

# COMUNE DI STATTE

## PROVINCIA DI TARANTO



REALIZZAZIONE DI NUOVA STRUTTURA DI TIPO  
"COMUNITA' SOCIO RIABILITATIVA" (art. 57 Reg. 18/01/07 n.4):  
STRUTTURA RESIDENZIALE SOCIO/ASSISTENZIALE  
A CARATTERE COMUNITARIO

C.SO V. EMANUELE III, n°165 - 74010 STATTE (TA)

## PROGETTO DEFINITIVO

Progettista

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TITOLO

### RELAZIONE CALCOLI STRUTTURALI

SCALA

DATA

GENNAIO 2012

TAVOLA N.

RT.04

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## **1. PREMESSA GENERALE**

La presente relazione ha per oggetto il calcolo delle strutture portanti della “Nuova Struttura Residenziale” da edificare nel Comune di Statte nell’ ambito del progetto:

*“Realizzazione di una nuova struttura di tipo COMUNITA’ SOCIO RIABILITATIVA” C.so V. Emanuele III n. 165 STATTE (TA).*

La fase del progetto e della presente relazione è quella di *Progetto DEFINITIVO*.

Il Comune di Statte, ricade in zona sismica, pertanto il calcolo delle sopra citate strutture è stato condotto considerando tale azione calcolata secondo le indicazioni del vigente D.M. 14/01/2008 “Nuove Norme Tecniche per le Costruzioni”.

Per quanto riguarda le caratteristiche geologico – tecniche e sismiche del terreno fondale, si è fatto riferimento alle relazioni redatte dal dott. Geol. Cataldo ALTAVILLA.

Le strutture sono state modellate, calcolate e verificate con un programma di calcolo strutturale agli Elementi Finiti (Enexsys).

Il calcolo è stato condotto con il metodo agli Stati Limite.

## **2. NORMATIVA DI RIFERIMENTO**

La Normativa Italiana cui viene fatto riferimento nelle fasi di calcolo e progettazione è la seguente:

Legge n. 1086 del 5 novembre 1971 "Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica".

Legge n. 64 del 2 febbraio 1974 "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche".

D.M. 14/01/2008 "Nuove Norme Tecniche per le Costruzioni", G.U. n. 29 del 04/02/2008 – supplemento ordinario n. 30.

C.M. n. 617 del 02/02/2009 G.U. n. 47 del 26/02/2009 supplemento ordinario n. 27 "Istruzioni per l' applicazione delle Norme Tecniche per le Costruzioni di cui al D.M. 14 gennaio 2008".

EUROCODICE 2

EUROCODICE 8

### 3. MATERIALI

I materiali da impiegare per la realizzazione delle opere da edificare negli interventi sono i seguenti:

#### **CALCESTRUZZO:**

- calcestruzzo non armato per magro di fondazione  $R_{ck} = 15 \text{ N/mm}^2$  (C12/15)
- calcestruzzo armato per fondazioni  $R_{ck} = 30 \text{ N/mm}^2$  (C 25/30)  
 $D_{CK} = \text{XC2}$
- calcestruzzo armato per elevazioni  $R_{ck} = 35 \text{ N/mm}^2$  (C 28/35)  
 $D_{CK} = \text{XC3}$

#### **ACCIAIO PER C.A.:**

B 450 C (ex FeB 44 K)

#### 4. DESCRIZIONE DELL' INTERVENTO

La presente relazione, racchiude i calcoli giustificativi relativi all' intervento di realizzazione della nuova struttura residenziale.

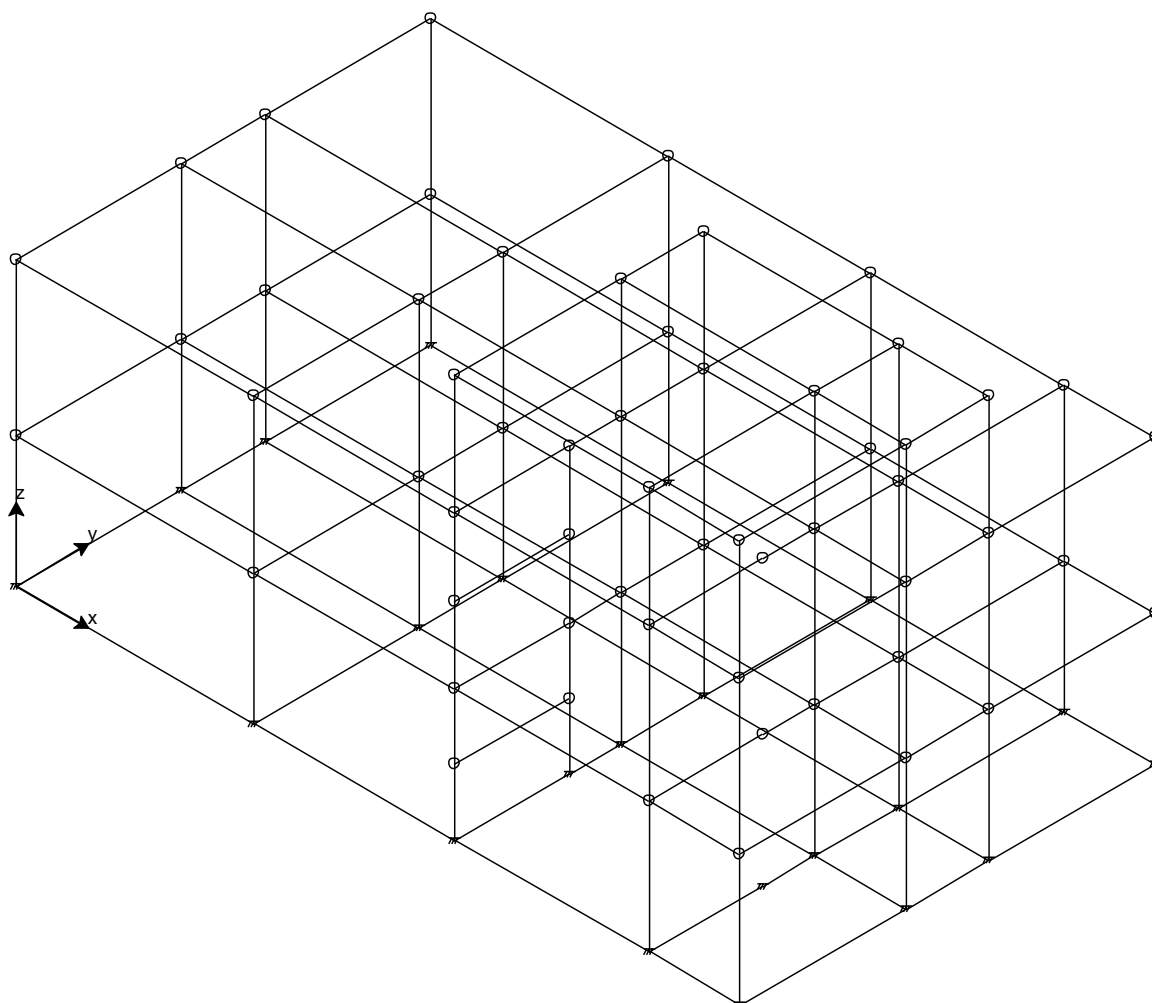
Le strutture da realizzare consistono in:

- solaio in latero – cemento a travetti prefabbricati  $H = 20+5 = 25$  cm,  $i = 50$  cm con getto armato di completamento in opera (sp. 5 cm);
- travi, cordoli e pilastri in C.A. di idonee dimensioni;
- fondazioni del tipo a travi rovesie.

Le strutture in C.A., sono tali da formare telai, resistenti al sisma, in entrambe le direzioni.

L'edificio è costituito da tre solai piani (solaio piano rialzato, solaio piano primo e solaio torrino).

Nella figura che segue è riportato lo schema statico:



## 5. CONDIZIONI ELEMENTARI DEI CARICHI E COMBINAZIONI

Vedi TABULATO di calcolo.

## 6. ANALISI DEI CARICHI

### AZIONI ORIZZONTALI

AZIONE SISMICA (COME DA D.M.14/01/2008)

L' AZIONE DEL VENTO, VISTA LA MODESTA ALTEZZA DELL' EDIFICIO È CERTAMENTE TRASCURABILE RISPETTO ALL' AZIONE DEL SISMA, PERTANTO NON VIENE PRESA IN CONSIDERAZIONE.

Per i parametri di calcolo Analisi Dinamica vedi tabulato di calcolo.

### ANALISI DEI CARICHI SUI SOLAI

PRIMO SOLAIO (ZONA ABITAZIONE)

|                    |            |
|--------------------|------------|
| P.P. SOLAIO 20+5   | 325 DAN/MQ |
| INTONACO           | 30         |
| MASSETTO IMPIANTI  | 155        |
| PAVIMENTAZIONE     | 75         |
| INCIDENZA TRAMEZZI | 160        |

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TOT. PERM. 745 DAN/MQ

ACCIDENTALI 200

PRIMO SOLAIO (TERRAZZO)

|                   |            |
|-------------------|------------|
| P.P. SOLAIO 20+5  | 325 DAN/MQ |
| INTONACO          | 30         |
| MASSETTO IMPIANTI | 155        |
| PAVIMENTAZIONE    | 75         |

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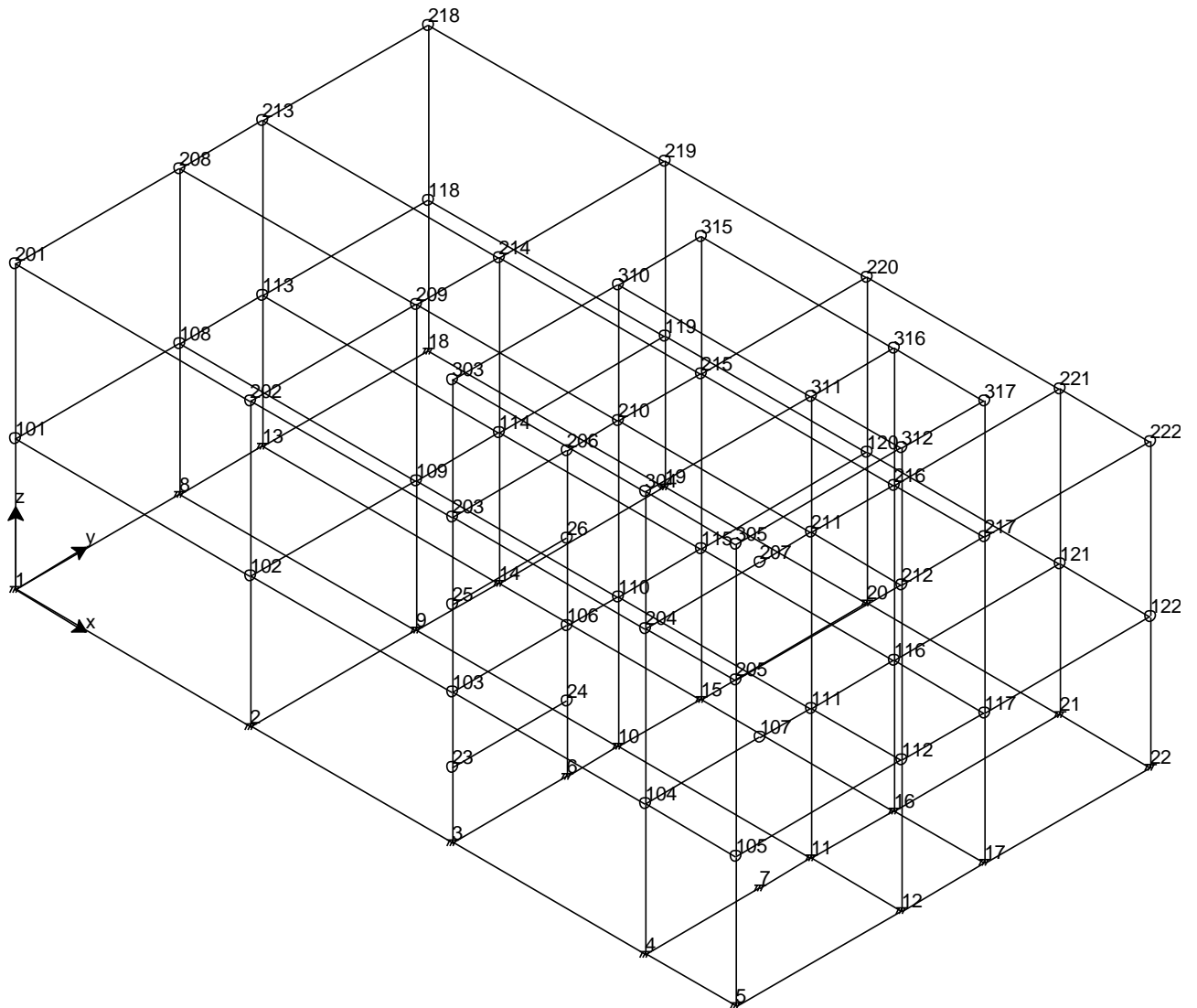
TOT. PERM. 585 DAN/MQ

ACCIDENTALI 400

NELLE TAVOLE DI CARPENTERIA DEI SOLAI SONO INDICATI I CARICHI, ZONA PER ZONA, CONSIDERATI NEL CALCOLO.

## 7. VERIFICHE

### 7.1. MODELLO E NUMERAZIONE DEI NODI



Le verifiche di seguito riportate vengono effettuate in automatico col programma di calcolo nel quale è stata inputata e calcolata la struttura.

Nell'allegato "A" è riportato l'input della struttura.

Nell'allegato "B" è riportato l'output della struttura.

## 7.2. VERIFICHE PILASTRI

### - **En.Ex.Sys. WinStrand** - **Structural Analysis & Design**

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**Ditta produttrice:**

**En.Ex.Sys.** s.r.l. - Via Tizzano 46/2 - Casalecchio di Reno (Bologna)

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**Sigla:**

WinStrand

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**Piattaforma software:**

Microsoft Windows XP Home, Microsoft Windows XP Home Professional

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**Documentazione in uso:**

Manuale teorico - Manuale d'uso

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**Campo di applicazione:**

Analisi statica e dinamica di strutture in campo elastico lineare.

### - **Elementi finiti implementati**

- Truss.
- Beam (Modellazione di Travi e Pilastri).
- Travi su suolo elastico alla Winckler.
- Plinti su suolo elastico alla Winckler.
- Elementi Shear Wall per la modellazione di pareti di taglio.
- Elementi shell (lastra/piastra) equivalenti.
- Elementi Isoparametrici a 8 Nodi Shell (lastra/piastra).

### - **Schemi di Carico**

- Carichi nodali concentrati.
- Carichi applicati direttamente agli elementi.
- Carichi Superficiali.

### - **Tipo di Risoluzione**

- Analisi statica e/o dinamica in campo lineare con il metodo dell'equilibrio.
- Fattorizzazione LDL<sup>T</sup>.
- Analisi Statica:
  - modellazione generale 6 gradi di libertà per nodo.
  - ipotesi di solai infinitamente rigidi nel proprio piano (3 gradi di libertà per nodo + 3 per impalcato).
- Analisi dinamica. (Nel caso di analisi modale gli autovettori ed autovalori possono essere calcolati mediante *subspace iteration* oppure tramite il *metodo dei vettori di Ritz*):
  - Via statica equivalente.
  - Modale con il metodo dello spettro di risposta.

### - **Normativa di riferimento**

La normativa italiana cui viene fatto riferimento nelle fasi di calcolo e progettazione è la seguente:

- Legge n. 1086 del 5 Novembre 1971. *"Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica"*.
- Legge n. 64 del 2 Febbraio 1974. *"Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche"*.
- D.M. del 3 Marzo 1975. *"Approvazione delle norme tecniche per le costruzioni in zone sismiche"*.
- D.M. del 3 Marzo 1975. *"Disposizioni concernenti l'applicazione delle norme tecniche per le costruzioni in zone sismiche"*.
- D.M. del 3 Ottobre 1978. *"Criteri generali per la verifica della sicurezza delle costruzioni e dei carichi e sovraccarichi"*.
- D.M. del 14 Febbraio 1992. *"Norme Tecniche per l'esecuzione delle opere in C.A. normale e precompresso e per le strutture metalliche"*.
- Istruzioni per la valutazione delle: Azioni sulle Costruzioni. (C.N.R. 10012/85)
- D.M. del 9 Gennaio 1996. *"Norme Tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche"*.
- D.M. del 16 Gennaio 1996. *"Norme tecniche relative ai «Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi»"*.
- D.M. del 16 Gennaio 1996. *"Norme tecniche per le costruzioni in zone sismiche"*
- Ordinanza n. 3274 del 20 Marzo 2003. *"Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica"*
- Ordinanza n. 3316. *"Modifiche ed integrazioni all'ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 Marzo 2003"*
- D.M. del 14 Gennaio 2008 *"Approvazione delle nuove norme tecniche per le costruzioni"*

## - Verifiche pilastri

### - Modalità di verifica

I pilastri vengono verificati (a discrezione dell'operatore) secondo le seguenti modalità:

- Presso-tenso flessione deviata.
- Presso-tenso flessione retta. In tale caso viene svolta prima la verifica a presso-tenso flessione considerando come azioni agenti lo sforzo normale ed il momento  $M_x$  agente sulla sezione poi, disgiuntamente, considerando come azioni agenti lo sforzo normale e l'altro momento  $M_y$ . A discrezione dell'operatore tali momenti (a favore della sicurezza) possono essere incrementati di un fattore di amplificazione anch'esso a discrezione dell'utente.

Per ogni pilastro le verifiche vengono svolte sia nella sezione di sommità che in quella di base in tutte le combinazioni di carico.

Nelle stampe vengono quindi riportate per le due sezioni di verifica succitate:

La combinazione di carico, le sollecitazioni (sforzo normale e momenti) che inducono le massime tensioni nel calcestruzzo, nel ferro teso e nel ferro compresso.

Il programma, per ogni sezione, una volta posizionati i ferri d'angolo sulla sezione, introduce lungo i bordi eventuali ferri di completamento così da rispettare l'interasse massimo fra i ferri imposto dall'operatore.

La verifica procede considerando (quanto a diametri) fissi i ferri di bordo, eventualmente introdotti, ed incrementando negli angoli il numero di ferri presenti ovvero il diametro degli stessi.

Tutti gli angoli della sezione vengono armati nella stesso modo sia quanto a diametro dei ferri presenti che quanto a numero di ferri.

Si noti che in ottemperanza a quanto prescritto nel punto **3.1.3** del *D.M. 14 febbraio 1992*, il programma, qualora la tensione media dell'intera sezione superi la tensione ammissibile per compressione semplice, considera tale situazione non verificata benchè possa risultare soddisfatta la verifica a pressoflessione utilizzando la sigma massima del calcestruzzo impiegato.

## - Sezioni Impiegate:

| Sezione<br>Numero | Info  | Dimensioni          | Criterio | Calcestruzzo | $f_{cd}$<br>[kg/cm <sup>2</sup> ] | $T_{rd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{RARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{QP}$<br>[kg/cm <sup>2</sup> ] | Acciaio | $f_{yd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{RARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{QP}$<br>[kg/cm <sup>2</sup> ] | Copriferro<br>[mm] | Verifica |
|-------------------|-------|---------------------|----------|--------------|-----------------------------------|-----------------------------------|--|--|--|---------|-----------------------------------|--|--|--|--------------------|----------|
| 1                 | Rett. | B 30 [cm] H 60 [cm] | Verpil   | Rbk 350      | 164.62                            | 3.31                              | 174.30                                   | 290.50                                   | 130.72                                 | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | Deviata  |
| 2                 | Rett. | B 60 [cm] H 30 [cm] | Verpil   | Rbk 350      | 164.62                            | 3.31                              | 174.30                                   | 290.50                                   | 130.72                                 | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | Deviata  |
| 3                 | Rett. | B 30 [cm] H 30 [cm] | Verpil   | Rbk 350      | 164.62                            | 3.31                              | 174.30                                   | 290.50                                   | 130.72                                 | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | Deviata  |
| 4                 | Rett. | B 30 [cm] H 80 [cm] | Verpil   | Rbk 350      | 164.62                            | 3.31                              | 174.30                                   | 290.50                                   | 130.72                                 | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | Deviata  |
| 5                 | Rett. | B 30 [cm] H 70 [cm] | Verpil   | Rbk 350      | 164.62                            | 3.31                              | 174.30                                   | 290.50                                   | 130.72                                 | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | Deviata  |

## - Verifiche Pilastr:

Fattore di sovraresistenza  $\gamma_{R,d}=1.10$

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio.  $\cotg \theta = 1.00$

## - Pilastro: 101/1 / L 2.21[m] / Sezione 1 B 30 [cm]H 60 [cm]

Af:  $8 \phi 24$  Af=36.19 [cm<sup>2</sup>] <  $1\phi 24 \times 4 V + 0\phi 24 \times 2 B + 2\phi 24 \times 2 H$  >

Staffe:  $\phi 10$  2br.x4br./10.0' x 221.5

## - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|---------|---------------|---------------|-------|
| 101  | 8    | -16392.7 | 5353.1  | 7051.3  | 7.17          | 3.41          | 0.40  |
| 1    | 8    | -17877.7 | -5353.1 | -7051.3 | 1.56          | 10.04         | 0.40  |

## - Verifiche a Taglio

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 2.46  | 25693.4  | 30757.5  | 22017.2  | 28323.5  | $\phi 10$ 2br.x4br./10.0' |

## - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N [kg]   | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|--------------------------|-----------|----------|----------|----------|--------------------------------|
|                          |           |          |          |          |                                |
| <b>Combinazioni Rare</b> |           |          |          |          |                                |
| 101                      | Ft. 10    | -22657.3 | -435.6   | 2590.2   | 190.32                         |
|                          | Fc. 10    | -22657.3 | -435.6   | 2590.2   | -397.56                        |
|                          | ClsMax 10 | -22657.3 | -435.6   | 2590.2   | -35.69                         |
|                          | ClsMed 10 | -22657.3 | -435.6   | 2590.2   | -16.64                         |

|   |            |          |        |        |         |
|---|------------|----------|--------|--------|---------|
| 1 | Ft. 10     | -24142.3 | -410.6 | -963.0 | -57.12  |
|   | Fc. 10     | -24142.3 | -410.6 | -963.0 | -252.02 |
|   | ClisMax 10 | -24142.3 | -410.6 | -963.0 | -19.63  |
|   | ClisMed 10 | -24142.3 | -410.6 | -963.0 | -10.30  |

**- Pilastro: 201/101 / L 3.35[m] / Sezione 1 B 30 [cm]H 60 [cm]**

Af:  $8 \phi 24$  Af=36.19 [cm<sup>2</sup>] <  $1\phi 24 \times 4 V + 0\phi 24 \times 2 B + 2\phi 24 \times 2 H$  >

Staffe:  $\phi 10$  2br.x4br./12.5' x 60.0+ $\phi 10$  2br.x4br./15.0' x 215.0+ $\phi 10$  2br.x4br./12.5' x 60.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 201  | 1    | -12628.5 | -1054.9 | 6113.8   | 1.00          | 1.00          | 0.32  |
| 101  | 2    | -8985.3  | 6112.5  | -13212.0 | 3.03          | 11.48         | 0.81  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 0.85  | 10804.9  | 24606.0  | 12765.5  | 22658.8  | $\phi 10$ 2br.x4br./12.5' |
| 0.85   | 3.00  | 10804.9  | 20505.0  | 12765.5  | 18882.3  | $\phi 10$ 2br.x4br./15.0' |
| 3.00   | 3.60  | 10804.9  | 24606.0  | 12765.5  | 22658.8  | $\phi 10$ 2br.x4br./12.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo                     | Comb       | N [kg]   | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|--------------------------|------------|----------|----------|----------|--------------------------------|
|                          |            |          |          |          |                                |
| <b>Combinazioni Rare</b> |            |          |          |          |                                |
| 201                      | Ft. 10     | -9368.6  | -807.8   | 4500.8   | 1004.28                        |
|                          | Fc. 10     | -9368.6  | -807.8   | 4500.8   | -520.35                        |
|                          | ClisMax 10 | -9368.6  | -807.8   | 4500.8   | -58.57                         |
|                          | ClisMed 10 | -9368.6  | -807.8   | 4500.8   | -26.34                         |
| 101                      | Ft. 10     | -11101.1 | 926.5    | -4043.5  | 851.86                         |
|                          | Fc. 10     | -11101.1 | 926.5    | -4043.5  | -504.59                        |
|                          | ClisMax 10 | -11101.1 | 926.5    | -4043.5  | -54.53                         |
|                          | ClisMed 10 | -11101.1 | 926.5    | -4043.5  | -24.01                         |

**- Pilastro: 2/102 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af:  $6 \phi 24$  Af=27.14 [cm<sup>2</sup>] <  $1\phi 24 \times 4 V + 1\phi 24 \times 2 B + 0\phi 24 \times 2 H$  >

Staffe:  $\phi 10$  4br.x2br./7.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx     | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|--------|----------|---------------|---------------|-------|
| 2    | 2    | -35741.2 | 2003.6 | -23222.2 | 3.67          | 2.32          | 0.70  |

|     |   |          |         |         |      |      |      |
|-----|---|----------|---------|---------|------|------|------|
| 102 | 2 | -34256.2 | -2003.6 | 23222.2 | 2.65 | 4.02 | 0.70 |
|-----|---|----------|---------|---------|------|------|------|

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe              |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------|
| 0.83      | 3.05     | 6297.9      | 37764.6     | 34771.4     | 41010.0     | ø 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | σ<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|----------------------------|
|                          |          |           |             |             |                            |
| <b>Combinazioni Rare</b> |          |           |             |             |                            |
| 2                        | Ft. 10   | -43236.5  | 73.4        | 104.4       | -282.05                    |
|                          | Fc. 10   | -43236.5  | 73.4        | 104.4       | -305.62                    |
|                          | ClMax 10 | -43236.5  | 73.4        | 104.4       | -20.66                     |
|                          | ClMed 10 | -43236.5  | 73.4        | 104.4       | -19.59                     |
| 102                      | Ft. 10   | -41751.5  | -588.2      | 1040.2      | -178.57                    |
|                          | Fc. 10   | -41751.5  | -588.2      | 1040.2      | -388.93                    |
|                          | ClMax 10 | -41751.5  | -588.2      | 1040.2      | -28.33                     |
|                          | ClMed 10 | -41751.5  | -588.2      | 1040.2      | -18.92                     |

### - Pilastro: 202/102 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 14 ø 24 Af=63.33 [cm<sup>2</sup>] < 1φ24 x 4 V + 4φ24 x 2 B + 1φ24 x 2 H >

Staffe: ø 10 4br.x2br./7.5' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My      | α <sub>12</sub> | α <sub>13</sub> | Sd/Sr |
|------|------|----------|---------|---------|-----------------|-----------------|-------|
| 202  | 2    | -14266.9 | -663.3  | -8747.9 | 1.00            | 1.00            | 0.16  |
| 102  | 9    | -15817.1 | -4352.4 | 30789.2 | 33.11           | 8.88            | 0.62  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe              |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------|
| 0.25      | 3.60     | 4615.9      | 37764.6     | 36305.2     | 41010.0     | ø 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | σ<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|----------------------------|
|                          |          |           |             |             |                            |
| <b>Combinazioni Rare</b> |          |           |             |             |                            |
| 202                      | Ft. 10   | -18428.7  | -394.6      | -2434.2     | 41.98                      |
|                          | Fc. 10   | -18428.7  | -394.6      | -2434.2     | -238.48                    |
|                          | ClMax 10 | -18428.7  | -394.6      | -2434.2     | -18.36                     |
|                          | ClMed 10 | -18428.7  | -394.6      | -2434.2     | -7.81                      |
| 102                      | Ft. 10   | -20161.2  | 665.9       | 2083.4      | 33.28                      |
|                          | Fc. 10   | -20161.2  | 665.9       | 2083.4      | -250.26                    |

|  |          |          |       |        |        |
|--|----------|----------|-------|--------|--------|
|  | ClMax 10 | -20161.2 | 665.9 | 2083.4 | -19.54 |
|  | ClMed 10 | -20161.2 | 665.9 | 2083.4 | -8.11  |

**- Pilastro: 3/103 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\phi$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./5.0' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 3    | 2    | -35285.0 | 745.8   | -10590.9 | 2.02          | 10.05         | 0.20  |
| 23   | 1    | -54091.9 | -954.1  | 474.0    | 1.00          | 1.00          | 0.12  |
| 23   | 4    | -32149.0 | 2185.0  | -21368.7 | 4.07          | 10.13         | 0.40  |
| 103  | 4    | -31406.6 | -2185.0 | 21368.7  | 11.68         | 3.38          | 0.40  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                   |
|--------|-------|----------|----------|----------|----------|--------------------------|
| 0.83   | 3.05  | 12052.1  | 56647.0  | 54433.5  | 61515.1  | $\phi$ 10 4br.x2br./5.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo                     | Comb     | N [kg]   | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|--------------------------|----------|----------|----------|----------|--------------------------------|
| <b>Combinazioni Rare</b> |          |          |          |          |                                |
| 3                        | Ft. 10   | -41338.0 | 83.7     | -302.4   | -206.52                        |
|                          | Fc. 10   | -41338.0 | 83.7     | -302.4   | -244.43                        |
|                          | ClMax 10 | -41338.0 | 83.7     | -302.4   | -16.66                         |
|                          | ClMed 10 | -41338.0 | 83.7     | -302.4   | -15.03                         |
| 23                       | Ft. 10   | -40595.5 | -691.1   | 355.7    | -158.06                        |
|                          | Fc. 10   | -40595.5 | -691.1   | 355.7    | -284.80                        |
|                          | ClMax 10 | -40595.5 | -691.1   | 355.7    | -20.79                         |
|                          | ClMed 10 | -40595.5 | -691.1   | 355.7    | -14.76                         |
| 23                       | Ft. 10   | -36961.7 | 569.9    | 350.4    | -146.87                        |
|                          | Fc. 10   | -36961.7 | 569.9    | 350.4    | -256.34                        |
|                          | ClMax 10 | -36961.7 | 569.9    | 350.4    | -18.61                         |
|                          | ClMed 10 | -36961.7 | 569.9    | 350.4    | -13.44                         |
| 103                      | Ft. 10   | -36219.2 | -127.1   | 1032.7   | -143.84                        |
|                          | Fc. 10   | -36219.2 | -127.1   | 1032.7   | -251.27                        |
|                          | ClMax 10 | -36219.2 | -127.1   | 1032.7   | -17.64                         |
|                          | ClMed 10 | -36219.2 | -127.1   | 1032.7   | -13.17                         |

**- Pilastro: 103/203 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\phi$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./7.5' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 103  | 9    | -17847.6 | -2924.0 | 25468.6  | 2.64          | 10.22         | 0.49  |
| 25   | 1    | -32094.5 | -774.4  | -334.2   | 1.00          | 1.00          | 0.07  |
| 25   | 7    | -16881.4 | -3821.2 | -45601.0 | 2.92          | 9.50          | 0.89  |
| 203  | 7    | -16015.1 | 3821.2  | -45601.0 | 2.86          | 126.61        | 0.89  |

### - Verifiche a Taglio

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.25   | 3.60  | 4522.9   | 37764.6  | 34949.2  | 41010.0  | $\emptyset$ 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N [kg]   | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|--------------------------|-----------|----------|----------|----------|--------------------------------|
| <b>Combinazioni Rare</b> |           |          |          |          |                                |
| 103                      | Ft. 10    | -24885.7 | 179.8    | 1830.9   | -43.66                         |
|                          | Fc. 10    | -24885.7 | 179.8    | 1830.9   | -227.82                        |
|                          | ClsMax 10 | -24885.7 | 179.8    | 1830.9   | -16.67                         |
|                          | ClsMed 10 | -24885.7 | 179.8    | 1830.9   | -9.05                          |
| 25                       | Ft. 10    | -24019.5 | -555.7   | -231.2   | -82.45                         |
|                          | Fc. 10    | -24019.5 | -555.7   | -231.2   | -179.58                        |
|                          | ClsMax 10 | -24019.5 | -555.7   | -231.2   | -13.39                         |
|                          | ClsMed 10 | -24019.5 | -555.7   | -231.2   | -8.73                          |
| 25                       | Ft. 10    | -20451.2 | 555.1    | -210.4   | -63.93                         |
|                          | Fc. 10    | -20451.2 | 555.1    | -210.4   | -159.17                        |
|                          | ClsMax 10 | -20451.2 | 555.1    | -210.4   | -12.02                         |
|                          | ClsMed 10 | -20451.2 | 555.1    | -210.4   | -7.44                          |
| 203                      | Ft. 10    | -19585.0 | -117.3   | -2279.4  | 1.74                           |
|                          | Fc. 10    | -19585.0 | -117.3   | -2279.4  | -214.77                        |
|                          | ClsMax 10 | -19585.0 | -117.3   | -2279.4  | -15.93                         |
|                          | ClsMed 10 | -19585.0 | -117.3   | -2279.4  | -7.55                          |

### - Pilastro: 303/203 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 1 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./5.0' x 250.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N       | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|----------|---------------|---------------|-------|
| 303  | 1    | -9971.8 | -1096.0 | 5497.0   | 1.00          | 1.00          | 0.11  |
| 203  | 9    | -7501.7 | -850.5  | -15006.9 | 2.64          | 10.22         | 0.28  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe              |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------|
| 0.25      | 2.75     | 20011.0     | 56647.0     | 49860.2     | 61515.1     | ø 10 4br.x2br./5.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |         |        |        |         |
|-----|-----------|---------|--------|--------|---------|
| 303 | Ft. 10    | -7506.1 | -835.7 | 4110.6 | 383.25  |
|     | Fc. 10    | -7506.1 | -835.7 | 4110.6 | -336.44 |
|     | ClsMax 10 | -7506.1 | -835.7 | 4110.6 | -28.97  |
|     | ClsMed 10 | -7506.1 | -835.7 | 4110.6 | -10.76  |
| 203 | Ft. 10    | -8856.1 | 358.8  | -531.4 | 0.33    |
|     | Fc. 10    | -8856.1 | 358.8  | -531.4 | -96.66  |
|     | ClsMax 10 | -8856.1 | 358.8  | -531.4 | -7.59   |
|     | ClsMed 10 | -8856.1 | 358.8  | -531.4 | -3.35   |

### - Pilastro: 4/104 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 6 ø 24 Af=27.14 [cm<sup>2</sup>] < 1ø24 x 4 V + 1ø24 x 2 B + 0ø24 x 2 H >

Staffe: ø 10 6br.x2br./7.5' x 221.5

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 4    | 3    | -26051.5 | -2489.7 | -10496.9 | 2.75          | 1.48          | 0.35  |
| 104  | 3    | -24566.5 | -2489.7 | 10496.9  | 6.40          | 2.17          | 0.35  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe              |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------|
| 0.83      | 3.05     | 7706.0      | 56647.0     | 32521.8     | 41010.0     | ø 10 6br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |          |         |       |         |
|-----|-----------|----------|---------|-------|---------|
| 4   | Ft. 10    | -35734.4 | 226.2   | 429.2 | -200.87 |
|     | Fc. 10    | -35734.4 | 226.2   | 429.2 | -284.84 |
|     | ClsMax 10 | -35734.4 | 226.2   | 429.2 | -19.94  |
|     | ClsMed 10 | -35734.4 | 226.2   | 429.2 | -16.19  |
| 104 | Ft. 10    | -34249.4 | -1057.8 | 93.5  | -137.52 |
|     | Fc. 10    | -34249.4 | -1057.8 | 93.5  | -328.00 |
|     | ClsMax 10 | -34249.4 | -1057.8 | 93.5  | -24.94  |
|     | ClsMed 10 | -34249.4 | -1057.8 | 93.5  | -15.52  |

**- Pilastro: 204/104 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 6  $\phi$  24 Af=27.14 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 1 $\phi$ 24 x 2 B + 0 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./15.0' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 204  | 7    | -15992.2 | 4174.4  | -22747.5 | 4.74          | 6.51          | 0.84  |
| 104  | 8    | -17924.8 | -4045.6 | 12671.7  | 31.01         | 3.54          | 0.49  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 3.60  | 4689.1   | 18882.3  | 19869.9  | 20505.0  | $\phi$ 10 4br.x2br./15.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 204 | Ft. 10    | -20857.1 | -871.5 | -180.2 | -57.83  |
|     | Fc. 10    | -20857.1 | -871.5 | -180.2 | -225.66 |
|     | ClSMax 10 | -20857.1 | -871.5 | -180.2 | -17.65  |
|     | ClSMed 10 | -20857.1 | -871.5 | -180.2 | -9.45   |
| 104 | Ft. 10    | -22589.6 | 1234.9 | 325.4  | -30.09  |
|     | Fc. 10    | -22589.6 | 1234.9 | 325.4  | -276.58 |
|     | ClSMax 10 | -22589.6 | 1234.9 | 325.4  | -22.20  |
|     | ClSMed 10 | -22589.6 | 1234.9 | 325.4  | -10.51  |

**- Pilastro: 5/105 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 6  $\phi$  20 Af=18.85 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 1 $\phi$ 20 x 2 B + 0 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 4br.x2br./12.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 5    | 2    | -29247.6 | -11125.3 | -6573.3 | 15.18         | 1.00          | 0.98  |
| 105  | 2    | -27762.6 | 11125.3  | 4107.7  | 167.13        | 1.15          | 0.97  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.83   | 3.05  | 12567.0  | 22658.8  | 17475.1  | 24606.0  | $\phi$ 10 4br.x2br./12.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 5                        | Ft. 10   | -19682.4  | -97.7       | 357.2       | -112.19                           |
|                          | Fc. 10   | -19682.4  | -97.7       | 357.2       | -171.31                           |
|                          | ClMax 10 | -19682.4  | -97.7       | 357.2       | -11.97                            |
|                          | ClMed 10 | -19682.4  | -97.7       | 357.2       | -9.45                             |
| 105                      | Ft. 10   | -18197.4  | -374.4      | 259.4       | -81.35                            |
|                          | Fc. 10   | -18197.4  | -374.4      | 259.4       | -180.77                           |
|                          | ClMax 10 | -18197.4  | -374.4      | 259.4       | -13.33                            |
|                          | ClMed 10 | -18197.4  | -374.4      | 259.4       | -8.74                             |

### - Pilastro: 205/105 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af:  $4 \phi 24 + 2 \phi 20$  Af=24.38 [cm<sup>2</sup>] <  $1\phi 24 \times 4$  V +  $1\phi 20 \times 2$  B +  $0\phi 20 \times 2$  H >

Staffe:  $\phi 10$  4br.x2br./15.0' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 205  | 2    | -15213.3 | 10673.5 | -10072.1 | 101.49        | 1.86          | 0.90  |
| 105  | 2    | -16945.8 | 8213.5  | 5377.2   | 167.13        | 1.15          | 0.62  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                    |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------------|
| 0.25      | 3.60     | 8228.7      | 18882.3     | 9620.2      | 20505.0     | $\phi 10$ 4br.x2br./15.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 205                      | Ft. 10   | -10756.1  | -453.0      | -959.4      | 21.17                             |
|                          | Fc. 10   | -10756.1  | -453.0      | -959.4      | -167.64                           |
|                          | ClMax 10 | -10756.1  | -453.0      | -959.4      | -13.26                            |
|                          | ClMed 10 | -10756.1  | -453.0      | -959.4      | -5.46                             |
| 105                      | Ft. 10   | -12488.6  | 577.1       | 810.3       | 9.97                              |
|                          | Fc. 10   | -12488.6  | 577.1       | 810.3       | -181.47                           |
|                          | ClMax 10 | -12488.6  | 577.1       | 810.3       | -14.41                            |
|                          | ClMed 10 | -12488.6  | 577.1       | 810.3       | -6.15                             |

**- Pilastro: 305/205 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 4  $\phi$  24 + 2  $\phi$  20 Af=24.38 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 1 $\phi$ 20 x 2 B + 0 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 4br.x2br./10.0' x 250.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N       | Mx      | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|--------|---------------|---------------|-------|
| 305  | 7    | -2482.7 | 1552.8  | -989.4 | 1.00          | 1.00          | 0.12  |
| 205  | 2    | -6185.5 | 11186.9 | -994.6 | 101.49        | 1.86          | 0.98  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 2.75  | 11646.5  | 28323.5  | 18757.7  | 30757.5  | $\phi$ 10 4br.x2br./10.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |         |        |        |         |
|-----|-----------|---------|--------|--------|---------|
| 305 | Ft. 10    | -3599.9 | -484.9 | -626.7 | 120.73  |
|     | Fc. 10    | -3599.9 | -484.9 | -626.7 | -123.23 |
|     | ClsMax 10 | -3599.9 | -484.9 | -626.7 | -11.22  |
|     | ClsMed 10 | -3599.9 | -484.9 | -626.7 | -3.92   |
| 205 | Ft. 10    | -4949.9 | 443.5  | 597.6  | 68.44   |
|     | Fc. 10    | -4949.9 | 443.5  | 597.6  | -117.89 |
|     | ClsMax 10 | -4949.9 | 443.5  | 597.6  | -10.11  |
|     | ClsMed 10 | -4949.9 | 443.5  | 597.6  | -3.64   |

**- Pilastro: 24/6 / L 0.79[m] / Sezione 3 B 30 [cm]H 30 [cm]**

Af: 4  $\phi$  20 Af=12.57 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 0 $\phi$ 16 x 2 B + 0 $\phi$ 16 x 2 H >

Staffe:  $\phi$  10/5.0' x 79.4

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx     | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|--------|--------|---------------|---------------|-------|
| 24   | 2    | -11590.4 | 3953.4 | 380.1  | 14.36         | 1.04          | 0.51  |
| 6    | 2    | -11961.6 | 3953.4 | 1194.2 | 26.31         | 1.00          | 0.53  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe         |
|--------|-------|----------|----------|----------|----------|----------------|
| 0.20   | 0.99  | 26859.0  | 28323.5  | 6094.3   | 28323.5  | $\phi$ 10/5.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 24                       | Ft. 10    | -13801.1  | 573.5       | -0.1        | -89.43                            |
|                          | Fc. 10    | -13801.1  | 573.5       | -0.1        | -290.94                           |
|                          | ClSMax 10 | -13801.1  | 573.5       | -0.1        | -22.56                            |
|                          | ClSMed 10 | -13801.1  | 573.5       | -0.1        | -12.68                            |
| 6                        | Ft. 10    | -14172.4  | -202.0      | 2.8         | -159.35                           |
|                          | Fc. 10    | -14172.4  | -202.0      | 2.8         | -231.26                           |
|                          | ClSMax 10 | -14172.4  | -202.0      | 2.8         | -16.55                            |
|                          | ClSMed 10 | -14172.4  | -202.0      | 2.8         | -13.02                            |

### - Pilastro: 206/26 / L 1.60[m] / Sezione 3 B 30 [cm]H 30 [cm]

Af: 4  $\phi$  20 Af=12.57 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 0 $\phi$ 16 x 2 B + 0 $\phi$ 16 x 2 H >

Staffe:  $\phi$  10/15.0' x 160.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N       | Mx      | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|--------|---------------|---------------|-------|
| 206  | 9    | -909.3  | 2707.8  | -124.3 | 1.00          | 1.00          | 0.47  |
| 26   | 9    | -1342.4 | -2915.5 | -93.5  | 1.20          | 1.00          | 0.50  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe          |
|-----------|----------|-------------|-------------|-------------|-------------|-----------------|
| 0.13      | 1.72     | 8800.7      | 9441.2      | 6805.9      | 9441.2      | $\phi$ 10/15.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 206                      | Ft. 10    | -3784.7   | 87.8        | -47.5       | -28.38                            |
|                          | Fc. 10    | -3784.7   | 87.8        | -47.5       | -75.93                            |
|                          | ClSMax 10 | -3784.7   | 87.8        | -47.5       | -5.81                             |
|                          | ClSMed 10 | -3784.7   | 87.8        | -47.5       | -3.48                             |
| 26                       | Ft. 10    | -4217.8   | -590.9      | -30.3       | 151.10                            |
|                          | Fc. 10    | -4217.8   | -590.9      | -30.3       | -183.55                           |
|                          | ClSMax 10 | -4217.8   | -590.9      | -30.3       | -17.49                            |
|                          | ClSMed 10 | -4217.8   | -590.9      | -30.3       | -8.34                             |

**- Pilastro: 108/8 / L 2.21[m] / Sezione 4 B 30 [cm]H 80 [cm]**

Af: 4  $\phi$  24 + 4  $\phi$  20 Af=30.66 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 0 $\phi$ 20 x 2 B + 2 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 2br.x4br./7.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|--------|---------------|---------------|-------|
| 108  | 4    | -22171.4 | 44441.1 | 819.2  | 109.44        | 7.34          | 0.93  |
| 8    | 4    | -24151.4 | 44441.1 | 2946.4 | 53.38         | 1.00          | 0.96  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                   |
|--------|-------|----------|----------|----------|----------|--------------------------|
| 0.25   | 2.46  | 51637.9  | 55761.9  | 11343.2  | 37764.6  | $\phi$ 10 2br.x4br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |       |        |         |
|-----|-----------|----------|-------|--------|---------|
| 108 | Ft. 10    | -29227.5 | 415.7 | 2869.3 | 136.83  |
|     | Fc. 10    | -29227.5 | 415.7 | 2869.3 | -376.77 |
|     | ClSMax 10 | -29227.5 | 415.7 | 2869.3 | -33.25  |
|     | ClSMed 10 | -29227.5 | 415.7 | 2869.3 | -15.95  |
| 8   | Ft. 10    | -31207.5 | 161.2 | -769.7 | -107.60 |
|     | Fc. 10    | -31207.5 | 161.2 | -769.7 | -219.76 |
|     | ClSMax 10 | -31207.5 | 161.2 | -769.7 | -16.40  |
|     | ClSMed 10 | -31207.5 | 161.2 | -769.7 | -10.91  |

**- Pilastro: 208/108 / L 3.35[m] / Sezione 4 B 30 [cm]H 80 [cm]**

Af: 12  $\phi$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 0 $\phi$ 24 x 2 B + 4 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 2br.x4br./12.5' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 208  | 1    | -17197.3 | 741.3   | 8535.1   | 1.00          | 1.00          | 0.30  |
| 108  | 4    | -11796.2 | 42180.2 | -13757.5 | 109.44        | 7.34          | 0.91  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 3.60  | 26768.3  | 33457.1  | 16443.2  | 22658.8  | $\phi$ 10 2br.x4br./12.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 208                      | Ft. 10    | -12682.3  | 583.1       | 6216.0      | 895.43                            |
|                          | Fc. 10    | -12682.3  | 583.1       | 6216.0      | -473.57                           |
|                          | ClSMax 10 | -12682.3  | 583.1       | 6216.0      | -53.64                            |
|                          | ClSMed 10 | -12682.3  | 583.1       | 6216.0      | -25.63                            |
| 108                      | Ft. 10    | -14992.3  | -686.1      | -5215.9     | 687.90                            |
|                          | Fc. 10    | -14992.3  | -686.1      | -5215.9     | -430.61                           |
|                          | ClSMax 10 | -14992.3  | -686.1      | -5215.9     | -46.49                            |
|                          | ClSMed 10 | -14992.3  | -686.1      | -5215.9     | -21.90                            |

### - Pilastro: 109/9 / L 2.39[m] / Sezione 5 B 30 [cm]H 70 [cm]

Af: 12  $\phi$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 0 $\phi$ 24 x 2 B + 4 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 2br.x4br./10.0' x 239.4

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 109  | 2    | -38023.7 | 12172.5 | -23890.3 | 90.64         | 7.21          | 0.92  |
| 9    | 2    | -39756.2 | 12172.5 | 23890.3  | 5.35          | 6.41          | 0.92  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                    |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------------|
| 0.25      | 2.64     | 14578.3     | 36289.5     | 24928.6     | 28323.5     | $\phi$ 10 2br.x4br./10.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 109                      | Ft. 10    | -47995.9  | 559.6       | -836.0      | -173.56                           |
|                          | Fc. 10    | -47995.9  | 559.6       | -836.0      | -320.51                           |
|                          | ClSMax 10 | -47995.9  | 559.6       | -836.0      | -23.35                            |
|                          | ClSMed 10 | -47995.9  | 559.6       | -836.0      | -16.47                            |
| 9                        | Ft. 10    | -49728.4  | 178.0       | 224.7       | -235.17                           |
|                          | Fc. 10    | -49728.4  | 178.0       | 224.7       | -276.74                           |
|                          | ClSMax 10 | -49728.4  | 178.0       | 224.7       | -18.99                            |
|                          | ClSMed 10 | -49728.4  | 178.0       | 224.7       | -17.06                            |

**- Pilastro: 10/110 / L 2.39[m] / Sezione 5 B 30 [cm]H 70 [cm]**

Af: 10  $\emptyset$  24 Af=45.24 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 0 $\emptyset$ 24 x 2 B + 3 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./12.5' x 239.4

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|----------|---------------|---------------|-------|
| 10   | 2    | -40489.3 | 10677.2  | -22102.3 | 5.51          | 6.14          | 0.98  |
| 110  | 2    | -38756.8 | -10677.2 | 22102.3  | 18.68         | 8.32          | 0.98  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.66   | 3.05  | 10025.7  | 29031.6  | 21357.8  | 22658.8  | $\emptyset$ 10 2br.x4br./12.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 10  | Ft. 10    | -48320.8 | -211.6 | 55.1   | -249.00 |
|     | Fc. 10    | -48320.8 | -211.6 | 55.1   | -272.72 |
|     | ClSMax 10 | -48320.8 | -211.6 | 55.1   | -18.39  |
|     | ClSMed 10 | -48320.8 | -211.6 | 55.1   | -17.39  |
| 110 | Ft. 10    | -46588.3 | -14.9  | -172.5 | -239.45 |
|     | Fc. 10    | -46588.3 | -14.9  | -172.5 | -263.56 |
|     | ClSMax 10 | -46588.3 | -14.9  | -172.5 | -17.96  |
|     | ClSMed 10 | -46588.3 | -14.9  | -172.5 | -16.77  |

**- Pilastro: 11/111 / L 2.39[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 1 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./10.0' x 239.4

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 11   | 7    | -34065.3 | 9984.3   | -9699.7 | 14.60         | 1.00          | 0.42  |
| 111  | 2    | -34334.2 | -10593.1 | 5479.6  | 3.18          | 3.80          | 0.38  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.66   | 3.05  | 25916.9  | 28323.5  | 17412.7  | 30757.5  | $\emptyset$ 10 4br.x2br./10.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 11                       | Ft. 10   | -46984.3  | 394.0       | -567.9      | -204.27                           |
|                          | Fc. 10   | -46984.3  | 394.0       | -567.9      | -308.28                           |
|                          | ClMax 10 | -46984.3  | 394.0       | -567.9      | -21.79                            |
|                          | ClMed 10 | -46984.3  | 394.0       | -567.9      | -17.09                            |
| 111                      | Ft. 10   | -45499.3  | -899.8      | 1274.6      | -130.38                           |
|                          | Fc. 10   | -45499.3  | -899.8      | 1274.6      | -365.97                           |
|                          | ClMax 10 | -45499.3  | -899.8      | 1274.6      | -27.22                            |
|                          | ClMed 10 | -45499.3  | -899.8      | 1274.6      | -16.55                            |

### - Pilastro: 211/111 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 14  $\phi$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./15.0' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 211  | 2    | -21144.7 | 12356.2  | 10393.0 | 3.35          | 6.75          | 0.51  |
| 111  | 9    | -21435.1 | -12500.7 | -7041.1 | 9.33          | 1.34          | 0.47  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                    |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------------|
| 0.25      | 3.60     | 16650.5     | 18882.3     | 12947.3     | 20505.0     | $\phi$ 10 4br.x2br./15.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 211                      | Ft. 10   | -27737.5  | 1225.5      | 693.0       | -36.17                            |
|                          | Fc. 10   | -27737.5  | 1225.5      | 693.0       | -266.40                           |
|                          | ClMax 10 | -27737.5  | 1225.5      | 693.0       | -20.99                            |
|                          | ClMed 10 | -27737.5  | 1225.5      | 693.0       | -10.13                            |
| 111                      | Ft. 10   | -29470.0  | -1205.7     | -1231.9     | -23.19                            |
|                          | Fc. 10   | -29470.0  | -1205.7     | -1231.9     | -298.13                           |
|                          | ClMax 10 | -29470.0  | -1205.7     | -1231.9     | -23.38                            |
|                          | ClMed 10 | -29470.0  | -1205.7     | -1231.9     | -10.86                            |

**- Pilastro: 311/211 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\phi$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./7.5' x 250.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|--------|---------------|---------------|-------|
| 311  | 4    | -11398.0 | 3506.5   | 1037.2 | 1.00          | 1.00          | 0.12  |
| 211  | 9    | -11126.1 | -12058.3 | 1902.2 | 8.02          | 2.02          | 0.44  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                   |
|--------|-------|----------|----------|----------|----------|--------------------------|
| 0.25   | 2.75  | 25668.4  | 37764.6  | 18170.7  | 41010.0  | $\phi$ 10 4br.x2br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |         |        |         |
|-----|-----------|----------|---------|--------|---------|
| 311 | Ft. 10    | -12558.9 | 1691.2  | 643.1  | 144.36  |
|     | Fc. 10    | -12558.9 | 1691.2  | 643.1  | -232.29 |
|     | ClsMax 10 | -12558.9 | 1691.2  | 643.1  | -21.02  |
|     | ClsMed 10 | -12558.9 | 1691.2  | 643.1  | -9.09   |
| 211 | Ft. 10    | -13908.9 | -1491.2 | -388.4 | 82.05   |
|     | Fc. 10    | -13908.9 | -1491.2 | -388.4 | -206.89 |
|     | ClsMax 10 | -13908.9 | -1491.2 | -388.4 | -18.18  |
|     | ClsMed 10 | -13908.9 | -1491.2 | -388.4 | -8.27   |

**- Pilastro: 12/112 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\phi$  20 Af=37.70 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 3 $\phi$ 20 x 2 B + 1 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 4br.x2br./12.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 12   | 7    | -17857.2 | -10097.3 | -3107.2 | 2.34          | 4.41          | 0.54  |
| 112  | 7    | -16372.2 | 10097.3  | 3107.2  | 2.55          | 7.54          | 0.55  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.83   | 3.05  | 19105.3  | 22658.8  | 9851.6   | 24606.0  | $\phi$ 10 4br.x2br./12.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 12                       | Ft. 10    | -23516.3  | -247.3      | -79.7       | -124.54                           |
|                          | Fc. 10    | -23516.3  | -247.3      | -79.7       | -173.70                           |
|                          | ClsMax 10 | -23516.3  | -247.3      | -79.7       | -12.28                            |
|                          | ClsMed 10 | -23516.3  | -247.3      | -79.7       | -9.94                             |
| 112                      | Ft. 10    | -22031.3  | 441.9       | 375.9       | -84.01                            |
|                          | Fc. 10    | -22031.3  | 441.9       | 375.9       | -195.40                           |
|                          | ClsMax 10 | -22031.3  | 441.9       | 375.9       | -14.42                            |
|                          | ClsMed 10 | -22031.3  | 441.9       | 375.9       | -9.31                             |

### - Pilastro: 212/112 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 12  $\phi$  20 Af=37.70 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 3 $\phi$ 20 x 2 B + 1 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 4br.x2br./15.0' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx       | My      | $a_{12}$ | $a_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|----------|----------|-------|
| 212  | 8    | -11111.1 | 13063.5  | -7000.3 | 3.42     | 5.70     | 0.79  |
| 112  | 9    | -11330.6 | -12144.6 | 8479.5  | 2.62     | 27.52    | 0.75  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                    |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------------|
| 0.25      | 3.60     | 11111.5     | 18882.3     | 7974.9      | 20505.0     | $\phi$ 10 4br.x2br./15.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 212                      | Ft. 10    | -13296.0  | 452.7       | -990.8      | 4.81                              |
|                          | Fc. 10    | -13296.0  | 452.7       | -990.8      | -172.80                           |
|                          | ClsMax 10 | -13296.0  | 452.7       | -990.8      | -13.36                            |
|                          | ClsMed 10 | -13296.0  | 452.7       | -990.8      | -5.85                             |
| 112                      | Ft. 10    | -15028.5  | -507.8      | 740.9       | -15.62                            |
|                          | Fc. 10    | -15028.5  | -507.8      | 740.9       | -174.94                           |
|                          | ClsMax 10 | -15028.5  | -507.8      | 740.9       | -13.46                            |
|                          | ClsMed 10 | -15028.5  | -507.8      | 740.9       | -6.39                             |

**- Pilastro: 312/212 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\emptyset$  20 Af=37.70 [cm<sup>2</sup>] < 1 $\emptyset$ 20 x 4 V + 3 $\emptyset$ 20 x 2 B + 1 $\emptyset$ 20 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./12.5' x 60.0+ $\emptyset$  10 4br.x2br./15.0' x 130.0+ $\emptyset$  10 4br.x2br./12.5' x 60.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N       | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|----------|---------|---------------|---------------|-------|
| 312  | 7    | -3816.8 | 3538.3   | -994.9  | 1.00          | 1.00          | 0.20  |
| 212  | 4    | -7518.9 | -12347.9 | -1491.8 | 12.26         | 2.11          | 0.72  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 0.85  | 15274.1  | 22658.8  | 13855.8  | 24606.0  | $\emptyset$ 10 4br.x2br./12.5' |
| 0.85   | 2.15  | 15274.1  | 18882.3  | 13855.8  | 20505.0  | $\emptyset$ 10 4br.x2br./15.0' |
| 2.15   | 2.75  | 15274.1  | 22658.8  | 13855.8  | 24606.0  | $\emptyset$ 10 4br.x2br./12.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo                     | Comb      | N [kg]  | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|--------------------------|-----------|---------|----------|----------|--------------------------------|
|                          |           |         |          |          |                                |
| <b>Combinazioni Rare</b> |           |         |          |          |                                |
| 312                      | Ft. 10    | -5283.4 | 543.2    | -884.0   | 107.28                         |
|                          | Fc. 10    | -5283.4 | 543.2    | -884.0   | -144.02                        |
|                          | ClSMax 10 | -5283.4 | 543.2    | -884.0   | -12.37                         |
|                          | ClSMed 10 | -5283.4 | 543.2    | -884.0   | -4.26                          |
| 212                      | Ft. 10    | -6633.4 | -533.6   | 653.9    | 58.39                          |
|                          | Fc. 10    | -6633.4 | -533.6   | 653.9    | -129.90                        |
|                          | ClSMax 10 | -6633.4 | -533.6   | 653.9    | -10.85                         |
|                          | ClSMed 10 | -6633.4 | -533.6   | 653.9    | -4.04                          |

**- Pilastro: 113/13 / L 2.21[m] / Sezione 1 B 30 [cm]H 60 [cm]**

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 1 $\emptyset$ 24 x 2 B + 4 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./5.0' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|--------|---------------|---------------|-------|
| 113  | 5    | -22155.9 | 26236.2  | 3007.8 | 110.13        | 6.01          | 0.50  |
| 13   | 5    | -23640.9 | -26236.2 | 3007.8 | 27.82         | 1.82          | 0.50  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe |
|--------|-------|----------|----------|----------|----------|--------|
|        |       |          |          |          |          |        |

|      |      |         |         |         |         |                     |
|------|------|---------|---------|---------|---------|---------------------|
| 0.25 | 2.46 | 52935.8 | 61515.1 | 11748.1 | 56647.0 | ø 10 2br.x4br./5.0' |
|------|------|---------|---------|---------|---------|---------------------|

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 113 | Ft. 10    | -27236.6 | -707.3 | 2589.0 | 110.86  |
|     | Fc. 10    | -27236.6 | -707.3 | 2589.0 | -374.34 |
|     | ClSMax 10 | -27236.6 | -707.3 | 2589.0 | -32.29  |
|     | ClSMed 10 | -27236.6 | -707.3 | 2589.0 | -14.70  |
| 13  | Ft. 10    | -28721.6 | 404.6  | -785.6 | -84.62  |
|     | Fc. 10    | -28721.6 | 404.6  | -785.6 | -228.71 |
|     | ClSMax 10 | -28721.6 | 404.6  | -785.6 | -17.30  |
|     | ClSMed 10 | -28721.6 | 404.6  | -785.6 | -10.44  |

### - Pilastro: 213/113 / L 3.35[m] / Sezione 1 B 30 [cm]H 60 [cm]

Af: 14 ø 24 Af=63.33 [cm<sup>2</sup>] < 1ø24 x 4 V + 0ø24 x 2 B + 5ø24 x 2 H >

Staffe: ø 10 2br.x4br./12.5' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 213  | 1    | -16162.2 | -1286.8 | 7191.7   | 1.00          | 1.00          | 0.22  |
| 113  | 4    | -10494.0 | 26575.2 | -13089.7 | 20.30         | 8.29          | 0.81  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe               |
|-----------|----------|-------------|-------------|-------------|-------------|----------------------|
| 0.25      | 3.60     | 21002.2     | 24606.0     | 17357.8     | 22658.8     | ø 10 2br.x4br./12.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |          |        |         |         |
|-----|-----------|----------|--------|---------|---------|
| 213 | Ft. 10    | -11921.5 | -990.4 | 5236.8  | 696.36  |
|     | Fc. 10    | -11921.5 | -990.4 | 5236.8  | -499.81 |
|     | ClSMax 10 | -11921.5 | -990.4 | 5236.8  | -51.77  |
|     | ClSMed 10 | -11921.5 | -990.4 | 5236.8  | -23.04  |
| 113 | Ft. 10    | -13654.0 | 919.2  | -4484.1 | 550.95  |
|     | Fc. 10    | -13654.0 | 919.2  | -4484.1 | -451.98 |
|     | ClSMax 10 | -13654.0 | 919.2  | -4484.1 | -45.50  |
|     | ClSMed 10 | -13654.0 | 919.2  | -4484.1 | -20.19  |

**- Pilastro: 114/14 / L 2.39[m] / Sezione 5 B 30 [cm]H 70 [cm]**

Af: 12  $\emptyset$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 0 $\emptyset$ 24 x 2 B + 4 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./10.0' x 239.4

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|----------|---------------|---------------|-------|
| 114  | 5    | -39134.9 | -15442.9 | -23631.5 | 69.51         | 8.37          | 0.93  |
| 14   | 5    | -40867.4 | -15442.9 | 23631.5  | 9.70          | 7.62          | 0.93  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 2.64  | 15252.8  | 36289.5  | 25797.3  | 28323.5  | $\emptyset$ 10 2br.x4br./10.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 114 | Ft. 10    | -48029.5 | -741.5 | -949.0 | -159.81 |
|     | Fc. 10    | -48029.5 | -741.5 | -949.0 | -334.61 |
|     | ClsMax 10 | -48029.5 | -741.5 | -949.0 | -24.60  |
|     | ClsMed 10 | -48029.5 | -741.5 | -949.0 | -16.48  |
| 14  | Ft. 10    | -49762.0 | 250.9  | 327.3  | -226.17 |
|     | Fc. 10    | -49762.0 | 250.9  | 327.3  | -286.09 |
|     | ClsMax 10 | -49762.0 | 250.9  | 327.3  | -19.86  |
|     | ClsMed 10 | -49762.0 | 250.9  | 327.3  | -17.08  |

**- Pilastro: 214/114 / L 3.35[m] / Sezione 5 B 30 [cm]H 70 [cm] NON VERIFICATO**

Af: 16  $\emptyset$  24 Af=72.38 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 1 $\emptyset$ 24 x 2 B + 5 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./12.5' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 214  | 2    | -16277.1 | -1424.1  | -4676.5 | 1.00          | 1.00          | 0.13  |
| 114  | 9    | -20443.8 | -12205.7 | 39262.9 | 5.93          | 52.06         | 1.30  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 3.60  | 17821.8  | 29031.6  | 22449.0  | 22658.8  | $\emptyset$ 10 2br.x4br./12.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 214                      | Ft. 10    | -22157.7  | -505.4      | -1836.0     | 39.92                             |
|                          | Fc. 10    | -22157.7  | -505.4      | -1836.0     | -236.48                           |
|                          | ClSMax 10 | -22157.7  | -505.4      | -1836.0     | -19.94                            |
|                          | ClSMed 10 | -22157.7  | -505.4      | -1836.0     | -9.23                             |
| 114                      | Ft. 10    | -24179.0  | 760.0       | 1575.3      | 10.93                             |
|                          | Fc. 10    | -24179.0  | 760.0       | 1575.3      | -235.53                           |
|                          | ClSMax 10 | -24179.0  | 760.0       | 1575.3      | -19.21                            |
|                          | ClSMed 10 | -24179.0  | 760.0       | 1575.3      | -8.60                             |

### - Pilastro: 15/115 / L 2.39[m] / Sezione 5 B 30 [cm]H 70 [cm]

Af: 16  $\phi$  24 Af=72.38 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 1 $\phi$ 24 x 2 B + 5 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 2br.x4br./7.5' x 239.4

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 15   | 8    | -46282.1 | -9482.1 | -30330.4 | 1.00          | 62.62         | 0.93  |
| 115  | 8    | -44549.6 | 7241.3  | 30330.4  | 4.54          | 97.67         | 0.93  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                   |
|-----------|----------|-------------|-------------|-------------|-------------|--------------------------|
| 0.66      | 3.05     | 22466.2     | 48385.9     | 31164.5     | 37764.6     | $\phi$ 10 2br.x4br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 15                       | Ft. 10    | -48898.7  | -727.7      | -26.3       | -204.59                           |
|                          | Fc. 10    | -48898.7  | -727.7      | -26.3       | -255.89                           |
|                          | ClSMax 10 | -48898.7  | -727.7      | -26.3       | -17.38                            |
|                          | ClSMed 10 | -48898.7  | -727.7      | -26.3       | -15.35                            |
| 115                      | Ft. 10    | -47166.2  | 7.2         | -86.7       | -216.70                           |
|                          | Fc. 10    | -47166.2  | 7.2         | -86.7       | -227.47                           |
|                          | ClSMax 10 | -47166.2  | 7.2         | -86.7       | -15.34                            |
|                          | ClSMed 10 | -47166.2  | 7.2         | -86.7       | -14.81                            |

**- Pilastro: 16/116 / L 2.39[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\emptyset$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 0 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./10.0' x 239.4

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|----------|---------------|---------------|-------|
| 16   | 4    | -31803.8 | 10499.0  | -12575.9 | 3.26          | 29.54         | 0.53  |
| 116  | 4    | -30318.8 | -10499.0 | -12575.9 | 3.11          | 53.74         | 0.53  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.66   | 3.05  | 26027.9  | 28323.5  | 21916.8  | 30757.5  | $\emptyset$ 10 4br.x2br./10.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 16  | Ft. 10    | -42343.7 | 399.9  | -360.1 | -197.87 |
|     | Fc. 10    | -42343.7 | 399.9  | -360.1 | -288.04 |
|     | ClSMax 10 | -42343.7 | 399.9  | -360.1 | -20.36  |
|     | ClSMed 10 | -42343.7 | 399.9  | -360.1 | -16.20  |
| 116 | Ft. 10    | -40858.7 | -896.6 | -82.7  | -168.31 |
|     | Fc. 10    | -40858.7 | -896.6 | -82.7  | -300.56 |
|     | ClSMax 10 | -40858.7 | -896.6 | -82.7  | -22.16  |
|     | ClSMed 10 | -40858.7 | -896.6 | -82.7  | -15.63  |

**- Pilastro: 216/116 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\emptyset$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 0 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./15.0' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 216  | 2    | -18819.8 | 14131.2  | 19277.9 | 3.71          | 25.33         | 0.78  |
| 116  | 9    | -26546.8 | -13688.3 | -7289.3 | 17.31         | 1.81          | 0.55  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 3.60  | 14256.9  | 18882.3  | 15115.9  | 20505.0  | $\emptyset$ 10 4br.x2br./15.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 216                      | Ft. 10    | -25214.9  | 1407.9      | -187.2      | -37.90                            |
|                          | Fc. 10    | -25214.9  | 1407.9      | -187.2      | -251.38                           |
|                          | ClSMax 10 | -25214.9  | 1407.9      | -187.2      | -20.13                            |
|                          | ClSMed 10 | -25214.9  | 1407.9      | -187.2      | -9.77                             |
| 116                      | Ft. 10    | -26947.4  | -1289.4     | 273.4       | -52.07                            |
|                          | Fc. 10    | -26947.4  | -1289.4     | 273.4       | -257.16                           |
|                          | ClSMax 10 | -26947.4  | -1289.4     | 273.4       | -20.30                            |
|                          | ClSMed 10 | -26947.4  | -1289.4     | 273.4       | -10.31                            |

**- Pilastro: 316/216 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\phi$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 0 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./7.5' x 250.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N       | Mx       | My     | $a_{12}$ | $a_{13}$ | Sd/Sr |
|------|------|---------|----------|--------|----------|----------|-------|
| 316  | 4    | -7191.7 | 3439.3   | -49.8  | 1.00     | 1.00     | 0.12  |
| 216  | 9    | -9292.3 | -17139.0 | 4681.6 | 10.04    | 4.03     | 0.73  |

**- Verifiche a Taglio**

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                   |
|-----------|----------|-------------|-------------|-------------|-------------|--------------------------|
| 0.25      | 2.75     | 23095.0     | 37764.6     | 15112.8     | 41010.0     | $\phi$ 10 4br.x2br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 316                      | Ft. 10    | -7043.5   | 1337.5      | 340.0       | 144.96                            |
|                          | Fc. 10    | -7043.5   | 1337.5      | 340.0       | -164.58                           |
|                          | ClSMax 10 | -7043.5   | 1337.5      | 340.0       | -15.64                            |
|                          | ClSMed 10 | -7043.5   | 1337.5      | 340.0       | -6.89                             |
| 216                      | Ft. 10    | -8393.5   | -1480.1     | -40.7       | 126.58                            |
|                          | Fc. 10    | -8393.5   | -1480.1     | -40.7       | -161.53                           |
|                          | ClSMax 10 | -8393.5   | -1480.1     | -40.7       | -15.51                            |
|                          | ClSMed 10 | -8393.5   | -1480.1     | -40.7       | -7.64                             |

**- Pilastro: 17/117 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./7.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|---------|---------------|---------------|-------|
| 17   | 4    | -26933.7 | -22152.6 | -6478.8 | 1537.97       | 1.00          | 0.81  |
| 117  | 4    | -25448.7 | -22152.6 | 4205.7  | 121.03        | 1.35          | 0.79  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.83   | 3.05  | 28050.1  | 37764.6  | 18533.4  | 41010.0  | $\emptyset$ 10 4br.x2br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |        |         |
|-----|-----------|----------|--------|--------|---------|
| 17  | Ft. 10    | -20713.2 | 68.8   | -126.3 | -102.72 |
|     | Fc. 10    | -20713.2 | 68.8   | -126.3 | -123.25 |
|     | ClSMax 10 | -20713.2 | 68.8   | -126.3 | -8.45   |
|     | ClSMed 10 | -20713.2 | 68.8   | -126.3 | -7.53   |
| 117 | Ft. 10    | -19228.2 | -243.4 | 372.9  | -71.80  |
|     | Fc. 10    | -19228.2 | -243.4 | 372.9  | -137.97 |
|     | ClSMax 10 | -19228.2 | -243.4 | 372.9  | -9.98   |
|     | ClSMed 10 | -19228.2 | -243.4 | 372.9  | -6.99   |

**- Pilastro: 217/117 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 4 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./7.5' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|----------|---------------|---------------|-------|
| 217  | 5    | -13472.5 | 18351.5  | -10216.8 | 21.19         | 2.71          | 0.72  |
| 117  | 5    | -15205.0 | -13773.4 | 5288.0   | 17.51         | 1.63          | 0.51  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.25   | 3.60  | 18557.6  | 37764.6  | 25179.5  | 41010.0  | $\emptyset$ 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 217                      | Ft. 10   | -10470.9  | -207.8      | -993.8      | 1.06                              |
|                          | Fc. 10   | -10470.9  | -207.8      | -993.8      | -115.05                           |
|                          | ClMax 10 | -10470.9  | -207.8      | -993.8      | -8.74                             |
|                          | ClMed 10 | -10470.9  | -207.8      | -993.8      | -3.94                             |
| 117                      | Ft. 10   | -12203.4  | 273.2       | 716.6       | -16.47                            |
|                          | Fc. 10   | -12203.4  | 273.2       | 716.6       | -116.66                           |
|                          | ClMax 10 | -12203.4  | 273.2       | 716.6       | -8.82                             |
|                          | ClMed 10 | -12203.4  | 273.2       | 716.6       | -4.44                             |

### - Pilastro: 317/217 / L 2.50[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 12  $\phi$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 3 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./10.0' x 250.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N       | Mx      | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|---------|---------------|---------------|-------|
| 317  | 7    | -4183.4 | 2517.9  | -1241.9 | 1.00          | 1.00          | 0.11  |
| 217  | 4    | -4210.0 | 22238.4 | -2505.0 | 88.10         | 2.23          | 0.98  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                    |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------------|
| 0.25      | 2.75     | 19446.5     | 28323.5     | 25649.1     | 30757.5     | $\phi$ 10 4br.x2br./10.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb     | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|----------|-----------|-------------|-------------|-----------------------------------|
|                          |          |           |             |             |                                   |
| <b>Combinazioni Rare</b> |          |           |             |             |                                   |
| 317                      | Ft. 10   | -2102.3   | 149.8       | -762.3      | 63.71                             |
|                          | Fc. 10   | -2102.3   | 149.8       | -762.3      | -67.61                            |
|                          | ClMax 10 | -2102.3   | 149.8       | -762.3      | -5.71                             |
|                          | ClMed 10 | -2102.3   | 149.8       | -762.3      | -2.15                             |
| 217                      | Ft. 10   | -3452.3   | 10.8        | 544.2       | 8.05                              |
|                          | Fc. 10   | -3452.3   | 10.8        | 544.2       | -45.98                            |
|                          | ClMax 10 | -3452.3   | 10.8        | 544.2       | -3.44                             |
|                          | ClMed 10 | -3452.3   | 10.8        | 544.2       | -1.68                             |

**- Pilastro: 118/18 / L 2.21[m] / Sezione 1 B 30 [cm]H 60 [cm]**

Af: 10  $\emptyset$  20 Af=31.42 [cm<sup>2</sup>] < 1 $\emptyset$ 20 x 4 V + 0 $\emptyset$ 20 x 2 B + 3 $\emptyset$ 20 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./10.0' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx       | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|----------|--------|---------------|---------------|-------|
| 118  | 2    | -16373.2 | -10833.1 | 2724.8 | 42.71         | 8.44          | 0.38  |
| 18   | 2    | -17858.2 | 10833.1  | 2724.8 | 4.37          | 1.47          | 0.38  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 2.46  | 28370.0  | 30757.5  | 20225.9  | 28323.5  | $\emptyset$ 10 2br.x4br./10.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |       |        |         |
|-----|-----------|----------|-------|--------|---------|
| 118 | Ft. 10    | -22624.6 | 297.2 | 2525.3 | 184.91  |
|     | Fc. 10    | -22624.6 | 297.2 | 2525.3 | -400.04 |
|     | ClSMax 10 | -22624.6 | 297.2 | 2525.3 | -35.42  |
|     | ClSMed 10 | -22624.6 | 297.2 | 2525.3 | -16.82  |
| 18  | Ft. 10    | -24109.6 | 788.7 | -875.8 | -43.18  |
|     | Fc. 10    | -24109.6 | 788.7 | -875.8 | -275.27 |
|     | ClSMax 10 | -24109.6 | 788.7 | -875.8 | -21.19  |
|     | ClSMed 10 | -24109.6 | 788.7 | -875.8 | -10.62  |

**- Pilastro: 218/118 / L 3.35[m] / Sezione 1 B 30 [cm]H 60 [cm]**

Af: 10  $\emptyset$  20 Af=31.42 [cm<sup>2</sup>] < 1 $\emptyset$ 20 x 4 V + 0 $\emptyset$ 20 x 2 B + 3 $\emptyset$ 20 x 2 H >

Staffe:  $\emptyset$  10 2br.x4br./12.5' x 60.0+ $\emptyset$  10 2br.x4br./15.0' x 215.0+ $\emptyset$  10 2br.x4br./12.5' x 60.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 218  | 1    | -12689.4 | 1106.9  | 6102.1   | 1.00          | 1.00          | 0.36  |
| 118  | 4    | -8633.8  | -6541.5 | -12932.3 | 8.34          | 10.23         | 0.90  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 0.85  | 6984.3   | 24606.0  | 11808.7  | 22658.8  | $\emptyset$ 10 2br.x4br./12.5' |
| 0.85   | 3.00  | 6984.3   | 20505.0  | 11808.7  | 18882.3  | $\emptyset$ 10 2br.x4br./15.0' |

|      |      |        |         |         |         |                      |
|------|------|--------|---------|---------|---------|----------------------|
| 3.00 | 3.60 | 6984.3 | 24606.0 | 11808.7 | 22658.8 | ø 10 2br.x4br./12.5' |
|------|------|--------|---------|---------|---------|----------------------|

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |          |        |         |         |
|-----|-----------|----------|--------|---------|---------|
| 218 | Ft. 10    | -9410.6  | 839.2  | 4490.2  | 1132.05 |
|     | Fc. 10    | -9410.6  | 839.2  | 4490.2  | -558.61 |
|     | ClsMax 10 | -9410.6  | 839.2  | 4490.2  | -62.07  |
|     | ClsMed 10 | -9410.6  | 839.2  | 4490.2  | -27.59  |
| 118 | Ft. 10    | -11143.1 | -972.4 | -4024.8 | 957.98  |
|     | Fc. 10    | -11143.1 | -972.4 | -4024.8 | -542.78 |
|     | ClsMax 10 | -11143.1 | -972.4 | -4024.8 | -57.82  |
|     | ClsMed 10 | -11143.1 | -972.4 | -4024.8 | -25.09  |

### - Pilastro: 19/119 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 14 ø 24 Af=63.33 [cm<sup>2</sup>] < 1ø24 x 4 V + 4ø24 x 2 B + 1ø24 x 2 H >

Staffe: ø 10 6br.x2br./5.0' x 221.5

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $a_{12}$ | $a_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|----------|----------|-------|
| 19   | 9    | -37890.6 | -1867.2 | 50791.9  | 1.16     | 18.87    | 0.93  |
| 119  | 9    | -36405.6 | 1867.2  | -50791.9 | 1.63     | 87.01    | 0.93  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe              |
|-----------|----------|-------------|-------------|-------------|-------------|---------------------|
| 0.83      | 3.05     | 5683.8      | 56892.7     | 54642.5     | 61515.1     | ø 10 6br.x2br./5.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo | Comb | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|------|-----------|-------------|-------------|-----------------------------------|
|      |      |           |             |             |                                   |
|      |      |           |             |             |                                   |

#### Combinazioni Rare

|     |           |          |       |        |         |
|-----|-----------|----------|-------|--------|---------|
| 19  | Ft. 10    | -42536.2 | 22.5  | -631.4 | -203.00 |
|     | Fc. 10    | -42536.2 | 22.5  | -631.4 | -261.03 |
|     | ClsMax 10 | -42536.2 | 22.5  | -631.4 | -17.82  |
|     | ClsMed 10 | -42536.2 | 22.5  | -631.4 | -15.47  |
| 119 | Ft. 10    | -41051.2 | 549.8 | 1496.9 | -120.71 |
|     | Fc. 10    | -41051.2 | 549.8 | 1496.9 | -327.11 |
|     | ClsMax 10 | -41051.2 | 549.8 | 1496.9 | -23.95  |
|     | ClsMed 10 | -41051.2 | 549.8 | 1496.9 | -14.93  |

**- Pilastro: 219/119 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 14  $\emptyset$  24 Af=63.33 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 1 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./7.5' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|---------|---------------|---------------|-------|
| 219  | 4    | -13947.6 | 341.8   | -8815.9 | 1.00          | 1.00          | 0.15  |
| 119  | 8    | -16632.9 | -2430.0 | 32608.1 | 1.92          | 21.08         | 0.62  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.25   | 3.60  | 16687.3  | 37764.6  | 36197.8  | 41010.0  | $\emptyset$ 10 4br.x2br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |        |         |         |
|-----|-----------|----------|--------|---------|---------|
| 219 | Ft. 10    | -18022.6 | 410.7  | -3125.5 | 96.13   |
|     | Fc. 10    | -18022.6 | 410.7  | -3125.5 | -275.78 |
|     | ClsMax 10 | -18022.6 | 410.7  | -3125.5 | -21.54  |
|     | ClsMed 10 | -18022.6 | 410.7  | -3125.5 | -9.18   |
| 119 | Ft. 10    | -19755.1 | -687.1 | 2487.9  | 62.63   |
|     | Fc. 10    | -19755.1 | -687.1 | 2487.9  | -271.08 |
|     | ClsMax 10 | -19755.1 | -687.1 | 2487.9  | -21.34  |
|     | ClsMed 10 | -19755.1 | -687.1 | 2487.9  | -8.55   |

**- Pilastro: 20/120 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 12  $\emptyset$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\emptyset$ 24 x 4 V + 4 $\emptyset$ 24 x 2 B + 0 $\emptyset$ 24 x 2 H >

Staffe:  $\emptyset$  10 6br.x2br./5.0' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 20   | 6    | -31998.8 | -1579.0 | -44239.8 | 1.16          | 134.52        | 0.97  |
| 120  | 6    | -30513.8 | 1579.0  | 44239.8  | 2.37          | 200.94        | 0.97  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.83   | 3.05  | 4996.3   | 56892.7  | 46863.0  | 61515.1  | $\emptyset$ 10 6br.x2br./5.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 20                       | Ft. 10    | -35183.8  | 220.0       | -649.9      | -155.28                           |
|                          | Fc. 10    | -35183.8  | 220.0       | -649.9      | -248.47                           |
|                          | ClSMax 10 | -35183.8  | 220.0       | -649.9      | -17.49                            |
|                          | ClSMed 10 | -35183.8  | 220.0       | -649.9      | -13.46                            |
| 120                      | Ft. 10    | -33698.8  | 94.9        | 405.8       | -167.20                           |
|                          | Fc. 10    | -33698.8  | 94.9        | 405.8       | -219.50                           |
|                          | ClSMax 10 | -33698.8  | 94.9        | 405.8       | -15.11                            |
|                          | ClSMed 10 | -33698.8  | 94.9        | 405.8       | -12.89                            |

### - Pilastro: 220/120 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 12  $\phi$  24 Af=54.29 [cm<sup>2</sup>] < 1 $\phi$ 24 x 4 V + 3 $\phi$ 24 x 2 B + 1 $\phi$ 24 x 2 H >

Staffe:  $\phi$  10 4br.x2br./7.5' x 335.0

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 220  | 4    | -12336.3 | 310.2   | -6907.0  | 1.00          | 1.00          | 0.13  |
| 120  | 8    | -14602.9 | -2626.2 | -44223.0 | 2.31          | 174.21        | 0.93  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                   |
|-----------|----------|-------------|-------------|-------------|-------------|--------------------------|
| 0.25      | 3.60     | 8805.6      | 37764.6     | 33630.2     | 41010.0     | $\phi$ 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 220                      | Ft. 10    | -15210.6  | 387.2       | -84.3       | -54.86                            |
|                          | Fc. 10    | -15210.6  | 387.2       | -84.3       | -119.68                           |
|                          | ClSMax 10 | -15210.6  | 387.2       | -84.3       | -8.98                             |
|                          | ClSMed 10 | -15210.6  | 387.2       | -84.3       | -5.82                             |
| 120                      | Ft. 10    | -16943.1  | -371.1      | 92.5        | -65.63                            |
|                          | Fc. 10    | -16943.1  | -371.1      | 92.5        | -128.80                           |
|                          | ClSMax 10 | -16943.1  | -371.1      | 92.5        | -9.56                             |
|                          | ClSMed 10 | -16943.1  | -371.1      | 92.5        | -6.48                             |

**- Pilastro: 21/121 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 10  $\emptyset$  20 Af=31.42 [cm<sup>2</sup>] < 1 $\emptyset$ 20 x 4 V + 2 $\emptyset$ 20 x 2 B + 1 $\emptyset$ 20 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./7.5' x 221.5

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N        | Mx      | My       | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|----------|---------|----------|---------------|---------------|-------|
| 21   | 9    | -28636.8 | -2445.6 | 14604.5  | 1.00          | 5.79          | 0.42  |
| 121  | 9    | -27151.8 | 1997.3  | -14604.5 | 1.68          | 28.65         | 0.41  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                        |
|--------|-------|----------|----------|----------|----------|-------------------------------|
| 0.83   | 3.05  | 7288.7   | 37764.6  | 38549.9  | 41010.0  | $\emptyset$ 10 4br.x2br./7.5' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |          |       |        |         |
|-----|-----------|----------|-------|--------|---------|
| 21  | Ft. 10    | -27537.8 | 170.9 | -858.6 | -122.58 |
|     | Fc. 10    | -27537.8 | 170.9 | -858.6 | -241.16 |
|     | ClSMax 10 | -27537.8 | 170.9 | -858.6 | -17.11  |
|     | ClSMed 10 | -27537.8 | 170.9 | -858.6 | -12.12  |
| 121 | Ft. 10    | -26052.8 | 125.3 | 1699.5 | -73.40  |
|     | Fc. 10    | -26052.8 | 125.3 | 1699.5 | -270.72 |
|     | ClSMax 10 | -26052.8 | 125.3 | 1699.5 | -19.51  |
|     | ClSMed 10 | -26052.8 | 125.3 | 1699.5 | -11.47  |

**- Pilastro: 221/121 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af: 10  $\emptyset$  20 Af=31.42 [cm<sup>2</sup>] < 1 $\emptyset$ 20 x 4 V + 2 $\emptyset$ 20 x 2 B + 1 $\emptyset$ 20 x 2 H >

Staffe:  $\emptyset$  10 4br.x2br./15.0' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N       | Mx      | My      | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|---------|---------------|---------------|-------|
| 221  | 4    | -7255.2 | 589.5   | -9423.0 | 1.00          | 1.00          | 0.28  |
| 121  | 2    | -9060.8 | -5353.0 | 12199.4 | 7.77          | 1.55          | 0.54  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                         |
|--------|-------|----------|----------|----------|----------|--------------------------------|
| 0.25   | 3.60  | 9790.5   | 18882.3  | 19577.2  | 20505.0  | $\emptyset$ 10 4br.x2br./15.0' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 221                      | Ft. 10    | -11720.2  | 481.1       | -2917.6     | 232.69                            |
|                          | Fc. 10    | -11720.2  | 481.1       | -2917.6     | -313.14                           |
|                          | ClSMax 10 | -11720.2  | 481.1       | -2917.6     | -25.51                            |
|                          | ClSMed 10 | -11720.2  | 481.1       | -2917.6     | -10.01                            |
| 121                      | Ft. 10    | -13452.7  | -425.4      | 2472.0      | 127.18                            |
|                          | Fc. 10    | -13452.7  | -425.4      | 2472.0      | -275.89                           |
|                          | ClSMax 10 | -13452.7  | -425.4      | 2472.0      | -21.86                            |
|                          | ClSMed 10 | -13452.7  | -425.4      | 2472.0      | -8.77                             |

### - Pilastro: 22/122 / L 2.21[m] / Sezione 2 B 60 [cm]H 30 [cm]

Af: 8  $\phi$  20 Af=25.13 [cm<sup>2</sup>] < 1 $\phi$ 20 x 4 V + 1 $\phi$ 20 x 2 B + 1 $\phi$ 20 x 2 H >

Staffe:  $\phi$  10 4br.x2br./7.5' x 221.5

### - Verifiche a Presso-Flessione S.L.U.

| Nodo | Comb | N        | Mx      | My      | $a_{12}$ | $a_{13}$ | Sd/Sr |
|------|------|----------|---------|---------|----------|----------|-------|
| 22   | 7    | -14155.6 | -4699.6 | 5379.5  | 1.33     | 1.97     | 0.38  |
| 122  | 7    | -12670.6 | 4699.6  | -5379.5 | 1.75     | 5.12     | 0.39  |

### - Verifiche a Taglio

| Da<br>[m] | A<br>[m] | Vdx<br>[kg] | Vrx<br>[kg] | Vdy<br>[kg] | Vry<br>[kg] | Staffe                   |
|-----------|----------|-------------|-------------|-------------|-------------|--------------------------|
| 0.83      | 3.05     | 14234.9     | 37764.6     | 19556.9     | 41010.0     | $\phi$ 10 4br.x2br./7.5' |

### - Verifiche a Presso-Flessione S.L.E.

| Nodo                     | Comb      | N<br>[kg] | Mx<br>[kgm] | My<br>[kgm] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|--------------------------|-----------|-----------|-------------|-------------|-----------------------------------|
|                          |           |           |             |             |                                   |
| <b>Combinazioni Rare</b> |           |           |             |             |                                   |
| 22                       | Ft. 10    | -13343.3  | -27.3       | -275.3      | -74.93                            |
|                          | Fc. 10    | -13343.3  | -27.3       | -275.3      | -108.95                           |
|                          | ClSMax 10 | -13343.3  | -27.3       | -275.3      | -7.53                             |
|                          | ClSMed 10 | -13343.3  | -27.3       | -275.3      | -6.13                             |
| 122                      | Ft. 10    | -11858.3  | 393.3       | 532.1       | -17.14                            |
|                          | Fc. 10    | -11858.3  | 393.3       | 532.1       | -146.27                           |
|                          | ClSMax 10 | -11858.3  | 393.3       | 532.1       | -11.26                            |
|                          | ClSMed 10 | -11858.3  | 393.3       | 532.1       | -5.46                             |

**- Pilastro: 222/122 / L 3.35[m] / Sezione 2 B 60 [cm]H 30 [cm]**

Af:  $8 \phi 20$  Af=25.13 [cm<sup>2</sup>] <  $1\phi 20 \times 4 V + 1\phi 20 \times 2 B + 1\phi 20 \times 2 H$  >

Staffe:  $\phi 10$  4br.x2br./15.0' x 335.0

**- Verifiche a Presso-Flessione S.L.U.**

| Nodo | Comb | N       | Mx      | My     | $\alpha_{12}$ | $\alpha_{13}$ | Sd/Sr |
|------|------|---------|---------|--------|---------------|---------------|-------|
| 222  | 7    | -4491.1 | 4042.8  | 1227.5 | 1.00          | 1.00          | 0.33  |
| 122  | 4    | -9010.7 | -7667.2 | 5098.8 | 9.14          | 1.13          | 0.65  |

**- Verifiche a Taglio**

| Da [m] | A [m] | Vdx [kg] | Vrx [kg] | Vdy [kg] | Vry [kg] | Staffe                    |
|--------|-------|----------|----------|----------|----------|---------------------------|
| 0.25   | 3.60  | 7943.7   | 18882.3  | 12426.5  | 20505.0  | $\phi 10$ 4br.x2br./15.0' |

**- Verifiche a Presso-Flessione S.L.E.**

| Nodo | Comb | N [kg] | Mx [kgm] | My [kgm] | $\sigma$ [kg/cm <sup>2</sup> ] |
|------|------|--------|----------|----------|--------------------------------|
|      |      |        |          |          |                                |
|      |      |        |          |          |                                |

**Combinazioni Rare**

|     |           |         |        |        |         |
|-----|-----------|---------|--------|--------|---------|
| 222 | Ft. 10    | -4329.1 | 612.7  | -971.7 | 199.74  |
|     | Fc. 10    | -4329.1 | 612.7  | -971.7 | -177.78 |
|     | ClsMax 10 | -4329.1 | 612.7  | -971.7 | -16.18  |
|     | ClsMed 10 | -4329.1 | 612.7  | -971.7 | -5.51   |
| 122 | Ft. 10    | -6061.6 | -638.1 | 774.6  | 127.87  |
|     | Fc. 10    | -6061.6 | -638.1 | 774.6  | -167.65 |
|     | ClsMax 10 | -6061.6 | -638.1 | 774.6  | -14.70  |
|     | ClsMed 10 | -6061.6 | -638.1 | 774.6  | -5.36   |

**7.3. VERIFICHE TRAVI DI ELEVAZIONE**

**- Modalità di verifica**

Le travi vengono progettate-verificate a flessione retta e taglio nel piano longitudinale della trave sulla base dell'involuppo delle sollecitazioni, in conformità al *Decreto Legge del 26 Marzo 1980* e successivi aggiornamenti.

Viene comunque sempre predisposta l'armatura minima mentre gli sforzi di taglio vengono integralmente assorbiti dalle staffe.

Le operazioni di progetto-verifica vengono condotte, per ogni asta, in tre diverse sezioni e precisamente in corrispondenza dei fili esterni dei pilastri e della sezione in campata nella quale viene riscontrato il massimo momento positivo (negativo).

I momenti si intendono positivi se tendono le fibre di intradosso (inferiori).

Per quanto concerne il progetto e la verifica delle travi a taglio esse vengono condotte nel modo seguente:

- Si controlla se la trave necessita o meno di armatura aggiuntiva a taglio:
  1. Se non occorre armatura aggiuntiva a taglio si procede a disporre la staffatura minima di regolamento e la progettazione ha termine.
  2. Se occorre armatura aggiuntiva a taglio la staffatura viene progettata andando a suddividere la trave, a seconda del caso, in uno, tre o cinque conci:
    - due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione;
    - due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento
    - un restante (eventuale) concio di chiusura centrale.
- In ogni caso l'armatura a taglio si intende simmetrica rispetto alla mezzeria della trave e viene progettata considerando, rispetto alla mezzeria, la zona della trave più sollecitata.

Per quanto concerne le verifiche a taglio esse vengono condotte suddividendo la trave in cinque conci:

due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione; due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento; il restante (eventuale) concio di chiusura centrale.

L'armatura a taglio si intende simmetrica rispetto alla mezzeria della trave e viene progettata considerando, rispetto alla mezzeria, la zona della trave più sollecitata.

Simbologia utilizzata:

---

**Af Es.**

Area di ferro all'estradosso

---

**Af In.**

Area di ferro all'intradosso

---

**Sigb. Es.**

Tensione del calcestruzzo estradosso

---

**Sigb. In.**

Tensione del calcestruzzo intradosso

---

**Sigf. Es.**

Tensione dell'acciaio estradosso

---

**Sigf. In.**

Tensione dell'acciaio intradosso

## - Sezioni Impiegate: Trave

| Sezione Numero | Info  | Dimensioni          | Criterio | Calcestruzzo | $f_{cd}$<br>[kg/cm <sup>2</sup> ] | $T_{fd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{RARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{QP}$<br>[kg/cm <sup>2</sup> ] | Calcestruzzo Appoggi | $d_x$<br>[cm] | $f_{cd}$<br>[kg/cm <sup>2</sup> ] | $T_{fd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{RARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{QP}$<br>[kg/cm <sup>2</sup> ] | Acciaio | $f_{yd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{RARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{QP}$<br>[kg/cm <sup>2</sup> ] | Copri ferro Es [mm] | Copri ferro In [mm] |
|----------------|-------|---------------------|----------|--------------|-----------------------------------|-----------------------------------|--|--|--|----------------------|---------------|-----------------------------------|-----------------------------------|--|--|--|---------|-----------------------------------|--|--|--|---------------------|---------------------|
| 1              | Rett. | B 30 [cm] H 50 [cm] | Vertrav  | Rbk 300      | 141.10                            | 2.80                              | 149.40                                   | 249.00                                   | 112.05                                 |                      |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00               | 30.00               |
| 2              | Rett. | B 30 [cm] H 50 [cm] | Vertrav  | Rbk 300      | 141.10                            | 2.80                              | 149.40                                   | 249.00                                   | 112.05                                 |                      |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00               | 30.00               |
| 3              | Rett. | B 55 [cm] H 25 [cm] | Vertrav  | Rbk 300      | 141.10                            | 2.80                              | 149.40                                   | 249.00                                   | 112.05                                 |                      |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00               | 30.00               |
| 4              | Rett. | B 60 [cm] H 25 [cm] | Vertrav  | Rbk 300      | 141.10                            | 2.80                              | 149.40                                   | 249.00                                   | 112.05                                 |                      |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00               | 30.00               |
| 5              | Rett. | B 30 [cm] H 40 [cm] | Vertrav  | Rbk 300      | 141.10                            | 2.80                              | 149.40                                   | 249.00                                   | 112.05                                 |                      |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00               | 30.00               |

**EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio.  $\cotg \theta = 1.00$**

**Verifica a fessurazione indiretta**

**Fattore di sovraresistenza Travi  $\gamma_{R,d}=1.00$**

**Fattore di sovraresistenza Fondazioni  $\gamma_{R,d}=1.10$**

**- Verifiche Travate :**

**- Travata: 101 Travata 101 102 103 104 105**

| Nodo                                 | x [m] | A <sub>fe</sub> [cm <sup>2</sup> ] | A <sub>fi</sub> [cm <sup>2</sup> ] | q <sub>T</sub> [kg/m] | M <sub>rif</sub> [kgm] | M <sub>de</sub> [kgm] | M <sub>re</sub> [kgm] | x/d  | M <sub>di</sub> [kgm] | M <sub>ri</sub> [kgm] | x/d  | σ <sub>be</sub> [kg/cm <sup>2</sup> ] | σ <sub>bi</sub> [kg/cm <sup>2</sup> ] | σ <sub>fe</sub> [kg/cm <sup>2</sup> ] | σ <sub>fi</sub> [kg/cm <sup>2</sup> ] | W mm |
|--------------------------------------|-------|------------------------------------|------------------------------------|-----------------------|------------------------|-----------------------|-----------------------|------|-----------------------|-----------------------|------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|------|
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b> |       |                                    |                                    |                       |                        |                       |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 101                                  | 0.15  | 8.04                               | 8.04                               |                       |                        | 7289.3                | 13275.1               | 0.13 | -672.5                | 13275.1               | 0.13 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 5382.3                |                       |      | 0.0                   |                       |      | 0.00                                  | 46.52                                 | 1638.00                               | 461.16                                |      |
| Camp.                                | 2.92  | 8.04                               | 8.04                               | 4451.5                | 10015.9                | 0.0                   | 13275.1               | 0.13 | -10015.9              | 13275.1               | 0.13 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 0.0                   |                       |      | -7413.8               |                       |      | 64.08                                 | 0.00                                  | 635.21                                | 2256.24                               |      |
| 102                                  | 5.70  | 14.07                              | 14.33                              |                       |                        | 12821.1               | 22858.5               | 0.15 | 0.0                   | 23236.6               | 0.15 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 9514.3                |                       |      | 0.0                   |                       |      | 0.00                                  | 60.40                                 | 1676.08                               | 644.32                                |      |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b> |       |                                    |                                    |                       |                        |                       |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 102                                  | 0.30  | 14.07                              | 14.33                              |                       |                        | 8983.2                | 22858.5               | 0.15 | -352.2                | 23236.6               | 0.15 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 6742.9                |                       |      | 0.0                   |                       |      | 0.00                                  | 42.80                                 | 1187.86                               | 456.64                                |      |
| Camp.                                | 2.55  | 6.03                               | 6.28                               | 4263.5                | 6930.9                 | 0.0                   | 10055.3               | 0.12 | -6930.9               | 10417.4               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 0.0                   |                       |      | -5226.4               |                       |      | 52.04                                 | 0.00                                  | 494.30                                | 2032.68                               |      |
| 103                                  | 4.80  | 12.06                              | 12.57                              |                       |                        | 9733.5                | 19631.3               | 0.14 | 0.0                   | 20384.3               | 0.15 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 4899.3                |                       |      | 0.0                   |                       |      | 0.00                                  | 33.87                                 | 1004.76                               | 348.12                                |      |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b> |       |                                    |                                    |                       |                        |                       |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 103                                  | 0.30  | 12.06                              | 12.57                              |                       |                        | 3423.8                | 19631.3               | 0.14 | -2385.1               | 20384.3               | 0.15 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 2622.3                |                       |      | 0.0                   |                       |      | 0.00                                  | 18.13                                 | 537.78                                | 186.32                                |      |
| Camp.                                | 2.45  | 6.03                               | 6.28                               | 1592.5                | 2389.7                 | 0.0                   | 10055.3               | 0.12 | -2389.7               | 10417.4               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 0.0                   |                       |      | -1838.3               |                       |      | 18.30                                 | 0.00                                  | 173.86                                | 714.95                                |      |
| 104                                  | 4.60  | 6.03                               | 6.28                               |                       |                        | 6177.8                | 10055.3               | 0.12 | 0.0                   | 10417.4               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 1576.5                |                       |      | 0.0                   |                       |      | 0.00                                  | 15.80                                 | 635.51                                | 144.79                                |      |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b> |       |                                    |                                    |                       |                        |                       |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 104                                  | 0.30  | 6.03                               | 6.28                               |                       |                        | 1459.8                | 10055.3               | 0.12 | -4274.8               | 10417.4               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 1127.4                |                       |      | 0.0                   |                       |      | 0.00                                  | 11.30                                 | 454.47                                | 103.54                                |      |
| Camp.                                | 1.15  | 6.03                               | 6.28                               | 4263.5                | 1409.6                 | 944.4                 | 10055.3               | 0.12 | -1409.6               | 10417.4               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 0.0                   |                       |      | -1063.0               |                       |      | 10.58                                 | 0.00                                  | 100.53                                | 413.41                                |      |
| 105                                  | 2.00  | 5.13                               | 5.92                               |                       |                        | 6650.4                | 8622.7                | 0.11 | -2.3                  | -9843.3               | 0.12 |                                       |                                       |                                       |                                       |      |
|                                      |       |                                    |                                    |                       | S.L.E. Rare            | 604.2                 |                       |      | 0.0                   |                       |      | 0.00                                  | 6.49                                  | 242.35                                | 53.63                                 |      |

| Da [m]                                       | A [m] | Dx [m] | V <sub>Sd</sub> [kg] | V <sub>rdc</sub> [kg] | VR <sub>dmax</sub> [kg] | V <sub>rd<sub>s</sub></sub> [kg] | T <sub>Sd</sub> [kgm] | Trd1 [kgm] | Trd2 [kgm] | Staffe         |
|--|-------|--------|----------------------|-----------------------|-------------------------|----------------------------------|-----------------------|------------|------------|----------------|
| <b>Trave 101 102 Sez. 1 Rett. 30x50 [cm]</b> |       |        |                      |                       |                         |                                  |                       |            |            |                |
| 0.15   | 0.64  | 0.49   | 14293.6              | 6675.3                | 43430.6                 | 16144.4                          | 203.4                 | 5253.0     | 3296.1     | ø 8 2br. 10.0' |
| 0.64   | 1.75  | 1.11   | 12903.6              | 6675.3                | 43430.6                 | 12915.5                          | 203.4                 | 5253.0     | 2636.9     | ø 8 2br. 12.5' |
| 1.75   | 3.96  | 2.21   | 9736.8               | 6675.3                | 43430.6                 | 10762.9                          | 203.4                 | 5253.0     | 2197.4     | ø 8 2br. 15.0' |
| 3.96   | 5.07  | 1.11   | 12835.4              | 6675.3                | 43430.6                 | 12915.5                          | 203.4                 | 5253.0     | 2636.9     | ø 8 2br. 12.5' |
| 5.07   | 5.55  | 0.49   | 14225.5              | 8066.5                | 43430.6                 | 16144.4                          | 203.4                 | 5253.0     | 3296.1     | ø 8 2br. 10.0' |

| <b>Trave 102 103 Sez. 1 Rett. 30x50 [cm]</b> |      |      |  |         |        |  |         |         |  |       |        |        |                |
|--|------|------|--|---------|--------|--|---------|---------|--|-------|--------|--------|----------------|
| 0.44   | 4.66 | 4.22 |  | 16619.9 | 6148.0 |  | 43430.6 | 21525.8 |  | 157.0 | 5253.0 | 4394.8 | ø 8 2br. 7.5'  |
| <b>Trave 103 104 Sez. 1 Rett. 30x50 [cm]</b> |      |      |  |         |        |  |         |         |  |       |        |        |                |
| 0.44   | 0.91 | 0.47 |  | 9805.6  | 7739.4 |  | 43430.6 | 16144.4 |  | 268.1 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| 0.91   | 3.99 | 3.08 |  | 9241.2  | 6148.0 |  | 43430.6 | 12915.5 |  | 268.1 | 5253.0 | 2636.9 | ø 8 2br. 12.5' |
| 3.99   | 4.46 | 0.47 |  | 9896.5  | 6148.0 |  | 43430.6 | 16144.4 |  | 268.1 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| <b>Trave 104 105 Sez. 1 Rett. 30x50 [cm]</b> |      |      |  |         |        |  |         |         |  |       |        |        |                |
| 0.43   | 1.87 | 1.45 |  | 14626.1 | 6027.8 |  | 43430.6 | 21525.8 |  | 389.2 | 5253.0 | 4394.8 | ø 8 2br. 7.5'  |

## - Travata: 102 Travata 108 109 110 111 112

| Nodo                                 | x    | A <sub>fe</sub>    | A <sub>fi</sub>    | q <sub>T</sub> | M <sub>rif</sub> | M <sub>de</sub> | M <sub>re</sub> | x/d  | M <sub>di</sub> | M <sub>ri</sub> | x/d  | σ <sub>be</sub>       | σ <sub>bi</sub>       | σ <sub>fe</sub>       | σ <sub>fi</sub>       | w  |
|--------------------------------------|------|--------------------|--------------------|----------------|------------------|-----------------|-----------------|------|-----------------|-----------------|------|-----------------------|-----------------------|-----------------------|-----------------------|----|
|                                      | [m]  | [cm <sup>2</sup> ] | [cm <sup>2</sup> ] | [kg/m]         | [kgm]            | [kgm]           | [kgm]           |      | [kgm]           | [kgm]           |      | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | mm |
| <b>Trave Sez. 2 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |      |                       |                       |                       |                       |    |
| 108                                  | 0.15 | 8.04               | 9.42               |                |                  | 8893.2          | 13251.5         | 0.13 | -209.3          | 15401.8         | 0.14 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 6447.1          |                 |      | 0.0             |                 |      | 0.00                  | 54.36                 | 1962.56               | 521.72                |    |
| Camp.                                | 3.00 | 8.04               | 9.42               | 4776.0         | 10746.0          | 0.0             | 13251.5         | 0.13 | -10746.0        | 15401.8         | 0.14 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | -7830.0         |                 |      | 64.62                 | 0.00                  | 661.58                | 2054.70               |    |
| 109                                  | 5.85 | 14.07              | 15.71              |                |                  | 12706.5         | 22823.0         | 0.15 | 0.0             | 25353.2         | 0.16 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 9318.1          |                 |      | 0.0             |                 |      | 0.00                  | 57.86                 | 1641.07               | 602.65                |    |
| <b>Trave Sez. 2 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |      |                       |                       |                       |                       |    |
| 109                                  | 0.15 | 14.07              | 15.71              |                |                  | 9883.2          | 22823.0         | 0.15 | 0.0             | 25353.2         | 0.16 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 7311.4          |                 |      | 0.0             |                 |      | 0.00                  | 45.40                 | 1287.66               | 472.87                |    |
| Camp.                                | 2.55 | 6.03               | 6.28               | 4487.5         | 7295.0           | 0.0             | 10055.3         | 0.12 | -7295.0         | 10417.4         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | -5454.0         |                 |      | 54.31                 | 0.00                  | 515.83                | 2121.20               |    |
| 110                                  | 4.95 | 12.06              | 12.57              |                |                  | 8037.8          | 19631.3         | 0.14 | 0.0             | 20384.3         | 0.15 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 5532.2          |                 |      | 0.0             |                 |      | 0.00                  | 38.25                 | 1134.55               | 393.09                |    |
| <b>Trave Sez. 2 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |      |                       |                       |                       |                       |    |
| 110                                  | 0.15 | 12.06              | 12.57              |                |                  | 7835.7          | 19631.3         | 0.14 | 0.0             | 20384.3         | 0.15 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 5867.4          |                 |      | 0.0             |                 |      | 0.00                  | 40.56                 | 1203.30               | 416.91                |    |
| Camp.                                | 2.45 | 6.03               | 6.28               | 4487.5         | 6734.1           | 0.0             | 10055.3         | 0.12 | -6734.1         | 10417.4         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | -5034.6         |                 |      | 50.13                 | 0.00                  | 476.16                | 1958.09               |    |
| 111                                  | 4.75 | 6.03               | 6.28               |                |                  | 6132.9          | 10055.3         | 0.12 | 0.0             | 10417.4         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 4336.2          |                 |      | 0.0             |                 |      | 0.00                  | 43.47                 | 1748.02               | 398.25                |    |
| <b>Trave Sez. 2 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |      |                       |                       |                       |                       |    |
| 111                                  | 0.15 | 6.03               | 6.28               |                |                  | 3367.2          | 10055.3         | 0.12 | -202.2          | 10417.4         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 2550.0          |                 |      | 0.0             |                 |      | 0.00                  | 25.56                 | 1027.95               | 234.20                |    |
| Camp.                                | 1.07 | 6.03               | 6.28               | 4487.5         | 1483.7           | 2061.4          | 10055.3         | 0.12 | -1483.7         | 10417.4         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | -1109.2         |                 |      | 11.05                 | 0.00                  | 104.91                | 431.42                |    |
| 112                                  | 2.00 | 5.13               | 5.92               |                |                  | 5819.1          | 8622.7          | 0.11 | -231.5          | -9843.3         | 0.12 |                       |                       |                       |                       |    |
|                                      |      |                    |                    |                | S.L.E. Rare      | 715.6           |                 |      | 0.0             |                 |      | 0.00                  | 7.68                  | 287.05                | 63.52                 |    |

| Da   | A    | Dx   | VSd     | Vrd <sub>c</sub> | VRd <sub>max</sub> | Vrd <sub>s</sub> | TSd   | Trd1   | Trd2   | Staffe         |
|--|------|------|---------|------------------|--------------------|------------------|-------|--------|--------|----------------|
| [m]  | [m]  | [m]  | [kg]    | [kg]             | [kg]               | [kg]             | [kgm] | [kgm]  | [kgm]  |                |
| <b>Trave 108 109 Sez. 2 Rett. 30x50 [cm]</b> |      |      |         |                  |                    |                  |       |        |        |                |
| 0.15   | 0.65 | 0.50 | 14177.1 | 7037.7           | 43430.6            | 16144.4          | 145.9 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| 0.65   | 2.06 | 1.41 | 12878.1 | 7037.7           | 43430.6            | 12915.5          | 145.9 | 5253.0 | 2636.9 | ø 8 2br. 12.5' |
| 2.06   | 3.94 | 1.87 | 9208.3  | 7037.7           | 43430.6            | 10762.9          | 145.9 | 5253.0 | 2197.4 | ø 8 2br. 15.0' |

|  |      |      |         |        |         |         |       |        |        |                |
|--|------|------|---------|--------|---------|---------|-------|--------|--------|----------------|
| 3.94   | 5.35 | 1.41 | 12811.4 | 7037.7 | 43430.6 | 12915.5 | 145.9 | 5253.0 | 2636.9 | ø 8 2br. 12.5' |
| 5.35   | 5.85 | 0.50 | 14280.6 | 8315.2 | 43430.6 | 16144.4 | 145.9 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| <b>Trave 109 110 Sez. 2 Rett. 30x50 [cm]</b> |      |      |         |        |         |         |       |        |        |                |
| 0.15   | 0.65 | 0.50 | 15995.1 | 8344.1 | 43430.6 | 21525.8 | 155.6 | 5253.0 | 4394.8 | ø 8 2br. 7.5'  |
| 0.65   | 4.45 | 3.80 | 14908.4 | 6148.0 | 43430.6 | 16144.4 | 155.6 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| 4.45   | 4.95 | 0.50 | 16365.4 | 7746.0 | 43430.6 | 21525.8 | 155.6 | 5253.0 | 4394.8 | ø 8 2br. 7.5'  |
| <b>Trave 110 111 Sez. 2 Rett. 30x50 [cm]</b> |      |      |         |        |         |         |       |        |        |                |
| 0.15   | 4.75 | 4.60 | 13319.5 | 6148.0 | 43430.6 | 16144.4 | 86.0  | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| <b>Trave 111 112 Sez. 2 Rett. 30x50 [cm]</b> |      |      |         |        |         |         |       |        |        |                |
| 0.15   | 1.86 | 1.71 | 13670.0 | 6027.8 | 43430.6 | 21525.8 | 759.4 | 5253.0 | 4394.8 | ø 8 2br. 7.5'  |

### - Travata: 105 Travata 101 108 113 118

| Nodo   | x    | A <sub>fe</sub>    | A <sub>fi</sub>    | q <sub>T</sub> | M <sub>rif</sub> | M <sub>de</sub> | M <sub>re</sub> | x/d  | M <sub>di</sub> | M <sub>ri</sub> | x/d    | σ <sub>be</sub>       | σ <sub>bi</sub>       | σ <sub>fe</sub>       | σ <sub>fi</sub>       | w  |
|--|------|--------------------|--------------------|----------------|------------------|-----------------|-----------------|------|-----------------|-----------------|--------|-----------------------|-----------------------|-----------------------|-----------------------|----|
|  | [m]  | [cm <sup>2</sup> ] | [cm <sup>2</sup> ] | [kg/m]         | [kgm]            | [kgm]           | [kgm]           |      | [kgm]           | [kgm]           |        | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | [kg/cm <sup>2</sup> ] | mm |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b>         |      |                    |                    |                |                  |                 |                 |      |                 |                 |        |                       |                       |                       |                       |    |
| 101  | 0.30 | 5.13               | 5.92               |                |                  | 2560.9          | 8622.7          | 0.11 | 2717.6          | -9843.3         | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 958.7           |                 |      | 0.0             |                 |        | 0.00                  | 10.29                 | 384.59                | 85.11                 |    |
| Camp.  | 2.10 | 6.03               | 6.28               | 1592.5         | 1755.7           | 0.0             | 10055.3         | 0.12 | 1755.7          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | 1350.6          |                 |        | 13.45                 | 0.00                  | 127.73                | 525.27                |    |
| 108  | 3.90 | 6.03               | 6.28               |                |                  | 5218.8          | 10055.3         | 0.12 | -269.2          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 1646.9          |                 |      | 0.0             |                 |        | 0.00                  | 16.51                 | 663.91                | 151.26                |    |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b>         |      |                    |                    |                |                  |                 |                 |      |                 |                 |        |                       |                       |                       |                       |    |
| 108  | 0.30 | 6.03               | 6.28               |                |                  | 2652.5          | 10055.3         | 0.12 | 4021.8          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 735.0           |                 |      | 0.0             |                 |        | 0.00                  | 7.37                  | 296.29                | 67.50                 |    |
| Camp.  | 1.05 | 6.03               | 6.28               | 1592.5         | 438.9            | 646.3           | 10055.3         | 0.12 | 1317.7          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 0.2             |                 |      | -337.6          |                 |        | 3.36                  | 0.00                  | 31.93                 | 131.32                |    |
| 113  | 1.80 | 6.03               | 6.28               |                |                  | 4274.4          | 10055.3         | 0.12 | 1366.0          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 260.5           |                 |      | 0.0             |                 |        | 0.00                  | 2.61                  | 105.00                | 23.92                 |    |
| <b>Trave Sez. 1 Rett. 30x50 [cm]</b>         |      |                    |                    |                |                  |                 |                 |      |                 |                 |        |                       |                       |                       |                       |    |
| 113  | 0.30 | 6.03               | 6.28               |                |                  | 2870.6          | 10055.3         | 0.12 | 1507.3          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 1636.2          |                 |      | 0.0             |                 |        | 0.00                  | 16.40                 | 659.58                | 150.27                |    |
| Camp.  | 2.10 | 6.03               | 6.28               | 1592.5         | 1755.7           | 0.0             | 10055.3         | 0.12 | 1755.7          | -10417.4        | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 0.0             |                 |      | 1350.6          |                 |        | 13.45                 | 0.00                  | 127.73                | 525.27                |    |
| 118  | 3.90 | 5.13               | 5.92               |                |                  | 4287.2          | 8622.7          | 0.11 | -836.1          | -9843.3         | 0.12   |                       |                       |                       |                       |    |
|  |      |                    |                    |                | S.L.E. Rare      | 861.8           |                 |      | 0.0             |                 |        | 0.00                  | 9.25                  | 345.69                | 76.50                 |    |
| <b>Trave 101 108 Sez. 1 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |        |                       |                       |                       |                       |    |
| 0.44   | 0.90 | 0.46               |                    |                | 7677.7           | 6027.8          | 43430.6         |      | 16144.4         | 161.9           | 5253.0 | 3296.1                | ø 8 2br. 10.0'        |                       |                       |    |
| 0.90   | 3.30 | 2.40               |                    |                | 7252.6           | 6148.0          | 43430.6         |      | 10762.9         | 161.9           | 5253.0 | 2197.4                | ø 8 2br. 15.0'        |                       |                       |    |
| 3.30   | 3.76 | 0.46               |                    |                | 7916.1           | 6148.0          | 43430.6         |      | 16144.4         | 161.9           | 5253.0 | 3296.1                | ø 8 2br. 10.0'        |                       |                       |    |
| <b>Trave 108 113 Sez. 1 Rett. 30x50 [cm]</b> |      |                    |                    |                |                  |                 |                 |      |                 |                 |        |                       |                       |                       |                       |    |
| 0.43   | 1.67 | 1.25               |                    |                | 14751.0          | 6148.0          | 43430.6         |      | 32288.8         | 225.3           | 5253.0 | 6592.2                | ø 8 2br. 5.0'         |                       |                       |    |

| Trave 113 118 Sez. 1 Rett. 30x50 [cm] |      |      |        |        |         |         |      |        |        |                |
|---------------------------------------|------|------|--------|--------|---------|---------|------|--------|--------|----------------|
| 0.44                                  | 0.90 | 0.46 | 7916.2 | 6148.0 | 43430.6 | 16144.4 | 65.6 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |
| 0.90                                  | 3.30 | 2.40 | 7252.6 | 6148.0 | 43430.6 | 10762.9 | 65.6 | 5253.0 | 2197.4 | ø 8 2br. 15.0' |
| 3.30                                  | 3.76 | 0.46 | 7677.7 | 6027.8 | 43430.6 | 16144.4 | 65.6 | 5253.0 | 3296.1 | ø 8 2br. 10.0' |

#### 7.4. VERIFICA S.L.D.

- Combinazioni agli Stati Limite di Danno
- Massimi spostamenti differenziali orizzontali
  - Fattore moltiplicativo spostamenti dovuti al sisma b 1
  - c 1
  - Controllo degli spostamenti di interpiano dU inferiore a 0.005 H

| Comb. | Ux      |         | Uy      |         | Uz     |         | Uxyz    |            |
|-------|---------|---------|---------|---------|--------|---------|---------|------------|
|       | Nodi    | Ux [mm] | Nodi    | Uy [mm] | Nodi   | Uz [mm] | Nodi    | Uxyz  [mm] |
| 11    | 217-317 | -0.17   | 217-317 | 1.02    | 16-116 | 0.01    | 217-317 | 1.03       |
| 12    | 122-222 | -0.29   | 215-315 | 1.46    | 16-116 | 0.01    | 215-315 | 1.47       |
| 13    | 217-317 | 0.17    | 217-317 | -1.02   | 16-116 | -0.01   | 217-317 | 1.03       |
| 14    | 122-222 | 0.29    | 215-315 | -1.46   | 16-116 | -0.01   | 215-315 | 1.47       |
| 15    | 217-317 | -1.43   | 215-315 | -1.61   | 5-105  | -0.00   | 215-315 | 2.16       |
| 16    | 217-317 | -1.05   | 215-315 | -0.91   | 5-105  | -0.00   | 215-315 | 1.39       |
| 17    | 217-317 | 1.43    | 215-315 | 1.61    | 5-105  | 0.00    | 215-315 | 2.16       |
| 18    | 217-317 | 1.05    | 215-315 | 0.91    | 5-105  | 0.00    | 215-315 | 1.39       |

#### - Spostamenti Max in direzione Ux [mm]

| Nodi    | Comb. | 11           | 12           | 13          | 14          | 15           | 16           | 17          | 18          |
|---------|-------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|-------------|
| 217 317 | 11    | <b>-0.17</b> | 0.21         | 0.17        | -0.21       | -1.43        | -1.05        | 1.43        | 1.05        |
| 122 222 | 12    | -0.17        | <b>-0.29</b> | 0.17        | 0.29        | 0.25         | 0.12         | -0.25       | -0.12       |
| 217 317 | 13    | -0.17        | 0.21         | <b>0.17</b> | -0.21       | -1.43        | -1.05        | 1.43        | 1.05        |
| 122 222 | 14    | -0.17        | -0.29        | 0.17        | <b>0.29</b> | 0.25         | 0.12         | -0.25       | -0.12       |
| 217 317 | 15    | -0.17        | 0.21         | 0.17        | -0.21       | <b>-1.43</b> | -1.05        | 1.43        | 1.05        |
| 217 317 | 16    | -0.17        | 0.21         | 0.17        | -0.21       | -1.43        | <b>-1.05</b> | 1.43        | 1.05        |
| 217 317 | 17    | -0.17        | 0.21         | 0.17        | -0.21       | -1.43        | -1.05        | <b>1.43</b> | 1.05        |
| 217 317 | 18    | -0.17        | 0.21         | 0.17        | -0.21       | -1.43        | -1.05        | 1.43        | <b>1.05</b> |

#### - Spostamenti Max in direzione Uy [mm]

| Nodi    | Comb. | 11          | 12          | 13           | 14           | 15           | 16           | 17          | 18          |
|---------|-------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|
| 217 317 | 11    | <b>1.02</b> | 1.11        | -1.02        | -1.11        | 0.71         | 0.80         | -0.71       | -0.80       |
| 215 315 | 12    | 0.75        | <b>1.46</b> | -0.75        | -1.46        | -1.61        | -0.91        | 1.61        | 0.91        |
| 217 317 | 13    | 1.02        | 1.11        | <b>-1.02</b> | -1.11        | 0.71         | 0.80         | -0.71       | -0.80       |
| 215 315 | 14    | 0.75        | 1.46        | -0.75        | <b>-1.46</b> | -1.61        | -0.91        | 1.61        | 0.91        |
| 215 315 | 15    | 0.75        | 1.46        | -0.75        | -1.46        | <b>-1.61</b> | -0.91        | 1.61        | 0.91        |
| 215 315 | 16    | 0.75        | 1.46        | -0.75        | -1.46        | -1.61        | <b>-0.91</b> | 1.61        | 0.91        |
| 215 315 | 17    | 0.75        | 1.46        | -0.75        | -1.46        | -1.61        | -0.91        | <b>1.61</b> | 0.91        |
| 215 315 | 18    | 0.75        | 1.46        | -0.75        | -1.46        | -1.61        | -0.91        | 1.61        | <b>0.91</b> |

#### - Spostamenti Max in direzione Uz [mm]

| Nodi   | Comb. | 11          | 12          | 13           | 14           | 15           | 16           | 17          | 18          |
|--------|-------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|
| 16 116 | 11    | <b>0.01</b> | 0.01        | -0.01        | -0.01        | -0.00        | 0.00         | 0.00        | -0.00       |
| 16 116 | 12    | 0.01        | <b>0.01</b> | -0.01        | -0.01        | -0.00        | 0.00         | 0.00        | -0.00       |
| 16 116 | 13    | 0.01        | 0.01        | <b>-0.01</b> | -0.01        | -0.00        | 0.00         | 0.00        | -0.00       |
| 16 116 | 14    | 0.01        | 0.01        | -0.01        | <b>-0.01</b> | -0.00        | 0.00         | 0.00        | -0.00       |
| 5 105  | 15    | -0.00       | -0.00       | 0.00         | 0.00         | <b>-0.00</b> | -0.00        | 0.00        | 0.00        |
| 5 105  | 16    | -0.00       | -0.00       | 0.00         | 0.00         | -0.00        | <b>-0.00</b> | 0.00        | 0.00        |
| 5 105  | 17    | -0.00       | -0.00       | 0.00         | 0.00         | -0.00        | -0.00        | <b>0.00</b> | 0.00        |
| 5 105  | 18    | -0.00       | -0.00       | 0.00         | 0.00         | -0.00        | -0.00        | 0.00        | <b>0.00</b> |

### - Spostamenti Max in direzione |Uxyz| [mm]

| Nodi    | Comb. | 11          | 12          | 13          | 14          | 15          | 16          | 17          | 18          |
|---------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 217 317 | 11    | <b>1.03</b> | 1.13        | 1.03        | 1.13        | 1.60        | 1.32        | 1.60        | 1.32        |
| 215 315 | 12    | 0.77        | <b>1.47</b> | 0.77        | 1.47        | 2.16        | 1.39        | 2.16        | 1.39        |
| 217 317 | 13    | 1.03        | 1.13        | <b>1.03</b> | 1.13        | 1.60        | 1.32        | 1.60        | 1.32        |
| 215 315 | 14    | 0.77        | 1.47        | 0.77        | <b>1.47</b> | 2.16        | 1.39        | 2.16        | 1.39        |
| 215 315 | 15    | 0.77        | 1.47        | 0.77        | 1.47        | <b>2.16</b> | 1.39        | 2.16        | 1.39        |
| 215 315 | 16    | 0.77        | 1.47        | 0.77        | 1.47        | 2.16        | <b>1.39</b> | 2.16        | 1.39        |
| 215 315 | 17    | 0.77        | 1.47        | 0.77        | 1.47        | 2.16        | 1.39        | <b>2.16</b> | 1.39        |
| 215 315 | 18    | 0.77        | 1.47        | 0.77        | 1.47        | 2.16        | 1.39        | 2.16        | <b>1.39</b> |

### - Spostamenti Massimi :

- Combinazione di Carico **17**
- Fra i nodi **215 315**
- In direzione |Uxyz|
- Spostamento **2.16**

**Non si sono rilevati spostamenti di interpiano superiori a 0.005000 H**

## 7.5. VERIFICA TRAVI DI FONDAZIONE

### - Modalità di verifica

Le travi vengono progettate-verificate a flessione retta e taglio nel piano longitudinale della trave sulla base dell'involuppo delle sollecitazioni, in conformità al *Decreto Legge del 26 Marzo 1980* e successivi aggiornamenti.

Viene comunque sempre predisposta l'armatura minima mentre gli sforzi di taglio vengono integralmente assorbiti dalle staffe.

Le operazioni di progetto-verifica vengono condotte, per ogni asta, in tre diverse sezioni e precisamente in corrispondenza dei fili esterni dei pilastri e della sezione in campata nella quale viene riscontrato il massimo momento positivo (negativo).

I momenti si intendono positivi se tendono le fibre di intradosso (inferiori).

Per quanto concerne il progetto e la verifica delle travi a taglio esse vengono condotte nel modo seguente:

- Si controlla se la trave necessita o meno di armatura aggiuntiva a taglio:
  1. Se non occorre armatura aggiuntiva a taglio si procede a disporre la staffatura minima di regolamento e la progettazione ha termine.
  2. Se occorre armatura aggiuntiva a taglio la staffatura viene progettata andando a suddividere la trave, a seconda del caso, in uno, tre o cinque conci:
    - due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione;
    - due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento
    - un restante (eventuale) concio di chiusura centrale.
- In ogni caso l'armatura a taglio si intende simmetrica rispetto alla mezzera della trave e viene progettata considerando, rispetto alla mezzera, la zona della trave più sollecitata.

Per quanto concerne le verifiche a taglio esse vengono condotte suddividendo la trave in cinque conci:

due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione; due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento; il restante (eventuale) concio di chiusura centrale.

L'armatura a taglio si intende simmetrica rispetto alla mezzera della trave e viene progettata considerando, rispetto alla mezzera, la zona della trave più sollecitata.

Simbologia utilizzata:

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**Af Es.**

Area di ferro all'estradosso

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**Af In.**

Area di ferro all'intradosso

---

**Sigb.Es.**

Tensione del calcestruzzo estradosso

---

**Sigb. In.**

Tensione del calcestruzzo intradosso

---

**Sigf. Es.**

Tensione dell'acciaio estradosso

---

**Sigf. In.**

Tensione dell'acciaio intradosso

## - Sezioni Impiegate: Trave di fondazione

| Sezione Numero | Info | Dimensioni | Criterio  | Calcestruzzo | $f_{cd}$<br>[kg/cm <sup>2</sup> ] | $T_{fd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{BARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{OP}$<br>[kg/cm <sup>2</sup> ] | Calcestruzzo Appoggi | $d_x$<br>[cm] | $f_{cd}$<br>[kg/cm <sup>2</sup> ] | $T_{fd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{BARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{OP}$<br>[kg/cm <sup>2</sup> ] | Acciaio | $f_{yd}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{BARE}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{FREQ}$<br>[kg/cm <sup>2</sup> ] | $\sigma_{OP}$<br>[kg/cm <sup>2</sup> ] | Copriferro Es [mm] | Copriferro In [mm] |
|----------------|------|------------|---|--------------|-----------------------------------|-----------------------------------|--|--|--|----------------------|---------------|-----------------------------------|-----------------------------------|--|--|--|---------|-----------------------------------|--|--|--|--------------------|--------------------|
| 1              | a    | Tr         | B 110 [cm]<br>H 140 [cm]<br>b 50 [cm] h 50 [cm]<br>Terreno numero 1 | Verfond      | Rbk 300                           | 141.10                            | 2.80                                     | 149.40                                   | 249.00                                 | 112.05               |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | 30.00              |
| 2              | a    | Tr         | B 110 [cm]<br>H 110 [cm]<br>b 50 [cm] h 50 [cm]<br>Terreno numero 1 | Verfond      | Rbk 300                           | 141.10                            | 2.80                                     | 149.40                                   | 249.00                                 | 112.05               |               |                                   |                                   |  |  |  | B 450 C | 3913.04                           | 3600.00                                  | 4500.00                                  | 4500.00                                | 30.00              | 30.00              |

**EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg  $\theta = 1.00$**

**Verifica a fessurazione indiretta**

**Fattore di sovraresistenza Travi  $\gamma_{R,d}=1.00$**

**Fattore di sovraresistenza Fondazioni  $\gamma_{R,d}=1.10$**

**- Verifiche Travate :**

**- Travata: 2 Travata 8 9 10 11 12**

| Nodo  | x [m]    | A <sub>fe</sub> [cm <sup>2</sup> ] | A <sub>fi</sub> [cm <sup>2</sup> ] | q <sub>T</sub> [kg/m]   | M <sub>rif</sub> [kgm]    | M <sub>de</sub> [kgm]   | M <sub>re</sub> [kgm] | x/d  | M <sub>di</sub> [kgm] | M <sub>ri</sub> [kgm] | x/d  | σ <sub>be</sub> [kg/cm <sup>2</sup> ] | σ <sub>bi</sub> [kg/cm <sup>2</sup> ] | σ <sub>fe</sub> [kg/cm <sup>2</sup> ] | σ <sub>fi</sub> [kg/cm <sup>2</sup> ] | w mm |
|---|----------|------------------------------------|------------------------------------|-------------------------|---------------------------|-------------------------|-----------------------|------|-----------------------|-----------------------|------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|------|
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b>       |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 8   | 0.15     | 17.34                              | 20.11                              |                         |                           | 8238.2                  | 66818.9               | 0.05 | -2990.5               | -75892.9              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 1310.8                  |                       |      | -391.6                |                       |      | 0.46                                  | 1.08                                  | 58.72                                 | 20.10                                 |      |
| Camp.   | 3.00     | 22.62                              | 20.11                              |                         |                           | 19484.3                 | 86492.8               | 0.05 | 0.0                   | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 13936.6                 |                       |      | 0.0                   |                       |      | 0.00                                  | 10.38                                 | 628.70                                | 118.15                                |      |
| 9   | 5.85     | 22.62                              | 20.11                              |                         |                           | 4314.4                  | 86492.8               | 0.05 | 17677.2               | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | 12529.3               |                       |      | 14.03                                 | 0.00                                  | 166.67                                | 640.47                                |      |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b>       |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 9   | 0.15     | 22.62                              | 20.11                              |                         |                           | 4810.7                  | 86492.8               | 0.05 | 17165.2               | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | 12359.4               |                       |      | 13.84                                 | 0.00                                  | 164.41                                | 631.78                                |      |
| Camp.   | 2.55     | 22.62                              | 20.11                              |                         |                           | 5732.5                  | 86492.8               | 0.05 | 0.0                   | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 4300.9                  |                       |      | 0.0                   |                       |      | 0.00                                  | 3.20                                  | 194.02                                | 36.46                                 |      |
| 10  | 4.95     | 39.42                              | 40.21                              |                         |                           | 4810.7                  | 149209.9              | 0.06 | 19366.8               | -150532.1             | 0.08 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | 14235.2               |                       |      | 11.23                                 | 0.00                                  | 138.80                                | 368.34                                |      |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b>       |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 10  | 0.15     | 39.42                              | 40.21                              |                         |                           | 4723.5                  | 149210.0              | 0.06 | 19090.5               | -150532.1             | 0.08 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | 13982.9               |                       |      | 11.04                                 | 0.00                                  | 138.11                                | 361.81                                |      |
| Camp.   | 2.45     | 22.62                              | 20.11                              |                         |                           | 14051.5                 | 86492.8               | 0.05 | 0.0                   | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 7313.4                  |                       |      | 0.0                   |                       |      | 0.00                                  | 5.44                                  | 329.92                                | 62.00                                 |      |
| 11  | 4.75     | 22.62                              | 20.11                              |                         |                           | 12603.2                 | 86492.8               | 0.05 | -7698.4               | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | -5180.0               |                       |      | 5.80                                  | 0.00                                  | 68.91                                 | 264.79                                |      |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b>       |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 11  | 0.15     | 22.62                              | 20.11                              |                         |                           | 8537.9                  | 86492.8               | 0.05 | -8711.4               | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 0.0                     |                       |      | -6304.6               |                       |      | 7.06                                  | 0.00                                  | 83.87                                 | 322.28                                |      |
| Camp.   | 1.07     | 22.62                              | 20.11                              |                         |                           | 10090.1                 | 86492.8               | 0.05 | -3341.9               | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 500.7                   |                       |      | 0.0                   |                       |      | 0.00                                  | 0.37                                  | 22.59                                 | 4.24                                  |      |
| 12  | 2.00     | 22.62                              | 20.11                              |                         |                           | 9851.7                  | 86492.8               | 0.05 | 0.0                   | -76280.5              | 0.07 |                                       |                                       |                                       |                                       |      |
|   |          |                                    |                                    |                         | S.L.E. Rare               | 1595.8                  |                       |      | 0.0                   |                       |      | 0.00                                  | 1.19                                  | 71.99                                 | 13.53                                 |      |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b>       |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| <b>Da</b>   | <b>A</b> | <b>Dx</b>                          | <b>V<sub>Sd</sub></b>              | <b>V<sub>rd,c</sub></b> | <b>V<sub>rd,max</sub></b> | <b>V<sub>rd,s</sub></b> | <b>Staffe</b>         |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| [m]   | [m]      | [m]                                | [kg]                               | [kg]                    | [kg]                      | [kg]                    |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| <b>Trave di fondazione 8 9 Sez. 2 a Tr 110x110x50x50 [cm]</b>   |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 0.15  | 5.85     | 5.70                               | 22629.9                            | 18319.6                 | 167626.8                  | 33648.3                 | ø 12 2br. 25.0'       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| <b>Trave di fondazione 9 10 Sez. 2 a Tr 110x110x50x50 [cm]</b>  |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 0.15  | 4.95     | 4.80                               | 20659.5                            | 20017.4                 | 167626.8                  | 33648.3                 | ø 12 2br. 25.0'       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| <b>Trave di fondazione 10 11 Sez. 2 a Tr 110x110x50x50 [cm]</b> |          |                                    |                                    |                         |                           |                         |                       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |
| 0.15  | 4.75     | 4.60                               | 22346.8                            | 20017.4                 | 167626.8                  | 33648.3                 | ø 12 2br. 25.0'       |      |                       |                       |      |                                       |                                       |                                       |                                       |      |

| Trave di fondazione 11 12 Sez. 2 a Tr 110x110x50x50 [cm] |      |      |         |         |          |         |                 |  |
|--|------|------|---------|---------|----------|---------|-----------------|--|
| 0.15   | 2.00 | 1.85 | 14084.6 | 20017.4 | 167626.8 | 33648.3 | ø 12 2br. 25.0' |  |

## - Travata: 1 Travata 1 2 3 4 5

Nodo x A<sub>fe</sub> A<sub>fi</sub> q<sub>T</sub> M<sub>rif</sub> M<sub>de</sub> M<sub>re</sub> x/d M<sub>di</sub> M<sub>ri</sub> x/d σ<sub>be</sub> σ<sub>bi</sub> σ<sub>fe</sub> σ<sub>fi</sub> W  
[m] [cm<sup>2</sup>] [cm<sup>2</sup>] [kg/m] [kgm] [kgm] [kgm] [kgm] [kgm] [kgm] [kgm] [kg/cm<sup>2</sup>] [kg/cm<sup>2</sup>] [kg/cm<sup>2</sup>] [kg/cm<sup>2</sup>] mm

| Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm] |      |       |       |  |             |         |          |      |         |          |      |      |      |        |        |
|--|------|-------|-------|--|-------------|---------|----------|------|---------|----------|------|------|------|--------|--------|
| 1  | 0.15 | 17.34 | 20.11 |  |             | 14545.4 | 86621.0  | 0.04 | -480.1  | -98495.9 | 0.06 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 4198.6  |          |      | 0.0     |          |      | 0.00 | 2.35 | 145.15 | 26.98  |
| Camp.  | 2.92 | 22.62 | 20.11 |  |             | 24971.8 | 112197.7 | 0.04 | 0.0     | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 18101.4 |          |      | 0.0     |          |      | 0.00 | 9.13 | 629.88 | 108.44 |
| 2  | 5.70 | 22.62 | 20.11 |  |             | 3744.3  | 112197.7 | 0.04 | 12192.7 | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | -8999.4 |          |      | 6.87 | 0.00 | 84.73  | 354.83 |
| Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm] |      |       |       |  |             |         |          |      |         |          |      |      |      |        |        |
| 2  | 0.30 | 22.62 | 20.11 |  |             | 3944.6  | 112197.7 | 0.04 | 15606.6 | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | 10623.3 |          |      | 8.11 | 0.00 | 100.02 | 418.86 |
| Camp.  | 2.55 | 22.62 | 20.11 |  |             | 4622.9  | 112197.7 | 0.04 | -225.9  | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 3485.3  |          |      | 0.0     |          |      | 0.00 | 1.76 | 121.28 | 20.88  |
| 3  | 4.80 | 39.75 | 40.21 |  |             | 4189.6  | 195275.4 | 0.05 | 15308.4 | 195332.8 | 0.06 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | 11463.0 |          |      | 6.18 | 0.00 | 79.89  | 228.72 |
| Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm] |      |       |       |  |             |         |          |      |         |          |      |      |      |        |        |
| 3  | 0.30 | 39.47 | 40.21 |  |             | 3569.6  | 193908.9 | 0.05 | 14237.7 | 195287.0 | 0.06 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | 10660.1 |          |      | 5.76 | 0.00 | 74.45  | 212.74 |
| Camp.  | 2.45 | 22.62 | 20.11 |  |             | 23458.6 | 112197.7 | 0.04 | 0.0     | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 8370.3  |          |      | 0.0     |          |      | 0.00 | 4.22 | 291.26 | 50.14  |
| 4  | 4.60 | 22.62 | 20.11 |  |             | 24977.5 | 112197.7 | 0.04 | -3046.0 | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | -1950.2 |          |      | 1.49 | 0.00 | 18.36  | 76.89  |
| Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm] |      |       |       |  |             |         |          |      |         |          |      |      |      |        |        |
| 4  | 0.30 | 22.62 | 20.11 |  |             | 16100.8 | 112197.7 | 0.04 | -3301.8 | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 0.0     |          |      | -2298.5 |          |      | 1.75 | 0.00 | 21.64  | 90.63  |
| Camp.  | 1.15 | 22.62 | 20.11 |  |             | 16101.1 | 112197.7 | 0.04 | -1150.3 | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 1620.6  |          |      | 0.0     |          |      | 0.00 | 0.82 | 56.39  | 9.71   |
| 5  | 2.00 | 22.62 | 20.11 |  |             | 14723.6 | 112197.7 | 0.04 | 0.0     | -98956.1 | 0.05 |      |      |        |        |
|  |      |       |       |  | S.L.E. Rare | 481.9   |          |      | 0.0     |          |      | 0.00 | 0.24 | 16.77  | 2.89   |

| Da [m]   | A [m] | Dx [m] | Vsd [kg] | Vrd <sub>c</sub> [kg] | Vrd <sub>max</sub> [kg] | Vrd <sub>s</sub> [kg] | Staffe          |
|--|-------|--------|----------|-----------------------|-------------------------|-----------------------|-----------------|
| Trave di fondazione 1 2 Sez. 1 a Tr 110x140x50x50 [cm] |       |        |          |                       |                         |                       |                 |
| 0.15   | 5.70  | 5.55   | 23531.4  | 20871.4               | 215248.1                | 43207.5               | ø 12 2br. 25.0' |
| Trave di fondazione 2 3 Sez. 1 a Tr 110x140x50x50 [cm] |       |        |          |                       |                         |                       |                 |
| 0.30   | 4.80  | 4.50   | 17899.9  | 22805.8               | 215248.1                | 43207.5               | ø 12 2br. 25.0' |
| Trave di fondazione 3 4 Sez. 1 a Tr 110x140x50x50 [cm] |       |        |          |                       |                         |                       |                 |
| 0.30   | 4.60  | 4.30   | 20727.7  | 22805.8               | 215248.1                | 43207.5               | ø 12 2br. 25.0' |
| Trave di fondazione 4 5 Sez. 1 a Tr 110x140x50x50 [cm] |       |        |          |                       |                         |                       |                 |
| 0.30   | 2.00  | 1.70   | 10087.9  | 22805.8               | 215248.1                | 43207.5               | ø 12 2br. 25.0' |

## - Travata: 5 Travata 1 8 13 18

| Nodo  | x<br>[m] | A <sub>fe</sub><br>[cm <sup>2</sup> ] | A <sub>fi</sub><br>[cm <sup>2</sup> ] | q <sub>T</sub><br>[kg/m] | M <sub>rif</sub><br>[kgm] | M <sub>de</sub><br>[kgm] | M <sub>re</sub><br>[kgm] | x/d  | M <sub>di</sub><br>[kgm] | M <sub>ri</sub><br>[kgm] | x/d  | σ <sub>be</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>bi</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>fe</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>fi</sub><br>[kg/cm <sup>2</sup> ] | w<br>mm |
|---|----------|---------------------------------------|---------------------------------------|--------------------------|---------------------------|--------------------------|--------------------------|------|--------------------------|--------------------------|------|--|--|--|--|---------|
| <b>Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm]</b> |          |                                       |                                       |                          |                           |                          |                          |      |                          |                          |      |  |  |  |  |         |
| 1   | 0.30     | 22.62                                 | 20.11                                 |                          |                           | 9812.6                   | 112197.7                 | 0.04 | 1113.6                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 2955.9                   |                          |      | 0.0                      |                          |      | 0.00                                     | 1.49                                     | 102.86                                   | 17.71                                    |         |
| Camp.   | 2.10     | 22.62                                 | 20.11                                 |                          |                           | 13412.1                  | 112197.7                 | 0.04 | 0.0                      | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 9984.6                   |                          |      | 0.0                      |                          |      | 0.00                                     | 5.04                                     | 347.44                                   | 59.82                                    |         |
| 8   | 3.90     | 22.62                                 | 20.11                                 |                          |                           | 10673.2                  | 112197.7                 | 0.04 | 2125.8                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 178.1                    |                          |      | -742.7                   |                          |      | 0.57                                     | 0.09                                     | 6.99                                     | 29.28                                    |         |
| <b>Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm]</b> |          |                                       |                                       |                          |                           |                          |                          |      |                          |                          |      |  |  |  |  |         |
| 8   | 0.30     | 22.62                                 | 20.11                                 |                          |                           | 829.6                    | 112197.7                 | 0.04 | 3271.1                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 0.0                      |                          |      | 2213.8                   |                          |      | 1.69                                     | 0.00                                     | 20.84                                    | 87.29                                    |         |
| Camp.   | 1.05     | 22.62                                 | 20.11                                 |                          |                           | 0.0                      | 112197.7                 | 0.04 | 2580.9                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 0.0                      |                          |      | -194.5                   |                          |      | 0.15                                     | 0.00                                     | 1.83                                     | 7.67                                     |         |
| 13  | 1.80     | 22.62                                 | 20.11                                 |                          |                           | 829.6                    | 112197.7                 | 0.04 | 1867.8                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 0.0                      |                          |      | 1165.2                   |                          |      | 0.89                                     | 0.00                                     | 10.97                                    | 45.94                                    |         |
| <b>Trave di fondazione Sez. 1 a Tr 110x140x50x50 [cm]</b> |          |                                       |                                       |                          |                           |                          |                          |      |                          |                          |      |  |  |  |  |         |
| 13  | 0.30     | 22.62                                 | 20.11                                 |                          |                           | 8528.2                   | 112197.7                 | 0.04 | 4379.1                   | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 1482.9                   |                          |      | 0.0                      |                          |      | 0.00                                     | 0.75                                     | 51.60                                    | 8.88                                     |         |
| Camp.   | 2.10     | 22.62                                 | 20.11                                 |                          |                           | 14184.7                  | 112197.7                 | 0.04 | 0.0                      | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 10666.9                  |                          |      | 0.0                      |                          |      | 0.00                                     | 5.38                                     | 371.18                                   | 63.90                                    |         |
| 18  | 3.90     | 22.62                                 | 20.11                                 |                          |                           | 9911.4                   | 112197.7                 | 0.04 | 0.0                      | 98956.1                  | 0.05 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 2439.2                   |                          |      | 0.0                      |                          |      | 0.00                                     | 1.23                                     | 84.88                                    | 14.61                                    |         |

| Da<br>[m]   | A<br>[m] | Dx<br>[m] | V <sub>Sd</sub><br>[kg] | V <sub>rd<sub>c</sub></sub><br>[kg] | V <sub>Rd<sub>max</sub></sub><br>[kg] | V <sub>rd<sub>s</sub></sub><br>[kg] | Staffe          |
|---|----------|-----------|-------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-----------------|
| <b>Trave di fondazione 1 8 Sez. 1 a Tr 110x140x50x50 [cm]</b>   |          |           |                         |                                     |                                       |                                     |                 |
| 0.30  | 3.90     | 3.60      | 14379.9                 | 22805.8                             | 215248.1                              | 43207.5                             | ø 12 2br. 25.0' |
| <b>Trave di fondazione 8 13 Sez. 1 a Tr 110x140x50x50 [cm]</b>  |          |           |                         |                                     |                                       |                                     |                 |
| 0.30  | 1.80     | 1.50      | 6303.2                  | 22805.8                             | 215248.1                              | 43207.5                             | ø 12 2br. 25.0' |
| <b>Trave di fondazione 13 18 Sez. 1 a Tr 110x140x50x50 [cm]</b> |          |           |                         |                                     |                                       |                                     |                 |
| 0.30  | 3.90     | 3.60      | 13313.2                 | 22805.8                             | 215248.1                              | 43207.5                             | ø 12 2br. 25.0' |

## - Travata: 6 Travata 2 9 14 19

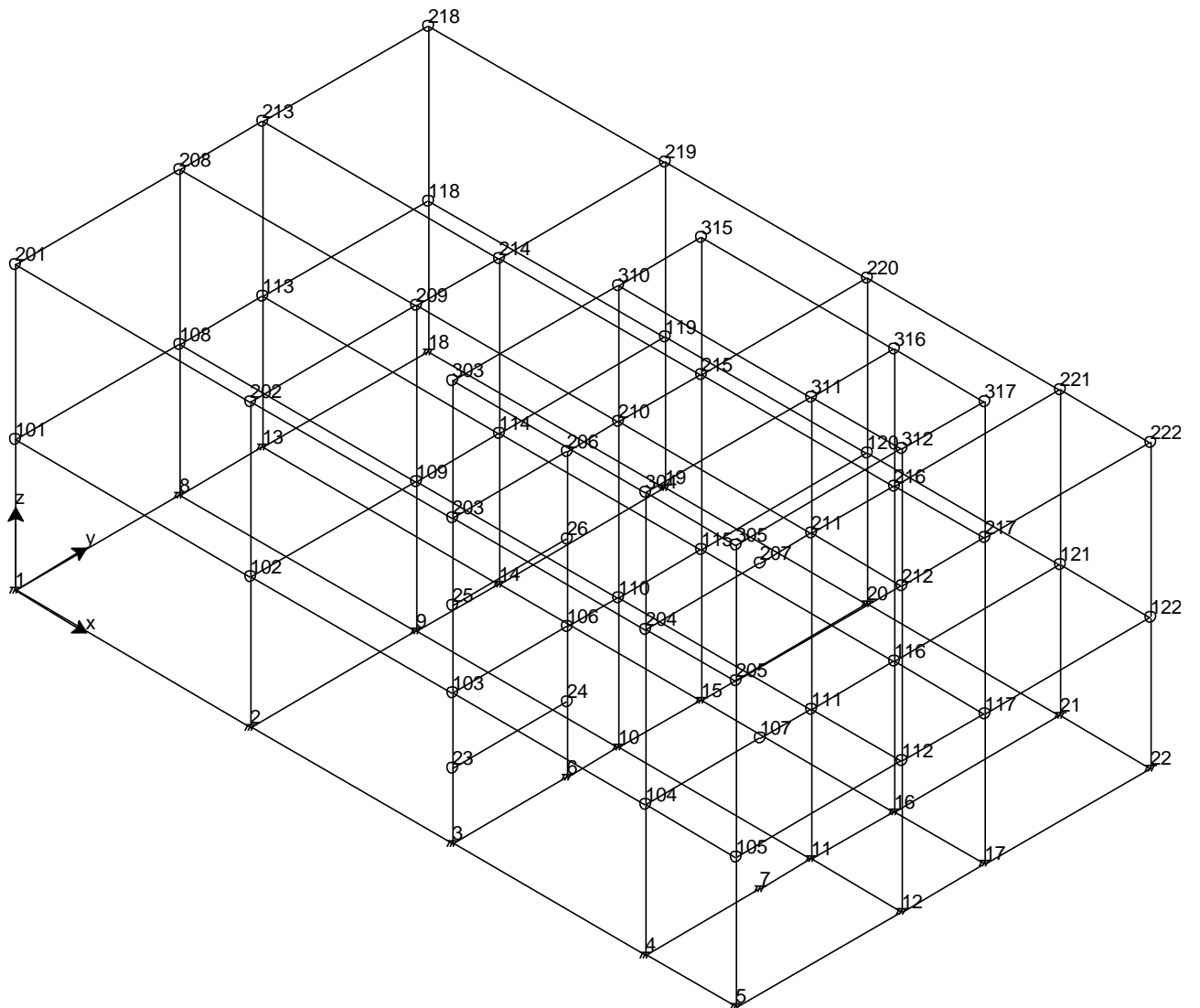
| Nodo  | x<br>[m] | A <sub>fe</sub><br>[cm <sup>2</sup> ] | A <sub>fi</sub><br>[cm <sup>2</sup> ] | q <sub>T</sub><br>[kg/m] | M <sub>rif</sub><br>[kgm] | M <sub>de</sub><br>[kgm] | M <sub>re</sub><br>[kgm] | x/d  | M <sub>di</sub><br>[kgm] | M <sub>ri</sub><br>[kgm] | x/d  | σ <sub>be</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>bi</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>fe</sub><br>[kg/cm <sup>2</sup> ] | σ <sub>fi</sub><br>[kg/cm <sup>2</sup> ] | w<br>mm |
|---|----------|---------------------------------------|---------------------------------------|--------------------------|---------------------------|--------------------------|--------------------------|------|--------------------------|--------------------------|------|--|--|--|--|---------|
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b> |          |                                       |                                       |                          |                           |                          |                          |      |                          |                          |      |  |  |  |  |         |
| 2   | 0.15     | 17.34                                 | 20.11                                 |                          |                           | 5588.9                   | 66818.9                  | 0.05 | 2635.7                   | 75892.9                  | 0.07 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 653.8                    |                          |      | -206.0                   |                          |      | 0.24                                     | 0.54                                     | 29.29                                    | 10.57                                    |         |
| Camp.   | 2.03     | 22.62                                 | 20.11                                 |                          |                           | 10851.4                  | 86492.8                  | 0.05 | 0.0                      | 76280.5                  | 0.07 |  |  |  |  |         |
|   |          |                                       |                                       |                          | S.L.E. Rare               | 8067.4                   |                          |      | 0.0                      |                          |      | 0.00                                     | 6.01                                     | 363.93                                   | 68.39                                    |         |
| 9   | 3.90     | 22.62                                 | 20.11                                 |                          |                           | 7733.1                   | 86492.8                  | 0.05 | 3553.4                   | 76280.5                  | 0.07 |  |  |  |  |         |

|   |      |       |       |             |        |         |         |      |        |         |      |      |      |        |        |  |
|---|------|-------|-------|-------------|--------|---------|---------|------|--------|---------|------|------|------|--------|--------|--|
|   |      |       |       | S.L.E. Rare | 0.0    |         |         |      | 2150.9 |         |      | 2.41 | 0.00 | 28.61  | 109.95 |  |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b> |      |       |       |             |        |         |         |      |        |         |      |      |      |        |        |  |
| 9   | 0.30 | 22.62 | 20.11 |             |        | 1190.5  | 86492.8 | 0.05 | 4212.9 | 76280.5 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 0.0    |         |         |      | 2904.1 |         |      | 3.25 | 0.00 | 38.63  | 148.45 |  |
| Camp.   | 1.05 | 22.62 | 20.11 |             |        | 0.0     | 86492.8 | 0.05 | 3344.9 | 76280.5 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 0.0    |         |         |      | 1489.3 |         |      | 1.67 | 0.00 | 19.81  | 76.13  |  |
| 14  | 1.80 | 22.62 | 20.11 |             |        | 1190.5  | 86492.8 | 0.05 | 4694.4 | 76280.5 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 0.0    |         |         |      | 3263.7 |         |      | 3.65 | 0.00 | 43.42  | 166.83 |  |
| <b>Trave di fondazione Sez. 2 a Tr 110x110x50x50 [cm]</b> |      |       |       |             |        |         |         |      |        |         |      |      |      |        |        |  |
| 14  | 0.30 | 22.62 | 20.11 |             |        | 3682.5  | 86492.8 | 0.05 | 7142.1 | 76280.5 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 0.0    |         |         |      | 1146.7 |         |      | 1.28 | 0.00 | 15.25  | 58.62  |  |
| Camp.   | 2.18 | 22.62 | 20.11 |             |        | 10963.7 | 86492.8 | 0.05 | 0.0    | 76280.5 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 8176.1 |         |         |      | 0.0    |         |      | 0.00 | 6.09 | 368.83 | 69.31  |  |
| 19  | 4.05 | 17.34 | 20.11 |             |        | 5709.0  | 66818.9 | 0.05 | 2725.6 | 75892.9 | 0.07 |      |      |        |        |  |
|   |      |       |       | S.L.E. Rare | 754.5  |         |         |      | -163.5 |         |      | 0.19 | 0.62 | 33.80  | 8.39   |  |

| Da<br>[m]   | A<br>[m] | Dx<br>[m] | VSd<br>[kg] | Vrd <sub>c</sub><br>[kg] | VRd <sub>max</sub><br>[kg] | Vrd <sub>s</sub><br>[kg] | Staffe          |
|---|----------|-----------|-------------|--------------------------|----------------------------|--------------------------|-----------------|
| <b>Trave di fondazione 2 9 Sez. 2 a Tr 110x110x50x50 [cm]</b>   |          |           |             |                          |                            |                          |                 |
| 0.15  | 3.90     | 3.75      | 13750.2     | 18319.6                  | 167626.8                   | 33648.3                  | ø 12 2br. 25.0' |
| <b>Trave di fondazione 9 14 Sez. 2 a Tr 110x110x50x50 [cm]</b>  |          |           |             |                          |                            |                          |                 |
| 0.30  | 1.80     | 1.50      | 6034.1      | 20017.4                  | 167626.8                   | 33648.3                  | ø 12 2br. 25.0' |
| <b>Trave di fondazione 14 19 Sez. 2 a Tr 110x110x50x50 [cm]</b> |          |           |             |                          |                            |                          |                 |
| 0.30  | 4.05     | 3.75      | 12905.5     | 18319.6                  | 167626.8                   | 33648.3                  | ø 12 2br. 25.0' |

**ALLEGATO “A”**  
**TABULATI DI CALCOLO - INPUT**

# NUMERAZIONE NODI:



## - **En.Ex.Sys. WinStrand**

### - **Structural Analysis & Design**

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**Ditta produttrice:**

*En.Ex.Sys.* s.r.l. - Via Tizzano 46/2 - Casalecchio di Reno (Bologna)

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**Sigla:**

WinStrand

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**Piattaforma software:**

Microsoft Windows XP Home, Microsoft Windows XP Home Professional

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**Documentazione in uso:**

Manuale teorico - Manuale d'uso

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**Campo di applicazione:**

Analisi statica e dinamica di strutture in campo elastico lineare.

### - **Elementi finiti implementati**

- Truss.
- Beam (Modellazione di Travi e Pilastrini).
- Travi su suolo elastico alla Winckler.
- Plinti su suolo elastico alla Winckler.
- Elementi Shear Wall per la modellazione di pareti di taglio.
- Elementi shell (lastra/piastra) equivalenti.
- Elementi Isoparametrici a 8 Nodi Shell (lastra/piastra).

### - **Schemi di Carico**

- Carichi nodali concentrati.
- Carichi applicati direttamente agli elementi.
- Carichi Superficiali.

### - **Tipo di Risoluzione**

- Analisi statica e/o dinamica in campo lineare con il metodo dell'equilibrio.
- Fattorizzazione  $LDL^T$ .
- Analisi Statica:
  - - modellazione generale 6 gradi di libertà per nodo.
    - ipotesi di solai infinitamente rigidi nel proprio piano (3 gradi di libertà per nodo + 3 per impalcato).
- Analisi dinamica. (Nel caso di analisi modale gli autovettori ed autovalori possono essere calcolati mediante *subspace iteration* oppure tramite il *metodo dei vettori di Ritz*):
  - - Via statica equivalente.
    - Modale con il metodo dello spettro di risposta.

### - **Normativa di riferimento**

La normativa italiana cui viene fatto riferimento nelle fasi di calcolo e progettazione è la seguente:

- Legge n. 1086 del 5 Novembre 1971. "Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica".
- Legge n. 64 del 2 Febbraio 1974. "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche".
- D.M. del 3 Marzo 1975. "Approvazione delle norme tecniche per le costruzioni in zone sismiche".
- D.M. del 3 Marzo 1975. "Disposizioni concernenti l'applicazione delle norme tecniche per le costruzioni in zone sismiche".
- D.M. del 3 Ottobre 1978. "Criteri generali per la verifica della sicurezza delle costruzioni e dei carichi e sovraccarichi".
- D.M. del 14 Febbraio 1992. "Norme Tecniche per l'esecuzione delle opere in C.A. normale e precompresso e per le strutture metalliche".
- Istruzioni per la valutazione delle: Azioni sulle Costruzioni. (C.N.R. 10012/85)
- D.M. del 9 Gennaio 1996. "Norme Tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
- D.M. del 16 Gennaio 1996. "Norme tecniche relative ai «Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi»".
- D.M. del 16 Gennaio 1996. "Norme tecniche per le costruzioni in zone sismiche"
- Ordinanza n. 3274 del 20 Marzo 2003. "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica"
- Ordinanza n. 3316. "Modifiche ed integrazioni all'ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 Marzo 2003"
- D.M. del 14 Gennaio 2008 "Approvazione delle nuove norme tecniche per le costruzioni"

## - Dati relativi ai nodi della struttura

### - Convenzioni adottate

La terna di riferimento generale è destrorsa.

I nodi vengono numerati, con riferimento a una sezione orizzontale, da sinistra a destra, dal basso verso l'alto e per quote crescenti.

L'impalcato di appartenenza di un nodo è definito, in generale, dalla prima delle tre cifre che ne definiscono il numero, possono tuttavia presentarsi casi in cui si hanno più di 100 nodi per solaio nel qual caso il solaio di appartenenza è specificato dall'ultimo valore stampato nella riga dei dati relativi al nodo.

La maschera dei vincoli è costituita dai valori 0 e 1. Il valore 1 indica che per il nodo in riferimento il grado di libertà correlativo è soppresso mentre il valore 0 indica che è libero.

Nel caso di edifici civili multipiano l'asse z generale coincide con l'asse verticale rivolto verso l'alto.

### - Nodi

| Nodo | x<br>[m] | y<br>[m] | z<br>[m] | Ux | Uy | Uz | Rx | Ry | Rz | Solaio |
|------|----------|----------|----------|----|----|----|----|----|----|--------|
| 1    | 0.00     | 0.00     | 0.00     | 1  | 1  | 0  | 0  | 0  | 1  | 0      |
| 2    | 6.00     | 0.00     | 0.00     | 1  | 1  | 0  | 0  | 0  | 1  | 0      |
| 3    | 11.10    | 0.00     | 0.00     | 1  | 1  | 0  | 0  | 0  | 1  | 0      |

|     |       |       |      |   |   |   |   |   |   |   |
|-----|-------|-------|------|---|---|---|---|---|---|---|
| 4   | 16.00 | 0.00  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 5   | 18.30 | 0.00  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 6   | 11.10 | 2.90  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 7   | 16.00 | 2.90  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 8   | 0.00  | 4.20  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 9   | 6.00  | 4.20  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 10  | 11.10 | 4.20  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 11  | 16.00 | 4.20  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 12  | 18.30 | 4.20  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 13  | 0.00  | 6.30  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 14  | 6.00  | 6.30  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 15  | 11.10 | 6.30  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 16  | 16.00 | 6.30  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 17  | 18.30 | 6.30  | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 18  | 0.00  | 10.50 | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 19  | 6.00  | 10.50 | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 20  | 11.10 | 10.50 | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 21  | 16.00 | 10.50 | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 22  | 18.30 | 10.50 | 0.00 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 23  | 11.10 | 0.00  | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24  | 11.10 | 2.90  | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25  | 11.10 | 0.00  | 5.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26  | 11.10 | 2.90  | 5.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 101 | 0.00  | 0.00  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 102 | 6.00  | 0.00  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 103 | 11.10 | 0.00  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 104 | 16.00 | 0.00  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 105 | 18.30 | 0.00  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 106 | 11.10 | 2.90  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 107 | 16.00 | 2.90  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 108 | 0.00  | 4.20  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 109 | 6.00  | 4.20  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 110 | 11.10 | 4.20  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 111 | 16.00 | 4.20  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 112 | 18.30 | 4.20  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 113 | 0.00  | 6.30  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 114 | 6.00  | 6.30  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 115 | 11.10 | 6.30  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 116 | 16.00 | 6.30  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 117 | 18.30 | 6.30  | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 118 | 0.00  | 10.50 | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 119 | 6.00  | 10.50 | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 120 | 11.10 | 10.50 | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 121 | 16.00 | 10.50 | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 122 | 18.30 | 10.50 | 3.30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 201 | 0.00  | 0.00  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 202 | 6.00  | 0.00  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 203 | 11.10 | 0.00  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 204 | 16.00 | 0.00  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 205 | 18.30 | 0.00  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 206 | 11.10 | 2.90  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 207 | 16.00 | 2.90  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 208 | 0.00  | 4.20  | 7.15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

|       |       |        |        |   |   |   |   |   |   |   |
|-------|-------|--------|--------|---|---|---|---|---|---|---|
| 209   | 6.00  | 4.20   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 210   | 11.10 | 4.20   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 211   | 16.00 | 4.20   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 212   | 18.30 | 4.20   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 213   | 0.00  | 6.30   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 214   | 6.00  | 6.30   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 215   | 11.10 | 6.30   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 216   | 16.00 | 6.30   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 217   | 18.30 | 6.30   | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 218   | 0.00  | 10.50  | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 219   | 6.00  | 10.50  | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 220   | 11.10 | 10.50  | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 221   | 16.00 | 10.50  | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 222   | 18.30 | 10.50  | 7.15   | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 303   | 11.10 | 0.00   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 304   | 16.00 | 0.00   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 305   | 18.30 | 0.00   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 310   | 11.10 | 4.20   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 311   | 16.00 | 4.20   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 312   | 18.30 | 4.20   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 315   | 11.10 | 6.30   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 316   | 16.00 | 6.30   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 317   | 18.30 | 6.30   | 10.15  | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 10000 | 11.10 | 0.00   | 201.65 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10001 | 11.10 | 202.90 | 3.30   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10002 | 11.10 | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10003 | 11.10 | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10004 | 11.10 | 0.00   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10005 | 6.00  | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10006 | 6.00  | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10007 | 6.00  | 0.00   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10008 | 16.00 | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10009 | 11.10 | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10010 | 6.00  | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10011 | 0.00  | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10012 | 16.00 | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10013 | 11.10 | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10014 | 6.00  | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10015 | 0.00  | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10016 | 16.00 | 10.50  | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10017 | 11.10 | 10.50  | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10018 | 6.00  | 10.50  | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10019 | 18.30 | 6.30   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10020 | 18.30 | 4.20   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10021 | 18.30 | 0.00   | 203.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10022 | 18.30 | 204.20 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10023 | 18.30 | 206.30 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10024 | 18.30 | 210.50 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10025 | 18.30 | 200.00 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10026 | 16.00 | 200.00 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10027 | 11.10 | 206.30 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10028 | 11.10 | 204.20 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10029 | 11.10 | 210.50 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |

|       |       |        |        |   |   |   |   |   |   |   |
|-------|-------|--------|--------|---|---|---|---|---|---|---|
| 10030 | 11.10 | 200.00 | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10031 | 0.00  | 200.00 | 3.30   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10032 | 6.00  | 204.20 | 3.30   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10033 | 18.30 | 0.00   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10034 | 0.00  | 10.50  | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10035 | 6.00  | 10.50  | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10036 | 11.10 | 10.50  | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10037 | 16.00 | 10.50  | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10038 | 18.30 | 10.50  | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10039 | 18.30 | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10040 | 18.30 | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10041 | 6.00  | 0.00   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10042 | 6.00  | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10043 | 6.00  | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10044 | 11.10 | 0.00   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10045 | 11.10 | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10046 | 11.10 | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10047 | 0.00  | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10048 | 6.00  | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10049 | 11.10 | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10050 | 16.00 | 4.20   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10051 | 0.00  | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10052 | 6.00  | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10053 | 11.10 | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10054 | 16.00 | 6.30   | 200.00 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10055 | 6.00  | 0.00   | 588.30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10056 | 0.00  | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10057 | 6.00  | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10058 | 11.10 | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10059 | 16.00 | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10060 | 0.00  | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10061 | 6.00  | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10062 | 11.10 | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10063 | 16.00 | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10064 | 0.00  | 10.50  | 203.85 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10065 | 6.00  | 10.50  | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10066 | 16.00 | 10.50  | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10067 | 6.00  | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10068 | 11.10 | 0.00   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10069 | 11.10 | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10070 | 11.10 | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10071 | 18.30 | 0.00   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10072 | 18.30 | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10073 | 18.30 | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10074 | 6.00  | 204.20 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10075 | 6.00  | 206.30 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10076 | 6.00  | 210.50 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10077 | 6.00  | 200.00 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10078 | 11.10 | 200.00 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10079 | 11.10 | 210.50 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10080 | 18.30 | 210.50 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10081 | 18.30 | 200.00 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10082 | 11.10 | 206.30 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |

|       |         |        |        |   |   |   |   |   |   |   |
|-------|---------|--------|--------|---|---|---|---|---|---|---|
| 10083 | 11.10   | 204.20 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10084 | 18.30   | 206.30 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10085 | 18.30   | 204.20 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10086 | 11.10   | 4.20   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10087 | 16.00   | 4.20   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10088 | 11.10   | 6.30   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10089 | 16.00   | 6.30   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10090 | 11.10   | 0.00   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10091 | 11.10   | 4.20   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10092 | 18.30   | 0.00   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10093 | 18.30   | 4.20   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10094 | 11.10   | 200.00 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10095 | 11.10   | 204.20 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10096 | 11.10   | 206.30 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10097 | 18.30   | 200.00 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10098 | 18.30   | 204.20 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10099 | 18.30   | 206.30 | 10.15  | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10100 | 11.10   | 202.90 | 7.15   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10101 | 11.10   | 0.00   | 205.23 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10102 | -179.80 | 4.20   | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10103 | 22.30   | 4.20   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10104 | 18.10   | 4.20   | 210.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10105 | -177.70 | 6.30   | 0.00   | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10106 | 20.20   | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 10107 | 20.20   | 6.30   | 207.15 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |

| Tipo | Modulo Elastico<br>[kg/cm <sup>2</sup> ] | v     | alfa<br>[1/°C] | Peso Specifico<br>[kg/m <sup>3</sup> ] | Commento     |
|------|--|-------|----------------|--|--------------|
| 1    | 323000.00                                | 0.120 | 0.000012       | 2500.0                                 | Calcestruzzo |
| 2    | 2100000.00                               | 0.330 | 0.000012       | 7850.0                                 | Acciaio      |
| 3    | 315000.00                                | 0.120 | 0.000012       | 2500.0                                 | calcestruzzo |

| Sezione | Materiale | Tipo di Sezione | Parametri Dimensionali<br>Commenti |
|---------|-----------|-----------------|------------------------------------|
| 1       | 1         | Rett.           | B= 30 H= 60 [cm]                   |
| 2       | 1         | Rett.           | B= 60 H= 30 [cm]                   |
| 3       | 1         | Rett.           | B= 30 H= 30 [cm]                   |
| 4       | 1         | Rett.           | B= 30 H= 80 [cm]                   |
| 5       | 1         | Rett.           | B= 30 H= 70 [cm]                   |

| Sezione | Materiale | Area<br>[cm <sup>2</sup> ] | Jt<br>[cm <sup>4</sup> ] | J2<br>[cm <sup>4</sup> ] | J3<br>[cm <sup>4</sup> ] | J23<br>[cm <sup>4</sup> ] | Xx  | Xy  |
|---------|-----------|----------------------------|--------------------------|--------------------------|--------------------------|---------------------------|-----|-----|
| 1       | 1         | 1800.00                    | 370716                   | 540000                   | 135000                   | 0                         | 1.2 | 1.2 |
| 2       | 1         | 1800.00                    | 370716                   | 135000                   | 540000                   | 0                         | 1.2 | 1.2 |
| 3       | 1         | 900.00                     | 113866                   | 67500                    | 67500                    | 0                         | 1.2 | 1.2 |
| 4       | 1         | 2400.00                    | 578360                   | 1280000                  | 180000                   | 0                         | 1.2 | 1.2 |
| 5       | 1         | 2100.00                    | 473287                   | 857500                   | 157500                   | 0                         | 1.2 | 1.2 |

| Piano | Pilastro | Nodo<br>i | Nodo<br>j | Nodo<br>k | Materiale | Sezione | Luce<br>[m] | Vi12 | Vj12 | Vi13 | Vj13 |
|-------|----------|-----------|-----------|-----------|-----------|---------|-------------|------|------|------|------|
| 0     | 1        | 101       | 1         | 10031     | 1         | 1       | 3.30        | 100  | 100  | 100  | 100  |
| 1     | 101      | 201       | 101       | 10064     | 1         | 1       | 3.85        | 100  | 100  | 100  | 100  |
| 0     | 2        | 2         | 102       | 10032     | 1         | 2       | 3.30        | 100  | 100  | 100  | 100  |
| 1     | 102      | 202       | 102       | 10077     | 1         | 2       | 3.85        | 100  | 100  | 100  | 100  |

|   |     |     |     |       |   |   |      |     |     |     |     |
|---|-----|-----|-----|-------|---|---|------|-----|-----|-----|-----|
| 0 | 3   | 3   | 23  | 10030 | 1 | 2 | 1.65 | 100 | 100 | 100 | 100 |
| 0 | 23  | 23  | 103 | 10030 | 1 | 2 | 1.65 | 100 | 100 | 100 | 100 |
| 0 | 25  | 25  | 103 | 10078 | 1 | 2 | 1.92 | 100 | 100 | 100 | 100 |
| 0 | 25  | 203 | 25  | 10078 | 1 | 2 | 1.92 | 100 | 100 | 100 | 100 |
| 2 | 203 | 303 | 203 | 10094 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 4   | 4   | 104 | 10026 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 104 | 204 | 104 | 10066 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 204 | 304 | 204 | 10089 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 5   | 5   | 105 | 10025 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 105 | 205 | 105 | 10081 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 205 | 305 | 205 | 10097 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 6   | 24  | 6   | 10001 | 1 | 3 | 1.65 | 100 | 100 | 100 | 100 |
| 0 | 24  | 106 | 24  | 10001 | 1 | 3 | 1.65 | 100 | 100 | 100 | 100 |
| 0 | 26  | 26  | 106 | 10100 | 1 | 3 | 1.92 | 100 | 100 | 100 | 100 |
| 0 | 26  | 206 | 26  | 10100 | 1 | 3 | 1.92 | 100 | 100 | 100 | 100 |
| 0 | 8   | 108 | 8   | 10031 | 1 | 4 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 108 | 208 | 108 | 10064 | 1 | 4 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 9   | 109 | 9   | 10032 | 1 | 5 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 109 | 209 | 109 | 10074 | 1 | 5 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 10  | 10  | 110 | 10028 | 1 | 5 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 110 | 210 | 110 | 10083 | 1 | 5 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 210 | 310 | 210 | 10095 | 1 | 5 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 11  | 11  | 111 | 10102 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 111 | 211 | 111 | 10103 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 211 | 311 | 211 | 10104 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 12  | 12  | 112 | 10022 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 112 | 212 | 112 | 10085 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 212 | 312 | 212 | 10098 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 13  | 113 | 13  | 10031 | 1 | 1 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 113 | 213 | 113 | 10064 | 1 | 1 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 14  | 114 | 14  | 10032 | 1 | 5 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 114 | 214 | 114 | 10075 | 1 | 5 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 15  | 15  | 115 | 10027 | 1 | 5 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 115 | 215 | 115 | 10082 | 1 | 5 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 215 | 315 | 215 | 10096 | 1 | 5 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 16  | 16  | 116 | 10105 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 116 | 216 | 116 | 10106 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 216 | 316 | 216 | 10107 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 17  | 17  | 117 | 10023 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 117 | 217 | 117 | 10084 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 2 | 217 | 317 | 217 | 10099 | 1 | 2 | 3.00 | 100 | 100 | 100 | 100 |
| 0 | 18  | 118 | 18  | 10031 | 1 | 1 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 118 | 218 | 118 | 10031 | 1 | 1 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 19  | 19  | 119 | 10032 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 119 | 219 | 119 | 10076 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 20  | 20  | 120 | 10029 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 120 | 220 | 120 | 10079 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 21  | 21  | 121 | 10026 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 121 | 221 | 121 | 10026 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |
| 0 | 22  | 22  | 122 | 10024 | 1 | 2 | 3.30 | 100 | 100 | 100 | 100 |
| 1 | 122 | 222 | 122 | 10080 | 1 | 2 | 3.85 | 100 | 100 | 100 | 100 |

| Tipo | Modulo Elastico<br>[kg/cm <sup>2</sup> ] | v     | alfa<br>[1/°C] | Peso Specifico<br>[kg/m <sup>3</sup> ] | Commento     |
|------|--|-------|----------------|--|--------------|
| 1    | 323000.00                                | 0.120 | 0.000012       | 2500.0                                 | Calcestruzzo |
| 2    | 2100000.00                               | 0.330 | 0.000012       | 7850.0                                 | Acciaio      |
| 3    | 315000.00                                | 0.120 | 0.000012       | 2500.0                                 | calcestruzzo |

| Sezione | Materiale | Tipo di Sezione | Parametri Dimensionali<br>Commenti |
|---------|-----------|-----------------|------------------------------------|
| 1       | 1         | Rett.           | B= 30 H= 50 [cm]                   |
| 2       | 1         | Rett.           | B= 30 H= 50 [cm]                   |
| 3       | 1         | Rett.           | B= 55 H= 25 [cm]                   |
| 4       | 1         | Rett.           | B= 60 H= 25 [cm]                   |
| 5       | 1         | Rett.           | B= 30 H= 40 [cm]                   |

| Sezione | Materiale | Area<br>[cm <sup>2</sup> ] | Jt<br>[cm <sup>4</sup> ] | J2<br>[cm <sup>4</sup> ] | J3<br>[cm <sup>4</sup> ] | J23<br>[cm <sup>4</sup> ] | Xx  | Xy  |
|---------|-----------|----------------------------|--------------------------|--------------------------|--------------------------|---------------------------|-----|-----|
| 1       | 1         | 1500.00                    | 273656                   | 312500                   | 112500                   | 0                         | 1.2 | 1.2 |
| 2       | 1         | 1500.00                    | 273656                   | 312500                   | 112500                   | 0                         | 1.2 | 1.2 |
| 3       | 1         | 1375.00                    | 208246                   | 71615                    | 346615                   | 0                         | 1.2 | 1.2 |
| 4       | 1         | 1500.00                    | 238317                   | 78125                    | 450000                   | 0                         | 1.2 | 1.2 |
| 5       | 1         | 1200.00                    | 186385                   | 160000                   | 90000                    | 0                         | 1.2 | 1.2 |

| Travata | Trave | Nodo<br>i | Nodo<br>j | Nodo<br>k | Materiale | Sezione | Luce<br>[m] | Vi12 | Vj12 | Vi13 | Vj13 |
|---------|-------|-----------|-----------|-----------|-----------|---------|-------------|------|------|------|------|
| 10      | 1     | 23        | 24        | 10000     | 1         | 5       | 2.90        | 100  | 100  | 100  | 100  |
| 11      | 1     | 25        | 26        | 10101     | 1         | 5       | 2.90        | 100  | 100  | 100  | 100  |
| 101     | 1     | 101       | 102       | 10021     | 1         | 1       | 6.00        | 100  | 100  | 100  | 100  |
| 101     | 2     | 102       | 103       | 10021     | 1         | 1       | 5.10        | 100  | 100  | 100  | 100  |
| 101     | 3     | 103       | 104       | 10021     | 1         | 1       | 4.90        | 100  | 100  | 100  | 100  |
| 101     | 4     | 104       | 105       | 10021     | 1         | 1       | 2.30        | 100  | 100  | 100  | 100  |
| 102     | 1     | 108       | 109       | 10011     | 1         | 2       | 6.00        | 100  | 100  | 100  | 100  |
| 102     | 2     | 109       | 110       | 10010     | 1         | 2       | 5.10        | 100  | 100  | 100  | 100  |
| 102     | 3     | 110       | 111       | 10009     | 1         | 2       | 4.90        | 100  | 100  | 100  | 100  |
| 102     | 4     | 111       | 112       | 10008     | 1         | 2       | 2.30        | 100  | 100  | 100  | 100  |
| 103     | 1     | 113       | 114       | 10015     | 1         | 2       | 6.00        | 100  | 100  | 100  | 100  |
| 103     | 2     | 114       | 115       | 10014     | 1         | 2       | 5.10        | 100  | 100  | 100  | 100  |
| 103     | 3     | 115       | 116       | 10013     | 1         | 2       | 4.90        | 100  | 100  | 100  | 100  |
| 103     | 4     | 116       | 117       | 10012     | 1         | 2       | 2.30        | 100  | 100  | 100  | 100  |
| 104     | 1     | 118       | 119       | 10034     | 1         | 1       | 6.00        | 100  | 100  | 100  | 100  |
| 104     | 2     | 119       | 120       | 10018     | 1         | 1       | 5.10        | 100  | 100  | 100  | 100  |
| 104     | 3     | 120       | 121       | 10017     | 1         | 1       | 4.90        | 100  | 100  | 100  | 100  |
| 104     | 4     | 121       | 122       | 10016     | 1         | 1       | 2.30        | 100  | 100  | 100  | 100  |
| 105     | 1     | 101       | 108       | 10034     | 1         | 1       | 4.20        | 100  | 100  | 100  | 100  |
| 105     | 2     | 108       | 113       | 10034     | 1         | 1       | 2.10        | 100  | 100  | 100  | 100  |
| 105     | 3     | 113       | 118       | 10034     | 1         | 1       | 4.20        | 100  | 100  | 100  | 100  |
| 106     | 1     | 102       | 109       | 10007     | 1         | 3       | 4.20        | 100  | 100  | 100  | 100  |
| 106     | 2     | 109       | 114       | 10006     | 1         | 3       | 2.10        | 100  | 100  | 100  | 100  |
| 106     | 3     | 114       | 119       | 10005     | 1         | 3       | 4.20        | 100  | 100  | 100  | 100  |
| 107     | 1     | 103       | 106       | 10004     | 1         | 3       | 2.90        | 100  | 100  | 100  | 100  |
| 107     | 2     | 106       | 110       | 10004     | 1         | 3       | 1.30        | 100  | 100  | 100  | 100  |
| 107     | 3     | 110       | 115       | 10003     | 1         | 3       | 2.10        | 100  | 100  | 100  | 100  |
| 107     | 4     | 115       | 120       | 10002     | 1         | 3       | 4.20        | 100  | 100  | 100  | 100  |
| 108     | 1     | 104       | 107       | 10008     | 1         | 4       | 2.90        | 100  | 100  | 100  | 100  |
| 108     | 2     | 107       | 111       | 10008     | 1         | 4       | 1.30        | 100  | 100  | 100  | 100  |
| 108     | 3     | 111       | 116       | 10008     | 1         | 4       | 2.10        | 100  | 100  | 100  | 100  |

|     |   |     |     |       |   |   |      |     |     |     |     |
|-----|---|-----|-----|-------|---|---|------|-----|-----|-----|-----|
| 108 | 4 | 116 | 121 | 10008 | 1 | 4 | 4.20 | 100 | 100 | 100 | 100 |
| 109 | 1 | 105 | 112 | 10021 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 109 | 2 | 112 | 117 | 10020 | 1 | 1 | 2.10 | 100 | 100 | 100 | 100 |
| 109 | 3 | 117 | 122 | 10019 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 201 | 1 | 201 | 202 | 10055 | 1 | 1 | 6.00 | 100 | 100 | 100 | 100 |
| 201 | 2 | 202 | 203 | 10055 | 1 | 1 | 5.10 | 100 | 100 | 100 | 100 |
| 201 | 3 | 203 | 204 | 10055 | 1 | 1 | 4.90 | 100 | 100 | 100 | 100 |
| 201 | 4 | 204 | 205 | 10055 | 1 | 1 | 2.30 | 100 | 100 | 100 | 100 |
| 202 | 1 | 208 | 209 | 10056 | 1 | 2 | 6.00 | 100 | 100 | 100 | 100 |
| 202 | 2 | 209 | 210 | 10057 | 1 | 2 | 5.10 | 100 | 100 | 100 | 100 |
| 202 | 3 | 210 | 211 | 10058 | 1 | 2 | 4.90 | 100 | 100 | 100 | 100 |
| 202 | 4 | 211 | 212 | 10059 | 1 | 2 | 2.30 | 100 | 100 | 100 | 100 |
| 203 | 1 | 213 | 214 | 10060 | 1 | 2 | 6.00 | 100 | 100 | 100 | 100 |
| 203 | 2 | 214 | 215 | 10061 | 1 | 2 | 5.10 | 100 | 100 | 100 | 100 |
| 203 | 3 | 215 | 216 | 10062 | 1 | 2 | 4.90 | 100 | 100 | 100 | 100 |
| 203 | 4 | 216 | 217 | 10063 | 1 | 2 | 2.30 | 100 | 100 | 100 | 100 |
| 204 | 1 | 218 | 219 | 10064 | 1 | 1 | 6.00 | 100 | 100 | 100 | 100 |
| 204 | 2 | 219 | 220 | 10065 | 1 | 1 | 5.10 | 100 | 100 | 100 | 100 |
| 204 | 3 | 220 | 221 | 10065 | 1 | 1 | 4.90 | 100 | 100 | 100 | 100 |
| 204 | 4 | 221 | 222 | 10066 | 1 | 1 | 2.30 | 100 | 100 | 100 | 100 |
| 205 | 1 | 201 | 208 | 10064 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 205 | 2 | 208 | 213 | 10064 | 1 | 1 | 2.10 | 100 | 100 | 100 | 100 |
| 205 | 3 | 213 | 218 | 10064 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 206 | 1 | 202 | 209 | 10065 | 1 | 3 | 4.20 | 100 | 100 | 100 | 100 |
| 206 | 2 | 209 | 214 | 10065 | 1 | 3 | 2.10 | 100 | 100 | 100 | 100 |
| 206 | 3 | 214 | 219 | 10067 | 1 | 3 | 4.20 | 100 | 100 | 100 | 100 |
| 207 | 1 | 203 | 206 | 10068 | 1 | 3 | 2.90 | 100 | 100 | 100 | 100 |
| 207 | 2 | 206 | 210 | 10068 | 1 | 3 | 1.30 | 100 | 100 | 100 | 100 |
| 207 | 3 | 210 | 215 | 10069 | 1 | 3 | 2.10 | 100 | 100 | 100 | 100 |
| 207 | 4 | 215 | 220 | 10070 | 1 | 3 | 4.20 | 100 | 100 | 100 | 100 |
| 208 | 1 | 204 | 207 | 10066 | 1 | 4 | 2.90 | 100 | 100 | 100 | 100 |
| 208 | 2 | 207 | 211 | 10066 | 1 | 4 | 1.30 | 100 | 100 | 100 | 100 |
| 208 | 3 | 211 | 216 | 10066 | 1 | 4 | 2.10 | 100 | 100 | 100 | 100 |
| 208 | 4 | 216 | 221 | 10066 | 1 | 4 | 4.20 | 100 | 100 | 100 | 100 |
| 209 | 1 | 205 | 212 | 10071 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 209 | 2 | 212 | 217 | 10072 | 1 | 1 | 2.10 | 100 | 100 | 100 | 100 |
| 209 | 3 | 217 | 222 | 10073 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 301 | 1 | 303 | 304 | 10071 | 1 | 1 | 4.90 | 100 | 100 | 100 | 100 |
| 301 | 2 | 304 | 305 | 10071 | 1 | 1 | 2.30 | 100 | 100 | 100 | 100 |
| 302 | 1 | 310 | 311 | 10086 | 1 | 2 | 4.90 | 100 | 100 | 100 | 100 |
| 302 | 2 | 311 | 312 | 10087 | 1 | 2 | 2.30 | 100 | 100 | 100 | 100 |
| 303 | 1 | 315 | 316 | 10088 | 1 | 2 | 4.90 | 100 | 100 | 100 | 100 |
| 303 | 2 | 316 | 317 | 10089 | 1 | 2 | 2.30 | 100 | 100 | 100 | 100 |
| 304 | 1 | 303 | 310 | 10090 | 1 | 3 | 4.20 | 100 | 100 | 100 | 100 |
| 304 | 2 | 310 | 315 | 10091 | 1 | 3 | 2.10 | 100 | 100 | 100 | 100 |
| 305 | 1 | 304 | 311 | 10089 | 1 | 4 | 4.20 | 100 | 100 | 100 | 100 |
| 305 | 2 | 311 | 316 | 10089 | 1 | 4 | 2.10 | 100 | 100 | 100 | 100 |
| 306 | 1 | 305 | 312 | 10092 | 1 | 1 | 4.20 | 100 | 100 | 100 | 100 |
| 306 | 2 | 312 | 317 | 10093 | 1 | 1 | 2.10 | 100 | 100 | 100 | 100 |

| Tipo | Modulo Elastico<br>[kg/cm <sup>2</sup> ] | v     | alfa<br>[1/°C] | Peso Specifico<br>[kg/m <sup>3</sup> ] | Commento     |
|------|--|-------|----------------|--|--------------|
| 1    | 323000.00                                | 0.120 | 0.000012       | 2500.0                                 | Calcestruzzo |

|   |            |       |          |        |              |
|---|------------|-------|----------|--------|--------------|
| 2 | 2100000.00 | 0.330 | 0.000012 | 7850.0 | Acciaio      |
| 3 | 315000.00  | 0.120 | 0.000012 | 2500.0 | calcestruzzo |

| Tipo | Costante di Sottofondo<br>[kg/cm <sup>3</sup> ] | Commento |
|------|---|----------|
| 1    | 5.0   | Default  |

| Sezione | Materiale | Tipo di Sezione | Parametri Dimensionali<br>Commenti                         |
|---------|-----------|-----------------|--|
| 1       | 3         | a Tr            | B= 110 H= 140 b= 50 h= 50 [cm] Terreno numero 1<br>Default |
| 2       | 3         | a Tr            | B= 110 H= 110 b= 50 h= 50 [cm] Terreno numero 1<br>Default |

| Sezione | Materiale | Area<br>[cm <sup>2</sup> ] | Jt<br>[cm <sup>4</sup> ] | J2<br>[cm <sup>4</sup> ] | J3<br>[cm <sup>4</sup> ] | J23<br>[cm <sup>4</sup> ] | Xx  | Yy  |
|---------|-----------|----------------------------|--------------------------|--------------------------|--------------------------|---------------------------|-----|-----|
| 1       | 3         | 10000.00                   | 10967719                 | 16310832                 | 6483334                  | 0                         | 1.2 | 1.2 |
| 2       | 3         | 8500.00                    | 9262837                  | 7917893                  | 6170834                  | 0                         | 1.2 | 1.2 |

| Travata | Trave | Nodo<br>i | Nodo<br>j | Nodo<br>k | Materiale | Sezione | Luce<br>[m] |
|---------|-------|-----------|-----------|-----------|-----------|---------|-------------|
| 1       | 1     | 2         | 1         | 10033     | 3         | 1       | 6.00        |
| 1       | 2     | 3         | 2         | 10033     | 3         | 1       | 5.10        |
| 1       | 3     | 4         | 3         | 10033     | 3         | 1       | 4.90        |
| 1       | 4     | 5         | 4         | 10033     | 3         | 1       | 2.30        |
| 2       | 1     | 8         | 9         | 10047     | 3         | 2       | 6.00        |
| 2       | 2     | 9         | 10        | 10048     | 3         | 2       | 5.10        |
| 2       | 3     | 10        | 11        | 10049     | 3         | 2       | 4.90        |
| 2       | 4     | 11        | 12        | 10050     | 3         | 2       | 2.30        |
| 3       | 1     | 13        | 14        | 10051     | 3         | 2       | 6.00        |
| 3       | 2     | 14        | 15        | 10052     | 3         | 2       | 5.10        |
| 3       | 3     | 15        | 16        | 10053     | 3         | 2       | 4.90        |
| 3       | 4     | 16        | 17        | 10054     | 3         | 2       | 2.30        |
| 4       | 1     | 18        | 19        | 10034     | 3         | 1       | 6.00        |
| 4       | 2     | 19        | 20        | 10035     | 3         | 1       | 5.10        |
| 4       | 3     | 20        | 21        | 10036     | 3         | 1       | 4.90        |
| 4       | 4     | 21        | 22        | 10037     | 3         | 1       | 2.30        |
| 5       | 1     | 1         | 8         | 10031     | 3         | 1       | 4.20        |
| 5       | 2     | 8         | 13        | 10031     | 3         | 1       | 2.10        |
| 5       | 3     | 13        | 18        | 10031     | 3         | 1       | 4.20        |
| 6       | 1     | 2         | 9         | 10041     | 3         | 2       | 4.20        |
| 6       | 2     | 9         | 14        | 10042     | 3         | 2       | 2.10        |
| 6       | 3     | 14        | 19        | 10043     | 3         | 2       | 4.20        |
| 7       | 1     | 3         | 6         | 10044     | 3         | 2       | 2.90        |
| 7       | 2     | 6         | 10        | 10044     | 3         | 2       | 1.30        |
| 7       | 3     | 10        | 15        | 10045     | 3         | 2       | 2.10        |
| 7       | 4     | 15        | 20        | 10046     | 3         | 2       | 4.20        |
| 8       | 1     | 4         | 7         | 10037     | 3         | 2       | 2.90        |
| 8       | 2     | 7         | 11        | 10037     | 3         | 2       | 1.30        |
| 8       | 3     | 11        | 16        | 10037     | 3         | 2       | 2.10        |
| 8       | 4     | 16        | 21        | 10037     | 3         | 2       | 4.20        |
| 9       | 1     | 12        | 5         | 10040     | 3         | 1       | 4.20        |
| 9       | 2     | 17        | 12        | 10039     | 3         | 1       | 2.10        |
| 9       | 3     | 22        | 17        | 10038     | 3         | 1       | 4.20        |

**Combinazione di carico numero**

|                   |          |          |          |          |          |        |
|-------------------|----------|----------|----------|----------|----------|--------|
|                   |          |          |          |          | 1        | SLU    |
| <b>Comb.\Cond</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |        |
|                   | 1        | 1.3000   | 1.3000   | 1.3000   | 1.3000   | 1.5000 |

**Combinazione di carico numero**

|  |   |                 |
|--|---|-----------------|
|  | 2 | Sisma 0 / 90    |
|  | 3 | Sisma 0 / 270   |
|  | 4 | Sisma 90 / 0    |
|  | 5 | Sisma 90 / 180  |
|  | 6 | Sisma 180 / 90  |
|  | 7 | Sisma 180 / 270 |
|  | 8 | Sisma 270 / 0   |
|  | 9 | Sisma 270 / 180 |

| Comb.\Cond | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 |
| 3          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 |
| 4          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 |
| 5          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 |
| 6          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 |
| 7          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 |
| 8          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 |
| 9          | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 |

**Combinazione di carico numero**

|                   |          |          |          |          |          |        |        |
|-------------------|----------|----------|----------|----------|----------|--------|--------|
|                   |          |          |          |          |          | 10     | SLE    |
| <b>Comb.\Cond</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |        |        |
|                   | 10       | 1.0000   | 1.0000   | 1.0000   | 1.0000   | 1.0000 | 1.0000 |

**Combinazione di carico numero**

|  |    |                 |
|--|----|-----------------|
|  | 11 | Sisma 0 / 90    |
|  | 12 | Sisma 0 / 270   |
|  | 13 | Sisma 90 / 0    |
|  | 14 | Sisma 90 / 180  |
|  | 15 | Sisma 180 / 90  |
|  | 16 | Sisma 180 / 270 |
|  | 17 | Sisma 270 / 0   |
|  | 18 | Sisma 270 / 180 |

| Comb.\Cond | 1      | 2      | 3      | 4      | 5      | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 11         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 |
| 12         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 |
| 13         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 |
| 14         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 |
| 15         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 |
| 16         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 |
| 17         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 1.0000 |
| 18         | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.3000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 | 0.0000 | 0.0000 | 0.3000 | 1.0000 |

| Nodo I | Nodo J | L [m] | Condizione di carico | xi [m] | qxi [kg/m] | qyi [kg/m] | qzi [kg/m] | xj [m] | qxj [kg/m] | qyj [kg/m] | qzj [kg/m] |     |
|--------|--------|-------|----------------------|--------|------------|------------|------------|--------|------------|------------|------------|-----|
| 2      | 1      | 6.00  |                      | 1      | 0.00       | 0.0        | 2500.0     | 0.0    | 6.00       | 0.0        | 2500.0     | 0.0 |
|        |        |       |                      | 4      | 0.00       | 0.0        | 970.0      | 0.0    | 6.00       | 0.0        | 970.0      | 0.0 |
| 23     | 24     | 2.90  |                      | 1      | 0.00       | 0.0        | 300.0      | 0.0    | 2.90       | 0.0        | 300.0      | 0.0 |

|     |     |      |   |      |        |        |     |      |        |        |     |
|-----|-----|------|---|------|--------|--------|-----|------|--------|--------|-----|
|     |     |      | 2 | 1.70 | 0.0    | 1680.0 | 0.0 | 2.90 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1680.0 | 0.0 | 1.20 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 5 | 1.70 | 0.0    | 960.0  | 0.0 | 2.90 | 0.0    | 960.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 960.0  | 0.0 | 1.20 | 0.0    | 960.0  | 0.0 |
| 101 | 1   | 3.30 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.30 | -450.0 | 0.0    | 0.0 |
| 3   | 2   | 5.10 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 5.10 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 5.10 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 5.10 | 0.0    | 970.0  | 0.0 |
| 25  | 26  | 2.90 | 1 | 0.00 | 0.0    | 300.0  | 0.0 | 2.90 | 0.0    | 300.0  | 0.0 |
|     |     |      | 2 | 1.70 | 0.0    | 1680.0 | 0.0 | 2.90 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1680.0 | 0.0 | 1.20 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 960.0  | 0.0 | 1.20 | 0.0    | 960.0  | 0.0 |
|     |     |      | 5 | 1.70 | 0.0    | 960.0  | 0.0 | 2.90 | 0.0    | 960.0  | 0.0 |
| 201 | 101 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 4   | 3   | 4.90 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.90 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.90 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.90 | 0.0    | 970.0  | 0.0 |
| 101 | 102 | 6.00 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 6.00 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1230.0 | 0.0 | 6.00 | 0.0    | 1230.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 840.0  | 0.0 | 6.00 | 0.0    | 840.0  | 0.0 |
| 2   | 102 | 3.30 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 5   | 4   | 2.30 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 2.30 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 2.30 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.30 | 0.0    | 970.0  | 0.0 |
| 102 | 103 | 5.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 5.10 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1570.0 | 0.0 | 5.10 | 0.0    | 1570.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 420.0  | 0.0 | 5.10 | 0.0    | 420.0  | 0.0 |
| 202 | 102 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 8   | 9   | 6.00 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 6.00 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 6.00 | 0.0    | 970.0  | 0.0 |
| 103 | 104 | 4.90 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.90 | 0.0    | 850.0  | 0.0 |
| 3   | 23  | 1.65 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 1.65 | 450.0  | 0.0    | 0.0 |
| 9   | 10  | 5.10 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 5.10 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 5.10 | 0.0    | 970.0  | 0.0 |
| 104 | 105 | 2.30 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 2.30 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1570.0 | 0.0 | 2.30 | 0.0    | 1570.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 420.0  | 0.0 | 2.30 | 0.0    | 420.0  | 0.0 |
| 23  | 103 | 1.65 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 1.65 | 450.0  | 0.0    | 0.0 |
| 10  | 11  | 4.90 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.90 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.90 | 0.0    | 970.0  | 0.0 |
| 108 | 109 | 6.00 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1845.0 | 0.0 | 6.00 | 0.0    | 1845.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 1260.0 | 0.0 | 6.00 | 0.0    | 1260.0 | 0.0 |
| 25  | 103 | 1.92 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 1.92 | -450.0 | 0.0    | 0.0 |
| 11  | 12  | 2.30 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.30 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.30 | 0.0    | 970.0  | 0.0 |
| 109 | 110 | 5.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 5.10 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 5.10 | 0.0    | 630.0  | 0.0 |

|     |     |      |   |      |        |        |     |      |        |        |     |
|-----|-----|------|---|------|--------|--------|-----|------|--------|--------|-----|
| 203 | 25  | 1.92 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 1.92 | -450.0 | 0.0    | 0.0 |
| 13  | 14  | 6.00 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 6.00 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 6.00 | 0.0    | 970.0  | 0.0 |
| 110 | 111 | 4.90 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 4.90 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 4.90 | 0.0    | 630.0  | 0.0 |
| 303 | 203 | 3.00 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 14  | 15  | 5.10 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 5.10 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 5.10 | 0.0    | 970.0  | 0.0 |
| 111 | 112 | 2.30 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 2.30 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 2.30 | 0.0    | 630.0  | 0.0 |
| 4   | 104 | 3.30 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 15  | 16  | 4.90 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.90 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.90 | 0.0    | 970.0  | 0.0 |
| 113 | 114 | 6.00 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1845.0 | 0.0 | 6.00 | 0.0    | 1845.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 1260.0 | 0.0 | 6.00 | 0.0    | 1260.0 | 0.0 |
| 204 | 104 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 16  | 17  | 2.30 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.30 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.30 | 0.0    | 970.0  | 0.0 |
| 114 | 115 | 5.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 5.10 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 5.10 | 0.0    | 630.0  | 0.0 |
| 304 | 204 | 3.00 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 18  | 19  | 6.00 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 6.00 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 6.00 | 0.0    | 970.0  | 0.0 |
| 115 | 116 | 4.90 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 4.90 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 4.90 | 0.0    | 630.0  | 0.0 |
| 5   | 105 | 3.30 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 19  | 20  | 5.10 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 5.10 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 5.10 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 5.10 | 0.0    | 970.0  | 0.0 |
| 116 | 117 | 2.30 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 2350.0 | 0.0 | 2.30 | 0.0    | 2350.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 630.0  | 0.0 | 2.30 | 0.0    | 630.0  | 0.0 |
| 205 | 105 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 20  | 21  | 4.90 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.90 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.90 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.90 | 0.0    | 970.0  | 0.0 |
| 118 | 119 | 6.00 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 6.00 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1230.0 | 0.0 | 6.00 | 0.0    | 1230.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 840.0  | 0.0 | 6.00 | 0.0    | 840.0  | 0.0 |
| 305 | 205 | 3.00 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 21  | 22  | 2.30 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 2.30 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 2.30 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.30 | 0.0    | 970.0  | 0.0 |
| 119 | 120 | 5.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 5.10 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1570.0 | 0.0 | 5.10 | 0.0    | 1570.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 420.0  | 0.0 | 5.10 | 0.0    | 420.0  | 0.0 |

|     |     |      |   |      |        |        |     |      |        |        |     |
|-----|-----|------|---|------|--------|--------|-----|------|--------|--------|-----|
| 24  | 6   | 1.65 | 1 | 0.00 | -225.0 | 0.0    | 0.0 | 1.65 | -225.0 | 0.0    | 0.0 |
| 1   | 8   | 4.20 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.20 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 120 | 121 | 4.90 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.90 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1570.0 | 0.0 | 4.90 | 0.0    | 1570.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 420.0  | 0.0 | 4.90 | 0.0    | 420.0  | 0.0 |
| 106 | 24  | 1.65 | 1 | 0.00 | -225.0 | 0.0    | 0.0 | 1.65 | -225.0 | 0.0    | 0.0 |
| 8   | 13  | 2.10 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 2.10 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.10 | 0.0    | 970.0  | 0.0 |
| 121 | 122 | 2.30 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 2.30 | 0.0    | 850.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1570.0 | 0.0 | 2.30 | 0.0    | 1570.0 | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 420.0  | 0.0 | 2.30 | 0.0    | 420.0  | 0.0 |
| 26  | 106 | 1.92 | 1 | 0.00 | -225.0 | 0.0    | 0.0 | 1.92 | -225.0 | 0.0    | 0.0 |
| 13  | 18  | 4.20 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.20 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 101 | 108 | 4.20 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 206 | 26  | 1.92 | 1 | 0.00 | -225.0 | 0.0    | 0.0 | 1.92 | -225.0 | 0.0    | 0.0 |
| 2   | 9   | 4.20 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.20 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.20 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 108 | 113 | 2.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 2.10 | 0.0    | 850.0  | 0.0 |
| 108 | 8   | 3.30 | 1 | 0.00 | -600.0 | 0.0    | 0.0 | 3.30 | -600.0 | 0.0    | 0.0 |
| 9   | 14  | 2.10 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.10 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.10 | 0.0    | 970.0  | 0.0 |
| 113 | 118 | 4.20 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 208 | 108 | 3.85 | 1 | 0.00 | -600.0 | 0.0    | 0.0 | 3.85 | -600.0 | 0.0    | 0.0 |
| 14  | 19  | 4.20 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.20 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.20 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 102 | 109 | 4.20 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 109 | 9   | 3.30 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.30 | -525.0 | 0.0    | 0.0 |
| 3   | 6   | 2.90 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.90 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.90 | 0.0    | 970.0  | 0.0 |
| 109 | 114 | 2.10 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 2.10 | 0.0    | 343.8  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 2.10 | 0.0    | 850.0  | 0.0 |
| 209 | 109 | 3.85 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.85 | -525.0 | 0.0    | 0.0 |
| 6   | 10  | 1.30 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 1.30 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 1.30 | 0.0    | 970.0  | 0.0 |
| 114 | 119 | 4.20 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 10  | 110 | 3.30 | 1 | 0.00 | 525.0  | 0.0    | 0.0 | 3.30 | 525.0  | 0.0    | 0.0 |
| 10  | 15  | 2.10 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.10 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.10 | 0.0    | 970.0  | 0.0 |
| 103 | 106 | 2.90 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 2.90 | 0.0    | 343.8  | 0.0 |
| 210 | 110 | 3.85 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.85 | -525.0 | 0.0    | 0.0 |
| 15  | 20  | 4.20 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.20 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |

|     |     |      |   |      |        |        |     |      |        |        |     |
|-----|-----|------|---|------|--------|--------|-----|------|--------|--------|-----|
| 106 | 110 | 1.30 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 1.30 | 0.0    | 343.8  | 0.0 |
| 310 | 210 | 3.00 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.00 | -525.0 | 0.0    | 0.0 |
| 4   | 7   | 2.90 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.90 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.90 | 0.0    | 970.0  | 0.0 |
|     |     |      | 2 | 1.70 | 0.0    | 1680.0 | 0.0 | 2.90 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 5 | 1.70 | 0.0    | 960.0  | 0.0 | 2.90 | 0.0    | 960.0  | 0.0 |
| 110 | 115 | 2.10 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 2.10 | 0.0    | 343.8  | 0.0 |
| 11  | 111 | 3.30 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 7   | 11  | 1.30 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 1.30 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 1.30 | 0.0    | 970.0  | 0.0 |
| 115 | 120 | 4.20 | 1 | 0.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
| 211 | 111 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 11  | 16  | 2.10 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 2.10 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.10 | 0.0    | 970.0  | 0.0 |
| 104 | 107 | 2.90 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1680.0 | 0.0 | 1.20 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 2 | 1.70 | 0.0    | 1680.0 | 0.0 | 2.90 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 5 | 1.70 | 0.0    | 960.0  | 0.0 | 2.90 | 0.0    | 960.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 960.0  | 0.0 | 1.20 | 0.0    | 960.0  | 0.0 |
| 311 | 211 | 3.00 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 16  | 21  | 4.20 | 1 | 0.00 | 0.0    | 2125.0 | 0.0 | 4.20 | 0.0    | 2125.0 | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 107 | 111 | 1.30 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 1.30 | 0.0    | 375.0  | 0.0 |
| 12  | 112 | 3.30 | 1 | 0.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 12  | 5   | 4.20 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.20 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.20 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 111 | 116 | 2.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
| 212 | 112 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 17  | 12  | 2.10 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 2.10 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 2.10 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 2.10 | 0.0    | 970.0  | 0.0 |
| 116 | 121 | 4.20 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
| 312 | 212 | 3.00 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 22  | 17  | 4.20 | 1 | 0.00 | 0.0    | 2500.0 | 0.0 | 4.20 | 0.0    | 2500.0 | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 690.0  | 0.0 | 4.20 | 0.0    | 690.0  | 0.0 |
|     |     |      | 4 | 0.00 | 0.0    | 970.0  | 0.0 | 4.20 | 0.0    | 970.0  | 0.0 |
| 105 | 112 | 4.20 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 113 | 13  | 3.30 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.30 | -450.0 | 0.0    | 0.0 |
| 213 | 113 | 3.85 | 1 | 0.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 112 | 117 | 2.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 2.10 | 0.0    | 850.0  | 0.0 |
| 114 | 14  | 3.30 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.30 | -525.0 | 0.0    | 0.0 |
| 117 | 122 | 4.20 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 850.0  | 0.0 | 4.20 | 0.0    | 850.0  | 0.0 |
| 214 | 114 | 3.85 | 1 | 0.00 | -525.0 | 0.0    | 0.0 | 3.85 | -525.0 | 0.0    | 0.0 |
| 201 | 202 | 6.00 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0    | 840.0  | 0.0 | 6.00 | 0.0    | 840.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0    | 450.0  | 0.0 | 6.00 | 0.0    | 450.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0    | 1250.0 | 0.0 | 6.00 | 0.0    | 1250.0 | 0.0 |
| 15  | 115 | 3.30 | 1 | 0.00 | 525.0  | 0.0    | 0.0 | 3.30 | 525.0  | 0.0    | 0.0 |
| 202 | 203 | 5.10 | 1 | 0.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |

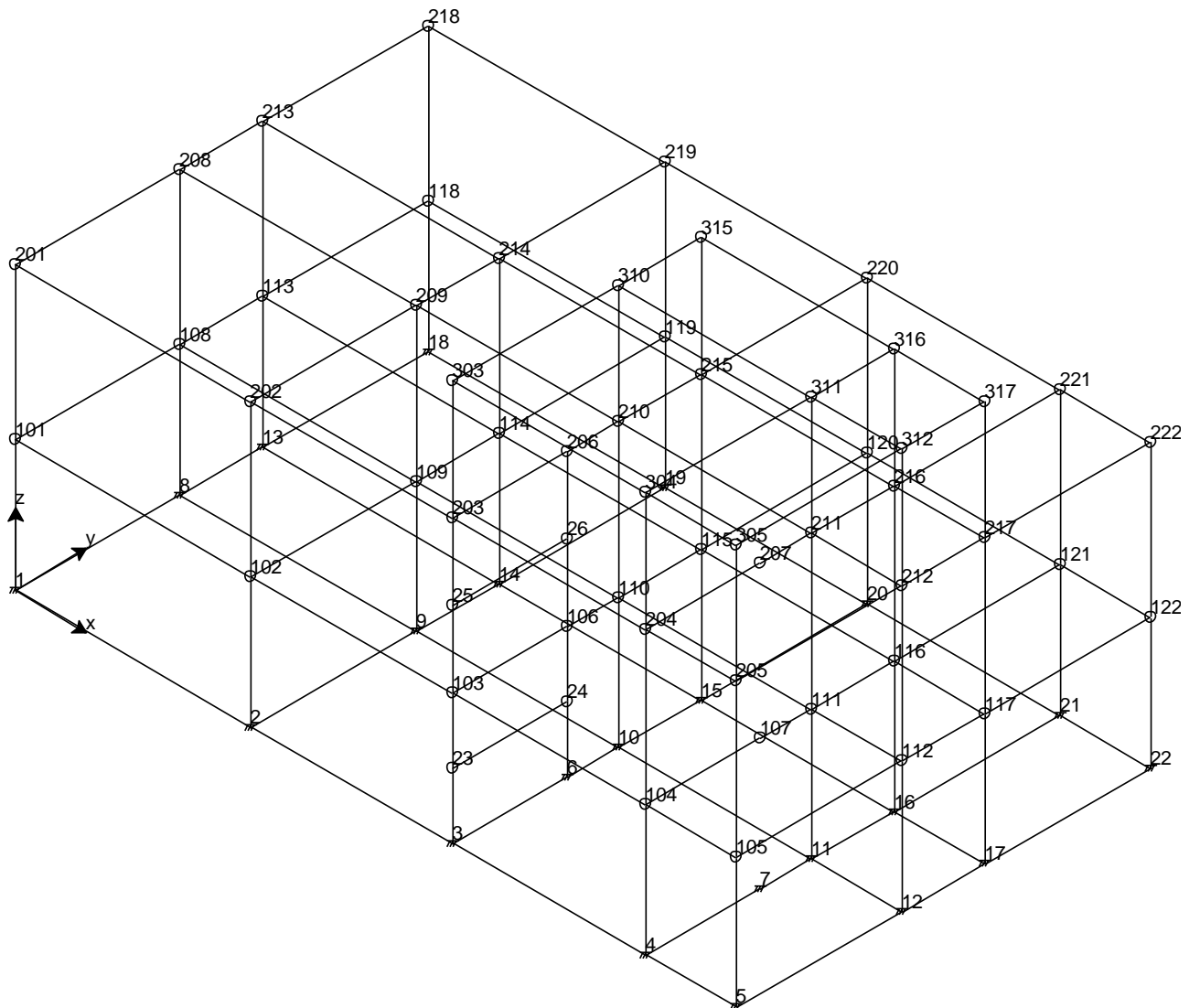
|     |     |      |       |        |        |     |      |        |        |     |
|-----|-----|------|-------|--------|--------|-----|------|--------|--------|-----|
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 5.10 | 0.0    | 840.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 5.10 | 0.0    | 450.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 5.10 | 0.0    | 1250.0 | 0.0 |
| 215 | 115 | 3.85 | 10.00 | -525.0 | 0.0    | 0.0 | 3.85 | -525.0 | 0.0    | 0.0 |
| 203 | 204 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 4.90 | 0.0    | 625.0  | 0.0 |
| 315 | 215 | 3.00 | 10.00 | -525.0 | 0.0    | 0.0 | 3.00 | -525.0 | 0.0    | 0.0 |
| 204 | 205 | 2.30 | 10.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 2.30 | 0.0    | 840.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 2.30 | 0.0    | 1250.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 2.30 | 0.0    | 625.0  | 0.0 |
| 16  | 116 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 208 | 209 | 6.00 | 10.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 6.00 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 6.00 | 0.0    | 1875.0 | 0.0 |
| 216 | 116 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 209 | 210 | 5.10 | 10.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 5.10 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 5.10 | 0.0    | 1875.0 | 0.0 |
| 316 | 216 | 3.00 | 10.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 210 | 211 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 4.90 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 4.90 | 0.0    | 1875.0 | 0.0 |
| 17  | 117 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 211 | 212 | 2.30 | 10.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 2.30 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 2.30 | 0.0    | 1875.0 | 0.0 |
| 217 | 117 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 213 | 214 | 6.00 | 10.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 6.00 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 6.00 | 0.0    | 1875.0 | 0.0 |
| 317 | 217 | 3.00 | 10.00 | -450.0 | 0.0    | 0.0 | 3.00 | -450.0 | 0.0    | 0.0 |
| 214 | 215 | 5.10 | 10.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 5.10 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 5.10 | 0.0    | 1875.0 | 0.0 |
| 118 | 18  | 3.30 | 10.00 | -450.0 | 0.0    | 0.0 | 3.30 | -450.0 | 0.0    | 0.0 |
| 215 | 216 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 4.90 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 4.90 | 0.0    | 1875.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 4.90 | 0.0    | 625.0  | 0.0 |
| 218 | 118 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 216 | 217 | 2.30 | 10.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 1260.0 | 0.0 | 2.30 | 0.0    | 1260.0 | 0.0 |
|     |     |      | 20.00 | 0.0    | 1875.0 | 0.0 | 2.30 | 0.0    | 1875.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 2.30 | 0.0    | 625.0  | 0.0 |
| 19  | 119 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 218 | 219 | 6.00 | 10.00 | 0.0    | 375.0  | 0.0 | 6.00 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 6.00 | 0.0    | 840.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 6.00 | 0.0    | 1250.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 6.00 | 0.0    | 450.0  | 0.0 |
| 219 | 119 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 219 | 220 | 5.10 | 10.00 | 0.0    | 375.0  | 0.0 | 5.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 5.10 | 0.0    | 840.0  | 0.0 |

|     |     |      |       |        |        |     |      |        |        |     |
|-----|-----|------|-------|--------|--------|-----|------|--------|--------|-----|
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 5.10 | 0.0    | 1250.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 5.10 | 0.0    | 450.0  | 0.0 |
| 20  | 120 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 220 | 221 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 4.90 | 0.0    | 840.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 4.90 | 0.0    | 1250.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 4.90 | 0.0    | 450.0  | 0.0 |
| 220 | 120 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 221 | 222 | 2.30 | 10.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 840.0  | 0.0 | 2.30 | 0.0    | 840.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1250.0 | 0.0 | 2.30 | 0.0    | 1250.0 | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 2.30 | 0.0    | 450.0  | 0.0 |
| 21  | 121 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 201 | 208 | 4.20 | 10.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 4.20 | 0.0    | 450.0  | 0.0 |
| 221 | 121 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 208 | 213 | 2.10 | 10.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 2.10 | 0.0    | 450.0  | 0.0 |
| 22  | 122 | 3.30 | 10.00 | 450.0  | 0.0    | 0.0 | 3.30 | 450.0  | 0.0    | 0.0 |
| 213 | 218 | 4.20 | 10.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 4.20 | 0.0    | 450.0  | 0.0 |
| 222 | 122 | 3.85 | 10.00 | -450.0 | 0.0    | 0.0 | 3.85 | -450.0 | 0.0    | 0.0 |
| 202 | 209 | 4.20 | 10.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
| 209 | 214 | 2.10 | 10.00 | 0.0    | 343.8  | 0.0 | 2.10 | 0.0    | 343.8  | 0.0 |
| 214 | 219 | 4.20 | 10.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
| 203 | 206 | 2.90 | 10.00 | 0.0    | 343.8  | 0.0 | 2.90 | 0.0    | 343.8  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 2.90 | 0.0    | 625.0  | 0.0 |
| 206 | 210 | 1.30 | 10.00 | 0.0    | 343.8  | 0.0 | 1.30 | 0.0    | 343.8  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 1.30 | 0.0    | 625.0  | 0.0 |
| 210 | 215 | 2.10 | 10.00 | 0.0    | 343.8  | 0.0 | 2.10 | 0.0    | 343.8  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 2.10 | 0.0    | 625.0  | 0.0 |
| 215 | 220 | 4.20 | 10.00 | 0.0    | 343.8  | 0.0 | 4.20 | 0.0    | 343.8  | 0.0 |
| 204 | 207 | 2.90 | 10.00 | 0.0    | 375.0  | 0.0 | 2.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1680.0 | 0.0 | 1.20 | 0.0    | 1680.0 | 0.0 |
|     |     |      | 50.00 | 0.0    | 960.0  | 0.0 | 1.20 | 0.0    | 960.0  | 0.0 |
| 207 | 211 | 1.30 | 10.00 | 0.0    | 375.0  | 0.0 | 1.30 | 0.0    | 375.0  | 0.0 |
| 211 | 216 | 2.10 | 10.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
| 216 | 221 | 4.20 | 10.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
| 205 | 212 | 4.20 | 10.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 4.20 | 0.0    | 625.0  | 0.0 |
| 212 | 217 | 2.10 | 10.00 | 0.0    | 375.0  | 0.0 | 2.10 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 625.0  | 0.0 | 2.10 | 0.0    | 625.0  | 0.0 |
| 217 | 222 | 4.20 | 10.00 | 0.0    | 375.0  | 0.0 | 4.20 | 0.0    | 375.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 4.20 | 0.0    | 450.0  | 0.0 |
| 303 | 304 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 420.0  | 0.0 | 4.90 | 0.0    | 420.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 4.90 | 0.0    | 450.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1210.0 | 0.0 | 4.90 | 0.0    | 1210.0 | 0.0 |
| 304 | 305 | 2.30 | 10.00 | 0.0    | 375.0  | 0.0 | 2.30 | 0.0    | 375.0  | 0.0 |
|     |     |      | 50.00 | 0.0    | 420.0  | 0.0 | 2.30 | 0.0    | 420.0  | 0.0 |
|     |     |      | 30.00 | 0.0    | 450.0  | 0.0 | 2.30 | 0.0    | 450.0  | 0.0 |
|     |     |      | 20.00 | 0.0    | 1210.0 | 0.0 | 2.30 | 0.0    | 1210.0 | 0.0 |
| 310 | 311 | 4.90 | 10.00 | 0.0    | 375.0  | 0.0 | 4.90 | 0.0    | 375.0  | 0.0 |

|     |     |      |   |      |     |        |     |      |     |        |     |
|-----|-----|------|---|------|-----|--------|-----|------|-----|--------|-----|
|     |     |      | 5 | 0.00 | 0.0 | 630.0  | 0.0 | 4.90 | 0.0 | 630.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0 | 1815.0 | 0.0 | 4.90 | 0.0 | 1815.0 | 0.0 |
| 311 | 312 | 2.30 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 2.30 | 0.0 | 375.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0 | 630.0  | 0.0 | 2.30 | 0.0 | 630.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0 | 1815.0 | 0.0 | 2.30 | 0.0 | 1815.0 | 0.0 |
| 315 | 316 | 4.90 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 4.90 | 0.0 | 375.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0 | 210.0  | 0.0 | 4.90 | 0.0 | 210.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 4.90 | 0.0 | 450.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0 | 605.0  | 0.0 | 4.90 | 0.0 | 605.0  | 0.0 |
| 316 | 317 | 2.30 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 2.30 | 0.0 | 375.0  | 0.0 |
|     |     |      | 5 | 0.00 | 0.0 | 210.0  | 0.0 | 2.30 | 0.0 | 210.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 2.30 | 0.0 | 450.0  | 0.0 |
|     |     |      | 2 | 0.00 | 0.0 | 605.0  | 0.0 | 2.30 | 0.0 | 605.0  | 0.0 |
| 303 | 310 | 4.20 | 1 | 0.00 | 0.0 | 343.8  | 0.0 | 4.20 | 0.0 | 343.8  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 4.20 | 0.0 | 450.0  | 0.0 |
| 310 | 315 | 2.10 | 1 | 0.00 | 0.0 | 343.8  | 0.0 | 2.10 | 0.0 | 343.8  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 2.10 | 0.0 | 450.0  | 0.0 |
| 304 | 311 | 4.20 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 4.20 | 0.0 | 375.0  | 0.0 |
| 311 | 316 | 2.10 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 2.10 | 0.0 | 375.0  | 0.0 |
| 305 | 312 | 4.20 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 4.20 | 0.0 | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 4.20 | 0.0 | 450.0  | 0.0 |
| 312 | 317 | 2.10 | 1 | 0.00 | 0.0 | 375.0  | 0.0 | 2.10 | 0.0 | 375.0  | 0.0 |
|     |     |      | 3 | 0.00 | 0.0 | 450.0  | 0.0 | 2.10 | 0.0 | 450.0  | 0.0 |

**ALLEGATO “B”**  
**TABULATI DI CALCOLO - OUTPUT**

NUMERAZIONE NODI:



## - Structural Analysis & Design

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**Ditta produttrice:**

*En.Ex.Sys.* s.r.l. - Via Tizzano 46/2 - Casalecchio di Reno (Bologna)

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**Sigla:**

WinStrand

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**Piattaforma software:**

Microsoft Windows XP Home, Microsoft Windows XP Home Professional

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**Documentazione in uso:**

Manuale teorico - Manuale d'uso

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**Campo di applicazione:**

Analisi statica e dinamica di strutture in campo elastico lineare.

## - Elementi finiti implementati

- Truss.
- Beam (Modellazione di Travi e Pilastr).
- Travi su suolo elastico alla Winckler.
- Plinti su suolo elastico alla Winckler.
- Elementi Shear Wall per la modellazione di pareti di taglio.
- Elementi shell (lastra/piastra) equivalenti.
- Elementi Isoparametrici a 8 Nodi Shell (lastra/piastra).

## - Schemi di Carico

- Carichi nodali concentrati.
- Carichi applicati direttamente agli elementi.
- Carichi Superficiali.

## - Tipo di Risoluzione

- Analisi statica e/o dinamica in campo lineare con il metodo dell'equilibrio.
- Fattorizzazione LDL<sup>T</sup>.
- Analisi Statica:
  - - modellazione generale 6 gradi di libertà per nodo.
    - ipotesi di solai infinitamente rigidi nel proprio piano (3 gradi di libertà per nodo + 3 per impalcato).
- Analisi dinamica. (Nel caso di analisi modale gli autovettori ed autovalori possono essere calcolati mediante *subspace iteration* oppure tramite il *metodo dei vettori di Ritz*):
  - - Via statica equivalente.
    - Modale con il metodo dello spettro di risposta.

## - Normativa di riferimento

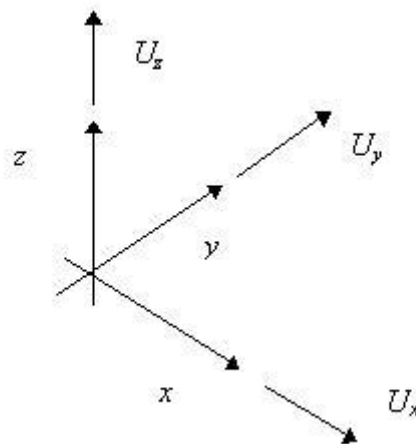
La normativa italiana cui viene fatto riferimento nelle fasi di calcolo e progettazione è la seguente:

- Legge n. 1086 del 5 Novembre 1971. "Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica".
- Legge n. 64 del 2 Febbraio 1974. "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche".
- D.M. del 3 Marzo 1975. "Approvazione delle norme tecniche per le costruzioni in zone sismiche".
- D.M. del 3 Marzo 1975. "Disposizioni concernenti l'applicazione delle norme tecniche per le costruzioni in zone sismiche".
- D.M. del 3 Ottobre 1978. "Criteri generali per la verifica della sicurezza delle costruzioni e dei carichi e sovraccarichi".
- D.M. del 14 Febbraio 1992. "Norme Tecniche per l'esecuzione delle opere in C.A. normale e precompresso e per le strutture metalliche".
- Istruzioni per la valutazione delle: Azioni sulle Costruzioni. (C.N.R. 10012/85)
- D.M. del 9 Gennaio 1996. "Norme Tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
- D.M. del 16 Gennaio 1996. "Norme tecniche relative ai «Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi»".
- D.M. del 16 Gennaio 1996. "Norme tecniche per le costruzioni in zone sismiche"
- Ordinanza n. 3274 del 20 Marzo 2003. "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica"
- Ordinanza n. 3316. "Modifiche ed integrazioni all'ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 Marzo 2003"
- D.M. del 14 Gennaio 2008 "Approvazione delle nuove norme tecniche per le costruzioni"

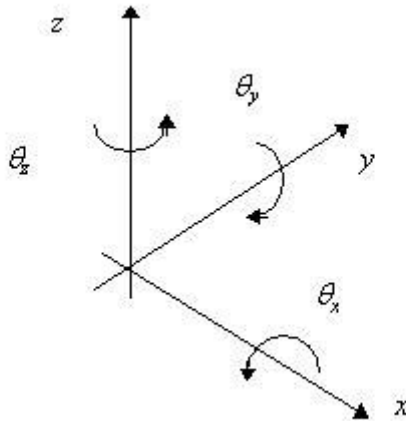
## - Spostamenti nodali

### - Convenzioni adottate

La terna di riferimento generale è destrorsa per cui si hanno i seguenti segni positivi per le componenti di spostamento nodale:



e per quanto riguarda le rotazioni:



Nel seguito vengono riportate, per ogni nodo (con esclusione dei nodi  $K$  che definiscono l'orientamento delle aste e quindi, essendo bloccati, hanno componenti di spostamento nulle), le componenti di spostamento in tutte le combinazioni di carico definite.

| Nodo | Comb. | Ux<br>[mm] | Uy<br>[mm] | Uz<br>[mm] | Rx<br>[°] | Ry<br>[°] | Rz<br>[°] |
|------|-------|------------|------------|------------|-----------|-----------|-----------|
| 1    | 1     | 0.00       | 0.00       | -2.24      | 0.00      | -0.01     | 0.00      |
|      | 2     | 0.00       | 0.00       | -1.44      | 0.00      | -0.00     | 0.00      |
|      | 3     | 0.00       | 0.00       | -1.41      | 0.00      | -0.00     | 0.00      |
|      | 4     | 0.00       | 0.00       | -1.41      | 0.00      | -0.00     | 0.00      |
|      | 5     | 0.00       | 0.00       | -1.38      | 0.00      | -0.00     | 0.00      |
|      | 6     | 0.00       | 0.00       | -1.33      | 0.00      | -0.00     | 0.00      |
|      | 7     | 0.00       | 0.00       | -1.30      | -0.00     | -0.00     | 0.00      |
|      | 8     | 0.00       | 0.00       | -1.30      | -0.00     | -0.00     | 0.00      |
|      | 9     | 0.00       | 0.00       | -1.27      | -0.00     | -0.00     | 0.00      |
|      | 10    | 0.00       | 0.00       | -1.69      | 0.00      | -0.00     | 0.00      |
|      | 11    | 0.00       | 0.00       | -1.56      | 0.00      | -0.00     | 0.00      |
|      | 12    | 0.00       | 0.00       | -1.56      | 0.00      | -0.00     | 0.00      |
|      | 13    | 0.00       | 0.00       | -1.51      | 0.00      | -0.00     | 0.00      |
|      | 14    | 0.00       | 0.00       | -1.51      | 0.00      | -0.00     | 0.00      |
|      | 15    | 0.00       | 0.00       | -1.56      | 0.00      | -0.00     | 0.00      |
|      | 16    | 0.00       | 0.00       | -1.56      | 0.00      | -0.00     | 0.00      |
|      | 17    | 0.00       | 0.00       | -1.52      | 0.00      | -0.00     | 0.00      |
|      | 18    | 0.00       | 0.00       | -1.51      | 0.00      | -0.00     | 0.00      |
| 2    | 1     | 0.00       | 0.00       | -2.27      | 0.01      | 0.00      | 0.00      |
|      | 2     | 0.00       | 0.00       | -1.51      | 0.00      | 0.00      | 0.00      |
|      | 3     | 0.00       | 0.00       | -1.50      | 0.00      | 0.00      | 0.00      |
|      | 4     | 0.00       | 0.00       | -1.50      | 0.00      | 0.00      | 0.00      |
|      | 5     | 0.00       | 0.00       | -1.48      | 0.00      | 0.00      | 0.00      |
|      | 6     | 0.00       | 0.00       | -1.45      | 0.00      | 0.00      | 0.00      |
|      | 7     | 0.00       | 0.00       | -1.43      | 0.00      | 0.00      | 0.00      |
|      | 8     | 0.00       | 0.00       | -1.44      | 0.00      | 0.00      | 0.00      |
|      | 9     | 0.00       | 0.00       | -1.42      | 0.00      | 0.00      | 0.00      |
|      | 10    | 0.00       | 0.00       | -1.71      | 0.00      | 0.00      | 0.00      |
|      | 11    | 0.00       | 0.00       | -1.58      | 0.00      | 0.00      | 0.00      |
|      | 12    | 0.00       | 0.00       | -1.58      | 0.00      | 0.00      | 0.00      |
|      | 13    | 0.00       | 0.00       | -1.55      | 0.00      | 0.00      | 0.00      |
|      | 14    | 0.00       | 0.00       | -1.55      | 0.00      | 0.00      | 0.00      |
|      | 15    | 0.00       | 0.00       | -1.57      | 0.00      | 0.00      | 0.00      |

|   |    |      |      |       |      |      |      |
|---|----|------|------|-------|------|------|------|
|   | 16 | 0.00 | 0.00 | -1.57 | 0.00 | 0.00 | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.56 | 0.00 | 0.00 | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.56 | 0.00 | 0.00 | 0.00 |
| 3 | 1  | 0.00 | 0.00 | -2.49 | 0.00 | 0.00 | 0.00 |
|   | 2  | 0.00 | 0.00 | -1.66 | 0.00 | 0.00 | 0.00 |
|   | 3  | 0.00 | 0.00 | -1.63 | 0.00 | 0.00 | 0.00 |
|   | 4  | 0.00 | 0.00 | -1.65 | 0.00 | 0.00 | 0.00 |
|   | 5  | 0.00 | 0.00 | -1.62 | 0.00 | 0.00 | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.54 | 0.00 | 0.00 | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.51 | 0.00 | 0.00 | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.55 | 0.00 | 0.00 | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.51 | 0.00 | 0.00 | 0.00 |
|   | 10 | 0.00 | 0.00 | -1.88 | 0.00 | 0.00 | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.74 | 0.00 | 0.00 | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.74 | 0.00 | 0.00 | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.73 | 0.00 | 0.00 | 0.00 |
|   | 14 | 0.00 | 0.00 | -1.73 | 0.00 | 0.00 | 0.00 |
|   | 15 | 0.00 | 0.00 | -1.73 | 0.00 | 0.00 | 0.00 |
|   | 16 | 0.00 | 0.00 | -1.74 | 0.00 | 0.00 | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.74 | 0.00 | 0.00 | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.74 | 0.00 | 0.00 | 0.00 |
| 4 | 1  | 0.00 | 0.00 | -2.62 | 0.01 | 0.00 | 0.00 |
|   | 2  | 0.00 | 0.00 | -1.98 | 0.01 | 0.01 | 0.00 |
|   | 3  | 0.00 | 0.00 | -1.90 | 0.01 | 0.01 | 0.00 |
|   | 4  | 0.00 | 0.00 | -1.96 | 0.01 | 0.01 | 0.00 |
|   | 5  | 0.00 | 0.00 | -1.88 | 0.01 | 0.01 | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.70 | 0.00 | 0.00 | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.62 | 0.00 | 0.00 | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.70 | 0.00 | 0.00 | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.61 | 0.00 | 0.00 | 0.00 |
|   | 10 | 0.00 | 0.00 | -1.98 | 0.01 | 0.00 | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.87 | 0.01 | 0.00 | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.87 | 0.01 | 0.00 | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.84 | 0.01 | 0.00 | 0.00 |
|   | 14 | 0.00 | 0.00 | -1.83 | 0.01 | 0.00 | 0.00 |
|   | 15 | 0.00 | 0.00 | -1.86 | 0.01 | 0.00 | 0.00 |
|   | 16 | 0.00 | 0.00 | -1.86 | 0.01 | 0.00 | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.85 | 0.01 | 0.00 | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.85 | 0.01 | 0.00 | 0.00 |
| 5 | 1  | 0.00 | 0.00 | -2.73 | 0.01 | 0.00 | 0.00 |
|   | 2  | 0.00 | 0.00 | -2.39 | 0.01 | 0.01 | 0.00 |
|   | 3  | 0.00 | 0.00 | -2.24 | 0.01 | 0.01 | 0.00 |
|   | 4  | 0.00 | 0.00 | -2.37 | 0.01 | 0.01 | 0.00 |
|   | 5  | 0.00 | 0.00 | -2.22 | 0.01 | 0.01 | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.90 | 0.00 | 0.01 | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.75 | 0.00 | 0.00 | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.87 | 0.00 | 0.00 | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.72 | 0.00 | 0.00 | 0.00 |
|   | 10 | 0.00 | 0.00 | -2.07 | 0.01 | 0.00 | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.97 | 0.01 | 0.00 | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.96 | 0.01 | 0.00 | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.94 | 0.01 | 0.00 | 0.00 |
|   | 14 | 0.00 | 0.00 | -1.94 | 0.01 | 0.00 | 0.00 |

|   |    |      |      |       |       |       |      |
|---|----|------|------|-------|-------|-------|------|
|   | 15 | 0.00 | 0.00 | -1.98 | 0.01  | 0.00  | 0.00 |
|   | 16 | 0.00 | 0.00 | -1.97 | 0.01  | 0.00  | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.93 | 0.01  | 0.00  | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.93 | 0.01  | 0.00  | 0.00 |
| 6 | 1  | 0.00 | 0.00 | -2.37 | 0.00  | 0.00  | 0.00 |
|   | 2  | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|   | 3  | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|   | 4  | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|   | 5  | 0.00 | 0.00 | -1.54 | 0.00  | 0.00  | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.53 | -0.00 | 0.00  | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.52 | -0.00 | 0.00  | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.53 | -0.00 | 0.00  | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.52 | -0.00 | 0.00  | 0.00 |
|   | 10 | 0.00 | 0.00 | -1.79 | 0.00  | 0.00  | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.63 | 0.00  | 0.00  | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.61 | 0.00  | 0.00  | 0.00 |
|   | 14 | 0.00 | 0.00 | -1.61 | 0.00  | 0.00  | 0.00 |
|   | 15 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|   | 16 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
| 7 | 1  | 0.00 | 0.00 | -2.36 | 0.00  | 0.00  | 0.00 |
|   | 2  | 0.00 | 0.00 | -1.70 | 0.00  | 0.01  | 0.00 |
|   | 3  | 0.00 | 0.00 | -1.66 | 0.00  | 0.01  | 0.00 |
|   | 4  | 0.00 | 0.00 | -1.69 | 0.00  | 0.01  | 0.00 |
|   | 5  | 0.00 | 0.00 | -1.65 | 0.00  | 0.01  | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.57 | 0.00  | 0.00  | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.53 | -0.00 | 0.00  | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.57 | 0.00  | 0.00  | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.53 | -0.00 | 0.00  | 0.00 |
|   | 10 | 0.00 | 0.00 | -1.79 | 0.00  | 0.00  | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.66 | 0.00  | 0.00  | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.66 | 0.00  | 0.00  | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.64 | 0.00  | 0.00  | 0.00 |
|   | 14 | 0.00 | 0.00 | -1.64 | 0.00  | 0.00  | 0.00 |
|   | 15 | 0.00 | 0.00 | -1.65 | 0.00  | 0.00  | 0.00 |
|   | 16 | 0.00 | 0.00 | -1.65 | 0.00  | 0.00  | 0.00 |
|   | 17 | 0.00 | 0.00 | -1.65 | 0.00  | 0.00  | 0.00 |
|   | 18 | 0.00 | 0.00 | -1.65 | 0.00  | 0.00  | 0.00 |
| 8 | 1  | 0.00 | 0.00 | -2.12 | -0.00 | -0.01 | 0.00 |
|   | 2  | 0.00 | 0.00 | -1.36 | 0.00  | -0.00 | 0.00 |
|   | 3  | 0.00 | 0.00 | -1.37 | 0.00  | -0.00 | 0.00 |
|   | 4  | 0.00 | 0.00 | -1.34 | 0.00  | -0.00 | 0.00 |
|   | 5  | 0.00 | 0.00 | -1.35 | -0.00 | -0.00 | 0.00 |
|   | 6  | 0.00 | 0.00 | -1.38 | -0.00 | -0.00 | 0.00 |
|   | 7  | 0.00 | 0.00 | -1.39 | -0.00 | -0.00 | 0.00 |
|   | 8  | 0.00 | 0.00 | -1.38 | -0.00 | -0.00 | 0.00 |
|   | 9  | 0.00 | 0.00 | -1.38 | -0.00 | -0.00 | 0.00 |
|   | 10 | 0.00 | 0.00 | -1.60 | 0.00  | -0.01 | 0.00 |
|   | 11 | 0.00 | 0.00 | -1.45 | 0.00  | -0.01 | 0.00 |
|   | 12 | 0.00 | 0.00 | -1.45 | 0.00  | -0.01 | 0.00 |
|   | 13 | 0.00 | 0.00 | -1.43 | -0.00 | -0.01 | 0.00 |

|    |    |      |      |       |       |       |      |
|----|----|------|------|-------|-------|-------|------|
|    | 14 | 0.00 | 0.00 | -1.42 | -0.00 | -0.01 | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.44 | 0.00  | -0.01 | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.44 | 0.00  | -0.01 | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.44 | 0.00  | -0.01 | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.43 | -0.00 | -0.01 | 0.00 |
| 9  | 1  | 0.00 | 0.00 | -2.13 | -0.00 | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.41 | -0.00 | 0.00  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.40 | -0.00 | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.40 | -0.00 | 0.00  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.40 | -0.00 | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.39 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.39 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.39 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.38 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.42 | -0.00 | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.42 | -0.00 | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.42 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.42 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.42 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.42 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.42 | -0.00 | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.42 | 0.00  | 0.00  | 0.00 |
| 10 | 1  | 0.00 | 0.00 | -2.34 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.52 | 0.00  | 0.00  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.53 | 0.00  | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.52 | 0.00  | 0.00  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.53 | 0.00  | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.55 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.55 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.76 | 0.00  | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.59 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.59 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.58 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.58 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.58 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.58 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.59 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.59 | 0.00  | 0.00  | 0.00 |
| 11 | 1  | 0.00 | 0.00 | -2.33 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.64 | 0.00  | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.63 | 0.00  | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.64 | 0.00  | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.62 | 0.00  | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.59 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.57 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.59 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.57 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.76 | 0.00  | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |

|    |    |      |      |       |       |       |      |
|----|----|------|------|-------|-------|-------|------|
|    | 13 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
| 12 | 1  | 0.00 | 0.00 | -2.36 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.99 | 0.00  | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.91 | 0.00  | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00 | -2.00 | 0.00  | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.92 | 0.00  | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.74 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.66 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.72 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.64 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.79 | 0.00  | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.68 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.67 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.69 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.70 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.71 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.70 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.66 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.67 | 0.00  | 0.00  | 0.00 |
| 13 | 1  | 0.00 | 0.00 | -2.11 | 0.00  | -0.01 | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.31 | 0.00  | -0.00 | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.35 | 0.00  | -0.00 | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.33 | 0.00  | -0.00 | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.37 | -0.00 | -0.00 | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.45 | -0.00 | -0.01 | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.48 | -0.00 | -0.01 | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.46 | -0.00 | -0.01 | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.49 | -0.00 | -0.01 | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.59 | 0.00  | -0.01 | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.42 | 0.00  | -0.01 | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.42 | 0.00  | -0.01 | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.44 | -0.00 | -0.01 | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.44 | -0.00 | -0.01 | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.43 | 0.00  | -0.01 | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.42 | 0.00  | -0.01 | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.44 | 0.00  | -0.01 | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.44 | -0.00 | -0.01 | 0.00 |
| 14 | 1  | 0.00 | 0.00 | -2.10 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.38 | 0.00  | 0.00  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.39 | 0.00  | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.38 | 0.00  | 0.00  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.40 | 0.00  | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.44 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.45 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.44 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.46 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.58 | 0.00  | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.40 | 0.00  | 0.00  | 0.00 |

|    |    |      |      |       |       |       |      |
|----|----|------|------|-------|-------|-------|------|
|    | 12 | 0.00 | 0.00 | -1.40 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.41 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.41 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.40 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.40 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.41 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.41 | 0.00  | 0.00  | 0.00 |
| 15 | 1  | 0.00 | 0.00 | -2.22 | 0.00  | -0.00 | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.43 | 0.00  | -0.00 | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.47 | 0.00  | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.44 | 0.00  | -0.00 | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.48 | 0.00  | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.56 | 0.00  | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.57 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.61 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.67 | 0.00  | -0.00 | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.50 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.50 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.51 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.52 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.50 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.50 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.51 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.51 | 0.00  | 0.00  | 0.00 |
| 16 | 1  | 0.00 | 0.00 | -2.22 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.57 | 0.00  | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.58 | 0.00  | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.57 | 0.00  | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.58 | 0.00  | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.62 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.63 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.62 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.63 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.68 | 0.00  | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.55 | 0.00  | 0.00  | 0.00 |
| 17 | 1  | 0.00 | 0.00 | -2.26 | 0.00  | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.90 | 0.00  | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.85 | 0.00  | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.92 | 0.00  | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.87 | 0.00  | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.75 | 0.00  | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.69 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.74 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.69 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.71 | 0.00  | 0.00  | 0.00 |

|    |    |      |      |       |       |       |      |
|----|----|------|------|-------|-------|-------|------|
|    | 11 | 0.00 | 0.00 | -1.60 | 0.00  | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.59 | 0.00  | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.63 | 0.00  | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.62 | 0.00  | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.61 | 0.00  | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.60 | 0.00  | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.61 | 0.00  | 0.00  | 0.00 |
| 18 | 1  | 0.00 | 0.00 | -2.23 | -0.00 | -0.01 | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.32 | -0.00 | -0.00 | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.41 | -0.00 | -0.00 | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.38 | -0.00 | -0.00 | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.48 | -0.00 | -0.00 | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.65 | -0.00 | -0.00 | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.74 | -0.01 | -0.01 | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.67 | -0.00 | -0.00 | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.77 | -0.01 | -0.01 | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.68 | -0.00 | -0.00 | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.48 | -0.00 | -0.00 | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.47 | -0.00 | -0.00 | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.58 | -0.00 | -0.00 | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.59 | -0.00 | -0.00 | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.52 | -0.00 | -0.00 | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.50 | -0.00 | -0.00 | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.54 | -0.00 | -0.00 | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.55 | -0.00 | -0.00 | 0.00 |
| 19 | 1  | 0.00 | 0.00 | -2.17 | -0.00 | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.42 | -0.00 | 0.00  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.46 | -0.00 | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.44 | -0.00 | 0.00  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.48 | -0.00 | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.59 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00 | -1.64 | -0.00 | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00 | -1.49 | -0.00 | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00 | -1.48 | -0.00 | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00 | -1.51 | -0.00 | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00 | -1.51 | -0.00 | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00 | -1.49 | -0.00 | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00 | -1.49 | -0.00 | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00 | -1.50 | -0.00 | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00 | -1.51 | -0.00 | 0.00  | 0.00 |
| 20 | 1  | 0.00 | 0.00 | -2.16 | -0.00 | -0.00 | 0.00 |
|    | 2  | 0.00 | 0.00 | -1.43 | -0.00 | 0.00  | 0.00 |
|    | 3  | 0.00 | 0.00 | -1.48 | -0.00 | 0.00  | 0.00 |
|    | 4  | 0.00 | 0.00 | -1.44 | -0.00 | 0.00  | 0.00 |
|    | 5  | 0.00 | 0.00 | -1.49 | -0.00 | 0.00  | 0.00 |
|    | 6  | 0.00 | 0.00 | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00 | -1.64 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00 | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00 | -1.65 | -0.00 | 0.00  | 0.00 |

|    |    |      |       |       |       |       |      |
|----|----|------|-------|-------|-------|-------|------|
|    | 10 | 0.00 | 0.00  | -1.64 | -0.00 | -0.00 | 0.00 |
|    | 11 | 0.00 | 0.00  | -1.51 | -0.00 | -0.00 | 0.00 |
|    | 12 | 0.00 | 0.00  | -1.50 | -0.00 | -0.00 | 0.00 |
|    | 13 | 0.00 | 0.00  | -1.52 | -0.00 | -0.00 | 0.00 |
|    | 14 | 0.00 | 0.00  | -1.52 | -0.00 | -0.00 | 0.00 |
|    | 15 | 0.00 | 0.00  | -1.51 | -0.00 | -0.00 | 0.00 |
|    | 16 | 0.00 | 0.00  | -1.51 | -0.00 | -0.00 | 0.00 |
|    | 17 | 0.00 | 0.00  | -1.51 | -0.00 | -0.00 | 0.00 |
|    | 18 | 0.00 | 0.00  | -1.51 | -0.00 | -0.00 | 0.00 |
| 21 | 1  | 0.00 | 0.00  | -2.12 | -0.00 | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00  | -1.59 | -0.00 | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00  | -1.62 | -0.00 | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00  | -1.60 | -0.00 | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00  | -1.63 | -0.00 | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00  | -1.69 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00  | -1.71 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00  | -1.69 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00  | -1.71 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00  | -1.61 | -0.00 | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00  | -1.51 | -0.00 | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00  | -1.51 | -0.00 | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00  | -1.52 | -0.00 | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00  | -1.52 | -0.00 | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00  | -1.52 | -0.00 | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00  | -1.52 | -0.00 | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00  | -1.51 | -0.00 | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00  | -1.52 | -0.00 | 0.00  | 0.00 |
| 22 | 1  | 0.00 | 0.00  | -2.16 | -0.00 | 0.00  | 0.00 |
|    | 2  | 0.00 | 0.00  | -1.90 | -0.00 | 0.01  | 0.00 |
|    | 3  | 0.00 | 0.00  | -1.86 | -0.00 | 0.01  | 0.00 |
|    | 4  | 0.00 | 0.00  | -1.93 | -0.00 | 0.01  | 0.00 |
|    | 5  | 0.00 | 0.00  | -1.91 | -0.00 | 0.01  | 0.00 |
|    | 6  | 0.00 | 0.00  | -1.82 | -0.00 | 0.00  | 0.00 |
|    | 7  | 0.00 | 0.00  | -1.78 | -0.00 | 0.00  | 0.00 |
|    | 8  | 0.00 | 0.00  | -1.81 | -0.00 | 0.00  | 0.00 |
|    | 9  | 0.00 | 0.00  | -1.78 | -0.00 | 0.00  | 0.00 |
|    | 10 | 0.00 | 0.00  | -1.65 | -0.00 | 0.00  | 0.00 |
|    | 11 | 0.00 | 0.00  | -1.54 | -0.00 | 0.00  | 0.00 |
|    | 12 | 0.00 | 0.00  | -1.53 | -0.00 | 0.00  | 0.00 |
|    | 13 | 0.00 | 0.00  | -1.59 | -0.00 | 0.00  | 0.00 |
|    | 14 | 0.00 | 0.00  | -1.60 | -0.00 | 0.00  | 0.00 |
|    | 15 | 0.00 | 0.00  | -1.57 | -0.00 | 0.00  | 0.00 |
|    | 16 | 0.00 | 0.00  | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 17 | 0.00 | 0.00  | -1.56 | -0.00 | 0.00  | 0.00 |
|    | 18 | 0.00 | 0.00  | -1.57 | -0.00 | 0.00  | 0.00 |
| 23 | 1  | 0.05 | -0.06 | -2.64 | -0.00 | 0.00  | 0.00 |
|    | 2  | 0.69 | 0.06  | -1.76 | -0.01 | 0.04  | 0.00 |
|    | 3  | 0.59 | 0.19  | -1.72 | -0.01 | 0.03  | 0.00 |
|    | 4  | 0.69 | -0.00 | -1.75 | -0.00 | 0.04  | 0.00 |
|    | 5  | 0.59 | 0.09  | -1.71 | -0.01 | 0.03  | 0.00 |
|    | 6  | 0.38 | 0.37  | -1.63 | -0.02 | 0.02  | 0.00 |
|    | 7  | 0.28 | 0.50  | -1.60 | -0.02 | 0.01  | 0.00 |
|    | 8  | 0.34 | 0.42  | -1.63 | -0.02 | 0.02  | 0.00 |

|    |    |       |       |       |       |       |       |
|----|----|-------|-------|-------|-------|-------|-------|
|    | 9  | 0.24  | 0.52  | -1.60 | -0.02 | 0.01  | 0.00  |
|    | 10 | 0.04  | -0.05 | -2.00 | -0.00 | 0.00  | 0.00  |
|    | 11 | 0.05  | 0.00  | -1.84 | -0.00 | 0.00  | 0.00  |
|    | 12 | 0.05  | 0.03  | -1.85 | -0.01 | 0.00  | 0.00  |
|    | 13 | 0.04  | -0.11 | -1.83 | 0.00  | 0.00  | -0.00 |
|    | 14 | 0.05  | -0.13 | -1.83 | 0.00  | 0.00  | -0.00 |
|    | 15 | 0.08  | -0.09 | -1.84 | -0.00 | 0.00  | 0.00  |
|    | 16 | 0.07  | -0.06 | -1.84 | -0.00 | 0.00  | 0.00  |
|    | 17 | 0.01  | -0.01 | -1.84 | -0.00 | -0.00 | -0.00 |
|    | 18 | 0.02  | -0.04 | -1.84 | -0.00 | -0.00 | -0.00 |
| 24 | 1  | 0.02  | -0.06 | -2.48 | 0.01  | 0.00  | 0.00  |
|    | 2  | 0.62  | 0.07  | -1.62 | 0.00  | 0.03  | 0.00  |
|    | 3  | 0.50  | 0.19  | -1.62 | -0.00 | 0.03  | 0.00  |
|    | 4  | 0.62  | -0.00 | -1.62 | 0.01  | 0.04  | 0.00  |
|    | 5  | 0.51  | 0.09  | -1.61 | 0.00  | 0.03  | 0.00  |
|    | 6  | 0.25  | 0.38  | -1.59 | -0.01 | 0.01  | 0.00  |
|    | 7  | 0.14  | 0.51  | -1.58 | -0.01 | 0.01  | 0.00  |
|    | 8  | 0.23  | 0.43  | -1.59 | -0.01 | 0.01  | 0.00  |
|    | 9  | 0.13  | 0.52  | -1.58 | -0.01 | 0.01  | 0.00  |
|    | 10 | 0.02  | -0.05 | -1.87 | 0.01  | 0.00  | 0.00  |
|    | 11 | 0.02  | 0.01  | -1.69 | 0.01  | 0.00  | 0.00  |
|    | 12 | 0.02  | 0.03  | -1.70 | 0.00  | 0.00  | 0.00  |
|    | 13 | 0.03  | -0.11 | -1.68 | 0.01  | 0.00  | 0.00  |
|    | 14 | 0.04  | -0.14 | -1.68 | 0.01  | 0.00  | -0.00 |
|    | 15 | 0.04  | -0.09 | -1.68 | 0.01  | 0.00  | 0.00  |
|    | 16 | 0.04  | -0.06 | -1.69 | 0.01  | 0.00  | 0.00  |
|    | 17 | 0.01  | -0.01 | -1.69 | 0.01  | -0.00 | 0.00  |
|    | 18 | 0.02  | -0.04 | -1.69 | 0.01  | 0.00  | 0.00  |
| 25 | 1  | 0.08  | -0.13 | -2.89 | -0.00 | 0.00  | -0.00 |
|    | 2  | 3.02  | 0.46  | -1.92 | -0.01 | 0.04  | 0.00  |
|    | 3  | 2.56  | 1.09  | -1.88 | -0.01 | 0.04  | 0.00  |
|    | 4  | 2.99  | 0.11  | -1.91 | -0.00 | 0.04  | 0.00  |
|    | 5  | 2.58  | 0.55  | -1.87 | -0.01 | 0.04  | 0.00  |
|    | 6  | 1.66  | 1.94  | -1.77 | -0.02 | 0.03  | 0.01  |
|    | 7  | 1.20  | 2.57  | -1.73 | -0.03 | 0.02  | 0.01  |
|    | 8  | 1.45  | 2.21  | -1.77 | -0.02 | 0.02  | 0.01  |
|    | 9  | 1.04  | 2.65  | -1.73 | -0.03 | 0.02  | 0.01  |
|    | 10 | 0.06  | -0.10 | -2.18 | -0.00 | 0.00  | -0.00 |
|    | 11 | 0.10  | 0.19  | -2.01 | -0.00 | 0.00  | 0.00  |
|    | 12 | 0.06  | 0.35  | -2.01 | -0.01 | 0.00  | 0.00  |
|    | 13 | 0.05  | -0.39 | -2.00 | 0.00  | 0.00  | -0.00 |
|    | 14 | 0.10  | -0.54 | -1.99 | 0.00  | 0.00  | -0.00 |
|    | 15 | 0.24  | -0.31 | -2.00 | 0.00  | 0.00  | 0.00  |
|    | 16 | 0.20  | -0.16 | -2.00 | -0.00 | 0.00  | 0.00  |
|    | 17 | -0.09 | 0.12  | -2.00 | -0.00 | -0.00 | -0.00 |
|    | 18 | -0.05 | -0.03 | -2.00 | -0.00 | 0.00  | -0.00 |
| 26 | 1  | 0.09  | -0.13 | -2.63 | 0.01  | 0.00  | -0.00 |
|    | 2  | 2.97  | 0.46  | -1.72 | 0.00  | 0.04  | 0.00  |
|    | 3  | 2.41  | 1.09  | -1.71 | -0.00 | 0.03  | 0.00  |
|    | 4  | 3.00  | 0.11  | -1.71 | 0.01  | 0.04  | 0.00  |
|    | 5  | 2.48  | 0.55  | -1.70 | 0.00  | 0.03  | 0.00  |
|    | 6  | 1.24  | 1.94  | -1.67 | -0.01 | 0.02  | 0.01  |
|    | 7  | 0.68  | 2.57  | -1.66 | -0.01 | 0.01  | 0.01  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 8  | 1.14  | 2.21  | -1.67 | -0.01 | 0.02  | 0.01  |
|     | 9  | 0.62  | 2.65  | -1.66 | -0.01 | 0.01  | 0.01  |
|     | 10 | 0.07  | -0.10 | -1.98 | 0.01  | 0.00  | -0.00 |
|     | 11 | 0.06  | 0.19  | -1.79 | 0.01  | 0.00  | 0.00  |
|     | 12 | 0.03  | 0.35  | -1.79 | 0.01  | 0.00  | 0.00  |
|     | 13 | 0.12  | -0.39 | -1.78 | 0.01  | 0.00  | -0.00 |
|     | 14 | 0.15  | -0.54 | -1.77 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.17  | -0.31 | -1.78 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.14  | -0.16 | -1.78 | 0.01  | 0.00  | 0.00  |
|     | 17 | 0.01  | 0.12  | -1.78 | 0.01  | -0.00 | -0.00 |
|     | 18 | 0.04  | -0.03 | -1.78 | 0.01  | 0.00  | -0.00 |
| 101 | 1  | 0.03  | -0.04 | -2.42 | -0.00 | 0.04  | -0.00 |
|     | 2  | 1.77  | -0.56 | -1.55 | 0.01  | 0.05  | 0.00  |
|     | 3  | 1.46  | -0.44 | -1.52 | 0.00  | 0.04  | 0.00  |
|     | 4  | 1.71  | -0.13 | -1.51 | 0.00  | 0.05  | 0.00  |
|     | 5  | 1.46  | 0.09  | -1.48 | -0.01 | 0.04  | 0.00  |
|     | 6  | 0.96  | 0.18  | -1.43 | -0.01 | 0.04  | 0.00  |
|     | 7  | 0.65  | 0.29  | -1.40 | -0.02 | 0.03  | 0.01  |
|     | 8  | 0.66  | 0.25  | -1.40 | -0.01 | 0.04  | 0.00  |
|     | 9  | 0.42  | 0.48  | -1.37 | -0.02 | 0.03  | 0.01  |
|     | 10 | 0.03  | -0.03 | -1.82 | -0.00 | 0.03  | -0.00 |
|     | 11 | 0.10  | -0.39 | -1.68 | 0.00  | 0.03  | 0.00  |
|     | 12 | 0.05  | -0.49 | -1.68 | 0.00  | 0.03  | 0.00  |
|     | 13 | -0.02 | 0.33  | -1.62 | -0.01 | 0.03  | -0.00 |
|     | 14 | 0.04  | 0.42  | -1.62 | -0.01 | 0.03  | -0.00 |
|     | 15 | 0.29  | -0.08 | -1.67 | -0.00 | 0.03  | 0.00  |
|     | 16 | 0.24  | -0.17 | -1.67 | -0.00 | 0.03  | 0.00  |
|     | 17 | -0.20 | 0.01  | -1.63 | -0.00 | 0.02  | -0.00 |
|     | 18 | -0.15 | 0.11  | -1.63 | -0.00 | 0.03  | -0.00 |
| 102 | 1  | 0.03  | -0.07 | -2.59 | -0.01 | -0.01 | -0.00 |
|     | 2  | 1.77  | -0.42 | -1.71 | -0.00 | 0.03  | 0.00  |
|     | 3  | 1.46  | -0.18 | -1.69 | -0.01 | 0.02  | 0.00  |
|     | 4  | 1.71  | -0.13 | -1.70 | -0.01 | 0.03  | 0.00  |
|     | 5  | 1.46  | 0.20  | -1.68 | -0.01 | 0.02  | 0.00  |
|     | 6  | 0.96  | 0.66  | -1.64 | -0.02 | 0.01  | 0.00  |
|     | 7  | 0.65  | 0.91  | -1.63 | -0.03 | 0.01  | 0.01  |
|     | 8  | 0.66  | 0.68  | -1.64 | -0.02 | 0.01  | 0.00  |
|     | 9  | 0.42  | 1.01  | -1.62 | -0.03 | 0.01  | 0.01  |
|     | 10 | 0.03  | -0.05 | -1.95 | -0.01 | -0.00 | -0.00 |
|     | 11 | 0.10  | -0.30 | -1.78 | -0.00 | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.38 | -1.78 | -0.00 | -0.00 | 0.00  |
|     | 13 | -0.02 | 0.20  | -1.76 | -0.01 | -0.00 | -0.00 |
|     | 14 | 0.04  | 0.27  | -1.76 | -0.01 | -0.00 | -0.00 |
|     | 15 | 0.29  | -0.06 | -1.77 | -0.01 | -0.00 | 0.00  |
|     | 16 | 0.24  | -0.13 | -1.78 | -0.01 | -0.00 | 0.00  |
|     | 17 | -0.20 | -0.04 | -1.77 | -0.01 | -0.00 | -0.00 |
|     | 18 | -0.15 | 0.03  | -1.76 | -0.01 | -0.00 | -0.00 |
| 103 | 1  | 0.03  | -0.09 | -2.78 | 0.00  | -0.00 | -0.00 |
|     | 2  | 1.77  | -0.31 | -1.85 | -0.01 | 0.02  | 0.00  |
|     | 3  | 1.46  | 0.04  | -1.81 | -0.01 | 0.02  | 0.00  |
|     | 4  | 1.71  | -0.12 | -1.84 | -0.00 | 0.02  | 0.00  |
|     | 5  | 1.46  | 0.30  | -1.80 | -0.01 | 0.02  | 0.00  |
|     | 6  | 0.96  | 1.07  | -1.71 | -0.02 | 0.01  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 7  | 0.65  | 1.43  | -1.68 | -0.03 | 0.01  | 0.01  |
|     | 8  | 0.66  | 1.05  | -1.71 | -0.03 | 0.01  | 0.00  |
|     | 9  | 0.42  | 1.47  | -1.67 | -0.03 | 0.01  | 0.01  |
|     | 10 | 0.03  | -0.07 | -2.10 | 0.00  | -0.00 | -0.00 |
|     | 11 | 0.10  | -0.22 | -1.94 | -0.00 | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.28 | -1.94 | -0.00 | -0.00 | 0.00  |
|     | 13 | -0.02 | 0.09  | -1.93 | 0.00  | -0.00 | -0.00 |
|     | 14 | 0.04  | 0.15  | -1.92 | 0.01  | -0.00 | -0.00 |
|     | 15 | 0.29  | -0.05 | -1.93 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.24  | -0.10 | -1.93 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.20 | -0.09 | -1.93 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.15 | -0.03 | -1.93 | 0.00  | -0.00 | -0.00 |
| 104 | 1  | 0.03  | -0.11 | -2.88 | -0.02 | -0.00 | -0.00 |
|     | 2  | 1.77  | -0.20 | -2.13 | -0.02 | 0.02  | 0.00  |
|     | 3  | 1.46  | 0.25  | -2.05 | -0.02 | 0.02  | 0.00  |
|     | 4  | 1.71  | -0.11 | -2.11 | -0.01 | 0.02  | 0.00  |
|     | 5  | 1.46  | 0.39  | -2.02 | -0.02 | 0.02  | 0.00  |
|     | 6  | 0.96  | 1.47  | -1.84 | -0.04 | 0.01  | 0.00  |
|     | 7  | 0.65  | 1.92  | -1.77 | -0.05 | 0.01  | 0.01  |
|     | 8  | 0.66  | 1.40  | -1.85 | -0.04 | 0.01  | 0.00  |
|     | 9  | 0.42  | 1.90  | -1.76 | -0.04 | 0.01  | 0.01  |
|     | 10 | 0.03  | -0.09 | -2.18 | -0.01 | -0.00 | -0.00 |
|     | 11 | 0.10  | -0.15 | -2.05 | -0.01 | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.19 | -2.06 | -0.01 | -0.00 | 0.00  |
|     | 13 | -0.02 | -0.01 | -2.01 | -0.01 | -0.00 | -0.00 |
|     | 14 | 0.04  | 0.02  | -2.01 | -0.01 | -0.00 | -0.00 |
|     | 15 | 0.29  | -0.03 | -2.03 | -0.01 | 0.00  | 0.00  |
|     | 16 | 0.24  | -0.07 | -2.03 | -0.01 | 0.00  | 0.00  |
|     | 17 | -0.20 | -0.13 | -2.03 | -0.01 | -0.00 | -0.00 |
|     | 18 | -0.15 | -0.10 | -2.03 | -0.01 | -0.00 | -0.00 |
| 105 | 1  | 0.03  | -0.12 | -2.87 | -0.01 | -0.00 | -0.00 |
|     | 2  | 1.77  | -0.15 | -2.55 | -0.01 | 0.03  | 0.00  |
|     | 3  | 1.46  | 0.35  | -2.38 | -0.02 | 0.02  | 0.00  |
|     | 4  | 1.71  | -0.11 | -2.53 | -0.01 | 0.03  | 0.00  |
|     | 5  | 1.46  | 0.43  | -2.37 | -0.01 | 0.02  | 0.00  |
|     | 6  | 0.96  | 1.66  | -2.01 | -0.03 | 0.01  | 0.00  |
|     | 7  | 0.65  | 2.16  | -1.84 | -0.03 | 0.01  | 0.01  |
|     | 8  | 0.66  | 1.57  | -1.97 | -0.03 | 0.01  | 0.00  |
|     | 9  | 0.42  | 2.11  | -1.81 | -0.03 | 0.01  | 0.01  |
|     | 10 | 0.03  | -0.09 | -2.18 | -0.00 | -0.00 | -0.00 |
|     | 11 | 0.10  | -0.11 | -2.07 | -0.01 | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.14 | -2.06 | -0.01 | -0.00 | 0.00  |
|     | 13 | -0.02 | -0.06 | -2.04 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.04  | -0.03 | -2.04 | -0.00 | -0.00 | -0.00 |
|     | 15 | 0.29  | -0.02 | -2.08 | -0.00 | 0.00  | 0.00  |
|     | 16 | 0.24  | -0.05 | -2.08 | -0.00 | 0.00  | 0.00  |
|     | 17 | -0.20 | -0.15 | -2.02 | -0.01 | -0.00 | -0.00 |
|     | 18 | -0.15 | -0.13 | -2.03 | -0.00 | -0.00 | -0.00 |
| 106 | 1  | 0.04  | -0.09 | -2.55 | -0.00 | 0.00  | -0.00 |
|     | 2  | 1.71  | -0.31 | -1.67 | -0.00 | 0.03  | 0.00  |
|     | 3  | 1.33  | 0.04  | -1.66 | -0.01 | 0.03  | 0.00  |
|     | 4  | 1.70  | -0.12 | -1.67 | -0.00 | 0.03  | 0.00  |
|     | 5  | 1.41  | 0.30  | -1.65 | -0.00 | 0.03  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 6  | 0.73  | 1.07  | -1.63 | -0.01 | 0.01  | 0.00  |
|     | 7  | 0.35  | 1.43  | -1.61 | -0.02 | 0.01  | 0.01  |
|     | 8  | 0.45  | 1.05  | -1.63 | -0.01 | 0.01  | 0.00  |
|     | 9  | 0.16  | 1.47  | -1.61 | -0.02 | 0.01  | 0.01  |
|     | 10 | 0.04  | -0.07 | -1.92 | -0.00 | 0.00  | -0.00 |
|     | 11 | 0.06  | -0.22 | -1.74 | -0.00 | 0.00  | 0.00  |
|     | 12 | -0.01 | -0.28 | -1.75 | -0.00 | 0.00  | 0.00  |
|     | 13 | 0.05  | 0.09  | -1.73 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.11  | 0.15  | -1.73 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.28  | -0.05 | -1.74 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.22  | -0.10 | -1.74 | -0.00 | 0.00  | 0.00  |
|     | 17 | -0.18 | -0.09 | -1.74 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.11 | -0.03 | -1.74 | -0.00 | 0.00  | -0.00 |
| 107 | 1  | 0.04  | -0.11 | -3.55 | 0.04  | -0.01 | -0.00 |
|     | 2  | 1.71  | -0.20 | -2.31 | 0.03  | 0.01  | 0.00  |
|     | 3  | 1.33  | 0.25  | -2.22 | 0.03  | 0.01  | 0.00  |
|     | 4  | 1.70  | -0.11 | -2.36 | 0.03  | 0.01  | 0.00  |
|     | 5  | 1.41  | 0.39  | -2.29 | 0.03  | 0.01  | 0.00  |
|     | 6  | 0.73  | 1.47  | -2.10 | 0.03  | 0.00  | 0.00  |
|     | 7  | 0.35  | 1.92  | -2.01 | 0.03  | -0.00 | 0.01  |
|     | 8  | 0.45  | 1.40  | -2.08 | 0.03  | 0.00  | 0.00  |
|     | 9  | 0.16  | 1.90  | -2.01 | 0.03  | -0.00 | 0.01  |
|     | 10 | 0.04  | -0.09 | -2.67 | 0.03  | -0.01 | -0.00 |
|     | 11 | 0.06  | -0.15 | -2.33 | 0.03  | -0.01 | 0.00  |
|     | 12 | -0.01 | -0.19 | -2.32 | 0.03  | -0.01 | 0.00  |
|     | 13 | 0.05  | -0.01 | -2.41 | 0.03  | -0.01 | -0.00 |
|     | 14 | 0.11  | 0.02  | -2.43 | 0.03  | -0.01 | -0.00 |
|     | 15 | 0.28  | -0.03 | -2.39 | 0.03  | -0.00 | 0.00  |
|     | 16 | 0.22  | -0.07 | -2.37 | 0.03  | -0.00 | 0.00  |
|     | 17 | -0.18 | -0.13 | -2.36 | 0.03  | -0.01 | -0.00 |
|     | 18 | -0.11 | -0.10 | -2.37 | 0.03  | -0.01 | -0.00 |
| 108 | 1  | 0.05  | -0.04 | -2.30 | 0.00  | 0.04  | -0.00 |
|     | 2  | 1.68  | -0.56 | -1.46 | 0.01  | 0.05  | 0.00  |
|     | 3  | 1.28  | -0.44 | -1.47 | 0.00  | 0.04  | 0.00  |
|     | 4  | 1.70  | -0.13 | -1.44 | 0.00  | 0.05  | 0.00  |
|     | 5  | 1.39  | 0.09  | -1.44 | -0.00 | 0.04  | 0.00  |
|     | 6  | 0.62  | 0.18  | -1.47 | -0.01 | 0.03  | 0.00  |
|     | 7  | 0.22  | 0.29  | -1.47 | -0.01 | 0.02  | 0.01  |
|     | 8  | 0.36  | 0.25  | -1.47 | -0.01 | 0.03  | 0.00  |
|     | 9  | 0.04  | 0.48  | -1.47 | -0.02 | 0.02  | 0.01  |
|     | 10 | 0.04  | -0.03 | -1.73 | 0.00  | 0.03  | -0.00 |
|     | 11 | 0.04  | -0.39 | -1.56 | 0.01  | 0.02  | 0.00  |
|     | 12 | -0.03 | -0.49 | -1.56 | 0.01  | 0.02  | 0.00  |
|     | 13 | 0.07  | 0.33  | -1.53 | -0.00 | 0.02  | -0.00 |
|     | 14 | 0.15  | 0.42  | -1.52 | -0.01 | 0.02  | -0.00 |
|     | 15 | 0.28  | -0.08 | -1.54 | 0.00  | 0.02  | 0.00  |
|     | 16 | 0.21  | -0.17 | -1.55 | 0.00  | 0.02  | 0.00  |
|     | 17 | -0.17 | 0.01  | -1.54 | 0.00  | 0.02  | -0.00 |
|     | 18 | -0.09 | 0.11  | -1.54 | -0.00 | 0.02  | -0.00 |
| 109 | 1  | 0.05  | -0.07 | -2.45 | 0.00  | -0.01 | -0.00 |
|     | 2  | 1.68  | -0.42 | -1.60 | 0.01  | 0.01  | 0.00  |
|     | 3  | 1.28  | -0.18 | -1.59 | 0.00  | 0.01  | 0.00  |
|     | 4  | 1.70  | -0.13 | -1.59 | 0.00  | 0.01  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 5  | 1.39  | 0.20  | -1.59 | -0.00 | 0.01  | 0.00  |
|     | 6  | 0.62  | 0.66  | -1.57 | -0.02 | 0.00  | 0.00  |
|     | 7  | 0.22  | 0.91  | -1.57 | -0.02 | -0.00 | 0.01  |
|     | 8  | 0.36  | 0.68  | -1.57 | -0.02 | 0.00  | 0.00  |
|     | 9  | 0.04  | 1.01  | -1.56 | -0.02 | -0.00 | 0.01  |
|     | 10 | 0.04  | -0.05 | -1.83 | 0.00  | -0.01 | -0.00 |
|     | 11 | 0.04  | -0.30 | -1.62 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.03 | -0.38 | -1.62 | 0.01  | -0.00 | 0.00  |
|     | 13 | 0.07  | 0.20  | -1.61 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.15  | 0.27  | -1.61 | -0.00 | -0.00 | -0.00 |
|     | 15 | 0.28  | -0.06 | -1.62 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.21  | -0.13 | -1.62 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.17 | -0.04 | -1.61 | 0.00  | -0.00 | -0.00 |
|     | 18 | -0.09 | 0.03  | -1.61 | 0.00  | -0.00 | -0.00 |
| 110 | 1  | 0.05  | -0.09 | -2.65 | 0.00  | 0.00  | -0.00 |
|     | 2  | 1.68  | -0.31 | -1.71 | -0.01 | 0.02  | 0.00  |
|     | 3  | 1.28  | 0.04  | -1.73 | -0.01 | 0.01  | 0.00  |
|     | 4  | 1.70  | -0.12 | -1.71 | -0.00 | 0.02  | 0.00  |
|     | 5  | 1.39  | 0.30  | -1.72 | -0.01 | 0.02  | 0.00  |
|     | 6  | 0.62  | 1.07  | -1.75 | -0.02 | 0.01  | 0.00  |
|     | 7  | 0.22  | 1.43  | -1.76 | -0.03 | 0.00  | 0.01  |
|     | 8  | 0.36  | 1.05  | -1.75 | -0.02 | 0.01  | 0.00  |
|     | 9  | 0.04  | 1.47  | -1.76 | -0.03 | 0.00  | 0.01  |
|     | 10 | 0.04  | -0.07 | -1.99 | 0.00  | 0.00  | -0.00 |
|     | 11 | 0.04  | -0.22 | -1.78 | -0.00 | 0.00  | 0.00  |
|     | 12 | -0.03 | -0.28 | -1.79 | -0.00 | 0.00  | 0.00  |
|     | 13 | 0.07  | 0.09  | -1.78 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.15  | 0.15  | -1.78 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.28  | -0.05 | -1.78 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.21  | -0.10 | -1.78 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.17 | -0.09 | -1.78 | -0.00 | 0.00  | -0.00 |
|     | 18 | -0.09 | -0.03 | -1.78 | 0.00  | 0.00  | -0.00 |
| 111 | 1  | 0.05  | -0.11 | -2.68 | 0.01  | -0.01 | -0.00 |
|     | 2  | 1.68  | -0.20 | -1.83 | -0.00 | 0.00  | 0.00  |
|     | 3  | 1.28  | 0.25  | -1.81 | -0.01 | 0.00  | 0.00  |
|     | 4  | 1.70  | -0.11 | -1.83 | 0.00  | 0.00  | 0.00  |
|     | 5  | 1.39  | 0.39  | -1.82 | -0.00 | 0.00  | 0.00  |
|     | 6  | 0.62  | 1.47  | -1.78 | -0.03 | -0.00 | 0.00  |
|     | 7  | 0.22  | 1.92  | -1.76 | -0.03 | -0.01 | 0.01  |
|     | 8  | 0.36  | 1.40  | -1.78 | -0.03 | -0.01 | 0.00  |
|     | 9  | 0.04  | 1.90  | -1.76 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.04  | -0.09 | -2.02 | 0.01  | -0.01 | -0.00 |
|     | 11 | 0.04  | -0.15 | -1.84 | 0.00  | -0.01 | 0.00  |
|     | 12 | -0.03 | -0.19 | -1.84 | -0.00 | -0.01 | 0.00  |
|     | 13 | 0.07  | -0.01 | -1.85 | 0.01  | -0.01 | -0.00 |
|     | 14 | 0.15  | 0.02  | -1.85 | 0.01  | -0.01 | -0.00 |
|     | 15 | 0.28  | -0.03 | -1.85 | 0.01  | -0.01 | 0.00  |
|     | 16 | 0.21  | -0.07 | -1.84 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.17 | -0.13 | -1.84 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.09 | -0.10 | -1.84 | 0.00  | -0.01 | -0.00 |
| 112 | 1  | 0.05  | -0.12 | -2.54 | 0.01  | -0.00 | -0.00 |
|     | 2  | 1.68  | -0.15 | -2.16 | 0.01  | 0.03  | 0.00  |
|     | 3  | 1.28  | 0.35  | -2.06 | 0.01  | 0.02  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 4  | 1.70  | -0.11 | -2.16 | 0.01  | 0.03  | 0.00  |
|     | 5  | 1.39  | 0.43  | -2.07 | 0.00  | 0.02  | 0.00  |
|     | 6  | 0.62  | 1.66  | -1.86 | -0.00 | 0.01  | 0.00  |
|     | 7  | 0.22  | 2.16  | -1.76 | -0.01 | 0.00  | 0.01  |
|     | 8  | 0.36  | 1.57  | -1.83 | -0.00 | 0.01  | 0.00  |
|     | 9  | 0.04  | 2.11  | -1.74 | -0.01 | 0.00  | 0.01  |
|     | 10 | 0.04  | -0.09 | -1.92 | 0.01  | -0.00 | -0.00 |
|     | 11 | 0.04  | -0.11 | -1.80 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.03 | -0.14 | -1.79 | 0.01  | -0.00 | 0.00  |
|     | 13 | 0.07  | -0.06 | -1.81 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.15  | -0.03 | -1.82 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.28  | -0.02 | -1.83 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.21  | -0.05 | -1.82 | 0.01  | -0.00 | 0.00  |
|     | 17 | -0.17 | -0.15 | -1.78 | 0.01  | -0.00 | -0.00 |
|     | 18 | -0.09 | -0.13 | -1.79 | 0.01  | -0.00 | -0.00 |
| 113 | 1  | 0.06  | -0.04 | -2.33 | -0.00 | 0.05  | -0.00 |
|     | 2  | 1.63  | -0.56 | -1.42 | 0.00  | 0.05  | 0.00  |
|     | 3  | 1.18  | -0.44 | -1.47 | 0.00  | 0.04  | 0.00  |
|     | 4  | 1.70  | -0.13 | -1.45 | 0.00  | 0.05  | 0.00  |
|     | 5  | 1.35  | 0.09  | -1.50 | -0.00 | 0.04  | 0.00  |
|     | 6  | 0.45  | 0.18  | -1.59 | -0.01 | 0.03  | 0.00  |
|     | 7  | 0.01  | 0.29  | -1.64 | -0.01 | 0.02  | 0.01  |
|     | 8  | 0.21  | 0.25  | -1.60 | -0.01 | 0.03  | 0.00  |
|     | 9  | -0.15 | 0.48  | -1.65 | -0.02 | 0.02  | 0.01  |
|     | 10 | 0.05  | -0.03 | -1.75 | -0.00 | 0.03  | -0.00 |
|     | 11 | 0.01  | -0.39 | -1.54 | 0.00  | 0.02  | 0.00  |
|     | 12 | -0.07 | -0.49 | -1.54 | 0.00  | 0.02  | 0.00  |
|     | 13 | 0.12  | 0.33  | -1.58 | -0.01 | 0.03  | -0.00 |
|     | 14 | 0.20  | 0.42  | -1.58 | -0.01 | 0.03  | -0.00 |
|     | 15 | 0.27  | -0.08 | -1.56 | -0.00 | 0.03  | 0.00  |
|     | 16 | 0.19  | -0.17 | -1.55 | -0.00 | 0.03  | 0.00  |
|     | 17 | -0.15 | 0.01  | -1.57 | -0.00 | 0.02  | -0.00 |
|     | 18 | -0.07 | 0.11  | -1.57 | -0.00 | 0.02  | -0.00 |
| 114 | 1  | 0.06  | -0.07 | -2.42 | -0.00 | -0.01 | -0.00 |
|     | 2  | 1.63  | -0.42 | -1.56 | 0.01  | 0.01  | 0.00  |
|     | 3  | 1.18  | -0.18 | -1.58 | 0.00  | 0.01  | 0.00  |
|     | 4  | 1.70  | -0.13 | -1.57 | 0.00  | 0.01  | 0.00  |
|     | 5  | 1.35  | 0.20  | -1.60 | -0.01 | 0.01  | 0.00  |
|     | 6  | 0.45  | 0.66  | -1.64 | -0.02 | -0.00 | 0.00  |
|     | 7  | 0.01  | 0.91  | -1.66 | -0.02 | -0.00 | 0.01  |
|     | 8  | 0.21  | 0.68  | -1.64 | -0.02 | -0.00 | 0.00  |
|     | 9  | -0.15 | 1.01  | -1.67 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.05  | -0.05 | -1.82 | -0.00 | -0.01 | -0.00 |
|     | 11 | 0.01  | -0.30 | -1.59 | 0.00  | -0.00 | 0.00  |
|     | 12 | -0.07 | -0.38 | -1.59 | 0.01  | -0.01 | 0.00  |
|     | 13 | 0.12  | 0.20  | -1.61 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.20  | 0.27  | -1.61 | -0.01 | -0.00 | -0.00 |
|     | 15 | 0.27  | -0.06 | -1.59 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.19  | -0.13 | -1.59 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.15 | -0.04 | -1.60 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.07 | 0.03  | -1.60 | -0.00 | -0.01 | -0.00 |
| 115 | 1  | 0.06  | -0.09 | -2.53 | 0.00  | 0.00  | -0.00 |
|     | 2  | 1.63  | -0.31 | -1.62 | -0.01 | 0.02  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 3  | 1.18  | 0.04  | -1.67 | -0.01 | 0.01  | 0.00  |
|     | 4  | 1.70  | -0.12 | -1.64 | -0.00 | 0.02  | 0.00  |
|     | 5  | 1.35  | 0.30  | -1.68 | -0.01 | 0.01  | 0.00  |
|     | 6  | 0.45  | 1.07  | -1.78 | -0.02 | 0.01  | 0.00  |
|     | 7  | 0.01  | 1.43  | -1.83 | -0.03 | 0.00  | 0.01  |
|     | 8  | 0.21  | 1.05  | -1.79 | -0.03 | 0.00  | 0.00  |
|     | 9  | -0.15 | 1.47  | -1.83 | -0.03 | 0.00  | 0.01  |
|     | 10 | 0.05  | -0.07 | -1.91 | 0.00  | 0.00  | -0.00 |
|     | 11 | 0.01  | -0.22 | -1.70 | -0.00 | 0.00  | 0.00  |
|     | 12 | -0.07 | -0.28 | -1.70 | -0.00 | 0.00  | 0.00  |
|     | 13 | 0.12  | 0.09  | -1.72 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.20  | 0.15  | -1.72 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.27  | -0.05 | -1.70 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.19  | -0.10 | -1.70 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.15 | -0.09 | -1.71 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.07 | -0.03 | -1.71 | -0.00 | 0.00  | -0.00 |
| 116 | 1  | 0.06  | -0.11 | -2.53 | 0.00  | -0.01 | -0.00 |
|     | 2  | 1.63  | -0.20 | -1.72 | -0.01 | 0.00  | 0.00  |
|     | 3  | 1.18  | 0.25  | -1.75 | -0.01 | 0.00  | 0.00  |
|     | 4  | 1.70  | -0.11 | -1.74 | -0.00 | 0.00  | 0.00  |
|     | 5  | 1.35  | 0.39  | -1.77 | -0.01 | 0.00  | 0.00  |
|     | 6  | 0.45  | 1.47  | -1.84 | -0.03 | -0.00 | 0.00  |
|     | 7  | 0.01  | 1.92  | -1.87 | -0.04 | -0.01 | 0.01  |
|     | 8  | 0.21  | 1.40  | -1.84 | -0.03 | -0.01 | 0.00  |
|     | 9  | -0.15 | 1.90  | -1.87 | -0.04 | -0.01 | 0.01  |
|     | 10 | 0.05  | -0.09 | -1.91 | 0.00  | -0.01 | -0.00 |
|     | 11 | 0.01  | -0.15 | -1.75 | -0.00 | -0.01 | 0.00  |
|     | 12 | -0.07 | -0.19 | -1.74 | -0.00 | -0.01 | 0.00  |
|     | 13 | 0.12  | -0.01 | -1.76 | 0.00  | -0.01 | -0.00 |
|     | 14 | 0.20  | 0.02  | -1.77 | 0.01  | -0.01 | -0.00 |
|     | 15 | 0.27  | -0.03 | -1.76 | 0.00  | -0.01 | 0.00  |
|     | 16 | 0.19  | -0.07 | -1.75 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.15 | -0.13 | -1.75 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.07 | -0.10 | -1.75 | 0.00  | -0.01 | -0.00 |
| 117 | 1  | 0.06  | -0.12 | -2.41 | -0.00 | -0.00 | -0.00 |
|     | 2  | 1.63  | -0.15 | -2.05 | -0.00 | 0.03  | 0.00  |
|     | 3  | 1.18  | 0.35  | -1.99 | -0.01 | 0.02  | 0.00  |
|     | 4  | 1.70  | -0.11 | -2.07 | -0.00 | 0.03  | 0.00  |
|     | 5  | 1.35  | 0.43  | -2.02 | -0.01 | 0.02  | 0.00  |
|     | 6  | 0.45  | 1.66  | -1.89 | -0.01 | 0.01  | 0.00  |
|     | 7  | 0.01  | 2.16  | -1.83 | -0.02 | 0.00  | 0.01  |
|     | 8  | 0.21  | 1.57  | -1.88 | -0.01 | 0.00  | 0.00  |
|     | 9  | -0.15 | 2.11  | -1.83 | -0.02 | -0.00 | 0.01  |
|     | 10 | 0.05  | -0.09 | -1.83 | -0.00 | -0.00 | -0.00 |
|     | 11 | 0.01  | -0.11 | -1.70 | -0.00 | -0.00 | 0.00  |
|     | 12 | -0.07 | -0.14 | -1.69 | -0.00 | -0.00 | 0.00  |
|     | 13 | 0.12  | -0.06 | -1.73 | -0.00 | 0.00  | -0.00 |
|     | 14 | 0.20  | -0.03 | -1.74 | -0.00 | 0.00  | -0.00 |
|     | 15 | 0.27  | -0.02 | -1.72 | -0.00 | 0.00  | 0.00  |
|     | 16 | 0.19  | -0.05 | -1.72 | -0.00 | 0.00  | 0.00  |
|     | 17 | -0.15 | -0.15 | -1.71 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.07 | -0.13 | -1.71 | -0.00 | -0.00 | -0.00 |
| 118 | 1  | 0.08  | -0.04 | -2.41 | 0.00  | 0.04  | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 2  | 1.54  | -0.56 | -1.42 | 0.01  | 0.05  | 0.00  |
|     | 3  | 1.00  | -0.44 | -1.51 | 0.01  | 0.04  | 0.00  |
|     | 4  | 1.69  | -0.13 | -1.48 | 0.00  | 0.05  | 0.00  |
|     | 5  | 1.27  | 0.09  | -1.59 | -0.00 | 0.04  | 0.00  |
|     | 6  | 0.11  | 0.18  | -1.77 | -0.01 | 0.03  | 0.00  |
|     | 7  | -0.42 | 0.29  | -1.86 | -0.01 | 0.02  | 0.01  |
|     | 8  | -0.10 | 0.25  | -1.79 | -0.01 | 0.03  | 0.00  |
|     | 9  | -0.52 | 0.48  | -1.90 | -0.02 | 0.02  | 0.01  |
|     | 10 | 0.06  | -0.03 | -1.82 | 0.00  | 0.03  | -0.00 |
|     | 11 | -0.06 | -0.39 | -1.59 | 0.01  | 0.03  | 0.00  |
|     | 12 | -0.15 | -0.49 | -1.58 | 0.01  | 0.02  | 0.00  |
|     | 13 | 0.21  | 0.33  | -1.70 | -0.00 | 0.03  | -0.00 |
|     | 14 | 0.30  | 0.42  | -1.71 | -0.00 | 0.03  | -0.00 |
|     | 15 | 0.26  | -0.08 | -1.63 | 0.00  | 0.03  | 0.00  |
|     | 16 | 0.16  | -0.17 | -1.62 | 0.00  | 0.03  | 0.00  |
|     | 17 | -0.11 | 0.01  | -1.66 | 0.00  | 0.03  | -0.00 |
|     | 18 | -0.01 | 0.11  | -1.67 | 0.00  | 0.03  | -0.00 |
| 119 | 1  | 0.08  | -0.07 | -2.49 | 0.01  | -0.00 | -0.00 |
|     | 2  | 1.54  | -0.42 | -1.61 | 0.02  | 0.02  | 0.00  |
|     | 3  | 1.00  | -0.18 | -1.66 | 0.01  | 0.02  | 0.00  |
|     | 4  | 1.69  | -0.13 | -1.63 | 0.01  | 0.03  | 0.00  |
|     | 5  | 1.27  | 0.20  | -1.67 | 0.00  | 0.02  | 0.00  |
|     | 6  | 0.11  | 0.66  | -1.76 | -0.01 | -0.00 | 0.00  |
|     | 7  | -0.42 | 0.91  | -1.80 | -0.01 | -0.01 | 0.01  |
|     | 8  | -0.10 | 0.68  | -1.77 | -0.01 | -0.00 | 0.00  |
|     | 9  | -0.52 | 1.01  | -1.81 | -0.01 | -0.01 | 0.01  |
|     | 10 | 0.06  | -0.05 | -1.88 | 0.01  | -0.00 | -0.00 |
|     | 11 | -0.06 | -0.30 | -1.69 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.15 | -0.38 | -1.69 | 0.01  | -0.00 | 0.00  |
|     | 13 | 0.21  | 0.20  | -1.71 | 0.00  | -0.00 | -0.00 |
|     | 14 | 0.30  | 0.27  | -1.72 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.26  | -0.06 | -1.69 | 0.01  | -0.00 | 0.00  |
|     | 16 | 0.16  | -0.13 | -1.69 | 0.01  | -0.00 | 0.00  |
|     | 17 | -0.11 | -0.04 | -1.71 | 0.01  | -0.00 | -0.00 |
|     | 18 | -0.01 | 0.03  | -1.71 | 0.01  | -0.00 | -0.00 |
| 120 | 1  | 0.08  | -0.09 | -2.43 | 0.01  | 0.00  | -0.00 |
|     | 2  | 1.54  | -0.31 | -1.60 | -0.00 | 0.03  | 0.00  |
|     | 3  | 1.00  | 0.04  | -1.65 | -0.01 | 0.02  | 0.00  |
|     | 4  | 1.69  | -0.12 | -1.61 | 0.00  | 0.03  | 0.00  |
|     | 5  | 1.27  | 0.30  | -1.66 | -0.00 | 0.02  | 0.00  |
|     | 6  | 0.11  | 1.07  | -1.77 | -0.02 | 0.00  | 0.00  |
|     | 7  | -0.42 | 1.43  | -1.82 | -0.03 | -0.01 | 0.01  |
|     | 8  | -0.10 | 1.05  | -1.77 | -0.02 | 0.00  | 0.00  |
|     | 9  | -0.52 | 1.47  | -1.82 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.06  | -0.07 | -1.83 | 0.00  | 0.00  | -0.00 |
|     | 11 | -0.06 | -0.22 | -1.67 | 0.00  | -0.00 | 0.00  |
|     | 12 | -0.15 | -0.28 | -1.67 | -0.00 | -0.00 | 0.00  |
|     | 13 | 0.21  | 0.09  | -1.69 | 0.01  | 0.00  | -0.00 |
|     | 14 | 0.30  | 0.15  | -1.69 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.26  | -0.05 | -1.68 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.16  | -0.10 | -1.68 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.11 | -0.09 | -1.68 | 0.00  | 0.00  | -0.00 |
|     | 18 | -0.01 | -0.03 | -1.68 | 0.00  | 0.00  | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
| 121 | 1  | 0.08  | -0.11 | -2.33 | 0.01  | -0.01 | -0.00 |
|     | 2  | 1.54  | -0.20 | -1.70 | -0.00 | 0.02  | 0.00  |
|     | 3  | 1.00  | 0.25  | -1.74 | -0.01 | 0.01  | 0.00  |
|     | 4  | 1.69  | -0.11 | -1.70 | 0.00  | 0.02  | 0.00  |
|     | 5  | 1.27  | 0.39  | -1.74 | -0.00 | 0.01  | 0.00  |
|     | 6  | 0.11  | 1.47  | -1.83 | -0.02 | -0.00 | 0.00  |
|     | 7  | -0.42 | 1.92  | -1.87 | -0.03 | -0.01 | 0.01  |
|     | 8  | -0.10 | 1.40  | -1.83 | -0.03 | -0.00 | 0.00  |
|     | 9  | -0.52 | 1.90  | -1.87 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.06  | -0.09 | -1.76 | 0.00  | -0.00 | -0.00 |
|     | 11 | -0.06 | -0.15 | -1.65 | 0.00  | -0.00 | 0.00  |
|     | 12 | -0.15 | -0.19 | -1.65 | -0.00 | -0.00 | 0.00  |
|     | 13 | 0.21  | -0.01 | -1.65 | 0.01  | -0.00 | -0.00 |
|     | 14 | 0.30  | 0.02  | -1.65 | 0.01  | -0.00 | -0.00 |
|     | 15 | 0.26  | -0.03 | -1.65 | 0.01  | -0.00 | 0.00  |
|     | 16 | 0.16  | -0.07 | -1.65 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.11 | -0.13 | -1.65 | 0.00  | -0.00 | -0.00 |
|     | 18 | -0.01 | -0.10 | -1.65 | 0.00  | -0.00 | -0.00 |
| 122 | 1  | 0.08  | -0.12 | -2.26 | 0.01  | -0.00 | -0.00 |
|     | 2  | 1.54  | -0.15 | -2.02 | 0.00  | 0.03  | 0.00  |
|     | 3  | 1.00  | 0.35  | -1.97 | -0.00 | 0.02  | 0.00  |
|     | 4  | 1.69  | -0.11 | -2.05 | 0.01  | 0.03  | 0.00  |
|     | 5  | 1.27  | 0.43  | -2.02 | -0.00 | 0.02  | 0.00  |
|     | 6  | 0.11  | 1.66  | -1.90 | -0.02 | -0.00 | 0.00  |
|     | 7  | -0.42 | 2.16  | -1.85 | -0.02 | -0.01 | 0.01  |
|     | 8  | -0.10 | 1.57  | -1.89 | -0.02 | -0.00 | 0.00  |
|     | 9  | -0.52 | 2.11  | -1.85 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.06  | -0.09 | -1.72 | 0.01  | -0.00 | -0.00 |
|     | 11 | -0.06 | -0.11 | -1.60 | 0.00  | -0.00 | 0.00  |
|     | 12 | -0.15 | -0.14 | -1.59 | 0.00  | -0.00 | 0.00  |
|     | 13 | 0.21  | -0.06 | -1.66 | 0.01  | 0.00  | -0.00 |
|     | 14 | 0.30  | -0.03 | -1.67 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.26  | -0.02 | -1.64 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.16  | -0.05 | -1.63 | 0.01  | -0.00 | 0.00  |
|     | 17 | -0.11 | -0.15 | -1.62 | 0.01  | -0.00 | -0.00 |
|     | 18 | -0.01 | -0.13 | -1.63 | 0.01  | 0.00  | -0.00 |
| 201 | 1  | 0.06  | -0.09 | -2.51 | -0.00 | 0.06  | -0.00 |
|     | 2  | 4.35  | -1.50 | -1.60 | 0.01  | 0.05  | 0.00  |
|     | 3  | 3.57  | -1.14 | -1.57 | 0.00  | 0.04  | 0.01  |
|     | 4  | 4.23  | -0.47 | -1.56 | 0.00  | 0.05  | 0.00  |
|     | 5  | 3.64  | 0.13  | -1.53 | -0.00 | 0.05  | 0.00  |
|     | 6  | 2.38  | 0.49  | -1.48 | -0.01 | 0.04  | 0.01  |
|     | 7  | 1.60  | 0.85  | -1.45 | -0.01 | 0.04  | 0.01  |
|     | 8  | 1.63  | 0.72  | -1.45 | -0.01 | 0.04  | 0.01  |
|     | 9  | 1.04  | 1.32  | -1.41 | -0.02 | 0.04  | 0.01  |
|     | 10 | 0.05  | -0.07 | -1.89 | -0.00 | 0.04  | -0.00 |
|     | 11 | 0.20  | -0.94 | -1.74 | 0.00  | 0.03  | 0.00  |
|     | 12 | 0.05  | -1.15 | -1.74 | 0.00  | 0.03  | 0.00  |
|     | 13 | -0.02 | 0.79  | -1.68 | -0.00 | 0.03  | -0.00 |
|     | 14 | 0.13  | 1.01  | -1.68 | -0.01 | 0.03  | -0.00 |
|     | 15 | 0.70  | -0.23 | -1.73 | -0.00 | 0.03  | 0.00  |
|     | 16 | 0.55  | -0.44 | -1.73 | 0.00  | 0.03  | 0.00  |
|     | 17 | -0.52 | 0.08  | -1.69 | -0.00 | 0.03  | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 18 | -0.37 | 0.29  | -1.68 | -0.00 | 0.03  | -0.00 |
| 202 | 1  | 0.06  | -0.14 | -2.77 | -0.00 | -0.01 | -0.00 |
|     | 2  | 4.35  | -1.12 | -1.81 | 0.00  | 0.01  | 0.00  |
|     | 3  | 3.57  | -0.46 | -1.79 | 0.00  | 0.01  | 0.01  |
|     | 4  | 4.23  | -0.37 | -1.80 | 0.00  | 0.01  | 0.00  |
|     | 5  | 3.64  | 0.49  | -1.78 | -0.00 | 0.01  | 0.00  |
|     | 6  | 2.38  | 1.75  | -1.74 | -0.01 | 0.01  | 0.01  |
|     | 7  | 1.60  | 2.41  | -1.73 | -0.02 | 0.00  | 0.01  |
|     | 8  | 1.63  | 1.84  | -1.74 | -0.01 | 0.00  | 0.01  |
|     | 9  | 1.04  | 2.70  | -1.72 | -0.02 | 0.00  | 0.01  |
|     | 10 | 0.05  | -0.11 | -2.08 | -0.00 | -0.01 | -0.00 |
|     | 11 | 0.20  | -0.74 | -1.89 | 0.00  | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.92 | -1.89 | 0.00  | -0.00 | 0.00  |
|     | 13 | -0.02 | 0.52  | -1.86 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.13  | 0.69  | -1.86 | -0.00 | -0.00 | -0.00 |
|     | 15 | 0.70  | -0.16 | -1.88 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.55  | -0.34 | -1.88 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.52 | -0.06 | -1.87 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.37 | 0.11  | -1.87 | -0.00 | -0.01 | -0.00 |
| 203 | 1  | 0.06  | -0.19 | -2.98 | 0.00  | -0.01 | -0.00 |
|     | 2  | 4.35  | -0.81 | -1.97 | 0.01  | 0.02  | 0.00  |
|     | 3  | 3.57  | 0.11  | -1.93 | 0.00  | 0.01  | 0.01  |
|     | 4  | 4.23  | -0.28 | -1.96 | 0.00  | 0.02  | 0.00  |
|     | 5  | 3.64  | 0.81  | -1.92 | -0.01 | 0.01  | 0.00  |
|     | 6  | 2.38  | 2.83  | -1.83 | -0.02 | 0.01  | 0.01  |
|     | 7  | 1.60  | 3.75  | -1.79 | -0.03 | 0.00  | 0.01  |
|     | 8  | 1.63  | 2.79  | -1.83 | -0.02 | -0.00 | 0.01  |
|     | 9  | 1.04  | 3.88  | -1.79 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.05  | -0.14 | -2.25 | 0.00  | -0.01 | -0.00 |
|     | 11 | 0.20  | -0.57 | -2.07 | 0.01  | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.71 | -2.07 | 0.01  | -0.01 | 0.00  |
|     | 13 | -0.02 | 0.29  | -2.06 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.13  | 0.43  | -2.05 | -0.00 | -0.00 | -0.00 |
|     | 15 | 0.70  | -0.11 | -2.06 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.55  | -0.25 | -2.06 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.52 | -0.18 | -2.06 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.37 | -0.04 | -2.06 | 0.00  | -0.01 | -0.00 |
| 204 | 1  | 0.06  | -0.23 | -3.07 | -0.00 | 0.00  | -0.00 |
|     | 2  | 4.35  | -0.50 | -2.24 | -0.01 | 0.02  | 0.00  |
|     | 3  | 3.57  | 0.67  | -2.17 | -0.01 | 0.02  | 0.01  |
|     | 4  | 4.23  | -0.20 | -2.22 | -0.00 | 0.02  | 0.00  |
|     | 5  | 3.64  | 1.11  | -2.13 | -0.01 | 0.02  | 0.00  |
|     | 6  | 2.38  | 3.85  | -1.96 | -0.03 | 0.01  | 0.01  |
|     | 7  | 1.60  | 5.02  | -1.88 | -0.03 | 0.00  | 0.01  |
|     | 8  | 1.63  | 3.70  | -1.96 | -0.03 | 0.00  | 0.01  |
|     | 9  | 1.04  | 5.00  | -1.88 | -0.03 | -0.00 | 0.01  |
|     | 10 | 0.05  | -0.18 | -2.33 | -0.00 | 0.00  | -0.00 |
|     | 11 | 0.20  | -0.41 | -2.18 | -0.00 | 0.00  | 0.00  |
|     | 12 | 0.05  | -0.52 | -2.19 | -0.01 | -0.00 | 0.00  |
|     | 13 | -0.02 | 0.07  | -2.14 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.13  | 0.18  | -2.13 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.70  | -0.05 | -2.15 | -0.00 | 0.01  | 0.00  |
|     | 16 | 0.55  | -0.16 | -2.16 | -0.00 | 0.01  | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 17 | -0.52 | -0.29 | -2.17 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.37 | -0.18 | -2.16 | -0.00 | -0.00 | -0.00 |
| 205 | 1  | 0.06  | -0.25 | -2.97 | -0.00 | -0.00 | -0.00 |
|     | 2  | 4.35  | -0.36 | -2.65 | -0.01 | 0.02  | 0.00  |
|     | 3  | 3.57  | 0.93  | -2.48 | -0.01 | 0.02  | 0.01  |
|     | 4  | 4.23  | -0.16 | -2.63 | -0.00 | 0.02  | 0.00  |
|     | 5  | 3.64  | 1.25  | -2.46 | -0.01 | 0.02  | 0.00  |
|     | 6  | 2.38  | 4.34  | -2.08 | -0.02 | 0.01  | 0.01  |
|     | 7  | 1.60  | 5.62  | -1.90 | -0.03 | 0.00  | 0.01  |
|     | 8  | 1.63  | 4.13  | -2.04 | -0.02 | 0.00  | 0.01  |
|     | 9  | 1.04  | 5.54  | -1.87 | -0.03 | -0.00 | 0.01  |
|     | 10 | 0.05  | -0.19 | -2.26 | -0.00 | -0.00 | -0.00 |
|     | 11 | 0.20  | -0.34 | -2.14 | 0.00  | -0.00 | 0.00  |
|     | 12 | 0.05  | -0.43 | -2.13 | 0.00  | -0.00 | 0.00  |
|     | 13 | -0.02 | -0.03 | -2.11 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.13  | 0.06  | -2.11 | -0.00 | 0.00  | -0.00 |
|     | 15 | 0.70  | -0.03 | -2.16 | -0.00 | 0.01  | 0.00  |
|     | 16 | 0.55  | -0.12 | -2.15 | -0.00 | 0.01  | 0.00  |
|     | 17 | -0.52 | -0.34 | -2.09 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.37 | -0.25 | -2.09 | -0.00 | -0.01 | -0.00 |
| 206 | 1  | 0.08  | -0.19 | -2.66 | -0.00 | -0.00 | -0.00 |
|     | 2  | 4.17  | -0.81 | -1.74 | -0.00 | 0.02  | 0.00  |
|     | 3  | 3.25  | 0.11  | -1.73 | -0.00 | 0.02  | 0.01  |
|     | 4  | 4.18  | -0.28 | -1.73 | -0.00 | 0.02  | 0.00  |
|     | 5  | 3.46  | 0.81  | -1.72 | -0.00 | 0.02  | 0.00  |
|     | 6  | 1.77  | 2.83  | -1.68 | -0.01 | 0.01  | 0.01  |
|     | 7  | 0.85  | 3.75  | -1.67 | -0.01 | 0.00  | 0.01  |
|     | 8  | 1.09  | 2.79  | -1.69 | -0.01 | 0.01  | 0.01  |
|     | 9  | 0.37  | 3.88  | -1.67 | -0.01 | 0.00  | 0.01  |
|     | 10 | 0.07  | -0.14 | -2.00 | -0.00 | -0.00 | -0.00 |
|     | 11 | 0.11  | -0.57 | -1.82 | -0.00 | -0.00 | 0.00  |
|     | 12 | -0.06 | -0.71 | -1.82 | -0.00 | -0.00 | 0.00  |
|     | 13 | 0.11  | 0.29  | -1.80 | 0.00  | -0.00 | -0.00 |
|     | 14 | 0.28  | 0.43  | -1.80 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.67  | -0.11 | -1.81 | -0.00 | 0.00  | 0.00  |
|     | 16 | 0.50  | -0.25 | -1.81 | -0.00 | 0.00  | 0.00  |
|     | 17 | -0.45 | -0.18 | -1.81 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.29 | -0.04 | -1.81 | -0.00 | -0.00 | -0.00 |
| 207 | 1  | 0.08  | -0.23 | -3.22 | 0.02  | -0.01 | -0.00 |
|     | 2  | 4.17  | -0.50 | -2.15 | 0.01  | 0.01  | 0.00  |
|     | 3  | 3.25  | 0.67  | -2.07 | 0.01  | 0.01  | 0.01  |
|     | 4  | 4.18  | -0.20 | -2.18 | 0.01  | 0.01  | 0.00  |
|     | 5  | 3.46  | 1.11  | -2.12 | 0.01  | 0.01  | 0.00  |
|     | 6  | 1.77  | 3.85  | -1.94 | 0.02  | 0.00  | 0.01  |
|     | 7  | 0.85  | 5.02  | -1.86 | 0.02  | -0.00 | 0.01  |
|     | 8  | 1.09  | 3.70  | -1.92 | 0.02  | -0.00 | 0.01  |
|     | 9  | 0.37  | 5.00  | -1.86 | 0.02  | -0.01 | 0.01  |
|     | 10 | 0.07  | -0.18 | -2.43 | 0.01  | -0.01 | -0.00 |
|     | 11 | 0.11  | -0.41 | -2.18 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.06 | -0.52 | -2.17 | 0.01  | -0.01 | 0.00  |
|     | 13 | 0.11  | 0.07  | -2.24 | 0.01  | -0.00 | -0.00 |
|     | 14 | 0.28  | 0.18  | -2.25 | 0.01  | -0.00 | -0.00 |
|     | 15 | 0.67  | -0.05 | -2.22 | 0.01  | -0.00 | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 16 | 0.50  | -0.16 | -2.21 | 0.01  | -0.00 | 0.00  |
|     | 17 | -0.45 | -0.29 | -2.19 | 0.01  | -0.01 | -0.00 |
|     | 18 | -0.29 | -0.18 | -2.21 | 0.01  | -0.01 | -0.00 |
| 208 | 1  | 0.10  | -0.09 | -2.39 | 0.00  | 0.06  | -0.00 |
|     | 2  | 4.09  | -1.50 | -1.52 | 0.01  | 0.05  | 0.00  |
|     | 3  | 3.10  | -1.14 | -1.52 | 0.00  | 0.05  | 0.01  |
|     | 4  | 4.16  | -0.47 | -1.49 | 0.00  | 0.05  | 0.00  |
|     | 5  | 3.38  | 0.13  | -1.50 | -0.00 | 0.05  | 0.00  |
|     | 6  | 1.50  | 0.49  | -1.52 | -0.01 | 0.04  | 0.01  |
|     | 7  | 0.51  | 0.85  | -1.52 | -0.01 | 0.04  | 0.01  |
|     | 8  | 0.85  | 0.72  | -1.51 | -0.01 | 0.04  | 0.01  |
|     | 9  | 0.07  | 1.32  | -1.52 | -0.01 | 0.04  | 0.01  |
|     | 10 | 0.08  | -0.07 | -1.80 | 0.00  | 0.05  | -0.00 |
|     | 11 | 0.06  | -0.94 | -1.62 | 0.01  | 0.04  | 0.00  |
|     | 12 | -0.11 | -1.15 | -1.62 | 0.01  | 0.03  | 0.00  |
|     | 13 | 0.17  | 0.79  | -1.58 | -0.00 | 0.04  | -0.00 |
|     | 14 | 0.34  | 1.01  | -1.58 | -0.00 | 0.04  | -0.00 |
|     | 15 | 0.66  | -0.23 | -1.60 | 0.00  | 0.04  | 0.00  |
|     | 16 | 0.48  | -0.44 | -1.61 | 0.00  | 0.04  | 0.00  |
|     | 17 | -0.42 | 0.08  | -1.60 | 0.00  | 0.04  | -0.00 |
|     | 18 | -0.25 | 0.29  | -1.59 | -0.00 | 0.04  | -0.00 |
| 209 | 1  | 0.10  | -0.14 | -2.63 | 0.00  | -0.02 | -0.00 |
|     | 2  | 4.09  | -1.12 | -1.70 | 0.01  | -0.00 | 0.00  |
|     | 3  | 3.10  | -0.46 | -1.69 | 0.00  | -0.00 | 0.01  |
|     | 4  | 4.16  | -0.37 | -1.69 | 0.00  | -0.00 | 0.00  |
|     | 5  | 3.38  | 0.49  | -1.69 | -0.00 | -0.00 | 0.00  |
|     | 6  | 1.50  | 1.75  | -1.67 | -0.01 | -0.01 | 0.01  |
|     | 7  | 0.51  | 2.41  | -1.66 | -0.02 | -0.01 | 0.01  |
|     | 8  | 0.85  | 1.84  | -1.66 | -0.02 | -0.01 | 0.01  |
|     | 9  | 0.07  | 2.70  | -1.66 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.08  | -0.11 | -1.97 | 0.00  | -0.01 | -0.00 |
|     | 11 | 0.06  | -0.74 | -1.72 | 0.01  | -0.01 | 0.00  |
|     | 12 | -0.11 | -0.92 | -1.72 | 0.01  | -0.01 | 0.00  |
|     | 13 | 0.17  | 0.52  | -1.71 | -0.00 | -0.01 | -0.00 |
|     | 14 | 0.34  | 0.69  | -1.71 | -0.00 | -0.01 | -0.00 |
|     | 15 | 0.66  | -0.16 | -1.72 | 0.00  | -0.01 | 0.00  |
|     | 16 | 0.48  | -0.34 | -1.72 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.42 | -0.06 | -1.71 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.25 | 0.11  | -1.71 | -0.00 | -0.01 | -0.00 |
| 210 | 1  | 0.10  | -0.19 | -2.87 | 0.00  | -0.00 | -0.00 |
|     | 2  | 4.09  | -0.81 | -1.85 | 0.01  | 0.01  | 0.00  |
|     | 3  | 3.10  | 0.11  | -1.86 | -0.00 | 0.01  | 0.01  |
|     | 4  | 4.16  | -0.28 | -1.84 | 0.00  | 0.01  | 0.00  |
|     | 5  | 3.38  | 0.81  | -1.85 | -0.01 | 0.01  | 0.00  |
|     | 6  | 1.50  | 2.83  | -1.88 | -0.02 | 0.00  | 0.01  |
|     | 7  | 0.51  | 3.75  | -1.89 | -0.03 | 0.00  | 0.01  |
|     | 8  | 0.85  | 2.79  | -1.88 | -0.02 | 0.00  | 0.01  |
|     | 9  | 0.07  | 3.88  | -1.89 | -0.03 | 0.00  | 0.01  |
|     | 10 | 0.08  | -0.14 | -2.16 | 0.00  | -0.00 | -0.00 |
|     | 11 | 0.06  | -0.57 | -1.92 | 0.00  | 0.00  | 0.00  |
|     | 12 | -0.11 | -0.71 | -1.92 | 0.01  | -0.00 | 0.00  |
|     | 13 | 0.17  | 0.29  | -1.91 | -0.00 | 0.00  | -0.00 |
|     | 14 | 0.34  | 0.43  | -1.91 | -0.01 | 0.00  | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 15 | 0.66  | -0.11 | -1.92 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.48  | -0.25 | -1.92 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.42 | -0.18 | -1.92 | 0.00  | 0.00  | -0.00 |
|     | 18 | -0.25 | -0.04 | -1.92 | -0.00 | 0.00  | -0.00 |
| 211 | 1  | 0.10  | -0.23 | -2.94 | 0.00  | -0.01 | -0.00 |
|     | 2  | 4.09  | -0.50 | -1.98 | -0.00 | 0.00  | 0.00  |
|     | 3  | 3.10  | 0.67  | -1.96 | -0.01 | 0.00  | 0.01  |
|     | 4  | 4.16  | -0.20 | -1.98 | -0.00 | 0.01  | 0.00  |
|     | 5  | 3.38  | 1.11  | -1.96 | -0.01 | 0.00  | 0.00  |
|     | 6  | 1.50  | 3.85  | -1.92 | -0.02 | -0.00 | 0.01  |
|     | 7  | 0.51  | 5.02  | -1.90 | -0.03 | -0.01 | 0.01  |
|     | 8  | 0.85  | 3.70  | -1.92 | -0.03 | -0.01 | 0.01  |
|     | 9  | 0.07  | 5.00  | -1.90 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.08  | -0.18 | -2.21 | 0.00  | -0.01 | -0.00 |
|     | 11 | 0.06  | -0.41 | -2.00 | -0.00 | -0.01 | 0.00  |
|     | 12 | -0.11 | -0.52 | -2.00 | -0.00 | -0.01 | 0.00  |
|     | 13 | 0.17  | 0.07  | -2.00 | 0.00  | -0.01 | -0.00 |
|     | 14 | 0.34  | 0.18  | -2.00 | 0.01  | -0.01 | -0.00 |
|     | 15 | 0.66  | -0.05 | -2.00 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.48  | -0.16 | -2.00 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.42 | -0.29 | -2.00 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.25 | -0.18 | -2.00 | 0.00  | -0.01 | -0.00 |
| 212 | 1  | 0.10  | -0.25 | -2.66 | 0.01  | -0.00 | -0.00 |
|     | 2  | 4.09  | -0.36 | -2.27 | 0.01  | 0.02  | 0.00  |
|     | 3  | 3.10  | 0.93  | -2.16 | 0.00  | 0.02  | 0.01  |
|     | 4  | 4.16  | -0.16 | -2.28 | 0.01  | 0.02  | 0.00  |
|     | 5  | 3.38  | 1.25  | -2.18 | 0.00  | 0.02  | 0.00  |
|     | 6  | 1.50  | 4.34  | -1.94 | -0.01 | 0.01  | 0.01  |
|     | 7  | 0.51  | 5.62  | -1.83 | -0.01 | 0.00  | 0.01  |
|     | 8  | 0.85  | 4.13  | -1.91 | -0.01 | 0.01  | 0.01  |
|     | 9  | 0.07  | 5.54  | -1.81 | -0.01 | 0.00  | 0.01  |
|     | 10 | 0.08  | -0.19 | -2.02 | 0.00  | -0.00 | -0.00 |
|     | 11 | 0.06  | -0.34 | -1.88 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.11 | -0.43 | -1.88 | 0.01  | -0.00 | 0.00  |
|     | 13 | 0.17  | -0.03 | -1.89 | 0.00  | -0.00 | -0.00 |
|     | 14 | 0.34  | 0.06  | -1.90 | 0.00  | -0.00 | -0.00 |
|     | 15 | 0.66  | -0.03 | -1.91 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.48  | -0.12 | -1.90 | 0.00  | -0.00 | 0.00  |
|     | 17 | -0.42 | -0.34 | -1.87 | 0.01  | -0.00 | -0.00 |
|     | 18 | -0.25 | -0.25 | -1.87 | 0.00  | -0.00 | -0.00 |
| 213 | 1  | 0.11  | -0.09 | -2.44 | -0.00 | 0.07  | -0.00 |
|     | 2  | 3.96  | -1.50 | -1.48 | 0.00  | 0.05  | 0.00  |
|     | 3  | 2.86  | -1.14 | -1.54 | 0.00  | 0.05  | 0.01  |
|     | 4  | 4.12  | -0.47 | -1.51 | -0.00 | 0.05  | 0.00  |
|     | 5  | 3.25  | 0.13  | -1.57 | -0.00 | 0.05  | 0.00  |
|     | 6  | 1.06  | 0.49  | -1.67 | -0.01 | 0.04  | 0.01  |
|     | 7  | -0.04 | 0.85  | -1.72 | -0.01 | 0.04  | 0.01  |
|     | 8  | 0.46  | 0.72  | -1.68 | -0.01 | 0.04  | 0.01  |
|     | 9  | -0.41 | 1.32  | -1.74 | -0.01 | 0.04  | 0.01  |
|     | 10 | 0.10  | -0.07 | -1.84 | -0.00 | 0.05  | -0.00 |
|     | 11 | -0.01 | -0.94 | -1.61 | 0.00  | 0.04  | 0.00  |
|     | 12 | -0.20 | -1.15 | -1.61 | 0.00  | 0.04  | 0.00  |
|     | 13 | 0.26  | 0.79  | -1.65 | -0.00 | 0.04  | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 14 | 0.45  | 1.01  | -1.66 | -0.01 | 0.04  | -0.00 |
|     | 15 | 0.63  | -0.23 | -1.62 | -0.00 | 0.04  | 0.00  |
|     | 16 | 0.44  | -0.44 | -1.62 | -0.00 | 0.04  | 0.00  |
|     | 17 | -0.38 | 0.08  | -1.64 | -0.00 | 0.04  | -0.00 |
|     | 18 | -0.18 | 0.29  | -1.64 | -0.00 | 0.04  | -0.00 |
| 214 | 1  | 0.11  | -0.14 | -2.60 | 0.00  | -0.02 | -0.00 |
|     | 2  | 3.96  | -1.12 | -1.66 | 0.01  | -0.00 | 0.00  |
|     | 3  | 2.86  | -0.46 | -1.68 | 0.00  | -0.01 | 0.01  |
|     | 4  | 4.12  | -0.37 | -1.67 | 0.00  | -0.00 | 0.00  |
|     | 5  | 3.25  | 0.49  | -1.70 | -0.00 | -0.01 | 0.00  |
|     | 6  | 1.06  | 1.75  | -1.75 | -0.02 | -0.01 | 0.01  |
|     | 7  | -0.04 | 2.41  | -1.77 | -0.02 | -0.01 | 0.01  |
|     | 8  | 0.46  | 1.84  | -1.75 | -0.02 | -0.01 | 0.01  |
|     | 9  | -0.41 | 2.70  | -1.78 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.10  | -0.11 | -1.95 | 0.00  | -0.01 | -0.00 |
|     | 11 | -0.01 | -0.74 | -1.69 | 0.00  | -0.01 | 0.00  |
|     | 12 | -0.20 | -0.92 | -1.69 | 0.01  | -0.01 | 0.00  |
|     | 13 | 0.26  | 0.52  | -1.71 | -0.00 | -0.01 | -0.00 |
|     | 14 | 0.45  | 0.69  | -1.71 | -0.00 | -0.01 | -0.00 |
|     | 15 | 0.63  | -0.16 | -1.70 | 0.00  | -0.01 | 0.00  |
|     | 16 | 0.44  | -0.34 | -1.69 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.38 | -0.06 | -1.70 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.18 | 0.11  | -1.70 | -0.00 | -0.01 | -0.00 |
| 215 | 1  | 0.11  | -0.19 | -2.75 | 0.00  | 0.00  | -0.00 |
|     | 2  | 3.96  | -0.81 | -1.75 | 0.01  | 0.02  | 0.00  |
|     | 3  | 2.86  | 0.11  | -1.80 | 0.00  | 0.01  | 0.01  |
|     | 4  | 4.12  | -0.28 | -1.76 | 0.00  | 0.02  | 0.00  |
|     | 5  | 3.25  | 0.81  | -1.82 | -0.01 | 0.01  | 0.00  |
|     | 6  | 1.06  | 2.83  | -1.93 | -0.02 | 0.01  | 0.01  |
|     | 7  | -0.04 | 3.75  | -1.98 | -0.03 | 0.00  | 0.01  |
|     | 8  | 0.46  | 2.79  | -1.93 | -0.02 | 0.01  | 0.01  |
|     | 9  | -0.41 | 3.88  | -1.99 | -0.03 | 0.01  | 0.01  |
|     | 10 | 0.10  | -0.14 | -2.06 | 0.00  | 0.00  | -0.00 |
|     | 11 | -0.01 | -0.57 | -1.83 | 0.01  | 0.00  | 0.00  |
|     | 12 | -0.20 | -0.71 | -1.83 | 0.01  | 0.00  | 0.00  |
|     | 13 | 0.26  | 0.29  | -1.85 | -0.00 | 0.00  | -0.00 |
|     | 14 | 0.45  | 0.43  | -1.85 | -0.00 | 0.00  | -0.00 |
|     | 15 | 0.63  | -0.11 | -1.84 | 0.00  | 0.00  | 0.00  |
|     | 16 | 0.44  | -0.25 | -1.83 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.38 | -0.18 | -1.84 | 0.00  | 0.00  | -0.00 |
|     | 18 | -0.18 | -0.04 | -1.85 | -0.00 | 0.00  | -0.00 |
| 216 | 1  | 0.11  | -0.23 | -2.77 | 0.00  | -0.02 | -0.00 |
|     | 2  | 3.96  | -0.50 | -1.86 | -0.01 | 0.00  | 0.00  |
|     | 3  | 2.86  | 0.67  | -1.90 | -0.01 | -0.00 | 0.01  |
|     | 4  | 4.12  | -0.20 | -1.87 | -0.00 | 0.00  | 0.00  |
|     | 5  | 3.25  | 1.11  | -1.91 | -0.01 | 0.00  | 0.00  |
|     | 6  | 1.06  | 3.85  | -2.00 | -0.02 | -0.01 | 0.01  |
|     | 7  | -0.04 | 5.02  | -2.04 | -0.03 | -0.01 | 0.01  |
|     | 8  | 0.46  | 3.70  | -2.00 | -0.03 | -0.01 | 0.01  |
|     | 9  | -0.41 | 5.00  | -2.04 | -0.03 | -0.01 | 0.01  |
|     | 10 | 0.10  | -0.18 | -2.09 | 0.00  | -0.01 | -0.00 |
|     | 11 | -0.01 | -0.41 | -1.89 | -0.00 | -0.01 | 0.00  |
|     | 12 | -0.20 | -0.52 | -1.89 | -0.00 | -0.01 | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 13 | 0.26  | 0.07  | -1.91 | 0.00  | -0.01 | -0.00 |
|     | 14 | 0.45  | 0.18  | -1.91 | 0.00  | -0.01 | -0.00 |
|     | 15 | 0.63  | -0.05 | -1.90 | 0.00  | -0.01 | 0.00  |
|     | 16 | 0.44  | -0.16 | -1.90 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.38 | -0.29 | -1.90 | -0.00 | -0.01 | -0.00 |
|     | 18 | -0.18 | -0.18 | -1.90 | 0.00  | -0.01 | -0.00 |
| 217 | 1  | 0.11  | -0.25 | -2.51 | 0.00  | -0.00 | -0.00 |
|     | 2  | 3.96  | -0.36 | -2.14 | -0.00 | 0.02  | 0.00  |
|     | 3  | 2.86  | 0.93  | -2.08 | -0.01 | 0.02  | 0.01  |
|     | 4  | 4.12  | -0.16 | -2.16 | -0.00 | 0.02  | 0.00  |
|     | 5  | 3.25  | 1.25  | -2.11 | -0.00 | 0.02  | 0.00  |
|     | 6  | 1.06  | 4.34  | -1.98 | -0.01 | 0.01  | 0.01  |
|     | 7  | -0.04 | 5.62  | -1.93 | -0.01 | 0.00  | 0.01  |
|     | 8  | 0.46  | 4.13  | -1.97 | -0.01 | 0.01  | 0.01  |
|     | 9  | -0.41 | 5.54  | -1.93 | -0.01 | 0.00  | 0.01  |
|     | 10 | 0.10  | -0.19 | -1.90 | 0.00  | -0.00 | -0.00 |
|     | 11 | -0.01 | -0.34 | -1.77 | -0.00 | -0.00 | 0.00  |
|     | 12 | -0.20 | -0.43 | -1.76 | -0.00 | -0.00 | 0.00  |
|     | 13 | 0.26  | -0.03 | -1.80 | 0.00  | 0.00  | -0.00 |
|     | 14 | 0.45  | 0.06  | -1.81 | 0.00  | 0.00  | -0.00 |
|     | 15 | 0.63  | -0.03 | -1.79 | 0.00  | -0.00 | 0.00  |
|     | 16 | 0.44  | -0.12 | -1.79 | -0.00 | -0.00 | 0.00  |
|     | 17 | -0.38 | -0.34 | -1.77 | -0.00 | -0.00 | -0.00 |
|     | 18 | -0.18 | -0.25 | -1.78 | 0.00  | -0.00 | -0.00 |
| 218 | 1  | 0.15  | -0.09 | -2.50 | 0.00  | 0.06  | -0.00 |
|     | 2  | 3.70  | -1.50 | -1.47 | 0.01  | 0.05  | 0.00  |
|     | 3  | 2.39  | -1.14 | -1.56 | 0.00  | 0.04  | 0.01  |
|     | 4  | 4.05  | -0.47 | -1.53 | 0.00  | 0.05  | 0.00  |
|     | 5  | 2.99  | 0.13  | -1.64 | -0.00 | 0.04  | 0.00  |
|     | 6  | 0.18  | 0.49  | -1.83 | -0.01 | 0.03  | 0.01  |
|     | 7  | -1.14 | 0.85  | -1.93 | -0.01 | 0.03  | 0.01  |
|     | 8  | -0.32 | 0.72  | -1.86 | -0.01 | 0.03  | 0.01  |
|     | 9  | -1.38 | 1.32  | -1.97 | -0.01 | 0.03  | 0.01  |
|     | 10 | 0.12  | -0.07 | -1.88 | 0.00  | 0.04  | -0.00 |
|     | 11 | -0.14 | -0.94 | -1.65 | 0.01  | 0.03  | 0.00  |
|     | 12 | -0.36 | -1.15 | -1.63 | 0.01  | 0.03  | 0.00  |
|     | 13 | 0.45  | 0.79  | -1.76 | -0.00 | 0.03  | -0.00 |
|     | 14 | 0.67  | 1.01  | -1.77 | -0.00 | 0.04  | -0.00 |
|     | 15 | 0.59  | -0.23 | -1.69 | 0.00  | 0.03  | 0.00  |
|     | 16 | 0.37  | -0.44 | -1.67 | 0.00  | 0.03  | 0.00  |
|     | 17 | -0.28 | 0.08  | -1.72 | 0.00  | 0.03  | -0.00 |
|     | 18 | -0.06 | 0.29  | -1.73 | 0.00  | 0.03  | -0.00 |
| 219 | 1  | 0.15  | -0.14 | -2.66 | 0.00  | -0.01 | -0.00 |
|     | 2  | 3.70  | -1.12 | -1.71 | 0.01  | 0.01  | 0.00  |
|     | 3  | 2.39  | -0.46 | -1.76 | 0.00  | 0.01  | 0.01  |
|     | 4  | 4.05  | -0.37 | -1.73 | 0.00  | 0.01  | 0.00  |
|     | 5  | 2.99  | 0.49  | -1.77 | -0.00 | 0.01  | 0.00  |
|     | 6  | 0.18  | 1.75  | -1.87 | -0.01 | -0.01 | 0.01  |
|     | 7  | -1.14 | 2.41  | -1.91 | -0.01 | -0.01 | 0.01  |
|     | 8  | -0.32 | 1.84  | -1.87 | -0.01 | -0.01 | 0.01  |
|     | 9  | -1.38 | 2.70  | -1.92 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.12  | -0.11 | -2.00 | 0.00  | -0.01 | -0.00 |
|     | 11 | -0.14 | -0.74 | -1.79 | 0.00  | -0.01 | 0.00  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 12 | -0.36 | -0.92 | -1.79 | 0.01  | -0.01 | 0.00  |
|     | 13 | 0.45  | 0.52  | -1.82 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.67  | 0.69  | -1.82 | -0.00 | -0.00 | -0.00 |
|     | 15 | 0.59  | -0.16 | -1.80 | 0.00  | -0.01 | 0.00  |
|     | 16 | 0.37  | -0.34 | -1.79 | 0.00  | -0.01 | 0.00  |
|     | 17 | -0.28 | -0.06 | -1.81 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.06 | 0.11  | -1.81 | 0.00  | -0.01 | -0.00 |
| 220 | 1  | 0.15  | -0.19 | -2.57 | 0.01  | 0.00  | -0.00 |
|     | 2  | 3.70  | -0.81 | -1.69 | -0.00 | 0.02  | 0.00  |
|     | 3  | 2.39  | 0.11  | -1.74 | -0.01 | 0.01  | 0.01  |
|     | 4  | 4.05  | -0.28 | -1.70 | 0.00  | 0.02  | 0.00  |
|     | 5  | 2.99  | 0.81  | -1.75 | -0.00 | 0.01  | 0.00  |
|     | 6  | 0.18  | 2.83  | -1.86 | -0.01 | 0.00  | 0.01  |
|     | 7  | -1.14 | 3.75  | -1.91 | -0.02 | -0.00 | 0.01  |
|     | 8  | -0.32 | 2.79  | -1.86 | -0.01 | 0.00  | 0.01  |
|     | 9  | -1.38 | 3.88  | -1.92 | -0.02 | -0.00 | 0.01  |
|     | 10 | 0.12  | -0.14 | -1.94 | 0.00  | 0.00  | -0.00 |
|     | 11 | -0.14 | -0.57 | -1.76 | 0.00  | 0.00  | 0.00  |
|     | 12 | -0.36 | -0.71 | -1.76 | 0.00  | -0.00 | 0.00  |
|     | 13 | 0.45  | 0.29  | -1.78 | 0.01  | 0.00  | -0.00 |
|     | 14 | 0.67  | 0.43  | -1.78 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.59  | -0.11 | -1.77 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.37  | -0.25 | -1.77 | 0.00  | 0.00  | 0.00  |
|     | 17 | -0.28 | -0.18 | -1.77 | 0.00  | 0.00  | -0.00 |
|     | 18 | -0.06 | -0.04 | -1.77 | 0.00  | 0.00  | -0.00 |
| 221 | 1  | 0.15  | -0.23 | -2.44 | 0.01  | -0.01 | -0.00 |
|     | 2  | 3.70  | -0.50 | -1.77 | 0.00  | 0.01  | 0.00  |
|     | 3  | 2.39  | 0.67  | -1.81 | -0.00 | 0.01  | 0.01  |
|     | 4  | 4.05  | -0.20 | -1.76 | 0.00  | 0.01  | 0.00  |
|     | 5  | 2.99  | 1.11  | -1.80 | -0.00 | 0.01  | 0.00  |
|     | 6  | 0.18  | 3.85  | -1.91 | -0.01 | -0.00 | 0.01  |
|     | 7  | -1.14 | 5.02  | -1.95 | -0.02 | -0.01 | 0.01  |
|     | 8  | -0.32 | 3.70  | -1.91 | -0.02 | -0.00 | 0.01  |
|     | 9  | -1.38 | 5.00  | -1.95 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.12  | -0.18 | -1.85 | 0.01  | -0.01 | -0.00 |
|     | 11 | -0.14 | -0.41 | -1.72 | 0.00  | -0.01 | 0.00  |
|     | 12 | -0.36 | -0.52 | -1.73 | 0.00  | -0.01 | 0.00  |
|     | 13 | 0.45  | 0.07  | -1.71 | 0.01  | -0.00 | -0.00 |
|     | 14 | 0.67  | 0.18  | -1.71 | 0.01  | -0.00 | -0.00 |
|     | 15 | 0.59  | -0.05 | -1.72 | 0.01  | 0.00  | 0.00  |
|     | 16 | 0.37  | -0.16 | -1.72 | 0.01  | -0.00 | 0.00  |
|     | 17 | -0.28 | -0.29 | -1.72 | 0.00  | -0.01 | -0.00 |
|     | 18 | -0.06 | -0.18 | -1.72 | 0.01  | -0.01 | -0.00 |
| 222 | 1  | 0.15  | -0.25 | -2.30 | 0.01  | -0.00 | -0.00 |
|     | 2  | 3.70  | -0.36 | -2.07 | 0.00  | 0.02  | 0.00  |
|     | 3  | 2.39  | 0.93  | -2.01 | -0.00 | 0.01  | 0.01  |
|     | 4  | 4.05  | -0.16 | -2.11 | 0.00  | 0.02  | 0.00  |
|     | 5  | 2.99  | 1.25  | -2.07 | 0.00  | 0.02  | 0.00  |
|     | 6  | 0.18  | 4.34  | -1.94 | -0.01 | -0.00 | 0.01  |
|     | 7  | -1.14 | 5.62  | -1.88 | -0.01 | -0.01 | 0.01  |
|     | 8  | -0.32 | 4.13  | -1.93 | -0.01 | -0.00 | 0.01  |
|     | 9  | -1.38 | 5.54  | -1.89 | -0.01 | -0.01 | 0.01  |
|     | 10 | 0.12  | -0.19 | -1.75 | 0.01  | -0.00 | -0.00 |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 11 | -0.14 | -0.34 | -1.63 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.36 | -0.43 | -1.62 | 0.00  | -0.01 | 0.00  |
|     | 13 | 0.45  | -0.03 | -1.69 | 0.01  | 0.00  | -0.00 |
|     | 14 | 0.67  | 0.06  | -1.70 | 0.01  | 0.00  | -0.00 |
|     | 15 | 0.59  | -0.03 | -1.67 | 0.01  | 0.01  | 0.00  |
|     | 16 | 0.37  | -0.12 | -1.66 | 0.01  | 0.01  | 0.00  |
|     | 17 | -0.28 | -0.34 | -1.65 | 0.01  | -0.01 | -0.00 |
|     | 18 | -0.06 | -0.25 | -1.66 | 0.01  | -0.01 | -0.00 |
| 303 | 1  | -0.02 | -0.31 | -3.03 | -0.01 | 0.02  | -0.00 |
|     | 2  | 5.46  | 0.65  | -2.01 | -0.00 | 0.03  | 0.00  |
|     | 3  | 4.65  | 1.82  | -1.97 | -0.01 | 0.02  | 0.01  |
|     | 4  | 5.26  | 0.24  | -2.00 | -0.01 | 0.03  | -0.00 |
|     | 5  | 4.46  | 1.14  | -1.95 | -0.01 | 0.02  | 0.00  |
|     | 6  | 2.79  | 3.63  | -1.86 | -0.02 | 0.02  | 0.01  |
|     | 7  | 1.98  | 4.80  | -1.82 | -0.03 | 0.01  | 0.02  |
|     | 8  | 2.57  | 4.12  | -1.87 | -0.02 | 0.01  | 0.01  |
|     | 9  | 1.77  | 5.02  | -1.82 | -0.03 | 0.01  | 0.01  |
|     | 10 | 0.00  | -0.24 | -2.29 | -0.01 | 0.01  | -0.00 |
|     | 11 | 0.26  | 0.09  | -2.11 | -0.00 | 0.01  | 0.00  |
|     | 12 | -0.04 | 0.66  | -2.11 | -0.00 | 0.01  | -0.00 |
|     | 13 | -0.10 | -0.54 | -2.09 | -0.01 | 0.01  | -0.00 |
|     | 14 | 0.21  | -1.11 | -2.09 | -0.01 | 0.01  | -0.00 |
|     | 15 | 1.30  | -1.80 | -2.10 | -0.01 | 0.02  | 0.02  |
|     | 16 | 0.99  | -1.23 | -2.10 | -0.01 | 0.01  | 0.01  |
|     | 17 | -1.13 | 1.35  | -2.10 | -0.01 | 0.01  | -0.02 |
|     | 18 | -0.82 | 0.78  | -2.10 | -0.01 | 0.01  | -0.02 |
| 304 | 1  | -0.02 | -0.33 | -3.15 | -0.00 | -0.01 | -0.00 |
|     | 2  | 5.46  | 0.98  | -2.30 | 0.00  | 0.01  | 0.00  |
|     | 3  | 4.65  | 2.47  | -2.22 | -0.00 | 0.00  | 0.01  |
|     | 4  | 5.26  | 0.15  | -2.27 | 0.00  | 0.01  | -0.00 |
|     | 5  | 4.46  | 1.28  | -2.18 | -0.00 | 0.00  | 0.00  |
|     | 6  | 2.79  | 4.75  | -2.01 | -0.01 | -0.00 | 0.01  |
|     | 7  | 1.98  | 6.24  | -1.93 | -0.02 | -0.00 | 0.02  |
|     | 8  | 2.57  | 5.12  | -2.01 | -0.01 | -0.00 | 0.01  |
|     | 9  | 1.77  | 6.25  | -1.93 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.00  | -0.25 | -2.38 | -0.00 | -0.01 | -0.00 |
|     | 11 | 0.26  | 0.44  | -2.23 | -0.00 | -0.01 | 0.00  |
|     | 12 | -0.04 | 0.63  | -2.24 | -0.00 | -0.01 | -0.00 |
|     | 13 | -0.10 | -0.94 | -2.19 | -0.00 | -0.01 | -0.00 |
|     | 14 | 0.21  | -1.12 | -2.18 | -0.00 | -0.01 | -0.00 |
|     | 15 | 1.30  | -0.16 | -2.20 | -0.00 | -0.00 | 0.02  |
|     | 16 | 0.99  | 0.02  | -2.21 | -0.00 | -0.00 | 0.01  |
|     | 17 | -1.13 | -0.33 | -2.22 | -0.00 | -0.01 | -0.02 |
|     | 18 | -0.82 | -0.51 | -2.21 | -0.00 | -0.01 | -0.02 |
| 305 | 1  | -0.02 | -0.34 | -3.00 | -0.00 | -0.00 | -0.00 |
|     | 2  | 5.46  | 1.14  | -2.68 | 0.00  | 0.02  | 0.00  |
|     | 3  | 4.65  | 2.78  | -2.50 | -0.00 | 0.01  | 0.01  |
|     | 4  | 5.26  | 0.11  | -2.66 | 0.00  | 0.02  | -0.00 |
|     | 5  | 4.46  | 1.35  | -2.49 | -0.00 | 0.01  | 0.00  |
|     | 6  | 2.79  | 5.28  | -2.10 | -0.01 | 0.01  | 0.01  |
|     | 7  | 1.98  | 6.92  | -1.92 | -0.01 | 0.00  | 0.02  |
|     | 8  | 2.57  | 5.59  | -2.06 | -0.01 | 0.00  | 0.01  |
|     | 9  | 1.77  | 6.83  | -1.88 | -0.01 | -0.00 | 0.01  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 10 | 0.00  | -0.26 | -2.28 | -0.00 | -0.00 | -0.00 |
|     | 11 | 0.26  | 0.61  | -2.16 | -0.00 | -0.00 | 0.00  |
|     | 12 | -0.04 | 0.61  | -2.16 | -0.00 | -0.00 | -0.00 |
|     | 13 | -0.10 | -1.13 | -2.13 | -0.00 | -0.00 | -0.00 |
|     | 14 | 0.21  | -1.13 | -2.13 | -0.00 | -0.00 | -0.00 |
|     | 15 | 1.30  | 0.61  | -2.18 | -0.00 | 0.00  | 0.02  |
|     | 16 | 0.99  | 0.61  | -2.17 | -0.00 | 0.00  | 0.01  |
|     | 17 | -1.13 | -1.12 | -2.11 | -0.00 | -0.01 | -0.02 |
|     | 18 | -0.82 | -1.12 | -2.11 | -0.00 | -0.00 | -0.02 |
| 310 | 1  | -0.01 | -0.31 | -2.93 | 0.01  | 0.03  | -0.00 |
|     | 2  | 5.17  | 0.65  | -1.88 | 0.01  | 0.03  | 0.00  |
|     | 3  | 4.09  | 1.82  | -1.89 | 0.00  | 0.03  | 0.01  |
|     | 4  | 5.34  | 0.24  | -1.88 | 0.00  | 0.03  | -0.00 |
|     | 5  | 4.33  | 1.14  | -1.89 | -0.00 | 0.03  | 0.00  |
|     | 6  | 1.83  | 3.63  | -1.91 | -0.01 | 0.02  | 0.01  |
|     | 7  | 0.74  | 4.80  | -1.93 | -0.02 | 0.02  | 0.02  |
|     | 8  | 1.72  | 4.12  | -1.92 | -0.02 | 0.02  | 0.01  |
|     | 9  | 0.71  | 5.02  | -1.93 | -0.02 | 0.02  | 0.01  |
|     | 10 | 0.01  | -0.24 | -2.20 | 0.00  | 0.02  | -0.00 |
|     | 11 | -0.04 | 0.09  | -1.96 | 0.01  | 0.02  | 0.00  |
|     | 12 | -0.01 | 0.66  | -1.96 | 0.01  | 0.02  | -0.00 |
|     | 13 | 0.24  | -0.54 | -1.95 | -0.00 | 0.02  | -0.00 |
|     | 14 | 0.22  | -1.11 | -1.95 | -0.00 | 0.02  | -0.00 |
|     | 15 | -0.11 | -1.80 | -1.96 | 0.00  | 0.02  | 0.02  |
|     | 16 | -0.09 | -1.23 | -1.96 | 0.01  | 0.02  | 0.01  |
|     | 17 | 0.32  | 1.35  | -1.96 | 0.00  | 0.02  | -0.02 |
|     | 18 | 0.29  | 0.78  | -1.96 | 0.00  | 0.02  | -0.02 |
| 311 | 1  | -0.01 | -0.33 | -3.03 | 0.00  | -0.02 | -0.00 |
|     | 2  | 5.17  | 0.98  | -2.04 | 0.01  | -0.00 | 0.00  |
|     | 3  | 4.09  | 2.47  | -2.02 | 0.00  | -0.01 | 0.01  |
|     | 4  | 5.34  | 0.15  | -2.04 | 0.01  | -0.00 | -0.00 |
|     | 5  | 4.33  | 1.28  | -2.02 | -0.00 | -0.00 | 0.00  |
|     | 6  | 1.83  | 4.75  | -1.97 | -0.01 | -0.01 | 0.01  |
|     | 7  | 0.74  | 6.24  | -1.95 | -0.02 | -0.01 | 0.02  |
|     | 8  | 1.72  | 5.12  | -1.97 | -0.01 | -0.01 | 0.01  |
|     | 9  | 0.71  | 6.25  | -1.95 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.01  | -0.25 | -2.28 | 0.00  | -0.01 | -0.00 |
|     | 11 | -0.04 | 0.44  | -2.06 | 0.00  | -0.01 | 0.00  |
|     | 12 | -0.01 | 0.63  | -2.06 | 0.00  | -0.01 | -0.00 |
|     | 13 | 0.24  | -0.94 | -2.06 | 0.00  | -0.01 | -0.00 |
|     | 14 | 0.22  | -1.12 | -2.07 | 0.00  | -0.01 | -0.00 |
|     | 15 | -0.11 | -0.16 | -2.06 | 0.00  | -0.01 | 0.02  |
|     | 16 | -0.09 | 0.02  | -2.06 | 0.00  | -0.01 | 0.01  |
|     | 17 | 0.32  | -0.33 | -2.06 | 0.00  | -0.01 | -0.02 |
|     | 18 | 0.29  | -0.51 | -2.06 | 0.00  | -0.01 | -0.02 |
| 312 | 1  | -0.01 | -0.34 | -2.70 | 0.01  | -0.00 | -0.00 |
|     | 2  | 5.17  | 1.14  | -2.31 | 0.01  | 0.02  | 0.00  |
|     | 3  | 4.09  | 2.78  | -2.19 | 0.00  | 0.01  | 0.01  |
|     | 4  | 5.34  | 0.11  | -2.31 | 0.01  | 0.02  | -0.00 |
|     | 5  | 4.33  | 1.35  | -2.21 | 0.00  | 0.01  | 0.00  |
|     | 6  | 1.83  | 5.28  | -1.96 | -0.00 | 0.00  | 0.01  |
|     | 7  | 0.74  | 6.92  | -1.85 | -0.00 | 0.00  | 0.02  |
|     | 8  | 1.72  | 5.59  | -1.94 | -0.00 | 0.00  | 0.01  |

|     |    |       |       |       |       |       |       |
|-----|----|-------|-------|-------|-------|-------|-------|
|     | 9  | 0.71  | 6.83  | -1.83 | -0.00 | 0.00  | 0.01  |
|     | 10 | 0.01  | -0.26 | -2.05 | 0.01  | -0.00 | -0.00 |
|     | 11 | -0.04 | 0.61  | -1.91 | 0.01  | -0.00 | 0.00  |
|     | 12 | -0.01 | 0.61  | -1.90 | 0.01  | -0.00 | -0.00 |
|     | 13 | 0.24  | -1.13 | -1.92 | 0.00  | -0.00 | -0.00 |
|     | 14 | 0.22  | -1.13 | -1.93 | 0.00  | -0.00 | -0.00 |
|     | 15 | -0.11 | 0.61  | -1.94 | 0.00  | -0.00 | 0.02  |
|     | 16 | -0.09 | 0.61  | -1.93 | 0.01  | -0.00 | 0.01  |
|     | 17 | 0.32  | -1.12 | -1.90 | 0.00  | -0.00 | -0.02 |
|     | 18 | 0.29  | -1.12 | -1.90 | 0.00  | -0.00 | -0.02 |
| 315 | 1  | 0.00  | -0.31 | -2.78 | 0.00  | 0.02  | -0.00 |
|     | 2  | 5.03  | 0.65  | -1.77 | 0.01  | 0.02  | 0.00  |
|     | 3  | 3.81  | 1.82  | -1.82 | 0.00  | 0.02  | 0.01  |
|     | 4  | 5.38  | 0.24  | -1.78 | 0.00  | 0.03  | -0.00 |
|     | 5  | 4.27  | 1.14  | -1.84 | -0.01 | 0.02  | 0.00  |
|     | 6  | 1.35  | 3.63  | -1.96 | -0.02 | 0.02  | 0.01  |
|     | 7  | 0.12  | 4.80  | -2.01 | -0.02 | 0.02  | 0.02  |
|     | 8  | 1.29  | 4.12  | -1.96 | -0.02 | 0.02  | 0.01  |
|     | 9  | 0.18  | 5.02  | -2.02 | -0.02 | 0.02  | 0.01  |
|     | 10 | 0.02  | -0.24 | -2.09 | 0.00  | 0.01  | -0.00 |
|     | 11 | -0.19 | 0.09  | -1.85 | 0.01  | 0.01  | 0.00  |
|     | 12 | 0.00  | 0.66  | -1.85 | 0.01  | 0.01  | -0.00 |
|     | 13 | 0.41  | -0.54 | -1.88 | -0.00 | 0.01  | -0.00 |
|     | 14 | 0.22  | -1.11 | -1.88 | -0.00 | 0.02  | -0.00 |
|     | 15 | -0.81 | -1.80 | -1.86 | 0.00  | 0.01  | 0.02  |
|     | 16 | -0.63 | -1.23 | -1.85 | 0.00  | 0.01  | 0.01  |
|     | 17 | 1.04  | 1.35  | -1.87 | 0.00  | 0.01  | -0.02 |
|     | 18 | 0.85  | 0.78  | -1.87 | 0.00  | 0.01  | -0.02 |
| 316 | 1  | 0.00  | -0.33 | -2.82 | 0.00  | -0.01 | -0.00 |
|     | 2  | 5.03  | 0.98  | -1.89 | 0.01  | -0.00 | 0.00  |
|     | 3  | 3.81  | 2.47  | -1.93 | 0.00  | -0.00 | 0.01  |
|     | 4  | 5.38  | 0.15  | -1.90 | 0.01  | 0.00  | -0.00 |
|     | 5  | 4.27  | 1.28  | -1.95 | -0.00 | -0.00 | 0.00  |
|     | 6  | 1.35  | 4.75  | -2.04 | -0.01 | -0.01 | 0.01  |
|     | 7  | 0.12  | 6.24  | -2.08 | -0.02 | -0.01 | 0.02  |
|     | 8  | 1.29  | 5.12  | -2.04 | -0.01 | -0.01 | 0.01  |
|     | 9  | 0.18  | 6.25  | -2.09 | -0.02 | -0.01 | 0.01  |
|     | 10 | 0.02  | -0.25 | -2.13 | 0.00  | -0.01 | -0.00 |
|     | 11 | -0.19 | 0.44  | -1.93 | 0.00  | -0.01 | 0.00  |
|     | 12 | 0.00  | 0.63  | -1.93 | 0.00  | -0.01 | -0.00 |
|     | 13 | 0.41  | -0.94 | -1.95 | 0.00  | -0.01 | -0.00 |
|     | 14 | 0.22  | -1.12 | -1.95 | 0.00  | -0.01 | -0.00 |
|     | 15 | -0.81 | -0.16 | -1.94 | 0.00  | -0.01 | 0.02  |
|     | 16 | -0.63 | 0.02  | -1.94 | 0.00  | -0.01 | 0.01  |
|     | 17 | 1.04  | -0.33 | -1.94 | 0.00  | -0.01 | -0.02 |
|     | 18 | 0.85  | -0.51 | -1.94 | 0.00  | -0.01 | -0.02 |
| 317 | 1  | 0.00  | -0.34 | -2.52 | 0.00  | -0.00 | -0.00 |
|     | 2  | 5.03  | 1.14  | -2.15 | 0.00  | 0.02  | 0.00  |
|     | 3  | 3.81  | 2.78  | -2.10 | -0.00 | 0.01  | 0.01  |
|     | 4  | 5.38  | 0.11  | -2.18 | 0.00  | 0.02  | -0.00 |
|     | 5  | 4.27  | 1.35  | -2.13 | 0.00  | 0.01  | 0.00  |
|     | 6  | 1.35  | 5.28  | -2.01 | -0.01 | 0.00  | 0.01  |
|     | 7  | 0.12  | 6.92  | -1.95 | -0.01 | 0.00  | 0.02  |

|  |    |       |       |       |       |       |       |
|--|----|-------|-------|-------|-------|-------|-------|
|  | 8  | 1.29  | 5.59  | -1.99 | -0.01 | 0.00  | 0.01  |
|  | 9  | 0.18  | 6.83  | -1.95 | -0.01 | 0.00  | 0.01  |
|  | 10 | 0.02  | -0.26 | -1.92 | 0.00  | -0.00 | -0.00 |
|  | 11 | -0.19 | 0.61  | -1.78 | 0.00  | -0.00 | 0.00  |
|  | 12 | 0.00  | 0.61  | -1.77 | -0.00 | -0.00 | -0.00 |
|  | 13 | 0.41  | -1.13 | -1.81 | 0.01  | -0.00 | -0.00 |
|  | 14 | 0.22  | -1.13 | -1.82 | 0.01  | -0.00 | -0.00 |
|  | 15 | -0.81 | 0.61  | -1.81 | 0.00  | -0.00 | 0.02  |
|  | 16 | -0.63 | 0.61  | -1.80 | 0.00  | -0.00 | 0.01  |
|  | 17 | 1.04  | -1.12 | -1.79 | 0.00  | -0.00 | -0.02 |
|  | 18 | 0.85  | -1.12 | -1.79 | 0.00  | -0.00 | -0.02 |

## - Pressioni sul terreno

### - Convenzioni adottate

Nel seguito vengono riportate le pressioni trasmesse al terreno dalla struttura in corrispondenza dei nodi di fondazione.

| Nodo | Comb. | x<br>[m] | y<br>[m] | z<br>[m] | $\sigma$<br>[kg/cm <sup>2</sup> ] |
|------|-------|----------|----------|----------|-----------------------------------|
| 1    | 1     | 0.00     | 0.00     | 0.00     | 1.12                              |
|      | 2     |          |          |          | 0.72                              |
|      | 3     |          |          |          | 0.71                              |
|      | 4     |          |          |          | 0.70                              |
|      | 5     |          |          |          | 0.69                              |
|      | 6     |          |          |          | 0.67                              |
|      | 7     |          |          |          | 0.65                              |
|      | 8     |          |          |          | 0.65                              |
|      | 9     |          |          |          | 0.64                              |
|      | 10    |          |          |          | 0.84                              |
|      | 11    |          |          |          | 0.78                              |
|      | 12    |          |          |          | 0.78                              |
|      | 13    |          |          |          | 0.76                              |
|      | 14    |          |          |          | 0.76                              |
|      | 15    |          |          |          | 0.78                              |
|      | 16    |          |          |          | 0.78                              |
|      | 17    |          |          |          | 0.76                              |
|      | 18    |          |          |          | 0.76                              |
| 2    | 1     | 6.00     | 0.00     | 0.00     | 1.13                              |
|      | 2     |          |          |          | 0.76                              |
|      | 3     |          |          |          | 0.75                              |
|      | 4     |          |          |          | 0.75                              |
|      | 5     |          |          |          | 0.74                              |
|      | 6     |          |          |          | 0.72                              |
|      | 7     |          |          |          | 0.72                              |
|      | 8     |          |          |          | 0.72                              |
|      | 9     |          |          |          | 0.71                              |
|      | 10    |          |          |          | 0.86                              |
|      | 11    |          |          |          | 0.79                              |
|      | 12    |          |          |          | 0.79                              |
|      | 13    |          |          |          | 0.78                              |

|   |    |       |      |      |      |
|---|----|-------|------|------|------|
|   | 14 |       |      |      | 0.78 |
|   | 15 |       |      |      | 0.78 |
|   | 16 |       |      |      | 0.79 |
|   | 17 |       |      |      | 0.78 |
|   | 18 |       |      |      | 0.78 |
| 3 | 1  | 11.10 | 0.00 | 0.00 | 1.24 |
|   | 2  |       |      |      | 0.83 |
|   | 3  |       |      |      | 0.81 |
|   | 4  |       |      |      | 0.82 |
|   | 5  |       |      |      | 0.81 |
|   | 6  |       |      |      | 0.77 |
|   | 7  |       |      |      | 0.76 |
|   | 8  |       |      |      | 0.77 |
|   | 9  |       |      |      | 0.76 |
|   | 10 |       |      |      | 0.94 |
|   | 11 |       |      |      | 0.87 |
|   | 12 |       |      |      | 0.87 |
|   | 13 |       |      |      | 0.86 |
|   | 14 |       |      |      | 0.86 |
|   | 15 |       |      |      | 0.87 |
|   | 16 |       |      |      | 0.87 |
|   | 17 |       |      |      | 0.87 |
|   | 18 |       |      |      | 0.87 |
| 4 | 1  | 16.00 | 0.00 | 0.00 | 1.31 |
|   | 2  |       |      |      | 0.99 |
|   | 3  |       |      |      | 0.95 |
|   | 4  |       |      |      | 0.98 |
|   | 5  |       |      |      | 0.94 |
|   | 6  |       |      |      | 0.85 |
|   | 7  |       |      |      | 0.81 |
|   | 8  |       |      |      | 0.85 |
|   | 9  |       |      |      | 0.81 |
|   | 10 |       |      |      | 0.99 |
|   | 11 |       |      |      | 0.94 |
|   | 12 |       |      |      | 0.94 |
|   | 13 |       |      |      | 0.92 |
|   | 14 |       |      |      | 0.92 |
|   | 15 |       |      |      | 0.93 |
|   | 16 |       |      |      | 0.93 |
|   | 17 |       |      |      | 0.93 |
|   | 18 |       |      |      | 0.92 |
| 5 | 1  | 18.30 | 0.00 | 0.00 | 1.36 |
|   | 2  |       |      |      | 1.19 |
|   | 3  |       |      |      | 1.12 |
|   | 4  |       |      |      | 1.19 |
|   | 5  |       |      |      | 1.11 |
|   | 6  |       |      |      | 0.95 |
|   | 7  |       |      |      | 0.87 |
|   | 8  |       |      |      | 0.93 |
|   | 9  |       |      |      | 0.86 |
|   | 10 |       |      |      | 1.04 |
|   | 11 |       |      |      | 0.98 |
|   | 12 |       |      |      | 0.98 |

|   |    |       |      |      |      |
|---|----|-------|------|------|------|
|   | 13 |       |      |      | 0.97 |
|   | 14 |       |      |      | 0.97 |
|   | 15 |       |      |      | 0.99 |
|   | 16 |       |      |      | 0.99 |
|   | 17 |       |      |      | 0.96 |
|   | 18 |       |      |      | 0.96 |
| 6 | 1  | 11.10 | 2.90 | 0.00 | 1.19 |
|   | 2  |       |      |      | 0.78 |
|   | 3  |       |      |      | 0.77 |
|   | 4  |       |      |      | 0.77 |
|   | 5  |       |      |      | 0.77 |
|   | 6  |       |      |      | 0.76 |
|   | 7  |       |      |      | 0.76 |
|   | 8  |       |      |      | 0.76 |
|   | 9  |       |      |      | 0.76 |
|   | 10 |       |      |      | 0.89 |
|   | 11 |       |      |      | 0.81 |
|   | 12 |       |      |      | 0.81 |
|   | 13 |       |      |      | 0.81 |
|   | 14 |       |      |      | 0.81 |
|   | 15 |       |      |      | 0.81 |
|   | 16 |       |      |      | 0.81 |
|   | 17 |       |      |      | 0.81 |
|   | 18 |       |      |      | 0.81 |
| 7 | 1  | 16.00 | 2.90 | 0.00 | 1.18 |
|   | 2  |       |      |      | 0.85 |
|   | 3  |       |      |      | 0.83 |
|   | 4  |       |      |      | 0.84 |
|   | 5  |       |      |      | 0.82 |
|   | 6  |       |      |      | 0.78 |
|   | 7  |       |      |      | 0.77 |
|   | 8  |       |      |      | 0.78 |
|   | 9  |       |      |      | 0.76 |
|   | 10 |       |      |      | 0.89 |
|   | 11 |       |      |      | 0.83 |
|   | 12 |       |      |      | 0.83 |
|   | 13 |       |      |      | 0.82 |
|   | 14 |       |      |      | 0.82 |
|   | 15 |       |      |      | 0.82 |
|   | 16 |       |      |      | 0.82 |
|   | 17 |       |      |      | 0.82 |
|   | 18 |       |      |      | 0.82 |
| 8 | 1  | 0.00  | 4.20 | 0.00 | 1.06 |
|   | 2  |       |      |      | 0.68 |
|   | 3  |       |      |      | 0.68 |
|   | 4  |       |      |      | 0.67 |
|   | 5  |       |      |      | 0.67 |
|   | 6  |       |      |      | 0.69 |
|   | 7  |       |      |      | 0.69 |
|   | 8  |       |      |      | 0.69 |
|   | 9  |       |      |      | 0.69 |
|   | 10 |       |      |      | 0.80 |
|   | 11 |       |      |      | 0.72 |

|    |    |       |      |      |      |
|----|----|-------|------|------|------|
|    | 12 |       |      |      | 0.73 |
|    | 13 |       |      |      | 0.71 |
|    | 14 |       |      |      | 0.71 |
|    | 15 |       |      |      | 0.72 |
|    | 16 |       |      |      | 0.72 |
|    | 17 |       |      |      | 0.72 |
|    | 18 |       |      |      | 0.72 |
| 9  | 1  | 6.00  | 4.20 | 0.00 | 1.06 |
|    | 2  |       |      |      | 0.70 |
|    | 3  |       |      |      | 0.70 |
|    | 4  |       |      |      | 0.70 |
|    | 5  |       |      |      | 0.70 |
|    | 6  |       |      |      | 0.70 |
|    | 7  |       |      |      | 0.69 |
|    | 8  |       |      |      | 0.69 |
|    | 9  |       |      |      | 0.69 |
|    | 10 |       |      |      | 0.80 |
|    | 11 |       |      |      | 0.71 |
|    | 12 |       |      |      | 0.71 |
|    | 13 |       |      |      | 0.71 |
|    | 14 |       |      |      | 0.71 |
|    | 15 |       |      |      | 0.71 |
|    | 16 |       |      |      | 0.71 |
|    | 17 |       |      |      | 0.71 |
|    | 18 |       |      |      | 0.71 |
| 10 | 1  | 11.10 | 4.20 | 0.00 | 1.17 |
|    | 2  |       |      |      | 0.76 |
|    | 3  |       |      |      | 0.77 |
|    | 4  |       |      |      | 0.76 |
|    | 5  |       |      |      | 0.76 |
|    | 6  |       |      |      | 0.78 |
|    | 7  |       |      |      | 0.78 |
|    | 8  |       |      |      | 0.78 |
|    | 9  |       |      |      | 0.78 |
|    | 10 |       |      |      | 0.88 |
|    | 11 |       |      |      | 0.79 |
|    | 12 |       |      |      | 0.79 |
|    | 13 |       |      |      | 0.79 |
|    | 14 |       |      |      | 0.79 |
|    | 15 |       |      |      | 0.79 |
|    | 16 |       |      |      | 0.79 |
|    | 17 |       |      |      | 0.79 |
|    | 18 |       |      |      | 0.79 |
| 11 | 1  | 16.00 | 4.20 | 0.00 | 1.16 |
|    | 2  |       |      |      | 0.82 |
|    | 3  |       |      |      | 0.81 |
|    | 4  |       |      |      | 0.82 |
|    | 5  |       |      |      | 0.81 |
|    | 6  |       |      |      | 0.79 |
|    | 7  |       |      |      | 0.79 |
|    | 8  |       |      |      | 0.79 |
|    | 9  |       |      |      | 0.79 |
|    | 10 |       |      |      | 0.88 |

|    |    |       |      |      |      |
|----|----|-------|------|------|------|
|    | 11 |       |      |      | 0.81 |
|    | 12 |       |      |      | 0.81 |
|    | 13 |       |      |      | 0.81 |
|    | 14 |       |      |      | 0.81 |
|    | 15 |       |      |      | 0.81 |
|    | 16 |       |      |      | 0.81 |
|    | 17 |       |      |      | 0.81 |
|    | 18 |       |      |      | 0.81 |
| 12 | 1  | 18.30 | 4.20 | 0.00 | 1.18 |
|    | 2  |       |      |      | 1.00 |
|    | 3  |       |      |      | 0.96 |
|    | 4  |       |      |      | 1.00 |
|    | 5  |       |      |      | 0.96 |
|    | 6  |       |      |      | 0.87 |
|    | 7  |       |      |      | 0.83 |
|    | 8  |       |      |      | 0.86 |
|    | 9  |       |      |      | 0.82 |
|    | 10 |       |      |      | 0.90 |
|    | 11 |       |      |      | 0.84 |
|    | 12 |       |      |      | 0.84 |
|    | 13 |       |      |      | 0.84 |
|    | 14 |       |      |      | 0.85 |
|    | 15 |       |      |      | 0.85 |
|    | 16 |       |      |      | 0.85 |
|    | 17 |       |      |      | 0.83 |
|    | 18 |       |      |      | 0.84 |
| 13 | 1  | 0.00  | 6.30 | 0.00 | 1.06 |
|    | 2  |       |      |      | 0.66 |
|    | 3  |       |      |      | 0.68 |
|    | 4  |       |      |      | 0.66 |
|    | 5  |       |      |      | 0.68 |
|    | 6  |       |      |      | 0.72 |
|    | 7  |       |      |      | 0.74 |
|    | 8  |       |      |      | 0.73 |
|    | 9  |       |      |      | 0.75 |
|    | 10 |       |      |      | 0.80 |
|    | 11 |       |      |      | 0.71 |
|    | 12 |       |      |      | 0.71 |
|    | 13 |       |      |      | 0.72 |
|    | 14 |       |      |      | 0.72 |
|    | 15 |       |      |      | 0.71 |
|    | 16 |       |      |      | 0.71 |
|    | 17 |       |      |      | 0.72 |
|    | 18 |       |      |      | 0.72 |
| 14 | 1  | 6.00  | 6.30 | 0.00 | 1.05 |
|    | 2  |       |      |      | 0.69 |
|    | 3  |       |      |      | 0.70 |
|    | 4  |       |      |      | 0.69 |
|    | 5  |       |      |      | 0.70 |
|    | 6  |       |      |      | 0.72 |
|    | 7  |       |      |      | 0.73 |
|    | 8  |       |      |      | 0.72 |
|    | 9  |       |      |      | 0.73 |

|    |    |       |      |      |      |
|----|----|-------|------|------|------|
|    | 10 |       |      |      | 0.79 |
|    | 11 |       |      |      | 0.70 |
|    | 12 |       |      |      | 0.70 |
|    | 13 |       |      |      | 0.71 |
|    | 14 |       |      |      | 0.71 |
|    | 15 |       |      |      | 0.70 |
|    | 16 |       |      |      | 0.70 |
|    | 17 |       |      |      | 0.70 |
|    | 18 |       |      |      | 0.70 |
| 15 | 1  | 11.10 | 6.30 | 0.00 | 1.11 |
|    | 2  |       |      |      | 0.72 |
|    | 3  |       |      |      | 0.73 |
|    | 4  |       |      |      | 0.72 |
|    | 5  |       |      |      | 0.74 |
|    | 6  |       |      |      | 0.78 |
|    | 7  |       |      |      | 0.80 |
|    | 8  |       |      |      | 0.78 |
|    | 9  |       |      |      | 0.80 |
|    | 10 |       |      |      | 0.84 |
|    | 11 |       |      |      | 0.75 |
|    | 12 |       |      |      | 0.75 |
|    | 13 |       |      |      | 0.76 |
|    | 14 |       |      |      | 0.76 |
|    | 15 |       |      |      | 0.75 |
|    | 16 |       |      |      | 0.75 |
|    | 17 |       |      |      | 0.76 |
|    | 18 |       |      |      | 0.76 |
| 16 | 1  | 16.00 | 6.30 | 0.00 | 1.11 |
|    | 2  |       |      |      | 0.78 |
|    | 3  |       |      |      | 0.79 |
|    | 4  |       |      |      | 0.78 |
|    | 5  |       |      |      | 0.79 |
|    | 6  |       |      |      | 0.81 |
|    | 7  |       |      |      | 0.82 |
|    | 8  |       |      |      | 0.81 |
|    | 9  |       |      |      | 0.82 |
|    | 10 |       |      |      | 0.84 |
|    | 11 |       |      |      | 0.77 |
|    | 12 |       |      |      | 0.78 |
|    | 13 |       |      |      | 0.77 |
|    | 14 |       |      |      | 0.77 |
|    | 15 |       |      |      | 0.77 |
|    | 16 |       |      |      | 0.77 |
|    | 17 |       |      |      | 0.77 |
|    | 18 |       |      |      | 0.77 |
| 17 | 1  | 18.30 | 6.30 | 0.00 | 1.13 |
|    | 2  |       |      |      | 0.95 |
|    | 3  |       |      |      | 0.92 |
|    | 4  |       |      |      | 0.96 |
|    | 5  |       |      |      | 0.94 |
|    | 6  |       |      |      | 0.87 |
|    | 7  |       |      |      | 0.85 |
|    | 8  |       |      |      | 0.87 |

|    |    |       |       |      |      |
|----|----|-------|-------|------|------|
|    | 9  |       |       |      | 0.85 |
|    | 10 |       |       |      | 0.86 |
|    | 11 |       |       |      | 0.80 |
|    | 12 |       |       |      | 0.80 |
|    | 13 |       |       |      | 0.81 |
|    | 14 |       |       |      | 0.81 |
|    | 15 |       |       |      | 0.81 |
|    | 16 |       |       |      | 0.81 |
|    | 17 |       |       |      | 0.80 |
|    | 18 |       |       |      | 0.81 |
| 18 | 1  | 0.00  | 10.50 | 0.00 | 1.12 |
|    | 2  |       |       |      | 0.66 |
|    | 3  |       |       |      | 0.70 |
|    | 4  |       |       |      | 0.69 |
|    | 5  |       |       |      | 0.74 |
|    | 6  |       |       |      | 0.82 |
|    | 7  |       |       |      | 0.87 |
|    | 8  |       |       |      | 0.84 |
|    | 9  |       |       |      | 0.88 |
|    | 10 |       |       |      | 0.84 |
|    | 11 |       |       |      | 0.74 |
|    | 12 |       |       |      | 0.73 |
|    | 13 |       |       |      | 0.79 |
|    | 14 |       |       |      | 0.80 |
|    | 15 |       |       |      | 0.76 |
|    | 16 |       |       |      | 0.75 |
|    | 17 |       |       |      | 0.77 |
|    | 18 |       |       |      | 0.78 |
| 19 | 1  | 6.00  | 10.50 | 0.00 | 1.09 |
|    | 2  |       |       |      | 0.71 |
|    | 3  |       |       |      | 0.73 |
|    | 4  |       |       |      | 0.72 |
|    | 5  |       |       |      | 0.74 |
|    | 6  |       |       |      | 0.78 |
|    | 7  |       |       |      | 0.80 |
|    | 8  |       |       |      | 0.78 |
|    | 9  |       |       |      | 0.80 |
|    | 10 |       |       |      | 0.82 |
|    | 11 |       |       |      | 0.74 |
|    | 12 |       |       |      | 0.74 |
|    | 13 |       |       |      | 0.76 |
|    | 14 |       |       |      | 0.76 |
|    | 15 |       |       |      | 0.75 |
|    | 16 |       |       |      | 0.75 |
|    | 17 |       |       |      | 0.75 |
|    | 18 |       |       |      | 0.75 |
| 20 | 1  | 11.10 | 10.50 | 0.00 | 1.08 |
|    | 2  |       |       |      | 0.72 |
|    | 3  |       |       |      | 0.74 |
|    | 4  |       |       |      | 0.72 |
|    | 5  |       |       |      | 0.74 |
|    | 6  |       |       |      | 0.80 |
|    | 7  |       |       |      | 0.82 |

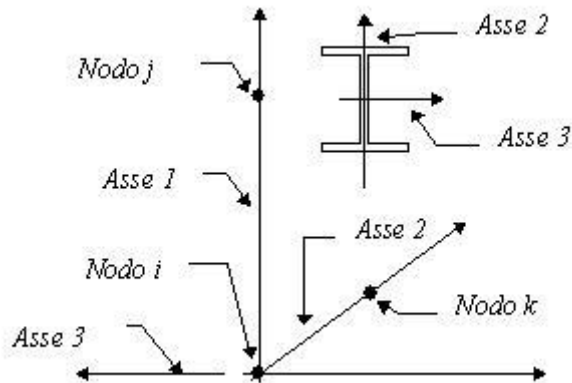
|    |    |       |       |      |      |
|----|----|-------|-------|------|------|
|    | 8  |       |       |      | 0.80 |
|    | 9  |       |       |      | 0.82 |
|    | 10 |       |       |      | 0.82 |
|    | 11 |       |       |      | 0.75 |
|    | 12 |       |       |      | 0.75 |
|    | 13 |       |       |      | 0.76 |
|    | 14 |       |       |      | 0.76 |
|    | 15 |       |       |      | 0.76 |
|    | 16 |       |       |      | 0.76 |
|    | 17 |       |       |      | 0.76 |
|    | 18 |       |       |      | 0.76 |
| 21 | 1  | 16.00 | 10.50 | 0.00 | 1.06 |
|    | 2  |       |       |      | 0.80 |
|    | 3  |       |       |      | 0.81 |
|    | 4  |       |       |      | 0.80 |
|    | 5  |       |       |      | 0.81 |
|    | 6  |       |       |      | 0.84 |
|    | 7  |       |       |      | 0.86 |
|    | 8  |       |       |      | 0.84 |
|    | 9  |       |       |      | 0.86 |
|    | 10 |       |       |      | 0.81 |
|    | 11 |       |       |      | 0.75 |
|    | 12 |       |       |      | 0.75 |
|    | 13 |       |       |      | 0.76 |
|    | 14 |       |       |      | 0.76 |
|    | 15 |       |       |      | 0.76 |
|    | 16 |       |       |      | 0.76 |
|    | 17 |       |       |      | 0.76 |
|    | 18 |       |       |      | 0.76 |
| 22 | 1  | 18.30 | 10.50 | 0.00 | 1.08 |
|    | 2  |       |       |      | 0.95 |
|    | 3  |       |       |      | 0.93 |
|    | 4  |       |       |      | 0.97 |
|    | 5  |       |       |      | 0.95 |
|    | 6  |       |       |      | 0.91 |
|    | 7  |       |       |      | 0.89 |
|    | 8  |       |       |      | 0.90 |
|    | 9  |       |       |      | 0.89 |
|    | 10 |       |       |      | 0.82 |
|    | 11 |       |       |      | 0.77 |
|    | 12 |       |       |      | 0.76 |
|    | 13 |       |       |      | 0.79 |
|    | 14 |       |       |      | 0.80 |
|    | 15 |       |       |      | 0.79 |
|    | 16 |       |       |      | 0.78 |
|    | 17 |       |       |      | 0.78 |
|    | 18 |       |       |      | 0.78 |

## - Sollecitazioni nei pilastri

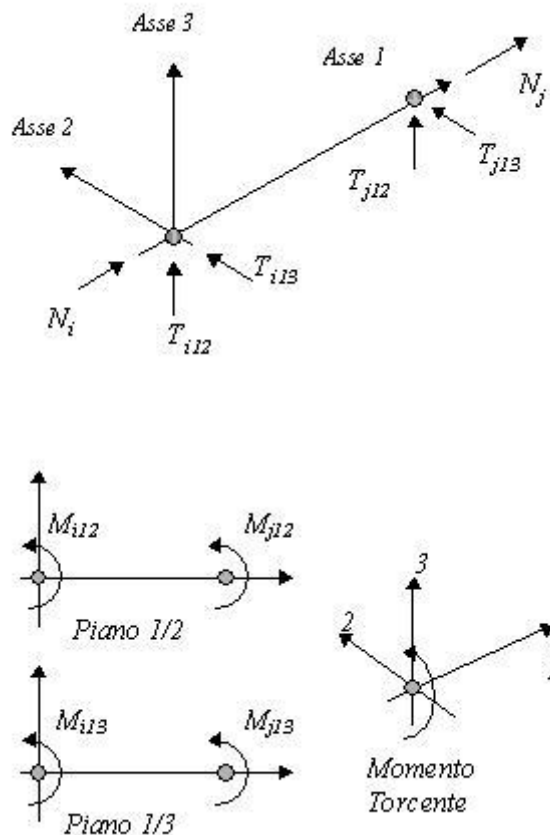
### - Convenzioni adottate

Le sollecitazioni nei pilastri sono da intendersi nel sistema di riferimento locale dell'elemento e si riferiscono all'asta.

L'orientamento del pilastro nello spazio è definito a mezzo del nodo K. La terna di riferimento locale dell'asta è così disposta:



Per quanto concerne i segni positivi assunti per le varie componenti di sollecitazione si assumono come positivi i versi e le sollecitazioni così diretti:



Per ogni pilastro vengono riportate, nelle varie combinazioni di carico, le componenti di sollecitazione alle estremità dell'asta.

| Comb. | Nodo | N<br>[kg] | T1-2<br>[kg] | T1-3<br>[kg] | Mt<br>[kgm] | M1-3<br>[kgm] | M1-2<br>[kgm] |
|-------|------|-----------|--------------|--------------|-------------|---------------|---------------|
|-------|------|-----------|--------------|--------------|-------------|---------------|---------------|

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 1  | 101 | 30383.0  | -9.9    | -1462.3 | 7.2    | 3509.9  | -569.3  |
|    | 1   | -32313.5 | 9.9     | 1462.3  | -7.2   | 1315.8  | 536.6   |
| 2  | 101 | 17983.0  | -821.8  | 625.0   | -36.3  | 121.1   | -1111.2 |
|    | 1   | -19468.0 | 821.8   | -625.0  | 36.3   | -2185.5 | -1705.4 |
| 3  | 101 | 17677.0  | -397.3  | 202.0   | -70.5  | 683.0   | -741.8  |
|    | 1   | -19162.0 | 397.3   | -202.0  | 70.5   | -1350.9 | -560.7  |
| 4  | 101 | 17412.6  | -162.7  | 570.7   | -2.2   | 194.9   | -485.2  |
|    | 1   | -18897.6 | 162.7   | -570.7  | 2.2    | -2079.5 | -380.8  |
| 5  | 101 | 17019.3  | 460.9   | 359.3   | -30.5  | 474.5   | 79.5    |
|    | 1   | -18504.3 | -460.9  | -359.3  | 30.5   | -1661.4 | 1124.6  |
| 6  | 101 | 16672.0  | 1256.8  | -79.5   | -130.8 | 1053.3  | 770.9   |
|    | 1   | -18157.0 | -1256.8 | 79.5    | 130.8  | -791.8  | 3312.3  |
| 7  | 101 | 16366.0  | 1681.3  | -502.6  | -165.0 | 1615.2  | 1140.3  |
|    | 1   | -17851.0 | -1681.3 | 502.6   | 165.0  | 42.8    | 4457.0  |
| 8  | 101 | 16392.7  | 1252.2  | -839.6  | -116.3 | 2067.8  | 746.3   |
|    | 1   | -17877.7 | -1252.2 | 839.6   | 116.3  | 702.6   | 3434.9  |
| 9  | 101 | 15999.4  | 1875.8  | -1050.9 | -144.6 | 2347.5  | 1310.9  |
|    | 1   | -17484.4 | -1875.8 | 1050.9  | 144.6  | 1120.7  | 4940.3  |
| 10 | 101 | 22657.3  | -7.6    | -1076.7 | 5.4    | 2590.2  | -435.6  |
|    | 1   | -24142.3 | 7.6     | 1076.7  | -5.4   | 963.0   | 410.6   |
| 11 | 101 | 19839.9  | -572.1  | -812.5  | -24.7  | 2029.3  | -965.2  |
|    | 1   | -21324.9 | 572.1   | 812.5   | 24.7   | 651.7   | -728.7  |
| 12 | 101 | 19908.0  | -753.1  | -996.3  | -30.6  | 2274.1  | -1139.7 |
|    | 1   | -21393.0 | 753.1   | 996.3   | 30.6   | 1013.6  | -1063.3 |
| 13 | 101 | 18974.6  | 557.0   | -903.0  | 34.6   | 2152.7  | 114.9   |
|    | 1   | -20459.6 | -557.0  | 903.0   | -34.6  | 827.5   | 1529.2  |
| 14 | 101 | 18906.5  | 738.0   | -719.2  | 40.4   | 1907.9  | 289.4   |
|    | 1   | -20391.5 | -738.0  | 719.2   | -40.4  | 465.6   | 1863.9  |
| 15 | 101 | 19612.7  | 31.4    | -199.9  | -5.1   | 1213.4  | -383.6  |
|    | 1   | -21097.7 | -31.4   | 199.9   | 5.1    | -554.5  | 387.0   |
| 16 | 101 | 19680.9  | -149.6  | -383.7  | -11.0  | 1458.2  | -558.1  |
|    | 1   | -21165.9 | 149.6   | 383.7   | 11.0   | -192.6  | 52.3    |
| 17 | 101 | 19201.8  | -46.5   | -1515.7 | 14.9   | 2968.7  | -466.7  |
|    | 1   | -20686.8 | 46.5    | 1515.7  | -14.9  | 2033.7  | 413.6   |
| 18 | 101 | 19133.6  | 134.5   | -1331.9 | 20.8   | 2723.9  | -292.2  |
|    | 1   | -20618.6 | -134.5  | 1331.9  | -20.8  | 1671.8  | 748.3   |
|    |     |          |         |         |        |         |         |
| 1  | 201 | 12628.5  | -587.8  | -3011.7 | 6.1    | 6113.8  | -1054.9 |
|    | 101 | -14880.7 | 587.8   | 3011.7  | -6.1   | 5481.4  | -1208.0 |
| 2  | 201 | 7252.8   | -1085.0 | -594.6  | -54.3  | 1137.4  | -2165.5 |
|    | 101 | -8985.3  | 1085.0  | 594.6   | 54.3   | 1150.9  | -2014.1 |
| 3  | 201 | 7085.9   | -722.9  | -765.9  | -96.9  | 1493.3  | -1409.4 |
|    | 101 | -8818.4  | 722.9   | 765.9   | 96.9   | 1454.3  | -1371.0 |
| 4  | 201 | 7035.1   | -692.4  | -624.7  | -17.5  | 1201.2  | -1286.7 |
|    | 101 | -8767.6  | 692.4   | 624.7   | 17.5   | 1202.9  | -1380.5 |
| 5  | 201 | 6847.6   | -237.2  | -778.3  | -55.1  | 1521.5  | -308.0  |
|    | 101 | -8580.1  | 237.2   | 778.3   | 55.1   | 1474.1  | -602.7  |
| 6  | 201 | 6627.9   | 432.3   | -1106.6 | -179.7 | 2205.0  | 1096.8  |
|    | 101 | -8360.4  | -432.3  | 1106.6  | 179.7  | 2055.0  | 578.8   |
| 7  | 201 | 6461.0   | 794.4   | -1277.8 | -222.4 | 2560.9  | 1853.0  |
|    | 101 | -8193.5  | -794.4  | 1277.8  | 222.4  | 2358.5  | 1221.9  |
| 8  | 201 | 6478.8   | 514.7   | -1195.5 | -159.7 | 2387.6  | 1233.9  |
|    | 101 | -8211.3  | -514.7  | 1195.5  | 159.7  | 2214.5  | 763.2   |

|    |     |          |        |         |        |          |         |
|----|-----|----------|--------|---------|--------|----------|---------|
| 9  | 201 | 6291.3   | 969.9  | -1349.1 | -197.3 | 2707.9   | 2212.6  |
|    | 101 | -8023.8  | -969.9 | 1349.1  | 197.3  | 2485.7   | 1541.1  |
| 10 | 201 | 9368.6   | -450.4 | -2219.3 | 4.6    | 4500.8   | -807.8  |
|    | 101 | -11101.1 | 450.4  | 2219.3  | -4.6   | 4043.5   | -926.5  |
| 11 | 201 | 7958.3   | -775.0 | -1751.1 | -27.6  | 3528.5   | -1535.5 |
|    | 101 | -9690.8  | 775.0  | 1751.1  | 27.6   | 3212.9   | -1449.2 |
| 12 | 201 | 7973.2   | -862.2 | -1922.4 | -32.8  | 3878.8   | -1743.2 |
|    | 101 | -9705.7  | 862.2  | 1922.4  | 32.8   | 3522.2   | -1576.0 |
| 13 | 201 | 7633.8   | -110.6 | -1801.0 | 36.0   | 3634.1   | -46.2   |
|    | 101 | -9366.3  | 110.6  | 1801.0  | -36.0  | 3299.8   | -378.8  |
| 14 | 201 | 7618.9   | -23.4  | -1629.7 | 41.3   | 3283.8   | 161.6   |
|    | 101 | -9351.4  | 23.4   | 1629.7  | -41.3  | 2990.6   | -252.1  |
| 15 | 201 | 7908.7   | -484.3 | -1180.0 | -10.2  | 2360.8   | -843.0  |
|    | 101 | -9641.2  | 484.3  | 1180.0  | 10.2   | 2181.9   | -1026.6 |
| 16 | 201 | 7923.6   | -571.5 | -1351.3 | -15.4  | 2711.1   | -1050.8 |
|    | 101 | -9656.1  | 571.5  | 1351.3  | 15.4   | 2491.2   | -1153.4 |
| 17 | 201 | 7683.4   | -401.3 | -2372.0 | 18.6   | 4801.8   | -738.6  |
|    | 101 | -9415.9  | 401.3  | 2372.0  | -18.6  | 4330.8   | -801.4  |
| 18 | 201 | 7668.5   | -314.1 | -2200.7 | 23.8   | 4451.5   | -530.9  |
|    | 101 | -9401.0  | 314.1  | 2200.7  | -23.8  | 4021.5   | -674.6  |
| 1  | 2   | 58006.5  | 263.1  | 409.7   | 7.2    | 118.4    | 99.9    |
|    | 102 | -56076.0 | -263.1 | -409.7  | -7.2   | -1470.4  | 768.3   |
| 2  | 2   | 35741.2  | 394.1  | 4779.9  | -36.3  | -10015.7 | 545.5   |
|    | 102 | -34256.2 | -394.1 | -4779.9 | 36.3   | -5781.0  | 755.4   |
| 3  | 2   | 35678.4  | 234.2  | 4061.0  | -70.5  | -8444.2  | 159.9   |
|    | 102 | -34193.4 | -234.2 | -4061.0 | 70.5   | -4976.8  | 610.2   |
| 4  | 2   | 35563.0  | 272.1  | 4682.8  | -2.2   | -9820.1  | 240.0   |
|    | 102 | -34078.0 | -272.1 | -4682.8 | 2.2    | -5653.0  | 658.4   |
| 5  | 2   | 35441.8  | 84.9   | 4036.8  | -30.5  | -8413.5  | -215.7  |
|    | 102 | -33956.8 | -84.9  | -4036.8 | 30.5   | -4924.0  | 493.5   |
| 6  | 2   | 35337.0  | -230.1 | 2626.6  | -130.8 | -5327.0  | -973.6  |
|    | 102 | -33852.0 | 230.1  | -2626.6 | 130.8  | -3351.2  | 205.6   |
| 7  | 2   | 35274.3  | -389.9 | 1907.7  | -165.0 | -3755.5  | -1359.2 |
|    | 102 | -33789.3 | 389.9  | -1907.7 | 165.0  | -2546.9  | 60.3    |
| 8  | 2   | 35353.9  | -260.7 | 2286.4  | -116.3 | -4581.7  | -1045.3 |
|    | 102 | -33868.9 | 260.7  | -2286.4 | 116.3  | -2972.2  | 174.1   |
| 9  | 2   | 35232.7  | -447.9 | 1640.4  | -144.6 | -3175.1  | -1501.0 |
|    | 102 | -33747.7 | 447.9  | -1640.4 | 144.6  | -2243.2  | 9.1     |
| 10 | 2   | 43236.5  | 200.5  | 283.6   | 5.4    | 104.4    | 73.4    |
|    | 102 | -41751.5 | -200.5 | -283.6  | -5.4   | -1040.2  | 588.2   |
| 11 | 2   | 37084.5  | 293.2  | 222.0   | -24.7  | 1.5      | 312.0   |
|    | 102 | -35599.5 | -293.2 | -222.0  | 24.7   | -737.6   | 655.7   |
| 12 | 2   | 37132.7  | 317.3  | 165.6   | -30.6  | 130.3    | 373.6   |
|    | 102 | -35647.7 | -317.3 | -165.6  | 30.6   | -680.5   | 672.8   |
| 13 | 2   | 36794.5  | 90.8   | 57.8    | 34.6   | 328.3    | -196.1  |
|    | 102 | -35309.5 | -90.8  | -57.8   | -34.6  | -515.8   | 495.5   |
| 14 | 2   | 36746.3  | 66.7   | 114.3   | 40.4   | 199.6    | -257.7  |
|    | 102 | -35261.3 | -66.7  | -114.3  | -40.4  | -572.9   | 478.4   |
| 15 | 2   | 36923.8  | 213.1  | 410.3   | -5.1   | -427.8   | 106.6   |
|    | 102 | -35438.8 | -213.1 | -410.3  | 5.1    | -928.2   | 598.6   |
| 16 | 2   | 36972.0  | 237.1  | 353.9   | -11.0  | -299.0   | 168.2   |
|    | 102 | -35487.0 | -237.1 | -353.9  | 11.0   | -871.0   | 615.7   |

|    |     |          |         |         |        |          |         |
|----|-----|----------|---------|---------|--------|----------|---------|
| 17 | 2   | 36955.2  | 170.9   | -130.5  | 14.9   | 757.7    | 9.3     |
|    | 102 | -35470.2 | -170.9  | 130.5   | -14.9  | -325.3   | 552.6   |
| 18 | 2   | 36907.0  | 146.8   | -74.0   | 20.8   | 628.9    | -52.3   |
|    | 102 | -35422.0 | -146.8  | 74.0    | -20.8  | -382.4   | 535.5   |
| 1  | 202 | 24983.3  | -359.8  | 1608.9  | 6.1    | -3317.1  | -517.0  |
|    | 102 | -27235.6 | 359.8   | -1608.9 | -6.1   | -2877.4  | -868.1  |
| 2  | 202 | 14266.9  | -397.7  | 4045.7  | -54.3  | -8747.9  | -663.3  |
|    | 102 | -15999.4 | 397.7   | -4045.7 | 54.3   | -6841.6  | -867.6  |
| 3  | 202 | 14247.7  | -290.6  | 3579.8  | -96.9  | -7729.5  | -432.2  |
|    | 102 | -15980.2 | 290.6   | -3579.8 | 96.9   | -6064.5  | -685.6  |
| 4  | 202 | 14192.9  | -299.6  | 3989.1  | -17.5  | -8625.5  | -455.0  |
|    | 102 | -15925.4 | 299.6   | -3989.1 | 17.5   | -6744.4  | -697.1  |
| 5  | 202 | 14148.7  | -169.3  | 3577.0  | -55.1  | -7722.7  | -174.2  |
|    | 102 | -15881.2 | 169.3   | -3577.0 | 55.1   | -6058.2  | -475.3  |
| 6  | 202 | 14119.7  | 36.6    | 2671.9  | -179.7 | -5738.6  | 272.8   |
|    | 102 | -15852.2 | -36.6   | -2671.9 | 179.7  | -4554.3  | -128.0  |
| 7  | 202 | 14100.5  | 143.7   | 2206.0  | -222.4 | -4720.3  | 504.0   |
|    | 102 | -15833.0 | -143.7  | -2206.0 | 222.4  | -3777.3  | 54.0    |
| 8  | 202 | 14128.8  | 57.4    | 2436.3  | -159.7 | -5230.9  | 315.4   |
|    | 102 | -15861.3 | -57.4   | -2436.3 | 159.7  | -4154.2  | -90.4   |
| 9  | 202 | 14084.6  | 187.7   | 2024.2  | -197.3 | -4328.1  | 596.3   |
|    | 102 | -15817.1 | -187.7  | -2024.2 | 197.3  | -3468.0  | 131.4   |
| 10 | 202 | 18428.7  | -275.4  | 1173.4  | 4.6    | -2434.2  | -394.6  |
|    | 102 | -20161.2 | 275.4   | -1173.4 | -4.6   | -2083.4  | -665.9  |
| 11 | 202 | 14897.0  | -351.9  | 928.8   | -27.6  | -2002.0  | -540.9  |
|    | 102 | -16629.5 | 351.9   | -928.8  | 27.6   | -1576.0  | -801.0  |
| 12 | 202 | 14917.3  | -372.4  | 886.7   | -32.8  | -1911.1  | -578.8  |
|    | 102 | -16649.8 | 372.4   | -886.7  | 32.8   | -1505.1  | -836.3  |
| 13 | 202 | 14777.8  | -187.1  | 833.4   | 36.0   | -1798.3  | -219.7  |
|    | 102 | -16510.3 | 187.1   | -833.4  | -36.0  | -1408.1  | -513.8  |
| 14 | 202 | 14757.5  | -166.7  | 875.5   | 41.3   | -1889.2  | -181.8  |
|    | 102 | -16490.0 | 166.7   | -875.5  | -41.3  | -1478.9  | -478.5  |
| 15 | 202 | 14829.4  | -283.6  | 1069.2  | -10.2  | -2305.0  | -414.7  |
|    | 102 | -16561.9 | 283.6   | -1069.2 | 10.2   | -1812.1  | -683.3  |
| 16 | 202 | 14849.7  | -304.1  | 1027.1  | -15.4  | -2214.1  | -452.5  |
|    | 102 | -16582.2 | 304.1   | -1027.1 | 15.4   | -1741.3  | -718.6  |
| 17 | 202 | 14845.4  | -255.4  | 693.0   | 18.6   | -1495.3  | -345.9  |
|    | 102 | -16577.9 | 255.4   | -693.0  | -18.6  | -1171.9  | -631.5  |
| 18 | 202 | 14825.1  | -234.9  | 735.1   | 23.8   | -1586.2  | -308.0  |
|    | 102 | -16557.6 | 234.9   | -735.1  | -23.8  | -1242.8  | -596.2  |
| 1  | 3   | 55057.1  | 665.7   | 522.8   | -10.0  | -388.6   | 144.2   |
|    | 23  | -54091.9 | -665.7  | -522.8  | 10.0   | -474.0   | 954.1   |
| 2  | 3   | 35285.0  | 791.9   | 5145.3  | -58.9  | -10590.9 | 560.9   |
|    | 23  | -34542.5 | -791.9  | -5145.3 | 58.9   | 2118.2   | 745.8   |
| 3  | 3   | 33867.6  | 207.5   | 4411.8  | -85.2  | -9001.0  | -121.2  |
|    | 23  | -33125.1 | -207.5  | -4411.8 | 85.2   | 1736.9   | 463.6   |
| 4  | 3   | 35559.9  | 483.5   | 5061.1  | -33.0  | -10437.4 | 199.6   |
|    | 23  | -34817.4 | -483.5  | -5061.1 | 33.0   | 2101.5   | 598.3   |
| 5  | 3   | 34342.5  | -205.5  | 4409.2  | -56.5  | -9028.0  | -605.1  |
|    | 23  | -33600.0 | 205.5   | -4409.2 | 56.5   | 1765.8   | 266.0   |
| 6  | 3   | 31227.0  | -1505.0 | 2972.2  | -137.2 | -5892.9  | -2121.3 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 23  | -30484.5 | 1505.0  | -2972.2 | 137.2  | 999.2   | -362.0  |
| 7  | 3   | 29809.7  | -2089.3 | 2238.7  | -163.4 | -4303.0 | -2803.4 |
|    | 23  | -29067.2 | 2089.3  | -2238.7 | 163.4  | 617.9   | -644.1  |
| 8  | 3   | 30835.4  | -1464.4 | 2616.0  | -120.5 | -5137.9 | -2074.1 |
|    | 23  | -30092.9 | 1464.4  | -2616.0 | 120.5  | 830.4   | -342.2  |
| 9  | 3   | 29618.0  | -2153.4 | 1964.0  | -144.0 | -3728.5 | -2878.7 |
|    | 23  | -28875.5 | 2153.4  | -1964.0 | 144.0  | 494.7   | -674.5  |
| 10 | 3   | 41338.0  | 469.6   | 398.8   | -7.4   | -302.4  | 83.7    |
|    | 23  | -40595.5 | -469.6  | -398.8  | 7.4    | -355.7  | 691.1   |
| 11 | 3   | 36498.2  | 526.6   | 455.0   | -28.4  | -446.6  | 253.0   |
|    | 23  | -35755.7 | -526.6  | -455.0  | 28.4   | -301.8  | 615.9   |
| 12 | 3   | 36334.6  | 612.5   | 391.0   | -31.4  | -304.1  | 353.5   |
|    | 23  | -35592.1 | -612.5  | -391.0  | 31.4   | -338.4  | 657.0   |
| 13 | 3   | 36954.2  | 26.7    | 312.8   | 16.0   | -189.6  | -333.1  |
|    | 23  | -36211.7 | -26.7   | -312.8  | -16.0  | -328.8  | 377.1   |
| 14 | 3   | 37117.8  | -59.2   | 376.8   | 19.0   | -332.1  | -433.6  |
|    | 23  | -36375.3 | 59.2    | -376.8  | -19.0  | -292.2  | 336.0   |
| 15 | 3   | 37043.5  | 240.5   | 668.4   | -18.3  | -921.6  | -82.1   |
|    | 23  | -36301.0 | -240.5  | -668.4  | 18.3   | -179.9  | 478.8   |
| 16 | 3   | 36879.9  | 326.3   | 604.4   | -21.3  | -779.1  | 18.4    |
|    | 23  | -36137.4 | -326.3  | -604.4  | 21.3   | -216.4  | 520.0   |
| 17 | 3   | 36408.9  | 312.8   | 99.3    | 6.0    | 285.4   | 2.0     |
|    | 23  | -35666.4 | -312.8  | -99.3   | -6.0   | -450.7  | 514.2   |
| 18 | 3   | 36572.5  | 227.0   | 163.3   | 9.0    | 142.9   | -98.5   |
|    | 23  | -35830.0 | -227.0  | -163.3  | -9.0   | -414.1  | 473.1   |
|    |     |          |         |         |        |         |         |
| 1  | 23  | 49117.7  | 587.2   | 542.4   | 24.4   | 466.8   | 792.3   |
|    | 103 | -48152.4 | -587.2  | -542.4  | -24.4  | -1361.7 | 176.5   |
| 2  | 23  | 32092.5  | 623.0   | 5176.5  | -18.3  | -2137.8 | 780.6   |
|    | 103 | -31350.0 | -623.0  | -5176.5 | 18.3   | -6435.9 | 248.5   |
| 3  | 23  | 31139.4  | 244.0   | 4435.4  | -59.1  | -1773.5 | 337.8   |
|    | 103 | -30396.9 | -244.0  | -4435.4 | 59.1   | -5573.9 | 56.5    |
| 4  | 23  | 32149.0  | 438.0   | 5094.5  | 22.9   | -2109.1 | 537.2   |
|    | 103 | -31406.6 | -438.0  | -5094.5 | -22.9  | -6325.1 | 187.1   |
| 5  | 23  | 31276.5  | -5.3    | 4435.1  | -9.3   | -1791.1 | 12.9    |
|    | 103 | -30534.0 | 5.3     | -4435.1 | 9.3    | -5551.4 | -29.8   |
| 6  | 23  | 29184.0  | -854.8  | 2978.7  | -125.8 | -1077.7 | -967.3  |
|    | 103 | -28441.5 | 854.8   | -2978.7 | 125.8  | -3856.8 | -474.6  |
| 7  | 23  | 28230.8  | -1233.8 | 2237.5  | -166.6 | -713.3  | -1410.0 |
|    | 103 | -27488.3 | 1233.8  | -2237.5 | 166.6  | -2994.8 | -666.6  |
| 8  | 23  | 28972.0  | -825.2  | 2624.1  | -113.0 | -894.7  | -938.6  |
|    | 103 | -28229.5 | 825.2   | -2624.1 | 113.0  | -3451.8 | -452.8  |
| 9  | 23  | 28099.4  | -1268.6 | 1964.8  | -145.3 | -576.7  | -1463.0 |
|    | 103 | -27356.9 | 1268.6  | -1964.8 | 145.3  | -2678.1 | -669.7  |
| 10 | 23  | 36961.7  | 422.4   | 413.5   | 18.3   | 350.4   | 569.9   |
|    | 103 | -36219.2 | -422.4  | -413.5  | -18.3  | -1032.7 | 127.1   |
| 11 | 23  | 33176.7  | 437.7   | 465.8   | 29.8   | 287.6   | 587.9   |
|    | 103 | -32434.2 | -437.7  | -465.8  | -29.8  | -1060.5 | 134.1   |
| 12 | 23  | 33110.8  | 490.3   | 401.6   | 42.8   | 324.4   | 655.0   |
|    | 103 | -32368.3 | -490.3  | -401.6  | -42.8  | -992.0  | 154.6   |
| 13 | 23  | 33274.4  | 140.5   | 327.2   | 2.2    | 334.4   | 191.5   |
|    | 103 | -32531.9 | -140.5  | -327.2  | -2.2   | -869.9  | 40.7    |
| 14 | 23  | 33340.3  | 87.9    | 391.4   | -10.8  | 297.6   | 124.4   |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    | 103 | -32597.8 | -87.9   | -391.4  | 10.8   | -938.4  | 20.2   |
| 15 | 23  | 33396.3  | 262.3   | 679.8   | -13.6  | 164.7   | 364.2  |
|    | 103 | -32653.8 | -262.3  | -679.8  | 13.6   | -1288.9 | 65.8   |
| 16 | 23  | 33330.4  | 315.0   | 615.6   | -0.6   | 201.6   | 431.3  |
|    | 103 | -32587.9 | -315.0  | -615.6  | 0.6    | -1220.4 | 86.3   |
| 17 | 23  | 33054.7  | 315.9   | 113.2   | 45.6   | 457.3   | 415.1  |
|    | 103 | -32312.2 | -315.9  | -113.2  | -45.6  | -641.6  | 108.9  |
| 18 | 23  | 33120.6  | 263.3   | 177.4   | 32.6   | 420.4   | 348.0  |
|    | 103 | -32378.1 | -263.3  | -177.4  | -32.6  | -710.1  | 88.4   |
|    |     |          |         |         |        |         |        |
| 1  | 25  | 32094.5  | -529.5  | 1460.9  | 1.2    | -334.2  | -774.4 |
|    | 103 | -33220.6 | 529.5   | -1460.9 | -1.2   | -2478.0 | -245.0 |
| 2  | 25  | 19877.3  | -637.6  | 3811.8  | -49.8  | -719.8  | -798.8 |
|    | 103 | -20743.6 | 637.6   | -3811.8 | 49.8   | -6755.7 | -428.3 |
| 3  | 25  | 19226.2  | -207.8  | 3416.8  | -97.0  | -661.4  | -311.7 |
|    | 103 | -20092.4 | 207.8   | -3416.8 | 97.0   | -6033.0 | -86.4  |
| 4  | 25  | 19801.3  | -343.2  | 3791.2  | -7.2   | -703.0  | -477.5 |
|    | 103 | -20667.6 | 343.2   | -3791.2 | 7.2    | -6703.9 | -181.5 |
| 5  | 25  | 19151.9  | 182.1   | 3459.3  | -46.8  | -651.2  | 113.8  |
|    | 103 | -20018.1 | -182.1  | -3459.3 | 46.8   | -6086.4 | 240.8  |
| 6  | 25  | 17712.5  | 1113.2  | 2705.6  | -181.9 | -547.1  | 1172.1 |
|    | 103 | -18578.7 | -1113.2 | -2705.6 | 181.9  | -4697.5 | 979.6  |
| 7  | 25  | 17061.3  | 1543.0  | 2310.6  | -229.2 | -488.7  | 1659.1 |
|    | 103 | -17927.6 | -1543.0 | -2310.6 | 229.2  | -3974.7 | 1321.5 |
| 8  | 25  | 17630.8  | 1089.5  | 2474.5  | -164.7 | -508.3  | 1146.0 |
|    | 103 | -18497.1 | -1089.5 | -2474.5 | 164.7  | -4294.7 | 958.2  |
| 9  | 25  | 16981.4  | 1614.8  | 2142.7  | -204.4 | -456.5  | 1737.2 |
|    | 103 | -17847.6 | -1614.8 | -2142.7 | 204.4  | -3677.2 | 1380.6 |
| 10 | 25  | 24019.5  | -382.1  | 1071.2  | 1.4    | -231.2  | -555.7 |
|    | 103 | -24885.7 | 382.1   | -1071.2 | -1.4   | -1830.9 | -179.8 |
| 11 | 25  | 21036.7  | -511.9  | 849.3   | -33.1  | -132.3  | -639.5 |
|    | 103 | -21902.9 | 511.9   | -849.3  | 33.1   | -1533.6 | 2.5    |
| 12 | 25  | 21035.0  | -592.3  | 799.1   | -40.6  | -129.1  | -726.7 |
|    | 103 | -21901.2 | 592.3   | -799.1  | 40.6   | -1450.3 | 83.7   |
| 13 | 25  | 20918.2  | -22.4   | 815.2   | 40.5   | -94.6   | -107.8 |
|    | 103 | -21784.5 | 22.4    | -815.2  | -40.5  | -1443.7 | -283.8 |
| 14 | 25  | 20919.9  | 58.0    | 865.4   | 48.0   | -97.7   | -20.7  |
|    | 103 | -21786.2 | -58.0   | -865.4  | -48.0  | -1527.0 | -364.9 |
| 15 | 25  | 21042.3  | -243.8  | 1016.6  | -8.1   | -142.7  | -349.0 |
|    | 103 | -21908.6 | 243.8   | -1016.6 | 8.1    | -1811.1 | -267.9 |
| 16 | 25  | 21040.6  | -324.2  | 966.4   | -15.6  | -139.6  | -436.2 |
|    | 103 | -21906.9 | 324.2   | -966.4  | 15.6   | -1727.9 | -186.7 |
| 17 | 25  | 20912.6  | -290.6  | 647.9   | 15.6   | -84.1   | -398.4 |
|    | 103 | -21778.9 | 290.6   | -647.9  | -15.6  | -1166.2 | -13.4  |
| 18 | 25  | 20914.3  | -210.1  | 698.1   | 23.1   | -87.3   | -311.2 |
|    | 103 | -21780.6 | 210.1   | -698.1  | -23.1  | -1249.4 | -94.5  |
|    |     |          |         |         |        |         |        |
| 1  | 203 | 26083.1  | -479.4  | 1466.4  | 11.0   | -3128.5 | -157.1 |
|    | 25  | -27209.2 | 479.4   | -1466.4 | -11.0  | 305.8   | -765.7 |
| 2  | 203 | 16311.4  | 91.8    | 3805.4  | -57.2  | -7873.2 | 207.6  |
|    | 25  | -17177.7 | -91.8   | -3805.4 | 57.2   | 668.5   | -763.5 |
| 3  | 203 | 16269.4  | 465.4   | 3413.7  | -97.3  | -7060.3 | 509.0  |
|    | 25  | -17135.6 | -465.4  | -3413.7 | 97.3   | 592.9   | -347.9 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 4  | 203 | 16255.6  | -109.1  | 3785.0  | -21.0  | -7853.6 | 77.8    |
|    | 25  | -17121.8 | 109.1   | -3785.0 | 21.0   | 660.7   | -487.2  |
| 5  | 203 | 16179.3  | 161.9   | 3456.5  | -56.5  | -7176.2 | 317.5   |
|    | 25  | -17045.5 | -161.9  | -3456.5 | 56.5   | 590.9   | 18.7    |
| 6  | 203 | 16057.2  | 995.0   | 2710.3  | -175.5 | -5615.1 | 1006.6  |
|    | 25  | -16923.4 | -995.0  | -2710.3 | 175.5  | 435.8   | 922.8   |
| 7  | 203 | 16015.1  | 1368.6  | 2318.6  | -215.6 | -4802.2 | 1308.0  |
|    | 25  | -16881.4 | -1368.6 | -2318.6 | 215.6  | 360.2   | 1338.4  |
| 8  | 203 | 16115.4  | 1136.1  | 2479.2  | -154.7 | -5143.9 | 1082.5  |
|    | 25  | -16981.7 | -1136.1 | -2479.2 | 154.7  | 408.6   | 898.0   |
| 9  | 203 | 16039.2  | 1407.1  | 2150.7  | -190.2 | -4466.5 | 1322.2  |
|    | 25  | -16905.4 | -1407.1 | -2150.7 | 190.2  | 338.8   | 1403.9  |
| 10 | 203 | 19585.0  | -349.3  | 1074.8  | 7.8    | -2279.4 | -117.3  |
|    | 25  | -20451.2 | 349.3   | -1074.8 | -7.8   | 210.4   | -555.1  |
| 11 | 203 | 17448.9  | -98.3   | 849.7   | -26.3  | -1716.4 | -0.5    |
|    | 25  | -18315.1 | 98.3    | -849.7  | 26.3   | 109.7   | -629.7  |
| 12 | 203 | 17476.4  | -15.4   | 799.5   | -31.1  | -1608.6 | 48.2    |
|    | 25  | -18342.7 | 15.4    | -799.5  | 31.1   | 107.0   | -705.4  |
| 13 | 203 | 17362.7  | -423.4  | 815.9   | 35.8   | -1685.1 | -202.2  |
|    | 25  | -18228.9 | 423.4   | -815.9  | -35.8  | 85.5    | -171.7  |
| 14 | 203 | 17335.1  | -506.3  | 866.1   | 40.6   | -1792.9 | -250.9  |
|    | 25  | -18201.4 | 506.3   | -866.1  | -40.6  | 88.2    | -96.0   |
| 15 | 203 | 17357.1  | -374.6  | 1017.1  | -10.3  | -2075.7 | -163.0  |
|    | 25  | -18223.4 | 374.6   | -1017.1 | 10.3   | 118.7   | -377.3  |
| 16 | 203 | 17384.7  | -291.7  | 966.9   | -15.1  | -1967.9 | -114.3  |
|    | 25  | -18250.9 | 291.7   | -966.9  | 15.1   | 116.0   | -453.0  |
| 17 | 203 | 17454.4  | -147.0  | 648.6   | 19.8   | -1325.9 | -39.7   |
|    | 25  | -18320.7 | 147.0   | -648.6  | -19.8  | 76.4    | -424.1  |
| 18 | 203 | 17426.9  | -229.9  | 698.8   | 24.6   | -1433.7 | -88.4   |
|    | 25  | -18293.2 | 229.9   | -698.8  | -24.6  | 79.1    | -348.4  |
|    |     |          |         |         |        |         |         |
| 1  | 303 | 9971.8   | -520.9  | -2053.6 | -9.1   | 5497.0  | -1096.0 |
|    | 203 | -11726.8 | 520.9   | 2053.6  | 9.1    | 663.9   | -466.9  |
| 2  | 303 | 5683.5   | -468.5  | 297.4   | -15.7  | 606.9   | -983.0  |
|    | 203 | -7033.5  | 468.5   | -297.4  | 15.7   | -1540.1 | -426.4  |
| 3  | 303 | 5799.2   | -360.1  | -151.5  | -17.9  | 1382.9  | -761.9  |
|    | 203 | -7149.2  | 360.1   | 151.5   | 17.9   | -928.2  | -311.1  |
| 4  | 303 | 5675.2   | -307.6  | 159.2   | 56.1   | 774.2   | -714.5  |
|    | 203 | -7025.2  | 307.6   | -159.2  | -56.1  | -1281.1 | -209.0  |
| 5  | 303 | 5765.8   | -168.8  | -134.4  | 87.9   | 1279.7  | -432.5  |
|    | 203 | -7115.8  | 168.8   | 134.4   | -87.9  | -570.7  | -62.1   |
| 6  | 303 | 5985.6   | -5.8    | -681.4  | 90.4   | 2291.8  | -42.7   |
|    | 203 | -7335.6  | 5.8     | 681.4   | -90.4  | 828.1   | 63.2    |
| 7  | 303 | 6101.4   | 102.5   | -1130.3 | 88.2   | 3067.7  | 178.3   |
|    | 203 | -7451.4  | -102.5  | 1130.3  | -88.2  | 1439.9  | 178.4   |
| 8  | 303 | 6061.0   | 53.7    | -1337.2 | 48.7   | 3360.8  | 22.4    |
|    | 203 | -7411.0  | -53.7   | 1337.2  | -48.7  | 758.4   | 175.2   |
| 9  | 303 | 6151.7   | 192.5   | -1630.8 | 80.6   | 3866.3  | 304.4   |
|    | 203 | -7501.7  | -192.5  | 1630.8  | -80.6  | 1468.9  | 322.0   |
| 10 | 303 | 7506.1   | -398.2  | -1547.4 | -6.2   | 4110.6  | -835.7  |
|    | 203 | -8856.1  | 398.2   | 1547.4  | 6.2    | 531.4   | -358.8  |
| 11 | 303 | 6762.3   | -527.5  | -1278.1 | -67.6  | 3428.7  | -1034.5 |
|    | 203 | -8112.3  | 527.5   | 1278.1  | 67.6   | 395.0   | -550.7  |

|    |     |          |        |         |        |         |         |
|----|-----|----------|--------|---------|--------|---------|---------|
| 12 | 303 | 6782.6   | -555.0 | -1417.3 | -98.3  | 3671.2  | -1088.6 |
|    | 203 | -8132.6  | 555.0  | 1417.3  | 98.3   | 305.8   | -384.1  |
| 13 | 303 | 6752.1   | -245.8 | -1522.1 | 62.2   | 3720.0  | -570.3  |
|    | 203 | -8102.1  | 245.8  | 1522.1  | -62.2  | 857.0   | -164.5  |
| 14 | 303 | 6731.8   | -218.3 | -1382.9 | 92.9   | 3477.4  | -516.1  |
|    | 203 | -8081.8  | 218.3  | 1382.9  | -92.9  | 946.2   | -331.0  |
| 15 | 303 | 6694.6   | -435.6 | -814.1  | 34.6   | 2620.2  | -854.0  |
|    | 203 | -8044.6  | 435.6  | 814.1   | -34.6  | 692.2   | -1105.7 |
| 16 | 303 | 6714.9   | -463.2 | -953.3  | 4.0    | 2862.7  | -908.2  |
|    | 203 | -8064.9  | 463.2  | 953.3   | -4.0   | 603.0   | -939.2  |
| 17 | 303 | 6819.8   | -337.7 | -1986.1 | -40.0  | 4528.4  | -750.8  |
|    | 203 | -8169.8  | 337.7  | 1986.1  | 40.0   | 559.7   | 390.6   |
| 18 | 303 | 6799.5   | -310.1 | -1846.9 | -9.3   | 4285.9  | -696.6  |
|    | 203 | -8149.5  | 310.1  | 1846.9  | 9.3    | 648.9   | 224.1   |
|    |     |          |        |         |        |         |         |
| 1  | 4   | 47527.6  | 538.9  | -136.1  | 7.2    | 566.3   | 330.9   |
|    | 104 | -45597.1 | -538.9 | 136.1   | -7.2   | -117.2  | 1447.4  |
| 2  | 4   | 25702.7  | 74.2   | 4261.8  | -36.3  | -8410.8 | -365.3  |
|    | 104 | -24217.7 | -74.2  | -4261.8 | 36.3   | -5664.4 | 607.3   |
| 3  | 4   | 26051.5  | -155.5 | 3617.5  | -70.5  | -7112.9 | -905.7  |
|    | 104 | -24566.5 | 155.5  | -3617.5 | 70.5   | -4834.5 | 388.9   |
| 4  | 4   | 25771.1  | 161.5  | 4182.4  | -2.2   | -8262.5 | -153.5  |
|    | 104 | -24286.1 | -161.5 | -4182.4 | 2.2    | -5549.0 | 681.0   |
| 5  | 4   | 25943.8  | -46.1  | 3615.6  | -30.5  | -7125.2 | -632.9  |
|    | 104 | -24458.8 | 46.1   | -3615.6 | 30.5   | -4814.4 | 473.0   |
| 6  | 4   | 26278.2  | -617.8 | 2372.7  | -130.8 | -4619.9 | -1963.3 |
|    | 104 | -24793.2 | 617.8  | -2372.7 | 130.8  | -3215.5 | -86.2   |
| 7  | 4   | 26627.0  | -847.6 | 1728.4  | -165.0 | -3322.0 | -2503.7 |
|    | 104 | -25142.0 | 847.6  | -1728.4 | 165.0  | -2385.5 | -304.6  |
| 8  | 4   | 26933.6  | -604.3 | 2034.6  | -116.3 | -3936.1 | -1954.7 |
|    | 104 | -25448.6 | 604.3  | -2034.6 | 116.3  | -2782.5 | -47.2   |
| 9  | 4   | 27106.2  | -811.9 | 1467.9  | -144.6 | -2798.9 | -2434.1 |
|    | 104 | -25621.2 | 811.9  | -1467.9 | 144.6  | -2047.8 | -255.3  |
| 10 | 4   | 35734.4  | 389.1  | -101.7  | 5.4    | 429.2   | 226.2   |
|    | 104 | -34249.4 | -389.1 | 101.7   | -5.4   | -93.5   | 1057.8  |
| 11 | 4   | 31920.8  | 203.0  | -20.0   | -24.7  | 274.0   | -75.1   |
|    | 104 | -30435.8 | -203.0 | 20.0    | 24.7   | -209.4  | 747.1   |
| 12 | 4   | 32063.0  | 185.8  | -80.5   | -30.6  | 400.0   | -124.0  |
|    | 104 | -30578.0 | -185.8 | 80.5    | 30.6   | -135.9  | 740.7   |
| 13 | 4   | 32038.2  | 343.7  | -156.6  | 34.6   | 526.2   | 269.5   |
|    | 104 | -30553.2 | -343.7 | 156.6   | -34.6  | -7.8    | 862.9   |
| 14 | 4   | 31895.9  | 361.0  | -96.1   | 40.4   | 400.2   | 318.4   |
|    | 104 | -30410.9 | -361.0 | 96.1    | -40.4  | -81.3   | 869.3   |
| 15 | 4   | 31446.6  | 260.4  | 181.6   | -5.1   | -145.9  | 88.0    |
|    | 104 | -29961.6 | -260.4 | -181.6  | 5.1    | -454.4  | 768.6   |
| 16 | 4   | 31588.9  | 243.2  | 121.1   | -11.0  | -19.9   | 39.1    |
|    | 104 | -30103.9 | -243.2 | -121.1  | 11.0   | -380.9  | 762.2   |
| 17 | 4   | 32512.3  | 286.4  | -358.3  | 14.9   | 946.1   | 106.4   |
|    | 104 | -31027.3 | -286.4 | 358.3   | -14.9  | 237.2   | 841.4   |
| 18 | 4   | 32370.1  | 303.6  | -297.8  | 20.8   | 820.1   | 155.3   |
|    | 104 | -30885.1 | -303.6 | 297.8   | -20.8  | 163.7   | 847.8   |
|    |     |          |        |         |        |         |         |
| 1  | 204 | 27813.0  | -742.6 | 168.2   | 6.1    | -226.9  | -1183.3 |

|    |     |          |        |         |        |         |         |
|----|-----|----------|--------|---------|--------|---------|---------|
|    | 104 | -30065.2 | 742.6  | -168.2  | -6.1   | -420.7  | -1675.5 |
| 2  | 204 | 15748.9  | -296.1 | 3371.7  | -54.3  | -6641.1 | -404.1  |
|    | 104 | -17481.4 | 296.1  | -3371.7 | 54.3   | -6353.4 | -733.4  |
| 3  | 204 | 15851.7  | -134.9 | 2943.3  | -96.9  | -5806.1 | -76.1   |
|    | 104 | -17584.2 | 134.9  | -2943.3 | 96.9   | -5537.3 | -440.4  |
| 4  | 204 | 15849.8  | -359.2 | 3352.3  | -17.5  | -6616.1 | -529.9  |
|    | 104 | -17582.3 | 359.2  | -3352.3 | 17.5   | -6300.6 | -846.5  |
| 5  | 204 | 15891.9  | -221.2 | 2993.2  | -55.1  | -5923.0 | -243.1  |
|    | 104 | -17624.4 | 221.2  | -2993.2 | 55.1   | -5608.3 | -599.1  |
| 6  | 204 | 15889.4  | 163.8  | 2174.7  | -179.7 | -4330.8 | 551.9   |
|    | 104 | -17621.9 | -163.8 | -2174.7 | 179.7  | -4045.9 | 91.1    |
| 7  | 204 | 15992.2  | 325.0  | 1746.3  | -222.4 | -3495.8 | 879.9   |
|    | 104 | -17724.7 | -325.0 | -1746.3 | 222.4  | -3229.8 | 384.2   |
| 8  | 204 | 16192.3  | 178.2  | 1924.3  | -159.7 | -3832.8 | 563.4   |
|    | 104 | -17924.8 | -178.2 | -1924.3 | 159.7  | -3580.2 | 130.5   |
| 9  | 204 | 16234.5  | 316.2  | 1565.2  | -197.3 | -3139.7 | 850.2   |
|    | 104 | -17967.0 | -316.2 | -1565.2 | 197.3  | -2888.0 | 377.8   |
| 10 | 204 | 20857.1  | -547.1 | 131.3   | 4.6    | -180.2  | -871.5  |
|    | 104 | -22589.6 | 547.1  | -131.3  | -4.6   | -325.4  | -1234.9 |
| 11 | 204 | 18315.9  | -385.8 | 156.2   | -27.6  | -226.1  | -592.4  |
|    | 104 | -20048.4 | 385.8  | -156.2  | 27.6   | -378.6  | -897.0  |
| 12 | 204 | 18362.5  | -366.8 | 101.0   | -32.8  | -113.2  | -558.7  |
|    | 104 | -20095.0 | 366.8  | -101.0  | 32.8   | -280.2  | -860.3  |
| 13 | 204 | 18507.2  | -489.1 | 124.3   | 36.0   | -185.9  | -797.8  |
|    | 104 | -20239.7 | 489.1  | -124.3  | -36.0  | -289.1  | -1081.0 |
| 14 | 204 | 18460.6  | -508.1 | 179.4   | 41.3   | -298.8  | -831.5  |
|    | 104 | -20193.1 | 508.1  | -179.4  | -41.3  | -387.4  | -1117.7 |
| 15 | 204 | 18160.4  | -449.2 | 340.0   | -10.2  | -602.4  | -704.8  |
|    | 104 | -19892.9 | 449.2  | -340.0  | 10.2   | -706.5  | -1019.4 |
| 16 | 204 | 18207.1  | -430.1 | 284.9   | -15.4  | -489.5  | -671.1  |
|    | 104 | -19939.6 | 430.1  | -284.9  | 15.4   | -608.2  | -982.7  |
| 17 | 204 | 18662.7  | -425.7 | -59.6   | 18.6   | 190.4   | -685.4  |
|    | 104 | -20395.2 | 425.7  | 59.6    | -18.6  | 38.8    | -958.7  |
| 18 | 204 | 18616.1  | -444.7 | -4.4    | 23.8   | 77.5    | -719.1  |
|    | 104 | -20348.6 | 444.7  | 4.4     | -23.8  | -59.5   | -995.4  |
|    |     |          |        |         |        |         |         |
| 1  | 304 | 13947.4  | -513.2 | 1226.2  | -9.1   | -2904.6 | -717.9  |
|    | 204 | -15702.4 | 513.2  | -1226.2 | 9.1    | -774.0  | -821.9  |
| 2  | 304 | 9745.6   | -216.6 | 3139.2  | -15.7  | -6094.4 | -266.5  |
|    | 204 | -11095.6 | 216.6  | -3139.2 | 15.7   | -3360.8 | -375.2  |
| 3  | 304 | 9575.9   | -101.8 | 2561.4  | -17.9  | -5039.6 | -22.7   |
|    | 204 | -10925.9 | 101.8  | -2561.4 | 17.9   | -2648.2 | -268.4  |
| 4  | 304 | 9658.1   | -242.2 | 2931.7  | 56.1   | -5797.9 | -343.9  |
|    | 204 | -11008.1 | 242.2  | -2931.7 | -56.1  | -3026.9 | -378.2  |
| 5  | 304 | 9415.6   | -145.9 | 2560.4  | 87.9   | -5118.5 | -143.1  |
|    | 204 | -10765.6 | 145.9  | -2560.4 | -87.9  | -2170.4 | -283.3  |
| 6  | 304 | 8937.2   | 104.3  | 1901.4  | 90.4   | -3829.8 | 402.8   |
|    | 204 | -10287.2 | -104.3 | -1901.4 | -90.4  | -505.7  | -58.9   |
| 7  | 304 | 8767.5   | 219.1  | 1323.6  | 88.2   | -2775.0 | 646.6   |
|    | 204 | -10117.5 | -219.1 | -1323.6 | -88.2  | 206.9   | 47.9    |
| 8  | 304 | 9092.6   | 140.5  | 1005.7  | 48.7   | -2282.0 | 469.0   |
|    | 204 | -10442.6 | -140.5 | -1005.7 | -48.7  | -651.8  | -22.1   |
| 9  | 304 | 8850.0   | 236.8  | 634.4   | 80.6   | -1602.7 | 669.8   |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 204 | -10200.0 | -236.8  | -634.4  | -80.6  | 204.7   | 72.8    |
| 10 | 304 | 10467.5  | -384.5  | 940.5   | -6.2   | -2197.1 | -542.1  |
|    | 204 | -11817.5 | 384.5   | -940.5  | 6.2    | -624.5  | -611.5  |
| 11 | 304 | 9359.9   | -319.9  | 1113.6  | -67.6  | -2290.7 | -437.3  |
|    | 204 | -10709.9 | 319.9   | -1113.6 | 67.6   | -1057.0 | -519.0  |
| 12 | 304 | 9426.4   | -306.9  | 928.7   | -98.3  | -1953.8 | -404.9  |
|    | 204 | -10776.4 | 306.9   | -928.7  | 98.3   | -1187.3 | -512.9  |
| 13 | 304 | 9197.9   | -355.5  | 743.2   | 62.2   | -1765.0 | -554.6  |
|    | 204 | -10547.9 | 355.5   | -743.2  | -62.2  | -457.6  | -515.3  |
| 14 | 304 | 9131.4   | -368.5  | 928.1   | 92.9   | -2102.0 | -587.0  |
|    | 204 | -10481.4 | 368.5   | -928.1  | -92.9  | -327.3  | -521.4  |
| 15 | 304 | 9138.4   | -363.2  | 1730.0  | 34.6   | -3413.8 | -545.2  |
|    | 204 | -10488.4 | 363.2   | -1730.0 | -34.6  | -622.5  | -539.5  |
| 16 | 304 | 9204.8   | -350.2  | 1545.1  | 4.0    | -3076.9 | -512.8  |
|    | 204 | -10554.8 | 350.2   | -1545.1 | -4.0   | -752.8  | -533.3  |
| 17 | 304 | 9419.5   | -312.2  | 126.8   | -40.0  | -641.9  | -446.7  |
|    | 204 | -10769.5 | 312.2   | -126.8  | 40.0   | -892.2  | -494.8  |
| 18 | 304 | 9353.0   | -325.2  | 311.7   | -9.3   | -978.9  | -479.1  |
|    | 204 | -10703.0 | 325.2   | -311.7  | 9.3    | -761.8  | -500.9  |
|    |     |          |         |         |        |         |         |
| 1  | 5   | 25990.8  | 110.9   | -30.0   | 7.2    | 453.5   | -126.5  |
|    | 105 | -24060.3 | -110.9  | 30.0    | -7.2   | -354.7  | 492.6   |
| 2  | 5   | 29247.6  | -242.0  | 3063.7  | -36.3  | -6573.3 | -733.1  |
|    | 105 | -27762.6 | 242.0   | -3063.7 | 36.3   | -3573.8 | -66.6   |
| 3  | 5   | 26220.3  | -590.4  | 2621.9  | -70.5  | -5592.1 | -1428.8 |
|    | 105 | -24735.3 | 590.4   | -2621.9 | 70.5   | -3091.5 | -520.4  |
| 4  | 5   | 28880.9  | -98.1   | 2993.5  | -2.2   | -6439.6 | -445.9  |
|    | 105 | -27395.9 | 98.1    | -2993.5 | 2.2    | -3471.5 | 120.1   |
| 5  | 5   | 25966.3  | -419.2  | 2607.6  | -30.5  | -5588.5 | -1082.7 |
|    | 105 | -24481.3 | 419.2   | -2607.6 | 30.5   | -3043.6 | -303.2  |
| 6  | 5   | 19532.5  | -1312.5 | 1777.6  | -130.8 | -3736.3 | -2855.9 |
|    | 105 | -18047.5 | 1312.5  | -1777.6 | 130.8  | -2147.4 | -1477.8 |
| 7  | 5   | 16505.1  | -1660.9 | 1335.8  | -165.0 | -2755.1 | -3551.6 |
|    | 105 | -15020.1 | 1660.9  | -1335.8 | 165.0  | -1665.2 | -1931.6 |
| 8  | 5   | 18789.7  | -1259.4 | 1520.8  | -116.3 | -3169.0 | -2765.2 |
|    | 105 | -17304.7 | 1259.4  | -1520.8 | 116.3  | -1864.0 | -1392.5 |
| 9  | 5   | 15875.1  | -1580.6 | 1135.0  | -144.6 | -2317.9 | -3402.0 |
|    | 105 | -14390.1 | 1580.6  | -1135.0 | 144.6  | -1436.1 | -1815.9 |
| 10 | 5   | 19682.4  | 83.9    | -29.6   | 5.4    | 357.2   | -97.7   |
|    | 105 | -18197.4 | -83.9   | 29.6    | -5.4   | -259.4  | 374.4   |
| 11 | 5   | 18575.1  | -41.0   | 1.8     | -24.7  | 280.3   | -336.1  |
|    | 105 | -17090.1 | 41.0    | -1.8    | 24.7   | -290.6  | 201.6   |
| 12 | 5   | 18503.5  | -63.4   | -41.2   | -30.6  | 381.6   | -385.0  |
|    | 105 | -17018.5 | 63.4    | 41.2    | 30.6   | -250.2  | 177.2   |
| 13 | 5   | 17964.1  | 195.3   | -121.2  | 34.6   | 510.4   | 136.8   |
|    | 105 | -16479.1 | -195.3  | 121.2   | -34.6  | -106.2  | 506.6   |
| 14 | 5   | 18035.7  | 217.6   | -78.2   | 40.4   | 409.1   | 185.7   |
|    | 105 | -16550.7 | -217.6  | 78.2    | -40.4  | -146.5  | 531.0   |
| 15 | 5   | 18813.7  | 33.5    | 145.3   | -5.1   | -57.4   | -173.3  |
|    | 105 | -17328.7 | -33.5   | -145.3  | 5.1    | -424.9  | 283.0   |
| 16 | 5   | 18742.1  | 11.1    | 102.2   | -11.0  | 43.9    | -222.1  |
|    | 105 | -17257.1 | -11.1   | -102.2  | 11.0   | -384.6  | 258.6   |
| 17 | 5   | 17725.5  | 120.8   | -264.6  | 14.9   | 848.1   | -26.0   |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    | 105 | -16240.5 | -120.8  | 264.6   | -14.9  | 28.1    | 425.3  |
| 18 | 5   | 17797.1  | 143.1   | -221.6  | 20.8   | 746.8   | 22.9   |
|    | 105 | -16312.1 | -143.1  | 221.6   | -20.8  | -12.2   | 449.7  |
|    |     |          |         |         |        |         |        |
| 1  | 205 | 14266.6  | -350.3  | 627.9   | 6.1    | -1318.1 | -593.0 |
|    | 105 | -16518.8 | 350.3   | -627.9  | -6.1   | -1099.2 | -755.8 |
| 2  | 205 | 15213.3  | 14.2    | 2610.6  | -54.3  | -5406.0 | 105.2  |
|    | 105 | -16945.8 | -14.2   | -2610.6 | 54.3   | -4678.2 | -49.1  |
| 3  | 205 | 13568.6  | 323.9   | 2337.5  | -96.9  | -4854.6 | 713.9  |
|    | 105 | -15301.1 | -323.9  | -2337.5 | 96.9   | -4173.0 | 533.7  |
| 4  | 205 | 14892.4  | -109.2  | 2603.9  | -17.5  | -5405.5 | -133.4 |
|    | 105 | -16624.9 | 109.2   | -2603.9 | 17.5   | -4645.7 | -283.6 |
| 5  | 205 | 13282.6  | 162.2   | 2382.4  | -55.1  | -4964.7 | 405.0  |
|    | 105 | -15015.1 | -162.2  | -2382.4 | 55.1   | -4226.6 | 223.9  |
| 6  | 205 | 9847.3   | 919.1   | 1872.4  | -179.7 | -3936.7 | 1899.8 |
|    | 105 | -11579.8 | -919.1  | -1872.4 | 179.7  | -3281.4 | 1642.6 |
| 7  | 205 | 8202.6   | 1228.7  | 1599.2  | -222.4 | -3385.3 | 2508.6 |
|    | 105 | -9935.1  | -1228.7 | -1599.2 | 222.4  | -2776.2 | 2225.5 |
| 8  | 205 | 9409.8   | 922.9   | 1693.4  | -159.7 | -3567.6 | 1895.7 |
|    | 105 | -11142.3 | -922.9  | -1693.4 | 159.7  | -2961.7 | 1659.3 |
| 9  | 205 | 7800.0   | 1194.4  | 1471.9  | -197.3 | -3126.8 | 2434.1 |
|    | 105 | -9532.5  | -1194.4 | -1471.9 | 197.3  | -2542.7 | 2166.8 |
| 10 | 205 | 10756.1  | -267.6  | 459.7   | 4.6    | -959.4  | -453.0 |
|    | 105 | -12488.6 | 267.6   | -459.7  | -4.6   | -810.3  | -577.1 |
| 11 | 205 | 10041.3  | -156.6  | 359.1   | -27.6  | -711.5  | -241.9 |
|    | 105 | -11773.8 | 156.6   | -359.1  | 27.6   | -678.9  | -363.4 |
| 12 | 205 | 10023.9  | -124.7  | 318.1   | -32.8  | -623.9  | -183.2 |
|    | 105 | -11756.4 | 124.7   | -318.1  | 32.8   | -610.9  | -300.8 |
| 13 | 205 | 9485.1   | -360.9  | 347.9   | 36.0   | -710.9  | -635.6 |
|    | 105 | -11217.6 | 360.9   | -347.9  | -36.0  | -620.6  | -751.5 |
| 14 | 205 | 9502.6   | -392.8  | 388.9   | 41.3   | -798.4  | -694.3 |
|    | 105 | -11235.1 | 392.8   | -388.9  | -41.3  | -688.5  | -814.2 |
| 15 | 205 | 10099.3  | -262.9  | 495.8   | -10.2  | -1003.3 | -437.6 |
|    | 105 | -11831.8 | 262.9   | -495.8  | 10.2   | -905.4  | -572.3 |
| 16 | 205 | 10081.9  | -231.0  | 454.8   | -15.4  | -915.8  | -378.9 |
|    | 105 | -11814.4 | 231.0   | -454.8  | 15.4   | -837.4  | -509.7 |
| 17 | 205 | 9427.1   | -254.6  | 211.1   | 18.6   | -419.0  | -439.9 |
|    | 105 | -11159.6 | 254.6   | -211.1  | -18.6  | -394.1  | -542.6 |
| 18 | 205 | 9444.5   | -286.5  | 252.2   | 23.8   | -506.6  | -498.6 |
|    | 105 | -11177.0 | 286.5   | -252.2  | -23.8  | -462.1  | -605.3 |
|    |     |          |         |         |        |         |        |
| 1  | 305 | 4743.5   | -401.9  | 541.5   | -9.1   | -830.5  | -629.5 |
|    | 205 | -6498.5  | 401.9   | -541.5  | 9.1    | -794.2  | -576.2 |
| 2  | 305 | 4835.5   | -59.3   | 1298.3  | -15.7  | -2545.1 | -65.9  |
|    | 205 | -6185.5  | 59.3    | -1298.3 | 15.7   | 533.8   | -110.2 |
| 3  | 305 | 4308.9   | 144.6   | 1035.0  | -17.9  | -2035.1 | 305.3  |
|    | 205 | -5658.9  | -144.6  | -1035.0 | 17.9   | 597.7   | 130.8  |
| 4  | 305 | 4657.8   | -70.8   | 1127.7  | 56.1   | -2331.8 | -120.1 |
|    | 205 | -6007.8  | 70.8    | -1127.7 | -56.1  | 271.6   | -90.9  |
| 5  | 305 | 4109.9   | 144.9   | 790.5   | 87.9   | -2018.1 | 254.2  |
|    | 205 | -5459.9  | -144.9  | -790.5  | -87.9  | 215.8   | 183.1  |
| 6  | 305 | 3009.3   | 659.7   | 174.3   | 90.4   | -1499.4 | 1181.6 |
|    | 205 | -4359.3  | -659.7  | -174.3  | -90.4  | 347.7   | 803.2  |

|    |     |          |         |        |       |         |        |
|----|-----|----------|---------|--------|-------|---------|--------|
| 7  | 305 | 2482.7   | 863.5   | -89.0  | 88.2  | -989.4  | 1552.8 |
|    | 205 | -3832.7  | -863.5  | 89.0   | -88.2 | 411.7   | 1044.3 |
| 8  | 305 | 2902.4   | 608.8   | 250.1  | 48.7  | -631.5  | 1117.2 |
|    | 205 | -4252.4  | -608.8  | -250.1 | -48.7 | 484.6   | 712.6  |
| 9  | 305 | 2354.6   | 824.5   | -87.1  | 80.6  | -317.8  | 1491.5 |
|    | 205 | -3704.6  | -824.5  | 87.1   | -80.6 | 428.8   | 986.6  |
| 10 | 305 | 3599.9   | -309.5  | 408.1  | -6.2  | -626.7  | -484.9 |
|    | 205 | -4949.9  | 309.5   | -408.1 | 6.2   | -597.6  | -443.5 |
| 11 | 305 | 3534.5   | -311.8  | 522.7  | -67.6 | -762.3  | -458.5 |
|    | 205 | -4884.5  | 311.8   | -522.7 | 67.6  | -298.5  | -476.5 |
| 12 | 305 | 3556.1   | -328.2  | 589.3  | -98.3 | -585.6  | -470.5 |
|    | 205 | -4906.1  | 328.2   | -589.3 | 98.3  | -188.8  | -514.3 |
| 13 | 305 | 3219.8   | -309.9  | 216.1  | 62.2  | -380.4  | -517.0 |
|    | 205 | -4569.8  | 309.9   | -216.1 | -62.2 | -775.4  | -413.3 |
| 14 | 305 | 3198.2   | -293.5  | 149.6  | 92.9  | -557.1  | -505.1 |
|    | 205 | -4548.2  | 293.5   | -149.6 | -92.9 | -885.1  | -375.5 |
| 15 | 305 | 3462.5   | -257.2  | 301.0  | 34.6  | -1351.4 | -418.8 |
|    | 205 | -4812.5  | 257.2   | -301.0 | -34.6 | -664.1  | -350.6 |
| 16 | 305 | 3484.1   | -273.6  | 367.5  | 4.0   | -1174.7 | -430.7 |
|    | 205 | -4834.1  | 273.6   | -367.5 | -4.0  | -554.4  | -388.4 |
| 17 | 305 | 3291.8   | -364.5  | 437.9  | -40.0 | 208.7   | -556.7 |
|    | 205 | -4641.8  | 364.5   | -437.9 | 40.0  | -409.7  | -539.2 |
| 18 | 305 | 3270.2   | -348.2  | 371.3  | -9.3  | 32.0    | -544.8 |
|    | 205 | -4620.2  | 348.2   | -371.3 | 9.3   | -519.4  | -501.4 |
|    |     |          |         |        |       |         |        |
| 1  | 24  | 18486.4  | 633.2   | 0.8    | -9.0  | 0.2     | 776.0  |
|    | 6   | -18969.1 | -633.2  | -0.8   | 9.0   | -1.4    | 268.9  |
| 2  | 24  | 11590.4  | 75.9    | 505.4  | -26.3 | 364.4   | 275.3  |
|    | 6   | -11961.6 | -75.9   | -505.4 | 26.3  | -1194.2 | -150.2 |
| 3  | 24  | 11285.4  | 437.3   | 373.0  | -32.0 | 304.7   | 493.1  |
|    | 6   | -11656.6 | -437.3  | -373.0 | 32.0  | -959.0  | 228.4  |
| 4  | 24  | 11642.4  | 262.4   | 515.2  | -19.8 | 361.8   | 386.7  |
|    | 6   | -12013.7 | -262.4  | -515.2 | 19.8  | -1208.7 | 45.8   |
| 5  | 24  | 11394.8  | 687.4   | 414.2  | -25.1 | 308.6   | 642.7  |
|    | 6   | -11766.0 | -687.4  | -414.2 | 25.1  | -988.3  | 491.2  |
| 6  | 24  | 10764.8  | 1492.6  | 168.9  | -44.0 | 187.2   | 1128.6 |
|    | 6   | -11136.1 | -1492.6 | -168.9 | 44.0  | -459.5  | 1334.3 |
| 7  | 24  | 10459.8  | 1854.1  | 36.5   | -49.7 | 127.5   | 1346.5 |
|    | 6   | -10831.1 | -1854.1 | -36.5  | 49.7  | -224.3  | 1712.9 |
| 8  | 24  | 10625.8  | 1467.1  | 74.0   | -38.7 | 162.9   | 1112.9 |
|    | 6   | -10997.1 | -1467.1 | -74.0  | 38.7  | -424.5  | 1307.9 |
| 9  | 24  | 10378.1  | 1892.1  | -26.9  | -44.0 | 109.8   | 1368.9 |
|    | 6   | -10749.4 | -1892.1 | 26.9   | 44.0  | -204.1  | 1753.3 |
| 10 | 24  | 13801.1  | 470.0   | 1.7    | -6.7  | -0.1    | 573.5  |
|    | 6   | -14172.4 | -470.0  | -1.7   | 6.7   | -2.8    | 202.0  |
| 11 | 24  | 11854.4  | 241.2   | -0.7   | -11.3 | 0.7     | 377.3  |
|    | 6   | -12225.6 | -241.2  | 0.7    | 11.3  | 1.3     | 20.8   |
| 12 | 24  | 11809.3  | 189.1   | -3.2   | -11.8 | -4.5    | 346.1  |
|    | 6   | -12180.5 | -189.1  | 3.2    | 11.8  | 13.3    | -33.9  |
| 13 | 24  | 11932.9  | 543.0   | 14.8   | -0.2  | -3.4    | 557.3  |
|    | 6   | -12304.1 | -543.0  | -14.8  | 0.2   | -21.8   | 338.5  |
| 14 | 24  | 11978.0  | 595.2   | 17.3   | 0.3   | 1.8     | 588.6  |
|    | 6   | -12349.2 | -595.2  | -17.3  | -0.3  | -33.9   | 393.2  |

|    |     |          |         |        |       |        |        |
|----|-----|----------|---------|--------|-------|--------|--------|
| 15 | 24  | 12004.8  | 414.9   | 7.6    | -9.6  | 18.1   | 481.4  |
|    | 6   | -12376.0 | -414.9  | -7.6   | 9.6   | -38.9  | 203.1  |
| 16 | 24  | 11959.7  | 362.8   | 5.1    | -10.1 | 12.9   | 450.2  |
|    | 6   | -12330.9 | -362.8  | -5.1   | 10.1  | -26.9  | 148.4  |
| 17 | 24  | 11782.5  | 369.3   | 6.5    | -1.8  | -20.8  | 453.2  |
|    | 6   | -12153.7 | -369.3  | -6.5   | 1.8   | 18.4   | 156.2  |
| 18 | 24  | 11827.6  | 421.4   | 9.0    | -1.3  | -15.6  | 484.5  |
|    | 6   | -12198.9 | -421.4  | -9.0   | 1.3   | 6.3    | 210.9  |
|    |     |          |         |        |       |        |        |
| 1  | 106 | 13149.4  | 554.8   | -18.8  | 13.4  | 24.1   | 118.5  |
|    | 24  | -13632.0 | -554.8  | 18.8   | -13.4 | 7.0    | 796.9  |
| 2  | 106 | 7983.1   | -93.6   | 474.0  | 24.6  | -445.6 | -282.9 |
|    | 24  | -8354.3  | 93.6    | -474.0 | -24.6 | -345.6 | 128.4  |
| 3  | 106 | 7218.8   | 474.9   | 375.5  | 9.7   | -355.1 | 198.8  |
|    | 24  | -7590.0  | -474.9  | -375.5 | -9.7  | -272.3 | 584.9  |
| 4  | 106 | 8322.2   | 215.3   | 481.8  | 23.4  | -448.4 | -26.3  |
|    | 24  | -8693.5  | -215.3  | -481.8 | -23.4 | -354.5 | 381.5  |
| 5  | 106 | 7763.5   | 887.5   | 387.8  | 4.9   | -362.3 | 541.9  |
|    | 24  | -8134.8  | -887.5  | -387.8 | -4.9  | -284.2 | 922.6  |
| 6  | 106 | 6120.6   | 2147.0  | 160.7  | -36.8 | -158.5 | 1611.0 |
|    | 24  | -6491.9  | -2147.0 | -160.7 | 36.8  | -111.5 | 1931.8 |
| 7  | 106 | 5356.4   | 2715.5  | 62.2   | -51.7 | -68.0  | 2092.7 |
|    | 24  | -5727.6  | -2715.5 | -62.2  | 51.7  | -38.2  | 2388.3 |
| 8  | 106 | 5774.6   | 2110.4  | 153.5  | -26.4 | -146.6 | 1579.3 |
|    | 24  | -6145.8  | -2110.4 | -153.5 | 26.4  | -110.0 | 1903.1 |
| 9  | 106 | 5215.9   | 2782.6  | 59.5   | -44.9 | -60.5  | 2147.5 |
|    | 24  | -5587.1  | -2782.6 | -59.5  | 44.9  | -39.8  | 2444.2 |
| 10 | 106 | 9857.7   | 422.8   | -12.9  | 10.0  | 15.8   | 99.5   |
|    | 24  | -10228.9 | -422.8  | 12.9   | -10.0 | 5.4    | 598.1  |
| 11 | 106 | 8409.9   | 153.0   | -11.6  | 10.4  | 5.1    | -71.4  |
|    | 24  | -8781.2  | -153.0  | 11.6   | -10.4 | 12.9   | 323.8  |
| 12 | 106 | 8242.6   | 67.7    | -15.2  | 13.4  | 8.5    | -142.4 |
|    | 24  | -8613.8  | -67.7   | 15.2   | -13.4 | 15.5   | 254.2  |
| 13 | 106 | 8964.8   | 656.2   | 0.5    | 7.1   | 2.0    | 345.9  |
|    | 24  | -9336.1  | -656.2  | -0.5   | -7.1  | -1.6   | 736.7  |
| 14 | 106 | 9132.1   | 741.4   | 4.1    | 4.1   | -1.4   | 417.0  |
|    | 24  | -9503.4  | -741.4  | -4.1   | -4.1  | -4.2   | 806.4  |
| 15 | 106 | 8967.7   | 437.2   | 0.3    | 0.4   | -6.2   | 165.5  |
|    | 24  | -9338.9  | -437.2  | -0.3   | -0.4  | 4.4    | 555.8  |
| 16 | 106 | 8800.3   | 351.9   | -3.3   | 3.4   | -2.8   | 94.4   |
|    | 24  | -9171.6  | -351.9  | 3.3    | -3.4  | 7.0    | 486.2  |
| 17 | 106 | 8407.0   | 372.0   | -11.4  | 17.1  | 13.2   | 109.0  |
|    | 24  | -8778.3  | -372.0  | 11.4   | -17.1 | 6.8    | 504.7  |
| 18 | 106 | 8574.4   | 457.2   | -7.9   | 14.1  | 9.9    | 180.1  |
|    | 24  | -8945.6  | -457.2  | 7.9    | -14.1 | 4.3    | 574.3  |
|    |     |          |         |        |       |        |        |
| 1  | 26  | 10509.2  | 512.6   | 17.3   | -1.2  | -14.0  | 832.9  |
|    | 106 | -11072.2 | -512.6  | -17.3  | 1.2   | -19.4  | 153.9  |
| 2  | 26  | 6706.2   | -76.0   | 214.3  | -14.6 | -75.0  | 152.6  |
|    | 106 | -7139.3  | 76.0    | -214.3 | 14.6  | -364.5 | -298.3 |
| 3  | 26  | 6828.9   | 409.5   | 170.8  | -30.0 | -48.9  | 583.9  |
|    | 106 | -7262.0  | -409.5  | -170.8 | 30.0  | -295.9 | 204.4  |
| 4  | 26  | 6655.0   | 241.5   | 220.5  | -0.9  | -77.8  | 434.0  |

|    |     |         |         |        |       |        |        |
|----|-----|---------|---------|--------|-------|--------|--------|
|    | 106 | -7088.2 | -241.5  | -220.5 | 0.9   | -368.0 | 33.1   |
| 5  | 26  | 6746.0  | 833.4   | 178.7  | -13.7 | -51.4  | 960.6  |
|    | 106 | -7179.1 | -833.4  | -178.7 | 13.7  | -304.1 | 646.1  |
| 6  | 26  | 7009.5  | 1897.1  | 75.2   | -57.2 | 13.0   | 1907.9 |
|    | 106 | -7442.6 | -1897.1 | -75.2  | 57.2  | -151.4 | 1745.1 |
| 7  | 26  | 7132.2  | 2382.6  | 31.7   | -72.6 | 39.1   | 2339.2 |
|    | 106 | -7565.3 | -2382.6 | -31.7  | 72.6  | -82.8  | 2247.8 |
| 8  | 26  | 7064.0  | 1859.8  | 75.5   | -52.3 | 9.3    | 1871.7 |
|    | 106 | -7497.1 | -1859.8 | -75.5  | 52.3  | -139.3 | 1708.8 |
| 9  | 26  | 7155.0  | 2451.7  | 33.7   | -65.1 | 35.7   | 2398.3 |
|    | 106 | -7588.1 | -2451.7 | -33.7  | 65.1  | -75.3  | 2321.8 |
| 10 | 26  | 7855.5  | 385.4   | 12.5   | -0.6  | -9.5   | 620.6  |
|    | 106 | -8288.7 | -385.4  | -12.5  | 0.6   | -14.5  | 121.3  |
| 11 | 26  | 6864.4  | 576.8   | 3.8    | -10.9 | -2.5   | 296.0  |
|    | 106 | -7297.5 | -576.8  | -3.8   | 10.9  | -10.5  | 371.0  |
| 12 | 26  | 6895.4  | 700.0   | 2.4    | -13.4 | -3.1   | 216.4  |
|    | 106 | -7328.5 | -700.0  | -2.4   | 13.4  | -6.9   | 497.8  |
| 13 | 26  | 6768.1  | 112.4   | 13.6   | 12.8  | -5.5   | 762.1  |
|    | 106 | -7201.2 | -112.4  | -13.6  | -12.8 | -15.0  | -102.4 |
| 14 | 26  | 6737.0  | -10.8   | 15.1   | 15.4  | -5.0   | 841.7  |
|    | 106 | -7170.1 | 10.8    | -15.1  | -15.4 | -18.7  | -229.1 |
| 15 | 26  | 6760.8  | 166.1   | 8.5    | -2.3  | -0.8   | 561.4  |
|    | 106 | -7193.9 | -166.1  | -8.5   | 2.3   | -22.7  | -51.6  |
| 16 | 26  | 6791.9  | 289.3   | 7.1    | -4.9  | -1.3   | 481.8  |
|    | 106 | -7225.0 | -289.3  | -7.1   | 4.9   | -19.0  | 75.2   |
| 17 | 26  | 6871.7  | 523.1   | 9.0    | 4.3   | -7.3   | 496.7  |
|    | 106 | -7304.8 | -523.1  | -9.0   | -4.3  | -2.8   | 320.2  |
| 18 | 26  | 6840.6  | 399.9   | 10.4   | 6.8   | -6.8   | 576.3  |
|    | 106 | -7273.7 | -399.9  | -10.4  | -6.8  | -6.5   | 193.4  |
| 1  | 206 | 5002.8  | 462.5   | 11.9   | 4.9   | -65.2  | 98.9   |
|    | 26  | -5565.8 | -462.5  | -11.9  | -4.9  | 42.4   | 791.4  |
| 2  | 206 | 2954.6  | -114.5  | 220.6  | -18.7 | -535.4 | -353.4 |
|    | 26  | -3387.7 | 114.5   | -220.6 | 18.7  | 126.5  | 133.1  |
| 3  | 206 | 2394.5  | 413.0   | 163.7  | -30.1 | -437.1 | 226.4  |
|    | 26  | -2827.7 | -413.0  | -163.7 | 30.1  | 119.9  | 568.5  |
| 4  | 206 | 3179.3  | 264.6   | 226.5  | -8.0  | -543.0 | 66.1   |
|    | 26  | -3612.4 | -264.6  | -226.5 | 8.0   | 120.3  | 443.5  |
| 5  | 206 | 2776.2  | 909.1   | 181.9  | -18.2 | -452.2 | 775.2  |
|    | 26  | -3209.3 | -909.1  | -181.9 | 18.2  | 115.4  | 975.1  |
| 6  | 206 | 1610.9  | 2033.9  | 72.1   | -52.7 | -232.6 | 2010.3 |
|    | 26  | -2044.0 | -2033.9 | -72.1  | 52.7  | 110.1  | 1905.0 |
| 7  | 206 | 1050.8  | 2561.3  | 15.1   | -64.1 | -134.2 | 2590.1 |
|    | 26  | -1483.9 | -2561.3 | -15.1  | 64.1  | 103.5  | 2340.5 |
| 8  | 206 | 1312.4  | 2022.7  | 36.7   | -46.0 | -215.2 | 1998.7 |
|    | 26  | -1745.5 | -2022.7 | -36.7  | 46.0  | 98.4   | 1895.1 |
| 9  | 206 | 909.3   | 2667.2  | -7.9   | -56.2 | -124.3 | 2707.8 |
|    | 26  | -1342.4 | -2667.2 | 7.9    | 56.2  | 93.5   | 2426.7 |
| 10 | 206 | 3784.7  | 352.6   | 8.9    | 3.4   | -47.5  | 87.8   |
|    | 26  | -4217.8 | -352.6  | -8.9   | -3.4  | 30.3   | 590.9  |
| 11 | 206 | 3316.7  | 22.1    | 3.5    | -7.5  | -29.3  | -208.5 |
|    | 26  | -3749.8 | -22.1   | -3.5   | 7.5   | 25.1   | 250.8  |
| 12 | 206 | 3191.0  | -77.0   | -6.9   | -8.8  | -23.1  | -317.9 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 26  | -3624.1  | 77.0    | 6.9     | 8.8    | 24.0    | 169.5   |
| 13 | 206 | 3674.0   | 654.4   | 12.8    | 10.8   | -41.8   | 491.3   |
|    | 26  | -4107.1  | -654.4  | -12.8   | -10.8  | 14.6    | 768.6   |
| 14 | 206 | 3799.7   | 753.5   | 23.2    | 12.1   | -48.0   | 600.7   |
|    | 26  | -4232.8  | -753.5  | -23.2   | -12.1  | 15.8    | 849.9   |
| 15 | 206 | 3735.6   | 352.3   | 38.1    | -3.3   | -49.9   | 156.3   |
|    | 26  | -4168.7  | -352.3  | -38.1   | 3.3    | 28.9    | 521.9   |
| 16 | 206 | 3609.9   | 253.2   | 27.7    | -4.6   | -43.7   | 46.9    |
|    | 26  | -4043.1  | -253.2  | -27.7   | 4.6    | 27.8    | 440.6   |
| 17 | 206 | 3255.0   | 324.2   | -21.8   | 6.5    | -21.2   | 126.5   |
|    | 26  | -3688.2  | -324.2  | 21.8    | -6.5   | 10.8    | 497.6   |
| 18 | 206 | 3380.7   | 423.3   | -11.4   | 7.8    | -27.4   | 235.9   |
|    | 26  | -3813.9  | -423.3  | 11.4    | -7.8   | 12.0    | 578.9   |
|    |     |          |         |         |        |         |         |
| 1  | 108 | 39456.0  | 86.9    | -1536.3 | 11.2   | 3968.0  | 524.8   |
|    | 8   | -42030.0 | -86.9   | 1536.3  | -11.2  | 1101.9  | -237.9  |
| 2  | 108 | 22472.5  | -1607.1 | 834.7   | -56.6  | 136.5   | -1021.9 |
|    | 8   | -24452.5 | 1607.1  | -834.7  | 56.6   | -2895.7 | -4293.3 |
| 3  | 108 | 21784.2  | -654.2  | 417.4   | -110.0 | 637.5   | -170.3  |
|    | 8   | -23764.2 | 654.2   | -417.4  | 110.0  | -2018.6 | -1971.7 |
| 4  | 108 | 22171.4  | -130.8  | 857.7   | -3.4   | 111.6   | 406.1   |
|    | 8   | -24151.4 | 130.8   | -857.7  | 3.4    | -2946.4 | -832.6  |
| 5  | 108 | 21585.1  | 1262.0  | 541.9   | -47.6  | 492.2   | 1694.0  |
|    | 8   | -23565.1 | -1262.0 | -541.9  | 47.6   | -2283.8 | 2500.7  |
| 6  | 108 | 20518.1  | 3035.6  | -218.2  | -204.0 | 1405.2  | 3271.3  |
|    | 8   | -22498.1 | -3035.6 | 218.2   | 204.0  | -687.2  | 6817.8  |
| 7  | 108 | 19829.8  | 3988.5  | -635.5  | -257.4 | 1906.2  | 4122.9  |
|    | 8   | -21809.8 | -3988.5 | 635.5   | 257.4  | 189.9   | 9139.3  |
| 8  | 108 | 19877.1  | 3045.5  | -533.3  | -181.5 | 1781.4  | 3244.9  |
|    | 8   | -21857.1 | -3045.5 | 533.3   | 181.5  | -22.6   | 6906.0  |
| 9  | 108 | 19290.8  | 4438.3  | -849.1  | -225.7 | 2162.1  | 4532.8  |
|    | 8   | -21270.8 | -4438.3 | 849.1   | 225.7  | 640.0   | 10239.3 |
| 10 | 108 | 29227.5  | 77.1    | -1102.7 | 8.5    | 2869.3  | 415.7   |
|    | 8   | -31207.5 | -77.1   | 1102.7  | -8.5   | 769.7   | -161.2  |
| 11 | 108 | 24287.0  | -1142.9 | -761.1  | -38.6  | 2055.4  | -763.9  |
|    | 8   | -26267.0 | 1142.9  | 761.1   | 38.6   | 455.6   | -3023.4 |
| 12 | 108 | 24193.4  | -1544.9 | -844.4  | -47.8  | 2154.0  | -1156.5 |
|    | 8   | -26173.4 | 1544.9  | 844.4   | 47.8   | 632.1   | -3952.8 |
| 13 | 108 | 23945.8  | 1390.5  | -724.6  | 53.9   | 2017.4  | 1704.2  |
|    | 8   | -25925.8 | -1390.5 | 724.6   | -53.9  | 374.4   | 2899.8  |
| 14 | 108 | 24039.4  | 1792.4  | -641.3  | 63.1   | 1918.8  | 2096.8  |
|    | 8   | -26019.4 | -1792.4 | 641.3   | -63.1  | 198.0   | 3829.2  |
| 15 | 108 | 24599.0  | 196.9   | -483.3  | -7.9   | 1726.7  | 544.7   |
|    | 8   | -26579.0 | -196.9  | 483.3   | 7.9    | -132.6  | 74.5    |
| 16 | 108 | 24505.4  | -205.0  | -566.6  | -17.1  | 1825.3  | 152.2   |
|    | 8   | -26485.4 | 205.0   | 566.6   | 17.1   | 43.8    | -854.8  |
| 17 | 108 | 23633.8  | 50.6    | -1002.4 | 23.2   | 2346.2  | 395.6   |
|    | 8   | -25613.8 | -50.6   | 1002.4  | -23.2  | 962.7   | -198.1  |
| 18 | 108 | 23727.4  | 452.6   | -919.1  | 32.4   | 2247.5  | 788.2   |
|    | 8   | -25707.4 | -452.6  | 919.1   | -32.4  | 786.2   | 731.3   |
|    |     |          |         |         |        |         |         |
| 1  | 208 | 17197.3  | 423.1   | -4078.2 | 9.5    | 8535.1  | 741.3   |
|    | 108 | -20200.3 | -423.1  | 4078.2  | -9.5   | 7166.2  | 887.6   |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 2  | 208 | 9598.3   | -1110.2 | -1079.1 | -84.7  | 2246.3  | -2254.3 |
|    | 108 | -11908.3 | 1110.2  | 1079.1  | 84.7   | 1904.5  | -1895.1 |
| 3  | 208 | 9336.4   | -269.2  | -1309.1 | -151.2 | 2733.0  | -668.0  |
|    | 108 | -11646.4 | 269.2   | 1309.1  | 151.2  | 2304.2  | -363.3  |
| 4  | 208 | 9486.2   | -218.3  | -1060.5 | -27.3  | 2206.2  | -26.8   |
|    | 108 | -11796.2 | 218.3   | 1060.5  | 27.3   | 1873.5  | -385.4  |
| 5  | 208 | 9266.3   | 829.2   | -1279.7 | -86.0  | 2670.3  | 2161.8  |
|    | 108 | -11576.3 | -829.2  | 1279.7  | 86.0   | 2254.2  | 1466.8  |
| 6  | 208 | 8865.5   | 2381.6  | -1809.9 | -280.4 | 3793.3  | 5041.0  |
|    | 108 | -11175.5 | -2381.6 | 1809.9  | 280.4  | 3173.5  | 4279.0  |
| 7  | 208 | 8603.6   | 3222.7  | -2039.9 | -346.9 | 4280.1  | 6627.3  |
|    | 108 | -10913.6 | -3222.7 | 2039.9  | 346.9  | 3573.3  | 5810.8  |
| 8  | 208 | 8613.3   | 2585.2  | -1827.5 | -249.1 | 3828.6  | 5261.0  |
|    | 108 | -10923.3 | -2585.2 | 1827.5  | 249.1  | 3206.0  | 4720.6  |
| 9  | 208 | 8393.5   | 3632.8  | -2046.7 | -307.8 | 4292.8  | 7449.5  |
|    | 108 | -10703.5 | -3632.8 | 2046.7  | 307.8  | 3586.7  | 6572.8  |
| 10 | 208 | 12682.3  | 329.7   | -2969.3 | 7.2    | 6216.0  | 583.1   |
|    | 108 | -14992.3 | -329.7  | 2969.3  | -7.2   | 5215.9  | 686.1   |
| 11 | 208 | 10262.4  | -406.4  | -2220.7 | -43.0  | 4658.4  | -987.2  |
|    | 108 | -12572.4 | 406.4   | 2220.7  | 43.0   | 3890.9  | -574.2  |
| 12 | 208 | 10224.7  | -601.0  | -2229.5 | -51.2  | 4676.9  | -1430.0 |
|    | 108 | -12534.7 | 601.0   | 2229.5  | 51.2   | 3906.3  | -876.5  |
| 13 | 208 | 10130.4  | 1104.2  | -2190.8 | 56.2   | 4593.2  | 2270.6  |
|    | 108 | -12440.4 | -1104.2 | 2190.8  | -56.2  | 3841.8  | 1977.2  |
| 14 | 208 | 10168.0  | 1298.8  | -2182.0 | 64.4   | 4574.7  | 2713.3  |
|    | 108 | -12478.0 | -1298.8 | 2182.0  | -64.4  | 3826.5  | 2279.5  |
| 15 | 208 | 10387.9  | 242.4   | -2191.3 | -15.8  | 4596.7  | 488.5   |
|    | 108 | -12697.9 | -242.4  | 2191.3  | 15.8   | 3839.7  | 433.5   |
| 16 | 208 | 10350.2  | 47.8    | -2200.1 | -24.0  | 4615.2  | 45.8    |
|    | 108 | -12660.2 | -47.8   | 2200.1  | 24.0   | 3855.1  | 131.2   |
| 17 | 208 | 10004.9  | 455.4   | -2220.2 | 29.0   | 4654.9  | 794.8   |
|    | 108 | -12314.9 | -455.4  | 2220.2  | -29.0  | 3893.0  | 969.5   |
| 18 | 208 | 10042.5  | 650.0   | -2211.4 | 37.2   | 4636.4  | 1237.6  |
|    | 108 | -12352.5 | -650.0  | 2211.4  | -37.2  | 3877.7  | 1271.9  |
|    |     |          |         |         |        |         |         |
| 1  | 109 | 65016.1  | 131.0   | 465.7   | 9.2    | -1203.1 | 711.1   |
|    | 9   | -67268.4 | -131.0  | -465.7  | -9.2   | -333.6  | -279.0  |
| 2  | 109 | 38023.7  | -685.2  | 2132.7  | -46.3  | -3312.9 | 134.3   |
|    | 9   | -39756.2 | 685.2   | -2132.7 | 46.3   | -3725.5 | -2277.2 |
| 3  | 109 | 37369.4  | 59.3    | 1607.4  | -90.0  | -2548.9 | 621.2   |
|    | 9   | -39101.9 | -59.3   | -1607.4 | 90.0   | -2756.2 | -374.8  |
| 4  | 109 | 38236.1  | -180.0  | 2168.3  | -2.8   | -3363.0 | 321.4   |
|    | 9   | -39968.6 | 180.0   | -2168.3 | 2.8    | -3792.9 | -495.3  |
| 5  | 109 | 37795.5  | 669.4   | 1769.4  | -39.0  | -2779.8 | 820.4   |
|    | 9   | -39528.0 | -669.4  | -1769.4 | 39.0   | -3059.6 | 1858.4  |
| 6  | 109 | 36555.1  | 2146.4  | 803.0   | -166.9 | -1368.9 | 1797.9  |
|    | 9   | -38287.6 | -2146.4 | -803.0  | 166.9  | -1281.3 | 5568.2  |
| 7  | 109 | 35900.8  | 2890.9  | 277.8   | -210.7 | -604.9  | 2284.8  |
|    | 9   | -37633.3 | -2890.9 | -277.8  | 210.7  | -312.0  | 7470.7  |
| 8  | 109 | 36055.0  | 2301.6  | 417.6   | -148.5 | -816.1  | 1944.5  |
|    | 9   | -37787.5 | -2301.6 | -417.6  | 148.5  | -561.9  | 5846.2  |
| 9  | 109 | 35614.4  | 3151.0  | 18.7    | -184.7 | -232.9  | 2443.5  |
|    | 9   | -37346.9 | -3151.0 | -18.7   | 184.7  | 171.4   | 8199.8  |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 10 | 109 | 47995.9  | 115.6   | 321.4   | 6.9    | -836.0  | 559.6   |
|    | 9   | -49728.4 | -115.6  | -321.4  | -6.9   | -224.7  | -178.0  |
| 11 | 109 | 38634.8  | -236.0  | 125.5   | -31.6  | -389.0  | 464.7   |
|    | 9   | -40367.3 | 236.0   | -125.5  | 31.6   | -25.2   | -1516.9 |
| 12 | 109 | 38459.1  | -328.7  | 21.7    | -39.1  | -240.4  | 454.5   |
|    | 9   | -40191.6 | 328.7   | -21.7   | 39.1   | 168.9   | -1918.9 |
| 13 | 109 | 39007.2  | 602.7   | 182.8   | 44.1   | -469.0  | 768.6   |
|    | 9   | -40739.6 | -602.7  | -182.8  | -44.1  | -134.0  | 1493.9  |
| 14 | 109 | 39182.9  | 695.5   | 286.6   | 51.6   | -617.5  | 778.8   |
|    | 9   | -40915.4 | -695.5  | -286.6  | -51.6  | -328.0  | 1895.8  |
| 15 | 109 | 39220.5  | 73.3    | 471.5   | -6.5   | -884.1  | 498.5   |
|    | 9   | -40953.0 | -73.3   | -471.5  | 6.5    | -671.9  | -177.2  |
| 16 | 109 | 39044.8  | -19.5   | 367.7   | -14.0  | -735.5  | 488.4   |
|    | 9   | -40777.3 | 19.5    | -367.7  | 14.0   | -477.9  | -579.1  |
| 17 | 109 | 38421.5  | 293.5   | -163.2  | 19.0   | 26.1    | 734.8   |
|    | 9   | -40153.9 | -293.5  | 163.2   | -19.0  | 512.8   | 154.1   |
| 18 | 109 | 38597.2  | 386.2   | -59.4   | 26.5   | -122.4  | 745.0   |
|    | 9   | -40329.7 | -386.2  | 59.4    | -26.5  | 318.7   | 556.0   |
|    |     |          |         |         |        |         |         |
| 1  | 209 | 30337.3  | 387.6   | 1099.0  | 7.8    | -2240.9 | 504.2   |
|    | 109 | -32964.9 | -387.6  | -1099.0 | -7.8   | -1990.3 | 988.3   |
| 2  | 209 | 16605.7  | -110.5  | 2253.2  | -69.3  | -4639.0 | -498.0  |
|    | 109 | -18627.0 | 110.5   | -2253.2 | 69.3   | -4035.9 | 71.4    |
| 3  | 209 | 16312.9  | 251.1   | 1794.8  | -123.7 | -3710.7 | 279.7   |
|    | 109 | -18334.2 | -251.1  | -1794.8 | 123.7  | -3199.3 | 700.9   |
| 4  | 209 | 16662.7  | 222.7   | 2284.7  | -22.3  | -4703.8 | 190.3   |
|    | 109 | -18683.9 | -222.7  | -2284.7 | 22.3   | -4092.6 | 671.6   |
| 5  | 209 | 16452.8  | 662.3   | 1942.4  | -70.4  | -4010.1 | 1130.6  |
|    | 109 | -18474.0 | -662.3  | -1942.4 | 70.4   | -3468.3 | 1438.5  |
| 6  | 209 | 15906.0  | 1354.7  | 1112.1  | -229.4 | -2326.8 | 2636.4  |
|    | 109 | -17927.3 | -1354.7 | -1112.1 | 229.4  | -1954.9 | 2627.8  |
| 7  | 209 | 15613.2  | 1716.3  | 653.7   | -283.9 | -1398.5 | 3414.1  |
|    | 109 | -17634.5 | -1716.3 | -653.7  | 283.9  | -1118.4 | 3257.3  |
| 8  | 209 | 15686.7  | 1428.1  | 756.7   | -203.8 | -1609.4 | 2782.8  |
|    | 109 | -17707.9 | -1428.1 | -756.7  | 203.8  | -1304.1 | 2769.8  |
| 9  | 209 | 15476.8  | 1867.6  | 414.4   | -251.9 | -915.7  | 3723.1  |
|    | 109 | -17498.0 | -1867.6 | -414.4  | 251.9  | -679.9  | 3536.7  |
| 10 | 209 | 22188.8  | 297.7   | 789.5   | 5.9    | -1622.4 | 391.6   |
|    | 109 | -24210.0 | -297.7  | -789.5  | -5.9   | -1417.4 | 754.5   |
| 11 | 209 | 16916.4  | 14.6    | 509.7   | -35.2  | -1108.1 | -168.3  |
|    | 109 | -18937.7 | -14.6   | -509.7  | 35.2   | -854.2  | 219.7   |
| 12 | 209 | 16848.6  | -54.4   | 414.0   | -41.9  | -914.6  | -311.6  |
|    | 109 | -18869.9 | 54.4    | -414.0  | 41.9   | -679.3  | 97.7    |
| 13 | 209 | 17018.2  | 576.1   | 561.1   | 46.0   | -1213.7 | 985.4   |
|    | 109 | -19039.5 | -576.1  | -561.1  | -46.0  | -946.4  | 1237.4  |
| 14 | 209 | 17086.0  | 645.1   | 656.7   | 52.7   | -1407.1 | 1128.8  |
|    | 109 | -19107.3 | -645.1  | -656.7  | -52.7  | -1121.3 | 1359.4  |
| 15 | 209 | 17142.4  | 244.5   | 828.6   | -13.0  | -1752.8 | 309.6   |
|    | 109 | -19163.6 | -244.5  | -828.6  | 13.0   | -1437.3 | 626.3   |
| 16 | 209 | 17074.6  | 175.5   | 732.9   | -19.6  | -1559.3 | 166.2   |
|    | 109 | -19095.8 | -175.5  | -732.9  | 19.6   | -1262.4 | 504.3   |
| 17 | 209 | 16792.3  | 346.2   | 242.2   | 23.8   | -569.0  | 507.6   |
|    | 109 | -18813.5 | -346.2  | -242.2  | -23.8  | -363.3  | 830.8   |

|    |     |          |         |         |        |         |          |
|----|-----|----------|---------|---------|--------|---------|----------|
| 18 | 209 | 16860.1  | 415.2   | 337.8   | 30.4   | -762.4  | 650.9    |
|    | 109 | -18881.3 | -415.2  | -337.8  | -30.4  | -538.2  | 952.8    |
| 1  | 10  | 64829.3  | -68.9   | -99.6   | 9.2    | 83.0    | -260.7   |
|    | 110 | -62577.1 | 68.9    | 99.6    | -9.2   | 245.6   | 33.3     |
| 2  | 10  | 40489.3  | 758.6   | 1896.7  | -46.3  | -3602.6 | 1938.8   |
|    | 110 | -38756.8 | -758.6  | -1896.7 | 46.3   | -2657.1 | 571.6    |
| 3  | 10  | 40905.8  | -232.3  | 1496.3  | -90.0  | -2852.5 | -619.3   |
|    | 110 | -39173.3 | 232.3   | -1496.3 | 90.0   | -2085.7 | -172.8   |
| 4  | 10  | 40438.3  | 296.6   | 1936.2  | -2.8   | -3676.7 | 647.8    |
|    | 110 | -38705.8 | -296.6  | -1936.2 | 2.8    | -2713.3 | 342.5    |
| 5  | 10  | 40825.3  | -852.5  | 1552.4  | -39.0  | -2957.8 | -2349.4  |
|    | 110 | -39092.8 | 852.5   | -1552.4 | 39.0   | -2165.7 | -484.2   |
| 6  | 10  | 41779.0  | -3071.4 | 617.5   | -166.9 | -1206.5 | -8051.8  |
|    | 110 | -40046.5 | 3071.4  | -617.5  | 166.9  | -831.6  | -2184.1  |
| 7  | 10  | 42195.6  | -4062.3 | 217.0   | -210.7 | -456.3  | -10609.9 |
|    | 110 | -40463.1 | 4062.3  | -217.0  | 210.7  | -260.2  | -2928.5  |
| 8  | 10  | 41826.7  | -3006.4 | 601.4   | -148.5 | -1176.2 | -7879.2  |
|    | 110 | -40094.2 | 3006.4  | -601.4  | 148.5  | -808.7  | -2138.7  |
| 9  | 10  | 42213.7  | -4155.5 | 217.6   | -184.7 | -457.3  | -10876.4 |
|    | 110 | -40481.2 | 4155.5  | -217.6  | 184.7  | -261.0  | -2965.4  |
| 10 | 10  | 48320.8  | -59.6   | -69.0   | 6.9    | 55.1    | -211.6   |
|    | 110 | -46588.3 | 59.6    | 69.0    | -6.9   | 172.5   | 14.9     |
| 11 | 10  | 41330.7  | -649.5  | -66.2   | -31.6  | 75.5    | -1665.2  |
|    | 110 | -39598.2 | 649.5   | 66.2    | 31.6   | 142.9   | 140.2    |
| 12 | 10  | 41364.5  | -918.8  | -79.7   | -39.1  | 100.9   | -2354.6  |
|    | 110 | -39632.0 | 918.8   | 79.7    | 39.1   | 162.0   | 209.4    |
| 13 | 10  | 41225.5  | 470.0   | -2.5    | 44.1   | -44.3   | 1141.0   |
|    | 110 | -39493.0 | -470.0  | 2.5     | -44.1  | 52.6    | -208.4   |
| 14 | 10  | 41191.7  | 739.2   | 11.0    | 51.6   | -69.7   | 1830.4   |
|    | 110 | -39459.2 | -739.2  | -11.0   | -51.6  | 33.5    | -277.6   |
| 15 | 10  | 41218.2  | 248.1   | -21.3   | -6.5   | -9.0    | 632.7    |
|    | 110 | -39485.7 | -248.1  | 21.3    | 6.5    | 79.2    | -90.4    |
| 16 | 10  | 41252.0  | -21.2   | -34.8   | -14.0  | 16.3    | -56.7    |
|    | 110 | -39519.5 | 21.2    | 34.8    | 14.0   | 98.4    | -21.2    |
| 17 | 10  | 41338.0  | -427.6  | -47.4   | 19.0   | 40.2    | -1156.9  |
|    | 110 | -39605.5 | 427.6   | 47.4    | -19.0  | 116.3   | 22.2     |
| 18 | 10  | 41304.3  | -158.3  | -33.9   | 26.5   | 14.9    | -467.6   |
|    | 110 | -39571.8 | 158.3   | 33.9    | -26.5  | 97.2    | -46.9    |
| 1  | 210 | 37944.1  | -292.2  | -59.9   | 7.8    | 31.2    | -711.8   |
|    | 110 | -40571.7 | 292.2   | 59.9    | -7.8   | 199.6   | -413.1   |
| 2  | 210 | 22162.5  | 262.6   | 1419.1  | -69.3  | -2830.7 | 471.6    |
|    | 110 | -24183.8 | -262.6  | -1419.1 | 69.3   | -2634.6 | 569.0    |
| 3  | 210 | 22113.4  | 736.5   | 1122.2  | -123.7 | -2247.1 | 1381.1   |
|    | 110 | -24134.7 | -736.5  | -1122.2 | 123.7  | -2074.8 | 1496.4   |
| 4  | 210 | 21966.6  | 70.9    | 1445.4  | -22.3  | -2880.4 | 211.5    |
|    | 110 | -23987.8 | -70.9   | -1445.4 | 22.3   | -2685.9 | 149.8    |
| 5  | 210 | 21893.3  | 449.0   | 1162.5  | -70.4  | -2324.0 | 1004.1   |
|    | 110 | -23914.6 | -449.0  | -1162.5 | 70.4   | -2152.7 | 845.3    |
| 6  | 210 | 21918.3  | 1523.0  | 476.1   | -229.4 | -976.2  | 3113.7   |
|    | 110 | -23939.5 | -1523.0 | -476.1  | 229.4  | -857.2  | 2887.2   |
| 7  | 210 | 21869.1  | 1996.9  | 179.2   | -283.9 | -392.7  | 4023.1   |

|    |     |          |         |         |        |        |         |
|----|-----|----------|---------|---------|--------|--------|---------|
|    | 110 | -23890.4 | -1996.9 | -179.2  | 283.9  | -297.4 | 3814.6  |
| 8  | 210 | 21802.9  | 1650.5  | 455.7   | -203.8 | -935.1 | 3243.0  |
|    | 110 | -23824.1 | -1650.5 | -455.7  | 203.8  | -819.8 | 3241.0  |
| 9  | 210 | 21729.6  | 2028.6  | 172.8   | -251.9 | -378.8 | 4035.6  |
|    | 110 | -23750.9 | -2028.6 | -172.8  | 251.9  | -286.6 | 3936.4  |
| 10 | 210 | 28061.4  | -222.1  | -42.3   | 5.9    | 21.0   | -540.7  |
|    | 110 | -30082.6 | 222.1   | 42.3    | -5.9   | 141.8  | -314.3  |
| 11 | 210 | 23105.7  | -60.9   | -46.5   | -35.2  | 48.2   | -325.8  |
|    | 110 | -25127.0 | 60.9    | 46.5    | 35.2   | 130.5  | 36.9    |
| 12 | 210 | 23126.7  | 14.0    | -58.0   | -41.9  | 70.7   | -237.1  |
|    | 110 | -25147.9 | -14.0   | 58.0    | 41.9   | 152.3  | 219.0   |
| 13 | 210 | 22767.1  | -358.6  | -3.5    | 46.0   | -33.3  | -693.0  |
|    | 110 | -24788.4 | 358.6   | 3.5     | -46.0  | 47.0   | -633.1  |
| 14 | 210 | 22746.2  | -433.4  | 8.0     | 52.7   | -55.8  | -781.7  |
|    | 110 | -24767.5 | 433.4   | -8.0    | -52.7  | 25.2   | -815.3  |
| 15 | 210 | 23036.0  | -310.6  | -8.1    | -13.0  | -26.7  | -621.5  |
|    | 110 | -25057.3 | 310.6   | 8.1     | 13.0   | 57.9   | -570.1  |
| 16 | 210 | 23056.9  | -235.7  | -19.6   | -19.6  | -4.2   | -532.8  |
|    | 110 | -25078.2 | 235.7   | 19.6    | 19.6   | 79.7   | -388.0  |
| 17 | 210 | 22836.9  | -108.9  | -41.9   | 23.8   | 41.6   | -397.3  |
|    | 110 | -24858.1 | 108.9   | 41.9    | -23.8  | 119.6  | -26.1   |
| 18 | 210 | 22815.9  | -183.8  | -30.4   | 30.4   | 19.1   | -486.0  |
|    | 110 | -24837.2 | 183.8   | 30.4    | -30.4  | 97.8   | -208.2  |
|    |     |          |         |         |        |        |         |
| 1  | 310 | 12188.7  | 156.4   | -2073.6 | -11.6  | 4073.2 | 1097.4  |
|    | 210 | -14236.2 | -156.4  | 2073.6  | 11.6   | 2147.6 | -628.1  |
| 2  | 310 | 7477.5   | -61.8   | -49.7   | -20.0  | 622.5  | 292.9   |
|    | 210 | -9052.5  | 61.8    | 49.7    | 20.0   | -475.7 | -501.5  |
| 3  | 310 | 7260.4   | 307.1   | -294.9  | -22.8  | 1001.7 | 1020.2  |
|    | 210 | -8835.4  | -307.1  | 294.9   | 22.8   | -118.7 | -54.3   |
| 4  | 310 | 7270.6   | 495.3   | 2.6     | 71.6   | 544.9  | 1112.4  |
|    | 210 | -8845.6  | -495.3  | -2.6    | -71.6  | -555.1 | 367.8   |
| 5  | 310 | 7031.5   | 961.1   | -219.2  | 112.3  | 889.3  | 2030.7  |
|    | 210 | -8606.5  | -961.1  | 219.2   | -112.3 | -233.9 | 74.4    |
| 6  | 310 | 6680.3   | 1490.7  | -789.2  | 115.4  | 1770.6 | 3353.9  |
|    | 210 | -8255.3  | -1490.7 | 789.2   | -115.4 | 594.8  | -1479.7 |
| 7  | 310 | 6463.2   | 1859.7  | -1034.4 | 112.6  | 2149.7 | 4081.2  |
|    | 210 | -8038.2  | -1859.7 | 1034.4  | -112.6 | 951.7  | -1032.5 |
| 8  | 310 | 6546.7   | 1725.1  | -814.7  | 62.2   | 1808.6 | 3536.7  |
|    | 210 | -8121.7  | -1725.1 | 814.7   | -62.2  | 634.7  | 1858.6  |
| 9  | 310 | 6307.6   | 2190.9  | -1036.6 | 102.8  | 2153.0 | 4455.0  |
|    | 210 | -7882.6  | -2190.9 | 1036.6  | -102.8 | 955.8  | 1565.2  |
| 10 | 310 | 9152.8   | 133.3   | -1535.1 | -7.9   | 3020.4 | 850.8   |
|    | 210 | -10727.8 | -133.3  | 1535.1  | 7.9    | 1584.9 | -450.8  |
| 11 | 310 | 8316.0   | -296.3  | -1305.6 | -86.3  | 2571.0 | 174.9   |
|    | 210 | -9891.0  | 296.3   | 1305.6  | 86.3   | 1345.8 | -1079.7 |
| 12 | 310 | 8336.2   | -384.5  | -1325.2 | -125.5 | 2599.9 | 6.3     |
|    | 210 | -9911.2  | 384.5   | 1325.2  | 125.5  | 1376.2 | -411.0  |
| 13 | 310 | 7959.5   | 681.5   | -1218.8 | 79.5   | 2442.7 | 1587.4  |
|    | 210 | -9534.5  | -681.5  | 1218.8  | -79.5  | 1213.6 | 473.2   |
| 14 | 310 | 7939.3   | 769.8   | -1199.2 | 118.6  | 2413.8 | 1756.0  |
|    | 210 | -9514.3  | -769.8  | 1199.2  | -118.6 | 1183.3 | -195.6  |
| 15 | 310 | 8248.8   | -1.9    | -1240.1 | 44.2   | 2474.4 | 737.0   |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 210 | -9823.8  | 1.9     | 1240.1  | -44.2  | 1244.7  | -3308.9 |
| 16 | 310 | 8268.9   | -90.2   | -1259.8 | 5.1    | 2503.3  | 568.4   |
|    | 210 | -9843.9  | 90.2    | 1259.8  | -5.1   | 1275.0  | -2640.2 |
| 17 | 310 | 8026.8   | 387.2   | -1284.2 | -51.1  | 2539.3  | 1025.3  |
|    | 210 | -9601.8  | -387.2  | 1284.2  | 51.1   | 1314.8  | 2702.3  |
| 18 | 310 | 8006.6   | 475.5   | -1264.6 | -11.9  | 2510.4  | 1193.9  |
|    | 210 | -9581.6  | -475.5  | 1264.6  | 11.9   | 1284.4  | 2033.6  |
|    |     |          |         |         |        |         |         |
| 1  | 11  | 62997.3  | 533.1   | 755.9   | 7.2    | -767.6  | 540.8   |
|    | 111 | -61066.8 | -533.1  | -755.9  | -7.2   | -1726.7 | 1218.4  |
| 2  | 11  | 35819.2  | 1964.1  | 1017.6  | -36.3  | -2091.0 | 3155.5  |
|    | 111 | -34334.2 | -1964.1 | -1017.6 | 36.3   | -1442.1 | 3326.3  |
| 3  | 11  | 35544.4  | 1622.5  | 1880.3  | -70.5  | -4061.1 | 2564.5  |
|    | 111 | -34059.4 | -1622.5 | -1880.3 | 70.5   | -2169.0 | 2789.8  |
| 4  | 11  | 35525.8  | 1996.2  | 484.9   | -2.2   | -1213.3 | 3211.7  |
|    | 111 | -34040.8 | -1996.2 | -484.9  | 2.2    | -945.2  | 3375.9  |
| 5  | 11  | 35082.0  | 1669.8  | 1168.5  | -30.5  | -2904.9 | 2647.5  |
|    | 111 | -33597.0 | -1669.8 | -1168.5 | 30.5   | -1527.3 | 2862.9  |
| 6  | 11  | 34340.1  | 876.1   | 3296.2  | -130.8 | -7729.6 | 1275.0  |
|    | 111 | -32855.1 | -876.1  | -3296.2 | 130.8  | -3382.4 | 1616.3  |
| 7  | 11  | 34065.3  | 534.5   | 4158.9  | -165.0 | -9699.7 | 684.0   |
|    | 111 | -32580.3 | -534.5  | -4158.9 | 165.0  | -4109.4 | 1079.7  |
| 8  | 11  | 34609.7  | 857.3   | 3360.6  | -116.3 | -7780.5 | 1241.8  |
|    | 111 | -33124.7 | -857.3  | -3360.6 | 116.3  | -3368.3 | 1587.4  |
| 9  | 11  | 34165.9  | 530.9   | 4044.2  | -144.6 | -9472.1 | 677.6   |
|    | 111 | -32680.9 | -530.9  | -4044.2 | 144.6  | -3950.4 | 1074.4  |
| 10 | 11  | 46984.3  | 392.1   | 558.3   | 5.4    | -567.9  | 394.0   |
|    | 111 | -45499.3 | -392.1  | -558.3  | -5.4   | -1274.6 | 899.8   |
| 11 | 11  | 40513.6  | 284.5   | 904.6   | -24.7  | -1173.5 | 248.8   |
|    | 111 | -39028.6 | -284.5  | -904.6  | 24.7   | -1458.6 | 690.0   |
| 12 | 11  | 40652.2  | 272.2   | 1056.0  | -30.6  | -1395.0 | 227.2   |
|    | 111 | -39167.2 | -272.2  | -1056.0 | 30.6   | -1581.2 | 671.1   |
| 13 | 11  | 40030.8  | 335.9   | 2.0     | 34.6   | 242.6   | 339.1   |
|    | 111 | -38545.8 | -335.9  | -2.0    | -34.6  | -602.6  | 769.3   |
| 14 | 11  | 39892.2  | 348.2   | -149.3  | 40.4   | 464.1   | 360.7   |
|    | 111 | -38407.2 | -348.2  | 149.3   | -40.4  | -479.9  | 788.2   |
| 15 | 11  | 40051.7  | 325.4   | 400.1   | -5.1   | -435.1  | 320.9   |
|    | 111 | -38566.7 | -325.4  | -400.1  | 5.1    | -1049.8 | 753.0   |
| 16 | 11  | 40190.2  | 313.2   | 551.5   | -11.0  | -656.6  | 299.3   |
|    | 111 | -38705.2 | -313.2  | -551.5  | 11.0   | -1172.4 | 734.1   |
| 17 | 11  | 40492.7  | 294.9   | 506.6   | 14.9   | -495.8  | 267.0   |
|    | 111 | -39007.7 | -294.9  | -506.6  | -14.9  | -1011.4 | 706.3   |
| 18 | 11  | 40354.1  | 307.2   | 355.2   | 20.8   | -274.3  | 288.6   |
|    | 111 | -38869.1 | -307.2  | -355.2  | -20.8  | -888.7  | 725.2   |
|    |     |          |         |         |        |         |         |
| 1  | 211 | 37400.9  | 862.9   | -676.3  | 6.1    | 934.0   | 1681.4  |
|    | 111 | -39653.1 | -862.9  | 676.3   | -6.1   | 1669.9  | 1640.9  |
| 2  | 211 | 21144.7  | 1930.5  | -864.4  | -54.3  | 1539.4  | 3687.5  |
|    | 111 | -22877.2 | -1930.5 | 864.4   | 54.3   | 1801.4  | 3745.1  |
| 3  | 211 | 20860.2  | 1633.8  | -1375.6 | -96.9  | 2603.0  | 3119.2  |
|    | 111 | -22592.7 | -1633.8 | 1375.6  | 96.9   | 2708.9  | 3171.2  |
| 4  | 211 | 20985.3  | 1957.5  | -670.1  | -17.5  | 1142.9  | 3738.2  |
|    | 111 | -22717.8 | -1957.5 | 670.1   | 17.5   | 1470.1  | 3798.2  |

|    |     |          |         |         |        |        |        |
|----|-----|----------|---------|---------|--------|--------|--------|
| 5  | 211 | 20651.0  | 1676.0  | -1109.5 | -55.1  | 2082.1 | 3199.1 |
|    | 111 | -22383.5 | -1676.0 | 1109.5  | 55.1   | 2239.8 | 3253.5 |
| 6  | 211 | 20030.3  | 992.2   | -2329.1 | -179.7 | 4670.1 | 1890.5 |
|    | 111 | -21762.8 | -992.2  | 2329.1  | 179.7  | 4367.0 | 1929.5 |
| 7  | 211 | 19745.8  | 695.6   | -2840.3 | -222.4 | 5733.7 | 1322.3 |
|    | 111 | -21478.3 | -695.6  | 2840.3  | 222.4  | 5274.5 | 1355.6 |
| 8  | 211 | 20036.9  | 968.6   | -2374.0 | -159.7 | 4688.2 | 1844.1 |
|    | 111 | -21769.4 | -968.6  | 2374.0  | 159.7  | 4495.2 | 1885.2 |
| 9  | 211 | 19702.6  | 687.1   | -2813.4 | -197.3 | 5627.5 | 1305.0 |
|    | 111 | -21435.1 | -687.1  | 2813.4  | 197.3  | 5264.9 | 1340.5 |
| 10 | 211 | 27737.5  | 631.5   | -500.0  | 4.6    | 693.0  | 1225.5 |
|    | 111 | -29470.0 | -631.5  | 500.0   | -4.6   | 1231.9 | 1205.7 |
| 11 | 211 | 23167.9  | 462.4   | -566.3  | -27.6  | 898.5  | 875.1  |
|    | 111 | -24900.4 | -462.4  | 566.3   | 27.6   | 1260.1 | 905.1  |
| 12 | 211 | 23207.7  | 449.9   | -624.6  | -32.8  | 999.5  | 851.1  |
|    | 111 | -24940.1 | -449.9  | 624.6   | 32.8   | 1369.0 | 881.1  |
| 13 | 211 | 22912.2  | 506.5   | -249.0  | 36.0   | 255.3  | 958.3  |
|    | 111 | -24644.7 | -506.5  | 249.0   | -36.0  | 724.7  | 991.8  |
| 14 | 211 | 22872.5  | 519.0   | -190.6  | 41.3   | 154.3  | 982.2  |
|    | 111 | -24605.0 | -519.0  | 190.6   | -41.3  | 615.9  | 1015.8 |
| 15 | 211 | 23035.4  | 503.9   | -371.7  | -10.2  | 562.0  | 955.0  |
|    | 111 | -24767.9 | -503.9  | 371.7   | 10.2   | 897.1  | 985.0  |
| 16 | 211 | 23075.1  | 491.5   | -430.1  | -15.4  | 663.0  | 931.1  |
|    | 111 | -24807.6 | -491.5  | 430.1   | 15.4   | 1006.0 | 961.1  |
| 17 | 211 | 23044.7  | 465.0   | -443.5  | 18.6   | 591.8  | 878.3  |
|    | 111 | -24777.2 | -465.0  | 443.5   | -18.6  | 1087.7 | 911.8  |
| 18 | 211 | 23005.0  | 477.4   | -385.2  | 23.8   | 490.9  | 902.3  |
|    | 111 | -24737.5 | -477.4  | 385.2   | -23.8  | 978.8  | 935.8  |
|    |     |          |         |         |        |        |        |
| 1  | 311 | 16777.6  | 1439.1  | -452.0  | -9.1   | 846.8  | 2286.4 |
|    | 211 | -18532.6 | -1439.1 | 452.0   | 9.1    | 509.1  | 2031.0 |
| 2  | 311 | 11427.5  | 2151.1  | 7.4     | -15.7  | 1261.4 | 3420.3 |
|    | 211 | -12777.5 | -2151.1 | -7.4    | 15.7   | -43.4  | 3033.2 |
| 3  | 311 | 11049.5  | 1886.1  | -377.9  | -17.9  | 1923.6 | 3005.2 |
|    | 211 | -12399.5 | -1886.1 | 377.9   | 17.9   | -239.7 | 2653.2 |
| 4  | 311 | 11398.0  | 2206.9  | -38.8   | 56.1   | 1037.2 | 3506.5 |
|    | 211 | -12748.0 | -2206.9 | 38.8    | -56.1  | -84.4  | 3114.4 |
| 5  | 311 | 11036.1  | 1966.7  | -420.3  | 87.9   | 1571.5 | 3129.6 |
|    | 211 | -12386.1 | -1966.7 | 420.3   | -87.9  | -286.3 | 2770.7 |
| 6  | 311 | 10221.3  | 1350.4  | -1264.1 | 90.4   | 3042.4 | 2164.0 |
|    | 211 | -11571.3 | -1350.4 | 1264.1  | -90.4  | -716.6 | 1887.5 |
| 7  | 311 | 9843.3   | 1085.4  | -1649.4 | 88.2   | 3704.6 | 1748.8 |
|    | 211 | -11193.3 | -1085.4 | 1649.4  | -88.2  | -912.9 | 1507.5 |
| 8  | 311 | 10138.0  | 1323.5  | -1323.4 | 48.7   | 3244.5 | 2122.6 |
|    | 211 | -11488.0 | -1323.5 | 1323.4  | -48.7  | -738.7 | 1847.9 |
| 9  | 311 | 9776.1   | 1083.3  | -1704.8 | 80.6   | 3778.8 | 1745.7 |
|    | 211 | -11126.1 | -1083.3 | 1704.8  | -80.6  | -940.6 | 1504.2 |
| 10 | 311 | 12558.9  | 1060.8  | -343.8  | -6.2   | 643.1  | 1691.2 |
|    | 211 | -13908.9 | -1060.8 | 343.8   | 6.2    | 388.4  | 1491.2 |
| 11 | 311 | 10998.6  | 804.6   | -297.9  | -67.6  | 774.7  | 1312.9 |
|    | 211 | -12348.6 | -804.6  | 297.9   | 67.6   | 418.9  | 1100.9 |
| 12 | 311 | 10982.9  | 783.7   | -301.9  | -98.3  | 870.4  | 1280.6 |
|    | 211 | -12332.9 | -783.7  | 301.9   | 98.3   | 434.2  | 1070.4 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 13 | 311 | 10962.0  | 896.5   | -354.9  | 62.2   | 435.7   | 1454.8  |
|    | 211 | -12312.0 | -896.5  | 354.9   | -62.2  | 329.0   | 1234.8  |
| 14 | 311 | 10977.7  | 917.5   | -350.9  | 92.9   | 339.9   | 1487.0  |
|    | 211 | -12327.7 | -917.5  | 350.9   | -92.9  | 313.7   | 1265.3  |
| 15 | 311 | 11050.8  | 874.4   | -284.4  | 34.6   | 455.4   | 1420.3  |
|    | 211 | -12400.8 | -874.4  | 284.4   | -34.6  | 367.9   | 1202.8  |
| 16 | 311 | 11035.1  | 853.4   | -288.5  | 4.0    | 551.2   | 1388.1  |
|    | 211 | -12385.1 | -853.4  | 288.5   | -4.0   | 383.2   | 1172.2  |
| 17 | 311 | 10909.8  | 826.7   | -368.3  | -40.0  | 754.9   | 1347.3  |
|    | 211 | -12259.8 | -826.7  | 368.3   | 40.0   | 379.9   | 1132.9  |
| 18 | 311 | 10925.5  | 847.7   | -364.3  | -9.3   | 659.2   | 1379.6  |
|    | 211 | -12275.5 | -847.7  | 364.3   | 9.3    | 364.7   | 1163.5  |
|    |     |          |         |         |        |         |         |
| 1  | 12  | 31098.1  | -273.2  | 211.4   | 7.2    | -162.3  | -323.5  |
|    | 112 | -29167.6 | 273.2   | -211.4  | -7.2   | -535.2  | -578.0  |
| 2  | 12  | 29782.7  | -605.3  | 2809.3  | -36.3  | -6272.4 | -949.2  |
|    | 112 | -28297.7 | 605.3   | -2809.3 | 36.3   | -3043.2 | -1048.5 |
| 3  | 12  | 26942.6  | -1086.6 | 2072.2  | -70.5  | -4948.6 | -1802.3 |
|    | 112 | -25457.6 | 1086.6  | -2072.2 | 70.5   | -2303.4 | -1783.8 |
| 4  | 12  | 29835.9  | -382.5  | 2852.8  | -2.2   | -6383.6 | -550.7  |
|    | 112 | -28350.9 | 382.5   | -2852.8 | 2.2    | -3069.9 | -711.8  |
| 5  | 12  | 27110.3  | -808.7  | 2297.0  | -30.5  | -5110.5 | -1302.0 |
|    | 112 | -25625.3 | 808.7   | -2297.0 | 30.5   | -2502.5 | -1366.9 |
| 6  | 12  | 20697.3  | -2025.9 | 956.7   | -130.8 | -2028.7 | -3453.6 |
|    | 112 | -19212.3 | 2025.9  | -956.7  | 130.8  | -1151.9 | -3232.0 |
| 7  | 12  | 17857.2  | -2507.2 | 219.5   | -165.0 | -704.8  | -4306.8 |
|    | 112 | -16372.2 | 2507.2  | -219.5  | 165.0  | -412.1  | -3967.2 |
| 8  | 12  | 20368.9  | -1986.9 | 395.6   | -116.3 | -1970.8 | -3394.4 |
|    | 112 | -18883.9 | 1986.9  | -395.6  | 116.3  | -603.9  | -3162.7 |
| 9  | 12  | 17643.2  | -2413.1 | -160.2  | -144.6 | -697.6  | -4145.7 |
|    | 112 | -16158.2 | 2413.1  | 160.2   | 144.6  | -36.5   | -3817.7 |
| 10 | 12  | 23516.3  | -208.8  | 138.0   | 5.4    | -79.7   | -247.3  |
|    | 112 | -22031.3 | 208.8   | -138.0  | -5.4   | -375.9  | -441.9  |
| 11 | 12  | 21629.6  | -385.0  | -6.2    | -24.7  | 213.0   | -566.2  |
|    | 112 | -20144.6 | 385.0   | 6.2     | 24.7   | -197.8  | -704.3  |
| 12 | 12  | 21537.2  | -430.0  | -154.5  | -30.6  | 253.0   | -649.5  |
|    | 112 | -20052.2 | 430.0   | 154.5   | 30.6   | -57.7   | -769.5  |
| 13 | 12  | 21715.1  | -21.0   | 59.0    | 34.6   | 38.8    | 85.5    |
|    | 112 | -20230.1 | 21.0    | -59.0   | -34.6  | -228.0  | -154.7  |
| 14 | 12  | 21807.5  | 24.0    | 207.3   | 40.4   | -1.2    | 168.7   |
|    | 112 | -20322.5 | -24.0   | -207.3  | -40.4  | -368.1  | -89.5   |
| 15 | 12  | 21937.8  | -235.1  | 488.2   | -5.1   | 79.6    | -288.8  |
|    | 112 | -20452.8 | 235.1   | -488.2  | 5.1    | -664.7  | -486.9  |
| 16 | 12  | 21845.4  | -280.0  | 339.8   | -11.0  | 119.6   | -372.1  |
|    | 112 | -20360.4 | 280.0   | -339.8  | 11.0   | -524.7  | -552.1  |
| 17 | 12  | 21406.9  | -170.9  | -435.4  | 14.9   | 172.2   | -191.9  |
|    | 112 | -19921.9 | 170.9   | 435.4   | -14.9  | 238.9   | -372.1  |
| 18 | 12  | 21499.3  | -126.0  | -287.1  | 20.8   | 132.2   | -108.7  |
|    | 112 | -20014.3 | 126.0   | 287.1   | -20.8  | 98.9    | -306.9  |
|    |     |          |         |         |        |         |         |
| 1  | 212 | 17652.6  | 327.0   | 623.3   | 6.1    | -1376.9 | 593.2   |
|    | 112 | -19904.8 | -327.0  | -623.3  | -6.1   | -1022.9 | 665.8   |
| 2  | 212 | 16243.1  | 634.6   | 2264.5  | -54.3  | -4821.1 | 1197.9  |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    | 112 | -17975.6 | -634.6  | -2264.5 | 54.3   | -3943.8 | 1245.7 |
| 3  | 212 | 14688.7  | 1105.1  | 1750.3  | -96.9  | -3733.6 | 2103.3 |
|    | 112 | -16421.2 | -1105.1 | -1750.3 | 96.9   | -3041.4 | 2151.4 |
| 4  | 212 | 16292.3  | 426.6   | 2281.8  | -17.5  | -4853.5 | 798.8  |
|    | 112 | -18024.8 | -426.6  | -2281.8 | 17.5   | -3974.6 | 844.2  |
| 5  | 212 | 14779.3  | 829.6   | 1904.9  | -55.1  | -4050.5 | 1576.4 |
|    | 112 | -16511.8 | -829.6  | -1904.9 | 55.1   | -3316.0 | 1618.5 |
| 6  | 212 | 11199.9  | 1978.3  | 1008.3  | -179.7 | -2144.3 | 3790.0 |
|    | 112 | -12932.4 | -1978.3 | -1008.3 | 179.7  | -1748.3 | 3826.8 |
| 7  | 212 | 9645.5   | 2448.7  | 494.1   | -222.4 | -1056.8 | 4695.4 |
|    | 112 | -11378.0 | -2448.7 | -494.1  | 222.4  | -846.0  | 4732.5 |
| 8  | 212 | 11111.1  | 1994.7  | 567.9   | -159.7 | -1228.5 | 3816.7 |
|    | 112 | -12843.6 | -1994.7 | -567.9  | 159.7  | -966.8  | 3863.1 |
| 9  | 212 | 9598.1   | 2397.8  | 191.0   | -197.3 | -425.4  | 4594.3 |
|    | 112 | -11330.6 | -2397.8 | -191.0  | 197.3  | -308.2  | 4637.5 |
| 10 | 212 | 13296.0  | 249.5   | 449.8   | 4.6    | -990.8  | 452.7  |
|    | 112 | -15028.5 | -249.5  | -449.8  | -4.6   | -740.9  | 507.8  |
| 11 | 212 | 11965.6  | 412.6   | 300.2   | -27.6  | -650.8  | 767.2  |
|    | 112 | -13698.1 | -412.6  | -300.2  | 27.6   | -508.7  | 821.0  |
| 12 | 212 | 11935.0  | 469.0   | 186.2   | -32.8  | -413.7  | 874.2  |
|    | 112 | -13667.5 | -469.0  | -186.2  | 32.8   | -307.5  | 930.8  |
| 13 | 212 | 12051.7  | 67.4    | 329.3   | 36.0   | -709.2  | 105.2  |
|    | 112 | -13784.2 | -67.4   | -329.3  | -36.0  | -554.9  | 154.9  |
| 14 | 212 | 12082.3  | 11.0    | 443.3   | 41.3   | -946.3  | -1.9   |
|    | 112 | -13814.8 | -11.0   | -443.3  | -41.3  | -756.2  | 45.0   |
| 15 | 212 | 12067.6  | 224.6   | 680.3   | -10.2  | -1441.0 | 410.5  |
|    | 112 | -13800.1 | -224.6  | -680.3  | 10.2   | -1179.5 | 454.7  |
| 16 | 212 | 12037.0  | 281.0   | 566.3   | -15.4  | -1204.0 | 517.5  |
|    | 112 | -13769.5 | -281.0  | -566.3  | 15.4   | -978.3  | 564.6  |
| 17 | 212 | 11949.6  | 255.4   | -50.7   | 18.6   | 81.0    | 461.9  |
|    | 112 | -13682.1 | -255.4  | 50.7    | -18.6  | 115.9   | 521.1  |
| 18 | 212 | 11980.2  | 199.0   | 63.3    | 23.8   | -156.1  | 354.9  |
|    | 112 | -13712.7 | -199.0  | -63.3   | -23.8  | -85.4   | 411.2  |
| 1  | 312 | 6983.6   | 472.6   | 700.9   | -9.1   | -1213.4 | 715.5  |
|    | 212 | -8738.6  | -472.6  | -700.9  | 9.1    | -889.2  | 702.4  |
| 2  | 312 | 6137.0   | 739.5   | 1301.5  | -15.7  | -2537.6 | 1139.7 |
|    | 212 | -7487.0  | -739.5  | -1301.5 | 15.7   | 654.6   | 1079.0 |
| 3  | 312 | 5599.6   | 1092.2  | 1114.3  | -17.9  | -2147.4 | 1703.9 |
|    | 212 | -6949.6  | -1092.2 | -1114.3 | 17.9   | 312.1   | 1572.7 |
| 4  | 312 | 6168.9   | 679.4   | 1353.7  | 56.1   | -2623.3 | 1031.4 |
|    | 212 | -7518.9  | -679.4  | -1353.7 | -56.1  | 705.7   | 1007.0 |
| 5  | 312 | 5634.0   | 1027.4  | 1203.9  | 87.9   | -2277.6 | 1581.7 |
|    | 212 | -6984.0  | -1027.4 | -1203.9 | -87.9  | 345.6   | 1500.6 |
| 6  | 312 | 4354.2   | 1899.3  | 802.1   | 90.4   | -1385.1 | 2974.0 |
|    | 212 | -5704.2  | -1899.3 | -802.1  | -90.4  | -545.5  | 2724.3 |
| 7  | 312 | 3816.8   | 2251.9  | 615.0   | 88.2   | -994.9  | 3538.3 |
|    | 212 | -5166.8  | -2251.9 | -615.0  | -88.2  | -888.0  | 3217.9 |
| 8  | 312 | 4377.7   | 1854.9  | 729.9   | 48.7   | -1322.7 | 2912.3 |
|    | 212 | -5727.7  | -1854.9 | -729.9  | -48.7  | -436.0  | 2652.6 |
| 9  | 312 | 3842.9   | 2202.8  | 580.1   | 80.6   | -976.9  | 3462.6 |
|    | 212 | -5192.9  | -2202.8 | -580.1  | -80.6  | -796.0  | 3146.1 |
| 10 | 312 | 5283.4   | 359.0   | 512.6   | -6.2   | -884.0  | 543.2  |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 212 | -6633.4  | -359.0  | -512.6  | 6.2    | -653.9  | 533.6   |
| 11 | 312 | 4848.3   | 373.3   | 346.2   | -67.6  | -587.9  | 578.4   |
|    | 212 | -6198.3  | -373.3  | -346.2  | 67.6   | -570.2  | 541.5   |
| 12 | 312 | 4847.4   | 368.4   | 313.0   | -98.3  | -549.5  | 576.9   |
|    | 212 | -6197.4  | -368.4  | -313.0  | 98.3   | -558.5  | 528.4   |
| 13 | 312 | 4911.7   | 302.6   | 437.6   | 62.2   | -730.2  | 442.8   |
|    | 212 | -6261.7  | -302.6  | -437.6  | -62.2  | -463.1  | 465.1   |
| 14 | 312 | 4912.6   | 307.5   | 470.8   | 92.9   | -768.6  | 444.3   |
|    | 212 | -6262.6  | -307.5  | -470.8  | -92.9  | -474.9  | 478.2   |
| 15 | 312 | 4851.2   | 389.6   | 457.0   | 34.6   | -715.8  | 583.5   |
|    | 212 | -6201.2  | -389.6  | -457.0  | -34.6  | -609.4  | 585.4   |
| 16 | 312 | 4850.4   | 384.7   | 423.8   | 4.0    | -677.4  | 582.0   |
|    | 212 | -6200.4  | -384.7  | -423.8  | -4.0   | -597.7  | 572.2   |
| 17 | 312 | 4908.8   | 286.4   | 326.8   | -40.0  | -602.3  | 437.7   |
|    | 212 | -6258.8  | -286.4  | -326.8  | 40.0   | -423.9  | 421.2   |
| 18 | 312 | 4909.7   | 291.3   | 360.0   | -9.3   | -640.7  | 439.2   |
|    | 212 | -6259.7  | -291.3  | -360.0  | 9.3    | -435.7  | 434.4   |
|    |     |          |         |         |        |         |         |
| 1  | 113 | 36783.9  | -432.4  | -1422.3 | 7.2    | 3579.2  | -915.6  |
|    | 13  | -38714.4 | 432.4   | 1422.3  | -7.2   | 1114.4  | -511.3  |
| 2  | 113 | 18767.0  | -1409.1 | 547.8   | -36.3  | 247.7   | -2038.7 |
|    | 13  | -20252.0 | 1409.1  | -547.8  | 36.3   | -2057.7 | -2612.2 |
| 3  | 113 | 20364.4  | -819.0  | 285.5   | -70.5  | 582.4   | -1295.3 |
|    | 13  | -21849.4 | 819.0   | -285.5  | 70.5   | -1526.4 | -1406.2 |
| 4  | 113 | 20213.1  | -501.3  | 601.9   | -2.2   | 179.3   | -859.2  |
|    | 13  | -21698.1 | 501.3   | -601.9  | 2.2    | -2167.7 | -794.2  |
| 5  | 113 | 22155.9  | 357.0   | 349.0   | -30.5  | 500.8   | 238.2   |
|    | 13  | -23640.9 | -357.0  | -349.0  | 30.5   | -1654.1 | 943.1   |
| 6  | 113 | 25242.9  | 1452.0  | -295.5  | -130.8 | 1319.5  | 1619.4  |
|    | 13  | -26727.9 | -1452.0 | 295.5   | 130.8  | -345.6  | 3178.9  |
| 7  | 113 | 26840.3  | 2042.0  | -557.8  | -165.0 | 1654.1  | 2362.8  |
|    | 13  | -28325.3 | -2042.0 | 557.8   | 165.0  | 185.7   | 4385.0  |
| 8  | 113 | 25537.8  | 1465.4  | -272.4  | -116.3 | 1294.8  | 1618.7  |
|    | 13  | -27022.8 | -1465.4 | 272.4   | 116.3  | -396.8  | 3226.0  |
| 9  | 113 | 27480.6  | 2323.8  | -525.4  | -144.6 | 1616.3  | 2716.2  |
|    | 13  | -28965.6 | -2323.8 | 525.4   | 144.6  | 116.9   | 4963.3  |
| 10 | 113 | 27236.6  | -336.9  | -1022.6 | 5.4    | 2589.0  | -707.3  |
|    | 13  | -28721.6 | 336.9   | 1022.6  | -5.4   | 785.6   | -404.6  |
| 11 | 113 | 21205.2  | -1134.8 | -741.0  | -24.7  | 1896.7  | -1734.4 |
|    | 13  | -22690.2 | 1134.8  | 741.0   | 24.7   | 548.5   | -2012.2 |
| 12 | 113 | 20883.2  | -1381.0 | -749.3  | -30.6  | 1908.0  | -2058.0 |
|    | 13  | -22368.2 | 1381.0  | 749.3   | 30.6   | 564.3   | -2500.9 |
| 13 | 113 | 23633.2  | 421.3   | -653.9  | 34.6   | 1787.3  | 292.0   |
|    | 13  | -25118.2 | -421.3  | 653.9   | -34.6  | 370.8   | 1100.1  |
| 14 | 113 | 23955.3  | 667.5   | -645.6  | 40.4   | 1776.0  | 615.6   |
|    | 13  | -25440.3 | -667.5  | 645.6   | -40.4  | 354.9   | 1588.8  |
| 15 | 113 | 22278.6  | -314.1  | -713.5  | -5.1   | 1858.8  | -655.6  |
|    | 13  | -23763.6 | 314.1   | 713.5   | 5.1    | 495.7   | -383.3  |
| 16 | 113 | 21956.6  | -560.3  | -721.8  | -11.0  | 1870.2  | -979.2  |
|    | 13  | -23441.6 | 560.3   | 721.8   | 11.0   | 511.5   | -871.9  |
| 17 | 113 | 22559.8  | -399.4  | -681.4  | 14.9   | 1825.2  | -786.8  |
|    | 13  | -24044.8 | 399.4   | 681.4   | -14.9  | 423.5   | -528.9  |
| 18 | 113 | 22881.8  | -153.2  | -673.1  | 20.8   | 1813.8  | -463.2  |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 13  | -24366.8 | 153.2   | 673.1   | -20.8  | 407.7   | -40.2   |
| 1  | 213 | 16162.2  | -644.5  | -3468.7 | 6.1    | 7191.7  | -1286.8 |
|    | 113 | -18414.4 | 644.5   | 3468.7  | -6.1   | 6162.7  | -1194.6 |
| 2  | 213 | 8218.4   | -1545.7 | -930.2  | -54.3  | 1935.7  | -3133.2 |
|    | 113 | -9950.9  | 1545.7  | 930.2   | 54.3   | 1643.9  | -2817.3 |
| 3  | 213 | 8833.9   | -956.3  | -1191.5 | -96.9  | 2479.3  | -1931.4 |
|    | 113 | -10566.4 | 956.3   | 1191.5  | 96.9   | 2106.8  | -1749.9 |
| 4  | 213 | 8761.5   | -716.8  | -892.1  | -17.5  | 1854.7  | -1447.9 |
|    | 113 | -10494.0 | 716.8   | 892.1   | 17.5   | 1578.5  | -1309.1 |
| 5  | 213 | 9499.3   | 95.5    | -1088.0 | -55.1  | 2261.0  | 209.1   |
|    | 113 | -11231.8 | -95.5   | 1088.0  | 55.1   | 1926.4  | 161.4   |
| 6  | 213 | 10677.8  | 1161.7  | -1583.0 | -179.7 | 3289.7  | 2390.4  |
|    | 113 | -12410.3 | -1161.7 | 1583.0  | 179.7  | 2803.6  | 2084.6  |
| 7  | 213 | 11293.3  | 1751.2  | -1844.3 | -222.4 | 3833.3  | 3592.1  |
|    | 113 | -13025.8 | -1751.2 | 1844.3  | 222.4  | 3266.4  | 3152.0  |
| 8  | 213 | 10813.2  | 1248.0  | -1763.2 | -159.7 | 3666.7  | 2558.0  |
|    | 113 | -12545.7 | -1248.0 | 1763.2  | 159.7  | 3121.3  | 2248.7  |
| 9  | 213 | 11551.0  | 2060.2  | -1959.0 | -197.3 | 4072.9  | 4215.1  |
|    | 113 | -13283.5 | -2060.2 | 1959.0  | 197.3  | 3469.2  | 3719.3  |
| 10 | 213 | 11921.5  | -496.0  | -2524.9 | 4.6    | 5236.8  | -990.4  |
|    | 113 | -13654.0 | 496.0   | 2524.9  | -4.6   | 4484.1  | -919.2  |
| 11 | 213 | 9140.9   | -1202.7 | -1903.8 | -27.6  | 3959.0  | -2427.8 |
|    | 113 | -10873.4 | 1202.7  | 1903.8  | 27.6   | 3370.4  | -2204.4 |
| 12 | 213 | 9026.5   | -1409.1 | -1906.7 | -32.8  | 3965.8  | -2849.7 |
|    | 113 | -10759.0 | 1409.1  | 1906.7  | 32.8   | 3375.0  | -2577.4 |
| 13 | 213 | 10052.4  | 208.8   | -1842.2 | 36.0   | 3827.7  | 442.0   |
|    | 113 | -11784.9 | -208.8  | 1842.2  | -36.0  | 3264.8  | 363.7   |
| 14 | 213 | 10166.8  | 415.2   | -1839.2 | 41.3   | 3820.8  | 863.9   |
|    | 113 | -11899.3 | -415.2  | 1839.2  | -41.3  | 3260.2  | 736.8   |
| 15 | 213 | 9522.3   | -514.9  | -1893.9 | -10.2  | 3936.3  | -1021.4 |
|    | 113 | -11254.8 | 514.9   | 1893.9  | 10.2   | 3354.9  | -960.8  |
| 16 | 213 | 9407.9   | -721.2  | -1896.9 | -15.4  | 3943.1  | -1443.3 |
|    | 113 | -11140.4 | 721.2   | 1896.9  | 15.4   | 3359.6  | -1333.8 |
| 17 | 213 | 9671.0   | -479.0  | -1852.0 | 18.6   | 3850.4  | -964.4  |
|    | 113 | -11403.5 | 479.0   | 1852.0  | -18.6  | 3280.2  | -879.9  |
| 18 | 213 | 9785.4   | -272.7  | -1849.0 | 23.8   | 3843.5  | -542.5  |
|    | 113 | -11517.9 | 272.7   | 1849.0  | -23.8  | 3275.6  | -506.8  |
| 1  | 114 | 65081.6  | -371.8  | 554.1   | 9.2    | -1356.7 | -951.9  |
|    | 14  | -67333.9 | 371.8   | -554.1  | -9.2   | -471.8  | -274.9  |
| 2  | 114 | 37508.4  | -1123.4 | 2122.8  | -46.3  | -3297.5 | -1135.6 |
|    | 14  | -39240.9 | 1123.4  | -2122.8 | 46.3   | -3708.6 | -2577.0 |
| 3  | 114 | 38386.5  | -443.3  | 1593.5  | -90.0  | -2529.2 | -743.1  |
|    | 14  | -40119.0 | 443.3   | -1593.5 | 90.0   | -2729.7 | -672.3  |
| 4  | 114 | 38125.1  | -456.6  | 2194.4  | -2.8   | -3401.2 | -722.4  |
|    | 14  | -39857.6 | 456.6   | -2194.4 | 2.8    | -3841.1 | -771.9  |
| 5  | 114 | 39134.9  | 396.7   | 1795.8  | -39.0  | -2824.5 | -222.2  |
|    | 14  | -40867.4 | -396.7  | -1795.8 | 39.0   | -3102.1 | 1591.9  |
| 6  | 114 | 40874.7  | 1721.0  | 794.0   | -166.9 | -1375.4 | 531.8   |
|    | 14  | -42607.2 | -1721.0 | -794.0  | 166.9  | -1245.2 | 5302.5  |
| 7  | 114 | 41752.8  | 2401.1  | 264.6   | -210.7 | -607.1  | 924.3   |
|    | 14  | -43485.3 | -2401.1 | -264.6  | 210.7  | -266.4  | 7207.2  |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 8  | 114 | 41052.1  | 1810.4  | 429.8   | -148.5 | -840.4  | 586.0   |
|    | 14  | -42784.6 | -1810.4 | -429.8  | 148.5  | -578.2  | 5576.9  |
| 9  | 114 | 42061.9  | 2663.8  | 31.2    | -184.7 | -263.7  | 1086.2  |
|    | 14  | -43794.4 | -2663.8 | -31.2   | 184.7  | 160.8   | 7940.8  |
| 10 | 114 | 48029.5  | -300.7  | 386.8   | 6.9    | -949.0  | -741.5  |
|    | 14  | -49762.0 | 300.7   | -386.8  | -6.9   | -327.3  | -250.9  |
| 11 | 114 | 38265.0  | -933.7  | 149.5   | -31.6  | -435.3  | -1144.5 |
|    | 14  | -39997.5 | 933.7   | -149.5  | 31.6   | -58.2   | -1952.8 |
| 12 | 114 | 38148.9  | -1088.5 | 35.6    | -39.1  | -268.2  | -1243.1 |
|    | 14  | -39881.4 | 1088.5  | -35.6   | 39.1   | 150.6   | -2360.7 |
| 13 | 114 | 39291.0  | 198.2   | 265.1   | 44.1   | -602.3  | -422.6  |
|    | 14  | -41023.5 | -198.2  | -265.1  | -44.1  | -272.5  | 1092.8  |
| 14 | 114 | 39407.1  | 353.0   | 379.0   | 51.6   | -769.3  | -323.9  |
|    | 14  | -41139.6 | -353.0  | -379.0  | -51.6  | -481.3  | 1500.6  |
| 15 | 114 | 38651.9  | -417.8  | 529.1   | -6.5   | -992.0  | -815.6  |
|    | 14  | -40384.4 | 417.8   | -529.1  | 6.5    | -754.1  | -593.4  |
| 16 | 114 | 38535.8  | -572.6  | 415.2   | -14.0  | -825.0  | -914.3  |
|    | 14  | -40268.3 | 572.6   | -415.2  | 14.0   | -545.4  | -1001.2 |
| 17 | 114 | 38904.1  | -317.6  | -114.4  | 19.0   | -45.6   | -751.4  |
|    | 14  | -40636.6 | 317.6   | 114.4   | -19.0  | 423.4   | -266.7  |
| 18 | 114 | 39020.2  | -162.9  | -0.6    | 26.5   | -212.6  | -652.8  |
|    | 14  | -40752.7 | 162.9   | 0.6     | -26.5  | 214.7   | 141.2   |
| 1  | 214 | 30306.6  | -424.9  | 1229.5  | 7.8    | -2529.1 | -647.6  |
|    | 114 | -32934.2 | 424.9   | -1229.5 | -7.8   | -2204.4 | -988.4  |
| 2  | 214 | 16277.1  | -739.3  | 2261.8  | -69.3  | -4676.5 | -1424.1 |
|    | 114 | -18298.3 | 739.3   | -2261.8 | 69.3   | -4031.7 | -1419.1 |
| 3  | 214 | 16696.4  | -375.2  | 1808.2  | -123.7 | -3756.8 | -643.1  |
|    | 114 | -18717.6 | 375.2   | -1808.2 | 123.7  | -3205.1 | -787.5  |
| 4  | 214 | 16550.2  | -403.4  | 2323.6  | -22.3  | -4803.3 | -719.2  |
|    | 114 | -18571.4 | 403.4   | -2323.6 | 22.3   | -4142.8 | -814.9  |
| 5  | 214 | 17024.9  | 38.6    | 1976.3  | -70.4  | -4099.5 | 228.7   |
|    | 114 | -19046.2 | -38.6   | -1976.3 | 70.4   | -3509.5 | -46.1   |
| 6  | 214 | 17859.6  | 733.9   | 1104.1  | -229.4 | -2330.4 | 1735.6  |
|    | 114 | -19880.8 | -733.9  | -1104.1 | 229.4  | -1920.9 | 1143.7  |
| 7  | 214 | 18278.9  | 1098.1  | 650.6   | -283.9 | -1410.7 | 2516.7  |
|    | 114 | -20300.1 | -1098.1 | -650.6  | 283.9  | -1094.3 | 1775.2  |
| 8  | 214 | 17947.8  | 810.3   | 811.7   | -203.8 | -1737.7 | 1884.3  |
|    | 114 | -19969.0 | -810.3  | -811.7  | 203.8  | -1387.4 | 1290.2  |
| 9  | 214 | 18422.5  | 1252.3  | 464.4   | -251.9 | -1033.9 | 2832.2  |
|    | 114 | -20443.8 | -1252.3 | -464.4  | 251.9  | -754.2  | 2059.0  |
| 10 | 214 | 22157.7  | -328.7  | 886.0   | 5.9    | -1836.0 | -505.4  |
|    | 114 | -24179.0 | 328.7   | -886.0  | -5.9   | -1575.3 | -760.0  |
| 11 | 214 | 16675.8  | -619.8  | 564.2   | -35.2  | -1234.7 | -1128.7 |
|    | 114 | -18697.1 | 619.8   | -564.2  | 35.2   | -937.5  | -1271.0 |
| 12 | 214 | 16627.1  | -688.8  | 472.3   | -41.9  | -1047.9 | -1275.8 |
|    | 114 | -18648.3 | 688.8   | -472.3  | 41.9   | -770.3  | -1393.1 |
| 13 | 214 | 17128.9  | -54.0   | 664.5   | 46.0   | -1440.7 | 52.2    |
|    | 114 | -19150.2 | 54.0    | -664.5  | -46.0  | -1117.6 | -246.4  |
| 14 | 214 | 17177.6  | 15.0    | 756.4   | 52.7   | -1627.5 | 199.3   |
|    | 114 | -19198.9 | -15.0   | -756.4  | -52.7  | -1284.7 | -124.3  |
| 15 | 214 | 16838.2  | -389.9  | 870.6   | -13.0  | -1857.5 | -638.5  |
|    | 114 | -18859.5 | 389.9   | -870.6  | 13.0   | -1494.7 | -864.1  |

|    |     |          |         |         |        |         |          |
|----|-----|----------|---------|---------|--------|---------|----------|
| 16 | 214 | 16789.5  | -458.8  | 778.7   | -19.6  | -1670.7 | -785.6   |
|    | 114 | -18810.8 | 458.8   | -778.7  | 19.6   | -1327.5 | -986.2   |
| 17 | 214 | 16966.5  | -283.9  | 358.1   | 23.8   | -817.9  | -438.0   |
|    | 114 | -18987.8 | 283.9   | -358.1  | -23.8  | -560.3  | -653.3   |
| 18 | 214 | 17015.2  | -214.9  | 450.0   | 30.4   | -1004.7 | -290.9   |
|    | 114 | -19036.5 | 214.9   | -450.0  | -30.4  | -727.5  | -531.3   |
|    |     |          |         |         |        |         |          |
| 1  | 15  | 65541.3  | -317.1  | -31.9   | 9.2    | -25.9   | -1018.1  |
|    | 115 | -63289.1 | 317.1   | 31.9    | -9.2   | 131.1   | -28.3    |
| 2  | 15  | 40241.9  | 685.9   | 1954.9  | -46.3  | -3664.2 | -2539.7  |
|    | 115 | -38509.4 | -685.9  | -1954.9 | 46.3   | -2787.6 | 523.3    |
| 3  | 15  | 41809.8  | -263.7  | 1418.6  | -90.0  | -2669.3 | -5129.9  |
|    | 115 | -40077.3 | 263.7   | -1418.6 | 90.0   | -2012.4 | -70.7    |
| 4  | 15  | 41055.6  | 245.1   | 2028.7  | -2.8   | -3800.7 | -848.1   |
|    | 115 | -39323.1 | -245.1  | -2028.7 | 2.8    | -2894.5 | 386.2    |
| 5  | 15  | 42819.2  | -854.1  | 1622.5  | -39.0  | -3045.6 | -2595.1  |
|    | 115 | -41086.7 | 854.1   | -1622.5 | 39.0   | -2309.2 | -257.1   |
| 6  | 15  | 46120.4  | -2978.2 | 601.0   | -166.9 | -1147.3 | -8363.1  |
|    | 115 | -44387.9 | 2978.2  | -601.0  | 166.9  | -836.4  | -1621.0  |
| 7  | 15  | 47688.3  | -3927.8 | 64.7    | -210.7 | -152.4  | -10953.3 |
|    | 115 | -45955.8 | 3927.8  | -64.7   | 210.7  | -61.2   | -2215.0  |
| 8  | 15  | 46282.1  | -2920.3 | 240.9   | -148.5 | -484.4  | -9482.1  |
|    | 115 | -44549.6 | 2920.3  | -240.9  | 148.5  | -310.5  | -1593.9  |
| 9  | 15  | 48045.6  | -4019.5 | -165.3  | -184.7 | 270.7   | -11229.1 |
|    | 115 | -46313.1 | 4019.5  | 165.3   | 184.7  | 274.8   | -2237.2  |
| 10 | 15  | 48898.7  | -222.7  | -18.3   | 6.9    | -26.3   | -727.7   |
|    | 115 | -47166.2 | 222.7   | 18.3    | -6.9   | 86.7    | -7.2     |
| 11 | 15  | 41325.4  | -662.4  | -49.6   | -31.6  | 55.2    | -1891.4  |
|    | 115 | -39592.9 | 662.4   | 49.6    | 31.6   | 108.4   | 159.0    |
| 12 | 15  | 41163.8  | -921.2  | -162.9  | -39.1  | 263.9   | -2589.8  |
|    | 115 | -39431.3 | 921.2   | 162.9   | 39.1   | 273.7   | 202.2    |
| 13 | 15  | 42660.8  | 410.2   | 69.6    | 44.1   | -165.6  | 940.5    |
|    | 115 | -40928.3 | -410.2  | -69.6   | -44.1  | -64.1   | -40.4    |
| 14 | 15  | 42822.5  | 669.0   | 183.0   | 51.6   | -374.3  | 1638.8   |
|    | 115 | -41090.0 | -669.0  | -183.0  | -51.6  | -229.4  | -83.6    |
| 15 | 15  | 41864.2  | 200.3   | 328.2   | -6.5   | -640.6  | 436.3    |
|    | 115 | -40131.7 | -200.3  | -328.2  | 6.5    | -442.6  | 15.0     |
| 16 | 15  | 41702.6  | -58.5   | 214.9   | -14.0  | -431.9  | -262.0   |
|    | 115 | -39970.1 | 58.5    | -214.9  | 14.0   | -277.3  | 58.2     |
| 17 | 15  | 42122.0  | -452.5  | -308.1  | 19.0   | 530.2   | -1387.2  |
|    | 115 | -40389.5 | 452.5   | 308.1   | -19.0  | 486.9   | 103.6    |
| 18 | 15  | 42283.7  | -193.7  | -194.8  | 26.5   | 321.5   | -688.9   |
|    | 115 | -40551.2 | 193.7   | 194.8   | -26.5  | 321.6   | 60.4     |
|    |     |          |         |         |        |         |          |
| 1  | 215 | 36611.3  | -73.4   | -187.9  | 7.8    | 394.8   | 29.4     |
|    | 115 | -39238.9 | 73.4    | 187.9   | -7.8   | 328.6   | -311.8   |
| 2  | 215 | 20776.0  | 309.3   | 1350.0  | -69.3  | -2606.3 | 800.2    |
|    | 115 | -22797.2 | -309.3  | -1350.0 | 69.3   | -2592.6 | 420.8    |
| 3  | 215 | 21933.9  | 687.5   | 945.8   | -123.7 | -1812.8 | 1565.7   |
|    | 115 | -23955.1 | -687.5  | -945.8  | 123.7  | -1829.5 | 1134.5   |
| 4  | 215 | 21297.9  | 175.4   | 1395.9  | -22.3  | -2692.0 | 636.2    |
|    | 115 | -23319.1 | -175.4  | -1395.9 | 22.3   | -2684.1 | 131.4    |
| 5  | 215 | 22542.4  | 486.8   | 1086.6  | -70.4  | -2087.4 | 1329.7   |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 115 | -24563.6 | -486.8  | -1086.6 | 70.4   | -2097.8 | 682.1   |
| 6  | 215 | 24924.3  | 1347.3  | 318.9   | -229.4 | -591.1  | 3111.9  |
|    | 115 | -26945.6 | -1347.3 | -318.9  | 229.4  | -638.4  | 2256.6  |
| 7  | 215 | 26082.2  | 1725.5  | -85.3   | -283.9 | 202.4   | 3877.5  |
|    | 115 | -28103.5 | -1725.5 | 85.3    | 283.9  | 124.8   | 2970.2  |
| 8  | 215 | 25157.6  | 1436.1  | 48.7    | -203.8 | -47.0   | 3188.0  |
|    | 115 | -27178.9 | -1436.1 | -48.7   | 203.8  | -140.1  | 2510.0  |
| 9  | 215 | 26402.1  | 1747.5  | -260.6  | -251.9 | 557.5   | 3881.6  |
|    | 115 | -28423.4 | -1747.5 | 260.6   | 251.9  | 446.1   | 3060.8  |
| 10 | 215 | 27107.7  | -61.2   | -139.8  | 5.9    | 297.7   | 6.9     |
|    | 115 | -29129.0 | 61.2    | 139.8   | -5.9   | 240.5   | -242.6  |
| 11 | 215 | 21880.9  | 17.7    | -155.5  | -35.2  | 340.1   | 38.4    |
|    | 115 | -23902.1 | -17.7   | 155.5   | 35.2   | 258.6   | -27.5   |
| 12 | 215 | 21810.2  | 68.9    | -237.1  | -41.9  | 502.6   | 91.2    |
|    | 115 | -23831.4 | -68.9   | 237.1   | 41.9   | 411.0   | 96.8    |
| 13 | 215 | 22735.9  | -183.9  | -80.8   | 46.0   | 200.6   | -168.2  |
|    | 115 | -24757.2 | 183.9   | 80.8    | -46.0  | 110.4   | -482.6  |
| 14 | 215 | 22806.6  | -235.1  | 0.8     | 52.7   | 38.1    | -221.0  |
|    | 115 | -24827.9 | 235.1   | -0.8    | -52.7  | -41.9   | -606.8  |
| 15 | 215 | 22116.6  | -152.7  | 116.6   | -13.0  | -201.5  | -137.7  |
|    | 115 | -24137.9 | 152.7   | -116.6  | 13.0   | -249.2  | -441.6  |
| 16 | 215 | 22045.9  | -101.6  | 35.0    | -19.6  | -39.0   | -84.9   |
|    | 115 | -24067.1 | 101.6   | -35.0   | 19.6   | -96.8   | -317.4  |
| 17 | 215 | 22500.2  | -13.5   | -352.9  | 23.8   | 742.2   | 7.9     |
|    | 115 | -24521.4 | 13.5    | 352.9   | -23.8  | 618.3   | -68.4   |
| 18 | 215 | 22570.9  | -64.6   | -271.3  | 30.4   | 579.7   | -44.9   |
|    | 115 | -24592.2 | 64.6    | 271.3   | -30.4  | 465.9   | -192.7  |
|    |     |          |         |         |        |         |         |
| 1  | 315 | 6134.0   | 108.3   | -1624.4 | -11.6  | 2891.0  | 390.6   |
|    | 215 | -8181.5  | -108.3  | 1624.4  | 11.6   | 1982.3  | -65.9   |
| 2  | 315 | 3189.2   | -73.1   | 194.9   | -20.0  | -23.4   | -117.5  |
|    | 215 | -4764.2  | 73.1    | -194.9  | 20.0   | -563.5  | -141.0  |
| 3  | 315 | 3867.5   | 174.5   | -71.1   | -22.8  | 386.7   | 375.9   |
|    | 215 | -5442.5  | -174.5  | 71.1    | 22.8   | -175.3  | -911.7  |
| 4  | 315 | 3455.7   | 351.1   | 315.6   | 71.6   | -197.7  | 454.2   |
|    | 215 | -5030.7  | -351.1  | -315.6  | -71.6  | -751.6  | 589.1   |
| 5  | 315 | 4158.9   | 662.5   | 89.8    | 112.3  | 155.4   | 1080.3  |
|    | 215 | -5733.9  | -662.5  | -89.8   | -112.3 | -426.9  | 356.1   |
| 6  | 315 | 5533.5   | 965.0   | -557.9  | 115.4  | 1153.8  | 1969.4  |
|    | 215 | -7108.5  | -965.0  | 557.9   | -115.4 | 518.7   | -917.8  |
| 7  | 315 | 6211.8   | 1212.6  | -823.9  | 112.6  | 1563.9  | 2462.8  |
|    | 215 | -7786.8  | -1212.6 | 823.9   | -112.6 | 906.9   | -1688.4 |
| 8  | 315 | 5716.6   | 1176.5  | -571.0  | 62.2   | 1169.2  | 2098.9  |
|    | 215 | -7291.6  | -1176.5 | 571.0   | -62.2  | 542.3   | -1979.8 |
| 9  | 315 | 6419.9   | 1487.9  | -796.9  | 102.8  | 1522.3  | 2724.9  |
|    | 215 | -7994.9  | -1487.9 | 796.9   | -102.8 | 867.0   | -2212.8 |
| 10 | 315 | 4634.3   | 82.8    | -1214.3 | -7.9   | 2164.2  | 296.5   |
|    | 215 | -6209.3  | -82.8   | 1214.3  | 7.9    | 1478.6  | -48.0   |
| 11 | 315 | 4031.7   | -294.0  | -1156.6 | -86.3  | 2040.5  | -215.0  |
|    | 215 | -5606.7  | 294.0   | 1156.6  | 86.3   | 1429.5  | -693.6  |
| 12 | 315 | 4011.5   | -353.4  | -1192.6 | -125.5 | 2091.3  | -332.3  |
|    | 215 | -5586.5  | 353.4   | 1192.6  | 125.5  | 1486.7  | -1171.7 |
| 13 | 315 | 4470.7   | 455.6   | -950.9  | 79.5   | 1745.0  | 771.2   |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    | 215 | -6045.7  | -455.6  | 950.9   | -79.5  | 1107.4  | 622.0  |
| 14 | 315 | 4490.9   | 514.9   | -914.9  | 118.6  | 1694.2  | 888.6  |
|    | 215 | -6065.9  | -514.9  | 914.9   | -118.6 | 1050.2  | 1100.1 |
| 15 | 315 | 4099.1   | -96.1   | -1036.6 | 44.2   | 1871.1  | 176.0  |
|    | 215 | -5674.1  | 96.1    | 1036.6  | -44.2  | 1238.9  | 900.3  |
| 16 | 315 | 4078.9   | -155.5  | -1072.6 | 5.1    | 1921.9  | 58.7   |
|    | 215 | -5653.9  | 155.5   | 1072.6  | -5.1   | 1296.1  | 422.2  |
| 17 | 315 | 4403.3   | 257.6   | -1070.9 | -51.1  | 1914.3  | 380.2  |
|    | 215 | -5978.3  | -257.6  | 1070.9  | 51.1   | 1298.0  | -972.0 |
| 18 | 315 | 4423.5   | 317.0   | -1034.9 | -11.9  | 1863.5  | 497.5  |
|    | 215 | -5998.5  | -317.0  | 1034.9  | 11.9   | 1240.8  | -493.8 |
|    |     |          |         |         |        |         |        |
| 1  | 16  | 56596.4  | 532.6   | 125.3   | 7.2    | -507.3  | 546.4  |
|    | 116 | -54665.9 | -532.6  | -125.3  | -7.2   | 94.0    | 1211.4 |
| 2  | 16  | 31663.5  | 1937.7  | 620.1   | -36.3  | -1751.6 | 3115.0 |
|    | 116 | -30178.5 | -1937.7 | -620.1  | 36.3   | -300.9  | 3279.7 |
| 3  | 16  | 34270.0  | 1491.0  | 1497.7  | -70.5  | -3923.7 | 2341.3 |
|    | 116 | -32785.0 | -1491.0 | -1497.7 | 70.5   | -1042.8 | 2579.2 |
| 4  | 16  | 31803.8  | 1998.4  | 58.5    | -2.2   | -425.7  | 3220.6 |
|    | 116 | -30318.8 | -1998.4 | -58.5   | 2.2    | 234.0   | 3374.2 |
| 5  | 16  | 34449.0  | 1660.8  | 742.2   | -30.5  | -2121.8 | 2635.6 |
|    | 116 | -32964.0 | -1660.8 | -742.2  | 30.5   | -344.2  | 2845.0 |
| 6  | 16  | 40480.9  | 812.4   | 2899.1  | -130.8 | -7405.1 | 1165.0 |
|    | 116 | -38995.9 | -812.4  | -2899.1 | 130.8  | -2228.2 | 1515.9 |
| 7  | 16  | 43087.4  | 365.6   | 3776.7  | -165.0 | -9577.2 | 391.2  |
|    | 116 | -41602.4 | -365.6  | -3776.7 | 165.0  | -2970.0 | 815.5  |
| 8  | 16  | 40492.3  | 509.3   | 2983.9  | -116.3 | -7665.9 | 641.4  |
|    | 116 | -39007.3 | -509.3  | -2983.9 | 116.3  | -2238.8 | 1039.2 |
| 9  | 16  | 43137.5  | 171.7   | 3667.6  | -144.6 | -9361.9 | 56.4   |
|    | 116 | -41652.5 | -171.7  | -3667.6 | 144.6  | -2817.0 | 510.1  |
| 10 | 16  | 42343.7  | 392.9   | 84.1    | 5.4    | -360.1  | 399.9  |
|    | 116 | -40858.7 | -392.9  | -84.1   | -5.4   | 82.7    | 896.6  |
| 11 | 16  | 36805.0  | 267.3   | 502.7   | -24.7  | -1338.1 | 222.0  |
|    | 116 | -35320.0 | -267.3  | -502.7  | 24.7   | -327.9  | 660.2  |
| 12 | 16  | 36771.8  | 172.0   | 665.9   | -30.6  | -1738.4 | 57.2   |
|    | 116 | -35286.8 | -172.0  | -665.9  | 30.6   | -465.4  | 510.5  |
| 13 | 16  | 37035.5  | 365.0   | -446.1  | 34.6   | 891.5   | 392.3  |
|    | 116 | -35550.5 | -365.0  | 446.1   | -34.6  | 587.8   | 812.4  |
| 14 | 16  | 37068.7  | 460.3   | -609.4  | 40.4   | 1291.9  | 557.1  |
|    | 116 | -35583.7 | -460.3  | 609.4   | -40.4  | 725.3   | 962.1  |
| 15 | 16  | 36915.6  | 585.0   | -41.6   | -5.1   | -3.7    | 771.3  |
|    | 116 | -35430.6 | -585.0  | 41.6    | 5.1    | 130.7   | 1159.3 |
| 16 | 16  | 36882.4  | 489.7   | 121.7   | -11.0  | -404.0  | 606.5  |
|    | 116 | -35397.4 | -489.7  | -121.7  | 11.0   | -6.9    | 1009.6 |
| 17 | 16  | 36924.9  | 47.4    | 98.2    | 14.9   | -442.8  | -157.1 |
|    | 116 | -35439.9 | -47.4   | -98.2   | -14.9  | 129.2   | 313.3  |
| 18 | 16  | 36958.1  | 142.7   | -65.1   | 20.8   | -42.5   | 7.7    |
|    | 116 | -35473.1 | -142.7  | 65.1    | -20.8  | 266.8   | 463.0  |
|    |     |          |         |         |        |         |        |
| 1  | 216 | 33886.8  | 952.2   | 151.3   | 6.1    | -232.6  | 1918.0 |
|    | 116 | -36139.1 | -952.2  | -151.3  | -6.1   | -350.0  | 1747.8 |
| 2  | 216 | 18819.8  | 1968.0  | -331.1  | -54.3  | 761.1   | 3808.7 |
|    | 116 | -20552.3 | -1968.0 | 331.1   | 54.3   | 526.1   | 3768.3 |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
| 3  | 216 | 20186.2  | 1580.2  | -858.3  | -96.9  | 1869.6  | 3064.5 |
|    | 116 | -21918.7 | -1580.2 | 858.3   | 96.9   | 1449.4  | 3019.1 |
| 4  | 216 | 18864.7  | 2016.3  | -121.6  | -17.5  | 325.0   | 3899.7 |
|    | 116 | -20597.2 | -2016.3 | 121.6   | 17.5   | 177.7   | 3863.3 |
| 5  | 216 | 20259.8  | 1718.8  | -570.1  | -55.1  | 1290.7  | 3329.8 |
|    | 116 | -21992.3 | -1718.8 | 570.1   | 55.1   | 955.4   | 3287.9 |
| 6  | 216 | 23470.4  | 976.4   | -1825.9 | -179.7 | 3980.1  | 1909.2 |
|    | 116 | -25202.9 | -976.4  | 1825.9  | 179.7  | 3118.4  | 1850.3 |
| 7  | 216 | 24836.7  | 588.6   | -2353.1 | -222.4 | 5088.6  | 1165.1 |
|    | 116 | -26569.2 | -588.6  | 2353.1  | 222.4  | 4041.7  | 1101.1 |
| 8  | 216 | 23419.2  | 723.5   | -1878.8 | -159.7 | 4020.1  | 1419.3 |
|    | 116 | -25151.7 | -723.5  | 1878.8  | 159.7  | 3255.5  | 1366.0 |
| 9  | 216 | 24814.3  | 426.0   | -2327.3 | -197.3 | 4985.8  | 849.5  |
|    | 116 | -26546.8 | -426.0  | 2327.3  | 197.3  | 4033.2  | 790.6  |
| 10 | 216 | 25214.9  | 700.6   | 119.6   | 4.6    | -187.2  | 1407.9 |
|    | 116 | -26947.4 | -700.6  | -119.6  | -4.6   | -273.4  | 1289.4 |
| 11 | 216 | 21314.4  | 516.5   | -36.7   | -27.6  | 129.2   | 1026.9 |
|    | 116 | -23046.9 | -516.5  | 36.7    | 27.6   | -10.8   | 961.5  |
| 12 | 216 | 21289.5  | 438.3   | -100.7  | -32.8  | 245.3   | 876.1  |
|    | 116 | -23022.0 | -438.3  | 100.7   | 32.8   | 104.3   | 811.1  |
| 13 | 216 | 21363.3  | 595.0   | 305.3   | 36.0   | -579.2  | 1175.0 |
|    | 116 | -23095.8 | -595.0  | -305.3  | -36.0  | -573.5  | 1115.9 |
| 14 | 216 | 21388.2  | 673.2   | 369.4   | 41.3   | -695.3  | 1325.8 |
|    | 116 | -23120.7 | -673.2  | -369.4  | -41.3  | -688.6  | 1266.2 |
| 15 | 216 | 21397.3  | 777.2   | 176.8   | -10.2  | -257.9  | 1529.6 |
|    | 116 | -23129.8 | -777.2  | -176.8  | 10.2   | -394.3  | 1462.8 |
| 16 | 216 | 21372.5  | 699.0   | 112.7   | -15.4  | -141.8  | 1378.8 |
|    | 116 | -23105.0 | -699.0  | -112.7  | 15.4   | -279.3  | 1312.4 |
| 17 | 216 | 21280.3  | 334.3   | 91.9    | 18.6   | -192.1  | 672.3  |
|    | 116 | -23012.8 | -334.3  | -91.9   | -18.6  | -190.0  | 614.6  |
| 18 | 216 | 21305.2  | 412.5   | 155.9   | 23.8   | -308.3  | 823.1  |
|    | 116 | -23037.7 | -412.5  | -155.9  | -23.8  | -305.0  | 765.0  |
|    |     |          |         |         |        |         |        |
| 1  | 316 | 9318.8   | 1261.4  | -178.7  | -9.1   | 464.1   | 1788.0 |
|    | 216 | -11073.8 | -1261.4 | 178.7   | 9.1    | 72.0    | 1996.2 |
| 2  | 316 | 7164.4   | 2109.6  | 188.1   | -15.7  | -200.0  | 3219.7 |
|    | 216 | -8514.4  | -2109.6 | -188.1  | 15.7   | -438.8  | 3109.6 |
| 3  | 316 | 7331.8   | 1837.7  | -91.1   | -17.9  | 356.4   | 2791.9 |
|    | 216 | -8681.8  | -1837.7 | 91.1    | 17.9   | -593.7  | 2721.5 |
| 4  | 316 | 7191.7   | 2252.7  | 166.2   | 56.1   | -49.8   | 3439.3 |
|    | 216 | -8541.7  | -2252.7 | -166.2  | -56.1  | -475.3  | 3319.1 |
| 5  | 316 | 7384.4   | 2028.2  | -105.0  | 87.9   | 549.3   | 3084.4 |
|    | 216 | -8734.4  | -2028.2 | 105.0   | -87.9  | -646.3  | 3000.5 |
| 6  | 316 | 7806.7   | 1361.3  | -715.9  | 90.4   | 1797.0  | 2036.7 |
|    | 216 | -9156.7  | -1361.3 | 715.9   | -90.4  | -1008.8 | 2047.5 |
| 7  | 316 | 7974.1   | 1089.4  | -995.1  | 88.2   | 2353.4  | 1608.9 |
|    | 216 | -9324.1  | -1089.4 | 995.1   | -88.2  | -1163.7 | 1659.4 |
| 8  | 316 | 7749.7   | 1346.2  | -764.5  | 48.7   | 1805.1  | 2013.3 |
|    | 216 | -9099.7  | -1346.2 | 764.5   | -48.7  | -991.7  | 2025.5 |
| 9  | 316 | 7942.3   | 1121.7  | -1035.7 | 80.6   | 2404.1  | 1658.4 |
|    | 216 | -9292.3  | -1121.7 | 1035.7  | -80.6  | -1162.7 | 1706.9 |
| 10 | 316 | 7043.5   | 939.2   | -126.9  | -6.2   | 340.0   | 1337.5 |
|    | 216 | -8393.5  | -939.2  | 126.9   | 6.2    | 40.7    | 1480.1 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 11 | 316 | 6438.8   | 675.2   | -68.2   | -67.6  | 149.7   | 977.5   |
|    | 216 | -7788.8  | -675.2  | 68.2    | 67.6   | 14.1    | 1048.2  |
| 12 | 316 | 6406.8   | 632.4   | -74.8   | -98.3  | 116.9   | 911.8   |
|    | 216 | -7756.8  | -632.4  | 74.8    | 98.3   | 36.0    | 985.4   |
| 13 | 316 | 6512.4   | 920.2   | -89.5   | 62.2   | 375.4   | 1353.1  |
|    | 216 | -7862.4  | -920.2  | 89.5    | -62.2  | -66.1   | 1407.5  |
| 14 | 316 | 6544.4   | 963.0   | -82.9   | 92.9   | 408.2   | 1418.8  |
|    | 216 | -7894.4  | -963.0  | 82.9    | -92.9  | -88.0   | 1470.2  |
| 15 | 316 | 6545.6   | 818.0   | -46.1   | 34.6   | 259.1   | 1196.5  |
|    | 216 | -7895.6  | -818.0  | 46.1    | -34.6  | -58.8   | 1257.3  |
| 16 | 316 | 6513.5   | 775.1   | -52.7   | 4.0    | 226.3   | 1130.8  |
|    | 216 | -7863.5  | -775.1  | 52.7    | -4.0   | -36.9   | 1194.6  |
| 17 | 316 | 6405.6   | 777.5   | -111.6  | -40.0  | 266.0   | 1134.1  |
|    | 216 | -7755.6  | -777.5  | 111.6   | 40.0   | 6.8     | 1198.3  |
| 18 | 316 | 6437.6   | 820.3   | -105.0  | -9.3   | 298.8   | 1199.8  |
|    | 216 | -7787.6  | -820.3  | 105.0   | 9.3    | -15.1   | 1261.1  |
|    |     |          |         |         |        |         |         |
| 1  | 17  | 27385.1  | 119.1   | 223.8   | 7.2    | -215.3  | 82.3    |
|    | 117 | -25454.6 | -119.1  | -223.8  | -7.2   | -523.2  | 310.7   |
| 2  | 17  | 26427.2  | -265.8  | 2797.5  | -36.3  | -6243.6 | -567.7  |
|    | 117 | -24942.2 | 265.8   | -2797.5 | 36.3   | -3031.0 | -309.3  |
| 3  | 17  | 25944.6  | -792.4  | 2039.6  | -70.5  | -4504.5 | -1495.0 |
|    | 117 | -24459.6 | 792.4   | -2039.6 | 70.5   | -2452.8 | -1120.0 |
| 4  | 17  | 26933.7  | 51.0    | 2899.5  | -2.2   | -6478.8 | -14.4   |
|    | 117 | -25448.7 | -51.0   | -2899.5 | 2.2    | -3126.8 | 183.0   |
| 5  | 17  | 26695.5  | -378.6  | 2341.2  | -30.5  | -5180.4 | -771.2  |
|    | 117 | -25210.5 | 378.6   | -2341.2 | 30.5   | -2575.9 | -478.0  |
| 6  | 17  | 25633.1  | -1697.8 | 936.3   | -130.8 | -1915.5 | -3090.3 |
|    | 117 | -24148.1 | 1697.8  | -936.3  | 130.8  | -1194.6 | -2512.6 |
| 7  | 17  | 25150.5  | -2224.5 | 178.4   | -165.0 | -176.3  | -4017.7 |
|    | 117 | -23665.5 | 2224.5  | -178.4  | 165.0  | -616.3  | -3323.3 |
| 8  | 17  | 25324.9  | -1704.4 | 373.2   | -116.3 | -681.6  | -3105.6 |
|    | 117 | -23839.9 | 1704.4  | -373.2  | 116.3  | -1199.4 | -2519.3 |
| 9  | 17  | 25086.7  | -2134.1 | -185.2  | -144.6 | 616.9   | -3862.4 |
|    | 117 | -23601.7 | 2134.1  | 185.2   | 144.6  | -648.5  | -3180.3 |
| 10 | 17  | 20713.2  | 94.6    | 151.3   | 5.4    | -126.3  | 68.8    |
|    | 117 | -19228.2 | -94.6   | -151.3  | -5.4   | -372.9  | 243.4   |
| 11 | 17  | 18693.7  | -159.3  | -23.9   | -24.7  | 240.1   | -373.2  |
|    | 117 | -17208.7 | 159.3   | 23.9    | 24.7   | -166.7  | -152.6  |
| 12 | 17  | 18492.8  | -242.3  | -198.5  | -30.6  | 625.5   | -519.1  |
|    | 117 | -17007.8 | 242.3   | 198.5   | 30.6   | -145.5  | -280.7  |
| 13 | 17  | 19527.4  | 375.9   | 136.8   | 34.6   | -135.7  | 561.1   |
|    | 117 | -18042.4 | -375.9  | -136.8  | -34.6  | -310.4  | 679.6   |
| 14 | 17  | 19728.3  | 458.9   | 311.5   | 40.4   | -521.1  | 706.9   |
|    | 117 | -18243.3 | -458.9  | -311.5  | -40.4  | -331.6  | 807.7   |
| 15 | 17  | 19363.4  | 117.3   | 558.2   | -5.1   | -1044.7 | 112.8   |
|    | 117 | -17878.4 | -117.3  | -558.2  | 5.1    | -237.4  | 274.3   |
| 16 | 17  | 19162.5  | 34.3    | 383.6   | -11.0  | -659.2  | -33.0   |
|    | 117 | -17677.5 | -34.3   | -383.6  | 11.0   | -216.2  | 146.3   |
| 17 | 17  | 18857.7  | 99.3    | -445.3  | 14.9   | 1149.0  | 75.1    |
|    | 117 | -17372.7 | -99.3   | 445.3   | -14.9  | -239.8  | 252.7   |
| 18 | 17  | 19058.6  | 182.3   | -270.6  | 20.8   | 763.6   | 220.9   |
|    | 117 | -17573.6 | -182.3  | 270.6   | -20.8  | -261.0  | 380.8   |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    |     |          |         |         |        |         |        |
| 1  | 217 | 13923.4  | -159.0  | 612.1   | 6.1    | -1373.0 | -263.5 |
|    | 117 | -16175.6 | 159.0   | -612.1  | -6.1   | -983.5  | -348.8 |
| 2  | 217 | 12949.9  | 257.2   | 2225.3  | -54.3  | -4757.0 | 528.9  |
|    | 117 | -14682.4 | -257.2  | -2225.3 | 54.3   | -3859.2 | 461.8  |
| 3  | 217 | 13042.2  | 740.6   | 1693.1  | -96.9  | -3609.7 | 1456.3 |
|    | 117 | -14774.7 | -740.6  | -1693.1 | 96.9   | -2943.6 | 1395.0 |
| 4  | 217 | 13267.7  | 24.6    | 2257.3  | -17.5  | -4815.6 | 87.2   |
|    | 117 | -15000.2 | -24.6   | -2257.3 | 17.5   | -3924.9 | 9.2    |
| 5  | 217 | 13472.5  | 428.8   | 1770.7  | -55.1  | -3767.8 | 865.9  |
|    | 117 | -15205.0 | -428.8  | -1770.7 | 55.1   | -3245.5 | 786.6  |
| 6  | 217 | 13632.6  | 1604.4  | 603.0   | -179.7 | -1264.3 | 3124.6 |
|    | 117 | -15365.1 | -1604.4 | -603.0  | 179.7  | -1594.6 | 3053.0 |
| 7  | 217 | 13724.8  | 2087.7  | 70.8    | -222.4 | -117.0  | 4052.0 |
|    | 117 | -15457.3 | -2087.7 | -70.8   | 222.4  | -679.1  | 3986.2 |
| 8  | 217 | 13575.2  | 1635.8  | 483.3   | -159.7 | -991.2  | 3178.4 |
|    | 117 | -15307.7 | -1635.8 | -483.3  | 159.7  | -873.1  | 3119.9 |
| 9  | 217 | 13780.0  | 2040.0  | -3.4    | -197.3 | 56.6    | 3957.1 |
|    | 117 | -15512.5 | -2040.0 | 3.4     | 197.3  | -193.7  | 3897.2 |
| 10 | 217 | 10470.9  | -124.9  | 444.3   | 4.6    | -993.8  | -207.8 |
|    | 117 | -12203.4 | 124.9   | -444.3  | -4.6   | -716.6  | -273.2 |
| 11 | 217 | 9120.7   | 55.4    | 296.4   | -27.6  | -656.8  | 133.7  |
|    | 117 | -10853.2 | -55.4   | -296.4  | 27.6   | -483.2  | 78.6   |
| 12 | 217 | 9029.2   | 121.3   | 170.1   | -32.8  | -573.3  | 257.3  |
|    | 117 | -10761.7 | -121.3  | -170.1  | 32.8   | -281.1  | 208.2  |
| 13 | 217 | 9642.5   | -328.7  | 350.3   | 36.0   | -763.1  | -595.3 |
|    | 117 | -11375.0 | 328.7   | -350.3  | -36.0  | -586.8  | -669.2 |
| 14 | 217 | 9734.1   | -394.6  | 476.6   | 41.3   | -846.7  | -718.8 |
|    | 117 | -11466.6 | 394.6   | -476.6  | -41.3  | -788.9  | -798.7 |
| 15 | 217 | 9425.8   | -164.1  | 717.5   | -10.2  | -935.5  | -278.1 |
|    | 117 | -11158.3 | 164.1   | -717.5  | 10.2   | -1157.0 | -353.2 |
| 16 | 217 | 9334.3   | -98.3   | 591.2   | -15.4  | -851.9  | -154.6 |
|    | 117 | -11066.8 | 98.3    | -591.2  | 15.4   | -954.9  | -223.6 |
| 17 | 217 | 9337.4   | -109.1  | -70.8   | 18.6   | -484.5  | -183.4 |
|    | 117 | -11069.9 | 109.1   | 70.8    | -18.6  | 87.0    | -237.4 |
| 18 | 217 | 9428.9   | -175.0  | 55.5    | 23.8   | -568.0  | -307.0 |
|    | 117 | -11161.4 | 175.0   | -55.5   | -23.8  | -115.1  | -366.9 |
|    |     |          |         |         |        |         |        |
| 1  | 317 | 2802.2   | 68.2    | 582.6   | -9.1   | -1026.6 | 206.6  |
|    | 217 | -4557.2  | -68.2   | -582.6  | 9.1    | -721.1  | -2.1   |
| 2  | 317 | 2788.5   | 244.5   | 1361.7  | -15.7  | -2555.3 | 446.9  |
|    | 217 | -4138.5  | -244.5  | -1361.7 | 15.7   | 848.0   | 286.8  |
| 3  | 317 | 3107.6   | 666.3   | 1195.8  | -17.9  | -2179.9 | 1074.9 |
|    | 217 | -4457.6  | -666.3  | -1195.8 | 17.9   | 220.1   | 924.4  |
| 4  | 317 | 2860.0   | -106.7  | 1565.8  | 56.1   | -2846.0 | -67.8  |
|    | 217 | -4210.0  | 106.7   | -1565.8 | -56.1  | 1124.8  | -252.4 |
| 5  | 317 | 3182.8   | 181.3   | 1461.9  | 87.9   | -2564.6 | 365.1  |
|    | 217 | -4532.8  | -181.3  | -1461.9 | -87.9  | 663.6   | 178.9  |
| 6  | 317 | 3864.3   | 1204.7  | 1015.3  | 90.4   | -1617.3 | 1889.9 |
|    | 217 | -5214.3  | -1204.7 | -1015.3 | -90.4  | -689.5  | 1724.5 |
| 7  | 317 | 4183.4   | 1626.5  | 849.4   | 88.2   | -1241.9 | 2517.9 |
|    | 217 | -5533.4  | -1626.5 | -849.4  | -88.2  | -1317.3 | 2362.1 |
| 8  | 317 | 3923.7   | 1299.4  | 1012.7  | 48.7   | -1594.6 | 2025.6 |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 217 | -5273.7  | -1299.4 | -1012.7 | -48.7  | -968.1  | 1873.0  |
| 9  | 317 | 4246.4   | 1587.5  | 908.8   | 80.6   | -1313.2 | 2458.5  |
|    | 217 | -5596.4  | -1587.5 | -908.8  | -80.6  | -1429.3 | 2304.3  |
| 10 | 317 | 2102.3   | 46.3    | 435.5   | -6.2   | -762.3  | 149.8   |
|    | 217 | -3452.3  | -46.3   | -435.5  | 6.2    | -544.2  | -10.8   |
| 11 | 317 | 1799.2   | 325.0   | 196.0   | -67.6  | -384.5  | 557.2   |
|    | 217 | -3149.2  | -325.0  | -196.0  | 67.6   | -758.0  | 418.0   |
| 12 | 317 | 1795.9   | 440.2   | 136.9   | -98.3  | -297.9  | 725.4   |
|    | 217 | -3145.9  | -440.2  | -136.9  | 98.3   | -906.8  | 595.5   |
| 13 | 317 | 1921.0   | -287.7  | 560.1   | 62.2   | -890.3  | -340.6  |
|    | 217 | -3271.0  | 287.7   | -560.1  | -62.2  | -235.3  | -522.7  |
| 14 | 317 | 1924.3   | -402.9  | 619.2   | 92.9   | -976.9  | -508.8  |
|    | 217 | -3274.3  | 402.9   | -619.2  | -92.9  | -86.5   | -700.2  |
| 15 | 317 | 1810.2   | -59.1   | 393.0   | 34.6   | -673.3  | -3.6    |
|    | 217 | -3160.2  | 59.1    | -393.0  | -34.6  | -262.1  | -173.8  |
| 16 | 317 | 1806.9   | 56.1    | 333.9   | 4.0    | -586.7  | 164.6   |
|    | 217 | -3156.9  | -56.1   | -333.9  | -4.0   | -410.9  | 3.8     |
| 17 | 317 | 1910.0   | 96.4    | 363.0   | -40.0  | -601.5  | 220.2   |
|    | 217 | -3260.0  | -96.4   | -363.0  | 40.0   | -731.2  | 69.0    |
| 18 | 317 | 1913.3   | -18.8   | 422.1   | -9.3   | -688.1  | 52.0    |
|    | 217 | -3263.3  | 18.8    | -422.1  | 9.3    | -582.4  | -108.5  |
| 1  | 118 | 30348.7  | -194.5  | -1401.4 | 7.2    | 3424.4  | 387.8   |
|    | 18  | -32279.2 | 194.5   | 1401.4  | -7.2   | 1200.2  | -1029.5 |
| 2  | 118 | 16373.2  | -825.3  | 463.4   | -36.3  | 323.0   | -253.6  |
|    | 18  | -17858.2 | 825.3   | -463.4  | 36.3   | -1853.8 | -2476.6 |
| 3  | 118 | 17557.8  | -425.9  | 236.4   | -70.5  | 624.6   | 84.6    |
|    | 18  | -19042.8 | 425.9   | -236.4  | 70.5   | -1406.2 | -1483.4 |
| 4  | 118 | 17019.8  | -165.2  | 584.0   | -2.2   | 163.3   | 353.0   |
|    | 18  | -18504.8 | 165.2   | -584.0  | 2.2    | -2091.9 | -894.2  |
| 5  | 118 | 18303.7  | 433.5   | 181.2   | -30.5  | 703.3   | 879.9   |
|    | 18  | -19788.7 | -433.5  | -181.2  | 30.5   | -1302.2 | 567.7   |
| 6  | 118 | 20652.9  | 1170.4  | -879.1  | -130.8 | 2122.9  | 1502.8  |
|    | 18  | -22137.9 | -1170.4 | 879.1   | 130.8  | 778.6   | 2396.3  |
| 7  | 118 | 21837.4  | 1569.8  | -1106.1 | -165.0 | 2424.5  | 1841.0  |
|    | 18  | -23322.4 | -1569.8 | 1106.1  | 165.0  | 1226.2  | 3389.5  |
| 8  | 118 | 20968.3  | 1165.9  | -172.7  | -116.3 | 1168.6  | 1480.5  |
|    | 18  | -22453.3 | -1165.9 | 172.7   | 116.3  | -599.7  | 2416.5  |
| 9  | 118 | 22252.2  | 1764.7  | -575.4  | -144.6 | 1708.6  | 2007.4  |
|    | 18  | -23737.2 | -1764.7 | 575.4   | 144.6  | 190.0   | 3878.4  |
| 10 | 118 | 22624.6  | -148.9  | -1030.7 | 5.4    | 2525.3  | 297.2   |
|    | 18  | -24109.6 | 148.9   | 1030.7  | -5.4   | 875.8   | -788.7  |
| 11 | 118 | 18809.2  | -713.8  | -911.7  | -24.7  | 2157.6  | -233.9  |
|    | 18  | -20294.2 | 713.8   | 911.7   | 24.7   | 850.8   | -2131.4 |
| 12 | 118 | 18713.3  | -896.3  | -961.8  | -30.6  | 1935.4  | -403.8  |
|    | 18  | -20198.3 | 896.3   | 961.8   | 30.6   | 948.9   | -2562.4 |
| 13 | 118 | 19882.4  | 421.9   | -718.9  | 34.6   | 1902.6  | 818.7   |
|    | 18  | -21367.4 | -421.9  | 718.9   | -34.6  | 469.8   | 583.2   |
| 14 | 118 | 19978.3  | 604.3   | -668.7  | 40.4   | 2124.9  | 988.7   |
|    | 18  | -21463.3 | -604.3  | 668.7   | -40.4  | 371.7   | 1014.2  |
| 15 | 118 | 19128.8  | -105.7  | -744.6  | -5.1   | 2898.5  | 332.7   |
|    | 18  | -20613.8 | 105.7   | 744.6   | 5.1    | 524.1   | -695.0  |
| 16 | 118 | 19032.9  | -288.1  | -794.7  | -11.0  | 2676.2  | 162.8   |

|    |     |          |         |         |        |          |         |
|----|-----|----------|---------|---------|--------|----------|---------|
|    | 18  | -20517.9 | 288.1   | 794.7   | 11.0   | 622.1    | -1125.9 |
| 17 | 118 | 19562.8  | -186.3  | -886.0  | 14.9   | 1161.8   | 252.1   |
|    | 18  | -21047.8 | 186.3   | 886.0   | -14.9  | 796.6    | -853.2  |
| 18 | 118 | 19658.6  | -3.8    | -835.8  | 20.8   | 1384.0   | 422.1   |
|    | 18  | -21143.6 | 3.8     | 835.8   | -20.8  | 698.5    | -422.3  |
|    |     |          |         |         |        |          |         |
| 1  | 218 | 12689.4  | 619.2   | -3002.7 | 6.1    | 6102.1   | 1106.9  |
|    | 118 | -14941.6 | -619.2  | 3002.7  | -6.1   | 5458.5   | 1277.1  |
| 2  | 218 | 6619.3   | -94.4   | -741.2  | -54.3  | 1444.8   | -364.7  |
|    | 118 | -8351.8  | 94.4    | 741.2   | 54.3   | 1407.9   | 4.9     |
| 3  | 218 | 7110.1   | 209.5   | -1095.0 | -96.9  | 2176.7   | 283.6   |
|    | 118 | -8842.6  | -209.5  | 1095.0  | 96.9   | 2038.3   | 526.0   |
| 4  | 218 | 6901.3   | 343.4   | -658.6  | -17.5  | 1270.5   | 558.9   |
|    | 118 | -8633.8  | -343.4  | 658.6   | 17.5   | 1264.3   | 784.5   |
| 5  | 218 | 7436.2   | 764.4   | -984.8  | -55.1  | 1943.9   | 1458.8  |
|    | 118 | -9168.7  | -764.4  | 984.8   | 55.1   | 1847.2   | 1510.0  |
| 6  | 218 | 8402.2   | 1308.6  | -1828.5 | -179.7 | 3689.4   | 2635.3  |
|    | 118 | -10134.7 | -1308.6 | 1828.5  | 179.7  | 3350.8   | 2423.3  |
| 7  | 218 | 8893.0   | 1612.6  | -2182.3 | -222.4 | 4421.3   | 3283.5  |
|    | 118 | -10625.5 | -1612.6 | 2182.3  | 222.4  | 3981.3   | 2944.4  |
| 8  | 218 | 8537.4   | 1356.6  | -1837.9 | -159.7 | 3710.4   | 2719.7  |
|    | 118 | -10269.9 | -1356.6 | 1837.9  | 159.7  | 3365.9   | 2521.6  |
| 9  | 218 | 9072.3   | 1777.5  | -2164.1 | -197.3 | 4383.7   | 3619.7  |
|    | 118 | -10804.8 | -1777.5 | 2164.1  | 197.3  | 3948.8   | 3247.1  |
| 10 | 218 | 9410.6   | 470.5   | -2211.7 | 4.6    | 4490.2   | 839.2   |
|    | 118 | -11143.1 | -470.5  | 2211.7  | -4.6   | 4024.8   | 972.4   |
| 11 | 218 | 7581.5   | 71.3    | -1831.5 | -27.6  | 3703.2   | -3.5    |
|    | 118 | -9314.0  | -71.3   | 1831.5  | 27.6   | 3348.2   | 441.9   |
| 12 | 218 | 7539.1   | -36.7   | -1865.6 | -32.8  | 3774.7   | -236.7  |
|    | 118 | -9271.6  | 36.7    | 1865.6  | 32.8   | 3407.7   | 331.6   |
| 13 | 218 | 8050.3   | 817.2   | -1699.2 | 36.0   | 3423.7   | 1570.1  |
|    | 118 | -9782.8  | -817.2  | 1699.2  | -36.0  | 3118.2   | 1412.1  |
| 14 | 218 | 8092.7   | 925.2   | -1665.1 | 41.3   | 3352.1   | 1803.3  |
|    | 118 | -9825.2  | -925.2  | 1665.1  | -41.3  | 3058.7   | 1522.4  |
| 15 | 218 | 7722.6   | 431.2   | -1718.1 | -10.2  | 3464.6   | 773.8   |
|    | 118 | -9455.1  | -431.2  | 1718.1  | 10.2   | 3149.9   | 809.5   |
| 16 | 218 | 7680.2   | 323.2   | -1752.1 | -15.4  | 3536.2   | 540.6   |
|    | 118 | -9412.7  | -323.2  | 1752.1  | 15.4   | 3209.4   | 699.2   |
| 17 | 218 | 7909.3   | 457.3   | -1812.6 | 18.6   | 3662.2   | 792.8   |
|    | 118 | -9641.8  | -457.3  | 1812.6  | -18.6  | 3316.5   | 1044.5  |
| 18 | 218 | 7951.6   | 565.3   | -1778.6 | 23.8   | 3590.6   | 1026.0  |
|    | 118 | -9684.1  | -565.3  | 1778.6  | -23.8  | 3257.1   | 1154.8  |
|    |     |          |         |         |        |          |         |
| 1  | 19  | 57070.2  | -210.0  | 888.2   | 7.2    | -856.7   | 25.1    |
|    | 119 | -55139.7 | 210.0   | -888.2  | -7.2   | -2074.4  | -718.0  |
| 2  | 19  | 34836.8  | 4.3     | 4631.3  | -36.3  | -9611.5  | 424.3   |
|    | 119 | -33351.8 | -4.3    | -4631.3 | 36.3   | -5691.9  | -410.1  |
| 3  | 19  | 35502.0  | -145.4  | 3234.4  | -70.5  | -6554.0  | 57.8    |
|    | 119 | -34017.0 | 145.4   | -3234.4 | 70.5   | -4133.1  | -540.2  |
| 4  | 19  | 34992.3  | -145.0  | 4953.9  | -2.2   | -10312.0 | 65.8    |
|    | 119 | -33507.3 | 145.0   | -4953.9 | 2.2    | -6054.2  | -545.8  |
| 5  | 19  | 35673.5  | -333.8  | 3667.4  | -30.5  | -7500.2  | -393.4  |
|    | 119 | -34188.5 | 333.8   | -3667.4 | 30.5   | -4612.1  | -712.4  |

|    |     |          |        |         |        |         |         |
|----|-----|----------|--------|---------|--------|---------|---------|
| 6  | 19  | 37107.6  | -625.1 | 343.0   | -130.8 | -238.8  | -1106.2 |
|    | 119 | -35622.6 | 625.1  | -343.0  | 130.8  | -884.9  | -965.4  |
| 7  | 19  | 37772.8  | -774.8 | -1053.8 | -165.0 | 2818.7  | -1472.6 |
|    | 119 | -36287.8 | 774.8  | 1053.8  | 165.0  | 673.9   | -1095.5 |
| 8  | 19  | 37209.3  | -643.9 | 297.6   | -116.3 | -120.4  | -1155.7 |
|    | 119 | -35724.3 | 643.9  | -297.6  | 116.3  | -858.3  | -979.4  |
| 9  | 19  | 37890.6  | -832.8 | -988.8  | -144.6 | 2691.4  | -1614.9 |
|    | 119 | -36405.6 | 832.8  | 988.8   | 144.6  | 583.8   | -1146.0 |
| 10 | 19  | 42536.2  | -159.8 | 645.0   | 5.4    | -631.4  | 22.5    |
|    | 119 | -41051.2 | 159.8  | -645.0  | -5.4   | -1496.9 | -549.8  |
| 11 | 19  | 36202.0  | -226.3 | 212.4   | -24.7  | 55.7    | -152.7  |
|    | 119 | -34717.0 | 226.3  | -212.4  | 24.7   | -758.3  | -593.3  |
| 12 | 19  | 36188.0  | -277.4 | 123.0   | -30.6  | 255.8   | -281.4  |
|    | 119 | -34703.0 | 277.4  | -123.0  | 30.6   | -665.1  | -633.8  |
| 13 | 19  | 36457.8  | -77.8  | 729.0   | 34.6   | -1067.6 | 226.3   |
|    | 119 | -34972.8 | 77.8   | -729.0  | -34.6  | -1336.6 | -483.5  |
| 14 | 19  | 36471.9  | -26.6  | 818.5   | 40.4   | -1267.7 | 354.9   |
|    | 119 | -34986.9 | 26.6   | -818.5  | -40.4  | -1429.8 | -443.0  |
| 15 | 19  | 36249.0  | -55.7  | 510.6   | -5.1   | -611.2  | 276.2   |
|    | 119 | -34764.0 | 55.7   | -510.6  | 5.1    | -1068.9 | -458.2  |
| 16 | 19  | 36234.9  | -106.8 | 421.1   | -11.0  | -411.1  | 147.6   |
|    | 119 | -34749.9 | 106.8  | -421.1  | 11.0   | -975.7  | -498.7  |
| 17 | 19  | 36410.8  | -248.4 | 430.9   | 14.9   | -400.7  | -202.7  |
|    | 119 | -34925.8 | 248.4  | -430.9  | -14.9  | -1026.0 | -618.6  |
| 18 | 19  | 36424.9  | -197.2 | 520.3   | 20.8   | -600.7  | -74.0   |
|    | 119 | -34939.9 | 197.2  | -520.3  | -20.8  | -1119.1 | -578.1  |
|    |     |          |        |         |        |         |         |
| 1  | 219 | 24435.3  | 374.0  | 1989.7  | 6.1    | -4243.8 | 541.3   |
|    | 119 | -26687.5 | -374.0 | -1989.7 | -6.1   | -3416.8 | 898.8   |
| 2  | 219 | 13875.2  | 151.3  | 3856.3  | -54.3  | -8384.0 | 120.1   |
|    | 119 | -15607.7 | -151.3 | -3856.3 | 54.3   | -6477.4 | 463.1   |
| 3  | 219 | 14161.1  | 263.5  | 2929.5  | -96.9  | -6385.5 | 363.1   |
|    | 119 | -15893.6 | -263.5 | -2929.5 | 96.9   | -4903.0 | 652.4   |
| 4  | 219 | 13947.6  | 253.6  | 4051.1  | -17.5  | -8815.9 | 341.8   |
|    | 119 | -15680.1 | -253.6 | -4051.1 | 17.5   | -6794.4 | 637.0   |
| 5  | 219 | 14241.5  | 389.9  | 3192.3  | -55.1  | -6971.0 | 638.0   |
|    | 119 | -15974.0 | -389.9 | -3192.3 | 55.1   | -5327.1 | 866.8   |
| 6  | 219 | 14855.0  | 605.9  | 993.6   | -179.7 | -2234.4 | 1107.2  |
|    | 119 | -16587.5 | -605.9 | -993.6  | 179.7  | -1586.2 | 1229.1  |
| 7  | 219 | 15140.9  | 718.1  | 66.8    | -222.4 | -236.0  | 1350.2  |
|    | 119 | -16873.4 | -718.1 | -66.8   | 222.4  | -11.9   | 1418.4  |
| 8  | 219 | 14900.4  | 627.6  | 961.6   | -159.7 | -2154.4 | 1151.9  |
|    | 119 | -16632.9 | -627.6 | -961.6  | 159.7  | -1546.6 | 1267.8  |
| 9  | 219 | 15194.3  | 763.9  | 102.8   | -197.3 | -309.6  | 1448.0  |
|    | 119 | -16926.8 | -763.9 | -102.8  | 197.3  | -79.3   | 1497.6  |
| 10 | 219 | 18022.6  | 285.1  | 1458.0  | 4.6    | -3125.5 | 410.7   |
|    | 119 | -19755.1 | -285.1 | -1458.0 | -4.6   | -2487.9 | 687.1   |
| 11 | 219 | 14442.4  | 187.6  | 971.7   | -27.6  | -2146.4 | 199.1   |
|    | 119 | -16174.9 | -187.6 | -971.7  | 27.6   | -1595.2 | 521.4   |
| 12 | 219 | 14435.3  | 166.3  | 916.0   | -32.8  | -2020.3 | 152.4   |
|    | 119 | -16167.8 | -166.3 | -916.0  | 32.8   | -1508.4 | 485.6   |
| 13 | 219 | 14561.5  | 359.2  | 1284.0  | 36.0   | -2839.8 | 570.4   |
|    | 119 | -16294.0 | -359.2 | -1284.0 | -36.0  | -2102.9 | 814.1   |

|    |     |          |        |         |        |          |         |
|----|-----|----------|--------|---------|--------|----------|---------|
| 14 | 219 | 14568.6  | 380.5  | 1339.7  | 41.3   | -2966.0  | 617.1   |
|    | 119 | -16301.1 | -380.5 | -1339.7 | -41.3  | -2189.8  | 850.0   |
| 15 | 219 | 14466.1  | 258.6  | 1157.2  | -10.2  | -2566.9  | 354.7   |
|    | 119 | -16198.6 | -258.6 | -1157.2 | 10.2   | -1884.9  | 640.9   |
| 16 | 219 | 14459.0  | 237.3  | 1101.6  | -15.4  | -2440.7  | 308.0   |
|    | 119 | -16191.5 | -237.3 | -1101.6 | 15.4   | -1798.0  | 605.1   |
| 17 | 219 | 14537.8  | 288.2  | 1098.5  | 18.6   | -2419.4  | 414.8   |
|    | 119 | -16270.3 | -288.2 | -1098.5 | -18.6  | -1813.2  | 694.6   |
| 18 | 219 | 14544.9  | 309.5  | 1154.1  | 23.8   | -2545.5  | 461.5   |
|    | 119 | -16277.4 | -309.5 | -1154.1 | -23.8  | -1900.1  | 730.5   |
|    |     |          |        |         |        |          |         |
| 1  | 20  | 46993.8  | 46.7   | 416.4   | 7.2    | -848.2   | 281.2   |
|    | 120 | -45063.3 | -46.7  | -416.4  | -7.2   | -525.9   | -126.9  |
| 2  | 20  | 31113.0  | -114.0 | 4671.4  | -36.3  | -10029.2 | -198.4  |
|    | 120 | -29628.0 | 114.0  | -4671.4 | 36.3   | -5403.4  | -212.3  |
| 3  | 20  | 31453.3  | -327.9 | 3214.4  | -70.5  | -6884.9  | -678.6  |
|    | 120 | -29968.3 | 327.9  | -3214.4 | 70.5   | -3734.2  | -407.1  |
| 4  | 20  | 31003.3  | 26.8   | 4975.2  | -2.2   | -10682.8 | 53.3    |
|    | 120 | -29518.3 | -26.8  | -4975.2 | 2.2    | -5751.0  | -79.5   |
| 5  | 20  | 31269.0  | -119.3 | 3624.3  | -30.5  | -7772.7  | -296.6  |
|    | 120 | -29784.0 | 119.3  | -3624.3 | 30.5   | -4196.1  | -215.4  |
| 6  | 20  | 31998.8  | -601.0 | 168.3   | -130.8 | -328.9   | -1364.6 |
|    | 120 | -30513.8 | 601.0  | -168.3  | 130.8  | -220.2   | -665.3  |
| 7  | 20  | 32339.0  | -814.9 | -1288.7 | -165.0 | 2815.4   | -1844.7 |
|    | 120 | -30854.0 | 814.9  | 1288.7  | 165.0  | 1449.0   | -860.1  |
| 8  | 20  | 32137.6  | -686.2 | 118.4   | -116.3 | -201.8   | -1547.2 |
|    | 120 | -30652.6 | 686.2  | -118.4  | 116.3  | -187.1   | -728.9  |
| 9  | 20  | 32403.3  | -832.3 | -1232.5 | -144.6 | 2708.3   | -1897.0 |
|    | 120 | -30918.3 | 832.3  | 1232.5  | 144.6  | 1367.8   | -864.8  |
| 10 | 20  | 35183.8  | 37.9   | 319.9   | 5.4    | -649.9   | 220.0   |
|    | 120 | -33698.8 | -37.9  | -319.9  | -5.4   | -405.8   | -94.9   |
| 11 | 20  | 30882.9  | -71.5  | 74.8    | -24.7  | -114.0   | 33.1    |
|    | 120 | -29397.9 | 71.5   | -74.8   | 24.7   | -133.9   | -195.6  |
| 12 | 20  | 30943.9  | -127.9 | -11.2   | -30.6  | 76.7     | -71.9   |
|    | 120 | -29458.9 | 127.9  | 11.2    | 30.6   | -42.6    | -245.0  |
| 13 | 20  | 30701.1  | 165.5  | 561.5   | 34.6   | -1162.3  | 441.4   |
|    | 120 | -29216.1 | -165.5 | -561.5  | -34.6  | -689.4   | 31.2    |
| 14 | 20  | 30640.1  | 221.8  | 647.4   | 40.4   | -1353.0  | 546.3   |
|    | 120 | -29155.1 | -221.8 | -647.4  | -40.4  | -780.7   | 80.5    |
| 15 | 20  | 30679.6  | 116.4  | 361.2   | -5.1   | -749.4   | 382.7   |
|    | 120 | -29194.6 | -116.4 | -361.2  | 5.1    | -438.3   | -30.9   |
| 16 | 20  | 30740.6  | 60.0   | 275.3   | -11.0  | -558.8   | 277.8   |
|    | 120 | -29255.6 | -60.0  | -275.3  | 11.0   | -347.0   | -80.3   |
| 17 | 20  | 30904.4  | -22.4  | 275.0   | 14.9   | -526.9   | 91.7    |
|    | 120 | -29419.4 | 22.4   | -275.0  | -14.9  | -385.1   | -133.5  |
| 18 | 20  | 30843.4  | 33.9   | 361.0   | 20.8   | -717.5   | 196.6   |
|    | 120 | -29358.4 | -33.9  | -361.0  | -20.8  | -476.4   | -84.1   |
|    |     |          |        |         |        |          |         |
| 1  | 220 | 20618.1  | 259.6  | 56.6    | 6.1    | -103.3   | 511.3   |
|    | 120 | -22870.3 | -259.6 | -56.6   | -6.1   | -114.7   | 488.3   |
| 2  | 220 | 12406.1  | 61.2   | 3020.3  | -54.3  | -6484.8  | 86.1    |
|    | 120 | -14138.6 | -61.2  | -3020.3 | 54.3   | -5155.7  | 149.6   |
| 3  | 220 | 12566.3  | 207.7  | 2012.1  | -96.9  | -4318.0  | 408.1   |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
|    | 120 | -14298.8 | -207.7  | -2012.1 | 96.9   | -3437.4 | 392.5   |
| 4  | 220 | 12336.3  | 165.8   | 3212.8  | -17.5  | -6907.0 | 310.2   |
|    | 120 | -14068.8 | -165.8  | -3212.8 | 17.5   | -5474.0 | 329.2   |
| 5  | 220 | 12451.8  | 345.4   | 2273.8  | -55.1  | -4894.2 | 703.0   |
|    | 120 | -14184.3 | -345.4  | -2273.8 | 55.1   | -3866.6 | 629.1   |
| 6  | 220 | 12791.0  | 659.9   | -110.0  | -179.7 | 224.5   | 1395.2  |
|    | 120 | -14523.5 | -659.9  | 110.0   | 179.7  | 202.5   | 1149.4  |
| 7  | 220 | 12951.2  | 806.5   | -1118.1 | -222.4 | 2391.3  | 1717.3  |
|    | 120 | -14683.7 | -806.5  | 1118.1  | 222.4  | 1920.8  | 1392.3  |
| 8  | 220 | 12870.4  | 654.4   | -147.8  | -159.7 | 315.7   | 1383.7  |
|    | 120 | -14602.9 | -654.4  | 147.8   | 159.7  | 253.9   | 1138.8  |
| 9  | 220 | 12985.9  | 834.0   | -1086.9 | -197.3 | 2328.4  | 1776.4  |
|    | 120 | -14718.4 | -834.0  | 1086.9  | 197.3  | 1861.3  | 1438.7  |
| 10 | 220 | 15210.6  | 197.0   | 45.9    | 4.6    | -84.3   | 387.2   |
|    | 120 | -16943.1 | -197.0  | -45.9   | -4.6   | -92.5   | 371.1   |
| 11 | 220 | 12312.3  | 246.3   | -97.8   | -27.6  | 232.6   | 501.1   |
|    | 120 | -14044.8 | -246.3  | 97.8    | 27.6   | 143.2   | 446.6   |
| 12 | 220 | 12348.5  | 282.2   | -154.3  | -32.8  | 359.0   | 582.1   |
|    | 120 | -14081.0 | -282.2  | 154.3   | 32.8   | 233.4   | 503.4   |
| 13 | 220 | 12199.1  | 122.4   | 211.1   | 36.0   | -445.3  | 217.6   |
|    | 120 | -13931.6 | -122.4  | -211.1  | -36.0  | -366.8  | 254.2   |
| 14 | 220 | 12162.9  | 86.5    | 267.6   | 41.3   | -571.7  | 136.6   |
|    | 120 | -13895.4 | -86.5   | -267.6  | -41.3  | -456.9  | 197.4   |
| 15 | 220 | 12191.6  | 126.5   | 90.7    | -10.2  | -188.8  | 230.9   |
|    | 120 | -13924.1 | -126.5  | -90.7   | 10.2   | -157.2  | 257.2   |
| 16 | 220 | 12227.8  | 162.5   | 34.1    | -15.4  | -62.3   | 312.0   |
|    | 120 | -13960.3 | -162.5  | -34.1   | 15.4   | -67.1   | 314.0   |
| 17 | 220 | 12319.7  | 242.2   | 22.6    | 18.6   | -23.9   | 487.8   |
|    | 120 | -14052.2 | -242.2  | -22.6   | -18.6  | -66.3   | 443.6   |
| 18 | 220 | 12283.5  | 206.2   | 79.2    | 23.8   | -150.3  | 406.7   |
|    | 120 | -14016.0 | -206.2  | -79.2   | -23.8  | -156.4  | 386.8   |
|    |     |          |         |         |        |         |         |
| 1  | 21  | 36720.5  | 16.1    | 1029.0  | 7.2    | -1142.5 | 218.7   |
|    | 121 | -34790.0 | -16.1   | -1029.0 | -7.2   | -2253.1 | -165.7  |
| 2  | 21  | 18479.5  | 244.1   | 4712.4  | -36.3  | -8912.5 | 703.5   |
|    | 121 | -16994.5 | -244.1  | -4712.4 | 36.3   | -6649.9 | 102.9   |
| 3  | 21  | 20894.9  | -29.0   | 3330.1  | -70.5  | -6103.4 | 68.0    |
|    | 121 | -19409.9 | 29.0    | -3330.1 | 70.5   | -4893.9 | -166.3  |
| 4  | 21  | 18227.7  | 143.4   | 4985.2  | -2.2   | -9467.4 | 445.1   |
|    | 121 | -16742.7 | -143.4  | -4985.2 | 2.2    | -6994.3 | 29.1    |
| 5  | 21  | 20585.3  | -187.2  | 3690.6  | -30.5  | -6841.6 | -327.2  |
|    | 121 | -19100.3 | 187.2   | -3690.6 | 30.5   | -5343.7 | -293.6  |
| 6  | 21  | 26338.1  | -857.8  | 397.4   | -130.8 | -160.0  | -1871.0 |
|    | 121 | -24853.1 | 857.8   | -397.4  | 130.8  | -1147.9 | -972.6  |
| 7  | 21  | 28753.5  | -1130.9 | -985.0  | -165.0 | 2649.1  | -2506.5 |
|    | 121 | -27268.5 | 1130.9  | 985.0   | 165.0  | 608.1   | -1241.8 |
| 8  | 21  | 26279.2  | -767.0  | 377.3   | -116.3 | -103.7  | -1673.3 |
|    | 121 | -24794.2 | 767.0   | -377.3  | 116.3  | -1140.8 | -868.2  |
| 9  | 21  | 28636.8  | -1097.6 | -917.2  | -144.6 | 2522.1  | -2445.6 |
|    | 121 | -27151.8 | 1097.6  | 917.2   | 144.6  | 509.8   | -1190.8 |
| 10 | 21  | 27537.8  | 13.8    | 775.2   | 5.4    | -858.6  | 170.9   |
|    | 121 | -26052.8 | -13.8   | -775.2  | -5.4   | -1699.5 | -125.3  |
| 11 | 21  | 24511.4  | 101.8   | 483.0   | -24.7  | -322.8  | 393.3   |

|    |     |          |         |         |        |         |        |
|----|-----|----------|---------|---------|--------|---------|--------|
|    | 121 | -23026.4 | -101.8  | -483.0  | 24.7   | -1271.7 | -57.3  |
| 12 | 21  | 24558.6  | 148.9   | 411.9   | -30.6  | -173.7  | 505.3  |
|    | 121 | -23073.6 | -148.9  | -411.9  | 30.6   | -1187.4 | -13.4  |
| 13 | 21  | 24115.3  | -60.8   | 918.7   | 34.6   | -1210.2 | -27.6  |
|    | 121 | -22630.3 | 60.8    | -918.7  | -34.6  | -1820.7 | -173.1 |
| 14 | 21  | 24068.0  | -107.8  | 989.7   | 40.4   | -1359.3 | -139.6 |
|    | 121 | -22583.0 | 107.8   | -989.7  | -40.4  | -1905.0 | -217.0 |
| 15 | 21  | 24353.8  | -54.9   | 719.8   | -5.1   | -819.7  | 19.9   |
|    | 121 | -22868.8 | 54.9    | -719.8  | 5.1    | -1552.8 | -203.6 |
| 16 | 21  | 24401.0  | -7.8    | 648.7   | -11.0  | -670.6  | 131.9  |
|    | 121 | -22916.0 | 7.8     | -648.7  | 11.0   | -1468.5 | -159.7 |
| 17 | 21  | 24272.9  | 95.9    | 681.9   | 14.9   | -713.3  | 345.8  |
|    | 121 | -22787.9 | -95.9   | -681.9  | -14.9  | -1539.6 | -26.8  |
| 18 | 21  | 24225.6  | 48.9    | 752.9   | 20.8   | -862.4  | 233.8  |
|    | 121 | -22740.6 | -48.9   | -752.9  | -20.8  | -1623.9 | -70.7  |
|    |     |          |         |         |        |         |        |
| 1  | 221 | 15868.2  | 309.9   | 1886.3  | 6.1    | -3947.6 | 633.7  |
|    | 121 | -18120.4 | -309.9  | -1886.3 | -6.1   | -3314.7 | 559.2  |
| 2  | 221 | 7328.3   | 389.0   | 4377.3  | -54.3  | -8997.2 | 809.9  |
|    | 121 | -9060.8  | -389.0  | -4377.3 | 54.3   | -7860.5 | 688.8  |
| 3  | 221 | 8254.1   | 589.6   | 3264.7  | -96.9  | -6700.5 | 1246.2 |
|    | 121 | -9986.6  | -589.6  | -3264.7 | 96.9   | -5872.0 | 1024.8 |
| 4  | 221 | 7255.2   | 293.2   | 4580.9  | -17.5  | -9423.0 | 589.5  |
|    | 121 | -8987.7  | -293.2  | -4580.9 | 17.5   | -8218.2 | 541.4  |
| 5  | 221 | 8166.4   | 452.8   | 3538.6  | -55.1  | -7274.3 | 933.0  |
|    | 121 | -9898.9  | -452.8  | -3538.6 | 55.1   | -6351.9 | 813.4  |
| 6  | 221 | 10365.8  | 921.0   | 902.8   | -179.7 | -1834.9 | 1954.9 |
|    | 121 | -12098.3 | -921.0  | -902.8  | 179.7  | -1639.5 | 1595.4 |
| 7  | 221 | 11291.6  | 1121.5  | -209.8  | -222.4 | 461.8   | 2391.2 |
|    | 121 | -13024.1 | -1121.5 | 209.8   | 222.4  | 348.9   | 1931.3 |
| 8  | 221 | 10341.1  | 961.6   | 872.1   | -159.7 | -1767.3 | 2043.8 |
|    | 121 | -12073.6 | -961.6  | -872.1  | 159.7  | -1590.0 | 1661.2 |
| 9  | 221 | 11252.4  | 1121.2  | -170.3  | -197.3 | 381.4   | 2387.3 |
|    | 121 | -12984.9 | -1121.2 | 170.3   | 197.3  | 276.3   | 1933.2 |
| 10 | 221 | 11720.2  | 235.5   | 1399.9  | 4.6    | -2917.6 | 481.1  |
|    | 121 | -13452.7 | -235.5  | -1399.9 | -4.6   | -2472.0 | 425.4  |
| 11 | 221 | 9565.6   | 300.1   | 1004.3  | -27.6  | -2034.9 | 632.2  |
|    | 121 | -11298.1 | -300.1  | -1004.3 | 27.6   | -1831.9 | 522.5  |
| 12 | 221 | 9576.9   | 333.2   | 946.8   | -32.8  | -1913.5 | 707.8  |
|    | 121 | -11309.4 | -333.2  | -946.8  | 32.8   | -1732.4 | 573.3  |
| 13 | 221 | 9451.6   | 144.5   | 1330.5  | 36.0   | -2717.5 | 272.3  |
|    | 121 | -11184.1 | -144.5  | -1330.5 | -36.0  | -2404.8 | 284.9  |
| 14 | 221 | 9440.2   | 111.5   | 1388.1  | 41.3   | -2838.9 | 196.7  |
|    | 121 | -11172.7 | -111.5  | -1388.1 | -41.3  | -2504.4 | 234.1  |
| 15 | 221 | 9527.7   | 190.0   | 1196.0  | -10.2  | -2439.6 | 380.1  |
|    | 121 | -11260.2 | -190.0  | -1196.0 | 10.2   | -2163.9 | 353.0  |
| 16 | 221 | 9539.1   | 223.0   | 1138.5  | -15.4  | -2318.2 | 455.7  |
|    | 121 | -11271.6 | -223.0  | -1138.5 | 15.4   | -2064.3 | 403.9  |
| 17 | 221 | 9489.4   | 254.7   | 1138.8  | 18.6   | -2312.8 | 524.4  |
|    | 121 | -11221.9 | -254.7  | -1138.8 | -18.6  | -2072.8 | 454.4  |
| 18 | 221 | 9478.1   | 221.6   | 1196.3  | 23.8   | -2434.2 | 448.7  |
|    | 121 | -11210.6 | -221.6  | -1196.3 | -23.8  | -2172.4 | 403.5  |

|    |     |          |         |         |        |         |         |
|----|-----|----------|---------|---------|--------|---------|---------|
| 1  | 22  | 17625.1  | -167.5  | 332.4   | 7.2    | -381.3  | -38.5   |
|    | 122 | -15694.6 | 167.5   | -332.4  | -7.2   | -715.6  | -514.3  |
| 2  | 22  | 20882.3  | -400.3  | 3138.1  | -36.3  | -6711.1 | -582.5  |
|    | 122 | -19397.3 | 400.3   | -3138.1 | 36.3   | -3676.5 | -738.5  |
| 3  | 22  | 19154.8  | -809.1  | 2105.3  | -70.5  | -4425.0 | -1398.6 |
|    | 122 | -17669.8 | 809.1   | -2105.3 | 70.5   | -2545.3 | -1272.1 |
| 4  | 22  | 21581.5  | -125.0  | 3339.5  | -2.2   | -7159.4 | -39.4   |
|    | 122 | -20096.5 | 125.0   | -3339.5 | 2.2    | -3890.6 | -372.5  |
| 5  | 22  | 20081.8  | -446.8  | 2365.2  | -30.5  | -5011.6 | -679.9  |
|    | 122 | -18596.8 | 446.8   | -2365.2 | 30.5   | -2811.6 | -794.7  |
| 6  | 22  | 15883.2  | -1473.0 | -109.5  | -130.8 | 448.2   | -2717.7 |
|    | 122 | -14398.2 | 1473.0  | 109.5   | 130.8  | -79.6   | -2145.8 |
| 7  | 22  | 14155.6  | -1881.8 | -1142.3 | -165.0 | 2734.3  | -3533.8 |
|    | 122 | -12670.6 | 1881.8  | 1142.3  | 165.0  | 1051.5  | -2679.4 |
| 8  | 22  | 15823.0  | -1487.5 | -103.2  | -116.3 | 461.2   | -2759.7 |
|    | 122 | -14338.0 | 1487.5  | 103.2   | 116.3  | -120.0  | -2151.2 |
| 9  | 22  | 14323.2  | -1809.4 | -1077.4 | -144.6 | 2609.0  | -3400.3 |
|    | 122 | -12838.2 | 1809.4  | 1077.4  | 144.6  | 959.0   | -2573.4 |
| 10 | 22  | 13343.3  | -127.5  | 244.7   | 5.4    | -275.3  | -27.3   |
|    | 122 | -11858.3 | 127.5   | -244.7  | -5.4   | -532.1  | -393.3  |
| 11 | 22  | 11801.0  | 4.1     | 34.2    | -24.7  | 164.4   | 243.9   |
|    | 122 | -10316.0 | -4.1    | -34.2   | 24.7   | -279.4  | -230.7  |
| 12 | 22  | 11610.4  | 83.3    | -12.6   | -30.6  | 276.6   | 402.7   |
|    | 122 | -10125.4 | -83.3   | 12.6    | 30.6   | -239.3  | -127.7  |
| 13 | 22  | 12934.5  | -246.4  | 354.8   | 34.6   | -550.9  | -278.1  |
|    | 122 | -11449.5 | 246.4   | -354.8  | -34.6  | -618.0  | -535.0  |
| 14 | 22  | 13125.1  | -325.7  | 401.7   | 40.4   | -663.1  | -436.8  |
|    | 122 | -11640.1 | 325.7   | -401.7  | -40.4  | -658.2  | -638.0  |
| 15 | 22  | 12436.1  | -260.2  | 190.5   | -5.1   | -209.4  | -285.2  |
|    | 122 | -10951.1 | 260.2   | -190.5  | 5.1    | -413.2  | -573.9  |
| 16 | 22  | 12245.6  | -180.9  | 143.6   | -11.0  | -97.2   | -126.5  |
|    | 122 | -10760.6 | 180.9   | -143.6  | 11.0   | -373.0  | -470.9  |
| 17 | 22  | 12299.4  | 17.8    | 198.6   | 14.9   | -177.1  | 251.1   |
|    | 122 | -10814.4 | -17.8   | -198.6  | -14.9  | -484.3  | -191.7  |
| 18 | 22  | 12489.9  | -61.5   | 245.5   | 20.8   | -289.3  | 92.3    |
|    | 122 | -11004.9 | 61.5    | -245.5  | -20.8  | -524.4  | -294.7  |
|    |     |          |         |         |        |         |         |
| 1  | 222 | 5788.7   | 425.9   | 614.2   | 6.1    | -1319.6 | 804.0   |
|    | 122 | -8040.9  | -425.9  | -614.2  | -6.1   | -1045.2 | 835.7   |
| 2  | 222 | 7011.2   | 613.8   | 2427.0  | -54.3  | -5053.0 | 1205.4  |
|    | 122 | -8743.7  | -613.8  | -2427.0 | 54.3   | -4306.8 | 1158.6  |
| 3  | 222 | 6364.3   | 982.4   | 1698.7  | -96.9  | -3535.0 | 1964.6  |
|    | 122 | -8096.8  | -982.4  | -1698.7 | 96.9   | -3016.2 | 1817.8  |
| 4  | 222 | 7278.2   | 431.1   | 2554.1  | -17.5  | -5325.3 | 823.2   |
|    | 122 | -9010.7  | -431.1  | -2554.1 | 17.5   | -4522.8 | 838.9   |
| 5  | 222 | 6716.2   | 734.4   | 1866.4  | -55.1  | -3896.6 | 1446.6  |
|    | 122 | -8448.7  | -734.4  | -1866.4 | 55.1   | -3298.4 | 1383.4  |
| 6  | 222 | 5138.0   | 1624.8  | 135.0   | -179.7 | -290.6  | 3283.6  |
|    | 122 | -6870.5  | -1624.8 | -135.0  | 179.7  | -225.6  | 2973.5  |
| 7  | 222 | 4491.1   | 1993.4  | -593.3  | -222.4 | 1227.5  | 4042.8  |
|    | 122 | -6223.6  | -1993.4 | 593.3   | 222.4  | 1064.9  | 3632.7  |
| 8  | 222 | 5121.9   | 1659.6  | 126.2   | -159.7 | -265.1  | 3353.9  |
|    | 122 | -6854.4  | -1659.6 | -126.2  | 159.7  | -221.1  | 3036.2  |

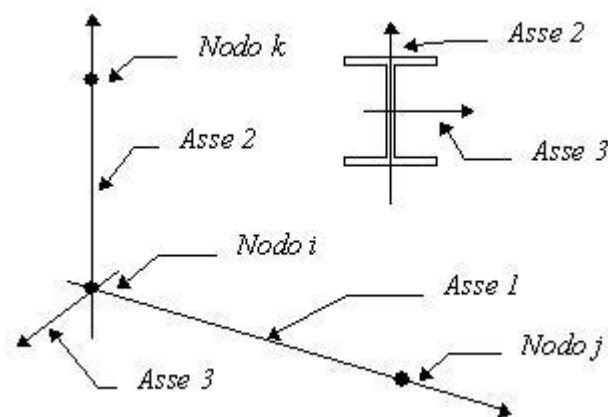
|    |     |         |         |        |        |         |        |
|----|-----|---------|---------|--------|--------|---------|--------|
| 9  | 222 | 4559.9  | 1962.9  | -561.4 | -197.3 | 1163.6  | 3977.3 |
|    | 122 | -6292.4 | -1962.9 | 561.4  | 197.3  | 1003.3  | 3580.6 |
| 10 | 222 | 4329.1  | 324.9   | 453.6  | 4.6    | -971.7  | 612.7  |
|    | 122 | -6061.6 | -324.9  | -453.6 | -4.6   | -774.6  | 638.1  |
| 11 | 222 | 3550.0  | 462.9   | 266.0  | -27.6  | -556.4  | 902.0  |
|    | 122 | -5282.5 | -462.9  | -266.0 | 27.6   | -468.5  | 878.9  |
| 12 | 222 | 3479.4  | 516.7   | 232.9  | -32.8  | -483.2  | 1014.5 |
|    | 122 | -5211.9 | -516.7  | -232.9 | 32.8   | -415.4  | 973.0  |
| 13 | 222 | 3982.3  | 162.2   | 469.0  | 36.0   | -992.0  | 271.5  |
|    | 122 | -5714.8 | -162.2  | -469.0 | -36.0  | -813.1  | 354.1  |
| 14 | 222 | 4052.9  | 108.4   | 502.2  | 41.3   | -1065.2 | 159.1  |
|    | 122 | -5785.4 | -108.4  | -502.2 | -41.3  | -866.2  | 259.9  |
| 15 | 222 | 3785.4  | 283.5   | 376.5  | -10.2  | -800.5  | 527.3  |
|    | 122 | -5517.9 | -283.5  | -376.5 | 10.2   | -645.5  | 565.1  |
| 16 | 222 | 3714.8  | 337.3   | 343.4  | -15.4  | -727.3  | 639.7  |
|    | 122 | -5447.3 | -337.3  | -343.4 | 15.4   | -592.4  | 659.2  |
| 17 | 222 | 3746.8  | 341.6   | 358.6  | 18.6   | -747.9  | 646.3  |
|    | 122 | -5479.3 | -341.6  | -358.6 | -18.6  | -636.2  | 667.9  |
| 18 | 222 | 3817.4  | 287.7   | 391.7  | 23.8   | -821.2  | 533.9  |
|    | 122 | -5549.9 | -287.7  | -391.7 | -23.8  | -689.3  | 573.8  |

## - Sollecitazioni nelle travi

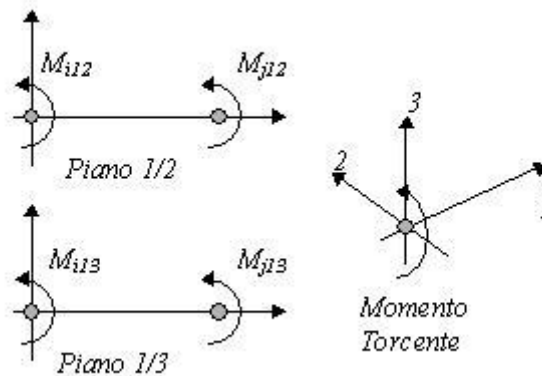
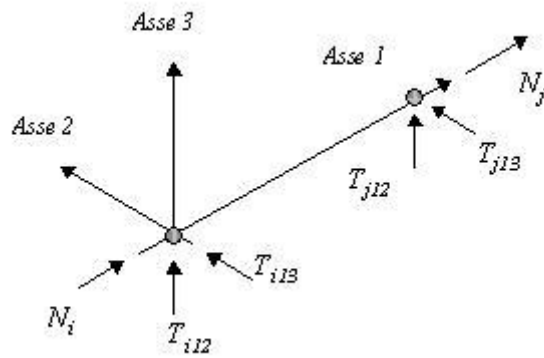
### - Convenzioni adottate

Le sollecitazioni nelle travi sono da intendersi nel sistema di riferimento locale dell'elemento, e si riferiscono all'asta. L'orientamento della trave nello spazio è definito a mezzo del nodo K.

La terna di riferimento locale dell'asta è così disposta:



Per quanto concerne i segni positivi assunti per le varie componenti di sollecitazione si assumono come positivi i versi e le sollecitazioni se così diretti:



Per ogni trave vengono riportate, nelle varie combinazioni di carico, le componenti di sollecitazione alle estremità dell'asta.

| Comb. | Nodo | N<br>[kg] | T1-2<br>[kg] | T1-3<br>[kg] | Mt<br>[kgm] | M1-3<br>[kgm] | M1-2<br>[kgm] |
|-------|------|-----------|--------------|--------------|-------------|---------------|---------------|
| 1     | 23   | 78.5      | 4974.2       | 19.6         | 7.2         | -34.4         | 1746.4        |
|       | 24   | -78.5     | 4854.4       | -19.6        | -7.2        | -22.4         | -1572.8       |
| 2     | 23   | 165.4     | 3183.6       | 32.0         | 27.4        | -56.2         | 1526.3        |
|       | 24   | -165.4    | 2409.6       | -32.0        | -27.4       | -36.7         | -403.8        |
| 3     | 23   | -38.7     | 2701.5       | 23.9         | 46.3        | -42.0         | 801.6         |
|       | 24   | 38.7      | 2891.7       | -23.9        | -46.3       | -27.4         | -1077.6       |
| 4     | 23   | 33.2      | 2923.0       | 33.8         | 8.3         | -59.3         | 1135.4        |
|       | 24   | -33.2     | 2670.2       | -33.8        | -8.3        | -38.7         | -768.7        |
| 5     | 23   | -215.3    | 2353.0       | 26.0         | 23.9        | -45.7         | 278.9         |
|       | 24   | 215.3     | 3240.2       | -26.0        | -23.9       | -29.8         | -1565.2       |
| 6     | 23   | -663.0    | 1283.7       | 6.2          | 79.5        | -10.8         | -1328.5       |
|       | 24   | 663.0     | 4309.5       | -6.2         | -79.5       | -7.1          | -3058.9       |
| 7     | 23   | -867.1    | 801.5        | -1.9         | 98.5        | 3.4           | -2053.2       |
|       | 24   | 867.1     | 4791.7       | 1.9          | -98.5       | 2.2           | -3732.6       |
| 8     | 23   | -647.2    | 1315.7       | 6.8          | 71.5        | -11.9         | -1280.2       |
|       | 24   | 647.2     | 4277.5       | -6.8         | -71.5       | -7.8          | -3014.5       |
| 9     | 23   | -895.7    | 745.7        | -1.0         | 87.1        | 1.7           | -2136.6       |
|       | 24   | 895.7     | 4847.5       | 1.0          | -87.1       | 1.1           | -3811.0       |
| 10    | 23   | 47.2      | 3633.8       | 14.6         | 5.3         | -25.7         | 1261.0        |
|       | 24   | -47.2     | 3572.2       | -14.6        | -5.3        | -16.8         | -1171.6       |
| 11    | 23   | 96.9      | 2970.0       | 11.2         | 20.9        | -19.7         | 1203.8        |

|    |    |        |        |       |        |       |         |
|----|----|--------|--------|-------|--------|-------|---------|
|    | 24 | -96.9  | 2623.2 | -11.2 | -20.9  | -12.9 | -700.9  |
| 12 | 23 | 134.0  | 3042.1 | 10.9  | 24.2   | -19.2 | 1312.0  |
|    | 24 | -134.0 | 2551.1 | -10.9 | -24.2  | -12.5 | -600.0  |
| 13 | 23 | -121.8 | 2546.3 | 14.0  | -12.3  | -24.6 | 568.5   |
|    | 24 | 121.8  | 3046.9 | -14.0 | 12.3   | -16.0 | -1294.3 |
| 14 | 23 | -158.9 | 2474.2 | 14.3  | -15.6  | -25.1 | 460.3   |
|    | 24 | 158.9  | 3119.0 | -14.3 | 15.6   | -16.4 | -1395.2 |
| 15 | 23 | -26.7  | 2729.7 | 12.2  | 9.8    | -21.4 | 843.1   |
|    | 24 | 26.7   | 2863.5 | -12.2 | -9.8   | -14.0 | -1037.1 |
| 16 | 23 | 10.4   | 2801.8 | 11.9  | 13.1   | -20.9 | 951.3   |
|    | 24 | -10.4  | 2791.4 | -11.9 | -13.1  | -13.6 | -936.2  |
| 17 | 23 | 1.7    | 2786.6 | 13.0  | -1.3   | -22.9 | 929.2   |
|    | 24 | -1.7   | 2806.6 | -13.0 | 1.3    | -14.9 | -958.1  |
| 18 | 23 | -35.3  | 2714.5 | 13.3  | -4.6   | -23.4 | 821.0   |
|    | 24 | 35.3   | 2878.7 | -13.3 | 4.6    | -15.3 | -1059.0 |
|    |    |        |        |       |        |       |         |
| 1  | 25 | 50.1   | 4885.3 | 5.5   | 28.4   | -9.7  | 1540.1  |
|    | 26 | -50.1  | 4943.3 | -5.5  | -28.4  | -6.1  | -1624.3 |
| 2  | 25 | 34.5   | 3238.5 | -7.5  | 63.8   | 13.3  | 1562.5  |
|    | 26 | -34.5  | 2354.7 | 7.5   | -63.8  | 8.3   | -281.2  |
| 3  | 25 | -21.2  | 2627.1 | -3.8  | 82.5   | 6.8   | 659.7   |
|    | 26 | 21.2   | 2966.1 | 3.8   | -82.5  | 4.3   | -1151.2 |
| 4  | 25 | -41.8  | 2832.4 | -7.1  | 47.4   | 12.6  | 965.5   |
|    | 26 | 41.8   | 2760.8 | 7.1   | -47.4  | 7.9   | -862.5  |
| 5  | 25 | 2.3    | 2089.6 | -3.3  | 64.9   | 5.9   | -131.6  |
|    | 26 | -2.3   | 3503.6 | 3.3   | -64.9  | 3.7   | -1919.5 |
| 6  | 25 | 181.6  | 762.6  | 5.0   | 122.1  | -9.0  | -2094.5 |
|    | 26 | -181.6 | 4830.6 | -5.0  | -122.1 | -5.6  | -3804.4 |
| 7  | 25 | 125.9  | 151.2  | 8.7   | 140.8  | -15.5 | -2997.3 |
|    | 26 | -125.9 | 5442.0 | -8.7  | -140.8 | -9.7  | -4674.3 |
| 8  | 25 | -227.3 | 794.5  | 5.1   | 109.7  | -9.0  | -2043.8 |
|    | 26 | 227.3  | 4798.7 | -5.1  | -109.7 | -5.6  | -3762.4 |
| 9  | 25 | -183.2 | 51.7   | 8.8   | 127.2  | -15.7 | -3140.9 |
|    | 26 | 183.2  | 5541.5 | -8.8  | -127.2 | -9.8  | -4819.3 |
| 10 | 25 | 32.8   | 3568.3 | 3.5   | 20.8   | -6.3  | 1110.8  |
|    | 26 | -32.8  | 3637.7 | -3.5  | -20.8  | -4.0  | -1211.5 |
| 11 | 25 | 73.6   | 3041.8 | 0.3   | 29.9   | -0.5  | 1268.7  |
|    | 26 | -73.6  | 2551.5 | -0.3  | -29.9  | -0.3  | -557.2  |
| 12 | 25 | 115.9  | 3151.8 | 0.2   | 31.3   | -0.4  | 1431.4  |
|    | 26 | -115.9 | 2441.4 | -0.2  | -31.3  | -0.2  | -400.5  |
| 13 | 25 | -60.9  | 2369.1 | 0.9   | 1.8    | -1.5  | 280.1   |
|    | 26 | 60.9   | 3224.1 | -0.9  | -1.8   | -1.0  | -1520.4 |
| 14 | 25 | -103.1 | 2259.1 | 0.9   | 0.3    | -1.7  | 117.4   |
|    | 26 | 103.1  | 3334.1 | -0.9  | -0.3   | -1.0  | -1677.1 |
| 15 | 25 | -67.2  | 2675.0 | 0.5   | 25.0   | -1.0  | 726.5   |
|    | 26 | 67.2   | 2918.2 | -0.5  | -25.0  | -0.6  | -1079.5 |
| 16 | 25 | -25.0  | 2785.0 | 0.5   | 26.5   | -0.8  | 889.2   |
|    | 26 | 25.0   | 2808.2 | -0.5  | -26.5  | -0.5  | -922.8  |
| 17 | 25 | 80.0   | 2735.9 | 0.6   | 6.7    | -1.1  | 822.3   |
|    | 26 | -80.0  | 2857.3 | -0.6  | -6.7   | -0.7  | -998.1  |
| 18 | 25 | 37.7   | 2625.9 | 0.7   | 5.2    | -1.2  | 659.6   |
|    | 26 | -37.7  | 2967.3 | -0.7  | -5.2   | -0.8  | -1154.8 |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
| 1  | 101 | 0.0 | 12384.0 | 0.0 | 79.9   | 0.0 | 9055.9   |
|    | 102 | 0.0 | 14325.0 | 0.0 | -79.9  | 0.0 | -14878.8 |
| 2  | 101 | 0.0 | 6070.5  | 0.0 | 95.4   | 0.0 | 1343.9   |
|    | 102 | 0.0 | 10171.5 | 0.0 | -95.4  | 0.0 | -13646.8 |
| 3  | 101 | 0.0 | 6484.5  | 0.0 | 123.5  | 0.0 | 2530.1   |
|    | 102 | 0.0 | 9757.5  | 0.0 | -123.5 | 0.0 | -12349.4 |
| 4  | 101 | 0.0 | 6108.5  | 0.0 | 70.0   | 0.0 | 1451.8   |
|    | 102 | 0.0 | 10133.5 | 0.0 | -70.0  | 0.0 | -13527.0 |
| 5  | 101 | 0.0 | 6308.3  | 0.0 | 94.0   | 0.0 | 2026.7   |
|    | 102 | 0.0 | 9933.7  | 0.0 | -94.0  | 0.0 | -12902.9 |
| 6  | 101 | 0.0 | 6736.6  | 0.0 | 175.3  | 0.0 | 3260.4   |
|    | 102 | 0.0 | 9505.4  | 0.0 | -175.3 | 0.0 | -11566.5 |
| 7  | 101 | 0.0 | 7150.6  | 0.0 | 203.4  | 0.0 | 4446.6   |
|    | 102 | 0.0 | 9091.4  | 0.0 | -203.4 | 0.0 | -10269.0 |
| 8  | 101 | 0.0 | 7488.3  | 0.0 | 163.7  | 0.0 | 5405.9   |
|    | 102 | 0.0 | 8753.7  | 0.0 | -163.7 | 0.0 | -9202.2  |
| 9  | 101 | 0.0 | 7688.1  | 0.0 | 187.7  | 0.0 | 5980.8   |
|    | 102 | 0.0 | 8553.9  | 0.0 | -187.7 | 0.0 | -8578.1  |
| 10 | 101 | 0.0 | 9160.1  | 0.0 | 61.5   | 0.0 | 6688.9   |
|    | 102 | 0.0 | 10609.9 | 0.0 | -61.5  | 0.0 | -11038.3 |
| 11 | 101 | 0.0 | 7463.3  | 0.0 | 83.7   | 0.0 | 5339.4   |
|    | 102 | 0.0 | 8778.7  | 0.0 | -83.7  | 0.0 | -9285.5  |
| 12 | 101 | 0.0 | 7647.3  | 0.0 | 87.8   | 0.0 | 5864.5   |
|    | 102 | 0.0 | 8594.7  | 0.0 | -87.8  | 0.0 | -8707.0  |
| 13 | 101 | 0.0 | 7525.6  | 0.0 | 39.7   | 0.0 | 5516.4   |
|    | 102 | 0.0 | 8716.4  | 0.0 | -39.7  | 0.0 | -9088.9  |
| 14 | 101 | 0.0 | 7341.7  | 0.0 | 35.6   | 0.0 | 4991.3   |
|    | 102 | 0.0 | 8900.3  | 0.0 | -35.6  | 0.0 | -9667.3  |
| 15 | 101 | 0.0 | 6850.3  | 0.0 | 69.8   | 0.0 | 3589.0   |
|    | 102 | 0.0 | 9391.7  | 0.0 | -69.8  | 0.0 | -11213.5 |
| 16 | 101 | 0.0 | 7034.2  | 0.0 | 74.0   | 0.0 | 4114.2   |
|    | 102 | 0.0 | 9207.8  | 0.0 | -74.0  | 0.0 | -10635.1 |
| 17 | 101 | 0.0 | 8138.7  | 0.0 | 53.5   | 0.0 | 7266.8   |
|    | 102 | 0.0 | 8103.3  | 0.0 | -53.5  | 0.0 | -7160.8  |
| 18 | 101 | 0.0 | 7954.7  | 0.0 | 49.4   | 0.0 | 6741.7   |
|    | 102 | 0.0 | 8287.3  | 0.0 | -49.4  | 0.0 | -7739.3  |
|    |     |     |         |     |        |     |          |
| 1  | 102 | 0.0 | 11394.0 | 0.0 | -157.0 | 0.0 | 10618.2  |
|    | 103 | 0.0 | 10349.8 | 0.0 | 157.0  | 0.0 | -7955.5  |
| 2  | 102 | 0.0 | 5566.1  | 0.0 | -74.5  | 0.0 | 1481.7   |
|    | 103 | 0.0 | 9331.0  | 0.0 | 74.5   | 0.0 | -11082.4 |
| 3  | 102 | 0.0 | 5892.3  | 0.0 | -39.5  | 0.0 | 2320.2   |
|    | 103 | 0.0 | 9004.8  | 0.0 | 39.5   | 0.0 | -10256.9 |
| 4  | 102 | 0.0 | 5588.5  | 0.0 | -99.3  | 0.0 | 1539.6   |
|    | 103 | 0.0 | 9308.6  | 0.0 | 99.3   | 0.0 | -11026.1 |
| 5  | 102 | 0.0 | 5872.6  | 0.0 | -67.8  | 0.0 | 2270.0   |
|    | 103 | 0.0 | 9024.5  | 0.0 | 67.8   | 0.0 | -10307.5 |
| 6  | 102 | 0.0 | 6513.1  | 0.0 | 30.3   | 0.0 | 3916.3   |
|    | 103 | 0.0 | 8384.0  | 0.0 | -30.3  | 0.0 | -8687.3  |
| 7  | 102 | 0.0 | 6839.3  | 0.0 | 65.3   | 0.0 | 4754.8   |
|    | 103 | 0.0 | 8057.8  | 0.0 | -65.3  | 0.0 | -7861.8  |
| 8  | 102 | 0.0 | 6676.1  | 0.0 | 17.5   | 0.0 | 4334.6   |
|    | 103 | 0.0 | 8221.0  | 0.0 | -17.5  | 0.0 | -8274.3  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 9  | 102 | 0.0 | 6960.2 | 0.0 | 48.9   | 0.0 | 5065.0  |
|    | 103 | 0.0 | 7936.9 | 0.0 | -48.9  | 0.0 | -7555.8 |
| 10 | 102 | 0.0 | 8582.3 | 0.0 | -119.2 | 0.0 | 7974.3  |
|    | 103 | 0.0 | 7814.2 | 0.0 | 119.2  | 0.0 | -6015.5 |
| 11 | 102 | 0.0 | 7734.6 | 0.0 | -90.9  | 0.0 | 7046.7  |
|    | 103 | 0.0 | 7162.5 | 0.0 | 90.9   | 0.0 | -5587.8 |
| 12 | 102 | 0.0 | 7768.3 | 0.0 | -87.4  | 0.0 | 7133.2  |
|    | 103 | 0.0 | 7128.8 | 0.0 | 87.4   | 0.0 | -5502.3 |
| 13 | 102 | 0.0 | 7771.1 | 0.0 | -133.4 | 0.0 | 7141.0  |
|    | 103 | 0.0 | 7126.0 | 0.0 | 133.4  | 0.0 | -5496.1 |
| 14 | 102 | 0.0 | 7737.4 | 0.0 | -136.9 | 0.0 | 7054.6  |
|    | 103 | 0.0 | 7159.7 | 0.0 | 136.9  | 0.0 | -5581.6 |
| 15 | 102 | 0.0 | 7622.2 | 0.0 | -102.8 | 0.0 | 6758.6  |
|    | 103 | 0.0 | 7274.9 | 0.0 | 102.8  | 0.0 | -5872.8 |
| 16 | 102 | 0.0 | 7656.0 | 0.0 | -99.2  | 0.0 | 6845.1  |
|    | 103 | 0.0 | 7241.1 | 0.0 | 99.2   | 0.0 | -5787.3 |
| 17 | 102 | 0.0 | 7883.4 | 0.0 | -121.5 | 0.0 | 7429.1  |
|    | 103 | 0.0 | 7013.7 | 0.0 | 121.5  | 0.0 | -5211.1 |
| 18 | 102 | 0.0 | 7849.7 | 0.0 | -125.1 | 0.0 | 7342.7  |
|    | 103 | 0.0 | 7047.4 | 0.0 | 125.1  | 0.0 | -5296.6 |
|    |     |     |        |     |        |     |         |
| 1  | 103 | 0.0 | 4202.4 | 0.0 | 268.1  | 0.0 | 4027.6  |
|    | 104 | 0.0 | 3600.8 | 0.0 | -268.1 | 0.0 | -2553.7 |
| 2  | 103 | 0.0 | 1179.4 | 0.0 | 187.5  | 0.0 | -2046.1 |
|    | 104 | 0.0 | 4823.1 | 0.0 | -187.5 | 0.0 | -6880.9 |
| 3  | 103 | 0.0 | 1488.5 | 0.0 | 171.4  | 0.0 | -1275.2 |
|    | 104 | 0.0 | 4514.0 | 0.0 | -171.4 | 0.0 | -6137.1 |
| 4  | 103 | 0.0 | 1205.5 | 0.0 | 160.0  | 0.0 | -1981.8 |
|    | 104 | 0.0 | 4797.0 | 0.0 | -160.0 | 0.0 | -6817.6 |
| 5  | 103 | 0.0 | 1478.1 | 0.0 | 127.8  | 0.0 | -1302.5 |
|    | 104 | 0.0 | 4524.4 | 0.0 | -127.8 | 0.0 | -6160.9 |
| 6  | 103 | 0.0 | 2088.3 | 0.0 | 80.1   | 0.0 | 218.0   |
|    | 104 | 0.0 | 3914.2 | 0.0 | -80.1  | 0.0 | -4691.6 |
| 7  | 103 | 0.0 | 2397.4 | 0.0 | 64.0   | 0.0 | 988.9   |
|    | 104 | 0.0 | 3605.1 | 0.0 | -64.0  | 0.0 | -3947.8 |
| 8  | 103 | 0.0 | 2235.8 | 0.0 | 106.3  | 0.0 | 587.8   |
|    | 104 | 0.0 | 3766.7 | 0.0 | -106.3 | 0.0 | -4338.4 |
| 9  | 103 | 0.0 | 2508.5 | 0.0 | 74.1   | 0.0 | 1267.0  |
|    | 104 | 0.0 | 3494.0 | 0.0 | -74.1  | 0.0 | -3681.6 |
| 10 | 103 | 0.0 | 3228.6 | 0.0 | 196.5  | 0.0 | 3086.1  |
|    | 104 | 0.0 | 2773.9 | 0.0 | -196.5 | 0.0 | -1972.1 |
| 11 | 103 | 0.0 | 3189.0 | 0.0 | 176.1  | 0.0 | 2978.7  |
|    | 104 | 0.0 | 2813.5 | 0.0 | -176.1 | 0.0 | -2058.6 |
| 12 | 103 | 0.0 | 3218.0 | 0.0 | 189.6  | 0.0 | 3051.4  |
|    | 104 | 0.0 | 2784.5 | 0.0 | -189.6 | 0.0 | -1989.6 |
| 13 | 103 | 0.0 | 3231.5 | 0.0 | 128.4  | 0.0 | 3083.7  |
|    | 104 | 0.0 | 2771.0 | 0.0 | -128.4 | 0.0 | -1955.5 |
| 14 | 103 | 0.0 | 3202.6 | 0.0 | 115.0  | 0.0 | 3011.0  |
|    | 104 | 0.0 | 2799.9 | 0.0 | -115.0 | 0.0 | -2024.5 |
| 15 | 103 | 0.0 | 3092.5 | 0.0 | 131.3  | 0.0 | 2736.1  |
|    | 104 | 0.0 | 2910.0 | 0.0 | -131.3 | 0.0 | -2288.8 |
| 16 | 103 | 0.0 | 3121.5 | 0.0 | 144.8  | 0.0 | 2808.9  |
|    | 104 | 0.0 | 2881.0 | 0.0 | -144.8 | 0.0 | -2219.8 |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
| 17 | 103 | 0.0 | 3328.0  | 0.0 | 173.2  | 0.0 | 3326.2   |
|    | 104 | 0.0 | 2674.5  | 0.0 | -173.2 | 0.0 | -1725.3  |
| 18 | 103 | 0.0 | 3299.0  | 0.0 | 159.8  | 0.0 | 3253.5   |
|    | 104 | 0.0 | 2703.5  | 0.0 | -159.8 | 0.0 | -1794.4  |
|    |     |     |         |     |        |     |          |
| 1  | 104 | 0.0 | 5217.4  | 0.0 | -323.0 | 0.0 | 2188.7   |
|    | 105 | 0.0 | 4588.7  | 0.0 | 323.0  | 0.0 | -1465.7  |
| 2  | 104 | 0.0 | -2103.5 | 0.0 | -202.3 | 0.0 | -4627.2  |
|    | 105 | 0.0 | 8821.8  | 0.0 | 202.3  | 0.0 | -7936.9  |
| 3  | 104 | 0.0 | -1313.7 | 0.0 | -251.6 | 0.0 | -3778.6  |
|    | 105 | 0.0 | 8032.0  | 0.0 | 251.6  | 0.0 | -6969.1  |
| 4  | 104 | 0.0 | -2041.0 | 0.0 | -185.1 | 0.0 | -4559.2  |
|    | 105 | 0.0 | 8759.3  | 0.0 | 185.1  | 0.0 | -7861.1  |
| 5  | 104 | 0.0 | -1371.7 | 0.0 | -225.0 | 0.0 | -3841.8  |
|    | 105 | 0.0 | 8090.0  | 0.0 | 225.0  | 0.0 | -7039.2  |
| 6  | 104 | 0.0 | 127.4   | 0.0 | -335.2 | 0.0 | -2235.6  |
|    | 105 | 0.0 | 6590.9  | 0.0 | 335.2  | 0.0 | -5197.4  |
| 7  | 104 | 0.0 | 917.1   | 0.0 | -384.5 | 0.0 | -1387.0  |
|    | 105 | 0.0 | 5801.2  | 0.0 | 384.5  | 0.0 | -4229.6  |
| 8  | 104 | 0.0 | 591.5   | 0.0 | -349.3 | 0.0 | -1730.6  |
|    | 105 | 0.0 | 6126.8  | 0.0 | 349.3  | 0.0 | -4635.0  |
| 9  | 104 | 0.0 | 1260.8  | 0.0 | -389.2 | 0.0 | -1013.1  |
|    | 105 | 0.0 | 5457.5  | 0.0 | 389.2  | 0.0 | -3813.2  |
| 10 | 104 | 0.0 | 3958.9  | 0.0 | -232.1 | 0.0 | 1680.7   |
|    | 105 | 0.0 | 3435.6  | 0.0 | 232.1  | 0.0 | -1079.0  |
| 11 | 104 | 0.0 | 3659.2  | 0.0 | -171.9 | 0.0 | 1611.2   |
|    | 105 | 0.0 | 3059.1  | 0.0 | 171.9  | 0.0 | -921.0   |
| 12 | 104 | 0.0 | 3755.0  | 0.0 | -179.6 | 0.0 | 1715.5   |
|    | 105 | 0.0 | 2963.3  | 0.0 | 179.6  | 0.0 | -805.0   |
| 13 | 104 | 0.0 | 3762.4  | 0.0 | -143.5 | 0.0 | 1723.4   |
|    | 105 | 0.0 | 2955.9  | 0.0 | 143.5  | 0.0 | -795.9   |
| 14 | 104 | 0.0 | 3666.6  | 0.0 | -135.9 | 0.0 | 1619.2   |
|    | 105 | 0.0 | 3051.7  | 0.0 | 135.9  | 0.0 | -912.0   |
| 15 | 104 | 0.0 | 3340.0  | 0.0 | -146.3 | 0.0 | 1263.8   |
|    | 105 | 0.0 | 3378.3  | 0.0 | 146.3  | 0.0 | -1307.9  |
| 16 | 104 | 0.0 | 3435.7  | 0.0 | -154.0 | 0.0 | 1368.0   |
|    | 105 | 0.0 | 3282.6  | 0.0 | 154.0  | 0.0 | -1191.8  |
| 17 | 104 | 0.0 | 4081.7  | 0.0 | -169.1 | 0.0 | 2070.9   |
|    | 105 | 0.0 | 2636.6  | 0.0 | 169.1  | 0.0 | -409.1   |
| 18 | 104 | 0.0 | 3985.9  | 0.0 | -161.4 | 0.0 | 1966.6   |
|    | 105 | 0.0 | 2732.4  | 0.0 | 161.4  | 0.0 | -525.1   |
|    |     |     |         |     |        |     |          |
| 1  | 108 | 0.0 | 13659.0 | 0.0 | -16.4  | 0.0 | 10844.3  |
|    | 109 | 0.0 | 14997.0 | 0.0 | 16.4   | 0.0 | -14858.4 |
| 2  | 108 | 0.0 | 6236.0  | 0.0 | 19.0   | 0.0 | 2074.9   |
|    | 109 | 0.0 | 9352.0  | 0.0 | -19.0  | 0.0 | -11422.7 |
| 3  | 108 | 0.0 | 6531.4  | 0.0 | 51.6   | 0.0 | 3044.4   |
|    | 109 | 0.0 | 9056.6  | 0.0 | -51.6  | 0.0 | -10620.2 |
| 4  | 108 | 0.0 | 6216.5  | 0.0 | -3.8   | 0.0 | 2010.6   |
|    | 109 | 0.0 | 9371.5  | 0.0 | 3.8    | 0.0 | -11475.6 |
| 5  | 108 | 0.0 | 6433.9  | 0.0 | 24.5   | 0.0 | 2727.6   |
|    | 109 | 0.0 | 9154.1  | 0.0 | -24.5  | 0.0 | -10888.0 |
| 6  | 108 | 0.0 | 6960.8  | 0.0 | 113.4  | 0.0 | 4464.8   |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 109 | 0.0 | 8627.2  | 0.0 | -113.4 | 0.0 | -9463.9  |
| 7  | 108 | 0.0 | 7256.1  | 0.0 | 145.9  | 0.0 | 5434.3   |
|    | 109 | 0.0 | 8331.9  | 0.0 | -145.9 | 0.0 | -8661.4  |
| 8  | 108 | 0.0 | 7200.9  | 0.0 | 104.6  | 0.0 | 5242.3   |
|    | 109 | 0.0 | 8387.1  | 0.0 | -104.6 | 0.0 | -8800.5  |
| 9  | 108 | 0.0 | 7418.4  | 0.0 | 132.9  | 0.0 | 5959.2   |
|    | 109 | 0.0 | 8169.6  | 0.0 | -132.9 | 0.0 | -8212.9  |
| 10 | 108 | 0.0 | 9936.3  | 0.0 | -12.4  | 0.0 | 7866.4   |
|    | 109 | 0.0 | 10943.7 | 0.0 | 12.4   | 0.0 | -10888.4 |
| 11 | 108 | 0.0 | 7356.2  | 0.0 | 8.3    | 0.0 | 5756.2   |
|    | 109 | 0.0 | 8231.8  | 0.0 | -8.3   | 0.0 | -8383.0  |
| 12 | 108 | 0.0 | 7420.4  | 0.0 | 12.3   | 0.0 | 5964.4   |
|    | 109 | 0.0 | 8167.6  | 0.0 | -12.3  | 0.0 | -8205.8  |
| 13 | 108 | 0.0 | 7324.1  | 0.0 | -30.9  | 0.0 | 5650.7   |
|    | 109 | 0.0 | 8263.9  | 0.0 | 30.9   | 0.0 | -8469.9  |
| 14 | 108 | 0.0 | 7259.9  | 0.0 | -34.9  | 0.0 | 5442.5   |
|    | 109 | 0.0 | 8328.1  | 0.0 | 34.9   | 0.0 | -8647.1  |
| 15 | 108 | 0.0 | 7142.1  | 0.0 | -5.0   | 0.0 | 5062.2   |
|    | 109 | 0.0 | 8445.9  | 0.0 | 5.0    | 0.0 | -8973.8  |
| 16 | 108 | 0.0 | 7206.3  | 0.0 | -1.0   | 0.0 | 5270.4   |
|    | 109 | 0.0 | 8381.7  | 0.0 | 1.0    | 0.0 | -8796.6  |
| 17 | 108 | 0.0 | 7538.2  | 0.0 | -17.6  | 0.0 | 6344.7   |
|    | 109 | 0.0 | 8049.8  | 0.0 | 17.6   | 0.0 | -7879.1  |
| 18 | 108 | 0.0 | 7474.0  | 0.0 | -21.6  | 0.0 | 6136.5   |
|    | 109 | 0.0 | 8114.0  | 0.0 | 21.6   | 0.0 | -8056.3  |
|    |     |     |         |     |        |     |          |
| 1  | 109 | 0.0 | 11968.0 | 0.0 | 26.0   | 0.0 | 11600.4  |
|    | 110 | 0.0 | 10918.2 | 0.0 | -26.0  | 0.0 | -8923.4  |
| 2  | 109 | 0.0 | 6397.8  | 0.0 | 57.5   | 0.0 | 3937.6   |
|    | 110 | 0.0 | 8463.6  | 0.0 | -57.5  | 0.0 | -9205.4  |
| 3  | 109 | 0.0 | 6729.9  | 0.0 | 84.2   | 0.0 | 4772.8   |
|    | 110 | 0.0 | 8131.5  | 0.0 | -84.2  | 0.0 | -8347.1  |
| 4  | 109 | 0.0 | 6375.9  | 0.0 | 26.9   | 0.0 | 3880.6   |
|    | 110 | 0.0 | 8485.5  | 0.0 | -26.9  | 0.0 | -9259.9  |
| 5  | 109 | 0.0 | 6630.4  | 0.0 | 48.3   | 0.0 | 4517.7   |
|    | 110 | 0.0 | 8231.0  | 0.0 | -48.3  | 0.0 | -8599.1  |
| 6  | 109 | 0.0 | 7246.1  | 0.0 | 128.9  | 0.0 | 6061.1   |
|    | 110 | 0.0 | 7615.3  | 0.0 | -128.9 | 0.0 | -7002.6  |
| 7  | 109 | 0.0 | 7578.2  | 0.0 | 155.6  | 0.0 | 6896.3   |
|    | 110 | 0.0 | 7283.2  | 0.0 | -155.6 | 0.0 | -6144.3  |
| 8  | 109 | 0.0 | 7482.8  | 0.0 | 115.8  | 0.0 | 6664.8   |
|    | 110 | 0.0 | 7378.6  | 0.0 | -115.8 | 0.0 | -6398.9  |
| 9  | 109 | 0.0 | 7737.3  | 0.0 | 137.2  | 0.0 | 7301.8   |
|    | 110 | 0.0 | 7124.1  | 0.0 | -137.2 | 0.0 | -5738.0  |
| 10 | 109 | 0.0 | 8925.9  | 0.0 | 19.8   | 0.0 | 8591.9   |
|    | 110 | 0.0 | 8184.6  | 0.0 | -19.8  | 0.0 | -6701.5  |
| 11 | 109 | 0.0 | 7668.7  | 0.0 | 45.3   | 0.0 | 7130.5   |
|    | 110 | 0.0 | 7192.7  | 0.0 | -45.3  | 0.0 | -5916.7  |
| 12 | 109 | 0.0 | 7732.6  | 0.0 | 5.4    | 0.0 | 7293.9   |
|    | 110 | 0.0 | 7128.8  | 0.0 | -5.4   | 0.0 | -5753.9  |
| 13 | 109 | 0.0 | 7632.8  | 0.0 | -7.8   | 0.0 | 7037.1   |
|    | 110 | 0.0 | 7228.6  | 0.0 | 7.8    | 0.0 | -6006.2  |
| 14 | 109 | 0.0 | 7568.9  | 0.0 | 32.2   | 0.0 | 6873.8   |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 110 | 0.0 | 7292.5  | 0.0 | -32.2  | 0.0 | -6169.0 |
| 15 | 109 | 0.0 | 7455.6  | 0.0 | 178.6  | 0.0 | 6586.1  |
|    | 110 | 0.0 | 7405.8  | 0.0 | -178.6 | 0.0 | -6459.4 |
| 16 | 109 | 0.0 | 7519.5  | 0.0 | 138.6  | 0.0 | 6749.5  |
|    | 110 | 0.0 | 7341.9  | 0.0 | -138.6 | 0.0 | -6296.6 |
| 17 | 109 | 0.0 | 7846.0  | 0.0 | -141.0 | 0.0 | 7581.5  |
|    | 110 | 0.0 | 7015.4  | 0.0 | 141.0  | 0.0 | -5463.5 |
| 18 | 109 | 0.0 | 7782.0  | 0.0 | -101.0 | 0.0 | 7418.2  |
|    | 110 | 0.0 | 7079.4  | 0.0 | 101.0  | 0.0 | -5626.3 |
|    |     |     |         |     |        |     |         |
| 1  | 110 | 0.0 | 11438.1 | 0.0 | -81.4  | 0.0 | 9476.4  |
|    | 111 | 0.0 | 10550.6 | 0.0 | 81.4   | 0.0 | -7302.1 |
| 2  | 110 | 0.0 | 6357.8  | 0.0 | -13.8  | 0.0 | 3386.7  |
|    | 111 | 0.0 | 7920.8  | 0.0 | 13.8   | 0.0 | -7216.4 |
| 3  | 110 | 0.0 | 6573.1  | 0.0 | 13.4   | 0.0 | 3951.7  |
|    | 111 | 0.0 | 7705.5  | 0.0 | -13.4  | 0.0 | -6726.5 |
| 4  | 110 | 0.0 | 6332.2  | 0.0 | -42.0  | 0.0 | 3321.3  |
|    | 111 | 0.0 | 7946.4  | 0.0 | 42.0   | 0.0 | -7276.4 |
| 5  | 110 | 0.0 | 6531.2  | 0.0 | -20.2  | 0.0 | 3844.3  |
|    | 111 | 0.0 | 7747.4  | 0.0 | 20.2   | 0.0 | -6824.3 |
| 6  | 110 | 0.0 | 7021.1  | 0.0 | 58.8   | 0.0 | 5130.1  |
|    | 111 | 0.0 | 7257.5  | 0.0 | -58.8  | 0.0 | -5709.5 |
| 7  | 110 | 0.0 | 7236.4  | 0.0 | 86.0   | 0.0 | 5695.1  |
|    | 111 | 0.0 | 7042.2  | 0.0 | -86.0  | 0.0 | -5219.6 |
| 8  | 110 | 0.0 | 7049.8  | 0.0 | 48.8   | 0.0 | 5204.8  |
|    | 111 | 0.0 | 7228.8  | 0.0 | -48.8  | 0.0 | -5643.3 |
| 9  | 110 | 0.0 | 7248.8  | 0.0 | 70.6   | 0.0 | 5727.8  |
|    | 111 | 0.0 | 7029.8  | 0.0 | -70.6  | 0.0 | -5191.3 |
| 10 | 110 | 0.0 | 8552.6  | 0.0 | -60.1  | 0.0 | 7094.2  |
|    | 111 | 0.0 | 7886.9  | 0.0 | 60.1   | 0.0 | -5463.2 |
| 11 | 110 | 0.0 | 7454.7  | 0.0 | -29.5  | 0.0 | 6259.2  |
|    | 111 | 0.0 | 6823.9  | 0.0 | 29.5   | 0.0 | -4713.8 |
| 12 | 110 | 0.0 | 7468.1  | 0.0 | -26.4  | 0.0 | 6293.7  |
|    | 111 | 0.0 | 6810.5  | 0.0 | 26.4   | 0.0 | -4682.7 |
| 13 | 110 | 0.0 | 7412.7  | 0.0 | -67.8  | 0.0 | 6151.9  |
|    | 111 | 0.0 | 6865.9  | 0.0 | 67.8   | 0.0 | -4812.3 |
| 14 | 110 | 0.0 | 7399.3  | 0.0 | -70.9  | 0.0 | 6117.4  |
|    | 111 | 0.0 | 6879.3  | 0.0 | 70.9   | 0.0 | -4843.4 |
| 15 | 110 | 0.0 | 7410.1  | 0.0 | -39.9  | 0.0 | 6144.1  |
|    | 111 | 0.0 | 6868.5  | 0.0 | 39.9   | 0.0 | -4817.4 |
| 16 | 110 | 0.0 | 7423.4  | 0.0 | -36.7  | 0.0 | 6178.7  |
|    | 111 | 0.0 | 6855.2  | 0.0 | 36.7   | 0.0 | -4786.4 |
| 17 | 110 | 0.0 | 7457.3  | 0.0 | -57.4  | 0.0 | 6267.0  |
|    | 111 | 0.0 | 6821.3  | 0.0 | 57.4   | 0.0 | -4708.6 |
| 18 | 110 | 0.0 | 7443.9  | 0.0 | -60.5  | 0.0 | 6232.5  |
|    | 111 | 0.0 | 6834.7  | 0.0 | 60.5   | 0.0 | -4739.7 |
|    |     |     |         |     |        |     |         |
| 1  | 111 | 0.0 | 6336.7  | 0.0 | -36.3  | 0.0 | 4261.2  |
|    | 112 | 0.0 | 3984.5  | 0.0 | 36.3   | 0.0 | -1556.1 |
| 2  | 111 | 0.0 | 418.3   | 0.0 | -175.5 | 0.0 | -111.0  |
|    | 112 | 0.0 | 6283.9  | 0.0 | 175.5  | 0.0 | -6634.5 |
| 3  | 111 | 0.0 | 1453.7  | 0.0 | -329.3 | 0.0 | 704.1   |
|    | 112 | 0.0 | 5248.5  | 0.0 | 329.3  | 0.0 | -5067.8 |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
| 4  | 111 | 0.0 | 355.1   | 0.0 | -108.1 | 0.0 | -156.3   |
|    | 112 | 0.0 | 6347.1  | 0.0 | 108.1  | 0.0 | -6734.5  |
| 5  | 111 | 0.0 | 1138.2  | 0.0 | -237.1 | 0.0 | 469.1    |
|    | 112 | 0.0 | 5564.0  | 0.0 | 237.1  | 0.0 | -5558.9  |
| 6  | 111 | 0.0 | 3028.6  | 0.0 | -605.5 | 0.0 | 1973.6   |
|    | 112 | 0.0 | 3673.6  | 0.0 | 605.5  | 0.0 | -2715.7  |
| 7  | 111 | 0.0 | 4063.9  | 0.0 | -759.4 | 0.0 | 2788.7   |
|    | 112 | 0.0 | 2638.3  | 0.0 | 759.4  | 0.0 | -1149.0  |
| 8  | 111 | 0.0 | 3806.4  | 0.0 | -620.9 | 0.0 | 2560.7   |
|    | 112 | 0.0 | 2895.8  | 0.0 | 620.9  | 0.0 | -1512.2  |
| 9  | 111 | 0.0 | 4589.5  | 0.0 | -749.9 | 0.0 | 3186.1   |
|    | 112 | 0.0 | 2112.7  | 0.0 | 749.9  | 0.0 | -336.6   |
| 10 | 111 | 0.0 | 4775.4  | 0.0 | -31.8  | 0.0 | 3224.0   |
|    | 112 | 0.0 | 2941.1  | 0.0 | 31.8   | 0.0 | -1114.5  |
| 11 | 111 | 0.0 | 4376.9  | 0.0 | -104.5 | 0.0 | 3016.3   |
|    | 112 | 0.0 | 2325.3  | 0.0 | 104.5  | 0.0 | -657.0   |
| 12 | 111 | 0.0 | 4584.7  | 0.0 | -124.9 | 0.0 | 3172.7   |
|    | 112 | 0.0 | 2117.5  | 0.0 | 124.9  | 0.0 | -334.9   |
| 13 | 111 | 0.0 | 4273.2  | 0.0 | 6.2    | 0.0 | 2942.0   |
|    | 112 | 0.0 | 2429.0  | 0.0 | -6.2   | 0.0 | -821.1   |
| 14 | 111 | 0.0 | 4065.4  | 0.0 | 26.6   | 0.0 | 2785.6   |
|    | 112 | 0.0 | 2636.8  | 0.0 | -26.6  | 0.0 | -1143.2  |
| 15 | 111 | 0.0 | 3684.1  | 0.0 | -36.5  | 0.0 | 2495.2   |
|    | 112 | 0.0 | 3018.1  | 0.0 | 36.5   | 0.0 | -1730.6  |
| 16 | 111 | 0.0 | 3892.0  | 0.0 | -56.9  | 0.0 | 2651.5   |
|    | 112 | 0.0 | 2810.2  | 0.0 | 56.9   | 0.0 | -1408.5  |
| 17 | 111 | 0.0 | 4966.0  | 0.0 | -61.8  | 0.0 | 3463.1   |
|    | 112 | 0.0 | 1736.2  | 0.0 | 61.8   | 0.0 | 252.5    |
| 18 | 111 | 0.0 | 4758.2  | 0.0 | -41.4  | 0.0 | 3306.8   |
|    | 112 | 0.0 | 1944.0  | 0.0 | 41.4   | 0.0 | -69.6    |
|    |     |     |         |     |        |     |          |
| 1  | 113 | 0.0 | 13456.6 | 0.0 | -11.8  | 0.0 | 10008.8  |
|    | 114 | 0.0 | 15199.4 | 0.0 | 11.8   | 0.0 | -15237.4 |
| 2  | 113 | 0.0 | 6219.7  | 0.0 | 20.6   | 0.0 | 1991.8   |
|    | 114 | 0.0 | 9368.3  | 0.0 | -20.6  | 0.0 | -11437.8 |
| 3  | 113 | 0.0 | 6433.7  | 0.0 | 58.4   | 0.0 | 2898.8   |
|    | 114 | 0.0 | 9154.3  | 0.0 | -58.4  | 0.0 | -10844.0 |
| 4  | 113 | 0.0 | 6175.7  | 0.0 | 2.1    | 0.0 | 1852.1   |
|    | 114 | 0.0 | 9412.3  | 0.0 | -2.1   | 0.0 | -11562.2 |
| 5  | 113 | 0.0 | 6384.7  | 0.0 | 33.3   | 0.0 | 2528.4   |
|    | 114 | 0.0 | 9203.3  | 0.0 | -33.3  | 0.0 | -10984.0 |
| 6  | 113 | 0.0 | 6916.6  | 0.0 | 124.4  | 0.0 | 4246.0   |
|    | 114 | 0.0 | 8671.4  | 0.0 | -124.4 | 0.0 | -9510.5  |
| 7  | 113 | 0.0 | 7130.6  | 0.0 | 162.2  | 0.0 | 5153.0   |
|    | 114 | 0.0 | 8457.4  | 0.0 | -162.2 | 0.0 | -8916.8  |
| 8  | 113 | 0.0 | 6889.1  | 0.0 | 128.0  | 0.0 | 4875.6   |
|    | 114 | 0.0 | 8698.9  | 0.0 | -128.0 | 0.0 | -9583.1  |
| 9  | 113 | 0.0 | 7098.2  | 0.0 | 159.1  | 0.0 | 5551.9   |
|    | 114 | 0.0 | 8489.8  | 0.0 | -159.1 | 0.0 | -9005.0  |
| 10 | 113 | 0.0 | 9788.9  | 0.0 | -9.1   | 0.0 | 7258.4   |
|    | 114 | 0.0 | 11091.1 | 0.0 | 9.1    | 0.0 | -11165.1 |
| 11 | 113 | 0.0 | 7266.2  | 0.0 | 5.9    | 0.0 | 5367.1   |
|    | 114 | 0.0 | 8321.8  | 0.0 | -5.9   | 0.0 | -8534.0  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 12 | 113 | 0.0 | 7270.9  | 0.0 | 11.4   | 0.0 | 5380.8  |
|    | 114 | 0.0 | 8317.1  | 0.0 | -11.4  | 0.0 | -8519.5 |
| 13 | 113 | 0.0 | 7194.6  | 0.0 | -24.6  | 0.0 | 5139.9  |
|    | 114 | 0.0 | 8393.4  | 0.0 | 24.6   | 0.0 | -8736.5 |
| 14 | 113 | 0.0 | 7189.9  | 0.0 | -30.1  | 0.0 | 5126.2  |
|    | 114 | 0.0 | 8398.1  | 0.0 | 30.1   | 0.0 | -8750.9 |
| 15 | 113 | 0.0 | 7250.5  | 0.0 | -12.4  | 0.0 | 5321.5  |
|    | 114 | 0.0 | 8337.5  | 0.0 | 12.4   | 0.0 | -8582.3 |
| 16 | 113 | 0.0 | 7255.2  | 0.0 | -6.9   | 0.0 | 5335.2  |
|    | 114 | 0.0 | 8332.8  | 0.0 | 6.9    | 0.0 | -8567.8 |
| 17 | 113 | 0.0 | 7210.2  | 0.0 | -6.3   | 0.0 | 5185.5  |
|    | 114 | 0.0 | 8377.8  | 0.0 | 6.3    | 0.0 | -8688.2 |
| 18 | 113 | 0.0 | 7205.5  | 0.0 | -11.8  | 0.0 | 5171.8  |
|    | 114 | 0.0 | 8382.5  | 0.0 | 11.8   | 0.0 | -8702.6 |
|    |     |     |         |     |        |     |         |
| 1  | 114 | 0.0 | 11944.9 | 0.0 | -17.7  | 0.0 | 11552.0 |
|    | 115 | 0.0 | 10941.4 | 0.0 | 17.7   | 0.0 | -8993.1 |
| 2  | 114 | 0.0 | 6433.8  | 0.0 | 24.5   | 0.0 | 3982.8  |
|    | 115 | 0.0 | 8427.6  | 0.0 | -24.5  | 0.0 | -9067.2 |
| 3  | 114 | 0.0 | 6766.0  | 0.0 | 55.1   | 0.0 | 4829.7  |
|    | 115 | 0.0 | 8095.4  | 0.0 | -55.1  | 0.0 | -8219.5 |
| 4  | 114 | 0.0 | 6392.3  | 0.0 | -6.0   | 0.0 | 3876.4  |
|    | 115 | 0.0 | 8469.1  | 0.0 | 6.0    | 0.0 | -9172.5 |
| 5  | 114 | 0.0 | 6644.2  | 0.0 | 19.8   | 0.0 | 4519.7  |
|    | 115 | 0.0 | 8217.2  | 0.0 | -19.8  | 0.0 | -8531.1 |
| 6  | 114 | 0.0 | 7273.4  | 0.0 | 110.5  | 0.0 | 6126.9  |
|    | 115 | 0.0 | 7588.0  | 0.0 | -110.5 | 0.0 | -6929.2 |
| 7  | 114 | 0.0 | 7605.7  | 0.0 | 141.2  | 0.0 | 6973.9  |
|    | 115 | 0.0 | 7255.7  | 0.0 | -141.2 | 0.0 | -6081.5 |
| 8  | 114 | 0.0 | 7499.9  | 0.0 | 96.3   | 0.0 | 6699.7  |
|    | 115 | 0.0 | 7361.5  | 0.0 | -96.3  | 0.0 | -6346.9 |
| 9  | 114 | 0.0 | 7751.8  | 0.0 | 122.1  | 0.0 | 7342.9  |
|    | 115 | 0.0 | 7109.6  | 0.0 | -122.1 | 0.0 | -5705.5 |
| 10 | 114 | 0.0 | 8908.3  | 0.0 | -13.6  | 0.0 | 8554.2  |
|    | 115 | 0.0 | 8202.2  | 0.0 | 13.6   | 0.0 | -6753.8 |
| 11 | 114 | 0.0 | 7667.6  | 0.0 | 13.0   | 0.0 | 7130.0  |
|    | 115 | 0.0 | 7193.8  | 0.0 | -13.0  | 0.0 | -5921.9 |
| 12 | 114 | 0.0 | 7736.8  | 0.0 | 17.9   | 0.0 | 7305.3  |
|    | 115 | 0.0 | 7124.6  | 0.0 | -17.9  | 0.0 | -5744.3 |
| 13 | 114 | 0.0 | 7600.1  | 0.0 | -39.9  | 0.0 | 6957.0  |
|    | 115 | 0.0 | 7261.3  | 0.0 | 39.9   | 0.0 | -6093.3 |
| 14 | 114 | 0.0 | 7530.9  | 0.0 | -44.9  | 0.0 | 6781.7  |
|    | 115 | 0.0 | 7330.5  | 0.0 | 44.9   | 0.0 | -6270.9 |
| 15 | 114 | 0.0 | 7436.9  | 0.0 | -3.5   | 0.0 | 6545.5  |
|    | 115 | 0.0 | 7424.5  | 0.0 | 3.5    | 0.0 | -6514.0 |
| 16 | 114 | 0.0 | 7506.1  | 0.0 | 1.4    | 0.0 | 6720.8  |
|    | 115 | 0.0 | 7355.3  | 0.0 | -1.4   | 0.0 | -6336.4 |
| 17 | 114 | 0.0 | 7830.7  | 0.0 | -23.4  | 0.0 | 7541.5  |
|    | 115 | 0.0 | 7030.7  | 0.0 | 23.4   | 0.0 | -5501.2 |
| 18 | 114 | 0.0 | 7761.5  | 0.0 | -28.4  | 0.0 | 7366.2  |
|    | 115 | 0.0 | 7099.9  | 0.0 | 28.4   | 0.0 | -5678.8 |
|    |     |     |         |     |        |     |         |
| 1  | 115 | 0.0 | 11419.1 | 0.0 | -2.5   | 0.0 | 9462.2  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 116 | 0.0 | 10569.7 | 0.0 | 2.5    | 0.0 | -7381.2 |
| 2  | 115 | 0.0 | 6409.5  | 0.0 | 34.8   | 0.0 | 3572.4  |
|    | 116 | 0.0 | 7869.1  | 0.0 | -34.8  | 0.0 | -7148.6 |
| 3  | 115 | 0.0 | 6691.8  | 0.0 | 13.8   | 0.0 | 4302.8  |
|    | 116 | 0.0 | 7586.8  | 0.0 | -13.8  | 0.0 | -6495.8 |
| 4  | 115 | 0.0 | 6367.2  | 0.0 | 6.0    | 0.0 | 3464.3  |
|    | 116 | 0.0 | 7911.4  | 0.0 | -6.0   | 0.0 | -7247.9 |
| 5  | 115 | 0.0 | 6580.6  | 0.0 | 23.5   | 0.0 | 4016.7  |
|    | 116 | 0.0 | 7698.0  | 0.0 | -23.5  | 0.0 | -6754.7 |
| 6  | 115 | 0.0 | 7120.8  | 0.0 | 93.2   | 0.0 | 5413.6  |
|    | 116 | 0.0 | 7157.8  | 0.0 | -93.2  | 0.0 | -5504.6 |
| 7  | 115 | 0.0 | 7403.1  | 0.0 | 72.2   | 0.0 | 6144.1  |
|    | 116 | 0.0 | 6875.5  | 0.0 | -72.2  | 0.0 | -4851.8 |
| 8  | 115 | 0.0 | 7308.1  | 0.0 | -64.2  | 0.0 | 5899.1  |
|    | 116 | 0.0 | 6970.5  | 0.0 | 64.2   | 0.0 | -5071.8 |
| 9  | 115 | 0.0 | 7521.5  | 0.0 | -46.7  | 0.0 | 6451.5  |
|    | 116 | 0.0 | 6757.1  | 0.0 | 46.7   | 0.0 | -4578.6 |
| 10 | 115 | 0.0 | 8539.9  | 0.0 | -1.7   | 0.0 | 7086.9  |
|    | 116 | 0.0 | 7899.6  | 0.0 | 1.7    | 0.0 | -5518.0 |
| 11 | 115 | 0.0 | 7464.3  | 0.0 | 24.6   | 0.0 | 6302.4  |
|    | 116 | 0.0 | 6814.3  | 0.0 | -24.6  | 0.0 | -4709.8 |
| 12 | 115 | 0.0 | 7467.6  | 0.0 | -9.4   | 0.0 | 6310.5  |
|    | 116 | 0.0 | 6811.0  | 0.0 | 9.4    | 0.0 | -4702.0 |
| 13 | 115 | 0.0 | 7395.4  | 0.0 | -25.7  | 0.0 | 6126.5  |
|    | 116 | 0.0 | 6883.2  | 0.0 | 25.7   | 0.0 | -4871.4 |
| 14 | 115 | 0.0 | 7392.2  | 0.0 | 8.3    | 0.0 | 6118.4  |
|    | 116 | 0.0 | 6886.4  | 0.0 | -8.3   | 0.0 | -4879.3 |
| 15 | 115 | 0.0 | 7453.5  | 0.0 | 138.0  | 0.0 | 6275.2  |
|    | 116 | 0.0 | 6825.1  | 0.0 | -138.0 | 0.0 | -4736.1 |
| 16 | 115 | 0.0 | 7456.7  | 0.0 | 104.0  | 0.0 | 6283.4  |
|    | 116 | 0.0 | 6821.9  | 0.0 | -104.0 | 0.0 | -4728.2 |
| 17 | 115 | 0.0 | 7406.3  | 0.0 | -139.1 | 0.0 | 6153.6  |
|    | 116 | 0.0 | 6872.3  | 0.0 | 139.1  | 0.0 | -4845.2 |
| 18 | 115 | 0.0 | 7403.0  | 0.0 | -105.1 | 0.0 | 6145.5  |
|    | 116 | 0.0 | 6875.6  | 0.0 | 105.1  | 0.0 | -4853.1 |
|    |     |     |         |     |        |     |         |
| 1  | 116 | 0.0 | 6389.2  | 0.0 | 75.6   | 0.0 | 4321.0  |
|    | 117 | 0.0 | 3932.0  | 0.0 | -75.6  | 0.0 | -1495.3 |
| 2  | 116 | 0.0 | 465.3   | 0.0 | -60.3  | 0.0 | -88.7   |
|    | 117 | 0.0 | 6236.9  | 0.0 | 60.3   | 0.0 | -6548.7 |
| 3  | 116 | 0.0 | 1524.0  | 0.0 | -227.9 | 0.0 | 752.9   |
|    | 117 | 0.0 | 5178.2  | 0.0 | 227.9  | 0.0 | -4955.3 |
| 4  | 116 | 0.0 | 330.7   | 0.0 | 35.7   | 0.0 | -196.2  |
|    | 117 | 0.0 | 6371.5  | 0.0 | -35.7  | 0.0 | -6750.7 |
| 5  | 116 | 0.0 | 1134.6  | 0.0 | -94.2  | 0.0 | 439.7   |
|    | 117 | 0.0 | 5567.6  | 0.0 | 94.2   | 0.0 | -5537.8 |
| 6  | 116 | 0.0 | 3144.8  | 0.0 | -493.2 | 0.0 | 2030.9  |
|    | 117 | 0.0 | 3557.4  | 0.0 | 493.2  | 0.0 | -2505.6 |
| 7  | 116 | 0.0 | 4203.4  | 0.0 | -660.8 | 0.0 | 2872.5  |
|    | 117 | 0.0 | 2498.8  | 0.0 | 660.8  | 0.0 | -912.3  |
| 8  | 116 | 0.0 | 3859.6  | 0.0 | -523.0 | 0.0 | 2609.0  |
|    | 117 | 0.0 | 2842.6  | 0.0 | 523.0  | 0.0 | -1439.5 |
| 9  | 116 | 0.0 | 4663.4  | 0.0 | -652.8 | 0.0 | 3244.9  |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 117 | 0.0 | 2038.8  | 0.0 | 652.8  | 0.0 | -226.6   |
| 10 | 116 | 0.0 | 4804.6  | 0.0 | 59.4   | 0.0 | 3257.7   |
|    | 117 | 0.0 | 2911.9  | 0.0 | -59.4  | 0.0 | -1081.1  |
| 11 | 116 | 0.0 | 4412.9  | 0.0 | -14.9  | 0.0 | 3044.3   |
|    | 117 | 0.0 | 2289.3  | 0.0 | 14.9   | 0.0 | -602.2   |
| 12 | 116 | 0.0 | 4635.0  | 0.0 | -46.4  | 0.0 | 3223.8   |
|    | 117 | 0.0 | 2067.2  | 0.0 | 46.4   | 0.0 | -270.7   |
| 13 | 116 | 0.0 | 4193.7  | 0.0 | 145.0  | 0.0 | 2869.2   |
|    | 117 | 0.0 | 2508.5  | 0.0 | -145.0 | 0.0 | -931.2   |
| 14 | 116 | 0.0 | 3971.6  | 0.0 | 176.5  | 0.0 | 2689.7   |
|    | 117 | 0.0 | 2730.6  | 0.0 | -176.5 | 0.0 | -1262.7  |
| 15 | 116 | 0.0 | 3672.3  | 0.0 | 90.1   | 0.0 | 2446.1   |
|    | 117 | 0.0 | 3029.9  | 0.0 | -90.1  | 0.0 | -1707.4  |
| 16 | 116 | 0.0 | 3894.5  | 0.0 | 58.6   | 0.0 | 2625.6   |
|    | 117 | 0.0 | 2807.7  | 0.0 | -58.6  | 0.0 | -1375.9  |
| 17 | 116 | 0.0 | 4934.3  | 0.0 | 40.0   | 0.0 | 3467.5   |
|    | 117 | 0.0 | 1767.9  | 0.0 | -40.0  | 0.0 | 174.0    |
| 18 | 116 | 0.0 | 4712.1  | 0.0 | 71.5   | 0.0 | 3288.0   |
|    | 117 | 0.0 | 1990.1  | 0.0 | -71.5  | 0.0 | -157.5   |
|    |     |     |         |     |        |     |          |
| 1  | 118 | 0.0 | 12313.8 | 0.0 | -90.3  | 0.0 | 8841.3   |
|    | 119 | 0.0 | 14395.2 | 0.0 | 90.3   | 0.0 | -15085.6 |
| 2  | 118 | 0.0 | 6219.9  | 0.0 | -34.4  | 0.0 | 1763.7   |
|    | 119 | 0.0 | 10022.1 | 0.0 | 34.4   | 0.0 | -13170.4 |
| 3  | 118 | 0.0 | 6438.1  | 0.0 | -6.3   | 0.0 | 2391.1   |
|    | 119 | 0.0 | 9803.9  | 0.0 | 6.3    | 0.0 | -11858.6 |
| 4  | 118 | 0.0 | 6114.5  | 0.0 | -60.3  | 0.0 | 1461.8   |
|    | 119 | 0.0 | 10127.5 | 0.0 | 60.3   | 0.0 | -13500.8 |
| 5  | 118 | 0.0 | 6495.6  | 0.0 | -36.5  | 0.0 | 2553.1   |
|    | 119 | 0.0 | 9746.4  | 0.0 | 36.5   | 0.0 | -12305.3 |
| 6  | 118 | 0.0 | 7490.3  | 0.0 | 44.9   | 0.0 | 5401.4   |
|    | 119 | 0.0 | 8751.7  | 0.0 | -44.9  | 0.0 | -9185.5  |
| 7  | 118 | 0.0 | 7708.6  | 0.0 | 73.0   | 0.0 | 6028.8   |
|    | 119 | 0.0 | 8533.4  | 0.0 | -73.0  | 0.0 | -7873.7  |
| 8  | 118 | 0.0 | 6842.0  | 0.0 | 33.3   | 0.0 | 3553.1   |
|    | 119 | 0.0 | 9400.0  | 0.0 | -33.3  | 0.0 | -9128.2  |
| 9  | 118 | 0.0 | 7223.2  | 0.0 | 57.1   | 0.0 | 4644.4   |
|    | 119 | 0.0 | 9018.8  | 0.0 | -57.1  | 0.0 | -7932.8  |
| 10 | 118 | 0.0 | 9107.5  | 0.0 | -69.3  | 0.0 | 6528.4   |
|    | 119 | 0.0 | 10662.5 | 0.0 | 69.3   | 0.0 | -11193.2 |
| 11 | 118 | 0.0 | 7533.3  | 0.0 | -46.3  | 0.0 | 5530.6   |
|    | 119 | 0.0 | 8708.7  | 0.0 | 46.3   | 0.0 | -9057.0  |
| 12 | 118 | 0.0 | 7575.2  | 0.0 | -42.0  | 0.0 | 5650.4   |
|    | 119 | 0.0 | 8666.8  | 0.0 | 42.0   | 0.0 | -8925.3  |
| 13 | 118 | 0.0 | 7364.1  | 0.0 | -91.2  | 0.0 | 5045.9   |
|    | 119 | 0.0 | 8877.9  | 0.0 | 91.2   | 0.0 | -9587.5  |
| 14 | 118 | 0.0 | 7322.2  | 0.0 | -95.5  | 0.0 | 4926.2   |
|    | 119 | 0.0 | 8919.8  | 0.0 | 95.5   | 0.0 | -9719.2  |
| 15 | 118 | 0.0 | 7393.6  | 0.0 | -60.6  | 0.0 | 5131.6   |
|    | 119 | 0.0 | 8848.4  | 0.0 | 60.6   | 0.0 | -9496.0  |
| 16 | 118 | 0.0 | 7435.5  | 0.0 | -56.3  | 0.0 | 5251.3   |
|    | 119 | 0.0 | 8806.5  | 0.0 | 56.3   | 0.0 | -9364.3  |
| 17 | 118 | 0.0 | 7503.7  | 0.0 | -76.8  | 0.0 | 5444.9   |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 119 | 0.0 | 8738.3  | 0.0 | 76.8   | 0.0 | -9148.5  |
| 18 | 118 | 0.0 | 7461.8  | 0.0 | -81.1  | 0.0 | 5325.2   |
|    | 119 | 0.0 | 8780.2  | 0.0 | 81.1   | 0.0 | -9280.2  |
|    |     |     |         |     |        |     |          |
| 1  | 119 | 0.0 | 10973.1 | 0.0 | 86.0   | 0.0 | 9696.2   |
|    | 120 | 0.0 | 10770.8 | 0.0 | -86.0  | 0.0 | -9180.3  |
| 2  | 119 | 0.0 | 5495.5  | 0.0 | 101.6  | 0.0 | 1411.7   |
|    | 120 | 0.0 | 9401.6  | 0.0 | -101.6 | 0.0 | -11372.4 |
| 3  | 119 | 0.0 | 6155.2  | 0.0 | 129.7  | 0.0 | 3103.5   |
|    | 120 | 0.0 | 8741.9  | 0.0 | -129.7 | 0.0 | -9699.7  |
| 4  | 119 | 0.0 | 5357.4  | 0.0 | 75.2   | 0.0 | 1058.9   |
|    | 120 | 0.0 | 9539.7  | 0.0 | -75.2  | 0.0 | -11723.7 |
| 5  | 119 | 0.0 | 5965.5  | 0.0 | 98.8   | 0.0 | 2618.7   |
|    | 120 | 0.0 | 8931.6  | 0.0 | -98.8  | 0.0 | -10182.3 |
| 6  | 119 | 0.0 | 7522.5  | 0.0 | 180.4  | 0.0 | 6611.2   |
|    | 120 | 0.0 | 7374.6  | 0.0 | -180.4 | 0.0 | -6234.3  |
| 7  | 119 | 0.0 | 8182.2  | 0.0 | 208.5  | 0.0 | 8303.1   |
|    | 120 | 0.0 | 6714.9  | 0.0 | -208.5 | 0.0 | -4561.5  |
| 8  | 119 | 0.0 | 7556.5  | 0.0 | 168.9  | 0.0 | 6698.4   |
|    | 120 | 0.0 | 7340.6  | 0.0 | -168.9 | 0.0 | -6148.0  |
| 9  | 119 | 0.0 | 8164.6  | 0.0 | 192.5  | 0.0 | 8258.3   |
|    | 120 | 0.0 | 6732.5  | 0.0 | -192.5 | 0.0 | -4606.6  |
| 10 | 119 | 0.0 | 8264.8  | 0.0 | 66.2   | 0.0 | 7278.5   |
|    | 120 | 0.0 | 8131.7  | 0.0 | -66.2  | 0.0 | -6939.2  |
| 11 | 119 | 0.0 | 7574.8  | 0.0 | 89.5   | 0.0 | 6742.7   |
|    | 120 | 0.0 | 7322.3  | 0.0 | -89.5  | 0.0 | -6099.0  |
| 12 | 119 | 0.0 | 7617.2  | 0.0 | 94.0   | 0.0 | 6851.1   |
|    | 120 | 0.0 | 7279.9  | 0.0 | -94.0  | 0.0 | -5991.2  |
| 13 | 119 | 0.0 | 7352.8  | 0.0 | 43.6   | 0.0 | 6175.6   |
|    | 120 | 0.0 | 7544.3  | 0.0 | -43.6  | 0.0 | -6663.8  |
| 14 | 119 | 0.0 | 7310.4  | 0.0 | 39.1   | 0.0 | 6067.1   |
|    | 120 | 0.0 | 7586.7  | 0.0 | -39.1  | 0.0 | -6771.6  |
| 15 | 119 | 0.0 | 7433.4  | 0.0 | 74.5   | 0.0 | 6381.3   |
|    | 120 | 0.0 | 7463.7  | 0.0 | -74.5  | 0.0 | -6458.5  |
| 16 | 119 | 0.0 | 7475.8  | 0.0 | 79.0   | 0.0 | 6489.7   |
|    | 120 | 0.0 | 7421.3  | 0.0 | -79.0  | 0.0 | -6350.7  |
| 17 | 119 | 0.0 | 7494.2  | 0.0 | 58.6   | 0.0 | 6537.0   |
|    | 120 | 0.0 | 7402.9  | 0.0 | -58.6  | 0.0 | -6304.3  |
| 18 | 119 | 0.0 | 7451.8  | 0.0 | 54.1   | 0.0 | 6428.6   |
|    | 120 | 0.0 | 7445.3  | 0.0 | -54.1  | 0.0 | -6412.1  |
|    |     |     |         |     |        |     |          |
| 1  | 120 | 0.0 | 10525.5 | 0.0 | -7.0   | 0.0 | 8515.4   |
|    | 121 | 0.0 | 10365.6 | 0.0 | 7.0    | 0.0 | -8123.5  |
| 2  | 120 | 0.0 | 5338.6  | 0.0 | 27.9   | 0.0 | 1156.1   |
|    | 121 | 0.0 | 8974.3  | 0.0 | -27.9  | 0.0 | -10063.4 |
| 3  | 120 | 0.0 | 5975.2  | 0.0 | 51.7   | 0.0 | 2748.4   |
|    | 121 | 0.0 | 8337.7  | 0.0 | -51.7  | 0.0 | -8536.4  |
| 4  | 120 | 0.0 | 5211.8  | 0.0 | 2.4    | 0.0 | 839.8    |
|    | 121 | 0.0 | 9101.1  | 0.0 | -2.4   | 0.0 | -10368.4 |
| 5  | 120 | 0.0 | 5801.8  | 0.0 | 21.7   | 0.0 | 2316.0   |
|    | 121 | 0.0 | 8511.1  | 0.0 | -21.7  | 0.0 | -8953.7  |
| 6  | 120 | 0.0 | 7305.3  | 0.0 | 92.3   | 0.0 | 6077.1   |
|    | 121 | 0.0 | 7007.6  | 0.0 | -92.3  | 0.0 | -5347.6  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 7  | 120 | 0.0 | 7941.9  | 0.0 | 116.1  | 0.0 | 7669.4  |
|    | 121 | 0.0 | 6371.0  | 0.0 | -116.1 | 0.0 | -3820.5 |
| 8  | 120 | 0.0 | 7333.8  | 0.0 | 81.7   | 0.0 | 6147.5  |
|    | 121 | 0.0 | 6979.1  | 0.0 | -81.7  | 0.0 | -5278.3 |
| 9  | 120 | 0.0 | 7923.8  | 0.0 | 101.0  | 0.0 | 7623.8  |
|    | 121 | 0.0 | 6389.1  | 0.0 | -101.0 | 0.0 | -3863.6 |
| 10 | 120 | 0.0 | 7937.9  | 0.0 | -5.3   | 0.0 | 6423.7  |
|    | 121 | 0.0 | 7815.6  | 0.0 | 5.3    | 0.0 | -6124.0 |
| 11 | 120 | 0.0 | 7317.9  | 0.0 | 17.3   | 0.0 | 6101.9  |
|    | 121 | 0.0 | 6995.0  | 0.0 | -17.3  | 0.0 | -5310.6 |
| 12 | 120 | 0.0 | 7356.2  | 0.0 | -18.7  | 0.0 | 6197.3  |
|    | 121 | 0.0 | 6956.7  | 0.0 | 18.7   | 0.0 | -5218.4 |
| 13 | 120 | 0.0 | 7114.2  | 0.0 | -27.0  | 0.0 | 5593.8  |
|    | 121 | 0.0 | 7198.7  | 0.0 | 27.0   | 0.0 | -5800.6 |
| 14 | 120 | 0.0 | 7075.9  | 0.0 | 9.0    | 0.0 | 5498.4  |
|    | 121 | 0.0 | 7237.0  | 0.0 | -9.0   | 0.0 | -5892.9 |
| 15 | 120 | 0.0 | 7190.3  | 0.0 | 137.2  | 0.0 | 5783.9  |
|    | 121 | 0.0 | 7122.6  | 0.0 | -137.2 | 0.0 | -5618.3 |
| 16 | 120 | 0.0 | 7228.6  | 0.0 | 101.2  | 0.0 | 5879.3  |
|    | 121 | 0.0 | 7084.3  | 0.0 | -101.2 | 0.0 | -5526.0 |
| 17 | 120 | 0.0 | 7241.9  | 0.0 | -147.0 | 0.0 | 5911.8  |
|    | 121 | 0.0 | 7071.0  | 0.0 | 147.0  | 0.0 | -5493.0 |
| 18 | 120 | 0.0 | 7203.6  | 0.0 | -111.0 | 0.0 | 5816.4  |
|    | 121 | 0.0 | 7109.3  | 0.0 | 111.0  | 0.0 | -5585.2 |
|    |     |     |         |     |        |     |         |
| 1  | 121 | 0.0 | 5295.6  | 0.0 | -102.0 | 0.0 | 2665.3  |
|    | 122 | 0.0 | 4510.4  | 0.0 | 102.0  | 0.0 | -1762.4 |
| 2  | 121 | 0.0 | -1724.5 | 0.0 | -22.4  | 0.0 | -3994.3 |
|    | 122 | 0.0 | 8442.8  | 0.0 | 22.4   | 0.0 | -7698.1 |
| 3  | 121 | 0.0 | 189.0   | 0.0 | -80.6  | 0.0 | -1905.1 |
|    | 122 | 0.0 | 6529.3  | 0.0 | 80.6   | 0.0 | -5386.2 |
| 4  | 121 | 0.0 | -2088.3 | 0.0 | -55.0  | 0.0 | -4390.9 |
|    | 122 | 0.0 | 8806.6  | 0.0 | 55.0   | 0.0 | -8138.3 |
| 5  | 121 | 0.0 | -298.6  | 0.0 | -123.9 | 0.0 | -2436.1 |
|    | 122 | 0.0 | 7016.9  | 0.0 | 123.9  | 0.0 | -5976.8 |
| 6  | 121 | 0.0 | 4241.1  | 0.0 | -252.0 | 0.0 | 2521.8  |
|    | 122 | 0.0 | 2477.2  | 0.0 | 252.0  | 0.0 | -493.3  |
| 7  | 121 | 0.0 | 6154.6  | 0.0 | -310.2 | 0.0 | 4610.9  |
|    | 122 | 0.0 | 563.7   | 0.0 | 310.2  | 0.0 | 1818.7  |
| 8  | 121 | 0.0 | 4290.2  | 0.0 | -249.0 | 0.0 | 2573.0  |
|    | 122 | 0.0 | 2428.1  | 0.0 | 249.0  | 0.0 | -431.6  |
| 9  | 121 | 0.0 | 6079.8  | 0.0 | -317.9 | 0.0 | 4527.8  |
|    | 122 | 0.0 | 638.5   | 0.0 | 317.9  | 0.0 | 1729.8  |
| 10 | 121 | 0.0 | 4012.3  | 0.0 | -78.3  | 0.0 | 2032.7  |
|    | 122 | 0.0 | 3382.2  | 0.0 | 78.3   | 0.0 | -1308.1 |
| 11 | 121 | 0.0 | 4025.1  | 0.0 | -50.5  | 0.0 | 2270.8  |
|    | 122 | 0.0 | 2693.2  | 0.0 | 50.5   | 0.0 | -739.1  |
| 12 | 121 | 0.0 | 4127.0  | 0.0 | -41.6  | 0.0 | 2381.3  |
|    | 122 | 0.0 | 2591.3  | 0.0 | 41.6   | 0.0 | -615.2  |
| 13 | 121 | 0.0 | 3442.2  | 0.0 | -104.1 | 0.0 | 1635.3  |
|    | 122 | 0.0 | 3276.1  | 0.0 | 104.1  | 0.0 | -1444.3 |
| 14 | 121 | 0.0 | 3340.2  | 0.0 | -113.0 | 0.0 | 1524.7  |
|    | 122 | 0.0 | 3378.1  | 0.0 | 113.0  | 0.0 | -1568.2 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 15 | 121 | 0.0 | 3685.3 | 0.0 | -80.0  | 0.0 | 1902.1  |
|    | 122 | 0.0 | 3033.0 | 0.0 | 80.0   | 0.0 | -1152.0 |
| 16 | 121 | 0.0 | 3787.2 | 0.0 | -71.2  | 0.0 | 2012.7  |
|    | 122 | 0.0 | 2931.1 | 0.0 | 71.2   | 0.0 | -1028.1 |
| 17 | 121 | 0.0 | 3782.0 | 0.0 | -74.6  | 0.0 | 2003.9  |
|    | 122 | 0.0 | 2936.3 | 0.0 | 74.6   | 0.0 | -1031.4 |
| 18 | 121 | 0.0 | 3680.0 | 0.0 | -83.5  | 0.0 | 1893.3  |
|    | 122 | 0.0 | 3038.3 | 0.0 | 83.5   | 0.0 | -1155.3 |
|    |     |     |        |     |        |     |         |
| 1  | 101 | 0.0 | 3118.2 | 0.0 | 64.6   | 0.0 | 1697.4  |
|    | 108 | 0.0 | 3570.3 | 0.0 | -64.6  | 0.0 | -2646.7 |
| 2  | 101 | 0.0 | 3210.1 | 0.0 | 15.9   | 0.0 | 3024.9  |
|    | 108 | 0.0 | 1934.9 | 0.0 | -15.9  | 0.0 | -346.9  |
| 3  | 101 | 0.0 | 2759.4 | 0.0 | 49.8   | 0.0 | 2071.6  |
|    | 108 | 0.0 | 2385.6 | 0.0 | -49.8  | 0.0 | -1286.6 |
| 4  | 101 | 0.0 | 2652.8 | 0.0 | 8.6    | 0.0 | 1844.9  |
|    | 108 | 0.0 | 2492.2 | 0.0 | -8.6   | 0.0 | -1507.7 |
| 5  | 101 | 0.0 | 2053.0 | 0.0 | 42.3   | 0.0 | 575.9   |
|    | 108 | 0.0 | 3092.0 | 0.0 | -42.3  | 0.0 | -2757.9 |
| 6  | 101 | 0.0 | 1210.8 | 0.0 | 128.1  | 0.0 | -1205.0 |
|    | 108 | 0.0 | 3934.2 | 0.0 | -128.1 | 0.0 | -4514.1 |
| 7  | 101 | 0.0 | 760.1  | 0.0 | 161.9  | 0.0 | -2158.3 |
|    | 108 | 0.0 | 4384.9 | 0.0 | -161.9 | 0.0 | -5453.9 |
| 8  | 101 | 0.0 | 1150.3 | 0.0 | 121.6  | 0.0 | -1332.8 |
|    | 108 | 0.0 | 3994.7 | 0.0 | -121.6 | 0.0 | -4640.3 |
| 9  | 101 | 0.0 | 550.5  | 0.0 | 155.2  | 0.0 | -2601.8 |
|    | 108 | 0.0 | 4594.5 | 0.0 | -155.2 | 0.0 | -5890.4 |
| 10 | 101 | 0.0 | 2396.0 | 0.0 | 55.2   | 0.0 | 1300.6  |
|    | 108 | 0.0 | 2749.0 | 0.0 | -55.2  | 0.0 | -2041.7 |
| 11 | 101 | 0.0 | 2857.9 | 0.0 | 86.1   | 0.0 | 2280.3  |
|    | 108 | 0.0 | 2287.1 | 0.0 | -86.1  | 0.0 | -1081.4 |
| 12 | 101 | 0.0 | 2996.7 | 0.0 | 86.3   | 0.0 | 2574.1  |
|    | 108 | 0.0 | 2148.3 | 0.0 | -86.3  | 0.0 | -792.3  |
| 13 | 101 | 0.0 | 1910.5 | 0.0 | 74.9   | 0.0 | 274.7   |
|    | 108 | 0.0 | 3234.5 | 0.0 | -74.9  | 0.0 | -3054.9 |
| 14 | 101 | 0.0 | 1771.7 | 0.0 | 74.7   | 0.0 | -19.2   |
|    | 108 | 0.0 | 3373.3 | 0.0 | -74.7  | 0.0 | -3344.0 |
| 15 | 101 | 0.0 | 2395.3 | 0.0 | 85.6   | 0.0 | 1300.8  |
|    | 108 | 0.0 | 2749.7 | 0.0 | -85.6  | 0.0 | -2045.1 |
| 16 | 101 | 0.0 | 2534.1 | 0.0 | 85.7   | 0.0 | 1594.6  |
|    | 108 | 0.0 | 2610.9 | 0.0 | -85.7  | 0.0 | -1756.0 |
| 17 | 101 | 0.0 | 2373.2 | 0.0 | 75.5   | 0.0 | 1254.2  |
|    | 108 | 0.0 | 2771.8 | 0.0 | -75.5  | 0.0 | -2091.2 |
| 18 | 101 | 0.0 | 2234.4 | 0.0 | 75.3   | 0.0 | 960.3   |
|    | 108 | 0.0 | 2910.6 | 0.0 | -75.3  | 0.0 | -2380.3 |
|    |     |     |        |     |        |     |         |
| 1  | 108 | 0.0 | 2026.5 | 0.0 | -225.3 | 0.0 | 1250.7  |
|    | 113 | 0.0 | 1317.8 | 0.0 | 225.3  | 0.0 | -506.6  |
| 2  | 108 | 0.0 | 3518.7 | 0.0 | -24.6  | 0.0 | 3165.2  |
|    | 113 | 0.0 | -946.2 | 0.0 | 24.6   | 0.0 | 1523.0  |
| 3  | 108 | 0.0 | 2399.1 | 0.0 | -23.1  | 0.0 | 1906.4  |
|    | 113 | 0.0 | 173.4  | 0.0 | 23.1   | 0.0 | 430.6   |
| 4  | 108 | 0.0 | 1960.8 | 0.0 | -34.3  | 0.0 | 1407.6  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 113 | 0.0 | 611.7   | 0.0 | 34.3   | 0.0 | 9.0     |
| 5  | 108 | 0.0 | 409.4   | 0.0 | -31.4  | 0.0 | -339.4  |
|    | 113 | 0.0 | 2163.1  | 0.0 | 31.4   | 0.0 | -1502.2 |
| 6  | 108 | 0.0 | -1652.8 | 0.0 | -15.1  | 0.0 | -2658.0 |
|    | 113 | 0.0 | 4225.3  | 0.0 | 15.1   | 0.0 | -3514.2 |
| 7  | 108 | 0.0 | -2772.5 | 0.0 | -13.6  | 0.0 | -3916.8 |
|    | 113 | 0.0 | 5345.0  | 0.0 | 13.6   | 0.0 | -4606.6 |
| 8  | 108 | 0.0 | -1771.3 | 0.0 | -29.4  | 0.0 | -2788.4 |
|    | 113 | 0.0 | 4343.8  | 0.0 | 29.4   | 0.0 | -3632.4 |
| 9  | 108 | 0.0 | -3322.7 | 0.0 | -26.6  | 0.0 | -4535.3 |
|    | 113 | 0.0 | 5895.2  | 0.0 | 26.6   | 0.0 | -5143.5 |
| 10 | 108 | 0.0 | 1549.9  | 0.0 | -163.5 | 0.0 | 952.3   |
|    | 113 | 0.0 | 1022.6  | 0.0 | 163.5  | 0.0 | -398.7  |
| 11 | 108 | 0.0 | 2836.3  | 0.0 | -110.7 | 0.0 | 2405.3  |
|    | 113 | 0.0 | -263.8  | 0.0 | 110.7  | 0.0 | 849.9   |
| 12 | 108 | 0.0 | 3236.5  | 0.0 | -111.6 | 0.0 | 2857.5  |
|    | 113 | 0.0 | -664.0  | 0.0 | 111.6  | 0.0 | 1238.0  |
| 13 | 108 | 0.0 | 181.9   | 0.0 | -127.0 | 0.0 | -589.8  |
|    | 113 | 0.0 | 2390.6  | 0.0 | 127.0  | 0.0 | -1729.5 |
| 14 | 108 | 0.0 | -218.3  | 0.0 | -126.1 | 0.0 | -1042.0 |
|    | 113 | 0.0 | 2790.8  | 0.0 | 126.1  | 0.0 | -2117.5 |
| 15 | 108 | 0.0 | 1502.6  | 0.0 | -107.7 | 0.0 | 897.9   |
|    | 113 | 0.0 | 1069.9  | 0.0 | 107.7  | 0.0 | -443.6  |
| 16 | 108 | 0.0 | 1902.7  | 0.0 | -108.6 | 0.0 | 1350.1  |
|    | 113 | 0.0 | 669.8   | 0.0 | 108.6  | 0.0 | -55.6   |
| 17 | 108 | 0.0 | 1515.6  | 0.0 | -130.0 | 0.0 | 917.6   |
|    | 113 | 0.0 | 1056.9  | 0.0 | 130.0  | 0.0 | -435.9  |
| 18 | 108 | 0.0 | 1115.5  | 0.0 | -129.1 | 0.0 | 465.4   |
|    | 113 | 0.0 | 1457.0  | 0.0 | 129.1  | 0.0 | -824.0  |
| 1  | 113 | 0.0 | 3595.2  | 0.0 | 41.6   | 0.0 | 2628.5  |
|    | 118 | 0.0 | 3093.3  | 0.0 | -41.6  | 0.0 | -1574.6 |
| 2  | 113 | 0.0 | 3447.8  | 0.0 | 23.4   | 0.0 | 3370.2  |
|    | 118 | 0.0 | 1697.2  | 0.0 | -23.4  | 0.0 | 306.0   |
| 3  | 113 | 0.0 | 3073.3  | 0.0 | 33.1   | 0.0 | 2634.2  |
|    | 118 | 0.0 | 2071.7  | 0.0 | -33.1  | 0.0 | -530.9  |
| 4  | 113 | 0.0 | 2905.6  | 0.0 | 13.3   | 0.0 | 2305.0  |
|    | 118 | 0.0 | 2239.4  | 0.0 | -13.3  | 0.0 | -906.1  |
| 5  | 113 | 0.0 | 2379.5  | 0.0 | 23.0   | 0.0 | 1271.6  |
|    | 118 | 0.0 | 2765.5  | 0.0 | -23.0  | 0.0 | -2082.1 |
| 6  | 113 | 0.0 | 1694.3  | 0.0 | 55.9   | 0.0 | -74.6   |
|    | 118 | 0.0 | 3450.7  | 0.0 | -55.9  | 0.0 | -3613.7 |
| 7  | 113 | 0.0 | 1319.8  | 0.0 | 65.6   | 0.0 | -810.6  |
|    | 118 | 0.0 | 3825.2  | 0.0 | -65.6  | 0.0 | -4450.6 |
| 8  | 113 | 0.0 | 1657.2  | 0.0 | 45.4   | 0.0 | -148.4  |
|    | 118 | 0.0 | 3487.8  | 0.0 | -45.4  | 0.0 | -3695.9 |
| 9  | 113 | 0.0 | 1131.2  | 0.0 | 55.2   | 0.0 | -1181.8 |
|    | 118 | 0.0 | 4013.8  | 0.0 | -55.2  | 0.0 | -4871.8 |
| 10 | 113 | 0.0 | 2771.1  | 0.0 | 21.8   | 0.0 | 2034.3  |
|    | 118 | 0.0 | 2373.9  | 0.0 | -21.8  | 0.0 | -1200.3 |
| 11 | 113 | 0.0 | 3258.8  | 0.0 | -16.3  | 0.0 | 2999.1  |
|    | 118 | 0.0 | 1886.2  | 0.0 | 16.3   | 0.0 | -116.8  |
| 12 | 113 | 0.0 | 3399.2  | 0.0 | -16.2  | 0.0 | 3274.7  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 118 | 0.0 | 1745.8 | 0.0 | 16.2   | 0.0 | 197.3   |
| 13 | 113 | 0.0 | 2333.8 | 0.0 | -33.5  | 0.0 | 1182.1  |
|    | 118 | 0.0 | 2811.2 | 0.0 | 33.5   | 0.0 | -2184.6 |
| 14 | 113 | 0.0 | 2193.4 | 0.0 | -33.7  | 0.0 | 906.6   |
|    | 118 | 0.0 | 2951.6 | 0.0 | 33.7   | 0.0 | -2498.7 |
| 15 | 113 | 0.0 | 2790.8 | 0.0 | -17.0  | 0.0 | 2080.5  |
|    | 118 | 0.0 | 2354.2 | 0.0 | 17.0   | 0.0 | -1163.6 |
| 16 | 113 | 0.0 | 2931.2 | 0.0 | -16.8  | 0.0 | 2356.1  |
|    | 118 | 0.0 | 2213.8 | 0.0 | 16.8   | 0.0 | -849.5  |
| 17 | 113 | 0.0 | 2801.8 | 0.0 | -32.9  | 0.0 | 2100.7  |
|    | 118 | 0.0 | 2343.2 | 0.0 | 32.9   | 0.0 | -1137.8 |
| 18 | 113 | 0.0 | 2661.4 | 0.0 | -33.1  | 0.0 | 1825.2  |
|    | 118 | 0.0 | 2483.6 | 0.0 | 33.1   | 0.0 | -1451.9 |
|    |     |     |        |     |        |     |         |
| 1  | 102 | 0.0 | 3121.5 | 0.0 | 87.2   | 0.0 | 1873.2  |
|    | 109 | 0.0 | 3396.4 | 0.0 | -87.2  | 0.0 | -2450.6 |
| 2  | 102 | 0.0 | 2574.5 | 0.0 | 194.1  | 0.0 | 1800.9  |
|    | 109 | 0.0 | 2439.3 | 0.0 | -194.1 | 0.0 | -1517.1 |
| 3  | 102 | 0.0 | 2420.4 | 0.0 | 177.6  | 0.0 | 1482.0  |
|    | 109 | 0.0 | 2593.3 | 0.0 | -177.6 | 0.0 | -1845.2 |
| 4  | 102 | 0.0 | 2445.0 | 0.0 | 185.9  | 0.0 | 1533.1  |
|    | 109 | 0.0 | 2568.7 | 0.0 | -185.9 | 0.0 | -1792.8 |
| 5  | 102 | 0.0 | 2260.7 | 0.0 | 172.2  | 0.0 | 1151.4  |
|    | 109 | 0.0 | 2753.1 | 0.0 | -172.2 | 0.0 | -2185.6 |
| 6  | 102 | 0.0 | 1959.8 | 0.0 | 148.6  | 0.0 | 528.6   |
|    | 109 | 0.0 | 3053.9 | 0.0 | -148.6 | 0.0 | -2826.1 |
| 7  | 102 | 0.0 | 1805.8 | 0.0 | 132.2  | 0.0 | 209.7   |
|    | 109 | 0.0 | 3208.0 | 0.0 | -132.2 | 0.0 | -3154.2 |
| 8  | 102 | 0.0 | 1931.5 | 0.0 | 131.1  | 0.0 | 470.1   |
|    | 109 | 0.0 | 3082.2 | 0.0 | -131.1 | 0.0 | -2886.5 |
| 9  | 102 | 0.0 | 1747.2 | 0.0 | 117.4  | 0.0 | 88.4    |
|    | 109 | 0.0 | 3266.6 | 0.0 | -117.4 | 0.0 | -3279.3 |
| 10 | 102 | 0.0 | 2398.1 | 0.0 | 59.5   | 0.0 | 1434.8  |
|    | 109 | 0.0 | 2615.7 | 0.0 | -59.5  | 0.0 | -1891.7 |
| 11 | 102 | 0.0 | 2492.3 | 0.0 | 32.2   | 0.0 | 1630.4  |
|    | 109 | 0.0 | 2521.5 | 0.0 | -32.2  | 0.0 | -1691.7 |
| 12 | 102 | 0.0 | 2519.0 | 0.0 | 30.1   | 0.0 | 1685.6  |
|    | 109 | 0.0 | 2494.8 | 0.0 | -30.1  | 0.0 | -1634.8 |
| 13 | 102 | 0.0 | 2276.2 | 0.0 | 18.6   | 0.0 | 1183.3  |
|    | 109 | 0.0 | 2737.5 | 0.0 | -18.6  | 0.0 | -2152.1 |
| 14 | 102 | 0.0 | 2249.5 | 0.0 | 20.7   | 0.0 | 1128.0  |
|    | 109 | 0.0 | 2764.3 | 0.0 | -20.7  | 0.0 | -2209.0 |
| 15 | 102 | 0.0 | 2403.2 | 0.0 | 39.2   | 0.0 | 1446.1  |
|    | 109 | 0.0 | 2610.5 | 0.0 | -39.2  | 0.0 | -1881.3 |
| 16 | 102 | 0.0 | 2430.0 | 0.0 | 37.1   | 0.0 | 1501.4  |
|    | 109 | 0.0 | 2583.8 | 0.0 | -37.1  | 0.0 | -1824.4 |
| 17 | 102 | 0.0 | 2365.2 | 0.0 | 11.6   | 0.0 | 1367.6  |
|    | 109 | 0.0 | 2648.5 | 0.0 | -11.6  | 0.0 | -1962.5 |
| 18 | 102 | 0.0 | 2338.5 | 0.0 | 13.7   | 0.0 | 1312.3  |
|    | 109 | 0.0 | 2675.2 | 0.0 | -13.7  | 0.0 | -2019.4 |
|    |     |     |        |     |        |     |         |
| 1  | 109 | 0.0 | 1689.8 | 0.0 | 22.6   | 0.0 | 708.7   |
|    | 114 | 0.0 | 1569.1 | 0.0 | -22.6  | 0.0 | -582.0  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 2  | 109 | 0.0 | 1946.5  | 0.0 | -0.0   | 0.0 | 1221.6  |
|    | 114 | 0.0 | 560.3   | 0.0 | 0.0    | 0.0 | 233.9   |
| 3  | 109 | 0.0 | 1391.3  | 0.0 | 12.1   | 0.0 | 638.6   |
|    | 114 | 0.0 | 1115.6  | 0.0 | -12.1  | 0.0 | -349.1  |
| 4  | 109 | 0.0 | 1450.3  | 0.0 | 1.4    | 0.0 | 700.7   |
|    | 114 | 0.0 | 1056.6  | 0.0 | -1.4   | 0.0 | -287.3  |
| 5  | 109 | 0.0 | 774.4   | 0.0 | 16.1   | 0.0 | -8.9    |
|    | 114 | 0.0 | 1732.5  | 0.0 | -16.1  | 0.0 | -997.1  |
| 6  | 109 | 0.0 | -306.5  | 0.0 | 49.2   | 0.0 | -1143.9 |
|    | 114 | 0.0 | 2813.4  | 0.0 | -49.2  | 0.0 | -2132.0 |
| 7  | 109 | 0.0 | -861.7  | 0.0 | 61.3   | 0.0 | -1726.9 |
|    | 114 | 0.0 | 3368.6  | 0.0 | -61.3  | 0.0 | -2715.0 |
| 8  | 109 | 0.0 | -400.5  | 0.0 | 41.7   | 0.0 | -1242.7 |
|    | 114 | 0.0 | 2907.4  | 0.0 | -41.7  | 0.0 | -2230.5 |
| 9  | 109 | 0.0 | -1076.4 | 0.0 | 56.4   | 0.0 | -1952.4 |
|    | 114 | 0.0 | 3583.3  | 0.0 | -56.4  | 0.0 | -2940.3 |
| 10 | 109 | 0.0 | 1300.6  | 0.0 | 16.4   | 0.0 | 545.4   |
|    | 114 | 0.0 | 1206.2  | 0.0 | -16.4  | 0.0 | -446.3  |
| 11 | 109 | 0.0 | 1719.9  | 0.0 | 10.5   | 0.0 | 982.9   |
|    | 114 | 0.0 | 787.0   | 0.0 | -10.5  | 0.0 | -3.3    |
| 12 | 109 | 0.0 | 1826.2  | 0.0 | 8.3    | 0.0 | 1094.5  |
|    | 114 | 0.0 | 680.6   | 0.0 | -8.3   | 0.0 | 108.4   |
| 13 | 109 | 0.0 | 888.7   | 0.0 | 13.6   | 0.0 | 110.3   |
|    | 114 | 0.0 | 1618.2  | 0.0 | -13.6  | 0.0 | -876.3  |
| 14 | 109 | 0.0 | 782.3   | 0.0 | 15.9   | 0.0 | -1.3    |
|    | 114 | 0.0 | 1724.5  | 0.0 | -15.9  | 0.0 | -988.1  |
| 15 | 109 | 0.0 | 1365.3  | 0.0 | 18.2   | 0.0 | 610.8   |
|    | 114 | 0.0 | 1141.5  | 0.0 | -18.2  | 0.0 | -375.8  |
| 16 | 109 | 0.0 | 1471.7  | 0.0 | 15.9   | 0.0 | 722.4   |
|    | 114 | 0.0 | 1035.2  | 0.0 | -15.9  | 0.0 | -264.1  |
| 17 | 109 | 0.0 | 1243.2  | 0.0 | 6.0    | 0.0 | 482.4   |
|    | 114 | 0.0 | 1263.6  | 0.0 | -6.0   | 0.0 | -503.8  |
| 18 | 109 | 0.0 | 1136.9  | 0.0 | 8.2    | 0.0 | 370.8   |
|    | 114 | 0.0 | 1370.0  | 0.0 | -8.2   | 0.0 | -615.6  |
|    |     |     |         |     |        |     |         |
| 1  | 114 | 0.0 | 3434.0  | 0.0 | -101.7 | 0.0 | 2528.2  |
|    | 119 | 0.0 | 3083.9  | 0.0 | 101.7  | 0.0 | -1793.0 |
| 2  | 114 | 0.0 | 2823.2  | 0.0 | -168.1 | 0.0 | 2333.5  |
|    | 119 | 0.0 | 2190.6  | 0.0 | 168.1  | 0.0 | -1005.0 |
| 3  | 114 | 0.0 | 2673.8  | 0.0 | -111.6 | 0.0 | 2015.2  |
|    | 119 | 0.0 | 2339.9  | 0.0 | 111.6  | 0.0 | -1314.1 |
| 4  | 114 | 0.0 | 2683.5  | 0.0 | -181.5 | 0.0 | 2036.1  |
|    | 119 | 0.0 | 2330.2  | 0.0 | 181.5  | 0.0 | -1294.2 |
| 5  | 114 | 0.0 | 2499.4  | 0.0 | -127.6 | 0.0 | 1644.0  |
|    | 119 | 0.0 | 2514.3  | 0.0 | 127.6  | 0.0 | -1675.1 |
| 6  | 114 | 0.0 | 2209.6  | 0.0 | 11.6   | 0.0 | 1026.3  |
|    | 119 | 0.0 | 2804.1  | 0.0 | -11.6  | 0.0 | -2274.7 |
| 7  | 114 | 0.0 | 2060.3  | 0.0 | 68.1   | 0.0 | 708.0   |
|    | 119 | 0.0 | 2953.5  | 0.0 | -68.1  | 0.0 | -2583.8 |
| 8  | 114 | 0.0 | 2185.6  | 0.0 | 6.7    | 0.0 | 975.1   |
|    | 119 | 0.0 | 2828.2  | 0.0 | -6.7   | 0.0 | -2324.6 |
| 9  | 114 | 0.0 | 2001.5  | 0.0 | 60.6   | 0.0 | 583.0   |
|    | 119 | 0.0 | 3012.2  | 0.0 | -60.6  | 0.0 | -2705.5 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 10 | 114 | 0.0 | 2644.9 | 0.0 | -70.2  | 0.0 | 1952.2  |
|    | 119 | 0.0 | 2368.8 | 0.0 | 70.2   | 0.0 | -1372.4 |
| 11 | 114 | 0.0 | 2777.4 | 0.0 | -22.7  | 0.0 | 2235.4  |
|    | 119 | 0.0 | 2236.3 | 0.0 | 22.7   | 0.0 | -1099.1 |
| 12 | 114 | 0.0 | 2807.9 | 0.0 | -20.6  | 0.0 | 2300.4  |
|    | 119 | 0.0 | 2205.8 | 0.0 | 20.6   | 0.0 | -1035.9 |
| 13 | 114 | 0.0 | 2543.3 | 0.0 | -44.0  | 0.0 | 1737.0  |
|    | 119 | 0.0 | 2470.4 | 0.0 | 44.0   | 0.0 | -1583.8 |
| 14 | 114 | 0.0 | 2512.8 | 0.0 | -46.2  | 0.0 | 1672.0  |
|    | 119 | 0.0 | 2500.9 | 0.0 | 46.2   | 0.0 | -1647.0 |
| 15 | 114 | 0.0 | 2675.7 | 0.0 | -29.9  | 0.0 | 2018.7  |
|    | 119 | 0.0 | 2338.1 | 0.0 | 29.9   | 0.0 | -1309.8 |
| 16 | 114 | 0.0 | 2706.2 | 0.0 | -27.7  | 0.0 | 2083.7  |
|    | 119 | 0.0 | 2307.6 | 0.0 | 27.7   | 0.0 | -1246.6 |
| 17 | 114 | 0.0 | 2645.1 | 0.0 | -36.9  | 0.0 | 1953.6  |
|    | 119 | 0.0 | 2368.7 | 0.0 | 36.9   | 0.0 | -1373.2 |
| 18 | 114 | 0.0 | 2614.6 | 0.0 | -39.0  | 0.0 | 1888.6  |
|    | 119 | 0.0 | 2399.2 | 0.0 | 39.0   | 0.0 | -1436.4 |
|    |     |     |        |     |        |     |         |
| 1  | 103 | 0.0 | 379.6  | 0.0 | -88.2  | 0.0 | -3.5    |
|    | 106 | 0.0 | 916.3  | 0.0 | 88.2   | 0.0 | -774.8  |
| 2  | 103 | 0.0 | 538.9  | 0.0 | -155.5 | 0.0 | 381.6   |
|    | 106 | 0.0 | 458.0  | 0.0 | 155.5  | 0.0 | -264.4  |
| 3  | 103 | 0.0 | 252.9  | 0.0 | -115.4 | 0.0 | -90.9   |
|    | 106 | 0.0 | 744.0  | 0.0 | 115.4  | 0.0 | -621.2  |
| 4  | 103 | 0.0 | 353.9  | 0.0 | -164.7 | 0.0 | 76.3    |
|    | 106 | 0.0 | 643.0  | 0.0 | 164.7  | 0.0 | -496.0  |
| 5  | 103 | 0.0 | 6.2    | 0.0 | -126.6 | 0.0 | -498.1  |
|    | 106 | 0.0 | 990.6  | 0.0 | 126.6  | 0.0 | -929.9  |
| 6  | 103 | 0.0 | -620.0 | 0.0 | -28.6  | 0.0 | -1533.1 |
|    | 106 | 0.0 | 1616.9 | 0.0 | 28.6   | 0.0 | -1710.7 |
| 7  | 103 | 0.0 | -906.0 | 0.0 | 11.4   | 0.0 | -2005.6 |
|    | 106 | 0.0 | 1902.9 | 0.0 | -11.4  | 0.0 | -2067.4 |
| 8  | 103 | 0.0 | -599.5 | 0.0 | -31.2  | 0.0 | -1498.7 |
|    | 106 | 0.0 | 1596.4 | 0.0 | 31.2   | 0.0 | -1685.2 |
| 9  | 103 | 0.0 | -947.2 | 0.0 | 6.9    | 0.0 | -2073.1 |
|    | 106 | 0.0 | 1944.0 | 0.0 | -6.9   | 0.0 | -2119.1 |
| 10 | 103 | 0.0 | 290.7  | 0.0 | -65.9  | 0.0 | -8.8    |
|    | 106 | 0.0 | 706.2  | 0.0 | 65.9   | 0.0 | -593.7  |
| 11 | 103 | 0.0 | 438.0  | 0.0 | -49.6  | 0.0 | 216.4   |
|    | 106 | 0.0 | 558.8  | 0.0 | 49.6   | 0.0 | -391.3  |
| 12 | 103 | 0.0 | 489.6  | 0.0 | -47.9  | 0.0 | 301.7   |
|    | 106 | 0.0 | 507.2  | 0.0 | 47.9   | 0.0 | -326.7  |
| 13 | 103 | 0.0 | 131.6  | 0.0 | -64.2  | 0.0 | -289.3  |
|    | 106 | 0.0 | 865.3  | 0.0 | 64.2   | 0.0 | -775.0  |
| 14 | 103 | 0.0 | 80.0   | 0.0 | -65.8  | 0.0 | -374.5  |
|    | 106 | 0.0 | 916.9  | 0.0 | 65.8   | 0.0 | -839.5  |
| 15 | 103 | 0.0 | 266.0  | 0.0 | -55.1  | 0.0 | -67.7   |
|    | 106 | 0.0 | 730.8  | 0.0 | 55.1   | 0.0 | -606.4  |
| 16 | 103 | 0.0 | 317.6  | 0.0 | -53.5  | 0.0 | 17.5    |
|    | 106 | 0.0 | 679.2  | 0.0 | 53.5   | 0.0 | -541.9  |
| 17 | 103 | 0.0 | 303.6  | 0.0 | -58.6  | 0.0 | -5.1    |
|    | 106 | 0.0 | 693.3  | 0.0 | 58.6   | 0.0 | -559.9  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 18 | 103 | 0.0 | 252.0   | 0.0 | -60.3  | 0.0 | -90.4   |
|    | 106 | 0.0 | 744.9   | 0.0 | 60.3   | 0.0 | -624.4  |
| 1  | 106 | 0.0 | 1160.8  | 0.0 | -93.0  | 0.0 | 502.3   |
|    | 110 | 0.0 | -579.9  | 0.0 | 93.0   | 0.0 | 629.1   |
| 2  | 106 | 0.0 | -257.0  | 0.0 | 610.6  | 0.0 | -228.9  |
|    | 110 | 0.0 | 703.8   | 0.0 | -610.6 | 0.0 | -395.7  |
| 3  | 106 | 0.0 | -1358.6 | 0.0 | 494.0  | 0.0 | -835.0  |
|    | 110 | 0.0 | 1805.5  | 0.0 | -494.0 | 0.0 | -1221.6 |
| 4  | 106 | 0.0 | 364.8   | 0.0 | 612.3  | 0.0 | 113.2   |
|    | 110 | 0.0 | 82.1    | 0.0 | -612.3 | 0.0 | 70.4    |
| 5  | 106 | 0.0 | -410.3  | 0.0 | 506.9  | 0.0 | -312.7  |
|    | 110 | 0.0 | 857.2   | 0.0 | -506.9 | 0.0 | -511.4  |
| 6  | 106 | 0.0 | -2840.6 | 0.0 | 259.2  | 0.0 | -1648.4 |
|    | 110 | 0.0 | 3287.5  | 0.0 | -259.2 | 0.0 | -2334.9 |
| 7  | 106 | 0.0 | -3942.2 | 0.0 | 142.5  | 0.0 | -2254.5 |
|    | 110 | 0.0 | 4389.1  | 0.0 | -142.5 | 0.0 | -3160.9 |
| 8  | 106 | 0.0 | -3307.3 | 0.0 | 223.5  | 0.0 | -1907.1 |
|    | 110 | 0.0 | 3754.2  | 0.0 | -223.5 | 0.0 | -2682.9 |
| 9  | 106 | 0.0 | -4082.4 | 0.0 | 118.1  | 0.0 | -2332.9 |
|    | 110 | 0.0 | 4529.3  | 0.0 | -118.1 | 0.0 | -3264.7 |
| 10 | 106 | 0.0 | 862.8   | 0.0 | -67.2  | 0.0 | 372.9   |
|    | 110 | 0.0 | -416.0  | 0.0 | 67.2   | 0.0 | 458.3   |
| 11 | 106 | 0.0 | 214.9   | 0.0 | -49.1  | 0.0 | 30.2    |
|    | 110 | 0.0 | 231.9   | 0.0 | 49.1   | 0.0 | -41.1   |
| 12 | 106 | 0.0 | -52.0   | 0.0 | -58.2  | 0.0 | -117.2  |
|    | 110 | 0.0 | 498.8   | 0.0 | 58.2   | 0.0 | -240.6  |
| 13 | 106 | 0.0 | 1236.9  | 0.0 | -46.2  | 0.0 | 592.9   |
|    | 110 | 0.0 | -790.0  | 0.0 | 46.2   | 0.0 | 724.5   |
| 14 | 106 | 0.0 | 1503.8  | 0.0 | -37.1  | 0.0 | 740.3   |
|    | 110 | 0.0 | -1057.0 | 0.0 | 37.1   | 0.0 | 924.0   |
| 15 | 106 | 0.0 | 1104.6  | 0.0 | -18.8  | 0.0 | 521.5   |
|    | 110 | 0.0 | -657.8  | 0.0 | 18.8   | 0.0 | 624.0   |
| 16 | 106 | 0.0 | 837.7   | 0.0 | -27.9  | 0.0 | 374.1   |
|    | 110 | 0.0 | -390.9  | 0.0 | 27.9   | 0.0 | 424.5   |
| 17 | 106 | 0.0 | 347.2   | 0.0 | -76.5  | 0.0 | 101.6   |
|    | 110 | 0.0 | 99.6    | 0.0 | 76.5   | 0.0 | 59.4    |
| 18 | 106 | 0.0 | 614.1   | 0.0 | -67.4  | 0.0 | 249.0   |
|    | 110 | 0.0 | -167.3  | 0.0 | 67.4   | 0.0 | 258.9   |
| 1  | 110 | 0.0 | 228.9   | 0.0 | 14.9   | 0.0 | -75.3   |
|    | 115 | 0.0 | 709.5   | 0.0 | -14.9  | 0.0 | -429.3  |
| 2  | 110 | 0.0 | -383.8  | 0.0 | 43.7   | 0.0 | -639.9  |
|    | 115 | 0.0 | 1105.7  | 0.0 | -43.7  | 0.0 | -924.1  |
| 3  | 110 | 0.0 | -1059.7 | 0.0 | 47.5   | 0.0 | -1341.6 |
|    | 115 | 0.0 | 1781.6  | 0.0 | -47.5  | 0.0 | -1641.7 |
| 4  | 110 | 0.0 | -4.5    | 0.0 | 37.6   | 0.0 | -246.1  |
|    | 115 | 0.0 | 726.4   | 0.0 | -37.6  | 0.0 | -521.4  |
| 5  | 110 | 0.0 | -484.0  | 0.0 | 41.5   | 0.0 | -743.9  |
|    | 115 | 0.0 | 1205.9  | 0.0 | -41.5  | 0.0 | -1030.5 |
| 6  | 110 | 0.0 | -1982.3 | 0.0 | 56.9   | 0.0 | -2299.3 |
|    | 115 | 0.0 | 2704.1  | 0.0 | -56.9  | 0.0 | -2621.4 |
| 7  | 110 | 0.0 | -2658.1 | 0.0 | 60.8   | 0.0 | -3001.0 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 115 | 0.0 | 3380.0  | 0.0 | -60.8  | 0.0 | -3339.0 |
| 8  | 110 | 0.0 | -2257.3 | 0.0 | 50.5   | 0.0 | -2584.9 |
|    | 115 | 0.0 | 2979.2  | 0.0 | -50.5  | 0.0 | -2913.4 |
| 9  | 110 | 0.0 | -2736.8 | 0.0 | 54.5   | 0.0 | -3082.7 |
|    | 115 | 0.0 | 3458.7  | 0.0 | -54.5  | 0.0 | -3422.5 |
| 10 | 110 | 0.0 | 184.5   | 0.0 | 11.2   | 0.0 | -49.3   |
|    | 115 | 0.0 | 537.4   | 0.0 | -11.2  | 0.0 | -321.2  |
| 11 | 110 | 0.0 | -87.6   | 0.0 | 15.1   | 0.0 | -332.4  |
|    | 115 | 0.0 | 809.5   | 0.0 | -15.1  | 0.0 | -609.5  |
| 12 | 110 | 0.0 | -247.5  | 0.0 | 15.2   | 0.0 | -498.4  |
|    | 115 | 0.0 | 969.3   | 0.0 | -15.2  | 0.0 | -779.2  |
| 13 | 110 | 0.0 | 532.9   | 0.0 | 4.8    | 0.0 | 311.9   |
|    | 115 | 0.0 | 188.9   | 0.0 | -4.8   | 0.0 | 49.3    |
| 14 | 110 | 0.0 | 692.8   | 0.0 | 4.7    | 0.0 | 477.9   |
|    | 115 | 0.0 | 29.1    | 0.0 | -4.7   | 0.0 | 219.0   |
| 15 | 110 | 0.0 | 445.3   | 0.0 | 14.8   | 0.0 | 221.0   |
|    | 115 | 0.0 | 276.5   | 0.0 | -14.8  | 0.0 | -43.7   |
| 16 | 110 | 0.0 | 285.5   | 0.0 | 14.9   | 0.0 | 55.0    |
|    | 115 | 0.0 | 436.4   | 0.0 | -14.9  | 0.0 | -213.5  |
| 17 | 110 | 0.0 | 0.0     | 0.0 | 5.1    | 0.0 | -241.5  |
|    | 115 | 0.0 | 721.9   | 0.0 | -5.1   | 0.0 | -516.5  |
| 18 | 110 | 0.0 | 159.9   | 0.0 | 5.0    | 0.0 | -75.5   |
|    | 115 | 0.0 | 562.0   | 0.0 | -5.0   | 0.0 | -346.7  |
|    |     |     |         |     |        |     |         |
| 1  | 115 | 0.0 | 980.2   | 0.0 | 24.3   | 0.0 | 697.7   |
|    | 120 | 0.0 | 896.7   | 0.0 | -24.3  | 0.0 | -522.4  |
| 2  | 115 | 0.0 | 600.1   | 0.0 | -114.6 | 0.0 | 210.9   |
|    | 120 | 0.0 | 843.6   | 0.0 | 114.6  | 0.0 | -722.3  |
| 3  | 115 | 0.0 | 404.9   | 0.0 | -61.8  | 0.0 | -204.3  |
|    | 120 | 0.0 | 1038.8  | 0.0 | 61.8   | 0.0 | -1127.0 |
| 4  | 115 | 0.0 | 710.3   | 0.0 | -128.0 | 0.0 | 445.0   |
|    | 120 | 0.0 | 733.4   | 0.0 | 128.0  | 0.0 | -493.9  |
| 5  | 115 | 0.0 | 573.7   | 0.0 | -77.7  | 0.0 | 153.9   |
|    | 120 | 0.0 | 870.0   | 0.0 | 77.7   | 0.0 | -776.4  |
| 6  | 115 | 0.0 | 144.8   | 0.0 | 52.9   | 0.0 | -759.6  |
|    | 120 | 0.0 | 1298.9  | 0.0 | -52.9  | 0.0 | -1664.1 |
| 7  | 115 | 0.0 | -50.4   | 0.0 | 105.6  | 0.0 | -1174.8 |
|    | 120 | 0.0 | 1494.1  | 0.0 | -105.6 | 0.0 | -2068.8 |
| 8  | 115 | 0.0 | 59.5    | 0.0 | 47.8   | 0.0 | -939.1  |
|    | 120 | 0.0 | 1384.2  | 0.0 | -47.8  | 0.0 | -1842.9 |
| 9  | 115 | 0.0 | -77.1   | 0.0 | 98.1   | 0.0 | -1230.2 |
|    | 120 | 0.0 | 1520.8  | 0.0 | -98.1  | 0.0 | -2125.4 |
| 10 | 115 | 0.0 | 757.7   | 0.0 | 17.1   | 0.0 | 544.8   |
|    | 120 | 0.0 | 686.1   | 0.0 | -17.1  | 0.0 | -394.5  |
| 11 | 115 | 0.0 | 683.7   | 0.0 | 20.7   | 0.0 | 389.0   |
|    | 120 | 0.0 | 760.1   | 0.0 | -20.7  | 0.0 | -549.3  |
| 12 | 115 | 0.0 | 635.7   | 0.0 | 22.8   | 0.0 | 287.5   |
|    | 120 | 0.0 | 808.1   | 0.0 | -22.8  | 0.0 | -649.3  |
| 13 | 115 | 0.0 | 865.0   | 0.0 | -0.5   | 0.0 | 774.0   |
|    | 120 | 0.0 | 578.7   | 0.0 | 0.5    | 0.0 | -173.0  |
| 14 | 115 | 0.0 | 913.0   | 0.0 | -2.5   | 0.0 | 875.5   |
|    | 120 | 0.0 | 530.7   | 0.0 | 2.5    | 0.0 | -72.9   |
| 15 | 115 | 0.0 | 843.6   | 0.0 | 13.8   | 0.0 | 727.2   |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 120 | 0.0 | 600.1   | 0.0 | -13.8  | 0.0 | -215.9  |
| 16 | 115 | 0.0 | 795.6   | 0.0 | 15.9   | 0.0 | 625.7   |
|    | 120 | 0.0 | 648.1   | 0.0 | -15.9  | 0.0 | -315.9  |
| 17 | 115 | 0.0 | 705.0   | 0.0 | 6.5    | 0.0 | 435.8   |
|    | 120 | 0.0 | 738.7   | 0.0 | -6.5   | 0.0 | -506.4  |
| 18 | 115 | 0.0 | 753.0   | 0.0 | 4.4    | 0.0 | 537.3   |
|    | 120 | 0.0 | 690.7   | 0.0 | -4.4   | 0.0 | -406.4  |
|    |     |     |         |     |        |     |         |
| 1  | 104 | 0.0 | 6713.7  | 0.0 | 172.9  | 0.0 | 3713.9  |
|    | 107 | 0.0 | 3397.7  | 0.0 | -172.9 | 0.0 | 1094.3  |
| 2  | 104 | 0.0 | 3665.4  | 0.0 | 292.8  | 0.0 | 1726.2  |
|    | 107 | 0.0 | 2145.3  | 0.0 | -292.8 | 0.0 | 478.0   |
| 3  | 104 | 0.0 | 3444.6  | 0.0 | 271.3  | 0.0 | 1267.8  |
|    | 107 | 0.0 | 2366.1  | 0.0 | -271.3 | 0.0 | 296.0   |
| 4  | 104 | 0.0 | 3761.2  | 0.0 | 285.7  | 0.0 | 1924.7  |
|    | 107 | 0.0 | 2049.5  | 0.0 | -285.7 | 0.0 | 557.3   |
| 5  | 104 | 0.0 | 3575.4  | 0.0 | 267.6  | 0.0 | 1538.9  |
|    | 107 | 0.0 | 2235.3  | 0.0 | -267.6 | 0.0 | 404.2   |
| 6  | 104 | 0.0 | 3046.1  | 0.0 | 232.3  | 0.0 | 440.5   |
|    | 107 | 0.0 | 2764.6  | 0.0 | -232.3 | 0.0 | -32.2   |
| 7  | 104 | 0.0 | 2825.3  | 0.0 | 210.8  | 0.0 | -17.9   |
|    | 107 | 0.0 | 2985.4  | 0.0 | -210.8 | 0.0 | -214.3  |
| 8  | 104 | 0.0 | 3025.0  | 0.0 | 213.9  | 0.0 | 396.6   |
|    | 107 | 0.0 | 2785.7  | 0.0 | -213.9 | 0.0 | -49.5   |
| 9  | 104 | 0.0 | 2839.3  | 0.0 | 195.7  | 0.0 | 10.9    |
|    | 107 | 0.0 | 2971.4  | 0.0 | -195.7 | 0.0 | -202.5  |
| 10 | 104 | 0.0 | 4927.1  | 0.0 | 127.6  | 0.0 | 2721.2  |
|    | 107 | 0.0 | 2496.4  | 0.0 | -127.6 | 0.0 | 803.2   |
| 11 | 104 | 0.0 | 3768.5  | 0.0 | 108.5  | 0.0 | 1940.6  |
|    | 107 | 0.0 | 2042.2  | 0.0 | -108.5 | 0.0 | 562.5   |
| 12 | 104 | 0.0 | 3739.5  | 0.0 | 105.9  | 0.0 | 1880.5  |
|    | 107 | 0.0 | 2071.2  | 0.0 | -105.9 | 0.0 | 538.6   |
| 13 | 104 | 0.0 | 3926.2  | 0.0 | 96.9   | 0.0 | 2267.5  |
|    | 107 | 0.0 | 1884.5  | 0.0 | -96.9  | 0.0 | 693.1   |
| 14 | 104 | 0.0 | 3955.2  | 0.0 | 99.5   | 0.0 | 2327.5  |
|    | 107 | 0.0 | 1855.5  | 0.0 | -99.5  | 0.0 | 717.0   |
| 15 | 104 | 0.0 | 3865.0  | 0.0 | 117.3  | 0.0 | 2140.7  |
|    | 107 | 0.0 | 1945.7  | 0.0 | -117.3 | 0.0 | 642.2   |
| 16 | 104 | 0.0 | 3836.0  | 0.0 | 114.7  | 0.0 | 2080.7  |
|    | 107 | 0.0 | 1974.7  | 0.0 | -114.7 | 0.0 | 618.3   |
| 17 | 104 | 0.0 | 3829.7  | 0.0 | 88.1   | 0.0 | 2067.3  |
|    | 107 | 0.0 | 1981.0  | 0.0 | -88.1  | 0.0 | 613.3   |
| 18 | 104 | 0.0 | 3858.7  | 0.0 | 90.7   | 0.0 | 2127.4  |
|    | 107 | 0.0 | 1952.0  | 0.0 | -90.7  | 0.0 | 637.3   |
|    |     |     |         |     |        |     |         |
| 1  | 107 | 0.0 | -3397.7 | 0.0 | 172.9  | 0.0 | -1094.3 |
|    | 111 | 0.0 | 4031.4  | 0.0 | -172.9 | 0.0 | -3734.6 |
| 2  | 107 | 0.0 | -2145.3 | 0.0 | 292.8  | 0.0 | -478.0  |
|    | 111 | 0.0 | 2632.8  | 0.0 | -292.8 | 0.0 | -2627.7 |
| 3  | 107 | 0.0 | -2366.1 | 0.0 | 271.3  | 0.0 | -296.0  |
|    | 111 | 0.0 | 2853.6  | 0.0 | -271.3 | 0.0 | -3096.8 |
| 4  | 107 | 0.0 | -2049.5 | 0.0 | 285.7  | 0.0 | -557.3  |
|    | 111 | 0.0 | 2537.0  | 0.0 | -285.7 | 0.0 | -2424.0 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 5  | 107 | 0.0 | -2235.3 | 0.0 | 267.6  | 0.0 | -404.2  |
|    | 111 | 0.0 | 2722.8  | 0.0 | -267.6 | 0.0 | -2818.6 |
| 6  | 107 | 0.0 | -2764.6 | 0.0 | 232.3  | 0.0 | 32.2    |
|    | 111 | 0.0 | 3252.1  | 0.0 | -232.3 | 0.0 | -3943.0 |
| 7  | 107 | 0.0 | -2985.4 | 0.0 | 210.8  | 0.0 | 214.3   |
|    | 111 | 0.0 | 3472.9  | 0.0 | -210.8 | 0.0 | -4412.2 |
| 8  | 107 | 0.0 | -2785.7 | 0.0 | 213.9  | 0.0 | 49.5    |
|    | 111 | 0.0 | 3273.2  | 0.0 | -213.9 | 0.0 | -3987.7 |
| 9  | 107 | 0.0 | -2971.4 | 0.0 | 195.7  | 0.0 | 202.5   |
|    | 111 | 0.0 | 3458.9  | 0.0 | -195.7 | 0.0 | -4382.3 |
| 10 | 107 | 0.0 | -2496.4 | 0.0 | 127.6  | 0.0 | -803.2  |
|    | 111 | 0.0 | 2983.9  | 0.0 | -127.6 | 0.0 | -2759.0 |
| 11 | 107 | 0.0 | -2042.2 | 0.0 | 108.5  | 0.0 | -562.5  |
|    | 111 | 0.0 | 2529.7  | 0.0 | -108.5 | 0.0 | -2409.3 |
| 12 | 107 | 0.0 | -2071.2 | 0.0 | 105.9  | 0.0 | -538.6  |
|    | 111 | 0.0 | 2558.7  | 0.0 | -105.9 | 0.0 | -2470.8 |
| 13 | 107 | 0.0 | -1884.5 | 0.0 | 96.9   | 0.0 | -693.1  |
|    | 111 | 0.0 | 2372.0  | 0.0 | -96.9  | 0.0 | -2073.7 |
| 14 | 107 | 0.0 | -1855.5 | 0.0 | 99.5   | 0.0 | -717.0  |
|    | 111 | 0.0 | 2343.0  | 0.0 | -99.5  | 0.0 | -2012.1 |
| 15 | 107 | 0.0 | -1945.7 | 0.0 | 117.3  | 0.0 | -642.2  |
|    | 111 | 0.0 | 2433.2  | 0.0 | -117.3 | 0.0 | -2204.1 |
| 16 | 107 | 0.0 | -1974.7 | 0.0 | 114.7  | 0.0 | -618.3  |
|    | 111 | 0.0 | 2462.2  | 0.0 | -114.7 | 0.0 | -2265.7 |
| 17 | 107 | 0.0 | -1981.0 | 0.0 | 88.1   | 0.0 | -613.3  |
|    | 111 | 0.0 | 2468.5  | 0.0 | -88.1  | 0.0 | -2278.8 |
| 18 | 107 | 0.0 | -1952.0 | 0.0 | 90.7   | 0.0 | -637.3  |
|    | 111 | 0.0 | 2439.5  | 0.0 | -90.7  | 0.0 | -2217.3 |
|    |     |     |         |     |        |     |         |
| 1  | 111 | 0.0 | 494.9   | 0.0 | -8.7   | 0.0 | 293.0   |
|    | 116 | 0.0 | 528.8   | 0.0 | 8.7    | 0.0 | -328.6  |
| 2  | 111 | 0.0 | -273.4  | 0.0 | 5.6    | 0.0 | -481.1  |
|    | 116 | 0.0 | 1060.9  | 0.0 | -5.6   | 0.0 | -919.9  |
| 3  | 111 | 0.0 | -1106.4 | 0.0 | 13.7   | 0.0 | -1355.3 |
|    | 116 | 0.0 | 1893.9  | 0.0 | -13.7  | 0.0 | -1795.0 |
| 4  | 111 | 0.0 | 132.0   | 0.0 | -1.8   | 0.0 | -55.5   |
|    | 116 | 0.0 | 655.5   | 0.0 | 1.8    | 0.0 | -494.1  |
| 5  | 111 | 0.0 | -549.7  | 0.0 | 4.9    | 0.0 | -770.9  |
|    | 116 | 0.0 | 1337.2  | 0.0 | -4.9   | 0.0 | -1210.3 |
| 6  | 111 | 0.0 | -2545.8 | 0.0 | 28.2   | 0.0 | -2865.8 |
|    | 116 | 0.0 | 3333.3  | 0.0 | -28.2  | 0.0 | -3307.4 |
| 7  | 111 | 0.0 | -3378.8 | 0.0 | 36.2   | 0.0 | -3739.9 |
|    | 116 | 0.0 | 4166.3  | 0.0 | -36.2  | 0.0 | -4182.5 |
| 8  | 111 | 0.0 | -2644.6 | 0.0 | 25.1   | 0.0 | -2969.4 |
|    | 116 | 0.0 | 3432.1  | 0.0 | -25.1  | 0.0 | -3411.2 |
| 9  | 111 | 0.0 | -3326.4 | 0.0 | 31.8   | 0.0 | -3684.8 |
|    | 116 | 0.0 | 4113.9  | 0.0 | -31.8  | 0.0 | -4127.4 |
| 10 | 111 | 0.0 | 383.1   | 0.0 | -6.0   | 0.0 | 224.2   |
|    | 116 | 0.0 | 404.4   | 0.0 | 6.0    | 0.0 | -246.6  |
| 11 | 111 | 0.0 | 61.4    | 0.0 | 3.4    | 0.0 | -129.9  |
|    | 116 | 0.0 | 726.1   | 0.0 | -3.4   | 0.0 | -568.0  |
| 12 | 111 | 0.0 | -62.8   | 0.0 | 4.7    | 0.0 | -260.3  |
|    | 116 | 0.0 | 850.3   | 0.0 | -4.7   | 0.0 | -698.4  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 13 | 111 | 0.0 | 726.2  | 0.0 | -9.6   | 0.0 | 567.9   |
|    | 116 | 0.0 | 61.3   | 0.0 | 9.6    | 0.0 | 130.2   |
| 14 | 111 | 0.0 | 850.4  | 0.0 | -10.9  | 0.0 | 698.3   |
|    | 116 | 0.0 | -62.9  | 0.0 | 10.9   | 0.0 | 260.7   |
| 15 | 111 | 0.0 | 475.4  | 0.0 | -1.0   | 0.0 | 304.6   |
|    | 116 | 0.0 | 312.1  | 0.0 | 1.0    | 0.0 | -133.2  |
| 16 | 111 | 0.0 | 351.2  | 0.0 | 0.3    | 0.0 | 174.3   |
|    | 116 | 0.0 | 436.3  | 0.0 | -0.3   | 0.0 | -263.6  |
| 17 | 111 | 0.0 | 312.2  | 0.0 | -5.2   | 0.0 | 133.4   |
|    | 116 | 0.0 | 475.3  | 0.0 | 5.2    | 0.0 | -304.6  |
| 18 | 111 | 0.0 | 436.4  | 0.0 | -6.5   | 0.0 | 263.8   |
|    | 116 | 0.0 | 351.1  | 0.0 | 6.5    | 0.0 | -174.1  |
|    |     |     |        |     |        |     |         |
| 1  | 116 | 0.0 | 1039.1 | 0.0 | -109.6 | 0.0 | 694.4   |
|    | 121 | 0.0 | 1008.4 | 0.0 | 109.6  | 0.0 | -629.9  |
| 2  | 116 | 0.0 | 631.2  | 0.0 | -224.0 | 0.0 | 179.9   |
|    | 121 | 0.0 | 943.8  | 0.0 | 224.0  | 0.0 | -836.4  |
| 3  | 116 | 0.0 | 385.6  | 0.0 | -161.9 | 0.0 | -339.9  |
|    | 121 | 0.0 | 1189.4 | 0.0 | 161.9  | 0.0 | -1348.0 |
| 4  | 116 | 0.0 | 774.4  | 0.0 | -239.3 | 0.0 | 482.4   |
|    | 121 | 0.0 | 800.6  | 0.0 | 239.3  | 0.0 | -537.4  |
| 5  | 116 | 0.0 | 585.6  | 0.0 | -181.2 | 0.0 | 82.0    |
|    | 121 | 0.0 | 989.4  | 0.0 | 181.2  | 0.0 | -930.0  |
| 6  | 116 | 0.0 | 1.8    | 0.0 | -30.2  | 0.0 | -1154.7 |
|    | 121 | 0.0 | 1573.2 | 0.0 | 30.2   | 0.0 | -2145.1 |
| 7  | 116 | 0.0 | -243.7 | 0.0 | 31.9   | 0.0 | -1674.5 |
|    | 121 | 0.0 | 1818.7 | 0.0 | -31.9  | 0.0 | -2656.7 |
| 8  | 116 | 0.0 | -44.2  | 0.0 | -32.3  | 0.0 | -1250.4 |
|    | 121 | 0.0 | 1619.2 | 0.0 | 32.3   | 0.0 | -2242.6 |
| 9  | 116 | 0.0 | -233.0 | 0.0 | 25.8   | 0.0 | -1650.8 |
|    | 121 | 0.0 | 1808.0 | 0.0 | -25.8  | 0.0 | -2635.3 |
| 10 | 116 | 0.0 | 802.7  | 0.0 | -80.3  | 0.0 | 541.6   |
|    | 121 | 0.0 | 772.3  | 0.0 | 80.3   | 0.0 | -477.7  |
| 11 | 116 | 0.0 | 699.6  | 0.0 | -49.8  | 0.0 | 324.7   |
|    | 121 | 0.0 | 875.4  | 0.0 | 49.8   | 0.0 | -694.0  |
| 12 | 116 | 0.0 | 652.5  | 0.0 | -46.5  | 0.0 | 225.5   |
|    | 121 | 0.0 | 922.5  | 0.0 | 46.5   | 0.0 | -792.7  |
| 13 | 116 | 0.0 | 936.8  | 0.0 | -74.1  | 0.0 | 826.0   |
|    | 121 | 0.0 | 638.2  | 0.0 | 74.1   | 0.0 | -198.9  |
| 14 | 116 | 0.0 | 983.9  | 0.0 | -77.4  | 0.0 | 925.3   |
|    | 121 | 0.0 | 591.1  | 0.0 | 77.4   | 0.0 | -100.2  |
| 15 | 116 | 0.0 | 856.7  | 0.0 | -60.7  | 0.0 | 655.5   |
|    | 121 | 0.0 | 718.3  | 0.0 | 60.7   | 0.0 | -364.9  |
| 16 | 116 | 0.0 | 809.5  | 0.0 | -57.4  | 0.0 | 556.3   |
|    | 121 | 0.0 | 765.5  | 0.0 | 57.4   | 0.0 | -463.7  |
| 17 | 116 | 0.0 | 779.7  | 0.0 | -63.3  | 0.0 | 495.2   |
|    | 121 | 0.0 | 795.3  | 0.0 | 63.3   | 0.0 | -528.0  |
| 18 | 116 | 0.0 | 826.8  | 0.0 | -66.5  | 0.0 | 594.5   |
|    | 121 | 0.0 | 748.2  | 0.0 | 66.5   | 0.0 | -429.3  |
|    |     |     |        |     |        |     |         |
| 1  | 105 | 0.0 | 2952.8 | 0.0 | -11.8  | 0.0 | 925.4   |
|    | 112 | 0.0 | 3735.7 | 0.0 | 11.8   | 0.0 | -2569.5 |
| 2  | 105 | 0.0 | 1879.4 | 0.0 | -40.9  | 0.0 | -189.6  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 112 | 0.0 | 3265.6  | 0.0 | 40.9   | 0.0 | -2722.1 |
| 3  | 105 | 0.0 | 1421.6  | 0.0 | -12.5  | 0.0 | -1277.0 |
|    | 112 | 0.0 | 3723.4  | 0.0 | 12.5   | 0.0 | -3557.0 |
| 4  | 105 | 0.0 | 2069.4  | 0.0 | -33.3  | 0.0 | 270.6   |
|    | 112 | 0.0 | 3075.6  | 0.0 | 33.3   | 0.0 | -2384.2 |
| 5  | 105 | 0.0 | 1664.2  | 0.0 | 4.2    | 0.0 | -687.9  |
|    | 112 | 0.0 | 3480.8  | 0.0 | -4.2   | 0.0 | -3127.6 |
| 6  | 105 | 0.0 | 528.6   | 0.0 | 83.9   | 0.0 | -3384.6 |
|    | 112 | 0.0 | 4616.4  | 0.0 | -83.9  | 0.0 | -5199.9 |
| 7  | 105 | 0.0 | 70.9    | 0.0 | 112.4  | 0.0 | -4472.0 |
|    | 112 | 0.0 | 5074.1  | 0.0 | -112.4 | 0.0 | -6034.9 |
| 8  | 105 | 0.0 | 543.6   | 0.0 | 61.5   | 0.0 | -3354.1 |
|    | 112 | 0.0 | 4601.4  | 0.0 | -61.5  | 0.0 | -5167.4 |
| 9  | 105 | 0.0 | 138.4   | 0.0 | 99.0   | 0.0 | -4312.6 |
|    | 112 | 0.0 | 5006.6  | 0.0 | -99.0  | 0.0 | -5910.7 |
| 10 | 105 | 0.0 | 2273.2  | 0.0 | -9.3   | 0.0 | 719.4   |
|    | 112 | 0.0 | 2871.8  | 0.0 | 9.3    | 0.0 | -1976.5 |
| 11 | 105 | 0.0 | 2123.4  | 0.0 | -17.8  | 0.0 | 371.4   |
|    | 112 | 0.0 | 3021.6  | 0.0 | 17.8   | 0.0 | -2257.8 |
| 12 | 105 | 0.0 | 2078.9  | 0.0 | -25.4  | 0.0 | 262.4   |
|    | 112 | 0.0 | 3066.1  | 0.0 | 25.4   | 0.0 | -2335.5 |
| 13 | 105 | 0.0 | 2439.4  | 0.0 | -2.9   | 0.0 | 1136.4  |
|    | 112 | 0.0 | 2705.6  | 0.0 | 2.9    | 0.0 | -1695.3 |
| 14 | 105 | 0.0 | 2483.9  | 0.0 | 4.7    | 0.0 | 1245.3  |
|    | 112 | 0.0 | 2661.1  | 0.0 | -4.7   | 0.0 | -1617.6 |
| 15 | 105 | 0.0 | 2271.5  | 0.0 | 7.6    | 0.0 | 734.5   |
|    | 112 | 0.0 | 2873.5  | 0.0 | -7.6   | 0.0 | -1998.8 |
| 16 | 105 | 0.0 | 2227.0  | 0.0 | 0.0    | 0.0 | 625.5   |
|    | 112 | 0.0 | 2918.0  | 0.0 | -0.0   | 0.0 | -2076.5 |
| 17 | 105 | 0.0 | 2291.3  | 0.0 | -28.4  | 0.0 | 773.3   |
|    | 112 | 0.0 | 2853.7  | 0.0 | 28.4   | 0.0 | -1954.3 |
| 18 | 105 | 0.0 | 2335.7  | 0.0 | -20.8  | 0.0 | 882.2   |
|    | 112 | 0.0 | 2809.3  | 0.0 | 20.8   | 0.0 | -1876.6 |
|    |     |     |         |     |        |     |         |
| 1  | 112 | 0.0 | 1542.6  | 0.0 | -9.8   | 0.0 | 1289.3  |
|    | 117 | 0.0 | 1801.7  | 0.0 | 9.8    | 0.0 | -1561.4 |
| 2  | 112 | 0.0 | 487.1   | 0.0 | 30.4   | 0.0 | 278.5   |
|    | 117 | 0.0 | 2085.4  | 0.0 | -30.4  | 0.0 | -1938.6 |
| 3  | 112 | 0.0 | -407.3  | 0.0 | 56.6   | 0.0 | -708.7  |
|    | 117 | 0.0 | 2979.8  | 0.0 | -56.6  | 0.0 | -2853.0 |
| 4  | 112 | 0.0 | 924.4   | 0.0 | 8.8    | 0.0 | 839.0   |
|    | 117 | 0.0 | 1648.1  | 0.0 | -8.8   | 0.0 | -1522.6 |
| 5  | 112 | 0.0 | 166.3   | 0.0 | 32.1   | 0.0 | 40.2    |
|    | 117 | 0.0 | 2406.2  | 0.0 | -32.1  | 0.0 | -2314.2 |
| 6  | 112 | 0.0 | -2039.9 | 0.0 | 108.1  | 0.0 | -2384.3 |
|    | 117 | 0.0 | 4612.4  | 0.0 | -108.1 | 0.0 | -4577.3 |
| 7  | 112 | 0.0 | -2934.3 | 0.0 | 134.4  | 0.0 | -3371.5 |
|    | 117 | 0.0 | 5506.8  | 0.0 | -134.4 | 0.0 | -5491.7 |
| 8  | 112 | 0.0 | -2056.8 | 0.0 | 96.2   | 0.0 | -2451.6 |
|    | 117 | 0.0 | 4629.3  | 0.0 | -96.2  | 0.0 | -4570.4 |
| 9  | 112 | 0.0 | -2814.9 | 0.0 | 119.5  | 0.0 | -3250.4 |
|    | 117 | 0.0 | 5387.4  | 0.0 | -119.5 | 0.0 | -5362.0 |
| 10 | 112 | 0.0 | 1190.0  | 0.0 | -7.0   | 0.0 | 995.1   |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 117 | 0.0 | 1382.5 | 0.0 | 7.0    | 0.0 | -1197.2 |
| 11 | 112 | 0.0 | 844.5  | 0.0 | 13.8   | 0.0 | 540.7   |
|    | 117 | 0.0 | 1728.0 | 0.0 | -13.8  | 0.0 | -1523.9 |
| 12 | 112 | 0.0 | 731.0  | 0.0 | 16.8   | 0.0 | 381.4   |
|    | 117 | 0.0 | 1841.5 | 0.0 | -16.8  | 0.0 | -1626.7 |
| 13 | 112 | 0.0 | 1566.4 | 0.0 | -23.2  | 0.0 | 1479.1  |
|    | 117 | 0.0 | 1006.1 | 0.0 | 23.2   | 0.0 | -835.2  |
| 14 | 112 | 0.0 | 1679.9 | 0.0 | -26.2  | 0.0 | 1638.5  |
|    | 117 | 0.0 | 892.6  | 0.0 | 26.2   | 0.0 | -732.4  |
| 15 | 112 | 0.0 | 1222.7 | 0.0 | 3.9    | 0.0 | 1071.8  |
|    | 117 | 0.0 | 1349.8 | 0.0 | -3.9   | 0.0 | -1181.4 |
| 16 | 112 | 0.0 | 1109.3 | 0.0 | 6.9    | 0.0 | 912.5   |
|    | 117 | 0.0 | 1463.2 | 0.0 | -6.9   | 0.0 | -1284.1 |
| 17 | 112 | 0.0 | 1188.2 | 0.0 | -13.3  | 0.0 | 948.0   |
|    | 117 | 0.0 | 1384.3 | 0.0 | 13.3   | 0.0 | -1177.7 |
| 18 | 112 | 0.0 | 1301.7 | 0.0 | -16.2  | 0.0 | 1107.4  |
|    | 117 | 0.0 | 1270.8 | 0.0 | 16.2   | 0.0 | -1075.0 |
|    |     |     |        |     |        |     |         |
| 1  | 117 | 0.0 | 3545.3 | 0.0 | 1.6    | 0.0 | 2296.5  |
|    | 122 | 0.0 | 3143.2 | 0.0 | -1.6   | 0.0 | -1452.0 |
| 2  | 117 | 0.0 | 2354.4 | 0.0 | 49.2   | 0.0 | 1085.5  |
|    | 122 | 0.0 | 2790.6 | 0.0 | -49.2  | 0.0 | -2001.8 |
| 3  | 117 | 0.0 | 1824.8 | 0.0 | 67.2   | 0.0 | 108.7   |
|    | 122 | 0.0 | 3320.2 | 0.0 | -67.2  | 0.0 | -3249.5 |
| 4  | 117 | 0.0 | 2675.4 | 0.0 | 30.1   | 0.0 | 1689.9  |
|    | 122 | 0.0 | 2469.6 | 0.0 | -30.1  | 0.0 | -1257.4 |
| 5  | 117 | 0.0 | 2259.1 | 0.0 | 46.3   | 0.0 | 928.5   |
|    | 122 | 0.0 | 2885.9 | 0.0 | -46.3  | 0.0 | -2244.6 |
| 6  | 117 | 0.0 | 966.6  | 0.0 | 103.3  | 0.0 | -1452.3 |
|    | 122 | 0.0 | 4178.4 | 0.0 | -103.3 | 0.0 | -5292.3 |
| 7  | 117 | 0.0 | 437.0  | 0.0 | 121.3  | 0.0 | -2429.1 |
|    | 122 | 0.0 | 4708.0 | 0.0 | -121.3 | 0.0 | -6540.0 |
| 8  | 117 | 0.0 | 910.0  | 0.0 | 90.1   | 0.0 | -1566.1 |
|    | 122 | 0.0 | 4235.0 | 0.0 | -90.1  | 0.0 | -5416.6 |
| 9  | 117 | 0.0 | 493.6  | 0.0 | 106.3  | 0.0 | -2327.4 |
|    | 122 | 0.0 | 4651.4 | 0.0 | -106.3 | 0.0 | -6403.8 |
| 10 | 117 | 0.0 | 2730.5 | 0.0 | 1.4    | 0.0 | 1773.2  |
|    | 122 | 0.0 | 2414.5 | 0.0 | -1.4   | 0.0 | -1109.7 |
| 11 | 117 | 0.0 | 2478.5 | 0.0 | 18.4   | 0.0 | 2175.4  |
|    | 122 | 0.0 | 2666.5 | 0.0 | -18.4  | 0.0 | -1695.9 |
| 12 | 117 | 0.0 | 2383.6 | 0.0 | 20.4   | 0.0 | 2369.7  |
|    | 122 | 0.0 | 2761.4 | 0.0 | -20.4  | 0.0 | -1914.5 |
| 13 | 117 | 0.0 | 3012.5 | 0.0 | -14.1  | 0.0 | 1431.4  |
|    | 122 | 0.0 | 2132.5 | 0.0 | 14.1   | 0.0 | -457.4  |
| 14 | 117 | 0.0 | 3107.5 | 0.0 | -16.0  | 0.0 | 1237.1  |
|    | 122 | 0.0 | 2037.5 | 0.0 | 16.0   | 0.0 | -238.8  |
| 15 | 117 | 0.0 | 2795.1 | 0.0 | 11.9   | 0.0 | 1527.7  |
|    | 122 | 0.0 | 2349.9 | 0.0 | -11.9  | 0.0 | -967.2  |
| 16 | 117 | 0.0 | 2700.2 | 0.0 | 13.9   | 0.0 | 1722.0  |
|    | 122 | 0.0 | 2444.8 | 0.0 | -13.9  | 0.0 | -1185.8 |
| 17 | 117 | 0.0 | 2695.9 | 0.0 | -7.6   | 0.0 | 2079.1  |
|    | 122 | 0.0 | 2449.1 | 0.0 | 7.6    | 0.0 | -1186.1 |
| 18 | 117 | 0.0 | 2790.9 | 0.0 | -9.5   | 0.0 | 1884.8  |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 122 | 0.0 | 2354.1  | 0.0 | 9.5    | 0.0 | -967.5   |
| 1  | 201 | 0.0 | 10566.1 | 0.0 | -10.9  | 0.0 | 6014.8   |
|    | 202 | 0.0 | 13178.9 | 0.0 | 10.9   | 0.0 | -13853.1 |
| 2  | 201 | 0.0 | 5328.4  | 0.0 | 19.2   | 0.0 | 1048.1   |
|    | 202 | 0.0 | 8633.6  | 0.0 | -19.2  | 0.0 | -10963.9 |
| 3  | 201 | 0.0 | 5589.6  | 0.0 | 39.1   | 0.0 | 1786.6   |
|    | 202 | 0.0 | 8372.4  | 0.0 | -39.1  | 0.0 | -10134.7 |
| 4  | 201 | 0.0 | 5351.7  | 0.0 | 1.7    | 0.0 | 1109.0   |
|    | 202 | 0.0 | 8610.3  | 0.0 | -1.7   | 0.0 | -10884.6 |
| 5  | 201 | 0.0 | 5473.7  | 0.0 | 19.0   | 0.0 | 1455.2   |
|    | 202 | 0.0 | 8488.3  | 0.0 | -19.0  | 0.0 | -10499.0 |
| 6  | 201 | 0.0 | 5735.0  | 0.0 | 76.7   | 0.0 | 2202.1   |
|    | 202 | 0.0 | 8227.0  | 0.0 | -76.7  | 0.0 | -9678.3  |
| 7  | 201 | 0.0 | 5996.2  | 0.0 | 96.6   | 0.0 | 2940.5   |
|    | 202 | 0.0 | 7965.8  | 0.0 | -96.6  | 0.0 | -8849.2  |
| 8  | 201 | 0.0 | 6222.6  | 0.0 | 67.8   | 0.0 | 3570.4   |
|    | 202 | 0.0 | 7739.4  | 0.0 | -67.8  | 0.0 | -8120.8  |
| 9  | 201 | 0.0 | 6344.5  | 0.0 | 85.1   | 0.0 | 3916.6   |
|    | 202 | 0.0 | 7617.5  | 0.0 | -85.1  | 0.0 | -7735.1  |
| 10 | 201 | 0.0 | 7783.6  | 0.0 | -8.7   | 0.0 | 4434.6   |
|    | 202 | 0.0 | 9706.4  | 0.0 | 8.7    | 0.0 | -10203.0 |
| 11 | 201 | 0.0 | 6198.3  | 0.0 | 5.3    | 0.0 | 3510.1   |
|    | 202 | 0.0 | 7763.7  | 0.0 | -5.3   | 0.0 | -8206.1  |
| 12 | 201 | 0.0 | 6317.9  | 0.0 | 7.9    | 0.0 | 3845.9   |
|    | 202 | 0.0 | 7644.1  | 0.0 | -7.9   | 0.0 | -7824.6  |
| 13 | 201 | 0.0 | 6236.9  | 0.0 | -24.9  | 0.0 | 3610.6   |
|    | 202 | 0.0 | 7725.1  | 0.0 | 24.9   | 0.0 | -8075.1  |
| 14 | 201 | 0.0 | 6117.4  | 0.0 | -27.6  | 0.0 | 3274.8   |
|    | 202 | 0.0 | 7844.6  | 0.0 | 27.6   | 0.0 | -8456.5  |
| 15 | 201 | 0.0 | 5799.9  | 0.0 | -3.5   | 0.0 | 2390.5   |
|    | 202 | 0.0 | 8162.1  | 0.0 | 3.5    | 0.0 | -9477.5  |
| 16 | 201 | 0.0 | 5919.4  | 0.0 | -0.9   | 0.0 | 2726.3   |
|    | 202 | 0.0 | 8042.6  | 0.0 | 0.9    | 0.0 | -9096.1  |
| 17 | 201 | 0.0 | 6635.4  | 0.0 | -16.1  | 0.0 | 4730.2   |
|    | 202 | 0.0 | 7326.6  | 0.0 | 16.1   | 0.0 | -6803.6  |
| 18 | 201 | 0.0 | 6515.8  | 0.0 | -18.8  | 0.0 | 4394.4   |
|    | 202 | 0.0 | 7446.2  | 0.0 | 18.8   | 0.0 | -7185.1  |
| 1  | 202 | 0.0 | 10906.4 | 0.0 | -50.6  | 0.0 | 10656.3  |
|    | 203 | 0.0 | 9276.9  | 0.0 | 50.6   | 0.0 | -6501.0  |
| 2  | 202 | 0.0 | 4853.7  | 0.0 | 7.3    | 0.0 | 2417.8   |
|    | 203 | 0.0 | 7014.0  | 0.0 | -7.3   | 0.0 | -7927.4  |
| 3  | 202 | 0.0 | 5089.5  | 0.0 | 46.4   | 0.0 | 2993.5   |
|    | 203 | 0.0 | 6778.2  | 0.0 | -46.4  | 0.0 | -7300.9  |
| 4  | 202 | 0.0 | 4875.1  | 0.0 | -6.8   | 0.0 | 2458.4   |
|    | 203 | 0.0 | 6992.6  | 0.0 | 6.8    | 0.0 | -7858.6  |
| 5  | 202 | 0.0 | 5082.6  | 0.0 | 26.7   | 0.0 | 2959.2   |
|    | 203 | 0.0 | 6785.1  | 0.0 | -26.7  | 0.0 | -7301.4  |
| 6  | 202 | 0.0 | 5545.4  | 0.0 | 118.9  | 0.0 | 4087.4   |
|    | 203 | 0.0 | 6322.3  | 0.0 | -118.9 | 0.0 | -6070.2  |
| 7  | 202 | 0.0 | 5781.2  | 0.0 | 158.0  | 0.0 | 4663.1   |
|    | 203 | 0.0 | 6086.5  | 0.0 | -158.0 | 0.0 | -5443.6  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 8  | 202 | 0.0 | 5661.3 | 0.0 | 123.5  | 0.0 | 4377.4  |
|    | 203 | 0.0 | 6206.5 | 0.0 | -123.5 | 0.0 | -5770.0 |
| 9  | 202 | 0.0 | 5868.8 | 0.0 | 157.0  | 0.0 | 4878.3  |
|    | 203 | 0.0 | 5998.9 | 0.0 | -157.0 | 0.0 | -5212.8 |
| 10 | 202 | 0.0 | 8034.0 | 0.0 | -37.1  | 0.0 | 7856.1  |
|    | 203 | 0.0 | 6832.5 | 0.0 | 37.1   | 0.0 | -4792.1 |
| 11 | 202 | 0.0 | 6398.4 | 0.0 | -17.6  | 0.0 | 6269.8  |
|    | 203 | 0.0 | 5469.3 | 0.0 | 17.6   | 0.0 | -3901.1 |
| 12 | 202 | 0.0 | 6420.9 | 0.0 | -13.0  | 0.0 | 6329.6  |
|    | 203 | 0.0 | 5446.8 | 0.0 | 13.0   | 0.0 | -3846.3 |
| 13 | 202 | 0.0 | 6434.6 | 0.0 | -40.0  | 0.0 | 6338.4  |
|    | 203 | 0.0 | 5433.1 | 0.0 | 40.0   | 0.0 | -3784.1 |
| 14 | 202 | 0.0 | 6412.1 | 0.0 | -44.7  | 0.0 | 6278.6  |
|    | 203 | 0.0 | 5455.6 | 0.0 | 44.7   | 0.0 | -3838.9 |
| 15 | 202 | 0.0 | 6323.3 | 0.0 | -33.1  | 0.0 | 6070.6  |
|    | 203 | 0.0 | 5544.4 | 0.0 | 33.1   | 0.0 | -4083.7 |
| 16 | 202 | 0.0 | 6345.8 | 0.0 | -28.4  | 0.0 | 6130.4  |
|    | 203 | 0.0 | 5521.9 | 0.0 | 28.4   | 0.0 | -4029.0 |
| 17 | 202 | 0.0 | 6509.7 | 0.0 | -24.6  | 0.0 | 6537.6  |
|    | 203 | 0.0 | 5358.0 | 0.0 | 24.6   | 0.0 | -3601.5 |
| 18 | 202 | 0.0 | 6487.2 | 0.0 | -29.2  | 0.0 | 6477.9  |
|    | 203 | 0.0 | 5380.5 | 0.0 | 29.2   | 0.0 | -3656.3 |
|    |     |     |        |     |        |     |         |
| 1  | 203 | 0.0 | 3603.3 | 0.0 | 107.1  | 0.0 | 3921.1  |
|    | 204 | 0.0 | 2766.7 | 0.0 | -107.1 | 0.0 | -1871.2 |
| 2  | 203 | 0.0 | 1006.6 | 0.0 | 78.1   | 0.0 | -1375.0 |
|    | 204 | 0.0 | 3893.4 | 0.0 | -78.1  | 0.0 | -5697.6 |
| 3  | 203 | 0.0 | 1476.1 | 0.0 | 72.3   | 0.0 | -228.5  |
|    | 204 | 0.0 | 3423.9 | 0.0 | -72.3  | 0.0 | -4543.9 |
| 4  | 203 | 0.0 | 1052.6 | 0.0 | 43.5   | 0.0 | -1261.5 |
|    | 204 | 0.0 | 3847.4 | 0.0 | -43.5  | 0.0 | -5585.8 |
| 5  | 203 | 0.0 | 1305.7 | 0.0 | 20.6   | 0.0 | -645.0  |
|    | 204 | 0.0 | 3594.3 | 0.0 | -20.6  | 0.0 | -4961.8 |
| 6  | 203 | 0.0 | 1850.4 | 0.0 | 1.5    | 0.0 | 679.9   |
|    | 204 | 0.0 | 3049.6 | 0.0 | -1.5   | 0.0 | -3617.7 |
| 7  | 203 | 0.0 | 2319.9 | 0.0 | -4.2   | 0.0 | 1826.3  |
|    | 204 | 0.0 | 2580.1 | 0.0 | 4.2    | 0.0 | -2464.0 |
| 8  | 203 | 0.0 | 2617.4 | 0.0 | 24.5   | 0.0 | 2560.0  |
|    | 204 | 0.0 | 2282.6 | 0.0 | -24.5  | 0.0 | -1739.9 |
| 9  | 203 | 0.0 | 2870.5 | 0.0 | 1.5    | 0.0 | 3176.5  |
|    | 204 | 0.0 | 2029.5 | 0.0 | -1.5   | 0.0 | -1115.9 |
| 10 | 203 | 0.0 | 2755.1 | 0.0 | 78.3   | 0.0 | 2960.7  |
|    | 204 | 0.0 | 2144.8 | 0.0 | -78.3  | 0.0 | -1465.5 |
| 11 | 203 | 0.0 | 2640.3 | 0.0 | 90.4   | 0.0 | 2611.6  |
|    | 204 | 0.0 | 2259.7 | 0.0 | -90.4  | 0.0 | -1679.0 |
| 12 | 203 | 0.0 | 2826.2 | 0.0 | 105.7  | 0.0 | 3067.0  |
|    | 204 | 0.0 | 2073.8 | 0.0 | -105.7 | 0.0 | -1223.9 |
| 13 | 203 | 0.0 | 2718.4 | 0.0 | 28.8   | 0.0 | 2804.5  |
|    | 204 | 0.0 | 2181.6 | 0.0 | -28.8  | 0.0 | -1489.2 |
| 14 | 203 | 0.0 | 2532.6 | 0.0 | 13.5   | 0.0 | 2349.2  |
|    | 204 | 0.0 | 2367.4 | 0.0 | -13.5  | 0.0 | -1944.4 |
| 15 | 203 | 0.0 | 2020.9 | 0.0 | 39.5   | 0.0 | 1093.8  |
|    | 204 | 0.0 | 2879.1 | 0.0 | -39.5  | 0.0 | -3196.2 |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
| 16 | 203 | 0.0 | 2206.8  | 0.0 | 54.7   | 0.0 | 1549.1   |
|    | 204 | 0.0 | 2693.2  | 0.0 | -54.7  | 0.0 | -2741.0  |
| 17 | 203 | 0.0 | 3337.8  | 0.0 | 79.7   | 0.0 | 4322.4   |
|    | 204 | 0.0 | 1562.2  | 0.0 | -79.7  | 0.0 | 27.9     |
| 18 | 203 | 0.0 | 3152.0  | 0.0 | 64.4   | 0.0 | 3867.0   |
|    | 204 | 0.0 | 1748.0  | 0.0 | -64.4  | 0.0 | -427.2   |
|    |     |     |         |     |        |     |          |
| 1  | 204 | 0.0 | 4362.9  | 0.0 | -73.5  | 0.0 | 1075.4   |
|    | 205 | 0.0 | 5262.6  | 0.0 | 73.5   | 0.0 | -2110.1  |
| 2  | 204 | 0.0 | -1457.2 | 0.0 | -67.2  | 0.0 | -3737.6  |
|    | 205 | 0.0 | 7211.8  | 0.0 | 67.2   | 0.0 | -6231.7  |
| 3  | 204 | 0.0 | -850.9  | 0.0 | -109.6 | 0.0 | -3083.2  |
|    | 205 | 0.0 | 6605.5  | 0.0 | 109.6  | 0.0 | -5491.6  |
| 4  | 204 | 0.0 | -1336.7 | 0.0 | -58.0  | 0.0 | -3605.1  |
|    | 205 | 0.0 | 7091.3  | 0.0 | 58.0   | 0.0 | -6087.0  |
| 5  | 204 | 0.0 | -791.9  | 0.0 | -91.2  | 0.0 | -3018.2  |
|    | 205 | 0.0 | 6546.5  | 0.0 | 91.2   | 0.0 | -5421.1  |
| 6  | 204 | 0.0 | 358.6   | 0.0 | -178.0 | 0.0 | -1781.2  |
|    | 205 | 0.0 | 5396.0  | 0.0 | 178.0  | 0.0 | -4011.8  |
| 7  | 204 | 0.0 | 964.9   | 0.0 | -220.4 | 0.0 | -1126.8  |
|    | 205 | 0.0 | 4789.7  | 0.0 | 220.4  | 0.0 | -3271.7  |
| 8  | 204 | 0.0 | 684.4   | 0.0 | -199.3 | 0.0 | -1423.8  |
|    | 205 | 0.0 | 5070.2  | 0.0 | 199.3  | 0.0 | -3619.9  |
| 9  | 204 | 0.0 | 1229.2  | 0.0 | -232.6 | 0.0 | -836.9   |
|    | 205 | 0.0 | 4525.4  | 0.0 | 232.6  | 0.0 | -2953.9  |
| 10 | 204 | 0.0 | 3228.6  | 0.0 | -50.8  | 0.0 | 808.6    |
|    | 205 | 0.0 | 3878.4  | 0.0 | 50.8   | 0.0 | -1555.8  |
| 11 | 204 | 0.0 | 2544.3  | 0.0 | -32.2  | 0.0 | 608.8    |
|    | 205 | 0.0 | 3210.3  | 0.0 | 32.2   | 0.0 | -1374.7  |
| 12 | 204 | 0.0 | 2591.4  | 0.0 | -39.5  | 0.0 | 660.4    |
|    | 205 | 0.0 | 3163.2  | 0.0 | 39.5   | 0.0 | -1317.9  |
| 13 | 204 | 0.0 | 2753.0  | 0.0 | -17.9  | 0.0 | 838.4    |
|    | 205 | 0.0 | 3001.6  | 0.0 | 17.9   | 0.0 | -1124.2  |
| 14 | 204 | 0.0 | 2705.9  | 0.0 | -10.6  | 0.0 | 786.7    |
|    | 205 | 0.0 | 3048.7  | 0.0 | 10.6   | 0.0 | -1181.0  |
| 15 | 204 | 0.0 | 2387.0  | 0.0 | -7.8   | 0.0 | 436.6    |
|    | 205 | 0.0 | 3367.6  | 0.0 | 7.8    | 0.0 | -1564.1  |
| 16 | 204 | 0.0 | 2434.2  | 0.0 | -15.2  | 0.0 | 488.2    |
|    | 205 | 0.0 | 3320.4  | 0.0 | 15.2   | 0.0 | -1507.3  |
| 17 | 204 | 0.0 | 2910.3  | 0.0 | -42.2  | 0.0 | 1010.6   |
|    | 205 | 0.0 | 2844.3  | 0.0 | 42.2   | 0.0 | -934.8   |
| 18 | 204 | 0.0 | 2863.1  | 0.0 | -34.9  | 0.0 | 958.9    |
|    | 205 | 0.0 | 2891.5  | 0.0 | 34.9   | 0.0 | -991.6   |
|    |     |     |         |     |        |     |          |
| 1  | 208 | 0.0 | 13231.8 | 0.0 | 1.2    | 0.0 | 8406.8   |
|    | 209 | 0.0 | 15658.2 | 0.0 | -1.2   | 0.0 | -15685.9 |
| 2  | 208 | 0.0 | 6552.7  | 0.0 | 28.3   | 0.0 | 2277.2   |
|    | 209 | 0.0 | 9215.3  | 0.0 | -28.3  | 0.0 | -10265.4 |
| 3  | 208 | 0.0 | 6685.1  | 0.0 | 56.4   | 0.0 | 2736.8   |
|    | 209 | 0.0 | 9082.9  | 0.0 | -56.4  | 0.0 | -9930.5  |
| 4  | 208 | 0.0 | 6542.3  | 0.0 | 12.3   | 0.0 | 2239.4   |
|    | 209 | 0.0 | 9225.7  | 0.0 | -12.3  | 0.0 | -10290.0 |
| 5  | 208 | 0.0 | 6668.1  | 0.0 | 37.4   | 0.0 | 2677.9   |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 209 | 0.0 | 9099.9  | 0.0 | -37.4  | 0.0 | -9973.4  |
| 6  | 208 | 0.0 | 6972.1  | 0.0 | 111.7  | 0.0 | 3738.8   |
|    | 209 | 0.0 | 8795.9  | 0.0 | -111.7 | 0.0 | -9210.2  |
| 7  | 208 | 0.0 | 7104.5  | 0.0 | 139.8  | 0.0 | 4198.4   |
|    | 209 | 0.0 | 8663.5  | 0.0 | -139.8 | 0.0 | -8875.3  |
| 8  | 208 | 0.0 | 6983.7  | 0.0 | 106.0  | 0.0 | 3771.4   |
|    | 209 | 0.0 | 8784.3  | 0.0 | -106.0 | 0.0 | -9173.8  |
| 9  | 208 | 0.0 | 7109.5  | 0.0 | 131.0  | 0.0 | 4209.9   |
|    | 209 | 0.0 | 8658.5  | 0.0 | -131.0 | 0.0 | -8857.2  |
| 10 | 208 | 0.0 | 9642.2  | 0.0 | 1.0    | 0.0 | 6116.5   |
|    | 209 | 0.0 | 11417.8 | 0.0 | -1.0   | 0.0 | -11443.3 |
| 11 | 208 | 0.0 | 7211.4  | 0.0 | 15.0   | 0.0 | 4553.5   |
|    | 209 | 0.0 | 8556.6  | 0.0 | -15.0  | 0.0 | -8589.3  |
| 12 | 208 | 0.0 | 7216.8  | 0.0 | 17.8   | 0.0 | 4570.8   |
|    | 209 | 0.0 | 8551.2  | 0.0 | -17.8  | 0.0 | -8574.3  |
| 13 | 208 | 0.0 | 7194.4  | 0.0 | -12.0  | 0.0 | 4492.0   |
|    | 209 | 0.0 | 8573.6  | 0.0 | 12.0   | 0.0 | -8629.5  |
| 14 | 208 | 0.0 | 7189.0  | 0.0 | -14.8  | 0.0 | 4474.7   |
|    | 209 | 0.0 | 8579.0  | 0.0 | 14.8   | 0.0 | -8644.5  |
| 15 | 208 | 0.0 | 7193.4  | 0.0 | 5.8    | 0.0 | 4496.0   |
|    | 209 | 0.0 | 8574.6  | 0.0 | -5.8   | 0.0 | -8639.4  |
| 16 | 208 | 0.0 | 7198.8  | 0.0 | 8.5    | 0.0 | 4513.2   |
|    | 209 | 0.0 | 8569.2  | 0.0 | -8.5   | 0.0 | -8624.4  |
| 17 | 208 | 0.0 | 7212.4  | 0.0 | -2.8   | 0.0 | 4549.6   |
|    | 209 | 0.0 | 8555.6  | 0.0 | 2.8    | 0.0 | -8579.5  |
| 18 | 208 | 0.0 | 7207.0  | 0.0 | -5.6   | 0.0 | 4532.3   |
|    | 209 | 0.0 | 8561.0  | 0.0 | 5.6    | 0.0 | -8594.5  |
|    |     |     |         |     |        |     |          |
| 1  | 209 | 0.0 | 13201.4 | 0.0 | 16.1   | 0.0 | 13387.4  |
|    | 210 | 0.0 | 11355.1 | 0.0 | -16.1  | 0.0 | -8679.2  |
| 2  | 209 | 0.0 | 6385.9  | 0.0 | 48.6   | 0.0 | 5454.3   |
|    | 210 | 0.0 | 7016.9  | 0.0 | -48.6  | 0.0 | -7064.4  |
| 3  | 209 | 0.0 | 6614.8  | 0.0 | 75.6   | 0.0 | 5978.4   |
|    | 210 | 0.0 | 6788.0  | 0.0 | -75.6  | 0.0 | -6420.8  |
| 4  | 209 | 0.0 | 6368.6  | 0.0 | 37.3   | 0.0 | 5416.7   |
|    | 210 | 0.0 | 7034.2  | 0.0 | -37.3  | 0.0 | -7115.0  |
| 5  | 209 | 0.0 | 6543.4  | 0.0 | 60.9   | 0.0 | 5816.2   |
|    | 210 | 0.0 | 6859.4  | 0.0 | -60.9  | 0.0 | -6622.9  |
| 6  | 209 | 0.0 | 6968.7  | 0.0 | 127.1  | 0.0 | 6786.0   |
|    | 210 | 0.0 | 6434.1  | 0.0 | -127.1 | 0.0 | -5424.0  |
| 7  | 209 | 0.0 | 7197.6  | 0.0 | 154.2  | 0.0 | 7310.0   |
|    | 210 | 0.0 | 6205.2  | 0.0 | -154.2 | 0.0 | -4780.3  |
| 8  | 209 | 0.0 | 7131.6  | 0.0 | 127.5  | 0.0 | 7163.4   |
|    | 210 | 0.0 | 6271.2  | 0.0 | -127.5 | 0.0 | -4969.5  |
| 9  | 209 | 0.0 | 7306.4  | 0.0 | 151.0  | 0.0 | 7562.9   |
|    | 210 | 0.0 | 6096.4  | 0.0 | -151.0 | 0.0 | -4477.4  |
| 10 | 209 | 0.0 | 9630.7  | 0.0 | 12.5   | 0.0 | 9780.1   |
|    | 210 | 0.0 | 8270.3  | 0.0 | -12.5  | 0.0 | -6311.2  |
| 11 | 209 | 0.0 | 7259.3  | 0.0 | 22.2   | 0.0 | 7454.5   |
|    | 210 | 0.0 | 6143.5  | 0.0 | -22.2  | 0.0 | -4608.9  |
| 12 | 209 | 0.0 | 7304.0  | 0.0 | 25.5   | 0.0 | 7557.2   |
|    | 210 | 0.0 | 6098.8  | 0.0 | -25.5  | 0.0 | -4483.8  |
| 13 | 209 | 0.0 | 7231.1  | 0.0 | 3.6    | 0.0 | 7393.1   |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 210 | 0.0 | 6171.7  | 0.0 | -3.6   | 0.0 | -4691.5 |
| 14 | 209 | 0.0 | 7186.5  | 0.0 | 0.4    | 0.0 | 7290.3  |
|    | 210 | 0.0 | 6216.3  | 0.0 | -0.4   | 0.0 | -4816.6 |
| 15 | 209 | 0.0 | 7110.6  | 0.0 | 11.3   | 0.0 | 7112.1  |
|    | 210 | 0.0 | 6292.2  | 0.0 | -11.3  | 0.0 | -5026.1 |
| 16 | 209 | 0.0 | 7155.2  | 0.0 | 14.6   | 0.0 | 7214.8  |
|    | 210 | 0.0 | 6247.6  | 0.0 | -14.6  | 0.0 | -4900.9 |
| 17 | 209 | 0.0 | 7379.9  | 0.0 | 14.5   | 0.0 | 7735.5  |
|    | 210 | 0.0 | 6022.9  | 0.0 | -14.5  | 0.0 | -4274.3 |
| 18 | 209 | 0.0 | 7335.3  | 0.0 | 11.3   | 0.0 | 7632.8  |
|    | 210 | 0.0 | 6067.5  | 0.0 | -11.3  | 0.0 | -4399.5 |
|    |     |     |         |     |        |     |         |
| 1  | 210 | 0.0 | 12473.1 | 0.0 | -32.7  | 0.0 | 10796.0 |
|    | 211 | 0.0 | 11120.4 | 0.0 | 32.7   | 0.0 | -7482.0 |
| 2  | 210 | 0.0 | 5791.4  | 0.0 | -3.8   | 0.0 | 3349.7  |
|    | 211 | 0.0 | 7085.8  | 0.0 | 3.8    | 0.0 | -6521.1 |
| 3  | 210 | 0.0 | 5989.1  | 0.0 | -10.4  | 0.0 | 3847.3  |
|    | 211 | 0.0 | 6888.1  | 0.0 | 10.4   | 0.0 | -6049.9 |
| 4  | 210 | 0.0 | 5760.2  | 0.0 | -40.4  | 0.0 | 3271.0  |
|    | 211 | 0.0 | 7117.0  | 0.0 | 40.4   | 0.0 | -6595.5 |
| 5  | 210 | 0.0 | 5940.7  | 0.0 | -28.2  | 0.0 | 3725.5  |
|    | 211 | 0.0 | 6936.5  | 0.0 | 28.2   | 0.0 | -6165.1 |
| 6  | 210 | 0.0 | 6393.3  | 0.0 | 36.9   | 0.0 | 4864.5  |
|    | 211 | 0.0 | 6483.9  | 0.0 | -36.9  | 0.0 | -5086.7 |
| 7  | 210 | 0.0 | 6591.0  | 0.0 | 30.3   | 0.0 | 5362.2  |
|    | 211 | 0.0 | 6286.2  | 0.0 | -30.3  | 0.0 | -4615.5 |
| 8  | 210 | 0.0 | 6419.2  | 0.0 | -62.6  | 0.0 | 4929.7  |
|    | 211 | 0.0 | 6458.0  | 0.0 | 62.6   | 0.0 | -5024.8 |
| 9  | 210 | 0.0 | 6599.8  | 0.0 | -50.4  | 0.0 | 5384.2  |
|    | 211 | 0.0 | 6277.4  | 0.0 | 50.4   | 0.0 | -4594.5 |
| 10 | 210 | 0.0 | 9090.5  | 0.0 | -24.8  | 0.0 | 7867.9  |
|    | 211 | 0.0 | 8108.5  | 0.0 | 24.8   | 0.0 | -5462.1 |
| 11 | 210 | 0.0 | 6822.0  | 0.0 | 9.2    | 0.0 | 5945.2  |
|    | 211 | 0.0 | 6055.2  | 0.0 | -9.2   | 0.0 | -4066.7 |
| 12 | 210 | 0.0 | 6836.0  | 0.0 | -7.8   | 0.0 | 5980.5  |
|    | 211 | 0.0 | 6041.2  | 0.0 | 7.8    | 0.0 | -4033.2 |
| 13 | 210 | 0.0 | 6771.0  | 0.0 | -56.3  | 0.0 | 5817.0  |
|    | 211 | 0.0 | 6106.2  | 0.0 | 56.3   | 0.0 | -4188.3 |
| 14 | 210 | 0.0 | 6757.0  | 0.0 | -39.3  | 0.0 | 5781.7  |
|    | 211 | 0.0 | 6120.2  | 0.0 | 39.3   | 0.0 | -4221.7 |
| 15 | 210 | 0.0 | 6775.2  | 0.0 | 66.0   | 0.0 | 5827.6  |
|    | 211 | 0.0 | 6102.0  | 0.0 | -66.0  | 0.0 | -4178.3 |
| 16 | 210 | 0.0 | 6789.2  | 0.0 | 49.0   | 0.0 | 5862.9  |
|    | 211 | 0.0 | 6088.0  | 0.0 | -49.0  | 0.0 | -4144.9 |
| 17 | 210 | 0.0 | 6817.8  | 0.0 | -113.1 | 0.0 | 5934.6  |
|    | 211 | 0.0 | 6059.4  | 0.0 | 113.1  | 0.0 | -4076.6 |
| 18 | 210 | 0.0 | 6803.7  | 0.0 | -96.1  | 0.0 | 5899.3  |
|    | 211 | 0.0 | 6073.5  | 0.0 | 96.1   | 0.0 | -4110.1 |
|    |     |     |         |     |        |     |         |
| 1  | 211 | 0.0 | 6136.7  | 0.0 | -120.7 | 0.0 | 3649.4  |
|    | 212 | 0.0 | 4937.8  | 0.0 | 120.7  | 0.0 | -2270.7 |
| 2  | 211 | 0.0 | 512.6   | 0.0 | -191.1 | 0.0 | -298.4  |
|    | 212 | 0.0 | 5531.8  | 0.0 | 191.1  | 0.0 | -5474.0 |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
| 3  | 211 | 0.0 | 1107.7  | 0.0 | -313.0 | 0.0 | 316.8    |
|    | 212 | 0.0 | 4936.7  | 0.0 | 313.0  | 0.0 | -4587.4  |
| 4  | 211 | 0.0 | 443.9   | 0.0 | -141.0 | 0.0 | -349.3   |
|    | 212 | 0.0 | 5600.5  | 0.0 | 141.0  | 0.0 | -5581.1  |
| 5  | 211 | 0.0 | 1015.3  | 0.0 | -238.3 | 0.0 | 119.0    |
|    | 212 | 0.0 | 5029.1  | 0.0 | 238.3  | 0.0 | -4735.1  |
| 6  | 211 | 0.0 | 2417.5  | 0.0 | -515.6 | 0.0 | 1262.5   |
|    | 212 | 0.0 | 3626.9  | 0.0 | 515.6  | 0.0 | -2654.0  |
| 7  | 211 | 0.0 | 3012.6  | 0.0 | -637.5 | 0.0 | 1877.6   |
|    | 212 | 0.0 | 3031.8  | 0.0 | 637.5  | 0.0 | -1767.5  |
| 8  | 211 | 0.0 | 2427.5  | 0.0 | -547.3 | 0.0 | 1701.3   |
|    | 212 | 0.0 | 3616.9  | 0.0 | 547.3  | 0.0 | -2626.0  |
| 9  | 211 | 0.0 | 2999.0  | 0.0 | -644.7 | 0.0 | 2169.5   |
|    | 212 | 0.0 | 3045.4  | 0.0 | 644.7  | 0.0 | -1780.0  |
| 10 | 211 | 0.0 | 4478.0  | 0.0 | -92.1  | 0.0 | 2662.7   |
|    | 212 | 0.0 | 3595.0  | 0.0 | 92.1   | 0.0 | -1647.2  |
| 11 | 211 | 0.0 | 3429.7  | 0.0 | -129.3 | 0.0 | 2045.6   |
|    | 212 | 0.0 | 2614.7  | 0.0 | 129.3  | 0.0 | -1108.5  |
| 12 | 211 | 0.0 | 3448.7  | 0.0 | -149.1 | 0.0 | 2166.8   |
|    | 212 | 0.0 | 2595.7  | 0.0 | 149.1  | 0.0 | -1075.7  |
| 13 | 211 | 0.0 | 3319.6  | 0.0 | -48.1  | 0.0 | 1964.5   |
|    | 212 | 0.0 | 2724.8  | 0.0 | 48.1   | 0.0 | -1280.4  |
| 14 | 211 | 0.0 | 3300.5  | 0.0 | -28.2  | 0.0 | 1843.3   |
|    | 212 | 0.0 | 2743.9  | 0.0 | 28.2   | 0.0 | -1313.2  |
| 15 | 211 | 0.0 | 3366.1  | 0.0 | -63.2  | 0.0 | 1641.7   |
|    | 212 | 0.0 | 2678.3  | 0.0 | 63.2   | 0.0 | -1217.6  |
| 16 | 211 | 0.0 | 3385.1  | 0.0 | -83.0  | 0.0 | 1762.9   |
|    | 212 | 0.0 | 2659.2  | 0.0 | 83.0   | 0.0 | -1184.9  |
| 17 | 211 | 0.0 | 3383.2  | 0.0 | -114.1 | 0.0 | 2368.4   |
|    | 212 | 0.0 | 2661.2  | 0.0 | 114.1  | 0.0 | -1171.2  |
| 18 | 211 | 0.0 | 3364.1  | 0.0 | -94.3  | 0.0 | 2247.2   |
|    | 212 | 0.0 | 2680.3  | 0.0 | 94.3   | 0.0 | -1204.0  |
|    |     |     |         |     |        |     |          |
| 1  | 213 | 0.0 | 13062.0 | 0.0 | -34.0  | 0.0 | 7620.3   |
|    | 214 | 0.0 | 15828.0 | 0.0 | 34.0   | 0.0 | -15918.1 |
| 2  | 213 | 0.0 | 6529.5  | 0.0 | 6.5    | 0.0 | 2118.5   |
|    | 214 | 0.0 | 9238.5  | 0.0 | -6.5   | 0.0 | -10245.6 |
| 3  | 213 | 0.0 | 6652.7  | 0.0 | 43.4   | 0.0 | 2666.0   |
|    | 214 | 0.0 | 9115.3  | 0.0 | -43.4  | 0.0 | -9924.5  |
| 4  | 213 | 0.0 | 6504.6  | 0.0 | -11.5  | 0.0 | 2037.2   |
|    | 214 | 0.0 | 9263.4  | 0.0 | 11.5   | 0.0 | -10313.8 |
| 5  | 213 | 0.0 | 6624.9  | 0.0 | 16.4   | 0.0 | 2448.3   |
|    | 214 | 0.0 | 9143.1  | 0.0 | -16.4  | 0.0 | -10003.0 |
| 6  | 213 | 0.0 | 6930.5  | 0.0 | 99.5   | 0.0 | 3488.5   |
|    | 214 | 0.0 | 8837.5  | 0.0 | -99.5  | 0.0 | -9209.7  |
| 7  | 213 | 0.0 | 7053.7  | 0.0 | 136.5  | 0.0 | 4036.1   |
|    | 214 | 0.0 | 8714.3  | 0.0 | -136.5 | 0.0 | -8888.6  |
| 8  | 213 | 0.0 | 6915.2  | 0.0 | 111.7  | 0.0 | 3862.5   |
|    | 214 | 0.0 | 8852.8  | 0.0 | -111.7 | 0.0 | -9243.3  |
| 9  | 213 | 0.0 | 7035.5  | 0.0 | 139.6  | 0.0 | 4273.5   |
|    | 214 | 0.0 | 8732.5  | 0.0 | -139.6 | 0.0 | -8932.5  |
| 10 | 213 | 0.0 | 9518.8  | 0.0 | -25.9  | 0.0 | 5543.3   |
|    | 214 | 0.0 | 11541.2 | 0.0 | 25.9   | 0.0 | -11610.4 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 11 | 213 | 0.0 | 7132.5  | 0.0 | -10.0  | 0.0 | 4160.1  |
|    | 214 | 0.0 | 8635.5  | 0.0 | 10.0   | 0.0 | -8669.1 |
| 12 | 213 | 0.0 | 7135.2  | 0.0 | -2.6   | 0.0 | 4166.8  |
|    | 214 | 0.0 | 8632.8  | 0.0 | 2.6    | 0.0 | -8659.9 |
| 13 | 213 | 0.0 | 7092.1  | 0.0 | -39.4  | 0.0 | 4028.3  |
|    | 214 | 0.0 | 8675.9  | 0.0 | 39.4   | 0.0 | -8779.7 |
| 14 | 213 | 0.0 | 7089.4  | 0.0 | -46.8  | 0.0 | 4021.7  |
|    | 214 | 0.0 | 8678.6  | 0.0 | 46.8   | 0.0 | -8789.0 |
| 15 | 213 | 0.0 | 7123.6  | 0.0 | -34.6  | 0.0 | 4138.1  |
|    | 214 | 0.0 | 8644.4  | 0.0 | 34.6   | 0.0 | -8699.9 |
| 16 | 213 | 0.0 | 7126.3  | 0.0 | -27.2  | 0.0 | 4144.7  |
|    | 214 | 0.0 | 8641.7  | 0.0 | 27.2   | 0.0 | -8690.6 |
| 17 | 213 | 0.0 | 7101.0  | 0.0 | -14.8  | 0.0 | 4050.4  |
|    | 214 | 0.0 | 8667.0  | 0.0 | 14.8   | 0.0 | -8748.9 |
| 18 | 213 | 0.0 | 7098.3  | 0.0 | -22.2  | 0.0 | 4043.8  |
|    | 214 | 0.0 | 8669.7  | 0.0 | 22.2   | 0.0 | -8758.2 |
|    |     |     |         |     |        |     |         |
| 1  | 214 | 0.0 | 13033.9 | 0.0 | -17.7  | 0.0 | 13202.0 |
|    | 215 | 0.0 | 11522.6 | 0.0 | 17.7   | 0.0 | -9348.2 |
| 2  | 214 | 0.0 | 6297.2  | 0.0 | 24.9   | 0.0 | 5350.7  |
|    | 215 | 0.0 | 7105.6  | 0.0 | -24.9  | 0.0 | -7413.7 |
| 3  | 214 | 0.0 | 6525.7  | 0.0 | 53.1   | 0.0 | 5884.5  |
|    | 215 | 0.0 | 6877.1  | 0.0 | -53.1  | 0.0 | -6780.6 |
| 4  | 214 | 0.0 | 6263.5  | 0.0 | 14.0   | 0.0 | 5281.8  |
|    | 215 | 0.0 | 7139.3  | 0.0 | -14.0  | 0.0 | -7516.6 |
| 5  | 214 | 0.0 | 6437.6  | 0.0 | 38.8   | 0.0 | 5687.5  |
|    | 215 | 0.0 | 6965.2  | 0.0 | -38.8  | 0.0 | -7035.6 |
| 6  | 214 | 0.0 | 6877.5  | 0.0 | 107.4  | 0.0 | 6703.1  |
|    | 215 | 0.0 | 6525.3  | 0.0 | -107.4 | 0.0 | -5810.3 |
| 7  | 214 | 0.0 | 7106.0  | 0.0 | 135.6  | 0.0 | 7236.9  |
|    | 215 | 0.0 | 6296.8  | 0.0 | -135.6 | 0.0 | -5177.2 |
| 8  | 214 | 0.0 | 7025.2  | 0.0 | 108.1  | 0.0 | 7061.1  |
|    | 215 | 0.0 | 6377.6  | 0.0 | -108.1 | 0.0 | -5406.2 |
| 9  | 214 | 0.0 | 7199.3  | 0.0 | 132.8  | 0.0 | 7466.9  |
|    | 215 | 0.0 | 6203.5  | 0.0 | -132.8 | 0.0 | -4925.2 |
| 10 | 214 | 0.0 | 9503.3  | 0.0 | -13.3  | 0.0 | 9637.5  |
|    | 215 | 0.0 | 8397.7  | 0.0 | 13.3   | 0.0 | -6818.4 |
| 11 | 214 | 0.0 | 7152.0  | 0.0 | -2.9   | 0.0 | 7337.3  |
|    | 215 | 0.0 | 6250.8  | 0.0 | 2.9    | 0.0 | -5039.0 |
| 12 | 214 | 0.0 | 7198.8  | 0.0 | 0.3    | 0.0 | 7446.9  |
|    | 215 | 0.0 | 6204.0  | 0.0 | -0.3   | 0.0 | -4907.6 |
| 13 | 214 | 0.0 | 7097.2  | 0.0 | -20.7  | 0.0 | 7225.3  |
|    | 215 | 0.0 | 6305.6  | 0.0 | 20.7   | 0.0 | -5207.3 |
| 14 | 214 | 0.0 | 7050.3  | 0.0 | -23.9  | 0.0 | 7115.7  |
|    | 215 | 0.0 | 6352.5  | 0.0 | 23.9   | 0.0 | -5338.7 |
| 15 | 214 | 0.0 | 6995.9  | 0.0 | -13.6  | 0.0 | 6971.9  |
|    | 215 | 0.0 | 6406.9  | 0.0 | 13.6   | 0.0 | -5477.2 |
| 16 | 214 | 0.0 | 7042.7  | 0.0 | -10.4  | 0.0 | 7081.5  |
|    | 215 | 0.0 | 6360.1  | 0.0 | 10.4   | 0.0 | -5345.8 |
| 17 | 214 | 0.0 | 7253.2  | 0.0 | -10.1  | 0.0 | 7590.7  |
|    | 215 | 0.0 | 6149.6  | 0.0 | 10.1   | 0.0 | -4769.1 |
| 18 | 214 | 0.0 | 7206.4  | 0.0 | -13.3  | 0.0 | 7481.1  |
|    | 215 | 0.0 | 6196.4  | 0.0 | 13.3   | 0.0 | -4900.5 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    |     |     |         |     |        |     |         |
| 1  | 215 | 0.0 | 14351.5 | 0.0 | 6.2    | 0.0 | 11878.6 |
|    | 216 | 0.0 | 13223.2 | 0.0 | -6.2   | 0.0 | -9114.1 |
| 2  | 215 | 0.0 | 7300.7  | 0.0 | 25.2   | 0.0 | 4372.2  |
|    | 216 | 0.0 | 8639.0  | 0.0 | -25.2  | 0.0 | -7651.5 |
| 3  | 215 | 0.0 | 7509.8  | 0.0 | 19.5   | 0.0 | 4893.9  |
|    | 216 | 0.0 | 8429.8  | 0.0 | -19.5  | 0.0 | -7148.4 |
| 4  | 215 | 0.0 | 7243.1  | 0.0 | -12.3  | 0.0 | 4224.6  |
|    | 216 | 0.0 | 8696.6  | 0.0 | 12.3   | 0.0 | -7786.0 |
| 5  | 215 | 0.0 | 7437.9  | 0.0 | -39.0  | 0.0 | 4707.9  |
|    | 216 | 0.0 | 8501.8  | 0.0 | 39.0   | 0.0 | -7315.0 |
| 6  | 215 | 0.0 | 7950.0  | 0.0 | -63.8  | 0.0 | 5983.1  |
|    | 216 | 0.0 | 7989.7  | 0.0 | 63.8   | 0.0 | -6081.2 |
| 7  | 215 | 0.0 | 8159.1  | 0.0 | -69.6  | 0.0 | 6504.8  |
|    | 216 | 0.0 | 7780.6  | 0.0 | 69.6   | 0.0 | -5578.1 |
| 8  | 215 | 0.0 | 7940.3  | 0.0 | -31.4  | 0.0 | 5963.4  |
|    | 216 | 0.0 | 7999.4  | 0.0 | 31.4   | 0.0 | -6109.2 |
| 9  | 215 | 0.0 | 8135.1  | 0.0 | -58.1  | 0.0 | 6446.7  |
|    | 216 | 0.0 | 7804.6  | 0.0 | 58.1   | 0.0 | -5638.1 |
| 10 | 215 | 0.0 | 10539.3 | 0.0 | 4.6    | 0.0 | 8711.8  |
|    | 216 | 0.0 | 9722.2  | 0.0 | -4.6   | 0.0 | -6709.7 |
| 11 | 215 | 0.0 | 8310.4  | 0.0 | 37.6   | 0.0 | 6897.1  |
|    | 216 | 0.0 | 7629.3  | 0.0 | -37.6  | 0.0 | -5228.4 |
| 12 | 215 | 0.0 | 8323.1  | 0.0 | 55.8   | 0.0 | 6930.8  |
|    | 216 | 0.0 | 7616.6  | 0.0 | -55.8  | 0.0 | -5200.0 |
| 13 | 215 | 0.0 | 8215.4  | 0.0 | -29.4  | 0.0 | 6653.6  |
|    | 216 | 0.0 | 7724.3  | 0.0 | 29.4   | 0.0 | -5450.2 |
| 14 | 215 | 0.0 | 8202.7  | 0.0 | -47.5  | 0.0 | 6619.8  |
|    | 216 | 0.0 | 7737.0  | 0.0 | 47.5   | 0.0 | -5478.6 |
| 15 | 215 | 0.0 | 8268.1  | 0.0 | -23.0  | 0.0 | 6784.6  |
|    | 216 | 0.0 | 7671.6  | 0.0 | 23.0   | 0.0 | -5323.0 |
| 16 | 215 | 0.0 | 8280.8  | 0.0 | -4.8   | 0.0 | 6818.3  |
|    | 216 | 0.0 | 7658.9  | 0.0 | 4.8    | 0.0 | -5294.6 |
| 17 | 215 | 0.0 | 8257.7  | 0.0 | 31.2   | 0.0 | 6766.0  |
|    | 216 | 0.0 | 7682.0  | 0.0 | -31.2  | 0.0 | -5355.6 |
| 18 | 215 | 0.0 | 8245.1  | 0.0 | 13.0   | 0.0 | 6732.3  |
|    | 216 | 0.0 | 7694.6  | 0.0 | -13.0  | 0.0 | -5384.0 |
|    |     |     |         |     |        |     |         |
| 1  | 216 | 0.0 | 7732.1  | 0.0 | 33.3   | 0.0 | 5001.2  |
|    | 217 | 0.0 | 5211.1  | 0.0 | -33.3  | 0.0 | -2102.0 |
| 2  | 216 | 0.0 | 1659.3  | 0.0 | -73.9  | 0.0 | 624.8   |
|    | 217 | 0.0 | 5822.6  | 0.0 | 73.9   | 0.0 | -5412.9 |
| 3  | 216 | 0.0 | 2270.1  | 0.0 | -195.6 | 0.0 | 1115.7  |
|    | 217 | 0.0 | 5211.8  | 0.0 | 195.6  | 0.0 | -4498.9 |
| 4  | 216 | 0.0 | 1480.5  | 0.0 | -14.9  | 0.0 | 476.6   |
|    | 217 | 0.0 | 6001.4  | 0.0 | 14.9   | 0.0 | -5675.9 |
| 5  | 216 | 0.0 | 2040.7  | 0.0 | -107.6 | 0.0 | 924.2   |
|    | 217 | 0.0 | 5441.2  | 0.0 | 107.6  | 0.0 | -4834.9 |
| 6  | 216 | 0.0 | 3526.7  | 0.0 | -382.7 | 0.0 | 2117.0  |
|    | 217 | 0.0 | 3955.2  | 0.0 | 382.7  | 0.0 | -2609.9 |
| 7  | 216 | 0.0 | 4137.5  | 0.0 | -504.4 | 0.0 | 2607.9  |
|    | 217 | 0.0 | 3344.4  | 0.0 | 504.4  | 0.0 | -1695.9 |
| 8  | 216 | 0.0 | 3516.6  | 0.0 | -420.4 | 0.0 | 2112.8  |

|    |     |     |         |     |        |     |          |
|----|-----|-----|---------|-----|--------|-----|----------|
|    | 217 | 0.0 | 3965.3  | 0.0 | 420.4  | 0.0 | -2629.2  |
| 9  | 216 | 0.0 | 4076.8  | 0.0 | -513.1 | 0.0 | 2560.5   |
|    | 217 | 0.0 | 3405.1  | 0.0 | 513.1  | 0.0 | -1788.3  |
| 10 | 216 | 0.0 | 5681.4  | 0.0 | 26.2   | 0.0 | 3673.6   |
|    | 217 | 0.0 | 3829.1  | 0.0 | -26.2  | 0.0 | -1543.5  |
| 11 | 216 | 0.0 | 4616.6  | 0.0 | -18.7  | 0.0 | 3006.9   |
|    | 217 | 0.0 | 2865.3  | 0.0 | 18.7   | 0.0 | -992.8   |
| 12 | 216 | 0.0 | 4661.3  | 0.0 | -42.1  | 0.0 | 3045.1   |
|    | 217 | 0.0 | 2820.6  | 0.0 | 42.1   | 0.0 | -928.3   |
| 13 | 216 | 0.0 | 4321.7  | 0.0 | 76.5   | 0.0 | 2762.1   |
|    | 217 | 0.0 | 3160.2  | 0.0 | -76.5  | 0.0 | -1426.5  |
| 14 | 216 | 0.0 | 4277.0  | 0.0 | 99.9   | 0.0 | 2724.0   |
|    | 217 | 0.0 | 3204.9  | 0.0 | -99.9  | 0.0 | -1491.0  |
| 15 | 216 | 0.0 | 4467.7  | 0.0 | 59.3   | 0.0 | 2879.7   |
|    | 217 | 0.0 | 3014.2  | 0.0 | -59.3  | 0.0 | -1208.0  |
| 16 | 216 | 0.0 | 4512.4  | 0.0 | 35.9   | 0.0 | 2917.8   |
|    | 217 | 0.0 | 2969.5  | 0.0 | -35.9  | 0.0 | -1143.5  |
| 17 | 216 | 0.0 | 4470.6  | 0.0 | -1.5   | 0.0 | 2889.3   |
|    | 217 | 0.0 | 3011.3  | 0.0 | 1.5    | 0.0 | -1211.3  |
| 18 | 216 | 0.0 | 4425.9  | 0.0 | 21.9   | 0.0 | 2851.2   |
|    | 217 | 0.0 | 3056.0  | 0.0 | -21.9  | 0.0 | -1275.8  |
| 1  | 218 | 0.0 | 10556.1 | 0.0 | 1.1    | 0.0 | 5900.6   |
|    | 219 | 0.0 | 13188.9 | 0.0 | -1.1   | 0.0 | -13799.2 |
| 2  | 218 | 0.0 | 5441.8  | 0.0 | 33.3   | 0.0 | 1322.8   |
|    | 219 | 0.0 | 8520.2  | 0.0 | -33.3  | 0.0 | -10557.9 |
| 3  | 218 | 0.0 | 5576.4  | 0.0 | 14.2   | 0.0 | 2056.7   |
|    | 219 | 0.0 | 8385.6  | 0.0 | -14.2  | 0.0 | -10130.9 |
| 4  | 218 | 0.0 | 5378.1  | 0.0 | 14.8   | 0.0 | 1147.8   |
|    | 219 | 0.0 | 8583.9  | 0.0 | -14.8  | 0.0 | -10765.1 |
| 5  | 218 | 0.0 | 5617.8  | 0.0 | 29.5   | 0.0 | 1819.9   |
|    | 219 | 0.0 | 8344.2  | 0.0 | -29.5  | 0.0 | -9999.0  |
| 6  | 218 | 0.0 | 6240.7  | 0.0 | 82.2   | 0.0 | 3562.9   |
|    | 219 | 0.0 | 7721.3  | 0.0 | -82.2  | 0.0 | -8004.4  |
| 7  | 218 | 0.0 | 6375.3  | 0.0 | 63.1   | 0.0 | 4296.8   |
|    | 219 | 0.0 | 7586.7  | 0.0 | -63.1  | 0.0 | -7577.4  |
| 8  | 218 | 0.0 | 5826.6  | 0.0 | -48.8  | 0.0 | 3594.1   |
|    | 219 | 0.0 | 8135.4  | 0.0 | 48.8   | 0.0 | -9341.6  |
| 9  | 218 | 0.0 | 6066.3  | 0.0 | -34.1  | 0.0 | 4266.1   |
|    | 219 | 0.0 | 7895.7  | 0.0 | 34.1   | 0.0 | -8575.5  |
| 10 | 218 | 0.0 | 7775.8  | 0.0 | 1.3    | 0.0 | 4349.3   |
|    | 219 | 0.0 | 9714.2  | 0.0 | -1.3   | 0.0 | -10164.2 |
| 11 | 218 | 0.0 | 6260.8  | 0.0 | 19.0   | 0.0 | 3626.9   |
|    | 219 | 0.0 | 7701.2  | 0.0 | -19.0  | 0.0 | -7948.2  |
| 12 | 218 | 0.0 | 6286.3  | 0.0 | -10.5  | 0.0 | 3696.5   |
|    | 219 | 0.0 | 7675.7  | 0.0 | 10.5   | 0.0 | -7864.4  |
| 13 | 218 | 0.0 | 6158.6  | 0.0 | -13.0  | 0.0 | 3346.1   |
|    | 219 | 0.0 | 7803.4  | 0.0 | 13.0   | 0.0 | -8280.5  |
| 14 | 218 | 0.0 | 6133.0  | 0.0 | 16.6   | 0.0 | 3276.5   |
|    | 219 | 0.0 | 7829.0  | 0.0 | -16.6  | 0.0 | -8364.3  |
| 15 | 218 | 0.0 | 6175.6  | 0.0 | 117.7  | 0.0 | 3395.1   |
|    | 219 | 0.0 | 7786.4  | 0.0 | -117.7 | 0.0 | -8227.6  |
| 16 | 218 | 0.0 | 6201.1  | 0.0 | 88.1   | 0.0 | 3464.7   |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 219 | 0.0 | 7760.9  | 0.0 | -88.1  | 0.0 | -8143.8 |
| 17 | 218 | 0.0 | 6243.8  | 0.0 | -111.6 | 0.0 | 3577.9  |
|    | 219 | 0.0 | 7718.2  | 0.0 | 111.6  | 0.0 | -8001.2 |
| 18 | 218 | 0.0 | 6218.2  | 0.0 | -82.0  | 0.0 | 3508.4  |
|    | 219 | 0.0 | 7743.8  | 0.0 | 82.0   | 0.0 | -8085.0 |
|    |     |     |         |     |        |     |         |
| 1  | 219 | 0.0 | 10374.6 | 0.0 | -44.0  | 0.0 | 9679.7  |
|    | 220 | 0.0 | 9808.6  | 0.0 | 44.0   | 0.0 | -8236.5 |
| 2  | 219 | 0.0 | 4808.1  | 0.0 | -3.3   | 0.0 | 2361.4  |
|    | 220 | 0.0 | 7059.6  | 0.0 | 3.3    | 0.0 | -8102.9 |
| 3  | 219 | 0.0 | 5240.6  | 0.0 | 13.0   | 0.0 | 3479.3  |
|    | 220 | 0.0 | 6627.1  | 0.0 | -13.0  | 0.0 | -7014.7 |
| 4  | 219 | 0.0 | 4723.2  | 0.0 | -19.6  | 0.0 | 2146.4  |
|    | 220 | 0.0 | 7144.5  | 0.0 | 19.6   | 0.0 | -8320.9 |
| 5  | 219 | 0.0 | 5123.9  | 0.0 | -5.0   | 0.0 | 3183.1  |
|    | 220 | 0.0 | 6743.8  | 0.0 | 5.0    | 0.0 | -7314.0 |
| 6  | 219 | 0.0 | 6143.7  | 0.0 | 45.2   | 0.0 | 5817.3  |
|    | 220 | 0.0 | 5724.0  | 0.0 | -45.2  | 0.0 | -4746.6 |
| 7  | 219 | 0.0 | 6576.3  | 0.0 | 61.4   | 0.0 | 6935.1  |
|    | 220 | 0.0 | 5291.4  | 0.0 | -61.4  | 0.0 | -3658.5 |
| 8  | 219 | 0.0 | 6165.0  | 0.0 | 34.5   | 0.0 | 5872.5  |
|    | 220 | 0.0 | 5702.8  | 0.0 | -34.5  | 0.0 | -4693.7 |
| 9  | 219 | 0.0 | 6565.7  | 0.0 | 49.0   | 0.0 | 6909.3  |
|    | 220 | 0.0 | 5302.1  | 0.0 | -49.0  | 0.0 | -3686.8 |
| 10 | 219 | 0.0 | 7640.9  | 0.0 | -33.7  | 0.0 | 7129.1  |
|    | 220 | 0.0 | 7225.6  | 0.0 | 33.7   | 0.0 | -6070.1 |
| 11 | 219 | 0.0 | 6164.1  | 0.0 | -19.2  | 0.0 | 5860.5  |
|    | 220 | 0.0 | 5703.6  | 0.0 | 19.2   | 0.0 | -4686.4 |
| 12 | 219 | 0.0 | 6190.2  | 0.0 | -17.4  | 0.0 | 5927.0  |
|    | 220 | 0.0 | 5677.5  | 0.0 | 17.4   | 0.0 | -4619.8 |
| 13 | 219 | 0.0 | 6027.6  | 0.0 | -47.1  | 0.0 | 5515.0  |
|    | 220 | 0.0 | 5840.1  | 0.0 | 47.1   | 0.0 | -5036.7 |
| 14 | 219 | 0.0 | 6001.5  | 0.0 | -48.9  | 0.0 | 5448.5  |
|    | 220 | 0.0 | 5866.2  | 0.0 | 48.9   | 0.0 | -5103.4 |
| 15 | 219 | 0.0 | 6077.0  | 0.0 | -25.3  | 0.0 | 5638.8  |
|    | 220 | 0.0 | 5790.7  | 0.0 | 25.3   | 0.0 | -4908.7 |
| 16 | 219 | 0.0 | 6103.1  | 0.0 | -23.5  | 0.0 | 5705.3  |
|    | 220 | 0.0 | 5764.6  | 0.0 | 23.5   | 0.0 | -4842.0 |
| 17 | 219 | 0.0 | 6114.7  | 0.0 | -41.0  | 0.0 | 5736.6  |
|    | 220 | 0.0 | 5753.0  | 0.0 | 41.0   | 0.0 | -4814.5 |
| 18 | 219 | 0.0 | 6088.5  | 0.0 | -42.8  | 0.0 | 5670.1  |
|    | 220 | 0.0 | 5779.2  | 0.0 | 42.8   | 0.0 | -4881.1 |
|    |     |     |         |     |        |     |         |
| 1  | 220 | 0.0 | 9912.7  | 0.0 | -25.3  | 0.0 | 8091.8  |
|    | 221 | 0.0 | 9479.1  | 0.0 | 25.3   | 0.0 | -7029.6 |
| 2  | 220 | 0.0 | 4541.7  | 0.0 | 8.9    | 0.0 | 1627.3  |
|    | 221 | 0.0 | 6860.6  | 0.0 | -8.9   | 0.0 | -7308.6 |
| 3  | 220 | 0.0 | 4971.9  | 0.0 | 21.7   | 0.0 | 2681.3  |
|    | 221 | 0.0 | 6430.4  | 0.0 | -21.7  | 0.0 | -6254.6 |
| 4  | 220 | 0.0 | 4459.1  | 0.0 | -3.7   | 0.0 | 1427.0  |
|    | 221 | 0.0 | 6943.2  | 0.0 | 3.7    | 0.0 | -7513.4 |
| 5  | 220 | 0.0 | 4858.8  | 0.0 | 7.5    | 0.0 | 2408.0  |
|    | 221 | 0.0 | 6543.5  | 0.0 | -7.5   | 0.0 | -6535.7 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 6  | 220 | 0.0 | 5874.2 | 0.0 | 46.0   | 0.0 | 4897.3  |
|    | 221 | 0.0 | 5528.1 | 0.0 | -46.0  | 0.0 | -4049.5 |
| 7  | 220 | 0.0 | 6304.3 | 0.0 | 58.8   | 0.0 | 5951.3  |
|    | 221 | 0.0 | 5098.0 | 0.0 | -58.8  | 0.0 | -2995.4 |
| 8  | 220 | 0.0 | 5893.0 | 0.0 | 38.7   | 0.0 | 4940.1  |
|    | 221 | 0.0 | 5509.3 | 0.0 | -38.7  | 0.0 | -4000.0 |
| 9  | 220 | 0.0 | 6292.7 | 0.0 | 49.9   | 0.0 | 5921.1  |
|    | 221 | 0.0 | 5109.6 | 0.0 | -49.9  | 0.0 | -3022.2 |
| 10 | 220 | 0.0 | 7298.2 | 0.0 | -19.4  | 0.0 | 5953.8  |
|    | 221 | 0.0 | 6985.3 | 0.0 | 19.4   | 0.0 | -5187.0 |
| 11 | 220 | 0.0 | 5877.3 | 0.0 | -8.1   | 0.0 | 4883.1  |
|    | 221 | 0.0 | 5525.0 | 0.0 | 8.1    | 0.0 | -4019.9 |
| 12 | 220 | 0.0 | 5902.3 | 0.0 | -6.4   | 0.0 | 4943.0  |
|    | 221 | 0.0 | 5500.0 | 0.0 | 6.4    | 0.0 | -3957.3 |
| 13 | 220 | 0.0 | 5744.5 | 0.0 | -29.8  | 0.0 | 4561.5  |
|    | 221 | 0.0 | 5657.8 | 0.0 | 29.8   | 0.0 | -4349.0 |
| 14 | 220 | 0.0 | 5719.5 | 0.0 | -31.5  | 0.0 | 4501.7  |
|    | 221 | 0.0 | 5682.8 | 0.0 | 31.5   | 0.0 | -4411.7 |
| 15 | 220 | 0.0 | 5794.0 | 0.0 | -13.9  | 0.0 | 4683.6  |
|    | 221 | 0.0 | 5608.3 | 0.0 | 13.9   | 0.0 | -4228.7 |
| 16 | 220 | 0.0 | 5819.0 | 0.0 | -12.2  | 0.0 | 4743.5  |
|    | 221 | 0.0 | 5583.3 | 0.0 | 12.2   | 0.0 | -4166.0 |
| 17 | 220 | 0.0 | 5827.8 | 0.0 | -24.1  | 0.0 | 4761.0  |
|    | 221 | 0.0 | 5574.5 | 0.0 | 24.1   | 0.0 | -4140.3 |
| 18 | 220 | 0.0 | 5802.8 | 0.0 | -25.8  | 0.0 | 4701.2  |
|    | 221 | 0.0 | 5599.5 | 0.0 | 25.8   | 0.0 | -4202.9 |
|    |     |     |        |     |        |     |         |
| 1  | 221 | 0.0 | 5371.4 | 0.0 | -21.6  | 0.0 | 3195.9  |
|    | 222 | 0.0 | 3730.9 | 0.0 | 21.6   | 0.0 | -1309.3 |
| 2  | 221 | 0.0 | -211.0 | 0.0 | 33.7   | 0.0 | -1559.3 |
|    | 222 | 0.0 | 5563.1 | 0.0 | -33.7  | 0.0 | -5080.9 |
| 3  | 221 | 0.0 | 969.4  | 0.0 | -25.8  | 0.0 | -347.1  |
|    | 222 | 0.0 | 4382.7 | 0.0 | 25.8   | 0.0 | -3578.2 |
| 4  | 221 | 0.0 | -420.8 | 0.0 | 4.7    | 0.0 | -1772.1 |
|    | 222 | 0.0 | 5772.9 | 0.0 | -4.7   | 0.0 | -5350.7 |
| 5  | 221 | 0.0 | 689.0  | 0.0 | -65.6  | 0.0 | -630.3  |
|    | 222 | 0.0 | 4663.1 | 0.0 | 65.6   | 0.0 | -3940.0 |
| 6  | 221 | 0.0 | 3488.3 | 0.0 | -200.7 | 0.0 | 2246.9  |
|    | 222 | 0.0 | 1863.8 | 0.0 | 200.7  | 0.0 | -378.7  |
| 7  | 221 | 0.0 | 4668.7 | 0.0 | -260.2 | 0.0 | 3459.2  |
|    | 222 | 0.0 | 683.4  | 0.0 | 260.2  | 0.0 | 1124.0  |
| 8  | 221 | 0.0 | 3513.8 | 0.0 | -193.5 | 0.0 | 2268.7  |
|    | 222 | 0.0 | 1838.3 | 0.0 | 193.5  | 0.0 | -341.8  |
| 9  | 221 | 0.0 | 4623.5 | 0.0 | -263.8 | 0.0 | 3410.5  |
|    | 222 | 0.0 | 728.6  | 0.0 | 263.8  | 0.0 | 1068.9  |
| 10 | 221 | 0.0 | 3955.5 | 0.0 | -16.9  | 0.0 | 2352.3  |
|    | 222 | 0.0 | 2749.0 | 0.0 | 16.9   | 0.0 | -964.8  |
| 11 | 221 | 0.0 | 3321.2 | 0.0 | 5.5    | 0.0 | 2039.8  |
|    | 222 | 0.0 | 2030.9 | 0.0 | -5.5   | 0.0 | -555.9  |
| 12 | 221 | 0.0 | 3379.0 | 0.0 | 14.4   | 0.0 | 2097.3  |
|    | 222 | 0.0 | 1973.1 | 0.0 | -14.4  | 0.0 | -480.6  |
| 13 | 221 | 0.0 | 2985.2 | 0.0 | -41.6  | 0.0 | 1699.2  |
|    | 222 | 0.0 | 2366.9 | 0.0 | 41.6   | 0.0 | -988.2  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 14 | 221 | 0.0 | 2927.4 | 0.0 | -50.5  | 0.0 | 1641.6  |
|    | 222 | 0.0 | 2424.7 | 0.0 | 50.5   | 0.0 | -1063.5 |
| 15 | 221 | 0.0 | 3128.7 | 0.0 | -24.0  | 0.0 | 1847.8  |
|    | 222 | 0.0 | 2223.4 | 0.0 | 24.0   | 0.0 | -806.9  |
| 16 | 221 | 0.0 | 3186.4 | 0.0 | -15.2  | 0.0 | 1905.4  |
|    | 222 | 0.0 | 2165.7 | 0.0 | 15.2   | 0.0 | -731.6  |
| 17 | 221 | 0.0 | 3177.7 | 0.0 | -12.1  | 0.0 | 1891.1  |
|    | 222 | 0.0 | 2174.4 | 0.0 | 12.1   | 0.0 | -737.2  |
| 18 | 221 | 0.0 | 3120.0 | 0.0 | -20.9  | 0.0 | 1833.6  |
|    | 222 | 0.0 | 2232.1 | 0.0 | 20.9   | 0.0 | -812.5  |
|    |     |     |        |     |        |     |         |
| 1  | 201 | 0.0 | 2062.4 | 0.0 | -99.0  | 0.0 | 1065.9  |
|    | 208 | 0.0 | 2442.1 | 0.0 | 99.0   | 0.0 | -1863.3 |
| 2  | 201 | 0.0 | 2229.2 | 0.0 | -91.0  | 0.0 | 2155.0  |
|    | 208 | 0.0 | 1235.8 | 0.0 | 91.0   | 0.0 | -68.8   |
| 3  | 201 | 0.0 | 1865.7 | 0.0 | -63.6  | 0.0 | 1395.1  |
|    | 208 | 0.0 | 1599.3 | 0.0 | 63.6   | 0.0 | -835.5  |
| 4  | 201 | 0.0 | 1812.8 | 0.0 | -92.9  | 0.0 | 1289.1  |
|    | 208 | 0.0 | 1652.2 | 0.0 | 92.9   | 0.0 | -951.5  |
| 5  | 201 | 0.0 | 1346.7 | 0.0 | -66.2  | 0.0 | 316.7   |
|    | 208 | 0.0 | 2118.3 | 0.0 | 66.2   | 0.0 | -1936.8 |
| 6  | 201 | 0.0 | 675.4  | 0.0 | -2.0   | 0.0 | -1086.4 |
|    | 208 | 0.0 | 2789.6 | 0.0 | 2.0    | 0.0 | -3353.3 |
| 7  | 201 | 0.0 | 312.0  | 0.0 | 25.4   | 0.0 | -1846.3 |
|    | 208 | 0.0 | 3153.0 | 0.0 | -25.4  | 0.0 | -4119.9 |
| 8  | 201 | 0.0 | 601.3  | 0.0 | -1.6   | 0.0 | -1243.9 |
|    | 208 | 0.0 | 2863.7 | 0.0 | 1.6    | 0.0 | -3507.0 |
| 9  | 201 | 0.0 | 135.2  | 0.0 | 25.1   | 0.0 | -2216.3 |
|    | 208 | 0.0 | 3329.8 | 0.0 | -25.1  | 0.0 | -4492.3 |
| 10 | 201 | 0.0 | 1585.0 | 0.0 | -66.2  | 0.0 | 816.4   |
|    | 208 | 0.0 | 1880.0 | 0.0 | 66.2   | 0.0 | -1435.9 |
| 11 | 201 | 0.0 | 1930.9 | 0.0 | -19.4  | 0.0 | 1533.6  |
|    | 208 | 0.0 | 1534.1 | 0.0 | 19.4   | 0.0 | -700.7  |
| 12 | 201 | 0.0 | 2026.9 | 0.0 | -18.9  | 0.0 | 1732.5  |
|    | 208 | 0.0 | 1438.1 | 0.0 | 18.9   | 0.0 | -496.4  |
| 13 | 201 | 0.0 | 1226.0 | 0.0 | -22.4  | 0.0 | 67.7    |
|    | 208 | 0.0 | 2239.0 | 0.0 | 22.4   | 0.0 | -2194.8 |
| 14 | 201 | 0.0 | 1130.0 | 0.0 | -23.0  | 0.0 | -131.2  |
|    | 208 | 0.0 | 2335.0 | 0.0 | 23.0   | 0.0 | -2399.0 |
| 15 | 201 | 0.0 | 1610.9 | 0.0 | -21.3  | 0.0 | 870.8   |
|    | 208 | 0.0 | 1854.1 | 0.0 | 21.3   | 0.0 | -1381.5 |
| 16 | 201 | 0.0 | 1706.9 | 0.0 | -20.8  | 0.0 | 1069.7  |
|    | 208 | 0.0 | 1758.1 | 0.0 | 20.8   | 0.0 | -1177.3 |
| 17 | 201 | 0.0 | 1546.0 | 0.0 | -20.5  | 0.0 | 730.5   |
|    | 208 | 0.0 | 1919.0 | 0.0 | 20.5   | 0.0 | -1514.0 |
| 18 | 201 | 0.0 | 1450.0 | 0.0 | -21.1  | 0.0 | 531.7   |
|    | 208 | 0.0 | 2015.0 | 0.0 | 21.1   | 0.0 | -1718.2 |
|    |     |     |        |     |        |     |         |
| 1  | 208 | 0.0 | 1523.3 | 0.0 | -227.2 | 0.0 | 1120.8  |
|    | 213 | 0.0 | 728.9  | 0.0 | 227.2  | 0.0 | -286.7  |
| 2  | 208 | 0.0 | 2430.5 | 0.0 | -58.1  | 0.0 | 2363.6  |
|    | 213 | 0.0 | -698.0 | 0.0 | 58.1   | 0.0 | 921.1   |
| 3  | 208 | 0.0 | 1683.8 | 0.0 | -59.6  | 0.0 | 1480.0  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 213 | 0.0 | 48.7    | 0.0 | 59.6   | 0.0 | 236.9   |
| 4  | 208 | 0.0 | 1398.6  | 0.0 | -59.0  | 0.0 | 1138.7  |
|    | 213 | 0.0 | 333.9   | 0.0 | 59.0   | 0.0 | -21.6   |
| 5  | 208 | 0.0 | 378.3   | 0.0 | -58.6  | 0.0 | -69.8   |
|    | 213 | 0.0 | 1354.2  | 0.0 | 58.6   | 0.0 | -955.6  |
| 6  | 208 | 0.0 | -970.3  | 0.0 | -56.7  | 0.0 | -1664.7 |
|    | 213 | 0.0 | 2702.8  | 0.0 | 56.7   | 0.0 | -2192.3 |
| 7  | 208 | 0.0 | -1717.0 | 0.0 | -58.2  | 0.0 | -2548.3 |
|    | 213 | 0.0 | 3449.5  | 0.0 | 58.2   | 0.0 | -2876.6 |
| 8  | 208 | 0.0 | -1090.5 | 0.0 | -64.1  | 0.0 | -1806.6 |
|    | 213 | 0.0 | 2823.0  | 0.0 | 64.1   | 0.0 | -2302.5 |
| 9  | 208 | 0.0 | -2110.7 | 0.0 | -63.6  | 0.0 | -3015.1 |
|    | 213 | 0.0 | 3843.2  | 0.0 | 63.6   | 0.0 | -3236.5 |
| 10 | 208 | 0.0 | 1160.1  | 0.0 | -165.6 | 0.0 | 851.8   |
|    | 213 | 0.0 | 572.4   | 0.0 | 165.6  | 0.0 | -234.7  |
| 11 | 208 | 0.0 | 1985.0  | 0.0 | -123.2 | 0.0 | 1847.1  |
|    | 213 | 0.0 | -252.5  | 0.0 | 123.2  | 0.0 | 502.8   |
| 12 | 208 | 0.0 | 2238.5  | 0.0 | -124.7 | 0.0 | 2148.3  |
|    | 213 | 0.0 | -506.0  | 0.0 | 124.7  | 0.0 | 734.2   |
| 13 | 208 | 0.0 | 228.9   | 0.0 | -124.8 | 0.0 | -237.9  |
|    | 213 | 0.0 | 1503.6  | 0.0 | 124.8  | 0.0 | -1101.1 |
| 14 | 208 | 0.0 | -24.6   | 0.0 | -123.2 | 0.0 | -539.1  |
|    | 213 | 0.0 | 1757.1  | 0.0 | 123.2  | 0.0 | -1332.5 |
| 15 | 208 | 0.0 | 1139.9  | 0.0 | -118.0 | 0.0 | 843.1   |
|    | 213 | 0.0 | 592.6   | 0.0 | 118.0  | 0.0 | -268.7  |
| 16 | 208 | 0.0 | 1393.4  | 0.0 | -119.6 | 0.0 | 1144.3  |
|    | 213 | 0.0 | 339.1   | 0.0 | 119.6  | 0.0 | -37.2   |
| 17 | 208 | 0.0 | 1074.0  | 0.0 | -130.0 | 0.0 | 766.1   |
|    | 213 | 0.0 | 658.5   | 0.0 | 130.0  | 0.0 | -329.6  |
| 18 | 208 | 0.0 | 820.5   | 0.0 | -128.4 | 0.0 | 464.9   |
|    | 213 | 0.0 | 912.0   | 0.0 | 128.4  | 0.0 | -561.0  |
|    |     |     |         |     |        |     |         |
| 1  | 213 | 0.0 | 2371.2  | 0.0 | 201.5  | 0.0 | 1607.5  |
|    | 218 | 0.0 | 2133.3  | 0.0 | -201.5 | 0.0 | -1108.0 |
| 2  | 213 | 0.0 | 2349.1  | 0.0 | 124.7  | 0.0 | 2250.6  |
|    | 218 | 0.0 | 1115.9  | 0.0 | -124.7 | 0.0 | 338.9   |
| 3  | 213 | 0.0 | 2065.2  | 0.0 | 125.4  | 0.0 | 1707.6  |
|    | 218 | 0.0 | 1399.8  | 0.0 | -125.4 | 0.0 | -310.3  |
| 4  | 213 | 0.0 | 1951.8  | 0.0 | 123.5  | 0.0 | 1487.8  |
|    | 218 | 0.0 | 1513.2  | 0.0 | -123.5 | 0.0 | -567.3  |
| 5  | 213 | 0.0 | 1562.0  | 0.0 | 125.6  | 0.0 | 741.0   |
|    | 218 | 0.0 | 1903.0  | 0.0 | -125.6 | 0.0 | -1457.6 |
| 6  | 213 | 0.0 | 1049.8  | 0.0 | 131.9  | 0.0 | -238.9  |
|    | 218 | 0.0 | 2415.2  | 0.0 | -131.9 | 0.0 | -2628.8 |
| 7  | 213 | 0.0 | 765.9   | 0.0 | 132.6  | 0.0 | -781.9  |
|    | 218 | 0.0 | 2699.1  | 0.0 | -132.6 | 0.0 | -3277.9 |
| 8  | 213 | 0.0 | 1005.5  | 0.0 | 126.0  | 0.0 | -322.2  |
|    | 218 | 0.0 | 2459.5  | 0.0 | -126.0 | 0.0 | -2731.2 |
| 9  | 213 | 0.0 | 615.7   | 0.0 | 128.2  | 0.0 | -1069.0 |
|    | 218 | 0.0 | 2849.3  | 0.0 | -128.2 | 0.0 | -3621.5 |
| 10 | 213 | 0.0 | 1830.3  | 0.0 | 140.9  | 0.0 | 1251.0  |
|    | 218 | 0.0 | 1634.7  | 0.0 | -140.9 | 0.0 | -840.4  |
| 11 | 213 | 0.0 | 2197.1  | 0.0 | 77.9   | 0.0 | 1966.3  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 218 | 0.0 | 1267.9 | 0.0 | -77.9  | 0.0 | -14.9   |
| 12 | 213 | 0.0 | 2295.3 | 0.0 | 76.8   | 0.0 | 2155.5  |
|    | 218 | 0.0 | 1169.7 | 0.0 | -76.8  | 0.0 | 208.9   |
| 13 | 213 | 0.0 | 1520.5 | 0.0 | 75.9   | 0.0 | 667.2   |
|    | 218 | 0.0 | 1944.5 | 0.0 | -75.9  | 0.0 | -1557.8 |
| 14 | 213 | 0.0 | 1422.2 | 0.0 | 77.0   | 0.0 | 477.9   |
|    | 218 | 0.0 | 2042.8 | 0.0 | -77.0  | 0.0 | -1781.6 |
| 15 | 213 | 0.0 | 1869.4 | 0.0 | 81.6   | 0.0 | 1335.5  |
|    | 218 | 0.0 | 1595.6 | 0.0 | -81.6  | 0.0 | -760.6  |
| 16 | 213 | 0.0 | 1967.7 | 0.0 | 80.5   | 0.0 | 1524.8  |
|    | 218 | 0.0 | 1497.3 | 0.0 | -80.5  | 0.0 | -536.9  |
| 17 | 213 | 0.0 | 1848.2 | 0.0 | 72.2   | 0.0 | 1298.0  |
|    | 218 | 0.0 | 1616.8 | 0.0 | -72.2  | 0.0 | -812.1  |
| 18 | 213 | 0.0 | 1749.9 | 0.0 | 73.3   | 0.0 | 1108.7  |
|    | 218 | 0.0 | 1715.1 | 0.0 | -73.3  | 0.0 | -1035.8 |
|    |     |     |        |     |        |     |         |
| 1  | 202 | 0.0 | 898.1  | 0.0 | 120.2  | 0.0 | 556.6   |
|    | 209 | 0.0 | 978.8  | 0.0 | -120.2 | 0.0 | -726.2  |
| 2  | 202 | 0.0 | 833.4  | 0.0 | 202.9  | 0.0 | 715.0   |
|    | 209 | 0.0 | 610.4  | 0.0 | -202.9 | 0.0 | -246.7  |
| 3  | 202 | 0.0 | 703.1  | 0.0 | 185.7  | 0.0 | 451.7   |
|    | 209 | 0.0 | 740.6  | 0.0 | -185.7 | 0.0 | -530.5  |
| 4  | 202 | 0.0 | 731.9  | 0.0 | 199.7  | 0.0 | 511.2   |
|    | 209 | 0.0 | 711.9  | 0.0 | -199.7 | 0.0 | -469.0  |
| 5  | 202 | 0.0 | 579.9  | 0.0 | 185.1  | 0.0 | 204.3   |
|    | 209 | 0.0 | 863.9  | 0.0 | -185.1 | 0.0 | -800.7  |
| 6  | 202 | 0.0 | 326.6  | 0.0 | 154.0  | 0.0 | -307.7  |
|    | 209 | 0.0 | 1117.2 | 0.0 | -154.0 | 0.0 | -1352.6 |
| 7  | 202 | 0.0 | 196.3  | 0.0 | 136.8  | 0.0 | -571.0  |
|    | 209 | 0.0 | 1247.4 | 0.0 | -136.8 | 0.0 | -1636.3 |
| 8  | 202 | 0.0 | 297.7  | 0.0 | 142.3  | 0.0 | -366.4  |
|    | 209 | 0.0 | 1146.0 | 0.0 | -142.3 | 0.0 | -1415.0 |
| 9  | 202 | 0.0 | 145.7  | 0.0 | 127.6  | 0.0 | -673.2  |
|    | 209 | 0.0 | 1298.1 | 0.0 | -127.6 | 0.0 | -1746.7 |
| 10 | 202 | 0.0 | 688.2  | 0.0 | 87.3   | 0.0 | 423.0   |
|    | 209 | 0.0 | 755.5  | 0.0 | -87.3  | 0.0 | -564.2  |
| 11 | 202 | 0.0 | 760.6  | 0.0 | 66.3   | 0.0 | 568.1   |
|    | 209 | 0.0 | 683.1  | 0.0 | -66.3  | 0.0 | -405.4  |
| 12 | 202 | 0.0 | 779.7  | 0.0 | 64.4   | 0.0 | 606.1   |
|    | 209 | 0.0 | 664.1  | 0.0 | -64.4  | 0.0 | -363.5  |
| 13 | 202 | 0.0 | 592.4  | 0.0 | 61.1   | 0.0 | 230.4   |
|    | 209 | 0.0 | 851.3  | 0.0 | -61.1  | 0.0 | -774.0  |
| 14 | 202 | 0.0 | 573.4  | 0.0 | 63.0   | 0.0 | 192.4   |
|    | 209 | 0.0 | 870.3  | 0.0 | -63.0  | 0.0 | -815.9  |
| 15 | 202 | 0.0 | 697.2  | 0.0 | 73.0   | 0.0 | 441.5   |
|    | 209 | 0.0 | 746.5  | 0.0 | -73.0  | 0.0 | -545.0  |
| 16 | 202 | 0.0 | 716.2  | 0.0 | 71.0   | 0.0 | 479.5   |
|    | 209 | 0.0 | 727.5  | 0.0 | -71.0  | 0.0 | -503.1  |
| 17 | 202 | 0.0 | 655.8  | 0.0 | 54.4   | 0.0 | 357.0   |
|    | 209 | 0.0 | 787.9  | 0.0 | -54.4  | 0.0 | -634.4  |
| 18 | 202 | 0.0 | 636.8  | 0.0 | 56.4   | 0.0 | 319.0   |
|    | 209 | 0.0 | 806.9  | 0.0 | -56.4  | 0.0 | -676.3  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 1  | 209 | 0.0 | 498.8   | 0.0 | 62.7   | 0.0 | 207.2   |
|    | 214 | 0.0 | 439.6   | 0.0 | -62.7  | 0.0 | -145.0  |
| 2  | 209 | 0.0 | 925.4   | 0.0 | 29.4   | 0.0 | 731.0   |
|    | 214 | 0.0 | -203.5  | 0.0 | -29.4  | 0.0 | 454.3   |
| 3  | 209 | 0.0 | 453.5   | 0.0 | 36.6   | 0.0 | 235.4   |
|    | 214 | 0.0 | 268.4   | 0.0 | -36.6  | 0.0 | -41.0   |
| 4  | 209 | 0.0 | 502.7   | 0.0 | 30.1   | 0.0 | 286.5   |
|    | 214 | 0.0 | 219.2   | 0.0 | -30.1  | 0.0 | 11.1    |
| 5  | 209 | 0.0 | -69.0   | 0.0 | 38.0   | 0.0 | -314.1  |
|    | 214 | 0.0 | 790.9   | 0.0 | -38.0  | 0.0 | -588.8  |
| 6  | 209 | 0.0 | -980.3  | 0.0 | 55.5   | 0.0 | -1271.1 |
|    | 214 | 0.0 | 1702.2  | 0.0 | -55.5  | 0.0 | -1545.5 |
| 7  | 209 | 0.0 | -1452.1 | 0.0 | 62.7   | 0.0 | -1766.7 |
|    | 214 | 0.0 | 2174.0  | 0.0 | -62.7  | 0.0 | -2040.8 |
| 8  | 209 | 0.0 | -1070.1 | 0.0 | 54.1   | 0.0 | -1365.4 |
|    | 214 | 0.0 | 1792.0  | 0.0 | -54.1  | 0.0 | -1639.7 |
| 9  | 209 | 0.0 | -1641.8 | 0.0 | 61.9   | 0.0 | -1966.0 |
|    | 214 | 0.0 | 2363.7  | 0.0 | -61.9  | 0.0 | -2239.7 |
| 10 | 209 | 0.0 | 384.8   | 0.0 | 46.5   | 0.0 | 161.3   |
|    | 214 | 0.0 | 337.1   | 0.0 | -46.5  | 0.0 | -111.1  |
| 11 | 209 | 0.0 | 744.2   | 0.0 | 38.3   | 0.0 | 542.4   |
|    | 214 | 0.0 | -22.3   | 0.0 | -38.3  | 0.0 | 262.5   |
| 12 | 209 | 0.0 | 832.3   | 0.0 | 37.8   | 0.0 | 635.0   |
|    | 214 | 0.0 | -110.4  | 0.0 | -37.8  | 0.0 | 354.8   |
| 13 | 209 | 0.0 | 35.3    | 0.0 | 39.5   | 0.0 | -203.0  |
|    | 214 | 0.0 | 686.6   | 0.0 | -39.5  | 0.0 | -480.9  |
| 14 | 209 | 0.0 | -52.8   | 0.0 | 40.0   | 0.0 | -295.6  |
|    | 214 | 0.0 | 774.6   | 0.0 | -40.0  | 0.0 | -573.2  |
| 15 | 209 | 0.0 | 450.6   | 0.0 | 40.1   | 0.0 | 233.6   |
|    | 214 | 0.0 | 271.3   | 0.0 | -40.1  | 0.0 | -45.4   |
| 16 | 209 | 0.0 | 538.7   | 0.0 | 39.5   | 0.0 | 326.3   |
|    | 214 | 0.0 | 183.2   | 0.0 | -39.5  | 0.0 | 47.0    |
| 17 | 209 | 0.0 | 328.9   | 0.0 | 37.8   | 0.0 | 105.8   |
|    | 214 | 0.0 | 393.0   | 0.0 | -37.8  | 0.0 | -173.0  |
| 18 | 209 | 0.0 | 240.8   | 0.0 | 38.3   | 0.0 | 13.2    |
|    | 214 | 0.0 | 481.1   | 0.0 | -38.3  | 0.0 | -265.4  |
|    |     |     |         |     |        |     |         |
| 1  | 214 | 0.0 | 1005.1  | 0.0 | -124.3 | 0.0 | 776.3   |
|    | 219 | 0.0 | 871.7   | 0.0 | 124.3  | 0.0 | -496.1  |
| 2  | 214 | 0.0 | 921.7   | 0.0 | -188.1 | 0.0 | 922.9   |
|    | 219 | 0.0 | 522.0   | 0.0 | 188.1  | 0.0 | -83.6   |
| 3  | 214 | 0.0 | 800.0   | 0.0 | -141.7 | 0.0 | 655.8   |
|    | 219 | 0.0 | 643.7   | 0.0 | 141.7  | 0.0 | -327.6  |
| 4  | 214 | 0.0 | 809.7   | 0.0 | -197.5 | 0.0 | 676.7   |
|    | 219 | 0.0 | 634.1   | 0.0 | 197.5  | 0.0 | -308.1  |
| 5  | 214 | 0.0 | 661.0   | 0.0 | -153.4 | 0.0 | 350.4   |
|    | 219 | 0.0 | 782.7   | 0.0 | 153.4  | 0.0 | -606.0  |
| 6  | 214 | 0.0 | 426.3   | 0.0 | -41.1  | 0.0 | -164.8  |
|    | 219 | 0.0 | 1017.5  | 0.0 | 41.1   | 0.0 | -1076.8 |
| 7  | 214 | 0.0 | 304.6   | 0.0 | 5.3    | 0.0 | -431.9  |
|    | 219 | 0.0 | 1139.2  | 0.0 | -5.3   | 0.0 | -1320.8 |
| 8  | 214 | 0.0 | 404.0   | 0.0 | -42.8  | 0.0 | -213.6  |
|    | 219 | 0.0 | 1039.8  | 0.0 | 42.8   | 0.0 | -1121.5 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 9  | 214 | 0.0 | 255.3  | 0.0 | 1.3    | 0.0 | -539.9  |
|    | 219 | 0.0 | 1188.4 | 0.0 | -1.3   | 0.0 | -1419.5 |
| 10 | 214 | 0.0 | 776.2  | 0.0 | -90.4  | 0.0 | 603.9   |
|    | 219 | 0.0 | 667.5  | 0.0 | 90.4   | 0.0 | -375.7  |
| 11 | 214 | 0.0 | 883.8  | 0.0 | -59.0  | 0.0 | 840.7   |
|    | 219 | 0.0 | 559.9  | 0.0 | 59.0   | 0.0 | -160.6  |
| 12 | 214 | 0.0 | 907.5  | 0.0 | -57.1  | 0.0 | 892.8   |
|    | 219 | 0.0 | 536.2  | 0.0 | 57.1   | 0.0 | -113.1  |
| 13 | 214 | 0.0 | 696.1  | 0.0 | -74.0  | 0.0 | 428.5   |
|    | 219 | 0.0 | 747.6  | 0.0 | 74.0   | 0.0 | -536.6  |
| 14 | 214 | 0.0 | 672.5  | 0.0 | -75.9  | 0.0 | 376.4   |
|    | 219 | 0.0 | 771.3  | 0.0 | 75.9   | 0.0 | -584.0  |
| 15 | 214 | 0.0 | 804.9  | 0.0 | -65.3  | 0.0 | 667.3   |
|    | 219 | 0.0 | 638.9  | 0.0 | 65.3   | 0.0 | -318.6  |
| 16 | 214 | 0.0 | 828.6  | 0.0 | -63.4  | 0.0 | 719.3   |
|    | 219 | 0.0 | 615.2  | 0.0 | 63.4   | 0.0 | -271.2  |
| 17 | 214 | 0.0 | 775.1  | 0.0 | -67.6  | 0.0 | 601.9   |
|    | 219 | 0.0 | 668.7  | 0.0 | 67.6   | 0.0 | -378.5  |
| 18 | 214 | 0.0 | 751.4  | 0.0 | -69.5  | 0.0 | 549.8   |
|    | 219 | 0.0 | 692.4  | 0.0 | 69.5   | 0.0 | -425.9  |
| 1  | 203 | 0.0 | 1476.0 | 0.0 | -115.2 | 0.0 | 466.2   |
|    | 206 | 0.0 | 2176.2 | 0.0 | 115.2  | 0.0 | -1481.4 |
| 2  | 203 | 0.0 | 1358.2 | 0.0 | -123.0 | 0.0 | 706.9   |
|    | 206 | 0.0 | 1451.1 | 0.0 | 123.0  | 0.0 | -842.4  |
| 3  | 203 | 0.0 | 1148.0 | 0.0 | -112.4 | 0.0 | 329.3   |
|    | 206 | 0.0 | 1661.3 | 0.0 | 112.4  | 0.0 | -1073.8 |
| 4  | 203 | 0.0 | 1200.3 | 0.0 | -133.7 | 0.0 | 415.0   |
|    | 206 | 0.0 | 1609.0 | 0.0 | 133.7  | 0.0 | -1010.7 |
| 5  | 203 | 0.0 | 943.0  | 0.0 | -129.9 | 0.0 | -48.1   |
|    | 206 | 0.0 | 1866.4 | 0.0 | 129.9  | 0.0 | -1293.9 |
| 6  | 203 | 0.0 | 500.4  | 0.0 | -110.3 | 0.0 | -837.0  |
|    | 206 | 0.0 | 2308.9 | 0.0 | 110.3  | 0.0 | -1786.7 |
| 7  | 203 | 0.0 | 290.2  | 0.0 | -99.6  | 0.0 | -1214.6 |
|    | 206 | 0.0 | 2519.1 | 0.0 | 99.6   | 0.0 | -2018.0 |
| 8  | 203 | 0.0 | 499.7  | 0.0 | -98.2  | 0.0 | -843.5  |
|    | 206 | 0.0 | 2309.7 | 0.0 | 98.2   | 0.0 | -1781.7 |
| 9  | 203 | 0.0 | 242.3  | 0.0 | -94.4  | 0.0 | -1306.7 |
|    | 206 | 0.0 | 2567.0 | 0.0 | 94.4   | 0.0 | -2065.0 |
| 10 | 203 | 0.0 | 1141.3 | 0.0 | -83.4  | 0.0 | 360.8   |
|    | 206 | 0.0 | 1668.1 | 0.0 | 83.4   | 0.0 | -1124.6 |
| 11 | 203 | 0.0 | 1300.3 | 0.0 | -51.2  | 0.0 | 615.7   |
|    | 206 | 0.0 | 1509.1 | 0.0 | 51.2   | 0.0 | -916.8  |
| 12 | 203 | 0.0 | 1340.5 | 0.0 | -45.8  | 0.0 | 688.9   |
|    | 206 | 0.0 | 1468.9 | 0.0 | 45.8   | 0.0 | -872.9  |
| 13 | 203 | 0.0 | 1035.7 | 0.0 | -68.3  | 0.0 | 125.3   |
|    | 206 | 0.0 | 1773.7 | 0.0 | 68.3   | 0.0 | -1197.2 |
| 14 | 203 | 0.0 | 995.5  | 0.0 | -73.7  | 0.0 | 52.2    |
|    | 206 | 0.0 | 1813.9 | 0.0 | 73.7   | 0.0 | -1241.1 |
| 15 | 203 | 0.0 | 1166.5 | 0.0 | -69.2  | 0.0 | 371.9   |
|    | 206 | 0.0 | 1642.9 | 0.0 | 69.2   | 0.0 | -1063.1 |
| 16 | 203 | 0.0 | 1206.6 | 0.0 | -63.8  | 0.0 | 445.0   |
|    | 206 | 0.0 | 1602.8 | 0.0 | 63.8   | 0.0 | -1019.2 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 17 | 203 | 0.0 | 1169.5  | 0.0 | -50.3  | 0.0 | 369.2   |
|    | 206 | 0.0 | 1639.9  | 0.0 | 50.3   | 0.0 | -1050.9 |
| 18 | 203 | 0.0 | 1129.3  | 0.0 | -55.7  | 0.0 | 296.0   |
|    | 206 | 0.0 | 1680.0  | 0.0 | 55.7   | 0.0 | -1094.8 |
|    |     |     |         |     |        |     |         |
| 1  | 206 | 0.0 | 2826.6  | 0.0 | -50.0  | 0.0 | 1382.5  |
|    | 210 | 0.0 | -1189.4 | 0.0 | 50.0   | 0.0 | 1227.9  |
| 2  | 206 | 0.0 | 1109.8  | 0.0 | 415.2  | 0.0 | 594.0   |
|    | 210 | 0.0 | 149.6   | 0.0 | -415.2 | 0.0 | 1215.1  |
| 3  | 206 | 0.0 | 338.2   | 0.0 | 337.4  | 0.0 | 248.8   |
|    | 210 | 0.0 | 921.1   | 0.0 | -337.4 | 0.0 | 557.5   |
| 4  | 206 | 0.0 | 1456.7  | 0.0 | 410.7  | 0.0 | 754.1   |
|    | 210 | 0.0 | -197.3  | 0.0 | -410.7 | 0.0 | 674.1   |
| 5  | 206 | 0.0 | 914.9   | 0.0 | 339.5  | 0.0 | 507.7   |
|    | 210 | 0.0 | 344.4   | 0.0 | -339.5 | 0.0 | -139.9  |
| 6  | 206 | 0.0 | -696.0  | 0.0 | 177.7  | 0.0 | -227.1  |
|    | 210 | 0.0 | 1955.4  | 0.0 | -177.7 | 0.0 | -1498.2 |
| 7  | 206 | 0.0 | -1467.6 | 0.0 | 99.9   | 0.0 | -572.3  |
|    | 210 | 0.0 | 2726.9  | 0.0 | -99.9  | 0.0 | -2155.8 |
| 8  | 206 | 0.0 | -1115.2 | 0.0 | 151.5  | 0.0 | -396.6  |
|    | 210 | 0.0 | 2374.6  | 0.0 | -151.5 | 0.0 | -1518.1 |
| 9  | 206 | 0.0 | -1657.0 | 0.0 | 80.3   | 0.0 | -643.0  |
|    | 210 | 0.0 | 2916.3  | 0.0 | -80.3  | 0.0 | -2332.1 |
| 10 | 206 | 0.0 | 2116.6  | 0.0 | -35.9  | 0.0 | 1036.8  |
|    | 210 | 0.0 | -857.2  | 0.0 | 35.9   | 0.0 | 896.1   |
| 11 | 206 | 0.0 | 1576.7  | 0.0 | -20.5  | 0.0 | 785.7   |
|    | 210 | 0.0 | -317.3  | 0.0 | 20.5   | 0.0 | 1131.7  |
| 12 | 206 | 0.0 | 1392.2  | 0.0 | -63.5  | 0.0 | 705.7   |
|    | 210 | 0.0 | -132.8  | 0.0 | 63.5   | 0.0 | 1265.6  |
| 13 | 206 | 0.0 | 2131.2  | 0.0 | -27.8  | 0.0 | 1045.5  |
|    | 210 | 0.0 | -871.8  | 0.0 | 27.8   | 0.0 | 220.2   |
| 14 | 206 | 0.0 | 2315.7  | 0.0 | 15.1   | 0.0 | 1125.5  |
|    | 210 | 0.0 | -1056.3 | 0.0 | -15.1  | 0.0 | 86.3    |
| 15 | 206 | 0.0 | 2191.6  | 0.0 | 122.8  | 0.0 | 1052.3  |
|    | 210 | 0.0 | -932.2  | 0.0 | -122.8 | 0.0 | 685.1   |
| 16 | 206 | 0.0 | 2007.1  | 0.0 | 79.8   | 0.0 | 972.3   |
|    | 210 | 0.0 | -747.8  | 0.0 | -79.8  | 0.0 | 819.1   |
| 17 | 206 | 0.0 | 1516.3  | 0.0 | -171.2 | 0.0 | 778.8   |
|    | 210 | 0.0 | -256.9  | 0.0 | 171.2  | 0.0 | 666.8   |
| 18 | 206 | 0.0 | 1700.7  | 0.0 | -128.2 | 0.0 | 858.8   |
|    | 210 | 0.0 | -441.4  | 0.0 | 128.2  | 0.0 | 532.8   |
|    |     |     |         |     |        |     |         |
| 1  | 210 | 0.0 | 1069.2  | 0.0 | -112.0 | 0.0 | 160.8   |
|    | 215 | 0.0 | 1575.5  | 0.0 | 112.0  | 0.0 | -692.5  |
| 2  | 210 | 0.0 | 1372.7  | 0.0 | -55.5  | 0.0 | 705.8   |
|    | 215 | 0.0 | 661.7   | 0.0 | 55.5   | 0.0 | 40.8    |
| 3  | 210 | 0.0 | 769.2   | 0.0 | -64.3  | 0.0 | 74.2    |
|    | 215 | 0.0 | 1265.1  | 0.0 | 64.3   | 0.0 | -594.9  |
| 4  | 210 | 0.0 | 882.1   | 0.0 | -61.0  | 0.0 | 192.8   |
|    | 215 | 0.0 | 1152.3  | 0.0 | 61.0   | 0.0 | -476.4  |
| 5  | 210 | 0.0 | 137.7   | 0.0 | -60.4  | 0.0 | -586.3  |
|    | 215 | 0.0 | 1896.7  | 0.0 | 60.4   | 0.0 | -1260.7 |
| 6  | 210 | 0.0 | -1108.8 | 0.0 | -53.2  | 0.0 | -1891.0 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
|    | 215 | 0.0 | 3143.2  | 0.0 | 53.2   | 0.0 | -2573.7 |
| 7  | 210 | 0.0 | -1712.3 | 0.0 | -62.0  | 0.0 | -2522.6 |
|    | 215 | 0.0 | 3746.7  | 0.0 | 62.0   | 0.0 | -3209.4 |
| 8  | 210 | 0.0 | -1129.4 | 0.0 | -90.3  | 0.0 | -1912.5 |
|    | 215 | 0.0 | 3163.8  | 0.0 | 90.3   | 0.0 | -2595.4 |
| 9  | 210 | 0.0 | -1873.9 | 0.0 | -89.6  | 0.0 | -2691.6 |
|    | 215 | 0.0 | 3908.3  | 0.0 | 89.6   | 0.0 | -3379.7 |
| 10 | 210 | 0.0 | 830.0   | 0.0 | -85.1  | 0.0 | 132.6   |
|    | 215 | 0.0 | 1204.4  | 0.0 | 85.1   | 0.0 | -525.8  |
| 11 | 210 | 0.0 | 1277.6  | 0.0 | -76.2  | 0.0 | 605.5   |
|    | 215 | 0.0 | 756.8   | 0.0 | 76.2   | 0.0 | -58.7   |
| 12 | 210 | 0.0 | 1398.5  | 0.0 | -85.1  | 0.0 | 732.0   |
|    | 215 | 0.0 | 635.8   | 0.0 | 85.1   | 0.0 | 68.8    |
| 13 | 210 | 0.0 | 450.8   | 0.0 | -84.7  | 0.0 | -259.1  |
|    | 215 | 0.0 | 1583.6  | 0.0 | 84.7   | 0.0 | -930.4  |
| 14 | 210 | 0.0 | 329.8   | 0.0 | -75.8  | 0.0 | -385.6  |
|    | 215 | 0.0 | 1704.6  | 0.0 | 75.8   | 0.0 | -1057.9 |
| 15 | 210 | 0.0 | 874.4   | 0.0 | -46.7  | 0.0 | 183.9   |
|    | 215 | 0.0 | 1159.9  | 0.0 | 46.7   | 0.0 | -483.7  |
| 16 | 210 | 0.0 | 995.4   | 0.0 | -55.5  | 0.0 | 310.4   |
|    | 215 | 0.0 | 1039.0  | 0.0 | 55.5   | 0.0 | -356.2  |
| 17 | 210 | 0.0 | 853.9   | 0.0 | -114.2 | 0.0 | 162.5   |
|    | 215 | 0.0 | 1180.4  | 0.0 | 114.2  | 0.0 | -505.3  |
| 18 | 210 | 0.0 | 733.0   | 0.0 | -105.4 | 0.0 | 36.0    |
|    | 215 | 0.0 | 1301.4  | 0.0 | 105.4  | 0.0 | -632.8  |
|    |     |     |         |     |        |     |         |
| 1  | 215 | 0.0 | 980.1   | 0.0 | 41.3   | 0.0 | 705.0   |
|    | 220 | 0.0 | 896.8   | 0.0 | -41.3  | 0.0 | -530.0  |
| 2  | 215 | 0.0 | 906.8   | 0.0 | -14.1  | 0.0 | 879.4   |
|    | 220 | 0.0 | 536.9   | 0.0 | 14.1   | 0.0 | -102.9  |
| 3  | 215 | 0.0 | 746.7   | 0.0 | 12.5   | 0.0 | 525.2   |
|    | 220 | 0.0 | 697.1   | 0.0 | -12.5  | 0.0 | -421.2  |
| 4  | 215 | 0.0 | 788.8   | 0.0 | -17.6  | 0.0 | 609.6   |
|    | 220 | 0.0 | 654.9   | 0.0 | 17.6   | 0.0 | -329.3  |
| 5  | 215 | 0.0 | 592.9   | 0.0 | 8.8    | 0.0 | 175.4   |
|    | 220 | 0.0 | 850.8   | 0.0 | -8.8   | 0.0 | -717.9  |
| 6  | 215 | 0.0 | 253.9   | 0.0 | 74.1   | 0.0 | -568.0  |
|    | 220 | 0.0 | 1189.9  | 0.0 | -74.1  | 0.0 | -1398.2 |
| 7  | 215 | 0.0 | 93.7    | 0.0 | 100.6  | 0.0 | -922.3  |
|    | 220 | 0.0 | 1350.0  | 0.0 | -100.6 | 0.0 | -1716.6 |
| 8  | 215 | 0.0 | 255.0   | 0.0 | 70.8   | 0.0 | -571.2  |
|    | 220 | 0.0 | 1188.8  | 0.0 | -70.8  | 0.0 | -1390.5 |
| 9  | 215 | 0.0 | 59.1    | 0.0 | 97.2   | 0.0 | -1005.4 |
|    | 220 | 0.0 | 1384.7  | 0.0 | -97.2  | 0.0 | -1779.1 |
| 10 | 215 | 0.0 | 757.0   | 0.0 | 32.0   | 0.0 | 549.0   |
|    | 220 | 0.0 | 686.8   | 0.0 | -32.0  | 0.0 | -401.5  |
| 11 | 215 | 0.0 | 703.7   | 0.0 | 35.8   | 0.0 | 805.3   |
|    | 220 | 0.0 | 740.1   | 0.0 | -35.8  | 0.0 | -511.8  |
| 12 | 215 | 0.0 | 663.0   | 0.0 | 35.9   | 0.0 | 873.3   |
|    | 220 | 0.0 | 780.8   | 0.0 | -35.9  | 0.0 | -592.6  |
| 13 | 215 | 0.0 | 838.0   | 0.0 | 30.1   | 0.0 | 353.3   |
|    | 220 | 0.0 | 605.7   | 0.0 | -30.1  | 0.0 | -235.3  |
| 14 | 215 | 0.0 | 878.8   | 0.0 | 29.9   | 0.0 | 285.2   |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 220 | 0.0 | 565.0  | 0.0 | -29.9  | 0.0 | -154.5  |
| 15 | 215 | 0.0 | 839.5  | 0.0 | 35.3   | 0.0 | 578.4   |
|    | 220 | 0.0 | 604.3  | 0.0 | -35.3  | 0.0 | -242.6  |
| 16 | 215 | 0.0 | 798.7  | 0.0 | 35.4   | 0.0 | 646.5   |
|    | 220 | 0.0 | 645.0  | 0.0 | -35.4  | 0.0 | -323.4  |
| 17 | 215 | 0.0 | 702.2  | 0.0 | 30.6   | 0.0 | 580.1   |
|    | 220 | 0.0 | 741.5  | 0.0 | -30.6  | 0.0 | -504.5  |
| 18 | 215 | 0.0 | 743.0  | 0.0 | 30.4   | 0.0 | 512.1   |
|    | 220 | 0.0 | 700.8  | 0.0 | -30.4  | 0.0 | -423.7  |
|    |     |     |        |     |        |     |         |
| 1  | 204 | 0.0 | 4981.0 | 0.0 | 205.0  | 0.0 | 2185.8  |
|    | 207 | 0.0 | 781.5  | 0.0 | -205.0 | 0.0 | 207.0   |
| 2  | 204 | 0.0 | 2753.5 | 0.0 | 245.0  | 0.0 | 964.6   |
|    | 207 | 0.0 | 695.6  | 0.0 | -245.0 | 0.0 | 12.1    |
| 3  | 204 | 0.0 | 2562.6 | 0.0 | 202.8  | 0.0 | 567.7   |
|    | 207 | 0.0 | 886.5  | 0.0 | -202.8 | 0.0 | -144.7  |
| 4  | 204 | 0.0 | 2833.7 | 0.0 | 234.2  | 0.0 | 1131.7  |
|    | 207 | 0.0 | 615.4  | 0.0 | -234.2 | 0.0 | 77.4    |
| 5  | 204 | 0.0 | 2680.2 | 0.0 | 219.0  | 0.0 | 812.9   |
|    | 207 | 0.0 | 768.9  | 0.0 | -219.0 | 0.0 | -49.0   |
| 6  | 204 | 0.0 | 2241.8 | 0.0 | 194.1  | 0.0 | -98.2   |
|    | 207 | 0.0 | 1207.3 | 0.0 | -194.1 | 0.0 | -409.1  |
| 7  | 204 | 0.0 | 2050.9 | 0.0 | 151.9  | 0.0 | -495.1  |
|    | 207 | 0.0 | 1398.2 | 0.0 | -151.9 | 0.0 | -565.9  |
| 8  | 204 | 0.0 | 2197.4 | 0.0 | 93.7   | 0.0 | -191.1  |
|    | 207 | 0.0 | 1251.7 | 0.0 | -93.7  | 0.0 | -445.1  |
| 9  | 204 | 0.0 | 2043.8 | 0.0 | 78.5   | 0.0 | -510.0  |
|    | 207 | 0.0 | 1405.3 | 0.0 | -78.5  | 0.0 | -571.4  |
| 10 | 204 | 0.0 | 3666.1 | 0.0 | 147.8  | 0.0 | 1612.1  |
|    | 207 | 0.0 | 589.4  | 0.0 | -147.8 | 0.0 | 156.4   |
| 11 | 204 | 0.0 | 2848.5 | 0.0 | 111.8  | 0.0 | 1161.7  |
|    | 207 | 0.0 | 600.6  | 0.0 | -111.8 | 0.0 | 90.5    |
| 12 | 204 | 0.0 | 2818.4 | 0.0 | 88.3   | 0.0 | 1098.8  |
|    | 207 | 0.0 | 630.7  | 0.0 | -88.3  | 0.0 | 66.0    |
| 13 | 204 | 0.0 | 2978.2 | 0.0 | 93.8   | 0.0 | 1432.1  |
|    | 207 | 0.0 | 470.9  | 0.0 | -93.8  | 0.0 | 196.3   |
| 14 | 204 | 0.0 | 3008.3 | 0.0 | 117.3  | 0.0 | 1494.9  |
|    | 207 | 0.0 | 440.8  | 0.0 | -117.3 | 0.0 | 220.7   |
| 15 | 204 | 0.0 | 2948.9 | 0.0 | 190.2  | 0.0 | 1371.1  |
|    | 207 | 0.0 | 500.2  | 0.0 | -190.2 | 0.0 | 172.1   |
| 16 | 204 | 0.0 | 2918.8 | 0.0 | 166.7  | 0.0 | 1308.2  |
|    | 207 | 0.0 | 530.3  | 0.0 | -166.7 | 0.0 | 147.6   |
| 17 | 204 | 0.0 | 2877.9 | 0.0 | 15.4   | 0.0 | 1222.7  |
|    | 207 | 0.0 | 571.2  | 0.0 | -15.4  | 0.0 | 114.7   |
| 18 | 204 | 0.0 | 2908.0 | 0.0 | 38.9   | 0.0 | 1285.5  |
|    | 207 | 0.0 | 541.1  | 0.0 | -38.9  | 0.0 | 139.1   |
|    |     |     |        |     |        |     |         |
| 1  | 207 | 0.0 | -781.5 | 0.0 | 205.0  | 0.0 | -207.0  |
|    | 211 | 0.0 | 1415.3 | 0.0 | -205.0 | 0.0 | -1220.9 |
| 2  | 207 | 0.0 | -695.6 | 0.0 | 245.0  | 0.0 | -12.1   |
|    | 211 | 0.0 | 1183.1 | 0.0 | -245.0 | 0.0 | -1209.1 |
| 3  | 207 | 0.0 | -886.5 | 0.0 | 202.8  | 0.0 | 144.7   |
|    | 211 | 0.0 | 1374.0 | 0.0 | -202.8 | 0.0 | -1614.0 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 4  | 207 | 0.0 | -615.4  | 0.0 | 234.2  | 0.0 | -77.4   |
|    | 211 | 0.0 | 1102.9  | 0.0 | -234.2 | 0.0 | -1039.5 |
| 5  | 207 | 0.0 | -768.9  | 0.0 | 219.0  | 0.0 | 49.0    |
|    | 211 | 0.0 | 1256.4  | 0.0 | -219.0 | 0.0 | -1365.4 |
| 6  | 207 | 0.0 | -1207.3 | 0.0 | 194.1  | 0.0 | 409.1   |
|    | 211 | 0.0 | 1694.8  | 0.0 | -194.1 | 0.0 | -2295.5 |
| 7  | 207 | 0.0 | -1398.2 | 0.0 | 151.9  | 0.0 | 565.9   |
|    | 211 | 0.0 | 1885.7  | 0.0 | -151.9 | 0.0 | -2700.4 |
| 8  | 207 | 0.0 | -1251.7 | 0.0 | 93.7   | 0.0 | 445.1   |
|    | 211 | 0.0 | 1739.2  | 0.0 | -93.7  | 0.0 | -2389.2 |
| 9  | 207 | 0.0 | -1405.3 | 0.0 | 78.5   | 0.0 | 571.4   |
|    | 211 | 0.0 | 1892.8  | 0.0 | -78.5  | 0.0 | -2715.1 |
| 10 | 207 | 0.0 | -589.4  | 0.0 | 147.8  | 0.0 | -156.4  |
|    | 211 | 0.0 | 1076.9  | 0.0 | -147.8 | 0.0 | -926.7  |
| 11 | 207 | 0.0 | -600.6  | 0.0 | 111.8  | 0.0 | -90.5   |
|    | 211 | 0.0 | 1088.1  | 0.0 | -111.8 | 0.0 | -1007.1 |
| 12 | 207 | 0.0 | -630.7  | 0.0 | 88.3   | 0.0 | -66.0   |
|    | 211 | 0.0 | 1118.2  | 0.0 | -88.3  | 0.0 | -1070.7 |
| 13 | 207 | 0.0 | -470.9  | 0.0 | 93.8   | 0.0 | -196.3  |
|    | 211 | 0.0 | 958.4   | 0.0 | -93.8  | 0.0 | -732.7  |
| 14 | 207 | 0.0 | -440.8  | 0.0 | 117.3  | 0.0 | -220.7  |
|    | 211 | 0.0 | 928.3   | 0.0 | -117.3 | 0.0 | -669.1  |
| 15 | 207 | 0.0 | -500.2  | 0.0 | 190.2  | 0.0 | -172.1  |
|    | 211 | 0.0 | 987.7   | 0.0 | -190.2 | 0.0 | -795.1  |
| 16 | 207 | 0.0 | -530.3  | 0.0 | 166.7  | 0.0 | -147.6  |
|    | 211 | 0.0 | 1017.8  | 0.0 | -166.7 | 0.0 | -858.7  |
| 17 | 207 | 0.0 | -571.2  | 0.0 | 15.4   | 0.0 | -114.7  |
|    | 211 | 0.0 | 1058.7  | 0.0 | -15.4  | 0.0 | -944.8  |
| 18 | 207 | 0.0 | -541.1  | 0.0 | 38.9   | 0.0 | -139.1  |
|    | 211 | 0.0 | 1028.6  | 0.0 | -38.9  | 0.0 | -881.2  |
|    |     |     |         |     |        |     |         |
| 1  | 211 | 0.0 | 195.9   | 0.0 | 84.9   | 0.0 | -134.2  |
|    | 216 | 0.0 | 827.9   | 0.0 | -84.9  | 0.0 | -529.4  |
| 2  | 211 | 0.0 | -320.8  | 0.0 | 73.5   | 0.0 | -598.3  |
|    | 216 | 0.0 | 1108.3  | 0.0 | -73.5  | 0.0 | -902.2  |
| 3  | 211 | 0.0 | -979.7  | 0.0 | 80.3   | 0.0 | -1293.2 |
|    | 216 | 0.0 | 1767.2  | 0.0 | -80.3  | 0.0 | -1591.0 |
| 4  | 211 | 0.0 | -16.1   | 0.0 | 63.9   | 0.0 | -276.0  |
|    | 216 | 0.0 | 803.6   | 0.0 | -63.9  | 0.0 | -584.7  |
| 5  | 211 | 0.0 | -532.7  | 0.0 | 68.5   | 0.0 | -820.4  |
|    | 216 | 0.0 | 1320.2  | 0.0 | -68.5  | 0.0 | -1125.3 |
| 6  | 211 | 0.0 | -2042.9 | 0.0 | 89.1   | 0.0 | -2412.9 |
|    | 216 | 0.0 | 2830.4  | 0.0 | -89.1  | 0.0 | -2704.1 |
| 7  | 211 | 0.0 | -2701.8 | 0.0 | 95.9   | 0.0 | -3107.8 |
|    | 216 | 0.0 | 3489.3  | 0.0 | -95.9  | 0.0 | -3392.8 |
| 8  | 211 | 0.0 | -2212.3 | 0.0 | 86.4   | 0.0 | -2592.2 |
|    | 216 | 0.0 | 2999.8  | 0.0 | -86.4  | 0.0 | -2880.6 |
| 9  | 211 | 0.0 | -2729.0 | 0.0 | 91.1   | 0.0 | -3136.6 |
|    | 216 | 0.0 | 3516.5  | 0.0 | -91.1  | 0.0 | -3421.1 |
| 10 | 211 | 0.0 | 165.2   | 0.0 | 65.2   | 0.0 | -87.5   |
|    | 216 | 0.0 | 622.3   | 0.0 | -65.2  | 0.0 | -392.5  |
| 11 | 211 | 0.0 | -14.3   | 0.0 | 73.4   | 0.0 | -275.3  |
|    | 216 | 0.0 | 801.8   | 0.0 | -73.4  | 0.0 | -581.4  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 12 | 211 | 0.0 | -128.3 | 0.0 | 65.5   | 0.0 | -396.0  |
|    | 216 | 0.0 | 915.8  | 0.0 | -65.5  | 0.0 | -700.3  |
| 13 | 211 | 0.0 | 476.6  | 0.0 | 56.3   | 0.0 | 243.8   |
|    | 216 | 0.0 | 310.9  | 0.0 | -56.3  | 0.0 | -69.8   |
| 14 | 211 | 0.0 | 590.7  | 0.0 | 64.2   | 0.0 | 364.5   |
|    | 216 | 0.0 | 196.8  | 0.0 | -64.2  | 0.0 | 49.0    |
| 15 | 211 | 0.0 | 365.9  | 0.0 | 99.7   | 0.0 | 126.8   |
|    | 216 | 0.0 | 421.6  | 0.0 | -99.7  | 0.0 | -185.2  |
| 16 | 211 | 0.0 | 251.9  | 0.0 | 91.8   | 0.0 | 6.2     |
|    | 216 | 0.0 | 535.6  | 0.0 | -91.8  | 0.0 | -304.1  |
| 17 | 211 | 0.0 | 96.4   | 0.0 | 30.0   | 0.0 | -158.3  |
|    | 216 | 0.0 | 691.1  | 0.0 | -30.0  | 0.0 | -466.1  |
| 18 | 211 | 0.0 | 210.5  | 0.0 | 37.9   | 0.0 | -37.7   |
|    | 216 | 0.0 | 577.0  | 0.0 | -37.9  | 0.0 | -347.2  |
|    |     |     |        |     |        |     |         |
| 1  | 216 | 0.0 | 1029.8 | 0.0 | -113.9 | 0.0 | 662.9   |
|    | 221 | 0.0 | 1017.7 | 0.0 | 113.9  | 0.0 | -637.5  |
| 2  | 216 | 0.0 | 657.2  | 0.0 | -134.3 | 0.0 | 210.5   |
|    | 221 | 0.0 | 917.8  | 0.0 | 134.3  | 0.0 | -758.6  |
| 3  | 216 | 0.0 | 474.7  | 0.0 | -101.6 | 0.0 | -186.8  |
|    | 221 | 0.0 | 1100.3 | 0.0 | 101.6  | 0.0 | -1127.3 |
| 4  | 216 | 0.0 | 749.2  | 0.0 | -141.9 | 0.0 | 408.5   |
|    | 221 | 0.0 | 825.8  | 0.0 | 141.9  | 0.0 | -571.2  |
| 5  | 216 | 0.0 | 607.5  | 0.0 | -110.7 | 0.0 | 100.3   |
|    | 221 | 0.0 | 967.5  | 0.0 | 110.7  | 0.0 | -858.1  |
| 6  | 216 | 0.0 | 184.9  | 0.0 | -30.4  | 0.0 | -816.7  |
|    | 221 | 0.0 | 1390.1 | 0.0 | 30.4   | 0.0 | -1715.1 |
| 7  | 216 | 0.0 | 2.4    | 0.0 | 2.3    | 0.0 | -1214.0 |
|    | 221 | 0.0 | 1572.6 | 0.0 | -2.3   | 0.0 | -2083.8 |
| 8  | 216 | 0.0 | 140.9  | 0.0 | -33.1  | 0.0 | -916.0  |
|    | 221 | 0.0 | 1434.1 | 0.0 | 33.1   | 0.0 | -1800.1 |
| 9  | 216 | 0.0 | -0.8   | 0.0 | -1.9   | 0.0 | -1224.2 |
|    | 221 | 0.0 | 1575.8 | 0.0 | 1.9    | 0.0 | -2087.0 |
| 10 | 216 | 0.0 | 795.6  | 0.0 | -82.9  | 0.0 | 517.5   |
|    | 221 | 0.0 | 779.4  | 0.0 | 82.9   | 0.0 | -483.7  |
| 11 | 216 | 0.0 | 736.3  | 0.0 | -55.1  | 0.0 | 391.7   |
|    | 221 | 0.0 | 838.7  | 0.0 | 55.1   | 0.0 | -605.8  |
| 12 | 216 | 0.0 | 703.3  | 0.0 | -53.9  | 0.0 | 319.8   |
|    | 221 | 0.0 | 871.7  | 0.0 | 53.9   | 0.0 | -672.2  |
| 13 | 216 | 0.0 | 885.7  | 0.0 | -67.2  | 0.0 | 712.0   |
|    | 221 | 0.0 | 689.3  | 0.0 | 67.2   | 0.0 | -300.5  |
| 14 | 216 | 0.0 | 918.7  | 0.0 | -68.5  | 0.0 | 783.9   |
|    | 221 | 0.0 | 656.3  | 0.0 | 68.5   | 0.0 | -234.1  |
| 15 | 216 | 0.0 | 846.4  | 0.0 | -59.3  | 0.0 | 631.4   |
|    | 221 | 0.0 | 728.6  | 0.0 | 59.3   | 0.0 | -384.4  |
| 16 | 216 | 0.0 | 813.4  | 0.0 | -58.1  | 0.0 | 559.5   |
|    | 221 | 0.0 | 761.6  | 0.0 | 58.1   | 0.0 | -450.8  |
| 17 | 216 | 0.0 | 775.6  | 0.0 | -63.0  | 0.0 | 472.3   |
|    | 221 | 0.0 | 799.4  | 0.0 | 63.0   | 0.0 | -521.9  |
| 18 | 216 | 0.0 | 808.6  | 0.0 | -64.3  | 0.0 | 544.2   |
|    | 221 | 0.0 | 766.4  | 0.0 | 64.3   | 0.0 | -455.5  |
|    |     |     |        |     |        |     |         |
| 1  | 205 | 0.0 | 2505.5 | 0.0 | 2.2    | 0.0 | 1095.8  |

|    |     |     |         |     |       |     |         |
|----|-----|-----|---------|-----|-------|-----|---------|
|    | 212 | 0.0 | 2954.5  | 0.0 | -2.2  | 0.0 | -2038.6 |
| 2  | 205 | 0.0 | 1566.3  | 0.0 | 12.5  | 0.0 | 20.2    |
|    | 212 | 0.0 | 2633.7  | 0.0 | -12.5 | 0.0 | -2262.8 |
| 3  | 205 | 0.0 | 1162.8  | 0.0 | 7.2   | 0.0 | -918.7  |
|    | 212 | 0.0 | 3037.2  | 0.0 | -7.2  | 0.0 | -3018.5 |
| 4  | 205 | 0.0 | 1713.9  | 0.0 | -21.6 | 0.0 | 371.1   |
|    | 212 | 0.0 | 2486.1  | 0.0 | 21.6  | 0.0 | -1994.1 |
| 5  | 205 | 0.0 | 1356.1  | 0.0 | -8.9  | 0.0 | -457.2  |
|    | 212 | 0.0 | 2843.9  | 0.0 | 8.9   | 0.0 | -2668.5 |
| 6  | 205 | 0.0 | 373.6   | 0.0 | 55.0  | 0.0 | -2740.8 |
|    | 212 | 0.0 | 3826.4  | 0.0 | -55.0 | 0.0 | -4510.6 |
| 7  | 205 | 0.0 | -30.0   | 0.0 | 49.6  | 0.0 | -3679.7 |
|    | 212 | 0.0 | 4230.0  | 0.0 | -49.6 | 0.0 | -5266.4 |
| 8  | 205 | 0.0 | 368.7   | 0.0 | -39.6 | 0.0 | -2758.4 |
|    | 212 | 0.0 | 3831.3  | 0.0 | 39.6  | 0.0 | -4513.3 |
| 9  | 205 | 0.0 | 10.9    | 0.0 | -26.9 | 0.0 | -3586.8 |
|    | 212 | 0.0 | 4189.1  | 0.0 | 26.9  | 0.0 | -5187.6 |
| 10 | 205 | 0.0 | 1927.8  | 0.0 | 1.1   | 0.0 | 845.7   |
|    | 212 | 0.0 | 2272.2  | 0.0 | -1.1  | 0.0 | -1568.9 |
| 11 | 205 | 0.0 | 1812.3  | 0.0 | 29.3  | 0.0 | 578.8   |
|    | 212 | 0.0 | 2387.7  | 0.0 | -29.3 | 0.0 | -1786.9 |
| 12 | 205 | 0.0 | 1776.6  | 0.0 | 13.1  | 0.0 | 492.5   |
|    | 212 | 0.0 | 2423.4  | 0.0 | -13.1 | 0.0 | -1850.5 |
| 13 | 205 | 0.0 | 2048.0  | 0.0 | -32.1 | 0.0 | 1138.4  |
|    | 212 | 0.0 | 2152.0  | 0.0 | 32.1  | 0.0 | -1357.2 |
| 14 | 205 | 0.0 | 2083.7  | 0.0 | -15.9 | 0.0 | 1224.7  |
|    | 212 | 0.0 | 2116.3  | 0.0 | 15.9  | 0.0 | -1293.5 |
| 15 | 205 | 0.0 | 1931.3  | 0.0 | 83.3  | 0.0 | 866.2   |
|    | 212 | 0.0 | 2268.7  | 0.0 | -83.3 | 0.0 | -1574.8 |
| 16 | 205 | 0.0 | 1895.6  | 0.0 | 67.1  | 0.0 | 780.0   |
|    | 212 | 0.0 | 2304.4  | 0.0 | -67.1 | 0.0 | -1638.4 |
| 17 | 205 | 0.0 | 1929.0  | 0.0 | -86.0 | 0.0 | 851.0   |
|    | 212 | 0.0 | 2271.0  | 0.0 | 86.0  | 0.0 | -1569.3 |
| 18 | 205 | 0.0 | 1964.7  | 0.0 | -69.8 | 0.0 | 937.2   |
|    | 212 | 0.0 | 2235.3  | 0.0 | 69.8  | 0.0 | -1505.6 |
|    |     |     |         |     |       |     |         |
| 1  | 212 | 0.0 | 1021.7  | 0.0 | -2.4  | 0.0 | 622.4   |
|    | 217 | 0.0 | 1708.3  | 0.0 | 2.4   | 0.0 | -1343.3 |
| 2  | 212 | 0.0 | 173.7   | 0.0 | 21.5  | 0.0 | -62.7   |
|    | 217 | 0.0 | 1926.3  | 0.0 | -21.5 | 0.0 | -1680.8 |
| 3  | 212 | 0.0 | -575.4  | 0.0 | 12.3  | 0.0 | -959.4  |
|    | 217 | 0.0 | 2675.4  | 0.0 | -12.3 | 0.0 | -2458.2 |
| 4  | 212 | 0.0 | 482.3   | 0.0 | -11.9 | 0.0 | 521.5   |
|    | 217 | 0.0 | 1617.7  | 0.0 | 11.9  | 0.0 | -1378.3 |
| 5  | 212 | 0.0 | -162.8  | 0.0 | 2.1   | 0.0 | -152.2  |
|    | 217 | 0.0 | 2262.8  | 0.0 | -2.1  | 0.0 | -2058.1 |
| 6  | 212 | 0.0 | -1976.7 | 0.0 | 68.1  | 0.0 | -2308.3 |
|    | 217 | 0.0 | 4076.7  | 0.0 | -68.1 | 0.0 | -3946.9 |
| 7  | 212 | 0.0 | -2725.8 | 0.0 | 58.8  | 0.0 | -3205.0 |
|    | 217 | 0.0 | 4825.8  | 0.0 | -58.8 | 0.0 | -4724.3 |
| 8  | 212 | 0.0 | -2014.7 | 0.0 | -42.7 | 0.0 | -2467.4 |
|    | 217 | 0.0 | 4114.7  | 0.0 | 42.7  | 0.0 | -3969.7 |
| 9  | 212 | 0.0 | -2659.8 | 0.0 | -28.7 | 0.0 | -3141.1 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 217 | 0.0 | 4759.8 | 0.0 | 28.7   | 0.0 | -4649.5 |
| 10 | 212 | 0.0 | 795.5  | 0.0 | -1.4   | 0.0 | 490.5   |
|    | 217 | 0.0 | 1304.5 | 0.0 | 1.4    | 0.0 | -1025.0 |
| 11 | 212 | 0.0 | 594.7  | 0.0 | 30.7   | 0.0 | 46.8    |
|    | 217 | 0.0 | 1505.3 | 0.0 | -30.7  | 0.0 | -1225.0 |
| 12 | 212 | 0.0 | 514.0  | 0.0 | 10.4   | 0.0 | -143.0  |
|    | 217 | 0.0 | 1586.0 | 0.0 | -10.4  | 0.0 | -1299.7 |
| 13 | 212 | 0.0 | 1083.3 | 0.0 | -29.0  | 0.0 | 1040.9  |
|    | 217 | 0.0 | 1016.7 | 0.0 | 29.0   | 0.0 | -749.0  |
| 14 | 212 | 0.0 | 1164.0 | 0.0 | -8.7   | 0.0 | 1230.7  |
|    | 217 | 0.0 | 936.0  | 0.0 | 8.7    | 0.0 | -674.3  |
| 15 | 212 | 0.0 | 863.6  | 0.0 | 98.3   | 0.0 | 679.5   |
|    | 217 | 0.0 | 1236.4 | 0.0 | -98.3  | 0.0 | -975.9  |
| 16 | 212 | 0.0 | 782.9  | 0.0 | 78.0   | 0.0 | 489.7   |
|    | 217 | 0.0 | 1317.1 | 0.0 | -78.0  | 0.0 | -1050.6 |
| 17 | 212 | 0.0 | 814.4  | 0.0 | -96.6  | 0.0 | 408.2   |
|    | 217 | 0.0 | 1285.6 | 0.0 | 96.6   | 0.0 | -998.0  |
| 18 | 212 | 0.0 | 895.1  | 0.0 | -76.3  | 0.0 | 598.0   |
|    | 217 | 0.0 | 1204.9 | 0.0 | 76.3   | 0.0 | -923.3  |
|    |     |     |        |     |        |     |         |
| 1  | 217 | 0.0 | 2446.7 | 0.0 | -10.3  | 0.0 | 1642.3  |
|    | 222 | 0.0 | 2057.8 | 0.0 | 10.3   | 0.0 | -825.5  |
| 2  | 217 | 0.0 | 1608.4 | 0.0 | 56.3   | 0.0 | 1958.8  |
|    | 222 | 0.0 | 1856.6 | 0.0 | -56.3  | 0.0 | -1233.7 |
| 3  | 217 | 0.0 | 1213.7 | 0.0 | 65.8   | 0.0 | 1147.7  |
|    | 222 | 0.0 | 2251.3 | 0.0 | -65.8  | 0.0 | -2085.0 |
| 4  | 217 | 0.0 | 1848.4 | 0.0 | 54.8   | 0.0 | 1611.5  |
|    | 222 | 0.0 | 1616.6 | 0.0 | -54.8  | 0.0 | -736.8  |
| 5  | 217 | 0.0 | 1545.4 | 0.0 | 66.7   | 0.0 | 630.9   |
|    | 222 | 0.0 | 1919.6 | 0.0 | -66.7  | 0.0 | -1401.7 |
| 6  | 217 | 0.0 | 598.4  | 0.0 | 96.1   | 0.0 | -1309.9 |
|    | 222 | 0.0 | 2866.6 | 0.0 | -96.1  | 0.0 | -3450.0 |
| 7  | 217 | 0.0 | 203.8  | 0.0 | 105.7  | 0.0 | -2121.0 |
|    | 222 | 0.0 | 3261.2 | 0.0 | -105.7 | 0.0 | -4301.3 |
| 8  | 217 | 0.0 | 532.9  | 0.0 | 86.7   | 0.0 | -1092.1 |
|    | 222 | 0.0 | 2932.1 | 0.0 | -86.7  | 0.0 | -3574.5 |
| 9  | 217 | 0.0 | 229.9  | 0.0 | 98.6   | 0.0 | -2072.7 |
|    | 222 | 0.0 | 3235.1 | 0.0 | -98.6  | 0.0 | -4239.4 |
| 10 | 217 | 0.0 | 1884.9 | 0.0 | -6.9   | 0.0 | 1269.7  |
|    | 222 | 0.0 | 1580.1 | 0.0 | 6.9    | 0.0 | -629.6  |
| 11 | 217 | 0.0 | 2048.0 | 0.0 | -2.6   | 0.0 | 1584.1  |
|    | 222 | 0.0 | 1417.0 | 0.0 | 2.6    | 0.0 | -1020.4 |
| 12 | 217 | 0.0 | 2121.5 | 0.0 | -5.0   | 0.0 | 1723.4  |
|    | 222 | 0.0 | 1343.5 | 0.0 | 5.0    | 0.0 | -1177.0 |
| 13 | 217 | 0.0 | 1747.6 | 0.0 | -1.7   | 0.0 | 1014.0  |
|    | 222 | 0.0 | 1717.4 | 0.0 | 1.7    | 0.0 | -189.3  |
| 14 | 217 | 0.0 | 1674.1 | 0.0 | 0.7    | 0.0 | 874.7   |
|    | 222 | 0.0 | 1790.9 | 0.0 | -0.7   | 0.0 | -32.7   |
| 15 | 217 | 0.0 | 1803.0 | 0.0 | 5.6    | 0.0 | 1120.1  |
|    | 222 | 0.0 | 1662.0 | 0.0 | -5.6   | 0.0 | -498.3  |
| 16 | 217 | 0.0 | 1876.5 | 0.0 | 3.2    | 0.0 | 1259.3  |
|    | 222 | 0.0 | 1588.5 | 0.0 | -3.2   | 0.0 | -655.0  |
| 17 | 217 | 0.0 | 1992.6 | 0.0 | -9.9   | 0.0 | 1478.0  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 222 | 0.0 | 1472.4 | 0.0 | 9.9    | 0.0 | -711.3  |
| 18 | 217 | 0.0 | 1919.1 | 0.0 | -7.5   | 0.0 | 1338.8  |
|    | 222 | 0.0 | 1545.9 | 0.0 | 7.5    | 0.0 | -554.7  |
|    |     |     |        |     |        |     |         |
| 1  | 303 | 0.0 | 7893.6 | 0.0 | -96.0  | 0.0 | 5293.2  |
|    | 304 | 0.0 | 8156.4 | 0.0 | 96.0   | 0.0 | -5937.1 |
| 2  | 303 | 0.0 | 4044.4 | 0.0 | -69.9  | 0.0 | 549.6   |
|    | 304 | 0.0 | 6544.5 | 0.0 | 69.9   | 0.0 | -6675.2 |
| 3  | 303 | 0.0 | 4342.3 | 0.0 | -69.6  | 0.0 | 1307.2  |
|    | 304 | 0.0 | 6246.6 | 0.0 | 69.6   | 0.0 | -5973.1 |
| 4  | 303 | 0.0 | 4102.7 | 0.0 | -103.2 | 0.0 | 703.9   |
|    | 304 | 0.0 | 6486.1 | 0.0 | 103.2  | 0.0 | -6543.5 |
| 5  | 303 | 0.0 | 4298.5 | 0.0 | -114.8 | 0.0 | 1201.4  |
|    | 304 | 0.0 | 6290.4 | 0.0 | 114.8  | 0.0 | -6082.0 |
| 6  | 303 | 0.0 | 4696.9 | 0.0 | -108.5 | 0.0 | 2208.0  |
|    | 304 | 0.0 | 5892.0 | 0.0 | 108.5  | 0.0 | -5136.6 |
| 7  | 303 | 0.0 | 4994.7 | 0.0 | -108.3 | 0.0 | 2965.6  |
|    | 304 | 0.0 | 5594.2 | 0.0 | 108.3  | 0.0 | -4434.5 |
| 8  | 303 | 0.0 | 5095.7 | 0.0 | -102.4 | 0.0 | 3229.3  |
|    | 304 | 0.0 | 5493.2 | 0.0 | 102.4  | 0.0 | -4203.1 |
| 9  | 303 | 0.0 | 5291.4 | 0.0 | -114.0 | 0.0 | 3726.9  |
|    | 304 | 0.0 | 5297.5 | 0.0 | 114.0  | 0.0 | -3741.5 |
| 10 | 303 | 0.0 | 5911.8 | 0.0 | -73.0  | 0.0 | 3959.4  |
|    | 304 | 0.0 | 6117.7 | 0.0 | 73.0   | 0.0 | -4463.9 |
| 11 | 303 | 0.0 | 5132.0 | 0.0 | -52.8  | 0.0 | 3313.5  |
|    | 304 | 0.0 | 5456.9 | 0.0 | 52.8   | 0.0 | -4109.5 |
| 12 | 303 | 0.0 | 5223.3 | 0.0 | -47.5  | 0.0 | 3546.1  |
|    | 304 | 0.0 | 5365.6 | 0.0 | 47.5   | 0.0 | -3894.7 |
| 13 | 303 | 0.0 | 5233.6 | 0.0 | -86.2  | 0.0 | 3582.8  |
|    | 304 | 0.0 | 5355.3 | 0.0 | 86.2   | 0.0 | -3880.9 |
| 14 | 303 | 0.0 | 5142.3 | 0.0 | -91.5  | 0.0 | 3350.3  |
|    | 304 | 0.0 | 5446.6 | 0.0 | 91.5   | 0.0 | -4095.7 |
| 15 | 303 | 0.0 | 4827.8 | 0.0 | -70.5  | 0.0 | 2538.3  |
|    | 304 | 0.0 | 5761.1 | 0.0 | 70.5   | 0.0 | -4825.6 |
| 16 | 303 | 0.0 | 4919.0 | 0.0 | -65.2  | 0.0 | 2770.9  |
|    | 304 | 0.0 | 5669.9 | 0.0 | 65.2   | 0.0 | -4610.8 |
| 17 | 303 | 0.0 | 5537.9 | 0.0 | -68.5  | 0.0 | 4358.0  |
|    | 304 | 0.0 | 5051.0 | 0.0 | 68.5   | 0.0 | -3164.8 |
| 18 | 303 | 0.0 | 5446.6 | 0.0 | -73.8  | 0.0 | 4125.5  |
|    | 304 | 0.0 | 5142.3 | 0.0 | 73.8   | 0.0 | -3379.6 |
|    |     |     |        |     |        |     |         |
| 1  | 304 | 0.0 | 4790.5 | 0.0 | 19.4   | 0.0 | 3159.5  |
|    | 305 | 0.0 | 2743.2 | 0.0 | -19.4  | 0.0 | -805.0  |
| 2  | 304 | 0.0 | 1678.9 | 0.0 | -18.9  | 0.0 | 674.7   |
|    | 305 | 0.0 | 3291.4 | 0.0 | 18.9   | 0.0 | -2533.6 |
| 3  | 304 | 0.0 | 2049.7 | 0.0 | -49.4  | 0.0 | 1022.9  |
|    | 305 | 0.0 | 2920.5 | 0.0 | 49.4   | 0.0 | -2027.7 |
| 4  | 304 | 0.0 | 1835.5 | 0.0 | -19.5  | 0.0 | 840.9   |
|    | 305 | 0.0 | 3134.8 | 0.0 | 19.5   | 0.0 | -2339.2 |
| 5  | 304 | 0.0 | 2067.0 | 0.0 | -45.1  | 0.0 | 1054.3  |
|    | 305 | 0.0 | 2903.3 | 0.0 | 45.1   | 0.0 | -2019.2 |
| 6  | 304 | 0.0 | 2450.6 | 0.0 | -104.6 | 0.0 | 1385.9  |
|    | 305 | 0.0 | 2519.6 | 0.0 | 104.6  | 0.0 | -1467.0 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 7  | 304 | 0.0 | 2821.5 | 0.0 | -135.0 | 0.0 | 1734.2  |
|    | 305 | 0.0 | 2148.8 | 0.0 | 135.0  | 0.0 | -961.1  |
| 8  | 304 | 0.0 | 3071.8 | 0.0 | -121.0 | 0.0 | 2001.8  |
|    | 305 | 0.0 | 1898.5 | 0.0 | 121.0  | 0.0 | -652.8  |
| 9  | 304 | 0.0 | 3303.3 | 0.0 | -146.7 | 0.0 | 2215.1  |
|    | 305 | 0.0 | 1667.0 | 0.0 | 146.7  | 0.0 | -332.9  |
| 10 | 304 | 0.0 | 3584.5 | 0.0 | 14.5   | 0.0 | 2360.3  |
|    | 305 | 0.0 | 2061.9 | 0.0 | -14.5  | 0.0 | -609.3  |
| 11 | 304 | 0.0 | 2986.0 | 0.0 | 13.8   | 0.0 | 1890.8  |
|    | 305 | 0.0 | 1984.3 | 0.0 | -13.8  | 0.0 | -739.2  |
| 12 | 304 | 0.0 | 3110.2 | 0.0 | 10.0   | 0.0 | 2010.9  |
|    | 305 | 0.0 | 1860.0 | 0.0 | -10.0  | 0.0 | -573.2  |
| 13 | 304 | 0.0 | 3269.1 | 0.0 | 11.7   | 0.0 | 2192.1  |
|    | 305 | 0.0 | 1701.2 | 0.0 | -11.7  | 0.0 | -388.8  |
| 14 | 304 | 0.0 | 3144.8 | 0.0 | 15.5   | 0.0 | 2072.1  |
|    | 305 | 0.0 | 1825.5 | 0.0 | -15.5  | 0.0 | -554.8  |
| 15 | 304 | 0.0 | 2571.7 | 0.0 | 26.3   | 0.0 | 1490.5  |
|    | 305 | 0.0 | 2398.6 | 0.0 | -26.3  | 0.0 | -1292.6 |
| 16 | 304 | 0.0 | 2696.0 | 0.0 | 22.6   | 0.0 | 1610.6  |
|    | 305 | 0.0 | 2274.3 | 0.0 | -22.6  | 0.0 | -1126.6 |
| 17 | 304 | 0.0 | 3683.4 | 0.0 | -0.8   | 0.0 | 2592.4  |
|    | 305 | 0.0 | 1286.9 | 0.0 | 0.8    | 0.0 | 164.6   |
| 18 | 304 | 0.0 | 3559.1 | 0.0 | 2.9    | 0.0 | 2472.3  |
|    | 305 | 0.0 | 1411.2 | 0.0 | -2.9   | 0.0 | -1.4    |
| 1  | 310 | 0.0 | 8821.9 | 0.0 | 19.2   | 0.0 | 4593.7  |
|    | 311 | 0.0 | 9758.9 | 0.0 | -19.2  | 0.0 | -6889.6 |
| 2  | 310 | 0.0 | 4752.8 | 0.0 | 19.6   | 0.0 | 859.5   |
|    | 311 | 0.0 | 6904.3 | 0.0 | -19.6  | 0.0 | -6133.3 |
| 3  | 310 | 0.0 | 4900.9 | 0.0 | 13.2   | 0.0 | 1247.2  |
|    | 311 | 0.0 | 6756.2 | 0.0 | -13.2  | 0.0 | -5794.8 |
| 4  | 310 | 0.0 | 4725.3 | 0.0 | -27.7  | 0.0 | 785.8   |
|    | 311 | 0.0 | 6931.8 | 0.0 | 27.7   | 0.0 | -6194.6 |
| 5  | 310 | 0.0 | 4859.8 | 0.0 | -47.7  | 0.0 | 1138.0  |
|    | 311 | 0.0 | 6797.3 | 0.0 | 47.7   | 0.0 | -5887.5 |
| 6  | 310 | 0.0 | 5201.1 | 0.0 | -47.0  | 0.0 | 2033.4  |
|    | 311 | 0.0 | 6456.0 | 0.0 | 47.0   | 0.0 | -5109.5 |
| 7  | 310 | 0.0 | 5349.2 | 0.0 | -53.4  | 0.0 | 2421.1  |
|    | 311 | 0.0 | 6307.9 | 0.0 | 53.4   | 0.0 | -4771.0 |
| 8  | 310 | 0.0 | 5218.9 | 0.0 | -49.0  | 0.0 | 2078.2  |
|    | 311 | 0.0 | 6438.2 | 0.0 | 49.0   | 0.0 | -5066.2 |
| 9  | 310 | 0.0 | 5353.4 | 0.0 | -69.0  | 0.0 | 2430.4  |
|    | 311 | 0.0 | 6303.7 | 0.0 | 69.0   | 0.0 | -4759.1 |
| 10 | 310 | 0.0 | 6554.6 | 0.0 | 14.3   | 0.0 | 3402.6  |
|    | 311 | 0.0 | 7263.4 | 0.0 | -14.3  | 0.0 | -5139.1 |
| 11 | 310 | 0.0 | 5524.2 | 0.0 | 54.6   | 0.0 | 2867.2  |
|    | 311 | 0.0 | 6132.9 | 0.0 | -54.6  | 0.0 | -4358.5 |
| 12 | 310 | 0.0 | 5535.5 | 0.0 | 67.4   | 0.0 | 2896.7  |
|    | 311 | 0.0 | 6121.6 | 0.0 | -67.4  | 0.0 | -4332.6 |
| 13 | 310 | 0.0 | 5479.0 | 0.0 | -30.4  | 0.0 | 2746.2  |
|    | 311 | 0.0 | 6178.1 | 0.0 | 30.4   | 0.0 | -4458.9 |
| 14 | 310 | 0.0 | 5467.8 | 0.0 | -43.2  | 0.0 | 2716.7  |
|    | 311 | 0.0 | 6189.3 | 0.0 | 43.2   | 0.0 | -4484.7 |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
| 15 | 310 | 0.0 | 5486.8 | 0.0 | 11.6   | 0.0 | 2769.0  |
|    | 311 | 0.0 | 6170.3 | 0.0 | -11.6  | 0.0 | -4444.5 |
| 16 | 310 | 0.0 | 5498.0 | 0.0 | 24.5   | 0.0 | 2798.4  |
|    | 311 | 0.0 | 6159.1 | 0.0 | -24.5  | 0.0 | -4418.7 |
| 17 | 310 | 0.0 | 5516.5 | 0.0 | 12.6   | 0.0 | 2844.5  |
|    | 311 | 0.0 | 6140.6 | 0.0 | -12.6  | 0.0 | -4372.9 |
| 18 | 310 | 0.0 | 5505.2 | 0.0 | -0.3   | 0.0 | 2815.0  |
|    | 311 | 0.0 | 6151.9 | 0.0 | 0.3    | 0.0 | -4398.7 |
|    |     |     |        |     |        |     |         |
| 1  | 311 | 0.0 | 5689.4 | 0.0 | -78.5  | 0.0 | 4300.2  |
|    | 312 | 0.0 | 3032.2 | 0.0 | 78.5   | 0.0 | -1244.3 |
| 2  | 311 | 0.0 | 2670.4 | 0.0 | -132.8 | 0.0 | 3124.4  |
|    | 312 | 0.0 | 2801.3 | 0.0 | 132.8  | 0.0 | -2543.1 |
| 3  | 311 | 0.0 | 2886.5 | 0.0 | -213.9 | 0.0 | 3258.4  |
|    | 312 | 0.0 | 2585.2 | 0.0 | 213.9  | 0.0 | -2151.6 |
| 4  | 311 | 0.0 | 2628.1 | 0.0 | -105.4 | 0.0 | 2571.5  |
|    | 312 | 0.0 | 2843.6 | 0.0 | 105.4  | 0.0 | -2627.1 |
| 5  | 311 | 0.0 | 2818.2 | 0.0 | -170.2 | 0.0 | 2429.9  |
|    | 312 | 0.0 | 2653.5 | 0.0 | 170.2  | 0.0 | -2279.7 |
| 6  | 311 | 0.0 | 3304.0 | 0.0 | -348.6 | 0.0 | 2652.3  |
|    | 312 | 0.0 | 2167.7 | 0.0 | 348.6  | 0.0 | -1385.0 |
| 7  | 311 | 0.0 | 3520.1 | 0.0 | -429.7 | 0.0 | 2786.3  |
|    | 312 | 0.0 | 1951.6 | 0.0 | 429.7  | 0.0 | -993.5  |
| 8  | 311 | 0.0 | 3348.5 | 0.0 | -375.7 | 0.0 | 3018.2  |
|    | 312 | 0.0 | 2123.2 | 0.0 | 375.7  | 0.0 | -1322.0 |
| 9  | 311 | 0.0 | 3538.6 | 0.0 | -440.5 | 0.0 | 2876.5  |
|    | 312 | 0.0 | 1933.1 | 0.0 | 440.5  | 0.0 | -974.6  |
| 10 | 311 | 0.0 | 4252.7 | 0.0 | -60.1  | 0.0 | 3226.9  |
|    | 312 | 0.0 | 2233.3 | 0.0 | 60.1   | 0.0 | -904.7  |
| 11 | 311 | 0.0 | 3724.3 | 0.0 | -80.0  | 0.0 | 2849.0  |
|    | 312 | 0.0 | 1747.4 | 0.0 | 80.0   | 0.0 | -596.0  |
| 12 | 311 | 0.0 | 3747.0 | 0.0 | -92.7  | 0.0 | 2878.3  |
|    | 312 | 0.0 | 1724.7 | 0.0 | 92.7   | 0.0 | -557.8  |
| 13 | 311 | 0.0 | 3654.3 | 0.0 | -37.7  | 0.0 | 2868.5  |
|    | 312 | 0.0 | 1817.4 | 0.0 | 37.7   | 0.0 | -735.6  |
| 14 | 311 | 0.0 | 3631.7 | 0.0 | -25.0  | 0.0 | 2839.3  |
|    | 312 | 0.0 | 1840.0 | 0.0 | 25.0   | 0.0 | -773.7  |
| 15 | 311 | 0.0 | 3648.8 | 0.0 | -37.9  | 0.0 | 2751.6  |
|    | 312 | 0.0 | 1822.9 | 0.0 | 37.9   | 0.0 | -723.1  |
| 16 | 311 | 0.0 | 3671.5 | 0.0 | -50.5  | 0.0 | 2780.8  |
|    | 312 | 0.0 | 1800.2 | 0.0 | 50.5   | 0.0 | -685.0  |
| 17 | 311 | 0.0 | 3729.8 | 0.0 | -79.9  | 0.0 | 2966.0  |
|    | 312 | 0.0 | 1741.9 | 0.0 | 79.9   | 0.0 | -608.4  |
| 18 | 311 | 0.0 | 3707.2 | 0.0 | -67.2  | 0.0 | 2936.7  |
|    | 312 | 0.0 | 1764.5 | 0.0 | 67.2   | 0.0 | -646.6  |
|    |     |     |        |     |        |     |         |
| 1  | 315 | 0.0 | 5078.3 | 0.0 | -1.1   | 0.0 | 2574.4  |
|    | 316 | 0.0 | 5574.3 | 0.0 | 1.1    | 0.0 | -3789.8 |
| 2  | 315 | 0.0 | 2726.0 | 0.0 | 4.4    | 0.0 | -201.0  |
|    | 316 | 0.0 | 4589.7 | 0.0 | -4.4   | 0.0 | -4368.3 |
| 3  | 315 | 0.0 | 2885.0 | 0.0 | 2.2    | 0.0 | 211.7   |
|    | 316 | 0.0 | 4430.7 | 0.0 | -2.2   | 0.0 | -4001.9 |
| 4  | 315 | 0.0 | 2668.6 | 0.0 | -45.8  | 0.0 | -363.3  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 316 | 0.0 | 4647.1 | 0.0 | 45.8   | 0.0 | -4487.7 |
| 5  | 315 | 0.0 | 2809.4 | 0.0 | -65.0  | 0.0 | -3.7    |
|    | 316 | 0.0 | 4506.3 | 0.0 | 65.0   | 0.0 | -4156.9 |
| 6  | 315 | 0.0 | 3195.4 | 0.0 | -59.7  | 0.0 | 997.8   |
|    | 316 | 0.0 | 4120.3 | 0.0 | 59.7   | 0.0 | -3265.6 |
| 7  | 315 | 0.0 | 3354.4 | 0.0 | -61.8  | 0.0 | 1410.4  |
|    | 316 | 0.0 | 3961.3 | 0.0 | 61.8   | 0.0 | -2899.3 |
| 8  | 315 | 0.0 | 3198.5 | 0.0 | -53.0  | 0.0 | 1012.2  |
|    | 316 | 0.0 | 4117.2 | 0.0 | 53.0   | 0.0 | -3266.4 |
| 9  | 315 | 0.0 | 3339.4 | 0.0 | -72.2  | 0.0 | 1371.8  |
|    | 316 | 0.0 | 3976.3 | 0.0 | 72.2   | 0.0 | -2935.6 |
| 10 | 315 | 0.0 | 3826.1 | 0.0 | -1.1   | 0.0 | 1933.2  |
|    | 316 | 0.0 | 4209.9 | 0.0 | 1.1    | 0.0 | -2873.4 |
| 11 | 315 | 0.0 | 3509.5 | 0.0 | 43.1   | 0.0 | 1856.3  |
|    | 316 | 0.0 | 3806.2 | 0.0 | -43.1  | 0.0 | -2583.0 |
| 12 | 315 | 0.0 | 3525.6 | 0.0 | 59.1   | 0.0 | 1903.5  |
|    | 316 | 0.0 | 3790.1 | 0.0 | -59.1  | 0.0 | -2551.6 |
| 13 | 315 | 0.0 | 3412.8 | 0.0 | -47.4  | 0.0 | 1581.7  |
|    | 316 | 0.0 | 3902.9 | 0.0 | 47.4   | 0.0 | -2782.7 |
| 14 | 315 | 0.0 | 3396.7 | 0.0 | -63.4  | 0.0 | 1534.5  |
|    | 316 | 0.0 | 3919.0 | 0.0 | 63.4   | 0.0 | -2814.2 |
| 15 | 315 | 0.0 | 3455.7 | 0.0 | -10.3  | 0.0 | 1698.9  |
|    | 316 | 0.0 | 3860.0 | 0.0 | 10.3   | 0.0 | -2687.9 |
| 16 | 315 | 0.0 | 3471.9 | 0.0 | 5.7    | 0.0 | 1746.1  |
|    | 316 | 0.0 | 3843.8 | 0.0 | -5.7   | 0.0 | -2656.5 |
| 17 | 315 | 0.0 | 3466.5 | 0.0 | 6.0    | 0.0 | 1739.1  |
|    | 316 | 0.0 | 3849.2 | 0.0 | -6.0   | 0.0 | -2677.9 |
| 18 | 315 | 0.0 | 3450.4 | 0.0 | -10.1  | 0.0 | 1691.9  |
|    | 316 | 0.0 | 3865.3 | 0.0 | 10.1   | 0.0 | -2709.3 |
| 1  | 316 | 0.0 | 3003.0 | 0.0 | -32.0  | 0.0 | 2177.8  |
|    | 317 | 0.0 | 1997.2 | 0.0 | 32.0   | 0.0 | -1021.2 |
| 2  | 316 | 0.0 | 1097.7 | 0.0 | 27.0   | 0.0 | 1832.6  |
|    | 317 | 0.0 | 2336.2 | 0.0 | -27.0  | 0.0 | -2555.3 |
| 3  | 316 | 0.0 | 1291.9 | 0.0 | -36.5  | 0.0 | 1915.7  |
|    | 317 | 0.0 | 2142.0 | 0.0 | 36.5   | 0.0 | -2183.2 |
| 4  | 316 | 0.0 | 939.3  | 0.0 | -24.4  | 0.0 | 1214.1  |
|    | 317 | 0.0 | 2494.6 | 0.0 | 24.4   | 0.0 | -2821.1 |
| 5  | 316 | 0.0 | 1083.0 | 0.0 | -102.7 | 0.0 | 1045.6  |
|    | 317 | 0.0 | 2350.9 | 0.0 | 102.7  | 0.0 | -2535.8 |
| 6  | 316 | 0.0 | 1576.4 | 0.0 | -234.0 | 0.0 | 1270.9  |
|    | 317 | 0.0 | 1857.5 | 0.0 | 234.0  | 0.0 | -1604.6 |
| 7  | 316 | 0.0 | 1770.6 | 0.0 | -297.5 | 0.0 | 1354.0  |
|    | 317 | 0.0 | 1663.3 | 0.0 | 297.5  | 0.0 | -1232.5 |
| 8  | 316 | 0.0 | 1586.7 | 0.0 | -235.9 | 0.0 | 1491.0  |
|    | 317 | 0.0 | 1847.2 | 0.0 | 235.9  | 0.0 | -1580.7 |
| 9  | 316 | 0.0 | 1730.3 | 0.0 | -314.2 | 0.0 | 1322.5  |
|    | 317 | 0.0 | 1703.6 | 0.0 | 314.2  | 0.0 | -1295.5 |
| 10 | 316 | 0.0 | 2279.2 | 0.0 | -24.4  | 0.0 | 1663.4  |
|    | 317 | 0.0 | 1492.8 | 0.0 | 24.4   | 0.0 | -759.0  |
| 11 | 316 | 0.0 | 2277.5 | 0.0 | 20.3   | 0.0 | 1527.2  |
|    | 317 | 0.0 | 1156.4 | 0.0 | -20.3  | 0.0 | -407.0  |
| 12 | 316 | 0.0 | 2324.3 | 0.0 | 33.3   | 0.0 | 1482.0  |

|    |     |     |        |     |        |     |         |
|----|-----|-----|--------|-----|--------|-----|---------|
|    | 317 | 0.0 | 1109.6 | 0.0 | -33.3  | 0.0 | -327.3  |
| 13 | 316 | 0.0 | 2001.1 | 0.0 | -67.1  | 0.0 | 1691.8  |
|    | 317 | 0.0 | 1432.8 | 0.0 | 67.1   | 0.0 | -869.0  |
| 14 | 316 | 0.0 | 1954.3 | 0.0 | -80.0  | 0.0 | 1737.0  |
|    | 317 | 0.0 | 1479.6 | 0.0 | 80.0   | 0.0 | -948.7  |
| 15 | 316 | 0.0 | 2121.5 | 0.0 | -22.7  | 0.0 | 1677.9  |
|    | 317 | 0.0 | 1312.4 | 0.0 | 22.7   | 0.0 | -672.8  |
| 16 | 316 | 0.0 | 2168.3 | 0.0 | -9.8   | 0.0 | 1632.7  |
|    | 317 | 0.0 | 1265.6 | 0.0 | 9.8    | 0.0 | -593.1  |
| 17 | 316 | 0.0 | 2157.1 | 0.0 | -24.0  | 0.0 | 1541.1  |
|    | 317 | 0.0 | 1276.8 | 0.0 | 24.0   | 0.0 | -603.2  |
| 18 | 316 | 0.0 | 2110.3 | 0.0 | -36.9  | 0.0 | 1586.3  |
|    | 317 | 0.0 | 1323.6 | 0.0 | 36.9   | 0.0 | -682.9  |
|    |     |     |        |     |        |     |         |
| 1  | 303 | 0.0 | 2078.3 | 0.0 | -203.8 | 0.0 | 1191.9  |
|    | 310 | 0.0 | 2255.6 | 0.0 | 203.8  | 0.0 | -1564.4 |
| 2  | 303 | 0.0 | 1666.2 | 0.0 | -55.5  | 0.0 | 1056.3  |
|    | 310 | 0.0 | 1667.5 | 0.0 | 55.5   | 0.0 | -1059.1 |
| 3  | 303 | 0.0 | 1555.7 | 0.0 | -76.0  | 0.0 | 834.3   |
|    | 310 | 0.0 | 1778.1 | 0.0 | 76.0   | 0.0 | -1301.4 |
| 4  | 303 | 0.0 | 1546.2 | 0.0 | -65.4  | 0.0 | 815.9   |
|    | 310 | 0.0 | 1787.6 | 0.0 | 65.4   | 0.0 | -1322.9 |
| 5  | 303 | 0.0 | 1407.6 | 0.0 | -73.1  | 0.0 | 537.8   |
|    | 310 | 0.0 | 1926.2 | 0.0 | 73.1   | 0.0 | -1626.9 |
| 6  | 303 | 0.0 | 1204.2 | 0.0 | -81.3  | 0.0 | 129.4   |
|    | 310 | 0.0 | 2129.5 | 0.0 | 81.3   | 0.0 | -2072.5 |
| 7  | 303 | 0.0 | 1093.7 | 0.0 | -101.8 | 0.0 | -92.5   |
|    | 310 | 0.0 | 2240.1 | 0.0 | 101.8  | 0.0 | -2314.9 |
| 8  | 303 | 0.0 | 1177.7 | 0.0 | -133.6 | 0.0 | 76.1    |
|    | 310 | 0.0 | 2156.0 | 0.0 | 133.6  | 0.0 | -2130.6 |
| 9  | 303 | 0.0 | 1039.1 | 0.0 | -141.4 | 0.0 | -202.0  |
|    | 310 | 0.0 | 2294.6 | 0.0 | 141.4  | 0.0 | -2434.6 |
| 10 | 303 | 0.0 | 1594.3 | 0.0 | -151.3 | 0.0 | 908.8   |
|    | 310 | 0.0 | 1739.5 | 0.0 | 151.3  | 0.0 | -1213.6 |
| 11 | 303 | 0.0 | 1677.7 | 0.0 | -118.4 | 0.0 | 1078.9  |
|    | 310 | 0.0 | 1656.0 | 0.0 | 118.4  | 0.0 | -1033.2 |
| 12 | 303 | 0.0 | 1702.5 | 0.0 | -113.4 | 0.0 | 1128.3  |
|    | 310 | 0.0 | 1631.3 | 0.0 | 113.4  | 0.0 | -978.8  |
| 13 | 303 | 0.0 | 1471.0 | 0.0 | -133.9 | 0.0 | 664.9   |
|    | 310 | 0.0 | 1862.7 | 0.0 | 133.9  | 0.0 | -1487.4 |
| 14 | 303 | 0.0 | 1446.3 | 0.0 | -138.9 | 0.0 | 615.5   |
|    | 310 | 0.0 | 1887.4 | 0.0 | 138.9  | 0.0 | -1541.8 |
| 15 | 303 | 0.0 | 1595.3 | 0.0 | -135.1 | 0.0 | 914.1   |
|    | 310 | 0.0 | 1738.4 | 0.0 | 135.1  | 0.0 | -1214.5 |
| 16 | 303 | 0.0 | 1620.1 | 0.0 | -130.1 | 0.0 | 963.5   |
|    | 310 | 0.0 | 1713.7 | 0.0 | 130.1  | 0.0 | -1160.1 |
| 17 | 303 | 0.0 | 1553.4 | 0.0 | -117.2 | 0.0 | 829.7   |
|    | 310 | 0.0 | 1780.3 | 0.0 | 117.2  | 0.0 | -1306.1 |
| 18 | 303 | 0.0 | 1528.7 | 0.0 | -122.2 | 0.0 | 780.3   |
|    | 310 | 0.0 | 1805.0 | 0.0 | 122.2  | 0.0 | -1360.5 |
|    |     |     |        |     |        |     |         |
| 1  | 310 | 0.0 | 1111.2 | 0.0 | 316.7  | 0.0 | 447.8   |
|    | 315 | 0.0 | 1055.7 | 0.0 | -316.7 | 0.0 | -389.6  |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 2  | 310 | 0.0 | 1246.6  | 0.0 | 177.8  | 0.0 | 749.6   |
|    | 315 | 0.0 | 420.3   | 0.0 | -177.8 | 0.0 | 118.1   |
| 3  | 310 | 0.0 | 784.1   | 0.0 | 176.1  | 0.0 | 270.7   |
|    | 315 | 0.0 | 882.7   | 0.0 | -176.1 | 0.0 | -374.3  |
| 4  | 310 | 0.0 | 750.4   | 0.0 | 158.6  | 0.0 | 235.9   |
|    | 315 | 0.0 | 916.5   | 0.0 | -158.6 | 0.0 | -410.2  |
| 5  | 310 | 0.0 | 170.7   | 0.0 | 150.4  | 0.0 | -364.4  |
|    | 315 | 0.0 | 1496.2  | 0.0 | -150.4 | 0.0 | -1027.4 |
| 6  | 310 | 0.0 | -685.8  | 0.0 | 150.6  | 0.0 | -1251.2 |
|    | 315 | 0.0 | 2352.6  | 0.0 | -150.6 | 0.0 | -1939.1 |
| 7  | 310 | 0.0 | -1148.3 | 0.0 | 148.9  | 0.0 | -1730.1 |
|    | 315 | 0.0 | 2815.1  | 0.0 | -148.9 | 0.0 | -2431.5 |
| 8  | 310 | 0.0 | -791.2  | 0.0 | 152.9  | 0.0 | -1360.2 |
|    | 315 | 0.0 | 2458.1  | 0.0 | -152.9 | 0.0 | -2051.5 |
| 9  | 310 | 0.0 | -1370.9 | 0.0 | 144.8  | 0.0 | -1960.5 |
|    | 315 | 0.0 | 3037.8  | 0.0 | -144.8 | 0.0 | -2668.7 |
| 10 | 310 | 0.0 | 858.8   | 0.0 | 231.0  | 0.0 | 348.6   |
|    | 315 | 0.0 | 808.1   | 0.0 | -231.0 | 0.0 | -295.4  |
| 11 | 310 | 0.0 | 1303.5  | 0.0 | 190.9  | 0.0 | 808.8   |
|    | 315 | 0.0 | 363.4   | 0.0 | -190.9 | 0.0 | 178.4   |
| 12 | 310 | 0.0 | 1406.6  | 0.0 | 197.0  | 0.0 | 915.6   |
|    | 315 | 0.0 | 260.2   | 0.0 | -197.0 | 0.0 | 288.1   |
| 13 | 310 | 0.0 | 450.1   | 0.0 | 156.5  | 0.0 | -74.7   |
|    | 315 | 0.0 | 1216.8  | 0.0 | -156.5 | 0.0 | -730.3  |
| 14 | 310 | 0.0 | 347.0   | 0.0 | 150.4  | 0.0 | -181.5  |
|    | 315 | 0.0 | 1319.9  | 0.0 | -150.4 | 0.0 | -840.0  |
| 15 | 310 | 0.0 | 959.8   | 0.0 | 170.6  | 0.0 | 452.8   |
|    | 315 | 0.0 | 707.1   | 0.0 | -170.6 | 0.0 | -187.5  |
| 16 | 310 | 0.0 | 1062.9  | 0.0 | 176.7  | 0.0 | 559.6   |
|    | 315 | 0.0 | 604.0   | 0.0 | -176.7 | 0.0 | -77.7   |
| 17 | 310 | 0.0 | 793.9   | 0.0 | 176.8  | 0.0 | 281.3   |
|    | 315 | 0.0 | 873.0   | 0.0 | -176.8 | 0.0 | -364.4  |
| 18 | 310 | 0.0 | 690.7   | 0.0 | 170.7  | 0.0 | 174.5   |
|    | 315 | 0.0 | 976.1   | 0.0 | -170.7 | 0.0 | -474.2  |
|    |     |     |         |     |        |     |         |
| 1  | 304 | 0.0 | 1000.5  | 0.0 | 127.0  | 0.0 | 602.5   |
|    | 311 | 0.0 | 1047.0  | 0.0 | -127.0 | 0.0 | -700.0  |
| 2  | 304 | 0.0 | 646.2   | 0.0 | 154.1  | 0.0 | 210.1   |
|    | 311 | 0.0 | 928.8   | 0.0 | -154.1 | 0.0 | -803.5  |
| 3  | 304 | 0.0 | 538.8   | 0.0 | 132.5  | 0.0 | -10.2   |
|    | 311 | 0.0 | 1036.2  | 0.0 | -132.5 | 0.0 | -1034.5 |
| 4  | 304 | 0.0 | 683.6   | 0.0 | 144.4  | 0.0 | 287.4   |
|    | 311 | 0.0 | 891.4   | 0.0 | -144.4 | 0.0 | -724.0  |
| 5  | 304 | 0.0 | 598.2   | 0.0 | 133.3  | 0.0 | 112.9   |
|    | 311 | 0.0 | 976.8   | 0.0 | -133.3 | 0.0 | -907.9  |
| 6  | 304 | 0.0 | 361.8   | 0.0 | 117.1  | 0.0 | -371.5  |
|    | 311 | 0.0 | 1213.2  | 0.0 | -117.1 | 0.0 | -1416.5 |
| 7  | 304 | 0.0 | 254.3   | 0.0 | 95.5   | 0.0 | -591.8  |
|    | 311 | 0.0 | 1320.7  | 0.0 | -95.5  | 0.0 | -1647.5 |
| 8  | 304 | 0.0 | 325.4   | 0.0 | 72.4   | 0.0 | -446.9  |
|    | 311 | 0.0 | 1249.6  | 0.0 | -72.4  | 0.0 | -1493.8 |
| 9  | 304 | 0.0 | 240.1   | 0.0 | 61.3   | 0.0 | -621.4  |
|    | 311 | 0.0 | 1334.9  | 0.0 | -61.3  | 0.0 | -1677.7 |

|    |     |     |         |     |        |     |         |
|----|-----|-----|---------|-----|--------|-----|---------|
| 10 | 304 | 0.0 | 765.3   | 0.0 | 93.5   | 0.0 | 454.5   |
|    | 311 | 0.0 | 809.7   | 0.0 | -93.5  | 0.0 | -547.9  |
| 11 | 304 | 0.0 | 716.4   | 0.0 | 82.5   | 0.0 | 353.9   |
|    | 311 | 0.0 | 858.6   | 0.0 | -82.5  | 0.0 | -652.5  |
| 12 | 304 | 0.0 | 699.3   | 0.0 | 72.8   | 0.0 | 318.5   |
|    | 311 | 0.0 | 875.7   | 0.0 | -72.8  | 0.0 | -688.8  |
| 13 | 304 | 0.0 | 774.2   | 0.0 | 65.8   | 0.0 | 473.5   |
|    | 311 | 0.0 | 800.8   | 0.0 | -65.8  | 0.0 | -529.3  |
| 14 | 304 | 0.0 | 791.3   | 0.0 | 75.5   | 0.0 | 508.8   |
|    | 311 | 0.0 | 783.7   | 0.0 | -75.5  | 0.0 | -493.0  |
| 15 | 304 | 0.0 | 773.3   | 0.0 | 114.9  | 0.0 | 471.8   |
|    | 311 | 0.0 | 801.7   | 0.0 | -114.9 | 0.0 | -531.4  |
| 16 | 304 | 0.0 | 756.2   | 0.0 | 105.2  | 0.0 | 436.4   |
|    | 311 | 0.0 | 818.8   | 0.0 | -105.2 | 0.0 | -567.7  |
| 17 | 304 | 0.0 | 717.3   | 0.0 | 33.4   | 0.0 | 355.5   |
|    | 311 | 0.0 | 857.7   | 0.0 | -33.4  | 0.0 | -650.4  |
| 18 | 304 | 0.0 | 734.4   | 0.0 | 43.1   | 0.0 | 390.9   |
|    | 311 | 0.0 | 840.6   | 0.0 | -43.1  | 0.0 | -614.1  |
|    |     |     |         |     |        |     |         |
| 1  | 311 | 0.0 | 282.2   | 0.0 | -176.0 | 0.0 | -49.1   |
|    | 316 | 0.0 | 741.5   | 0.0 | 176.0  | 0.0 | -433.1  |
| 2  | 311 | 0.0 | 678.7   | 0.0 | -82.7  | 0.0 | 435.9   |
|    | 316 | 0.0 | 108.8   | 0.0 | 82.7   | 0.0 | 162.5   |
| 3  | 311 | 0.0 | 229.4   | 0.0 | -81.2  | 0.0 | -19.9   |
|    | 316 | 0.0 | 558.1   | 0.0 | 81.2   | 0.0 | -325.2  |
| 4  | 311 | 0.0 | 539.2   | 0.0 | -85.2  | 0.0 | 294.4   |
|    | 316 | 0.0 | 248.3   | 0.0 | 85.2   | 0.0 | 11.2    |
| 5  | 311 | 0.0 | 55.0    | 0.0 | -83.9  | 0.0 | -196.6  |
|    | 316 | 0.0 | 732.5   | 0.0 | 83.9   | 0.0 | -514.7  |
| 6  | 311 | 0.0 | -935.4  | 0.0 | -78.3  | 0.0 | -1200.7 |
|    | 316 | 0.0 | 1722.9  | 0.0 | 78.3   | 0.0 | -1590.5 |
| 7  | 311 | 0.0 | -1384.7 | 0.0 | -76.8  | 0.0 | -1656.5 |
|    | 316 | 0.0 | 2172.2  | 0.0 | 76.8   | 0.0 | -2078.2 |
| 8  | 311 | 0.0 | -958.4  | 0.0 | -80.4  | 0.0 | -1224.9 |
|    | 316 | 0.0 | 1745.9  | 0.0 | 80.4   | 0.0 | -1614.5 |
| 9  | 311 | 0.0 | -1442.6 | 0.0 | -79.0  | 0.0 | -1715.9 |
|    | 316 | 0.0 | 2230.1  | 0.0 | 79.0   | 0.0 | -2140.4 |
| 10 | 311 | 0.0 | 233.1   | 0.0 | -127.6 | 0.0 | -20.8   |
|    | 316 | 0.0 | 554.4   | 0.0 | 127.6  | 0.0 | -316.6  |
| 11 | 311 | 0.0 | 412.9   | 0.0 | -89.8  | 0.0 | 165.3   |
|    | 316 | 0.0 | 374.6   | 0.0 | 89.8   | 0.0 | -125.1  |
| 12 | 311 | 0.0 | 439.9   | 0.0 | -89.6  | 0.0 | 192.6   |
|    | 316 | 0.0 | 347.6   | 0.0 | 89.6   | 0.0 | -95.6   |
| 13 | 311 | 0.0 | 198.7   | 0.0 | -94.1  | 0.0 | -52.0   |
|    | 316 | 0.0 | 588.8   | 0.0 | 94.1   | 0.0 | -357.6  |
| 14 | 311 | 0.0 | 171.7   | 0.0 | -94.3  | 0.0 | -79.2   |
|    | 316 | 0.0 | 615.8   | 0.0 | 94.3   | 0.0 | -387.1  |
| 15 | 311 | 0.0 | 322.7   | 0.0 | -90.4  | 0.0 | 74.5    |
|    | 316 | 0.0 | 464.8   | 0.0 | 90.4   | 0.0 | -223.7  |
| 16 | 311 | 0.0 | 349.8   | 0.0 | -90.2  | 0.0 | 101.8   |
|    | 316 | 0.0 | 437.7   | 0.0 | 90.2   | 0.0 | -194.1  |
| 17 | 311 | 0.0 | 288.9   | 0.0 | -93.5  | 0.0 | 38.8    |
|    | 316 | 0.0 | 498.6   | 0.0 | 93.5   | 0.0 | -259.0  |

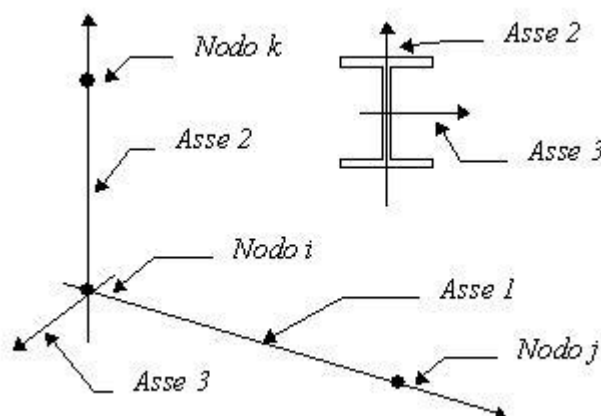
|    |     |     |        |     |       |     |         |
|----|-----|-----|--------|-----|-------|-----|---------|
| 18 | 311 | 0.0 | 261.8  | 0.0 | -93.7 | 0.0 | 11.6    |
|    | 316 | 0.0 | 525.7  | 0.0 | 93.7  | 0.0 | -288.6  |
| 1  | 305 | 0.0 | 2000.3 | 0.0 | 25.5  | 0.0 | 648.8   |
|    | 312 | 0.0 | 2504.2 | 0.0 | -25.5 | 0.0 | -1707.0 |
| 2  | 305 | 0.0 | 1343.4 | 0.0 | 13.9  | 0.0 | 56.7    |
|    | 312 | 0.0 | 2121.6 | 0.0 | -13.9 | 0.0 | -1696.0 |
| 3  | 305 | 0.0 | 1167.5 | 0.0 | 14.6  | 0.0 | -352.9  |
|    | 312 | 0.0 | 2297.5 | 0.0 | -14.6 | 0.0 | -2023.6 |
| 4  | 305 | 0.0 | 1374.6 | 0.0 | -26.1 | 0.0 | 129.4   |
|    | 312 | 0.0 | 2090.4 | 0.0 | 26.1  | 0.0 | -1638.8 |
| 5  | 305 | 0.0 | 1202.7 | 0.0 | -42.1 | 0.0 | -270.2  |
|    | 312 | 0.0 | 2262.3 | 0.0 | 42.1  | 0.0 | -1960.3 |
| 6  | 305 | 0.0 | 770.3  | 0.0 | -39.4 | 0.0 | -1275.4 |
|    | 312 | 0.0 | 2694.7 | 0.0 | 39.4  | 0.0 | -2767.9 |
| 7  | 305 | 0.0 | 594.4  | 0.0 | -38.7 | 0.0 | -1684.9 |
|    | 312 | 0.0 | 2870.6 | 0.0 | 38.7  | 0.0 | -3095.4 |
| 8  | 305 | 0.0 | 788.4  | 0.0 | -23.8 | 0.0 | -1235.9 |
|    | 312 | 0.0 | 2676.6 | 0.0 | 23.8  | 0.0 | -2730.7 |
| 9  | 305 | 0.0 | 616.4  | 0.0 | -39.8 | 0.0 | -1635.5 |
|    | 312 | 0.0 | 2848.6 | 0.0 | 39.8  | 0.0 | -3052.3 |
| 10 | 305 | 0.0 | 1537.9 | 0.0 | 17.4  | 0.0 | 499.4   |
|    | 312 | 0.0 | 1927.1 | 0.0 | -17.4 | 0.0 | -1316.6 |
| 11 | 305 | 0.0 | 1514.6 | 0.0 | 43.6  | 0.0 | 455.4   |
|    | 312 | 0.0 | 1950.4 | 0.0 | -43.6 | 0.0 | -1369.9 |
| 12 | 305 | 0.0 | 1515.0 | 0.0 | 59.0  | 0.0 | 456.2   |
|    | 312 | 0.0 | 1950.0 | 0.0 | -59.0 | 0.0 | -1368.8 |
| 13 | 305 | 0.0 | 1554.1 | 0.0 | -28.9 | 0.0 | 545.6   |
|    | 312 | 0.0 | 1910.9 | 0.0 | 28.9  | 0.0 | -1295.5 |
| 14 | 305 | 0.0 | 1553.8 | 0.0 | -44.3 | 0.0 | 544.8   |
|    | 312 | 0.0 | 1911.2 | 0.0 | 44.3  | 0.0 | -1296.6 |
| 15 | 305 | 0.0 | 1513.3 | 0.0 | -7.6  | 0.0 | 452.6   |
|    | 312 | 0.0 | 1951.7 | 0.0 | 7.6   | 0.0 | -1373.7 |
| 16 | 305 | 0.0 | 1513.7 | 0.0 | 7.7   | 0.0 | 453.5   |
|    | 312 | 0.0 | 1951.3 | 0.0 | -7.7  | 0.0 | -1372.5 |
| 17 | 305 | 0.0 | 1555.4 | 0.0 | 22.3  | 0.0 | 548.4   |
|    | 312 | 0.0 | 1909.6 | 0.0 | -22.3 | 0.0 | -1291.7 |
| 18 | 305 | 0.0 | 1555.0 | 0.0 | 7.0   | 0.0 | 547.6   |
|    | 312 | 0.0 | 1910.0 | 0.0 | -7.0  | 0.0 | -1292.8 |
| 1  | 312 | 0.0 | 1447.3 | 0.0 | -5.4  | 0.0 | 913.0   |
|    | 317 | 0.0 | 805.0  | 0.0 | 5.4   | 0.0 | -238.6  |
| 2  | 312 | 0.0 | 1629.6 | 0.0 | 6.3   | 0.0 | 1164.8  |
|    | 317 | 0.0 | 102.9  | 0.0 | -6.3  | 0.0 | -520.7  |
| 3  | 312 | 0.0 | 1088.5 | 0.0 | 7.9   | 0.0 | 724.5   |
|    | 317 | 0.0 | 644.0  | 0.0 | -7.9  | 0.0 | -1218.7 |
| 4  | 312 | 0.0 | 1539.9 | 0.0 | -30.3 | 0.0 | 1096.7  |
|    | 317 | 0.0 | 192.6  | 0.0 | 30.3  | 0.0 | 35.9    |
| 5  | 312 | 0.0 | 947.0  | 0.0 | -46.0 | 0.0 | 617.8   |
|    | 317 | 0.0 | 785.5  | 0.0 | 46.0  | 0.0 | -442.1  |
| 6  | 312 | 0.0 | -346.8 | 0.0 | -46.2 | 0.0 | -431.8  |
|    | 317 | 0.0 | 2079.3 | 0.0 | 46.2  | 0.0 | -2113.9 |
| 7  | 312 | 0.0 | -887.9 | 0.0 | -44.6 | 0.0 | -872.1  |

|    |     |     |        |     |       |     |         |
|----|-----|-----|--------|-----|-------|-----|---------|
|    | 317 | 0.0 | 2620.4 | 0.0 | 44.6  | 0.0 | -2811.9 |
| 8  | 312 | 0.0 | -263.9 | 0.0 | -25.0 | 0.0 | -370.9  |
|    | 317 | 0.0 | 1996.4 | 0.0 | 25.0  | 0.0 | -2290.8 |
| 9  | 312 | 0.0 | -856.8 | 0.0 | -40.7 | 0.0 | -849.9  |
|    | 317 | 0.0 | 2589.3 | 0.0 | 40.7  | 0.0 | -2768.8 |
| 10 | 312 | 0.0 | 1123.0 | 0.0 | -3.3  | 0.0 | 713.3   |
|    | 317 | 0.0 | 609.5  | 0.0 | 3.3   | 0.0 | -174.2  |
| 11 | 312 | 0.0 | 1228.3 | 0.0 | 33.8  | 0.0 | 809.8   |
|    | 317 | 0.0 | 504.2  | 0.0 | -33.8 | 0.0 | -615.6  |
| 12 | 312 | 0.0 | 1268.2 | 0.0 | 49.4  | 0.0 | 840.0   |
|    | 317 | 0.0 | 464.3  | 0.0 | -49.4 | 0.0 | -804.4  |
| 13 | 312 | 0.0 | 1105.7 | 0.0 | -32.6 | 0.0 | 716.6   |
|    | 317 | 0.0 | 626.8  | 0.0 | 32.6  | 0.0 | 352.3   |
| 14 | 312 | 0.0 | 1065.8 | 0.0 | -48.2 | 0.0 | 686.5   |
|    | 317 | 0.0 | 666.7  | 0.0 | 48.2  | 0.0 | 541.1   |
| 15 | 312 | 0.0 | 1095.2 | 0.0 | -18.3 | 0.0 | 709.4   |
|    | 317 | 0.0 | 637.3  | 0.0 | 18.3  | 0.0 | 13.9    |
| 16 | 312 | 0.0 | 1135.1 | 0.0 | -2.6  | 0.0 | 739.5   |
|    | 317 | 0.0 | 597.4  | 0.0 | 2.6   | 0.0 | -175.0  |
| 17 | 312 | 0.0 | 1238.8 | 0.0 | 19.5  | 0.0 | 817.1   |
|    | 317 | 0.0 | 493.7  | 0.0 | -19.5 | 0.0 | -277.2  |
| 18 | 312 | 0.0 | 1198.9 | 0.0 | 3.9   | 0.0 | 786.9   |
|    | 317 | 0.0 | 533.6  | 0.0 | -3.9  | 0.0 | -88.4   |

## - Sollecitazioni nelle travi di fondazione

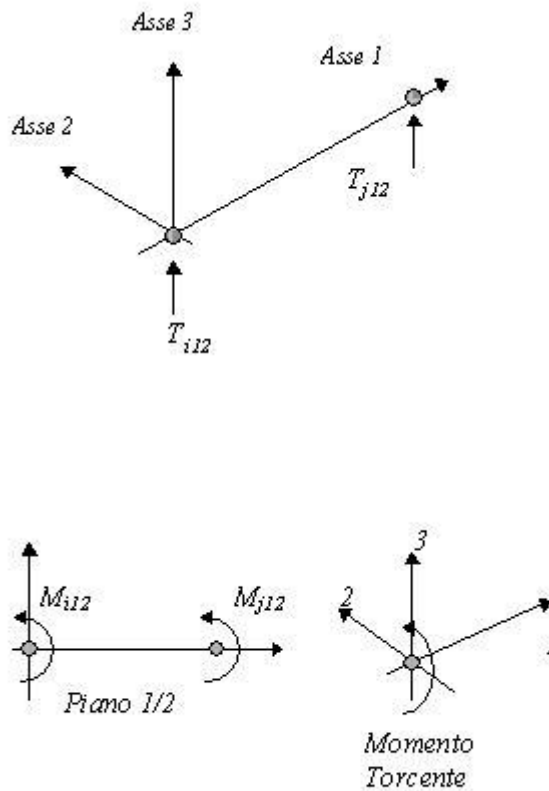
### - Convenzioni adottate

Le sollecitazioni nelle travi di fondazione sono da intendersi nel sistema di riferimento locale dell'elemento, e si riferiscono all'asta. L'orientamento della trave nello spazio è definito a mezzo del nodo  $K$ .



La terna di riferimento locale dell'asta è così disposta

Per quanto concerne i segni positivi assunti per le varie componenti di sollecitazione si assumono come positivi i versi e le sollecitazioni se così diretti:



La trave è da considerarsi appoggiata su un sottospazio elastico a comportamento bilatero (terreno alla Winkler).

| Comb. | Nodo | Presione<br>[kg/cm <sup>2</sup> ] | Mt<br>[kgm] | Taglio<br>[kg] | MFlet.<br>[kgm] |
|-------|------|-----------------------------------|-------------|----------------|-----------------|
| 1     | 2    | 1.13                              | -824.9      | -25905.3       | -19581.0        |
|       | 1    | 1.12                              | 569.0       | -18047.5       | -3090.6         |
| 2     | 2    | 0.76                              | -263.5      | -14452.8       | -7793.5         |
|       | 1    | 0.72                              | 58.8        | -12627.4       | 1864.9          |
| 3     | 2    | 0.75                              | -465.9      | -14493.9       | -9078.9         |
|       | 1    | 0.71                              | 280.0       | -11885.8       | 773.8           |
| 4     | 2    | 0.75                              | -544.5      | -14169.8       | -8512.1         |
|       | 1    | 0.70                              | 371.4       | -11414.1       | 1428.1          |
| 5     | 2    | 0.74                              | -848.3      | -14114.1       | -10070.9        |
|       | 1    | 0.69                              | 697.2       | -10343.9       | 138.7           |
| 6     | 2    | 0.72                              | -1275.9     | -14267.2       | -12989.3        |
|       | 1    | 0.67                              | 1145.0      | -9060.0        | -2432.8         |
| 7     | 2    | 0.72                              | -1478.3     | -14308.4       | -14274.7        |
|       | 1    | 0.65                              | 1366.1      | -8318.3        | -3523.9         |
| 8     | 2    | 0.72                              | -1219.1     | -14307.0       | -12796.7        |
|       | 1    | 0.65                              | 1108.5      | -8941.9        | -2208.9         |
| 9     | 2    | 0.71                              | -1522.9     | -14251.3       | -14355.5        |
|       | 1    | 0.64                              | 1434.4      | -7871.7        | -3498.2         |
| 10    | 2    | 0.86                              | -650.4      | -19311.1       | -14506.5        |
|       | 1    | 0.84                              | 453.2       | -13476.2       | -2295.6         |
| 11    | 2    | 0.79                              | -483.2      | -16737.7       | -11380.0        |

|    |   |      |         |          |          |
|----|---|------|---------|----------|----------|
|    | 1 | 0.78 | 256.9   | -11238.9 | -1561.6  |
| 12 | 2 | 0.79 | -393.2  | -16817.7 | -11145.0 |
|    | 1 | 0.78 | 162.5   | -10932.6 | -1396.1  |
| 13 | 2 | 0.78 | -962.1  | -16277.6 | -12574.5 |
|    | 1 | 0.76 | 790.0   | -12014.1 | -2286.1  |
| 14 | 2 | 0.78 | -1052.2 | -16197.7 | -12809.5 |
|    | 1 | 0.76 | 884.3   | -12320.4 | -2451.7  |
| 15 | 2 | 0.78 | -783.3  | -16471.3 | -12163.4 |
|    | 1 | 0.78 | 571.3   | -12260.1 | -2113.4  |
| 16 | 2 | 0.79 | -693.3  | -16551.2 | -11928.4 |
|    | 1 | 0.78 | 477.0   | -11953.7 | -1947.9  |
| 17 | 2 | 0.78 | -662.0  | -16544.0 | -11791.1 |
|    | 1 | 0.76 | 475.5   | -10993.0 | -1734.3  |
| 18 | 2 | 0.78 | -752.1  | -16464.1 | -12026.1 |
|    | 1 | 0.76 | 569.9   | -11299.3 | -1899.8  |
|    |   |      |         |          |          |
| 1  | 3 | 1.24 | 287.0   | -20377.5 | -21003.5 |
|    | 2 | 1.13 | -524.1  | -18831.3 | 19692.9  |
| 2  | 3 | 0.83 | -205.3  | -9631.7  | -5704.5  |
|    | 2 | 0.76 | 18.1    | -13806.1 | 17848.3  |
| 3  | 3 | 0.81 | 20.5    | -9492.4  | -6100.4  |
|    | 2 | 0.75 | -190.9  | -13249.7 | 17175.6  |
| 4  | 3 | 0.82 | -195.1  | -9320.5  | -5419.1  |
|    | 2 | 0.75 | 23.4    | -13719.3 | 18267.3  |
| 5  | 3 | 0.81 | 47.6    | -9019.8  | -5528.5  |
|    | 2 | 0.74 | -196.7  | -13160.0 | 17798.7  |
| 6  | 3 | 0.77 | 603.8   | -8629.2  | -6069.5  |
|    | 2 | 0.72 | -715.7  | -11941.8 | 16286.2  |
| 7  | 3 | 0.76 | 829.5   | -8489.8  | -6465.4  |
|    | 2 | 0.72 | -924.7  | -11385.4 | 15613.5  |
| 8  | 3 | 0.77 | 557.4   | -8856.1  | -6738.6  |
|    | 2 | 0.72 | -673.2  | -11864.5 | 16025.1  |
| 9  | 3 | 0.76 | 800.1   | -8555.3  | -6848.1  |
|    | 2 | 0.71 | -893.4  | -11305.2 | 15556.4  |
| 10 | 3 | 0.94 | 199.8   | -15250.1 | -15725.4 |
|    | 2 | 0.86 | -384.3  | -13995.6 | 14554.3  |
| 11 | 3 | 0.87 | 94.7    | -13572.6 | -13999.6 |
|    | 2 | 0.79 | -301.5  | -11837.9 | 11510.7  |
| 12 | 3 | 0.87 | 80.5    | -13705.8 | -14234.9 |
|    | 2 | 0.79 | -292.1  | -11843.8 | 11343.4  |
| 13 | 3 | 0.86 | 113.9   | -13061.0 | -13527.8 |
|    | 2 | 0.78 | -295.5  | -11693.9 | 12192.2  |
| 14 | 3 | 0.86 | 128.1   | -12927.8 | -13292.5 |
|    | 2 | 0.78 | -304.9  | -11688.0 | 12359.5  |
| 15 | 3 | 0.87 | 141.9   | -13128.6 | -13215.2 |
|    | 2 | 0.78 | -332.7  | -11818.2 | 12068.5  |
| 16 | 3 | 0.87 | 127.7   | -13261.8 | -13450.5 |
|    | 2 | 0.79 | -323.3  | -11824.1 | 11901.1  |
| 17 | 3 | 0.87 | 66.8    | -13505.1 | -14312.1 |
|    | 2 | 0.78 | -264.3  | -11713.6 | 11634.4  |
| 18 | 3 | 0.87 | 80.9    | -13371.9 | -14076.8 |
|    | 2 | 0.78 | -273.7  | -11707.7 | 11801.8  |
|    |   |      |         |          |          |

|    |   |      |         |          |          |
|----|---|------|---------|----------|----------|
| 1  | 4 | 1.31 | -1818.0 | -18478.4 | -7909.3  |
|    | 3 | 1.24 | 1536.6  | -23218.5 | 20818.9  |
| 2  | 4 | 0.99 | -2207.1 | -7019.7  | 19064.9  |
|    | 3 | 0.83 | 1943.0  | -20136.3 | 16258.9  |
| 3  | 4 | 0.95 | -1923.3 | -7402.9  | 15058.7  |
|    | 3 | 0.81 | 1685.4  | -18426.0 | 14943.8  |
| 4  | 4 | 0.98 | -2194.6 | -7017.5  | 18776.9  |
|    | 3 | 0.82 | 1939.7  | -19754.1 | 15737.4  |
| 5  | 4 | 0.94 | -1935.4 | -7254.7  | 15096.0  |
|    | 3 | 0.81 | 1737.9  | -18053.4 | 14344.2  |
| 6  | 4 | 0.85 | -1342.9 | -7810.6  | 6795.3   |
|    | 3 | 0.77 | 1270.6  | -14467.4 | 11615.0  |
| 7  | 4 | 0.81 | -1059.1 | -8193.8  | 2789.1   |
|    | 3 | 0.76 | 1012.9  | -12757.1 | 10299.8  |
| 8  | 4 | 0.85 | -1248.6 | -8294.8  | 5422.8   |
|    | 3 | 0.77 | 1080.8  | -14053.1 | 11353.7  |
| 9  | 4 | 0.81 | -989.4  | -8532.0  | 1742.0   |
|    | 3 | 0.76 | 879.0   | -12352.4 | 9960.5   |
| 10 | 4 | 0.99 | -1363.4 | -13830.7 | -5758.7  |
|    | 3 | 0.94 | 1145.5  | -17423.9 | 15599.9  |
| 11 | 4 | 0.94 | -1214.3 | -12088.2 | -4044.0  |
|    | 3 | 0.87 | 982.5   | -15752.4 | 14137.7  |
| 12 | 4 | 0.94 | -1194.7 | -12206.6 | -6507.2  |
|    | 3 | 0.87 | 933.2   | -15748.6 | 14203.2  |
| 13 | 4 | 0.92 | -1193.5 | -12083.7 | -4512.7  |
|    | 3 | 0.86 | 976.8   | -15123.7 | 13288.7  |
| 14 | 4 | 0.92 | -1213.1 | -11965.3 | -2049.5  |
|    | 3 | 0.86 | 1026.1  | -15127.5 | 13223.3  |
| 15 | 4 | 0.93 | -1279.6 | -11693.6 | 4166.7   |
|    | 3 | 0.87 | 1146.9  | -15765.2 | 13919.5  |
| 16 | 4 | 0.93 | -1260.0 | -11812.0 | 1703.5   |
|    | 3 | 0.87 | 1097.6  | -15761.4 | 13985.0  |
| 17 | 4 | 0.93 | -1128.2 | -12478.3 | -12723.4 |
|    | 3 | 0.87 | 812.4   | -15110.9 | 13507.0  |
| 18 | 4 | 0.92 | -1147.8 | -12359.9 | -10260.2 |
|    | 3 | 0.87 | 861.7   | -15114.7 | 13441.5  |
|    |   |      |         |          |          |
| 1  | 5 | 1.36 | -84.3   | -8555.4  | -1549.2  |
|    | 4 | 1.31 | -82.2   | -12796.9 | 6686.8   |
| 2  | 5 | 1.19 | -567.7  | -12171.1 | 5866.3   |
|    | 4 | 0.99 | 397.2   | -5588.4  | -11894.0 |
| 3  | 5 | 1.12 | -336.4  | -10398.0 | 4837.5   |
|    | 4 | 0.95 | 182.6   | -5869.3  | -7725.8  |
| 4  | 5 | 1.19 | -461.0  | -11916.8 | 5900.6   |
|    | 4 | 0.98 | 295.9   | -5684.1  | -11651.5 |
| 5  | 5 | 1.11 | -195.4  | -10208.1 | 5017.0   |
|    | 4 | 0.94 | 38.8    | -5919.7  | -8965.9  |
| 6  | 5 | 0.95 | 317.8   | -6475.3  | 2921.1   |
|    | 4 | 0.85 | -459.8  | -6373.7  | -2942.0  |
| 7  | 5 | 0.87 | 549.0   | -4702.3  | 1892.3   |
|    | 4 | 0.81 | -674.4  | -6654.6  | 1226.2   |
| 8  | 5 | 0.93 | 309.9   | -6006.6  | 2471.3   |
|    | 4 | 0.85 | -419.5  | -6620.5  | 2242.5   |

|    |   |      |        |          |         |
|----|---|------|--------|----------|---------|
| 9  | 5 | 0.86 | 575.5  | -4297.9  | 1587.8  |
|    | 4 | 0.81 | -676.6 | -6856.0  | 4928.1  |
| 10 | 5 | 1.04 | -13.6  | -6513.1  | -1143.2 |
|    | 4 | 0.99 | -113.9 | -9564.2  | 4858.5  |
| 11 | 5 | 0.98 | 131.6  | -6418.9  | -943.1  |
|    | 4 | 0.94 | -261.1 | -8202.7  | 3360.1  |
| 12 | 5 | 0.98 | 101.8  | -6376.1  | -1058.3 |
|    | 4 | 0.94 | -225.6 | -8235.1  | 4639.7  |
| 13 | 5 | 0.97 | 307.3  | -5988.6  | -902.2  |
|    | 4 | 0.92 | -428.0 | -8381.9  | 3761.5  |
| 14 | 5 | 0.97 | 337.1  | -6031.4  | -786.9  |
|    | 4 | 0.92 | -463.5 | -8349.5  | 2481.8  |
| 15 | 5 | 0.99 | 230.9  | -6561.6  | -558.9  |
|    | 4 | 0.93 | -379.3 | -8094.6  | -905.5  |
| 16 | 5 | 0.99 | 201.1  | -6518.8  | -674.1  |
|    | 4 | 0.93 | -343.8 | -8127.0  | 374.2   |
| 17 | 5 | 0.96 | 208.0  | -5846.0  | -1286.4 |
|    | 4 | 0.93 | -309.9 | -8489.9  | 8027.0  |
| 18 | 5 | 0.96 | 237.8  | -5888.8  | -1171.1 |
|    | 4 | 0.92 | -345.3 | -8457.5  | 6747.3  |
|    |   |      |        |          |         |
| 1  | 8 | 1.06 | 75.1   | -17046.7 | -1086.9 |
|    | 9 | 1.06 | -82.4  | -23771.0 | 20473.8 |
| 2  | 8 | 0.68 | 328.0  | -10595.0 | -3691.8 |
|    | 9 | 0.70 | -275.1 | -13573.3 | 10974.5 |
| 3  | 8 | 0.68 | 180.2  | -10527.8 | -2991.4 |
|    | 9 | 0.70 | -147.9 | -13635.4 | 10970.1 |
| 4  | 8 | 0.67 | 98.3   | -10546.4 | -3707.8 |
|    | 9 | 0.70 | -84.1  | -13428.8 | 10855.4 |
| 5  | 8 | 0.67 | -154.8 | -10484.9 | -3180.0 |
|    | 9 | 0.70 | 145.9  | -13447.9 | 10808.7 |
| 6  | 8 | 0.69 | -515.7 | -10389.7 | -1932.6 |
|    | 9 | 0.70 | 491.7  | -13637.1 | 10818.9 |
| 7  | 8 | 0.69 | -663.5 | -10322.6 | -1232.2 |
|    | 9 | 0.69 | 619.0  | -13699.2 | 10814.5 |
| 8  | 8 | 0.69 | -394.4 | -10322.6 | -1373.2 |
|    | 9 | 0.69 | 340.0  | -13635.8 | 10840.8 |
| 9  | 8 | 0.69 | -647.5 | -10261.0 | -845.4  |
|    | 9 | 0.69 | 570.0  | -13654.9 | 10794.1 |
| 10 | 8 | 0.80 | 44.3   | -12698.3 | -870.2  |
|    | 9 | 0.80 | -47.2  | -17601.2 | 15053.8 |
| 11 | 8 | 0.72 | 179.5  | -10842.9 | -1012.8 |
|    | 9 | 0.71 | -137.0 | -14604.7 | 11986.0 |
| 12 | 8 | 0.73 | 269.5  | -10837.0 | -869.1  |
|    | 9 | 0.71 | -222.8 | -14640.2 | 12020.5 |
| 13 | 8 | 0.71 | -213.6 | -10781.9 | -1037.9 |
|    | 9 | 0.71 | 190.4  | -14371.2 | 11794.5 |
| 14 | 8 | 0.71 | -303.6 | -10787.8 | -1181.5 |
|    | 9 | 0.71 | 276.3  | -14335.6 | 11760.0 |
| 15 | 8 | 0.72 | -120.4 | -10862.8 | -1491.6 |
|    | 9 | 0.71 | 149.2  | -14486.2 | 11871.1 |
| 16 | 8 | 0.72 | -30.4  | -10856.9 | -1347.9 |
|    | 9 | 0.71 | 63.4   | -14521.8 | 11905.6 |

|    |    |      |         |          |          |
|----|----|------|---------|----------|----------|
| 17 | 8  | 0.72 | 86.2    | -10761.9 | -559.1   |
|    | 9  | 0.71 | -95.8   | -14489.6 | 11909.4  |
| 18 | 8  | 0.72 | -3.7    | -10767.9 | -702.7   |
|    | 9  | 0.71 | -9.9    | -14454.1 | 11875.0  |
|    |    |      |         |          |          |
| 1  | 9  | 1.06 | -1080.0 | -20004.0 | -19716.1 |
|    | 10 | 1.17 | 1128.8  | -21984.3 | 22184.1  |
| 2  | 9  | 0.70 | -816.7  | -12993.8 | -14319.9 |
|    | 10 | 0.76 | 877.0   | -12330.8 | 11398.8  |
| 3  | 9  | 0.70 | -664.1  | -12653.4 | -13426.9 |
|    | 10 | 0.77 | 695.4   | -12803.4 | 12281.6  |
| 4  | 9  | 0.70 | -774.9  | -12895.2 | -14245.6 |
|    | 10 | 0.76 | 818.4   | -12303.3 | 11452.4  |
| 5  | 9  | 0.70 | -581.3  | -12547.1 | -13399.6 |
|    | 10 | 0.76 | 590.5   | -12687.7 | 12283.2  |
| 6  | 9  | 0.70 | -171.3  | -11833.6 | -11499.8 |
|    | 10 | 0.78 | 117.3   | -13612.2 | 14168.2  |
| 7  | 9  | 0.69 | -18.7   | -11493.2 | -10606.9 |
|    | 10 | 0.78 | -64.2   | -14084.8 | 15051.0  |
| 8  | 9  | 0.69 | -266.4  | -11760.6 | -11268.9 |
|    | 10 | 0.78 | 213.1   | -13878.8 | 14395.0  |
| 9  | 9  | 0.69 | -72.8   | -11412.5 | -10422.9 |
|    | 10 | 0.78 | -14.8   | -14263.2 | 15225.8  |
| 10 | 9  | 0.80 | -801.1  | -14802.8 | -14480.7 |
|    | 10 | 0.88 | 840.3   | -16408.0 | 16581.9  |
| 11 | 9  | 0.71 | -705.4  | -12223.0 | -11422.8 |
|    | 10 | 0.79 | 765.1   | -14142.0 | 14341.6  |
| 12 | 9  | 0.71 | -740.3  | -12230.4 | -11385.9 |
|    | 10 | 0.79 | 804.1   | -14215.9 | 14382.7  |
| 13 | 9  | 0.71 | -626.2  | -12060.2 | -11300.0 |
|    | 10 | 0.79 | 660.6   | -14096.5 | 14429.3  |
| 14 | 9  | 0.71 | -591.3  | -12052.8 | -11337.0 |
|    | 10 | 0.79 | 621.6   | -14022.7 | 14388.2  |
| 15 | 9  | 0.71 | -589.0  | -12198.3 | -11545.9 |
|    | 10 | 0.79 | 635.1   | -13895.8 | 14204.6  |
| 16 | 9  | 0.71 | -623.9  | -12205.7 | -11509.0 |
|    | 10 | 0.79 | 674.1   | -13969.7 | 14245.7  |
| 17 | 9  | 0.71 | -742.6  | -12084.9 | -11177.0 |
|    | 10 | 0.79 | 790.6   | -14342.7 | 14566.3  |
| 18 | 9  | 0.71 | -707.6  | -12077.5 | -11213.9 |
|    | 10 | 0.79 | 751.6   | -14268.9 | 14525.2  |
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| 1  | 10 | 1.17 | 241.1   | -23672.8 | -22104.3 |
|    | 11 | 1.16 | -146.3  | -18512.0 | 9789.4   |
| 2  | 10 | 0.76 | 28.2    | -17431.5 | -16198.2 |
|    | 11 | 0.82 | 66.1    | -8300.6  | -7121.8  |
| 3  | 10 | 0.77 | 40.3    | -17041.2 | -16017.7 |
|    | 11 | 0.81 | 37.7    | -8866.5  | -4724.1  |
| 4  | 10 | 0.76 | -23.0   | -17487.1 | -16296.4 |
|    | 11 | 0.82 | 106.7   | -8161.6  | -7498.9  |
| 5  | 10 | 0.76 | -25.8   | -17132.6 | -16178.7 |
|    | 11 | 0.81 | 101.4   | -8632.3  | -5344.5  |
| 6  | 10 | 0.78 | 19.0    | -16249.8 | -15805.9 |

|    |    |      |         |          |          |
|----|----|------|---------|----------|----------|
|    | 11 | 0.79 | 48.7    | -9869.7  | 59.8     |
| 7  | 10 | 0.78 | 31.1    | -15859.5 | -15625.5 |
|    | 11 | 0.79 | 20.2    | -10435.6 | 2457.5   |
| 8  | 10 | 0.78 | 17.3    | -16186.0 | -15694.8 |
|    | 11 | 0.79 | 11.8    | -10048.1 | 493.4    |
| 9  | 10 | 0.78 | 14.6    | -15831.5 | -15577.1 |
|    | 11 | 0.79 | 6.6     | -10518.8 | 2647.9   |
| 10 | 10 | 0.88 | 190.7   | -17711.1 | -16529.5 |
|    | 11 | 0.88 | -117.8  | -13810.9 | 7141.8   |
| 11 | 10 | 0.79 | 254.8   | -15395.9 | -14294.2 |
|    | 11 | 0.81 | -173.9  | -11973.0 | 5683.8   |
| 12 | 10 | 0.79 | 267.3   | -15366.6 | -14242.9 |
|    | 11 | 0.81 | -192.1  | -12051.4 | 5884.0   |
| 13 | 10 | 0.79 | 173.7   | -15486.9 | -14453.4 |
|    | 11 | 0.81 | -109.9  | -11744.4 | 5064.2   |
| 14 | 10 | 0.79 | 161.2   | -15516.3 | -14504.7 |
|    | 11 | 0.81 | -91.7   | -11666.0 | 4864.0   |
| 15 | 10 | 0.79 | 213.1   | -15493.7 | -14465.2 |
|    | 11 | 0.81 | -113.2  | -11711.6 | 5016.5   |
| 16 | 10 | 0.79 | 225.6   | -15464.4 | -14413.9 |
|    | 11 | 0.81 | -131.4  | -11790.0 | 5216.7   |
| 17 | 10 | 0.79 | 215.4   | -15389.1 | -14282.4 |
|    | 11 | 0.81 | -170.6  | -12005.8 | 5731.4   |
| 18 | 10 | 0.79 | 202.9   | -15418.5 | -14333.7 |
|    | 11 | 0.81 | -152.4  | -11927.4 | 5531.2   |
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| 1  | 11 | 1.16 | -861.5  | -15403.9 | -10911.3 |
|    | 12 | 1.18 | 911.7   | -5028.7  | -1096.9  |
| 2  | 11 | 0.82 | -782.7  | -8217.2  | 3497.6   |
|    | 12 | 1.00 | 817.4   | -7298.2  | -6006.0  |
| 3  | 11 | 0.81 | -1005.9 | -8177.2  | 1805.9   |
|    | 12 | 0.96 | 1024.8  | -6804.4  | -4443.8  |
| 4  | 11 | 0.82 | -611.0  | -8153.5  | 3839.8   |
|    | 12 | 1.00 | 647.5   | -7418.1  | -6074.1  |
| 5  | 11 | 0.81 | -803.5  | -8082.8  | 2359.9   |
|    | 12 | 0.96 | 825.2   | -6992.6  | -4690.5  |
| 6  | 11 | 0.79 | -1424.3 | -7981.5  | -1435.5  |
|    | 12 | 0.87 | 1409.8  | -5879.8  | -1394.0  |
| 7  | 11 | 0.79 | -1647.6 | -7941.6  | -3127.2  |
|    | 12 | 0.83 | 1617.2  | -5386.0  | 168.3    |
| 8  | 11 | 0.79 | -1355.2 | -8020.3  | -1799.2  |
|    | 12 | 0.86 | 1338.9  | -5772.1  | -866.5   |
| 9  | 11 | 0.79 | -1547.7 | -7949.6  | -3279.1  |
|    | 12 | 0.82 | 1516.6  | -5346.5  | 517.1    |
| 10 | 11 | 0.88 | -648.0  | -11412.6 | -7933.5  |
|    | 12 | 0.90 | 686.2   | -3955.7  | -717.7   |
| 11 | 11 | 0.81 | -729.4  | -9474.5  | -6122.8  |
|    | 12 | 0.84 | 764.7   | -4256.7  | -91.6    |
| 12 | 11 | 0.81 | -758.9  | -9498.1  | -6297.4  |
|    | 12 | 0.84 | 793.5   | -4201.2  | 51.8     |
| 13 | 11 | 0.81 | -432.4  | -9378.6  | -5560.0  |
|    | 12 | 0.84 | 470.4   | -4450.0  | -196.4   |
| 14 | 11 | 0.81 | -402.9  | -9355.0  | -5385.4  |

|    |    |      |         |          |          |
|----|----|------|---------|----------|----------|
|    | 12 | 0.85 | 441.7   | -4505.5  | -339.8   |
| 15 | 11 | 0.81 | -631.0  | -9396.1  | -5541.0  |
|    | 12 | 0.85 | 668.8   | -4441.9  | -569.7   |
| 16 | 11 | 0.81 | -660.5  | -9419.6  | -5715.5  |
|    | 12 | 0.85 | 697.6   | -4386.3  | -426.2   |
| 17 | 11 | 0.81 | -530.8  | -9457.0  | -6141.8  |
|    | 12 | 0.83 | 566.3   | -4264.8  | 281.6    |
| 18 | 11 | 0.81 | -501.3  | -9433.5  | -5967.2  |
|    | 12 | 0.84 | 537.6   | -4320.4  | 138.2    |
|    |    |      |         |          |          |
| 1  | 13 | 1.06 | -411.0  | -16705.6 | -789.3   |
|    | 14 | 1.05 | 467.4   | -23786.9 | 21439.5  |
| 2  | 13 | 0.66 | 14.1    | -9966.3  | -2978.9  |
|    | 14 | 0.69 | 59.3    | -13307.4 | 11500.8  |
| 3  | 13 | 0.68 | -88.1   | -10239.5 | -2537.9  |
|    | 14 | 0.70 | 141.2   | -13740.8 | 11823.6  |
| 4  | 13 | 0.66 | -176.3  | -10192.7 | -3145.1  |
|    | 14 | 0.69 | 217.0   | -13419.3 | 11495.2  |
| 5  | 13 | 0.68 | -364.7  | -10516.0 | -2763.6  |
|    | 14 | 0.70 | 383.0   | -13855.7 | 11803.4  |
| 6  | 13 | 0.72 | -613.6  | -11044.1 | -1707.2  |
|    | 14 | 0.72 | 612.7   | -14762.0 | 12528.2  |
| 7  | 13 | 0.74 | -715.9  | -11317.3 | -1266.3  |
|    | 14 | 0.73 | 694.6   | -15195.4 | 12851.1  |
| 8  | 13 | 0.73 | -517.3  | -11103.4 | -1675.2  |
|    | 14 | 0.72 | 489.9   | -14864.0 | 12571.3  |
| 9  | 13 | 0.75 | -705.6  | -11426.7 | -1293.7  |
|    | 14 | 0.73 | 655.9   | -15300.4 | 12879.5  |
| 10 | 13 | 0.80 | -297.4  | -12441.7 | -645.3   |
|    | 14 | 0.79 | 337.3   | -17611.2 | 15774.6  |
| 11 | 13 | 0.71 | -47.9   | -10392.7 | -685.2   |
|    | 14 | 0.70 | 99.6    | -14396.1 | 12514.1  |
| 12 | 13 | 0.71 | 26.3    | -10345.9 | -636.3   |
|    | 14 | 0.70 | 28.7    | -14392.1 | 12525.4  |
| 13 | 13 | 0.72 | -376.3  | -10771.0 | -952.4   |
|    | 14 | 0.71 | 372.8   | -14580.5 | 12507.3  |
| 14 | 13 | 0.72 | -450.5  | -10817.8 | -1001.3  |
|    | 14 | 0.71 | 443.7   | -14584.5 | 12496.0  |
| 15 | 13 | 0.71 | -295.2  | -10548.7 | -848.3   |
|    | 14 | 0.70 | 336.0   | -14409.4 | 12476.2  |
| 16 | 13 | 0.71 | -221.0  | -10501.9 | -799.4   |
|    | 14 | 0.70 | 265.1   | -14405.4 | 12487.6  |
| 17 | 13 | 0.72 | -129.1  | -10615.0 | -789.3   |
|    | 14 | 0.70 | 136.4   | -14567.2 | 12545.2  |
| 18 | 13 | 0.72 | -203.2  | -10661.8 | -838.2   |
|    | 14 | 0.70 | 207.3   | -14571.2 | 12533.8  |
|    |    |      |         |          |          |
| 1  | 14 | 1.05 | -1002.4 | -20356.1 | -21570.6 |
|    | 15 | 1.11 | 1136.7  | -19647.5 | 18434.0  |
| 2  | 14 | 0.69 | -463.5  | -12924.8 | -15228.4 |
|    | 15 | 0.72 | 552.9   | -10765.1 | 9241.7   |
| 3  | 14 | 0.70 | -563.3  | -12871.5 | -14454.5 |
|    | 15 | 0.73 | 666.7   | -11551.2 | 10387.0  |

|    |    |      |         |          |          |
|----|----|------|---------|----------|----------|
| 4  | 14 | 0.69 | -551.7  | -13012.4 | -15324.6 |
|    | 15 | 0.72 | 630.1   | -10881.2 | 9382.6   |
| 5  | 14 | 0.70 | -708.6  | -12985.2 | -14795.3 |
|    | 15 | 0.74 | 573.3   | -11672.9 | 10530.5  |
| 6  | 14 | 0.72 | -986.7  | -12834.0 | -13464.2 |
|    | 15 | 0.78 | 363.6   | -13403.9 | 13068.1  |
| 7  | 14 | 0.73 | -1086.4 | -12780.7 | -12690.3 |
|    | 15 | 0.80 | 477.5   | -14190.0 | 14213.4  |
| 8  | 14 | 0.72 | -884.2  | -12834.7 | -12744.9 |
|    | 15 | 0.78 | 1009.6  | -13501.4 | 13200.3  |
| 9  | 14 | 0.73 | -1041.2 | -12807.5 | -12215.7 |
|    | 15 | 0.80 | 952.8   | -14293.0 | 14348.2  |
| 10 | 14 | 0.79 | -756.5  | -15063.6 | -15862.0 |
|    | 15 | 0.84 | 854.6   | -14659.1 | 13774.0  |
| 11 | 14 | 0.70 | -614.9  | -12286.1 | -12459.1 |
|    | 15 | 0.75 | 698.5   | -12496.0 | 11810.4  |
| 12 | 14 | 0.70 | -568.3  | -12264.6 | -12248.7 |
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| 13 | 14 | 0.71 | -765.2  | -12427.3 | -12615.1 |
|    | 15 | 0.76 | 830.4   | -12687.3 | 12042.8  |
| 14 | 14 | 0.71 | -811.8  | -12448.8 | -12825.6 |
|    | 15 | 0.76 | 681.2   | -12692.3 | 12045.2  |
| 15 | 14 | 0.70 | -770.2  | -12357.8 | -13160.6 |
|    | 15 | 0.75 | 201.2   | -12512.4 | 11818.3  |
| 16 | 14 | 0.70 | -723.6  | -12336.3 | -12950.1 |
|    | 15 | 0.75 | 350.4   | -12507.5 | 11815.9  |
| 17 | 14 | 0.70 | -609.9  | -12355.6 | -11913.7 |
|    | 15 | 0.76 | 1327.7  | -12670.9 | 12034.9  |
| 18 | 14 | 0.70 | -656.5  | -12377.1 | -12124.1 |
|    | 15 | 0.76 | 1178.5  | -12675.8 | 12037.3  |
|    |    |      |         |          |          |
| 1  | 15 | 1.11 | 66.1    | -21345.7 | -18582.4 |
|    | 16 | 1.11 | 120.3   | -17692.4 | 9807.7   |
| 2  | 15 | 0.72 | 128.1   | -15627.4 | -13486.2 |
|    | 16 | 0.78 | -22.7   | -7834.1  | -6619.9  |
| 3  | 15 | 0.73 | 150.9   | -15539.7 | -13585.0 |
|    | 16 | 0.79 | -74.7   | -8916.8  | -3221.8  |
| 4  | 15 | 0.72 | 106.7   | -15842.2 | -13733.2 |
|    | 16 | 0.78 | -2.1    | -7716.7  | -7158.2  |
| 5  | 15 | 0.74 | 132.0   | -15828.6 | -13901.9 |
|    | 16 | 0.79 | -56.9   | -8711.1  | -4605.4  |
| 6  | 15 | 0.78 | 212.3   | -15582.1 | -14048.5 |
|    | 16 | 0.81 | -205.4  | -11148.9 | 1889.7   |
| 7  | 15 | 0.80 | 235.1   | -15494.3 | -14147.3 |
|    | 16 | 0.82 | -257.4  | -12231.5 | 5287.8   |
| 8  | 15 | 0.78 | 182.6   | -15549.7 | -14062.6 |
|    | 16 | 0.81 | -175.4  | -11325.5 | 4168.5   |
| 9  | 15 | 0.80 | 207.9   | -15536.1 | -14231.3 |
|    | 16 | 0.82 | -230.2  | -12319.9 | 6721.4   |
| 10 | 15 | 0.84 | 41.0    | -15959.3 | -13877.9 |
|    | 16 | 0.84 | 96.9    | -13211.7 | 7196.7   |
| 11 | 15 | 0.75 | 13.3    | -13688.7 | -11786.0 |
|    | 16 | 0.77 | 99.8    | -11496.9 | 6053.6   |

|  |    |    |      |        |          |          |
|--|----|----|------|--------|----------|----------|
|  | 12 | 15 | 0.75 | 11.3   | -13627.5 | -11729.3 |
|  |    | 16 | 0.78 | 102.1  | -11569.0 | 6788.9   |
|  | 13 | 15 | 0.76 | -21.0  | -14038.9 | -12182.0 |
|  |    | 16 | 0.77 | 133.0  | -11306.2 | 5175.6   |
|  | 14 | 15 | 0.76 | -19.0  | -14100.1 | -12238.7 |
|  |    | 16 | 0.77 | 130.8  | -11234.1 | 4440.3   |
|  | 15 | 15 | 0.75 | 20.0   | -13892.7 | -11975.0 |
|  |    | 16 | 0.77 | 92.2   | -11256.4 | 3602.8   |
|  | 16 | 15 | 0.75 | 18.0   | -13831.5 | -11918.3 |
|  |    | 16 | 0.77 | 94.5   | -11328.5 | 4338.0   |
|  | 17 | 15 | 0.76 | -27.7  | -13834.9 | -11993.0 |
|  |    | 16 | 0.77 | 140.6  | -11546.7 | 7626.4   |
|  | 18 | 15 | 0.76 | -25.7  | -13896.1 | -12049.7 |
|  |    | 16 | 0.77 | 138.4  | -11474.6 | 6891.2   |
|  |    |    |      |        |          |          |
|  | 1  | 16 | 1.11 | 866.2  | -13906.9 | -9883.3  |
|  |    | 17 | 1.13 | -786.7 | -5144.8  | -278.2   |
|  | 2  | 16 | 0.78 | 97.9   | -7361.5  | 3782.6   |
|  |    | 17 | 0.95 | -50.8  | -7066.5  | -5518.5  |
|  | 3  | 16 | 0.79 | -49.9  | -7951.4  | 1160.4   |
|  |    | 17 | 0.92 | 84.3   | -6258.6  | -4375.0  |
|  | 4  | 16 | 0.78 | 193.4  | -7369.9  | 4150.6   |
|  |    | 17 | 0.96 | -146.5 | -7186.6  | -5749.4  |
|  | 5  | 16 | 0.79 | 45.0   | -7967.6  | 1821.5   |
|  |    | 17 | 0.94 | -10.9  | -6471.3  | -4704.8  |
|  | 6  | 16 | 0.81 | -396.8 | -9353.8  | -3981.2  |
|  |    | 17 | 0.87 | 401.1  | -4681.9  | -2036.4  |
|  | 7  | 16 | 0.82 | -544.7 | -9943.7  | -6603.4  |
|  |    | 17 | 0.85 | 536.2  | -3874.0  | -893.0   |
|  | 8  | 16 | 0.81 | -299.5 | -9336.3  | -4590.1  |
|  |    | 17 | 0.87 | 303.8  | -4493.5  | -1937.9  |
|  | 9  | 16 | 0.82 | -447.9 | -9934.0  | -6919.3  |
|  |    | 17 | 0.85 | 439.3  | -3778.2  | -893.3   |
|  | 10 | 16 | 0.84 | 623.9  | -10336.4 | -7224.7  |
|  |    | 17 | 0.86 | -564.8 | -3996.1  | -146.9   |
|  | 11 | 16 | 0.77 | 351.6  | -8687.2  | -5806.2  |
|  |    | 17 | 0.80 | -301.4 | -4073.6  | 343.5    |
|  | 12 | 16 | 0.78 | 350.7  | -8681.3  | -6044.0  |
|  |    | 17 | 0.80 | -300.4 | -3998.0  | 423.5    |
|  | 13 | 16 | 0.77 | 510.9  | -8699.1  | -5204.8  |
|  |    | 17 | 0.81 | -461.0 | -4269.1  | -26.8    |
|  | 14 | 16 | 0.77 | 511.8  | -8705.1  | -4967.1  |
|  |    | 17 | 0.81 | -462.1 | -4344.7  | -106.8   |
|  | 15 | 16 | 0.77 | 354.8  | -8707.1  | -5013.7  |
|  |    | 17 | 0.81 | -305.0 | -4325.6  | 76.9     |
|  | 16 | 16 | 0.77 | 353.8  | -8701.1  | -5251.5  |
|  |    | 17 | 0.81 | -303.9 | -4250.0  | 156.9    |
|  | 17 | 16 | 0.77 | 507.8  | -8679.3  | -5997.3  |
|  |    | 17 | 0.80 | -457.4 | -4017.1  | 239.8    |
|  | 18 | 16 | 0.77 | 508.7  | -8685.2  | -5759.6  |
|  |    | 17 | 0.81 | -458.5 | -4092.7  | 159.8    |
|  |    |    |      |        |          |          |
|  | 1  | 18 | 1.12 | 138.2  | -17194.0 | 2782.2   |

|    |    |      |        |          |          |
|----|----|------|--------|----------|----------|
|    | 19 | 1.09 | -369.8 | -25465.4 | 22524.3  |
| 2  | 18 | 0.66 | 633.1  | -9278.7  | -817.2   |
|    | 19 | 0.71 | -748.8 | -13666.4 | 11473.8  |
| 3  | 18 | 0.70 | 393.9  | -10170.7 | -432.0   |
|    | 19 | 0.73 | -539.9 | -14651.1 | 11764.5  |
| 4  | 18 | 0.69 | 314.6  | -10228.1 | -1308.7  |
|    | 19 | 0.72 | -451.8 | -13848.5 | 10848.8  |
| 5  | 18 | 0.74 | -8.3   | -11351.6 | -1129.9  |
|    | 19 | 0.74 | -163.0 | -14835.3 | 10830.9  |
| 6  | 18 | 0.82 | -443.2 | -13023.8 | -221.4   |
|    | 19 | 0.78 | 213.6  | -16955.8 | 11414.2  |
| 7  | 18 | 0.87 | -682.4 | -13915.8 | 163.8    |
|    | 19 | 0.80 | 422.5  | -17940.5 | 11705.0  |
| 8  | 18 | 0.84 | -482.8 | -13201.6 | -24.7    |
|    | 19 | 0.78 | 244.6  | -17130.8 | 11818.1  |
| 9  | 18 | 0.88 | -805.7 | -14325.1 | 154.1    |
|    | 19 | 0.80 | 533.3  | -18117.6 | 11800.3  |
| 10 | 18 | 0.84 | 128.3  | -12828.7 | 2065.3   |
|    | 19 | 0.82 | -307.0 | -18978.3 | 16730.6  |
| 11 | 18 | 0.74 | 499.4  | -10219.5 | 2113.2   |
|    | 19 | 0.74 | -662.5 | -16051.3 | 14503.2  |
| 12 | 18 | 0.73 | 577.2  | -10004.3 | 2278.4   |
|    | 19 | 0.74 | -736.7 | -16048.1 | 14742.2  |
| 13 | 18 | 0.79 | -42.9  | -11820.4 | 1336.5   |
|    | 19 | 0.76 | -155.7 | -16350.7 | 13536.4  |
| 14 | 18 | 0.80 | -120.7 | -12035.7 | 1171.3   |
|    | 19 | 0.76 | -81.5  | -16353.9 | 13297.3  |
| 15 | 18 | 0.76 | 240.2  | -10937.0 | 1562.5   |
|    | 19 | 0.75 | -415.3 | -16062.0 | 13706.5  |
| 16 | 18 | 0.75 | 317.9  | -10721.8 | 1727.7   |
|    | 19 | 0.75 | -489.5 | -16058.8 | 13945.5  |
| 17 | 18 | 0.77 | 216.3  | -11103.0 | 1887.2   |
|    | 19 | 0.75 | -402.9 | -16340.1 | 14333.1  |
| 18 | 18 | 0.78 | 138.6  | -11318.2 | 1722.0   |
|    | 19 | 0.75 | -328.8 | -16343.3 | 14094.1  |
|    |    |      |        |          |          |
| 1  | 19 | 1.09 | -571.4 | -18879.0 | -24250.1 |
|    | 20 | 1.08 | 382.1  | -14582.6 | 13494.2  |
| 2  | 19 | 0.71 | -9.4   | -13379.0 | -21389.5 |
|    | 20 | 0.72 | -125.0 | -5736.4  | 2040.3   |
| 3  | 19 | 0.73 | -137.1 | -13169.9 | -19434.6 |
|    | 20 | 0.74 | -5.3   | -7109.7  | 4204.5   |
| 4  | 19 | 0.72 | -70.9  | -13598.9 | -21469.3 |
|    | 20 | 0.72 | -64.4  | -5745.8  | 1625.3   |
| 5  | 19 | 0.74 | -210.9 | -13455.6 | -19647.2 |
|    | 20 | 0.74 | 69.4   | -7090.3  | 3633.5   |
| 6  | 19 | 0.78 | -476.1 | -12901.2 | -15315.8 |
|    | 20 | 0.80 | 320.9  | -10218.1 | 8734.0   |
| 7  | 19 | 0.80 | -603.8 | -12692.1 | -13360.8 |
|    | 20 | 0.82 | 440.6  | -11591.5 | 10898.2  |
| 8  | 19 | 0.78 | -496.6 | -12902.1 | -14952.9 |
|    | 20 | 0.80 | 334.6  | -10323.7 | 8839.5   |
| 9  | 19 | 0.80 | -636.6 | -12758.7 | -13130.8 |

|    |    |      |        |          |          |
|----|----|------|--------|----------|----------|
|    | 20 | 0.82 | 468.3  | -11668.2 | 10847.6  |
| 10 | 19 | 0.82 | -433.4 | -14034.4 | -17997.8 |
|    | 20 | 0.82 | 285.8  | -10873.2 | 10045.4  |
| 11 | 19 | 0.74 | -354.4 | -11636.9 | -14948.3 |
|    | 20 | 0.75 | 198.7  | -9298.0  | 8856.1   |
| 12 | 19 | 0.74 | -342.6 | -11582.1 | -14840.1 |
|    | 20 | 0.75 | 185.5  | -9321.4  | 8983.3   |
| 13 | 19 | 0.76 | -456.2 | -11991.5 | -15076.5 |
|    | 20 | 0.76 | 299.2  | -9316.5  | 8188.9   |
| 14 | 19 | 0.76 | -468.0 | -12046.3 | -15184.8 |
|    | 20 | 0.76 | 312.4  | -9293.1  | 8061.6   |
| 15 | 19 | 0.75 | -393.7 | -11819.6 | -15309.1 |
|    | 20 | 0.76 | 242.7  | -9219.9  | 8431.8   |
| 16 | 19 | 0.75 | -381.9 | -11764.8 | -15200.9 |
|    | 20 | 0.76 | 229.5  | -9243.3  | 8559.1   |
| 17 | 19 | 0.75 | -416.8 | -11808.8 | -14715.7 |
|    | 20 | 0.76 | 255.2  | -9394.6  | 8613.1   |
| 18 | 19 | 0.75 | -428.6 | -11863.6 | -14824.0 |
|    | 20 | 0.76 | 268.4  | -9371.2  | 8485.9   |
|    |    |      |        |          |          |
| 1  | 20 | 1.08 | -627.0 | -17804.0 | -14774.3 |
|    | 21 | 1.06 | 489.9  | -12864.7 | 3216.9   |
| 2  | 20 | 0.72 | 151.3  | -15696.6 | -12050.7 |
|    | 21 | 0.80 | -292.4 | -3172.3  | -19925.2 |
| 3  | 20 | 0.74 | 134.2  | -14948.7 | -11123.5 |
|    | 21 | 0.81 | -278.6 | -5263.8  | -13066.3 |
| 4  | 20 | 0.72 | 243.9  | -16098.4 | -12261.0 |
|    | 21 | 0.80 | -387.0 | -3004.4  | -21264.2 |
| 5  | 20 | 0.74 | 256.8  | -15479.5 | -11390.3 |
|    | 21 | 0.81 | -404.6 | -5050.1  | -14963.8 |
| 6  | 20 | 0.80 | 194.4  | -13633.6 | -9148.4  |
|    | 21 | 0.84 | -351.1 | -9991.3  | 1076.1   |
| 7  | 20 | 0.82 | 177.4  | -12885.7 | -8221.2  |
|    | 21 | 0.86 | -337.4 | -12082.8 | 7935.0   |
| 8  | 20 | 0.80 | 186.9  | -13605.4 | -9170.2  |
|    | 21 | 0.84 | -341.3 | -9976.0  | 1598.6   |
| 9  | 20 | 0.82 | 199.9  | -12986.5 | -8299.5  |
|    | 21 | 0.86 | -358.9 | -12021.7 | 7899.0   |
| 10 | 20 | 0.82 | -486.9 | -13328.2 | -11026.9 |
|    | 21 | 0.81 | 379.4  | -9607.5  | 2260.3   |
| 11 | 20 | 0.75 | -582.8 | -11332.4 | -9323.5  |
|    | 21 | 0.75 | 467.8  | -8426.8  | 2364.3   |
| 12 | 20 | 0.75 | -607.6 | -11224.4 | -9278.0  |
|    | 21 | 0.75 | 493.7  | -8464.1  | 2821.0   |
| 13 | 20 | 0.76 | -432.6 | -11983.0 | -9655.2  |
|    | 21 | 0.76 | 314.1  | -8163.5  | 206.9    |
| 14 | 20 | 0.76 | -407.8 | -12091.0 | -9700.8  |
|    | 21 | 0.76 | 288.3  | -8126.2  | -249.8   |
| 15 | 20 | 0.76 | -500.2 | -11692.4 | -9475.4  |
|    | 21 | 0.76 | 381.6  | -8302.5  | 842.0    |
| 16 | 20 | 0.76 | -525.0 | -11584.4 | -9429.8  |
|    | 21 | 0.76 | 407.5  | -8339.8  | 1298.7   |
| 17 | 20 | 0.76 | -515.1 | -11623.0 | -9503.4  |

|    |    |      |         |          |         |
|----|----|------|---------|----------|---------|
|    | 21 | 0.76 | 400.3   | -8287.7  | 1729.3  |
| 18 | 20 | 0.76 | -490.4  | -11731.0 | -9548.9 |
|    | 21 | 0.76 | 374.5   | -8250.5  | 1272.6  |
|    |    |      |         |          |         |
| 1  | 21 | 1.06 | -1688.0 | -9490.6  | -4725.4 |
|    | 22 | 1.08 | 1650.3  | -5173.7  | -330.7  |
| 2  | 21 | 0.80 | -1023.4 | -4083.2  | 11016.6 |
|    | 22 | 0.95 | 968.7   | -8174.6  | -7336.9 |
| 3  | 21 | 0.81 | -984.6  | -4873.4  | 6835.2  |
|    | 22 | 0.93 | 928.8   | -7428.5  | -5015.9 |
| 4  | 21 | 0.80 | -939.2  | -3981.0  | 11911.9 |
|    | 22 | 0.97 | 877.5   | -8584.7  | -7650.5 |
| 5  | 21 | 0.81 | -887.6  | -4748.9  | 8139.9  |
|    | 22 | 0.95 | 823.1   | -7976.7  | -5466.6 |
| 6  | 21 | 0.84 | -851.4  | -6642.7  | -1556.7 |
|    | 22 | 0.91 | 787.2   | -6147.7  | -57.3   |
| 7  | 21 | 0.86 | -812.6  | -7432.9  | -5738.1 |
|    | 22 | 0.89 | 747.3   | -5401.6  | 2263.7  |
| 8  | 21 | 0.84 | -809.8  | -6615.1  | -2026.1 |
|    | 22 | 0.90 | 744.6   | -6097.8  | 86.3    |
| 9  | 21 | 0.86 | -758.2  | -7383.0  | -5798.1 |
|    | 22 | 0.89 | 690.2   | -5489.8  | 2270.2  |
| 10 | 21 | 0.81 | -1302.8 | -7086.0  | -3416.8 |
|    | 22 | 0.82 | 1273.0  | -3944.0  | -275.3  |
| 11 | 21 | 0.75 | -1385.4 | -6191.0  | -3147.5 |
|    | 22 | 0.77 | 1357.4  | -3448.0  | -119.0  |
| 12 | 21 | 0.75 | -1395.3 | -6208.9  | -3434.2 |
|    | 22 | 0.76 | 1368.8  | -3333.4  | -8.0    |
| 13 | 21 | 0.76 | -1259.8 | -6029.8  | -1700.8 |
|    | 22 | 0.79 | 1220.4  | -4114.7  | -621.6  |
| 14 | 21 | 0.76 | -1249.9 | -6011.9  | -1414.1 |
|    | 22 | 0.80 | 1209.0  | -4229.3  | -732.6  |
| 15 | 21 | 0.76 | -1352.2 | -6131.3  | -2191.8 |
|    | 22 | 0.79 | 1319.4  | -3829.9  | -489.0  |
| 16 | 21 | 0.76 | -1362.2 | -6149.2  | -2478.5 |
|    | 22 | 0.78 | 1330.8  | -3715.4  | -378.0  |
| 17 | 21 | 0.76 | -1293.0 | -6089.6  | -2656.5 |
|    | 22 | 0.78 | 1258.4  | -3732.8  | -251.6  |
| 18 | 21 | 0.76 | -1283.0 | -6071.6  | -2369.8 |
|    | 22 | 0.78 | 1247.0  | -3847.4  | -362.6  |
|    |    |      |         |          |         |
| 1  | 1  | 1.12 | 1774.8  | -14266.0 | 32.4    |
|    | 8  | 1.06 | -2055.2 | -16529.9 | 5643.4  |
| 2  | 1  | 0.72 | 287.6   | -7545.7  | 1768.5  |
|    | 8  | 0.68 | -420.2  | -8598.1  | 6031.5  |
| 3  | 1  | 0.71 | 668.6   | -8047.5  | 839.3   |
|    | 8  | 0.68 | -805.7  | -7883.4  | 4097.0  |
| 4  | 1  | 0.70 | 641.5   | -7686.1  | 756.4   |
|    | 8  | 0.67 | -752.8  | -8749.7  | 3706.1  |
| 5  | 1  | 0.69 | 1113.3  | -8243.0  | -431.3  |
|    | 8  | 0.67 | -1222.0 | -8297.1  | 1147.6  |
| 6  | 1  | 0.67 | 1860.4  | -9402.0  | -2190.4 |
|    | 8  | 0.69 | -1984.1 | -7089.5  | -2496.9 |

|    |    |      |         |          |         |
|----|----|------|---------|----------|---------|
| 7  | 1  | 0.65 | 2241.4  | -9903.8  | -3119.5 |
|    | 8  | 0.69 | -2369.7 | -6374.9  | -4431.4 |
| 8  | 1  | 0.65 | 1911.5  | -9358.8  | -2340.8 |
|    | 8  | 0.69 | -2037.9 | -6367.5  | -2742.2 |
| 9  | 1  | 0.64 | 2383.3  | -9915.7  | -3528.4 |
|    | 8  | 0.69 | -2507.1 | -5915.0  | -5300.7 |
| 10 | 1  | 0.84 | 1332.6  | -10666.1 | 42.6    |
|    | 8  | 0.80 | -1541.6 | -12232.7 | 3971.4  |
| 11 | 1  | 0.78 | 886.9   | -9149.0  | 1171.8  |
|    | 8  | 0.72 | -1084.0 | -9855.7  | 4260.6  |
| 12 | 1  | 0.78 | 803.0   | -9103.9  | 1493.4  |
|    | 8  | 0.73 | -1006.6 | -9635.3  | 4837.2  |
| 13 | 1  | 0.76 | 1481.5  | -9382.4  | -925.5  |
|    | 8  | 0.71 | -1641.8 | -10217.4 | 317.8   |
| 14 | 1  | 0.76 | 1565.5  | -9427.6  | -1247.1 |
|    | 8  | 0.71 | -1719.3 | -10437.8 | -258.8  |
| 15 | 1  | 0.78 | 1166.8  | -9299.6  | 99.9    |
|    | 8  | 0.72 | -1342.2 | -10590.3 | 2338.6  |
| 16 | 1  | 0.78 | 1082.9  | -9254.5  | 421.5   |
|    | 8  | 0.72 | -1264.7 | -10369.9 | 2915.2  |
| 17 | 1  | 0.76 | 1201.6  | -9231.8  | 146.4   |
|    | 8  | 0.72 | -1383.7 | -9482.8  | 2239.8  |
| 18 | 1  | 0.76 | 1285.6  | -9277.0  | -175.2  |
|    | 8  | 0.72 | -1461.1 | -9703.2  | 1663.2  |
|    |    |      |         |          |         |
| 1  | 8  | 1.06 | -133.7  | -8453.4  | -5480.6 |
|    | 13 | 1.06 | -36.9   | -6561.2  | 3511.6  |
| 2  | 8  | 0.68 | 402.9   | -4714.6  | -3013.1 |
|    | 13 | 0.66 | 377.0   | -3369.1  | 1752.5  |
| 3  | 8  | 0.68 | 645.4   | -5018.7  | -3351.0 |
|    | 13 | 0.68 | 124.3   | -3333.6  | 2087.0  |
| 4  | 8  | 0.67 | 225.6   | -4665.7  | -3111.3 |
|    | 13 | 0.66 | -37.8   | -3422.6  | 1833.0  |
| 5  | 8  | 0.67 | 335.2   | -4900.1  | -3386.8 |
|    | 13 | 0.68 | -411.0  | -3463.6  | 2098.4  |
| 6  | 8  | 0.69 | 768.3   | -5496.0  | -3931.5 |
|    | 13 | 0.72 | -867.1  | -3505.9  | 2637.4  |
| 7  | 8  | 0.69 | 1010.8  | -5800.2  | -4269.4 |
|    | 13 | 0.74 | -1119.8 | -3470.5  | 2971.9  |
| 8  | 8  | 0.69 | 1033.9  | -5679.6  | -4237.7 |
|    | 13 | 0.73 | -880.2  | -3304.5  | 2947.8  |
| 9  | 8  | 0.69 | 1143.5  | -5914.0  | -4513.2 |
|    | 13 | 0.75 | -1253.4 | -3345.6  | 3213.2  |
| 10 | 8  | 0.80 | -98.2   | -6276.5  | -3854.5 |
|    | 13 | 0.80 | -29.1   | -4862.4  | 2383.1  |
| 11 | 8  | 0.72 | 83.0    | -5283.7  | -2169.3 |
|    | 13 | 0.71 | -224.6  | -3977.6  | 908.7   |
| 12 | 8  | 0.73 | 192.2   | -5347.1  | -2233.1 |
|    | 13 | 0.71 | -347.8  | -3907.4  | 971.0   |
| 13 | 8  | 0.71 | -237.8  | -5211.2  | -2251.4 |
|    | 13 | 0.72 | 160.2   | -4066.5  | 962.9   |
| 14 | 8  | 0.71 | -347.0  | -5147.8  | -2187.6 |
|    | 13 | 0.72 | 283.4   | -4136.7  | 900.6   |

|    |    |      |         |          |         |
|----|----|------|---------|----------|---------|
| 15 | 8  | 0.72 | -281.0  | -5072.3  | -1956.6 |
|    | 13 | 0.71 | 186.0   | -4211.6  | 701.1   |
| 16 | 8  | 0.72 | -171.8  | -5135.7  | -2020.4 |
|    | 13 | 0.71 | 62.8    | -4141.4  | 763.4   |
| 17 | 8  | 0.72 | 126.2   | -5422.6  | -2464.1 |
|    | 13 | 0.72 | -250.4  | -3832.5  | 1170.5  |
| 18 | 8  | 0.72 | 17.0    | -5359.2  | -2400.3 |
|    | 13 | 0.72 | -127.2  | -3902.7  | 1108.2  |
|    |    |      |         |          |         |
| 1  | 13 | 1.06 | -1866.9 | -15447.6 | -2589.3 |
|    | 18 | 1.12 | 1582.0  | -15085.2 | 891.3   |
| 2  | 13 | 0.66 | -892.3  | -6865.1  | 1979.9  |
|    | 18 | 0.66 | 694.8   | -8441.2  | 1847.9  |
| 3  | 13 | 0.68 | -750.2  | -8007.5  | 532.4   |
|    | 18 | 0.70 | 523.6   | -8661.2  | 1089.1  |
| 4  | 13 | 0.66 | -817.7  | -8041.8  | -483.6  |
|    | 18 | 0.69 | 680.5   | -8226.5  | 580.6   |
| 5  | 13 | 0.68 | -691.8  | -9483.5  | -2649.7 |
|    | 18 | 0.74 | 554.5   | -8356.2  | -565.7  |
| 6  | 13 | 0.72 | -472.4  | -11670.9 | -5240.5 |
|    | 18 | 0.82 | 274.8   | -8873.5  | -1973.0 |
| 7  | 13 | 0.74 | -330.3  | -12813.3 | -6687.9 |
|    | 18 | 0.87 | 103.6   | -9093.6  | -2731.9 |
| 8  | 13 | 0.73 | -344.0  | -11849.7 | -5308.5 |
|    | 18 | 0.84 | 109.8   | -8960.0  | -1948.9 |
| 9  | 13 | 0.75 | -218.1  | -13291.5 | -7474.6 |
|    | 18 | 0.88 | -16.2   | -9089.7  | -3095.2 |
| 10 | 13 | 0.80 | -1401.8 | -11417.4 | -1681.1 |
|    | 18 | 0.84 | 1189.5  | -11280.9 | 660.5   |
| 11 | 13 | 0.71 | -1290.8 | -8307.7  | -1252.1 |
|    | 18 | 0.74 | 1060.3  | -9981.9  | 1635.3  |
| 12 | 13 | 0.71 | -1275.2 | -8030.3  | -1915.2 |
|    | 18 | 0.73 | 1021.5  | -10053.2 | 1990.1  |
| 13 | 13 | 0.72 | -1201.6 | -10293.0 | 716.9   |
|    | 18 | 0.79 | 1068.7  | -9639.7  | -543.6  |
| 14 | 13 | 0.72 | -1217.2 | -10570.4 | 1380.0  |
|    | 18 | 0.80 | 1107.5  | -9568.4  | -898.4  |
| 15 | 13 | 0.71 | -1342.7 | -9232.3  | 958.2   |
|    | 18 | 0.76 | 1189.7  | -9744.1  | 452.6   |
| 16 | 13 | 0.71 | -1327.2 | -8954.9  | 295.1   |
|    | 18 | 0.75 | 1150.9  | -9815.4  | 807.4   |
| 17 | 13 | 0.72 | -1149.7 | -9368.3  | -1493.5 |
|    | 18 | 0.77 | 939.3   | -9877.5  | 639.1   |
| 18 | 13 | 0.72 | -1165.3 | -9645.7  | -830.4  |
|    | 18 | 0.78 | 978.1   | -9806.2  | 284.3   |
|    |    |      |         |          |         |
| 1  | 2  | 1.13 | -230.2  | -13269.9 | -1249.2 |
|    | 9  | 1.06 | 382.5   | -15778.8 | 7619.5  |
| 2  | 2  | 0.76 | 93.9    | -7476.1  | 230.5   |
|    | 9  | 0.70 | 18.9    | -10056.7 | 6003.3  |
| 3  | 2  | 0.75 | 131.9   | -7912.1  | -491.0  |
|    | 9  | 0.70 | 122.8   | -9341.9  | 4233.3  |
| 4  | 2  | 0.75 | 109.9   | -7677.8  | -317.7  |

|    |    |      |        |          |         |
|----|----|------|--------|----------|---------|
|    | 9  | 0.70 | 6.7    | -9396.1  | 4708.4  |
| 5  | 2  | 0.74 | -11.7  | -8144.2  | -1153.5 |
|    | 9  | 0.70 | 123.2  | -8520.4  | 2664.0  |
| 6  | 2  | 0.72 | -311.8 | -9030.7  | -2555.5 |
|    | 9  | 0.70 | 407.1  | -7137.6  | -811.1  |
| 7  | 2  | 0.72 | -273.7 | -9466.8  | -3276.9 |
|    | 9  | 0.69 | 510.9  | -6422.7  | -2581.2 |
| 8  | 2  | 0.72 | 236.7  | -9131.3  | -2722.5 |
|    | 9  | 0.69 | 352.9  | -7013.4  | -1191.9 |
| 9  | 2  | 0.71 | 115.0  | -9597.7  | -3558.2 |
|    | 9  | 0.69 | 469.3  | -6137.7  | -3236.3 |
| 10 | 2  | 0.86 | -152.2 | -9929.9  | -961.3  |
|    | 9  | 0.80 | 266.8  | -11607.8 | 5386.4  |
| 11 | 2  | 0.79 | -47.4  | -8498.8  | -505.4  |
|    | 9  | 0.71 | 147.0  | -9753.6  | 4306.4  |
| 12 | 2  | 0.79 | 94.5   | -8469.1  | -402.1  |
|    | 9  | 0.71 | 9.3    | -9896.8  | 4551.7  |
| 13 | 2  | 0.78 | -30.8  | -8833.0  | -1421.0 |
|    | 9  | 0.71 | 136.2  | -8642.2  | 2146.2  |
| 14 | 2  | 0.78 | -172.7 | -8862.8  | -1524.4 |
|    | 9  | 0.71 | 273.9  | -8499.0  | 1901.0  |
| 15 | 2  | 0.78 | -520.3 | -8597.9  | -849.9  |
|    | 9  | 0.71 | 606.0  | -9276.3  | 3488.8  |
| 16 | 2  | 0.79 | -378.4 | -8568.2  | -746.5  |
|    | 9  | 0.71 | 468.3  | -9419.5  | 3734.0  |
| 17 | 2  | 0.78 | 442.1  | -8734.0  | -1076.6 |
|    | 9  | 0.71 | -322.8 | -9119.5  | 2963.9  |
| 18 | 2  | 0.78 | 300.2  | -8763.7  | -1179.9 |
|    | 9  | 0.71 | -185.1 | -8976.3  | 2718.6  |
|    |    |      |        |          |         |
| 1  | 9  | 1.06 | 708.8  | -7714.6  | -6178.0 |
|    | 14 | 1.05 | -632.9 | -8301.4  | 6840.8  |
| 2  | 9  | 0.70 | 319.6  | -4274.7  | -3247.4 |
|    | 14 | 0.69 | -266.4 | -4747.4  | 4002.7  |
| 3  | 9  | 0.70 | 400.7  | -4657.5  | -3562.3 |
|    | 14 | 0.70 | -349.4 | -4461.6  | 3580.2  |
| 4  | 9  | 0.70 | 387.3  | -4516.8  | -3442.3 |
|    | 14 | 0.69 | -333.5 | -4850.6  | 3832.7  |
| 5  | 9  | 0.70 | 340.7  | -4948.2  | -3776.3 |
|    | 14 | 0.70 | -287.0 | -4659.4  | 3385.2  |
| 6  | 9  | 0.70 | 164.4  | -5712.8  | -4361.0 |
|    | 14 | 0.72 | -111.4 | -4110.0  | 2511.0  |
| 7  | 9  | 0.69 | 245.6  | -6095.6  | -4676.0 |
|    | 14 | 0.73 | -194.4 | -3824.2  | 2088.5  |
| 8  | 9  | 0.69 | 657.8  | -5792.9  | -4492.1 |
|    | 14 | 0.72 | -610.2 | -3897.8  | 2424.5  |
| 9  | 9  | 0.69 | 611.3  | -6224.4  | -4826.2 |
|    | 14 | 0.73 | -563.7 | -3706.6  | 1977.0  |
| 10 | 9  | 0.80 | 531.1  | -5716.6  | -4360.1 |
|    | 14 | 0.79 | -474.4 | -6154.4  | 4855.0  |
| 11 | 9  | 0.71 | 408.8  | -4526.9  | -2425.2 |
|    | 14 | 0.70 | -360.2 | -5011.0  | 3143.6  |
| 12 | 9  | 0.71 | 521.4  | -4485.0  | -2411.5 |

|    |    |      |        |          |         |
|----|----|------|--------|----------|---------|
|    | 14 | 0.70 | -474.2 | -4932.5  | 3167.2  |
| 13 | 9  | 0.71 | 524.9  | -4925.1  | -2726.3 |
|    | 14 | 0.71 | -475.4 | -5192.6  | 2861.2  |
| 14 | 9  | 0.71 | 412.3  | -4967.0  | -2740.0 |
|    | 14 | 0.71 | -361.4 | -5271.1  | 2837.6  |
| 15 | 9  | 0.71 | 33.3   | -4666.6  | -2470.8 |
|    | 14 | 0.70 | 19.8   | -5272.7  | 3065.0  |
| 16 | 9  | 0.71 | 146.0  | -4624.7  | -2457.1 |
|    | 14 | 0.70 | -94.2  | -5194.2  | 3088.6  |
| 17 | 9  | 0.71 | 900.3  | -4785.4  | -2680.6 |
|    | 14 | 0.70 | -855.4 | -4930.9  | 2939.8  |
| 18 | 9  | 0.71 | 787.7  | -4827.3  | -2694.3 |
|    | 14 | 0.70 | -741.4 | -5009.4  | 2916.2  |
|    |    |      |        |          |         |
| 1  | 14 | 1.05 | 973.6  | -14889.5 | -6030.8 |
|    | 19 | 1.09 | -869.1 | -12725.9 | 966.4   |
| 2  | 14 | 0.69 | 275.2  | -7705.9  | -4001.7 |
|    | 19 | 0.71 | -183.0 | -7731.6  | 215.7   |
| 3  | 14 | 0.70 | 398.1  | -8468.7  | -5535.7 |
|    | 19 | 0.73 | -311.2 | -7625.6  | -228.1  |
| 4  | 14 | 0.69 | 360.0  | -8406.4  | -3563.4 |
|    | 19 | 0.72 | -270.5 | -7532.2  | 303.8   |
| 5  | 14 | 0.70 | 499.1  | -9344.1  | -4632.4 |
|    | 19 | 0.74 | -415.6 | -7389.4  | -2.9    |
| 6  | 14 | 0.72 | 738.7  | -10831.7 | -7565.1 |
|    | 19 | 0.78 | -666.5 | -7255.5  | -806.8  |
| 7  | 14 | 0.73 | 861.7  | -11594.6 | -9099.1 |
|    | 19 | 0.80 | -794.7 | -7149.5  | -1250.7 |
| 8  | 14 | 0.72 | 769.7  | -10949.1 | -8676.6 |
|    | 19 | 0.78 | -697.8 | -7179.0  | -1175.7 |
| 9  | 14 | 0.73 | 908.8  | -11886.9 | -9745.6 |
|    | 19 | 0.80 | -842.8 | -7036.2  | -1482.4 |
| 10 | 14 | 0.79 | 714.3  | -10932.8 | -4185.0 |
|    | 19 | 0.82 | -635.8 | -9523.5  | 762.8   |
| 11 | 14 | 0.70 | 486.0  | -7975.3  | -2510.8 |
|    | 19 | 0.74 | -413.7 | -8469.8  | 762.1   |
| 12 | 14 | 0.70 | 470.8  | -7820.8  | -2894.8 |
|    | 19 | 0.74 | -397.8 | -8499.2  | 647.9   |
| 13 | 14 | 0.71 | 627.4  | -9152.2  | -1726.2 |
|    | 19 | 0.76 | -559.6 | -8159.6  | 940.2   |
| 14 | 14 | 0.71 | 642.7  | -9306.7  | -1342.3 |
|    | 19 | 0.76 | -575.6 | -8130.2  | 1054.4  |
| 15 | 14 | 0.70 | 536.8  | -8490.3  | -1231.1 |
|    | 19 | 0.75 | -466.9 | -8371.7  | 1142.9  |
| 16 | 14 | 0.70 | 521.6  | -8335.8  | -1615.0 |
|    | 19 | 0.75 | -451.0 | -8401.1  | 1028.7  |
| 17 | 14 | 0.70 | 576.6  | -8637.2  | -3005.9 |
|    | 19 | 0.75 | -506.4 | -8257.7  | 559.5   |
| 18 | 14 | 0.70 | 591.9  | -8791.7  | -2622.0 |
|    | 19 | 0.75 | -522.4 | -8228.2  | 673.7   |
|    |    |      |        |          |         |
| 1  | 3  | 1.24 | 573.3  | -11461.1 | 1967.8  |
|    | 6  | 1.19 | -544.4 | -15345.2 | 4103.5  |

|    |    |      |         |          |         |
|----|----|------|---------|----------|---------|
| 2  | 3  | 0.83 | 300.1   | -6766.4  | 2162.5  |
|    | 6  | 0.78 | -239.6  | -8939.5  | 2910.3  |
| 3  | 3  | 0.81 | 208.4   | -7179.6  | 1478.7  |
|    | 6  | 0.77 | -188.6  | -8256.5  | 1910.0  |
| 4  | 3  | 0.82 | 408.4   | -6896.4  | 1848.7  |
|    | 6  | 0.77 | -255.2  | -9194.2  | 2376.5  |
| 5  | 3  | 0.81 | 359.4   | -7320.1  | 1096.3  |
|    | 6  | 0.77 | -207.3  | -8676.5  | 1240.6  |
| 6  | 3  | 0.77 | 136.8   | -8178.8  | -345.4  |
|    | 6  | 0.76 | -79.9   | -7213.6  | -876.3  |
| 7  | 3  | 0.76 | 45.1    | -8592.0  | -1029.3 |
|    | 6  | 0.76 | -29.0   | -6530.7  | -1876.5 |
| 8  | 3  | 0.77 | 102.7   | -8273.6  | -430.8  |
|    | 6  | 0.76 | -85.5   | -6917.6  | -957.7  |
| 9  | 3  | 0.76 | 53.7    | -8697.3  | -1183.1 |
|    | 6  | 0.76 | -37.6   | -6399.9  | -2093.6 |
| 10 | 3  | 0.94 | 427.9   | -8664.0  | 1429.1  |
|    | 6  | 0.89 | -404.7  | -11404.4 | 2902.1  |
| 11 | 3  | 0.87 | 355.9   | -7864.2  | 1302.7  |
|    | 6  | 0.81 | -327.8  | -9377.7  | 2181.1  |
| 12 | 3  | 0.87 | 353.5   | -7851.4  | 1362.3  |
|    | 6  | 0.81 | -325.4  | -9243.9  | 2294.1  |
| 13 | 3  | 0.86 | 381.2   | -8078.5  | 785.2   |
|    | 6  | 0.81 | -353.2  | -9794.6  | 1307.8  |
| 14 | 3  | 0.86 | 383.6   | -8091.2  | 725.6   |
|    | 6  | 0.81 | -355.6  | -9928.5  | 1194.8  |
| 15 | 3  | 0.87 | 364.1   | -7906.6  | 1104.1  |
|    | 6  | 0.81 | -336.0  | -9823.8  | 1804.3  |
| 16 | 3  | 0.87 | 361.6   | -7893.9  | 1163.7  |
|    | 6  | 0.81 | -333.6  | -9689.9  | 1917.3  |
| 17 | 3  | 0.87 | 373.0   | -8036.0  | 983.7   |
|    | 6  | 0.81 | -345.0  | -9348.6  | 1684.6  |
| 18 | 3  | 0.87 | 375.5   | -8048.7  | 924.2   |
|    | 6  | 0.81 | -347.5  | -9482.4  | 1571.6  |
|    |    |      |         |          |         |
| 1  | 6  | 1.19 | 545.8   | -3623.9  | -4372.4 |
|    | 10 | 1.17 | -539.3  | -8004.9  | 7245.6  |
| 2  | 6  | 0.78 | 1577.1  | -3046.1  | -2794.1 |
|    | 10 | 0.76 | -1567.4 | -4243.4  | 4421.8  |
| 3  | 6  | 0.77 | 1236.9  | -3434.7  | -2155.4 |
|    | 10 | 0.77 | -1227.9 | -3865.1  | 3217.3  |
| 4  | 6  | 0.77 | 1591.3  | -2876.4  | -2470.3 |
|    | 10 | 0.76 | -1581.5 | -4195.6  | 3805.1  |
| 5  | 6  | 0.77 | 1285.0  | -3174.8  | -1769.7 |
|    | 10 | 0.76 | -1276.0 | -3812.8  | 2434.4  |
| 6  | 6  | 0.76 | 556.2   | -4040.7  | -458.8  |
|    | 10 | 0.78 | -549.1  | -2967.2  | -147.3  |
| 7  | 6  | 0.76 | 216.1   | -4429.4  | 179.8   |
|    | 10 | 0.78 | -209.6  | -2589.0  | -1351.8 |
| 8  | 6  | 0.76 | 457.5   | -4171.8  | -341.5  |
|    | 10 | 0.78 | -450.1  | -2934.7  | -209.8  |
| 9  | 6  | 0.76 | 151.2   | -4470.2  | 359.0   |
|    | 10 | 0.78 | -144.6  | -2551.8  | -1580.6 |

|    |    |      |        |          |         |
|----|----|------|--------|----------|---------|
| 10 | 6  | 0.89 | 407.4  | -2768.0  | -3104.0 |
|    | 10 | 0.88 | -401.7 | -5905.3  | 5164.0  |
| 11 | 6  | 0.81 | 339.4  | -2813.9  | -2187.5 |
|    | 10 | 0.79 | -330.9 | -4796.5  | 3797.1  |
| 12 | 6  | 0.81 | 312.2  | -2884.0  | -2238.5 |
|    | 10 | 0.79 | -303.6 | -4802.3  | 3933.9  |
| 13 | 6  | 0.81 | 362.2  | -2543.5  | -1660.7 |
|    | 10 | 0.79 | -353.6 | -4718.7  | 2803.5  |
| 14 | 6  | 0.81 | 389.4  | -2473.4  | -1609.7 |
|    | 10 | 0.79 | -380.9 | -4712.9  | 2666.7  |
| 15 | 6  | 0.81 | 430.1  | -2580.3  | -2017.4 |
|    | 10 | 0.79 | -421.8 | -4777.3  | 3341.2  |
| 16 | 6  | 0.81 | 402.9  | -2650.4  | -2068.4 |
|    | 10 | 0.79 | -394.5 | -4783.1  | 3478.0  |
| 17 | 6  | 0.81 | 271.4  | -2777.1  | -1830.8 |
|    | 10 | 0.79 | -262.7 | -4737.9  | 3259.4  |
| 18 | 6  | 0.81 | 298.7  | -2707.0  | -1779.8 |
|    | 10 | 0.79 | -290.0 | -4732.2  | 3122.7  |
|    |    |      |        |          |         |
| 1  | 10 | 1.17 | 536.1  | -11167.3 | -8876.2 |
|    | 15 | 1.11 | -533.6 | -6757.5  | 4489.5  |
| 2  | 10 | 0.76 | 455.5  | -6144.0  | -3390.4 |
|    | 15 | 0.72 | -450.9 | -3970.8  | 1902.9  |
| 3  | 10 | 0.77 | 349.5  | -6887.5  | -4623.8 |
|    | 15 | 0.73 | -343.3 | -3544.9  | 1566.8  |
| 4  | 10 | 0.76 | 457.2  | -6360.7  | -3915.1 |
|    | 15 | 0.72 | -454.3 | -3988.5  | 2130.3  |
| 5  | 10 | 0.76 | 338.7  | -7194.7  | -5344.3 |
|    | 15 | 0.74 | -334.9 | -3557.9  | 1882.8  |
| 6  | 10 | 0.78 | 60.3   | -8923.8  | -8154.3 |
|    | 15 | 0.78 | -53.0  | -2535.5  | 1077.8  |
| 7  | 10 | 0.78 | -45.7  | -9667.3  | -9387.7 |
|    | 15 | 0.80 | 54.6   | -2109.5  | 741.8   |
| 8  | 10 | 0.78 | 103.9  | -8839.1  | -8026.4 |
|    | 15 | 0.78 | -95.7  | -2568.5  | 1010.1  |
| 9  | 10 | 0.78 | -14.6  | -9673.0  | -9455.6 |
|    | 15 | 0.80 | 23.7   | -2137.9  | 762.6   |
| 10 | 10 | 0.88 | 399.0  | -8296.5  | -6406.5 |
|    | 15 | 0.84 | -395.9 | -5057.7  | 3188.1  |
| 11 | 10 | 0.79 | 339.6  | -6790.8  | -5252.7 |
|    | 15 | 0.75 | -329.6 | -4410.8  | 1771.6  |
| 12 | 10 | 0.79 | 350.6  | -6720.1  | -5602.7 |
|    | 15 | 0.75 | -340.0 | -4417.2  | 1689.3  |
| 13 | 10 | 0.79 | 337.0  | -7128.8  | -3726.5 |
|    | 15 | 0.76 | -329.8 | -4427.5  | 2190.5  |
| 14 | 10 | 0.79 | 326.1  | -7199.5  | -3376.4 |
|    | 15 | 0.76 | -319.4 | -4421.1  | 2272.8  |
| 15 | 10 | 0.79 | 303.1  | -7026.7  | -4086.0 |
|    | 15 | 0.75 | -295.1 | -4389.6  | 2045.8  |
| 16 | 10 | 0.79 | 314.0  | -6955.9  | -4436.0 |
|    | 15 | 0.75 | -305.5 | -4396.0  | 1963.5  |
| 17 | 10 | 0.79 | 373.6  | -6893.0  | -4893.2 |
|    | 15 | 0.76 | -364.3 | -4448.7  | 1916.3  |

|    |    |      |        |          |          |
|----|----|------|--------|----------|----------|
| 18 | 10 | 0.79 | 362.6  | -6963.7  | -4543.2  |
|    | 15 | 0.76 | -353.9 | -4442.4  | 1998.6   |
|    |    |      |        |          |          |
| 1  | 15 | 1.11 | 411.2  | -17790.6 | -6710.4  |
|    | 20 | 1.08 | -432.0 | -14607.2 | 526.0    |
| 2  | 15 | 0.72 | -50.6  | -9685.7  | -1049.5  |
|    | 20 | 0.72 | 50.1   | -9175.1  | -132.7   |
| 3  | 15 | 0.73 | -6.8   | -10914.5 | -3457.4  |
|    | 20 | 0.74 | 9.6    | -8983.9  | -706.2   |
| 4  | 15 | 0.72 | -69.3  | -10264.3 | -2689.2  |
|    | 20 | 0.72 | 68.3   | -9005.3  | -76.1    |
| 5  | 15 | 0.74 | -37.6  | -11661.8 | -5619.2  |
|    | 20 | 0.74 | 40.0   | -8780.2  | -568.4   |
| 6  | 15 | 0.78 | 55.3   | -14344.1 | -10816.2 |
|    | 20 | 0.80 | -44.2  | -8424.8  | -1773.8  |
| 7  | 15 | 0.80 | 99.1   | -15572.8 | -13224.1 |
|    | 20 | 0.82 | -84.7  | -8233.6  | -2347.3  |
| 8  | 15 | 0.78 | 76.5   | -14360.2 | -10715.5 |
|    | 20 | 0.80 | -66.6  | -8368.0  | -1987.8  |
| 9  | 15 | 0.80 | 108.3  | -15757.7 | -13645.5 |
|    | 20 | 0.82 | -94.9  | -8142.9  | -2480.1  |
| 10 | 15 | 0.84 | 318.3  | -13222.7 | -4811.4  |
|    | 20 | 0.82 | -331.6 | -10982.4 | 421.1    |
| 11 | 15 | 0.75 | 343.0  | -10642.0 | -1855.7  |
|    | 20 | 0.75 | -343.7 | -9962.9  | 445.5    |
| 12 | 15 | 0.75 | 352.8  | -10501.4 | -1416.5  |
|    | 20 | 0.75 | -353.7 | -9990.8  | 379.2    |
| 13 | 15 | 0.76 | 312.1  | -11595.0 | -4578.5  |
|    | 20 | 0.76 | -313.8 | -9691.2  | 546.4    |
| 14 | 15 | 0.76 | 302.2  | -11735.7 | -5017.7  |
|    | 20 | 0.76 | -303.8 | -9663.3  | 612.8    |
| 15 | 15 | 0.75 | 310.1  | -11111.0 | -3319.6  |
|    | 20 | 0.76 | -310.3 | -9869.8  | 666.5    |
| 16 | 15 | 0.75 | 320.0  | -10970.3 | -2880.4  |
|    | 20 | 0.76 | -320.4 | -9897.7  | 600.2    |
| 17 | 15 | 0.76 | 345.0  | -11126.0 | -3114.6  |
|    | 20 | 0.76 | -347.2 | -9784.3  | 325.4    |
| 18 | 15 | 0.76 | 335.1  | -11266.7 | -3553.8  |
|    | 20 | 0.76 | -337.2 | -9756.4  | 391.7    |
|    |    |      |        |          |          |
| 1  | 4  | 1.31 | 656.2  | -16252.4 | -1569.4  |
|    | 7  | 1.18 | -588.7 | -7000.0  | -7142.6  |
| 2  | 4  | 0.99 | 1082.8 | -12923.1 | -2000.7  |
|    | 7  | 0.85 | -860.7 | -4125.1  | -7284.3  |
| 3  | 4  | 0.95 | 868.1  | -12685.2 | -2434.5  |
|    | 7  | 0.83 | -686.3 | -3521.1  | -7476.9  |
| 4  | 4  | 0.98 | 1010.8 | -12924.8 | -1987.9  |
|    | 7  | 0.84 | -787.8 | -4301.5  | -7322.9  |
| 5  | 4  | 0.94 | 904.2  | -12702.3 | -2420.0  |
|    | 7  | 0.82 | -713.8 | -3767.1  | -7579.6  |
| 6  | 4  | 0.85 | 727.3  | -12181.6 | -3440.9  |
|    | 7  | 0.78 | -614.1 | -2343.8  | -8139.8  |
| 7  | 4  | 0.81 | 512.6  | -11943.6 | -3874.6  |

|    |    |      |        |          |         |
|----|----|------|--------|----------|---------|
|    | 7  | 0.77 | -439.6 | -1739.9  | -8332.4 |
| 8  | 4  | 0.85 | 295.2  | -12131.6 | -3433.8 |
|    | 7  | 0.78 | -206.3 | -2288.4  | -7965.0 |
| 9  | 4  | 0.81 | 188.5  | -11909.1 | -3865.8 |
|    | 7  | 0.76 | -132.3 | -1754.0  | -8221.7 |
| 10 | 4  | 0.99 | 471.0  | -12339.6 | -1251.2 |
|    | 7  | 0.89 | -417.2 | -5258.3  | -5543.0 |
| 11 | 4  | 0.94 | 376.8  | -11599.6 | -1460.6 |
|    | 7  | 0.83 | -314.7 | -4538.3  | -5732.5 |
| 12 | 4  | 0.94 | 275.9  | -11585.1 | -1460.1 |
|    | 7  | 0.83 | -220.3 | -4481.4  | -5679.8 |
| 13 | 4  | 0.92 | 258.2  | -11602.8 | -1441.9 |
|    | 7  | 0.82 | -194.5 | -4828.5  | -5796.6 |
| 14 | 4  | 0.92 | 359.1  | -11617.3 | -1442.4 |
|    | 7  | 0.82 | -288.9 | -4885.5  | -5849.3 |
| 15 | 4  | 0.93 | 712.9  | -11647.7 | -1462.2 |
|    | 7  | 0.82 | -629.3 | -4728.3  | -5908.0 |
| 16 | 4  | 0.93 | 612.1  | -11633.3 | -1461.7 |
|    | 7  | 0.82 | -534.9 | -4671.3  | -5855.4 |
| 17 | 4  | 0.93 | -77.9  | -11554.7 | -1440.4 |
|    | 7  | 0.82 | 120.1  | -4638.6  | -5621.1 |
| 18 | 4  | 0.92 | 22.9   | -11569.1 | -1440.8 |
|    | 7  | 0.82 | 25.7   | -4695.5  | -5673.7 |
|    |    |      |        |          |         |
| 1  | 7  | 1.18 | 588.7  | 7000.0   | 7142.6  |
|    | 11 | 1.16 | -565.5 | -18530.8 | 9475.7  |
| 2  | 7  | 0.85 | 860.7  | 4125.1   | 7284.3  |
|    | 11 | 0.82 | -771.8 | -11692.4 | 3416.6  |
| 3  | 7  | 0.83 | 686.3  | 3521.1   | 7476.9  |
|    | 11 | 0.81 | -613.2 | -10907.4 | 2305.5  |
| 4  | 7  | 0.84 | 787.8  | 4301.5   | 7322.9  |
|    | 11 | 0.82 | -697.6 | -12046.0 | 3459.7  |
| 5  | 7  | 0.82 | 713.8  | 3767.1   | 7579.6  |
|    | 11 | 0.81 | -637.3 | -11409.9 | 2313.5  |
| 6  | 7  | 0.78 | 614.1  | 2343.8   | 8139.8  |
|    | 11 | 0.79 | -570.8 | -9572.0  | -404.2  |
| 7  | 7  | 0.77 | 439.6  | 1739.9   | 8332.4  |
|    | 11 | 0.79 | -412.2 | -8787.0  | -1515.3 |
| 8  | 7  | 0.78 | 206.3  | 2288.4   | 7965.0  |
|    | 11 | 0.79 | -168.9 | -9429.2  | -243.8  |
| 9  | 7  | 0.76 | 132.3  | 1754.0   | 8221.7  |
|    | 11 | 0.79 | -108.6 | -8793.1  | -1390.1 |
| 10 | 7  | 0.89 | 417.2  | 5258.3   | 5543.0  |
|    | 11 | 0.88 | -398.0 | -13909.6 | 6934.5  |
| 11 | 7  | 0.83 | 314.7  | 4538.3   | 5732.5  |
|    | 11 | 0.81 | -290.7 | -12050.3 | 5286.0  |
| 12 | 7  | 0.83 | 220.3  | 4481.4   | 5679.8  |
|    | 11 | 0.81 | -198.0 | -11928.3 | 5315.1  |
| 13 | 7  | 0.82 | 194.5  | 4828.5   | 5796.6  |
|    | 11 | 0.81 | -168.4 | -12630.5 | 5357.1  |
| 14 | 7  | 0.82 | 288.9  | 4885.5   | 5849.3  |
|    | 11 | 0.81 | -261.0 | -12752.4 | 5328.0  |
| 15 | 7  | 0.82 | 629.3  | 4728.3   | 5908.0  |

|    |    |      |        |          |         |
|----|----|------|--------|----------|---------|
|    | 11 | 0.81 | -599.5 | -12456.9 | 5189.2  |
| 16 | 7  | 0.82 | 534.9  | 4671.3   | 5855.4  |
|    | 11 | 0.81 | -506.9 | -12334.9 | 5218.3  |
| 17 | 7  | 0.82 | -120.1 | 4638.6   | 5621.1  |
|    | 11 | 0.81 | 140.5  | -12223.9 | 5453.9  |
| 18 | 7  | 0.82 | -25.7  | 4695.5   | 5673.7  |
|    | 11 | 0.81 | 47.8   | -12345.8 | 5424.8  |
|    |    |      |        |          |         |
| 1  | 11 | 1.16 | -15.6  | -10550.6 | -9235.5 |
|    | 16 | 1.11 | 50.1   | -7319.3  | 6068.7  |
| 2  | 11 | 0.82 | 278.3  | -6792.7  | -3500.8 |
|    | 16 | 0.78 | -132.1 | -5335.1  | 2155.3  |
| 3  | 11 | 0.81 | 321.7  | -6941.1  | -4183.3 |
|    | 16 | 0.79 | -223.0 | -5079.1  | 2218.7  |
| 4  | 11 | 0.82 | 222.3  | -6864.1  | -3581.7 |
|    | 16 | 0.78 | -8.5   | -5391.1  | 2141.1  |
| 5  | 11 | 0.81 | 264.6  | -7086.2  | -4301.6 |
|    | 16 | 0.79 | -68.5  | -5114.5  | 2174.5  |
| 6  | 11 | 0.79 | 419.4  | -7533.0  | -5900.5 |
|    | 16 | 0.81 | -332.0 | -4413.0  | 2266.6  |
| 7  | 11 | 0.79 | 462.8  | -7681.5  | -6582.9 |
|    | 16 | 0.82 | -422.9 | -4157.0  | 2330.1  |
| 8  | 11 | 0.79 | 366.9  | -7359.0  | -5856.5 |
|    | 16 | 0.81 | -311.4 | -4537.9  | 2352.6  |
| 9  | 11 | 0.79 | 409.3  | -7581.1  | -6576.4 |
|    | 16 | 0.82 | -371.4 | -4261.2  | 2386.0  |
| 10 | 11 | 0.88 | 0.2    | -7851.1  | -6736.7 |
|    | 16 | 0.84 | 28.5   | -5550.3  | 4489.7  |
| 11 | 11 | 0.81 | 102.9  | -6580.6  | -4999.4 |
|    | 16 | 0.77 | -126.1 | -5130.7  | 3691.0  |
| 12 | 11 | 0.81 | 104.9  | -6511.5  | -4963.3 |
|    | 16 | 0.78 | -155.4 | -5148.9  | 3725.0  |
| 13 | 11 | 0.81 | 9.2    | -6712.6  | -5129.1 |
|    | 16 | 0.77 | 91.4   | -5243.1  | 3663.8  |
| 14 | 11 | 0.81 | 7.2    | -6781.6  | -5165.2 |
|    | 16 | 0.77 | 120.8  | -5224.9  | 3629.8  |
| 15 | 11 | 0.81 | 96.1   | -6810.7  | -5119.8 |
|    | 16 | 0.77 | -28.3  | -5069.8  | 3577.5  |
| 16 | 11 | 0.81 | 98.1   | -6741.7  | -5083.7 |
|    | 16 | 0.77 | -57.7  | -5088.1  | 3611.5  |
| 17 | 11 | 0.81 | 16.1   | -6482.4  | -5008.6 |
|    | 16 | 0.77 | -6.3   | -5304.0  | 3777.3  |
| 18 | 11 | 0.81 | 14.0   | -6551.5  | -5044.8 |
|    | 16 | 0.77 | 23.0   | -5285.7  | 3743.2  |
|    |    |      |        |          |         |
| 1  | 16 | 1.11 | 420.7  | -17677.9 | -7562.5 |
|    | 21 | 1.06 | -365.9 | -14365.2 | 1416.8  |
| 2  | 16 | 0.78 | 215.7  | -10760.3 | -1571.2 |
|    | 21 | 0.80 | -22.0  | -11136.6 | 1946.4  |
| 3  | 16 | 0.79 | 172.1  | -11767.7 | -3996.3 |
|    | 21 | 0.81 | -20.5  | -10685.8 | 1276.0  |
| 4  | 16 | 0.78 | 167.9  | -11211.3 | -2240.7 |
|    | 21 | 0.80 | 73.0   | -11159.1 | 1767.6  |

|    |    |      |         |          |          |
|----|----|------|---------|----------|----------|
| 5  | 16 | 0.79 | 123.3   | -12407.7 | -4941.2  |
|    | 21 | 0.81 | 96.5    | -10722.4 | 1021.4   |
| 6  | 16 | 0.81 | 67.0    | -14748.5 | -10572.7 |
|    | 21 | 0.84 | 56.3    | -9680.8  | -541.2   |
| 7  | 16 | 0.82 | 23.4    | -15755.9 | -12997.8 |
|    | 21 | 0.86 | 57.8    | -9230.1  | -1211.6  |
| 8  | 16 | 0.81 | 22.4    | -14569.3 | -10324.5 |
|    | 21 | 0.84 | 78.2    | -9656.5  | -467.0   |
| 9  | 16 | 0.82 | -22.1   | -15765.7 | -13024.9 |
|    | 21 | 0.86 | 101.7   | -9219.8  | -1213.3  |
| 10 | 16 | 0.84 | 343.4   | -13245.3 | -5570.6  |
|    | 21 | 0.81 | -297.8  | -10844.3 | 1094.3   |
| 11 | 16 | 0.77 | 466.9   | -11269.1 | -3895.3  |
|    | 21 | 0.75 | -444.9  | -9889.7  | 1260.0   |
| 12 | 16 | 0.78 | 467.2   | -11114.3 | -3668.3  |
|    | 21 | 0.75 | -462.8  | -9878.5  | 1322.4   |
| 13 | 16 | 0.77 | 400.1   | -12008.1 | -5001.4  |
|    | 21 | 0.76 | -299.0  | -9925.9  | 968.9    |
| 14 | 16 | 0.77 | 399.9   | -12163.0 | -5228.4  |
|    | 21 | 0.76 | -281.2  | -9937.1  | 906.6    |
| 15 | 16 | 0.77 | 466.1   | -11785.3 | -4651.8  |
|    | 21 | 0.76 | -385.6  | -9927.1  | 1052.2   |
| 16 | 16 | 0.77 | 466.3   | -11630.5 | -4424.8  |
|    | 21 | 0.76 | -403.4  | -9915.9  | 1114.5   |
| 17 | 16 | 0.77 | 401.0   | -11492.0 | -4244.9  |
|    | 21 | 0.76 | -358.4  | -9888.5  | 1176.7   |
| 18 | 16 | 0.77 | 400.7   | -11646.8 | -4471.9  |
|    | 21 | 0.76 | -340.6  | -9899.7  | 1114.4   |
|    |    |      |         |          |          |
| 1  | 12 | 1.18 | 1015.6  | -17806.8 | -3893.1  |
|    | 5  | 1.36 | -1095.7 | -17435.4 | 210.7    |
| 2  | 12 | 1.00 | 155.5   | -15192.3 | 514.1    |
|    | 5  | 1.19 | -772.1  | -17126.9 | 1016.1   |
| 3  | 12 | 0.96 | 141.1   | -13720.2 | 1234.2   |
|    | 5  | 1.12 | -675.9  | -15790.1 | 1548.4   |
| 4  | 12 | 1.00 | 48.6    | -15158.7 | 328.8    |
|    | 5  | 1.19 | -534.0  | -17004.7 | 804.4    |
| 5  | 12 | 0.96 | -24.3   | -13684.1 | 1118.6   |
|    | 5  | 1.11 | -318.2  | -16044.3 | 1360.5   |
| 6  | 12 | 0.87 | -87.7   | -10276.8 | 3146.5   |
|    | 5  | 0.95 | -52.5   | -13925.4 | 2869.7   |
| 7  | 12 | 0.83 | -102.0  | -8804.7  | 3866.6   |
|    | 5  | 0.87 | 43.7    | -12588.6 | 3401.9   |
| 8  | 12 | 0.86 | 0.7     | -10251.8 | 2729.0   |
|    | 5  | 0.93 | -213.2  | -12548.7 | 2578.6   |
| 9  | 12 | 0.82 | -72.2   | -8777.2  | 3518.7   |
|    | 5  | 0.86 | 2.7     | -11588.2 | 3134.7   |
| 10 | 12 | 0.90 | 719.5   | -13366.2 | -2742.7  |
|    | 5  | 1.04 | -786.0  | -13169.3 | 111.3    |
| 11 | 12 | 0.84 | 514.3   | -11887.8 | -1446.8  |
|    | 5  | 0.98 | -410.9  | -12165.9 | 56.9     |
| 12 | 12 | 0.84 | 556.5   | -11889.8 | -1503.0  |
|    | 5  | 0.98 | -374.4  | -11826.8 | 40.1     |

|    |    |      |         |          |         |
|----|----|------|---------|----------|---------|
| 13 | 12 | 0.84 | 363.0   | -11829.9 | -1745.6 |
|    | 5  | 0.97 | -643.7  | -11965.8 | -296.5  |
| 14 | 12 | 0.85 | 320.8   | -11827.9 | -1689.5 |
|    | 5  | 0.97 | -680.1  | -12304.9 | -279.7  |
| 15 | 12 | 0.85 | 373.5   | -11881.2 | -1259.8 |
|    | 5  | 0.99 | -532.4  | -13296.3 | 112.8   |
| 16 | 12 | 0.85 | 415.7   | -11883.2 | -1315.9 |
|    | 5  | 0.99 | -495.9  | -12957.2 | 96.1    |
| 17 | 12 | 0.83 | 503.8   | -11836.4 | -1932.6 |
|    | 5  | 0.96 | -522.1  | -10835.3 | -352.5  |
| 18 | 12 | 0.84 | 461.5   | -11834.5 | -1876.5 |
|    | 5  | 0.96 | -558.6  | -11174.5 | -335.7  |
|    |    |      |         |          |         |
| 1  | 17 | 1.13 | 58.0    | -7075.9  | -4101.3 |
|    | 12 | 1.18 | -81.0   | -8262.6  | 5128.3  |
| 2  | 17 | 0.95 | 426.3   | -6433.4  | 222.0   |
|    | 12 | 1.00 | -621.7  | -7399.5  | 707.7   |
| 3  | 17 | 0.92 | 665.7   | -6518.9  | -1051.3 |
|    | 12 | 0.96 | -800.5  | -6527.8  | 1218.3  |
| 4  | 17 | 0.96 | 174.1   | -6579.1  | -56.8   |
|    | 12 | 1.00 | -441.8  | -7323.3  | 680.0   |
| 5  | 17 | 0.94 | 367.3   | -6730.4  | -1370.0 |
|    | 12 | 0.96 | -607.1  | -6448.6  | 926.6   |
| 6  | 17 | 0.87 | 1070.1  | -6937.8  | -4155.2 |
|    | 12 | 0.87 | -1172.8 | -4484.0  | 1529.9  |
| 7  | 17 | 0.85 | 1309.6  | -7023.3  | -5428.5 |
|    | 12 | 0.83 | -1351.6 | -3612.3  | 2040.6  |
| 8  | 17 | 0.87 | 972.3   | -6864.1  | -4301.0 |
|    | 12 | 0.86 | -1038.0 | -4417.6  | 2382.1  |
| 9  | 17 | 0.85 | 1165.4  | -7015.4  | -5614.2 |
|    | 12 | 0.82 | -1203.3 | -3542.9  | 2628.8  |
| 10 | 17 | 0.86 | 60.5    | -5334.2  | -2937.9 |
|    | 12 | 0.90 | -81.5   | -6194.4  | 3676.3  |
| 11 | 17 | 0.80 | 353.9   | -4717.9  | -1723.6 |
|    | 12 | 0.84 | -321.7  | -5522.4  | 2482.7  |
| 12 | 17 | 0.80 | 400.1   | -4660.9  | -1690.2 |
|    | 12 | 0.84 | -337.4  | -5527.8  | 2713.1  |
| 13 | 17 | 0.81 | -87.7   | -4959.9  | -2178.2 |
|    | 12 | 0.84 | -15.8   | -5397.9  | 2425.7  |
| 14 | 17 | 0.81 | -134.0  | -5016.9  | -2211.6 |
|    | 12 | 0.85 | -0.1    | -5392.6  | 2195.2  |
| 15 | 17 | 0.81 | 199.7   | -4907.9  | -1834.8 |
|    | 12 | 0.85 | -269.3  | -5504.6  | 1714.5  |
| 16 | 17 | 0.81 | 245.9   | -4850.9  | -1801.4 |
|    | 12 | 0.85 | -285.1  | -5510.0  | 1944.9  |
| 17 | 17 | 0.80 | 66.5    | -4769.9  | -2066.9 |
|    | 12 | 0.83 | -68.2   | -5415.7  | 3193.9  |
| 18 | 17 | 0.81 | 20.2    | -4826.9  | -2100.3 |
|    | 12 | 0.84 | -52.5   | -5410.4  | 2963.4  |
|    |    |      |         |          |         |
| 1  | 22 | 1.08 | -50.6   | -12451.3 | 1688.8  |
|    | 17 | 1.13 | 5.0     | -15164.4 | 3232.2  |
| 2  | 22 | 0.95 | 711.7   | -12743.9 | 514.3   |

|    |    |      |         |          |        |
|----|----|------|---------|----------|--------|
|    | 17 | 0.95 | -1091.5 | -13057.0 | -999.4 |
| 3  | 22 | 0.93 | 515.8   | -11428.0 | 1331.0 |
|    | 17 | 0.92 | -822.9  | -13240.3 | 1268.6 |
| 4  | 22 | 0.97 | 561.9   | -13024.9 | 627.6  |
|    | 17 | 0.96 | -957.1  | -13251.5 | -425.2 |
| 5  | 22 | 0.95 | 301.1   | -11832.4 | 1584.1 |
|    | 17 | 0.94 | -632.0  | -13554.3 | 2109.5 |
| 6  | 22 | 0.91 | -157.7  | -8769.1  | 3702.3 |
|    | 17 | 0.87 | -7.8    | -14066.4 | 7449.7 |
| 7  | 22 | 0.89 | -353.7  | -7453.2  | 4519.1 |
|    | 17 | 0.85 | 260.8   | -14249.7 | 9717.7 |
| 8  | 22 | 0.90 | -91.2   | -8638.6  | 3350.1 |
|    | 17 | 0.87 | -61.8   | -13862.4 | 7134.7 |
| 9  | 22 | 0.89 | -352.0  | -7446.2  | 4306.5 |
|    | 17 | 0.85 | 263.3   | -14165.2 | 9669.5 |
| 10 | 22 | 0.82 | -0.0    | -9399.3  | 1300.3 |
|    | 17 | 0.86 | -40.0   | -11383.0 | 2304.2 |
| 11 | 22 | 0.77 | 299.9   | -8359.7  | 1205.6 |
|    | 17 | 0.80 | -349.6  | -9939.6  | 999.1  |
| 12 | 22 | 0.76 | 354.2   | -8259.3  | 1088.8 |
|    | 17 | 0.80 | -397.3  | -9841.3  | 780.2  |
| 13 | 22 | 0.79 | 54.2    | -8813.1  | 1406.4 |
|    | 17 | 0.81 | -128.8  | -10261.0 | 1952.4 |
| 14 | 22 | 0.80 | -0.1    | -8913.4  | 1523.2 |
|    | 17 | 0.81 | -81.2   | -10359.3 | 2171.2 |
| 15 | 22 | 0.79 | 119.1   | -8694.3  | 1594.9 |
|    | 17 | 0.81 | -190.8  | -10267.5 | 1728.5 |
| 16 | 22 | 0.78 | 173.3   | -8593.9  | 1478.1 |
|    | 17 | 0.81 | -238.5  | -10169.1 | 1509.7 |
| 17 | 22 | 0.78 | 235.0   | -8478.5  | 1017.0 |
|    | 17 | 0.80 | -287.6  | -9933.1  | 1222.9 |
| 18 | 22 | 0.78 | 180.8   | -8578.9  | 1133.9 |
|    | 17 | 0.81 | -240.0  | -10031.5 | 1441.7 |

# - Analisi dinamica

## - Convenzioni adottate

Nella presente versione del programma **WinStrand** l'analisi in campo dinamico della struttura può essere condotta per via *statica equivalente* ovvero per via *modale* facendo uso, per il calcolo della risposta, dello spettro di pseudo accelerazioni fornito dal regolamento italiano.

Nel caso di analisi dinamica condotta per via *statica equivalente* le azioni di piano vengono calcolate facendo riferimento al punto **C.6.1.1.** delle **norme tecniche per le costruzioni in zona sismica** e cioè, definiti:

---

**W<sub>i</sub>**

peso dell'*i*-esimo impalcato valutato tenendo conto dei carichi permanenti e dei coefficienti riduttivi relativi alle condizioni di carico accidentali

---

**K<sub>hi</sub>**

coefficiente ottenuto tenendo conto del coefficiente di intensità sismica e dei coefficienti di risposta, fondazione, struttura. Ovvero:

$$K_{hi} = C \times R \times E \times \beta \times \eta_i$$

dove (indicando con  $h_j$  l'altezza del *j*-esimo piano)

$$\eta_i = h_i \frac{\sum_{j=1}^n W_j}{\sum_j W_j h_j}$$

L'azione tagliante sull'*i*-esimo piano vale:

$$F_i = K_{hi} \times W_i$$

A tale azione tagliante viene poi associato (qualora il rapporto fra i lati *D* e *B* dell'edificio sia superiore a 2.5 in accordo al punto **C.6.1.2** delle norme citate) il momento torcente di piano:

$$M_i = \lambda \sum_{j=i}^n D_j F_j$$

Nel caso di analisi dinamica condotta per via *modale* il programma provvede al calcolo dei modi di vibrare della struttura facendo uso dell'algoritmo noto in letteratura tecnica come *Subspace Iteration*. Una volta *M-Ortonormalizzati* gli autovettori la risposta massima relativa all'*i*-esimo modo di vibrare viene valutata con la formula:

$$S_{imax} = \frac{L_{ni} \times Sa(T_i)}{M_{ni} \times \omega_i^2}$$

nella quale:

$$S_a(T) = C \times R(T) \times \varepsilon \times \beta \times g$$

con:

$$C = (S-2)/100$$

$$L_{ni} = \{f_i^T\}[M]\{I\} \text{ e}$$

$$M_{ni} = \{f_i^T\}[M]\{f_i^T\}$$

I simboli che compaiono nelle espressioni precedenti hanno il seguente significato:

---

**$\varepsilon$**   
coefficiente di fondazione;

---

**$\beta$**   
coefficiente di struttura;

---

**$g$**   
accelerazione di gravità

---

**$w_i$**   
*i-esima* frequenza associata all'*i-esimo* autovettore;

---

**$R(T_i)$**   
coefficiente di risposta ricavato dallo spettro di *pseudoaccelerazioni* del regolamento;

---

**$S$**   
Grado di sismicità;

---

**$f_i$**   
*i-esimo* autovettore;

---

**$M$**   
matrice delle masse;

---

**$I$**   
vettore di trascinamento;

Per cui il campo di spostamenti indotto dall'*i-esimo* modo di vibrare sulla struttura vale:

$$V_i = \phi_i \times S_{Max}$$

Il programma per ogni direzione di ingresso del sisma quindi valuta il campo di spostamenti nodali e il campo di sollecitazioni nel generico elemento secondo la formula di quadratura:

$$S = \sqrt{\sum_{i=1}^n S_i^2}$$

dove:

---

**$n$**   
numero di modi ( $\geq 3$ ) considerati in soluzione

---

**$S_i$**

generica componente di spostamento o di sollecitazione indotta dallo *i-esimo* modo di vibrare nell'elemento.

In output vengono inoltre riportate, per ogni direzione di ingresso del sisma e per ogni modo di vibrare, le cosiddette *masse modali efficaci*. In particolare considerando la *j-esima* direzione di ingresso del sisma e denotando con il pedice *i* le grandezze relative all'*i-esimo* modo di vibrare, vengono forniti in output la grandezze:

- Il modo di vibrare (si noti che per ogni direzione di ingresso il *sub-set* di modi di vibrare utilizzato può cambiare essendo i modi di vibrare scelti in modo tale da fornire il massimo fattore di partecipazione  $L_{ij}$ ).
- Il fattore di partecipazione  $L_{ij}$  (altrimenti noto in letteratura tecnica come  $g_{ij}$ ).
- Il rapporto percentuale fra il fattore di partecipazione del primo modo considerato ed il generico modo (pari a  $100 L_{ij}/L_{1j}$ ).
- La massa modale  $Em_{ij}$  efficace relativa all'*i-esimo* modo ( $Em_{ij}=L_{ij}^2/M_{ij}$ ).
- Il rapporto fra la massa modale efficace dell'*i-esimo* modo e la massa modale efficace totale, calcolato come  $100 Em_{ij} / Em_{Totj}$ .
- La percentuale, cumulativa, della massa modale considerata sommando via via i contributi dovuti ai singoli modi di vibrare e pari a  $100 \sum_i (Em_{ij} / Em_{Totj})$ . Tale valore è pari al 100% per un'analisi dinamica completa.

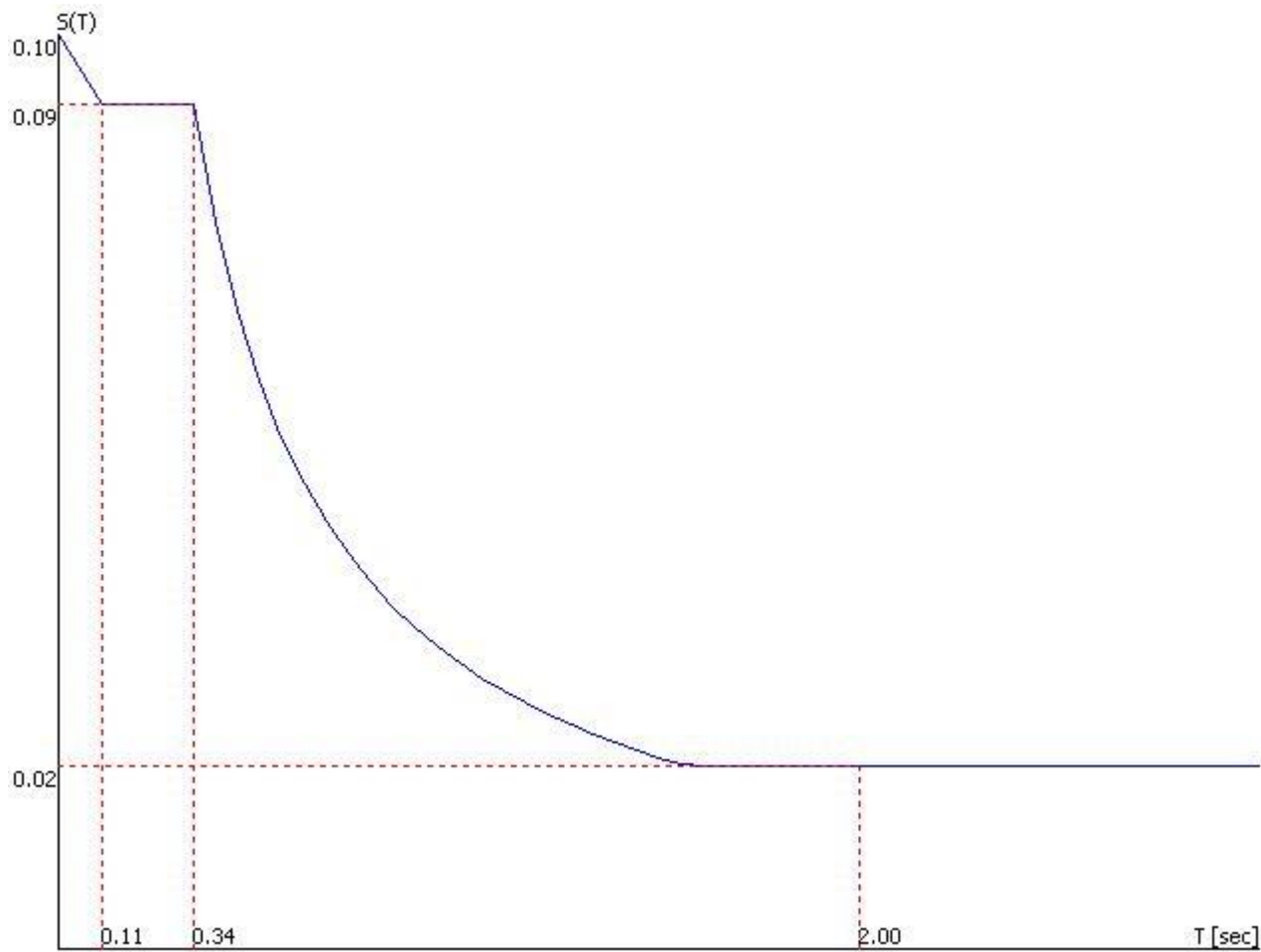
## - Dati generali relativi all'analisi dinamica

### - Spettro in accordo con TU 2008

- stante Longitudine 17.2050 Latitudine 40.5663
- Tipo di Terreno A
- Coefficiente di amplificazione topografica ( $S_T$ ) 1.0000
- Vita nominale della costruzione ( $V_N$ ) 50.0 anni
- Classe d'uso II° coefficiente  $C_U$  1.0
- Classe di duttilità impostata Bassa
- Fattore di struttura massimo  $q_0$  per sisma orizzontale 3.00
- Fattore di duttilità  $K_R$  per sisma orizzontale 1.15
- Fattore riduttivo regolarità in altezza  $K_R$  0.80
- Fattore riduttivo per la presenza di setti  $K_W$  1.00
- Fattore di struttura  $q$  per sisma orizzontale 2.76
- Fattore di struttura  $q$  per sisma verticale 1.50
- Smorzamento Viscoso (  $0.05 = 5\%$  ) 0.05

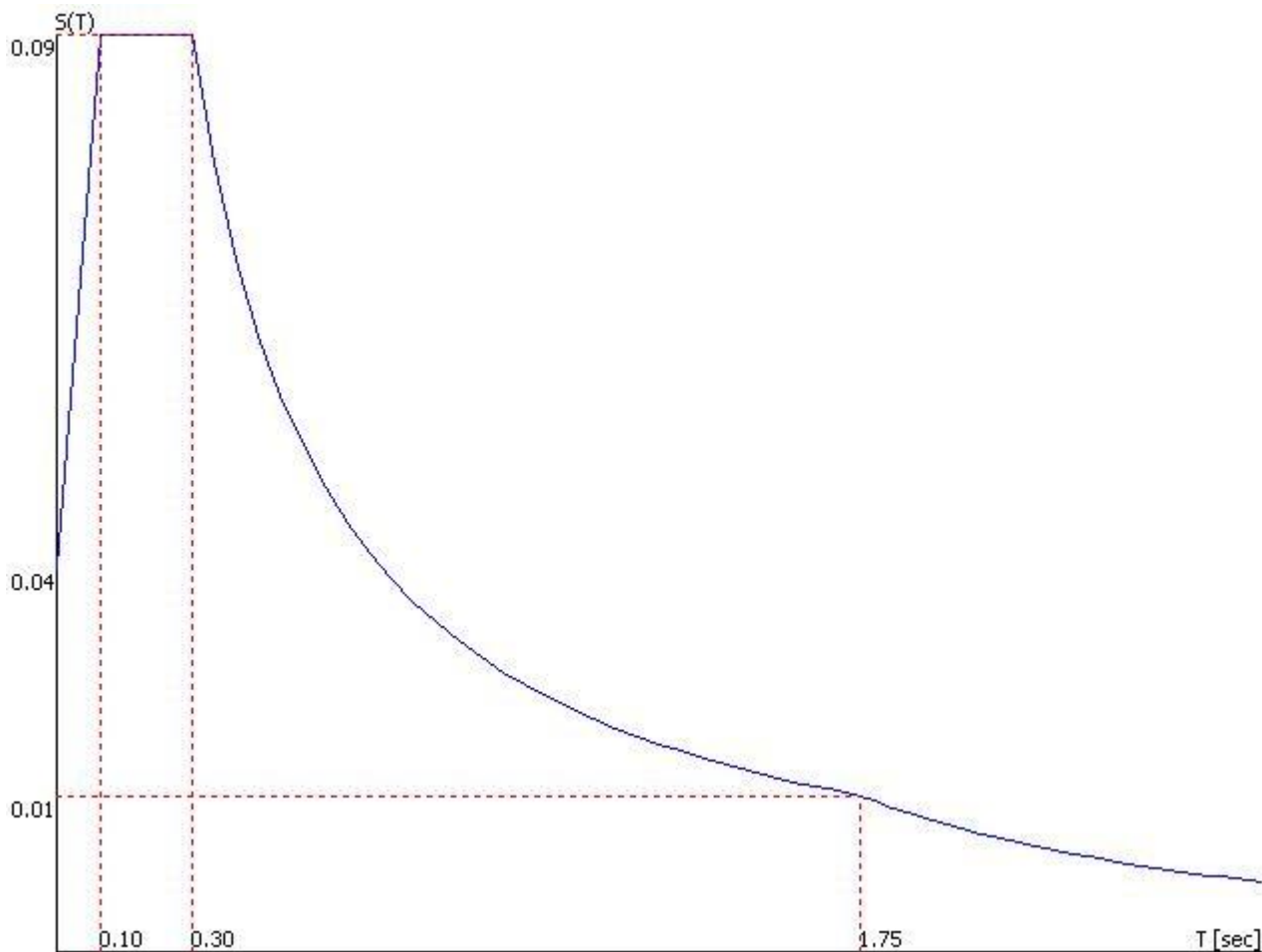
### - TU 2008 SLV H

- Probabilità di superamento ( $P_{VR}$ ) 10.0 e periodo di ritorno ( $T_R$ ) 475 (anni)
- $S_s$  1.0
- $T_B$  0.11 [sec]
- $T_C$  0.34 [sec]
- $T_D$  2.00 [sec]
- $a_g/g$  0.1012
- $F_o$  2.5496
- $T_C^*$  0.3392



## - TU 2008 SLD H

- Probabilità di superamento ( $P_{VR}$ ) 63.0 e periodo di ritorno ( $T_R$ ) 50 (anni)
- $S_s$  1.0
- $T_B$  0.10 [sec]
- $T_C$  0.30 [sec]
- $T_D$  1.75 [sec]
- $a_g/g$  0.0367
- $F_o$  2.4056
- $T_C^*$  0.2957



Fattori di partecipazione per il calcolo delle masse

Cond. Carico 1 p.p 1.0000

Cond. Carico 2 perm solai 1.0000

Cond. Carico 3 perm muri tamp 1.0000

Cond. Carico 4 perm terreno fond 1.0000

Cond. Carico 5 acc solai 0.3000

Angoli d'ingresso del Sisma

- SLV Direzione 1 Angolo in pianta 0.00 [°]
- SLV Direzione 2 Angolo in pianta 0.00 [°]
- SLV Direzione 3 Angolo in pianta 90.00 [°]
- SLV Direzione 4 Angolo in pianta 90.00 [°]
- SLV Direzione 5 Angolo in pianta 180.00 [°]
- SLV Direzione 6 Angolo in pianta 180.00 [°]
- SLV Direzione 7 Angolo in pianta 270.00 [°]
- SLV Direzione 8 Angolo in pianta 270.00 [°]
- SLD Direzione 9 Angolo in pianta 0.00 [°]
- SLD Direzione 10 Angolo in pianta 0.00 [°]
- SLD Direzione 11 Angolo in pianta 90.00 [°]
- SLD Direzione 12 Angolo in pianta 90.00 [°]
- SLD Direzione 13 Angolo in pianta 180.00 [°]

- SLD Direzione 14 Angolo in pianta 180.00 [°]
- SLD Direzione 15 Angolo in pianta 270.00 [°]
- SLD Direzione 16 Angolo in pianta 270.00 [°]

| Solaio | x [m] | y [m] | z [m] | Massa [UTM] | Jpolare [UTM m <sup>2</sup> ] |
|--------|-------|-------|-------|-------------|-------------------------------|
| 1      | 9.36  | 5.35  | 3.30  | 28827.9     | 1368036.9                     |
| 2      | 9.60  | 5.28  | 7.15  | 24455.7     | 1120422.8                     |
| 3      | 14.79 | 3.24  | 10.15 | 6350.5      | 76126.0                       |

### - Rigidezze traslanti dei solai.

| Solaio | Kxx [kg/m] | Kyy [kg/m] | Kxy [kg/m] | Kxt [kgm] | Kyt [kgm] |
|--------|------------|------------|------------|-----------|-----------|
| 1      | 9.9e+007   | 1.2e+008   | -3.5e+003  | 1.8e+007  | -1.7e+008 |
| 2      | 5.7e+007   | 5.4e+007   | 2.3e+004   | 8.0e+007  | 8.5e+007  |
| 3      | 2.0e+007   | 1.5e+007   | 9.7e+004   | 7.9e+006  | -2.4e+006 |

### - Direzione d'ingresso 1 angolo 0.00 [°] + SLV

### - Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 3.08380e+002 | 17.561              | 0.36          | 0.0886                |
| 2    | 2.97591e+003 | 54.552              | 0.12          | 0.0935                |
| 3    | 2.43454e+002 | 15.603              | 0.40          | 0.0787                |
| 4    | 5.55632e+003 | 74.541              | 0.08          | 0.0954                |
| 5    | 5.84968e+002 | 24.186              | 0.26          | 0.0935                |
| 6    | 5.93451e+003 | 77.036              | 0.08          | 0.0956                |

### - Direzione d'ingresso 2 angolo 0.00 [°] - SLV

### - Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 3.10527e+002 | 17.622              | 0.36          | 0.0889                |
| 2    | 2.90265e+003 | 53.876              | 0.12          | 0.0935                |
| 3    | 4.31806e+003 | 65.712              | 0.10          | 0.0946                |
| 4    | 5.26630e+003 | 72.569              | 0.09          | 0.0953                |
| 5    | 2.52771e+003 | 50.276              | 0.12          | 0.0935                |
| 6    | 7.83940e+003 | 88.540              | 0.07          | 0.0963                |

### - Direzione d'ingresso 3 angolo 90.00 [°] + SLV

### - Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 2.27544e+002 | 15.085              | 0.42          | 0.0761                |
| 2    | 6.36885e+002 | 25.237              | 0.25          | 0.0935                |
| 3    | 2.37587e+003 | 48.743              | 0.13          | 0.0935                |
| 4    | 7.99678e+003 | 89.425              | 0.07          | 0.0964                |
| 5    | 5.86627e+003 | 76.592              | 0.08          | 0.0956                |
| 6    | 4.37125e+003 | 66.115              | 0.10          | 0.0947                |

- Direzione d'ingresso 4 angolo 90.00 [°] - SLV

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 2.62260e+002 | 16.194                 | 0.39             | 0.0817                   |
| 2    | 5.21966e+002 | 22.847                 | 0.28             | 0.0935                   |
| 3    | 2.66449e+003 | 51.619                 | 0.12             | 0.0935                   |
| 4    | 5.82492e+003 | 76.321                 | 0.08             | 0.0956                   |
| 5    | 3.09822e+002 | 17.602                 | 0.36             | 0.0888                   |
| 6    | 5.38062e+003 | 73.353                 | 0.09             | 0.0953                   |

- Direzione d'ingresso 5 angolo 180.00 [°] + SLV

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 3.10527e+002 | 17.622                 | 0.36             | 0.0889                   |
| 2    | 2.90265e+003 | 53.876                 | 0.12             | 0.0935                   |
| 3    | 4.31806e+003 | 65.712                 | 0.10             | 0.0946                   |
| 4    | 5.26630e+003 | 72.569                 | 0.09             | 0.0953                   |
| 5    | 2.52771e+003 | 50.276                 | 0.12             | 0.0935                   |
| 6    | 7.83940e+003 | 88.540                 | 0.07             | 0.0963                   |

- Direzione d'ingresso 6 angolo 180.00 [°] - SLV

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 3.08380e+002 | 17.561                 | 0.36             | 0.0886                   |
| 2    | 2.97591e+003 | 54.552                 | 0.12             | 0.0935                   |
| 3    | 2.43454e+002 | 15.603                 | 0.40             | 0.0787                   |
| 4    | 5.55632e+003 | 74.541                 | 0.08             | 0.0954                   |
| 5    | 5.84968e+002 | 24.186                 | 0.26             | 0.0935                   |
| 6    | 5.93451e+003 | 77.036                 | 0.08             | 0.0956                   |

- Direzione d'ingresso 7 angolo 270.00 [°] + SLV

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 2.62260e+002 | 16.194                 | 0.39             | 0.0817                   |
| 2    | 5.21966e+002 | 22.847                 | 0.28             | 0.0935                   |
| 3    | 2.66449e+003 | 51.619                 | 0.12             | 0.0935                   |
| 4    | 5.82492e+003 | 76.321                 | 0.08             | 0.0956                   |
| 5    | 3.09822e+002 | 17.602                 | 0.36             | 0.0888                   |
| 6    | 5.38062e+003 | 73.353                 | 0.09             | 0.0953                   |

- Direzione d'ingresso 8 angolo 270.00 [°] - SLV

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 2.27544e+002 | 15.085                 | 0.42             | 0.0761                   |
| 2    | 6.36885e+002 | 25.237                 | 0.25             | 0.0935                   |
| 3    | 2.37587e+003 | 48.743                 | 0.13             | 0.0935                   |
| 4    | 7.99678e+003 | 89.425                 | 0.07             | 0.0964                   |
| 5    | 5.86627e+003 | 76.592                 | 0.08             | 0.0956                   |
| 6    | 4.37125e+003 | 66.115                 | 0.10             | 0.0947                   |

- Direzione d'ingresso 9 angolo 0.00 [°] + SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 3.08380e+002 | 17.561                 | 0.36             | 0.0886                   |
| 2    | 2.97591e+003 | 54.552                 | 0.12             | 0.0935                   |
| 3    | 2.43454e+002 | 15.603                 | 0.40             | 0.0787                   |
| 4    | 5.55632e+003 | 74.541                 | 0.08             | 0.0954                   |
| 5    | 5.84968e+002 | 24.186                 | 0.26             | 0.0935                   |
| 6    | 5.93451e+003 | 77.036                 | 0.08             | 0.0956                   |

- Direzione d'ingresso 10 angolo 0.00 [°] - SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 3.10527e+002 | 17.622                 | 0.36             | 0.0889                   |
| 2    | 2.90265e+003 | 53.876                 | 0.12             | 0.0935                   |
| 3    | 4.31806e+003 | 65.712                 | 0.10             | 0.0946                   |
| 4    | 5.26630e+003 | 72.569                 | 0.09             | 0.0953                   |
| 5    | 2.52771e+003 | 50.276                 | 0.12             | 0.0935                   |
| 6    | 7.83940e+003 | 88.540                 | 0.07             | 0.0963                   |

- Direzione d'ingresso 11 angolo 90.00 [°] + SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza<br>[rad/sec] | Periodo<br>[sec] | Coefficiente<br>Risposta |
|------|--------------|------------------------|------------------|--------------------------|
| 1    | 2.27544e+002 | 15.085                 | 0.42             | 0.0761                   |
| 2    | 6.36885e+002 | 25.237                 | 0.25             | 0.0935                   |
| 3    | 2.37587e+003 | 48.743                 | 0.13             | 0.0935                   |
| 4    | 7.99678e+003 | 89.425                 | 0.07             | 0.0964                   |
| 5    | 5.86627e+003 | 76.592                 | 0.08             | 0.0956                   |
| 6    | 4.37125e+003 | 66.115                 | 0.10             | 0.0947                   |

- Direzione d'ingresso 12 angolo 90.00 [°] - SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 2.62260e+002 | 16.194              | 0.39          | 0.0817                |
| 2    | 5.21966e+002 | 22.847              | 0.28          | 0.0935                |
| 3    | 2.66449e+003 | 51.619              | 0.12          | 0.0935                |
| 4    | 5.82492e+003 | 76.321              | 0.08          | 0.0956                |
| 5    | 3.09822e+002 | 17.602              | 0.36          | 0.0888                |
| 6    | 5.38062e+003 | 73.353              | 0.09          | 0.0953                |

- Direzione d'ingresso 13 angolo 180.00 [°] + SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 3.10527e+002 | 17.622              | 0.36          | 0.0889                |
| 2    | 2.90265e+003 | 53.876              | 0.12          | 0.0935                |
| 3    | 4.31806e+003 | 65.712              | 0.10          | 0.0946                |
| 4    | 5.26630e+003 | 72.569              | 0.09          | 0.0953                |
| 5    | 2.52771e+003 | 50.276              | 0.12          | 0.0935                |
| 6    | 7.83940e+003 | 88.540              | 0.07          | 0.0963                |

- Direzione d'ingresso 14 angolo 180.00 [°] - SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 3.08380e+002 | 17.561              | 0.36          | 0.0886                |
| 2    | 2.97591e+003 | 54.552              | 0.12          | 0.0935                |
| 3    | 2.43454e+002 | 15.603              | 0.40          | 0.0787                |
| 4    | 5.55632e+003 | 74.541              | 0.08          | 0.0954                |
| 5    | 5.84968e+002 | 24.186              | 0.26          | 0.0935                |
| 6    | 5.93451e+003 | 77.036              | 0.08          | 0.0956                |

- Direzione d'ingresso 15 angolo 270.00 [°] + SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 2.62260e+002 | 16.194              | 0.39          | 0.0817                |
| 2    | 5.21966e+002 | 22.847              | 0.28          | 0.0935                |
| 3    | 2.66449e+003 | 51.619              | 0.12          | 0.0935                |
| 4    | 5.82492e+003 | 76.321              | 0.08          | 0.0956                |
| 5    | 3.09822e+002 | 17.602              | 0.36          | 0.0888                |
| 6    | 5.38062e+003 | 73.353              | 0.09          | 0.0953                |

- Direzione d'ingresso 16 angolo 270.00 [°] - SLD

- Primi autovalori e modi di vibrare della struttura.

| Modo | Autovalore   | Frequenza [rad/sec] | Periodo [sec] | Coefficiente Risposta |
|------|--------------|---------------------|---------------|-----------------------|
| 1    | 2.27544e+002 | 15.085              | 0.42          | 0.0761                |
| 2    | 6.36885e+002 | 25.237              | 0.25          | 0.0935                |
| 3    | 2.37587e+003 | 48.743              | 0.13          | 0.0935                |
| 4    | 7.99678e+003 | 89.425              | 0.07          | 0.0964                |
| 5    | 5.86627e+003 | 76.592              | 0.08          | 0.0956                |
| 6    | 4.37125e+003 | 66.115              | 0.10          | 0.0947                |

- Direzione di Ingresso del Sisma 1 Angolo 0.00

- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 1    | 2.14442e+002  | 100.0   | 4.59854e+004 | 77.1      | 77.1          |
| 2    | -9.09974e+001 | 42.4    | 8.28052e+003 | 13.9      | 91.0          |
| 3    | 4.69860e+001  | 21.9    | 2.20768e+003 | 3.7       | 94.7          |
| 4    | 4.05290e+001  | 18.9    | 1.64260e+003 | 2.8       | 97.5          |
| 5    | -3.65655e+001 | 17.1    | 1.33703e+003 | 2.2       | 99.7          |
| 6    | 1.24496e+001  | 5.8     | 1.54993e+002 | 0.3       | 100.0         |

- Variazioni Matrice delle Masse Solai Direzione d'ingresso 0.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità | dxG  | dyG  | Sx        | Sy        | dJp      |        |
|--------|--------------------|---------------------|--------------|------|------|-----------|-----------|----------|--------|
|        | B [m]              | H [m]               | [m]          | [m]  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM m²] |        |
| 1      | 18.30              | 10.50               | 10.50        | 0.52 | 0.00 | -0.52     | 15134.6   | 0.0      | 7945.7 |
| 2      | 18.30              | 10.50               | 10.50        | 0.52 | 0.00 | -0.52     | 12839.3   | 0.0      | 6740.6 |
| 3      | 7.20               | 6.30                | 6.30         | 0.31 | 0.00 | -0.31     | 2000.4    | 0.0      | 630.1  |

Direzione di Ingresso del Sisma 1 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 1    | 10511.2 | -2683.8 | 9529.6   |              |              |               |
|                             | 2    | 10747.7 | -415.8  | 15268.9  |              |              |               |
|                             | 3    | 402.5   | 1606.5  | 5605.4   |              |              |               |
|                             | 4    | 3338.1  | -1250.1 | -7988.6  |              |              |               |
|                             | 5    | 464.3   | 1101.6  | -12844.0 |              |              |               |
|                             | 6    | 336.3   | 1245.8  | -138.6   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 14744.7      | 0.0          | -75196.0      |
| Per Via Modale              |      |         |         |          | 15903.8      | -2748.0      | 24038.6       |
| Variazione                  |      |         |         |          | 1159.1       | -2748.0      | 99234.5       |

Direzione di Ingresso del Sisma 1 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 1    | 21983.8 | -6002.3 | 19987.9  |              |              |               |
|                             | 2    | 1035.0  | -573.3  | 2690.6   |              |              |               |
|                             | 3    | 872.2   | 3677.9  | 11960.9  |              |              |               |
|                             | 4    | -3304.9 | 1229.0  | 1980.1   |              |              |               |
|                             | 5    | 839.8   | 2211.5  | -26204.2 |              |              |               |
|                             | 6    | -396.4  | -960.3  | -2887.3  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 27101.6      | 0.0          | 132464.1      |
| Per Via Modale              |      |         |         |          | 22750.1      | -5925.5      | 36267.3       |
| Variazione                  |      |         |         |          | -4351.5      | -5925.5      | -96196.8      |

Direzione di Ingresso del Sisma 1 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 1    | 7477.5  | -1847.8 | 3264.1   |              |              |               |
|                             | 2    | -4191.5 | 509.4   | -444.1   |              |              |               |
|                             | 3    | 430.4   | 1709.8  | 945.8    |              |              |               |
|                             | 4    | 1504.4  | -559.0  | 936.4    |              |              |               |
|                             | 5    | -78.4   | -277.8  | -2387.8  |              |              |               |
|                             | 6    | 205.4   | 367.8   | 86.5     |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 9990.3       | 0.0          | -35273.1      |
| Per Via Modale              |      |         |         |          | 8805.0       | -2033.9      | 4404.1        |
| Variazione                  |      |         |         |          | -1185.4      | -2033.9      | 39677.2       |

## - Direzione di Ingresso del Sisma 2 Angolo 0.00

### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 7    | 2.22355e+002  | 100.0   | 4.94419e+004 | 82.9      | 82.9          |
| 8    | -8.20515e+001 | 36.9    | 6.73245e+003 | 11.3      | 94.2          |
| 9    | -4.49229e+001 | 20.2    | 2.01807e+003 | 3.4       | 97.6          |
| 10   | 2.55527e+001  | 11.5    | 6.52943e+002 | 1.1       | 98.7          |
| 11   | 2.15507e+001  | 9.7     | 4.64435e+002 | 0.8       | 99.5          |
| 12   | 1.47694e+001  | 6.6     | 2.18135e+002 | 0.4       | 99.8          |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 0.00

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |       | Sx        | Sy        | dJp      |        |
|--------|--------------------|-------|---------------------|----------------------|-------|-----------|-----------|----------|--------|
|        | B [m]              | H [m] | [m]                 | [m]                  | [m]   | [UTM]x[m] | [UTM]x[m] | [UTM m²] |        |
| 1      | 18.30              | 10.50 | 10.50               | 0.52                 | -0.00 | 0.52      | -15134.6  | -0.0     | 7945.7 |
| 2      | 18.30              | 10.50 | 10.50               | 0.52                 | -0.00 | 0.52      | -12839.3  | -0.0     | 6740.6 |
| 3      | 7.20               | 6.30  | 6.30                | 0.31                 | -0.00 | 0.31      | -2000.4   | -0.0     | 630.1  |

Direzione di Ingresso del Sisma 2 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 7    | 11389.6 | 177.9   | -6911.3  |              |              |               |
|                             | 8    | 8495.1  | 2008.7  | 1913.0   |              |              |               |
|                             | 9    | 3332.8  | -202.2  | 10012.8  |              |              |               |
|                             | 10   | 1434.8  | -297.9  | -15383.2 |              |              |               |
|                             | 11   | 613.3   | -1989.5 | -8870.9  |              |              |               |
|                             | 12   | 495.1   | -429.5  | 9638.4   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 14795.9      | 0.0          | -17309.5      |
| Per Via Modale              |      |         |         |          | 15640.3      | -1715.4      | -18376.1      |
| Variazione                  |      |         |         |          | 844.4        | -1715.4      | -1066.7       |

Direzione di Ingresso del Sisma 2 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 7    | 23761.3 | 454.8   | -13065.3 |              |              |               |
|                             | 8    | 1406.8  | 162.3   | 5044.8   |              |              |               |
|                             | 9    | -1700.0 | -16.6   | 7075.8   |              |              |               |
|                             | 10   | -1642.4 | 776.7   | 5479.4   |              |              |               |
|                             | 11   | 37.8    | -582.7  | -2831.3  |              |              |               |
|                             | 12   | -621.4  | 29.7    | -7106.3  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 27195.7      | 0.0          | 26045.1       |
| Per Via Modale              |      |         |         |          | 23964.7      | 1004.9       | -18416.7      |
| Variazione                  |      |         |         |          | -3231.0      | 1004.9       | -44461.8      |

Direzione di Ingresso del Sisma 2 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 7    | 7975.6  | 120.9   | -2894.3  |              |              |               |
|                             | 8    | -3729.8 | -665.2  | 8007.5   |              |              |               |
|                             | 9    | 240.9   | -21.8   | -9186.1  |              |              |               |
|                             | 10   | 817.8   | -490.9  | 1530.6   |              |              |               |
|                             | 11   | -225.4  | 999.4   | -82.5    |              |              |               |
|                             | 12   | 332.3   | 121.9   | 1229.8   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 10025.1      | 0.0          | 4002.8        |
| Per Via Modale              |      |         |         |          | 8856.9       | 894.7        | -10858.2      |
| Variazione                  |      |         |         |          | -1168.2      | 894.7        | -14861.0      |

**- Direzione di Ingresso del Sisma 3 Angolo 90.00**

**- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 13   | 1.96528e+002  | 100.0   | 3.86234e+004 | 64.8      | 64.8          |
| 14   | -9.70608e+001 | 49.4    | 9.42080e+003 | 15.8      | 80.6          |
| 15   | -8.21538e+001 | 41.8    | 6.74925e+003 | 11.3      | 91.9          |
| 16   | -4.12872e+001 | 21.0    | 1.70463e+003 | 2.9       | 94.7          |
| 17   | 3.97746e+001  | 20.2    | 1.58202e+003 | 2.7       | 97.4          |
| 18   | 2.30857e+001  | 11.7    | 5.32951e+002 | 0.9       | 98.3          |

**- Variazioni Matrice delle Masse Solai Direzione d'ingresso 90.00**

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxGdyG |      |      | Sx        | Sy        | dJp                   |
|--------|--------------------|-------|---------------------|---------------------|------|------|-----------|-----------|-----------------------|
|        | B [m]              | H [m] | [m]                 | [m]                 | [m]  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
| 1      | 18.30              | 10.50 | 18.30               | 0.91                | 0.91 | 0.00 | -0.0      | 26377.5   | 24135.4               |
| 2      | 18.30              | 10.50 | 18.30               | 0.91                | 0.91 | 0.00 | -0.0      | 22377.0   | 20474.9               |
| 3      | 7.20               | 6.30  | 7.20                | 0.36                | 0.36 | 0.00 | -0.0      | 2286.2    | 823.0                 |

Direzione di Ingresso del Sisma 3 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 13   | 451.9   | 6697.0  | 29585.2  |              |              |               |
|                             | 14   | 865.0   | 2938.4  | -32276.1 |              |              |               |
|                             | 15   | -735.5  | 8031.9  | 42369.6  |              |              |               |
|                             | 16   | -615.4  | 2733.6  | -29166.3 |              |              |               |
|                             | 17   | 2374.2  | 2748.6  | -948.2   |              |              |               |
|                             | 18   | -1168.3 | 675.3   | -4341.6  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 12665.5      | -23925.5      |
| Per Via Modale              |      |         |         |          | 2538.0       | 12116.0      | 66525.6       |
| Variazione                  |      |         |         |          | 2538.0       | -549.5       | 90451.1       |

Direzione di Ingresso del Sisma 3 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 13   | 1054.2  | 15255.7 | 63525.9  |              |              |               |
|                             | 14   | 1407.3  | 6048.5  | -65460.7 |              |              |               |
|                             | 15   | -176.9  | 1940.5  | 11372.1  |              |              |               |
|                             | 16   | 917.6   | -1153.3 | 16694.6  |              |              |               |
|                             | 17   | -2679.4 | -2045.2 | -9920.0  |              |              |               |
|                             | 18   | 690.7   | -150.6  | -4071.3  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 23280.0      | -116108.6     |
| Per Via Modale              |      |         |         |          | 3035.8       | 16924.3      | 91880.4       |

|            |        |         |          |
|------------|--------|---------|----------|
| Variazione | 3035.8 | -6355.8 | 207988.9 |
|------------|--------|---------|----------|

Direzione di Ingresso del Sisma 3 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 13   | 1046.6  | 6886.4  | 6111.9   |              |              |               |
|                             | 14   | -626.9  | -350.2  | -6549.8  |              |              |               |
|                             | 15   | 347.8   | -3784.9 | -2101.8  |              |              |               |
|                             | 16   | -532.7  | 31.2    | -2794.2  |              |              |               |
|                             | 17   | 1337.5  | 779.8   | 1641.9   |              |              |               |
|                             | 18   | -157.9  | -29.7   | 5079.4   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 8581.6       | -37039.5      |
| Per Via Modale              |      |         |         |          | 1772.7       | 7864.8       | 10770.8       |
| Variazione                  |      |         |         |          | 1772.7       | -716.8       | 47810.3       |

### - Direzione di Ingresso del Sisma 4 Angolo 90.00

- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li <sup>2</sup> /Mi | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|-------------------------|-----------|---------------|
| 19   | 2.01036e+002  | 100.0   | 4.04154e+004            | 67.8      | 67.8          |
| 20   | -8.43140e+001 | 41.9    | 7.10885e+003            | 11.9      | 79.7          |
| 21   | -8.04217e+001 | 40.0    | 6.46765e+003            | 10.8      | 90.5          |
| 22   | 6.29242e+001  | 31.3    | 3.95945e+003            | 6.6       | 97.2          |
| 23   | -3.11662e+001 | 15.5    | 9.71333e+002            | 1.6       | 98.8          |
| 24   | 2.61702e+001  | 13.0    | 6.84880e+002            | 1.1       | 100.0         |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 90.00

| Solaio | Ingombro in Pianta |       |       | Larghezza Apparente | Eccentricità dxG dyG |       |     | Sx        | Sy        | dJp                   |
|--------|--------------------|-------|-------|---------------------|----------------------|-------|-----|-----------|-----------|-----------------------|
|        | B [m]              | H [m] | H [m] | [m]                 | [m]                  | [m]   | [m] | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
| 1      | 18.30              | 10.50 | 18.30 | 0.91                | -0.91                | -0.00 | 0.0 | -26377.5  | 24135.4   |                       |
| 2      | 18.30              | 10.50 | 18.30 | 0.91                | -0.91                | -0.00 | 0.0 | -22377.0  | 20474.9   |                       |
| 3      | 7.20               | 6.30  | 7.20  | 0.36                | -0.36                | -0.00 | 0.0 | -2286.2   | 823.0     |                       |

Direzione di Ingresso del Sisma 4 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 19   | 855.9   | 7463.7  | 12888.3  |              |              |               |
|                             | 20   | 850.3   | 2524.2  | -32612.7 |              |              |               |
|                             | 21   | -834.3  | 7295.3  | 21577.7  |              |              |               |
|                             | 22   | -1785.9 | 6901.0  | -16486.9 |              |              |               |
|                             | 23   | -1570.1 | 221.4   | -656.2   |              |              |               |
|                             | 24   | 1964.1  | 1040.6  | -14256.1 |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 13597.4      | 10403.9       |

|                |         |         |          |
|----------------|---------|---------|----------|
| Per Via Modale | -1929.5 | 13789.9 | -49137.1 |
| Variazione     | -1929.5 | 192.5   | -59541.0 |

Direzione di Ingresso del Sisma 4 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 19   | 1881.5  | 17105.2 | 27080.4  |              |              |               |
|                             | 20   | 1492.8  | 4968.4  | -66365.4 |              |              |               |
|                             | 21   | -80.6   | 2464.1  | 11395.5  |              |              |               |
|                             | 22   | 1945.5  | -4694.8 | 3442.4   |              |              |               |
|                             | 23   | -3281.9 | 490.2   | -1476.6  |              |              |               |
|                             | 24   | -1957.6 | -384.2  | 3568.3   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 24992.9      | -14154.2      |
| Per Via Modale              |      |         |         |          | -3081.0      | 19258.3      | -70782.5      |
| Variazione                  |      |         |         |          | -3081.0      | -5734.6      | -56628.4      |

Direzione di Ingresso del Sisma 4 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 19   | 1244.0  | 7828.5  | -122.5   |              |              |               |
|                             | 20   | -432.2  | -975.4  | -4933.4  |              |              |               |
|                             | 21   | 307.3   | -3830.0 | 5674.8   |              |              |               |
|                             | 22   | -945.8  | 1505.2  | -3104.0  |              |              |               |
|                             | 23   | -1115.2 | 134.7   | -130.1   |              |              |               |
|                             | 24   | 893.9   | -16.0   | 154.7    |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 9213.0       | 3628.7        |
| Per Via Modale              |      |         |         |          | -1308.2      | 8849.7       | -7944.6       |
| Variazione                  |      |         |         |          | -1308.2      | -363.3       | -11573.3      |

### - Direzione di Ingresso del Sisma 5 Angolo 180.00

### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 25   | -2.22355e+002 | 100.0   | 4.94419e+004 | 82.9      | 82.9          |
| 26   | 8.20515e+001  | 36.9    | 6.73245e+003 | 11.3      | 94.2          |
| 27   | 4.49229e+001  | 20.2    | 2.01807e+003 | 3.4       | 97.6          |
| 28   | -2.55527e+001 | 11.5    | 6.52943e+002 | 1.1       | 98.7          |
| 29   | -2.15508e+001 | 9.7     | 4.64436e+002 | 0.8       | 99.5          |
| 30   | -1.47694e+001 | 6.6     | 2.18135e+002 | 0.4       | 99.8          |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 180.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità dxG dyG | Sx | Sy | dJp |
|--------|--------------------|---------------------|----------------------|----|----|-----|
|--------|--------------------|---------------------|----------------------|----|----|-----|

|   | B<br>[m] | H<br>[m] | [m]   | [m]  | [m]   | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM<br>m <sup>2</sup> ] |
|---|----------|----------|-------|------|-------|------|-----------|-----------|--------------------------|
| 1 | 18.30    | 10.50    | 10.50 | 0.53 | -0.00 | 0.53 | -15134.6  | -0.0      | 7945.7                   |
| 2 | 18.30    | 10.50    | 10.50 | 0.53 | -0.00 | 0.53 | -12839.3  | -0.0      | 6740.6                   |
| 3 | 7.20     | 6.30     | 6.30  | 0.31 | -0.00 | 0.31 | -2000.4   | -0.0      | 630.1                    |

Direzione di Ingresso del Sisma 5 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 1                           | 25   | -11389.6   | -177.9     | 6911.3      |                 |                 |                  |
|                             | 26   | -8495.1    | -2008.7    | -1913.0     |                 |                 |                  |
|                             | 27   | -3332.8    | 202.2      | -10012.8    |                 |                 |                  |
|                             | 28   | -1434.8    | 297.9      | 15383.2     |                 |                 |                  |
|                             | 29   | -613.3     | 1989.5     | 8870.9      |                 |                 |                  |
|                             | 30   | -495.1     | 429.5      | -9638.4     |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -14795.9        | -0.0            | 75457.3          |
| Per Via Modale              |      |            |            |             | -15640.3        | 1715.4          | 18376.1          |
| Variazione                  |      |            |            |             | -844.4          | 1715.4          | -57081.2         |

Direzione di Ingresso del Sisma 5 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 2                           | 25   | -23761.3   | -454.8     | 13065.3     |                 |                 |                  |
|                             | 26   | -1406.8    | -162.3     | -5044.8     |                 |                 |                  |
|                             | 27   | 1700.0     | 16.6       | -7075.8     |                 |                 |                  |
|                             | 28   | 1642.4     | -776.7     | -5479.4     |                 |                 |                  |
|                             | 29   | -37.8      | 582.7      | 2831.3      |                 |                 |                  |
|                             | 30   | 621.4      | -29.7      | 7106.3      |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -27195.7        | -0.0            | -132924.4        |
| Per Via Modale              |      |            |            |             | -23964.7        | -1004.9         | 18416.7          |
| Variazione                  |      |            |            |             | 3231.0          | -1004.9         | 151341.1         |

Direzione di Ingresso del Sisma 5 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 3                           | 25   | -7975.6    | -120.9     | 2894.3      |                 |                 |                  |
|                             | 26   | 3729.8     | 665.2      | -8007.5     |                 |                 |                  |
|                             | 27   | -240.9     | 21.8       | 9186.1      |                 |                 |                  |
|                             | 28   | -817.8     | 490.9      | -1530.6     |                 |                 |                  |
|                             | 29   | 225.4      | -999.4     | 82.5        |                 |                 |                  |
|                             | 30   | -332.3     | -121.9     | -1229.8     |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -10025.1        | -0.0            | 35395.7          |
| Per Via Modale              |      |            |            |             | -8856.9         | -894.7          | 10858.2          |
| Variazione                  |      |            |            |             | 1168.2          | -894.7          | -24537.4         |

**- Direzione di Ingresso del Sisma 6 Angolo 180.00**

**- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 31   | -2.14442e+002 | 100.0   | 4.59854e+004 | 77.1      | 77.1          |
| 32   | 9.09974e+001  | 42.4    | 8.28052e+003 | 13.9      | 91.0          |
| 33   | -4.69859e+001 | 21.9    | 2.20768e+003 | 3.7       | 94.7          |
| 34   | -4.05290e+001 | 18.9    | 1.64260e+003 | 2.8       | 97.5          |
| 35   | 3.65654e+001  | 17.1    | 1.33703e+003 | 2.2       | 99.7          |
| 36   | -1.24496e+001 | 5.8     | 1.54992e+002 | 0.3       | 100.0         |

**- Variazioni Matrice delle Masse Solai Direzione d'ingresso 180.00**

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |      | Sx        | Sy        | dJp                   |        |
|--------|--------------------|-------|---------------------|----------------------|------|-----------|-----------|-----------------------|--------|
|        | B [m]              | H [m] | [m]                 | [m]                  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |        |
| 1      | 18.30              | 10.50 | 10.50               | 0.53                 | 0.00 | -0.53     | 15134.6   | 0.0                   | 7945.7 |
| 2      | 18.30              | 10.50 | 10.50               | 0.53                 | 0.00 | -0.53     | 12839.3   | 0.0                   | 6740.6 |
| 3      | 7.20               | 6.30  | 6.30                | 0.31                 | 0.00 | -0.31     | 2000.4    | 0.0                   | 630.1  |

Direzione di Ingresso del Sisma 6 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg]  | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|----------|---------|----------|--------------|--------------|---------------|
| 1                           | 31   | -10511.2 | 2683.8  | -9529.6  |              |              |               |
|                             | 32   | -10747.7 | 415.8   | -15268.9 |              |              |               |
|                             | 33   | -402.5   | -1606.5 | -5605.4  |              |              |               |
|                             | 34   | -3338.1  | 1250.1  | 7988.6   |              |              |               |
|                             | 35   | -464.3   | -1101.6 | 12844.0  |              |              |               |
|                             | 36   | -336.3   | -1245.8 | 138.6    |              |              |               |
| Per Via Statica Equivalente |      |          |         |          | -14744.7     | -0.0         | 17249.5       |
| Per Via Modale              |      |          |         |          | -15903.8     | 2748.0       | -24038.5      |
| Variazione                  |      |          |         |          | -1159.1      | 2748.0       | -41288.1      |

Direzione di Ingresso del Sisma 6 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg]  | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|----------|---------|----------|--------------|--------------|---------------|
| 2                           | 31   | -21983.8 | 6002.3  | -19988.0 |              |              |               |
|                             | 32   | -1035.0  | 573.3   | -2690.6  |              |              |               |
|                             | 33   | -872.2   | -3677.9 | -11960.8 |              |              |               |
|                             | 34   | 3304.9   | -1229.0 | -1980.1  |              |              |               |
|                             | 35   | -839.8   | -2211.5 | 26204.1  |              |              |               |
|                             | 36   | 396.4    | 960.3   | 2887.3   |              |              |               |
| Per Via Statica Equivalente |      |          |         |          | -27101.6     | -0.0         | -25954.9      |
| Per Via Modale              |      |          |         |          | -22750.1     | 5925.5       | -36267.3      |

|            |        |        |          |
|------------|--------|--------|----------|
| Variazione | 4351.5 | 5925.5 | -10312.3 |
|------------|--------|--------|----------|

Direzione di Ingresso del Sisma 6 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 31   | -7477.5 | 1847.8  | -3264.1  |              |              |               |
|                             | 32   | 4191.5  | -509.4  | 444.1    |              |              |               |
|                             | 33   | -430.4  | -1709.8 | -945.8   |              |              |               |
|                             | 34   | -1504.4 | 559.0   | -936.4   |              |              |               |
|                             | 35   | 78.4    | 277.8   | 2387.8   |              |              |               |
|                             | 36   | -205.4  | -367.8  | -86.5    |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -9990.3      | -0.0         | -3989.0       |
| Per Via Modale              |      |         |         |          | -8805.0      | 2033.9       | -4404.1       |
| Variazione                  |      |         |         |          | 1185.4       | 2033.9       | -415.1        |

### - Direzione di Ingresso del Sisma 7 Angolo 270.00

- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 37   | -2.01036e+002 | 100.0   | 4.04154e+004 | 67.8      | 67.8          |
| 38   | 8.43140e+001  | 41.9    | 7.10886e+003 | 11.9      | 79.7          |
| 39   | 8.04217e+001  | 40.0    | 6.46765e+003 | 10.8      | 90.5          |
| 40   | -6.29242e+001 | 31.3    | 3.95945e+003 | 6.6       | 97.2          |
| 41   | 3.11661e+001  | 15.5    | 9.71328e+002 | 1.6       | 98.8          |
| 42   | -2.61702e+001 | 13.0    | 6.84881e+002 | 1.1       | 100.0         |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 270.00

| Solaio | Ingombro in Pianta |       |       | Larghezza Apparente | Eccentricità dxG dyG |       |     | Sx        | Sy        | dJp                   |
|--------|--------------------|-------|-------|---------------------|----------------------|-------|-----|-----------|-----------|-----------------------|
|        | B [m]              | H [m] | H [m] | [m]                 | [m]                  | [m]   | [m] | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
| 1      | 18.30              | 10.50 | 18.30 | 0.91                | -0.91                | -0.00 | 0.0 | -26377.5  |           | 24135.4               |
| 2      | 18.30              | 10.50 | 18.30 | 0.91                | -0.91                | -0.00 | 0.0 | -22377.0  |           | 20474.9               |
| 3      | 7.20               | 6.30  | 7.20  | 0.36                | -0.36                | -0.00 | 0.0 | -2286.2   |           | 823.0                 |

Direzione di Ingresso del Sisma 7 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 37   | -855.9  | -7463.7 | -12888.3 |              |              |               |
|                             | 38   | -850.3  | -2524.2 | 32612.7  |              |              |               |
|                             | 39   | 834.3   | -7295.3 | -21577.7 |              |              |               |
|                             | 40   | 1785.9  | -6901.0 | 16486.9  |              |              |               |
|                             | 41   | 1570.1  | -221.4  | 656.2    |              |              |               |
|                             | 42   | -1964.1 | -1040.6 | 14256.1  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -13597.4     | 25685.9       |

|                |        |          |         |
|----------------|--------|----------|---------|
| Per Via Modale | 1929.5 | -13789.9 | 49137.1 |
| Variazione     | 1929.5 | -192.5   | 23451.2 |

Direzione di Ingresso del Sisma 7 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg]  | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|----------|----------|--------------|--------------|---------------|
| 2                           | 37   | -1881.5 | -17105.2 | -27080.4 |              |              |               |
|                             | 38   | -1492.8 | -4968.4  | 66365.4  |              |              |               |
|                             | 39   | 80.6    | -2464.1  | -11395.5 |              |              |               |
|                             | 40   | -1945.5 | 4694.8   | -3442.4  |              |              |               |
|                             | 41   | 3281.9  | -490.2   | 1476.6   |              |              |               |
|                             | 42   | 1957.6  | 384.2    | -3568.3  |              |              |               |
| Per Via Statica Equivalente |      |         |          |          | 0.0          | -24992.9     | 124651.6      |
| Per Via Modale              |      |         |          |          | 3081.0       | -19258.3     | 70782.5       |
| Variazione                  |      |         |          |          | 3081.0       | 5734.6       | -53869.0      |

Direzione di Ingresso del Sisma 7 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 37   | -1244.0 | -7828.5 | 122.5    |              |              |               |
|                             | 38   | 432.2   | 975.4   | 4933.4   |              |              |               |
|                             | 39   | -307.3  | 3830.0  | -5674.8  |              |              |               |
|                             | 40   | 945.8   | -1505.2 | 3104.0   |              |              |               |
|                             | 41   | 1115.2  | -134.7  | 130.1    |              |              |               |
|                             | 42   | -893.9  | 16.0    | -154.7   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -9213.0      | 39764.7       |
| Per Via Modale              |      |         |         |          | 1308.2       | -8849.7      | 7944.6        |
| Variazione                  |      |         |         |          | 1308.2       | 363.3        | -31820.1      |

## - Direzione di Ingresso del Sisma 8 Angolo 270.00

### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 43   | -1.96528e+002 | 100.0   | 3.86234e+004 | 64.8      | 64.8          |
| 44   | 9.70608e+001  | 49.4    | 9.42080e+003 | 15.8      | 80.6          |
| 45   | 8.21538e+001  | 41.8    | 6.74925e+003 | 11.3      | 91.9          |
| 46   | 4.12872e+001  | 21.0    | 1.70463e+003 | 2.9       | 94.7          |
| 47   | -3.97747e+001 | 20.2    | 1.58202e+003 | 2.7       | 97.4          |
| 48   | -2.30857e+001 | 11.7    | 5.32950e+002 | 0.9       | 98.3          |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 270.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità dxG dyG | Sx | Sy | dJp |
|--------|--------------------|---------------------|----------------------|----|----|-----|
|--------|--------------------|---------------------|----------------------|----|----|-----|

|   | B [m] | H [m] | [m]   | [m]  | [m]  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM]m <sup>2</sup> |
|---|-------|-------|-------|------|------|------|-----------|-----------|---------------------|
| 1 | 18.30 | 10.50 | 18.30 | 0.91 | 0.91 | 0.00 | -0.0      | 26377.5   | 24135.4             |
| 2 | 18.30 | 10.50 | 18.30 | 0.91 | 0.91 | 0.00 | -0.0      | 22377.0   | 20474.9             |
| 3 | 7.20  | 6.30  | 7.20  | 0.36 | 0.36 | 0.00 | -0.0      | 2286.2    | 823.0               |

Direzione di Ingresso del Sisma 8 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 43   | -451.9  | -6697.0 | -29585.2 |              |              |               |
|                             | 44   | -865.0  | -2938.4 | 32276.1  |              |              |               |
|                             | 45   | 735.5   | -8031.9 | -42369.6 |              |              |               |
|                             | 46   | 615.4   | -2733.6 | 29166.3  |              |              |               |
|                             | 47   | -2374.2 | -2748.6 | 948.2    |              |              |               |
|                             | 48   | 1168.3  | -675.3  | 4341.6   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -12665.5     | -9690.9       |
| Per Via Modale              |      |         |         |          | -2538.0      | -12116.0     | -66525.6      |
| Variazione                  |      |         |         |          | -2538.0      | 549.5        | -56834.7      |

Direzione di Ingresso del Sisma 8 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg]  | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|----------|----------|--------------|--------------|---------------|
| 2                           | 43   | -1054.2 | -15255.7 | -63525.9 |              |              |               |
|                             | 44   | -1407.3 | -6048.5  | 65460.7  |              |              |               |
|                             | 45   | 176.9   | -1940.5  | -11372.1 |              |              |               |
|                             | 46   | -917.6  | 1153.3   | -16694.6 |              |              |               |
|                             | 47   | 2679.4  | 2045.2   | 9920.0   |              |              |               |
|                             | 48   | -690.7  | 150.6    | 4071.3   |              |              |               |
| Per Via Statica Equivalente |      |         |          |          | 0.0          | -23280.0     | 13184.1       |
| Per Via Modale              |      |         |          |          | -3035.8      | -16924.3     | -91880.4      |
| Variazione                  |      |         |          |          | -3035.8      | 6355.8       | -105064.5     |

Direzione di Ingresso del Sisma 8 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 43   | -1046.6 | -6886.4 | -6111.9  |              |              |               |
|                             | 44   | 626.9   | 350.2   | 6549.8   |              |              |               |
|                             | 45   | -347.8  | 3784.9  | 2101.8   |              |              |               |
|                             | 46   | 532.7   | -31.2   | 2794.2   |              |              |               |
|                             | 47   | -1337.5 | -779.8  | -1641.9  |              |              |               |
|                             | 48   | 157.9   | 29.7    | -5079.4  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -8581.6      | -3380.0       |
| Per Via Modale              |      |         |         |          | -1772.7      | -7864.8      | -10770.8      |
| Variazione                  |      |         |         |          | -1772.7      | 716.8        | -7390.8       |

**- Direzione di Ingresso del Sisma 9 Angolo 0.00**

**- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 49   | 2.14442e+002  | 100.0   | 4.59854e+004 | 77.1      | 77.1          |
| 50   | -9.09974e+001 | 42.4    | 8.28052e+003 | 13.9      | 91.0          |
| 51   | 4.69860e+001  | 21.9    | 2.20768e+003 | 3.7       | 94.7          |
| 52   | 4.05290e+001  | 18.9    | 1.64260e+003 | 2.8       | 97.5          |
| 53   | -3.65655e+001 | 17.1    | 1.33703e+003 | 2.2       | 99.7          |
| 54   | 1.24496e+001  | 5.8     | 1.54993e+002 | 0.3       | 100.0         |

**- Variazioni Matrice delle Masse Solai Direzione d'ingresso 0.00**

| Solaio | Ingombro in Pianta |       | Larghezza Apparente [m] | Eccentricità dxG dyG [m] |      | Sx [UTM]x[m] | Sy [UTM]x[m] | dJp [UTM m <sup>2</sup> ] |        |
|--------|--------------------|-------|-------------------------|--------------------------|------|--------------|--------------|---------------------------|--------|
|        | B [m]              | H [m] |                         |                          |      |              |              |                           |        |
| 1      | 18.30              | 10.50 | 10.50                   | 0.52                     | 0.00 | -0.52        | 15134.6      | 0.0                       | 7945.7 |
| 2      | 18.30              | 10.50 | 10.50                   | 0.52                     | 0.00 | -0.52        | 12839.3      | 0.0                       | 6740.6 |
| 3      | 7.20               | 6.30  | 6.30                    | 0.31                     | 0.00 | -0.31        | 2000.4       | 0.0                       | 630.1  |

Direzione di Ingresso del Sisma 9 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 49   | 8658.9  | -2210.9 | 7850.3   |              |              |               |
|                             | 50   | 10156.0 | -392.9  | 14428.2  |              |              |               |
|                             | 51   | 331.6   | 1323.4  | 4617.6   |              |              |               |
|                             | 52   | 2827.7  | -1058.9 | -6767.1  |              |              |               |
|                             | 53   | 438.7   | 1040.9  | -12136.8 |              |              |               |
|                             | 54   | 279.3   | 1034.7  | -115.1   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 12146.4      | 0.0          | -61945.0      |
| Per Via Modale              |      |         |         |          | 14072.8      | -2323.0      | 21765.3       |
| Variazione                  |      |         |         |          | 1926.5       | -2323.0      | 83710.4       |

Direzione di Ingresso del Sisma 9 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 49   | 18109.9 | -4944.6 | 16465.7  |              |              |               |
|                             | 50   | 978.1   | -541.8  | 2542.4   |              |              |               |
|                             | 51   | 718.5   | 3029.8  | 9853.1   |              |              |               |
|                             | 52   | -2799.6 | 1041.0  | 1677.4   |              |              |               |
|                             | 53   | 793.6   | 2089.7  | -24761.4 |              |              |               |
|                             | 54   | -329.2  | -797.5  | -2397.9  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 22325.8      | 0.0          | 109121.4      |
| Per Via Modale              |      |         |         |          | 18771.2      | -4979.7      | 32076.7       |

|            |         |         |          |
|------------|---------|---------|----------|
| Variazione | -3554.5 | -4979.7 | -77044.8 |
|------------|---------|---------|----------|

Direzione di Ingresso del Sisma 9 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 49   | 6159.8  | -1522.1 | 2688.9   |              |              |               |
|                             | 50   | -3960.7 | 481.3   | -419.7   |              |              |               |
|                             | 51   | 354.5   | 1408.5  | 779.1    |              |              |               |
|                             | 52   | 1274.3  | -473.6  | 793.2    |              |              |               |
|                             | 53   | -74.1   | -262.5  | -2256.4  |              |              |               |
|                             | 54   | 170.6   | 305.5   | 71.9     |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 8229.9       | 0.0          | -29057.3      |
| Per Via Modale              |      |         |         |          | 7502.0       | -1698.2      | 3781.3        |
| Variazione                  |      |         |         |          | -727.9       | -1698.2      | 32838.6       |

### - Direzione di Ingresso del Sisma 10 Angolo 0.00

#### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 55   | 2.22355e+002  | 100.0   | 4.94419e+004 | 82.9      | 82.9          |
| 56   | -8.20515e+001 | 36.9    | 6.73245e+003 | 11.3      | 94.2          |
| 57   | -4.49229e+001 | 20.2    | 2.01807e+003 | 3.4       | 97.6          |
| 58   | 2.55527e+001  | 11.5    | 6.52943e+002 | 1.1       | 98.7          |
| 59   | 2.15507e+001  | 9.7     | 4.64435e+002 | 0.8       | 99.5          |
| 60   | 1.47694e+001  | 6.6     | 2.18135e+002 | 0.4       | 99.8          |

#### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 0.00

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |       | Sx        | Sy        | dJp      |        |
|--------|--------------------|-------|---------------------|----------------------|-------|-----------|-----------|----------|--------|
|        | B [m]              | H [m] | [m]                 | [m]                  | [m]   | [UTM]x[m] | [UTM]x[m] | [UTM m²] |        |
| 1      | 18.30              | 10.50 | 10.50               | 0.52                 | -0.00 | 0.52      | -15134.6  | -0.0     | 7945.7 |
| 2      | 18.30              | 10.50 | 10.50               | 0.52                 | -0.00 | 0.52      | -12839.3  | -0.0     | 6740.6 |
| 3      | 7.20               | 6.30  | 6.30                | 0.31                 | -0.00 | 0.31      | -2000.4   | -0.0     | 630.1  |

Direzione di Ingresso del Sisma 10 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 55   | 9382.5  | 146.6   | -5693.4  |              |              |               |
|                             | 56   | 8027.4  | 1898.1  | 1807.7   |              |              |               |
|                             | 57   | 3055.0  | -185.4  | 9178.1   |              |              |               |
|                             | 58   | 1235.4  | -256.5  | -13246.0 |              |              |               |
|                             | 59   | 579.6   | -1879.9 | -8382.5  |              |              |               |
|                             | 60   | 379.6   | -329.3  | 7389.6   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 12188.6      | 0.0          | -14259.2      |

|                |         |         |          |
|----------------|---------|---------|----------|
| Per Via Modale | 13719.8 | -1592.2 | -15746.4 |
| Variazione     | 1531.3  | -1592.2 | -1487.2  |

Direzione di Ingresso del Sisma 10 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 55   | 19574.1 | 374.7   | -10762.9 |              |              |               |
|                             | 56   | 1329.3  | 153.4   | 4767.0   |              |              |               |
|                             | 57   | -1558.3 | -15.3   | 6486.0   |              |              |               |
|                             | 58   | -1414.2 | 668.8   | 4718.2   |              |              |               |
|                             | 59   | 35.7    | -550.6  | -2675.4  |              |              |               |
|                             | 60   | -476.4  | 22.8    | -5448.3  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 22403.3      | 0.0          | 21455.5       |
| Per Via Modale              |      |         |         |          | 19769.9      | 876.2        | -15652.8      |
| Variazione                  |      |         |         |          | -2633.5      | 876.2        | -37108.3      |

Direzione di Ingresso del Sisma 10 Angolo 0.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 55   | 6570.1  | 99.6    | -2384.3  |              |              |               |
|                             | 56   | -3524.4 | -628.6  | 7566.6   |              |              |               |
|                             | 57   | 220.8   | -20.0   | -8420.4  |              |              |               |
|                             | 58   | 704.2   | -422.7  | 1318.0   |              |              |               |
|                             | 59   | -213.0  | 944.3   | -77.9    |              |              |               |
|                             | 60   | 254.8   | 93.5    | 942.9    |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 8258.5       | 0.0          | 3297.5        |
| Per Via Modale              |      |         |         |          | 7505.6       | 821.6        | -10020.9      |
| Variazione                  |      |         |         |          | -752.9       | 821.6        | -13318.4      |

## - Direzione di Ingresso del Sisma 11 Angolo 90.00

- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 61   | 1.96528e+002  | 100.0   | 3.86234e+004 | 64.8      | 64.8          |
| 62   | -9.70608e+001 | 49.4    | 9.42080e+003 | 15.8      | 80.6          |
| 63   | -8.21538e+001 | 41.8    | 6.74925e+003 | 11.3      | 91.9          |
| 64   | -4.12872e+001 | 21.0    | 1.70463e+003 | 2.9       | 94.7          |
| 65   | 3.97746e+001  | 20.2    | 1.58202e+003 | 2.7       | 97.4          |
| 66   | 2.30857e+001  | 11.7    | 5.32951e+002 | 0.9       | 98.3          |

## - Variazioni Matrice delle Masse Solai Direzione d'ingresso 90.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità dxG dyG | Sx | Sy | dJp |
|--------|--------------------|---------------------|----------------------|----|----|-----|
|--------|--------------------|---------------------|----------------------|----|----|-----|

|   | B [m] | H [m] | [m]   | [m]  | [m]  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
|---|-------|-------|-------|------|------|------|-----------|-----------|-----------------------|
| 1 | 18.30 | 10.50 | 18.30 | 0.91 | 0.91 | 0.00 | -0.0      | 26377.5   | 24135.4               |
| 2 | 18.30 | 10.50 | 18.30 | 0.91 | 0.91 | 0.00 | -0.0      | 22377.0   | 20474.9               |
| 3 | 7.20  | 6.30  | 7.20  | 0.36 | 0.36 | 0.00 | -0.0      | 2286.2    | 823.0                 |

Direzione di Ingresso del Sisma 11 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 61   | 372.3   | 5516.8  | 24371.7  |              |              |               |
|                             | 62   | 817.4   | 2776.6  | -30499.0 |              |              |               |
|                             | 63   | -695.0  | 7589.7  | 40036.8  |              |              |               |
|                             | 64   | -469.3  | 2084.4  | -22239.1 |              |              |               |
|                             | 65   | 1978.6  | 2290.6  | -790.2   |              |              |               |
|                             | 66   | -1066.7 | 616.6   | -3964.0  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 10433.6      | -19709.4      |
| Per Via Modale              |      |         |         |          | 2194.9       | 10749.2      | 59208.9       |
| Variazione                  |      |         |         |          | 2194.9       | 315.5        | 78918.3       |

Direzione di Ingresso del Sisma 11 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 61   | 868.4   | 12567.3 | 52331.4  |              |              |               |
|                             | 62   | 1329.9  | 5715.5  | -61856.5 |              |              |               |
|                             | 63   | -167.2  | 1833.7  | 10746.0  |              |              |               |
|                             | 64   | 699.7   | -879.4  | 12729.6  |              |              |               |
|                             | 65   | -2232.9 | -1704.4 | -8267.1  |              |              |               |
|                             | 66   | 630.7   | -137.5  | -3717.3  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 19177.7      | -95648.1      |
| Per Via Modale              |      |         |         |          | 2601.3       | 14269.4      | 81377.1       |
| Variazione                  |      |         |         |          | 2601.3       | -4908.2      | 177025.2      |

Direzione di Ingresso del Sisma 11 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 61   | 862.2   | 5672.9  | 5034.8   |              |              |               |
|                             | 62   | -592.4  | -330.9  | -6189.2  |              |              |               |
|                             | 63   | 328.6   | -3576.5 | -1986.1  |              |              |               |
|                             | 64   | -406.2  | 23.8    | -2130.6  |              |              |               |
|                             | 65   | 1114.7  | 649.9   | 1368.3   |              |              |               |
|                             | 66   | -144.2  | -27.1   | 4637.7   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 7069.4       | -30512.4      |
| Per Via Modale              |      |         |         |          | 1500.1       | 6709.8       | 9590.9        |
| Variazione                  |      |         |         |          | 1500.1       | -359.6       | 40103.4       |

**- Direzione di Ingresso del Sisma 12 Angolo 90.00**

**- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 67   | 2.01036e+002  | 100.0   | 4.04154e+004 | 67.8      | 67.8          |
| 68   | -8.43140e+001 | 41.9    | 7.10885e+003 | 11.9      | 79.7          |
| 69   | -8.04217e+001 | 40.0    | 6.46765e+003 | 10.8      | 90.5          |
| 70   | 6.29242e+001  | 31.3    | 3.95945e+003 | 6.6       | 97.2          |
| 71   | -3.11662e+001 | 15.5    | 9.71333e+002 | 1.6       | 98.8          |
| 72   | 2.61702e+001  | 13.0    | 6.84880e+002 | 1.1       | 100.0         |

**- Variazioni Matrice delle Masse Solai Direzione d'ingresso 90.00**

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |       |       | Sx        | Sy        | dJp                   |
|--------|--------------------|-------|---------------------|----------------------|-------|-------|-----------|-----------|-----------------------|
|        | B [m]              | H [m] | [m]                 | [m]                  | [m]   | [m]   | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
| 1      | 18.30              | 10.50 | 18.30               | 0.91                 | -0.91 | -0.00 | 0.0       | -26377.5  | 24135.4               |
| 2      | 18.30              | 10.50 | 18.30               | 0.91                 | -0.91 | -0.00 | 0.0       | -22377.0  | 20474.9               |
| 3      | 7.20               | 6.30  | 7.20                | 0.36                 | -0.36 | -0.00 | 0.0       | -2286.2   | 823.0                 |

Direzione di Ingresso del Sisma 12 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 67   | 705.0   | 6148.5  | 10617.1  |              |              |               |
|                             | 68   | 803.4   | 2385.2  | -30817.1 |              |              |               |
|                             | 69   | -788.4  | 6893.6  | 20389.7  |              |              |               |
|                             | 70   | -1491.5 | 5763.3  | -13768.9 |              |              |               |
|                             | 71   | -1293.4 | 182.4   | -540.6   |              |              |               |
|                             | 72   | 1680.2  | 890.2   | -12195.0 |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 11201.3      | 8570.5        |
| Per Via Modale              |      |         |         |          | -1685.9      | 12021.4      | -44473.8      |
| Variazione                  |      |         |         |          | -1685.9      | 820.1        | -53044.3      |

Direzione di Ingresso del Sisma 12 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 2                           | 67   | 1549.9  | 14090.9 | 22308.3  |              |              |               |
|                             | 68   | 1410.6  | 4694.8  | -62711.3 |              |              |               |
|                             | 69   | -76.2   | 2328.4  | 10768.1  |              |              |               |
|                             | 70   | 1624.7  | -3920.9 | 2874.9   |              |              |               |
|                             | 71   | -2703.6 | 403.8   | -1216.4  |              |              |               |
|                             | 72   | -1674.6 | -328.7  | 3052.4   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 20588.7      | -11659.9      |
| Per Via Modale              |      |         |         |          | 2622.8       | 16126.9      | -65919.1      |

|            |        |         |          |
|------------|--------|---------|----------|
| Variazione | 2622.8 | -4461.8 | -54259.2 |
|------------|--------|---------|----------|

Direzione di Ingresso del Sisma 12 Angolo 90.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 67   | 1024.8  | 6449.0  | -100.9   |              |              |               |
|                             | 68   | -408.4  | -921.7  | -4661.8  |              |              |               |
|                             | 69   | 290.4   | -3619.1 | 5362.3   |              |              |               |
|                             | 70   | -789.9  | 1257.1  | -2592.3  |              |              |               |
|                             | 71   | -918.7  | 110.9   | -107.2   |              |              |               |
|                             | 72   | 764.7   | -13.7   | 132.3    |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -0.0         | 7589.5       | 2989.2        |
| Per Via Modale              |      |         |         |          | -1110.5      | 7505.2       | -7400.7       |
| Variazione                  |      |         |         |          | -1110.5      | -84.4        | -10390.0      |

### - Direzione di Ingresso del Sisma 13 Angolo 180.00

#### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li <sup>2</sup> /Mi | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|-------------------------|-----------|---------------|
| 73   | -2.22355e+002 | 100.0   | 4.94419e+004            | 82.9      | 82.9          |
| 74   | 8.20515e+001  | 36.9    | 6.73245e+003            | 11.3      | 94.2          |
| 75   | 4.49229e+001  | 20.2    | 2.01807e+003            | 3.4       | 97.6          |
| 76   | -2.55527e+001 | 11.5    | 6.52943e+002            | 1.1       | 98.7          |
| 77   | -2.15508e+001 | 9.7     | 4.64436e+002            | 0.8       | 99.5          |
| 78   | -1.47694e+001 | 6.6     | 2.18135e+002            | 0.4       | 99.8          |

#### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 180.00

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |       | Sx        | Sy        | dJp                   |        |
|--------|--------------------|-------|---------------------|----------------------|-------|-----------|-----------|-----------------------|--------|
|        | B [m]              | H [m] | [m]                 | [m]                  | [m]   | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |        |
| 1      | 18.30              | 10.50 | 10.50               | 0.53                 | -0.00 | 0.53      | -15134.6  | -0.0                  | 7945.7 |
| 2      | 18.30              | 10.50 | 10.50               | 0.53                 | -0.00 | 0.53      | -12839.3  | -0.0                  | 6740.6 |
| 3      | 7.20               | 6.30  | 6.30                | 0.31                 | -0.00 | 0.31      | -2000.4   | -0.0                  | 630.1  |

Direzione di Ingresso del Sisma 13 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 73   | -9382.5 | -146.6  | 5693.4   |              |              |               |
|                             | 74   | -8027.4 | -1898.1 | -1807.7  |              |              |               |
|                             | 75   | -3055.0 | 185.4   | -9178.1  |              |              |               |
|                             | 76   | -1235.4 | 256.5   | 13246.0  |              |              |               |
|                             | 77   | -579.6  | 1879.9  | 8382.5   |              |              |               |
|                             | 78   | -379.6  | 329.3   | -7389.6  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -12188.6     | -0.0         | 62160.3       |

|                |          |        |          |
|----------------|----------|--------|----------|
| Per Via Modale | -13719.8 | 1592.2 | 15746.4  |
| Variazione     | -1531.3  | 1592.2 | -46413.9 |

Direzione di Ingresso del Sisma 13 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg]  | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|----------|---------|----------|--------------|--------------|---------------|
| 2                           | 73   | -19574.1 | -374.7  | 10762.9  |              |              |               |
|                             | 74   | -1329.3  | -153.4  | -4767.0  |              |              |               |
|                             | 75   | 1558.3   | 15.3    | -6486.0  |              |              |               |
|                             | 76   | 1414.2   | -668.8  | -4718.2  |              |              |               |
|                             | 77   | -35.7    | 550.6   | 2675.4   |              |              |               |
|                             | 78   | 476.4    | -22.8   | 5448.3   |              |              |               |
| Per Via Statica Equivalente |      |          |         |          | -22403.3     | -0.0         | -109500.6     |
| Per Via Modale              |      |          |         |          | -19769.9     | -876.2       | 15652.8       |
| Variazione                  |      |          |         |          | 2633.5       | -876.2       | 125153.4      |

Direzione di Ingresso del Sisma 13 Angolo 180.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 73   | -6570.1 | -99.6   | 2384.3   |              |              |               |
|                             | 74   | 3524.4  | 628.6   | -7566.6  |              |              |               |
|                             | 75   | -220.8  | 20.0    | 8420.4   |              |              |               |
|                             | 76   | -704.2  | 422.7   | -1318.0  |              |              |               |
|                             | 77   | 213.0   | -944.3  | 77.9     |              |              |               |
|                             | 78   | -254.8  | -93.5   | -942.9   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | -8258.5      | -0.0         | 29158.3       |
| Per Via Modale              |      |         |         |          | -7505.6      | -821.6       | 10020.9       |
| Variazione                  |      |         |         |          | 752.9        | -821.6       | -19137.4      |

### - Direzione di Ingresso del Sisma 14 Angolo 180.00

### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 79   | -2.14442e+002 | 100.0   | 4.59854e+004 | 77.1      | 77.1          |
| 80   | 9.09974e+001  | 42.4    | 8.28052e+003 | 13.9      | 91.0          |
| 81   | -4.69859e+001 | 21.9    | 2.20768e+003 | 3.7       | 94.7          |
| 82   | -4.05290e+001 | 18.9    | 1.64260e+003 | 2.8       | 97.5          |
| 83   | 3.65654e+001  | 17.1    | 1.33703e+003 | 2.2       | 99.7          |
| 84   | -1.24496e+001 | 5.8     | 1.54992e+002 | 0.3       | 100.0         |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 180.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità dxG dyG | Sx | Sy | dJp |
|--------|--------------------|---------------------|----------------------|----|----|-----|
|--------|--------------------|---------------------|----------------------|----|----|-----|

|   | B<br>[m] | H<br>[m] | [m]   | [m]  | [m]  | [m]   | [UTM]x[m] | [UTM]x[m] | [UTM<br>m <sup>2</sup> ] |
|---|----------|----------|-------|------|------|-------|-----------|-----------|--------------------------|
| 1 | 18.30    | 10.50    | 10.50 | 0.53 | 0.00 | -0.53 | 15134.6   | 0.0       | 7945.7                   |
| 2 | 18.30    | 10.50    | 10.50 | 0.53 | 0.00 | -0.53 | 12839.3   | 0.0       | 6740.6                   |
| 3 | 7.20     | 6.30     | 6.30  | 0.31 | 0.00 | -0.31 | 2000.4    | 0.0       | 630.1                    |

Direzione di Ingresso del Sisma 14 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 1                           | 79   | -8658.9    | 2210.9     | -7850.3     |                 |                 |                  |
|                             | 80   | -10156.0   | 392.9      | -14428.2    |                 |                 |                  |
|                             | 81   | -331.6     | -1323.4    | -4617.6     |                 |                 |                  |
|                             | 82   | -2827.7    | 1058.9     | 6767.1      |                 |                 |                  |
|                             | 83   | -438.7     | -1040.9    | 12136.8     |                 |                 |                  |
|                             | 84   | -279.3     | -1034.7    | 115.1       |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -12146.4        | -0.0            | 14209.8          |
| Per Via Modale              |      |            |            |             | -14072.8        | 2323.0          | -21765.3         |
| Variazione                  |      |            |            |             | -1926.5         | 2323.0          | -35975.2         |

Direzione di Ingresso del Sisma 14 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 2                           | 79   | -18109.9   | 4944.6     | -16465.7    |                 |                 |                  |
|                             | 80   | -978.1     | 541.8      | -2542.4     |                 |                 |                  |
|                             | 81   | -718.5     | -3029.8    | -9853.1     |                 |                 |                  |
|                             | 82   | 2799.6     | -1041.0    | -1677.4     |                 |                 |                  |
|                             | 83   | -793.6     | -2089.7    | 24761.3     |                 |                 |                  |
|                             | 84   | 329.2      | 797.5      | 2397.9      |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -22325.8        | -0.0            | -21381.2         |
| Per Via Modale              |      |            |            |             | -18771.2        | 4979.7          | -32076.6         |
| Variazione                  |      |            |            |             | 3554.5          | 4979.7          | -10695.4         |

Direzione di Ingresso del Sisma 14 Angolo 180.00 [°]

| Solaio                      | Modo | Fx<br>[kg] | Fy<br>[kg] | Mt<br>[kgm] | Fx Ris.<br>[kg] | Fy Ris.<br>[kg] | Mt Ris.<br>[kgm] |
|-----------------------------|------|------------|------------|-------------|-----------------|-----------------|------------------|
| 3                           | 79   | -6159.8    | 1522.1     | -2688.9     |                 |                 |                  |
|                             | 80   | 3960.7     | -481.3     | 419.7       |                 |                 |                  |
|                             | 81   | -354.5     | -1408.5    | -779.1      |                 |                 |                  |
|                             | 82   | -1274.3    | 473.6      | -793.2      |                 |                 |                  |
|                             | 83   | 74.1       | 262.5      | 2256.4      |                 |                 |                  |
|                             | 84   | -170.6     | -305.5     | -71.9       |                 |                 |                  |
| Per Via Statica Equivalente |      |            |            |             | -8229.9         | -0.0            | -3286.0          |
| Per Via Modale              |      |            |            |             | -7502.0         | 1698.2          | -3781.3          |
| Variazione                  |      |            |            |             | 727.9           | 1698.2          | -495.3           |

**- Direzione di Ingresso del Sisma 15 Angolo 270.00**

**- Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 85   | -2.01036e+002 | 100.0   | 4.04154e+004 | 67.8      | 67.8          |
| 86   | 8.43140e+001  | 41.9    | 7.10886e+003 | 11.9      | 79.7          |
| 87   | 8.04217e+001  | 40.0    | 6.46765e+003 | 10.8      | 90.5          |
| 88   | -6.29242e+001 | 31.3    | 3.95945e+003 | 6.6       | 97.2          |
| 89   | 3.11661e+001  | 15.5    | 9.71328e+002 | 1.6       | 98.8          |
| 90   | -2.61702e+001 | 13.0    | 6.84881e+002 | 1.1       | 100.0         |

**- Variazioni Matrice delle Masse Solai Direzione d'ingresso 270.00**

| Solaio | Ingombro in Pianta |       | Larghezza Apparente | Eccentricità dxG dyG |       |       | Sx  | Sy       | dJp [UTM m <sup>2</sup> ] |
|--------|--------------------|-------|---------------------|----------------------|-------|-------|-----|----------|---------------------------|
|        | B [m]              | H [m] |                     | [m]                  | [m]   | [m]   |     |          |                           |
| 1      | 18.30              | 10.50 | 18.30               | 0.91                 | -0.91 | -0.00 | 0.0 | -26377.5 | 24135.4                   |
| 2      | 18.30              | 10.50 | 18.30               | 0.91                 | -0.91 | -0.00 | 0.0 | -22377.0 | 20474.9                   |
| 3      | 7.20               | 6.30  | 7.20                | 0.36                 | -0.36 | -0.00 | 0.0 | -2286.2  | 823.0                     |

Direzione di Ingresso del Sisma 15 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 85   | -705.0  | -6148.5 | -10617.1 |              |              |               |
|                             | 86   | -803.4  | -2385.2 | 30817.1  |              |              |               |
|                             | 87   | 788.4   | -6893.6 | -20389.7 |              |              |               |
|                             | 88   | 1491.5  | -5763.3 | 13768.9  |              |              |               |
|                             | 89   | 1293.4  | -182.4  | 540.6    |              |              |               |
|                             | 90   | -1680.2 | -890.2  | 12195.0  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -11201.3     | 21159.6       |
| Per Via Modale              |      |         |         |          | 1685.9       | -12021.4     | 44473.8       |
| Variazione                  |      |         |         |          | 1685.9       | -820.1       | 23314.2       |

Direzione di Ingresso del Sisma 15 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg]  | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|----------|----------|--------------|--------------|---------------|
| 2                           | 85   | -1549.9 | -14090.9 | -22308.3 |              |              |               |
|                             | 86   | -1410.6 | -4694.8  | 62711.3  |              |              |               |
|                             | 87   | 76.2    | -2328.4  | -10768.1 |              |              |               |
|                             | 88   | -1624.7 | 3920.9   | -2874.9  |              |              |               |
|                             | 89   | 2703.6  | -403.8   | 1216.4   |              |              |               |
|                             | 90   | 1674.6  | 328.7    | -3052.4  |              |              |               |
| Per Via Statica Equivalente |      |         |          |          | 0.0          | -20588.7     | 102685.6      |
| Per Via Modale              |      |         |          |          | -2622.8      | -16126.9     | 65919.1       |

|            |         |        |          |
|------------|---------|--------|----------|
| Variazione | -2622.8 | 4461.8 | -36766.5 |
|------------|---------|--------|----------|

Direzione di Ingresso del Sisma 15 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 85   | -1024.8 | -6449.0 | 100.9    |              |              |               |
|                             | 86   | 408.4   | 921.7   | 4661.8   |              |              |               |
|                             | 87   | -290.4  | 3619.1  | -5362.3  |              |              |               |
|                             | 88   | 789.9   | -1257.1 | 2592.3   |              |              |               |
|                             | 89   | 918.7   | -110.9  | 107.2    |              |              |               |
|                             | 90   | -764.7  | 13.7    | -132.3   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -7589.5      | 32757.4       |
| Per Via Modale              |      |         |         |          | 1110.5       | -7505.2      | 7400.7        |
| Variazione                  |      |         |         |          | 1110.5       | 84.4         | -25356.7      |

### - Direzione di Ingresso del Sisma 16 Angolo 270.00

### - Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

| Modo | Li(gi)        | Li / L1 | Emi=Li^2/Mi  | Emi/EmTot | Sum.Emi/EmTot |
|------|---------------|---------|--------------|-----------|---------------|
| 91   | -1.96528e+002 | 100.0   | 3.86234e+004 | 64.8      | 64.8          |
| 92   | 9.70608e+001  | 49.4    | 9.42080e+003 | 15.8      | 80.6          |
| 93   | 8.21538e+001  | 41.8    | 6.74925e+003 | 11.3      | 91.9          |
| 94   | 4.12872e+001  | 21.0    | 1.70463e+003 | 2.9       | 94.7          |
| 95   | -3.97747e+001 | 20.2    | 1.58202e+003 | 2.7       | 97.4          |
| 96   | -2.30857e+001 | 11.7    | 5.32950e+002 | 0.9       | 98.3          |

### - Variazioni Matrice delle Masse Solai Direzione d'ingresso 270.00

| Solaio | Ingombro in Pianta | Larghezza Apparente | Eccentricità | dxG  | dyG  | Sx        | Sy        | dJp                   |
|--------|--------------------|---------------------|--------------|------|------|-----------|-----------|-----------------------|
|        | B [m] H [m]        | [m]                 | [m]          | [m]  | [m]  | [UTM]x[m] | [UTM]x[m] | [UTM m <sup>2</sup> ] |
| 1      | 18.30 10.50        | 18.30               | 0.91         | 0.91 | 0.00 | -0.0      | 26377.5   | 24135.4               |
| 2      | 18.30 10.50        | 18.30               | 0.91         | 0.91 | 0.00 | -0.0      | 22377.0   | 20474.9               |
| 3      | 7.20 6.30          | 7.20                | 0.36         | 0.36 | 0.00 | -0.0      | 2286.2    | 823.0                 |

Direzione di Ingresso del Sisma 16 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 1                           | 91   | -372.3  | -5516.8 | -24371.7 |              |              |               |
|                             | 92   | -817.4  | -2776.6 | 30499.0  |              |              |               |
|                             | 93   | 695.0   | -7589.7 | -40036.8 |              |              |               |
|                             | 94   | 469.3   | -2084.4 | 22239.1  |              |              |               |
|                             | 95   | -1978.6 | -2290.6 | 790.2    |              |              |               |
|                             | 96   | 1066.7  | -616.6  | 3964.0   |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -10433.6     | -7983.2       |

|  |                |         |          |          |
|--|----------------|---------|----------|----------|
|  | Per Via Modale | -2194.9 | -10749.2 | -59208.9 |
|  | Variazione     | -2194.9 | -315.5   | -51225.8 |

Direzione di Ingresso del Sisma 16 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg]  | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|----------|----------|--------------|--------------|---------------|
| 2                           | 91   | -868.4  | -12567.3 | -52331.4 |              |              |               |
|                             | 92   | -1329.9 | -5715.5  | 61856.5  |              |              |               |
|                             | 93   | 167.2   | -1833.7  | -10746.0 |              |              |               |
|                             | 94   | -699.7  | 879.4    | -12729.6 |              |              |               |
|                             | 95   | 2232.9  | 1704.4   | 8267.1   |              |              |               |
|                             | 96   | -630.7  | 137.5    | 3717.3   |              |              |               |
| Per Via Statica Equivalente |      |         |          |          | 0.0          | -19177.7     | 10860.8       |
| Per Via Modale              |      |         |          |          | -2601.3      | -14269.5     | -81377.1      |
| Variazione                  |      |         |          |          | -2601.3      | 4908.2       | -92237.9      |

Direzione di Ingresso del Sisma 16 Angolo 270.00 [°]

| Solaio                      | Modo | Fx [kg] | Fy [kg] | Mt [kgm] | Fx Ris. [kg] | Fy Ris. [kg] | Mt Ris. [kgm] |
|-----------------------------|------|---------|---------|----------|--------------|--------------|---------------|
| 3                           | 91   | -862.2  | -5672.9 | -5034.8  |              |              |               |
|                             | 92   | 592.4   | 330.9   | 6189.2   |              |              |               |
|                             | 93   | -328.6  | 3576.5  | 1986.1   |              |              |               |
|                             | 94   | 406.2   | -23.8   | 2130.6   |              |              |               |
|                             | 95   | -1114.7 | -649.9  | -1368.3  |              |              |               |
|                             | 96   | 144.2   | 27.1    | -4637.7  |              |              |               |
| Per Via Statica Equivalente |      |         |         |          | 0.0          | -7069.4      | -2784.4       |
| Per Via Modale              |      |         |         |          | -1500.1      | -6709.8      | -9590.9       |
| Variazione                  |      |         |         |          | -1500.1      | 359.6        | -6806.6       |