

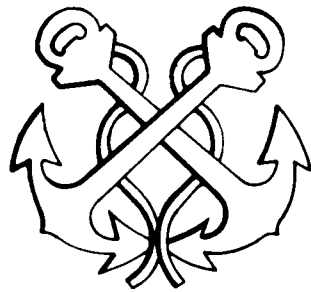


ΑΝΩΤΕΡΕΣ ΔΗΜΟΣΙΕΣ ΣΧΟΛΕΣ
ΕΜΠΟΡΙΚΟΥ ΝΑΥΤΙΚΟΥ

ΑΠΟΣΠΑΣΜΑ ΑΣΤΡΟΝΟΜΙΚΩΝ ΕΦΗΜΕΡΙΔΩΝ



ΙΔΡΥΜΑ ΕΥΓΕΝΙΔΟΥ
ΧΡΥΣΟΥΝ ΜΕΤΑΛΛΙΟΝ ΑΚΑΔΗΜΙΑΣ ΑΘΗΝΩΝ



ΕΚΠΑΙΔΕΥΤΙΚΟ ΚΕΙΜΕΝΟ
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Α' ΕΚΔΟΣΗ 1986



ΠΡΟΛΟΓΟΣ ΙΔΡΥΜΑΤΟΣ ΕΥΓΕΝΙΔΟΥ

Ο Ευγένιος Ευγενίδης ιδρυτής και χορηγός του «Ιδρύματος Ευγενίδου» προείδε ενωρίτατα και σχημάτισε τη βαθιά πεποίθηση ότι αναγκαίο παράγοντα για την πρόοδο του έθνους θα αποτελούσε η άρτια κατάρτιση των τεχνικών μας σε συνδυασμό προς την ηθική τους αγωγή.

Την πεποίθησή του αυτή τη μετέτρεψε σε γενναία πράξη ευεργεσίας, όταν κληροδότησε σεβαστό ποσό για τη σύσταση Ιδρύματος που θα είχε ως σκοπό να συμβάλλει στην τεχνική εκπαίδευση των νέων της Ελλάδας.

Με το Β. Διάταγμα της 10ης Φεβρουαρίου 1956, συνεστήθη το Ίδρυμα Ευγενίδου και κατά την επιθυμία του διαθέτη του ανέλαβε τη διοίκηση η αδελφή του κυρία Μαρ. Σίμου. Από τη στιγμή εκείνη άρχισαν πραγματοποιούμενοι οι σκοποί που οραματίστηκε ο Ευγένιος Ευγενίδης και συγχρόνως η εκπλήρωση μιας από τις βασικότερες ανάγκες του εθνικού μας βίου.

Κατά την κλιμάκωση των σκοπών του, το Ίδρυμα πρόταξε την έκδοση τεχνικών βιβλίων τόσο για λόγους θεωρητικούς όσο και πρακτικούς. Διαπιστώθηκε πράγματι ότι αποτελεί πρωταρχική ανάγκη ο εφοδιασμός των μαθητών με σειρές από βιβλία, τα οποία θα έθεταν ορθά θεμέλια στην παιδεία τους και θα αποτελούσαν συγχρόνως πολύτιμη βιβλιοθήκη για κάθε τεχνικό.

Ειδικότερα, όσον αφορά στα εκπαιδευτικά βιβλία των σπουδαστών των Δημοσίων Σχολών Εμπορικού Ναυτικού, το Ίδρυμα ανέλαβε την έκδοσή τους σε πλήρη και στενή συνεργασία με τη Διεύθυνση Ναυτικής Εκπαιδύσεως του Υπουργείου Εμπορικής Ναυτιλίας, υπό την εποπτεία του οποίου υπάγονται οι Σχολές αυτές.

Η ανάθεση στο Ίδρυμα έγινε με την υπ' αριθ. 61288/5031, της 9ης Αυγούστου 1966, απόφαση του Υπουργείου Εμπορικής Ναυτιλίας, οπότε και συγκροτήθηκε και η Επιτροπή Εκδόσεων.

Κύριος σκοπός των εκδόσεων αυτών, των οποίων το περιεχόμενο είναι σύμφωνο με τα εκάστοτε ισχύοντα αναλυτικά προγράμματα του Υ.Ε.Ν., είναι η παροχή προς τους σπουδαστές των ναυτικών σχολών ΑΔΣΕΝ και Ναυτικών Λυκείων των αναγκαίων εκπαιδευτικών κειμένων, τα οποία αντιστοιχούν προς τα μαθήματα που διδάσκονται στις Σχολές αυτές.

Επίσης ελήφθη πρόνοια, ώστε τα βιβλία αυτά να είναι γενικότερα χρήσιμα για όλους τους αξιωματικούς του Εμπορικού Ναυτικού, που ασκούν ήδη το επάγγελμα και εξελίσσονται στην ιεραρχία του κλάδου τους, χωρίς αυτό να σημαίνει ότι επέρχεται μεταβολή στη στάθμη του περιεχομένου τους.

Οι συγγραφείς και η Επιτροπή Εκδόσεων του Ιδρύματος καταβάλλουν κάθε προσπάθεια, ώστε τα βιβλία να είναι επιστημονικώς άρτια αλλά και προσαρμοσμένα στις ανάγκες και τις δυνατότητες των σπουδαστών. Γι' αυτό και τα βιβλία αυτά έχουν προσεγμένη γλωσσική διατύπωση και η διαπραγμάτευση των θεμάτων είναι ανάλογη προς τη στάθμη της εκπαιδύσεως για την οποία προορίζεται κάθε σειρά των βιβλίων.

Έτσι προσφέρονται στους καθηγητές, τους σπουδαστές της ναυτικής μας εκπαιδύσεως και όλους τους αξιωματικούς του Ε.Ν. οι εκδόσεις του Ιδρύματος, των οποίων η συμβολή στην πραγματοποίηση του σκοπού του Ευγενίου Ευγενίδου ελπίζεται να είναι μεγάλη.

ΕΠΙΤΡΟΠΗ ΕΚΔΟΣΕΩΝ ΙΔΡΥΜΑΤΟΣ ΕΥΓΕΝΙΔΟΥ

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Σύμβουλος εκδόσεων του Ιδρύματος **Κων. Α. Μανάφης**, καθηγ. Φιλ. Σχολής Παν/μίου Αθηνών.

Γραμματέας της Επιτροπής **Γεώργιος Ανδρεάκο**

Ι Δ Ρ Υ Μ Α Ε Υ Γ Ε Ν Ι Δ Ο Υ
ΒΙΒΛΙΟΘΗΚΗ ΤΟΥ ΝΑΥΤΙΚΟΥ

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ΜΕΤΑΦΡΑΣΗ ΟΔΗΓΙΩΝ - ΕΠΙΜΕΛΕΙΑ

ΙΩΑΝΝΟΥ Κ. ΠΑΠΑΪΩΑΝΝΟΥ
ΠΛΟΙΑΡΧΟΥ Α' Ε.Ν.

ΑΘΗΝΑ
2005

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ΠΡΟΛΟΓΟΣ

Τα αποσπάσματα Αστρονομικών Εφημερίδων και οι βοηθητικοί πίνακες που περιλαμβάνονται σ' αυτό το βιβλίο έχουν ληφθεί από το «Nautical Almanac» του έτους 1984 και προορίζονται να χρησιμοποιηθούν στις ΑΔΣΕΝ, στο ΚΕΣΕΝ και στη ΔΣΜΑΕΝ για την εκπαίδευση των σπουδαστών στην επίλυση προβλημάτων αστρονομικής ναυτιλίας.

Μαζί με τα αποσπάσματα, κρίθηκε σκόπιμο να συμπεριληφθεί και πλήρης μετάφραση των οδηγιών που περιέχονται στην πλήρη έκδοση του Almanac. Στη μετάφραση υπάρχουν και οδηγίες για πίνακες που δεν έχουν συμπεριληφθεί σ' αυτή την έκδοση και έχει διατηρηθεί η αναφορά στις σελίδες του πρωτοτύπου. Αυτό, ενώ δεν αναμένεται να προκαλέσει σύγχυση λόγω του μικρού αριθμού σελίδων του έχει το προτέρημα να κάνει τις οδηγίες χρησιμοποιήσιμες μ' οποιαδήποτε πλήρη έκδοση του Almanac.

Τέλος πιστεύουμε ότι αυτή η έκδοση, μαζί με την έκδοση αποσπασμάτων των πινάκων Η.Ο. 229, θα δώσει τη δυνατότητα στους διδάσκοντες να δημιουργήσουν μια πλούσια τράπεζα λυμένων ασκήσεων που θα μπορούν να χρησιμοποιούνται σε κάθε εκπαιδευτική περίοδο.

ΚΕΦΑΛΑΙΟ ΠΡΩΤΟ

ΒΑΣΙΚΕΣ ΑΡΧΕΣ ΚΑΙ ΔΙΑΤΑΞΗ ΤΩΝ ΠΙΝΑΚΩΝ

1.1 Σκοπός.

Σκοπός αυτού του Almanac είναι η παροχή, στους σπουδαστές με πρόσφορο τρόπο, των στοιχείων που απαιτούνται για τις πρακτικές εφαρμογές της αστρονομικής ναυτιλίας στα πλοία.

1.2 Βασικές αρχές.

Το περιεχόμενο του Almanac αποτελούν τα στοιχεία, που χρειάζονται για την εύρεση της **Ωρικής γωνίας ως προς Greenwich** (Greenwich Hour Angle - G.H.A.) καθώς και της **κλίσεως** (Declination - Dec) όλων των ουρανίων σωμάτων που χρησιμοποιούνται στη ναυτιλία για κάθε χρονική στιγμή του **Μέσου Χρόνου στο Greenwich** (Greenwich Mean Time - G.M.T.). Η **Τοπική Ωρική Γωνία** (Local Hour Angle - L.H.A.) μπορεί να βρεθεί από την G.H.A. με χρήση του τύπου:

$$\text{L.H.A.} = \text{G.H.A.} - \text{Δυτικό} \\ + \text{Ανατολικό μήκος}$$

Παρέχονται επίσης και τα εξής στοιχεία:

- Χρόνοι ανατολής και δύσεως του Ηλίου και της Σελήνης, χρόνοι ενάρξεως λυκαυγών και λήξεως λυκοφώτων.
 - Διάφορα ημερολογιακά στοιχεία και στοιχεία που χρησιμεύουν για τη σχεδίαση.
 - Βοηθητικοί πίνακες.
 - Κατάλογος των συμβατικών χρόνων (standard times) που τηρούνται στις διάφορες χώρες.
 - Πίνακες διορθώσεων που πρέπει να επιφέρονται στα παρατηρούμενα ύψη.
- Η G.H.A. και η κλίση του Ηλίου, της Σελήνης και των πλανητών παρέχονται για κάθε ακέραια ώρα G.M.T. για όλο το έτος. Για τους απλανείς παρέχεται η **Αστρική ωρική γωνία** (Sidereal Hour Angle - S.H.A.) οπότε η G.H.A. βρίσκεται με τον τύπο:

$$\text{G.H.A. απλανούς} = \text{G.H.A. Aries} + \text{S.H.A. απλανούς}$$

Οι S.H.A. και οι κλίσεις των απλανών μπορούν να θεωρηθούν ότι παραμένουν αμετάβλητες επί αρκετές ημέρες. Η **Ωρική Γωνία του εαρινού Ισημερινού σημείου ως προς Greenwich** (Greenwich Hour Angle of the first point of Aries ή G.H.A. Aries) παρέχεται για κάθε ακέραια ώρα G.M.T. για όλο το έτος.

Στις ωριαίες τιμές G.H.A. και κλίσεων, που περιέχουν οι πίνακες, πρέπει να επιφέρονται οι κατάλληλες αυξήσεις (increments) και διορθώσεις (corrections) για τα λεπτά και δευτερόλεπτα του G.M.T. Αυτές οι αυξήσεις και διορθώσεις παρέχονται σε πίνακες που είναι μόνιμοι για όλα τα έτη.

Η εξάτομη σειρά ναυτικών πινάκων επιλύσεως του σφαιρικού τριγώνου «Sight Reduction Tables for Marine Navigation» προορίζεται για χρήση σε συνδυασμό με το Nautical Almanac. Η σειρά αυτή εκδίδεται στις Η.Π.Α. ως Publication No 229 και στη Μεγάλη Βρεταννία ως N.P. 401.

Σ' όλο το βιβλίο οι τιμές των G.H.A., των κλίσεων και S.H.A. παρέχονται στρογγυλεμένες στο πλησιέστερο 0'.1. Ο χρόνος που χρησιμοποιείται ως στοιχείο εισόδου στις ημερήσιες σελίδες του Almanac είναι $12^{\text{h}} + \text{G.H.A. του μέσου Ηλίου}$ και χαρακτηρίζεται ως G.M.T., αν και είναι γνωστός και ως **Παγκόσμιος Χρόνος** (Universal Time - MT ή MT 1). Αυτή η κλίμακα χρόνου μπορεί να διαφέρει κατά ένα ποσό από το **Συντονισμένο Παγκόσμιο Χρόνο** (Coordinated Universal Time - MTC) που

μεταδίδεται με τα **ωριαία σήματα** (time signals). Η διαφορά αυτή οφείλεται στο γεγονός ότι ο χρόνος (G.M.T.), που χρησιμοποιείται ως στοιχείο εισόδου, βασίζεται στη μεταβαλλόμενη ταχύτητα περιστροφής της γης, ενώ ο χρόνος (MTC), που μεταδίδεται με τα ωριαία σήματα, βασίζεται σήμερα σε **ατομική κλίμακα χρόνου** (atomic time - scale). Στο χρόνο που μεταδίδεται με τα ωριαία σήματα επιφέρονται, ανάλογα με τις ανάγκες (συνήθως στις 24^h στις 24 Δεκεμβρίου ή στις 30 Ιουνίου), μεταβολές ενός ακριβώς δευτερολέπτου έτσι, ώστε η διαφορά ανάμεσα στα ωριαία σήματα και στο G.M.T. που χρησιμοποιείται στο Almanac, να μην είναι μεγαλύτερη από 0.9 seconds. Αν δεν ληφθεί υπόψη αυτή η διαφορά, τότε το μήκος του στίγματος, που υπολογίζεται με αστρονομικές παρατηρήσεις, μπορεί να έχει σφάλμα μέχρι 0'.2. Γι' αυτό το λόγο, όταν στον υπολογισμό του στίγματος απαιτείται ακρίβεια μεγαλύτερη από 1 second (0'.25), θα πρέπει να λαμβάνεται υπόψη η διόρθωση στο χρόνο που μεταδίδουν τα ωριαία σήματα. Αυτή η διόρθωση παρέχεται στο ωριαίο σήμα με ειδικό κώδικα καθώς και από άλλες πηγές. Η διόρθωση μπορεί να γίνεται κατευθείαν στους χρόνους των παρατηρήσεων ή, εναλλακτικά, ο υπολογισμός να γίνεται χωρίς να διορθωθούν οι χρόνοι και στη συνέχεια να διορθώνεται το μήκος του στίγματος με τα ποσά που αναφέρονται στον παρακάτω πίνακα:

| Διόρθωση ωριαίου σήματος | | | Διόρθωση μήκους |
|-----------------------------|-------|-------------------|-----------------|
| -0 ^s 9 | μέχρι | -0 ^s 7 | 0'2 προς A |
| -0 ^s 6 | μέχρι | -0 ^s 3 | 0.1 προς A |
| -0 ^s 2 | μέχρι | +0 ^s 2 | Καμία διόρθωση |
| +0 ^s 3 | μέχρι | +0 ^s 6 | 0'1 προς Δ |
| +0 ^s 7 | μέχρι | +0 ^s 9 | 0'2 προς Δ |

1.3 Διάταξη των πινάκων.

Στις δυο σελίδες που αντιστοιχούν σε κάθε άνοιγμα του τμήματος που περιέχει τις αστρονομικές εφημερίδες, παρέχονται στοιχεία για τρεις ημερομηνίες. Στην αριστερή σελίδα παρέχονται τα στοιχεία για τους πλανήτες και τους απλανείς. Στη δεξιά σελίδα παρέχονται τα στοιχεία για τον Ήλιο και τη Σελήνη, καθώς και οι χρόνοι ενάρξεως λυκαυγών, λήξεως λυκοφώτων, ανατολής και δύσεως Ηλίου και Σελήνης.

Η διάταξη των υπολοίπων πινάκων έχει γίνει ως εξής: Για να διευκολύνεται η χρήση τους οι πίνακες διορθώσεων υψών περιέχονται στις σελίδες A₂, A₃, A₄, xxxiv και xxv. Το ημερολόγιο, οι φάσεις της Σελήνης και οι πληροφορίες για τις εκλείψεις και τους πλανήτες έχουν τοποθετηθεί πριν από τους κύριους πίνακες. Οι υπόλοιποι πίνακες ακολουθούν μετά τους κύριους πίνακες με σειρά, όσο ήταν εφικτό, αντίστροφη της σημασίας τους ή της συχνότητας που χρησιμοποιούνται.

ΚΕΦΑΛΑΙΟ ΔΕΥΤΕΡΟ

ΚΥΡΙΑ ΣΤΟΙΧΕΙΑ

2.1 Ημερήσιες σελίδες.

Στις ημερήσιες σελίδες παρέχονται για κάθε ακέραια ώρα G.M.T. ή G.H.A. του εαρινού ισημερινού σημείου (Aries) και οι G.H.A και κλίσεις του Ηλίου, της Σελήνης και των τεσσάρων πλανητών που χρησιμοποιούνται στη ναυτιλία. Επίσης για κάθε ακέραια ώρα G.M.T. παρέχονται για τη Σελήνη οι τιμές των u και d ώστε να διευκολύνεται η διόρθωση της G.H.A. και της κλίσεως της για ενδιάμεσους χρόνους. Οι ποσότητες u και d για τους πλανήτες και d για τον Ήλιο μεταβάλλονται τόσο αργά, ώστε παρέχονται μόνο μια φορά σε κάθε σελίδα στο κάτω μέρος της αντίστοιχης στήλης. Η ποσότητα u για το εαρινό ισημερινό σημείο (Aries) είναι μηδέν, ενώ για τον Ήλιο είναι αμελητέα και γι' αυτό παραλείπεται. Επίσης παρέχονται οι S.H.A. και οι κλίσεις των 57 επιλεγμένων απλανών που αναγράφονται κατ' αλφαβητική σειρά των ονομάτων τους.

2.2 Απλανείς αστέρες.

Στους πίνακες των σελίδων 268 - 273 παρέχονται για κάθε μήνα οι S.H.A. και οι κλίσεις 173 απλανών αστέρων, στους οποίους συμπεριλαμβάνονται και οι 57 επιλεγμένοι. Τα στοιχεία παίρνονται από τους πίνακες χωρίς παρεμβολή και χρησιμοποιούνται με τον ίδιο τρόπο, όπως και τα στοιχεία των επιλεγμένων απλανών που παίρνονται από τις ημερήσιες σελίδες. Η κατάταξη των απλανών έχει γίνει κατά αύξουσα σειρά της S.H.A.

Στους 173 αστέρες συμπεριλαμβάνονται όλοι οι απλανείς μέχρι τρίτου μεγέθους (λαμπρότητα 3.0) καθώς και μερικοί λιγότερο λαμπροί για να συμπληρωθούν τα μεγαλύτερα διάκενα. Οι 57 επιλεγμένοι απλανείς αστέρες έχουν ξεχωρισθεί με κριτήρια τη λαμπρότητα (μέγεθος) και την κατανομή τους στην ουράνια σφαίρα και επαρκούν για την πλειονότητα των παρατηρήσεων.

Οι 57 αυτοί επιλεγμένοι απλανείς αναφέρονται με τα ιδιαίτερα ονόματά τους, αλλά έχουν επίσης αριθμολογηθεί κατά φθίνουσα σειρά S.H.A. Στον κατάλογο των 173 απλανών, οι αστέρες αναφέρονται στην αριστερή σελίδα πάντα με το όνομα του αστερισμού, στον οποίο ανήκουν, και το γράμμα του ελληνικού αλφαβήτου που τους προσδιορίζει. Στη δεξιά σελίδα αναφέρονται με τ' όνομά τους εφόσον υπάρχει και είναι γενικά γνωστό. Και στις δυο σελίδες αναγράφονται και οι αριθμοί των επιλεγμένων απλανών.

Στη σελίδα xxxiii παρέχονται ευρετήρια των επιλεγμένων απλανών κατ' αλφαβητική και κατ' αριθμητική σειρά. Αυτά τα ευρετήρια έχουν τυπωθεί και στο σελιδοδείκτη.

2.3 Αυξήσεις και διορθώσεις.

Στο τέλος του Almanac έχουν τυπωθεί σε χρωματιστό χαρτί (σελίδες ii - xxxi) οι πίνακες που παρέχουν τις **αυξήσεις** (increments) και τις **διορθώσεις** (corrections) που πρέπει να επιφέρονται στις ωριαίες τιμές της G.H.A. και της κλίσεως για τα λεπτά και δευτερόλεπτα του G.M.T. Υπάρχουν 60 τέτοιοι πίνακες, ένας για κάθε ακέραιο λεπτό, και ο καθένας αποτελείται από δυο μέρη. Στο ένα μέρος παρέχονται για κάθε λεπτό και δευτερόλεπτο οι αντίστοιχες αυξήσεις των G.H.A. Ηλίου και Πλανητών (στήλη SUN/PLANETS), εαρινού ισημερινού σημείου (στήλη ARIES) και Σελήνης (στήλη MOON). Στο άλλο μέρος παρέχονται για κάθε λεπτό οι διορθώσεις που πρέπει να επιφέρονται στις G.H.A. και τις κλίσεις ανάλογα με τις τιμές των ποσοτήτων u και d που παρέχονται στις ημερήσιες σελίδες.

Ο υπολογισμός των αυξήσεων έχει γίνει με βάση σταθερές τιμές ωριαίας αυξήσεως της G.H.A. Οι τιμές αυτές είναι 15° ακριβώς για τον Ήλιο και τους Πλανήτες, $15^\circ 02' 46''$ για το εαρινό ισημερινό σημείο και $14^\circ 19' 0''$ για τη Σελήνη. Οι τιμές των u , που παρέχονται στις ημερήσιες σελίδες, είναι οι διαφορές των

πραγματικών ωριαίων μεταβολών των G.H.A. από τις τιμές που χρησιμοποιήθηκαν για τον υπολογισμό των πινάκων και είναι πάντα θετικές για όλα τα σώματα εκτός από την Αφροδίτη (Venus). Γι' αυτήν υπάρχουν περιπτώσεις, κατά τις οποίες οι τιμές είναι αρνητικές οπότε και έχουν αρνητικό πρόσημο. Οι ωριαίες τιμές των G.H.A. του Ηλίου, που αναφέρονται στις ημερήσιες σελίδες, έχουν υποστεί μικρή αύξηση ή μείωση από τις πραγματικές, έτσι ώστε να μειώνεται στο ελάχιστο το σφάλμα που οφείλεται στην παράλειψη της διορθώσεως u ως αμελητέας. Οι τιμές των d , που παρέχονται στις ημερήσιες σελίδες, είναι οι ωριαίες μεταβολές των κλίσεων. Για τη Σελήνη παρέχονται για κάθε ώρα οι πραγματικές τιμές των u και d , ενώ για τα υπόλοιπα σώματα παρέχονται μέσες τιμές για τις τρεις ημέρες κάθε σελίδας.

2.4 Τρόπος εισόδου.

Εκφράζομε το G.M.T. της παρατηρήσεως ως ημερομηνία και ώρες που ακολουθούνται από ένα αριθμό λεπτών και δευτερολέπτων. Εισερχόμαστε στις ημερήσιες σελίδες με την ημερομηνία και τον ακέραιο αριθμό ωρών G.M.T. και παίρνομε τις αντίστοιχες τιμές G.H.A. και κλίσεως του σώματος καθώς και, όπου χρειάζεται, τις τιμές των u και d . Επίσης από τις ημερήσιες σελίδες παίρνομε τις S.H.A. και τις κλίσεις των επιλεγμένων απλανών.

Κατόπιν επιλέγομε τον **πίνακα αυξήσεων και διορθώσεων** (Increments and Corrections) που αντιστοιχεί στα ακέραια λεπτά του G.M.T. Από την κατάλληλη στήλη και απέναντι στα δευτερόλεπτα του G.M.T. παίρνομε την αύξηση της G.H.A. Από το δεύτερο μέρος του πίνακα, απέναντι στην τιμή του u που πήραμε από τις ημερήσιες σελίδες, λαμβάνομε την τιμή της διορθώσεως u (u correction). Και η αύξηση και η διόρθωση u προσθέτονται πάντα στην G.H.A., εκτός αν πρόκειται για την Αφροδίτη (Venus) και το πρόσημο του u είναι αρνητικό, οπότε η διόρθωση u είναι αφαιρετική. Για την κλίση δεν υπάρχει αύξηση αλλά επιφέρεται μόνο η διόρθωση d (d -correction), που παρέχεται και αυτή στο δεύτερο μέρος του ίδιου πίνακα απέναντι στο d , που έχει ληφθεί από τις ημερήσιες σελίδες. Στις ημερήσιες σελίδες το d παρέχεται χωρίς αλγεβρικό σημείο (+ ή -). Αυτό το προσδιορίζομε εξετάζοντας τη μεταβολή της κλίσεως (+ αν αυξάνει και - αν μειώνεται με το χρόνο.). Σε πολλές περιπτώσεις η διόρθωση μπορεί να γίνει με το μυαλό.

2.5 Παραδείγματα.

α) Ήλιος και Σελήνη.

Ζητούνται η G.H.A και η κλίση του Ηλίου και της Σελήνης στις 27 Δεκεμβρίου 1984 σε G.M.T. 15^h 47^m 13^s.

| Ημερ. σελ. Dec. | SUN | | | | MOON | | | |
|---------------------------------|---|-------------|-------------|------------|-------|-------------|-------|--|
| | G.H.A. | Dec. | d | G.H.A. | u | Dec. | d | |
| 27 ^d 15 ^h | 44° 40'6" | S.23° 18'2" | 0'1" | 340° 06'8" | 14'8" | S.13° 27'4" | 12'0" | |
| Increments | 47 ^m 13 ^s | 11° 48'3" | | 11° 16'0" | | | | |
| u or d corrections | 47 ^m | | 0'1" | + 11'7" | | -9'5" | | |
| Άθροισμα Dec. | 27 ^d 15 ^h 47 ^m 13 ^s | 56° 28'9" | S.23° 18'1" | 351° 34'5" | | S.13° 17'9" | | |

β) Πλανήτες.

Ζητούνται η L.H.A. και η κλίση (i) της Αφροδίτης στις 27 Δεκεμβρίου 1984 σε G.M.T. 14^h 57^m 28^s σε μήκος 58° 12' Α (ii) του Κρόνου στις 27 Δεκεμβρίου 1984 σε G.M.T. 11^h 48^m 51^s σε μήκος 97° 45' Δ.

| Ημερ. σελ. Dec. | VENUS | | | | SATURN | | | |
|---|-----------------|-------|-------------|--------------------|---|------|-------------|------|
| | G.H.A. | u | Dec. | d | G.H.A. | u | Dec. | d |
| 27 ^d (14 ^h) | 341° 53'2" | -0'3" | S.16° 05'2" | 1'0" | (11 ⁿ) 28° 39'8" | 2'2" | S.16° 50'5" | 0'1" |
| Increments (planets) (57 ^m 28 ^s) | 14° 22'0" | | | | 48 ^m 51 ^s) 12° 12'8" | | | |
| u or d corrections (57 ^m) | - 0'3" | | 1'0" | (48 ^m) | + 1'8" | | + 0'1" | |
| Άθροισ. G.H.A. Dec. | 356° 14'9" | | S.16° 04'2" | | 40° 54'4" | | S.16° 50'6" | |
| Μήκος | (Α) + 58° 12'0" | | | | (Δ) - 97° 45'0" | | | |
| Πολλαπλάσια 360° | -360° | | | | +360° | | | |
| L.H.A. πλανήτη | 54° 26'9" | | | | 303° 09'4" | | | |

γ) Απλανείς:

Ζητούνται οι G.H.A. και η κλίση: α) του Aldebaran στις 27 Δεκεμβρίου 1984 σε G.M.T. 15^h 55^m 13^s β) Spica στις 27 Δεκεμβρίου 1984 σε G.M.T. 18^h 02^m 45^s.

| | ALDEBARAN | | SPICA | |
|------------------------------|---|------------------------------------|-----------|------------|
| | G.H.A. | Dec. | G.H.A. | Dec. |
| Ημερ. σελ. (S.H.A. and Dec.) | 291° 14:1 N.16° 28:9 | | 158° 54:3 | S.11° 04:9 |
| Ημερ. σελ. (G.H.A. Aries) | (15 ^h) 321° 16:5 | (18 ^h) | 6° 23:9 | |
| Increments (Aries) | (55 ^m 13 ^s) 13° 50:5 | (02 ^m 45 ^s) | 0° 41:4 | |
| Άθροισμα = G.H.A. | 626° 21:1 | | 165° 59:6 | |
| Πολλαπλάσια 360° | -360° | | | |
| G.H.A. | 266° 21:1 | | 165° 59:6 | |

2.6 Πίνακες Πολικού [Polaris (Pole Star) Tables].

Οι πίνακες των σελίδων 274-276 παρέχουν το μέσον για τον υπολογισμό του πλάτους με παρατήρηση του Πολικού, καθώς και για τον υπολογισμό του αζιμούθ του Πολικού. Οι πίνακες βασίζονται στον τύπο:

$$\varphi - H_{\lambda^*} = -\rho \cos h + \frac{1}{2} \rho \sin \rho \sin^2 h \tan \varphi$$

όπου:

H_{λ^*} = αληθές ύψος του Πολικού

ρ = πολική απόσταση του πολικού = $90^\circ - \delta^*$

h = L.H.A. Πολικού = L.H.A. Aries + S.H.A. *

α_0 είναι το αποτέλεσμα της επιλύσεως του παραπάνω τύπου για πλάτος $\varphi = 50^\circ$ B και μέσες τιμές S.H.A.* (326° 09:0) και κλίσεως (89° 11.7 B) στο οποίο έχει προστεθεί μια σταθερή ποσότητα (58:8). Έτσι το α_0 είναι συνάρτηση της L.H.A. Aries μόνο και πάντα θετικό. Το α_1 είναι η διαφορά της τιμής του δεύτερου όρου του τύπου για το πραγματικό πλάτος από την τιμή του για $\varphi = 50^\circ$ B, στην οποία διαφορά έχει προστεθεί μια σταθερή ποσότητα (0:6), ώστε το αποτέλεσμα να είναι πάντα θετικό. Το α_1 είναι συνάρτηση της L.H.A. Aries και του πλάτους του παρατηρητή. Το α_2 είναι η διόρθωση του πρώτου όρου του τύπου για διαφορές της S.H.A. και της κλίσεως του Πολικού από τις μέσες τιμές που χρησιμοποιήθηκαν για τον υπολογισμό του α_1 . Το α_2 είναι συνάρτηση της L.H.A. Aries και της ημερομηνίας και είναι πάντα θετικό, επειδή στην πραγματική διόρθωση έχει προστεθεί μια σταθερή ποσότητα (0:6). Το άθροισμα των σταθερών ποσοτήτων, που έχουν προστεθεί, είναι 1° (58:8 + 0:6 + 0:6) και επομένως:

$$\varphi = H_{\lambda^*} - 1^\circ + \alpha_0 + \alpha_1 + \alpha_2$$

Στους πίνακες εισερχόμαστε με την L.H.A. Aries, για να προσδιορίσουμε τη στήλη που θα χρησιμοποιήσουμε. Κάθε στήλη αντιστοιχεί σε 10° της L.H.A. Με κατακόρυφο στοιχείο εισόδου τις μονάδες μοιρών της L.H.A. Aries, και παρεμβολή εξ όψεως για τα πρώτα λεπτά, παίρνομε από τον πρώτο πίνακα τη διόρθωση α_0 . Από το δεύτερο και τον τρίτο πίνακα παίρνομε χωρίς παρεμβολή, τις διορθώσεις α_1 και α_2 με στοιχεία εισόδου το πλάτος αναμετρήσεως και το μήνα αντίστοιχα. Οι διορθώσεις α_0 , α_1 και α_2 είναι πάντα θετικές. Ο τελευταίος πίνακας παρέχει το Αζιμούθ του Πολικού:

Παράδειγμα:

Στις 2 Μαΐου 1984 σε G.M.T. 23^h 28^m 40^s, σε στίγμα αναμετρήσεως πλάτος $50^\circ 06'$ B και μήκος $47^\circ 14'$ Δ το αληθές ύψος του Πολικού ήταν $H_{\lambda^*} = 49^\circ 31:6$.

| Από τις ημερήσιες σελίδες | Πίνακες πολικού | | | |
|---|-----------------|------|--|------------|
| G.H.A. Aries (23 ^h) | 206° | 02:0 | H_{λ^*} | 49° 31:6 |
| Increment (28 ^m 40 ^s) | 6° | 41:1 | α_0 (για 165° 29:1) | 1° 31:1 |
| G.H.A. Aries (23 ^h 28 ^m 40 ^s) | 212° | 43:1 | α_1 ($\varphi = 50^\circ$ περίπου) | 0:6 |
| λ (Δ) | -47° | 14:0 | α_2 (Μάιος) | 1:0 |
| L.H.A. Aries | 165° | 29:1 | Άθροισμα - $1^\circ = \varphi =$ | 50° 04:3 B |

ΚΕΦΑΛΑΙΟ ΤΡΙΤΟ

ΦΑΙΝΟΜΕΝΑ ΑΝΑΤΟΛΗΣ ΚΑΙ ΔΥΣΕΩΣ

3.1 Γενικά.

Στις δεξιές ημερήσιες σελίδες παρέχονται οι χρόνοι ανατολής και δύσεως του Ηλίου και της Σελήνης, ενάρξεως ναυτικού και πολιτικού λυκαυγούς και λήξεως πολιτικού και ναυτικού λυκόφωτος, για πλάτη από 72° Β μέχρι 60° Ν. Οι χρόνοι παρέχονται στο πλησιέστερο ακέραιο λεπτό και στην πραγματικότητα είναι οι χρόνοι G.M.T. των φαινομένων για τύπους που βρίσκονται στο μεσημβρινό του Greenwich. Οι χρόνοι ανατολής και δύσεως της Σελήνης παρέχονται για κάθε ημερομηνία, ενώ οι χρόνοι των ηλιακών φαινομένων μόνο για τη μεσαία από τις τρεις ημερομηνίες που περιέχονται σε κάθε σελίδα.

Οι παραπάνω χρόνοι είναι κατά προσέγγιση **Τοπικοί Μέσοι Χρόνοι** (Local Mean Times – L.M.T.) των αντιστοιχών φαινομένων σε άλλους μεσημβρινούς. Όταν όμως είναι επιθυμητό, μπορεί να γίνει παρεμβολή. Το G.M.T. ενός φαινομένου βρίσκεται από το αντίστοιχο L.M.T. με τον τύπο:

$$\begin{aligned} & + \text{ Δυτικό} \\ \text{G.M.T.} &= \text{L.M.T.} \quad \text{μήκος} \\ & - \text{ Ανατολικό} \end{aligned}$$

Για την επίλυση του τύπου το μήκος πρέπει πρώτα να μετατραπεί σε χρόνο με χρήση του πίνακα της σελίδας 1 ή με άλλο τρόπο.

Οι παρεμβολές για ενδιάμεσα πλάτη μπορούν να γίνονται εξ όψεως ή ακριβέστερα με τον πίνακα της σελίδας xxii.

Στα μεγάλα πλάτη μπορεί ορισμένα φαινόμενα να μη συμβαίνουν και αυτό το γεγονός επισημαίνεται με τα παρακάτω σύμβολα:

- Το σώμα (Ήλιος η Σελήνη) παραμένει συνεχώς πάνω από τον ορίζοντα.
- Το σώμα (Ήλιος η Σελήνη) παραμένει συνεχώς κάτω από τον ορίζοντα.
- //// Το λυκόφως (ή λυκαυγές) διαρκεί όλη τη νύκτα.

Βάση της πινακοποίησης. Για τον υπολογισμό του αληθούς ύψους του Ηλίου κατά την ορατή ανατολή ή δύση του, χρησιμοποιήθηκαν τιμή ημιδιαμέτρου ίση με 16' και τιμή οριζόντιας αστρονομικής διαθλάσεως ίση με 34'. Έτσι κατά τους παρεχομένους χρόνους το άνω χείλος του Ηλίου θα βρίσκεται στον ορατό ορίζοντα και όλοι οι χρόνοι αναφέρονται στα φαινόμενα, όπως θα παρατηρούνται από την επιφάνεια της θάλασσας (ύψος οφθαλμού παρατηρητή μηδέν) με καθαρό ορίζοντα.

Κατά τους χρόνους που παρέχονται ως χρόνοι ενάρξεως του πολιτικού λυκαυγούς ή λήξεως του πολιτικού λυκόφωτος η ζενιθιακή απόσταση του Ηλίου είναι 96° και κατά τους αντίστοιχους χρόνους για το ναυτικό λυκαυγές ή λυκόφως είναι 102°. Κατά την έναρξη του πολιτικού λυκαυγούς ή τη λήξη του πολιτικού λυκόφωτος, η ένταση του φωτισμού (εφόσον οι συνθήκες είναι καλές και δεν υπάρχουν άλλες πηγές φωτισμού) είναι τόση, ώστε να είναι ορατοί οι πιο λαμπροί από τους απλανείς και να είναι ευδιάκριτος ο ορίζοντας. Κατά την έναρξη του ναυτικού λυκαυγούς ή κατά τη λήξη του ναυτικού λυκόφωτος ο ορίζοντας, γενικά, δεν είναι ορατός και είναι πολύ σκοτεινά για να γίνουν παρατηρήσεις με ναυτικό εξάντα.

Οι χρόνοι που αντιστοιχούν σε άλλα αρνητικά ύψη του Ηλίου μπορούν να βρεθούν με παρεμβολή για ύψη μεταξύ 0° και -12° και με παρέκταση, αλλά με μικρότερη ακρίβεια, για ύψη χαμηλότερα από -12°. Κοντά σε ακραίες περιπτώσεις, οι χρόνοι, που υπολογίζονται μ' αυτό τον τρόπο, υπόκεινται σε σημαντική αβεβαιότητα.

Για τον υπολογισμό των χρόνων ανατολής και δύσεως της Σελήνης έχουν ληφθεί υπόψη η επίδραση της ημιδιαμέτρου, της παραλλάξεως και της διαθλάσεως (34') έτσι, ώστε κατά τους παρεχόμενους χρόνους το άνω χείλος της Σελήνης θα βρίσκεται στον ορατό ορίζοντα για παρατηρητή στην επιφάνεια της θάλασσας (ύψος οφθαλμού μηδέν).

3.2 Ανατολή και δύση Ηλίου, λυκαυγές και λυκόφως.

Οι χρόνοι που παρέχονται στους πίνακες μπορούν, χωρίς σοβαρό σφάλμα, να θεωρηθούν ως οι L.M.T. των φαινομένων για οποιαδήποτε από τις τρεις ημερομηνίες της σελίδας και για όλα τα μήκη. Με κανονικές συνθήκες, οι ζητούμενοι χρόνοι είναι δυνατόν να υπολογισθούν ακριβέστερα με εκτέλεση παρεμβολών (α) για το πλάτος και (β) για την ακριβή ημερομηνία και το μήκος. Στην περίπτωση (β) διαιρούμε το μήκος δια 360°, ώστε να εκφράζεται ως κλάσμα του 24ώρου και το προσθέτουμε αλγεβρικά στην ημερομηνία θεωρώντας θετικό το δυτικό μήκος και αρνητικό το ανατολικό. (Βλέπε παραδείγματα). Σε ακραίες συνθήκες, κοντά σε , ██████, ή $////$ είναι πιθανόν να μην είναι δυνατή η εκτέλεση παρεμβολής προς ορισμένη κατεύθυνση. Σ' αυτές τις περιπτώσεις οι ακριβείς χρόνοι έχουν πολύ μικρή αξία.

Παράδειγμα.

Ζητούνται τα G.M.T α) ενάρξεως ναυτικού και πολιτικού λυκαυγούς και ανατολής ηλίου σε πλάτος 48° 55' N μήκος 75° 18' A στις 22 Ιανουαρίου 1984, β) δύσεως ηλίου και λήξεως πολιτικού και ναυτικού λυκόφωτος σε πλάτος 67° 10' B μήκος 168° 05' Δ στις 21 Ιανουαρίου 1984.

| (a) | Twilight | | Sunrise | | (b) | Sunset | | Twilight | |
|---|----------|-------|---------|---|-----|--------|-------|----------|---|
| | Nautical | Civil | | | | | Civil | Nautical | |
| Από σελ. 25 και 23 L.M.T. για πλάτος S. 45° | d | h | m | d | h | m | d | h | m |
| Διορθ για S.48° 55' | | | | | | | | | |
| (σ. xxii, Table I) | | | | | | | | | |
| Μήκος (σελ. i) E.75° 18' | | | | | | | | | |
| G.M.T. | | | | | | | | | |

Τα L.M.T. είναι ακριβή μόνο για τη μεσαία ημερομηνία της σελίδας (23/1 και 20/1 αντίστοιχα) και για μήκος 0°. Όταν χρειάζεται ακριβέστερος υπολογισμός, τότε πρέπει να γίνουν παρεμβολές, αλλά το σφάλμα που προκαλεί το στρογγύλεμα στο πλησιέστερο λεπτό μπορεί συγκεντρωτικά να φθάσει μέχρι περίπου 2^m.

α) Ιανουαρίου 22^d - 75°/360° = Ιαν. 21^d . 8 δηλαδή 1/3 (1.2) = 0.4 προς στα πίσω προς στα στοιχεία που αντιστοιχούν σε πλάτος 48° 55' N στην προηγούμενη σελίδα. Οι διορθώσεις είναι -2^m για το ναυτικό λυκαυγές, -2^m για το πολιτικό λυκαυγές και -2^m για την ανατολή ηλίου.

β) Ιανουαρ. 21^d + 168°/360° = Ιαν. 21^d . 5 δηλ. $\frac{1}{3}$ (1.5) = 0.5 προς τα εμπρός προς τα στοι-

χεία που αντιστοιχούν σε πλάτος 67° 10' B στην επόμενη σελίδα. Οι διορθώσεις είναι + 7^m στη δύση του ηλίου, + 5^m στο πολιτικό λυκόφως και + 4^m στο ναυτικό λυκόφως.

3.3 Ανατολή και δύση Σελήνης.

Στην πράξη πολύ σπάνια χρειάζονται ακριβείς χρόνοι ανατολής ή δύσεως της Σελήνης. Συνήθως μια ματιά στους πίνακες είναι αρκετή για να δούμε αν η παρατήρηση της Σελήνης είναι δυνατή καθώς και ποια ώρα ανατέλλει ή δύει περίπου. Όταν χρειάζεται, οι ακριβείς χρόνοι μπορούν να υπολογισθούν ως εξής: Χρησιμοποιώντας τον πίνακα I της σελίδας xxii κάνομε παρεμβολή για το πλάτος και βρίσκομε το ζητούμενο χρόνο (π.χ. ανατολής) για την επιθυμητή ημερομηνία καθώς και

για την προηγούμενη, αν το μήκος μας είναι ανατολικό, ή την επόμενη, αν είναι δυτικό. Μπαίνουμε στον πίνακα II της σελίδας xxxii με στοιχεία εισόδου το μήκος μας και τη διαφορά ανάμεσα στους χρόνους που υπολογίσαμε για τις δυο ημερομηνίες και βρίσκουμε μια διόρθωση, που την επιφέρουμε στο χρόνο της επιθυμητής ημερομηνίας. Έτσι, ώστε το αποτέλεσμα να βρεθεί ανάμεσα στους χρόνους που υπολογίσαμε για τις δυο ημερομηνίες. Σε ακραίες συνθήκες, κοντά σε ή είναι δυνατόν να μην μπορεί να γίνει παρεμβολή, αλλά σ' αυτές τις περιπτώσεις οι ακριβείς χρόνοι έχουν πολύ μικρή αξία.

Σε κάθε σελίδα οι χρόνοι ανατολής και δύσεως της Σελήνης παρέχονται για 4 ημερομηνίες, ώστε να διευκολύνεται η εκτέλεση παρεμβολής. Όταν κάποιο φαινόμενο δεν παρατηρείται σε ορισμένη ημερομηνία (όπως συμβαίνει μια φορά το μήνα), τότε γι' αυτήν την ημερομηνία παρέχεται ο χρόνος του φαινομένου για την επομένη αυξημένος κατά 24 ώρες. Χρειάζεται ιδιαίτερη προσοχή, όταν γίνεται παρεμβολή μεταξύ δυο χρόνων, από τους οποίους ο ένας είναι αυξημένος κατά 24 ώρες. Στην πράξη, όταν γίνεται παρεμβολή για το μήκος, είναι αρκετό να χρησιμοποιείται η διαφορά των χρόνων του φαινομένου για το πλάτος των πινάκων, που είναι πλησιέστερο προς το πλάτος μας, και η διόρθωση να βρίσκεται από τον πίνακα II χωρίς παρεμβολή χρησιμοποιώντας τα πλησιέστερα στοιχεία εισόδου, όπως δείχνει το παρακάτω παράδειγμα.

Παράδειγμα.

Ζητούνται τα G.M.T. ανατολής και δύσεως της Σελήνης στις 22 Ιανουαρίου 1984 σε πλάτος $47^{\circ}10'N$ και μήκος (α) $124^{\circ}00' A$ (β) $78^{\circ}31' \Delta$.

| | Μήκος $124^{\circ}00' A$ | | Μήκος $78^{\circ}31' \Delta$ | |
|--------------------------------------|--------------------------|----------|------------------------------|----------|
| | Moonrise | Moonset | Moonrise | Moonset |
| L.M.T. για πλάτος $S45^{\circ}0$ | 22 22 26 | 22 09 16 | 22 22 26 | 22 09 16 |
| Διόρθ. πλάτους (σελ. xxxii, Table I) | +2 | -2 | +2 | -2 |
| Διόρθ. μήκους (σελ. xxxii, Table II) | -10 | -27 | +4 | +18 |
| Διορθωμένο L.M.T. | 22 22 18 | 22 08 47 | 22 22 32 | 22 09 32 |
| Μήκος | -8 16 | -8 16 | +5 14 | +5 14 |
| G.M.T | 22 14 02 | 22 00 31 | 23 03 46 | 22 14 46 |

ΚΕΦΑΛΑΙΟ ΤΕΤΑΡΤΟ

ΠΙΝΑΚΕΣ ΔΙΟΡΘΩΣΕΩΝ ΥΨΩΝ

4.1 Γενικά.

Για τη διόρθωση των υψών που μετρούνται με ναυτικό εξάντα παρέχονται γενικά δυο διορθώσεις. Όμως για τα ύψη της Αφροδίτης (Venus) και του Άρη (Mars) καθώς και για τα πολύ χαμηλά ύψη όλων των σωμάτων απαιτούνται και επιπλέον διορθώσεις.

Στις σελίδες A_2 και $xxxiv$ παρέχονται διορθώσεις για το **βάθος ορίζοντα** (dip of the horizon), που οφείλεται στο ύψος του οφθαλμού του παρατηρητή πάνω από την επιφάνεια της θάλασσας. Θεωρητικά, η διόρθωση αυτή πρέπει να επιφέρεται πρώτη και ν' αφαιρείται από το ύψος εξάντα που έχει μετρηθεί (διορθωμένο για τυχόν σφάλματα του εξάντα) για να βρεθεί το **φαινόμενο ύψος** (apparent altitude – App. Alt) που είναι το σωστό στοιχείο εισόδου στους άλλους πίνακες. Στην πράξη αυτό είναι απαραίτητο μόνο για χαμηλά ύψη κάτω από 10° . (Για ύψος 10° , ακόμη και όταν το ύψος οφθαλμού είναι 40 m, τυχόν παράλειψη αυτού του κανόνα προκαλεί σφάλμα μικρότερο από 0'1).

Η δεύτερη διόρθωση παρέχεται σε χωριστούς πίνακες για τον Ήλιο, για τους απλανείς και πλανήτες (σελ. A_2 και A_3) και για τη Σελήνη (σελ. $xxiv$ και $xxxv$). Οι πίνακες διορθώσεων για τον Ήλιο διαιρούνται σε δυο περιόδους και παρέχουν διορθώσεις για ύψη κάτω και άνω χείλους. Οι πίνακες διορθώσεων υψών των απλανών χρησιμοποιούνται και για τη διόρθωση υψών πλανητών, αλλά στα ύψη της Αφροδίτης (Venus) και του Άρη (Mars) πρέπει να επιφέρεται και πρόσθετη διόρθωση (σελ. A_2). Οι πίνακες διορθώσεων των υψών της Σελήνης αποτελούνται από δυο μέρη. Η κύρια διόρθωση είναι συνάρτηση του φαινομένου ύψους (App. Alt.) μόνο και παρέχεται για το κάτω χείλος μόνο. (Για το άνω χείλος αφαιρούμε $30'$ από τη διόρθωση για το κάτω χείλος). Η συμπληρωματική διόρθωση παρέχεται χωριστά για το κάτω και για το άνω χείλος ως συνάρτηση του φαινομένου ύψους και της **οριζόντιας παραλλάξεως** (horizontal parallax – H.P.), που λαμβάνεται από τις ημερήσιες σελίδες.

Όταν η ατμοσφαιρική πίεση ή η θερμοκρασία του αέρα διαφέρουν από τις πρότυπες τιμές, που έχουν χρησιμοποιηθεί για τον υπολογισμό της αστρονομικής διαθλάσεως, τότε πρέπει να επιφέρεται και η διόρθωση της αστρονομικής διαθλάσεως, που παρέχεται στη σελίδα A_4 . Η διόρθωση αυτή μπορεί γενικά να παραλείπεται, όταν το ύψος είναι μεγαλύτερο από 10° , με πιθανή εξαίρεση τις περιπτώσεις που η πίεση ή η θερμοκρασία έχουν ακραίες τιμές.

Οι πίνακες διορθώσεων για τον Ήλιο, καθώς και για τους απλανείς και τους πλανήτες, διαιρούνται σε δυο μέρη: ένα για ύψη μέχρι 10° και ένα για μεγαλύτερα ύψη. Οι πίνακες για ύψη πάνω από 10° είναι τυπωμένοι και στο σελιδοδέκτη.

4.2 Πίνακες κρίσιμων τιμών (critical tables).

Σε μερικούς από τους πίνακες διορθώσεως υψών έχει δοθεί μορφή πινάκων κρίσιμων τιμών. Σ' αυτούς τους πίνακες ένα διάστημα μεταξύ δυο τιμών του στοιχείου εισόδου (φαινομένου ύψους ή ύψους οφθαλμού) αντιστοιχεί σε μια μόνο τιμή διορθώσεως και έτσι δεν υπάρχει ανάγκη να γίνονται παρεμβολές. Όταν το στοιχείο εισόδου αντιστοιχεί σε κρίσιμη τιμή (ακραία τιμή διαστήματος), τότε, από τις δυο τιμές που είναι δυνατόν να ληφθούν, παίρνεται εκείνη, που στον πίνακα βρίσκεται από πάνω. Π.χ. στον πίνακα του βάθους ορίζοντα (Dip) η διόρθωση – $4'.1$ αντιστοιχεί σ' όλα τα ύψη οφθαλμού από 5.3 m (ή 17.5 ft.) μέχρι και 5.5 m (ή 18.3 ft.).

Παράδειγμα.

Το παρακάτω παράδειγμα δείχνει τον τρόπο χρήσεως των πινάκων. Τα ύψη εξάντα που δίνονται

υποτίθεται ότι έχουν μετρηθεί με ναυτικό εξάντα χωρίς σφάλμα στις 27 Δεκεμβρίου 1984 από ύψος οφθαλμού 5.4 m (18 Feet), με θερμοκρασία αέρα -3° C και με ατμοσφαιρική πίεση 982 mb. Οι παρατηρήσεις της Σελήνης έγιναν σε G.M.T. περίπου 10h.

| | SUN Lower limb | SUN upper limb | MOON lower limb | MOON upper limb | VENUS | POLARIS |
|-------------------------------|----------------------|----------------------|-----------------------|-----------------------|----------------|-----------------|
| Ύψος εξάντα | 21° 19:7 | 3° 20:2 | 33° 27:6 | 26° 06:7 | 4° 32:6 | 49° 36:5 |
| Βαθ. για 5.4 metres (18 Feet) | -4.1 | -4.1 | -4.1 | -4.1 | -4.1 | -4.1 |
| Κύρια διάρθρωση | +13.8 | -29.6 | +57.4 | +60.5 | -10.8 | 0.8 |
| -30' για άνω χείλος Σελήνης | — | — | — | -30.0 | — | — |
| Διόρθ. L ή U (Σελήνη) | — | — | +2.1 | +2.0 | — | — |
| Πρόσθετη διορθ. Αφροδίτης | — | — | — | — | +0.2 | — |
| Προσθ. διορθ. διαθλάσεως | -0.1 | -0.3 | 0.0 | -0.1 | -0.3 | 0.0 |
| Αληθές ύψος | 21° 29:3 | 2° 46:2 | 34° 23:0 | 26° 35:0 | 4° 17:6 | 49° 31:6 |

Οι κύριες διορθώσεις έχουν παρθεί με στοιχεία εισόδου το φαινόμενο ύψος (ύψος εξάντα διορθωμένο για το βάθος ορίζοντα) και όπου ήταν δυνατόν έχει γίνει παρεμβολή. Όπως όμως αναφέρθηκε παραπάνω αυτή η λεπτολογία σπάνια χρειάζεται στην πράξη.

4.3 Θεωρητική βάση των διορθώσεων.

Ο πίνακας του βάθους του ορίζοντα θάλασσας υπολογίστηκε με τον τύπο:

$$B\theta = 1.7 \sqrt{\text{ύψος οφθαλμού (σε μέτρα)}} = 0.97 \sqrt{\text{ύψος οφθαλμού (σε πόδια)}}$$

Οι πίνακες διορθώσεων υψών των απλανών και πλανητών, που στην πραγματικότητα είναι πίνακες των τιμών της αστρονομικής διαθλάσεως, βασίζονται στη θεωρία του Garfinkel και έχουν υπολογισθεί για θερμοκρασία αέρα 10° C (50° F) και ατμοσφαιρική πίεση 1010 mb/29.83 inches. Οι ίδιες τιμές αστρονομικής διαθλάσεως έχουν χρησιμοποιηθεί για τον υπολογισμό των διορθώσεων υψών του Ηλίου και της Σελήνης. Οι πρόσθετες διορθώσεις για τιμές θερμοκρασίας και ατμοσφαιρικής πίεσεως, διαφορετικές από τις παραπάνω μέσες τιμές, βασίζονται επίσης στη θεωρία του Garfinkel, αλλά για το βαθμό προσεγγίσεως που παρέχεται στους πίνακες οι διαφορές ανάμεσα στις διάφορες θεωρίες δεν είναι σημαντικές.

Στους πίνακες διορθώσεως υψών του Ηλίου έχουν συνυπολογισθεί η μέση αστρονομική διάθλαση, η ημιδιάμετρος και η παράλλαξη. Δεν έχει συμπεριληφθεί διόρθωση για το φαινόμενο του *αυξηφούς* (irradiation).

Οι πρόσθετες διορθώσεις για τα ύψη της Αφροδίτης (Venus), που παρέχονται στη σελίδα A₂, προορίζονται για χρήση μόνο στις περιπτώσεις που κατά την παρατήρηση ο Ήλιος βρίσκεται κάτω από τον ορίζοντα. Οι διορθώσεις αυτές είναι μέσες τιμές που αντισταθμίζουν την επίδραση της παραλλάξεως και της φάσεως.

Όταν γίνονται παρατηρήσεις της Αφροδίτης την ημέρα, τότε η διόρθωση για την παράλλαξη και τη φάση μπορεί να υπολογισθεί με τον τύπο:

$$\text{διορθ} = \rho \cos H + k \cos \Theta,$$

όπου:

H είναι το ύψος της Αφροδίτης και

Θ είναι η γωνία μεταξύ του τμήματος του κατακόρυφου κύκλου από τον ορίζοντα μέχρι τον πλανήτη και το τόξο μέγιστου κύκλου από τον πλανήτη μέχρι τον Ήλιο.

Το μέγιστο σφάλμα που προκαλείται στη διόρθωση εξαιτίας ενός σφάλματος 15° στο H ή στο Θ είναι περίπου $+0.1$ και επομένως για την επίλυση του τύπου μπορούν να χρησιμοποιούνται προσεγγίζουσες τιμές αυτών των στοιχείων. Ο όρος $\rho \cos H$ (διόρθωση παραλλάξεως) είναι πάντα θετικός, ενώ ο όρος $k \cos \Theta$ (διόρθωση φάσεως) είναι θετικός όταν ο Ήλιος είναι χαμηλότερα από την Αφροδίτη, και αρνητικός, όταν είναι υψηλότερα. Ειδικά για το 1984 το k είναι αμελητέο και έτσι

οι διορθώσεις που παρέχονται γι' αυτό το έτος μπορούν να χρησιμοποιηθούν και για παρατηρήσεις της Αφροδίτης την ημέρα.

Η πρόσθετη διόρθωση για τα ύψη του Άρη (Mars), που παρέχεται στη σελίδα A₂, είναι διόρθωση μόνο για την παραλλαγή μια και για τον Άρη δεν χρειάζεται διόρθωση για τη φάση.

Για το 1984 οι τιμές της οριζόντιας παραλλάξεως p είναι:

| | | | | | | |
|-------|--------|---------|---------|---------|---------|---------|
| | Jan. 1 | Dec. 12 | Dec. 31 | | | |
| Venus | | 0'1 | 0'2 | | | |
| | Jan. 1 | Mar. 4 | Apr. 24 | June 15 | Aug. 27 | Dec. 31 |
| Mars | | 0'1 | 0'2 | 0'3 | 0'2 | 0'1 |

Στους πίνακες διορθώσεων των υψών της Σελήνης έχουν συνυπολογιστεί η μέση αστρονομική διάθλαση, η ημιδιάμετρος, η αύξηση της ημιδιαμέτρου και η παράλλαξη. Δεν έχει συνυπολογισθεί διόρθωση για το αυξηφαές.

4.4 Παρατηρήσεις με εξάντα φουσαλίδας.

Τα ύψη, που μετρούνται με εξάντα φουσαλίδας, δεν χρειάζονται διόρθωση για το βάθος ορίζοντα, την ημιδιάμετρο και την αύξηση της ημιδιαμέτρου. Για τα ύψη της Σελήνης ο ευκολότερος τρόπος είναι να χρησιμοποιείται σαν διόρθωση ο μέσος όρος των διορθώσεων για το κάτω και το άνω χείλος και μετά να αφαιρούνται 15' από το ύψος. Δεν πρέπει να γίνεται διόρθωση για το βάθος ορίζοντα.

ΚΕΦΑΛΑΙΟ ΠΕΜΠΤΟ

ΒΟΗΘΗΤΙΚΑ ΣΤΟΙΧΕΙΑ ΚΑΙ ΣΤΟΙΧΕΙΑ ΣΧΕΔΙΑΣΕΩΣ

5.1 Ήλιος και Σελήνη.

Στις ημερήσιες σελίδες παρέχονται: οι χρόνοι μεσημβρινής διαβάσεως από το μεσημβρινό του Greenwich, καθώς και οι ημιδιάμετροι του Ηλίου και της Σελήνης, η *εξίσωση του χρόνου* (equation of time), η *οριζόντια παράλλαξη* (horizontal parallax — H.P.) και η *ηλικία* (age) της Σελήνης μαζί μ' ένα σύμβολο που δείχνει τη φάση της. Στο κάτω μέρος της στήλης της Σελήνης παρέχονται τρεις τιμές της *ημιδιαμέτρου* της (semi - diameter - S.D), που αντιστοιχούν με τη σειρά στις τρεις ημερομηνίες της σελίδας. Στο κάτω μέρος της στήλης του Ηλίου παρέχεται μόνο μια τιμή της ημιδιαμέτρου (S.D.) του Ηλίου, που είναι αρκετά ακριβής και για τις τρεις ημερομηνίες της σελίδας. Η *εξίσωση του χρόνου* (equation of time) παρέχεται για κάθε ημερομηνία σε G.M.T. 00^h και 12^h χωρίς πρόσημο. Για τον υπολογισμό του *αληθούς χρόνου* (apparent time) η εξίσωση του χρόνου προστίθεται στο *μέσο χρόνο* (mean time), όταν G.H.A. του Ηλίου για G.M.T. 00^h είναι μεγαλύτερη από 180° ή για G.M.T. 12^h είναι μεγαλύτερη από 0°, γεγονότα που αντιστοιχούν με μεσημβρινή διάβαση του Ηλίου από το μεσημβρινό του Greenwich σε G.M.T. μικρότερο από 12^h. Σε περίπτωση αντίθετη από τα παραπάνω, η εξίσωση του χρόνου αφαιρείται από το μέσο χρόνο.

Οι χρόνοι των φάσεων της Σελήνης παρέχονται σε G.M.T. στη σελίδα 4.

5.2 Πλανήτες.

Στις ημερήσιες σελίδες, στην κορυφή κάθε στήλης πλανήτη και αμέσως μετά το όνομά του, παρέχεται το μέγεθος (λαμπρότητα) του. Επί πλέον κάτω δεξιά στην αριστερή σελίδα παρέχονται για τη μεσαία από τις τρεις ημερομηνίες οι S.H.A. σε G.M.T. 12^h και οι χρόνοι μεσημβρινής διαβάσεως (Mer. Pass.) των τεσσάρων ναυτιλιακών πλανητών.

Οι πληροφορίες για τους πλανήτες (planet notes) στη σελίδα 8 και το διάγραμμα στη σελίδα 9 παρέχουν περιγραφικές πληροφορίες σχετικά με την καταλληλότητα των πλανητών για παρατήρηση κατά τη διάρκεια του έτους, καθώς και για τις θέσεις και τις κινήσεις τους.

5.3 Απλανείς.

Σε κάθε ημερήσια σελίδα και στο κάτω μέρος της στήλης ARIES παρέχεται στο πλησιέστερο 0^m.1 ο χρόνος μεσημβρινής διαβάσεως του εαρινού ισημερινού σημείου (first point of Aries) από το μεσημβρινό του Greenwich για τη μεσαία ημερομηνία. Το χρονικό διάλειμμα μεταξύ δυο διαδοχικών μεσημβρινών διαβάσεων είναι 23^m 56^m.1 (24^m μείον 3^m.9) και για να βρούμε τους χρόνους για την προηγούμενη ή την επόμενη ημερομηνία αρκεί να προσθέσουμε ή να αφαιρέσουμε αντίστοιχα 3^m.9 από το χρόνο που παρέχεται για τη μεσαία ημερομηνία. Επίσης μπορούμε να κάνουμε παρεμβολή για το μήκος. Ο ακριβής χρόνος μεσημβρινής διαβάσεως μπορεί, εφόσον απαιτείται, να βρεθεί με αντίστροφη είσοδο για προσδιορισμό του G.M.T., που αντιστοιχεί σε L.H.A. Aries 0°.

Κατά τη μεσημβρινή διάβαση ενός απλανούς ισχύει:

$$L.H.A. Aries = 360^\circ - S.H.A.$$

και ο χρόνος μεσημβρινής διαβάσεως μπορεί να βρεθεί με αντίστροφη είσοδο για προσδιορισμό του G.M.T., που αντιστοιχεί σ' αυτή τη L.H.A. Aries. Ο χρόνος μεσημβρινής διαβάσεως μπορεί επίσης

να βρεθεί, κατά προσέγγιση από το διάγραμμα πλανητών της σελίδας 9.

Οι χάρτες απλανών στις σελίδες 286 και 287 προορίζονται να βοηθήσουν στην αναγνώριση αστέρων. Οι χάρτες δείχνουν τις σχετικές θέσεις των απλανών στον ουράνιο θόλο όπως, φαίνονται από τη γη, και περιλαμβάνουν και τους 173 απλανείς που χρησιμοποιούνται στο *Almanac*, καθώς και μερικούς άλλους για συμπλήρωση των σχηματισμών των κυρίων αστερισμών. Ο μεσημβρινός του παρατηρητή επάνω στο χάρτη μπορεί να εντοπισθεί για οποιαδήποτε χρονική στιγμή με χρήση της S.H.A. του, που είναι ίση με $360^\circ - L.H.A. Aries$.

5.4 Ουρανόςφαιρα.

Για να ρυθμίσαμε μια ουρανόςφαιρα, που διαθέτει κλίμακα L.H.A. Aries, πρώτα τη ρυθμίζουμε για το πλάτος και μετά την περιστρέφουμε γύρω από τον πολικό άξονά της, έτσι ώστε η υποδιαίρεση της κλίμακας L.H.A. Aries, που βρίσκεται κάτω από το χείλος του μεσημβρινού κύκλου, να είναι ίση με την L.H.A. Aries για τη στιγμή της παρατηρήσεως.

Για να σημειώσουμε τη θέση του Ηλίου, της Σελήνης ή ενός πλανήτη στην ουρανόςφαιρα, βρίσκουμε τη διαφορά G.H.A. Aries — G.H.A. του σώματος για την ίδια ώρα και τη χρησιμοποιούμε στην κλίμακα L.H.A. Aries για να προσδιορίσουμε τον ωρικό κύκλο του σώματος. Η θέση του σώματος θα βρίσκεται πάνω σε αυτό τον ωρικό κύκλο και σε απόσταση από τον Ισημερινό ίση και ομώνυμη με την κλίση του. Η διαφορά G.H.A. Aries — G.H.A. σώματος βρίσκεται ευκολότερα, όταν η G.H.A. του σώματος είναι μικρή (μικρότερη από 15°), πράγμα που συμβαίνει μια φορά το 24ωρο.

5.5 Ημερολόγιο.

Στη σελίδα 4 παρέχεται κατάλογος των θρησκευτικών εορτών και των κυριότερων αργιών και επετείων στο Ηνωμένο Βασίλειο και στις ΗΠΑ. Το ημερολόγιο της σελίδας 5 περιέχει τις ημέρες του έτους καθώς και τις ημέρες της εβδομάδας.

Στο κάτω μέρος της σελίδας 5 περιέχονται συνοπτικές πληροφορίες για τις εκλείψεις του Ηλίου και της Σελήνης που θα συμβούν στη διάρκεια του έτους. Τα κύρια χαρακτηριστικά των σπουδαιότερων εκλείψεων του Ηλίου φαίνονται στους χάρτες των σελίδων 6 και 7.

5.6 Συμβατικοί χρόνοι (Standard times).

Οι πίνακες των σελίδων 262-265 περιλαμβάνουν τους συμβατικούς χρόνους που χρησιμοποιούνται στις περισσότερες χώρες. Γενικά δεν παρέχονται πληροφορίες σχετικά με τις ημερομηνίες ενάρξεως και λήξεως εφαρμογής *θερινής ώρας* (Summer time), επειδή υπόκεινται σε συχνές και αιφνίδιες αλλαγές.

Η *γραμμή αλλαγής ημερομηνίας* (Date ή Calendar Line) είναι μια αυθαίρετη γραμμή, που ανατολικά και δυτικά της η ημερομηνία διαφέρει κατά μια ημέρα. Όταν ένα πλοίο διασχίζει αυτή τη γραμμή πλέοντας προς τα Δυτικά, θα πρέπει να αλλάξει την ημερομηνία του κατά μια ημέρα προς τα εμπρός, ενώ όταν τη διασχίζει πλέοντας προς τα Ανατολικά, θα πρέπει να την αλλάξει μια ημέρα προς τα πίσω. Η γραμμή αλλαγής ημερομηνίας αποτελεί τροποποίηση του μεσημβρινού των 180° και έχει χαραχθεί έτσι ώστε κατά το δυνατόν τα νησιά που ανήκουν στην ίδια ομάδα να βρίσκονται προς την ίδια πλευρά της γραμμής. Αρχίζοντας από το Νότιο πόλο η γραμμή αλλαγής ημερομηνίας διέρχεται από τα παρακάτω στίγματα:

| | | | | | | | |
|--------|---------|----------|----------|--------|---------|----------|----------|
| Πλάτος | 51°.0 N | 45°.0 N | 15°.0 N | 5°.0 N | 48°.0 B | 53°.0 B | 65°.5 B |
| Μήκος | 180°.0 | 172°.5 Δ | 172°.5 Δ | 180°.0 | 180°.0 | 170°.0 A | 169°.0 Δ |

Μετά διέρχεται από τη μέση των νησιών Diomedes και φθάνει σε στίγμα φ $68^\circ.0 B$ λ $169^\circ.0 \Delta$. Στη συνέχεια διέρχεται Ανατολικά του νησιού Ostrou Vrangeliua και φθάνει σε στίγμα φ $75^\circ.0 B$ λ $180^\circ.0 \Delta$ και απ' εκεί στο Βόρειο πόλο.

ΚΕΦΑΛΑΙΟ ΕΚΤΟ

ΑΚΡΙΒΕΙΑ

6.1 Κύρια στοιχεία.

Γενικά, οι ποσότητες που παρέχονται σ' αυτό το Almanac είναι ακριβείς στο πλησιέστερο 0'.1. Εξαιρέση αποτελεί η G.H.A. του Ηλίου στην οποία έχει σκόπιμα προστεθεί ή αφαιρεθεί μια μικρή ποσότητα μέχρι και 0'.15 έτσι, ώστε να μειώνεται το σφάλμα λόγω παραλείψεως της διορθώσεως u . Για ενδιάμεσους χρόνους η G.H.A. και η κλίση ενός σώματος δεν μπορούν να βρεθούν με την ίδια ακρίβεια, επειδή πρέπει να προστεθούν τουλάχιστον δυο ποσότητες στρογγυλεμένες στο πλησιέστερο 0'.1' επί πλέον οι διορθώσεις u και d βασίζονται σε μέσες τιμές των ποσοτήτων u και d και παίρνονται από πίνακες που τις παρέχουν μόνο για τα ακέραια λεπτά συν 30 δευτερόλεπτα G.M.T. Για όλα τα σώματα, εκτός από τον Ήλιο και τη Σελήνη, το μέγιστο δυνατό σφάλμα στη G.H.A. ή στην κλίση θα είναι μικρότερο από 0'.2. Για τη G.H.A. του Ηλίου μπορεί να είναι μέχρι 0'.25 και για τη G.H.A. της Σελήνης μέχρι 0'.3.

Στην πράξη μπορεί ν' αναμένεται ότι σφάλμα μεγαλύτερο από 0'.05 θα έχει μόνο το ένα τρίτο των υπολογιζομένων τιμών G.H.A και κλίσεων και ότι λιγότερες από το ένα δέκατο αυτών των τιμών θα έχουν σφάλμα μεγαλύτερο από 0'.1.

6.2 Διορθώσεις υψών.

Θεωρητικά, τα σφάλματα των διορθώσεων υψών είναι της ίδιας τάξεως μεγέθους με αυτά των G.H.A και των κλίσεων, αφού οι διορθώσεις είναι αποτέλεσμα της αθροίσεως ποσοτήτων που έχουν στρογγυλευθεί σωστά στο πλησιέστερο 0'.1. Όταν όμως επικρατούν ακραίες ατμοσφαιρικές συνθήκες, τότε οι πραγματικές τιμές του βάθους ορίζοντα και της αστρονομικής διαθλάσεως για χαμηλά ύψη, μπορεί να διαφέρουν αρκετά από τις μέσες τιμές που χρησιμοποιούνται στους πίνακες.

ΚΕΦΑΛΑΙΟ ΕΒΔΟΜΟ

ΧΡΗΣΗ ΤΟΥ ALMANAC 1984 ΤΟ ΕΤΟΣ 1985

Το Almanac 1984 μπορεί να χρησιμοποιηθεί το 1985 για τον Ήλιο και τους απλανείς με τον παρακάτω τρόπο.

Ήλιος: Αν η ημερομηνία του G.M.T. ανήκει στους μήνες Ιανουάριο ή Φεβρουάριο, προσθέτομε στο G.M.T. $18^h 12^m 00^s$ και αν ανήκει στους μήνες Μάρτιο μέχρι Δεκέμβριο αφαιρούμε από το G.M.T. $5^h 48^m 00^s$. Και στις δυο περιπτώσεις χρειάζεται προσοχή σε τυχόν αλλαγή ημερομηνίας. Με το διορθωμένο G.M.T. (και ημερομηνία) βρίσκομε από το Almanac 1984 την G.H.A. και την κλίση του Ηλίου και προσθέτομε $87^{\circ}.00'.0$ στην G.H.A. Το σφάλμα, που οφείλεται κυρίως σε πλανητικές διαταράξεις, είναι απίθανο να είναι μεγαλύτερο από $0'.4$.

Απλανείς: Με το G.M.T. και την ημερομηνία της παρατηρήσεως βρίσκομε από το Almanac 1984 την G.H.A. και την κλίση του απλανούς. Αν η ημερομηνία του G.M.T. ανήκει στους μήνες Ιανουάριο ή Φεβρουάριο προσθέτομε $44'.0$ στη G.H.A. που βρήκαμε. Αν η ημερομηνία του G.M.T. ανήκει στους μήνες Μάρτιο μέχρι και Δεκέμβριο, αφαιρούμε $15'.1$ από την G.H.A. που βρήκαμε. Το σφάλμα, που οφείλεται σε ατελή διόρθωση για τη μετάπτωση των Ισημεριών και την κρόνιση του άξονα της γης, είναι απίθανο να είναι μεγαλύτερο από $0'.4$.

Το Almanac 1984 δεν μπορεί να χρησιμοποιηθεί το 1985 για τη Σελήνη και τους πλανήτες.

ΠΙΝΑΚΕΣ

1984 JANUARY 19, 20, 21 (THURS., FRI., SAT.)

| G.M.T. | ARIES | | VENUS -3.5 | | MARS +1.1 | | JUPITER -1.4 | | SATURN +0.8 | | STARS | | |
|------------|----------|--------------|------------|--------------|-----------|--------------|--------------|--------------|-------------|-------------|--------------|------------|------|
| | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. |
| 19 00 | 117 34.9 | 216 30.2 S21 | 40.2 | 265 15.9 S11 | 16.4 | 207 43.7 S23 | 08.4 | 254 05.8 S14 | 11.0 | Acomar | 315 35.2 S40 | 22.4 | |
| 01 | 132 37.4 | 231 29.4 | 40.5 | 280 17.2 | 16.8 | 222 45.5 | 08.5 | 269 08.1 | 11.0 | Achernar | 335 43.3 S57 | 19.4 | |
| 02 | 147 39.8 | 246 28.6 | 40.8 | 295 18.4 | 17.2 | 237 47.4 | 08.5 | 284 10.4 | 11.1 | Acruz | 173 34.5 S63 | 00.3 | |
| 03 | 162 42.3 | 261 27.8 | 41.1 | 310 19.7 | 17.6 | 252 49.3 | 08.5 | 299 12.7 | 11.1 | Adhara | 255 29.8 S28 | 57.0 | |
| 04 | 177 44.8 | 276 27.0 | 41.4 | 325 21.0 | 18.0 | 267 51.2 | 08.5 | 314 15.0 | 11.1 | Aldebaran | 291 15.0 N16 | 28.7 | |
| 05 | 192 47.2 | 291 26.2 | 41.7 | 340 22.2 | 18.4 | 282 53.1 | 08.5 | 329 17.4 | 11.2 | | | | |
| 06 | 207 49.7 | 306 25.4 S21 | 42.0 | 355 23.5 S11 | 18.8 | 297 55.0 S23 | 08.5 | 344 19.7 S14 | 11.2 | Alioth | 166 40.0 N56 | 02.6 | |
| 07 | 222 52.2 | 321 24.6 | 42.2 | 10 24.8 | 19.3 | 312 56.8 | 08.5 | 359 22.0 | 11.2 | Alkaid | 153 16.4 N49 | 23.3 | |
| T 08 | 237 54.6 | 336 23.8 | 42.5 | 25 26.0 | 19.7 | 327 58.7 | 08.5 | 14 24.3 | 11.3 | Al Na'ir | 28 12.2 S47 | 02.6 | |
| H 09 | 252 57.1 | 351 23.0 | 42.8 | 40 27.3 | 20.1 | 343 00.6 | 08.5 | 29 26.6 | 11.3 | Alnilam | 276 08.9 S 1 | 12.7 | |
| U 10 | 267 59.6 | 6 22.2 | 43.1 | 55 28.6 | 20.5 | 358 02.5 | 08.5 | 44 28.9 | 11.3 | Alphard | 218 17.9 S 8 | 35.3 | |
| R 11 | 283 02.0 | 21 21.4 | 43.4 | 70 29.9 | 20.9 | 13 04.4 | 08.5 | 59 31.2 | 11.4 | | | | |
| S 12 | 298 04.5 | 36 20.6 S21 | 43.7 | 85 31.1 S11 | 21.3 | 28 06.3 S23 | 08.5 | 74 33.6 S14 | 11.4 | Alphecca | 126 30.2 N26 | 45.9 | |
| D 13 | 313 06.9 | 51 19.8 | 44.0 | 100 32.4 | 21.7 | 43 08.1 | 08.5 | 89 35.9 | 11.5 | Alpheratz | 358 07.0 N29 | 00.1 | |
| A 14 | 328 09.4 | 66 19.0 | 44.3 | 115 33.7 | 22.2 | 58 10.0 | 08.5 | 104 38.2 | 11.5 | Altair | 62 30.5 N 8 | 49.4 | |
| Y 15 | 343 11.9 | 81 18.2 | 44.5 | 130 34.9 | 22.6 | 73 11.9 | 08.5 | 119 40.5 | 11.5 | Ankaa | 353 37.9 S42 | 23.9 | |
| 16 | 358 14.3 | 96 17.4 | 44.8 | 145 36.2 | 23.0 | 88 13.8 | 08.5 | 134 42.8 | 11.6 | Antares | 112 54.1 S26 | 23.8 | |
| 17 | 13 16.8 | 111 16.6 | 45.1 | 160 37.5 | 23.4 | 103 15.7 | 08.5 | 149 45.1 | 11.6 | | | | |
| 18 | 28 19.3 | 126 15.7 S21 | 45.4 | 175 38.7 S11 | 23.8 | 118 17.6 S23 | 08.5 | 164 47.4 S14 | 11.6 | Arcturus | 146 16.2 N19 | 15.8 | |
| 19 | 43 21.7 | 141 14.9 | 45.7 | 190 40.0 | 24.2 | 133 19.5 | 08.5 | 179 49.8 | 11.7 | Atria | 108 16.7 S68 | 59.8 | |
| 20 | 58 24.2 | 156 14.1 | 45.9 | 205 41.3 | 24.6 | 148 21.3 | 08.5 | 194 52.1 | 11.7 | Avior | 234 26.7 S59 | 27.4 | |
| 21 | 73 26.7 | 171 13.3 | 46.2 | 220 42.6 | 25.1 | 163 23.2 | 08.5 | 209 54.4 | 11.7 | Bellatrix | 278 55.9 N 6 | 20.1 | |
| 22 | 88 29.1 | 186 12.5 | 46.5 | 235 43.8 | 25.5 | 178 25.1 | 08.5 | 224 56.7 | 11.8 | Betelgeuse | 271 25.3 N 7 | 24.3 | |
| 23 | 103 31.6 | 201 11.7 | 46.8 | 250 45.1 | 25.9 | 193 27.0 | 08.5 | 239 59.0 | 11.8 | | | | |
| 20 00 | 118 34.1 | 216 10.9 S21 | 47.0 | 265 46.4 S11 | 26.3 | 208 28.9 S23 | 08.5 | 255 01.3 S14 | 11.8 | Canopus | 264 05.6 S52 | 41.3 | |
| 01 | 133 36.5 | 231 10.1 | 47.3 | 280 47.6 | 26.7 | 223 30.8 | 08.5 | 270 03.7 | 11.9 | Capella | 281 07.3 N45 | 59.1 | |
| 02 | 148 39.0 | 246 09.3 | 47.6 | 295 48.9 | 27.1 | 238 32.6 | 08.5 | 285 06.0 | 11.9 | Deneb | 49 47.3 N45 | 13.3 | |
| 03 | 163 41.4 | 261 08.5 | 47.9 | 310 50.2 | 27.5 | 253 34.5 | 08.5 | 300 08.3 | 11.9 | Denebola | 182 56.4 N14 | 39.6 | |
| 04 | 178 43.9 | 276 07.7 | 48.1 | 325 51.5 | 27.9 | 268 36.4 | 08.5 | 315 10.6 | 12.0 | Diphda | 349 18.5 S18 | 04.7 | |
| 05 | 193 46.4 | 291 06.9 | 48.4 | 340 52.7 | 28.3 | 283 38.3 | 08.5 | 330 12.9 | 12.0 | | | | |
| 06 | 208 48.8 | 306 06.0 S21 | 48.7 | 355 54.0 S11 | 28.8 | 298 40.2 S23 | 08.5 | 345 15.2 S14 | 12.0 | Dubhe | 194 18.4 N61 | 50.1 | |
| 07 | 223 51.3 | 321 05.2 | 48.9 | 10 55.3 | 29.2 | 313 42.1 | 08.5 | 0 17.6 | 12.1 | Elnath | 278 40.7 N28 | 35.8 | |
| 08 | 238 53.8 | 336 04.4 | 49.2 | 25 56.6 | 29.6 | 328 44.0 | 08.5 | 15 19.9 | 12.1 | Eltonin | 90 57.1 N51 | 29.2 | |
| F 09 | 253 56.2 | 351 03.6 | 49.5 | 40 57.8 | 30.0 | 343 45.8 | 08.5 | 30 22.2 | 12.1 | Enif | 34 09.5 N 9 | 47.9 | |
| R 10 | 268 58.7 | 6 02.8 | 49.7 | 55 59.1 | 30.4 | 358 47.7 | 08.5 | 45 24.5 | 12.2 | Fomalhaut | 15 48.9 S29 | 42.7 | |
| I 11 | 284 01.2 | 21 02.0 | 50.0 | 71 00.4 | 30.8 | 13 49.6 | 08.5 | 60 26.8 | 12.2 | | | | |
| D 12 | 299 03.6 | 36 01.2 S21 | 50.3 | 86 01.7 S11 | 31.2 | 28 51.5 S23 | 08.5 | 75 29.1 S14 | 12.2 | Gacrux | 172 26.0 S57 | 01.1 | |
| A 13 | 314 06.1 | 51 00.4 | 50.5 | 101 02.9 | 31.6 | 43 53.4 | 08.6 | 90 31.5 | 12.3 | Genah | 176 15.4 S17 | 27.1 | |
| Y 14 | 329 08.5 | 65 59.6 | 50.8 | 116 04.2 | 32.0 | 58 55.3 | 08.6 | 105 33.8 | 12.3 | Hadar | 149 20.1 S60 | 17.5 | |
| 15 | 344 11.0 | 80 58.7 | 51.0 | 131 05.5 | 32.4 | 73 57.2 | 08.6 | 120 36.1 | 12.3 | Hamal | 328 26.2 N23 | 23.3 | |
| 16 | 359 13.5 | 95 57.9 | 51.3 | 146 06.8 | 32.9 | 88 59.0 | 08.6 | 135 38.4 | 12.4 | Kaus Aust. | 84 14.0 S34 | 23.6 | |
| 17 | 14 15.9 | 110 57.1 | 51.5 | 161 08.0 | 33.3 | 104 00.9 | 08.6 | 150 40.7 | 12.4 | | | | |
| 18 | 29 18.4 | 125 56.3 S21 | 51.8 | 176 09.3 S11 | 33.7 | 119 02.8 S23 | 08.6 | 165 43.1 S14 | 12.4 | Kochab | 137 19.1 N74 | 13.0 | |
| 19 | 44 20.9 | 140 55.5 | 52.1 | 191 10.6 | 34.1 | 134 04.7 | 08.6 | 180 45.4 | 12.5 | Markab | 14 01.0 N15 | 07.0 | |
| 20 | 59 23.3 | 155 54.7 | 52.3 | 206 11.9 | 34.5 | 149 06.6 | 08.6 | 195 47.7 | 12.5 | Menkar | 314 38.5 N 4 | 01.6 | |
| 21 | 74 25.8 | 170 53.9 | 52.6 | 221 13.1 | 34.9 | 164 08.5 | 08.6 | 210 50.0 | 12.5 | Menkent | 148 34.2 S36 | 17.3 | |
| 22 | 89 28.3 | 185 53.0 | 52.8 | 236 14.4 | 35.3 | 179 10.4 | 08.6 | 225 52.3 | 12.6 | Miaplacidus | 221 43.8 S69 | 38.9 | |
| 23 | 104 30.7 | 200 52.2 | 53.1 | 251 15.7 | 35.7 | 194 12.2 | 08.6 | 240 54.7 | 12.6 | | | | |
| 21 00 | 119 33.2 | 215 51.4 S21 | 53.3 | 266 17.0 S11 | 36.1 | 209 14.1 S23 | 08.6 | 255 57.0 S14 | 12.6 | Mirfak | 309 12.5 N49 | 48.5 | |
| 01 | 134 35.7 | 230 50.6 | 53.6 | 281 18.2 | 36.5 | 224 16.0 | 08.6 | 270 59.3 | 12.7 | Nunki | 76 26.5 S26 | 19.1 | |
| 02 | 149 38.1 | 245 49.8 | 53.8 | 296 19.5 | 36.9 | 239 17.9 | 08.6 | 286 01.6 | 12.7 | Peacock | 53 55.0 S56 | 47.4 | |
| 03 | 164 40.6 | 260 49.0 | 54.0 | 311 20.8 | 37.3 | 254 19.8 | 08.6 | 301 03.9 | 12.7 | Pollux | 243 54.8 N28 | 04.0 | |
| 04 | 179 43.0 | 275 48.1 | 54.3 | 326 22.1 | 37.7 | 269 21.7 | 08.6 | 316 06.3 | 12.8 | Procyon | 245 22.9 N 5 | 16.0 | |
| 05 | 194 45.5 | 290 47.3 | 54.5 | 341 23.4 | 38.2 | 284 23.6 | 08.6 | 331 08.6 | 12.8 | | | | |
| 06 | 209 48.0 | 305 46.5 S21 | 54.8 | 356 24.6 S11 | 38.6 | 299 25.5 S23 | 08.6 | 346 10.9 S14 | 12.8 | Rasalhague | 96 27.6 N12 | 34.1 | |
| 07 | 224 50.4 | 320 45.7 | 55.0 | 11 25.9 | 39.0 | 314 27.3 | 08.6 | 1 13.2 | 12.9 | Regulus | 208 07.1 N12 | 02.7 | |
| S 08 | 239 52.9 | 335 44.9 | 55.3 | 26 27.2 | 39.4 | 329 29.2 | 08.6 | 16 15.5 | 12.9 | Rigel | 281 33.4 S 8 | 13.2 | |
| A 09 | 254 55.4 | 350 44.1 | 55.5 | 41 28.5 | 39.8 | 344 31.1 | 08.6 | 31 17.9 | 12.9 | Rigil Kent. | 140 22.8 S60 | 45.8 | |
| T 10 | 269 57.8 | 5 43.2 | 55.7 | 56 29.7 | 40.2 | 359 33.0 | 08.6 | 46 20.2 | 13.0 | Sabik | 102 38.6 S15 | 42.4 | |
| U 11 | 285 00.3 | 20 42.4 | 56.0 | 71 31.0 | 40.6 | 14 34.9 | 08.6 | 61 22.5 | 13.0 | | | | |
| R 12 | 300 02.8 | 35 41.6 S21 | 56.2 | 86 32.3 S11 | 41.0 | 29 36.8 S23 | 08.6 | 76 24.8 S14 | 13.0 | Schedar | 350 06.6 N56 | 27.1 | |
| D 13 | 315 05.2 | 50 40.8 | 56.4 | 101 33.6 | 41.4 | 44 38.7 | 08.6 | 91 27.1 | 13.1 | Shaula | 96 52.8 S37 | 05.6 | |
| A 14 | 330 07.7 | 65 40.0 | 56.7 | 116 34.9 | 41.8 | 59 40.6 | 08.6 | 106 29.5 | 13.1 | Sirius | 258 53.2 S16 | 41.7 | |
| Y 15 | 345 10.2 | 80 39.2 | 56.9 | 131 36.1 | 42.2 | 74 42.4 | 08.6 | 121 31.8 | 13.1 | Spica | 158 55.0 S11 | 04.6 | |
| 16 | 0 12.6 | 95 38.3 | 57.1 | 146 37.4 | 42.6 | 89 44.3 | 08.6 | 136 34.1 | 13.2 | Suhail | 223 08.6 S43 | 21.9 | |
| 17 | 15 15.1 | 110 37.5 | 57.4 | 161 38.7 | 43.0 | 104 46.2 | 08.6 | 151 36.4 | 13.2 | | | | |
| 18 | 30 17.5 | 125 36.7 S21 | 57.6 | 176 40.0 S11 | 43.4 | 119 48.1 S23 | 08.6 | 166 38.8 S14 | 13.2 | Vega | 80 54.6 N38 | 45.9 | |
| 19 | 45 20.0 | 140 35.9 | 57.8 | 191 41.3 | 43.8 | 134 50.0 | 08.6 | 181 41.1 | 13.3 | Zuben'ubi | 137 30.5 S15 | 58.5 | |
| 20 | 60 22.5 | 155 35.1 | 58.0 | 206 42.5 | 44.2 | 149 51.9 | 08.6 | 196 43.4 | 13.3 | | S.H.A. | Mer. Pass. | |
| 21 | 75 24.9 | 170 34.2 | 58.3 | 221 43.8 | 44.6 | 164 53.8 | 08.6 | 211 45.7 | 13.3 | | n | m | |
| 22 | 90 27.4 | 185 33.4 | 58.5 | 236 45.1 | 45.0 | 179 55.7 | 08.6 | 226 48.0 | 13.4 | Venus | 97 36.8 | 9 36 | |
| 23 | 105 29.9 | 200 32.6 | 58.7 | 251 46.4 | 45.4 | 194 57.6 | 08.6 | 241 50.4 | 13.4 | Mars | 147 12.3 | 6 16 | |
| | | | | | | | | | | Jupiter | 89 54.8 | 10 05 | |
| | | | | | | | | | | Saturn | 136 27.3 | 6 59 | |
| Mer. Pass. | 16 03.1 | v -0.8 | d 0.3 | v 1.3 | d 0.4 | v 1.9 | d 0.0 | v 2.3 | d 0.0 | | | | |

1984 JANUARY 19, 20, 21 (THURS., FRI., SAT.)

| G.M.T. | SUN | | | | MOON | | | | Lot. | Twilight | | | Moonrise | | | | | | |
|--------------|----------|------|-----|------|----------|-----|------|------|------|----------|-------|--------|----------|-------|-------|---------|-------|-----|--|
| | G.H.A. | Dec. | S20 | 32.8 | G.H.A. | V | Dec. | d | | H.P. | Naut. | Civil | Sunrise | 19 | 20 | 21 | 22 | | |
| | | | | | | | | | | | h m | h m | h m | h m | h m | h m | h m | h m | |
| 19 00 | 177 23.6 | 32.8 | S20 | 32.8 | 350 25.0 | 3.4 | N23 | 02.7 | 7.0 | 60.9 | N 72 | 07 50 | 09 34 | 11 13 | 15 59 | 19 01 | 21 26 | | |
| 01 | 192 23.4 | 32.3 | | | 4 47.4 | 3.4 | 22 | 55.7 | 7.1 | 60.9 | N 70 | 07 37 | 09 05 | 11 13 | 16 47 | 19 19 | 21 31 | | |
| 02 | 207 23.2 | 31.8 | | | 19 09.8 | 3.5 | 22 | 48.6 | 7.3 | 60.9 | 68 | 07 26 | 08 43 | 10 13 | 17 17 | 19 32 | 21 35 | | |
| 03 | 222 23.1 | 31.3 | | | 33 32.3 | 3.5 | 22 | 41.3 | 7.5 | 60.9 | 66 | 07 17 | 08 26 | 09 40 | 15 23 | 17 39 | 19 43 | | |
| 04 | 237 22.9 | 30.7 | | | 47 54.8 | 3.6 | 22 | 33.8 | 7.6 | 60.9 | 64 | 07 09 | 08 12 | 09 16 | 15 55 | 17 57 | 19 53 | | |
| 05 | 252 22.7 | 30.2 | | | 62 17.4 | 3.7 | 22 | 26.2 | 7.8 | 60.9 | 62 | 07 02 | 08 00 | 08 56 | 16 18 | 18 11 | 20 00 | | |
| 06 | 267 22.5 | 29.7 | S20 | 29.7 | 76 40.1 | 3.7 | N22 | 18.4 | 7.9 | 60.9 | 60 | 06 56 | 07 49 | 08 41 | 16 37 | 18 23 | 20 07 | | |
| 07 | 282 22.3 | 29.2 | | | 91 02.8 | 3.8 | 22 | 10.5 | 8.2 | 60.9 | N 58 | 06 51 | 07 40 | 08 28 | 16 53 | 18 34 | 20 13 | | |
| 08 | 297 22.1 | 28.7 | | | 105 25.6 | 3.9 | 22 | 02.3 | 8.2 | 60.9 | 56 | 06 46 | 07 32 | 08 16 | 17 06 | 18 43 | 20 18 | | |
| 09 | 312 21.9 | 28.2 | | | 119 48.5 | 3.9 | 21 | 54.1 | 8.5 | 60.9 | 54 | 06 41 | 07 25 | 08 06 | 17 18 | 18 51 | 20 23 | | |
| 10 | 327 21.7 | 27.7 | | | 134 11.4 | 4.0 | 21 | 45.6 | 8.6 | 60.9 | 52 | 06 37 | 07 19 | 07 57 | 17 28 | 18 58 | 20 27 | | |
| 11 | 342 21.5 | 27.2 | | | 148 34.4 | 4.1 | 21 | 37.0 | 8.7 | 61.0 | 50 | 06 33 | 07 13 | 07 49 | 17 37 | 19 04 | 20 31 | | |
| 12 | 357 21.3 | 26.6 | S20 | 26.6 | 162 57.5 | 4.2 | N21 | 28.3 | 9.0 | 61.0 | 45 | 06 24 | 07 00 | 07 32 | 17 56 | 19 18 | 20 39 | | |
| 13 | 12 21.1 | 26.1 | | | 177 20.7 | 4.2 | 21 | 19.3 | 9.0 | 61.0 | N 40 | 06 16 | 06 49 | 07 18 | 18 11 | 19 29 | 20 46 | | |
| 14 | 27 20.9 | 25.6 | | | 191 43.9 | 4.3 | 21 | 10.3 | 9.2 | 61.0 | 35 | 06 08 | 06 39 | 07 06 | 18 24 | 19 39 | 20 51 | | |
| 15 | 42 20.7 | 25.1 | | | 206 07.2 | 4.4 | 21 | 01.1 | 9.4 | 61.0 | 30 | 06 01 | 06 30 | 06 56 | 18 35 | 19 47 | 20 57 | | |
| 16 | 57 20.5 | 24.6 | | | 220 30.6 | 4.5 | 20 | 51.7 | 9.5 | 61.0 | 20 | 05 48 | 06 14 | 06 38 | 18 55 | 20 01 | 21 05 | | |
| 17 | 72 20.3 | 24.0 | | | 234 54.1 | 4.5 | 20 | 42.2 | 9.7 | 61.0 | N 10 | 05 34 | 06 00 | 06 22 | 19 11 | 20 14 | 21 13 | | |
| 18 | 87 20.1 | 23.5 | S20 | 23.5 | 249 17.6 | 4.6 | N20 | 32.5 | 9.8 | 61.0 | 0 | 05 20 | 05 45 | 06 07 | 19 27 | 20 26 | 21 20 | | |
| 19 | 102 19.9 | 23.0 | | | 263 41.2 | 4.8 | 20 | 22.7 | 9.9 | 61.0 | S 10 | 05 03 | 05 30 | 05 52 | 19 43 | 20 37 | 21 27 | | |
| 20 | 117 19.7 | 22.5 | | | 278 05.0 | 4.8 | 20 | 12.8 | 10.1 | 61.0 | 20 | 04 44 | 05 12 | 05 36 | 19 59 | 20 50 | 21 35 | | |
| 21 | 132 19.6 | 22.0 | | | 292 28.8 | 4.8 | 20 | 02.7 | 10.3 | 61.0 | 30 | 04 19 | 04 51 | 05 17 | 20 18 | 21 04 | 21 44 | | |
| 22 | 147 19.4 | 21.4 | | | 306 52.6 | 5.0 | 19 | 52.4 | 10.3 | 61.0 | 35 | 04 03 | 04 38 | 05 06 | 20 29 | 21 12 | 21 49 | | |
| 23 | 162 19.2 | 20.9 | | | 321 16.6 | 5.1 | 19 | 42.1 | 10.5 | 61.0 | 40 | 03 43 | 04 22 | 04 54 | 20 42 | 21 21 | 21 54 | | |
| 20 00 | 177 19.0 | 20.4 | S20 | 20.4 | 335 40.7 | 5.1 | N19 | 31.6 | 10.7 | 61.0 | 45 | 03 18 | 04 03 | 04 39 | 20 57 | 21 32 | 22 01 | | |
| 01 | 192 18.8 | 19.9 | | | 350 04.8 | 5.2 | 19 | 20.9 | 10.7 | 61.0 | S 50 | 02 43 | 03 39 | 04 20 | 21 15 | 21 45 | 22 09 | | |
| 02 | 207 18.6 | 19.3 | | | 4 29.0 | 5.3 | 19 | 10.2 | 10.9 | 61.0 | 52 | 02 25 | 03 27 | 04 11 | 21 23 | 21 51 | 22 12 | | |
| 03 | 222 18.4 | 18.8 | | | 18 53.3 | 5.4 | 18 | 59.3 | 11.1 | 61.0 | 54 | 02 01 | 03 13 | 04 01 | 21 33 | 21 57 | 22 16 | | |
| 04 | 237 18.2 | 18.3 | | | 33 17.7 | 5.5 | 18 | 48.2 | 11.1 | 61.0 | 56 | 01 27 | 02 57 | 03 50 | 21 43 | 22 05 | 22 20 | | |
| 05 | 252 18.0 | 17.7 | | | 47 42.2 | 5.6 | 18 | 37.1 | 11.3 | 61.0 | 58 | /// | 02 37 | 03 37 | 21 56 | 22 13 | 22 25 | | |
| 06 | 267 17.8 | 17.2 | S20 | 17.2 | 62 06.8 | 5.7 | N18 | 25.8 | 11.4 | 61.0 | S 60 | /// | 02 12 | 03 22 | 22 10 | 22 22 | 22 31 | | |
| 07 | 282 17.6 | 16.7 | | | 76 31.5 | 5.8 | 18 | 14.4 | 11.5 | 61.0 | Lat. | Sunset | Twilight | | | Moonset | | | |
| 08 | 297 17.5 | 16.2 | | | 90 56.3 | 5.8 | 18 | 02.9 | 11.7 | 61.0 | Civil | Naut. | 19 | 20 | 21 | 22 | | | |
| 09 | 312 17.3 | 15.6 | | | 105 21.1 | 6.0 | 17 | 51.2 | 11.8 | 61.0 | h m | h m | h m | h m | h m | h m | h m | | |
| 10 | 327 17.1 | 15.1 | | | 119 46.1 | 6.0 | 17 | 39.4 | 11.8 | 60.9 | N 72 | 14 49 | 16 33 | 18 17 | 22 07 | 23 46 | 25 21 | | |
| 11 | 342 16.9 | 14.6 | | | 134 11.1 | 6.2 | 17 | 27.6 | 12.0 | 60.9 | N 70 | 13 10 | 15 18 | 16 46 | 22 07 | 23 46 | 25 21 | | |
| 12 | 357 16.7 | 14.0 | S20 | 14.0 | 148 36.3 | 6.2 | N17 | 15.6 | 12.1 | 60.9 | N 68 | 14 09 | 15 40 | 16 57 | 22 07 | 23 46 | 25 21 | | |
| 13 | 12 16.5 | 13.5 | | | 163 01.5 | 6.3 | 17 | 03.5 | 12.2 | 60.9 | 60 | 14 43 | 15 57 | 17 06 | 22 07 | 23 46 | 25 21 | | |
| 14 | 27 16.3 | 13.0 | | | 177 26.8 | 6.4 | 16 | 51.3 | 12.4 | 60.9 | 66 | 14 09 | 15 57 | 17 06 | 22 07 | 23 46 | 25 21 | | |
| 15 | 42 16.2 | 12.4 | | | 191 52.2 | 6.5 | 16 | 38.9 | 12.4 | 60.9 | 64 | 15 07 | 16 11 | 17 13 | 22 07 | 23 46 | 25 21 | | |
| 16 | 57 16.0 | 11.9 | | | 206 17.7 | 6.6 | 16 | 26.5 | 12.5 | 60.9 | 62 | 15 26 | 16 23 | 17 20 | 22 07 | 23 46 | 25 21 | | |
| 17 | 72 15.8 | 11.4 | | | 220 43.3 | 6.7 | 16 | 14.0 | 12.6 | 60.9 | 60 | 15 42 | 16 33 | 17 26 | 22 07 | 23 46 | 25 21 | | |
| 18 | 87 15.6 | 10.8 | S20 | 10.8 | 235 09.0 | 6.8 | N16 | 01.4 | 12.8 | 60.9 | N 58 | 15 55 | 16 42 | 17 32 | 22 07 | 23 46 | 25 21 | | |
| 19 | 102 15.4 | 10.3 | | | 249 34.8 | 6.9 | 15 | 48.6 | 12.8 | 60.9 | 56 | 16 06 | 16 50 | 17 37 | 22 07 | 23 46 | 25 21 | | |
| 20 | 117 15.2 | 9.7 | | | 264 00.7 | 6.9 | 15 | 35.8 | 12.9 | 60.9 | 54 | 16 16 | 16 57 | 17 41 | 22 07 | 23 46 | 25 21 | | |
| 21 | 132 15.0 | 9.2 | | | 278 26.6 | 7.1 | 15 | 22.9 | 13.0 | 60.8 | 52 | 16 25 | 17 04 | 17 46 | 22 07 | 23 46 | 25 21 | | |
| 22 | 147 14.9 | 8.7 | | | 292 52.7 | 7.2 | 15 | 09.9 | 13.1 | 60.8 | 50 | 16 33 | 17 09 | 17 50 | 22 07 | 23 46 | 25 21 | | |
| 23 | 162 14.7 | 8.1 | | | 307 18.9 | 7.2 | 14 | 56.8 | 13.2 | 60.8 | 45 | 16 50 | 17 22 | 17 59 | 22 07 | 23 46 | 25 21 | | |
| 21 00 | 177 14.5 | 7.6 | S20 | 7.6 | 321 45.1 | 7.3 | N14 | 43.6 | 13.3 | 60.8 | N 40 | 17 04 | 17 33 | 18 07 | 22 07 | 23 46 | 25 21 | | |
| 01 | 192 14.3 | 7.0 | | | 336 11.4 | 7.5 | 14 | 30.3 | 13.4 | 60.8 | 35 | 17 16 | 17 43 | 18 14 | 22 07 | 23 46 | 25 21 | | |
| 02 | 207 14.1 | 6.5 | | | 350 37.9 | 7.5 | 14 | 16.9 | 13.4 | 60.8 | 30 | 17 26 | 17 52 | 18 21 | 22 07 | 23 46 | 25 21 | | |
| 03 | 222 13.9 | 6.0 | | | 5 04.4 | 7.6 | 14 | 03.5 | 13.6 | 60.8 | 20 | 17 44 | 18 07 | 18 34 | 22 07 | 23 46 | 25 21 | | |
| 04 | 237 13.8 | 5.4 | | | 19 31.0 | 7.7 | 13 | 49.9 | 13.6 | 60.8 | N 10 | 18 00 | 18 22 | 18 48 | 22 07 | 23 46 | 25 21 | | |
| 05 | 252 13.6 | 4.9 | | | 33 57.7 | 7.8 | 13 | 36.3 | 13.7 | 60.7 | 0 | 18 15 | 18 37 | 19 02 | 22 07 | 23 46 | 25 21 | | |
| 06 | 267 13.4 | 4.3 | S20 | 4.3 | 48 24.5 | 7.8 | N13 | 22.6 | 13.7 | 60.7 | S 10 | 18 29 | 18 52 | 19 18 | 22 07 | 23 46 | 25 21 | | |
| 07 | 282 13.2 | 3.8 | | | 62 51.3 | 8.0 | 13 | 08.9 | 13.9 | 60.7 | 20 | 18 46 | 19 09 | 19 38 | 22 07 | 23 46 | 25 21 | | |
| 08 | 297 13.0 | 3.2 | | | 77 18.3 | 8.0 | 12 | 55.0 | 13.9 | 60.7 | 30 | 19 04 | 19 31 | 20 03 | 22 07 | 23 46 | 25 21 | | |
| 09 | 312 12.9 | 2.7 | | | 91 45.3 | 8.2 | 12 | 41.1 | 13.9 | 60.7 | 35 | 19 15 | 19 44 | 20 18 | 22 07 | 23 46 | 25 21 | | |
| 10 | 327 12.7 | 2.1 | | | 106 12.5 | 8.2 | 12 | 27.2 | 14.1 | 60.7 | 40 | 19 28 | 19 59 | 20 38 | 22 07 | 23 46 | 25 21 | | |
| 11 | 342 12.5 | 1.6 | | | 120 39.7 | 8.3 | 12 | 13.1 | 14.1 | 60.6 | 45 | 19 43 | 20 18 | 21 02 | 22 07 | 23 46 | 25 21 | | |
| 12 | 357 12.3 | 1.0 | S20 | 1.0 | 135 07.0 | 8.4 | N11 | 59.0 | 14.2 | 60.6 | S 50 | 20 01 | 20 42 | 21 37 | 22 07 | 23 46 | 25 21 | | |
| 13 | 12 12.1 | 0.5 | | | 149 34.4 | 8.5 | 11 | 44.8 | 14.2 | 60.6 | 52 | 20 10 | 20 53 | 21 55 | 22 07 | 23 46 | 25 21 | | |
| 14 | 27 12.0 | 0.0 | | | 164 01.9 | 8.5 | 11 | 30.6 | 14.3 | 60.6 | 54 | 20 19 | 21 07 | 22 18 | 22 07 | 23 46 | 25 21 | | |
| 15 | 42 11.8 | -0.5 | | | 178 29.4 | 8.7 | 11 | 16.3 | 14.4 | 60.6 | 56 | 20 31 | 21 23 | 22 5 | | | | | |

1984 JANUARY 22, 23, 24 (SUN., MON., TUES.)

| G.M.T. | ARIES | | VENUS -3.5 | | MARS +1.0 | | JUPITER -1.4 | | SATURN +0.8 | | STARS | | | | |
|---|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------|------|-------|--------|------|--|--|
| | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | | |
| 22 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | 120 32.3 | 215 31.8 S21 58.9 | 266 47.7 S11 45.8 | 209 59.4 S23 08.6 | 256 52.7 S14 13.4 | Acamar | 315 35.2 S40 22.4 | | | | | | | | |
| | 135 34.8 | 230 30.9 59.2 | 281 49.0 46.2 | 225 01.3 08.6 | 271 55.0 13.5 | Achernar | 335 43.3 S57 19.4 | | | | | | | | |
| | 150 37.3 | 245 30.1 59.4 | 296 50.2 46.7 | 240 03.2 08.6 | 286 57.3 13.5 | Acrux | 173 34.4 S63 00.3 | | | | | | | | |
| | 165 39.7 | 260 29.3 59.6 | 311 51.5 47.1 | 255 05.1 08.6 | 301 59.7 13.5 | Adhara | 255 29.8 S28 57.0 | | | | | | | | |
| | 180 42.2 | 275 28.5 21 59.8 | 326 52.8 47.5 | 270 07.0 08.6 | 317 02.0 13.5 | Aldebaran | 291 15.0 N16 28.7 | | | | | | | | |
| | 195 44.7 | 290 27.7 22 00.0 | 341 54.1 47.9 | 285 08.9 08.6 | 332 04.3 13.6 | | | | | | | | | | |
| | 210 47.1 | 305 26.8 S22 00.3 | 356 55.4 S11 48.3 | 300 10.8 S23 08.6 | 347 06.6 S14 13.6 | Alioth | 166 40.0 N56 02.6 | | | | | | | | |
| | 225 49.6 | 320 26.0 00.5 | 11 56.6 48.7 | 315 12.7 08.6 | 2 09.0 13.6 | Alkaid | 153 16.4 N49 23.3 | | | | | | | | |
| | 240 52.0 | 335 25.2 00.7 | 26 57.9 49.1 | 330 14.6 08.6 | 17 11.3 13.7 | Al Na'ir | 28 12.2 S47 02.6 | | | | | | | | |
| | SUN 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | 255 54.5 | 350 24.4 00.9 | 41 59.2 49.5 | 345 16.5 08.6 | 32 13.6 13.7 | Alnilam | 276 08.9 S 1 12.7 | | | | | | | |
| | | 270 57.0 | 5 23.5 01.1 | 57 00.5 49.9 | 0 18.3 08.6 | 47 15.9 13.7 | Alphard | 218 17.9 S 8 35.3 | | | | | | | |
| | | 285 59.4 | 20 22.7 01.3 | 72 01.8 50.3 | 15 20.2 08.6 | 62 18.3 13.8 | | | | | | | | | |
| | | 301 01.9 | 35 21.9 S22 01.5 | 87 03.1 S11 50.7 | 30 22.1 S23 08.6 | 77 20.6 S14 13.8 | Alphecca | 126 30.2 N26 45.9 | | | | | | | |
| | | 316 04.4 | 50 21.1 01.7 | 102 04.4 51.1 | 45 24.0 08.6 | 92 22.9 13.8 | Alpheratz | 358 07.0 N29 00.1 | | | | | | | |
| | | 331 06.8 | 65 20.2 01.9 | 117 05.6 51.5 | 60 25.9 08.6 | 107 25.2 13.9 | Altair | 62 30.5 N 8 49.4 | | | | | | | |
| | | 346 09.3 | 80 19.4 02.1 | 132 06.9 51.9 | 75 27.8 08.6 | 122 27.6 13.9 | Ankaa | 353 37.9 S42 23.9 | | | | | | | |
| | | 1 11.8 | 95 18.6 02.4 | 147 08.2 52.3 | 90 29.7 08.6 | 137 29.9 13.9 | Antares | 112 54.1 S26 23.8 | | | | | | | |
| | | 16 14.2 | 110 17.8 02.6 | 162 09.5 52.7 | 105 31.6 08.6 | 152 32.2 14.0 | | | | | | | | | |
| | | 31 16.7 | 125 16.9 S22 02.8 | 177 10.8 S11 53.1 | 120 33.5 S23 08.6 | 167 34.5 S14 14.0 | Arcturus | 146 16.2 N19 15.8 | | | | | | | |
| | | 46 19.1 | 140 16.1 03.0 | 192 12.1 53.5 | 135 35.4 08.6 | 182 36.9 14.0 | Atria | 108 16.6 S68 59.8 | | | | | | | |
| | | 61 21.6 | 155 15.3 03.2 | 207 13.3 53.9 | 150 37.2 08.6 | 197 39.2 14.1 | Avior | 234 26.7 S59 27.4 | | | | | | | |
| | | 76 24.1 | 170 14.5 03.4 | 222 14.6 54.3 | 165 39.1 08.6 | 212 41.5 14.1 | Bellatrix | 278 55.9 N 6 20.1 | | | | | | | |
| | | 91 26.5 | 185 13.6 03.6 | 237 15.9 54.7 | 180 41.0 08.6 | 227 43.9 14.1 | Betelgeuse | 271 25.3 N 7 24.3 | | | | | | | |
| 106 29.0 | | 200 12.8 03.8 | 252 17.2 55.1 | 195 42.9 08.6 | 242 46.2 14.1 | | | | | | | | | | |
| 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | | 121 31.5 | 215 12.0 S22 04.0 | 267 18.5 S11 55.5 | 210 44.8 S23 08.6 | 257 48.5 S14 14.2 | Canopus | 264 05.6 S52 41.3 | | | | | | | |
| | | 136 33.9 | 230 11.1 04.1 | 282 19.8 55.9 | 225 46.7 08.6 | 272 50.8 14.2 | Capella | 281 07.3 N45 59.1 | | | | | | | |
| | | 151 36.4 | 245 10.3 04.3 | 297 21.1 56.3 | 240 48.6 08.6 | 287 53.2 14.2 | Deneb | 49 47.3 N45 13.3 | | | | | | | |
| | | 166 38.9 | 260 09.5 04.5 | 312 22.4 56.7 | 255 50.5 08.6 | 302 55.5 14.3 | Denebola | 182 56.3 N14 39.6 | | | | | | | |
| | | 181 41.3 | 275 08.7 04.7 | 327 23.6 57.1 | 270 52.4 08.6 | 317 57.8 14.3 | Diphda | 349 18.5 S18 04.7 | | | | | | | |
| | | 196 43.8 | 290 07.8 04.9 | 342 24.9 57.5 | 285 54.3 08.6 | 333 00.1 14.3 | | | | | | | | | |
| | | 211 46.3 | 305 07.0 S22 05.1 | 357 26.2 S11 57.9 | 300 56.2 S23 08.6 | 348 02.5 S14 14.4 | Dubhe | 194 18.4 N61 50.1 | | | | | | | |
| | | 226 48.7 | 320 06.2 05.3 | 12 27.5 58.3 | 315 58.1 08.6 | 3 04.8 14.4 | Elnath | 278 40.8 N28 35.8 | | | | | | | |
| | 241 51.2 | 335 05.3 05.5 | 27 28.8 58.7 | 330 59.9 08.6 | 18 07.1 14.4 | Eltanin | 90 57.1 N51 29.2 | | | | | | | | |
| | 256 53.6 | 350 04.5 05.7 | 42 30.1 59.1 | 346 01.8 08.6 | 33 09.5 14.4 | Enif | 34 09.5 N 9 47.9 | | | | | | | | |
| | 271 56.1 | 5 03.7 05.9 | 57 31.4 59.5 | 1 03.7 08.6 | 48 11.8 14.5 | Fomalhaut | 15 48.9 S29 42.7 | | | | | | | | |
| | 286 58.6 | 20 02.9 06.0 | 72 32.7 11 59.9 | 16 05.6 08.6 | 63 14.1 14.5 | | | | | | | | | | |
| | 302 01.0 | 35 02.0 S22 06.2 | 87 33.9 S12 00.2 | 31 07.5 S23 08.6 | 78 16.4 S14 14.5 | Gacrux | 172 26.0 S57 01.1 | | | | | | | | |
| | 317 03.5 | 50 01.2 06.4 | 102 35.2 00.6 | 46 09.4 08.6 | 93 18.8 14.6 | Genah | 176 15.3 S17 27.1 | | | | | | | | |
| | 332 06.0 | 65 00.4 06.6 | 117 36.5 01.0 | 61 11.3 08.6 | 108 21.1 14.6 | Hadar | 149 20.1 S60 17.5 | | | | | | | | |
| | 347 08.4 | 79 59.5 06.8 | 132 37.8 01.4 | 76 13.2 08.6 | 123 23.4 14.6 | Hamal | 328 26.2 S23 23.3 | | | | | | | | |
| | 2 10.9 | 94 58.7 06.9 | 147 39.1 01.8 | 91 15.1 08.6 | 138 25.8 14.7 | Kaus Aust. | 84 14.0 N34 23.6 | | | | | | | | |
| | 17 13.4 | 109 57.9 07.1 | 162 40.4 02.2 | 106 17.0 08.6 | 153 28.1 14.7 | | | | | | | | | | |
| | 32 15.8 | 124 57.0 S22 07.3 | 177 41.7 S12 02.6 | 121 18.9 S23 08.6 | 168 30.4 S14 14.7 | Kochab | 137 19.1 N74 12.9 | | | | | | | | |
| | 47 18.3 | 139 56.2 07.5 | 192 43.0 03.0 | 136 20.8 08.6 | 183 32.8 14.7 | Markab | 14 01.0 N15 07.0 | | | | | | | | |
| | 62 20.8 | 154 55.4 07.6 | 207 44.3 03.4 | 151 22.7 08.6 | 198 35.1 14.8 | Menkar | 314 38.5 N 4 01.6 | | | | | | | | |
| | 77 23.2 | 169 54.5 07.8 | 222 45.6 03.8 | 166 24.6 08.6 | 213 37.4 14.8 | Menkent | 148 34.2 S36 17.3 | | | | | | | | |
| | 92 25.7 | 184 53.7 08.0 | 237 46.9 04.2 | 181 26.5 08.6 | 228 39.7 14.8 | Miaplacidus | 221 43.7 S69 38.9 | | | | | | | | |
| 107 28.1 | 199 52.9 08.2 | 252 48.1 04.6 | 196 28.3 08.6 | 243 42.1 14.9 | | | | | | | | | | | |
| 24 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | 122 30.6 | 214 52.0 S22 08.3 | 267 49.4 S12 05.0 | 211 30.2 S23 08.6 | 258 44.4 S14 14.9 | Mirfak | 309 12.5 N49 48.5 | | | | | | | | |
| | 137 33.1 | 229 51.2 08.5 | 282 50.7 05.4 | 226 32.1 08.6 | 273 46.7 14.9 | Nunki | 76 26.5 S26 19.1 | | | | | | | | |
| | 152 35.5 | 244 50.4 08.7 | 297 52.0 05.8 | 241 34.0 08.6 | 288 49.1 15.0 | Peacock | 53 55.0 S56 47.4 | | | | | | | | |
| | 167 38.0 | 259 49.6 08.8 | 312 53.3 06.2 | 256 35.9 08.6 | 303 51.4 15.0 | Pallux | 243 54.8 N28 04.0 | | | | | | | | |
| | 182 40.5 | 274 48.7 09.0 | 327 54.6 06.6 | 271 37.8 08.6 | 318 53.7 15.0 | Pracyon | 245 22.9 N 5 16.0 | | | | | | | | |
| | 197 42.9 | 289 47.9 09.2 | 342 55.9 07.0 | 286 39.7 08.6 | 333 56.1 15.0 | | | | | | | | | | |
| | 212 45.4 | 304 47.0 S22 09.3 | 357 57.2 S12 07.4 | 301 41.6 S23 08.6 | 348 58.4 S14 15.1 | Rasalhague | 96 27.6 N12 34.1 | | | | | | | | |
| | 227 47.9 | 319 46.2 09.5 | 12 58.5 07.8 | 316 43.5 08.6 | 4 00.7 15.1 | Regulus | 208 07.1 N12 02.7 | | | | | | | | |
| | 242 50.3 | 334 45.4 09.6 | 27 59.8 08.1 | 331 45.4 08.6 | 19 03.1 15.1 | Rigel | 281 33.4 S 8 13.2 | | | | | | | | |
| | 257 52.8 | 349 44.5 09.8 | 43 01.1 08.5 | 346 47.3 08.6 | 34 05.4 15.2 | Rigel Kent. | 140 22.8 S60 45.8 | | | | | | | | |
| | 272 55.3 | 4 43.7 10.0 | 58 02.4 08.9 | 1 49.2 08.6 | 49 07.7 15.2 | Sabik | 102 38.6 S15 42.4 | | | | | | | | |
| | 287 57.7 | 19 42.9 10.1 | 73 03.7 09.3 | 16 51.1 08.6 | 64 10.1 15.2 | | | | | | | | | | |
| | 303 00.2 | 34 42.0 S22 10.3 | 88 05.0 S12 09.7 | 31 53.0 S23 08.6 | 79 12.4 S14 15.2 | Schedar | 350 06.6 N56 27.1 | | | | | | | | |
| | 318 02.6 | 49 41.2 10.4 | 103 06.3 10.1 | 46 54.9 08.6 | 94 14.7 15.3 | Shaula | 96 52.8 S37 05.6 | | | | | | | | |
| | 333 05.1 | 64 40.4 10.6 | 118 07.5 10.5 | 61 56.8 08.6 | 109 17.1 15.3 | Sirius | 258 53.2 S16 41.7 | | | | | | | | |
| | 348 07.6 | 79 39.5 10.7 | 133 08.8 10.9 | 76 58.7 08.6 | 124 19.4 15.3 | Spica | 158 54.9 S11 04.6 | | | | | | | | |
| | 3 10.0 | 94 38.7 10.9 | 148 10.1 11.3 | 92 00.6 08.6 | 139 21.7 15.4 | Suhail | 223 08.6 S43 22.0 | | | | | | | | |
| | 18 12.5 | 109 37.9 11.0 | 163 11.4 11.7 | 107 02.5 08.6 | 154 24.1 15.4 | | | | | | | | | | |
| | 33 15.0 | 124 37.0 S22 11.2 | 178 12.7 S12 12.1 | 122 04.4 S23 08.6 | 169 26.4 S14 15.4 | Vega | 80 54.6 N38 45.9 | | | | | | | | |
| | 48 17.4 | 139 36.2 11.3 | 193 14.0 12.5 | 137 06.2 08.6 | 184 28.7 15.5 | Zuben'ubi | 137 30.4 S15 58.5 | | | | | | | | |
| | 63 19.9 | 154 35.4 11.5 | 208 15.3 12.9 | 152 08.1 08.6 | 199 31.1 15.5 | | | | | | | | | | |
| | 78 22.4 | 169 34.5 11.6 | 223 16.6 13.2 | 167 10.0 08.6 | 214 33.4 15.5 | | | | | | | | | | |
| | 93 24.8 | 184 33.7 11.8 | 238 17.9 13.6 | 182 11.9 08.6 | 229 35.7 15.5 | Venus | 93 40.5 9 40 | | | | | | | | |
| 108 27.3 | 199 32.8 11.9 | 253 19.2 14.0 | 197 13.8 08.6 | 244 38.1 15.6 | Mars | 145 47.0 6 10 | | | | | | | | | |
| | | | | | | Jupiter | 89 13.3 9 56 | | | | | | | | |
| | | | | | | Saturn | 136 17.0 6 48 | | | | | | | | |
| Mer. Pass. | 15 51.3 | v -0.8 d 0.2 | v 1.3 d 0.4 | v 1.9 d 0.0 | v 2.3 d 0.0 | | | | | | | | | | |



1984 JANUARY 22, 23, 24 (SUN., MON., TUES.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | |
|--------|----------|----------|----------|--------|--------|------|------|-------|--------|----------|-------|---------|----------|-------|-------|--|
| | G.H.A. | Dec. | G.H.A. | v | Dec. | d | H.P. | Naut. | | Civil | 22 | | 23 | 24 | 25 | |
| 22 00 | 177 10.2 | S19 54.4 | 308 41.1 | 9.3 N | 9 05.2 | 14.8 | 60.4 | N 72 | 07 42 | 09 21 | 07 30 | 21 26 | 23 40 | 25 54 | 01 54 | |
| 01 | 192 10.0 | 53.9 | 323 09.4 | 9.5 | 8 50.4 | 14.8 | 60.4 | N 70 | 07 30 | 08 55 | 10 47 | 21 31 | 23 35 | 25 39 | 01 39 | |
| 02 | 207 09.8 | 53.3 | 337 37.9 | 9.5 | 8 35.6 | 14.9 | 60.3 | 68 | 07 20 | 08 35 | 10 00 | 21 35 | 23 32 | 25 27 | 01 27 | |
| 03 | 222 09.7 | 52.7 | 352 06.4 | 9.5 | 8 20.7 | 14.9 | 60.3 | 66 | 07 11 | 08 19 | 09 30 | 21 39 | 23 29 | 25 17 | 01 17 | |
| 04 | 237 09.5 | 52.2 | 6 34.9 | 9.7 | 8 05.8 | 14.9 | 60.3 | 64 | 07 04 | 08 06 | 09 08 | 21 42 | 23 26 | 25 09 | 01 09 | |
| 05 | 252 09.3 | 51.6 | 21 03.6 | 9.7 | 7 50.9 | 15.0 | 60.3 | 62 | 06 58 | 07 54 | 08 50 | 21 44 | 23 24 | 25 02 | 01 02 | |
| 06 | 267 09.1 | S19 51.1 | 35 32.3 | 9.7 N | 7 35.9 | 15.0 | 60.2 | 60 | 06 52 | 07 45 | 08 35 | 21 46 | 23 22 | 24 55 | 00 55 | |
| 07 | 282 09.0 | 50.5 | 50 01.0 | 9.9 | 7 20.9 | 15.0 | 60.2 | N 58 | 06 47 | 07 36 | 08 23 | 21 48 | 23 20 | 24 50 | 00 50 | |
| 08 | 297 08.8 | 49.9 | 64 29.9 | 9.9 | 7 05.9 | 15.1 | 60.2 | 56 | 06 42 | 07 29 | 08 12 | 21 50 | 23 19 | 24 45 | 00 45 | |
| S 09 | 312 08.6 | 49.4 | 78 58.8 | 10.0 | 6 50.8 | 15.0 | 60.2 | 54 | 06 38 | 07 22 | 08 02 | 21 52 | 23 17 | 24 41 | 00 41 | |
| U 10 | 327 08.4 | 48.8 | 93 27.8 | 10.0 | 6 35.8 | 15.1 | 60.1 | 52 | 06 34 | 07 16 | 07 54 | 21 53 | 23 16 | 24 37 | 00 37 | |
| N 11 | 342 08.3 | 48.2 | 107 56.8 | 10.1 | 6 20.7 | 15.2 | 60.1 | 50 | 06 30 | 07 10 | 07 46 | 21 54 | 23 15 | 24 34 | 00 34 | |
| D 12 | 357 08.1 | S19 47.7 | 122 25.9 | 10.2 N | 6 05.5 | 15.1 | 60.1 | 45 | 06 22 | 06 58 | 07 30 | 21 57 | 23 13 | 24 27 | 00 27 | |
| A 13 | 12 07.9 | 47.1 | 136 55.1 | 10.2 | 5 50.4 | 15.2 | 60.1 | N 40 | 06 14 | 06 47 | 07 16 | 22 00 | 23 11 | 24 20 | 00 20 | |
| Y 14 | 27 07.8 | 46.6 | 151 24.3 | 10.3 | 5 35.2 | 15.2 | 60.0 | 35 | 06 07 | 06 38 | 07 05 | 22 02 | 23 09 | 24 15 | 00 15 | |
| 15 | 42 07.6 | 46.0 | 165 53.6 | 10.4 | 5 20.0 | 15.2 | 60.0 | 30 | 06 00 | 06 29 | 06 55 | 22 03 | 23 08 | 24 10 | 00 10 | |
| 16 | 57 07.4 | 45.4 | 180 23.0 | 10.4 | 5 04.8 | 15.2 | 60.0 | 20 | 05 48 | 06 14 | 06 38 | 22 06 | 23 05 | 24 03 | 00 03 | |
| 17 | 72 07.3 | 44.9 | 194 52.4 | 10.4 | 4 49.6 | 15.2 | 60.0 | N 10 | 05 35 | 06 00 | 06 22 | 22 09 | 23 03 | 23 56 | 24 48 | |
| 18 | 87 07.1 | S19 44.3 | 209 21.8 | 10.5 N | 4 34.4 | 15.2 | 59.9 | 0 | 05 21 | 05 46 | 06 08 | 22 12 | 23 01 | 23 49 | 24 38 | |
| 19 | 102 06.9 | 43.7 | 223 51.3 | 10.6 | 4 19.2 | 15.3 | 59.9 | S 10 | 05 05 | 05 31 | 05 54 | 22 14 | 22 59 | 23 43 | 24 27 | |
| 20 | 117 06.7 | 43.1 | 238 20.9 | 10.6 | 4 03.9 | 15.2 | 59.9 | 20 | 04 46 | 05 14 | 05 38 | 22 17 | 22 57 | 23 36 | 24 16 | |
| 21 | 132 06.6 | 42.6 | 252 50.5 | 10.7 | 3 48.7 | 15.3 | 59.8 | 30 | 04 22 | 04 54 | 05 20 | 22 20 | 22 54 | 23 28 | 24 04 | |
| 22 | 147 06.4 | 42.0 | 267 20.2 | 10.8 | 3 33.4 | 15.2 | 59.8 | 35 | 04 06 | 04 41 | 05 09 | 22 22 | 22 53 | 23 24 | 23 56 | |
| 23 | 162 06.2 | 41.4 | 281 50.0 | 10.7 | 3 18.2 | 15.3 | 59.8 | 40 | 03 48 | 04 26 | 04 57 | 22 24 | 22 52 | 23 19 | 23 48 | |
| 23 00 | 177 06.1 | S19 40.9 | 296 19.7 | 10.9 N | 3 02.9 | 15.3 | 59.8 | 45 | 03 24 | 04 08 | 04 43 | 22 26 | 22 50 | 23 14 | 23 39 | |
| 01 | 192 05.9 | 40.3 | 310 49.6 | 10.8 | 2 47.6 | 15.2 | 59.7 | S 50 | 02 51 | 03 45 | 04 25 | 22 29 | 22 48 | 23 07 | 23 27 | |
| 02 | 207 05.7 | 39.7 | 325 19.4 | 11.0 | 2 32.4 | 15.3 | 59.7 | 52 | 02 33 | 03 33 | 04 16 | 22 30 | 22 47 | 23 04 | 23 22 | |
| 03 | 222 05.6 | 39.1 | 339 49.4 | 10.9 | 2 17.1 | 15.2 | 59.7 | 54 | 02 11 | 03 20 | 04 07 | 22 32 | 22 46 | 23 00 | 23 16 | |
| 04 | 237 05.4 | 38.6 | 354 19.3 | 11.0 | 2 01.9 | 15.3 | 59.6 | 56 | 01 41 | 03 05 | 03 56 | 22 33 | 22 45 | 22 57 | 23 10 | |
| 05 | 252 05.2 | 38.0 | 8 49.3 | 11.1 | 1 46.6 | 15.2 | 59.6 | 58 | 00 46 | 02 46 | 03 44 | 22 35 | 22 44 | 22 53 | 23 03 | |
| 06 | 267 05.1 | S19 37.4 | 23 19.4 | 11.1 N | 1 31.4 | 15.3 | 59.6 | S 60 | /// | 02 23 | 03 30 | 22 37 | 22 42 | 22 48 | 22 55 | |
| 07 | 282 04.9 | 36.8 | 37 49.5 | 11.1 | 1 16.1 | 15.2 | 59.6 | | | | | | | | | |
| 08 | 297 04.7 | 36.3 | 52 19.6 | 11.2 | 1 00.9 | 15.2 | 59.5 | Lat. | Sunset | Twilight | | Moonset | | | | |
| 09 | 312 04.6 | 35.7 | 66 49.8 | 11.2 | 0 45.7 | 15.2 | 59.5 | | | Civil | Naut. | 22 | 23 | 24 | 25 | |
| 10 | 327 04.4 | 35.1 | 81 20.0 | 11.3 | 0 30.5 | 15.2 | 59.5 | | | | | | | | | |
| 11 | 342 04.2 | 34.5 | 95 50.3 | 11.3 | 0 15.3 | 15.2 | 59.4 | | | | | | | | | |
| D 12 | 357 04.1 | S19 34.0 | 110 20.6 | 11.3 N | 0 00.1 | 15.2 | 59.4 | N 72 | 13 38 | 15 29 | 16 55 | 10 57 | 10 38 | 10 19 | 09 57 | |
| A 13 | 12 03.9 | 33.4 | 124 50.9 | 11.3 S | 0 15.1 | 15.1 | 59.4 | 68 | 14 24 | 15 49 | 17 05 | 10 50 | 10 38 | 10 25 | 10 12 | |
| Y 14 | 27 03.8 | 32.8 | 139 21.2 | 11.4 | 0 30.2 | 15.1 | 59.3 | 66 | 14 54 | 16 05 | 17 13 | 10 44 | 10 38 | 10 31 | 10 23 | |
| 15 | 42 03.6 | 32.2 | 153 51.6 | 11.5 | 0 45.3 | 15.1 | 59.3 | 64 | 15 17 | 16 19 | 17 20 | 10 39 | 10 37 | 10 35 | 10 33 | |
| 16 | 57 03.4 | 31.6 | 168 22.1 | 11.4 | 1 00.4 | 15.1 | 59.3 | 62 | 15 34 | 16 30 | 17 26 | 10 35 | 10 37 | 10 39 | 10 41 | |
| 17 | 72 03.3 | 31.0 | 182 52.5 | 11.5 | 1 15.5 | 15.1 | 59.3 | 60 | 15 49 | 16 39 | 17 32 | 10 31 | 10 37 | 10 43 | 10 49 | |
| 18 | 87 03.1 | S19 30.5 | 197 23.0 | 11.5 S | 1 30.6 | 15.0 | 59.2 | N 58 | 16 01 | 16 48 | 17 37 | 10 28 | 10 37 | 10 46 | 10 55 | |
| 19 | 102 02.9 | 29.9 | 211 53.5 | 11.5 | 1 45.6 | 15.0 | 59.2 | 56 | 16 12 | 16 55 | 17 42 | 10 25 | 10 37 | 10 49 | 11 01 | |
| 20 | 117 02.8 | 29.3 | 226 24.0 | 11.6 | 2 00.6 | 15.0 | 59.2 | 54 | 16 22 | 17 02 | 17 46 | 10 22 | 10 37 | 10 51 | 11 06 | |
| 21 | 132 02.6 | 28.7 | 240 54.6 | 11.6 | 2 15.6 | 15.0 | 59.1 | 52 | 16 30 | 17 08 | 17 50 | 10 19 | 10 37 | 10 53 | 11 11 | |
| 22 | 147 02.5 | 28.1 | 255 25.2 | 11.6 | 2 30.6 | 14.9 | 59.1 | 50 | 16 38 | 17 14 | 17 54 | 10 17 | 10 37 | 10 55 | 11 15 | |
| 23 | 162 02.3 | 27.5 | 269 55.8 | 11.6 | 2 45.5 | 14.9 | 59.1 | 45 | 16 54 | 17 26 | 18 02 | 10 12 | 10 36 | 11 00 | 11 24 | |
| 24 00 | 177 02.1 | S19 27.0 | 284 26.4 | 11.7 S | 3 00.4 | 14.9 | 59.0 | N 40 | 17 07 | 17 37 | 18 10 | 10 08 | 10 36 | 11 04 | 11 32 | |
| 01 | 192 02.0 | 26.4 | 298 57.1 | 11.6 | 3 15.3 | 14.8 | 59.0 | 35 | 17 19 | 17 46 | 18 17 | 10 04 | 10 36 | 11 07 | 11 39 | |
| 02 | 207 01.8 | 25.8 | 313 27.7 | 11.7 | 3 30.1 | 14.8 | 59.0 | 30 | 17 29 | 17 54 | 18 23 | 10 01 | 10 36 | 11 10 | 11 45 | |
| 03 | 222 01.7 | 25.2 | 327 58.4 | 11.7 | 3 44.9 | 14.8 | 58.9 | 20 | 17 46 | 18 09 | 18 36 | 09 55 | 10 36 | 11 15 | 11 55 | |
| 04 | 237 01.5 | 24.6 | 342 29.1 | 11.7 | 3 59.7 | 14.7 | 58.9 | N 10 | 18 01 | 18 23 | 18 49 | 09 50 | 10 35 | 11 20 | 12 04 | |
| 05 | 252 01.3 | 24.0 | 356 59.8 | 11.8 | 4 14.4 | 14.7 | 58.9 | 0 | 18 15 | 18 37 | 19 03 | 09 45 | 10 35 | 11 24 | 12 12 | |
| 06 | 267 01.2 | S19 23.4 | 11 30.6 | 11.7 S | 4 29.1 | 14.6 | 58.8 | S 10 | 18 30 | 18 52 | 19 18 | 09 40 | 10 35 | 11 28 | 12 21 | |
| 07 | 282 01.0 | 22.8 | 26 01.3 | 11.8 | 4 43.7 | 14.6 | 58.8 | 20 | 18 45 | 19 09 | 19 37 | 09 35 | 10 35 | 11 33 | 12 30 | |
| 08 | 297 00.9 | 22.2 | 40 32.1 | 11.8 | 4 58.3 | 14.6 | 58.8 | 30 | 19 03 | 19 29 | 20 01 | 09 29 | 10 34 | 11 38 | 12 40 | |
| 09 | 312 00.7 | 21.6 | 55 02.9 | 11.8 | 5 12.9 | 14.5 | 58.7 | 35 | 19 14 | 19 42 | 20 16 | 09 25 | 10 34 | 11 41 | 12 46 | |
| 10 | 327 00.6 | 21.0 | 69 33.7 | 11.8 | 5 27.4 | 14.5 | 58.7 | 40 | 19 26 | 19 57 | 20 35 | 09 21 | 10 34 | 11 44 | 12 53 | |
| 11 | 342 00.4 | 20.5 | 84 04.5 | 11.8 | 5 41.9 | 14.4 | 58.7 | 45 | 19 40 | 20 15 | 20 59 | 09 16 | 10 33 | 11 48 | 13 01 | |
| 12 | 357 00.3 | S19 19.9 | 98 35.3 | 11.8 S | 5 56.3 | 14.4 | 58.7 | S 50 | 19 58 | 20 38 | 21 31 | 09 11 | 10 33 | 11 53 | 13 11 | |
| 13 | 12 00.1 | 19.3 | 113 06.1 | 11.8 | 6 10.7 | 14.3 | 58.6 | 52 | 20 06 | 20 49 | 21 48 | 09 08 | 10 33 | 11 55 | 13 15 | |
| 14 | 26 59.9 | 18.7 | 127 36.9 | 11.8 | 6 25.0 | 14.3 | 58.6 | 54 | 20 15 | 21 02 | 22 10 | 09 05 | 10 33 | 11 57 | 13 20 | |
| 15 | 41 59.8 | 18.1 | 142 07.7 | 11.9 | 6 39.3 | 14.3 | 58.6 | 56 | 20 26 | 21 17 | 22 39 | 09 02 | 10 32 | 12 00 | 13 26 | |
| 16 | 56 59.6 | 17.5 | 156 38.6 | 11.8 | 6 53.6 | 14.2 | 58.5 | 58 | 20 38 | 21 35 | 23 28 | 08 58 | 10 32 | 12 03 | 13 32 | |
| 17 | 71 59.5 | 16.9 | 171 09.4 | 11.8 | 7 07.8 | 14.1 | 58.5 | S 60 | 20 52 | 21 58 | /// | 08 54 | 10 32 | 12 06 | 13 39 | |
| 18 | 86 59.3 | S19 16.3 | 185 40.2 | 11.9 S | 7 21.9 | 14.1 | 58.5 | | | | | | | | | |
| 19 | 101 59.2 | 15.7 | 200 11.1 | 11.8 | 7 36.0 | 14.0 | 58.4 | Day | SUN | | | MOON | | | | |
| 20 | 116 59.0 | 15.1 | 214 41.9 | 11.9 | 7 50.0 | 14.0 | 58.4 | | | | | | | | | |

1984 MARCH 19, 20, 21 (MON., TUES., WED.)

| G.M.T. | ARIES | | | VENUS -3.3 | | | MARS -0.2 | | | JUPITER -1.7 | | | SATURN +0.5 | | | STARS | | |
|---|---|----------|----------|------------|----------|----------|-----------|----------|----------|--------------|-------------|----------|-------------|----------|--|-------|--|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | | | | |
| M O N D A Y | 19 00 | 176 43.3 | 198 57.1 | S10 34.7 | 302 04.0 | S17 58.2 | 255 28.9 | S22 48.2 | 312 30.5 | S14 10.2 | Acomar | 315 35.5 | S40 22.3 | | | | | |
| | 01 | 191 45.7 | 213 56.6 | 33.7 | 317 05.9 | 58.4 | 270 31.0 | 48.2 | 327 33.0 | 10.2 | Achernar | 335 43.7 | S57 19.3 | | | | | |
| | 02 | 206 48.2 | 228 56.2 | 32.6 | 332 07.9 | 58.5 | 285 33.2 | 48.1 | 342 35.6 | 10.1 | Acruz | 173 34.0 | S63 00.6 | | | | | |
| | 03 | 221 50.6 | 243 55.7 | 31.5 | 347 09.9 | 58.7 | 300 35.3 | 48.1 | 357 38.1 | 10.1 | Adhara | 255 30.0 | S28 57.2 | | | | | |
| | 04 | 236 53.1 | 258 55.2 | 30.4 | 2 11.9 | 58.8 | 315 37.5 | 48.1 | 12 40.7 | 10.1 | Aldebaran | 291 15.2 | N16 28.7 | | | | | |
| | 05 | 251 55.6 | 273 54.7 | 29.4 | 17 13.9 | 58.9 | 330 39.6 | 48.1 | 27 43.2 | 10.0 | | | | | | | | |
| | 06 | 266 58.0 | 288 54.3 | S10 28.3 | 32 15.9 | S17 59.1 | 345 41.7 | S22 48.1 | 42 45.8 | S14 10.0 | Alioth | 166 39.5 | N56 02.7 | | | | | |
| | 07 | 282 00.5 | 303 53.8 | 27.2 | 47 17.9 | 59.2 | 0 43.9 | 48.0 | 57 48.4 | 10.0 | Alkaid | 153 15.9 | N49 23.4 | | | | | |
| | 08 | 297 03.0 | 318 53.3 | 26.1 | 62 19.9 | 59.4 | 15 46.0 | 48.0 | 72 50.9 | 09.9 | Al Na'ir | 28 12.0 | S47 02.4 | | | | | |
| | 09 | 312 05.4 | 333 52.8 | 25.1 | 77 21.9 | 59.5 | 30 48.2 | 48.0 | 87 53.5 | 09.9 | Alnilam | 276 09.1 | S 1 12.8 | | | | | |
| T U E S D A Y | 10 11 | 327 07.9 | 348 52.4 | 24.0 | 92 23.9 | 59.6 | 45 50.3 | 48.0 | 102 56.0 | 09.9 | Alphard | 218 17.8 | S 8 35.4 | | | | | |
| | 12 | 342 10.4 | 3 51.9 | 22.9 | 107 25.9 | 59.8 | 60 52.5 | 48.0 | 117 58.6 | 09.8 | | | | | | | | |
| | 13 | 357 12.8 | 18 51.4 | S10 21.8 | 122 27.9 | S17 59.9 | 75 54.6 | S22 47.9 | 133 01.1 | S14 09.8 | Alphecca | 126 29.7 | N26 45.8 | | | | | |
| | 14 | 12 15.3 | 33 50.9 | 20.7 | 137 29.9 | 18 00.0 | 90 56.7 | 47.9 | 148 03.7 | 09.8 | Alpheratz | 358 07.1 | N29 00.0 | | | | | |
| | 15 | 27 17.7 | 48 50.5 | 19.7 | 152 31.9 | 00.2 | 105 58.9 | 47.9 | 163 06.3 | 09.7 | Altair | 62 30.2 | N 8 49.3 | | | | | |
| | 16 | 42 20.2 | 63 50.0 | 18.6 | 167 33.9 | 00.3 | 121 01.0 | 47.9 | 178 08.8 | 09.7 | Ankaa | 353 38.0 | S42 23.7 | | | | | |
| | 17 | 57 22.7 | 78 49.5 | 17.5 | 182 35.9 | 00.4 | 136 03.2 | 47.9 | 193 11.4 | 09.6 | Antares | 112 53.6 | S26 23.9 | | | | | |
| | 18 | 72 25.1 | 93 49.0 | 16.4 | 197 37.9 | 00.6 | 151 05.3 | 47.8 | 208 13.9 | 09.6 | | | | | | | | |
| | 19 | 87 27.6 | 108 48.6 | S10 15.3 | 212 39.9 | S18 00.7 | 166 07.5 | S22 47.8 | 223 16.5 | S14 09.6 | Arcturus | 146 15.8 | N19 15.7 | | | | | |
| | 20 | 102 30.1 | 123 48.1 | 14.3 | 227 41.9 | 00.9 | 181 09.6 | 47.8 | 238 19.1 | 09.5 | Atria | 108 15.5 | S68 59.8 | | | | | |
| W E D N E S D A Y | 21 | 117 32.5 | 138 47.6 | 13.2 | 242 43.9 | 01.0 | 196 11.8 | 47.8 | 253 21.6 | 09.5 | Avior | 234 26.9 | S59 27.7 | | | | | |
| | 22 | 132 35.0 | 153 47.2 | 12.1 | 257 45.9 | 01.1 | 211 13.9 | 47.8 | 268 24.2 | 09.5 | Bellatrix | 278 56.1 | N 6 20.1 | | | | | |
| | 23 | 147 37.5 | 168 46.7 | 11.0 | 272 47.9 | 01.3 | 226 16.1 | 47.7 | 283 26.7 | 09.4 | Betegeuse | 271 25.5 | N 7 24.3 | | | | | |
| | 00 | 162 39.9 | 183 46.2 | 09.9 | 287 49.9 | 01.4 | 241 18.2 | 47.7 | 298 29.3 | 09.4 | | | | | | | | |
| | 01 | 177 42.4 | 198 45.7 | S10 08.8 | 302 51.9 | S18 01.5 | 256 20.4 | S22 47.7 | 313 31.9 | S14 09.4 | Canopus | 264 06.0 | S52 41.5 | | | | | |
| | 02 | 192 44.9 | 213 45.3 | 07.8 | 317 53.9 | 01.7 | 271 22.5 | 47.7 | 328 34.4 | 09.3 | Capella | 281 07.6 | N45 59.2 | | | | | |
| | 03 | 207 47.3 | 228 44.8 | 06.7 | 332 55.9 | 01.8 | 286 24.6 | 47.7 | 343 37.0 | 09.3 | Deneb | 49 47.1 | N45 13.0 | | | | | |
| | 04 | 222 49.8 | 243 44.3 | 05.6 | 347 57.9 | 01.9 | 301 26.8 | 47.6 | 358 39.5 | 09.3 | Denebola | 182 56.1 | N14 39.6 | | | | | |
| | 05 | 237 52.2 | 258 43.9 | 04.5 | 2 59.9 | 02.1 | 316 28.9 | 47.6 | 13 42.1 | 09.2 | Diphda | 349 18.6 | S18 04.6 | | | | | |
| | 06 | 252 54.7 | 273 43.4 | 03.4 | 18 02.0 | 02.2 | 331 31.1 | 47.6 | 28 44.7 | 09.2 | | | | | | | | |
| M O N D A Y | 07 | 267 57.2 | 288 42.9 | S10 02.3 | 33 04.0 | S18 02.3 | 346 33.2 | S22 47.6 | 43 47.2 | S14 09.1 | Dubhe | 194 18.1 | N61 50.3 | | | | | |
| | 08 | 282 59.6 | 303 42.5 | 01.2 | 48 06.0 | 02.5 | 1 35.4 | 47.6 | 58 49.8 | 09.1 | Elath | 278 41.0 | N28 35.8 | | | | | |
| | 09 | 298 02.1 | 318 42.0 | 10 00.2 | 63 08.0 | 02.6 | 16 37.5 | 47.5 | 73 52.3 | 09.1 | Elnath | 90 56.5 | N51 29.0 | | | | | |
| | 10 | 313 04.6 | 333 41.5 | 9 59.1 | 78 10.0 | 02.7 | 31 39.7 | 47.5 | 88 54.9 | 09.0 | Enif | 34 09.4 | N 9 47.8 | | | | | |
| | 11 | 328 07.0 | 348 41.1 | 58.0 | 93 12.0 | 02.9 | 46 41.8 | 47.5 | 103 57.5 | 09.0 | Fomalhaut | 15 48.9 | S29 42.6 | | | | | |
| | 12 | 343 09.5 | 3 40.6 | 56.9 | 108 14.1 | 03.0 | 61 44.0 | 47.5 | 119 00.0 | 09.0 | | | | | | | | |
| | 13 | 358 12.0 | 18 40.1 | S 9 55.8 | 123 16.1 | S18 03.1 | 76 46.1 | S22 47.5 | 134 02.6 | S14 08.9 | Gacrux | 172 25.6 | S57 01.4 | | | | | |
| | 14 | 13 14.4 | 33 39.7 | 54.7 | 138 18.1 | 03.3 | 91 48.3 | 47.4 | 149 05.2 | 08.9 | Genah | 176 15.1 | S17 27.3 | | | | | |
| | 15 | 28 16.9 | 48 39.2 | 53.6 | 153 20.1 | 03.4 | 106 50.4 | 47.4 | 164 07.7 | 08.9 | Hadar | 149 19.4 | S60 17.7 | | | | | |
| | 16 | 43 19.4 | 63 38.8 | 52.5 | 168 22.2 | 03.5 | 121 52.6 | 47.4 | 179 10.3 | 08.8 | Hamal | 328 26.4 | N23 23.2 | | | | | |
| T U E S D A Y | 17 | 58 21.8 | 78 38.3 | 51.4 | 183 24.2 | 03.7 | 136 54.8 | 47.4 | 194 12.8 | 08.8 | Kaus Aust. | 84 13.5 | S34 23.6 | | | | | |
| | 18 | 73 24.3 | 93 37.8 | 50.4 | 198 26.2 | 03.8 | 151 56.9 | 47.4 | 209 15.4 | 08.7 | | | | | | | | |
| | 19 | 88 26.7 | 108 37.4 | S 9 49.3 | 213 28.2 | S18 03.9 | 166 59.1 | S22 47.4 | 224 18.0 | S14 08.7 | Kochab | 137 17.9 | N74 13.0 | | | | | |
| | 20 | 103 29.2 | 123 36.9 | 48.2 | 228 30.3 | 04.1 | 182 01.2 | 47.3 | 239 20.5 | 08.7 | Markab | 14 01.0 | N15 06.9 | | | | | |
| | 21 | 118 31.7 | 138 36.4 | 47.1 | 243 32.3 | 04.2 | 197 03.4 | 47.3 | 254 23.1 | 08.6 | Menkar | 314 38.7 | N 4 01.6 | | | | | |
| | 22 | 133 34.1 | 153 36.0 | 46.0 | 258 34.3 | 04.3 | 212 05.5 | 47.3 | 269 25.7 | 08.6 | Menkent | 148 33.8 | S36 17.5 | | | | | |
| | 23 | 148 36.6 | 168 35.5 | 44.9 | 273 36.4 | 04.4 | 227 07.7 | 47.3 | 284 28.2 | 08.6 | Miaplacidus | 221 44.0 | S69 39.2 | | | | | |
| | 00 | 163 39.1 | 183 35.1 | 43.8 | 288 38.4 | 04.6 | 242 09.8 | 47.3 | 299 30.8 | 08.5 | | | | | | | | |
| | W E D N E S D A Y | 01 | 178 41.5 | 198 34.6 | S 9 42.7 | 303 40.4 | S18 04.7 | 257 12.0 | S22 47.2 | 314 33.3 | S14 08.5 | Mirfak | 309 12.9 | N49 48.4 | | | | |
| | | 02 | 193 44.0 | 213 34.1 | 41.6 | 318 42.5 | 04.8 | 272 14.1 | 47.2 | 329 35.9 | 08.5 | Nunki | 76 26.1 | S26 19.1 | | | | |
| 03 | | 208 46.5 | 228 33.7 | 40.5 | 333 44.5 | 05.0 | 287 16.3 | 47.2 | 344 38.5 | 08.4 | Peacock | 53 54.6 | S56 47.2 | | | | | |
| 04 | | 223 48.9 | 243 33.2 | 39.4 | 348 46.5 | 05.1 | 302 18.4 | 47.1 | 359 41.0 | 08.4 | Pollux | 243 54.9 | N28 04.0 | | | | | |
| 05 | | 238 51.4 | 258 32.7 | 38.3 | 3 48.6 | 05.2 | 317 20.6 | 47.1 | 14 43.6 | 08.4 | Procyon | 245 23.0 | N 5 16.0 | | | | | |
| 06 | | 253 53.8 | 273 32.3 | 37.2 | 18 50.6 | 05.3 | 332 22.7 | 47.1 | 29 46.2 | 08.3 | | | | | | | | |
| 07 | | 268 56.3 | 288 31.8 | S 9 36.1 | 33 52.6 | S18 05.5 | 347 24.9 | S22 47.1 | 44 48.7 | S14 08.3 | Rasalhague | 96 27.2 | N12 34.0 | | | | | |
| 08 | | 283 58.8 | 303 31.4 | 35.0 | 48 54.7 | 05.6 | 2 27.1 | 47.1 | 59 51.3 | 08.3 | Regulus | 208 07.0 | N12 02.7 | | | | | |
| 09 | | 299 01.2 | 318 30.9 | 33.9 | 63 56.7 | 05.7 | 17 29.2 | 47.0 | 74 53.9 | 08.2 | Rigel | 281 33.6 | S 8 13.3 | | | | | |
| 10 | | 314 03.7 | 333 30.4 | 32.8 | 78 58.8 | 05.8 | 32 31.4 | 47.0 | 89 56.4 | 08.2 | Rigel Kent. | 140 22.1 | S60 46.0 | | | | | |
| M O N D A Y | 11 | 329 06.2 | 348 30.0 | 31.7 | 94 00.8 | 06.0 | 47 33.5 | 47.0 | 104 59.0 | 08.1 | Sabik | 102 38.2 | S15 42.5 | | | | | |
| | 12 | 344 08.6 | 3 29.5 | 30.6 | 109 02.8 | 06.1 | 62 35.7 | 47.0 | 120 01.5 | 08.1 | | | | | | | | |
| | 13 | 359 11.1 | 18 29.1 | S 9 29.5 | 124 04.9 | S18 06.2 | 77 37.8 | S22 47.0 | 135 04.1 | S14 08.1 | Schedar | 350 06.9 | N56 26.9 | | | | | |
| | 14 | 14 13.6 | 33 28.6 | 28.4 | 139 06.9 | 06.4 | 92 40.0 | 46.9 | 150 06.7 | 08.0 | Shaula | 96 52.3 | S37 05.6 | | | | | |
| | 15 | 29 16.0 | 48 28.2 | 27.3 | 154 09.0 | 06.5 | 107 42.2 | 46.9 | 165 09.2 | 08.0 | Sirius | 258 53.4 | S16 41.8 | | | | | |
| | 16 | 44 18.5 | 63 27.7 | 26.2 | 169 11.0 | 06.6 | 122 44.3 | 46.9 | 180 11.8 | 08.0 | Spica | 158 54.6 | S11 04.8 | | | | | |
| | 17 | 59 21.0 | 78 27.2 | 25.1 | 184 13.1 | 06.7 | 137 46.5 | 46.9 | 195 14.4 | 07.9 | Suhail | 223 08.7 | S43 22.2 | | | | | |
| | 18 | 74 23.4 | 93 26.8 | 24.0 | 199 15.1 | 06.9 | 152 48.6 | 46.9 | 210 16.9 | 07.9 | | | | | | | | |
| | 19 | 89 25.9 | 108 26.3 | S 9 22.9 | 214 17.2 | S18 07.0 | 167 50.8 | S22 46.8 | 225 19.5 | S14 07.8 | Vega | 80 54.2 | N38 45.7 | | | | | |
| | 20 | 104 28.3 | 123 25.9 | 21.8 | 229 19.2 | 07.1 | 182 52.9 | 46.8 | 240 22.1 | 07.8 | Zuben'ubi | 137 30.0 | S15 58.6 | | | | | |
| M O N D A Y | 21 | 119 30.8 | 138 25.4 | 20.7 | 244 21.3 | 07.2 | 197 55.1 | 46.8 | 255 24.6 | 07.8 | | | | | | | | |
| | 22 | 134 33.3 | 153 25.0 | 19.6 | 259 23.3 | 07.4 | 212 57.3 | 46.8 | 270 27.2 | 07.7 | | | | | | | | |
| | 23 | 149 35.7 | 168 24.5 | 18.5 | 274 25.4 | 07.5 | 227 59.4 | 46.8 | 285 29.8 | 07.7 | Venus | 21 03.4 | 10 45 | | | | | |
| | 00 | 164 38.2 | 183 24.1 | 17.4 | 289 27.5 | 07.6 | 243 01.6 | 46.7 | 300 32.3 | 07.7 | Mars | 125 09.5 | 3 48 | | | | | |
| | Mer. Pass. | 12 07.2 | v -0.5 | d 1.1 | v 2.0 | d 0.1 | v 2.2 | d 0.0 | v 2.6 | d 0.0 | Jupiter | 78 38.0 | 6 54 | | | | | |
| | | | | | | | | | | Saturn | 135 49.5 | 3 05 | | | | | | |



1984 MARCH 19, 20, 21 (MON., TUES., WED.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | |
|--|----------------------------------|---------------------------------|-------|-----------------|-------|------------|-------|------------|-------|----------|----|---------|----------|----|----|---|----|
| | G.H.A. | Dec. | U | H.P. | V | Dec. | d | Naut. | | Civil | 19 | | 20 | | 21 | | 22 |
| | | | | | | | | | h | | m | h | m | h | m | h | m |
| 19 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 20 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 21 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 21 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 | 178 01.7 S 0 34.0 | 336 01.1 9.6 S 4 39.5 15.9 60.7 | N 72 | 03 20 | 04 50 | 05 58 | 22 44 | 25 46 | 01 46 | | | | | | | | |
| | 193 01.9 33.0 | 350 29.7 9.7 4 55.4 15.8 60.6 | N 70 | 03 39 | 04 57 | 05 59 | 22 26 | 24 55 | 00 55 | ■ | | | | | | | |
| | 208 02.1 32.0 | 4 58.4 9.7 5 11.2 15.8 60.6 | 68 | 03 54 | 05 04 | 05 59 | 22 11 | 24 23 | 00 23 | 03 01 | | | | | | | |
| | 223 02.3 31.0 | 19 27.1 9.6 5 27.0 15.7 60.6 | 66 | 04 06 | 05 09 | 06 00 | 22 00 | 24 00 | 00 00 | 02 08 | | | | | | | |
| | 238 02.5 30.0 | 33 55.7 9.7 5 42.7 15.7 60.6 | 64 | 04 15 | 05 13 | 06 01 | 21 50 | 23 42 | 25 36 | 01 36 | | | | | | | |
| | 253 02.7 29.0 | 48 24.4 9.7 5 58.4 15.6 60.5 | 62 | 04 23 | 05 17 | 06 01 | 21 42 | 23 27 | 25 12 | 01 12 | | | | | | | |
| | 268 02.8 S 0 28.0 | 62 53.1 9.7 S 6 14.0 15.6 60.5 | 60 | 04 30 | 05 20 | 06 01 | 21 35 | 23 15 | 24 53 | 00 53 | | | | | | | |
| | 283 03.0 27.1 | 77 21.8 9.7 6 29.6 15.5 60.5 | N 58 | 04 36 | 05 23 | 06 02 | 21 29 | 23 04 | 24 38 | 00 38 | | | | | | | |
| | 298 03.2 26.1 | 91 50.5 9.6 6 45.1 15.5 60.4 | 56 | 04 41 | 05 25 | 06 02 | 21 23 | 22 55 | 24 24 | 00 24 | | | | | | | |
| | 313 03.4 25.1 | 106 19.1 9.7 7 00.6 15.4 60.4 | 54 | 04 45 | 05 27 | 06 02 | 21 18 | 22 47 | 24 13 | 00 13 | | | | | | | |
| | 328 03.6 24.1 | 120 47.8 9.7 7 16.0 15.4 60.4 | 52 | 04 49 | 05 29 | 06 02 | 21 14 | 22 40 | 24 03 | 00 03 | | | | | | | |
| | 343 03.8 23.1 | 135 16.5 9.7 7 31.4 15.3 60.3 | 50 | 04 53 | 05 30 | 06 03 | 21 10 | 22 33 | 23 54 | 25 09 | | | | | | | |
| | 358 04.0 S 0 22.1 | 149 45.2 9.7 S 7 46.7 15.2 60.3 | 45 | 05 00 | 05 34 | 06 03 | 21 02 | 22 19 | 23 35 | 24 46 | | | | | | | |
| | 13 04.1 21.1 | 164 13.9 9.7 8 01.9 15.2 60.3 | N 40 | 05 05 | 05 36 | 06 03 | 20 54 | 22 08 | 23 20 | 24 27 | | | | | | | |
| | 28 04.3 20.1 | 178 42.6 9.6 8 17.1 15.1 60.2 | 35 | 05 09 | 05 38 | 06 04 | 20 48 | 21 58 | 23 07 | 24 12 | | | | | | | |
| | 43 04.5 19.2 | 193 11.2 9.7 8 32.2 15.0 60.2 | 30 | 05 12 | 05 40 | 06 04 | 20 43 | 21 50 | 22 55 | 23 59 | | | | | | | |
| | 58 04.7 18.2 | 207 39.9 9.6 8 47.2 15.0 60.2 | 20 | 05 17 | 05 42 | 06 04 | 20 34 | 21 35 | 22 36 | 23 36 | | | | | | | |
| | 73 04.9 17.2 | 222 08.5 9.7 9 02.2 14.9 60.1 | N 10 | 05 19 | 05 43 | 06 04 | 20 26 | 21 23 | 22 20 | 23 16 | | | | | | | |
| | 88 05.1 S 0 16.2 | 236 37.2 9.6 S 9 17.1 14.8 60.1 | 0 | 05 20 | 05 44 | 06 04 | 20 19 | 21 11 | 22 04 | 22 58 | | | | | | | |
| | 103 05.3 15.2 | 251 05.8 9.7 9 31.9 14.8 60.1 | S 10 | 05 19 | 05 43 | 06 04 | 20 12 | 21 00 | 21 49 | 22 40 | | | | | | | |
| | 118 05.4 14.2 | 265 34.5 9.6 9 46.7 14.7 60.0 | 20 | 05 16 | 05 42 | 06 04 | 20 04 | 20 47 | 21 33 | 22 21 | | | | | | | |
| | 133 05.6 13.2 | 280 03.1 9.6 10 01.4 14.6 60.0 | 30 | 05 12 | 05 40 | 06 04 | 19 56 | 20 33 | 21 14 | 21 59 | | | | | | | |
| | 148 05.8 12.2 | 294 31.7 9.6 10 16.0 14.5 60.0 | 35 | 05 08 | 05 38 | 06 03 | 19 51 | 20 25 | 21 03 | 21 46 | | | | | | | |
| | 163 06.0 11.3 | 309 00.3 9.6 10 30.5 14.5 59.9 | 40 | 05 04 | 05 36 | 06 03 | 19 45 | 20 16 | 20 51 | 21 31 | | | | | | | |
| 178 06.2 S 0 10.3 | 323 28.9 9.6 S 10 45.0 14.4 59.9 | 45 | 04 59 | 05 33 | 06 03 | 19 39 | 20 06 | 20 37 | 21 13 | | | | | | | | |
| 193 06.4 09.3 | 337 57.5 9.6 10 59.4 14.3 59.9 | S 50 | 04 52 | 05 30 | 06 02 | 19 31 | 19 53 | 20 19 | 20 51 | | | | | | | | |
| 208 06.6 08.3 | 352 26.1 9.6 11 13.7 14.2 59.8 | 52 | 04 48 | 05 28 | 06 02 | 19 27 | 19 47 | 20 11 | 20 41 | | | | | | | | |
| 223 06.7 7.3 | 6 54.7 9.5 11 27.9 14.1 59.8 | 54 | 04 44 | 05 26 | 06 01 | 19 24 | 19 41 | 20 02 | 20 30 | | | | | | | | |
| 238 06.9 06.3 | 21 23.2 9.6 11 42.0 14.1 59.8 | 56 | 04 40 | 05 24 | 06 01 | 19 19 | 19 34 | 19 52 | 20 16 | | | | | | | | |
| 253 07.1 05.3 | 35 51.8 9.5 11 56.1 14.0 59.7 | 58 | 04 34 | 05 21 | 06 01 | 19 15 | 19 26 | 19 40 | 20 01 | | | | | | | | |
| 268 07.3 S 0 04.3 | 50 20.3 9.5 S 12 10.1 13.8 59.7 | S 60 | 04 29 | 05 19 | 06 00 | 19 09 | 19 16 | 19 27 | 19 43 | | | | | | | | |
| 283 07.5 03.4 | 64 48.8 9.5 12 23.9 13.8 59.6 | Lat. | | Sunset | | Twilight | | Moonset | | | | | | | | | |
| 298 07.7 02.4 | 79 17.3 9.5 12 37.7 13.7 59.6 | | | Civil | | Naut. | | 19 | | 20 | | 21 | | 22 | | | |
| 313 07.9 01.4 | 93 45.8 9.5 12 51.4 13.6 59.6 | | | | | | | | | | | | | | | | |
| 328 08.1 S 0 00.4 | 108 14.3 9.4 13 05.0 13.6 59.5 | | | | | | | | | | | | | | | | |
| 343 08.2 N 0 00.6 | 122 42.7 9.4 13 18.6 13.4 59.5 | N 72 | 18 20 | 19 28 | 20 59 | 06 27 | 05 50 | 04 39 | ■ | | | | | | | | |
| 358 08.4 N 0 01.6 | 137 11.1 9.5 S 13 32.0 13.3 59.5 | N 70 | 18 19 | 19 20 | 20 39 | 06 36 | 06 11 | 05 32 | ■ | | | | | | | | |
| 13 08.6 02.6 | 151 39.6 9.4 13 45.3 13.2 59.4 | 68 | 18 18 | 19 14 | 20 24 | 06 43 | 06 27 | 06 05 | 05 19 | | | | | | | | |
| 28 08.8 03.5 | 166 08.0 9.3 13 58.5 13.2 59.4 | 66 | 18 17 | 19 08 | 20 12 | 06 50 | 06 41 | 06 30 | 06 13 | | | | | | | | |
| 43 09.0 04.5 | 180 36.3 9.4 14 11.7 13.0 59.3 | 64 | 18 16 | 19 04 | 20 02 | 06 55 | 06 52 | 06 49 | 06 46 | | | | | | | | |
| 58 09.2 05.5 | 195 04.7 9.3 14 24.7 12.9 59.3 | 62 | 18 15 | 19 00 | 19 54 | 07 00 | 07 02 | 07 05 | 07 11 | | | | | | | | |
| 73 09.4 06.5 | 209 33.0 9.4 14 37.6 12.9 59.3 | 60 | 18 15 | 18 57 | 19 47 | 07 04 | 07 10 | 07 18 | 07 30 | | | | | | | | |
| 88 09.5 N 0 07.5 | 224 01.4 9.3 S 14 50.5 12.7 59.2 | N 58 | 18 14 | 18 54 | 19 41 | 07 07 | 07 17 | 07 30 | 07 47 | | | | | | | | |
| 103 09.7 08.5 | 238 29.7 9.3 15 03.2 12.7 59.2 | 56 | 18 14 | 18 51 | 19 36 | 07 11 | 07 24 | 07 40 | 08 00 | | | | | | | | |
| 118 09.9 09.5 | 252 58.0 9.2 15 15.9 12.5 59.1 | 54 | 18 14 | 18 49 | 19 31 | 07 13 | 07 29 | 07 48 | 08 12 | | | | | | | | |
| 133 10.1 10.5 | 267 26.2 9.3 15 28.4 12.4 59.1 | 52 | 18 13 | 18 47 | 19 27 | 07 16 | 07 35 | 07 56 | 08 23 | | | | | | | | |
| 148 10.3 11.4 | 281 54.5 9.2 15 40.8 12.3 59.1 | 50 | 18 13 | 18 45 | 19 24 | 07 19 | 07 40 | 08 04 | 08 32 | | | | | | | | |
| 163 10.5 12.4 | 296 22.7 9.2 15 53.1 12.2 59.0 | 45 | 18 13 | 18 42 | 19 16 | 07 24 | 07 50 | 08 19 | 08 52 | | | | | | | | |
| 178 10.7 N 0 13.4 | 310 50.9 9.2 S 16 05.3 12.1 59.0 | N 40 | 18 12 | 18 39 | 19 11 | 07 28 | 07 59 | 08 32 | 09 09 | | | | | | | | |
| 193 10.9 14.4 | 325 19.1 9.2 16 17.4 12.0 58.9 | 35 | 18 12 | 18 37 | 19 07 | 07 32 | 08 06 | 08 42 | 09 23 | | | | | | | | |
| 208 11.1 15.4 | 339 47.3 9.1 16 29.4 11.9 58.9 | 30 | 18 12 | 18 35 | 19 03 | 07 36 | 08 13 | 08 52 | 09 35 | | | | | | | | |
| 223 11.2 16.4 | 354 15.4 9.1 16 41.3 11.8 58.9 | 20 | 18 11 | 18 33 | 18 59 | 07 42 | 08 24 | 09 08 | 09 55 | | | | | | | | |
| 238 11.4 17.4 | 8 43.5 9.1 16 53.1 11.6 58.8 | N 10 | 18 11 | 18 32 | 18 56 | 07 47 | 08 34 | 09 23 | 10 13 | | | | | | | | |
| 253 11.6 18.4 | 23 11.6 9.1 17 04.7 11.6 58.8 | 0 | 18 11 | 18 31 | 18 55 | 07 52 | 08 44 | 09 36 | 10 30 | | | | | | | | |
| 268 11.8 N 0 19.3 | 37 39.7 9.1 S 17 16.3 11.4 58.7 | S 10 | 18 11 | 18 32 | 18 56 | 07 57 | 08 53 | 09 50 | 10 47 | | | | | | | | |
| 283 12.0 20.3 | 52 07.8 9.0 17 27.7 11.3 58.7 | 20 | 18 11 | 18 33 | 18 58 | 08 02 | 09 03 | 10 05 | 11 05 | | | | | | | | |
| 298 12.2 21.3 | 66 35.8 9.0 17 39.0 11.2 58.7 | 30 | 18 11 | 18 35 | 19 03 | 08 08 | 09 15 | 10 21 | 11 26 | | | | | | | | |
| 313 12.4 22.3 | 81 03.8 9.0 17 50.2 11.1 58.6 | 35 | 18 11 | 18 36 | 19 06 | 08 11 | 09 22 | 10 31 | 11 38 | | | | | | | | |
| 328 12.5 23.3 | 95 31.8 9.0 18 01.3 11.0 58.6 | 40 | 18 11 | 18 38 | 19 10 | 08 15 | 09 30 | 10 42 | 11 52 | | | | | | | | |
| 343 12.7 24.3 | 109 59.8 9.0 18 12.3 10.8 58.5 | 45 | 18 12 | 18 41 | 19 15 | 08 20 | 09 39 | 10 56 | 12 09 | | | | | | | | |
| 358 12.9 N 0 25.3 | 124 27.8 8.9 S 18 23.1 10.8 58.5 | S 50 | 18 12 | 18 44 | 19 22 | 08 25 | 09 50 | 11 12 | 12 30 | | | | | | | | |
| 13 13.1 26.3 | 138 55.7 8.9 18 33.9 10.6 58.5 | 52 | 18 12 | 18 46 | 19 25 | 08 28 | 09 55 | 11 20 | 12 40 | | | | | | | | |
| 28 13.3 27.2 | 153 23.6 8.9 18 44.5 10.5 58.4 | 54 | 18 12 | 18 48 | 19 29 | 08 31 | 10 01 | 11 28 | 12 51 | | | | | | | | |
| 43 13.5 28.2 | 167 51.5 8.9 18 55.0 10.3 58.4 | 56 | 18 13 | 18 50 | 19 34 | 08 34 | 10 07 | 11 38 | 13 04 | | | | | | | | |
| 58 13.7 29.2 | 182 19.4 8.8 19 05.3 10.3 58.3 | 58 | 18 13 | 18 52 | 19 39 | 08 37 | 10 14 | 11 49 | 13 19 | | | | | | | | |
| 73 13.9 30.2 | 196 47.2 8.8 19 15.6 10.1 58.3 | S 60 | 18 13 | 18 55 | 19 44 | 08 41 | 10 22 | 12 01 | 13 37 | | | | | | | | |
| 88 14.0 N 0 31.2 | 211 15.0 8.9 S 19 25.7 10.0 58.2 | Day | | SUN | | MOON | | | | | | | | | | | |
| 103 14.2 32.2 | 225 42.9 8.7 19 35.7 9.9 58.2 | | | Eqn. of Time | | Mer. Pass. | | Mer. Pass. | | Age | | Phase | | | | | |
| 118 14.4 33.2 | 240 10.6 8.8 19 45.6 9.7 58.2 | | | 00 ^h | | Upper | | Lower | | | | | | | | | |
| 133 14.6 34.1 | 254 38.4 8.8 19 55.3 9.6 58.1 | | | 12 ^h | | Pass. | | | | | | | | | | | |
| 148 14.8 35.1 | 269 06.2 8.7 20 04.9 9.5 58.1 | | | m s | | h m | | h m | | h m | | d | | | | | |
| 163 15.0 36.1 | 283 33.9 8.7 20 14.4 9.4 58.0 | | | 07 53 | | 07 45 | | 12 08 | | 01 39 | | 14 05 | | 17 | | | |
| | | | | 07 36 | | | | | | | | | | | | | |

1984 MARCH 22, 23, 24 (THURS., FRI., SAT.)

| G.M.T. | ARIES | | | VENUS -3.3 | | | MARS -0.3 | | | JUPITER -1.7 | | | SATURN +0.5 | | | STARS | | |
|--------|----------|------------|--------|--------------|------|--------------|-----------|--------------|------|--------------|--------------|------|-------------|------|--|-------|--|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | | | | |
| 22 00 | 179 40.7 | 198 23.6 S | 9 16.3 | 304 29.5 S18 | 07.7 | 258 03.7 S22 | 46.7 | 315 34.9 S14 | 07.6 | Acamar | 315 35.5 S40 | 22.3 | | | | | | |
| 01 | 194 43.1 | 213 23.2 | 15.2 | 319 31.6 | 07.9 | 273 05.9 | 46.7 | 330 37.5 | 07.6 | Achernar | 335 43.7 S57 | 19.2 | | | | | | |
| 02 | 209 45.6 | 228 22.7 | 14.1 | 334 33.6 | 08.0 | 288 08.1 | 46.7 | 345 40.0 | 07.6 | Acrux | 173 34.0 S63 | 00.7 | | | | | | |
| 03 | 224 48.1 | 243 22.2 | 13.0 | 349 35.7 | 08.1 | 303 10.2 | 46.7 | 0 42.6 | 07.5 | Adhara | 255 30.1 S28 | 57.2 | | | | | | |
| 04 | 239 50.5 | 258 21.8 | 11.8 | 4 37.8 | 08.2 | 318 12.4 | 46.7 | 15 45.2 | 07.5 | Aldebaran | 291 15.2 N16 | 28.7 | | | | | | |
| 05 | 254 53.0 | 273 21.3 | 10.7 | 19 39.8 | 08.3 | 333 14.5 | 46.6 | 30 47.8 | 07.4 | | | | | | | | | |
| 06 | 269 55.5 | 288 20.9 S | 9 09.6 | 34 41.9 S18 | 08.5 | 348 16.7 S22 | 46.6 | 45 50.3 S14 | 07.4 | Alioth | 166 39.5 N56 | 02.7 | | | | | | |
| 07 | 284 57.9 | 303 20.4 | 08.5 | 49 43.9 | 08.6 | 3 18.9 | 46.6 | 60 52.9 | 07.4 | Alkaid | 153 15.9 N49 | 23.4 | | | | | | |
| T 08 | 300 00.4 | 318 20.0 | 07.4 | 64 46.0 | 08.7 | 18 21.0 | 46.6 | 75 55.5 | 07.3 | Al Na'ir | 28 12.0 S47 | 02.4 | | | | | | |
| H 09 | 315 02.8 | 333 19.5 | 06.3 | 79 48.1 | 08.8 | 33 23.2 | 46.6 | 90 58.0 | 07.3 | Alnilam | 276 09.1 S 1 | 12.8 | | | | | | |
| U 10 | 330 05.3 | 348 19.1 | 05.2 | 94 50.1 | 09.0 | 48 25.4 | 46.5 | 106 00.6 | 07.3 | Alphard | 218 17.8 S 8 | 35.4 | | | | | | |
| R 11 | 345 07.8 | 3 18.6 | 04.1 | 109 52.2 | 09.1 | 63 27.5 | 46.5 | 121 03.2 | 07.2 | | | | | | | | | |
| S 12 | 0 10.2 | 18 18.2 S | 9 03.0 | 124 54.3 S18 | 09.2 | 78 29.7 S22 | 46.5 | 136 05.7 S14 | 07.2 | Alphecca | 126 29.7 N26 | 45.8 | | | | | | |
| D 13 | 15 12.7 | 33 17.7 | 01.9 | 139 56.4 | 09.3 | 93 31.9 | 46.5 | 151 08.3 | 07.1 | Alpheratz | 358 07.1 N29 | 00.0 | | | | | | |
| A 14 | 30 15.2 | 48 17.3 | 9 00.8 | 154 58.4 | 09.5 | 108 34.0 | 46.5 | 166 10.9 | 07.1 | Alhair | 62 30.2 N 8 | 49.3 | | | | | | |
| Y 15 | 45 17.6 | 63 16.8 | 8 59.6 | 170 00.5 | 09.6 | 123 36.2 | 46.4 | 181 13.4 | 07.1 | Ankaa | 353 38.0 S42 | 23.7 | | | | | | |
| 16 | 60 20.1 | 78 16.4 | 58.5 | 185 02.6 | 09.7 | 138 38.3 | 46.4 | 196 16.0 | 07.0 | Antares | 112 53.6 S26 | 23.9 | | | | | | |
| 17 | 75 22.6 | 93 15.9 | 57.4 | 200 04.6 | 09.8 | 153 40.5 | 46.4 | 211 18.6 | 07.0 | | | | | | | | | |
| 18 | 90 25.0 | 108 15.5 S | 8 56.3 | 215 06.7 S18 | 09.9 | 168 42.7 S22 | 46.4 | 226 21.1 S14 | 06.9 | Arcturus | 146 15.8 N19 | 15.7 | | | | | | |
| 19 | 105 27.5 | 123 15.1 | 55.2 | 230 08.8 | 10.1 | 183 44.8 | 46.4 | 241 23.7 | 06.9 | Atria | 108 15.5 S68 | 59.8 | | | | | | |
| 20 | 120 29.9 | 138 14.6 | 54.1 | 245 10.9 | 10.2 | 198 47.0 | 46.3 | 256 26.3 | 06.9 | Avior | 234 27.0 S59 | 27.7 | | | | | | |
| 21 | 135 32.4 | 153 14.2 | 53.0 | 260 13.0 | 10.3 | 213 49.2 | 46.3 | 271 28.9 | 06.8 | Bellatrix | 278 56.1 N 6 | 20.1 | | | | | | |
| 22 | 150 34.9 | 168 13.7 | 51.8 | 275 15.0 | 10.4 | 228 51.3 | 46.3 | 286 31.4 | 06.8 | Betelgeuse | 271 25.5 N 7 | 24.3 | | | | | | |
| 23 | 165 37.3 | 183 13.3 | 50.7 | 290 17.1 | 10.5 | 243 53.5 | 46.3 | 301 34.0 | 06.8 | | | | | | | | | |
| 23 00 | 180 39.8 | 198 12.8 S | 8 49.6 | 305 19.2 S18 | 10.7 | 258 55.7 S22 | 46.3 | 316 36.6 S14 | 06.7 | Canopus | 264 06.1 S52 | 41.5 | | | | | | |
| 01 | 195 42.3 | 213 12.4 | 48.5 | 320 21.3 | 10.8 | 273 57.8 | 46.3 | 331 39.1 | 06.7 | Capella | 281 07.7 N45 | 59.2 | | | | | | |
| 02 | 210 44.7 | 228 11.9 | 47.4 | 335 23.4 | 10.9 | 289 00.0 | 46.2 | 346 41.7 | 06.6 | Deneb | 49 47.1 N45 | 13.0 | | | | | | |
| 03 | 225 47.2 | 243 11.5 | 46.3 | 350 25.5 | 11.0 | 304 02.2 | 46.2 | 1 44.3 | 06.6 | Denebola | 182 56.1 N14 | 39.6 | | | | | | |
| 04 | 240 49.7 | 258 11.0 | 45.1 | 5 27.5 | 11.1 | 319 04.3 | 46.2 | 16 46.9 | 06.6 | Diphda | 349 18.6 S18 | 04.6 | | | | | | |
| 05 | 255 52.1 | 273 10.6 | 44.0 | 20 29.6 | 11.3 | 334 06.5 | 46.2 | 31 49.4 | 06.5 | | | | | | | | | |
| 06 | 270 54.6 | 288 10.1 S | 8 42.9 | 35 31.7 S18 | 11.4 | 349 08.7 S22 | 46.2 | 46 52.0 S14 | 06.5 | Dubhe | 194 18.1 N61 | 50.3 | | | | | | |
| 07 | 285 57.1 | 303 09.7 | 41.8 | 50 33.8 | 11.5 | 4 10.8 | 46.1 | 61 54.6 | 06.4 | Elnath | 278 41.0 N28 | 35.8 | | | | | | |
| 08 | 300 59.5 | 318 09.3 | 40.7 | 65 35.9 | 11.6 | 19 13.0 | 46.1 | 76 57.1 | 06.4 | Eltanin | 90 56.5 N51 | 29.0 | | | | | | |
| F 09 | 316 02.0 | 333 08.8 | 39.5 | 80 38.0 | 11.7 | 34 15.2 | 46.1 | 91 59.7 | 06.4 | Enif | 34 09.3 N 9 | 47.8 | | | | | | |
| R 10 | 331 04.4 | 348 08.4 | 38.4 | 95 40.1 | 11.9 | 49 17.4 | 46.1 | 107 02.3 | 06.3 | Fomalhaut | 15 48.9 S29 | 42.6 | | | | | | |
| I 11 | 346 06.9 | 3 07.9 | 37.3 | 110 42.2 | 12.0 | 64 19.5 | 46.1 | 122 04.9 | 06.3 | | | | | | | | | |
| D 12 | 1 09.4 | 18 07.5 S | 8 36.2 | 125 44.3 S18 | 12.1 | 79 21.7 S22 | 46.0 | 137 07.4 S14 | 06.3 | Gacrux | 172 25.5 S57 | 01.5 | | | | | | |
| A 13 | 16 11.8 | 33 07.1 | 35.1 | 140 46.4 | 12.2 | 94 23.9 | 46.0 | 152 10.0 | 06.2 | Gienah | 176 15.1 S17 | 27.3 | | | | | | |
| Y 14 | 31 14.3 | 48 06.6 | 33.9 | 155 48.5 | 12.3 | 109 26.0 | 46.0 | 167 12.6 | 06.2 | Hadar | 149 19.4 S60 | 17.7 | | | | | | |
| 15 | 46 16.8 | 63 06.2 | 32.8 | 170 50.6 | 12.4 | 124 28.2 | 46.0 | 182 15.2 | 06.1 | Hamal | 328 26.4 N23 | 23.2 | | | | | | |
| 16 | 61 19.2 | 78 05.7 | 31.7 | 185 52.7 | 12.6 | 139 30.4 | 46.0 | 197 17.7 | 06.1 | Kaus Aust. | 84 13.5 S34 | 23.6 | | | | | | |
| 17 | 76 21.7 | 93 05.3 | 30.6 | 200 54.8 | 12.7 | 154 32.6 | 45.9 | 212 20.3 | 06.1 | | | | | | | | | |
| 18 | 91 24.2 | 108 04.8 S | 8 29.4 | 215 56.9 S18 | 12.8 | 169 34.7 S22 | 45.9 | 227 22.9 S14 | 06.0 | Kochab | 137 17.9 N74 | 13.0 | | | | | | |
| 19 | 106 26.6 | 123 04.4 | 28.3 | 230 59.0 | 12.9 | 184 36.9 | 45.9 | 242 25.4 | 06.0 | Markab | 14 01.0 N15 | 06.9 | | | | | | |
| 20 | 121 29.1 | 138 04.0 | 27.2 | 246 01.1 | 13.0 | 199 39.1 | 45.9 | 257 28.0 | 05.9 | Menkar | 314 38.7 N 4 | 01.6 | | | | | | |
| 21 | 136 31.6 | 153 03.5 | 26.1 | 261 03.2 | 13.1 | 214 41.2 | 45.9 | 272 30.6 | 05.9 | Menkent | 148 33.7 S36 | 17.5 | | | | | | |
| 22 | 151 34.0 | 168 03.1 | 24.9 | 276 05.3 | 13.3 | 229 43.4 | 45.9 | 287 33.2 | 05.9 | Miaplacidus | 221 44.0 S69 | 39.3 | | | | | | |
| 23 | 166 36.5 | 183 02.6 | 23.8 | 291 07.4 | 13.4 | 244 45.6 | 45.8 | 302 35.7 | 05.8 | | | | | | | | | |
| 24 00 | 181 38.9 | 198 02.2 S | 8 22.7 | 306 09.5 S18 | 13.5 | 259 47.8 S22 | 45.8 | 317 38.3 S14 | 05.8 | Mirfak | 309 12.9 N49 | 48.4 | | | | | | |
| 01 | 196 41.4 | 213 01.8 | 21.6 | 321 11.6 | 13.6 | 274 49.9 | 45.8 | 332 40.9 | 05.8 | Nunki | 76 26.1 S26 | 19.1 | | | | | | |
| 02 | 211 43.9 | 228 01.3 | 20.4 | 336 13.7 | 13.7 | 289 52.1 | 45.8 | 347 43.5 | 05.7 | Peacock | 53 54.5 S56 | 47.2 | | | | | | |
| 03 | 226 46.3 | 243 00.9 | 19.3 | 351 15.8 | 13.8 | 304 54.3 | 45.8 | 2 46.0 | 05.7 | Pollux | 243 54.9 N28 | 04.0 | | | | | | |
| 04 | 241 48.8 | 258 00.5 | 18.2 | 6 18.0 | 13.9 | 319 56.5 | 45.7 | 17 48.6 | 05.6 | Procyon | 245 23.0 N 5 | 16.0 | | | | | | |
| 05 | 256 51.3 | 273 00.0 | 17.1 | 21 20.1 | 14.1 | 334 58.6 | 45.7 | 32 51.2 | 05.6 | | | | | | | | | |
| 06 | 271 53.7 | 287 59.6 S | 8 15.9 | 36 22.2 S18 | 14.2 | 350 00.8 S22 | 45.7 | 47 53.8 S14 | 05.6 | Rasalhague | 96 27.2 N12 | 34.0 | | | | | | |
| 07 | 286 56.2 | 302 59.2 | 14.8 | 51 24.3 | 14.3 | 5 03.0 | 45.7 | 62 56.3 | 05.5 | Regulus | 208 07.0 N12 | 02.7 | | | | | | |
| S 08 | 301 58.7 | 317 58.7 | 13.7 | 66 26.4 | 14.4 | 20 05.2 | 45.7 | 77 58.9 | 05.5 | Rigel | 281 33.6 S 8 | 13.3 | | | | | | |
| A 09 | 317 01.1 | 332 58.3 | 12.5 | 81 28.5 | 14.5 | 35 07.3 | 45.6 | 93 01.5 | 05.4 | Rigel Kent. | 140 22.0 S60 | 46.0 | | | | | | |
| T 10 | 332 03.6 | 347 57.8 | 11.4 | 96 30.7 | 14.6 | 50 09.5 | 45.6 | 108 04.1 | 05.4 | Sabik | 102 38.1 S15 | 42.5 | | | | | | |
| U 11 | 347 06.1 | 2 57.4 | 10.3 | 111 32.8 | 14.7 | 65 11.7 | 45.6 | 123 06.6 | 05.4 | | | | | | | | | |
| R 12 | 2 08.5 | 17 57.0 S | 8 09.1 | 126 34.9 S18 | 14.9 | 80 13.9 S22 | 45.6 | 138 09.2 S14 | 05.3 | Schedar | 350 06.9 N56 | 26.9 | | | | | | |
| D 13 | 17 11.0 | 32 56.5 | 08.0 | 141 37.0 | 15.0 | 95 16.1 | 45.6 | 153 11.8 | 05.3 | Shaula | 96 52.2 S37 | 05.6 | | | | | | |
| A 14 | 32 13.4 | 47 56.1 | 06.9 | 156 39.2 | 15.1 | 110 18.2 | 45.6 | 168 14.4 | 05.2 | Sirius | 258 53.4 S16 | 41.8 | | | | | | |
| Y 15 | 47 15.9 | 62 55.7 | 05.8 | 171 41.3 | 15.2 | 125 20.4 | 45.5 | 183 16.9 | 05.2 | Spica | 158 54.6 S11 | 04.8 | | | | | | |
| 16 | 62 18.4 | 77 55.2 | 04.6 | 186 43.4 | 15.3 | 140 22.6 | 45.5 | 198 19.5 | 05.2 | Suhail | 223 08.7 S43 | 22.2 | | | | | | |
| 17 | 77 20.8 | 92 54.8 | 03.5 | 201 45.5 | 15.4 | 155 24.8 | | | | | | | | | | | | |

1984 MARCH 22, 23, 24 (THURS., FRI., SAT.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | |
|--------|----------|----------|----------|-----|----------|-----|------|-------|-----------------|------------|------------|---------|----------|-------|----|---|
| | G.H.A. | Dec. | G.H.A. | V | Dec. | d | H.P. | Naut. | | Civil | 22 | | 23 | 24 | 25 | |
| | | | | | | | | h | m | h | m | h | m | h | m | h |
| 22 00 | 178 15.2 | N 0 37.1 | 298 01.6 | 8.7 | S20 23.8 | 9.2 | 58.0 | N 72 | 02 59 | 04 33 | 05 42 | 03 30 | 05 18 | 06 17 | | |
| 01 | 193 15.3 | 38.1 | 312 29.3 | 8.7 | 20 33.0 | 9.1 | 58.0 | N 70 | 03 22 | 04 43 | 05 45 | 03 01 | 05 13 | | | |
| 02 | 208 15.5 | 39.1 | 326 57.0 | 8.6 | 20 42.1 | 9.0 | 57.9 | N 68 | 03 39 | 04 50 | 05 47 | 02 08 | 04 39 | | | |
| 03 | 223 15.7 | 40.1 | 341 24.6 | 8.7 | 20 51.1 | 8.9 | 57.9 | N 66 | 03 52 | 04 57 | 05 48 | 02 08 | 04 39 | | | |
| 04 | 238 15.9 | 41.1 | 355 52.3 | 8.6 | 21 00.0 | 8.7 | 57.8 | N 64 | 04 03 | 05 02 | 05 50 | 01 36 | 05 18 | 06 17 | | |
| 05 | 253 16.1 | 42.0 | 10 19.9 | 8.6 | 21 08.7 | 8.6 | 57.8 | N 62 | 04 12 | 05 07 | 05 51 | 01 12 | 02 52 | 04 17 | | |
| 06 | 268 16.3 | N 0 43.0 | 24 47.5 | 8.6 | S21 17.3 | 8.4 | 57.8 | N 60 | 04 20 | 05 11 | 05 52 | 00 53 | 02 25 | 03 43 | | |
| 07 | 283 16.5 | 44.0 | 39 15.1 | 8.5 | 21 25.7 | 8.3 | 57.7 | N 58 | 04 27 | 05 14 | 05 53 | 00 38 | 02 04 | 03 18 | | |
| 08 | 298 16.7 | 45.0 | 53 42.6 | 8.6 | 21 34.0 | 8.2 | 57.7 | N 56 | 04 32 | 05 17 | 05 54 | 00 24 | 01 47 | 02 58 | | |
| 09 | 313 16.9 | 46.0 | 68 10.2 | 8.5 | 21 42.2 | 8.1 | 57.6 | N 54 | 04 37 | 05 19 | 05 55 | 00 13 | 01 33 | 02 42 | | |
| 10 | 328 17.0 | 47.0 | 82 37.7 | 8.6 | 21 50.3 | 7.9 | 57.6 | N 52 | 04 42 | 05 22 | 05 56 | 00 03 | 01 20 | 02 28 | | |
| 11 | 343 17.2 | 48.0 | 97 05.3 | 8.5 | 21 58.2 | 7.8 | 57.6 | N 50 | 04 46 | 05 24 | 05 56 | 25 09 | 01 09 | 02 15 | | |
| 12 | 358 17.4 | N 0 48.9 | 111 32.8 | 8.5 | S22 06.0 | 7.6 | 57.5 | N 48 | 04 54 | 05 28 | 05 57 | 24 46 | 00 46 | 01 50 | | |
| 13 | 13 17.6 | 49.9 | 126 00.3 | 8.5 | 22 13.6 | 7.6 | 57.5 | N 46 | 05 00 | 05 32 | 05 59 | 24 27 | 00 27 | 01 29 | | |
| 14 | 28 17.8 | 50.9 | 140 27.8 | 8.4 | 22 21.2 | 7.3 | 57.4 | N 44 | 05 05 | 05 34 | 05 59 | 24 12 | 00 12 | 01 13 | | |
| 15 | 43 18.0 | 51.9 | 154 55.2 | 8.5 | 22 28.5 | 7.3 | 57.4 | N 42 | 05 08 | 05 36 | 06 00 | 23 59 | 24 58 | 00 58 | | |
| 16 | 58 18.2 | 52.9 | 169 22.7 | 8.5 | 22 35.8 | 7.1 | 57.4 | N 40 | 05 14 | 05 39 | 06 01 | 23 36 | 24 33 | 00 33 | | |
| 17 | 73 18.4 | 53.9 | 183 50.2 | 8.4 | 22 42.9 | 7.0 | 57.3 | N 38 | 05 17 | 05 41 | 06 02 | 23 16 | 24 12 | 00 12 | | |
| 18 | 88 18.5 | N 0 54.9 | 198 17.6 | 8.4 | S22 49.9 | 6.8 | 57.3 | N 36 | 05 19 | 05 43 | 06 04 | 22 40 | 23 32 | 24 25 | | |
| 19 | 103 18.7 | 55.8 | 212 45.0 | 8.5 | 22 56.7 | 6.7 | 57.2 | N 34 | 05 19 | 05 43 | 06 05 | 22 21 | 23 11 | 24 04 | | |
| 20 | 118 18.9 | 56.8 | 227 12.5 | 8.4 | 23 03.4 | 6.5 | 57.2 | N 32 | 05 14 | 05 41 | 06 05 | 21 59 | 22 47 | 23 39 | | |
| 21 | 133 19.1 | 57.8 | 241 39.9 | 8.4 | 23 09.9 | 6.5 | 57.2 | N 30 | 05 11 | 05 40 | 06 06 | 21 46 | 22 33 | 23 24 | | |
| 22 | 148 19.3 | 58.8 | 256 07.3 | 8.4 | 23 16.4 | 6.2 | 57.1 | N 28 | 05 07 | 05 39 | 06 06 | 21 31 | 22 16 | 23 07 | | |
| 23 | 163 19.5 | 0 59.8 | 270 34.7 | 8.4 | 23 22.6 | 6.2 | 57.1 | N 26 | 05 03 | 05 37 | 06 06 | 21 13 | 21 56 | 22 47 | | |
| 23 00 | 178 19.7 | N 1 00.8 | 285 02.1 | 8.4 | S23 28.8 | 6.0 | 57.0 | S 50 | 04 57 | 05 35 | 06 07 | 20 51 | 21 32 | 22 21 | | |
| 01 | 193 19.9 | 01.8 | 299 29.5 | 8.3 | 23 34.8 | 5.9 | 57.0 | S 48 | 04 54 | 05 33 | 06 07 | 20 41 | 21 20 | 22 09 | | |
| 02 | 208 20.1 | 02.7 | 313 56.8 | 8.4 | 23 40.7 | 5.7 | 57.0 | S 46 | 04 50 | 05 32 | 06 07 | 20 30 | 21 06 | 21 54 | | |
| 03 | 223 20.2 | 03.7 | 328 24.2 | 8.4 | 23 46.4 | 5.6 | 56.9 | S 44 | 04 46 | 05 30 | 06 07 | 20 16 | 20 51 | 21 38 | | |
| 04 | 238 20.4 | 04.7 | 342 51.6 | 8.4 | 23 52.0 | 5.4 | 56.9 | S 42 | 04 42 | 05 28 | 06 07 | 20 01 | 20 32 | 21 18 | | |
| 05 | 253 20.6 | 05.7 | 357 19.0 | 8.4 | 23 57.4 | 5.3 | 56.9 | S 40 | 04 37 | 05 26 | 06 08 | 19 43 | 20 09 | 20 53 | | |
| 06 | 268 20.8 | N 1 06.7 | 11 46.4 | 8.3 | S24 02.7 | 5.2 | 56.8 | | | | Moonset | | | | | |
| 07 | 283 21.0 | 07.7 | 26 13.7 | 8.4 | 24 07.9 | 5.0 | 56.8 | Lat. | Sunset | Twilight | | 22 | 23 | 24 | 25 | |
| 08 | 298 21.2 | 08.7 | 40 41.1 | 8.4 | 24 12.9 | 4.9 | 56.7 | | | Civil | Naut. | | | | | |
| 09 | 313 21.4 | 09.6 | 55 08.5 | 8.4 | 24 17.8 | 4.7 | 56.7 | N 72 | 18 34 | 19 43 | 21 19 | 06 46 | 06 50 | 07 42 | | |
| 10 | 328 21.6 | 10.6 | 69 35.9 | 8.3 | 24 22.5 | 4.6 | 56.7 | N 70 | 18 31 | 19 33 | 20 56 | 05 19 | 06 13 | 07 05 | | |
| 11 | 343 21.8 | 11.6 | 84 03.2 | 8.4 | 24 27.1 | 4.5 | 56.6 | N 68 | 18 28 | 19 25 | 20 38 | 04 46 | 05 41 | 06 33 | | |
| 12 | 358 21.9 | N 1 12.6 | 98 30.6 | 8.4 | S24 31.6 | 4.3 | 56.6 | N 66 | 18 27 | 19 18 | 20 24 | 06 13 | 07 11 | 08 05 | | |
| 13 | 13 22.1 | 13.6 | 112 58.0 | 8.4 | 24 35.9 | 4.2 | 56.6 | N 64 | 18 25 | 19 13 | 20 12 | 06 46 | 07 47 | 08 42 | | |
| 14 | 28 22.3 | 14.6 | 127 25.4 | 8.4 | 24 40.1 | 4.0 | 56.5 | N 62 | 18 23 | 19 08 | 20 03 | 07 11 | 08 12 | 09 09 | | |
| 15 | 43 22.5 | 15.5 | 141 52.8 | 8.4 | 24 44.1 | 3.9 | 56.5 | N 60 | 18 22 | 19 04 | 19 55 | 07 30 | 08 31 | 09 27 | | |
| 16 | 58 22.7 | 16.5 | 156 20.2 | 8.5 | 24 48.0 | 3.8 | 56.5 | N 58 | 18 22 | 19 04 | 19 55 | 07 30 | 08 31 | 09 27 | | |
| 17 | 73 22.9 | 17.5 | 170 47.7 | 8.4 | 24 51.8 | 3.6 | 56.4 | N 56 | 18 21 | 19 01 | 19 48 | 07 47 | 08 48 | 09 44 | | |
| 18 | 88 23.1 | N 1 18.5 | 185 15.1 | 8.4 | S24 55.4 | 3.5 | 56.4 | N 54 | 18 20 | 18 58 | 19 42 | 08 00 | 09 29 | 10 04 | | |
| 19 | 103 23.3 | 19.5 | 199 42.5 | 8.5 | 24 58.9 | 3.3 | 56.4 | N 52 | 18 19 | 18 55 | 19 37 | 08 12 | 09 44 | 10 10 | | |
| 20 | 118 23.5 | 20.5 | 214 10.0 | 8.4 | 25 02.2 | 3.2 | 56.3 | N 50 | 18 19 | 18 52 | 19 33 | 08 23 | 09 57 | 10 35 | | |
| 21 | 133 23.7 | 21.5 | 228 37.4 | 8.5 | 25 05.4 | 3.1 | 56.3 | N 48 | 18 18 | 18 50 | 19 29 | 08 32 | 09 08 | 09 53 | | |
| 22 | 148 23.8 | 22.4 | 243 04.9 | 8.5 | 25 08.5 | 2.9 | 56.2 | N 46 | 18 16 | 18 46 | 19 20 | 08 52 | 09 32 | 10 19 | | |
| 23 | 163 24.0 | 23.4 | 257 32.4 | 8.5 | 25 11.4 | 2.8 | 56.2 | N 44 | 18 15 | 18 42 | 19 14 | 09 09 | 09 51 | 10 40 | | |
| 24 00 | 178 24.2 | N 1 24.4 | 271 59.9 | 8.5 | S25 14.2 | 2.6 | 56.2 | N 42 | 18 14 | 18 40 | 19 09 | 09 23 | 10 07 | 10 57 | | |
| 01 | 193 24.4 | 25.4 | 286 27.4 | 8.6 | 25 16.8 | 2.5 | 56.1 | N 40 | 18 13 | 18 37 | 19 05 | 09 35 | 10 21 | 11 11 | | |
| 02 | 208 24.6 | 26.4 | 300 55.0 | 8.5 | 25 19.3 | 2.3 | 56.1 | N 38 | 18 12 | 18 34 | 19 00 | 09 55 | 10 45 | 11 36 | | |
| 03 | 223 24.8 | 27.4 | 315 22.5 | 8.6 | 25 21.6 | 2.3 | 56.1 | N 36 | 18 11 | 18 32 | 18 56 | 10 13 | 11 05 | 11 58 | | |
| 04 | 238 25.0 | 28.3 | 329 50.1 | 8.6 | 25 23.9 | 2.0 | 56.0 | N 34 | 18 10 | 18 30 | 18 54 | 10 30 | 11 24 | 12 18 | | |
| 05 | 253 25.2 | 29.3 | 344 17.7 | 8.6 | 25 25.9 | 2.0 | 56.0 | N 32 | 18 09 | 18 30 | 18 54 | 10 47 | 11 43 | 12 38 | | |
| 06 | 268 25.4 | N 1 30.3 | 358 45.3 | 8.7 | S25 27.9 | 1.8 | 56.0 | N 30 | 18 08 | 18 30 | 18 56 | 11 05 | 12 04 | 13 00 | | |
| 07 | 283 25.6 | 31.3 | 13 13.0 | 8.6 | 25 29.7 | 1.6 | 55.9 | N 28 | 18 07 | 18 31 | 18 59 | 11 26 | 12 28 | 13 25 | | |
| 08 | 298 25.7 | 32.3 | 27 40.6 | 8.7 | 25 31.3 | 1.5 | 55.9 | N 26 | 18 07 | 18 32 | 19 01 | 11 38 | 12 41 | 13 39 | | |
| 09 | 313 25.9 | 33.3 | 42 08.3 | 8.8 | 25 32.8 | 1.4 | 55.9 | N 24 | 18 06 | 18 33 | 19 05 | 11 52 | 12 58 | 13 56 | | |
| 10 | 328 26.1 | 34.2 | 56 36.1 | 8.7 | 25 34.2 | 1.2 | 55.9 | N 22 | 18 06 | 18 35 | 19 09 | 12 09 | 13 17 | 14 17 | | |
| 11 | 343 26.3 | 35.2 | 71 03.8 | 8.8 | 25 35.4 | 1.1 | 55.8 | N 20 | 18 05 | 18 38 | 19 15 | 12 30 | 13 41 | 14 42 | | |
| 12 | 358 26.5 | N 1 36.2 | 85 31.6 | 8.8 | S25 36.5 | 1.0 | 55.8 | N 18 | 18 05 | 18 39 | 19 18 | 12 40 | 13 53 | 14 55 | | |
| 13 | 13 26.7 | 37.2 | 99 59.4 | 8.8 | 25 37.5 | 0.8 | 55.8 | N 16 | 18 05 | 18 40 | 19 22 | 12 51 | 14 06 | 15 09 | | |
| 14 | 28 26.9 | 38.2 | 114 27.2 | 8.8 | 25 38.3 | 0.7 | 55.7 | N 14 | 18 05 | 18 42 | 19 25 | 13 04 | 14 22 | 15 26 | | |
| 15 | 43 27.1 | 39.2 | 128 55.0 | 8.9 | 25 39.0 | 0.6 | 55.7 | N 12 | 18 04 | 18 43 | 19 30 | 13 19 | 14 40 | 15 45 | | |
| 16 | 58 27.3 | 40.1 | 143 22.9 | 8.9 | 25 39.6 | 0.4 | 55.7 | N 10 | 18 04 | 18 45 | 19 35 | 13 37 | 15 03 | 16 10 | | |
| 17 | 73 27.4 | 41.1 | 157 50.8 | 9.0 | 25 40.0 | 0.3 | 55.6 | N 08 | 18 04 | 18 45 | 19 35 | 13 37 | 15 03 | 16 10 | | |
| 18 | 88 27.6 | N 1 42.1 | 172 18.8 | 9.0 | S25 40.3 | 0.1 | 55.6 | | | | Moonset | | | | | |
| 19 | 103 27.8 | 43.1 | 186 46.8 | 9.0 | 25 40.4 | 0.0 | 55.6 | Day | Eqn. of Time | Mer. Pass. | Mer. Pass. | | Age | Phase | | |
| 20 | 118 28.0 | 44.1 | 201 14.8 | 9.1 | 25 40.4 | 0.1 | 55.6 | | 00 ^h | Pass. | Upper | Lower | | | | |
| 21 | 133 28.2 | 45.1 | 215 42.9 | 9.1 | 25 40.3 | 0.2 | 55.5 | | m s | h m | h m | h m | d | | | |
| 22 | 148 28.4 | 46.0 | 230 11.0 | 9.1 | 25 40.1 | 0.4 | 55.5 | 22 | 07 00 | 06 51 | 12 07 | 04 17 | 16 44 | 20 | | |
| 23 | 163 28.6 | 47.0 | 244 39.1 | 9.2 | 25 39.7 | 0.5 | 55.5 | 23 | 06 42 | 06 33 | 12 07 | 05 11 | 17 38 | 21 | | |
| 24 | | | | | | | | | | | | | | | | |

1984 APRIL 30, MAY 1, 2 (MON., TUES., WED.)

| G.M.T. | ARIES | | | VENUS -3.3 | | | MARS -1.5 | | | JUPITER -2.0 | | | SATURN +0.3 | | | STARS | | |
|------------|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------|----------|----------|--------------|------|------|-------------|------|--|-------|--|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | | | | |
| MONDAY | 30 00 | 218 07.1 | 192 17.9 N 9 14.8 | 345 44.8 S18 33.6 | 294 03.2 S22 37.7 | 356 25.9 S13 21.2 | Acamar | 315 35.6 | S40 22.1 | | | | | | | | | |
| | 01 | 233 09.5 | 207 17.4 16.0 | 0 48.0 33.5 | 309 05.7 37.7 | 11 28.5 21.1 | Achernar | 335 43.7 | S57 19.0 | | | | | | | | | |
| | 02 | 248 12.0 | 222 17.0 17.1 | 15 51.3 33.5 | 324 08.2 37.7 | 26 31.2 21.0 | Acruz | 173 34.0 | S63 00.9 | | | | | | | | | |
| | 03 | 263 14.5 | 237 16.6 18.2 | 30 54.5 33.4 | 339 10.6 37.7 | 41 33.8 21.0 | Adhara | 255 30.3 | S28 57.1 | | | | | | | | | |
| | 04 | 278 16.9 | 252 16.1 19.4 | 45 57.8 33.3 | 354 13.1 37.7 | 56 36.5 20.9 | Aldebaran | 291 15.3 | N16 28.7 | | | | | | | | | |
| | 05 | 293 19.4 | 267 15.7 20.5 | 61 01.0 33.2 | 9 15.6 37.7 | 71 39.1 20.9 | | | | | | | | | | | | |
| | 06 | 308 21.9 | 282 15.3 N 9 21.7 | 76 04.3 S18 33.1 | 24 18.0 S22 37.8 | 86 41.8 S13 20.8 | Alioth | 166 39.5 | N56 02.9 | | | | | | | | | |
| | 07 | 323 24.3 | 297 14.8 22.8 | 91 07.5 33.1 | 39 20.5 37.8 | 101 44.4 20.8 | Alkaid | 153 15.8 | N49 23.6 | | | | | | | | | |
| | 08 | 338 26.8 | 312 14.4 24.0 | 106 10.8 33.0 | 54 23.0 37.8 | 116 47.1 20.7 | Al Na'ir | 28 11.7 | S47 02.2 | | | | | | | | | |
| | 09 | 353 29.3 | 327 14.0 25.1 | 121 14.0 32.9 | 69 25.4 37.8 | 131 49.7 20.7 | Alnilam | 276 09.3 | S 1 12.7 | | | | | | | | | |
| | 10 | 8 31.7 | 342 13.6 26.2 | 136 17.3 32.8 | 84 27.9 37.8 | 146 52.4 20.6 | Alphard | 218 18.0 | S 8 35.4 | | | | | | | | | |
| | 11 | 23 34.2 | 357 13.1 27.4 | 151 20.5 32.8 | 99 30.4 37.8 | 161 55.0 20.5 | | | | | | | | | | | | |
| | 12 | 38 36.7 | 12 12.7 N 9 28.5 | 166 23.8 S18 32.7 | 114 32.9 S22 37.8 | 176 57.7 S13 20.5 | Alphecca | 126 29.5 | N26 45.9 | | | | | | | | | |
| | 13 | 53 39.1 | 27 12.3 29.7 | 181 27.0 32.6 | 129 35.3 37.8 | 192 00.3 20.4 | Alpheratz | 358 07.0 | N28 59.9 | | | | | | | | | |
| | 14 | 68 41.6 | 42 11.8 30.8 | 196 30.3 32.5 | 144 37.8 37.8 | 207 03.0 20.4 | Altair | 62 29.9 | N 8 49.3 | | | | | | | | | |
| | 15 | 83 44.0 | 57 11.4 31.9 | 211 33.5 32.4 | 159 40.3 37.8 | 222 05.6 20.3 | Ankaa | 353 37.9 | S42 23.5 | | | | | | | | | |
| | 16 | 98 46.5 | 72 11.0 33.1 | 226 36.8 32.4 | 174 42.7 37.8 | 237 08.3 20.3 | Antares | 112 53.3 | S26 23.9 | | | | | | | | | |
| | 17 | 113 49.0 | 87 10.5 34.2 | 241 40.0 32.3 | 189 45.2 37.8 | 252 10.9 20.2 | | | | | | | | | | | | |
| | 18 | 128 51.4 | 102 10.1 N 9 35.4 | 256 43.3 S18 32.2 | 204 47.7 S22 37.8 | 267 13.6 S13 20.2 | Arcturus | 146 15.7 | N19 15.8 | | | | | | | | | |
| | 19 | 143 53.9 | 117 09.7 36.5 | 271 46.6 32.1 | 219 50.1 37.8 | 282 16.2 20.1 | Atria | 108 14.9 | S68 59.9 | | | | | | | | | |
| | 20 | 158 56.4 | 132 09.2 37.6 | 286 49.8 32.0 | 234 52.6 37.8 | 297 18.9 20.0 | Avior | 234 27.4 | S59 27.7 | | | | | | | | | |
| | 21 | 173 58.8 | 147 08.8 38.8 | 301 53.1 32.0 | 249 55.1 37.8 | 312 21.5 20.0 | Bellatrix | 278 56.2 | N 6 20.1 | | | | | | | | | |
| | 22 | 189 01.3 | 162 08.4 39.9 | 316 56.3 31.9 | 264 57.6 37.8 | 327 24.2 19.9 | Betelgeuse | 271 25.7 | N 7 24.3 | | | | | | | | | |
| 23 | 204 03.8 | 177 07.9 41.0 | 331 59.6 31.8 | 280 00.0 37.8 | 342 26.8 19.9 | | | | | | | | | | | | | |
| TUESDAY | 1 00 | 219 06.2 | 192 07.5 N 9 42.2 | 347 02.9 S18 31.7 | 295 02.5 S22 37.8 | 357 29.5 S13 19.8 | Canopus | 264 06.4 | S52 41.4 | | | | | | | | | |
| | 01 | 234 08.7 | 207 07.0 43.3 | 2 06.1 31.6 | 310 05.0 37.8 | 12 32.1 19.8 | Capella | 281 07.8 | N45 59.1 | | | | | | | | | |
| | 02 | 249 11.1 | 222 06.6 44.4 | 17 09.4 31.5 | 325 07.5 37.8 | 27 34.8 19.7 | Deneb | 49 46.7 | N45 13.0 | | | | | | | | | |
| | 03 | 264 13.6 | 237 06.2 45.6 | 32 12.7 31.5 | 340 09.9 37.8 | 42 37.4 19.7 | Denebola | 182 56.1 | N14 39.7 | | | | | | | | | |
| | 04 | 279 16.1 | 252 05.7 46.7 | 47 15.9 31.4 | 355 12.4 37.9 | 57 40.1 19.6 | Diphda | 349 18.5 | S18 04.5 | | | | | | | | | |
| | 05 | 294 18.5 | 267 05.3 47.8 | 62 19.2 31.3 | 10 14.9 37.9 | 72 42.7 19.5 | | | | | | | | | | | | |
| | 06 | 309 21.0 | 282 04.9 N 9 49.0 | 77 22.5 S18 31.2 | 25 17.4 S22 37.9 | 87 45.4 S13 19.5 | Dubhe | 194 18.3 | N61 50.5 | | | | | | | | | |
| | 07 | 324 23.5 | 297 04.4 50.1 | 92 25.8 31.1 | 40 19.8 37.9 | 102 48.0 19.4 | Elnath | 278 41.1 | N28 35.8 | | | | | | | | | |
| | 08 | 339 25.9 | 312 04.0 51.2 | 107 29.0 31.1 | 55 22.3 37.9 | 117 50.7 19.4 | Eltanin | 90 56.1 | N51 29.1 | | | | | | | | | |
| | 09 | 354 28.4 | 327 03.5 52.4 | 122 32.3 31.0 | 70 24.8 37.9 | 132 53.3 19.3 | Enif | 34 09.1 | N 9 47.9 | | | | | | | | | |
| | 10 | 9 30.9 | 342 03.1 53.5 | 137 35.6 30.9 | 85 27.3 37.9 | 147 56.0 19.3 | Fomalhaut | 15 48.6 | S29 42.4 | | | | | | | | | |
| | 11 | 24 33.3 | 357 02.7 54.6 | 152 38.8 30.8 | 100 29.7 37.9 | 162 58.6 19.2 | | | | | | | | | | | | |
| | 12 | 39 35.8 | 12 02.2 N 9 55.8 | 167 42.1 S18 30.7 | 115 32.2 S22 37.9 | 178 01.3 S13 19.2 | Gacrux | 172 25.6 | S57 01.6 | | | | | | | | | |
| | 13 | 54 38.3 | 27 01.8 56.9 | 182 45.4 30.6 | 130 34.7 37.9 | 193 03.9 19.1 | Gienah | 176 15.1 | S17 27.3 | | | | | | | | | |
| | 14 | 69 40.7 | 42 01.3 58.0 | 197 48.7 30.5 | 145 37.2 37.9 | 208 06.6 19.0 | Hadar | 149 19.2 | S60 17.9 | | | | | | | | | |
| | 15 | 84 43.2 | 57 00.9 59.2 | 212 52.0 30.5 | 160 39.7 37.9 | 223 09.2 19.0 | Hamal | 328 26.4 | N23 23.1 | | | | | | | | | |
| | 16 | 99 45.6 | 72 00.5 10 00.3 | 227 55.2 30.4 | 175 42.1 37.9 | 238 11.9 18.9 | Kaus Aust. | 84 13.1 | S34 23.6 | | | | | | | | | |
| | 17 | 114 48.1 | 87 00.0 01.4 | 242 58.5 30.3 | 190 44.6 37.9 | 253 14.5 18.9 | | | | | | | | | | | | |
| | 18 | 129 50.6 | 101 59.6 N10 02.5 | 258 01.8 S18 30.2 | 205 47.1 S22 37.9 | 268 17.1 S13 18.8 | Kochab | 137 17.6 | N74 13.2 | | | | | | | | | |
| | 19 | 144 53.0 | 116 59.1 03.7 | 273 05.1 30.1 | 220 49.6 37.9 | 283 19.8 18.8 | Markab | 14 00.8 | N15 07.0 | | | | | | | | | |
| | 20 | 159 55.5 | 131 58.7 04.8 | 288 08.4 30.0 | 235 52.1 37.9 | 298 22.4 18.7 | Menkar | 314 38.7 | N 4 01.6 | | | | | | | | | |
| | 21 | 174 58.0 | 146 58.3 05.9 | 303 11.6 30.0 | 250 54.5 37.9 | 313 25.1 18.7 | Menkent | 148 33.6 | S36 17.7 | | | | | | | | | |
| | 22 | 190 00.4 | 161 57.8 07.1 | 318 14.9 29.9 | 265 57.0 37.9 | 328 27.7 18.6 | Miaplacidus | 221 44.6 | S69 39.4 | | | | | | | | | |
| 23 | 205 02.9 | 176 57.4 08.2 | 333 18.2 29.8 | 280 59.5 38.0 | 343 30.4 18.5 | | | | | | | | | | | | | |
| WEDNESDAY | 2 00 | 220 05.4 | 191 56.9 N10 09.3 | 348 21.5 S18 29.7 | 296 02.0 S22 38.0 | 358 33.0 S13 18.5 | Mirfak | 309 13.0 | N49 48.3 | | | | | | | | | |
| | 01 | 235 07.8 | 206 56.5 10.4 | 3 24.8 29.6 | 311 04.5 38.0 | 13 35.7 18.4 | Nunki | 76 25.7 | S26 19.1 | | | | | | | | | |
| | 02 | 250 10.3 | 221 56.0 11.6 | 18 28.1 29.5 | 326 07.0 38.0 | 28 38.3 18.4 | Peacock | 53 54.1 | S56 47.1 | | | | | | | | | |
| | 03 | 265 12.8 | 236 55.6 12.7 | 33 31.4 29.4 | 341 09.4 38.0 | 43 41.0 18.3 | Pollux | 243 55.0 | N28 04.1 | | | | | | | | | |
| | 04 | 280 15.2 | 251 55.2 13.8 | 48 34.7 29.3 | 356 11.9 38.0 | 58 43.6 18.3 | Procyon | 245 23.2 | N 5 16.0 | | | | | | | | | |
| | 05 | 295 17.7 | 266 54.7 14.9 | 63 37.9 29.3 | 11 14.4 38.0 | 73 46.3 18.2 | | | | | | | | | | | | |
| | 06 | 310 20.1 | 281 54.3 N10 16.1 | 78 41.2 S18 29.2 | 26 16.9 S22 38.0 | 88 48.9 S13 18.2 | Rasalhague | 96 26.9 | N12 34.0 | | | | | | | | | |
| | 07 | 325 22.6 | 296 53.8 17.2 | 93 44.5 29.1 | 41 19.4 38.0 | 103 51.6 18.1 | Regulus | 208 07.1 | N12 02.7 | | | | | | | | | |
| | 08 | 340 25.1 | 311 53.4 18.3 | 108 47.8 29.0 | 56 21.9 38.0 | 118 54.2 18.1 | Rigel | 281 33.8 | S 8 13.2 | | | | | | | | | |
| | 09 | 355 27.5 | 326 52.9 19.4 | 123 51.1 28.9 | 71 24.3 38.0 | 133 56.9 18.0 | Rigel Kent. | 140 21.8 | S60 46.2 | | | | | | | | | |
| | 10 | 10 30.0 | 341 52.5 20.6 | 138 54.4 28.8 | 86 26.8 38.0 | 148 59.5 17.9 | Sabik | 102 37.9 | S15 42.5 | | | | | | | | | |
| | 11 | 25 32.5 | 356 52.0 21.7 | 153 57.7 28.7 | 101 29.3 38.0 | 164 02.2 17.9 | | | | | | | | | | | | |
| | 12 | 40 34.9 | 11 51.6 N10 22.8 | 169 01.0 S18 28.6 | 116 31.8 S22 38.0 | 179 04.8 S13 17.8 | Schedar | 350 06.7 | N56 26.8 | | | | | | | | | |
| | 13 | 55 37.4 | 26 51.1 23.9 | 184 04.3 28.5 | 131 34.3 38.0 | 194 07.5 17.8 | Shaula | 96 51.9 | S37 05.6 | | | | | | | | | |
| | 14 | 70 39.9 | 41 50.7 25.0 | 199 07.6 28.5 | 146 36.8 38.0 | 209 10.1 17.7 | Sirius | 258 53.6 | S16 41.8 | | | | | | | | | |
| | 15 | 85 42.3 | 56 50.2 26.2 | 214 10.9 28.4 | 161 39.3 38.0 | 224 12.8 17.7 | Spica | 158 54.5 | S11 04.8 | | | | | | | | | |
| | 16 | 100 44.8 | 71 49.8 27.3 | 229 14.2 28.3 | 176 41.8 38.1 | 239 15.4 17.6 | Suhail | 223 08.9 | S43 22.3 | | | | | | | | | |
| | 17 | 115 47.3 | 86 49.3 28.4 | 244 17.5 28.2 | 191 44.2 38.1 | 254 18.1 17.6 | | | | | | | | | | | | |
| | 18 | 130 49.7 | 101 48.9 N10 29.5 | 259 20.8 S18 28.1 | 206 46.7 S22 38.1 | 269 20.7 S13 17.5 | Vega | 80 53.8 | N38 45.8 | | | | | | | | | |
| | 19 | 145 52.2 | 116 48.5 30.6 | 274 24.1 28.0 | 221 49.2 38.1 | 284 23.4 17.4 | Zuben'ubi | 137 29.8 | S15 58.7 | | | | | | | | | |
| | 20 | 160 54.6 | 131 48.0 31.8 | 289 27.4 27.9 | 236 51.7 38.1 | 299 26.0 17.4 | | | | | | | | | | | | |
| | 21 | 175 57.1 | 146 47.6 32.9 | 304 30.7 27.8 | 251 54.2 38.1 | 314 28.7 17.3 | | | | | | | | | | | | |
| | 22 | 190 59.6 | 161 47.1 34.0 | 319 34.0 27.7 | 266 56.7 38.1 | 329 31.3 17.3 | Venus | 333 01.3 | 11 12 | | | | | | | | | |
| 23 | 206 02.0 | 176 46.6 35.1 | 334 37.3 27.6 | 281 59.2 38.1 | 344 34.0 17.2 | Mars | 127 56.7 | 0 52 | | | | | | | | | | |
| | | | | | | Jupiter | 75 56.3 | 4 19 | | | | | | | | | | |
| | | | | | | Saturn | 138 23.2 | 0 10 | | | | | | | | | | |
| Mer. Pass. | 9 22.0 | v -0.4 d 1.1 | v 3.3 d 0.1 | v 2.5 d 0.0 | v 2.6 d 0.1 | | | | | | | | | | | | | |



1984 APRIL 30, MAY 1, 2 (MON., TUES., WED.)

Table with columns for G.M.T, SUN, MOON, Lat., Twilight (Naut., Civil, Sunrise), Moonrise (30, 1, 2, 3), Moonset (30, 1, 2, 3), and Day. Rows are organized by day (MON, TUE, WED) and hour (00-23). Includes a small table at the bottom for Day, Eqn. of Time, Mer. Pass., Mer. Pass. Upper/Lower, Age, and Phase.



1984 MAY 3, 4, 5 (THURS., FRI., SAT.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | | Sunrise | Moonrise | | | |
|--------|----------|----------|----------|------|----------|-----|------|-----------------|-----------------|------------|-------|-------|---------|----------|-------|-----|-----|
| | G.H.A. | Dec. | G.H.A. | v | Dec. | d | H.P. | Naut. | | Civil | h m | 3 | | 4 | 5 | 6 | |
| | | | | | | | | | | | | h m | | h m | h m | h m | h m |
| 3 00 | 180 46.8 | N15 39.9 | 158 46.0 | 10.4 | N20 47.0 | 8.8 | 56.3 | N 72 | 01 23 | 01 23 | 01 23 | 01 23 | 01 23 | 01 23 | 01 23 | | |
| 01 | 195 46.9 | 40.6 | 173 15.4 | 10.2 | 20 55.8 | 8.6 | 56.3 | N 70 | 02 12 | 02 12 | 02 12 | 02 12 | 02 12 | 02 12 | 02 12 | | |
| 02 | 210 46.9 | 41.4 | 187 44.6 | 10.1 | 21 04.4 | 8.6 | 56.3 | N 68 | 00 11 | 00 11 | 00 11 | 00 11 | 00 11 | 00 11 | 00 11 | | |
| 03 | 225 47.0 | 42.1 | 202 13.7 | 10.1 | 21 13.0 | 8.4 | 56.4 | N 66 | 01 35 | 01 35 | 01 35 | 01 35 | 01 35 | 01 35 | 01 35 | | |
| 04 | 240 47.1 | 42.8 | 216 42.8 | 9.9 | 21 21.4 | 8.4 | 56.4 | N 64 | 02 10 | 02 10 | 02 10 | 02 10 | 02 10 | 02 10 | 02 10 | | |
| 05 | 255 47.1 | 43.6 | 231 11.7 | 9.9 | 21 29.8 | 8.2 | 56.4 | N 62 | 00 10 | 02 35 | 03 37 | 04 25 | 04 37 | 05 03 | 06 02 | | |
| 06 | 270 47.2 | N15 44.3 | 245 40.6 | 9.8 | N21 38.0 | 8.1 | 56.4 | N 60 | 01 24 | 02 55 | 03 50 | 04 44 | 05 03 | 05 37 | 06 36 | | |
| 07 | 285 47.2 | 45.0 | 260 09.4 | 9.7 | 21 46.1 | 8.1 | 56.5 | N 58 | 01 57 | 03 10 | 04 00 | 05 00 | 05 24 | 06 02 | 07 02 | | |
| 08 | 300 47.3 | 45.8 | 274 38.1 | 9.6 | 21 54.2 | 7.9 | 56.5 | N 56 | 02 20 | 03 24 | 04 09 | 05 14 | 05 41 | 06 22 | 07 22 | | |
| 09 | 315 47.4 | 46.5 | 289 06.7 | 9.6 | 22 02.1 | 7.8 | 56.5 | N 54 | 02 38 | 03 35 | 04 17 | 05 25 | 05 56 | 06 39 | 07 38 | | |
| 10 | 330 47.4 | 47.2 | 303 35.3 | 9.4 | 22 09.9 | 7.7 | 56.5 | N 52 | 02 53 | 03 45 | 04 24 | 05 36 | 06 08 | 06 53 | 07 53 | | |
| 11 | 345 47.5 | 48.0 | 318 03.7 | 9.4 | 22 17.6 | 7.6 | 56.5 | N 50 | 03 06 | 03 54 | 04 31 | 05 45 | 06 20 | 07 06 | 08 05 | | |
| 12 | 0 47.6 | N15 48.7 | 332 32.1 | 9.3 | N22 25.2 | 7.4 | 56.6 | N 48 | 03 31 | 04 12 | 04 45 | 06 05 | 06 43 | 07 32 | 08 31 | | |
| 13 | 15 47.6 | 49.4 | 347 00.4 | 9.2 | 22 32.6 | 7.4 | 56.6 | N 46 | 03 51 | 04 27 | 04 56 | 06 21 | 07 02 | 07 52 | 08 51 | | |
| 14 | 30 47.7 | 50.2 | 1 28.6 | 9.1 | 22 40.0 | 7.2 | 56.6 | N 40 | 04 06 | 04 39 | 05 06 | 06 34 | 07 18 | 08 09 | 09 08 | | |
| 15 | 45 47.7 | 50.9 | 15 56.7 | 9.0 | 22 47.2 | 7.1 | 56.6 | N 35 | 04 19 | 04 49 | 05 15 | 06 46 | 07 32 | 08 24 | 09 23 | | |
| 16 | 60 47.8 | 51.6 | 30 24.7 | 9.0 | 22 54.3 | 7.0 | 56.6 | N 30 | 04 39 | 05 06 | 05 29 | 07 07 | 07 55 | 08 49 | 09 48 | | |
| 17 | 75 47.9 | 52.3 | 44 52.7 | 8.8 | 23 01.3 | 6.9 | 56.7 | N 10 | 04 54 | 05 20 | 05 42 | 07 25 | 08 16 | 09 11 | 10 10 | | |
| 18 | 90 47.9 | N15 53.1 | 59 20.5 | 8.8 | N23 08.2 | 6.8 | 56.7 | N 0 | 05 07 | 05 32 | 05 53 | 07 41 | 08 35 | 09 32 | 10 30 | | |
| 19 | 105 48.0 | 53.8 | 73 48.3 | 8.7 | 23 15.0 | 6.6 | 56.7 | S 10 | 05 18 | 05 43 | 06 05 | 07 58 | 08 54 | 09 52 | 10 50 | | |
| 20 | 120 48.0 | 54.5 | 88 16.0 | 8.6 | 23 21.6 | 6.5 | 56.7 | S 20 | 05 28 | 05 54 | 06 17 | 08 16 | 09 15 | 10 14 | 11 12 | | |
| 21 | 135 48.1 | 55.3 | 102 43.6 | 8.6 | 23 28.1 | 6.4 | 56.7 | S 30 | 05 37 | 06 06 | 06 31 | 08 37 | 09 39 | 10 40 | 11 37 | | |
| 22 | 150 48.2 | 56.0 | 117 11.2 | 8.4 | 23 34.5 | 6.3 | 56.8 | S 40 | 05 42 | 06 12 | 06 39 | 08 50 | 09 53 | 10 55 | 11 51 | | |
| 23 | 165 48.2 | 56.7 | 131 38.6 | 8.4 | 23 40.8 | 6.1 | 56.8 | S 50 | 05 47 | 06 20 | 06 48 | 09 04 | 10 10 | 11 12 | 12 08 | | |
| 4 00 | 180 48.3 | N15 57.4 | 146 06.0 | 8.3 | N23 46.9 | 6.0 | 56.8 | S 60 | 05 52 | 06 27 | 06 58 | 09 21 | 10 29 | 11 33 | 12 29 | | |
| 01 | 195 48.3 | 58.2 | 160 33.3 | 8.2 | 23 52.9 | 5.9 | 56.8 | S 50 | 05 58 | 06 37 | 07 11 | 09 42 | 10 54 | 11 59 | 12 54 | | |
| 02 | 210 48.4 | 58.9 | 175 00.5 | 8.2 | 23 58.8 | 5.7 | 56.9 | S 40 | 06 01 | 06 41 | 07 17 | 09 52 | 11 06 | 12 12 | 13 07 | | |
| 03 | 225 48.5 | 59.6 | 189 27.7 | 8.0 | 24 04.5 | 5.6 | 56.9 | S 30 | 06 03 | 06 45 | 07 24 | 10 03 | 11 20 | 12 27 | 13 21 | | |
| 04 | 240 48.5 | 60.3 | 203 54.7 | 8.0 | 24 10.1 | 5.5 | 56.9 | S 20 | 06 06 | 06 50 | 07 31 | 10 16 | 11 36 | 12 44 | 13 37 | | |
| 05 | 255 48.6 | 61.0 | 218 21.7 | 8.0 | 24 15.6 | 5.4 | 56.9 | S 10 | 06 09 | 06 56 | 07 39 | 10 31 | 11 55 | 13 05 | 13 57 | | |
| 06 | 270 48.6 | N16 01.8 | 232 48.7 | 7.8 | N24 21.0 | 5.2 | 56.9 | S 0 | 06 12 | 07 02 | 07 48 | 10 50 | 12 18 | 13 32 | 14 21 | | |
| 07 | 285 48.7 | 02.5 | 247 15.5 | 7.8 | 24 26.2 | 5.1 | 57.0 | Lat. | Sunset | Twilight | | | Moonset | | | | |
| 08 | 300 48.8 | 03.2 | 261 42.3 | 7.7 | 24 31.3 | 4.9 | 57.0 | Civil | Naut. | 3 | 4 | 5 | 6 | | | | |
| 09 | 315 48.8 | 03.9 | 276 09.0 | 7.6 | 24 36.2 | 4.8 | 57.0 | h m | h m | h m | h m | h m | h m | h m | | | |
| 10 | 330 48.9 | 04.7 | 290 35.6 | 7.6 | 24 41.0 | 4.7 | 57.0 | N 72 | 22 40 | 22 40 | 22 40 | 22 40 | 22 40 | 22 40 | | | |
| 11 | 345 48.9 | 05.4 | 305 02.2 | 7.5 | 24 45.7 | 4.5 | 57.0 | N 70 | 21 47 | 21 47 | 21 47 | 21 47 | 21 47 | 21 47 | | | |
| 12 | 0 49.0 | N16 06.1 | 319 28.7 | 7.4 | N24 50.2 | 4.4 | 57.1 | N 68 | 21 15 | 21 15 | 21 15 | 00 01 | 00 01 | 00 01 | | | |
| 13 | 15 49.0 | 06.8 | 333 55.1 | 7.4 | 24 54.6 | 4.2 | 57.1 | N 66 | 20 51 | 22 25 | 23 57 | 01 52 | 01 52 | 01 52 | | | |
| 14 | 30 49.1 | 07.5 | 348 21.5 | 7.3 | 24 58.8 | 4.1 | 57.1 | N 64 | 20 33 | 21 47 | 23 34 | 00 34 | 00 34 | 02 28 | | | |
| 15 | 45 49.1 | 08.2 | 2 47.8 | 7.2 | 25 02.9 | 4.0 | 57.1 | N 62 | 20 18 | 21 21 | 23 57 | 01 27 | 01 27 | 02 30 | | | |
| 16 | 60 49.2 | 09.0 | 17 14.0 | 7.2 | 25 06.9 | 3.8 | 57.1 | N 60 | 20 06 | 21 01 | 22 35 | 00 53 | 00 53 | 01 55 | | | |
| 17 | 75 49.3 | 09.7 | 31 40.2 | 7.1 | 25 10.7 | 3.6 | 57.2 | N 58 | 19 55 | 20 45 | 22 00 | 00 29 | 00 29 | 01 30 | | | |
| 18 | 90 49.3 | N16 10.4 | 46 06.3 | 7.1 | N25 14.3 | 3.6 | 57.2 | N 56 | 19 46 | 20 32 | 21 36 | 00 09 | 00 09 | 01 10 | | | |
| 19 | 105 49.4 | 11.1 | 60 32.4 | 7.0 | 25 17.9 | 3.3 | 57.2 | N 54 | 19 37 | 20 20 | 21 18 | 00 00 | 00 00 | 01 03 | | | |
| 20 | 120 49.4 | 11.8 | 74 58.4 | 6.9 | 25 21.2 | 3.3 | 57.2 | N 52 | 19 30 | 20 10 | 21 02 | 00 27 | 00 27 | 01 30 | | | |
| 21 | 135 49.5 | 12.5 | 89 24.3 | 6.9 | 25 24.5 | 3.0 | 57.3 | N 50 | 19 23 | 20 01 | 20 49 | 00 26 | 00 26 | 01 30 | | | |
| 22 | 150 49.5 | 13.3 | 103 50.2 | 6.8 | 25 27.5 | 3.0 | 57.3 | N 48 | 19 09 | 19 42 | 20 23 | 00 25 | 00 25 | 01 30 | | | |
| 23 | 165 49.6 | 14.0 | 118 16.0 | 6.8 | 25 30.5 | 2.7 | 57.3 | N 40 | 18 58 | 19 27 | 20 04 | 00 25 | 00 25 | 01 30 | | | |
| 5 00 | 180 49.6 | N16 14.7 | 132 41.8 | 6.7 | N25 33.2 | 2.7 | 57.3 | S 35 | 18 48 | 19 15 | 19 48 | 00 20 | 00 20 | 01 30 | | | |
| 01 | 195 49.7 | 15.4 | 147 07.5 | 6.7 | 25 35.9 | 2.5 | 57.3 | S 30 | 18 39 | 19 05 | 19 35 | 00 17 | 00 17 | 01 30 | | | |
| 02 | 210 49.7 | 16.1 | 161 33.2 | 6.6 | 25 38.4 | 2.3 | 57.4 | S 20 | 18 25 | 18 48 | 19 15 | 00 14 | 00 14 | 01 30 | | | |
| 03 | 225 49.8 | 16.8 | 175 58.8 | 6.6 | 25 40.7 | 2.1 | 57.4 | N 10 | 18 12 | 18 34 | 19 00 | 00 25 | 00 25 | 01 30 | | | |
| 04 | 240 49.8 | 17.5 | 190 24.4 | 6.5 | 25 42.8 | 2.1 | 57.4 | N 0 | 18 00 | 18 22 | 18 47 | 00 27 | 00 27 | 01 30 | | | |
| 05 | 255 49.9 | 18.3 | 204 49.9 | 6.5 | 25 44.9 | 1.8 | 57.4 | S 10 | 17 49 | 18 10 | 18 36 | 00 25 | 00 25 | 01 30 | | | |
| 06 | 270 50.0 | N16 19.0 | 219 15.4 | 6.5 | N25 46.7 | 1.7 | 57.4 | S 20 | 17 36 | 17 59 | 18 25 | 00 24 | 00 24 | 01 30 | | | |
| 07 | 285 50.0 | 19.7 | 233 40.9 | 6.4 | 25 48.4 | 1.6 | 57.5 | S 30 | 17 22 | 17 47 | 18 16 | 00 23 | 00 23 | 01 30 | | | |
| 08 | 300 50.1 | 20.4 | 248 06.3 | 6.3 | 25 50.0 | 1.4 | 57.5 | S 40 | 17 14 | 17 41 | 18 11 | 00 23 | 00 23 | 01 30 | | | |
| 09 | 315 50.1 | 21.1 | 262 31.6 | 6.4 | 25 51.4 | 1.2 | 57.5 | S 50 | 17 05 | 17 33 | 18 06 | 00 23 | 00 23 | 01 30 | | | |
| 10 | 330 50.2 | 21.8 | 276 57.0 | 6.2 | 25 52.6 | 1.1 | 57.5 | S 60 | 16 54 | 17 25 | 18 00 | 00 23 | 00 23 | 01 30 | | | |
| 11 | 345 50.2 | 22.5 | 291 22.2 | 6.3 | 25 53.7 | 1.0 | 57.5 | S 50 | 16 42 | 17 16 | 17 55 | 00 23 | 00 23 | 01 30 | | | |
| 12 | 0 50.3 | N16 23.2 | 305 47.5 | 6.2 | N25 54.7 | 0.7 | 57.6 | S 40 | 16 36 | 17 12 | 17 52 | 00 23 | 00 23 | 01 30 | | | |
| 13 | 15 50.3 | 23.9 | 320 12.7 | 6.2 | 25 55.4 | 0.6 | 57.6 | S 30 | 16 29 | 17 07 | 17 50 | 00 23 | 00 23 | 01 30 | | | |
| 14 | 30 50.4 | 24.6 | 334 37.9 | 6.2 | 25 56.0 | 0.5 | 57.6 | S 20 | 16 22 | 17 02 | 17 47 | 00 23 | 00 23 | 01 30 | | | |
| 15 | 45 50.4 | 25.3 | 349 03.1 | 6.1 | 25 56.5 | 0.3 | 57.6 | S 10 | 16 14 | 16 57 | 17 44 | 00 23 | 00 23 | 01 30 | | | |
| 16 | 60 50.5 | 26.0 | 3 28.2 | 6.1 | 25 56.8 | 0.1 | 57.7 | S 0 | 16 04 | 16 51 | 17 41 | 00 23 | 00 23 | 01 30 | | | |
| 17 | 75 50.5 | 26.8 | 17 53.3 | 6.1 | 25 56.9 | 0.0 | 57.7 | Day | Eqn. of Time | Mer. Pass. | | | MOON | | | | |
| 18 | 90 50.6 | N16 27.5 | 32 18.4 | 6.0 | N25 56.9 | 0.2 | 57.7 | 00 ^h | 12 ^h | Mer. Pass. | Upper | Lower | Age | Phase | | | |
| 19 | 105 50.6 | 28.2 | 46 43.4 | 6.0 | 25 56.7 | 0.3 | 57.7 | m s | m s | h m | h m | h m | d | | | | |
| 20 | 120 50.7 | 28.9 | 61 08.4 | 6.0 | 25 56.4 | 0.5 | 57.7 | 3 | 03 07 | 03 10 | 11 57 | 13 54 | 01 28 | 02 | | | |
| 21 | 135 50.7 | 29.6 | 75 33.4 | 6.0 | 25 55.9 | 0.7 | 57.8 | 4 | 03 13 | 03 16 | 11 5 | | | | | | |

1984 AUGUST 7, 8, 9 (TUES., WED., THURS.)

| G.M.T. | ARIES | | VENUS -3.3 | | MARS -0.2 | | JUPITER -2.1 | | SATURN +0.8 | | STARS | | |
|------------|----------|--------------|------------|--------------|-----------|--------------|--------------|--------------|-------------|-------------|--------------|-----------|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | |
| 7 00 | 315 41.8 | 164 02.7 N13 | 12.4 | 84 05.0 S21 | 11.4 | 41 24.0 S23 | 24.5 | 97 10.6 S12 | 42.2 | Acomar | 315 35.0 S40 | 21.7 | |
| 01 | 330 44.3 | 179 02.2 | 11.3 | 99 06.2 | 11.7 | 56 26.7 | 24.5 | 112 13.0 | 42.2 | Achernar | 335 42.7 S57 | 18.6 | |
| 02 | 345 46.8 | 194 01.7 | 10.2 | 114 07.5 | 12.0 | 71 29.3 | 24.5 | 127 15.4 | 42.3 | Acrux | 173 34.7 S63 | 00.9 | |
| 03 | 0 49.2 | 209 01.2 | 09.1 | 129 08.7 | 12.3 | 86 32.0 | 24.5 | 142 17.7 | 42.3 | Adhara | 255 30.2 S28 | 56.8 | |
| 04 | 15 51.7 | 224 00.7 | 08.1 | 144 09.9 | 12.6 | 101 34.6 | 24.5 | 157 20.1 | 42.4 | Aldebaran | 291 14.9 N16 | 28.8 | |
| 05 | 30 54.1 | 239 00.2 | 07.0 | 159 11.2 | 12.9 | 116 37.3 | 24.5 | 172 22.5 | 42.4 | | | | |
| 06 | 45 56.6 | 253 59.7 N13 | 05.9 | 174 12.4 S21 | 13.2 | 131 39.9 S23 | 24.6 | 187 24.9 S12 | 42.4 | Alioth | 166 40.1 N56 | 03.0 | |
| 07 | 60 59.1 | 268 59.3 | 04.8 | 189 13.7 | 13.5 | 146 42.6 | 24.6 | 202 27.2 | 42.5 | Alkaid | 153 16.2 N49 | 23.7 | |
| 08 | 76 01.5 | 283 58.8 | 03.7 | 204 14.9 | 13.8 | 161 45.2 | 24.6 | 217 29.6 | 42.5 | Al Na'ir | 28 10.7 S47 | 02.1 | |
| 09 | 91 04.0 | 298 58.3 | 02.7 | 219 16.2 | 14.1 | 176 47.9 | 24.6 | 232 32.0 | 42.6 | Alnilam | 276 09.0 S 1 | 12.5 | |
| 10 | 106 06.5 | 313 57.8 | 01.6 | 234 17.4 | 14.4 | 191 50.5 | 24.6 | 247 34.3 | 42.6 | Alphard | 218 18.1 S 8 | 35.3 | |
| 11 | 121 08.9 | 328 57.3 | 13 00.5 | 249 18.6 | 14.7 | 206 53.2 | 24.6 | 262 36.7 | 42.6 | | | | |
| 12 | 136 11.4 | 343 56.8 N12 | 59.4 | 264 19.9 S21 | 15.0 | 221 55.8 S23 | 24.6 | 277 39.1 S12 | 42.7 | Alphecca | 126 29.6 N26 | 46.2 | |
| 13 | 151 13.9 | 358 56.3 | 58.3 | 279 21.1 | 15.3 | 236 58.5 | 24.6 | 292 41.4 | 42.7 | Alpheratz | 358 06.2 N29 | 00.2 | |
| 14 | 166 16.3 | 13 55.8 | 57.3 | 294 22.4 | 15.6 | 252 01.1 | 24.6 | 307 43.8 | 42.8 | Altair | 62 29.4 N 8 | 49.6 | |
| 15 | 181 18.8 | 28 55.3 | 56.2 | 309 23.6 | 15.9 | 267 03.8 | 24.7 | 322 46.2 | 42.8 | Ankaa | 353 37.0 S42 | 23.2 | |
| 16 | 196 21.3 | 43 54.8 | 55.1 | 324 24.8 | 16.2 | 282 06.4 | 24.7 | 337 48.5 | 42.9 | Antares | 112 53.2 S26 | 24.0 | |
| 17 | 211 23.7 | 58 54.4 | 54.0 | 339 26.1 | 16.5 | 297 09.1 | 24.7 | 352 50.9 | 42.9 | | | | |
| 18 | 226 26.2 | 73 53.9 N12 | 52.9 | 354 27.3 S21 | 16.8 | 312 11.7 S23 | 24.7 | 7 53.3 S12 | 42.9 | Arcturus | 146 15.9 N19 | 16.0 | |
| 19 | 241 28.6 | 88 53.4 | 51.8 | 9 28.5 | 17.1 | 327 14.4 | 24.7 | 22 55.7 | 43.0 | Atria | 108 14.7 S69 | 00.3 | |
| 20 | 256 31.1 | 103 52.9 | 50.7 | 24 29.8 | 17.4 | 342 17.0 | 24.7 | 37 58.0 | 43.0 | Avior | 234 27.8 S59 | 27.4 | |
| 21 | 271 33.6 | 118 52.4 | 49.7 | 39 31.0 | 17.7 | 357 19.7 | 24.7 | 53 00.4 | 43.1 | Bellatrix | 278 55.9 N 6 | 20.3 | |
| 22 | 286 36.0 | 133 51.9 | 48.6 | 54 32.2 | 18.0 | 12 22.3 | 24.7 | 68 02.8 | 43.1 | Betelgeuse | 271 25.4 N 7 | 24.4 | |
| 23 | 301 38.5 | 148 51.4 | 47.5 | 69 33.5 | 18.3 | 27 24.9 | 24.7 | 83 05.1 | 43.1 | | | | |
| 8 00 | 316 41.0 | 163 51.0 N12 | 46.4 | 84 34.7 S21 | 18.6 | 42 27.6 S23 | 24.7 | 98 07.5 S12 | 43.2 | Canopus | 264 06.4 S52 | 40.9 | |
| 01 | 331 43.4 | 178 50.5 | 45.3 | 99 35.9 | 18.9 | 57 30.2 | 24.8 | 113 09.9 | 43.2 | Capella | 281 07.4 N45 | 58.9 | |
| 02 | 346 45.9 | 193 50.0 | 44.2 | 114 37.1 | 19.2 | 72 32.9 | 24.8 | 128 12.2 | 43.3 | Deneb | 49 46.1 N45 | 13.5 | |
| 03 | 1 48.4 | 208 49.5 | 43.1 | 129 38.4 | 19.5 | 87 35.5 | 24.8 | 143 14.6 | 43.3 | Denebola | 182 56.3 N14 | 39.7 | |
| 04 | 16 50.8 | 223 49.0 | 42.0 | 144 39.6 | 19.8 | 102 38.2 | 24.8 | 158 17.0 | 43.4 | Diphda | 349 17.8 S18 | 04.2 | |
| 05 | 31 53.3 | 238 48.5 | 40.9 | 159 40.8 | 20.1 | 117 40.8 | 24.8 | 173 19.3 | 43.4 | | | | |
| 06 | 46 55.8 | 253 48.1 N12 | 39.8 | 174 42.1 S21 | 20.4 | 132 43.5 S23 | 24.8 | 188 21.7 S12 | 43.4 | Dubhe | 194 18.9 N61 | 50.4 | |
| 07 | 61 58.2 | 268 47.6 | 38.7 | 189 43.3 | 20.7 | 147 46.1 | 24.8 | 203 24.1 | 43.5 | Elnath | 278 40.7 N28 | 35.7 | |
| 08 | 77 00.7 | 283 47.1 | 37.7 | 204 44.5 | 21.0 | 162 48.7 | 24.8 | 218 26.4 | 43.5 | Eltanin | 90 56.0 N51 | 29.6 | |
| 09 | 92 03.1 | 298 46.6 | 36.6 | 219 45.7 | 21.3 | 177 51.4 | 24.8 | 233 28.8 | 43.6 | Enif | 34 08.5 N 9 | 48.2 | |
| 10 | 107 05.6 | 313 46.1 | 35.5 | 234 46.9 | 21.6 | 192 54.0 | 24.8 | 248 31.2 | 43.6 | Fomalhaut | 15 47.8 S29 | 42.2 | |
| 11 | 122 08.1 | 328 45.7 | 34.4 | 249 48.2 | 21.9 | 207 56.7 | 24.9 | 263 33.5 | 43.7 | | | | |
| 12 | 137 10.5 | 343 45.2 N12 | 33.3 | 264 49.4 S21 | 22.2 | 222 59.3 S23 | 24.9 | 278 35.9 S12 | 43.7 | Gacrux | 172 26.1 S57 | 01.7 | |
| 13 | 152 13.0 | 358 44.7 | 32.2 | 279 50.6 | 22.4 | 238 02.0 | 24.9 | 293 38.3 | 43.7 | Gienah | 176 15.3 S17 | 27.3 | |
| 14 | 167 15.5 | 13 44.2 | 31.1 | 294 51.8 | 22.7 | 253 04.6 | 24.9 | 308 40.6 | 43.8 | Hadar | 149 19.6 S60 | 18.1 | |
| 15 | 182 17.9 | 28 43.7 | 30.0 | 309 53.1 | 23.0 | 268 07.2 | 24.9 | 323 43.0 | 43.8 | Hamal | 328 25.7 N23 | 23.3 | |
| 16 | 197 20.4 | 43 43.3 | 28.9 | 324 54.3 | 23.3 | 283 09.9 | 24.9 | 338 45.4 | 43.9 | Kaus Aust. | 84 12.7 S34 | 23.7 | |
| 17 | 212 22.9 | 58 42.8 | 27.8 | 339 55.5 | 23.6 | 298 12.5 | 24.9 | 353 47.7 | 43.9 | | | | |
| 18 | 227 25.3 | 73 42.3 N12 | 26.7 | 354 56.7 S21 | 23.9 | 313 15.2 S23 | 24.9 | 8 50.1 S12 | 44.0 | Kochab | 137 18.8 N74 | 13.5 | |
| 19 | 242 27.8 | 88 41.8 | 25.6 | 9 57.9 | 24.2 | 328 17.8 | 24.9 | 23 52.4 | 44.0 | Markab | 14 00.1 N15 | 07.3 | |
| 20 | 257 30.2 | 103 41.4 | 24.5 | 24 59.1 | 24.5 | 343 20.4 | 25.0 | 38 54.8 | 44.0 | Menkar | 314 38.1 N 4 | 01.9 | |
| 21 | 272 32.7 | 118 40.9 | 23.4 | 40 00.4 | 24.8 | 358 23.1 | 25.0 | 53 57.2 | 44.1 | Nenkent | 148 33.8 S36 | 17.8 | |
| 22 | 287 35.2 | 133 40.4 | 22.3 | 55 01.6 | 25.1 | 13 25.7 | 25.0 | 68 59.5 | 44.1 | Miaplacidus | 221 45.6 S69 | 39.1 | |
| 23 | 302 37.6 | 148 39.9 | 21.2 | 70 02.8 | 25.4 | 28 28.4 | 25.0 | 84 01.9 | 44.2 | | | | |
| 9 00 | 317 40.1 | 163 39.5 N12 | 20.1 | 85 04.0 S21 | 25.7 | 43 31.0 S23 | 25.0 | 99 04.3 S12 | 44.2 | Mirfak | 309 12.2 N49 | 48.3 | |
| 01 | 332 42.6 | 178 39.0 | 19.0 | 100 05.2 | 26.0 | 58 33.6 | 25.0 | 114 06.6 | 44.3 | Nunki | 76 25.3 S26 | 19.1 | |
| 02 | 347 45.0 | 193 38.5 | 17.9 | 115 06.4 | 26.3 | 73 36.3 | 25.0 | 129 09.0 | 44.3 | Peacock | 53 53.1 S56 | 47.2 | |
| 03 | 2 47.5 | 208 38.0 | 16.8 | 130 07.6 | 26.6 | 88 38.9 | 25.0 | 144 11.4 | 44.3 | Pollux | 243 55.0 N28 | 04.0 | |
| 04 | 17 50.0 | 223 37.6 | 15.6 | 145 08.8 | 26.9 | 103 41.5 | 25.0 | 159 13.7 | 44.4 | Procyon | 245 23.1 N 5 | 16.1 | |
| 05 | 32 52.4 | 238 37.1 | 14.5 | 160 10.0 | 27.2 | 118 44.2 | 25.0 | 174 16.1 | 44.4 | | | | |
| 06 | 47 54.9 | 253 36.6 N12 | 13.4 | 175 11.3 S21 | 27.5 | 133 46.8 S23 | 25.1 | 189 18.4 S12 | 44.5 | Rasalhague | 96 26.7 N12 | 34.3 | |
| 07 | 62 57.4 | 268 36.2 | 12.3 | 190 12.5 | 27.8 | 148 49.5 | 25.1 | 204 20.8 | 44.5 | Regulus | 208 07.2 N12 | 02.8 | |
| 08 | 77 59.8 | 283 35.7 | 11.2 | 205 13.7 | 28.1 | 163 52.1 | 25.1 | 219 23.2 | 44.6 | Rigel | 281 33.4 S 8 | 12.9 | |
| 09 | 93 02.3 | 298 35.2 | 10.1 | 220 14.9 | 28.4 | 178 54.7 | 25.1 | 234 25.5 | 44.6 | Rigel Kent. | 140 22.2 S60 | 46.5 | |
| 10 | 108 04.7 | 313 34.7 | 09.0 | 235 16.1 | 28.7 | 193 57.4 | 25.1 | 249 27.9 | 44.6 | Sabik | 102 37.7 S15 | 42.4 | |
| 11 | 123 07.2 | 328 34.3 | 07.9 | 250 17.3 | 29.0 | 209 00.0 | 25.1 | 264 30.3 | 44.7 | | | | |
| 12 | 138 09.7 | 343 33.8 N12 | 06.8 | 265 18.5 S21 | 29.3 | 224 02.6 S23 | 25.1 | 279 32.6 S12 | 44.7 | Schedar | 350 05.6 N56 | 26.9 | |
| 13 | 153 12.1 | 358 33.3 | 05.7 | 280 19.7 | 29.6 | 239 05.3 | 25.1 | 294 35.0 | 44.8 | Shaula | 96 51.6 S37 | 05.7 | |
| 14 | 168 14.6 | 13 32.9 | 04.6 | 295 20.9 | 29.9 | 254 07.9 | 25.1 | 309 37.3 | 44.8 | Sirius | 258 53.5 S16 | 41.5 | |
| A 15 | 183 17.1 | 28 32.4 | 03.4 | 310 22.1 | 30.2 | 269 10.5 | 25.1 | 324 39.7 | 44.9 | Spica | 158 54.7 S11 | 04.8 | |
| 16 | 198 19.5 | 43 31.9 | 02.3 | 325 23.3 | 30.5 | 284 13.2 | 25.2 | 339 42.1 | 44.9 | Suhail | 223 09.2 S43 | 22.0 | |
| 17 | 213 22.0 | 58 31.5 | 01.2 | 340 24.5 | 30.8 | 299 15.8 | 25.2 | 354 44.4 | 44.9 | | | | |
| 18 | 228 24.5 | 73 31.0 N12 | 00.1 | 355 25.7 S21 | 31.1 | 314 18.4 S23 | 25.2 | 9 46.8 S12 | 45.0 | Vega | 80 53.6 N38 | 46.2 | |
| 19 | 243 26.9 | 88 30.5 | 11 59.0 | 10 26.9 | 31.4 | 329 21.1 | 25.2 | 24 49.2 | 45.0 | Zuben'ubi | 137 29.9 S15 | 58.7 | |
| 20 | 258 29.4 | 103 30.1 | 57.9 | 25 28.1 | 31.7 | 344 23.7 | 25.2 | 39 51.5 | 45.1 | | | | |
| 21 | 273 31.9 | 118 29.6 | 56.8 | 40 29.3 | 32.0 | 359 26.3 | 25.2 | 54 53.9 | 45.1 | | S.H.A. | Mer Pass. | |
| 22 | 288 34.3 | 133 29.1 | 55.7 | 55 30.5 | 32.3 | 14 29.0 | 25.2 | 69 56.2 | 45.2 | Venus | 207 10.0 | 13 05 | |
| 23 | 303 36.8 | 148 28.7 | 54.5 | 70 31.7 | 32.6 | 29 31.6 | 25.2 | 84 58.6 | 45.2 | Mars | 127 53.7 | 18 20 | |
| | | | | | | | | | | Jupiter | 85 46.6 | 21 06 | |
| | | | | | | | | | | Saturn | 141 26.5 | 17 25 | |
| Mer. Pass. | 2 52.8 | v -0.5 | d 1.1 | v 1.2 | d 0.3 | v 2.6 | d 0.0 | v 2.4 | d 0.0 | | | | |



1984 AUGUST 7, 8, 9 (TUES., WED., THURS.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | | | | |
|-----------|--------|------|------|------|---------|------|------|------|------|----------|-------|---------|----------|--------|----------|-------|---------|-------|-------|-------|
| | G.H.A. | | Dec. | | G.H.A. | | V | | | Naut. | Civil | | 7 | 8 | 9 | 10 | | | | |
| | d | h | d | h | d | h | d | H.P. | | | | | | | | | | | | |
| TUESDAY | 7 00 | 178 | 33.8 | N16 | 26.1 | 56 | 00.6 | 8.1 | S24 | 32.8 | 4.9 | 56.8 | N 72 | //// | //// | 01 26 | | | | |
| | 01 | 193 | 33.9 | | 25.4 | 70 | 27.7 | 8.0 | 24 | 37.7 | 4.9 | 56.8 | N 70 | //// | //// | 02 18 | | | | |
| | 02 | 208 | 34.0 | | 24.7 | 84 | 54.7 | 8.0 | 24 | 42.6 | 4.7 | 56.8 | 68 | //// | //// | 02 49 | | | | |
| | 03 | 223 | 34.0 | | 24.0 | 99 | 21.7 | 7.9 | 24 | 47.3 | 4.6 | 56.8 | 66 | //// | 01 39 | 03 12 | | | | 22 04 |
| | 04 | 238 | 34.1 | | 23.3 | 113 | 48.6 | 8.0 | 24 | 51.9 | 4.4 | 56.7 | 64 | //// | 02 17 | 03 30 | 20 39 | 21 50 | 21 31 | 21 25 |
| | 05 | 253 | 34.2 | | 22.6 | 128 | 15.6 | 7.9 | 24 | 56.3 | 4.3 | 56.7 | 62 | //// | 02 42 | 03 45 | 19 21 | 20 20 | 20 47 | 20 58 |
| | 06 | 268 | 34.3 | N16 | 21.9 | 142 | 42.5 | 8.0 | S25 | 00.6 | 4.1 | 56.7 | 60 | 01 29 | 03 02 | 03 57 | 18 45 | 19 44 | 20 18 | 20 37 |
| | 07 | 283 | 34.3 | | 21.2 | 157 | 09.5 | 7.9 | 25 | 04.7 | 4.0 | 56.7 | N 58 | 02 03 | 03 18 | 04 08 | 18 19 | 19 17 | 19 56 | 20 20 |
| | 08 | 298 | 34.4 | | 20.5 | 171 | 36.4 | 7.9 | 25 | 08.7 | 3.8 | 56.6 | 56 | 02 27 | 03 32 | 04 17 | 17 59 | 18 56 | 19 37 | 20 05 |
| | 09 | 313 | 34.5 | | 19.8 | 186 | 03.3 | 7.9 | 25 | 12.5 | 3.7 | 56.6 | 54 | 02 46 | 03 43 | 04 25 | 17 42 | 18 39 | 19 22 | 19 52 |
| | 10 | 328 | 34.6 | | 19.1 | 200 | 30.2 | 7.9 | 25 | 16.2 | 3.6 | 56.6 | 52 | 03 01 | 03 53 | 04 33 | 17 27 | 18 25 | 19 08 | 19 41 |
| | 11 | 343 | 34.7 | | 18.4 | 214 | 57.1 | 7.8 | 25 | 19.8 | 3.4 | 56.6 | 50 | 03 14 | 04 02 | 04 39 | 17 15 | 18 12 | 18 57 | 19 31 |
| | 12 | 358 | 34.7 | N16 | 17.7 | 229 | 23.9 | 7.9 | S25 | 23.2 | 3.3 | 56.5 | 45 | 02 40 | 04 21 | 04 53 | 16 49 | 17 45 | 18 32 | 19 10 |
| | 13 | 13 | 34.8 | | 17.0 | 243 | 50.8 | 7.9 | 25 | 26.5 | 3.1 | 56.5 | N 40 | 03 59 | 04 35 | 05 05 | 16 28 | 17 24 | 18 13 | 18 53 |
| | 14 | 28 | 34.9 | | 16.3 | 258 | 17.7 | 7.8 | 25 | 29.6 | 2.9 | 56.5 | 35 | 04 14 | 04 47 | 05 15 | 16 11 | 17 07 | 17 56 | 18 39 |
| | 15 | 43 | 35.0 | | 15.6 | 272 | 44.5 | 7.9 | 25 | 32.5 | 2.9 | 56.5 | 30 | 04 27 | 04 58 | 05 23 | 15 56 | 16 52 | 17 42 | 18 26 |
| | 16 | 58 | 35.1 | | 14.9 | 287 | 11.4 | 7.8 | 25 | 35.4 | 2.6 | 56.5 | 20 | 04 47 | 05 15 | 05 38 | 15 31 | 16 26 | 17 18 | 18 05 |
| | 17 | 73 | 35.1 | | 14.2 | 301 | 38.2 | 7.9 | 25 | 38.0 | 2.6 | 56.4 | N 10 | 05 03 | 05 28 | 05 50 | 15 09 | 16 04 | 16 57 | 17 46 |
| | 18 | 88 | 35.2 | N16 | 13.5 | 316 | 05.1 | 7.8 | S25 | 40.6 | 2.4 | 56.4 | 0 | 05 16 | 05 41 | 06 02 | 14 49 | 15 44 | 16 38 | 17 29 |
| | 19 | 103 | 35.3 | | 12.8 | 330 | 31.9 | 7.9 | 25 | 43.0 | 2.2 | 56.4 | S 10 | 05 27 | 05 52 | 06 14 | 14 29 | 15 24 | 16 18 | 17 11 |
| | 20 | 118 | 35.4 | | 12.1 | 344 | 58.8 | 7.9 | 25 | 45.2 | 2.1 | 56.4 | 20 | 05 37 | 06 03 | 06 26 | 14 08 | 15 02 | 15 57 | 16 52 |
| | 21 | 133 | 35.5 | | 11.4 | 359 | 25.7 | 7.8 | 25 | 47.3 | 2.0 | 56.3 | 30 | 05 46 | 06 15 | 06 40 | 13 43 | 14 36 | 15 33 | 16 31 |
| | 22 | 148 | 35.5 | | 10.7 | 373 | 52.5 | 7.9 | 25 | 49.3 | 1.8 | 56.3 | 35 | 05 51 | 06 21 | 06 48 | 13 28 | 14 21 | 15 18 | 16 18 |
| 23 | 163 | 35.6 | | 09.9 | 388 | 19.4 | 7.9 | 25 | 51.1 | 1.6 | 56.3 | 40 | 05 56 | 06 29 | 06 57 | 13 12 | 14 04 | 15 02 | 16 03 | |
| 24 | 178 | 35.7 | N16 | 09.2 | 402 | 46.3 | 7.9 | S25 | 52.7 | 1.5 | 56.3 | 45 | 06 02 | 06 36 | 07 07 | 12 52 | 13 43 | 14 42 | 15 46 | |
| WEDNESDAY | 01 | 193 | 35.8 | | 08.5 | 57 | 13.2 | 7.9 | 25 | 54.2 | 1.4 | 56.3 | S 50 | 06 07 | 06 46 | 07 20 | 12 26 | 13 17 | 14 17 | 15 24 |
| | 02 | 208 | 35.9 | | 07.8 | 71 | 40.1 | 7.9 | 25 | 55.6 | 1.2 | 56.2 | 52 | 06 10 | 06 50 | 07 26 | 12 14 | 13 04 | 14 05 | 15 13 |
| | 03 | 223 | 35.9 | | 07.1 | 86 | 07.0 | 7.9 | 25 | 56.8 | 1.1 | 56.2 | 54 | 06 12 | 06 54 | 07 33 | 12 00 | 12 49 | 13 51 | 15 02 |
| | 04 | 238 | 36.0 | | 06.4 | 100 | 33.9 | 8.0 | 25 | 57.9 | 0.9 | 56.2 | 56 | 06 15 | 06 59 | 07 40 | 11 44 | 12 32 | 13 35 | 14 48 |
| | 05 | 253 | 36.1 | | 05.7 | 115 | 00.9 | 7.9 | 25 | 58.8 | 0.8 | 56.2 | 58 | 06 18 | 07 05 | 07 48 | 11 25 | 12 12 | 13 16 | 14 32 |
| | 06 | 268 | 36.2 | N16 | 05.0 | 129 | 27.8 | 8.0 | S25 | 59.6 | 0.6 | 56.1 | S 60 | 06 21 | 07 11 | 07 57 | 11 02 | 11 46 | 12 52 | 14 13 |
| | 07 | 283 | 36.3 | | 04.3 | 143 | 54.8 | 8.0 | 26 | 00.2 | 0.5 | 56.1 | | | | | | | | |
| | 08 | 298 | 36.4 | | 03.5 | 158 | 21.8 | 8.0 | 26 | 00.7 | 0.4 | 56.1 | Lat. | Sunset | Twilight | | Moonset | | | |
| | 09 | 313 | 36.4 | | 02.8 | 172 | 48.8 | 8.1 | 26 | 01.1 | 0.2 | 56.1 | Civil | Naut. | 7 | 8 | 9 | 10 | | |
| | 10 | 328 | 36.5 | | 02.1 | 187 | 15.9 | 8.0 | 26 | 01.3 | 0.0 | 56.1 | | | | | | | | |
| | 11 | 343 | 36.6 | | 01.4 | 201 | 42.9 | 8.1 | 26 | 01.3 | 0.0 | 56.0 | N 72 | 22 36 | //// | //// | h m | h m | h m | h m |
| | 12 | 358 | 36.7 | N16 | 00.7 | 216 | 10.0 | 8.1 | S26 | 01.3 | 0.3 | 56.0 | N 70 | 21 48 | //// | //// | h m | h m | h m | h m |
| | 13 | 13 | 36.8 | | 00.0 | 230 | 37.1 | 8.1 | 26 | 01.0 | 0.3 | 56.0 | 68 | 21 18 | 23 40 | //// | h m | h m | h m | h m |
| | 14 | 28 | 36.9 | | 15 59.3 | 245 | 04.2 | 8.2 | 26 | 00.7 | 0.6 | 56.0 | 66 | 20 56 | 22 26 | //// | h m | h m | h m | h m |
| | 15 | 43 | 37.0 | | 58.5 | 259 | 31.4 | 8.2 | 26 | 00.1 | 0.6 | 56.0 | 64 | 20 38 | 21 51 | //// | h m | h m | h m | h m |
| | 16 | 58 | 37.0 | | 57.8 | 273 | 58.6 | 8.2 | 25 | 59.5 | 0.8 | 55.9 | 62 | 20 24 | 21 26 | 23 43 | 21 23 | 22 06 | 24 16 | 00 16 |
| | 17 | 73 | 37.1 | | 57.1 | 288 | 25.8 | 8.3 | 25 | 58.7 | 1.0 | 55.9 | 60 | 20 12 | 21 07 | 22 36 | 22 41 | 23 36 | 24 59 | 00 59 |
| | 18 | 88 | 37.2 | N15 | 56.4 | 302 | 53.1 | 8.3 | S25 | 57.7 | 1.0 | 55.9 | N 58 | 20 02 | 20 51 | 22 04 | 23 43 | 24 39 | 00 39 | 01 50 |
| | 19 | 103 | 37.3 | | 55.7 | 317 | 20.4 | 8.3 | 25 | 56.7 | 1.3 | 55.9 | 56 | 19 52 | 20 38 | 21 41 | 24 04 | 00 04 | 00 59 | 02 08 |
| | 20 | 118 | 37.4 | | 55.0 | 331 | 47.7 | 8.3 | 25 | 55.4 | 1.3 | 55.9 | 54 | 19 44 | 20 27 | 21 23 | 24 21 | 00 21 | 01 17 | 02 23 |
| | 21 | 133 | 37.5 | | 54.2 | 346 | 15.0 | 8.4 | 25 | 54.1 | 1.5 | 55.8 | 52 | 19 37 | 20 17 | 21 08 | 24 35 | 00 35 | 01 31 | 02 37 |
| | 22 | 148 | 37.6 | | 53.5 | 360 | 42.4 | 8.5 | 25 | 52.6 | 1.7 | 55.8 | 50 | 19 31 | 20 08 | 20 56 | 00 03 | 00 48 | 01 44 | 02 48 |
| | 23 | 163 | 37.6 | | 52.8 | 375 | 09.9 | 8.4 | 25 | 50.9 | 1.8 | 55.8 | 45 | 19 17 | 19 50 | 20 30 | 00 27 | 01 15 | 02 10 | 03 12 |
| THURSDAY | 00 | 178 | 37.7 | N15 | 52.1 | 29 | 37.3 | 8.6 | S25 | 49.1 | 1.9 | 55.8 | N 40 | 19 06 | 19 35 | 20 11 | 00 46 | 01 35 | 02 31 | 03 31 |
| | 01 | 193 | 37.8 | | 51.4 | 44 | 04.9 | 8.5 | 25 | 47.2 | 2.1 | 55.8 | 35 | 18 56 | 19 23 | 19 56 | 01 03 | 01 53 | 02 48 | 03 47 |
| | 02 | 208 | 37.9 | | 50.6 | 58 | 32.4 | 8.6 | 25 | 45.1 | 2.2 | 55.7 | 30 | 18 48 | 19 13 | 19 43 | 01 17 | 02 08 | 03 03 | 04 01 |
| | 03 | 223 | 38.0 | | 49.9 | 73 | 00.0 | 8.7 | 25 | 42.9 | 2.3 | 55.7 | 20 | 18 33 | 18 56 | 19 24 | 01 41 | 02 33 | 03 28 | 04 24 |
| | 04 | 238 | 38.1 | | 49.2 | 87 | 27.7 | 8.7 | 25 | 40.6 | 2.5 | 55.7 | N 10 | 18 21 | 18 43 | 19 08 | 02 01 | 02 55 | 03 50 | 04 44 |
| | 05 | 253 | 38.2 | | 48.5 | 101 | 55.4 | 8.7 | 25 | 38.1 | 2.6 | 55.7 | 0 | 18 09 | 18 30 | 18 55 | 02 21 | 03 16 | 04 10 | 05 03 |
| | 06 | 268 | 38.3 | N15 | 47.7 | 116 | 23.1 | 8.8 | S25 | 35.5 | 2.7 | 55.7 | S 10 | 17 57 | 18 19 | 18 44 | 02 40 | 03 36 | 04 30 | 05 21 |
| | 07 | 283 | 38.4 | | 47.0 | 130 | 50.9 | 8.8 | 25 | 32.8 | 2.9 | 55.6 | 20 | 17 45 | 18 08 | 18 35 | 03 01 | 03 58 | 04 52 | 05 41 |
| | 08 | 298 | 38.4 | | 46.3 | 145 | 18.7 | 8.9 | 25 | 29.9 | 3.0 | 55.6 | 30 | 17 32 | 17 56 | 18 25 | 03 25 | 04 23 | 05 17 | 06 04 |
| | 09 | 313 | 38.5 | | 45.6 | 159 | 46.6 | 8.9 | 25 | 26.9 | 3.1 | 55.6 | 35 | 17 24 | 17 50 | 18 20 | 03 39 | 04 38 | 05 31 | 06 17 |
| | 10 | 328 | 38.6 | | 44.9 | 174 | 14.5 | 9.0 | 25 | 23.8 | 3.3 | 55.6 | 40 | 17 15 | 17 43 | 18 15 | 03 55 | 04 56 | 05 48 | 06 33 |
| | 11 | 343 | 38.7 | | 44.1 | 188 | 42.5 | 9.1 | 25 | 20.5 | 3.4 | 55.6 | 45 | 17 04 | 17 35 | 18 10 | 04 15 | 05 16 | 06 08 | 06 51 |
| | 12 | 358 | 38.8 | N15 | 43.4 | 203 | 10.6 | 9.1 | S25 | 17.1 | 3.6 | 55.5 | S 50 | 16 52 | 17 26 | 18 05 | 04 40 | 05 43 | 06 34 | 07 13 |
| | 13 | 13 | 38.9 | | 42.7 | 217 | 38.7 | 9.1 | 25 | 13.5 | 3.6 | 55.5 | 52 | 16 46 | 17 22 | 18 02 | 04 | | | |

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| G.M.T. d h | ARIES | | | VENUS -3.3 | | | MARS -0.1 | | | JUPITER -2.1 | | | SATURN +0.8 | | | STARS | | |
|------------------|----------|----------|----------|------------|----------|--|-----------|----------|--|--------------|----------|--|-------------|----------|----------|-------|--------|------|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | | G.H.A. | Dec. | | G.H.A. | Dec. | | G.H.A. | Dec. | | Name | S.H.A. | Dec. |
| 10 00 | 318 39.2 | 163 28.2 | N11 53.4 | 85 32.9 | S21 32.9 | | 44 34.2 | S23 25.2 | | 100 01.0 | S12 45.3 | | Acomar | 315 34.9 | S40 21.7 | | | |
| 01 | 333 41.7 | 178 27.8 | 52.3 | 100 34.1 | 33.1 | | 59 36.9 | 25.2 | | 115 03.3 | 45.3 | | Achernar | 335 42.7 | S57 18.6 | | | |
| 02 | 348 44.2 | 193 27.3 | 51.2 | 115 35.3 | 33.4 | | 74 39.5 | 25.2 | | 130 05.7 | 45.3 | | Acruz | 173 34.8 | S63 00.9 | | | |
| 03 | 3 46.6 | 208 26.8 | 50.1 | 130 36.5 | 33.7 | | 89 42.1 | 25.3 | | 145 08.0 | 45.4 | | Adhara | 255 30.2 | S28 56.8 | | | |
| 04 | 18 49.1 | 223 26.4 | 48.9 | 145 37.7 | 34.0 | | 104 44.7 | 25.3 | | 160 10.4 | 45.4 | | Aldebaran | 291 14.8 | N16 28.8 | | | |
| 05 | 33 51.6 | 238 25.9 | 47.8 | 160 38.9 | 34.3 | | 119 47.4 | 25.3 | | 175 12.8 | 45.5 | | | | | | | |
| 06 | 48 54.0 | 253 25.4 | N11 46.7 | 175 40.1 | S21 34.6 | | 134 50.0 | S23 25.3 | | 190 15.1 | S12 45.5 | | Alioth | 166 40.1 | N56 02.9 | | | |
| 07 | 63 56.5 | 268 25.0 | 45.6 | 190 41.2 | 34.9 | | 149 52.6 | 25.3 | | 205 17.5 | 45.6 | | Alkaid | 153 16.2 | N49 23.7 | | | |
| 08 | 78 59.0 | 283 24.5 | 44.5 | 205 42.4 | 35.2 | | 164 55.3 | 25.3 | | 220 19.8 | 45.6 | | Al No'ir | 28 10.7 | S47 02.1 | | | |
| F 09 | 94 01.4 | 298 24.1 | 43.3 | 220 43.6 | 35.5 | | 179 57.9 | 25.3 | | 235 22.2 | 45.7 | | Alnilam | 276 08.9 | S 1 12.5 | | | |
| R 10 | 109 03.9 | 313 23.6 | 42.2 | 235 44.8 | 35.8 | | 195 00.5 | 25.3 | | 250 24.6 | 45.7 | | Alphard | 218 18.1 | S 8 35.3 | | | |
| I 11 | 124 06.3 | 328 23.1 | 41.1 | 250 46.0 | 36.1 | | 210 03.1 | 25.3 | | 265 26.9 | 45.7 | | | | | | | |
| D 12 | 139 08.8 | 343 22.7 | N11 40.0 | 265 47.2 | S21 36.4 | | 225 05.8 | S23 25.3 | | 280 29.3 | S12 45.8 | | Alphecca | 126 29.6 | N26 46.2 | | | |
| A 13 | 154 11.3 | 358 22.2 | 38.9 | 280 48.4 | 36.7 | | 240 08.4 | 25.4 | | 295 31.6 | 45.8 | | Alpheratz | 358 06.2 | N29 00.2 | | | |
| Y 14 | 169 13.7 | 13 21.8 | 37.7 | 295 49.6 | 37.0 | | 255 11.0 | 25.4 | | 310 34.0 | 45.9 | | Altair | 62 29.4 | N 8 49.6 | | | |
| 15 | 184 16.2 | 28 21.3 | 36.6 | 310 50.7 | 37.3 | | 270 13.6 | 25.4 | | 325 36.3 | 45.9 | | Ankaa | 353 37.0 | S42 23.2 | | | |
| 16 | 199 18.7 | 43 20.9 | 35.5 | 325 51.9 | 37.6 | | 285 16.3 | 25.4 | | 340 38.7 | 46.0 | | Antares | 112 53.2 | S26 24.0 | | | |
| 17 | 214 21.1 | 58 20.4 | 34.4 | 340 53.1 | 37.9 | | 300 18.9 | 25.4 | | 355 41.1 | 46.0 | | | | | | | |
| 18 | 229 23.6 | 73 19.9 | N11 33.2 | 355 54.3 | S21 38.2 | | 315 21.5 | S23 25.4 | | 10 43.4 | S12 46.1 | | Arcturus | 146 15.9 | N19 16.0 | | | |
| 19 | 244 26.1 | 88 19.5 | 32.1 | 10 55.5 | 38.5 | | 330 24.1 | 25.4 | | 25 45.8 | 46.1 | | Atria | 108 14.7 | S69 00.3 | | | |
| 20 | 259 28.5 | 103 19.0 | 31.0 | 25 56.7 | 38.8 | | 345 26.8 | 25.4 | | 40 48.1 | 46.2 | | Avior | 234 27.8 | S59 27.4 | | | |
| 21 | 274 31.0 | 118 18.6 | 29.8 | 40 57.8 | 39.1 | | 0 29.4 | 25.4 | | 55 50.5 | 46.2 | | Bellatrix | 278 55.8 | N 6 20.3 | | | |
| 22 | 289 33.5 | 133 18.1 | 28.7 | 55 59.0 | 39.4 | | 15 32.0 | 25.4 | | 70 52.8 | 46.2 | | Betelgeuse | 271 25.4 | N 7 24.4 | | | |
| 23 | 304 35.9 | 148 17.7 | 27.6 | 71 00.2 | 39.7 | | 30 34.6 | 25.5 | | 85 55.2 | 46.3 | | | | | | | |
| 11 00 | 319 38.4 | 163 17.2 | N11 26.5 | 86 01.4 | S21 40.0 | | 45 37.3 | S23 25.5 | | 100 57.6 | S12 46.3 | | Canopus | 264 06.3 | S52 40.9 | | | |
| 01 | 334 40.8 | 178 16.8 | 25.3 | 101 02.6 | 40.3 | | 60 39.9 | 25.5 | | 115 59.9 | 46.4 | | Capella | 281 07.3 | N45 58.9 | | | |
| 02 | 349 43.3 | 193 16.3 | 24.2 | 116 03.7 | 40.6 | | 75 42.5 | 25.5 | | 131 02.3 | 46.4 | | Deneb | 49 46.1 | N45 13.5 | | | |
| 03 | 4 45.8 | 208 15.9 | 23.1 | 131 04.9 | 40.9 | | 90 45.1 | 25.5 | | 146 04.6 | 46.5 | | Denebola | 182 56.3 | N14 39.7 | | | |
| 04 | 19 48.2 | 223 15.4 | 21.9 | 146 06.1 | 41.1 | | 105 47.7 | 25.5 | | 161 07.0 | 46.5 | | Diphda | 349 17.7 | S18 04.2 | | | |
| 05 | 34 50.7 | 238 15.0 | 20.8 | 161 07.3 | 41.4 | | 120 50.4 | 25.5 | | 176 09.3 | 46.6 | | | | | | | |
| 06 | 49 53.2 | 253 14.5 | N11 19.7 | 176 08.4 | S21 41.7 | | 135 53.0 | S23 25.5 | | 191 11.7 | S12 46.6 | | Dubhe | 194 18.9 | N61 50.3 | | | |
| 07 | 64 55.6 | 268 14.0 | 18.5 | 191 09.6 | 42.0 | | 150 55.6 | 25.5 | | 206 14.0 | 46.7 | | El Nath | 278 40.7 | N28 35.7 | | | |
| S 08 | 79 58.1 | 283 13.6 | 17.4 | 206 10.8 | 42.3 | | 165 58.2 | 25.5 | | 221 16.4 | 46.7 | | Eltanin | 90 56.0 | N51 29.6 | | | |
| A 09 | 95 00.6 | 298 13.1 | 16.3 | 221 12.0 | 42.6 | | 181 00.8 | 25.5 | | 236 18.8 | 46.7 | | Enif | 34 08.5 | N 9 48.2 | | | |
| T 10 | 110 03.0 | 313 12.7 | 15.1 | 236 13.1 | 42.9 | | 196 03.5 | 25.6 | | 251 21.1 | 46.8 | | Fomalhaut | 15 47.8 | S29 42.2 | | | |
| U 11 | 125 05.5 | 328 12.2 | 14.0 | 251 14.3 | 43.2 | | 211 06.1 | 25.6 | | 266 23.5 | 46.8 | | | | | | | |
| R 12 | 140 08.0 | 343 11.8 | N11 12.9 | 266 15.5 | S21 43.5 | | 226 08.7 | S23 25.6 | | 281 25.8 | S12 46.9 | | Gacrux | 172 26.1 | S57 01.7 | | | |
| D 13 | 155 10.4 | 358 11.4 | 11.7 | 281 16.7 | 43.8 | | 241 11.3 | 25.6 | | 296 28.2 | 46.9 | | Giennah | 176 15.3 | S17 27.3 | | | |
| A 14 | 170 12.9 | 13 10.9 | 10.6 | 296 17.8 | 44.1 | | 256 13.9 | 25.6 | | 311 30.5 | 47.0 | | Hadar | 149 19.7 | S60 28.1 | | | |
| Y 15 | 185 15.3 | 28 10.5 | 09.5 | 311 19.0 | 44.4 | | 271 16.6 | 25.6 | | 326 32.9 | 47.0 | | Hamal | 328 25.6 | N23 23.3 | | | |
| 16 | 200 17.8 | 43 10.0 | 08.3 | 326 20.2 | 44.7 | | 286 19.2 | 25.6 | | 341 35.2 | 47.1 | | Kaus Aust. | 84 12.7 | S34 23.7 | | | |
| 17 | 215 20.3 | 58 09.6 | 07.2 | 341 21.3 | 45.0 | | 301 21.8 | 25.6 | | 356 37.6 | 47.1 | | | | | | | |
| 18 | 230 22.7 | 73 09.1 | N11 06.0 | 356 22.5 | S21 45.3 | | 316 24.4 | S23 25.6 | | 11 39.9 | S12 47.2 | | Kochab | 137 18.8 | N74 13.5 | | | |
| 19 | 245 25.2 | 88 08.7 | 04.9 | 11 23.7 | 45.6 | | 331 27.0 | 25.6 | | 26 42.3 | 47.2 | | Markab | 14 00.0 | N15 07.3 | | | |
| 20 | 260 27.7 | 103 08.2 | 03.8 | 26 24.8 | 45.9 | | 346 29.6 | 25.6 | | 41 44.7 | 47.2 | | Menkar | 314 38.1 | N 4 01.9 | | | |
| 21 | 275 30.1 | 118 07.8 | 02.6 | 41 26.0 | 46.2 | | 1 32.3 | 25.7 | | 56 47.0 | 47.3 | | Menkent | 148 33.8 | S36 17.7 | | | |
| 22 | 290 32.6 | 133 07.3 | 01.5 | 56 27.2 | 46.5 | | 16 34.9 | 25.7 | | 71 49.4 | 47.3 | | Miaplapidus | 221 45.6 | S69 39.1 | | | |
| 23 | 305 35.1 | 148 06.9 | 11 00.3 | 71 28.3 | 46.8 | | 31 37.5 | 25.7 | | 86 51.7 | 47.4 | | | | | | | |
| 12 00 | 320 37.5 | 163 06.4 | N10 59.2 | 86 29.5 | S21 47.1 | | 46 40.1 | S23 25.7 | | 101 54.1 | S12 47.4 | | Mirfak | 309 12.1 | N49 48.3 | | | |
| 01 | 335 40.0 | 178 06.0 | 58.0 | 101 30.6 | 47.3 | | 61 42.7 | 25.7 | | 116 56.4 | 47.5 | | Nunki | 76 25.3 | S26 19.1 | | | |
| 02 | 350 42.5 | 193 05.6 | 56.9 | 116 31.8 | 47.6 | | 76 45.3 | 25.7 | | 131 58.8 | 47.5 | | Peacock | 53 53.1 | S56 47.2 | | | |
| 03 | 5 44.9 | 208 05.1 | 55.8 | 131 33.0 | 47.9 | | 91 47.9 | 25.7 | | 147 01.1 | 47.6 | | Pollux | 243 55.0 | N28 04.0 | | | |
| 04 | 20 47.4 | 223 04.7 | 54.6 | 146 34.1 | 48.2 | | 106 50.6 | 25.7 | | 162 03.5 | 47.6 | | Procyon | 245 23.1 | N 5 16.1 | | | |
| 05 | 35 49.8 | 238 04.2 | 53.5 | 161 35.3 | 48.5 | | 121 53.2 | 25.7 | | 177 05.8 | 47.7 | | | | | | | |
| 06 | 50 52.3 | 253 03.8 | N10 52.3 | 176 36.4 | S21 48.8 | | 136 55.8 | S23 25.7 | | 192 08.2 | S12 47.7 | | Rasalhague | 96 26.7 | N12 34.3 | | | |
| 07 | 65 54.8 | 268 03.3 | 51.2 | 191 37.6 | 49.1 | | 151 58.4 | 25.7 | | 207 10.5 | 47.8 | | Regulus | 208 07.2 | N12 02.8 | | | |
| 08 | 80 57.2 | 283 02.9 | 50.0 | 206 38.8 | 49.4 | | 167 01.0 | 25.8 | | 222 12.9 | 47.8 | | Rigel | 281 33.4 | S 8 12.9 | | | |
| S 09 | 95 59.7 | 298 02.5 | 48.9 | 221 39.9 | 49.7 | | 182 03.6 | 25.8 | | 237 15.2 | 47.9 | | Rigel Kent. | 140 22.2 | S60 46.5 | | | |
| U 10 | 111 02.2 | 313 02.0 | 47.7 | 236 41.1 | 50.0 | | 197 06.2 | 25.8 | | 252 17.6 | 47.9 | | Sabik | 102 37.7 | S15 42.4 | | | |
| N 11 | 126 04.6 | 328 01.6 | 46.6 | 251 42.2 | 50.3 | | 212 08.8 | 25.8 | | 267 19.9 | 47.9 | | | | | | | |
| D 12 | 141 07.1 | 343 01.1 | N10 45.4 | 266 43.4 | S21 50.6 | | 227 11.5 | S23 25.8 | | 282 22.3 | S12 48.0 | | Schedar | 350 05.6 | N56 27.0 | | | |
| A 13 | 156 09.6 | 358 00.7 | 44.3 | 281 44.5 | 50.9 | | 242 14.1 | 25.8 | | 297 24.6 | 48.0 | | Shaula | 96 51.6 | S37 05.8 | | | |
| Y 14 | 171 12.0 | 13 00.3 | 43.2 | 296 45.7 | 51.2 | | 257 16.7 | 25.8 | | 312 27.0 | 48.1 | | Sirius | 258 53.4 | S16 41.5 | | | |
| 15 | 186 14.5 | 27 59.8 | 42.0 | 311 46.8 | 51.5 | | 272 19.3 | 25.8 | | 327 29.3 | 48.1 | | Spica | 158 54.7 | S11 04.8 | | | |
| 16 | 201 16.9 | 42 59.4 | 40.9 | 326 48.0 | 51.8 | | 287 21.9 | 25.8 | | 342 31.7 | 48.2 | | Suhail | 223 09.2 | S43 22.0 | | | |
| 17 | 216 19.4 | 57 59.0 | 39.7 | 341 49.1 | 52.1 | | 302 24.5 | 25.8 | | 357 34.0 | 48.2 | | | | | | | |
| 18 | 231 21.9 | 72 58.5 | N10 38.6 | 356 50.3 | S21 52.4 | | 317 27.1 | S23 25.8 | | 12 36.4 | S12 48.3 | | Vega | 80 53.6 | N38 46.2 | | | |
| 19 | 246 24.3 | 87 58.1 | 37.4 | 11 51.4 | 52.6 | | 332 29.7 | 25.9 | | 27 38.7 | 48.3 | | Zuben'ubi | 137 29.9 | S15 58.7 | | | |
| 20 | 261 26.8 | 102 57.6 | 36.2 | 26 52.6 | 52.9 | | 347 32.3 | 25.9 | | 42 41.1 | 48.4 | | | | | | | |
| 21 | 276 29.3 | 117 57.2 | 35.1 | 41 53.7 | 53.2 | | 2 34.9 | 25.9 | | 57 43.4 | 48.4 | | | | | | | |
| 22 | 291 31.7 | 132 56.8 | 33.9 | 56 54.9 | 53.5 | | 17 37.6 | 25.9 | | 72 45.8 | 48.5 | | Venus | 203 38.8 | 13 07 | | | |
| 23 | 306 34.2 | 147 56.3 | 32.8 | 71 56.0 | 53.8 | | 32 40.2 | 25.9 | | 87 48.1 | 48.5 | | Mars | 126 23.0 | 18 14 | | | |
| | | | | | </ | | | | | | | | | | | | | |

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| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | |
|--------|----------|----------|----------|------|----------|------|------|-------|-----------------|-----------------|------------|---------|----------|-------|-------|---|
| | G.H.A. | Dec. | G.H.A. | V | Dec. | d | H.P. | Naut. | | Civil | 10 | | 11 | 12 | 13 | |
| | | | | | | | | | | | | | | | | h |
| 10 00 | 178 39.9 | N15 34.7 | 16 51.6 | 9.8 | S24 26.2 | 5.1 | 55.3 | N 72 | //// | //// | 01 54 | ■ | ■ | ■ | ■ | |
| 01 | 193 40.0 | 33.9 | 31 20.4 | 9.9 | 24 21.1 | 5.2 | 55.3 | N 70 | //// | //// | 02 35 | ■ | ■ | ■ | ■ | |
| 02 | 208 40.1 | 33.2 | 45 49.3 | 9.9 | 24 15.9 | 5.3 | 55.3 | 68 | //// | 01 06 | 03 03 | ■ | ■ | ■ | ■ | |
| 03 | 223 40.2 | 32.5 | 60 18.2 | 10.0 | 24 10.6 | 5.4 | 55.3 | 66 | //// | 01 59 | 03 23 | ■ | ■ | ■ | ■ | |
| 04 | 238 40.3 | 31.7 | 74 47.2 | 10.1 | 24 05.2 | 5.5 | 55.2 | 64 | //// | 02 30 | 03 40 | ■ | ■ | ■ | ■ | |
| 05 | 253 40.4 | 31.0 | 89 16.3 | 10.2 | 23 59.7 | 5.7 | 55.2 | 62 | 00 59 | 02 53 | 03 53 | ■ | ■ | ■ | ■ | |
| 06 | 268 40.5 | N15 30.3 | 103 45.5 | 10.2 | S23 54.0 | 5.7 | 55.2 | 60 | 01 47 | 03 11 | 04 05 | ■ | ■ | ■ | ■ | |
| 07 | 283 40.6 | 29.5 | 118 14.7 | 10.3 | 23 48.3 | 5.9 | 55.2 | N 58 | 02 15 | 03 26 | 04 15 | ■ | ■ | ■ | ■ | |
| 08 | 298 40.7 | 28.8 | 132 44.0 | 10.3 | 23 42.4 | 6.0 | 55.2 | 56 | 02 37 | 03 38 | 04 23 | ■ | ■ | ■ | ■ | |
| 09 | 313 40.8 | 28.1 | 147 13.3 | 10.4 | 23 36.4 | 6.1 | 55.2 | 54 | 02 54 | 03 49 | 04 31 | ■ | ■ | ■ | ■ | |
| F 10 | 328 40.9 | 27.3 | 161 42.7 | 10.5 | 23 30.2 | 6.2 | 55.1 | 52 | 03 08 | 03 59 | 04 38 | ■ | ■ | ■ | ■ | |
| R 11 | 343 41.0 | 26.6 | 176 12.2 | 10.6 | 23 24.1 | 6.4 | 55.1 | 50 | 03 20 | 04 07 | 04 44 | ■ | ■ | ■ | ■ | |
| I 12 | 358 41.1 | N15 25.9 | 190 41.8 | 10.7 | S23 17.7 | 6.4 | 55.1 | 45 | 03 44 | 04 24 | 04 57 | ■ | ■ | ■ | ■ | |
| D 13 | 13 41.2 | 25.1 | 205 11.5 | 10.7 | 23 11.3 | 6.6 | 55.1 | N 40 | 04 03 | 04 38 | 05 08 | ■ | ■ | ■ | ■ | |
| A 14 | 28 41.3 | 24.4 | 219 41.2 | 10.7 | 23 04.7 | 6.6 | 55.1 | 35 | 04 17 | 04 50 | 05 17 | ■ | ■ | ■ | ■ | |
| Y 15 | 43 41.4 | 23.7 | 234 10.9 | 10.9 | 22 58.1 | 6.8 | 55.1 | 30 | 04 29 | 05 00 | 05 25 | ■ | ■ | ■ | ■ | |
| 16 | 58 41.5 | 22.9 | 248 40.8 | 10.9 | 22 51.3 | 6.9 | 55.0 | N 10 | 04 48 | 05 16 | 05 39 | ■ | ■ | ■ | ■ | |
| 17 | 73 41.6 | 22.2 | 263 10.7 | 11.0 | 22 44.4 | 7.0 | 55.0 | 0 | 05 03 | 05 29 | 05 51 | ■ | ■ | ■ | ■ | |
| 18 | 88 41.6 | N15 21.4 | 277 40.7 | 11.1 | S22 37.4 | 7.0 | 55.0 | S 10 | 05 15 | 05 40 | 06 02 | ■ | ■ | ■ | ■ | |
| 19 | 103 41.7 | 20.7 | 292 10.8 | 11.2 | 22 30.4 | 7.2 | 55.0 | 20 | 05 26 | 05 51 | 06 13 | ■ | ■ | ■ | ■ | |
| 20 | 118 41.8 | 20.0 | 306 41.0 | 11.2 | 22 23.2 | 7.3 | 55.0 | 30 | 05 35 | 06 01 | 06 24 | ■ | ■ | ■ | ■ | |
| 21 | 133 41.9 | 19.2 | 321 11.2 | 11.3 | 22 15.9 | 7.4 | 55.0 | 40 | 05 44 | 06 12 | 06 37 | ■ | ■ | ■ | ■ | |
| 22 | 148 42.0 | 18.5 | 335 41.5 | 11.4 | 22 08.5 | 7.5 | 54.9 | 50 | 05 48 | 06 18 | 06 45 | ■ | ■ | ■ | ■ | |
| 23 | 163 42.1 | 17.8 | 350 11.9 | 11.4 | 22 01.0 | 7.6 | 54.9 | 60 | 05 53 | 06 25 | 06 53 | ■ | ■ | ■ | ■ | |
| 11 00 | 178 42.2 | N15 17.0 | 4 42.3 | 11.5 | S21 53.4 | 7.7 | 54.9 | S 50 | 05 58 | 06 32 | 07 03 | ■ | ■ | ■ | ■ | |
| 01 | 193 42.3 | 16.3 | 19 12.8 | 11.6 | 21 45.7 | 7.8 | 54.9 | 52 | 06 03 | 06 41 | 07 15 | ■ | ■ | ■ | ■ | |
| 02 | 208 42.4 | 15.5 | 33 43.4 | 11.7 | 21 37.9 | 7.9 | 54.9 | 54 | 06 05 | 06 45 | 07 21 | ■ | ■ | ■ | ■ | |
| 03 | 223 42.5 | 14.8 | 48 14.1 | 11.7 | 21 30.0 | 8.0 | 54.9 | 56 | 06 07 | 06 49 | 07 27 | ■ | ■ | ■ | ■ | |
| 04 | 238 42.6 | 14.0 | 62 44.8 | 11.9 | 21 22.0 | 8.1 | 54.9 | 58 | 06 09 | 06 53 | 07 33 | ■ | ■ | ■ | ■ | |
| 05 | 253 42.7 | 13.3 | 77 15.7 | 11.9 | 21 13.9 | 8.2 | 54.8 | S 60 | 06 12 | 06 58 | 07 41 | ■ | ■ | ■ | ■ | |
| 06 | 268 42.8 | N15 12.6 | 91 46.6 | 11.9 | S21 05.7 | 8.3 | 54.8 | | 06 14 | 07 04 | 07 50 | ■ | ■ | ■ | ■ | |
| 07 | 283 42.9 | 11.8 | 106 17.5 | 12.1 | 20 57.4 | 8.3 | 54.8 | Lat. | Sunset | Twilight | | Moonset | | | | |
| 08 | 298 43.1 | 11.1 | 120 48.6 | 12.1 | 20 49.1 | 8.5 | 54.8 | | | Civil | Naut. | 10 | 11 | 12 | 13 | |
| S 09 | 313 43.2 | 10.3 | 135 19.7 | 12.2 | 20 40.6 | 8.5 | 54.8 | | | | | h | m | h | m | |
| A 10 | 328 43.3 | 09.6 | 149 50.9 | 12.3 | 20 32.1 | 8.7 | 54.8 | N 72 | h | m | h | m | h | m | h | m |
| U 11 | 343 43.4 | 08.8 | 164 22.2 | 12.3 | 20 23.4 | 8.7 | 54.8 | | 22 09 | //// | //// | ■ | ■ | ■ | ■ | |
| R 12 | 358 43.5 | N15 08.1 | 178 53.5 | 12.4 | S20 14.7 | 8.8 | 54.7 | N 70 | 21 30 | //// | //// | ■ | ■ | 02 15 | 04 34 | |
| D 13 | 13 43.6 | 07.3 | 193 24.9 | 12.5 | 20 05.9 | 8.9 | 54.7 | 68 | 21 04 | 22 54 | //// | ■ | ■ | 02 58 | 04 55 | |
| A 14 | 28 43.7 | 06.6 | 207 56.4 | 12.6 | 19 57.0 | 9.0 | 54.7 | 66 | 20 44 | 22 06 | //// | ■ | ■ | 01 28 | 03 27 | |
| Y 15 | 43 43.8 | 05.9 | 222 28.0 | 12.7 | 19 48.0 | 9.0 | 54.7 | 64 | 20 28 | 21 36 | //// | 00 16 | 02 06 | 03 49 | 05 24 | |
| 16 | 58 43.9 | 05.1 | 236 59.7 | 12.7 | 19 39.0 | 9.2 | 54.7 | 62 | 20 15 | 21 14 | 23 02 | 00 59 | 02 33 | 04 06 | 05 35 | |
| 17 | 73 44.0 | 04.4 | 251 31.4 | 12.8 | 19 29.8 | 9.2 | 54.7 | 60 | 20 04 | 20 57 | 22 19 | 01 28 | 02 53 | 04 20 | 05 44 | |
| 18 | 88 44.1 | N15 03.6 | 266 03.2 | 12.8 | S19 20.6 | 9.3 | 54.7 | N 58 | 19 54 | 20 42 | 21 52 | 01 50 | 03 10 | 04 32 | 05 52 | |
| 19 | 103 44.2 | 02.9 | 280 35.0 | 13.0 | 19 11.3 | 9.4 | 54.6 | 56 | 19 46 | 20 30 | 21 31 | 02 08 | 03 24 | 04 43 | 05 59 | |
| 20 | 118 44.3 | 02.1 | 295 07.0 | 13.0 | 19 01.9 | 9.5 | 54.6 | 54 | 19 38 | 20 20 | 21 14 | 02 23 | 03 37 | 04 52 | 06 06 | |
| 21 | 133 44.4 | 01.4 | 309 39.0 | 13.1 | 18 52.4 | 9.6 | 54.6 | 52 | 19 32 | 20 10 | 21 01 | 02 37 | 03 47 | 05 00 | 06 11 | |
| 22 | 148 44.5 | 15 00.6 | 324 11.1 | 13.1 | 18 42.8 | 9.6 | 54.6 | 50 | 19 25 | 20 02 | 20 49 | 02 48 | 03 57 | 05 07 | 06 17 | |
| 23 | 163 44.6 | 14 59.9 | 338 43.2 | 13.2 | 18 33.2 | 9.7 | 54.6 | 45 | 19 13 | 19 45 | 20 25 | 03 12 | 04 17 | 05 23 | 06 28 | |
| 12 00 | 178 44.7 | N14 59.1 | 353 15.4 | 13.3 | S18 23.5 | 9.8 | 54.6 | N 40 | 19 02 | 19 31 | 20 07 | 03 31 | 04 33 | 05 35 | 06 37 | |
| 01 | 193 44.8 | 58.4 | 7 47.7 | 13.4 | 18 13.7 | 9.8 | 54.6 | 35 | 18 53 | 19 20 | 19 52 | 03 47 | 04 47 | 05 46 | 06 44 | |
| 02 | 208 44.9 | 57.6 | 22 20.1 | 13.4 | 18 03.9 | 9.9 | 54.6 | 30 | 18 45 | 19 10 | 19 40 | 04 01 | 04 59 | 05 56 | 06 51 | |
| 03 | 223 45.0 | 56.9 | 36 52.5 | 13.6 | 17 54.0 | 10.0 | 54.5 | 20 | 18 31 | 18 54 | 19 21 | 04 24 | 05 19 | 06 12 | 07 03 | |
| 04 | 238 45.1 | 56.1 | 51 25.1 | 13.5 | 17 44.0 | 10.1 | 54.5 | N 10 | 18 19 | 18 41 | 19 07 | 04 44 | 05 36 | 06 26 | 07 13 | |
| 05 | 253 45.2 | 55.4 | 65 57.6 | 13.7 | 17 33.9 | 10.1 | 54.5 | 0 | 18 09 | 18 30 | 18 55 | 05 03 | 05 52 | 06 39 | 07 22 | |
| 06 | 268 45.4 | N14 54.6 | 80 30.3 | 13.7 | S17 23.8 | 10.3 | 54.5 | S 10 | 17 58 | 18 19 | 18 44 | 05 21 | 06 08 | 06 52 | 07 32 | |
| 07 | 283 45.5 | 53.8 | 95 03.0 | 13.8 | 17 13.5 | 10.2 | 54.5 | 20 | 17 46 | 18 09 | 18 35 | 05 41 | 06 25 | 07 05 | 07 42 | |
| 08 | 298 45.6 | 53.1 | 109 35.8 | 13.9 | 17 03.3 | 10.4 | 54.5 | 30 | 17 33 | 17 58 | 18 26 | 06 04 | 06 45 | 07 21 | 07 53 | |
| S 09 | 313 45.7 | 52.3 | 124 08.7 | 13.9 | 16 52.9 | 10.4 | 54.5 | 35 | 17 26 | 17 52 | 18 22 | 06 17 | 06 56 | 07 30 | 08 00 | |
| U 10 | 328 45.8 | 51.6 | 138 41.6 | 14.0 | 16 42.5 | 10.5 | 54.5 | 40 | 17 17 | 17 46 | 18 18 | 06 33 | 07 09 | 07 40 | 08 07 | |
| N 11 | 343 45.9 | 50.8 | 153 14.6 | 14.0 | 16 32.0 | 10.5 | 54.4 | 45 | 17 08 | 17 38 | 18 13 | 06 51 | 07 25 | 07 52 | 08 15 | |
| D 12 | 358 46.0 | N14 50.1 | 167 47.6 | 14.2 | S16 21.5 | 10.6 | 54.4 | S 50 | 16 56 | 17 30 | 18 08 | 07 13 | 07 44 | 08 07 | 08 26 | |
| A 13 | 13 46.1 | 49.3 | 182 20.8 | 14.1 | 16 10.9 | 10.7 | 54.4 | 52 | 16 50 | 17 26 | 18 06 | 07 24 | 07 52 | 08 14 | 08 30 | |
| Y 14 | 28 46.2 | 48.6 | 196 53.9 | 14.3 | 16 00.2 | 10.7 | 54.4 | 54 | 16 44 | 17 22 | 18 04 | 07 36 | 08 02 | 08 21 | 08 35 | |
| 15 | 43 46.3 | 47.8 | 211 27.2 | 14.3 | 15 49.5 | 10.8 | 54.4 | 56 | 16 38 | 17 18 | 18 02 | 07 50 | 08 13 | 08 29 | 08 41 | |
| 16 | 58 46.4 | 47.0 | 226 00.5 | 14.4 | 15 38.7 | 10.8 | 54.4 | 58 | 16 30 | 17 13 | 17 59 | 08 07 | 08 26 | 08 39 | 08 48 | |
| 17 | 73 46.5 | 46.3 | 240 33.9 | 14.4 | 15 27.9 | 11.0 | 54.4 | S 60 | 16 22 | 17 07 | 17 57 | 08 26 | 08 41 | 08 49 | 08 55 | |
| 18 | 88 46.7 | N14 45.5 | 255 07.3 | 14.6 | S15 16.9 | 10.9 | 54.4 | | | | | | | | | |
| 19 | 103 46.8 | 44.8 | 269 40.9 | 14.5 | 15 06.0 | 11.0 | 54.4 | | | | | | | | | |
| 20 | 118 46.9 | 44.0 | 284 14.4 | 14.7 | 14 55.0 | 11.1 | 54.3 | Day | SUN | MOON | | | | | | |
| 21 | 133 47.0 | 43.3 | 298 48.1 | 14.7 | 14 43.9 | 11.2 | 54.3 | | Eqn. of Time | Mer. Pass. | Mer. Pass. | Upper | Lower | Age | Phase | |
| 22 | 148 47.1 | 42.5 | 313 21.8 | 14.7 | 14 32.7 | 11.1 | 54.3 | | 00 ^a | 12 ^b | Pass. | Upper | Lower | | | |
| 23 | 163 47 | | | | | | | | | | | | | | | |

1984 OCTOBER 12, 13, 14 (FRI., SAT., SUN.)

| G.M.T. d h m | ARIES | | | VENUS -3.4 | | | MARS +0.5 | | | JUPITER -1.7 | | | SATURN +0.8 | | | STARS | | |
|-----------------------|----------|----------|----------|------------|----------|----------|-----------|----------|----------|--------------|----------|----------|-------------|------|-------|--------|------|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Mer. | Pass. | S.H.A. | Dec. | |
| 12 00 | 20 45.0 | 153 24.0 | S18 17.3 | 105 33.3 | S25 25.9 | 104 18.0 | S23 27.1 | 157 03.9 | S14 30.4 | Acomar | 315 34.5 | S40 21.8 | | | | | | |
| 01 | 35 47.5 | 168 23.4 | 18.2 | 120 33.9 | 25.8 | 119 20.2 | 27.1 | 172 06.0 | 30.4 | Achernar | 335 42.2 | S57 18.8 | | | | | | |
| 02 | 50 49.9 | 183 22.8 | 19.2 | 135 34.4 | 25.7 | 134 22.3 | 27.1 | 187 08.2 | 30.5 | Accrus | 173 34.9 | S63 00.7 | | | | | | |
| 03 | 65 52.4 | 198 22.2 | 20.1 | 150 34.9 | 25.6 | 149 24.4 | 27.1 | 202 10.4 | 30.6 | Adhara | 255 29.7 | S28 56.7 | | | | | | |
| 04 | 80 54.9 | 213 21.6 | 21.0 | 165 35.4 | 25.5 | 164 26.5 | 27.1 | 217 12.6 | 30.7 | Aldebaran | 291 14.4 | N16 28.9 | | | | | | |
| 05 | 95 57.3 | 228 21.0 | 22.0 | 180 35.9 | 25.5 | 179 28.7 | 27.1 | 232 14.8 | 30.8 | | | | | | | | | |
| 06 | 110 59.8 | 243 20.4 | S18 22.9 | 195 36.5 | S25 25.4 | 194 30.8 | S23 27.1 | 247 17.0 | S14 30.9 | Alioth | 166 40.2 | N56 02.6 | | | | | | |
| 07 | 126 02.2 | 258 19.8 | 23.9 | 210 37.0 | 25.3 | 209 32.9 | 27.0 | 262 19.2 | 31.0 | Alkaid | 153 16.5 | N49 23.5 | | | | | | |
| 08 | 141 04.7 | 273 19.2 | 24.8 | 225 37.5 | 25.2 | 224 35.0 | 27.0 | 277 21.4 | 31.0 | Al Na'ir | 28 10.7 | S47 02.3 | | | | | | |
| F 09 | 156 07.2 | 288 18.6 | 25.7 | 240 38.0 | 25.1 | 239 37.2 | 27.0 | 292 23.6 | 31.1 | Alnilam | 276 08.5 | S 1 12.4 | | | | | | |
| R 10 | 171 09.6 | 303 18.0 | 26.7 | 255 38.6 | 25.0 | 254 39.3 | 27.0 | 307 25.8 | 31.2 | Alphard | 218 17.8 | S 8 35.2 | | | | | | |
| I 11 | 186 12.1 | 318 17.4 | 27.6 | 270 39.1 | 24.9 | 269 41.4 | 27.0 | 322 27.9 | 31.3 | | | | | | | | | |
| D 12 | 201 14.6 | 333 16.8 | S18 28.5 | 285 39.6 | S25 24.8 | 284 43.5 | S23 27.0 | 337 30.1 | S14 31.4 | Alphecca | 126 29.8 | N26 46.1 | | | | | | |
| A 13 | 216 17.0 | 348 16.2 | 29.5 | 300 40.1 | 24.7 | 299 45.7 | 27.0 | 352 32.3 | 31.5 | Alpheratz | 358 06.0 | N29 00.5 | | | | | | |
| Y 14 | 231 19.5 | 3 15.6 | 30.4 | 315 40.7 | 24.6 | 314 47.8 | 27.0 | 7 34.5 | 31.5 | Altair | 62 29.6 | N 8 49.7 | | | | | | |
| 15 | 246 22.0 | 18 15.0 | 31.3 | 330 41.2 | 24.5 | 329 49.9 | 27.0 | 22 36.7 | 31.6 | Ankaa | 353 36.7 | S42 23.4 | | | | | | |
| 16 | 261 24.4 | 33 14.4 | 32.2 | 345 41.7 | 24.4 | 344 52.0 | 27.0 | 37 38.9 | 31.7 | Antares | 112 53.5 | S26 24.0 | | | | | | |
| 17 | 276 26.9 | 48 13.8 | 33.2 | 0 42.2 | 24.3 | 359 54.2 | 26.9 | 52 41.1 | 31.8 | | | | | | | | | |
| 18 | 291 29.4 | 63 13.2 | S18 34.1 | 15 42.7 | S25 24.3 | 14 56.3 | S23 26.9 | 67 43.3 | S14 31.9 | Arcturus | 146 16.0 | N19 15.9 | | | | | | |
| 19 | 306 31.8 | 78 12.6 | 35.0 | 30 43.3 | 24.2 | 29 58.4 | 26.9 | 82 45.5 | 32.0 | Atria | 108 15.5 | S69 00.3 | | | | | | |
| 20 | 321 34.3 | 93 12.0 | 35.9 | 45 43.8 | 24.1 | 45 00.5 | 26.9 | 97 47.7 | 32.1 | Avior | 234 27.3 | S59 27.2 | | | | | | |
| 21 | 336 36.7 | 108 11.4 | 36.9 | 60 44.3 | 24.0 | 60 02.6 | 26.9 | 112 49.8 | 32.1 | Bellatrix | 278 55.4 | N 6 20.4 | | | | | | |
| 22 | 351 39.2 | 123 10.8 | 37.8 | 75 44.8 | 23.9 | 75 04.8 | 26.9 | 127 52.0 | 32.2 | Betelgeuse | 271 24.9 | N 7 24.5 | | | | | | |
| 23 | 6 41.7 | 138 10.2 | 38.7 | 90 45.3 | 23.8 | 90 06.9 | 26.9 | 142 54.2 | 32.3 | | | | | | | | | |
| 13 00 | 21 44.1 | 153 09.6 | S18 39.6 | 105 45.9 | S25 23.7 | 105 09.0 | S23 26.9 | 157 56.4 | S14 32.4 | Canopus | 264 05.8 | S52 40.8 | | | | | | |
| 01 | 36 46.6 | 168 09.0 | 40.6 | 120 46.4 | 23.6 | 120 11.1 | 26.9 | 172 58.6 | 32.5 | Capella | 281 06.7 | N45 59.0 | | | | | | |
| 02 | 51 49.1 | 183 08.4 | 41.5 | 135 46.9 | 23.5 | 135 13.2 | 26.8 | 188 00.8 | 32.6 | Deneb | 49 46.4 | N45 13.7 | | | | | | |
| 03 | 66 51.5 | 198 07.8 | 42.4 | 150 47.4 | 23.4 | 150 15.4 | 26.8 | 203 03.0 | 32.6 | Denebola | 182 56.3 | N14 39.6 | | | | | | |
| 04 | 81 54.0 | 213 07.2 | 43.3 | 165 48.0 | 23.3 | 165 17.5 | 26.8 | 218 05.2 | 32.7 | Diphda | 349 17.5 | S18 04.2 | | | | | | |
| 05 | 96 56.5 | 228 06.6 | 44.2 | 180 48.5 | 23.2 | 180 19.6 | 26.8 | 233 07.4 | 32.8 | | | | | | | | | |
| 06 | 111 58.9 | 243 06.0 | S18 45.2 | 195 49.0 | S25 23.1 | 195 21.7 | S23 26.8 | 248 09.5 | S14 32.9 | Dubhe | 194 18.7 | N61 50.0 | | | | | | |
| 07 | 127 01.4 | 258 05.4 | 46.1 | 210 49.5 | 23.0 | 210 23.8 | 26.8 | 263 11.7 | 33.0 | Elmath | 278 40.2 | N28 35.8 | | | | | | |
| S 08 | 142 03.8 | 273 04.7 | 47.0 | 225 50.0 | 22.9 | 225 26.0 | 26.8 | 278 13.9 | 33.1 | Eltanin | 90 56.5 | N51 29.6 | | | | | | |
| A 09 | 157 06.3 | 288 04.1 | 47.9 | 240 50.6 | 22.8 | 240 28.1 | 26.8 | 293 16.1 | 33.2 | Enif | 34 08.5 | N 9 48.3 | | | | | | |
| T 10 | 172 08.8 | 303 03.5 | 48.8 | 255 51.1 | 22.7 | 255 30.2 | 26.8 | 308 18.3 | 33.2 | Fomalhaut | 15 47.8 | S29 42.3 | | | | | | |
| U 11 | 187 11.2 | 318 02.9 | 49.7 | 270 51.6 | 22.6 | 270 32.3 | 26.7 | 323 20.5 | 33.3 | | | | | | | | | |
| R 12 | 202 13.7 | 333 02.3 | S18 50.6 | 285 52.1 | S25 22.5 | 285 34.4 | S23 26.7 | 338 22.7 | S14 33.4 | Gacrux | 172 26.2 | S57 01.5 | | | | | | |
| D 13 | 217 16.2 | 348 01.7 | 51.6 | 300 52.6 | 22.4 | 300 36.5 | 26.7 | 353 24.9 | 33.5 | Glenah | 176 15.3 | S17 27.2 | | | | | | |
| A 14 | 232 18.6 | 3 01.1 | 52.5 | 315 53.1 | 22.3 | 315 38.7 | 26.7 | 8 27.1 | 33.6 | Hadar | 149 20.0 | S60 17.9 | | | | | | |
| Y 15 | 247 21.1 | 18 00.5 | 53.4 | 330 53.7 | 22.2 | 330 40.8 | 26.7 | 23 29.2 | 33.7 | Hamal | 328 25.3 | N23 23.5 | | | | | | |
| 16 | 262 23.6 | 32 59.8 | 54.3 | 345 54.2 | 22.0 | 345 42.9 | 26.7 | 38 31.4 | 33.7 | Kaus Aust. | 84 13.0 | S34 23.7 | | | | | | |
| 17 | 277 26.0 | 47 59.2 | 55.2 | 0 54.7 | 21.9 | 0 45.0 | 26.7 | 53 33.6 | 33.8 | | | | | | | | | |
| 18 | 292 28.5 | 62 58.6 | S18 56.1 | 15 55.2 | S25 21.8 | 15 47.1 | S23 26.7 | 68 35.8 | S14 33.9 | Kochab | 137 19.8 | N74 13.2 | | | | | | |
| 19 | 307 31.0 | 77 58.0 | 57.0 | 30 55.7 | 21.7 | 30 49.2 | 26.7 | 83 38.0 | 34.0 | Markab | 14 00.0 | N15 07.4 | | | | | | |
| 20 | 322 33.4 | 92 57.4 | 57.9 | 45 56.3 | 21.6 | 45 51.4 | 26.6 | 98 40.2 | 34.1 | Menkar | 314 37.7 | N 4 01.9 | | | | | | |
| 21 | 337 35.9 | 107 56.8 | 58.8 | 60 56.8 | 21.5 | 60 53.5 | 26.6 | 113 42.4 | 34.2 | Menkent | 148 34.0 | S36 17.6 | | | | | | |
| 22 | 352 38.3 | 122 56.2 | 59.7 | 75 57.3 | 21.4 | 75 55.6 | 26.6 | 128 44.6 | 34.3 | Miaplacidus | 221 45.0 | S69 38.8 | | | | | | |
| 23 | 7 40.8 | 137 55.5 | 19 00.6 | 90 57.8 | 21.3 | 90 57.7 | 26.6 | 143 46.7 | 34.3 | | | | | | | | | |
| 14 00 | 22 43.3 | 152 54.9 | S19 01.5 | 105 58.3 | S25 21.2 | 105 59.8 | S23 26.6 | 158 48.9 | S14 34.4 | Mirfak | 309 11.5 | N49 48.4 | | | | | | |
| 01 | 37 45.7 | 167 54.3 | 02.4 | 120 58.8 | 21.1 | 121 01.9 | 26.6 | 173 51.1 | 34.5 | Nunki | 76 25.5 | S26 19.1 | | | | | | |
| 02 | 52 48.2 | 182 53.7 | 03.3 | 135 59.4 | 21.0 | 136 04.0 | 26.6 | 188 53.3 | 34.6 | Peacock | 53 53.4 | S56 47.4 | | | | | | |
| 03 | 67 50.7 | 197 53.1 | 04.2 | 150 59.9 | 20.9 | 151 06.2 | 26.6 | 203 55.5 | 34.7 | Pollux | 243 54.5 | N28 03.9 | | | | | | |
| 04 | 82 53.1 | 212 52.4 | 05.1 | 166 00.4 | 20.8 | 166 08.3 | 26.6 | 218 57.7 | 34.8 | Procyon | 245 22.7 | N 5 16.1 | | | | | | |
| 05 | 97 55.6 | 227 51.8 | 06.0 | 181 00.9 | 20.7 | 181 10.4 | 26.5 | 233 59.9 | 34.8 | | | | | | | | | |
| 06 | 112 58.1 | 242 51.2 | S19 06.9 | 196 01.4 | S25 20.5 | 196 12.5 | S23 26.5 | 249 02.1 | S14 34.9 | Rasalhague | 96 27.0 | N12 34.3 | | | | | | |
| 07 | 128 00.5 | 257 50.6 | 07.8 | 211 01.9 | 20.4 | 211 14.6 | 26.5 | 264 04.3 | 35.0 | Regulus | 208 07.0 | N12 02.7 | | | | | | |
| 08 | 143 03.0 | 272 50.0 | 08.7 | 226 02.5 | 20.3 | 226 16.7 | 26.5 | 279 06.4 | 35.1 | Rigel | 281 33.0 | S 8 12.9 | | | | | | |
| S 09 | 158 05.5 | 287 49.3 | 09.6 | 241 03.0 | 20.2 | 241 18.8 | 26.5 | 294 08.6 | 35.2 | Rigel Kent. | 140 22.6 | S60 46.3 | | | | | | |
| U 10 | 173 07.9 | 302 48.7 | 10.5 | 256 03.5 | 20.1 | 256 20.9 | 26.5 | 309 10.8 | 35.3 | Sabik | 102 37.9 | S15 42.4 | | | | | | |
| N 11 | 188 10.4 | 317 48.1 | 11.4 | 271 04.0 | 20.0 | 271 23.1 | 26.5 | 324 13.0 | 35.4 | | | | | | | | | |
| D 12 | 203 12.8 | 332 47.5 | S19 12.3 | 286 04.5 | S25 19.9 | 286 25.2 | S23 26.5 | 339 15.2 | S14 35.4 | Schedar | 350 05.3 | N56 27.3 | | | | | | |
| A 13 | 218 15.3 | 347 46.8 | 13.2 | 301 05.0 | 19.8 | 301 27.3 | 26.4 | 354 17.4 | 35.5 | Shaula | 96 51.9 | S37 05.8 | | | | | | |
| Y 14 | 233 17.8 | 2 46.2 | 14.1 | 316 05.6 | 19.6 | 316 29.4 | 26.4 | 9 19.6 | 35.6 | Sirius | 258 53.0 | S16 41.4 | | | | | | |
| 15 | 248 20.2 | 17 45.6 | 15.0 | 331 06.1 | 19.5 | 331 31.5 | 26.4 | 24 21.7 | 35.7 | Spica | 158 54.8 | S11 04.7 | | | | | | |
| 16 | 263 22.7 | 32 45.0 | 15.9 | 346 06.6 | 19.4 | 346 33.6 | 26.4 | 39 23.9 | 35.8 | Suhail | 223 08.9 | S43 21.8 | | | | | | |
| 17 | 278 25.2 | 47 44.3 | 16. | | | | | | | | | | | | | | | |

1984 OCTOBER 12, 13, 14 (FRI., SAT., SUN.)

| G.M.T. | SUN | | MOON | | | | Lat. | Twilight | | | Moonrise | | | | | |
|--------------|----------|----------|----------|-------|----------|------|------|----------|--------|----------|----------|-------|---------|-------|-------|---|
| | G.H.A. | Dec. | G.H.A. | ν | Dec. | d | | H.P. | Naut. | Civil | Sunrise | 12 | 13 | 14 | 15 | |
| | | | | | | | | | | | | h | m | h | m | h |
| 12 00 | 183 22.1 | S 7 22.9 | 341 57.0 | 14.9 | N13 35.7 | 11.8 | 54.5 | N 72 | 04 47 | 06 05 | 07 15 | 15 20 | | | | |
| 01 | 198 22.2 | 23.8 | 356 30.9 | 14.9 | 13 47.5 | 11.7 | 54.5 | N 70 | 04 52 | 06 02 | 07 05 | 16 02 | | | | |
| 02 | 213 22.4 | 24.8 | 11 04.8 | 14.8 | 13 59.2 | 11.6 | 54.5 | 68 | 04 55 | 06 00 | 06 57 | 16 31 | 15 54 | | | |
| 03 | 228 22.6 | 25.7 | 25 38.6 | 14.8 | 14 10.8 | 11.6 | 54.5 | 66 | 04 58 | 05 58 | 06 50 | 16 53 | 16 36 | 15 55 | | |
| 04 | 243 22.7 | 26.6 | 40 12.4 | 14.6 | 14 22.4 | 11.6 | 54.5 | 64 | 05 01 | 05 56 | 06 44 | 17 10 | 17 05 | 16 57 | 16 40 | |
| 05 | 258 22.9 | 27.6 | 54 46.0 | 14.7 | 14 34.0 | 11.4 | 54.5 | 62 | 05 03 | 05 54 | 06 39 | 17 25 | 17 27 | 17 32 | 17 46 | |
| 06 | 273 23.0 | S 7 28.5 | 69 19.7 | 14.5 | N14 45.4 | 11.5 | 54.5 | 60 | 05 04 | 05 53 | 06 35 | 17 37 | 17 44 | 17 57 | 18 21 | |
| 07 | 288 23.2 | 29.5 | 83 53.2 | 14.5 | 14 56.9 | 11.4 | 54.5 | N 58 | 05 06 | 05 51 | 06 31 | 17 48 | 17 59 | 18 17 | 18 46 | |
| 08 | 303 23.3 | 30.4 | 98 26.7 | 14.5 | 15 08.3 | 11.3 | 54.6 | 56 | 05 07 | 05 50 | 06 27 | 17 57 | 18 12 | 18 34 | 19 07 | |
| 09 | 318 23.5 | 31.3 | 113 00.2 | 14.3 | 15 19.6 | 11.2 | 54.6 | 54 | 05 08 | 05 49 | 06 24 | 18 06 | 18 23 | 18 48 | 19 24 | |
| 10 | 333 23.6 | 32.3 | 127 33.5 | 14.4 | 15 30.8 | 11.2 | 54.6 | 52 | 05 08 | 05 47 | 06 21 | 18 13 | 18 33 | 19 00 | 19 38 | |
| 11 | 348 23.8 | 33.2 | 142 06.9 | 14.2 | 15 42.0 | 11.2 | 54.6 | 50 | 05 09 | 05 46 | 06 19 | 18 20 | 18 42 | 19 12 | 19 51 | |
| 12 | 3 24.0 | S 7 34.1 | 156 40.1 | 14.2 | N15 53.2 | 11.1 | 54.6 | 45 | 05 10 | 05 44 | 06 13 | 18 34 | 19 01 | 19 35 | 20 17 | |
| 13 | 18 24.1 | 35.1 | 171 13.3 | 14.1 | 16 04.3 | 11.0 | 54.6 | N 40 | 05 10 | 05 41 | 06 08 | 18 46 | 19 17 | 19 53 | 20 38 | |
| 14 | 33 24.3 | 36.0 | 185 46.4 | 14.0 | 16 15.3 | 10.9 | 54.6 | 35 | 05 09 | 05 39 | 06 04 | 18 56 | 19 30 | 20 09 | 20 55 | |
| 15 | 48 24.4 | 37.0 | 200 19.4 | 14.0 | 16 26.2 | 10.9 | 54.7 | 30 | 05 09 | 05 37 | 06 01 | 19 05 | 19 40 | 20 22 | 21 10 | |
| 16 | 63 24.6 | 37.9 | 214 52.4 | 13.9 | 16 37.1 | 10.9 | 54.7 | 20 | 05 06 | 05 32 | 05 54 | 19 21 | 20 01 | 20 46 | 21 35 | |
| 17 | 78 24.7 | 38.8 | 229 25.3 | 13.8 | 16 48.0 | 10.7 | 54.7 | N 10 | 05 03 | 05 27 | 05 48 | 19 35 | 20 18 | 21 06 | 21 57 | |
| 18 | 93 24.9 | S 7 39.8 | 243 58.1 | 13.8 | N16 58.7 | 10.7 | 54.7 | 0 | 04 58 | 05 22 | 05 43 | 19 48 | 20 35 | 21 25 | 22 18 | |
| 19 | 108 25.0 | 40.7 | 258 30.9 | 13.7 | 17 09.4 | 10.7 | 54.7 | S 10 | 04 51 | 05 16 | 05 37 | 20 01 | 20 51 | 21 44 | 22 39 | |
| 20 | 123 25.2 | 41.6 | 273 03.6 | 13.6 | 17 20.1 | 10.5 | 54.7 | 20 | 04 43 | 05 09 | 05 31 | 20 15 | 21 08 | 22 04 | 23 01 | |
| 21 | 138 25.3 | 42.6 | 287 36.2 | 13.6 | 17 30.6 | 10.5 | 54.7 | 30 | 04 31 | 05 00 | 05 24 | 20 31 | 21 29 | 22 28 | 23 27 | |
| 22 | 153 25.5 | 43.5 | 302 08.8 | 13.5 | 17 41.1 | 10.4 | 54.8 | 35 | 04 24 | 04 54 | 05 20 | 20 40 | 21 41 | 22 42 | 23 42 | |
| 23 | 168 25.6 | 44.4 | 316 41.3 | 13.4 | 17 51.5 | 10.4 | 54.8 | 40 | 04 15 | 04 48 | 05 15 | 20 51 | 21 54 | 22 58 | 24 00 | |
| 13 00 | 183 25.8 | S 7 45.4 | 331 13.7 | 13.3 | N18 01.9 | 10.3 | 54.8 | 45 | 04 03 | 04 40 | 05 10 | 21 04 | 22 11 | 23 17 | 24 21 | |
| 01 | 198 25.9 | 46.3 | 345 46.0 | 13.2 | 18 12.2 | 10.2 | 54.8 | S 50 | 03 49 | 04 30 | 05 03 | 21 20 | 22 31 | 23 42 | 24 48 | |
| 02 | 213 26.1 | 47.2 | 0 18.2 | 13.2 | 18 22.4 | 10.1 | 54.8 | 52 | 03 42 | 04 25 | 05 00 | 21 27 | 22 41 | 23 54 | 25 01 | |
| 03 | 228 26.2 | 48.2 | 14 50.4 | 13.1 | 18 32.5 | 10.1 | 54.8 | 54 | 03 34 | 04 20 | 04 57 | 21 35 | 22 52 | 24 07 | 00 07 | |
| 04 | 243 26.4 | 49.1 | 29 22.5 | 13.1 | 18 42.6 | 9.9 | 54.9 | 56 | 03 25 | 04 14 | 04 53 | 21 44 | 23 04 | 24 23 | 00 23 | |
| 05 | 258 26.5 | 50.0 | 43 54.6 | 12.9 | 18 52.5 | 10.0 | 54.9 | 58 | 03 14 | 04 07 | 04 49 | 21 55 | 23 19 | 24 41 | 00 41 | |
| 06 | 273 26.7 | S 7 51.0 | 58 26.5 | 12.9 | N19 02.5 | 9.8 | 54.9 | S 60 | 03 02 | 04 00 | 04 44 | 22 07 | 23 36 | 25 04 | 01 04 | |
| 07 | 288 26.8 | 51.9 | 72 58.4 | 12.8 | 19 12.3 | 9.7 | 54.9 | | | | | | | | | |
| 08 | 303 27.0 | 52.8 | 87 30.2 | 12.7 | 19 22.0 | 9.7 | 54.9 | Lat. | Sunset | Twilight | | | Moonset | | | |
| 09 | 318 27.1 | 53.8 | 102 01.9 | 12.7 | 19 31.7 | 9.6 | 54.9 | | | Civil | Naut. | 12 | 13 | 14 | 15 | |
| 10 | 333 27.3 | 54.7 | 116 33.6 | 12.6 | 19 41.3 | 9.5 | 55.0 | | | | | | | | | |
| 11 | 348 27.4 | 55.6 | 131 05.2 | 12.5 | 19 50.8 | 9.4 | 55.0 | N 70 | 16 15 | 17 25 | 18 43 | 11 32 | | | | |
| 12 | 3 27.6 | S 7 56.6 | 145 36.7 | 12.4 | N20 00.2 | 9.3 | 55.0 | N 70 | 16 26 | 17 28 | 18 38 | 10 51 | | | | |
| 13 | 18 27.7 | 57.5 | 160 08.1 | 12.3 | 20 09.5 | 9.3 | 55.0 | 68 | 16 34 | 17 31 | 18 35 | 10 24 | 12 36 | | | |
| 14 | 33 27.9 | 58.4 | 174 39.4 | 12.3 | 20 18.8 | 9.1 | 55.0 | 66 | 16 41 | 17 33 | 18 32 | 10 03 | 11 55 | 14 18 | | |
| 15 | 48 28.0 | 59.4 | 189 10.7 | 12.1 | 20 27.9 | 9.1 | 55.0 | 64 | 16 47 | 17 35 | 18 30 | 09 47 | 11 27 | 13 16 | 15 23 | |
| 16 | 63 28.2 | 8 00.3 | 203 41.8 | 12.1 | 20 37.0 | 9.0 | 55.1 | 62 | 16 52 | 17 37 | 18 28 | 09 33 | 11 06 | 12 42 | 14 17 | |
| 17 | 78 28.3 | 01.2 | 218 12.9 | 12.0 | 20 46.0 | 8.9 | 55.1 | 60 | 16 57 | 17 38 | 18 26 | 09 22 | 10 49 | 12 17 | 13 42 | |
| 18 | 93 28.5 | S 8 02.2 | 232 43.9 | 12.0 | N20 54.9 | 8.8 | 55.1 | N 58 | 17 00 | 17 40 | 18 25 | 09 12 | 10 34 | 11 58 | 13 17 | |
| 19 | 108 28.6 | 03.1 | 247 14.9 | 11.8 | 21 03.7 | 8.7 | 55.1 | 56 | 17 04 | 17 41 | 18 24 | 09 03 | 10 22 | 11 42 | 12 57 | |
| 20 | 123 28.8 | 04.0 | 261 45.7 | 11.8 | 21 12.4 | 8.6 | 55.1 | 54 | 17 07 | 17 43 | 18 24 | 08 56 | 10 12 | 11 28 | 12 40 | |
| 21 | 138 28.9 | 05.0 | 276 16.5 | 11.7 | 21 21.0 | 8.6 | 55.2 | 52 | 17 10 | 17 44 | 18 23 | 08 49 | 10 02 | 11 16 | 12 26 | |
| 22 | 153 29.1 | 05.9 | 290 47.2 | 11.6 | 21 29.6 | 8.4 | 55.2 | 50 | 17 13 | 17 45 | 18 23 | 08 43 | 09 54 | 11 05 | 12 14 | |
| 23 | 168 29.2 | 06.8 | 305 17.8 | 11.6 | 21 38.0 | 8.3 | 55.2 | 45 | 17 18 | 17 48 | 18 22 | 08 30 | 09 36 | 10 43 | 11 48 | |
| 14 00 | 183 29.4 | S 8 07.7 | 319 48.4 | 11.4 | N21 46.3 | 8.3 | 55.2 | N 40 | 17 23 | 17 51 | 18 22 | 08 19 | 09 21 | 10 25 | 11 28 | |
| 01 | 198 29.5 | 08.7 | 334 18.8 | 11.4 | 21 54.6 | 8.1 | 55.2 | 35 | 17 28 | 17 53 | 18 22 | 08 10 | 09 09 | 10 10 | 11 11 | |
| 02 | 213 29.7 | 09.6 | 348 49.2 | 11.3 | 22 02.7 | 8.0 | 55.3 | 30 | 17 31 | 17 55 | 18 23 | 08 02 | 08 59 | 09 57 | 10 56 | |
| 03 | 228 29.8 | 10.5 | 3 19.5 | 11.2 | 22 10.7 | 8.0 | 55.3 | 20 | 17 38 | 18 00 | 18 26 | 07 48 | 08 40 | 09 35 | 10 31 | |
| 04 | 243 29.9 | 11.5 | 17 49.7 | 11.1 | 22 18.7 | 7.8 | 55.3 | N 10 | 17 44 | 18 05 | 18 30 | 07 36 | 08 25 | 09 16 | 10 10 | |
| 05 | 258 30.1 | 12.4 | 32 19.8 | 11.0 | 22 26.5 | 7.8 | 55.3 | 0 | 17 49 | 18 10 | 18 35 | 07 25 | 08 10 | 08 58 | 09 50 | |
| 06 | 273 30.2 | S 8 13.3 | 46 49.8 | 11.0 | N22 34.3 | 7.6 | 55.3 | S 10 | 17 55 | 18 16 | 18 41 | 07 14 | 07 55 | 08 40 | 09 30 | |
| 07 | 288 30.4 | 14.3 | 61 19.8 | 10.9 | 22 41.9 | 7.5 | 55.4 | 20 | 18 01 | 18 24 | 18 50 | 07 02 | 07 40 | 08 22 | 09 09 | |
| 08 | 303 30.5 | 15.2 | 75 49.7 | 10.8 | 22 49.4 | 7.4 | 55.4 | 30 | 18 09 | 18 33 | 19 02 | 06 48 | 07 22 | 08 00 | 08 44 | |
| 09 | 318 30.7 | 16.1 | 90 19.5 | 10.7 | 22 56.8 | 7.4 | 55.4 | 35 | 18 13 | 18 39 | 19 09 | 06 40 | 07 11 | 07 47 | 08 30 | |
| 10 | 333 30.8 | 17.0 | 104 49.2 | 10.6 | 23 04.2 | 7.2 | 55.4 | 40 | 18 18 | 18 46 | 19 19 | 06 32 | 07 00 | 07 33 | 08 13 | |
| 11 | 348 31.0 | 18.0 | 119 18.8 | 10.6 | 23 11.4 | 7.1 | 55.4 | 45 | 18 23 | 18 54 | 19 30 | 06 21 | 06 46 | 07 15 | 07 53 | |
| 12 | 3 31.1 | S 8 18.9 | 133 48.4 | 10.4 | N23 18.5 | 7.0 | 55.5 | S 50 | 18 30 | 19 04 | 19 45 | 06 09 | 06 29 | 06 54 | 07 28 | |
| 13 | 18 31.2 | 19.8 | 148 17.8 | 10.4 | 23 25.5 | 6.8 | 55.5 | 52 | 18 33 | 19 09 | 19 52 | 06 03 | 06 21 | 06 44 | 07 16 | |
| 14 | 33 31.4 | 20.7 | 162 47.2 | 10.4 | 23 32.3 | 6.8 | 55.5 | 54 | 18 37 | 19 14 | 20 00 | 05 57 | 06 12 | 06 33 | 07 02 | |
| 15 | 48 31.5 | 21.7 | 177 16.6 | 10.2 | 23 39.1 | 6.7 | 55.5 | 56 | 18 41 | 19 20 | 20 10 | 05 50 | 06 02 | 06 20 | 06 46 | |
| 16 | 63 31.7 | 22.6 | 191 45.8 | 10.1 | 23 45.8 | 6.5 | 55.5 | | | | | | | | | |

1984 OCTOBER 15, 16, 17 (MON., TUES., WED.)

| G.M.T. | ARIES | | VENUS -3.4 | | MARS +0.6 | | JUPITER -1.7 | | SATURN +0.8 | | STARS | | |
|--------------------|----------|--------------|------------|-------------|-----------|-------------|--------------|-------------|-------------|-------------|----------|------------|------|
| | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. |
| 15 | 23 42.4 | 152 39.9 | S19 22.9 | 106 10.7 | S25 18.5 | 106 50.5 | S23 26.3 | 159 41.4 | S14 36.5 | Acomar | 315 34.5 | S40 21.8 | |
| 01 | 38 44.9 | 167 39.3 | 23.8 | 121 11.2 | 18.4 | 121 52.6 | 26.3 | 174 43.6 | 36.5 | Achernar | 335 42.2 | S57 18.8 | |
| 02 | 53 47.3 | 182 38.7 | 24.7 | 136 11.7 | 18.2 | 136 54.7 | 26.3 | 189 45.8 | 36.6 | Acrux | 173 34.9 | S63 00.7 | |
| 03 | 68 49.8 | 197 38.1 | 25.6 | 151 12.2 | 18.1 | 151 56.8 | 26.3 | 204 48.0 | 36.7 | Adhara | 255 29.7 | S28 56.7 | |
| 04 | 83 52.3 | 212 37.4 | 26.5 | 166 12.8 | 18.0 | 166 58.9 | 26.3 | 219 50.2 | 36.8 | Aldebaran | 291 14.3 | N16 28.9 | |
| 05 | 98 54.7 | 227 36.8 | 27.3 | 181 13.3 | 17.9 | 182 01.0 | 26.3 | 234 52.4 | 36.9 | | | | |
| 06 | 113 57.2 | 242 36.2 | S19 28.2 | 196 13.8 | S25 17.8 | 197 03.1 | S23 26.2 | 249 54.5 | S14 37.0 | Alioth | 166 40.2 | N56 02.6 | |
| 07 | 128 59.7 | 257 35.5 | 29.1 | 211 14.3 | 17.6 | 212 05.2 | 26.2 | 264 56.7 | 37.1 | Alkaid | 153 16.5 | N49 23.5 | |
| 08 | 144 02.1 | 272 34.9 | 30.0 | 226 14.8 | 17.5 | 227 07.3 | 26.2 | 279 58.9 | 37.1 | Al No'ir | 28 10.8 | S47 02.3 | |
| 09 | 159 04.6 | 287 34.3 | 30.8 | 241 15.3 | 17.4 | 242 09.4 | 26.2 | 295 01.1 | 37.2 | Alnilam | 276 08.5 | S 1 12.4 | |
| 10 | 174 07.1 | 302 33.6 | 31.7 | 256 15.8 | 17.3 | 257 11.5 | 26.2 | 310 03.3 | 37.3 | Alphard | 218 17.8 | S 8 35.2 | |
| 11 | 189 09.5 | 317 33.0 | 32.6 | 271 16.3 | 17.2 | 272 13.6 | 26.2 | 325 05.5 | 37.4 | | | | |
| 12 | 204 12.0 | 332 32.3 | S19 33.5 | 286 16.9 | S25 17.0 | 287 15.8 | S23 26.2 | 340 07.7 | S14 37.5 | Alphecca | 126 29.9 | N26 46.1 | |
| 13 | 219 14.4 | 347 31.7 | 34.3 | 301 17.4 | 16.9 | 302 17.9 | 26.2 | 355 09.8 | 37.6 | Alpheratz | 358 06.0 | N29 00.5 | |
| 14 | 234 16.9 | 2 31.1 | 35.2 | 316 17.9 | 16.8 | 317 20.0 | 26.1 | 10 12.0 | 37.6 | Altair | 62 29.6 | N 8 49.7 | |
| 15 | 249 19.4 | 17 30.4 | 36.1 | 331 18.4 | 16.7 | 332 22.1 | 26.1 | 25 14.2 | 37.7 | Ankaa | 353 36.7 | S42 23.4 | |
| 16 | 264 21.8 | 32 29.8 | 36.9 | 346 18.9 | 16.5 | 347 24.2 | 26.1 | 40 16.4 | 37.8 | Antares | 112 53.5 | S26 24.0 | |
| 17 | 279 24.3 | 47 29.2 | 37.8 | 1 19.4 | 16.4 | 2 26.3 | 26.1 | 55 18.6 | 37.9 | | | | |
| 18 | 294 26.8 | 62 28.5 | S19 38.7 | 16 19.9 | S25 16.3 | 17 28.4 | S23 26.1 | 70 20.8 | S14 38.0 | Arcturus | 146 16.0 | N19 15.8 | |
| 19 | 309 29.2 | 77 27.9 | 39.5 | 31 20.4 | 16.2 | 32 30.5 | 26.1 | 85 23.0 | 38.1 | Atria | 108 15.5 | S69 00.3 | |
| 20 | 324 31.7 | 92 27.2 | 40.4 | 46 21.0 | 16.0 | 47 32.6 | 26.1 | 100 25.1 | 38.2 | Avior | 234 27.2 | S59 27.2 | |
| 21 | 339 34.2 | 107 26.6 | 41.3 | 61 21.5 | 15.9 | 62 34.7 | 26.1 | 115 27.3 | 38.2 | Bellatrix | 278 55.4 | N 6 20.4 | |
| 22 | 354 36.6 | 122 26.0 | 42.1 | 76 22.0 | 15.8 | 77 36.8 | 26.0 | 130 29.5 | 38.3 | Betelgeuse | 271 24.9 | N 7 24.5 | |
| 23 | 9 39.1 | 137 25.3 | 43.0 | 91 22.5 | 15.7 | 92 38.9 | 26.0 | 145 31.7 | 38.4 | | | | |
| 16 | 24 41.6 | 152 24.7 | S19 43.9 | 106 23.0 | S25 15.5 | 107 41.0 | S23 26.0 | 160 33.9 | S14 38.5 | Canopus | 264 05.7 | S52 40.8 | |
| 01 | 39 44.0 | 167 24.0 | 44.7 | 121 23.5 | 15.4 | 122 43.1 | 26.0 | 175 36.1 | 38.6 | Capella | 281 06.6 | N45 59.0 | |
| 02 | 54 46.5 | 182 23.4 | 45.6 | 136 24.0 | 15.3 | 137 45.2 | 26.0 | 190 38.3 | 38.7 | Deneb | 49 46.4 | N45 13.7 | |
| 03 | 69 48.9 | 197 22.7 | 46.4 | 151 24.5 | 15.1 | 152 47.3 | 26.0 | 205 40.4 | 38.8 | Denebola | 182 56.3 | N14 39.6 | |
| 04 | 84 51.4 | 212 22.1 | 47.3 | 166 25.0 | 15.0 | 167 49.4 | 26.0 | 220 42.6 | 38.8 | Diphda | 349 17.5 | S18 04.2 | |
| 05 | 99 53.9 | 227 21.5 | 48.2 | 181 25.6 | 14.9 | 182 51.5 | 26.0 | 235 44.8 | 38.9 | | | | |
| 06 | 114 56.3 | 242 20.8 | S19 49.0 | 196 26.1 | S25 14.8 | 197 53.6 | S23 25.9 | 250 47.0 | S14 39.0 | Dubhe | 194 18.7 | N61 50.0 | |
| 07 | 129 58.8 | 257 20.2 | 49.9 | 211 26.6 | 14.6 | 212 55.7 | 25.9 | 265 49.2 | 39.1 | Elnath | 278 40.2 | N28 35.8 | |
| 08 | 145 01.3 | 272 19.5 | 50.7 | 226 27.1 | 14.5 | 227 57.8 | 25.9 | 280 51.4 | 39.2 | Eltanin | 90 56.6 | N51 29.6 | |
| 09 | 160 03.7 | 287 18.9 | 51.6 | 241 27.6 | 14.4 | 242 59.9 | 25.9 | 295 53.5 | 39.3 | Enif | 34 08.5 | N 9 48.3 | |
| 10 | 175 06.2 | 302 18.2 | 52.4 | 256 28.1 | 14.2 | 258 02.0 | 25.9 | 310 55.7 | 39.3 | Fomalhaut | 15 47.8 | S29 42.3 | |
| 11 | 190 08.7 | 317 17.6 | 53.3 | 271 28.6 | 14.1 | 273 04.1 | 25.9 | 325 57.9 | 39.4 | | | | |
| 12 | 205 11.1 | 332 16.9 | S19 54.1 | 286 29.1 | S25 14.0 | 288 06.2 | S23 25.9 | 341 00.1 | S14 39.5 | Gacrux | 172 26.2 | S57 01.4 | |
| 13 | 220 13.6 | 347 16.3 | 55.0 | 301 29.6 | 13.8 | 303 08.3 | 25.9 | 356 02.3 | 39.6 | Gienah | 176 15.3 | S17 27.2 | |
| 14 | 235 16.1 | 2 15.6 | 55.8 | 316 30.1 | 13.7 | 318 10.4 | 25.8 | 11 04.5 | 39.7 | Hadar | 149 20.0 | S60 17.9 | |
| 15 | 250 18.5 | 17 15.0 | 56.7 | 331 30.6 | 13.6 | 333 12.5 | 25.8 | 26 06.7 | 39.8 | Hamal | 328 25.3 | N23 23.5 | |
| 16 | 265 21.0 | 32 14.3 | 57.5 | 346 31.2 | 13.4 | 348 14.6 | 25.8 | 41 08.8 | 39.9 | Kaus Aust. | 84 13.0 | S34 23.7 | |
| 17 | 280 23.4 | 47 13.7 | 58.4 | 1 31.7 | 13.3 | 3 16.7 | 25.8 | 56 11.0 | 39.9 | | | | |
| 18 | 295 25.9 | 62 13.0 | S19 59.2 | 16 32.2 | S25 13.2 | 18 18.8 | S23 25.8 | 71 13.2 | S14 40.0 | Kochab | 137 19.8 | N74 13.2 | |
| 19 | 310 28.4 | 77 12.4 | 20 00.1 | 31 32.7 | 13.0 | 33 20.9 | 25.8 | 86 15.4 | 40.1 | Markab | 14 00.0 | N15 07.4 | |
| 20 | 325 30.8 | 92 11.7 | 00.9 | 46 33.2 | 12.9 | 48 23.0 | 25.8 | 101 17.6 | 40.2 | Menkar | 314 37.7 | N 4 01.9 | |
| 21 | 340 33.3 | 107 11.1 | 01.7 | 61 33.7 | 12.7 | 63 25.1 | 25.7 | 116 19.8 | 40.3 | Menkent | 148 34.0 | S36 17.6 | |
| 22 | 355 35.8 | 122 10.4 | 02.6 | 76 34.2 | 12.6 | 78 27.2 | 25.7 | 131 21.9 | 40.4 | Miaplacidus | 221 45.0 | S69 38.8 | |
| 23 | 10 38.2 | 137 09.8 | 03.4 | 91 34.7 | 12.5 | 93 29.3 | 25.7 | 146 24.1 | 40.5 | | | | |
| 17 | 25 40.7 | 152 09.1 | S20 04.3 | 106 35.2 | S25 12.3 | 108 31.3 | S23 25.7 | 161 26.3 | S14 40.5 | Mirfak | 309 11.5 | N49 48.5 | |
| 01 | 40 43.2 | 167 08.5 | 05.1 | 121 35.7 | 12.2 | 123 33.4 | 25.7 | 176 28.5 | 40.6 | Nunki | 76 25.5 | S26 19.1 | |
| 02 | 55 45.6 | 182 07.8 | 05.9 | 136 36.2 | 12.1 | 138 35.5 | 25.7 | 191 30.7 | 40.7 | Peacock | 53 53.4 | S56 47.4 | |
| 03 | 70 48.1 | 197 07.1 | 06.8 | 151 36.7 | 11.9 | 153 37.6 | 25.7 | 206 32.9 | 40.8 | Pollux | 243 54.5 | N28 03.9 | |
| 04 | 85 50.5 | 212 06.5 | 07.6 | 166 37.2 | 11.8 | 168 39.7 | 25.7 | 221 35.0 | 40.9 | Procyon | 245 22.7 | N 5 16.1 | |
| 05 | 100 53.0 | 227 05.8 | 08.5 | 181 37.8 | 11.6 | 183 41.8 | 25.6 | 236 37.2 | 41.0 | | | | |
| 06 | 115 55.5 | 242 05.2 | S20 09.3 | 196 38.3 | S25 11.5 | 198 43.9 | S23 25.6 | 251 39.4 | S14 41.0 | Rasalhague | 96 27.0 | N12 34.3 | |
| 07 | 130 57.9 | 257 04.5 | 10.1 | 211 38.8 | 11.4 | 213 46.0 | 25.6 | 266 41.6 | 41.1 | Regulus | 208 07.0 | N12 02.7 | |
| 08 | 146 00.4 | 272 03.8 | 11.0 | 226 39.3 | 11.2 | 228 48.1 | 25.6 | 281 43.8 | 41.2 | Rigel | 281 32.9 | S 8 12.9 | |
| 09 | 161 02.9 | 287 03.2 | 11.8 | 241 39.8 | 11.1 | 243 50.2 | 25.6 | 296 46.0 | 41.3 | Rigel Kent. | 140 22.6 | S60 46.3 | |
| 10 | 176 05.3 | 302 02.5 | 12.6 | 256 40.3 | 10.9 | 258 52.3 | 25.6 | 311 48.1 | 41.4 | Sabik | 102 37.9 | S15 42.4 | |
| 11 | 191 07.8 | 317 01.9 | 13.4 | 271 40.8 | 10.8 | 273 54.4 | 25.6 | 326 50.3 | 41.5 | | | | |
| 12 | 206 10.3 | 332 01.2 | S20 14.3 | 286 41.3 | S25 10.6 | 288 56.5 | S23 25.5 | 341 52.5 | S14 41.6 | Schedar | 350 05.3 | N56 27.3 | |
| 13 | 221 12.7 | 347 00.5 | 15.1 | 301 41.8 | 10.5 | 303 58.6 | 25.5 | 356 54.7 | 41.6 | Shaula | 96 51.9 | S37 05.8 | |
| 14 | 236 15.2 | 1 59.9 | 15.9 | 316 42.3 | 10.4 | 319 00.7 | 25.5 | 11 56.9 | 41.7 | Sirius | 258 53.0 | S16 41.4 | |
| 15 | 251 17.7 | 16 59.2 | 16.8 | 331 42.8 | 10.2 | 334 02.7 | 25.5 | 26 59.1 | 41.8 | Spica | 158 54.7 | S11 04.7 | |
| 16 | 266 20.1 | 31 58.6 | 17.6 | 346 43.3 | 10.1 | 349 04.8 | 25.5 | 42 01.2 | 41.9 | Shulai | 223 08.9 | S43 21.8 | |
| 17 | 281 22.6 | 46 57.9 | 18.4 | 1 43.8 | 09.9 | 4 06.9 | 25.5 | 57 03.4 | 42.0 | | | | |
| 18 | 296 25.0 | 61 57.2 | S20 19.2 | 16 44.3 | S25 09.8 | 19 09.0 | S23 25.5 | 72 05.6 | S14 42.1 | Vega | 80 53.9 | N38 46.3 | |
| 19 | 311 27.5 | 76 56.6 | 20.1 | 31 44.8 | 09.6 | 34 11.1 | 25.4 | 87 07.8 | 42.2 | Zuben'ubi | 137 30.1 | S15 58.6 | |
| 20 | 326 30.0 | 91 55.9 | 20.9 | 46 45.3 | 09.5 | 49 13.2 | 25.4 | 102 10.0 | 42.2 | | | | |
| 21 | 341 32.4 | 106 55.2 | 21.7 | 61 45.9 | 09.3 | 64 15.3 | 25.4 | 117 12.2 | 42.3 | | S.H.A. | Mer. Pass. | |
| 22 | 356 34.9 | 121 54.6 | 22.5 | 76 46.4 | 09.2 | 79 17.4 | 25.4 | 132 14.3 | 42.4 | Venus | 127 43.1 | 13 51 | |
| 23 | 11 37.4 | 136 53.9 | 23.3 | 91 46.9 | 09.0 | 94 19.5 | 25.4 | 147 16.5 | 42.5 | Mars | 81 41.4 | 16 54 | |
| Mer. Pass. 22 17.6 | | v -0.6 d 0.9 | | v 0.5 d 0.1 | | v 2.1 d 0.0 | | v 2.2 d 0.1 | | Jupiter | 82 59.4 | 16 47 | |
| | | | | | | | | | | Saturn | 135 52.3 | 13 16 | |



1984 OCTOBER 15, 16, 17 (MON., TUES., WED.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | | | | |
|---|----------|------|------|------|------|------|------|------|------|----------|-------|---------|----------|--------|----------|-------|---------|-------|-------|-------|
| | G.H.A. | Dec. | N | D | H.P. | N | D | d | | Naut. | Civil | | 15 | 16 | 17 | 18 | | | | |
| | | | | | | | | | h m | h m | h m | h m | h m | h m | h m | h m | | | | |
| 15 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 D A Y | 183 | 32.8 | S | 8 | 30.0 | 307 | 36.8 | 9.5 | N24 | 34.8 | 5.6 | 55.7 | N 72 | 05 00 | 06 18 | 07 30 | | | | |
| | 198 | 32.9 | | | 30.9 | 322 | 05.3 | 9.4 | 24 | 40.4 | 5.5 | 55.8 | N 70 | 05 03 | 06 14 | 07 18 | | | | |
| | 213 | 33.1 | | | 31.9 | 336 | 33.7 | 9.4 | 24 | 45.9 | 5.3 | 55.8 | 68 | 05 06 | 06 10 | 07 08 | | | | |
| | 228 | 33.2 | | | 32.8 | 351 | 02.1 | 9.3 | 24 | 51.2 | 5.3 | 55.8 | 66 | 05 08 | 06 07 | 07 00 | | | | 20 09 |
| | 243 | 33.4 | | | 33.7 | 5 | 30.4 | 9.2 | 24 | 56.5 | 5.1 | 55.8 | 64 | 05 09 | 06 04 | 06 53 | 16 40 | | 18 44 | 20 59 |
| | 258 | 33.5 | | | 34.6 | 19 | 58.6 | 9.2 | 25 | 01.6 | 4.9 | 55.8 | 62 | 05 11 | 06 02 | 06 47 | 17 46 | 18 26 | 19 46 | 21 31 |
| | 273 | 33.6 | S | 8 | 35.6 | 34 | 26.8 | 9.1 | N25 | 06.5 | 4.9 | 55.9 | 60 | 05 11 | 06 00 | 06 42 | 18 21 | 19 06 | 20 20 | 21 54 |
| | 288 | 33.8 | | | 36.5 | 48 | 54.9 | 9.0 | 25 | 11.4 | 4.7 | 55.9 | N 58 | 05 12 | 05 58 | 06 38 | 18 46 | 19 34 | 20 45 | 22 13 |
| | 303 | 33.9 | | | 37.4 | 63 | 22.9 | 8.9 | 25 | 16.1 | 4.6 | 55.9 | 56 | 05 13 | 05 56 | 06 33 | 19 07 | 19 56 | 21 05 | 22 29 |
| | 318 | 34.0 | | | 38.3 | 77 | 50.8 | 8.8 | 25 | 20.7 | 4.4 | 55.9 | 54 | 05 13 | 05 54 | 06 30 | 19 24 | 20 14 | 21 21 | 22 42 |
| | 333 | 34.2 | | | 39.3 | 92 | 18.6 | 8.8 | 25 | 25.1 | 4.3 | 56.0 | 52 | 05 13 | 05 52 | 06 27 | 19 38 | 20 29 | 21 35 | 22 54 |
| | 348 | 34.3 | | | 40.2 | 106 | 46.4 | 8.7 | 25 | 29.4 | 4.2 | 56.0 | 50 | 05 13 | 05 51 | 06 24 | 19 51 | 20 43 | 21 48 | 23 04 |
| | 3 34.5 | S | 8 | 41.1 | 121 | 14.1 | 8.7 | N25 | 33.6 | 4.1 | 56.0 | 45 | 05 13 | 05 47 | 06 17 | 20 17 | 21 10 | 22 13 | 23 26 | |
| | 18 34.6 | | | 42.0 | 135 | 41.8 | 8.6 | 25 | 37.7 | 3.9 | 56.1 | N 40 | 05 13 | 05 44 | 06 12 | 20 38 | 21 31 | 22 34 | 23 43 | |
| | 33 34.7 | | | 42.9 | 150 | 09.4 | 8.5 | 25 | 41.6 | 3.8 | 56.1 | 35 | 05 12 | 05 41 | 06 07 | 20 55 | 21 49 | 22 51 | 23 58 | |
| | 48 34.9 | | | 43.9 | 164 | 36.9 | 8.4 | 25 | 45.4 | 3.6 | 56.1 | 30 | 05 11 | 05 38 | 06 03 | 21 10 | 22 04 | 23 05 | 24 10 | |
| | 63 35.0 | | | 44.8 | 179 | 04.3 | 8.4 | 25 | 49.0 | 3.6 | 56.1 | 20 | 05 07 | 05 33 | 05 55 | 21 35 | 22 30 | 23 30 | 24 32 | |
| | 78 35.1 | | | 45.7 | 193 | 31.7 | 8.3 | 25 | 52.6 | 3.3 | 56.2 | N 10 | 05 03 | 05 27 | 05 48 | 21 57 | 22 53 | 23 51 | 24 50 | |
| | 93 35.3 | S | 8 | 46.6 | 207 | 59.0 | 8.2 | N25 | 55.9 | 3.3 | 56.2 | 0 | 04 57 | 05 21 | 05 42 | 22 18 | 23 14 | 24 11 | 00 11 | |
| | 108 35.4 | | | 47.6 | 222 | 26.2 | 8.2 | 25 | 59.2 | 3.1 | 56.2 | S 10 | 04 50 | 05 14 | 05 36 | 22 39 | 23 35 | 24 31 | 00 31 | |
| | 123 35.5 | | | 48.5 | 236 | 53.4 | 8.1 | 26 | 02.3 | 2.9 | 56.2 | 20 | 04 40 | 05 06 | 05 29 | 23 01 | 23 57 | 24 52 | 00 52 | |
| | 138 35.7 | | | 49.4 | 251 | 20.5 | 8.1 | 26 | 05.2 | 2.8 | 56.3 | 30 | 04 28 | 04 56 | 05 21 | 23 27 | 24 24 | 00 24 | 01 17 | |
| | 153 35.8 | | | 50.3 | 265 | 47.6 | 8.0 | 26 | 08.0 | 2.7 | 56.3 | 35 | 04 19 | 04 50 | 05 16 | 23 42 | 24 39 | 00 39 | 01 31 | |
| 168 35.9 | | | 51.2 | 280 | 14.6 | 8.0 | 26 | 10.7 | 2.5 | 56.3 | 40 | 04 10 | 04 43 | 05 11 | 24 00 | 00 00 | 00 57 | 01 48 | | |
| | | | | | | | | | | | 45 | 03 57 | 04 34 | 05 04 | 24 21 | 00 21 | 01 18 | 02 07 | | |
| 16 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 T U E S D A Y | 183 | 36.1 | S | 8 | 52.2 | 294 | 41.6 | 7.8 | N26 | 13.2 | 2.4 | 56.3 | S 50 | 03 42 | 04 23 | 04 57 | 24 48 | 00 48 | 01 46 | 02 32 |
| | 198 | 36.2 | | | 53.1 | 309 | 08.4 | 7.9 | 26 | 15.6 | 2.3 | 56.4 | 52 | 03 34 | 04 18 | 04 53 | 25 01 | 01 01 | 01 59 | 02 44 |
| | 213 | 36.3 | | | 54.0 | 323 | 35.3 | 7.7 | 26 | 17.9 | 2.1 | 56.4 | 54 | 03 25 | 04 12 | 04 50 | 00 07 | 01 16 | 02 14 | 02 58 |
| | 228 | 36.5 | | | 54.9 | 338 | 02.0 | 7.8 | 26 | 20.0 | 1.9 | 56.4 | 56 | 03 15 | 04 06 | 04 45 | 00 23 | 01 34 | 02 32 | 03 14 |
| | 243 | 36.6 | | | 55.8 | 352 | 28.8 | 7.6 | 26 | 21.9 | 1.8 | 56.5 | 58 | 03 04 | 03 58 | 04 41 | 00 41 | 01 56 | 02 54 | 03 32 |
| | 258 | 36.7 | | | 56.8 | 6 | 55.4 | 7.6 | 26 | 23.7 | 1.7 | 56.5 | S 60 | 02 50 | 03 50 | 04 35 | 01 04 | 02 24 | 03 22 | 03 55 |
| | 273 | 36.9 | S | 8 | 57.7 | 21 | 22.0 | 7.6 | N26 | 25.4 | 1.5 | 56.5 | | | | | | | | |
| | 288 | 37.0 | | | 58.6 | 35 | 48.6 | 7.5 | 26 | 26.9 | 1.4 | 56.5 | Lat. | Sunset | Twilight | | Moonset | | | |
| | 303 | 37.1 | | | 59.5 | 50 | 15.1 | 7.5 | 26 | 28.3 | 1.2 | 56.6 | | | Civil | Naut. | 15 | 16 | 17 | 18 |
| | 318 | 37.3 | | | 60.4 | 64 | 41.6 | 7.4 | 26 | 29.5 | 1.1 | 56.6 | | h m | h m | h m | h m | h m | h m | h m |
| | 333 | 37.4 | | | 61.4 | 79 | 08.0 | 7.4 | 26 | 30.6 | 0.9 | 56.6 | N 72 | 15 59 | 17 10 | 18 28 | | | | |
| | 348 | 37.5 | | | 62.3 | 93 | 34.4 | 7.3 | 26 | 31.5 | 0.7 | 56.7 | N 70 | 16 12 | 17 15 | 18 25 | | | | |
| | 3 37.7 | S | 9 | 03.2 | 108 | 00.7 | 7.3 | N26 | 32.2 | 0.7 | 56.7 | 68 | 16 22 | 17 19 | 18 23 | | | | | |
| | 18 37.8 | | | 04.1 | 122 | 27.0 | 7.2 | 26 | 32.9 | 0.4 | 56.7 | 66 | 16 30 | 17 22 | 18 21 | | | | 17 49 | |
| | 33 37.9 | | | 05.0 | 136 | 53.2 | 7.2 | 26 | 33.3 | 0.3 | 56.7 | 64 | 16 37 | 17 25 | 18 20 | 15 23 | | 17 13 | 16 58 | |
| | 48 38.1 | | | 05.9 | 151 | 19.4 | 7.2 | 26 | 33.6 | 0.2 | 56.8 | 62 | 16 43 | 17 28 | 18 19 | 14 17 | 15 33 | 16 11 | 16 26 | |
| | 63 38.2 | | | 06.9 | 165 | 45.6 | 7.1 | 26 | 33.8 | 0.0 | 56.8 | 60 | 16 48 | 17 30 | 18 18 | 13 42 | 14 52 | 15 37 | 16 01 | |
| | 78 38.3 | | | 07.8 | 180 | 11.7 | 7.1 | 26 | 33.8 | 0.2 | 56.8 | N 58 | 16 52 | 17 32 | 18 18 | 13 17 | 14 24 | 15 12 | 15 42 | |
| | 93 38.4 | S | 9 | 08.7 | 194 | 37.8 | 7.0 | N26 | 33.6 | 0.3 | 56.9 | 56 | 16 57 | 17 34 | 18 17 | 12 57 | 14 02 | 14 52 | 15 26 | |
| | 108 38.6 | | | 09.6 | 209 | 03.8 | 7.0 | 26 | 33.3 | 0.4 | 56.9 | 54 | 17 00 | 17 36 | 18 17 | 12 40 | 13 44 | 14 35 | 15 12 | |
| | 123 38.7 | | | 10.5 | 223 | 29.8 | 7.0 | 26 | 32.9 | 0.6 | 56.9 | 52 | 17 04 | 17 38 | 18 17 | 12 26 | 13 29 | 14 21 | 15 00 | |
| | 138 38.8 | | | 11.4 | 237 | 55.8 | 7.0 | 26 | 32.3 | 0.8 | 57.0 | 50 | 17 07 | 17 39 | 18 17 | 12 14 | 13 16 | 14 08 | 14 49 | |
| | 153 39.0 | | | 12.4 | 252 | 21.8 | 6.9 | 26 | 31.5 | 0.9 | 57.0 | 45 | 17 13 | 17 43 | 18 17 | 11 48 | 12 49 | 13 42 | 14 27 | |
| 168 39.1 | | | 13.3 | 266 | 47.7 | 6.9 | 26 | 30.6 | 1.1 | 57.0 | N 40 | 17 19 | 17 46 | 18 18 | 11 28 | 12 27 | 13 21 | 14 08 | | |
| 183 | 39.2 | S | 9 | 14.2 | 281 | 13.6 | 6.9 | N26 | 29.5 | 1.3 | 57.1 | 35 | 17 24 | 17 49 | 18 19 | 11 11 | 12 09 | 13 04 | 13 53 | |
| 198 | 39.3 | | | 15.1 | 295 | 39.5 | 6.8 | 26 | 28.2 | 1.3 | 57.1 | 30 | 17 28 | 17 52 | 18 20 | 10 56 | 11 54 | 12 49 | 13 40 | |
| 213 | 39.5 | | | 16.0 | 310 | 05.3 | 6.8 | 26 | 26.9 | 1.6 | 57.1 | 20 | 17 36 | 17 58 | 18 24 | 10 31 | 11 28 | 12 24 | 13 17 | |
| 228 | 39.6 | | | 16.9 | 324 | 31.1 | 6.8 | 26 | 25.3 | 1.7 | 57.1 | N 10 | 17 42 | 18 04 | 18 28 | 10 10 | 11 06 | 12 02 | 12 57 | |
| 243 | 39.7 | | | 17.8 | 338 | 56.9 | 6.8 | 26 | 23.6 | 1.9 | 57.2 | 0 | 17 49 | 18 10 | 18 34 | 09 50 | 10 45 | 11 41 | 12 38 | |
| 258 | 39.9 | | | 18.8 | 353 | 22.7 | 6.7 | 26 | 21.7 | 2.0 | 57.2 | S 10 | 17 55 | 18 17 | 18 42 | 09 30 | 10 24 | 11 21 | 12 19 | |
| 273 | 40.0 | S | 9 | 19.7 | 7 | 48.4 | 6.8 | N26 | 19.7 | 2.2 | 57.2 | 20 | 18 02 | 18 25 | 18 51 | 09 09 | 10 01 | 10 58 | 11 59 | |
| 288 | 40.1 | | | 20.6 | 22 | 14.2 | 6.7 | 26 | 17.5 | 2.3 | 57.3 | 30 | 18 11 | 18 35 | 19 04 | 08 44 | 09 35 | 10 33 | 11 36 | |
| 303 | 40.2 | | | 21.5 | 36 | 39.9 | 6.7 | 26 | 15.2 | 2.5 | 57.3 | 35 | 18 15 | 18 41 | 19 12 | 08 30 | 09 20 | 10 17 | 11 22 | |
| 318 | 40.4 | | | 22.4 | 51 | 05.6 | 6.7 | 26 | 12.7 | 2.7 | 57.3 | 40 | 18 21 | 18 49 | 19 22 | 08 13 | 09 02 | 10 00 | 11 06 | |
| 333 | 40.5 | | | 23.3 | 65 | 31.3 | 6.7 | 26 | 10.0 | 2.8 | 57.4 | 45 | 18 27 | 18 58 | 19 35 | 07 53 | 08 40 | 09 38 | 10 47 | |
| 348 | 40.6 | | | 24.2 | 79 | 57.0 | 6.6 | 26 | 07.2 | 3.0 | 57.4 | S 50 | 18 35 | 19 09 | 19 51 | 07 28 | 08 13 | 09 11 | 10 23 | |
| 3 40.7 | S | 9 | 25.2 | 94 | 22.6 | 6.7 | N26 | 04.2 | 3.1 | 57.4 | 52 | 18 39 | 19 14 | 19 59 | 07 16 | 07 59 | 08 58 | 10 11 | | |
| 18 40.9 | | | 26.1 | 108 | 48.3 | 6.7 | 26 | 01.1 | 3.3 | 57.5 | 54 | 18 43 | 19 20 | 20 07 | 07 02 | 07 44 | 08 43 | 09 58 | | |
| 33 41.0 | | | 27.0 | 123 | 14.0 | 6.6 | 25 | 57.8 | 3.5 | 57.5 | 56 | 18 47 | 19 27 | 20 18 | 06 46 | 07 26 | 08 25 | 09 42 | | |
| 48 41.1 | | | 27.9 | 137 | 39.6 | 6.6 | 25 | 54.3 | 3.6 | 57.5 | 58 | 18 52 | 19 34 | 20 29 | 06 27 | 07 04 | 08 03 | 09 24 | | |
| 63 41.2 | | | 28.8 | 152 | 05.2 | 6.7 | 25 | 50.7 | 3.8 | 57.6 | S 60 | 18 57 | 19 43 | 20 44 | 06 04 | 06 36 | 07 35 | 09 01 | | |
| 78 41.3 | | | 29.7 | 166 | 30.9 | 6.6 | 25 | 46.9 | 3.9 | 57.6 | | | | | | | | | | |
| 93 41.5 | S | 9 | 30.6 | 180 | 56.5 | 6.6 | N25 | 43.0 | 4.1 | 57.6 | | | | | | | | | | |
| 108 41.6 | | | 31.5 | 195 | 22.1 | 6 | | | | | | | | | | | | | | |

1984 DECEMBER 23, 24, 25 (SUN., MON., TUES.)

| G.M.T. | ARIES | | | VENUS -3.8 | | | MARS +1.1 | | | JUPITER -1.4 | | | SATURN +0.8 | | | STARS | | |
|------------------------|----------|--------------|---------|--------------|---------|--|--------------|------|--------------|--------------|--------|------|-------------|-------------|----------|----------|------|--|
| | G.H.A. | G.H.A. | Dec. | G.H.A. | Dec. | | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | G.H.A. | Dec. | Name | S.H.A. | Dec. | |
| 23 ^h | 91 43.0 | 132 30.5 S17 | 54.1 | 120 54.2 S13 | 06.6 | | 160 41.8 S22 | 16.6 | 219 43.6 S16 | 44.3 | | | | Acamar | 315 34.4 | S40 22.1 | | |
| 01 | 106 45.5 | 147 30.1 | 53.1 | 135 54.8 | 05.9 | | 175 43.6 | 16.6 | 234 45.8 | 44.4 | | | | Achernar | 335 42.5 | S57 19.1 | | |
| 02 | 121 47.9 | 162 29.7 | 52.2 | 150 55.5 | 05.2 | | 190 45.5 | 16.5 | 249 48.0 | 44.4 | | | | Acruz | 173 34.0 | S63 00.6 | | |
| 03 | 136 50.4 | 177 29.3 | 51.2 | 165 56.1 | 04.5 | | 205 47.4 | 16.4 | 264 50.2 | 44.5 | | | | Adhara | 255 29.3 | S28 56.9 | | |
| 04 | 151 52.9 | 192 28.9 | 50.3 | 180 56.7 | 03.8 | | 220 49.2 | 16.3 | 279 52.4 | 44.5 | | | | Aldebaran | 291 14.1 | N16 28.9 | | |
| 05 | 166 55.3 | 207 28.6 | 49.3 | 195 57.4 | 03.1 | | 235 51.1 | 16.2 | 294 54.6 | 44.6 | | | | | | | | |
| 06 | 181 57.8 | 222 28.2 S17 | 48.4 | 210 58.0 S13 | 02.4 | | 250 52.9 S22 | 16.2 | 309 56.8 S16 | 44.7 | | | | Alioth | 166 39.6 | N56 02.3 | | |
| 07 | 197 00.3 | 237 27.8 | 47.4 | 225 58.7 | 01.7 | | 265 54.8 | 16.1 | 324 59.1 | 44.7 | | | | Alkaid | 153 16.1 | M49 23.1 | | |
| 08 | 212 02.7 | 252 27.4 | 46.5 | 240 59.3 | 01.0 | | 280 56.6 | 16.0 | 340 01.3 | 44.8 | | | | Al No'ir | 28 11.1 | S47 02.4 | | |
| 09 | 227 05.2 | 267 27.0 | 45.5 | 255 59.9 | 13 00.3 | | 295 58.5 | 15.9 | 355 03.5 | 44.8 | | | | Anilam | 276 08.1 | S 1 12.6 | | |
| SUN | 242 07.7 | 282 26.7 | 44.5 | 271 00.6 | 12 59.6 | | 311 00.3 | 15.9 | 10 05.7 | 44.9 | | | | Alphard | 218 17.3 | S 8 35.4 | | |
| D | 257 10.1 | 297 26.3 | 43.6 | 286 01.2 | 58.9 | | 326 02.2 | 15.8 | 25 07.9 | 45.0 | | | | | | | | |
| A | 272 12.6 | 312 25.9 S17 | 42.6 | 301 01.9 S12 | 58.2 | | 341 04.0 S22 | 15.7 | 40 10.1 S16 | 45.0 | | | | Alphecca | 126 29.7 | N26 45.8 | | |
| 13 | 287 15.0 | 327 25.5 | 41.7 | 316 02.5 | 57.5 | | 356 05.9 | 15.6 | 55 12.3 | 45.1 | | | | Alpheratz | 358 06.1 | N29 00.5 | | |
| Y | 302 17.5 | 342 25.2 | 40.7 | 331 03.1 | 56.8 | | 11 07.7 | 15.5 | 70 14.5 | 45.1 | | | | Altair | 62 29.8 | N 8 49.6 | | |
| 14 | 317 20.0 | 357 24.8 | 39.7 | 346 03.8 | 56.1 | | 26 09.6 | 15.5 | 85 16.7 | 45.2 | | | | Ankaa | 353 37.0 | S42 23.6 | | |
| 15 | 332 22.4 | 12 24.4 | 38.8 | 1 04.4 | 55.4 | | 41 11.5 | 15.4 | 100 18.9 | 45.2 | | | | Antares | 112 53.4 | S26 23.9 | | |
| 16 | 347 24.9 | 27 24.1 | 37.8 | 16 05.1 | 54.7 | | 56 13.3 | 15.3 | 115 21.1 | 45.3 | | | | | | | | |
| 17 | 2 27.4 | 42 23.7 S17 | 36.9 | 31 05.7 S12 | 54.0 | | 71 15.2 S22 | 15.2 | 130 23.3 S16 | 45.4 | | | | Arcturus | 146 15.7 | N19 15.5 | | |
| 18 | 17 29.8 | 57 23.3 | 35.9 | 46 06.3 | 53.2 | | 86 17.0 | 15.2 | 145 25.5 | 45.4 | | | | Atria | 108 15.4 | S69 00.0 | | |
| 19 | 32 32.3 | 72 22.9 | 34.9 | 61 07.0 | 52.5 | | 101 18.9 | 15.1 | 160 27.7 | 45.5 | | | | Avior | 234 26.5 | S59 27.4 | | |
| 20 | 47 34.8 | 87 22.6 | 34.0 | 76 07.6 | 51.8 | | 116 20.7 | 15.0 | 175 29.9 | 45.5 | | | | Bellatrix | 278 55.0 | N 6 20.3 | | |
| 21 | 62 37.2 | 102 22.2 | 33.0 | 91 08.3 | 51.1 | | 131 22.6 | 14.9 | 190 32.1 | 45.6 | | | | Betelgeuse | 271 24.5 | N 7 24.4 | | |
| 22 | 77 39.7 | 117 21.8 | 32.0 | 106 08.9 | 50.4 | | 146 24.4 | 14.8 | 205 34.3 | 45.7 | | | | | | | | |
| 24 ^h | 92 42.2 | 132 21.5 S17 | 31.1 | 121 09.6 S12 | 49.7 | | 161 26.3 S22 | 14.8 | 220 36.5 S16 | 45.7 | | | | Canopus | 264 05.3 | S52 41.1 | | |
| 01 | 107 44.6 | 147 21.1 | 30.1 | 136 10.2 | 49.0 | | 176 28.1 | 14.7 | 235 38.7 | 45.8 | | | | Capella | 281-06.2 | N45 59.1 | | |
| 02 | 122 47.1 | 162 20.8 | 29.1 | 151 10.8 | 48.3 | | 191 30.0 | 14.6 | 250 40.9 | 45.8 | | | | Deneb | 49 46.8 | N45 13.6 | | |
| 03 | 137 49.5 | 177 20.4 | 28.1 | 166 11.5 | 47.6 | | 206 31.8 | 14.5 | 265 43.1 | 45.9 | | | | Denebola | 182 55.8 | N14 39.4 | | |
| 04 | 152 52.0 | 192 20.0 | 27.2 | 181 12.1 | 46.9 | | 221 33.7 | 14.4 | 280 45.3 | 46.0 | | | | Diphda | 349 17.6 | S18 04.3 | | |
| 05 | 167 54.5 | 207 19.7 | 26.2 | 196 12.8 | 46.2 | | 236 35.5 | 14.4 | 295 47.5 | 46.0 | | | | | | | | |
| 06 | 182 56.9 | 222 19.3 S17 | 25.2 | 211 13.4 S12 | 45.5 | | 251 37.4 S22 | 14.3 | 310 49.7 S16 | 46.1 | | | | Dubhe | 194 17.8 | N61 49.7 | | |
| 07 | 197 59.4 | 237 19.0 | 24.3 | 226 14.1 | 44.8 | | 266 39.2 | 14.2 | 325 51.9 | 46.1 | | | | Elnath | 278 39.8 | N28 35.8 | | |
| 08 | 213 01.9 | 252 18.6 | 23.3 | 241 14.7 | 44.1 | | 281 41.1 | 14.1 | 340 54.1 | 46.2 | | | | Eltanin | 90 56.8 | N51 29.3 | | |
| M | 228 04.3 | 267 18.2 | 22.3 | 256 15.3 | 43.4 | | 296 42.9 | 14.0 | 355 56.4 | 46.2 | | | | Enif | 34 08.7 | N 9 48.3 | | |
| 09 | 243 06.8 | 282 17.9 | 21.3 | 271 16.0 | 42.7 | | 311 44.8 | 14.0 | 10 58.6 | 46.3 | | | | Fomalhaut | 15 48.0 | S29 42.4 | | |
| 10 | 258 09.3 | 297 17.5 | 20.4 | 286 16.6 | 42.0 | | 326 46.7 | 13.9 | 26 00.8 | 46.4 | | | | | | | | |
| D | 273 11.7 | 312 17.2 S17 | 19.4 | 301 17.3 S12 | 41.3 | | 341 48.5 S22 | 13.8 | 41 03.0 S16 | 46.4 | | | | Gacrux | 172 25.5 | S57 01.4 | | |
| 12 | 288 14.2 | 327 16.8 | 18.4 | 316 17.9 | 40.6 | | 356 50.4 | 13.7 | 56 05.2 | 46.5 | | | | Gienah | 176 14.8 | S17 27.2 | | |
| A | 303 16.6 | 342 16.5 | 17.4 | 331 18.6 | 39.8 | | 11 52.2 | 13.6 | 71 07.4 | 46.5 | | | | Hadar | 149 19.4 | S60 17.8 | | |
| 13 | 318 19.1 | 357 16.1 | 16.4 | 346 19.2 | 39.1 | | 26 54.1 | 13.6 | 86 09.6 | 46.6 | | | | Hamal | 328 25.2 | N23 23.6 | | |
| 14 | 333 21.6 | 12 15.8 | 15.5 | 1 19.8 | 38.4 | | 41 55.9 | 13.5 | 101 11.8 | 46.7 | | | | Kaus Aust. | 84 13.1 | S34 23.7 | | |
| 15 | 348 24.0 | 27 15.4 | 14.5 | 16 20.5 | 37.7 | | 56 57.8 | 13.4 | 116 14.0 | 46.7 | | | | | | | | |
| 16 | 3 26.5 | 42 15.1 S17 | 13.5 | 31 21.1 S12 | 37.0 | | 71 59.6 S22 | 13.3 | 131 16.2 S16 | 46.8 | | | | Kochab | 137 19.5 | N74 12.8 | | |
| 17 | 18 29.0 | 57 14.7 | 12.5 | 46 21.8 | 36.3 | | 87 01.5 | 13.2 | 146 18.4 | 46.8 | | | | Markab | 14 00.2 | N15 07.4 | | |
| 18 | 33 31.4 | 72 14.4 | 11.5 | 61 22.4 | 35.6 | | 102 03.3 | 13.2 | 161 20.6 | 46.9 | | | | Menkar | 314 37.6 | N 4 01.9 | | |
| 19 | 48 33.9 | 87 14.0 | 10.6 | 76 23.1 | 34.9 | | 117 05.2 | 13.1 | 176 22.8 | 47.0 | | | | Menkent | 148 33.6 | S36 17.6 | | |
| 20 | 63 36.4 | 102 13.7 | 09.6 | 91 23.7 | 34.2 | | 132 07.0 | 13.0 | 191 25.0 | 47.0 | | | | Miaplacidus | 221 43.9 | S69 39.0 | | |
| 21 | 78 38.8 | 117 13.3 | 08.6 | 106 24.4 | 33.5 | | 147 08.9 | 12.9 | 206 27.2 | 47.1 | | | | | | | | |
| 25 ^h | 93 41.3 | 132 13.0 S17 | 07.6 | 121 25.0 S12 | 32.8 | | 162 10.7 S22 | 12.9 | 221 29.4 S16 | 47.1 | | | | Mirfak | 309 11.3 | N49 48.7 | | |
| 01 | 108 43.8 | 147 12.6 | 06.6 | 136 25.7 | 32.1 | | 177 12.6 | 12.8 | 236 31.6 | 47.2 | | | | Nunki | 76 25.6 | S26 19.1 | | |
| 02 | 123 46.2 | 162 12.3 | 05.6 | 151 26.3 | 31.3 | | 192 14.4 | 12.7 | 251 33.8 | 47.2 | | | | Peacock | 53 53.8 | S56 47.3 | | |
| 03 | 138 48.7 | 177 11.9 | 04.6 | 166 26.9 | 30.6 | | 207 16.3 | 12.6 | 266 36.1 | 47.3 | | | | Pollux | 243 53.9 | N28 03.8 | | |
| 04 | 153 51.1 | 192 11.6 | 03.7 | 181 27.6 | 29.9 | | 222 18.1 | 12.5 | 281 38.3 | 47.4 | | | | Procyon | 245 22.2 | N 5 15.9 | | |
| 05 | 168 53.6 | 207 11.3 | 02.7 | 196 28.2 | 29.2 | | 237 20.0 | 12.5 | 296 40.5 | 47.4 | | | | | | | | |
| 06 | 183 56.1 | 222 10.9 S17 | 01.7 | 211 28.9 S12 | 28.5 | | 252 21.8 S22 | 12.4 | 311 42.7 S16 | 47.5 | | | | Rasalhague | 96 27.0 | N12 34.1 | | |
| 07 | 198 58.5 | 237 10.6 | 17 00.7 | 226 29.5 | 27.8 | | 267 23.7 | 12.3 | 326 44.9 | 47.5 | | | | Regulus | 208 06.4 | N12 02.5 | | |
| 08 | 214 01.0 | 252 10.2 | 16 59.7 | 241 30.2 | 27.1 | | 282 25.5 | 12.2 | 341 47.1 | 47.6 | | | | Rigel | 281 32.6 | S 8 13.1 | | |
| 09 | 229 03.5 | 267 09.9 | 16 58.7 | 256 30.8 | 26.4 | | 297 27.4 | 12.1 | 356 49.3 | 47.6 | | | | Rigel Kent. | 140 22.2 | S60 46.1 | | |
| 10 | 244 05.9 | 282 09.6 | 16 57.7 | 271 31.5 | 25.7 | | 312 29.2 | 12.0 | 11 51.5 | 47.7 | | | | Sabik | 102 37.9 | S15 42.5 | | |
| 11 | 259 08.4 | 297 09.2 | 16 56.7 | 286 32.1 | 24.9 | | 327 31.1 | 12.0 | 26 53.7 | 47.8 | | | | | | | | |
| 12 | 274 10.9 | 312 08.9 S16 | 55.7 | 301 32.8 S12 | 24.2 | | 342 32.9 S22 | 11.9 | 41 55.9 S16 | 47.8 | | | | Schedar | 350 05.6 | N56 27.5 | | |
| 13 | 289 13.3 | 327 08.6 | 54.7 | 316 33.4 | 23.5 | | 357 34.8 | 11.8 | 56 58.1 | 47.9 | | | | Shaula | 96 51.9 | S37 05.7 | | |
| 14 | 304 15.8 | 342 08.2 | 53.7 | 331 34.1 | 22.8 | | 12 36.6 | 11.7 | 72 00.3 | 47.9 | | | | Sirius | 258 52.6 | S16 41.6 | | |
| 15 | 319 18.3 | 357 07.9 | 52.7 | 346 34.7 | 22.1 | | 27 38.5 | 11.6 | 87 02.5 | 48.0 | | | | Spica | 158 54.4 | S11 04.9 | | |
| 16 | 334 20.7 | 12 07.6 | 51.7 | 1 35.4 | 21.4 | | 42 40.4 | 11.6 | 102 04.7 | 48.1 | | | | Suhail | 223 08.2 | S43 22.0 | | |
| 17 | 349 23.2 | 27 07.2 | 50.8 | 16 36.0 | 20.7 | | 57 42.2 | 11.5 | 117 07.0 | 48.1 | | | | | | | | |
| 18 | 4 25.6 | 42 06.9 S16 | 49.8 | 31 36.7 S12 | 20.0 | | 72 44.1 S22 | 11.4 | 132 09.2 S16 | 48.2 | | | | Vega | 80 54.2 | N38 46.1 | | |
| 19 | 19 28.1 | 57 06.6 | 48.8 | 46 37.3 | 19.3 | | | | | | | | | | | | | |

1984 DECEMBER 23, 24, 25 (SUN., MON., TUES.)

| G.M.T. | SUN | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | |
|-----------|-----------|----------|-----------|----------|----------|----------|------|------------|--------|----------|----------|-------|-------|-------|-----|
| | G.H.A. | Dec. | G.H.A. | <i>v</i> | Dec. | <i>d</i> | | M.P. | Naut. | | Civil | 23 | 24 | 25 | 26 |
| | h m | ° | ° | ' | ° | ' | | ' | h m | | h m | h m | h m | h m | h m |
| 23 | 180 15.1 | S23 26.1 | 172 59.7 | 5.3 | S26 35.7 | 0.2 | 58.0 | N 72 08 27 | 10 58 | 09 55 | 09 55 | 10 58 | 11 55 | 12 47 | |
| 01 | 195 14.8 | 26.1 | 187 24.0 | 5.4 | 26 35.9 | 0.0 | 57.9 | 68 07 51 | 09 20 | 09 20 | 09 20 | 14 54 | 13 15 | 12 25 | |
| 02 | 210 14.5 | 26.1 | 201 48.4 | 5.4 | 26 35.9 | 0.1 | 57.9 | 66 07 38 | 08 55 | 08 55 | 10 36 | 13 11 | 12 47 | 12 25 | |
| 03 | 225 14.2 | 26.1 | 216 12.8 | 5.4 | 26 35.8 | 0.3 | 57.9 | 64 07 27 | 08 35 | 08 35 | 09 53 | 12 47 | 12 33 | 12 25 | |
| 04 | 240 13.8 | 26.0 | 230 37.2 | 5.5 | 26 35.5 | 0.5 | 57.9 | 62 07 17 | 08 19 | 08 19 | 09 25 | 11 37 | 11 59 | 12 08 | |
| 05 | 255 13.5 | 26.0 | 245 01.7 | 5.5 | 26 35.0 | 0.7 | 57.8 | 60 07 09 | 08 06 | 08 06 | 09 03 | 10 55 | 11 28 | 11 53 | |
| 06 | 270 13.2 | S23 26.0 | 259 26.2 | 5.6 | S26 34.3 | 0.8 | 57.8 | N 58 07 01 | 07 54 | 07 54 | 08 46 | 10 26 | 11 05 | 11 41 | |
| 07 | 285 12.9 | 25.9 | 273 50.8 | 5.6 | 26 33.5 | 1.0 | 57.8 | 56 06 54 | 07 44 | 07 44 | 08 31 | 10 04 | 10 46 | 11 30 | |
| 08 | 300 12.6 | 25.9 | 288 15.4 | 5.6 | 26 32.5 | 1.1 | 57.7 | 54 06 48 | 07 35 | 07 35 | 08 18 | 09 46 | 10 30 | 11 20 | |
| S 09 | 315 12.3 | 25.9 | 302 40.0 | 5.6 | 26 31.4 | 1.3 | 57.7 | 52 06 43 | 07 26 | 07 26 | 08 07 | 09 31 | 10 16 | 11 12 | |
| U 10 | 330 12.0 | 25.8 | 317 04.8 | 5.7 | 26 30.1 | 1.5 | 57.7 | 50 06 37 | 07 19 | 07 19 | 07 57 | 09 17 | 10 04 | 11 04 | |
| N 11 | 345 11.7 | 25.8 | 331 29.5 | 5.8 | 26 28.6 | 1.7 | 57.7 | 45 06 25 | 07 03 | 07 03 | 07 37 | 08 50 | 09 39 | 10 48 | |
| D 12 | 0 11.3 | S23 25.8 | 345 54.3 | 5.9 | S26 26.9 | 1.8 | 57.6 | N 40 06 15 | 06 49 | 06 49 | 07 20 | 08 28 | 09 19 | 10 34 | |
| A 13 | 15 11.0 | 25.7 | 0 19.2 | 6.0 | 26 25.1 | 1.9 | 57.6 | 35 06 06 | 06 37 | 06 37 | 07 06 | 08 10 | 09 03 | 10 23 | |
| Y 14 | 30 10.7 | 25.7 | 14 44.2 | 6.0 | 26 23.2 | 2.2 | 57.6 | 30 05 57 | 06 27 | 06 27 | 06 53 | 07 55 | 08 48 | 10 13 | |
| 15 | 45 10.4 | 25.7 | 29 09.2 | 6.0 | 26 21.0 | 2.2 | 57.5 | 20 05 40 | 06 08 | 06 08 | 06 32 | 07 28 | 08 23 | 09 55 | |
| 16 | 60 10.1 | 25.6 | 43 34.2 | 6.2 | 26 18.8 | 2.5 | 57.5 | N 10 05 24 | 05 51 | 05 51 | 06 13 | 07 06 | 08 02 | 09 40 | |
| 17 | 75 09.8 | 25.6 | 57 59.4 | 6.1 | 26 16.3 | 2.6 | 57.5 | 0 05 07 | 05 33 | 05 33 | 05 56 | 06 45 | 07 42 | 09 26 | |
| 18 | 90 09.5 | S23 25.5 | 72 24.5 | 6.3 | S26 13.7 | 2.7 | 57.5 | S 10 04 48 | 05 15 | 05 15 | 05 38 | 06 24 | 07 22 | 08 19 | |
| 19 | 105 09.2 | 25.5 | 86 49.8 | 6.3 | 26 11.0 | 3.0 | 57.4 | 20 04 26 | 04 55 | 04 55 | 05 19 | 06 01 | 07 01 | 08 06 | |
| 20 | 120 08.8 | 25.5 | 101 15.1 | 6.4 | 26 08.0 | 3.0 | 57.4 | 30 03 56 | 04 30 | 04 30 | 04 57 | 05 35 | 06 36 | 07 38 | |
| 21 | 135 08.5 | 25.4 | 115 40.5 | 6.5 | 26 05.0 | 3.3 | 57.4 | 35 03 38 | 04 15 | 04 15 | 04 44 | 05 19 | 06 21 | 07 25 | |
| 22 | 150 08.2 | 25.4 | 130 06.0 | 6.6 | 26 01.7 | 3.3 | 57.3 | 40 03 15 | 03 56 | 03 56 | 04 29 | 05 02 | 06 04 | 07 10 | |
| 23 | 165 07.9 | 25.3 | 144 31.6 | 6.6 | 25 58.4 | 3.6 | 57.3 | 45 02 44 | 03 34 | 03 34 | 04 11 | 04 40 | 05 44 | 06 53 | |
| 24 | 180 07.6 | S23 25.3 | 158 57.2 | 6.7 | S25 54.8 | 3.7 | 57.3 | S 50 01 58 | 03 04 | 03 04 | 03 49 | 04 13 | 05 18 | 06 31 | |
| 01 | 195 07.3 | 25.2 | 173 22.9 | 6.8 | 25 51.1 | 3.8 | 57.3 | 52 01 30 | 02 49 | 02 49 | 03 38 | 03 59 | 05 06 | 06 20 | |
| 02 | 210 07.0 | 25.2 | 187 48.7 | 6.8 | 25 47.3 | 4.0 | 57.2 | 54 00 43 | 02 31 | 02 31 | 03 25 | 03 44 | 04 52 | 06 08 | |
| 03 | 225 06.7 | 25.1 | 202 14.5 | 7.0 | 25 43.3 | 4.1 | 57.2 | 56 | 02 08 | 02 08 | 03 11 | 03 26 | 04 35 | 05 55 | |
| 04 | 240 06.3 | 25.1 | 216 40.5 | 7.0 | 25 39.2 | 4.3 | 57.2 | 58 | 01 39 | 01 39 | 02 54 | 03 04 | 04 15 | 05 38 | |
| 05 | 255 06.0 | 25.0 | 231 06.5 | 7.1 | 25 34.9 | 4.4 | 57.1 | S 60 | 00 48 | 00 48 | 02 34 | 02 36 | 03 50 | 05 19 | |
| 06 | 270 05.7 | S23 25.0 | 245 32.6 | 7.2 | S25 30.5 | 4.6 | 57.1 | | | | | | | | |
| 07 | 285 05.4 | 24.9 | 259 58.8 | 7.3 | 25 25.9 | 4.7 | 57.1 | Lat. | Sunset | Twilight | Moonset | | | | |
| 08 | 300 05.1 | 24.9 | 274 25.1 | 7.3 | 25 21.2 | 4.9 | 57.0 | | | Civil | Naut. | 23 | 24 | 25 | 26 |
| M 09 | 315 04.8 | 24.8 | 288 51.4 | 7.5 | 25 16.3 | 4.9 | 57.0 | | | | | | | | |
| N 10 | 330 04.5 | 24.8 | 303 17.9 | 7.5 | 25 11.4 | 5.2 | 57.0 | | | | | | | | |
| O 11 | 345 04.2 | 24.7 | 317 44.4 | 7.6 | 25 06.2 | 5.3 | 57.0 | | | | | | | | |
| D 12 | 0 03.8 | S23 24.7 | 332 11.0 | 7.8 | S25 00.9 | 5.4 | 56.9 | N 72 | 13 02 | 15 33 | 13 02 | 15 33 | 15 05 | 16 00 | |
| A 13 | 15 03.5 | 24.6 | 346 37.8 | 7.8 | 24 55.5 | 5.5 | 56.9 | N 70 | 14 04 | 16 09 | 14 04 | 16 09 | 15 38 | 16 17 | |
| Y 14 | 30 03.2 | 24.6 | 1 04.6 | 7.9 | 24 50.0 | 5.7 | 56.9 | 68 | 14 39 | 16 09 | 13 24 | 15 05 | 16 22 | 16 38 | |
| 15 | 45 02.9 | 24.5 | 15 31.5 | 8.0 | 24 44.3 | 5.8 | 56.8 | 66 | 15 05 | 16 22 | 14 06 | 15 24 | 16 33 | 17 16 | |
| 16 | 60 02.6 | 24.4 | 29 58.5 | 8.1 | 24 38.5 | 6.0 | 56.8 | 64 | 15 24 | 16 33 | 14 35 | 15 40 | 16 42 | 17 42 | |
| 17 | 75 02.3 | 24.4 | 44 25.6 | 8.2 | 24 32.5 | 6.0 | 56.8 | 62 | 15 40 | 16 42 | 14 56 | 15 54 | 16 51 | 18 03 | |
| 18 | 90 02.0 | S23 24.3 | 58 52.8 | 8.3 | S24 26.5 | 6.2 | 56.8 | N 58 | 15 14 | 16 06 | 15 14 | 16 06 | 16 58 | 18 19 | |
| 19 | 105 01.7 | 24.3 | 73 20.1 | 8.4 | 24 20.3 | 6.4 | 56.7 | 56 | 15 28 | 16 16 | 15 28 | 16 16 | 17 05 | 18 34 | |
| 20 | 120 01.3 | 24.2 | 87 47.5 | 8.5 | 24 13.9 | 6.4 | 56.7 | 54 | 15 41 | 16 25 | 15 41 | 16 25 | 17 11 | 18 46 | |
| 21 | 135 01.0 | 24.1 | 102 15.0 | 8.6 | 24 07.5 | 6.6 | 56.7 | 52 | 15 52 | 16 33 | 15 52 | 16 33 | 17 17 | 18 56 | |
| 22 | 150 00.7 | 24.1 | 116 42.6 | 8.7 | 24 00.9 | 6.7 | 56.6 | 50 | 16 02 | 16 41 | 16 02 | 16 41 | 17 22 | 19 06 | |
| 23 | 165 00.4 | 24.0 | 131 10.3 | 8.7 | 23 54.2 | 6.9 | 56.6 | 45 | 16 23 | 16 57 | 16 23 | 16 57 | 17 34 | 20 35 | |
| 25 | 180 00.1 | S23 24.0 | 145 38.0 | 8.9 | S23 47.3 | 6.9 | 56.6 | N 40 | 16 40 | 17 10 | 16 40 | 17 14 | 17 31 | 18 36 | |
| 01 | 194 59.8 | 23.9 | 160 05.9 | 9.0 | 23 40.4 | 7.1 | 56.5 | 35 | 16 54 | 17 22 | 16 54 | 17 48 | 18 52 | 19 55 | |
| 02 | 209 59.5 | 23.8 | 174 33.9 | 9.1 | 23 33.3 | 7.2 | 56.5 | 30 | 17 06 | 17 33 | 17 06 | 17 33 | 18 04 | 19 06 | |
| 03 | 224 59.2 | 23.8 | 189 02.0 | 9.2 | 23 26.1 | 7.3 | 56.5 | 20 | 17 27 | 17 52 | 17 27 | 18 19 | 19 29 | 20 27 | |
| 04 | 239 58.9 | 23.7 | 203 30.2 | 9.3 | 23 18.8 | 7.4 | 56.5 | N 10 | 17 46 | 18 09 | 17 46 | 18 35 | 19 50 | 20 44 | |
| 05 | 254 58.5 | 23.6 | 217 58.5 | 9.4 | 23 11.4 | 7.5 | 56.4 | 0 | 18 03 | 18 26 | 18 03 | 18 52 | 19 13 | 20 09 | |
| 06 | 269 58.2 | S23 23.5 | 232 26.9 | 9.5 | S23 03.9 | 7.7 | 56.4 | S 10 | 18 21 | 18 44 | 18 21 | 19 11 | 19 33 | 20 27 | |
| 07 | 284 57.9 | 23.5 | 246 55.4 | 9.6 | 22 56.2 | 7.8 | 56.4 | 20 | 18 40 | 19 05 | 18 40 | 19 34 | 19 55 | 20 48 | |
| 08 | 299 57.6 | 23.4 | 261 24.0 | 9.7 | 22 48.4 | 7.8 | 56.3 | 30 | 19 02 | 19 30 | 19 02 | 20 03 | 20 21 | 21 11 | |
| 09 | 314 57.3 | 23.3 | 275 52.7 | 9.8 | 22 40.6 | 8.0 | 56.3 | 35 | 19 15 | 19 45 | 19 15 | 20 22 | 20 36 | 21 24 | |
| 10 | 329 57.0 | 23.3 | 290 21.5 | 9.9 | 22 32.6 | 8.1 | 56.3 | 40 | 19 30 | 20 03 | 20 03 | 20 45 | 21 03 | 22 04 | |
| 11 | 344 56.7 | 23.2 | 304 50.4 | 10.0 | 22 24.5 | 8.2 | 56.3 | 45 | 19 48 | 20 26 | 20 26 | 21 15 | 21 14 | 22 32 | |
| 12 | 359 56.4 | S23 23.1 | 319 19.4 | 10.1 | S22 16.3 | 8.3 | 56.2 | S 50 | 20 11 | 20 55 | 20 11 | 21 00 | 22 21 | 23 51 | |
| 13 | 14 56.0 | 23.0 | 333 48.5 | 10.2 | 22 08.0 | 8.4 | 56.2 | 52 | 20 22 | 21 10 | 20 22 | 21 10 | 22 29 | 23 00 | |
| 14 | 29 55.7 | 23.0 | 348 17.7 | 10.3 | 21 59.6 | 8.5 | 56.2 | 54 | 20 34 | 21 28 | 20 34 | 21 28 | 22 07 | 23 09 | |
| 15 | 44 55.4 | 22.9 | 2 47.0 | 10.4 | 21 51.1 | 8.6 | 56.1 | 56 | 20 48 | 21 51 | 20 48 | 21 51 | 22 24 | 23 20 | |
| 16 | 59 55.1 | 22.8 | 17 16.4 | 10.5 | 21 42.5 | 8.7 | 56.1 | 58 | 21 05 | 22 21 | 21 05 | 22 21 | 22 45 | 23 33 | |
| 17 | 74 54.8 | 22.7 | 31 45.9 | 10.7 | 21 33.8 | 8.8 | 56.1 | S 60 | 21 25 | 23 11 | 21 25 | 23 11 | 23 10 | 23 47 | |
| 18 | 89 54.5 | S23 22.7 | 46 15.6 | 10.7 | S21 25.0 | 8.9 | 56.1 | | | | | | | | |
| 19 | 104 54.2 | 22.6 | 60 45.3 | 10.8 | 21 16.1 | 9.0 | 56.0 | | | | | | | | |
| 20 | 119 53.9 | 22.5 | 75 15.1 | 10.9 | 21 07.1 | 9.1 | 56.0 | | | | | | | | |
| 21 | 134 53.6 | 22.4 | 89 45.0 | 11.1 | 20 58.0 | 9.2 | 56.0 | | | | | | | | |
| 22 | 149 53.2 | 22.3 | 104 15.1 | 11.1 | 20 48.8 | 9.3 | 55.9 | | | | | | | | |
| 23 | 164 52.9 | 22.2 | 118 45.2 | 11.2 | 20 39.5 | 9.4 | 55.9 | | | | | | | | |
| | S.D. 16.3 | d 0.1 | S.D. 15.7 | 15.5 | 15.5 | 15. | | | | | | | | | |

1984 DECEMBER 26, 27, 28 (WED., THURS., FRI.)

| G.M.T. | SUN | | | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | | | | |
|---|--------|------|------|------|--------|------|------|------|------|----------|-------|---------|----------|--------------|----------|------------|------------|-------|-------|-----|
| | G.H.A. | Dec. | S23 | 22.2 | G.H.A. | U | Dec. | d | | H.P. | Naut. | | Civil | 26 | 27 | 28 | 29 | | | |
| | | | | | | | | | h | | m | h | m | h | m | h | m | h | m | h |
| 26 W E D N E S D A Y | 179 | 52.6 | S23 | 22.2 | 133 | 15.4 | 11.3 | S20 | 30.1 | 9.4 | 55.9 | N 72 | 08 27 | 10 54 | 15 44 | 13 34 | 12 54 | 12 24 | | |
| | 01 | 194 | 52.3 | | 22.1 | 147 | 45.7 | 11.5 | 20 | 20.7 | 9.6 | 55.9 | N 70 | 08 07 | 09 55 | 13 55 | 13 08 | 12 41 | 12 19 | |
| | 02 | 209 | 52.0 | | 22.0 | 162 | 16.2 | 11.5 | 20 | 11.1 | 9.6 | 55.8 | 68 | 07 51 | 09 20 | 13 15 | 12 48 | 12 30 | 12 15 | |
| | 03 | 224 | 51.7 | | 21.9 | 176 | 46.7 | 11.6 | 20 | 01.5 | 9.7 | 55.8 | 66 | 07 38 | 08 55 | 10 34 | 12 47 | 12 32 | 12 21 | |
| | 04 | 239 | 51.4 | | 21.8 | 191 | 17.3 | 11.8 | 19 | 51.8 | 9.8 | 55.8 | 64 | 07 27 | 08 36 | 09 53 | 12 25 | 12 19 | 12 13 | |
| | 05 | 254 | 51.1 | | 21.7 | 205 | 48.1 | 11.8 | 19 | 42.0 | 9.9 | 55.8 | 62 | 07 18 | 08 20 | 09 25 | 12 08 | 12 08 | 12 07 | |
| | 06 | 269 | 50.8 | S23 | 21.6 | 220 | 18.9 | 11.9 | S19 | 32.1 | 10.0 | 55.7 | 60 | 07 09 | 08 06 | 09 04 | 11 53 | 11 58 | 12 01 | |
| | 07 | 284 | 50.5 | | 21.5 | 234 | 49.8 | 12.0 | 19 | 22.1 | 10.0 | 55.7 | N 58 | 07 02 | 07 55 | 08 46 | 11 41 | 11 50 | 11 56 | |
| | 08 | 299 | 50.1 | | 21.5 | 249 | 20.8 | 12.1 | 19 | 12.1 | 10.1 | 55.7 | 56 | 06 55 | 07 44 | 08 32 | 11 30 | 11 42 | 11 51 | |
| | 09 | 314 | 49.8 | | 21.4 | 263 | 51.9 | 12.3 | 19 | 02.0 | 10.2 | 55.6 | 54 | 06 49 | 07 35 | 08 19 | 11 20 | 11 35 | 11 47 | |
| | 10 | 329 | 49.5 | | 21.3 | 278 | 23.2 | 12.3 | 18 | 51.8 | 10.3 | 55.6 | 52 | 06 44 | 07 27 | 08 08 | 11 12 | 11 29 | 11 43 | |
| | 11 | 344 | 49.2 | | 21.2 | 292 | 54.5 | 12.4 | 18 | 41.5 | 10.4 | 55.6 | 50 | 06 38 | 07 20 | 07 58 | 11 04 | 11 24 | 11 40 | |
| | 12 | 359 | 48.9 | S23 | 21.1 | 307 | 25.9 | 12.5 | S18 | 31.1 | 10.4 | 55.6 | 45 | 06 27 | 07 04 | 07 38 | 10 48 | 11 12 | 11 33 | |
| | 13 | 14 | 48.6 | | 21.0 | 321 | 57.4 | 12.5 | 18 | 20.7 | 10.5 | 55.5 | N 40 | 06 16 | 06 50 | 07 21 | 10 34 | 11 02 | 11 26 | |
| | 14 | 29 | 48.3 | | 20.9 | 336 | 28.9 | 12.7 | 18 | 10.2 | 10.6 | 55.5 | 35 | 06 07 | 06 39 | 07 07 | 10 23 | 10 54 | 11 21 | |
| | 15 | 44 | 48.0 | | 20.8 | 351 | 00.6 | 12.8 | 17 | 59.6 | 10.6 | 55.5 | 30 | 05 58 | 06 28 | 06 54 | 10 13 | 10 46 | 11 16 | |
| | 16 | 59 | 47.7 | | 20.7 | 5 | 32.4 | 12.9 | 17 | 49.0 | 10.7 | 55.5 | 20 | 05 42 | 06 09 | 06 33 | 09 55 | 10 34 | 11 08 | |
| | 17 | 74 | 47.4 | | 20.6 | 20 | 04.3 | 12.9 | 17 | 38.3 | 10.8 | 55.4 | N 10 | 05 26 | 05 52 | 06 15 | 09 40 | 10 22 | 11 01 | |
| | 18 | 89 | 47.0 | S23 | 20.5 | 34 | 36.2 | 13.1 | S17 | 27.5 | 10.9 | 55.4 | 0 | 05 09 | 05 35 | 05 57 | 09 26 | 10 11 | 10 54 | |
| | 19 | 104 | 46.7 | | 20.4 | 49 | 08.3 | 13.1 | 17 | 16.6 | 10.9 | 55.4 | S 10 | 04 50 | 05 17 | 05 40 | 09 11 | 10 01 | 10 47 | |
| | 20 | 119 | 46.4 | | 20.3 | 63 | 40.4 | 13.2 | 17 | 05.7 | 10.9 | 55.4 | 20 | 04 27 | 04 57 | 05 21 | 08 56 | 09 49 | 10 40 | |
| | 21 | 134 | 46.1 | | 20.2 | 78 | 12.6 | 13.4 | 16 | 54.8 | 11.1 | 55.3 | 30 | 03 58 | 04 32 | 04 59 | 08 38 | 09 36 | 10 31 | |
| | 22 | 149 | 45.8 | | 20.1 | 92 | 45.0 | 13.4 | 16 | 43.7 | 11.1 | 55.3 | 35 | 03 40 | 04 16 | 04 46 | 08 28 | 09 28 | 10 27 | |
| 23 | 164 | 45.5 | | 20.0 | 107 | 17.4 | 13.4 | 16 | 32.6 | 11.2 | 55.3 | 40 | 03 17 | 03 58 | 04 31 | 08 16 | 09 20 | 10 21 | | |
| 27 T H U R S D A Y | 179 | 45.2 | S23 | 19.9 | 121 | 49.8 | 13.6 | S16 | 21.4 | 11.2 | 55.3 | 45 | 02 46 | 03 36 | 04 13 | 08 02 | 09 09 | 10 15 | | |
| | 01 | 194 | 44.9 | | 19.8 | 136 | 22.4 | 13.7 | 16 | 10.2 | 11.3 | 55.3 | S 50 | 02 01 | 03 06 | 03 51 | 07 45 | 08 57 | 10 07 | |
| | 02 | 209 | 44.6 | | 19.7 | 150 | 55.1 | 13.7 | 15 | 58.9 | 11.3 | 55.2 | 52 | 01 33 | 02 51 | 03 40 | 07 36 | 08 51 | 10 03 | |
| | 03 | 224 | 44.3 | | 19.6 | 165 | 27.8 | 13.8 | 15 | 47.6 | 11.4 | 55.2 | 54 | 00 48 | 02 33 | 03 28 | 07 27 | 08 45 | 09 59 | |
| | 04 | 239 | 44.0 | | 19.5 | 180 | 00.6 | 13.9 | 15 | 36.2 | 11.5 | 55.2 | 56 | /// | 02 11 | 03 14 | 07 17 | 08 37 | 09 55 | |
| | 05 | 254 | 43.6 | | 19.4 | 194 | 33.5 | 14.0 | 15 | 24.7 | 11.5 | 55.2 | 58 | /// | 01 42 | 02 57 | 07 05 | 08 29 | 09 50 | |
| | 06 | 269 | 43.3 | S23 | 19.3 | 209 | 06.5 | 14.1 | S15 | 13.2 | 11.5 | 55.1 | S 60 | /// | 00 53 | 02 37 | 06 51 | 08 20 | 09 44 | |
| | 07 | 284 | 43.0 | | 19.1 | 223 | 39.6 | 14.1 | 15 | 01.7 | 11.6 | 55.1 | | | | | | | | |
| | 08 | 299 | 42.7 | | 19.0 | 238 | 12.7 | 14.2 | 14 | 50.1 | 11.7 | 55.1 | Lat. | Sunset | Twilight | | Moonset | | | |
| | 09 | 314 | 42.4 | | 18.9 | 252 | 45.9 | 14.3 | 14 | 38.4 | 11.7 | 55.1 | | | Civil | Naut. | 26 | 27 | 28 | 29 |
| | 10 | 329 | 42.1 | | 18.8 | 267 | 19.2 | 14.4 | 14 | 26.7 | 11.8 | 55.1 | N 72 | h m | h m | h m | h m | h m | h m | h m |
| | 11 | 344 | 41.8 | | 18.7 | 281 | 52.6 | 14.4 | 14 | 14.9 | 11.8 | 55.0 | N 70 | 13 08 | 15 36 | 16 00 | 19 33 | 21 41 | 23 35 | |
| | 12 | 359 | 41.5 | S23 | 18.6 | 296 | 26.0 | 14.6 | S14 | 03.1 | 11.9 | 55.0 | 68 | 14 08 | 15 56 | 17 38 | 19 57 | 21 52 | 23 37 | |
| | 13 | 14 | 41.2 | | 18.5 | 310 | 59.6 | 14.6 | 13 | 51.2 | 11.9 | 55.0 | 66 | 14 43 | 16 11 | 18 17 | 20 16 | 22 00 | 23 39 | |
| | 14 | 29 | 40.9 | | 18.4 | 325 | 33.2 | 14.6 | 13 | 39.3 | 11.9 | 55.0 | 64 | 13 28 | 15 08 | 16 24 | 18 43 | 20 30 | 22 08 | |
| | 15 | 44 | 40.6 | | 18.2 | 340 | 06.8 | 14.8 | 13 | 27.4 | 12.0 | 54.9 | 62 | 14 10 | 15 27 | 16 35 | 19 04 | 20 42 | 22 14 | |
| | 16 | 59 | 40.3 | | 18.1 | 354 | 40.6 | 14.8 | 13 | 15.4 | 12.1 | 54.9 | 60 | 14 38 | 15 43 | 16 45 | 19 20 | 20 52 | 22 19 | |
| | 17 | 74 | 39.9 | | 18.0 | 9 | 14.4 | 14.9 | 13 | 03.3 | 12.1 | 54.9 | 62 | 14 59 | 15 56 | 16 53 | 19 34 | 21 01 | 22 23 | |
| | 18 | 89 | 39.6 | S23 | 17.9 | 23 | 48.3 | 14.9 | S12 | 51.2 | 12.1 | 54.9 | N 58 | 15 16 | 16 08 | 17 01 | 19 46 | 21 08 | 22 27 | |
| | 19 | 104 | 39.3 | | 17.8 | 38 | 22.2 | 15.0 | 12 | 39.1 | 12.2 | 54.9 | 56 | 15 31 | 16 18 | 17 07 | 19 56 | 21 15 | 22 31 | |
| | 20 | 119 | 39.0 | | 17.6 | 52 | 56.2 | 15.1 | 12 | 26.9 | 12.2 | 54.9 | 54 | 15 43 | 16 27 | 17 13 | 20 05 | 21 21 | 22 34 | |
| | 21 | 134 | 38.7 | | 17.5 | 67 | 30.3 | 15.1 | 12 | 14.7 | 12.3 | 54.8 | 52 | 15 54 | 16 35 | 17 19 | 20 12 | 21 26 | 22 37 | |
| | 22 | 149 | 38.4 | | 17.4 | 82 | 04.4 | 15.2 | 12 | 02.4 | 12.2 | 54.8 | 50 | 16 04 | 16 43 | 17 24 | 20 20 | 21 31 | 22 40 | |
| 23 | 164 | 38.1 | | 17.3 | 96 | 38.6 | 15.3 | 11 | 50.2 | 12.4 | 54.8 | 45 | 16 25 | 16 59 | 17 36 | 20 35 | 21 41 | 22 45 | | |
| 28 F R I D A Y | 179 | 37.8 | S23 | 17.2 | 111 | 12.9 | 15.3 | S11 | 37.8 | 12.3 | 54.8 | N 40 | 16 42 | 17 12 | 17 46 | 20 47 | 21 50 | 22 50 | | |
| | 01 | 194 | 37.5 | | 17.0 | 125 | 47.2 | 15.4 | 11 | 25.5 | 12.4 | 54.8 | 35 | 16 56 | 17 24 | 17 56 | 20 57 | 21 57 | 22 54 | |
| | 02 | 209 | 37.2 | | 16.9 | 140 | 21.6 | 15.5 | 11 | 13.1 | 12.5 | 54.7 | 30 | 17 08 | 17 34 | 18 04 | 21 06 | 22 03 | 22 57 | |
| | 03 | 224 | 36.9 | | 16.8 | 154 | 56.1 | 15.5 | 11 | 00.6 | 12.5 | 54.7 | 20 | 17 29 | 17 53 | 18 21 | 21 22 | 22 14 | 23 03 | |
| | 04 | 239 | 36.6 | | 16.7 | 169 | 30.6 | 15.6 | 10 | 48.1 | 12.5 | 54.7 | N 10 | 17 48 | 18 10 | 18 37 | 21 36 | 22 23 | 23 09 | |
| | 05 | 254 | 36.3 | | 16.5 | 184 | 05.2 | 15.6 | 10 | 35.6 | 12.5 | 54.7 | 0 | 18 05 | 18 27 | 18 54 | 21 48 | 22 32 | 23 14 | |
| | 06 | 269 | 35.9 | S23 | 16.4 | 198 | 39.8 | 15.7 | S10 | 23.1 | 12.6 | 54.7 | S 10 | 18 22 | 18 46 | 19 13 | 22 01 | 22 41 | 23 18 | |
| | 07 | 284 | 35.6 | | 16.3 | 213 | 14.5 | 15.7 | 10 | 10.5 | 12.6 | 54.7 | 20 | 18 41 | 19 06 | 19 35 | 22 14 | 22 50 | 23 24 | |
| | 08 | 299 | 35.3 | | 16.1 | 227 | 49.2 | 15.8 | 9 | 57.9 | 12.6 | 54.6 | 30 | 19 03 | 19 31 | 20 04 | 22 29 | 23 01 | 23 29 | |
| | 09 | 314 | 35.0 | | 16.0 | 242 | 24.0 | 15.8 | 9 | 45.3 | 12.7 | 54.6 | 35 | 19 16 | 19 46 | 20 23 | 22 38 | 23 07 | 23 33 | |
| | 10 | 329 | 34.7 | | 15.9 | 256 | 58.8 | 15.9 | 9 | 32.6 | 12.6 | 54.6 | 40 | 19 31 | 20 04 | 20 46 | 22 48 | 23 14 | 23 36 | |
| | 11 | 344 | 34.4 | | 15.8 | 271 | 33.7 | 16.0 | 9 | 20.0 | 12.8 | 54.6 | 45 | 19 49 | 20 26 | 21 16 | 22 59 | 23 22 | 23 41 | |
| | 12 | 359 | 34.1 | S23 | 15.6 | 286 | 08.7 | 16.0 | S 9 | 07.2 | 12.7 | 54.6 | S 50 | 20 12 | 20 56 | 22 01 | 23 13 | 23 31 | 23 46 | |
| | 13 | 14 | 33.8 | | 15.5 | 300 | 43.7 | 16.0 | 8 | 54.5 | 12.8 | 54.6 | 52 | 20 22 | 21 11 | 22 28 | 23 20 | 23 35 | 23 48 | |
| | 14 | 29 | 33.5 | | 15.3 | 315 | 18.7 | 16.1 | 8 | 41.7 | 12.8 | 54.6 | 54 | 20 35 | 21 29 | 23 13 | 23 27 | 23 40 | 23 51 | |
| | 15 | 44 | 33.2 | | 15.2 | 329 | 53.8 | 16.1 | 8 | 28.9 | 12.8 | 54.5 | 56 | 20 49 | 21 51 | /// | 23 35 | 23 45 | 23 54 | |
| | 16 | 59 | 32.9 | | 15.1 | 344 | 28.9 | 16.2 | 8 | 16.1 | 12.8 | 54.5 | 58 | 21 05 | 22 20 | /// | 23 44 | 23 51 | 23 57 | |
| | 17 | 74 | 32.6 | | 14.9 | 359 | 04.1 | 16.2 | 8 | 03.3 | 12.9 | 54.5 | S 60 | 21 25 | 23 08 | /// | 23 54 | 23 58 | 24 00 | |
| | 18 | 89 | 32.3 | S23 | 14.8 | 13 | 39.3 | 16.3 | S 7 | 50.4 | 12.9 | 54.5 | | | | | | | | |
| | 19 | 104 | 32.0 | | 14.7 | 28 | 14.6 | 16.3 | 7 | 37.5 | 12.9 | 54.5 | Day | SUN | | MOON | | | | |
| | 20 | 119 | 31.7 | | 14.5 | 42 | 49.9 | 16.3 | 7 | 24.6 | 12.9 | 54.5 | | Eqn. of Time | Mer. | Mer. Pass. | Mer. Pass. | Age | Phase | |
| | 21 | 134 | 31.4 | | 14.4 | 57 | 25.2 | | | | | | | | | | | | | |

STARS, 1984 JANUARY—JUNE

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | |
|--------|---------------------------|--------|------|------|------|------|------|-------------|-------|------|------|------|------|------|------|
| | | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JAN. | FEB. | MAR. | APR. | MAY | JUNE | | |
| 3.4 | γ Cephei | 5 | 20.9 | 21.4 | 21.6 | 21.4 | 20.8 | 20.0 | N. 77 | 32.8 | 32.7 | 32.5 | 32.4 | 32.3 | 32.3 |
| 2.6 | α Pegasi 57 | 14 | 01.0 | 01.0 | 01.0 | 00.9 | 00.7 | 00.4 | N. 15 | 07.1 | 07.0 | 06.9 | 06.9 | 07.0 | 07.1 |
| 2.6 | β Pegasi | 14 | 15.5 | 15.6 | 15.5 | 15.4 | 15.2 | 14.9 | N. 27 | 59.7 | 59.6 | 59.6 | 59.5 | 59.5 | 59.6 |
| 1.3 | α Piscis Aust. 56 | 15 | 48.9 | 48.9 | 48.9 | 48.7 | 48.5 | 48.3 | S. 29 | 42.7 | 42.7 | 42.6 | 42.5 | 42.4 | 42.3 |
| 2.2 | β Gruis | 19 | 34.8 | 34.8 | 34.7 | 34.6 | 34.3 | 34.0 | S. 46 | 58.4 | 58.3 | 58.2 | 58.1 | 58.0 | 57.9 |
| 2.9 | α Tucanæ | 25 | 39.5 | 39.5 | 39.4 | 39.1 | 38.7 | 38.3 | S. 60 | 20.7 | 20.6 | 20.4 | 20.3 | 20.2 | 20.1 |
| 2.2 | α Gruis 55 | 28 | 12.2 | 12.2 | 12.0 | 11.8 | 11.5 | 11.2 | S. 47 | 02.6 | 02.5 | 02.4 | 02.3 | 02.2 | 02.1 |
| 3.0 | δ Capricorni | 33 | 28.1 | 28.1 | 28.0 | 27.8 | 27.6 | 27.3 | S. 16 | 12.2 | 12.2 | 12.2 | 12.1 | 12.0 | 11.9 |
| 2.5 | ϵ Pegasi 54 | 34 | 09.5 | 09.5 | 09.4 | 09.2 | 09.0 | 08.8 | N. 9 | 48.0 | 47.9 | 47.9 | 47.9 | 47.9 | 48.0 |
| 3.1 | β Aquarii | 37 | 19.8 | 19.7 | 19.6 | 19.4 | 19.2 | 19.0 | S. 5 | 38.7 | 38.7 | 38.7 | 38.7 | 38.6 | 38.5 |
| 2.6 | α Cephei | 40 | 27.8 | 27.9 | 27.7 | 27.4 | 27.0 | 26.6 | N. 62 | 31.1 | 30.9 | 30.8 | 30.7 | 30.7 | 30.8 |
| 2.6 | ϵ Cygni | 48 | 37.1 | 37.1 | 36.9 | 36.7 | 36.5 | 36.2 | N. 33 | 54.5 | 54.4 | 54.3 | 54.3 | 54.3 | 54.4 |
| 1.3 | α Cygni 53 | 49 | 47.3 | 47.3 | 47.1 | 46.9 | 46.6 | 46.4 | N. 45 | 13.3 | 13.2 | 13.0 | 13.0 | 13.0 | 13.2 |
| 3.2 | α Indi | 50 | 54.1 | 53.9 | 53.7 | 53.4 | 53.1 | 52.8 | S. 47 | 21.1 | 21.0 | 20.9 | 20.8 | 20.7 | 20.7 |
| 2.1 | α Pavonis 52 | 53 | 55.1 | 54.9 | 54.6 | 54.3 | 53.9 | 53.5 | S. 56 | 47.4 | 47.3 | 47.2 | 47.1 | 47.1 | 47.1 |
| 2.3 | γ Cygni | 54 | 35.8 | 35.7 | 35.6 | 35.3 | 35.1 | 34.8 | N. 40 | 12.2 | 12.1 | 12.0 | 11.9 | 12.0 | 12.1 |
| 0.9 | α Aquilæ 51 | 62 | 30.5 | 30.4 | 30.2 | 30.0 | 29.8 | 29.6 | N. 8 | 49.4 | 49.3 | 49.3 | 49.3 | 49.4 | 49.5 |
| 2.8 | γ Aquilæ | 63 | 38.1 | 38.0 | 37.8 | 37.6 | 37.3 | 37.1 | N. 10 | 34.3 | 34.2 | 34.2 | 34.2 | 34.2 | 34.3 |
| 3.0 | δ Cygni | 63 | 53.5 | 53.4 | 53.2 | 52.9 | 52.7 | 52.4 | N. 45 | 05.4 | 05.2 | 05.1 | 05.1 | 05.2 | 05.3 |
| 3.2 | β Cygni | 67 | 29.4 | 29.3 | 29.1 | 28.9 | 28.7 | 28.5 | N. 27 | 55.4 | 55.3 | 55.2 | 55.2 | 55.3 | 55.4 |
| 3.0 | π Sagittarii | 72 | 48.4 | 48.3 | 48.0 | 47.8 | 47.6 | 47.4 | S. 21 | 03.1 | 03.1 | 02.1 | 03.1 | 03.0 | 03.0 |
| 3.0 | ζ Aquilæ | 73 | 50.4 | 50.3 | 50.1 | 49.9 | 49.7 | 49.5 | N. 13 | 50.2 | 50.1 | 50.1 | 50.1 | 50.1 | 50.3 |
| 2.7 | ζ Sagittarii | 74 | 36.7 | 36.6 | 36.3 | 36.1 | 35.8 | 35.6 | S. 29 | 54.3 | 54.3 | 54.3 | 54.3 | 54.2 | 54.2 |
| 2.1 | σ Sagittarii 50 | 76 | 26.5 | 26.4 | 26.1 | 25.9 | 25.6 | 25.4 | S. 26 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 |
| 0.1 | α Lyrae 49 | 80 | 54.6 | 54.5 | 54.2 | 54.0 | 53.7 | 53.6 | N. 38 | 45.9 | 45.8 | 45.7 | 45.7 | 45.8 | 46.0 |
| 2.9 | λ Sagittarii | 83 | 15.9 | 15.7 | 15.4 | 15.2 | 15.0 | 14.8 | S. 25 | 26.0 | 25.9 | 25.9 | 25.9 | 25.9 | 25.9 |
| 2.0 | ϵ Sagittarii 48 | 84 | 14.0 | 13.8 | 13.5 | 13.3 | 13.0 | 12.8 | S. 34 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6 |
| 2.8 | δ Sagittarii | 84 | 61.1 | 60.9 | 60.6 | 60.4 | 60.1 | 59.9 | S. 29 | 50.2 | 50.2 | 50.2 | 50.2 | 50.2 | 50.2 |
| 3.1 | γ Sagittarii | 88 | 48.9 | 48.7 | 48.5 | 48.2 | 48.0 | 47.8 | S. 30 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.6 |
| 2.4 | γ Draconis 47 | 90 | 57.1 | 56.9 | 56.6 | 56.3 | 56.1 | 55.9 | N. 51 | 29.3 | 29.1 | 29.0 | 29.1 | 29.2 | 29.3 |
| 2.9 | β Ophiuchi | 94 | 20.3 | 20.1 | 19.9 | 19.7 | 19.5 | 19.3 | N. 4 | 34.3 | 34.2 | 34.2 | 34.2 | 34.2 | 34.3 |
| 2.5 | κ Scorpii | 94 | 40.0 | 39.7 | 39.5 | 39.2 | 38.9 | 38.7 | S. 39 | 01.4 | 01.3 | 01.3 | 01.4 | 01.4 | 01.4 |
| 2.0 | θ Scorpii | 95 | 58.2 | 57.9 | 57.6 | 57.3 | 57.1 | 56.9 | S. 42 | 59.3 | 59.3 | 59.3 | 59.3 | 59.3 | 59.4 |
| 2.1 | α Ophiuchi 46 | 96 | 27.6 | 27.4 | 27.2 | 27.0 | 26.8 | 26.7 | N. 12 | 34.1 | 34.0 | 34.0 | 34.0 | 34.1 | 34.2 |
| 1.7 | λ Scorpii 45 | 96 | 52.9 | 52.6 | 52.3 | 52.0 | 51.8 | 51.6 | S. 37 | 05.6 | 05.6 | 05.6 | 05.6 | 05.6 | 05.7 |
| 3.0 | α Aræ | 97 | 21.7 | 21.4 | 21.1 | 20.8 | 20.5 | 20.3 | S. 49 | 51.8 | 51.8 | 51.8 | 51.8 | 51.9 | 52.0 |
| 3.0 | β Draconis | 97 | 29.5 | 29.3 | 29.0 | 28.7 | 28.5 | 28.4 | N. 52 | 18.6 | 18.4 | 18.4 | 18.4 | 18.5 | 18.7 |
| 2.8 | ν Scorpii | 97 | 35.6 | 35.3 | 35.0 | 34.7 | 34.5 | 34.3 | S. 37 | 17.0 | 17.0 | 17.0 | 17.0 | 17.1 | 17.1 |
| 2.8 | β Aræ | 98 | 61.4 | 61.0 | 60.6 | 60.2 | 59.9 | 59.7 | S. 55 | 30.9 | 30.8 | 30.8 | 30.9 | 31.0 | 31.0 |
| Var. ‡ | α Herculis | 101 | 31.7 | 31.5 | 31.3 | 31.1 | 30.9 | 30.8 | N. 14 | 24.4 | 24.3 | 24.2 | 24.2 | 24.3 | 24.4 |
| 2.6 | η Ophiuchi 44 | 102 | 38.7 | 38.4 | 38.2 | 38.0 | 37.8 | 37.7 | S. 15 | 42.4 | 42.4 | 42.5 | 42.5 | 42.5 | 42.4 |
| 3.1 | ζ Aræ | 105 | 41.5 | 41.1 | 40.7 | 40.3 | 40.1 | 39.9 | S. 55 | 57.8 | 57.8 | 57.8 | 57.9 | 58.0 | 58.1 |
| 2.4 | ϵ Scorpii | 107 | 43.7 | 43.5 | 43.2 | 42.9 | 42.7 | 42.6 | S. 34 | 15.8 | 15.9 | 15.9 | 15.9 | 16.0 | 16.0 |
| 1.9 | α Triang. Aust. 43 | 108 | 16.8 | 16.2 | 15.6 | 15.1 | 14.7 | 14.5 | S. 68 | 59.8 | 59.8 | 59.8 | 59.9 | 60.0 | 60.1 |
| 3.0 | ζ Herculis | 109 | 50.2 | 50.0 | 49.7 | 49.5 | 49.4 | 49.3 | N. 31 | 37.7 | 37.6 | 37.6 | 37.6 | 37.7 | 37.8 |
| 2.7 | ζ Ophiuchi | 110 | 56.4 | 56.1 | 55.9 | 55.7 | 55.5 | 55.4 | S. 10 | 32.1 | 32.2 | 32.3 | 32.3 | 32.3 | 32.2 |
| 2.9 | τ Scorpii | 111 | 17.3 | 17.0 | 16.8 | 16.5 | 16.4 | 16.3 | S. 28 | 11.0 | 11.0 | 11.0 | 11.1 | 11.1 | 11.2 |
| 2.8 | β Herculis | 112 | 37.5 | 37.2 | 37.0 | 36.8 | 36.7 | 36.6 | N. 21 | 31.3 | 31.2 | 31.1 | 31.2 | 31.3 | 31.4 |
| 1.2 | α Scorpii 42 | 112 | 54.2 | 53.9 | 53.7 | 53.4 | 53.3 | 53.2 | S. 26 | 23.8 | 23.8 | 23.9 | 23.9 | 23.9 | 24.0 |
| 2.9 | η Draconis | 114 | 04.0 | 03.6 | 03.2 | 02.9 | 02.7 | 02.7 | N. 61 | 32.8 | 32.7 | 32.6 | 32.7 | 32.9 | 33.0 |
| 3.0 | δ Ophiuchi | 116 | 37.9 | 37.6 | 37.4 | 37.2 | 37.1 | 37.0 | S. 3 | 39.3 | 39.3 | 39.4 | 39.4 | 39.4 | 39.3 |
| 2.8 | β Scorpii | 118 | 52.9 | 52.7 | 52.4 | 52.2 | 52.1 | 52.0 | S. 19 | 45.7 | 45.8 | 45.8 | 45.8 | 45.9 | 45.9 |
| 2.5 | δ Scorpii | 120 | 09.7 | 09.5 | 09.2 | 09.0 | 08.9 | 08.8 | S. 22 | 34.6 | 34.6 | 34.7 | 34.7 | 34.7 | 34.8 |
| 3.0 | π Scorpii | 120 | 32.3 | 32.0 | 31.8 | 31.6 | 31.4 | 31.3 | S. 26 | 04.0 | 04.1 | 04.2 | 04.2 | 04.2 | 04.3 |
| 3.0 | β Trianguli Aust. | 121 | 35.0 | 34.5 | 34.1 | 33.7 | 33.5 | 33.4 | S. 63 | 22.7 | 22.7 | 22.8 | 22.9 | 23.0 | 23.2 |
| 2.8 | α Serpentis | 124 | 08.2 | 08.0 | 07.8 | 07.6 | 07.5 | 07.4 | N. 6 | 28.5 | 28.4 | 28.3 | 28.3 | 28.4 | 28.5 |
| 3.0 | γ Lupi | 126 | 29.5 | 29.2 | 28.9 | 28.7 | 28.5 | 28.5 | S. 41 | 06.7 | 06.7 | 06.8 | 06.9 | 07.0 | 07.0 |
| 2.3 | α Coronæ Bor. 41 | 126 | 30.2 | 30.0 | 29.7 | 29.6 | 29.5 | 29.4 | N. 26 | 45.9 | 45.8 | 45.8 | 45.9 | 46.0 | 46.1 |

‡ 3.0—3.7



STARS, 1984 JULY—DECEMBER

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | |
|--------|-------------------------|--------|------|------|-------|------|------|-------------|-------|------|------|-------|------|------|------|
| | | | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. | | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. |
| 3.4 | γ Cephei | 5 | 19.2 | 18.7 | 18.5 | 18.6 | 19.1 | 19.7 | N. 77 | 32.4 | 32.5 | 32.7 | 32.9 | 33.1 | 33.1 |
| 2.6 | <i>Markab</i> | 57 | 14 | 00.2 | 00.0 | 00.0 | 00.0 | 00.0 | N. 15 | 07.2 | 07.3 | 07.4 | 07.4 | 07.5 | 07.4 |
| 2.6 | <i>Scheat</i> | 14 | 14.7 | 14.5 | 14.5 | 14.5 | 14.6 | 14.7 | N. 27 | 59.7 | 59.9 | 60.0 | 60.1 | 60.1 | 60.1 |
| 1.3 | <i>Fomalhaut</i> | 56 | 15 | 48.0 | 47.8 | 47.7 | 47.8 | 47.8 | S. 29 | 42.2 | 42.2 | 42.2 | 42.3 | 42.4 | 42.4 |
| 2.2 | β Gruis | 19 | 33.7 | 33.4 | 33.4 | 33.4 | 33.5 | 33.7 | S. 46 | 57.8 | 57.9 | 58.0 | 58.1 | 58.1 | 58.2 |
| 2.9 | α Tucanae | 25 | 37.9 | 37.7 | 37.6 | 37.7 | 38.0 | 38.2 | S. 60 | 20.1 | 20.2 | 20.3 | 20.4 | 20.5 | 20.5 |
| 2.2 | <i>Al Na'ir</i> | 55 | 28 | 10.9 | 10.7 | 10.7 | 10.8 | 10.9 | S. 47 | 02.1 | 02.2 | 02.3 | 02.3 | 02.4 | 02.4 |
| 3.0 | δ Capricorni | 33 | 27.1 | 27.0 | 27.0 | 27.0 | 27.1 | 27.2 | S. 16 | 11.9 | 11.9 | 11.9 | 11.9 | 11.9 | 12.0 |
| 2.5 | <i>Enif</i> | 54 | 34 | 08.6 | 08.4 | 08.4 | 08.5 | 08.6 | N. 9 | 48.1 | 48.2 | 48.3 | 48.3 | 48.3 | 48.3 |
| 3.1 | β Aquarii | 37 | 18.8 | 18.7 | 18.7 | 18.7 | 18.8 | 18.9 | S. 5 | 38.4 | 38.4 | 38.4 | 38.4 | 38.4 | 38.4 |
| 2.6 | <i>Alderamin</i> | 40 | 26.4 | 26.3 | 26.4 | 26.7 | 27.0 | 27.3 | N. 62 | 31.0 | 31.1 | 31.3 | 31.4 | 31.5 | 31.4 |
| 2.6 | ϵ Cygni | 48 | 36.1 | 36.0 | 36.1 | 36.2 | 36.4 | 36.5 | N. 33 | 54.6 | 54.7 | 54.8 | 54.9 | 54.9 | 54.8 |
| 1.3 | <i>Deneb</i> | 53 | 49 | 46.2 | 46.1 | 46.2 | 46.4 | 46.6 | N. 45 | 13.3 | 13.5 | 13.6 | 13.7 | 13.7 | 13.6 |
| 3.2 | α Indi | 50 | 52.5 | 52.4 | 52.5 | 52.6 | 52.8 | 52.9 | S. 47 | 20.8 | 20.8 | 20.9 | 21.0 | 21.0 | 21.0 |
| 2.1 | <i>Peacock</i> | 52 | 53 | 53.2 | 53.1 | 53.2 | 53.4 | 53.6 | S. 56 | 47.1 | 47.2 | 47.3 | 47.4 | 47.4 | 47.4 |
| 2.3 | γ Cygni | 54 | 34.7 | 34.7 | 34.8 | 34.9 | 35.1 | 35.2 | N. 40 | 12.3 | 12.4 | 12.6 | 12.6 | 12.6 | 12.5 |
| 0.9 | <i>Altair</i> | 51 | 62 | 29.5 | 29.4 | 29.5 | 29.6 | 29.7 | N. 8 | 49.6 | 49.6 | 49.7 | 49.7 | 49.7 | 49.6 |
| 2.8 | γ Aquilae | 63 | 37.0 | 37.0 | 37.1 | 37.2 | 37.3 | 37.4 | N. 10 | 34.4 | 34.5 | 34.6 | 34.6 | 34.6 | 34.5 |
| 3.0 | δ Cygni | 63 | 52.3 | 52.3 | 52.5 | 52.7 | 52.9 | 53.0 | N. 45 | 05.5 | 05.6 | 05.7 | 05.8 | 05.7 | 05.6 |
| 3.2 | <i>Albireo</i> | 67 | 28.4 | 28.4 | 28.5 | 28.6 | 28.8 | 28.8 | N. 27 | 55.5 | 55.7 | 55.7 | 55.8 | 55.7 | 55.6 |
| 3.0 | π Sagittarii | 72 | 47.2 | 47.2 | 47.3 | 47.4 | 47.5 | 47.6 | S. 21 | 03.0 | 03.0 | 03.0 | 03.0 | 03.0 | 03.0 |
| 3.0 | ζ Aquilae | 73 | 49.4 | 49.4 | 49.5 | 49.6 | 49.7 | 49.8 | N. 13 | 50.4 | 50.4 | 50.5 | 50.5 | 50.5 | 50.4 |
| 2.7 | ζ Sagittarii | 74 | 35.5 | 35.5 | 35.6 | 35.7 | 35.8 | 35.8 | S. 29 | 54.3 | 54.3 | 54.3 | 54.3 | 54.3 | 54.3 |
| 2.1 | <i>Nunki</i> | 50 | 76 | 25.3 | 25.3 | 25.4 | 25.5 | 25.6 | S. 26 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 |
| 0.1 | <i>Vega</i> | 49 | 80 | 53.5 | 53.6 | 53.8 | 53.9 | 54.1 | N. 38 | 46.1 | 46.3 | 46.3 | 46.3 | 46.3 | 46.1 |
| 2.9 | λ Sagittarii | 83 | 14.7 | 14.7 | 14.8 | 14.9 | 15.0 | 15.0 | S. 25 | 25.9 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 |
| 2.0 | <i>Kaus Australis</i> | 48 | 84 | 12.7 | 12.7 | 12.9 | 13.0 | 13.1 | S. 34 | 23.7 | 23.7 | 23.7 | 23.7 | 23.7 | 23.7 |
| 2.8 | δ Sagittarii | 84 | 59.8 | 59.9 | 60.0 | 60.1 | 60.2 | 60.2 | S. 29 | 50.2 | 50.2 | 50.3 | 50.3 | 50.3 | 50.2 |
| 3.1 | γ Sagittarii | 88 | 47.7 | 47.7 | 47.9 | 48.0 | 48.1 | 48.1 | S. 30 | 25.6 | 25.6 | 25.6 | 25.6 | 25.6 | 25.6 |
| 2.4 | <i>Eltanin</i> | 47 | 90 | 55.9 | 56.1 | 56.3 | 56.6 | 56.8 | N. 51 | 29.5 | 29.6 | 29.7 | 29.6 | 29.5 | 29.4 |
| 2.9 | β Ophiuchi | 94 | 19.3 | 19.4 | 19.5 | 19.6 | 19.7 | 19.6 | N. 4 | 34.4 | 34.4 | 34.5 | 34.4 | 34.4 | 34.3 |
| 2.5 | κ Scorpii | 94 | 38.7 | 38.7 | 38.9 | 39.0 | 39.1 | 39.1 | S. 39 | 01.5 | 01.5 | 01.6 | 01.6 | 01.5 | 01.5 |
| 2.0 | θ Scorpii | 95 | 56.8 | 56.9 | 57.1 | 57.2 | 57.3 | 57.3 | S. 42 | 59.5 | 59.5 | 59.5 | 59.5 | 59.5 | 59.4 |
| 2.1 | <i>Rasalhague</i> | 46 | 96 | 26.7 | 26.7 | 26.9 | 27.0 | 27.1 | N. 12 | 34.3 | 34.3 | 34.3 | 34.3 | 34.3 | 34.2 |
| 1.7 | <i>Shaula</i> | 45 | 96 | 51.6 | 51.6 | 51.8 | 51.9 | 52.0 | S. 37 | 05.7 | 05.8 | 05.8 | 05.8 | 05.7 | 05.7 |
| 3.0 | α Aræ | 97 | 20.2 | 20.3 | 20.5 | 20.7 | 20.8 | 20.7 | S. 49 | 52.0 | 52.1 | 52.1 | 52.1 | 52.1 | 52.0 |
| 3.0 | β Draconis | 97 | 28.4 | 28.6 | 28.8 | 29.1 | 29.2 | 29.3 | N. 52 | 18.9 | 19.0 | 19.0 | 19.0 | 18.8 | 18.7 |
| 2.8 | ν Scorpii | 97 | 34.3 | 34.3 | 34.5 | 34.6 | 34.7 | 34.7 | S. 37 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.1 |
| 2.8 | β Aræ | 98 | 59.7 | 59.8 | 60.0 | 60.2 | 60.3 | 60.3 | S. 55 | 31.1 | 31.2 | 31.3 | 31.2 | 31.1 | 31.1 |
| Var. † | α Herculis | 101 | 30.8 | 30.9 | 31.0 | 31.1 | 31.2 | 31.1 | N. 14 | 24.5 | 24.5 | 24.6 | 24.5 | 24.5 | 24.4 |
| 2.6 | <i>Sabik</i> | 44 | 102 | 37.6 | 37.7 | 37.8 | 37.9 | 38.0 | S. 15 | 42.4 | 42.4 | 42.4 | 42.4 | 42.4 | 42.5 |
| 3.1 | ζ Aræ | 105 | 39.9 | 40.0 | 40.2 | 40.4 | 40.5 | 40.4 | S. 55 | 58.2 | 58.3 | 58.3 | 58.2 | 58.1 | 58.0 |
| 2.4 | ϵ Scorpii | 107 | 42.6 | 42.7 | 42.8 | 43.0 | 43.0 | 42.9 | S. 34 | 16.1 | 16.1 | 16.1 | 16.1 | 16.0 | 16.0 |
| 1.9 | <i>Atria</i> | 43 | 108 | 14.5 | 14.8 | 15.2 | 15.5 | 15.5 | S. 69 | 00.3 | 00.3 | 00.4 | 00.3 | 00.2 | 00.1 |
| 3.0 | ζ Herculis | 109 | 49.3 | 49.4 | 49.6 | 49.7 | 49.8 | 49.8 | N. 31 | 38.0 | 38.0 | 38.0 | 38.0 | 37.9 | 37.7 |
| 2.7 | ζ Ophiuchi | 110 | 55.4 | 55.5 | 55.6 | 55.7 | 55.7 | 55.7 | S. 10 | 32.2 | 32.2 | 32.2 | 32.2 | 32.2 | 32.3 |
| 2.9 | τ Scorpii | 111 | 16.2 | 16.3 | 16.5 | 16.6 | 16.6 | 16.5 | S. 28 | 11.2 | 11.2 | 11.2 | 11.2 | 11.1 | 11.1 |
| 2.8 | β Herculis | 112 | 36.6 | 36.7 | 36.9 | 37.0 | 37.0 | 37.0 | N. 21 | 31.5 | 31.5 | 31.5 | 31.5 | 31.4 | 31.2 |
| 1.2 | <i>Antares</i> | 42 | 112 | 53.2 | 53.2 | 53.4 | 53.5 | 53.4 | S. 26 | 24.0 | 24.0 | 24.0 | 24.0 | 23.9 | 23.9 |
| 2.9 | η Draconis | 114 | 02.8 | 03.1 | 03.5 | 03.8 | 04.0 | 03.9 | N. 61 | 33.2 | 33.2 | 33.2 | 33.1 | 33.0 | 32.8 |
| 3.0 | δ Ophiuchi | 116 | 37.0 | 37.1 | 37.2 | 37.3 | 37.3 | 37.2 | S. 3 | 39.3 | 39.3 | 39.3 | 39.3 | 39.3 | 39.4 |
| 2.8 | β Scorpii | 118 | 52.0 | 52.1 | 52.2 | 52.3 | 52.3 | 52.2 | S. 19 | 45.9 | 45.9 | 45.9 | 45.8 | 45.8 | 45.9 |
| 2.5 | <i>Dschubba</i> | 120 | 08.8 | 08.9 | 09.0 | 09.1 | 09.1 | 09.0 | S. 22 | 34.8 | 34.8 | 34.7 | 34.7 | 34.7 | 34.7 |
| 3.0 | π Scorpii | 120 | 31.3 | 31.4 | 31.6 | 31.7 | 31.7 | 31.5 | S. 26 | 04.3 | 04.3 | 04.3 | 04.3 | 04.2 | 04.2 |
| 3.0 | β Trianguli Aust. | 121 | 33.5 | 33.7 | 34.0 | 34.2 | 34.3 | 34.1 | S. 63 | 23.3 | 23.3 | 23.3 | 23.2 | 23.1 | 23.0 |
| 2.8 | α Serpentis | 124 | 07.4 | 07.5 | 07.7 | 07.7 | 07.7 | 07.6 | N. 6 | 28.5 | 28.5 | 28.5 | 28.5 | 28.4 | 28.3 |
| 3.0 | γ Lupi | 126 | 28.5 | 28.6 | 28.8 | 28.9 | 28.9 | 28.7 | S. 41 | 07.1 | 07.1 | 07.1 | 07.0 | 06.9 | 06.9 |
| 2.3 | <i>Alphecca</i> | 41 | 126 | 29.5 | 29.6 | 29.7 | 29.8 | 29.9 | N. 26 | 46.2 | 46.2 | 46.2 | 46.1 | 46.0 | 45.8 |

† 3.0—3.7

STARS, 1984 JANUARY—JUNE

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | |
|------|----------------------------|--------|------|------|------|------|------|-------------|-------|------|------|------|------|------|------|
| | | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JAN. | FEB. | MAR. | APR. | MAY | JUNE | | |
| 3.1 | γ Ursæ Minoris | 129 | 49.3 | 48.7 | 48.2 | 47.8 | 47.7 | 47.8 | N. 71 | 53.2 | 53.1 | 53.1 | 53.3 | 53.4 | 53.6 |
| 3.1 | γ Trianguli Aust. | 130 | 39.9 | 39.3 | 38.8 | 38.4 | 38.2 | 38.1 | S. 68 | 37.0 | 37.0 | 37.1 | 37.3 | 37.4 | 37.5 |
| 2.7 | β Libræ | 130 | 58.2 | 58.0 | 57.8 | 57.6 | 57.5 | 57.5 | S. 9 | 19.4 | 19.5 | 19.6 | 19.6 | 19.6 | 19.6 |
| 2.8 | β Lupi | 135 | 38.3 | 38.0 | 37.7 | 37.5 | 37.4 | 37.4 | S. 43 | 04.0 | 04.1 | 04.2 | 04.3 | 04.4 | 04.4 |
| 2.2 | β Ursæ Minoris 40 | 137 | 19.2 | 18.6 | 18.0 | 17.6 | 17.6 | 17.9 | N. 74 | 13.0 | 12.9 | 13.0 | 13.1 | 13.3 | 13.4 |
| 2.9 | α Libræ 39 | 137 | 30.5 | 30.3 | 30.0 | 29.9 | 29.8 | 29.8 | S. 15 | 58.5 | 58.6 | 58.6 | 58.7 | 58.7 | 58.7 |
| 2.6 | ϵ Bootis | 138 | 56.0 | 55.7 | 55.5 | 55.4 | 55.3 | 55.3 | N. 27 | 08.3 | 08.2 | 08.2 | 08.3 | 08.4 | 08.5 |
| 2.9 | α Lupi | 139 | 47.6 | 47.2 | 47.0 | 46.8 | 46.7 | 46.7 | S. 47 | 19.0 | 19.0 | 19.1 | 19.3 | 19.4 | 19.5 |
| 0.1 | α Centauri 38 | 140 | 22.9 | 22.4 | 22.1 | 21.9 | 21.8 | 21.8 | S. 60 | 45.8 | 45.9 | 46.0 | 46.2 | 46.3 | 46.4 |
| 2.2 | η Centauri | 141 | 23.1 | 22.8 | 22.6 | 22.4 | 22.3 | 22.3 | S. 42 | 05.1 | 05.1 | 05.3 | 05.4 | 05.5 | 05.5 |
| 3.0 | γ Bootis | 142 | 08.8 | 08.5 | 08.3 | 08.1 | 08.1 | 08.1 | N. 38 | 22.5 | 22.4 | 22.4 | 22.5 | 22.6 | 22.7 |
| 0.2 | α Bootis 37 | 146 | 16.3 | 16.1 | 15.9 | 15.7 | 15.7 | 15.7 | N. 19 | 15.8 | 15.7 | 15.7 | 15.8 | 15.8 | 15.9 |
| 2.3 | θ Centauri 36 | 148 | 34.3 | 34.0 | 33.8 | 33.7 | 33.6 | 33.6 | S. 36 | 17.3 | 17.4 | 17.5 | 17.6 | 17.7 | 17.8 |
| 0.9 | β Centauri 35 | 149 | 20.2 | 19.8 | 19.4 | 19.2 | 19.2 | 19.3 | S. 60 | 17.5 | 17.5 | 17.7 | 17.8 | 18.0 | 18.1 |
| 3.1 | ζ Centauri | 151 | 22.3 | 22.0 | 21.8 | 21.6 | 21.6 | 21.6 | S. 47 | 12.3 | 12.4 | 12.6 | 12.7 | 12.8 | 12.9 |
| 2.8 | η Bootis | 151 | 31.4 | 31.2 | 31.0 | 30.9 | 30.8 | 30.9 | N. 18 | 28.6 | 28.5 | 28.5 | 28.5 | 28.6 | 28.7 |
| 1.9 | η Ursæ Majoris 34 | 153 | 16.5 | 16.2 | 15.9 | 15.8 | 15.8 | 15.9 | N. 49 | 23.3 | 23.3 | 23.4 | 23.5 | 23.6 | 23.7 |
| 2.6 | ϵ Centauri | 155 | 17.3 | 17.0 | 16.7 | 16.6 | 16.6 | 16.7 | S. 53 | 22.8 | 22.9 | 23.1 | 23.2 | 23.3 | 23.4 |
| 1.2 | α Virginis 33 | 158 | 55.0 | 54.8 | 54.6 | 54.5 | 54.5 | 54.5 | S. 11 | 04.6 | 04.7 | 04.8 | 04.8 | 04.8 | 04.8 |
| 2.2 | ζ Ursæ Majoris | 159 | 10.9 | 10.5 | 10.3 | 10.2 | 10.2 | 10.3 | N. 55 | 00.3 | 00.3 | 00.3 | 00.5 | 00.6 | 00.7 |
| 2.9 | ι Centauri | 160 | 04.9 | 04.6 | 04.4 | 04.3 | 04.3 | 04.3 | S. 36 | 37.5 | 37.6 | 37.7 | 37.8 | 37.9 | 37.9 |
| 3.0 | ϵ Virginis | 164 | 39.5 | 39.2 | 39.1 | 39.0 | 39.0 | 39.1 | N. 11 | 02.7 | 02.6 | 02.6 | 02.6 | 02.6 | 02.7 |
| 2.9 | α Canum Venat. | 166 | 10.9 | 10.6 | 10.5 | 10.4 | 10.4 | 10.5 | N. 38 | 24.1 | 24.1 | 24.1 | 24.2 | 24.3 | 24.4 |
| 1.7 | ϵ Ursæ Majoris 32 | 166 | 40.1 | 39.8 | 39.5 | 39.5 | 39.6 | 39.7 | N. 56 | 02.6 | 02.6 | 02.6 | 02.8 | 02.9 | 03.0 |
| 1.5 | β Crucis | 168 | 18.5 | 18.2 | 17.9 | 17.9 | 18.1 | 18.1 | S. 59 | 35.7 | 35.9 | 36.0 | 36.2 | 36.3 | 36.4 |
| 2.9 | γ Virginis | 169 | 47.4 | 47.2 | 47.1 | 47.0 | 47.0 | 47.1 | S. 1 | 21.7 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 |
| 2.4 | γ Centauri | 169 | 50.7 | 50.5 | 50.3 | 50.2 | 50.3 | 50.4 | S. 48 | 52.0 | 52.2 | 52.3 | 52.5 | 52.6 | 52.6 |
| 2.9 | α Muscæ | 170 | 56.9 | 56.4 | 56.2 | 56.1 | 56.2 | 56.5 | S. 69 | 02.5 | 02.6 | 02.8 | 03.0 | 03.1 | 03.2 |
| 2.8 | β Corvi | 171 | 37.0 | 36.8 | 36.6 | 36.6 | 36.7 | 36.7 | S. 23 | 18.3 | 18.5 | 18.6 | 18.6 | 18.7 | 18.7 |
| 1.6 | γ Crucis 31 | 172 | 26.1 | 25.7 | 25.6 | 25.5 | 25.6 | 25.8 | S. 57 | 01.1 | 01.2 | 01.4 | 01.6 | 01.7 | 01.8 |
| 1.1 | α Crucis 30 | 173 | 34.5 | 34.2 | 34.0 | 34.0 | 34.1 | 34.3 | S. 63 | 00.3 | 00.4 | 00.6 | 00.8 | 00.9 | 01.0 |
| 2.8 | γ Corvi 29 | 176 | 15.4 | 15.2 | 15.1 | 15.0 | 15.1 | 15.1 | S. 17 | 27.1 | 27.2 | 27.3 | 27.3 | 27.4 | 27.4 |
| 2.9 | δ Centauri | 178 | 07.2 | 07.0 | 06.8 | 06.8 | 06.9 | 07.0 | S. 50 | 37.7 | 37.9 | 38.0 | 38.2 | 38.3 | 38.3 |
| 2.5 | γ Ursæ Majoris | 181 | 45.0 | 44.7 | 44.6 | 44.6 | 44.7 | 44.9 | N. 53 | 46.8 | 46.9 | 47.0 | 47.1 | 47.2 | 47.2 |
| 2.2 | β Leonis 28 | 182 | 56.4 | 56.2 | 56.1 | 56.1 | 56.1 | 56.2 | N. 14 | 39.7 | 39.6 | 39.6 | 39.6 | 39.7 | 39.7 |
| 2.6 | δ Leonis | 191 | 41.1 | 40.9 | 40.9 | 40.9 | 41.0 | 41.0 | N. 20 | 36.6 | 36.6 | 36.6 | 36.7 | 36.7 | 36.8 |
| 3.2 | ψ Ursæ Majoris | 192 | 48.4 | 48.2 | 48.1 | 48.1 | 48.3 | 48.4 | N. 44 | 35.0 | 35.0 | 35.1 | 35.2 | 35.3 | 35.3 |
| 2.0 | α Ursæ Majoris 27 | 194 | 18.5 | 18.2 | 18.1 | 18.2 | 18.4 | 18.7 | N. 61 | 50.1 | 50.2 | 50.3 | 50.4 | 50.5 | 50.5 |
| 2.4 | β Ursæ Majoris | 194 | 46.6 | 46.3 | 46.2 | 46.3 | 46.5 | 46.7 | N. 56 | 27.9 | 28.0 | 28.1 | 28.2 | 28.3 | 28.3 |
| 2.8 | μ Velorum | 198 | 28.7 | 28.5 | 28.5 | 28.6 | 28.7 | 28.9 | S. 49 | 19.9 | 20.0 | 20.2 | 20.3 | 20.4 | 20.4 |
| 3.0 | θ Carinæ | 199 | 24.0 | 23.7 | 23.7 | 23.9 | 24.2 | 24.5 | S. 64 | 18.3 | 18.5 | 18.7 | 18.8 | 18.9 | 19.0 |
| 2.3 | γ Leonis | 205 | 13.6 | 13.4 | 13.4 | 13.4 | 13.5 | 13.6 | N. 19 | 55.3 | 55.3 | 55.3 | 55.4 | 55.4 | 55.4 |
| 1.3 | α Leonis | 208 | 07.1 | 07.0 | 07.0 | 07.0 | 07.1 | 07.2 | N. 12 | 02.7 | 02.7 | 02.7 | 02.7 | 02.8 | 02.8 |
| 3.1 | ϵ Leonis | 213 | 45.8 | 45.6 | 45.6 | 45.7 | 45.8 | 45.9 | N. 23 | 50.9 | 50.9 | 50.9 | 51.0 | 51.0 | 51.0 |
| 3.0 | N Velorum | 217 | 18.6 | 18.5 | 18.6 | 18.8 | 19.1 | 19.3 | S. 56 | 57.6 | 57.8 | 58.0 | 58.1 | 58.1 | 58.1 |
| 2.2 | α Hydræ 25 | 218 | 17.9 | 17.8 | 17.8 | 17.9 | 18.0 | 18.1 | S. 8 | 35.3 | 35.4 | 35.4 | 35.4 | 35.4 | 35.4 |
| 2.6 | κ Velorum | 219 | 35.4 | 35.3 | 35.4 | 35.6 | 35.8 | 36.1 | S. 54 | 56.3 | 56.5 | 56.7 | 56.8 | 56.8 | 56.8 |
| 2.2 | ι Carinæ | 220 | 49.6 | 49.6 | 49.7 | 49.9 | 50.2 | 50.5 | S. 59 | 12.3 | 12.5 | 12.6 | 12.7 | 12.8 | 12.7 |
| 1.8 | β Carinæ 24 | 221 | 43.8 | 43.7 | 43.9 | 44.3 | 44.8 | 45.2 | S. 69 | 38.9 | 39.1 | 39.2 | 39.3 | 39.4 | 39.3 |
| 2.2 | λ Velorum 23 | 223 | 08.7 | 08.6 | 08.7 | 08.8 | 09.0 | 09.1 | S. 43 | 21.9 | 22.1 | 22.2 | 22.3 | 22.3 | 22.2 |
| 3.1 | ι Ursæ Majoris | 225 | 28.0 | 27.9 | 28.0 | 28.1 | 28.3 | 28.4 | N. 48 | 06.3 | 06.3 | 06.4 | 06.5 | 06.5 | 06.5 |
| 2.0 | δ Velorum | 228 | 55.7 | 55.6 | 55.8 | 56.0 | 56.3 | 56.5 | S. 54 | 38.8 | 39.0 | 39.1 | 39.2 | 39.2 | 39.2 |
| 1.7 | ϵ Carinæ 22 | 234 | 26.7 | 26.7 | 26.9 | 27.2 | 27.5 | 27.7 | S. 59 | 27.3 | 27.5 | 27.7 | 27.7 | 27.7 | 27.6 |
| 1.9 | γ Velorum | 237 | 44.1 | 44.1 | 44.2 | 44.4 | 44.6 | 44.8 | S. 47 | 17.3 | 17.4 | 17.5 | 17.6 | 17.6 | 17.5 |
| 2.9 | ρ Puppis | 238 | 16.9 | 16.9 | 16.9 | 17.1 | 17.2 | 17.3 | S. 24 | 15.4 | 15.5 | 15.6 | 15.6 | 15.6 | 15.5 |
| 2.3 | ζ Puppis | 239 | 14.4 | 14.4 | 14.5 | 14.7 | 14.9 | 15.0 | S. 39 | 57.4 | 57.5 | 57.7 | 57.7 | 57.7 | 57.6 |
| 1.2 | β Geminorum 21 | 243 | 54.8 | 54.8 | 54.8 | 55.0 | 55.1 | 55.1 | N. 28 | 04.0 | 04.0 | 04.0 | 04.0 | 04.1 | 04.0 |
| 0.5 | α Canis Minoris 20 | 245 | 22.9 | 22.9 | 23.0 | 23.1 | 23.2 | 23.2 | N. 5 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |

STARS, 1984 JULY—DECEMBER

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | |
|------|---------------------------|--------|------|------|-------|------|------|-------------|-------|------|------|-------|------|------|------|
| | | | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. | | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. |
| 3.1 | γ Ursæ Minoris | 129 | 48.2 | 48.7 | 49.2 | 49.6 | 49.8 | 49.6 | N. 71 | 53.7 | 53.7 | 53.6 | 53.5 | 53.3 | 53.1 |
| 3.1 | γ Trianguli Aust. | 130 | 38.3 | 38.7 | 39.0 | 39.3 | 39.3 | 39.0 | S. 68 | 37.6 | 37.7 | 37.6 | 37.5 | 37.4 | 37.3 |
| 2.7 | β Libræ | 130 | 57.5 | 57.6 | 57.7 | 57.8 | 57.7 | 57.6 | S. 9 | 19.6 | 19.6 | 19.5 | 19.5 | 19.6 | 19.6 |
| 2.8 | β Lupi | 135 | 37.4 | 37.6 | 37.8 | 37.8 | 37.8 | 37.6 | S. 43 | 04.5 | 04.5 | 04.4 | 04.4 | 04.3 | 04.3 |
| 2.2 | κ Kochab 40 | 137 | 18.3 | 18.9 | 19.4 | 19.8 | 19.9 | 19.7 | N. 74 | 13.5 | 13.5 | 13.4 | 13.2 | 13.0 | 12.8 |
| 2.9 | δ Zubenelgenubi 39 | 137 | 29.8 | 29.9 | 30.0 | 30.1 | 30.0 | 29.9 | S. 15 | 58.7 | 58.7 | 58.7 | 58.6 | 58.6 | 58.7 |
| 2.6 | ϵ Bootis | 138 | 55.4 | 55.5 | 55.6 | 55.7 | 55.7 | 55.5 | N. 27 | 08.6 | 08.6 | 08.5 | 08.5 | 08.3 | 08.2 |
| 2.9 | α Lupi | 139 | 46.8 | 46.9 | 47.1 | 47.2 | 47.1 | 46.9 | S. 47 | 19.5 | 19.5 | 19.4 | 19.4 | 19.3 | 19.2 |
| 0.1 | α Rigil Kent. | 140 | 22.0 | 22.3 | 22.5 | 22.6 | 22.5 | 22.3 | S. 60 | 46.5 | 46.5 | 46.4 | 46.3 | 46.2 | 46.1 |
| 2.6 | η Centauri | 141 | 22.4 | 22.5 | 22.7 | 22.7 | 22.7 | 22.5 | S. 42 | 05.6 | 05.6 | 05.5 | 05.4 | 05.4 | 05.3 |
| 3.0 | γ Bootis | 142 | 08.2 | 08.3 | 08.5 | 08.6 | 08.5 | 08.4 | N. 38 | 22.8 | 22.8 | 22.8 | 22.6 | 22.5 | 22.3 |
| 0.2 | α Arcturus 37 | 146 | 15.8 | 15.9 | 16.0 | 16.0 | 16.0 | 15.8 | N. 19 | 16.0 | 16.0 | 15.9 | 15.8 | 15.7 | 15.6 |
| 2.3 | β Menkent 36 | 148 | 33.7 | 33.8 | 34.0 | 34.0 | 33.9 | 33.7 | S. 36 | 17.8 | 17.7 | 17.7 | 17.6 | 17.6 | 17.6 |
| 0.9 | α Hadar 35 | 149 | 19.4 | 19.7 | 19.9 | 20.0 | 19.9 | 19.6 | S. 60 | 18.1 | 18.1 | 18.0 | 17.9 | 17.8 | 17.8 |
| 3.1 | ζ Centauri | 151 | 21.7 | 21.9 | 22.0 | 22.1 | 22.0 | 21.7 | S. 47 | 12.9 | 12.9 | 12.8 | 12.7 | 12.6 | 12.6 |
| 2.8 | η Bootis | 151 | 30.9 | 31.0 | 31.1 | 31.1 | 31.1 | 30.9 | N. 18 | 28.7 | 28.7 | 28.7 | 28.6 | 28.5 | 28.3 |
| 1.9 | α Alkaid 34 | 153 | 16.1 | 16.3 | 16.4 | 16.5 | 16.4 | 16.2 | N. 49 | 23.8 | 23.7 | 23.6 | 23.5 | 23.3 | 23.1 |
| 2.6 | ϵ Centauri | 155 | 16.8 | 17.0 | 17.2 | 17.2 | 17.0 | 16.8 | S. 53 | 23.5 | 23.4 | 23.3 | 23.2 | 23.1 | 23.1 |
| 1.2 | α Spica 33 | 158 | 54.6 | 54.7 | 54.8 | 54.8 | 54.6 | 54.4 | S. 11 | 04.8 | 04.8 | 04.7 | 04.7 | 04.8 | 04.9 |
| 2.2 | β Mizar | 159 | 10.5 | 10.7 | 10.9 | 10.9 | 10.8 | 10.5 | N. 55 | 00.7 | 00.7 | 00.6 | 00.4 | 00.2 | 00.0 |
| 2.9 | ϵ Centauri | 160 | 04.4 | 04.6 | 04.7 | 04.7 | 04.5 | 04.3 | S. 36 | 38.0 | 37.9 | 37.8 | 37.8 | 37.7 | 37.7 |
| 3.0 | ϵ Virginis | 164 | 39.1 | 39.2 | 39.3 | 39.3 | 39.1 | 38.9 | N. 11 | 02.7 | 02.7 | 02.7 | 02.6 | 02.5 | 02.4 |
| 2.9 | α Cor Caroli | 166 | 10.6 | 10.8 | 10.8 | 10.8 | 10.7 | 10.4 | N. 38 | 24.4 | 24.4 | 24.3 | 24.2 | 24.0 | 23.9 |
| 1.7 | α Alioth 32 | 166 | 39.9 | 40.1 | 40.2 | 40.2 | 40.0 | 39.7 | N. 56 | 03.0 | 02.9 | 02.8 | 02.6 | 02.4 | 02.3 |
| 1.5 | α Mimosia | 168 | 18.3 | 18.6 | 18.7 | 18.7 | 18.4 | 18.1 | S. 59 | 36.4 | 36.4 | 36.3 | 36.1 | 36.0 | 36.0 |
| 2.9 | γ Virginis | 169 | 47.2 | 47.2 | 47.3 | 47.2 | 47.1 | 46.9 | S. 1 | 21.8 | 21.7 | 21.7 | 21.7 | 21.8 | 21.9 |
| 2.4 | β Muhlifain | 169 | 50.5 | 50.7 | 50.8 | 50.8 | 50.6 | 50.3 | S. 48 | 52.6 | 52.6 | 52.4 | 52.3 | 52.3 | 52.3 |
| 2.9 | α Muscæ | 170 | 56.9 | 57.2 | 57.4 | 57.4 | 57.1 | 56.6 | S. 69 | 03.2 | 03.2 | 03.0 | 02.9 | 02.8 | 02.8 |
| 2.8 | β Corvi | 171 | 36.8 | 36.8 | 36.9 | 36.8 | 36.7 | 36.4 | S. 23 | 18.7 | 18.6 | 18.6 | 18.5 | 18.5 | 18.6 |
| 1.6 | α Gacrux 31 | 172 | 26.0 | 26.2 | 26.3 | 26.2 | 26.0 | 25.6 | S. 57 | 01.8 | 01.7 | 01.6 | 01.4 | 01.4 | 01.4 |
| 1.1 | α Acrux 30 | 173 | 34.5 | 34.8 | 34.9 | 34.9 | 34.6 | 34.2 | S. 63 | 01.0 | 00.9 | 00.8 | 00.7 | 00.6 | 00.6 |
| 2.8 | β Gienah 29 | 176 | 15.2 | 15.3 | 15.3 | 15.3 | 15.1 | 14.9 | S. 17 | 27.3 | 27.3 | 27.2 | 27.2 | 27.2 | 27.3 |
| 2.9 | δ Centauri | 178 | 07.2 | 07.3 | 07.4 | 07.3 | 07.1 | 06.8 | S. 50 | 38.3 | 38.2 | 38.1 | 38.0 | 37.9 | 38.0 |
| 2.5 | β Phecda | 181 | 45.0 | 45.2 | 45.2 | 45.1 | 44.9 | 44.5 | N. 53 | 47.2 | 47.1 | 47.0 | 46.8 | 46.7 | 46.5 |
| 2.2 | α Denebola 28 | 182 | 56.3 | 56.3 | 56.3 | 56.3 | 56.1 | 55.8 | N. 14 | 39.7 | 39.7 | 39.7 | 39.6 | 39.5 | 39.4 |
| 2.6 | δ Leonis | 191 | 41.1 | 41.1 | 41.1 | 41.0 | 40.8 | 40.5 | N. 20 | 36.8 | 36.7 | 36.7 | 36.6 | 36.5 | 36.4 |
| 3.2 | ψ Ursæ Majoris | 192 | 48.5 | 48.5 | 48.5 | 48.4 | 48.1 | 47.8 | N. 44 | 35.3 | 35.2 | 35.1 | 35.0 | 34.8 | 34.7 |
| 2.0 | β Dubhe 27 | 194 | 18.8 | 18.9 | 18.9 | 18.7 | 18.4 | 17.9 | N. 7 | 50.4 | 50.3 | 50.2 | 50.0 | 49.9 | 49.8 |
| 2.4 | α Merak | 194 | 46.8 | 46.9 | 46.8 | 46.7 | 46.3 | 46.0 | N. 56 | 28.3 | 28.2 | 28.0 | 27.9 | 27.7 | 27.6 |
| 2.8 | μ Velorum | 198 | 29.1 | 29.1 | 29.1 | 29.0 | 28.7 | 28.4 | S. 49 | 20.3 | 20.2 | 20.1 | 20.0 | 20.0 | 20.0 |
| 3.0 | θ Carinæ | 199 | 24.7 | 24.9 | 24.9 | 24.7 | 24.3 | 23.9 | S. 64 | 18.9 | 18.8 | 18.6 | 18.5 | 18.4 | 18.5 |
| 2.3 | β Algeiba | 205 | 13.7 | 13.7 | 13.6 | 13.4 | 13.2 | 12.9 | N. 19 | 55.5 | 55.4 | 55.4 | 55.3 | 55.2 | 55.1 |
| 1.3 | α Regulus 26 | 208 | 07.2 | 07.2 | 07.2 | 07.0 | 06.8 | 06.5 | N. 12 | 02.8 | 02.8 | 02.8 | 02.7 | 02.6 | 02.5 |
| 3.1 | ϵ Leonis | 213 | 45.9 | 45.9 | 45.8 | 45.6 | 45.3 | 45.1 | N. 23 | 51.0 | 51.0 | 50.9 | 50.8 | 50.7 | 50.7 |
| 3.0 | ν Velorum | 217 | 19.5 | 19.5 | 19.4 | 19.2 | 18.8 | 18.4 | S. 56 | 58.0 | 57.8 | 57.7 | 57.6 | 57.6 | 57.7 |
| 2.2 | α Alphard 25 | 218 | 18.1 | 18.1 | 18.0 | 17.8 | 17.6 | 17.3 | S. 8 | 35.3 | 35.3 | 35.2 | 35.2 | 35.3 | 35.4 |
| 2.6 | κ Velorum | 219 | 36.2 | 36.2 | 36.1 | 35.9 | 35.5 | 35.2 | S. 54 | 56.6 | 56.5 | 56.4 | 56.3 | 56.3 | 56.4 |
| 2.2 | ι Carinæ | 220 | 50.6 | 50.7 | 50.5 | 50.3 | 49.9 | 49.5 | S. 59 | 12.6 | 12.4 | 12.3 | 12.2 | 12.2 | 12.3 |
| 1.8 | α Miaplacidus 24 | 221 | 45.5 | 45.6 | 45.4 | 45.0 | 44.5 | 44.0 | S. 69 | 39.2 | 39.1 | 38.9 | 38.8 | 38.8 | 38.9 |
| 2.2 | β Suhail 23 | 223 | 09.2 | 09.2 | 09.1 | 08.9 | 08.6 | 08.3 | S. 43 | 22.1 | 22.0 | 21.9 | 21.8 | 21.8 | 22.0 |
| 3.1 | ι Ursæ Majoris | 225 | 28.4 | 28.3 | 28.1 | 27.9 | 27.5 | 27.2 | N. 48 | 06.4 | 06.3 | 06.2 | 06.1 | 06.0 | 06.0 |
| 2.0 | δ Velorum | 228 | 56.6 | 56.6 | 56.4 | 56.1 | 55.8 | 55.5 | S. 54 | 39.0 | 38.9 | 38.7 | 38.7 | 38.7 | 38.8 |
| 1.7 | α Avior 22 | 234 | 27.8 | 27.8 | 27.6 | 27.3 | 26.9 | 26.6 | S. 59 | 27.5 | 27.3 | 27.2 | 27.2 | 27.2 | 27.3 |
| 1.9 | γ Velorum | 237 | 44.8 | 44.8 | 44.6 | 44.3 | 44.0 | 43.8 | S. 47 | 17.3 | 17.2 | 17.1 | 17.0 | 17.1 | 17.2 |
| 2.9 | ρ Puppis | 238 | 17.3 | 17.2 | 17.1 | 16.8 | 16.6 | 16.4 | S. 24 | 15.4 | 15.3 | 15.2 | 15.2 | 15.3 | 15.4 |
| 2.3 | ζ Puppis | 239 | 15.0 | 14.9 | 14.8 | 14.5 | 14.2 | 14.0 | S. 39 | 57.4 | 57.3 | 57.2 | 57.2 | 57.2 | 57.4 |
| 1.2 | α Pollux 21 | 243 | 55.1 | 54.9 | 54.7 | 54.5 | 54.2 | 54.0 | N. 28 | 04.0 | 04.0 | 04.0 | 03.9 | 03.9 | 03.8 |
| 0.5 | α Procyon 20 | 245 | 23.2 | 23.1 | 22.9 | 22.7 | 22.4 | 22.2 | N. 5 | 16.1 | 16.1 | 16.1 | 16.1 | 16.0 | 16.0 |

STARS, 1984 JANUARY—JUNE

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | | |
|--------|--------------------------|--------|------|------|------|------|------|-------------|-------|-------|------|------|------|------|------|------|
| | | | JAN. | FEB. | MAR. | APR. | MAY | JUNE | | JAN. | FEB. | MAR. | APR. | MAY | JUNE | |
| 1.6 | α Geminorum | 246 | 36.2 | 36.1 | 36.2 | 36.4 | 36.5 | 36.5 | N. 31 | 55.5 | 55.5 | 55.6 | 55.6 | 55.6 | 55.6 | |
| 3.3 | σ Puppis | 247 | 48.8 | 48.9 | 49.0 | 49.2 | 49.4 | 49.5 | S. 43 | 16.1 | 16.2 | 16.3 | 16.4 | 16.3 | 16.2 | |
| 3.1 | β Canis Minoris | 248 | 25.6 | 25.6 | 25.7 | 25.8 | 25.9 | 26.0 | N. 8 | 19.4 | 19.3 | 19.3 | 19.3 | 19.4 | 19.4 | |
| 2.4 | η Canis Majoris | 249 | 07.9 | 07.9 | 08.0 | 08.2 | 08.3 | 08.4 | S. 29 | 16.3 | 16.4 | 16.5 | 16.5 | 16.4 | 16.3 | |
| 2.7 | π Puppis | 250 | 51.1 | 51.1 | 51.3 | 51.4 | 51.6 | 51.7 | S. 37 | 04.1 | 04.2 | 04.3 | 04.3 | 04.3 | 04.2 | |
| 2.0 | δ Canis Majoris | 253 | 03.7 | 03.7 | 03.8 | 04.0 | 04.1 | 04.2 | S. 26 | 22.0 | 22.1 | 22.2 | 22.2 | 22.2 | 22.1 | |
| 3.1 | \circ Canis Majoris | 254 | 24.5 | 24.5 | 24.6 | 24.8 | 24.9 | 24.9 | S. 23 | 48.6 | 48.7 | 48.7 | 48.7 | 48.7 | 48.6 | |
| 1.6 | ϵ Canis Majoris | 19 | 255 | 29.8 | 29.9 | 30.0 | 30.2 | 30.3 | 30.3 | S. 28 | 57.0 | 57.1 | 57.2 | 57.2 | 57.1 | 57.0 |
| 2.8 | τ Puppis | 257 | 36.5 | 36.6 | 36.8 | 37.1 | 37.3 | 37.4 | S. 50 | 35.7 | 35.9 | 36.0 | 36.0 | 35.9 | 35.8 | |
| -1.6 | α Canis Majoris | 18 | 258 | 53.2 | 53.3 | 53.4 | 53.5 | 53.6 | 53.6 | S. 16 | 41.7 | 41.8 | 41.8 | 41.8 | 41.7 | 41.6 |
| 1.9 | γ Geminorum | 260 | 48.1 | 48.1 | 48.2 | 48.3 | 48.4 | 48.4 | N. 16 | 24.9 | 24.8 | 24.9 | 24.9 | 24.9 | 24.9 | |
| -0.9 | α Carinae | 17 | 264 | 05.6 | 05.7 | 06.0 | 06.3 | 06.5 | 06.6 | S. 52 | 41.3 | 41.4 | 41.5 | 41.4 | 41.4 | 41.2 |
| 2.0 | β Canis Majoris | 264 | 29.9 | 30.0 | 30.1 | 30.3 | 30.3 | 30.4 | S. 17 | 56.9 | 57.0 | 57.0 | 57.0 | 56.9 | 56.8 | |
| 2.7 | θ Aurigae | 270 | 20.5 | 20.5 | 20.6 | 20.8 | 20.9 | 20.8 | N. 37 | 12.8 | 12.9 | 12.9 | 12.9 | 12.8 | 12.8 | |
| 2.1 | β Aurigae | 270 | 24.6 | 24.6 | 24.8 | 25.0 | 25.1 | 25.0 | N. 44 | 56.9 | 57.0 | 57.0 | 57.0 | 56.9 | 56.9 | |
| Var. § | α Orionis | 16 | 271 | 25.3 | 25.4 | 25.5 | 25.6 | 25.7 | 25.7 | N. 7 | 24.3 | 24.3 | 24.3 | 24.3 | 24.3 | 24.3 |
| 2.2 | κ Orionis | 273 | 14.9 | 15.0 | 15.1 | 15.3 | 15.3 | 15.3 | S. 9 | 40.5 | 40.6 | 40.6 | 40.6 | 40.5 | 40.4 | |
| 1.9 | ζ Orionis | 275 | 00.7 | 00.7 | 00.8 | 01.0 | 01.0 | 01.0 | S. 1 | 57.0 | 57.1 | 57.1 | 57.1 | 57.0 | 57.0 | |
| 2.8 | α Columbae | 275 | 13.8 | 13.9 | 14.0 | 14.2 | 14.3 | 14.3 | S. 34 | 05.0 | 05.1 | 05.2 | 05.1 | 05.0 | 04.9 | |
| 3.0 | ζ Tauri | 275 | 49.6 | 49.7 | 49.8 | 49.9 | 50.0 | 49.9 | N. 21 | 08.1 | 08.1 | 08.1 | 08.1 | 08.1 | 08.1 | |
| 1.8 | ϵ Orionis | 15 | 276 | 08.9 | 09.0 | 09.1 | 09.2 | 09.3 | 09.2 | S. 1 | 12.7 | 12.8 | 12.8 | 12.7 | 12.7 | 12.6 |
| 2.9 | ι Orionis | 276 | 20.2 | 20.2 | 20.3 | 20.5 | 20.5 | 20.5 | S. 5 | 55.2 | 55.3 | 55.3 | 55.3 | 55.2 | 55.1 | |
| 2.7 | α Leporis | 276 | 59.5 | 59.6 | 59.7 | 59.9 | 59.9 | 59.9 | S. 17 | 50.1 | 50.1 | 50.2 | 50.1 | 50.0 | 49.9 | |
| 2.5 | δ Orionis | 277 | 12.1 | 12.2 | 12.3 | 12.4 | 12.5 | 12.4 | S. 0 | 18.6 | 18.7 | 18.7 | 18.7 | 18.6 | 18.6 | |
| 3.0 | β Leporis | 278 | 06.5 | 06.6 | 06.7 | 06.8 | 06.9 | 06.9 | S. 20 | 46.4 | 46.5 | 46.5 | 46.4 | 46.4 | 46.2 | |
| 1.8 | β Tauri | 14 | 278 | 40.8 | 40.8 | 40.9 | 41.1 | 41.1 | 41.1 | N. 28 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | 35.7 |
| 1.7 | γ Orionis | 13 | 278 | 55.9 | 55.9 | 56.0 | 56.2 | 56.2 | 56.2 | N. 6 | 20.1 | 20.1 | 20.1 | 20.1 | 20.2 | 20.2 |
| 0.2 | α Aurigae | 12 | 281 | 07.3 | 07.4 | 07.6 | 07.8 | 07.8 | 07.8 | N. 45 | 59.1 | 59.1 | 59.2 | 59.1 | 59.1 | 59.0 |
| 0.3 | β Orionis | 11 | 281 | 33.4 | 33.5 | 33.6 | 33.7 | 33.8 | 33.7 | S. 8 | 13.2 | 13.3 | 13.3 | 13.3 | 13.2 | 13.1 |
| 2.9 | β Eridani | 283 | 14.0 | 14.1 | 14.2 | 14.3 | 14.4 | 14.3 | S. 5 | 06.4 | 06.5 | 06.5 | 06.5 | 06.4 | 06.3 | |
| 2.9 | ι Aurigae | 286 | 00.7 | 00.8 | 00.9 | 01.1 | 01.1 | 01.0 | N. 33 | 08.6 | 08.6 | 08.6 | 08.6 | 08.6 | 08.5 | |
| 1.1 | α Tauri | 10 | 291 | 15.0 | 15.1 | 15.2 | 15.3 | 15.2 | N. 16 | 28.7 | 28.7 | 28.7 | 28.7 | 28.7 | 28.7 | |
| 3.2 | γ Eridani | 300 | 40.8 | 40.9 | 41.0 | 41.1 | 41.1 | 41.0 | S. 13 | 33.3 | 33.4 | 33.4 | 33.3 | 33.2 | 33.1 | |
| 3.0 | ϵ Persei | 300 | 48.4 | 48.5 | 48.7 | 48.8 | 48.8 | 48.6 | N. 39 | 58.0 | 58.0 | 58.0 | 58.0 | 57.9 | 57.9 | |
| 2.9 | ζ Persei | 301 | 43.2 | 43.3 | 43.4 | 43.5 | 43.5 | 43.4 | N. 31 | 50.3 | 50.3 | 50.3 | 50.2 | 50.2 | 50.2 | |
| 3.0 | η Tauri | 303 | 22.1 | 22.2 | 22.3 | 22.4 | 22.4 | 22.3 | N. 24 | 03.4 | 03.4 | 03.4 | 03.4 | 03.4 | 03.4 | |
| 1.9 | α Persei | 9 | 309 | 12.5 | 12.6 | 12.8 | 12.9 | 12.9 | N. 49 | 48.5 | 48.5 | 48.5 | 48.4 | 48.3 | 48.2 | |
| Var. § | β Persei | 313 | 13.3 | 13.4 | 13.6 | 13.6 | 13.6 | 13.4 | N. 40 | 53.8 | 53.8 | 53.8 | 53.7 | 53.6 | 53.6 | |
| 2.8 | α Ceti | 8 | 314 | 38.5 | 38.6 | 38.7 | 38.7 | 38.5 | N. 4 | 01.6 | 01.6 | 01.6 | 01.6 | 01.6 | 01.7 | |
| 3.1 | θ Eridani | 7 | 315 | 35.2 | 35.3 | 35.5 | 35.6 | 35.4 | S. 40 | 22.4 | 22.4 | 22.5 | 22.2 | 22.1 | 21.9 | |
| 2.1 | α Ursae Minoris | 326 | 10.2 | 21.2 | 30.2 | 34.5 | 31.8 | 23.9 | N. 89 | 11.8 | 11.8 | 11.7 | 11.6 | 11.4 | 11.3 | |
| 3.1 | β Trianguli | 327 | 51.4 | 51.5 | 51.6 | 51.7 | 51.6 | 51.4 | N. 34 | 54.8 | 54.8 | 54.7 | 54.7 | 54.6 | 54.6 | |
| 2.2 | α Arietis | 6 | 328 | 26.2 | 26.3 | 26.4 | 26.4 | 26.3 | 26.1 | N. 23 | 23.3 | 23.2 | 23.2 | 23.2 | 23.1 | 23.2 |
| 2.2 | γ Andromedae | 329 | 16.5 | 16.7 | 16.8 | 16.9 | 16.7 | 16.5 | N. 42 | 15.3 | 15.3 | 15.2 | 15.2 | 15.1 | 15.1 | |
| 3.0 | α Hydri | 330 | 26.0 | 26.3 | 26.5 | 26.6 | 26.5 | 26.3 | S. 61 | 39.2 | 39.2 | 39.2 | 38.9 | 38.7 | 38.5 | |
| 2.7 | β Arietis | 331 | 33.9 | 34.0 | 34.1 | 34.1 | 34.0 | 33.8 | N. 20 | 43.8 | 43.8 | 43.7 | 43.7 | 43.7 | 43.8 | |
| 0.6 | α Eridani | 5 | 335 | 43.3 | 43.5 | 43.7 | 43.7 | 43.6 | 43.4 | S. 57 | 19.4 | 19.4 | 19.3 | 19.1 | 18.9 | 18.8 |
| 2.8 | δ Cassiopeiae | 338 | 49.0 | 49.2 | 49.4 | 49.4 | 49.2 | 48.9 | N. 60 | 09.3 | 09.3 | 09.2 | 09.1 | 09.0 | 08.9 | |
| 2.4 | β Andromedae | 342 | 47.8 | 47.9 | 48.0 | 47.9 | 47.6 | N. 35 | 32.2 | 32.2 | 32.1 | 32.0 | 32.0 | 32.0 | | |
| Var. § | γ Cassiopeiae | 346 | 04.4 | 04.7 | 04.8 | 04.8 | 04.6 | 04.2 | N. 60 | 38.0 | 37.9 | 37.8 | 37.7 | 37.6 | 37.6 | |
| 2.2 | β Ceti | 4 | 349 | 18.5 | 18.6 | 18.6 | 18.5 | 18.4 | 18.2 | S. 18 | 04.7 | 04.7 | 04.6 | 04.6 | 04.4 | 04.3 |
| 2.5 | α Cassiopeiae | 3 | 350 | 06.5 | 06.7 | 06.9 | 06.8 | 06.6 | 06.3 | N. 56 | 27.1 | 27.1 | 27.0 | 26.8 | 26.8 | 26.8 |
| 2.4 | α Phoenicis | 2 | 353 | 37.9 | 38.0 | 38.0 | 38.0 | 37.8 | 37.5 | S. 42 | 23.9 | 23.9 | 23.7 | 23.6 | 23.4 | 23.3 |
| 2.9 | β Hydri | 353 | 46.5 | 47.0 | 47.2 | 47.1 | 46.7 | 46.0 | S. 77 | 21.1 | 21.0 | 20.8 | 20.6 | 20.4 | 20.3 | |
| 2.9 | γ Pegasi | 356 | 54.2 | 54.3 | 54.3 | 54.2 | 54.1 | 53.8 | N. 15 | 05.6 | 05.6 | 05.5 | 05.5 | 05.5 | 05.6 | |
| 2.4 | β Cassiopeiae | 357 | 55.8 | 56.0 | 56.0 | 56.0 | 55.7 | 55.3 | N. 59 | 03.8 | 03.8 | 03.6 | 03.5 | 03.4 | 03.4 | |
| 2.2 | α Andromedae | 1 | 358 | 07.0 | 07.1 | 07.1 | 07.0 | 06.9 | N. 28 | 60.1 | 60.1 | 60.0 | 59.9 | 59.9 | 60.0 | |

‡ 0.1—1.2 § 2.3—3.5 || Irregular variable; 1981 mag. 2.5

STARS, 1984 JULY—DECEMBER

| Mag. | Name and Number | S.H.A. | | | | | | Declination | | | | | | | |
|---------------|------------------------------|--------|------|-------|------|------|------|-------------|-------|-------|------|------|------|------|------|
| | | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. | JULY | AUG. | SEPT. | OCT. | NOV. | DEC. | | |
| 1.6 | <i>Castor</i> | 246 | 36.4 | 36.3 | 36.1 | 35.8 | 35.5 | 35.3 | N. 31 | 55.5 | 55.5 | 55.5 | 55.4 | 55.4 | 55.4 |
| 3.3 | σ <i>Puppis</i> | 247 | 49.5 | 49.4 | 49.2 | 49.0 | 48.7 | 48.5 | S. 43 | 16.1 | 15.9 | 15.8 | 15.8 | 15.9 | 16.0 |
| 3.1 | β <i>Canis Minoris</i> | 248 | 25.9 | 25.8 | 25.6 | 25.4 | 25.1 | 24.9 | N. 8 | 19.4 | 19.5 | 19.5 | 19.4 | 19.4 | 19.3 |
| 2.4 | η <i>Canis Majoris</i> | 249 | 08.3 | 08.2 | 08.0 | 07.8 | 07.6 | 07.4 | S. 29 | 16.2 | 16.1 | 16.0 | 16.0 | 16.1 | 16.2 |
| 2.7 | π <i>Puppis</i> | 250 | 51.7 | 51.5 | 51.3 | 51.1 | 50.8 | 50.6 | S. 37 | 04.0 | 03.9 | 03.8 | 03.8 | 03.9 | 04.0 |
| 2.0 | <i>Wezen</i> | 253 | 04.1 | 04.0 | 03.8 | 03.6 | 03.3 | 03.2 | S. 26 | 21.9 | 21.8 | 21.7 | 21.7 | 21.8 | 21.9 |
| 3.1 | \circ <i>Canis Majoris</i> | 254 | 24.9 | 24.8 | 24.6 | 24.3 | 24.1 | 23.9 | S. 23 | 48.5 | 48.3 | 48.3 | 48.3 | 48.4 | 48.5 |
| 1.6 | <i>Adhara</i> | 19 | 255 | 30.3 | 30.2 | 30.0 | 29.7 | 29.5 | S. 28 | 56.9 | 56.8 | 56.7 | 56.7 | 56.8 | 56.9 |
| 2.8 | τ <i>Puppis</i> | 257 | 37.4 | 37.2 | 37.0 | 36.7 | 36.4 | 36.2 | S. 50 | 35.6 | 35.4 | 35.4 | 35.3 | 35.4 | 35.6 |
| -1.6 | <i>Sirius</i> | 18 | 258 | 53.6 | 53.4 | 53.2 | 53.0 | 52.8 | S. 16 | 41.5 | 41.4 | 41.4 | 41.4 | 41.5 | 41.6 |
| 1.9 | <i>Alhena</i> | 260 | 48.3 | 48.1 | 47.9 | 47.7 | 47.5 | 47.3 | N. 16 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 |
| -0.9 | <i>Canopus</i> | 17 | 264 | 06.5 | 06.3 | 06.0 | 05.7 | 05.5 | S. 52 | 41.0 | 40.9 | 40.8 | 40.8 | 40.9 | 41.1 |
| 2.0 | <i>Mirzam</i> | 264 | 30.3 | 30.1 | 29.9 | 29.7 | 29.5 | 29.3 | S. 17 | 56.7 | 56.6 | 56.5 | 56.6 | 56.6 | 56.7 |
| 2.7 | θ <i>Aurigæ</i> | 270 | 20.7 | 20.5 | 20.2 | 19.9 | 19.6 | 19.4 | N. 37 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 |
| 2.1 | <i>Menkalinan</i> | 270 | 24.9 | 24.6 | 24.3 | 24.0 | 23.7 | 23.5 | N. 44 | 56.8 | 56.8 | 56.8 | 56.8 | 56.8 | 56.9 |
| Var. † | <i>Betelgeuse</i> | 16 | 271 | 25.5 | 25.4 | 25.1 | 24.9 | 24.7 | N. 7 | 24.4 | 24.5 | 24.5 | 24.5 | 24.4 | 24.4 |
| 2.2 | κ <i>Orionis</i> | 273 | 15.2 | 15.0 | 14.8 | 14.6 | 14.4 | 14.2 | S. 9 | 40.3 | 40.2 | 40.2 | 40.2 | 40.3 | 40.4 |
| 1.9 | <i>Alnitak</i> | 274 | 60.9 | 60.7 | 60.5 | 60.2 | 60.0 | 59.9 | S. 1 | 56.9 | 56.8 | 56.8 | 56.8 | 56.8 | 56.9 |
| 2.8 | <i>Phact</i> | 275 | 14.2 | 14.0 | 13.8 | 13.5 | 13.3 | 13.2 | S. 34 | 04.7 | 04.6 | 04.6 | 04.6 | 04.7 | 04.8 |
| 3.0 | ζ <i>Tauri</i> | 275 | 49.8 | 49.6 | 49.3 | 49.1 | 48.9 | 48.7 | N. 21 | 08.1 | 08.1 | 08.1 | 08.1 | 08.1 | 08.1 |
| 1.8 | <i>Alnilam</i> | 15 | 276 | 09.1 | 08.9 | 08.7 | 08.5 | 08.3 | S. 1 | 12.6 | 12.5 | 12.4 | 12.4 | 12.5 | 12.6 |
| 2.9 | ι <i>Orionis</i> | 276 | 20.4 | 20.2 | 20.0 | 19.8 | 19.6 | 19.4 | S. 5 | 55.0 | 55.0 | 54.9 | 54.9 | 55.0 | 55.1 |
| 2.7 | α <i>Leporis</i> | 276 | 59.8 | 59.6 | 59.4 | 59.2 | 59.0 | 58.9 | S. 17 | 49.8 | 49.7 | 49.7 | 49.7 | 49.8 | 49.9 |
| 2.5 | δ <i>Orionis</i> | 277 | 12.3 | 12.1 | 11.9 | 11.7 | 11.5 | 11.3 | S. 0 | 18.5 | 18.4 | 18.4 | 18.4 | 18.4 | 18.5 |
| 3.0 | β <i>Leporis</i> | 278 | 06.8 | 06.6 | 06.4 | 06.1 | 05.9 | 05.8 | S. 20 | 46.1 | 46.0 | 46.0 | 46.0 | 46.1 | 46.2 |
| 1.8 | <i>Elnath</i> | 14 | 278 | 40.9 | 40.7 | 40.4 | 40.2 | 40.0 | N. 28 | 35.7 | 35.7 | 35.8 | 35.8 | 35.8 | 35.8 |
| 1.7 | <i>Bellatrix</i> | 13 | 278 | 56.0 | 55.8 | 55.6 | 55.4 | 55.2 | N. 6 | 20.3 | 20.3 | 20.4 | 20.4 | 20.3 | 20.3 |
| 0.2 | <i>Capella</i> | 12 | 281 | 07.6 | 07.3 | 07.0 | 06.7 | 06.4 | N. 45 | 59.0 | 58.9 | 59.0 | 59.0 | 59.0 | 59.1 |
| 0.3 | <i>Rigel</i> | 11 | 281 | 33.6 | 33.4 | 33.2 | 33.0 | 32.8 | S. 8 | 13.0 | 12.9 | 12.9 | 12.9 | 12.9 | 13.0 |
| 2.9 | β <i>Eridani</i> | 283 | 14.2 | 14.0 | 13.8 | 13.5 | 13.4 | 13.2 | S. 5 | 06.2 | 06.1 | 06.1 | 06.1 | 06.2 | 06.2 |
| 2.9 | ι <i>Aurigæ</i> | 285 | 60.9 | 60.6 | 60.3 | 60.1 | 59.9 | 59.7 | N. 33 | 08.5 | 08.5 | 08.6 | 08.6 | 08.6 | 08.7 |
| 1.1 | <i>Aldebaran</i> | 10 | 291 | 15.0 | 14.8 | 14.6 | 14.4 | 14.2 | N. 16 | 28.8 | 28.8 | 28.8 | 28.9 | 28.9 | 28.9 |
| 3.2 | γ <i>Eridani</i> | 300 | 40.8 | 40.6 | 40.4 | 40.2 | 40.0 | 40.0 | S. 13 | 33.0 | 32.9 | 32.9 | 32.9 | 33.0 | 33.0 |
| 3.0 | ϵ <i>Persei</i> | 300 | 48.4 | 48.1 | 47.8 | 47.6 | 47.4 | 47.3 | N. 39 | 57.9 | 57.9 | 58.0 | 58.0 | 58.1 | 58.2 |
| 2.9 | ζ <i>Persei</i> | 301 | 43.2 | 42.9 | 42.7 | 42.4 | 42.3 | 42.2 | N. 31 | 50.2 | 50.3 | 50.3 | 50.4 | 50.4 | 50.5 |
| 3.0 | <i>Alcyone</i> | 303 | 22.0 | 21.8 | 21.6 | 21.4 | 21.2 | 21.1 | N. 24 | 03.4 | 03.5 | 03.5 | 03.6 | 03.6 | 03.7 |
| 1.9 | <i>Mirfak</i> | 9 | 309 | 12.4 | 12.1 | 11.8 | 11.5 | 11.3 | N. 49 | 48.2 | 48.3 | 48.3 | 48.4 | 48.6 | 48.7 |
| Var. § | <i>Algol</i> | 313 | 13.1 | 12.8 | 12.6 | 12.4 | 12.2 | 12.2 | N. 40 | 53.6 | 53.7 | 53.8 | 53.9 | 54.0 | 54.0 |
| 2.8 | <i>Menkar</i> | 8 | 314 | 38.3 | 38.1 | 37.9 | 37.7 | 37.6 | N. 4 | 01.8 | 01.9 | 01.9 | 01.9 | 01.9 | 01.9 |
| 3.1 | <i>Acamar</i> | 7 | 315 | 35.2 | 34.9 | 34.7 | 34.5 | 34.4 | S. 40 | 21.8 | 21.7 | 21.7 | 21.8 | 21.9 | 22.0 |
| 2.1 | <i>Polaris</i> | 325 | 73.0 | 61.2 | 51.1 | 44.8 | 43.8 | 48.7 | N. 89 | 11.3 | 11.4 | 11.5 | 11.7 | 11.8 | 12.0 |
| 3.1 | β <i>Trianguli</i> | 327 | 51.1 | 50.8 | 50.6 | 50.4 | 50.4 | 50.4 | N. 34 | 54.7 | 54.8 | 54.9 | 55.0 | 55.1 | 55.1 |
| 2.2 | <i>Hamal</i> | 6 | 328 | 25.9 | 25.6 | 25.4 | 25.3 | 25.2 | N. 23 | 23.3 | 23.3 | 23.4 | 23.5 | 23.6 | 23.6 |
| 2.2 | <i>Almak</i> | 329 | 16.2 | 15.9 | 15.7 | 15.5 | 15.5 | 15.5 | N. 42 | 15.1 | 15.2 | 15.3 | 15.5 | 15.6 | 15.6 |
| 3.0 | α <i>Hydri</i> | 330 | 25.9 | 25.5 | 25.2 | 25.0 | 25.0 | 25.1 | S. 61 | 38.4 | 38.4 | 38.5 | 38.6 | 38.7 | 38.8 |
| 2.7 | <i>Sheratan</i> | 331 | 33.6 | 33.3 | 33.1 | 33.0 | 33.0 | 33.0 | N. 20 | 43.8 | 43.9 | 44.0 | 44.1 | 44.1 | 44.2 |
| 0.6 | <i>Achernar</i> | 5 | 335 | 43.0 | 42.6 | 42.4 | 42.2 | 42.4 | S. 57 | 18.7 | 18.6 | 18.7 | 18.8 | 19.0 | 19.1 |
| 2.8 | <i>Ruchbah</i> | 338 | 48.5 | 48.1 | 47.8 | 47.7 | 47.6 | 47.8 | N. 60 | 09.0 | 09.1 | 09.2 | 09.4 | 09.6 | 09.7 |
| 2.4 | <i>Mirach</i> | 342 | 47.3 | 47.1 | 46.9 | 46.8 | 46.8 | 46.8 | N. 35 | 32.1 | 32.2 | 32.3 | 32.5 | 32.5 | 32.6 |
| Var. γ | <i>Cassiopeia</i> | 346 | 03.8 | 03.4 | 03.2 | 03.1 | 03.1 | 03.3 | N. 60 | 37.7 | 37.8 | 37.9 | 38.1 | 38.3 | 38.3 |
| 2.2 | <i>Diphda</i> | 4 | 349 | 17.9 | 17.7 | 17.6 | 17.5 | 17.6 | S. 18 | 04.2 | 04.2 | 04.1 | 04.2 | 04.3 | 04.3 |
| 2.5 | <i>Schedar</i> | 3 | 350 | 05.9 | 05.6 | 05.4 | 05.3 | 05.5 | N. 56 | 26.8 | 27.0 | 27.1 | 27.3 | 27.4 | 27.5 |
| 2.4 | <i>Ankaa</i> | 2 | 353 | 37.2 | 36.9 | 36.8 | 36.7 | 36.8 | S. 42 | 23.2 | 23.2 | 23.3 | 23.4 | 23.5 | 23.6 |
| 2.9 | β <i>Hydri</i> | 353 | 45.1 | 44.4 | 43.9 | 43.9 | 44.2 | 44.8 | S. 77 | 20.2 | 20.3 | 20.4 | 20.6 | 20.7 | 20.7 |
| 2.9 | <i>Algemib</i> | 356 | 53.6 | 53.4 | 53.2 | 53.2 | 53.2 | 53.3 | N. 15 | 05.7 | 05.8 | 05.9 | 06.0 | 06.0 | 06.0 |
| 2.4 | <i>Caph</i> | 357 | 54.9 | 54.6 | 54.5 | 54.4 | 54.5 | 54.7 | N. 59 | 03.5 | 03.7 | 03.9 | 04.0 | 04.2 | 04.2 |
| 2.2 | <i>Alpheratz</i> | 1 | 358 | 06.4 | 06.1 | 06.0 | 06.0 | 06.1 | N. 29 | 00.1 | 00.2 | 00.4 | 00.5 | 00.5 | 00.5 |

† 0.1—1.2 § 2.3—3.5 † Irregular variable; 1981 mag. 2.5

POLARIS (POLE STAR) TABLES, 1984
FOR DETERMINING LATITUDE FROM SEXTANT ALTITUDE AND FOR AZIMUTH

| L.H.A. ARIES | 0°- 9° | 10°- 19° | 20°- 29° | 30°- 39° | 40°- 49° | 50°- 59° | 60°- 69° | 70°- 79° | 80°- 89° | 90°- 99° | 100°- 109° | 110°- 119° |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ |
| 0 | 18.8 | 14.7 | 11.9 | 10.6 | 10.8 | 12.4 | 15.5 | 19.9 | 25.5 | 32.2 | 39.6 | 47.6 |
| 1 | 18.3 | 14.4 | 11.7 | 10.6 | 10.9 | 12.7 | 15.9 | 20.4 | 26.2 | 32.9 | 40.4 | 48.4 |
| 2 | 17.9 | 14.0 | 11.5 | 10.5 | 11.0 | 12.9 | 16.3 | 21.0 | 26.8 | 33.6 | 41.2 | 49.3 |
| 3 | 17.4 | 13.7 | 11.4 | 10.5 | 11.1 | 13.2 | 16.7 | 21.5 | 27.4 | 34.3 | 42.0 | 50.1 |
| 4 | 17.0 | 13.4 | 11.2 | 10.5 | 11.3 | 13.5 | 17.1 | 22.0 | 28.1 | 35.1 | 42.8 | 50.9 |
| 5 | 16.6 | 13.1 | 11.1 | 10.5 | 11.4 | 13.8 | 17.6 | 22.6 | 28.7 | 35.8 | 43.6 | 51.8 |
| 6 | 16.2 | 12.9 | 11.0 | 10.5 | 11.6 | 14.1 | 18.0 | 23.2 | 29.4 | 36.6 | 44.4 | 52.6 |
| 7 | 15.8 | 12.6 | 10.9 | 10.6 | 11.8 | 14.5 | 18.5 | 23.8 | 30.1 | 37.3 | 45.2 | 53.4 |
| 8 | 15.4 | 12.4 | 10.8 | 10.6 | 12.0 | 14.8 | 19.0 | 24.3 | 30.8 | 38.1 | 46.0 | 54.3 |
| 9 | 15.0 | 12.1 | 10.7 | 10.7 | 12.2 | 15.2 | 19.4 | 24.9 | 31.5 | 38.8 | 46.8 | 55.1 |
| 10 | 14.7 | 11.9 | 10.6 | 10.8 | 12.4 | 15.5 | 19.9 | 25.5 | 32.2 | 39.6 | 47.6 | 56.0 |
| Lat. | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ |
| 0 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |
| 10 | .5 | .6 | .6 | .6 | .6 | .6 | .5 | .5 | .4 | .3 | .3 | .3 |
| 20 | .5 | .6 | .6 | .6 | .6 | .6 | .5 | .5 | .4 | .4 | .3 | .3 |
| 30 | .6 | .6 | .6 | .6 | .6 | .6 | .5 | .5 | .5 | .4 | .4 | .4 |
| 40 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 45 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .5 | .5 |
| 50 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| 55 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .7 | .7 | .7 |
| 60 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .7 | .7 | .7 | .8 | .8 |
| 62 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 |
| 64 | .7 | .6 | .6 | .6 | .6 | .6 | .7 | .7 | .8 | .8 | .9 | .9 |
| 66 | .7 | .6 | .6 | .6 | .6 | .6 | .7 | .8 | .8 | .9 | 0.9 | 0.9 |
| 68 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 |
| Month | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ |
| Jan. | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 |
| Feb. | .6 | .6 | .7 | .7 | .7 | .7 | .8 | .8 | .8 | .8 | .8 | .8 |
| Mar. | .5 | .5 | .6 | .6 | .7 | .7 | .8 | .8 | .8 | .9 | .9 | .9 |
| Apr. | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 0.9 |
| May | .2 | .2 | .3 | .3 | .4 | .5 | .5 | .6 | .7 | .8 | .8 | .9 |
| June | .2 | .2 | .2 | .2 | .3 | .3 | .4 | .5 | .5 | .6 | .7 | .8 |
| July | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 |
| Aug. | .4 | .3 | .3 | .3 | .3 | .2 | .3 | .3 | .3 | .3 | .4 | .4 |
| Sept. | .5 | .5 | .4 | .4 | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .3 |
| Oct. | 0.7 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Nov. | 0.9 | 0.9 | 0.8 | .7 | .7 | .6 | .5 | .5 | .4 | .4 | .3 | .3 |
| Dec. | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 |
| Lat. | AZIMUTH | | | | | | | | | | | |
| 0 | 0.4 | 0.3 | 0.1 | 0.0 | 359.8 | 359.7 | 359.6 | 359.5 | 359.4 | 359.3 | 359.2 | 359.2 |
| 20 | 0.4 | 0.3 | 0.1 | 0.0 | 359.8 | 359.7 | 359.6 | 359.4 | 359.3 | 359.2 | 359.2 | 359.2 |
| 40 | 0.5 | 0.3 | 0.2 | 0.0 | 359.8 | 359.6 | 359.5 | 359.3 | 359.2 | 359.1 | 359.0 | 359.0 |
| 50 | 0.6 | 0.4 | 0.2 | 0.0 | 359.8 | 359.5 | 359.3 | 359.2 | 359.0 | 358.9 | 358.8 | 358.8 |
| 55 | 0.7 | 0.5 | 0.2 | 0.0 | 359.7 | 359.5 | 359.3 | 359.1 | 358.9 | 358.8 | 358.7 | 358.6 |
| 60 | 0.8 | 0.5 | 0.3 | 0.0 | 359.7 | 359.4 | 359.1 | 358.9 | 358.7 | 358.6 | 358.5 | 358.4 |
| 65 | 0.9 | 0.6 | 0.3 | 0.0 | 359.6 | 359.3 | 359.0 | 358.7 | 358.5 | 358.3 | 358.2 | 358.1 |

Latitude = Apparent altitude (corrected for refraction) - $I^\circ + a_0 + a_1 + a_2$

The table is entered with L.H.A. Aries to determine the column to be used; each column refers to a range of 10° . a_0 is taken, with mental interpolation, from the upper table with the units of L.H.A. Aries in degrees as argument; a_1 , a_2 are taken, without interpolation, from the second and third tables with arguments latitude and month respectively. a_0 , a_1 , a_2 are always positive. The final table gives the azimuth of *Polaris*.



POLARIS (POLE STAR) TABLES, 1984
FOR DETERMINING LATITUDE FROM SEXTANT ALTITUDE AND FOR AZIMUTH

| L.H.A. ARIES | 120°- 129° | 130°- 139° | 140°- 149° | 150°- 159° | 160°- 169° | 170°- 179° | 180°- 189° | 190°- 199° | 200°- 209° | 210°- 219° | 220°- 229° | 230°- 239° |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ | <i>a</i> ₀ |
| 0 | 0 56.0 | 1 04.4 | 1 12.6 | 1 20.4 | 1 27.6 | 1 33.8 | 1 39.0 | 1 43.0 | 1 45.7 | 1 47.0 | 1 46.8 | 1 45.2 |
| 1 | 56.8 | 05.2 | 13.4 | 21.2 | 28.2 | 34.4 | 39.5 | 43.4 | 45.9 | 47.0 | 46.7 | 45.0 |
| 2 | 57.6 | 06.0 | 14.2 | 21.9 | 28.9 | 35.0 | 39.9 | 43.7 | 46.1 | 47.1 | 46.6 | 44.7 |
| 3 | 58.5 | 06.9 | 15.0 | 22.6 | 29.5 | 35.5 | 40.4 | 44.0 | 46.3 | 47.1 | 46.5 | 44.5 |
| 4 | 0 59.3 | 07.7 | 15.8 | 23.4 | 30.2 | 36.0 | 40.8 | 44.3 | 46.4 | 47.1 | 46.4 | 44.2 |
| 5 | 1 00.2 | 1 08.5 | 1 16.6 | 1 24.1 | 1 30.8 | 1 36.6 | 1 41.2 | 1 44.6 | 1 46.5 | 1 47.1 | 1 46.2 | 1 43.9 |
| 6 | 01.0 | 09.4 | 17.4 | 24.8 | 31.4 | 37.1 | 41.6 | 44.8 | 46.7 | 47.1 | 46.0 | 43.6 |
| 7 | 01.9 | 10.2 | 18.1 | 25.5 | 32.0 | 37.6 | 42.0 | 45.1 | 46.8 | 47.0 | 45.9 | 43.3 |
| 8 | 02.7 | 11.0 | 18.9 | 26.2 | 32.7 | 38.1 | 42.3 | 45.3 | 46.9 | 47.0 | 45.7 | 42.9 |
| 9 | 03.5 | 11.8 | 19.7 | 26.9 | 33.2 | 38.6 | 42.7 | 45.5 | 46.9 | 46.9 | 45.4 | 42.6 |
| 10 | 1 04.4 | 1 12.6 | 1 20.4 | 1 27.6 | 1 33.8 | 1 39.0 | 1 43.0 | 1 45.7 | 1 47.0 | 1 46.8 | 1 45.2 | 1 42.2 |
| Lat. | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ | <i>a</i> ₁ |
| 0 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 |
| 10 | .3 | .3 | .3 | .3 | .4 | .5 | .5 | .6 | .6 | .6 | .6 | .6 |
| 20 | .3 | .3 | .4 | .4 | .4 | .5 | .5 | .6 | .6 | .6 | .6 | .6 |
| 30 | .4 | .4 | .4 | .4 | .5 | .5 | .6 | .6 | .6 | .6 | .6 | .6 |
| 40 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 45 | .5 | .5 | .5 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| 50 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| 55 | .7 | .7 | .7 | .7 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| 60 | .8 | .8 | .8 | .7 | .7 | .7 | .6 | .6 | .6 | .6 | .6 | .6 |
| 62 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 64 | 0.9 | .9 | .9 | .8 | .8 | .7 | .7 | .6 | .6 | .6 | .6 | .6 |
| 66 | 1.0 | 0.9 | 0.9 | .9 | .8 | .7 | .7 | .6 | .6 | .6 | .6 | .6 |
| 68 | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 |
| Month | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ | <i>a</i> ₂ |
| Jan. | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Feb. | .8 | .8 | .7 | .7 | .7 | .6 | .6 | .6 | .5 | .5 | .5 | .5 |
| Mar. | 0.9 | 0.9 | 0.9 | 0.8 | .8 | .8 | .7 | .7 | .6 | .6 | .5 | .5 |
| Apr. | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 |
| May | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | .8 | .7 |
| June | .8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | .9 |
| July | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 |
| Aug. | .5 | .6 | .6 | .7 | .7 | .8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 |
| Sept. | .4 | .4 | .4 | .5 | .6 | .6 | .7 | .7 | .8 | .8 | .9 | 0.9 |
| Oct. | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.8 |
| Nov. | .2 | .2 | .2 | .2 | .2 | .3 | .3 | .3 | .4 | .5 | .5 | .6 |
| Dec. | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 |
| Lat. | AZIMUTH | | | | | | | | | | | |
| 0 | 359.2 | 359.2 | 359.2 | 359.3 | 359.4 | 359.5 | 359.6 | 359.7 | 359.9 | 0.0 | 0.2 | 0.3 |
| 20 | 359.1 | 359.2 | 359.2 | 359.3 | 359.4 | 359.5 | 359.6 | 359.7 | 359.9 | 0.0 | 0.2 | 0.3 |
| 40 | 358.9 | 359.0 | 359.0 | 359.1 | 359.2 | 359.3 | 359.5 | 359.7 | 359.8 | 0.0 | 0.2 | 0.4 |
| 50 | 358.7 | 358.8 | 358.8 | 358.9 | 359.1 | 359.2 | 359.4 | 359.6 | 359.8 | 0.0 | 0.2 | 0.4 |
| 55 | 358.6 | 358.6 | 358.7 | 358.8 | 359.0 | 359.1 | 359.3 | 359.6 | 359.8 | 0.0 | 0.3 | 0.5 |
| 60 | 358.4 | 358.4 | 358.5 | 358.6 | 358.8 | 359.0 | 359.2 | 359.5 | 359.8 | 0.0 | 0.3 | 0.6 |
| 65 | 358.1 | 358.1 | 358.2 | 358.4 | 358.6 | 358.8 | 359.1 | 359.4 | 359.7 | 0.0 | 0.4 | 0.7 |

ILLUSTRATION
On 1984 April 21 at G.M.T.
23° 18' 56" in longitude
W. 37° 14' the apparent altitude
(corrected for refraction), *H*₀, of
Polaris was 49° 31'.6.

From the daily pages:
G.H.A. *Aries* (23^h) 195 11.5
Increment (18^m 56^s) 4 44.8
Longitude (west) -37 14
L.H.A. *Aries* 162 42

*H*₀ 49 31.6
*a*₀ (argument 162° 42') 1 29.3
*a*₁ (lat. 50° approx.) 0.6
*a*₂ (April) 0.9
Sum - 1° = Lat. = 50 02.4



POLARIS (POLE STAR) TABLES, 1984
FOR DETERMINING LATITUDE FROM SEXTANT ALTITUDE AND FOR AZIMUTH

| L.H.A. ARIES | 240°- 249° | 250°- 259° | 260°- 269° | 270°- 279° | 280°- 289° | 290°- 299° | 300°- 309° | 310°- 319° | 320°- 329° | 330°- 339° | 340°- 349° | 350°- 359° |
|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 | a_0 |
| 0 | 1 42.2 | 1 37.9 | 1 32.5 | 1 26.0 | 1 18.7 | 1 10.7 | 1 02.4 | 0 54.0 | 0 45.7 | 0 37.8 | 0 30.6 | 0 24.2 |
| 1 | 41.9 | 37.4 | 31.9 | 25.3 | 17.9 | 09.9 | 01.6 | 53.2 | 44.9 | 37.1 | 29.9 | 23.6 |
| 2 | 41.5 | 36.9 | 31.2 | 24.6 | 17.1 | 09.1 | 1 00.8 | 52.3 | 44.1 | 36.3 | 29.2 | 23.0 |
| 3 | 41.1 | 36.4 | 30.6 | 23.9 | 16.3 | 08.3 | 0 59.9 | 51.5 | 43.3 | 35.6 | 28.5 | 22.4 |
| 4 | 40.7 | 35.9 | 30.0 | 23.1 | 15.6 | 07.5 | 59.1 | 50.7 | 42.5 | 34.8 | 27.9 | 21.9 |
| 5 | 1 40.2 | 1 35.3 | 1 29.3 | 1 22.4 | 1 14.8 | 1 06.6 | 0 58.2 | 0 49.8 | 0 41.7 | 0 34.1 | 0 27.2 | 0 21.3 |
| 6 | 39.8 | 34.8 | 28.7 | 21.7 | 14.0 | 05.8 | 57.4 | 49.0 | 40.9 | 33.4 | 26.6 | 20.8 |
| 7 | 39.4 | 34.2 | 28.0 | 20.9 | 13.2 | 05.0 | 56.5 | 48.2 | 40.2 | 32.7 | 26.0 | 20.3 |
| 8 | 38.9 | 33.7 | 27.4 | 20.2 | 12.4 | 04.1 | 55.7 | 47.4 | 39.4 | 32.0 | 25.4 | 19.8 |
| 9 | 38.4 | 33.1 | 26.7 | 19.4 | 11.6 | 03.3 | 54.9 | 46.6 | 38.6 | 31.3 | 24.8 | 19.3 |
| 10 | 1 37.9 | 1 32.5 | 1 26.0 | 1 18.7 | 1 10.7 | 1 02.4 | 0 54.0 | 0 45.7 | 0 37.8 | 0 30.6 | 0 24.2 | 0 18.8 |
| Lat. | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 | a_1 |
| 0 | 0.5 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 |
| 10 | .5 | .5 | .4 | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .4 | .5 |
| 20 | .5 | .5 | .4 | .4 | .3 | .3 | .3 | .3 | .4 | .4 | .4 | .5 |
| 30 | .5 | .5 | .5 | .4 | .4 | .4 | .4 | .4 | .4 | .4 | .5 | .5 |
| 40 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| 45 | .6 | .6 | .6 | .6 | .5 | .5 | .5 | .5 | .5 | .6 | .6 | .6 |
| 50 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 | .6 |
| 55 | .6 | .6 | .6 | .7 | .7 | .7 | .7 | .7 | .7 | .7 | .6 | .6 |
| 60 | .6 | .7 | .7 | .7 | .8 | .8 | .8 | .8 | .8 | .7 | .7 | .7 |
| 62 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 |
| 64 | .7 | .7 | .8 | .8 | .9 | .9 | 0.9 | .9 | .9 | .8 | .8 | .7 |
| 66 | .7 | .8 | .8 | .9 | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | .9 | .8 | .7 |
| 68 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 |
| Month | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 | a_2 |
| Jan. | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 |
| Feb. | .4 | .4 | .4 | .4 | .4 | .4 | .4 | .4 | .5 | .5 | .5 | .6 |
| Mar. | .4 | .4 | .4 | .3 | .3 | .3 | .3 | .3 | .3 | .4 | .4 | .4 |
| Apr. | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| May | .7 | .6 | .5 | .4 | .4 | .3 | .3 | .2 | .2 | .2 | .2 | .2 |
| June | .8 | .7 | .7 | .6 | .5 | .4 | .4 | .3 | .3 | .2 | .2 | .2 |
| July | 0.9 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 |
| Aug. | .9 | .9 | .9 | .9 | .8 | .8 | .7 | .6 | .6 | .5 | .5 | .4 |
| Sept. | .9 | .9 | .9 | .9 | .9 | .9 | .8 | .8 | .8 | .7 | .6 | .6 |
| Oct. | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 |
| Nov. | .7 | .7 | .8 | .8 | .9 | .9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 |
| Dec. | 0.5 | 0.6 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lat. | AZIMUTH | | | | | | | | | | | |
| 0 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.6 | 0.5 |
| 20 | 0.4 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 0.5 |
| 40 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.7 |
| 50 | 0.6 | 0.8 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 0.8 |
| 55 | 0.7 | 0.9 | 1.1 | 1.2 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.2 | 1.1 | 0.9 |
| 60 | 0.8 | 1.0 | 1.2 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.5 | 1.4 | 1.2 | 1.0 |
| 65 | 1.0 | 1.2 | 1.5 | 1.6 | 1.8 | 1.9 | 1.9 | 1.9 | 1.8 | 1.7 | 1.5 | 1.2 |

Latitude = Apparent altitude (corrected for refraction) - $1^\circ + a_0 + a_1 + a_2$

The table is entered with L.H.A. Aries to determine the column to be used; each column refers to a range of 10° . a_0 is taken, with mental interpolation, from the upper table with the units of L.H.A. Aries in degrees as argument; a_1 , a_2 are taken, without interpolation, from the second and third tables with arguments latitude and month respectively. a_0 , a_1 , a_2 are always positive. The final table gives the azimuth of *Polaris*.



CONVERSION OF ARC TO TIME

| 0°-59° | | 60°-119° | | 120°-179° | | 180°-239° | | 240°-299° | | 300°-359° | | 0° 00' | 0° 25' | 0° 50' | 0° 75' | |
|--------|------|----------|------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|--------|--------|--------|--------|------|
| a | h m | a | h m | a | h m | a | h m | a | h m | a | h m | m | m | m | m | |
| 0 | 0 00 | 60 | 4 00 | 120 | 8 00 | 180 | 12 00 | 240 | 16 00 | 300 | 20 00 | 0 | 0 00 | 0 01 | 0 02 | 0 03 |
| 1 | 0 04 | 61 | 4 04 | 121 | 8 04 | 181 | 12 04 | 241 | 16 04 | 301 | 20 04 | 1 | 0 04 | 0 05 | 0 06 | 0 07 |
| 2 | 0 08 | 62 | 4 08 | 122 | 8 08 | 182 | 12 08 | 242 | 16 08 | 302 | 20 08 | 2 | 0 08 | 0 09 | 0 10 | 0 11 |
| 3 | 0 12 | 63 | 4 12 | 123 | 8 12 | 183 | 12 12 | 243 | 16 12 | 303 | 20 12 | 3 | 0 12 | 0 13 | 0 14 | 0 15 |
| 4 | 0 16 | 64 | 4 16 | 124 | 8 16 | 184 | 12 16 | 244 | 16 16 | 304 | 20 16 | 4 | 0 16 | 0 17 | 0 18 | 0 19 |
| 5 | 0 20 | 65 | 4 20 | 125 | 8 20 | 185 | 12 20 | 245 | 16 20 | 305 | 20 20 | 5 | 0 20 | 0 21 | 0 22 | 0 23 |
| 6 | 0 24 | 66 | 4 24 | 126 | 8 24 | 186 | 12 24 | 246 | 16 24 | 306 | 20 24 | 6 | 0 24 | 0 25 | 0 26 | 0 27 |
| 7 | 0 28 | 67 | 4 28 | 127 | 8 28 | 187 | 12 28 | 247 | 16 28 | 307 | 20 28 | 7 | 0 28 | 0 29 | 0 30 | 0 31 |
| 8 | 0 32 | 68 | 4 32 | 128 | 8 32 | 188 | 12 32 | 248 | 16 32 | 308 | 20 32 | 8 | 0 32 | 0 33 | 0 34 | 0 35 |
| 9 | 0 36 | 69 | 4 36 | 129 | 8 36 | 189 | 12 36 | 249 | 16 36 | 309 | 20 36 | 9 | 0 36 | 0 37 | 0 38 | 0 39 |
| 10 | 0 40 | 70 | 4 40 | 130 | 8 40 | 190 | 12 40 | 250 | 16 40 | 310 | 20 40 | 10 | 0 40 | 0 41 | 0 42 | 0 43 |
| 11 | 0 44 | 71 | 4 44 | 131 | 8 44 | 191 | 12 44 | 251 | 16 44 | 311 | 20 44 | 11 | 0 44 | 0 45 | 0 46 | 0 47 |
| 12 | 0 48 | 72 | 4 48 | 132 | 8 48 | 192 | 12 48 | 252 | 16 48 | 312 | 20 48 | 12 | 0 48 | 0 49 | 0 50 | 0 51 |
| 13 | 0 52 | 73 | 4 52 | 133 | 8 52 | 193 | 12 52 | 253 | 16 52 | 313 | 20 52 | 13 | 0 52 | 0 53 | 0 54 | 0 55 |
| 14 | 0 56 | 74 | 4 56 | 134 | 8 56 | 194 | 12 56 | 254 | 16 56 | 314 | 20 56 | 14 | 0 56 | 0 57 | 0 58 | 0 59 |
| 15 | 1 00 | 75 | 5 00 | 135 | 9 00 | 195 | 13 00 | 255 | 17 00 | 315 | 21 00 | 15 | 1 00 | 1 01 | 1 02 | 1 03 |
| 16 | 1 04 | 76 | 5 04 | 136 | 9 04 | 196 | 13 04 | 256 | 17 04 | 316 | 21 04 | 16 | 1 04 | 1 05 | 1 06 | 1 07 |
| 17 | 1 08 | 77 | 5 08 | 137 | 9 08 | 197 | 13 08 | 257 | 17 08 | 317 | 21 08 | 17 | 1 08 | 1 09 | 1 10 | 1 11 |
| 18 | 1 12 | 78 | 5 12 | 138 | 9 12 | 198 | 13 12 | 258 | 17 12 | 318 | 21 12 | 18 | 1 12 | 1 13 | 1 14 | 1 15 |
| 19 | 1 16 | 79 | 5 16 | 139 | 9 16 | 199 | 13 16 | 259 | 17 16 | 319 | 21 16 | 19 | 1 16 | 1 17 | 1 18 | 1 19 |
| 20 | 1 20 | 80 | 5 20 | 140 | 9 20 | 200 | 13 20 | 260 | 17 20 | 320 | 21 20 | 20 | 1 20 | 1 21 | 1 22 | 1 23 |
| 21 | 1 24 | 81 | 5 24 | 141 | 9 24 | 201 | 13 24 | 261 | 17 24 | 321 | 21 24 | 21 | 1 24 | 1 25 | 1 26 | 1 27 |
| 22 | 1 28 | 82 | 5 28 | 142 | 9 28 | 202 | 13 28 | 262 | 17 28 | 322 | 21 28 | 22 | 1 28 | 1 29 | 1 30 | 1 31 |
| 23 | 1 32 | 83 | 5 32 | 143 | 9 32 | 203 | 13 32 | 263 | 17 32 | 323 | 21 32 | 23 | 1 32 | 1 33 | 1 34 | 1 35 |
| 24 | 1 36 | 84 | 5 36 | 144 | 9 36 | 204 | 13 36 | 264 | 17 36 | 324 | 21 36 | 24 | 1 36 | 1 37 | 1 38 | 1 39 |
| 25 | 1 40 | 85 | 5 40 | 145 | 9 40 | 205 | 13 40 | 265 | 17 40 | 325 | 21 40 | 25 | 1 40 | 1 41 | 1 42 | 1 43 |
| 26 | 1 44 | 86 | 5 44 | 146 | 9 44 | 206 | 13 44 | 266 | 17 44 | 326 | 21 44 | 26 | 1 44 | 1 45 | 1 46 | 1 47 |
| 27 | 1 48 | 87 | 5 48 | 147 | 9 48 | 207 | 13 48 | 267 | 17 48 | 327 | 21 48 | 27 | 1 48 | 1 49 | 1 50 | 1 51 |
| 28 | 1 52 | 88 | 5 52 | 148 | 9 52 | 208 | 13 52 | 268 | 17 52 | 328 | 21 52 | 28 | 1 52 | 1 53 | 1 54 | 1 55 |
| 29 | 1 56 | 89 | 5 56 | 149 | 9 56 | 209 | 13 56 | 269 | 17 56 | 329 | 21 56 | 29 | 1 56 | 1 57 | 1 58 | 1 59 |
| 30 | 2 00 | 90 | 6 00 | 150 | 10 00 | 210 | 14 00 | 270 | 18 00 | 330 | 22 00 | 30 | 2 00 | 2 01 | 2 02 | 2 03 |
| 31 | 2 04 | 91 | 6 04 | 151 | 10 04 | 211 | 14 04 | 271 | 18 04 | 331 | 22 04 | 31 | 2 04 | 2 05 | 2 06 | 2 07 |
| 32 | 2 08 | 92 | 6 08 | 152 | 10 08 | 212 | 14 08 | 272 | 18 08 | 332 | 22 08 | 32 | 2 08 | 2 09 | 2 10 | 2 11 |
| 33 | 2 12 | 93 | 6 12 | 153 | 10 12 | 213 | 14 12 | 273 | 18 12 | 333 | 22 12 | 33 | 2 12 | 2 13 | 2 14 | 2 15 |
| 34 | 2 16 | 94 | 6 16 | 154 | 10 16 | 214 | 14 16 | 274 | 18 16 | 334 | 22 16 | 34 | 2 16 | 2 17 | 2 18 | 2 19 |
| 35 | 2 20 | 95 | 6 20 | 155 | 10 20 | 215 | 14 20 | 275 | 18 20 | 335 | 22 20 | 35 | 2 20 | 2 21 | 2 22 | 2 23 |
| 36 | 2 24 | 96 | 6 24 | 156 | 10 24 | 216 | 14 24 | 276 | 18 24 | 336 | 22 24 | 36 | 2 24 | 2 25 | 2 26 | 2 27 |
| 37 | 2 28 | 97 | 6 28 | 157 | 10 28 | 217 | 14 28 | 277 | 18 28 | 337 | 22 28 | 37 | 2 28 | 2 29 | 2 30 | 2 31 |
| 38 | 2 32 | 98 | 6 32 | 158 | 10 32 | 218 | 14 32 | 278 | 18 32 | 338 | 22 32 | 38 | 2 32 | 2 33 | 2 34 | 2 35 |
| 39 | 2 36 | 99 | 6 36 | 159 | 10 36 | 219 | 14 36 | 279 | 18 36 | 339 | 22 36 | 39 | 2 36 | 2 37 | 2 38 | 2 39 |
| 40 | 2 40 | 100 | 6 40 | 160 | 10 40 | 220 | 14 40 | 280 | 18 40 | 340 | 22 40 | 40 | 2 40 | 2 41 | 2 42 | 2 43 |
| 41 | 2 44 | 101 | 6 44 | 161 | 10 44 | 221 | 14 44 | 281 | 18 44 | 341 | 22 44 | 41 | 2 44 | 2 45 | 2 46 | 2 47 |
| 42 | 2 48 | 102 | 6 48 | 162 | 10 48 | 222 | 14 48 | 282 | 18 48 | 342 | 22 48 | 42 | 2 48 | 2 49 | 2 50 | 2 51 |
| 43 | 2 52 | 103 | 6 52 | 163 | 10 52 | 223 | 14 52 | 283 | 18 52 | 343 | 22 52 | 43 | 2 52 | 2 53 | 2 54 | 2 55 |
| 44 | 2 56 | 104 | 6 56 | 164 | 10 56 | 224 | 14 56 | 284 | 18 56 | 344 | 22 56 | 44 | 2 56 | 2 57 | 2 58 | 2 59 |
| 45 | 3 00 | 105 | 7 00 | 165 | 11 00 | 225 | 15 00 | 285 | 19 00 | 345 | 23 00 | 45 | 3 00 | 3 01 | 3 02 | 3 03 |
| 46 | 3 04 | 106 | 7 04 | 166 | 11 04 | 226 | 15 04 | 286 | 19 04 | 346 | 23 04 | 46 | 3 04 | 3 05 | 3 06 | 3 07 |
| 47 | 3 08 | 107 | 7 08 | 167 | 11 08 | 227 | 15 08 | 287 | 19 08 | 347 | 23 08 | 47 | 3 08 | 3 09 | 3 10 | 3 11 |
| 48 | 3 12 | 108 | 7 12 | 168 | 11 12 | 228 | 15 12 | 288 | 19 12 | 348 | 23 12 | 48 | 3 12 | 3 13 | 3 14 | 3 15 |
| 49 | 3 16 | 109 | 7 16 | 169 | 11 16 | 229 | 15 16 | 289 | 19 16 | 349 | 23 16 | 49 | 3 16 | 3 17 | 3 18 | 3 19 |
| 50 | 3 20 | 110 | 7 20 | 170 | 11 20 | 230 | 15 20 | 290 | 19 20 | 350 | 23 20 | 50 | 3 20 | 3 21 | 3 22 | 3 23 |
| 51 | 3 24 | 111 | 7 24 | 171 | 11 24 | 231 | 15 24 | 291 | 19 24 | 351 | 23 24 | 51 | 3 24 | 3 25 | 3 26 | 3 27 |
| 52 | 3 28 | 112 | 7 28 | 172 | 11 28 | 232 | 15 28 | 292 | 19 28 | 352 | 23 28 | 52 | 3 28 | 3 29 | 3 30 | 3 31 |
| 53 | 3 32 | 113 | 7 32 | 173 | 11 32 | 233 | 15 32 | 293 | 19 32 | 353 | 23 32 | 53 | 3 32 | 3 33 | 3 34 | 3 35 |
| 54 | 3 36 | 114 | 7 36 | 174 | 11 36 | 234 | 15 36 | 294 | 19 36 | 354 | 23 36 | 54 | 3 36 | 3 37 | 3 38 | 3 39 |
| 55 | 3 40 | 115 | 7 40 | 175 | 11 40 | 235 | 15 40 | 295 | 19 40 | 355 | 23 40 | 55 | 3 40 | 3 41 | 3 42 | 3 43 |
| 56 | 3 44 | 116 | 7 44 | 176 | 11 44 | 236 | 15 44 | 296 | 19 44 | 356 | 23 44 | 56 | 3 44 | 3 45 | 3 46 | 3 47 |
| 57 | 3 48 | 117 | 7 48 | 177 | 11 48 | 237 | 15 48 | 297 | 19 48 | 357 | 23 48 | 57 | 3 48 | 3 49 | 3 50 | 3 51 |
| 58 | 3 52 | 118 | 7 52 | 178 | 11 52 | 238 | 15 52 | 298 | 19 52 | 358 | 23 52 | 58 | 3 52 | 3 53 | 3 54 | 3 55 |
| 59 | 3 56 | 119 | 7 56 | 179 | 11 56 | 239 | 15 56 | 299 | 19 56 | 359 | 23 56 | 59 | 3 56 | 3 57 | 3 58 | 3 59 |

The above table is for converting expressions in arc to their equivalent in time ; its main use in this Almanac is for the conversion of longitude for application to L.M.T. (added if west, subtracted if east) to give G.M.T. or vice versa, particularly in the case of sunrise, sunset, etc.



0^m

INCREMENTS AND CORRECTIONS

1^m

| 0 | SUN PLANETS | ARIES | MOON | ° of Corr ⁿ | | | i | SUN PLANETS | ARIES | MOON | ° of Corr ⁿ | | | | | | | | |
|----|-------------|--------|--------|------------------------|-----|------|-----|-------------|-------|------|------------------------|--------|--------|-----|-----|------|-----|------|-----|
| | | | | d | ' | "/ | | | | | d | ' | "/ | d | ' | "/ | | | |
| 00 | 0 00-0 | 0 00-0 | 0 00-0 | 0-0 | 0-0 | 6-0 | 0-1 | 12-0 | 0-1 | 00 | 0 15-0 | 0 15-0 | 0 14-3 | 0-0 | 0-0 | 6-0 | 0-2 | 12-0 | 0-3 |
| 01 | 0 00-3 | 0 00-3 | 0 00-2 | 0-1 | 0-0 | 6-1 | 0-1 | 12-1 | 0-1 | 01 | 0 15-3 | 0 15-3 | 0 14-6 | 0-1 | 0-0 | 6-1 | 0-2 | 12-1 | 0-3 |
| 02 | 0 00-5 | 0 00-5 | 0 00-5 | 0-2 | 0-0 | 6-2 | 0-1 | 12-2 | 0-1 | 02 | 0 15-5 | 0 15-5 | 0 14-8 | 0-2 | 0-0 | 6-2 | 0-2 | 12-2 | 0-3 |
| 03 | 0 00-8 | 0 00-8 | 0 00-7 | 0-3 | 0-0 | 6-3 | 0-1 | 12-3 | 0-1 | 03 | 0 15-8 | 0 15-8 | 0 15-0 | 0-3 | 0-0 | 6-3 | 0-2 | 12-3 | 0-3 |
| 04 | 0 01-0 | 0 01-0 | 0 01-0 | 0-4 | 0-0 | 6-4 | 0-1 | 12-4 | 0-1 | 04 | 0 16-0 | 0 16-0 | 0 15-3 | 0-4 | 0-0 | 6-4 | 0-2 | 12-4 | 0-3 |
| 05 | 0 01-3 | 0 01-3 | 0 01-2 | 0-5 | 0-0 | 6-5 | 0-1 | 12-5 | 0-1 | 05 | 0 16-3 | 0 16-3 | 0 15-5 | 0-5 | 0-0 | 6-5 | 0-2 | 12-5 | 0-3 |
| 06 | 0 01-5 | 0 01-5 | 0 01-4 | 0-6 | 0-0 | 6-6 | 0-1 | 12-6 | 0-1 | 06 | 0 16-5 | 0 16-5 | 0 15-7 | 0-6 | 0-0 | 6-6 | 0-2 | 12-6 | 0-3 |
| 07 | 0 01-8 | 0 01-8 | 0 01-7 | 0-7 | 0-0 | 6-7 | 0-1 | 12-7 | 0-1 | 07 | 0 16-8 | 0 16-8 | 0 16-0 | 0-7 | 0-0 | 6-7 | 0-2 | 12-7 | 0-3 |
| 08 | 0 02-0 | 0 02-0 | 0 01-9 | 0-8 | 0-0 | 6-8 | 0-1 | 12-8 | 0-1 | 08 | 0 17-0 | 0 17-0 | 0 16-2 | 0-8 | 0-0 | 6-8 | 0-2 | 12-8 | 0-3 |
| 09 | 0 02-3 | 0 02-3 | 0 02-1 | 0-9 | 0-0 | 6-9 | 0-1 | 12-9 | 0-1 | 09 | 0 17-3 | 0 17-3 | 0 16-5 | 0-9 | 0-0 | 6-9 | 0-2 | 12-9 | 0-3 |
| 10 | 0 02-5 | 0 02-5 | 0 02-4 | 1-0 | 0-0 | 7-0 | 0-1 | 13-0 | 0-1 | 10 | 0 17-5 | 0 17-5 | 0 16-7 | 1-0 | 0-0 | 7-0 | 0-2 | 13-0 | 0-3 |
| 11 | 0 02-8 | 0 02-8 | 0 02-6 | 1-1 | 0-0 | 7-1 | 0-1 | 13-1 | 0-1 | 11 | 0 17-8 | 0 17-8 | 0 16-9 | 1-1 | 0-0 | 7-1 | 0-2 | 13-1 | 0-3 |
| 12 | 0 03-0 | 0 03-0 | 0 02-9 | 1-2 | 0-0 | 7-2 | 0-1 | 13-2 | 0-1 | 12 | 0 18-0 | 0 18-0 | 0 17-2 | 1-2 | 0-0 | 7-2 | 0-2 | 13-2 | 0-3 |
| 13 | 0 03-3 | 0 03-3 | 0 03-1 | 1-3 | 0-0 | 7-3 | 0-1 | 13-3 | 0-1 | 13 | 0 18-3 | 0 18-3 | 0 17-4 | 1-3 | 0-0 | 7-3 | 0-2 | 13-3 | 0-3 |
| 14 | 0 03-5 | 0 03-5 | 0 03-3 | 1-4 | 0-0 | 7-4 | 0-1 | 13-4 | 0-1 | 14 | 0 18-5 | 0 18-6 | 0 17-7 | 1-4 | 0-0 | 7-4 | 0-2 | 13-4 | 0-3 |
| 15 | 0 03-8 | 0 03-8 | 0 03-6 | 1-5 | 0-0 | 7-5 | 0-1 | 13-5 | 0-1 | 15 | 0 18-8 | 0 18-8 | 0 17-9 | 1-5 | 0-0 | 7-5 | 0-2 | 13-5 | 0-3 |
| 16 | 0 04-0 | 0 04-0 | 0 03-8 | 1-6 | 0-0 | 7-6 | 0-1 | 13-6 | 0-1 | 16 | 0 19-0 | 0 19-1 | 0 18-1 | 1-6 | 0-0 | 7-6 | 0-2 | 13-6 | 0-3 |
| 17 | 0 04-3 | 0 04-3 | 0 04-1 | 1-7 | 0-0 | 7-7 | 0-1 | 13-7 | 0-1 | 17 | 0 19-3 | 0 19-3 | 0 18-4 | 1-7 | 0-0 | 7-7 | 0-2 | 13-7 | 0-3 |
| 18 | 0 04-5 | 0 04-5 | 0 04-3 | 1-8 | 0-0 | 7-8 | 0-1 | 13-8 | 0-1 | 18 | 0 19-5 | 0 19-6 | 0 18-6 | 1-8 | 0-0 | 7-8 | 0-2 | 13-8 | 0-3 |
| 19 | 0 04-8 | 0 04-8 | 0 04-5 | 1-9 | 0-0 | 7-9 | 0-1 | 13-9 | 0-1 | 19 | 0 19-8 | 0 19-8 | 0 18-9 | 1-9 | 0-0 | 7-9 | 0-2 | 13-9 | 0-3 |
| 20 | 0 05-0 | 0 05-0 | 0 04-8 | 2-0 | 0-0 | 8-0 | 0-1 | 14-0 | 0-1 | 20 | 0 20-0 | 0 20-1 | 0 19-1 | 2-0 | 0-1 | 8-0 | 0-2 | 14-0 | 0-4 |
| 21 | 0 05-3 | 0 05-3 | 0 05-0 | 2-1 | 0-0 | 8-1 | 0-1 | 14-1 | 0-1 | 21 | 0 20-3 | 0 20-3 | 0 19-3 | 2-1 | 0-1 | 8-1 | 0-2 | 14-1 | 0-4 |
| 22 | 0 05-5 | 0 05-5 | 0 05-2 | 2-2 | 0-0 | 8-2 | 0-1 | 14-2 | 0-1 | 22 | 0 20-5 | 0 20-6 | 0 19-6 | 2-2 | 0-1 | 8-2 | 0-2 | 14-2 | 0-4 |
| 23 | 0 05-8 | 0 05-8 | 0 05-5 | 2-3 | 0-0 | 8-3 | 0-1 | 14-3 | 0-1 | 23 | 0 20-8 | 0 20-8 | 0 19-8 | 2-3 | 0-1 | 8-3 | 0-2 | 14-3 | 0-4 |
| 24 | 0 06-0 | 0 06-0 | 0 05-7 | 2-4 | 0-0 | 8-4 | 0-1 | 14-4 | 0-1 | 24 | 0 21-0 | 0 21-1 | 0 20-0 | 2-4 | 0-1 | 8-4 | 0-2 | 14-4 | 0-4 |
| 25 | 0 06-3 | 0 06-3 | 0 06-0 | 2-5 | 0-0 | 8-5 | 0-1 | 14-5 | 0-1 | 25 | 0 21-3 | 0 21-3 | 0 20-3 | 2-5 | 0-1 | 8-5 | 0-2 | 14-5 | 0-4 |
| 26 | 0 06-5 | 0 06-5 | 0 06-2 | 2-6 | 0-0 | 8-6 | 0-1 | 14-6 | 0-1 | 26 | 0 21-5 | 0 21-6 | 0 20-5 | 2-6 | 0-1 | 8-6 | 0-2 | 14-6 | 0-4 |
| 27 | 0 06-8 | 0 06-8 | 0 06-4 | 2-7 | 0-0 | 8-7 | 0-1 | 14-7 | 0-1 | 27 | 0 21-8 | 0 21-8 | 0 20-8 | 2-7 | 0-1 | 8-7 | 0-2 | 14-7 | 0-4 |
| 28 | 0 07-0 | 0 07-0 | 0 06-7 | 2-8 | 0-0 | 8-8 | 0-1 | 14-8 | 0-1 | 28 | 0 22-0 | 0 22-1 | 0 21-0 | 2-8 | 0-1 | 8-8 | 0-2 | 14-8 | 0-4 |
| 29 | 0 07-3 | 0 07-3 | 0 06-9 | 2-9 | 0-0 | 8-9 | 0-1 | 14-9 | 0-1 | 29 | 0 22-3 | 0 22-3 | 0 21-2 | 2-9 | 0-1 | 8-9 | 0-2 | 14-9 | 0-4 |
| 30 | 0 07-5 | 0 07-5 | 0 07-2 | 3-0 | 0-0 | 9-0 | 0-1 | 15-0 | 0-1 | 30 | 0 22-5 | 0 22-6 | 0 21-5 | 3-0 | 0-1 | 9-0 | 0-2 | 15-0 | 0-4 |
| 31 | 0 07-8 | 0 07-8 | 0 07-4 | 3-1 | 0-0 | 9-1 | 0-1 | 15-1 | 0-1 | 31 | 0 22-8 | 0 22-8 | 0 21-7 | 3-1 | 0-1 | 9-1 | 0-2 | 15-1 | 0-4 |
| 32 | 0 08-0 | 0 08-0 | 0 07-6 | 3-2 | 0-0 | 9-2 | 0-1 | 15-2 | 0-1 | 32 | 0 23-0 | 0 23-1 | 0 22-0 | 3-2 | 0-1 | 9-2 | 0-2 | 15-2 | 0-4 |
| 33 | 0 08-3 | 0 08-3 | 0 07-9 | 3-3 | 0-0 | 9-3 | 0-1 | 15-3 | 0-1 | 33 | 0 23-3 | 0 23-3 | 0 22-2 | 3-3 | 0-1 | 9-3 | 0-2 | 15-3 | 0-4 |
| 34 | 0 08-5 | 0 08-5 | 0 08-1 | 3-4 | 0-0 | 9-4 | 0-1 | 15-4 | 0-1 | 34 | 0 23-5 | 0 23-6 | 0 22-4 | 3-4 | 0-1 | 9-4 | 0-2 | 15-4 | 0-4 |
| 35 | 0 08-8 | 0 08-8 | 0 08-4 | 3-5 | 0-0 | 9-5 | 0-1 | 15-5 | 0-1 | 35 | 0 23-8 | 0 23-8 | 0 22-7 | 3-5 | 0-1 | 9-5 | 0-2 | 15-5 | 0-4 |
| 36 | 0 09-0 | 0 09-0 | 0 08-6 | 3-6 | 0-0 | 9-6 | 0-1 | 15-6 | 0-1 | 36 | 0 24-0 | 0 24-1 | 0 22-9 | 3-6 | 0-1 | 9-6 | 0-2 | 15-6 | 0-4 |
| 37 | 0 09-3 | 0 09-3 | 0 08-8 | 3-7 | 0-0 | 9-7 | 0-1 | 15-7 | 0-1 | 37 | 0 24-3 | 0 24-3 | 0 23-1 | 3-7 | 0-1 | 9-7 | 0-2 | 15-7 | 0-4 |
| 38 | 0 09-5 | 0 09-5 | 0 09-1 | 3-8 | 0-0 | 9-8 | 0-1 | 15-8 | 0-1 | 38 | 0 24-5 | 0 24-6 | 0 23-4 | 3-8 | 0-1 | 9-8 | 0-2 | 15-8 | 0-4 |
| 39 | 0 09-8 | 0 09-8 | 0 09-3 | 3-9 | 0-0 | 9-9 | 0-1 | 15-9 | 0-1 | 39 | 0 24-8 | 0 24-8 | 0 23-6 | 3-9 | 0-1 | 9-9 | 0-2 | 15-9 | 0-4 |
| 40 | 0 10-0 | 0 10-0 | 0 09-5 | 4-0 | 0-0 | 10-0 | 0-1 | 16-0 | 0-1 | 40 | 0 25-0 | 0 25-1 | 0 23-9 | 4-0 | 0-1 | 10-0 | 0-3 | 16-0 | 0-4 |
| 41 | 0 10-3 | 0 10-3 | 0 09-8 | 4-1 | 0-0 | 10-1 | 0-1 | 16-1 | 0-1 | 41 | 0 25-3 | 0 25-3 | 0 24-1 | 4-1 | 0-1 | 10-1 | 0-3 | 16-1 | 0-4 |
| 42 | 0 10-5 | 0 10-5 | 0 10-0 | 4-2 | 0-0 | 10-2 | 0-1 | 16-2 | 0-1 | 42 | 0 25-5 | 0 25-6 | 0 24-3 | 4-2 | 0-1 | 10-2 | 0-3 | 16-2 | 0-4 |
| 43 | 0 10-8 | 0 10-8 | 0 10-3 | 4-3 | 0-0 | 10-3 | 0-1 | 16-3 | 0-1 | 43 | 0 25-8 | 0 25-8 | 0 24-6 | 4-3 | 0-1 | 10-3 | 0-3 | 16-3 | 0-4 |
| 44 | 0 11-0 | 0 11-0 | 0 10-5 | 4-4 | 0-0 | 10-4 | 0-1 | 16-4 | 0-1 | 44 | 0 26-0 | 0 26-1 | 0 24-8 | 4-4 | 0-1 | 10-4 | 0-3 | 16-4 | 0-4 |
| 45 | 0 11-3 | 0 11-3 | 0 10-7 | 4-5 | 0-0 | 10-5 | 0-1 | 16-5 | 0-1 | 45 | 0 26-3 | 0 26-3 | 0 25-1 | 4-5 | 0-1 | 10-5 | 0-3 | 16-5 | 0-4 |
| 46 | 0 11-5 | 0 11-5 | 0 11-0 | 4-6 | 0-0 | 10-6 | 0-1 | 16-6 | 0-1 | 46 | 0 26-5 | 0 26-6 | 0 25-3 | 4-6 | 0-1 | 10-6 | 0-3 | 16-6 | 0-4 |
| 47 | 0 11-8 | 0 11-8 | 0 11-2 | 4-7 | 0-0 | 10-7 | 0-1 | 16-7 | 0-1 | 47 | 0 26-8 | 0 26-8 | 0 25-5 | 4-7 | 0-1 | 10-7 | 0-3 | 16-7 | 0-4 |
| 48 | 0 12-0 | 0 12-0 | 0 11-5 | 4-8 | 0-0 | 10-8 | 0-1 | 16-8 | 0-1 | 48 | 0 27-0 | 0 27-1 | 0 25-8 | 4-8 | 0-1 | 10-8 | 0-3 | 16-8 | 0-4 |
| 49 | 0 12-3 | 0 12-3 | 0 11-7 | 4-9 | 0-0 | 10-9 | 0-1 | 16-9 | 0-1 | 49 | 0 27-3 | 0 27-3 | 0 26-0 | 4-9 | 0-1 | 10-9 | 0-3 | 16-9 | 0-4 |
| 50 | 0 12-5 | 0 12-5 | 0 11-9 | 5-0 | 0-0 | 11-0 | 0-1 | 17-0 | 0-1 | 50 | 0 27-5 | 0 27-6 | 0 26-2 | 5-0 | 0-1 | 11-0 | 0-3 | 17-0 | 0-4 |
| 51 | 0 12-8 | 0 12-8 | 0 12-2 | 5-1 | 0-0 | 11-1 | 0-1 | 17-1 | 0-1 | 51 | 0 27-8 | 0 27-8 | 0 26-5 | 5-1 | 0-1 | 11-1 | 0-3 | 17-1 | 0-4 |
| 52 | 0 13-0 | 0 13-0 | 0 12-4 | 5-2 | 0-0 | 11-2 | 0-1 | 17-2 | 0-1 | 52 | 0 28-0 | 0 28-1 | 0 26-7 | 5-2 | 0-1 | 11-2 | 0-3 | 17-2 | 0-4 |
| 53 | 0 13-3 | 0 13-3 | 0 12-6 | 5-3 | 0-0 | 11-3 | 0-1 | 17-3 | 0-1 | 53 | 0 28-3 | 0 28-3 | 0 27-0 | 5-3 | 0-1 | 11-3 | 0-3 | 17-3 | 0-4 |
| 54 | 0 13-5 | 0 13-5 | 0 12-9 | 5-4 | 0-0 | 11-4 | 0-1 | 17-4 | 0-1 | 54 | 0 28-5 | 0 28-6 | 0 27-2 | 5-4 | 0-1 | 11-4 | 0-3 | 17-4 | 0-4 |
| 55 | 0 13-8 | 0 13-8 | 0 13-1 | 5-5 | 0-0 | 11-5 | 0-1 | 17-5 | 0-1 | 55 | 0 28-8 | 0 28-8 | 0 27-4 | 5-5 | 0-1 | 11-5 | 0-3 | 17-5 | 0-4 |
| 56 | 0 14-0 | 0 14-0 | 0 13-4 | 5-6 | 0-0 | 11-6 | 0-1 | 17-6 | 0-1 | 56 | 0 29-0 | 0 29-1 | 0 27-7 | 5-6 | 0-1 | 11-6 | 0-3 | 17-6 | 0-4 |
| 57 | 0 14-3 | 0 14-3 | 0 13-6 | 5-7 | 0-0 | 11-7 | 0-1 | 17-7 | 0-1 | 57 | 0 29-3 | 0 29-3 | 0 27-9 | 5-7 | 0-1 | 11-7 | 0-3 | 17-7 | 0-4 |
| 58 | 0 14-5 | 0 14-5 | 0 13-8 | 5-8 | 0-0 | 11-8 | 0-1 | 17-8 | 0-1 | 58 | 0 29-5 | 0 29-6 | 0 28-2 | 5-8 | 0-1 | 11-8 | 0-3 | 17-8 | 0-4 |
| 59 | 0 14-8 | 0 14-8 | 0 14-1 | 5-9 | 0-0 | 11-9 | 0-1 | 17-9 | 0-1 | 59 | 0 29-8 | 0 29-8 | 0 28-4 | 5-9 | 0-1 | 11-9 | 0-3 | 17-9 | 0-4 |
| 60 | 0 15-0 | 0 15-0 | 0 14-3 | 6-0 | 0-1 | 12-0 | 0-1 | 18-0 | 0-2 | 60 | 0 30-0 | 0 30-1 | 0 28-6 | 6-0 | 0-2 | 12-0 | 0-3 | 18-0 | 0-5 |

2^m

INCREMENTS AND CORRECTIONS

3^m

| 2 | SUN PLANETS | ARIES | MOON | v of Corr ⁿ d | | v of Corr ⁿ d | | v of Corr ⁿ d | |
|----|----------------|--------|--------|--------------------------------|-----|--------------------------------|-----|--------------------------------|-----|
| | | | | /' | "/ | /' | "/ | /' | "/ |
| 00 | 0 30-0 | 0 30-1 | 0 28-6 | 0-0 | 0-0 | 6-0 | 0-3 | 12-0 | 0-5 |
| 01 | 0 30-3 | 0 30-3 | 0 28-9 | 0-1 | 0-0 | 6-1 | 0-3 | 12-1 | 0-5 |
| 02 | 0 30-5 | 0 30-6 | 0 29-1 | 0-2 | 0-0 | 6-2 | 0-3 | 12-2 | 0-5 |
| 03 | 0 30-8 | 0 30-8 | 0 29-3 | 0-3 | 0-0 | 6-3 | 0-3 | 12-3 | 0-5 |
| 04 | 0 31-0 | 0 31-1 | 0 29-6 | 0-4 | 0-0 | 6-4 | 0-3 | 12-4 | 0-5 |
| 05 | 0 31-3 | 0 31-3 | 0 29-8 | 0-5 | 0-0 | 6-5 | 0-3 | 12-5 | 0-5 |
| 06 | 0 31-5 | 0 31-6 | 0 30-1 | 0-6 | 0-0 | 6-6 | 0-3 | 12-6 | 0-5 |
| 07 | 0 31-8 | 0 31-8 | 0 30-3 | 0-7 | 0-0 | 6-7 | 0-3 | 12-7 | 0-5 |
| 08 | 0 32-0 | 0 32-1 | 0 30-5 | 0-8 | 0-0 | 6-8 | 0-3 | 12-8 | 0-5 |
| 09 | 0 32-3 | 0 32-3 | 0 30-8 | 0-9 | 0-0 | 6-9 | 0-3 | 12-9 | 0-5 |
| 10 | 0 32-5 | 0 32-6 | 0 31-0 | 1-0 | 0-0 | 7-0 | 0-3 | 13-0 | 0-5 |
| 11 | 0 32-8 | 0 32-8 | 0 31-3 | 1-1 | 0-0 | 7-1 | 0-3 | 13-1 | 0-5 |
| 12 | 0 33-0 | 0 33-1 | 0 31-5 | 1-2 | 0-1 | 7-2 | 0-3 | 13-2 | 0-6 |
| 13 | 0 33-3 | 0 33-3 | 0 31-7 | 1-3 | 0-1 | 7-3 | 0-3 | 13-3 | 0-6 |
| 14 | 0 33-5 | 0 33-6 | 0 32-0 | 1-4 | 0-1 | 7-4 | 0-3 | 13-4 | 0-6 |
| 15 | 0 33-8 | 0 33-8 | 0 32-2 | 1-5 | 0-1 | 7-5 | 0-3 | 13-5 | 0-6 |
| 16 | 0 34-0 | 0 34-1 | 0 32-5 | 1-6 | 0-1 | 7-6 | 0-3 | 13-6 | 0-6 |
| 17 | 0 34-3 | 0 34-3 | 0 32-7 | 1-7 | 0-1 | 7-7 | 0-3 | 13-7 | 0-6 |
| 18 | 0 34-5 | 0 34-6 | 0 32-9 | 1-8 | 0-1 | 7-8 | 0-3 | 13-8 | 0-6 |
| 19 | 0 34-8 | 0 34-8 | 0 33-2 | 1-9 | 0-1 | 7-9 | 0-3 | 13-9 | 0-6 |
| 20 | 0 35-0 | 0 35-1 | 0 33-4 | 2-0 | 0-1 | 8-0 | 0-3 | 14-0 | 0-6 |
| 21 | 0 35-3 | 0 35-3 | 0 33-6 | 2-1 | 0-1 | 8-1 | 0-3 | 14-1 | 0-6 |
| 22 | 0 35-5 | 0 35-6 | 0 33-9 | 2-2 | 0-1 | 8-2 | 0-3 | 14-2 | 0-6 |
| 23 | 0 35-8 | 0 35-8 | 0 34-1 | 2-3 | 0-1 | 8-3 | 0-3 | 14-3 | 0-6 |
| 24 | 0 36-0 | 0 36-1 | 0 34-4 | 2-4 | 0-1 | 8-4 | 0-4 | 14-4 | 0-6 |
| 25 | 0 36-3 | 0 36-3 | 0 34-6 | 2-5 | 0-1 | 8-5 | 0-4 | 14-5 | 0-6 |
| 26 | 0 36-5 | 0 36-6 | 0 34-8 | 2-6 | 0-1 | 8-6 | 0-4 | 14-6 | 0-6 |
| 27 | 0 36-8 | 0 36-9 | 0 35-1 | 2-7 | 0-1 | 8-7 | 0-4 | 14-7 | 0-6 |
| 28 | 0 37-0 | 0 37-1 | 0 35-3 | 2-8 | 0-1 | 8-8 | 0-4 | 14-8 | 0-6 |
| 29 | 0 37-3 | 0 37-4 | 0 35-6 | 2-9 | 0-1 | 8-9 | 0-4 | 14-9 | 0-6 |
| 30 | 0 37-5 | 0 37-6 | 0 35-8 | 3-0 | 0-1 | 9-0 | 0-4 | 15-0 | 0-6 |
| 31 | 0 37-8 | 0 37-9 | 0 36-0 | 3-1 | 0-1 | 9-1 | 0-4 | 15-1 | 0-6 |
| 32 | 0 38-0 | 0 38-1 | 0 36-3 | 3-2 | 0-1 | 9-2 | 0-4 | 15-2 | 0-6 |
| 33 | 0 38-3 | 0 38-4 | 0 36-5 | 3-3 | 0-1 | 9-3 | 0-4 | 15-3 | 0-6 |
| 34 | 0 38-5 | 0 38-6 | 0 36-7 | 3-4 | 0-1 | 9-4 | 0-4 | 15-4 | 0-6 |
| 35 | 0 38-8 | 0 38-9 | 0 37-0 | 3-5 | 0-1 | 9-5 | 0-4 | 15-5 | 0-6 |
| 36 | 0 39-0 | 0 39-1 | 0 37-2 | 3-6 | 0-2 | 9-6 | 0-4 | 15-6 | 0-6 |
| 37 | 0 39-3 | 0 39-4 | 0 37-5 | 3-7 | 0-2 | 9-7 | 0-4 | 15-7 | 0-7 |
| 38 | 0 39-5 | 0 39-6 | 0 37-7 | 3-8 | 0-2 | 9-8 | 0-4 | 15-8 | 0-7 |
| 39 | 0 39-8 | 0 39-9 | 0 37-9 | 3-9 | 0-2 | 9-9 | 0-4 | 15-9 | 0-7 |
| 40 | 0 40-0 | 0 40-1 | 0 38-2 | 4-0 | 0-2 | 10-0 | 0-4 | 16-0 | 0-7 |
| 41 | 0 40-3 | 0 40-4 | 0 38-4 | 4-1 | 0-2 | 10-1 | 0-4 | 16-1 | 0-7 |
| 42 | 0 40-5 | 0 40-6 | 0 38-7 | 4-2 | 0-2 | 10-2 | 0-4 | 16-2 | 0-7 |
| 43 | 0 40-8 | 0 40-9 | 0 38-9 | 4-3 | 0-2 | 10-3 | 0-4 | 16-3 | 0-7 |
| 44 | 0 41-0 | 0 41-1 | 0 39-1 | 4-4 | 0-2 | 10-4 | 0-4 | 16-4 | 0-7 |
| 45 | 0 41-3 | 0 41-4 | 0 39-4 | 4-5 | 0-2 | 10-5 | 0-4 | 16-5 | 0-7 |
| 46 | 0 41-5 | 0 41-6 | 0 39-6 | 4-6 | 0-2 | 10-6 | 0-4 | 16-6 | 0-7 |
| 47 | 0 41-8 | 0 41-9 | 0 39-8 | 4-7 | 0-2 | 10-7 | 0-4 | 16-7 | 0-7 |
| 48 | 0 42-0 | 0 42-1 | 0 40-1 | 4-8 | 0-2 | 10-8 | 0-5 | 16-8 | 0-7 |
| 49 | 0 42-3 | 0 42-4 | 0 40-3 | 4-9 | 0-2 | 10-9 | 0-5 | 16-9 | 0-7 |
| 50 | 0 42-5 | 0 42-6 | 0 40-6 | 5-0 | 0-2 | 11-0 | 0-5 | 17-0 | 0-7 |
| 51 | 0 42-8 | 0 42-9 | 0 40-8 | 5-1 | 0-2 | 11-1 | 0-5 | 17-1 | 0-7 |
| 52 | 0 43-0 | 0 43-1 | 0 41-0 | 5-2 | 0-2 | 11-2 | 0-5 | 17-2 | 0-7 |
| 53 | 0 43-3 | 0 43-4 | 0 41-3 | 5-3 | 0-2 | 11-3 | 0-5 | 17-3 | 0-7 |
| 54 | 0 43-5 | 0 43-6 | 0 41-5 | 5-4 | 0-2 | 11-4 | 0-5 | 17-4 | 0-7 |
| 55 | 0 43-8 | 0 43-9 | 0 41-8 | 5-5 | 0-2 | 11-5 | 0-5 | 17-5 | 0-7 |
| 56 | 0 44-0 | 0 44-1 | 0 42-0 | 5-6 | 0-2 | 11-6 | 0-5 | 17-6 | 0-7 |
| 57 | 0 44-3 | 0 44-4 | 0 42-2 | 5-7 | 0-2 | 11-7 | 0-5 | 17-7 | 0-7 |
| 58 | 0 44-5 | 0 44-6 | 0 42-5 | 5-8 | 0-2 | 11-8 | 0-5 | 17-8 | 0-7 |
| 59 | 0 44-8 | 0 44-9 | 0 42-7 | 5-9 | 0-2 | 11-9 | 0-5 | 17-9 | 0-7 |
| 60 | 0 45-0 | 0 45-1 | 0 43-0 | 6-0 | 0-3 | 12-0 | 0-5 | 18-0 | 0-8 |

| 3 | SUN PLANETS | ARIES | MOON | v of Corr ⁿ d | | v of Corr ⁿ d | | v of Corr ⁿ d | |
|----|----------------|--------|--------|--------------------------------|-----|--------------------------------|-----|--------------------------------|-----|
| | | | | /' | "/ | /' | "/ | /' | "/ |
| 00 | 0 45-0 | 0 45-1 | 0 43-0 | 0-0 | 0-0 | 6-0 | 0-4 | 12-0 | 0-7 |
| 01 | 0 45-3 | 0 45-4 | 0 43-2 | 0-1 | 0-0 | 6-1 | 0-4 | 12-1 | 0-7 |
| 02 | 0 45-5 | 0 45-6 | 0 43-4 | 0-2 | 0-0 | 6-2 | 0-4 | 12-2 | 0-7 |
| 03 | 0 45-8 | 0 45-9 | 0 43-7 | 0-3 | 0-0 | 6-3 | 0-4 | 12-3 | 0-7 |
| 04 | 0 46-0 | 0 46-1 | 0 43-9 | 0-4 | 0-0 | 6-4 | 0-4 | 12-4 | 0-7 |
| 05 | 0 46-3 | 0 46-4 | 0 44-1 | 0-5 | 0-0 | 6-5 | 0-4 | 12-5 | 0-7 |
| 06 | 0 46-5 | 0 46-6 | 0 44-4 | 0-6 | 0-0 | 6-6 | 0-4 | 12-6 | 0-7 |
| 07 | 0 46-8 | 0 46-9 | 0 44-6 | 0-7 | 0-0 | 6-7 | 0-4 | 12-7 | 0-7 |
| 08 | 0 47-0 | 0 47-1 | 0 44-9 | 0-8 | 0-0 | 6-8 | 0-4 | 12-8 | 0-7 |
| 09 | 0 47-3 | 0 47-4 | 0 45-1 | 0-9 | 0-1 | 6-9 | 0-4 | 12-9 | 0-8 |
| 10 | 0 47-5 | 0 47-6 | 0 45-3 | 1-0 | 0-1 | 7-0 | 0-4 | 13-0 | 0-8 |
| 11 | 0 47-8 | 0 47-9 | 0 45-6 | 1-1 | 0-1 | 7-1 | 0-4 | 13-1 | 0-8 |
| 12 | 0 48-0 | 0 48-1 | 0 45-8 | 1-2 | 0-1 | 7-2 | 0-4 | 13-2 | 0-8 |
| 13 | 0 48-3 | 0 48-4 | 0 46-1 | 1-3 | 0-1 | 7-3 | 0-4 | 13-3 | 0-8 |
| 14 | 0 48-5 | 0 48-6 | 0 46-3 | 1-4 | 0-1 | 7-4 | 0-4 | 13-4 | 0-8 |
| 15 | 0 48-8 | 0 48-9 | 0 46-5 | 1-5 | 0-1 | 7-5 | 0-4 | 13-5 | 0-8 |
| 16 | 0 49-0 | 0 49-1 | 0 46-8 | 1-6 | 0-1 | 7-6 | 0-4 | 13-6 | 0-8 |
| 17 | 0 49-3 | 0 49-4 | 0 47-0 | 1-7 | 0-1 | 7-7 | 0-4 | 13-7 | 0-8 |
| 18 | 0 49-5 | 0 49-6 | 0 47-2 | 1-8 | 0-1 | 7-8 | 0-5 | 13-8 | 0-8 |
| 19 | 0 49-8 | 0 49-9 | 0 47-5 | 1-9 | 0-1 | 7-9 | 0-5 | 13-9 | 0-8 |
| 20 | 0 50-0 | 0 50-1 | 0 47-7 | 2-0 | 0-1 | 8-0 | 0-5 | 14-0 | 0-8 |
| 21 | 0 50-3 | 0 50-4 | 0 48-0 | 2-1 | 0-1 | 8-1 | 0-5 | 14-1 | 0-8 |
| 22 | 0 50-5 | 0 50-6 | 0 48-2 | 2-2 | 0-1 | 8-2 | 0-5 | 14-2 | 0-8 |
| 23 | 0 50-8 | 0 50-9 | 0 48-4 | 2-3 | 0-1 | 8-3 | 0-5 | 14-3 | 0-8 |
| 24 | 0 51-0 | 0 51-1 | 0 48-7 | 2-4 | 0-1 | 8-4 | 0-5 | 14-4 | 0-8 |
| 25 | 0 51-3 | 0 51-4 | 0 48-9 | 2-5 | 0-1 | 8-5 | 0-5 | 14-5 | 0-8 |
| 26 | 0 51-5 | 0 51-6 | 0 49-2 | 2-6 | 0-2 | 8-6 | 0-5 | 14-6 | 0-8 |
| 27 | 0 51-8 | 0 51-9 | 0 49-4 | 2-7 | 0-2 | 8-7 | 0-5 | 14-7 | 0-9 |
| 28 | 0 52-0 | 0 52-1 | 0 49-6 | 2-8 | 0-2 | 8-8 | 0-5 | 14-8 | 0-9 |
| 29 | 0 52-3 | 0 52-4 | 0 49-9 | 2-9 | 0-2 | 8-9 | 0-5 | 14-9 | 0-9 |
| 30 | 0 52-5 | 0 52-6 | 0 50-1 | 3-0 | 0-2 | 9-0 | 0-5 | 15-0 | 0-9 |
| 31 | 0 52-8 | 0 52-9 | 0 50-3 | 3-1 | 0-2 | 9-1 | 0-5 | 15-1 | 0-9 |
| 32 | 0 53-0 | 0 53-1 | 0 50-6 | 3-2 | 0-2 | 9-2 | 0-5 | 15-2 | 0-9 |
| 33 | 0 53-3 | 0 53-4 | 0 50-8 | 3-3 | 0-2 | 9-3 | 0-5 | 15-3 | 0-9 |
| 34 | 0 53-5 | 0 53-6 | 0 51-1 | 3-4 | 0-2 | 9-4 | 0-5 | 15-4 | 0-9 |
| 35 | 0 53-8 | 0 53-9 | 0 51-3 | 3-5 | 0-2 | 9-5 | 0-6 | 15-5 | 0-9 |
| 36 | 0 54-0 | 0 54-1 | 0 51-5 | 3-6 | 0-2 | 9-6 | 0-6 | 15-6 | 0-9 |
| 37 | 0 54-3 | 0 54-4 | 0 51-8 | 3-7 | 0-2 | 9-7 | 0-6 | 15-7 | 0-9 |
| 38 | 0 54-5 | 0 54-6 | 0 52-0 | 3-8 | 0-2 | 9-8 | 0-6 | 15-8 | 0-9 |
| 39 | 0 54-8 | 0 54-9 | 0 52-3 | 3-9 | 0-2 | 9-9 | 0-6 | 15-9 | 0-9 |
| 40 | 0 55-0 | 0 55-2 | 0 52-5 | 4-0 | 0-2 | 10-0 | 0-6 | 16-0 | 0-9 |
| 41 | 0 55-3 | 0 55-4 | 0 52-7 | 4-1 | 0-2 | 10-1 | 0-6 | 16-1 | 0-9 |
| 42 | 0 55-5 | 0 55-7 | 0 53-0 | 4-2 | 0-2 | 10-2 | 0-6 | 16-2 | 0-9 |
| 43 | 0 55-8 | 0 55-9 | 0 53-2 | 4-3 | 0-3 | 10-3 | 0-6 | 16-3 | 1-0 |
| 44 | 0 56-0 | 0 56-2 | 0 53-4 | 4-4 | 0-3 | 10-4 | 0-6 | 16-4 | 1-0 |
| 45 | 0 56-3 | 0 56-4 | 0 53-7 | 4-5 | 0-3 | 10-5 | 0-6 | 16-5 | 1-0 |
| 46 | 0 56-5 | 0 56-7 | 0 53-9 | 4-6 | 0-3 | 10-6 | 0-6 | 16-6 | 1-0 |
| 47 | 0 56-8 | 0 56-9 | 0 54-2 | 4-7 | 0-3 | 10-7 | 0-6 | 16-7 | 1-0 |
| 48 | 0 57-0 | 0 57-2 | 0 54-4 | 4-8 | 0-3 | 10-8 | 0-6 | 16-8 | 1-0 |
| 49 | 0 57-3 | 0 57-4 | 0 54-6 | 4-9 | 0-3 | 10-9 | 0-6 | 16-9 | 1-0 |
| 50 | 0 57-5 | 0 57-7 | 0 54-9 | 5-0 | 0-3 | 11-0 | 0-6 | 17-0 | 1-0 |
| 51 | 0 57-8 | 0 57-9 | 0 55-1 | 5-1 | 0-3 | 11-1 | 0-6 | 17-1 | 1-0 |
| 52 | 0 58-0 | 0 58-2 | 0 55-4 | 5-2 | 0-3 | 11-2 | 0-7 | 17-2 | 1-0 |
| 53 | 0 58-3 | 0 58-4 | 0 55-6 | 5-3 | 0-3 | 11-3 | 0-7 | 17-3 | 1-0 |
| 54 | 0 58-5 | 0 58-7 | 0 55-8 | 5-4 | 0-3 | 11-4 | 0-7 | 17-4 | 1-0 |
| 55 | 0 58-8 | 0 58-9 | 0 56-1 | 5-5 | 0-3 | 11-5 | 0-7 | 17-5 | 1-0 |
| 56 | 0 59-0 | 0 59-2 | 0 56-3 | 5-6 | 0-3 | 11-6 | 0-7 | 17-6 | 1-0 |
| 57 | 0 59-3 | 0 59-4 | 0 56-6 | 5-7 | 0-3 | 11-7 | 0-7 | 17-7 | 1-0 |
| 58 | 0 59-5 | 0 59-7 | 0 56-8 | 5-8 | 0-3 | 11-8 | 0-7 | 17-8 | 1-0 |
| 59 | 0 59-8 | 0 59-9 | 0 57-0 | 5-9 | 0-3 | 11-9 | 0-7 | 17-9 | 1-0 |
| 60 | 1 00-0 | 1 00-2 | 0 57-3 | 6-0 | 0-4 | 12-0 | 0-7 | 18-0 | 1-1 |



4^m

INCREMENTS AND CORRECTIONS

5^m

| 4 | SUN PLANETS | ARIES | MOON | ° or Corr ^d | | ° or Corr ^d | | ° or Corr ^d | |
|----|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|
| | | | | ' | " | ' | " | ' | " |
| 00 | 1 00 0 | 1 00 2 | 0 57 3 | 0 0 | 0 0 | 6 0 | 0 5 | 12 0 | 0 9 |
| 01 | 1 00 3 | 1 00 4 | 0 57 5 | 0 1 | 0 0 | 6 1 | 0 5 | 12 1 | 0 9 |
| 02 | 1 00 5 | 1 00 7 | 0 57 7 | 0 2 | 0 0 | 6 2 | 0 5 | 12 2 | 0 9 |
| 03 | 1 00 8 | 1 00 9 | 0 58 0 | 0 3 | 0 0 | 6 3 | 0 5 | 12 3 | 0 9 |
| 04 | 1 01 0 | 1 01 2 | 0 58 2 | 0 4 | 0 0 | 6 4 | 0 5 | 12 4 | 0 9 |
| 05 | 1 01 3 | 1 01 4 | 0 58 5 | 0 5 | 0 0 | 6 5 | 0 5 | 12 5 | 0 9 |
| 06 | 1 01 5 | 1 01 7 | 0 58 7 | 0 6 | 0 0 | 6 6 | 0 5 | 12 6 | 0 9 |
| 07 | 1 01 8 | 1 01 9 | 0 58 9 | 0 7 | 0 1 | 6 7 | 0 5 | 12 7 | 1 0 |
| 08 | 1 02 0 | 1 02 2 | 0 59 2 | 0 8 | 0 1 | 6 8 | 0 5 | 12 8 | 1 0 |
| 09 | 1 02 3 | 1 02 4 | 0 59 4 | 0 9 | 0 1 | 6 9 | 0 5 | 12 9 | 1 0 |
| 10 | 1 02 5 | 1 02 7 | 0 59 7 | 1 0 | 0 1 | 7 0 | 0 5 | 13 0 | 1 0 |
| 11 | 1 02 8 | 1 02 9 | 0 59 9 | 1 1 | 0 1 | 7 1 | 0 5 | 13 1 | 1 0 |
| 12 | 1 03 0 | 1 03 2 | 1 00 1 | 1 2 | 0 1 | 7 2 | 0 5 | 13 2 | 1 0 |
| 13 | 1 03 3 | 1 03 4 | 1 00 4 | 1 3 | 0 1 | 7 3 | 0 5 | 13 3 | 1 0 |
| 14 | 1 03 5 | 1 03 7 | 1 00 6 | 1 4 | 0 1 | 7 4 | 0 6 | 13 4 | 1 0 |
| 15 | 1 03 8 | 1 03 9 | 1 00 8 | 1 5 | 0 1 | 7 5 | 0 6 | 13 5 | 1 0 |
| 16 | 1 04 0 | 1 04 2 | 1 01 1 | 1 6 | 0 1 | 7 6 | 0 6 | 13 6 | 1 0 |
| 17 | 1 04 3 | 1 04 4 | 1 01 3 | 1 7 | 0 1 | 7 7 | 0 6 | 13 7 | 1 0 |
| 18 | 1 04 5 | 1 04 7 | 1 01 6 | 1 8 | 0 1 | 7 8 | 0 6 | 13 8 | 1 0 |
| 19 | 1 04 8 | 1 04 9 | 1 01 8 | 1 9 | 0 1 | 7 9 | 0 6 | 13 9 | 1 0 |
| 20 | 1 05 0 | 1 05 2 | 1 02 0 | 2 0 | 0 2 | 8 0 | 0 6 | 14 0 | 1 1 |
| 21 | 1 05 3 | 1 05 4 | 1 02 3 | 2 1 | 0 2 | 8 1 | 0 6 | 14 1 | 1 1 |
| 22 | 1 05 5 | 1 05 7 | 1 02 5 | 2 2 | 0 2 | 8 2 | 0 6 | 14 2 | 1 1 |
| 23 | 1 05 8 | 1 05 9 | 1 02 8 | 2 3 | 0 2 | 8 3 | 0 6 | 14 3 | 1 1 |
| 24 | 1 06 0 | 1 06 2 | 1 03 0 | 2 4 | 0 2 | 8 4 | 0 6 | 14 4 | 1 1 |
| 25 | 1 06 3 | 1 06 4 | 1 03 2 | 2 5 | 0 2 | 8 5 | 0 6 | 14 5 | 1 1 |
| 26 | 1 06 5 | 1 06 7 | 1 03 5 | 2 6 | 0 2 | 8 6 | 0 6 | 14 6 | 1 1 |
| 27 | 1 06 8 | 1 06 9 | 1 03 7 | 2 7 | 0 2 | 8 7 | 0 7 | 14 7 | 1 1 |
| 28 | 1 07 0 | 1 07 2 | 1 03 9 | 2 8 | 0 2 | 8 8 | 0 7 | 14 8 | 1 1 |
| 29 | 1 07 3 | 1 07 4 | 1 04 2 | 2 9 | 0 2 | 8 9 | 0 7 | 14 9 | 1 1 |
| 30 | 1 07 5 | 1 07 7 | 1 04 4 | 3 0 | 0 2 | 9 0 | 0 7 | 15 0 | 1 1 |
| 31 | 1 07 8 | 1 07 9 | 1 04 7 | 3 1 | 0 2 | 9 1 | 0 7 | 15 1 | 1 1 |
| 32 | 1 08 0 | 1 08 2 | 1 04 9 | 3 2 | 0 2 | 9 2 | 0 7 | 15 2 | 1 1 |
| 33 | 1 08 3 | 1 08 4 | 1 05 1 | 3 3 | 0 2 | 9 3 | 0 7 | 15 3 | 1 1 |
| 34 | 1 08 5 | 1 08 7 | 1 05 4 | 3 4 | 0 3 | 9 4 | 0 7 | 15 4 | 1 2 |
| 35 | 1 08 8 | 1 08 9 | 1 05 6 | 3 5 | 0 3 | 9 5 | 0 7 | 15 5 | 1 2 |
| 36 | 1 09 0 | 1 09 2 | 1 05 9 | 3 6 | 0 3 | 9 6 | 0 7 | 15 6 | 1 2 |
| 37 | 1 09 3 | 1 09 4 | 1 06 1 | 3 7 | 0 3 | 9 7 | 0 7 | 15 7 | 1 2 |
| 38 | 1 09 5 | 1 09 7 | 1 06 3 | 3 8 | 0 3 | 9 8 | 0 7 | 15 8 | 1 2 |
| 39 | 1 09 8 | 1 09 9 | 1 06 6 | 3 9 | 0 3 | 9 9 | 0 7 | 15 9 | 1 2 |
| 40 | 1 10 0 | 1 10 2 | 1 06 8 | 4 0 | 0 3 | 10 0 | 0 8 | 16 0 | 1 2 |
| 41 | 1 10 3 | 1 10 4 | 1 07 0 | 4 1 | 0 3 | 10 1 | 0 8 | 16 1 | 1 2 |
| 42 | 1 10 5 | 1 10 7 | 1 07 3 | 4 2 | 0 3 | 10 2 | 0 8 | 16 2 | 1 2 |
| 43 | 1 10 8 | 1 10 9 | 1 07 5 | 4 3 | 0 3 | 10 3 | 0 8 | 16 3 | 1 2 |
| 44 | 1 11 0 | 1 11 2 | 1 07 8 | 4 4 | 0 3 | 10 4 | 0 8 | 16 4 | 1 2 |
| 45 | 1 11 3 | 1 11 4 | 1 08 0 | 4 5 | 0 3 | 10 5 | 0 8 | 16 5 | 1 2 |
| 46 | 1 11 5 | 1 11 7 | 1 08 2 | 4 6 | 0 3 | 10 6 | 0 8 | 16 6 | 1 2 |
| 47 | 1 11 8 | 1 11 9 | 1 08 5 | 4 7 | 0 4 | 10 7 | 0 8 | 16 7 | 1 3 |
| 48 | 1 12 0 | 1 12 2 | 1 08 7 | 4 8 | 0 4 | 10 8 | 0 8 | 16 8 | 1 3 |
| 49 | 1 12 3 | 1 12 4 | 1 09 0 | 4 9 | 0 4 | 10 9 | 0 8 | 16 9 | 1 3 |
| 50 | 1 12 5 | 1 12 7 | 1 09 2 | 5 0 | 0 4 | 11 0 | 0 8 | 17 0 | 1 3 |
| 51 | 1 12 8 | 1 12 9 | 1 09 4 | 5 1 | 0 4 | 11 1 | 0 8 | 17 1 | 1 3 |
| 52 | 1 13 0 | 1 13 2 | 1 09 7 | 5 2 | 0 4 | 11 2 | 0 8 | 17 2 | 1 3 |
| 53 | 1 13 3 | 1 13 5 | 1 09 9 | 5 3 | 0 4 | 11 3 | 0 8 | 17 3 | 1 3 |
| 54 | 1 13 5 | 1 13 7 | 1 10 2 | 5 4 | 0 4 | 11 4 | 0 9 | 17 4 | 1 3 |
| 55 | 1 13 8 | 1 14 0 | 1 10 4 | 5 5 | 0 4 | 11 5 | 0 9 | 17 5 | 1 3 |
| 56 | 1 14 0 | 1 14 2 | 1 10 6 | 5 6 | 0 4 | 11 6 | 0 9 | 17 6 | 1 3 |
| 57 | 1 14 3 | 1 14 5 | 1 10 9 | 5 7 | 0 4 | 11 7 | 0 9 | 17 7 | 1 3 |
| 58 | 1 14 5 | 1 14 7 | 1 11 1 | 5 8 | 0 4 | 11 8 | 0 9 | 17 8 | 1 3 |
| 59 | 1 14 8 | 1 15 0 | 1 11 3 | 5 9 | 0 4 | 11 9 | 0 9 | 17 9 | 1 3 |
| 60 | 1 15 0 | 1 15 2 | 1 11 6 | 6 0 | 0 5 | 12 0 | 0 9 | 18 0 | 1 4 |

| 5 | SUN PLANETS | ARIES | MOON | ° or Corr ^d | | ° or Corr ^d | | ° or Corr ^d | |
|----|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|
| | | | | ' | " | ' | " | ' | " |
| 00 | 1 15 0 | 1 15 2 | 1 11 6 | 0 0 | 0 0 | 6 0 | 0 6 | 12 0 | 1 1 |
| 01 | 1 15 3 | 1 15 5 | 1 11 8 | 0 1 | 0 0 | 6 1 | 0 6 | 12 1 | 1 1 |
| 02 | 1 15 5 | 1 15 7 | 1 12 1 | 0 2 | 0 0 | 6 2 | 0 6 | 12 2 | 1 1 |
| 03 | 1 15 8 | 1 16 0 | 1 12 3 | 0 3 | 0 0 | 6 3 | 0 6 | 12 3 | 1 1 |
| 04 | 1 16 0 | 1 16 2 | 1 12 5 | 0 4 | 0 0 | 6 4 | 0 6 | 12 4 | 1 1 |
| 05 | 1 16 3 | 1 16 5 | 1 12 8 | 0 5 | 0 0 | 6 5 | 0 6 | 12 5 | 1 1 |
| 06 | 1 16 5 | 1 16 7 | 1 13 0 | 0 6 | 0 1 | 6 6 | 0 6 | 12 6 | 1 2 |
| 07 | 1 16 8 | 1 17 0 | 1 13 3 | 0 7 | 0 1 | 6 7 | 0 6 | 12 7 | 1 2 |
| 08 | 1 17 0 | 1 17 2 | 1 13 5 | 0 8 | 0 1 | 6 8 | 0 6 | 12 8 | 1 2 |
| 09 | 1 17 3 | 1 17 5 | 1 13 7 | 0 9 | 0 1 | 6 9 | 0 6 | 12 9 | 1 2 |
| 10 | 1 17 5 | 1 17 7 | 1 14 0 | 1 0 | 0 1 | 7 0 | 0 6 | 13 0 | 1 2 |
| 11 | 1 17 8 | 1 18 0 | 1 14 2 | 1 1 | 0 1 | 7 1 | 0 7 | 13 1 | 1 2 |
| 12 | 1 18 0 | 1 18 2 | 1 14 4 | 1 2 | 0 1 | 7 2 | 0 7 | 13 2 | 1 2 |
| 13 | 1 18 3 | 1 18 5 | 1 14 7 | 1 3 | 0 1 | 7 3 | 0 7 | 13 3 | 1 2 |
| 14 | 1 18 5 | 1 18 7 | 1 14 9 | 1 4 | 0 1 | 7 4 | 0 7 | 13 4 | 1 2 |
| 15 | 1 18 8 | 1 19 0 | 1 15 2 | 1 5 | 0 1 | 7 5 | 0 7 | 13 5 | 1 2 |
| 16 | 1 19 0 | 1 19 2 | 1 15 4 | 1 6 | 0 1 | 7 6 | 0 7 | 13 6 | 1 2 |
| 17 | 1 19 3 | 1 19 5 | 1 15 6 | 1 7 | 0 2 | 7 7 | 0 7 | 13 7 | 1 3 |
| 18 | 1 19 5 | 1 19 7 | 1 15 9 | 1 8 | 0 2 | 7 8 | 0 7 | 13 8 | 1 3 |
| 19 | 1 19 8 | 1 20 0 | 1 16 1 | 1 9 | 0 2 | 7 9 | 0 7 | 13 9 | 1 3 |
| 20 | 1 20 0 | 1 20 2 | 1 16 4 | 2 0 | 0 2 | 8 0 | 0 7 | 14 0 | 1 3 |
| 21 | 1 20 3 | 1 20 5 | 1 16 6 | 2 1 | 0 2 | 8 1 | 0 7 | 14 1 | 1 3 |
| 22 | 1 20 5 | 1 20 7 | 1 16 8 | 2 2 | 0 2 | 8 2 | 0 8 | 14 2 | 1 3 |
| 23 | 1 20 8 | 1 21 0 | 1 17 1 | 2 3 | 0 2 | 8 3 | 0 8 | 14 3 | 1 3 |
| 24 | 1 21 0 | 1 21 2 | 1 17 3 | 2 4 | 0 2 | 8 4 | 0 8 | 14 4 | 1 3 |
| 25 | 1 21 3 | 1 21 5 | 1 17 5 | 2 5 | 0 2 | 8 5 | 0 8 | 14 5 | 1 3 |
| 26 | 1 21 5 | 1 21 7 | 1 17 8 | 2 6 | 0 2 | 8 6 | 0 8 | 14 6 | 1 3 |
| 27 | 1 21 8 | 1 22 0 | 1 18 0 | 2 7 | 0 2 | 8 7 | 0 8 | 14 7 | 1 3 |
| 28 | 1 22 0 | 1 22 2 | 1 18 3 | 2 8 | 0 3 | 8 8 | 0 8 | 14 8 | 1 4 |
| 29 | 1 22 3 | 1 22 5 | 1 18 5 | 2 9 | 0 3 | 8 9 | 0 8 | 14 9 | 1 4 |
| 30 | 1 22 5 | 1 22 7 | 1 18 7 | 3 0 | 0 3 | 9 0 | 0 8 | 15 0 | 1 4 |
| 31 | 1 22 8 | 1 23 0 | 1 19 0 | 3 1 | 0 3 | 9 1 | 0 8 | 15 1 | 1 4 |
| 32 | 1 23 0 | 1 23 2 | 1 19 2 | 3 2 | 0 3 | 9 2 | 0 8 | 15 2 | 1 4 |
| 33 | 1 23 3 | 1 23 5 | 1 19 5 | 3 3 | 0 3 | 9 3 | 0 9 | 15 3 | 1 4 |
| 34 | 1 23 5 | 1 23 7 | 1 19 7 | 3 4 | 0 3 | 9 4 | 0 9 | 15 4 | 1 4 |
| 35 | 1 23 8 | 1 24 0 | 1 19 9 | 3 5 | 0 3 | 9 5 | 0 9 | 15 5 | 1 4 |
| 36 | 1 24 0 | 1 24 2 | 1 20 2 | 3 6 | 0 3 | 9 6 | 0 9 | 15 6 | 1 4 |
| 37 | 1 24 3 | 1 24 5 | 1 20 4 | 3 7 | 0 3 | 9 7 | 0 9 | 15 7 | 1 4 |
| 38 | 1 24 5 | 1 24 7 | 1 20 7 | 3 8 | 0 3 | 9 8 | 0 9 | 15 8 | 1 4 |
| 39 | 1 24 8 | 1 25 0 | 1 20 9 | 3 9 | 0 4 | 9 9 | 0 9 | 15 9 | 1 5 |
| 40 | 1 25 0 | 1 25 2 | 1 21 1 | 4 0 | 0 4 | 10 0 | 0 9 | 16 0 | 1 5 |
| 41 | 1 25 3 | 1 25 5 | 1 21 4 | 4 1 | 0 4 | 10 1 | 0 9 | 16 1 | 1 5 |
| 42 | 1 25 5 | 1 25 7 | 1 21 6 | 4 2 | 0 4 | 10 2 | 0 9 | 16 2 | 1 5 |
| 43 | 1 25 8 | 1 26 0 | 1 21 8 | 4 3 | 0 4 | 10 3 | 0 9 | 16 3 | 1 5 |
| 44 | 1 26 0 | 1 26 2 | 1 22 1 | 4 4 | 0 4 | 10 4 | 1 0 | 16 4 | 1 5 |
| 45 | 1 26 3 | 1 26 5 | 1 22 3 | 4 5 | 0 4 | 10 5 | 1 0 | 16 5 | 1 5 |
| 46 | 1 26 5 | 1 26 7 | 1 22 6 | 4 6 | 0 4 | 10 6 | 1 0 | 16 6 | 1 5 |
| 47 | 1 26 8 | 1 27 0 | 1 22 8 | 4 7 | 0 4 | 10 7 | 1 0 | 16 7 | 1 5 |
| 48 | 1 27 0 | 1 27 2 | 1 23 0 | 4 8 | 0 4 | 10 8 | 1 0 | 16 8 | 1 5 |
| 49 | 1 27 3 | 1 27 5 | 1 23 3 | 4 9 | 0 4 | 10 9 | 1 0 | 16 9 | 1 5 |
| 50 | 1 27 5 | 1 27 7 | 1 23 5 | 5 0 | 0 5 | 11 0 | 1 0 | 17 0 | 1 6 |
| 51 | 1 27 8 | 1 28 0 | 1 23 8 | 5 1 | 0 5 | 11 1 | 1 0 | 17 1 | 1 6 |
| 52 | 1 28 0 | 1 28 2 | 1 24 0 | 5 2 | 0 5 | 11 2 | 1 0 | 17 2 | 1 6 |
| 53 | 1 28 3 | 1 28 5 | 1 24 2 | 5 3 | 0 5 | 11 3 | 1 0 | 17 3 | 1 6 |
| 54 | 1 28 5 | 1 28 7 | 1 24 5 | 5 4 | 0 5 | 11 4 | 1 0 | 17 4 | 1 6 |
| 55 | 1 28 8 | 1 29 0 | 1 24 7 | 5 5 | 0 5 | 11 5 | 1 1 | 17 5 | 1 6 |
| 56 | 1 29 0 | 1 29 2 | 1 24 9 | 5 6 | 0 5 | 11 6 | 1 1 | 17 6 | 1 6 |
| 57 | 1 29 3 | 1 29 5 | 1 25 2 | 5 7 | 0 5 | 11 7 | 1 1 | 17 7 | 1 6 |
| 58 | 1 29 5 | 1 29 7 | 1 25 4 | 5 8 | 0 5 | 11 8 | 1 1 | 17 8 | 1 6 |
| 59 | 1 29 8 | 1 30 0 | 1 25 7 | 5 9 | 0 5 | 11 9 | 1 1 | 17 9 | 1 6 |
| 60 | 1 30 0 | 1 30 2 | 1 25 9 | 6 0 | 0 6 | 12 0 | 1 1 | 18 0 | 1 7 |

v

6^m

INCREMENTS AND CORRECTIONS

7^m

| 6 | SUN PLANETS | ARIES | MOON | ° or Corr ^a | | | 7 | SUN PLANETS | ARIES | MOON | ° or Corr ^a | | | | | | | | |
|----|----------------|--------|--------|------------------------|-----|------|-----|----------------|-------|------|------------------------|--------|--------|-----|-----|------|-----|------|-----|
| | | | | ° | ' | " | | | | | ° | ' | " | ° | ' | " | | | |
| 00 | 1 30-0 | 1 30-2 | 1 25-9 | 0-0 | 0-0 | 6-0 | 0-7 | 12-0 | 1-3 | 00 | 1 45-0 | 1 45-3 | 1 40-2 | 0-0 | 0-0 | 6-0 | 0-8 | 12-0 | 1-5 |
| 01 | 1 30-3 | 1 30-5 | 1 26-1 | 0-1 | 0-0 | 6-1 | 0-7 | 12-1 | 1-3 | 01 | 1 45-3 | 1 45-5 | 1 40-5 | 0-1 | 0-0 | 6-1 | 0-8 | 12-1 | 1-5 |
| 02 | 1 30-5 | 1 30-7 | 1 26-4 | 0-2 | 0-0 | 6-2 | 0-7 | 12-2 | 1-3 | 02 | 1 45-5 | 1 45-8 | 1 40-7 | 0-2 | 0-0 | 6-2 | 0-8 | 12-2 | 1-5 |
| 03 | 1 30-8 | 1 31-0 | 1 26-6 | 0-3 | 0-0 | 6-3 | 0-7 | 12-3 | 1-3 | 03 | 1 45-8 | 1 46-0 | 1 40-9 | 0-3 | 0-0 | 6-3 | 0-8 | 12-3 | 1-5 |
| 04 | 1 31-0 | 1 31-2 | 1 26-9 | 0-4 | 0-0 | 6-4 | 0-7 | 12-4 | 1-3 | 04 | 1 46-0 | 1 46-3 | 1 41-2 | 0-4 | 0-1 | 6-4 | 0-8 | 12-4 | 1-6 |
| 05 | 1 31-3 | 1 31-5 | 1 27-1 | 0-5 | 0-1 | 6-5 | 0-7 | 12-5 | 1-4 | 05 | 1 46-3 | 1 46-5 | 1 41-4 | 0-5 | 0-1 | 6-5 | 0-8 | 12-5 | 1-6 |
| 06 | 1 31-5 | 1 31-8 | 1 27-3 | 0-6 | 0-1 | 6-6 | 0-7 | 12-6 | 1-4 | 06 | 1 46-5 | 1 46-8 | 1 41-6 | 0-6 | 0-1 | 6-6 | 0-8 | 12-6 | 1-6 |
| 07 | 1 31-8 | 1 32-0 | 1 27-6 | 0-7 | 0-1 | 6-7 | 0-7 | 12-7 | 1-4 | 07 | 1 46-8 | 1 47-0 | 1 41-9 | 0-7 | 0-1 | 6-7 | 0-8 | 12-7 | 1-6 |
| 08 | 1 32-0 | 1 32-3 | 1 27-8 | 0-8 | 0-1 | 6-8 | 0-7 | 12-8 | 1-4 | 08 | 1 47-0 | 1 47-3 | 1 42-1 | 0-8 | 0-1 | 6-8 | 0-9 | 12-8 | 1-6 |
| 09 | 1 32-3 | 1 32-5 | 1 28-0 | 0-9 | 0-1 | 6-9 | 0-7 | 12-9 | 1-4 | 09 | 1 47-3 | 1 47-5 | 1 42-4 | 0-9 | 0-1 | 6-9 | 0-9 | 12-9 | 1-6 |
| 10 | 1 32-5 | 1 32-8 | 1 28-3 | 1-0 | 0-1 | 7-0 | 0-8 | 13-0 | 1-4 | 10 | 1 47-5 | 1 47-8 | 1 42-6 | 1-0 | 0-1 | 7-0 | 0-9 | 13-0 | 1-6 |
| 11 | 1 32-8 | 1 33-0 | 1 28-5 | 1-1 | 0-1 | 7-1 | 0-8 | 13-1 | 1-4 | 11 | 1 47-8 | 1 48-0 | 1 42-8 | 1-1 | 0-1 | 7-1 | 0-9 | 13-1 | 1-6 |
| 12 | 1 33-0 | 1 33-3 | 1 28-8 | 1-2 | 0-1 | 7-2 | 0-8 | 13-2 | 1-4 | 12 | 1 48-0 | 1 48-3 | 1 43-1 | 1-2 | 0-2 | 7-2 | 0-9 | 13-2 | 1-7 |
| 13 | 1 33-3 | 1 33-5 | 1 29-0 | 1-3 | 0-1 | 7-3 | 0-8 | 13-3 | 1-4 | 13 | 1 48-3 | 1 48-5 | 1 43-3 | 1-3 | 0-2 | 7-3 | 0-9 | 13-3 | 1-7 |
| 14 | 1 33-5 | 1 33-8 | 1 29-2 | 1-4 | 0-2 | 7-4 | 0-8 | 13-4 | 1-5 | 14 | 1 48-5 | 1 48-8 | 1 43-6 | 1-4 | 0-2 | 7-4 | 0-9 | 13-4 | 1-7 |
| 15 | 1 33-8 | 1 34-0 | 1 29-5 | 1-5 | 0-2 | 7-5 | 0-8 | 13-5 | 1-5 | 15 | 1 48-8 | 1 49-0 | 1 43-8 | 1-5 | 0-2 | 7-5 | 0-9 | 13-5 | 1-7 |
| 16 | 1 34-0 | 1 34-3 | 1 29-7 | 1-6 | 0-2 | 7-6 | 0-8 | 13-6 | 1-5 | 16 | 1 49-0 | 1 49-3 | 1 44-0 | 1-6 | 0-2 | 7-6 | 1-0 | 13-6 | 1-7 |
| 17 | 1 34-3 | 1 34-5 | 1 30-0 | 1-7 | 0-2 | 7-7 | 0-8 | 13-7 | 1-5 | 17 | 1 49-3 | 1 49-5 | 1 44-3 | 1-7 | 0-2 | 7-7 | 1-0 | 13-7 | 1-7 |
| 18 | 1 34-5 | 1 34-8 | 1 30-2 | 1-8 | 0-2 | 7-8 | 0-8 | 13-8 | 1-5 | 18 | 1 49-5 | 1 49-8 | 1 44-5 | 1-8 | 0-2 | 7-8 | 1-0 | 13-8 | 1-7 |
| 19 | 1 34-8 | 1 35-0 | 1 30-4 | 1-9 | 0-2 | 7-9 | 0-9 | 13-9 | 1-5 | 19 | 1 49-8 | 1 50-1 | 1 44-8 | 1-9 | 0-2 | 7-9 | 1-0 | 13-9 | 1-7 |
| 20 | 1 35-0 | 1 35-3 | 1 30-7 | 2-0 | 0-2 | 8-0 | 0-9 | 14-0 | 1-5 | 20 | 1 50-0 | 1 50-3 | 1 45-0 | 2-0 | 0-3 | 8-0 | 1-0 | 14-0 | 1-8 |
| 21 | 1 35-3 | 1 35-5 | 1 30-9 | 2-1 | 0-2 | 8-1 | 0-9 | 14-1 | 1-5 | 21 | 1 50-3 | 1 50-6 | 1 45-2 | 2-1 | 0-3 | 8-1 | 1-0 | 14-1 | 1-8 |
| 22 | 1 35-5 | 1 35-8 | 1 31-1 | 2-2 | 0-2 | 8-2 | 0-9 | 14-2 | 1-5 | 22 | 1 50-5 | 1 50-8 | 1 45-5 | 2-2 | 0-3 | 8-2 | 1-0 | 14-2 | 1-8 |
| 23 | 1 35-8 | 1 36-0 | 1 31-4 | 2-3 | 0-2 | 8-3 | 0-9 | 14-3 | 1-5 | 23 | 1 50-8 | 1 51-1 | 1 45-7 | 2-3 | 0-3 | 8-3 | 1-0 | 14-3 | 1-8 |
| 24 | 1 36-0 | 1 36-3 | 1 31-6 | 2-4 | 0-3 | 8-4 | 0-9 | 14-4 | 1-6 | 24 | 1 51-0 | 1 51-3 | 1 45-9 | 2-4 | 0-3 | 8-4 | 1-1 | 14-4 | 1-8 |
| 25 | 1 36-3 | 1 36-5 | 1 31-9 | 2-5 | 0-3 | 8-5 | 0-9 | 14-5 | 1-6 | 25 | 1 51-3 | 1 51-6 | 1 46-2 | 2-5 | 0-3 | 8-5 | 1-1 | 14-5 | 1-8 |
| 26 | 1 36-5 | 1 36-8 | 1 32-1 | 2-6 | 0-3 | 8-6 | 0-9 | 14-6 | 1-6 | 26 | 1 51-5 | 1 51-8 | 1 46-4 | 2-6 | 0-3 | 8-6 | 1-1 | 14-6 | 1-8 |
| 27 | 1 36-8 | 1 37-0 | 1 32-3 | 2-7 | 0-3 | 8-7 | 0-9 | 14-7 | 1-6 | 27 | 1 51-8 | 1 52-1 | 1 46-7 | 2-7 | 0-3 | 8-7 | 1-1 | 14-7 | 1-8 |
| 28 | 1 37-0 | 1 37-3 | 1 32-6 | 2-8 | 0-3 | 8-8 | 1-0 | 14-8 | 1-6 | 28 | 1 52-0 | 1 52-3 | 1 46-9 | 2-8 | 0-4 | 8-8 | 1-1 | 14-8 | 1-9 |
| 29 | 1 37-3 | 1 37-5 | 1 32-8 | 2-9 | 0-3 | 8-9 | 1-0 | 14-9 | 1-6 | 29 | 1 52-3 | 1 52-6 | 1 47-1 | 2-9 | 0-4 | 8-9 | 1-1 | 14-9 | 1-9 |
| 30 | 1 37-5 | 1 37-8 | 1 33-1 | 3-0 | 0-3 | 9-0 | 1-0 | 15-0 | 1-6 | 30 | 1 52-5 | 1 52-8 | 1 47-4 | 3-0 | 0-4 | 9-0 | 1-1 | 15-0 | 1-9 |
| 31 | 1 37-8 | 1 38-0 | 1 33-3 | 3-1 | 0-3 | 9-1 | 1-0 | 15-1 | 1-6 | 31 | 1 52-8 | 1 53-1 | 1 47-6 | 3-1 | 0-4 | 9-1 | 1-1 | 15-1 | 1-9 |
| 32 | 1 38-0 | 1 38-3 | 1 33-5 | 3-2 | 0-3 | 9-2 | 1-0 | 15-2 | 1-6 | 32 | 1 53-0 | 1 53-3 | 1 47-9 | 3-2 | 0-4 | 9-2 | 1-2 | 15-2 | 1-9 |
| 33 | 1 38-3 | 1 38-5 | 1 33-8 | 3-3 | 0-4 | 9-3 | 1-0 | 15-3 | 1-7 | 33 | 1 53-3 | 1 53-6 | 1 48-1 | 3-3 | 0-4 | 9-3 | 1-2 | 15-3 | 1-9 |
| 34 | 1 38-5 | 1 38-8 | 1 34-0 | 3-4 | 0-4 | 9-4 | 1-0 | 15-4 | 1-7 | 34 | 1 53-5 | 1 53-8 | 1 48-3 | 3-4 | 0-4 | 9-4 | 1-2 | 15-4 | 1-9 |
| 35 | 1 38-8 | 1 39-0 | 1 34-3 | 3-5 | 0-4 | 9-5 | 1-0 | 15-5 | 1-7 | 35 | 1 53-8 | 1 54-1 | 1 48-6 | 3-5 | 0-4 | 9-5 | 1-2 | 15-5 | 1-9 |
| 36 | 1 39-0 | 1 39-3 | 1 34-5 | 3-6 | 0-4 | 9-6 | 1-0 | 15-6 | 1-7 | 36 | 1 54-0 | 1 54-3 | 1 48-8 | 3-6 | 0-5 | 9-6 | 1-2 | 15-6 | 2-0 |
| 37 | 1 39-3 | 1 39-5 | 1 34-7 | 3-7 | 0-4 | 9-7 | 1-1 | 15-7 | 1-7 | 37 | 1 54-3 | 1 54-6 | 1 49-0 | 3-7 | 0-5 | 9-7 | 1-2 | 15-7 | 2-0 |
| 38 | 1 39-5 | 1 39-8 | 1 35-0 | 3-8 | 0-4 | 9-8 | 1-1 | 15-8 | 1-7 | 38 | 1 54-5 | 1 54-8 | 1 49-3 | 3-8 | 0-5 | 9-8 | 1-2 | 15-8 | 2-0 |
| 39 | 1 39-8 | 1 40-0 | 1 35-2 | 3-9 | 0-4 | 9-9 | 1-1 | 15-9 | 1-7 | 39 | 1 54-8 | 1 55-1 | 1 49-5 | 3-9 | 0-5 | 9-9 | 1-2 | 15-9 | 2-0 |
| 40 | 1 40-0 | 1 40-3 | 1 35-4 | 4-0 | 0-4 | 10-0 | 1-1 | 16-0 | 1-7 | 40 | 1 55-0 | 1 55-3 | 1 49-8 | 4-0 | 0-5 | 10-0 | 1-3 | 16-0 | 2-0 |
| 41 | 1 40-3 | 1 40-5 | 1 35-7 | 4-1 | 0-4 | 10-1 | 1-1 | 16-1 | 1-7 | 41 | 1 55-3 | 1 55-6 | 1 50-0 | 4-1 | 0-5 | 10-1 | 1-3 | 16-1 | 2-0 |
| 42 | 1 40-5 | 1 40-8 | 1 35-9 | 4-2 | 0-5 | 10-2 | 1-1 | 16-2 | 1-8 | 42 | 1 55-5 | 1 55-8 | 1 50-2 | 4-2 | 0-5 | 10-2 | 1-3 | 16-2 | 2-0 |
| 43 | 1 40-8 | 1 41-0 | 1 36-2 | 4-3 | 0-5 | 10-3 | 1-1 | 16-3 | 1-8 | 43 | 1 55-8 | 1 56-1 | 1 50-5 | 4-3 | 0-5 | 10-3 | 1-3 | 16-3 | 2-0 |
| 44 | 1 41-0 | 1 41-3 | 1 36-4 | 4-4 | 0-5 | 10-4 | 1-1 | 16-4 | 1-8 | 44 | 1 56-0 | 1 56-3 | 1 50-7 | 4-4 | 0-6 | 10-4 | 1-3 | 16-4 | 2-1 |
| 45 | 1 41-3 | 1 41-5 | 1 36-6 | 4-5 | 0-5 | 10-5 | 1-1 | 16-5 | 1-8 | 45 | 1 56-3 | 1 56-6 | 1 51-0 | 4-5 | 0-6 | 10-5 | 1-3 | 16-5 | 2-1 |
| 46 | 1 41-5 | 1 41-8 | 1 36-9 | 4-6 | 0-5 | 10-6 | 1-1 | 16-6 | 1-8 | 46 | 1 56-5 | 1 56-8 | 1 51-2 | 4-6 | 0-6 | 10-6 | 1-3 | 16-6 | 2-1 |
| 47 | 1 41-8 | 1 42-0 | 1 37-1 | 4-7 | 0-5 | 10-7 | 1-2 | 16-7 | 1-8 | 47 | 1 56-8 | 1 57-1 | 1 51-4 | 4-7 | 0-6 | 10-7 | 1-3 | 16-7 | 2-1 |
| 48 | 1 42-0 | 1 42-3 | 1 37-4 | 4-8 | 0-5 | 10-8 | 1-2 | 16-8 | 1-8 | 48 | 1 57-0 | 1 57-3 | 1 51-7 | 4-8 | 0-6 | 10-8 | 1-4 | 16-8 | 2-1 |
| 49 | 1 42-3 | 1 42-5 | 1 37-6 | 4-9 | 0-5 | 10-9 | 1-2 | 16-9 | 1-8 | 49 | 1 57-3 | 1 57-6 | 1 51-9 | 4-9 | 0-6 | 10-9 | 1-4 | 16-9 | 2-1 |
| 50 | 1 42-5 | 1 42-8 | 1 37-8 | 5-0 | 0-5 | 11-0 | 1-2 | 17-0 | 1-8 | 50 | 1 57-5 | 1 57-8 | 1 52-1 | 5-0 | 0-6 | 11-0 | 1-4 | 17-0 | 2-1 |
| 51 | 1 42-8 | 1 43-0 | 1 38-1 | 5-1 | 0-6 | 11-1 | 1-2 | 17-1 | 1-9 | 51 | 1 57-8 | 1 58-1 | 1 52-4 | 5-1 | 0-6 | 11-1 | 1-4 | 17-1 | 2-1 |
| 52 | 1 43-0 | 1 43-3 | 1 38-3 | 5-2 | 0-6 | 11-2 | 1-2 | 17-2 | 1-9 | 52 | 1 58-0 | 1 58-3 | 1 52-6 | 5-2 | 0-7 | 11-2 | 1-4 | 17-2 | 2-2 |
| 53 | 1 43-3 | 1 43-5 | 1 38-5 | 5-3 | 0-6 | 11-3 | 1-2 | 17-3 | 1-9 | 53 | 1 58-3 | 1 58-6 | 1 52-9 | 5-3 | 0-7 | 11-3 | 1-4 | 17-3 | 2-2 |
| 54 | 1 43-5 | 1 43-8 | 1 38-8 | 5-4 | 0-6 | 11-4 | 1-2 | 17-4 | 1-9 | 54 | 1 58-5 | 1 58-8 | 1 53-1 | 5-4 | 0-7 | 11-4 | 1-4 | 17-4 | 2-2 |
| 55 | 1 43-8 | 1 44-0 | 1 39-0 | 5-5 | 0-6 | 11-5 | 1-2 | 17-5 | 1-9 | 55 | 1 58-8 | 1 59-1 | 1 53-3 | 5-5 | 0-7 | 11-5 | 1-4 | 17-5 | 2-2 |
| 56 | 1 44-0 | 1 44-3 | 1 39-3 | 5-6 | 0-6 | 11-6 | 1-3 | 17-6 | 1-9 | 56 | 1 59-0 | 1 59-3 | 1 53-6 | 5-6 | 0-7 | 11-6 | 1-5 | 17-6 | 2-2 |
| 57 | 1 44-3 | 1 44-5 | 1 39-5 | 5-7 | 0-6 | 11-7 | 1-3 | 17-7 | 1-9 | 57 | 1 59-3 | 1 59-6 | 1 53-8 | 5-7 | 0-7 | 11-7 | 1-5 | 17-7 | 2-2 |
| 58 | 1 44-5 | 1 44-8 | 1 39-7 | 5-8 | 0-6 | 11-8 | 1-3 | 17-8 | 1-9 | 58 | 1 59-5 | 1 59-8 | 1 54-1 | 5-8 | 0-7 | 11-8 | 1-5 | 17-8 | 2-2 |
| 59 | 1 44-8 | 1 45-0 | 1 40-0 | 5-9 | 0-6 | 11-9 | 1-3 | 17-9 | 1-9 | 59 | 1 59-8 | 2 00-1 | 1 54-3 | 5-9 | 0-7 | 11-9 | 1-5 | 17-9 | 2-2 |
| 60 | 1 45-0 | 1 45-3 | 1 40-2 | 6-0 | 0-7 | 12-0 | 1-3 | 18-0 | 2-0 | 60 | 2 00-0 | 2 00-3 | 1 54-5 | 6-0 | 0-8 | 12-0 | 1-5 | 18-0 | 2-3 |

8^m

INCREMENTS AND CORRECTIONS

9^m

| 8 | SUN PLANETS | ARIES | MOON | v or Corr | | | |
|----|-------------|--------|--------|-----------|-----|------|-----|
| | | | | d | d | d | |
| 00 | 2 00-0 | 2 00-3 | 1 54-5 | 0-0 | 0-0 | 12-0 | 1-7 |
| 01 | 2 00-3 | 2 00-6 | 1 54-8 | 0-1 | 0-0 | 12-1 | 1-7 |
| 02 | 2 00-5 | 2 00-8 | 1 55-0 | 0-2 | 0-0 | 12-2 | 1-7 |
| 03 | 2 00-8 | 2 01-1 | 1 55-2 | 0-3 | 0-0 | 12-3 | 1-7 |
| 04 | 2 01-0 | 2 01-3 | 1 55-5 | 0-4 | 0-1 | 12-4 | 1-8 |
| 05 | 2 01-3 | 2 01-6 | 1 55-7 | 0-5 | 0-1 | 12-5 | 1-8 |
| 06 | 2 01-5 | 2 01-8 | 1 56-0 | 0-6 | 0-1 | 12-6 | 1-8 |
| 07 | 2 01-8 | 2 02-1 | 1 56-2 | 0-7 | 0-1 | 12-7 | 1-8 |
| 08 | 2 02-0 | 2 02-3 | 1 56-4 | 0-8 | 0-1 | 12-8 | 1-8 |
| 09 | 2 02-3 | 2 02-6 | 1 56-7 | 0-9 | 0-1 | 12-9 | 1-8 |
| 10 | 2 02-5 | 2 02-8 | 1 56-9 | 1-0 | 0-1 | 13-0 | 1-8 |
| 11 | 2 02-8 | 2 03-1 | 1 57-2 | 1-1 | 0-2 | 13-1 | 1-9 |
| 12 | 2 03-0 | 2 03-3 | 1 57-4 | 1-2 | 0-2 | 13-2 | 1-9 |
| 13 | 2 03-3 | 2 03-6 | 1 57-6 | 1-3 | 0-2 | 13-3 | 1-9 |
| 14 | 2 03-5 | 2 03-8 | 1 57-9 | 1-4 | 0-2 | 13-4 | 1-9 |
| 15 | 2 03-8 | 2 04-1 | 1 58-1 | 1-5 | 0-2 | 13-5 | 1-9 |
| 16 | 2 04-0 | 2 04-3 | 1 58-4 | 1-6 | 0-2 | 13-6 | 1-9 |
| 17 | 2 04-3 | 2 04-6 | 1 58-6 | 1-7 | 0-2 | 13-7 | 1-9 |
| 18 | 2 04-5 | 2 04-8 | 1 58-8 | 1-8 | 0-3 | 13-8 | 2-0 |
| 19 | 2 04-8 | 2 05-1 | 1 59-1 | 1-9 | 0-3 | 13-9 | 2-0 |
| 20 | 2 05-0 | 2 05-3 | 1 59-3 | 2-0 | 0-3 | 14-0 | 2-0 |
| 21 | 2 05-3 | 2 05-6 | 1 59-5 | 2-1 | 0-3 | 14-1 | 2-0 |
| 22 | 2 05-5 | 2 05-8 | 1 59-8 | 2-2 | 0-3 | 14-2 | 2-0 |
| 23 | 2 05-8 | 2 06-1 | 2 00-0 | 2-3 | 0-3 | 14-3 | 2-0 |
| 24 | 2 06-0 | 2 06-3 | 2 00-3 | 2-4 | 0-3 | 14-4 | 2-0 |
| 25 | 2 06-3 | 2 06-6 | 2 00-5 | 2-5 | 0-4 | 14-5 | 2-1 |
| 26 | 2 06-5 | 2 06-8 | 2 00-7 | 2-6 | 0-4 | 14-6 | 2-1 |
| 27 | 2 06-8 | 2 07-1 | 2 01-0 | 2-7 | 0-4 | 14-7 | 2-1 |
| 28 | 2 07-0 | 2 07-3 | 2 01-2 | 2-8 | 0-4 | 14-8 | 2-1 |
| 29 | 2 07-3 | 2 07-6 | 2 01-5 | 2-9 | 0-4 | 14-9 | 2-1 |
| 30 | 2 07-5 | 2 07-8 | 2 01-7 | 3-0 | 0-4 | 15-0 | 2-1 |
| 31 | 2 07-8 | 2 08-1 | 2 01-9 | 3-1 | 0-4 | 15-1 | 2-1 |
| 32 | 2 08-0 | 2 08-4 | 2 02-2 | 3-2 | 0-5 | 15-2 | 2-2 |
| 33 | 2 08-3 | 2 08-6 | 2 02-4 | 3-3 | 0-5 | 15-3 | 2-2 |
| 34 | 2 08-5 | 2 08-9 | 2 02-6 | 3-4 | 0-5 | 15-4 | 2-2 |
| 35 | 2 08-8 | 2 09-1 | 2 02-9 | 3-5 | 0-5 | 15-5 | 2-2 |
| 36 | 2 09-0 | 2 09-4 | 2 03-1 | 3-6 | 0-5 | 15-6 | 2-2 |
| 37 | 2 09-3 | 2 09-6 | 2 03-4 | 3-7 | 0-5 | 15-7 | 2-2 |
| 38 | 2 09-5 | 2 09-9 | 2 03-6 | 3-8 | 0-5 | 15-8 | 2-2 |
| 39 | 2 09-8 | 2 10-1 | 2 03-8 | 3-9 | 0-6 | 15-9 | 2-3 |
| 40 | 2 10-0 | 2 10-4 | 2 04-1 | 4-0 | 0-6 | 16-0 | 2-3 |
| 41 | 2 10-3 | 2 10-6 | 2 04-3 | 4-1 | 0-6 | 16-1 | 2-3 |
| 42 | 2 10-5 | 2 10-9 | 2 04-6 | 4-2 | 0-6 | 16-2 | 2-3 |
| 43 | 2 10-8 | 2 11-1 | 2 04-8 | 4-3 | 0-6 | 16-3 | 2-3 |
| 44 | 2 11-0 | 2 11-4 | 2 05-0 | 4-4 | 0-6 | 16-4 | 2-3 |
| 45 | 2 11-3 | 2 11-6 | 2 05-3 | 4-5 | 0-6 | 16-5 | 2-3 |
| 46 | 2 11-5 | 2 11-9 | 2 05-5 | 4-6 | 0-7 | 16-6 | 2-4 |
| 47 | 2 11-8 | 2 12-1 | 2 05-7 | 4-7 | 0-7 | 16-7 | 2-4 |
| 48 | 2 12-0 | 2 12-4 | 2 06-0 | 4-8 | 0-7 | 16-8 | 2-4 |
| 49 | 2 12-3 | 2 12-6 | 2 06-2 | 4-9 | 0-7 | 16-9 | 2-4 |
| 50 | 2 12-5 | 2 12-9 | 2 06-5 | 5-0 | 0-7 | 17-0 | 2-4 |
| 51 | 2 12-8 | 2 13-1 | 2 06-7 | 5-1 | 0-7 | 17-1 | 2-4 |
| 52 | 2 13-0 | 2 13-4 | 2 06-9 | 5-2 | 0-7 | 17-2 | 2-4 |
| 53 | 2 13-3 | 2 13-6 | 2 07-2 | 5-3 | 0-8 | 17-3 | 2-5 |
| 54 | 2 13-5 | 2 13-9 | 2 07-4 | 5-4 | 0-8 | 17-4 | 2-5 |
| 55 | 2 13-8 | 2 14-1 | 2 07-7 | 5-5 | 0-8 | 17-5 | 2-5 |
| 56 | 2 14-0 | 2 14-4 | 2 07-9 | 5-6 | 0-8 | 17-6 | 2-5 |
| 57 | 2 14-3 | 2 14-6 | 2 08-1 | 5-7 | 0-8 | 17-7 | 2-5 |
| 58 | 2 14-5 | 2 14-9 | 2 08-4 | 5-8 | 0-8 | 17-8 | 2-5 |
| 59 | 2 14-8 | 2 15-1 | 2 08-6 | 5-9 | 0-8 | 17-9 | 2-5 |
| 60 | 2 15-0 | 2 15-4 | 2 08-9 | 6-0 | 0-9 | 18-0 | 2-6 |

| 9 | SUN PLANETS | ARIES | MOON | v or Corr | | | | | |
|----|-------------|--------|--------|-----------|-----|------|-----|------|-----|
| | | | | d | d | d | | | |
| 00 | 2 15-0 | 2 15-4 | 2 08-9 | 0-0 | 0-0 | 6-0 | 1-0 | 12-0 | 1-9 |
| 01 | 2 15-3 | 2 15-6 | 2 09-1 | 0-1 | 0-0 | 6-1 | 1-0 | 12-1 | 1-9 |
| 02 | 2 15-5 | 2 15-9 | 2 09-3 | 0-2 | 0-0 | 6-2 | 1-0 | 12-2 | 1-9 |
| 03 | 2 15-8 | 2 16-1 | 2 09-6 | 0-3 | 0-0 | 6-3 | 1-0 | 12-3 | 1-9 |
| 04 | 2 16-0 | 2 16-4 | 2 09-8 | 0-4 | 0-1 | 6-4 | 1-0 | 12-4 | 2-0 |
| 05 | 2 16-3 | 2 16-6 | 2 10-0 | 0-5 | 0-1 | 6-5 | 1-0 | 12-5 | 2-0 |
| 06 | 2 16-5 | 2 16-9 | 2 10-3 | 0-6 | 0-1 | 6-6 | 1-0 | 12-6 | 2-0 |
| 07 | 2 16-8 | 2 17-1 | 2 10-5 | 0-7 | 0-1 | 6-7 | 1-1 | 12-7 | 2-0 |
| 08 | 2 17-0 | 2 17-4 | 2 10-8 | 0-8 | 0-1 | 6-8 | 1-1 | 12-8 | 2-0 |
| 09 | 2 17-3 | 2 17-6 | 2 11-0 | 0-9 | 0-1 | 6-9 | 1-1 | 12-9 | 2-0 |
| 10 | 2 17-5 | 2 17-9 | 2 11-2 | 1-0 | 0-2 | 7-0 | 1-1 | 13-0 | 2-1 |
| 11 | 2 17-8 | 2 18-1 | 2 11-5 | 1-1 | 0-2 | 7-1 | 1-1 | 13-1 | 2-1 |
| 12 | 2 18-0 | 2 18-4 | 2 11-7 | 1-2 | 0-2 | 7-2 | 1-1 | 13-2 | 2-1 |
| 13 | 2 18-3 | 2 18-6 | 2 12-0 | 1-3 | 0-2 | 7-3 | 1-2 | 13-3 | 2-1 |
| 14 | 2 18-5 | 2 18-9 | 2 12-2 | 1-4 | 0-2 | 7-4 | 1-2 | 13-4 | 2-1 |
| 15 | 2 18-8 | 2 19-1 | 2 12-4 | 1-5 | 0-2 | 7-5 | 1-2 | 13-5 | 2-1 |
| 16 | 2 19-0 | 2 19-4 | 2 12-7 | 1-6 | 0-3 | 7-6 | 1-2 | 13-6 | 2-2 |
| 17 | 2 19-3 | 2 19-6 | 2 12-9 | 1-7 | 0-3 | 7-7 | 1-2 | 13-7 | 2-2 |
| 18 | 2 19-5 | 2 19-9 | 2 13-1 | 1-8 | 0-3 | 7-8 | 1-2 | 13-8 | 2-2 |
| 19 | 2 19-8 | 2 20-1 | 2 13-4 | 1-9 | 0-3 | 7-9 | 1-3 | 13-9 | 2-2 |
| 20 | 2 20-0 | 2 20-4 | 2 13-6 | 2-0 | 0-3 | 8-0 | 1-3 | 14-0 | 2-2 |
| 21 | 2 20-3 | 2 20-6 | 2 13-9 | 2-1 | 0-3 | 8-1 | 1-3 | 14-1 | 2-2 |
| 22 | 2 20-5 | 2 20-9 | 2 14-1 | 2-2 | 0-3 | 8-2 | 1-3 | 14-2 | 2-2 |
| 23 | 2 20-8 | 2 21-1 | 2 14-3 | 2-3 | 0-4 | 8-3 | 1-3 | 14-3 | 2-3 |
| 24 | 2 21-0 | 2 21-4 | 2 14-6 | 2-4 | 0-4 | 8-4 | 1-3 | 14-4 | 2-3 |
| 25 | 2 21-3 | 2 21-6 | 2 14-8 | 2-5 | 0-4 | 8-5 | 1-3 | 14-5 | 2-3 |
| 26 | 2 21-5 | 2 21-9 | 2 15-1 | 2-6 | 0-4 | 8-6 | 1-4 | 14-6 | 2-3 |
| 27 | 2 21-8 | 2 22-1 | 2 15-3 | 2-7 | 0-4 | 8-7 | 1-4 | 14-7 | 2-3 |
| 28 | 2 22-0 | 2 22-4 | 2 15-5 | 2-8 | 0-4 | 8-8 | 1-4 | 14-8 | 2-3 |
| 29 | 2 22-3 | 2 22-6 | 2 15-8 | 2-9 | 0-5 | 8-9 | 1-4 | 14-9 | 2-4 |
| 30 | 2 22-5 | 2 22-9 | 2 16-0 | 3-0 | 0-5 | 9-0 | 1-4 | 15-0 | 2-4 |
| 31 | 2 22-8 | 2 23-1 | 2 16-2 | 3-1 | 0-5 | 9-1 | 1-4 | 15-1 | 2-4 |
| 32 | 2 23-0 | 2 23-4 | 2 16-5 | 3-2 | 0-5 | 9-2 | 1-5 | 15-2 | 2-4 |
| 33 | 2 23-3 | 2 23-6 | 2 16-7 | 3-3 | 0-5 | 9-3 | 1-5 | 15-3 | 2-4 |
| 34 | 2 23-5 | 2 23-9 | 2 17-0 | 3-4 | 0-5 | 9-4 | 1-5 | 15-4 | 2-4 |
| 35 | 2 23-8 | 2 24-1 | 2 17-2 | 3-5 | 0-6 | 9-5 | 1-5 | 15-5 | 2-5 |
| 36 | 2 24-0 | 2 24-4 | 2 17-4 | 3-6 | 0-6 | 9-6 | 1-5 | 15-6 | 2-5 |
| 37 | 2 24-3 | 2 24-6 | 2 17-7 | 3-7 | 0-6 | 9-7 | 1-5 | 15-7 | 2-5 |
| 38 | 2 24-5 | 2 24-9 | 2 17-9 | 3-8 | 0-6 | 9-8 | 1-6 | 15-8 | 2-5 |
| 39 | 2 24-8 | 2 25-1 | 2 18-2 | 3-9 | 0-6 | 9-9 | 1-6 | 15-9 | 2-5 |
| 40 | 2 25-0 | 2 25-4 | 2 18-4 | 4-0 | 0-6 | 10-0 | 1-6 | 16-0 | 2-5 |
| 41 | 2 25-3 | 2 25-6 | 2 18-6 | 4-1 | 0-6 | 10-1 | 1-6 | 16-1 | 2-5 |
| 42 | 2 25-5 | 2 25-9 | 2 18-9 | 4-2 | 0-7 | 10-2 | 1-6 | 16-2 | 2-6 |
| 43 | 2 25-8 | 2 26-1 | 2 19-1 | 4-3 | 0-7 | 10-3 | 1-6 | 16-3 | 2-6 |
| 44 | 2 26-0 | 2 26-4 | 2 19-3 | 4-4 | 0-7 | 10-4 | 1-6 | 16-4 | 2-6 |
| 45 | 2 26-3 | 2 26-7 | 2 19-6 | 4-5 | 0-7 | 10-5 | 1-7 | 16-5 | 2-6 |
| 46 | 2 26-5 | 2 26-9 | 2 19-8 | 4-6 | 0-7 | 10-6 | 1-7 | 16-6 | 2-6 |
| 47 | 2 26-8 | 2 27-2 | 2 20-1 | 4-7 | 0-7 | 10-7 | 1-7 | 16-7 | 2-6 |
| 48 | 2 27-0 | 2 27-4 | 2 20-3 | 4-8 | 0-8 | 10-8 | 1-7 | 16-8 | 2-7 |
| 49 | 2 27-3 | 2 27-7 | 2 20-5 | 4-9 | 0-8 | 10-9 | 1-7 | 16-9 | 2-7 |
| 50 | 2 27-5 | 2 27-9 | 2 20-8 | 5-0 | 0-8 | 11-0 | 1-7 | 17-0 | 2-7 |
| 51 | 2 27-8 | 2 28-2 | 2 21-0 | 5-1 | 0-8 | 11-1 | 1-8 | 17-1 | 2-7 |
| 52 | 2 28-0 | 2 28-4 | 2 21-3 | 5-2 | 0-8 | 11-2 | 1-8 | 17-2 | 2-7 |
| 53 | 2 28-3 | 2 28-7 | 2 21-5 | 5-3 | 0-8 | 11-3 | 1-8 | 17-3 | 2-7 |
| 54 | 2 28-5 | 2 28-9 | 2 21-7 | 5-4 | 0-9 | 11-4 | 1-8 | 17-4 | 2-8 |
| 55 | 2 28-8 | 2 29-2 | 2 22-0 | 5-5 | 0-9 | 11-5 | 1-8 | 17-5 | 2-8 |
| 56 | 2 29-0 | 2 29-4 | 2 22-2 | 5-6 | 0-9 | 11-6 | 1-8 | 17-6 | 2-8 |
| 57 | 2 29-3 | 2 29-7 | 2 22-5 | 5-7 | 0-9 | 11-7 | 1-9 | 17-7 | 2-8 |
| 58 | 2 29-5 | 2 29-9 | 2 22-7 | 5-8 | 0-9 | 11-8 | 1-9 | 17-8 | 2-8 |
| 59 | 2 29-8 | 2 30-2 | 2 22-9 | 5-9 | 0-9 | 11-9 | 1-9 | 17-9 | 2-8 |
| 60 | 2 30-0 | 2 30-4 | 2 23-2 | 6-0 | 1-0 | 12-0 | 1-9 | 18-0 | 2-9 |



10^m

INCREMENTS AND CORRECTIONS

11^m

| 10 | SUN PLANETS | ARIES | MOON | v or Corr ^d | | v or Corr ^d | | v or Corr ^d | |
|----|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|
| | | | | d | ' | d | ' | d | ' |
| 00 | 2 30-0 | 2 30-4 | 2 23-2 | 0-0 | 0-0 | 6-0 | 1-1 | 12-0 | 2-1 |
| 01 | 2 30-3 | 2 30-7 | 2 23-4 | 0-1 | 0-0 | 6-1 | 1-1 | 12-1 | 2-1 |
| 02 | 2 30-5 | 2 30-9 | 2 23-6 | 0-2 | 0-0 | 6-2 | 1-1 | 12-2 | 2-1 |
| 03 | 2 30-8 | 2 31-2 | 2 23-9 | 0-3 | 0-1 | 6-3 | 1-1 | 12-3 | 2-2 |
| 04 | 2 31-0 | 2 31-4 | 2 24-1 | 0-4 | 0-1 | 6-4 | 1-1 | 12-4 | 2-2 |
| 05 | 2 31-3 | 2 31-7 | 2 24-4 | 0-5 | 0-1 | 6-5 | 1-1 | 12-5 | 2-2 |
| 06 | 2 31-5 | 2 31-9 | 2 24-6 | 0-6 | 0-1 | 6-6 | 1-2 | 12-6 | 2-2 |
| 07 | 2 31-8 | 2 32-2 | 2 24-8 | 0-7 | 0-1 | 6-7 | 1-2 | 12-7 | 2-2 |
| 08 | 2 32-0 | 2 32-4 | 2 25-1 | 0-8 | 0-1 | 6-8 | 1-2 | 12-8 | 2-2 |
| 09 | 2 32-3 | 2 32-7 | 2 25-3 | 0-9 | 0-2 | 6-9 | 1-2 | 12-9 | 2-3 |
| 10 | 2 32-5 | 2 32-9 | 2 25-6 | 1-0 | 0-2 | 7-0 | 1-2 | 13-0 | 2-3 |
| 11 | 2 32-8 | 2 33-2 | 2 25-8 | 1-1 | 0-2 | 7-1 | 1-2 | 13-1 | 2-3 |
| 12 | 2 33-0 | 2 33-4 | 2 26-0 | 1-2 | 0-2 | 7-2 | 1-3 | 13-2 | 2-3 |
| 13 | 2 33-3 | 2 33-7 | 2 26-3 | 1-3 | 0-2 | 7-3 | 1-3 | 13-3 | 2-3 |
| 14 | 2 33-5 | 2 33-9 | 2 26-5 | 1-4 | 0-2 | 7-4 | 1-3 | 13-4 | 2-3 |
| 15 | 2 33-8 | 2 34-2 | 2 26-7 | 1-5 | 0-3 | 7-5 | 1-3 | 13-5 | 2-4 |
| 16 | 2 34-0 | 2 34-4 | 2 27-0 | 1-6 | 0-3 | 7-6 | 1-3 | 13-6 | 2-4 |
| 17 | 2 34-3 | 2 34-7 | 2 27-2 | 1-7 | 0-3 | 7-7 | 1-3 | 13-7 | 2-4 |
| 18 | 2 34-5 | 2 34-9 | 2 27-5 | 1-8 | 0-3 | 7-8 | 1-4 | 13-8 | 2-4 |
| 19 | 2 34-8 | 2 35-2 | 2 27-7 | 1-9 | 0-3 | 7-9 | 1-4 | 13-9 | 2-4 |
| 20 | 2 35-0 | 2 35-4 | 2 27-9 | 2-0 | 0-4 | 8-0 | 1-4 | 14-0 | 2-5 |
| 21 | 2 35-3 | 2 35-7 | 2 28-2 | 2-1 | 0-4 | 8-1 | 1-4 | 14-1 | 2-5 |
| 22 | 2 35-5 | 2 35-9 | 2 28-4 | 2-2 | 0-4 | 8-2 | 1-4 | 14-2 | 2-5 |
| 23 | 2 35-8 | 2 36-2 | 2 28-7 | 2-3 | 0-4 | 8-3 | 1-5 | 14-3 | 2-5 |
| 24 | 2 36-0 | 2 36-4 | 2 28-9 | 2-4 | 0-4 | 8-4 | 1-5 | 14-4 | 2-5 |
| 25 | 2 36-3 | 2 36-7 | 2 29-1 | 2-5 | 0-4 | 8-5 | 1-5 | 14-5 | 2-5 |
| 26 | 2 36-5 | 2 36-9 | 2 29-4 | 2-6 | 0-5 | 8-6 | 1-5 | 14-6 | 2-6 |
| 27 | 2 36-8 | 2 37-2 | 2 29-6 | 2-7 | 0-5 | 8-7 | 1-5 | 14-7 | 2-6 |
| 28 | 2 37-0 | 2 37-4 | 2 29-8 | 2-8 | 0-5 | 8-8 | 1-5 | 14-8 | 2-6 |
| 29 | 2 37-3 | 2 37-7 | 2 30-1 | 2-9 | 0-5 | 8-9 | 1-6 | 14-9 | 2-6 |
| 30 | 2 37-5 | 2 37-9 | 2 30-3 | 3-0 | 0-5 | 9-0 | 1-6 | 15-0 | 2-6 |
| 31 | 2 37-8 | 2 38-2 | 2 30-6 | 3-1 | 0-5 | 9-1 | 1-6 | 15-1 | 2-6 |
| 32 | 2 38-0 | 2 38-4 | 2 30-8 | 3-2 | 0-6 | 9-2 | 1-6 | 15-2 | 2-7 |
| 33 | 2 38-3 | 2 38-7 | 2 31-0 | 3-3 | 0-6 | 9-3 | 1-6 | 15-3 | 2-7 |
| 34 | 2 38-5 | 2 38-9 | 2 31-3 | 3-4 | 0-6 | 9-4 | 1-6 | 15-4 | 2-7 |
| 35 | 2 38-8 | 2 39-2 | 2 31-5 | 3-5 | 0-6 | 9-5 | 1-7 | 15-5 | 2-7 |
| 36 | 2 39-0 | 2 39-4 | 2 31-8 | 3-6 | 0-6 | 9-6 | 1-7 | 15-6 | 2-7 |
| 37 | 2 39-3 | 2 39-7 | 2 32-0 | 3-7 | 0-6 | 9-7 | 1-7 | 15-7 | 2-7 |
| 38 | 2 39-5 | 2 39-9 | 2 32-2 | 3-8 | 0-7 | 9-8 | 1-7 | 15-8 | 2-8 |
| 39 | 2 39-8 | 2 40-2 | 2 32-5 | 3-9 | 0-7 | 9-9 | 1-7 | 15-9 | 2-8 |
| 40 | 2 40-0 | 2 40-4 | 2 32-7 | 4-0 | 0-7 | 10-0 | 1-8 | 16-0 | 2-8 |
| 41 | 2 40-3 | 2 40-7 | 2 32-9 | 4-1 | 0-7 | 10-1 | 1-8 | 16-1 | 2-8 |
| 42 | 2 40-5 | 2 40-9 | 2 33-2 | 4-2 | 0-7 | 10-2 | 1-8 | 16-2 | 2-8 |
| 43 | 2 40-8 | 2 41-2 | 2 33-4 | 4-3 | 0-8 | 10-3 | 1-8 | 16-3 | 2-9 |
| 44 | 2 41-0 | 2 41-4 | 2 33-7 | 4-4 | 0-8 | 10-4 | 1-8 | 16-4 | 2-9 |
| 45 | 2 41-3 | 2 41-7 | 2 33-9 | 4-5 | 0-8 | 10-5 | 1-8 | 16-5 | 2-9 |
| 46 | 2 41-5 | 2 41-9 | 2 34-1 | 4-6 | 0-8 | 10-6 | 1-9 | 16-6 | 2-9 |
| 47 | 2 41-8 | 2 42-2 | 2 34-4 | 4-7 | 0-8 | 10-7 | 1-9 | 16-7 | 2-9 |
| 48 | 2 42-0 | 2 42-4 | 2 34-6 | 4-8 | 0-8 | 10-8 | 1-9 | 16-8 | 2-9 |
| 49 | 2 42-3 | 2 42-7 | 2 34-9 | 4-9 | 0-9 | 10-9 | 1-9 | 16-9 | 2-9 |
| 50 | 2 42-5 | 2 42-9 | 2 35-1 | 5-0 | 0-9 | 11-0 | 1-9 | 17-0 | 3-0 |
| 51 | 2 42-8 | 2 43-2 | 2 35-3 | 5-1 | 0-9 | 11-1 | 1-9 | 17-1 | 3-0 |
| 52 | 2 43-0 | 2 43-4 | 2 35-6 | 5-2 | 0-9 | 11-2 | 2-0 | 17-2 | 3-0 |
| 53 | 2 43-3 | 2 43-7 | 2 35-8 | 5-3 | 0-9 | 11-3 | 2-0 | 17-3 | 3-0 |
| 54 | 2 43-5 | 2 43-9 | 2 36-1 | 5-4 | 0-9 | 11-4 | 2-0 | 17-4 | 3-0 |
| 55 | 2 43-8 | 2 44-2 | 2 36-3 | 5-5 | 1-0 | 11-5 | 2-0 | 17-5 | 3-1 |
| 56 | 2 44-0 | 2 44-4 | 2 36-5 | 5-6 | 1-0 | 11-6 | 2-0 | 17-6 | 3-1 |
| 57 | 2 44-3 | 2 44-7 | 2 36-8 | 5-7 | 1-0 | 11-7 | 2-0 | 17-7 | 3-1 |
| 58 | 2 44-5 | 2 45-0 | 2 37-0 | 5-8 | 1-0 | 11-8 | 2-1 | 17-8 | 3-1 |
| 59 | 2 44-8 | 2 45-2 | 2 37-2 | 5-9 | 1-0 | 11-9 | 2-1 | 17-9 | 3-1 |
| 60 | 2 45-0 | 2 45-5 | 2 37-5 | 6-0 | 1-1 | 12-0 | 2-1 | 18-0 | 3-2 |

| 11 | SUN PLANETS | ARIES | MOON | v or Corr ^d | | v or Corr ^d | | v or Corr ^d | |
|----|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|
| | | | | d | ' | d | ' | d | ' |
| 00 | 2 45-0 | 2 45-5 | 2 37-5 | 0-0 | 0-0 | 6-0 | 1-2 | 12-0 | 2-3 |
| 01 | 2 45-3 | 2 45-7 | 2 37-7 | 0-1 | 0-0 | 6-1 | 1-2 | 12-1 | 2-3 |
| 02 | 2 45-5 | 2 46-0 | 2 38-0 | 0-2 | 0-0 | 6-2 | 1-2 | 12-2 | 2-3 |
| 03 | 2 45-8 | 2 46-2 | 2 38-2 | 0-3 | 0-1 | 6-3 | 1-2 | 12-3 | 2-4 |
| 04 | 2 46-0 | 2 46-5 | 2 38-4 | 0-4 | 0-1 | 6-4 | 1-2 | 12-4 | 2-4 |
| 05 | 2 46-3 | 2 46-7 | 2 38-7 | 0-5 | 0-1 | 6-5 | 1-2 | 12-5 | 2-4 |
| 06 | 2 46-5 | 2 47-0 | 2 38-9 | 0-6 | 0-1 | 6-6 | 1-3 | 12-6 | 2-4 |
| 07 | 2 46-8 | 2 47-2 | 2 39-2 | 0-7 | 0-1 | 6-7 | 1-3 | 12-7 | 2-4 |
| 08 | 2 47-0 | 2 47-5 | 2 39-4 | 0-8 | 0-2 | 6-8 | 1-3 | 12-8 | 2-5 |
| 09 | 2 47-3 | 2 47-7 | 2 39-6 | 0-9 | 0-2 | 6-9 | 1-3 | 12-9 | 2-5 |
| 10 | 2 47-5 | 2 48-0 | 2 39-9 | 1-0 | 0-2 | 7-0 | 1-3 | 13-0 | 2-5 |
| 11 | 2 47-8 | 2 48-2 | 2 40-1 | 1-1 | 0-2 | 7-1 | 1-4 | 13-1 | 2-5 |
| 12 | 2 48-0 | 2 48-5 | 2 40-3 | 1-2 | 0-2 | 7-2 | 1-4 | 13-2 | 2-5 |
| 13 | 2 48-3 | 2 48-7 | 2 40-6 | 1-3 | 0-2 | 7-3 | 1-4 | 13-3 | 2-5 |
| 14 | 2 48-5 | 2 49-0 | 2 40-8 | 1-4 | 0-3 | 7-4 | 1-4 | 13-4 | 2-6 |
| 15 | 2 48-8 | 2 49-2 | 2 41-1 | 1-5 | 0-3 | 7-5 | 1-4 | 13-5 | 2-6 |
| 16 | 2 49-0 | 2 49-5 | 2 41-3 | 1-6 | 0-3 | 7-6 | 1-5 | 13-6 | 2-6 |
| 17 | 2 49-3 | 2 49-7 | 2 41-5 | 1-7 | 0-3 | 7-7 | 1-5 | 13-7 | 2-6 |
| 18 | 2 49-5 | 2 50-0 | 2 41-8 | 1-8 | 0-3 | 7-8 | 1-5 | 13-8 | 2-6 |
| 19 | 2 49-8 | 2 50-2 | 2 42-0 | 1-9 | 0-4 | 7-9 | 1-5 | 13-9 | 2-7 |
| 20 | 2 50-0 | 2 50-5 | 2 42-3 | 2-0 | 0-4 | 8-0 | 1-5 | 14-0 | 2-7 |
| 21 | 2 50-3 | 2 50-7 | 2 42-5 | 2-1 | 0-4 | 8-1 | 1-6 | 14-1 | 2-7 |
| 22 | 2 50-5 | 2 51-0 | 2 42-7 | 2-2 | 0-4 | 8-2 | 1-6 | 14-2 | 2-7 |
| 23 | 2 50-8 | 2 51-2 | 2 43-0 | 2-3 | 0-4 | 8-3 | 1-6 | 14-3 | 2-7 |
| 24 | 2 51-0 | 2 51-5 | 2 43-2 | 2-4 | 0-5 | 8-4 | 1-6 | 14-4 | 2-8 |
| 25 | 2 51-3 | 2 51-7 | 2 43-4 | 2-5 | 0-5 | 8-5 | 1-6 | 14-5 | 2-8 |
| 26 | 2 51-5 | 2 52-0 | 2 43-7 | 2-6 | 0-5 | 8-6 | 1-6 | 14-6 | 2-8 |
| 27 | 2 51-8 | 2 52-2 | 2 43-9 | 2-7 | 0-5 | 8-7 | 1-7 | 14-7 | 2-8 |
| 28 | 2 52-0 | 2 52-5 | 2 44-2 | 2-8 | 0-5 | 8-8 | 1-7 | 14-8 | 2-8 |
| 29 | 2 52-3 | 2 52-7 | 2 44-4 | 2-9 | 0-6 | 8-9 | 1-7 | 14-9 | 2-9 |
| 30 | 2 52-5 | 2 53-0 | 2 44-6 | 3-0 | 0-6 | 9-0 | 1-7 | 15-0 | 2-9 |
| 31 | 2 52-8 | 2 53-2 | 2 44-9 | 3-1 | 0-6 | 9-1 | 1-7 | 15-1 | 2-9 |
| 32 | 2 53-0 | 2 53-5 | 2 45-1 | 3-2 | 0-6 | 9-2 | 1-8 | 15-2 | 2-9 |
| 33 | 2 53-3 | 2 53-7 | 2 45-4 | 3-3 | 0-6 | 9-3 | 1-8 | 15-3 | 2-9 |
| 34 | 2 53-5 | 2 54-0 | 2 45-6 | 3-4 | 0-7 | 9-4 | 1-8 | 15-4 | 3-0 |
| 35 | 2 53-8 | 2 54-2 | 2 45-8 | 3-5 | 0-7 | 9-5 | 1-8 | 15-5 | 3-0 |
| 36 | 2 54-0 | 2 54-5 | 2 46-1 | 3-6 | 0-7 | 9-6 | 1-8 | 15-6 | 3-0 |
| 37 | 2 54-3 | 2 54-7 | 2 46-3 | 3-7 | 0-7 | 9-7 | 1-9 | 15-7 | 3-0 |
| 38 | 2 54-5 | 2 55-0 | 2 46-6 | 3-8 | 0-7 | 9-8 | 1-9 | 15-8 | 3-0 |
| 39 | 2 54-8 | 2 55-2 | 2 46-8 | 3-9 | 0-7 | 9-9 | 1-9 | 15-9 | 3-0 |
| 40 | 2 55-0 | 2 55-5 | 2 47-0 | 4-0 | 0-8 | 10-0 | 1-9 | 16-0 | 3-1 |
| 41 | 2 55-3 | 2 55-7 | 2 47-3 | 4-1 | 0-8 | 10-1 | 1-9 | 16-1 | 3-1 |
| 42 | 2 55-5 | 2 56-0 | 2 47-5 | 4-2 | 0-8 | 10-2 | 2-0 | 16-2 | 3-1 |
| 43 | 2 55-8 | 2 56-2 | 2 47-7 | 4-3 | 0-8 | 10-3 | 2-0 | 16-3 | 3-1 |
| 44 | 2 56-0 | 2 56-5 | 2 48-0 | 4-4 | 0-8 | 10-4 | 2-0 | 16-4 | 3-1 |
| 45 | 2 56-3 | 2 56-7 | 2 48-2 | 4-5 | 0-9 | 10-5 | 2-0 | 16-5 | 3-2 |
| 46 | 2 56-5 | 2 57-0 | 2 48-5 | 4-6 | 0-9 | 10-6 | 2-0 | 16-6 | 3-2 |
| 47 | 2 56-8 | 2 57-2 | 2 48-7 | 4-7 | 0-9 | 10-7 | 2-1 | 16-7 | 3-2 |
| 48 | 2 57-0 | 2 57-5 | 2 48-9 | 4-8 | 0-9 | 10-8 | 2-1 | 16-8 | 3-2 |
| 49 | 2 57-3 | 2 57-7 | 2 49-2 | 4-9 | 0-9 | 10-9 | 2-1 | 16-9 | 3-2 |
| 50 | 2 57-5 | 2 58-0 | 2 49-4 | 5-0 | 1-0 | 11-0 | 2-1 | 17-0 | 3-3 |
| 51 | 2 57-8 | 2 58-2 | 2 49-7 | 5-1 | 1-0 | 11-1 | 2-1 | 17-1 | 3-3 |
| 52 | 2 58-0 | 2 58-5 | 2 49-9 | 5-2 | 1-0 | 11-2 | 2-1 | 17-2 | 3-3 |
| 53 | 2 58-3 | 2 58-7 | 2 50-1 | 5-3 | 1-0 | 11-3 | 2-2 | 17-3 | 3-3 |
| 54 | 2 58-5 | 2 59-0 | 2 50-4 | 5-4 | 1-0 | 11-4 | 2-2 | 17-4 | 3-3 |
| 55 | 2 58-8 | 2 59-2 | 2 50-6 | 5-5 | 1-1 | 11-5 | 2-2 | 17-5 | 3-4 |
| 56 | 2 59-0 | 2 59-5 | 2 50-8 | 5-6 | 1-1 | 11-6 | 2-2 | 17-6 | 3-4 |
| 57 | 2 59-3 | 2 59-7 | 2 51-1 | 5-7 | 1-1 | 11-7 | 2-2 | 17-7 | 3-4 |
| 58 | 2 59-5 | 3 00-0 | 2 51-3 | 5-8 | 1-1 | 11-8 | 2-3 | 17-8 | 3-4 |
| 59 | 2 59-8 | 3 00-2 | 2 51-6 | 5-9 | 1-1 | 11-9 | 2-3 | 17-9 | 3-4 |
| 60 | 3 00-0 | 3 00-5 | 2 51-8 | 6-0 | 1-2 | 12-0 | 2-3 | 18-0 | 3-5 |



12^m

INCREMENTS AND CORRECTIONS

13^m

| 12 ^m | SUN PLANETS | ARIES | MOON | ° or Corr ^d | | | 13 ^m | SUN PLANETS | ARIES | MOON | ° or Corr ^d | | | | |
|-----------------|-------------|-------|-------|------------------------|----|----|-----------------|-------------|-------|------|------------------------|----|----|-------|-----|
| | | | | d | ' | " | | | | | d | ' | " | | |
| 00 | 3 000 | 3 005 | 2 510 | 00 | 00 | 00 | 13 | 12-0 | 25 | 00 | 00 | 00 | 14 | 12-0 | 2-7 |
| 01 | 3 003 | 3 007 | 2 520 | 01 | 00 | 01 | 13 | 12-1 | 25 | 01 | 00 | 01 | 14 | 12-1 | 2-7 |
| 02 | 3 005 | 3 010 | 2 523 | 02 | 00 | 02 | 13 | 12-2 | 25 | 02 | 00 | 02 | 14 | 12-2 | 2-7 |
| 03 | 3 008 | 3 012 | 2 525 | 03 | 01 | 03 | 13 | 12-3 | 26 | 03 | 01 | 03 | 14 | 12-3 | 2-8 |
| 04 | 3 010 | 3 015 | 2 528 | 04 | 01 | 04 | 13 | 12-4 | 26 | 04 | 01 | 04 | 14 | 12-4 | 2-8 |
| 05 | 3 013 | 3 017 | 2 530 | 05 | 01 | 05 | 14 | 12-5 | 26 | 05 | 01 | 05 | 15 | 12-5 | 2-8 |
| 06 | 3 015 | 3 020 | 2 532 | 06 | 01 | 06 | 14 | 12-6 | 26 | 06 | 01 | 06 | 15 | 12-6 | 2-8 |
| 07 | 3 018 | 3 022 | 2 535 | 07 | 01 | 07 | 14 | 12-7 | 26 | 07 | 02 | 07 | 15 | 12-7 | 2-9 |
| 08 | 3 020 | 3 025 | 2 537 | 08 | 02 | 08 | 14 | 12-8 | 27 | 08 | 02 | 08 | 15 | 12-8 | 2-9 |
| 09 | 3 023 | 3 027 | 2 539 | 09 | 02 | 09 | 14 | 12-9 | 27 | 09 | 02 | 09 | 16 | 12-9 | 2-9 |
| 10 | 3 025 | 3 030 | 2 542 | 10 | 02 | 10 | 15 | 12-10 | 27 | 10 | 02 | 10 | 16 | 12-10 | 2-9 |
| 11 | 3 028 | 3 033 | 2 544 | 11 | 02 | 11 | 15 | 12-11 | 27 | 11 | 02 | 11 | 16 | 12-11 | 2-9 |
| 12 | 3 030 | 3 035 | 2 547 | 12 | 03 | 12 | 15 | 12-12 | 28 | 12 | 03 | 12 | 16 | 12-12 | 3-0 |
| 13 | 3 033 | 3 038 | 2 549 | 13 | 03 | 13 | 15 | 12-13 | 28 | 13 | 03 | 13 | 16 | 12-13 | 3-0 |
| 14 | 3 035 | 3 040 | 2 551 | 14 | 03 | 14 | 15 | 12-14 | 28 | 14 | 03 | 14 | 17 | 12-14 | 3-0 |
| 15 | 3 038 | 3 043 | 2 554 | 15 | 03 | 15 | 16 | 12-15 | 28 | 15 | 03 | 15 | 17 | 12-15 | 3-0 |
| 16 | 3 040 | 3 045 | 2 556 | 16 | 03 | 16 | 16 | 12-16 | 28 | 16 | 04 | 16 | 17 | 12-16 | 3-1 |
| 17 | 3 043 | 3 048 | 2 559 | 17 | 04 | 17 | 16 | 12-17 | 29 | 17 | 04 | 17 | 17 | 12-17 | 3-1 |
| 18 | 3 045 | 3 050 | 2 561 | 18 | 04 | 18 | 16 | 12-18 | 29 | 18 | 04 | 18 | 18 | 12-18 | 3-1 |
| 19 | 3 048 | 3 053 | 2 563 | 19 | 04 | 19 | 16 | 12-19 | 29 | 19 | 04 | 19 | 18 | 12-19 | 3-1 |
| 20 | 3 050 | 3 055 | 2 566 | 20 | 04 | 20 | 17 | 12-20 | 29 | 20 | 05 | 20 | 18 | 12-20 | 3-2 |
| 21 | 3 053 | 3 058 | 2 568 | 21 | 04 | 21 | 17 | 12-21 | 29 | 21 | 05 | 21 | 18 | 12-21 | 3-2 |
| 22 | 3 055 | 3 060 | 2 570 | 22 | 05 | 22 | 17 | 12-22 | 30 | 22 | 05 | 22 | 18 | 12-22 | 3-2 |
| 23 | 3 058 | 3 063 | 2 573 | 23 | 05 | 23 | 17 | 12-23 | 30 | 23 | 05 | 23 | 19 | 12-23 | 3-2 |
| 24 | 3 060 | 3 065 | 2 575 | 24 | 05 | 24 | 18 | 12-24 | 30 | 24 | 05 | 24 | 19 | 12-24 | 3-2 |
| 25 | 3 063 | 3 068 | 2 578 | 25 | 05 | 25 | 18 | 12-25 | 30 | 25 | 06 | 25 | 19 | 12-25 | 3-3 |
| 26 | 3 065 | 3 070 | 2 580 | 26 | 05 | 26 | 18 | 12-26 | 30 | 26 | 06 | 26 | 19 | 12-26 | 3-3 |
| 27 | 3 068 | 3 073 | 2 582 | 27 | 06 | 27 | 18 | 12-27 | 31 | 27 | 06 | 27 | 20 | 12-27 | 3-3 |
| 28 | 3 070 | 3 075 | 2 585 | 28 | 06 | 28 | 18 | 12-28 | 31 | 28 | 06 | 28 | 20 | 12-28 | 3-3 |
| 29 | 3 073 | 3 078 | 2 587 | 29 | 06 | 29 | 19 | 12-29 | 31 | 29 | 07 | 29 | 20 | 12-29 | 3-4 |
| 30 | 3 075 | 3 080 | 2 590 | 30 | 06 | 30 | 19 | 12-30 | 31 | 30 | 07 | 30 | 20 | 12-30 | 3-4 |
| 31 | 3 078 | 3 083 | 2 592 | 31 | 06 | 31 | 19 | 12-31 | 31 | 31 | 07 | 31 | 20 | 12-31 | 3-4 |
| 32 | 3 080 | 3 085 | 2 594 | 32 | 07 | 32 | 19 | 12-32 | 32 | 32 | 07 | 32 | 21 | 12-32 | 3-4 |
| 33 | 3 083 | 3 088 | 2 597 | 33 | 07 | 33 | 19 | 12-33 | 32 | 33 | 07 | 33 | 21 | 12-33 | 3-4 |
| 34 | 3 085 | 3 090 | 2 599 | 34 | 07 | 34 | 20 | 12-34 | 32 | 34 | 08 | 34 | 21 | 12-34 | 3-5 |
| 35 | 3 088 | 3 093 | 3 002 | 35 | 07 | 35 | 20 | 12-35 | 32 | 35 | 08 | 35 | 21 | 12-35 | 3-5 |
| 36 | 3 090 | 3 095 | 3 004 | 36 | 08 | 36 | 20 | 12-36 | 33 | 36 | 08 | 36 | 22 | 12-36 | 3-5 |
| 37 | 3 093 | 3 098 | 3 006 | 37 | 08 | 37 | 20 | 12-37 | 33 | 37 | 08 | 37 | 22 | 12-37 | 3-5 |
| 38 | 3 095 | 3 100 | 3 009 | 38 | 08 | 38 | 20 | 12-38 | 33 | 38 | 09 | 38 | 22 | 12-38 | 3-6 |
| 39 | 3 098 | 3 103 | 3 011 | 39 | 08 | 39 | 21 | 12-39 | 33 | 39 | 09 | 39 | 22 | 12-39 | 3-6 |
| 40 | 3 100 | 3 105 | 3 013 | 40 | 08 | 40 | 21 | 12-40 | 33 | 40 | 09 | 40 | 23 | 12-40 | 3-6 |
| 41 | 3 103 | 3 108 | 3 016 | 41 | 09 | 41 | 21 | 12-41 | 34 | 41 | 09 | 41 | 23 | 12-41 | 3-6 |
| 42 | 3 105 | 3 110 | 3 018 | 42 | 09 | 42 | 21 | 12-42 | 34 | 42 | 09 | 42 | 23 | 12-42 | 3-6 |
| 43 | 3 108 | 3 113 | 3 021 | 43 | 09 | 43 | 21 | 12-43 | 34 | 43 | 10 | 43 | 23 | 12-43 | 3-7 |
| 44 | 3 110 | 3 115 | 3 023 | 44 | 09 | 44 | 22 | 12-44 | 34 | 44 | 10 | 44 | 23 | 12-44 | 3-7 |
| 45 | 3 113 | 3 118 | 3 025 | 45 | 09 | 45 | 22 | 12-45 | 34 | 45 | 10 | 45 | 24 | 12-45 | 3-7 |
| 46 | 3 115 | 3 120 | 3 028 | 46 | 10 | 46 | 22 | 12-46 | 35 | 46 | 10 | 46 | 24 | 12-46 | 3-7 |
| 47 | 3 118 | 3 123 | 3 030 | 47 | 10 | 47 | 22 | 12-47 | 35 | 47 | 11 | 47 | 24 | 12-47 | 3-8 |
| 48 | 3 120 | 3 125 | 3 033 | 48 | 10 | 48 | 23 | 12-48 | 35 | 48 | 11 | 48 | 24 | 12-48 | 3-8 |
| 49 | 3 123 | 3 128 | 3 035 | 49 | 10 | 49 | 23 | 12-49 | 35 | 49 | 11 | 49 | 25 | 12-49 | 3-8 |
| 50 | 3 125 | 3 130 | 3 037 | 50 | 10 | 50 | 23 | 12-50 | 35 | 50 | 11 | 50 | 25 | 12-50 | 3-8 |
| 51 | 3 128 | 3 133 | 3 040 | 51 | 11 | 51 | 23 | 12-51 | 36 | 51 | 11 | 51 | 25 | 12-51 | 3-8 |
| 52 | 3 130 | 3 135 | 3 042 | 52 | 11 | 52 | 23 | 12-52 | 36 | 52 | 12 | 52 | 25 | 12-52 | 3-9 |
| 53 | 3 133 | 3 138 | 3 044 | 53 | 11 | 53 | 24 | 12-53 | 36 | 53 | 12 | 53 | 25 | 12-53 | 3-9 |
| 54 | 3 135 | 3 140 | 3 047 | 54 | 11 | 54 | 24 | 12-54 | 36 | 54 | 12 | 54 | 26 | 12-54 | 3-9 |
| 55 | 3 138 | 3 143 | 3 049 | 55 | 11 | 55 | 24 | 12-55 | 36 | 55 | 12 | 55 | 26 | 12-55 | 3-9 |
| 56 | 3 140 | 3 145 | 3 052 | 56 | 12 | 56 | 24 | 12-56 | 37 | 56 | 13 | 56 | 26 | 12-56 | 4-0 |
| 57 | 3 143 | 3 148 | 3 054 | 57 | 12 | 57 | 24 | 12-57 | 37 | 57 | 13 | 57 | 26 | 12-57 | 4-0 |
| 58 | 3 145 | 3 150 | 3 056 | 58 | 12 | 58 | 25 | 12-58 | 37 | 58 | 13 | 58 | 27 | 12-58 | 4-0 |
| 59 | 3 148 | 3 153 | 3 059 | 59 | 12 | 59 | 25 | 12-59 | 37 | 59 | 13 | 59 | 27 | 12-59 | 4-0 |
| 60 | 3 150 | 3 155 | 3 061 | 60 | 13 | 60 | 25 | 12-60 | 38 | 60 | 14 | 60 | 27 | 12-60 | 4-1 |



14°

INCREMENTS AND CORRECTIONS

15°

| 14 | SUN PLANETS | ARIES | MOON | or Corr | | or Corr | | or Corr | |
|----|----------------|--------|--------|---------|-----|---------|-----|---------|-----|
| | | | | d | ' | d | ' | d | ' |
| 00 | 3 30-0 | 3 30-6 | 3 20-4 | 0-0 | 0-0 | 0-0 | 1-5 | 12-0 | 2-9 |
| 01 | 3 30-3 | 3 30-8 | 3 20-7 | 0-1 | 0-0 | 0-1 | 1-5 | 12-1 | 2-9 |
| 02 | 3 30-5 | 3 31-1 | 3 20-9 | 0-2 | 0-0 | 0-2 | 1-5 | 12-2 | 2-9 |
| 03 | 3 30-8 | 3 31-3 | 3 21-1 | 0-3 | 0-1 | 0-3 | 1-5 | 12-3 | 3-0 |
| 04 | 3 31-0 | 3 31-6 | 3 21-4 | 0-4 | 0-1 | 0-4 | 1-5 | 12-4 | 3-0 |
| 05 | 3 31-3 | 3 31-8 | 3 21-6 | 0-5 | 0-1 | 0-5 | 1-6 | 12-5 | 3-0 |
| 06 | 3 31-5 | 3 32-1 | 3 21-9 | 0-6 | 0-1 | 0-6 | 1-6 | 12-6 | 3-0 |
| 07 | 3 31-8 | 3 32-3 | 3 22-1 | 0-7 | 0-2 | 0-7 | 1-6 | 12-7 | 3-1 |
| 08 | 3 32-0 | 3 32-6 | 3 22-3 | 0-8 | 0-2 | 0-8 | 1-6 | 12-8 | 3-1 |
| 09 | 3 32-3 | 3 32-8 | 3 22-6 | 0-9 | 0-2 | 0-9 | 1-7 | 12-9 | 3-1 |
| 10 | 3 32-5 | 3 33-1 | 3 22-8 | 1-0 | 0-2 | 1-0 | 1-7 | 13-0 | 3-1 |
| 11 | 3 32-8 | 3 33-3 | 3 23-1 | 1-1 | 0-3 | 1-1 | 1-7 | 13-1 | 3-2 |
| 12 | 3 33-0 | 3 33-6 | 3 23-3 | 1-2 | 0-3 | 1-2 | 1-7 | 13-2 | 3-2 |
| 13 | 3 33-3 | 3 33-8 | 3 23-5 | 1-3 | 0-3 | 1-3 | 1-8 | 13-3 | 3-2 |
| 14 | 3 33-5 | 3 34-1 | 3 23-8 | 1-4 | 0-3 | 1-4 | 1-8 | 13-4 | 3-2 |
| 15 | 3 33-8 | 3 34-3 | 3 24-0 | 1-5 | 0-4 | 1-5 | 1-8 | 13-5 | 3-3 |
| 16 | 3 34-0 | 3 34-6 | 3 24-3 | 1-6 | 0-4 | 1-6 | 1-8 | 13-6 | 3-3 |
| 17 | 3 34-3 | 3 34-8 | 3 24-5 | 1-7 | 0-4 | 1-7 | 1-9 | 13-7 | 3-3 |
| 18 | 3 34-5 | 3 35-1 | 3 24-7 | 1-8 | 0-4 | 1-8 | 1-9 | 13-8 | 3-3 |
| 19 | 3 34-8 | 3 35-3 | 3 25-0 | 1-9 | 0-5 | 1-9 | 1-9 | 13-9 | 3-4 |
| 20 | 3 35-0 | 3 35-6 | 3 25-2 | 2-0 | 0-5 | 2-0 | 1-9 | 14-0 | 3-4 |
| 21 | 3 35-3 | 3 35-8 | 3 25-4 | 2-1 | 0-5 | 2-1 | 2-0 | 14-1 | 3-4 |
| 22 | 3 35-5 | 3 36-1 | 3 25-7 | 2-2 | 0-5 | 2-2 | 2-0 | 14-2 | 3-4 |
| 23 | 3 35-8 | 3 36-3 | 3 25-9 | 2-3 | 0-6 | 2-3 | 2-0 | 14-3 | 3-5 |
| 24 | 3 36-0 | 3 36-6 | 3 26-2 | 2-4 | 0-6 | 2-4 | 2-0 | 14-4 | 3-5 |
| 25 | 3 36-3 | 3 36-8 | 3 26-4 | 2-5 | 0-6 | 2-5 | 2-1 | 14-5 | 3-5 |
| 26 | 3 36-5 | 3 37-1 | 3 26-6 | 2-6 | 0-6 | 2-6 | 2-1 | 14-6 | 3-5 |
| 27 | 3 36-8 | 3 37-3 | 3 26-9 | 2-7 | 0-7 | 2-7 | 2-1 | 14-7 | 3-6 |
| 28 | 3 37-0 | 3 37-6 | 3 27-1 | 2-8 | 0-7 | 2-8 | 2-1 | 14-8 | 3-6 |
| 29 | 3 37-3 | 3 37-8 | 3 27-4 | 2-9 | 0-7 | 2-9 | 2-2 | 14-9 | 3-6 |
| 30 | 3 37-5 | 3 38-1 | 3 27-6 | 3-0 | 0-7 | 3-0 | 2-2 | 15-0 | 3-6 |
| 31 | 3 37-8 | 3 38-3 | 3 27-8 | 3-1 | 0-7 | 3-1 | 2-2 | 15-1 | 3-6 |
| 32 | 3 38-0 | 3 38-6 | 3 28-1 | 3-2 | 0-8 | 3-2 | 2-2 | 15-2 | 3-7 |
| 33 | 3 38-3 | 3 38-8 | 3 28-3 | 3-3 | 0-8 | 3-3 | 2-2 | 15-3 | 3-7 |
| 34 | 3 38-5 | 3 39-1 | 3 28-5 | 3-4 | 0-8 | 3-4 | 2-3 | 15-4 | 3-7 |
| 35 | 3 38-8 | 3 39-3 | 3 28-8 | 3-5 | 0-8 | 3-5 | 2-3 | 15-5 | 3-7 |
| 36 | 3 39-0 | 3 39-6 | 3 29-0 | 3-6 | 0-9 | 3-6 | 2-3 | 15-6 | 3-8 |
| 37 | 3 39-3 | 3 39-8 | 3 29-3 | 3-7 | 0-9 | 3-7 | 2-3 | 15-7 | 3-8 |
| 38 | 3 39-5 | 3 40-1 | 3 29-5 | 3-8 | 0-9 | 3-8 | 2-4 | 15-8 | 3-8 |
| 39 | 3 39-8 | 3 40-4 | 3 29-7 | 3-9 | 0-9 | 3-9 | 2-4 | 15-9 | 3-8 |
| 40 | 3 40-0 | 3 40-6 | 3 30-0 | 4-0 | 1-0 | 4-0 | 2-4 | 16-0 | 3-9 |
| 41 | 3 40-3 | 3 40-8 | 3 30-2 | 4-1 | 1-0 | 4-1 | 2-4 | 16-1 | 3-9 |
| 42 | 3 40-5 | 3 41-1 | 3 30-5 | 4-2 | 1-0 | 4-2 | 2-5 | 16-2 | 3-9 |
| 43 | 3 40-8 | 3 41-4 | 3 30-7 | 4-3 | 1-0 | 4-3 | 2-5 | 16-3 | 3-9 |
| 44 | 3 41-0 | 3 41-6 | 3 30-9 | 4-4 | 1-1 | 4-4 | 2-5 | 16-4 | 4-0 |
| 45 | 3 41-3 | 3 41-9 | 3 31-2 | 4-5 | 1-1 | 4-5 | 2-5 | 16-5 | 4-0 |
| 46 | 3 41-5 | 3 42-1 | 3 31-4 | 4-6 | 1-1 | 4-6 | 2-6 | 16-6 | 4-0 |
| 47 | 3 41-8 | 3 42-4 | 3 31-6 | 4-7 | 1-1 | 4-7 | 2-6 | 16-7 | 4-0 |
| 48 | 3 42-0 | 3 42-6 | 3 31-9 | 4-8 | 1-2 | 4-8 | 2-6 | 16-8 | 4-1 |
| 49 | 3 42-3 | 3 42-9 | 3 32-1 | 4-9 | 1-2 | 4-9 | 2-6 | 16-9 | 4-1 |
| 50 | 3 42-5 | 3 43-1 | 3 32-4 | 5-0 | 1-2 | 5-0 | 2-7 | 17-0 | 4-1 |
| 51 | 3 42-8 | 3 43-4 | 3 32-6 | 5-1 | 1-2 | 5-1 | 2-7 | 17-1 | 4-1 |
| 52 | 3 43-0 | 3 43-6 | 3 32-8 | 5-2 | 1-3 | 5-2 | 2-7 | 17-2 | 4-2 |
| 53 | 3 43-3 | 3 43-8 | 3 33-1 | 5-3 | 1-3 | 5-3 | 2-7 | 17-3 | 4-2 |
| 54 | 3 43-5 | 3 44-1 | 3 33-3 | 5-4 | 1-3 | 5-4 | 2-8 | 17-4 | 4-2 |
| 55 | 3 43-8 | 3 44-4 | 3 33-6 | 5-5 | 1-3 | 5-5 | 2-8 | 17-5 | 4-2 |
| 56 | 3 44-0 | 3 44-6 | 3 33-8 | 5-6 | 1-4 | 5-6 | 2-8 | 17-6 | 4-3 |
| 57 | 3 44-3 | 3 44-8 | 3 34-0 | 5-7 | 1-4 | 5-7 | 2-8 | 17-7 | 4-3 |
| 58 | 3 44-5 | 3 45-1 | 3 34-3 | 5-8 | 1-4 | 5-8 | 2-9 | 17-8 | 4-3 |
| 59 | 3 44-8 | 3 45-4 | 3 34-5 | 5-9 | 1-4 | 5-9 | 2-9 | 17-9 | 4-3 |
| 60 | 3 45-0 | 3 45-6 | 3 34-8 | 6-0 | 1-5 | 6-0 | 2-9 | 18-0 | 4-4 |

| 15 | SUN PLANETS | ARIES | MOON | or Corr | | or Corr | | or Corr | |
|----|----------------|--------|--------|---------|-----|---------|-----|---------|-----|
| | | | | d | ' | d | ' | d | ' |
| 00 | 3 45-0 | 3 45-6 | 3 34-8 | 0-0 | 0-0 | 0-0 | 1-6 | 12-0 | 3-1 |
| 01 | 3 45-3 | 3 45-9 | 3 35-0 | 0-1 | 0-0 | 0-1 | 1-6 | 12-1 | 3-1 |
| 02 | 3 45-5 | 3 46-1 | 3 35-2 | 0-2 | 0-1 | 0-2 | 1-6 | 12-2 | 3-2 |
| 03 | 3 45-8 | 3 46-4 | 3 35-5 | 0-3 | 0-1 | 0-3 | 1-6 | 12-3 | 3-2 |
| 04 | 3 46-0 | 3 46-6 | 3 35-7 | 0-4 | 0-1 | 0-4 | 1-7 | 12-4 | 3-2 |
| 05 | 3 46-3 | 3 46-9 | 3 35-9 | 0-5 | 0-1 | 0-5 | 1-7 | 12-5 | 3-3 |
| 06 | 3 46-5 | 3 47-1 | 3 36-2 | 0-6 | 0-2 | 0-6 | 1-7 | 12-6 | 3-3 |
| 07 | 3 46-8 | 3 47-4 | 3 36-4 | 0-7 | 0-2 | 0-7 | 1-7 | 12-7 | 3-3 |
| 08 | 3 47-0 | 3 47-6 | 3 36-7 | 0-8 | 0-2 | 0-8 | 1-8 | 12-8 | 3-3 |
| 09 | 3 47-3 | 3 47-9 | 3 36-9 | 0-9 | 0-2 | 0-9 | 1-8 | 12-9 | 3-3 |
| 10 | 3 47-5 | 3 48-1 | 3 37-1 | 1-0 | 0-3 | 1-0 | 1-8 | 13-0 | 3-4 |
| 11 | 3 47-8 | 3 48-4 | 3 37-4 | 1-1 | 0-3 | 1-1 | 1-8 | 13-1 | 3-4 |
| 12 | 3 48-0 | 3 48-6 | 3 37-6 | 1-2 | 0-3 | 1-2 | 1-9 | 13-2 | 3-4 |
| 13 | 3 48-3 | 3 48-9 | 3 37-9 | 1-3 | 0-3 | 1-3 | 1-9 | 13-3 | 3-4 |
| 14 | 3 48-5 | 3 49-1 | 3 38-1 | 1-4 | 0-4 | 1-4 | 1-9 | 13-4 | 3-5 |
| 15 | 3 48-8 | 3 49-4 | 3 38-3 | 1-5 | 0-4 | 1-5 | 1-9 | 13-5 | 3-5 |
| 16 | 3 49-0 | 3 49-6 | 3 38-6 | 1-6 | 0-4 | 1-6 | 2-0 | 13-6 | 3-5 |
| 17 | 3 49-3 | 3 49-9 | 3 38-8 | 1-7 | 0-4 | 1-7 | 2-0 | 13-7 | 3-5 |
| 18 | 3 49-5 | 3 50-1 | 3 39-0 | 1-8 | 0-5 | 1-8 | 2-0 | 13-8 | 3-6 |
| 19 | 3 49-8 | 3 50-4 | 3 39-3 | 1-9 | 0-5 | 1-9 | 2-0 | 13-9 | 3-6 |
| 20 | 3 50-0 | 3 50-6 | 3 39-5 | 2-0 | 0-5 | 2-0 | 2-1 | 14-0 | 3-6 |
| 21 | 3 50-3 | 3 50-9 | 3 39-8 | 2-1 | 0-5 | 2-1 | 2-1 | 14-1 | 3-6 |
| 22 | 3 50-5 | 3 51-1 | 3 40-0 | 2-2 | 0-6 | 2-2 | 2-1 | 14-2 | 3-7 |
| 23 | 3 50-8 | 3 51-4 | 3 40-2 | 2-3 | 0-6 | 2-3 | 2-1 | 14-3 | 3-7 |
| 24 | 3 51-0 | 3 51-6 | 3 40-5 | 2-4 | 0-6 | 2-4 | 2-2 | 14-4 | 3-7 |
| 25 | 3 51-3 | 3 51-9 | 3 40-7 | 2-5 | 0-6 | 2-5 | 2-2 | 14-5 | 3-7 |
| 26 | 3 51-5 | 3 52-1 | 3 41-0 | 2-6 | 0-7 | 2-6 | 2-2 | 14-6 | 3-8 |
| 27 | 3 51-8 | 3 52-4 | 3 41-2 | 2-7 | 0-7 | 2-7 | 2-2 | 14-7 | 3-8 |
| 28 | 3 52-0 | 3 52-6 | 3 41-4 | 2-8 | 0-7 | 2-8 | 2-3 | 14-8 | 3-8 |
| 29 | 3 52-3 | 3 52-9 | 3 41-7 | 2-9 | 0-7 | 2-9 | 2-3 | 14-9 | 3-8 |
| 30 | 3 52-5 | 3 53-1 | 3 41-9 | 3-0 | 0-8 | 3-0 | 2-3 | 15-0 | 3-9 |
| 31 | 3 52-8 | 3 53-4 | 3 42-1 | 3-1 | 0-8 | 3-1 | 2-4 | 15-1 | 3-9 |
| 32 | 3 53-0 | 3 53-6 | 3 42-4 | 3-2 | 0-8 | 3-2 | 2-4 | 15-2 | 3-9 |
| 33 | 3 53-3 | 3 53-9 | 3 42-6 | 3-3 | 0-9 | 3-3 | 2-4 | 15-3 | 4-0 |
| 34 | 3 53-5 | 3 54-1 | 3 42-9 | 3-4 | 0-9 | 3-4 | 2-4 | 15-4 | 4-0 |
| 35 | 3 53-8 | 3 54-4 | 3 43-1 | 3-5 | 0-9 | 3-5 | 2-5 | 15-5 | 4-0 |
| 36 | 3 54-0 | 3 54-6 | 3 43-3 | 3-6 | 0-9 | 3-6 | 2-5 | 15-6 | 4-0 |
| 37 | 3 54-3 | 3 54-9 | 3 43-6 | 3-7 | 1-0 | 3-7 | 2-5 | 15-7 | 4-1 |
| 38 | 3 54-5 | 3 55-1 | 3 43-8 | 3-8 | 1-0 | 3-8 | 2-5 | 15-8 | 4-1 |
| 39 | 3 54-8 | 3 55-4 | 3 44-1 | 3-9 | 1-0 | 3-9 | 2-6 | 15-9 | 4-1 |
| 40 | 3 55-0 | 3 55-6 | 3 44-3 | 4-0 | 1-0 | 4-0 | 2-6 | 16-0 | 4-1 |
| 41 | 3 55-3 | 3 55-9 | 3 44-5 | 4-1 | 1-1 | 4-1 | 2-6 | 16-1 | 4-2 |
| 42 | 3 55-5 | 3 56-1 | 3 44-8 | 4-2 | 1-1 | 4-2 | 2-6 | 16-2 | 4-2 |
| 43 | 3 55-8 | 3 56-4 | 3 45-0 | 4-3 | 1-1 | 4-3 | 2-7 | 16-3 | 4-2 |
| 44 | 3 56-0 | 3 56-6 | 3 45-2 | 4-4 | 1-1 | 4-4 | 2-7 | 16-4 | 4-2 |
| 45 | 3 56-3 | 3 56-9 | 3 45-5 | 4-5 | 1-2 | 4-5 | 2-7 | 16-5 | 4-3 |
| 46 | 3 56-5 | 3 57-1 | 3 45-7 | 4-6 | 1-2 | 4-6 | 2-7 | 16-6 | 4-3 |
| 47 | 3 56-8 | 3 57-4 | 3 46-0 | 4-7 | 1-2 | 4-7 | 2-8 | 16-7 | 4-3 |
| 48 | 3 57-0 | 3 57-6 | 3 46-2 | 4-8 | 1-2 | 4-8 | 2-8 | 16-8 | 4-3 |
| 49 | 3 57-3 | 3 57-9 | 3 46-4 | 4-9 | 1-3 | 4-9 | 2-8 | 16-9 | 4-4 |
| 50 | 3 57-5 | 3 58-2 | 3 46-7 | 5-0 | 1-3 | 5-0 | 2-8 | 17-0 | 4-4 |
| 51 | 3 57-8 | 3 58-4 | 3 46-9 | 5-1 | 1-3 | 5-1 | 2-9 | 17-1 | 4-4 |
| 52 | 3 58-0 | 3 58-7 | 3 47-2 | 5-2 | 1-3 | 5-2 | 2-9 | 17-2 | 4-4 |
| 53 | 3 58-3 | 3 58-9 | 3 47-4 | 5-3 | 1-4 | 5-3 | 2-9 | 17-3 | 4-5 |
| 54 | 3 58-5 | 3 59-2 | 3 47-6 | 5-4 | 1-4 | 5-4 | 2-9 | 17-4 | 4-5 |
| 55 | 3 58-8 | 3 59-4 | 3 47-9 | 5-5 | 1-4 | 5-5 | 3-0 | 17-5 | 4-5 |
| 56 | 3 59-0 | 3 59-7 | 3 48-1 | 5-6 | 1-4 | 5-6 | 3-0 | 17-6 | 4-5 |
| 57 | 3 59-3 | 3 59-9 | 3 48-4 | 5-7 | 1-5 | 5-7 | 3-0 | 17-7 | 4-6 |
| 58 | 3 59-5 | 4 00-2 | 3 48-6 | 5-8 | 1-5 | 5-8 | 3-0 | 17-8 | 4-6 |
| 59 | 3 59-8 | 4 00-4 | 3 48-8 | 5-9 | 1-5 | 5-9 | 3-1 | 17-9 | 4-6 |
| 60 | 4 00-0 | 4 00-7 | 3 49-1 | 6-0 | 1-6 | 6-0 | 3-1 | 18-0 | 4-7 |



16^m

INCREMENTS AND CORRECTIONS

17^m

| 16 | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | v or Corr ⁿ | v or Corr ⁿ | |
|----|-------------|--------|--------|------------------------|-----|------|------------------------|------------------------|-----|
| | | | | d | ' | " | | | |
| 00 | 4 00-0 | 4 00-7 | 3 49-1 | 0-0 | 0-0 | 6-0 | 1-7 | 12-0 | 3-3 |
| 01 | 4 00-3 | 4 00-9 | 3 49-3 | 0-1 | 0-0 | 6-1 | 1-7 | 12-1 | 3-3 |
| 02 | 4 00-5 | 4 01-2 | 3 49-5 | 0-2 | 0-1 | 6-2 | 1-7 | 12-2 | 3-4 |
| 03 | 4 00-8 | 4 01-4 | 3 49-8 | 0-3 | 0-1 | 6-3 | 1-7 | 12-3 | 3-4 |
| 04 | 4 01-0 | 4 01-7 | 3 50-0 | 0-4 | 0-1 | 6-4 | 1-8 | 12-4 | 3-4 |
| 05 | 4 01-3 | 4 01-9 | 3 50-3 | 0-5 | 0-1 | 6-5 | 1-8 | 12-5 | 3-4 |
| 06 | 4 01-5 | 4 02-2 | 3 50-5 | 0-6 | 0-2 | 6-6 | 1-8 | 12-6 | 3-5 |
| 07 | 4 01-8 | 4 02-4 | 3 50-7 | 0-7 | 0-2 | 6-7 | 1-8 | 12-7 | 3-5 |
| 08 | 4 02-0 | 4 02-7 | 3 51-0 | 0-8 | 0-2 | 6-8 | 1-9 | 12-8 | 3-5 |
| 09 | 4 02-3 | 4 02-9 | 3 51-2 | 0-9 | 0-2 | 6-9 | 1-9 | 12-9 | 3-5 |
| 10 | 4 02-5 | 4 03-2 | 3 51-5 | 1-0 | 0-3 | 7-0 | 1-9 | 13-0 | 3-6 |
| 11 | 4 02-8 | 4 03-4 | 3 51-7 | 1-1 | 0-3 | 7-1 | 2-0 | 13-1 | 3-6 |
| 12 | 4 03-0 | 4 03-7 | 3 51-9 | 1-2 | 0-3 | 7-2 | 2-0 | 13-2 | 3-6 |
| 13 | 4 03-3 | 4 03-9 | 3 52-2 | 1-3 | 0-4 | 7-3 | 2-0 | 13-3 | 3-7 |
| 14 | 4 03-5 | 4 04-2 | 3 52-4 | 1-4 | 0-4 | 7-4 | 2-0 | 13-4 | 3-7 |
| 15 | 4 03-8 | 4 04-4 | 3 52-6 | 1-5 | 0-4 | 7-5 | 2-1 | 13-5 | 3-7 |
| 16 | 4 04-0 | 4 04-7 | 3 52-9 | 1-6 | 0-4 | 7-6 | 2-1 | 13-6 | 3-7 |
| 17 | 4 04-3 | 4 04-9 | 3 53-1 | 1-7 | 0-5 | 7-7 | 2-1 | 13-7 | 3-8 |
| 18 | 4 04-5 | 4 05-2 | 3 53-4 | 1-8 | 0-5 | 7-8 | 2-1 | 13-8 | 3-8 |
| 19 | 4 04-8 | 4 05-4 | 3 53-6 | 1-9 | 0-5 | 7-9 | 2-2 | 13-9 | 3-8 |
| 20 | 4 05-0 | 4 05-7 | 3 53-8 | 2-0 | 0-6 | 8-0 | 2-2 | 14-0 | 3-9 |
| 21 | 4 05-3 | 4 05-9 | 3 54-1 | 2-1 | 0-6 | 8-1 | 2-2 | 14-1 | 3-9 |
| 22 | 4 05-5 | 4 06-2 | 3 54-3 | 2-2 | 0-6 | 8-2 | 2-3 | 14-2 | 3-9 |
| 23 | 4 05-8 | 4 06-4 | 3 54-6 | 2-3 | 0-6 | 8-3 | 2-3 | 14-3 | 3-9 |
| 24 | 4 06-0 | 4 06-7 | 3 54-8 | 2-4 | 0-7 | 8-4 | 2-3 | 14-4 | 4-0 |
| 25 | 4 06-3 | 4 06-9 | 3 55-0 | 2-5 | 0-7 | 8-5 | 2-3 | 14-5 | 4-0 |
| 26 | 4 06-5 | 4 07-2 | 3 55-3 | 2-6 | 0-7 | 8-6 | 2-4 | 14-6 | 4-0 |
| 27 | 4 06-8 | 4 07-4 | 3 55-5 | 2-7 | 0-7 | 8-7 | 2-4 | 14-7 | 4-0 |
| 28 | 4 07-0 | 4 07-7 | 3 55-7 | 2-8 | 0-8 | 8-8 | 2-4 | 14-8 | 4-1 |
| 29 | 4 07-3 | 4 07-9 | 3 56-0 | 2-9 | 0-8 | 8-9 | 2-4 | 14-9 | 4-1 |
| 30 | 4 07-5 | 4 08-2 | 3 56-2 | 3-0 | 0-8 | 9-0 | 2-5 | 15-0 | 4-1 |
| 31 | 4 07-8 | 4 08-4 | 3 56-5 | 3-1 | 0-9 | 9-1 | 2-5 | 15-1 | 4-2 |
| 32 | 4 08-0 | 4 08-7 | 3 56-7 | 3-2 | 0-9 | 9-2 | 2-5 | 15-2 | 4-2 |
| 33 | 4 08-3 | 4 08-9 | 3 56-9 | 3-3 | 0-9 | 9-3 | 2-6 | 15-3 | 4-2 |
| 34 | 4 08-5 | 4 09-2 | 3 57-2 | 3-4 | 0-9 | 9-4 | 2-6 | 15-4 | 4-2 |
| 35 | 4 08-8 | 4 09-4 | 3 57-4 | 3-5 | 1-0 | 9-5 | 2-6 | 15-5 | 4-3 |
| 36 | 4 09-0 | 4 09-7 | 3 57-7 | 3-6 | 1-0 | 9-6 | 2-6 | 15-6 | 4-3 |
| 37 | 4 09-3 | 4 09-9 | 3 57-9 | 3-7 | 1-0 | 9-7 | 2-7 | 15-7 | 4-3 |
| 38 | 4 09-5 | 4 10-2 | 3 58-1 | 3-8 | 1-0 | 9-8 | 2-7 | 15-8 | 4-3 |
| 39 | 4 09-8 | 4 10-4 | 3 58-4 | 3-9 | 1-1 | 9-9 | 2-7 | 15-9 | 4-4 |
| 40 | 4 10-0 | 4 10-7 | 3 58-6 | 4-0 | 1-1 | 10-0 | 2-8 | 16-0 | 4-4 |
| 41 | 4 10-3 | 4 10-9 | 3 58-8 | 4-1 | 1-1 | 10-1 | 2-8 | 16-1 | 4-4 |
| 42 | 4 10-5 | 4 11-2 | 3 59-1 | 4-2 | 1-2 | 10-2 | 2-8 | 16-2 | 4-5 |
| 43 | 4 10-8 | 4 11-4 | 3 59-3 | 4-3 | 1-2 | 10-3 | 2-8 | 16-3 | 4-5 |
| 44 | 4 11-0 | 4 11-7 | 3 59-6 | 4-4 | 1-2 | 10-4 | 2-9 | 16-4 | 4-5 |
| 45 | 4 11-3 | 4 11-9 | 3 59-8 | 4-5 | 1-2 | 10-5 | 2-9 | 16-5 | 4-5 |
| 46 | 4 11-5 | 4 12-2 | 4 00-0 | 4-6 | 1-3 | 10-6 | 2-9 | 16-6 | 4-6 |
| 47 | 4 11-8 | 4 12-4 | 4 00-3 | 4-7 | 1-3 | 10-7 | 2-9 | 16-7 | 4-6 |
| 48 | 4 12-0 | 4 12-7 | 4 00-5 | 4-8 | 1-3 | 10-8 | 3-0 | 16-8 | 4-6 |
| 49 | 4 12-3 | 4 12-9 | 4 00-8 | 4-9 | 1-3 | 10-9 | 3-0 | 16-9 | 4-6 |
| 50 | 4 12-5 | 4 13-2 | 4 01-0 | 5-0 | 1-4 | 11-0 | 3-0 | 17-0 | 4-7 |
| 51 | 4 12-8 | 4 13-4 | 4 01-2 | 5-1 | 1-4 | 11-1 | 3-1 | 17-1 | 4-7 |
| 52 | 4 13-0 | 4 13-7 | 4 01-5 | 5-2 | 1-4 | 11-2 | 3-1 | 17-2 | 4-7 |
| 53 | 4 13-3 | 4 13-9 | 4 01-7 | 5-3 | 1-5 | 11-3 | 3-1 | 17-3 | 4-8 |
| 54 | 4 13-5 | 4 14-2 | 4 02-0 | 5-4 | 1-5 | 11-4 | 3-1 | 17-4 | 4-8 |
| 55 | 4 13-8 | 4 14-4 | 4 02-2 | 5-5 | 1-5 | 11-5 | 3-2 | 17-5 | 4-8 |
| 56 | 4 14-0 | 4 14-7 | 4 02-4 | 5-6 | 1-5 | 11-6 | 3-2 | 17-6 | 4-8 |
| 57 | 4 14-3 | 4 14-9 | 4 02-7 | 5-7 | 1-6 | 11-7 | 3-2 | 17-7 | 4-9 |
| 58 | 4 14-5 | 4 15-2 | 4 02-9 | 5-8 | 1-6 | 11-8 | 3-2 | 17-8 | 4-9 |
| 59 | 4 14-8 | 4 15-4 | 4 03-1 | 5-9 | 1-6 | 11-9 | 3-3 | 17-9 | 4-9 |
| 60 | 4 15-0 | 4 15-7 | 4 03-4 | 6-0 | 1-7 | 12-0 | 3-3 | 18-0 | 5-0 |

| 17 | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | v or Corr ⁿ | v or Corr ⁿ | |
|----|-------------|--------|--------|------------------------|-----|------|------------------------|------------------------|-----|
| | | | | d | ' | " | | | |
| 00 | 4 15-0 | 4 15-7 | 4 03-4 | 0-0 | 0-0 | 6-0 | 1-8 | 12-0 | 3-5 |
| 01 | 4 15-3 | 4 15-9 | 4 03-6 | 0-1 | 0-0 | 6-1 | 1-8 | 12-1 | 3-5 |
| 02 | 4 15-5 | 4 16-2 | 4 03-9 | 0-2 | 0-1 | 6-2 | 1-8 | 12-2 | 3-6 |
| 03 | 4 15-8 | 4 16-5 | 4 04-1 | 0-3 | 0-1 | 6-3 | 1-8 | 12-3 | 3-6 |
| 04 | 4 16-0 | 4 16-7 | 4 04-3 | 0-4 | 0-1 | 6-4 | 1-9 | 12-4 | 3-6 |
| 05 | 4 16-3 | 4 17-0 | 4 04-6 | 0-5 | 0-1 | 6-5 | 1-9 | 12-5 | 3-6 |
| 06 | 4 16-5 | 4 17-2 | 4 04-8 | 0-6 | 0-2 | 6-6 | 1-9 | 12-6 | 3-7 |
| 07 | 4 16-8 | 4 17-5 | 4 05-1 | 0-7 | 0-2 | 6-7 | 2-0 | 12-7 | 3-7 |
| 08 | 4 17-0 | 4 17-7 | 4 05-3 | 0-8 | 0-2 | 6-8 | 2-0 | 12-8 | 3-7 |
| 09 | 4 17-3 | 4 18-0 | 4 05-5 | 0-9 | 0-3 | 6-9 | 2-0 | 12-9 | 3-8 |
| 10 | 4 17-5 | 4 18-2 | 4 05-8 | 1-0 | 0-3 | 7-0 | 2-0 | 13-0 | 3-8 |
| 11 | 4 17-8 | 4 18-5 | 4 06-0 | 1-1 | 0-3 | 7-1 | 2-1 | 13-1 | 3-8 |
| 12 | 4 18-0 | 4 18-7 | 4 06-2 | 1-2 | 0-4 | 7-2 | 2-1 | 13-2 | 3-9 |
| 13 | 4 18-3 | 4 19-0 | 4 06-5 | 1-3 | 0-4 | 7-3 | 2-1 | 13-3 | 3-9 |
| 14 | 4 18-5 | 4 19-2 | 4 06-7 | 1-4 | 0-4 | 7-4 | 2-2 | 13-4 | 3-9 |
| 15 | 4 18-8 | 4 19-5 | 4 07-0 | 1-5 | 0-4 | 7-5 | 2-2 | 13-5 | 3-9 |
| 16 | 4 19-0 | 4 19-7 | 4 07-2 | 1-6 | 0-5 | 7-6 | 2-2 | 13-6 | 4-0 |
| 17 | 4 19-3 | 4 20-0 | 4 07-4 | 1-7 | 0-5 | 7-7 | 2-2 | 13-7 | 4-0 |
| 18 | 4 19-5 | 4 20-2 | 4 07-7 | 1-8 | 0-5 | 7-8 | 2-3 | 13-8 | 4-0 |
| 19 | 4 19-8 | 4 20-5 | 4 07-9 | 1-9 | 0-6 | 7-9 | 2-3 | 13-9 | 4-1 |
| 20 | 4 20-0 | 4 20-7 | 4 08-2 | 2-0 | 0-6 | 8-0 | 2-3 | 14-0 | 4-1 |
| 21 | 4 20-3 | 4 21-0 | 4 08-4 | 2-1 | 0-6 | 8-1 | 2-4 | 14-1 | 4-1 |
| 22 | 4 20-5 | 4 21-2 | 4 08-6 | 2-2 | 0-6 | 8-2 | 2-4 | 14-2 | 4-1 |
| 23 | 4 20-8 | 4 21-5 | 4 08-9 | 2-3 | 0-7 | 8-3 | 2-4 | 14-3 | 4-2 |
| 24 | 4 21-0 | 4 21-7 | 4 09-1 | 2-4 | 0-7 | 8-4 | 2-5 | 14-4 | 4-2 |
| 25 | 4 21-3 | 4 22-0 | 4 09-3 | 2-5 | 0-7 | 8-5 | 2-5 | 14-5 | 4-2 |
| 26 | 4 21-5 | 4 22-2 | 4 09-6 | 2-6 | 0-8 | 8-6 | 2-5 | 14-6 | 4-3 |
| 27 | 4 21-8 | 4 22-5 | 4 09-8 | 2-7 | 0-8 | 8-7 | 2-5 | 14-7 | 4-3 |
| 28 | 4 22-0 | 4 22-7 | 4 10-1 | 2-8 | 0-8 | 8-8 | 2-6 | 14-8 | 4-3 |
| 29 | 4 22-3 | 4 23-0 | 4 10-3 | 2-9 | 0-8 | 8-9 | 2-6 | 14-9 | 4-3 |
| 30 | 4 22-5 | 4 23-2 | 4 10-5 | 3-0 | 0-9 | 9-0 | 2-6 | 15-0 | 4-4 |
| 31 | 4 22-8 | 4 23-5 | 4 10-8 | 3-1 | 0-9 | 9-1 | 2-7 | 15-1 | 4-4 |
| 32 | 4 23-0 | 4 23-7 | 4 11-0 | 3-2 | 0-9 | 9-2 | 2-7 | 15-2 | 4-4 |
| 33 | 4 23-3 | 4 24-0 | 4 11-3 | 3-3 | 1-0 | 9-3 | 2-7 | 15-3 | 4-5 |
| 34 | 4 23-5 | 4 24-2 | 4 11-5 | 3-4 | 1-0 | 9-4 | 2-7 | 15-4 | 4-5 |
| 35 | 4 23-8 | 4 24-5 | 4 11-7 | 3-5 | 1-0 | 9-5 | 2-8 | 15-5 | 4-5 |
| 36 | 4 24-0 | 4 24-7 | 4 12-0 | 3-6 | 1-1 | 9-6 | 2-8 | 15-6 | 4-6 |
| 37 | 4 24-3 | 4 25-0 | 4 12-2 | 3-7 | 1-1 | 9-7 | 2-8 | 15-7 | 4-6 |
| 38 | 4 24-5 | 4 25-2 | 4 12-5 | 3-8 | 1-1 | 9-8 | 2-9 | 15-8 | 4-6 |
| 39 | 4 24-8 | 4 25-5 | 4 12-7 | 3-9 | 1-1 | 9-9 | 2-9 | 15-9 | 4-6 |
| 40 | 4 25-0 | 4 25-7 | 4 12-9 | 4-0 | 1-2 | 10-0 | 2-9 | 16-0 | 4-7 |
| 41 | 4 25-3 | 4 26-0 | 4 13-2 | 4-1 | 1-2 | 10-1 | 2-9 | 16-1 | 4-7 |
| 42 | 4 25-5 | 4 26-2 | 4 13-4 | 4-2 | 1-2 | 10-2 | 3-0 | 16-2 | 4-7 |
| 43 | 4 25-8 | 4 26-5 | 4 13-6 | 4-3 | 1-3 | 10-3 | 3-0 | 16-3 | 4-8 |
| 44 | 4 26-0 | 4 26-7 | 4 13-9 | 4-4 | 1-3 | 10-4 | 3-0 | 16-4 | 4-8 |
| 45 | 4 26-3 | 4 27-0 | 4 14-1 | 4-5 | 1-3 | 10-5 | 3-1 | 16-5 | 4-8 |
| 46 | 4 26-5 | 4 27-2 | 4 14-4 | 4-6 | 1-3 | 10-6 | 3-1 | 16-6 | 4-8 |
| 47 | 4 26-8 | 4 27-5 | 4 14-6 | 4-7 | 1-4 | 10-7 | 3-1 | 16-7 | 4-9 |
| 48 | 4 27-0 | 4 27-7 | 4 14-8 | 4-8 | 1-4 | 10-8 | 3-2 | 16-8 | 4-9 |
| 49 | 4 27-3 | 4 28-0 | 4 15-1 | 4-9 | 1-4 | 10-9 | 3-2 | 16-9 | 4-9 |
| 50 | 4 27-5 | 4 28-2 | 4 15-3 | 5-0 | 1-5 | 11-0 | 3-2 | 17-0 | 5-0 |
| 51 | 4 27-8 | 4 28-5 | 4 15-6 | 5-1 | 1-5 | 11-1 | 3-2 | 17-1 | 5-0 |
| 52 | 4 28-0 | 4 28-7 | 4 15-8 | 5-2 | 1-5 | 11-2 | 3-3 | 17-2 | 5-0 |
| 53 | 4 28-3 | 4 29-0 | 4 16-0 | 5-3 | 1-5 | 11-3 | 3-3 | 17-3 | 5-0 |
| 54 | 4 28-5 | 4 29-2 | 4 16-3 | 5-4 | 1-6 | 11-4 | 3-3 | 17-4 | 5-1 |
| 55 | 4 28-8 | 4 29-5 | 4 16-5 | 5-5 | 1-6 | 11-5 | 3-4 | 17-5 | 5-1 |
| 56 | 4 29-0 | 4 29-7 | 4 16-7 | 5-6 | 1-6 | 11-6 | 3-4 | 17-6 | 5-1 |
| 57 | 4 29-3 | 4 30-0 | 4 17-0 | 5-7 | 1-7 | 11-7 | 3-4 | 17-7 | 5-2 |
| 58 | 4 29-5 | 4 30-2 | 4 17-2 | 5-8 | 1-7 | 11-8 | 3-4 | 17-8 | 5-2 |
| 59 | 4 29-8 | 4 30-5 | 4 17-5 | 5-9 | 1-7 | 11-9 | 3-5 | 17-9 | 5-2 |
| 60 | 4 30-0 | 4 30-7 | 4 17-7 | 6-0 | 1-8 | 12-0 | 3-5 | 18-0 | 5-3 |

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18°

INCREMENTS AND CORRECTIONS

19°

| 18 | SUN PLANETS | ARIES | MOON | U of Corr | | | | | |
|----|-------------|--------|--------|-----------|-----|------|-----|------|-----|
| | | | | d | ' | " | | | |
| 00 | 4 30-0 | 4 30-7 | 4 17-7 | 0-0 | 0-0 | 6-0 | 1-9 | 12-0 | 3-7 |
| 01 | 4 30-3 | 4 31-0 | 4 17-9 | 0-1 | 0-0 | 6-1 | 1-9 | 12-1 | 3-7 |
| 02 | 4 30-5 | 4 31-2 | 4 18-2 | 0-2 | 0-1 | 6-2 | 1-9 | 12-2 | 3-8 |
| 03 | 4 30-8 | 4 31-5 | 4 18-4 | 0-3 | 0-1 | 6-3 | 1-9 | 12-3 | 3-8 |
| 04 | 4 31-0 | 4 31-7 | 4 18-7 | 0-4 | 0-1 | 6-4 | 2-0 | 12-4 | 3-8 |
| 05 | 4 31-3 | 4 32-0 | 4 18-9 | 0-5 | 0-2 | 6-5 | 2-0 | 12-5 | 3-9 |
| 06 | 4 31-5 | 4 32-2 | 4 19-1 | 0-6 | 0-2 | 6-6 | 2-0 | 12-6 | 3-9 |
| 07 | 4 31-8 | 4 32-5 | 4 19-4 | 0-7 | 0-2 | 6-7 | 2-1 | 12-7 | 3-9 |
| 08 | 4 32-0 | 4 32-7 | 4 19-6 | 0-8 | 0-2 | 6-8 | 2-1 | 12-8 | 3-9 |
| 09 | 4 32-3 | 4 33-0 | 4 19-8 | 0-9 | 0-3 | 6-9 | 2-1 | 12-9 | 4-0 |
| 10 | 4 32-5 | 4 33-2 | 4 20-1 | 1-0 | 0-3 | 7-0 | 2-2 | 13-0 | 4-0 |
| 11 | 4 32-8 | 4 33-5 | 4 20-3 | 1-1 | 0-3 | 7-1 | 2-2 | 13-1 | 4-0 |
| 12 | 4 33-0 | 4 33-7 | 4 20-6 | 1-2 | 0-4 | 7-2 | 2-2 | 13-2 | 4-1 |
| 13 | 4 33-3 | 4 34-0 | 4 20-8 | 1-3 | 0-4 | 7-3 | 2-3 | 13-3 | 4-1 |
| 14 | 4 33-5 | 4 34-2 | 4 21-0 | 1-4 | 0-4 | 7-4 | 2-3 | 13-4 | 4-1 |
| 15 | 4 33-8 | 4 34-5 | 4 21-3 | 1-5 | 0-5 | 7-5 | 2-3 | 13-5 | 4-2 |
| 16 | 4 34-0 | 4 34-8 | 4 21-5 | 1-6 | 0-5 | 7-6 | 2-3 | 13-6 | 4-2 |
| 17 | 4 34-3 | 4 35-0 | 4 21-8 | 1-7 | 0-5 | 7-7 | 2-4 | 13-7 | 4-2 |
| 18 | 4 34-5 | 4 35-3 | 4 22-0 | 1-8 | 0-6 | 7-8 | 2-4 | 13-8 | 4-3 |
| 19 | 4 34-8 | 4 35-5 | 4 22-2 | 1-9 | 0-6 | 7-9 | 2-4 | 13-9 | 4-3 |
| 20 | 4 35-0 | 4 35-8 | 4 22-5 | 2-0 | 0-6 | 8-0 | 2-5 | 14-0 | 4-3 |
| 21 | 4 35-3 | 4 36-0 | 4 22-7 | 2-1 | 0-6 | 8-1 | 2-5 | 14-1 | 4-3 |
| 22 | 4 35-5 | 4 36-3 | 4 22-9 | 2-2 | 0-7 | 8-2 | 2-5 | 14-2 | 4-4 |
| 23 | 4 35-8 | 4 36-5 | 4 23-2 | 2-3 | 0-7 | 8-3 | 2-6 | 14-3 | 4-4 |
| 24 | 4 36-0 | 4 36-8 | 4 23-4 | 2-4 | 0-7 | 8-4 | 2-6 | 14-4 | 4-4 |
| 25 | 4 36-3 | 4 37-0 | 4 23-7 | 2-5 | 0-8 | 8-5 | 2-6 | 14-5 | 4-5 |
| 26 | 4 36-5 | 4 37-3 | 4 23-9 | 2-6 | 0-8 | 8-6 | 2-7 | 14-6 | 4-5 |
| 27 | 4 36-8 | 4 37-5 | 4 24-1 | 2-7 | 0-8 | 8-7 | 2-7 | 14-7 | 4-5 |
| 28 | 4 37-0 | 4 37-8 | 4 24-4 | 2-8 | 0-9 | 8-8 | 2-7 | 14-8 | 4-6 |
| 29 | 4 37-3 | 4 38-0 | 4 24-6 | 2-9 | 0-9 | 8-9 | 2-7 | 14-9 | 4-6 |
| 30 | 4 37-5 | 4 38-3 | 4 24-9 | 3-0 | 0-9 | 9-0 | 2-8 | 15-0 | 4-6 |
| 31 | 4 37-8 | 4 38-5 | 4 25-1 | 3-1 | 1-0 | 9-1 | 2-8 | 15-1 | 4-7 |
| 32 | 4 38-0 | 4 38-8 | 4 25-3 | 3-2 | 1-0 | 9-2 | 2-8 | 15-2 | 4-7 |
| 33 | 4 38-3 | 4 39-0 | 4 25-6 | 3-3 | 1-0 | 9-3 | 2-9 | 15-3 | 4-7 |
| 34 | 4 38-5 | 4 39-3 | 4 25-8 | 3-4 | 1-0 | 9-4 | 2-9 | 15-4 | 4-7 |
| 35 | 4 38-8 | 4 39-5 | 4 26-1 | 3-5 | 1-1 | 9-5 | 2-9 | 15-5 | 4-8 |
| 36 | 4 39-0 | 4 39-8 | 4 26-3 | 3-6 | 1-1 | 9-6 | 3-0 | 15-6 | 4-8 |
| 37 | 4 39-3 | 4 40-0 | 4 26-5 | 3-7 | 1-1 | 9-7 | 3-0 | 15-7 | 4-8 |
| 38 | 4 39-5 | 4 40-3 | 4 26-8 | 3-8 | 1-2 | 9-8 | 3-0 | 15-8 | 4-9 |
| 39 | 4 39-8 | 4 40-5 | 4 27-0 | 3-9 | 1-2 | 9-9 | 3-1 | 15-9 | 4-9 |
| 40 | 4 40-0 | 4 40-8 | 4 27-2 | 4-0 | 1-2 | 10-0 | 3-1 | 16-0 | 4-9 |
| 41 | 4 40-3 | 4 41-0 | 4 27-5 | 4-1 | 1-3 | 10-1 | 3-1 | 16-1 | 5-0 |
| 42 | 4 40-5 | 4 41-3 | 4 27-7 | 4-2 | 1-3 | 10-2 | 3-1 | 16-2 | 5-0 |
| 43 | 4 40-8 | 4 41-5 | 4 28-0 | 4-3 | 1-3 | 10-3 | 3-2 | 16-3 | 5-0 |
| 44 | 4 41-0 | 4 41-8 | 4 28-2 | 4-4 | 1-4 | 10-4 | 3-2 | 16-4 | 5-1 |
| 45 | 4 41-3 | 4 42-0 | 4 28-4 | 4-5 | 1-4 | 10-5 | 3-2 | 16-5 | 5-1 |
| 46 | 4 41-5 | 4 42-3 | 4 28-7 | 4-6 | 1-4 | 10-6 | 3-3 | 16-6 | 5-1 |
| 47 | 4 41-8 | 4 42-5 | 4 28-9 | 4-7 | 1-4 | 10-7 | 3-3 | 16-7 | 5-1 |
| 48 | 4 42-0 | 4 42-8 | 4 29-2 | 4-8 | 1-5 | 10-8 | 3-3 | 16-8 | 5-2 |
| 49 | 4 42-3 | 4 43-0 | 4 29-4 | 4-9 | 1-5 | 10-9 | 3-4 | 16-9 | 5-2 |
| 50 | 4 42-5 | 4 43-3 | 4 29-6 | 5-0 | 1-5 | 11-0 | 3-4 | 17-0 | 5-2 |
| 51 | 4 42-8 | 4 43-5 | 4 29-9 | 5-1 | 1-6 | 11-1 | 3-4 | 17-1 | 5-3 |
| 52 | 4 43-0 | 4 43-8 | 4 30-1 | 5-2 | 1-6 | 11-2 | 3-5 | 17-2 | 5-3 |
| 53 | 4 43-3 | 4 44-0 | 4 30-3 | 5-3 | 1-6 | 11-3 | 3-5 | 17-3 | 5-3 |
| 54 | 4 43-5 | 4 44-3 | 4 30-6 | 5-4 | 1-7 | 11-4 | 3-5 | 17-4 | 5-4 |
| 55 | 4 43-8 | 4 44-5 | 4 30-8 | 5-5 | 1-7 | 11-5 | 3-5 | 17-5 | 5-4 |
| 56 | 4 44-0 | 4 44-8 | 4 31-1 | 5-6 | 1-7 | 11-6 | 3-6 | 17-6 | 5-4 |
| 57 | 4 44-3 | 4 45-0 | 4 31-3 | 5-7 | 1-8 | 11-7 | 3-6 | 17-7 | 5-5 |
| 58 | 4 44-5 | 4 45-3 | 4 31-5 | 5-8 | 1-8 | 11-8 | 3-6 | 17-8 | 5-5 |
| 59 | 4 44-8 | 4 45-5 | 4 31-8 | 5-9 | 1-8 | 11-9 | 3-7 | 17-9 | 5-5 |
| 60 | 4 45-0 | 4 45-8 | 4 32-0 | 6-0 | 1-9 | 12-0 | 3-7 | 18-0 | 5-6 |

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| 19 | SUN PLANETS | ARIES | MOON | U of Corr | | | | | |
|----|-------------|--------|--------|-----------|-----|------|-----|------|-----|
| | | | | d | ' | " | | | |
| 00 | 4 45-0 | 4 45-8 | 4 32-0 | 0-0 | 0-0 | 6-0 | 2-0 | 12-0 | 3-9 |
| 01 | 4 45-3 | 4 46-0 | 4 32-3 | 0-1 | 0-0 | 6-1 | 2-0 | 12-1 | 3-9 |
| 02 | 4 45-5 | 4 46-3 | 4 32-5 | 0-2 | 0-1 | 6-2 | 2-0 | 12-2 | 4-0 |
| 03 | 4 45-8 | 4 46-5 | 4 32-7 | 0-3 | 0-1 | 6-3 | 2-0 | 12-3 | 4-0 |
| 04 | 4 46-0 | 4 46-8 | 4 33-0 | 0-4 | 0-1 | 6-4 | 2-1 | 12-4 | 4-0 |
| 05 | 4 46-3 | 4 47-0 | 4 33-2 | 0-5 | 0-2 | 6-5 | 2-1 | 12-5 | 4-1 |
| 06 | 4 46-5 | 4 47-3 | 4 33-4 | 0-6 | 0-2 | 6-6 | 2-1 | 12-6 | 4-1 |
| 07 | 4 46-8 | 4 47-5 | 4 33-7 | 0-7 | 0-2 | 6-7 | 2-2 | 12-7 | 4-1 |
| 08 | 4 47-0 | 4 47-8 | 4 33-9 | 0-8 | 0-3 | 6-8 | 2-2 | 12-8 | 4-2 |
| 09 | 4 47-3 | 4 48-0 | 4 34-2 | 0-9 | 0-3 | 6-9 | 2-2 | 12-9 | 4-2 |
| 10 | 4 47-5 | 4 48-3 | 4 34-4 | 1-0 | 0-3 | 7-0 | 2-3 | 13-0 | 4-2 |
| 11 | 4 47-8 | 4 48-5 | 4 34-6 | 1-1 | 0-4 | 7-1 | 2-3 | 13-1 | 4-3 |
| 12 | 4 48-0 | 4 48-8 | 4 34-9 | 1-2 | 0-4 | 7-2 | 2-3 | 13-2 | 4-3 |
| 13 | 4 48-3 | 4 49-0 | 4 35-1 | 1-3 | 0-4 | 7-3 | 2-4 | 13-3 | 4-3 |
| 14 | 4 48-5 | 4 49-3 | 4 35-4 | 1-4 | 0-5 | 7-4 | 2-4 | 13-4 | 4-4 |
| 15 | 4 48-8 | 4 49-5 | 4 35-6 | 1-5 | 0-5 | 7-5 | 2-4 | 13-5 | 4-4 |
| 16 | 4 49-0 | 4 49-8 | 4 35-8 | 1-6 | 0-5 | 7-6 | 2-5 | 13-6 | 4-4 |
| 17 | 4 49-3 | 4 50-0 | 4 36-1 | 1-7 | 0-6 | 7-7 | 2-5 | 13-7 | 4-5 |
| 18 | 4 49-5 | 4 50-3 | 4 36-3 | 1-8 | 0-6 | 7-8 | 2-5 | 13-8 | 4-5 |
| 19 | 4 49-8 | 4 50-5 | 4 36-6 | 1-9 | 0-6 | 7-9 | 2-6 | 13-9 | 4-5 |
| 20 | 4 50-0 | 4 50-8 | 4 36-8 | 2-0 | 0-7 | 8-0 | 2-6 | 14-0 | 4-6 |
| 21 | 4 50-3 | 4 51-0 | 4 37-0 | 2-1 | 0-7 | 8-1 | 2-6 | 14-1 | 4-6 |
| 22 | 4 50-5 | 4 51-3 | 4 37-3 | 2-2 | 0-7 | 8-2 | 2-7 | 14-2 | 4-6 |
| 23 | 4 50-8 | 4 51-5 | 4 37-5 | 2-3 | 0-7 | 8-3 | 2-7 | 14-3 | 4-6 |
| 24 | 4 51-0 | 4 51-8 | 4 37-7 | 2-4 | 0-8 | 8-4 | 2-7 | 14-4 | 4-7 |
| 25 | 4 51-3 | 4 52-0 | 4 38-0 | 2-5 | 0-8 | 8-5 | 2-8 | 14-5 | 4-7 |
| 26 | 4 51-5 | 4 52-3 | 4 38-2 | 2-6 | 0-8 | 8-6 | 2-8 | 14-6 | 4-7 |
| 27 | 4 51-8 | 4 52-5 | 4 38-5 | 2-7 | 0-9 | 8-7 | 2-8 | 14-7 | 4-8 |
| 28 | 4 52-0 | 4 52-8 | 4 38-7 | 2-8 | 0-9 | 8-8 | 2-9 | 14-8 | 4-8 |
| 29 | 4 52-3 | 4 53-1 | 4 38-9 | 2-9 | 0-9 | 8-9 | 2-9 | 14-9 | 4-8 |
| 30 | 4 52-5 | 4 53-3 | 4 39-2 | 3-0 | 1-0 | 9-0 | 2-9 | 15-0 | 4-9 |
| 31 | 4 52-8 | 4 53-6 | 4 39-4 | 3-1 | 1-0 | 9-1 | 3-0 | 15-1 | 4-9 |
| 32 | 4 53-0 | 4 53-8 | 4 39-7 | 3-2 | 1-0 | 9-2 | 3-0 | 15-2 | 4-9 |
| 33 | 4 53-3 | 4 54-1 | 4 39-9 | 3-3 | 1-1 | 9-3 | 3-0 | 15-3 | 5-0 |
| 34 | 4 53-5 | 4 54-3 | 4 40-1 | 3-4 | 1-1 | 9-4 | 3-1 | 15-4 | 5-0 |
| 35 | 4 53-8 | 4 54-6 | 4 40-4 | 3-5 | 1-1 | 9-5 | 3-1 | 15-5 | 5-0 |
| 36 | 4 54-0 | 4 54-8 | 4 40-6 | 3-6 | 1-2 | 9-6 | 3-1 | 15-6 | 5-1 |
| 37 | 4 54-3 | 4 55-1 | 4 40-8 | 3-7 | 1-2 | 9-7 | 3-2 | 15-7 | 5-1 |
| 38 | 4 54-5 | 4 55-3 | 4 41-1 | 3-8 | 1-2 | 9-8 | 3-2 | 15-8 | 5-1 |
| 39 | 4 54-8 | 4 55-6 | 4 41-3 | 3-9 | 1-3 | 9-9 | 3-2 | 15-9 | 5-2 |
| 40 | 4 55-0 | 4 55-8 | 4 41-6 | 4-0 | 1-3 | 10-0 | 3-3 | 16-0 | 5-2 |
| 41 | 4 55-3 | 4 56-1 | 4 41-8 | 4-1 | 1-3 | 10-1 | 3-3 | 16-1 | 5-2 |
| 42 | 4 55-5 | 4 56-3 | 4 42-0 | 4-2 | 1-4 | 10-2 | 3-3 | 16-2 | 5-3 |
| 43 | 4 55-8 | 4 56-6 | 4 42-3 | 4-3 | 1-4 | 10-3 | 3-3 | 16-3 | 5-3 |
| 44 | 4 56-0 | 4 56-8 | 4 42-5 | 4-4 | 1-4 | 10-4 | 3-4 | 16-4 | 5-3 |
| 45 | 4 56-3 | 4 57-1 | 4 42-8 | 4-5 | 1-5 | 10-5 | 3-4 | 16-5 | 5-4 |
| 46 | 4 56-5 | 4 57-3 | 4 43-0 | 4-6 | 1-5 | 10-6 | 3-4 | 16-6 | 5-4 |
| 47 | 4 56-8 | 4 57-6 | 4 43-2 | 4-7 | 1-5 | 10-7 | 3-5 | 16-7 | 5-4 |
| 48 | 4 57-0 | 4 57-8 | 4 43-5 | 4-8 | 1-6 | 10-8 | 3-5 | 16-8 | 5-5 |
| 49 | 4 57-3 | 4 58-1 | 4 43-7 | 4-9 | 1-6 | 10-9 | 3-5 | 16-9 | 5-5 |
| 50 | 4 57-5 | 4 58-3 | 4 43-9 | 5-0 | 1-6 | 11-0 | 3-6 | 17-0 | 5-5 |
| 51 | 4 57-8 | 4 58-6 | 4 44-2 | 5-1 | 1-7 | 11-1 | 3-6 | 17-1 | 5-6 |
| 52 | 4 58-0 | 4 58-8 | 4 44-4 | 5-2 | 1-7 | 11-2 | 3-6 | 17-2 | 5-6 |
| 53 | 4 58-3 | 4 59-1 | 4 44-7 | 5-3 | 1-7 | 11-3 | 3-7 | 17-3 | 5-6 |
| 54 | 4 58-5 | 4 59-3 | 4 44-9 | 5-4 | 1-8 | 11-4 | 3-7 | 17-4 | 5-7 |
| 55 | 4 58-8 | 4 59-6 | 4 45-1 | 5-5 | 1-8 | 11-5 | 3-7 | 17-5 | 5-7 |
| 56 | 4 59-0 | 4 59-8 | 4 45-4 | 5-6 | 1-8 | 11-6 | 3-8 | 17-6 | 5-7 |
| 57 | 4 59-3 | 5 00-1 | 4 45-6 | 5-7 | 1-9 | 11-7 | 3-8 | 17-7 | 5-8 |
| 58 | 4 59-5 | 5 00-3 | 4 45-9 | 5-8 | 1-9 | 11-8 | 3-8 | 17-8 | 5-8 |
| 59 | 4 59-8 | 5 00-6 | 4 46-1 | 5-9 | 1-9 | 11-9 | 3-9 | 17-9 | 5-8 |
| 60 | 5 00-0 | 5 00-8 | 4 46-3 | 6-0 | 2-0 | 12-0 | 3-9 | 18-0 | 5-9 |



20^m

INCREMENTS AND CORRECTIONS

21^m

| 20 | SUN PLANETS | ARIES | MOON | ° or Corr | | | 21 | SUN PLANETS | ARIES | MOON | ° or Corr | | | | | | | | |
|----|-------------|--------|--------|-----------|-----|------|-----|-------------|-------|------|-----------|--------|--------|-----|-----|------|-----|------|-----|
| | | | | d | ' | " | | | | | d | ' | " | d | ' | " | | | |
| 00 | 5 00-0 | 5 00-8 | 4 46-3 | 0-0 | 0-0 | 6-0 | 2-1 | 12-0 | 4-1 | 00 | 5 15-0 | 5 15-9 | 5 00-7 | 0-0 | 0-0 | 6-0 | 2-2 | 12-0 | 4-3 |
| 01 | 5 00-3 | 5 01-1 | 4 46-6 | 0-1 | 0-0 | 6-1 | 2-1 | 12-1 | 4-1 | 01 | 5 15-3 | 5 16-1 | 5 00-9 | 0-1 | 0-0 | 6-1 | 2-2 | 12-1 | 4-3 |
| 02 | 5 00-5 | 5 01-3 | 4 46-8 | 0-2 | 0-1 | 6-2 | 2-1 | 12-2 | 4-2 | 02 | 5 15-5 | 5 16-4 | 5 01-1 | 0-2 | 0-1 | 6-2 | 2-2 | 12-2 | 4-4 |
| 03 | 5 00-8 | 5 01-6 | 4 47-0 | 0-3 | 0-1 | 6-3 | 2-2 | 12-3 | 4-2 | 03 | 5 15-8 | 5 16-6 | 5 01-4 | 0-3 | 0-1 | 6-3 | 2-3 | 12-3 | 4-4 |
| 04 | 5 01-0 | 5 01-8 | 4 47-3 | 0-4 | 0-1 | 6-4 | 2-2 | 12-4 | 4-2 | 04 | 5 16-0 | 5 16-9 | 5 01-6 | 0-4 | 0-1 | 6-4 | 2-3 | 12-4 | 4-4 |
| 05 | 5 01-3 | 5 02-1 | 4 47-5 | 0-5 | 0-2 | 6-5 | 2-2 | 12-5 | 4-3 | 05 | 5 16-3 | 5 17-1 | 5 01-8 | 0-5 | 0-2 | 6-5 | 2-3 | 12-5 | 4-5 |
| 06 | 5 01-5 | 5 02-3 | 4 47-8 | 0-6 | 0-2 | 6-6 | 2-3 | 12-6 | 4-3 | 06 | 5 16-5 | 5 17-4 | 5 02-1 | 0-6 | 0-2 | 6-6 | 2-4 | 12-6 | 4-5 |
| 07 | 5 01-8 | 5 02-6 | 4 48-0 | 0-7 | 0-2 | 6-7 | 2-3 | 12-7 | 4-3 | 07 | 5 16-8 | 5 17-6 | 5 02-3 | 0-7 | 0-3 | 6-7 | 2-4 | 12-7 | 4-6 |
| 08 | 5 02-0 | 5 02-8 | 4 48-2 | 0-8 | 0-3 | 6-8 | 2-3 | 12-8 | 4-4 | 08 | 5 17-0 | 5 17-9 | 5 02-6 | 0-8 | 0-3 | 6-8 | 2-4 | 12-8 | 4-6 |
| 09 | 5 02-3 | 5 03-1 | 4 48-5 | 0-9 | 0-3 | 6-9 | 2-4 | 12-9 | 4-4 | 09 | 5 17-3 | 5 18-1 | 5 02-8 | 0-9 | 0-3 | 6-9 | 2-5 | 12-9 | 4-6 |
| 10 | 5 02-5 | 5 03-3 | 4 48-7 | 1-0 | 0-3 | 7-0 | 2-4 | 13-0 | 4-4 | 10 | 5 17-5 | 5 18-4 | 5 03-0 | 1-0 | 0-4 | 7-0 | 2-5 | 13-0 | 4-7 |
| 11 | 5 02-8 | 5 03-6 | 4 49-0 | 1-1 | 0-4 | 7-1 | 2-4 | 13-1 | 4-5 | 11 | 5 17-8 | 5 18-6 | 5 03-3 | 1-1 | 0-4 | 7-1 | 2-5 | 13-1 | 4-7 |
| 12 | 5 03-0 | 5 03-8 | 4 49-2 | 1-2 | 0-4 | 7-2 | 2-5 | 13-2 | 4-5 | 12 | 5 18-0 | 5 18-9 | 5 03-5 | 1-2 | 0-4 | 7-2 | 2-6 | 13-2 | 4-7 |
| 13 | 5 03-3 | 5 04-1 | 4 49-4 | 1-3 | 0-4 | 7-3 | 2-5 | 13-3 | 4-5 | 13 | 5 18-3 | 5 19-1 | 5 03-8 | 1-3 | 0-5 | 7-3 | 2-6 | 13-3 | 4-8 |
| 14 | 5 03-5 | 5 04-3 | 4 49-7 | 1-4 | 0-5 | 7-4 | 2-5 | 13-4 | 4-6 | 14 | 5 18-5 | 5 19-4 | 5 04-0 | 1-4 | 0-5 | 7-4 | 2-7 | 13-4 | 4-8 |
| 15 | 5 03-8 | 5 04-6 | 4 49-9 | 1-5 | 0-5 | 7-5 | 2-6 | 13-5 | 4-6 | 15 | 5 18-8 | 5 19-6 | 5 04-2 | 1-5 | 0-5 | 7-5 | 2-7 | 13-5 | 4-8 |
| 16 | 5 04-0 | 5 04-8 | 4 50-2 | 1-6 | 0-5 | 7-6 | 2-6 | 13-6 | 4-6 | 16 | 5 19-0 | 5 19-9 | 5 04-5 | 1-6 | 0-6 | 7-6 | 2-7 | 13-6 | 4-9 |
| 17 | 5 04-3 | 5 05-1 | 4 50-4 | 1-7 | 0-6 | 7-7 | 2-6 | 13-7 | 4-7 | 17 | 5 19-3 | 5 20-1 | 5 04-7 | 1-7 | 0-6 | 7-7 | 2-8 | 13-7 | 4-9 |
| 18 | 5 04-5 | 5 05-3 | 4 50-6 | 1-8 | 0-6 | 7-8 | 2-7 | 13-8 | 4-7 | 18 | 5 19-5 | 5 20-4 | 5 04-9 | 1-8 | 0-6 | 7-8 | 2-8 | 13-8 | 4-9 |
| 19 | 5 04-8 | 5 05-6 | 4 50-9 | 1-9 | 0-6 | 7-9 | 2-7 | 13-9 | 4-7 | 19 | 5 19-8 | 5 20-6 | 5 05-2 | 1-9 | 0-7 | 7-9 | 2-8 | 13-9 | 5-0 |
| 20 | 5 05-0 | 5 05-8 | 4 51-1 | 2-0 | 0-7 | 8-0 | 2-7 | 14-0 | 4-8 | 20 | 5 20-0 | 5 20-9 | 5 05-4 | 2-0 | 0-7 | 8-0 | 2-9 | 14-0 | 5-0 |
| 21 | 5 05-3 | 5 06-1 | 4 51-3 | 2-1 | 0-7 | 8-1 | 2-8 | 14-1 | 4-8 | 21 | 5 20-3 | 5 21-1 | 5 05-7 | 2-1 | 0-8 | 8-1 | 2-9 | 14-1 | 5-1 |
| 22 | 5 05-5 | 5 06-3 | 4 51-6 | 2-2 | 0-8 | 8-2 | 2-8 | 14-2 | 4-9 | 22 | 5 20-5 | 5 21-4 | 5 05-9 | 2-2 | 0-8 | 8-2 | 2-9 | 14-2 | 5-1 |
| 23 | 5 05-8 | 5 06-6 | 4 51-8 | 2-3 | 0-8 | 8-3 | 2-8 | 14-3 | 4-9 | 23 | 5 20-8 | 5 21-6 | 5 06-1 | 2-3 | 0-8 | 8-3 | 3-0 | 14-3 | 5-1 |
| 24 | 5 06-0 | 5 06-8 | 4 52-1 | 2-4 | 0-8 | 8-4 | 2-9 | 14-4 | 4-9 | 24 | 5 21-0 | 5 21-9 | 5 06-4 | 2-4 | 0-9 | 8-4 | 3-0 | 14-4 | 5-2 |
| 25 | 5 06-3 | 5 07-1 | 4 52-3 | 2-5 | 0-9 | 8-5 | 2-9 | 14-5 | 5-0 | 25 | 5 21-3 | 5 22-1 | 5 06-6 | 2-5 | 0-9 | 8-5 | 3-0 | 14-5 | 5-2 |
| 26 | 5 06-5 | 5 07-3 | 4 52-5 | 2-6 | 0-9 | 8-6 | 2-9 | 14-6 | 5-0 | 26 | 5 21-5 | 5 22-4 | 5 06-9 | 2-6 | 0-9 | 8-6 | 3-1 | 14-6 | 5-2 |
| 27 | 5 06-8 | 5 07-6 | 4 52-8 | 2-7 | 0-9 | 8-7 | 3-0 | 14-7 | 5-0 | 27 | 5 21-8 | 5 22-6 | 5 07-1 | 2-7 | 1-0 | 8-7 | 3-1 | 14-7 | 5-3 |
| 28 | 5 07-0 | 5 07-8 | 4 53-0 | 2-8 | 1-0 | 8-8 | 3-0 | 14-8 | 5-1 | 28 | 5 22-0 | 5 22-9 | 5 07-3 | 2-8 | 1-0 | 8-8 | 3-2 | 14-8 | 5-3 |
| 29 | 5 07-3 | 5 08-1 | 4 53-3 | 2-9 | 1-0 | 8-9 | 3-0 | 14-9 | 5-1 | 29 | 5 22-3 | 5 23-1 | 5 07-6 | 2-9 | 1-0 | 8-9 | 3-2 | 14-9 | 5-3 |
| 30 | 5 07-5 | 5 08-3 | 4 53-5 | 3-0 | 1-0 | 9-0 | 3-1 | 15-0 | 5-1 | 30 | 5 22-5 | 5 23-4 | 5 07-8 | 3-0 | 1-1 | 9-0 | 3-2 | 15-0 | 5-4 |
| 31 | 5 07-8 | 5 08-6 | 4 53-7 | 3-1 | 1-1 | 9-1 | 3-1 | 15-1 | 5-2 | 31 | 5 22-8 | 5 23-6 | 5 08-0 | 3-1 | 1-1 | 9-1 | 3-3 | 15-1 | 5-4 |
| 32 | 5 08-0 | 5 08-8 | 4 54-0 | 3-2 | 1-1 | 9-2 | 3-1 | 15-2 | 5-2 | 32 | 5 23-0 | 5 23-9 | 5 08-3 | 3-2 | 1-1 | 9-2 | 3-3 | 15-2 | 5-4 |
| 33 | 5 08-3 | 5 09-1 | 4 54-2 | 3-3 | 1-1 | 9-3 | 3-2 | 15-3 | 5-2 | 33 | 5 23-3 | 5 24-1 | 5 08-5 | 3-3 | 1-2 | 9-3 | 3-3 | 15-3 | 5-5 |
| 34 | 5 08-5 | 5 09-3 | 4 54-4 | 3-4 | 1-2 | 9-4 | 3-2 | 15-4 | 5-3 | 34 | 5 23-5 | 5 24-4 | 5 08-8 | 3-4 | 1-2 | 9-4 | 3-4 | 15-4 | 5-5 |
| 35 | 5 08-8 | 5 09-6 | 4 54-7 | 3-5 | 1-2 | 9-5 | 3-2 | 15-5 | 5-3 | 35 | 5 23-8 | 5 24-6 | 5 09-0 | 3-5 | 1-3 | 9-5 | 3-4 | 15-5 | 5-6 |
| 36 | 5 09-0 | 5 09-8 | 4 54-9 | 3-6 | 1-2 | 9-6 | 3-3 | 15-6 | 5-3 | 36 | 5 24-0 | 5 24-9 | 5 09-2 | 3-6 | 1-3 | 9-6 | 3-4 | 15-6 | 5-6 |
| 37 | 5 09-3 | 5 10-1 | 4 55-2 | 3-7 | 1-3 | 9-7 | 3-3 | 15-7 | 5-4 | 37 | 5 24-3 | 5 25-1 | 5 09-5 | 3-7 | 1-3 | 9-7 | 3-5 | 15-7 | 5-6 |
| 38 | 5 09-5 | 5 10-3 | 4 55-4 | 3-8 | 1-3 | 9-8 | 3-3 | 15-8 | 5-4 | 38 | 5 24-5 | 5 25-4 | 5 09-7 | 3-8 | 1-4 | 9-8 | 3-5 | 15-8 | 5-7 |
| 39 | 5 09-8 | 5 10-6 | 4 55-6 | 3-9 | 1-3 | 9-9 | 3-4 | 15-9 | 5-4 | 39 | 5 24-8 | 5 25-6 | 5 10-0 | 3-9 | 1-4 | 9-9 | 3-5 | 15-9 | 5-7 |
| 40 | 5 10-0 | 5 10-8 | 4 55-9 | 4-0 | 1-4 | 10-0 | 3-4 | 16-0 | 5-5 | 40 | 5 25-0 | 5 25-9 | 5 10-2 | 4-0 | 1-4 | 10-0 | 3-6 | 16-0 | 5-7 |
| 41 | 5 10-3 | 5 11-1 | 4 56-1 | 4-1 | 1-4 | 10-1 | 3-5 | 16-1 | 5-5 | 41 | 5 25-3 | 5 26-1 | 5 10-4 | 4-1 | 1-5 | 10-1 | 3-6 | 16-1 | 5-8 |
| 42 | 5 10-5 | 5 11-4 | 4 56-4 | 4-2 | 1-4 | 10-2 | 3-5 | 16-2 | 5-5 | 42 | 5 25-5 | 5 26-4 | 5 10-7 | 4-2 | 1-5 | 10-2 | 3-7 | 16-2 | 5-8 |
| 43 | 5 10-8 | 5 11-6 | 4 56-6 | 4-3 | 1-5 | 10-3 | 3-5 | 16-3 | 5-6 | 43 | 5 25-8 | 5 26-6 | 5 10-9 | 4-3 | 1-5 | 10-3 | 3-7 | 16-3 | 5-8 |
| 44 | 5 11-0 | 5 11-9 | 4 56-8 | 4-4 | 1-5 | 10-4 | 3-6 | 16-4 | 5-6 | 44 | 5 26-0 | 5 26-9 | 5 11-1 | 4-4 | 1-6 | 10-4 | 3-7 | 16-4 | 5-9 |
| 45 | 5 11-3 | 5 12-1 | 4 57-1 | 4-5 | 1-5 | 10-5 | 3-6 | 16-5 | 5-6 | 45 | 5 26-3 | 5 27-1 | 5 11-4 | 4-5 | 1-6 | 10-5 | 3-8 | 16-5 | 5-9 |
| 46 | 5 11-5 | 5 12-4 | 4 57-3 | 4-6 | 1-6 | 10-6 | 3-6 | 16-6 | 5-7 | 46 | 5 26-5 | 5 27-4 | 5 11-6 | 4-6 | 1-6 | 10-6 | 3-8 | 16-6 | 5-9 |
| 47 | 5 11-8 | 5 12-6 | 4 57-5 | 4-7 | 1-6 | 10-7 | 3-7 | 16-7 | 5-7 | 47 | 5 26-8 | 5 27-6 | 5 11-9 | 4-7 | 1-7 | 10-7 | 3-8 | 16-7 | 6-0 |
| 48 | 5 12-0 | 5 12-9 | 4 57-8 | 4-8 | 1-6 | 10-8 | 3-7 | 16-8 | 5-7 | 48 | 5 27-0 | 5 27-9 | 5 12-1 | 4-8 | 1-7 | 10-8 | 3-9 | 16-8 | 6-0 |
| 49 | 5 12-3 | 5 13-1 | 4 58-0 | 4-9 | 1-7 | 10-9 | 3-7 | 16-9 | 5-8 | 49 | 5 27-3 | 5 28-1 | 5 12-3 | 4-9 | 1-8 | 10-9 | 3-9 | 16-9 | 6-1 |
| 50 | 5 12-5 | 5 13-4 | 4 58-3 | 5-0 | 1-7 | 11-0 | 3-8 | 17-0 | 5-8 | 50 | 5 27-5 | 5 28-4 | 5 12-6 | 5-0 | 1-8 | 11-0 | 3-9 | 17-0 | 6-1 |
| 51 | 5 12-8 | 5 13-6 | 4 58-5 | 5-1 | 1-7 | 11-1 | 3-8 | 17-1 | 5-8 | 51 | 5 27-8 | 5 28-6 | 5 12-8 | 5-1 | 1-8 | 11-1 | 4-0 | 17-1 | 6-1 |
| 52 | 5 13-0 | 5 13-9 | 4 58-7 | 5-2 | 1-8 | 11-2 | 3-8 | 17-2 | 5-9 | 52 | 5 28-0 | 5 28-9 | 5 13-1 | 5-2 | 1-9 | 11-2 | 4-0 | 17-2 | 6-2 |
| 53 | 5 13-3 | 5 14-1 | 4 59-0 | 5-3 | 1-8 | 11-3 | 3-9 | 17-3 | 5-9 | 53 | 5 28-3 | 5 29-1 | 5 13-3 | 5-3 | 1-9 | 11-3 | 4-0 | 17-3 | 6-2 |
| 54 | 5 13-5 | 5 14-4 | 4 59-2 | 5-4 | 1-8 | 11-4 | 3-9 | 17-4 | 5-9 | 54 | 5 28-5 | 5 29-4 | 5 13-5 | 5-4 | 1-9 | 11-4 | 4-1 | 17-4 | 6-2 |
| 55 | 5 13-8 | 5 14-6 | 4 59-5 | 5-5 | 1-9 | 11-5 | 3-9 | 17-5 | 6-0 | 55 | 5 28-8 | 5 29-7 | 5 13-8 | 5-5 | 2-0 | 11-5 | 4-1 | 17-5 | 6-3 |
| 56 | 5 14-0 | 5 14-9 | 4 59-7 | 5-6 | 1-9 | 11-6 | 4-0 | 17-6 | 6-0 | 56 | 5 29-0 | 5 29-9 | 5 14-0 | 5-6 | 2-0 | 11-6 | 4-2 | 17-6 | 6-3 |
| 57 | 5 14-3 | 5 15-1 | 4 59-9 | 5-7 | 1-9 | 11-7 | 4-0 | 17-7 | 6-0 | 57 | 5 29-3 | 5 30-2 | 5 14-3 | 5-7 | 2-0 | 11-7 | 4-2 | 17-7 | 6-3 |
| 58 | 5 14-5 | 5 15-4 | 5 00-2 | 5-8 | 2-0 | 11-8 | 4-0 | 17-8 | 6-1 | 58 | 5 29-5 | 5 30-4 | 5 14-5 | 5-8 | 2-1 | 11-8 | 4-2 | 17-8 | 6-4 |
| 59 | 5 14-8 | 5 15-6 | 5 00-4 | 5-9 | 2-0 | 11-9 | 4-1 | 17-9 | 6-1 | 59 | 5 29-8 | 5 30-7 | 5 14-7 | 5-9 | 2-1 | 11-9 | 4-3 | 17-9 | 6-4 |
| 60 | 5 15-0 | 5 15-9 | 5 00-7 | 6-0 | 2-1 | 12-0 | 4-1 | 18-0 | 6-2 | 60 | 5 30-0 | 5 30-9 | 5 15-0 | 6-0 | 2-2 | 12-0 | 4-3 | 18-0 | 6-5 |



24^m

INCREMENTS AND CORRECTIONS

25^m

| 24 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | 25 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | |
|-----------------|-------------|--------|--------|------------------------|-----|------|-----------------|-------------|-------|------|------------------------|------|-----|------|-----|
| | | | | d | ' | " | | | | | d | ' | " | d | ' |
| 00 | 6 00-0 | 6 01-0 | 5 43-6 | 0-0 | 0-0 | 6-0 | 2-5 | 12-0 | 4-9 | 0-0 | 0-0 | 6-0 | 2-6 | 12-0 | 5-1 |
| 01 | 6 00-3 | 6 01-2 | 5 43-8 | 0-1 | 0-0 | 6-1 | 2-5 | 12-1 | 4-9 | 0-1 | 0-0 | 6-1 | 2-6 | 12-1 | 5-1 |
| 02 | 6 00-5 | 6 01-5 | 5 44-1 | 0-2 | 0-1 | 6-2 | 2-5 | 12-2 | 5-0 | 0-2 | 0-1 | 6-2 | 2-6 | 12-2 | 5-2 |
| 03 | 6 00-8 | 6 01-7 | 5 44-3 | 0-3 | 0-1 | 6-3 | 2-6 | 12-3 | 5-0 | 0-3 | 0-1 | 6-3 | 2-7 | 12-3 | 5-2 |
| 04 | 6 01-0 | 6 02-0 | 5 44-6 | 0-4 | 0-2 | 6-4 | 2-6 | 12-4 | 5-1 | 0-4 | 0-2 | 6-4 | 2-7 | 12-4 | 5-3 |
| 05 | 6 01-3 | 6 02-2 | 5 44-8 | 0-5 | 0-2 | 6-5 | 2-7 | 12-5 | 5-1 | 0-5 | 0-2 | 6-5 | 2-8 | 12-5 | 5-3 |
| 06 | 6 01-5 | 6 02-5 | 5 45-0 | 0-6 | 0-2 | 6-6 | 2-7 | 12-6 | 5-1 | 0-6 | 0-3 | 6-6 | 2-8 | 12-6 | 5-4 |
| 07 | 6 01-8 | 6 02-7 | 5 45-3 | 0-7 | 0-3 | 6-7 | 2-7 | 12-7 | 5-2 | 0-7 | 0-3 | 6-7 | 2-8 | 12-7 | 5-4 |
| 08 | 6 02-0 | 6 03-0 | 5 45-5 | 0-8 | 0-3 | 6-8 | 2-8 | 12-8 | 5-2 | 0-8 | 0-3 | 6-8 | 2-9 | 12-8 | 5-4 |
| 09 | 6 02-3 | 6 03-2 | 5 45-7 | 0-9 | 0-4 | 6-9 | 2-8 | 12-9 | 5-3 | 0-9 | 0-4 | 6-9 | 2-9 | 12-9 | 5-5 |
| 10 | 6 02-5 | 6 03-5 | 5 46-0 | 1-0 | 0-4 | 7-0 | 2-9 | 13-0 | 5-3 | 1-0 | 0-4 | 7-0 | 3-0 | 13-0 | 5-5 |
| 11 | 6 02-8 | 6 03-7 | 5 46-2 | 1-1 | 0-4 | 7-1 | 2-9 | 13-1 | 5-3 | 1-1 | 0-5 | 7-1 | 3-0 | 13-1 | 5-6 |
| 12 | 6 03-0 | 6 04-0 | 5 46-5 | 1-2 | 0-5 | 7-2 | 2-9 | 13-2 | 5-4 | 1-2 | 0-5 | 7-2 | 3-1 | 13-2 | 5-6 |
| 13 | 6 03-3 | 6 04-2 | 5 46-7 | 1-3 | 0-5 | 7-3 | 3-0 | 13-3 | 5-4 | 1-3 | 0-6 | 7-3 | 3-1 | 13-3 | 5-7 |
| 14 | 6 03-5 | 6 04-5 | 5 46-9 | 1-4 | 0-6 | 7-4 | 3-0 | 13-4 | 5-5 | 1-4 | 0-6 | 7-4 | 3-1 | 13-4 | 5-7 |
| 15 | 6 03-8 | 6 04-7 | 5 47-2 | 1-5 | 0-6 | 7-5 | 3-1 | 13-5 | 5-5 | 1-5 | 0-6 | 7-5 | 3-2 | 13-5 | 5-7 |
| 16 | 6 04-0 | 6 05-0 | 5 47-4 | 1-6 | 0-7 | 7-6 | 3-1 | 13-6 | 5-6 | 1-6 | 0-7 | 7-6 | 3-2 | 13-6 | 5-8 |
| 17 | 6 04-3 | 6 05-2 | 5 47-7 | 1-7 | 0-7 | 7-7 | 3-1 | 13-7 | 5-6 | 1-7 | 0-7 | 7-7 | 3-3 | 13-7 | 5-8 |
| 18 | 6 04-5 | 6 05-5 | 5 47-9 | 1-8 | 0-7 | 7-8 | 3-2 | 13-8 | 5-6 | 1-8 | 0-8 | 7-8 | 3-3 | 13-8 | 5-9 |
| 19 | 6 04-8 | 6 05-7 | 5 48-1 | 1-9 | 0-8 | 7-9 | 3-2 | 13-9 | 5-7 | 1-9 | 0-8 | 7-9 | 3-4 | 13-9 | 5-9 |
| 20 | 6 05-0 | 6 06-0 | 5 48-4 | 2-0 | 0-8 | 8-0 | 3-3 | 14-0 | 5-7 | 2-0 | 0-9 | 8-0 | 3-4 | 14-0 | 6-0 |
| 21 | 6 05-3 | 6 06-3 | 5 48-6 | 2-1 | 0-9 | 8-1 | 3-3 | 14-1 | 5-8 | 2-1 | 0-9 | 8-1 | 3-4 | 14-1 | 6-0 |
| 22 | 6 05-5 | 6 06-5 | 5 48-8 | 2-2 | 0-9 | 8-2 | 3-3 | 14-2 | 5-8 | 2-2 | 0-9 | 8-2 | 3-5 | 14-2 | 6-0 |
| 23 | 6 05-8 | 6 06-8 | 5 49-1 | 2-3 | 0-9 | 8-3 | 3-4 | 14-3 | 5-8 | 2-3 | 1-0 | 8-3 | 3-5 | 14-3 | 6-1 |
| 24 | 6 06-0 | 6 07-0 | 5 49-3 | 2-4 | 1-0 | 8-4 | 3-4 | 14-4 | 5-9 | 2-4 | 1-0 | 8-4 | 3-6 | 14-4 | 6-1 |
| 25 | 6 06-3 | 6 07-3 | 5 49-6 | 2-5 | 1-0 | 8-5 | 3-5 | 14-5 | 5-9 | 2-5 | 1-1 | 8-5 | 3-6 | 14-5 | 6-2 |
| 26 | 6 06-5 | 6 07-5 | 5 49-8 | 2-6 | 1-1 | 8-6 | 3-5 | 14-6 | 6-0 | 2-6 | 1-1 | 8-6 | 3-7 | 14-6 | 6-2 |
| 27 | 6 06-8 | 6 07-8 | 5 50-0 | 2-7 | 1-1 | 8-7 | 3-6 | 14-7 | 6-0 | 2-7 | 1-1 | 8-7 | 3-7 | 14-7 | 6-2 |
| 28 | 6 07-0 | 6 08-0 | 5 50-3 | 2-8 | 1-1 | 8-8 | 3-6 | 14-8 | 6-0 | 2-8 | 1-2 | 8-8 | 3-7 | 14-8 | 6-3 |
| 29 | 6 07-3 | 6 08-3 | 5 50-5 | 2-9 | 1-2 | 8-9 | 3-6 | 14-9 | 6-1 | 2-9 | 1-2 | 8-9 | 3-8 | 14-9 | 6-3 |
| 30 | 6 07-5 | 6 08-5 | 5 50-8 | 3-0 | 1-2 | 9-0 | 3-7 | 15-0 | 6-1 | 3-0 | 1-3 | 9-0 | 3-8 | 15-0 | 6-4 |
| 31 | 6 07-8 | 6 08-8 | 5 51-0 | 3-1 | 1-3 | 9-1 | 3-7 | 15-1 | 6-2 | 3-1 | 1-3 | 9-1 | 3-9 | 15-1 | 6-4 |
| 32 | 6 08-0 | 6 09-0 | 5 51-2 | 3-2 | 1-3 | 9-2 | 3-8 | 15-2 | 6-2 | 3-2 | 1-4 | 9-2 | 3-9 | 15-2 | 6-5 |
| 33 | 6 08-3 | 6 09-3 | 5 51-5 | 3-3 | 1-3 | 9-3 | 3-8 | 15-3 | 6-2 | 3-3 | 1-4 | 9-3 | 4-0 | 15-3 | 6-5 |
| 34 | 6 08-5 | 6 09-5 | 5 51-7 | 3-4 | 1-4 | 9-4 | 3-8 | 15-4 | 6-3 | 3-4 | 1-4 | 9-4 | 4-0 | 15-4 | 6-5 |
| 35 | 6 08-8 | 6 09-8 | 5 52-0 | 3-5 | 1-4 | 9-5 | 3-9 | 15-5 | 6-3 | 3-5 | 1-5 | 9-5 | 4-0 | 15-5 | 6-6 |
| 36 | 6 09-0 | 6 10-0 | 5 52-2 | 3-6 | 1-5 | 9-6 | 3-9 | 15-6 | 6-4 | 3-6 | 1-5 | 9-6 | 4-1 | 15-6 | 6-6 |
| 37 | 6 09-3 | 6 10-3 | 5 52-4 | 3-7 | 1-5 | 9-7 | 4-0 | 15-7 | 6-4 | 3-7 | 1-6 | 9-7 | 4-1 | 15-7 | 6-7 |
| 38 | 6 09-5 | 6 10-5 | 5 52-7 | 3-8 | 1-6 | 9-8 | 4-0 | 15-8 | 6-5 | 3-8 | 1-6 | 9-8 | 4-2 | 15-8 | 6-7 |
| 39 | 6 09-8 | 6 10-8 | 5 52-9 | 3-9 | 1-6 | 9-9 | 4-0 | 15-9 | 6-5 | 3-9 | 1-7 | 9-9 | 4-2 | 15-9 | 6-8 |
| 40 | 6 10-0 | 6 11-0 | 5 53-1 | 4-0 | 1-6 | 10-0 | 4-1 | 16-0 | 6-5 | 4-0 | 1-7 | 10-0 | 4-3 | 16-0 | 6-8 |
| 41 | 6 10-3 | 6 11-3 | 5 53-4 | 4-1 | 1-7 | 10-1 | 4-1 | 16-1 | 6-6 | 4-1 | 1-7 | 10-1 | 4-3 | 16-1 | 6-8 |
| 42 | 6 10-5 | 6 11-5 | 5 53-6 | 4-2 | 1-7 | 10-2 | 4-2 | 16-2 | 6-6 | 4-2 | 1-8 | 10-2 | 4-3 | 16-2 | 6-9 |
| 43 | 6 10-8 | 6 11-8 | 5 53-9 | 4-3 | 1-8 | 10-3 | 4-2 | 16-3 | 6-7 | 4-3 | 1-8 | 10-3 | 4-4 | 16-3 | 6-9 |
| 44 | 6 11-0 | 6 12-0 | 5 54-1 | 4-4 | 1-8 | 10-4 | 4-2 | 16-4 | 6-7 | 4-4 | 1-9 | 10-4 | 4-4 | 16-4 | 7-0 |
| 45 | 6 11-3 | 6 12-3 | 5 54-3 | 4-5 | 1-8 | 10-5 | 4-3 | 16-5 | 6-7 | 4-5 | 1-9 | 10-5 | 4-5 | 16-5 | 7-0 |
| 46 | 6 11-5 | 6 12-5 | 5 54-6 | 4-6 | 1-9 | 10-6 | 4-3 | 16-6 | 6-8 | 4-6 | 2-0 | 10-6 | 4-5 | 16-6 | 7-1 |
| 47 | 6 11-8 | 6 12-8 | 5 54-8 | 4-7 | 1-9 | 10-7 | 4-4 | 16-7 | 6-8 | 4-7 | 2-0 | 10-7 | 4-5 | 16-7 | 7-1 |
| 48 | 6 12-0 | 6 13-0 | 5 55-1 | 4-8 | 2-0 | 10-8 | 4-4 | 16-8 | 6-9 | 4-8 | 2-0 | 10-8 | 4-6 | 16-8 | 7-1 |
| 49 | 6 12-3 | 6 13-3 | 5 55-3 | 4-9 | 2-0 | 10-9 | 4-5 | 16-9 | 6-9 | 4-9 | 2-1 | 10-9 | 4-6 | 16-9 | 7-2 |
| 50 | 6 12-5 | 6 13-5 | 5 55-5 | 5-0 | 2-0 | 11-0 | 4-5 | 17-0 | 6-9 | 5-0 | 2-1 | 11-0 | 4-7 | 17-0 | 7-2 |
| 51 | 6 12-8 | 6 13-8 | 5 55-8 | 5-1 | 2-1 | 11-1 | 4-5 | 17-1 | 7-0 | 5-1 | 2-2 | 11-1 | 4-7 | 17-1 | 7-3 |
| 52 | 6 13-0 | 6 14-0 | 5 56-0 | 5-2 | 2-1 | 11-2 | 4-6 | 17-2 | 7-0 | 5-2 | 2-2 | 11-2 | 4-8 | 17-2 | 7-3 |
| 53 | 6 13-3 | 6 14-3 | 5 56-2 | 5-3 | 2-2 | 11-3 | 4-6 | 17-3 | 7-1 | 5-3 | 2-3 | 11-3 | 4-8 | 17-3 | 7-4 |
| 54 | 6 13-5 | 6 14-5 | 5 56-5 | 5-4 | 2-2 | 11-4 | 4-7 | 17-4 | 7-1 | 5-4 | 2-3 | 11-4 | 4-8 | 17-4 | 7-4 |
| 55 | 6 13-8 | 6 14-8 | 5 56-7 | 5-5 | 2-2 | 11-5 | 4-7 | 17-5 | 7-1 | 5-5 | 2-3 | 11-5 | 4-9 | 17-5 | 7-4 |
| 56 | 6 14-0 | 6 15-0 | 5 57-0 | 5-6 | 2-3 | 11-6 | 4-7 | 17-6 | 7-2 | 5-6 | 2-4 | 11-6 | 4-9 | 17-6 | 7-5 |
| 57 | 6 14-3 | 6 15-3 | 5 57-2 | 5-7 | 2-3 | 11-7 | 4-8 | 17-7 | 7-2 | 5-7 | 2-4 | 11-7 | 5-0 | 17-7 | 7-5 |
| 58 | 6 14-5 | 6 15-5 | 5 57-4 | 5-8 | 2-4 | 11-8 | 4-8 | 17-8 | 7-3 | 5-8 | 2-5 | 11-8 | 5-0 | 17-8 | 7-6 |
| 59 | 6 14-8 | 6 15-8 | 5 57-7 | 5-9 | 2-4 | 11-9 | 4-9 | 17-9 | 7-3 | 5-9 | 2-5 | 11-9 | 5-1 | 17-9 | 7-6 |
| 60 | 6 15-0 | 6 16-0 | 5 57-9 | 6-0 | 2-5 | 12-0 | 4-9 | 18-0 | 7-4 | 6-0 | 2-6 | 12-0 | 5-1 | 18-0 | 7-7 |



26^m

INCREMENTS AND CORRECTIONS

27^m

| 26 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | v or Corr ⁿ | | v or Corr ⁿ | | 27 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | v or Corr ⁿ | | v or Corr ⁿ | |
|-----------------|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|-----------------|-------------|--------|--------|------------------------|-----|------------------------|-----|------------------------|-----|
| | | | | d | ' | d | ' | d | ' | | | | | d | ' | d | ' | d | ' |
| 00 | 6 30-0 | 6 31-1 | 6 12-2 | 0-0 | 0-0 | 6-0 | 2-7 | 12-0 | 5-3 | 00 | 6 45-0 | 6 46-1 | 6 26-6 | 0-0 | 0-0 | 6-0 | 2-8 | 12-0 | 5-5 |
| 01 | 6 30-3 | 6 31-3 | 6 12-5 | 0-1 | 0-0 | 6-1 | 2-7 | 12-1 | 5-3 | 01 | 6 45-3 | 6 46-4 | 6 26-8 | 0-1 | 0-0 | 6-1 | 2-8 | 12-1 | 5-5 |
| 02 | 6 30-5 | 6 31-6 | 6 12-7 | 0-2 | 0-1 | 6-2 | 2-7 | 12-2 | 5-4 | 02 | 6 45-5 | 6 46-6 | 6 27-0 | 0-2 | 0-1 | 6-2 | 2-8 | 12-2 | 5-6 |
| 03 | 6 30-8 | 6 31-8 | 6 12-9 | 0-3 | 0-1 | 6-3 | 2-8 | 12-3 | 5-4 | 03 | 6 45-8 | 6 46-9 | 6 27-3 | 0-3 | 0-1 | 6-3 | 2-9 | 12-3 | 5-6 |
| 04 | 6 31-0 | 6 32-1 | 6 13-2 | 0-4 | 0-2 | 6-4 | 2-8 | 12-4 | 5-5 | 04 | 6 46-0 | 6 47-1 | 6 27-5 | 0-4 | 0-2 | 6-4 | 2-9 | 12-4 | 5-7 |
| 05 | 6 31-3 | 6 32-3 | 6 13-4 | 0-5 | 0-2 | 6-5 | 2-9 | 12-5 | 5-5 | 05 | 6 46-3 | 6 47-4 | 6 27-7 | 0-5 | 0-2 | 6-5 | 3-0 | 12-5 | 5-7 |
| 06 | 6 31-5 | 6 32-6 | 6 13-7 | 0-6 | 0-3 | 6-6 | 2-9 | 12-6 | 5-6 | 06 | 6 46-5 | 6 47-6 | 6 28-0 | 0-6 | 0-3 | 6-6 | 3-0 | 12-6 | 5-8 |
| 07 | 6 31-8 | 6 32-8 | 6 13-9 | 0-7 | 0-3 | 6-7 | 3-0 | 12-7 | 5-6 | 07 | 6 46-8 | 6 47-9 | 6 28-2 | 0-7 | 0-3 | 6-7 | 3-1 | 12-7 | 5-8 |
| 08 | 6 32-0 | 6 33-1 | 6 14-1 | 0-8 | 0-4 | 6-8 | 3-0 | 12-8 | 5-7 | 08 | 6 47-0 | 6 48-1 | 6 28-5 | 0-8 | 0-4 | 6-8 | 3-1 | 12-8 | 5-9 |
| 09 | 6 32-3 | 6 33-3 | 6 14-4 | 0-9 | 0-4 | 6-9 | 3-0 | 12-9 | 5-7 | 09 | 6 47-3 | 6 48-4 | 6 28-7 | 0-9 | 0-4 | 6-9 | 3-2 | 12-9 | 5-9 |
| 10 | 6 32-5 | 6 33-6 | 6 14-6 | 1-0 | 0-4 | 7-0 | 3-1 | 13-0 | 5-7 | 10 | 6 47-5 | 6 48-6 | 6 28-9 | 1-0 | 0-5 | 7-0 | 3-2 | 13-0 | 6-0 |
| 11 | 6 32-8 | 6 33-8 | 6 14-9 | 1-1 | 0-5 | 7-1 | 3-1 | 13-1 | 5-8 | 11 | 6 47-8 | 6 48-9 | 6 29-2 | 1-1 | 0-5 | 7-1 | 3-3 | 13-1 | 6-0 |
| 12 | 6 33-0 | 6 34-1 | 6 15-1 | 1-2 | 0-5 | 7-2 | 3-2 | 13-2 | 5-8 | 12 | 6 48-0 | 6 49-1 | 6 29-4 | 1-2 | 0-6 | 7-2 | 3-3 | 13-2 | 6-1 |
| 13 | 6 33-3 | 6 34-3 | 6 15-3 | 1-3 | 0-6 | 7-3 | 3-2 | 13-3 | 5-9 | 13 | 6 48-3 | 6 49-4 | 6 29-7 | 1-3 | 0-6 | 7-3 | 3-3 | 13-3 | 6-1 |
| 14 | 6 33-5 | 6 34-6 | 6 15-6 | 1-4 | 0-6 | 7-4 | 3-3 | 13-4 | 5-9 | 14 | 6 48-5 | 6 49-6 | 6 29-9 | 1-4 | 0-6 | 7-4 | 3-4 | 13-4 | 6-1 |
| 15 | 6 33-8 | 6 34-8 | 6 15-8 | 1-5 | 0-7 | 7-5 | 3-3 | 13-5 | 6-0 | 15 | 6 48-8 | 6 49-9 | 6 30-1 | 1-5 | 0-7 | 7-5 | 3-4 | 13-5 | 6-2 |
| 16 | 6 34-0 | 6 35-1 | 6 16-1 | 1-6 | 0-7 | 7-6 | 3-4 | 13-6 | 6-0 | 16 | 6 49-0 | 6 50-1 | 6 30-4 | 1-6 | 0-7 | 7-6 | 3-5 | 13-6 | 6-2 |
| 17 | 6 34-3 | 6 35-3 | 6 16-3 | 1-7 | 0-8 | 7-7 | 3-4 | 13-7 | 6-1 | 17 | 6 49-3 | 6 50-4 | 6 30-6 | 1-7 | 0-8 | 7-7 | 3-5 | 13-7 | 6-3 |
| 18 | 6 34-5 | 6 35-6 | 6 16-5 | 1-8 | 0-8 | 7-8 | 3-4 | 13-8 | 6-1 | 18 | 6 49-5 | 6 50-6 | 6 30-8 | 1-8 | 0-8 | 7-8 | 3-6 | 13-8 | 6-3 |
| 19 | 6 34-8 | 6 35-8 | 6 16-8 | 1-9 | 0-8 | 7-9 | 3-5 | 13-9 | 6-1 | 19 | 6 49-8 | 6 50-9 | 6 31-1 | 1-9 | 0-9 | 7-9 | 3-6 | 13-9 | 6-4 |
| 20 | 6 35-0 | 6 36-1 | 6 17-0 | 2-0 | 0-9 | 8-0 | 3-5 | 14-0 | 6-2 | 20 | 6 50-0 | 6 51-1 | 6 31-3 | 2-0 | 0-9 | 8-0 | 3-7 | 14-0 | 6-4 |
| 21 | 6 35-3 | 6 36-3 | 6 17-2 | 2-1 | 0-9 | 8-1 | 3-6 | 14-1 | 6-2 | 21 | 6 50-3 | 6 51-4 | 6 31-6 | 2-1 | 1-0 | 8-1 | 3-7 | 14-1 | 6-5 |
| 22 | 6 35-5 | 6 36-6 | 6 17-5 | 2-2 | 1-0 | 8-2 | 3-6 | 14-2 | 6-3 | 22 | 6 50-5 | 6 51-6 | 6 31-8 | 2-2 | 1-0 | 8-2 | 3-8 | 14-2 | 6-5 |
| 23 | 6 35-8 | 6 36-8 | 6 17-7 | 2-3 | 1-0 | 8-3 | 3-7 | 14-3 | 6-3 | 23 | 6 50-8 | 6 51-9 | 6 32-0 | 2-3 | 1-1 | 8-3 | 3-8 | 14-3 | 6-6 |
| 24 | 6 36-0 | 6 37-1 | 6 18-0 | 2-4 | 1-1 | 8-4 | 3-7 | 14-4 | 6-4 | 24 | 6 51-0 | 6 52-1 | 6 32-3 | 2-4 | 1-1 | 8-4 | 3-9 | 14-4 | 6-6 |
| 25 | 6 36-3 | 6 37-3 | 6 18-2 | 2-5 | 1-1 | 8-5 | 3-8 | 14-5 | 6-4 | 25 | 6 51-3 | 6 52-4 | 6 32-5 | 2-5 | 1-1 | 8-5 | 3-9 | 14-5 | 6-6 |
| 26 | 6 36-5 | 6 37-6 | 6 18-4 | 2-6 | 1-1 | 8-6 | 3-8 | 14-6 | 6-4 | 26 | 6 51-5 | 6 52-6 | 6 32-8 | 2-6 | 1-2 | 8-6 | 3-9 | 14-6 | 6-7 |
| 27 | 6 36-8 | 6 37-8 | 6 18-7 | 2-7 | 1-2 | 8-7 | 3-8 | 14-7 | 6-5 | 27 | 6 51-8 | 6 52-9 | 6 33-0 | 2-7 | 1-2 | 8-7 | 4-0 | 14-7 | 6-7 |
| 28 | 6 37-0 | 6 38-1 | 6 18-9 | 2-8 | 1-2 | 8-8 | 3-9 | 14-8 | 6-5 | 28 | 6 52-0 | 6 53-1 | 6 33-2 | 2-8 | 1-3 | 8-8 | 4-0 | 14-8 | 6-8 |
| 29 | 6 37-3 | 6 38-3 | 6 19-2 | 2-9 | 1-3 | 8-9 | 3-9 | 14-9 | 6-6 | 29 | 6 52-3 | 6 53-4 | 6 33-5 | 2-9 | 1-3 | 8-9 | 4-1 | 14-9 | 6-8 |
| 30 | 6 37-5 | 6 38-6 | 6 19-4 | 3-0 | 1-3 | 9-0 | 4-0 | 15-0 | 6-6 | 30 | 6 52-5 | 6 53-6 | 6 33-7 | 3-0 | 1-4 | 9-0 | 4-1 | 15-0 | 6-9 |
| 31 | 6 37-8 | 6 38-8 | 6 19-6 | 3-1 | 1-4 | 9-1 | 4-0 | 15-1 | 6-7 | 31 | 6 52-8 | 6 53-9 | 6 33-9 | 3-1 | 1-4 | 9-1 | 4-2 | 15-1 | 6-9 |
| 32 | 6 38-0 | 6 39-1 | 6 19-9 | 3-2 | 1-4 | 9-2 | 4-1 | 15-2 | 6-7 | 32 | 6 53-0 | 6 54-1 | 6 34-2 | 3-2 | 1-5 | 9-2 | 4-2 | 15-2 | 7-0 |
| 33 | 6 38-3 | 6 39-3 | 6 20-1 | 3-3 | 1-5 | 9-3 | 4-1 | 15-3 | 6-8 | 33 | 6 53-3 | 6 54-4 | 6 34-4 | 3-3 | 1-5 | 9-3 | 4-3 | 15-3 | 7-0 |
| 34 | 6 38-5 | 6 39-6 | 6 20-3 | 3-4 | 1-5 | 9-4 | 4-2 | 15-4 | 6-8 | 34 | 6 53-5 | 6 54-6 | 6 34-7 | 3-4 | 1-6 | 9-4 | 4-3 | 15-4 | 7-1 |
| 35 | 6 38-8 | 6 39-8 | 6 20-6 | 3-5 | 1-5 | 9-5 | 4-2 | 15-5 | 6-8 | 35 | 6 53-8 | 6 54-9 | 6 34-9 | 3-5 | 1-6 | 9-5 | 4-4 | 15-5 | 7-1 |
| 36 | 6 39-0 | 6 40-1 | 6 20-8 | 3-6 | 1-6 | 9-6 | 4-2 | 15-6 | 6-9 | 36 | 6 54-0 | 6 55-1 | 6 35-1 | 3-6 | 1-7 | 9-6 | 4-4 | 15-6 | 7-2 |
| 37 | 6 39-3 | 6 40-3 | 6 21-1 | 3-7 | 1-6 | 9-7 | 4-3 | 15-7 | 6-9 | 37 | 6 54-3 | 6 55-4 | 6 35-4 | 3-7 | 1-7 | 9-7 | 4-4 | 15-7 | 7-2 |
| 38 | 6 39-5 | 6 40-6 | 6 21-3 | 3-8 | 1-7 | 9-8 | 4-3 | 15-8 | 7-0 | 38 | 6 54-5 | 6 55-6 | 6 35-6 | 3-8 | 1-7 | 9-8 | 4-5 | 15-8 | 7-2 |
| 39 | 6 39-8 | 6 40-8 | 6 21-5 | 3-9 | 1-7 | 9-9 | 4-4 | 15-9 | 7-0 | 39 | 6 54-8 | 6 55-9 | 6 35-9 | 3-9 | 1-8 | 9-9 | 4-5 | 15-9 | 7-3 |
| 40 | 6 40-0 | 6 41-1 | 6 21-8 | 4-0 | 1-8 | 10-0 | 4-4 | 16-0 | 7-1 | 40 | 6 55-0 | 6 56-1 | 6 36-1 | 4-0 | 1-8 | 10-0 | 4-6 | 16-0 | 7-3 |
| 41 | 6 40-3 | 6 41-3 | 6 22-0 | 4-1 | 1-8 | 10-1 | 4-5 | 16-1 | 7-1 | 41 | 6 55-3 | 6 56-4 | 6 36-3 | 4-1 | 1-9 | 10-1 | 4-6 | 16-1 | 7-4 |
| 42 | 6 40-5 | 6 41-6 | 6 22-3 | 4-2 | 1-9 | 10-2 | 4-5 | 16-2 | 7-2 | 42 | 6 55-5 | 6 56-6 | 6 36-6 | 4-2 | 1-9 | 10-2 | 4-7 | 16-2 | 7-4 |
| 43 | 6 40-8 | 6 41-8 | 6 22-5 | 4-3 | 1-9 | 10-3 | 4-5 | 16-3 | 7-2 | 43 | 6 55-8 | 6 56-9 | 6 36-8 | 4-3 | 2-0 | 10-3 | 4-7 | 16-3 | 7-5 |
| 44 | 6 41-0 | 6 42-1 | 6 22-7 | 4-4 | 1-9 | 10-4 | 4-6 | 16-4 | 7-2 | 44 | 6 56-0 | 6 57-1 | 6 37-0 | 4-4 | 2-0 | 10-4 | 4-8 | 16-4 | 7-5 |
| 45 | 6 41-3 | 6 42-3 | 6 23-0 | 4-5 | 2-0 | 10-5 | 4-6 | 16-5 | 7-3 | 45 | 6 56-3 | 6 57-4 | 6 37-3 | 4-5 | 2-1 | 10-5 | 4-8 | 16-5 | 7-6 |
| 46 | 6 41-5 | 6 42-6 | 6 23-2 | 4-6 | 2-0 | 10-6 | 4-7 | 16-6 | 7-3 | 46 | 6 56-5 | 6 57-6 | 6 37-5 | 4-6 | 2-1 | 10-6 | 4-9 | 16-6 | 7-6 |
| 47 | 6 41-8 | 6 42-8 | 6 23-4 | 4-7 | 2-1 | 10-7 | 4-7 | 16-7 | 7-4 | 47 | 6 56-8 | 6 57-9 | 6 37-8 | 4-7 | 2-2 | 10-7 | 4-9 | 16-7 | 7-7 |
| 48 | 6 42-0 | 6 43-1 | 6 23-7 | 4-8 | 2-1 | 10-8 | 4-8 | 16-8 | 7-4 | 48 | 6 57-0 | 6 58-1 | 6 38-0 | 4-8 | 2-2 | 10-8 | 5-0 | 16-8 | 7-7 |
| 49 | 6 42-3 | 6 43-4 | 6 23-9 | 4-9 | 2-2 | 10-9 | 4-8 | 16-9 | 7-5 | 49 | 6 57-3 | 6 58-4 | 6 38-2 | 4-9 | 2-2 | 10-9 | 5-0 | 16-9 | 7-7 |
| 50 | 6 42-5 | 6 43-6 | 6 24-2 | 5-0 | 2-2 | 11-0 | 4-9 | 17-0 | 7-5 | 50 | 6 57-5 | 6 58-6 | 6 38-5 | 5-0 | 2-3 | 11-0 | 5-0 | 17-0 | 7-8 |
| 51 | 6 42-8 | 6 43-9 | 6 24-4 | 5-1 | 2-3 | 11-1 | 4-9 | 17-1 | 7-6 | 51 | 6 57-8 | 6 58-9 | 6 38-7 | 5-1 | 2-3 | 11-1 | 5-1 | 17-1 | 7-8 |
| 52 | 6 43-0 | 6 44-1 | 6 24-6 | 5-2 | 2-3 | 11-2 | 4-9 | 17-2 | 7-6 | 52 | 6 58-0 | 6 59-1 | 6 39-0 | 5-2 | 2-4 | 11-2 | 5-1 | 17-2 | 7-9 |
| 53 | 6 43-3 | 6 44-4 | 6 24-9 | 5-3 | 2-3 | 11-3 | 5-0 | 17-3 | 7-6 | 53 | 6 58-3 | 6 59-4 | 6 39-2 | 5-3 | 2-4 | 11-3 | 5-2 | 17-3 | 7-9 |
| 54 | 6 43-5 | 6 44-6 | 6 25-1 | 5-4 | 2-4 | 11-4 | 5-0 | 17-4 | 7-7 | 54 | 6 58-5 | 6 59-6 | 6 39-4 | 5-4 | 2-5 | 11-4 | 5-2 | 17-4 | 8-0 |
| 55 | 6 43-8 | 6 44-9 | 6 25-4 | 5-5 | 2-4 | 11-5 | 5-1 | 17-5 | 7-7 | 55 | 6 58-8 | 6 59-9 | 6 39-7 | 5-5 | 2-5 | 11-5 | 5-3 | 17-5 | 8-0 |
| 56 | 6 44-0 | 6 45-1 | 6 25-6 | 5-6 | 2-5 | 11-6 | 5-1 | 17-6 | 7-8 | 56 | 6 59-0 | 7 00-1 | 6 39-9 | 5-6 | 2-6 | 11-6 | 5-3 | 17-6 | 8-1 |
| 57 | 6 44-3 | 6 45-4 | 6 25-8 | 5-7 | 2-5 | 11-7 | 5-2 | 17-7 | 7-8 | 57 | 6 59-3 | 7 00-4 | 6 40-2 | 5-7 | 2-6 | 11-7 | 5-4 | 17-7 | 8-1 |
| 58 | 6 44-5 | 6 45-6 | 6 26-1 | 5-8 | 2-6 | 11-8 | 5-2 | 17-8 | 7-9 | 58 | 6 59-5 | 7 00-6 | 6 40-4 | 5-8 | 2-7 | 11-8 | 5-4 | 17-8 | 8-2 |
| 59 | 6 44-8 | 6 45-9 | 6 26-3 | 5-9 | 2-6 | 11-9 | 5-3 | 17-9 | 7-9 | 59 | 6 59-8 | 7 00-9 | 6 40-6 | 5-9 | 2-7 | 11-9 | 5-5 | 17-9 | 8-2 |
| 60 | 6 45-0 | 6 46-1 | 6 26-6 | 6-0 | 2-7 | 12-0 | 5-3 | 18-0 | 8-0 | 60 | 7 00-0 | 7 01-1 | 6 40-9 | 6-0 | 2-8 | 12-0 | 5-5 | 18-0 | 8-3 |

4V



INCREMENTS AND CORRECTIONS

| 28 | SUN PLANETS | ARIES | MOON | ° or Corr ^m | | | 29 | SUN PLANETS | ARIES | MOON | ° or Corr ^m | | | | | | | | |
|----|-------------|--------|--------|------------------------|-----|------|-----|-------------|-------|------|------------------------|--------|--------|-----|-----|------|-----|------|-----|
| | | | | d | ' | " | | | | | d | ' | " | d | ' | " | | | |
| 00 | 7 00-0 | 7 01-1 | 6 40-9 | 0-0 | 0-0 | 6-0 | 2-9 | 12-0 | 5-7 | 00 | 7 15-0 | 7 16-2 | 6 55-2 | 0-0 | 0-0 | 6-0 | 3-0 | 12-0 | 5-9 |
| 01 | 7 00-3 | 7 01-4 | 6 41-1 | 0-1 | 0-0 | 6-1 | 2-9 | 12-1 | 5-7 | 01 | 7 15-3 | 7 16-4 | 6 55-4 | 0-1 | 0-0 | 6-1 | 3-0 | 12-1 | 5-9 |
| 02 | 7 00-5 | 7 01-7 | 6 41-3 | 0-2 | 0-1 | 6-2 | 2-9 | 12-2 | 5-8 | 02 | 7 15-5 | 7 16-7 | 6 55-7 | 0-2 | 0-1 | 6-2 | 3-0 | 12-2 | 6-0 |
| 03 | 7 00-8 | 7 01-9 | 6 41-6 | 0-3 | 0-1 | 6-3 | 3-0 | 12-3 | 5-8 | 03 | 7 15-8 | 7 16-9 | 6 55-9 | 0-3 | 0-1 | 6-3 | 3-1 | 12-3 | 6-0 |
| 04 | 7 01-0 | 7 02-2 | 6 41-8 | 0-4 | 0-2 | 6-4 | 3-0 | 12-4 | 5-9 | 04 | 7 16-0 | 7 17-2 | 6 56-1 | 0-4 | 0-2 | 6-4 | 3-1 | 12-4 | 6-1 |
| 05 | 7 01-3 | 7 02-4 | 6 42-1 | 0-5 | 0-2 | 6-5 | 3-1 | 12-5 | 5-9 | 05 | 7 16-3 | 7 17-4 | 6 56-4 | 0-5 | 0-2 | 6-5 | 3-2 | 12-5 | 6-1 |
| 06 | 7 01-5 | 7 02-7 | 6 42-3 | 0-6 | 0-3 | 6-6 | 3-1 | 12-6 | 6-0 | 06 | 7 16-5 | 7 17-7 | 6 56-6 | 0-6 | 0-3 | 6-6 | 3-2 | 12-6 | 6-2 |
| 07 | 7 01-8 | 7 02-9 | 6 42-5 | 0-7 | 0-3 | 6-7 | 3-2 | 12-7 | 6-0 | 07 | 7 16-8 | 7 17-9 | 6 56-9 | 0-7 | 0-3 | 6-7 | 3-3 | 12-7 | 6-2 |
| 08 | 7 02-0 | 7 03-2 | 6 42-8 | 0-8 | 0-4 | 6-8 | 3-2 | 12-8 | 6-1 | 08 | 7 17-0 | 7 18-2 | 6 57-1 | 0-8 | 0-4 | 6-8 | 3-3 | 12-8 | 6-3 |
| 09 | 7 02-3 | 7 03-4 | 6 43-0 | 0-9 | 0-4 | 6-9 | 3-3 | 12-9 | 6-1 | 09 | 7 17-3 | 7 18-4 | 6 57-3 | 0-9 | 0-4 | 6-9 | 3-4 | 12-9 | 6-3 |
| 10 | 7 02-5 | 7 03-7 | 6 43-3 | 1-0 | 0-5 | 7-0 | 3-3 | 13-0 | 6-2 | 10 | 7 17-5 | 7 18-7 | 6 57-6 | 1-0 | 0-5 | 7-0 | 3-4 | 13-0 | 6-4 |
| 11 | 7 02-8 | 7 03-9 | 6 43-5 | 1-1 | 0-5 | 7-1 | 3-4 | 13-1 | 6-2 | 11 | 7 17-8 | 7 18-9 | 6 57-8 | 1-1 | 0-5 | 7-1 | 3-5 | 13-1 | 6-4 |
| 12 | 7 03-0 | 7 04-2 | 6 43-7 | 1-2 | 0-6 | 7-2 | 3-4 | 13-2 | 6-3 | 12 | 7 18-0 | 7 19-2 | 6 58-0 | 1-2 | 0-6 | 7-2 | 3-5 | 13-2 | 6-5 |
| 13 | 7 03-3 | 7 04-4 | 6 44-0 | 1-3 | 0-6 | 7-3 | 3-5 | 13-3 | 6-3 | 13 | 7 18-3 | 7 19-4 | 6 58-3 | 1-3 | 0-6 | 7-3 | 3-6 | 13-3 | 6-5 |
| 14 | 7 03-5 | 7 04-7 | 6 44-2 | 1-4 | 0-7 | 7-4 | 3-5 | 13-4 | 6-4 | 14 | 7 18-5 | 7 19-7 | 6 58-5 | 1-4 | 0-7 | 7-4 | 3-6 | 13-4 | 6-6 |
| 15 | 7 03-8 | 7 04-9 | 6 44-4 | 1-5 | 0-7 | 7-5 | 3-6 | 13-5 | 6-4 | 15 | 7 18-8 | 7 20-0 | 6 58-8 | 1-5 | 0-7 | 7-5 | 3-7 | 13-5 | 6-6 |
| 16 | 7 04-0 | 7 05-2 | 6 44-7 | 1-6 | 0-8 | 7-6 | 3-6 | 13-6 | 6-5 | 16 | 7 19-0 | 7 20-2 | 6 59-0 | 1-6 | 0-8 | 7-6 | 3-7 | 13-6 | 6-7 |
| 17 | 7 04-3 | 7 05-4 | 6 44-9 | 1-7 | 0-8 | 7-7 | 3-7 | 13-7 | 6-5 | 17 | 7 19-3 | 7 20-5 | 6 59-2 | 1-7 | 0-8 | 7-7 | 3-8 | 13-7 | 6-7 |
| 18 | 7 04-5 | 7 05-7 | 6 45-2 | 1-8 | 0-9 | 7-8 | 3-7 | 13-8 | 6-6 | 18 | 7 19-5 | 7 20-7 | 6 59-5 | 1-8 | 0-9 | 7-8 | 3-8 | 13-8 | 6-8 |
| 19 | 7 04-8 | 7 05-9 | 6 45-4 | 1-9 | 0-9 | 7-9 | 3-8 | 13-9 | 6-6 | 19 | 7 19-8 | 7 21-0 | 6 59-7 | 1-9 | 0-9 | 7-9 | 3-9 | 13-9 | 6-8 |
| 20 | 7 05-0 | 7 06-2 | 6 45-6 | 2-0 | 1-0 | 8-0 | 3-8 | 14-0 | 6-7 | 20 | 7 20-0 | 7 21-2 | 7 00-0 | 2-0 | 1-0 | 8-0 | 3-9 | 14-0 | 6-9 |
| 21 | 7 05-3 | 7 06-4 | 6 45-9 | 2-1 | 1-0 | 8-1 | 3-8 | 14-1 | 6-7 | 21 | 7 20-3 | 7 21-5 | 7 00-2 | 2-1 | 1-0 | 8-1 | 4-0 | 14-1 | 6-9 |
| 22 | 7 05-5 | 7 06-7 | 6 46-1 | 2-2 | 1-0 | 8-2 | 3-9 | 14-2 | 6-7 | 22 | 7 20-5 | 7 21-7 | 7 00-4 | 2-2 | 1-1 | 8-2 | 4-0 | 14-2 | 7-0 |
| 23 | 7 05-8 | 7 06-9 | 6 46-4 | 2-3 | 1-1 | 8-3 | 3-9 | 14-3 | 6-8 | 23 | 7 20-8 | 7 22-0 | 7 00-7 | 2-3 | 1-1 | 8-3 | 4-1 | 14-3 | 7-0 |
| 24 | 7 06-0 | 7 07-2 | 6 46-6 | 2-4 | 1-1 | 8-4 | 4-0 | 14-4 | 6-8 | 24 | 7 21-0 | 7 22-2 | 7 00-9 | 2-4 | 1-2 | 8-4 | 4-1 | 14-4 | 7-1 |
| 25 | 7 06-3 | 7 07-4 | 6 46-8 | 2-5 | 1-2 | 8-5 | 4-0 | 14-5 | 6-9 | 25 | 7 21-3 | 7 22-5 | 7 01-1 | 2-5 | 1-2 | 8-5 | 4-2 | 14-5 | 7-1 |
| 26 | 7 06-5 | 7 07-7 | 6 47-1 | 2-6 | 1-2 | 8-6 | 4-1 | 14-6 | 6-9 | 26 | 7 21-5 | 7 22-7 | 7 01-4 | 2-6 | 1-3 | 8-6 | 4-2 | 14-6 | 7-2 |
| 27 | 7 06-8 | 7 07-9 | 6 47-3 | 2-7 | 1-3 | 8-7 | 4-1 | 14-7 | 7-0 | 27 | 7 21-8 | 7 23-0 | 7 01-6 | 2-7 | 1-3 | 8-7 | 4-3 | 14-7 | 7-2 |
| 28 | 7 07-0 | 7 08-2 | 6 47-5 | 2-8 | 1-3 | 8-8 | 4-2 | 14-8 | 7-0 | 28 | 7 22-0 | 7 23-2 | 7 01-9 | 2-8 | 1-4 | 8-8 | 4-3 | 14-8 | 7-3 |
| 29 | 7 07-3 | 7 08-4 | 6 47-8 | 2-9 | 1-4 | 8-9 | 4-2 | 14-9 | 7-1 | 29 | 7 22-3 | 7 23-5 | 7 02-1 | 2-9 | 1-4 | 8-9 | 4-4 | 14-9 | 7-3 |
| 30 | 7 07-5 | 7 08-7 | 6 48-0 | 3-0 | 1-4 | 9-0 | 4-3 | 15-0 | 7-1 | 30 | 7 22-5 | 7 23-7 | 7 02-3 | 3-0 | 1-5 | 9-0 | 4-4 | 15-0 | 7-4 |
| 31 | 7 07-8 | 7 08-9 | 6 48-3 | 3-1 | 1-5 | 9-1 | 4-3 | 15-1 | 7-2 | 31 | 7 22-8 | 7 24-0 | 7 02-6 | 3-1 | 1-5 | 9-1 | 4-5 | 15-1 | 7-4 |
| 32 | 7 08-0 | 7 09-2 | 6 48-5 | 3-2 | 1-5 | 9-2 | 4-4 | 15-2 | 7-2 | 32 | 7 23-0 | 7 24-2 | 7 02-8 | 3-2 | 1-6 | 9-2 | 4-5 | 15-2 | 7-5 |
| 33 | 7 08-3 | 7 09-4 | 6 48-7 | 3-3 | 1-6 | 9-3 | 4-4 | 15-3 | 7-3 | 33 | 7 23-3 | 7 24-5 | 7 03-1 | 3-3 | 1-6 | 9-3 | 4-6 | 15-3 | 7-5 |
| 34 | 7 08-5 | 7 09-7 | 6 49-0 | 3-4 | 1-6 | 9-4 | 4-5 | 15-4 | 7-3 | 34 | 7 23-5 | 7 24-7 | 7 03-3 | 3-4 | 1-7 | 9-4 | 4-6 | 15-4 | 7-6 |
| 35 | 7 08-8 | 7 09-9 | 6 49-2 | 3-5 | 1-7 | 9-5 | 4-5 | 15-5 | 7-4 | 35 | 7 23-8 | 7 25-0 | 7 03-5 | 3-5 | 1-7 | 9-5 | 4-7 | 15-5 | 7-6 |
| 36 | 7 09-0 | 7 10-2 | 6 49-5 | 3-6 | 1-7 | 9-6 | 4-6 | 15-6 | 7-4 | 36 | 7 24-0 | 7 25-2 | 7 03-8 | 3-6 | 1-8 | 9-6 | 4-7 | 15-6 | 7-7 |
| 37 | 7 09-3 | 7 10-4 | 6 49-7 | 3-7 | 1-8 | 9-7 | 4-6 | 15-7 | 7-5 | 37 | 7 24-3 | 7 25-5 | 7 04-0 | 3-7 | 1-8 | 9-7 | 4-8 | 15-7 | 7-7 |
| 38 | 7 09-5 | 7 10-7 | 6 49-9 | 3-8 | 1-8 | 9-8 | 4-7 | 15-8 | 7-5 | 38 | 7 24-5 | 7 25-7 | 7 04-3 | 3-8 | 1-9 | 9-8 | 4-8 | 15-8 | 7-8 |
| 39 | 7 09-8 | 7 10-9 | 6 50-2 | 3-9 | 1-9 | 9-9 | 4-7 | 15-9 | 7-6 | 39 | 7 24-8 | 7 26-0 | 7 04-5 | 3-9 | 1-9 | 9-9 | 4-9 | 15-9 | 7-8 |
| 40 | 7 10-0 | 7 11-2 | 6 50-4 | 4-0 | 1-9 | 10-0 | 4-8 | 16-0 | 7-6 | 40 | 7 25-0 | 7 26-2 | 7 04-7 | 4-0 | 2-0 | 10-0 | 4-9 | 16-0 | 7-9 |
| 41 | 7 10-3 | 7 11-4 | 6 50-6 | 4-1 | 1-9 | 10-1 | 4-8 | 16-1 | 7-6 | 41 | 7 25-3 | 7 26-5 | 7 05-0 | 4-1 | 2-0 | 10-1 | 5-0 | 16-1 | 7-9 |
| 42 | 7 10-5 | 7 11-7 | 6 50-9 | 4-2 | 2-0 | 10-2 | 4-8 | 16-2 | 7-7 | 42 | 7 25-5 | 7 26-7 | 7 05-2 | 4-2 | 2-1 | 10-2 | 5-0 | 16-2 | 8-0 |
| 43 | 7 10-8 | 7 11-9 | 6 51-1 | 4-3 | 2-0 | 10-3 | 4-9 | 16-3 | 7-7 | 43 | 7 25-8 | 7 27-0 | 7 05-4 | 4-3 | 2-1 | 10-3 | 5-1 | 16-3 | 8-0 |
| 44 | 7 11-0 | 7 12-2 | 6 51-4 | 4-4 | 2-1 | 10-4 | 4-9 | 16-4 | 7-8 | 44 | 7 26-0 | 7 27-2 | 7 05-7 | 4-4 | 2-2 | 10-4 | 5-1 | 16-4 | 8-1 |
| 45 | 7 11-3 | 7 12-4 | 6 51-6 | 4-5 | 2-1 | 10-5 | 5-0 | 16-5 | 7-8 | 45 | 7 26-3 | 7 27-5 | 7 05-9 | 4-5 | 2-2 | 10-5 | 5-2 | 16-5 | 8-1 |
| 46 | 7 11-5 | 7 12-7 | 6 51-8 | 4-6 | 2-2 | 10-6 | 5-0 | 16-6 | 7-9 | 46 | 7 26-5 | 7 27-7 | 7 06-2 | 4-6 | 2-3 | 10-6 | 5-2 | 16-6 | 8-2 |
| 47 | 7 11-8 | 7 12-9 | 6 52-1 | 4-7 | 2-2 | 10-7 | 5-1 | 16-7 | 7-9 | 47 | 7 26-8 | 7 28-0 | 7 06-4 | 4-7 | 2-3 | 10-7 | 5-3 | 16-7 | 8-2 |
| 48 | 7 12-0 | 7 13-2 | 6 52-3 | 4-8 | 2-3 | 10-8 | 5-1 | 16-8 | 8-0 | 48 | 7 27-0 | 7 28-2 | 7 06-6 | 4-8 | 2-4 | 10-8 | 5-3 | 16-8 | 8-3 |
| 49 | 7 12-3 | 7 13-4 | 6 52-6 | 4-9 | 2-3 | 10-9 | 5-2 | 16-9 | 8-0 | 49 | 7 27-3 | 7 28-5 | 7 06-9 | 4-9 | 2-4 | 10-9 | 5-4 | 16-9 | 8-3 |
| 50 | 7 12-5 | 7 13-7 | 6 52-8 | 5-0 | 2-4 | 11-0 | 5-2 | 17-0 | 8-1 | 50 | 7 27-5 | 7 28-7 | 7 07-1 | 5-0 | 2-5 | 11-0 | 5-4 | 17-0 | 8-4 |
| 51 | 7 12-8 | 7 13-9 | 6 53-0 | 5-1 | 2-4 | 11-1 | 5-3 | 17-1 | 8-1 | 51 | 7 27-8 | 7 29-0 | 7 07-4 | 5-1 | 2-5 | 11-1 | 5-5 | 17-1 | 8-4 |
| 52 | 7 13-0 | 7 14-2 | 6 53-3 | 5-2 | 2-5 | 11-2 | 5-3 | 17-2 | 8-2 | 52 | 7 28-0 | 7 29-2 | 7 07-6 | 5-2 | 2-6 | 11-2 | 5-5 | 17-2 | 8-5 |
| 53 | 7 13-3 | 7 14-4 | 6 53-5 | 5-3 | 2-5 | 11-3 | 5-4 | 17-3 | 8-2 | 53 | 7 28-3 | 7 29-5 | 7 07-8 | 5-3 | 2-6 | 11-3 | 5-6 | 17-3 | 8-5 |
| 54 | 7 13-5 | 7 14-7 | 6 53-8 | 5-4 | 2-6 | 11-4 | 5-4 | 17-4 | 8-3 | 54 | 7 28-5 | 7 29-7 | 7 08-1 | 5-4 | 2-7 | 11-4 | 5-6 | 17-4 | 8-6 |
| 55 | 7 13-8 | 7 14-9 | 6 54-0 | 5-5 | 2-6 | 11-5 | 5-5 | 17-5 | 8-3 | 55 | 7 28-8 | 7 30-0 | 7 08-3 | 5-5 | 2-7 | 11-5 | 5-7 | 17-5 | 8-6 |
| 56 | 7 14-0 | 7 15-2 | 6 54-2 | 5-6 | 2-7 | 11-6 | 5-5 | 17-6 | 8-4 | 56 | 7 29-0 | 7 30-2 | 7 08-5 | 5-6 | 2-8 | 11-6 | 5-7 | 17-6 | 8-7 |
| 57 | 7 14-3 | 7 15-4 | 6 54-5 | 5-7 | 2-7 | 11-7 | 5-6 | 17-7 | 8-4 | 57 | 7 29-3 | 7 30-5 | 7 08-8 | 5-7 | 2-8 | 11-7 | 5-8 | 17-7 | 8-7 |
| 58 | 7 14-5 | 7 15-7 | 6 54-7 | 5-8 | 2-8 | 11-8 | 5-6 | 17-8 | 8-5 | 58 | 7 29-5 | 7 30-7 | 7 09-0 | 5-8 | 2-9 | 11-8 | 5-8 | 17-8 | 8-8 |
| 59 | 7 14-8 | 7 15-9 | 6 54-9 | 5-9 | 2-8 | 11-9 | 5-7 | 17-9 | 8-5 | 59 | 7 29-8 | 7 31-0 | 7 09-3 | 5-9 | 2-9 | 11-9 | 5-9 | 17-9 | 8-8 |
| 60 | 7 15-0 | 7 16-2 | 6 55-2 | 6-0 | 2-9 | 12-0 | 5-7 | 18-0 | 8-6 | 60 | 7 30-0 | 7 31-2 | 7 09-5 | 6-0 | 3-0 | 12-0 | 5-9 | 18-0 | 8-9 |



30^m

INCREMENTS AND CORRECTIONS

31^m

| 30 ^s | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ | | | 31 ^s | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ | | | | | | | | |
|-----------------|-------------|--------|--------|------------------------|-----|------|-----------------|-------------|-------|------|------------------------|--------|--------|-----|-----|------|-----|------|-----|
| | | | | d | ' | " | | | | | d | ' | " | d | ' | " | | | |
| 00 | 7 30.0 | 7 31.2 | 7 09.5 | 0.0 | 0.0 | 6.0 | 3.1 | 12.0 | 6.1 | 00 | 7 45.0 | 7 46.3 | 7 23.8 | 0.0 | 0.0 | 6.0 | 3.2 | 12.0 | 6.3 |
| 01 | 7 30.3 | 7 31.5 | 7 09.7 | 0.1 | 0.1 | 6.1 | 3.1 | 12.1 | 6.2 | 01 | 7 45.3 | 7 46.5 | 7 24.1 | 0.1 | 0.1 | 6.1 | 3.2 | 12.1 | 6.4 |
| 02 | 7 30.5 | 7 31.7 | 7 10.0 | 0.2 | 0.1 | 6.2 | 3.2 | 12.2 | 6.2 | 02 | 7 45.5 | 7 46.8 | 7 24.3 | 0.2 | 0.1 | 6.2 | 3.3 | 12.2 | 6.4 |
| 03 | 7 30.8 | 7 32.0 | 7 10.2 | 0.3 | 0.2 | 6.3 | 3.2 | 12.3 | 6.3 | 03 | 7 45.8 | 7 47.0 | 7 24.5 | 0.3 | 0.2 | 6.3 | 3.3 | 12.3 | 6.5 |
| 04 | 7 31.0 | 7 32.2 | 7 10.5 | 0.4 | 0.2 | 6.4 | 3.3 | 12.4 | 6.3 | 04 | 7 46.0 | 7 47.3 | 7 24.8 | 0.4 | 0.2 | 6.4 | 3.4 | 12.4 | 6.5 |
| 05 | 7 31.3 | 7 32.5 | 7 10.7 | 0.5 | 0.3 | 6.5 | 3.3 | 12.5 | 6.4 | 05 | 7 46.3 | 7 47.5 | 7 25.0 | 0.5 | 0.3 | 6.5 | 3.4 | 12.5 | 6.6 |
| 06 | 7 31.5 | 7 32.7 | 7 10.9 | 0.6 | 0.3 | 6.6 | 3.4 | 12.6 | 6.4 | 06 | 7 46.5 | 7 47.8 | 7 25.2 | 0.6 | 0.3 | 6.6 | 3.5 | 12.6 | 6.6 |
| 07 | 7 31.8 | 7 33.0 | 7 11.2 | 0.7 | 0.4 | 6.7 | 3.4 | 12.7 | 6.5 | 07 | 7 46.8 | 7 48.0 | 7 25.5 | 0.7 | 0.4 | 6.7 | 3.5 | 12.7 | 6.7 |
| 08 | 7 32.0 | 7 33.2 | 7 11.4 | 0.8 | 0.4 | 6.8 | 3.5 | 12.8 | 6.5 | 08 | 7 47.0 | 7 48.3 | 7 25.7 | 0.8 | 0.4 | 6.8 | 3.6 | 12.8 | 6.7 |
| 09 | 7 32.3 | 7 33.5 | 7 11.6 | 0.9 | 0.5 | 6.9 | 3.5 | 12.9 | 6.6 | 09 | 7 47.3 | 7 48.5 | 7 26.0 | 0.9 | 0.5 | 6.9 | 3.6 | 12.9 | 6.8 |
| 10 | 7 32.5 | 7 33.7 | 7 11.9 | 1.0 | 0.5 | 7.0 | 3.6 | 13.0 | 6.6 | 10 | 7 47.5 | 7 48.8 | 7 26.2 | 1.0 | 0.5 | 7.0 | 3.7 | 13.0 | 6.8 |
| 11 | 7 32.8 | 7 34.0 | 7 12.1 | 1.1 | 0.6 | 7.1 | 3.6 | 13.1 | 6.7 | 11 | 7 47.8 | 7 49.0 | 7 26.4 | 1.1 | 0.6 | 7.1 | 3.7 | 13.1 | 6.9 |
| 12 | 7 33.0 | 7 34.2 | 7 12.4 | 1.2 | 0.6 | 7.2 | 3.7 | 13.2 | 6.7 | 12 | 7 48.0 | 7 49.3 | 7 26.7 | 1.2 | 0.6 | 7.2 | 3.8 | 13.2 | 6.9 |
| 13 | 7 33.3 | 7 34.5 | 7 12.6 | 1.3 | 0.7 | 7.3 | 3.7 | 13.3 | 6.8 | 13 | 7 48.3 | 7 49.5 | 7 26.9 | 1.3 | 0.7 | 7.3 | 3.8 | 13.3 | 7.0 |
| 14 | 7 33.5 | 7 34.7 | 7 12.8 | 1.4 | 0.7 | 7.4 | 3.8 | 13.4 | 6.8 | 14 | 7 48.5 | 7 49.8 | 7 27.2 | 1.4 | 0.7 | 7.4 | 3.9 | 13.4 | 7.0 |
| 15 | 7 33.8 | 7 35.0 | 7 13.1 | 1.5 | 0.8 | 7.5 | 3.8 | 13.5 | 6.9 | 15 | 7 48.8 | 7 50.0 | 7 27.4 | 1.5 | 0.8 | 7.5 | 3.9 | 13.5 | 7.1 |
| 16 | 7 34.0 | 7 35.2 | 7 13.3 | 1.6 | 0.8 | 7.6 | 3.9 | 13.6 | 6.9 | 16 | 7 49.0 | 7 50.3 | 7 27.6 | 1.6 | 0.8 | 7.6 | 4.0 | 13.6 | 7.1 |
| 17 | 7 34.3 | 7 35.5 | 7 13.6 | 1.7 | 0.9 | 7.7 | 3.9 | 13.7 | 7.0 | 17 | 7 49.3 | 7 50.5 | 7 27.9 | 1.7 | 0.9 | 7.7 | 4.0 | 13.7 | 7.2 |
| 18 | 7 34.5 | 7 35.7 | 7 13.8 | 1.8 | 0.9 | 7.8 | 4.0 | 13.8 | 7.0 | 18 | 7 49.5 | 7 50.8 | 7 28.1 | 1.8 | 0.9 | 7.8 | 4.1 | 13.8 | 7.2 |
| 19 | 7 34.8 | 7 36.0 | 7 14.0 | 1.9 | 1.0 | 7.9 | 4.0 | 13.9 | 7.1 | 19 | 7 49.8 | 7 51.0 | 7 28.4 | 1.9 | 1.0 | 7.9 | 4.1 | 13.9 | 7.3 |
| 20 | 7 35.0 | 7 36.2 | 7 14.3 | 2.0 | 1.0 | 8.0 | 4.1 | 14.0 | 7.1 | 20 | 7 50.0 | 7 51.3 | 7 28.6 | 2.0 | 1.1 | 8.0 | 4.2 | 14.0 | 7.4 |
| 21 | 7 35.3 | 7 36.5 | 7 14.5 | 2.1 | 1.1 | 8.1 | 4.1 | 14.1 | 7.2 | 21 | 7 50.3 | 7 51.5 | 7 28.8 | 2.1 | 1.1 | 8.1 | 4.3 | 14.1 | 7.4 |
| 22 | 7 35.5 | 7 36.7 | 7 14.7 | 2.2 | 1.1 | 8.2 | 4.2 | 14.2 | 7.2 | 22 | 7 50.5 | 7 51.8 | 7 29.1 | 2.2 | 1.2 | 8.2 | 4.3 | 14.2 | 7.5 |
| 23 | 7 35.8 | 7 37.0 | 7 15.0 | 2.3 | 1.2 | 8.3 | 4.2 | 14.3 | 7.3 | 23 | 7 50.8 | 7 52.0 | 7 29.3 | 2.3 | 1.2 | 8.3 | 4.4 | 14.3 | 7.5 |
| 24 | 7 36.0 | 7 37.2 | 7 15.2 | 2.4 | 1.2 | 8.4 | 4.3 | 14.4 | 7.3 | 24 | 7 51.0 | 7 52.3 | 7 29.5 | 2.4 | 1.3 | 8.4 | 4.4 | 14.4 | 7.6 |
| 25 | 7 36.3 | 7 37.5 | 7 15.5 | 2.5 | 1.3 | 8.5 | 4.3 | 14.5 | 7.4 | 25 | 7 51.3 | 7 52.5 | 7 29.8 | 2.5 | 1.3 | 8.5 | 4.5 | 14.5 | 7.6 |
| 26 | 7 36.5 | 7 37.7 | 7 15.7 | 2.6 | 1.3 | 8.6 | 4.4 | 14.6 | 7.4 | 26 | 7 51.5 | 7 52.8 | 7 30.0 | 2.6 | 1.4 | 8.6 | 4.5 | 14.6 | 7.7 |
| 27 | 7 36.8 | 7 38.0 | 7 15.9 | 2.7 | 1.4 | 8.7 | 4.4 | 14.7 | 7.5 | 27 | 7 51.8 | 7 53.0 | 7 30.3 | 2.7 | 1.4 | 8.7 | 4.6 | 14.7 | 7.7 |
| 28 | 7 37.0 | 7 38.3 | 7 16.2 | 2.8 | 1.4 | 8.8 | 4.5 | 14.8 | 7.5 | 28 | 7 52.0 | 7 53.3 | 7 30.5 | 2.8 | 1.5 | 8.8 | 4.6 | 14.8 | 7.8 |
| 29 | 7 37.3 | 7 38.5 | 7 16.4 | 2.9 | 1.5 | 8.9 | 4.5 | 14.9 | 7.6 | 29 | 7 52.3 | 7 53.5 | 7 30.7 | 2.9 | 1.5 | 8.9 | 4.7 | 14.9 | 7.8 |
| 30 | 7 37.5 | 7 38.8 | 7 16.7 | 3.0 | 1.5 | 9.0 | 4.6 | 15.0 | 7.6 | 30 | 7 52.5 | 7 53.8 | 7 31.0 | 3.0 | 1.6 | 9.0 | 4.7 | 15.0 | 7.9 |
| 31 | 7 37.8 | 7 39.0 | 7 16.9 | 3.1 | 1.6 | 9.1 | 4.6 | 15.1 | 7.7 | 31 | 7 52.8 | 7 54.0 | 7 31.2 | 3.1 | 1.6 | 9.1 | 4.8 | 15.1 | 7.9 |
| 32 | 7 38.0 | 7 39.3 | 7 17.1 | 3.2 | 1.6 | 9.2 | 4.7 | 15.2 | 7.7 | 32 | 7 53.0 | 7 54.3 | 7 31.5 | 3.2 | 1.7 | 9.2 | 4.8 | 15.2 | 8.0 |
| 33 | 7 38.3 | 7 39.5 | 7 17.4 | 3.3 | 1.7 | 9.3 | 4.7 | 15.3 | 7.8 | 33 | 7 53.3 | 7 54.5 | 7 31.7 | 3.3 | 1.7 | 9.3 | 4.9 | 15.3 | 8.0 |
| 34 | 7 38.5 | 7 39.8 | 7 17.6 | 3.4 | 1.7 | 9.4 | 4.8 | 15.4 | 7.8 | 34 | 7 53.5 | 7 54.8 | 7 31.9 | 3.4 | 1.8 | 9.4 | 4.9 | 15.4 | 8.1 |
| 35 | 7 38.8 | 7 40.0 | 7 17.9 | 3.5 | 1.8 | 9.5 | 4.8 | 15.5 | 7.9 | 35 | 7 53.8 | 7 55.0 | 7 32.2 | 3.5 | 1.8 | 9.5 | 5.0 | 15.5 | 8.1 |
| 36 | 7 39.0 | 7 40.3 | 7 18.1 | 3.6 | 1.8 | 9.6 | 4.9 | 15.6 | 7.9 | 36 | 7 54.0 | 7 55.3 | 7 32.4 | 3.6 | 1.9 | 9.6 | 5.0 | 15.6 | 8.2 |
| 37 | 7 39.3 | 7 40.5 | 7 18.3 | 3.7 | 1.9 | 9.7 | 4.9 | 15.7 | 8.0 | 37 | 7 54.3 | 7 55.5 | 7 32.6 | 3.7 | 1.9 | 9.7 | 5.1 | 15.7 | 8.2 |
| 38 | 7 39.5 | 7 40.8 | 7 18.6 | 3.8 | 1.9 | 9.8 | 5.0 | 15.8 | 8.0 | 38 | 7 54.5 | 7 55.8 | 7 32.9 | 3.8 | 2.0 | 9.8 | 5.1 | 15.8 | 8.3 |
| 39 | 7 39.8 | 7 41.0 | 7 18.8 | 3.9 | 2.0 | 9.9 | 5.0 | 15.9 | 8.1 | 39 | 7 54.8 | 7 56.0 | 7 33.1 | 3.9 | 2.0 | 9.9 | 5.2 | 15.9 | 8.3 |
| 40 | 7 40.0 | 7 41.3 | 7 19.0 | 4.0 | 2.0 | 10.0 | 5.1 | 16.0 | 8.1 | 40 | 7 55.0 | 7 56.3 | 7 33.4 | 4.0 | 2.1 | 10.0 | 5.3 | 16.0 | 8.4 |
| 41 | 7 40.3 | 7 41.5 | 7 19.3 | 4.1 | 2.1 | 10.1 | 5.1 | 16.1 | 8.2 | 41 | 7 55.3 | 7 56.6 | 7 33.6 | 4.1 | 2.2 | 10.1 | 5.3 | 16.1 | 8.5 |
| 42 | 7 40.5 | 7 41.8 | 7 19.5 | 4.2 | 2.1 | 10.2 | 5.2 | 16.2 | 8.2 | 42 | 7 55.5 | 7 56.8 | 7 33.8 | 4.2 | 2.2 | 10.2 | 5.4 | 16.2 | 8.5 |
| 43 | 7 40.8 | 7 42.0 | 7 19.8 | 4.3 | 2.2 | 10.3 | 5.2 | 16.3 | 8.3 | 43 | 7 55.8 | 7 57.1 | 7 34.1 | 4.3 | 2.3 | 10.3 | 5.4 | 16.3 | 8.6 |
| 44 | 7 41.0 | 7 42.3 | 7 20.0 | 4.4 | 2.2 | 10.4 | 5.3 | 16.4 | 8.3 | 44 | 7 56.0 | 7 57.3 | 7 34.3 | 4.4 | 2.3 | 10.4 | 5.5 | 16.4 | 8.6 |
| 45 | 7 41.3 | 7 42.5 | 7 20.2 | 4.5 | 2.3 | 10.5 | 5.3 | 16.5 | 8.4 | 45 | 7 56.3 | 7 57.6 | 7 34.6 | 4.5 | 2.4 | 10.5 | 5.5 | 16.5 | 8.7 |
| 46 | 7 41.5 | 7 42.8 | 7 20.5 | 4.6 | 2.3 | 10.6 | 5.4 | 16.6 | 8.4 | 46 | 7 56.5 | 7 57.8 | 7 34.8 | 4.6 | 2.4 | 10.6 | 5.6 | 16.6 | 8.7 |
| 47 | 7 41.8 | 7 43.0 | 7 20.7 | 4.7 | 2.4 | 10.7 | 5.4 | 16.7 | 8.5 | 47 | 7 56.8 | 7 58.1 | 7 35.0 | 4.7 | 2.5 | 10.7 | 5.6 | 16.7 | 8.8 |
| 48 | 7 42.0 | 7 43.3 | 7 21.0 | 4.8 | 2.4 | 10.8 | 5.5 | 16.8 | 8.5 | 48 | 7 57.0 | 7 58.3 | 7 35.3 | 4.8 | 2.5 | 10.8 | 5.7 | 16.8 | 8.8 |
| 49 | 7 42.3 | 7 43.5 | 7 21.2 | 4.9 | 2.5 | 10.9 | 5.5 | 16.9 | 8.6 | 49 | 7 57.3 | 7 58.6 | 7 35.5 | 4.9 | 2.6 | 10.9 | 5.7 | 16.9 | 8.9 |
| 50 | 7 42.5 | 7 43.8 | 7 21.4 | 5.0 | 2.5 | 11.0 | 5.6 | 17.0 | 8.6 | 50 | 7 57.5 | 7 58.8 | 7 35.7 | 5.0 | 2.6 | 11.0 | 5.8 | 17.0 | 8.9 |
| 51 | 7 42.8 | 7 44.0 | 7 21.7 | 5.1 | 2.6 | 11.1 | 5.6 | 17.1 | 8.7 | 51 | 7 57.8 | 7 59.1 | 7 36.0 | 5.1 | 2.7 | 11.1 | 5.8 | 17.1 | 9.0 |
| 52 | 7 43.0 | 7 44.3 | 7 21.9 | 5.2 | 2.6 | 11.2 | 5.7 | 17.2 | 8.7 | 52 | 7 58.0 | 7 59.3 | 7 36.2 | 5.2 | 2.7 | 11.2 | 5.9 | 17.2 | 9.0 |
| 53 | 7 43.3 | 7 44.5 | 7 22.1 | 5.3 | 2.7 | 11.3 | 5.7 | 17.3 | 8.8 | 53 | 7 58.3 | 7 59.6 | 7 36.5 | 5.3 | 2.8 | 11.3 | 5.9 | 17.3 | 9.1 |
| 54 | 7 43.5 | 7 44.8 | 7 22.4 | 5.4 | 2.7 | 11.4 | 5.8 | 17.4 | 8.8 | 54 | 7 58.5 | 7 59.8 | 7 36.7 | 5.4 | 2.8 | 11.4 | 6.0 | 17.4 | 9.1 |
| 55 | 7 43.8 | 7 45.0 | 7 22.6 | 5.5 | 2.8 | 11.5 | 5.8 | 17.5 | 8.9 | 55 | 7 58.8 | 8 00.1 | 7 36.9 | 5.5 | 2.9 | 11.5 | 6.0 | 17.5 | 9.2 |
| 56 | 7 44.0 | 7 45.3 | 7 22.9 | 5.6 | 2.8 | 11.6 | 5.9 | 17.6 | 8.9 | 56 | 7 59.0 | 8 00.3 | 7 37.2 | 5.6 | 2.9 | 11.6 | 6.1 | 17.6 | 9.2 |
| 57 | 7 44.3 | 7 45.5 | 7 23.1 | 5.7 | 2.9 | 11.7 | 5.9 | 17.7 | 9.0 | 57 | 7 59.3 | 8 00.6 | 7 37.4 | 5.7 | 3.0 | 11.7 | 6.1 | 17.7 | 9.3 |
| 58 | 7 44.5 | 7 45.8 | 7 23.3 | 5.8 | 2.9 | 11.8 | 6.0 | 17.8 | 9.0 | 58 | 7 59.5 | 8 00.8 | 7 37.7 | 5.8 | 3.0 | 11.8 | 6.2 | 17.8 | 9.3 |
| 59 | 7 44.8 | 7 46.0 | 7 23.6 | 5.9 | 3.0 | 11.9 | 6.0 | 17.9 | 9.1 | 59 | 7 59.8 | 8 01.1 | 7 37.9 | 5.9 | 3.1 | 11.9 | 6.2 | 17.9 | 9.4 |
| 60 | 7 45.0 | 7 46.3 | 7 23.8 | 6.0 | 3.1 | 12.0 | 6.1 | 18.0 | 9.2 | 60 | 8 00.0 | 8 01.3 | 7 38.1 | 6.0 | 3.2 | 12.0 | 6.3 | 18.0 | 9.5 |



INCREMENTS AND CORRECTIONS

| 32 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | 33 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | | | | |
|-----------------|-------------|--------|--------|------------------------|-----|------|-----|-----------------|-------------|-------|--------|------------------------|--------|-----|-----|------|-----|------|------|
| | | | | d | ' | " | " | | | | | d | ' | " | " | | | | |
| 00 | 8 00-0 | 8 01-3 | 7 38-1 | 0-0 | 0-0 | 6-0 | 3-3 | 12-0 | 6-5 | 00 | 8 15-0 | 8 16-4 | 7 52-5 | 0-0 | 0-0 | 6-0 | 3-4 | 12-0 | 6-7 |
| 01 | 8 00-3 | 8 01-6 | 7 38-4 | 0-1 | 0-1 | 6-1 | 3-3 | 12-1 | 6-6 | 01 | 8 15-3 | 8 16-6 | 7 52-7 | 0-1 | 0-1 | 6-1 | 3-4 | 12-1 | 6-8 |
| 02 | 8 00-5 | 8 01-8 | 7 38-6 | 0-2 | 0-1 | 6-2 | 3-4 | 12-2 | 6-6 | 02 | 8 15-5 | 8 16-9 | 7 52-9 | 0-2 | 0-1 | 6-2 | 3-5 | 12-2 | 6-8 |
| 03 | 8 00-8 | 8 02-1 | 7 38-8 | 0-3 | 0-2 | 6-3 | 3-4 | 12-3 | 6-7 | 03 | 8 15-8 | 8 17-1 | 7 53-2 | 0-3 | 0-2 | 6-3 | 3-5 | 12-3 | 6-9 |
| 04 | 8 01-0 | 8 02-3 | 7 39-1 | 0-4 | 0-2 | 6-4 | 3-5 | 12-4 | 6-7 | 04 | 8 16-0 | 8 17-4 | 7 53-4 | 0-4 | 0-2 | 6-4 | 3-6 | 12-4 | 6-9 |
| 05 | 8 01-3 | 8 02-6 | 7 39-3 | 0-5 | 0-3 | 6-5 | 3-5 | 12-5 | 6-8 | 05 | 8 16-3 | 8 17-6 | 7 53-6 | 0-5 | 0-3 | 6-5 | 3-6 | 12-5 | 7-0 |
| 06 | 8 01-5 | 8 02-8 | 7 39-6 | 0-6 | 0-3 | 6-6 | 3-6 | 12-6 | 6-8 | 06 | 8 16-5 | 8 17-9 | 7 53-9 | 0-6 | 0-3 | 6-6 | 3-7 | 12-6 | 7-0 |
| 07 | 8 01-8 | 8 03-1 | 7 39-8 | 0-7 | 0-4 | 6-7 | 3-6 | 12-7 | 6-9 | 07 | 8 16-8 | 8 18-1 | 7 54-1 | 0-7 | 0-4 | 6-7 | 3-7 | 12-7 | 7-1 |
| 08 | 8 02-0 | 8 03-3 | 7 40-0 | 0-8 | 0-4 | 6-8 | 3-7 | 12-8 | 6-9 | 08 | 8 17-0 | 8 18-4 | 7 54-4 | 0-8 | 0-4 | 6-8 | 3-8 | 12-8 | 7-1 |
| 09 | 8 02-3 | 8 03-6 | 7 40-3 | 0-9 | 0-5 | 6-9 | 3-7 | 12-9 | 7-0 | 09 | 8 17-3 | 8 18-6 | 7 54-6 | 0-9 | 0-5 | 6-9 | 3-9 | 12-9 | 7-2 |
| 10 | 8 02-5 | 8 03-8 | 7 40-5 | 1-0 | 0-5 | 7-0 | 3-8 | 13-0 | 7-0 | 10 | 8 17-5 | 8 18-9 | 7 54-8 | 1-0 | 0-6 | 7-0 | 3-9 | 13-0 | 7-3 |
| 11 | 8 02-8 | 8 04-1 | 7 40-8 | 1-1 | 0-6 | 7-1 | 3-8 | 13-1 | 7-1 | 11 | 8 17-8 | 8 19-1 | 7 55-1 | 1-1 | 0-6 | 7-1 | 4-0 | 13-1 | 7-3 |
| 12 | 8 03-0 | 8 04-3 | 7 41-0 | 1-2 | 0-7 | 7-2 | 3-9 | 13-2 | 7-2 | 12 | 8 18-0 | 8 19-4 | 7 55-3 | 1-2 | 0-7 | 7-2 | 4-0 | 13-2 | 7-4 |
| 13 | 8 03-3 | 8 04-6 | 7 41-2 | 1-3 | 0-7 | 7-3 | 4-0 | 13-3 | 7-2 | 13 | 8 18-3 | 8 19-6 | 7 55-6 | 1-3 | 0-7 | 7-3 | 4-1 | 13-3 | 7-4 |
| 14 | 8 03-5 | 8 04-8 | 7 41-5 | 1-4 | 0-8 | 7-4 | 4-0 | 13-4 | 7-3 | 14 | 8 18-5 | 8 19-9 | 7 55-8 | 1-4 | 0-8 | 7-4 | 4-1 | 13-4 | 7-5 |
| 15 | 8 03-8 | 8 05-1 | 7 41-7 | 1-5 | 0-8 | 7-5 | 4-1 | 13-5 | 7-3 | 15 | 8 18-8 | 8 20-1 | 7 56-0 | 1-5 | 0-8 | 7-5 | 4-2 | 13-5 | 7-5 |
| 16 | 8 04-0 | 8 05-3 | 7 42-0 | 1-6 | 0-9 | 7-6 | 4-1 | 13-6 | 7-4 | 16 | 8 19-0 | 8 20-4 | 7 56-3 | 1-6 | 0-9 | 7-6 | 4-2 | 13-6 | 7-6 |
| 17 | 8 04-3 | 8 05-6 | 7 42-2 | 1-7 | 0-9 | 7-7 | 4-2 | 13-7 | 7-4 | 17 | 8 19-3 | 8 20-6 | 7 56-5 | 1-7 | 0-9 | 7-7 | 4-3 | 13-7 | 7-6 |
| 18 | 8 04-5 | 8 05-8 | 7 42-4 | 1-8 | 1-0 | 7-8 | 4-2 | 13-8 | 7-5 | 18 | 8 19-5 | 8 20-9 | 7 56-7 | 1-8 | 1-0 | 7-8 | 4-4 | 13-8 | 7-7 |
| 19 | 8 04-8 | 8 06-1 | 7 42-7 | 1-9 | 1-0 | 7-9 | 4-3 | 13-9 | 7-5 | 19 | 8 19-8 | 8 21-1 | 7 57-0 | 1-9 | 1-1 | 7-9 | 4-4 | 13-9 | 7-8 |
| 20 | 8 05-0 | 8 06-3 | 7 42-9 | 2-0 | 1-1 | 8-0 | 4-3 | 14-0 | 7-6 | 20 | 8 20-0 | 8 21-4 | 7 57-2 | 2-0 | 1-1 | 8-0 | 4-5 | 14-0 | 7-8 |
| 21 | 8 05-3 | 8 06-6 | 7 43-1 | 2-1 | 1-1 | 8-1 | 4-4 | 14-1 | 7-6 | 21 | 8 20-3 | 8 21-6 | 7 57-5 | 2-1 | 1-2 | 8-1 | 4-5 | 14-1 | 7-9 |
| 22 | 8 05-5 | 8 06-8 | 7 43-4 | 2-2 | 1-2 | 8-2 | 4-4 | 14-2 | 7-7 | 22 | 8 20-5 | 8 21-9 | 7 57-7 | 2-2 | 1-2 | 8-2 | 4-6 | 14-2 | 7-9 |
| 23 | 8 05-8 | 8 07-1 | 7 43-6 | 2-3 | 1-2 | 8-3 | 4-5 | 14-3 | 7-7 | 23 | 8 20-8 | 8 22-1 | 7 57-9 | 2-3 | 1-3 | 8-3 | 4-6 | 14-3 | 8-0 |
| 24 | 8 06-0 | 8 07-3 | 7 43-9 | 2-4 | 1-3 | 8-4 | 4-6 | 14-4 | 7-8 | 24 | 8 21-0 | 8 22-4 | 7 58-2 | 2-4 | 1-3 | 8-4 | 4-7 | 14-4 | 8-0 |
| 25 | 8 06-3 | 8 07-6 | 7 44-1 | 2-5 | 1-4 | 8-5 | 4-6 | 14-5 | 7-9 | 25 | 8 21-3 | 8 22-6 | 7 58-4 | 2-5 | 1-4 | 8-5 | 4-7 | 14-5 | 8-1 |
| 26 | 8 06-5 | 8 07-8 | 7 44-3 | 2-6 | 1-4 | 8-6 | 4-7 | 14-6 | 7-9 | 26 | 8 21-5 | 8 22-9 | 7 58-7 | 2-6 | 1-5 | 8-6 | 4-8 | 14-6 | 8-2 |
| 27 | 8 06-8 | 8 08-1 | 7 44-6 | 2-7 | 1-5 | 8-7 | 4-7 | 14-7 | 8-0 | 27 | 8 21-8 | 8 23-1 | 7 58-9 | 2-7 | 1-5 | 8-7 | 4-9 | 14-7 | 8-2 |
| 28 | 8 07-0 | 8 08-3 | 7 44-8 | 2-8 | 1-5 | 8-8 | 4-8 | 14-8 | 8-0 | 28 | 8 22-0 | 8 23-4 | 7 59-1 | 2-8 | 1-6 | 8-8 | 4-9 | 14-8 | 8-3 |
| 29 | 8 07-3 | 8 08-6 | 7 45-1 | 2-9 | 1-6 | 8-9 | 4-8 | 14-9 | 8-1 | 29 | 8 22-3 | 8 23-6 | 7 59-4 | 2-9 | 1-6 | 8-9 | 5-0 | 14-9 | 8-3 |
| 30 | 8 07-5 | 8 08-8 | 7 45-3 | 3-0 | 1-6 | 9-0 | 4-9 | 15-0 | 8-1 | 30 | 8 22-5 | 8 23-9 | 7 59-6 | 3-0 | 1-7 | 9-0 | 5-0 | 15-0 | 8-4 |
| 31 | 8 07-8 | 8 09-1 | 7 45-5 | 3-1 | 1-7 | 9-1 | 4-9 | 15-1 | 8-2 | 31 | 8 22-8 | 8 24-1 | 7 59-8 | 3-1 | 1-7 | 9-1 | 5-1 | 15-1 | 8-4 |
| 32 | 8 08-0 | 8 09-3 | 7 45-8 | 3-2 | 1-7 | 9-2 | 5-0 | 15-2 | 8-2 | 32 | 8 23-0 | 8 24-4 | 8 00-1 | 3-2 | 1-8 | 9-2 | 5-1 | 15-2 | 8-5 |
| 33 | 8 08-3 | 8 09-6 | 7 46-0 | 3-3 | 1-8 | 9-3 | 5-0 | 15-3 | 8-3 | 33 | 8 23-3 | 8 24-6 | 8 00-3 | 3-3 | 1-8 | 9-3 | 5-2 | 15-3 | 8-5 |
| 34 | 8 08-5 | 8 09-8 | 7 46-2 | 3-4 | 1-8 | 9-4 | 5-1 | 15-4 | 8-3 | 34 | 8 23-5 | 8 24-9 | 8 00-6 | 3-4 | 1-9 | 9-4 | 5-2 | 15-4 | 8-6 |
| 35 | 8 08-8 | 8 10-1 | 7 46-5 | 3-5 | 1-9 | 9-5 | 5-1 | 15-5 | 8-4 | 35 | 8 23-8 | 8 25-1 | 8 00-8 | 3-5 | 2-0 | 9-5 | 5-3 | 15-5 | 8-7 |
| 36 | 8 09-0 | 8 10-3 | 7 46-7 | 3-6 | 2-0 | 9-6 | 5-2 | 15-6 | 8-5 | 36 | 8 24-0 | 8 25-4 | 8 01-0 | 3-6 | 2-0 | 9-6 | 5-4 | 15-6 | 8-7 |
| 37 | 8 09-3 | 8 10-6 | 7 47-0 | 3-7 | 2-0 | 9-7 | 5-3 | 15-7 | 8-5 | 37 | 8 24-3 | 8 25-6 | 8 01-3 | 3-7 | 2-1 | 9-7 | 5-4 | 15-7 | 8-8 |
| 38 | 8 09-5 | 8 10-8 | 7 47-2 | 3-8 | 2-1 | 9-8 | 5-3 | 15-8 | 8-6 | 38 | 8 24-5 | 8 25-9 | 8 01-5 | 3-8 | 2-1 | 9-8 | 5-5 | 15-8 | 8-8 |
| 39 | 8 09-8 | 8 11-1 | 7 47-4 | 3-9 | 2-1 | 9-9 | 5-4 | 15-9 | 8-6 | 39 | 8 24-8 | 8 26-1 | 8 01-8 | 3-9 | 2-2 | 9-9 | 5-5 | 15-9 | 8-9 |
| 40 | 8 10-0 | 8 11-3 | 7 47-7 | 4-0 | 2-2 | 10-0 | 5-4 | 16-0 | 8-7 | 40 | 8 25-0 | 8 26-4 | 8 02-0 | 4-0 | 2-2 | 10-0 | 5-6 | 16-0 | 8-9 |
| 41 | 8 10-3 | 8 11-6 | 7 47-9 | 4-1 | 2-2 | 10-1 | 5-5 | 16-1 | 8-7 | 41 | 8 25-3 | 8 26-6 | 8 02-2 | 4-1 | 2-3 | 10-1 | 5-6 | 16-1 | 9-0 |
| 42 | 8 10-5 | 8 11-8 | 7 48-2 | 4-2 | 2-3 | 10-2 | 5-5 | 16-2 | 8-8 | 42 | 8 25-5 | 8 26-9 | 8 02-5 | 4-2 | 2-3 | 10-2 | 5-7 | 16-2 | 9-0 |
| 43 | 8 10-8 | 8 12-1 | 7 48-4 | 4-3 | 2-3 | 10-3 | 5-6 | 16-3 | 8-8 | 43 | 8 25-8 | 8 27-1 | 8 02-7 | 4-3 | 2-4 | 10-3 | 5-8 | 16-3 | 9-1 |
| 44 | 8 11-0 | 8 12-3 | 7 48-6 | 4-4 | 2-4 | 10-4 | 5-6 | 16-4 | 8-9 | 44 | 8 26-0 | 8 27-4 | 8 02-9 | 4-4 | 2-5 | 10-4 | 5-8 | 16-4 | 9-2 |
| 45 | 8 11-3 | 8 12-6 | 7 48-9 | 4-5 | 2-4 | 10-5 | 5-7 | 16-5 | 8-9 | 45 | 8 26-3 | 8 27-6 | 8 03-2 | 4-5 | 2-5 | 10-5 | 5-9 | 16-5 | 9-2 |
| 46 | 8 11-5 | 8 12-8 | 7 49-1 | 4-6 | 2-5 | 10-6 | 5-7 | 16-6 | 9-0 | 46 | 8 26-5 | 8 27-9 | 8 03-4 | 4-6 | 2-6 | 10-6 | 5-9 | 16-6 | 9-3 |
| 47 | 8 11-8 | 8 13-1 | 7 49-3 | 4-7 | 2-5 | 10-7 | 5-8 | 16-7 | 9-0 | 47 | 8 26-8 | 8 28-1 | 8 03-7 | 4-7 | 2-6 | 10-7 | 6-0 | 16-7 | 9-3 |
| 48 | 8 12-0 | 8 13-3 | 7 49-6 | 4-8 | 2-6 | 10-8 | 5-9 | 16-8 | 9-1 | 48 | 8 27-0 | 8 28-4 | 8 03-9 | 4-8 | 2-7 | 10-8 | 6-0 | 16-8 | 9-4 |
| 49 | 8 12-3 | 8 13-6 | 7 49-8 | 4-9 | 2-7 | 10-9 | 5-9 | 16-9 | 9-2 | 49 | 8 27-3 | 8 28-6 | 8 04-1 | 4-9 | 2-7 | 10-9 | 6-1 | 16-9 | 9-4 |
| 50 | 8 12-5 | 8 13-8 | 7 50-1 | 5-0 | 2-7 | 11-0 | 6-0 | 17-0 | 9-2 | 50 | 8 27-5 | 8 28-9 | 8 04-4 | 5-0 | 2-8 | 11-0 | 6-1 | 17-0 | 9-5 |
| 51 | 8 12-8 | 8 14-1 | 7 50-3 | 5-1 | 2-8 | 11-1 | 6-0 | 17-1 | 9-3 | 51 | 8 27-8 | 8 29-1 | 8 04-6 | 5-1 | 2-8 | 11-1 | 6-2 | 17-1 | 9-5 |
| 52 | 8 13-0 | 8 14-3 | 7 50-5 | 5-2 | 2-8 | 11-2 | 6-1 | 17-2 | 9-3 | 52 | 8 28-0 | 8 29-4 | 8 04-9 | 5-2 | 2-9 | 11-2 | 6-3 | 17-2 | 9-6 |
| 53 | 8 13-3 | 8 14-6 | 7 50-8 | 5-3 | 2-9 | 11-3 | 6-1 | 17-3 | 9-4 | 53 | 8 28-3 | 8 29-6 | 8 05-1 | 5-3 | 3-0 | 11-3 | 6-3 | 17-3 | 9-7 |
| 54 | 8 13-5 | 8 14-8 | 7 51-0 | 5-4 | 2-9 | 11-4 | 6-2 | 17-4 | 9-4 | 54 | 8 28-5 | 8 29-9 | 8 05-3 | 5-4 | 3-0 | 11-4 | 6-4 | 17-4 | 9-7 |
| 55 | 8 13-8 | 8 15-1 | 7 51-3 | 5-5 | 3-0 | 11-5 | 6-2 | 17-5 | 9-5 | 55 | 8 28-8 | 8 30-1 | 8 05-6 | 5-5 | 3-1 | 11-5 | 6-4 | 17-5 | 9-8 |
| 56 | 8 14-0 | 8 15-4 | 7 51-5 | 5-6 | 3-0 | 11-6 | 6-3 | 17-6 | 9-5 | 56 | 8 29-0 | 8 30-4 | 8 05-8 | 5-6 | 3-1 | 11-6 | 6-5 | 17-6 | 9-8 |
| 57 | 8 14-3 | 8 15-6 | 7 51-7 | 5-7 | 3-1 | 11-7 | 6-3 | 17-7 | 9-6 | 57 | 8 29-3 | 8 30-6 | 8 06-1 | 5-7 | 3-2 | 11-7 | 6-5 | 17-7 | 9-9 |
| 58 | 8 14-5 | 8 15-9 | 7 52-0 | 5-8 | 3-1 | 11-8 | 6-4 | 17-8 | 9-6 | 58 | 8 29-5 | 8 30-9 | 8 06-3 | 5-8 | 3-2 | 11-8 | 6-6 | 17-8 | 9-9 |
| 59 | 8 14-8 | 8 16-1 | 7 52-2 | 5-9 | 3-2 | 11-9 | 6-4 | 17-9 | 9-7 | 59 | 8 29-8 | 8 31-1 | 8 06-5 | 5-9 | 3-3 | 11-9 | 6-6 | 17-9 | 10-0 |
| 60 | 8 15-0 | 8 16-4 | 7 52-5 | 6-0 | 3-3 | 12-0 | 6-5 | 18-0 | 9-8 | 60 | 8 30-0 | 8 31-4 | 8 06-8 | 6-0 | 3-4 | 12-0 | 6-7 | 18-0 | 10-1 |



34^m

INCREMENTS AND CORRECTIONS

35^m

| 34 | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | 35 | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | | | | | |
|----|-------------|--------|--------|------------------------|-----|------|-----|-------------|-------|------|------------------------|--------|--------|-----|-----|------|-----|------|------|
| | | | | d | ' | " | | | | | d | ' | " | | | | | | |
| 00 | 8 30-0 | 8 31-4 | 8 06-8 | 0-0 | 0-0 | 6-0 | 3-5 | 12-0 | 6-9 | 00 | 8 45-0 | 8 46-4 | 8 21-1 | 0-0 | 0-0 | 6-0 | 3-6 | 12-0 | 7-1 |
| 01 | 8 30-3 | 8 31-6 | 8 07-0 | 0-1 | 0-1 | 6-1 | 3-5 | 12-1 | 7-0 | 01 | 8 45-3 | 8 46-7 | 8 21-3 | 0-1 | 0-1 | 6-1 | 3-6 | 12-1 | 7-2 |
| 02 | 8 30-5 | 8 31-9 | 8 07-2 | 0-2 | 0-1 | 6-2 | 3-6 | 12-2 | 7-0 | 02 | 8 45-5 | 8 46-9 | 8 21-6 | 0-2 | 0-1 | 6-2 | 3-7 | 12-2 | 7-2 |
| 03 | 8 30-8 | 8 32-1 | 8 07-5 | 0-3 | 0-2 | 6-3 | 3-6 | 12-3 | 7-1 | 03 | 8 45-8 | 8 47-2 | 8 21-8 | 0-3 | 0-2 | 6-3 | 3-7 | 12-3 | 7-3 |
| 04 | 8 31-0 | 8 32-4 | 8 07-7 | 0-4 | 0-2 | 6-4 | 3-7 | 12-4 | 7-1 | 04 | 8 46-0 | 8 47-4 | 8 22-0 | 0-4 | 0-2 | 6-4 | 3-8 | 12-4 | 7-3 |
| 05 | 8 31-3 | 8 32-6 | 8 08-0 | 0-5 | 0-3 | 6-5 | 3-7 | 12-5 | 7-2 | 05 | 8 46-3 | 8 47-7 | 8 22-3 | 0-5 | 0-3 | 6-5 | 3-8 | 12-5 | 7-4 |
| 06 | 8 31-5 | 8 32-9 | 8 08-2 | 0-6 | 0-3 | 6-6 | 3-8 | 12-6 | 7-2 | 06 | 8 46-5 | 8 47-9 | 8 22-5 | 0-6 | 0-4 | 6-6 | 3-9 | 12-6 | 7-5 |
| 07 | 8 31-8 | 8 33-2 | 8 08-4 | 0-7 | 0-4 | 6-7 | 3-9 | 12-7 | 7-3 | 07 | 8 46-8 | 8 48-2 | 8 22-8 | 0-7 | 0-4 | 6-7 | 4-0 | 12-7 | 7-5 |
| 08 | 8 32-0 | 8 33-4 | 8 08-7 | 0-8 | 0-5 | 6-8 | 3-9 | 12-8 | 7-4 | 08 | 8 47-0 | 8 48-4 | 8 23-0 | 0-8 | 0-5 | 6-8 | 4-0 | 12-8 | 7-6 |
| 09 | 8 32-3 | 8 33-7 | 8 08-9 | 0-9 | 0-5 | 6-9 | 4-0 | 12-9 | 7-4 | 09 | 8 47-3 | 8 48-7 | 8 23-2 | 0-9 | 0-5 | 6-9 | 4-1 | 12-9 | 7-6 |
| 10 | 8 32-5 | 8 33-9 | 8 09-2 | 1-0 | 0-6 | 7-0 | 4-0 | 13-0 | 7-5 | 10 | 8 47-5 | 8 48-9 | 8 23-5 | 1-0 | 0-6 | 7-0 | 4-1 | 13-0 | 7-7 |
| 11 | 8 32-8 | 8 34-2 | 8 09-4 | 1-1 | 0-6 | 7-1 | 4-1 | 13-1 | 7-5 | 11 | 8 47-8 | 8 49-2 | 8 23-7 | 1-1 | 0-7 | 7-1 | 4-2 | 13-1 | 7-8 |
| 12 | 8 33-0 | 8 34-4 | 8 09-6 | 1-2 | 0-7 | 7-2 | 4-1 | 13-2 | 7-6 | 12 | 8 48-0 | 8 49-4 | 8 23-9 | 1-2 | 0-7 | 7-2 | 4-3 | 13-2 | 7-8 |
| 13 | 8 33-3 | 8 34-7 | 8 09-9 | 1-3 | 0-7 | 7-3 | 4-2 | 13-3 | 7-6 | 13 | 8 48-3 | 8 49-7 | 8 24-2 | 1-3 | 0-8 | 7-3 | 4-3 | 13-3 | 7-9 |
| 14 | 8 33-5 | 8 34-9 | 8 10-1 | 1-4 | 0-8 | 7-4 | 4-3 | 13-4 | 7-7 | 14 | 8 48-5 | 8 49-9 | 8 24-4 | 1-4 | 0-8 | 7-4 | 4-4 | 13-4 | 7-9 |
| 15 | 8 33-8 | 8 35-2 | 8 10-3 | 1-5 | 0-9 | 7-5 | 4-3 | 13-5 | 7-8 | 15 | 8 48-8 | 8 50-2 | 8 24-7 | 1-5 | 0-9 | 7-5 | 4-4 | 13-5 | 8-0 |
| 16 | 8 34-0 | 8 35-4 | 8 10-6 | 1-6 | 0-9 | 7-6 | 4-4 | 13-6 | 7-8 | 16 | 8 49-0 | 8 50-4 | 8 24-9 | 1-6 | 0-9 | 7-6 | 4-5 | 13-6 | 8-0 |
| 17 | 8 34-3 | 8 35-7 | 8 10-8 | 1-7 | 1-0 | 7-7 | 4-4 | 13-7 | 7-9 | 17 | 8 49-3 | 8 50-7 | 8 25-1 | 1-7 | 1-0 | 7-7 | 4-6 | 13-7 | 8-1 |
| 18 | 8 34-5 | 8 35-9 | 8 11-1 | 1-8 | 1-0 | 7-8 | 4-5 | 13-8 | 7-9 | 18 | 8 49-5 | 8 50-9 | 8 25-4 | 1-8 | 1-1 | 7-8 | 4-6 | 13-8 | 8-2 |
| 19 | 8 34-8 | 8 36-2 | 8 11-3 | 1-9 | 1-1 | 7-9 | 4-5 | 13-9 | 8-0 | 19 | 8 49-8 | 8 51-2 | 8 25-6 | 1-9 | 1-1 | 7-9 | 4-7 | 13-9 | 8-2 |
| 20 | 8 35-0 | 8 36-4 | 8 11-5 | 2-0 | 1-2 | 8-0 | 4-6 | 14-0 | 8-1 | 20 | 8 50-0 | 8 51-5 | 8 25-9 | 2-0 | 1-2 | 8-0 | 4-7 | 14-0 | 8-3 |
| 21 | 8 35-3 | 8 36-7 | 8 11-8 | 2-1 | 1-2 | 8-1 | 4-7 | 14-1 | 8-1 | 21 | 8 50-3 | 8 51-7 | 8 26-1 | 2-1 | 1-2 | 8-1 | 4-8 | 14-1 | 8-3 |
| 22 | 8 35-5 | 8 36-9 | 8 12-0 | 2-2 | 1-3 | 8-2 | 4-7 | 14-2 | 8-2 | 22 | 8 50-5 | 8 52-0 | 8 26-3 | 2-2 | 1-3 | 8-2 | 4-9 | 14-2 | 8-4 |
| 23 | 8 35-8 | 8 37-2 | 8 12-3 | 2-3 | 1-3 | 8-3 | 4-8 | 14-3 | 8-3 | 23 | 8 50-8 | 8 52-2 | 8 26-6 | 2-3 | 1-4 | 8-3 | 4-9 | 14-3 | 8-5 |
| 24 | 8 36-0 | 8 37-4 | 8 12-5 | 2-4 | 1-4 | 8-4 | 4-8 | 14-4 | 8-3 | 24 | 8 51-0 | 8 52-5 | 8 26-8 | 2-4 | 1-4 | 8-4 | 5-0 | 14-4 | 8-5 |
| 25 | 8 36-3 | 8 37-7 | 8 12-7 | 2-5 | 1-4 | 8-5 | 4-9 | 14-5 | 8-3 | 25 | 8 51-3 | 8 52-7 | 8 27-0 | 2-5 | 1-5 | 8-5 | 5-0 | 14-5 | 8-6 |
| 26 | 8 36-5 | 8 37-9 | 8 13-0 | 2-6 | 1-5 | 8-6 | 4-9 | 14-6 | 8-4 | 26 | 8 51-5 | 8 53-0 | 8 27-3 | 2-6 | 1-5 | 8-6 | 5-1 | 14-6 | 8-6 |
| 27 | 8 36-8 | 8 38-2 | 8 13-2 | 2-7 | 1-6 | 8-7 | 5-0 | 14-7 | 8-5 | 27 | 8 51-8 | 8 53-2 | 8 27-5 | 2-7 | 1-6 | 8-7 | 5-1 | 14-7 | 8-7 |
| 28 | 8 37-0 | 8 38-4 | 8 13-4 | 2-8 | 1-6 | 8-8 | 5-1 | 14-8 | 8-5 | 28 | 8 52-0 | 8 53-5 | 8 27-8 | 2-8 | 1-7 | 8-8 | 5-2 | 14-8 | 8-8 |
| 29 | 8 37-3 | 8 38-7 | 8 13-7 | 2-9 | 1-7 | 8-9 | 5-1 | 14-9 | 8-6 | 29 | 8 52-3 | 8 53-7 | 8 28-0 | 2-9 | 1-7 | 8-9 | 5-3 | 14-9 | 8-8 |
| 30 | 8 37-5 | 8 38-9 | 8 13-9 | 3-0 | 1-7 | 9-0 | 5-2 | 15-0 | 8-6 | 30 | 8 52-5 | 8 54-0 | 8 28-2 | 3-0 | 1-8 | 9-0 | 5-3 | 15-0 | 8-9 |
| 31 | 8 37-8 | 8 39-2 | 8 14-2 | 3-1 | 1-8 | 9-1 | 5-2 | 15-1 | 8-7 | 31 | 8 52-8 | 8 54-2 | 8 28-5 | 3-1 | 1-8 | 9-1 | 5-4 | 15-1 | 8-9 |
| 32 | 8 38-0 | 8 39-4 | 8 14-4 | 3-2 | 1-8 | 9-2 | 5-3 | 15-2 | 8-7 | 32 | 8 53-0 | 8 54-5 | 8 28-7 | 3-2 | 1-9 | 9-2 | 5-4 | 15-2 | 9-0 |
| 33 | 8 38-3 | 8 39-7 | 8 14-6 | 3-3 | 1-9 | 9-3 | 5-3 | 15-3 | 8-8 | 33 | 8 53-3 | 8 54-7 | 8 29-0 | 3-3 | 2-0 | 9-3 | 5-5 | 15-3 | 9-1 |
| 34 | 8 38-5 | 8 39-9 | 8 14-9 | 3-4 | 2-0 | 9-4 | 5-4 | 15-4 | 8-9 | 34 | 8 53-5 | 8 55-0 | 8 29-2 | 3-4 | 2-0 | 9-4 | 5-6 | 15-4 | 9-1 |
| 35 | 8 38-8 | 8 40-2 | 8 15-1 | 3-5 | 2-0 | 9-5 | 5-5 | 15-5 | 8-9 | 35 | 8 53-8 | 8 55-2 | 8 29-4 | 3-5 | 2-1 | 9-5 | 5-6 | 15-5 | 9-2 |
| 36 | 8 39-0 | 8 40-4 | 8 15-4 | 3-6 | 2-1 | 9-6 | 5-5 | 15-6 | 9-0 | 36 | 8 54-0 | 8 55-5 | 8 29-7 | 3-6 | 2-1 | 9-6 | 5-7 | 15-6 | 9-2 |
| 37 | 8 39-3 | 8 40-7 | 8 15-6 | 3-7 | 2-1 | 9-7 | 5-6 | 15-7 | 9-0 | 37 | 8 54-3 | 8 55-7 | 8 29-9 | 3-7 | 2-2 | 9-7 | 5-7 | 15-7 | 9-3 |
| 38 | 8 39-5 | 8 40-9 | 8 15-8 | 3-8 | 2-2 | 9-8 | 5-6 | 15-8 | 9-1 | 38 | 8 54-5 | 8 56-0 | 8 30-2 | 3-8 | 2-2 | 9-8 | 5-8 | 15-8 | 9-3 |
| 39 | 8 39-8 | 8 41-2 | 8 16-1 | 3-9 | 2-2 | 9-9 | 5-7 | 15-9 | 9-1 | 39 | 8 54-8 | 8 56-2 | 8 30-4 | 3-9 | 2-3 | 9-9 | 5-9 | 15-9 | 9-4 |
| 40 | 8 40-0 | 8 41-4 | 8 16-3 | 4-0 | 2-3 | 10-0 | 5-8 | 16-0 | 9-2 | 40 | 8 55-0 | 8 56-5 | 8 30-6 | 4-0 | 2-4 | 10-0 | 5-9 | 16-0 | 9-5 |
| 41 | 8 40-3 | 8 41-7 | 8 16-5 | 4-1 | 2-4 | 10-1 | 5-8 | 16-1 | 9-3 | 41 | 8 55-3 | 8 56-7 | 8 30-9 | 4-1 | 2-4 | 10-1 | 6-0 | 16-1 | 9-5 |
| 42 | 8 40-5 | 8 41-9 | 8 16-8 | 4-2 | 2-4 | 10-2 | 5-9 | 16-2 | 9-3 | 42 | 8 55-5 | 8 57-0 | 8 31-1 | 4-2 | 2-5 | 10-2 | 6-0 | 16-2 | 9-6 |
| 43 | 8 40-8 | 8 42-2 | 8 17-0 | 4-3 | 2-5 | 10-3 | 5-9 | 16-3 | 9-4 | 43 | 8 55-8 | 8 57-2 | 8 31-3 | 4-3 | 2-5 | 10-3 | 6-1 | 16-3 | 9-6 |
| 44 | 8 41-0 | 8 42-4 | 8 17-3 | 4-4 | 2-5 | 10-4 | 6-0 | 16-4 | 9-4 | 44 | 8 56-0 | 8 57-5 | 8 31-6 | 4-4 | 2-6 | 10-4 | 6-2 | 16-4 | 9-7 |
| 45 | 8 41-3 | 8 42-7 | 8 17-5 | 4-5 | 2-6 | 10-5 | 6-0 | 16-5 | 9-5 | 45 | 8 56-3 | 8 57-7 | 8 31-8 | 4-5 | 2-7 | 10-5 | 6-2 | 16-5 | 9-8 |
| 46 | 8 41-5 | 8 42-9 | 8 17-7 | 4-6 | 2-6 | 10-6 | 6-1 | 16-6 | 9-5 | 46 | 8 56-5 | 8 58-0 | 8 32-1 | 4-6 | 2-7 | 10-6 | 6-3 | 16-6 | 9-8 |
| 47 | 8 41-8 | 8 43-2 | 8 18-0 | 4-7 | 2-7 | 10-7 | 6-2 | 16-7 | 9-6 | 47 | 8 56-8 | 8 58-2 | 8 32-3 | 4-7 | 2-8 | 10-7 | 6-3 | 16-7 | 9-9 |
| 48 | 8 42-0 | 8 43-4 | 8 18-2 | 4-8 | 2-8 | 10-8 | 6-2 | 16-8 | 9-7 | 48 | 8 57-0 | 8 58-5 | 8 32-5 | 4-8 | 2-8 | 10-8 | 6-4 | 16-8 | 9-9 |
| 49 | 8 42-3 | 8 43-7 | 8 18-5 | 4-9 | 2-8 | 10-9 | 6-3 | 16-9 | 9-7 | 49 | 8 57-3 | 8 58-7 | 8 32-8 | 4-9 | 2-9 | 10-9 | 6-4 | 16-9 | 10-0 |
| 50 | 8 42-5 | 8 43-9 | 8 18-7 | 5-0 | 2-9 | 11-0 | 6-3 | 17-0 | 9-8 | 50 | 8 57-5 | 8 59-0 | 8 33-0 | 5-0 | 3-0 | 11-0 | 6-5 | 17-0 | 10-1 |
| 51 | 8 42-8 | 8 44-2 | 8 18-9 | 5-1 | 2-9 | 11-1 | 6-4 | 17-1 | 9-8 | 51 | 8 57-8 | 8 59-2 | 8 33-3 | 5-1 | 3-0 | 11-1 | 6-6 | 17-1 | 10-1 |
| 52 | 8 43-0 | 8 44-4 | 8 19-2 | 5-2 | 3-0 | 11-2 | 6-4 | 17-2 | 9-9 | 52 | 8 58-0 | 8 59-5 | 8 33-5 | 5-2 | 3-1 | 11-2 | 6-6 | 17-2 | 10-2 |
| 53 | 8 43-3 | 8 44-7 | 8 19-4 | 5-3 | 3-0 | 11-3 | 6-5 | 17-3 | 9-9 | 53 | 8 58-3 | 8 59-7 | 8 33-7 | 5-3 | 3-1 | 11-3 | 6-7 | 17-3 | 10-2 |
| 54 | 8 43-5 | 8 44-9 | 8 19-7 | 5-4 | 3-1 | 11-4 | 6-6 | 17-4 | 10-0 | 54 | 8 58-5 | 9 00-0 | 8 34-0 | 5-4 | 3-2 | 11-4 | 6-7 | 17-4 | 10-3 |
| 55 | 8 43-8 | 8 45-2 | 8 19-9 | 5-5 | 3-2 | 11-5 | 6-6 | 17-5 | 10-1 | 55 | 8 58-8 | 9 00-2 | 8 34-2 | 5-5 | 3-3 | 11-5 | 6-8 | 17-5 | 10-4 |
| 56 | 8 44-0 | 8 45-4 | 8 20-1 | 5-6 | 3-2 | 11-6 | 6-7 | 17-6 | 10-1 | 56 | 8 59-0 | 9 00-5 | 8 34-4 | 5-6 | 3-3 | 11-6 | 6-9 | 17-6 | 10-4 |
| 57 | 8 44-3 | 8 45-7 | 8 20-4 | 5-7 | 3-3 | 11-7 | 6-7 | 17-7 | 10-2 | 57 | 8 59-3 | 9 00-7 | 8 34-7 | 5-7 | 3-4 | 11-7 | 6-9 | 17-7 | 10-5 |
| 58 | 8 44-5 | 8 45-9 | 8 20-6 | 5-8 | 3-3 | 11-8 | 6-8 | 17-8 | 10-2 | 58 | 8 59-5 | 9 01-0 | 8 34-9 | 5-8 | 3-4 | 11-8 | 7-0 | 17-8 | 10-5 |
| 59 | 8 44-8 | 8 46-2 | 8 20-8 | 5-9 | 3-4 | 11-9 | 6-8 | 17-9 | 10-3 | 59 | 8 59-8 | 9 01-2 | 8 35-2 | 5-9 | 3-5 | 11-9 | 7-0 | 17-9 | 10-6 |
| 60 | 8 45-0 | 8 46-4 | 8 21-1 | 6-0 | 3-5 | 12-0 | 6-9 | 18-0 | 10-4 | 60 | 9 00-0 | 9 01-5 | 8 35-4 | 6-0 | 3-6 | 12-0 | 7-1 | 18-0 | 10-7 |

xlx



36^m

INCREMENTS AND CORRECTIONS

37^m

| 36 ^m | | | | CORRECTIONS | | | | 37 ^m | | | | CORRECTIONS | | | | | | | |
|-----------------|--------|---------|--------|-------------|-----|------|-----|-----------------|------|----|--------|-------------|--------|-----|-----|------|-----|------|------|
| h | m | PLANETS | VALUES | v | | or | | v | | or | | v | | or | | | | | |
| | | | | d | ' | d | ' | d | ' | d | ' | d | ' | d | ' | | | | |
| 00 | 9 00-0 | 9 01-5 | 8 35-4 | 0-0 | 0-0 | 6-0 | 3-7 | 12-0 | 7-3 | 00 | 9 15-0 | 9 16-5 | 8 49-7 | 0-0 | 0-0 | 6-0 | 3-8 | 12-0 | 7-5 |
| 01 | 9 00-3 | 9 01-7 | 8 35-6 | 0-1 | 0-1 | 6-1 | 3-7 | 12-1 | 7-4 | 01 | 9 15-3 | 9 16-8 | 8 50-0 | 0-1 | 0-1 | 6-1 | 3-8 | 12-1 | 7-6 |
| 02 | 9 00-5 | 9 02-0 | 8 35-9 | 0-2 | 0-1 | 6-2 | 3-8 | 12-2 | 7-4 | 02 | 9 15-5 | 9 17-0 | 8 50-2 | 0-2 | 0-1 | 6-2 | 3-9 | 12-2 | 7-6 |
| 03 | 9 00-8 | 9 02-2 | 8 36-1 | 0-3 | 0-2 | 6-3 | 3-8 | 12-3 | 7-5 | 03 | 9 15-8 | 9 17-3 | 8 50-4 | 0-3 | 0-2 | 6-3 | 3-9 | 12-3 | 7-7 |
| 04 | 9 01-0 | 9 02-5 | 8 36-4 | 0-4 | 0-2 | 6-4 | 3-9 | 12-4 | 7-5 | 04 | 9 16-0 | 9 17-5 | 8 50-7 | 0-4 | 0-3 | 6-4 | 4-0 | 12-4 | 7-8 |
| 05 | 9 01-3 | 9 02-7 | 8 36-6 | 0-5 | 0-3 | 6-5 | 4-0 | 12-5 | 7-6 | 05 | 9 16-3 | 9 17-8 | 8 50-9 | 0-5 | 0-3 | 6-5 | 4-1 | 12-5 | 7-8 |
| 06 | 9 01-5 | 9 03-0 | 8 36-8 | 0-6 | 0-4 | 6-6 | 4-0 | 12-6 | 7-7 | 06 | 9 16-5 | 9 18-0 | 8 51-1 | 0-6 | 0-4 | 6-6 | 4-1 | 12-6 | 7-9 |
| 07 | 9 01-8 | 9 03-2 | 8 37-1 | 0-7 | 0-4 | 6-7 | 4-1 | 12-7 | 7-7 | 07 | 9 16-8 | 9 18-3 | 8 51-4 | 0-7 | 0-4 | 6-7 | 4-2 | 12-7 | 7-9 |
| 08 | 9 02-0 | 9 03-5 | 8 37-3 | 0-8 | 0-5 | 6-8 | 4-1 | 12-8 | 7-8 | 08 | 9 17-0 | 9 18-5 | 8 51-6 | 0-8 | 0-5 | 6-8 | 4-3 | 12-8 | 8-0 |
| 09 | 9 02-3 | 9 03-7 | 8 37-5 | 0-9 | 0-5 | 6-9 | 4-2 | 12-9 | 7-8 | 09 | 9 17-3 | 9 18-8 | 8 51-9 | 0-9 | 0-6 | 6-9 | 4-3 | 12-9 | 8-1 |
| 10 | 9 02-5 | 9 04-0 | 8 37-8 | 1-0 | 0-6 | 7-0 | 4-3 | 13-0 | 7-9 | 10 | 9 17-5 | 9 19-0 | 8 52-1 | 1-0 | 0-6 | 7-0 | 4-4 | 13-0 | 8-1 |
| 11 | 9 02-8 | 9 04-2 | 8 38-0 | 1-1 | 0-7 | 7-1 | 4-3 | 13-1 | 8-0 | 11 | 9 17-8 | 9 19-3 | 8 52-3 | 1-1 | 0-7 | 7-1 | 4-4 | 13-1 | 8-2 |
| 12 | 9 03-0 | 9 04-5 | 8 38-3 | 1-2 | 0-7 | 7-2 | 4-4 | 13-2 | 8-0 | 12 | 9 18-0 | 9 19-5 | 8 52-6 | 1-2 | 0-8 | 7-2 | 4-5 | 13-2 | 8-3 |
| 13 | 9 03-3 | 9 04-7 | 8 38-5 | 1-3 | 0-8 | 7-3 | 4-4 | 13-3 | 8-1 | 13 | 9 18-3 | 9 19-8 | 8 52-8 | 1-3 | 0-8 | 7-3 | 4-6 | 13-3 | 8-3 |
| 14 | 9 03-5 | 9 05-0 | 8 38-7 | 1-4 | 0-9 | 7-4 | 4-5 | 13-4 | 8-2 | 14 | 9 18-5 | 9 20-0 | 8 53-1 | 1-4 | 0-9 | 7-4 | 4-6 | 13-4 | 8-4 |
| 15 | 9 03-8 | 9 05-2 | 8 39-0 | 1-5 | 0-9 | 7-5 | 4-6 | 13-5 | 8-2 | 15 | 9 18-8 | 9 20-3 | 8 53-3 | 1-5 | 0-9 | 7-5 | 4-7 | 13-5 | 8-4 |
| 16 | 9 04-0 | 9 05-5 | 8 39-2 | 1-6 | 1-0 | 7-6 | 4-6 | 13-6 | 8-3 | 16 | 9 19-0 | 9 20-5 | 8 53-5 | 1-6 | 1-0 | 7-6 | 4-8 | 13-6 | 8-5 |
| 17 | 9 04-3 | 9 05-7 | 8 39-5 | 1-7 | 1-0 | 7-7 | 4-7 | 13-7 | 8-3 | 17 | 9 19-3 | 9 20-8 | 8 53-8 | 1-7 | 1-1 | 7-7 | 4-8 | 13-7 | 8-6 |
| 18 | 9 04-5 | 9 06-0 | 8 39-7 | 1-8 | 1-1 | 7-8 | 4-7 | 13-8 | 8-4 | 18 | 9 19-5 | 9 21-0 | 8 54-0 | 1-8 | 1-1 | 7-8 | 4-9 | 13-8 | 8-6 |
| 19 | 9 04-8 | 9 06-2 | 8 39-9 | 1-9 | 1-2 | 7-9 | 4-8 | 13-9 | 8-5 | 19 | 9 19-8 | 9 21-3 | 8 54-3 | 1-9 | 1-2 | 7-9 | 4-9 | 13-9 | 8-7 |
| 20 | 9 05-0 | 9 06-5 | 8 40-2 | 2-0 | 1-2 | 8-0 | 4-9 | 14-0 | 8-5 | 20 | 9 20-0 | 9 21-5 | 8 54-5 | 2-0 | 1-3 | 8-0 | 5-0 | 14-0 | 8-8 |
| 21 | 9 05-3 | 9 06-7 | 8 40-4 | 2-1 | 1-3 | 8-1 | 4-9 | 14-1 | 8-6 | 21 | 9 20-3 | 9 21-8 | 8 54-7 | 2-1 | 1-3 | 8-1 | 5-1 | 14-1 | 8-8 |
| 22 | 9 05-5 | 9 07-0 | 8 40-6 | 2-2 | 1-3 | 8-2 | 5-0 | 14-2 | 8-6 | 22 | 9 20-5 | 9 22-0 | 8 55-0 | 2-2 | 1-4 | 8-2 | 5-1 | 14-2 | 8-9 |
| 23 | 9 05-8 | 9 07-2 | 8 40-9 | 2-3 | 1-4 | 8-3 | 5-0 | 14-3 | 8-7 | 23 | 9 20-8 | 9 22-3 | 8 55-2 | 2-3 | 1-4 | 8-3 | 5-2 | 14-3 | 8-9 |
| 24 | 9 06-0 | 9 07-5 | 8 41-1 | 2-4 | 1-5 | 8-4 | 5-1 | 14-4 | 8-8 | 24 | 9 21-0 | 9 22-5 | 8 55-4 | 2-4 | 1-5 | 8-4 | 5-3 | 14-4 | 9-0 |
| 25 | 9 06-3 | 9 07-7 | 8 41-4 | 2-5 | 1-5 | 8-5 | 5-2 | 14-5 | 8-8 | 25 | 9 21-3 | 9 22-8 | 8 55-7 | 2-5 | 1-6 | 8-5 | 5-3 | 14-5 | 9-1 |
| 26 | 9 06-5 | 9 08-0 | 8 41-6 | 2-6 | 1-6 | 8-6 | 5-2 | 14-6 | 8-9 | 26 | 9 21-5 | 9 23-0 | 8 55-9 | 2-6 | 1-6 | 8-6 | 5-4 | 14-6 | 9-1 |
| 27 | 9 06-8 | 9 08-2 | 8 41-8 | 2-7 | 1-6 | 8-7 | 5-3 | 14-7 | 8-9 | 27 | 9 21-8 | 9 23-3 | 8 56-2 | 2-7 | 1-7 | 8-7 | 5-4 | 14-7 | 9-2 |
| 28 | 9 07-0 | 9 08-5 | 8 42-1 | 2-8 | 1-7 | 8-8 | 5-4 | 14-8 | 9-0 | 28 | 9 22-0 | 9 23-5 | 8 56-4 | 2-8 | 1-8 | 8-8 | 5-5 | 14-8 | 9-3 |
| 29 | 9 07-3 | 9 08-7 | 8 42-3 | 2-9 | 1-8 | 8-9 | 5-4 | 14-9 | 9-1 | 29 | 9 22-3 | 9 23-8 | 8 56-6 | 2-9 | 1-8 | 8-9 | 5-6 | 14-9 | 9-3 |
| 30 | 9 07-5 | 9 09-0 | 8 42-6 | 3-0 | 1-8 | 9-0 | 5-5 | 15-0 | 9-1 | 30 | 9 22-5 | 9 24-0 | 8 56-9 | 3-0 | 1-9 | 9-0 | 5-6 | 15-0 | 9-4 |
| 31 | 9 07-8 | 9 09-2 | 8 42-8 | 3-1 | 1-9 | 9-1 | 5-5 | 15-1 | 9-2 | 31 | 9 22-8 | 9 24-3 | 8 57-1 | 3-1 | 1-9 | 9-1 | 5-7 | 15-1 | 9-4 |
| 32 | 9 08-0 | 9 09-5 | 8 43-0 | 3-2 | 1-9 | 9-2 | 5-6 | 15-2 | 9-2 | 32 | 9 23-0 | 9 24-5 | 8 57-4 | 3-2 | 2-0 | 9-2 | 5-8 | 15-2 | 9-5 |
| 33 | 9 08-3 | 9 09-8 | 8 43-3 | 3-3 | 2-0 | 9-3 | 5-7 | 15-3 | 9-3 | 33 | 9 23-3 | 9 24-8 | 8 57-6 | 3-3 | 2-1 | 9-3 | 5-8 | 15-3 | 9-6 |
| 34 | 9 08-5 | 9 10-0 | 8 43-5 | 3-4 | 2-1 | 9-4 | 5-7 | 15-4 | 9-4 | 34 | 9 23-5 | 9 25-0 | 8 57-8 | 3-4 | 2-1 | 9-4 | 5-9 | 15-4 | 9-6 |
| 35 | 9 08-8 | 9 10-3 | 8 43-8 | 3-5 | 2-1 | 9-5 | 5-8 | 15-5 | 9-4 | 35 | 9 23-8 | 9 25-3 | 8 58-1 | 3-5 | 2-2 | 9-5 | 5-9 | 15-5 | 9-7 |
| 36 | 9 09-0 | 9 10-5 | 8 44-0 | 3-6 | 2-2 | 9-6 | 5-8 | 15-6 | 9-5 | 36 | 9 24-0 | 9 25-5 | 8 58-3 | 3-6 | 2-3 | 9-6 | 6-0 | 15-6 | 9-8 |
| 37 | 9 09-3 | 9 10-8 | 8 44-2 | 3-7 | 2-3 | 9-7 | 5-9 | 15-7 | 9-6 | 37 | 9 24-3 | 9 25-8 | 8 58-5 | 3-7 | 2-3 | 9-7 | 6-1 | 15-7 | 9-8 |
| 38 | 9 09-5 | 9 11-0 | 8 44-5 | 3-8 | 2-3 | 9-8 | 6-0 | 15-8 | 9-6 | 38 | 9 24-5 | 9 26-0 | 8 58-8 | 3-8 | 2-4 | 9-8 | 6-1 | 15-8 | 9-9 |
| 39 | 9 09-8 | 9 11-3 | 8 44-7 | 3-9 | 2-4 | 9-9 | 6-0 | 15-9 | 9-7 | 39 | 9 24-8 | 9 26-3 | 8 59-0 | 3-9 | 2-4 | 9-9 | 6-2 | 15-9 | 9-9 |
| 40 | 9 10-0 | 9 11-5 | 8 44-9 | 4-0 | 2-4 | 10-0 | 6-1 | 16-0 | 9-7 | 40 | 9 25-0 | 9 26-5 | 8 59-3 | 4-0 | 2-5 | 10-0 | 6-3 | 16-0 | 10-0 |
| 41 | 9 10-3 | 9 11-8 | 8 45-2 | 4-1 | 2-5 | 10-1 | 6-1 | 16-1 | 9-8 | 41 | 9 25-3 | 9 26-8 | 8 59-5 | 4-1 | 2-6 | 10-1 | 6-3 | 16-1 | 10-1 |
| 42 | 9 10-5 | 9 12-0 | 8 45-4 | 4-2 | 2-6 | 10-2 | 6-2 | 16-2 | 9-9 | 42 | 9 25-5 | 9 27-0 | 8 59-7 | 4-2 | 2-6 | 10-2 | 6-4 | 16-2 | 10-1 |
| 43 | 9 10-8 | 9 12-3 | 8 45-7 | 4-3 | 2-6 | 10-3 | 6-3 | 16-3 | 9-9 | 43 | 9 25-8 | 9 27-3 | 9 00-0 | 4-3 | 2-7 | 10-3 | 6-4 | 16-3 | 10-2 |
| 44 | 9 11-0 | 9 12-5 | 8 45-9 | 4-4 | 2-7 | 10-4 | 6-3 | 16-4 | 10-0 | 44 | 9 26-0 | 9 27-5 | 9 00-2 | 4-4 | 2-8 | 10-4 | 6-5 | 16-4 | 10-3 |
| 45 | 9 11-3 | 9 12-8 | 8 46-1 | 4-5 | 2-7 | 10-5 | 6-4 | 16-5 | 10-0 | 45 | 9 26-3 | 9 27-8 | 9 00-5 | 4-5 | 2-8 | 10-5 | 6-6 | 16-5 | 10-3 |
| 46 | 9 11-5 | 9 13-0 | 8 46-4 | 4-6 | 2-8 | 10-6 | 6-4 | 16-6 | 10-1 | 46 | 9 26-5 | 9 28-1 | 9 00-7 | 4-6 | 2-9 | 10-6 | 6-6 | 16-6 | 10-4 |
| 47 | 9 11-8 | 9 13-3 | 8 46-6 | 4-7 | 2-9 | 10-7 | 6-5 | 16-7 | 10-2 | 47 | 9 26-8 | 9 28-3 | 9 00-9 | 4-7 | 2-9 | 10-7 | 6-7 | 16-7 | 10-4 |
| 48 | 9 12-0 | 9 13-5 | 8 46-9 | 4-8 | 2-9 | 10-8 | 6-6 | 16-8 | 10-2 | 48 | 9 27-0 | 9 28-6 | 9 01-2 | 4-8 | 3-0 | 10-8 | 6-8 | 16-8 | 10-5 |
| 49 | 9 12-3 | 9 13-8 | 8 47-1 | 4-9 | 3-0 | 10-9 | 6-6 | 16-9 | 10-3 | 49 | 9 27-3 | 9 28-8 | 9 01-4 | 4-9 | 3-1 | 10-9 | 6-8 | 16-9 | 10-6 |
| 50 | 9 12-5 | 9 14-0 | 8 47-3 | 5-0 | 3-0 | 11-0 | 6-7 | 17-0 | 10-3 | 50 | 9 27-5 | 9 29-1 | 9 01-6 | 5-0 | 3-1 | 11-0 | 6-9 | 17-0 | 10-6 |
| 51 | 9 12-8 | 9 14-3 | 8 47-6 | 5-1 | 3-1 | 11-1 | 6-8 | 17-1 | 10-4 | 51 | 9 27-8 | 9 29-3 | 9 01-9 | 5-1 | 3-2 | 11-1 | 6-9 | 17-1 | 10-7 |
| 52 | 9 13-0 | 9 14-5 | 8 47-8 | 5-2 | 3-2 | 11-2 | 6-8 | 17-2 | 10-5 | 52 | 9 28-0 | 9 29-6 | 9 02-1 | 5-2 | 3-3 | 11-2 | 7-0 | 17-2 | 10-8 |
| 53 | 9 13-3 | 9 14-8 | 8 48-0 | 5-3 | 3-2 | 11-3 | 6-9 | 17-3 | 10-5 | 53 | 9 28-3 | 9 29-8 | 9 02-4 | 5-3 | 3-3 | 11-3 | 7-1 | 17-3 | 10-8 |
| 54 | 9 13-5 | 9 15-0 | 8 48-3 | 5-4 | 3-3 | 11-4 | 6-9 | 17-4 | 10-6 | 54 | 9 28-5 | 9 30-1 | 9 02-6 | 5-4 | 3-4 | 11-4 | 7-1 | 17-4 | 10-9 |
| 55 | 9 13-8 | 9 15-3 | 8 48-5 | 5-5 | 3-3 | 11-5 | 7-0 | 17-5 | 10-6 | 55 | 9 28-8 | 9 30-3 | 9 02-8 | 5-5 | 3-4 | 11-5 | 7-2 | 17-5 | 10-9 |
| 56 | 9 14-0 | 9 15-5 | 8 48-8 | 5-6 | 3-4 | 11-6 | 7-1 | 17-6 | 10-7 | 56 | 9 29-0 | 9 30-6 | 9 03-1 | 5-6 | 3-5 | 11-6 | 7-3 | 17-6 | 11-0 |
| 57 | 9 14-3 | 9 15-8 | 8 49-0 | 5-7 | 3-5 | 11-7 | 7-1 | 17-7 | 10-8 | 57 | 9 29-3 | 9 30-8 | 9 03-3 | 5-7 | 3-6 | 11-7 | 7-3 | 17-7 | 11-1 |
| 58 | 9 14-5 | 9 16-0 | 8 49-2 | 5-8 | 3-5 | 11-8 | 7-2 | 17-8 | 10-8 | 58 | 9 29-5 | 9 31-1 | 9 03-6 | 5-8 | 3-6 | 11-8 | 7-4 | 17-8 | 11-1 |
| 59 | 9 14-8 | 9 16-3 | 8 49-5 | 5-9 | 3-6 | 11-9 | 7-2 | 17-9 | 10-9 | 59 | 9 29-8 | 9 31-3 | 9 03-8 | 5-9 | 3-7 | 11-9 | 7-4 | 17-9 | 11-2 |
| 60 | 9 15-0 | 9 16-5 | 8 49-7 | 6-0 | 3-7 | 12-0 | 7-3 | 18-0 | 11-0 | 60 | 9 30-0 | 9 31-6 | 9 04-0 | 6-0 | 3-8 | 12-0 | 7-5 | 18-0 | 11-3 |



38^m

INCREMENTS AND CORRECTIONS

39^m

| 38 | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ d | ° or Corr ⁿ d | ° or Corr ⁿ d |
|----|-------------|--------|--------|-----------------------------|-----------------------------|-----------------------------|
| 00 | 9 30-0 | 9 31-6 | 9 04-0 | 0-0 0-0 | 6-0 3-9 | 12-0 7-7 |
| 01 | 9 30-3 | 9 31-8 | 9 04-3 | 0-1 0-1 | 6-1 3-9 | 12-1 7-8 |
| 02 | 9 30-5 | 9 32-1 | 9 04-5 | 0-2 0-1 | 6-2 4-0 | 12-2 7-8 |
| 03 | 9 30-8 | 9 32-3 | 9 04-7 | 0-3 0-2 | 6-3 4-0 | 12-3 7-9 |
| 04 | 9 31-0 | 9 32-6 | 9 05-0 | 0-4 0-3 | 6-4 4-1 | 12-4 8-0 |
| 05 | 9 31-3 | 9 32-8 | 9 05-2 | 0-5 0-3 | 6-5 4-2 | 12-5 8-0 |
| 06 | 9 31-5 | 9 33-1 | 9 05-5 | 0-6 0-4 | 6-6 4-2 | 12-6 8-1 |
| 07 | 9 31-8 | 9 33-3 | 9 05-7 | 0-7 0-4 | 6-7 4-3 | 12-7 8-1 |
| 08 | 9 32-0 | 9 33-6 | 9 05-9 | 0-8 0-5 | 6-8 4-4 | 12-8 8-2 |
| 09 | 9 32-3 | 9 33-8 | 9 06-2 | 0-9 0-6 | 6-9 4-4 | 12-9 8-3 |
| 10 | 9 32-5 | 9 34-1 | 9 06-4 | 1-0 0-6 | 7-0 4-5 | 13-0 8-3 |
| 11 | 9 32-8 | 9 34-3 | 9 06-7 | 1-1 0-7 | 7-1 4-6 | 13-1 8-4 |
| 12 | 9 33-0 | 9 34-6 | 9 06-9 | 1-2 0-8 | 7-2 4-6 | 13-2 8-5 |
| 13 | 9 33-3 | 9 34-8 | 9 07-1 | 1-3 0-8 | 7-3 4-7 | 13-3 8-5 |
| 14 | 9 33-5 | 9 35-1 | 9 07-4 | 1-4 0-9 | 7-4 4-7 | 13-4 8-6 |
| 15 | 9 33-8 | 9 35-3 | 9 07-6 | 1-5 1-0 | 7-5 4-8 | 13-5 8-7 |
| 16 | 9 34-0 | 9 35-6 | 9 07-9 | 1-6 1-0 | 7-6 4-9 | 13-6 8-7 |
| 17 | 9 34-3 | 9 35-8 | 9 08-1 | 1-7 1-1 | 7-7 4-9 | 13-7 8-8 |
| 18 | 9 34-5 | 9 36-1 | 9 08-3 | 1-8 1-2 | 7-8 5-0 | 13-8 8-9 |
| 19 | 9 34-8 | 9 36-3 | 9 08-6 | 1-9 1-2 | 7-9 5-1 | 13-9 8-9 |
| 20 | 9 35-0 | 9 36-6 | 9 08-8 | 2-0 1-3 | 8-0 5-1 | 14-0 9-0 |
| 21 | 9 35-3 | 9 36-8 | 9 09-0 | 2-1 1-3 | 8-1 5-2 | 14-1 9-0 |
| 22 | 9 35-5 | 9 37-1 | 9 09-3 | 2-2 1-4 | 8-2 5-3 | 14-2 9-1 |
| 23 | 9 35-8 | 9 37-3 | 9 09-5 | 2-3 1-5 | 8-3 5-3 | 14-3 9-2 |
| 24 | 9 36-0 | 9 37-6 | 9 09-8 | 2-4 1-5 | 8-4 5-4 | 14-4 9-2 |
| 25 | 9 36-3 | 9 37-8 | 9 10-0 | 2-5 1-6 | 8-5 5-5 | 14-5 9-3 |
| 26 | 9 36-5 | 9 38-1 | 9 10-2 | 2-6 1-7 | 8-6 5-5 | 14-6 9-4 |
| 27 | 9 36-8 | 9 38-3 | 9 10-5 | 2-7 1-7 | 8-7 5-6 | 14-7 9-4 |
| 28 | 9 37-0 | 9 38-6 | 9 10-7 | 2-8 1-8 | 8-8 5-6 | 14-8 9-5 |
| 29 | 9 37-3 | 9 38-8 | 9 11-0 | 2-9 1-9 | 8-9 5-7 | 14-9 9-6 |
| 30 | 9 37-5 | 9 39-1 | 9 11-2 | 3-0 1-9 | 9-0 5-8 | 15-0 9-6 |
| 31 | 9 37-8 | 9 39-3 | 9 11-4 | 3-1 2-0 | 9-1 5-8 | 15-1 9-7 |
| 32 | 9 38-0 | 9 39-6 | 9 11-7 | 3-2 2-1 | 9-2 5-9 | 15-2 9-8 |
| 33 | 9 38-3 | 9 39-8 | 9 11-9 | 3-3 2-1 | 9-3 6-0 | 15-3 9-8 |
| 34 | 9 38-5 | 9 40-1 | 9 12-1 | 3-4 2-2 | 9-4 6-0 | 15-4 9-9 |
| 35 | 9 38-8 | 9 40-3 | 9 12-4 | 3-5 2-2 | 9-5 6-1 | 15-5 9-9 |
| 36 | 9 39-0 | 9 40-6 | 9 12-6 | 3-6 2-3 | 9-6 6-2 | 15-6 10-0 |
| 37 | 9 39-3 | 9 40-8 | 9 12-9 | 3-7 2-4 | 9-7 6-2 | 15-7 10-1 |
| 38 | 9 39-5 | 9 41-1 | 9 13-1 | 3-8 2-4 | 9-8 6-3 | 15-8 10-1 |
| 39 | 9 39-8 | 9 41-3 | 9 13-3 | 3-9 2-5 | 9-9 6-4 | 15-9 10-2 |
| 40 | 9 40-0 | 9 41-6 | 9 13-6 | 4-0 2-6 | 10-0 6-4 | 16-0 10-3 |
| 41 | 9 40-3 | 9 41-8 | 9 13-8 | 4-1 2-6 | 10-1 6-5 | 16-1 10-3 |
| 42 | 9 40-5 | 9 42-1 | 9 14-1 | 4-2 2-7 | 10-2 6-5 | 16-2 10-4 |
| 43 | 9 40-8 | 9 42-3 | 9 14-3 | 4-3 2-8 | 10-3 6-6 | 16-3 10-5 |
| 44 | 9 41-0 | 9 42-6 | 9 14-5 | 4-4 2-8 | 10-4 6-7 | 16-4 10-5 |
| 45 | 9 41-3 | 9 42-8 | 9 14-8 | 4-5 2-9 | 10-5 6-7 | 16-5 10-6 |
| 46 | 9 41-5 | 9 43-1 | 9 15-0 | 4-6 3-0 | 10-6 6-8 | 16-6 10-7 |
| 47 | 9 41-8 | 9 43-3 | 9 15-2 | 4-7 3-0 | 10-7 6-9 | 16-7 10-7 |
| 48 | 9 42-0 | 9 43-6 | 9 15-5 | 4-8 3-1 | 10-8 6-9 | 16-8 10-8 |
| 49 | 9 42-3 | 9 43-8 | 9 15-7 | 4-9 3-1 | 10-9 7-0 | 16-9 10-8 |
| 50 | 9 42-5 | 9 44-1 | 9 16-0 | 5-0 3-2 | 11-0 7-1 | 17-0 10-9 |
| 51 | 9 42-8 | 9 44-3 | 9 16-2 | 5-1 3-3 | 11-1 7-1 | 17-1 11-0 |
| 52 | 9 43-0 | 9 44-6 | 9 16-4 | 5-2 3-3 | 11-2 7-2 | 17-2 11-0 |
| 53 | 9 43-3 | 9 44-8 | 9 16-7 | 5-3 3-4 | 11-3 7-3 | 17-3 11-1 |
| 54 | 9 43-5 | 9 45-1 | 9 16-9 | 5-4 3-5 | 11-4 7-3 | 17-4 11-2 |
| 55 | 9 43-8 | 9 45-3 | 9 17-2 | 5-5 3-5 | 11-5 7-4 | 17-5 11-2 |
| 56 | 9 44-0 | 9 45-6 | 9 17-4 | 5-6 3-6 | 11-6 7-4 | 17-6 11-3 |
| 57 | 9 44-3 | 9 45-8 | 9 17-7 | 5-7 3-7 | 11-7 7-5 | 17-7 11-4 |
| 58 | 9 44-5 | 9 46-1 | 9 17-9 | 5-8 3-7 | 11-8 7-6 | 17-8 11-4 |
| 59 | 9 44-8 | 9 46-4 | 9 18-1 | 5-9 3-8 | 11-9 7-6 | 17-9 11-5 |
| 60 | 9 45-0 | 9 46-6 | 9 18-4 | 6-0 3-9 | 12-0 7-7 | 18-0 11-6 |

300

| 39 | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ d | ° or Corr ⁿ d | ° or Corr ⁿ d |
|----|-------------|---------|--------|-----------------------------|-----------------------------|-----------------------------|
| 00 | 9 45-0 | 9 46-6 | 9 18-4 | 0-0 0-0 | 6-0 4-0 | 12-0 7-9 |
| 01 | 9 45-3 | 9 46-9 | 9 18-6 | 0-1 0-1 | 6-1 4-0 | 12-1 8-0 |
| 02 | 9 45-5 | 9 47-1 | 9 18-8 | 0-2 0-1 | 6-2 4-1 | 12-2 8-0 |
| 03 | 9 45-8 | 9 47-4 | 9 19-1 | 0-3 0-2 | 6-3 4-1 | 12-3 8-1 |
| 04 | 9 46-0 | 9 47-6 | 9 19-3 | 0-4 0-3 | 6-4 4-2 | 12-4 8-2 |
| 05 | 9 46-3 | 9 47-9 | 9 19-5 | 0-5 0-3 | 6-5 4-3 | 12-5 8-2 |
| 06 | 9 46-5 | 9 48-1 | 9 19-8 | 0-6 0-4 | 6-6 4-3 | 12-6 8-3 |
| 07 | 9 46-8 | 9 48-4 | 9 20-0 | 0-7 0-5 | 6-7 4-4 | 12-7 8-4 |
| 08 | 9 47-0 | 9 48-6 | 9 20-3 | 0-8 0-5 | 6-8 4-5 | 12-8 8-4 |
| 09 | 9 47-3 | 9 48-9 | 9 20-5 | 0-9 0-6 | 6-9 4-5 | 12-9 8-5 |
| 10 | 9 47-5 | 9 49-1 | 9 20-7 | 1-0 0-7 | 7-0 4-6 | 13-0 8-6 |
| 11 | 9 47-8 | 9 49-4 | 9 21-0 | 1-1 0-7 | 7-1 4-7 | 13-1 8-6 |
| 12 | 9 48-0 | 9 49-6 | 9 21-2 | 1-2 0-8 | 7-2 4-7 | 13-2 8-7 |
| 13 | 9 48-3 | 9 49-9 | 9 21-5 | 1-3 0-9 | 7-3 4-8 | 13-3 8-8 |
| 14 | 9 48-5 | 9 50-1 | 9 21-7 | 1-4 0-9 | 7-4 4-9 | 13-4 8-8 |
| 15 | 9 48-8 | 9 50-4 | 9 21-9 | 1-5 1-0 | 7-5 4-9 | 13-5 8-9 |
| 16 | 9 49-0 | 9 50-6 | 9 22-2 | 1-6 1-1 | 7-6 5-0 | 13-6 8-9 |
| 17 | 9 49-3 | 9 50-9 | 9 22-4 | 1-7 1-1 | 7-7 5-1 | 13-7 9-0 |
| 18 | 9 49-5 | 9 51-1 | 9 22-6 | 1-8 1-2 | 7-8 5-1 | 13-8 9-1 |
| 19 | 9 49-8 | 9 51-4 | 9 22-9 | 1-9 1-3 | 7-9 5-2 | 13-9 9-2 |
| 20 | 9 50-0 | 9 51-6 | 9 23-1 | 2-0 1-3 | 8-0 5-3 | 14-0 9-2 |
| 21 | 9 50-3 | 9 51-9 | 9 23-4 | 2-1 1-4 | 8-1 5-3 | 14-1 9-3 |
| 22 | 9 50-5 | 9 52-1 | 9 23-6 | 2-2 1-4 | 8-2 5-4 | 14-2 9-3 |
| 23 | 9 50-8 | 9 52-4 | 9 23-8 | 2-3 1-5 | 8-3 5-5 | 14-3 9-4 |
| 24 | 9 51-0 | 9 52-6 | 9 24-1 | 2-4 1-6 | 8-4 5-5 | 14-4 9-5 |
| 25 | 9 51-3 | 9 52-9 | 9 24-3 | 2-5 1-6 | 8-5 5-6 | 14-5 9-5 |
| 26 | 9 51-5 | 9 53-1 | 9 24-6 | 2-6 1-7 | 8-6 5-7 | 14-6 9-6 |
| 27 | 9 51-8 | 9 53-4 | 9 24-8 | 2-7 1-8 | 8-7 5-7 | 14-7 9-7 |
| 28 | 9 52-0 | 9 53-6 | 9 25-0 | 2-8 1-8 | 8-8 5-8 | 14-8 9-7 |
| 29 | 9 52-3 | 9 53-9 | 9 25-3 | 2-9 1-9 | 8-9 5-9 | 14-9 9-8 |
| 30 | 9 52-5 | 9 54-1 | 9 25-5 | 3-0 2-0 | 9-0 5-9 | 15-0 9-9 |
| 31 | 9 52-8 | 9 54-4 | 9 25-7 | 3-1 2-0 | 9-1 6-0 | 15-1 9-9 |
| 32 | 9 53-0 | 9 54-6 | 9 26-0 | 3-2 2-1 | 9-2 6-1 | 15-2 10-0 |
| 33 | 9 53-3 | 9 54-9 | 9 26-2 | 3-3 2-2 | 9-3 6-1 | 15-3 10-1 |
| 34 | 9 53-5 | 9 55-1 | 9 26-5 | 3-4 2-2 | 9-4 6-2 | 15-4 10-1 |
| 35 | 9 53-8 | 9 55-4 | 9 26-7 | 3-5 2-3 | 9-5 6-3 | 15-5 10-2 |
| 36 | 9 54-0 | 9 55-6 | 9 26-9 | 3-6 2-4 | 9-6 6-3 | 15-6 10-3 |
| 37 | 9 54-3 | 9 55-9 | 9 27-2 | 3-7 2-4 | 9-7 6-4 | 15-7 10-3 |
| 38 | 9 54-5 | 9 56-1 | 9 27-4 | 3-8 2-5 | 9-8 6-5 | 15-8 10-4 |
| 39 | 9 54-8 | 9 56-4 | 9 27-7 | 3-9 2-6 | 9-9 6-5 | 15-9 10-5 |
| 40 | 9 55-0 | 9 56-6 | 9 27-9 | 4-0 2-6 | 10-0 6-6 | 16-0 10-5 |
| 41 | 9 55-3 | 9 56-9 | 9 28-1 | 4-1 2-7 | 10-1 6-6 | 16-1 10-6 |
| 42 | 9 55-5 | 9 57-1 | 9 28-4 | 4-2 2-8 | 10-2 6-7 | 16-2 10-7 |
| 43 | 9 55-8 | 9 57-4 | 9 28-6 | 4-3 2-8 | 10-3 6-8 | 16-3 10-7 |
| 44 | 9 56-0 | 9 57-6 | 9 28-8 | 4-4 2-9 | 10-4 6-8 | 16-4 10-8 |
| 45 | 9 56-3 | 9 57-9 | 9 29-1 | 4-5 3-0 | 10-5 6-9 | 16-5 10-9 |
| 46 | 9 56-5 | 9 58-1 | 9 29-3 | 4-6 3-0 | 10-6 7-0 | 16-6 10-9 |
| 47 | 9 56-8 | 9 58-4 | 9 29-6 | 4-7 3-1 | 10-7 7-0 | 16-7 11-0 |
| 48 | 9 57-0 | 9 58-6 | 9 29-8 | 4-8 3-2 | 10-8 7-1 | 16-8 11-1 |
| 49 | 9 57-3 | 9 58-9 | 9 30-0 | 4-9 3-2 | 10-9 7-2 | 16-9 11-1 |
| 50 | 9 57-5 | 9 59-1 | 9 30-3 | 5-0 3-3 | 11-0 7-2 | 17-0 11-2 |
| 51 | 9 57-8 | 9 59-4 | 9 30-5 | 5-1 3-4 | 11-1 7-3 | 17-1 11-3 |
| 52 | 9 58-0 | 9 59-6 | 9 30-8 | 5-2 3-4 | 11-2 7-4 | 17-2 11-3 |
| 53 | 9 58-3 | 9 59-9 | 9 31-0 | 5-3 3-5 | 11-3 7-4 | 17-3 11-4 |
| 54 | 9 58-5 | 10 00-1 | 9 31-2 | 5-4 3-6 | 11-4 7-5 | 17-4 11-5 |
| 55 | 9 58-8 | 10 00-4 | 9 31-5 | 5-5 3-6 | 11-5 7-6 | 17-5 11-5 |
| 56 | 9 59-0 | 10 00-6 | 9 31-7 | 5-6 3-7 | 11-6 7-6 | 17-6 11-6 |
| 57 | 9 59-3 | 10 00-9 | 9 32-0 | 5-7 3-8 | 11-7 7-7 | 17-7 11-7 |
| 58 | 9 59-5 | 10 01-1 | 9 32-2 | 5-8 3-8 | 11-8 7-8 | 17-8 11-7 |
| 59 | 9 59-8 | 10 01-4 | 9 32-4 | 5-9 3-9 | 11-9 7-8 | 17-9 11-8 |
| 60 | 10 00-0 | 10 01-6 | 9 32-7 | 6-0 4-0 | 12-0 7-9 | 18-0 11-9 |



42^m

INCREMENTS AND CORRECTIONS

43^m

| 42 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | 43 ^m | SUN PLANETS | ARIES | MOON | v or Corr ⁿ | | | | | | | |
|-----------------|----------------|---------|---------|---------------------------|-----|------|-----|-----------------|----------------|-------|---------|---------------------------|---------|-----|-----|------|-----|------|------|
| | | | | d | ' | " | ''' | | | | | d | ' | " | ''' | | | | |
| 00 | 10 30-0 | 10 31-7 | 10 01-3 | 0-0 | 0-0 | 6-0 | 4-3 | 12-0 | 8-5 | 00 | 10 45-0 | 10 46-8 | 10 15-6 | 0-0 | 0-0 | 6-0 | 4-4 | 12-0 | 8-7 |
| 01 | 10 30-3 | 10 32-0 | 10 01-5 | 0-1 | 0-1 | 6-1 | 4-3 | 12-1 | 8-6 | 01 | 10 45-3 | 10 47-0 | 10 15-9 | 0-1 | 0-1 | 6-1 | 4-4 | 12-1 | 8-8 |
| 02 | 10 30-5 | 10 32-2 | 10 01-8 | 0-2 | 0-1 | 6-2 | 4-4 | 12-2 | 8-6 | 02 | 10 45-5 | 10 47-3 | 10 16-1 | 0-2 | 0-1 | 6-2 | 4-5 | 12-2 | 8-8 |
| 03 | 10 30-8 | 10 32-5 | 10 02-0 | 0-3 | 0-2 | 6-3 | 4-5 | 12-3 | 8-7 | 03 | 10 45-8 | 10 47-5 | 10 16-3 | 0-3 | 0-2 | 6-3 | 4-6 | 12-3 | 8-9 |
| 04 | 10 31-0 | 10 32-7 | 10 02-3 | 0-4 | 0-3 | 6-4 | 4-5 | 12-4 | 8-8 | 04 | 10 46-0 | 10 47-8 | 10 16-6 | 0-4 | 0-3 | 6-4 | 4-6 | 12-4 | 9-0 |
| 05 | 10 31-3 | 10 33-0 | 10 02-5 | 0-5 | 0-4 | 6-5 | 4-6 | 12-5 | 8-9 | 05 | 10 46-3 | 10 48-0 | 10 16-8 | 0-5 | 0-4 | 6-5 | 4-7 | 12-5 | 9-1 |
| 06 | 10 31-5 | 10 33-2 | 10 02-7 | 0-6 | 0-4 | 6-6 | 4-7 | 12-6 | 8-9 | 06 | 10 46-5 | 10 48-3 | 10 17-0 | 0-6 | 0-4 | 6-6 | 4-8 | 12-6 | 9-1 |
| 07 | 10 31-8 | 10 33-5 | 10 03-0 | 0-7 | 0-5 | 6-7 | 4-7 | 12-7 | 9-0 | 07 | 10 46-8 | 10 48-5 | 10 17-3 | 0-7 | 0-5 | 6-7 | 4-9 | 12-7 | 9-2 |
| 08 | 10 32-0 | 10 33-7 | 10 03-2 | 0-8 | 0-6 | 6-8 | 4-8 | 12-8 | 9-1 | 08 | 10 47-0 | 10 48-8 | 10 17-5 | 0-8 | 0-6 | 6-8 | 4-9 | 12-8 | 9-3 |
| 09 | 10 32-3 | 10 34-0 | 10 03-4 | 0-9 | 0-6 | 6-9 | 4-9 | 12-9 | 9-1 | 09 | 10 47-3 | 10 49-0 | 10 17-8 | 0-9 | 0-7 | 6-9 | 5-0 | 12-9 | 9-4 |
| 10 | 10 32-5 | 10 34-2 | 10 03-7 | 1-0 | 0-7 | 7-0 | 5-0 | 13-0 | 9-2 | 10 | 10 47-5 | 10 49-3 | 10 18-0 | 1-0 | 0-7 | 7-0 | 5-1 | 13-0 | 9-4 |
| 11 | 10 32-8 | 10 34-5 | 10 03-9 | 1-1 | 0-8 | 7-1 | 5-0 | 13-1 | 9-3 | 11 | 10 47-8 | 10 49-5 | 10 18-2 | 1-1 | 0-8 | 7-1 | 5-1 | 13-1 | 9-5 |
| 12 | 10 33-0 | 10 34-7 | 10 04-2 | 1-2 | 0-9 | 7-2 | 5-1 | 13-2 | 9-4 | 12 | 10 48-0 | 10 49-8 | 10 18-5 | 1-2 | 0-9 | 7-2 | 5-2 | 13-2 | 9-6 |
| 13 | 10 33-3 | 10 35-0 | 10 04-4 | 1-3 | 0-9 | 7-3 | 5-2 | 13-3 | 9-4 | 13 | 10 48-3 | 10 50-0 | 10 18-7 | 1-3 | 0-9 | 7-3 | 5-3 | 13-3 | 9-6 |
| 14 | 10 33-5 | 10 35-2 | 10 04-6 | 1-4 | 1-0 | 7-4 | 5-2 | 13-4 | 9-5 | 14 | 10 48-5 | 10 50-3 | 10 19-0 | 1-4 | 1-0 | 7-4 | 5-4 | 13-4 | 9-7 |
| 15 | 10 33-8 | 10 35-5 | 10 04-9 | 1-5 | 1-1 | 7-5 | 5-3 | 13-5 | 9-6 | 15 | 10 48-8 | 10 50-5 | 10 19-2 | 1-5 | 1-1 | 7-5 | 5-4 | 13-5 | 9-8 |
| 16 | 10 34-0 | 10 35-7 | 10 05-1 | 1-6 | 1-1 | 7-6 | 5-4 | 13-6 | 9-6 | 16 | 10 49-0 | 10 50-8 | 10 19-4 | 1-6 | 1-2 | 7-6 | 5-5 | 13-6 | 9-9 |
| 17 | 10 34-3 | 10 36-0 | 10 05-4 | 1-7 | 1-2 | 7-7 | 5-5 | 13-7 | 9-7 | 17 | 10 49-3 | 10 51-0 | 10 19-7 | 1-7 | 1-2 | 7-7 | 5-6 | 13-7 | 9-9 |
| 18 | 10 34-5 | 10 36-2 | 10 05-6 | 1-8 | 1-3 | 7-8 | 5-5 | 13-8 | 9-8 | 18 | 10 49-5 | 10 51-3 | 10 19-9 | 1-8 | 1-3 | 7-8 | 5-7 | 13-8 | 10-0 |
| 19 | 10 34-8 | 10 36-5 | 10 05-8 | 1-9 | 1-3 | 7-9 | 5-6 | 13-9 | 9-8 | 19 | 10 49-8 | 10 51-5 | 10 20-2 | 1-9 | 1-4 | 7-9 | 5-7 | 13-9 | 10-1 |
| 20 | 10 35-0 | 10 36-7 | 10 06-1 | 2-0 | 1-4 | 8-0 | 5-7 | 14-0 | 9-9 | 20 | 10 50-0 | 10 51-8 | 10 20-4 | 2-0 | 1-5 | 8-0 | 5-8 | 14-0 | 10-2 |
| 21 | 10 35-3 | 10 37-0 | 10 06-3 | 2-1 | 1-5 | 8-1 | 5-7 | 14-1 | 10-0 | 21 | 10 50-3 | 10 52-0 | 10 20-6 | 2-1 | 1-5 | 8-1 | 5-9 | 14-1 | 10-2 |
| 22 | 10 35-5 | 10 37-2 | 10 06-5 | 2-2 | 1-6 | 8-2 | 5-8 | 14-2 | 10-1 | 22 | 10 50-5 | 10 52-3 | 10 20-9 | 2-2 | 1-6 | 8-2 | 5-9 | 14-2 | 10-3 |
| 23 | 10 35-8 | 10 37-5 | 10 06-8 | 2-3 | 1-6 | 8-3 | 5-9 | 14-3 | 10-1 | 23 | 10 50-8 | 10 52-5 | 10 21-1 | 2-3 | 1-7 | 8-3 | 6-0 | 14-3 | 10-4 |
| 24 | 10 36-0 | 10 37-7 | 10 07-0 | 2-4 | 1-7 | 8-4 | 6-0 | 14-4 | 10-2 | 24 | 10 51-0 | 10 52-8 | 10 21-3 | 2-4 | 1-7 | 8-4 | 6-1 | 14-4 | 10-4 |
| 25 | 10 36-3 | 10 38-0 | 10 07-3 | 2-5 | 1-8 | 8-5 | 6-0 | 14-5 | 10-3 | 25 | 10 51-3 | 10 53-0 | 10 21-6 | 2-5 | 1-8 | 8-5 | 6-2 | 14-5 | 10-5 |
| 26 | 10 36-5 | 10 38-2 | 10 07-5 | 2-6 | 1-8 | 8-6 | 6-1 | 14-6 | 10-3 | 26 | 10 51-5 | 10 53-3 | 10 21-8 | 2-6 | 1-9 | 8-6 | 6-2 | 14-6 | 10-6 |
| 27 | 10 36-8 | 10 38-5 | 10 07-7 | 2-7 | 1-9 | 8-7 | 6-2 | 14-7 | 10-4 | 27 | 10 51-8 | 10 53-5 | 10 22-1 | 2-7 | 2-0 | 8-7 | 6-3 | 14-7 | 10-7 |
| 28 | 10 37-0 | 10 38-7 | 10 08-0 | 2-8 | 2-0 | 8-8 | 6-2 | 14-8 | 10-5 | 28 | 10 52-0 | 10 53-8 | 10 22-3 | 2-8 | 2-0 | 8-8 | 6-4 | 14-8 | 10-7 |
| 29 | 10 37-3 | 10 39-0 | 10 08-2 | 2-9 | 2-1 | 8-9 | 6-3 | 14-9 | 10-6 | 29 | 10 52-3 | 10 54-0 | 10 22-5 | 2-9 | 2-1 | 8-9 | 6-5 | 14-9 | 10-8 |
| 30 | 10 37-5 | 10 39-2 | 10 08-5 | 3-0 | 2-1 | 9-0 | 6-4 | 15-0 | 10-6 | 30 | 10 52-5 | 10 54-3 | 10 22-8 | 3-0 | 2-2 | 9-0 | 6-5 | 15-0 | 10-9 |
| 31 | 10 37-8 | 10 39-5 | 10 08-7 | 3-1 | 2-2 | 9-1 | 6-4 | 15-1 | 10-7 | 31 | 10 52-8 | 10 54-5 | 10 23-0 | 3-1 | 2-2 | 9-1 | 6-6 | 15-1 | 10-9 |
| 32 | 10 38-0 | 10 39-7 | 10 08-9 | 3-2 | 2-3 | 9-2 | 6-5 | 15-2 | 10-8 | 32 | 10 53-0 | 10 54-8 | 10 23-3 | 3-2 | 2-3 | 9-2 | 6-7 | 15-2 | 11-0 |
| 33 | 10 38-3 | 10 40-0 | 10 09-2 | 3-3 | 2-3 | 9-3 | 6-6 | 15-3 | 10-8 | 33 | 10 53-3 | 10 55-0 | 10 23-5 | 3-3 | 2-4 | 9-3 | 6-7 | 15-3 | 11-1 |
| 34 | 10 38-5 | 10 40-2 | 10 09-4 | 3-4 | 2-4 | 9-4 | 6-7 | 15-4 | 10-9 | 34 | 10 53-5 | 10 55-3 | 10 23-7 | 3-4 | 2-5 | 9-4 | 6-8 | 15-4 | 11-2 |
| 35 | 10 38-8 | 10 40-5 | 10 09-7 | 3-5 | 2-5 | 9-5 | 6-7 | 15-5 | 11-0 | 35 | 10 53-8 | 10 55-5 | 10 24-0 | 3-5 | 2-5 | 9-5 | 6-9 | 15-5 | 11-2 |
| 36 | 10 39-0 | 10 40-7 | 10 09-9 | 3-6 | 2-6 | 9-6 | 6-8 | 15-6 | 11-1 | 36 | 10 54-0 | 10 55-8 | 10 24-2 | 3-6 | 2-6 | 9-6 | 7-0 | 15-6 | 11-3 |
| 37 | 10 39-3 | 10 41-0 | 10 10-1 | 3-7 | 2-6 | 9-7 | 6-9 | 15-7 | 11-1 | 37 | 10 54-3 | 10 56-0 | 10 24-4 | 3-7 | 2-7 | 9-7 | 7-0 | 15-7 | 11-4 |
| 38 | 10 39-5 | 10 41-3 | 10 10-4 | 3-8 | 2-7 | 9-8 | 6-9 | 15-8 | 11-2 | 38 | 10 54-5 | 10 56-3 | 10 24-7 | 3-8 | 2-8 | 9-8 | 7-1 | 15-8 | 11-5 |
| 39 | 10 39-8 | 10 41-5 | 10 10-6 | 3-9 | 2-8 | 9-9 | 7-0 | 15-9 | 11-3 | 39 | 10 54-8 | 10 56-5 | 10 24-9 | 3-9 | 2-8 | 9-9 | 7-2 | 15-9 | 11-5 |
| 40 | 10 40-0 | 10 41-8 | 10 10-8 | 4-0 | 2-8 | 10-0 | 7-1 | 16-0 | 11-3 | 40 | 10 55-0 | 10 56-8 | 10 25-2 | 4-0 | 2-9 | 10-0 | 7-3 | 16-0 | 11-6 |
| 41 | 10 40-3 | 10 42-0 | 10 11-1 | 4-1 | 2-9 | 10-1 | 7-2 | 16-1 | 11-4 | 41 | 10 55-3 | 10 57-0 | 10 25-4 | 4-1 | 3-0 | 10-1 | 7-3 | 16-1 | 11-7 |
| 42 | 10 40-5 | 10 42-3 | 10 11-3 | 4-2 | 3-0 | 10-2 | 7-2 | 16-2 | 11-5 | 42 | 10 55-5 | 10 57-3 | 10 25-6 | 4-2 | 3-0 | 10-2 | 7-4 | 16-2 | 11-7 |
| 43 | 10 40-8 | 10 42-5 | 10 11-6 | 4-3 | 3-0 | 10-3 | 7-3 | 16-3 | 11-5 | 43 | 10 55-8 | 10 57-5 | 10 25-9 | 4-3 | 3-1 | 10-3 | 7-5 | 16-3 | 11-8 |
| 44 | 10 41-0 | 10 42-8 | 10 11-8 | 4-4 | 3-1 | 10-4 | 7-4 | 16-4 | 11-6 | 44 | 10 56-0 | 10 57-8 | 10 26-1 | 4-4 | 3-2 | 10-4 | 7-5 | 16-4 | 11-9 |
| 45 | 10 41-3 | 10 43-0 | 10 12-0 | 4-5 | 3-2 | 10-5 | 7-4 | 16-5 | 11-7 | 45 | 10 56-3 | 10 58-0 | 10 26-4 | 4-5 | 3-3 | 10-5 | 7-6 | 16-5 | 12-0 |
| 46 | 10 41-5 | 10 43-3 | 10 12-3 | 4-6 | 3-3 | 10-6 | 7-5 | 16-6 | 11-8 | 46 | 10 56-5 | 10 58-3 | 10 26-6 | 4-6 | 3-3 | 10-6 | 7-7 | 16-6 | 12-0 |
| 47 | 10 41-8 | 10 43-5 | 10 12-5 | 4-7 | 3-3 | 10-7 | 7-6 | 16-7 | 11-8 | 47 | 10 56-8 | 10 58-5 | 10 26-8 | 4-7 | 3-4 | 10-7 | 7-8 | 16-7 | 12-1 |
| 48 | 10 42-0 | 10 43-8 | 10 12-8 | 4-8 | 3-4 | 10-8 | 7-7 | 16-8 | 11-9 | 48 | 10 57-0 | 10 58-8 | 10 27-1 | 4-8 | 3-5 | 10-8 | 7-8 | 16-8 | 12-2 |
| 49 | 10 42-3 | 10 44-0 | 10 13-0 | 4-9 | 3-5 | 10-9 | 7-7 | 16-9 | 12-0 | 49 | 10 57-3 | 10 59-0 | 10 27-3 | 4-9 | 3-6 | 10-9 | 7-9 | 16-9 | 12-3 |
| 50 | 10 42-5 | 10 44-3 | 10 13-2 | 5-0 | 3-5 | 11-0 | 7-8 | 17-0 | 12-0 | 50 | 10 57-5 | 10 59-3 | 10 27-5 | 5-0 | 3-6 | 11-0 | 8-0 | 17-0 | 12-3 |
| 51 | 10 42-8 | 10 44-5 | 10 13-5 | 5-1 | 3-6 | 11-1 | 7-9 | 17-1 | 12-1 | 51 | 10 57-8 | 10 59-6 | 10 27-8 | 5-1 | 3-7 | 11-1 | 8-0 | 17-1 | 12-4 |
| 52 | 10 43-0 | 10 44-8 | 10 13-7 | 5-2 | 3-7 | 11-2 | 7-9 | 17-2 | 12-2 | 52 | 10 58-0 | 10 59-8 | 10 28-0 | 5-2 | 3-8 | 11-2 | 8-1 | 17-2 | 12-5 |
| 53 | 10 43-3 | 10 45-0 | 10 13-9 | 5-3 | 3-8 | 11-3 | 8-0 | 17-3 | 12-3 | 53 | 10 58-3 | 11 00-1 | 10 28-3 | 5-3 | 3-8 | 11-3 | 8-2 | 17-3 | 12-5 |
| 54 | 10 43-5 | 10 45-3 | 10 14-2 | 5-4 | 3-8 | 11-4 | 8-1 | 17-4 | 12-3 | 54 | 10 58-5 | 11 00-3 | 10 28-5 | 5-4 | 3-9 | 11-4 | 8-3 | 17-4 | 12-6 |
| 55 | 10 43-8 | 10 45-5 | 10 14-4 | 5-5 | 3-9 | 11-5 | 8-1 | 17-5 | 12-4 | 55 | 10 58-8 | 11 00-6 | 10 28-7 | 5-5 | 4-0 | 11-5 | 8-4 | 17-5 | 12-7 |
| 56 | 10 44-0 | 10 45-8 | 10 14-7 | 5-6 | 4-0 | 11-6 | 8-2 | 17-6 | 12-5 | 56 | 10 59-0 | 11 00-8 | 10 29-0 | 5-6 | 4-1 | 11-6 | 8-4 | 17-6 | 12-8 |
| 57 | 10 44-3 | 10 46-0 | 10 14-9 | 5-7 | 4-0 | 11-7 | 8-3 | 17-7 | 12-5 | 57 | 10 59-3 | 11 01-1 | 10 29-2 | 5-7 | 4-1 | 11-7 | 8-5 | 17-7 | 12-8 |
| 58 | 10 44-5 | 10 46-3 | 10 15-1 | 5-8 | 4-1 | 11-8 | 8-4 | 17-8 | 12-6 | 58 | 10 59-5 | 11 01-3 | 10 29-5 | 5-8 | 4-2 | 11-8 | 8-6 | 17-8 | 12-9 |
| 59 | 10 44-8 | 10 46-5 | 10 15-4 | 5-9 | 4-2 | 11-9 | 8-4 | 17-9 | 12-7 | 59 | 10 59-8 | 11 01-6 | 10 29-7 | 5-9 | 4-3 | 11-9 | 8-6 | 17-9 | 13-0 |
| 60 | 10 45-0 | 10 46-8 | 10 15-6 | 6-0 | 4-3 | 12-0 | 8-5 | 18-0 | 12-8 | 60 | 11 00-0 | 11 01-8 | 10 29-9 | 6-0 | 4-4 | 12-0 | 8-7 | 18-0 | 13-1 |

44^m

INCREMENTS AND CORRECTIONS

45^m

| 44 ^m | SUN PLANETS | ARIES | MOON | v or Corr ^d | | | 45 ^m | SUN PLANETS | ARIES | MOON | v or Corr ^d | | | | |
|-----------------|-------------|---------|---------|------------------------|-----|------|-----------------|-------------|-------|------|------------------------|------|-----|------|------|
| | | | | d | ' | " | | | | | d | ' | " | | |
| 00 | 11 00-0 | 11 01-8 | 10 29-9 | 0-0 | 0-0 | 6-0 | 4-5 | 12-0 | 8-9 | 0-0 | 0-0 | 6-0 | 4-6 | 12-0 | 9-1 |
| 01 | 11 00-3 | 11 02-1 | 10 30-2 | 0-1 | 0-1 | 6-1 | 4-5 | 12-1 | 9-0 | 0-1 | 0-1 | 6-1 | 4-6 | 12-1 | 9-2 |
| 02 | 11 00-5 | 11 02-3 | 10 30-4 | 0-2 | 0-1 | 6-2 | 4-6 | 12-2 | 9-0 | 0-2 | 0-2 | 6-2 | 4-7 | 12-2 | 9-3 |
| 03 | 11 00-8 | 11 02-6 | 10 30-6 | 0-3 | 0-2 | 6-3 | 4-7 | 12-3 | 9-1 | 0-3 | 0-2 | 6-3 | 4-8 | 12-3 | 9-3 |
| 04 | 11 01-0 | 11 02-8 | 10 30-9 | 0-4 | 0-3 | 6-4 | 4-7 | 12-4 | 9-2 | 0-4 | 0-3 | 6-4 | 4-9 | 12-4 | 9-4 |
| 05 | 11 01-3 | 11 03-1 | 10 31-1 | 0-5 | 0-4 | 6-5 | 4-8 | 12-5 | 9-3 | 0-5 | 0-4 | 6-5 | 4-9 | 12-5 | 9-5 |
| 06 | 11 01-5 | 11 03-3 | 10 31-4 | 0-6 | 0-4 | 6-6 | 4-9 | 12-6 | 9-3 | 0-6 | 0-5 | 6-6 | 5-0 | 12-6 | 9-6 |
| 07 | 11 01-8 | 11 03-6 | 10 31-6 | 0-7 | 0-5 | 6-7 | 5-0 | 12-7 | 9-4 | 0-7 | 0-5 | 6-7 | 5-1 | 12-7 | 9-6 |
| 08 | 11 02-0 | 11 03-8 | 10 31-8 | 0-8 | 0-6 | 6-8 | 5-0 | 12-8 | 9-5 | 0-8 | 0-6 | 6-8 | 5-2 | 12-8 | 9-7 |
| 09 | 11 02-3 | 11 04-1 | 10 32-1 | 0-9 | 0-7 | 6-9 | 5-1 | 12-9 | 9-6 | 0-9 | 0-7 | 6-9 | 5-2 | 12-9 | 9-8 |
| 10 | 11 02-5 | 11 04-3 | 10 32-3 | 1-0 | 0-7 | 7-0 | 5-2 | 13-0 | 9-6 | 1-0 | 0-8 | 7-0 | 5-3 | 13-0 | 9-9 |
| 11 | 11 02-8 | 11 04-6 | 10 32-6 | 1-1 | 0-8 | 7-1 | 5-3 | 13-1 | 9-7 | 1-1 | 0-8 | 7-1 | 5-4 | 13-1 | 9-9 |
| 12 | 11 03-0 | 11 04-8 | 10 32-8 | 1-2 | 0-9 | 7-2 | 5-3 | 13-2 | 9-8 | 1-2 | 0-9 | 7-2 | 5-5 | 13-2 | 10-0 |
| 13 | 11 03-3 | 11 05-1 | 10 33-0 | 1-3 | 1-0 | 7-3 | 5-4 | 13-3 | 9-9 | 1-3 | 1-0 | 7-3 | 5-5 | 13-3 | 10-1 |
| 14 | 11 03-5 | 11 05-3 | 10 33-3 | 1-4 | 1-0 | 7-4 | 5-5 | 13-4 | 9-9 | 1-4 | 1-1 | 7-4 | 5-6 | 13-4 | 10-2 |
| 15 | 11 03-8 | 11 05-6 | 10 33-5 | 1-5 | 1-1 | 7-5 | 5-6 | 13-5 | 10-0 | 1-5 | 1-1 | 7-5 | 5-7 | 13-5 | 10-2 |
| 16 | 11 04-0 | 11 05-8 | 10 33-8 | 1-6 | 1-2 | 7-6 | 5-6 | 13-6 | 10-1 | 1-6 | 1-2 | 7-6 | 5-8 | 13-6 | 10-3 |
| 17 | 11 04-3 | 11 06-1 | 10 34-0 | 1-7 | 1-3 | 7-7 | 5-7 | 13-7 | 10-2 | 1-7 | 1-3 | 7-7 | 5-9 | 13-7 | 10-4 |
| 18 | 11 04-5 | 11 06-3 | 10 34-2 | 1-8 | 1-3 | 7-8 | 5-8 | 13-8 | 10-2 | 1-8 | 1-4 | 7-8 | 5-9 | 13-8 | 10-5 |
| 19 | 11 04-8 | 11 06-6 | 10 34-5 | 1-9 | 1-4 | 7-9 | 5-9 | 13-9 | 10-3 | 1-9 | 1-4 | 7-9 | 6-0 | 13-9 | 10-5 |
| 20 | 11 05-0 | 11 06-8 | 10 34-7 | 2-0 | 1-5 | 8-0 | 5-9 | 14-0 | 10-4 | 2-0 | 1-5 | 8-0 | 6-1 | 14-0 | 10-6 |
| 21 | 11 05-3 | 11 07-1 | 10 34-9 | 2-1 | 1-6 | 8-1 | 6-0 | 14-1 | 10-5 | 2-1 | 1-6 | 8-1 | 6-1 | 14-1 | 10-7 |
| 22 | 11 05-5 | 11 07-3 | 10 35-2 | 2-2 | 1-6 | 8-2 | 6-1 | 14-2 | 10-5 | 2-2 | 1-7 | 8-2 | 6-2 | 14-2 | 10-6 |
| 23 | 11 05-8 | 11 07-6 | 10 35-4 | 2-3 | 1-7 | 8-3 | 6-2 | 14-3 | 10-6 | 2-3 | 1-7 | 8-3 | 6-3 | 14-3 | 10-6 |
| 24 | 11 06-0 | 11 07-8 | 10 35-7 | 2-4 | 1-8 | 8-4 | 6-2 | 14-4 | 10-7 | 2-4 | 1-8 | 8-4 | 6-4 | 14-4 | 10-9 |
| 25 | 11 06-3 | 11 08-1 | 10 35-9 | 2-5 | 1-9 | 8-5 | 6-3 | 14-5 | 10-8 | 2-5 | 1-9 | 8-5 | 6-4 | 14-5 | 11-0 |
| 26 | 11 06-5 | 11 08-3 | 10 36-1 | 2-6 | 1-9 | 8-6 | 6-4 | 14-6 | 10-8 | 2-6 | 2-0 | 8-6 | 6-5 | 14-6 | 11-1 |
| 27 | 11 06-8 | 11 08-6 | 10 36-4 | 2-7 | 2-0 | 8-7 | 6-5 | 14-7 | 10-9 | 2-7 | 2-0 | 8-7 | 6-6 | 14-7 | 11-1 |
| 28 | 11 07-0 | 11 08-8 | 10 36-6 | 2-8 | 2-1 | 8-8 | 6-5 | 14-8 | 11-0 | 2-8 | 2-1 | 8-8 | 6-7 | 14-8 | 11-2 |
| 29 | 11 07-3 | 11 09-1 | 10 36-9 | 2-9 | 2-2 | 8-9 | 6-6 | 14-9 | 11-1 | 2-9 | 2-2 | 8-9 | 6-7 | 14-9 | 11-3 |
| 30 | 11 07-5 | 11 09-3 | 10 37-1 | 3-0 | 2-2 | 9-0 | 6-7 | 15-0 | 11-1 | 3-0 | 2-3 | 9-0 | 6-8 | 15-0 | 11-4 |
| 31 | 11 07-8 | 11 09-6 | 10 37-3 | 3-1 | 2-3 | 9-1 | 6-7 | 15-1 | 11-2 | 3-1 | 2-4 | 9-1 | 6-9 | 15-1 | 11-5 |
| 32 | 11 08-0 | 11 09-8 | 10 37-6 | 3-2 | 2-4 | 9-2 | 6-8 | 15-2 | 11-3 | 3-2 | 2-4 | 9-2 | 7-0 | 15-2 | 11-5 |
| 33 | 11 08-3 | 11 10-1 | 10 37-8 | 3-3 | 2-4 | 9-3 | 6-9 | 15-3 | 11-3 | 3-3 | 2-5 | 9-3 | 7-1 | 15-3 | 11-6 |
| 34 | 11 08-5 | 11 10-3 | 10 38-0 | 3-4 | 2-5 | 9-4 | 7-0 | 15-4 | 11-4 | 3-4 | 2-6 | 9-4 | 7-1 | 15-4 | 11-7 |
| 35 | 11 08-8 | 11 10-6 | 10 38-3 | 3-5 | 2-6 | 9-5 | 7-0 | 15-5 | 11-5 | 3-5 | 2-7 | 9-5 | 7-2 | 15-5 | 11-8 |
| 36 | 11 09-0 | 11 10-8 | 10 38-5 | 3-6 | 2-7 | 9-6 | 7-1 | 15-6 | 11-6 | 3-6 | 2-7 | 9-6 | 7-3 | 15-6 | 11-8 |
| 37 | 11 09-3 | 11 11-1 | 10 38-8 | 3-7 | 2-7 | 9-7 | 7-2 | 15-7 | 11-6 | 3-7 | 2-8 | 9-7 | 7-4 | 15-7 | 11-9 |
| 38 | 11 09-5 | 11 11-3 | 10 39-0 | 3-8 | 2-8 | 9-8 | 7-3 | 15-8 | 11-7 | 3-8 | 2-9 | 9-8 | 7-4 | 15-8 | 12-0 |
| 39 | 11 09-8 | 11 11-6 | 10 39-2 | 3-9 | 2-9 | 9-9 | 7-3 | 15-9 | 11-8 | 3-9 | 3-0 | 9-9 | 7-5 | 15-9 | 12-1 |
| 40 | 11 10-0 | 11 11-8 | 10 39-5 | 4-0 | 3-0 | 10-0 | 7-4 | 16-0 | 11-9 | 4-0 | 3-0 | 10-0 | 7-6 | 16-0 | 12-1 |
| 41 | 11 10-3 | 11 12-1 | 10 39-7 | 4-1 | 3-0 | 10-1 | 7-5 | 16-1 | 11-9 | 4-1 | 3-1 | 10-1 | 7-7 | 16-1 | 12-2 |
| 42 | 11 10-5 | 11 12-3 | 10 40-0 | 4-2 | 3-1 | 10-2 | 7-6 | 16-2 | 12-0 | 4-2 | 3-2 | 10-2 | 7-7 | 16-2 | 12-3 |
| 43 | 11 10-8 | 11 12-6 | 10 40-2 | 4-3 | 3-2 | 10-3 | 7-6 | 16-3 | 12-1 | 4-3 | 3-3 | 10-3 | 7-8 | 16-3 | 12-4 |
| 44 | 11 11-0 | 11 12-8 | 10 40-4 | 4-4 | 3-3 | 10-4 | 7-7 | 16-4 | 12-2 | 4-4 | 3-3 | 10-4 | 7-9 | 16-4 | 12-4 |
| 45 | 11 11-3 | 11 13-1 | 10 40-7 | 4-5 | 3-3 | 10-5 | 7-8 | 16-5 | 12-2 | 4-5 | 3-4 | 10-5 | 8-0 | 16-5 | 12-5 |
| 46 | 11 11-5 | 11 13-3 | 10 40-9 | 4-6 | 3-4 | 10-6 | 7-9 | 16-6 | 12-3 | 4-6 | 3-5 | 10-6 | 8-0 | 16-6 | 12-6 |
| 47 | 11 11-8 | 11 13-6 | 10 41-1 | 4-7 | 3-5 | 10-7 | 7-9 | 16-7 | 12-4 | 4-7 | 3-6 | 10-7 | 8-1 | 16-7 | 12-7 |
| 48 | 11 12-0 | 11 13-8 | 10 41-4 | 4-8 | 3-6 | 10-8 | 8-0 | 16-8 | 12-5 | 4-8 | 3-6 | 10-8 | 8-2 | 16-8 | 12-7 |
| 49 | 11 12-3 | 11 14-1 | 10 41-6 | 4-9 | 3-6 | 10-9 | 8-1 | 16-9 | 12-5 | 4-9 | 3-7 | 10-9 | 8-3 | 16-9 | 12-8 |
| 50 | 11 12-5 | 11 14-3 | 10 41-9 | 5-0 | 3-7 | 11-0 | 8-2 | 17-0 | 12-6 | 5-0 | 3-8 | 11-0 | 8-3 | 17-0 | 12-9 |
| 51 | 11 12-8 | 11 14-6 | 10 42-1 | 5-1 | 3-8 | 11-1 | 8-2 | 17-1 | 12-7 | 5-1 | 3-9 | 11-1 | 8-4 | 17-1 | 13-0 |
| 52 | 11 13-0 | 11 14-8 | 10 42-3 | 5-2 | 3-9 | 11-2 | 8-3 | 17-2 | 12-8 | 5-2 | 3-9 | 11-2 | 8-5 | 17-2 | 13-0 |
| 53 | 11 13-3 | 11 15-1 | 10 42-6 | 5-3 | 3-9 | 11-3 | 8-4 | 17-3 | 12-8 | 5-3 | 4-0 | 11-3 | 8-6 | 17-3 | 13-1 |
| 54 | 11 13-5 | 11 15-3 | 10 42-8 | 5-4 | 4-0 | 11-4 | 8-5 | 17-4 | 12-9 | 5-4 | 4-1 | 11-4 | 8-6 | 17-4 | 13-2 |
| 55 | 11 13-8 | 11 15-6 | 10 43-1 | 5-5 | 4-1 | 11-5 | 8-5 | 17-5 | 13-0 | 5-5 | 4-2 | 11-5 | 8-7 | 17-5 | 13-3 |
| 56 | 11 14-0 | 11 15-8 | 10 43-3 | 5-6 | 4-2 | 11-6 | 8-6 | 17-6 | 13-1 | 5-6 | 4-2 | 11-6 | 8-8 | 17-6 | 13-3 |
| 57 | 11 14-3 | 11 16-1 | 10 43-5 | 5-7 | 4-2 | 11-7 | 8-7 | 17-7 | 13-1 | 5-7 | 4-3 | 11-7 | 8-9 | 17-7 | 13-4 |
| 58 | 11 14-5 | 11 16-3 | 10 43-8 | 5-8 | 4-3 | 11-8 | 8-8 | 17-8 | 13-2 | 5-8 | 4-4 | 11-8 | 8-9 | 17-8 | 13-5 |
| 59 | 11 14-8 | 11 16-6 | 10 44-0 | 5-9 | 4-4 | 11-9 | 8-8 | 17-9 | 13-3 | 5-9 | 4-5 | 11-9 | 9-0 | 17-9 | 13-6 |
| 60 | 11 15-0 | 11 16-8 | 10 44-3 | 6-0 | 4-5 | 12-0 | 8-9 | 18-0 | 13-4 | 6-0 | 4-6 | 12-0 | 9-1 | 18-0 | 13-7 |



46"

INCREMENTS AND CORRECTIONS

47"

| 46" | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ | | |
|-----|-------------|---------|---------|------------------------|-----|----------|
| | | | | d | ' | " |
| 00 | 11 30.0 | 11 31.9 | 10 58.6 | 0.0 | 0.0 | 6.0 4.7 |
| 01 | 11 30.3 | 11 32.1 | 10 58.8 | 0.1 | 0.1 | 6.1 4.7 |
| 02 | 11 30.5 | 11 32.4 | 10 59.0 | 0.2 | 0.2 | 6.2 4.8 |
| 03 | 11 30.8 | 11 32.6 | 10 59.3 | 0.3 | 0.2 | 6.3 4.9 |
| 04 | 11 31.0 | 11 32.9 | 10 59.5 | 0.4 | 0.3 | 6.4 5.0 |
| 05 | 11 31.3 | 11 33.1 | 10 59.8 | 0.5 | 0.4 | 6.5 5.0 |
| 06 | 11 31.5 | 11 33.4 | 11 00.0 | 0.6 | 0.5 | 6.6 5.1 |
| 07 | 11 31.8 | 11 33.6 | 11 00.2 | 0.7 | 0.5 | 6.7 5.2 |
| 08 | 11 32.0 | 11 33.9 | 11 00.5 | 0.8 | 0.6 | 6.8 5.3 |
| 09 | 11 32.3 | 11 34.1 | 11 00.7 | 0.9 | 0.7 | 6.9 5.3 |
| 10 | 11 32.5 | 11 34.4 | 11 01.0 | 1.0 | 0.8 | 7.0 5.4 |
| 11 | 11 32.8 | 11 34.6 | 11 01.2 | 1.1 | 0.9 | 7.1 5.5 |
| 12 | 11 33.0 | 11 34.9 | 11 01.4 | 1.2 | 0.9 | 7.2 5.6 |
| 13 | 11 33.3 | 11 35.1 | 11 01.7 | 1.3 | 1.0 | 7.3 5.7 |
| 14 | 11 33.5 | 11 35.4 | 11 01.9 | 1.4 | 1.1 | 7.4 5.7 |
| 15 | 11 33.8 | 11 35.6 | 11 02.1 | 1.5 | 1.2 | 7.5 5.8 |
| 16 | 11 34.0 | 11 35.9 | 11 02.4 | 1.6 | 1.2 | 7.6 5.9 |
| 17 | 11 34.3 | 11 36.2 | 11 02.6 | 1.7 | 1.3 | 7.7 6.0 |
| 18 | 11 34.5 | 11 36.4 | 11 02.9 | 1.8 | 1.4 | 7.8 6.0 |
| 19 | 11 34.8 | 11 36.7 | 11 03.1 | 1.9 | 1.5 | 7.9 6.1 |
| 20 | 11 35.0 | 11 36.9 | 11 03.3 | 2.0 | 1.6 | 8.0 6.2 |
| 21 | 11 35.3 | 11 37.2 | 11 03.6 | 2.1 | 1.6 | 8.1 6.3 |
| 22 | 11 35.5 | 11 37.4 | 11 03.8 | 2.2 | 1.7 | 8.2 6.4 |
| 23 | 11 35.8 | 11 37.7 | 11 04.1 | 2.3 | 1.8 | 8.3 6.4 |
| 24 | 11 36.0 | 11 37.9 | 11 04.3 | 2.4 | 1.9 | 8.4 6.5 |
| 25 | 11 36.3 | 11 38.2 | 11 04.5 | 2.5 | 1.9 | 8.5 6.6 |
| 26 | 11 36.5 | 11 38.4 | 11 04.8 | 2.6 | 2.0 | 8.6 6.7 |
| 27 | 11 36.8 | 11 38.7 | 11 05.0 | 2.7 | 2.1 | 8.7 6.7 |
| 28 | 11 37.0 | 11 38.9 | 11 05.2 | 2.8 | 2.2 | 8.8 6.8 |
| 29 | 11 37.3 | 11 39.2 | 11 05.5 | 2.9 | 2.2 | 8.9 6.9 |
| 30 | 11 37.5 | 11 39.4 | 11 05.7 | 3.0 | 2.3 | 9.0 7.0 |
| 31 | 11 37.8 | 11 39.7 | 11 06.0 | 3.1 | 2.4 | 9.1 7.1 |
| 32 | 11 38.0 | 11 39.9 | 11 06.2 | 3.2 | 2.5 | 9.2 7.1 |
| 33 | 11 38.3 | 11 40.2 | 11 06.4 | 3.3 | 2.6 | 9.3 7.2 |
| 34 | 11 38.5 | 11 40.4 | 11 06.7 | 3.4 | 2.6 | 9.4 7.3 |
| 35 | 11 38.8 | 11 40.7 | 11 06.9 | 3.5 | 2.7 | 9.5 7.4 |
| 36 | 11 39.0 | 11 40.9 | 11 07.2 | 3.6 | 2.8 | 9.6 7.4 |
| 37 | 11 39.3 | 11 41.2 | 11 07.4 | 3.7 | 2.9 | 9.7 7.5 |
| 38 | 11 39.5 | 11 41.4 | 11 07.6 | 3.8 | 2.9 | 9.8 7.6 |
| 39 | 11 39.8 | 11 41.7 | 11 07.9 | 3.9 | 3.0 | 9.9 7.7 |
| 40 | 11 40.0 | 11 41.9 | 11 08.1 | 4.0 | 3.1 | 10.0 7.8 |
| 41 | 11 40.3 | 11 42.2 | 11 08.3 | 4.1 | 3.2 | 10.1 7.8 |
| 42 | 11 40.5 | 11 42.4 | 11 08.6 | 4.2 | 3.3 | 10.2 7.9 |
| 43 | 11 40.8 | 11 42.7 | 11 08.8 | 4.3 | 3.3 | 10.3 8.0 |
| 44 | 11 41.0 | 11 42.9 | 11 09.1 | 4.4 | 3.4 | 10.4 8.1 |
| 45 | 11 41.3 | 11 43.2 | 11 09.3 | 4.5 | 3.5 | 10.5 8.1 |
| 46 | 11 41.5 | 11 43.4 | 11 09.5 | 4.6 | 3.6 | 10.6 8.2 |
| 47 | 11 41.8 | 11 43.7 | 11 09.8 | 4.7 | 3.6 | 10.7 8.3 |
| 48 | 11 42.0 | 11 43.9 | 11 10.0 | 4.8 | 3.7 | 10.8 8.4 |
| 49 | 11 42.3 | 11 44.2 | 11 10.3 | 4.9 | 3.8 | 10.9 8.4 |
| 50 | 11 42.5 | 11 44.4 | 11 10.5 | 5.0 | 3.9 | 11.0 8.5 |
| 51 | 11 42.8 | 11 44.7 | 11 10.7 | 5.1 | 4.0 | 11.1 8.6 |
| 52 | 11 43.0 | 11 44.9 | 11 11.0 | 5.2 | 4.0 | 11.2 8.7 |
| 53 | 11 43.3 | 11 45.2 | 11 11.2 | 5.3 | 4.1 | 11.3 8.8 |
| 54 | 11 43.5 | 11 45.4 | 11 11.5 | 5.4 | 4.2 | 11.4 8.8 |
| 55 | 11 43.8 | 11 45.7 | 11 11.7 | 5.5 | 4.3 | 11.5 8.9 |
| 56 | 11 44.0 | 11 45.9 | 11 11.9 | 5.6 | 4.3 | 11.6 9.0 |
| 57 | 11 44.3 | 11 46.2 | 11 12.2 | 5.7 | 4.4 | 11.7 9.1 |
| 58 | 11 44.5 | 11 46.4 | 11 12.4 | 5.8 | 4.5 | 11.8 9.1 |
| 59 | 11 44.8 | 11 46.7 | 11 12.6 | 5.9 | 4.6 | 11.9 9.2 |
| 60 | 11 45.0 | 11 46.9 | 11 12.9 | 6.0 | 4.7 | 12.0 9.3 |

100

| 47" | SUN PLANETS | ARIES | MOON | ° or Corr ⁿ | | |
|-----|-------------|---------|---------|------------------------|-----|----------|
| | | | | d | ' | " |
| 00 | 11 45.0 | 11 46.9 | 11 12.9 | 6.0 | 0.0 | 6.0 4.8 |
| 01 | 11 45.3 | 11 47.2 | 11 13.1 | 6.1 | 0.1 | 6.1 4.8 |
| 02 | 11 45.5 | 11 47.4 | 11 13.4 | 6.2 | 0.2 | 6.2 4.9 |
| 03 | 11 45.8 | 11 47.7 | 11 13.6 | 6.3 | 0.2 | 6.3 5.0 |
| 04 | 11 46.0 | 11 47.9 | 11 13.8 | 6.4 | 0.3 | 6.4 5.1 |
| 05 | 11 46.3 | 11 48.2 | 11 14.1 | 6.5 | 0.4 | 6.5 5.1 |
| 06 | 11 46.5 | 11 48.4 | 11 14.3 | 6.6 | 0.5 | 6.6 5.2 |
| 07 | 11 46.8 | 11 48.7 | 11 14.6 | 6.7 | 0.6 | 6.7 5.3 |
| 08 | 11 47.0 | 11 48.9 | 11 14.8 | 6.8 | 0.6 | 6.8 5.4 |
| 09 | 11 47.3 | 11 49.2 | 11 15.0 | 6.9 | 0.7 | 6.9 5.5 |
| 10 | 11 47.5 | 11 49.4 | 11 15.3 | 7.0 | 0.8 | 7.0 5.6 |
| 11 | 11 47.8 | 11 49.7 | 11 15.5 | 7.1 | 0.9 | 7.1 5.6 |
| 12 | 11 48.0 | 11 49.9 | 11 15.7 | 7.2 | 1.0 | 7.2 5.7 |
| 13 | 11 48.3 | 11 50.2 | 11 16.0 | 7.3 | 1.0 | 7.3 5.8 |
| 14 | 11 48.5 | 11 50.4 | 11 16.2 | 7.4 | 1.1 | 7.4 5.9 |
| 15 | 11 48.8 | 11 50.7 | 11 16.5 | 7.5 | 1.2 | 7.5 5.9 |
| 16 | 11 49.0 | 11 50.9 | 11 16.7 | 7.6 | 1.3 | 7.6 6.0 |
| 17 | 11 49.3 | 11 51.2 | 11 16.9 | 7.7 | 1.3 | 7.7 6.1 |
| 18 | 11 49.5 | 11 51.4 | 11 17.2 | 7.8 | 1.4 | 7.8 6.2 |
| 19 | 11 49.8 | 11 51.7 | 11 17.4 | 7.9 | 1.5 | 7.9 6.3 |
| 20 | 11 50.0 | 11 51.9 | 11 17.7 | 8.0 | 1.6 | 8.0 6.3 |
| 21 | 11 50.3 | 11 52.2 | 11 17.9 | 8.1 | 1.7 | 8.1 6.4 |
| 22 | 11 50.5 | 11 52.4 | 11 18.1 | 8.2 | 1.7 | 8.2 6.5 |
| 23 | 11 50.8 | 11 52.7 | 11 18.4 | 8.3 | 1.8 | 8.3 6.6 |
| 24 | 11 51.0 | 11 52.9 | 11 18.6 | 8.4 | 1.9 | 8.4 6.7 |
| 25 | 11 51.3 | 11 53.2 | 11 18.8 | 8.5 | 2.0 | 8.5 6.7 |
| 26 | 11 51.5 | 11 53.4 | 11 19.1 | 8.6 | 2.1 | 8.6 6.8 |
| 27 | 11 51.8 | 11 53.7 | 11 19.3 | 8.7 | 2.1 | 8.7 6.9 |
| 28 | 11 52.0 | 11 53.9 | 11 19.6 | 8.8 | 2.2 | 8.8 7.0 |
| 29 | 11 52.3 | 11 54.2 | 11 19.8 | 8.9 | 2.3 | 8.9 7.1 |
| 30 | 11 52.5 | 11 54.5 | 11 20.0 | 9.0 | 2.4 | 9.0 7.1 |
| 31 | 11 52.8 | 11 54.7 | 11 20.3 | 9.1 | 2.5 | 9.1 7.2 |
| 32 | 11 53.0 | 11 55.0 | 11 20.5 | 9.2 | 2.5 | 9.2 7.3 |
| 33 | 11 53.3 | 11 55.2 | 11 20.8 | 9.3 | 2.6 | 9.3 7.4 |
| 34 | 11 53.5 | 11 55.5 | 11 21.0 | 9.4 | 2.7 | 9.4 7.4 |
| 35 | 11 53.8 | 11 55.7 | 11 21.2 | 9.5 | 2.8 | 9.5 7.5 |
| 36 | 11 54.0 | 11 56.0 | 11 21.5 | 9.6 | 2.9 | 9.6 7.6 |
| 37 | 11 54.3 | 11 56.2 | 11 21.7 | 9.7 | 2.9 | 9.7 7.7 |
| 38 | 11 54.5 | 11 56.5 | 11 22.0 | 9.8 | 3.0 | 9.8 7.8 |
| 39 | 11 54.8 | 11 56.7 | 11 22.2 | 9.9 | 3.1 | 9.9 7.8 |
| 40 | 11 55.0 | 11 57.0 | 11 22.4 | 10.0 | 3.2 | 10.0 7.9 |
| 41 | 11 55.3 | 11 57.2 | 11 22.7 | 10.1 | 3.2 | 10.1 8.0 |
| 42 | 11 55.5 | 11 57.5 | 11 22.9 | 10.2 | 3.3 | 10.2 8.1 |
| 43 | 11 55.8 | 11 57.7 | 11 23.1 | 10.3 | 3.4 | 10.3 8.2 |
| 44 | 11 56.0 | 11 58.0 | 11 23.4 | 10.4 | 3.5 | 10.4 8.2 |
| 45 | 11 56.3 | 11 58.2 | 11 23.6 | 10.5 | 3.6 | 10.5 8.3 |
| 46 | 11 56.5 | 11 58.5 | 11 23.9 | 10.6 | 3.6 | 10.6 8.4 |
| 47 | 11 56.8 | 11 58.7 | 11 24.1 | 10.7 | 3.7 | 10.7 8.5 |
| 48 | 11 57.0 | 11 59.0 | 11 24.3 | 10.8 | 3.8 | 10.8 8.6 |
| 49 | 11 57.3 | 11 59.2 | 11 24.6 | 10.9 | 3.9 | 10.9 8.6 |
| 50 | 11 57.5 | 11 59.5 | 11 24.8 | 11.0 | 4.0 | 11.0 8.7 |
| 51 | 11 57.8 | 11 59.7 | 11 25.1 | 11.1 | 4.0 | 11.1 8.8 |
| 52 | 11 58.0 | 12 00.0 | 11 25.3 | 11.2 | 4.1 | 11.2 8.9 |
| 53 | 11 58.3 | 12 00.2 | 11 25.5 | 11.3 | 4.2 | 11.3 8.9 |
| 54 | 11 58.5 | 12 00.5 | 11 25.8 | 11.4 | 4.3 | 11.4 9.0 |
| 55 | 11 58.8 | 12 00.7 | 11 26.0 | 11.5 | 4.4 | 11.5 9.1 |
| 56 | 11 59.0 | 12 01.0 | 11 26.2 | 11.6 | 4.4 | 11.6 9.2 |
| 57 | 11 59.3 | 12 01.2 | 11 26.5 | 11.7 | 4.5 | 11.7 9.3 |
| 58 | 11 59.5 | 12 01.5 | 11 26.7 | 11.8 | 4.6 | 11.8 9.3 |
| 59 | 11 59.8 | 12 01.7 | 11 27.0 | 11.9 | 4.7 | 11.9 9.4 |
| 60 | 12 00.0 | 12 02.0 | 11 27.2 | 12.0 | 4.8 | 12.0 9.5 |



48^m

INCREMENTS AND CORRECTIONS

49^m

| 48 | SUN PLANETS | | ARIES | MOON | ° of Corr ⁿ | | | 49 | SUN PLANETS | | ARIES | MOON | ° of Corr ⁿ | | | | | | |
|----|-------------|---------|---------|------|------------------------|------|-----|------|-------------|----|---------|---------|------------------------|-----|-----|------|-----|------|------|
| | ° | ' | | | ° | ' | ° | | ' | ° | | | ' | ° | ' | ° | ' | ° | ' |
| 00 | 12 00-0 | 12 02-0 | 11 27-2 | 0-0 | 0-0 | 6-0 | 4-9 | 12-0 | 9-7 | 00 | 12 15-0 | 12 17-0 | 11 41-5 | 0-0 | 0-0 | 6-0 | 5-0 | 12-0 | 9-9 |
| 01 | 12 00-3 | 12 02-2 | 11 27-4 | 0-1 | 0-1 | 6-1 | 4-9 | 12-1 | 9-8 | 01 | 12 15-3 | 12 17-3 | 11 41-8 | 0-1 | 0-1 | 6-1 | 5-0 | 12-1 | 10-0 |
| 02 | 12 00-5 | 12 02-5 | 11 27-7 | 0-2 | 0-2 | 6-2 | 5-0 | 12-2 | 9-9 | 02 | 12 15-5 | 12 17-5 | 11 42-0 | 0-2 | 0-2 | 6-2 | 5-1 | 12-2 | 10-1 |
| 03 | 12 00-8 | 12 02-7 | 11 27-9 | 0-3 | 0-2 | 6-3 | 5-1 | 12-3 | 9-9 | 03 | 12 15-8 | 12 17-8 | 11 42-2 | 0-3 | 0-2 | 6-3 | 5-2 | 12-3 | 10-1 |
| 04 | 12 01-0 | 12 03-0 | 11 28-2 | 0-4 | 0-3 | 6-4 | 5-2 | 12-4 | 10-0 | 04 | 12 16-0 | 12 18-0 | 11 42-5 | 0-4 | 0-3 | 6-4 | 5-3 | 12-4 | 10-2 |
| 05 | 12 01-3 | 12 03-2 | 11 28-4 | 0-5 | 0-4 | 6-5 | 5-3 | 12-5 | 10-1 | 05 | 12 16-3 | 12 18-3 | 11 42-7 | 0-5 | 0-4 | 6-5 | 5-4 | 12-5 | 10-3 |
| 06 | 12 01-5 | 12 03-5 | 11 28-6 | 0-6 | 0-5 | 6-6 | 5-3 | 12-6 | 10-2 | 06 | 12 16-5 | 12 18-5 | 11 42-9 | 0-6 | 0-5 | 6-6 | 5-4 | 12-6 | 10-4 |
| 07 | 12 01-8 | 12 03-7 | 11 28-9 | 0-7 | 0-6 | 6-7 | 5-4 | 12-7 | 10-3 | 07 | 12 16-8 | 12 18-8 | 11 43-2 | 0-7 | 0-6 | 6-7 | 5-5 | 12-7 | 10-5 |
| 08 | 12 02-0 | 12 04-0 | 11 29-1 | 0-8 | 0-6 | 6-8 | 5-5 | 12-8 | 10-3 | 08 | 12 17-0 | 12 19-0 | 11 43-4 | 0-8 | 0-7 | 6-8 | 5-6 | 12-8 | 10-6 |
| 09 | 12 02-3 | 12 04-2 | 11 29-3 | 0-9 | 0-7 | 6-9 | 5-6 | 12-9 | 10-4 | 09 | 12 17-3 | 12 19-3 | 11 43-7 | 0-9 | 0-7 | 6-9 | 5-7 | 12-9 | 10-6 |
| 10 | 12 02-5 | 12 04-5 | 11 29-6 | 1-0 | 0-8 | 7-0 | 5-7 | 13-0 | 10-5 | 10 | 12 17-5 | 12 19-5 | 11 43-9 | 1-0 | 0-8 | 7-0 | 5-8 | 13-0 | 10-7 |
| 11 | 12 02-8 | 12 04-7 | 11 29-8 | 1-1 | 0-9 | 7-1 | 5-7 | 13-1 | 10-6 | 11 | 12 17-8 | 12 19-8 | 11 44-1 | 1-1 | 0-9 | 7-1 | 5-9 | 13-1 | 10-8 |
| 12 | 12 03-0 | 12 05-0 | 11 30-1 | 1-2 | 1-0 | 7-2 | 5-8 | 13-2 | 10-7 | 12 | 12 18-0 | 12 20-0 | 11 44-4 | 1-2 | 1-0 | 7-2 | 5-9 | 13-2 | 10-9 |
| 13 | 12 03-3 | 12 05-2 | 11 30-3 | 1-3 | 1-1 | 7-3 | 5-9 | 13-3 | 10-8 | 13 | 12 18-3 | 12 20-3 | 11 44-6 | 1-3 | 1-1 | 7-3 | 6-0 | 13-3 | 11-0 |
| 14 | 12 03-5 | 12 05-5 | 11 30-5 | 1-4 | 1-1 | 7-4 | 5-9 | 13-4 | 10-8 | 14 | 12 18-5 | 12 20-5 | 11 44-9 | 1-4 | 1-2 | 7-4 | 6-1 | 13-4 | 11-1 |
| 15 | 12 03-8 | 12 05-7 | 11 30-8 | 1-5 | 1-2 | 7-5 | 6-1 | 13-5 | 10-9 | 15 | 12 18-8 | 12 20-8 | 11 45-1 | 1-5 | 1-2 | 7-5 | 6-2 | 13-5 | 11-1 |
| 16 | 12 04-0 | 12 06-0 | 11 31-0 | 1-6 | 1-3 | 7-6 | 6-1 | 13-6 | 11-0 | 16 | 12 19-0 | 12 21-0 | 11 45-3 | 1-6 | 1-3 | 7-6 | 6-3 | 13-6 | 11-2 |
| 17 | 12 04-3 | 12 06-2 | 11 31-3 | 1-7 | 1-4 | 7-7 | 6-2 | 13-7 | 11-1 | 17 | 12 19-3 | 12 21-3 | 11 45-6 | 1-7 | 1-4 | 7-7 | 6-4 | 13-7 | 11-3 |
| 18 | 12 04-5 | 12 06-5 | 11 31-5 | 1-8 | 1-5 | 7-8 | 6-3 | 13-8 | 11-2 | 18 | 12 19-5 | 12 21-5 | 11 45-8 | 1-8 | 1-5 | 7-8 | 6-4 | 13-8 | 11-4 |
| 19 | 12 04-8 | 12 06-7 | 11 31-7 | 1-9 | 1-5 | 7-9 | 6-4 | 13-9 | 11-2 | 19 | 12 19-8 | 12 21-8 | 11 46-1 | 1-9 | 1-6 | 7-9 | 6-5 | 13-9 | 11-5 |
| 20 | 12 05-0 | 12 07-0 | 11 32-0 | 2-0 | 1-6 | 8-0 | 6-5 | 14-0 | 11-3 | 20 | 12 20-0 | 12 22-0 | 11 46-3 | 2-0 | 1-7 | 8-0 | 6-6 | 14-0 | 11-6 |
| 21 | 12 05-3 | 12 07-2 | 11 32-2 | 2-1 | 1-7 | 8-1 | 6-5 | 14-1 | 11-4 | 21 | 12 20-3 | 12 22-3 | 11 46-5 | 2-1 | 1-7 | 8-1 | 6-7 | 14-1 | 11-6 |
| 22 | 12 05-5 | 12 07-5 | 11 32-4 | 2-2 | 1-8 | 8-2 | 6-6 | 14-2 | 11-5 | 22 | 12 20-5 | 12 22-5 | 11 46-8 | 2-2 | 1-8 | 8-2 | 6-8 | 14-2 | 11-7 |
| 23 | 12 05-8 | 12 07-7 | 11 32-7 | 2-3 | 1-9 | 8-3 | 6-7 | 14-3 | 11-6 | 23 | 12 20-8 | 12 22-8 | 11 47-0 | 2-3 | 1-9 | 8-3 | 6-8 | 14-3 | 11-8 |
| 24 | 12 06-0 | 12 08-0 | 11 32-9 | 2-4 | 1-9 | 8-4 | 6-8 | 14-4 | 11-6 | 24 | 12 21-0 | 12 23-0 | 11 47-2 | 2-4 | 2-0 | 8-4 | 6-9 | 14-4 | 11-9 |
| 25 | 12 06-3 | 12 08-2 | 11 33-2 | 2-5 | 2-0 | 8-5 | 6-9 | 14-5 | 11-7 | 25 | 12 21-3 | 12 23-3 | 11 47-5 | 2-5 | 2-1 | 8-5 | 7-0 | 14-5 | 12-0 |
| 26 | 12 06-5 | 12 08-5 | 11 33-4 | 2-6 | 2-1 | 8-6 | 7-0 | 14-6 | 11-8 | 26 | 12 21-5 | 12 23-5 | 11 47-7 | 2-6 | 2-1 | 8-6 | 7-1 | 14-6 | 12-0 |
| 27 | 12 06-8 | 12 08-7 | 11 33-6 | 2-7 | 2-2 | 8-7 | 7-0 | 14-7 | 11-9 | 27 | 12 21-8 | 12 23-8 | 11 48-0 | 2-7 | 2-2 | 8-7 | 7-2 | 14-7 | 12-1 |
| 28 | 12 07-0 | 12 09-0 | 11 33-9 | 2-8 | 2-3 | 8-8 | 7-1 | 14-8 | 12-0 | 28 | 12 22-0 | 12 24-0 | 11 48-2 | 2-8 | 2-3 | 8-8 | 7-3 | 14-8 | 12-2 |
| 29 | 12 07-3 | 12 09-2 | 11 34-1 | 2-9 | 2-3 | 8-9 | 7-2 | 14-9 | 12-0 | 29 | 12 22-3 | 12 24-3 | 11 48-4 | 2-9 | 2-4 | 8-9 | 7-3 | 14-9 | 12-3 |
| 30 | 12 07-5 | 12 09-5 | 11 34-4 | 3-0 | 2-4 | 9-0 | 7-3 | 15-0 | 12-1 | 30 | 12 22-5 | 12 24-5 | 11 48-7 | 3-0 | 2-5 | 9-0 | 7-4 | 15-0 | 12-4 |
| 31 | 12 07-8 | 12 09-7 | 11 34-6 | 3-1 | 2-5 | 9-1 | 7-4 | 15-1 | 12-2 | 31 | 12 22-8 | 12 24-8 | 11 48-9 | 3-1 | 2-6 | 9-1 | 7-5 | 15-1 | 12-5 |
| 32 | 12 08-0 | 12 10-0 | 11 34-8 | 3-2 | 2-6 | 9-2 | 7-4 | 15-2 | 12-3 | 32 | 12 23-0 | 12 25-0 | 11 49-2 | 3-2 | 2-6 | 9-2 | 7-6 | 15-2 | 12-5 |
| 33 | 12 08-3 | 12 10-2 | 11 35-1 | 3-3 | 2-7 | 9-3 | 7-5 | 15-3 | 12-4 | 33 | 12 23-3 | 12 25-3 | 11 49-4 | 3-3 | 2-7 | 9-3 | 7-7 | 15-3 | 12-6 |
| 34 | 12 08-5 | 12 10-5 | 11 35-3 | 3-4 | 2-7 | 9-4 | 7-6 | 15-4 | 12-4 | 34 | 12 23-5 | 12 25-5 | 11 49-6 | 3-4 | 2-8 | 9-4 | 7-8 | 15-4 | 12-7 |
| 35 | 12 08-8 | 12 10-7 | 11 35-6 | 3-5 | 2-8 | 9-5 | 7-7 | 15-5 | 12-5 | 35 | 12 23-8 | 12 25-8 | 11 49-9 | 3-5 | 2-9 | 9-5 | 7-8 | 15-5 | 12-8 |
| 36 | 12 09-0 | 12 11-0 | 11 35-8 | 3-6 | 2-9 | 9-6 | 7-8 | 15-6 | 12-6 | 36 | 12 24-0 | 12 26-0 | 11 50-1 | 3-6 | 3-0 | 9-6 | 7-9 | 15-6 | 12-9 |
| 37 | 12 09-3 | 12 11-2 | 11 36-0 | 3-7 | 3-0 | 9-7 | 7-8 | 15-7 | 12-7 | 37 | 12 24-3 | 12 26-3 | 11 50-3 | 3-7 | 3-1 | 9-7 | 8-0 | 15-7 | 13-0 |
| 38 | 12 09-5 | 12 11-5 | 11 36-3 | 3-8 | 3-1 | 9-8 | 7-9 | 15-8 | 12-8 | 38 | 12 24-5 | 12 26-5 | 11 50-6 | 3-8 | 3-1 | 9-8 | 8-1 | 15-8 | 13-0 |
| 39 | 12 09-8 | 12 11-7 | 11 36-5 | 3-9 | 3-2 | 9-9 | 8-0 | 15-9 | 12-9 | 39 | 12 24-8 | 12 26-8 | 11 50-8 | 3-9 | 3-2 | 9-9 | 8-2 | 15-9 | 13-1 |
| 40 | 12 10-0 | 12 12-0 | 11 36-7 | 4-0 | 3-2 | 10-0 | 8-1 | 16-0 | 12-9 | 40 | 12 25-0 | 12 27-0 | 11 51-1 | 4-0 | 3-3 | 10-0 | 8-3 | 16-0 | 13-2 |
| 41 | 12 10-3 | 12 12-2 | 11 37-0 | 4-1 | 3-3 | 10-1 | 8-2 | 16-1 | 13-0 | 41 | 12 25-3 | 12 27-3 | 11 51-3 | 4-1 | 3-4 | 10-1 | 8-3 | 16-1 | 13-3 |
| 42 | 12 10-5 | 12 12-5 | 11 37-2 | 4-2 | 3-4 | 10-2 | 8-2 | 16-2 | 13-1 | 42 | 12 25-5 | 12 27-5 | 11 51-5 | 4-2 | 3-5 | 10-2 | 8-4 | 16-2 | 13-4 |
| 43 | 12 10-8 | 12 12-8 | 11 37-5 | 4-3 | 3-5 | 10-3 | 8-3 | 16-3 | 13-2 | 43 | 12 25-8 | 12 27-8 | 11 51-8 | 4-3 | 3-5 | 10-3 | 8-5 | 16-3 | 13-4 |
| 44 | 12 11-0 | 12 13-0 | 11 37-7 | 4-4 | 3-6 | 10-4 | 8-4 | 16-4 | 13-3 | 44 | 12 26-0 | 12 28-0 | 11 52-0 | 4-4 | 3-6 | 10-4 | 8-6 | 16-4 | 13-5 |
| 45 | 12 11-3 | 12 13-3 | 11 37-9 | 4-5 | 3-6 | 10-5 | 8-5 | 16-5 | 13-3 | 45 | 12 26-3 | 12 28-3 | 11 52-3 | 4-5 | 3-7 | 10-5 | 8-7 | 16-5 | 13-6 |
| 46 | 12 11-5 | 12 13-5 | 11 38-2 | 4-6 | 3-7 | 10-6 | 8-6 | 16-6 | 13-4 | 46 | 12 26-5 | 12 28-5 | 11 52-5 | 4-6 | 3-8 | 10-6 | 8-7 | 16-6 | 13-7 |
| 47 | 12 11-8 | 12 13-8 | 11 38-4 | 4-7 | 3-8 | 10-7 | 8-6 | 16-7 | 13-5 | 47 | 12 26-8 | 12 28-8 | 11 52-7 | 4-7 | 3-9 | 10-7 | 8-8 | 16-7 | 13-8 |
| 48 | 12 12-0 | 12 14-0 | 11 38-7 | 4-8 | 3-9 | 10-8 | 8-7 | 16-8 | 13-6 | 48 | 12 27-0 | 12 29-0 | 11 53-0 | 4-8 | 4-0 | 10-8 | 8-9 | 16-8 | 13-9 |
| 49 | 12 12-3 | 12 14-3 | 11 38-9 | 4-9 | 4-0 | 10-9 | 8-8 | 16-9 | 13-7 | 49 | 12 27-3 | 12 29-3 | 11 53-2 | 4-9 | 4-0 | 10-9 | 9-0 | 16-9 | 13-9 |
| 50 | 12 12-5 | 12 14-5 | 11 39-1 | 5-0 | 4-0 | 11-0 | 8-9 | 17-0 | 13-7 | 50 | 12 27-5 | 12 29-5 | 11 53-4 | 5-0 | 4-1 | 11-0 | 9-1 | 17-0 | 14-0 |
| 51 | 12 12-8 | 12 14-8 | 11 39-4 | 5-1 | 4-1 | 11-1 | 9-0 | 17-1 | 13-8 | 51 | 12 27-8 | 12 29-8 | 11 53-7 | 5-1 | 4-2 | 11-1 | 9-2 | 17-1 | 14-1 |
| 52 | 12 13-0 | 12 15-0 | 11 39-6 | 5-2 | 4-2 | 11-2 | 9-1 | 17-2 | 13-9 | 52 | 12 28-0 | 12 30-0 | 11 53-9 | 5-2 | 4-3 | 11-2 | 9-2 | 17-2 | 14-2 |
| 53 | 12 13-3 | 12 15-3 | 11 39-8 | 5-3 | 4-3 | 11-3 | 9-1 | 17-3 | 14-0 | 53 | 12 28-3 | 12 30-3 | 11 54-2 | 5-3 | 4-4 | 11-3 | 9-3 | 17-3 | 14-3 |
| 54 | 12 13-5 | 12 15-5 | 11 40-1 | 5-4 | 4-4 | 11-4 | 9-2 | 17-4 | 14-1 | 54 | 12 28-5 | 12 30-5 | 11 54-4 | 5-4 | 4-5 | 11-4 | 9-4 | 17-4 | 14-4 |
| 55 | 12 13-8 | 12 15-8 | 11 40-3 | 5-5 | 4-4 | 11-5 | 9-3 | 17-5 | 14-1 | 55 | 12 28-8 | 12 30-8 | 11 54-6 | 5-5 | 4-5 | 11-5 | 9-5 | 17-5 | 14-4 |
| 56 | 12 14-0 | 12 16-0 | 11 40-6 | 5-6 | 4-5 | 11-6 | 9-4 | 17-6 | 14-2 | 56 | 12 29-0 | 12 31-0 | 11 54-9 | 5-6 | 4-6 | 11-6 | 9-6 | 17-6 | 14-5 |
| 57 | 12 14-3 | 12 16-3 | 11 40-8 | 5-7 | 4-6 | 11-7 | 9-5 | 17-7 | 14-3 | 57 | 12 29-3 | 12 31-3 | 11 55-1 | 5-7 | 4-7 | 11-7 | 9-7 | 17-7 | 14-6 |
| 58 | 12 14-5 | 12 16-5 | 11 41-0 | 5-8 | 4-7 | 11-8 | 9-5 | 17-8 | 14-4 | 58 | 12 29-5 | 12 31-5 | 11 55-4 | 5-8 | 4-8 | 11-8 | 9-7 | 17-8 | 14-7 |
| 59 | 12 14-8 | 12 16-8 | 11 41-3 | 5-9 | 4-8 | 11-9 | 9-6 | 17-9 | 14-5 | 59 | 12 29-8 | 12 31-8 | 11 55-6 | 5-9 | 4-9 | 11-9 | 9-8 | 17-9 | 14-8 |
| 60 | 12 15-0 | 12 17-0 | 11 41-5 | 6-0 | 4-9 | 12-0 | 9-7 | 18-0 | 14-6 | 60 | 12 30-0 | 12 32-0 | 11 55-8 | 6-0 | 5-0 | 12-0 | 9-9 | 18-0 | 14-9 |



50^m

INCREMENTS AND CORRECTIONS

51^m

| 50 | SUN PLANETS | | | ARIES | MOON | P or Corr ⁿ | | V or Corr ⁿ | | V or Corr ⁿ | | 51 | SUN PLANETS | | | ARIES | MOON | P or Corr ⁿ | | V or Corr ⁿ | | V or Corr ⁿ | | | | | | | |
|----|-------------|---------|---------|-------|------|------------------------|-----|------------------------|------|------------------------|---------|---------|-------------|-----|-----|-------|------|------------------------|------|------------------------|---------|------------------------|---------|-----|-----|------|-----|------|------|
| | d | m | s | | | d | m | d | m | s | d | | m | s | d | | | m | s | d | m | s | d | m | s | d | m | s | |
| 00 | 12 30-0 | 12 32-1 | 11 55-8 | 0-0 | 0-0 | 6-0 | 5-1 | 12-0 | 10-1 | 00 | 12 45-0 | 12 47-1 | 12 10-2 | 0-0 | 0-0 | 6-0 | 5-2 | 12-0 | 10-3 | 00 | 12 45-0 | 12 47-1 | 12 10-2 | 0-0 | 0-0 | 6-0 | 5-2 | 12-0 | 10-3 |
| 01 | 12 30-3 | 12 32-3 | 11 56-1 | 0-1 | 0-1 | 6-1 | 5-1 | 12-1 | 10-2 | 01 | 12 45-3 | 12 47-3 | 12 10-4 | 0-1 | 0-1 | 6-1 | 5-2 | 12-1 | 10-4 | 01 | 12 45-3 | 12 47-3 | 12 10-4 | 0-1 | 0-1 | 6-1 | 5-2 | 12-1 | 10-4 |
| 02 | 12 30-5 | 12 32-6 | 11 56-3 | 0-2 | 0-2 | 6-2 | 5-2 | 12-2 | 10-3 | 02 | 12 45-5 | 12 47-6 | 12 10-6 | 0-2 | 0-2 | 6-2 | 5-3 | 12-2 | 10-6 | 02 | 12 45-5 | 12 47-6 | 12 10-6 | 0-2 | 0-2 | 6-2 | 5-3 | 12-2 | 10-6 |
| 03 | 12 30-8 | 12 32-8 | 11 56-5 | 0-3 | 0-3 | 6-3 | 5-3 | 12-3 | 10-4 | 03 | 12 45-8 | 12 47-8 | 12 10-9 | 0-3 | 0-3 | 6-3 | 5-4 | 12-3 | 10-9 | 03 | 12 45-8 | 12 47-8 | 12 10-9 | 0-3 | 0-3 | 6-3 | 5-4 | 12-3 | 10-6 |
| 04 | 12 31-0 | 12 33-1 | 11 56-8 | 0-4 | 0-3 | 6-4 | 5-4 | 12-4 | 10-4 | 04 | 12 46-0 | 12 48-1 | 12 11-1 | 0-4 | 0-3 | 6-4 | 5-5 | 12-4 | 10-6 | 04 | 12 46-0 | 12 48-1 | 12 11-1 | 0-4 | 0-3 | 6-4 | 5-5 | 12-4 | 10-6 |
| 05 | 12 31-3 | 12 33-3 | 11 57-0 | 0-5 | 0-4 | 6-5 | 5-5 | 12-5 | 10-5 | 05 | 12 46-3 | 12 48-3 | 12 11-3 | 0-5 | 0-4 | 6-5 | 5-6 | 12-5 | 10-7 | 05 | 12 46-3 | 12 48-3 | 12 11-3 | 0-5 | 0-4 | 6-5 | 5-6 | 12-5 | 10-7 |
| 06 | 12 31-5 | 12 33-6 | 11 57-3 | 0-6 | 0-5 | 6-6 | 5-6 | 12-6 | 10-6 | 06 | 12 46-5 | 12 48-6 | 12 11-6 | 0-6 | 0-5 | 6-6 | 5-7 | 12-6 | 10-8 | 06 | 12 46-5 | 12 48-6 | 12 11-6 | 0-6 | 0-5 | 6-6 | 5-7 | 12-6 | 10-8 |
| 07 | 12 31-8 | 12 33-8 | 11 57-5 | 0-7 | 0-6 | 6-7 | 5-6 | 12-7 | 10-7 | 07 | 12 46-8 | 12 48-8 | 12 11-8 | 0-7 | 0-6 | 6-7 | 5-8 | 12-7 | 10-9 | 07 | 12 46-8 | 12 48-8 | 12 11-8 | 0-7 | 0-6 | 6-7 | 5-8 | 12-7 | 10-9 |
| 08 | 12 32-0 | 12 34-1 | 11 57-7 | 0-8 | 0-7 | 6-8 | 5-7 | 12-8 | 10-8 | 08 | 12 47-0 | 12 49-1 | 12 12-1 | 0-8 | 0-7 | 6-8 | 5-8 | 12-8 | 11-0 | 08 | 12 47-0 | 12 49-1 | 12 12-1 | 0-8 | 0-7 | 6-8 | 5-8 | 12-8 | 11-0 |
| 09 | 12 32-3 | 12 34-3 | 11 58-0 | 0-9 | 0-8 | 6-9 | 5-8 | 12-9 | 10-9 | 09 | 12 47-3 | 12 49-4 | 12 12-3 | 0-9 | 0-8 | 6-9 | 5-9 | 12-9 | 11-1 | 09 | 12 47-3 | 12 49-4 | 12 12-3 | 0-9 | 0-8 | 6-9 | 5-9 | 12-9 | 11-1 |
| 10 | 12 32-5 | 12 34-6 | 11 58-2 | 1-0 | 0-8 | 7-0 | 5-9 | 13-0 | 10-9 | 10 | 12 47-5 | 12 49-6 | 12 12-5 | 1-0 | 0-9 | 7-0 | 6-0 | 13-0 | 11-2 | 10 | 12 47-5 | 12 49-6 | 12 12-5 | 1-0 | 0-9 | 7-0 | 6-0 | 13-0 | 11-2 |
| 11 | 12 32-8 | 12 34-8 | 11 58-5 | 1-1 | 0-9 | 7-1 | 6-0 | 13-1 | 11-0 | 11 | 12 47-8 | 12 49-9 | 12 12-8 | 1-1 | 0-9 | 7-1 | 6-1 | 13-1 | 11-2 | 11 | 12 47-8 | 12 49-9 | 12 12-8 | 1-1 | 0-9 | 7-1 | 6-1 | 13-1 | 11-2 |
| 12 | 12 33-0 | 12 35-1 | 11 58-7 | 1-2 | 1-0 | 7-2 | 6-1 | 13-2 | 11-1 | 12 | 12 48-0 | 12 50-1 | 12 13-0 | 1-2 | 1-0 | 7-2 | 6-2 | 13-2 | 11-3 | 12 | 12 48-0 | 12 50-1 | 12 13-0 | 1-2 | 1-0 | 7-2 | 6-2 | 13-2 | 11-3 |
| 13 | 12 33-3 | 12 35-3 | 11 58-9 | 1-3 | 1-1 | 7-3 | 6-1 | 13-3 | 11-2 | 13 | 12 48-3 | 12 50-4 | 12 13-3 | 1-3 | 1-1 | 7-3 | 6-3 | 13-3 | 11-4 | 13 | 12 48-3 | 12 50-4 | 12 13-3 | 1-3 | 1-1 | 7-3 | 6-3 | 13-3 | 11-4 |
| 14 | 12 33-5 | 12 35-6 | 11 59-2 | 1-4 | 1-2 | 7-4 | 6-2 | 13-4 | 11-3 | 14 | 12 48-5 | 12 50-6 | 12 13-5 | 1-4 | 1-2 | 7-4 | 6-4 | 13-4 | 11-5 | 14 | 12 48-5 | 12 50-6 | 12 13-5 | 1-4 | 1-2 | 7-4 | 6-4 | 13-4 | 11-5 |
| 15 | 12 33-8 | 12 35-8 | 11 59-4 | 1-5 | 1-3 | 7-5 | 6-3 | 13-5 | 11-4 | 15 | 12 48-8 | 12 50-9 | 12 13-7 | 1-5 | 1-3 | 7-5 | 6-4 | 13-5 | 11-6 | 15 | 12 48-8 | 12 50-9 | 12 13-7 | 1-5 | 1-3 | 7-5 | 6-4 | 13-5 | 11-6 |
| 16 | 12 34-0 | 12 36-1 | 11 59-7 | 1-6 | 1-3 | 7-6 | 6-4 | 13-6 | 11-4 | 16 | 12 49-0 | 12 51-1 | 12 14-0 | 1-6 | 1-4 | 7-6 | 6-5 | 13-6 | 11-7 | 16 | 12 49-0 | 12 51-1 | 12 14-0 | 1-6 | 1-4 | 7-6 | 6-5 | 13-6 | 11-7 |
| 17 | 12 34-3 | 12 36-3 | 11 59-9 | 1-7 | 1-4 | 7-7 | 6-5 | 13-7 | 11-5 | 17 | 12 49-3 | 12 51-4 | 12 14-2 | 1-7 | 1-5 | 7-7 | 6-6 | 13-7 | 11-8 | 17 | 12 49-3 | 12 51-4 | 12 14-2 | 1-7 | 1-5 | 7-7 | 6-6 | 13-7 | 11-8 |
| 18 | 12 34-5 | 12 36-6 | 12 00-1 | 1-8 | 1-5 | 7-8 | 6-6 | 13-8 | 11-6 | 18 | 12 49-5 | 12 51-6 | 12 14-4 | 1-8 | 1-5 | 7-8 | 6-7 | 13-8 | 11-8 | 18 | 12 49-5 | 12 51-6 | 12 14-4 | 1-8 | 1-5 | 7-8 | 6-7 | 13-8 | 11-8 |
| 19 | 12 34-8 | 12 36-8 | 12 00-4 | 1-9 | 1-6 | 7-9 | 6-6 | 13-9 | 11-7 | 19 | 12 49-8 | 12 51-9 | 12 14-7 | 1-9 | 1-6 | 7-9 | 6-8 | 13-9 | 11-9 | 19 | 12 49-8 | 12 51-9 | 12 14-7 | 1-9 | 1-6 | 7-9 | 6-8 | 13-9 | 11-9 |
| 20 | 12 35-0 | 12 37-1 | 12 00-6 | 2-0 | 1-7 | 8-0 | 6-7 | 14-0 | 11-8 | 20 | 12 50-0 | 12 52-1 | 12 14-9 | 2-0 | 1-7 | 8-0 | 6-9 | 14-0 | 12-0 | 20 | 12 50-0 | 12 52-1 | 12 14-9 | 2-0 | 1-7 | 8-0 | 6-9 | 14-0 | 12-0 |
| 21 | 12 35-3 | 12 37-3 | 12 00-8 | 2-1 | 1-8 | 8-1 | 6-8 | 14-1 | 11-9 | 21 | 12 50-3 | 12 52-4 | 12 15-2 | 2-1 | 1-8 | 8-1 | 7-0 | 14-1 | 12-1 | 21 | 12 50-3 | 12 52-4 | 12 15-2 | 2-1 | 1-8 | 8-1 | 7-0 | 14-1 | 12-1 |
| 22 | 12 35-5 | 12 37-6 | 12 01-1 | 2-2 | 1-9 | 8-2 | 6-9 | 14-2 | 12-0 | 22 | 12 50-5 | 12 52-6 | 12 15-4 | 2-2 | 1-9 | 8-2 | 7-0 | 14-2 | 12-2 | 22 | 12 50-5 | 12 52-6 | 12 15-4 | 2-2 | 1-9 | 8-2 | 7-0 | 14-2 | 12-2 |
| 23 | 12 35-8 | 12 37-8 | 12 01-3 | 2-3 | 1-9 | 8-3 | 7-0 | 14-3 | 12-0 | 23 | 12 50-8 | 12 52-9 | 12 15-6 | 2-3 | 2-0 | 8-3 | 7-1 | 14-3 | 12-3 | 23 | 12 50-8 | 12 52-9 | 12 15-6 | 2-3 | 2-0 | 8-3 | 7-1 | 14-3 | 12-3 |
| 24 | 12 36-0 | 12 38-1 | 12 01-6 | 2-4 | 2-0 | 8-4 | 7-1 | 14-4 | 12-1 | 24 | 12 51-0 | 12 53-1 | 12 15-9 | 2-4 | 2-1 | 8-4 | 7-2 | 14-4 | 12-4 | 24 | 12 51-0 | 12 53-1 | 12 15-9 | 2-4 | 2-1 | 8-4 | 7-2 | 14-4 | 12-4 |
| 25 | 12 36-3 | 12 38-3 | 12 01-8 | 2-5 | 2-1 | 8-5 | 7-2 | 14-5 | 12-2 | 25 | 12 51-3 | 12 53-4 | 12 16-1 | 2-5 | 2-1 | 8-5 | 7-3 | 14-5 | 12-4 | 25 | 12 51-3 | 12 53-4 | 12 16-1 | 2-5 | 2-1 | 8-5 | 7-3 | 14-5 | 12-4 |
| 26 | 12 36-5 | 12 38-6 | 12 02-0 | 2-6 | 2-2 | 8-6 | 7-2 | 14-6 | 12-3 | 26 | 12 51-5 | 12 53-6 | 12 16-4 | 2-6 | 2-2 | 8-6 | 7-4 | 14-6 | 12-5 | 26 | 12 51-5 | 12 53-6 | 12 16-4 | 2-6 | 2-2 | 8-6 | 7-4 | 14-6 | 12-5 |
| 27 | 12 36-8 | 12 38-8 | 12 02-3 | 2-7 | 2-3 | 8-7 | 7-3 | 14-7 | 12-4 | 27 | 12 51-8 | 12 53-9 | 12 16-6 | 2-7 | 2-3 | 8-7 | 7-5 | 14-7 | 12-6 | 27 | 12 51-8 | 12 53-9 | 12 16-6 | 2-7 | 2-3 | 8-7 | 7-5 | 14-7 | 12-6 |
| 28 | 12 37-0 | 12 39-1 | 12 02-5 | 2-8 | 2-4 | 8-8 | 7-4 | 14-8 | 12-5 | 28 | 12 52-0 | 12 54-1 | 12 16-8 | 2-8 | 2-4 | 8-8 | 7-6 | 14-8 | 12-7 | 28 | 12 52-0 | 12 54-1 | 12 16-8 | 2-8 | 2-4 | 8-8 | 7-6 | 14-8 | 12-7 |
| 29 | 12 37-3 | 12 39-3 | 12 02-8 | 2-9 | 2-4 | 8-9 | 7-5 | 14-9 | 12-5 | 29 | 12 52-3 | 12 54-4 | 12 17-1 | 2-9 | 2-5 | 8-9 | 7-6 | 14-9 | 12-8 | 29 | 12 52-3 | 12 54-4 | 12 17-1 | 2-9 | 2-5 | 8-9 | 7-6 | 14-9 | 12-8 |
| 30 | 12 37-5 | 12 39-6 | 12 03-0 | 3-0 | 2-5 | 9-0 | 7-6 | 15-0 | 12-6 | 30 | 12 52-5 | 12 54-6 | 12 17-3 | 3-0 | 2-6 | 9-0 | 7-7 | 15-0 | 12-9 | 30 | 12 52-5 | 12 54-6 | 12 17-3 | 3-0 | 2-6 | 9-0 | 7-7 | 15-0 | 12-9 |
| 31 | 12 37-8 | 12 39-8 | 12 03-2 | 3-1 | 2-6 | 9-1 | 7-7 | 15-1 | 12-7 | 31 | 12 52-8 | 12 54-9 | 12 17-5 | 3-1 | 2-7 | 9-1 | 7-8 | 15-1 | 13-0 | 31 | 12 52-8 | 12 54-9 | 12 17-5 | 3-1 | 2-7 | 9-1 | 7-8 | 15-1 | 13-0 |
| 32 | 12 38-0 | 12 40-1 | 12 03-5 | 3-2 | 2-7 | 9-2 | 7-7 | 15-2 | 12-8 | 32 | 12 53-0 | 12 55-1 | 12 17-8 | 3-2 | 2-7 | 9-2 | 7-9 | 15-2 | 13-0 | 32 | 12 53-0 | 12 55-1 | 12 17-8 | 3-2 | 2-7 | 9-2 | 7-9 | 15-2 | 13-0 |
| 33 | 12 38-3 | 12 40-3 | 12 03-7 | 3-3 | 2-8 | 9-3 | 7-8 | 15-3 | 12-9 | 33 | 12 53-3 | 12 55-4 | 12 18-0 | 3-3 | 2-8 | 9-3 | 8-0 | 15-3 | 13-1 | 33 | 12 53-3 | 12 55-4 | 12 18-0 | 3-3 | 2-8 | 9-3 | 8-0 | 15-3 | 13-1 |
| 34 | 12 38-5 | 12 40-6 | 12 03-9 | 3-4 | 2-9 | 9-4 | 7-9 | 15-4 | 13-0 | 34 | 12 53-5 | 12 55-6 | 12 18-3 | 3-4 | 2-9 | 9-4 | 8-1 | 15-4 | 13-2 | 34 | 12 53-5 | 12 55-6 | 12 18-3 | 3-4 | 2-9 | 9-4 | 8-1 | 15-4 | 13-2 |
| 35 | 12 38-8 | 12 40-8 | 12 04-2 | 3-5 | 2-9 | 9-5 | 8-0 | 15-5 | 13-0 | 35 | 12 53-8 | 12 55-9 | 12 18-5 | 3-5 | 3-0 | 9-5 | 8-2 | 15-5 | 13-3 | 35 | 12 53-8 | 12 55-9 | 12 18-5 | 3-5 | 3-0 | 9-5 | 8-2 | 15-5 | 13-3 |
| 36 | 12 39-0 | 12 41-1 | 12 04-4 | 3-6 | 3-0 | 9-6 | 8-1 | 15-6 | 13-1 | 36 | 12 54-0 | 12 56-1 | 12 18-7 | 3-6 | 3-1 | 9-6 | 8-2 | 15-6 | 13-4 | 36 | 12 54-0 | 12 56-1 | 12 18-7 | 3-6 | 3-1 | 9-6 | 8-2 | 15-6 | 13-4 |
| 37 | 12 39-3 | 12 41-3 | 12 04-7 | 3-7 | 3-1 | 9-7 | 8-2 | 15-7 | 13-2 | 37 | 12 54-3 | 12 56-4 | 12 19-0 | 3-7 | 3-2 | 9-7 | 8-3 | 15-7 | 13-5 | 37 | 12 54-3 | 12 56-4 | 12 19-0 | 3-7 | 3-2 | 9-7 | 8-3 | 15-7 | 13-5 |
| 38 | 12 39-5 | 12 41-6 | 12 04-9 | 3-8 | 3-2 | 9-8 | 8-2 | 15-8 | 13-3 | 38 | 12 54-5 | 12 56-6 | 12 19-2 | 3-8 | 3-3 | 9-8 | 8-4 | 15-8 | 13-6 | 38 | 12 54-5 | 12 56-6 | 12 19-2 | 3-8 | 3-3 | 9-8 | 8-4 | 15-8 | 13-6 |
| 39 | 12 39-8 | 12 41-8 | 12 05-1 | 3-9 | 3-3 | 9-9 | 8-3 | 15-9 | 13-4 | 39 | 12 54-8 | 12 56-9 | 12 19-5 | 3-9 | 3-3 | 9-9 | 8-5 | 15-9 | 13-6 | 39 | 12 54-8 | 12 56-9 | 12 19-5 | 3-9 | 3-3 | 9-9 | 8-5 | 15-9 | 13-6 |
| 40 | 12 40-0 | 12 42-1 | 12 05-4 | 4-0 | 3-4 | 10-0 | 8-4 | 16-0 | 13-5 | 40 | 12 55-0 | 12 57-1 | 12 19-7 | 4-0 | 3-4 | 10-0 | 8-6 | 16-0 | 13-7 | 40 | 12 55-0 | 12 57-1 | 12 19-7 | 4-0 | 3-4 | 10-0 | 8-6 | 16-0 | 13-7 |
| 41 | 12 40-3 | 12 42-3 | 12 05-6 | 4-1 | 3-5 | 10-1 | 8-5 | 16-1 | 13-6 | 41 | 12 55-3 | 12 57-4 | 12 19-9 | 4-1 | 3-5 | 10-1 | 8-7 | | | | | | | | | | | | |

52°

INCREMENTS AND CORRECTIONS

53°

| 52 | SUN PLANETS | | ARIES | MOON | ° of Corr | | | 53 | SUN PLANETS | | ARIES | MOON | ° of Corr | | | | | | |
|----|-------------|---------|---------|------|-----------|------|------|------|-------------|----|---------|---------|-----------|-----|-----|------|------|------|------|
| | ° | ' | | | ° | ' | " | | ° | ' | | | ° | ' | " | | | | |
| 00 | 13 00-0 | 13 02-1 | 12 24-5 | 0-0 | 0-0 | 6-0 | 5-3 | 12-0 | 10-5 | 00 | 13 15-0 | 13 17-2 | 12 30-0 | 0-0 | 0-0 | 6-0 | 5-4 | 12-0 | 10-7 |
| 01 | 13 00-3 | 13 02-4 | 12 24-7 | 0-1 | 0-1 | 6-1 | 5-3 | 12-1 | 10-6 | 01 | 13 15-3 | 13 17-4 | 12 30-0 | 0-1 | 0-1 | 6-1 | 5-4 | 12-1 | 10-8 |
| 02 | 13 00-5 | 13 02-6 | 12 24-9 | 0-2 | 0-2 | 6-2 | 5-4 | 12-2 | 10-7 | 02 | 13 15-5 | 13 17-7 | 12 30-3 | 0-2 | 0-2 | 6-2 | 5-5 | 12-2 | 10-9 |
| 03 | 13 00-8 | 13 02-9 | 12 25-2 | 0-3 | 0-3 | 6-3 | 5-5 | 12-3 | 10-8 | 03 | 13 15-8 | 13 17-9 | 12 30-5 | 0-3 | 0-3 | 6-3 | 5-6 | 12-3 | 11-0 |
| 04 | 13 01-0 | 13 03-1 | 12 25-4 | 0-4 | 0-4 | 6-4 | 5-6 | 12-4 | 10-9 | 04 | 13 16-0 | 13 18-2 | 12 30-7 | 0-4 | 0-4 | 6-4 | 5-7 | 12-4 | 11-1 |
| 05 | 13 01-3 | 13 03-4 | 12 25-7 | 0-5 | 0-4 | 6-5 | 5-7 | 12-5 | 10-9 | 05 | 13 16-3 | 13 18-4 | 12 40-0 | 0-5 | 0-4 | 6-5 | 5-8 | 12-5 | 11-1 |
| 06 | 13 01-5 | 13 03-6 | 12 25-9 | 0-6 | 0-5 | 6-6 | 5-8 | 12-6 | 11-0 | 06 | 13 16-5 | 13 18-7 | 12 40-2 | 0-6 | 0-5 | 6-6 | 5-9 | 12-6 | 11-2 |
| 07 | 13 01-8 | 13 03-9 | 12 26-1 | 0-7 | 0-6 | 6-7 | 5-9 | 12-7 | 11-1 | 07 | 13 16-8 | 13 18-9 | 12 40-5 | 0-7 | 0-6 | 6-7 | 6-0 | 12-7 | 11-3 |
| 08 | 13 02-0 | 13 04-1 | 12 26-4 | 0-8 | 0-7 | 6-8 | 6-0 | 12-8 | 11-2 | 08 | 13 17-0 | 13 19-2 | 12 40-7 | 0-8 | 0-7 | 6-8 | 6-1 | 12-8 | 11-4 |
| 09 | 13 02-3 | 13 04-4 | 12 26-6 | 0-9 | 0-8 | 6-9 | 6-0 | 12-9 | 11-3 | 09 | 13 17-3 | 13 19-4 | 12 40-9 | 0-9 | 0-8 | 6-9 | 6-2 | 12-9 | 11-5 |
| 10 | 13 02-5 | 13 04-6 | 12 26-9 | 1-0 | 0-9 | 7-0 | 6-1 | 13-0 | 11-4 | 10 | 13 17-5 | 13 19-7 | 12 41-2 | 1-0 | 0-9 | 7-0 | 6-2 | 13-0 | 11-6 |
| 11 | 13 02-8 | 13 04-9 | 12 27-1 | 1-1 | 1-0 | 7-1 | 6-2 | 13-1 | 11-5 | 11 | 13 17-8 | 13 19-9 | 12 41-4 | 1-1 | 1-0 | 7-1 | 6-3 | 13-1 | 11-7 |
| 12 | 13 03-0 | 13 05-1 | 12 27-3 | 1-2 | 1-1 | 7-2 | 6-3 | 13-2 | 11-6 | 12 | 13 18-0 | 13 20-2 | 12 41-6 | 1-2 | 1-1 | 7-2 | 6-4 | 13-2 | 11-8 |
| 13 | 13 03-3 | 13 05-4 | 12 27-6 | 1-3 | 1-1 | 7-3 | 6-4 | 13-3 | 11-6 | 13 | 13 18-3 | 13 20-4 | 12 41-9 | 1-3 | 1-2 | 7-3 | 6-5 | 13-3 | 11-9 |
| 14 | 13 03-5 | 13 05-6 | 12 27-8 | 1-4 | 1-2 | 7-4 | 6-5 | 13-4 | 11-7 | 14 | 13 18-5 | 13 20-7 | 12 42-1 | 1-4 | 1-2 | 7-4 | 6-6 | 13-4 | 11-9 |
| 15 | 13 03-8 | 13 05-9 | 12 28-0 | 1-5 | 1-3 | 7-5 | 6-6 | 13-5 | 11-8 | 15 | 13 18-8 | 13 20-9 | 12 42-4 | 1-5 | 1-3 | 7-5 | 6-7 | 13-5 | 12-0 |
| 16 | 13 04-0 | 13 06-1 | 12 28-3 | 1-6 | 1-4 | 7-6 | 6-7 | 13-6 | 11-9 | 16 | 13 19-0 | 13 21-2 | 12 42-6 | 1-6 | 1-4 | 7-6 | 6-8 | 13-6 | 12-1 |
| 17 | 13 04-3 | 13 06-4 | 12 28-5 | 1-7 | 1-5 | 7-7 | 6-7 | 13-7 | 12-0 | 17 | 13 19-3 | 13 21-4 | 12 42-8 | 1-7 | 1-5 | 7-7 | 6-9 | 13-7 | 12-2 |
| 18 | 13 04-5 | 13 06-6 | 12 28-8 | 1-8 | 1-6 | 7-8 | 6-8 | 13-8 | 12-1 | 18 | 13 19-5 | 13 21-7 | 12 43-1 | 1-8 | 1-6 | 7-8 | 7-0 | 13-8 | 12-3 |
| 19 | 13 04-8 | 13 06-9 | 12 29-0 | 1-9 | 1-7 | 7-9 | 6-9 | 13-9 | 12-2 | 19 | 13 19-8 | 13 21-9 | 12 43-3 | 1-9 | 1-7 | 7-9 | 7-0 | 13-9 | 12-4 |
| 20 | 13 05-0 | 13 07-1 | 12 29-2 | 2-0 | 1-8 | 8-0 | 7-0 | 14-0 | 12-3 | 20 | 13 20-0 | 13 22-2 | 12 43-6 | 2-0 | 1-8 | 8-0 | 7-1 | 14-0 | 12-5 |
| 21 | 13 05-3 | 13 07-4 | 12 29-5 | 2-1 | 1-8 | 8-1 | 7-1 | 14-1 | 12-3 | 21 | 13 20-3 | 13 22-4 | 12 43-8 | 2-1 | 1-9 | 8-1 | 7-2 | 14-1 | 12-6 |
| 22 | 13 05-5 | 13 07-7 | 12 29-7 | 2-2 | 1-9 | 8-2 | 7-2 | 14-2 | 12-4 | 22 | 13 20-5 | 13 22-7 | 12 44-0 | 2-2 | 2-0 | 8-2 | 7-3 | 14-2 | 12-7 |
| 23 | 13 05-8 | 13 07-9 | 12 30-0 | 2-3 | 2-0 | 8-3 | 7-3 | 14-3 | 12-5 | 23 | 13 20-8 | 13 22-9 | 12 44-3 | 2-3 | 2-1 | 8-3 | 7-4 | 14-3 | 12-8 |
| 24 | 13 06-0 | 13 08-2 | 12 30-2 | 2-4 | 2-1 | 8-4 | 7-4 | 14-4 | 12-6 | 24 | 13 21-0 | 13 23-2 | 12 44-5 | 2-4 | 2-1 | 8-4 | 7-5 | 14-4 | 12-8 |
| 25 | 13 06-3 | 13 08-4 | 12 30-4 | 2-5 | 2-2 | 8-5 | 7-4 | 14-5 | 12-7 | 25 | 13 21-3 | 13 23-4 | 12 44-7 | 2-5 | 2-2 | 8-5 | 7-6 | 14-5 | 12-9 |
| 26 | 13 06-5 | 13 08-7 | 12 30-7 | 2-6 | 2-3 | 8-6 | 7-5 | 14-6 | 12-8 | 26 | 13 21-5 | 13 23-7 | 12 45-0 | 2-6 | 2-3 | 8-6 | 7-7 | 14-6 | 13-0 |
| 27 | 13 06-8 | 13 08-9 | 12 30-9 | 2-7 | 2-4 | 8-7 | 7-6 | 14-7 | 12-9 | 27 | 13 21-8 | 13 23-9 | 12 45-2 | 2-7 | 2-4 | 8-7 | 7-8 | 14-7 | 13-1 |
| 28 | 13 07-0 | 13 09-2 | 12 31-1 | 2-8 | 2-5 | 8-8 | 7-7 | 14-8 | 13-0 | 28 | 13 22-0 | 13 24-2 | 12 45-5 | 2-8 | 2-5 | 8-8 | 7-8 | 14-8 | 13-2 |
| 29 | 13 07-3 | 13 09-4 | 12 31-4 | 2-9 | 2-5 | 8-9 | 7-8 | 14-9 | 13-0 | 29 | 13 22-3 | 13 24-4 | 12 45-7 | 2-9 | 2-6 | 8-9 | 7-9 | 14-9 | 13-3 |
| 30 | 13 07-5 | 13 09-7 | 12 31-6 | 3-0 | 2-6 | 9-0 | 7-9 | 15-0 | 13-1 | 30 | 13 22-5 | 13 24-7 | 12 45-9 | 3-0 | 2-7 | 9-0 | 8-0 | 15-0 | 13-4 |
| 31 | 13 07-8 | 13 09-9 | 12 31-9 | 3-1 | 2-7 | 9-1 | 8-0 | 15-1 | 13-2 | 31 | 13 22-8 | 13 24-9 | 12 46-2 | 3-1 | 2-8 | 9-1 | 8-1 | 15-1 | 13-5 |
| 32 | 13 08-0 | 13 10-2 | 12 32-1 | 3-2 | 2-8 | 9-2 | 8-1 | 15-2 | 13-3 | 32 | 13 23-0 | 13 25-2 | 12 46-4 | 3-2 | 2-9 | 9-2 | 8-2 | 15-2 | 13-6 |
| 33 | 13 08-3 | 13 10-4 | 12 32-3 | 3-3 | 2-9 | 9-3 | 8-1 | 15-3 | 13-4 | 33 | 13 23-3 | 13 25-4 | 12 46-7 | 3-3 | 2-9 | 9-3 | 8-3 | 15-3 | 13-6 |
| 34 | 13 08-5 | 13 10-7 | 12 32-6 | 3-4 | 3-0 | 9-4 | 8-2 | 15-4 | 13-5 | 34 | 13 23-5 | 13 25-7 | 12 46-9 | 3-4 | 3-0 | 9-4 | 8-4 | 15-4 | 13-7 |
| 35 | 13 08-8 | 13 10-9 | 12 32-8 | 3-5 | 3-1 | 9-5 | 8-3 | 15-5 | 13-6 | 35 | 13 23-8 | 13 26-0 | 12 47-1 | 3-5 | 3-1 | 9-5 | 8-5 | 15-5 | 13-8 |
| 36 | 13 09-0 | 13 11-2 | 12 33-1 | 3-6 | 3-2 | 9-6 | 8-4 | 15-6 | 13-7 | 36 | 13 24-0 | 13 26-2 | 12 47-4 | 3-6 | 3-2 | 9-6 | 8-6 | 15-6 | 13-9 |
| 37 | 13 09-3 | 13 11-4 | 12 33-3 | 3-7 | 3-2 | 9-7 | 8-5 | 15-7 | 13-7 | 37 | 13 24-3 | 13 26-5 | 12 47-6 | 3-7 | 3-3 | 9-7 | 8-6 | 15-7 | 14-0 |
| 38 | 13 09-5 | 13 11-7 | 12 33-5 | 3-8 | 3-3 | 9-8 | 8-6 | 15-8 | 13-8 | 38 | 13 24-5 | 13 26-7 | 12 47-9 | 3-8 | 3-4 | 9-8 | 8-7 | 15-8 | 14-1 |
| 39 | 13 09-8 | 13 11-9 | 12 33-8 | 3-9 | 3-4 | 9-9 | 8-7 | 15-9 | 13-9 | 39 | 13 24-8 | 13 27-0 | 12 48-1 | 3-9 | 3-5 | 9-9 | 8-8 | 15-9 | 14-2 |
| 40 | 13 10-0 | 13 12-2 | 12 34-0 | 4-0 | 3-5 | 10-0 | 8-8 | 16-0 | 14-0 | 40 | 13 25-0 | 13 27-2 | 12 48-3 | 4-0 | 3-6 | 10-0 | 8-9 | 16-0 | 14-3 |
| 41 | 13 10-3 | 13 12-4 | 12 34-2 | 4-1 | 3-6 | 10-1 | 8-8 | 16-1 | 14-1 | 41 | 13 25-3 | 13 27-5 | 12 48-6 | 4-1 | 3-7 | 10-1 | 9-0 | 16-1 | 14-4 |
| 42 | 13 10-5 | 13 12-7 | 12 34-5 | 4-2 | 3-7 | 10-2 | 8-9 | 16-2 | 14-2 | 42 | 13 25-5 | 13 27-7 | 12 48-8 | 4-2 | 3-7 | 10-2 | 9-1 | 16-2 | 14-4 |
| 43 | 13 10-8 | 13 12-9 | 12 34-7 | 4-3 | 3-8 | 10-3 | 9-0 | 16-3 | 14-3 | 43 | 13 25-8 | 13 28-0 | 12 49-0 | 4-3 | 3-8 | 10-3 | 9-2 | 16-3 | 14-5 |
| 44 | 13 11-0 | 13 13-2 | 12 35-0 | 4-4 | 3-9 | 10-4 | 9-1 | 16-4 | 14-4 | 44 | 13 26-0 | 13 28-2 | 12 49-3 | 4-4 | 3-9 | 10-4 | 9-3 | 16-4 | 14-6 |
| 45 | 13 11-3 | 13 13-4 | 12 35-2 | 4-5 | 3-9 | 10-5 | 9-2 | 16-5 | 14-4 | 45 | 13 26-3 | 13 28-5 | 12 49-5 | 4-5 | 4-0 | 10-5 | 9-4 | 16-5 | 14-7 |
| 46 | 13 11-5 | 13 13-7 | 12 35-4 | 4-6 | 4-0 | 10-6 | 9-3 | 16-6 | 14-5 | 46 | 13 26-5 | 13 28-7 | 12 49-8 | 4-6 | 4-1 | 10-6 | 9-5 | 16-6 | 14-8 |
| 47 | 13 11-8 | 13 13-9 | 12 35-7 | 4-7 | 4-1 | 10-7 | 9-4 | 16-7 | 14-6 | 47 | 13 26-8 | 13 29-0 | 12 50-0 | 4-7 | 4-2 | 10-7 | 9-5 | 16-7 | 14-9 |
| 48 | 13 12-0 | 13 14-2 | 12 35-9 | 4-8 | 4-2 | 10-8 | 9-5 | 16-8 | 14-7 | 48 | 13 27-0 | 13 29-2 | 12 50-2 | 4-8 | 4-3 | 10-8 | 9-6 | 16-8 | 15-0 |
| 49 | 13 12-3 | 13 14-4 | 12 36-2 | 4-9 | 4-3 | 10-9 | 9-5 | 16-9 | 14-8 | 49 | 13 27-3 | 13 29-5 | 12 50-5 | 4-9 | 4-4 | 10-9 | 9-7 | 16-9 | 15-1 |
| 50 | 13 12-5 | 13 14-7 | 12 36-4 | 5-0 | 4-4 | 11-0 | 9-6 | 17-0 | 14-9 | 50 | 13 27-5 | 13 29-7 | 12 50-7 | 5-0 | 4-5 | 11-0 | 9-8 | 17-0 | 15-2 |
| 51 | 13 12-8 | 13 14-9 | 12 36-6 | 5-1 | 4-5 | 11-1 | 9-7 | 17-1 | 15-0 | 51 | 13 27-8 | 13 30-0 | 12 51-0 | 5-1 | 4-5 | 11-1 | 9-9 | 17-1 | 15-2 |
| 52 | 13 13-0 | 13 15-2 | 12 36-9 | 5-2 | 4-6 | 11-2 | 9-8 | 17-2 | 15-1 | 52 | 13 28-0 | 13 30-2 | 12 51-2 | 5-2 | 4-6 | 11-2 | 10-0 | 17-2 | 15-3 |
| 53 | 13 13-3 | 13 15-4 | 12 37-1 | 5-3 | 4-6 | 11-3 | 9-9 | 17-3 | 15-1 | 53 | 13 28-3 | 13 30-5 | 12 51-4 | 5-3 | 4-7 | 11-3 | 10-1 | 17-3 | 15-4 |
| 54 | 13 13-5 | 13 15-7 | 12 37-4 | 5-4 | 4-7 | 11-4 | 10-0 | 17-4 | 15-2 | 54 | 13 28-5 | 13 30-7 | 12 51-7 | 5-4 | 4-8 | 11-4 | 10-2 | 17-4 | 15-5 |
| 55 | 13 13-8 | 13 15-9 | 12 37-6 | 5-5 | 4-8 | 11-5 | 10-1 | 17-5 | 15-3 | 55 | 13 28-8 | 13 31-0 | 12 51-9 | 5-5 | 4-9 | 11-5 | 10-3 | 17-5 | 15-6 |
| 56 | 13 14-0 | 13 16-2 | 12 37-8 | 5-6 | 4-9 | 11-6 | 10-2 | 17-6 | 15-4 | 56 | 13 29-0 | 13 31-2 | 12 52-1 | 5-6 | 5-0 | 11-6 | 10-3 | 17-6 | 15-7 |
| 57 | 13 14-3 | 13 16-4 | 12 38-1 | 5-7 | 5-0 | 11-7 | 10-2 | 17-7 | 15-5 | 57 | 13 29-3 | 13 31-5 | 12 52-4 | 5-7 | 5-1 | 11-7 | 10-4 | 17-7 | 15-8 |
| 58 | 13 14-5 | 13 16-7 | 12 38-3 | 5-8 | 5-1 | 11-8 | 10-3 | 17-8 | 15-6 | 58 | 13 29-5 | 13 31-7 | 12 52-6 | 5-8 | 5-2 | 11-8 | 10-5 | 17-8 | 15-9 |
| 59 | 13 14-8 | 13 16-9 | 12 38-5 | 5-9 | 5-2 | 11-9 | 10-4 | 17-9 | 15-7 | 59 | 13 29-8 | 13 32-0 | 12 52-9 | 5-9 | 5-3 | 11-9 | 10-6 | 17-9 | 16-0 |
| 60 | 13 15-0 | 13 17-2 | 12 38-8 | 6-0 | 5-3 | 12-0 | 10-5 | 18-0 | 15-8 | 60 | 13 30-0 | 13 32-2 | 12 53-1 | 6-0 | 5-4 | 12-0 | 10-7 | 18-0 | 16-1 |

32011



54"

INCREMENTS AND CORRECTIONS

55"

| 54 | SUN PLANETS | ARIES | MOON | v or Corr | | | |
|----|-------------|---------|---------|-----------|-----|-----------|-----------|
| | | | | d | ' | " | |
| 00 | 13 30-0 | 13 32-2 | 12 53-1 | 0-0 | 0-0 | 6-4 5-5 | 12-0 10-9 |
| 01 | 13 30-3 | 13 32-5 | 12 53-3 | 0-1 | 0-1 | 6-1 5-5 | 12-1 11-0 |
| 02 | 13 30-5 | 13 32-7 | 12 53-6 | 0-2 | 0-2 | 6-2 5-6 | 12-2 11-1 |
| 03 | 13 30-8 | 13 33-0 | 12 53-8 | 0-3 | 0-3 | 6-3 5-7 | 12-3 11-2 |
| 04 | 13 31-0 | 13 33-2 | 12 54-1 | 0-4 | 0-4 | 6-4 5-8 | 12-4 11-3 |
| 05 | 13 31-3 | 13 33-5 | 12 54-3 | 0-5 | 0-5 | 6-5 5-9 | 12-5 11-4 |
| 06 | 13 31-5 | 13 33-7 | 12 54-5 | 0-6 | 0-5 | 6-6 6-0 | 12-6 11-4 |
| 07 | 13 31-8 | 13 34-0 | 12 54-8 | 0-7 | 0-6 | 6-7 6-1 | 12-7 11-5 |
| 08 | 13 32-0 | 13 34-2 | 12 55-0 | 0-8 | 0-7 | 6-8 6-2 | 12-8 11-6 |
| 09 | 13 32-3 | 13 34-5 | 12 55-2 | 0-9 | 0-8 | 6-9 6-3 | 12-9 11-7 |
| 10 | 13 32-5 | 13 34-7 | 12 55-5 | 1-0 | 0-9 | 7-0 6-4 | 13-0 11-8 |
| 11 | 13 32-8 | 13 35-0 | 12 55-7 | 1-1 | 1-0 | 7-1 6-4 | 13-1 11-9 |
| 12 | 13 33-0 | 13 35-2 | 12 56-0 | 1-2 | 1-1 | 7-2 6-5 | 13-2 12-0 |
| 13 | 13 33-3 | 13 35-5 | 12 56-2 | 1-3 | 1-2 | 7-3 6-6 | 13-3 12-1 |
| 14 | 13 33-5 | 13 35-7 | 12 56-4 | 1-4 | 1-3 | 7-4 6-7 | 13-4 12-2 |
| 15 | 13 33-8 | 13 36-0 | 12 56-7 | 1-5 | 1-4 | 7-5 6-8 | 13-5 12-3 |
| 16 | 13 34-0 | 13 36-2 | 12 56-9 | 1-6 | 1-5 | 7-6 6-9 | 13-6 12-4 |
| 17 | 13 34-3 | 13 36-5 | 12 57-2 | 1-7 | 1-5 | 7-7 7-0 | 13-7 12-4 |
| 18 | 13 34-5 | 13 36-7 | 12 57-4 | 1-8 | 1-6 | 7-8 7-1 | 13-8 12-5 |
| 19 | 13 34-8 | 13 37-0 | 12 57-6 | 1-9 | 1-7 | 7-9 7-2 | 13-9 12-6 |
| 20 | 13 35-0 | 13 37-2 | 12 57-9 | 2-0 | 1-8 | 8-0 7-3 | 14-0 12-7 |
| 21 | 13 35-3 | 13 37-5 | 12 58-1 | 2-1 | 1-9 | 8-1 7-4 | 14-1 12-8 |
| 22 | 13 35-5 | 13 37-7 | 12 58-3 | 2-2 | 2-0 | 8-2 7-4 | 14-2 12-9 |
| 23 | 13 35-8 | 13 38-0 | 12 58-6 | 2-3 | 2-1 | 8-3 7-5 | 14-3 13-0 |
| 24 | 13 36-0 | 13 38-2 | 12 58-8 | 2-4 | 2-2 | 8-4 7-6 | 14-4 13-1 |
| 25 | 13 36-3 | 13 38-5 | 12 59-1 | 2-5 | 2-3 | 8-5 7-7 | 14-5 13-2 |
| 26 | 13 36-5 | 13 38-7 | 12 59-3 | 2-6 | 2-4 | 8-6 7-8 | 14-6 13-3 |
| 27 | 13 36-8 | 13 39-0 | 12 59-5 | 2-7 | 2-5 | 8-7 7-9 | 14-7 13-4 |
| 28 | 13 37-0 | 13 39-2 | 12 59-8 | 2-8 | 2-5 | 8-8 8-0 | 14-8 13-4 |
| 29 | 13 37-3 | 13 39-5 | 13 00-0 | 2-9 | 2-6 | 8-9 8-1 | 14-9 13-5 |
| 30 | 13 37-5 | 13 39-7 | 13 00-3 | 3-0 | 2-7 | 9-0 8-2 | 15-0 13-6 |
| 31 | 13 37-8 | 13 40-0 | 13 00-5 | 3-1 | 2-8 | 9-1 8-3 | 15-1 13-7 |
| 32 | 13 38-0 | 13 40-2 | 13 00-7 | 3-2 | 2-9 | 9-2 8-4 | 15-2 13-8 |
| 33 | 13 38-3 | 13 40-5 | 13 01-0 | 3-3 | 3-0 | 9-3 8-4 | 15-3 13-9 |
| 34 | 13 38-5 | 13 40-7 | 13 01-2 | 3-4 | 3-1 | 9-4 8-5 | 15-4 14-0 |
| 35 | 13 38-8 | 13 41-0 | 13 01-5 | 3-5 | 3-2 | 9-5 8-6 | 15-5 14-1 |
| 36 | 13 39-0 | 13 41-2 | 13 01-7 | 3-6 | 3-3 | 9-6 8-7 | 15-6 14-2 |
| 37 | 13 39-3 | 13 41-5 | 13 01-9 | 3-7 | 3-4 | 9-7 8-8 | 15-7 14-3 |
| 38 | 13 39-5 | 13 41-7 | 13 02-2 | 3-8 | 3-5 | 9-8 8-9 | 15-8 14-4 |
| 39 | 13 39-8 | 13 42-0 | 13 02-4 | 3-9 | 3-5 | 9-9 9-0 | 15-9 14-4 |
| 40 | 13 40-0 | 13 42-2 | 13 02-6 | 4-0 | 3-6 | 10-0 9-1 | 16-0 14-5 |
| 41 | 13 40-3 | 13 42-5 | 13 02-9 | 4-1 | 3-7 | 10-1 9-2 | 16-1 14-6 |
| 42 | 13 40-5 | 13 42-7 | 13 03-1 | 4-2 | 3-8 | 10-2 9-3 | 16-2 14-7 |
| 43 | 13 40-8 | 13 43-0 | 13 03-4 | 4-3 | 3-9 | 10-3 9-4 | 16-3 14-8 |
| 44 | 13 41-0 | 13 43-2 | 13 03-6 | 4-4 | 4-0 | 10-4 9-4 | 16-4 14-9 |
| 45 | 13 41-3 | 13 43-5 | 13 03-8 | 4-5 | 4-1 | 10-5 9-5 | 16-5 15-0 |
| 46 | 13 41-5 | 13 43-7 | 13 04-1 | 4-6 | 4-2 | 10-6 9-6 | 16-6 15-1 |
| 47 | 13 41-8 | 13 44-0 | 13 04-3 | 4-7 | 4-3 | 10-7 9-7 | 16-7 15-2 |
| 48 | 13 42-0 | 13 44-3 | 13 04-6 | 4-8 | 4-4 | 10-8 9-8 | 16-8 15-3 |
| 49 | 13 42-3 | 13 44-5 | 13 04-8 | 4-9 | 4-5 | 10-9 9-9 | 16-9 15-4 |
| 50 | 13 42-5 | 13 44-8 | 13 05-0 | 5-0 | 4-5 | 11-0 10-0 | 17-0 15-4 |
| 51 | 13 42-8 | 13 45-0 | 13 05-3 | 5-1 | 4-6 | 11-1 10-1 | 17-1 15-5 |
| 52 | 13 43-0 | 13 45-3 | 13 05-5 | 5-2 | 4-7 | 11-2 10-2 | 17-2 15-6 |
| 53 | 13 43-3 | 13 45-5 | 13 05-7 | 5-3 | 4-8 | 11-3 10-3 | 17-3 15-7 |
| 54 | 13 43-5 | 13 45-8 | 13 06-0 | 5-4 | 4-9 | 11-4 10-4 | 17-4 15-8 |
| 55 | 13 43-8 | 13 46-0 | 13 06-2 | 5-5 | 5-0 | 11-5 10-4 | 17-5 15-9 |
| 56 | 13 44-0 | 13 46-3 | 13 06-5 | 5-6 | 5-1 | 11-6 10-5 | 17-6 16-0 |
| 57 | 13 44-3 | 13 46-5 | 13 06-7 | 5-7 | 5-2 | 11-7 10-6 | 17-7 16-1 |
| 58 | 13 44-5 | 13 46-8 | 13 06-9 | 5-8 | 5-3 | 11-8 10-7 | 17-8 16-2 |
| 59 | 13 44-8 | 13 47-0 | 13 07-2 | 5-9 | 5-4 | 11-9 10-8 | 17-9 16-3 |
| 60 | 13 45-0 | 13 47-3 | 13 07-4 | 6-0 | 5-5 | 12-0 10-9 | 18-0 16-4 |

xxxx

| 55 | SUN PLANETS | ARIES | MOON | v or Corr | | | |
|----|-------------|---------|---------|-----------|-----|-----------|-----------|
| | | | | d | ' | " | |
| 00 | 13 45-0 | 13 47-3 | 13 07-4 | 0-0 | 0-0 | 6-4 5-6 | 12-0 11-1 |
| 01 | 13 45-3 | 13 47-5 | 13 07-7 | 0-1 | 0-1 | 6-1 5-6 | 12-1 11-2 |
| 02 | 13 45-5 | 13 47-8 | 13 07-9 | 0-2 | 0-2 | 6-2 5-7 | 12-2 11-3 |
| 03 | 13 45-8 | 13 48-0 | 13 08-1 | 0-3 | 0-3 | 6-3 5-8 | 12-3 11-4 |
| 04 | 13 46-0 | 13 48-3 | 13 08-4 | 0-4 | 0-4 | 6-4 5-9 | 12-4 11-5 |
| 05 | 13 46-3 | 13 48-5 | 13 08-6 | 0-5 | 0-5 | 6-5 6-0 | 12-5 11-6 |
| 06 | 13 46-5 | 13 48-8 | 13 08-8 | 0-6 | 0-6 | 6-6 6-1 | 12-6 11-7 |
| 07 | 13 46-8 | 13 49-0 | 13 09-1 | 0-7 | 0-6 | 6-7 6-2 | 12-7 11-7 |
| 08 | 13 47-0 | 13 49-3 | 13 09-3 | 0-8 | 0-7 | 6-8 6-3 | 12-8 11-8 |
| 09 | 13 47-3 | 13 49-5 | 13 09-6 | 0-9 | 0-8 | 6-9 6-4 | 12-9 11-9 |
| 10 | 13 47-5 | 13 49-8 | 13 09-8 | 1-0 | 0-9 | 7-0 6-5 | 13-0 12-0 |
| 11 | 13 47-8 | 13 50-0 | 13 10-0 | 1-1 | 1-0 | 7-1 6-6 | 13-1 12-1 |
| 12 | 13 48-0 | 13 50-3 | 13 10-3 | 1-2 | 1-1 | 7-2 6-7 | 13-2 12-2 |
| 13 | 13 48-3 | 13 50-5 | 13 10-6 | 1-3 | 1-2 | 7-3 6-8 | 13-3 12-3 |
| 14 | 13 48-5 | 13 50-8 | 13 10-8 | 1-4 | 1-3 | 7-4 6-9 | 13-4 12-4 |
| 15 | 13 48-8 | 13 51-0 | 13 11-0 | 1-5 | 1-4 | 7-5 6-9 | 13-5 12-5 |
| 16 | 13 49-0 | 13 51-3 | 13 11-3 | 1-6 | 1-5 | 7-6 7-0 | 13-6 12-6 |
| 17 | 13 49-3 | 13 51-5 | 13 11-5 | 1-7 | 1-6 | 7-7 7-1 | 13-7 12-7 |
| 18 | 13 49-5 | 13 51-8 | 13 11-7 | 1-8 | 1-7 | 7-8 7-2 | 13-8 12-8 |
| 19 | 13 49-8 | 13 52-0 | 13 12-0 | 1-9 | 1-8 | 7-9 7-3 | 13-9 12-9 |
| 20 | 13 50-0 | 13 52-3 | 13 12-3 | 2-0 | 1-9 | 8-0 7-4 | 14-0 13-0 |
| 21 | 13 50-3 | 13 52-5 | 13 12-5 | 2-1 | 1-9 | 8-1 7-5 | 14-1 13-0 |
| 22 | 13 50-5 | 13 52-8 | 13 12-7 | 2-2 | 2-0 | 8-2 7-6 | 14-2 13-1 |
| 23 | 13 50-8 | 13 53-0 | 13 13-0 | 2-3 | 2-0 | 8-3 7-7 | 14-3 13-2 |
| 24 | 13 51-0 | 13 53-3 | 13 13-1 | 2-4 | 2-1 | 8-4 7-8 | 14-4 13-3 |
| 25 | 13 51-3 | 13 53-5 | 13 13-4 | 2-5 | 2-1 | 8-5 7-9 | 14-5 13-4 |
| 26 | 13 51-5 | 13 53-8 | 13 13-6 | 2-6 | 2-2 | 8-6 8-0 | 14-6 13-5 |
| 27 | 13 51-8 | 13 54-0 | 13 13-9 | 2-7 | 2-3 | 8-7 8-0 | 14-7 13-6 |
| 28 | 13 52-0 | 13 54-3 | 13 14-1 | 2-8 | 2-4 | 8-8 8-1 | 14-8 13-7 |
| 29 | 13 52-3 | 13 54-5 | 13 14-3 | 2-9 | 2-4 | 8-9 8-2 | 14-9 13-8 |
| 30 | 13 52-5 | 13 54-8 | 13 14-6 | 3-0 | 2-5 | 9-0 8-3 | 15-0 13-9 |
| 31 | 13 52-8 | 13 55-0 | 13 14-8 | 3-1 | 2-6 | 9-1 8-4 | 15-1 14-0 |
| 32 | 13 53-0 | 13 55-3 | 13 15-1 | 3-2 | 3-0 | 9-2 8-5 | 15-2 14-1 |
| 33 | 13 53-3 | 13 55-5 | 13 15-3 | 3-3 | 3-1 | 9-3 8-6 | 15-3 14-2 |
| 34 | 13 53-5 | 13 55-8 | 13 15-6 | 3-4 | 3-1 | 9-4 8-7 | 15-4 14-3 |
| 35 | 13 53-8 | 13 56-0 | 13 15-8 | 3-5 | 3-2 | 9-5 8-8 | 15-5 14-3 |
| 36 | 13 54-0 | 13 56-3 | 13 16-0 | 3-6 | 3-3 | 9-6 8-9 | 15-6 14-4 |
| 37 | 13 54-3 | 13 56-5 | 13 16-3 | 3-7 | 3-4 | 9-7 9-0 | 15-7 14-5 |
| 38 | 13 54-5 | 13 56-8 | 13 16-5 | 3-8 | 3-5 | 9-8 9-1 | 15-8 14-6 |
| 39 | 13 54-8 | 13 57-0 | 13 16-7 | 3-9 | 3-6 | 9-9 9-2 | 15-9 14-7 |
| 40 | 13 55-0 | 13 57-3 | 13 17-0 | 4-0 | 3-7 | 10-0 9-3 | 16-0 14-8 |
| 41 | 13 55-3 | 13 57-5 | 13 17-2 | 4-1 | 3-8 | 10-1 9-3 | 16-1 14-9 |
| 42 | 13 55-5 | 13 57-8 | 13 17-4 | 4-2 | 3-9 | 10-2 9-4 | 16-2 15-0 |
| 43 | 13 55-8 | 13 58-0 | 13 17-7 | 4-3 | 4-0 | 10-3 9-5 | 16-3 15-1 |
| 44 | 13 56-0 | 13 58-3 | 13 17-9 | 4-4 | 4-1 | 10-4 9-6 | 16-4 15-2 |
| 45 | 13 56-3 | 13 58-5 | 13 18-2 | 4-5 | 4-2 | 10-5 9-7 | 16-5 15-3 |
| 46 | 13 56-5 | 13 58-8 | 13 18-4 | 4-6 | 4-3 | 10-6 9-8 | 16-6 15-4 |
| 47 | 13 56-8 | 13 59-0 | 13 18-6 | 4-7 | 4-3 | 10-7 9-9 | 16-7 15-4 |
| 48 | 13 57-0 | 13 59-3 | 13 18-9 | 4-8 | 4-4 | 10-8 10-0 | 16-8 15-5 |
| 49 | 13 57-3 | 13 59-5 | 13 19-1 | 4-9 | 4-5 | 10-9 10-1 | 16-9 15-6 |
| 50 | 13 57-5 | 13 59-8 | 13 19-3 | 5-0 | 4-6 | 11-0 10-2 | 17-0 15-7 |
| 51 | 13 57-8 | 14 00-0 | 13 19-6 | 5-1 | 4-7 | 11-1 10-3 | 17-1 15-8 |
| 52 | 13 58-0 | 14 00-3 | 13 19-8 | 5-2 | 4-8 | 11-2 10-4 | 17-2 15-9 |
| 53 | 13 58-3 | 14 00-5 | 13 20-1 | 5-3 | 4-9 | 11-3 10-5 | 17-3 16-0 |
| 54 | 13 58-5 | 14 00-8 | 13 20-3 | 5-4 | 5-0 | 11-4 10-5 | 17-4 16-1 |
| 55 | 13 58-8 | 14 01-0 | 13 20-6 | 5-5 | 5-1 | 11-5 10-6 | 17-5 16-2 |
| 56 | 13 59-0 | 14 01-3 | 13 20-8 | 5-6 | 5-2 | 11-6 10-7 | 17-6 16-3 |
| 57 | 13 59-3 | 14 01-6 | 13 21-0 | 5-7 | 5-3 | 11-7 10-8 | 17-7 16-4 |
| 58 | 13 59-5 | 14 01-8 | 13 21-3 | 5-8 | 5-4 | 11-8 10-9 | 17-8 16-5 |
| 59 | 13 59-8 | 14 02-0 | 13 21-6 | 5-9 | 5-5 | 11-9 11-0 | 17-9 16-6 |
| 60 | 14 00-0 | 14 02-3 | 13 21-7 | 6-0 | 5-6 | 12-0 11-1 | 18-0 16-7 |



INCREMENTS AND CORRECTIONS

| 56 ⁿ | SUN PLANETS | | ARIES | MOON | of Corr | | | 57 ⁿ | SUN PLANETS | | ARIES | MOON | of Corr | | | | | | |
|-----------------|-------------|---------|---------|------|---------|------|------|-----------------|-------------|----|---------|---------|---------|-----|-----|------|------|------|------|
| | h | m | | | h | m | s | | h | m | | | s | h | m | s | h | m | s |
| 00 | 14 00-0 | 14 02-3 | 13 21-7 | 0-0 | 0-0 | 0-0 | 5-7 | 12-0 | 11-3 | 00 | 14 15-0 | 14 17-3 | 13 36-1 | 0-0 | 0-0 | 0-0 | 5-8 | 12-0 | 11-5 |
| 01 | 14 00-3 | 14 02-6 | 13 22-0 | 0-1 | 0-1 | 0-1 | 5-7 | 12-1 | 11-4 | 01 | 14 15-3 | 14 17-6 | 13 36-3 | 0-1 | 0-1 | 0-1 | 5-8 | 12-1 | 11-6 |
| 02 | 14 00-5 | 14 02-8 | 13 22-2 | 0-2 | 0-2 | 0-2 | 5-8 | 12-2 | 11-5 | 02 | 14 15-5 | 14 17-8 | 13 36-5 | 0-2 | 0-2 | 0-2 | 5-9 | 12-2 | 11-7 |
| 03 | 14 00-8 | 14 03-1 | 13 22-4 | 0-3 | 0-3 | 0-3 | 5-8 | 12-3 | 11-6 | 03 | 14 15-8 | 14 18-1 | 13 36-8 | 0-3 | 0-3 | 0-3 | 6-0 | 12-3 | 11-8 |
| 04 | 14 01-0 | 14 03-3 | 13 22-7 | 0-4 | 0-4 | 0-4 | 6-0 | 12-4 | 11-7 | 04 | 14 16-0 | 14 18-3 | 13 37-0 | 0-4 | 0-4 | 0-4 | 6-1 | 12-4 | 11-9 |
| 05 | 14 01-3 | 14 03-6 | 13 22-9 | 0-5 | 0-5 | 0-5 | 6-1 | 12-5 | 11-8 | 05 | 14 16-3 | 14 18-6 | 13 37-2 | 0-5 | 0-5 | 0-5 | 6-2 | 12-5 | 12-0 |
| 06 | 14 01-5 | 14 03-8 | 13 23-2 | 0-6 | 0-6 | 0-6 | 6-2 | 12-6 | 11-9 | 06 | 14 16-5 | 14 18-8 | 13 37-5 | 0-6 | 0-6 | 0-6 | 6-3 | 12-6 | 12-1 |
| 07 | 14 01-8 | 14 04-1 | 13 23-4 | 0-7 | 0-7 | 0-7 | 6-3 | 12-7 | 12-0 | 07 | 14 16-8 | 14 19-1 | 13 37-7 | 0-7 | 0-7 | 0-7 | 6-4 | 12-7 | 12-2 |
| 08 | 14 02-0 | 14 04-3 | 13 23-6 | 0-8 | 0-8 | 0-8 | 6-4 | 12-8 | 12-1 | 08 | 14 17-0 | 14 19-3 | 13 38-0 | 0-8 | 0-8 | 0-8 | 6-5 | 12-8 | 12-3 |
| 09 | 14 02-3 | 14 04-6 | 13 23-9 | 0-9 | 0-9 | 0-9 | 6-5 | 12-9 | 12-1 | 09 | 14 17-3 | 14 19-6 | 13 38-2 | 0-9 | 0-9 | 0-9 | 6-6 | 12-9 | 12-4 |
| 10 | 14 02-5 | 14 04-8 | 13 24-1 | 1-0 | 0-9 | 7-0 | 6-6 | 12-0 | 12-2 | 10 | 14 17-5 | 14 19-8 | 13 38-4 | 1-0 | 1-0 | 7-0 | 6-7 | 12-0 | 12-5 |
| 11 | 14 02-8 | 14 05-1 | 13 24-4 | 1-1 | 1-0 | 7-1 | 6-7 | 12-1 | 12-3 | 11 | 14 17-8 | 14 20-1 | 13 38-7 | 1-1 | 1-1 | 7-1 | 6-8 | 12-1 | 12-6 |
| 12 | 14 03-0 | 14 05-3 | 13 24-6 | 1-2 | 1-1 | 7-2 | 6-8 | 12-2 | 12-4 | 12 | 14 18-0 | 14 20-3 | 13 38-9 | 1-2 | 1-2 | 7-2 | 6-9 | 12-2 | 12-7 |
| 13 | 14 03-3 | 14 05-6 | 13 24-8 | 1-3 | 1-2 | 7-3 | 6-9 | 12-3 | 12-5 | 13 | 14 18-3 | 14 20-6 | 13 39-2 | 1-3 | 1-3 | 7-3 | 7-0 | 12-3 | 12-7 |
| 14 | 14 03-5 | 14 05-8 | 13 25-1 | 1-4 | 1-3 | 7-4 | 7-0 | 12-4 | 12-6 | 14 | 14 18-5 | 14 20-9 | 13 39-4 | 1-4 | 1-3 | 7-4 | 7-1 | 12-4 | 12-8 |
| 15 | 14 03-8 | 14 06-1 | 13 25-3 | 1-5 | 1-4 | 7-5 | 7-1 | 12-5 | 12-7 | 15 | 14 18-8 | 14 21-1 | 13 39-6 | 1-5 | 1-4 | 7-5 | 7-2 | 12-5 | 12-9 |
| 16 | 14 04-0 | 14 06-3 | 13 25-6 | 1-6 | 1-5 | 7-6 | 7-2 | 12-6 | 12-8 | 16 | 14 19-0 | 14 21-4 | 13 39-9 | 1-6 | 1-5 | 7-6 | 7-3 | 12-6 | 13-0 |
| 17 | 14 04-3 | 14 06-6 | 13 25-8 | 1-7 | 1-6 | 7-7 | 7-3 | 12-7 | 12-9 | 17 | 14 19-3 | 14 21-6 | 13 40-1 | 1-7 | 1-6 | 7-7 | 7-4 | 12-7 | 13-1 |
| 18 | 14 04-5 | 14 06-8 | 13 26-0 | 1-8 | 1-7 | 7-8 | 7-3 | 12-8 | 13-0 | 18 | 14 19-5 | 14 21-9 | 13 40-3 | 1-8 | 1-7 | 7-8 | 7-5 | 12-8 | 13-2 |
| 19 | 14 04-8 | 14 07-1 | 13 26-3 | 1-9 | 1-8 | 7-9 | 7-4 | 12-9 | 13-1 | 19 | 14 19-8 | 14 22-1 | 13 40-6 | 1-9 | 1-8 | 7-9 | 7-6 | 12-9 | 13-3 |
| 20 | 14 05-0 | 14 07-3 | 13 26-5 | 2-0 | 1-9 | 8-0 | 7-5 | 12-0 | 13-2 | 20 | 14 20-0 | 14 22-4 | 13 40-8 | 2-0 | 1-9 | 8-0 | 7-7 | 12-0 | 13-4 |
| 21 | 14 05-3 | 14 07-6 | 13 26-7 | 2-1 | 2-0 | 8-1 | 7-6 | 12-1 | 13-3 | 21 | 14 20-3 | 14 22-6 | 13 41-1 | 2-1 | 2-0 | 8-1 | 7-8 | 12-1 | 13-5 |
| 22 | 14 05-5 | 14 07-8 | 13 27-0 | 2-2 | 2-1 | 8-2 | 7-7 | 12-2 | 13-4 | 22 | 14 20-5 | 14 22-9 | 13 41-3 | 2-2 | 2-1 | 8-2 | 7-9 | 12-2 | 13-6 |
| 23 | 14 05-8 | 14 08-1 | 13 27-2 | 2-3 | 2-2 | 8-3 | 7-8 | 12-3 | 13-5 | 23 | 14 20-8 | 14 23-1 | 13 41-5 | 2-3 | 2-2 | 8-3 | 8-0 | 12-3 | 13-7 |
| 24 | 14 06-0 | 14 08-3 | 13 27-5 | 2-4 | 2-3 | 8-4 | 7-9 | 12-4 | 13-6 | 24 | 14 21-0 | 14 23-4 | 13 41-8 | 2-4 | 2-3 | 8-4 | 8-1 | 12-4 | 13-8 |
| 25 | 14 06-3 | 14 08-6 | 13 27-7 | 2-5 | 2-4 | 8-5 | 8-0 | 12-5 | 13-7 | 25 | 14 21-3 | 14 23-6 | 13 42-0 | 2-5 | 2-4 | 8-5 | 8-1 | 12-5 | 13-9 |
| 26 | 14 06-5 | 14 08-8 | 13 27-9 | 2-6 | 2-4 | 8-6 | 8-1 | 12-6 | 13-7 | 26 | 14 21-5 | 14 23-9 | 13 42-3 | 2-6 | 2-5 | 8-6 | 8-2 | 12-6 | 14-0 |
| 27 | 14 06-8 | 14 09-1 | 13 28-2 | 2-7 | 2-5 | 8-7 | 8-2 | 12-7 | 13-8 | 27 | 14 21-8 | 14 24-1 | 13 42-5 | 2-7 | 2-6 | 8-7 | 8-3 | 12-7 | 14-1 |
| 28 | 14 07-0 | 14 09-3 | 13 28-4 | 2-8 | 2-6 | 8-8 | 8-3 | 12-8 | 13-9 | 28 | 14 22-0 | 14 24-4 | 13 42-7 | 2-8 | 2-7 | 8-8 | 8-4 | 12-8 | 14-2 |
| 29 | 14 07-3 | 14 09-6 | 13 28-7 | 2-9 | 2-7 | 8-9 | 8-4 | 12-9 | 14-0 | 29 | 14 22-3 | 14 24-6 | 13 43-0 | 2-9 | 2-8 | 8-9 | 8-5 | 12-9 | 14-3 |
| 30 | 14 07-5 | 14 09-8 | 13 28-9 | 3-0 | 2-8 | 9-0 | 8-5 | 12-0 | 14-1 | 30 | 14 22-5 | 14 24-9 | 13 43-2 | 3-0 | 2-9 | 9-0 | 8-6 | 12-0 | 14-4 |
| 31 | 14 07-8 | 14 10-1 | 13 29-1 | 3-1 | 2-9 | 9-1 | 8-6 | 12-1 | 14-2 | 31 | 14 22-8 | 14 25-1 | 13 43-4 | 3-1 | 3-0 | 9-1 | 8-7 | 12-1 | 14-5 |
| 32 | 14 08-0 | 14 10-3 | 13 29-4 | 3-2 | 3-0 | 9-2 | 8-7 | 12-2 | 14-3 | 32 | 14 23-0 | 14 25-4 | 13 43-7 | 3-2 | 3-1 | 9-2 | 8-8 | 12-2 | 14-6 |
| 33 | 14 08-3 | 14 10-6 | 13 29-6 | 3-3 | 3-1 | 9-3 | 8-8 | 12-3 | 14-4 | 33 | 14 23-3 | 14 25-6 | 13 43-9 | 3-3 | 3-2 | 9-3 | 8-9 | 12-3 | 14-7 |
| 34 | 14 08-5 | 14 10-8 | 13 29-8 | 3-4 | 3-2 | 9-4 | 8-9 | 12-4 | 14-5 | 34 | 14 23-5 | 14 25-9 | 13 44-2 | 3-4 | 3-3 | 9-4 | 9-0 | 12-4 | 14-8 |
| 35 | 14 08-8 | 14 11-1 | 13 30-1 | 3-5 | 3-3 | 9-5 | 8-9 | 12-5 | 14-6 | 35 | 14 23-8 | 14 26-1 | 13 44-4 | 3-5 | 3-4 | 9-5 | 9-1 | 12-5 | 14-9 |
| 36 | 14 09-0 | 14 11-3 | 13 30-3 | 3-6 | 3-4 | 9-6 | 9-0 | 12-6 | 14-7 | 36 | 14 24-0 | 14 26-4 | 13 44-6 | 3-6 | 3-5 | 9-6 | 9-2 | 12-6 | 15-0 |
| 37 | 14 09-3 | 14 11-6 | 13 30-6 | 3-7 | 3-5 | 9-7 | 9-1 | 12-7 | 14-8 | 37 | 14 24-3 | 14 26-6 | 13 44-9 | 3-7 | 3-6 | 9-7 | 9-3 | 12-7 | 15-0 |
| 38 | 14 09-5 | 14 11-8 | 13 30-8 | 3-8 | 3-6 | 9-8 | 9-2 | 12-8 | 14-9 | 38 | 14 24-5 | 14 26-9 | 13 45-1 | 3-8 | 3-6 | 9-8 | 9-4 | 12-8 | 15-1 |
| 39 | 14 09-8 | 14 12-1 | 13 31-0 | 3-9 | 3-7 | 9-9 | 9-3 | 12-9 | 15-0 | 39 | 14 24-8 | 14 27-1 | 13 45-4 | 3-9 | 3-7 | 9-9 | 9-5 | 12-9 | 15-2 |
| 40 | 14 10-0 | 14 12-3 | 13 31-3 | 4-0 | 3-8 | 10-0 | 9-4 | 12-0 | 15-1 | 40 | 14 25-0 | 14 27-4 | 13 45-6 | 4-0 | 3-8 | 10-0 | 9-6 | 12-0 | 15-3 |
| 41 | 14 10-3 | 14 12-6 | 13 31-5 | 4-1 | 3-9 | 10-1 | 9-5 | 12-1 | 15-2 | 41 | 14 25-3 | 14 27-6 | 13 45-8 | 4-1 | 3-9 | 10-1 | 9-7 | 12-1 | 15-4 |
| 42 | 14 10-5 | 14 12-8 | 13 31-8 | 4-2 | 4-0 | 10-2 | 9-6 | 12-2 | 15-3 | 42 | 14 25-5 | 14 27-9 | 13 46-1 | 4-2 | 4-0 | 10-2 | 9-8 | 12-2 | 15-5 |
| 43 | 14 10-8 | 14 13-1 | 13 32-0 | 4-3 | 4-0 | 10-3 | 9-7 | 12-3 | 15-3 | 43 | 14 25-8 | 14 28-1 | 13 46-3 | 4-3 | 4-1 | 10-3 | 9-9 | 12-3 | 15-6 |
| 44 | 14 11-0 | 14 13-3 | 13 32-2 | 4-4 | 4-1 | 10-4 | 9-8 | 12-4 | 15-4 | 44 | 14 26-0 | 14 28-4 | 13 46-5 | 4-4 | 4-2 | 10-4 | 10-0 | 12-4 | 15-7 |
| 45 | 14 11-3 | 14 13-6 | 13 32-5 | 4-5 | 4-2 | 10-5 | 9-9 | 12-5 | 15-5 | 45 | 14 26-3 | 14 28-6 | 13 46-8 | 4-5 | 4-3 | 10-5 | 10-1 | 12-5 | 15-8 |
| 46 | 14 11-5 | 14 13-8 | 13 32-7 | 4-6 | 4-3 | 10-6 | 10-0 | 12-6 | 15-6 | 46 | 14 26-5 | 14 28-9 | 13 47-0 | 4-6 | 4-4 | 10-6 | 10-2 | 12-6 | 15-9 |
| 47 | 14 11-8 | 14 14-1 | 13 32-9 | 4-7 | 4-4 | 10-7 | 10-1 | 12-7 | 15-7 | 47 | 14 26-8 | 14 29-1 | 13 47-3 | 4-7 | 4-5 | 10-7 | 10-3 | 12-7 | 16-0 |
| 48 | 14 12-0 | 14 14-3 | 13 33-2 | 4-8 | 4-5 | 10-8 | 10-2 | 12-8 | 15-8 | 48 | 14 27-0 | 14 29-4 | 13 47-5 | 4-8 | 4-6 | 10-8 | 10-4 | 12-8 | 16-1 |
| 49 | 14 12-3 | 14 14-6 | 13 33-4 | 4-9 | 4-6 | 10-9 | 10-3 | 12-9 | 15-9 | 49 | 14 27-3 | 14 29-6 | 13 47-7 | 4-9 | 4-7 | 10-9 | 10-4 | 12-9 | 16-2 |
| 50 | 14 12-5 | 14 14-8 | 13 33-7 | 5-0 | 4-7 | 11-0 | 10-4 | 12-0 | 16-0 | 50 | 14 27-5 | 14 29-9 | 13 48-0 | 5-0 | 4-8 | 11-0 | 10-5 | 12-0 | 16-3 |
| 51 | 14 12-8 | 14 15-1 | 13 33-9 | 5-1 | 4-8 | 11-1 | 10-5 | 12-1 | 16-1 | 51 | 14 27-8 | 14 30-1 | 13 48-2 | 5-1 | 4-9 | 11-1 | 10-6 | 12-1 | 16-4 |
| 52 | 14 13-0 | 14 15-3 | 13 34-1 | 5-2 | 4-9 | 11-2 | 10-5 | 12-2 | 16-2 | 52 | 14 28-0 | 14 30-4 | 13 48-5 | 5-2 | 5-0 | 11-2 | 10-7 | 12-2 | 16-5 |
| 53 | 14 13-3 | 14 15-6 | 13 34-4 | 5-3 | 5-0 | 11-3 | 10-6 | 12-3 | 16-3 | 53 | 14 28-3 | 14 30-6 | 13 48-7 | 5-3 | 5-1 | 11-3 | 10-8 | 12-3 | 16-6 |
| 54 | 14 13-5 | 14 15-8 | 13 34-6 | 5-4 | 5-1 | 11-4 | 10-7 | 12-4 | 16-4 | 54 | 14 28-5 | 14 30-9 | 13 48-9 | 5-4 | 5-2 | 11-4 | 10-9 | 12-4 | 16-7 |
| 55 | 14 13-8 | 14 16-1 | 13 34-9 | 5-5 | 5-2 | 11-5 | 10-8 | 12-5 | 16-5 | 55 | 14 28-8 | 14 31-1 | 13 49-2 | 5-5 | 5-3 | 11-5 | 11-0 | 12-5 | 16-8 |
| 56 | 14 14-0 | 14 16-3 | 13 35-1 | 5-6 | 5-3 | 11-6 | 10-9 | 12-6 | 16-6 | 56 | 14 29-0 | 14 31-4 | 13 49-4 | 5-6 | 5-4 | 11-6 | 11-1 | 12-6 | 16-9 |
| 57 | 14 14-3 | 14 16-6 | 13 35-3 | 5-7 | 5-4 | 11-7 | 11-0 | 12-7 | 16-7 | 57 | 14 29-3 | 14 31-6 | 13 49-7 | 5-7 | 5-5 | 11-7 | 11-2 | 12-7 | 17-0 |
| 58 | 14 14-5 | 14 16-8 | 13 35-6 | 5-8 | 5-5 | 11-8 | 11-1 | 12-8 | 16-8 | 58 | 14 29-5 | 14 31-9 | 13 49-9 | 5-8 | 5-6 | 11-8 | 11-3 | 12-8 | 17-1 |
| 59 | 14 14-8 | 14 17-1 | 13 35-8 | 5-9 | 5-6 | 11-9 | 11-2 | 12-9 | 16-9 | 59 | 14 29-8 | 14 32-1 | 13 50-1 | 5-9 | 5-7 | 11-9 | 11-4 | 12-9 | 17-2 |
| 60 | 14 15-0 | 14 17-3 | 13 36-1 | 6-0 | 5-7 | 12-0 | 11-3 | 12-0 | 17-0 | 60 | 14 30-0 | 14 32-4 | 13 50-4 | 6-0 | 5-8 | 12-0 | 11-5 | 12-0 | 17-3 |

XXX



58^m

INCREMENTS AND CORRECTIONS

59^m

| 58 | SUN PLANETS | | | ARIES | MOON | v or Corr | | | v or Corr | | | v or Corr | | |
|----|-------------|---------|---------|-------|------|-----------|------|------|-----------|---|---|-----------|---|---|
| | s | o | i | | | s | o | i | s | o | i | s | o | i |
| 00 | 14 300 | 14 324 | 13 504 | 0-0 | 0-0 | 6-0 | 5-9 | 12-0 | 11-7 | | | | | |
| 01 | 14 30-3 | 14 32-6 | 13 50-6 | 0-1 | 0-1 | 6-1 | 5-9 | 12-1 | 11-8 | | | | | |
| 02 | 14 30-5 | 14 32-9 | 13 50-8 | 0-2 | 0-2 | 6-2 | 6-0 | 12-2 | 11-9 | | | | | |
| 03 | 14 30-8 | 14 33-1 | 13 51-1 | 0-3 | 0-3 | 6-3 | 6-1 | 12-3 | 12-0 | | | | | |
| 04 | 14 31-0 | 14 33-4 | 13 51-3 | 0-4 | 0-4 | 6-4 | 6-2 | 12-4 | 12-1 | | | | | |
| 05 | 14 31-3 | 14 33-6 | 13 51-6 | 0-5 | 0-5 | 6-5 | 6-3 | 12-5 | 12-2 | | | | | |
| 06 | 14 31-5 | 14 33-9 | 13 51-8 | 0-6 | 0-6 | 6-6 | 6-4 | 12-6 | 12-3 | | | | | |
| 07 | 14 31-8 | 14 34-1 | 13 52-0 | 0-7 | 0-7 | 6-7 | 6-5 | 12-7 | 12-4 | | | | | |
| 08 | 14 32-0 | 14 34-4 | 13 52-3 | 0-8 | 0-8 | 6-8 | 6-6 | 12-8 | 12-5 | | | | | |
| 09 | 14 32-3 | 14 34-6 | 13 52-5 | 0-9 | 0-9 | 6-9 | 6-7 | 12-9 | 12-6 | | | | | |
| 10 | 14 32-5 | 14 34-9 | 13 52-8 | 1-0 | 1-0 | 7-0 | 6-8 | 13-0 | 12-7 | | | | | |
| 11 | 14 32-8 | 14 35-1 | 13 53-0 | 1-1 | 1-1 | 7-1 | 6-9 | 13-1 | 12-8 | | | | | |
| 12 | 14 33-0 | 14 35-4 | 13 53-2 | 1-2 | 1-2 | 7-2 | 7-0 | 13-2 | 12-9 | | | | | |
| 13 | 14 33-3 | 14 35-6 | 13 53-5 | 1-3 | 1-3 | 7-3 | 7-1 | 13-3 | 13-0 | | | | | |
| 14 | 14 33-5 | 14 35-9 | 13 53-7 | 1-4 | 1-4 | 7-4 | 7-2 | 13-4 | 13-1 | | | | | |
| 15 | 14 33-8 | 14 36-1 | 13 53-9 | 1-5 | 1-5 | 7-5 | 7-3 | 13-5 | 13-2 | | | | | |
| 16 | 14 34-0 | 14 36-4 | 13 54-2 | 1-6 | 1-6 | 7-6 | 7-4 | 13-6 | 13-3 | | | | | |
| 17 | 14 34-3 | 14 36-6 | 13 54-4 | 1-7 | 1-7 | 7-7 | 7-5 | 13-7 | 13-4 | | | | | |
| 18 | 14 34-5 | 14 36-9 | 13 54-7 | 1-8 | 1-8 | 7-8 | 7-6 | 13-8 | 13-5 | | | | | |
| 19 | 14 34-8 | 14 37-1 | 13 54-9 | 1-9 | 1-9 | 7-9 | 7-7 | 13-9 | 13-6 | | | | | |
| 20 | 14 35-0 | 14 37-4 | 13 55-1 | 2-0 | 2-0 | 8-0 | 7-8 | 14-0 | 13-7 | | | | | |
| 21 | 14 35-3 | 14 37-6 | 13 55-4 | 2-1 | 2-1 | 8-1 | 7-9 | 14-1 | 13-7 | | | | | |
| 22 | 14 35-5 | 14 37-9 | 13 55-6 | 2-2 | 2-1 | 8-2 | 8-0 | 14-2 | 13-8 | | | | | |
| 23 | 14 35-8 | 14 38-1 | 13 55-9 | 2-3 | 2-2 | 8-3 | 8-1 | 14-3 | 13-9 | | | | | |
| 24 | 14 36-0 | 14 38-4 | 13 56-1 | 2-4 | 2-3 | 8-4 | 8-2 | 14-4 | 14-0 | | | | | |
| 25 | 14 36-3 | 14 38-6 | 13 56-3 | 2-5 | 2-4 | 8-5 | 8-3 | 14-5 | 14-1 | | | | | |
| 26 | 14 36-5 | 14 38-9 | 13 56-6 | 2-6 | 2-5 | 8-6 | 8-4 | 14-6 | 14-2 | | | | | |
| 27 | 14 36-8 | 14 39-2 | 13 56-8 | 2-7 | 2-6 | 8-7 | 8-5 | 14-7 | 14-3 | | | | | |
| 28 | 14 37-0 | 14 39-4 | 13 57-0 | 2-8 | 2-7 | 8-8 | 8-6 | 14-8 | 14-4 | | | | | |
| 29 | 14 37-3 | 14 39-7 | 13 57-3 | 2-9 | 2-8 | 8-9 | 8-7 | 14-9 | 14-5 | | | | | |
| 30 | 14 37-5 | 14 39-9 | 13 57-5 | 3-0 | 2-9 | 9-0 | 8-8 | 15-0 | 14-6 | | | | | |
| 31 | 14 37-8 | 14 40-2 | 13 57-8 | 3-1 | 3-0 | 9-1 | 8-9 | 15-1 | 14-7 | | | | | |
| 32 | 14 38-0 | 14 40-4 | 13 58-0 | 3-2 | 3-1 | 9-2 | 9-0 | 15-2 | 14-8 | | | | | |
| 33 | 14 38-3 | 14 40-7 | 13 58-2 | 3-3 | 3-2 | 9-3 | 9-1 | 15-3 | 14-9 | | | | | |
| 34 | 14 38-5 | 14 40-9 | 13 58-5 | 3-4 | 3-3 | 9-4 | 9-2 | 15-4 | 15-0 | | | | | |
| 35 | 14 38-8 | 14 41-2 | 13 58-7 | 3-5 | 3-4 | 9-5 | 9-3 | 15-5 | 15-1 | | | | | |
| 36 | 14 39-0 | 14 41-4 | 13 59-0 | 3-6 | 3-5 | 9-6 | 9-4 | 15-6 | 15-2 | | | | | |
| 37 | 14 39-3 | 14 41-7 | 13 59-2 | 3-7 | 3-6 | 9-7 | 9-5 | 15-7 | 15-3 | | | | | |
| 38 | 14 39-5 | 14 41-9 | 13 59-4 | 3-8 | 3-7 | 9-8 | 9-6 | 15-8 | 15-4 | | | | | |
| 39 | 14 39-8 | 14 42-2 | 13 59-7 | 3-9 | 3-8 | 9-9 | 9-7 | 15-9 | 15-5 | | | | | |
| 40 | 14 40-0 | 14 42-4 | 13 59-9 | 4-0 | 3-9 | 10-0 | 9-8 | 16-0 | 15-6 | | | | | |
| 41 | 14 40-3 | 14 42-7 | 14 00-1 | 4-1 | 4-0 | 10-1 | 9-8 | 16-1 | 15-7 | | | | | |
| 42 | 14 40-5 | 14 42-9 | 14 00-4 | 4-2 | 4-1 | 10-2 | 9-9 | 16-2 | 15-8 | | | | | |
| 43 | 14 40-8 | 14 43-2 | 14 00-6 | 4-3 | 4-2 | 10-3 | 10-0 | 16-3 | 15-9 | | | | | |
| 44 | 14 41-0 | 14 43-4 | 14 00-9 | 4-4 | 4-3 | 10-4 | 10-1 | 16-4 | 16-0 | | | | | |
| 45 | 14 41-3 | 14 43-7 | 14 01-1 | 4-5 | 4-4 | 10-5 | 10-2 | 16-5 | 16-1 | | | | | |
| 46 | 14 41-5 | 14 43-9 | 14 01-3 | 4-6 | 4-5 | 10-6 | 10-3 | 16-6 | 16-2 | | | | | |
| 47 | 14 41-8 | 14 44-2 | 14 01-6 | 4-7 | 4-6 | 10-7 | 10-4 | 16-7 | 16-3 | | | | | |
| 48 | 14 42-0 | 14 44-4 | 14 01-8 | 4-8 | 4-7 | 10-8 | 10-5 | 16-8 | 16-4 | | | | | |
| 49 | 14 42-3 | 14 44-7 | 14 02-1 | 4-9 | 4-8 | 10-9 | 10-6 | 16-9 | 16-5 | | | | | |
| 50 | 14 42-5 | 14 44-9 | 14 02-3 | 5-0 | 4-9 | 11-0 | 10-7 | 17-0 | 16-6 | | | | | |
| 51 | 14 42-8 | 14 45-2 | 14 02-5 | 5-1 | 5-0 | 11-1 | 10-8 | 17-1 | 16-7 | | | | | |
| 52 | 14 43-0 | 14 45-4 | 14 02-8 | 5-2 | 5-1 | 11-2 | 10-9 | 17-2 | 16-8 | | | | | |
| 53 | 14 43-3 | 14 45-7 | 14 03-0 | 5-3 | 5-2 | 11-3 | 11-0 | 17-3 | 16-9 | | | | | |
| 54 | 14 43-5 | 14 45-9 | 14 03-3 | 5-4 | 5-3 | 11-4 | 11-1 | 17-4 | 17-0 | | | | | |
| 55 | 14 43-8 | 14 46-2 | 14 03-5 | 5-5 | 5-4 | 11-5 | 11-2 | 17-5 | 17-1 | | | | | |
| 56 | 14 44-0 | 14 46-4 | 14 03-7 | 5-6 | 5-5 | 11-6 | 11-3 | 17-6 | 17-2 | | | | | |
| 57 | 14 44-3 | 14 46-7 | 14 04-0 | 5-7 | 5-6 | 11-7 | 11-4 | 17-7 | 17-3 | | | | | |
| 58 | 14 44-5 | 14 46-9 | 14 04-2 | 5-8 | 5-7 | 11-8 | 11-5 | 17-8 | 17-4 | | | | | |
| 59 | 14 44-8 | 14 47-2 | 14 04-4 | 5-9 | 5-8 | 11-9 | 11-6 | 17-9 | 17-5 | | | | | |
| 60 | 14 45-0 | 14 47-4 | 14 04-7 | 6-0 | 5-9 | 12-0 | 11-7 | 18-0 | 17-6 | | | | | |

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| 59 | SUN PLANETS | | | ARIES | MOON | v or Corr | | | v or Corr | | | v or Corr | | |
|----|-------------|---------|---------|-------|------|-----------|--------|------|-----------|---|---|-----------|---|---|
| | s | o | i | | | s | o | i | s | o | i | s | o | i |
| 00 | 14 45-0 | 14 47-4 | 14 04-7 | 0-0 | 0-0 | 6-0 | 6-0 | 12-0 | 11-9 | | | | | |
| 01 | 14 45-3 | 14 47-7 | 14 04-9 | 0-1 | 0-1 | 6-1 | 6-0 | 12-1 | 12-0 | | | | | |
| 02 | 14 45-5 | 14 47-9 | 14 05-2 | 0-2 | 0-2 | 6-2 | 6-1 | 12-2 | 12-1 | | | | | |
| 03 | 14 45-8 | 14 48-2 | 14 05-4 | 0-3 | 0-3 | 6-3 | 6-2 | 12-3 | 12-2 | | | | | |
| 04 | 14 46-0 | 14 48-4 | 14 05-6 | 0-4 | 0-4 | 6-4 | 6-3 | 12-4 | 12-3 | | | | | |
| 05 | 14 46-3 | 14 48-7 | 14 05-9 | 0-5 | 0-5 | 6-5 | 6-4 | 12-5 | 12-4 | | | | | |
| 06 | 14 46-5 | 14 48-9 | 14 06-1 | 0-6 | 0-6 | 6-6 | 6-5 | 12-6 | 12-5 | | | | | |
| 07 | 14 46-8 | 14 49-2 | 14 06-4 | 0-7 | 0-7 | 6-7 | 6-6 | 12-7 | 12-6 | | | | | |
| 08 | 14 47-0 | 14 49-4 | 14 06-6 | 0-8 | 0-8 | 6-8 | 6-7 | 12-8 | 12-7 | | | | | |
| 09 | 14 47-3 | 14 49-7 | 14 06-8 | 0-9 | 0-9 | 6-9 | 6-8 | 12-9 | 12-8 | | | | | |
| 10 | 14 47-5 | 14 49-9 | 14 07-1 | 1-0 | 1-0 | 7-0 | 6-9 | 13-0 | 12-9 | | | | | |
| 11 | 14 47-8 | 14 50-2 | 14 07-3 | 1-1 | 1-1 | 7-1 | 7-0 | 13-1 | 13-0 | | | | | |
| 12 | 14 48-0 | 14 50-4 | 14 07-5 | 1-2 | 1-2 | 7-2 | 7-1 | 13-2 | 13-1 | | | | | |
| 13 | 14 48-3 | 14 50-7 | 14 07-8 | 1-3 | 1-3 | 7-3 | 7-2 | 13-3 | 13-2 | | | | | |
| 14 | 14 48-5 | 14 50-9 | 14 08-0 | 1-4 | 1-4 | 7-4 | 7-3 | 13-4 | 13-3 | | | | | |
| 15 | 14 48-8 | 14 51-2 | 14 08-3 | 1-5 | 1-5 | 7-5 | 7-4 | 13-5 | 13-4 | | | | | |
| 16 | 14 49-0 | 14 51-4 | 14 08-5 | 1-6 | 1-6 | 7-6 | 7-5 | 13-6 | 13-5 | | | | | |
| 17 | 14 49-3 | 14 51-7 | 14 08-7 | 1-7 | 1-7 | 7-7 | 7-6 | 13-7 | 13-6 | | | | | |
| 18 | 14 49-5 | 14 51-9 | 14 09-0 | 1-8 | 1-8 | 7-8 | 7-7 | 13-8 | 13-7 | | | | | |
| 19 | 14 49-8 | 14 52-2 | 14 09-2 | 1-9 | 1-9 | 7-9 | 7-8 | 13-9 | 13-8 | | | | | |
| 20 | 14 50-0 | 14 52-4 | 14 09-5 | 2-0 | 2-0 | 8-0 | 7-9 | 14-0 | 13-9 | | | | | |
| 21 | 14 50-3 | 14 52-7 | 14 09-7 | 2-1 | 2-1 | 8-1 | 8-0 | 14-1 | 14-0 | | | | | |
| 22 | 14 50-5 | 14 52-9 | 14 09-9 | 2-2 | 2-2 | 8-2 | 8-1 | 14-2 | 14-1 | | | | | |
| 23 | 14 50-8 | 14 53-2 | 14 10-2 | 2-3 | 2-3 | 8-3 | 8-2 | 14-3 | 14-2 | | | | | |
| 24 | 14 51-0 | 14 53-4 | 14 10-4 | 2-4 | 2-4 | 8-4 | 8-3 | 14-4 | 14-3 | | | | | |
| 25 | 14 51-3 | 14 53-7 | 14 10-6 | 2-5 | 2-5 | 8-5 | 8-4 | 14-5 | 14-4 | | | | | |
| 26 | 14 51-5 | 14 53-9 | 14 10-9 | 2-6 | 2-6 | 8-6 | 8-5 | 14-6 | 14-5 | | | | | |
| 27 | 14 51-8 | 14 54-2 | 14 11-1 | 2-7 | 2-7 | 8-7 | 8-6 | 14-7 | 14-6 | | | | | |
| 28 | 14 52-0 | 14 54-4 | 14 11-4 | 2-8 | 2-8 | 8-8 | 8-7 | 14-8 | 14-7 | | | | | |
| 29 | 14 52-3 | 14 54-7 | 14 11-6 | 2-9 | 2-9 | 8-9 | 8-8 | 14-9 | 14-8 | | | | | |
| 30 | 14 52-5 | 14 54-9 | 14 11-8 | 3-0 | 3-0 | 9-0 | 8-9 | 15-0 | 14-9 | | | | | |
| 31 | 14 52-8 | 14 55-2 | 14 12-1 | 3-1 | 3-1 | 9-1 | 9-0 | 15-1 | 15-0 | | | | | |
| 32 | 14 53-0 | 14 55-4 | 14 12-3 | 3-2 | 3-2 | 9-2 | 9-1 | 15-2 | 15-1 | | | | | |
| 33 | 14 53-3 | 14 55-7 | 14 12-6 | 3-3 | 3-3 | 9-3 | 9-2 | 15-3 | 15-2 | | | | | |
| 34 | 14 53-5 | 14 55-9 | 14 12-8 | 3-4 | 3-4 | 9-4 | 9-3 | 15-4 | 15-3 | | | | | |
| 35 | 14 53-8 | 14 56-2 | 14 13-0 | 3-5 | 3-5 | 9-5 | 9-4 | 15-5 | 15-4 | | | | | |
| 36 | 14 54-0 | 14 56-4 | 14 13-3 | 3-6 | 3-6 | 9-6 | 9-5 | 15-6 | 15-5 | | | | | |
| 37 | 14 54-3 | 14 56-7 | 14 13-5 | 3-7 | 3-7 | 9-7 | 9-6 | 15-7 | 15-6 | | | | | |
| 38 | 14 54-5 | 14 56-9 | 14 13-8 | 3-8 | 3-8 | 9-8 | 9-7 | 15-8 | 15-7 | | | | | |
| 39 | 14 54-8 | 14 57-2 | 14 14-0 | 3-9 | 3-9 | 9-9 | 9-8 | 15-9 | 15-8 | | | | | |
| 40 | 14 55-0 | 14 57-5 | 14 14-2 | 4-0 | 4-0 | 10-0 | 9-9 | 16-0 | 15-9 | | | | | |
| 41 | 14 55-3 | 14 57-7 | 14 14-5 | 4-1 | 4-1 | 10-1 | 10-0</ | | | | | | | |

TABLES FOR INTERPOLATING SUNRISE, MOONRISE, ETC.

TABLE I—FOR LATITUDE

| Tabular Interval | | | Difference between the times for consecutive latitudes | | | | | | | | | | | | | | | |
|------------------|------|------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 10' | 5' | 2' | 5 ^m | 10 ^m | 15 ^m | 20 ^m | 25 ^m | 30 ^m | 35 ^m | 40 ^m | 45 ^m | 50 ^m | 55 ^m | 60 ^m | 1 ^h 05 ^m | 1 ^h 10 ^m | 1 ^h 15 ^m | 1 ^h 20 ^m |
| 0 30 | 0 15 | 0 06 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 0 02 | 0 02 | 0 02 | 0 02 |
| 1 00 | 0 30 | 0 12 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 0 05 | 0 05 | 0 05 | 0 05 |
| 1 30 | 0 45 | 0 18 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 0 07 | 0 07 | 0 07 | 0 07 |
| 2 00 | 1 00 | 0 24 | 1 | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 10 | 10 | 10 | 10 | 10 |
| 2 30 | 1 15 | 0 30 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 12 | 13 | 13 | 13 |
| 3 00 | 1 30 | 0 36 | 1 | 3 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 0 15 | 0 15 | 0 16 | 0 16 |
| 3 30 | 1 45 | 0 42 | 2 | 3 | 5 | 7 | 8 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 18 | 19 | 19 |
| 4 00 | 2 00 | 0 48 | 2 | 4 | 6 | 8 | 9 | 11 | 13 | 14 | 15 | 16 | 18 | 19 | 20 | 21 | 22 | 22 |
| 4 30 | 2 15 | 0 54 | 2 | 4 | 7 | 9 | 11 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 |
| 5 00 | 2 30 | 1 00 | 2 | 5 | 7 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 23 | 25 | 26 | 27 | 28 | 29 |
| 5 30 | 2 45 | 1 06 | 3 | 5 | 8 | 11 | 13 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 0 29 | 0 30 | 0 31 | 0 32 |
| 6 00 | 3 00 | 1 12 | 3 | 6 | 9 | 12 | 14 | 17 | 20 | 22 | 24 | 26 | 29 | 31 | 32 | 33 | 34 | 36 |
| 6 30 | 3 15 | 1 18 | 3 | 6 | 10 | 13 | 16 | 19 | 22 | 24 | 26 | 29 | 31 | 34 | 36 | 37 | 38 | 40 |
| 7 00 | 3 30 | 1 24 | 3 | 7 | 10 | 14 | 17 | 20 | 23 | 26 | 29 | 31 | 34 | 37 | 39 | 41 | 42 | 44 |
| 7 30 | 3 45 | 1 30 | 4 | 7 | 11 | 15 | 18 | 22 | 25 | 28 | 31 | 34 | 37 | 40 | 43 | 44 | 46 | 48 |
| 8 00 | 4 00 | 1 36 | 4 | 8 | 12 | 16 | 20 | 23 | 27 | 30 | 34 | 37 | 41 | 44 | 0 47 | 0 48 | 0 51 | 0 53 |
| 8 30 | 4 15 | 1 42 | 4 | 8 | 13 | 17 | 21 | 25 | 29 | 33 | 36 | 40 | 44 | 48 | 0 51 | 0 53 | 0 56 | 0 58 |
| 9 00 | 4 30 | 1 48 | 4 | 9 | 13 | 18 | 22 | 27 | 31 | 35 | 39 | 43 | 47 | 52 | 0 55 | 0 58 | 1 01 | 1 04 |
| 9 30 | 4 45 | 1 54 | 5 | 9 | 14 | 19 | 24 | 28 | 33 | 38 | 42 | 47 | 51 | 56 | 1 00 | 1 04 | 1 08 | 1 12 |
| 10 00 | 5 00 | 2 00 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 1 05 | 1 10 | 1 15 | 1 20 |

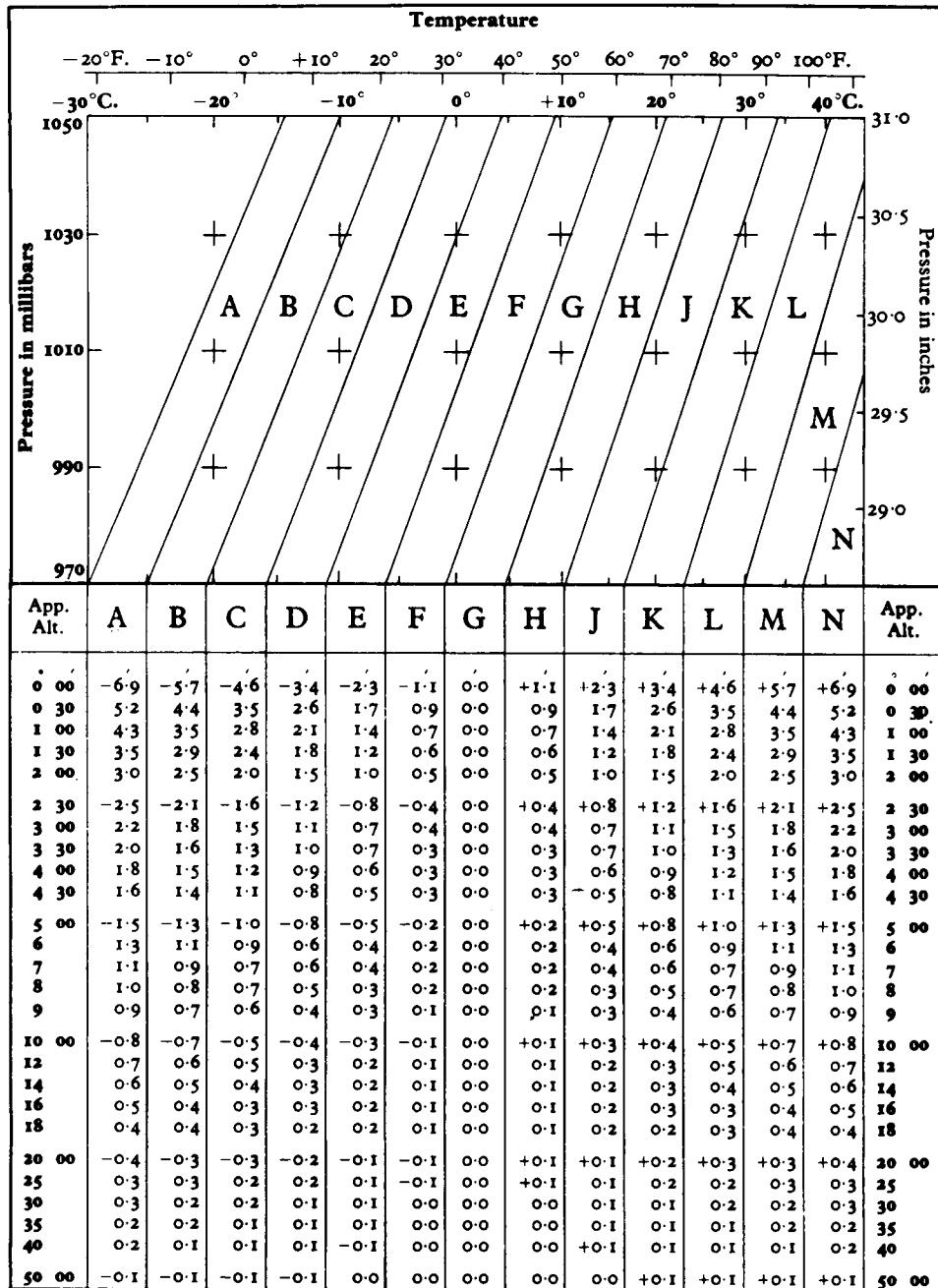
Ο πίνακας I χρησιμεύει για την εκτέλεση παρεμβολών στα L.M.T. ανατολής Ηλίου ή Σελήνης, λυκαυγών κ.λ.π. για ενδιάμεσα πλάτη. Υπολογίζομε: α) τη διαφορά μεταξύ των πλάτων των πινάκων που περικλείουν το ενδιάμεσο πλάτος, β) τη διαφορά του ενδιάμεσου πλάτους από το μικρότερο από τα δυο που το περικλείουν και γ) τη διαφορά μεταξύ των χρόνων που αντιστοιχούν στα δυο πλάτη των πινάκων που περικλείουν το ενδιάμεσο. Μπαίνουμε στον πίνακα κατακόρυφα με τη διαφορά β) στη στήλη που αντιστοιχεί στη διαφορά α), και οριζόντια με τη διαφορά γ) και βρίσκουμε τη διόρθωση που την επιφέρομε στο L.M.T. που αντιστοιχεί στο μικρότερο από τα δυο πλάτη των πινάκων' το σημείο της διορθώσεως θα είναι + ή - ανάλογα με το αν ο χρόνος αυξάνεται ή μειώνεται όταν αυξάνει το πλάτος. Πρέπει να τονισθεί ότι η παρεμβολή δεν είναι γραμμική και γι' αυτό, όταν χρησιμοποιείται αυτός ο πίνακας, είναι απαραίτητο να λαμβάνεται πάντα ο χρόνος που αντιστοιχεί στο πλησιέστερο πλάτος των πινάκων που είναι μικρότερο από το πλάτος μας και να διορθώνεται ακριβώς, όπως περιγράφεται παραπάνω.

TABLE II—FOR LONGITUDE

| Long. East or West | Difference between the times for given date and preceding date (for east longitude) or for given date and following date (for west longitude) | | | | | | | | | | | | | | | | |
|-----------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------------------|-----------------|-----------------|--------------------------------------|-----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | 10 ^m | 20 ^m | 30 ^m | 40 ^m | 50 ^m | 60 ^m | 1 ^h + 10 ^m | 20 ^m | 30 ^m | 40 ^m + 50 ^m | 60 ^m | 2 ^h 10 ^m | 2 ^h 20 ^m | 2 ^h 30 ^m | 2 ^h 40 ^m | 2 ^h 50 ^m | 3 ^h 00 ^m |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 00 | 0 00 | 0 00 | 0 00 | 0 00 | 0 00 |
| 10 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 04 | 04 | 04 | 04 | 05 | 05 |
| 20 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | 6 | 07 | 08 | 08 | 09 | 09 | 10 |
| 30 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 40 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 20 |
| 50 | 1 | 3 | 4 | 6 | 7 | 8 | 10 | 11 | 12 | 14 | 15 | 17 | 0 18 | 0 19 | 0 21 | 0 22 | 0 25 |
| 60 | 2 | 3 | 5 | 7 | 8 | 10 | 12 | 13 | 15 | 17 | 18 | 20 | 22 | 23 | 25 | 27 | 30 |
| 70 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 17 | 19 | 21 | 23 | 25 | 27 | 29 | 31 | 35 |
| 80 | 2 | 4 | 7 | 9 | 11 | 13 | 16 | 18 | 20 | 22 | 24 | 27 | 29 | 31 | 33 | 36 | 40 |
| 90 | 2 | 5 | 7 | 10 | 12 | 15 | 17 | 20 | 22 | 25 | 27 | 30 | 32 | 35 | 37 | 40 | 45 |
| 100 | 3 | 6 | 8 | 11 | 14 | 17 | 19 | 22 | 25 | 28 | 31 | 33 | 0 36 | 0 39 | 0 42 | 0 44 | 0 50 |
| 110 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 31 | 34 | 37 | 40 | 43 | 46 | 49 | 0 55 |
| 120 | 3 | 7 | 10 | 13 | 17 | 20 | 23 | 27 | 30 | 33 | 37 | 40 | 43 | 47 | 50 | 53 | 1 00 |
| 130 | 4 | 7 | 11 | 14 | 18 | 22 | 25 | 29 | 32 | 36 | 40 | 43 | 47 | 51 | 54 | 0 58 | 1 05 |
| 140 | 4 | 8 | 12 | 16 | 19 | 23 | 27 | 31 | 35 | 39 | 43 | 47 | 51 | 54 | 0 58 | 1 02 | 1 10 |
| 150 | 4 | 8 | 13 | 17 | 21 | 25 | 29 | 33 | 38 | 42 | 46 | 50 | 0 54 | 0 58 | 1 03 | 1 07 | 1 15 |
| 160 | 4 | 9 | 13 | 18 | 22 | 27 | 31 | 36 | 40 | 44 | 49 | 53 | 0 58 | 1 02 | 1 07 | 1 11 | 1 20 |
| 170 | 5 | 9 | 14 | 19 | 24 | 28 | 33 | 38 | 42 | 47 | 52 | 57 | 1 01 | 1 06 | 1 11 | 1 16 | 1 25 |
| 180 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 1 05 | 1 10 | 1 15 | 1 20 | 1 30 |

Ο πίνακας II χρησιμεύει για την εκτέλεση παρεμβολών για το μήκος στους χρόνους ανατολής, δύσεως και μεσημβρινής διαβάσεως της Σελήνης. Στον πίνακα μπαίνουμε κατακόρυφα και οριζόντια με τη διαφορά ανάμεσα στο χρόνο για τη δοσμένη ημερομηνία και το χρόνο για την προηγούμενη ημερομηνία, όταν το μήκος είναι ανατολικό, ή την επόμενη, όταν είναι δυτικό. Τις περισσότερες φορές η διόρθωση είναι προσθετική, όταν το μήκος είναι δυτικό, και αφαιρετική, όταν είναι ανατολικό. Εξάιρεση αποτελούν ορισμένες περιπτώσεις, κατά τις οποίες η ανατολή ή δύση γίνεται νωρίτερα την επόμενη ή αργότερα την προηγούμενη ημερομηνία, οπότε τα παραπάνω σημεία αντιστρέφονται.

ALTITUDE CORRECTION TABLES—ADDITIONAL CORRECTIONS
ADDITIONAL REFRACTION CORRECTIONS FOR NON-STANDARD CONDITIONS



Εισερχόμεστε στο διάγραμμα με τη θερμοκρασία (Temperature) και την ατμοσφαιρική πίεση (pressure) και προσδιορίζετε ένα γράμμα ζώνης. Με στοιχεία εισόδου το γράμμα ζώνης και το φαινόμενο ύψος (διορθωμένο για το βάθος ορίζοντα - App. Alt) βρίσκουμε τη διόρθωση με το σημείο της. Η διόρθωση αυτή επιφέρεται στο ύψος μαζί με τις υπόλοιπες διορθώσεις που επιφέρονται με κανονικές συνθήκες.

ALTITUDE CORRECTION TABLES 0°-35°-MOON

| App. Alt. | 0°-4° | | 5°-9° | | 10°-14° | | 15°-19° | | 20°-24° | | 25°-29° | | 30°-34° | | App. Alt. |
|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|-----------|
| | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | | |
| 00 | 0 | 33.8 | 5 | 58.2 | 10 | 62.1 | 15 | 62.8 | 20 | 62.2 | 25 | 60.8 | 30 | 58.9 | 00 |
| 10 | | 35.9 | | 58.5 | | 62.2 | | 62.8 | | 62.1 | | 60.8 | | 58.8 | 10 |
| 20 | | 37.8 | | 58.7 | | 62.2 | | 62.8 | | 62.1 | | 60.7 | | 58.8 | 20 |
| 30 | | 39.6 | | 58.9 | | 62.3 | | 62.8 | | 62.1 | | 60.7 | | 58.7 | 30 |
| 40 | | 41.2 | | 59.1 | | 62.3 | | 62.8 | | 62.0 | | 60.6 | | 58.6 | 40 |
| 50 | | 42.6 | | 59.3 | | 62.4 | | 62.7 | | 62.0 | | 60.6 | | 58.5 | 50 |
| 00 | 1 | 44.0 | 6 | 59.5 | 11 | 62.4 | 16 | 62.7 | 21 | 62.0 | 26 | 60.5 | 31 | 58.5 | 00 |
| 10 | | 45.2 | | 59.7 | | 62.4 | | 62.7 | | 61.9 | | 60.4 | | 58.4 | 10 |
| 20 | | 46.3 | | 59.9 | | 62.5 | | 62.7 | | 61.9 | | 60.4 | | 58.3 | 20 |
| 30 | | 47.3 | | 60.0 | | 62.5 | | 62.7 | | 61.9 | | 60.3 | | 58.2 | 30 |
| 40 | | 48.3 | | 60.2 | | 62.5 | | 62.7 | | 61.8 | | 60.3 | | 58.2 | 40 |
| 50 | | 49.2 | | 60.3 | | 62.6 | | 62.7 | | 61.8 | | 60.2 | | 58.1 | 50 |
| 00 | 2 | 50.0 | 7 | 60.5 | 12 | 62.6 | 17 | 62.7 | 22 | 61.7 | 27 | 60.1 | 32 | 58.0 | 00 |
| 10 | | 50.8 | | 60.6 | | 62.6 | | 62.6 | | 61.7 | | 60.1 | | 57.9 | 10 |
| 20 | | 51.4 | | 60.7 | | 62.6 | | 62.6 | | 61.6 | | 60.0 | | 57.8 | 20 |
| 30 | | 52.1 | | 60.9 | | 62.7 | | 62.6 | | 61.6 | | 59.9 | | 57.8 | 30 |
| 40 | | 52.7 | | 61.0 | | 62.7 | | 62.6 | | 61.5 | | 59.9 | | 57.7 | 40 |
| 50 | | 53.3 | | 61.1 | | 62.7 | | 62.6 | | 61.5 | | 59.8 | | 57.6 | 50 |
| 00 | 3 | 53.8 | 8 | 61.2 | 13 | 62.7 | 18 | 62.5 | 23 | 61.5 | 28 | 59.7 | 33 | 57.5 | 00 |
| 10 | | 54.3 | | 61.3 | | 62.7 | | 62.5 | | 61.4 | | 59.7 | | 57.4 | 10 |
| 20 | | 54.8 | | 61.4 | | 62.7 | | 62.5 | | 61.4 | | 59.6 | | 57.4 | 20 |
| 30 | | 55.2 | | 61.5 | | 62.8 | | 62.5 | | 61.3 | | 59.6 | | 57.3 | 30 |
| 40 | | 55.6 | | 61.6 | | 62.8 | | 62.4 | | 61.3 | | 59.5 | | 57.2 | 40 |
| 50 | | 56.0 | | 61.6 | | 62.8 | | 62.4 | | 61.2 | | 59.4 | | 57.1 | 50 |
| 00 | 4 | 56.4 | 9 | 61.7 | 14 | 62.8 | 19 | 62.4 | 24 | 61.2 | 29 | 59.3 | 34 | 57.0 | 00 |
| 10 | | 56.7 | | 61.8 | | 62.8 | | 62.3 | | 61.1 | | 59.3 | | 56.9 | 10 |
| 20 | | 57.1 | | 61.9 | | 62.8 | | 62.3 | | 61.1 | | 59.2 | | 56.9 | 20 |
| 30 | | 57.4 | | 61.9 | | 62.8 | | 62.3 | | 61.0 | | 59.1 | | 56.8 | 30 |
| 40 | | 57.7 | | 62.0 | | 62.8 | | 62.2 | | 60.9 | | 59.1 | | 56.7 | 40 |
| 50 | | 57.9 | | 62.1 | | 62.8 | | 62.2 | | 60.9 | | 59.0 | | 56.6 | 50 |
| H.P. | L | U | L | U | L | U | L | U | L | U | L | U | L | U | H.P. |
| 54.0 | 0.3 | 0.9 | 0.3 | 0.9 | 0.4 | 1.0 | 0.5 | 1.1 | 0.6 | 1.2 | 0.7 | 1.3 | 0.9 | 1.5 | 54.0 |
| 54.3 | 0.7 | 1.1 | 0.7 | 1.2 | 0.8 | 1.3 | 0.8 | 1.3 | 0.9 | 1.4 | 1.1 | 1.5 | 1.2 | 1.7 | 54.3 |
| 54.6 | 1.1 | 1.4 | 1.1 | 1.4 | 1.1 | 1.4 | 1.2 | 1.5 | 1.3 | 1.6 | 1.4 | 1.7 | 1.5 | 1.8 | 54.6 |
| 54.9 | 1.4 | 1.6 | 1.5 | 1.6 | 1.5 | 1.6 | 1.6 | 1.7 | 1.6 | 1.8 | 1.8 | 1.9 | 1.9 | 2.0 | 54.9 |
| 55.2 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 | 55.2 |
| 55.5 | 2.2 | 2.0 | 2.2 | 2.0 | 2.3 | 2.1 | 2.3 | 2.1 | 2.4 | 2.2 | 2.4 | 2.3 | 2.5 | 2.4 | 55.5 |
| 55.8 | 2.6 | 2.2 | 2.6 | 2.2 | 2.6 | 2.3 | 2.7 | 2.3 | 2.7 | 2.4 | 2.8 | 2.4 | 2.9 | 2.5 | 55.8 |
| 56.1 | 3.0 | 2.4 | 3.0 | 2.5 | 3.0 | 2.5 | 3.0 | 2.5 | 3.1 | 2.6 | 3.1 | 2.6 | 3.2 | 2.7 | 56.1 |
| 56.4 | 3.4 | 2.7 | 3.4 | 2.7 | 3.4 | 2.7 | 3.4 | 2.7 | 3.4 | 2.8 | 3.5 | 2.8 | 3.5 | 2.9 | 56.4 |
| 56.7 | 3.7 | 2.9 | 3.7 | 2.9 | 3.8 | 2.9 | 3.8 | 2.9 | 3.8 | 3.0 | 3.8 | 3.0 | 3.9 | 3.0 | 56.7 |
| 57.0 | 4.1 | 3.1 | 4.1 | 3.1 | 4.1 | 3.1 | 4.1 | 3.1 | 4.2 | 3.1 | 4.2 | 3.2 | 4.2 | 3.2 | 57.0 |
| 57.3 | 4.5 | 3.3 | 4.5 | 3.3 | 4.5 | 3.3 | 4.5 | 3.3 | 4.5 | 3.3 | 4.5 | 3.4 | 4.6 | 3.4 | 57.3 |
| 57.6 | 4.9 | 3.5 | 4.9 | 3.5 | 4.9 | 3.5 | 4.9 | 3.5 | 4.9 | 3.5 | 4.9 | 3.5 | 4.9 | 3.6 | 57.6 |
| 57.9 | 5.3 | 3.8 | 5.3 | 3.8 | 5.2 | 3.8 | 5.2 | 3.7 | 5.2 | 3.7 | 5.2 | 3.7 | 5.2 | 3.7 | 57.9 |
| 58.2 | 5.6 | 4.0 | 5.6 | 4.0 | 5.6 | 4.0 | 5.6 | 4.0 | 5.6 | 3.9 | 5.6 | 3.9 | 5.6 | 3.9 | 58.2 |
| 58.5 | 6.0 | 4.2 | 6.0 | 4.2 | 6.0 | 4.2 | 6.0 | 4.1 | 5.9 | 4.1 | 5.9 | 4.1 | 5.9 | 4.1 | 58.5 |
| 58.8 | 6.4 | 4.4 | 6.4 | 4.4 | 6.4 | 4.4 | 6.3 | 4.4 | 6.3 | 4.3 | 6.3 | 4.3 | 6.2 | 4.2 | 58.8 |
| 59.1 | 6.8 | 4.6 | 6.8 | 4.6 | 6.7 | 4.6 | 6.7 | 4.6 | 6.7 | 4.5 | 6.6 | 4.5 | 6.6 | 4.4 | 59.1 |
| 59.4 | 7.2 | 4.8 | 7.1 | 4.8 | 7.1 | 4.8 | 7.1 | 4.8 | 7.0 | 4.7 | 7.0 | 4.7 | 6.9 | 4.6 | 59.4 |
| 59.7 | 7.5 | 5.1 | 7.5 | 5.0 | 7.5 | 5.0 | 7.5 | 5.0 | 7.4 | 4.9 | 7.3 | 4.8 | 7.2 | 4.7 | 59.7 |
| 60.0 | 7.9 | 5.3 | 7.9 | 5.3 | 7.9 | 5.2 | 7.8 | 5.2 | 7.8 | 5.1 | 7.7 | 5.0 | 7.6 | 4.9 | 60.0 |
| 60.3 | 8.3 | 5.5 | 8.3 | 5.5 | 8.2 | 5.4 | 8.2 | 5.4 | 8.1 | 5.3 | 8.0 | 5.2 | 7.9 | 5.1 | 60.3 |
| 60.6 | 8.7 | 5.7 | 8.7 | 5.7 | 8.6 | 5.7 | 8.6 | 5.6 | 8.5 | 5.5 | 8.4 | 5.4 | 8.2 | 5.3 | 60.6 |
| 60.9 | 9.1 | 5.9 | 9.0 | 5.9 | 9.0 | 5.9 | 8.9 | 5.8 | 8.8 | 5.7 | 8.7 | 5.6 | 8.6 | 5.4 | 60.9 |
| 61.2 | 9.5 | 6.2 | 9.4 | 6.1 | 9.4 | 6.1 | 9.3 | 6.0 | 9.2 | 5.9 | 9.1 | 5.8 | 8.9 | 5.6 | 61.2 |
| 61.5 | 9.8 | 6.4 | 9.8 | 6.3 | 9.7 | 6.3 | 9.7 | 6.2 | 9.5 | 6.1 | 9.4 | 5.9 | 9.2 | 5.8 | 61.5 |

| DIP | | | | | |
|------------|-------------------|------------|------------|-------------------|------------|
| Ht. of Eye | Corr ⁿ | Ht. of Eye | Ht. of Eye | Corr ⁿ | Ht. of Eye |
| m | ft. | m | ft. | m | ft. |
| 2.4 | -2.8 | 8.0 | 9.5 | -5.5 | 31.5 |
| 2.6 | -2.9 | 8.6 | 9.9 | -5.6 | 32.7 |
| 2.8 | -3.0 | 9.2 | 10.3 | -5.7 | 33.9 |
| 3.0 | -3.1 | 9.8 | 10.6 | -5.7 | 35.1 |
| 3.2 | -3.2 | 10.5 | 11.0 | -5.9 | 36.3 |
| 3.4 | -3.3 | 11.2 | 11.4 | -6.0 | 37.6 |
| 3.6 | -3.4 | 11.9 | 11.8 | -6.1 | 38.9 |
| 3.8 | -3.5 | 12.6 | 12.2 | -6.2 | 40.1 |
| 4.0 | -3.5 | 13.3 | 12.6 | -6.2 | 41.5 |
| 4.3 | -3.6 | 14.1 | 13.0 | -6.3 | 42.8 |
| 4.5 | -3.7 | 14.9 | 13.4 | -6.4 | 44.2 |
| 4.7 | -3.9 | 15.7 | 13.8 | -6.6 | 45.5 |
| 5.0 | -4.0 | 16.5 | 14.2 | -6.7 | 46.9 |
| 5.2 | -4.1 | 17.4 | 14.7 | -6.8 | 48.4 |
| 5.5 | -4.2 | 18.3 | 15.1 | -6.9 | 49.8 |
| 5.8 | -4.3 | 19.1 | 15.5 | -7.0 | 51.3 |
| 6.1 | -4.4 | 20.1 | 16.0 | -7.1 | 52.8 |
| 6.3 | -4.4 | 21.0 | 16.5 | -7.2 | 54.3 |
| 6.6 | -4.5 | 22.0 | 16.9 | -7.3 | 55.8 |
| 6.9 | -4.6 | 22.9 | 17.4 | -7.4 | 57.4 |
| 7.2 | -4.7 | 23.9 | 17.9 | -7.5 | 58.9 |
| 7.5 | -4.8 | 24.9 | 18.4 | -7.6 | 60.5 |
| 7.9 | -4.9 | 26.0 | 18.8 | -7.7 | 62.1 |
| 8.2 | -5.0 | 27.1 | 19.3 | -7.7 | 63.8 |
| 8.5 | -5.1 | 28.1 | 19.8 | -7.8 | 65.4 |
| 8.8 | -5.2 | 29.2 | 20.4 | -8.0 | 67.1 |
| 9.2 | -5.3 | 30.4 | 20.9 | -8.1 | 68.8 |
| 9.5 | -5.4 | 31.5 | 21.4 | | 70.5 |

Η διόρθωση παρέχεται σε δυο μέρη. Το πρώτο παίρνεται από το επάνω τμήμα του πίνακα με στοιχείο εισόδου το φαινόμενο ύψος (ύψος διορθωμένο για το βάθος ορίζοντα-App. Alt) και το δεύτερο από το κατώτερο τμήμα με στοιχείο εισόδου την *οριζόντια παράλλαξη* (horizontal Parallax-H.P.), στην ίδια στήλη που έχει ληφθεί και το πρώτο μέρος. Το δεύτερο μέρος της διορθώσεως παρέχεται χωριστά για το *κάτω χείλος* (lower limb-L) και το *άνω χείλος* (upper limb-U). Και τα δυο μέρη της διορθώσεως προσθέτονται στο φαινόμενο ύψος, αλλά από το ύψος του άνω χείλους πρέπει ν' αφαιρούνται 30'.

ALTITUDE CORRECTION TABLES 35°-90°-MOON

| App. Alt. | 35°-39° | 40°-44° | 45°-49° | 50°-54° | 55°-59° | 60°-64° | 65°-69° | 70°-74° | 75°-79° | 80°-84° | 85°-89° | App. Alt. |
|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------|
| | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | Corr ^a | |
| 00 | 35 56.5 | 40 53.7 | 45 50.5 | 50 46.9 | 55 43.1 | 60 38.9 | 65 34.6 | 70 30.1 | 75 25.3 | 80 20.5 | 85 15.6 | 00 |
| 10 | 56.4 | 53.6 | 50.4 | 46.8 | 42.9 | 38.8 | 34.4 | 29.9 | 25.2 | 20.4 | 15.5 | 10 |
| 20 | 56.3 | 53.5 | 50.2 | 46.7 | 42.8 | 38.7 | 34.3 | 29.7 | 25.0 | 20.2 | 15.3 | 20 |
| 30 | 56.2 | 53.4 | 50.1 | 46.5 | 42.7 | 38.5 | 34.1 | 29.6 | 24.9 | 20.0 | 15.1 | 30 |
| 40 | 56.2 | 53.3 | 50.0 | 46.4 | 42.5 | 38.4 | 34.0 | 29.4 | 24.7 | 19.9 | 15.0 | 40 |
| 50 | 56.1 | 53.2 | 49.9 | 46.3 | 42.4 | 38.2 | 33.8 | 29.3 | 24.5 | 19.7 | 14.8 | 50 |
| 00 | 36 56.0 | 41 53.1 | 46 49.8 | 51 46.2 | 56 42.3 | 61 38.1 | 66 33.7 | 71 29.1 | 76 24.4 | 81 19.6 | 86 14.6 | 00 |
| 10 | 55.9 | 53.0 | 49.7 | 46.0 | 42.1 | 37.9 | 33.5 | 29.0 | 24.2 | 19.4 | 14.5 | 10 |
| 20 | 55.8 | 52.8 | 49.5 | 45.9 | 42.0 | 37.8 | 33.4 | 28.8 | 24.1 | 19.2 | 14.3 | 20 |
| 30 | 55.7 | 52.7 | 49.4 | 45.8 | 41.8 | 37.7 | 33.2 | 28.7 | 23.9 | 19.1 | 14.1 | 30 |
| 40 | 55.6 | 52.6 | 49.3 | 45.7 | 41.7 | 37.5 | 33.1 | 28.5 | 23.8 | 18.9 | 14.0 | 40 |
| 50 | 55.5 | 52.5 | 49.2 | 45.5 | 41.6 | 37.4 | 32.9 | 28.3 | 23.6 | 18.7 | 13.8 | 50 |
| 00 | 37 55.4 | 42 52.4 | 47 49.1 | 52 45.4 | 57 41.4 | 62 37.2 | 67 32.8 | 72 28.2 | 77 23.4 | 82 18.6 | 87 13.7 | 00 |
| 10 | 55.3 | 52.3 | 49.0 | 45.3 | 41.3 | 37.1 | 32.6 | 28.0 | 23.3 | 18.4 | 13.5 | 10 |
| 20 | 55.2 | 52.2 | 48.8 | 45.2 | 41.2 | 36.9 | 32.5 | 27.9 | 23.1 | 18.2 | 13.3 | 20 |
| 30 | 55.1 | 52.1 | 48.7 | 45.0 | 41.0 | 36.8 | 32.3 | 27.7 | 22.9 | 18.1 | 13.2 | 30 |
| 40 | 55.0 | 52.0 | 48.6 | 44.9 | 40.9 | 36.6 | 32.2 | 27.6 | 22.8 | 17.9 | 13.0 | 40 |
| 50 | 55.0 | 51.9 | 48.5 | 44.8 | 40.8 | 36.5 | 32.0 | 27.4 | 22.6 | 17.8 | 12.8 | 50 |
| 00 | 38 54.9 | 43 51.8 | 48 48.4 | 53 44.6 | 58 40.6 | 63 36.4 | 68 31.9 | 73 27.2 | 78 22.5 | 83 17.6 | 88 12.7 | 00 |
| 10 | 54.8 | 51.7 | 48.2 | 44.5 | 40.5 | 36.2 | 31.7 | 27.1 | 22.3 | 17.4 | 12.5 | 10 |
| 20 | 54.7 | 51.6 | 48.1 | 44.4 | 40.3 | 36.1 | 31.6 | 26.9 | 22.1 | 17.3 | 12.3 | 20 |
| 30 | 54.6 | 51.5 | 48.0 | 44.2 | 40.2 | 35.9 | 31.4 | 26.8 | 22.0 | 17.1 | 12.2 | 30 |
| 40 | 54.5 | 51.4 | 47.9 | 44.1 | 40.1 | 35.8 | 31.3 | 26.6 | 21.8 | 16.9 | 12.0 | 40 |
| 50 | 54.4 | 51.2 | 47.8 | 44.0 | 39.9 | 35.6 | 31.1 | 26.5 | 21.7 | 16.8 | 11.8 | 50 |
| 00 | 39 54.3 | 44 51.1 | 49 47.6 | 54 43.9 | 59 39.8 | 64 35.5 | 69 31.0 | 74 26.3 | 79 21.5 | 84 16.6 | 89 11.7 | 00 |
| 10 | 54.2 | 51.0 | 47.5 | 43.7 | 39.6 | 35.3 | 30.8 | 26.1 | 21.3 | 16.5 | 11.5 | 10 |
| 20 | 54.1 | 50.9 | 47.4 | 43.6 | 39.5 | 35.2 | 30.7 | 26.0 | 21.2 | 16.3 | 11.4 | 20 |
| 30 | 54.0 | 50.8 | 47.3 | 43.5 | 39.4 | 35.0 | 30.5 | 25.8 | 21.0 | 16.1 | 11.2 | 30 |
| 40 | 53.9 | 50.7 | 47.2 | 43.3 | 39.2 | 34.9 | 30.4 | 25.7 | 20.9 | 16.0 | 11.0 | 40 |
| 50 | 53.8 | 50.6 | 47.0 | 43.2 | 39.1 | 34.7 | 30.2 | 25.5 | 20.7 | 15.8 | 10.9 | 50 |
| H.P. | L U | L U | L U | L U | L U | L U | L U | L U | L U | L U | L U | H.P. |
| 54.0 | 1.1 1.7 | 1.3 1.9 | 1.5 2.1 | 1.7 2.4 | 2.0 2.6 | 2.3 2.9 | 2.6 3.2 | 2.9 3.5 | 3.2 3.8 | 3.5 4.1 | 3.8 4.5 | 54.0 |
| 54.3 | 1.4 1.8 | 1.6 2.0 | 1.8 2.2 | 2.0 2.5 | 2.3 2.7 | 2.5 3.0 | 2.8 3.2 | 3.0 3.5 | 3.3 3.8 | 3.6 4.1 | 3.9 4.4 | 54.3 |
| 54.6 | 1.7 2.0 | 1.9 2.2 | 2.1 2.4 | 2.3 2.6 | 2.5 2.8 | 2.7 3.0 | 3.0 3.3 | 3.2 3.5 | 3.5 3.8 | 3.7 4.1 | 4.0 4.3 | 54.6 |
| 54.9 | 2.0 2.2 | 2.2 2.3 | 2.3 2.5 | 2.5 2.7 | 2.7 2.9 | 2.9 3.1 | 3.2 3.3 | 3.4 3.5 | 3.6 3.8 | 3.9 4.0 | 4.1 4.3 | 54.9 |
| 55.2 | 2.3 2.3 | 2.5 2.4 | 2.6 2.6 | 2.8 2.8 | 3.0 2.9 | 3.2 3.1 | 3.4 3.3 | 3.6 3.5 | 3.8 3.7 | 4.0 4.0 | 4.2 4.2 | 55.2 |
| 55.5 | 2.7 2.5 | 2.8 2.6 | 2.9 2.7 | 3.1 2.9 | 3.2 3.0 | 3.4 3.2 | 3.6 3.4 | 3.7 3.5 | 3.9 3.7 | 4.1 3.9 | 4.3 4.1 | 55.5 |
| 55.8 | 3.0 2.6 | 3.1 2.7 | 3.2 2.8 | 3.3 3.0 | 3.5 3.1 | 3.6 3.3 | 3.8 3.4 | 3.9 3.6 | 4.1 3.7 | 4.2 3.9 | 4.4 4.0 | 55.8 |
| 56.1 | 3.3 2.8 | 3.4 2.9 | 3.5 3.0 | 3.6 3.1 | 3.7 3.2 | 3.8 3.3 | 4.0 3.4 | 4.1 3.6 | 4.2 3.7 | 4.4 3.8 | 4.5 4.0 | 56.1 |
| 56.4 | 3.6 2.9 | 3.7 3.0 | 3.8 3.1 | 3.9 3.2 | 3.9 3.3 | 4.0 3.4 | 4.1 3.5 | 4.3 3.6 | 4.4 3.7 | 4.5 3.8 | 4.6 3.9 | 56.4 |
| 56.7 | 3.9 3.1 | 4.0 3.1 | 4.1 3.2 | 4.1 3.3 | 4.2 3.3 | 4.3 3.4 | 4.3 3.5 | 4.4 3.6 | 4.5 3.7 | 4.6 3.8 | 4.7 3.8 | 56.7 |
| 57.0 | 4.3 3.2 | 4.3 3.3 | 4.3 3.3 | 4.4 3.4 | 4.4 3.4 | 4.5 3.5 | 4.5 3.5 | 4.6 3.6 | 4.7 3.6 | 4.7 3.7 | 4.8 3.8 | 57.0 |
| 57.3 | 4.6 3.4 | 4.6 3.4 | 4.6 3.4 | 4.6 3.5 | 4.7 3.5 | 4.7 3.5 | 4.7 3.6 | 4.8 3.6 | 4.8 3.6 | 4.8 3.7 | 4.9 3.7 | 57.3 |
| 57.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 4.9 3.6 | 5.0 3.6 | 5.0 3.6 | 5.0 3.6 | 57.6 |
| 57.9 | 5.2 3.7 | 5.2 3.7 | 5.2 3.7 | 5.2 3.7 | 5.2 3.7 | 5.1 3.6 | 5.1 3.6 | 5.1 3.6 | 5.1 3.6 | 5.1 3.6 | 5.1 3.6 | 57.9 |
| 58.2 | 5.5 3.9 | 5.5 3.8 | 5.5 3.8 | 5.4 3.8 | 5.4 3.7 | 5.4 3.7 | 5.3 3.7 | 5.3 3.6 | 5.2 3.6 | 5.2 3.5 | 5.2 3.5 | 58.2 |
| 58.5 | 5.9 4.0 | 5.8 4.0 | 5.8 3.9 | 5.7 3.9 | 5.6 3.8 | 5.6 3.8 | 5.5 3.7 | 5.5 3.6 | 5.4 3.6 | 5.3 3.5 | 5.3 3.4 | 58.5 |
| 58.8 | 6.2 4.2 | 6.1 4.1 | 6.0 4.1 | 6.0 4.0 | 5.9 3.9 | 5.8 3.8 | 5.7 3.7 | 5.6 3.6 | 5.5 3.5 | 5.4 3.5 | 5.3 3.4 | 58.8 |
| 59.1 | 6.5 4.3 | 6.4 4.3 | 6.3 4.2 | 6.2 4.1 | 6.1 4.0 | 6.0 3.9 | 5.9 3.8 | 5.8 3.6 | 5.7 3.5 | 5.6 3.4 | 5.4 3.3 | 59.1 |
| 59.4 | 6.8 4.5 | 6.7 4.4 | 6.6 4.3 | 6.5 4.2 | 6.4 4.1 | 6.2 3.9 | 6.1 3.8 | 6.0 3.7 | 5.8 3.5 | 5.7 3.4 | 5.5 3.2 | 59.4 |
| 59.7 | 7.1 4.6 | 7.0 4.5 | 6.9 4.4 | 6.8 4.3 | 6.6 4.1 | 6.5 4.0 | 6.3 3.8 | 6.2 3.7 | 6.0 3.5 | 5.8 3.3 | 5.6 3.2 | 59.7 |
| 60.0 | 7.5 4.8 | 7.3 4.7 | 7.2 4.5 | 7.0 4.4 | 6.9 4.2 | 6.7 4.0 | 6.5 3.9 | 6.3 3.7 | 6.1 3.5 | 5.9 3.3 | 5.7 3.1 | 60.0 |
| 60.3 | 7.8 5.0 | 7.6 4.8 | 7.5 4.7 | 7.3 4.5 | 7.1 4.3 | 6.9 4.1 | 6.7 3.9 | 6.5 3.7 | 6.3 3.5 | 6.0 3.2 | 5.8 3.0 | 60.3 |
| 60.6 | 8.1 5.1 | 7.9 5.0 | 7.7 4.8 | 7.6 4.6 | 7.3 4.4 | 7.1 4.2 | 6.9 3.9 | 6.7 3.7 | 6.4 3.4 | 6.2 3.2 | 5.9 2.9 | 60.6 |
| 60.9 | 8.4 5.3 | 8.2 5.1 | 8.0 4.9 | 7.8 4.7 | 7.6 4.5 | 7.3 4.2 | 7.1 4.0 | 6.8 3.7 | 6.6 3.4 | 6.3 3.2 | 6.0 2.9 | 60.9 |
| 61.2 | 8.7 5.4 | 8.5 5.2 | 8.3 5.0 | 8.1 4.8 | 7.8 4.5 | 7.6 4.3 | 7.3 4.0 | 7.0 3.7 | 6.7 3.4 | 6.4 3.1 | 6.1 2.8 | 61.2 |
| 61.5 | 9.1 5.6 | 8.8 5.4 | 8.6 5.1 | 8.3 4.9 | 8.1 4.6 | 7.8 4.3 | 7.5 4.0 | 7.2 3.7 | 6.9 3.4 | 6.5 3.1 | 6.2 2.7 | 61.5 |



ALTITUDE CORRECTION TABLES 0°-10°-SUN, STARS, PLANETS

| App. Alt. | OCT.-MAR. SUN | | APR.-SEPT. | | STARS PLANETS |
|-----------|---------------|------------|------------|------------|---------------|
| | Lower Limb | Upper Limb | Lower Limb | Upper Limb | |
| 0 00 | -18.2 | -50.5 | -18.4 | -50.2 | -34.5 |
| 03 | 17.5 | 49.8 | 17.8 | 49.6 | 33.8 |
| 06 | 16.9 | 49.2 | 17.1 | 48.9 | 33.2 |
| 09 | 16.3 | 48.6 | 16.5 | 48.3 | 32.6 |
| 12 | 15.7 | 48.0 | 15.9 | 47.7 | 32.0 |
| 15 | 15.1 | 47.4 | 15.3 | 47.1 | 31.4 |
| 0 18 | -14.5 | -46.8 | -14.8 | -46.6 | -30.8 |
| 21 | 14.0 | 46.3 | 14.2 | 46.0 | 30.3 |
| 24 | 13.5 | 45.8 | 13.7 | 45.5 | 29.8 |
| 27 | 12.9 | 45.2 | 13.2 | 45.0 | 29.2 |
| 30 | 12.4 | 44.7 | 12.7 | 44.5 | 28.7 |
| 33 | 11.9 | 44.2 | 12.2 | 44.0 | 28.2 |
| 0 36 | -11.5 | -43.8 | -11.7 | -43.5 | -27.8 |
| 39 | 11.0 | 43.3 | 11.2 | 43.0 | 27.3 |
| 42 | 10.5 | 42.8 | 10.8 | 42.6 | 26.8 |
| 45 | 10.1 | 42.4 | 10.3 | 42.1 | 26.4 |
| 48 | 9.6 | 41.9 | 9.9 | 41.7 | 25.9 |
| 51 | 9.2 | 41.5 | 9.5 | 41.3 | 25.5 |
| 0 54 | - 8.8 | -41.1 | - 9.1 | -40.9 | -25.1 |
| 0 57 | 8.4 | 40.7 | 8.7 | 40.5 | 24.7 |
| 1 00 | 8.0 | 40.3 | 8.3 | 40.1 | 24.3 |
| 03 | 7.7 | 40.0 | 7.9 | 39.7 | 24.0 |
| 06 | 7.3 | 39.6 | 7.5 | 39.3 | 23.6 |
| 09 | 6.9 | 39.2 | 7.2 | 39.0 | 23.2 |
| 1 12 | - 6.6 | -38.9 | - 6.8 | -38.6 | -22.9 |
| 15 | 6.2 | 38.5 | 6.5 | 38.3 | 22.5 |
| 18 | 5.9 | 38.2 | 6.2 | 38.0 | 22.2 |
| 21 | 5.6 | 37.9 | 5.8 | 37.6 | 21.9 |
| 24 | 5.3 | 37.6 | 5.5 | 37.3 | 21.6 |
| 27 | 4.9 | 37.2 | 5.2 | 37.0 | 21.2 |
| 1 30 | - 4.6 | -36.9 | - 4.9 | -36.7 | -20.9 |
| 35 | 4.2 | 36.5 | 4.4 | 36.2 | 20.5 |
| 40 | 3.7 | 36.0 | 4.0 | 35.8 | 20.0 |
| 45 | 3.2 | 35.5 | 3.5 | 35.3 | 19.5 |
| 50 | 2.8 | 35.1 | 3.1 | 34.9 | 19.1 |
| 1 55 | 2.4 | 34.7 | 2.6 | 34.4 | 18.7 |
| 2 00 | - 2.0 | -34.3 | - 2.2 | -34.0 | -18.3 |
| 05 | 1.6 | 33.9 | 1.8 | 33.6 | 17.9 |
| 10 | 1.2 | 33.5 | 1.5 | 33.3 | 17.5 |
| 15 | 0.9 | 33.2 | 1.1 | 32.9 | 17.2 |
| 20 | 0.5 | 32.8 | 0.8 | 32.6 | 16.8 |
| 25 | - 0.2 | 32.5 | 0.4 | 32.2 | 16.5 |
| 2 30 | + 0.2 | -32.1 | - 0.1 | -31.9 | -16.1 |
| 35 | 0.5 | 31.8 | + 0.2 | 31.6 | 15.8 |
| 40 | 0.8 | 31.5 | 0.5 | 31.3 | 15.5 |
| 45 | 1.1 | 31.2 | 0.8 | 31.0 | 15.2 |
| 50 | 1.4 | 30.9 | 1.1 | 30.7 | 14.9 |
| 2 55 | 1.6 | 30.7 | 1.4 | 30.4 | 14.7 |
| 3 00 | + 1.9 | -30.4 | + 1.7 | -30.1 | -14.4 |
| 05 | 2.2 | 30.1 | 1.9 | 29.9 | 14.1 |
| 10 | 2.4 | 29.9 | 2.1 | 29.7 | 13.9 |
| 15 | 2.6 | 29.7 | 2.4 | 29.4 | 13.7 |
| 20 | 2.9 | 29.4 | 2.6 | 29.2 | 13.4 |
| 25 | 3.1 | 29.2 | 2.9 | 28.9 | 13.2 |
| 3 30 | + 3.3 | -29.0 | + 3.1 | -28.7 | -13.0 |

| App. Alt. | OCT.-MAR. SUN | | APR.-SEPT. | | STARS PLANETS |
|-----------|---------------|------------|------------|------------|---------------|
| | Lower Limb | Upper Limb | Lower Limb | Upper Limb | |
| 3 30 | + 3.3 | -29.0 | + 3.1 | -28.7 | -13.0 |
| 35 | 3.6 | 28.7 | 3.3 | 28.5 | 12.7 |
| 40 | 3.8 | 28.5 | 3.5 | 28.3 | 12.5 |
| 45 | 4.0 | 28.3 | 3.7 | 28.1 | 12.3 |
| 50 | 4.2 | 28.1 | 3.9 | 27.9 | 12.1 |
| 3 55 | 4.4 | 27.9 | 4.1 | 27.7 | 11.9 |
| 4 00 | + 4.5 | -27.8 | + 4.3 | -27.5 | -11.8 |
| 05 | 4.7 | 27.6 | 4.5 | 27.3 | 11.6 |
| 10 | 4.9 | 27.4 | 4.6 | 27.2 | 11.4 |
| 15 | 5.1 | 27.2 | 4.8 | 27.0 | 11.2 |
| 20 | 5.2 | 27.1 | 5.0 | 26.8 | 11.1 |
| 25 | 5.4 | 26.9 | 5.1 | 26.7 | 10.9 |
| 4 30 | + 5.6 | -26.7 | + 5.3 | -26.5 | -10.7 |
| 35 | 5.7 | 26.6 | 5.5 | 26.3 | 10.6 |
| 40 | 5.9 | 26.4 | 5.6 | 26.2 | 10.4 |
| 45 | 6.0 | 26.3 | 5.8 | 26.0 | 10.3 |
| 50 | 6.2 | 26.1 | 5.9 | 25.9 | 10.1 |
| 4 55 | 6.3 | 26.0 | 6.0 | 25.8 | 10.0 |
| 5 00 | + 6.4 | -25.9 | + 6.2 | -25.6 | - 9.9 |
| 05 | 6.6 | 25.7 | 6.3 | 25.5 | 9.7 |
| 10 | 6.7 | 25.6 | 6.4 | 25.4 | 9.6 |
| 15 | 6.8 | 25.5 | 6.6 | 25.2 | 9.5 |
| 20 | 6.9 | 25.4 | 6.7 | 25.1 | 9.4 |
| 25 | 7.1 | 25.2 | 6.8 | 25.0 | 9.2 |
| 5 30 | + 7.2 | -25.1 | + 6.9 | -24.9 | - 9.1 |
| 35 | 7.3 | 25.0 | 7.0 | 24.8 | 9.0 |
| 40 | 7.4 | 24.9 | 7.2 | 24.6 | 8.9 |
| 45 | 7.5 | 24.8 | 7.3 | 24.5 | 8.8 |
| 50 | 7.6 | 24.7 | 7.4 | 24.4 | 8.7 |
| 5 55 | 7.7 | 24.6 | 7.5 | 24.3 | 8.6 |
| 6 00 | + 7.8 | -24.5 | + 7.6 | -24.2 | - 8.5 |
| 10 | 8.0 | 24.3 | 7.8 | 24.0 | 8.3 |
| 20 | 8.2 | 24.1 | 8.0 | 23.8 | 8.1 |
| 30 | 8.4 | 23.9 | 8.1 | 23.7 | 7.9 |
| 40 | 8.6 | 23.7 | 8.3 | 23.5 | 7.7 |
| 6 50 | 8.7 | 23.6 | 8.5 | 23.3 | 7.6 |
| 7 00 | + 8.9 | -23.4 | + 8.6 | -23.2 | - 7.4 |
| 10 | 9.1 | 23.2 | 8.8 | 23.0 | 7.2 |
| 20 | 9.2 | 23.1 | 9.0 | 22.8 | 7.1 |
| 30 | 9.3 | 23.0 | 9.1 | 22.7 | 7.0 |
| 40 | 9.5 | 22.8 | 9.2 | 22.6 | 6.8 |
| 7 50 | 9.6 | 22.7 | 9.4 | 22.4 | 6.7 |
| 8 00 | + 9.7 | -22.6 | + 9.5 | -22.3 | - 6.6 |
| 10 | 9.9 | 22.4 | 9.6 | 22.2 | 6.4 |
| 20 | 10.0 | 22.3 | 9.7 | 22.1 | 6.3 |
| 30 | 10.1 | 22.2 | 9.8 | 22.0 | 6.2 |
| 40 | 10.2 | 22.1 | 10.0 | 21.8 | 6.1 |
| 8 50 | 10.3 | 22.0 | 10.1 | 21.7 | 6.0 |
| 9 00 | + 10.4 | -21.9 | + 10.2 | -21.6 | - 5.9 |
| 10 | 10.5 | 21.8 | 10.3 | 21.5 | 5.8 |
| 20 | 10.6 | 21.7 | 10.4 | 21.4 | 5.7 |
| 30 | 10.7 | 21.6 | 10.5 | 21.3 | 5.6 |
| 40 | 10.8 | 21.5 | 10.6 | 21.2 | 5.5 |
| 9 50 | 10.9 | 21.4 | 10.6 | 21.2 | 5.4 |
| 10 00 | + 11.0 | -21.3 | + 10.7 | -21.1 | - 5.3 |

Additional corrections for temperature and pressure are given on the page 506
 For bubble sextant observations ignore dip and use the star corrections for Sun, planets, and stars.

ALTITUDE CORRECTION TABLES 10°-90°—SUN, STARS, PLANETS

| OCT.—MAR. SUN | | | APR.—SEPT. | | | STARS AND PLANETS | | | DIP | | | | | |
|---------------|------------|------------|------------|------------|------------|-------------------|-------------------|-----------|------------------------------|------------|-------------------|------------|------------|-------------------|
| App. Alt. | Lower Limb | Upper Limb | App. Alt. | Lower Limb | Upper Limb | App. Alt. | Corr ⁿ | App. Alt. | Additional Corr ⁿ | Ht. of Eye | Corr ⁿ | Ht. of Eye | Ht. of Eye | Corr ⁿ |
| 9 34 | +10.8 | -21.5 | 9 39 | +10.6 | -21.2 | 9 56 | -5.3 | | | m | | ft. | m | |
| 9 45 | +10.9 | -21.4 | 9 51 | +10.7 | -21.1 | 10 08 | -5.2 | | | 2.4 | -2.8 | 8.0 | 1.0 | -1.8 |
| 9 56 | +11.0 | -21.3 | 10 03 | +10.8 | -21.0 | 10 20 | -5.1 | | | 2.6 | -2.9 | 8.6 | 1.5 | -2.2 |
| 10 08 | +11.1 | -21.2 | 10 15 | +10.9 | -20.9 | 10 33 | -5.0 | | | 2.8 | -2.9 | 9.2 | 2.0 | -2.5 |
| 10 21 | +11.2 | -21.1 | 10 27 | +11.0 | -20.8 | 10 46 | -4.9 | | | 3.0 | -3.0 | 9.8 | 2.5 | -2.8 |
| 10 34 | +11.3 | -21.0 | 10 40 | +11.1 | -20.7 | 11 00 | -4.8 | | | 3.2 | -3.1 | 10.5 | 3.0 | -3.0 |
| 10 47 | +11.4 | -20.9 | 10 54 | +11.2 | -20.6 | 11 14 | -4.7 | | | 3.4 | -3.2 | 11.2 | | See table |
| 11 01 | +11.5 | -20.8 | 11 08 | +11.3 | -20.5 | 11 29 | -4.6 | | | 3.6 | -3.3 | 11.9 | | ← |
| 11 15 | +11.6 | -20.7 | 11 23 | +11.4 | -20.4 | 11 45 | -4.5 | | | 3.8 | -3.4 | 12.6 | | m |
| 11 30 | +11.7 | -20.6 | 11 38 | +11.5 | -20.3 | 12 01 | -4.4 | | | 4.0 | -3.5 | 13.3 | 20 | -7.9 |
| 11 46 | +11.8 | -20.5 | 12 10 | +11.6 | -20.2 | 12 18 | -4.4 | | | 4.3 | -3.6 | 14.1 | 22 | -8.3 |
| 12 02 | +11.9 | -20.4 | 12 28 | +11.8 | -20.1 | 12 35 | -4.3 | | | 4.5 | -3.7 | 14.9 | 24 | -8.6 |
| 12 19 | +12.0 | -20.3 | 12 46 | +11.9 | -20.0 | 12 54 | -4.2 | | | 4.7 | -3.9 | 15.7 | 26 | -9.0 |
| 12 37 | +12.1 | -20.2 | 13 05 | +12.0 | -19.8 | 13 13 | -4.0 | | | 5.0 | -4.0 | 16.5 | 28 | -9.3 |
| 12 55 | +12.2 | -20.1 | 13 24 | +12.1 | -19.7 | 13 33 | -3.9 | | | 5.2 | -4.1 | 17.4 | | |
| 13 14 | +12.3 | -20.0 | 13 45 | +12.2 | -19.6 | 14 16 | -3.7 | | | 5.5 | -4.2 | 18.3 | 30 | -9.6 |
| 13 35 | +12.4 | -19.9 | 14 07 | +12.3 | -19.5 | 14 40 | -3.6 | | | 5.8 | -4.2 | 19.1 | 32 | -10.0 |
| 13 56 | +12.5 | -19.8 | 14 30 | +12.4 | -19.4 | 15 04 | -3.5 | | | 6.1 | -4.3 | 20.1 | 34 | -10.3 |
| 14 18 | +12.6 | -19.7 | 15 19 | +12.5 | -19.3 | 15 30 | -3.4 | | | 6.3 | -4.4 | 21.0 | 36 | -10.6 |
| 14 42 | +12.7 | -19.6 | 15 46 | +12.6 | -19.2 | 16 26 | -3.3 | | | 6.6 | -4.5 | 22.0 | 38 | -10.8 |
| 15 06 | +12.8 | -19.5 | 16 14 | +12.8 | -19.0 | 17 28 | -3.1 | | | 6.9 | -4.6 | 22.9 | | |
| 15 32 | +12.9 | -19.4 | 16 44 | +12.9 | -18.9 | 18 02 | -2.9 | | | 7.2 | -4.7 | 23.9 | 40 | -11.1 |
| 15 59 | +13.0 | -19.3 | 17 15 | +13.0 | -18.8 | 18 38 | -2.8 | | | 7.5 | -4.8 | 24.9 | 42 | -11.4 |
| 16 28 | +13.1 | -19.2 | 17 48 | +13.1 | -18.7 | 19 17 | -2.7 | | | 7.9 | -5.0 | 26.0 | 44 | -11.7 |
| 16 59 | +13.2 | -19.1 | 18 24 | +13.2 | -18.6 | 19 58 | -2.6 | | | 8.2 | -5.1 | 27.1 | 46 | -11.9 |
| 17 32 | +13.3 | -19.0 | 19 01 | +13.3 | -18.5 | 20 42 | -2.5 | | | 8.5 | -5.1 | 28.1 | 48 | -12.2 |
| 18 06 | +13.4 | -18.9 | 19 42 | +13.4 | -18.4 | 21 28 | -2.4 | | | 8.8 | -5.2 | 29.2 | | ft. |
| 18 42 | +13.5 | -18.8 | 20 25 | +13.5 | -18.3 | 22 19 | -2.3 | | | 9.2 | -5.3 | 30.4 | 2 | -1.4 |
| 19 21 | +13.6 | -18.7 | 21 11 | +13.6 | -18.2 | 23 13 | -2.2 | | | 9.5 | -5.4 | 31.5 | 4 | -1.9 |
| 20 03 | +13.7 | -18.6 | 22 00 | +13.7 | -18.1 | 24 11 | -2.1 | | | 9.9 | -5.5 | 32.7 | 6 | -2.4 |
| 20 48 | +13.8 | -18.5 | 23 51 | +13.8 | -18.0 | 25 14 | -2.0 | | | 10.3 | -5.6 | 33.9 | 8 | -2.7 |
| 21 35 | +13.9 | -18.4 | 24 53 | +13.9 | -17.9 | 26 22 | -1.9 | | | 10.6 | -5.7 | 35.1 | 10 | -3.1 |
| 22 26 | +14.0 | -18.3 | 26 00 | +14.0 | -17.8 | 27 36 | -1.8 | | | 11.0 | -5.9 | 36.3 | | See table |
| 23 22 | +14.1 | -18.2 | 27 13 | +14.1 | -17.7 | 28 56 | -1.7 | | | 11.4 | -6.0 | 37.6 | | ← |
| 24 21 | +14.2 | -18.1 | 28 33 | +14.2 | -17.6 | 30 24 | -1.6 | | | 11.8 | -6.1 | 38.9 | | ft. |
| 25 26 | +14.3 | -18.0 | 30 00 | +14.3 | -17.5 | 32 00 | -1.5 | | | 12.2 | -6.2 | 40.1 | 70 | -8.1 |
| 26 36 | +14.4 | -17.9 | 31 35 | +14.4 | -17.4 | 33 45 | -1.4 | | | 12.6 | -6.3 | 41.5 | 75 | -8.4 |
| 27 52 | +14.5 | -17.8 | 33 20 | +14.5 | -17.3 | 35 40 | -1.3 | | | 13.0 | -6.4 | 42.8 | 80 | -8.7 |
| 29 15 | +14.6 | -17.7 | 35 17 | +14.6 | -17.2 | 37 48 | -1.2 | | | 13.4 | -6.5 | 44.2 | 85 | -8.9 |
| 30 46 | +14.7 | -17.6 | 37 26 | +14.7 | -17.1 | 40 08 | -1.1 | | | 13.8 | -6.6 | 45.5 | 90 | -9.2 |
| 32 26 | +14.8 | -17.5 | 39 50 | +14.8 | -17.0 | 42 44 | -1.0 | | | 14.2 | -6.7 | 46.9 | 95 | -9.5 |
| 34 17 | +14.9 | -17.4 | 42 31 | +14.9 | -16.9 | 45 36 | -0.9 | | | 14.7 | -6.8 | 48.4 | | |
| 36 20 | +15.0 | -17.3 | 45 31 | +15.0 | -16.8 | 48 47 | -0.8 | | | 15.1 | -6.9 | 49.8 | 100 | -9.7 |
| 38 36 | +15.1 | -17.2 | 48 55 | +15.1 | -16.7 | 52 18 | -0.7 | | | 15.5 | -7.0 | 51.3 | 105 | -9.9 |
| 41 08 | +15.2 | -17.1 | 52 44 | +15.2 | -16.6 | 56 11 | -0.6 | | | 16.0 | -7.1 | 52.8 | 110 | -10.2 |
| 43 59 | +15.3 | -17.0 | 57 02 | +15.3 | -16.5 | 60 28 | -0.5 | | | 16.5 | -7.2 | 54.3 | 115 | -10.4 |
| 47 10 | +15.4 | -16.9 | 61 51 | +15.4 | -16.4 | 65 08 | -0.5 | | | 16.9 | -7.3 | 55.8 | 120 | -10.6 |
| 50 46 | +15.5 | -16.8 | 67 17 | +15.5 | -16.3 | 70 11 | -0.3 | | | 17.4 | -7.4 | 57.4 | 125 | -10.8 |
| 54 49 | +15.6 | -16.7 | 73 16 | +15.6 | -16.2 | 75 34 | -0.2 | | | 17.9 | -7.5 | 58.9 | | |
| 59 23 | +15.7 | -16.6 | 79 43 | +15.7 | -16.1 | 81 13 | -0.1 | | | 18.4 | -7.6 | 60.5 | 130 | -11.1 |
| 64 30 | +15.8 | -16.5 | 86 32 | +15.8 | -16.0 | 87 03 | 0.0 | | | 18.8 | -7.7 | 62.1 | 135 | -11.3 |
| 70 12 | +15.9 | -16.4 | 90 00 | +15.9 | -15.9 | 90 00 | 0.0 | | | 19.3 | -7.8 | 63.8 | 140 | -11.5 |
| 76 26 | +16.0 | -16.3 | | | | | | | | 19.8 | -7.9 | 65.4 | 145 | -11.7 |
| 83 05 | +16.1 | -16.2 | | | | | | | | 20.4 | -8.0 | 67.1 | 150 | -11.9 |
| 90 00 | | | | | | | | | | 20.9 | -8.1 | 68.8 | 155 | -12.1 |
| | | | | | | | | | | 21.4 | | 70.5 | | |

App. Alt. = Apparent altitude = Sextant altitude corrected for index error and dip.



ΠΙΝΑΚΑΣ ΠΕΡΙΕΧΟΜΕΝΩΝ

ΚΕΦΑΛΑΙΟ ΠΡΩΤΟ

Βασικές αρχές και διάταξη των πινάκων

| | |
|-------------------------------|---|
| 1.1 Σκοπός | 1 |
| 1.2 Βασικές αρχές | 1 |
| 1.3 Διάταξη των πινάκων | 2 |

ΚΕΦΑΛΑΙΟ ΔΕΥΤΕΡΟ

Κύρια στοιχεία

| | |
|--|---|
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