

# Celestial Sphere Models—Star Data

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The number preceding the name of the star (or binary or multiple system of stars) refers to its approximate rank according to apparent magnitude. “RA” stands for “Right Ascension” and “Decl.” for “Declination”. A “v” following the apparent or absolute magnitude of a star (or system of stars) means that this value varies.

The sections are designated as two numbers separated by a slash. The first number refers to the spherical biangle sections and the second to the panel sections.

## Greek Alphabet

$\alpha$	alpha	$\iota$	iota	$\rho, \varrho$	rho
$\beta$	beta	$\kappa$	kappa	$\sigma, \varsigma$	sigma
$\gamma$	gamma	$\lambda$	lambda	$\tau$	tau
$\delta$	delta	$\mu$	mu	$\upsilon$	upsilon
$\epsilon, \varepsilon$	epsilon	$\nu$	nu	$\phi, \varphi$	phi
$\zeta$	zeta	$\xi$	xi	$\chi$	chi
$\eta$	eta	$\omicron$	omicron	$\psi$	psi
$\theta, \vartheta$	theta	$\pi, \varpi$	pi	$\omega$	omega

## Constellations

Full name, genitive, abbreviation.

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. <b>Andromeda</b>, Andromedae, And</li> <li>2. <b>Antlia</b>, Antliae, Ant</li> <li>3. <b>Apus</b>, Apodis, Aps</li> <li>4. <b>Aquarius</b>, Aquarii, Aqr</li> <li>5. <b>Aquila</b>, Aquilae, Aql</li> <li>6. <b>Ara</b>, Arae, Ara</li> <li>7. <b>Aries</b>, Arietis, Ari</li> <li>8. <b>Auriga</b>, Aurigae, Aur</li> <li>9. <b>Boötes</b>, Boötis, Boo</li> <li>10. <b>Caelum</b>, Caeli, Cae</li> <li>11. <b>Camelopardalis</b>, Camelopardalis, Cam</li> <li>12. <b>Cancer</b>, Cancri, Cnc</li> <li>13. <b>Canes Venatici</b>, Canum Venaticorum, CVn</li> <li>14. <b>Canis Major</b>, Canis Majoris, CMa</li> <li>15. <b>Canis Minor</b>, Canis Minoris, CMi</li> <li>16. <b>Capricornus</b>, Capricorni, Cap</li> <li>17. <b>Carina</b>, Carinae, Car</li> <li>18. <b>Cassiopeia</b>, Cassiopeiae, Cas</li> <li>19. <b>Centaurus</b>, Centauri, Cen</li> <li>20. <b>Cepheus</b>, Cephei, Cep</li> <li>21. <b>Cetus</b>, Ceti, Cet</li> <li>22. <b>Chamaeleon</b>, Chamaeleontis, Cha</li> <li>23. <b>Circinus</b>, Circini, Cir</li> <li>24. <b>Columba</b>, Columbae, Col</li> <li>25. <b>Coma Berenices</b>, Comae Berenices, Com</li> <li>26. <b>Corona Borealis</b>, Coronae Borealis, CrB</li> <li>27. <b>Corona Australis</b>, Coronae Australis, Cra</li> <li>28. <b>Corvus</b>, Corvi, Crv</li> <li>29. <b>Crater</b>, Crateris, Crt</li> <li>30. <b>Crux</b>, Crucis, Cru</li> <li>31. <b>Cygnus</b>, Cygni, Cyg</li> <li>32. <b>Delphinus</b>, Delphini, Del</li> <li>33. <b>Dorado</b>, Doradus, Dor</li> <li>34. <b>Draco</b>, Draconis, Dra</li> </ol> | <ol style="list-style-type: none"> <li>35. <b>Equuleus</b>, Equulei, Equ</li> <li>36. <b>Eridanus</b>, Eridani, Eri</li> <li>37. <b>Fornax</b>, Fornacis, For</li> <li>38. <b>Gemini</b>, Geminorum, Gem</li> <li>39. <b>Grus</b>, Gruis, Gru</li> <li>40. <b>Hercules</b>, Herculis, Her</li> <li>41. <b>Horologium</b>, Horologii, Hor</li> <li>42. <b>Hydra</b>, Hydrae, Hya</li> <li>43. <b>Hydrus</b>, Hydri, Hyi</li> <li>44. <b>Indus</b>, Indi, Ind</li> <li>45. <b>Lacerta</b>, Lacertae, Lac</li> <li>46. <b>Leo</b>, Leonis, Leo</li> <li>47. <b>Leo Minor</b>, Leonis Minoris, LMi</li> <li>48. <b>Lepus</b>, Leporis, Lep</li> <li>49. <b>Libra</b>, Librae, Lib</li> <li>50. <b>Lupus</b>, Lupi, Lup</li> <li>51. <b>Lynx</b>, Lyncis, Lyn</li> <li>52. <b>Lyra</b>, Lyrae, Lyr</li> <li>53. <b>Mensa</b>, Mensae, Men</li> <li>54. <b>Microscopium</b>, Microscopii, Mic</li> <li>55. <b>Monoceros</b>, Monocerotis, Mon</li> <li>56. <b>Musca</b>, Muscae, Mus</li> <li>57. <b>Norma</b>, Normae, Nor</li> <li>58. <b>Octans</b>, Octantis, Oct</li> <li>59. <b>Ophiuchus</b>, Ophiuchi, Oph</li> <li>60. <b>Orion</b>, Orionis, Ori</li> <li>61. <b>Pavo</b>, Pavonis, Pav</li> <li>62. <b>Pegasus</b>, Pegasi, Peg</li> <li>63. <b>Perseus</b>, Persei, Per</li> <li>64. <b>Phoenix</b>, Phoenicis, Phe</li> <li>65. <b>Pictor</b>, Pictoris, Pic</li> <li>66. <b>Pisces</b>, Piscium, Psc</li> <li>67. <b>Piscis Austrinus</b>, Piscis Austrini, PsA</li> <li>68. <b>Puppis</b>, Puppis, Pup</li> </ol> |
|--|--|

- |  |   |
|--|---|
| 69. <b>Pyxis</b> , Pyxidis, Pyx          | 79. <b>Telescopium</b> , Telescopii, Tel                  |
| 70. <b>Reticulum</b> , Reticuli, Ret     | 80. <b>Triangulum</b> , Trianguli, Tri                    |
| 71. <b>Sagitta</b> , Sagittae, Sge       | 81. <b>Triangulum Australe</b> , Trianguli Australis, TrA |
| 72. <b>Sagittarius</b> , Sagittarii, Sgr | 82. <b>Tucana</b> , Tucanae, Tuc                          |
| 73. <b>Scorpius</b> , Scorpii, Sco       | 83. <b>Ursa Major</b> , Ursae Majoris, UMa                |
| 74. <b>Sculptor</b> , Sculptoris, Scl    | 84. <b>Ursa Minor</b> , Ursae Minoris, UMi                |
| 75. <b>Scutum</b> , Scuti, Sct           | 85. <b>Vela</b> , Velorum, Vel                            |
| 76. <b>Serpens</b> , Serpentis, Ser      | 86. <b>Virgo</b> , Virginis, Vir                          |
| 77. <b>Sextans</b> , Sextantis, Sex      | 87. <b>Volans</b> , Volantis, Vol                         |
| 78. <b>Taurus</b> , Tauri, Tau           | 88. <b>Vulpecula</b> , Vulpeculae, Vul                    |

## Stars Sorted Alphabetically

**151. Acamar** $\theta^1$  Eridani

Constellation: Eridanus

RA 2h 58' 15.6792"

Decl.  $-40^\circ 18' 16.8457''$ 

Section 2/2

Apparent magnitude: 2.88

Absolute magnitude: -0.59

**9. Achernar** $\alpha$  Eridani

Constellation: Eridanus

RA 1h 38' 24"

Decl.  $-57^\circ 8' 36''$ 

Section 2/2

Apparent magnitude: 0.45

Absolute magnitude: -2.77

**22. Adhara** $\epsilon$  Canis Majoris

Constellation: Canis Major

RA 6h 59' 21.2"

Decl.  $-28^\circ 59' 5''$ 

Section 3/5

Apparent magnitude: 1.5

Absolute magnitude: -4.1

**152. Albaldah** $\pi$  Sagittarii

Constellation: Sagittarius

RA 19h 10' 51.8"

Decl.  $-20^\circ 59' 3''$ 

Section 7/13

Apparent magnitude: 2.88

Absolute magnitude: -2.77

**157. Albireo** $\beta$  Cygni

Constellation: Cygnus

RA 19h 31' 28.1"

Decl.  $27^\circ 59' 5''$ 

Section 8/14

Apparent magnitude: 2.9

Absolute magnitude: -2.31

**143. Alcyone** $\eta$  Tauri

Constellation: Taurus

RA 3h 48' 35.3"

Decl.  $24^\circ 9' 4''$ 

Section 2/3

Apparent magnitude: 2.85

Absolute magnitude: -2.41

**14. Aldebaran** $\alpha$  Tauri

Constellation: Taurus

RA 4h 36' 59.1"

Decl.  $16^\circ 32' 4''$ 

Section 3/4

Apparent magnitude: 0.86v

Absolute magnitude: -0.64v

**89. Alderamin** $\alpha$  Cephei

Constellation: Cepheus

RA 21h 19' 1.2"

Decl.  $62^\circ 39' 5''$ 

Section 8/15

Apparent magnitude: 2.45

Absolute magnitude: 1.58

**58. Al Dhanab** $\beta$  Gruis

Constellation: Grus

RA 22h 43' 45.8"

Decl.  $-46^\circ 47' 14''$ 

Section 1/16

Apparent magnitude: 2.07v

Absolute magnitude: 1.52

**120. Aldhibain** $\eta$  Draconis

Constellation: Draco

RA 16h 24' 14.7"

Decl.  $61^\circ 28' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: 0.58

**137. Algenib** $\gamma$  Pegasi

Constellation: Pegasus

RA 0h 14' 11.4"

Decl.  $15^\circ 17' 1''$ 

Section 1/1

Apparent magnitude: 2.83

Absolute magnitude: -2.22

**49. Algieba** $\gamma$  Leonis

Constellation: Leo

RA 10h 19' 58.3506"

Decl.  $19^\circ 50' 29.3468''$ 

Section 4/7

Apparent magnitude: 2

Absolute magnitude: -0.93

**60. Algol** $\beta$  Persei

Constellation: Perseus

RA 3h 9' 22.8"

Decl.  $41^\circ 1' 3''$ 

Section 2/3

Apparent magnitude: 2.09

Absolute magnitude: 0.18

**163. Algorel** $\delta$  Corvi

Constellation: Corvus

RA 12h 30' 49.4"

Decl.  $-16^\circ 37' 0''$ 

Section 5/9

Apparent magnitude: 2.94

Absolute magnitude: 0.79

**166. Alheka** $\zeta$  Tauri

Constellation: Taurus

RA 5h 38' 45.1"

Decl.  $21^\circ 9' 0''$ 

Section 3/4

Apparent magnitude: 2.97

Absolute magnitude: -2.56

**43. Alhena** $\gamma$  Geminorum

Constellation: Gemini

RA 6h 38' 46.8"

Decl.  $16^\circ 22' 5''$ 

Section 3/5

Apparent magnitude: 1.93

Absolute magnitude: -0.6

**32. Alioth** $\epsilon$  Ursae Majoris

Constellation: Ursa Major

RA 12h 54' 50.3"

Decl.  $55^\circ 51' 3''$ 

Section 5/9

Apparent magnitude: 1.77

Absolute magnitude: -0.2

**38. Alkaid** $\eta$  Ursae Majoris

Constellation: Ursa Major

RA 13h 48' 16.1"

Decl.  $49^\circ 13' 1''$ 

Section 6/10

Apparent magnitude: 1.86

Absolute magnitude: -0.59

**181. Almaaz**

ε Aurigae  
 Constellation: Auriga  
 RA 5h 3' 18"  
 Decl. 43° 50' 5"  
 Section 3/4  
 Apparent magnitude: 3.03  
 Absolute magnitude: -5.95

**61. Almach**

γ Andromedae  
 Constellation: Andromeda  
 RA 2h 3' 53.9523"  
 Decl. 42° 19' 47.0223"  
 Section 2/2  
 Apparent magnitude: 2.1  
 Absolute magnitude: -3.08

**30. Alnair**

α Gruis  
 Constellation: Grus  
 RA 22h 9' 23.4"  
 Decl. -46° 52' 14"  
 Section 8/15  
 Apparent magnitude: 1.74  
 Absolute magnitude: -0.72

**168. Alnasl**

γ Sagittarii  
 Constellation: Sagittarius  
 RA 18h 6' 59.8"  
 Decl. -30° 25' 2"  
 Section 7/13  
 Apparent magnitude: 2.98  
 Absolute magnitude: 0.63

**29. Alnilam**

ε Orionis  
 Constellation: Orion  
 RA 5h 37' 9.2"  
 Decl. -1° 11' 2"  
 Section 3/4  
 Apparent magnitude: 1.69  
 Absolute magnitude: -6.38

**31. Alnitak**

ζ Orionis  
 Constellation: Orion  
 RA 5h 41' 41.6"  
 Decl. -1° 56' 0"  
 Section 3/4  
 Apparent magnitude: 1.75  
 Absolute magnitude: -5.25

**156. Alniyat**

σ Scorpii  
 Constellation: Scorpius  
 RA 16h 22' 19"  
 Decl. -25° 38' 0"  
 Section 6/11  
 Apparent magnitude: 2.9v  
 Absolute magnitude: -3.86v

**3. α Centauri**

Constellation: Centaurus  
 RA 14h 39' 35.0631"  
 Decl. -60° 50' 15.0992"  
 Section 6/10  
 Apparent magnitude: -0.29  
 Absolute magnitude: 4.06

**146. α Hydri**

Constellation: Hydrus  
 RA 1h 59' 21.1"  
 Decl. -61° 28' 49"  
 Section 2/2  
 Apparent magnitude: 2.86  
 Absolute magnitude: 1.16

**198. α Lyncis**

Constellation: Lynx  
 RA 9h 22' 10.6"  
 Decl. 34° 18' 4"  
 Section 4/7  
 Apparent magnitude: 3.14  
 Absolute magnitude: -1.02

**114. α Muscae**

Constellation: Musca  
 RA 12h 38' 18.4"  
 Decl. -69° 14' 14"  
 Section 5/9  
 Apparent magnitude: 2.69  
 Absolute magnitude: -2.17

**47. Alphard**

α Hydrae  
 Constellation: Hydra  
 RA 9h 28' 29.8"  
 Decl. -8° 44' 2"  
 Section 4/7  
 Apparent magnitude: 1.98  
 Absolute magnitude: -1.7

**150. α Tucanae**

Constellation: Tucana  
 RA 22h 19' 45.2"  
 Decl. -60° 10' 0"  
 Section 8/15  
 Apparent magnitude: 2.87  
 Absolute magnitude: -1.05

**67. Alphecca**

α Coronae Borealis  
 Constellation: Corona Borealis  
 RA 15h 35' 28.3"  
 Decl. 26° 39' 1"  
 Section 6/11  
 Apparent magnitude: 2.22  
 Absolute magnitude: 0.42

**54. Alpheratz**

α Andromedae  
 Constellation: Andromeda  
 RA 0h 9' 20.9"  
 Decl. 29° 11' 3"  
 Section 1/1  
 Apparent magnitude: 2.07  
 Absolute magnitude: -0.3

**12. Altair**

α Aquilae  
 Constellation: Aquila  
 RA 19h 51' 41.1"  
 Decl. 8° 55' 0"  
 Section 8/14  
 Apparent magnitude: 0.77  
 Absolute magnitude: 2.21

**88. Aludra**

η Canis Majoris  
 Constellation: Canis Major  
 RA 7h 24' 49.6"  
 Decl. -29° 20' 2"  
 Section 3/5  
 Apparent magnitude: 2.45  
 Absolute magnitude: -7.51

**84. Ankaa**

α Phoenicis  
 Constellation: Phoenix  
 RA 0h 27' 11.7"  
 Decl. -42° 12' 20"  
 Section 1/1  
 Apparent magnitude: 2.4  
 Absolute magnitude: 0.52

**15. Antares**

α Scorpii  
 Constellation: Scorpius  
 RA 16h 30' 32.7"  
 Decl. -26° 28' 1"  
 Section 7/12  
 Apparent magnitude: 0.95v  
 Absolute magnitude: -5.39v

**4. Arcturus**

α Boötis  
 Constellation: Boötes  
 RA 14h 16' 30.3"  
 Decl. 19° 5' 1"  
 Section 6/10  
 Apparent magnitude: -0.05  
 Absolute magnitude: -0.31

**98. Arneb**

α Leporis  
 Constellation: Lepus  
 RA 5h 33' 32.8"  
 Decl. -17° 48' 3"  
 Section 3/4  
 Apparent magnitude: 2.58  
 Absolute magnitude: -5.4

**101. Ascella** $\zeta$  Sagittarii

Constellation: Sagittarius

RA 19h 3' 47.2"

Decl.  $-29^{\circ} 51' 0''$ 

Section 7/13

Apparent magnitude: 2.6

Absolute magnitude: 0.42

**66. Aspidiske** $\iota$  Carinae

Constellation: Carina

RA 9h 17' 35.1"

Decl.  $-59^{\circ} 21' 12''$ 

Section 4/7

Apparent magnitude: 2.21v

Absolute magnitude: -4.42

**42. Atria** $\alpha$  Trianguli Australis

Constellation: Triangulum Australe

RA 16h 48' 39.8951"

Decl.  $-69^{\circ} 1' 39.7626''$ 

Section 7/12

Apparent magnitude: 1.92

Absolute magnitude: -3.61

**40. Avior** $\epsilon$  Carinae

Constellation: Carina

RA 8h 22' 53.5"

Decl.  $-59^{\circ} 34' 10''$ 

Section 4/6

Apparent magnitude: 1.87

Absolute magnitude: -4.57

**26. Bellatrix** $\gamma$  Orionis

Constellation: Orion

RA 5h 26' 7.5"

Decl.  $6^{\circ} 21' 5''$ 

Section 3/4

Apparent magnitude: 1.64

Absolute magnitude: -2.72

**141.  $\beta$  Aræ**

Constellation: Ara

RA 17h 26' 50.5"

Decl.  $-55^{\circ} 32' 43''$ 

Section 7/12

Apparent magnitude: 2.84

Absolute magnitude: -3.49

**134.  $\beta$  Hydri**

Constellation: Hydrus

RA 0h 26' 41.9"

Decl.  $-77^{\circ} 9' 1''$ 

Section 1/1

Apparent magnitude: 2.82

Absolute magnitude: 3.45

**182.  $\beta$  Muscæ**

Constellation: Musca

RA 12h 47' 26.1"

Decl.  $-68^{\circ} 12' 32''$ 

Section 5/9

Apparent magnitude: 3.04

Absolute magnitude: -1.86

**139.  $\beta$  Trianguli Australis**

Constellation: Triangulum Australe

RA 15h 56' 47.3"

Decl.  $-63^{\circ} 29' 9''$ 

Section 6/11

Apparent magnitude: 2.83

Absolute magnitude: 2.38

**172.  $\beta$  Trianguli**

Constellation: Triangulum

RA 2h 10' 39.1"

Decl.  $35^{\circ} 4' 2''$ 

Section 2/2

Apparent magnitude: 3

Absolute magnitude: 0.09

**10. Betelgeuse** $\alpha$  Orionis

Constellation: Orion

RA 5h 56' 10.4"

Decl.  $7^{\circ} 24' 3''$ 

Section 3/4

Apparent magnitude: 0.55v

Absolute magnitude: -5.04v

**2. Canopus** $\alpha$  Carinae

Constellation: Carina

RA 6h 24' 21.8"

Decl.  $-52^{\circ} 42' 23''$ 

Section 3/5

Apparent magnitude: -0.73

Absolute magnitude: -5.64

**6. Capella** $\alpha$  Aurigae

Constellation: Auriga

RA 5h 18' 3.5"

Decl.  $46^{\circ} 0' 5''$ 

Section 3/4

Apparent magnitude: 0.07

Absolute magnitude: -0.49

**74. Caph** $\beta$  Cassiopeiae

Constellation: Cassiopeia

RA 0h 10' 10.6"

Decl.  $59^{\circ} 15' 0''$ 

Section 1/1

Apparent magnitude: 2.28

Absolute magnitude: 1.17

**23. Castor** $\alpha$  Geminorum

Constellation: Gemini

RA 7h 34' 35.863"

Decl.  $31^{\circ} 53' 17.79''$ 

Section 4/6

Apparent magnitude: 1.58

Absolute magnitude: 0.59

**125. Cebalrai** $\beta$  Ophiuchi

Constellation: Ophiuchus

RA 17h 44' 23.2"

Decl.  $4^{\circ} 33' 3''$ 

Section 7/12

Apparent magnitude: 2.76

Absolute magnitude: 0.76

**142. Choo** $\alpha$  Arae

Constellation: Ara

RA 17h 33' 16.4"

Decl.  $-49^{\circ} 53' 20''$ 

Section 7/12

Apparent magnitude: 2.84

Absolute magnitude: -1.51

**63. Cih** $\gamma$  Cassiopeiae

Constellation: Cassiopeia

RA 0h 57' 50.4"

Decl.  $60^{\circ} 48' 5''$ 

Section 1/1

Apparent magnitude: 2.15v

Absolute magnitude: -4.22

**130. Cor Caroli 2** $\alpha^2$  Canum Venaticorum

Constellation: Canes Venatici

RA 12h 56' 1.66622"

Decl.  $38^{\circ} 19' 6.1541''$ 

Section 5/9

Apparent magnitude: 2.98v

Absolute magnitude: 0.16

**184. Dabih** $\beta$  Capricorni

Constellation: Capricornus

RA 20h 22' 2.9"

Decl.  $-14^{\circ} 43' 1''$ 

Section 8/14

Apparent magnitude: 3.05

Absolute magnitude: -2.07

**99.  $\delta$  Centauri**

Constellation: Centaurus

RA 12h 9' 19.5"

Decl.  $-50^{\circ} 49' 31''$ 

Section 5/9

Apparent magnitude: 2.58v

Absolute magnitude: -2.84

**128.  $\delta$  Crucis**

Constellation: Crux  
RA 12h 16' 8.3"  
Decl.  $-58^{\circ} 51' 6''$   
Section 5/9  
Apparent magnitude: 2.79  
Absolute magnitude: -2.45

**147.  $\delta$  Cygni**

Constellation: Cygnus  
RA 19h 45' 33.2"  
Decl.  $45^{\circ} 10' 3''$   
Section 8/14  
Apparent magnitude: 2.86  
Absolute magnitude: -0.74

**177.  $\delta$  Persei**

Constellation: Perseus  
RA 3h 44' 15"  
Decl.  $47^{\circ} 50' 4''$   
Section 2/3  
Apparent magnitude: 3.01  
Absolute magnitude: -3.04

**145. Deneb Algedi**

$\delta$  Capricorni  
Constellation: Capricornus  
RA 21h 48' 3.6"  
Decl.  $-16^{\circ} 2' 3''$   
Section 8/15  
Apparent magnitude: 2.85  
Absolute magnitude: 2.49

**19. Deneb**

$\alpha$  Cygni  
Constellation: Cygnus  
RA 20h 42' 3.8"  
Decl.  $45^{\circ} 20' 5''$   
Section 8/14  
Apparent magnitude: 1.24  
Absolute magnitude: -8.74

**171. Deneb el Okab**

$\zeta$  Aquilae  
Constellation: Aquila  
RA 19h 6' 15.6"  
Decl.  $13^{\circ} 53' 3''$   
Section 7/13  
Apparent magnitude: 2.99  
Absolute magnitude: 0.96

**62. Denebola**

$\beta$  Leonis  
Constellation: Leo  
RA 11h 50' 0.1"  
Decl.  $14^{\circ} 28' 0''$   
Section 5/8  
Apparent magnitude: 2.14  
Absolute magnitude: 1.92

**51. Diphda**

$\beta$  Ceti  
Constellation: Cetus  
RA 0h 44' 31"  
Decl.  $-17^{\circ} 53' 0''$   
Section 1/1  
Apparent magnitude: 2.04  
Absolute magnitude: -0.3

**76. Dschubba**

$\delta$  Scorpii  
Constellation: Scorpius  
RA 16h 1' 25.8"  
Decl.  $-22^{\circ} 40' 2''$   
Section 6/11  
Apparent magnitude: 2.29  
Absolute magnitude: -3.16

**34. Dubhe**

$\alpha$  Ursae Majoris  
Constellation: Ursa Major  
RA 11h 4' 51.2"  
Decl.  $61^{\circ} 39' 0''$   
Section 5/8  
Apparent magnitude: 1.8  
Absolute magnitude: -1.09

**27. Elnath**

$\beta$  Tauri  
Constellation: Taurus  
RA 5h 27' 27.8"  
Decl.  $28^{\circ} 37' 1''$   
Section 3/4  
Apparent magnitude: 1.66  
Absolute magnitude: -1.36

**72. Eltanin**

$\gamma$  Draconis  
Constellation: Draco  
RA 17h 57' 2.2"  
Decl.  $51^{\circ} 29' 1''$   
Section 7/12  
Apparent magnitude: 2.24  
Absolute magnitude: -1.04

**82. Enif**

$\epsilon$  Pegasi  
Constellation: Pegasus  
RA 21h 45' 5.7"  
Decl.  $9^{\circ} 57' 3''$   
Section 8/15  
Apparent magnitude: 2.38  
Absolute magnitude: -4.19

**75.  $\epsilon$  Centauri**

Constellation: Centaurus  
RA 13h 41' 4.3"  
Decl.  $-53^{\circ} 33' 35''$   
Section 6/10  
Apparent magnitude: 2.29  
Absolute magnitude: -3.02

**155.  $\epsilon$  Persei**

Constellation: Perseus  
RA 3h 59' 6.1"  
Decl.  $40^{\circ} 3' 4''$   
Section 2/3  
Apparent magnitude: 2.9  
Absolute magnitude: -3.19

**79.  $\eta$  Centauri**

Constellation: Centaurus  
RA 14h 36' 41.4"  
Decl.  $-42^{\circ} 14' 17''$   
Section 6/10  
Apparent magnitude: 2.33v  
Absolute magnitude: -2.55

**188.  $\eta$  Sagittarii**

Constellation: Sagittarius  
RA 18h 18' 52.7"  
Decl.  $-36^{\circ} 45' 16''$   
Section 7/13  
Apparent magnitude: 3.1  
Absolute magnitude: -0.2

**18. Fomalhaut**

$\alpha$  Piscis Austrini  
Constellation: Piscis Austrinus  
RA 22h 57' 39.0465"  
Decl.  $-29^{\circ} 37' 20.05''$   
Section 1/16  
Apparent magnitude: 1.15  
Absolute magnitude: 1.72

**25. Gacrux**

$\gamma$  Crucis  
Constellation: Crux  
RA 12h 32' 12.2"  
Decl.  $-57^{\circ} 13' 0''$   
Section 5/9  
Apparent magnitude: 1.63  
Absolute magnitude: -0.52

**176.  $\gamma$  Gruis**

Constellation: Grus  
RA 21h 55' 2.6"  
Decl.  $-37^{\circ} 16' 37''$   
Section 8/15  
Apparent magnitude: 3  
Absolute magnitude: -0.97

**169.  $\gamma$  Hydrae**

Constellation: Hydra  
RA 13h 19' 55.9"  
Decl.  $-23^{\circ} 16' 0''$   
Section 5/9  
Apparent magnitude: 2.99  
Absolute magnitude: -0.05

**131.  $\gamma$  Lupi**

Constellation: Lupus  
RA 15h 36' 22.8"  
Decl.  $-41^{\circ} 13' 39''$   
Section 6/11  
Apparent magnitude: 2.8  
Absolute magnitude: -3.4

**159.  $\gamma$  Persei**

Constellation: Perseus  
RA 3h 6' 8.9"  
Decl.  $53^{\circ} 34' 3''$   
Section 2/3  
Apparent magnitude: 2.91  
Absolute magnitude: -1.57

**149.  $\gamma$  Trianguli Australis**

Constellation: Triangulum Australe  
RA 15h 18' 54.582"  
Decl.  $-68^{\circ} 40' 46.3654''$   
Section 6/11  
Apparent magnitude: 2.87  
Absolute magnitude: -0.87

**91. Gienah**

$\epsilon$  Cygni  
Constellation: Cygnus  
RA 20h 46' 57.6"  
Decl.  $34^{\circ} 2' 2''$   
Section 8/14  
Apparent magnitude: 2.48  
Absolute magnitude: 0.76

**100. Gienah Ghurab**

$\gamma$  Corvi  
Constellation: Corvus  
RA 12h 16' 45.6"  
Decl.  $-17^{\circ} 38' 4''$   
Section 5/9  
Apparent magnitude: 2.58  
Absolute magnitude: -0.94

**83. Girtab**

$\kappa$  Scorpii  
Constellation: Scorpius  
RA 17h 43' 46.1"  
Decl.  $-39^{\circ} 2' 16''$   
Section 7/12  
Apparent magnitude: 2.39  
Absolute magnitude: -3.38

**153. Gomeisa**

$\beta$  Canis Minoris  
Constellation: Canis Minor  
RA 7h 28' 9.2"  
Decl.  $8^{\circ} 15' 0''$   
Section 3/5  
Apparent magnitude: 2.89  
Absolute magnitude: -0.7

**97. Graffias**

$\beta$  Scorpii  
Constellation: Scorpius  
RA 16h 5' 26.232"  
Decl.  $-19^{\circ} 48' 19.63''$   
Section 6/11  
Apparent magnitude: 2.56  
Absolute magnitude: -3.5

**11. Hadar**

$\beta$  Centauri  
Constellation: Centaurus  
RA 14h 5' 8.7"  
Decl.  $-60^{\circ} 27' 41''$   
Section 6/10  
Apparent magnitude: 0.61  
Absolute magnitude: -5.42

**50. Hamal**

$\alpha$  Arietis  
Constellation: Aries  
RA 2h 8' 13.2"  
Decl.  $23^{\circ} 32' 5''$   
Section 2/2  
Apparent magnitude: 2.01  
Absolute magnitude: 0.48

**94. Han**

$\zeta$  Ophiuchi  
Constellation: Ophiuchus  
RA 16h 38' 10.8"  
Decl.  $-10^{\circ} 36' 1''$   
Section 7/12  
Apparent magnitude: 2.54  
Absolute magnitude: -3.2

**112. Hassaleh**

$\iota$  Aurigae  
Constellation: Auriga  
RA 4h 58' 12.1"  
Decl.  $33^{\circ} 11' 3''$   
Section 3/4  
Apparent magnitude: 2.69  
Absolute magnitude: -3.29

**123. Hatysa**

$\iota$  Orionis  
Constellation: Orion  
RA 5h 36' 20.3"  
Decl.  $-5^{\circ} 53' 5''$   
Section 3/4  
Apparent magnitude: 2.75  
Absolute magnitude: -5.3

**170.  $\iota^1$  Scorpii**

Constellation: Scorpius  
RA 17h 48' 52.8"  
Decl.  $-40^{\circ} 7' 56''$   
Section 7/12  
Apparent magnitude: 2.99  
Absolute magnitude: -5.71

**124.  $\iota$  Centauri**

Constellation: Centaurus  
RA 13h 21' 38.6"  
Decl.  $-36^{\circ} 48' 34''$   
Section 5/9  
Apparent magnitude: 2.75  
Absolute magnitude: 1.48

**81. Izar**

$\epsilon$  Boötis  
Constellation: Boötes  
RA 14h 45' 47.7"  
Decl.  $26^{\circ} 59' 4''$   
Section 6/10  
Apparent magnitude: 2.35  
Absolute magnitude: -1.69

**37. Kaus Australis**

$\epsilon$  Sagittarii  
Constellation: Sagittarius  
RA 18h 25' 24"  
Decl.  $-34^{\circ} 22' 2''$   
Section 7/13  
Apparent magnitude: 1.84  
Absolute magnitude: -1.39

**136. Kaus Borealis**

$\lambda$  Sagittarii  
Constellation: Sagittarius  
RA 18h 29' 6.7"  
Decl.  $-25^{\circ} 24' 3''$   
Section 7/13  
Apparent magnitude: 2.82  
Absolute magnitude: 0.95

**117. Kaus Meridionalis**

$\delta$  Sagittarii  
Constellation: Sagittarius  
RA 18h 22' 10.7"  
Decl.  $-29^{\circ} 49' 0''$   
Section 7/13  
Apparent magnitude: 2.72  
Absolute magnitude: -2.14

**111. Ke Kouan**

$\beta$  Lupi  
Constellation: Lupus  
RA 14h 59' 45.1"  
Decl.  $-43^{\circ} 12' 26''$   
Section 6/10  
Apparent magnitude: 2.68  
Absolute magnitude: -3.35

**197. Ke Kwan**

$\kappa$  Centauri  
Constellation: Centaurus  
RA 15h 0' 22.3"  
Decl.  $-42^{\circ} 10' 38''$   
Section 6/11  
Apparent magnitude: 3.13  
Absolute magnitude: -2.96



**57. Kochab**

$\beta$  Ursae Minoris  
 Constellation: Ursa Minor  
 RA 14h 50' 40.2"  
 Decl. 74° 4' 4"  
 Section 6/10  
 Apparent magnitude: 2.07  
 Absolute magnitude: -0.87

**45. Koo She**

$\delta$  Velorum  
 Constellation: Vela  
 RA 8h 45' 12.9"  
 Decl. -54° 46' 38"  
 Section 4/6  
 Apparent magnitude: 1.95  
 Absolute magnitude: 0.01

**127. Kornephoros**

$\beta$  Herculis  
 Constellation: Hercules  
 RA 16h 31' 1"  
 Decl. 21° 27' 0"  
 Section 7/12  
 Apparent magnitude: 2.78  
 Absolute magnitude: -0.5

**108. Kraz**

$\beta$  Corvi  
 Constellation: Corvus  
 RA 12h 35' 21.7"  
 Decl. -23° 29' 5"  
 Section 5/9  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.51

**126. Kursa**

$\beta$  Eridani  
 Constellation: Eridanus  
 RA 5h 8' 45.6"  
 Decl. -5° 3' 5"  
 Section 3/4  
 Apparent magnitude: 2.78  
 Absolute magnitude: 0.6

**191.  $\lambda$  Centauri**

Constellation: Centaurus  
 RA 11h 36' 38.6"  
 Decl. -63° 7' 20"  
 Section 5/8  
 Apparent magnitude: 3.11  
 Absolute magnitude: -2.39

**115. Lesath**

$\nu$  Scorpii  
 Constellation: Scorpius  
 RA 17h 32' 1.4"  
 Decl. -37° 18' 3"  
 Section 7/12  
 Apparent magnitude: 2.7  
 Absolute magnitude: -3.31

**92. Markab**

$\alpha$  Pegasi  
 Constellation: Pegasus  
 RA 23h 5' 41"  
 Decl. 15° 18' 1"  
 Section 1/16  
 Apparent magnitude: 2.49  
 Absolute magnitude: -0.67

**90. Markeb**

$\kappa$  Velorum  
 Constellation: Vela  
 RA 9h 22' 41.2"  
 Decl. -55° 5' 25"  
 Section 4/7  
 Apparent magnitude: 2.47  
 Absolute magnitude: -3.62

**161. Matar**

$\eta$  Pegasi  
 Constellation: Pegasus  
 RA 22h 43' 52.3"  
 Decl. 30° 19' 0"  
 Section 1/16  
 Apparent magnitude: 2.93  
 Absolute magnitude: -1.16

**185. Mebsuta**

$\epsilon$  Geminorum  
 Constellation: Gemini  
 RA 6h 45' 4.2"  
 Decl. 25° 6' 4"  
 Section 3/5  
 Apparent magnitude: 3.06  
 Absolute magnitude: -4.15

**78. Men**

$\alpha$  Lupi  
 Constellation: Lupus  
 RA 14h 43' 10.1"  
 Decl. -47° 27' 59"  
 Section 6/10  
 Apparent magnitude: 2.3  
 Absolute magnitude: -3.83

**41. Menkalinan**

$\beta$  Aurigae  
 Constellation: Auriga  
 RA 6h 0' 53.2"  
 Decl. 44° 56' 5"  
 Section 3/5  
 Apparent magnitude: 1.9  
 Absolute magnitude: -0.1

**93. Menkar**

$\alpha$  Ceti  
 Constellation: Cetus  
 RA 3h 3' 14.9"  
 Decl. 4° 9' 4"  
 Section 2/3  
 Apparent magnitude: 2.54  
 Absolute magnitude: -1.61

**53. Menkent**

$\theta$  Centauri  
 Constellation: Centaurus  
 RA 14h 7' 46.7"  
 Decl. -36° 27' 3"  
 Section 6/10  
 Apparent magnitude: 2.06  
 Absolute magnitude: 0.7

**80. Merak**

$\beta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 2' 56.8"  
 Decl. 56° 16' 5"  
 Section 5/8  
 Apparent magnitude: 2.34  
 Absolute magnitude: 0.41

**28. Miaplacidus**

$\beta$  Carinae  
 Constellation: Carina  
 RA 9h 13' 23.7"  
 Decl. -69° 47' 37"  
 Section 4/7  
 Apparent magnitude: 1.67  
 Absolute magnitude: -0.99

**20. Mimosa**

$\beta$  Crucis  
 Constellation: Crux  
 RA 12h 48' 48.9"  
 Decl. -59° 47' 22"  
 Section 5/9  
 Apparent magnitude: 1.26  
 Absolute magnitude: -3.91

**180. Minkar**

$\epsilon$  Corvi  
 Constellation: Corvus  
 RA 12h 11' 4.7"  
 Decl. -22° 43' 2"  
 Section 5/9  
 Apparent magnitude: 3.02  
 Absolute magnitude: -1.82

**73. Mintaka**

$\delta$  Orionis  
 Constellation: Orion  
 RA 5h 32' 57.2"  
 Decl. 0° 17' 1"  
 Section 3/4  
 Apparent magnitude: 2.25  
 Absolute magnitude: -4.99

**55. Mirach**

$\beta$  Andromedae  
 Constellation: Andromeda  
 RA 1h 10' 46.4"  
 Decl. 35° 43' 0"  
 Section 1/1  
 Apparent magnitude: 2.07  
 Absolute magnitude: -1.86

**33. Mirfak**

$\alpha$  Persei  
 Constellation: Perseus  
 RA 3h 25' 39.2"  
 Decl. 49° 55' 3"  
 Section 2/3  
 Apparent magnitude: 1.8  
 Absolute magnitude: -4.49

**46. Mirzam**

$\beta$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 23' 30.9"  
 Decl. -17° 57' 5"  
 Section 3/5  
 Apparent magnitude: 1.98  
 Absolute magnitude: -3.95

**69. Mizar**

$\zeta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 13h 24' 40.1"  
 Decl. 54° 49' 4"  
 Section 5/9  
 Apparent magnitude: 2.23  
 Absolute magnitude: 0.33

**175.  $\mu^1$  Scorpii**

Constellation: Scorpius  
 RA 16h 53' 7.6"  
 Decl. -38° 4' 39"  
 Section 7/12  
 Apparent magnitude: 3  
 Absolute magnitude: -4.01

**64. Muhlifain**

$\gamma$  Centauri  
 Constellation: Centaurus  
 RA 12h 42' 32.8"  
 Decl. -49° 3' 40"  
 Section 5/9  
 Apparent magnitude: 2.2  
 Absolute magnitude: -0.81

**110. Muphrid**

$\eta$  Boötis  
 Constellation: Boötes  
 RA 13h 55' 33.9"  
 Decl. 18° 18' 2"  
 Section 6/10  
 Apparent magnitude: 2.68  
 Absolute magnitude: 2.41

**113.  $\mu$  Velorum**

Constellation: Vela  
 RA 10h 47' 34.2"  
 Decl. -49° 31' 6"  
 Section 5/8  
 Apparent magnitude: 2.69  
 Absolute magnitude: -0.06

**65. Naos**

$\zeta$  Puppis  
 Constellation: Puppis  
 RA 8h 4' 14.1"  
 Decl. -40° 3' 32"  
 Section 4/6  
 Apparent magnitude: 2.21  
 Absolute magnitude: -5.95

**132. Nihal**

$\beta$  Leporis  
 Constellation: Lepus  
 RA 5h 29' 2.3"  
 Decl. -20° 44' 4"  
 Section 3/4  
 Apparent magnitude: 2.81  
 Absolute magnitude: -0.63

**190.  $\nu$  Hydrae**

Constellation: Hydra  
 RA 10h 50' 32.3"  
 Decl. -16° 17' 27"  
 Section 5/8  
 Apparent magnitude: 3.11  
 Absolute magnitude: -0.03

**52. Nunki**

$\sigma$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 56' 24.7"  
 Decl. -26° 16' 2"  
 Section 7/13  
 Apparent magnitude: 2.05  
 Absolute magnitude: -2.14

**199. N Velorum**

Constellation: Vela  
 RA 9h 31' 13.3189"  
 Decl. -57° 2' 3.7578"  
 Section 4/7  
 Apparent magnitude: 3.16  
 Absolute magnitude: -1.15

**179.  $\phi^2$  Canis Majoris**

Constellation: Canis Major  
 RA 7h 3' 1.47211"  
 Decl. -23° 49' 59.8523"  
 Section 3/5  
 Apparent magnitude: 3.02  
 Absolute magnitude: -6.46

**44. Peacock**

$\alpha$  Pavonis  
 Constellation: Pavo  
 RA 20h 27' 6"  
 Decl. -56° 40' 27"  
 Section 8/14  
 Apparent magnitude: 1.93  
 Absolute magnitude: -1.82

**192. Persian**

$\alpha$  Indi  
 Constellation: Indus  
 RA 20h 38' 51.6"  
 Decl. -47° 13' 32"  
 Section 8/14  
 Apparent magnitude: 3.11  
 Absolute magnitude: 0.65

**106. Phact**

$\alpha$  Columbae  
 Constellation: Columba  
 RA 5h 40' 19.2"  
 Decl. -34° 3' 55"  
 Section 3/4  
 Apparent magnitude: 2.65  
 Absolute magnitude: -1.93

**85. Phecda**

$\gamma$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 54' 47.8"  
 Decl. 53° 35' 3"  
 Section 5/8  
 Apparent magnitude: 2.41  
 Absolute magnitude: 0.36

**174. Pherkad Major**

$\gamma$  Ursae Minoris  
 Constellation: Ursa Minor  
 RA 15h 20' 42.8"  
 Decl. 71° 46' 0"  
 Section 6/11  
 Apparent magnitude: 3  
 Absolute magnitude: -2.84

**178. Phurad**

$\zeta$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 21' 1.4"  
 Decl. -30° 4' 2"  
 Section 3/5  
 Apparent magnitude: 3.02  
 Absolute magnitude: -2.05

**200.  $\pi$  Herculis**

Constellation: Hercules  
 RA 17h 15' 41.5"  
 Decl. 36° 47' 2"  
 Section 7/12  
 Apparent magnitude: 3.16  
 Absolute magnitude: -2.1

**116.  $\pi$  Puppis**

Constellation: Puppis  
 RA 7h 17' 47.8"  
 Decl. -37° 7' 54"  
 Section 3/5  
 Apparent magnitude: 2.71  
 Absolute magnitude: -4.92

**154.  $\pi$  Scorpii**

Constellation: Scorpius  
 RA 15h 59' 58.5"  
 Decl.  $-26^{\circ} 9' 5''$   
 Section 6/11  
 Apparent magnitude: 2.89  
 Absolute magnitude: -2.85

**17. Pollux**

$\beta$  Geminorum  
 Constellation: Gemini  
 RA 7h 46' 26.7"  
 Decl.  $27^{\circ} 58' 4''$   
 Section 4/6  
 Apparent magnitude: 1.14  
 Absolute magnitude: 1.07

**122. Porrima**

$\gamma$  Virginis  
 Constellation: Virgo  
 RA 12h 41' 39.6434"  
 Decl.  $-1^{\circ} 26' 57.7421''$   
 Section 5/9  
 Apparent magnitude: 2.74  
 Absolute magnitude: 2.38

**8. Procyon**

$\alpha$  Canis Minoris  
 Constellation: Canis Minor  
 RA 7h 40' 16.3"  
 Decl.  $5^{\circ} 10' 3''$   
 Section 4/6  
 Apparent magnitude: 0.36  
 Absolute magnitude: 2.64

**173.  $\psi$  Ursae Majoris**

Constellation: Ursa Major  
 RA 11h 10' 41.8"  
 Decl.  $44^{\circ} 23' 5''$   
 Section 5/8  
 Apparent magnitude: 3  
 Absolute magnitude: -0.27

**59. Rasalhague**

$\alpha$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 17h 35' 47.6"  
 Decl.  $12^{\circ} 32' 5''$   
 Section 7/12  
 Apparent magnitude: 2.08  
 Absolute magnitude: 1.3

**167. Ras Elased Australis**

$\epsilon$  Leonis  
 Constellation: Leo  
 RA 9h 46' 53.9"  
 Decl.  $23^{\circ} 41' 1''$   
 Section 4/7  
 Apparent magnitude: 2.97  
 Absolute magnitude: -1.46

**129. Rastaban**

$\beta$  Draconis  
 Constellation: Draco  
 RA 17h 30' 51.1"  
 Decl.  $52^{\circ} 17' 1''$   
 Section 7/12  
 Apparent magnitude: 2.79  
 Absolute magnitude: -2.43

**35. Regor**

$\gamma$  Velorum  
 Constellation: Vela  
 RA 8h 9' 31.9501"  
 Decl.  $-47^{\circ} 20' 11.7108''$   
 Section 4/6  
 Apparent magnitude: 1.81  
 Absolute magnitude: -5.25

**21. Regulus**

$\alpha$  Leonis  
 Constellation: Leo  
 RA 10h 9' 21.3"  
 Decl.  $11^{\circ} 52' 3''$   
 Section 4/7  
 Apparent magnitude: 1.36  
 Absolute magnitude: -0.52

**7. Rigel**

$\beta$  Orionis  
 Constellation: Orion  
 RA 5h 15' 25.7"  
 Decl.  $-8^{\circ} 10' 5''$   
 Section 3/4  
 Apparent magnitude: 0.15v  
 Absolute magnitude: -6.72v

**109. Ruchbah**

$\delta$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 1h 27' 2.5"  
 Decl.  $60^{\circ} 19' 5''$   
 Section 1/1  
 Apparent magnitude: 2.66  
 Absolute magnitude: 0.24

**133. Rutilicus**

$\zeta$  Herculis  
 Constellation: Hercules  
 RA 16h 41' 59.1"  
 Decl.  $31^{\circ} 34' 1''$   
 Section 7/12  
 Apparent magnitude: 2.81  
 Absolute magnitude: 2.64

**86. Sabik**

$\eta$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 17h 11' 26.4"  
 Decl.  $-15^{\circ} 44' 4''$   
 Section 7/12  
 Apparent magnitude: 2.43  
 Absolute magnitude: 0.37

**164. Sadalmelik**

$\alpha$  Aquarii  
 Constellation: Aquarius  
 RA 22h 6' 44"  
 Decl.  $0^{\circ} 13' 4''$   
 Section 8/15  
 Apparent magnitude: 2.95  
 Absolute magnitude: -3.88

**158. Sadalsuud**

$\beta$  Aquarii  
 Constellation: Aquarius  
 RA 21h 32' 31.9"  
 Decl.  $-5^{\circ} 29' 2''$   
 Section 8/15  
 Apparent magnitude: 2.9  
 Absolute magnitude: -3.47

**70. Sadr**

$\gamma$  Cygni  
 Constellation: Cygnus  
 RA 20h 22' 53.6"  
 Decl.  $40^{\circ} 19' 0''$   
 Section 8/14  
 Apparent magnitude: 2.23  
 Absolute magnitude: -6.12

**56. Saiph**

$\kappa$  Orionis  
 Constellation: Orion  
 RA 5h 48' 38.1"  
 Decl.  $-9^{\circ} 39' 5''$   
 Section 3/4  
 Apparent magnitude: 2.07  
 Absolute magnitude: -4.65

**39. Sargas**

$\theta$  Scorpii  
 Constellation: Scorpius  
 RA 17h 38' 39"  
 Decl.  $-43^{\circ} 0' 28''$   
 Section 7/12  
 Apparent magnitude: 1.86  
 Absolute magnitude: -2.75

**196. Sarin**

$\delta$  Herculis  
 Constellation: Hercules  
 RA 17h 15' 47.5"  
 Decl.  $24^{\circ} 49' 0''$   
 Section 7/12  
 Apparent magnitude: 3.12  
 Absolute magnitude: 1.21

**87. Scheat**

$\beta$  Pegasi  
 Constellation: Pegasus  
 RA 23h 4' 40.4"  
 Decl.  $28^{\circ} 11' 0''$   
 Section 1/16  
 Apparent magnitude: 2.44v  
 Absolute magnitude: -1.49

**71. Schedar**

$\alpha$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 0h 41' 34.1"  
 Decl. 56° 38' 1"  
 Section 1/1  
 Apparent magnitude: 2.24  
 Absolute magnitude: -1.99

**183. Seginus**

$\gamma$  Boötis  
 Constellation: Boötes  
 RA 14h 32' 49.3"  
 Decl. 38° 13' 4"  
 Section 6/10  
 Apparent magnitude: 3.04  
 Absolute magnitude: 0.96

**24. Shaula**

$\lambda$  Scorpii  
 Constellation: Scorpius  
 RA 17h 34' 52"  
 Decl. -37° 6' 5"  
 Section 7/12  
 Apparent magnitude: 1.62  
 Absolute magnitude: -5.05

**104. Sheratan**

$\beta$  Arietis  
 Constellation: Aries  
 RA 1h 55' 40"  
 Decl. 20° 53' 5"  
 Section 2/2  
 Apparent magnitude: 2.64  
 Absolute magnitude: 1.33

**1. Sirius**

$\alpha$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 45' 57.4"  
 Decl. -16° 44' 3"  
 Section 3/5  
 Apparent magnitude: -1.46  
 Absolute magnitude: 1.43

**16. Spica**

$\alpha$  Virginis  
 Constellation: Virgo  
 RA 13h 26' 10.2"  
 Decl. -11° 15' 2"  
 Section 5/9  
 Apparent magnitude: 0.97  
 Absolute magnitude: -3.56

**68. Suhail**

$\lambda$  Velorum  
 Constellation: Vela  
 RA 9h 8' 40.7"  
 Decl. -43° 30' 29"  
 Section 4/7  
 Apparent magnitude: 2.23  
 Absolute magnitude: -3.99

**187. Tais**

$\delta$  Draconis  
 Constellation: Draco  
 RA 19h 12' 33.3"  
 Decl. 67° 41' 3"  
 Section 7/13  
 Apparent magnitude: 3.07  
 Absolute magnitude: 0.63

**194. Talita**

$\iota$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 9h 0' 28"  
 Decl. 47° 58' 0"  
 Section 4/7  
 Apparent magnitude: 3.12  
 Absolute magnitude: 2.29

**186. Tania Australis**

$\mu$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 10h 23' 25.5"  
 Decl. 41° 24' 2"  
 Section 4/7  
 Apparent magnitude: 3.06  
 Absolute magnitude: -1.35

**118. Tarazed**

$\gamma$  Aquilae  
 Constellation: Aquila  
 RA 19h 47' 8.3"  
 Decl. 10° 39' 3"  
 Section 8/14  
 Apparent magnitude: 2.72  
 Absolute magnitude: -3.03

**162.  $\tau$  Puppis**

Constellation: Puppis  
 RA 6h 50' 23.7"  
 Decl. -50° 38' 14"  
 Section 3/5  
 Apparent magnitude: 2.94  
 Absolute magnitude: -0.8

**135.  $\tau$  Scorpii**

Constellation: Scorpius  
 RA 16h 37' 2.2"  
 Decl. -28° 15' 1"  
 Section 7/12  
 Apparent magnitude: 2.82  
 Absolute magnitude: -2.78

**148. Tejat**

$\mu$  Geminorum  
 Constellation: Gemini  
 RA 6h 24' 4.8"  
 Decl. 22° 30' 0"  
 Section 3/5  
 Apparent magnitude: 2.87v  
 Absolute magnitude: -1.39v

**107.  $\theta$  Aurigae**

Constellation: Auriga  
 RA 6h 0' 59"  
 Decl. 37° 12' 4"  
 Section 3/5  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.98

**121.  $\theta$  Carinae**

Constellation: Carina  
 RA 10h 43' 37.3"  
 Decl. -64° 29' 30"  
 Section 5/8  
 Apparent magnitude: 2.74  
 Absolute magnitude: -2.91

**138. Turais**

$\rho$  Puppis  
 Constellation: Puppis  
 RA 8h 8' 19.9"  
 Decl. -24° 21' 3"  
 Section 4/6  
 Apparent magnitude: 2.83  
 Absolute magnitude: 1.41

**103. Unukalhai**

$\alpha$  Serpentis  
 Constellation: Serpens  
 RA 15h 45' 10.8"  
 Decl. 6° 22' 0"  
 Section 6/11  
 Apparent magnitude: 2.63  
 Absolute magnitude: 0.87

**160.  $\nu$  Carinae**

Constellation: Carina  
 RA 9h 47' 33.8"  
 Decl. -65° 9' 29"  
 Section 4/7  
 Apparent magnitude: 2.92  
 Absolute magnitude: -5.56

**5. Vega**

$\alpha$  Lyrae  
 Constellation: Lyra  
 RA 18h 37' 33.9"  
 Decl. 38° 48' 0"  
 Section 7/13  
 Apparent magnitude: 0.03  
 Absolute magnitude: 0.58

**144. Vindemiatrix**

$\epsilon$  Virginis  
 Constellation: Virgo  
 RA 13h 3' 5.9"  
 Decl. 10° 51' 3"  
 Section 5/9  
 Apparent magnitude: 2.85  
 Absolute magnitude: 0.37

**193. Wazn** $\beta$  Columbae

Constellation: Columba

RA 5h 51' 36.8"

Decl.  $-35^{\circ} 45' 44''$ 

Section 3/4

Apparent magnitude: 3.12

Absolute magnitude: 1.02

**77. Wei** $\epsilon$  Scorpii

Constellation: Scorpius

RA 16h 51' 21.9"

Decl.  $-34^{\circ} 19' 3''$ 

Section 7/12

Apparent magnitude: 2.29

Absolute magnitude: 0.78

**36. Wezen** $\delta$  Canis Majoris

Constellation: Canis Major

RA 7h 9' 8.6"

Decl.  $-26^{\circ} 25' 2''$ 

Section 3/5

Apparent magnitude: 1.83

Absolute magnitude: -6.87

**119. Yed Prior** $\delta$  Ophiuchi

Constellation: Ophiuchus

RA 16h 15' 19"

Decl.  $-3^{\circ} 44' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: -0.86

**165. Zaurak** $\gamma$  Eridani

Constellation: Eridanus

RA 3h 58' 53.6"

Decl.  $-13^{\circ} 27' 2''$ 

Section 2/3

Apparent magnitude: 2.97

Absolute magnitude: -1.19

**195.  $\zeta$  Aræ**

Constellation: Ara

RA 17h 0' 9.4"

Decl.  $-56^{\circ} 1' 2''$ 

Section 7/12

Apparent magnitude: 3.12

Absolute magnitude: -3.11

**95.  $\zeta$  Centauri**

Constellation: Centaurus

RA 13h 56' 42.2"

Decl.  $-47^{\circ} 22' 43''$ 

Section 6/10

Apparent magnitude: 2.55

Absolute magnitude: -2.81

**189.  $\zeta$  Hydræ**

Constellation: Hydra

RA 8h 56' 22.2"

Decl.  $5^{\circ} 52' 2''$ 

Section 4/6

Apparent magnitude: 3.11

Absolute magnitude: -0.21

**140.  $\zeta$  Persei**

Constellation: Perseus

RA 3h 55' 18"

Decl.  $31^{\circ} 56' 1''$ 

Section 2/3

Apparent magnitude: 2.84

Absolute magnitude: -4.55

**96. Zosma** $\delta$  Leonis

Constellation: Leo

RA 11h 15' 5.4"

Decl.  $20^{\circ} 25' 1''$ 

Section 5/8

Apparent magnitude: 2.56

Absolute magnitude: 1.32

**105. Zubenelgenubi** $\alpha^2$  Librae

Constellation: Libra

RA 14h 50' 52.7131"

Decl.  $-16^{\circ} 2' 30.3955''$ 

Section 6/10

Apparent magnitude: 2.64

Absolute magnitude: 0.77

**102. Zubeneshamali** $\beta$  Librae

Constellation: Libra

RA 15h 18' 0.3"

Decl.  $-9^{\circ} 27' 0''$ 

Section 6/11

Apparent magnitude: 2.61

Absolute magnitude: -0.84

## Stars According to Apparent Magnitude

### 1. Sirius

$\alpha$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 45' 57.4"  
 Decl.  $-16^{\circ} 44' 3''$   
 Section 3/5  
 Apparent magnitude: -1.46  
 Absolute magnitude: 1.43

### 2. Canopus

$\alpha$  Carinae  
 Constellation: Carina  
 RA 6h 24' 21.8"  
 Decl.  $-52^{\circ} 42' 23''$   
 Section 3/5  
 Apparent magnitude: -0.73  
 Absolute magnitude: -5.64

### 3. $\alpha$ Centauri

Constellation: Centaurus  
 RA 14h 39' 35.0631"  
 Decl.  $-60^{\circ} 50' 15.0992''$   
 Section 6/10  
 Apparent magnitude: -0.29  
 Absolute magnitude: 4.06

### 4. Arcturus

$\alpha$  Boötis  
 Constellation: Boötes  
 RA 14h 16' 30.3"  
 Decl.  $19^{\circ} 5' 1''$   
 Section 6/10  
 Apparent magnitude: -0.05  
 Absolute magnitude: -0.31

### 5. Vega

$\alpha$  Lyrae  
 Constellation: Lyra  
 RA 18h 37' 33.9"  
 Decl.  $38^{\circ} 48' 0''$   
 Section 7/13  
 Apparent magnitude: 0.03  
 Absolute magnitude: 0.58

### 6. Capella

$\alpha$  Aurigae  
 Constellation: Auriga  
 RA 5h 18' 3.5"  
 Decl.  $46^{\circ} 0' 5''$   
 Section 3/4  
 Apparent magnitude: 0.07  
 Absolute magnitude: -0.49

### 7. Rigel

$\beta$  Orionis  
 Constellation: Orion  
 RA 5h 15' 25.7"  
 Decl.  $-8^{\circ} 10' 5''$   
 Section 3/4  
 Apparent magnitude: 0.15v  
 Absolute magnitude: -6.72v

### 8. Procyon

$\alpha$  Canis Minoris  
 Constellation: Canis Minor  
 RA 7h 40' 16.3"  
 Decl.  $5^{\circ} 10' 3''$   
 Section 4/6  
 Apparent magnitude: 0.36  
 Absolute magnitude: 2.64

### 9. Achernar

$\alpha$  Eridani  
 Constellation: Eridanus  
 RA 1h 38' 24"  
 Decl.  $-57^{\circ} 8' 36''$   
 Section 2/2  
 Apparent magnitude: 0.45  
 Absolute magnitude: -2.77

### 10. Betelgeuse

$\alpha$  Orionis  
 Constellation: Orion  
 RA 5h 56' 10.4"  
 Decl.  $7^{\circ} 24' 3''$   
 Section 3/4  
 Apparent magnitude: 0.55v  
 Absolute magnitude: -5.04v

### 11. Hadar

$\beta$  Centauri  
 Constellation: Centaurus  
 RA 14h 5' 8.7"  
 Decl.  $-60^{\circ} 27' 41''$   
 Section 6/10  
 Apparent magnitude: 0.61  
 Absolute magnitude: -5.42

### 12. Altair

$\alpha$  Aquilae  
 Constellation: Aquila  
 RA 19h 51' 41.1"  
 Decl.  $8^{\circ} 55' 0''$   
 Section 8/14  
 Apparent magnitude: 0.77  
 Absolute magnitude: 2.21

### 14. Aldebaran

$\alpha$  Tauri  
 Constellation: Taurus  
 RA 4h 36' 59.1"  
 Decl.  $16^{\circ} 32' 4''$   
 Section 3/4  
 Apparent magnitude: 0.86v  
 Absolute magnitude: -0.64v

### 15. Antares

$\alpha$  Scorpii  
 Constellation: Scorpius  
 RA 16h 30' 32.7"  
 Decl.  $-26^{\circ} 28' 1''$   
 Section 7/12  
 Apparent magnitude: 0.95v  
 Absolute magnitude: -5.39v

### 16. Spica

$\alpha$  Virginis  
 Constellation: Virgo  
 RA 13h 26' 10.2"  
 Decl.  $-11^{\circ} 15' 2''$   
 Section 5/9  
 Apparent magnitude: 0.97  
 Absolute magnitude: -3.56

### 17. Pollux

$\beta$  Geminorum  
 Constellation: Gemini  
 RA 7h 46' 26.7"  
 Decl.  $27^{\circ} 58' 4''$   
 Section 4/6  
 Apparent magnitude: 1.14  
 Absolute magnitude: 1.07

### 18. Fomalhaut

$\alpha$  Piscis Austrini  
 Constellation: Piscis Austrinus  
 RA 22h 57' 39.0465"  
 Decl.  $-29^{\circ} 37' 20.05''$   
 Section 1/16  
 Apparent magnitude: 1.15  
 Absolute magnitude: 1.72

### 19. Deneb

$\alpha$  Cygni  
 Constellation: Cygnus  
 RA 20h 42' 3.8"  
 Decl.  $45^{\circ} 20' 5''$   
 Section 8/14  
 Apparent magnitude: 1.24  
 Absolute magnitude: -8.74

### 20. Mimosa

$\beta$  Crucis  
 Constellation: Crux  
 RA 12h 48' 48.9"  
 Decl.  $-59^{\circ} 47' 22''$   
 Section 5/9  
 Apparent magnitude: 1.26  
 Absolute magnitude: -3.91

**21. Regulus**

$\alpha$  Leonis  
 Constellation: Leo  
 RA 10h 9' 21.3"  
 Decl. 11° 52' 3"  
 Section 4/7  
 Apparent magnitude: 1.36  
 Absolute magnitude: -0.52

**22. Adhara**

$\epsilon$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 59' 21.2"  
 Decl. -28° 59' 5"  
 Section 3/5  
 Apparent magnitude: 1.5  
 Absolute magnitude: -4.1

**23. Castor**

$\alpha$  Geminorum  
 Constellation: Gemini  
 RA 7h 34' 35.863"  
 Decl. 31° 53' 17.79"  
 Section 4/6  
 Apparent magnitude: 1.58  
 Absolute magnitude: 0.59

**24. Shaula**

$\lambda$  Scorpii  
 Constellation: Scorpius  
 RA 17h 34' 52"  
 Decl. -37° 6' 5"  
 Section 7/12  
 Apparent magnitude: 1.62  
 Absolute magnitude: -5.05

**25. Gacrux**

$\gamma$  Crucis  
 Constellation: Crux  
 RA 12h 32' 12.2"  
 Decl. -57° 13' 0"  
 Section 5/9  
 Apparent magnitude: 1.63  
 Absolute magnitude: -0.52

**26. Bellatrix**

$\gamma$  Orionis  
 Constellation: Orion  
 RA 5h 26' 7.5"  
 Decl. 6° 21' 5"  
 Section 3/4  
 Apparent magnitude: 1.64  
 Absolute magnitude: -2.72

**27. Elnath**

$\beta$  Tauri  
 Constellation: Taurus  
 RA 5h 27' 27.8"  
 Decl. 28° 37' 1"  
 Section 3/4  
 Apparent magnitude: 1.66  
 Absolute magnitude: -1.36

**28. Miaplacidus**

$\beta$  Carinae  
 Constellation: Carina  
 RA 9h 13' 23.7"  
 Decl. -69° 47' 37"  
 Section 4/7  
 Apparent magnitude: 1.67  
 Absolute magnitude: -0.99

**29. Alnilam**

$\epsilon$  Orionis  
 Constellation: Orion  
 RA 5h 37' 9.2"  
 Decl. -1° 11' 2"  
 Section 3/4  
 Apparent magnitude: 1.69  
 Absolute magnitude: -6.38

**30. Alnair**

$\alpha$  Gruis  
 Constellation: Grus  
 RA 22h 9' 23.4"  
 Decl. -46° 52' 14"  
 Section 8/15  
 Apparent magnitude: 1.74  
 Absolute magnitude: -0.72

**31. Alnitak**

$\zeta$  Orionis  
 Constellation: Orion  
 RA 5h 41' 41.6"  
 Decl. -1° 56' 0"  
 Section 3/4  
 Apparent magnitude: 1.75  
 Absolute magnitude: -5.25

**32. Alioth**

$\epsilon$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 12h 54' 50.3"  
 Decl. 55° 51' 3"  
 Section 5/9  
 Apparent magnitude: 1.77  
 Absolute magnitude: -0.2

**33. Mirfak**

$\alpha$  Persei  
 Constellation: Perseus  
 RA 3h 25' 39.2"  
 Decl. 49° 55' 3"  
 Section 2/3  
 Apparent magnitude: 1.8  
 Absolute magnitude: -4.49

**34. Dubhe**

$\alpha$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 4' 51.2"  
 Decl. 61° 39' 0"  
 Section 5/8  
 Apparent magnitude: 1.8  
 Absolute magnitude: -1.09

**35. Regor**

$\gamma$  Velorum  
 Constellation: Vela  
 RA 8h 9' 31.9501"  
 Decl. -47° 20' 11.7108"  
 Section 4/6  
 Apparent magnitude: 1.81  
 Absolute magnitude: -5.25

**36. Wezen**

$\delta$  Canis Majoris  
 Constellation: Canis Major  
 RA 7h 9' 8.6"  
 Decl. -26° 25' 2"  
 Section 3/5  
 Apparent magnitude: 1.83  
 Absolute magnitude: -6.87

**37. Kaus Australis**

$\epsilon$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 25' 24"  
 Decl. -34° 22' 2"  
 Section 7/13  
 Apparent magnitude: 1.84  
 Absolute magnitude: -1.39

**38. Alkaid**

$\eta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 13h 48' 16.1"  
 Decl. 49° 13' 1"  
 Section 6/10  
 Apparent magnitude: 1.86  
 Absolute magnitude: -0.59

**39. Sargas**

$\theta$  Scorpii  
 Constellation: Scorpius  
 RA 17h 38' 39"  
 Decl. -43° 0' 28"  
 Section 7/12  
 Apparent magnitude: 1.86  
 Absolute magnitude: -2.75

**40. Avior**

$\epsilon$  Carinae  
 Constellation: Carina  
 RA 8h 22' 53.5"  
 Decl. -59° 34' 10"  
 Section 4/6  
 Apparent magnitude: 1.87  
 Absolute magnitude: -4.57

**41. Menkalinan**

$\beta$  Aurigae  
 Constellation: Auriga  
 RA 6h 0' 53.2"  
 Decl. 44° 56' 5"  
 Section 3/5  
 Apparent magnitude: 1.9  
 Absolute magnitude: -0.1

**42. Atria**

$\alpha$  Trianguli Australis  
 Constellation: Triangulum Australe  
 RA 16h 48' 39.8951"  
 Decl.  $-69^{\circ} 1' 39.7626''$   
 Section 7/12  
 Apparent magnitude: 1.92  
 Absolute magnitude: -3.61

**43. Alhena**

$\gamma$  Geminorum  
 Constellation: Gemini  
 RA 6h 38' 46.8"  
 Decl.  $16^{\circ} 22' 5''$   
 Section 3/5  
 Apparent magnitude: 1.93  
 Absolute magnitude: -0.6

**44. Peacock**

$\alpha$  Pavonis  
 Constellation: Pavo  
 RA 20h 27' 6"  
 Decl.  $-56^{\circ} 40' 27''$   
 Section 8/14  
 Apparent magnitude: 1.93  
 Absolute magnitude: -1.82

**45. Koo She**

$\delta$  Velorum  
 Constellation: Vela  
 RA 8h 45' 12.9"  
 Decl.  $-54^{\circ} 46' 38''$   
 Section 4/6  
 Apparent magnitude: 1.95  
 Absolute magnitude: 0.01

**46. Mirzam**

$\beta$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 23' 30.9"  
 Decl.  $-17^{\circ} 57' 5''$   
 Section 3/5  
 Apparent magnitude: 1.98  
 Absolute magnitude: -3.95

**47. Alphard**

$\alpha$  Hydrae  
 Constellation: Hydra  
 RA 9h 28' 29.8"  
 Decl.  $-8^{\circ} 44' 2''$   
 Section 4/7  
 Apparent magnitude: 1.98  
 Absolute magnitude: -1.7

**49. Algieba**

$\gamma$  Leonis  
 Constellation: Leo  
 RA 10h 19' 58.3506"  
 Decl.  $19^{\circ} 50' 29.3468''$   
 Section 4/7  
 Apparent magnitude: 2  
 Absolute magnitude: -0.93

**50. Hamal**

$\alpha$  Arietis  
 Constellation: Aries  
 RA 2h 8' 13.2"  
 Decl.  $23^{\circ} 32' 5''$   
 Section 2/2  
 Apparent magnitude: 2.01  
 Absolute magnitude: 0.48

**51. Diphda**

$\beta$  Ceti  
 Constellation: Cetus  
 RA 0h 44' 31"  
 Decl.  $-17^{\circ} 53' 0''$   
 Section 1/1  
 Apparent magnitude: 2.04  
 Absolute magnitude: -0.3

**52. Nunki**

$\sigma$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 56' 24.7"  
 Decl.  $-26^{\circ} 16' 2''$   
 Section 7/13  
 Apparent magnitude: 2.05  
 Absolute magnitude: -2.14

**53. Menkent**

$\theta$  Centauri  
 Constellation: Centaurus  
 RA 14h 7' 46.7"  
 Decl.  $-36^{\circ} 27' 3''$   
 Section 6/10  
 Apparent magnitude: 2.06  
 Absolute magnitude: 0.7

**54. Alpheratz**

$\alpha$  Andromedae  
 Constellation: Andromeda  
 RA 0h 9' 20.9"  
 Decl.  $29^{\circ} 11' 3''$   
 Section 1/1  
 Apparent magnitude: 2.07  
 Absolute magnitude: -0.3

**55. Mirach**

$\beta$  Andromedae  
 Constellation: Andromeda  
 RA 1h 10' 46.4"  
 Decl.  $35^{\circ} 43' 0''$   
 Section 1/1  
 Apparent magnitude: 2.07  
 Absolute magnitude: -1.86

**56. Saiph**

$\kappa$  Orionis  
 Constellation: Orion  
 RA 5h 48' 38.1"  
 Decl.  $-9^{\circ} 39' 5''$   
 Section 3/4  
 Apparent magnitude: 2.07  
 Absolute magnitude: -4.65

**57. Kochab**

$\beta$  Ursae Minoris  
 Constellation: Ursa Minor  
 RA 14h 50' 40.2"  
 Decl.  $74^{\circ} 4' 4''$   
 Section 6/10  
 Apparent magnitude: 2.07  
 Absolute magnitude: -0.87

**58. Al Dhanab**

$\beta$  Gruis  
 Constellation: Grus  
 RA 22h 43' 45.8"  
 Decl.  $-46^{\circ} 47' 14''$   
 Section 1/16  
 Apparent magnitude: 2.07v  
 Absolute magnitude: 1.52

**59. Rasalhague**

$\alpha$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 17h 35' 47.6"  
 Decl.  $12^{\circ} 32' 5''$   
 Section 7/12  
 Apparent magnitude: 2.08  
 Absolute magnitude: 1.3

**60. Algol**

$\beta$  Persei  
 Constellation: Perseus  
 RA 3h 9' 22.8"  
 Decl.  $41^{\circ} 1' 3''$   
 Section 2/3  
 Apparent magnitude: 2.09  
 Absolute magnitude: 0.18

**61. Almach**

$\gamma$  Andromedae  
 Constellation: Andromeda  
 RA 2h 3' 53.9523"  
 Decl.  $42^{\circ} 19' 47.0223''$   
 Section 2/2  
 Apparent magnitude: 2.1  
 Absolute magnitude: -3.08

**62. Denebola**

$\beta$  Leonis  
 Constellation: Leo  
 RA 11h 50' 0.1"  
 Decl.  $14^{\circ} 28' 0''$   
 Section 5/8  
 Apparent magnitude: 2.14  
 Absolute magnitude: 1.92

**63. Cih**

$\gamma$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 0h 57' 50.4"  
 Decl.  $60^{\circ} 48' 5''$   
 Section 1/1  
 Apparent magnitude: 2.15v  
 Absolute magnitude: -4.22



**64. Muhlifain**

$\gamma$  Centauri  
 Constellation: Centaurus  
 RA 12h 42' 32.8"  
 Decl.  $-49^{\circ} 3' 40''$   
 Section 5/9  
 Apparent magnitude: 2.2  
 Absolute magnitude: -0.81

**65. Naos**

$\zeta$  Puppis  
 Constellation: Puppis  
 RA 8h 4' 14.1"  
 Decl.  $-40^{\circ} 3' 22''$   
 Section 4/6  
 Apparent magnitude: 2.21  
 Absolute magnitude: -5.95

**66. Aspidiske**

$\iota$  Carinae  
 Constellation: Carina  
 RA 9h 17' 35.1"  
 Decl.  $-59^{\circ} 21' 12''$   
 Section 4/7  
 Apparent magnitude: 2.21v  
 Absolute magnitude: -4.42

**67. Alphecca**

$\alpha$  Coronae Borealis  
 Constellation: Corona Borealis  
 RA 15h 35' 28.3"  
 Decl.  $26^{\circ} 39' 1''$   
 Section 6/11  
 Apparent magnitude: 2.22  
 Absolute magnitude: 0.42

**68. Suhail**

$\lambda$  Velorum  
 Constellation: Vela  
 RA 9h 8' 40.7"  
 Decl.  $-43^{\circ} 30' 29''$   
 Section 4/7  
 Apparent magnitude: 2.23  
 Absolute magnitude: -3.99

**69. Mizar**

$\zeta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 13h 24' 40.1"  
 Decl.  $54^{\circ} 49' 4''$   
 Section 5/9  
 Apparent magnitude: 2.23  
 Absolute magnitude: 0.33

**70. Sadr**

$\gamma$  Cygni  
 Constellation: Cygnus  
 RA 20h 22' 53.6"  
 Decl.  $40^{\circ} 19' 0''$   
 Section 8/14  
 Apparent magnitude: 2.23  
 Absolute magnitude: -6.12

**71. Schedar**

$\alpha$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 0h 41' 34.1"  
 Decl.  $56^{\circ} 38' 1''$   
 Section 1/1  
 Apparent magnitude: 2.24  
 Absolute magnitude: -1.99

**72. Eltanin**

$\gamma$  Draconis  
 Constellation: Draco  
 RA 17h 57' 2.2"  
 Decl.  $51^{\circ} 29' 1''$   
 Section 7/12  
 Apparent magnitude: 2.24  
 Absolute magnitude: -1.04

**73. Mintaka**

$\delta$  Orionis  
 Constellation: Orion  
 RA 5h 32' 57.2"  
 Decl.  $0^{\circ} 17' 1''$   
 Section 3/4  
 Apparent magnitude: 2.25  
 Absolute magnitude: -4.99

**74. Caph**

$\beta$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 0h 10' 10.6"  
 Decl.  $59^{\circ} 15' 0''$   
 Section 1/1  
 Apparent magnitude: 2.28  
 Absolute magnitude: 1.17

**75.  $\epsilon$  Centauri**

Constellation: Centaurus  
 RA 13h 41' 4.3"  
 Decl.  $-53^{\circ} 33' 35''$   
 Section 6/10  
 Apparent magnitude: 2.29  
 Absolute magnitude: -3.02

**76. Dschubba**

$\delta$  Scorpii  
 Constellation: Scorpius  
 RA 16h 1' 25.8"  
 Decl.  $-22^{\circ} 40' 2''$   
 Section 6/11  
 Apparent magnitude: 2.29  
 Absolute magnitude: -3.16

**77. Wei**

$\epsilon$  Scorpii  
 Constellation: Scorpius  
 RA 16h 51' 21.9"  
 Decl.  $-34^{\circ} 19' 3''$   
 Section 7/12  
 Apparent magnitude: 2.29  
 Absolute magnitude: 0.78

**78. Men**

$\alpha$  Lupi  
 Constellation: Lupus  
 RA 14h 43' 10.1"  
 Decl.  $-47^{\circ} 27' 59''$   
 Section 6/10  
 Apparent magnitude: 2.3  
 Absolute magnitude: -3.83

**79.  $\eta$  Centauri**

Constellation: Centaurus  
 RA 14h 36' 41.4"  
 Decl.  $-42^{\circ} 14' 17''$   
 Section 6/10  
 Apparent magnitude: 2.33v  
 Absolute magnitude: -2.55

**80. Merak**

$\beta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 2' 56.8"  
 Decl.  $56^{\circ} 16' 5''$   
 Section 5/8  
 Apparent magnitude: 2.34  
 Absolute magnitude: 0.41

**81. Izar**

$\epsilon$  Boötis  
 Constellation: Boötes  
 RA 14h 45' 47.7"  
 Decl.  $26^{\circ} 59' 4''$   
 Section 6/10  
 Apparent magnitude: 2.35  
 Absolute magnitude: -1.69

**82. Enif**

$\epsilon$  Pegasi  
 Constellation: Pegasus  
 RA 21h 45' 5.7"  
 Decl.  $9^{\circ} 57' 3''$   
 Section 8/15  
 Apparent magnitude: 2.38  
 Absolute magnitude: -4.19

**83. Girtab**

$\kappa$  Scorpii  
 Constellation: Scorpius  
 RA 17h 43' 46.1"  
 Decl.  $-39^{\circ} 2' 16''$   
 Section 7/12  
 Apparent magnitude: 2.39  
 Absolute magnitude: -3.38

**84. Ankaa**

$\alpha$  Phoenicis  
 Constellation: Phoenix  
 RA 0h 27' 11.7"  
 Decl.  $-42^{\circ} 12' 20''$   
 Section 1/1  
 Apparent magnitude: 2.4  
 Absolute magnitude: 0.52

**85. Phecda**

$\gamma$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 54' 47.8"  
 Decl. 53° 35' 3"  
 Section 5/8  
 Apparent magnitude: 2.41  
 Absolute magnitude: 0.36

**86. Sabik**

$\eta$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 17h 11' 26.4"  
 Decl. -15° 44' 4"  
 Section 7/12  
 Apparent magnitude: 2.43  
 Absolute magnitude: 0.37

**87. Scheat**

$\beta$  Pegasi  
 Constellation: Pegasus  
 RA 23h 4' 40.4"  
 Decl. 28° 11' 0"  
 Section 1/16  
 Apparent magnitude: 2.44v  
 Absolute magnitude: -1.49

**88. Aludra**

$\eta$  Canis Majoris  
 Constellation: Canis Major  
 RA 7h 24' 49.6"  
 Decl. -29° 20' 2"  
 Section 3/5  
 Apparent magnitude: 2.45  
 Absolute magnitude: -7.51

**89. Alderamin**

$\alpha$  Cephei  
 Constellation: Cepheus  
 RA 21h 19' 1.2"  
 Decl. 62° 39' 5"  
 Section 8/15  
 Apparent magnitude: 2.45  
 Absolute magnitude: 1.58

**90. Markeb**

$\kappa$  Velorum  
 Constellation: Vela  
 RA 9h 22' 41.2"  
 Decl. -55° 5' 25"  
 Section 4/7  
 Apparent magnitude: 2.47  
 Absolute magnitude: -3.62

**91. Gienah**

$\epsilon$  Cygni  
 Constellation: Cygnus  
 RA 20h 46' 57.6"  
 Decl. 34° 2' 2"  
 Section 8/14  
 Apparent magnitude: 2.48  
 Absolute magnitude: 0.76

**92. Markab**

$\alpha$  Pegasi  
 Constellation: Pegasus  
 RA 23h 5' 41"  
 Decl. 15° 18' 1"  
 Section 1/16  
 Apparent magnitude: 2.49  
 Absolute magnitude: -0.67

**93. Menkar**

$\alpha$  Ceti  
 Constellation: Cetus  
 RA 3h 3' 14.9"  
 Decl. 4° 9' 4"  
 Section 2/3  
 Apparent magnitude: 2.54  
 Absolute magnitude: -1.61

**94. Han**

$\zeta$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 16h 38' 10.8"  
 Decl. -10° 36' 1"  
 Section 7/12  
 Apparent magnitude: 2.54  
 Absolute magnitude: -3.2

**95.  $\zeta$  Centauri**

Constellation: Centaurus  
 RA 13h 56' 42.2"  
 Decl. -47° 22' 43"  
 Section 6/10  
 Apparent magnitude: 2.55  
 Absolute magnitude: -2.81

**96. Zosma**

$\delta$  Leonis  
 Constellation: Leo  
 RA 11h 15' 5.4"  
 Decl. 20° 25' 1"  
 Section 5/8  
 Apparent magnitude: 2.56  
 Absolute magnitude: 1.32

**97. Graffias**

$\beta$  Scorpii  
 Constellation: Scorpius  
 RA 16h 5' 26.232"  
 Decl. -19° 48' 19.63"  
 Section 6/11  
 Apparent magnitude: 2.56  
 Absolute magnitude: -3.5

**98. Arneb**

$\alpha$  Leporis  
 Constellation: Lepus  
 RA 5h 33' 32.8"  
 Decl. -17° 48' 3"  
 Section 3/4  
 Apparent magnitude: 2.58  
 Absolute magnitude: -5.4

**99.  $\delta$  Centauri**

Constellation: Centaurus  
 RA 12h 9' 19.5"  
 Decl. -50° 49' 31"  
 Section 5/9  
 Apparent magnitude: 2.58v  
 Absolute magnitude: -2.84

**100. Gienah Ghurab**

$\gamma$  Corvi  
 Constellation: Corvus  
 RA 12h 16' 45.6"  
 Decl. -17° 38' 4"  
 Section 5/9  
 Apparent magnitude: 2.58  
 Absolute magnitude: -0.94

**101. Ascella**

$\zeta$  Sagittarii  
 Constellation: Sagittarius  
 RA 19h 3' 47.2"  
 Decl. -29° 51' 0"  
 Section 7/13  
 Apparent magnitude: 2.6  
 Absolute magnitude: 0.42

**102. Zubeneshamali**

$\beta$  Librae  
 Constellation: Libra  
 RA 15h 18' 0.3"  
 Decl. -9° 27' 0"  
 Section 6/11  
 Apparent magnitude: 2.61  
 Absolute magnitude: -0.84

**103. Unukalhai**

$\alpha$  Serpentis  
 Constellation: Serpens  
 RA 15h 45' 10.8"  
 Decl. 6° 22' 0"  
 Section 6/11  
 Apparent magnitude: 2.63  
 Absolute magnitude: 0.87

**104. Sheratan**

$\beta$  Arietis  
 Constellation: Aries  
 RA 1h 55' 40"  
 Decl. 20° 53' 5"  
 Section 2/2  
 Apparent magnitude: 2.64  
 Absolute magnitude: 1.33

**105. Zubenelgenubi**

$\alpha^2$  Librae  
 Constellation: Libra  
 RA 14h 50' 52.7131"  
 Decl. -16° 2' 30.3955"  
 Section 6/10  
 Apparent magnitude: 2.64  
 Absolute magnitude: 0.77

**106. Phact**

$\alpha$  Columbae  
 Constellation: Columba  
 RA 5h 40' 19.2"  
 Decl.  $-34^{\circ} 3' 55''$   
 Section 3/4  
 Apparent magnitude: 2.65  
 Absolute magnitude: -1.93

**107.  $\theta$  Aurigæ**

Constellation: Auriga  
 RA 6h 0' 59"  
 Decl.  $37^{\circ} 12' 4''$   
 Section 3/5  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.98

**108. Kraz**

$\beta$  Corvi  
 Constellation: Corvus  
 RA 12h 35' 21.7"  
 Decl.  $-23^{\circ} 29' 5''$   
 Section 5/9  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.51

**109. Ruchbah**

$\delta$  Cassiopeiae  
 Constellation: Cassiopeia  
 RA 1h 27' 2.5"  
 Decl.  $60^{\circ} 19' 5''$   
 Section 1/1  
 Apparent magnitude: 2.66  
 Absolute magnitude: 0.24

**110. Muphrid**

$\eta$  Boötis  
 Constellation: Boötes  
 RA 13h 55' 33.9"  
 Decl.  $18^{\circ} 18' 2''$   
 Section 6/10  
 Apparent magnitude: 2.68  
 Absolute magnitude: 2.41

**111. Ke Kouan**

$\beta$  Lupi  
 Constellation: Lupus  
 RA 14h 59' 45.1"  
 Decl.  $-43^{\circ} 12' 26''$   
 Section 6/10  
 Apparent magnitude: 2.68  
 Absolute magnitude: -3.35

**112. Hassaleh**

$\iota$  Aurigae  
 Constellation: Auriga  
 RA 4h 58' 12.1"  
 Decl.  $33^{\circ} 11' 3''$   
 Section 3/4  
 Apparent magnitude: 2.69  
 Absolute magnitude: -3.29

**113.  $\mu$  Velorum**

Constellation: Vela  
 RA 10h 47' 34.2"  
 Decl.  $-49^{\circ} 31' 6''$   
 Section 5/8  
 Apparent magnitude: 2.69  
 Absolute magnitude: -0.06

**114.  $\alpha$  Muscæ**

Constellation: Musca  
 RA 12h 38' 18.4"  
 Decl.  $-69^{\circ} 14' 14''$   
 Section 5/9  
 Apparent magnitude: 2.69  
 Absolute magnitude: -2.17

**115. Lesath**

$\nu$  Scorpii  
 Constellation: Scorpius  
 RA 17h 32' 1.4"  
 Decl.  $-37^{\circ} 18' 3''$   
 Section 7/12  
 Apparent magnitude: 2.7  
 Absolute magnitude: -3.31

**116.  $\pi$  Puppis**

Constellation: Puppis  
 RA 7h 17' 47.8"  
 Decl.  $-37^{\circ} 7' 54''$   
 Section 3/5  
 Apparent magnitude: 2.71  
 Absolute magnitude: -4.92

**117. Kaus Meridionalis**

$\delta$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 22' 10.7"  
 Decl.  $-29^{\circ} 49' 0''$   
 Section 7/13  
 Apparent magnitude: 2.72  
 Absolute magnitude: -2.14

**118. Tarazed**

$\gamma$  Aquilae  
 Constellation: Aquila  
 RA 19h 47' 8.3"  
 Decl.  $10^{\circ} 39' 3''$   
 Section 8/14  
 Apparent magnitude: 2.72  
 Absolute magnitude: -3.03

**119. Yed Prior**

$\delta$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 16h 15' 19"  
 Decl.  $-3^{\circ} 44' 2''$   
 Section 6/11  
 Apparent magnitude: 2.73  
 Absolute magnitude: -0.86

**120. Aldhibain**

$\eta$  Draconis  
 Constellation: Draco  
 RA 16h 24' 14.7"  
 Decl.  $61^{\circ} 28' 2''$   
 Section 6/11  
 Apparent magnitude: 2.73  
 Absolute magnitude: 0.58

**121.  $\theta$  Carinæ**

Constellation: Carina  
 RA 10h 43' 37.3"  
 Decl.  $-64^{\circ} 29' 30''$   
 Section 5/8  
 Apparent magnitude: 2.74  
 Absolute magnitude: -2.91

**122. Porrima**

$\gamma$  Virginis  
 Constellation: Virgo  
 RA 12h 41' 39.6434"  
 Decl.  $-1^{\circ} 26' 57.7421''$   
 Section 5/9  
 Apparent magnitude: 2.74  
 Absolute magnitude: 2.38

**123. Hatysa**

$\iota$  Orionis  
 Constellation: Orion  
 RA 5h 36' 20.3"  
 Decl.  $-5^{\circ} 53' 5''$   
 Section 3/4  
 Apparent magnitude: 2.75  
 Absolute magnitude: -5.3

**124.  $\iota$  Centauri**

Constellation: Centaurus  
 RA 13h 21' 38.6"  
 Decl.  $-36^{\circ} 48' 34''$   
 Section 5/9  
 Apparent magnitude: 2.75  
 Absolute magnitude: 1.48

**125. Cebalrai**

$\beta$  Ophiuchi  
 Constellation: Ophiuchus  
 RA 17h 44' 23.2"  
 Decl.  $4^{\circ} 33' 3''$   
 Section 7/12  
 Apparent magnitude: 2.76  
 Absolute magnitude: 0.76

**126. Kursa**

$\beta$  Eridani  
 Constellation: Eridanus  
 RA 5h 8' 45.6"  
 Decl.  $-5^{\circ} 3' 5''$   
 Section 3/4  
 Apparent magnitude: 2.78  
 Absolute magnitude: 0.6

**127. Kornephoros**

$\beta$  Herculis  
 Constellation: Hercules  
 RA 16h 31' 1"  
 Decl. 21° 27' 0"  
 Section 7/12  
 Apparent magnitude: 2.78  
 Absolute magnitude: -0.5

**128.  $\delta$  Crucis**

Constellation: Crux  
 RA 12h 16' 8.3"  
 Decl. -58° 51' 6"  
 Section 5/9  
 Apparent magnitude: 2.79  
 Absolute magnitude: -2.45

**129. Rastaban**

$\beta$  Draconis  
 Constellation: Draco  
 RA 17h 30' 51.1"  
 Decl. 52° 17' 1"  
 Section 7/12  
 Apparent magnitude: 2.79  
 Absolute magnitude: -2.43

**130. Cor Caroli 2**

$\alpha^2$  Canum Venaticorum  
 Constellation: Canes Venatici  
 RA 12h 56' 1.66622"  
 Decl. 38° 19' 6.1541"  
 Section 5/9  
 Apparent magnitude: 2.98v  
 Absolute magnitude: 0.16

**131.  $\gamma$  Lupi**

Constellation: Lupus  
 RA 15h 36' 22.8"  
 Decl. -41° 13' 39"  
 Section 6/11  
 Apparent magnitude: 2.8  
 Absolute magnitude: -3.4

**132. Nihal**

$\beta$  Leporis  
 Constellation: Lepus  
 RA 5h 29' 2.3"  
 Decl. -20° 44' 4"  
 Section 3/4  
 Apparent magnitude: 2.81  
 Absolute magnitude: -0.63

**133. Rutilicus**

$\zeta$  Herculis  
 Constellation: Hercules  
 RA 16h 41' 59.1"  
 Decl. 31° 34' 1"  
 Section 7/12  
 Apparent magnitude: 2.81  
 Absolute magnitude: 2.64

**134.  $\beta$  Hydri**

Constellation: Hydrus  
 RA 0h 26' 41.9"  
 Decl. -77° 9' 1"  
 Section 1/1  
 Apparent magnitude: 2.82  
 Absolute magnitude: 3.45

**135.  $\tau$  Scorpii**

Constellation: Scorpion  
 RA 16h 37' 2.2"  
 Decl. -28° 15' 1"  
 Section 7/12  
 Apparent magnitude: 2.82  
 Absolute magnitude: -2.78

**136. Kaus Borealis**

$\lambda$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 29' 6.7"  
 Decl. -25° 24' 3"  
 Section 7/13  
 Apparent magnitude: 2.82  
 Absolute magnitude: 0.95

**137. Algenib**

$\gamma$  Pegasi  
 Constellation: Pegasus  
 RA 0h 14' 11.4"  
 Decl. 15° 17' 1"  
 Section 1/1  
 Apparent magnitude: 2.83  
 Absolute magnitude: -2.22

**138. Turais**

$\rho$  Puppis  
 Constellation: Puppis  
 RA 8h 8' 19.9"  
 Decl. -24° 21' 3"  
 Section 4/6  
 Apparent magnitude: 2.83  
 Absolute magnitude: 1.41

**139.  $\beta$  Trianguli Australis**

Constellation: Triangulum Australe  
 RA 15h 56' 47.3"  
 Decl. -63° 29' 9"  
 Section 6/11  
 Apparent magnitude: 2.83  
 Absolute magnitude: 2.38

**140.  $\zeta$  Persei**

Constellation: Perseus  
 RA 3h 55' 18"  
 Decl. 31° 56' 1"  
 Section 2/3  
 Apparent magnitude: 2.84  
 Absolute magnitude: -4.55

**141.  $\beta$  Arae**

Constellation: Ara  
 RA 17h 26' 50.5"  
 Decl. -55° 32' 43"  
 Section 7/12  
 Apparent magnitude: 2.84  
 Absolute magnitude: -3.49

**142. Choo**

$\alpha$  Arae  
 Constellation: Ara  
 RA 17h 33' 16.4"  
 Decl. -49° 53' 20"  
 Section 7/12  
 Apparent magnitude: 2.84  
 Absolute magnitude: -1.51

**143. Alcyone**

$\eta$  Tauri  
 Constellation: Taurus  
 RA 3h 48' 35.3"  
 Decl. 24° 9' 4"  
 Section 2/3  
 Apparent magnitude: 2.85  
 Absolute magnitude: -2.41

**144. Vindemiatrix**

$\epsilon$  Virginis  
 Constellation: Virgo  
 RA 13h 3' 5.9"  
 Decl. 10° 51' 3"  
 Section 5/9  
 Apparent magnitude: 2.85  
 Absolute magnitude: 0.37

**145. Deneb Algedi**

$\delta$  Capricorni  
 Constellation: Capricornus  
 RA 21h 48' 3.6"  
 Decl. -16° 2' 3"  
 Section 8/15  
 Apparent magnitude: 2.85  
 Absolute magnitude: 2.49

**146.  $\alpha$  Hydri**

Constellation: Hydrus  
 RA 1h 59' 21.1"  
 Decl. -61° 28' 49"  
 Section 2/2  
 Apparent magnitude: 2.86  
 Absolute magnitude: 1.16

**147.  $\delta$  Cygni**

Constellation: Cygnus  
 RA 19h 45' 33.2"  
 Decl. 45° 10' 3"  
 Section 8/14  
 Apparent magnitude: 2.86  
 Absolute magnitude: -0.74

**148. Tejat**

$\mu$  Geminorum  
 Constellation: Gemini  
 RA 6h 24' 4.8"  
 Decl. 22° 30' 0"  
 Section 3/5  
 Apparent magnitude: 2.87v  
 Absolute magnitude: -1.39v

**149.  $\gamma$  Trianguli Australis**

Constellation: Triangulum Australe  
 RA 15h 18' 54.582"  
 Decl. -68° 40' 46.3654"  
 Section 6/11  
 Apparent magnitude: 2.87  
 Absolute magnitude: -0.87

**150.  $\alpha$  Tucanæ**

Constellation: Tucana  
 RA 22h 19' 45.2"  
 Decl. -60° 10' 0"  
 Section 8/15  
 Apparent magnitude: 2.87  
 Absolute magnitude: -1.05

**151. Acamar**

$\theta^1$  Eridani  
 Constellation: Eridanus  
 RA 2h 58' 15.6792"  
 Decl. -40° 18' 16.8457"  
 Section 2/2  
 Apparent magnitude: 2.88  
 Absolute magnitude: -0.59

**152. Albaldah**

$\pi$  Sagittarii  
 Constellation: Sagittarius  
 RA 19h 10' 51.8"  
 Decl. -20° 59' 3"  
 Section 7/13  
 Apparent magnitude: 2.88  
 Absolute magnitude: -2.77

**153. Gomeisa**

$\beta$  Canis Minoris  
 Constellation: Canis Minor  
 RA 7h 28' 9.2"  
 Decl. 8° 15' 0"  
 Section 3/5  
 Apparent magnitude: 2.89  
 Absolute magnitude: -0.7

**154.  $\pi$  Scorpii**

Constellation: Scorpius  
 RA 15h 59' 58.5"  
 Decl. -26° 9' 5"  
 Section 6/11  
 Apparent magnitude: 2.89  
 Absolute magnitude: -2.85

**155.  $\epsilon$  Persei**

Constellation: Perseus  
 RA 3h 59' 6.1"  
 Decl. 40° 3' 4"  
 Section 2/3  
 Apparent magnitude: 2.9  
 Absolute magnitude: -3.19

**156. Alniyat**

$\sigma$  Scorpii  
 Constellation: Scorpius  
 RA 16h 22' 19"  
 Decl. -25° 38' 0"  
 Section 6/11  
 Apparent magnitude: 2.9v  
 Absolute magnitude: -3.86v

**157. Albireo**

$\beta$  Cygni  
 Constellation: Cygnus  
 RA 19h 31' 28.1"  
 Decl. 27° 59' 5"  
 Section 8/14  
 Apparent magnitude: 2.9  
 Absolute magnitude: -2.31

**158. Sadalsuud**

$\beta$  Aquarii  
 Constellation: Aquarius  
 RA 21h 32' 31.9"  
 Decl. -5° 29' 2"  
 Section 8/15  
 Apparent magnitude: 2.9  
 Absolute magnitude: -3.47

**159.  $\gamma$  Persei**

Constellation: Perseus  
 RA 3h 6' 8.9"  
 Decl. 53° 34' 3"  
 Section 2/3  
 Apparent magnitude: 2.91  
 Absolute magnitude: -1.57

**160.  $\nu$  Carinæ**

Constellation: Carina  
 RA 9h 47' 33.8"  
 Decl. -65° 9' 29"  
 Section 4/7  
 Apparent magnitude: 2.92  
 Absolute magnitude: -5.56

**161. Matar**

$\eta$  Pegasi  
 Constellation: Pegasus  
 RA 22h 43' 52.3"  
 Decl. 30° 19' 0"  
 Section 1/16  
 Apparent magnitude: 2.93  
 Absolute magnitude: -1.16

**162.  $\tau$  Puppis**

Constellation: Puppis  
 RA 6h 50' 23.7"  
 Decl. -50° 38' 14"  
 Section 3/5  
 Apparent magnitude: 2.94  
 Absolute magnitude: -0.8

**163. Algorel**

$\delta$  Corvi  
 Constellation: Corvus  
 RA 12h 30' 49.4"  
 Decl. -16° 37' 0"  
 Section 5/9  
 Apparent magnitude: 2.94  
 Absolute magnitude: 0.79

**164. Sadalmelik**

$\alpha$  Aquarii  
 Constellation: Aquarius  
 RA 22h 6' 44"  
 Decl. 0° 13' 4"  
 Section 8/15  
 Apparent magnitude: 2.95  
 Absolute magnitude: -3.88

**165. Zaurak**

$\gamma$  Eridani  
 Constellation: Eridanus  
 RA 3h 58' 53.6"  
 Decl. -13° 27' 2"  
 Section 2/3  
 Apparent magnitude: 2.97  
 Absolute magnitude: -1.19

**166. Alheka**

$\zeta$  Tauri  
 Constellation: Taurus  
 RA 5h 38' 45.1"  
 Decl. 21° 9' 0"  
 Section 3/4  
 Apparent magnitude: 2.97  
 Absolute magnitude: -2.56

**167. Ras Elased Australis**

$\epsilon$  Leonis  
 Constellation: Leo  
 RA 9h 46' 53.9"  
 Decl. 23° 41' 1"  
 Section 4/7  
 Apparent magnitude: 2.97  
 Absolute magnitude: -1.46

**168. Alnasl**

$\gamma$  Sagittarii  
 Constellation: Sagittarius  
 RA 18h 6' 59.8"  
 Decl. -30° 25' 2"  
 Section 7/13  
 Apparent magnitude: 2.98  
 Absolute magnitude: 0.63

**169.  $\gamma$  Hydræ**

Constellation: Hydra  
RA 13h 19' 55.9"  
Decl.  $-23^{\circ} 16' 0''$   
Section 5/9  
Apparent magnitude: 2.99  
Absolute magnitude: -0.05

**170.  $\iota^1$  Scorpii**

Constellation: Scorpius  
RA 17h 48' 52.8"  
Decl.  $-40^{\circ} 7' 56''$   
Section 7/12  
Apparent magnitude: 2.99  
Absolute magnitude: -5.71

**171. Deneb el Okab**

$\zeta$  Aquilæ  
Constellation: Aquila  
RA 19h 6' 15.6"  
Decl.  $13^{\circ} 53' 3''$   
Section 7/13  
Apparent magnitude: 2.99  
Absolute magnitude: 0.96

**172.  $\beta$  Trianguli**

Constellation: Triangulum  
RA 2h 10' 39.1"  
Decl.  $35^{\circ} 4' 2''$   
Section 2/2  
Apparent magnitude: 3  
Absolute magnitude: 0.09

**173.  $\psi$  Ursæ Majoris**

Constellation: Ursa Major  
RA 11h 10' 41.8"  
Decl.  $44^{\circ} 23' 5''$   
Section 5/8  
Apparent magnitude: 3  
Absolute magnitude: -0.27

**174. Pherkad Major**

$\gamma$  Ursæ Minoris  
Constellation: Ursa Minor  
RA 15h 20' 42.8"  
Decl.  $71^{\circ} 46' 0''$   
Section 6/11  
Apparent magnitude: 3  
Absolute magnitude: -2.84

**175.  $\mu^1$  Scorpii**

Constellation: Scorpius  
RA 16h 53' 7.6"  
Decl.  $-38^{\circ} 4' 39''$   
Section 7/12  
Apparent magnitude: 3  
Absolute magnitude: -4.01

**176.  $\gamma$  Gruis**

Constellation: Grus  
RA 21h 55' 2.6"  
Decl.  $-37^{\circ} 16' 37''$   
Section 8/15  
Apparent magnitude: 3  
Absolute magnitude: -0.97

**177.  $\delta$  Persei**

Constellation: Perseus  
RA 3h 44' 15"  
Decl.  $47^{\circ} 50' 4''$   
Section 2/3  
Apparent magnitude: 3.01  
Absolute magnitude: -3.04

**178. Phurad**

$\zeta$  Canis Majoris  
Constellation: Canis Major  
RA 6h 21' 1.4"  
Decl.  $-30^{\circ} 4' 2''$   
Section 3/5  
Apparent magnitude: 3.02  
Absolute magnitude: -2.05

**179.  $\sigma^2$  Canis Majoris**

Constellation: Canis Major  
RA 7h 3' 1.47211"  
Decl.  $-23^{\circ} 49' 59.8523''$   
Section 3/5  
Apparent magnitude: 3.02  
Absolute magnitude: -6.46

**180. Minkar**

$\epsilon$  Corvi  
Constellation: Corvus  
RA 12h 11' 4.7"  
Decl.  $-22^{\circ} 43' 2''$   
Section 5/9  
Apparent magnitude: 3.02  
Absolute magnitude: -1.82

**181. Almaaz**

$\epsilon$  Aurigæ  
Constellation: Auriga  
RA 5h 3' 18"  
Decl.  $43^{\circ} 50' 5''$   
Section 3/4  
Apparent magnitude: 3.03  
Absolute magnitude: -5.95

**182.  $\beta$  Muscæ**

Constellation: Musca  
RA 12h 47' 26.1"  
Decl.  $-68^{\circ} 12' 32''$   
Section 5/9  
Apparent magnitude: 3.04  
Absolute magnitude: -1.86

**183. Seginus**

$\gamma$  Boötis  
Constellation: Boötes  
RA 14h 32' 49.3"  
Decl.  $38^{\circ} 13' 4''$   
Section 6/10  
Apparent magnitude: 3.04  
Absolute magnitude: 0.96

**184. Dabih**

$\beta$  Capricorni  
Constellation: Capricornus  
RA 20h 22' 2.9"  
Decl.  $-14^{\circ} 43' 1''$   
Section 8/14  
Apparent magnitude: 3.05  
Absolute magnitude: -2.07

**185. Mebsuta**

$\epsilon$  Geminorum  
Constellation: Gemini  
RA 6h 45' 4.2"  
Decl.  $25^{\circ} 6' 4''$   
Section 3/5  
Apparent magnitude: 3.06  
Absolute magnitude: -4.15

**186. Tania Australis**

$\mu$  Ursæ Majoris  
Constellation: Ursa Major  
RA 10h 23' 25.5"  
Decl.  $41^{\circ} 24' 2''$   
Section 4/7  
Apparent magnitude: 3.06  
Absolute magnitude: -1.35

**187. Tais**

$\delta$  Draconis  
Constellation: Draco  
RA 19h 12' 33.3"  
Decl.  $67^{\circ} 41' 3''$   
Section 7/13  
Apparent magnitude: 3.07  
Absolute magnitude: 0.63

**188.  $\eta$  Sagittarii**

Constellation: Sagittarius  
RA 18h 18' 52.7"  
Decl.  $-36^{\circ} 45' 16''$   
Section 7/13  
Apparent magnitude: 3.1  
Absolute magnitude: -0.2

**189.  $\zeta$  Hydræ**

Constellation: Hydra  
RA 8h 56' 22.2"  
Decl.  $5^{\circ} 52' 2''$   
Section 4/6  
Apparent magnitude: 3.11  
Absolute magnitude: -0.21

**190.  $\nu$  Hydrae**

Constellation: Hydra  
RA 10h 50' 32.3"  
Decl.  $-16^{\circ} 17' 27''$   
Section 5/8  
Apparent magnitude: 3.11  
Absolute magnitude: -0.03

**191.  $\lambda$  Centauri**

Constellation: Centaurus  
RA 11h 36' 38.6"  
Decl.  $-63^{\circ} 7' 20''$   
Section 5/8  
Apparent magnitude: 3.11  
Absolute magnitude: -2.39

**192. Persian**

$\alpha$  Indi  
Constellation: Indus  
RA 20h 38' 51.6"  
Decl.  $-47^{\circ} 13' 32''$   
Section 8/14  
Apparent magnitude: 3.11  
Absolute magnitude: 0.65

**193. Wazn**

$\beta$  Columbae  
Constellation: Columba  
RA 5h 51' 36.8"  
Decl.  $-35^{\circ} 45' 44''$   
Section 3/4  
Apparent magnitude: 3.12  
Absolute magnitude: 1.02

**194. Talita**

$\iota$  Ursae Majoris  
Constellation: Ursa Major  
RA 9h 0' 28"  
Decl.  $47^{\circ} 58' 0''$   
Section 4/7  
Apparent magnitude: 3.12  
Absolute magnitude: 2.29

**195.  $\zeta$  Arae**

Constellation: Ara  
RA 17h 0' 9.4"  
Decl.  $-56^{\circ} 1' 2''$   
Section 7/12  
Apparent magnitude: 3.12  
Absolute magnitude: -3.11

**196. Sarin**

$\delta$  Herculis  
Constellation: Hercules  
RA 17h 15' 47.5"  
Decl.  $24^{\circ} 49' 0''$   
Section 7/12  
Apparent magnitude: 3.12  
Absolute magnitude: 1.21

**197. Ke Kwan**

$\kappa$  Centauri  
Constellation: Centaurus  
RA 15h 0' 22.3"  
Decl.  $-42^{\circ} 10' 38''$   
Section 6/11  
Apparent magnitude: 3.13  
Absolute magnitude: -2.96

**198.  $\alpha$  Lyncis**

Constellation: Lynx  
RA 9h 22' 10.6"  
Decl.  $34^{\circ} 18' 4''$   
Section 4/7  
Apparent magnitude: 3.14  
Absolute magnitude: -1.02

**199. N Velorum**

Constellation: Vela  
RA 9h 31' 13.3189"  
Decl.  $-57^{\circ} 2' 3.7578''$   
Section 4/7  
Apparent magnitude: 3.16  
Absolute magnitude: -1.15

**200.  $\pi$  Herculis**

Constellation: Hercules  
RA 17h 15' 41.5"  
Decl.  $36^{\circ} 47' 2''$   
Section 7/12  
Apparent magnitude: 3.16  
Absolute magnitude: -2.1

## Stars According To Section (RA)

The first section number refers to the spherical biangle section. The two numbers following the slash refer to the two corresponding panel sections.

### Section 1/16–1

#### RA 22h 30'–1h 30'

##### 18. Fomalhaut

$\alpha$  Piscis Austrini  
Constellation: Piscis Austrinus  
RA 22h 57' 39.0465"  
Decl.  $-29^{\circ} 37' 20.05''$   
Section 1/16  
Apparent magnitude: 1.15  
Absolute magnitude: 1.72

##### 51. Diphda

$\beta$  Ceti  
Constellation: Cetus  
RA 0h 44' 31"  
Decl.  $-17^{\circ} 53' 0''$   
Section 1/1  
Apparent magnitude: 2.04  
Absolute magnitude: -0.3

##### 54. Alpheratz

$\alpha$  Andromedae  
Constellation: Andromeda  
RA 0h 9' 20.9"  
Decl.  $29^{\circ} 11' 3''$   
Section 1/1  
Apparent magnitude: 2.07  
Absolute magnitude: -0.3

##### 55. Mirach

$\beta$  Andromedae  
Constellation: Andromeda  
RA 1h 10' 46.4"  
Decl.  $35^{\circ} 43' 0''$   
Section 1/1  
Apparent magnitude: 2.07  
Absolute magnitude: -1.86

##### 58. Al Dhanab

$\beta$  Gruis  
Constellation: Grus  
RA 22h 43' 45.8"  
Decl.  $-46^{\circ} 47' 14''$   
Section 1/16  
Apparent magnitude: 2.07v  
Absolute magnitude: 1.52

##### 63. Cih

$\gamma$  Cassiopeiae  
Constellation: Cassiopeia  
RA 0h 57' 50.4"  
Decl.  $60^{\circ} 48' 5''$   
Section 1/1  
Apparent magnitude: 2.15v  
Absolute magnitude: -4.22

##### 71. Schedar

$\alpha$  Cassiopeiae  
Constellation: Cassiopeia  
RA 0h 41' 34.1"  
Decl.  $56^{\circ} 38' 1''$   
Section 1/1  
Apparent magnitude: 2.24  
Absolute magnitude: -1.99

##### 74. Caph

$\beta$  Cassiopeiae  
Constellation: Cassiopeia  
RA 0h 10' 10.6"  
Decl.  $59^{\circ} 15' 0''$   
Section 1/1  
Apparent magnitude: 2.28  
Absolute magnitude: 1.17

##### 84. Ankaa

$\alpha$  Phoenicis  
Constellation: Phoenix  
RA 0h 27' 11.7"  
Decl.  $-42^{\circ} 12' 20''$   
Section 1/1  
Apparent magnitude: 2.4  
Absolute magnitude: 0.52

##### 87. Scheat

$\beta$  Pegasi  
Constellation: Pegasus  
RA 23h 4' 40.4"  
Decl.  $28^{\circ} 11' 0''$   
Section 1/16  
Apparent magnitude: 2.44v  
Absolute magnitude: -1.49

##### 92. Markab

$\alpha$  Pegasi  
Constellation: Pegasus  
RA 23h 5' 41"  
Decl.  $15^{\circ} 18' 1''$   
Section 1/16  
Apparent magnitude: 2.49  
Absolute magnitude: -0.67

##### 109. Ruchbah

$\delta$  Cassiopeiae  
Constellation: Cassiopeia  
RA 1h 27' 2.5"  
Decl.  $60^{\circ} 19' 5''$   
Section 1/1  
Apparent magnitude: 2.66  
Absolute magnitude: 0.24

##### 134. $\beta$ Hydri

Constellation: Hydrus  
RA 0h 26' 41.9"  
Decl.  $-77^{\circ} 9' 1''$   
Section 1/1  
Apparent magnitude: 2.82  
Absolute magnitude: 3.45

##### 137. Algenib

$\gamma$  Pegasi  
Constellation: Pegasus  
RA 0h 14' 11.4"  
Decl.  $15^{\circ} 17' 1''$   
Section 1/1  
Apparent magnitude: 2.83  
Absolute magnitude: -2.22

##### 161. Matar

$\eta$  Pegasi  
Constellation: Pegasus  
RA 22h 43' 52.3"  
Decl.  $30^{\circ} 19' 0''$   
Section 1/16  
Apparent magnitude: 2.93  
Absolute magnitude: -1.16

### Section 2/2–3

#### RA 1h 30'–4h 30'

##### 9. Achernar

$\alpha$  Eridani  
Constellation: Eridanus  
RA 1h 38' 24"  
Decl.  $-57^{\circ} 8' 36''$   
Section 2/2  
Apparent magnitude: 0.45  
Absolute magnitude: -2.77

##### 33. Mirfak

$\alpha$  Persei  
Constellation: Perseus  
RA 3h 25' 39.2"  
Decl.  $49^{\circ} 55' 3''$   
Section 2/3  
Apparent magnitude: 1.8  
Absolute magnitude: -4.49

##### 50. Hamal

$\alpha$  Arietis  
Constellation: Aries  
RA 2h 8' 13.2"  
Decl.  $23^{\circ} 32' 5''$   
Section 2/2  
Apparent magnitude: 2.01  
Absolute magnitude: 0.48



**60. Algol** $\beta$  Persei

Constellation: Perseus

RA 3h 9' 22.8"

Decl. 41° 1' 3"

Section 2/3

Apparent magnitude: 2.09

Absolute magnitude: 0.18

**61. Almach** $\gamma$  Andromedae

Constellation: Andromeda

RA 2h 3' 53.9523"

Decl. 42° 19' 47.0223"

Section 2/2

Apparent magnitude: 2.1

Absolute magnitude: -3.08

**93. Menkar** $\alpha$  Ceti

Constellation: Cetus

RA 3h 3' 14.9"

Decl. 4° 9' 4"

Section 2/3

Apparent magnitude: 2.54

Absolute magnitude: -1.61

**104. Sheratan** $\beta$  Arietis

Constellation: Aries

RA 1h 55' 40"

Decl. 20° 53' 5"

Section 2/2

Apparent magnitude: 2.64

Absolute magnitude: 1.33

**140.  $\zeta$  Persei**

Constellation: Perseus

RA 3h 55' 18"

Decl. 31° 56' 1"

Section 2/3

Apparent magnitude: 2.84

Absolute magnitude: -4.55

**143. Alcyone** $\eta$  Tauri

Constellation: Taurus

RA 3h 48' 35.3"

Decl. 24° 9' 4"

Section 2/3

Apparent magnitude: 2.85

Absolute magnitude: -2.41

**146.  $\alpha$  Hydri**

Constellation: Hydrus

RA 1h 59' 21.1"

Decl. -61° 28' 49"

Section 2/2

Apparent magnitude: 2.86

Absolute magnitude: 1.16

**151. Acamar** $\theta^1$  Eridani

Constellation: Eridanus

RA 2h 58' 15.6792"

Decl. -40° 18' 16.8457"

Section 2/2

Apparent magnitude: 2.88

Absolute magnitude: -0.59

**155.  $\epsilon$  Persei**

Constellation: Perseus

RA 3h 59' 6.1"

Decl. 40° 3' 4"

Section 2/3

Apparent magnitude: 2.9

Absolute magnitude: -3.19

**159.  $\gamma$  Persei**

Constellation: Perseus

RA 3h 6' 8.9"

Decl. 53° 34' 3"

Section 2/3

Apparent magnitude: 2.91

Absolute magnitude: -1.57

**165. Zaurak** $\gamma$  Eridani

Constellation: Eridanus

RA 3h 58' 53.6"

Decl. -13° 27' 2"

Section 2/3

Apparent magnitude: 2.97

Absolute magnitude: -1.19

**172.  $\beta$  Trianguli**

Constellation: Triangulum

RA 2h 10' 39.1"

Decl. 35° 4' 2"

Section 2/2

Apparent magnitude: 3

Absolute magnitude: 0.09

**177.  $\delta$  Persei**

Constellation: Perseus

RA 3h 44' 15"

Decl. 47° 50' 4"

Section 2/3

Apparent magnitude: 3.01

Absolute magnitude: -3.04

**Section 3/4-5****RA 4h 30' - 7h 30'****1. Sirius** $\alpha$  Canis Majoris

Constellation: Canis Major

RA 6h 45' 57.4"

Decl. -16° 44' 3"

Section 3/5

Apparent magnitude: -1.46

Absolute magnitude: 1.43

**2. Canopus** $\alpha$  Carinae

Constellation: Carina

RA 6h 24' 21.8"

Decl. -52° 42' 23"

Section 3/5

Apparent magnitude: -0.73

Absolute magnitude: -5.64

**6. Capella** $\alpha$  Aurigae

Constellation: Auriga

RA 5h 18' 3.5"

Decl. 46° 0' 5"

Section 3/4

Apparent magnitude: 0.07

Absolute magnitude: -0.49

**7. Rigel** $\beta$  Orionis

Constellation: Orion

RA 5h 15' 25.7"

Decl. -8° 10' 5"

Section 3/4

Apparent magnitude: 0.15v

Absolute magnitude: -6.72v

**10. Betelgeuse** $\alpha$  Orionis

Constellation: Orion

RA 5h 56' 10.4"

Decl. 7° 24' 3"

Section 3/4

Apparent magnitude: 0.55v

Absolute magnitude: -5.04v

**14. Aldebaran** $\alpha$  Tauri

Constellation: Taurus

RA 4h 36' 59.1"

Decl. 16° 32' 4"

Section 3/4

Apparent magnitude: 0.86v

Absolute magnitude: -0.64v

**22. Adhara** $\epsilon$  Canis Majoris

Constellation: Canis Major

RA 6h 59' 21.2"

Decl. -28° 59' 5"

Section 3/5

Apparent magnitude: 1.5

Absolute magnitude: -4.1

**26. Bellatrix** $\gamma$  Orionis

Constellation: Orion

RA 5h 26' 7.5"

Decl. 6° 21' 5"

Section 3/4

Apparent magnitude: 1.64

Absolute magnitude: -2.72

**27. Elnath**

$\beta$  Tauri  
 Constellation: Taurus  
 RA 5h 27' 27.8"  
 Decl. 28° 37' 1"  
 Section 3/4  
 Apparent magnitude: 1.66  
 Absolute magnitude: -1.36

**29. Alnilam**

$\epsilon$  Orionis  
 Constellation: Orion  
 RA 5h 37' 9.2"  
 Decl. -1° 11' 2"  
 Section 3/4  
 Apparent magnitude: 1.69  
 Absolute magnitude: -6.38

**31. Alnitak**

$\zeta$  Orionis  
 Constellation: Orion  
 RA 5h 41' 41.6"  
 Decl. -1° 56' 0"  
 Section 3/4  
 Apparent magnitude: 1.75  
 Absolute magnitude: -5.25

**36. Wezen**

$\delta$  Canis Majoris  
 Constellation: Canis Major  
 RA 7h 9' 8.6"  
 Decl. -26° 25' 2"  
 Section 3/5  
 Apparent magnitude: 1.83  
 Absolute magnitude: -6.87

**41. Menkalinan**

$\beta$  Aurigae  
 Constellation: Auriga  
 RA 6h 0' 53.2"  
 Decl. 44° 56' 5"  
 Section 3/5  
 Apparent magnitude: 1.9  
 Absolute magnitude: -0.1

**43. Alhena**

$\gamma$  Geminorum  
 Constellation: Gemini  
 RA 6h 38' 46.8"  
 Decl. 16° 22' 5"  
 Section 3/5  
 Apparent magnitude: 1.93  
 Absolute magnitude: -0.6

**46. Mirzam**

$\beta$  Canis Majoris  
 Constellation: Canis Major  
 RA 6h 23' 30.9"  
 Decl. -17° 57' 5"  
 Section 3/5  
 Apparent magnitude: 1.98  
 Absolute magnitude: -3.95

**56. Saiph**

$\kappa$  Orionis  
 Constellation: Orion  
 RA 5h 48' 38.1"  
 Decl. -9° 39' 5"  
 Section 3/4  
 Apparent magnitude: 2.07  
 Absolute magnitude: -4.65

**73. Mintaka**

$\delta$  Orionis  
 Constellation: Orion  
 RA 5h 32' 57.2"  
 Decl. 0° 17' 1"  
 Section 3/4  
 Apparent magnitude: 2.25  
 Absolute magnitude: -4.99

**88. Aludra**

$\eta$  Canis Majoris  
 Constellation: Canis Major  
 RA 7h 24' 49.6"  
 Decl. -29° 20' 2"  
 Section 3/5  
 Apparent magnitude: 2.45  
 Absolute magnitude: -7.51

**98. Arneb**

$\alpha$  Leporis  
 Constellation: Lepus  
 RA 5h 33' 32.8"  
 Decl. -17° 48' 3"  
 Section 3/4  
 Apparent magnitude: 2.58  
 Absolute magnitude: -5.4

**106. Phact**

$\alpha$  Columbae  
 Constellation: Columba  
 RA 5h 40' 19.2"  
 Decl. -34° 3' 55"  
 Section 3/4  
 Apparent magnitude: 2.65  
 Absolute magnitude: -1.93

**107.  $\theta$  Aurigæ**

Constellation: Auriga  
 RA 6h 0' 59"  
 Decl. 37° 12' 4"  
 Section 3/5  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.98

**112. Hassaleh**

$\iota$  Aurigae  
 Constellation: Auriga  
 RA 4h 58' 12.1"  
 Decl. 33° 11' 3"  
 Section 3/4  
 Apparent magnitude: 2.69  
 Absolute magnitude: -3.29

**116.  $\pi$  Puppis**

Constellation: Puppis  
 RA 7h 17' 47.8"  
 Decl. -37° 7' 54"  
 Section 3/5  
 Apparent magnitude: 2.71  
 Absolute magnitude: -4.92

**123. Hatysa**

$\iota$  Orionis  
 Constellation: Orion  
 RA 5h 36' 20.3"  
 Decl. -5° 53' 5"  
 Section 3/4  
 Apparent magnitude: 2.75  
 Absolute magnitude: -5.3

**126. Kursa**

$\beta$  Eridani  
 Constellation: Eridanus  
 RA 5h 8' 45.6"  
 Decl. -5° 3' 5"  
 Section 3/4  
 Apparent magnitude: 2.78  
 Absolute magnitude: 0.6

**132. Nihal**

$\beta$  Leporis  
 Constellation: Lepus  
 RA 5h 29' 2.3"  
 Decl. -20° 44' 4"  
 Section 3/4  
 Apparent magnitude: 2.81  
 Absolute magnitude: -0.63

**148. Tejat**

$\mu$  Geminorum  
 Constellation: Gemini  
 RA 6h 24' 4.8"  
 Decl. 22° 30' 0"  
 Section 3/5  
 Apparent magnitude: 2.87v  
 Absolute magnitude: -1.39v

**153. Gomeisa**

$\beta$  Canis Minoris  
 Constellation: Canis Minor  
 RA 7h 28' 9.2"  
 Decl. 8° 15' 0"  
 Section 3/5  
 Apparent magnitude: 2.89  
 Absolute magnitude: -0.7

**162.  $\tau$  Puppis**

Constellation: Puppis  
 RA 6h 50' 23.7"  
 Decl. -50° 38' 14"  
 Section 3/5  
 Apparent magnitude: 2.94  
 Absolute magnitude: -0.8

**166. Alheka**

ζ Tauri  
 Constellation: Taurus  
 RA 5h 38' 45.1"  
 Decl. 21° 9' 0"  
 Section 3/4  
 Apparent magnitude: 2.97  
 Absolute magnitude: -2.56

**178. Phurad**

ζ Canis Majoris  
 Constellation: Canis Major  
 RA 6h 21' 1.4"  
 Decl. -30° 4' 2"  
 Section 3/5  
 Apparent magnitude: 3.02  
 Absolute magnitude: -2.05

**179. o<sup>2</sup> Canis Majoris**

Constellation: Canis Major  
 RA 7h 3' 1.47211"  
 Decl. -23° 49' 59.8523"  
 Section 3/5  
 Apparent magnitude: 3.02  
 Absolute magnitude: -6.46

**181. Almaaz**

ε Aurigae  
 Constellation: Auriga  
 RA 5h 3' 18"  
 Decl. 43° 50' 5"  
 Section 3/4  
 Apparent magnitude: 3.03  
 Absolute magnitude: -5.95

**185. Mebsuta**

ε Geminorum  
 Constellation: Gemini  
 RA 6h 45' 4.2"  
 Decl. 25° 6' 4"  
 Section 3/5  
 Apparent magnitude: 3.06  
 Absolute magnitude: -4.15

**193. Wazn**

β Columbae  
 Constellation: Columba  
 RA 5h 51' 36.8"  
 Decl. -35° 45' 44"  
 Section 3/4  
 Apparent magnitude: 3.12  
 Absolute magnitude: 1.02

**Section 4/6–7**

**RA 7h 30'–10h 30'**

**8. Procyon**

α Canis Minoris  
 Constellation: Canis Minor  
 RA 7h 40' 16.3"  
 Decl. 5° 10' 3"  
 Section 4/6  
 Apparent magnitude: 0.36  
 Absolute magnitude: 2.64

**17. Pollux**

β Geminorum  
 Constellation: Gemini  
 RA 7h 46' 26.7"  
 Decl. 27° 58' 4"  
 Section 4/6  
 Apparent magnitude: 1.14  
 Absolute magnitude: 1.07

**21. Regulus**

α Leonis  
 Constellation: Leo  
 RA 10h 9' 21.3"  
 Decl. 11° 52' 3"  
 Section 4/7  
 Apparent magnitude: 1.36  
 Absolute magnitude: -0.52

**23. Castor**

α Geminorum  
 Constellation: Gemini  
 RA 7h 34' 35.863"  
 Decl. 31° 53' 17.79"  
 Section 4/6  
 Apparent magnitude: 1.58  
 Absolute magnitude: 0.59

**28. Miaplacidus**

β Carinae  
 Constellation: Carina  
 RA 9h 13' 23.7"  
 Decl. -69° 47' 37"  
 Section 4/7  
 Apparent magnitude: 1.67  
 Absolute magnitude: -0.99

**35. Regor**

γ Velorum  
 Constellation: Vela  
 RA 8h 9' 31.9501"  
 Decl. -47° 20' 11.7108"  
 Section 4/6  
 Apparent magnitude: 1.81  
 Absolute magnitude: -5.25

**40. Avior**

ε Carinae  
 Constellation: Carina  
 RA 8h 22' 53.5"  
 Decl. -59° 34' 10"  
 Section 4/6  
 Apparent magnitude: 1.87  
 Absolute magnitude: -4.57

**45. Koo She**

δ Velorum  
 Constellation: Vela  
 RA 8h 45' 12.9"  
 Decl. -54° 46' 38"  
 Section 4/6  
 Apparent magnitude: 1.95  
 Absolute magnitude: 0.01

**47. Alphard**

α Hydrae  
 Constellation: Hydra  
 RA 9h 28' 29.8"  
 Decl. -8° 44' 2"  
 Section 4/7  
 Apparent magnitude: 1.98  
 Absolute magnitude: -1.7

**49. Algieba**

γ Leonis  
 Constellation: Leo  
 RA 10h 19' 58.3506"  
 Decl. 19° 50' 29.3468"  
 Section 4/7  
 Apparent magnitude: 2  
 Absolute magnitude: -0.93

**65. Naos**

ζ Puppis  
 Constellation: Puppis  
 RA 8h 4' 14.1"  
 Decl. -40° 3' 22"  
 Section 4/6  
 Apparent magnitude: 2.21  
 Absolute magnitude: -5.95

**66. Aspidiske**

ι Carinae  
 Constellation: Carina  
 RA 9h 17' 35.1"  
 Decl. -59° 21' 12"  
 Section 4/7  
 Apparent magnitude: 2.21v  
 Absolute magnitude: -4.42

**68. Suhail**

λ Velorum  
 Constellation: Vela  
 RA 9h 8' 40.7"  
 Decl. -43° 30' 29"  
 Section 4/7  
 Apparent magnitude: 2.23  
 Absolute magnitude: -3.99

**90. Markeb**

κ Velorum  
 Constellation: Vela  
 RA 9h 22' 41.2"  
 Decl. -55° 5' 25"  
 Section 4/7  
 Apparent magnitude: 2.47  
 Absolute magnitude: -3.62

**138. Turais**

$\rho$  Puppis  
 Constellation: Puppis  
 RA 8h 8' 19.9"  
 Decl.  $-24^{\circ} 21' 3''$   
 Section 4/6  
 Apparent magnitude: 2.83  
 Absolute magnitude: 1.41

**160.  $\nu$  Carinae**

Constellation: Carina  
 RA 9h 47' 33.8"  
 Decl.  $-65^{\circ} 9' 29''$   
 Section 4/7  
 Apparent magnitude: 2.92  
 Absolute magnitude: -5.56

**167. Ras Elased Australis**

$\epsilon$  Leonis  
 Constellation: Leo  
 RA 9h 46' 53.9"  
 Decl.  $23^{\circ} 41' 1''$   
 Section 4/7  
 Apparent magnitude: 2.97  
 Absolute magnitude: -1.46

**186. Tania Australis**

$\mu$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 10h 23' 25.5"  
 Decl.  $41^{\circ} 24' 2''$   
 Section 4/7  
 Apparent magnitude: 3.06  
 Absolute magnitude: -1.35

**189.  $\zeta$  Hydræ**

Constellation: Hydra  
 RA 8h 56' 22.2"  
 Decl.  $5^{\circ} 52' 2''$   
 Section 4/6  
 Apparent magnitude: 3.11  
 Absolute magnitude: -0.21

**194. Talita**

$\iota$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 9h 0' 28"  
 Decl.  $47^{\circ} 58' 0''$   
 Section 4/7  
 Apparent magnitude: 3.12  
 Absolute magnitude: 2.29

**198.  $\alpha$  Lyncis**

Constellation: Lynx  
 RA 9h 22' 10.6"  
 Decl.  $34^{\circ} 18' 4''$   
 Section 4/7  
 Apparent magnitude: 3.14  
 Absolute magnitude: -1.02

**199. N Velorum**

Constellation: Vela  
 RA 9h 31' 13.3189"  
 Decl.  $-57^{\circ} 2' 3.7578''$   
 Section 4/7  
 Apparent magnitude: 3.16  
 Absolute magnitude: -1.15

**Section 5/8–9****RA 10h 30'–13h 30'****16. Spica**

$\alpha$  Virginis  
 Constellation: Virgo  
 RA 13h 26' 10.2"  
 Decl.  $-11^{\circ} 15' 2''$   
 Section 5/9  
 Apparent magnitude: 0.97  
 Absolute magnitude: -3.56

**20. Mimosa**

$\beta$  Crucis  
 Constellation: Crux  
 RA 12h 48' 48.9"  
 Decl.  $-59^{\circ} 47' 22''$   
 Section 5/9  
 Apparent magnitude: 1.26  
 Absolute magnitude: -3.91

**25. Gacrux**

$\gamma$  Crucis  
 Constellation: Crux  
 RA 12h 32' 12.2"  
 Decl.  $-57^{\circ} 13' 0''$   
 Section 5/9  
 Apparent magnitude: 1.63  
 Absolute magnitude: -0.52

**32. Alioth**

$\epsilon$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 12h 54' 50.3"  
 Decl.  $55^{\circ} 51' 3''$   
 Section 5/9  
 Apparent magnitude: 1.77  
 Absolute magnitude: -0.2

**34. Dubhe**

$\alpha$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 4' 51.2"  
 Decl.  $61^{\circ} 39' 0''$   
 Section 5/8  
 Apparent magnitude: 1.8  
 Absolute magnitude: -1.09

**62. Denebola**

$\beta$  Leonis  
 Constellation: Leo  
 RA 11h 50' 0.1"  
 Decl.  $14^{\circ} 28' 0''$   
 Section 5/8  
 Apparent magnitude: 2.14  
 Absolute magnitude: 1.92

**64. Muhlifain**

$\gamma$  Centauri  
 Constellation: Centaurus  
 RA 12h 42' 32.8"  
 Decl.  $-49^{\circ} 3' 40''$   
 Section 5/9  
 Apparent magnitude: 2.2  
 Absolute magnitude: -0.81

**69. Mizar**

$\zeta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 13h 24' 40.1"  
 Decl.  $54^{\circ} 49' 4''$   
 Section 5/9  
 Apparent magnitude: 2.23  
 Absolute magnitude: 0.33

**80. Merak**

$\beta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 2' 56.8"  
 Decl.  $56^{\circ} 16' 5''$   
 Section 5/8  
 Apparent magnitude: 2.34  
 Absolute magnitude: 0.41

**85. Phecda**

$\gamma$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 11h 54' 47.8"  
 Decl.  $53^{\circ} 35' 3''$   
 Section 5/8  
 Apparent magnitude: 2.41  
 Absolute magnitude: 0.36

**96. Zosma**

$\delta$  Leonis  
 Constellation: Leo  
 RA 11h 15' 5.4"  
 Decl.  $20^{\circ} 25' 1''$   
 Section 5/8  
 Apparent magnitude: 2.56  
 Absolute magnitude: 1.32

**99.  $\delta$  Centauri**

Constellation: Centaurus  
 RA 12h 9' 19.5"  
 Decl.  $-50^{\circ} 49' 31''$   
 Section 5/9  
 Apparent magnitude: 2.58v  
 Absolute magnitude: -2.84

**100. Gienah Ghurab**

$\gamma$  Corvi  
 Constellation: Corvus  
 RA 12h 16' 45.6"  
 Decl.  $-17^{\circ} 38' 4''$   
 Section 5/9  
 Apparent magnitude: 2.58  
 Absolute magnitude: -0.94

**108. Kraz**

$\beta$  Corvi  
 Constellation: Corvus  
 RA 12h 35' 21.7"  
 Decl.  $-23^{\circ} 29' 5''$   
 Section 5/9  
 Apparent magnitude: 2.65  
 Absolute magnitude: -0.51

**113.  $\mu$  Velorum**

Constellation: Vela  
 RA 10h 47' 34.2"  
 Decl.  $-49^{\circ} 31' 6''$   
 Section 5/8  
 Apparent magnitude: 2.69  
 Absolute magnitude: -0.06

**114.  $\alpha$  Muscae**

Constellation: Musca  
 RA 12h 38' 18.4"  
 Decl.  $-69^{\circ} 14' 14''$   
 Section 5/9  
 Apparent magnitude: 2.69  
 Absolute magnitude: -2.17

**121.  $\theta$  Carinae**

Constellation: Carina  
 RA 10h 43' 37.3"  
 Decl.  $-64^{\circ} 29' 30''$   
 Section 5/8  
 Apparent magnitude: 2.74  
 Absolute magnitude: -2.91

**122. Porrima**

$\gamma$  Virginis  
 Constellation: Virgo  
 RA 12h 41' 39.6434"  
 Decl.  $-1^{\circ} 26' 57.7421''$   
 Section 5/9  
 Apparent magnitude: 2.74  
 Absolute magnitude: 2.38

**124.  $\iota$  Centauri**

Constellation: Centaurus  
 RA 13h 21' 38.6"  
 Decl.  $-36^{\circ} 48' 34''$   
 Section 5/9  
 Apparent magnitude: 2.75  
 Absolute magnitude: 1.48

**128.  $\delta$  Crucis**

Constellation: Crux  
 RA 12h 16' 8.3"  
 Decl.  $-58^{\circ} 51' 6''$   
 Section 5/9  
 Apparent magnitude: 2.79  
 Absolute magnitude: -2.45

**130. Cor Caroli 2**

$\alpha^2$  Canum Venaticorum  
 Constellation: Canes Venatici  
 RA 12h 56' 1.66622"  
 Decl.  $38^{\circ} 19' 6.1541''$   
 Section 5/9  
 Apparent magnitude: 2.98v  
 Absolute magnitude: 0.16

**144. Vindemiatrix**

$\epsilon$  Virginis  
 Constellation: Virgo  
 RA 13h 3' 5.9"  
 Decl.  $10^{\circ} 51' 3''$   
 Section 5/9  
 Apparent magnitude: 2.85  
 Absolute magnitude: 0.37

**163. Algorrel**

$\delta$  Corvi  
 Constellation: Corvus  
 RA 12h 30' 49.4"  
 Decl.  $-16^{\circ} 37' 0''$   
 Section 5/9  
 Apparent magnitude: 2.94  
 Absolute magnitude: 0.79

**169.  $\gamma$  Hydrae**

Constellation: Hydra  
 RA 13h 19' 55.9"  
 Decl.  $-23^{\circ} 16' 0''$   
 Section 5/9  
 Apparent magnitude: 2.99  
 Absolute magnitude: -0.05

**173.  $\psi$  Ursae Majoris**

Constellation: Ursa Major  
 RA 11h 10' 41.8"  
 Decl.  $44^{\circ} 23' 5''$   
 Section 5/8  
 Apparent magnitude: 3  
 Absolute magnitude: -0.27

**180. Minkar**

$\epsilon$  Corvi  
 Constellation: Corvus  
 RA 12h 11' 4.7"  
 Decl.  $-22^{\circ} 43' 2''$   
 Section 5/9  
 Apparent magnitude: 3.02  
 Absolute magnitude: -1.82

**182.  $\beta$  Muscae**

Constellation: Musca  
 RA 12h 47' 26.1"  
 Decl.  $-68^{\circ} 12' 32''$   
 Section 5/9  
 Apparent magnitude: 3.04  
 Absolute magnitude: -1.86

**190.  $\nu$  Hydrae**

Constellation: Hydra  
 RA 10h 50' 32.3"  
 Decl.  $-16^{\circ} 17' 27''$   
 Section 5/8  
 Apparent magnitude: 3.11  
 Absolute magnitude: -0.03

**191.  $\lambda$  Centauri**

Constellation: Centaurus  
 RA 11h 36' 38.6"  
 Decl.  $-63^{\circ} 7' 20''$   
 Section 5/8  
 Apparent magnitude: 3.11  
 Absolute magnitude: -2.39

**Section 6/10–11****RA 13h 30'–16h 30'****3.  $\alpha$  Centauri**

Constellation: Centaurus  
 RA 14h 39' 35.0631"  
 Decl.  $-60^{\circ} 50' 15.0992''$   
 Section 6/10  
 Apparent magnitude: -0.29  
 Absolute magnitude: 4.06

**4. Arcturus**

$\alpha$  Boötis  
 Constellation: Boötes  
 RA 14h 16' 30.3"  
 Decl.  $19^{\circ} 5' 1''$   
 Section 6/10  
 Apparent magnitude: -0.05  
 Absolute magnitude: -0.31

**11. Hadar**

$\beta$  Centauri  
 Constellation: Centaurus  
 RA 14h 5' 8.7"  
 Decl.  $-60^{\circ} 27' 41''$   
 Section 6/10  
 Apparent magnitude: 0.61  
 Absolute magnitude: -5.42

**38. Alkaid**

$\eta$  Ursae Majoris  
 Constellation: Ursa Major  
 RA 13h 48' 16.1"  
 Decl.  $49^{\circ} 13' 1''$   
 Section 6/10  
 Apparent magnitude: 1.86  
 Absolute magnitude: -0.59

**53. Menkent** $\theta$  Centauri

Constellation: Centaurus

RA 14h 7' 46.7"

Decl.  $-36^{\circ} 27' 3''$ 

Section 6/10

Apparent magnitude: 2.06

Absolute magnitude: 0.7

**57. Kochab** $\beta$  Ursae Minoris

Constellation: Ursa Minor

RA 14h 50' 40.2"

Decl.  $74^{\circ} 4' 4''$ 

Section 6/10

Apparent magnitude: 2.07

Absolute magnitude: -0.87

**67. Alphecca** $\alpha$  Coronae Borealis

Constellation: Corona Borealis

RA 15h 35' 28.3"

Decl.  $26^{\circ} 39' 1''$ 

Section 6/11

Apparent magnitude: 2.22

Absolute magnitude: 0.42

**75.  $\epsilon$  Centauri**

Constellation: Centaurus

RA 13h 41' 4.3"

Decl.  $-53^{\circ} 33' 35''$ 

Section 6/10

Apparent magnitude: 2.29

Absolute magnitude: -3.02

**76. Dschubba** $\delta$  Scorpii

Constellation: Scorpius

RA 16h 1' 25.8"

Decl.  $-22^{\circ} 40' 2''$ 

Section 6/11

Apparent magnitude: 2.29

Absolute magnitude: -3.16

**78. Men** $\alpha$  Lupi

Constellation: Lupus

RA 14h 43' 10.1"

Decl.  $-47^{\circ} 27' 59''$ 

Section 6/10

Apparent magnitude: 2.3

Absolute magnitude: -3.83

**79.  $\eta$  Centauri**

Constellation: Centaurus

RA 14h 36' 41.4"

Decl.  $-42^{\circ} 14' 17''$ 

Section 6/10

Apparent magnitude: 2.33v

Absolute magnitude: -2.55

**81. Izar** $\epsilon$  Boötis

Constellation: Boötes

RA 14h 45' 47.7"

Decl.  $26^{\circ} 59' 4''$ 

Section 6/10

Apparent magnitude: 2.35

Absolute magnitude: -1.69

**95.  $\zeta$  Centauri**

Constellation: Centaurus

RA 13h 56' 42.2"

Decl.  $-47^{\circ} 22' 43''$ 

Section 6/10

Apparent magnitude: 2.55

Absolute magnitude: -2.81

**97. Graffias** $\beta$  Scorpii

Constellation: Scorpius

RA 16h 5' 26.232"

Decl.  $-19^{\circ} 48' 19.63''$ 

Section 6/11

Apparent magnitude: 2.56

Absolute magnitude: -3.5

**102. Zubeneshamali** $\beta$  Librae

Constellation: Libra

RA 15h 18' 0.3"

Decl.  $-9^{\circ} 27' 0''$ 

Section 6/11

Apparent magnitude: 2.61

Absolute magnitude: -0.84

**103. Unukalhai** $\alpha$  Serpentis

Constellation: Serpens

RA 15h 45' 10.8"

Decl.  $6^{\circ} 22' 0''$ 

Section 6/11

Apparent magnitude: 2.63

Absolute magnitude: 0.87

**105. Zubenelgenubi** $\alpha^2$  Librae

Constellation: Libra

RA 14h 50' 52.7131"

Decl.  $-16^{\circ} 2' 30.3955''$ 

Section 6/10

Apparent magnitude: 2.64

Absolute magnitude: 0.77

**110. Muphrid** $\eta$  Boötis

Constellation: Boötes

RA 13h 55' 33.9"

Decl.  $18^{\circ} 18' 2''$ 

Section 6/10

Apparent magnitude: 2.68

Absolute magnitude: 2.41

**111. Ke Kouan** $\beta$  Lupi

Constellation: Lupus

RA 14h 59' 45.1"

Decl.  $-43^{\circ} 12' 26''$ 

Section 6/10

Apparent magnitude: 2.68

Absolute magnitude: -3.35

**119. Yed Prior** $\delta$  Ophiuchi

Constellation: Ophiuchus

RA 16h 15' 19"

Decl.  $-3^{\circ} 44' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: -0.86

**120. Aldhibain** $\eta$  Draconis

Constellation: Draco

RA 16h 24' 14.7"

Decl.  $61^{\circ} 28' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: 0.58

**131.  $\gamma$  Lupi**

Constellation: Lupus

RA 15h 36' 22.8"

Decl.  $-41^{\circ} 13' 39''$ 

Section 6/11

Apparent magnitude: 2.8

Absolute magnitude: -3.4

**139.  $\beta$  Trianguli Australis**

Constellation: Triangulum Australe

RA 15h 56' 47.3"

Decl.  $-63^{\circ} 29' 9''$ 

Section 6/11

Apparent magnitude: 2.83

Absolute magnitude: 2.38

**149.  $\gamma$  Trianguli Australis**

Constellation: Triangulum Australe

RA 15h 18' 54.582"

Decl.  $-68^{\circ} 40' 46.3654''$ 

Section 6/11

Apparent magnitude: 2.87

Absolute magnitude: -0.87

**154.  $\pi$  Scorpii**

Constellation: Scorpius

RA 15h 59' 58.5"

Decl.  $-26^{\circ} 9' 5''$ 

Section 6/11

Apparent magnitude: 2.89

Absolute magnitude: -2.85

**156. Alniyat** $\sigma$  Scorpii

Constellation: Scorpius

RA 16h 22' 19"

Decl.  $-25^{\circ} 38' 0''$ 

Section 6/11

Apparent magnitude: 2.9v

Absolute magnitude: -3.86v

**174. Pherkad Major** $\gamma$  Ursae Minoris

Constellation: Ursa Minor

RA 15h 20' 42.8"

Decl.  $71^{\circ} 46' 0''$ 

Section 6/11

Apparent magnitude: 3

Absolute magnitude: -2.84

**183. Seginus** $\gamma$  Boötis

Constellation: Boötes

RA 14h 32' 49.3"

Decl.  $38^{\circ} 13' 4''$ 

Section 6/10

Apparent magnitude: 3.04

Absolute magnitude: 0.96

**197. Ke Kwan** $\kappa$  Centauri

Constellation: Centaurus

RA 15h 0' 22.3"

Decl.  $-42^{\circ} 10' 38''$ 

Section 6/11

Apparent magnitude: 3.13

Absolute magnitude: -2.96

**Section 7/12–13****RA 16h 30'–19h 30'****5. Vega** $\alpha$  Lyrae

Constellation: Lyra

RA 18h 37' 33.9"

Decl.  $38^{\circ} 48' 0''$ 

Section 7/13

Apparent magnitude: 0.03

Absolute magnitude: 0.58

**15. Antares** $\alpha$  Scorpii

Constellation: Scorpius

RA 16h 30' 32.7"

Decl.  $-26^{\circ} 28' 1''$ 

Section 7/12

Apparent magnitude: 0.95v

Absolute magnitude: -5.39v

**24. Shaula** $\lambda$  Scorpii

Constellation: Scorpius

RA 17h 34' 52"

Decl.  $-37^{\circ} 6' 5''$ 

Section 7/12

Apparent magnitude: 1.62

Absolute magnitude: -5.05

**37. Kaus Australis** $\epsilon$  Sagittarii

Constellation: Sagittarius

RA 18h 25' 24"

Decl.  $-34^{\circ} 22' 2''$ 

Section 7/13

Apparent magnitude: 1.84

Absolute magnitude: -1.39

**39. Sargas** $\theta$  Scorpii

Constellation: Scorpius

RA 17h 38' 39"

Decl.  $-43^{\circ} 0' 28''$ 

Section 7/12

Apparent magnitude: 1.86

Absolute magnitude: -2.75

**42. Atria** $\alpha$  Trianguli Australis

Constellation: Triangulum Australe

RA 16h 48' 39.8951"

Decl.  $-69^{\circ} 1' 39.7626''$ 

Section 7/12

Apparent magnitude: 1.92

Absolute magnitude: -3.61

**52. Nunki** $\sigma$  Sagittarii

Constellation: Sagittarius

RA 18h 56' 24.7"

Decl.  $-26^{\circ} 16' 2''$ 

Section 7/13

Apparent magnitude: 2.05

Absolute magnitude: -2.14

**59. Rasalhague** $\alpha$  Ophiuchi

Constellation: Ophiuchus

RA 17h 35' 47.6"

Decl.  $12^{\circ} 32' 5''$ 

Section 7/12

Apparent magnitude: 2.08

Absolute magnitude: 1.3

**72. Eltanin** $\gamma$  Draconis

Constellation: Draco

RA 17h 57' 2.2"

Decl.  $51^{\circ} 29' 1''$ 

Section 7/12

Apparent magnitude: 2.24

Absolute magnitude: -1.04

**77. Wei** $\epsilon$  Scorpii

Constellation: Scorpius

RA 16h 51' 21.9"

Decl.  $-34^{\circ} 19' 3''$ 

Section 7/12

Apparent magnitude: 2.29

Absolute magnitude: 0.78

**83. Girtab** $\kappa$  Scorpii

Constellation: Scorpius

RA 17h 43' 46.1"

Decl.  $-39^{\circ} 2' 16''$ 

Section 7/12

Apparent magnitude: 2.39

Absolute magnitude: -3.38

**86. Sabik** $\eta$  Ophiuchi

Constellation: Ophiuchus

RA 17h 11' 26.4"

Decl.  $-15^{\circ} 44' 4''$ 

Section 7/12

Apparent magnitude: 2.43

Absolute magnitude: 0.37

**94. Han** $\zeta$  Ophiuchi

Constellation: Ophiuchus

RA 16h 38' 10.8"

Decl.  $-10^{\circ} 36' 1''$ 

Section 7/12

Apparent magnitude: 2.54

Absolute magnitude: -3.2

**101. Ascella** $\zeta$  Sagittarii

Constellation: Sagittarius

RA 19h 3' 47.2"

Decl.  $-29^{\circ} 51' 0''$ 

Section 7/13

Apparent magnitude: 2.6

Absolute magnitude: 0.42

**115. Lesath** $\nu$  Scorpii

Constellation: Scorpius

RA 17h 32' 1.4"

Decl.  $-37^{\circ} 18' 3''$ 

Section 7/12

Apparent magnitude: 2.7

Absolute magnitude: -3.31

**117. Kaus Meridionalis** $\delta$  Sagittarii

Constellation: Sagittarius

RA 18h 22' 10.7"

Decl.  $-29^{\circ} 49' 0''$ 

Section 7/13

Apparent magnitude: 2.72

Absolute magnitude: -2.14

**125. Cebalrai** $\beta$  Ophiuchi

Constellation: Ophiuchus

RA 17h 44' 23.2''

Decl. 4° 33' 3''

Section 7/12

Apparent magnitude: 2.76

Absolute magnitude: 0.76

**127. Kornephoros** $\beta$  Herculis

Constellation: Hercules

RA 16h 31' 1''

Decl. 21° 27' 0''

Section 7/12

Apparent magnitude: 2.78

Absolute magnitude: -0.5

**129. Rastaban** $\beta$  Draconis

Constellation: Draco

RA 17h 30' 51.1''

Decl. 52° 17' 1''

Section 7/12

Apparent magnitude: 2.79

Absolute magnitude: -2.43

**133. Rutilicus** $\zeta$  Herculis

Constellation: Hercules

RA 16h 41' 59.1''

Decl. 31° 34' 1''

Section 7/12

Apparent magnitude: 2.81

Absolute magnitude: 2.64

**135.  $\tau$  Scorpii**

Constellation: Scorpius

RA 16h 37' 2.2''

Decl. -28° 15' 1''

Section 7/12

Apparent magnitude: 2.82

Absolute magnitude: -2.78

**136. Kaus Borealis** $\lambda$  Sagittarii

Constellation: Sagittarius

RA 18h 29' 6.7''

Decl. -25° 24' 3''

Section 7/13

Apparent magnitude: 2.82

Absolute magnitude: 0.95

**141.  $\beta$  Aræ**

Constellation: Ara

RA 17h 26' 50.5''

Decl. -55° 32' 43''

Section 7/12

Apparent magnitude: 2.84

Absolute magnitude: -3.49

**142. Choo** $\alpha$  Arae

Constellation: Ara

RA 17h 33' 16.4''

Decl. -49° 53' 20''

Section 7/12

Apparent magnitude: 2.84

Absolute magnitude: -1.51

**152. Albaldah** $\pi$  Sagittarii

Constellation: Sagittarius

RA 19h 10' 51.8''

Decl. -20° 59' 3''

Section 7/13

Apparent magnitude: 2.88

Absolute magnitude: -2.77

**168. Alnasl** $\gamma$  Sagittarii

Constellation: Sagittarius

RA 18h 6' 59.8''

Decl. -30° 25' 2''

Section 7/13

Apparent magnitude: 2.98

Absolute magnitude: 0.63

**170.  $\iota^1$  Scorpii**

Constellation: Scorpius

RA 17h 48' 52.8''

Decl. -40° 7' 56''

Section 7/12

Apparent magnitude: 2.99

Absolute magnitude: -5.71

**171. Deneb el Okab** $\zeta$  Aquilae

Constellation: Aquila

RA 19h 6' 15.6''

Decl. 13° 53' 3''

Section 7/13

Apparent magnitude: 2.99

Absolute magnitude: 0.96

**175.  $\mu^1$  Scorpii**

Constellation: Scorpius

RA 16h 53' 7.6''

Decl. -38° 4' 39''

Section 7/12

Apparent magnitude: 3

Absolute magnitude: -4.01

**187. Tais** $\delta$  Draconis

Constellation: Draco

RA 19h 12' 33.3''

Decl. 67° 41' 3''

Section 7/13

Apparent magnitude: 3.07

Absolute magnitude: 0.63

**188.  $\eta$  Sagittarii**

Constellation: Sagittarius

RA 18h 18' 52.7''

Decl. -36° 45' 16''

Section 7/13

Apparent magnitude: 3.1

Absolute magnitude: -0.2

**195.  $\zeta$  Aræ**

Constellation: Ara

RA 17h 0' 9.4''

Decl. -56° 1' 2''

Section 7/12

Apparent magnitude: 3.12

Absolute magnitude: -3.11

**196. Sarin** $\delta$  Herculis

Constellation: Hercules

RA 17h 15' 47.5''

Decl. 24° 49' 0''

Section 7/12

Apparent magnitude: 3.12

Absolute magnitude: 1.21

**200.  $\pi$  Herculis**

Constellation: Hercules

RA 17h 15' 41.5''

Decl. 36° 47' 2''

Section 7/12

Apparent magnitude: 3.16

Absolute magnitude: -2.1

**Section 8/14–15****RA 19h 30'–22h 30'****12. Altair** $\alpha$  Aquilae

Constellation: Aquila

RA 19h 51' 41.1''

Decl. 8° 55' 0''

Section 8/14

Apparent magnitude: 0.77

Absolute magnitude: 2.21

**19. Deneb** $\alpha$  Cygni

Constellation: Cygnus

RA 20h 42' 3.8''

Decl. 45° 20' 5''

Section 8/14

Apparent magnitude: 1.24

Absolute magnitude: -8.74

**30. Alnair** $\alpha$  Gruis

Constellation: Grus

RA 22h 9' 23.4''

Decl. -46° 52' 14''

Section 8/15

Apparent magnitude: 1.74

Absolute magnitude: -0.72



**44. Peacock** $\alpha$  Pavonis

Constellation: Pavo

RA 20h 27' 6"

Decl.  $-56^{\circ} 40' 27''$ 

Section 8/14

Apparent magnitude: 1.93

Absolute magnitude: -1.82

**70. Sadr** $\gamma$  Cygni

Constellation: Cygnus

RA 20h 22' 53.6"

Decl.  $40^{\circ} 19' 0''$ 

Section 8/14

Apparent magnitude: 2.23

Absolute magnitude: -6.12

**82. Enif** $\epsilon$  Pegasi

Constellation: Pegasus

RA 21h 45' 5.7"

Decl.  $9^{\circ} 57' 3''$ 

Section 8/15

Apparent magnitude: 2.38

Absolute magnitude: -4.19

**89. Alderamin** $\alpha$  Cephei

Constellation: Cepheus

RA 21h 19' 1.2"

Decl.  $62^{\circ} 39' 5''$ 

Section 8/15

Apparent magnitude: 2.45

Absolute magnitude: 1.58

**91. Gienah** $\epsilon$  Cygni

Constellation: Cygnus

RA 20h 46' 57.6"

Decl.  $34^{\circ} 2' 2''$ 

Section 8/14

Apparent magnitude: 2.48

Absolute magnitude: 0.76

**118. Tarazed** $\gamma$  Aquilae

Constellation: Aquila

RA 19h 47' 8.3"

Decl.  $10^{\circ} 39' 3''$ 

Section 8/14

Apparent magnitude: 2.72

Absolute magnitude: -3.03

**145. Deneb Algedi** $\delta$  Capricorni

Constellation: Capricornus

RA 21h 48' 3.6"

Decl.  $-16^{\circ} 2' 3''$ 

Section 8/15

Apparent magnitude: 2.85

Absolute magnitude: 2.49

**147.  $\delta$  Cygni**

Constellation: Cygnus

RA 19h 45' 33.2"

Decl.  $45^{\circ} 10' 3''$ 

Section 8/14

Apparent magnitude: 2.86

Absolute magnitude: -0.74

**150.  $\alpha$  Tucanæ**

Constellation: Tucana

RA 22h 19' 45.2"

Decl.  $-60^{\circ} 10' 0''$ 

Section 8/15

Apparent magnitude: 2.87

Absolute magnitude: -1.05

**157. Albireo** $\beta$  Cygni

Constellation: Cygnus

RA 19h 31' 28.1"

Decl.  $27^{\circ} 59' 5''$ 

Section 8/14

Apparent magnitude: 2.9

Absolute magnitude: -2.31

**158. Sadalsuud** $\beta$  Aquarii

Constellation: Aquarius

RA 21h 32' 31.9"

Decl.  $-5^{\circ} 29' 2''$ 

Section 8/15

Apparent magnitude: 2.9

Absolute magnitude: -3.47

**164. Sadalmelik** $\alpha$  Aquarii

Constellation: Aquarius

RA 22h 6' 44"

Decl.  $0^{\circ} 13' 4''$ 

Section 8/15

Apparent magnitude: 2.95

Absolute magnitude: -3.88

**176.  $\gamma$  Gruis**

Constellation: Grus

RA 21h 55' 2.6"

Decl.  $-37^{\circ} 16' 37''$ 

Section 8/15

Apparent magnitude: 3

Absolute magnitude: -0.97

**184. Dabih** $\beta$  Capricorni

Constellation: Capricornus

RA 20h 22' 2.9"

Decl.  $-14^{\circ} 43' 1''$ 

Section 8/14

Apparent magnitude: 3.05

Absolute magnitude: -2.07

**192. Persian** $\alpha$  Indi

Constellation: Indus

RA 20h 38' 51.6"

Decl.  $-47^{\circ} 13' 32''$ 

Section 8/14

Apparent magnitude: 3.11

Absolute magnitude: 0.65

## Stars According to Constellation

### 1. Andromeda

#### 54. Alpheratz

$\alpha$  Andromedae  
RA 0h 9' 20.9"  
Decl. 29° 11' 3"  
Section 1/1  
Apparent magnitude: 2.07  
Absolute magnitude: -0.3

#### 55. Mirach

$\beta$  Andromedae  
RA 1h 10' 46.4"  
Decl. 35° 43' 0"  
Section 1/1  
Apparent magnitude: 2.07  
Absolute magnitude: -1.86

#### 61. Almach

$\gamma$  Andromedae  
RA 2h 3' 53.9523"  
Decl. 42° 19' 47.0223"  
Section 2/2  
Apparent magnitude: 2.1  
Absolute magnitude: -3.08

### 2. Aquarius

#### 158. Sadalsuud

$\beta$  Aquarii  
RA 21h 32' 31.9"  
Decl. -5° 29' 2"  
Section 8/15  
Apparent magnitude: 2.9  
Absolute magnitude: -3.47

#### 164. Sadalmelik

$\alpha$  Aquarii  
RA 22h 6' 44"  
Decl. 0° 13' 4"  
Section 8/15  
Apparent magnitude: 2.95  
Absolute magnitude: -3.88

### 3. Aquila

#### 12. Altair

$\alpha$  Aquilae  
RA 19h 51' 41.1"  
Decl. 8° 55' 0"  
Section 8/14  
Apparent magnitude: 0.77  
Absolute magnitude: 2.21

#### 118. Tarazed

$\gamma$  Aquilae  
RA 19h 47' 8.3"  
Decl. 10° 39' 3"  
Section 8/14  
Apparent magnitude: 2.72  
Absolute magnitude: -3.03

#### 171. Deneb el Okab

$\zeta$  Aquilae  
RA 19h 6' 15.6"  
Decl. 13° 53' 3"  
Section 7/13  
Apparent magnitude: 2.99  
Absolute magnitude: 0.96

### 4. Ara

#### 141. $\beta$ Aræ

$\beta$  Arae  
RA 17h 26' 50.5"  
Decl. -55° 32' 43"  
Section 7/12  
Apparent magnitude: 2.84  
Absolute magnitude: -3.49

#### 142. Choo

$\alpha$  Arae  
RA 17h 33' 16.4"  
Decl. -49° 53' 20"  
Section 7/12  
Apparent magnitude: 2.84  
Absolute magnitude: -1.51

#### 195. $\zeta$ Aræ

$\zeta$  Arae  
RA 17h 0' 9.4"  
Decl. -56° 1' 2"  
Section 7/12  
Apparent magnitude: 3.12  
Absolute magnitude: -3.11

### 5. Aries

#### 50. Hamal

$\alpha$  Arietis  
RA 2h 8' 13.2"  
Decl. 23° 32' 5"  
Section 2/2  
Apparent magnitude: 2.01  
Absolute magnitude: 0.48

#### 104. Sheratan

$\beta$  Arietis  
RA 1h 55' 40"  
Decl. 20° 53' 5"  
Section 2/2  
Apparent magnitude: 2.64  
Absolute magnitude: 1.33

### 6. Auriga

#### 6. Capella

$\alpha$  Aurigae  
RA 5h 18' 3.5"  
Decl. 46° 0' 5"  
Section 3/4  
Apparent magnitude: 0.07  
Absolute magnitude: -0.49

#### 41. Menkalinan

$\beta$  Aurigae  
RA 6h 0' 53.2"  
Decl. 44° 56' 5"  
Section 3/5  
Apparent magnitude: 1.9  
Absolute magnitude: -0.1

#### 107. $\theta$ Aurigæ

$\theta$  Aurigae  
RA 6h 0' 59"  
Decl. 37° 12' 4"  
Section 3/5  
Apparent magnitude: 2.65  
Absolute magnitude: -0.98

#### 112. Hassaleh

$\iota$  Aurigae  
RA 4h 58' 12.1"  
Decl. 33° 11' 3"  
Section 3/4  
Apparent magnitude: 2.69  
Absolute magnitude: -3.29

#### 181. Almaaz

$\epsilon$  Aurigae  
RA 5h 3' 18"  
Decl. 43° 50' 5"  
Section 3/4  
Apparent magnitude: 3.03  
Absolute magnitude: -5.95

### 7. Boötes

#### 4. Arcturus

$\alpha$  Boötis  
RA 14h 16' 30.3"  
Decl. 19° 5' 1"  
Section 6/10  
Apparent magnitude: -0.05  
Absolute magnitude: -0.31

#### 81. Izar

$\epsilon$  Boötis  
RA 14h 45' 47.7"  
Decl. 26° 59' 4"  
Section 6/10  
Apparent magnitude: 2.35  
Absolute magnitude: -1.69

#### 110. Muphrid

$\eta$  Boötis  
RA 13h 55' 33.9"  
Decl. 18° 18' 2"  
Section 6/10  
Apparent magnitude: 2.68  
Absolute magnitude: 2.41

**183. Seginus** $\gamma$  Boötis

RA 14h 32' 49.3"

Decl. 38° 13' 4"

Section 6/10

Apparent magnitude: 3.04

Absolute magnitude: 0.96

**8. Canes Venatici****130. Cor Caroli 2** $\alpha^2$  Canum Venaticorum

RA 12h 56' 1.66622"

Decl. 38° 19' 6.1541"

Section 5/9

Apparent magnitude: 2.98v

Absolute magnitude: 0.16

**9. Canis Major****1. Sirius** $\alpha$  Canis Majoris

RA 6h 45' 57.4"

Decl. -16° 44' 3"

Section 3/5

Apparent magnitude: -1.46

Absolute magnitude: 1.43

**22. Adhara** $\epsilon$  Canis Majoris

RA 6h 59' 21.2"

Decl. -28° 59' 5"

Section 3/5

Apparent magnitude: 1.5

Absolute magnitude: -4.1

**36. Wezen** $\delta$  Canis Majoris

RA 7h 9' 8.6"

Decl. -26° 25' 2"

Section 3/5

Apparent magnitude: 1.83

Absolute magnitude: -6.87

**46. Mirzam** $\beta$  Canis Majoris

RA 6h 23' 30.9"

Decl. -17° 57' 5"

Section 3/5

Apparent magnitude: 1.98

Absolute magnitude: -3.95

**88. Aludra** $\eta$  Canis Majoris

RA 7h 24' 49.6"

Decl. -29° 20' 2"

Section 3/5

Apparent magnitude: 2.45

Absolute magnitude: -7.51

**178. Phurad** $\zeta$  Canis Majoris

RA 6h 21' 1.4"

Decl. -30° 4' 2"

Section 3/5

Apparent magnitude: 3.02

Absolute magnitude: -2.05

**179.  $\alpha^2$  Canis Majoris** $\alpha^2$  Canis Majoris

RA 7h 3' 1.47211"

Decl. -23° 49' 59.8523"

Section 3/5

Apparent magnitude: 3.02

Absolute magnitude: -6.46

**10. Canis Minor****8. Procyon** $\alpha$  Canis Minoris

RA 7h 40' 16.3"

Decl. 5° 10' 3"

Section 4/6

Apparent magnitude: 0.36

Absolute magnitude: 2.64

**153. Gomeisa** $\beta$  Canis Minoris

RA 7h 28' 9.2"

Decl. 8° 15' 0"

Section 3/5

Apparent magnitude: 2.89

Absolute magnitude: -0.7

**11. Capricornus****145. Deneb Algedi** $\delta$  Capricorni

RA 21h 48' 3.6"

Decl. -16° 2' 3"

Section 8/15

Apparent magnitude: 2.85

Absolute magnitude: 2.49

**184. Dabih** $\beta$  Capricorni

RA 20h 22' 2.9"

Decl. -14° 43' 1"

Section 8/14

Apparent magnitude: 3.05

Absolute magnitude: -2.07

**12. Carina****2. Canopus** $\alpha$  Carinae

RA 6h 24' 21.8"

Decl. -52° 42' 23"

Section 3/5

Apparent magnitude: -0.73

Absolute magnitude: -5.64

**28. Miaplacidus** $\beta$  Carinae

RA 9h 13' 23.7"

Decl. -69° 47' 37"

Section 4/7

Apparent magnitude: 1.67

Absolute magnitude: -0.99

**40. Avior** $\epsilon$  Carinae

RA 8h 22' 53.5"

Decl. -59° 34' 10"

Section 4/6

Apparent magnitude: 1.87

Absolute magnitude: -4.57

**66. Aspidiske** $\iota$  Carinae

RA 9h 17' 35.1"

Decl. -59° 21' 12"

Section 4/7

Apparent magnitude: 2.21v

Absolute magnitude: -4.42

**121.  $\theta$  Carinae** $\theta$  Carinae

RA 10h 43' 37.3"

Decl. -64° 29' 30"

Section 5/8

Apparent magnitude: 2.74

Absolute magnitude: -2.91

**160.  $\nu$  Carinae** $\nu$  Carinae

RA 9h 47' 33.8"

Decl. -65° 9' 29"

Section 4/7

Apparent magnitude: 2.92

Absolute magnitude: -5.56

**13. Cassiopeia****63. Cih** $\gamma$  Cassiopeiae

RA 0h 57' 50.4"

Decl. 60° 48' 5"

Section 1/1

Apparent magnitude: 2.15v

Absolute magnitude: -4.22

**71. Schedar** $\alpha$  Cassiopeiae

RA 0h 41' 34.1"

Decl. 56° 38' 1"

Section 1/1

Apparent magnitude: 2.24

Absolute magnitude: -1.99

**74. Caph**

$\beta$  Cassiopeiae  
RA 0h 10' 10.6"  
Decl. 59° 15' 0"  
Section 1/1  
Apparent magnitude: 2.28  
Absolute magnitude: 1.17

**109. Ruchbah**

$\delta$  Cassiopeiae  
RA 1h 27' 2.5"  
Decl. 60° 19' 5"  
Section 1/1  
Apparent magnitude: 2.66  
Absolute magnitude: 0.24

**14. Centaurus****3.  $\alpha$  Centauri**

RA 14h 39' 35.0631"  
Decl. -60° 50' 15.0992"  
Section 6/10  
Apparent magnitude: -0.29  
Absolute magnitude: 4.06

**11. Hadar**

$\beta$  Centauri  
RA 14h 5' 8.7"  
Decl. -60° 27' 41"  
Section 6/10  
Apparent magnitude: 0.61  
Absolute magnitude: -5.42

**53. Menkent**

$\theta$  Centauri  
RA 14h 7' 46.7"  
Decl. -36° 27' 3"  
Section 6/10  
Apparent magnitude: 2.06  
Absolute magnitude: 0.7

**64. Muhlifain**

$\gamma$  Centauri  
RA 12h 42' 32.8"  
Decl. -49° 3' 40"  
Section 5/9  
Apparent magnitude: 2.2  
Absolute magnitude: -0.81

**75.  $\epsilon$  Centauri**

RA 13h 41' 4.3"  
Decl. -53° 33' 35"  
Section 6/10  
Apparent magnitude: 2.29  
Absolute magnitude: -3.02

**79.  $\eta$  Centauri**

RA 14h 36' 41.4"  
Decl. -42° 14' 17"  
Section 6/10  
Apparent magnitude: 2.33v  
Absolute magnitude: -2.55

**95.  $\zeta$  Centauri**

RA 13h 56' 42.2"  
Decl. -47° 22' 43"  
Section 6/10  
Apparent magnitude: 2.55  
Absolute magnitude: -2.81

**99.  $\delta$  Centauri**

RA 12h 9' 19.5"  
Decl. -50° 49' 31"  
Section 5/9  
Apparent magnitude: 2.58v  
Absolute magnitude: -2.84

**124.  $\iota$  Centauri**

RA 13h 21' 38.6"  
Decl. -36° 48' 34"  
Section 5/9  
Apparent magnitude: 2.75  
Absolute magnitude: 1.48

**191.  $\lambda$  Centauri**

RA 11h 36' 38.6"  
Decl. -63° 7' 20"  
Section 5/8  
Apparent magnitude: 3.11  
Absolute magnitude: -2.39

**197. Ke Kwan**

$\kappa$  Centauri  
RA 15h 0' 22.3"  
Decl. -42° 10' 38"  
Section 6/11  
Apparent magnitude: 3.13  
Absolute magnitude: -2.96

**15. Cepheus****89. Alderamin**

$\alpha$  Cephei  
RA 21h 19' 1.2"  
Decl. 62° 39' 5"  
Section 8/15  
Apparent magnitude: 2.45  
Absolute magnitude: 1.58

**16. Cetus****51. Diphda**

$\beta$  Ceti  
RA 0h 44' 31"  
Decl. -17° 53' 0"  
Section 1/1  
Apparent magnitude: 2.04  
Absolute magnitude: -0.3

**93. Menkar**

$\alpha$  Ceti  
RA 3h 3' 14.9"  
Decl. 4° 9' 4"  
Section 2/3  
Apparent magnitude: 2.54  
Absolute magnitude: -1.61

**17. Columba****106. Phact**

$\alpha$  Columbae  
RA 5h 40' 19.2"  
Decl. -34° 3' 55"  
Section 3/4  
Apparent magnitude: 2.65  
Absolute magnitude: -1.93

**193. Wazn**

$\beta$  Columbae  
RA 5h 51' 36.8"  
Decl. -35° 45' 44"  
Section 3/4  
Apparent magnitude: 3.12  
Absolute magnitude: 1.02

**18. Corona Borealis****67. Alphecca**

$\alpha$  Coronae Borealis  
RA 15h 35' 28.3"  
Decl. 26° 39' 1"  
Section 6/11  
Apparent magnitude: 2.22  
Absolute magnitude: 0.42

**19. Corvus****100. Gienah Ghurab**

$\gamma$  Corvi  
RA 12h 16' 45.6"  
Decl. -17° 38' 4"  
Section 5/9  
Apparent magnitude: 2.58  
Absolute magnitude: -0.94

**108. Kraz**

$\beta$  Corvi  
RA 12h 35' 21.7"  
Decl. -23° 29' 5"  
Section 5/9  
Apparent magnitude: 2.65  
Absolute magnitude: -0.51

**163. Algorel**

$\delta$  Corvi  
RA 12h 30' 49.4"  
Decl. -16° 37' 0"  
Section 5/9  
Apparent magnitude: 2.94  
Absolute magnitude: 0.79

**180. Minkar**

$\epsilon$  Corvi  
RA 12h 11' 4.7"  
Decl. -22° 43' 2"  
Section 5/9  
Apparent magnitude: 3.02  
Absolute magnitude: -1.82

**20. Crux**

**13. Acrux** $\alpha$  Crucis

RA 12h 26' 35.8952"

Decl.  $-63^{\circ} 5' 56.734''$ 

Section 5/9

Apparent magnitude: 0.79

Absolute magnitude: -4.17

**20. Mimosa** $\beta$  Crucis

RA 12h 48' 48.9"

Decl.  $-59^{\circ} 47' 22''$ 

Section 5/9

Apparent magnitude: 1.26

Absolute magnitude: -3.91

**25. Gacrux** $\gamma$  Crucis

RA 12h 32' 12.2"

Decl.  $-57^{\circ} 13' 0''$ 

Section 5/9

Apparent magnitude: 1.63

Absolute magnitude: -0.52

**128.  $\delta$  Crucis**

RA 12h 16' 8.3"

Decl.  $-58^{\circ} 51' 6''$ 

Section 5/9

Apparent magnitude: 2.79

Absolute magnitude: -2.45

**21. Cygnus****19. Deneb** $\alpha$  Cygni

RA 20h 42' 3.8"

Decl.  $45^{\circ} 20' 5''$ 

Section 8/14

Apparent magnitude: 1.24

Absolute magnitude: -8.74

**70. Sadr** $\gamma$  Cygni

RA 20h 22' 53.6"

Decl.  $40^{\circ} 19' 0''$ 

Section 8/14

Apparent magnitude: 2.23

Absolute magnitude: -6.12

**91. Gienah** $\epsilon$  Cygni

RA 20h 46' 57.6"

Decl.  $34^{\circ} 2' 2''$ 

Section 8/14

Apparent magnitude: 2.48

Absolute magnitude: 0.76

**147.  $\delta$  Cygni**

RA 19h 45' 33.2"

Decl.  $45^{\circ} 10' 3''$ 

Section 8/14

Apparent magnitude: 2.86

Absolute magnitude: -0.74

**157. Albireo** $\beta$  Cygni

RA 19h 31' 28.1"

Decl.  $27^{\circ} 59' 5''$ 

Section 8/14

Apparent magnitude: 2.9

Absolute magnitude: -2.31

**22. Draco****72. Eltanin** $\gamma$  Draconis

RA 17h 57' 2.2"

Decl.  $51^{\circ} 29' 1''$ 

Section 7/12

Apparent magnitude: 2.24

Absolute magnitude: -1.04

**120. Aldhibain** $\eta$  Draconis

RA 16h 24' 14.7"

Decl.  $61^{\circ} 28' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: 0.58

**129. Rastaban** $\beta$  Draconis

RA 17h 30' 51.1"

Decl.  $52^{\circ} 17' 1''$ 

Section 7/12

Apparent magnitude: 2.79

Absolute magnitude: -2.43

**187. Tais** $\delta$  Draconis

RA 19h 12' 33.3"

Decl.  $67^{\circ} 41' 3''$ 

Section 7/13

Apparent magnitude: 3.07

Absolute magnitude: 0.63

**23. Eridanus****9. Achernar** $\alpha$  Eridani

RA 1h 38' 24"

Decl.  $-57^{\circ} 8' 36''$ 

Section 2/2

Apparent magnitude: 0.45

Absolute magnitude: -2.77

**126. Kursa** $\beta$  Eridani

RA 5h 8' 45.6"

Decl.  $-5^{\circ} 3' 5''$ 

Section 3/4

Apparent magnitude: 2.78

Absolute magnitude: 0.6

**151. Acamar** $\theta^1$  Eridani

RA 2h 58' 15.6792"

Decl.  $-40^{\circ} 18' 16.8457''$ 

Section 2/2

Apparent magnitude: 2.88

Absolute magnitude: -0.59

**165. Zaurak** $\gamma$  Eridani

RA 3h 58' 53.6"

Decl.  $-13^{\circ} 27' 2''$ 

Section 2/3

Apparent magnitude: 2.97

Absolute magnitude: -1.19

**24. Gemini****17. Pollux** $\beta$  Geminorum

RA 7h 46' 26.7"

Decl.  $27^{\circ} 58' 4''$ 

Section 4/6

Apparent magnitude: 1.14

Absolute magnitude: 1.07

**23. Castor** $\alpha$  Geminorum

RA 7h 34' 35.863"

Decl.  $31^{\circ} 53' 17.79''$ 

Section 4/6

Apparent magnitude: 1.58

Absolute magnitude: 0.59

**43. Alhena** $\gamma$  Geminorum

RA 6h 38' 46.8"

Decl.  $16^{\circ} 22' 5''$ 

Section 3/5

Apparent magnitude: 1.93

Absolute magnitude: -0.6

**148. Tejat** $\mu$  Geminorum

RA 6h 24' 4.8"

Decl.  $22^{\circ} 30' 0''$ 

Section 3/5

Apparent magnitude: 2.87v

Absolute magnitude: -1.39v

**185. Mebsuta** $\epsilon$  Geminorum

RA 6h 45' 4.2"

Decl.  $25^{\circ} 6' 4''$ 

Section 3/5

Apparent magnitude: 3.06

Absolute magnitude: -4.15

**25. Grus**

**30. Alnair** $\alpha$  Gruis

RA 22h 9' 23.4"

Decl.  $-46^{\circ} 52' 14''$ 

Section 8/15

Apparent magnitude: 1.74

Absolute magnitude: -0.72

**58. Al Dhanab** $\beta$  Gruis

RA 22h 43' 45.8"

Decl.  $-46^{\circ} 47' 14''$ 

Section 1/16

Apparent magnitude: 2.07v

Absolute magnitude: 1.52

**176.  $\gamma$  Gruis**

RA 21h 55' 2.6"

Decl.  $-37^{\circ} 16' 37''$ 

Section 8/15

Apparent magnitude: 3

Absolute magnitude: -0.97

**26. Hercules****127. Kornephoros** $\beta$  Herculis

RA 16h 31' 1"

Decl.  $21^{\circ} 27' 0''$ 

Section 7/12

Apparent magnitude: 2.78

Absolute magnitude: -0.5

**133. Rutilicus** $\zeta$  Herculis

RA 16h 41' 59.1"

Decl.  $31^{\circ} 34' 1''$ 

Section 7/12

Apparent magnitude: 2.81

Absolute magnitude: 2.64

**196. Sarin** $\delta$  Herculis

RA 17h 15' 47.5"

Decl.  $24^{\circ} 49' 0''$ 

Section 7/12

Apparent magnitude: 3.12

Absolute magnitude: 1.21

**200.  $\pi$  Herculis**

RA 17h 15' 41.5"

Decl.  $36^{\circ} 47' 2''$ 

Section 7/12

Apparent magnitude: 3.16

Absolute magnitude: -2.1

**27. Hydra****47. Alphard** $\alpha$  Hydrae

RA 9h 28' 29.8"

Decl.  $-8^{\circ} 44' 2''$ 

Section 4/7

Apparent magnitude: 1.98

Absolute magnitude: -1.7

**169.  $\gamma$  Hydræ** $\gamma$  Hydrae

RA 13h 19' 55.9"

Decl.  $-23^{\circ} 16' 0''$ 

Section 5/9

Apparent magnitude: 2.99

Absolute magnitude: -0.05

**189.  $\zeta$  Hydræ** $\zeta$  Hydrae

RA 8h 56' 22.2"

Decl.  $5^{\circ} 52' 2''$ 

Section 4/6

Apparent magnitude: 3.11

Absolute magnitude: -0.21

**190.  $\nu$  Hydræ** $\nu$  Hydrae

RA 10h 50' 32.3"

Decl.  $-16^{\circ} 17' 27''$ 

Section 5/8

Apparent magnitude: 3.11

Absolute magnitude: -0.03

**28. Hydrus****134.  $\beta$  Hydri**

RA 0h 26' 41.9"

Decl.  $-77^{\circ} 9' 1''$ 

Section 1/1

Apparent magnitude: 2.82

Absolute magnitude: 3.45

**146.  $\alpha$  Hydri**

RA 1h 59' 21.1"

Decl.  $-61^{\circ} 28' 49''$ 

Section 2/2

Apparent magnitude: 2.86

Absolute magnitude: 1.16

**29. Indus****192. Persian** $\alpha$  Indi

RA 20h 38' 51.6"

Decl.  $-47^{\circ} 13' 32''$ 

Section 8/14

Apparent magnitude: 3.11

Absolute magnitude: 0.65

**30. Leo****21. Regulus** $\alpha$  Leonis

RA 10h 9' 21.3"

Decl.  $11^{\circ} 52' 3''$ 

Section 4/7

Apparent magnitude: 1.36

Absolute magnitude: -0.52

**49. Algieba** $\gamma$  Leonis

RA 10h 19' 58.3506"

Decl.  $19^{\circ} 50' 29.3468''$ 

Section 4/7

Apparent magnitude: 2

Absolute magnitude: -0.93

**62. Denebola** $\beta$  Leonis

RA 11h 50' 0.1"

Decl.  $14^{\circ} 28' 0''$ 

Section 5/8

Apparent magnitude: 2.14

Absolute magnitude: 1.92

**96. Zosma** $\delta$  Leonis

RA 11h 15' 5.4"

Decl.  $20^{\circ} 25' 1''$ 

Section 5/8

Apparent magnitude: 2.56

Absolute magnitude: 1.32

**167. Ras Elased Australis** $\epsilon$  Leonis

RA 9h 46' 53.9"

Decl.  $23^{\circ} 41' 1''$ 

Section 4/7

Apparent magnitude: 2.97

Absolute magnitude: -1.46

**31. Lepus****98. Arneb** $\alpha$  Leporis

RA 5h 33' 32.8"

Decl.  $-17^{\circ} 48' 3''$ 

Section 3/4

Apparent magnitude: 2.58

Absolute magnitude: -5.4

**132. Nihal** $\beta$  Leporis

RA 5h 29' 2.3"

Decl.  $-20^{\circ} 44' 4''$ 

Section 3/4

Apparent magnitude: 2.81

Absolute magnitude: -0.63

**32. Libra**

**102. Zubeneshamali** $\beta$  Librae

RA 15h 18' 0.3"

Decl.  $-9^{\circ} 27' 0''$ 

Section 6/11

Apparent magnitude: 2.61

Absolute magnitude: -0.84

**105. Zubenelgenubi** $\alpha^2$  Librae

RA 14h 50' 52.7131"

Decl.  $-16^{\circ} 2' 30.3955''$ 

Section 6/10

Apparent magnitude: 2.64

Absolute magnitude: 0.77

**33. Lupus****78. Men** $\alpha$  Lupi

RA 14h 43' 10.1"

Decl.  $-47^{\circ} 27' 59''$ 

Section 6/10

Apparent magnitude: 2.3

Absolute magnitude: -3.83

**111. Ke Kouan** $\beta$  Lupi

RA 14h 59' 45.1"

Decl.  $-43^{\circ} 12' 26''$ 

Section 6/10

Apparent magnitude: 2.68

Absolute magnitude: -3.35

**131.  $\gamma$  Lupi**

RA 15h 36' 22.8"

Decl.  $-41^{\circ} 13' 39''$ 

Section 6/11

Apparent magnitude: 2.8

Absolute magnitude: -3.4

**34. Lynx****198.  $\alpha$  Lyncis**

RA 9h 22' 10.6"

Decl.  $34^{\circ} 18' 4''$ 

Section 4/7

Apparent magnitude: 3.14

Absolute magnitude: -1.02

**35. Lyra****5. Vega** $\alpha$  Lyrae

RA 18h 37' 33.9"

Decl.  $38^{\circ} 48' 0''$ 

Section 7/13

Apparent magnitude: 0.03

Absolute magnitude: 0.58

**36. Musca****114.  $\alpha$  Muscae** $\alpha$  Muscae

RA 12h 38' 18.4"

Decl.  $-69^{\circ} 14' 14''$ 

Section 5/9

Apparent magnitude: 2.69

Absolute magnitude: -2.17

**182.  $\beta$  Muscae** $\beta$  Muscae

RA 12h 47' 26.1"

Decl.  $-68^{\circ} 12' 32''$ 

Section 5/9

Apparent magnitude: 3.04

Absolute magnitude: -1.86

**37. Ophiuchus****59. Rasalhague** $\alpha$  Ophiuchi

RA 17h 35' 47.6"

Decl.  $12^{\circ} 32' 5''$ 

Section 7/12

Apparent magnitude: 2.08

Absolute magnitude: 1.3

**86. Sabik** $\eta$  Ophiuchi

RA 17h 11' 26.4"

Decl.  $-15^{\circ} 44' 4''$ 

Section 7/12

Apparent magnitude: 2.43

Absolute magnitude: 0.37

**94. Han** $\zeta$  Ophiuchi

RA 16h 38' 10.8"

Decl.  $-10^{\circ} 36' 1''$ 

Section 7/12

Apparent magnitude: 2.54

Absolute magnitude: -3.2

**119. Yed Prior** $\delta$  Ophiuchi

RA 16h 15' 19"

Decl.  $-3^{\circ} 44' 2''$ 

Section 6/11

Apparent magnitude: 2.73

Absolute magnitude: -0.86

**125. Cebalrai** $\beta$  Ophiuchi

RA 17h 44' 23.2"

Decl.  $4^{\circ} 33' 3''$ 

Section 7/12

Apparent magnitude: 2.76

Absolute magnitude: 0.76

**38. Orion****7. Rigel** $\beta$  Orionis

RA 5h 15' 25.7"

Decl.  $-8^{\circ} 10' 5''$ 

Section 3/4

Apparent magnitude: 0.15v

Absolute magnitude: -6.72v

**10. Betelgeuse** $\alpha$  Orionis

RA 5h 56' 10.4"

Decl.  $7^{\circ} 24' 3''$ 

Section 3/4

Apparent magnitude: 0.55v

Absolute magnitude: -5.04v

**26. Bellatrix** $\gamma$  Orionis

RA 5h 26' 7.5"

Decl.  $6^{\circ} 21' 5''$ 

Section 3/4

Apparent magnitude: 1.64

Absolute magnitude: -2.72

**29. Alnilam** $\epsilon$  Orionis

RA 5h 37' 9.2"

Decl.  $-1^{\circ} 11' 2''$ 

Section 3/4

Apparent magnitude: 1.69

Absolute magnitude: -6.38

**31. Alnitak** $\zeta$  Orionis

RA 5h 41' 41.6"

Decl.  $-1^{\circ} 56' 0''$ 

Section 3/4

Apparent magnitude: 1.75

Absolute magnitude: -5.25

**56. Saiph** $\kappa$  Orionis

RA 5h 48' 38.1"

Decl.  $-9^{\circ} 39' 5''$ 

Section 3/4

Apparent magnitude: 2.07

Absolute magnitude: -4.65

**73. Mintaka** $\delta$  Orionis

RA 5h 32' 57.2"

Decl.  $0^{\circ} 17' 1''$ 

Section 3/4

Apparent magnitude: 2.25

Absolute magnitude: -4.99

**123. Hatysa** $\iota$  Orionis

RA 5h 36' 20.3"

Decl.  $-5^{\circ} 53' 5''$ 

Section 3/4

Apparent magnitude: 2.75

Absolute magnitude: -5.3

**39. Pavo**

**44. Peacock** $\alpha$  Pavonis

RA 20h 27' 6"

Decl.  $-56^{\circ} 40' 27''$ 

Section 8/14

Apparent magnitude: 1.93

Absolute magnitude: -1.82

**40. Pegasus****82. Enif** $\epsilon$  Pegasi

RA 21h 45' 5.7"

Decl.  $9^{\circ} 57' 3''$ 

Section 8/15

Apparent magnitude: 2.38

Absolute magnitude: -4.19

**87. Scheat** $\beta$  Pegasi

RA 23h 4' 40.4"

Decl.  $28^{\circ} 11' 0''$ 

Section 1/16

Apparent magnitude: 2.44v

Absolute magnitude: -1.49

**92. Markab** $\alpha$  Pegasi

RA 23h 5' 41"

Decl.  $15^{\circ} 18' 1''$ 

Section 1/16

Apparent magnitude: 2.49

Absolute magnitude: -0.67

**137. Algenib** $\gamma$  Pegasi

RA 0h 14' 11.4"

Decl.  $15^{\circ} 17' 1''$ 

Section 1/1

Apparent magnitude: 2.83

Absolute magnitude: -2.22

**161. Matar** $\eta$  Pegasi

RA 22h 43' 52.3"

Decl.  $30^{\circ} 19' 0''$ 

Section 1/16

Apparent magnitude: 2.93

Absolute magnitude: -1.16

**41. Perseus****33. Mirfak** $\alpha$  Persei

RA 3h 25' 39.2"

Decl.  $49^{\circ} 55' 3''$ 

Section 2/3

Apparent magnitude: 1.8

Absolute magnitude: -4.49

**60. Algol** $\beta$  Persei

RA 3h 9' 22.8"

Decl.  $41^{\circ} 1' 3''$ 

Section 2/3

Apparent magnitude: 2.09

Absolute magnitude: 0.18

**140.  $\zeta$  Persei**

RA 3h 55' 18"

Decl.  $31^{\circ} 56' 1''$ 

Section 2/3

Apparent magnitude: 2.84

Absolute magnitude: -4.55

**155.  $\epsilon$  Persei**

RA 3h 59' 6.1"

Decl.  $40^{\circ} 3' 4''$ 

Section 2/3

Apparent magnitude: 2.9

Absolute magnitude: -3.19

**159.  $\gamma$  Persei**

RA 3h 6' 8.9"

Decl.  $53^{\circ} 34' 3''$ 

Section 2/3

Apparent magnitude: 2.91

Absolute magnitude: -1.57

**177.  $\delta$  Persei**

RA 3h 44' 15"

Decl.  $47^{\circ} 50' 4''$ 

Section 2/3

Apparent magnitude: 3.01

Absolute magnitude: -3.04

**42. Phoenix****84. Ankaa** $\alpha$  Phoenicis

RA 0h 27' 11.7"

Decl.  $-42^{\circ} 12' 20''$ 

Section 1/1

Apparent magnitude: 2.4

Absolute magnitude: 0.52

**43. Piscis Austrinus****18. Fomalhaut** $\alpha$  Piscis Austrini

RA 22h 57' 39.0465"

Decl.  $-29^{\circ} 37' 20.05''$ 

Section 1/16

Apparent magnitude: 1.15

Absolute magnitude: 1.72

**44. Puppis****65. Naos** $\zeta$  Puppis

RA 8h 4' 14.1"

Decl.  $-40^{\circ} 3' 22''$ 

Section 4/6

Apparent magnitude: 2.21

Absolute magnitude: -5.95

**116.  $\pi$  Puppis**

RA 7h 17' 47.8"

Decl.  $-37^{\circ} 7' 54''$ 

Section 3/5

Apparent magnitude: 2.71

Absolute magnitude: -4.92

**138. Turais** $\rho$  Puppis

RA 8h 8' 19.9"

Decl.  $-24^{\circ} 21' 3''$ 

Section 4/6

Apparent magnitude: 2.83

Absolute magnitude: 1.41

**162.  $\tau$  Puppis**

RA 6h 50' 23.7"

Decl.  $-50^{\circ} 38' 14''$ 

Section 3/5

Apparent magnitude: 2.94

Absolute magnitude: -0.8

**45. Sagittarius****37. Kaus Australis** $\epsilon$  Sagittarii

RA 18h 25' 24"

Decl.  $-34^{\circ} 22' 2''$ 

Section 7/13

Apparent magnitude: 1.84

Absolute magnitude: -1.39

**52. Nunki** $\sigma$  Sagittarii

RA 18h 56' 24.7"

Decl.  $-26^{\circ} 16' 2''$ 

Section 7/13

Apparent magnitude: 2.05

Absolute magnitude: -2.14

**101. Ascella** $\zeta$  Sagittarii

RA 19h 3' 47.2"

Decl.  $-29^{\circ} 51' 0''$ 

Section 7/13

Apparent magnitude: 2.6

Absolute magnitude: 0.42

**117. Kaus Meridionalis** $\delta$  Sagittarii

RA 18h 22' 10.7"

Decl.  $-29^{\circ} 49' 0''$ 

Section 7/13

Apparent magnitude: 2.72

Absolute magnitude: -2.14



**136. Kaus Borealis**

$\lambda$  Sagittarii  
RA 18h 29' 6.7"  
Decl.  $-25^{\circ} 24' 3''$   
Section 7/13  
Apparent magnitude: 2.82  
Absolute magnitude: 0.95

**152. Albaldah**

$\pi$  Sagittarii  
RA 19h 10' 51.8"  
Decl.  $-20^{\circ} 59' 3''$   
Section 7/13  
Apparent magnitude: 2.88  
Absolute magnitude: -2.77

**168. Alnasl**

$\gamma$  Sagittarii  
RA 18h 6' 59.8"  
Decl.  $-30^{\circ} 25' 2''$   
Section 7/13  
Apparent magnitude: 2.98  
Absolute magnitude: 0.63

**188.  $\eta$  Sagittarii**

RA 18h 18' 52.7"  
Decl.  $-36^{\circ} 45' 16''$   
Section 7/13  
Apparent magnitude: 3.1  
Absolute magnitude: -0.2

**46. Scorpius****15. Antares**

$\alpha$  Scorpii  
RA 16h 30' 32.7"  
Decl.  $-26^{\circ} 28' 1''$   
Section 7/12  
Apparent magnitude: 0.95v  
Absolute magnitude: -5.39v

**24. Shaula**

$\lambda$  Scorpii  
RA 17h 34' 52"  
Decl.  $-37^{\circ} 6' 5''$   
Section 7/12  
Apparent magnitude: 1.62  
Absolute magnitude: -5.05

**39. Sargas**

$\theta$  Scorpii  
RA 17h 38' 39"  
Decl.  $-43^{\circ} 0' 28''$   
Section 7/12  
Apparent magnitude: 1.86  
Absolute magnitude: -2.75

**76. Dschubba**

$\delta$  Scorpii  
RA 16h 1' 25.8"  
Decl.  $-22^{\circ} 40' 2''$   
Section 6/11  
Apparent magnitude: 2.29  
Absolute magnitude: -3.16

**77. Wei**

$\epsilon$  Scorpii  
RA 16h 51' 21.9"  
Decl.  $-34^{\circ} 19' 3''$   
Section 7/12  
Apparent magnitude: 2.29  
Absolute magnitude: 0.78

**83. Girtab**

$\kappa$  Scorpii  
RA 17h 43' 46.1"  
Decl.  $-39^{\circ} 2' 16''$   
Section 7/12  
Apparent magnitude: 2.39  
Absolute magnitude: -3.38

**97. Graffias**

$\beta$  Scorpii  
RA 16h 5' 26.232"  
Decl.  $-19^{\circ} 48' 19.63''$   
Section 6/11  
Apparent magnitude: 2.56  
Absolute magnitude: -3.5

**115. Lesath**

$\nu$  Scorpii  
RA 17h 32' 1.4"  
Decl.  $-37^{\circ} 18' 3''$   
Section 7/12  
Apparent magnitude: 2.7  
Absolute magnitude: -3.31

**135.  $\tau$  Scorpii**

RA 16h 37' 2.2"  
Decl.  $-28^{\circ} 15' 1''$   
Section 7/12  
Apparent magnitude: 2.82  
Absolute magnitude: -2.78

**154.  $\pi$  Scorpii**

RA 15h 59' 58.5"  
Decl.  $-26^{\circ} 9' 5''$   
Section 6/11  
Apparent magnitude: 2.89  
Absolute magnitude: -2.85

**156. Alniyat**

$\sigma$  Scorpii  
RA 16h 22' 19"  
Decl.  $-25^{\circ} 38' 0''$   
Section 6/11  
Apparent magnitude: 2.9v  
Absolute magnitude: -3.86v

**170.  $\iota^1$  Scorpii**

RA 17h 48' 52.8"  
Decl.  $-40^{\circ} 7' 56''$   
Section 7/12  
Apparent magnitude: 2.99  
Absolute magnitude: -5.71

**175.  $\mu^1$  Scorpii**

RA 16h 53' 7.6"  
Decl.  $-38^{\circ} 4' 39''$   
Section 7/12  
Apparent magnitude: 3  
Absolute magnitude: -4.01

**47. Serpens****103. Unukalhai**

$\alpha$  Serpentis  
RA 15h 45' 10.8"  
Decl.  $6^{\circ} 22' 0''$   
Section 6/11  
Apparent magnitude: 2.63  
Absolute magnitude: 0.87

**48. Taurus****14. Aldebaran**

$\alpha$  Tauri  
RA 4h 36' 59.1"  
Decl.  $16^{\circ} 32' 4''$   
Section 3/4  
Apparent magnitude: 0.86v  
Absolute magnitude: -0.64v

**27. Elnath**

$\beta$  Tauri  
RA 5h 27' 27.8"  
Decl.  $28^{\circ} 37' 1''$   
Section 3/4  
Apparent magnitude: 1.66  
Absolute magnitude: -1.36

**143. Alcyone**

$\eta$  Tauri  
RA 3h 48' 35.3"  
Decl.  $24^{\circ} 9' 4''$   
Section 2/3  
Apparent magnitude: 2.85  
Absolute magnitude: -2.41

**166. Alheka**

$\zeta$  Tauri  
RA 5h 38' 45.1"  
Decl.  $21^{\circ} 9' 0''$   
Section 3/4  
Apparent magnitude: 2.97  
Absolute magnitude: -2.56

**49. Triangulum****172.  $\beta$  Trianguli**

RA 2h 10' 39.1"  
Decl.  $35^{\circ} 4' 2''$   
Section 2/2  
Apparent magnitude: 3  
Absolute magnitude: 0.09

**50. Triangulum Australe**

**42. Atria**

$\alpha$  Trianguli Australis  
RA 16h 48' 39.8951"  
Decl.  $-69^{\circ} 1' 39.7626''$   
Section 7/12  
Apparent magnitude: 1.92  
Absolute magnitude: -3.61

**139.  $\beta$  Trianguli Australis**

RA 15h 56' 47.3"  
Decl.  $-63^{\circ} 29' 9''$   
Section 6/11  
Apparent magnitude: 2.83  
Absolute magnitude: 2.38

**149.  $\gamma$  Trianguli Australis**

RA 15h 18' 54.582"  
Decl.  $-68^{\circ} 40' 46.3654''$   
Section 6/11  
Apparent magnitude: 2.87  
Absolute magnitude: -0.87

**51. Tucana****150.  $\alpha$  Tucanæ**

$\alpha$  Tucanæ  
RA 22h 19' 45.2"  
Decl.  $-60^{\circ} 10' 0''$   
Section 8/15  
Apparent magnitude: 2.87  
Absolute magnitude: -1.05

**52. Ursa Major****32. Alioth**

$\epsilon$  Ursae Majoris  
RA 12h 54' 50.3"  
Decl.  $55^{\circ} 51' 3''$   
Section 5/9  
Apparent magnitude: 1.77  
Absolute magnitude: -0.2

**34. Dubhe**

$\alpha$  Ursae Majoris  
RA 11h 4' 51.2"  
Decl.  $61^{\circ} 39' 0''$   
Section 5/8  
Apparent magnitude: 1.8  
Absolute magnitude: -1.09

**38. Alkaid**

$\eta$  Ursae Majoris  
RA 13h 48' 16.1"  
Decl.  $49^{\circ} 13' 1''$   
Section 6/10  
Apparent magnitude: 1.86  
Absolute magnitude: -0.59

**69. Mizar**

$\zeta$  Ursae Majoris  
RA 13h 24' 40.1"  
Decl.  $54^{\circ} 49' 4''$   
Section 5/9  
Apparent magnitude: 2.23  
Absolute magnitude: 0.33

**80. Merak**

$\beta$  Ursae Majoris  
RA 11h 2' 56.8"  
Decl.  $56^{\circ} 16' 5''$   
Section 5/8  
Apparent magnitude: 2.34  
Absolute magnitude: 0.41

**85. Phecda**

$\gamma$  Ursae Majoris  
RA 11h 54' 47.8"  
Decl.  $53^{\circ} 35' 3''$   
Section 5/8  
Apparent magnitude: 2.41  
Absolute magnitude: 0.36

**173.  $\psi$  Ursae Majoris**

RA 11h 10' 41.8"  
Decl.  $44^{\circ} 23' 5''$   
Section 5/8  
Apparent magnitude: 3  
Absolute magnitude: -0.27

**186. Tania Australis**

$\mu$  Ursae Majoris  
RA 10h 23' 25.5"  
Decl.  $41^{\circ} 24' 2''$   
Section 4/7  
Apparent magnitude: 3.06  
Absolute magnitude: -1.35

**194. Talita**

$\iota$  Ursae Majoris  
RA 9h 0' 28"  
Decl.  $47^{\circ} 58' 0''$   
Section 4/7  
Apparent magnitude: 3.12  
Absolute magnitude: 2.29

**53. Ursa Minor****48. Polaris**

$\alpha$  Ursae Minoris  
RA 2h 55' 0"  
Decl.  $89^{\circ} 20' 3''$   
Section 2/2  
Apparent magnitude: 1.99v  
Absolute magnitude: -3.62v

**57. Kochab**

$\beta$  Ursae Minoris  
RA 14h 50' 40.2"  
Decl.  $74^{\circ} 4' 4''$   
Section 6/10  
Apparent magnitude: 2.07  
Absolute magnitude: -0.87

**174. Pherkad Major**

$\gamma$  Ursae Minoris  
RA 15h 20' 42.8"  
Decl.  $71^{\circ} 46' 0''$   
Section 6/11  
Apparent magnitude: 3  
Absolute magnitude: -2.84

**54. Vela****35. Regor**

$\gamma$  Velorum  
RA 8h 9' 31.9501"  
Decl.  $-47^{\circ} 20' 11.7108''$   
Section 4/6  
Apparent magnitude: 1.81  
Absolute magnitude: -5.25

**45. Koo She**

$\delta$  Velorum  
RA 8h 45' 12.9"  
Decl.  $-54^{\circ} 46' 38''$   
Section 4/6  
Apparent magnitude: 1.95  
Absolute magnitude: 0.01

**68. Suhail**

$\lambda$  Velorum  
RA 9h 8' 40.7"  
Decl.  $-43^{\circ} 30' 29''$   
Section 4/7  
Apparent magnitude: 2.23  
Absolute magnitude: -3.99

**90. Markeb**

$\kappa$  Velorum  
RA 9h 22' 41.2"  
Decl.  $-55^{\circ} 5' 25''$   
Section 4/7  
Apparent magnitude: 2.47  
Absolute magnitude: -3.62

**113.  $\mu$  Velorum**

RA 10h 47' 34.2"  
Decl.  $-49^{\circ} 31' 6''$   
Section 5/8  
Apparent magnitude: 2.69  
Absolute magnitude: -0.06

**199. N Velorum**

RA 9h 31' 13.3189"  
Decl.  $-57^{\circ} 2' 3.7578''$   
Section 4/7  
Apparent magnitude: 3.16  
Absolute magnitude: -1.15

**55. Virgo**

**16. Spica** $\alpha$  Virginis

RA 13h 26' 10.2''

Decl.  $-11^{\circ} 15' 2''$ 

Section 5/9

Apparent magnitude: 0.97

Absolute magnitude: -3.56

**122. Porrima** $\gamma$  Virginis

RA 12h 41' 39.6434''

Decl.  $-1^{\circ} 26' 57.7421''$ 

Section 5/9

Apparent magnitude: 2.74

Absolute magnitude: 2.38

**144. Vindemiatrix** $\epsilon$  Virginis

RA 13h 3' 5.9''

Decl.  $10^{\circ} 51' 3''$ 

Section 5/9

Apparent magnitude: 2.85

Absolute magnitude: 0.37

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