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EINE REIHE DIFFERENTIELLER  
BEOBACHTUNGEN AM MERIDIANKREIS DER  
KOPENHAGENER UNIVERSITÄTSSTERNWARTE,

AUSGEFÜHRT UND REDUZIERT

von

JOHANNES BRAAE

D. KGL. DANSKE VIDENSK. SELSK. SKRIFTER, NATURVIDENSK. OG MATH. AFD., 8. RÆKKE, XI. 3.



KØBENHAVN

HOVEDKOMMISSIONÆR: ANDR. FRED. HØST & SØN, KGL. HOF-BOGHANDEL  
BIANCO LUNOS BOGTRYKKERI

1927

Pris: 5 Kr.



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## Programm.

Nachdem der jetzige Professor Nørlund seine grosse Beobachtungsreihe an dem Meridiankreis der Universitätssternwarte abgeschlossen und dadurch gezeigt hatte, welch vortreffliche Resultate mit dem ca. 50-jährigen Instrument erzielt werden können, übernahm ich — auf Anregung von Professor Strömgren — die Arbeit an diesem Instrument. Einige kleinere Beobachtungsreihen habe ich schon früher veröffentlicht, siehe A. N. 4560, 4697 und 5011 sowie D. Kgl. Danske Vidensk. Selsk. Skr. 7. Række, naturv. og math. Afd. XI, 3 oder Publikationer og mindre Meddelelser fra Københavns Observatorium Nr. 10, 15, 17 und 33.

In den Jahren 1914 und 1915 wurde mir von Professor Strömgren eine Programmliste über B- und M-Sterne übertragen, die von Professor E. C. Pickering als Meridianprogramm für die Kopenhagener Sternwarte ausgearbeitet worden war. Diese Programmliste lief bruchstückweise ein, so dass ich die Arbeit zwar im November 1914 beginnen konnte, aber erst im August 1915 war die Liste vollständig, und jetzt erst konnte die Arbeit mit voller Kraft durchgeführt werden.

Wegen der Art des Programmes war es unmöglich, die Arbeit als Zonenarbeit anzulegen, und um den bestmöglichen Anschluss an das Fundamentalsystem (B. J.) zu bekommen, habe ich deshalb jeden Abend Fundamentalsterne beobachtet, die in Deklination möglichst im selben Verhältnis verteilt lagen wie die Programmsterne. Im ganzen beträgt die Anzahl der beobachteten Fundamentalsterne ca. 30 % der Gesamtzahl der Beobachtungen. Da ich ausserdem ohne Hilfe arbeitete, war es notwendig, die Beobachtungsabende so viel wie möglich auszudehnen — was auch mit Rücksicht auf die Reduktionsarbeit am zweckentsprechendsten war — und ich habe deshalb, wenn das Wetter günstig war, die ganze Nacht beobachtet, auch die langen Winternächte (bis zu 70 Sternen in einer Nacht).

Die vorliegende Arbeit enthält Beobachtungen, die sich von November 1914 bis Ende 1918 erstrecken und im ganzen ca. 4300 Rektaszensionen und ca. 4100 Deklinationen umfassen.

Der Meridiankreis der Universitätssternwarte — Pistor-Martins 1859, 188 cm Brennweite und 12.2 cm Oeffnung — ist genügend bekannt, so dass ich mich damit begnügen kann, auf frühere Beschreibungen zu verweisen: Schjellerup: Stjernefortegnelse indeholdende 10000 Positioner af teleskopiske Fixstjerner mellem  $-15^{\circ}$  og

$+15^\circ$  Deklination, København 1864 und Nørlund: Beobachtungen am Meridiankreis der Kopenhagener Universitätssternwarte, A. N. 4514 oder Publ. og m. Meddelelser fra Københavns Observatorium Nr. 3.

Bei den Beobachtungen sind immer dunkle Fäden im hellen Feld benutzt worden, und die Vergrößerung war 130. Die Rektaszensionen sind mittels Taster auf dem Chronographen (Peyer-Farvarger) registriert worden, unter Benutzung der Riefler'schen Uhr der Sternwarte. Sowohl die Tätigkeit des Chronographen als der Gang der Uhr waren befriedigend. Die Sterne sind mit wenigen Ausnahmen über 11 Fäden beobachtet worden, und alle Ablesungen der Chronographenstreifen habe ich selber mittels des Oppolzer'schen Ableseapparates der Sternwarte (Farvarger & Cie in Neuchâtel) vorgenommen.

Aus den Beobachtungen von ca. 100 Fundamentalsternen, ausgeführt von November 1914 bis Mai 1915, habe ich die in der folgenden Tabelle unter I angegebenen Werte für die Äquatorabstände vom mittleren Faden (Faden 6), und aus Beobachtungen von ca. 150 Fundamentalsternen, im Jahre 1917 ausgeführt, die unter II angegebenen Werte berechnet:

| Faden        | I <sub>s</sub> | II <sub>s</sub> |
|--------------|----------------|-----------------|
| 1 . . . . .  | 35,061         | 35,044          |
| 2 . . . . .  | 17,319         | 17,310          |
| 3 . . . . .  | 12,256         | 12,255          |
| 4 . . . . .  | 7,656          | 7,660           |
| 5 . . . . .  | 4,014          | 3,988           |
| 7 . . . . .  | 3,942          | 3,938           |
| 8 . . . . .  | 7,771          | 7,762           |
| 9 . . . . .  | 12,750         | 12,754          |
| 10 . . . . . | 17,603         | 17,612          |
| 11 . . . . . | 35,293         | 35,274          |

1 ist der Faden, den ein Stern in der oberen Kulmination zuerst passiert, bei Kreis Ost, und der mittlere Fehler für jeden dieser Werte ist kleiner als  $\pm 0^s,01$ . Mit diesen Werten  $i$  für die Äquatorabstände ist eine Tabelle für  $i \sec \delta$  berechnet, und mit Hilfe dieser Tabelle ist für alle Beobachtungen jeder Fadendurchgang für sich auf den mittleren Faden reduziert worden. Die Werte I sind bei den Beobachtungen in den Jahren 1914—15 und die Werte II für die in den Jahren 1916—18 verwendet worden.

Die Beobachtungen in der Deklination sind durchweg in der Weise ausgeführt worden, dass der Faden auf den Stern eingestellt wurde, und zwar ist bei jeder Beobachtung nur eine Deklinationseinstellung vorgenommen worden, die immer ausgeführt wurde, wenn der Stern den mittleren Faden passierte. Dagegen sind immer alle 4 Mikroskope abgelesen und es ist in den allermeisten Fällen auf 2 Teilstiche in jedem eingestellt worden; in einzelnen Fällen, wo die Beobachtungen schneller aufeinander folgten, ist nur auf einen Teilstrich in jedem Mikroskop eingestellt worden.

Die Kollimationskonstante ist etwa einmal monatlich durch Umlegung auf  $\lambda$  Urs. min. oder  $\alpha$  Polaris bestimmt worden. Zwischen je zwei Bestimmungen ist dann ein Wert für die einzelne Beobachtungsnacht interpoliert worden. Die durch Beobachtung bestimmten Werte finden sich in folgender Tabelle:

| 1914 Okt. 14 ... | <sup>s</sup> — 0.42 | 1916 Juli 25 ... | <sup>s</sup> — 0.48 | 1917 Okt. 15 ... | <sup>s</sup> — 0.40 |
|------------------|---------------------|------------------|---------------------|------------------|---------------------|
| Dez. 4 ...       | 38                  | Aug. 16 ...      | 47                  | Dez. 13 ...      | 48                  |
| 1915 Jan. 28 ... | 34                  | Sept. 20 ...     | 43                  | 1918 Jan. 2 ...  | 36                  |
| März 3 ...       | 35                  | Okt. 17 ...      | 47                  | Febr. 13 ...     | 39                  |
| April 17 ...     | 38                  | Nov. 15 ...      | 37                  | März 5 ...       | 39                  |
| Sept. 7 ...      | 48                  | 1917 Febr. 5 ... | 34                  | April 10 ...     | 44                  |
| Sept. 28 ...     | 43                  | März 1 ...       | 36                  | Mai 10 ...       | 43                  |
| Okt. 28 ...      | 36                  | April 13 ...     | 38                  | Sept. 9 ...      | 51                  |
| 1916 Febr. 4 ... | 32                  | Juli 24 ...      | 48                  | Nov. 9 ...       | 46                  |
| April 7 ...      | <sup>s</sup> — 0.37 | Sept. 7 ...      | <sup>s</sup> — 0.46 | Dez. 28 ...      | <sup>s</sup> — 0.43 |

Für die Inklinination ist an jedem Beobachtungsabend ein konstanter Wert angenommen worden, der durch mehrmaliges Anhängen des Niveaus bestimmt wurde.

Von diesem Beobachtungsprogramm habe ich bereits jene Beobachtungen veröffentlicht, die ich in den Jahren 1914 und 1915 ausgeführt habe, siehe A.N. 5011 oder Publ. og m. Meddelelser fra Københavns Observatory Nr. 33. Da ich aber, als ich an der Reduktion dieser Beobachtungen arbeitete, den Eindruck bekam, dass sie — wenigstens was die Deklinationen betraf — sich durch eine ausführlichere Behandlung nicht un wesentlich verbessern lassen würden, so habe ich sie in die vorliegende Arbeit mit einbezogen.

Bei einem Teil der Reduktionsarbeit haben mich die Arbeitskräfte der Sternwarte unterstützt. Dafür spreche ich Frl. Esthrid Egede Nielsen und Frl. Erna Mackeprang meinen Dank aus.

### Reduktion der Rektaszensionen.

Die Rektaszensionen sind mit Hilfe der Hansen'schen Formel bestimmt. Um möglichst engen Anschluss an das Fundamentalsystem zu bekommen, ist das Bessel'sche  $n$  nicht nur aus Beobachtungen von Polarsternen abgeleitet, sondern auch als Unbekannte in die Gleichungen zur Bestimmung des Uhrstandes und des Uhrganges eingesetzt worden. Aus Beobachtungen eines Polarsternes und eines Äquatorsternes ist für jede Nacht ein vorläufiger Wert für  $n$  bestimmt, und aus einer Reihe von Fundamentalsternen (System B.J.) ist dann eine Reihe von Bedingungsgleichungen zur Bestimmung von 3 Unbekannten berechnet worden: einer Korrektion für dieses  $n$ , dem Uhrstand und dem Uhrgang pr. Stunde. Die Bedingungsgleichungen haben nach der Safford'schen Formel  $p = \frac{1.3}{1 + 0.3 \sec^2 \delta}$  Gewichte erhalten, und die

drei Unbekannten sind dann durch Ausgleichung nach der Methode der kleinsten Quadrate bestimmt worden.

Jetzt sind erst die Rektaszensionen der Fundamentalsterne bestimmt und das dadurch beschaffte Material zu einer Untersuchung benutzt worden, ob sich systematische Korrekturen der abgeleiteten Rektaszensionen ergeben sollten. Das Resultat dieser Untersuchung findet man in der folgende Tabelle, die aber keine systematischen Korrekturen von Bedeutung erkennen lässt:

| Kr. Ost  |                        |                          | Kr. West |                        |                          |
|----------|------------------------|--------------------------|----------|------------------------|--------------------------|
| $\delta$ | $A_\alpha \cos \delta$ | Anzahl der Beobachtungen | $\delta$ | $A_\alpha \cos \delta$ | Anzahl der Beobachtungen |
| — 4.6    | — 0.005                | 45                       | — 4.5    | — 0.007                | 25                       |
| + 2.5    | + 5                    | 45                       | + 3.7    | + 13                   | 25                       |
| + 8.3    | + 10                   | 45                       | + 11.6   | + 2                    | 25                       |
| + 15.4   | + 12                   | 45                       | + 17.7   | — 1                    | 25                       |
| + 21.2   | + 10                   | 45                       | + 23.3   | + 8                    | 25                       |
| + 26.5   | + 1                    | 45                       | + 28.9   | + 1                    | 25                       |
| + 32.3   | + 8                    | 46                       | + 34.3   | — 2                    | 25                       |
| + 37.6   | — 17                   | 45                       | + 40.0   | 0                      | 25                       |
| + 41.3   | — 7                    | 46                       | + 43.7   | — 6                    | 25                       |
| + 50.7   | — 0.021                | 45                       | + 51.7   | — 0.003                | 25                       |

Die mittels der Fundamentalsterne bestimmten Konstanten des Instrumentes, die Uhrstände und Uhrgänge ergeben so einen recht guten Anschluss an das Fundamentalsystem, und sie sind dann benutzt worden, um die apparenten Rektaszensionen der Programmsterne zu bestimmen; diese sind mit Hilfe der Konstanten des Berliner Jahrbuchs (G, H, g, h, f, i) auf Jahresanfang reduziert worden, worauf alle Einzelpositionen mit Hilfe von Newcombs Konstanten auf das mittlere Aequinoktium 1916.0 reduziert worden sind.

Ich meinte nun, dass bei der Grösse des Beobachtungsmaterials ein Versuch, wenigstens gröbere systematische Fehler aus den Beobachtungen zu eliminieren, von Interesse sein könnte. Zuerst ist für jeden Stern, der in beiden Kreislagen beobachtet wurde, die Differenz Kreis Ost—Kreis West gebildet worden. Aus diesen Differenzen, nach der Deklination geordnet, sind Mittel gebildet worden, die in der folgenden Tabelle gegeben sind:

| $\delta$    | Anzahl der Sterne | $(o-w) \cos \delta$ |
|-------------|-------------------|---------------------|
| — 10° — — 5 | 26                | + 0.008             |
| — 5 — 0     | 25                | + 10                |
| 0 — + 5     | 40                | + 4                 |
| + 5 — + 10  | 55                | — 4                 |
| 10 — 15     | 54                | — 2                 |
| 15 — 20     | 31                | + 0.008             |

| $\delta$      | Anzahl der Sterne | $(o-w) \cos \delta$ |
|---------------|-------------------|---------------------|
| + 20° — + 25° | 50                | + 0.008             |
| 25 — 30       | 51                | 0                   |
| 30 — 35       | 59                | 0                   |
| 35 — 40       | 58                | + 21                |
| 40 — 45       | 55                | + 14                |
| 45 — 50       | 44                | + 26                |
| 50 — 55       | 60                | + 0.050             |

Hier zeigt sich ja offenbar für die höheren Deklinationen eine systematische Abweichung zwischen den Beobachtungen in den beiden Instrumentlagen. Für die Abweichungen zwischen  $30^\circ$  und  $55^\circ$  Deklination ist eine graphische Ausgleichung vorgenommen worden, wodurch folgende Korrektionstabelle entsteht:

| $\delta$ | $\Delta_\alpha$ Kr. Ost | $\delta$ | $\Delta_\alpha$ Kr. Ost |
|----------|-------------------------|----------|-------------------------|
| 35       | 0.00                    | 46       | - 0.02                  |
| 36       | 0.00                    | 47       | 2                       |
| 37       | - 0.00                  | 48       | 2                       |
| 38       | 0                       | 49       | 2                       |
| 39       | 0                       | 50       | 2                       |
| 40       | 1                       | 51       | 3                       |
| 41       | 1                       | 52       | 3                       |
| 42       | 1                       | 53       | 3                       |
| 43       | 1                       | 54       | 4                       |
| 44       | 1                       | 55       | 4                       |
| 45       | - 0.01                  | 56       | - 0.04                  |

Es ist hier — wie in der ganzen Arbeit — mit dem Thiele'schen Punkt gearbeitet worden. Für Kreis West haben die Rektaszensionen dieselben Korrekctionen erhalten, aber mit entgegengesetztem Vorzeichen.

Nachdem diese Korrekctionen angebracht worden waren, wurde das ganze Material untersucht, um eventuelle systematische Korrekctionen zu den einzelnen Beobachtungsabenden zu konstatieren. Für jeden Stern sind die Abweichungen der Einzelpositionen von dem Mittelwert gebildet und für jeden Beobachtungsabend das Mittel dieser Abweichungen berechnet worden, und dieser Mittelwert wurde so als konstanter systematischer Fehler für die Beobachtungen des Abends betrachtet.

Die Grösse dieser Korrekctionen ist aus der Tabelle S. 11 ersichtlich, nebst den entsprechenden für die Deklinationen; sie sind an sämtliche Rektaszensionen angebracht worden, und das ganze Material wurde nun untersucht, um zu sehen, ob es nunmehr gelungen war, die gefundenen systematischen Abweichungen zwischen den Beobachtungen in den beiden Kreislagen zu entfernen. Bei jedem Stern, der in beiden Lagen beobachtet wurde, ist der Mittelwert der Einzelpositionen für jede Kreislage für sich gebildet worden, für jeden Stern ist die Differenz  $o-w$  dieser Mittelwerte

gebildet und ihr das Gewicht  $\frac{p_o P_w}{p_o + p_w}$  gegeben worden, wo  $p_o$  und  $p_w$  die Anzahl der Einzelpositionen im Kr. Ost bzw. Kr. West angeben. Aus diesen Differenzen, nach der Deklination geordnet, ist folgende Tabelle gebildet worden:

| $\delta$  | $(o-w) \cos \delta$ | Gewicht |
|-----------|---------------------|---------|
| -10° 0'   | + 0.008             | 48.8    |
| 0° +5'    | - 1                 | 38.8    |
| + 5° -10' | - 9                 | 53.4    |
| 10° -15'  | - 6                 | 52.4    |
| 15° -20'  | + 6                 | 33.1    |
| 20° -25'  | + 7                 | 48.3    |
| 25° -30'  | - 5                 | 48.9    |
| 30° -35'  | - 5                 | 53.8    |
| 35° -40'  | + 9                 | 60.8    |
| 40° -45'  | - 4                 | 53.4    |
| 45° -50'  | - 4                 | 43.7    |
| 50° -55'  | + 0.004             | 57.6    |

Hier findet sich keine Andeutung einer systematischen, von der Deklination abhängigen Abweichung, und das ganze Material unter einem genommen ergibt als Unterschied zwischen den Beobachtungen in den beiden Instrumentlagen:

$$(o-w)_a \cos \delta = -0^s.0002.$$

### Reduktion der Deklinationen.

Der Run der Mikroskope ist immer sehr klein gewesen. Bis Februar 1917 sind wegen Run Korrekturen eingeführt worden, aber da diese Korrekturen nur in wenigen Fällen die beobachtete Deklination um  $0''.1$  verändern, habe ich von diesem Zeitpunkt an nicht mehr wegen Run korrigiert. Zur Korrektion wegen Refraktion sind die Ball'schen Tabellen benutzt worden.

Für jeden Fundamentalstern ist nun der Aequatorpunkt bestimmt worden; für jeden Beobachtungsabend ist er als konstant angenommen und als Mittel der von den einzelnen Sternen bestimmten berechnet worden. Für eine einzige Nacht zeigte es sich notwendig, den Aequatorpunkt als mit der Zeit variierend anzunehmen. Hier wurde nach der Methode der kleinsten Quadrate ausgeglichen und eine Variation von  $-0''.37$  pr. Stunde bestimmt.

Wie S. 5 erwähnt, bekam ich, während ich an der Reduktion meiner früheren Beobachtungsreihen arbeitete, den Eindruck, dass jedenfalls die Deklinationen in besseren Anschluss an das Fundamentalsystem zu bringen seien. Um dies zu untersuchen, berechnete ich für alle Beobachtungen an Fundamentalsternen die Differenz zwischen dem von dem einzelnen Stern bestimmten Aequatorpunkt und dem aus allen Fundamentalsternen der Nacht berechneten. Aus diesen Differenzen sind Mittelwerte gebildet worden, nach der Deklination geordnet:

| $\delta^{\circ}$ | Kr. Ost | Anzahl der Beobachtungen | $\delta^{\circ}$ | Kr. West | Anzahl der Beobachtungen |
|------------------|---------|--------------------------|------------------|----------|--------------------------|
| - 4.6            | + 0.24  | 45                       | - 4.5            | - 1.14   | 25                       |
| + 2.5            | + 43    | 45                       | + 3.7            | - 0.77   | 25                       |
| + 8.3            | + 1     | 45                       | + 11.6           | - 91     | 25                       |
| + 15.4           | - 6     | 45                       | + 17.7           | - 88     | 25                       |
| + 21.2           | - 30    | 45                       | + 23.3           | - 45     | 25                       |
| + 26.5           | + 15    | 45                       | + 28.9           | + 34     | 25                       |
| + 32.3           | + 29    | 46                       | + 34.3           | + 86     | 25                       |
| + 37.6           | + 19    | 45                       | + 40.0           | + 0.82   | 25                       |
| + 41.3           | - 28    | 46                       | + 43.7           | + 1.01   | 25                       |
| + 50.7           | - 0.63  | 45                       | + 51.7           | + 1.22   | 25                       |

Die hier angegebenen Korrektionen sind als Korrektion zur beobachteten Deklination berechnet worden. Hier ergibt sich — wie ich auch erwartet hatte — eine sehr deutliche Abhängigkeit von der Deklination.

Durch graphische Ausgleichung ist folgende Korrektionstabelle gebildet worden:

| $\delta^{\circ}$ | Kr. Ost | Kr. West | $\delta^{\circ}$ | Kr. Ost | Kr. West | $\delta^{\circ}$ | Kr. Ost | Kr. West |
|------------------|---------|----------|------------------|---------|----------|------------------|---------|----------|
| - 10             | + 0.40  | - 1.07   | + 12             | + 0.00  | - 0.85   | + 34             | + 0.13  | + 0.70   |
| 9                | 40      | - 1.05   | 13               | - 0.05  | - 0.84   | 35               | + 0.12  | + 0.76   |
| 8                | 40      | - 1.03   | 14               | 10      | - 0.82   | 36               | + 0.10  | + 0.81   |
| 7                | 40      | - 1.02   | 15               | 14      | - 0.81   | 37               | + 0.07  | + 0.85   |
| 6                | 40      | - 1.01   | 16               | 18      | - 0.80   | 38               | + 0.03  | + 0.88   |
| 5                | 40      | - 1.00   | 17               | 21      | - 0.78   | 39               | - 0.02  | + 0.92   |
| 4                | 40      | - 0.99   | 18               | 22      | - 0.76   | 40               | - 0.07  | + 0.94   |
| 3                | 40      | - 0.98   | 19               | 22      | - 0.73   | 41               | - 0.10  | + 0.97   |
| 2                | 40      | - 0.97   | 20               | 21      | - 0.70   | 42               | - 0.14  | + 1.00   |
| - 1              | 40      | - 0.96   | 21               | 20      | - 0.64   | 43               | - 0.20  | + 1.02   |
| 0                | 39      | - 0.95   | 22               | 17      | - 0.58   | 44               | - 0.24  | + 1.03   |
| + 1              | 38      | - 0.94   | 23               | 11      | - 0.50   | 45               | - 0.29  | + 1.05   |
| 2                | 37      | - 0.93   | 24               | - 0.07  | - 0.40   | 46               | - 0.33  | + 1.08   |
| 3                | 36      | - 0.92   | 25               | 0.00    | - 0.28   | 47               | - 0.38  | + 1.10   |
| 4                | 34      | - 0.92   | 26               | + 0.07  | - 0.13   | 48               | - 0.43  | + 1.11   |
| 5                | 31      | - 0.91   | 27               | + 0.10  | + 0.02   | 49               | - 0.48  | + 1.13   |
| 6                | 27      | - 0.90   | 28               | + 0.12  | + 0.17   | 50               | - 0.53  | + 1.14   |
| 7                | 23      | - 0.90   | 29               | + 0.13  | + 0.30   | 51               | - 0.58  | + 1.16   |
| 8                | 19      | - 0.89   | 30               | + 0.14  | + 0.42   | 52               | - 0.62  | + 1.17   |
| 9                | 14      | - 0.88   | 31               | + 0.15  | + 0.50   | 53               | - 0.66  | + 1.18   |
| 10               | 10      | - 0.87   | 32               | + 0.15  | + 0.58   | 54               | - 0.70  | + 1.19   |
| + 11             | + 0.04  | - 0.86   | + 33             | + 0.14  | + 0.64   | + 55             | - 0.74  | + 1.20   |

Die Korrekturen dieser Tabelle sind dann auf die beobachteten Deklinationen der Fundamentalsterne angewendet worden, wonach alle Aequatorpunkte aufs neue bestimmt worden sind.

Mit diesen Aequatorpunkten sind nun für alle Programmsterne die beobachteten Deklinationen berechnet worden, die dann nach Anwendung der von der Deklination abhängigen Korrekturen die apparenten Deklinationen ergaben, die alle auf das mittlere Aequinoktium 1916.0 reduziert wurden.

Ebenso wie bei den Rektaszensionen ist nun versucht worden, aus dem ganzen Material — bestehend aus den Beobachtungen der Programmsterne — eventuelle systematische Fehler zu bestimmen, die entweder von einem Unterschied in den beiden Instrumentlagen abhängig sind oder die einzelnen Beobachtungsabende betreffen.

Eine erste Bestimmung der Differenzen zwischen den Beobachtungen in den beiden Instrumentlagen, geordnet nach der Deklination, ergab folgendes Resultat:

| $\delta$     | $o-w$  | Anzahl der Sterne |
|--------------|--------|-------------------|
| - 10° - - 5° | - 0.31 | 26                |
| - 5° - 0°    | - 0.33 | 25                |
| 0° - + 5°    | - 0.53 | 40                |
| + 5° - 10°   | - 0.03 | 55                |
| 10° - 15°    | + 0.02 | 54                |
| 15° - 20°    | - 0.42 | 31                |
| 20° - 25°    | - 0.24 | 50                |
| 25° - 30°    | - 0.37 | 51                |
| 30° - 35°    | - 0.33 | 59                |
| 35° - 40°    | - 0.45 | 58                |
| 40° - 45°    | - 0.25 | 55                |
| 45° - 50°    | - 0.31 | 44                |
| 50° - 55°    | + 0.10 | 60                |

Hieraus lässt sich sicherlich keine Abhängigkeit von der Deklination bestimmen: deshalb ist das Mittel sämtlicher Differenzen gebildet:

$$o-w = -0''.25$$

und alle Beobachtungen wurden hiernach korrigiert.

Hierauf wurde das ganze Material ebenso wie die Rektaszensionen untersucht, um eventuelle systematische Korrekturen für die einzelnen Beobachtungsabende zu konstatieren. Das Resultat dieser Untersuchung — sowohl was die Rektaszensionen als die Deklinationen betrifft — findet man in der folgenden Tabelle, wo jede Korrektion gleich Null gesetzt ist, wenn sie nicht grösser ist als ihr mittlerer Fehler.

| $\Delta\alpha$ | $\Delta\delta$ | $\Delta\alpha$ | $\Delta\delta$ | $\Delta\alpha$ | $\Delta\delta$ | $\Delta\alpha$ | $\Delta\delta$ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| s              | "              | s              | "              | s              | "              | s              | "              |
| 0.00           | 0.0            | 0.00           | 0.0            | 0.00           | -0.7           | -0.01          | 0.0            |
| + 2            | 0              | 0              | 0              | 0              | 0              | 0              | + 4            |
| + 1            | - 2            | 0              | + 1            | 0              | 0              | 0              | - 2            |
| - 1            | + 2            | - 2            | 0              | 0              | - 1            | 0              | 0              |
| 0              | + 3            | - 2            | - 2            | 0              | 0              | 0              | + 5            |
| 0              | - 4            | - 2            | 0              | 0              | 0              | 0              | - 1            |
| - 3            | - 4            | + 2            | 0              | - 2            | 0              | + 1            | + 4            |
| 0              | 0              | + 1            | + 4            | + 2            | 0              | 0              | + 3            |
| 0              | + 2            | 0              | 0              | 0              | 0              | 0              | 0              |
| - 3            | - 2            | - 2            | 0              | - 3            | 0              | + 2            | 0              |
| 0              | - 5            | 0              | 0              | + 2            | + 3            | - 3            | + 3            |
| + 1            | 0              | + 1            | + 1            | 0              | - 2            | - 1            | + 2            |
| 0              | 0              | 0              | - 7            | - 2            | 0              | 0              | 0              |
| - 1            | - 3            | 0              | - 3            | 0              | - 4            | 0              | - 2            |
| 0              | 0              | 0              | 0              | 0              | - 4            | 0              | - 2            |
| 0              | 0              | 0              | 0              | - 2            | - 3            | + 1            | - 2            |
| + 1            | 0              | 0              | 0              | + 2            | + 1            | - 2            | 0              |
| + 2            | 0              | 0              | + 2            | - 2            | 0              | + 1            | + 2            |
| 0              | 0              | + 3            | 0              | 0              | - 4            | - 1            | + 2            |
| - 1            | - 3            | 0              | 0              | - 1            | + 1            | 0              | + 2            |
| - 2            | - 3            | + 2            | - 1            | + 3            | - 5            | 0              | 0              |
| 0              | + 2            | 0              | - 3            | + 1            | + 2            | 0              | 0              |
| + 1            | + 4            | 0              | 0              | 0              | 0              | 0              | - 3            |
| + 2            | - 3            | - 1            | - 2            | 0              | 0              | - 1            | 0              |
| 0              | + 3            | 0              | - 2            | + 2            | 0              | 0              | 0              |
| - 3            | 0              | + 2            | - 3            | 0              | 0              | 0              | 0              |
| 0              | 0              | - 2            | + 3            | 0              | - 2            | 0              | + 2            |
| - 1            | + 4            | 0              | 0              | + 2            | 0              | + 1            | 0              |
| - 1            | - 3            | 0              | 0              | 0              | - 4            | 0              | + 2            |
| 0              | 0              | 0              | 0              | 0              | 0              | + 1            | + 3            |
| 0              | 0              | 0              | 0              | 0              | 0              | 0              | 0              |
| 0.00           | + 0.3          | + 0.01         | + 0.3          | 0.00           | 0.0            | 0.00           | - 0.3          |

Diese Korrekturen wurden nun auf sämtliche Deklinationen angewendet, und dann wurde untersucht, ob es gelungen war, die systematischen Abweichungen zwischen den Beobachtungen in den beiden Instrumentlagen zu entfernen. Das Verfahren war dasselbe wie bei den Rektaszensionen, und es wurden für die Differenz o-w Werte gefunden, die — nach der Deklination geordnet — in der folgenden Tabelle angegeben sind:

| $\delta$ | $\alpha - w$ | Gewicht |
|----------|--------------|---------|
| - 10° 0' | - 0'.17      | 48.8    |
| 0 — + 5  | - 0.35       | 38.8    |
| + 5 — 10 | + 0.17       | 53.4    |
| 10 — 15  | + 0.15       | 52.4    |
| 15 — 20  | - 0.18       | 33.1    |
| 20 — 25  | - 0.07       | 48.3    |
| 25 — 30  | - 0.10       | 48.9    |
| 30 — 35  | - 0.02       | 53.8    |
| 35 — 40  | - 0.11       | 60.8    |
| 40 — 45  | + 0.03       | 53.4    |
| 45 — 50  | - 0.02       | 43.7    |
| 50 — 55  | + 0.46       | 57.6    |

Sowohl diese Tabelle als die frühere Bestimmung der Differenz  $\alpha - w$  könnten darauf deuten, dass die Differenz für die Zenithsterne einen andern Wert hätte als für die übrigen Sterne. Indessen tritt die grössere Abweichung so plötzlich auf, dass es schwer fallen wird, sie zu bestimmen, und für die endgültigen Positionen wird ausserdem eine Korrektion für diese Abweichung nur geringe Bedeutung haben, weshalb denn auch keine Rücksicht darauf genommen wurde. Das ganze Material unter einem betrachtet ergibt demnach für die Deklinationen einen Unterschied zwischen den Beobachtungen in den beiden Instrumentlagen, der gleich ist:

$$\alpha - w = + 0''.002.$$

### Mittlerer Fehler.

Um die Genauigkeit der Beobachtungen zu untersuchen, ist der mittlere Fehler der einzelnen Beobachtung berechnet worden. Nachdem die beobachteten Rektaszensionen und Deklinationen die oben abgeleiteten systematischen Korrekctionen erhalten haben, habe ich für jeden Stern das Mittel aller Positionen gebildet — ohne dabei zwischen den beiden Instrumentlagen zu unterscheiden — und die Abweichungen ( $v$ ) der einzelnen Positionen von diesen Mitteln. Aus der Quadratsumme dieser  $v$  sind zuerst die mittleren Fehler  $\varepsilon_\alpha$  und  $\varepsilon_\delta$  für verschiedene Deklinationszonen und verschiedene Grössenklassen berechnet:

| $\delta$  | $\varepsilon_\alpha$                                   | $\varepsilon_\delta$                                   |                                   |                                   |
|-----------|--|--|-----------------------------------|-----------------------------------|
| - 10° 0'  | $5^{m.5} - 8^{m.0}$<br>$\pm 0.038 \text{ sec } \delta$ | $8^{m.1} - 9^{m.5}$<br>$\pm 0.036 \text{ sec } \delta$ | $5^{m.5} - 8^{m.0}$<br>$\pm 0.61$ | $8^{m.1} - 9^{m.5}$<br>$\pm 0.62$ |
| 0 — + 10  | 32   | 32   | 47                                | 49                                |
| + 10 — 20 | 29   | 33   | 43                                | 50                                |
| 20 — 30   | 27   | 28   | 45                                | 48                                |
| 30 — 40   | 25   | 32   | 43                                | 40                                |
| 40 — 50   | 28   | 31   | 44                                | 48                                |
| 50 — 55   | $\pm 0.030 \text{ sec } \delta$                        | $\pm 0.040 \text{ sec } \delta$                        | $\pm 0.52$                        | $\pm 0.51$                        |

Hiernach ist der mittlere Fehler wesentlich grösser für Sterne mit südlicher Deklination und auch grösser für Sterne in der Nähe des Zeniths. In beiden Fällen liegt die Erklärung auf der Hand: die schlechte Luft über der Stadt und die unbequeme Stellung während der Beobachtung der Sterne in der Nähe des Zeniths. Für Sterne schwächer als  $8^m.0$  wird der mittlere Fehler etwas grösser als für klarere Sterne. Dies ist hauptsächlich auf den grösseren Fehler bei den schwächsten Sternen  $9^m.0$ — $9^m.5$  zurückzuführen.

Wenn man alle  $\nu$  unter einen nimmt, erhält man für das ganze Beobachtungsmaterial als

mittleren Fehler einer einzelnen Beobachtung:

$$\epsilon_\alpha = \pm 0^s.030 \sec \delta \quad \text{und} \quad \epsilon_\delta = \pm 0''.47.$$

Bei meinen früheren Beobachtungsreihen an diesem Instrument sind die folgenden Werte des mittleren Fehlers bei einer einzelnen Beobachtung berechnet worden:

|            | $\epsilon_\alpha$       | $\epsilon_\delta$ |
|------------|-------------------------|-------------------|
| A. N. 4560 | $\pm 0.038 \sec \delta$ | $\pm 0.62$        |
| A. N. 4697 | $\pm 0.036$             | $\pm 0.66$        |
| A. N. 5011 | $\pm 0.035 \sec \delta$ | $\pm 0.56$        |

woraus man ersieht, dass durch die hier abgeleiteten systematischen Korrekturen die Genauigkeit der Beobachtungen nicht unwe sentlich erhöht worden ist.

### Die Einzelpositionen.

Im folgenden Katalog findet man die endgültigen Einzelpositionen für das Aequinoktium 1916.0. Die Sterne sind nach der Rektaszension geordnet, und jeder Stern hat eine laufende Nummer erhalten. In derselben Zeile wie die laufende Nummer ist Grösse und Spektrum jedes Sternes gegeben, bezw. nach der Liste Pickering's und nach The Draper Catalogue. In der zweiten Zeile stehen Stunden und Minuten der Rektaszension sowie Grade und Minuten der Deklination. In den folgenden Zeilen — die der Zahl nach den Einzelpositionen des Sternes entsprechen — sind Kreislage sowie die Sekunden der Rektaszension und Deklination angegeben, und endlich in der letzten Zeile das Mittel der Sekunde der Einzelpositionen für jeden Stern.

S. 49 ff. ist eine Tabelle gegeben, die nebst der laufenden Nummer die B. D.-Nummer des Sterns und die Beobachtungsepoke für Rektaszension bezw. Deklination enthält.

|           |                               |                |            |                                |                |            |                                |                |            |                                |                |
|-----------|-------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|
| <b>1.</b> | 7.6 Mg                        | B <sub>3</sub> | <b>6.</b>  | 8.1 Mg                         | B <sub>8</sub> | <b>11.</b> | 5.8 Mg                         | B <sub>8</sub> | <b>16.</b> | 6.6 Mg                         | B <sub>8</sub> |
|           | 0 <sup>h</sup> 0 <sup>m</sup> | 53° 48'        |            | 0 <sup>h</sup> 10 <sup>m</sup> | 49° 50'        |            | 0 <sup>h</sup> 16 <sup>m</sup> | 30° 28'        |            | 0 <sup>h</sup> 21 <sup>m</sup> | 19° 40'        |
| s         |                               | "              | s          |                                | "              | s          |                                | "              | s          |                                | "              |
| o         | 1.62                          | 25.0           | o          | 2.23                           | 7.6            | o          | 0.82                           | 9.6            | o          | 41.28                          | 53.8           |
| w         | 68                            | 24.5           | o          | 21                             | 7.2            | o          | 85                             | 9.3            | w          | 33                             | 54.6           |
| w         | 66                            | 25.4           | w          | 18                             | 7.7            | o          | 82                             | 8.5            | w          | 26                             | 54.3           |
| o         | 72                            | 25.0           |            | 21                             | 7.5            | w          | 88                             | 8.6            | o          | 32                             | 53.5           |
|           | 67                            | 25.0           |            |                                |                |            | 84                             | 9.0            |            | 30                             | 54.0           |
| <b>2.</b> | 8.0 Mg                        | Ma             | <b>7.</b>  | 6.8 Mg                         | Ma             | <b>12.</b> | 7.9 Mg                         | Ma             | <b>17.</b> | 7.6 Mg                         | Ma             |
|           | 0 <sup>h</sup> 5 <sup>m</sup> | 24° 43'        |            | 0 <sup>h</sup> 12 <sup>m</sup> | 48° 59'        |            | 0 <sup>h</sup> 16 <sup>m</sup> | 24° 52'        |            | 0 <sup>h</sup> 22 <sup>m</sup> | 30° 42'        |
| o         | 45.58                         | 49.4           | o          | 27.62                          | 43.1           | o          | 47.32                          | 20.3           | o          | 42.47                          | 43.7           |
| o         | 54                            | 49.3           | o          | 62                             | 42.6           | o          | 30                             | 20.3           | o          | 39                             | 44.9           |
| o         | 50                            | 48.5           | w          | 65                             | 42.4           | o          | 37                             | 20.4           | o          | 42                             | 44.7           |
| w         | 53                            | 47.5           | w          | 65                             | 42.8           | w          | 24                             | 20.7           |            |                                |                |
|           | 54                            | 48.7           |            | 63                             | 42.7           | w          | 32                             | 19.4           |            | 43                             | 44.4           |
|           |                               |                |            |                                |                |            | 31                             | 20.2           |            |                                |                |
| <b>3.</b> | 7.9 Mg                        | Mb             | <b>8.</b>  | 8.0 Mg                         | K <sub>5</sub> | <b>13.</b> | 7.0 Mg                         | Ma             | <b>18.</b> | 7.5 Mg                         | Ma             |
|           | 0 <sup>h</sup> 6 <sup>m</sup> | 28° 11'        |            | 0 <sup>h</sup> 12 <sup>m</sup> | 30° 36'        |            | 0 <sup>h</sup> 18 <sup>m</sup> | 38° 17'        |            | 0 <sup>h</sup> 24 <sup>m</sup> | 47° 56'        |
| o         | 6.46                          | 8.8            | o          | 43.29                          | 26.8           | o          | 31.12                          | 18.4           | o          | —                              | 57.4           |
| w         | 43                            | 9.7            | o          | 33                             | 27.5           | o          | 12                             | 18.4           | o          | 24.34                          | 57.6           |
| w         | 39                            | 8.8            | w          | 31                             | 28.0           | w          | 16                             | 18.4           | w          | 28                             | 57.6           |
|           | 43                            | 9.1            | w          | 34                             | 27.0           | w          | 19                             | 18.4           | w          | 31                             | 56.8           |
|           |                               |                |            | 32                             | 27.3           |            | 15                             | 18.4           |            | 31                             | 57.4           |
| <b>4.</b> | 8.0 Mg                        | Mb             | <b>9.</b>  | 7.3 Mg                         | Mb             | <b>14.</b> | 8.3 Mg                         | Ma             | <b>19.</b> | 6.6 Mg                         | B <sub>8</sub> |
|           | 0 <sup>h</sup> 7 <sup>m</sup> | 43° 21'        |            | 0 <sup>h</sup> 13 <sup>m</sup> | 19° 45'        |            | 0 <sup>h</sup> 18 <sup>m</sup> | 51° 18'        |            | 0 <sup>h</sup> 26 <sup>m</sup> | 43° 28'        |
| o         | 53.02                         | 3.6            | o          | 30.23                          | 38.2           | w          | 41.26                          | 8.8            | o          | 41.28                          | 57.6           |
| o         | 07                            | 4.4            | o          | 22                             | 38.4           | o          | 07                             | 10.0           | o          | 26                             | 57.3           |
| w         | 01                            | 4.0            | w          | 22                             | 38.0           | o          | 17                             | 10.4           | w          | 25                             | 55.8           |
| w         | 52.99                         | 3.6            | w          | 27                             | 38.4           | w          | 20                             | 9.9            | w          | 26                             | 56.6           |
|           | 02                            | 3.9            |            | 23                             | 38.2           |            | 17                             | 9.8            |            | 26                             | 56.8           |
| <b>5.</b> | 7.8 Mg                        | Ma             | <b>10.</b> | 8.2 Mg                         | B <sub>8</sub> | <b>15.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>20.</b> | 8.1 Mg                         | B <sub>8</sub> |
|           | 0 <sup>h</sup> 7 <sup>m</sup> | 22° 5'         |            | 0 <sup>h</sup> 15 <sup>m</sup> | 49° 18'        |            | 0 <sup>h</sup> 21 <sup>m</sup> | 49° 11'        |            | 0 <sup>h</sup> 27 <sup>m</sup> | 53° 29'        |
| o         | 55.62                         | 21.5           | o          | 45.41                          | —              | o          | 18.17                          | 30.5           | o          | 6.65                           | 52.0           |
| o         | 57                            | 21.2           | o          | 40                             | 0.6            | w          | 08                             | 30.7           | o          | 54                             | 53.4           |
| w         | 63                            | 20.6           | w          | 42                             | 0.8            | w          | 08                             | 30.2           | w          | 49                             | 52.6           |
| w         | 54                            | 21.2           | o          |                                |                | w          | 02                             | 30.4           | w          | 62                             | 51.9           |
|           | 59                            | 21.1           |            | 41                             | 0.7            |            | 09                             | 30.4           |            | 57                             | 52.5           |

|            |                                |                |            |                                |                |            |                                |                |            |                                |                |
|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|
| <b>21.</b> | 7.8 Mg                         | B <sub>9</sub> | <b>26.</b> | 6.0 Mg                         | B <sub>8</sub> | <b>31.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>37.</b> | 7.5 Mg                         | Mb             |
|            | 0 <sup>h</sup> 31 <sup>m</sup> | 55° 14'        |            | 0 <sup>h</sup> 41 <sup>m</sup> | 44° 24'        |            | 0 <sup>h</sup> 48 <sup>m</sup> | 49° 11'        |            | 1 <sup>h</sup> 0 <sup>m</sup>  | 18° 44'        |
| w          | 5.73                           | "              | s          | 31.33                          | 8.7            | o          | 32.33                          | 58.0           | o          | 43.59                          | 51.6           |
| w          | 77                             | 40.2           | o          | 39                             | 9.2            | o          | 27                             | 58.9           | o          | 58                             | 52.4           |
|            | 75                             | 40.5           | w          | 44                             | 7.9            |            | 30                             | 58.5           | w          | 55                             | 53.1           |
|            |                                |                | w          | 46                             | 9.4            |            |                                |                |            | 57                             | 52.4           |
|            |                                |                |            | 40                             | 8.8            |            |                                |                |            |                                |                |
| <b>22.</b> | 7.3 Mg                         | B <sub>8</sub> | <b>27.</b> | 8.2 Mg                         | B              | <b>32.</b> | 8.2 Mg                         | Ma             | <b>38.</b> | 6.9 Mg                         | Ma             |
|            | 0 <sup>h</sup> 31 <sup>m</sup> | 44° 10'        |            | 0 <sup>h</sup> 42 <sup>m</sup> | 47° 20'        |            | 0 <sup>h</sup> 49 <sup>m</sup> | 38° 42'        |            | 1 <sup>h</sup> 3 <sup>m</sup>  | 9° 27'         |
| o          | 45.70                          | 35.2           | o          | 36.97                          | 49.1           | o          | 58.96                          | 51.1           | o          | 58.19                          | 37.0           |
| o          | 67                             | 35.6           | w          | 92                             | 49.6           | o          | 96                             | 51.1           | o          | 22                             | 36.2           |
|            | 68                             | 35.4           | o          | 93                             | 50.3           |            | 96                             | 51.1           |            | 20                             | 36.6           |
|            |                                |                |            | 94                             | 49.7           |            |                                |                |            |                                |                |
| <b>23.</b> | 7.6 Mg                         | B <sub>8</sub> | <b>28.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>33.</b> | 8.0 Mg                         | Ma             | <b>39.</b> | 8.3 Mg                         | Ma             |
|            | 0 <sup>h</sup> 37 <sup>m</sup> | 38° 26'        |            | 0 <sup>h</sup> 45 <sup>m</sup> | 40° 21'        |            | 0 <sup>h</sup> 52 <sup>m</sup> | 25° 53'        |            | 1 <sup>h</sup> 6 <sup>m</sup>  | 30° 30'        |
| o          | 17.64                          | 9.0            | o          | 48.46                          | 2.5            | o          | 13.08                          | 7.8            | o          | 32.42                          | 14.0           |
| o          | 59                             | 8.4            | o          | 44                             | 2.9            | w          | 03                             | 8.0            | w          | 44                             | 13.5           |
| o          | 56                             | 7.8            | w          | 54                             | 3.5            | o          | 13                             | 8.8            | o          | 44                             | 14.3           |
| w          | 54                             | 8.5            | w          | 37                             | 3.5            |            | 08                             | 8.2            | w          | 42                             | 13.9           |
| w          | 53                             | 9.2            |            | 45                             | 3.1            |            |                                |                |            | 43                             | 13.9           |
|            | 57                             | 8.6            |            |                                |                |            |                                |                |            |                                |                |
| <b>24.</b> | 7.5 Mg                         | Ma             | <b>29.</b> | 8.0 Mg                         | Ma             | <b>34.</b> | 6.8 Mg                         | B <sub>5</sub> | <b>40.</b> | 8.5 Mg                         | Ma             |
|            | 0 <sup>h</sup> 40 <sup>m</sup> | 40° 13'        |            | 0 <sup>h</sup> 47 <sup>m</sup> | 31° 54'        |            | 0 <sup>h</sup> 57 <sup>m</sup> | 51° 20'        |            | 1 <sup>h</sup> 7 <sup>m</sup>  | 28° 27'        |
| o          | 1.47                           | 12.4           | o          | 21.26                          | 36.8           | o          | 58.69                          | 48.6           | o          | 40.20                          | 52.4           |
| w          | 46                             | 11.6           | o          | 26                             | 37.9           | w          | 68                             | 48.0           | o          | 16                             | 52.6           |
| w          | 38                             | 12.2           | w          | 30                             | 37.5           | o          | —                              | 49.8           | w          | 29                             | 53.0           |
|            | 44                             | 12.1           | w          | 30                             | 38.1           |            | 68                             | 48.8           | w          | 16                             | 53.0           |
|            |                                |                | w          | 24                             | 37.5           |            |                                |                |            | 20                             | 52.7           |
|            |                                |                |            | 27                             | 37.6           |            |                                |                |            |                                |                |
| <b>25.</b> | 7.3 Mg                         | B <sub>8</sub> | <b>30.</b> | 8.2 Mg                         | Ma             | <b>35.</b> | 7.3 Mg                         | Ma             | <b>41.</b> | 6.5 Mg                         | B <sub>8</sub> |
|            | 0 <sup>h</sup> 40 <sup>m</sup> | 23° 7'         |            | 0 <sup>h</sup> 47 <sup>m</sup> | 44° 40'        |            | 0 <sup>h</sup> 59 <sup>m</sup> | 38° 14'        |            | 1 <sup>h</sup> 11 <sup>m</sup> | 47° 39'        |
| o          | 45.62                          | 53.7           | o          | 55.49                          | 40.0           | o          | 51.52                          | 34.6           | o          | 26.98                          | 19.0           |
| o          | 60                             | 53.3           | o          | 60                             | 39.0           | o          | 63                             | 34.7           | o          | 00                             | 18.8           |
| w          | 66                             | 53.6           | w          | 62                             | 38.1           | o          | 64                             | 34.0           | w          | 02                             | 19.4           |
|            | 63                             | 53.5           | w          | 49                             | 39.4           |            | 78                             | 15.2           | w          | 98                             | 19.4           |
|            |                                |                |            | 55                             | 39.1           |            |                                |                |            | 27.00                          | 19.1           |

|            |                                |                |            |                                |                |            |                                |                |            |                                |                |
|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|
| <b>42.</b> | 7.4 Mg                         | B <sub>5</sub> | <b>47.</b> | 6.4 Mg                         | B <sub>8</sub> | <b>52.</b> | 7.3 Mg                         | Ma             | <b>57.</b> | 7.8 Mg                         | B <sub>8</sub> |
|            | 1 <sup>h</sup> 12 <sup>m</sup> | 55° 0'         |            | 1 <sup>h</sup> 22 <sup>m</sup> | 3° 5'          |            | 1 <sup>h</sup> 29 <sup>m</sup> | 35° 10'        |            | 1 <sup>h</sup> 34 <sup>m</sup> | 54° 1'         |
| s          | "                              |                | s          | "                              |                | s          | "                              |                | s          | "                              |                |
| w          | 40.11                          | 10.5           | o          | 32.98                          | 59.2           | o          | 4.89                           | 38.6           | o          | 50.28                          | 11.1           |
| o          | 07                             | 11.4           | o          | 33.06                          | 58.9           | o          | 92                             | 38.0           | w          | 22                             | 10.1           |
| o          | 22                             | 10.3           | w          | 03                             | —              | w          | 87                             | 38.2           | w          | 21                             | 10.9           |
| w          | 18                             | 10.0           | w          | 00                             | 59.4           | w          | 88                             | 38.1           | o          | 19                             | 11.0           |
|            | 14                             | 10.6           |            | 02                             | 59.2           |            | 89                             | 38.2           |            | 22                             | 10.8           |
| <b>43.</b> | 8.5 Mg                         | Mb             | <b>48.</b> | 8.0 Mg                         | Mb             | <b>53.</b> | 8.5 Mg                         | Ma             | <b>58.</b> | 8.3 Mg                         | Ma             |
|            | 1 <sup>h</sup> 12 <sup>m</sup> | 13°28'         |            | 1 <sup>h</sup> 26 <sup>m</sup> | 14° 35'        |            | 1 <sup>h</sup> 32 <sup>m</sup> | 22° 0'         |            | 1 <sup>h</sup> 36 <sup>m</sup> | 39° 2'         |
| o          | 55.23                          | 22.1           | o          | 17.79                          | 20.6           | o          | 13.59                          | 49.0           | o          | 53.73                          | 36.8           |
| w          | 26                             | 21.9           | o          | 74                             | 20.6           | w          | 59                             | 48.0           | o          | 75                             | 36.0           |
| o          | 26                             | 20.8           | o          | 75                             | 20.6           | w          | 60                             | 48.1           |            | 74                             | 36.4           |
| w          | 22                             | 20.8           | w          | 75                             | 21.2           | o          | 59                             | 48.5           |            |                                |                |
|            | 24                             | 21.4           | w          | 73                             | 20.7           |            | 59                             | 48.4           | <b>59.</b> | 8.6 Mg                         | Ma             |
|            |                                |                |            | 75                             | 20.7           | <b>54.</b> | 6.7 Mg                         | Ma             |            | 1 <sup>h</sup> 37 <sup>m</sup> | 38° 53'        |
| <b>44.</b> | 7.5 Mg                         | B <sub>8</sub> |            |                                |                |            | 1 <sup>h</sup> 32 <sup>m</sup> | 7° 24'         | o          | 16.50                          | 42.9           |
|            | 1 <sup>h</sup> 15 <sup>m</sup> | 51° 23'        | <b>49.</b> | 7.8 Mg                         | B <sub>8</sub> | o          | 19.33                          | 9.7            | o          | 55                             | 43.1           |
| o          | 19.28                          | 33.8           |            | 1 <sup>h</sup> 26 <sup>m</sup> | 53° 35'        | o          | 30                             | 9.7            | w          | 52                             | 42.9           |
| w          | 28                             | 33.2           | o          | 49.06                          | 10.6           | o          | 25                             | 9.1            | w          | 46                             | 43.0           |
| w          | 24                             | 32.7           | w          | 04                             | 11.5           | w          | —                              | 9.5            |            | 51                             | 43.0           |
| o          | 21                             | 34.1           | w          | —                              | 10.8           | w          | 33                             | 8.9            | <b>60.</b> | 8.8 Mg                         | B <sub>8</sub> |
|            | 25                             | 33.5           | o          | 09                             | 12.7           |            | 30                             | 9.4            |            | 1 <sup>h</sup> 38 <sup>m</sup> | 54° 46'        |
| <b>45.</b> | 7.6 Mg                         | Mb             | o          | 04                             | 11.0           |            |                                |                | w          | 6.15                           | 59.8           |
|            | 1 <sup>h</sup> 18 <sup>m</sup> | 31° 24'        |            | 06                             | 11.3           | <b>55.</b> | 7.6 Mg                         | B <sub>8</sub> | w          | 09                             | 59.6           |
| o          | 14.45                          | 8.0            |            |                                |                |            | 1 <sup>h</sup> 34 <sup>m</sup> | 55° 21'        |            | 12                             | 59.7           |
| o          | 38                             | 8.6            | <b>50.</b> | 7.8 Mg                         | Mb             | w          | 16.98                          | 28.0           | <b>61.</b> | 6.5 Mg                         | K <sub>0</sub> |
| o          | 47                             | 7.2            |            | 1 <sup>h</sup> 27 <sup>m</sup> | 15° 11'        | w          | 14                             | 27.6           |            | 1 <sup>h</sup> 38 <sup>m</sup> | 44° 53'        |
| w          | 42                             | 8.6            | o          | 19.11                          | 33.8           | w          | 94                             | 28.4           | o          | 9.30                           | 57.5           |
|            | 43                             | 8.1            | w          | 03                             | 34.4           | o          | 05                             | 27.2           | w          | 42                             | 57.0           |
|            |                                |                | o          | 02                             | 34.0           |            | 17.03                          | 27.8           |            | 36                             | 57.2           |
| <b>46.</b> | 7.8 Mg                         | B <sub>9</sub> | w          | 12                             | 34.7           |            |                                |                |            |                                |                |
|            | 1 <sup>h</sup> 21 <sup>m</sup> | 45° 14'        |            | 07                             | 34.2           | <b>56.</b> | 8.4 Mg                         | Ma             |            |                                |                |
| o          | 51.13                          | 29.5           |            |                                |                |            | 1 <sup>h</sup> 34 <sup>m</sup> | 38° 7'         | <b>62.</b> | 7.8 Mg                         | Mb             |
| o          | 15                             | 27.8           | <b>51.</b> | 9.0 Mg                         | Ma             | o          | 22.86                          | 38.8           |            | 1 <sup>h</sup> 40 <sup>m</sup> | 28° 18'        |
| w          | 20                             | 28.4           |            | 1 <sup>h</sup> 28 <sup>m</sup> | 22° 6'         | w          | 83                             | 38.4           | o          | 21.84                          | 52.1           |
| o          | 20                             | 27.2           | w          | 48.24                          | 38.6           | w          | 80                             | 40.2           | w          | 86                             | 51.0           |
| w          | 24                             | 29.9           | w          | 24                             | 38.4           | o          | 79                             | 39.4           | w          | 86                             | 51.9           |
| o          | 19                             | 27.7           | o          | 28                             | 37.8           | o          | 96                             | 39.0           | o          | 91                             | 52.0           |
|            | 19                             | 28.4           |            | 25                             | 38.3           |            | 85                             | 39.2           |            | 87                             | 51.7           |

|            |                                |                |            |                                |                |            |                                |                |            |                                |                |
|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|
| <b>63.</b> | 8.5 Mg                         | Ma             | <b>68.</b> | 6.0 Mg                         | Mb             | <b>73.</b> | 8.1 Mg                         | B <sub>8</sub> | <b>78.</b> | 6.8 Mg                         | Ma             |
|            | 1 <sup>h</sup> 42 <sup>m</sup> | 20° 59'        |            | 1 <sup>h</sup> 52 <sup>m</sup> | 27° 23'        |            | 2 <sup>h</sup> 2 <sup>m</sup>  | 43° 14'        |            | 2 <sup>h</sup> 13 <sup>m</sup> | 28° 37'        |
| s          |                                | "              | s          |                                | "              | s          |                                | "              | s          |                                | "              |
| o          | 50.94                          | 30.0           | w          | 57.24                          | 45.4           | w          | 5.90                           | 30.7           | w          | 4.68                           | 8.4            |
| o          | 98                             | 31.2           | o          | 24                             | 46.1           | o          | 88                             | 31.8           | o          | 64                             | 8.6            |
| w          | 93                             | 30.7           | o          | 20                             | 45.9           | w          | 89                             | 31.1           | o          | 64                             | 7.6            |
| w          | 86                             | 31.8           | o          | 22                             | 46.6           | o          | 80                             | 30.8           | w          | 71                             | 9.5            |
|            | 93                             | 30.9           | w          | 28                             | 45.4           |            | 87                             | 31.1           |            | 67                             | 8.5            |
|            |                                |                | w          | 24                             | 45.9           |            |                                |                |            |                                |                |
| <b>64.</b> | 8.0 Mg                         | Mb             | <b>69.</b> | 7.8 Mg                         | Mb             | <b>74.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>79.</b> | 7.0 Mg                         | B <sub>5</sub> |
|            | 1 <sup>h</sup> 43 <sup>m</sup> | 33° 43'        |            | 1 <sup>h</sup> 53 <sup>m</sup> | 45° 1'         |            | 2 <sup>h</sup> 6 <sup>m</sup>  | 46° 48'        |            | 2 <sup>h</sup> 13 <sup>m</sup> | 52° 10'        |
| w          | 58.74                          | 27.6           | w          | 31.03                          | 34.9           | o          | 9.61                           | 47.8           | o          | 57.90                          | 28.0           |
| o          | 75                             | 27.7           | w          | 03                             | 35.7           | o          | 61                             | 48.0           | w          | 70                             | 29.0           |
| o          | 71                             | 27.7           | o          | 03                             | 34.8           | w          | 62                             | 46.4           | w          | 80                             | 28.3           |
|            | 73                             | 27.7           |            | 03                             | 35.1           | w          | 44                             | 48.1           | w          | 79                             | 28.8           |
|            |                                |                | w          | 64                             | 48.2           |            |                                |                |            | 80                             | 28.5           |
|            |                                |                |            | 58                             | 47.7           |            |                                |                |            |                                |                |
| <b>65.</b> | 7.1 Mg                         | B <sub>8</sub> | <b>70.</b> | 7.1 Mg                         | B <sub>8</sub> | <b>75.</b> | 6.7 Mg                         | B <sub>8</sub> | <b>80.</b> | 6.5 Mg                         | B <sub>8</sub> |
|            | 1 <sup>h</sup> 45 <sup>m</sup> | 47° 0'         |            | 1 <sup>h</sup> 57 <sup>m</sup> | 46° 26'        |            | 2 <sup>h</sup> 9 <sup>m</sup>  | 46° 17'        |            | 2 <sup>h</sup> 14 <sup>m</sup> | 39° 26'        |
| o          | 49.18                          | 11.9           | w          | 2.46                           | 14.6           | o          | 23.64                          | 44.2           | w          | 26.64                          | 55.9           |
| w          | 08                             | 11.5           | o          | 46                             | 15.1           | o          | 74                             | 44.9           | w          | 66                             | 55.1           |
| w          | 13                             | 11.8           | w          | 47                             | 15.8           |            | 69                             | 44.5           | o          | 64                             | 54.9           |
|            | 13                             | 11.7           |            | 46                             | 15.2           |            |                                |                | o          | 64                             | 54.3           |
|            |                                |                |            |                                |                |            |                                |                |            | 64                             | 55.1           |
| <b>66.</b> | 7.5 Mg                         | B <sub>8</sub> | <b>71.</b> | 6.3 Mg                         | Mb             | <b>76.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>81.</b> | 9.0 Mg                         | B <sub>8</sub> |
|            | 1 <sup>h</sup> 47 <sup>m</sup> | 44° 23'        |            | 1 <sup>h</sup> 58 <sup>m</sup> | 13° 4'         |            | 2 <sup>h</sup> 9 <sup>m</sup>  | 30° 0'         |            | 2 <sup>h</sup> 18 <sup>m</sup> | 53° 48'        |
| w          | 24.07                          | 51.5           | o          | 3.64                           | 19.4           | w          | 48.22                          | 10.1           | o          | 18.56                          | 60.5           |
| w          | 11                             | 52.1           | o          | —                              | 19.5           | o          | 23                             | 10.0           | o          | 59                             | 59.7           |
| o          | 08                             | 51.6           | w          | 74                             | 19.0           | o          | 20                             | 9.6            | w          | 73                             | 59.4           |
| o          | 95                             | 52.1           | w          | 66                             | 19.0           |            | 22                             | 9.9            | w          | 89                             | 59.8           |
|            | 05                             | 51.8           |            | 68                             | 19.2           |            |                                |                | w          | 74                             | 59.4           |
|            |                                |                |            |                                |                |            |                                |                |            | 70                             | 59.8           |
| <b>67.</b> | 8.0 Mg                         | G <sub>5</sub> | <b>72.</b> | 6.5 Mg                         | B <sub>8</sub> | <b>77.</b> | 8.2 Mg                         | B <sub>8</sub> | <b>82.</b> | 7.5 Mg                         | Mb             |
|            | 1 <sup>h</sup> 50 <sup>m</sup> | 55° 9'         |            | 1 <sup>h</sup> 58 <sup>m</sup> | 51° 33'        |            | 2 <sup>h</sup> 12 <sup>m</sup> | 51° 23'        |            | 2 <sup>h</sup> 20 <sup>m</sup> | 33° 29'        |
| o          | 11.92                          | 54.3           | w          | 42.80                          | 53.0           | o          | 22.46                          | 53.9           | w          | 8.33                           | 12.3           |
| w          | 85                             | 54.9           | o          | 83                             | 53.5           | w          | 46                             | 51.5           | w          | 26                             | 12.2           |
|            | 88                             | 54.6           | o          | 89                             | 52.5           | w          | 35                             | 52.9           | o          | 34                             | 12.2           |
|            |                                |                |            | 84                             | 53.0           | o          | 44                             | 52.5           | o          | 30                             | 12.3           |
|            |                                |                |            |                                |                |            | 43                             | 52.7           |            | 31                             | 12.2           |

|            |                                |                |            |                                |                |            |                                |                |             |                                |                |
|------------|--------------------------------|----------------|------------|--------------------------------|----------------|------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>83.</b> | 7.5 Mg                         | Ma             | <b>88.</b> | 7.7 Mg                         | B <sub>8</sub> | <b>93.</b> | 8.0 Mg                         | Mb             | <b>98.</b>  | 7.9 Mg                         | B <sub>8</sub> |
|            | 2 <sup>h</sup> 20 <sup>m</sup> | 36° 38'        |            | 2 <sup>h</sup> 27 <sup>m</sup> | 39° 10'        |            | 2 <sup>h</sup> 33 <sup>m</sup> | 27° 9'         |             | 2 <sup>h</sup> 42 <sup>m</sup> | 31° 2'         |
| w          | 42.62                          | 2.2            | o          | 30.12                          | 44.9           | o          | 35.39                          | 5.9            | o           | 0.74                           | 35.3           |
| o          | 69                             | 1.6            | o          | 07                             | 44.6           | o          | 51                             | 7.0            | o           | 68                             | 35.5           |
| o          | 61                             | 3.4            | w          | 12                             | 45.9           | w          | 44                             | 6.6            | o           | 64                             | 35.7           |
| w          | 64                             | 2.7            |            | 10                             | 45.1           | w          | 46                             | 7.8            | w           | 72                             | 36.3           |
|            | 64                             | 2.5            |            |                                |                | w          | 45                             | 6.8            | w           | 66                             | 36.2           |
|            |                                |                | <b>89.</b> | 9.1 Mg                         | B <sub>8</sub> |            |                                |                |             | 69                             | 35.8           |
| <b>84.</b> | 7.7 Mg                         | Mb             |            | 2 <sup>h</sup> 28 <sup>m</sup> | 55° 27'        | <b>94.</b> | 8.4 Mg                         | Mb             | <b>99.</b>  | 8.3 Mg                         | B <sub>8</sub> |
|            | 2 <sup>h</sup> 22 <sup>m</sup> | 36° 35'        | o          | 12.12                          | 53.4           |            | 2 <sup>h</sup> 34 <sup>m</sup> | 39° 28'        |             | 2 <sup>h</sup> 46 <sup>m</sup> | 26° 16'        |
| o          | 7.23                           | 21.9           | w          | 48                             | 53.4           | w          | 44.93                          | 23.6           | w           | 41.43                          | 3.3            |
| o          | 21                             | 23.8           | o          | 49                             | 52.4           | o          | 98                             | 22.5           | w           | 37                             | 3.8            |
| o          | 27                             | 23.9           | o          | 47                             | 51.8           | o          | 99                             | 22.9           | o           | 38                             | 3.1            |
|            | 24                             | 23.2           |            | 39                             | 52.7           | o          | 96                             | 22.0           | o           | 44                             | 4.2            |
|            |                                |                |            |                                |                | w          | 96                             | 22.8           |             | 40                             |                |
| <b>85.</b> | 8.0 Mg                         | B <sub>5</sub> | <b>90.</b> | 7.1 Mg                         | B <sub>8</sub> | <b>95.</b> | 7.7 Mg                         | Ma             | <b>100.</b> | 8.3 Mg                         | K <sub>5</sub> |
|            | 2 <sup>h</sup> 22 <sup>m</sup> | 52° 10'        |            | 2 <sup>h</sup> 31 <sup>m</sup> | 29° 2'         |            | 2 <sup>h</sup> 35 <sup>m</sup> | 20° 49'        |             | 2 <sup>h</sup> 47 <sup>m</sup> | 16° 9'         |
| o          | 15.59                          | 20.8           | o          | 7.14                           | 14.3           | o          | 45.94                          | 36.2           | w           | 12.11                          | 9.4            |
| o          | 65                             | 21.0           | o          | 13                             | 14.4           | o          | 93                             | 36.0           | w           | 13                             | 8.6            |
| o          | 62                             | 21.7           | o          | 04                             | 14.2           | o          | 94                             | 36.6           |             | 12                             | 9.0            |
| w          | 61                             | 20.1           | w          | 18                             | 15.1           | w          | 89                             | 35.9           |             |                                |                |
| w          | 60                             | 21.5           | w          | 13                             | 14.7           | w          | 91                             | 37.6           |             |                                |                |
|            | 61                             | 21.0           |            | 12                             | 14.5           | w          | 92                             | 36.5           |             |                                |                |
|            |                                |                |            |                                |                |            |                                |                |             |                                |                |
| <b>86.</b> | 8.5 Mg                         | Ma             | <b>91.</b> | 8.8 Mg                         | Ma             | <b>96.</b> | 8.1 Mg                         | Mb             | <b>101.</b> | 7.6 Mg                         | Ma             |
|            | 2 <sup>h</sup> 25 <sup>m</sup> | 22° 5'         |            | 2 <sup>h</sup> 31 <sup>m</sup> | 38° 33'        |            | 2 <sup>h</sup> 36 <sup>m</sup> | 34° 9'         |             | 2 <sup>h</sup> 49 <sup>m</sup> | 14° 19'        |
| w          | 56.85                          | 41.8           | w          | 12.44                          | 60.8           | w          | 23.39                          | 22.2           | o           | 0.69                           | 38.3           |
| w          | 96                             | 41.2           | w          | 38                             | 59.8           | w          | 39                             | 22.6           | w           | 69                             | 39.1           |
| o          | 89                             | 39.7           | o          | 50                             | 59.9           | o          | 41                             | 22.6           | w           | 60                             | 37.8           |
| o          | 86                             | 40.1           | o          | 61                             | 58.9           | o          | 45                             | 22.5           |             | 66                             | 38.4           |
|            | 89                             | 40.7           |            | 48                             | 59.8           | w          | 41                             | 22.5           |             |                                |                |
|            |                                |                |            |                                |                |            |                                |                |             |                                |                |
| <b>87.</b> | 7.4 Mg                         | Ma             | <b>92.</b> | 6.4 Mg                         | B <sub>8</sub> | <b>97.</b> | 7.2 Mg                         | B <sub>5</sub> | <b>102.</b> | 8.4 Mg                         | Ma             |
|            | 2 <sup>h</sup> 26 <sup>m</sup> | 49° 48'        |            | 2 <sup>h</sup> 32 <sup>m</sup> | 39° 31'        |            | 2 <sup>h</sup> 39 <sup>m</sup> | 34° 45'        |             | 2 <sup>h</sup> 52 <sup>m</sup> | 33° 53'        |
| w          | 27.08                          | 30.8           | w          | 4.36                           | 53.1           | w          | 2.46                           | 32.8           | w           | 47.78                          | 39.4           |
| o          | 28                             | 31.0           | o          | 40                             | 52.2           | w          | 47                             | 32.4           | w           | 78                             | 39.5           |
| o          | 17                             | 31.7           | o          | 32                             | 52.6           | o          | 38                             | 31.8           | o           | 91                             | 39.4           |
| w          | 19                             | 31.2           | w          | 34                             | 52.8           |            | 44                             | 32.3           | o           | 86                             | 38.9           |
|            | 18                             | 31.2           |            | 36                             | 52.7           |            |                                |                |             | 83                             | 39.3           |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |      |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|------|
| <b>103.</b> | 7.5 Mg                         | G <sub>5</sub> | <b>109.</b> | 8.5 Mg                         | B <sub>8</sub> | <b>114.</b> | 7.5 Mg                         | B <sub>8</sub> | <b>119.</b> | 7.7 Mg                         | B <sub>8</sub> |      |
|             | 2 <sup>h</sup> 52 <sup>m</sup> | —0° 54'        |             | 3 <sup>h</sup> 8 <sup>m</sup>  | 39° 53'        |             | 3 <sup>h</sup> 15 <sup>m</sup> | 45° 5'         |             | 3 <sup>h</sup> 20 <sup>m</sup> | 50° 33'        |      |
| w           | 53.55                          | 45.6           | s           | 36.05                          | 16.9           | o           | 45.47                          | 3.3            | o           | 34.76                          | 7.0            |      |
| w           | 63                             | 45.1           | w           | 35.98                          | 16.6           | o           | 48                             | 3.6            | o           | 67                             | 8.4            |      |
|             | 59                             | 45.4           | w           | 95                             | 16.8           | o           | 45                             | 3.1            | w           | 52                             | 7.8            |      |
|             |                                |                |             | 35.99                          | 16.8           | w           | 44                             | 3.7            | w           | 69                             | 7.2            |      |
| <b>104.</b> | 8.0 Mg                         | B <sub>9</sub> |             |                                |                | w           | 49                             | —              |             | 66                             | 7.6            |      |
|             | 3 <sup>h</sup> 1 <sup>m</sup>  | 53° 47'        |             |                                |                |             | 47                             | 3.4            |             |                                |                |      |
| w           | 19.86                          | 14.1           | <b>110.</b> | 7.6 Mg                         | B <sub>8</sub> | <b>115.</b> | 7.6 Mg                         | Ma             | <b>120.</b> | 7.4 Mg                         | B <sub>3</sub> |      |
| w           | 84                             | 14.3           |             | 3 <sup>h</sup> 9 <sup>m</sup>  | 36° 9'         |             | 3 <sup>h</sup> 17 <sup>m</sup> | 31° 56'        |             | 3 <sup>h</sup> 23 <sup>m</sup> | 44° 45'        |      |
|             | 85                             | 14.2           | w           | 57.36                          | 49.8           | o           | 19.04                          | 21.0           | o           | 27.86                          | 31.2           |      |
|             |                                |                | w           | 37                             | 49.4           | o           | 09                             | 21.9           | o           | 96                             | 31.3           |      |
| <b>105.</b> | 6.2 Mg                         | B <sub>5</sub> | o           | 34                             | 49.7           | w           | 06                             | 21.9           | w           | 92                             | 31.8           |      |
|             | 3 <sup>h</sup> 2 <sup>m</sup>  | 51° 53'        | o           | 34                             | 48.6           | w           | 12                             | 21.7           | w           | 91                             | 31.2           |      |
| o           | 1.60                           | 26.6           |             | 35                             | 49.4           |             |                                |                |             | 91                             | 31.4           |      |
| o           | 58                             | 26.1           |             |                                |                | w           | 08                             | 21.6           |             |                                |                |      |
| w           | 61                             | 26.3           |             |                                |                |             |                                |                |             |                                |                |      |
|             | 60                             | 26.3           | <b>111.</b> | 7.4 Mg                         | Ma             | <b>116.</b> | 8.2 Mg                         | B <sub>8</sub> | <b>121.</b> | 6.2 Mg                         | B <sub>5</sub> |      |
|             |                                |                |             | 3 <sup>h</sup> 10 <sup>m</sup> | —2° 38'        |             | 3 <sup>h</sup> 18 <sup>m</sup> | 41° 2'         |             | 3 <sup>h</sup> 23 <sup>m</sup> | 46° 38'        |      |
| <b>106.</b> | 8.0 Mg                         | Ma             | o           | 21.56                          | 44.5           | w           | 21.91                          | 18.2           | w           | 34.35                          | 54.0           |      |
|             | 3 <sup>h</sup> 3 <sup>m</sup>  | 36° 43'        | w           | 50                             | 44.5           | w           | 91                             | 18.7           | w           | 28                             | 52.6           |      |
| w           | 28.23                          | 27.4           |             | 53                             | 44.5           | o           | 90                             | 16.8           | o           | 24                             | 52.7           |      |
| o           | 26                             | 25.7           |             |                                |                | o           | 89                             | 17.1           | o           | 25                             | 52.0           |      |
| w           | 31                             | 26.9           |             |                                |                |             |                                |                |             | 28                             | 52.8           |      |
|             | 27                             | 26.7           | <b>112.</b> | 8.0 Mg                         | B <sub>8</sub> |             | 90                             | 17.7           | <b>122.</b> | 7.1 Mg                         | B <sub>5</sub> |      |
|             |                                |                |             | 3 <sup>h</sup> 12 <sup>m</sup> | —3° 40'        |             |                                |                |             | 3 <sup>h</sup> 25 <sup>m</sup> | 41° 26'        |      |
| <b>107.</b> | 7.5 Mg                         | Ma             | w           | 31.48                          | 21.3           | <b>117.</b> | 7.6 Mg                         | B <sub>8</sub> |             | o                              | 38.92          | 20.2 |
|             | 3 <sup>h</sup> 6 <sup>m</sup>  | 37° 45'        | o           | 42                             | 22.5           |             | 3 <sup>h</sup> 19 <sup>m</sup> | 45° 13'        |             | o                              | 94             | 20.9 |
| o           | 1.44                           | 5.8            | o           | 49                             | 23.0           | w           | 51.60                          | 9.7            | w           | 93                             | 20.8           |      |
| o           | 41                             | 5.6            | w           | 53                             | 23.4           | o           | 57                             | 9.6            | w           | 91                             | 20.3           |      |
| w           | 50                             | 5.4            |             | 48                             | 22.5           | o           | 63                             | 8.0            |             |                                |                |      |
| w           | 44                             | 5.8            |             |                                |                | w           | 55                             | 10.2           |             |                                |                |      |
|             | 45                             | 5.6            |             |                                |                |             |                                |                |             | 92                             | 20.5           |      |
| <b>108.</b> | 6.3 Mg                         | Ma             | <b>113.</b> | 7.6 Mg                         | B <sub>8</sub> |             | 59                             | 9.4            | <b>123.</b> | 8.4 Mg                         | B <sub>8</sub> |      |
|             | 3 <sup>h</sup> 7 <sup>m</sup>  | —4° 7'         |             | 3 <sup>h</sup> 13 <sup>m</sup> | 12° 31'        |             |                                |                |             | 3 <sup>h</sup> 26 <sup>m</sup> | 51° 46'        |      |
| w           | 6.42                           | 42.8           | o           | 37.95                          | 1.2            | <b>118.</b> | 5.9 Mg                         | B <sub>5</sub> | o           | 15.10                          | 49.2           |      |
| o           | 30                             | 42.4           | o           | 91                             | 1.7            |             | 3 <sup>h</sup> 19 <sup>m</sup> | 48° 49'        | o           | 07                             | 48.8           |      |
| o           | 36                             | 42.1           | o           | 82                             | 1.5            | o           | 59.20                          | 31.1           | w           | 04                             | 49.1           |      |
| w           | 36                             | 41.2           | w           | 88                             | 1.8            | w           | 20                             | 31.3           | w           | 06                             | 48.8           |      |
|             | 36                             | 42.1           | w           | 95                             | 1.8            | w           | 19                             | 30.1           |             | 07                             | 49.0           |      |
|             |                                |                |             | 90                             | 1.6            |             | 20                             | 30.8           |             |                                |                |      |

35\*

|             |                                |                |             |                                |                |             |                                |                |             |                                |                 |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|-----------------|
| <b>124.</b> | 8.3 Mg                         | Ma             | <b>129.</b> | 7.8 Mg                         | B <sub>3</sub> | <b>134.</b> | 6.9 Mg                         | B <sub>2</sub> | <b>139.</b> | 6.7 Mg                         | Oe <sub>5</sub> |
|             | 3 <sup>h</sup> 28 <sup>m</sup> | 14° 23'        |             | 3 <sup>h</sup> 38 <sup>m</sup> | 33° 50'        |             | 3 <sup>h</sup> 44 <sup>m</sup> | 52° 13'        |             | 3 <sup>h</sup> 49 <sup>m</sup> | 52° 23'         |
| w           | 54.59                          | 44.9           | w           | 3.86                           | 58.9           | w           | 5.18                           | 31.5           | w           | 15.97                          | 37.7            |
| w           | 62                             | 44.5           | w           | 80                             | 56.5           | w           | 20                             | 31.8           | w           | 16.11                          | 39.3            |
| o           | 59                             | 45.1           | o           | 72                             | 56.8           | o           | 25                             | 32.8           | o           | 15                             | 39.4            |
|             | 60                             | 44.8           |             | 79                             | 57.4           | o           | 26                             | 33.3           | o           | 07                             | 39.7            |
|             |                                |                |             |                                |                |             | 22                             | 32.4           |             | 08                             | 39.0            |
| <b>125.</b> | 6.8 Mg                         | B <sub>8</sub> | <b>130.</b> | 8.5 Mg                         | B <sub>9</sub> | <b>135.</b> | 7.6 Mg                         | B <sub>9</sub> | <b>140.</b> | 7.7 Mg                         | Ma              |
|             | 3 <sup>h</sup> 29 <sup>m</sup> | 55° 36'        |             | 3 <sup>h</sup> 38 <sup>m</sup> | 29° 25'        |             | 3 <sup>h</sup> 45 <sup>m</sup> | 34° 50'        |             | 3 <sup>h</sup> 54 <sup>m</sup> | 10° 47'         |
| w           | 51.51                          | 25.2           | w           | 47.51                          | 1.4            | o           | 27.27                          | 42.2           | o           | 0.68                           | 15.0            |
| w           | 67                             | 26.6           | w           | 48                             | 1.4            | o           | 29                             | 42.6           | o           | 65                             | 14.9            |
| o           | 63                             | 26.1           | w           | 53                             | 1.6            | w           | 26                             | 43.0           | o           | 65                             | 15.8            |
| o           | 63                             | 27.5           | o           | 49                             | 1.0            | w           | 28                             | 42.6           | w           | 66                             | 15.6            |
|             | 61                             | 26.4           |             | 50                             | 1.4            |             | 28                             | 42.6           | w           | 63                             | 14.5            |
|             |                                |                |             |                                |                |             |                                |                |             | 65                             | 15.2            |
| <b>126.</b> | 8.7 Mg                         | Ma             | <b>131.</b> | 8.0 Mg                         | M              | <b>136.</b> | 7.5 Mg                         | B <sub>3</sub> | <b>141.</b> | 8.0 Mg                         | A <sub>0</sub>  |
|             | 3 <sup>h</sup> 30 <sup>m</sup> | 1° 29'         |             | 3 <sup>h</sup> 39 <sup>m</sup> | 53° 38'        |             | 3 <sup>h</sup> 46 <sup>m</sup> | 33° 58'        |             | 3 <sup>h</sup> 57 <sup>m</sup> | 32° 40'         |
| o           | 52.38                          | 59.5           | o           | 41.72                          | 30.6           | o           | 56.80                          | 13.4           | w           | 15.52                          | 32.3            |
| w           | 36                             | 58.5           | w           | 74                             | 30.6           | o           | 81                             | 12.1           | o           | 54                             | 32.0            |
|             | 37                             | 59.0           | w           | 82                             | 30.4           | w           | 82                             | 12.3           | o           | 42                             | 31.2            |
|             |                                |                |             | 76                             | 30.5           | w           | 84                             | 12.7           | w           | 51                             | 32.5            |
|             |                                |                |             |                                |                |             | 82                             | 12.6           |             | 50                             | 32.0            |
| <b>127.</b> | 8.3 Mg                         | B              | <b>132.</b> | 6.5 Mg                         | B <sub>3</sub> | <b>137.</b> | 8.3 Mg                         | B <sub>8</sub> | <b>142.</b> | 6.9 Mg                         | B <sub>8</sub>  |
|             | 3 <sup>h</sup> 31 <sup>m</sup> | 54° 53'        |             | 3 <sup>h</sup> 41 <sup>m</sup> | 32° 1'         |             | 3 <sup>h</sup> 48 <sup>m</sup> | 45° 31'        |             | 3 <sup>h</sup> 58 <sup>m</sup> | 3° 36'          |
| o           | 33.65                          | 38.8           | o           | 24.19                          | 43.4           | o           | 33.90                          | 60.0           | o           | 4.72                           | 50.2            |
| w           | 60                             | 37.4           | o           | 15                             | 42.6           | o           | 86                             | 58.8           | w           | 70                             | 50.2            |
| o           | 67                             | 38.9           | w           | 18                             | 44.0           |             | 88                             | 59.4           |             | 71                             | 50.2            |
| w           | 66                             | 37.2           | w           | 17                             | 43.5           |             |                                |                |             |                                |                 |
| w           | 60                             | 38.2           |             | 17                             | 43.4           |             |                                |                |             |                                |                 |
|             | 64                             | 38.1           |             |                                |                |             |                                |                |             |                                |                 |
| <b>128.</b> | 6.3 Mg                         | B <sub>8</sub> | <b>133.</b> | 8.3 Mg                         | B <sub>8</sub> | <b>138.</b> | 7.1 Mg                         | B <sub>8</sub> | <b>143.</b> | 7.0 Mg                         | B <sub>8</sub>  |
|             | 3 <sup>h</sup> 32 <sup>m</sup> | 42° 18'        |             | 3 <sup>h</sup> 42 <sup>m</sup> | 29° 36'        |             | 3 <sup>h</sup> 49 <sup>m</sup> | 21° 41'        |             | 4 <sup>h</sup> 6 <sup>m</sup>  | 16° 25'         |
| o           | 19.16                          | 24.8           | w           | 14.22                          | 58.4           | o           | 5.85                           | 48.5           | w           | 15.76                          | 42.8            |
| o           | 02                             | 24.6           | o           | 25                             | 56.8           | w           | 85                             | 47.2           | w           | 76                             | 42.2            |
| o           | 06                             | 24.6           | o           | 23                             | 56.0           | w           | 77                             | 47.8           |             | 76                             | 42.5            |
| w           | 09                             | 25.7           | w           | 26                             | 56.3           | w           | 81                             | 48.6           |             |                                |                 |
| w           | 19                             | 25.6           |             |                                |                |             | 82                             | 48.0           |             |                                |                 |
|             | 10                             | 25.1           |             | 24                             | 56.9           |             |                                |                |             |                                |                 |

|             |                                |                |             |                                |                |             |                                |                                |             |                                |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|--------------------------------|-------------|--------------------------------|--------------------------------|----------------|
| <b>144.</b> | 8.2 Mg                         | Ma             | <b>149.</b> | 8.0 Mg                         | Ma             | <b>154.</b> | 5.8 Mg                         | B <sub>8</sub>                 | <b>159.</b> | 6.2 Mg                         | B <sub>8</sub>                 |                |
|             | 4 <sup>h</sup> 6 <sup>m</sup>  | 2° 6'          |             | 4 <sup>h</sup> 18 <sup>m</sup> | 22° 46'        |             | 4 <sup>h</sup> 22 <sup>m</sup> | 11° 1'                         |             | 4 <sup>h</sup> 28 <sup>m</sup> | 17° 50'                        |                |
| s           |                                |                | s           |                                |                | s           |                                |                                | s           |                                |                                |                |
| w           | 47.50                          | 2.2            | w           | 43.05                          | 10.8           | o           | 50.41                          | 27.6                           | o           | 40.90                          | 25.1                           |                |
| o           | 49                             | 4.3            | w           | 04                             | 11.5           | o           | 42                             | 28.4                           | w           | 99                             | 23.7                           |                |
| o           | 45                             | 2.4            | o           | 06                             | 10.8           | w           | 48                             | 28.2                           | w           | 90                             | 24.8                           |                |
|             | —                              | —              | o           | 06                             | 11.0           | w           | 45                             | 28.2                           | w           | 94                             | 24.4                           |                |
|             | 48                             | 3.0            |             | 05                             | 11.0           |             | 44                             | 28.1                           | o           | 85                             | 25.1                           |                |
|             |                                |                |             |                                |                |             |                                |                                |             | 92                             | 24.6                           |                |
| <b>145.</b> | 6.2 Mg                         | B <sub>8</sub> |             |                                |                | <b>155.</b> | 7.0 Mg                         | B <sub>8</sub>                 |             |                                |                                |                |
|             | 4 <sup>h</sup> 8 <sup>m</sup>  | 9° 59'         |             |                                |                |             | 4 <sup>h</sup> 23 <sup>m</sup> | 7° 58'                         |             |                                |                                |                |
| w           | 58.56                          | 56.9           | <b>150.</b> | 6.2 Mg                         | B <sub>8</sub> |             | o                              | 32.64                          | 5.0         | <b>160.</b>                    | 7.8 Mg                         | A <sub>0</sub> |
| w           | 53                             | 57.8           |             | 4 <sup>h</sup> 18 <sup>m</sup> | 24° 6'         |             | w                              | 66                             | 6.8         |                                | 4 <sup>h</sup> 30 <sup>m</sup> | 18° 14'        |
| o           | 54                             | 57.1           | w           | 55.75                          | 22.5           |             | w                              | 63                             | 5.0         | o                              | 0.11                           | 20.6           |
| o           | 50                             | 58.0           | o           | 70                             | 22.9           |             | o                              | 63                             | 5.2         | w                              | 11                             | 21.2           |
|             | —                              | —              | o           | 73                             | 22.9           |             |                                |                                | w           | 08                             | 20.7                           |                |
|             | 53                             | 57.5           | w           | 80                             | 21.5           |             |                                |                                |             | 10                             | 20.8                           |                |
|             |                                |                |             | 74                             | 22.5           |             | 65                             | 5.5                            |             |                                |                                |                |
| <b>146.</b> | 6.1 Mg                         | B <sub>8</sub> |             |                                |                | <b>156.</b> | 8.3 Mg                         | B <sub>8</sub>                 |             |                                |                                |                |
|             | 4 <sup>h</sup> 12 <sup>m</sup> | 41° 56'        |             |                                |                |             | 4 <sup>h</sup> 23 <sup>m</sup> | 20° 29'                        |             |                                |                                |                |
| w           | 19.02                          | 7.7            | <b>151.</b> | 7.2 Mg                         | B <sub>3</sub> |             | w                              | 45.36                          | 29.4        | <b>161.</b>                    | 7.8 Mg                         | B <sub>5</sub> |
| w           | 02                             | 7.9            |             | 4 <sup>h</sup> 19 <sup>m</sup> | 45° 57'        |             | o                              | 32                             | 29.8        |                                | 4 <sup>h</sup> 30 <sup>m</sup> | 48° 13'        |
| o           | 00                             | 8.8            | o           | 25.05                          | 1.4            |             | o                              | 39                             | 29.0        | w                              | 52.91                          | 41.2           |
| o           | 00                             | 7.1            | o           | 07                             | 1.3            |             | w                              | 37                             | 29.6        | w                              | 82                             | 41.1           |
|             | —                              | —              | w           | 06                             | 1.7            |             |                                |                                | o           | 81                             | 41.0                           |                |
|             | 01                             | 7.9            | w           | 03                             | 1.4            |             | 36                             | 29.4                           | o           | 76                             | 40.9                           |                |
|             |                                |                |             | 05                             | 1.4            |             |                                |                                |             | 82                             | 41.0                           |                |
| <b>147.</b> | 7.8 Mg                         | B <sub>8</sub> |             |                                |                | <b>157.</b> | 6.6 Mg                         | B <sub>9</sub>                 |             |                                |                                |                |
|             | 4 <sup>h</sup> 15 <sup>m</sup> | 7° 37'         |             |                                |                |             | 4 <sup>h</sup> 25 <sup>m</sup> | 10° 20'                        |             |                                |                                |                |
| w           | 44.76                          | 8.4            | <b>152.</b> | 8.2 Mg                         | B <sub>8</sub> |             | w                              | 5.78                           | 17.6        | <b>162.</b>                    | 8.2 Mg                         | B <sub>3</sub> |
| w           | 72                             | 9.1            |             | 4 <sup>h</sup> 21 <sup>m</sup> | 0° 50'         |             | w                              | 80                             | 15.9        |                                | 4 <sup>h</sup> 34 <sup>m</sup> | 8° 0'          |
| o           | 60                             | 8.8            | w           | 36.42                          | 28.6           |             | o                              | 76                             | 16.3        | w                              | 3.24                           | 29.6           |
| o           | 64                             | 8.1            | w           | 41                             | 27.6           |             | o                              | 72                             | 16.2        | o                              | 20                             | 29.8           |
|             | —                              | —              |             | 42                             | 28.1           |             | 76                             | 16.5                           |             | 22                             | 29.7                           |                |
|             | 68                             | 8.6            |             |                                |                |             |                                |                                |             |                                |                                |                |
| <b>148.</b> | 5.9 Mg                         | B <sub>8</sub> |             |                                |                | <b>158.</b> | 8.0 Mg                         | B <sub>8</sub>                 |             |                                |                                |                |
|             | 4 <sup>h</sup> 18 <sup>m</sup> | 20° 47'        | <b>153.</b> | 6.0 Mg                         | B <sub>5</sub> |             |                                | 4 <sup>h</sup> 28 <sup>m</sup> | 0° 48'      | <b>163.</b>                    | 8.5 Mg                         | Ma             |
| w           | 35.24                          | 15.1           |             | 4 <sup>h</sup> 21 <sup>m</sup> | 8° 24'         |             | w                              | 4.73                           | 7.0         |                                | 4 <sup>h</sup> 34 <sup>m</sup> | 6° 39'         |
| w           | 18                             | 14.7           | w           | 47.63                          | 0.9            |             | w                              | 81                             | 9.2         | o                              | 15.61                          | 11.5           |
| o           | 25                             | 13.5           | w           | 64                             | 1.5            |             | w                              | 67                             | 7.5         | w                              | 69                             | 12.7           |
| o           | 20                             | 13.5           | w           | 62                             | 0.8            |             | w                              | 69                             | 6.4         | w                              | 66                             | 13.1           |
|             | —                              | —              |             | 63                             | 1.1            |             | w                              | 62                             | 5.6         | o                              | 59                             | 12.1           |
|             | 22                             | 14.2           |             |                                |                |             | 70                             | 7.1                            |             | 64                             | 12.4                           |                |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>164.</b> | 7.8 Mg                         | B <sub>5</sub> | <b>169.</b> | 7.4 Mg                         | B <sub>5</sub> | <b>174.</b> | 7.8 Mg                         | B <sub>5</sub> | <b>179.</b> | 8.8 Mg                         | B <sub>8</sub> |
|             | 4 <sup>h</sup> 38 <sup>m</sup> | 52° 10'        |             | 4 <sup>h</sup> 45 <sup>m</sup> | 43° 26'        |             | 4 <sup>h</sup> 56 <sup>m</sup> | 26° 24'        |             | 5 <sup>h</sup> 7 <sup>m</sup>  | 38° 0'         |
| w           | 20.46                          | s<br>57.8      | o           | 33.13                          | s<br>6.4       | o           | 6.92                           | s<br>38.9      | w           | 48.33                          | s<br>35.8      |
| w           | 44                             | 57.8           | w           | 12                             | 4.7            | w           | 88                             | 39.5           | w           | 40                             | 35.4           |
| o           | 46                             | 58.5           | w           | 10                             | 5.5            | o           | 86                             | 38.7           |             | 36                             | 35.6           |
| o           | 57                             | 58.7           | o           | 12                             | 5.1            | w           | 91                             | 39.0           |             |                                |                |
|             | 48                             | 58.2           |             | 12                             | 5.4            |             | 89                             | 39.0           | <b>180.</b> | 8.2 Mg                         | B <sub>8</sub> |
|             |                                |                |             |                                |                |             |                                |                |             | 5 <sup>h</sup> 10 <sup>m</sup> | 19° 51'        |
| <b>165.</b> | 8.7 Mg                         | Ma             | <b>170.</b> | 7.7 Mg                         | B <sub>3</sub> | <b>175.</b> | 6.9 Mg                         | B <sub>8</sub> | <b>181.</b> | 8.5 Mg                         | B <sub>8</sub> |
|             | 4 <sup>h</sup> 39 <sup>m</sup> | 32° 45'        |             | 4 <sup>h</sup> 45 <sup>m</sup> | 28° 10'        |             | 5 <sup>h</sup> 0 <sup>m</sup>  | 33° 48'        |             | 5 <sup>h</sup> 12 <sup>m</sup> | 38° 37'        |
| w           | 48.20                          | 52.1           | o           | 36.45                          | 14.3           | o           | 37.13                          | 16.2           | w           | 52.28                          | 35.4           |
| w           | 20                             | 51.0           | w           | 48                             | 12.6           | o           | 17                             | 16.6           | o           | 33                             | 35.3           |
|             | 20                             | 51.5           | o           | 48                             | 14.3           | w           | 22                             | 16.4           | o           | 34                             | 35.7           |
|             |                                |                | w           | 48                             | 13.1           | w           | 18                             | 16.9           |             | 32                             | 35.5           |
|             |                                |                |             | 47                             | 13.6           |             | 17                             | 16.5           | <b>182.</b> | 7.9 Mg                         | B <sub>5</sub> |
|             |                                |                |             |                                |                |             |                                |                |             | 5 <sup>h</sup> 13 <sup>m</sup> | 36° 6'         |
| <b>166.</b> | 8.6 Mg                         | B <sub>8</sub> | <b>171.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>176.</b> | 6.6 Mg                         | B <sub>5</sub> | <b>183.</b> | 7.0 Mg                         | B <sub>8</sub> |
|             | 4 <sup>h</sup> 39 <sup>m</sup> | 43° 14'        |             | 4 <sup>h</sup> 47 <sup>m</sup> | 12° 14'        |             | 5 <sup>h</sup> 0 <sup>m</sup>  | 26° 18'        |             | 5 <sup>h</sup> 13 <sup>m</sup> | 34° 48'        |
| o           | 51.47                          | 13.6           | o           | 59.59                          | 41.7           | o           | 41.34                          | 55.4           | o           | 40.48                          | 8.8            |
| w           | 42                             | 14.7           | o           | 58                             | 41.3           | o           | 35                             | 55.3           | w           | 54.12                          | 15.5           |
| o           | 40                             | 14.6           | w           | 61                             | 41.0           | w           | 36                             | 55.4           | o           | 18.31                          | 30.7           |
|             | 43                             | 14.3           | w           | 63                             | 40.9           |             | 35                             | 55.4           | w           | 26                             | 29.8           |
|             |                                |                |             | 60                             | 41.2           |             |                                |                | o           | 34                             | 29.8           |
|             |                                |                |             |                                |                |             |                                |                | w           | 23                             | 30.2           |
| <b>167.</b> | 6.2 Mg                         | B <sub>8</sub> | <b>172.</b> | 7.6 Mg                         | Ma             | <b>177.</b> | 7.9 Mg                         | B <sub>8</sub> | <b>184.</b> | 8.2 Mg                         | B <sub>8</sub> |
|             | 4 <sup>h</sup> 40 <sup>m</sup> | 23° 28'        |             | 4 <sup>h</sup> 50 <sup>m</sup> | 43° 21'        |             | 5 <sup>h</sup> 6 <sup>m</sup>  | 42° 17'        |             | 5 <sup>h</sup> 15 <sup>m</sup> | 32° 29'        |
| o           | 38.09                          | 27.9           | o           | 3.60                           | 32.8           | w           | 5.69                           | 46.5           |             |                                |                |
| o           | 06                             | 28.6           | w           | 66                             | 32.2           | w           | 70                             | 45.9           |             |                                |                |
| w           | 10                             | 28.3           | w           | 52                             | 33.0           | o           | 65                             | 46.4           |             |                                |                |
| w           | 10                             | 28.8           | o           | 67                             | 33.5           | o           | 78                             | 46.7           |             |                                |                |
|             | 09                             | 28.4           |             | 61                             | 32.9           |             | 70                             | 46.4           |             |                                |                |
|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
| <b>168.</b> | 8.1 Mg                         | Ma             | <b>173.</b> | 7.3 Mg                         | B <sub>2</sub> | <b>178.</b> | 7.3 Mg                         | B <sub>3</sub> |             | 54                             | 8.5            |
|             | 4 <sup>h</sup> 44 <sup>m</sup> | 50° 15'        |             | 4 <sup>h</sup> 53 <sup>m</sup> | 43° 11'        |             | 5 <sup>h</sup> 7 <sup>m</sup>  | 40° 5'         |             |                                |                |
| w           | 12.44                          | 47.2           | o           | —                              | 43.1           | o           | 22.79                          | 35.1           | <b>184.</b> | 8.2 Mg                         | B <sub>8</sub> |
| w           | 56                             | 47.8           | o           | 21.56                          | 42.0           | o           | 80                             | 34.6           |             | 5 <sup>h</sup> 15 <sup>m</sup> | 32° 29'        |
| o           | 48                             | 48.1           | w           | 63                             | 42.7           | w           | 85                             | 34.6           | o           | 43.98                          | 42.3           |
| o           | 57                             | 47.8           | w           | 63                             | 42.0           | w           | 75                             | 34.7           | o           | 98                             | 42.4           |
|             | 51                             | 47.7           |             | 61                             | 42.4           |             | 80                             | 34.8           |             | 98                             | 42.4           |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                 |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|-----------------|
| <b>185.</b> | 8.7 Mg                         | B <sub>5</sub> | <b>190.</b> | 8.4 Mg                         | B <sub>8</sub> | <b>195.</b> | 6.9 Mg                         | B <sub>8</sub> | <b>200.</b> | 6.0 Mg                         | B <sub>5</sub>  |
|             | 5 <sup>h</sup> 16 <sup>m</sup> | 39° 25'        |             | 5 <sup>h</sup> 21 <sup>m</sup> | 34° 41'        |             | 5 <sup>h</sup> 28 <sup>m</sup> | 24° 34'        |             | 5 <sup>h</sup> 33 <sup>m</sup> | 29° 10'         |
| w           | 17.69                          | "              | w           | 27.95                          | "              | o           | 21.64                          | "              | o           | 57.73                          | "               |
| w           | 73                             | 47.1           | w           | 88                             | 47.7           | o           | 62                             | 15.0           | o           | 78                             | 3.5             |
| o           | 60                             | 47.2           | o           | 92                             | 47.5           | w           | 60                             | 13.7           | w           | 89                             | 3.6             |
| o           | 64                             | 46.9           | o           | 89                             | 47.9           | w           | 64                             | 15.1           | w           | 94                             | 3.1             |
|             | 66                             | 47.1           |             | 91                             | 47.5           |             | 62                             | 14.5           |             | 83                             | 3.5             |
| <b>186.</b> | 7.4 Mg                         | B <sub>0</sub> | <b>191.</b> | 7.5 Mg                         | B <sub>1</sub> | <b>196.</b> | 6.1 Mg                         | B <sub>8</sub> | <b>201.</b> | 7.5 Mg                         | B <sub>5</sub>  |
|             | 5 <sup>h</sup> 16 <sup>m</sup> | 37° 35'        |             | 5 <sup>h</sup> 22 <sup>m</sup> | 33° 52'        |             | 5 <sup>h</sup> 28 <sup>m</sup> | 20° 24'        |             | 5 <sup>h</sup> 33 <sup>m</sup> | 30° 50'         |
| w           | 51.96                          | 38.8           | o           | 13.24                          | 29.4           | o           | 39.24                          | 56.6           | o           | 59.94                          | 36.6            |
| w           | 93                             | 40.1           | o           | 27                             | 29.4           | o           | 34                             | 55.3           | o           | 94                             | 35.6            |
| o           | 02                             | 39.7           | w           | 30                             | 29.1           | w           | 28                             | 56.6           |             | 94                             | 36.1            |
|             | 97                             | 39.5           | w           | 30                             | 29.0           | w           | 24                             | 56.8           |             |                                |                 |
|             |                                |                |             | 28                             | 29.2           |             | 28                             | 56.3           |             |                                |                 |
| <b>187.</b> | 8.3 Mg                         | B <sub>5</sub> | <b>192.</b> | 8.0 Mg                         | B <sub>5</sub> | <b>197.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>202.</b> | 7.0 Mg                         | B <sub>3</sub>  |
|             | 5 <sup>h</sup> 18 <sup>m</sup> | 38° 29'        |             | 5 <sup>h</sup> 23 <sup>m</sup> | 3° 27'         |             | 5 <sup>h</sup> 29 <sup>m</sup> | 27° 59'        |             | 5 <sup>h</sup> 36 <sup>m</sup> | 43° 1'          |
| o           | 22.22                          | 22.2           | o           | 42.00                          | 58.3           | o           | 21.68                          | 39.2           | o           | 17.44                          | 2.8             |
| o           | 15                             | 22.2           | o           | 06                             | 58.2           | o           | 74                             | 38.6           | o           | 35                             | 2.8             |
| w           | 12                             | 21.8           |             | 03                             | 58.2           |             | 71                             | 38.9           | w           | 45                             | 3.4             |
| w           | 16                             | 22.4           |             |                                |                |             |                                |                | w           | 42                             | 3.6             |
|             | 16                             | 22.2           |             |                                |                |             |                                |                |             | 42                             | 3.1             |
| <b>188.</b> | 6.9 Mg                         | B <sub>8</sub> | <b>193.</b> | 8.3 Mg                         | Mb             | <b>198.</b> | 8.9 Mg                         | B <sub>8</sub> | <b>203.</b> | 7.4 Mg                         | B <sub>8</sub>  |
|             | 5 <sup>h</sup> 18 <sup>m</sup> | 15° 57'        |             | 5 <sup>h</sup> 25 <sup>m</sup> | 22° 28'        |             | 5 <sup>h</sup> 32 <sup>m</sup> | 22° 3'         |             | 5 <sup>h</sup> 36 <sup>m</sup> | 9° 9'           |
| o           | 41.88                          | 42.9           | w           | 11.19                          | 29.2           | o           | 2.12                           | 54.8           | w           | 49.71                          | 21.3            |
| w           | 80                             | 42.8           | w           | 27                             | 28.5           | o           | 13                             | 55.0           | w           | 79                             | 20.3            |
| o           | 91                             | 41.7           | o           | 28                             | 28.3           |             | 12                             | 54.9           | o           | 72                             | 20.3            |
| w           | 83                             | 42.6           | o           | 22                             | 28.2           |             |                                |                | o           | 61                             | 21.5            |
|             | 85                             | 42.5           |             | 24                             | 28.5           |             |                                |                |             | 71                             | 20.8            |
| <b>189.</b> | 8.3 Mg                         | B <sub>8</sub> | <b>194.</b> | 8.0 Mg                         | B <sub>5</sub> | <b>199.</b> | 8.2 Mg                         | B              | <b>204.</b> | 6.9 Mg                         | B <sub>2p</sub> |
|             | 5 <sup>h</sup> 20 <sup>m</sup> | 39° 34'        |             | 5 <sup>h</sup> 26 <sup>m</sup> | 34° 49'        |             | 5 <sup>h</sup> 33 <sup>m</sup> | 28° 24'        |             | 5 <sup>h</sup> 38 <sup>m</sup> | 25° 24'         |
| w           | 35.06                          | 21.0           | w           | 10.05                          | 6.8            | w           | 39.51                          | 42.1           | w           | 27.79                          | 3.5             |
| w           | 05                             | 21.4           | w           | 07                             | 7.8            | w           | 52                             | 42.8           | w           | 89                             | 4.4             |
| o           | 07                             | 20.9           | w           | 02                             | 7.5            | w           | 46                             | 41.7           | o           | 78                             | 3.3             |
| o           | 07                             | 20.6           |             | 05                             | 7.3            | w           | 50                             | 42.4           |             | 82                             | 3.7             |
|             | 06                             | 21.0           |             |                                |                |             | 50                             | 42.2           |             |                                |                 |

|             |                                |                |             |                                |                |             |                                |                 |             |                                |                |      |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|-----------------|-------------|--------------------------------|----------------|------|
| <b>205.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>210.</b> | 8.1 Mg                         | B <sub>8</sub> | <b>215.</b> | 7.5 Mg                         | B <sub>5</sub>  | <b>220.</b> | 7.6 Mg                         | B <sub>8</sub> |      |
|             | 5 <sup>h</sup> 38 <sup>m</sup> | 5° 19'         |             | 5 <sup>h</sup> 43 <sup>m</sup> | 27° 20'        |             | 5 <sup>h</sup> 48 <sup>m</sup> | 30° 28'         |             | 5 <sup>h</sup> 57 <sup>m</sup> | 3° 11'         |      |
| w           | 54.86                          | 12.8           | w           | 33.01                          | 7.7            | w           | 51.86                          | 36.0            | w           | 5.92                           | 6.4            |      |
| w           | 84                             | 13.8           | w           | 32.96                          | 7.2            | w           | 86                             | 35.3            | w           | 91                             | 6.4            |      |
|             | 85                             | 13.3           | o           | 97                             | 7.3            | o           | 84                             | 35.5            | o           | 98                             | 6.4            |      |
|             |                                |                |             | 98                             | 7.4            | o           | 82                             | 35.3            | o           | 94                             | 5.9            |      |
|             |                                |                |             |                                |                |             | 84                             | 35.5            |             | 94                             | 6.3            |      |
| <b>206.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>211.</b> | 8.0 Mg                         | B <sub>5</sub> | <b>216.</b> | 7.7 Mg                         | B <sub>2</sub>  | <b>221.</b> | 8.5 Mg                         | Mb             |      |
|             | 5 <sup>h</sup> 39 <sup>m</sup> | 6° 51'         |             | 5 <sup>h</sup> 45 <sup>m</sup> | 31° 2'         |             | 5 <sup>h</sup> 50 <sup>m</sup> | 27° 42'         |             | 5 <sup>h</sup> 57 <sup>m</sup> | 50° 36'        |      |
| o           | 4.96                           | 2.2            | w           | 3.31                           | 23.7           | w           | 23.29                          | 5.4             | o           | 7.69                           | 47.9           |      |
| o           | 96                             | 1.8            | w           | 35                             | 24.2           | o           | 20                             | 5.3             | w           | 67                             | 47.0           |      |
| w           | 94                             | 2.5            | o           | 30                             | 24.1           | o           | 30                             | 6.4             | o           | 66                             | 48.5           |      |
| w           | 96                             | 2.2            | o           | 28                             | 23.6           | w           | 21                             | 6.1             | w           | 67                             | 46.9           |      |
|             | 95                             | 2.2            |             | 31                             | 23.9           |             | 25                             | 5.8             |             | 67                             | 47.6           |      |
| <b>207.</b> | 8.1 Mg                         | B <sub>5</sub> | <b>212.</b> | 7.7 Mg                         | Ma             |             |                                |                 |             |                                |                |      |
|             | 5 <sup>h</sup> 39 <sup>m</sup> | 28° 58'        |             | 5 <sup>h</sup> 45 <sup>m</sup> | 27° 39'        |             |                                |                 |             |                                |                |      |
| o           | 17.63                          | 47.5           | w           | 31.33                          | 42.3           | <b>217.</b> | 7.5 Mg                         | Mb              | <b>222.</b> | 7.0 Mg                         | B <sub>3</sub> |      |
| o           | —                              | 46.5           | o           | 27                             | 44.9           |             | 5 <sup>h</sup> 51 <sup>m</sup> | 35° 34'         |             | 5 <sup>h</sup> 58 <sup>m</sup> | 46° 35'        |      |
| w           | 65                             | 46.9           | o           | 30                             | 44.4           | o           | 16.64                          | 3.4             | o           | 21.73                          | 17.3           |      |
| w           | 69                             | 47.9           | w           | 34                             | 43.7           | w           | 65                             | 3.3             | o           | 66                             | 17.6           |      |
|             | 66                             | 47.2           |             | 31                             | 43.8           | o           | 64                             | 2.4             |             | 70                             | 17.4           |      |
|             |                                |                |             |                                |                | w           | 64                             | 2.8             |             |                                |                |      |
| <b>208.</b> | 7.7 Mg                         | B <sub>8</sub> | <b>213.</b> | 6.8 Mg                         | B <sub>8</sub> |             |                                |                 | <b>223.</b> | 8.5 Mg                         | B <sub>8</sub> |      |
|             | 5 <sup>h</sup> 41 <sup>m</sup> | 34° 16'        |             | 5 <sup>h</sup> 46 <sup>m</sup> | 38° 32'        |             |                                |                 |             | 6 <sup>h</sup> 1 <sup>m</sup>  | 27° 3'         |      |
| w           | 26.13                          | 45.7           | w           | 26.41                          | 19.6           | <b>218.</b> | 8.0 Mg                         | B <sub>8</sub>  |             | o                              | 13.55          | 48.7 |
| w           | 11                             | 45.5           | w           | 42                             | 20.0           |             | 5 <sup>h</sup> 52 <sup>m</sup> | 24° 36'         |             | o                              | 52             | 48.0 |
| o           | 13                             | 46.4           | o           | 40                             | 19.8           | o           | 50.78                          | 27.6            | w           | 55                             | 49.4           |      |
|             | 12                             | 45.9           | o           | 44                             | 20.7           | o           | 78                             | 27.9            |             | 54                             | 48.7           |      |
|             |                                |                |             | 42                             | 20.0           |             | 78                             | 27.8            |             |                                |                |      |
| <b>209.</b> | 6.6 Mg                         | B <sub>5</sub> | <b>214.</b> | 7.8 Mg                         | B <sub>8</sub> | <b>219.</b> | 6.1 Mg                         | B <sub>8p</sub> | <b>224.</b> | 8.0 Mg                         | B <sub>2</sub> |      |
|             | 5 <sup>h</sup> 43 <sup>m</sup> | 12° 23'        |             | 5 <sup>h</sup> 48 <sup>m</sup> | 24° 16'        |             | 5 <sup>h</sup> 55 <sup>m</sup> | 27° 34'         |             | 6 <sup>h</sup> 2 <sup>m</sup>  | 21° 53'        |      |
| o           | 19.34                          | 21.4           | o           | 25.01                          | 6.3            | o           | 43.71                          | 8.0             |             |                                |                |      |
| o           | 36                             | 20.9           | o           | 04                             | 7.0            | w           | 72                             | 7.2             | o           | 35.74                          | 2.4            |      |
| o           | 27                             | 22.1           | o           | 02                             | 6.6            | o           | 72                             | 7.9             | o           | 68                             | 2.0            |      |
| o           | 32                             | 21.8           | w           | 03                             | 7.6            | w           | 69                             | 7.8             | w           | 75                             | 1.0            |      |
| w           | 30                             | 21.4           | w           | 03                             | 7.6            |             | 71                             | 7.7             |             | 72                             | 1.8            |      |
|             | 32                             | 21.6           |             | 03                             | 7.0            |             |                                |                 |             |                                |                |      |

|             |                               |                |             |                                |                |             |                                |                |                                |                                |                 |
|-------------|-------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|--------------------------------|--------------------------------|-----------------|
| <b>225.</b> | 6.6 Mg                        | Ma             | <b>230.</b> | 6.0 Mg                         | B <sub>5</sub> | <b>235.</b> | 7.8 Mg                         | Mb             | <b>240.</b>                    | 7.1 Mg                         | Oe <sub>5</sub> |
|             | 6 <sup>h</sup> 6 <sup>m</sup> | 21° 53'        |             | 6 <sup>h</sup> 11 <sup>m</sup> | 6° 5'          |             | 6 <sup>h</sup> 16 <sup>m</sup> | 2° 36'         |                                | 6 <sup>h</sup> 22 <sup>m</sup> | 14° 56'         |
| s           |                               |                | s           |                                |                | s           |                                |                | s                              |                                |                 |
| o           | 48.24                         | 15.0           | o           | 10.20                          | 38.6           | o           | 39.79                          | 27.4           | o                              | 27.90                          | 23.0            |
| o           | 22                            | 15.2           | o           | 12                             | 37.6           | o           | 82                             | 27.4           | o                              | 94                             | 22.8            |
| w           | 25                            | 14.2           | w           | 21                             | 37.0           |             | 80                             | 27.4           | w                              | 93                             | 23.1            |
| w           | 24                            | 14.5           | w           | 10                             | 37.6           |             |                                |                | w                              | 94                             | 22.2            |
|             | 24                            | 14.7           |             | 16                             | 37.7           |             |                                |                |                                | 93                             | 22.8            |
| <b>226.</b> | 7.4 Mg                        | B <sub>5</sub> | <b>231.</b> | 6.4 Mg                         | B <sub>8</sub> | <b>236.</b> | 8.3 Mg                         | B <sub>8</sub> | <b>241.</b>                    | 8.2 Mg                         | B <sub>8</sub>  |
|             | 6 <sup>h</sup> 7 <sup>m</sup> | 10° 21'        |             | 6 <sup>h</sup> 12 <sup>m</sup> | 7° 4'          | o           | 3.53                           | 53.8           | 6 <sup>h</sup> 22 <sup>m</sup> | 0° 11'                         |                 |
| o           | 37.36                         | 13.1           | o           | 26.42                          | 57.2           | o           | 52                             | 53.3           | w                              | —                              | 9.6             |
| o           | 34                            | 13.6           | o           | 46                             | 57.4           |             | 52                             | 53.6           | o                              | 50.78                          | —               |
| w           | 39                            | 12.6           | w           | 48                             | 57.4           |             |                                |                | o                              | 81                             | 9.3             |
|             | 36                            | 13.1           |             | 45                             | 57.3           | <b>237.</b> | 8.0 Mg                         | B <sub>5</sub> | w                              | 82                             | 10.8            |
| <b>227.</b> | 6.8 Mg                        | Ma             | <b>232.</b> | 8.1 Mg                         | B <sub>1</sub> |             | 6 <sup>h</sup> 18 <sup>m</sup> | 15° 8'         |                                | 80                             | 9.9             |
|             | 6 <sup>h</sup> 8 <sup>m</sup> | 6° 2'          |             | 6 <sup>h</sup> 13 <sup>m</sup> | 23° 2'         | w           | —                              | 40.8           |                                |                                |                 |
| o           | —                             | 18.0           | o           | 54.04                          | 4.8            | o           | 36.36                          | 40.9           | <b>242.</b>                    | 9.0 Mg                         | Ma              |
| o           | 29.59                         | 17.9           | o           | 02                             | 4.4            | o           | 40                             | 40.6           | 6 <sup>h</sup> 24 <sup>m</sup> | 6° 48'                         |                 |
| w           | 57                            | 17.3           | w           | 06                             | 4.2            | w           | 42                             | 41.2           | o                              | 21.04                          | 59.8            |
| w           | 56                            | 17.1           | w           | 06                             | 4.4            |             | 39                             | 40.9           | w                              | 98                             | 59.4            |
|             | 57                            | 17.6           |             | 05                             | 4.4            |             |                                |                |                                | 01                             | 59.6            |
| <b>228.</b> | 7.8 Mg                        | B <sub>8</sub> | <b>233.</b> | 7.9 Mg                         | B <sub>8</sub> | <b>238.</b> | 8.4 Mg                         | B              | <b>243.</b>                    | 8.1 Mg                         | B <sub>3</sub>  |
|             | 6 <sup>h</sup> 8 <sup>m</sup> | 3° 31'         |             | 6 <sup>h</sup> 14 <sup>m</sup> | 12° 46'        | o           | 52.65                          | 38.2           | 6 <sup>h</sup> 25 <sup>m</sup> | 7° 10'                         |                 |
| o           | 38.72                         | 52.4           | o           | 22.76                          | 51.2           | o           | —                              | 38.2           | w                              | 23.90                          | 6.5             |
| w           | 76                            | 52.3           | w           | 76                             | 51.2           | w           | 66                             | 37.6           | o                              | 86                             | 5.8             |
| w           | 76                            | 53.0           | w           | 81                             | 51.9           | w           | 66                             | 37.8           | o                              | —                              | 5.2             |
| o           | 77                            | 52.5           | o           | 78                             | 51.2           |             | 66                             | 38.0           | w                              | 97                             | 5.0             |
|             | 75                            | 52.5           |             | 78                             | 51.4           |             |                                |                |                                | 91                             | 5.6             |
| <b>229.</b> | 7.3 Mg                        | B <sub>8</sub> | <b>234.</b> | 7.1 Mg                         | B <sub>8</sub> | <b>239.</b> | 8.7 Mg                         | B <sub>5</sub> | <b>244.</b>                    | 8.2 Mg                         | B <sub>3</sub>  |
|             | 6 <sup>h</sup> 8 <sup>m</sup> | 46° 25'        |             | 6 <sup>h</sup> 16 <sup>m</sup> | 21° 10'        | o           | 25.20                          | 8.2            | 6 <sup>h</sup> 26 <sup>m</sup> | 4° 23'                         |                 |
| o           | 42.92                         | 11.6           | o           | 13.20                          | 15.0           | o           | 27                             | 8.1            | w                              | 2.65                           | 23.2            |
| o           | 84                            | 11.2           | o           | 10                             | 14.0           | o           | 14                             | 7.8            | o                              | 54                             | 24.2            |
|             | 88                            | 11.4           | w           | 16                             | 14.7           | w           | 23                             | 7.8            |                                | 60                             | 23.7            |
|             |                               |                |             | 15                             | 14.5           |             | 21                             | 8.0            |                                |                                |                 |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>245.</b> | 6.7 Mg                         | B <sub>3</sub> | <b>250.</b> | 8.1 Mg                         | B <sub>2</sub> | <b>255.</b> | 8.6 Mg                         | B <sub>3</sub> | <b>260.</b> | 7.8 Mg                         | B <sub>8</sub> |
|             | 6 <sup>h</sup> 26 <sup>m</sup> | 5° 55'         |             | 6 <sup>h</sup> 31 <sup>m</sup> | 10° 21'        |             | 6 <sup>h</sup> 39 <sup>m</sup> | 20° 4'         |             | 6 <sup>h</sup> 45 <sup>m</sup> | 6° 21'         |
|             | s                              |                |             | s                              |                |             | s                              |                |             | s                              |                |
| o           | 3.23                           | 29.0           | o           | 31.37                          | 13.5           | o           | 40.22                          | 23.0           | w           | 35.64                          | 11.3           |
| o           | 25                             | 28.3           | o           | 44                             | 13.5           | w           | 24                             | 23.8           | o           | 69                             | 12.0           |
| w           | 32                             | 27.3           | w           | 40                             | 12.9           | w           | 22                             | 23.4           | o           | 61                             | 11.4           |
| w           | 30                             | 28.0           | w           | 44                             | 15.1           | o           | 18                             | 22.5           |             | 65                             | 11.6           |
|             | 28                             | 28.2           |             | 41                             | 13.8           |             | 22                             | 23.2           |             |                                |                |
| <b>246.</b> | 7.6 Mg                         | B <sub>8</sub> | <b>251.</b> | 6.2 Mg                         | B <sub>1</sub> | <b>256.</b> | 6.9 Mg                         | B <sub>8</sub> | <b>261.</b> | 7.9 Mg                         | B <sub>8</sub> |
|             | 6 <sup>h</sup> 26 <sup>m</sup> | 9° 59'         |             | 6 <sup>h</sup> 33 <sup>m</sup> | 5° 1'          |             | 6 <sup>h</sup> 40 <sup>m</sup> | 0° 2'          |             | 6 <sup>h</sup> 49 <sup>m</sup> | 29° 55'        |
| w           | 31.68                          | 55.9           | w           | 24.93                          | 44.4           | o           | 53.04                          | 38.4           | o           | 26.05                          | 58.8           |
| o           | 66                             | 55.3           | o           | 90                             | 44.4           | w           | 10                             | 39.8           | o           | 10                             | 57.8           |
| o           | 62                             | 54.2           |             | 92                             | 44.4           | w           | 13                             | 39.2           | w           | 09                             | 59.4           |
| w           | 64                             | 55.2           |             |                                |                | o           | 06                             | 37.8           | w           | 03                             | 57.9           |
|             | 65                             | 55.2           |             |                                |                |             | 08                             | 38.8           |             | 07                             | 58.5           |
| <b>247.</b> | 7.7 Mg                         | B <sub>2</sub> | <b>252.</b> | 7.8 Mg                         | B <sub>8</sub> | <b>257.</b> | 7.6 Mg                         | Ma             | <b>262.</b> | 8.1 Mg                         | B <sub>8</sub> |
|             | 6 <sup>h</sup> 27 <sup>m</sup> | 5° 5'          |             | 6 <sup>h</sup> 35 <sup>m</sup> | 9° 53'         |             | 6 <sup>h</sup> 42 <sup>m</sup> | 21° 47'        |             | 6 <sup>h</sup> 49 <sup>m</sup> | 5° 12'         |
| w           | 24.62                          | 36.9           | o           | 51.24                          | 44.1           | w           | 45.46                          | 1.6            | o           | 50.36                          | 55.6           |
| w           | 56                             | 35.8           | w           | 24                             | 44.5           | w           | 51                             | 1.8            | o           | 30                             | 55.4           |
| o           | 54                             | 35.0           | w           | 28                             | 43.0           | o           | 44                             | 1.0            | w           | 36                             | 55.0           |
| o           | 57                             | 36.0           |             | 28                             | 43.3           |             | 47                             | 1.5            | w           | 28                             | 55.0           |
|             | 57                             | 35.9           |             | 26                             | 43.7           |             |                                |                |             | 32                             | 55.2           |
| <b>248.</b> | 8.5 Mg                         | Ma             | <b>253.</b> | 8.2 Mg                         | B <sub>2</sub> | <b>258.</b> | 7.4 Mg                         | B <sub>8</sub> | <b>263.</b> | 8.6 Mg                         | B              |
|             | 6 <sup>h</sup> 30 <sup>m</sup> | 5° 34'         |             | 6 <sup>h</sup> 36 <sup>m</sup> | 9° 44'         |             | 6 <sup>h</sup> 43 <sup>m</sup> | 20° 39'        |             | 6 <sup>h</sup> 50 <sup>m</sup> | 0° 17'         |
| o           | 59.80                          | 47.5           | o           | 5.26                           | 2.2            | o           | 57.80                          | 29.4           | o           | 3.66                           | 13.8           |
| o           | 94                             | 47.9           | o           | 34                             | 2.0            | w           | 78                             | 29.4           | o           | 60                             | 15.2           |
| w           | 89                             | 47.6           | w           | 30                             | 1.7            | w           | 72                             | 29.8           |             | 63                             | 14.5           |
|             | 88                             | 47.7           |             | 30                             | 2.0            | w           | 75                             | 29.9           |             |                                |                |
|             |                                |                |             |                                |                |             | 76                             | 29.6           |             |                                |                |
| <b>249.</b> | 7.9 Mg                         | B <sub>8</sub> | <b>254.</b> | 6.4 Mg                         | Ma             | <b>259.</b> | 7.7 Mg                         | Ma             | <b>264.</b> | 9.0 Mg                         | B <sub>8</sub> |
|             | 6 <sup>h</sup> 31 <sup>m</sup> | 9° 55'         |             | 6 <sup>h</sup> 36 <sup>m</sup> | 11° 4'         |             | 6 <sup>h</sup> 45 <sup>m</sup> | 12° 9'         |             | 6 <sup>h</sup> 52 <sup>m</sup> | 5° 12'         |
| o           | 3.13                           | 10.9           | o           | 37.49                          | 55.4           | o           | 20.44                          | 16.6           | o           | 41.27                          | 48.4           |
| w           | 14                             | 10.9           | o           | 47                             | 55.7           | o           | 57                             | 16.8           | o           | 18                             | 47.2           |
| o           | 14                             | 10.7           | w           | 43                             | 54.6           | w           | 54                             | 17.6           | w           | 21                             | 47.1           |
| w           | 17                             | 11.6           | w           | 49                             | 54.8           | w           | 52                             | 16.7           | w           | 20                             | 47.4           |
|             | 14                             | 11.0           |             | 47                             | 55.1           |             | 52                             | 16.9           |             | 22                             | 47.5           |

|             |                                |                |             |                               |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|-------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>265.</b> | 7.1 Mg                         | B <sub>2</sub> | <b>271.</b> | 6.6 Mg                        | K <sub>0</sub> | <b>276.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>281.</b> | 7.9 Mg                         | Ma             |
|             | 6 <sup>h</sup> 52 <sup>m</sup> | 18° 0'         |             | 7 <sup>h</sup> 1 <sup>m</sup> | 9° 18'         |             | 7 <sup>h</sup> 10 <sup>m</sup> | 29° 24'        |             | 7 <sup>h</sup> 16 <sup>m</sup> | 32° 12'        |
| w           | 49.52                          | s 50.0         | w           | 3.07                          | " 49.2         | w           | 44.03                          | " 8.5          | w           | 12.00                          | " 59.4         |
| w           | 51                             | 50.3           | w           | —                             | 48.9           | w           | 04                             | 8.7            | w           | —                              | 60.0           |
|             | 52                             | 50.2           | o           | 04                            | 49.5           | o           | 04                             | 8.7            | w           | 00                             | 59.7           |
|             |                                |                |             | 05                            | 49.2           | o           | 97                             | 9.3            | o           | 96                             | 59.9           |
|             |                                |                |             |                               |                | o           | 02                             | 8.8            | o           | 00                             | 60.6           |
| <b>266.</b> | 6.3 Mg                         | B <sub>8</sub> | <b>272.</b> | 6.0 Mg                        | B <sub>8</sub> | <b>277.</b> | 8.3 Mg                         | Ma             | <b>282.</b> | 6.8 Mg                         | B <sub>9</sub> |
|             | 6 <sup>h</sup> 54 <sup>m</sup> | 7° 25'         |             | 7 <sup>h</sup> 2 <sup>m</sup> | 5° 2'          |             | 7 <sup>h</sup> 11 <sup>m</sup> | 0° 46'         |             | 7 <sup>h</sup> 16 <sup>m</sup> | 0° 33'         |
| o           | 47.98                          | 56.5           | w           | 39.14                         | 29.0           | w           | 1.08                           | 13.9           | o           | 12.14                          | 36.8           |
| o           | 48.02                          | 57.1           | o           | 05                            | 28.6           | w           | 04                             | 14.2           | w           | 09                             | 37.4           |
| w           | —                              | 56.4           | o           | 05                            | 28.5           | o           | 98                             | 13.5           | w           | 08                             | 37.6           |
| w           | 01                             | 56.4           | w           | 07                            | 28.0           | o           | 00                             | 13.8           | o           | 04                             | 36.1           |
|             | 00                             | 56.6           |             | 08                            | 28.5           |             | 02                             | 13.8           |             | 09                             | 37.0           |
| <b>267.</b> | 9.1 Mg                         | B <sub>8</sub> | <b>273.</b> | 6.9 Mg                        | K <sub>0</sub> | <b>278.</b> | 6.7 Mg                         | B <sub>8</sub> | <b>283.</b> | 6.6 Mg                         | B <sub>3</sub> |
|             | 6 <sup>h</sup> 56 <sup>m</sup> | 0° 13'         |             | 7 <sup>h</sup> 5 <sup>m</sup> | 49° 55'        |             | 7 <sup>h</sup> 12 <sup>m</sup> | 31° 50'        |             | 7 <sup>h</sup> 17 <sup>m</sup> | —5° 44'        |
| o           | 13.38                          | 48.4           | w           | 31.94                         | 42.0           | w           | 6.63                           | 54.6           | w           | 27.30                          | 16.0           |
| o           | 32                             | 50.6           | w           | 92                            | 42.1           | w           | 69                             | —              | w           | 27                             | 16.8           |
|             | 35                             | 49.5           | o           | 94                            | 42.4           | w           | 66                             | 54.0           |             | 28                             | 16.4           |
|             |                                |                |             | 93                            | 42.2           |             | 66                             | 54.3           |             |                                |                |
| <b>268.</b> | 6.5 Mg                         | B <sub>3</sub> | <b>274.</b> | 8.2 Mg                        | Ma             | <b>279.</b> | 8.7 Mg                         | Mb             | <b>284.</b> | 6.0 Mg                         | B <sub>8</sub> |
|             | 6 <sup>h</sup> 57 <sup>m</sup> | 5° 40'         |             | 7 <sup>h</sup> 6 <sup>m</sup> | 24° 48'        |             | 7 <sup>h</sup> 14 <sup>m</sup> | 3° 41'         |             | 7 <sup>h</sup> 17 <sup>m</sup> | 0° 20'         |
| w           | 26.58                          | 39.7           | o           | 7.80                          | 7.2            | o           | 38.08                          | 10.8           | w           | 44.82                          | 12.6           |
| w           | 58                             | 39.6           | w           | 86                            | 7.6            | o           | 02                             | 10.5           | w           | 84                             | 13.8           |
| o           | 48                             | 40.2           | w           | 89                            | 6.4            | w           | 04                             | 9.6            | o           | 83                             | 12.0           |
| o           | 45                             | 39.6           | w           | —                             | 7.5            | w           | 06                             | 10.0           | o           | 84                             | 12.7           |
|             | 52                             | 39.8           | o           | 85                            | 7.2            |             | 05                             | 10.2           |             | 83                             | 12.8           |
| <b>269.</b> | 6.2 Mg                         | Ma             |             |                               |                |             |                                |                | <b>285.</b> | 8.3 Mg                         | K <sub>5</sub> |
|             | 6 <sup>h</sup> 57 <sup>m</sup> | 17° 52'        | <b>275.</b> | 8.3 Mg                        | B <sub>8</sub> | <b>280.</b> | 8.7 Mg                         | B <sub>8</sub> |             | 7 <sup>h</sup> 17 <sup>m</sup> | 5° 46'         |
| w           | 32.49                          | 32.6           |             | 7 <sup>h</sup> 9 <sup>m</sup> | —0° 7'         |             | 7 <sup>h</sup> 15 <sup>m</sup> | —0° 45'        | w           | 55.70                          | 11.0           |
| w           | 47                             | 32.8           | w           | 32.28                         | 28.4           | w           | 16.56                          | 12.2           | w           | 74                             | 10.4           |
|             | 48                             | 32.7           | w           | 24                            | 29.9           | w           | 56                             | 12.6           | o           | 74                             | 10.8           |
|             |                                |                |             | 26                            | 29.1           |             | 56                             | 12.4           | o           | 74                             | 10.5           |
|             |                                |                |             |                               |                |             |                                |                |             | 73                             | 10.7           |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>286.</b> | 8.5 Mg                         | Ma             | <b>292.</b> | 8.8 Mg                         | B <sub>8</sub> | <b>297.</b> | 8.1 Mg                         | Ma             | <b>302.</b> | 7.7 Mg                         | Mb             |
|             | 7 <sup>h</sup> 21 <sup>m</sup> | 26° 7'         |             | 7 <sup>h</sup> 28 <sup>m</sup> | 10° 45'        |             | 7 <sup>h</sup> 32 <sup>m</sup> | 13° 3'         |             | 7 <sup>h</sup> 38 <sup>m</sup> | 39° 2'         |
| w           | 9.04                           | "              | w           | 13.68                          | "              | o           | 4.28                           | "              | o           | 29.52                          | "              |
| w           | 98                             | 17.9           | w           | 64                             | 10.8           | o           | 39                             | 12.3           | o           | 48                             | 17.8           |
| o           | 02                             | 18.4           | o           | 62                             | 11.2           | w           | 32                             | 11.7           | w           | 41                             | 17.8           |
| o           | 98                             | 18.4           | o           | 64                             | 11.1           | w           | 30                             | 10.6           | w           | 50                             | 17.9           |
|             | 9.00                           |                |             | 64                             | 11.0           |             | 32                             | 11.9           |             | 48                             | 17.8           |
| <b>287.</b> | 6.3 Mg                         | B <sub>8</sub> | <b>293.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>298.</b> | 7.6 Mg                         | Mb             | <b>303.</b> | 7.8 Mg                         | Mb             |
|             | 7 <sup>h</sup> 22 <sup>m</sup> | 11° 10'        |             | 7 <sup>h</sup> 28 <sup>m</sup> | 5° 12'         |             | 7 <sup>h</sup> 32 <sup>m</sup> | 38° 26'        |             | 7 <sup>h</sup> 39 <sup>m</sup> | 14° 22'        |
| w           | 2.58                           | 38.2           | w           | 25.14                          | 57.8           | w           | 28.04                          | 54.3           | o           | 25.85                          | 28.2           |
| w           | 60                             | 37.8           | w           | 12                             | 58.5           | w           | 07                             | 54.1           | w           | 90                             | 26.9           |
|             | 59                             | 38.0           | o           | 13                             | 58.2           | o           | 13                             | 53.5           | w           | 90                             | 27.6           |
|             |                                |                | o           | 16                             | 57.8           | o           | 04                             | 52.5           | o           | 82                             | 27.8           |
| <b>288.</b> | 7.0 Mg                         | B <sub>8</sub> |             |                                |                |             | 07                             | 53.6           |             | 87                             | 27.6           |
|             | 7 <sup>h</sup> 22 <sup>m</sup> | 15° 29'        |             | 14                             | 58.1           |             |                                |                |             |                                |                |
| w           | 38.96                          | 11.6           | <b>294.</b> | 8.1 Mg                         | Ma             | <b>299.</b> | 8.9 Mg                         | Ma             | <b>304.</b> | 8.0 Mg                         | B <sub>8</sub> |
| w           | 96                             | 10.0           |             | 7 <sup>h</sup> 28 <sup>m</sup> | 11° 11'        |             | 7 <sup>h</sup> 34 <sup>m</sup> | 40° 23'        |             | 7 <sup>h</sup> 40 <sup>m</sup> | 26° 55'        |
|             | 96                             | 10.8           | w           | 49.14                          | 35.1           | w           | 34.26                          | 2.8            | o           | 43.82                          | 45.2           |
| <b>289.</b> | 8.3 Mg                         | Ma             | w           | 16                             | 34.6           | w           | 26                             | 4.2            | o           | 82                             | 46.6           |
|             | 7 <sup>h</sup> 24 <sup>m</sup> | 22° 57'        | w           | 15                             | 34.8           | o           | 19                             | 4.3            | w           | 84                             | 45.6           |
| w           | 16.04                          | 43.6           |             |                                |                | o           | 28                             | 2.7            | w           | 85                             | 45.8           |
| w           | 06                             | 43.0           |             |                                |                |             | 25                             | 3.5            |             | 83                             | 45.8           |
|             | 05                             | 43.3           | <b>295.</b> | 8.5 Mg                         | Mb             | <b>300.</b> | 7.8 Mg                         | Ma             | <b>305.</b> | 8.3 Mg                         | B <sub>8</sub> |
| <b>290.</b> | 9.0 Mg                         | Ma             |             | 7 <sup>h</sup> 28 <sup>m</sup> | 18° 30'        |             | 7 <sup>h</sup> 38 <sup>m</sup> | 32° 38'        |             | 7 <sup>h</sup> 43 <sup>m</sup> | 6° 59'         |
|             | 7 <sup>h</sup> 27 <sup>m</sup> | 14° 17'        | w           | 56.52                          | 54.4           | o           | 6.82                           | 47.2           | o           | 52.63                          | 38.6           |
| w           | 34.13                          | 13.8           | o           | 50                             | 52.3           | o           | 80                             | 46.9           | o           | 68                             | 39.8           |
| w           | 14                             | 14.7           | w           | 54                             | 53.0           | w           | 86                             | 46.7           | w           | 66                             | 37.4           |
|             | 14                             | 14.3           | o           | 52                             | 53.4           | w           | 81                             | 46.6           | w           | 69                             | 39.0           |
|             |                                |                |             | 52                             | 53.3           |             | 82                             | 46.8           |             | 67                             | 38.7           |
| <b>291.</b> | 8.5 Mg                         | Ma             | <b>296.</b> | 7.7 Mg                         | B <sub>9</sub> | <b>301.</b> | 8.2 Mg                         | B <sub>9</sub> | <b>306.</b> | 7.0 Mg                         | Ma             |
|             | 7 <sup>h</sup> 28 <sup>m</sup> | 16° 31'        |             | 7 <sup>h</sup> 29 <sup>m</sup> | 28° 35'        |             | 7 <sup>h</sup> 38 <sup>m</sup> | 20° 18'        |             | 7 <sup>h</sup> 44 <sup>m</sup> | 39° 58'        |
| w           | 2.07                           | 29.4           | w           | 14.00                          | 35.2           | o           | 14.17                          | 59.0           | o           | 31.86                          | 56.0           |
| w           | 02                             | 29.2           | w           | 02                             | 36.4           | o           | 20                             | 59.9           | o           | 84                             | 55.6           |
| o           | 06                             | 30.0           | w           |                                |                | w           | 18                             | 59.4           | w           | 80                             | 56.3           |
| o           | 03                             | 29.7           |             |                                |                | w           | 20                             | 58.1           | w           | 86                             | 56.0           |
|             | 04                             | 29.6           |             | 01                             | 35.8           |             | 19                             | 59.1           |             | 84                             | 56.0           |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>307.</b> | 7.0 Mg                         | Ma             | <b>312.</b> | 7.7 Mg                         | Ma             | <b>317.</b> | 8.5 Mg                         | Ma             | <b>322.</b> | 8.0 Mg                         | Ma             |
|             | 7 <sup>h</sup> 46 <sup>m</sup> | 36° 23'        |             | 7 <sup>h</sup> 53 <sup>m</sup> | 34° 54'        |             | 8 <sup>h</sup> 4 <sup>m</sup>  | —0° 47'        |             | 8 <sup>h</sup> 15 <sup>m</sup> | 35° 35'        |
| s           |                                |                | s           |                                |                | s           |                                |                | s           |                                |                |
| o           | 37.26                          | 4.6            | o           | 58.90                          | 28.7           | o           | 9.71                           | 11.6           | o           | 47.48                          | 44.1           |
| o           | 20                             | 4.8            | o           | 90                             | 28.8           | o           | 63                             | 11.4           | o           | 54                             | 43.3           |
| w           | 28                             | 4.5            | w           | 82                             | 28.9           | w           | 62                             | 10.4           | w           | 46                             | 44.1           |
| w           | 27                             | 4.1            | w           | 88                             | 28.1           | w           | 60                             | 11.3           | w           | 46                             | 44.1           |
| w           | 24                             | 4.8            |             | 88                             | 28.6           |             | 64                             | 11.2           |             | 48                             | 43.9           |
|             | 25                             | 4.6            |             |                                |                |             |                                |                |             |                                |                |
| <b>308.</b> | 8.3 Mg                         | Ma             | <b>313.</b> | 8.3 Mg                         | B <sub>8</sub> | <b>318.</b> | 8.5 Mg                         | Ma             | <b>323.</b> | 7.8 Mg                         | Mb             |
|             | 7 <sup>h</sup> 49 <sup>m</sup> | —4° 5'         |             | 7 <sup>h</sup> 56 <sup>m</sup> | 16° 24'        |             | 8 <sup>h</sup> 7 <sup>m</sup>  | 6° 2'          |             | 8 <sup>h</sup> 20 <sup>m</sup> | —8° 14'        |
| o           | 51.32                          | 3.7            | o           | 15.46                          | 31.4           | w           | 23.16                          | 51.8           | o           | 23.26                          | 53.3           |
| o           | 39                             | 3.5            | o           | 44                             | 32.3           | o           | 22                             | 52.7           | w           | 35                             | 53.8           |
| o           | 38                             | 3.3            | w           | 44                             | 32.1           | o           | 25                             | 51.8           | w           | 30                             | 54.5           |
|             | 36                             | 3.5            | w           | 44                             | 32.4           | w           | 21                             | 52.7           | o           | 34                             | 53.3           |
|             |                                |                | w           | 41                             | 31.8           |             | 21                             | 52.2           |             | 31                             | 53.7           |
|             |                                |                |             | 44                             | 32.0           |             |                                |                |             |                                |                |
| <b>309.</b> | 7.0 Mg                         | B <sub>8</sub> | <b>314.</b> | 6.8 Mg                         | Mb             | <b>319.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>324.</b> | 7.9 Mg                         | Mb             |
|             | 7 <sup>h</sup> 51 <sup>m</sup> | 23° 50'        |             | 7 <sup>h</sup> 58 <sup>m</sup> | 36° 34'        |             | 8 <sup>h</sup> 8 <sup>m</sup>  | 11° 26'        |             | 8 <sup>h</sup> 20 <sup>m</sup> | 4° 46'         |
| o           | 5.03                           | 47.8           |             | 10.23                          | 49.8           | o           | 11.02                          | 12.7           | o           | 40.82                          | 14.6           |
| o           | 07                             | 47.2           | w           | 28                             | 50.4           | o           | 12                             | 12.9           | o           | 91                             | 14.8           |
| o           | 02                             | 47.5           | o           | 35                             | 49.8           | w           | 11                             | 11.5           | o           | 86                             | 14.8           |
| w           | 09                             | 47.7           | o           | 28                             | 50.4           | w           | 10                             | 12.8           | w           | 88                             | 13.9           |
| w           | 08                             | 47.5           |             | 28                             | 50.1           |             | 09                             | 12.5           | w           | 87                             | 14.8           |
|             | 06                             | 47.5           |             |                                |                |             |                                |                |             | 87                             | 14.6           |
| <b>310.</b> | 9.0 Mg                         | B <sub>8</sub> | <b>315.</b> | 8.2 Mg                         | Ma             | <b>320.</b> | 8.9 Mg                         | Mc             | <b>325.</b> | 7.8 Mg                         | B <sub>8</sub> |
|             | 7 <sup>h</sup> 51 <sup>m</sup> | —0° 3'         |             | 7 <sup>h</sup> 59 <sup>m</sup> | 24° 44'        |             | 8 <sup>h</sup> 9 <sup>m</sup>  | 24° 59'        |             | 8 <sup>h</sup> 21 <sup>m</sup> | —9° 30'        |
| w           | 36.60                          | 29.2           | o           | 6.60                           | 41.7           | w           | 41.86                          | 24.8           | o           | 6.64                           | 42.0           |
| w           | 51                             | 29.8           | w           | 50                             | 41.3           | o           | 90                             | 24.5           | o           | 69                             | 42.2           |
| o           | 62                             | 29.8           | w           | 54                             | 42.1           | w           | 84                             | 23.9           | o           | 60                             | 42.6           |
|             | 58                             | 29.6           | o           | 63                             | 41.8           | w           | 89                             | 24.3           | w           | 63                             | 41.6           |
|             |                                |                |             | 57                             | 41.7           |             | 87                             | 24.4           |             | 64                             | 42.1           |
| <b>311.</b> | 8.3 Mg                         | B              | <b>316.</b> | 6.8 Mg                         | Ma             | <b>321.</b> | 7.2 Mg                         | B <sub>8</sub> | <b>326.</b> | 8.4 Mg                         | Mc             |
|             | 7 <sup>h</sup> 53 <sup>m</sup> | —1° 23'        |             | 8 <sup>h</sup> 3 <sup>m</sup>  | —3° 9'         |             | 8 <sup>h</sup> 10 <sup>m</sup> | 16° 20'        |             | 8 <sup>h</sup> 25 <sup>m</sup> | —6° 2'         |
| o           | 9.66                           | 15.6           | o           | 28.69                          | 46.4           | o           | 14.12                          | 3.7            | w           | 32.60                          | 12.2           |
| o           | 64                             | 16.6           | o           | 79                             | 46.2           | o           | 12                             | 3.4            | o           | 69                             | 12.4           |
| w           | 70                             | —              | w           | 70                             | 46.5           | w           | 12                             | 3.7            | o           | 73                             | 12.5           |
| w           | 67                             | 16.2           | w           | 70                             | 46.7           | w           | 16                             | 3.2            | w           | 68                             | 12.0           |
|             | 67                             | 16.1           |             | 72                             | 46.4           |             | 13                             | 3.5            |             | 68                             | 12.3           |

|             |                                |                |             |                                |                |             |                                |                |             |                                |                |
|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|-------------|--------------------------------|----------------|
| <b>327.</b> | 7.8 Mg                         | B <sub>8</sub> | <b>332.</b> | 7.6 Mg                         | Ma             | <b>337.</b> | 7.1 Mg                         | Ma             | <b>342.</b> | 8.3 Mg                         | Ma             |
|             | 8 <sup>h</sup> 26 <sup>m</sup> | —6° 52'        |             | 8 <sup>h</sup> 37 <sup>m</sup> | 39° 21'        |             | 8 <sup>h</sup> 44 <sup>m</sup> | 10° 44'        |             | 8 <sup>h</sup> 53 <sup>m</sup> | 9° 35'         |
| s           |                                |                | s           |                                |                | s           |                                |                | s           |                                |                |
| o           | 27.84                          | 30.3           | o           | 13.48                          | 42.1           | o           | 3.13                           | 36.6           | o           | 7.76                           | 43.8           |
| o           | 80                             | 28.5           | o           | 54                             | 43.0           | o           | 18                             | 36.3           | o           | 71                             | 43.8           |
| o           | 64                             | 29.3           | w           | 54                             | 41.4           | o           | 14                             | 36.4           | w           | 72                             | 42.6           |
| w           | 79                             | 29.6           | w           | 51                             | 42.4           | w           | 16                             | 36.1           | w           | 73                             | 43.0           |
| w           | 77                             | 29.2           |             | 52                             | 42.2           | w           | 16                             | 36.6           |             | 73                             | 43.3           |
|             | 77                             | 29.4           |             |                                |                |             | 15                             | 36.4           |             |                                |                |
| <b>328.</b> | 8.0 Mg                         | B <sub>8</sub> | <b>333.</b> | 8.0 Mg                         | Ma             | <b>338.</b> | 8.7 Mg                         | Ma             | <b>343.</b> | 8.2 Mg                         | Ma             |
|             | 8 <sup>h</sup> 29 <sup>m</sup> | —0° 1'         |             | 8 <sup>h</sup> 37 <sup>m</sup> | —5° 18'        |             | 8 <sup>h</sup> 45 <sup>m</sup> | —7° 37'        |             | 8 <sup>h</sup> 53 <sup>m</sup> | 33° 31'        |
| o           | 7.45                           | 16.0           | o           | 40.36                          | 37.0           | o           | 15.51                          | 49.0           | o           | 9.25                           | 11.7           |
| o           | 53                             | 16.8           | w           | 39                             | 36.7           | o           | 54                             | 47.7           | o           | 28                             | 11.5           |
| w           | 63                             | 15.9           | w           | 36                             | 36.0           | o           | 53                             | 50.0           | w           | 28                             | 11.6           |
| w           | 56                             | 15.4           |             | 37                             | 37.1           | w           | 56                             | 47.4           |             | 27                             | 11.6           |
|             | 54                             | 16.0           |             |                                |                | w           | 47                             | 49.2           |             |                                |                |
| <b>329.</b> | 7.7 Mg                         | Ma             | <b>334.</b> | 7.5 Mg                         | Ma             |             | 52                             | 48.7           | <b>344.</b> | 8.5 Mg                         | Ma             |
|             | 8 <sup>h</sup> 29 <sup>m</sup> | —9° 42'        |             | 8 <sup>h</sup> 37 <sup>m</sup> | —2° 44'        |             |                                |                |             | 8 <sup>h</sup> 55 <sup>m</sup> | 24° 49'        |
| o           | 44.11                          | 37.4           | o           | 55.61                          | 56.7           | <b>339.</b> | 8.4 Mg                         | B <sub>5</sub> | o           | 30.98                          | 27.9           |
| o           | 09                             | 36.6           | o           | 64                             | 55.7           |             | 8 <sup>h</sup> 47 <sup>m</sup> | 19° 40'        | o           | 88                             | 28.3           |
| o           | 02                             | 36.3           | w           | 60                             | 56.4           | o           | 32.70                          | 0.3            | w           | 90                             | 28.3           |
| w           | 06                             | 38.4           | w           | 52                             | 56.3           | o           | 62                             | 0.3            | w           | 93                             | 27.9           |
| w           | 07                             | 38.0           |             | 59                             | 56.3           | w           | 57                             | 0.1            | o           | 90                             | 28.7           |
|             | 07                             | 37.3           |             |                                |                | w           | 63                             | 0.3            |             | 92                             | 28.4           |
| <b>330.</b> | 7.7 Mg                         | Ma             | <b>335.</b> | 7.5 Mg                         | B <sub>8</sub> |             | 63                             | 0.3            | <b>345.</b> | 8.5 Mg                         | Ma             |
|             | 8 <sup>h</sup> 31 <sup>m</sup> | —10° 59'       |             | 8 <sup>h</sup> 39 <sup>m</sup> | 4° 38'         |             |                                |                |             | 8 <sup>h</sup> 56 <sup>m</sup> | —7° 5'         |
| o           | 51.12                          | 57.1           | o           | 35.04                          | 16.5           | <b>340.</b> | 8.5 Mg                         | Ma             | o           | 43.75                          | 2.4            |
| w           | —                              | 59.9           | o           | —                              | 17.3           |             | 8 <sup>h</sup> 48 <sup>m</sup> | 4° 13'         | o           | 76                             | 1.6            |
| o           | 08                             | 57.4           | w           | 02                             | 17.2           | w           | 58.47                          | 35.2           | w           | 84                             | 1.0            |
|             | 10                             | 58.1           | w           | 04                             | 17.9           | w           | 57                             | 34.4           | w           | 80                             | 1.0            |
|             |                                |                | w           | 04                             | 16.8           | o           | 51                             | 34.1           |             | 79                             | 1.5            |
| <b>331.</b> | 7.7 Mg                         | Mb             | <b>336.</b> | 6.8 Mg                         | Ma             | <b>341.</b> | 9.0 Mg                         | Ma             | <b>346.</b> | 8.0 Mg                         | K <sub>0</sub> |
|             | 8 <sup>h</sup> 35 <sup>m</sup> | —9° 17'        |             | 8 <sup>h</sup> 44 <sup>m</sup> | 12° 51'        |             | 8 <sup>h</sup> 50 <sup>m</sup> | 44° 40'        |             | 8 <sup>h</sup> 58 <sup>m</sup> | 14° 30'        |
| o           | 40.01                          | 20.8           | o           | 2.59                           | 26.2           | o           | 29.00                          | 24.8           | o           | 40.36                          | 58.1           |
| o           | 39.96                          | 21.1           | o           | 69                             | 27.7           | w           | 99                             | 26.1           | o           | 28                             | 57.6           |
| o           | 90                             | 20.8           | o           | 59                             | 27.1           | o           | 05                             | 25.4           | o           | 31                             | 58.6           |
| w           | 97                             | 21.1           | w           | 58                             | 26.5           | w           | 05                             | 25.0           | w           | 34                             | 57.8           |
| w           | 00                             | 22.1           | w           | 67                             | 25.7           | w           | 02                             | 24.7           | w           | 28                             | 58.3           |
|             | 97                             | 21.2           |             | 62                             | 26.6           |             | 02                             | 25.2           |             | 31                             | 58.1           |

|             |                                |                |             |                                |         |             |                                |         |             |                                |         |
|-------------|--------------------------------|----------------|-------------|--------------------------------|---------|-------------|--------------------------------|---------|-------------|--------------------------------|---------|
| <b>347.</b> | 7.9 Mg                         | Ma             | <b>352.</b> | 8.3 Mg                         | Mb      | <b>357.</b> | 7.7 Mg                         | Ma      | <b>362.</b> | 9.0 Mg                         | Ma      |
|             | 8 <sup>h</sup> 59 <sup>m</sup> | 29° 36'        |             | 9 <sup>h</sup> 16 <sup>m</sup> | 53° 59' |             | 9 <sup>h</sup> 23 <sup>m</sup> | 50° 23' |             | 9 <sup>h</sup> 38 <sup>m</sup> | 54° 9'  |
| s           | "                              |                | s           | "                              | "       | s           | "                              |         | s           | "                              |         |
| o           | 20.16                          | 5.8            | o           | 1.56                           | 23.8    | w           | 17.30                          | 50.6    | o           | 22.24                          | 4.4     |
| o           | 16                             | 4.7            | o           | 65                             | 23.9    | o           | 30                             | 51.3    | o           | 12                             | 4.3     |
| w           | 15                             | 5.2            | o           | 70                             | 23.3    | o           | 38                             | 51.6    |             | 18                             | 4.4     |
| w           | 15                             | 5.9            | w           | 58                             | 24.2    | w           | 41                             | 50.5    |             |                                |         |
|             | 16                             | 5.4            | w           | 66                             | 23.8    |             | 35                             | 51.0    |             |                                |         |
|             |                                |                | w           | 63                             | 23.8    |             |                                |         |             |                                |         |
| <b>348.</b> | 8.3 Mg                         | Ma             | <b>353.</b> | 8.2 Mg                         | Ma      | <b>358.</b> | 8.5 Mg                         | Ma      | <b>363.</b> | 7.9 Mg                         | Ma      |
|             | 9 <sup>h</sup> 1 <sup>m</sup>  | —9° 22'        |             | 9 <sup>h</sup> 16 <sup>m</sup> | —4° 45' |             | 9 <sup>h</sup> 26 <sup>m</sup> | 25° 25' |             | 9 <sup>h</sup> 39 <sup>m</sup> | 35° 6'  |
| o           | 5.85                           | 8.1            | w           | 26.13                          | 47.0    | o           | 15.67                          | 0.2     | o           | 12.81                          | 22.2    |
| o           | 88                             | 6.2            | w           | 16                             | 45.8    | o           | 69                             | 1.1     | w           | 90                             | 23.3    |
| w           | 91                             | 6.2            | o           | 18                             | 46.7    | w           | 68                             | 1.5     | w           | 92                             | 22.6    |
| w           | 91                             | 6.4            | o           | 16                             | 46.8    | w           | —                              | 1.4     |             | 89                             | 22.9    |
|             | 89                             | 6.7            |             | 16                             | 46.6    | w           | 65                             | 0.9     |             |                                |         |
|             |                                |                |             | 16                             | 46.6    |             | 67                             | 1.0     | <b>364.</b> | 7.9 Mg                         | Ma      |
| <b>349.</b> | 8.0 Mg                         | Ma             | <b>354.</b> | 8.5 Mg                         | Mb      | <b>359.</b> | 8.2 Mg                         | Ma      | <b>364.</b> | 7.9 Mg                         | Ma      |
|             | 9 <sup>h</sup> 7 <sup>m</sup>  | —6° 38'        |             | 9 <sup>h</sup> 16 <sup>m</sup> | 12° 35' |             | 9 <sup>h</sup> 30 <sup>m</sup> | 8° 33'  |             | 9 <sup>h</sup> 42 <sup>m</sup> | 33° 10' |
| o           | 42.28                          | 5.4            | o           | 43.40                          | 58.6    | w           | 13.38                          | 42.0    | o           | 14.38                          | 17.3    |
| o           | 26                             | 6.3            | w           | 39                             | 58.8    | o           | 41                             | 41.8    | w           | 35                             | 17.8    |
| w           | 32                             | 6.3            | w           | 40                             | 59.2    | w           | 36                             | 41.2    | o           | 39                             | 17.4    |
|             | 29                             | 6.0            | o           | 47                             | 60.6    | o           | 43                             | 41.6    | w           | 39                             | 17.6    |
|             |                                |                |             | 42                             | 59.3    |             | 40                             | 41.6    |             | 38                             | 17.5    |
| <b>350.</b> | 6.1 Mg                         | A <sub>0</sub> | <b>355.</b> | 8.0 Mg                         | Ma      | <b>360.</b> | 9.1 Mg                         | Ma      | <b>365.</b> | 7.3 Mg                         | Ma      |
|             | 9 <sup>h</sup> 7 <sup>m</sup>  | 4° 12'         |             | 9 <sup>h</sup> 21 <sup>m</sup> | 50° 3'  |             | 9 <sup>h</sup> 35 <sup>m</sup> | 3° 52'  |             | 9 <sup>h</sup> 45 <sup>m</sup> | 31° 47' |
| o           | 49.60                          | —              | o           | 13.89                          | 22.6    | w           | —                              | 21.5    | o           | 49.28                          | 5.4     |
| o           | 62                             | 45.5           | o           | 91                             | 23.6    | w           | 11.06                          | 21.9    | o           | 32                             | 6.1     |
| w           | 66                             | 47.1           | w           | 94                             | 21.6    | o           | 11                             | 21.6    | w           | 31                             | 6.1     |
| w           | 66                             | 47.4           | w           | 95                             | 22.0    | o           | 03                             | 21.9    | w           | 31                             | 6.6     |
| o           | 64                             | 46.3           |             | 92                             | 22.4    | w           | 07                             | 22.1    |             | 30                             | 6.0     |
|             | 64                             | 46.6           |             |                                |         |             | 07                             | 21.8    | <b>366.</b> | 8.0 Mg                         | Mb      |
| <b>351.</b> | 8.6 Mg                         | Mb             | <b>356.</b> | 8.2 Mg                         | Ma      | <b>361.</b> | 7.3 Mg                         | Ma      | <b>366.</b> | 8.0 Mg                         | Mb      |
|             | 9 <sup>h</sup> 10 <sup>m</sup> | 45° 2'         |             | 9 <sup>h</sup> 22 <sup>m</sup> | 23° 42' |             | 9 <sup>h</sup> 37 <sup>m</sup> | 51° 39' |             | 9 <sup>h</sup> 49 <sup>m</sup> | 10° 39' |
| o           | 17.93                          | 48.0           | w           | 56.86                          | 8.0     | o           | 4.88                           | 6.6     | w           | 37                             | 16.6    |
| o           | 01                             | 48.6           | o           | 89                             | 7.6     | o           | 91                             | 7.5     | w           | —                              | 16.3    |
| w           | 96                             | 48.3           | o           | 92                             | 6.1     | w           | 84                             | 5.5     | o           | 34                             | 17.4    |
|             | 97                             | 48.3           | w           | 99                             | 6.6     | w           | 89                             | 4.8     | w           | 42                             | 16.5    |
|             |                                |                | w           | 92                             | 7.1     |             | 88                             | 6.1     |             | 38                             | 16.7    |



|             |                                 |         |             |                                 |                |             |                                 |         |             |                                 |         |
|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|-------------|---------------------------------|---------|
| <b>387.</b> | 8.0 Mg                          | Ma      | <b>392.</b> | 7.3 Mg                          | B <sub>3</sub> | <b>397.</b> | 7.7 Mg                          | Ma      | <b>402.</b> | 8.8 Mg                          | Ma      |
|             | 11 <sup>h</sup> 1 <sup>m</sup>  | 1° 39'  |             | 11 <sup>h</sup> 11 <sup>m</sup> | —3° 0'         |             | 11 <sup>h</sup> 35 <sup>m</sup> | 42° 29' |             | 11 <sup>h</sup> 44 <sup>m</sup> | —2° 50' |
| s           |                                 |         | s           |                                 |                | s           |                                 |         | s           |                                 |         |
| o           | 43.47                           | 52.7    | o           | 54.70                           | 50.6           | o           | 37.00                           | 27.5    | o           | 59.02                           | 42.3    |
| w           | 44                              | 54.1    | o           | 70                              | 50.2           | o           | 01                              | 28.4    | w           | 58.90                           | 41.4    |
| o           | 54                              | 53.2    | w           | 70                              | 50.6           | w           | 04                              | 27.8    | o           | 04                              | 42.4    |
| w           | 50                              | 52.6    | w           | 68                              | 50.2           | w           | 02                              | 28.2    | w           | 96                              | 42.3    |
|             | 49                              | 53.2    |             | 70                              | 50.4           |             | 02                              | 28.0    |             | 98                              | 42.1    |
| <b>388.</b> | 7.1 Mg                          | Ma      | <b>393.</b> | 8.7 Mg                          | Ma             | <b>398.</b> | 7.8 Mg                          | Ma      | <b>403.</b> | 8.5 Mg                          | Ma      |
|             | 11 <sup>h</sup> 4 <sup>m</sup>  | 51° 50' |             | 11 <sup>h</sup> 17 <sup>m</sup> | 32° 30'        |             | 11 <sup>h</sup> 37 <sup>m</sup> | 44° 39' |             | 11 <sup>h</sup> 45 <sup>m</sup> | 18° 42' |
| o           | 26.14                           | 3.2     | o           | 5.49                            | 12.9           | o           | 12.18                           | 39.8    | w           | 6.94                            | 10.4    |
| o           | 16                              | 3.3     | o           | 48                              | 12.8           | w           | 24                              | 39.7    | o           | 92                              | 10.4    |
| w           | 08                              | 3.4     | w           | 52                              | 11.9           | w           | 16                              | 39.1    | o           | 93                              | 9.0     |
|             | 13                              | 3.3     | w           | 54                              | 12.8           | o           | 14                              | 40.4    | w           | 86                              | 10.4    |
|             |                                 |         | o           | 52                              | 11.9           |             | 18                              | 39.8    |             | 91                              | 10.0    |
| <b>389.</b> | 8.3 Mg                          | Mb      |             | 51                              | 12.5           |             |                                 |         |             |                                 |         |
|             | 11 <sup>h</sup> 4 <sup>m</sup>  | 20° 42' | <b>394.</b> | 7.2 Mg                          | Mb             | <b>399.</b> | 8.5 Mg                          | Ma      | <b>404.</b> | 7.7 Mg                          | Ma      |
| o           | 28.83                           | 47.3    |             | 11 <sup>h</sup> 23 <sup>m</sup> | 45° 38'        |             | 11 <sup>h</sup> 39 <sup>m</sup> | 11° 9'  |             | 11 <sup>h</sup> 46 <sup>m</sup> | 51° 52' |
| w           | 78                              | 47.6    | o           | 15.24                           | 53.2           | w           | 40.06                           | 7.6     | o           | 25.69                           | 49.3    |
| o           | 83                              | 47.4    | o           | 24                              | 52.9           | o           | 04                              | 8.2     | o           | 66                              | 47.3    |
| w           | 73                              | 48.2    | w           | 33                              | 52.6           | o           | 97                              | 8.4     | w           | 60                              | 46.2    |
|             | 79                              | 47.6    | w           | 36                              | 52.3           | w           | 07                              | 7.6     | w           | 62                              | 46.3    |
|             |                                 |         | o           | 16                              | 51.6           |             | 03                              | 8.0     |             | 64                              | 47.3    |
| <b>390.</b> | 7.5 Mg                          | Mb      |             | 27                              | 52.5           |             |                                 |         |             |                                 |         |
|             | 11 <sup>h</sup> 6 <sup>m</sup>  | 11° 45' | <b>395.</b> | 7.1 Mg                          | B <sub>9</sub> | <b>400.</b> | 7.2 Mg                          | Mb      | <b>405.</b> | 8.4 Mg                          | Ma      |
| o           | 13.66                           | 27.7    |             | 11 <sup>h</sup> 25 <sup>m</sup> | 49° 23'        |             | 11 <sup>h</sup> 41 <sup>m</sup> | 36° 21' |             | 11 <sup>h</sup> 56 <sup>m</sup> | 4° 34'  |
| o           | 59                              | 27.8    | o           | 53.72                           | 57.5           | o           | 11.26                           | 36.9    | o           | 13.80                           | 5.5     |
| o           | 66                              | 27.6    | o           | 63                              | 57.0           | o           | 26                              | 36.2    | o           | 88                              | 6.3     |
| w           | 56                              | 27.6    | w           | 68                              | 56.2           | w           | 24                              | 36.1    | w           | 74                              | 7.0     |
| w           | 64                              | 26.8    | w           | 69                              | 55.8           | w           | 18                              | 37.2    | w           | 77                              | 6.6     |
|             | 62                              | 27.5    |             | 68                              | 56.6           |             | 23                              | 36.6    |             | 80                              | 6.4     |
| <b>391.</b> | 7.4 Mg                          | Ma      | <b>396.</b> | 8.1 Mg                          | Ma             | <b>401.</b> | 7.1 Mg                          | Ma      | <b>406.</b> | 7.8 Mg                          | Ma      |
|             | 11 <sup>h</sup> 10 <sup>m</sup> | —7° 52' |             | 11 <sup>h</sup> 27 <sup>m</sup> | 18° 37'        |             | 11 <sup>h</sup> 41 <sup>m</sup> | 7° 38'  |             | 11 <sup>h</sup> 58 <sup>m</sup> | 8° 32'  |
| o           | 58.02                           | 12.8    | o           | 40.58                           | 10.4           | o           | 47.24                           | 29.7    | o           | 17.01                           | 17.5    |
| o           | 02                              | 13.3    | o           | 66                              | 10.2           | w           | 22                              | 29.2    | w           | 16.94                           | 16.9    |
| w           | 04                              | 13.2    | w           | 62                              | 9.8            | w           | 18                              | 29.2    | o           | 98                              | 16.8    |
| w           | 00                              | 10.6    | w           | 60                              | 9.5            | o           | 18                              | 29.6    | w           | 01                              | 16.8    |
| o           | 99                              | 11.9    | o           | 59                              | 10.5           |             | 20                              | 29.4    |             | 98                              | 17.0    |
|             | 01                              | 12.4    |             | 61                              | 10.1           |             |                                 |         |             |                                 |         |

|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
|-------------|---------------------------------|---------|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|
| <b>407.</b> | 7.7 Mg                          | Mb      | <b>412.</b> | 9.0 Mg                          | Ma      | <b>417.</b> | 7.8 Mg                          | Ma             | <b>422.</b> | 8.3 Mg                          | Mc      |
|             | 11 <sup>h</sup> 59 <sup>m</sup> | 30° 8'  |             | 12 <sup>h</sup> 5 <sup>m</sup>  | 8° 38'  |             | 12 <sup>h</sup> 20 <sup>m</sup> | 1° 50'         |             | 12 <sup>h</sup> 26 <sup>m</sup> | 4° 52'  |
| s           |                                 |         | s           |                                 |         | s           |                                 |                | s           |                                 |         |
| o           | 15.31                           | 50.6    | w           | 28.65                           | 48.7    | o           | 23.01                           | 57.3           | o           | 4.23                            | 51.4    |
| o           | 38                              | 50.0    | o           | 71                              | 49.0    | w           | 01                              | 56.1           | o           | 24                              | 52.0    |
| w           | 42                              | 50.0    | o           | 77                              | 47.9    | w           | 04                              | 56.0           | w           | 23                              | 52.4    |
| w           | 40                              | 49.9    | w           | 72                              | 48.2    | o           | 09                              | 55.6           | w           | 24                              | 51.6    |
|             | 38                              | 50.1    | w           | 72                              | 48.7    |             | 04                              | 56.3           |             | 24                              | 51.8    |
|             |                                 |         | w           | 71                              | 48.5    |             |                                 |                |             |                                 |         |
| <b>408.</b> | 7.7 Mg                          | Ma      | <b>413.</b> | 8.2 Mg                          | Ma      | <b>418.</b> | 8.8 Mg                          | Ma             | <b>423.</b> | 7.4 Mg                          | Ma      |
|             | 12 <sup>h</sup> 0 <sup>m</sup>  | 5° 23'  |             | 12 <sup>h</sup> 12 <sup>m</sup> | 28° 12' |             | 12 <sup>h</sup> 24 <sup>m</sup> | —2° 17'        |             | 12 <sup>h</sup> 29 <sup>m</sup> | 24° 54' |
| o           | 0.68                            | 59.7    | o           | 42.25                           | 24.2    | o           | 7.36                            | 42.0           | o           | 21.24                           | 43.5    |
| o           | 66                              | 58.8    | w           | 26                              | 23.2    | o           | 36                              | 42.4           | o           | 20                              | 43.4    |
| w           | 69                              | 59.4    | o           | 28                              | 24.0    | w           | 38                              | 42.4           | w           | 12                              | 43.6    |
| w           | 72                              | 58.7    | o           | 26                              | 24.7    | w           | 33                              | 41.8           | w           | 14                              | 43.3    |
|             | 69                              | 59.2    | w           | 33                              | 24.2    |             | 36                              | 42.2           |             | 18                              | 43.4    |
|             |                                 |         | w           | 28                              | 24.1    |             |                                 |                |             |                                 |         |
| <b>409.</b> | 9.0 Mg                          | Ma      | <b>414.</b> | 8.2 Mg                          | Mb      | <b>419.</b> | 7.9 Mg                          | K <sub>5</sub> | <b>424.</b> | var.                            | Md      |
|             | 12 <sup>h</sup> 0 <sup>m</sup>  | 3° 5'   |             | 12 <sup>h</sup> 17 <sup>m</sup> | 5° 19'  |             | 12 <sup>h</sup> 24 <sup>m</sup> | 30° 3'         |             | 12 <sup>h</sup> 34 <sup>m</sup> | 7°27'   |
| o           | 18.05                           | 14.4    | o           | 57.81                           | 16.2    | o           | 22.17                           | 16.9           | w           | 14.23                           | 1.2     |
| o           | 10                              | 14.1    | o           | 80                              | 15.1    | o           | 16                              | 17.2           | o           | 26                              | 1.0     |
| w           | 01                              | 14.4    | w           | 76                              | 15.8    | w           | 16                              | 16.7           | o           | 20                              | 1.0     |
| w           | 00                              | 14.1    | w           | 76                              | 17.1    | w           | 18                              | 16.8           | w           | 23                              | 1.3     |
|             | 04                              | 14.2    |             | 78                              | 16.1    |             | 17                              | 16.9           | w           | 26                              | 0.5     |
|             |                                 |         |             |                                 |         |             |                                 |                |             | 24                              | 1.0     |
| <b>410.</b> | 6.8 Mg                          | Ma      | <b>415.</b> | 8.2 Mg                          | Ma      | <b>420.</b> | 8.8 Mg                          | Mb             | <b>425.</b> | 7.6 Mg                          | Ma      |
|             | 12 <sup>h</sup> 1 <sup>m</sup>  | —5° 22' |             | 12 <sup>h</sup> 19 <sup>m</sup> | 41° 11' |             | 12 <sup>h</sup> 24 <sup>m</sup> | —3° 38'        |             | 12 <sup>h</sup> 36 <sup>m</sup> | —8° 47' |
| o           | 16.90                           | 42.4    | o           | 45.31                           | 5.7     | o           | 50.78                           | 41.3           | w           | 47.82                           | 3.6     |
| o           | 88                              | 41.8    | w           | 26                              | 5.7     | w           | 84                              | 40.4           | w           | 82                              | 4.2     |
| w           | 79                              | 42.1    | w           | 24                              | 5.6     | o           | 79                              | 40.2           | w           | 76                              | 3.4     |
|             | 86                              | 42.1    | o           | 22                              | 5.6     |             | 80                              | 40.6           | o           | 88                              | 4.0     |
|             |                                 |         |             | 26                              | 5.6     |             |                                 |                | o           | 84                              | 3.3     |
| <b>411.</b> | 7.0 Mg                          | Mb      | <b>416.</b> | 8.1 Mg                          | Mb      | <b>421.</b> | 7.5 Mg                          | Mb             | <b>426.</b> | 8.1 Mg                          | Ma      |
|             | 12 <sup>h</sup> 2 <sup>m</sup>  | —6° 17' |             | 12 <sup>h</sup> 19 <sup>m</sup> | 6° 26'  |             | 12 <sup>h</sup> 25 <sup>m</sup> | 18° 21'        |             | 12 <sup>h</sup> 39 <sup>m</sup> | 10° 33' |
| o           | 56.45                           | 54.1    | o           | 54.51                           | 15.6    | o           | 53.86                           | 35.8           | o           | 1.48                            | 43.2    |
| o           | 69                              | 52.8    | w           | 55                              | 14.2    | w           | 90                              | 36.4           | w           | 51                              | 42.8    |
| w           | 62                              | 53.2    | o           | 53                              | 14.7    | o           | 94                              | 35.4           | o           | 48                              | 44.9    |
| w           | 64                              | 53.0    | o           | 54                              | 15.5    | o           | 88                              | 35.7           | w           | 49                              | 43.4    |
|             | 60                              | 53.3    | w           | 45                              | 15.8    | o           | 93                              | —              |             | 49                              | 43.6    |
|             |                                 |         | w           | 49                              | 14.8    | w           | 88                              | 34.1           |             |                                 |         |
|             |                                 |         |             | 51                              | 15.1    |             | 90                              | 35.5           |             | 49                              |         |

|             |            |           |  |             |            |                                 |                      |             |                                 |            |                      |                                 |                                |   |           |
|-------------|------------|-----------|--|-------------|------------|---------------------------------|----------------------|-------------|---------------------------------|------------|----------------------|---------------------------------|--------------------------------|---|-----------|
| <b>427.</b> | <b>8.5</b> | <b>Mg</b> | <b>Ma</b>                                | <b>432.</b> | <b>6.4</b> | <b>Mg</b>                       | <b>B<sub>9</sub></b> | <b>437.</b> | <b>8.1</b>                      | <b>Mg</b>  | <b>K<sub>5</sub></b> | <b>442.</b>                     | <b>8.0</b>                     | <b>Mg</b>                               | <b>Mb</b> |
|             |            |           | 12 <sup>h</sup> 39 <sup>m</sup> — 0° 58' |             |            | 12 <sup>h</sup> 42 <sup>m</sup> | 6° 24'               |             | 12 <sup>h</sup> 53 <sup>m</sup> | 18° 13'    |                      | 12 <sup>h</sup> 59 <sup>m</sup> | 11° 40'                        |   |           |
| o           | 23.83      |           | s  | o           | 46.24      |                                 | ”                    | o           | 57.11                           | ”          | o                    | 47.64                           | ”                              | 55.2                                    |           |
| o           | 83         | 40.8      | ”  | w           | 32         | 37.0                            |                      | w           | 10                              | 21.0       | o                    | —                               | —                              | 55.5                                    |           |
| w           | 75         | 40.5      |  | w           | 36         | 37.6                            |                      | w           | 05                              | 21.3       | o                    | 68                              | 54.1                           |   |           |
| w           | 86         | 40.8      |  | o           | 33         | 37.2                            |                      | o           | 12                              | 20.8       | w                    | 71                              | 53.0                           |   |           |
|             | 82         | 40.8      |  |             | 31         | 37.2                            |                      |             | 10                              | 20.8       | w                    | 69                              | 53.9                           |   |           |
|             |            |           |  |             |            |                                 |                      |             |                                 |            |                      | 68                              | 54.3                           |   |           |
|             |            |           |  | <b>433.</b> | <b>7.8</b> | <b>Mg</b>                       | <b>Ma</b>            |             |                                 |            |                      |                                 |                                |   |           |
| <b>428.</b> | <b>7.8</b> | <b>Mg</b> | <b>Ma</b>                                |             |            | 12 <sup>h</sup> 44 <sup>m</sup> | 19° 46'              | <b>438.</b> | <b>8.0</b>                      | <b>Mg</b>  | <b>Ma</b>            | <b>443.</b>                     | <b>7.0</b>                     | <b>Mg</b>                               | <b>Ma</b> |
|             |            |           | 12 <sup>h</sup> 39 <sup>m</sup> 41° 43'  | o           | —          |                                 | 51.7                 |             | 12 <sup>h</sup> 55 <sup>m</sup> | 34° 59'    |                      | 13 <sup>h</sup> 0 <sup>m</sup>  | 43° 27'                        |   |           |
| o           | 33.75      | 16.0      |  | o           | 7.66       | 49.9                            |                      | o           | 0.15                            | 56.2       | w                    | 3.70                            | 29.4                           |   |           |
| o           | 78         | 15.2      |  | o           | 76         | 50.5                            |                      | w           | 17                              | 56.1       | w                    | 78                              | 28.8                           |   |           |
| w           | 72         | 15.9      |  | w           | 73         | 51.2                            |                      | w           | 18                              | 55.7       | o                    | 72                              | 30.6                           |   |           |
| w           | 70         | 15.8      |  | w           | 73         | 51.1                            |                      | o           | 18                              | 55.2       | o                    | 76                              | 29.9                           |   |           |
|             | 74         | 15.7      |  | w           | 72         | 50.8                            |                      |             | 17                              | 55.8       |                      | 74                              | 29.7                           |   |           |
|             |            |           |  |             | 72         | 50.9                            |                      |             |                                 |            |                      |                                 |                                |   |           |
| <b>429.</b> | <b>8.2</b> | <b>Mg</b> | <b>Ma</b>                                | <b>434.</b> | <b>8.7</b> | <b>Mg</b>                       | <b>Ma p</b>          | <b>439.</b> | <b>7.9</b>                      | <b>Mg</b>  | <b>Ma</b>            | <b>444.</b>                     | <b>7.8</b>                     | <b>Mg</b>                               | <b>Ma</b> |
|             |            |           | 12 <sup>h</sup> 40 <sup>m</sup> 0° 59'   |             |            | 12 <sup>h</sup> 46 <sup>m</sup> | — 0° 18'             |             | 12 <sup>h</sup> 55 <sup>m</sup> | 0° 45'     |                      | 13 <sup>h</sup> 4 <sup>m</sup>  | 43° 37'                        |   |           |
| o           | —          | 47.2      |  | w           | 25.38      | 7.0                             |                      | w           | 46.70                           | 38.9       | w                    | 27.61                           | 43.5                           |   |           |
| o           | 7.66       | 46.2      |  | w           | 35         | 5.3                             |                      | w           | 68                              | 39.0       | w                    | 63                              | 45.6                           |   |           |
| o           | 62         | 47.0      |  | o           | 39         | 8.0                             |                      | o           | 66                              | 38.5       | o                    | 54                              | 44.8                           |   |           |
|             | 64         | 46.8      |  | o           | 38         | 7.6                             |                      | o           | 66                              | 38.0       | o                    | 52                              | 45.0                           |   |           |
|             |            |           |  |             | 38         | 7.0                             |                      |             | 68                              | 38.6       |                      | 58                              | 44.7                           |   |           |
|             |            |           |  |             |            |                                 |                      |             |                                 |            |                      |                                 |                                |   |           |
| <b>430.</b> | <b>8.0</b> | <b>Mg</b> | <b>Ma</b>                                | <b>435.</b> | <b>7.6</b> | <b>Mg</b>                       | <b>Ma</b>            |             | <b>445.</b>                     | <b>6.7</b> | <b>Mg</b>            | <b>Ma</b>                       |                                |   |           |
|             |            |           | 12 <sup>h</sup> 40 <sup>m</sup> 24° 3'   |             |            | 12 <sup>h</sup> 49 <sup>m</sup> | 47° 6'               | <b>440.</b> | <b>8.0</b>                      | <b>Mg</b>  | <b>Ma</b>            |                                 | 13 <sup>h</sup> 9 <sup>m</sup> | 37° 19'                                 |           |
| w           | 55.10      | 11.2      |  | w           | 28.68      | 44.0                            |                      |             | 12 <sup>h</sup> 57 <sup>m</sup> | 1° 58'     | w                    | 43.96                           | 56.6                           |   |           |
| w           | 05         | 11.9      |  | w           | 62         | 44.0                            |                      | o           | 13.19                           | 20.9       | o                    | 95                              | 56.9                           |   |           |
| o           | 10         | 10.9      |  | o           | 59         | 44.2                            |                      | o           | 17                              | 20.1       | w                    | 89                              | 56.9                           |   |           |
| o           | 14         | 11.0      |  | o           | 55         | 44.0                            |                      | w           | 16                              | 20.8       | o                    | 97                              | 56.8                           |   |           |
|             | 10         | 11.2      |  | w           | 62         | 43.5                            |                      |             | 17                              | 20.6       |                      | 94                              | 56.8                           |   |           |
|             |            |           |  |             | 61         | 43.9                            |                      |             |                                 |            |                      |                                 |                                |   |           |
| <b>431.</b> | <b>8.0</b> | <b>Mg</b> | <b>Ma</b>                                | <b>436.</b> | <b>6.0</b> | <b>Mg</b>                       | <b>Mb</b>            | <b>441.</b> | <b>7.2</b>                      | <b>Mg</b>  | <b>Ma</b>            | <b>446.</b>                     | <b>8.2</b>                     | <b>Mg</b>                               | <b>Mc</b> |
|             |            |           | 12 <sup>h</sup> 42 <sup>m</sup> 47° 49'  |             |            | 12 <sup>h</sup> 51 <sup>m</sup> | 47° 39'              |             | 12 <sup>h</sup> 59 <sup>m</sup> | 24° 16'    | o                    | —                               | —                              | 13 <sup>h</sup> 9 <sup>m</sup> — 2° 21' |           |
| w           | 43.33      | 53.2      |  | w           | 6.44       | 6.8                             |                      | o           | 5.76                            | 40.6       | o                    | 44.88                           | 43.2                           |   |           |
| w           | 35         | 52.2      |  | w           | 60         | 7.3                             |                      | o           | 76                              | 39.6       | w                    | 90                              | 43.8                           |   |           |
| o           | 22         | 52.6      |  | o           | 55         | 6.4                             |                      | w           | 68                              | 40.7       | w                    | 88                              | 43.9                           |   |           |
| o           | 31         | 52.4      |  | o           | 58         | 7.2                             |                      | w           | 76                              | 40.1       | o                    | 90                              | —                              |   |           |
|             | 30         | 52.6      |  |             | 54         | 6.9                             |                      |             | 74                              | 40.2       |                      | 89                              | 43.5                           |   |           |

|             |                                 |         |             |                                 |                |             |                                 |         |             |                                 |                |
|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|
| <b>447.</b> | 7.5 Mg                          | Mb      | <b>451.</b> | 7.7 Mg                          | Ma             | <b>456.</b> | 8.5 Mg                          | Mb      | <b>461.</b> | 8.2 Mg                          | Ma             |
|             | 13 <sup>h</sup> 10 <sup>m</sup> | 4° 57'  |             | 13 <sup>h</sup> 19 <sup>m</sup> | 52° 5'         |             | 13 <sup>h</sup> 33 <sup>m</sup> | 13° 52' |             | 13 <sup>h</sup> 39 <sup>m</sup> | —7° 0'         |
| s           |                                 |         | s           |                                 |                | s           |                                 |         | s           |                                 |                |
| o           | 47.92                           | 42.2    | w           | 28.80                           | 30.7           | o           | 46.15                           | 31.1    | o           | 11.18                           | 14.4           |
| o           | 91                              | 43.5    | w           | 78                              | 29.8           | w           | 03                              | 31.3    | o           | 19                              | 14.9           |
| w           | 97                              | 42.5    | o           | 88                              | 30.2           | w           | 09                              | 30.3    | w           | 18                              | 12.8           |
| w           | 92                              | 42.4    | w           | 86                              | 30.8           | o           | 08                              | 31.1    | w           | 16                              | 12.4           |
| w           | 92                              | 42.0    | o           | 94                              | 31.1           |             | 09                              | 31.0    | w           | 15                              | 13.8           |
|             | 93                              | 42.5    |             | 85                              | 30.5           |             |                                 |         |             | 17                              | 13.7           |
|             |                                 |         |             |                                 |                | <b>457.</b> | 7.6 Mg                          | Ma      |             |                                 |                |
|             |                                 |         | <b>452.</b> | 6.9 Mg                          | Mb             |             | 13 <sup>h</sup> 34 <sup>m</sup> | 42° 37' | <b>462.</b> | 7.8 Mg                          | B <sub>5</sub> |
|             |                                 |         |             | 13 <sup>h</sup> 19 <sup>m</sup> | 47° 26'        | w           | 2.20                            | 43.0    |             | 13 <sup>h</sup> 42 <sup>m</sup> | —2° 1'         |
| <b>448.</b> | 7.2 Mg                          | Mb      | w           | 29.76                           | 24.6           | o           | 12                              | 43.4    | o           | 59.10                           | 26.6           |
|             | 13 <sup>h</sup> 12 <sup>m</sup> | 6° 56'  | w           | 66                              | 24.2           | w           | 27                              | 43.5    | o           | 15                              | 27.5           |
| o           | 10.15                           | 57.2    | o           | 62                              | 24.3           | o           | 17                              | 42.0    | w           | 12                              | 27.2           |
| o           | 10                              | 58.6    | o           | 59                              | 25.2           |             | 19                              | 43.0    | w           | 18                              | 25.6           |
| w           | 96                              | 56.9    |             | 66                              | 24.6           |             |                                 |         |             | 14                              | 26.7           |
| w           | 11                              | 57.1    |             |                                 |                | <b>458.</b> | 8.0 Mg                          | Ma      | <b>463.</b> | 7.8 Mg                          | Ma             |
| o           | 04                              | 58.4    | <b>453.</b> | 7.6 Mg                          | Ma             |             | 13 <sup>h</sup> 36 <sup>m</sup> | —10° 1' |             | 13 <sup>h</sup> 43 <sup>m</sup> | 48° 8'         |
|             | 07                              | 57.6    |             | 13 <sup>h</sup> 26 <sup>m</sup> | 46° 10'        | o           | —                               | 41.2    | o           | 48.24                           | 54.1           |
|             |                                 |         | w           | 38.56                           | 6.0            | o           | 56.06                           | 40.2    | o           | 28                              | 52.6           |
|             |                                 |         | w           | 61                              | 6.4            | w           | 99                              | 41.0    | w           | 23                              | 53.8           |
|             |                                 |         | o           | 48                              | 6.8            | w           | 00                              | 40.5    | o           | 36                              | 54.2           |
| <b>449.</b> | 8.5 Mg                          | Ma      | o           | 52                              | 6.2            | o           | 09                              | 42.1    | w           | 39                              | 53.5           |
|             | 13 <sup>h</sup> 14 <sup>m</sup> | 13° 21' | o           | 54                              | 7.1            |             | 04                              | 41.0    |             | 30                              | 53.6           |
| o           | —                               | 14.1    |             |                                 |                | <b>459.</b> | 8.0 Mg                          | Ma      | <b>464.</b> | 8.2 Mg                          | Ma             |
| o           | 27.21                           | 13.7    |             |                                 |                |             | 13 <sup>h</sup> 38 <sup>m</sup> | 1° 25'  |             | 13 <sup>h</sup> 44 <sup>m</sup> | 40° 39'        |
| o           | 20                              | 13.6    | <b>454.</b> | 7.7 Mg                          | Ma             | o           | 4.18                            | 14.8    | o           | 58.06                           | 52.0           |
| w           | 30                              | 13.0    |             | 13 <sup>h</sup> 27 <sup>m</sup> | 36° 54'        | o           | 24                              | 15.0    | w           | 00                              | 52.3           |
| w           | 26                              | 13.4    | w           | 31.06                           | 47.2           | w           | 26                              | 15.0    | w           | 06                              | 51.6           |
|             | 24                              | 13.6    | w           | 02                              | 46.2           | w           | 26                              | 15.0    | o           | 04                              | 52.0           |
|             |                                 |         | o           | 05                              | 47.4           | w           | 26                              | 15.1    |             | 04                              | 52.0           |
|             |                                 |         | o           | 08                              | —              | w           | 26                              | 15.1    |             |                                 |                |
|             |                                 |         | o           | 01                              | 46.6           |             | 24                              | 15.0    |             |                                 |                |
| <b>450.</b> | 8.0 Mg                          | Ma      |             | 04                              | 46.8           | <b>460.</b> | 7.5 Mg                          | Ma      | <b>465.</b> | 9.3 Mg                          | Mb             |
|             | 13 <sup>h</sup> 15 <sup>m</sup> | 45° 58' |             |                                 |                |             | 13 <sup>h</sup> 38 <sup>m</sup> | 23° 44' |             | 13 <sup>h</sup> 47 <sup>m</sup> | —3° 15'        |
| w           | 48.29                           | 7.1     | <b>455.</b> | 8.0 Mg                          | B <sub>8</sub> | o           | 36.71                           | 35.8    |             |                                 |                |
| o           | 20                              | 5.3     |             | 13 <sup>h</sup> 31 <sup>m</sup> | —5° 43'        | w           | 68                              | 36.0    | o           | 30.36                           | 37.8           |
| w           | 25                              | 6.4     | w           | 20.54                           | 34.4           | w           | 68                              | —       | o           | 33                              | 38.9           |
| w           | 27                              | 5.9     | o           | 54                              | 35.8           | w           | 64                              | 36.4    | w           | 32                              | 38.8           |
| o           | 29                              | 6.6     | o           | 56                              | 36.4           | o           | 72                              | 36.7    | w           | 40                              | 41.3           |
| o           | 30                              | 6.2     | w           | 56                              | 35.2           |             | 69                              | 36.2    |             | 35                              | 39.2           |
|             | 27                              | 6.3     |             | 55                              | 35.4           |             |                                 |         |             |                                 |                |

|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
|-------------|---------------------------------|---------|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|
| <b>466.</b> | 9.2 Mg                          | Ma      | <b>471.</b> | 7.2 Mg                          | Ma      | <b>476.</b> | 9.1 Mg                          | Ma             | <b>482.</b> | 7.6 Mg                          | Ma      |
|             | 13 <sup>h</sup> 47 <sup>m</sup> | —3° 3'  |             | 13 <sup>h</sup> 55 <sup>m</sup> | 47° 0'  |             | 14 <sup>h</sup> 16 <sup>m</sup> | —11°27'        |             | 14 <sup>h</sup> 24 <sup>m</sup> | 6° 3'   |
| s           |                                 |         | s           |                                 |         | s           |                                 | "              | s           |                                 | "       |
| o           | 40.25                           | 54.1    | w           | 26.17                           | 15.0    | o           | 40.09                           | —              | o           | 17.40                           | 22.6    |
| o           | 29                              | —       | w           | 14                              | 14.8    | o           | 08                              | 24.1           | o           | 44                              | 23.1    |
| w           | 22                              | 54.8    | o           | 14                              | 15.0    | w           | 06                              | 24.5           | w           | 50                              | 22.9    |
|             | 25                              | 54.4    | w           | 16                              | 14.0    |             | 08                              | 24.3           | w           | 44                              | 23.0    |
|             |                                 |         |             | 15                              | 14.7    |             |                                 |                | w           | 40                              | 23.1    |
| <b>467.</b> | 7.8 Mg                          | Mb      | <b>472.</b> | 8.0 Mg                          | Ma      | <b>477.</b> | 9.1 Mg                          | B <sub>5</sub> |             |                                 |         |
|             | 13 <sup>h</sup> 48 <sup>m</sup> | 40° 5'  |             | 14 <sup>h</sup> 0 <sup>m</sup>  | 29° 32' |             | 14 <sup>h</sup> 18 <sup>m</sup> | —7° 51'        |             |                                 |         |
| o           | 12.13                           | 5.4     | o           | 41.70                           | 44.8    | o           | 15.99                           | 56.9           | <b>483.</b> | 7.0 Mg                          | Ma      |
| o           | 28                              | 6.2     | w           | 62                              | 45.3    | w           | 75                              | 55.5           |             | 14 <sup>h</sup> 25 <sup>m</sup> | 26° 13' |
| w           | 28                              | 4.4     | w           | 65                              | 44.4    | w           | 78                              | 55.2           | o           | 0.62                            | 44.3    |
| o           | 26                              | 5.7     | w           | 66                              | 44.6    |             | 84                              | 55.9           | o           | 58                              | 44.6    |
| w           | 33                              | 4.8     | o           | 61                              | 45.0    | <b>478.</b> | 6.6 Mg                          | Mb             | w           | 58                              | 44.3    |
|             | 26                              | 5.3     |             | 65                              | 44.8    |             | 14 <sup>h</sup> 18 <sup>m</sup> | 29° 45'        | o           | 64                              | 44.0    |
|             |                                 |         |             |                                 |         |             |                                 |                | w           | 62                              | 44.2    |
|             |                                 |         |             |                                 |         |             |                                 |                |             | 61                              | 44.3    |
| <b>468.</b> | 7.0 Mg                          | Mb      | <b>473.</b> | 8.5 Mg                          | Mb      | o           | 32.76                           | 10.9           | <b>484.</b> | 7.4 Mg                          | Ma      |
|             | 13 <sup>h</sup> 50 <sup>m</sup> | 52° 44' |             | 14 <sup>h</sup> 4 <sup>m</sup>  | —8° 27' | o           | 77                              | 11.2           |             | 14 <sup>h</sup> 28 <sup>m</sup> | 4° 30'  |
| o           | 10.63                           | 9.3     | o           | 10.68                           | 48.3    | w           | 74                              | 11.7           | o           | 0.06                            | 47.3    |
| o           | 90                              | 10.1    | o           | 64                              | 49.7    |             | 76                              | 11.3           | o           | —                               | 47.4    |
| w           | 86                              | 9.3     | o           | 64                              | 48.0    | <b>479.</b> | 8.1 Mg                          | Ma             | w           | 12                              | 47.1    |
| w           | 83                              | 9.4     | w           | 73                              | 49.5    |             | 14 <sup>h</sup> 19 <sup>m</sup> | 43° 35'        | w           | 05                              | 48.0    |
|             | 80                              | 9.5     | w           | 61                              | 48.6    | w           | 13.34                           | 31.1           |             | 08                              | 47.5    |
|             |                                 |         |             | 66                              | 48.8    | w           | 39                              | 30.7           |             |                                 |         |
| <b>469.</b> | 8.5 Mg                          | Mb      | <b>474.</b> | 6.0 Mg                          | Ma      |             | 37                              | 30.9           | <b>485.</b> | 7.3 Mg                          | Ma      |
|             | 13 <sup>h</sup> 52 <sup>m</sup> | 6° 59'  |             | 14 <sup>h</sup> 13 <sup>m</sup> | 15° 39' |             |                                 |                |             | 14 <sup>h</sup> 34 <sup>m</sup> | —3° 14' |
| o           | 47.96                           | 6.1     | w           | 27.50                           | 6.3     | <b>480.</b> | 8.0 Mg                          | Ma             | o           | 6.70                            | 51.8    |
| o           | 99                              | 5.6     | w           | 50                              | 4.9     |             | 14 <sup>h</sup> 20 <sup>m</sup> | 27° 39'        | o           | 72                              | 50.5    |
| w           | 98                              | 5.4     | o           | 50                              | 5.6     | o           | 8.12                            | 7.6            | w           | 71                              | 51.7    |
| w           | 98                              | 5.6     | o           | 46                              | 6.0     | o           | 16                              | 7.7            | w           | 71                              | 51.4    |
|             | 98                              | 5.7     |             | 49                              | 5.7     | w           | 08                              | 7.0            |             | 71                              | 51.4    |
|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
|             |                                 |         |             |                                 |         |             |                                 |                |             |                                 |         |
| <b>475.</b> | 8.2 Mg                          | Ma      |             |                                 |         |             | 12                              | 7.4            | <b>486.</b> | 8.3 Mg                          | Mb      |
|             |                                 |         |             |                                 |         |             |                                 |                |             | 14 <sup>h</sup> 35 <sup>m</sup> | 32° 54' |
| <b>470.</b> | 8.0 Mg                          | Ma      |             | 14 <sup>h</sup> 14 <sup>m</sup> | 4° 33'  | <b>481.</b> | 7.4 Mg                          | Ma             | o           | 43.38                           | 4.9     |
|             | 13 <sup>h</sup> 53 <sup>m</sup> | 7° 52'  | w           | 48.32                           | 59.4    |             | 14 <sup>h</sup> 20 <sup>m</sup> | —1° 57'        | o           | 35                              | 4.7     |
| o           | 51.15                           | 20.6    | o           | 25                              | 59.4    | o           | 15.38                           | 47.0           | w           | 35                              | 3.7     |
| w           | 13                              | 20.5    | o           | 26                              | 59.2    | o           | 34                              | 46.7           | w           | 40                              | 4.0     |
| w           | 11                              | 20.0    | o           | 26                              | 59.3    | w           | 40                              | 46.2           |             | 37                              | 4.3     |
| o           | 07                              | 21.0    | w           | 31                              | 59.5    |             | 37                              | 46.6           |             |                                 |         |
|             | 12                              | 20.5    |             | 28                              | 59.4    |             |                                 |                |             |                                 |         |

|             |                                 |         |             |                                 |         |             |                                 |         |             |                                 |                |
|-------------|---------------------------------|---------|-------------|---------------------------------|---------|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|
| <b>487.</b> | 8.0 Mg                          | Mb      | <b>492.</b> | 7.3 Mg                          | Ma      | <b>497.</b> | 8.0 Mg                          | Ma      | <b>502.</b> | 6.8 Mg                          | Mb             |
|             | 14 <sup>h</sup> 37 <sup>m</sup> | 31° 55' |             | 14 <sup>h</sup> 42 <sup>m</sup> | 14° 51' |             | 14 <sup>h</sup> 59 <sup>m</sup> | —7° 14' |             | 15 <sup>h</sup> 8 <sup>m</sup>  | 22° 37'        |
| w           | 39.86                           | 51.3    | w           | 19.44                           | 48.2    | o           | 8.40                            | 32.8    | w           | 20.26                           | 45.9           |
| w           | 84                              | 51.0    | o           | 42                              | 47.7    | o           | 43                              | 33.0    | w           | 26                              | 47.2           |
| o           | 87                              | 51.8    | o           | 39                              | 47.2    | w           | 37                              | 32.8    | o           | 23                              | 47.3           |
| o           | 87                              | 52.2    | w           | 44                              | 47.3    | w           | 39                              | 33.3    | o           | 26                              | 46.8           |
|             | 86                              | 51.6    |             | 42                              | 47.6    |             | 40                              | 33.0    |             | 25                              | 46.8           |
| <b>488.</b> | 8.0 Mg                          | Ma      | <b>493.</b> | 8.0 Mg                          | Mb      | <b>498.</b> | 9.0 Mg                          | Mb      | <b>503.</b> | 7.6 Mg                          | Ma             |
|             | 14 <sup>h</sup> 37 <sup>m</sup> | 40° 55' |             | 14 <sup>h</sup> 42 <sup>m</sup> | 7° 38'  |             | 15 <sup>h</sup> 0 <sup>m</sup>  | —7° 41' |             | 15 <sup>h</sup> 8 <sup>m</sup>  | 50° 13'        |
| w           | 56.78                           | 23.8    | w           | 35.84                           | 0.2     | o           | 20.28                           | 44.0    | w           | 55.78                           | 6.9            |
| o           | 83                              | 23.7    | w           | 80                              | 0.2     | o           | 21                              | 44.9    | w           | 86                              | 6.4            |
| o           | 80                              | 23.7    | o           | 83                              | 0.8     | w           | 21                              | 45.0    |             | 82                              | 6.6            |
| w           | 87                              | 23.2    | o           | 78                              | 0.6     |             | 23                              | 44.6    |             |                                 |                |
|             | 82                              | 23.6    |             | 81                              | 0.4     |             |                                 |         |             |                                 |                |
| <b>489.</b> | 8.0 Mg                          | Mb      | <b>494.</b> | 7.6 Mg                          | Mb      | <b>499.</b> | 8.2 Mg                          | Ma      | <b>504.</b> | 8.5 Mg                          | Ma             |
|             | 14 <sup>h</sup> 39 <sup>m</sup> | 55° 9'  |             | 14 <sup>h</sup> 53 <sup>m</sup> | —12° 5' |             | 15 <sup>h</sup> 2 <sup>m</sup>  | —8° 36' |             | 15 <sup>h</sup> 9 <sup>m</sup>  | —1° 34'        |
| o           | 48.62                           | 37.6    | o           | 11.41                           | 58.2    | o           | 39.09                           | 17.8    | w           | 40.96                           | 22.2           |
| w           | 62                              | 38.2    | o           | 42                              | 58.8    | o           | 09                              | 18.1    | o           | 99                              | 23.7           |
|             | 62                              | 37.9    | w           | 40                              | 59.3    | w           | 10                              | 17.8    | o           | 98                              | 24.1           |
|             |                                 |         | w           | 41                              | 59.3    |             | 09                              | 17.9    | w           | 96                              | 23.2           |
|             |                                 |         |             | 41                              | 58.9    |             |                                 |         |             | 97                              | 23.3           |
| <b>490.</b> | 6.5 Mg                          | Ma      | <b>495.</b> | 8.0 Mg                          | Ma      | <b>500.</b> | 7.1 Mg                          | Ma      | <b>505.</b> | 6.4 Mg                          | Ma             |
|             | 14 <sup>h</sup> 41 <sup>m</sup> | 33° 8'  |             | 14 <sup>h</sup> 57 <sup>m</sup> | 31° 42' |             | 15 <sup>h</sup> 6 <sup>m</sup>  | 11° 59' |             | 15 <sup>h</sup> 11 <sup>m</sup> | 42° 29'        |
| o           | 42.90                           | 36.7    | o           | 28.45                           | 36.8    | o           | 30.93                           | 28.6    | w           | 8.19                            | 0.8            |
| o           | 90                              | 37.0    | o           | 42                              | 37.2    | o           | 00                              | 28.6    | w           | 24                              | 0.8            |
| w           | 90                              | 36.8    | w           | 46                              | 36.6    | w           | 92                              | 28.7    |             | 22                              | 0.8            |
| w           | 91                              | 37.1    | w           | 42                              | 36.6    | w           | 03                              | 28.0    |             |                                 |                |
|             | 90                              | 36.9    | o           | 44                              | 36.4    |             | 97                              | 28.5    |             |                                 |                |
|             |                                 |         |             | 45                              | 36.7    |             |                                 |         |             |                                 |                |
| <b>491.</b> | 6.1 Mg                          | Mb      | <b>496.</b> | 6.8 Mg                          | Mb      | <b>501.</b> | 9.3 Mg                          | Mb      | <b>506.</b> | var.                            | B <sub>8</sub> |
|             | 14 <sup>h</sup> 42 <sup>m</sup> | 15° 29' |             | 14 <sup>h</sup> 59 <sup>m</sup> | 32° 0'  |             | 15 <sup>h</sup> 8 <sup>m</sup>  | 14° 41' |             | 15 <sup>h</sup> 14 <sup>m</sup> | 31° 57'        |
| o           | 8.44                            | 1.8     | w           | 2.14                            | 46.6    | o           | 10.82                           | 31.8    | w           | 45.86                           | 12.7           |
| o           | 43                              | 2.1     | o           | 16                              | 46.8    | o           | 81                              | 31.7    | w           | 93                              | 13.2           |
| w           | 47                              | 3.2     | o           | 09                              | 46.6    | o           | 84                              | 32.3    | o           | 88                              | 13.5           |
| w           | 44                              | 1.8     | w           | 17                              | 46.1    | w           | 75                              | 31.7    | o           | 86                              | 12.4           |
|             | 44                              | 2.2     |             | 14                              | 46.5    | w           | 78                              | 32.4    | o           | 87                              | 11.9           |
|             |                                 |         |             |                                 |         |             | 80                              | 32.0    |             | 88                              | 12.7           |

|             |                                 |                |             |                                 |                |             |                                 |         |             |                                 |         |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|-------------|---------------------------------|---------|
| <b>507.</b> | 7.6 Mg                          | Ma             | <b>512.</b> | 8.5 Mg                          | Mb             | <b>517.</b> | 9.2 Mg                          | Mb      | <b>522.</b> | 8.5 Mg                          | Ma      |
|             | 15 <sup>h</sup> 16 <sup>m</sup> | 14° 51'        |             | 15 <sup>h</sup> 33 <sup>m</sup> | 37° 39'        |             | 15 <sup>h</sup> 43 <sup>m</sup> | 0° 56'  |             | 15 <sup>h</sup> 49 <sup>m</sup> | 44° 46' |
| s           |                                 | "              | s           |                                 | "              | s           |                                 | "       | s           |                                 | "       |
| o           | 10.54                           | 52.1           | w           | 17.64                           | 10.7           | o           | 30.65                           | 49.1    | w           | 59.90                           | 17.6    |
| o           | 56                              | 51.9           | w           | 58                              | 11.5           | o           | 66                              | 49.2    | w           | 81                              | 18.1    |
| o           | 60                              | 51.8           | w           | 65                              | 12.2           | w           | 58                              | 48.9    | w           | 87                              | 16.6    |
| w           | 59                              | 53.0           |             | 62                              | 11.5           | w           | 55                              | 49.6    | o           | 97                              | 16.8    |
| w           | 56                              | 51.7           |             |                                 |                |             | 61                              | 49.2    | o           | 04                              | 17.1    |
|             | 57                              | 52.1           |             |                                 |                |             |                                 |         |             | 92                              | 17.2    |
| <b>508.</b> | 8.5 Mg                          | Ma             | <b>513.</b> | 6.0 Mg                          | B <sub>8</sub> | <b>518.</b> | 8.7 Mg                          | Mb      | <b>523.</b> | 8.5 Mg                          | Ma      |
|             | 15 <sup>h</sup> 19 <sup>m</sup> | 47° 56'        |             | 15 <sup>h</sup> 36 <sup>m</sup> | 36° 54'        |             | 15 <sup>h</sup> 44 <sup>m</sup> | 5° 39'  |             | 15 <sup>h</sup> 59 <sup>m</sup> | 3° 57'  |
| w           | 1.83                            | 4.6            | o           | 12.41                           | 31.2           | o           | 38.53                           | 38.0    | w           | 41.29                           | 29.4    |
| o           | 76                              | 5.4            | o           | 34                              | 31.0           | o           | 54                              | 37.5    | o           | 26                              | 29.0    |
| o           | 83                              | 4.4            | w           | 45                              | 31.9           | w           | 50                              | 38.2    | o           | 28                              | 27.7    |
| w           | 86                              | 4.8            | w           | 42                              | 31.1           | w           | 48                              | 38.2    |             | 28                              | 28.7    |
|             | 82                              | 4.8            | w           | 32                              | 31.2           |             | 51                              | 38.0    |             |                                 |         |
|             |                                 |                |             | 38                              | 31.5           |             |                                 |         |             |                                 |         |
| <b>509.</b> | 8.8 Mg                          | Ma             | <b>514.</b> | 8.5 Mg                          | Mb             | <b>519.</b> | var.                            | Md      | <b>524.</b> | var.                            | Mc      |
|             | 15 <sup>h</sup> 19 <sup>m</sup> | 2° 19'         |             | 15 <sup>h</sup> 36 <sup>m</sup> | —11°35'        |             | 15 <sup>h</sup> 46 <sup>m</sup> | 15° 23' |             | 16 <sup>h</sup> 0 <sup>m</sup>  | 47° 28' |
| o           | 28.44                           | 3.6            | o           | 32.99                           | 54.8           | w           | 49.38                           | 15.9    | o           | 7.53                            | 12.8    |
| o           | 36                              | 3.1            | w           | 93                              | 54.5           | w           | 32                              | 16.4    | o           | 57                              | 13.2    |
| w           | 39                              | 2.5            |             |                                 |                | w           | 35                              | 16.0    | w           | 53                              | 12.6    |
|             | 40                              | 3.1            |             | 96                              | 54.6           |             | 35                              | 16.1    | w           | 62                              | 12.5    |
|             |                                 |                |             |                                 |                |             |                                 |         |             | 56                              | 12.8    |
| <b>510.</b> | 7.7 Mg                          | Ma             | <b>515.</b> | 7.8 Mg                          | Mb             | <b>520.</b> | 7.7 Mg                          | Mc      | <b>525.</b> | 8.5 Mg                          | Ma      |
|             | 15 <sup>h</sup> 20 <sup>m</sup> | —5° 37'        |             | 15 <sup>h</sup> 38 <sup>m</sup> | 38° 49'        |             | 15 <sup>h</sup> 48 <sup>m</sup> | 48° 44' |             | 16 <sup>h</sup> 1 <sup>m</sup>  | 40° 58' |
| o           | 39.96                           | 22.0           | w           | 21.58                           | 35.2           | w           | 15.86                           | 8.4     | o           | 58.40                           | 45.2    |
| o           | 04                              | 22.7           | w           | 52                              | 36.0           | w           | 90                              | 8.0     | o           | 41                              | 45.1    |
| w           | 96                              | 20.3           |             |                                 |                |             | 88                              | 8.2     | w           | 43                              | 45.7    |
| w           | 93                              | 22.3           |             | 55                              | 35.6           |             |                                 |         | w           | 47                              | 44.0    |
|             | 97                              | 21.8           |             |                                 |                |             |                                 |         |             | 43                              | 45.0    |
| <b>511.</b> | 8.0 Mg                          | B <sub>5</sub> | <b>516.</b> | 7.6 Mg                          | Ma             | <b>521.</b> | 9.0 Mg                          | Ma      | <b>526.</b> | 8.9 Mg                          | Ma      |
|             | 15 <sup>h</sup> 22 <sup>m</sup> | 14° 59'        |             | 15 <sup>h</sup> 41 <sup>m</sup> | 39° 50'        |             | 15 <sup>h</sup> 49 <sup>m</sup> | 17° 32' |             | 16 <sup>h</sup> 6 <sup>m</sup>  | 7° 59'  |
| o           | 25.78                           | 14.3           | o           | 0.74                            | 16.8           | o           | 32.07                           | 10.6    | o           | 43.88                           | 53.1    |
| o           | 74                              | 14.4           | o           | 74                              | 17.0           | o           | 98                              | 9.8     | o           | 90                              | 52.6    |
| w           | 77                              | 14.7           | w           | 76                              | 15.9           | w           | 00                              | 11.0    | w           | 86                              | 52.2    |
| w           | 74                              | 14.9           | w           | 74                              | 17.2           | w           | 94                              | 10.3    | w           | 87                              | 52.8    |
|             | 76                              | 14.6           |             | 74                              | 16.7           |             | 00                              | 10.4    |             | 88                              | 52.7    |

|             |                                 |         |             |                                 |                |             |                                 |         |             |                                 |         |
|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------|-------------|---------------------------------|---------|
| <b>527.</b> | 8.5 Mg                          | Ma      | <b>532.</b> | 6.6 Mg                          | B <sub>2</sub> | <b>537.</b> | 8.0 Mg                          | Ma      | <b>541.</b> | 7.3 Mg                          | Ma      |
|             | 16 <sup>h</sup> 14 <sup>m</sup> | 13° 42' |             | 16 <sup>h</sup> 33 <sup>m</sup> | 14° 38'        |             | 16 <sup>h</sup> 39 <sup>m</sup> | 26° 12' |             | 16 <sup>h</sup> 47 <sup>m</sup> | 10° 1'  |
| s           |                                 |         | s           |                                 | "              | s           |                                 | "       | s           |                                 | "       |
| o           | 46.75                           | 51.4    | o           | 7.26                            | 40.4           | w           | 40.22                           | 51.7    | o           | 3.80                            | 16.3    |
| o           | 71                              | 51.4    | o           | 28                              | 40.3           | w           | 19                              | 53.0    | o           | 81                              | 16.3    |
| w           | 71                              | 52.2    | w           | 29                              | 40.6           | o           | 23                              | 51.8    | o           | 78                              | 16.7    |
| w           | 73                              | 51.6    | w           | 30                              | 39.8           | o           | 23                              | 51.6    | w           | 71                              | 16.6    |
| w           | 66                              | —       |             |                                 |                |             | 22                              | 52.0    | w           | 80                              | 16.6    |
|             |                                 |         |             | 28                              | 40.3           |             |                                 |         |             | 78                              | 16.5    |
|             | 71                              | 51.6    |             |                                 |                |             |                                 |         |             |                                 |         |
|             |                                 |         | <b>533.</b> | 7.4 Mg                          | Ma             |             |                                 |         |             |                                 |         |
| <b>528.</b> | var.                            | Md      |             | 16 <sup>h</sup> 33 <sup>m</sup> | 36° 12'        | <b>538.</b> | 8.1 Mg                          | Ma      | <b>542.</b> | 8.3 Mg                          | Ma      |
|             | 16 <sup>h</sup> 22 <sup>m</sup> | 19° 4'  | w           | 29.86                           | 35.3           |             | 16 <sup>h</sup> 40 <sup>m</sup> | 48° 33' |             | 16 <sup>h</sup> 52 <sup>m</sup> | 13° 23' |
| w           | 4.68                            | 59.5    | w           | 99                              | 36.9           | w           | 20.45                           | 49.3    | o           | 34.43                           | 5.6     |
| w           | 70                              | 58.9    | o           | 99                              | 35.8           | w           | 35                              | 48.7    | o           | 36                              | 5.7     |
|             | 69                              | 59.2    | o           | 97                              | 36.0           | w           | 52                              | 49.9    | o           | 38                              | 5.2     |
|             |                                 |         |             | 95                              | 36.0           | o           | 52                              | 48.2    | w           | 35                              | 5.6     |
|             |                                 |         |             |                                 |                | o           | 49                              | 48.8    | w           | 39                              | 6.5     |
|             |                                 |         | <b>534.</b> | 8.0 Mg                          | Ma             |             |                                 |         |             | 38                              | 5.7     |
| <b>529.</b> | 8.2 Mg                          | Ma      |             | 16 <sup>h</sup> 34 <sup>m</sup> | 22° 36'        |             |                                 |         | <b>543.</b> | 8.0 Mg                          | Mb      |
|             | 16 <sup>h</sup> 22 <sup>m</sup> | 23° 15' |             |                                 |                |             | 47                              | 49.0    |             | 16 <sup>h</sup> 52 <sup>m</sup> | 46° 24' |
| o           | 43.67                           | 15.1    | <b>535.</b> | 7.1 Mg                          | Ma             |             |                                 |         | w           | 35.02                           | 32.8    |
| o           | 63                              | 14.4    |             | 16 <sup>h</sup> 34 <sup>m</sup> | 27° 12'        |             |                                 |         | w           | 08                              | 32.1    |
| w           | 64                              | 14.7    | w           | 2.98                            | 47.0           |             |                                 |         | o           | 01                              | 32.0    |
| w           | 67                              | 14.5    | w           | 3.03                            | —              | <b>539.</b> | 8.5 Mg                          | Ma      |             |                                 |         |
| w           | 63                              | 14.1    | o           | 03                              | 46.6           |             | 16 <sup>h</sup> 44 <sup>m</sup> | 31° 44' | w           | 92                              | 17.8    |
|             | 65                              | 14.6    | o           | 01                              | 47.9           |             |                                 |         | o           | 04                              | 31.5    |
|             |                                 |         |             | 01                              | 47.2           | w           | 39.92                           | 17.2    |             |                                 |         |
|             |                                 |         | <b>536.</b> | 8.0 Mg                          | Ma             | w           | 94                              | 17.8    | 04          | 32.1                            |         |
| <b>530.</b> | 7.0 Mg                          | Ma      |             | 16 <sup>h</sup> 34 <sup>m</sup> | 27° 12'        | o           | 94                              | 17.3    |             |                                 |         |
|             | 16 <sup>h</sup> 22 <sup>m</sup> | 11° 10' |             |                                 |                | o           | 94                              | 18.0    | <b>544.</b> | 6.7 Mg                          | Ma      |
| o           | 45.41                           | 49.6    | w           | 24.56                           | 41.8           |             | 94                              | 17.6    |             | 16 <sup>h</sup> 53 <sup>m</sup> | 50° 10' |
| o           | 42                              | 48.6    | w           | 55                              | 43.2           |             |                                 |         | o           | 57.45                           | 10.8    |
| w           | 47                              | 49.3    | w           | 59                              | 43.3           |             |                                 |         | w           | 44                              | 8.3     |
| w           | 46                              | 49.3    | w           | 57                              | 43.0           |             |                                 |         | w           | 43                              | 11.1    |
| o           | 40                              | 48.6    |             | 57                              | 42.8           | <b>540.</b> | 9.3 Mg                          | Ma      |             |                                 |         |
|             | 43                              | 49.1    |             |                                 |                |             | 16 <sup>h</sup> 45 <sup>m</sup> | 6° 37'  | 44          | 10.1                            |         |
|             |                                 |         | <b>537.</b> | 8.0 Mg                          | Ma             | w           | 34.44                           | 7.6     |             |                                 |         |
| <b>531.</b> | 8.5 Mg                          | Mb      |             | 16 <sup>h</sup> 37 <sup>m</sup> | 16° 6'         | w           | 18                              | 7.0     | <b>545.</b> | 8.1 Mg                          | Ma      |
|             | 16 <sup>h</sup> 25 <sup>m</sup> | 0° 3'   | o           | 52.06                           | 43.3           | w           | 38                              | 7.4     |             | 16 <sup>h</sup> 55 <sup>m</sup> | 11° 38' |
| w           | 41.82                           | 25.7    | o           | 06                              | 44.1           | o           | 44                              | 6.8     | o           | 9.50                            | 24.6    |
| w           | 81                              | 26.4    | o           | 08                              | 44.9           | o           | 48                              | 7.2     | o           | 57                              | 25.1    |
| o           | 74                              | 25.5    | w           | 06                              | 44.4           | o           | 50                              | 6.6     | w           | 58                              | 24.4    |
| o           | 75                              | 26.0    | w           | 00                              | 44.3           |             |                                 |         |             | 55                              | 24.7    |
|             | 78                              | 25.9    |             | 05                              | 44.2           |             | 40                              | 7.1     |             |                                 |         |

|             |                                 |         |             |                                 |                |             |                                 |                |             |                                 |                |
|-------------|---------------------------------|---------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|
| <b>546.</b> | 9.0 Mg                          | Ma      | <b>551.</b> | 7.7 Mg                          | Mb             | <b>556.</b> | 7.6 Mg                          | Ma             | <b>563.</b> | 8.7 Mg                          | B <sub>5</sub> |
|             | 16 <sup>h</sup> 57 <sup>m</sup> | 6° 43'  |             | 17 <sup>h</sup> 7 <sup>m</sup>  | 40° 47'        |             | 18 <sup>h</sup> 49 <sup>m</sup> | 9° 33'         |             | 19 <sup>h</sup> 38 <sup>m</sup> | 9° 1'          |
| s           |                                 |         | s           |                                 | "              | w           | 30.24                           | "              | w           | 36.04                           | 43.6           |
| w           | 41.40                           | 53.5    | w           | 34.52                           | 33.8           | w           | 22                              | 15.2           | w           | 00                              | 44.4           |
| o           | 40                              | 54.1    | w           | 59                              | 34.1           |             | 23                              | 15.5           |             | 02                              | 44.0           |
| o           | 49                              | 53.2    | o           | 56                              | 32.8           |             |                                 |                |             |                                 |                |
|             | 43                              | 53.6    | o           | 55                              | 33.1           |             |                                 |                |             |                                 |                |
|             |                                 |         | 56          | 33.4                            |                | <b>557.</b> | 8.2 Mg                          | B <sub>8</sub> | <b>564.</b> | 8.1 Mg                          | B <sub>5</sub> |
|             |                                 |         |             |                                 |                |             | 19 <sup>h</sup> 7 <sup>m</sup>  | 9° 48'         |             | 19 <sup>h</sup> 45 <sup>m</sup> | 18° 9'         |
| <b>547.</b> | 7.1 Mg                          | Ma      | <b>552.</b> | 7.1 Mg                          | Ma             | w           | 42.42                           | 42.6           | w           | 0.78                            | 30.4           |
|             | 16 <sup>h</sup> 59 <sup>m</sup> | 20° 50' |             | 17 <sup>h</sup> 16 <sup>m</sup> | 27° 22'        | w           | 36                              | 41.8           | w           | 86                              | 31.4           |
| o           | 1.55                            | 41.6    | o           | 2.95                            | 11.6           |             | 39                              | 42.2           |             | 82                              | 30.9           |
| w           | 51                              | 42.3    | o           | 91                              | 11.7           |             |                                 |                |             |                                 |                |
| w           | 52                              | 41.5    | w           | 93                              | 11.2           | <b>558.</b> | 7.3 Mg                          | B <sub>3</sub> | <b>565.</b> | 7.2 Mg                          | B <sub>2</sub> |
|             | 53                              | 41.8    | w           | 94                              | 10.9           |             | 19 <sup>h</sup> 18 <sup>m</sup> | 25° 26'        |             | 19 <sup>h</sup> 45 <sup>m</sup> | 19° 27'        |
|             |                                 |         | w           | 93                              | 11.4           | w           | 0.12                            | 40.2           | w           | 1.68                            | 3.6            |
| <b>548.</b> | 8.8 Mg                          | Ma      | <b>553.</b> | 8.7 Mg                          | Mb             |             | 12                              | 40.0           | w           | 68                              | 3.3            |
|             | 17 <sup>h</sup> 0 <sup>m</sup>  | 13° 25' |             | 17 <sup>h</sup> 16 <sup>m</sup> | 43° 41'        |             |                                 |                | o           | 66                              | 2.7            |
| o           | 27.85                           | 16.4    | o           | 8.75                            | 44.8           | <b>559.</b> | 7.3 Mg                          | B <sub>3</sub> |             | 67                              | 3.2            |
| o           | 91                              | 16.1    | o           | 79                              | 44.6           |             | 19 <sup>h</sup> 18 <sup>m</sup> | 25° 24'        |             |                                 |                |
| o           | 88                              | 16.9    | w           | 69                              | 44.3           | w           | 11.26                           | 54.3           | <b>566.</b> | 8.0 Mg                          | B <sub>8</sub> |
| w           | 92                              | 16.7    | w           | 91                              | 44.2           | w           | 24                              | 53.4           |             | 19 <sup>h</sup> 48 <sup>m</sup> | 18° 31'        |
| w           | 91                              | 17.0    |             | 79                              | 44.5           |             | 25                              | 53.8           | w           | 54.21                           | 23.8           |
|             | 89                              | 16.6    |             |                                 |                |             |                                 |                | w           | 17                              | 24.4           |
|             |                                 |         | <b>554.</b> | 7.8 Mg                          | B <sub>8</sub> | <b>560.</b> | 7.3 Mg                          | B <sub>8</sub> | o           | 14                              | 24.7           |
|             |                                 |         |             | 17 <sup>h</sup> 27 <sup>m</sup> | 2° 53'         |             | 19 <sup>h</sup> 22 <sup>m</sup> | 25° 56'        | o           | 12                              | 24.2           |
| <b>549.</b> | 9.2 Mg                          | Ma      | o           | 50.27                           | 6.2            | w           | 12.04                           | 11.4           |             | 16                              | 24.3           |
|             | 17 <sup>h</sup> 2 <sup>m</sup>  | 13° 33' | o           | 32                              | 6.4            | w           | 06                              | 11.5           |             |                                 |                |
| w           | 38.97                           | 8.1     | o           | 31                              | 6.9            |             | 05                              | 11.4           | <b>567.</b> | 8.6 Mg                          | B <sub>5</sub> |
| w           | 89                              | 8.8     | w           | 29                              | 6.5            |             |                                 |                |             | 19 <sup>h</sup> 49 <sup>m</sup> | 20° 56'        |
| o           | 88                              | 7.6     | w           | 29                              | 6.9            | <b>561.</b> | 7.2 Mg                          | B <sub>2</sub> | w           | 31.77                           | 22.2           |
| o           | 94                              | 6.6     |             | 30                              | 6.6            |             | 19 <sup>h</sup> 23 <sup>m</sup> | 21° 29'        | w           | 76                              | 23.1           |
|             | 92                              | 7.8     |             |                                 |                | w           | 7.85                            | 1.6            |             | 76                              | 22.6           |
| <b>550.</b> | 9.4 Mg                          | Ma      | o           | 34.29                           | 1.6            | w           | 87                              | 1.6            |             |                                 |                |
|             | 17 <sup>h</sup> 4 <sup>m</sup>  | 13° 52' | o           | 27                              | 1.6            |             | 86                              | 1.6            |             |                                 |                |
| o           | 40.13                           | 6.9     | o           | 29                              | 1.2            | <b>562.</b> | 6.3 Mg                          | B <sub>5</sub> | <b>568.</b> | 8.6 Mg                          | B <sub>5</sub> |
| w           | 03                              | 6.4     | w           | 30                              | 1.6            |             | 19 <sup>h</sup> 33 <sup>m</sup> | 29° 8'         |             | 19 <sup>h</sup> 53 <sup>m</sup> | 19° 20'        |
| w           | 95                              | 7.4     | w           | 23                              | 2.7            | w           | 48.92                           | 40.6           | w           | 22.96                           | 19.2           |
|             | 04                              | 6.9     |             | 28                              | 1.7            | w           | 89                              | 40.2           | w           | 89                              | 20.4           |
|             |                                 |         |             |                                 |                |             | 90                              | 40.4           |             | 92                              | 19.8           |

|             |                                 |                |             |                                 |                |             |                                 |                                 |             |                                 |                                 |                |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------------------------------|-------------|---------------------------------|---------------------------------|----------------|
| <b>569.</b> | 6.8 Mg                          | B <sub>8</sub> | <b>575.</b> | 7.9 Mg                          | B <sub>8</sub> | <b>580.</b> | 7.2 Mg                          | B <sub>3</sub>                  | <b>585.</b> | 7.6 Mg                          | B                               |                |
|             | 19 <sup>h</sup> 54 <sup>m</sup> | 16° 15'        |             | 20 <sup>h</sup> 8 <sup>m</sup>  | 41° 8'         |             | 20 <sup>h</sup> 24 <sup>m</sup> | 41° 45'                         |             | 20 <sup>h</sup> 29 <sup>m</sup> | 31° 22'                         |                |
| s           |                                 |                | s           |                                 |                | s           |                                 |                                 | s           |                                 |                                 |                |
| w           | 24.91                           | 59.7           | o           | 45.56                           | 25.4           | w           | 39.58                           | 26.0                            | w           | 41.34                           | 13.1                            |                |
| w           | 91                              | 59.5           | o           | 51                              | 25.9           | w           | 50                              | 25.1                            | w           | 34                              | 12.8                            |                |
| o           | 85                              | 59.4           |             | 54                              | 25.6           | o           | 53                              | 24.8                            | o           | 33                              | 13.6                            |                |
|             | 89                              | 59.5           |             |                                 |                | o           | 59                              | 25.5                            | o           | 34                              | 13.1                            |                |
|             |                                 |                |             |                                 |                |             | 55                              | 25.4                            |             | 34                              | 13.2                            |                |
| <b>570.</b> | 7.7 Mg                          | B <sub>8</sub> | <b>576.</b> | 7.6 Mg                          | Mb             | <b>581.</b> | 8.9 Mg                          | Ma                              | <b>586.</b> | 7.1 Mg                          | B <sub>3</sub>                  |                |
|             | 20 <sup>h</sup> 1 <sup>m</sup>  | 41° 57'        |             | 20 <sup>h</sup> 12 <sup>m</sup> | 6° 48'         |             | 20 <sup>h</sup> 24 <sup>m</sup> | 11° 47'                         |             | 20 <sup>h</sup> 30 <sup>m</sup> | 32° 37'                         |                |
| o           | 34.74                           | 33.0           | w           | 53.43                           | 43.1           | o           | 48.84                           | 54.0                            | o           | 9.09                            | 12.6                            |                |
| o           | 75                              | 32.6           | w           | 45                              | 43.2           | w           | 84                              | 53.4                            | o           | 18                              | 12.4                            |                |
|             | 74                              | 32.8           | w           | 46                              | 43.1           | w           | 76                              | 53.8                            |             | 13                              | 12.5                            |                |
|             |                                 |                |             | 45                              | 43.1           | o           | 85                              | 53.8                            |             |                                 |                                 |                |
| <b>571.</b> | 8.0 Mg                          | B <sub>8</sub> |             |                                 |                |             | 82                              | 53.8                            | <b>587.</b> | 6.6 Mg                          | B <sub>8</sub>                  |                |
|             | 20 <sup>h</sup> 1 <sup>m</sup>  | 26° 47'        | <b>577.</b> | 6.3 Mg                          | B <sub>5</sub> |             |                                 |                                 |             | 20 <sup>h</sup> 30 <sup>m</sup> | 34° 23'                         |                |
| o           | 43.02                           | 33.4           |             | 20 <sup>h</sup> 13 <sup>m</sup> | 36° 47'        | <b>582.</b> | 8.4 Mg                          | Ma                              | w           | 44.51                           | 24.7                            |                |
| o           | 00                              | 32.7           | w           | 20.12                           | 47.7           |             | 20 <sup>h</sup> 25 <sup>m</sup> | 37° 30'                         | w           | 49                              | 25.2                            |                |
|             | 01                              | 33.0           | w           | 05                              | 48.0           | w           | 19.75                           | 35.7                            | o           | 50                              | 24.8                            |                |
|             |                                 |                |             | 08                              | 47.8           | w           | 78                              | 35.4                            | o           | 46                              | 25.7                            |                |
| <b>572.</b> | 7.8 Mg                          | B <sub>3</sub> |             |                                 |                |             | o                               | 76                              | 36.1        |                                 | 49                              | 25.1           |
|             | 20 <sup>h</sup> 5 <sup>m</sup>  | 26° 1'         |             |                                 |                |             | o                               | 80                              | 35.6        |                                 |                                 |                |
| o           | 11.90                           | 43.2           | <b>578.</b> | 7.5 Mg                          | Ma             |             | o                               | 78                              | 36.1        | <b>588.</b>                     | 7.4 Mg                          | B <sub>5</sub> |
| o           | 91                              | 43.4           |             | 20 <sup>h</sup> 18 <sup>m</sup> | 16° 38'        |             |                                 | 77                              | 35.8        |                                 | 20 <sup>h</sup> 31 <sup>m</sup> | 29° 57'        |
|             | 90                              | 43.3           | w           | 36.32                           | 53.3           |             |                                 |                                 |             | o                               | 40.39                           | 45.1           |
|             |                                 |                | w           | 21                              | 52.4           | <b>583.</b> | 7.8 Mg                          | B                               | o           | 37                              | 45.9                            |                |
| <b>573.</b> | 7.6 Mg                          | B <sub>5</sub> |             | w                               | 28             | 53.2        |                                 | 20 <sup>h</sup> 25 <sup>m</sup> | 41° 44'     | w                               | 34                              | 46.5           |
|             | 20 <sup>h</sup> 6 <sup>m</sup>  | 28° 1'         | o           | 33                              | 53.3           | o           | 32.64                           | 12.2                            | w           | 31                              | 45.9                            |                |
| o           | 35.09                           | 14.0           | o           | 28                              | 52.6           | o           | 69                              | 11.9                            | w           | 31                              | 45.3                            |                |
| o           | 10                              | 13.8           |             | 28                              | 53.0           |             | 66                              | 12.0                            |             | 34                              | 45.7                            |                |
|             | 10                              | 13.9           |             |                                 |                |             |                                 |                                 |             |                                 |                                 |                |
|             |                                 |                | <b>579.</b> | 8.2 Mg                          | Ma             | <b>584.</b> | 8.3 Mg                          | Ma                              | <b>589.</b> | 8.3 Mg                          | Ma                              |                |
|             |                                 |                |             | 20 <sup>h</sup> 18 <sup>m</sup> | 11° 26'        |             | 20 <sup>h</sup> 27 <sup>m</sup> | 29° 26'                         |             | 20 <sup>h</sup> 35 <sup>m</sup> | 1° 50'                          |                |
| <b>574.</b> | 7.1 Mg                          | K <sub>5</sub> |             | o                               | 44.52          | 49.2        | o                               | 50.09                           | 38.4        | w                               | 2.87                            | 50.7           |
|             | 20 <sup>h</sup> 7 <sup>m</sup>  | 15° 37'        | w           | 51                              | 48.6           | o           | 17                              | 38.6                            | w           | 81                              | 50.4                            |                |
| o           | 58.14                           | 27.1           | w           | 47                              | 47.9           | w           | 06                              | 37.9                            | o           | 91                              | 50.5                            |                |
| o           | 12                              | 26.6           |             |                                 |                | w           | 13                              | 38.0                            | o           | 84                              | 50.4                            |                |
|             | 13                              | 26.8           |             | 50                              | 48.6           |             | 11                              | 38.2                            |             | 86                              | 50.5                            |                |

|             |                                 |                |             |                                 |                  |             |                                 |                |                                      |                                 |                                 |         |
|-------------|---------------------------------|----------------|-------------|---------------------------------|------------------|-------------|---------------------------------|----------------|--------------------------------------|---------------------------------|---------------------------------|---------|
| <b>590.</b> | 6.6 Mg                          | B <sub>8</sub> | <b>595.</b> | 7.3 Mg                          | B <sub>8</sub>   | <b>601.</b> | 7.9 Mg                          | Ma             | <b>606.</b>                          | 6.4 Mg                          | B <sub>1</sub>                  |         |
|             | 20 <sup>h</sup> 35 <sup>m</sup> | 44° 2'         |             | 20 <sup>h</sup> 46 <sup>m</sup> | 42° 38'          |             | 20 <sup>h</sup> 54 <sup>m</sup> | 44° 27'        |                                      | 21 <sup>h</sup> 7 <sup>m</sup>  | 35° 57'                         |         |
| w           | 22.10                           | 13.0           | s           | 6.66                            | 32.9             | o           | 54.74                           | 46.4           | o                                    | 41.11                           | 19.9                            |         |
| w           | 10                              | 13.3           | w           | 69                              | 32.1             | o           | 70                              | 46.2           | w                                    | 13                              | 20.1                            |         |
| o           | 10                              | 13.1           | w           | 60                              | 33.7             |             | 72                              | 46.3           | w                                    | 08                              | 19.6                            |         |
| o           | 06                              | 14.2           |             | 65                              | 32.9             |             |                                 |                | o                                    | 23                              | 18.8                            |         |
|             | 09                              | 13.4           |             |                                 |                  |             |                                 |                |                                      | 14                              | 19.6                            |         |
| <b>591.</b> | 6.9 Mg                          | B <sub>8</sub> | <b>596.</b> | 6.3 Mg                          | B <sub>5</sub>   | <b>602.</b> | 7.2 Mg                          | Mb             | <b>607.</b>                          | 7.3 Mg                          | B <sub>5</sub>                  |         |
|             | 20 <sup>h</sup> 37 <sup>m</sup> | 6° 12'         |             | 20 <sup>h</sup> 48 <sup>m</sup> | 32° 31'          |             | 20 <sup>h</sup> 56 <sup>m</sup> | 32° 10'        |                                      | 21 <sup>h</sup> 8 <sup>m</sup>  | 40° 50'                         |         |
| w           | 57.28                           | 25.2           | o           | 35.24                           | 57.4             | w           | 31.30                           | 4.9            | o                                    | 9.82                            | 26.8                            |         |
| w           | 24                              | 25.1           | w           | 25                              | 57.3             | w           | 27                              | 4.4            | o                                    | 83                              | 27.0                            |         |
| w           | 27                              | 25.8           | o           | 27                              | 57.2             | o           | 34                              | 4.2            |                                      | 82                              | 26.9                            |         |
| o           | 26                              | 25.0           |             | 25                              | 57.3             | o           | 29                              | 4.4            |                                      |                                 |                                 |         |
| o           | 23                              | 25.3           |             |                                 |                  |             | 30                              | 4.5            | <b>608.</b>                          | 7.9 Mg                          | B <sub>8</sub>                  |         |
|             | 26                              | 25.3           | <b>597.</b> | 6.4 Mg                          | B <sub>3</sub>   |             |                                 |                |                                      | 21 <sup>h</sup> 9 <sup>m</sup>  | 45° 21'                         |         |
|             |                                 |                |             | 20 <sup>h</sup> 50 <sup>m</sup> | 28° 12'          | <b>603.</b> | 7.6 Mg                          | B <sub>8</sub> | o                                    | 5.76                            | 28.5                            |         |
| <b>592.</b> | 8.5 Mg                          | B <sub>2</sub> | o           | 48.46                           | 8.8              |             | 20 <sup>h</sup> 57 <sup>m</sup> | 46° 14'        | o                                    | 74                              | 28.0                            |         |
|             | 20 <sup>h</sup> 39 <sup>m</sup> | 36° 4'         | o           | 41                              | 7.4              |             |                                 |                |                                      | 75                              | 28.2                            |         |
| o           | 25.76                           | 42.6           |             | 44                              | 8.1              | <b>o</b>    | 55.30                           | 55.0           | <b>609.</b>                          | 7.7 Mg                          | B <sub>8</sub>                  |         |
| o           | 72                              | 42.8           | <b>598.</b> | 7.4 Mg                          | Ma               |             | o                               | 42             | 54.4                                 |                                 | 21 <sup>h</sup> 12 <sup>m</sup> | 36° 54' |
| w           | 71                              | 43.7           |             | 20 <sup>h</sup> 51 <sup>m</sup> | 33° 26'          |             | w                               | 34             | 55.3                                 | o                               | 12.18                           | 8.2     |
| w           | 67                              | 43.2           | o           | 33.88                           | 35.6             | w           | 36                              | 55.6           | w                                    | 11                              | 8.2                             |         |
|             | 71                              | 43.1           | o           | 95                              | 36.0             |             | 35                              | 55.1           | w                                    | 08                              | 8.2                             |         |
|             |                                 |                |             | 92                              | 35.8             | <b>o</b>    |                                 |                | o                                    | 14                              | 8.4                             |         |
| <b>593.</b> | 7.8 Mg                          | Mb             | <b>604.</b> | 7.8 Mg                          | B <sub>8</sub>   |             |                                 |                |                                      | 13                              | 8.2                             |         |
|             | 20 <sup>h</sup> 39 <sup>m</sup> | 26° 56'        | <b>599.</b> | 7.0 Mg                          | B <sub>0</sub> p |             |                                 |                | <b>610.</b>                          | 7.4 Mg                          | B <sub>8</sub>                  |         |
| o           | 47.91                           | 55.2           |             | 20 <sup>h</sup> 52 <sup>m</sup> | 39° 58'          | w           | 10.19                           | 59.3           |                                      | 21 <sup>h</sup> 12 <sup>m</sup> | 13° 36'                         |         |
| o           | 91                              | 54.7           | w           | 13.67                           | 42.6             | w           | 14                              | 59.0           | o                                    | 54.66                           | 5.8                             |         |
| w           | 92                              | 54.2           | o           | 73                              | 41.5             | o           | 19                              | 57.8           | o                                    | 68                              | 5.2                             |         |
| w           | 90                              | 54.6           | o           | 69                              | 42.6             | o           | 28                              | 58.5           |                                      | 67                              | 5.5                             |         |
|             | 91                              | 54.7           |             | 70                              | 42.2             |             | 20                              | 58.6           |                                      |                                 |                                 |         |
| <b>594.</b> | 7.9 Mg                          | Mb             | <b>600.</b> | 6.8 Mg                          | B <sub>8</sub>   | <b>611.</b> | 7.6 Mg                          | B <sub>9</sub> |                                      |                                 |                                 |         |
|             | 20 <sup>h</sup> 44 <sup>m</sup> | 27° 56'        |             | 20 <sup>h</sup> 53 <sup>m</sup> | 43° 6'           |             |                                 |                |                                      |                                 |                                 |         |
| o           | 44.42                           | 16.8           | o           | 9.78                            | 4.2              | <b>605.</b> | 7.8 Mg                          | B <sub>0</sub> | <b>21<sup>h</sup> 12<sup>m</sup></b> | <b>45° 22'</b>                  |                                 |         |
| w           | 41                              | 18.4           | w           | 82                              | 5.4              |             | 21 <sup>h</sup> 4 <sup>m</sup>  | 33° 3'         | o                                    | 55.43                           | 50.2                            |         |
| o           | 39                              | 17.5           | w           | 81                              | 4.0              | o           | 27.83                           | 27.3           | o                                    | 38                              | 50.6                            |         |
| w           | 32                              | 17.9           | o           | 77                              | 4.2              | o           | 80                              | 27.2           | w                                    | 46                              | 49.8                            |         |
|             | 38                              | 17.6           |             | 80                              | 4.5              |             | 82                              | 27.2           |                                      | 42                              | 50.2                            |         |

|             |                                 |                  |             |                                 |                |             |                                 |                |             |                                 |                |     |
|-------------|---------------------------------|------------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-----|
| <b>612.</b> | 6.1 Mg                          | B <sub>8</sub>   | <b>618.</b> | 8.0 Mg                          | B <sub>0</sub> | <b>623.</b> | 7.1 Mg                          | B <sub>5</sub> | <b>628.</b> | 6.5 Mg                          | Mb             |     |
|             | 21 <sup>h</sup> 14 <sup>m</sup> | 42° 19'          |             | 21 <sup>h</sup> 21 <sup>m</sup> | 55° 0'         |             | 21 <sup>h</sup> 28 <sup>m</sup> | 42° 19'        |             | 21 <sup>h</sup> 38 <sup>m</sup> | 45° 22'        |     |
| s           |                                 |                  | s           |                                 |                | s           |                                 |                | s           |                                 |                |     |
| o           | 12.48                           | 49.9             | w           | 54.26                           | 15.2           | o           | 21.44                           | 45.8           | w           | 55.70                           | 55.6           |     |
| o           | 53                              | 50.4             | w           | 36                              | 15.0           | o           | 50                              | 46.6           | w           | —                               | 55.9           |     |
| w           | 49                              | 50.0             |             | 31                              | 15.1           | w           | 40                              | 46.4           | o           | 65                              | 56.2           |     |
|             | 50                              | 50.1             |             |                                 |                | w           | 42                              | 47.0           | o           | 68                              | 56.4           |     |
|             |                                 |                  |             |                                 |                |             | 44                              | 46.5           |             | 68                              | 56.0           |     |
| <b>613.</b> | 8.2 Mg                          | Mb               | <b>619.</b> | 7.8 Mg                          | Ma             | <b>624.</b> | 6.8 Mg                          | Mb             | <b>629.</b> | 7.6 Mg                          | B <sub>8</sub> |     |
|             | 21 <sup>h</sup> 15 <sup>m</sup> | 23° 7'           |             | 21 <sup>h</sup> 22 <sup>m</sup> | 35° 28'        |             | 21 <sup>h</sup> 30 <sup>m</sup> | 1° 27'         |             | 21 <sup>h</sup> 39 <sup>m</sup> | 52° 51'        |     |
| w           | 28.55                           | 9.2              | o           | 50.12                           | 32.0           | o           | 26.49                           | 18.2           | o           | 46.32                           | 57.0           |     |
| w           | 50                              | 8.8              | w           | 13                              | 32.3           | w           | 48                              | 17.4           | o           | 45                              | 57.3           |     |
| o           | 51                              | 9.4              | o           | 04                              | 31.4           |             | 48                              | 17.8           | w           | 39                              | 56.4           |     |
| o           | 54                              | 9.1              | w           | 08                              | 32.6           |             |                                 |                | w           | 38                              | 56.8           |     |
|             | 52                              | 9.1              |             | 09                              | 32.1           |             |                                 |                |             | 38                              | 56.9           |     |
| <b>614.</b> | 7.2 Mg                          | Mb               | <b>620.</b> | 9.1 Mg                          | Ma             | <b>625.</b> | 6.7 Mg                          | B <sub>8</sub> | <b>630.</b> | 7.2 Mg                          | Mb             |     |
|             | 21 <sup>h</sup> 17 <sup>m</sup> | 55° 5'           |             | 21 <sup>h</sup> 24 <sup>m</sup> | 24° 16'        |             | 21 <sup>h</sup> 31 <sup>m</sup> | 43° 19'        |             | 21 <sup>h</sup> 42 <sup>m</sup> | —2° 36'        |     |
| w           | 9.42                            | 35.2             | o           | 31.08                           | 5.2            | o           | 54.10                           | 40.0           | o           | 10.91                           | 5.5            |     |
| w           | 48                              | 35.6             | o           | 12                              | 5.8            | o           | 09                              | 40.4           | o           | 94                              | 5.0            |     |
|             | 45                              | 35.4             | w           | 12                              | 5.5            | w           | 08                              | 40.2           | o           | 90                              | 4.6            |     |
| <b>615.</b> | 6.4 Mg                          | A <sub>0</sub>   |             | w                               | 14             | 4.2         | w                               | 08             | 39.4        | w                               | 90             | 4.8 |
|             | 21 <sup>h</sup> 19 <sup>m</sup> | 38° 16'          |             |                                 | 12             | 5.2         |                                 | 09             | 40.0        |                                 | 91             | 5.0 |
| w           | 25.72                           | 29.0             | <b>621.</b> | 7.6 Mg                          | B <sub>8</sub> | <b>626.</b> | 8.3 Mg                          | B              | <b>631.</b> | 7.7 Mg                          | Ma             |     |
| w           | 70                              | 30.0             |             | 21 <sup>h</sup> 26 <sup>m</sup> | 32° 26'        |             | 21 <sup>h</sup> 32 <sup>m</sup> | 29° 22'        |             | 21 <sup>h</sup> 43 <sup>m</sup> | 37° 16'        |     |
| o           | 66                              | 29.8             | w           | 23.72                           | 28.0           | w           | 4.23                            | 12.7           | w           | 15.82                           | 9.4            |     |
| o           | 70                              | 29.4             | w           | 73                              | 28.2           | o           | 14                              | 11.2           | o           | 82                              | 8.8            |     |
|             | 70                              | 29.6             | o           | 69                              | 28.3           | w           | 14                              | 12.4           | o           | 82                              | 9.2            |     |
| <b>616.</b> | 7.4 Mg                          | B <sub>5</sub>   | o           | 70                              | 27.6           |             | 17                              | 12.1           | o           | 78                              | 9.2            |     |
|             | 21 <sup>h</sup> 19 <sup>m</sup> | 40° 20'          |             | 71                              | 28.0           |             |                                 |                | o           | 80                              | 9.0            |     |
| w           | 34.30                           | 15.3             | <b>627.</b> | 8.3 Mg                          | Ma             |             |                                 |                |             | 81                              | 9.1            |     |
| w           | 28                              | 15.2             |             | 21 <sup>h</sup> 26 <sup>m</sup> | 11° 0'         | w           | 47.56                           | 6.8            | <b>632.</b> | 8.1 Mg                          | B <sub>8</sub> |     |
|             | 29                              | 15.2             | <b>622.</b> | 8.0 Mg                          | Ma             |             |                                 |                |             | 21 <sup>h</sup> 44 <sup>m</sup> | 31° 8'         |     |
| <b>617.</b> | 6.7 Mg                          | B <sub>5</sub> p | w           | 57.40                           | 16.0           | w           | 58                              | 5.6            | w           | 0.50                            | 20.0           |     |
|             | 21 <sup>h</sup> 19 <sup>m</sup> | 13° 41'          | o           | 34                              | 16.3           | o           | 56                              | 6.6            | w           | 45                              | 19.0           |     |
| o           | 34.82                           | 24.1             | -o          | 40                              | 16.3           | o           | 65                              | 7.2            | o           | 51                              | 19.1           |     |
| o           | 84                              | 24.9             | w           | 38                              | 16.0           | o           | 62                              | 5.8            | o           | 52                              | 18.1           |     |
|             | 83                              | 24.5             |             | 38                              | 16.2           |             | 59                              | 6.4            |             | 49                              | 19.0           |     |

|             |                                 |                |             |                                 |                |             |                                 |                |             |                                 |                  |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|------------------|
| <b>633.</b> | 6.6 Mg                          | A <sub>0</sub> | <b>638.</b> | 7.6 Mg                          | B <sub>8</sub> | <b>643.</b> | 7.6 Mg                          | Ma             | <b>648.</b> | 7.8 Mg                          | B <sub>8</sub>   |
|             | 21 <sup>h</sup> 46 <sup>m</sup> | 40° 45'        |             | 21 <sup>h</sup> 54 <sup>m</sup> | 38° 31'        |             | 22 <sup>h</sup> 1 <sup>m</sup>  | 29° 29'        |             | 22 <sup>h</sup> 14 <sup>m</sup> | 50° 53'          |
| w           | 15.14                           | —              | w           | 34.47                           | 32.7           | w           | 57.57                           | 53.2           | o           | 21.34                           | 51.6             |
| w           | 09                              | 24.6           | o           | 50                              | 33.0           | o           | 49                              | 52.5           | w           | 35                              | 51.1             |
| w           | 10                              | 24.0           | o           | 48                              | 32.2           | w           | 54                              | 52.6           | o           | 31                              | 52.5             |
| o           | 10                              | 24.0           | w           | 54                              | 32.4           | o           | 56                              | 52.9           | w           | 39                              | 51.1             |
| o           | 12                              | 23.9           | o           | 48                              | 32.6           |             | 54                              | 52.8           |             | 35                              | 51.6             |
|             | 11                              | 24.1           |             | 49                              | 32.6           |             |                                 |                |             |                                 |                  |
| <b>634.</b> | 6.6 Mg                          | B <sub>2</sub> | <b>639.</b> | 7.8 Mg                          | B <sub>3</sub> | <b>644.</b> | 8.0 Mg                          | B <sub>8</sub> | <b>649.</b> | 7.1 Mg                          | B <sub>2</sub> p |
|             | 21 <sup>h</sup> 47 <sup>m</sup> | 52° 18'        |             | 21 <sup>h</sup> 55 <sup>m</sup> | 33° 13'        |             | 22 <sup>h</sup> 3 <sup>m</sup>  | 54° 50'        |             | 22 <sup>h</sup> 17 <sup>m</sup> | 51° 26'          |
| o           | 3.70                            | 16.0           | w           | 31.17                           | 43.3           | o           | 16.91                           | 12.8           | o           | 5.26                            | 17.4             |
| o           | 79                              | 15.7           | w           | 12                              | 42.6           | o           | 00                              | —              | o           | 20                              | 17.6             |
| w           | 80                              | 15.2           | o           | 22                              | 43.2           | w           | 02                              | 12.0           | w           | 22                              | 17.8             |
| w           | 72                              | 16.2           | o           | 10                              | 43.0           | w           | 02                              | 13.2           | w           | 23                              | 17.5             |
|             | 75                              | 15.8           | o           | 25                              | 42.2           |             | 99                              | 12.7           |             | 23                              | 17.6             |
|             |                                 |                |             | 17                              | 42.9           |             |                                 |                |             |                                 |                  |
| <b>635.</b> | 7.3 Mg                          | B <sub>8</sub> | <b>640.</b> | 7.8 Mg                          | B <sub>5</sub> | <b>645.</b> | 7.7 Mg                          | B <sub>2</sub> | <b>650.</b> | 6.5 Mg                          | Ma               |
|             | 21 <sup>h</sup> 49 <sup>m</sup> | 54° 38'        |             | 21 <sup>h</sup> 57 <sup>m</sup> | 54° 36'        |             | 22 <sup>h</sup> 8 <sup>m</sup>  | 52° 0'         |             | 22 <sup>h</sup> 17 <sup>m</sup> | 26° 30'          |
| o           | 37.58                           | 39.6           | o           | 7.11                            | 59.2           | w           | 27.44                           | 54.4           | o           | 5.89                            | 43.9             |
| o           | 60                              | 38.9           | o           | 06                              | 58.2           | o           | 48                              | 55.2           | o           | 89                              | 44.4             |
| w           | 60                              | 39.2           | w           | 12                              | 58.6           | o           | 33                              | 54.6           | w           | 85                              | 43.5             |
|             | 59                              | 39.2           | w           | 08                              | 58.2           | w           | 45                              | 53.8           | w           | 87                              | 43.8             |
|             |                                 |                |             |                                 |                |             | 42                              | 54.5           |             | 88                              | 43.9             |
| <b>636.</b> | 7.7 Mg                          | Ma             |             | 09                              | 58.6           |             |                                 |                |             |                                 |                  |
|             | 21 <sup>h</sup> 49 <sup>m</sup> | 18° 46'        | <b>641.</b> | 7.2 Mg                          | Mb             | <b>646.</b> | 8.0 Mg                          | B <sub>8</sub> | <b>651.</b> | 6.3 Mg                          | B <sub>3</sub>   |
| w           | 39.98                           | 42.4           |             | 21 <sup>h</sup> 58 <sup>m</sup> | 36° 34'        |             | 22 <sup>h</sup> 10 <sup>m</sup> | 51° 58'        |             | 22 <sup>h</sup> 18 <sup>m</sup> | 41° 39'          |
| w           | 98                              | 42.0           | w           | 39.62                           | 38.4           | o           | 29.12                           | 30.8           | o           | 15.12                           | 15.1             |
| o           | 95                              | 41.9           | w           | 66                              | 39.0           | w           | 18                              | 31.0           | o           | 25                              | 14.2             |
| o           | 96                              | 42.6           | o           | 66                              | 39.1           | w           | 22                              | 31.0           |             | 18                              | 14.6             |
|             | 97                              | 43.0           |             |                                 |                |             | 17                              | 30.9           |             |                                 |                  |
|             | 97                              | 42.4           |             | 65                              | 38.8           |             |                                 |                |             |                                 |                  |
| <b>637.</b> | 8.8 Mg                          | Ma             | <b>642.</b> | 6.4 Mg                          | Ma             | <b>647.</b> | 7.6 Mg                          | B <sub>8</sub> | <b>652.</b> | 7.5 Mg                          | Mb               |
|             | 21 <sup>h</sup> 53 <sup>m</sup> | 39° 31'        |             | 21 <sup>h</sup> 59 <sup>m</sup> | 14° 24'        |             | 22 <sup>h</sup> 12 <sup>m</sup> | 29° 40'        |             | 22 <sup>h</sup> 20 <sup>m</sup> | 30° 50'          |
| w           | 46.10                           | 12.0           | o           | 15.15                           | 48.3           | w           | 58.56                           | 20.4           | o           | 6.22                            | 10.1             |
| w           | 29                              | 11.1           | w           | 23                              | 47.4           | w           | 55                              | 20.0           | o           | 22                              | 10.8             |
| o           | 16                              | 10.3           | o           | 19                              | —              | o           | 59                              | 20.0           |             | 22                              | 10.4             |
| o           | 03                              | 11.3           | o           | 30                              | 47.8           | o           | 54                              | 19.7           |             |                                 |                  |
|             | 14                              | 11.2           |             | 22                              | 47.8           |             | 56                              | 20.0           |             |                                 |                  |

|             |                                 |                |             |                                 |                |             |                                 |                                 |             |                                 |                                 |                |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|---------------------------------|-------------|---------------------------------|---------------------------------|----------------|
| <b>653.</b> | 8.4 Mg                          | B <sub>8</sub> | <b>658.</b> | 8.0 Mg                          | B <sub>8</sub> | <b>663.</b> | 6.2 Mg                          | B <sub>3</sub>                  | <b>668.</b> | 8.1 Mg                          | B <sub>5</sub>                  |                |
|             | 22 <sup>h</sup> 21 <sup>m</sup> | 51° 42'        |             | 22 <sup>h</sup> 32 <sup>m</sup> | 39° 39'        |             | 22 <sup>h</sup> 39 <sup>m</sup> | 37° 21'                         |             | 22 <sup>h</sup> 45 <sup>m</sup> | 47° 29'                         |                |
| s           |                                 |                | s           |                                 |                | s           |                                 |                                 | s           |                                 |                                 |                |
| o           | 33.64                           | 23.0           | o           | 32.81                           | 11.5           | w           | 6.51                            | 44.6                            | o           | 37.95                           | 8.2                             |                |
| o           | 60                              | 22.7           | o           | 76                              | 11.8           | w           | 56                              | 45.0                            | o           | 00                              | 7.9                             |                |
| w           | 65                              | 22.4           | w           | 76                              | 11.2           | o           | 51                              | 45.6                            |             | 98                              | 8.0                             |                |
| w           | 60                              | 22.8           | w           | 76                              | 12.5           | o           | 51                              | 45.2                            |             |                                 |                                 |                |
|             | 62                              | 22.7           |             | 77                              | 11.8           |             | 52                              | 45.1                            |             |                                 |                                 |                |
| <b>654.</b> | 6.9 Mg                          | Ma             | <b>659.</b> | 6.8 Mg                          | B <sub>3</sub> | <b>664.</b> | 8.6 Mg                          | Ma                              | <b>669.</b> | 7.4 Mg                          | Ma                              |                |
|             | 22 <sup>h</sup> 21 <sup>m</sup> | 50° 49'        |             | 22 <sup>h</sup> 32 <sup>m</sup> | 37° 24'        |             | 22 <sup>h</sup> 40 <sup>m</sup> | 29° 10'                         |             | 22 <sup>h</sup> 49 <sup>m</sup> | 50° 15'                         |                |
| w           | 41.92                           | 42.4           | w           | 35.74                           | 23.6           | o           | 15.78                           | 8.8                             | o           | 0.67                            | 30.4                            |                |
| o           | 68                              | 42.4           | w           | 74                              | 24.8           | o           | 70                              | 10.3                            | o           | 68                              | 31.0                            |                |
| w           | 54                              | 44.0           | o           | 76                              | 24.9           | w           | 85                              | 9.4                             | w           | 65                              | 29.2                            |                |
|             | 71                              | 42.9           | o           | 73                              | 23.3           | w           | 72                              | 9.3                             | w           | 73                              | 30.5                            |                |
|             |                                 |                |             | 74                              | 24.2           |             | 76                              | 9.4                             |             | 68                              | 30.3                            |                |
| <b>655.</b> | 6.4 Mg                          | B <sub>3</sub> |             |                                 |                | <b>665.</b> | 7.7 Mg                          | B <sub>2</sub>                  | <b>670.</b> | 7.1 Mg                          | Ma                              |                |
|             | 22 <sup>h</sup> 23 <sup>m</sup> | 37° 0'         |             |                                 |                |             | 22 <sup>h</sup> 42 <sup>m</sup> | 16° 47'                         |             | 22 <sup>h</sup> 49 <sup>m</sup> | 38° 10'                         |                |
| w           | 1.74                            | 56.5           | <b>660.</b> | 7.4 Mg                          | B <sub>8</sub> |             | w                               | 55.41                           | 25.8        | w                               | 2.40                            | 10.9           |
| w           | 80                              | 56.4           |             | 22 <sup>h</sup> 34 <sup>m</sup> | 40° 41'        |             | o                               | 42                              | 26.0        | w                               | 36                              | 12.1           |
| o           | 80                              | 56.0           | o           | 25.64                           | 3.6            | o           | 41                              | 27.0                            | o           | 47                              | 10.1                            |                |
| o           | 74                              | 56.4           | o           | 62                              | 2.8            | w           | 41                              | 25.1                            | o           | 44                              | 9.8                             |                |
| o           | 81                              | 56.0           | w           | 61                              | 3.2            |             |                                 |                                 |             | 42                              | 10.7                            |                |
|             | 78                              | 56.3           | w           | 60                              | 2.6            |             | 41                              | 26.0                            |             |                                 |                                 |                |
|             |                                 |                |             | 62                              | 3.0            |             |                                 |                                 |             |                                 |                                 |                |
| <b>656.</b> | 6.6 Mg                          | B <sub>3</sub> |             |                                 |                | <b>666.</b> | 7.2 Mg                          | Ma                              | <b>671.</b> | 6.2 Mg                          | B <sub>8</sub>                  |                |
|             | 22 <sup>h</sup> 26 <sup>m</sup> | 53° 48'        |             |                                 |                |             | 22 <sup>h</sup> 44 <sup>m</sup> | 49° 8'                          |             | 22 <sup>h</sup> 49 <sup>m</sup> | 39° 43'                         |                |
| o           | 4.82                            | 55.8           | <b>661.</b> | 7.1 Mg                          | Ma             |             | o                               | 30.92                           | 20.4        | o                               | 20.92                           | 14.9           |
| o           | 82                              | 56.2           |             | 22 <sup>h</sup> 36 <sup>m</sup> | 40° 13'        |             | o                               | 96                              | 20.3        | o                               | 95                              | 15.3           |
| w           | 85                              | 55.8           | w           | 21.04                           | 57.0           | w           | 00                              | 19.6                            | w           | 93                              | 14.0                            |                |
|             | 83                              | 55.9           | w           | 03                              | 56.6           | w           | 01                              | 21.0                            | w           | 94                              | 14.2                            |                |
|             |                                 |                | o           | 15                              | 57.1           |             |                                 |                                 |             | 94                              | 14.6                            |                |
| <b>657.</b> | 7.0 Mg                          | B <sub>5</sub> |             | o                               | 17             | 57.1        |                                 | 97                              | 20.3        |                                 |                                 |                |
|             | 22 <sup>h</sup> 30 <sup>m</sup> | 40° 20'        |             | o                               | 13             | 56.8        |                                 |                                 |             |                                 |                                 |                |
| w           | 47.81                           | 27.2           |             |                                 | 10             | 56.9        | <b>667.</b>                     | 8.0 Mg                          | Ma          | <b>672.</b>                     | 7.8 Mg                          | B <sub>5</sub> |
| w           | 74                              | 27.5           | <b>662.</b> | 7.3 Mg                          | B <sub>3</sub> |             |                                 | 22 <sup>h</sup> 44 <sup>m</sup> | 38° 4'      |                                 | 22 <sup>h</sup> 50 <sup>m</sup> | 43° 4'         |
| o           | 74                              | 27.2           |             | 22 <sup>h</sup> 37 <sup>m</sup> | 23° 24'        |             | o                               | 59.78                           | 59.0        | o                               | 33.87                           | 51.6           |
| o           | 75                              | 27.7           | o           | 24.61                           | 27.4           | w           | 85                              | 59.7                            | o           | 82                              | 51.9                            |                |
| o           | 78                              | 27.5           | o           | 55                              | 27.4           | w           | 79                              | 59.0                            | w           | 78                              | 51.4                            |                |
|             | 76                              | 27.4           |             |                                 | 58             | 27.4        | w                               | 76                              | 59.4        | w                               | 87                              | 52.1           |
|             |                                 |                |             |                                 |                |             | 80                              | 59.3                            |             | 84                              | 51.8                            |                |

|             |                                 |                |             |                                 |                |             |                                 |                |             |                                 |                |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|
| <b>673.</b> | 7.9 Mg                          | Mb             | <b>678.</b> | 6.6 Mg                          | B <sub>5</sub> | <b>683.</b> | 9.2 Mg                          | Mb             | <b>688.</b> | 6.9 Mg                          | Ma             |
|             | 22 <sup>h</sup> 50 <sup>m</sup> | 23° 56'        |             | 23 <sup>h</sup> 3 <sup>m</sup>  | 45° 36'        |             | 23 <sup>h</sup> 15 <sup>m</sup> | 48° 12'        |             | 23 <sup>h</sup> 21 <sup>m</sup> | 52° 31'        |
| o           | 36.72                           | 21.2           | w           | 27.17                           | 49.1           | o           | 48.24                           | 36.0           | o           | 41.46                           | 3.5            |
| o           | 77                              | 21.5           | o           | 11                              | 47.9           | o           | 25                              | 35.3           | o           | 40                              | 4.5            |
| w           | 72                              | 20.8           | o           | 18                              | 48.2           | w           | 12                              | 35.0           | w           | 38                              | 3.8            |
|             | 74                              | 21.2           | w           | 10                              | 50.1           | w           | 15                              | 35.8           | w           | 39                              | 4.4            |
|             |                                 |                |             | 14                              | 48.8           |             | 19                              | 35.5           |             | 41                              | 4.0            |
| <b>674.</b> | 7.6 Mg                          | Mb             | <b>679.</b> | 6.9 Mg                          | Mb             | <b>684.</b> | 8.2 Mg                          | B <sub>8</sub> | <b>689.</b> | 7.9 Mg                          | Ma             |
|             | 22 <sup>h</sup> 54 <sup>m</sup> | 21° 3'         |             | 23 <sup>h</sup> 6 <sup>m</sup>  | 33° 18'        |             | 23 <sup>h</sup> 16 <sup>m</sup> | 42° 43'        |             | 23 <sup>h</sup> 25 <sup>m</sup> | 38° 10'        |
| w           | 0.12                            | 52.0           | w           | 7.22                            | 45.6           | o           | 15.03                           | 11.6           | w           | 30.39                           | 47.8           |
| o           | 14                              | 50.4           | w           | 22                              | 46.3           | w           | 14.98                           | 12.0           | w           | 43                              | 49.0           |
| o           | 16                              | 52.3           | o           | 20                              | 45.8           | o           | 97                              | 11.4           | o           | 40                              | 50.0           |
| w           | 15                              | 51.3           | o           | 32                              | 46.0           |             | 99                              | 11.7           | o           | 39                              | 49.2           |
|             | 14                              | 51.5           |             | 24                              | 45.9           |             |                                 |                |             | 40                              | 49.0           |
| <b>675.</b> | 7.0 Mg                          | B <sub>3</sub> | <b>680.</b> | 7.1 Mg                          | B <sub>0</sub> | <b>685.</b> | 7.4 Mg                          | Ma             | <b>690.</b> | 8.0 Mg                          | Ma             |
|             | 22 <sup>h</sup> 54 <sup>m</sup> | 43° 23'        |             | 23 <sup>h</sup> 7 <sup>m</sup>  | 52° 36'        |             | 23 <sup>h</sup> 17 <sup>m</sup> | 20° 10'        |             | 23 <sup>h</sup> 25 <sup>m</sup> | 51° 13'        |
| o           | 56.79                           | 19.7           | o           | 21.44                           | 6.4            | w           | 38.49                           | 40.0           | o           | 33.11                           | 20.9           |
| w           | 75                              | 20.0           | o           | 47                              | 6.6            | w           | 43                              | 39.3           | o           | 06                              | 20.0           |
| w           | 72                              | 18.7           | w           | 40                              | 7.3            | o           | 47                              | 40.0           | w           | 12                              | 20.4           |
| o           | 74                              | 20.0           | w           | 36                              | 6.8            | o           | 42                              | 39.3           | w           | 10                              | 20.4           |
|             | 75                              | 19.6           |             | 42                              | 6.8            |             | 45                              | 39.6           |             | 10                              | 20.4           |
| <b>676.</b> | 6.3 Mg                          | B <sub>3</sub> | <b>681.</b> | 7.7 Mg                          | Mb             | <b>686.</b> | 6.7 Mg                          | Ma             | <b>691.</b> | 7.7 Mg                          | B <sub>8</sub> |
|             | 22 <sup>h</sup> 58 <sup>m</sup> | 43° 36'        |             | 23 <sup>h</sup> 8 <sup>m</sup>  | 8° 30'         |             | 23 <sup>h</sup> 20 <sup>m</sup> | 41° 9'         |             | 23 <sup>h</sup> 27 <sup>m</sup> | 53° 40'        |
| o           | 54.53                           | 23.2           | o           | 50.56                           | 22.8           | o           | 7.07                            | 5.6            | o           | 39.76                           | 39.6           |
| w           | 54                              | 24.0           | o           | 56                              | 22.8           | o           | 06                              | 5.2            | w           | 74                              | 40.3           |
| o           | 51                              | 23.8           | w           | 61                              | 22.5           | w           | 11                              | 5.6            | w           | 74                              | 39.6           |
| w           | 45                              | 24.7           | w           | 57                              | 21.9           | w           | 06                              | 5.9            | o           | 75                              | 40.7           |
|             | 51                              | 23.9           |             | 57                              | 22.5           |             | 08                              | 5.6            |             | 75                              | 40.0           |
| <b>677.</b> | 8.0 Mg                          | B <sub>3</sub> | <b>682.</b> | 8.3 Mg                          | Mc             | <b>687.</b> | 6.8 Mg                          | B <sub>3</sub> | <b>692.</b> | 6.9 Mg                          | Ma             |
|             | 23 <sup>h</sup> 2 <sup>m</sup>  | 46° 28'        |             | 23 <sup>h</sup> 12 <sup>m</sup> | 10° 8'         |             | 23 <sup>h</sup> 20 <sup>m</sup> | 35° 54'        |             | 23 <sup>h</sup> 28 <sup>m</sup> | 45° 39'        |
| o           | 43.37                           | 9.7            | w           | 33.64                           | 26.1           | o           | 38.46                           | 2.4            | o           | 52.52                           | 35.4           |
| w           | 36                              | 10.4           | w           | 61                              | —              | o           | 44                              | 2.3            | o           | 65                              | 35.1           |
| w           | 27                              | 10.2           | o           | 58                              | 26.4           | w           | 50                              | 1.6            | w           | 68                              | 35.1           |
|             | 33                              | 10.1           | o           | 72                              | 25.5           | w           | 52                              | 2.4            | w           | 54                              | 34.5           |
|             |                                 |                |             | 64                              | 26.0           |             | 48                              | 2.2            |             | 60                              | 35.0           |

|             |                                 |                |             |                                 |                |             |                                 |                |             |                                 |                |
|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|-------------|---------------------------------|----------------|
| <b>693.</b> | 7.2 Mg                          | Ma             | <b>697.</b> | 7.8 Mg                          | Ma             | <b>702.</b> | 9.0 Mg                          | B <sub>8</sub> | <b>707.</b> | 8.5 Mg                          | Ma             |
|             | 23 <sup>h</sup> 31 <sup>m</sup> | 50° 47'        |             | 23 <sup>h</sup> 39 <sup>m</sup> | 21° 28'        |             | 23 <sup>h</sup> 47 <sup>m</sup> | 54° 34'        |             | 23 <sup>h</sup> 52 <sup>m</sup> | 31° 52'        |
| s           |                                 |                | s           |                                 |                | s           |                                 |                | s           |                                 |                |
| o           | 40.54                           | 57.3           | o           | 27.66                           | 27.8           | o           | 26.36                           | 29.6           | o           | 41.46                           | 11.1           |
| o           | 55                              | 56.8           | o           | 67                              | 28.2           | o           | 38                              | 29.2           | w           | 49                              | 11.3           |
| w           | 56                              | 55.6           | w           | —                               | 27.6           | w           | 38                              | 29.8           | w           | 40                              | 10.8           |
| w           | 46                              | 56.0           | w           | 66                              | 27.9           | w           | 41                              | 30.2           |             | 45                              | 11.1           |
|             | 53                              | 56.4           |             | 66                              | 27.9           |             | 38                              | 29.7           |             |                                 |                |
|             |                                 |                | <b>698.</b> | 8.5 Mg                          | B              | <b>703.</b> | 8.0 Mg                          | B <sub>8</sub> | <b>708.</b> | 6.4 Mg                          | B <sub>5</sub> |
|             |                                 |                |             | 23 <sup>h</sup> 41 <sup>m</sup> | 54° 16'        |             | 23 <sup>h</sup> 49 <sup>m</sup> | 51° 28'        |             | 23 <sup>h</sup> 54 <sup>m</sup> | 31° 54'        |
| <b>694.</b> | 6.6 Mg                          | Ma             | o           | 48.10                           | 8.4            | w           | 20.62                           | 13.7           | o           | 32.18                           | 51.4           |
|             | 23 <sup>h</sup> 31 <sup>m</sup> | 24° 5'         | o           | 06                              | 8.2            | o           | 67                              | 13.4           | o           | 05                              | 51.3           |
| w           | 43.60                           | 45.5           | w           | 10                              | 7.6            | o           | 48                              | 14.4           | w           | 14                              | 50.6           |
| w           | 62                              | 45.8           |             | 09                              | 8.1            | w           | 64                              | 13.6           | w           | 06                              | 51.1           |
| o           | 49                              | 45.0           |             |                                 |                |             |                                 |                |             |                                 |                |
| o           | 55                              | 46.0           | <b>699.</b> | 7.4 Mg                          | Ma             |             | 60                              | 13.8           |             | 11                              | 51.1           |
|             | 57                              | 45.6           |             | 23 <sup>h</sup> 42 <sup>m</sup> | 27° 57'        |             |                                 |                |             |                                 |                |
|             |                                 |                | o           | 38.24                           | 12.8           | <b>704.</b> | 7.9 Mg                          | Ma             | <b>709.</b> | 7.0 Mg                          | Ma             |
|             |                                 |                | o           | 28                              | 12.8           |             | 23 <sup>h</sup> 49 <sup>m</sup> | 0° 7'          |             | 23 <sup>h</sup> 55 <sup>m</sup> | —0° 44'        |
|             |                                 |                | w           | 30                              | 11.9           | o           | 34.03                           | 44.0           | o           | 28.34                           | 50.6           |
| <b>695.</b> | 8.7 Mg                          | B <sub>8</sub> | w           | 26                              | 11.9           | o           | 96                              | 44.8           | o           | 33                              | 48.7           |
|             | 23 <sup>h</sup> 36 <sup>m</sup> | 19° 17'        |             | 27                              | 12.4           | w           | 03                              | 45.5           | w           | 36                              | 49.7           |
| w           | 1.60                            | 21.4           |             |                                 |                | w           | 05                              | 44.7           | w           | 37                              | 51.6           |
| o           | 65                              | 20.1           | <b>700.</b> | 7.5 Mg                          | B <sub>5</sub> |             | 02                              | 44.8           |             | 35                              | 50.2           |
| o           | 69                              | 22.4           |             | 23 <sup>h</sup> 42 <sup>m</sup> | 50° 45'        |             |                                 |                |             |                                 |                |
| w           | 58                              | 21.8           | o           | 47.28                           | 44.0           | <b>705.</b> | 7.8 Mg                          | B <sub>8</sub> | <b>710.</b> | 7.7 Mg                          | A <sub>0</sub> |
|             | 63                              | 21.4           | w           | 26                              | 44.2           |             | 23 <sup>h</sup> 50 <sup>m</sup> | 54° 8'         |             | 23 <sup>h</sup> 58 <sup>m</sup> | 42° 27'        |
|             |                                 |                | w           | 16                              | 43.2           | w           | 57.61                           | 1.7            | o           | 24.16                           | 11.2           |
|             |                                 |                | o           | 27                              | 45.2           | w           | 57                              | 2.3            | o           | 16                              | 10.9           |
|             |                                 |                |             | 24                              | 44.2           | o           | 58                              | 5.3            | w           | 18                              | 11.2           |
| <b>696.</b> | 6.5 Mg                          | B <sub>8</sub> |             |                                 |                |             | 59                              | 3.1            | w           | 19                              | 11.6           |
|             | 23 <sup>h</sup> 38 <sup>m</sup> | 52° 41'        | <b>701.</b> | 5.8 Mg                          | B <sub>3</sub> |             |                                 |                |             | 17                              | 11.2           |
| o           | 59.86                           | 10.9           |             | 23 <sup>h</sup> 43 <sup>m</sup> | 46° 21'        |             |                                 |                |             |                                 |                |
| o           | 74                              | 10.7           | w           | 22.41                           | 57.0           | <b>706.</b> | 8.4 Mg                          | B              |             |                                 |                |
| w           | 82                              | 10.9           | w           | 49                              | 56.1           |             | 23 <sup>h</sup> 52 <sup>m</sup> | 55° 31'        |             |                                 |                |
| w           | 79                              | 9.3            | o           | 48                              | 57.2           | w           | 11.02                           | 20.2           |             |                                 |                |
| w           | 73                              | 11.4           | o           | 40                              | 58.1           | w           | 10.94                           | 21.4           |             |                                 |                |
|             | 79                              | 10.6           |             | 44                              | 57.1           |             | 98                              | 20.8           |             |                                 |                |

| No. | B. D.     | Ep.      |          | Ep.   |       | No. | B. D.    | Ep.      |          | Ep.   |       | No. | B. D.    | Ep.      |          | Ep.   |       |
|-----|-----------|----------|----------|-------|-------|-----|----------|----------|----------|-------|-------|-----|----------|----------|----------|-------|-------|
|     |           | $\alpha$ | $\delta$ | 1910+ | 1910+ |     |          | $\alpha$ | $\delta$ | 1910+ | 1910+ |     |          | $\alpha$ | $\delta$ | 1910+ | 1910+ |
| 1   | +53° 3280 | 6.75     | 6.75     | 1910+ | 1910+ | 40  | +28° 197 | 7.24     | 7.24     | 1910+ | 1910+ | 79  | +51° 548 | 7.25     | 7.25     | 1910+ | 1910+ |
| 2   | +24 6     | 5.14     | 5.14     |       |       | 41  | +47 357  | 6.10     | 6.10     |       |       | 80  | +39 521  | 5.81     | 5.81     |       |       |
| 3   | +27 7     | 7.76     | 7.76     |       |       | 42  | +54 258  | 8.13     | 8.13     |       |       | 81  | +53 518  | 8.43     | 8.43     |       |       |
| 4   | +43 18    | 8.01     | 8.01     |       |       | 43  | +13 191  | 7.01     | 7.01     |       |       | 82  | +33 425  | 5.80     | 5.80     |       |       |
| 5   | +21 10    | 6.99     | 6.99     |       |       | 44  | +51 285  | 7.59     | 7.59     |       |       | 83  | +36 482  | 7.02     | 7.02     |       |       |
| 6   | +49 34    | 7.69     | 7.69     |       |       | 45  | +31 236  | 5.34     | 5.34     |       |       | 84  | +36 491  | 8.14     | 8.14     |       |       |
| 7   | +48 60    | 7.78     | 7.78     |       |       | 46  | +44 304  | 6.91     | 6.91     |       |       | 85  | +51 579  | 8.43     | 8.43     |       |       |
| 8   | +30 31    | 5.68     | 5.68     |       |       | 47  | +2 211   | 7.28     | 7.14     |       |       | 86  | +21 344  | 6.30     | 6.30     |       |       |
| 9   | +19 38    | 6.70     | 6.70     |       |       | 48  | +14 226  | 5.29     | 5.29     |       |       | 87  | +49 682  | 7.03     | 7.03     |       |       |
| 10  | +48 80    | 7.08     | 8.28     |       |       | 49  | +53 323  | 7.59     | 7.59     |       |       | 88  | +38 502  | 7.97     | 7.97     |       |       |
| 11  | +30 42    | 6.38     | 6.38     |       |       | 50  | +14 233  | 6.77     | 6.77     |       |       | 89  | +55 649  | 8.62     | 8.62     |       |       |
| 12  | +24 31    | 7.13     | 7.13     |       |       | 51  | +21 208  | 8.31     | 8.31     |       |       | 90  | +28 438  | 5.29     | 5.29     |       |       |
| 13  | +37 54    | 6.70     | 6.70     |       |       | 52  | +34 270  | 7.28     | 7.28     |       |       | 91  | +38 513  | 7.05     | 7.05     |       |       |
| 14  | +50 60    | 7.29     | 7.29     |       |       | 53  | +21 217  | 6.73     | 6.73     |       |       | 92  | +39 582  | 7.07     | 7.07     |       |       |
| 15  | +48 62    | 6.38     | 6.38     |       |       | 54  | +7 240   | 5.14     | 5.28     |       |       | 93  | +26 438  | 8.54     | 8.54     |       |       |
| 16  | +19 64    | 6.37     | 6.37     |       |       | 55  | +55 375  | 8.59     | 8.59     |       |       | 94  | +39 596  | 7.06     | 7.06     |       |       |
| 17  | +30 59    | 6.07     | 6.07     |       |       | 56  | +37 337  | 7.40     | 7.40     |       |       | 95  | +20 443  | 5.29     | 5.29     |       |       |
| 18  | +47 113   | 8.43     | 8.25     |       |       | 57  | +53 362  | 7.75     | 7.75     |       |       | 96  | +33 490  | 7.05     | 7.05     |       |       |
| 19  | +43 97    | 5.40     | 5.40     |       |       | 58  | +38 326  | 6.81     | 6.81     |       |       | 97  | +34 504  | 7.88     | 7.88     |       |       |
| 20  | +53 81    | 7.52     | 7.52     |       |       | 59  | +38 327  | 5.60     | 5.60     |       |       | 98  | +30 444  | 5.29     | 5.29     |       |       |
| 21  | +54 111   | 8.80     | 8.80     |       |       | 60  | +54 364  | 8.79     | 8.79     |       |       | 99  | +26 474  | 5.80     | 5.80     |       |       |
| 22  | +43 110   | 5.29     | 5.29     |       |       | 61  | +44 354  | 6.32     | 6.32     |       |       | 100 | +15 397  | 7.96     | 7.96     |       |       |
| 23  | +38 94    | 5.86     | 5.86     |       |       | 62  | +28 292  | 7.52     | 7.52     |       |       | 101 | +14 484  | 5.56     | 5.56     |       |       |
| 24  | +39 167   | 5.84     | 5.84     |       |       | 63  | +20 285  | 5.60     | 5.60     |       |       | 102 | +33 547  | 6.30     | 6.30     |       |       |
| 25  | +22 113   | 7.16     | 7.16     |       |       | 64  | +33 302  | 7.93     | 7.93     |       |       | 103 | -1 419   | 7.96     | 7.96     |       |       |
| 26  | +44 160   | 6.25     | 6.25     |       |       | 65  | +46 463  | 8.76     | 8.76     |       |       | 104 | +53 615  | 8.83     | 8.83     |       |       |
| 27  | +47 201   | 7.54     | 7.54     |       |       | 66  | +44 384  | 5.85     | 5.85     |       |       | 105 | +51 681  | 6.84     | 6.84     |       |       |
| 28  | +40 172   | 5.60     | 5.60     |       |       | 67  | +54 415  | 8.72     | 8.72     |       |       | 106 | +36 638  | 7.95     | 7.95     |       |       |
| 29  | +31 131   | 6.73     | 6.73     |       |       | 68  | +27 310  | 6.01     | 6.01     |       |       | 107 | +37 719  | 5.40     | 5.40     |       |       |
| 30  | +44 185   | 8.35     | 8.35     |       |       | 69  | +44 398  | 7.53     | 7.53     |       |       | 108 | -4 540   | 6.82     | 6.82     |       |       |
| 31  | +48 272   | 6.69     | 6.69     |       |       | 70  | +46 498  | 8.45     | 8.45     |       |       | 109 | +39 736  | 8.16     | 8.16     |       |       |
| 32  | +38 140   | 8.90     | 8.90     |       |       | 71  | +12 271  | 5.84     | 5.60     |       |       | 110 | +35 653  | 7.89     | 7.89     |       |       |
| 33  | +25 136   | 7.44     | 7.44     |       |       | 72  | +51 483  | 8.86     | 8.86     |       |       | 111 | -2 581   | 5.40     | 5.40     |       |       |
| 34  | +51 216   | 7.77     | 7.77     |       |       | 73  | +42 445  | 7.33     | 7.33     |       |       | 112 | -3 525   | 6.82     | 6.82     |       |       |
| 35  | +37 199   | 5.28     | 5.28     |       |       | 74  | +46 532  | 6.20     | 6.20     |       |       | 113 | +12 460  | 5.44     | 5.44     |       |       |
| 36  | +50 212   | 7.20     | 7.20     |       |       | 75  | +46 539  | 6.40     | 6.40     |       |       | 114 | +44 677  | 7.76     | 7.76     |       |       |
| 37  | +18 145   | 6.16     | 6.16     |       |       | 76  | +29 376  | 7.90     | 7.90     |       |       | 115 | +31 588  | 7.10     | 7.10     |       |       |
| 38  | +9 132    | 8.44     | 8.44     |       |       | 77  | +51 538  | 8.78     | 8.78     |       |       | 116 | +40 729  | 5.81     | 5.81     |       |       |
| 39  | +30 182   | 6.77     | 6.77     |       |       | 78  | +28 385  | 6.08     | 6.08     |       |       | 117 | +44 695  | 6.07     | 6.07     |       |       |

| No. | B. D.    | Ep.      |          | Ep.   |       | No. | B. D.    | Ep.      |          | Ep.   |          | No.  | B. D. | Ep.      |          | Ep.   |       |
|-----|----------|----------|----------|-------|-------|-----|----------|----------|----------|-------|----------|------|-------|----------|----------|-------|-------|
|     |          | $\alpha$ | $\delta$ | 1910+ | 1910+ |     |          | $\alpha$ | $\delta$ | 1910+ | 1910+    |      |       | $\alpha$ | $\delta$ | 1910+ | 1910+ |
| 118 | +48° 913 | 8.02     | 8.02     | 1910+ | 1910+ | 157 | +10° 583 | 6.78     | 6.78     | 196   | +20° 989 | 5.53 | 5.53  |          |          |       |       |
| 119 | +50 757  | 8.37     | 8.37     |       |       | 158 | + 0 780  | 6.20     | 6.20     | 197   | +27 798  | 7.49 | 7.49  |          |          |       |       |
| 120 | +44 714  | 7.10     | 7.10     |       |       | 159 | +17 750  | 8.19     | 8.19     | 198   | +22 959  | 8.89 | 8.89  |          |          |       |       |
| 121 | +46 760  | 5.81     | 5.81     |       |       | 160 | +18 652  | 6.94     | 6.94     | 199   | +28 836  | 7.58 | 7.58  |          |          |       |       |
| 122 | +41 696  | 7.23     | 7.23     |       |       | 161 | +48 1119 | 6.78     | 6.78     | 200   | +29 947  | 5.53 | 5.53  |          |          |       |       |
| 123 | +51 744  | 8.09     | 8.09     |       |       | 162 | + 7 678  | 8.49     | 8.49     | 201   | +30 968  | 7.48 | 7.48  |          |          |       |       |
| 124 | +14 575  | 6.60     | 6.60     |       |       | 163 | + 6 730  | 7.46     | 7.46     | 202   | +42 1376 | 5.93 | 5.93  |          |          |       |       |
| 125 | +55 801  | 6.78     | 6.78     |       |       | 164 | +52 876  | 6.78     | 6.78     | 203   | + 9 925  | 8.24 | 8.24  |          |          |       |       |
| 126 | + 1 621  | 8.00     | 8.00     |       |       | 165 | +32 830  | 7.55     | 7.55     | 204   | +25 941  | 7.09 | 7.09  |          |          |       |       |
| 127 | +54 698  | 8.04     | 8.04     |       |       | 166 | +43 1049 | 8.30     | 8.30     | 205   | + 5 1001 | 7.10 | 7.10  |          |          |       |       |
| 128 | +42 795  | 5.72     | 5.72     |       |       | 167 | +23 739  | 5.92     | 5.92     | 206   | + 6 1005 | 5.19 | 5.19  |          |          |       |       |
| 129 | +33 704  | 6.77     | 6.77     |       |       | 168 | +50 1070 | 6.78     | 6.78     | 207   | +28 868  | 5.68 | 5.71  |          |          |       |       |
| 130 | +29 603  | 5.92     | 5.92     |       |       | 169 | +43 1096 | 8.11     | 8.11     | 208   | +34 1172 | 7.97 | 7.97  |          |          |       |       |
| 131 | +53 698  | 8.25     | 8.25     |       |       | 170 | +28 704  | 5.99     | 5.99     | 209   | +12 902  | 5.31 | 5.31  |          |          |       |       |
| 132 | +31 649  | 6.13     | 6.13     |       |       | 171 | +12 667  | 5.96     | 5.96     | 210   | +27 874  | 7.09 | 7.09  |          |          |       |       |
| 133 | +29 620  | 7.17     | 7.17     |       |       | 172 | +43 1131 | 8.23     | 8.23     | 211   | +31 1115 | 8.13 | 8.13  |          |          |       |       |
| 134 | +52 715  | 6.78     | 6.78     |       |       | 173 | +43 1147 | 8.01     | 7.22     | 212   | +27 887  | 6.44 | 6.44  |          |          |       |       |
| 135 | +34 746  | 8.00     | 8.00     |       |       | 174 | +26 774  | 5.98     | 5.98     | 213   | +38 1318 | 7.97 | 7.97  |          |          |       |       |
| 136 | +33 730  | 5.88     | 5.88     |       |       | 175 | +33 953  | 6.17     | 6.17     | 214   | +24 1007 | 5.51 | 5.51  |          |          |       |       |
| 137 | +45 840  | 7.96     | 7.96     |       |       | 176 | +26 783  | 6.31     | 6.31     | 215   | +30 1045 | 7.31 | 7.31  |          |          |       |       |
| 138 | +21 550  | 5.73     | 5.73     |       |       | 177 | +42 1197 | 8.43     | 8.43     | 216   | +27 914  | 6.01 | 6.01  |          |          |       |       |
| 139 | +52 726  | 6.78     | 6.78     |       |       | 178 | +40 1213 | 6.40     | 6.40     | 217   | +35 1288 | 7.69 | 7.69  |          |          |       |       |
| 140 | +10 513  | 5.16     | 5.16     |       |       | 179 | +37 1093 | 7.05     | 7.05     | 218   | +24 1043 | 4.88 | 4.88  |          |          |       |       |
| 141 | +32 708  | 7.75     | 7.75     |       |       | 180 | +19 880  | 8.56     | 8.56     | 219   | +27 945  | 5.24 | 5.24  |          |          |       |       |
| 142 | + 3 552  | 8.01     | 8.01     |       |       | 181 | +38 1108 | 7.06     | 7.06     | 220   | + 3 1104 | 8.53 | 8.53  |          |          |       |       |
| 143 | +16 567  | 6.48     | 6.48     |       |       | 182 | +36 1078 | 5.95     | 5.95     | 221   | +50 1262 | 7.49 | 7.49  |          |          |       |       |
| 144 | + 1 713  | 6.80     | 6.80     |       |       | 183 | +34 994  | 6.02     | 6.02     | 222   | +46 1091 | 8.13 | 8.13  |          |          |       |       |
| 145 | + 9 549  | 7.97     | 7.97     |       |       | 184 | +32 952  | 4.86     | 4.86     | 223   | +27 979  | 6.63 | 6.63  |          |          |       |       |
| 146 | +41 844  | 6.78     | 6.78     |       |       | 185 | +39 1274 | 8.06     | 8.06     | 224   | +21 1120 | 7.62 | 7.62  |          |          |       |       |
| 147 | + 7 631  | 7.97     | 7.97     |       |       | 186 | +37 1160 | 8.00     | 8.00     | 225   | +21 1146 | 8.01 | 8.01  |          |          |       |       |
| 148 | +20 751  | 6.43     | 6.43     |       |       | 187 | +38 1144 | 6.88     | 6.88     | 226   | +10 1044 | 7.14 | 7.14  |          |          |       |       |
| 149 | +22 686  | 6.78     | 6.78     |       |       | 188 | +15 805  | 5.52     | 5.52     | 227   | + 6 1160 | 8.17 | 8.15  |          |          |       |       |
| 150 | +23 684  | 7.70     | 7.70     |       |       | 189 | +39 1299 | 8.04     | 8.04     | 228   | + 3 1164 | 6.10 | 6.10  |          |          |       |       |
| 151 | +45 931  | 8.01     | 8.01     |       |       | 190 | +34 1041 | 8.22     | 8.22     | 229   | +46 1119 | 8.13 | 8.13  |          |          |       |       |
| 152 | + 0 753  | 7.05     | 7.05     |       |       | 191 | +33 1049 | 5.95     | 5.95     | 230   | + 6 1172 | 6.47 | 6.47  |          |          |       |       |
| 153 | + 8 687  | 5.93     | 5.93     |       |       | 192 | + 3 910  | 4.98     | 4.98     | 231   | + 7 1216 | 7.14 | 7.14  |          |          |       |       |
| 154 | +10 577  | 8.00     | 8.00     |       |       | 193 | +22 922  | 7.30     | 7.30     | 232   | +23 1297 | 8.17 | 8.17  |          |          |       |       |
| 155 | + 7 648  | 5.71     | 5.71     |       |       | 194 | +34 1077 | 8.60     | 8.60     | 233   | +12 1105 | 6.10 | 6.10  |          |          |       |       |
| 156 | +20 761  | 7.70     | 7.70     |       |       | 195 | +24 854  | 5.96     | 5.96     | 234   | +21 1203 | 5.88 | 5.88  |          |          |       |       |

| No. | B. D.     | Ep.      |          | Ep.      |            | No.  | B. D. | Ep.      |            | Ep.      |          | No. | B. D. | Ep.      |          | Ep.      |          |
|-----|-----------|----------|----------|----------|------------|------|-------|----------|------------|----------|----------|-----|-------|----------|----------|----------|----------|
|     |           | $\alpha$ | $\delta$ | $\alpha$ | $\delta$   |      |       | $\alpha$ | $\delta$   | $\alpha$ | $\delta$ |     |       | $\alpha$ | $\delta$ | $\alpha$ | $\delta$ |
| 235 | + 2° 1196 | 7.97     | 7.97     | 274      | + 24° 1549 | 6.51 | 7.27  | 313      | + 16° 1611 | 5.61     | 5.61     |     |       |          |          |          |          |
| 236 | + 28 1101 | 8.12     | 8.12     | 275      | — 0 1651   | 7.54 | 7.54  | 314      | + 36 1735  | 7.34     | 7.34     |     |       |          |          |          |          |
| 237 | + 15 1176 | 7.13     | 7.09     | 276      | + 29 1489  | 7.63 | 7.63  | 315      | + 24 1840  | 8.04     | 8.04     |     |       |          |          |          |          |
| 238 | + 25 1251 | 8.18     | 8.17     | 277      | + 0 1869   | 7.85 | 7.85  | 316      | — 2 2437   | 5.97     | 5.97     |     |       |          |          |          |          |
| 239 | + 12 1148 | 4.94     | 4.94     | 278      | + 31 1527  | 6.02 | 6.10  | 317      | — 0 1917   | 7.14     | 7.14     |     |       |          |          |          |          |
| 240 | + 14 1296 | 7.79     | 7.79     | 279      | + 3 1639   | 8.11 | 8.11  | 318      | + 6 1891   | 7.36     | 7.36     |     |       |          |          |          |          |
| 241 | + 0 1425  | 7.12     | 7.11     | 280      | — 0 1680   | 7.02 | 7.02  | 319      | + 11 1785  | 5.97     | 5.97     |     |       |          |          |          |          |
| 242 | + 6 1258  | 6.52     | 6.52     | 281      | + 32 1526a | 6.86 | 6.66  | 320      | + 25 1880  | 7.87     | 7.87     |     |       |          |          |          |          |
| 243 | + 7 1314  | 8.12     | 8.13     | 282      | + 0 1909   | 6.52 | 6.52  | 321      | + 16 1669  | 7.14     | 7.14     |     |       |          |          |          |          |
| 244 | + 4 1282  | 8.47     | 8.47     | 283      | — 5 2080   | 8.06 | 8.06  | 322      | + 35 1808  | 5.93     | 5.93     |     |       |          |          |          |          |
| 245 | + 5 1267  | 5.70     | 5.70     | 284      | + 0 1915   | 7.62 | 7.62  | 323      | — 8 2343   | 6.63     | 6.63     |     |       |          |          |          |          |
| 246 | + 10 1159 | 7.96     | 7.96     | 285      | + 5 1635   | 7.78 | 7.78  | 324      | + 4 1972   | 5.39     | 5.39     |     |       |          |          |          |          |
| 247 | + 5 1282  | 6.58     | 6.58     | 286      | + 26 1554  | 6.77 | 6.77  | 325      | — 9 2508   | 5.69     | 5.69     |     |       |          |          |          |          |
| 248 | + 5 1312  | 7.14     | 7.14     | 287      | + 11 1588  | 7.05 | 7.05  | 326      | — 5 2550   | 7.12     | 7.12     |     |       |          |          |          |          |
| 249 | + 9 1295  | 6.26     | 6.26     | 288      | + 15 1574  | 7.06 | 7.06  | 327      | — 6 2620   | 5.81     | 5.81     |     |       |          |          |          |          |
| 250 | + 10 1193 | 7.22     | 7.22     | 289      | + 23 1728  | 5.37 | 5.37  | 328      | + 0 2331   | 8.11     | 8.11     |     |       |          |          |          |          |
| 251 | + 5 1334  | 6.62     | 6.62     | 290      | + 14 1691  | 8.18 | 8.18  | 329      | — 9 2571   | 5.99     | 5.99     |     |       |          |          |          |          |
| 252 | + 9 1331  | 5.70     | 5.70     | 291      | + 16 1505  | 7.05 | 7.05  | 330      | — 10 2575  | 5.08     | 5.08     |     |       |          |          |          |          |
| 253 | + 9 1334  | 7.14     | 7.14     | 292      | + 10 1561  | 7.65 | 7.65  | 331      | — 9 2612   | 5.95     | 5.95     |     |       |          |          |          |          |
| 254 | + 11 1273 | 8.00     | 8.00     | 293      | + 5 1703   | 7.35 | 7.35  | 332      | + 39 2141  | 5.67     | 5.67     |     |       |          |          |          |          |
| 255 | + 20 1550 | 5.82     | 5.82     | 294      | + 11 1607  | 7.05 | 7.05  | 333      | — 5 2609   | 8.16     | 8.16     |     |       |          |          |          |          |
| 256 | + 0 1580  | 6.79     | 6.79     | 295      | + 18 1661  | 8.01 | 8.01  | 334      | — 2 2659   | 7.14     | 7.14     |     |       |          |          |          |          |
| 257 | + 21 1383 | 7.59     | 7.59     | 296      | + 28 1415  | 6.98 | 6.98  | 335      | + 4 2029   | 6.62     | 6.35     |     |       |          |          |          |          |
| 258 | + 20 1578 | 5.80     | 5.80     | 297      | + 13 1714  | 6.44 | 6.44  | 336      | + 13 1994  | 5.17     | 5.17     |     |       |          |          |          |          |
| 259 | + 12 1310 | 7.36     | 7.36     | 298      | + 38 1798  | 8.09 | 8.09  | 337      | + 10 1876  | 5.99     | 5.99     |     |       |          |          |          |          |
| 260 | + 6 1397  | 8.13     | 8.13     | 299      | + 40 1915  | 7.68 | 7.68  | 338      | — 7 2627   | 7.75     | 7.75     |     |       |          |          |          |          |
| 261 | + 30 1357 | 5.92     | 5.92     | 300      | + 32 1613  | 7.81 | 7.81  | 339      | + 19 2114  | 8.00     | 8.00     |     |       |          |          |          |          |
| 262 | + 5 1465  | 8.15     | 8.15     | 301      | + 20 1885  | 6.41 | 6.41  | 340      | + 4 2064   | 6.04     | 6.04     |     |       |          |          |          |          |
| 263 | + 0 1691  | 7.97     | 7.97     | 302      | + 39 1996  | 7.63 | 7.63  | 341      | + 44 1803  | 7.57     | 7.57     |     |       |          |          |          |          |
| 264 | + 5 1486  | 8.15     | 8.15     | 303      | + 14 1738  | 6.19 | 6.19  | 342      | + 9 2092   | 8.00     | 8.00     |     |       |          |          |          |          |
| 265 | + 18 1423 | 7.14     | 7.14     | 304      | + 27 1470  | 6.02 | 6.02  | 343      | + 33 1789  | 8.16     | 8.16     |     |       |          |          |          |          |
| 266 | + 7 1544  | 5.93     | 6.46     | 305      | + 7 1838   | 6.05 | 6.05  | 344      | + 25 2024  | 5.67     | 5.67     |     |       |          |          |          |          |
| 267 | + 0 1754  | 7.97     | 7.97     | 306      | + 40 1949  | 7.58 | 7.58  | 345      | — 6 2784   | 8.17     | 8.17     |     |       |          |          |          |          |
| 268 | + 5 1514  | 7.63     | 7.63     | 307      | + 36 1696  | 6.65 | 6.65  | 346      | + 14 2018  | 5.66     | 5.66     |     |       |          |          |          |          |
| 269 | + 17 1479 | 8.18     | 8.18     | 308      | — 3 2111   | 5.10 | 5.10  | 347      | + 29 1860  | 8.00     | 8.00     |     |       |          |          |          |          |
| 270 | + 31 1487 | 8.08     | 8.08     | 309      | + 24 1806  | 5.56 | 5.56  | 348      | — 9 2735   | 8.18     | 8.18     |     |       |          |          |          |          |
| 271 | + 9 1510  | 8.02     | 8.03     | 310      | + 0 2129   | 7.12 | 7.12  | 349      | — 6 2839   | 8.16     | 8.16     |     |       |          |          |          |          |
| 272 | + 5 1543  | 7.89     | 7.89     | 311      | — 1 1900   | 8.05 | 8.05  | 350      | + 4 2139   | 7.29     | 7.29     |     |       |          |          |          |          |
| 273 | + 50 1401 | 8.03     | 8.03     | 312      | + 35 1722  | 7.57 | 7.57  | 351      | + 45 1694  | 8.18     | 8.18     |     |       |          |          |          |          |

| No. | B. D.     | Ep.      |          | Ep.      |           | No.  | B. D. | Ep.      |           | Ep.      |          | No. | B. D. | Ep.      |          | Ep.      |          |
|-----|-----------|----------|----------|----------|-----------|------|-------|----------|-----------|----------|----------|-----|-------|----------|----------|----------|----------|
|     |           | $\alpha$ | $\delta$ | $\alpha$ | $\delta$  |      |       | $\alpha$ | $\delta$  | $\alpha$ | $\delta$ |     |       | $\alpha$ | $\delta$ | $\alpha$ | $\delta$ |
| 352 | +54° 1293 | 8.16     | 8.16     | 391      | — 7° 3197 | 6.75 | 6.75  | 430      | +24° 2489 | 7.55     | 7.55     |     |       |          |          |          |          |
| 353 | — 4 2596  | 7.40     | 7.40     | 392      | — 2 2312  | 7.14 | 7.14  | 431      | +48 2055  | 6.77     | 6.77     |     |       |          |          |          |          |
| 354 | +12 2023  | 6.80     | 6.80     | 393      | +32 2139  | 6.75 | 6.75  | 432      | + 6 2660  | 5.66     | 5.66     |     |       |          |          |          |          |
| 355 | +50 1640  | 8.18     | 8.18     | 394      | +45 1924  | 6.75 | 6.75  | 433      | +20 2761  | 6.48     | 6.29     |     |       |          |          |          |          |
| 356 | +23 2099  | 7.75     | 7.75     | 395      | +49 2061  | 7.42 | 7.42  | 434      | + 0 2989  | 7.64     | 7.64     |     |       |          |          |          |          |
| 357 | +50 1644  | 8.12     | 8.12     | 396      | +18 2506  | 6.75 | 6.75  | 435      | +47 1998  | 7.03     | 7.03     |     |       |          |          |          |          |
| 358 | +25 2109  | 5.60     | 5.51     | 397      | +42 2233  | 6.05 | 6.05  | 436      | +47 2003  | 7.64     | 7.64     |     |       |          |          |          |          |
| 359 | + 8 2243  | 7.13     | 7.13     | 398      | +45 1955  | 6.87 | 6.87  | 437      | +18 2681  | 6.29     | 6.29     |     |       |          |          |          |          |
| 360 | + 4 2225  | 6.21     | 6.00     | 399      | +11 2394  | 5.21 | 5.21  | 438      | +35 2387  | 7.40     | 7.40     |     |       |          |          |          |          |
| 361 | +51 1536  | 7.63     | 7.63     | 400      | +36 2216  | 6.70 | 6.70  | 439      | + 1 2776  | 8.26     | 8.26     |     |       |          |          |          |          |
| 362 | +54 1327  | 8.14     | 8.14     | 401      | + 7 2480  | 6.87 | 6.87  | 440      | + 2 2614  | 8.18     | 8.18     |     |       |          |          |          |          |
| 363 | +35 2046  | 6.65     | 6.65     | 402      | — 2 3420  | 6.00 | 6.00  | 441      | +24 2531  | 7.14     | 7.14     |     |       |          |          |          |          |
| 364 | +33 1907  | 5.18     | 5.18     | 403      | +19 2505  | 5.20 | 5.20  | 442      | +12 4545  | 5.84     | 5.74     |     |       |          |          |          |          |
| 365 | +32 1941  | 6.65     | 6.65     | 404      | +52 1590  | 6.92 | 6.92  | 443      | +43 2296  | 8.26     | 8.26     |     |       |          |          |          |          |
| 366 | +10 2067  | 5.18     | 5.18     | 405      | + 4 2558  | 6.29 | 6.29  | 444      | +43 2301  | 7.23     | 7.23     |     |       |          |          |          |          |
| 367 | + 0 2582  | 6.65     | 6.65     | 406      | + 8 2562  | 5.70 | 5.70  | 445      | +37 2383  | 7.99     | 7.99     |     |       |          |          |          |          |
| 368 | +54 1337  | 7.43     | 7.43     | 407      | +30 2217  | 7.14 | 7.14  | 446      | — 2 3653  | 6.29     | 5.99     |     |       |          |          |          |          |
| 369 | + 5 2263  | 5.68     | 5.68     | 408      | + 5 2580  | 7.97 | 7.97  | 447      | + 5 2728  | 6.30     | 6.30     |     |       |          |          |          |          |
| 370 | +42 2080  | 7.10     | 7.10     | 409      | + 3 2593  | 6.29 | 6.29  | 448      | + 7 2627  | 7.21     | 7.21     |     |       |          |          |          |          |
| 371 | +39 2318  | 6.36     | 6.36     | 410      | — 5 3416  | 8.17 | 8.17  | 449      | +13 2655  | 5.85     | 5.75     |     |       |          |          |          |          |
| 372 | +30 1983  | 7.38     | 7.38     | 411      | — 5 3424  | 7.14 | 7.14  | 450      | +46 1862  | 8.08     | 8.08     |     |       |          |          |          |          |
| 373 | +31 2119  | 6.87     | 6.87     | 412      | + 8 2573  | 6.43 | 6.43  | 451      | +52 1698  | 7.79     | 7.79     |     |       |          |          |          |          |
| 374 | +37 2038  | 5.68     | 5.68     | 413      | +28 2097  | 5.52 | 5.52  | 452      | +47 2053  | 6.99     | 6.99     |     |       |          |          |          |          |
| 375 | +35 2172  | 5.22     | 5.22     | 414      | + 5 2620  | 6.70 | 6.70  | 453      | +46 1873  | 7.08     | 7.08     |     |       |          |          |          |          |
| 376 | + 9 2388  | 6.45     | 6.45     | 415      | +41 2292  | 6.51 | 6.51  | 454      | +37 2417  | 7.46     | 7.29     |     |       |          |          |          |          |
| 377 | +14 2281  | 6.87     | 6.87     | 416      | + 6 2606  | 5.19 | 5.19  | 455      | — 5 3730  | 8.33     | 8.33     |     |       |          |          |          |          |
| 378 | +46 1659  | 6.79     | 6.79     | 417      | + 2 2536  | 6.28 | 6.28  | 456      | +14 2643  | 8.21     | 8.21     |     |       |          |          |          |          |
| 379 | +35 2181  | 5.22     | 5.22     | 418      | — 1 2671  | 6.50 | 6.50  | 457      | +42 2424  | 7.19     | 7.19     |     |       |          |          |          |          |
| 380 | + 2 2367  | 6.40     | 6.40     | 419      | +30 2279  | 6.29 | 6.29  | 458      | — 9 3745  | 7.03     | 6.69     |     |       |          |          |          |          |
| 381 | +26 2145  | 5.22     | 5.22     | 420      | — 3 3304  | 8.27 | 8.27  | 459      | + 1 2839  | 6.14     | 6.14     |     |       |          |          |          |          |
| 382 | +52 1522  | 6.85     | 6.85     | 421      | +18 2617  | 5.19 | 5.19  | 460      | +24 2624  | 6.88     | 6.88     |     |       |          |          |          |          |
| 383 | +22 2292  | 5.20     | 5.22     | 422      | + 5 2634  | 8.16 | 8.16  | 461      | — 6 3875  | 8.19     | 8.19     |     |       |          |          |          |          |
| 384 | +19 2401  | 6.40     | 6.40     | 423      | +25 2522  | 7.14 | 7.14  | 462      | — 1 2858  | 5.80     | 5.80     |     |       |          |          |          |          |
| 385 | +30 2100  | 6.94     | 6.94     | 424      | + 7 2561  | 7.99 | 7.99  | 463      | +48 2152  | 8.05     | 8.05     |     |       |          |          |          |          |
| 386 | +54 1414  | 7.47     | 7.47     | 425      | — 8 3401  | 6.66 | 6.66  | 464      | +40 2693  | 8.21     | 8.21     |     |       |          |          |          |          |
| 387 | + 1 2519  | 5.95     | 5.95     | 426      | +10 2461  | 7.71 | 7.71  | 465      | — 2 3749  | 5.60     | 5.60     |     |       |          |          |          |          |
| 388 | +52 1541  | 7.14     | 7.14     | 427      | — 0 2604  | 8.19 | 8.19  | 466      | — 2 3751  | 8.35     | 8.35     |     |       |          |          |          |          |
| 389 | +21 2292  | 6.90     | 6.90     | 428      | +42 2334  | 6.20 | 6.20  | 467      | +40 2701  | 7.88     | 7.88     |     |       |          |          |          |          |
| 390 | +12 2307  | 5.59     | 5.59     | 429      | + 1 2746  | 6.84 | 6.34  | 468      | +53 1667  | 8.15     | 8.15     |     |       |          |          |          |          |

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|-----|-----------|----------|----------|-------|-------|-----|------------|----------|----------|-------|-------|-----|------------|----------|----------|-------|-------|
|     |           | $\alpha$ | $\delta$ | 1910+ | 1910+ |     |            | $\alpha$ | $\delta$ | 1910+ | 1910+ |     |            | $\alpha$ | $\delta$ | 1910+ | 1910+ |
| 469 | + 7° 2720 | 5.59     | 5.59     |       |       | 508 | + 48° 2286 | 8.08     | 8.08     |       |       | 547 | + 20° 3382 | 8.36     | 8.36     |       |       |
| 470 | + 8 2794  | 6.81     | 6.81     |       |       | 509 | + 2 2954   | 8.35     | 8.35     |       |       | 548 | + 13 3296  | 5.36     | 5.36     |       |       |
| 471 | + 47 2108 | 8.01     | 8.01     |       |       | 510 | - 5 4070   | 6.30     | 6.30     |       |       | 549 | + 13 3306  | 7.34     | 7.34     |       |       |
| 472 | + 29 2486 | 6.47     | 6.47     |       |       | 511 | + 15 2858  | 5.83     | 5.83     |       |       | 550 | + 13 3311  | 8.36     | 8.36     |       |       |
| 473 | - 8 3705  | 6.19     | 6.19     |       |       | 512 | + 37 2661  | 7.34     | 7.34     |       |       | 551 | + 40 3110  | 7.34     | 7.34     |       |       |
| 474 | + 15 2690 | 8.26     | 8.26     |       |       | 513 | + 37 2665  | 6.13     | 6.13     |       |       | 552 | + 27 2790  | 5.36     | 5.36     |       |       |
| 475 | + 4 2849  | 8.34     | 8.34     |       |       | 514 | - 11 3989  | 5.84     | 5.84     |       |       | 553 | + 43 2716  | 8.37     | 8.37     |       |       |
| 476 | - 11 3721 | 5.35     | 5.36     |       |       | 515 | + 39 2901  | 6.82     | 6.82     |       |       | 554 | + 2 3341   | 5.36     | 5.36     |       |       |
| 477 | - 7 3835  | 8.16     | 8.16     |       |       | 516 | + 40 2914  | 6.29     | 6.29     |       |       | 555 | + 1 3463   | 5.36     | 5.36     |       |       |
| 478 | + 30 2513 | 6.55     | 6.55     |       |       | 517 | + 1 3133   | 5.36     | 5.36     |       |       | 556 | + 9 3911   | 6.60     | 6.60     |       |       |
| 479 | + 43 2405 | 8.32     | 8.32     |       |       | 518 | + 5 3088   | 6.29     | 6.29     |       |       | 557 | + 9 4011   | 6.60     | 6.60     |       |       |
| 480 | + 27 2374 | 7.66     | 7.66     |       |       | 519 | + 15 2918  | 7.02     | 7.02     |       |       | 558 | + 25 3802  | 6.59     | 6.59     |       |       |
| 481 | - 1 2951  | 8.35     | 8.35     |       |       | 520 | + 48 2334  | 7.83     | 7.83     |       |       | 559 | + 25 3803  | 6.60     | 6.60     |       |       |
| 482 | + 6 2891  | 6.32     | 6.32     |       |       | 521 | + 17 2928  | 5.36     | 5.36     |       |       | 560 | + 25 3827  | 6.59     | 6.59     |       |       |
| 483 | + 26 2575 | 7.50     | 7.50     |       |       | 522 | + 44 2518  | 7.13     | 7.13     |       |       | 561 | + 21 3782  | 6.60     | 6.60     |       |       |
| 484 | + 4 2878  | 5.36     | 5.36     |       |       | 523 | + 4 3105   | 7.68     | 7.68     |       |       | 562 | + 29 3670  | 6.59     | 6.59     |       |       |
| 485 | - 2 3873  | 5.36     | 5.36     |       |       | 524 | + 47 2291  | 8.36     | 8.36     |       |       | 563 | + 8 4189   | 6.60     | 6.60     |       |       |
| 486 | + 33 2482 | 6.53     | 6.53     |       |       | 525 | + 41 2665  | 6.29     | 6.29     |       |       | 564 | + 18 4253  | 6.59     | 6.59     |       |       |
| 487 | + 32 2504 | 8.26     | 8.26     |       |       | 526 | + 8 3148   | 6.29     | 6.29     |       |       | 565 | + 19 4162  | 6.96     | 6.96     |       |       |
| 488 | + 41 2519 | 8.33     | 8.33     |       |       | 527 | + 13 3115  | 6.69     | 6.69     |       |       | 566 | + 18 4283  | 7.12     | 7.12     |       |       |
| 489 | + 55 1704 | 8.36     | 8.36     |       |       | 528 | + 19 3098  | 6.33     | 6.33     |       |       | 567 | + 20 4319  | 6.60     | 6.60     |       |       |
| 490 | + 33 2489 | 6.53     | 6.53     |       |       | 529 | + 23 2934  | 6.69     | 6.69     |       |       | 568 | + 19 4218  | 6.59     | 6.59     |       |       |
| 491 | + 15 2758 | 5.36     | 5.36     |       |       | 530 | + 11 2987  | 5.96     | 5.96     |       |       | 569 | + 16 4086  | 6.95     | 6.95     |       |       |
| 492 | + 15 2760 | 8.33     | 8.33     |       |       | 531 | + 0 3533   | 7.33     | 7.33     |       |       | 570 | + 41 3599  | 6.69     | 6.69     |       |       |
| 493 | + 7 2841  | 8.26     | 8.26     |       |       | 532 | + 14 3086  | 5.36     | 5.36     |       |       | 571 | + 26 3783  | 5.69     | 5.69     |       |       |
| 494 | - 11 3841 | 5.36     | 5.36     |       |       | 533 | + 36 2756  | 7.34     | 7.34     |       |       | 572 | + 25 4116  | 6.66     | 6.66     |       |       |
| 495 | + 31 2684 | 6.90     | 6.90     |       |       | 534 | + 22 2998  | 8.07     | 8.00     |       |       | 573 | + 27 3636  | 5.69     | 5.69     |       |       |
| 496 | + 32 2537 | 8.33     | 8.33     |       |       | 535 | + 27 2661  | 8.36     | 8.36     |       |       | 574 | + 15 4081  | 7.66     | 7.66     |       |       |
| 497 | - 6 4124  | 5.36     | 5.36     |       |       | 536 | + 16 3000  | 5.54     | 5.54     |       |       | 575 | + 40 4056  | 6.66     | 6.66     |       |       |
| 498 | - 7 3955  | 7.39     | 7.39     |       |       | 537 | + 26 2885  | 7.33     | 7.33     |       |       | 576 | + 6 4490   | 6.59     | 6.59     |       |       |
| 499 | - 8 3908  | 8.35     | 8.35     |       |       | 538 | + 48 2429  | 7.14     | 7.14     |       |       | 577 | + 36 3978  | 6.60     | 6.60     |       |       |
| 500 | + 12 2796 | 5.36     | 5.36     |       |       | 539 | + 31 2908  | 7.32     | 7.32     |       |       | 578 | + 16 4237  | 6.43     | 6.43     |       |       |
| 501 | + 14 2845 | 6.10     | 6.10     |       |       | 540 | + 6 3298   | 7.34     | 7.34     |       |       | 579 | + 11 4243  | 6.71     | 6.71     |       |       |
| 502 | + 22 2801 | 7.34     | 7.34     |       |       | 541 | + 10 3083  | 5.36     | 5.36     |       |       | 580 | + 41 3758  | 6.14     | 6.14     |       |       |
| 503 | + 50 2153 | 8.18     | 8.18     |       |       | 542 | + 13 3261  | 5.36     | 5.36     |       |       | 581 | + 11 4276  | 6.94     | 6.94     |       |       |
| 504 | - 1 3036  | 8.33     | 8.33     |       |       | 543 | + 46 2237  | 7.34     | 7.34     |       |       | 582 | + 37 3946  | 6.44     | 6.44     |       |       |
| 505 | + 42 2577 | 8.37     | 8.37     |       |       | 544 | + 50 2345  | 8.36     | 8.36     |       |       | 583 | + 41 3765  | 7.66     | 7.66     |       |       |
| 506 | + 32 2569 | 7.54     | 7.54     |       |       | 545 | + 11 3083  | 8.35     | 8.35     |       |       | 584 | + 29 4070  | 7.22     | 7.22     |       |       |
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