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Discovering Double Stars II

Double stars for light-polluted skies

Discovering Double Stars II

Double stars for light-polluted skies (Version 2022-1)

Agnes Clarke

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Using This Book

I wrote this book to help myself find the brighter and better double stars visible from an urban location. The charts and contents of the book have been designed accordingly. I observe with smaller telescopes, the largest being a 150mm Schmidt-Cassegrain, and the smallest being my 50mm finderscope. I am typically observing near the city of Amsterdam, close to a large airport, so the skies are extremely light polluted. Fortunately I also get away from time to time to more southerly locations with darker skies.

I locate targets using a 50mm finderscope and a red dot finder (RDF). The RDF helps me to point the telescope to the nearest bright star by simply moving the projected red dot in the sight to the right place in the sky, and then the finderscope takes over as it shows about 5-7 degrees of sky with about 7-10 times magnification (it varies because my finderscope accepts different eyepieces).

The charts in this book are created for the view through a finderscope in light-polluted conditions, showing stars down to magnitude 7.0. Using the charts and starting from a nearby bright star, it should be possible to star-hop to the doubles, each of which are shown circled with the 5° view of a typical finderscope. Double stars often have more than two components, but for each double a main pairing has been selected and the position angle of this pairing is indicated by a short line. The position angle indicates the angle from the primary star to the secondary star with 0° pointing due north and the degrees increasing counterclockwise.

To avoid confusing crowds of doubles on each chart, the doubles for each section of sky are distributed over three otherwise identical charts. I have included deep sky objects from the Messier and Caldwell catalogs, only omitting those close to the doubles to keep the star patterns around the doubles clear.

I normally have the finderscope and telescope as closely aligned as I can manage, so that I can keep a high magnification eyepiece in the telescope and not have to keep switching between lower and higher magnification in the telescope to center the double in the telescope view. To increase the chance that the double will actually be in the telescope view, I prefer to use wide-angle eyepieces so that I still have a reasonably large field of view despite using hundredfold magnification.

All 950 doubles in this book have been selected for brightness and reasonable separation. Those select doubles with strong color or unique properties are marked in green on the charts and are given an extended description on the facing page. Stars that are still very good but did not make my "green list" are marked in blue. Additional doubles that are either a bit fainter or more widely separated are marked in red. To make the quality rating clear with a red light torch, the green doubles are surrounded by a solid finder circle on the charts, while the blue doubles have a dashed circle and the red doubles a dotted circle.

All the charts show the rough spectral class of the stars as a color: hot blue stars of spectral class O or B are shown as dark blue. White stars like Sirius or Procyon (spectral class A or F) are shown as black. Yellow stars similar to our G-class Sun are shown as dark yellow, while cooler K class stars are dark orange and smouldering M class stars are deep red.

Note that the separation and position angle of double stars can change from year to year. This is one of the many charms of double stars: they offer the chance to see dynamic processes in deep space. However it does mean the data in this book is only valid as of 2022.

Astronomical Abbreviations

Constellations are often referred to in this work by three-letter abbreviations. When the constellation name is used in a star name, the constellation's genitive form is used. For example, Aquarius is abbreviated as Aqr, and one of its stars would be 5 Aquarii.

The following list gives the abbreviation and the full and genitive names.

And - Andromeda (Andromedae)

Ant - Antlia (Antliae)

Aps - Apus (Apodis)

Aqr - Aquarius (Aquarii)

Aql - Aquila (Aquilae)

Ara - Ara (Arae)

Ari - Aries (Arietis)

Aur - Auriga (Aurigae)

Boo - Bootes (Bootis)

Cae - Caelum (Caeli)

Cam - Camelopardalis (Camelopardalis)

Cnc - Cancer (Cancri)

CVn - Canes Venatici (Canum Venaticorum)

CMa - Canis Major (Canis Majoris)

CMi - Canis Minor (Canis Minoris)

Cap - Capricornus (Capricorni)

Car - Carina (Carinae)

Cas - Cassiopeia (Cassiopeiae)

Cen - Centaurus (Centauri)

Cep - Cepheus (Cephei)

Cet - Cetus (Ceti)

Cha - Chamaeleon (Chamaeleontis)

Cir - Circinus (Circini)

Col - Columba (Columbae)

Com - Coma Berenices (Comae Berenices)

CrA - Corona Australis (Coronae Australis)

CrB - Corona Borealis (Coronae Borealis)

Crv - Corvus (Corvi)

Crt - Crater (Crateris)

Cru - Crux (Crucis)

Cyg - Cygnus (Cygni)

Del - Delphinus (Delphini)

Dor - Dorado (Doradus)

Dra - Draco (Draconis)

Equ - Equuleus (Equulei)

Eri - Eridanus (Eridani)

For - Fornax (Fornacis)

Gem - Gemini (Geminorum)

Gru - Grus (Gruis)

Her - Hercules (Herculis)

Hor - Horologium (Horologii)

Hya - Hydra (Hydrae)

Hyi - Hydrus (Hydri)

Ind - Indus (Indi)

Lac - Lacerta (Lacertae)

Leo - Leo (Leonis)

LMi - Leo Minor (Leonis Minoris)

Lep - Lepus (Leporis)

Lib - Libra (Librae)

Lup - Lupus (Lupi)

Lyn - Lynx (Lyncis)

Lyr - Lyra (Lyrae)

Men - Mensa Mensae)

Mic - Microscopium (Microscopii)

Mon - Monoceros (Monocerotis)

Mus - Musca (Muscae)

Nor - Norma (Normae)

Oct - Octans (Octantis)

Oph - Ophiuchus (Ophiuchi)

Ori - Orion (Orionis)

Pav - Pavo (Pavonis)

Peg - Pegasus (Pegasi)

Per - Perseus (Persei)

Phe - Phoenix (Phoenicis)

Pic - Pictor (Pictoris)

Psc - Pisces (Piscium)

PsA - Piscis Austrinus (Piscis Austrini)

Pup - Puppis (Puppis)

Pyx - Pyxis (Pyxidis)

Ret - Reticulum (Reticuli)

Sge - Sagitta (Sagittae)

Sgr - Sagittarius (Sagittarii)

Sco - Scorpius (Scorpii)

Scl - Sculptor (Sculptoris)

Sct - Scutum (Scuti)

Ser - Serpens (Serpentis)

Sex - Sextans (Sextantis)

Tau - Taurus (Tauri)

Tel - Telescopium (Telescopii)

Tri - Triangulum (Trianguli)

TrA - Triangulum Australe (Trianguli Australis)

Tuc - Tucana (Tucanae)

UMa - Ursa Major (Ursae Majoris)

UMi - Ursa Minor (Ursae Minoris)

Vel - Vela (Velorum)

Vir - Virgo (Virginis)

Vol - Volans (Volantis)

Vul - Vulpecula (Vulpeculae)

Greek letters are used in Bayer designations of stars, such as Alpha Canis Majoris (Sirius). Greek letters also have standardised three-letter abbreviations as follows:

α - alf - alpha

β - bet - beta

γ - gam - gamma

δ - del - delta

ε - eps - epsilon

ζ - zet - zeta

η - eta - eta

θ - tet - theta

ι - iot - iota

κ - kap - kappa

λ - lam -lamda, lambda

μ - mu. - mu

ν - nu. - nu

ξ - ksi - xi

ο - omi - omicron

π - pi. - pi

ρ - rho - rho

σ - sig - sigma

τ - tau - tau

υ - ups - upsilon

φ - phi - phi

χ - khi - chi

ψ - psi - psi

ω - ome - omega

Doubles by Constellation

Andromeda

164 And: page 74 — A close pairing of a fairly bright primary and a fairly bright companion.

Observed:

36 And: page 76 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

59 And: page 96 — A comfortably separated pairing of a fairly bright primary and a fairly bright companion.

Observed:

Almach: page 98 — A spectacular pairing of an intense orange primary with a fainter blue secondary.

Observed:

HJ 1947 AB: page 72 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 5451: page 74 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Pi And: page 72 — A bright blue primary widely separated from a fairly bright secondary.

Observed:

STF 108: page 70 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 24: page 76 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 47 AB: page 80 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STT 514 AB: page 74 — A close pairing of a fairly bright primary and a faint companion.

Observed:

Struve 3050: page 70 — A tightly bound and perfectly balanced pair of bright yellow stars.

Observed:

Antlia

Del Ant: page 164 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Apus

Del1 Aps: page 262 — A wide pairing of a bright primary and a bright companion.

Observed:

HDO 284 AB: page 266 — A tight pairing of a bright primary and a faint companion.

Observed:

I 236: page 266 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Aquila

11 Aql: page 220 — A wide pair with a white primary and a faint blue companion.

Observed:

15 Aql: page 230 — A very wide pair of yellow stars.

Observed:

23 Aql: page 224 — A tight pairing of a bright primary and a faint companion.

Observed:

28 Aql: page 220 — A bright yellowish primary with a distant much fainter companion.

Observed:

5 Aql: page 230 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

57 Aql: page 250 — A very wide and balanced pair of bright, bluish stars.

Observed:

Pi Aql: page 246 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

RST 4659 AB: page 250 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

S 735: page 250 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

S 749 AB: page 252 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2447 AB: page 226 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 2489 AB: page 222 — A close pairing of a bright primary and a faint companion.

Observed:

STF 2545 AB: page 252 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2562 AB: page 244 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 2587: page 246 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2616: page 244 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2628: page 248 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2643: page 252 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 2644: page 244 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2654: page 254 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STTA 178: page 224 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

V822 Aql: page 254 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Aquarius

101 Aqr: page 84 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

107 Aqr: page 82 — A bright white primary with a fairly bright yellowish companion close by.

Observed:

12 Aqr: page 250 — A very tight yellow-blue system, with the small blue component sufficiently bright to show some color.

Observed:

29 Aqr: page 252 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

41 Aqr: page 254 — A close, balanced with a bright orange primary and yellowish secondary.

Observed:

53 Aqr: page 250 — An extremely tight and exactly equal pair of yellow suns.

Observed:

94 Aqr: page 84 — A bright yellowish primary easily separated from a fairly bright companion.

Observed:

BU 181 AB: page 82 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

BU 384: page 84 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3184: page 86 — A close pairing of a fairly faint primary and a faint companion.

Observed:

KV Aqr: page 252 — A close pairing of a fairly faint primary and a faint companion.

Observed:

Ome2 Aqr: page 86 — A brilliant bluish primary with a faint orange companion close by.

Observed:

Psi1 Aqr: page 84 — A brilliant orange primary distantly separated from a faint orange secondary.

Observed:

Psi3 Aqr: page 86 — A tight pairing of a bright primary and a faint companion.

Observed:

STF 2744 AB: page 246 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2755: page 254 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 2809 AB: page 250 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 2838: page 252 — An easily separated pair of white stars with a bright primary and a faint secondary.

Observed:

STF 2935 AB: page 84 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2936: page 76 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 2944 AC: page 82 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 3008: page 82 — An equal pair, with an orange primary closely separated from a slightly fainter secondary.

Observed:

Tau1 Aqr: page 86 — A wide pairing of a bright primary and a faint companion.

Observed:

Zeta Aqr: page 254 — A balanced, tight pair of white stars.

Observed:

Ara

B 1818: page 234 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BSO 13 AB: page 234 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

DUN 214 AB: page 264 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 4949 AB: page 232 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

HJ 5015: page 234 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

HLD 131: page 236 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

MLO 8 AB: page 232 — A tight pairing of a bright primary and a faint companion.

Observed:

SEE 316: page 236 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

Ups1 Ara: page 232 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Aries

1 Ari: page 100 — A close pair with a brighter yellow primary and blue secondary.

Observed:

10 Ari: page 100 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

14 Ari: page 102 — A very wide triangle of three stars; the bright primary is yellowing and the other two components are significantly fainter.

Observed:

30 Ari: page 104 — Two bright yellow stars, almost equally matched and widely separated.

Observed:

33 Ari: page 100 — A bright yellow primary with a faint blue companion, widely separated.

Observed:

Eps Ari: page 100 — A tight pairing of a bright primary and a bright companion.

Observed:

Gamma Ari: page 102 — An equal pair of icy blue stars with close separation.

Observed:

H 6 5 AD: page 102 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Lambda Ari: page 104 — A bright, wide pair with good colors: the A component is yellow and the B component is blue.

Observed:

Pi Ari: page 102 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

STF 271 AB: page 102 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Auriga

14 Aur: page 118 — A bright yellow-blue pairing with comfortable separation.

Observed:

26 Aur: page 118 — A bright yellow primary easily separated from a significantly fainter blue companion.

Observed:

41 Aur: page 122 — A close pairing of a fairly bright primary and a fairly bright companion.

Observed:

5 Aur: page 122 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 1053: page 120 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Omega Aur: page 120 — A yellow primary with a closely bound faint orange companion.

Observed:

Psi5 Aur: page 118 — A very wide yellow-blue duo. The primary is very bright and strongly colored.

Observed:

STF 681 AB: page 120 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 764: page 122 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STT147: page 120 — A moderately bright yellow primary with two small blue companions, forming a widely separated triangle.

Observed:

STTA 61 AB: page 122 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STTA 63: page 122 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Struve 698: page 120 — A wide orange-blue pair. The two stars are separated in brightness by almost exactly two magnitudes.

Observed:

Struve 872: page 118 — An easily separated pair of stars. Neither star is particularly bright, perhaps leading to fanciful star colors variously reported as pinkish or lilac.

Observed:

The Aur: page 122 — A tight pairing of a brilliant primary and a fairly faint companion.

Observed:

Boötes

1 Boo: page 198 — A tight pairing of a bright primary and a faint companion.

Observed:

39 Boo: page 194 — A balanced tightly bound pair of yellow stars.

Observed:

Alkalurops: page 192 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

BX Boo: page 192 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Del Boo: page 190 — A wide pairing of a brilliant primary and a fairly faint companion.

Observed:

Iota Boo: page 190 — A very wide pairing of a bright yellow primary and a blue companion.

Observed:

Izar: page 200 — A fine and very narrowly separated orange-yellow pair. Both components shine brilliantly.

Observed:

Kappa Boo: page 192 — A very bright white primary component nicely separated from a reasonably bright blue secondary.

Observed:

Muphrid: page 196 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Pi Boo: page 200 — A close and reasonably balanced pair of white stars.

Observed:

S 656: page 200 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

SHJ 191: page 192 — A balanced (but somewhat less bright) pair of yellow stars with very wide separation.

Observed:

STF 1850: page 194 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

STF 1884: page 198 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1889 AB: page 190 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STT 279: page 196 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STT 298 AB: page 190 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STTA 137: page 194 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Struve 1825: page 198 — A very close yellow-orange pairing.

Observed:

Struve 1835: page 198 — A bright white primary close to a yellow secondary.

Observed:

Xi Boo: page 196 — A close yellow-orange duo, with a bright primary and brightish secondary.

Observed:

Canis Major

Adhara: page 140 — A close pairing of a brilliant primary and a fairly faint companion.

Observed:

Aludra: page 140 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

BSO 2: page 136 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

DUN 47 A,CD: page 138 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

HJ 3869: page 138 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

HJ 3945: page 134 — A bright, wide and balanced pair of stars, the primary being orange, and the secondary pale yellow.

Observed:

HP CMa: page 136 — A close pairing of a bright primary and a faint companion.

Observed:

HZ CMa: page 138 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

IY CMa: page 140 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Mu CMa: page 132 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Pi CMa: page 132 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STF 1026 AB,C: page 134 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Sirius: page 130 — A ferociously brilliant white primary moderately separated from a relatively dim white dwarf companion.

Observed:

Tau CMa: page 130 — A brilliant blue primary with two faint stars close to the east, and a brighter component some distance beyond them.

Observed:

Zeta CMa: page 136 — A brilliant bluish primary distantly separated from a fairly apparent orange secondary.

Observed:

Canis Minor

STF 1103: page 152 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STT 176 AB: page 150 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Canes Venatici

2 CVn: page 166 — A yellow-blue pairing with easy separation.

Observed:

25 CVn: page 194 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

BU 608 BC: page 170 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Cor Caroli: page 166 — A brilliant white primary star with a more orange secondary, easily separated.

Observed:

S 654 AB: page 192 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 1632: page 170 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 1645 AB: page 170 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STT 261: page 168 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

Struve 1755: page 190 — A fairly equal and very close pairing; the primary is yellow.

Observed:

Caelum

Gam Cae: page 140 — A tight pairing of a bright primary and a faint companion.

Observed:

HJ 3650 AB: page 116 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Camelopardalis

1 Cam: page 122 — A reasonably balanced and separated white-blue pair.

Observed:

32H. Cam: page 68 — A bright and balanced white-white pair, widely separated.

Observed:

35 Cam: page 118 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

ARG 100 AB,C: page 96 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Bet Cam: page 118 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

HJ 2200 AC: page 68 — A wide pairing of a bright primary and a faint companion.

Observed:

KUI 61: page 66 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

S 436: page 98 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

SHJ 136: page 64 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

SHJ 86 AB: page 144 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1127 AC: page 146 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 389 AB: page 98 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 396 AB: page 94 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 634 AB: page 64 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 780 AB: page 122 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STT 192: page 66 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STT 67: page 94 — A tight pairing of a bright primary and a faint companion.

Observed:

Struve 385: page 96 — A brilliant blue primary with a moderately faint companion, very tightly separated.

Observed:

WEB 2 AD: page 96 — A wide pairing of a bright primary and a faint companion.

Observed:

Capricornus

Alpha1/2 Cap: page 250 — A distantly separated pair of brilliant white stars.

Observed:

Beta Cap: page 252 — A brilliant yellow primary distantly separated from bright white secondary.

Observed:

HJ 3003: page 254 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Omi Cap: page 250 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

Pi Cap: page 252 — A very close pair, with a bright blue primary and fairly faint secondary.

Observed:

Rho Cap: page 254 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Sig Cap: page 254 — A wide pairing of a bright primary and a faint companion.

Observed:

Carina

C Car: page 160 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

DUN 99 AB: page 262 — A wide pairing of a fairly bright primary and a fairly bright companion.

Observed:

GLI 152: page 184 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

HJ 4206 AB,C: page 262 — A close pairing of a bright primary and a faint companion.

Observed:

HJ 4383: page 266 — An extremely tight and relatively balanced pair of bluish stars.

Observed:

HJ 4393: page 264 — A close pairing of a fairly bright primary and a faint companion.

Observed:

LDS 198 AB: page 164 — A wide pairing of a bright primary and a faint companion.

Observed:

R 161: page 186 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

RMK 6 AB: page 138 — A close pairing of a fairly bright primary and a fairly bright companion.

Observed:

Ups Car: page 160 — A close pairing of a brilliant primary and a fairly bright companion.

Observed:

V450 Car: page 136 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

b1 Car: page 162 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

t2 Car: page 188 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

u Car: page 188 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

Cassiopeia

35 Cas: page 70 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

6 Cas: page 72 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

BU 396: page 72 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Eta Cas: page 74 — A brilliant yellow primary comfortably separated from a fairly faint red secondary.

Observed:

H 3 23 AC: page 70 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

H 5 18 AD: page 72 — A wide pairing of a brilliant primary and a faint companion.

Observed:

H 5 83 AC: page 68 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 1088 AB: page 98 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

Iota Cas: page 66 — A bright, white primary with a yellow-orange secondary and a dim, colorless third component.

Observed:

SHJ 355 AC: page 70 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

STF 191: page 64 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 70 AB: page 70 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STTA 28: page 98 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Sigma Cas: page 72 — A tight primary with a brilliant blue-white primary almost touching a delicate secondary.

Observed:

Struve 3053: page 74 — A bright yellow primary with an easily apparent white companion, easily separated. There is a very faint third component distantly separated from the central two stars.

Observed:

V640 Cas: page 74 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

V761 Cas: page 74 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

V987 Cas: page 94 — A wide pairing of a bright primary and a faint companion.

Observed:

Centaurus

3 Cen: page 210 — A close pairing of a bright primary and a bright companion.

Observed:

4 Cen: page 208 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

BSO 6: page 188 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

Chi Cen: page 208 — A wide pairing of a bright primary and a faint companion.

Observed:

D Cen: page 184 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

DUN 133 AB,C: page 184 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

DUN 159 AB: page 208 — A close pairing of a bright primary and a fairly faint companion.

Observed:

I 424 AB,C: page 188 — A tight pairing of a bright primary and a faint companion.

Observed:

JC 2 AC: page 186 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

N Cen: page 210 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

Q Cen: page 212 — A close pairing of a bright primary and a fairly bright companion.

Observed:

Rigel Kent: page 210 — A close, extremely brilliant pair with a yellow primary and orange secondary.

Observed:

V815 Cen: page 186 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Cepheus

Beta Cep: page 68 — A brilliant white primary split comfortably from a moderately faint blue companion.

Observed:

Delta Cep: page 242 — A bright, widely separated yellow and blue pair.

Observed:

Kappa Cep: page 66 — A scattered triple system, with a very bright blue primary with one close and one dim distant companion.

Observed:

Omi Cep: page 66 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Pi Cep: page 64 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

S 405 AB: page 66 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2840 AB: page 238 — A comfortably separated pairing of a bright primary and a fairly bright companion.

Observed:

STF 2883: page 64 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STF 2893: page 66 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2923 AB: page 68 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 2950 AB: page 74 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 320: page 68 — A tight pairing of a bright primary and a faint companion.

Observed:

STT 482 AB: page 68 — A tight pairing of a bright primary and a faint companion.

Observed:

Struve 2816: page 240 — Possibly yellow and white (the yellow primary being bracketed by by two fainter white stars). Alternately, the primary might be blue.

Observed:

Ups1 Cep: page 238 — A wide pairing of a bright primary and a faint companion.

Observed:

V381 Cep: page 242 — A tight pairing of a bright primary and a faint companion.

Observed:

Xi Cep: page 242 — A bright white primary with a close moderately fainter white secondary.

Observed:

Cetus

26 Cet: page 80 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

37 Cet: page 84 — A very widely separated pair, with a brilliant yellowish primary and a significantly fainter, strongly yellow secondary.

Observed:

42 Cet: page 86 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

66 Cet: page 108 — A comfortably separated yellow and blue pair.

Observed:

79 Cet: page 110 — A close pairing of a bright primary and a faint companion.

Observed:

84 Cet: page 106 — A tight pairing of a bright primary and a faint companion.

Observed:

95 Cet: page 106 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

AA Cet: page 108 — A close pairing of a fairly faint primary and a fairly faint companion.

Observed:

AB Cet: page 110 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

BU 399 AB: page 82 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 518: page 102 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 6 AB: page 106 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 734: page 82 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

HDO 45: page 76 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HJ 2004: page 86 — A fairly bright white primary with a very close, faint secondary.

Observed:

HJ 2043: page 86 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 2052: page 110 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

HJ 323: page 82 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3511: page 108 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

Kaffaljidhma: page 104 — A tight pairing of a brilliant primary and a fairly bright companion.

Observed:

Nu Cet: page 100 — A close pairing of a bright primary and a faint companion.

Observed:

SE 1: page 82 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 330: page 110 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 39 AB,C: page 86 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 49: page 84 — A close pair with a yellow primary and tiny orange secondary.

Observed:

WNO 1: page 84 — A close pairing of a fairly bright primary and a faint companion.

Observed:

Chamaeleon

DI Cha: page 264 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

FGL 1 AB,C: page 262 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

S Cha: page 264 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Circinus

Alp Cir: page 212 — A comfortably separated pairing of a brilliant primary and a faint companion.

Observed:

Cancer

17 Cnc: page 144 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

21 Cnc: page 148 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

24 Cnc: page 150 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

57 Cnc: page 146 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

66 Cnc: page 144 — A tight pairing of a bright primary and a faint companion.

Observed:

Iota Cnc: page 144 — A strongly colored deeply yellow and blue pair. The separation is wide but both components are bright.

Observed:

Phi2 Cnc: page 152 — Two identical bright white stars nearly touching each other.

Observed:

S 571 AD: page 152 — A wide pairing of a fairly faint primary and a fairly bright companion.

Observed:

STF 1171: page 148 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1187 AB: page 142 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

Sig3 Cnc: page 142 — A wide pairing of a bright primary and a faint companion.

Observed:

Struve 1245: page 152 — A well matched white-yellow pair, easily separated.

Observed:

Struve 1254: page 148 — A wide yellow-blue pairing, but the small blue component is very faint.

Observed:

Struve 1311: page 150 — A close pair of equal yellowish stars.

Observed:

Zeta Cnc: page 150 — An equal pair of closely bound and bright yellow stars.

Observed:

Columba

BU 755 AB: page 138 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

DUN 28 AC: page 136 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

Coma Berenices

17 Com: page 176 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

2 Com: page 174 — A white primary with a tightly bound and fairly apparent secondary.

Observed:

24 Com: page 176 — An orange-blue pair, with a reasonable bright secondary and easy separation.

Observed:

35 Com: page 172 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

39 Com: page 176 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

A 567: page 196 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 800 AB: page 174 — A close pairing of a fairly bright primary and a faint companion.

Observed:

SHJ 143 AC: page 172 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 1615 AB: page 166 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1633: page 176 — A close pairing of a fairly faint primary and a fairly faint companion.

Observed:

STF 1639 AB: page 174 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1678: page 174 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

Corona Australis

BSO 14: page 232 — A fairly bright, balanced double, easily separated. Both components have a blue hue.

Observed:

Gamma CrA: page 236 — A brilliant yellowish primary tightly bound to a fairly bright companion.

Observed:

HJ 5014: page 232 — An extremely tight pairing of two equally bright white stars.

Observed:

Corona Borealis

Sigma CrB: page 192 — A well balanced yellow pair with quite close separation.

Observed:

Zeta CrB: page 194 — A well-matched pair of bright bluish stars, closely separated. The pair are both blue, but some observers report seeing the fainter companion as greenish.

Observed:

Corona Australis

Kap2 Cra: page 236 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

Crater

17 Crt: page 188 — A close, equal pair of bright, somewhat yellow stars.

Observed:

BU 600 AC: page 180 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Gamma Crt: page 182 — A close pair with a brilliant white primary somewhat fainter secondary.

Observed:

JC 16 AB: page 180 — A close pairing of a bright primary and a faint companion.

Observed:

STF 1509: page 178 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 3072: page 182 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

Crux

Alpha Cru: page 184 — Two extremely brilliant blue stars, very close together. A third very bright component lies distantly from them.

Observed:

Gacrux: page 188 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

HJ 4548 AB: page 186 — A wide pairing of a bright primary and a faint companion.

Observed:

Mu1 Cru: page 184 — A wide pairing of a brilliant primary and a bright companion.

Observed:

Corvus

58 Crv: page 178 — A close pair of bright, yellowish stars, with a third faint, widely separated component.

Observed:

BU 28 AB: page 182 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 920: page 182 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Delta Crv: page 180 — A brilliant bluish primary widely separated from a moderately faint companion.

Observed:

S 634 AB: page 178 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

S 643: page 180 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 1604 AC: page 180 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

Cygnus

17 Cyg: page 242 — A bright yellowish primary widely separated from a dim secondary.

Observed:

26 Cyg: page 240 — A bright orange primary very widely separated from a dim secondary.

Observed:

49 Cyg: page 242 — A tight pairing of a bright primary and a faint companion.

Observed:

52 Cyg: page 240 — A close pairing of a bright primary and a faint companion.

Observed:

59 Cyg: page 240 — A wide pairing of a bright primary and a faint companion.

Observed:

60 Cyg: page 238 — A tight pairing of a bright primary and a faint companion.

Observed:

61 Cyg: page 242 — An orange-red pair with wide separation. I see both components as orange.

Observed:

BU 1474 AB: page 240 — A wide pairing of a bright primary and a faint companion.

Observed:

Beta Cyg: page 238 — This is the renowned Albireo, a brilliant deep yellow primary with a bright and delicate blue companion.

Observed:

Delta Cyg: page 238 — A very close and unbalanced pair with a brilliant blueish primary and reasonably bright white secondary.

Observed:

Mu1 Cyg: page 242 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Psi Cyg: page 242 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

S 765 AC: page 240 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 2666 AB: page 238 — A tight pairing of a bright primary and a faint companion.

Observed:

STF 2741 AB: page 242 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

STFA 50 AC: page 242 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

STT 433 AC: page 240 — A wide pairing of a bright primary and a faint companion.

Observed:

Tau Cyg: page 238 — A tight pairing of a brilliant primary and a fairly bright companion.

Observed:

V1942 Cyg: page 242 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

V389 Cyg: page 238 — A tight pairing of a bright primary and a faint companion.

Observed:

Delphinus

13 Del: page 246 — A tight pairing of a bright primary and a faint companion.

Observed:

Gamma Del: page 246 — A very bright yellow primary close to a bright blue secondary.

Observed:

STF 2665 A,BC: page 248 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2735: page 244 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

Dorado

I 276: page 262 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

RMK 4: page 116 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

Draco

40/41 Dra: page 68 — A comfortably separated pair of bright yellow stars.

Observed:

BU 946: page 190 — A tight pairing of a bright primary and a faint companion.

Observed:

DL Dra: page 194 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Eta Dra: page 192 — A tight pairing of a brilliant primary and a faint companion.

Observed:

Mu Dra: page 218 — A tightly bound pair of yellow stars.

Observed:

Nu Dra: page 216 — A very wide pair of balanced, very bright white stars.

Observed:

Omi Dra: page 214 — A widely separated pair. The strongly yellow primary has an adequately bright blue companion.

Observed:

Psi1 Dra: page 66 — A wide pair of reasonably balanced, bright white stars.

Observed:

STF 1573: page 170 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 1882 AB: page 192 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 1984 AB: page 194 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 2054 AB: page 194 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2323 AC: page 216 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

STF 2403: page 218 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STFA 30 AC: page 216 — A wide pairing of a bright primary and a bright companion.

Observed:

STTA 123 AB: page 166 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Struve 2348: page 218 — A yellow primary widely separated from a moderately faint white secondary.

Observed:

Tyl: page 64 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Equuleus

Eps Equ: page 248 — A yellow-blue combination with a moderately bright secondary. Easy separation.

Observed:

Eridanus

32 Eri: page 106 — A close double with bright components; yellow and white.

Observed:

39 Eri: page 106 — A close pairing of a bright primary and a faint companion.

Observed:

62 Eri: page 132 — A distantly separated pair, with a bright, blue primary and a significantly fainter secondary.

Observed:

BU 1004 AB: page 116 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

BU 12: page 108 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

BU 184: page 108 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

CLL 2: page 110 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

DUN 15: page 116 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

DUN 4: page 114 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

HJ 2224: page 110 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3527: page 116 — A tight pair of blue stars with third distant and dim companion.

Observed:

HJ 3533: page 106 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HJ 3556: page 112 — A yellowish primary very close to significantly fainter secondary.

Observed:

HJ 3565: page 106 — A close pairing of a bright primary and a faint companion.

Observed:

HJ 3589 AB: page 112 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3628: page 112 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

HJ 3642 AB: page 114 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3644 AB,D: page 110 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Omicron2 Eri: page 108 — A brilliant yellow-orange primary distantly separated from a dim white companion.

Observed:

Phi Eri: page 116 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Rho2 Eri: page 106 — A bright yellow-orange star with an extremely close, faint companion.

Observed:

SRT 2: page 106 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

STF 341 AB: page 108 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 411 AB: page 108 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

Sceptrum: page 132 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Tau4 Eri: page 110 — A close pairing of a brilliant primary and a faint companion.

Observed:

Theta Eri: page 114 — A close, balanced double composed of two brilliant white stars.

Observed:

f Eri: page 114 — A close pairing of a bright primary and a bright companion.

Observed:

p Eri: page 112 — A comfortably separated pairing of a bright primary and a bright companion.

Observed:

Fornax

BSO 1 AB: page 110 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

Eta2 For: page 116 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Fornacis: page 114 — A close pairing of a brilliant primary and a fairly faint companion.

Observed:

HJ 3532: page 112 — A close pairing of a fairly faint primary and a faint companion.

Observed:

Ome For: page 116 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

Gemini

38 Gem: page 128 — A brilliant white primary with close yellow companion.

Observed:

Castor: page 144 — A tight pair of very brilliant, bluish stars.

Observed:

Mebsuta: page 128 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Nu Gem: page 126 — A wide pairing of a bright primary and a faint companion.

Observed:

Propus: page 124 — A tight pairing of a brilliant primary and a fairly bright companion.

Observed:

SHJ 77 AC: page 124 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

STF 1140: page 152 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STTA 89: page 146 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Struve 1108: page 150 — A yellow primary comfortably separated from a blue secondary.

Observed:

Wasat: page 126 — Delta Geminorum or Wasat is a brilliant white star with a close orange-yellow companion.

Observed:

Grus

BSO 15: page 258 — A wide pairing of a bright primary and a faint companion.

Observed:

BU 1011: page 88 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

DQ Gru: page 90 — A bright and easily separated pair of white stars.

Observed:

DUN 246: page 92 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

DUN 248: page 88 — An easy, equal pair of fairly bright stars; the primary is white, the secondary is yellow.

Observed:

Del2 Gru: page 258 — A wide pairing of a bright primary and a faint companion.

Observed:

HDO 298: page 260 — A tight pairing of a bright primary and a faint companion.

Observed:

HJ 5288: page 258 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

HJ 5319: page 260 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

HJ 5362: page 92 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

I 22 AB,CD: page 90 — A wide pairing of a fairly faint primary and a fairly bright companion.

Observed:

JC 19 AB: page 256 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

The Gru: page 88 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Hercules

100 Her: page 224 — Two almost identical bright white stars, comfortably separated.

Observed:

23 Her: page 190 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

37 Her: page 222 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

43 Her: page 220 — A wide pairing of a bright primary and a faint companion.

Observed:

52 Her: page 216 — A tight pairing of a bright primary and a faint companion.

Observed:

54 Her: page 224 — A tight pairing of a bright primary and a faint companion.

Observed:

90 Her: page 216 — A tight pairing of a bright primary and a faint companion.

Observed:

95 Her: page 222 — A bright white-yellow pairing with close separation.

Observed:

99 Her: page 218 — A tight pairing of a bright primary and a faint companion.

Observed:

Alpha Her: page 220 — A reasonably balanced orange-blue pair, very close with a brilliant primary and bright secondary.

Observed:

BU 1251 AB: page 220 — A tight pairing of a bright primary and a faint companion.

Observed:

Delta Her: page 220 — A close white-blue pairing. The primary is brilliant but the secondary is just over 5 magnitudes fainter.

Observed:

Kappa Her: page 198 — A reasonably balanced and bright, but widely separated, pair of yellow stars.

Observed:

Mu Her: page 216 — A brilliant yellow primary widely separated from a vastly fainter red secondary.

Observed:

PRY 2 AB: page 222 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Rho Her: page 214 — A very close equally matched pair with a brilliant white white primary and slightly fainter blue companion.

Observed:

STF 2049: page 194 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 2142 AB: page 214 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2160 AB: page 222 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2190 AB: page 224 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 2277 AB: page 216 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Struve 2063: page 218 — An easily separated white-yellow double.

Observed:

Zet Her: page 216 — A tight pairing of a brilliant primary and a bright companion.

Observed:

Horologium

HJ 3576: page 114 — A very close pair with a white primary.

Observed:

HJ 3643: page 114 — A wide pairing of a bright primary and a faint companion.

Observed:

SKF 949: page 116 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Hydra

15 Hya: page 154 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

17 Hya: page 156 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

19 Hya: page 158 — A tight pairing of a bright primary and a faint companion.

Observed:

54 Hya: page 206 — A close pairing of a bright primary and a fairly faint companion.

Observed:

BU 211: page 152 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

BU 219: page 154 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

F Hya: page 158 — A wide pairing of a bright primary and a faint companion.

Observed:

H N 69 AB: page 212 — A comfortably separated pairing of a bright primary and a fairly bright companion.

Observed:

HJ 4455 AB: page 186 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

HJ 4465 AC: page 184 — A wide pairing of a bright primary and a faint companion.

Observed:

I 211: page 184 — A tight pairing of a bright primary and a faint companion.

Observed:

S 584: page 158 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

S 585: page 154 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

S 604: page 158 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

SHJ 110 AC: page 156 — A wide pairing of a fairly bright primary and a fairly bright companion.

Observed:

STF 1210 AB: page 148 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 1255 AB: page 150 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 1270: page 154 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1273 AB,C: page 148 — A tight pairing of a brilliant primary and a fairly bright companion.

Observed:

STF 1347: page 148 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 1357 AB: page 154 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 1474 AB: page 180 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Tau1 Hya: page 156 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

The Hya: page 150 — A wide pairing of a brilliant primary and a faint companion.

Observed:

V401 Hya: page 156 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Hydrus

BN Hyi: page 266 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

HJ 3435 AB: page 88 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HJ 3475: page 116 — An equal and extremely tight pair of yellowish stars.

Observed:

Indus

I 19 AB: page 260 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Theta Ind: page 256 — A brilliant white primary with a close fairly bright yellow companion.

Observed:

Leo Minor

7 LMi: page 146 — A wide pairing of a bright primary and a faint companion.

Observed:

COU 961 AB: page 170 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 1374 AB: page 142 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Lacerta

8 Lac: page 72 — A fairly equally balanced and bright pair of blue-white stars, comfortably separated.

Observed:

HJ 1741 AD: page 240 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 975: page 72 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 2942 AB: page 70 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2960 AC: page 74 — A wide pairing of a bright primary and a faint companion.

Observed:

Leo

49 Leo: page 176 — A bright white primary with an extremely close, reasonably apparent companion.

Observed:

54 Leo: page 176 — A bright white primary which shines very close to a fairly bright white companion.

Observed:

55 Leo: page 172 — A tight pairing of a bright primary and a faint companion.

Observed:

6 Leo: page 152 — A wide pairing of a bright primary and a faint companion.

Observed:

65 Leo: page 176 — A tight pairing of a bright primary and a faint companion.

Observed:

7 Leo: page 150 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

78 Leo: page 176 — A tight white-yellow pair. The secondary is not too faint, but the primary shines brilliantly.

Observed:

83 Leo: page 174 — A fairly bright yellow primary with an easily apparent orange secondary, widely separated.

Observed:

88 Leo: page 172 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

90 Leo: page 174 — A balanced pair of fairly bright bluish stars, very closely separated.

Observed:

93 Leo: page 176 — A bright white primary very widely separated from a faint companion.

Observed:

Al minliar al asad: page 152 — A tight pairing of a bright primary and a faint companion.

Observed:

BU 603 AB: page 176 — A tight pairing of a bright primary and a faint companion.

Observed:

Gamma Leo: page 152 — Known variously as Gamma Leonis or Algeiba, this is one of the finest yellow-yellow doubles, being both bright, fairly balanced and tightly bound.

Observed:

HDS 1642 AB: page 174 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Phi Leo: page 178 — A wide pairing of a bright primary and a faint companion.

Observed:

Regolo: page 152 — A wide pairing of a brilliant primary and a faint companion.

Observed:

S 617: page 180 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1426 AB,C: page 148 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1529: page 182 — A close pairing of a fairly faint primary and a fairly faint companion.

Observed:

STT 215: page 148 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

Tau Leo: page 172 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

Lepus

Gam Lep: page 132 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

HJ 3750: page 134 — A tight pairing of a bright primary and a faint companion.

Observed:

HJ 3752: page 132 — A bright yellow primary with a fairly bright and very close secondary.

Observed:

Iot Lep: page 134 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Kap Lep: page 132 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Nihal: page 130 — A tight pairing of a brilliant primary and a fairly faint companion.

Observed:

Libra

18 Lib: page 204 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

Alpha Lib: page 202 — A brilliant white primary with distant bright, white companion.

Observed:

BU 35 AB: page 202 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

BU 354: page 206 — A close pairing of a fairly faint primary and a faint companion.

Observed:

H 6 117 AB: page 204 — A wide pairing of a bright primary and a faint companion.

Observed:

KX Lib: page 202 — A wide pairing of a bright primary and a faint companion.

Observed:

LAL 123 AB: page 202 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

Mu Lib: page 206 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

S 672: page 206 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

SHJ 179 AB: page 206 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

SHJ 195: page 204 — A widely separated, fairly balanced pair of yellowish stars.

Observed:

SHJ 202 AB: page 206 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1837: page 204 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

Struve 1962: page 202 — An easily separated equal pair of yellow stars.

Observed:

Lupus

DUN 182 AC: page 210 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Eta Lup: page 208 — A comfortably separated pairing of a brilliant primary and a fairly faint companion.

Observed:

HJ 4672: page 212 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

HJ 4690: page 210 — A bright yellow primary easily separated from a white secondary.

Observed:

Kap1 Lup: page 210 — A wide pairing of a brilliant primary and a bright companion.

Observed:

Mu Lup: page 212 — An extraordinarily tight pair of equally brilliant bluish stars, with a widely separated, fairly bright, white third component.

Observed:

Pi Lup: page 208 — A tight pairing of a bright primary and a bright companion.

Observed:

Xi Lup: page 210 — A bright white primary with an almost as bright blue companion close by.

Observed:

Zet Lup: page 208 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

d Lup: page 208 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

k Lup: page 212 — A wide pairing of a bright primary and a faint companion.

Observed:

Lynx

12 Lyn: page 122 — A close pair with a bright yellow primary and a reasonably bright blue companion.

Observed:

19 Lyn: page 120 — An easily separated and reasonably balanced yellow-blue pairing.

Observed:

38 Lyn: page 144 — A bright white primary narrowly separated from a brightish white secondary.

Observed:

41 Lyn: page 146 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

MUG 1: page 142 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

S 514 AC: page 120 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

S 565 AB: page 144 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1009 AB: page 122 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STT 174: page 144 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Struve 1333: page 142 — A challenging pair of equal white stars separated by less than two arc seconds.

Observed:

Struve 1338: page 146 — The tightest double in this book, Struve 1338 consists of two well-balanced white stars split by a mere arc second.

Observed:

Struve 1369: page 144 — An orange-yellow pair, widely separated.

Observed:

Struve 958: page 118 — Two tightly bound, perfectly matched bright stars.

Observed:

Lyra

17 Lyr: page 216 — A tight pairing of a bright primary and a faint companion.

Observed:

Aladfar: page 216 — A wide pairing of a bright primary and a faint companion.

Observed:

BU 648 AB: page 214 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Beta Lyr: page 216 — Two very widely separated white stars.

Observed:

Epsilon Lyr: page 214 — Two pairs of tightly bound and very well balanced bright white stars. The pairs are separated by over three arc minutes (one tenth of a full Moon), but each pair is split by only just over 2 arc seconds.

Observed:

HAU 24 AB: page 218 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 2349 AB: page 214 — A close pairing of a bright primary and a faint companion.

Observed:

STF 2431: page 218 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STFB 9 AE: page 218 — A wide pairing of a brilliant primary and a faint companion.

Observed:

STT525: page 218 — A colorless pair very widely separated. In addition to the two main components, a third faint component might be glimpsed within 2" of the primary.

Observed:

Zeta Lyr: page 216 — A very widely separated double that can be split in the finder scope. It has two bright yellow components differing in brightness by 1.6 magnitudes.

Observed:

Microscopium

BU 251: page 260 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

DUN 236: page 256 — A fairly bright, nearly equal pair, with a yellow primary widely separated from an orange companion.

Observed:

HJ 5228: page 258 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

MLO 6 AB: page 260 — A tight pairing of a bright primary and a faint companion.

Observed:

Monoceros

3 Mon: page 132 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Beta Mon: page 130 — A wonderful triple showing a brilliant bluish primary closely separated from a tight pair of bluish stars.

Observed:

Epsilon Mon: page 128 — An unequal pair of bright yellow stars, easily separated.

Observed:

STF 1112: page 158 — A yellow primary widely separated from a somewhat fainter white secondary.

Observed:

STF 1154: page 154 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 1183 AB: page 158 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 921: page 128 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 950 AC: page 126 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STT 146: page 124 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Zeta Mon: page 156 — A widely separated triple system with two brighter yellow components and a fainter orange companion.

Observed:

Musca

COO 130: page 188 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

DUN 131 AC: page 262 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

HJ 4432: page 184 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

HJ 4498: page 186 — A fairly bright yellow primary with an orange companion close by.

Observed:

I 296: page 266 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Theta Mus: page 186 — A close pair of blue stars with a bright primary and moderate secondary.

Observed:

Norma

Eps Nor: page 212 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

HJ 4825 AB,C: page 210 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

V360 Nor: page 212 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Octans

DUN 238 AB: page 266 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

HJ 4490: page 266 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Lambda Oct: page 262 — And very close pair with a bright yellow-orange primary and a white companion.

Observed:

Mu2 Oct: page 264 — A well balanced and easily separated pair of yellow suns.

Observed:

R 38: page 264 — A very tight double, but the moderately bright blueish primary does not overwhelm the fainter secondary.

Observed:

Ophiuchus

19 Oph: page 224 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

24 Oph: page 226 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

36 Oph: page 228 — A bright, equal pair of orange dwarfs, closely separated.

Observed:

53 Oph: page 224 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

61 Oph: page 224 — A widely separated pair of white stars. Both components are fairly bright.

Observed:

70 Oph: page 224 — A brilliant yellow star with a bright orange companion. The pair are quite close, especially given their apparent magnitude. The gap is currently near the maximum.

Observed:

BU 1089 AB: page 226 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

BU 126 AB: page 230 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

H 6 2 AC: page 222 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Marfic: page 220 — A tight pairing of a bright primary and a bright companion.

Observed:

Omi Oph: page 230 — A comfortably separated pairing of a bright primary and a fairly bright companion.

Observed:

Rho Oph: page 204 — A tight pairing of a bright primary and a bright companion.

Observed:

SHJ 240 AB: page 230 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2048 AB: page 206 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 2122: page 228 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Tau Oph: page 228 — An extremely tight, balanced pair of yellowish stars.

Observed:

WFC 193: page 220 — A wide pairing of a bright primary and a faint companion.

Observed:

Xi Oph: page 228 — A tight pairing of a bright primary and a faint companion.

Observed:

Orion

23 Ori: page 126 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

31 Ori: page 130 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

32 Ori: page 126 — A tight pairing of a bright primary and a bright companion.

Observed:

33 Ori: page 124 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

42/45 Ori: page 132 — A very wide and bright binocular pair, the brighter star (42 Ori) being bluish and the other white.

Observed:

Algjebba: page 134 — A tight pairing of a brilliant primary and a bright companion.

Observed:

BU 1048: page 132 — A tight pairing of a bright primary and a faint companion.

Observed:

HEI 670: page 128 — A tight pairing of a bright primary and a faint companion.

Observed:

Iota Ori: page 134 — In the same field as Struve 747, Iota Orionis is a brilliant white star with an easily separated and reasonably bright blue companion.

Observed:

Lamda Ori: page 124 — A close pair of white stars, with a brilliant primary and bright secondary.

Observed:

Psi Ori: page 128 — A tight pairing of a bright primary and a faint companion.

Observed:

Rho Ori: page 124 — A close pairing of a bright primary and a faint companion.

Observed:

Rigel: page 130 — Rigel, one of the brightest stars in the sky, has a moderately bright companion that seems very faint in the glare of its primary. The separation is reasonable and the white secondary contrasts nicely with the blue primary.

Observed:

SHJ 49 AC: page 128 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 855 AB: page 126 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

STFA 14 AC: page 134 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

STT 111: page 126 — A tight pairing of a bright primary and a faint companion.

Observed:

Sigma Ori: page 130 — A blue primary, flanked by one fainter star to the west, and two relatively bright white stars to the east, all easily separated from the primary.

Observed:

Struve 747: page 132 — A very wide pair of well matched and bright white stars.

Observed:

Theta2 Ori: page 130 — A very wide line of three bright white stars, often overlooked as it is on the border of the spectacular Orion Nebula.

Observed:

Zeta Ori: page 134 — A fiercely brilliant close blue-blue pairing, made difficult by the brightness of the primary.

Observed:

Pavo

HJ 5132: page 256 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HJ 5163: page 260 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

HJ 5171 AB: page 258 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

I 117: page 258 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

I 121 Aa,Ab: page 256 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

R 314: page 262 — A very tight double consisting of a fairly bright blueish primary and a significantly fainter secondary.

Observed:

RMK 8550: page 256 — An equal and very tight pair of bright white stars.

Observed:

Xi Pav: page 234 — A tight pairing of a bright primary and a faint companion.

Observed:

Pegasus

1 Peg: page 244 — A triple system, with a brilliant orange primary with two faint companions, one very close and the other quite widely separated.

Observed:

3 Peg: page 246 — A bright white primary distantly separated from a reasonably apparent yellowish secondary.

Observed:

33 Peg: page 246 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Eta Peg: page 70 — A wide pairing of a brilliant primary and a faint companion.

Observed:

S 798 AC: page 248 — A wide pairing of a brilliant primary and a faint companion.

Observed:

STF 2834 AB: page 246 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2877 AB: page 248 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 2878 AB: page 244 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2920 AB: page 80 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 2958: page 78 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2986: page 76 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 3023: page 78 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 3044: page 76 — A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Observed:

STT 505: page 76 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Struve 2841: page 244 — A wide yellow-blue pairing. Some see some green in the secondary.

Observed:

Struve 3007: page 80 — A close pair with a brighter yellow component and a very faint orange dwarf companion.

Observed:

V343 Peg: page 74 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

Perseus

56 Per: page 94 — A bright yellow primary with a close yellow companion.

Observed:

57 Per: page 120 — A distantly separated pair of moderately bright, balanced, white stars.

Observed:

Atik: page 94 — A comfortably separated pairing of a brilliant primary and a faint companion.

Observed:

DCH 11A B: page 98 — A close pairing of a brilliant primary and a fairly bright companion.

Observed:

Eps Per: page 96 — A close pairing of a brilliant primary and a faint companion.

Observed:

Eta Per: page 96 — A bright orange primary with a much fainter blue secondary.

Observed:

STF 162 AB: page 94 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 318 AB,C: page 94 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STF 382 AB: page 96 — A tight pairing of a bright primary and a faint companion.

Observed:

STF 552: page 118 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

STT 69: page 98 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Struve 331: page 98 — A bright and easily separated white-blue pair.

Observed:

Phoenix

HJ 3430 AB: page 92 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

HJ 5437: page 92 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

I 51: page 116 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

SLR 2 AB: page 92 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Theta Phe: page 90 — A white primary with a slightly fainter yellowish secondary, very closely separated.

Observed:

Xi Phe: page 88 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Zeta Phe: page 90 — A pair of close bluish stars, the brilliant primary is much brighter and is itself an extreme sub-arcsecond pairing.

Observed:

Pictor

DUN 20: page 140 — A balanced and widely separated pair of fairly bright, white stars.

Observed:

Iota Pic: page 136 — An easily separated, balanced pair of bright yellowish stars.

Observed:

Mu Pic: page 140 — A tight pairing of a bright primary and a faint companion.

Observed:

Piscis Austrinus

Del PsA: page 92 — A tight pairing of a bright primary and a faint companion.

Observed:

Dunlop 241: page 88 — A bright orange primary separated distantly from a moderate secondary.

Observed:

Eta PsA: page 258 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Gam PsA: page 90 — A tight pairing of a bright primary and a faint companion.

Observed:

H 6 119 AB: page 92 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

PZ 7 AC: page 90 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

Pisces

34 Psc: page 78 — A bright bluish primary with a faint secondary close by.

Observed:

35 Psc: page 80 — An easy, bright double star with comfortable separation and a reasonably bright secondary, consisting of a white primary and light yellow secondary.

Observed:

51 Psc: page 78 — A wide pairing of a bright primary and a faint companion.

Observed:

55 Psc: page 78 — A bright orange primary with a much fainter white secondary close by.

Observed:

65 Psc: page 70 — An equal pair of fairly bright light yellow stars.

Observed:

77 Psc: page 78 — A wide, fairly bright pairing of two yellow-white stars, separated in brightness by nearly one magnitude.

Observed:

Alrisha: page 102 — An extremely tight pair of bright, white stars.

Observed:

BU 281 AB: page 78 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Phi Psc: page 78 — A close pairing of a bright primary and a faint companion.

Observed:

Psi1 Psc: page 80 — An equally matched and widely separated pair of blue-white stars.

Observed:

S 398 AB: page 76 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 122: page 78 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 22 AB,C: page 76 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

STF 3009 AB: page 80 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 3019: page 76 — A balanced pair with a yellowish primary and white secondary.

Observed:

Zeta Psc: page 80 — A widely separated pair of closely matched bright white stars.

Observed:

Puppis

2 Pup: page 154 — A comfortably separated pairing of a fairly bright primary and a fairly bright companion.

Observed:

212 Pup: page 162 — A tight pairing of a bright primary and a faint companion.

Observed:

BU 333 AC: page 156 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

DUN 30 AB,CD: page 138 — A comfortably separated pairing of a bright primary and a fairly faint companion.

Observed:

DUN 38 AB: page 138 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

DUN 49: page 140 — A close pairing of a fairly bright primary and a fairly bright companion.

Observed:

G Pup: page 136 — A tight pairing of a bright primary and a faint companion.

Observed:

HJ 3834 AB: page 138 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 4025 AD: page 162 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 4057: page 162 — A wide pairing of a bright primary and a faint companion.

Observed:

I 487: page 154 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Kappa Pup: page 164 — A close pair of brilliant, bluish stars.

Observed:

OS Pup: page 160 — A wide pairing of a bright primary and a bright companion.

Observed:

Pi Pup: page 140 — A wide pairing of a brilliant primary and a fairly faint companion.

Observed:

S 557: page 158 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

S 568: page 158 — A wide pairing of a bright primary and a faint companion.

Observed:

SHJ 91 AE: page 156 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 1120 AC: page 154 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STF 1121: page 156 — A close and equal pair of bluish stars.

Observed:

Sig Pup: page 140 — A wide pairing of a brilliant primary and a faint companion.

Observed:

V336 Pup: page 160 — A wide pairing of a bright primary and a faint companion.

Observed:

V363 Pup: page 136 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Y Pup: page 140 — A bright yellow-orange primary easily separated from a very slightly bluish secondary.

Observed:

d2 Pup: page 164 — A tight pairing of a bright primary and a faint companion.

Observed:

h2 Pup: page 164 — A wide pairing of a bright primary and a faint companion.

Observed:

n Pup: page 158 — A close pairing of a bright primary and a bright companion.

Observed:

Pyxis

BU 207: page 156 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Eps Pyx: page 162 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

XY Pyx: page 164 — A wide pairing of a bright primary and a faint companion.

Observed:

Zet Pyx: page 160 — A wide pairing of a bright primary and a faint companion.

Observed:

Reticulum

DUN 12 A,BC: page 116 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

DUN 14: page 114 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HJ 3592: page 112 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3670: page 138 — A wide pairing of a bright primary and a faint companion.

Observed:

The Ret: page 112 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

Sculptor

Eps Scl: page 106 — A close pairing of a bright primary and a faint companion.

Observed:

HJ 1991: page 86 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3216 AC: page 88 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 3375: page 90 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

HJ 3436: page 92 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 5417: page 86 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HWE 93: page 90 — A close pairing of a fairly bright primary and a faint companion.

Observed:

Kap1 Scl: page 92 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

phi Scl: page 82 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

Scorpius

11 Sco: page 202 — A tight pairing of a bright primary and a faint companion.

Observed:

2 Sco: page 204 — A tight pairing of a bright primary and a fairly bright companion.

Observed:

Alniyat: page 206 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Antares: page 208 — A fiercely brilliant and intensely red primary with a very close, bright, blue or green companion.

Observed:

BSO 12 AB: page 212 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

BU 38: page 202 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Beta Sco: page 204 — A moderately separated pair of brilliant bluish stars.

Observed:

CPO 70 AB: page 232 — A wide pairing of a fairly bright primary and a fairly bright companion.

Observed:

DUN 217: page 236 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

HJ 4889: page 234 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

JC 23 AF: page 236 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

MLO 4 AB: page 232 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

Nu Sco: page 206 — A bright, extremely tight and balanced pair of blue stars.

Observed:

V1003 Sco: page 234 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Xi Sco: page 204 — Xi Sco (Graffias) is a triple star system. The yellow primary can be split by larger telescopes into a an equal pale yellow pair with a separation of 1.1". Lesser telescopes show a single yellow point distantly separated from a fairly apparent blue companion.

Observed:

Scutum

STF 2325: page 226 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

STF 2391 AB: page 228 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Serpens

59 Ser: page 220 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

6 Ser: page 196 — A tight pairing of a bright primary and a faint companion.

Observed:

ARY 73: page 198 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

Chow: page 200 — A wide pairing of a brilliant primary and a faint companion.

Observed:

Delta Ser: page 200 — A reasonably balanced and very tight yellow-yellow pair.

Observed:

HJ 2814 AB: page 228 — A wide pairing of a bright primary and a faint companion.

Observed:

HJ 4964 AB: page 230 — A wide pairing of a bright primary and a faint companion.

Observed:

Nu Ser: page 228 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 1931 AB: page 196 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 1985: page 206 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1987: page 198 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 2007 AB: page 196 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 2303: page 230 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2375 AB: page 222 — A tight pairing of a fairly bright primary and a fairly bright companion.

Observed:

Struve 1919: page 200 — A less bright and quite wide yellow-blue pairing.

Observed:

Theta Ser: page 220 — A widely separated pair of bright blue stars.

Observed:

Sextans

35 Sex: page 174 — An unusual orange-yellow pairing, reasonably balanced and closely separated.

Observed:

40 Sex: page 178 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

9 Sex: page 150 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1441 AB: page 182 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Sagitta

Eps Sge: page 244 — A wide pairing of a bright primary and a faint companion.

Observed:

H N 84: page 248 — A wide pair with a strongly orange primary and fainter blue companion.

Observed:

STF 2637 AC: page 246 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Zeta Sge: page 246 — A bright yellow primary with a much fainter blue secondary.

Observed:

Sagittarius

21 Sgr: page 228 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

52 Sgr: page 252 — A tight pairing of a bright primary and a faint companion.

Observed:

Arkab prior: page 234 — A wide pairing of a brilliant primary and a fairly faint companion.

Observed:

BB Sgr: page 228 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

BU 245: page 236 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

DUN 230: page 256 — A close pairing of a fairly faint primary and a fairly faint companion.

Observed:

Dunlop 219: page 234 — A yellow primary with two widely separated companions, one extremely faint.

Observed:

Eta Sgr: page 232 — A trio of stars, a brilliant red primary and very close secondary are distantly separated from a very faint third component.

Observed:

H N 119: page 236 — A close pairing of a bright primary and a faint companion.

Observed:

HJ 2822 AE: page 228 — A wide pairing of a brilliant primary and a faint companion.

Observed:

HJ 5082 AB: page 230 — A close pairing of a fairly bright primary and a faint companion.

Observed:

HJ 5178 AB: page 258 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

HJ 5188: page 256 — A complex of 6 stars, centered on a fairly bright white primary. The widely separated C component is moderately bright, but the remaining four members are all faint.

Observed:

HJ 599 AC: page 250 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

HWE 43 AB: page 234 — A tight pairing of a bright primary and a faint companion.

Observed:

PZ 6: page 232 — A bright red star with a fairly bright, yellow companion close by.

Observed:

R 321: page 260 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

S 710: page 226 — A close pairing of a fairly bright primary and a faint companion.

Observed:

S 722 AB: page 254 — A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Observed:

SHJ 263 AB: page 226 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

SHJ 264 AB,C: page 230 — A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Observed:

V3792 Sgr: page 230 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

WNO 6: page 226 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Taurus

118 Tau: page 124 — A bright white primary with a closely bound yellow secondary. The secondary is reasonably bright, enhancing the color of the pair.

Observed:

30 Tau: page 104 — An unusual blue-red color combination, with reasonable separation, but the faint red companion needs a larger telescope to bring out its color.

Observed:

47 Tau: page 102 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

62 Tau: page 102 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

80 Tau: page 124 — A tight pairing of a bright primary and a faint companion.

Observed:

88 Tau: page 126 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

Alcyone: page 100 — A wide pairing of a brilliant primary and a fairly bright companion.

Observed:

BU 87: page 100 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Chi Tau: page 104 — An easily separated white-blue pairing, where the secondary is also reasonably bright so seeing the color is easier.

Observed:

Del3 Tau: page 102 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

Phi Tau: page 96 — A bright yellow primary with a widely separated faint blue companion.

Observed:

STF 412 AB,C: page 104 — A wide pairing of a bright primary and a faint companion.

Observed:

STF 548 AB: page 98 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 680: page 126 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 730 AB: page 128 — A close pairing of a fairly bright primary and a fairly bright companion.

Observed:

STT 72 AB: page 104 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STTA 67 AB,C: page 126 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Struve 401: page 94 — An easily separated equal pair of fairly bright white stars.

Observed:

Struve 422: page 100 — A bright yellow primary close to a relatively faint orange companion.

Observed:

Struve 495: page 100 — A close pair of yellow stars. The primary is almost three magnitudes brighter than the secondary, meaning it is roughly 15 times brighter.

Observed:

Tau Tau: page 128 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

V1156 Tau: page 120 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

V774 Tau: page 104 — A wide pairing of a fairly bright primary and a fairly faint companion.

Observed:

Telescopium

COO 238: page 258 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

DUN 227: page 260 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

HJ 5114 AB: page 236 — A wide pairing of a bright primary and a faint companion.

Observed:

I 118: page 260 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

Triangulum Australe

Eps TrA: page 208 — A wide pairing of a bright primary and a faint companion.

Observed:

Iot TrA: page 212 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

Triangulum

Iota Tri: page 98 — A tight, bright pair of well-matched yellow and blue stars.

Observed:

Tucana

Beta1 Tuc: page 90 — An equal pair of very bright, easily separated stars; Beta1 is bluish, while Beta2 is white.

Observed:

COO 3: page 92 — A fairly bright yellowish primary with a tightly bound secondary.

Observed:

DUN 247: page 92 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Delta Tuc: page 258 — A brilliant bluish primary close to a fairly faint secondary.

Observed:

HJ 3426: page 266 — An extremely close pairing, with a fairly bright white primary and moderate secondary.

Observed:

Kappa Tuc: page 264 — A tight pair of light yellow and yellow stars distantly separated from an extremely tight pair of orange suns.

Observed:

Ursa Major

23 UMa: page 144 — A brilliant yellowish primary well separated from a faint secondary.

Observed:

62 UMa: page 166 — A wide pairing of a bright primary and a faint companion.

Observed:

65 Uma: page 168 — A white primary with a tightly bound secondary.

Observed:

ARG 101: page 170 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

BU 408: page 142 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

HJ 2554: page 166 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

HO 50: page 168 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Iot UMa: page 146 — A tight pairing of a brilliant primary and a faint companion.

Observed:

Mizar: page 168 — A delightful triple system of white stars easily separated in any telescope.

Observed:

STF 1193 AB: page 64 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1315: page 146 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

STF 1340 AB: page 142 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1415 AB: page 68 — A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1495: page 170 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 1510: page 166 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1542: page 170 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1544: page 168 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 1559: page 166 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1561 AB: page 166 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 1600: page 170 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1770: page 190 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1795: page 194 — A close pairing of a fairly bright primary and a faint companion.

Observed:

STF 1831 AB: page 190 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STT 200: page 144 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STT 241: page 168 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Sig2 UMa: page 146 — A tight pairing of a bright primary and a faint companion.

Observed:

Struve 1520: page 168 — An easily separated pairing of two yellowish stars.

Observed:

Struve 1695: page 166 — A bright yellow primary tightly separated from a fainter blue companion.

Observed:

Xi UMa: page 168 — A bright white-yellow pair separated by anything between 1.6 and 3.0 arc seconds.

Observed:

Ursa Minor

BU 799 AB: page 68 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

Pi1 UMi: page 64 — A very wide and reasonably balanced yellow-white pair.

Observed:

Ursa Minor

Polaris: page 66 — A brilliant yellow primary separated comfortably from a vastly fainter white secondary.

Observed:

Vela

DUN 69 AB: page 160 — A wide pairing of a bright primary and a faint companion.

Observed:

DUN 70: page 160 — A bright blue primary with a very close and fairly bright secondary.

Observed:

Gamma Vel: page 164 — An extremely brilliant blue primary widely separated from a brilliant blue companion.

Observed:

H Vel: page 160 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

HJ 4104 AC: page 162 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

HJ 4191: page 164 — A bright, bluish primary with a close faint companion.

Observed:

HJ 4220: page 162 — A well-balanced pair, with a bright bluish primary and a tightly bound, fairly bright companion.

Observed:

HJ 4330: page 184 — A bright orange primary widely separated from a fairly faint white secondary.

Observed:

HY Vel: page 164 — A wide pairing of a bright primary and a bright companion.

Observed:

Mu Vel: page 186 — A very brilliant yellow primary with a bright yellow companion, very tightly separated.

Observed:

NY Vel: page 162 — A tight pairing of a bright primary and a faint companion.

Observed:

NZ Vel: page 162 — A comfortably separated pairing of a bright primary and a faint companion.

Observed:

RMK 13 AC: page 164 — A wide pairing of a bright primary and a faint companion.

Observed:

Y Vel: page 188 — A wide pairing of a bright primary and a faint companion.

Observed:

s Vel: page 188 — A comfortably separated pairing of a bright primary and a bright companion.

Observed:

x Vel: page 186 — A wide pairing of a bright primary and a fairly bright companion.

Observed:

Virgo

17 Vir: page 176 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

54 Vir: page 182 — A close pairing of a fairly bright primary and a fairly faint companion.

Observed:

84 Vir: page 198 — A tight pairing of a bright primary and a faint companion.

Observed:

86 Vir: page 206 — A tight pairing of a bright primary and a faint companion.

Observed:

HJ 228: page 200 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

Porrima: page 178 — An almost perfectly equal and very close pair of brilliant yellowish stars.

Observed:

STF 1560: page 180 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1627: page 182 — An equal and easily separated pair of fairly bright white stars.

Observed:

STF 1677: page 180 — A comfortably separated pairing of a fairly faint primary and a faint companion.

Observed:

STF 1682 AB: page 180 — A wide pairing of a fairly bright primary and a faint companion.

Observed:

STF 1689: page 172 — A wide pairing of a fairly faint primary and a faint companion.

Observed:

STF 1690: page 182 — A close pairing of a fairly faint primary and a faint companion.

Observed:

STF 1734: page 174 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1740: page 176 — A wide pairing of a fairly faint primary and a fairly faint companion.

Observed:

STF 1764 AB: page 196 — A comfortably separated pairing of a fairly bright primary and a faint companion.

Observed:

STF 1788 AB: page 204 — A tight pairing of a fairly bright primary and a fairly faint companion.

Observed:

STF 1881: page 200 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 1883: page 196 — A tight pairing of a fairly faint primary and a faint companion.

Observed:

STF 1904: page 200 — A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Observed:

STT 256: page 180 — A tight pairing of a fairly faint primary and a fairly faint companion.

Observed:

Tau Vir: page 200 — A wide pairing of a bright primary and a faint companion.

Observed:

The Vir: page 178 — A close pairing of a bright primary and a faint companion.

Observed:

Volans

BSO 17 AC: page 264 — A wide pairing of a bright primary and a fairly faint companion.

Observed:

Epsilon Vol: page 262 — A close, unbalanced pair with a very bright blue primary and white secondary.

Observed:

Gam2 Vol: page 264 — A brilliant orange primary easily separated from a bright yellowish companion.

Observed:

Zeta Vol: page 266 — A very bright orange primary star comfortably separated from a much fainter companion.

Observed:

Vulpecula

13 Vul: page 248 — A tight pairing of a bright primary and a fairly faint companion.

Observed:

2 Vul: page 220 — A tight pairing of a bright primary and a faint companion.

Observed:

STF 2653 AB: page 244 — A tight pairing of a fairly bright primary and a faint companion.

Observed:

STF 2769 AB: page 248 — A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Observed:

Bortle Light Pollution Scale

The Bortle Light Pollution Scale was developed by John E Bortle in 2001 to categorize local light pollution levels into nine categories, with "one" being truly dark, pristine skies and "nine" being highly polluted inner city skies.

To help you judge your local light pollution, the following pages show selected regions at Bortle levels nine, seven five and three. The northern and southern polar regions are included, as are the more equatorial constellations of Leo, Scorpius, Orion and Pegasus. I also include two bright and easily recognized circumpolar constellations, Crux and Cassiopeia. Although only some Bortle levels are illustrated, it should be fairly simple to interpolate the remaining levels - for example if the sky is slightly better than the Bortle 7 chart but not quite as good as Bortle 5, then it is reasonable to estimate a level of Bortle 6 even though it is not separately illustrated.

In Bortle 9 skies, almost all targets are extremely difficult, with only a few of the brightest targets such as the Pleiades being easily visible. Finding the targets presents its own challenge as even the relatively bright signpost stars used in this book are at the edge of visibility. Very bright skies make galaxies in particular more difficult, while open clusters and globular clusters and especially double stars fare somewhat better. This is because higher magnification can be used to stretch out and dim the background, while stars, being point sources, are not significantly dimmed by higher magnifications. Likewise, colored stars like carbon stars can still be enjoyed regardless of light pollution.

Bortle 8 skies show a slight improvement, and most bright targets should be visible though a small telescope. Other targets may only show on the best nights. Faint targets will mostly prove elusive.

In Bortle 7 skies, numerous brighter targets should present themselves beautifully in the eyepiece, and most other targets should at least be visible (given an adequate telescope).

In Bortle 6 skies fainter targets like many galaxies and the milky way should be visible. While these skies are regarded as relatively badly light polluted, a Bortle 6 sky nevertheless retains some traces of its true majesty.

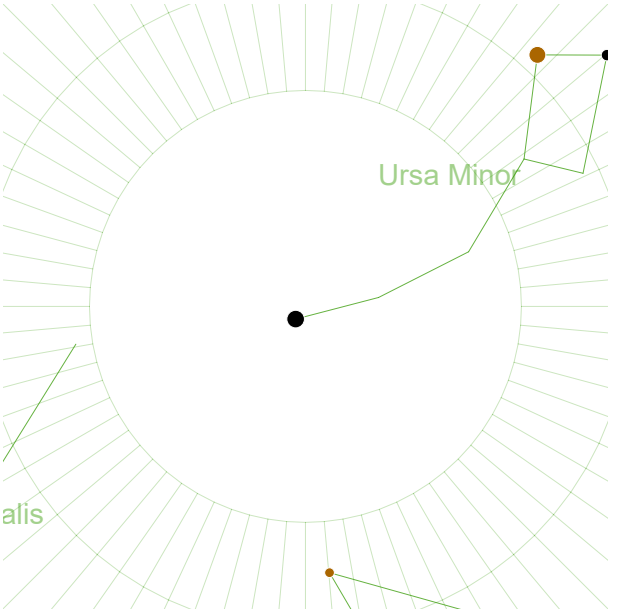
Light pollution is worse nearer to the horizon, and stars are partially extinguished by the atmosphere at lower elevations, so it is not unusual to for different parts of the sky to be effectively a different Bortle.

Aside from being a nuisance to stargazers, light pollution has serious consequences for ecosystems and human health. Light pollution can affect the reproductive cycles of animals, the migration of birds, and contributes to the catastrophic decline in the numbers of insects.

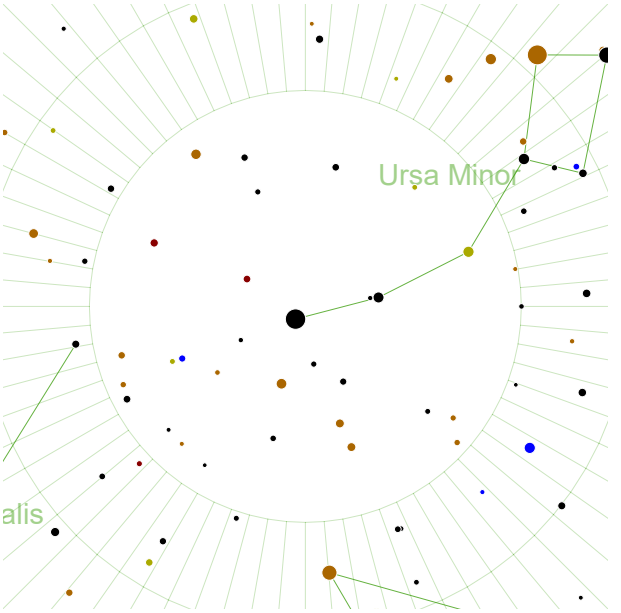
The International Dark-Sky Association campaigns against light pollution:

https://www.darksky.org/

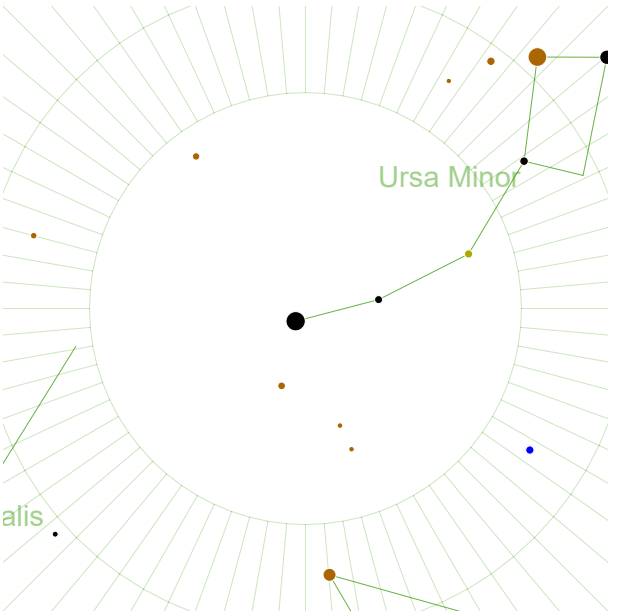
Bortle Scale (Ursa Minor)



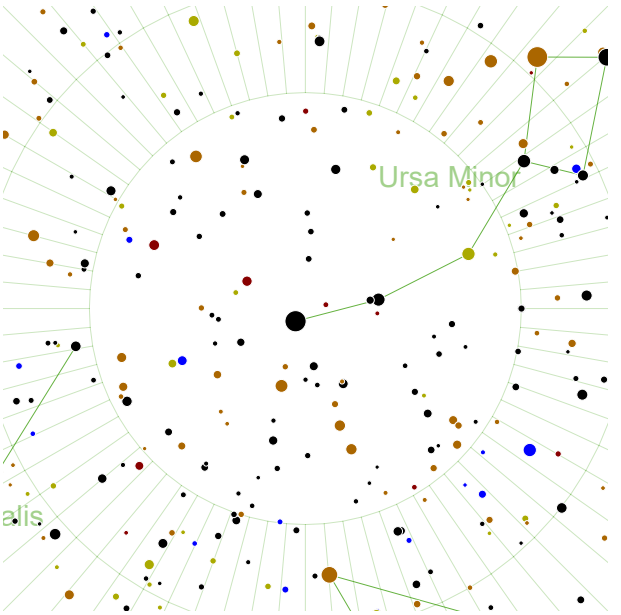
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

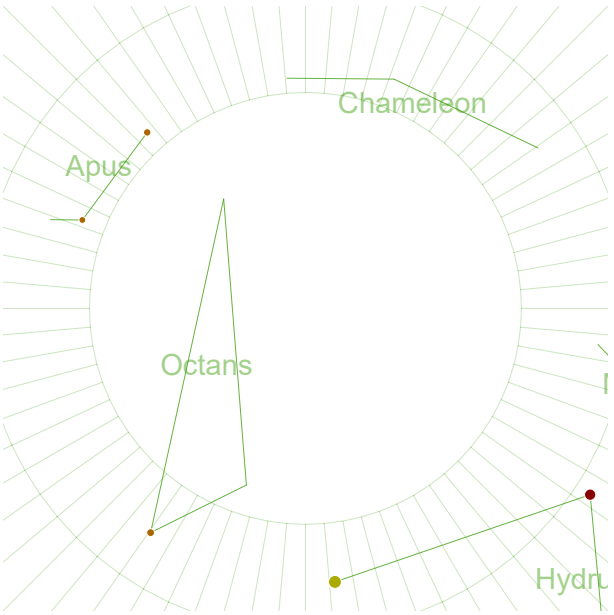


Bortle 7 (limiting magnitude 5.0)

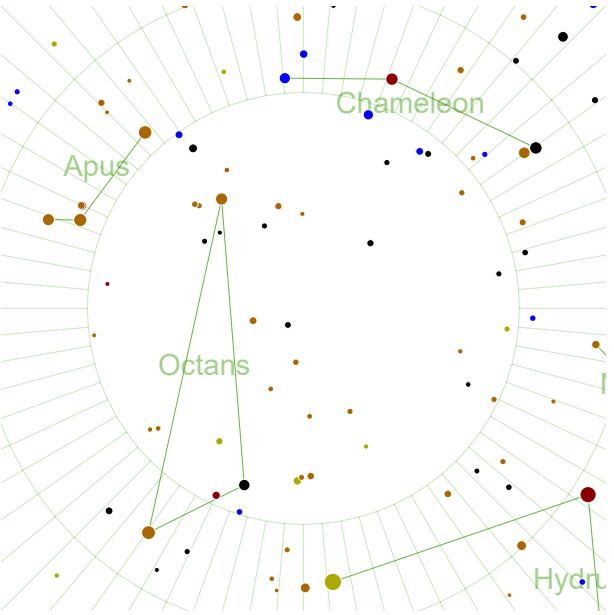


Bortle 3 (limiting magnitude 7.0)

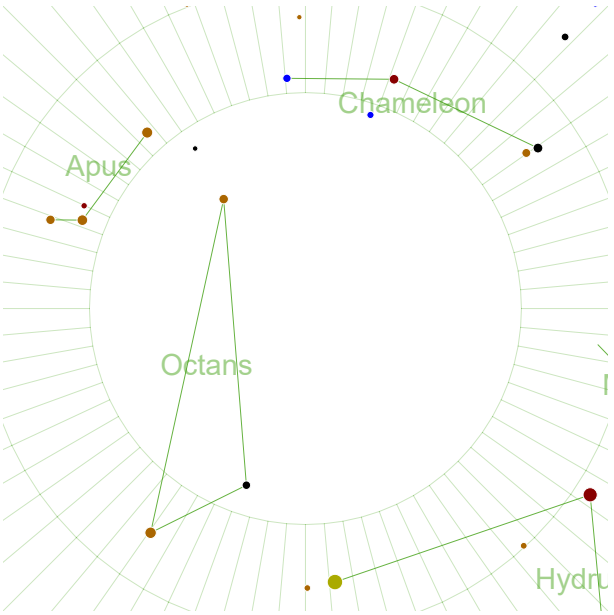
Bortle Scale (Octans)



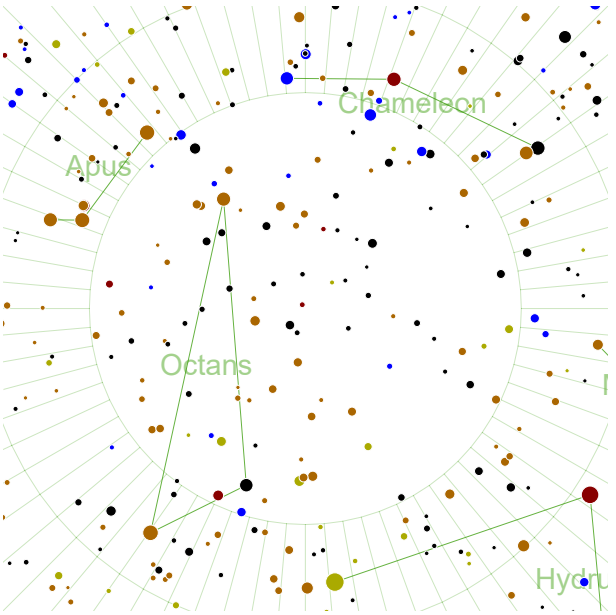
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

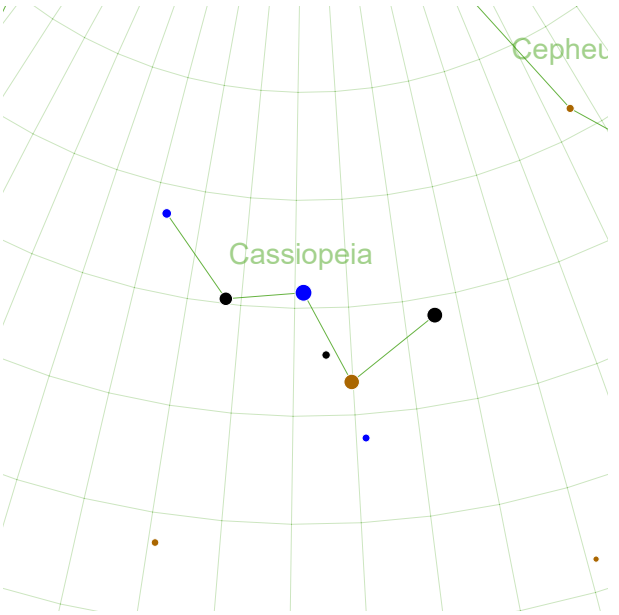


Bortle 7 (limiting magnitude 5.0)

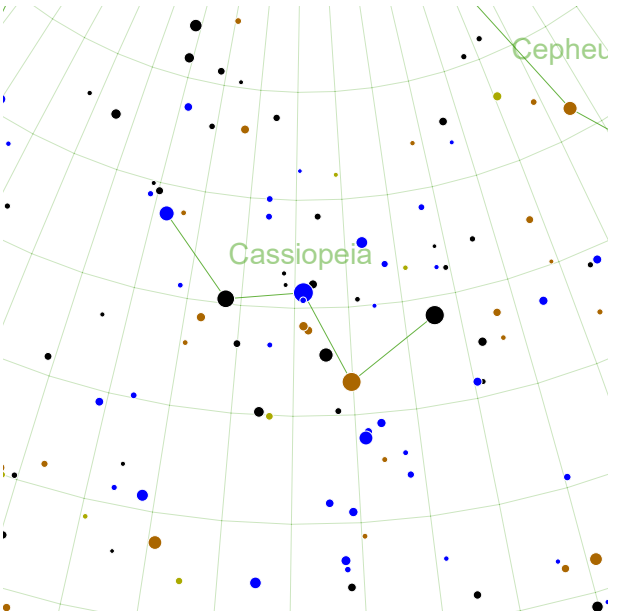


Bortle 3 (limiting magnitude 7.0)

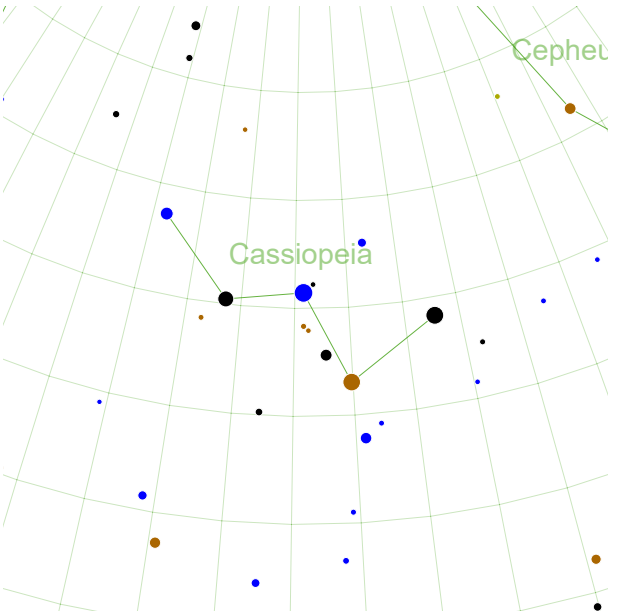
Bortle Scale (Cassiopeia)



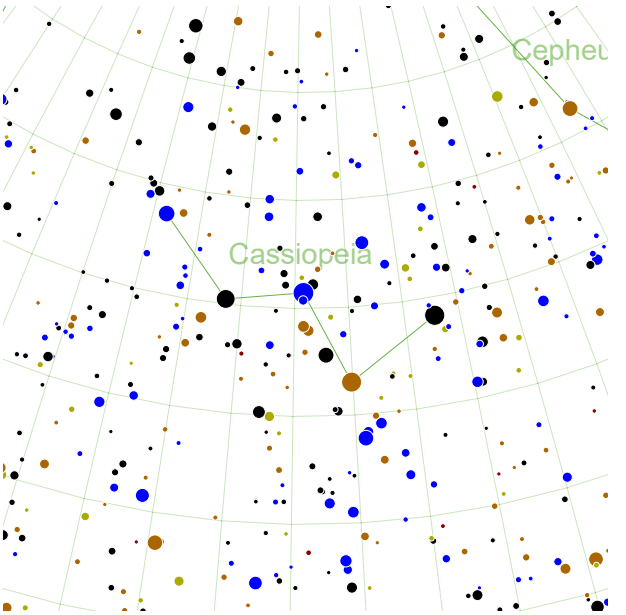
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

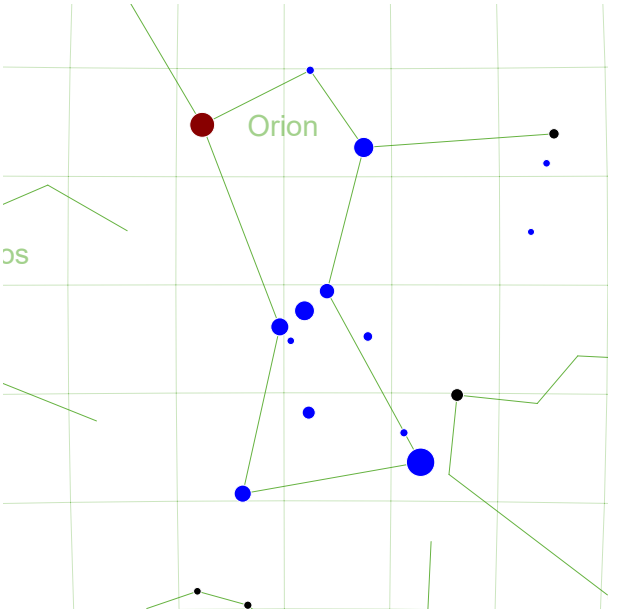


Bortle 7 (limiting magnitude 5.0)

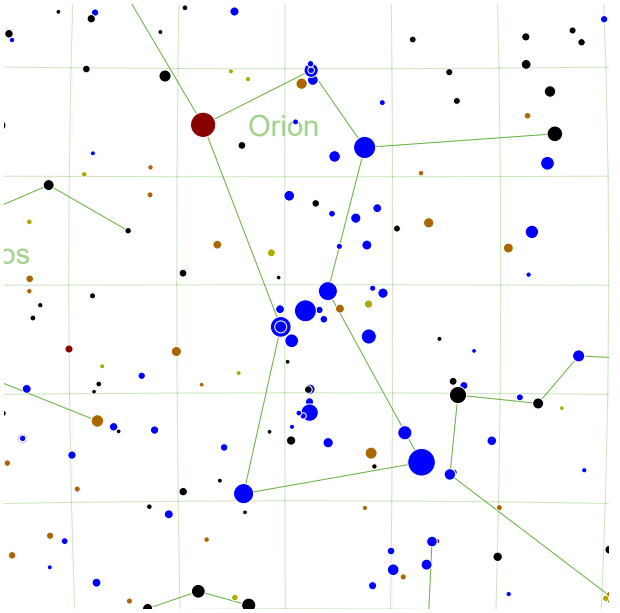


Bortle 3 (limiting magnitude 7.0)

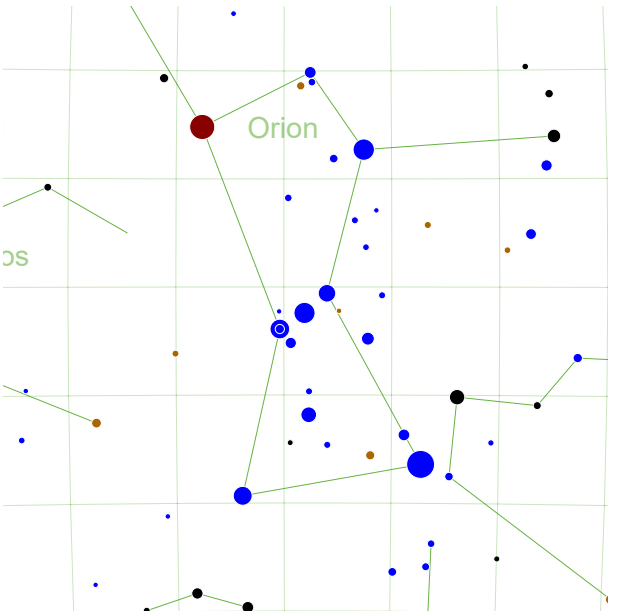
Bortle Scale (Orion)



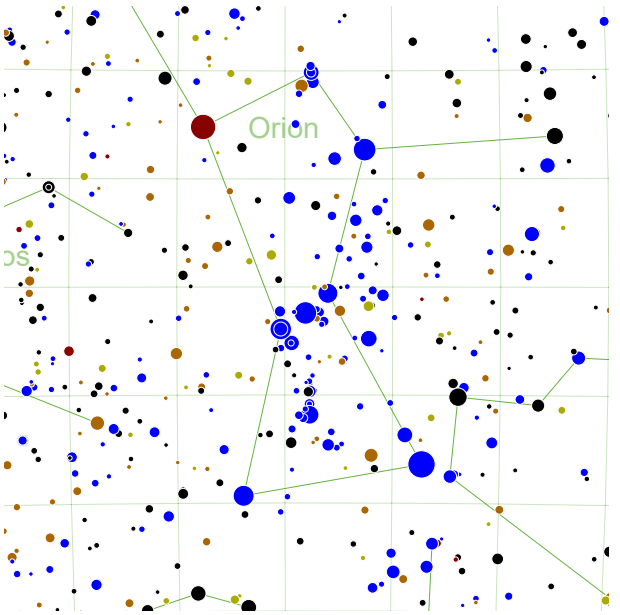
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

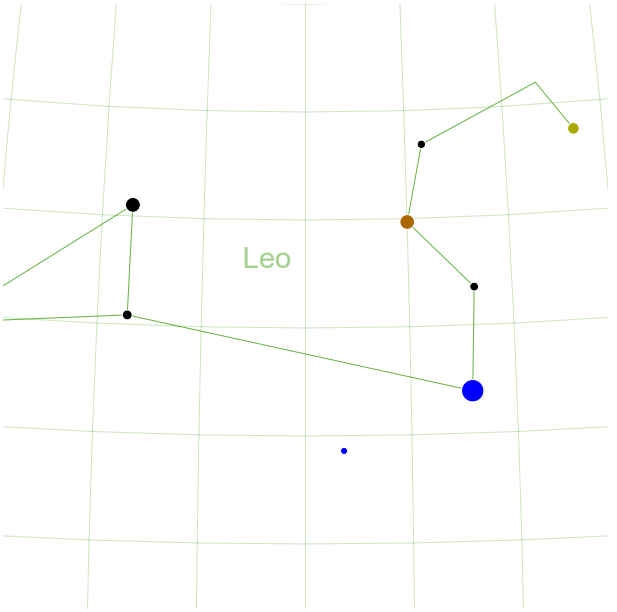


Bortle 7 (limiting magnitude 5.0)

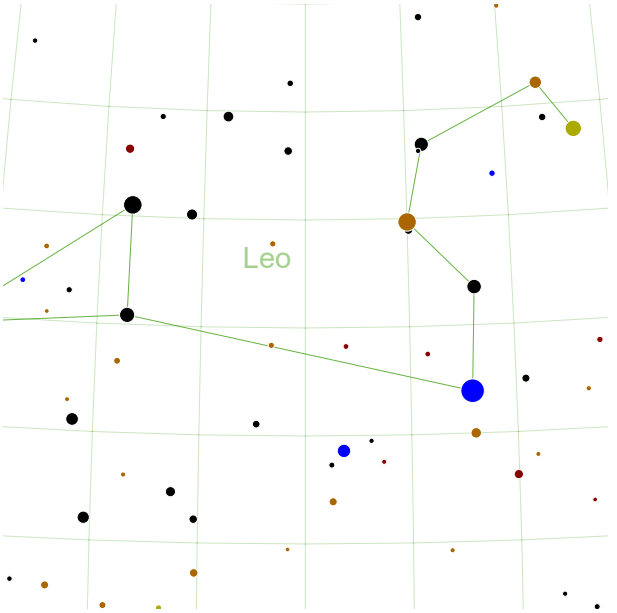


Bortle 3 (limiting magnitude 7.0)

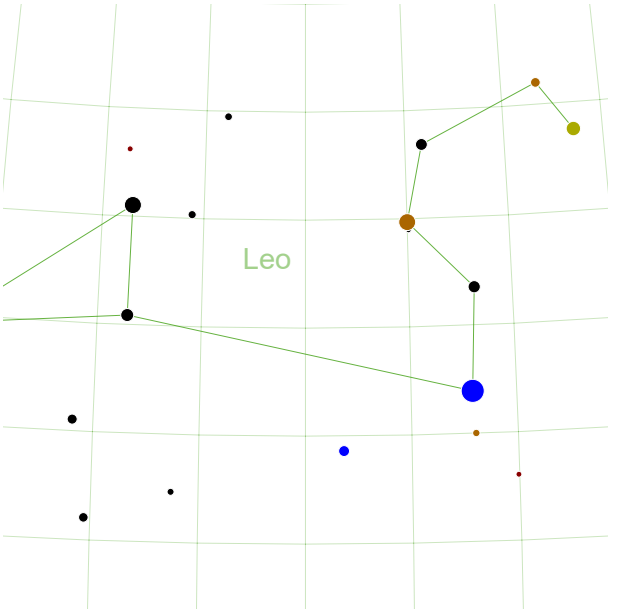
Bortle Scale (Leo)



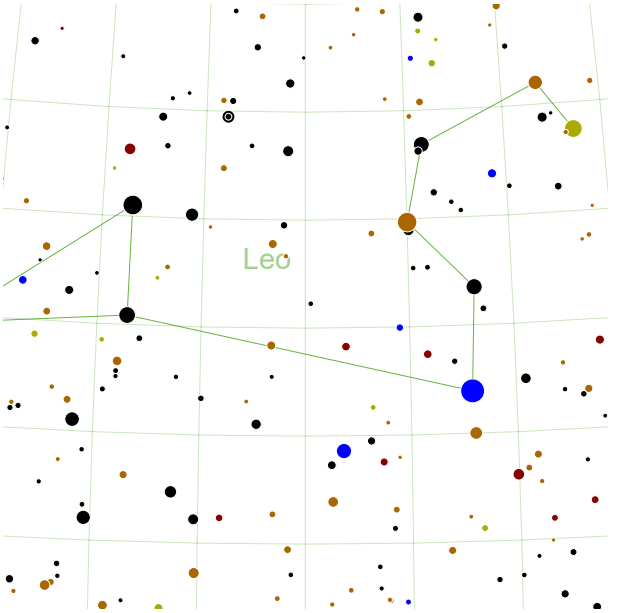
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

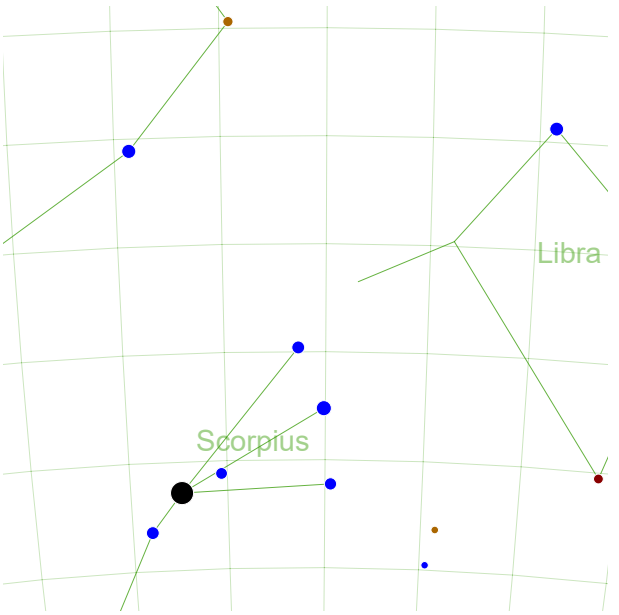


Bortle 7 (limiting magnitude 5.0)

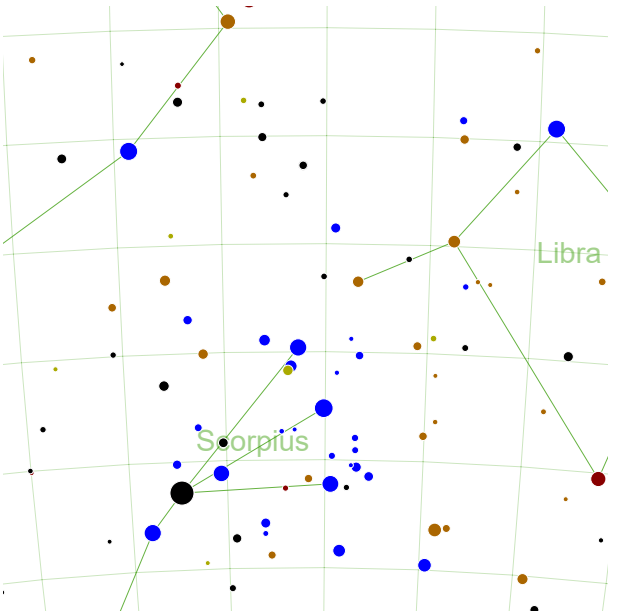


Bortle 3 (limiting magnitude 7.0)

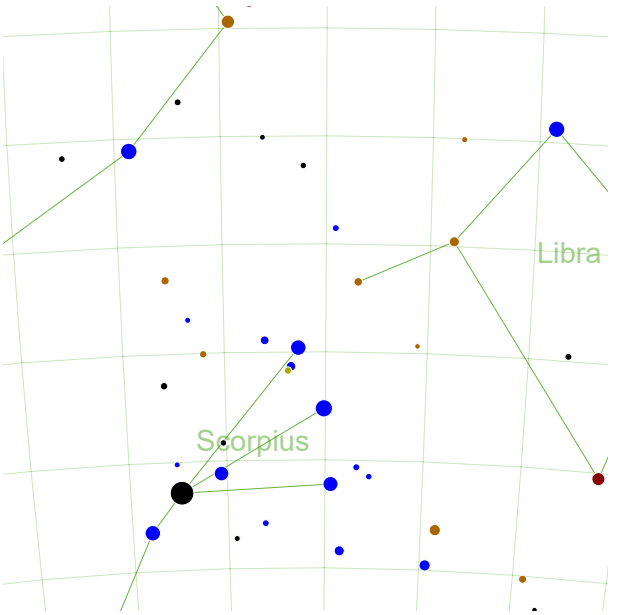
Bortle Scale (Scorpius)



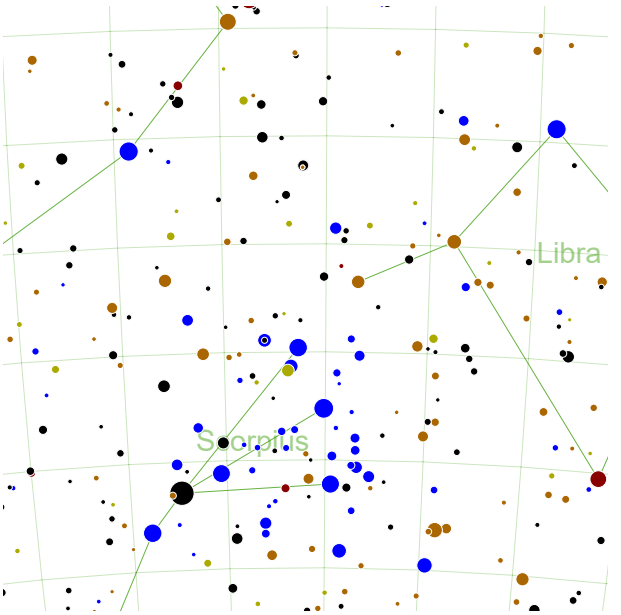
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

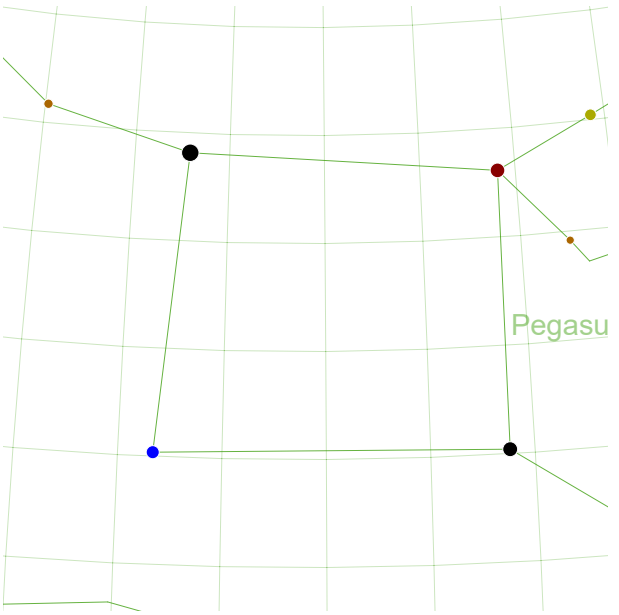


Bortle 7 (limiting magnitude 5.0)

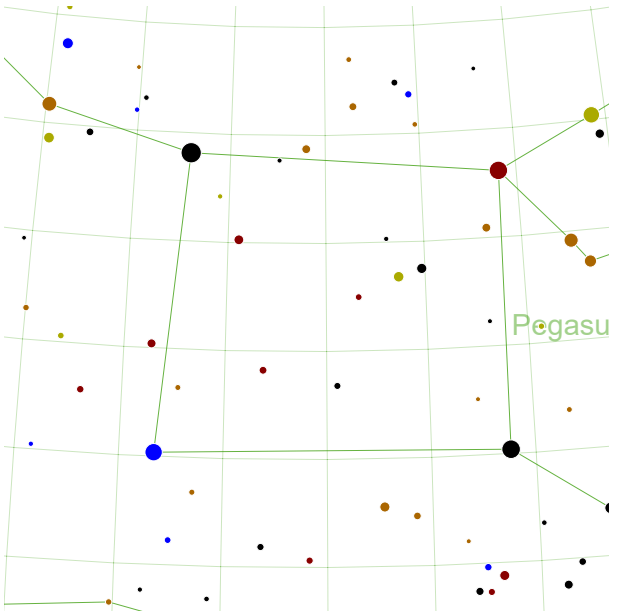


Bortle 3 (limiting magnitude 7.0)

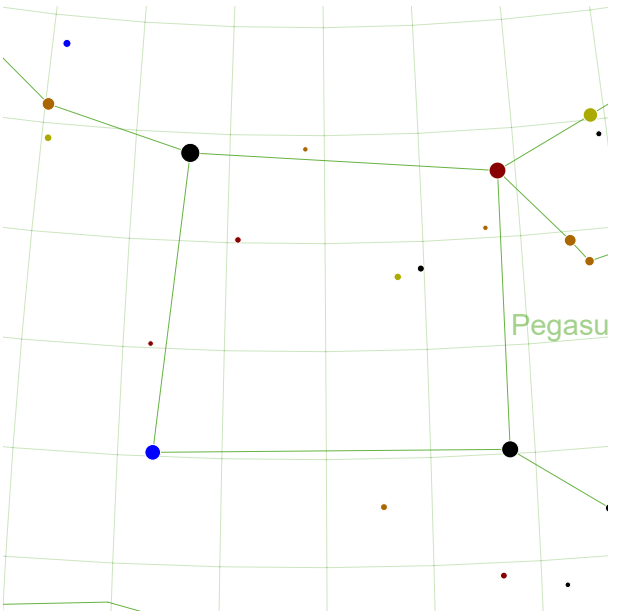
Bortle Scale (Pegasus)



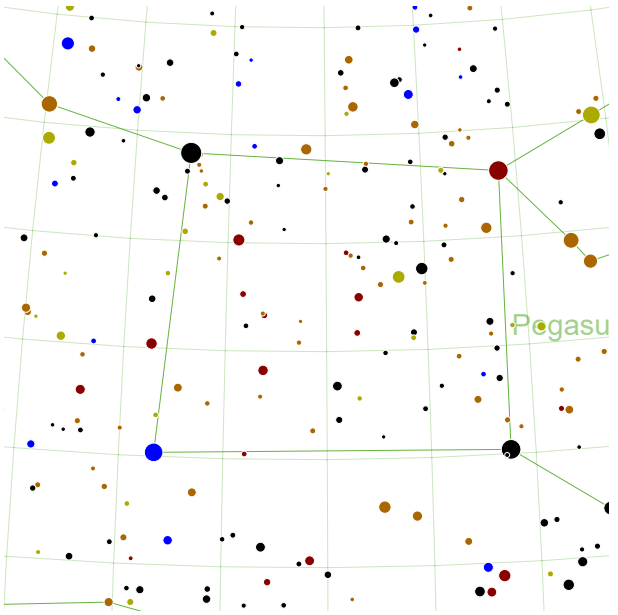
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

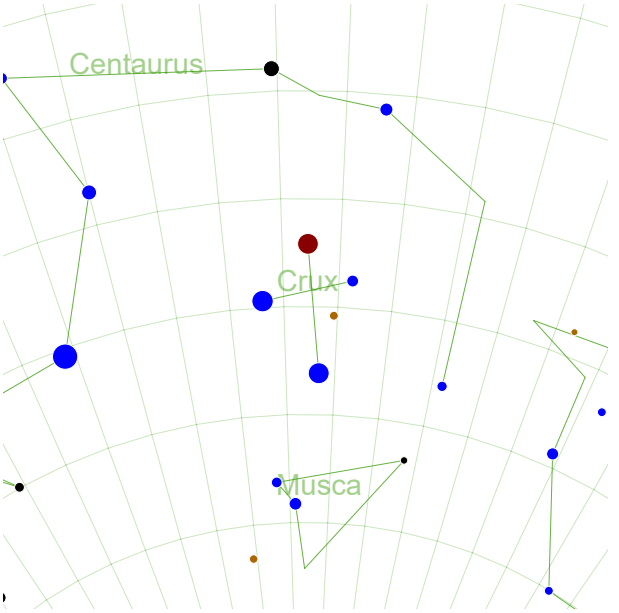


Bortle 7 (limiting magnitude 5.0)

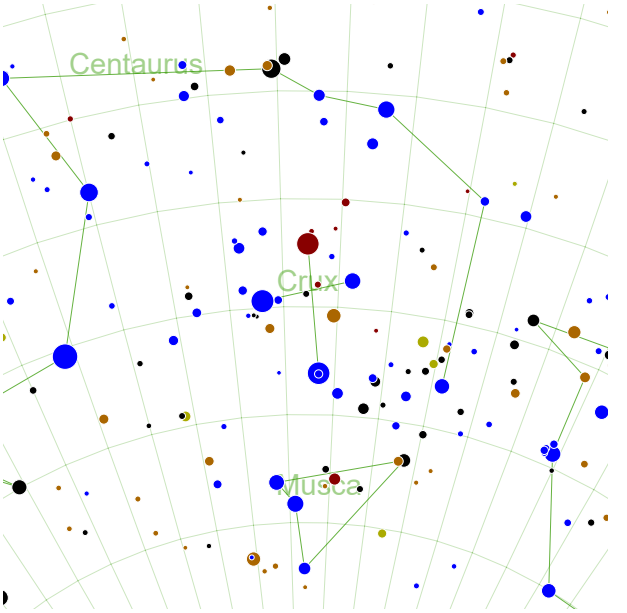


Bortle 3 (limiting magnitude 7.0)

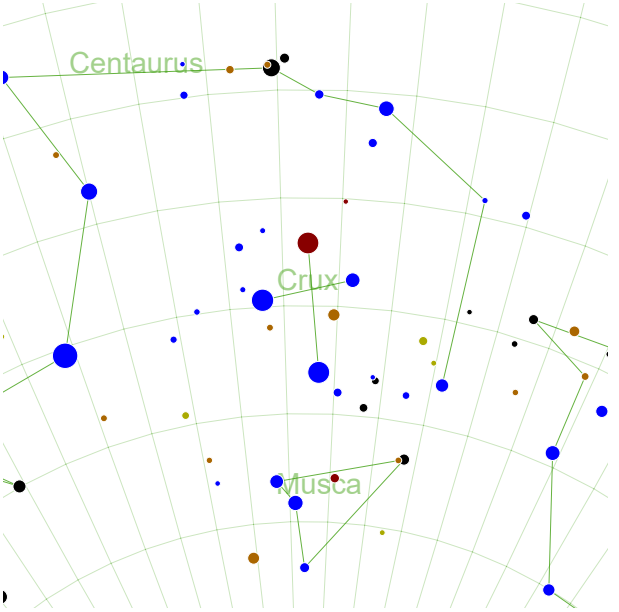
Bortle Scale (Crux)



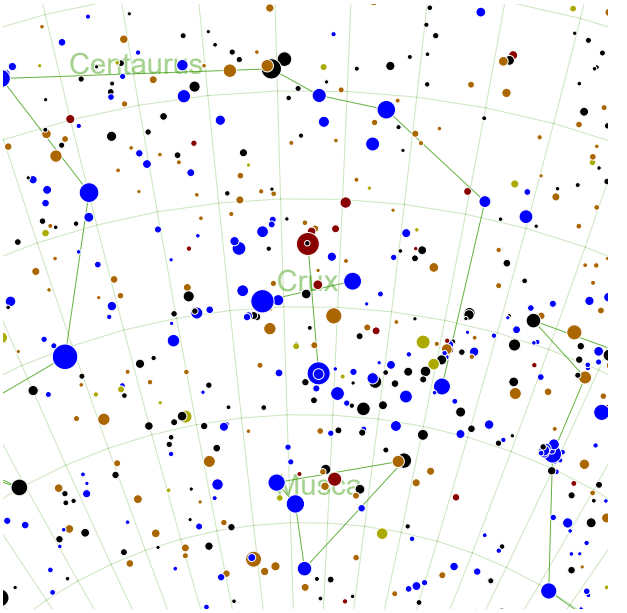
Bortle 9 (limiting magnitude 4.0)



Bortle 5 (limiting magnitude 6.0)

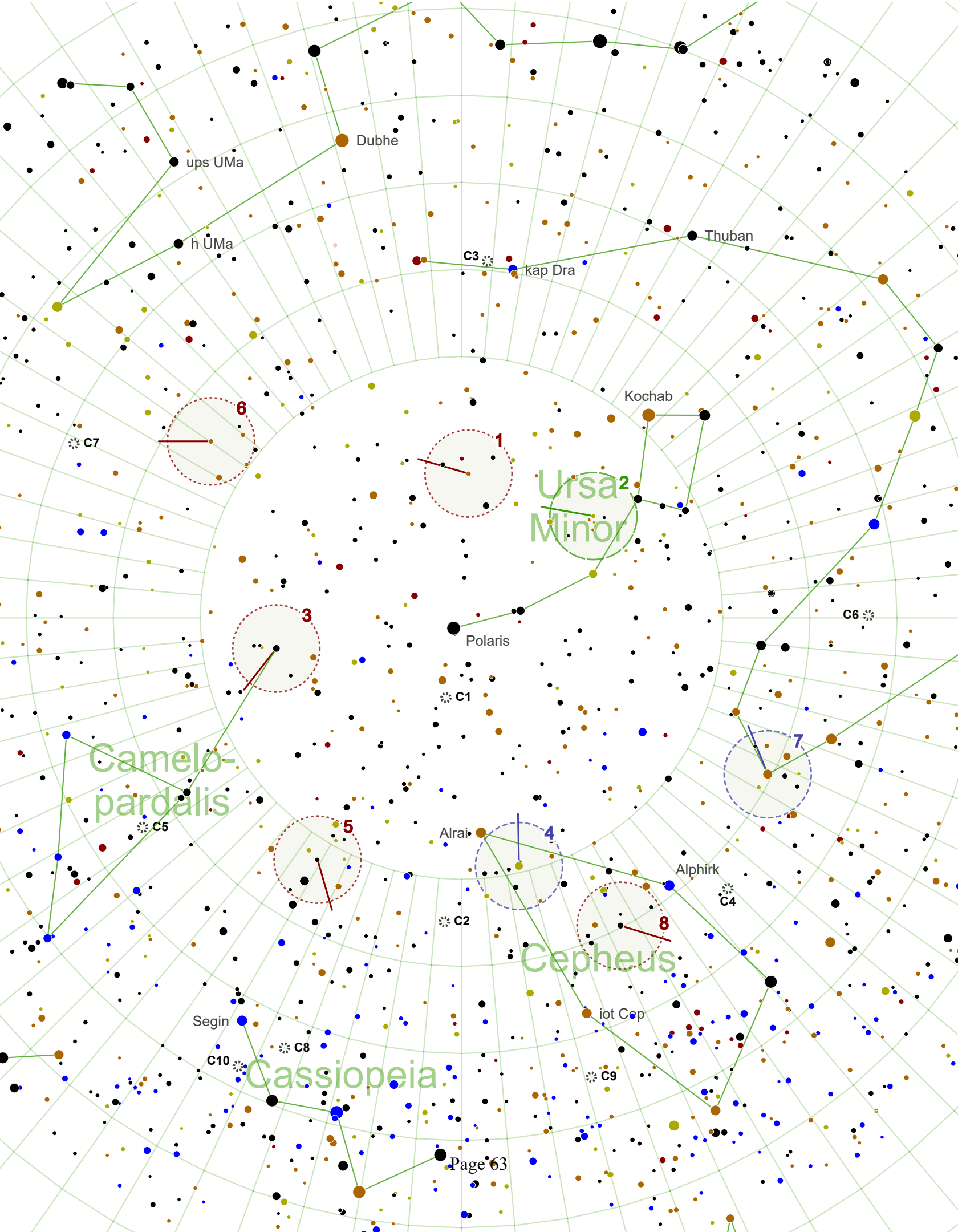


Bortle 7 (limiting magnitude 5.0)



Bortle 3 (limiting magnitude 7.0)

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Dubhe
ups UMa
h UMa
C3
kap Dra
Thuban
Kochab
6
C7
1
Ursa
Minor
2
3
Polaris
C6
C1
Camelo-
pardalis
7
C5
5
Alrai
4
Alphirk
C4
C2
8
Cepheus
Segin
C8
C10
Cassiopeia
iot Cep
C9

Northern Circumpolar Sky (1)

1: SHJ 136 (RA: 12 10 60, DEC: +81 42 35)

***SHJ 136**: mag.:6.15 | 8.25, sep.:71.9″ , p.a.74°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 1991

2: Pi1 UMi (RA: 15 29 11, DEC: +80 26 55)

***STF 1972 AB**: mag.:6.64 | 7.3, sep.:31.6″ , p.a.80°*

A very wide and reasonably balanced yellow-white pair.

Identifiers: Pi1 UMi | SAO 2556 | HIP 75809 | GDR2 98827435648

3: STF 634 AB (RA: 05 22 34, DEC: +79 13 52)

***STF 634 AB**: mag.:5.14 | 9.14, sep.:31.1″ , p.a.142°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 5496

4: Pi Cep (RA: 23 07 54, DEC: +75 23 15)

***STT 489 AB**: mag.:4.61 | 6.8, sep.:1.1″ , p.a.1°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 10629

5: STF 191 (RA: 02 03 10, DEC: +73 51 02)

***STF 191**: mag.:6.2 | 9.1, sep.:5.3″ , p.a.196°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 4559

6: STF 1193 AB (RA: 08 20 40, DEC: +72 24 26)

***STF 1193 AB**: mag.:6.16 | 9.69, sep.:42.4″ , p.a.90°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 6504

7: Tyl (RA: 19 48 10, DEC: +70 16 04)

***STF 2603**: mag.:4.01 | 6.87, sep.:3.2″ , p.a.22°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 9540

8: STF 2883 (RA: 22 10 39, DEC: +70 07 57)

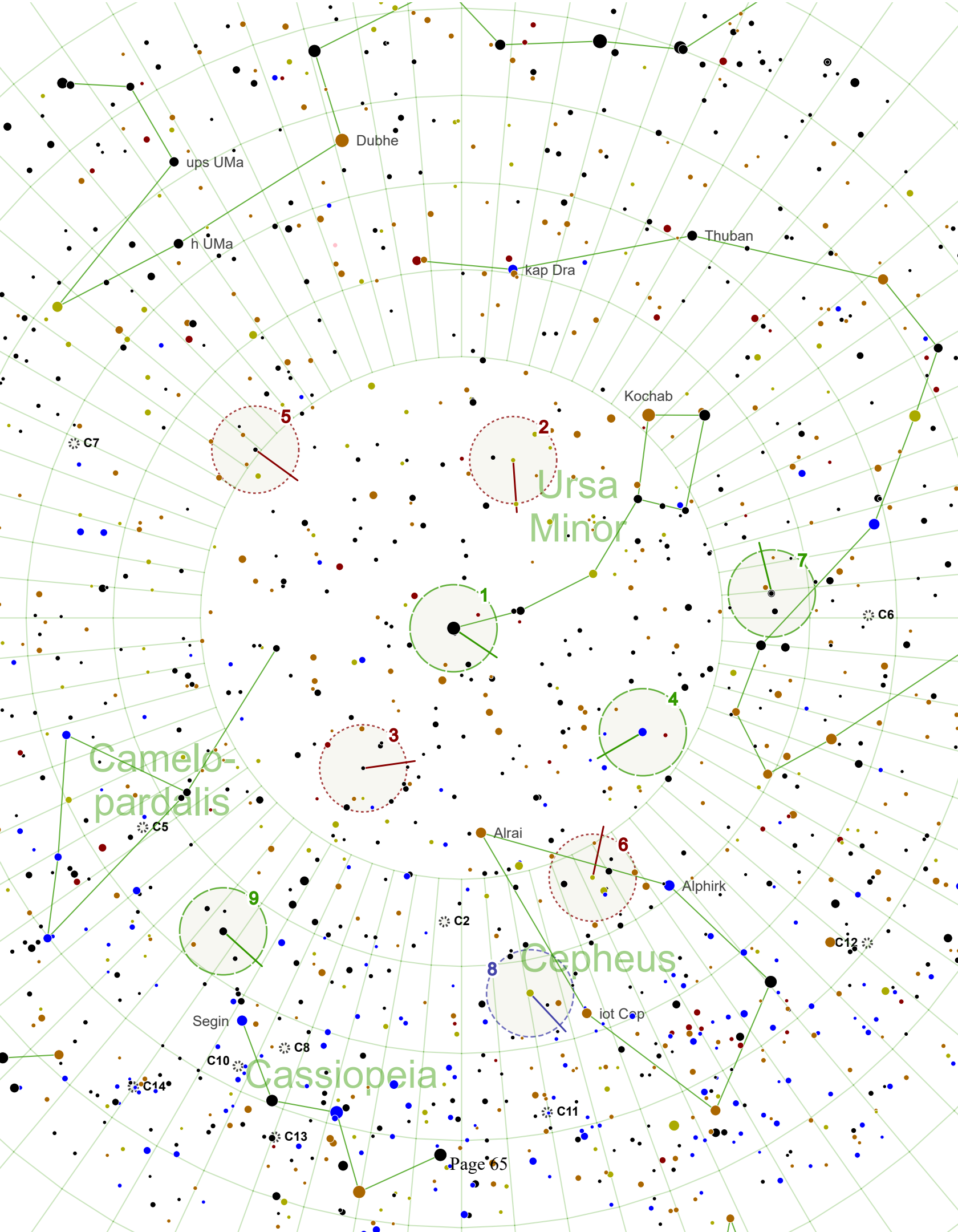
***STF 2883**: mag.:5.56 | 8.56, sep.:14.2″ , p.a.253°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 19922

Deep Sky Objects

DSO	Mag.	Type
C1	8.1	open cluster
C10	7.1	open cluster
C2	11.6	planetary nebula
C3	9.7	barred spiral galaxy
C4	6.8	bright nebula
C5	9.2	spiral galaxy
C6	8.8	planetary nebula
C7	8.9	spiral galaxy
C8	9.5	open cluster
C9	7.7	bright nebula


Dubhe
ups UMa
h UMa
Thuban
kap Dra
Kochab
5
2
C7
Ursa
Minor
1
7
C6
4
3
Camelo-
pardalis
C5
Alrai
6
Alphirk
9
C2
C12
Cepheus
8
iot Cep
Segin
C8
C10
Cassiopeia
C14
C11
C13

Northern Circumpolar Sky (2)

1: Polaris (RA: 02 31 49, DEC: +89 15 51)

***STF 93 AB**: mag.:2.04 | 9.1, sep.:18.4" , p.a.236°*

A brilliant yellow primary separated comfortably from a vastly fainter white secondary.

Although Delta Cephei is the model of all Cepheid variables, Polaris is the best-known member of this class of stars, although it currently varies with a very small amplitude. The variability was significantly more pronounced when it was first measured in 1911.

Identifiers: Polaris | SAO 308 | HIP 11767 | GDR2 9921505664

2: KUI 61 (RA: 13 12 25, DEC: +80 28 17)

***KUI 61**: mag.:6.44 | 9.07, sep.:1" , p.a.184°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 2164

3: S 405 AB (RA: 02 12 50, DEC: +79 41 29)

***S 405 AB**: mag.:6.47 | 7.15, sep.:55.7" , p.a.278°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 4594

4: Kappa Cep (RA: 20 08 53, DEC: +77 42 41)

***STF 2675 AB**: mag.:4.39 | 8.34, sep.:7.3" , p.a.120°*

A scattered triple system, with a very bright blue primary with one close and one dim distant companion.

The two brighter components are bound together by gravity but the third companion is merely a background star.

Identifiers: Kappa Cep | SAO 9665 | HIP 99255 | GDR2 11287582464

5: STT 192 (RA: 08 36 49, DEC: +74 43 25)

***STT 192**: mag.:6.35 | 9.7, sep.:1.4" , p.a.234°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 6592

6: STF 2893 (RA: 22 12 53, DEC: +73 18 26)

***STF 2893**: mag.:6.19 | 7.91, sep.:28.9" , p.a.348°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 10284

7: Psi1 Dra (RA: 17 41 56, DEC: +72 08 56)

***STF 2241 AB**: mag.:4.6 | 5.59, sep.:29.6" , p.a.14°*

A wide pair of reasonably balanced, bright white stars.

Only 75 light-years away, the B component is orbited by an exoplanet (Psi1 Dra Bb) which is at least 50% more massive than Jupiter. It orbits Psi1 Dra B every 8.5 years.

Identifiers: Psi1 Dra | SAO 8890 | HIP 86614 | GDR2 60202647296

8: Omi Cep (RA: 23 18 37, DEC: +68 06 41)

***STF 3001 AB**: mag.:4.97 | 7.28, sep.:3.4" , p.a.223°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 20554

9: Iota Cas (RA: 02 29 04, DEC: +67 24 09)

***STF 262 AB**: mag.:4.63 | 6.92, sep.:3" , p.a.228°*

***STF 262 AC**: mag.:4.63 | 9.05, sep.:6.7" , p.a.117°*

***STF 262 BC**: mag.:6.92 | 9.05, sep.:8.5" , p.a.99°*

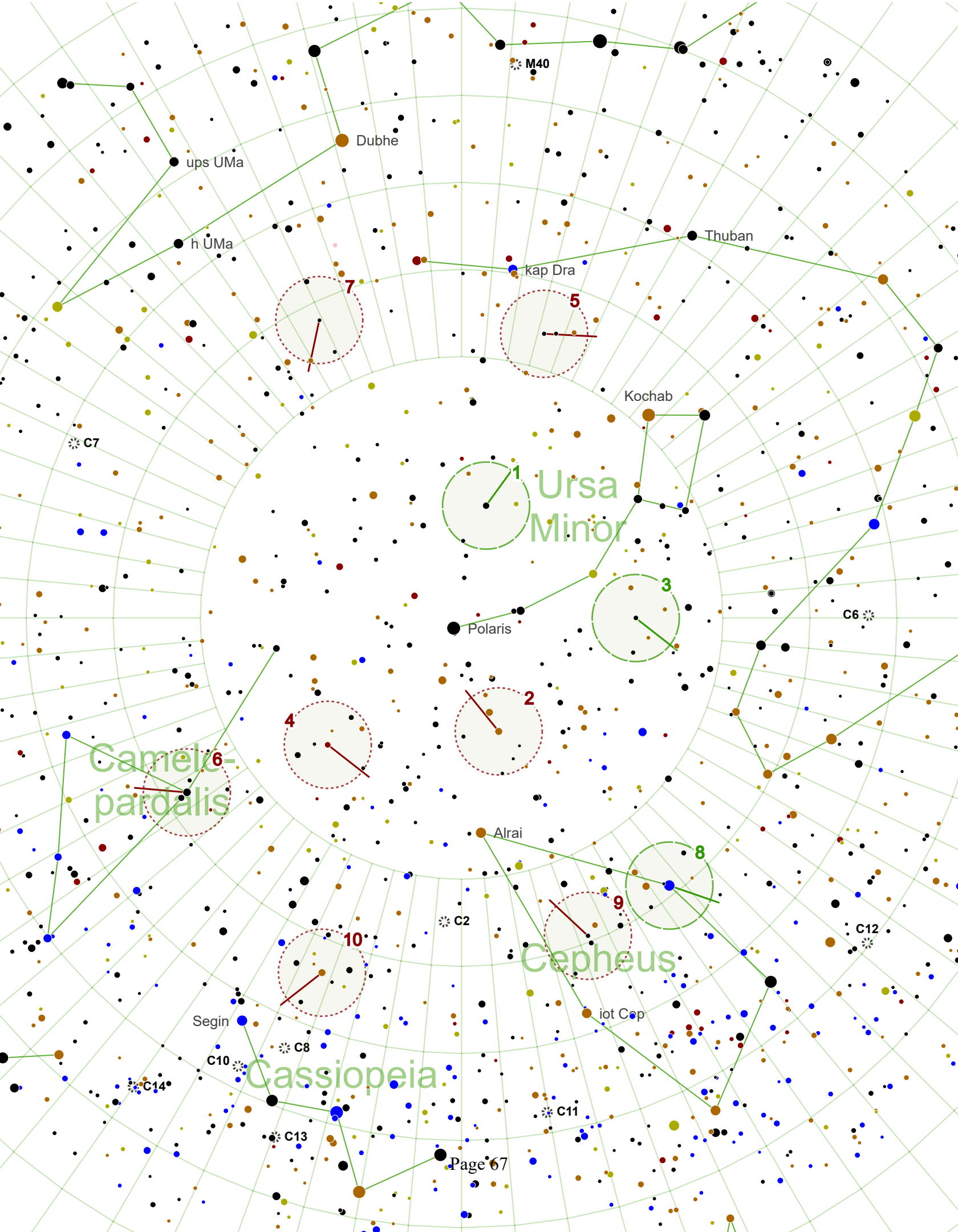
A bright, white primary with a yellow-orange secondary and a dim, colorless third component.

The needle-like reflection nebula VdB 8 (mag. 8.5) is on the NEE edge of the finder circle.

Identifiers: Iota Cas | SAO 12298 | HIP 11569 | GDR2 517650349234855424

Deep Sky Objects

DSO	Mag.	Type
C10	7.1	open cluster
C11	7.0	bright nebula
C12	9.7	spiral galaxy
C13	6.4	open cluster
C14	4.3	open cluster
C2	11.6	planetary nebula
C5	9.2	spiral galaxy
C6	8.8	planetary nebula
C7	8.9	spiral galaxy
C8	9.5	open cluster


M40
Dubhe
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h UMa
Thuban
kap Dra
7
5
Kochab
C7
1
Ursa
Minor
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Polaris
C6
2
4
6
Camelo-
pardalis
Alrai
8
9
C2
C12
10
Cepheus
Segin
C8
C10
Cassiopeia
C14
C11
C13
iot Cep

Northern Circumpolar Sky (3)

1: 32H. Cam (RA: 12 49 14, DEC: +83 24 46)

***STF 1694 AB**: mag.:5.29 | 5.74, sep.:21.8" , p.a.324°*

A bright and balanced white-white pair, widely separated.

Also known as Struve 1694, 32H. Camelopardalis is not to be confused with Flamsteed's 32 Cam, which is now confusingly named as Xi Aurigae. "32H." means Hevelius' 32nd of Camelopardalis.

Identifiers: 32H. Cam | SAO 2102 | HIP 62572 | GDR2 77354219648

2: STT 482 AB (RA: 22 47 29, DEC: +83 09 14)

***STT 482 AB**: mag.:4.92 | 9.6, sep.:3.9" , p.a.39°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 3794

3: 40/41 Dra (RA: 18 00 09, DEC: +80 00 14)

***STF 2308 AB**: mag.:5.7 | 6, sep.:18.8" , p.a.232°*

A comfortably separated pair of bright yellow stars.

This system of yellow-white dwarfs is only 207 light-years from the Sun.

Identifiers: 40/41 Dra | SAO 8996 | HIP 88136 | GDR2 24838599808

4: STF 320 (RA: 03 06 08, DEC: +79 25 07)

***STF 320**: mag.:5.72 | 9.15, sep.:4.6" , p.a.232°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 4810

5: BU 799 AB (RA: 13 04 50, DEC: +73 01 30)

***BU 799 AB**: mag.:6.6 | 8.45, sep.:1.4" , p.a.267°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 7741

6: HJ 2200 AC (RA: 03 50 21, DEC: +71 19 56)

***HJ 2200 AC**: mag.:4.63 | 9.07, sep.:106" , p.a.85°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 5006

7: STF 1415 AB (RA: 10 17 51, DEC: +71 03 39)

***STF 1415 AB**: mag.:6.65 | 7.27, sep.:16.5" , p.a.168°*

A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 7099

8: Beta Cep (RA: 21 28 40, DEC: +70 33 38)

***STF 2806 AB**: mag.:3.17 | 8.63, sep.:13.5" , p.a.251°*

A brilliant white primary split comfortably from a moderately faint blue companion.

If you position Beta Cephei (also known as Alfirk) in the north-east quadrant of a finder, the famous Iris nebula is on the opposite quadrant.

Identifiers: Beta Cep | SAO 10057 | HIP 106032 | GDR2 59992826624

9: STF 2923 AB (RA: 22 33 17, DEC: +70 22 25)

***STF 2923 AB**: mag.:6.32 | 9.24, sep.:9.6" , p.a.47°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 10418

10: H 5 83 AC (RA: 01 25 56, DEC: +68 07 48)

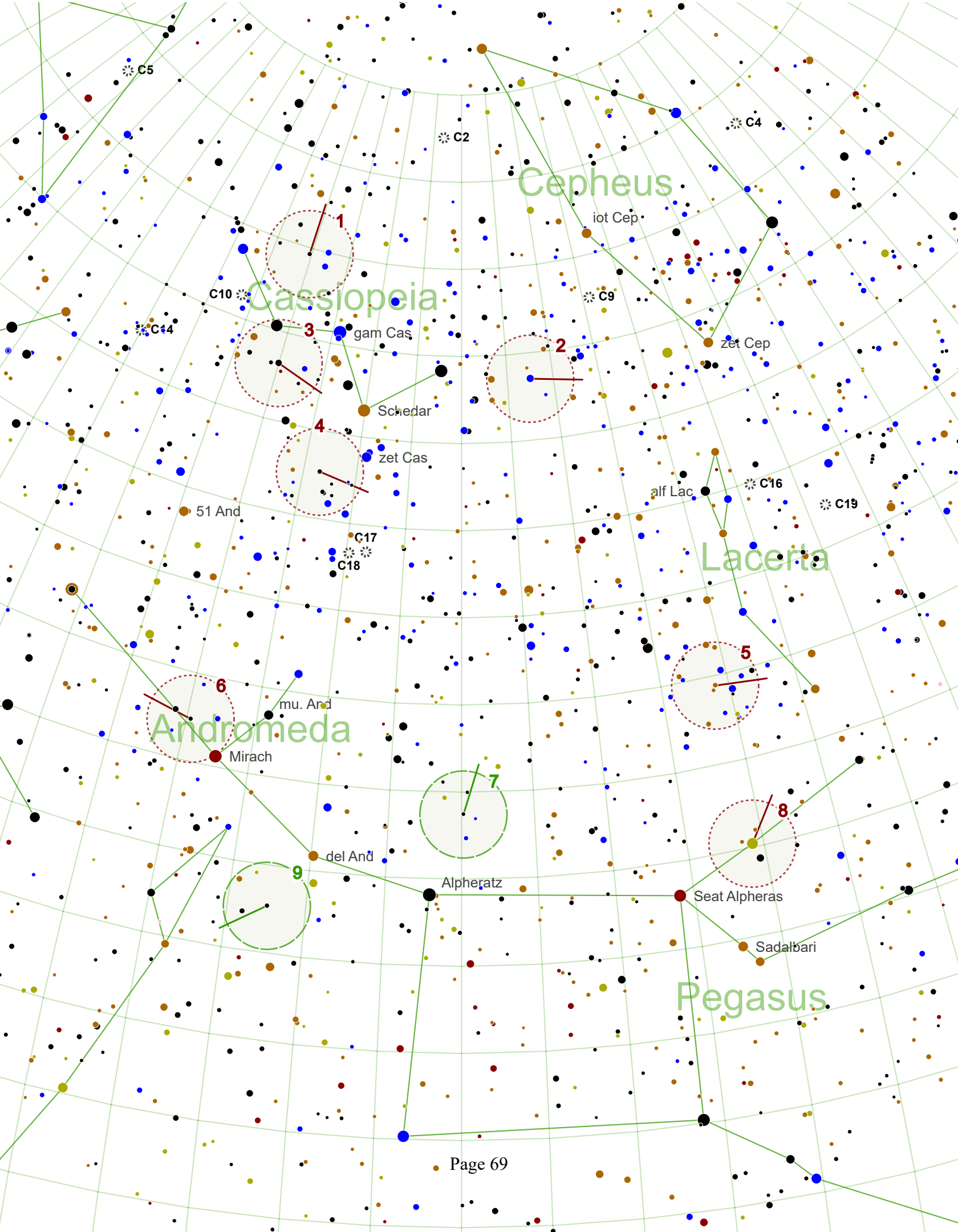
***H 5 83 AC**: mag.:4.68 | 9.18, sep.:20.3" , p.a.128°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 11751

Deep Sky Objects

DSO	Mag.	Type
C10	7.1	open cluster
C11	7.0	bright nebula
C12	9.7	spiral galaxy
C13	6.4	open cluster
C14	4.3	open cluster
C2	11.6	planetary nebula
C6	8.8	planetary nebula
C7	8.9	spiral galaxy
C8	9.5	open cluster
M40	8.4	double star


C5
C2
C4
Cepheus
iot Cep
1
C10
Cassiopeia
C9
C14
3
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zet Cep
2
Schedar
4
zet Cas
alf Lac
C16
C19
51 And
C17
C18
Lacerta
5
6
mu. And
Andromeda
Mirach
7
8
del And
9
Alpheratz
Seat Alpheras
Sadalbari
Pegasus

October: 45° North (1)

1: 35 Cas (RA: 01 21 05, DEC: +64 39 29)

***S 397 AB**: mag.:6.34 | 8.63, sep.:57.4″ , p.a.342°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 11712

2: SHJ 355 AC (RA: 23 30 02, DEC: +58 32 56)

***DA 2 CD**: mag.:7.23 | 9.06, sep.:1.3″ , p.a.214°*

***SHJ 355 AC**: mag.:4.87 | 7.23, sep.:75″ , p.a.269°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 35478

3: H 3 23 AC (RA: 01 20 05, DEC: +58 13 54)

***H 3 23 AC**: mag.:5.07 | 7.04, sep.:132.8″ , p.a.235°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 22191

4: STF 70 AB (RA: 00 53 48, DEC: +52 41 22)

***STF 70 AB**: mag.:6.33 | 9.49, sep.:8.3″ , p.a.247°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 21814

5: STF 2942 AB (RA: 22 44 05, DEC: +39 27 56)

***STF 2942 AB**: mag.:6.18 | 8.94, sep.:2.9″ , p.a.278°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 72675

6: STF 108 (RA: 01 18 47, DEC: +37 23 11)

***STF 108**: mag.:6.52 | 9.57, sep.:6.4″ , p.a.62°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 54592

7: Struve 3050 (RA: 23 59 29, DEC: +33 43 27)

***STF 3050 AB**: mag.:6.46 | 6.72, sep.:2.5″ , p.a.343°*

A tightly bound and perfectly balanced pair of bright yellow stars.

Identifiers: Struve 3050 | SAO 73656 | HIP 118281 | GDR2 78193873024

8: Eta Peg (RA: 22 43 00, DEC: +30 13 17)

***BU 1144 A,BC**: mag.:3.02 | 9.87, sep.:91.9″ , p.a.338°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 90734

9: 65 Psc (RA: 00 49 53, DEC: +27 42 39)

***STF 61**: mag.:6.33 | 6.34, sep.:4.4″ , p.a.115°*

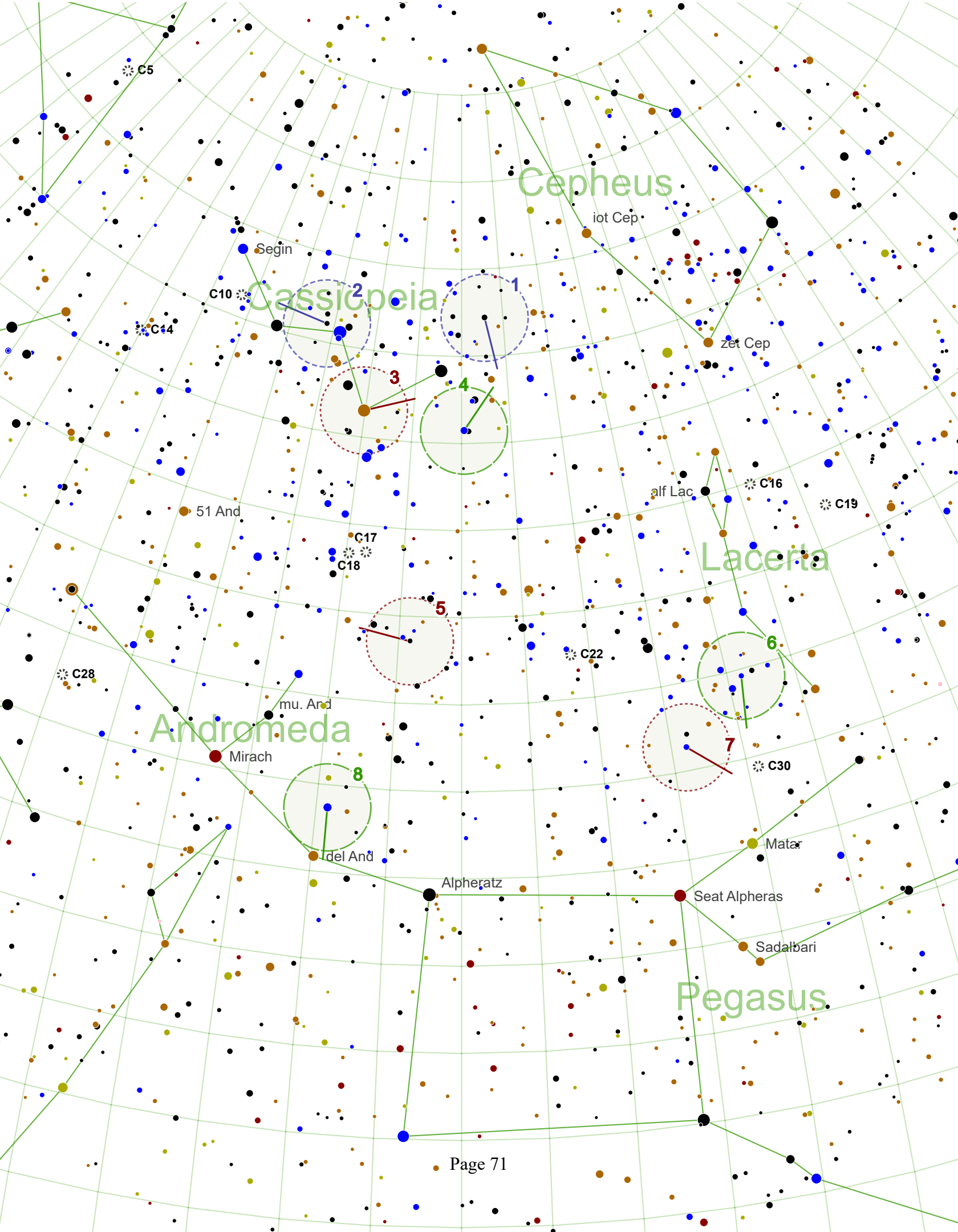
An equal pair of fairly bright light yellow stars.

This double was found by William Herschel in 1783.

Identifiers: 65 Psc | SAO 74296 | HIP 3885 | GDR2 72903101824

Deep Sky Objects

DSO	Mag.	Type
C10	7.1	open cluster
C14	4.3	open cluster
C16	6.4	open cluster
C17	9.3	elliptical galaxy
C18	9.2	elliptical galaxy
C19	10.0	bright nebula
C2	11.6	planetary nebula
C4	6.8	bright nebula
C5	9.2	spiral galaxy
C9	7.7	bright nebula


Cepheus
iot Cep
Segin
C10
Cassiopeia
2
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C14
zet Cep
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4
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C16
C19
51 And
C17
C18
Lacerta
5
6
C22
C28
mu. And
Andromeda
Mirach
7
C30
8
del And
Matar
Alpheratz
Seat Alpheras
Sadalbari
Pegasus

October: 45° North (2)

1: 6 Cas (RA: 23 48 50, DEC: +62 12 51)

STT 508 AB*: mag.:5.66 | 7.95, sep.:1.5″ , p.a.194°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 20869

2: BU 396 (RA: 01 03 37, DEC: +61 04 29)

BU 396*: mag.:6.06 | 8.62, sep.:1.3″ , p.a.67°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 11551

3: H 5 18 AD (RA: 00 40 30, DEC: +56 32 15)

H 5 18 AD*: mag.:2.35 | 8.98, sep.:70.4″ , p.a.283°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 21609

4: Sigma Cas (RA: 23 59 01, DEC: +55 45 18)

STF 3049 AB*: mag.:4.99 | 7.24, sep.:3.1″ , p.a.326°*

A tight primary with a brilliant blue-white primary almost touching a delicate secondary.

The system is roughly 5000 light-years from us. The primary is 25,000 times more luminous than the Sun. One degree to the north of Sigma Cas is the star cluster NGC 7789, found by Caroline Herschel in 1783.

Identifiers: Sigma Cas | SAO 35947 | HIP 118243 | GDR2 37220412288

5: HJ 1947 AB (RA: 00 16 22, DEC: +43 35 42)

HJ 1947 AB*: mag.:6.16 | 9.83, sep.:9.1″ , p.a.75°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 36221

6: 8 Lac (RA: 22 35 52, DEC: +39 38 04)

A 1469 AD*: mag.:5.66 | 9.08, sep.:81.6″ , p.a.145°*

A 1469 BD*: mag.:6.29 | 9.08, sep.:66.9″ , p.a.131°*

STF 2922 AB*: mag.:5.66 | 6.29, sep.:22.5″ , p.a.186°*

A fairly equally balanced and bright pair of blue-white stars, comfortably separated.

Very slightly more than one finder circle due south is the Deer Lick group of galaxies (Caldwell 30).

Identifiers: 8 Lac | SAO 72509 | HIP 111546 | GDR2 97999299840

7: HJ 975 (RA: 22 55 45, DEC: +36 21 05)

HJ 975*: mag.:5.71 | 9.21, sep.:52.1″ , p.a.240°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 72851

8: Pi And (RA: 00 36 53, DEC: +33 43 10)

H 5 17 AB*: mag.:4.36 | 7.08, sep.:36.2″ , p.a.175°*

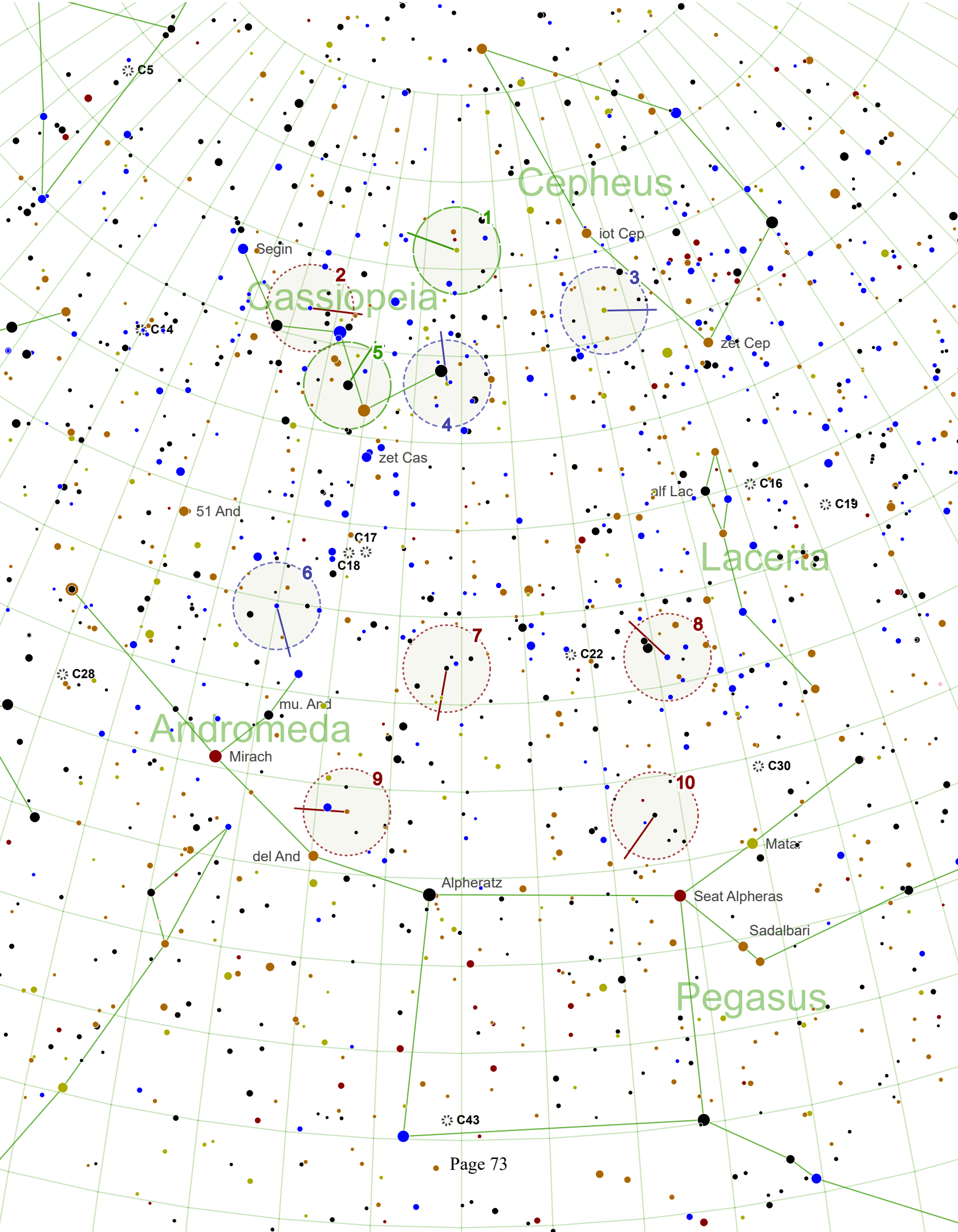
A bright blue primary widely separated from a fairly bright secondary.

The primary is a spectroscopic binary with an orbital period of 143 days.

Identifiers: Pi And | SAO 54033 | HIP 2912 | GDR2 8611467520

Deep Sky Objects

DSO	Mag.	Type
C10	7.1	open cluster
C14	4.3	open cluster
C16	6.4	open cluster
C17	9.3	elliptical galaxy
C18	9.2	elliptical galaxy
C19	10.0	bright nebula
C22	9.2	planetary nebula
C28	5.7	open cluster
C30	9.5	barred spiral galaxy
C5	9.2	spiral galaxy


Cepheus
Cassiopeia
Lacerta
Andromeda
Pegasus
1
2
3
4
5
6
7
8
9
10
Segin
iot Cep
zet Cep
zet Cas
alf Lac
51 And
mu. And
Mirach
del And
Alpheratz
Seat Alpheras
Sadalbari
Matar
C5
C14
C16
C17
C18
C19
C22
C28
C30
C43

October: 45° North (3)

1: Struve 3053 (RA: 00 02 36, DEC: +66 05 56)

***STF 3053 AB**: mag.:5.96 | 7.17, sep.:15.2″ , p.a.70°*

A bright yellow primary with an easily apparent white companion, easily separated. There is a very faint third component distantly separated from the central two stars.

The primary star is a giant with the same temperature as the Sun (but much larger) while the white companion is an A-class main sequence star.

Identifiers: Struve 3053 | SAO 10937 | HIP 207 | GDR2 6794345472

2: V761 Cas (RA: 01 13 10, DEC: +61 42 22)

***BU 258 AB**: mag.:6.5 | 8.8, sep.:1.6″ , p.a.263°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 11637

3: STF 2950 AB (RA: 22 51 23, DEC: +61 41 48)

***STF 2950 AB**: mag.:6.03 | 7.08, sep.:1″ , p.a.271°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 20281

4: V640 Cas (RA: 00 06 16, DEC: +58 26 12)

***STF 3062**: mag.:6.42 | 7.32, sep.:1.5″ , p.a.7°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 21085

5: Eta Cas (RA: 00 49 06, DEC: +57 48 55)

***STF 60 AB**: mag.:3.52 | 7.36, sep.:13.4″ , p.a.327°*

A brilliant yellow primary comfortably separated from a fairly faint red secondary.

William Herschel discovered the binary nature of this system in August 1779. The meaning and origin of the common name “Achird” is unknown. Note that Achird is one of the closest stars to us, at only 19 light-years distance. The primary star is very similar to the Sun, while the companion is a much dimmer K-type star roughly half as massive.

Identifiers: Eta Cas | SAO 21732 | HIP 3821 | GDR2 425040000951479424

6: 164 And (RA: 01 00 04, DEC: +44 42 48)

***STF 79**: mag.:6.04 | 6.77, sep.:7.9″ , p.a.195°*

A close pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 36832

7: STT 514 AB (RA: 00 04 37, DEC: +42 05 33)

***STT 514 AB**: mag.:6.16 | 9.65, sep.:5.1″ , p.a.170°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 36037

8: STF 2960 AC (RA: 22 56 24, DEC: +41 36 14)

***STF 2960 AC**: mag.:5.56 | 9.35, sep.:61.5″ , p.a.47°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 52512

9: HJ 5451 (RA: 00 31 26, DEC: +33 34 54)

***HJ 5451**: mag.:6.01 | 9.34, sep.:55.3″ , p.a.86°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 53956

10: V343 Peg (RA: 23 07 28, DEC: +32 49 31)

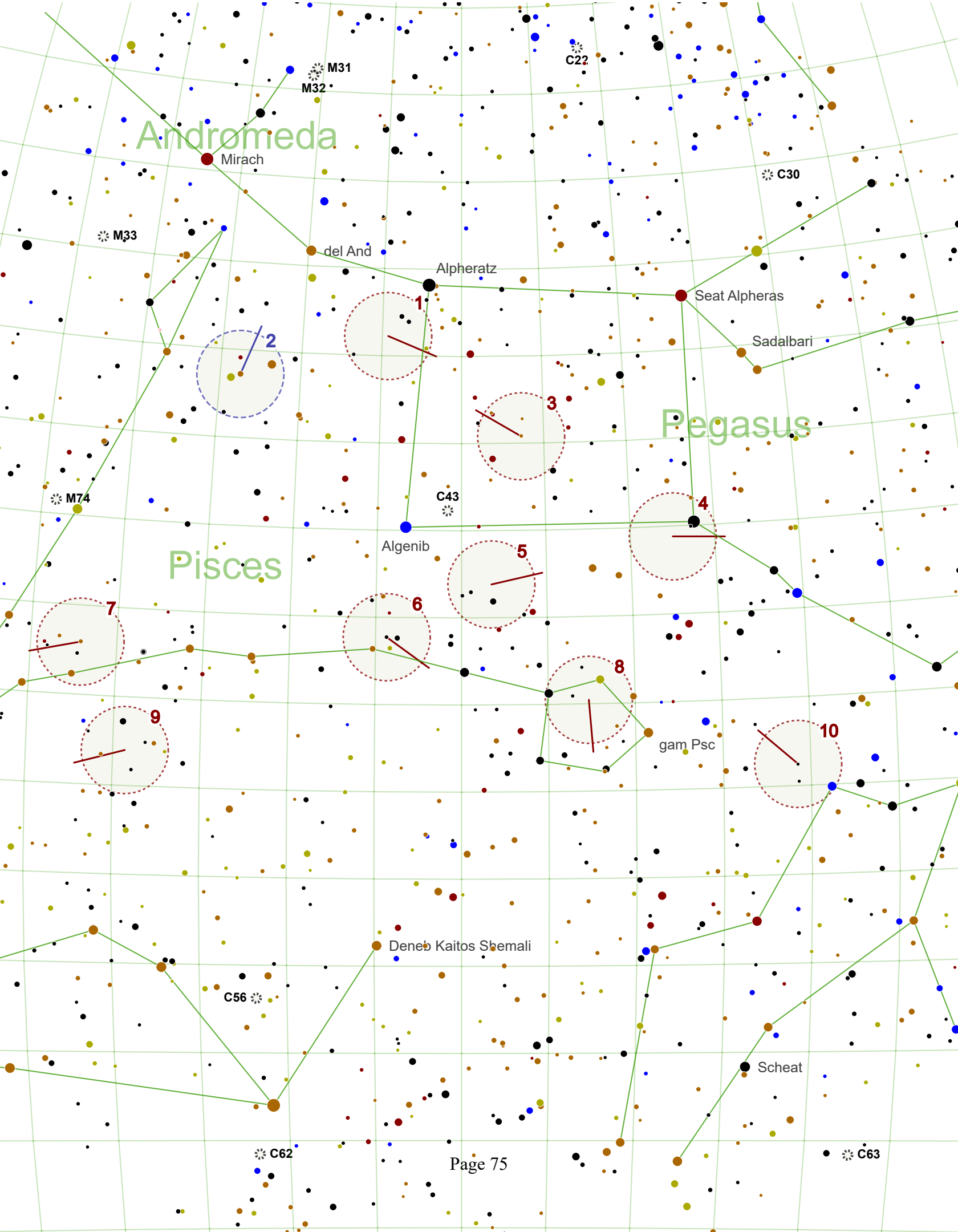
***STF 2978**: mag.:6.35 | 7.46, sep.:8.3″ , p.a.145°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 73010

Deep Sky Objects

DSO	Mag.	Type
C14	4.3	open cluster
C16	6.4	open cluster
C17	9.3	elliptical galaxy
C18	9.2	elliptical galaxy
C19	10.0	bright nebula
C22	9.2	planetary nebula
C28	5.7	open cluster
C30	9.5	barred spiral galaxy
C43	10.5	barred spiral galaxy
C5	9.2	spiral galaxy


Andromeda
Pegasus
Pisces
M31
M32
M33
M74
C22
C30
C43
C56
C62
C63
Mirach
del And
Alpheratz
Seat Alpheras
Sadalbari
Algenib
gam Psc
Deneb Kaitos Shemali
Scheat
1
2
3
4
5
6
7
8
9
10

October: 10° North (1)

1: STF 24 (RA: 00 18 31, DEC: +26 08 25)

***STF 24**: mag.:7.79 | 8.44, sep.:5″ , p.a.247°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 73883

2: 36 And (RA: 00 54 58, DEC: +23 37 42)

***STF 73 AB**: mag.:6.12 | 6.54, sep.:1.2″ , p.a.336°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 74359

3: STT 505 (RA: 23 45 29, DEC: +20 24 56)

***STT 505**: mag.:6.75 | 9.61, sep.:2.4″ , p.a.60°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 91467

4: STF 2986 (RA: 23 09 57, DEC: +14 25 36)

***STF 2986**: mag.:6.61 | 8.88, sep.:31.4″ , p.a.270°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 108437

5: STF 3044 (RA: 23 52 60, DEC: +11 55 27)

***STF 3044**: mag.:7.27 | 7.91, sep.:18.7″ , p.a.283°*

A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 108883

6: STF 22 AB,C (RA: 00 17 24, DEC: +08 52 35)

***STF 22 AB,C**: mag.:7.13 | 7.66, sep.:3.9″ , p.a.234°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO

7: S 398 AB (RA: 01 28 23, DEC: +07 57 41)

***S 398 AB**: mag.:6.34 | 8.02, sep.:68.9″ , p.a.100°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 109907

8: STF 3019 (RA: 23 30 41, DEC: +05 14 58)

***STF 3019**: mag.:7.77 | 8.37, sep.:10.7″ , p.a.185°*

A balanced pair with a yellowish primary and white secondary.

This highly luminous pair is gravitationally bound and is very distant - 5931 light-years from Earth.

Identifiers: SAO

9: HDO 45 (RA: 01 17 10, DEC: +02 00 55)

***HDO 45**: mag.:7.36 | 9.65, sep.:38.2″ , p.a.104°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

10: STF 2936 (RA: 22 42 58, DEC: +01 13 02)

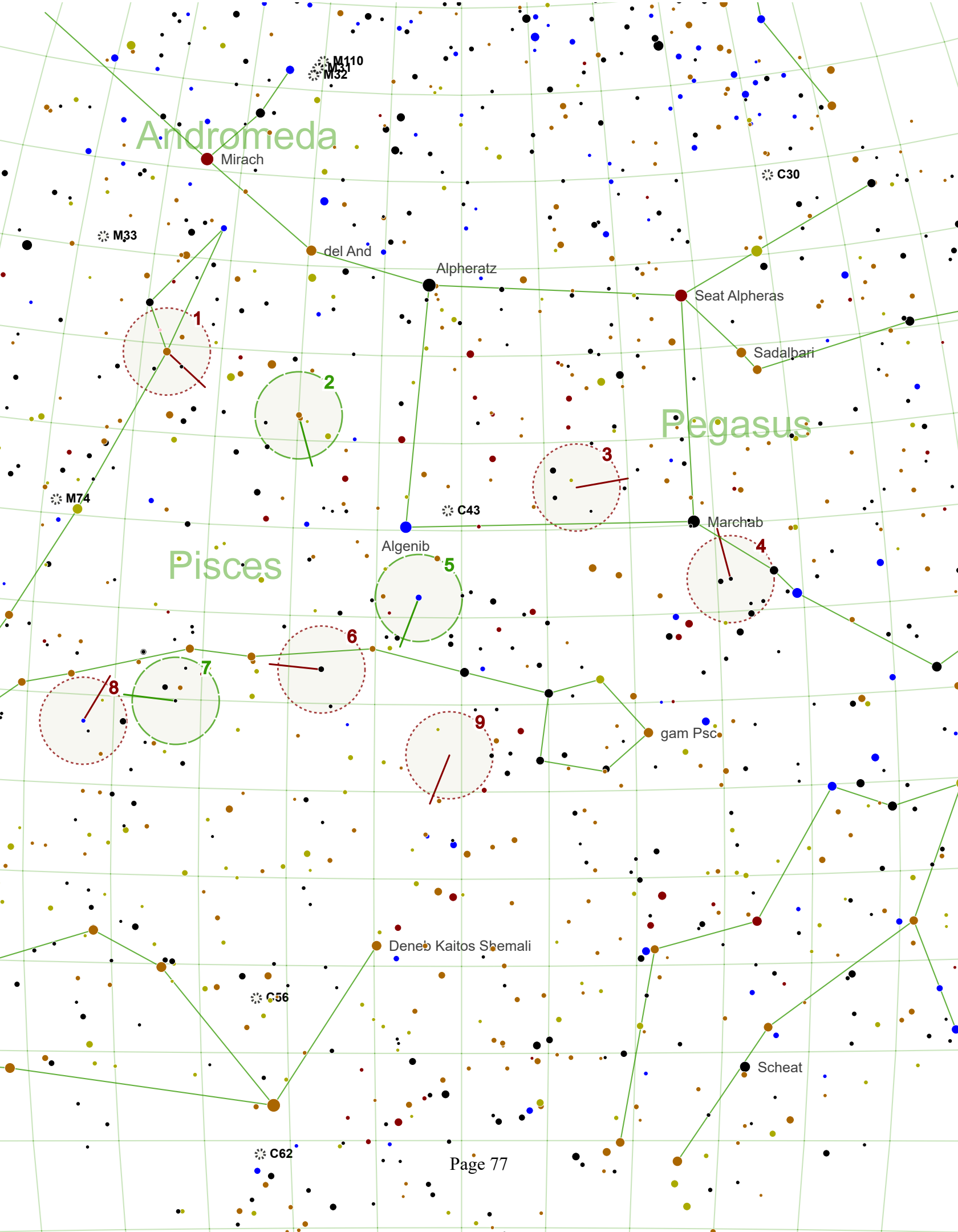
***STF 2936**: mag.:7.04 | 9.6, sep.:4.4″ , p.a.50°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

Deep Sky Objects

DSO	Mag.	Type
C22	9.2	planetary nebula
C30	9.5	barred spiral galaxy
C43	10.5	barred spiral galaxy
C56	8.0	planetary nebula
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
M31	3.4	spiral galaxy
M32	8.1	elliptical galaxy
M33	5.7	spiral galaxy
M74	9.4	spiral galaxy


M110
M31
M32
Andromeda
Mirach
C30
M33
del And
Alpheratz
Seat Alpheras
Sadalbari
1
2
Pegasus
3
M74
C43
Marchab
Algenib
Pisces
5
4
6
7
8
9
gam Psc
Deneb Kaitos Shemali
C56
Scheat
C62

October: 10° North (2)

1: Phi Psc (RA: 01 13 45, DEC: +24 35 02)

***STF 99 AB**: mag.:4.65 | 9.11, sep.:7.5″ , p.a.227°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 74571

2: 55 Psc (RA: 00 39 56, DEC: +21 26 19)

***STF 46**: mag.:5.56 | 8.49, sep.:6.6″ , p.a.195°*

A bright orange primary with a much fainter white secondary close by.

The primary is an orange giant star similar in color to Arcturus.

Identifiers: 55 Psc | SAO 74182 | HIP 3138 | GDR2 79926374144

3: STF 3023 (RA: 23 32 25, DEC: +17 24 15)

***STF 3023**: mag.:7.23 | 9.11, sep.:1.8″ , p.a.280°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 108669

4: STF 2958 (RA: 22 56 51, DEC: +11 50 54)

***STF 2958**: mag.:6.63 | 9.09, sep.:4″ , p.a.15°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 108275

5: 34 Psc (RA: 00 10 02, DEC: +11 08 45)

***STF 5**: mag.:5.54 | 9.44, sep.:7.6″ , p.a.159°*

A bright bluish primary with a faint secondary close by.

It is not known if this double is gravitationally bound. The primary is 305 light-years from Earth.

Identifiers: 34 Psc | SAO 91750 | HIP 813 | GDR2 22041820928

6: 51 Psc (RA: 00 32 24, DEC: +06 57 20)

***STF 36 AB**: mag.:5.68 | 9.52, sep.:27″ , p.a.84°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 109262

7: 77 Psc (RA: 01 05 49, DEC: +04 54 31)

***STF 90 AB**: mag.:6.39 | 7.26, sep.:33.2″ , p.a.83°*

A wide, fairly bright pairing of two yellow-white stars, separated in brightness by nearly one magnitude.

Only 132 light-years away, this system is composed of two F-class dwarfs.

Identifiers: 77 Psc | SAO 109666 | HIP 5141 | GDR2 91858705024

8: STF 122 (RA: 01 26 54, DEC: +03 32 08)

***STF 122**: mag.:6.65 | 9.51, sep.:5.7″ , p.a.329°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 109895

9: BU 281 AB (RA: 00 02 47, DEC: +02 07 49)

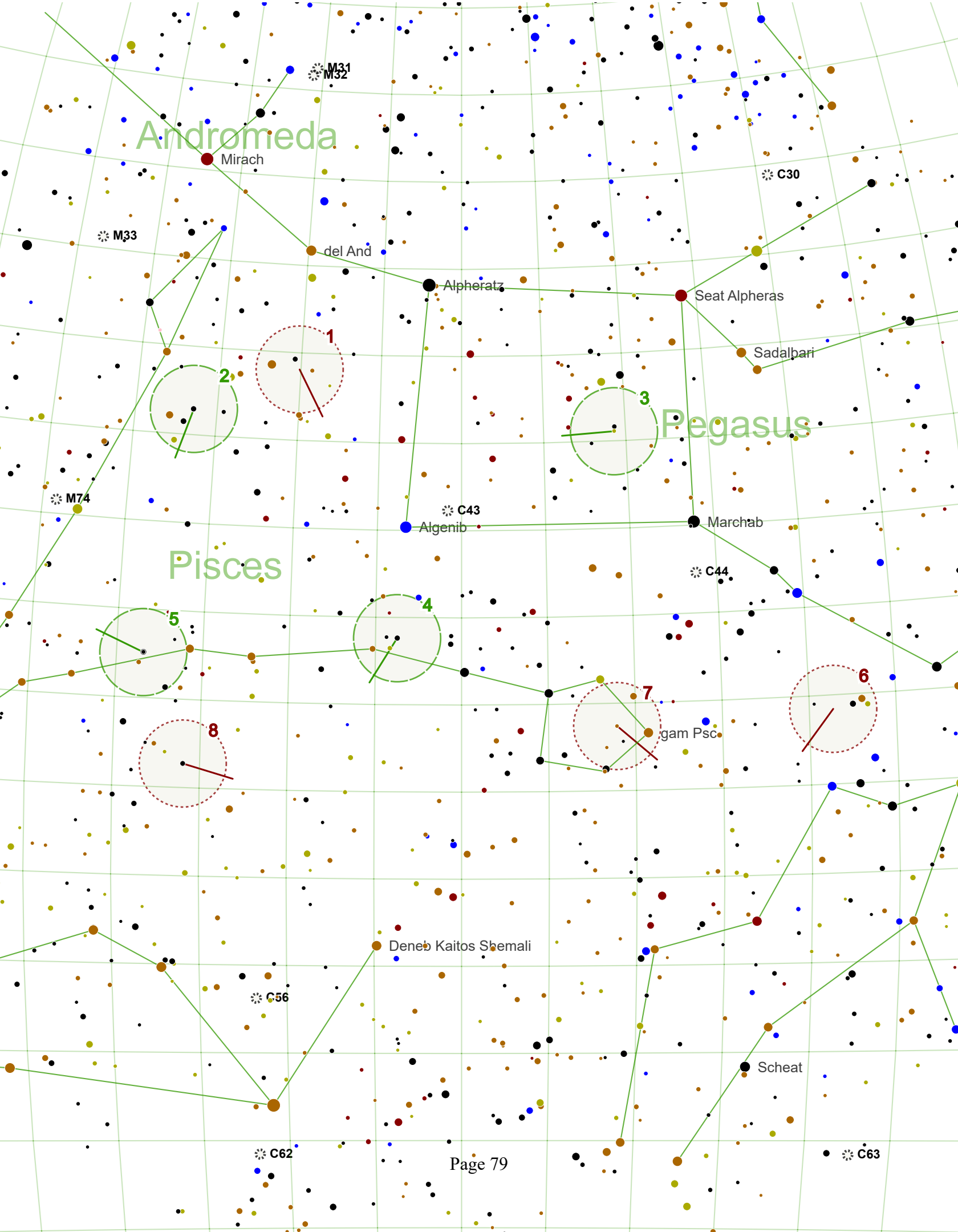
***BU 281 AB**: mag.:7.4 | 9.36, sep.:1.5″ , p.a.158°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

Deep Sky Objects

DSO	Mag.	Type
C30	9.5	barred spiral galaxy
C43	10.5	barred spiral galaxy
C56	8.0	planetary nebula
C62	8.9	spiral galaxy
M110	8.5	elliptical galaxy
M31	3.4	spiral galaxy
M32	8.1	elliptical galaxy
M33	5.7	spiral galaxy
M74	9.4	spiral galaxy


M31
M32
Andromeda
Mirach
C30
M33
del And
Alpheratz
Seat Alpheras
Sadalbari
1
2
3
Pegasus
M74
C43
Algenib
Marchab
Pisces
C44
4
5
6
7
8
gam Psc
Deneb Kaitos Shemali
C56
Scheat
C62
C63

October: 10° North (3)

1: STF 47 AB (RA: 00 40 20, DEC: +24 03 14)

***STF 47 AB**: mag.:7.25 | 8.82, sep.:16.2" , p.a.206°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 74185

2: Psi1 Psc (RA: 01 05 41, DEC: +21 28 24)

***STF 88 AB**: mag.:5.27 | 5.45, sep.:29.9" , p.a.159°*

An equally matched and widely separated pair of blue-white stars.

The primary is reported to be a close binary.

Identifiers: Psi1 Psc | SAO 74482 | HIP 5131 | GDR2 34190737152

3: Struve 3007 (RA: 23 22 49, DEC: +20 33 32)

***STF 3007 AB**: mag.:6.74 | 9.78, sep.:5.8" , p.a.95°*

A close pair with a brighter yellow component and a very faint orange dwarf companion.

The primary is very similar to the Sun, the Sun being a G2V star and Struve 3007 A is a G3V. The system is only 37 light-years away.

Identifiers: Struve 3007 | SAO 91222 | HIP 115417 | GDR2 74536867584

4: 35 Psc (RA: 00 14 59, DEC: +08 49 16)

***STF 12**: mag.:6.06 | 7.51, sep.:11.2" , p.a.148°*

An easy, bright double star with comfortable separation and a reasonably bright secondary, consisting of a white primary and light yellow secondary.

35 Piscium is a triple star system roughly 250 light-years from the Sun. The primary star is itself a spectroscopic binary, with two stars circling each other in just 0.84 days. This causes a slight variability in the primary star, which shows two dips of slightly less than 0.1 magnitude each cycle.

Identifiers: 35 Psc | SAO 109087 | HIP 1196 | GDR2 27234710784

5: Zeta Psc (RA: 01 13 44, DEC: +07 34 32)

***STF 100 AB**: mag.:5.22 | 6.26, sep.:23.1" , p.a.64°*

A widely separated pair of closely matched bright white stars.

Identifiers: Zeta Psc | SAO 109739 | HIP 5737 | GDR2 92921353984

6: STF 2920 AB (RA: 22 34 32, DEC: +04 13 21)

***STF 2920 AB**: mag.:7.55 | 8.85, sep.:13.7" , p.a.144°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

7: STF 3009 AB (RA: 23 24 16, DEC: +03 42 56)

***STF 3009 AB**: mag.:6.87 | 8.76, sep.:7.1" , p.a.230°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

8: 26 Cet (RA: 01 03 49, DEC: +01 22 01)

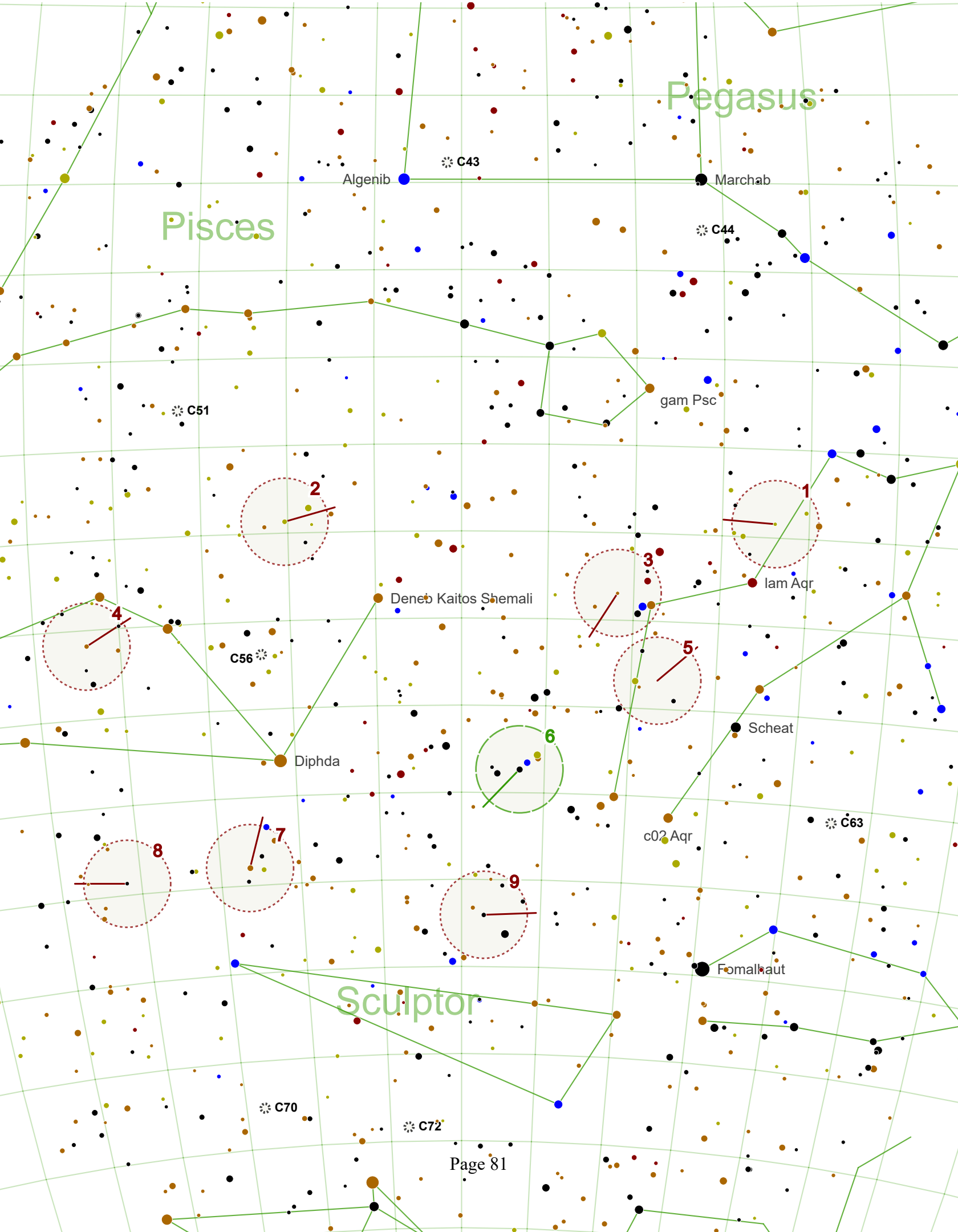
***STF 84 AB**: mag.:6.11 | 9.52, sep.:16" , p.a.253°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 109643

Deep Sky Objects

DSO	Mag.	Type
C30	9.5	barred spiral galaxy
C43	10.5	barred spiral galaxy
C44	11.0	barred spiral galaxy
C56	8.0	planetary nebula
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
M31	3.4	spiral galaxy
M32	8.1	elliptical galaxy
M33	5.7	spiral galaxy
M74	9.4	spiral galaxy


Pegasus
Pisces
Sculptor
C43
Algenib
Marchab
C44
C51
gam Psc
1
2
3
4
5
6
7
8
9
Deneb Kaitos Shemali
Iam Aqr
C56
Diphda
Scheat
c02 Aqr
C63
Fomalhaut
C70
C72

October: -10° South (1)

1: STF 2944 AC (RA: 22 47 50, DEC: -04 13 44)

***STF 2944 AB**: mag.:7.3 | 7.68, sep.:1.8″ , p.a.308°*

***STF 2944 AC**: mag.:7.3 | 8.58, sep.:60.6″ , p.a.85°*

***STF 2944 BC**: mag.:7.68 | 8.58, sep.:59.3″ , p.a.85°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

2: HJ 323 (RA: 00 40 42, DEC: -04 21 07)

***HJ 323**: mag.:6.01 | 8.46, sep.:63″ , p.a.286°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 128891

3: STF 3008 (RA: 23 23 45, DEC: -08 27 36)

***STF 3008**: mag.:7.21 | 7.67, sep.:7.1″ , p.a.147°*

An equal pair, with an orange primary closely separated from a slightly fainter secondary.

The pair are not gravitationally bound. The primary is K-class giant 588 light-years from Earth.

Identifiers: SAO

4: BU 399 AB (RA: 01 27 47, DEC: -10 54 06)

***BU 399 AB**: mag.:6.37 | 8.83, sep.:1.5″ , p.a.303°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 147819

5: BU 181 AB (RA: 23 13 48, DEC: -13 23 40)

***BU 181 AB**: mag.:7.34 | 9.31, sep.:1.5″ , p.a.310°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 165571

6: 107 Aqr (RA: 23 46 01, DEC: -18 40 42)

***H 2 24**: mag.:5.65 | 6.46, sep.:7″ , p.a.136°*

A bright white primary with a fairly bright yellowish companion close by.

This double is not gravitationally bound and is only a line of sight coincidence. The primary is 239 light-years from Earth.

Identifiers: 107 Aqr | SAO 165867 | HIP 117218 | GDR2 07944627712

7: BU 734 (RA: 00 52 41, DEC: -24 00 21)

***BU 734**: mag.:5.62 | 9.64, sep.:10.9″ , p.a.346°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 166647

8: SE 1 (RA: 01 23 35, DEC: -24 21 10)

***SE 1**: mag.:6.83 | 9.06, sep.:3.1″ , p.a.90°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 167011

9: phi Scl (RA: 23 54 21, DEC: -27 02 34)

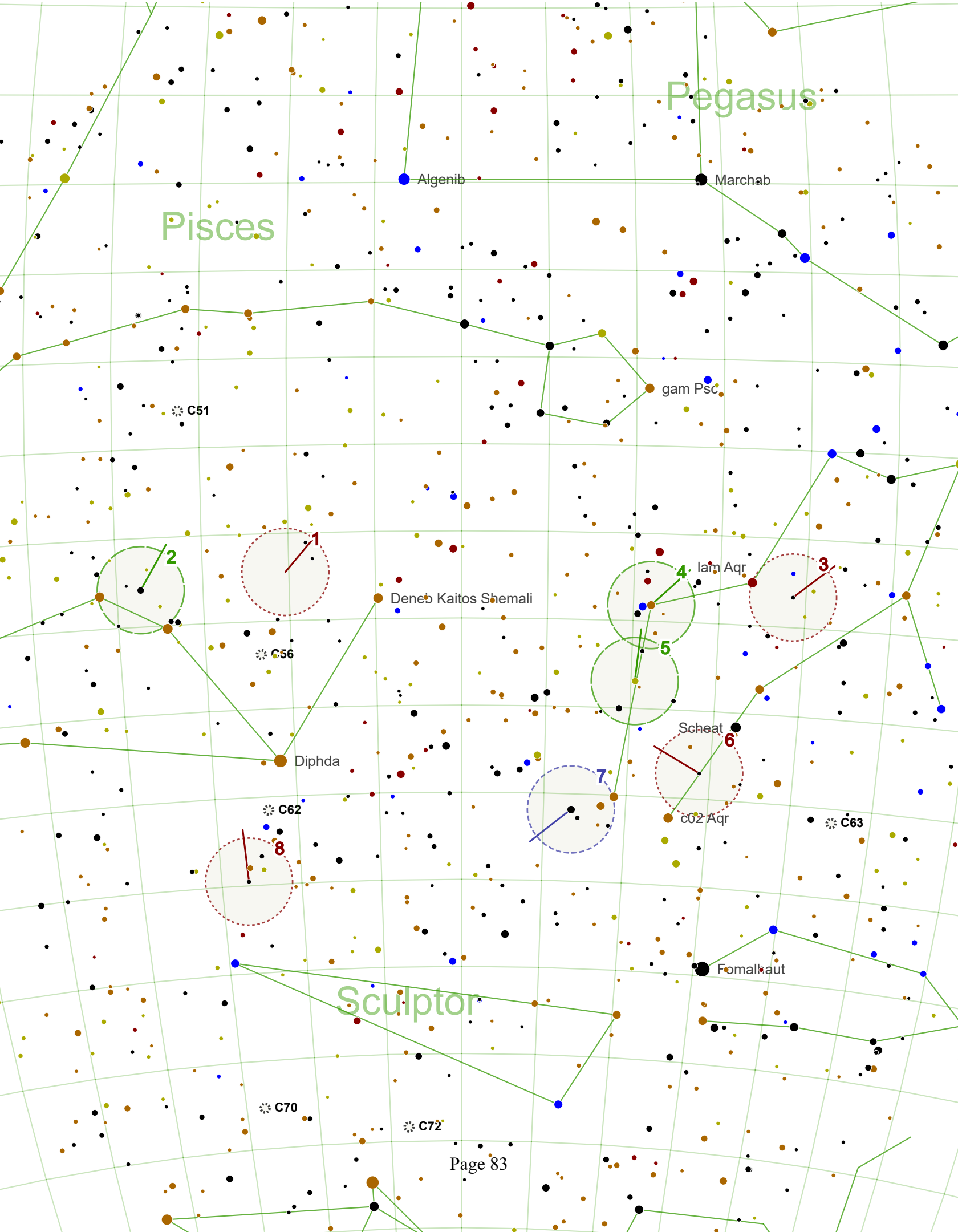
***LAL 192**: mag.:6.79 | 7.41, sep.:6.5″ , p.a.272°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 192231

Deep Sky Objects

DSO	Mag.	Type
C43	10.5	barred spiral galaxy
C44	11.0	barred spiral galaxy
C51	9.0	irregular galaxy
C56	8.0	planetary nebula
C63	6.5	planetary nebula
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


Pegasus
Algenib
Marchab
Pisces
gam Psc
C51
1
2
Deneb Kaitos Shemali
C56
4
Iam Aqr
3
5
Scheat
6
7
c02 Aqr
C63
Diphda
C62
8
Fomalhaut
Sculptor
C70
C72

October: -10° South (2)

1: STF 49 (RA: 00 40 47, DEC: -07 13 58)

***STF 49**: mag.:7.12 | 9.98, sep.:8.6" , p.a.320°*

A close pair with a yellow primary and tiny orange secondary.

Only 86 light-years away, the primary is a slightly brighter version of our Sun.

Identifiers: SAO

2: 37 Cet (RA: 01 14 24, DEC: -07 55 22)

***STFA 3 AB**: mag.:5.19 | 7.85, sep.:47.1" , p.a.331°*

A very widely separated pair, with a brilliant yellowish primary and a significantly fainter, strongly yellow secondary.

This gravitationally bound system is only 73 light-years from Earth.

Identifiers: 37 Cet | SAO 129193 | HIP 5799 | GDR2 28340199936

3: STF 2935 AB (RA: 22 43 03, DEC: -08 18 41)

***STF 2935 AB**: mag.:6.79 | 7.88, sep.:2.4" , p.a.307°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 146271

4: Psi1 Aqr (RA: 23 15 54, DEC: -09 05 16)

***STFB 12 A,BC**: mag.:4.36 | 9.88, sep.:48.9" , p.a.312°*

A brilliant orange primary distantly separated from a faint orange secondary.

The secondary is itself a reasonably balanced double with a separation of 0.4". Also known as 91 Aqr, the primary is orbited by a massive exoplanet as least 3.2 times the mass of Jupiter.

Identifiers: Psi1 Aqr | SAO 146598 | HIP 114855

5: 94 Aqr (RA: 23 19 07, DEC: -13 27 31)

***STF 2998 AB**: mag.:5.27 | 6.97, sep.:12.1" , p.a.353°*

A bright yellowish primary easily separated from a fairly bright companion.

Identifiers: 94 Aqr | SAO 165625 | HIP 115126

6: BU 384 (RA: 23 02 38, DEC: -18 32 30)

***BU 384**: mag.:6.88 | 9.15, sep.:1.1" , p.a.59°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 165456

7: 101 Aqr (RA: 23 33 17, DEC: -20 54 52)

***B 1900**: mag.:4.76 | 7.68, sep.:1" , p.a.128°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 191988

8: WNO 1 (RA: 00 53 12, DEC: -24 46 37)

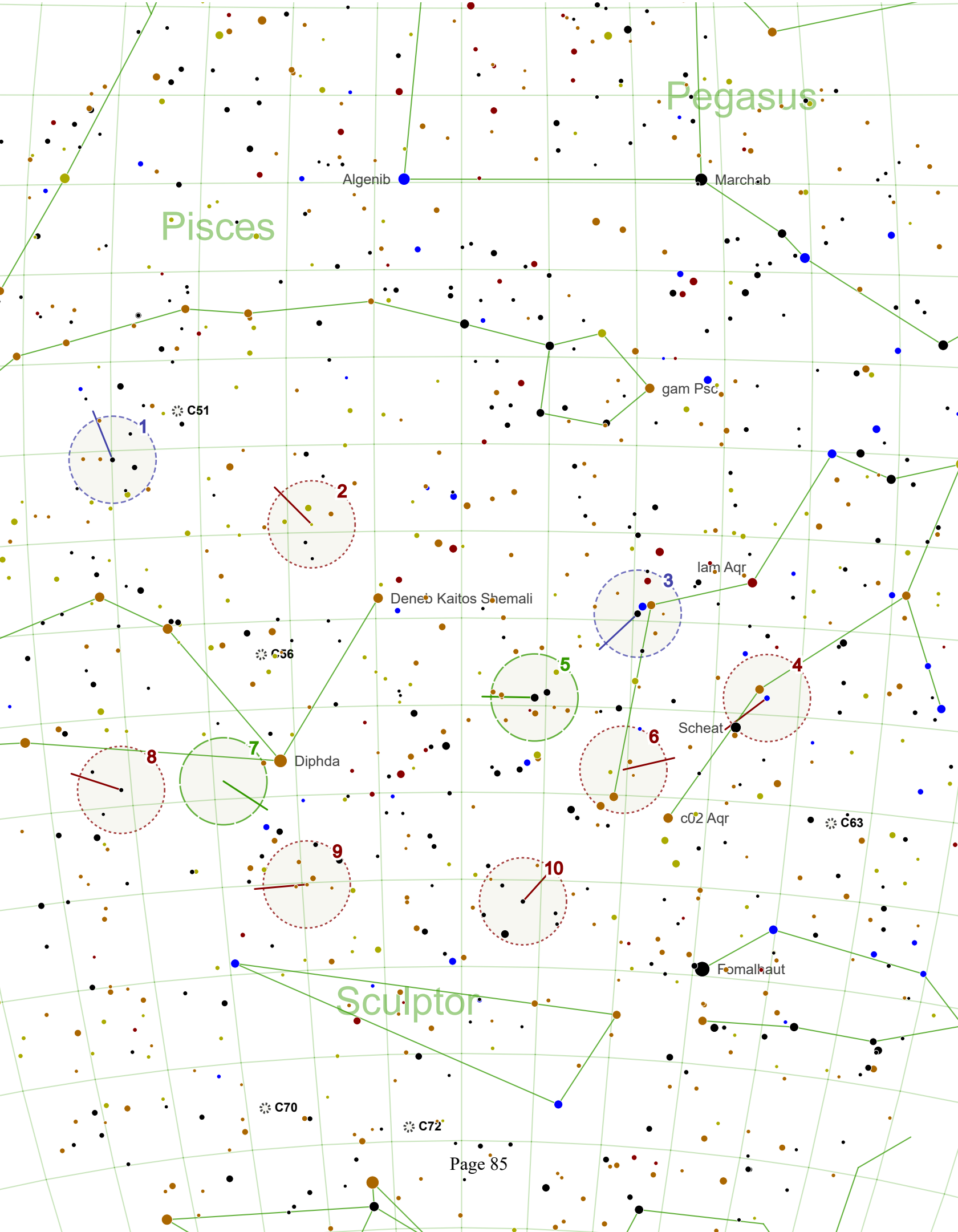
***WNO 1**: mag.:6.6 | 9.2, sep.:5" , p.a.7°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 166651

Deep Sky Objects

DSO	Mag.	Type
C51	9.0	irregular galaxy
C56	8.0	planetary nebula
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


Pegasus
Algenib
Markab
Pisces
gam Psc
C51
1
2
Deneb Kaitos Shemali
3
Iam Aqr
C56
5
4
Scheat
6
8
7
Diphda
c02 Aqr
C63
9
10
Fomalhaut
Sculptor
C70
C72

October: -10° South (3)

1: 42 Cet (RA: 01 19 48, DEC: -00 30 32)

***STF 113 A,BC**: mag.:6.45 | 6.99, sep.:1.6″ , p.a.22°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 129235

2: STF 39 AB,C (RA: 00 34 30, DEC: -04 32 48)

***STF 39 AB,C**: mag.:7.1 | 8.65, sep.:20.1″ , p.a.45°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

3: Psi3 Aqr (RA: 23 18 58, DEC: -09 36 39)

***HO 199 AB**: mag.:5 | 9, sep.:1.5″ , p.a.133°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 146635

4: Tau1 Aqr (RA: 22 47 43, DEC: -14 03 23)

***STF 2943 AB**: mag.:5.68 | 9.57, sep.:21″ , p.a.127°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 165298

5: Ome2 Aqr (RA: 23 42 43, DEC: -14 32 41)

***BU 279**: mag.:4.48 | 9.9, sep.:5.5″ , p.a.89°*

A brilliant bluish primary with a faint orange companion close by.

The system is a strong nearby X-ray source, as the primary is a hot B-type main sequence star with a surface temperature of 10,500 K.

Identifiers: Ome2 Aqr | SAO 165842 | HIP 116971 | GDR2 49815948416

6: HJ 3184 (RA: 23 20 56, DEC: -18 32 36)

***HJ 3184**: mag.:7.29 | 8.39, sep.:5.6″ , p.a.283°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

7: HJ 2004 (RA: 00 57 38, DEC: -18 59 55)

***HJ 2004**: mag.:7.04 | 9.77, sep.:3.3″ , p.a.237°*

A fairly bright white primary with a very close, faint secondary.

Position this little double in the north-eastern quarter of the finder, and Caldwell 62 (mag. 9.1 active galaxy) is in the south-western quarter.

Identifiers: HJ 2004 | SAO 147537 | HIP 4496 | GDR2 63244742016

8: HJ 2043 (RA: 01 22 30, DEC: -19 04 52)

***HJ 2043**: mag.:6.54 | 8.65, sep.:5.1″ , p.a.72°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 147767

9: HJ 1991 (RA: 00 38 49, DEC: -25 06 28)

***HJ 1991**: mag.:6.58 | 9.73, sep.:47.2″ , p.a.95°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 166443

10: HJ 5417 (RA: 23 44 29, DEC: -26 14 48)

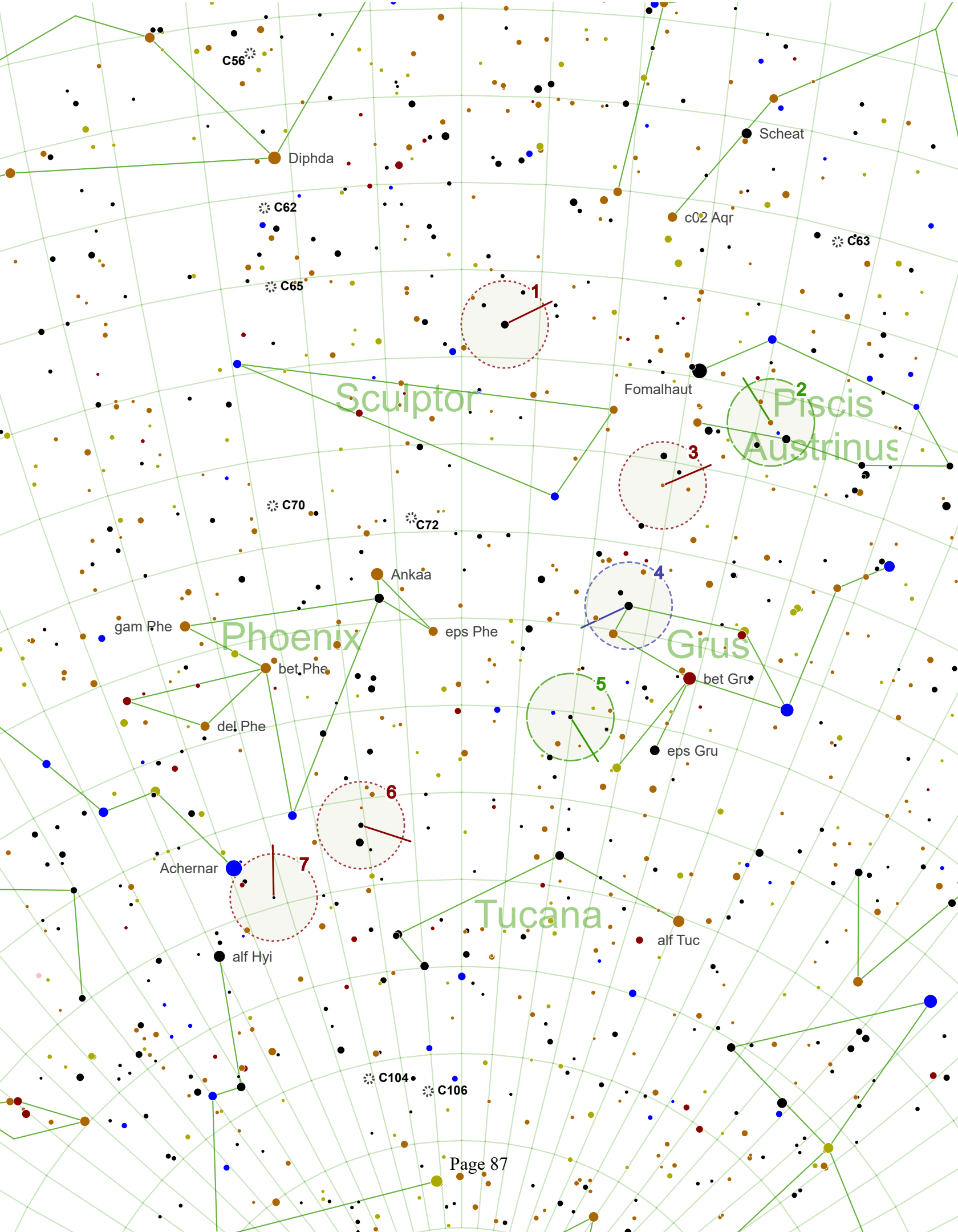
***HJ 5417**: mag.:6.28 | 9.41, sep.:8.1″ , p.a.318°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 192116

Deep Sky Objects

DSO	Mag.	Type
C51	9.0	irregular galaxy
C56	8.0	planetary nebula
C63	6.5	planetary nebula
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


C56
Diphda
Scheat
C62
c02 Aqr
C63
C65
1
Sculptor
Fomalhaut
2
Piscis
Austrinus
3
C70
C72
Ankaa
4
gam Phe
Phoenix
eps Phe
Grus
bet Phe
bet Gru
5
del Phe
eps Gru
6
Achernar
7
Tucana
alf Tuc
alf Hyi
C104
C106

October: -45° South (1)

1: HJ 3216 AC (RA: 23 48 55, DEC: -28 07 48)

***HJ 3216 AC**: mag.:4.57 | 9.37, sep.:74.7″, p.a.296°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 192167

2: Dunlop 241 (RA: 22 36 35, DEC: -31 39 50)

***DUN 241**: mag.:5.93 | 7.55, sep.:93.4″, p.a.32°*

A bright orange primary separated distantly from a moderate secondary.

The primary is a K-class giant star 358 light-years from Earth. The secondary is an unrelated background star.

Identifiers: Dunlop 241 | SAO 213948 | HIP 111600 | GDR2 54099267456

3: BU 1011 (RA: 23 02 34, DEC: -36 25 15)

***BU 1011**: mag.:6.64 | 9.33, sep.:2″, p.a.293°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 214261

4: The Gru (RA: 23 06 53, DEC: -43 31 13)

***JC 20 AB**: mag.:4.45 | 6.6, sep.:1.5″, p.a.115°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 231444

5: DUN 248 (RA: 23 20 50, DEC: -50 18 23)

***DUN 248 AB,C**: mag.:6.15 | 6.58, sep.:17″, p.a.212°*

***RST 5560 AB**: mag.:6.15 | 8.93, sep.:1.3″, p.a.232°*

An easy, equal pair of fairly bright stars; the primary is white, the secondary is yellow.

Although the stars are quite close and well-balanced, the pair are not part of the same system.

Identifiers: DUN 248 | SAO 247838 | HIP 115272 | GDR2 31546224512

6: Xi Phe (RA: 00 41 46, DEC: -56 30 05)

***HJ 3387**: mag.:5.72 | 9.95, sep.:13.1″, p.a.252°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 232152

7: HJ 3435 AB (RA: 01 25 20, DEC: -59 29 55)

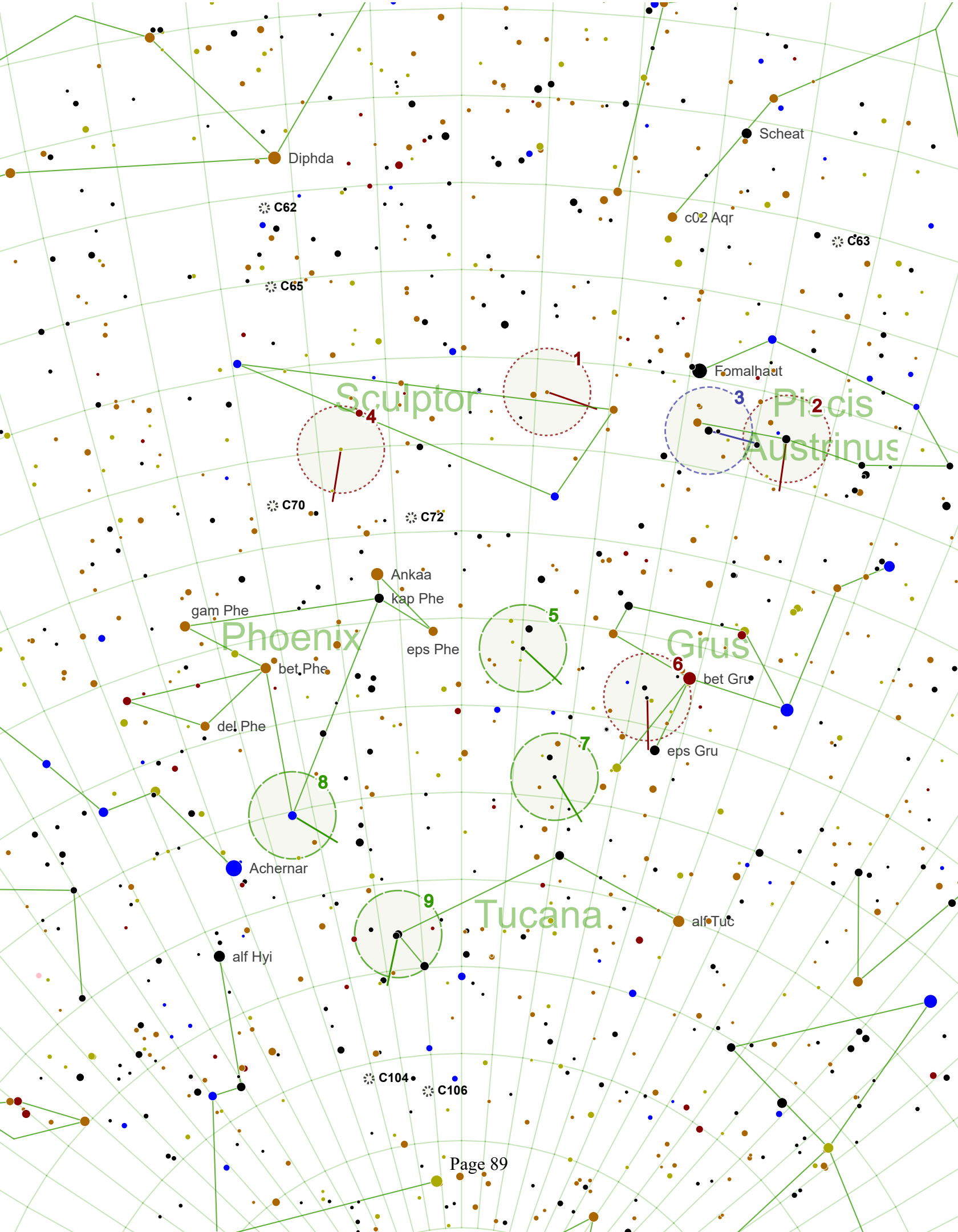
***HJ 3435 AB**: mag.:7.11 | 9.37, sep.:25.1″, p.a.1°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 232418

Deep Sky Objects

DSO	Mag.	Type
C104	6.6	globular cluster
C106	4.0	globular cluster
C56	8.0	planetary nebula
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
C65	7.1	spiral galaxy
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


Diphda
Scheat
C62
c02 Aqr
C63
C65
1
Fomalhaut
Sculptor
3
2
Piscis
Austrinus
4
C70
C72
Ankaa
kap Phe
gam Phe
Phoenix
eps Phe
5
Grus
bet Phe
6
bet Gru
del Phe
7
eps Gru
8
Achernar
9
Tucana
alf Tuc
alf Hyi
C104
C106

October: -45° South (2)

1: HWE 93 (RA: 23 37 05, DEC: -31 52 16)

HWE 93*: mag.:6.69 | 9.92, sep.:5.5″ , p.a.251°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 214659

2: PZ 7 AC (RA: 22 31 30, DEC: -32 20 46)

PZ 7 AC*: mag.:4.28 | 7.12, sep.:30.4″ , p.a.172°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 213883

3: Gam PsA (RA: 22 52 32, DEC: -32 52 32)

HJ 5367*: mag.:4.5 | 8.2, sep.:4.1″ , p.a.255°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 214153

4: HJ 3375 (RA: 00 33 44, DEC: -35 00 07)

HJ 3375*: mag.:6.64 | 8.46, sep.:4.4″ , p.a.171°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 192609

5: Theta Phe (RA: 23 39 28, DEC: -46 38 16)

DUN 251*: mag.:6.53 | 7.27, sep.:3.9″ , p.a.227°*

A white primary with a slightly fainter yellowish secondary, very closely separated.

A dim galaxy shares the finder view, two degrees to the north west: magnitude 11.0 IC 5328.

Identifiers: Theta Phe | SAO 231719 | HIP 116737 | GDR2 31089676800

6: I 22 AB,CD (RA: 22 55 16, DEC: -48 27 57)

I 22 AB,CD*: mag.:7.14 | 6.71, sep.:93.9″ , p.a.181°*

A wide pairing of a fairly faint primary and a fairly bright companion.

Identifiers: SAO 231354

7: DQ Gru (RA: 23 23 55, DEC: -53 48 32)

DUN 249*: mag.:6.14 | 7.07, sep.:26.4″ , p.a.211°*

A bright and easily separated pair of white stars.

The hot white giant primary is 387 light-years from Earth.

Identifiers: DQ Gru | SAO 247854 | HIP 115510 | GDR2 65274954496

8: Zeta Phe (RA: 01 08 23, DEC: -55 14 45)

RMK 2 AB,C*: mag.:4 | 8.23, sep.:6.8″ , p.a.239°*

A pair of close bluish stars, the brilliant primary is much brighter and is itself an extreme sub-arcsecond pairing.

The wider pairing is also referred to as Rossiter 1205. Richard Alfred Rossiter (1886-1977) discovered more than 5000 double stars.

Identifiers: Zeta Phe | SAO 232306 | HIP 5348 | GDR2 89156808960

9: Beta1 Tuc (RA: 00 31 33, DEC: -62 57 29)

LCL 119 AC*: mag.:4.28 | 4.51, sep.:27.2″ , p.a.168°*

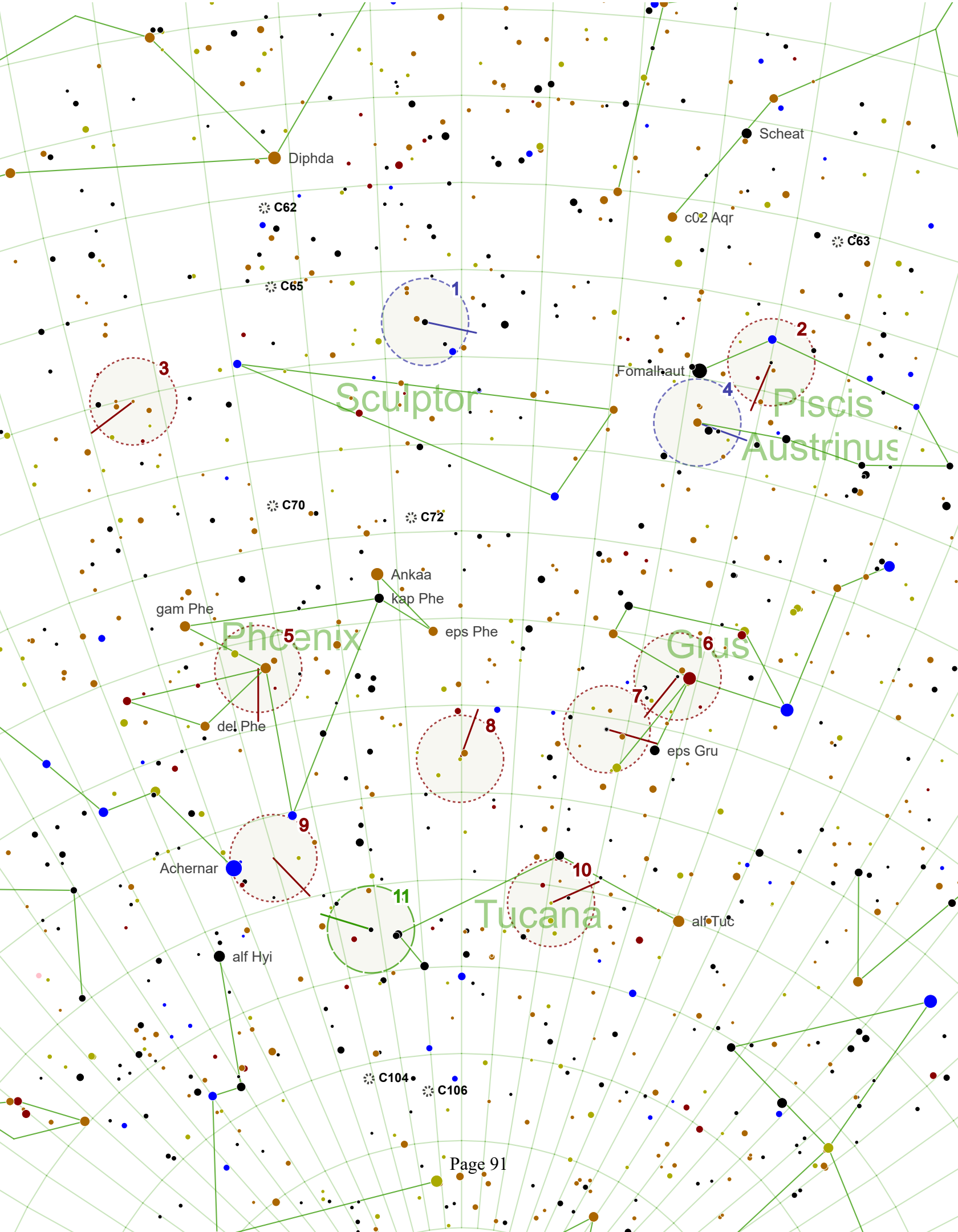
An equal pair of very bright, easily separated stars; Beta1 is bluish, while Beta2 is white.

The primary has a faint magnitude 13.5 companion (2.6" separation, position angle 153).

Identifiers: Beta1 Tuc | SAO 248201 | HIP 2484 | GDR2 34176620160

Deep Sky Objects

DSO	Mag.	Type
C104	6.6	globular cluster
C106	4.0	globular cluster
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
C65	7.1	spiral galaxy
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


Diphda
Scheat
C62
c02 Aqr
C63
C65
1
2
3
Fomalhaut
4
Sculptor
Piscis
Austrinus
C70
C72
Ankaa
kap Phe
gam Phe
eps Phe
Phoenix
5
Grus
6
7
del Phe
8
eps Gru
9
Achernar
10
11
Tucana
alf Tuc
alf Hyi
C104
C106

October: -45° South (3)

1: Kap1 Scl (RA: 00 09 21, DEC: -27 59 16)

***BU 391 AB**: mag.:6.13 | 6.24, sep.:1.3" , p.a.258°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 166083

2: H 6 119 AB (RA: 22 39 44, DEC: -28 19 32)

***H 6 119 AB**: mag.:6.43 | 7.5, sep.:86.5" , p.a.157°*

***H N 117 BC**: mag.:7.49 | 8.61, sep.:3.1" , p.a.70°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 191308

3: HJ 3436 (RA: 01 27 05, DEC: -30 14 09)

***HJ 3436**: mag.:6.9 | 9.56, sep.:9.9" , p.a.127°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 193123

4: Del PsA (RA: 22 55 57, DEC: -32 32 23)

***HWE 91**: mag.:4.32 | 9.2, sep.:4.9" , p.a.250°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 214189

5: SLR 2 AB (RA: 01 08 34, DEC: -46 40 05)

***SLR 2 AB**: mag.:7.14 | 8.67, sep.:1.3" , p.a.180°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 215379

6: HJ 5362 (RA: 22 46 44, DEC: -46 56 22)

***HJ 5362**: mag.:6.64 | 9.9, sep.:10.4" , p.a.141°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 231290

7: DUN 246 (RA: 23 07 15, DEC: -50 41 12)

***DUN 246**: mag.:6.29 | 7.05, sep.:8.9" , p.a.254°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 247739

8: HJ 5437 (RA: 00 00 34, DEC: -53 05 52)

***HJ 5437**: mag.:6.55 | 9.85, sep.:1.3" , p.a.340°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 248097

9: HJ 3430 AB (RA: 01 20 28, DEC: -57 20 19)

***HJ 3430 AB**: mag.:7.18 | 9.48, sep.:3.2" , p.a.224°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 232385

10: DUN 247 (RA: 23 18 01, DEC: -61 00 13)

***DUN 247**: mag.:6.87 | 8.17, sep.:51.8" , p.a.294°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 255453

11: COO 3 (RA: 00 44 32, DEC: -62 29 51)

***COO 3**: mag.:6.31 | 8.01, sep.:2.4" , p.a.73°*

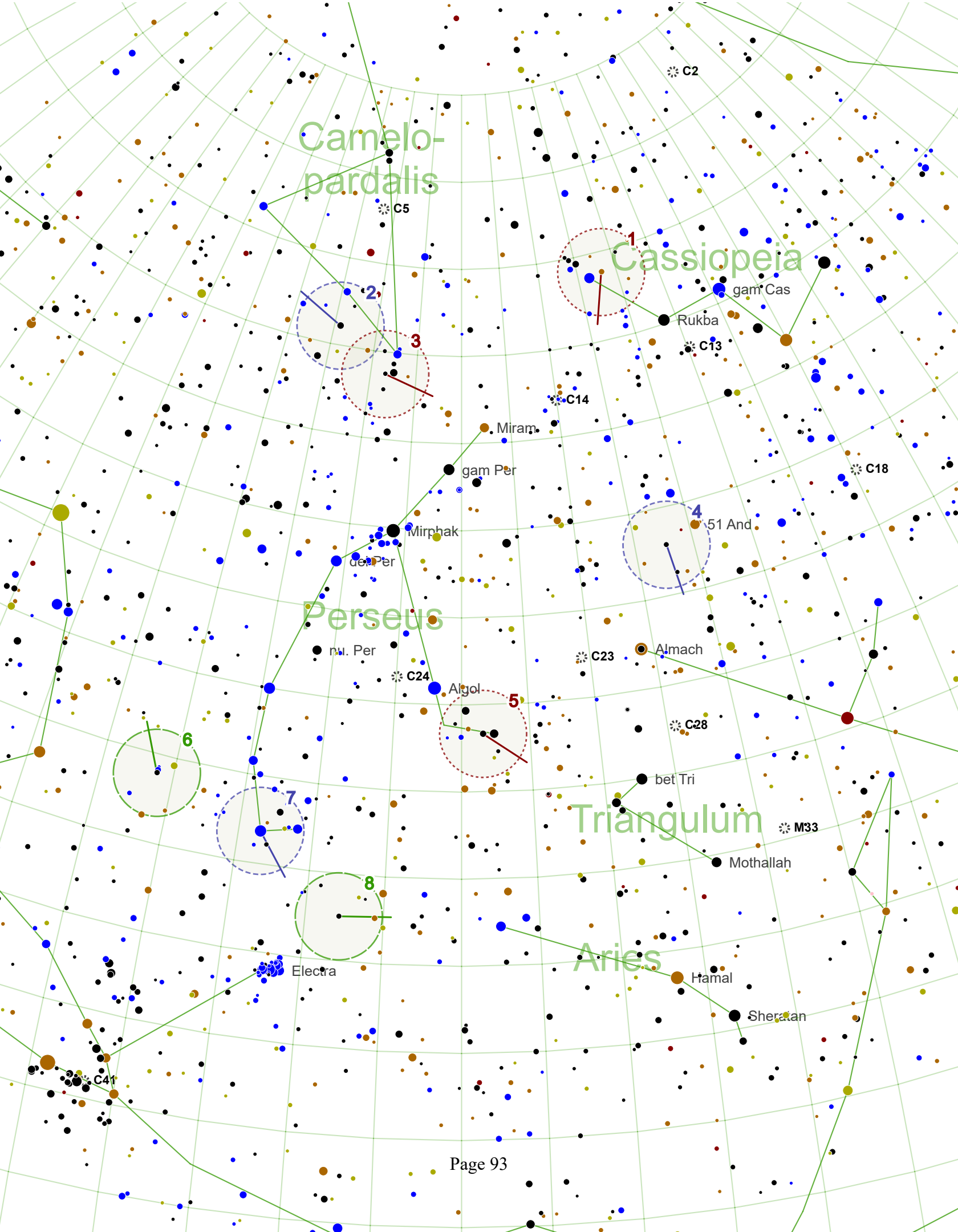
A fairly bright yellowish primary with a tightly bound secondary.

BQ Tuc is a strongly red and moderately variable star one degree to the south east (mag 5.7, Δ mag. 0.2). Beta 1 and 2 Tuc are a lovely brilliant double just over a degree to the south west.

Identifiers: COO 3 | SAO 248243 | HIP 3489 | GDR2 40124725760

Deep Sky Objects

DSO	Mag.	Type
C104	6.6	globular cluster
C106	4.0	globular cluster
C62	8.9	spiral galaxy
C63	6.5	planetary nebula
C65	7.1	spiral galaxy
C70	8.1	spiral galaxy
C72	8.2	barred spiral galaxy


Camelo-
pardalis
C5
C2
1
Cassiopeia
gam Cas
Rukba
C13
2
3
C14
Miram
gam Per
C18
4
51 And
Mirphak
del Per
Perseus
nu. Per
C23
Almach
C24
Algol
5
C28
6
bet Tri
7
Triangulum
M33
Mothallah
8
Aries
Electra
Hamal
Sheratan
C41

November: 45° North (1)

1: V987 Cas (RA: 01 47 45, DEC: +63 51 09)

***ENG 7 AB**: mag.:5.71 | 9.89, sep.:45.9″ , p.a.176°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 11983

2: STT 67 (RA: 03 57 08, DEC: +61 06 32)

***STT 67**: mag.:5.25 | 8.06, sep.:1.7″ , p.a.49°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 12968

3: STF 396 AB (RA: 03 33 32, DEC: +58 45 55)

***STF 396 AB**: mag.:6.43 | 7.68, sep.:20.5″ , p.a.245°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 24093

4: STF 162 AB (RA: 01 49 15, DEC: +47 53 47)

***STF 162 AB**: mag.:6.47 | 7.22, sep.:2″ , p.a.199°*

***STF 162 AC**: mag.:6.47 | 9.24, sep.:20.7″ , p.a.178°*

***STF 162 BC**: mag.:7.22 | 9.24, sep.:19.2″ , p.a.177°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 37536

5: STF 318 AB,C (RA: 02 53 43, DEC: +38 20 16)

***STF 318 AB,C**: mag.:5.39 | 9.68, sep.:13.9″ , p.a.237°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 55975

6: 56 Per (RA: 04 24 37, DEC: +33 57 35)

***STT 81 AB**: mag.:5.84 | 9.25, sep.:4.2″ , p.a.11°*

A bright yellow primary with a close yellow companion.

The primary star is an F4V main sequence star 50% more massive than the Sun and seven times brighter. It has a very dim close white dwarf companion (magnitude 15), but the brighter star identified as the B component is further separated and 86% of the mass of the sun.

Identifiers: 56 Per | SAO 57216 | HIP 20591 | GDR2 9818083712

7: Atik (RA: 03 54 08, DEC: +31 53 01)

***STF 464 AB**: mag.:2.86 | 9.16, sep.:12.8″ , p.a.208°*

***STF 464 AE**: mag.:2.86 | 9.96, sep.:120″ , p.a.186°*

A comfortably separated pairing of a brilliant primary and a faint companion.

Identifiers: SAO 56799

8: Struve 401 (RA: 03 31 21, DEC: +27 34 18)

***STF 401 AB**: mag.:6.58 | 6.93, sep.:11.4″ , p.a.269°*

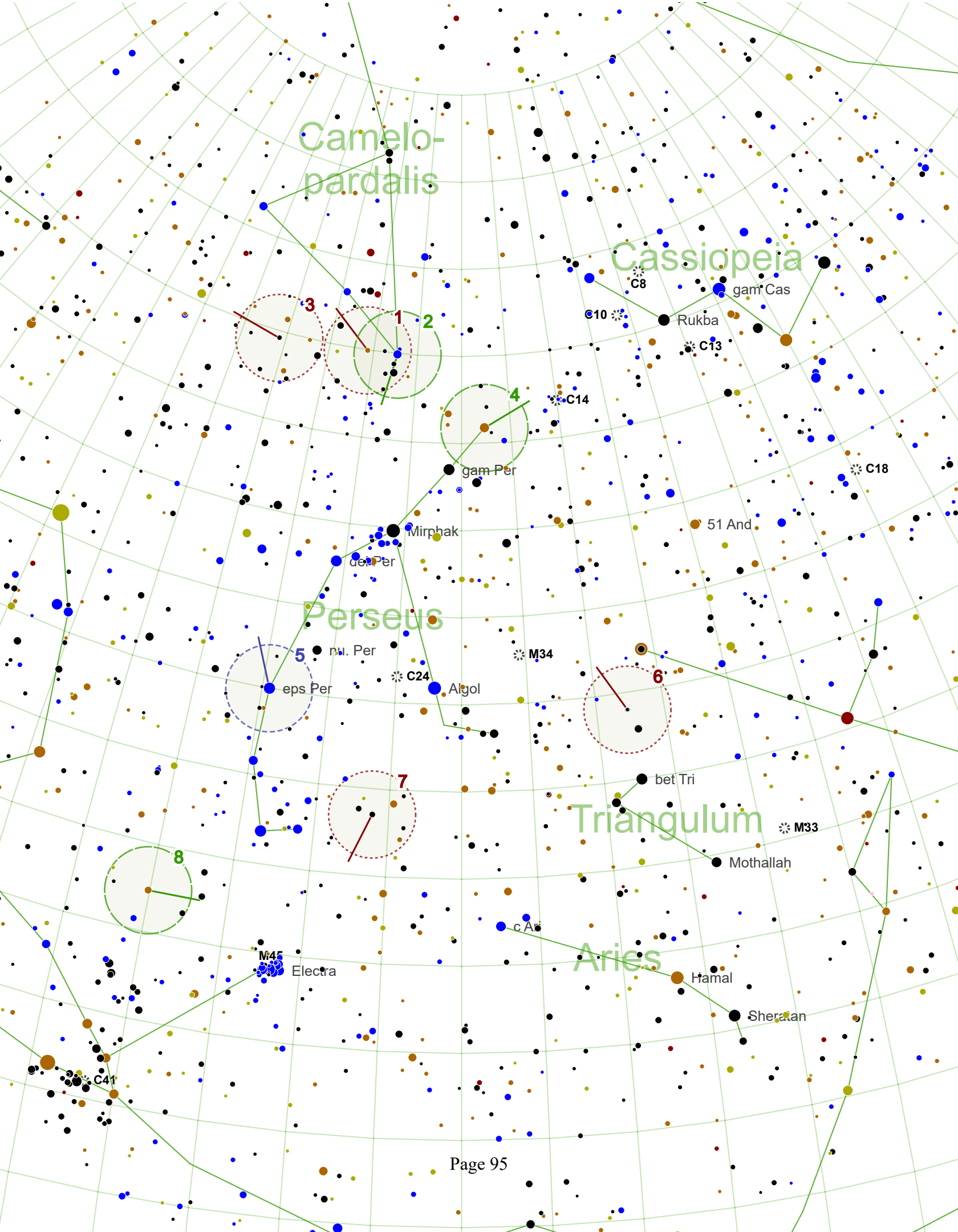
An easily separated equal pair of fairly bright white stars.

This system lies one finder circle north west of the Pleiades.

Identifiers: Struve 401 | SAO 75970 | HIP 16411 | GDR2 5464382080

Deep Sky Objects

DSO	Mag.	Type
C13	6.4	open cluster
C14	4.3	open cluster
C18	9.2	elliptical galaxy
C2	11.6	planetary nebula
C23	9.9	barred spiral galaxy
C24	11.6	seyfert galaxy
C28	5.7	open cluster
C41	1.0	open cluster
C5	9.2	spiral galaxy
M33	5.7	spiral galaxy


Camelo-
pardalis
Cassiopeia
C8
gam Cas
C10
Rukba
C13
3
1
2
4
C14
gam Per
C18
51 And
Mirphak
Perseus
M34
5
eps Per
C24
Algol
6
7
bet Tri
Triangulum
M33
Mothallah
8
c Ari
M45
Electra
Aries
Hamal
Sheratan
C41

November: 45° North (2)

1: WEB 2 AD (RA: 03 42 43, DEC: +59 58 10)

***WEB 2 AD**: mag.:5.72 | 8.45, sep.:54.8″, p.a.37°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 24169

2: Struve 385 (RA: 03 29 04, DEC: +59 56 25)

***STF 384 AB**: mag.:8.13 | 8.85, sep.:2″, p.a.273°*

***STF 385**: mag.:4.23 | 7.8, sep.:2.3″, p.a.162°*

A brilliant blue primary with a moderately faint companion, very tightly separated.

This system is also known as CS Cam, indicating it is a variable star (of type Alpha Cygni). The magnitude range is barely 0.05 magnitudes, so this is not apparent to visual observers. The star is located in te dim reflection nebula VdB 14.

Identifiers: Struve 385 | SAO 24054 | HIP 16228 | GDR2 8616785152

3: ARG 100 AB,C (RA: 04 22 58, DEC: +59 36 58)

***ARG 100 AB,C**: mag.:6.19 | 9.31, sep.:32.5″, p.a.60°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 24577

4: Eta Per (RA: 02 50 42, DEC: +55 53 44)

***STF 307 AB**: mag.:3.76 | 8.5, sep.:28.7″, p.a.301°*

A bright orange primary with a much fainter blue secondary.

The common name for the system, “Miram”, originates in the 20th century but its meaning (if any) is unclear. The primary is about ten times the Sun’s mass with approximately 4130 times the luminosity and 220 times the radius.

Identifiers: Eta Per | SAO 23655 | HIP 13268 | GDR2 1980370304

5: Eps Per (RA: 03 57 51, DEC: +40 00 37)

***STF 471 AB**: mag.:2.85 | 8.88, sep.:8.8″, p.a.12°*

A close pairing of a brilliant primary and a faint companion.

Identifiers: SAO 56840

6: 59 And (RA: 02 10 53, DEC: +39 02 22)

***STF 222**: mag.:6.05 | 6.71, sep.:16.6″, p.a.36°*

A comfortably separated pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 55330

7: STF 382 AB (RA: 03 24 30, DEC: +33 32 10)

***STF 382 AB**: mag.:5.8 | 9.25, sep.:4.7″, p.a.153°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 56419

8: Phi Tau (RA: 04 20 21, DEC: +27 21 03)

***SHJ 40 AB**: mag.:5.08 | 7.51, sep.:48.7″, p.a.259°*

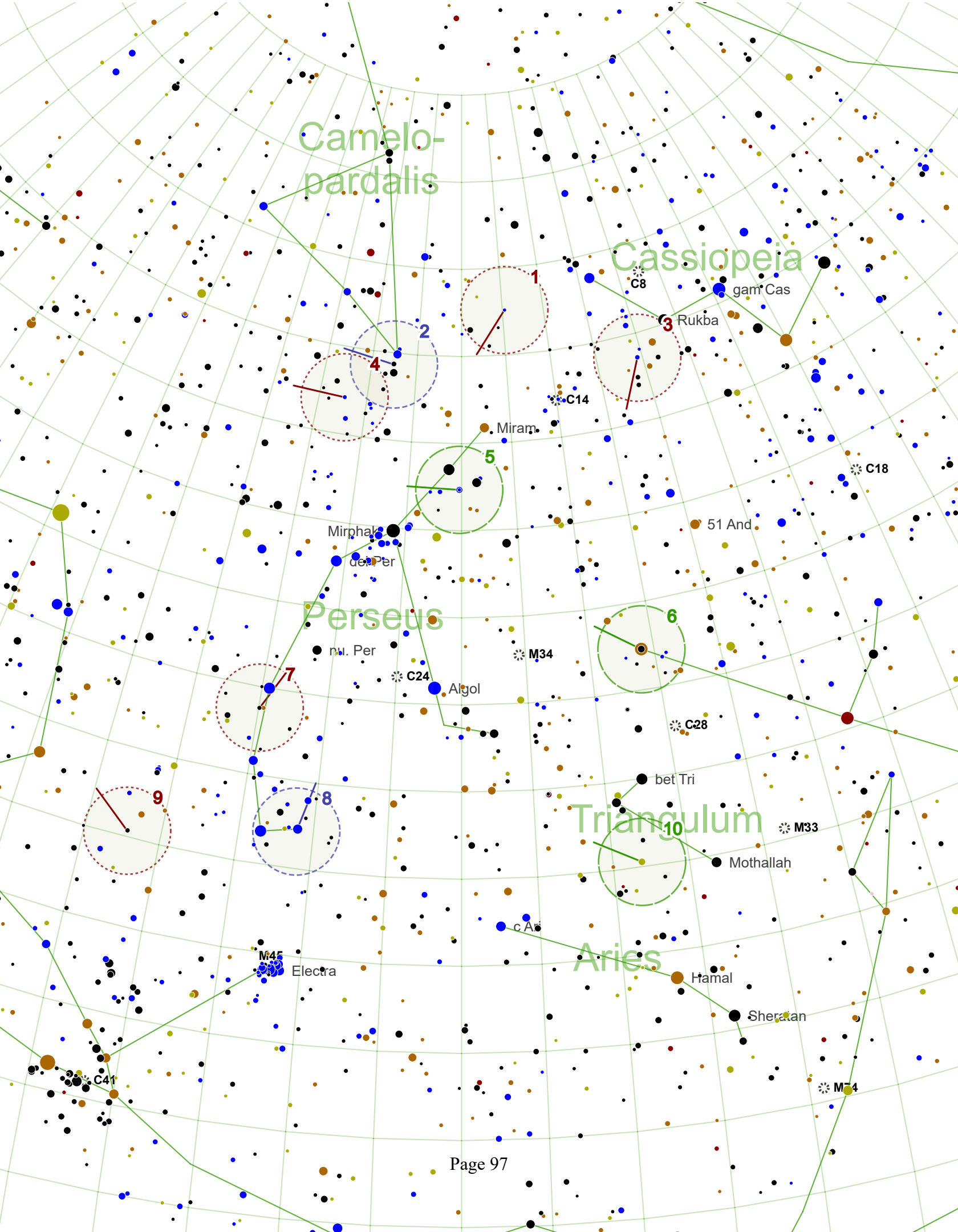
A bright yellow primary with a widely separated faint blue companion.

This double is only a line-of-sight coincidence and the components are not gravitationally related.

Identifiers: Phi Tau | SAO 76558 | HIP 20250 | GDR2 6556443904

Deep Sky Objects

DSO	Mag.	Type
C10	7.1	open cluster
C13	6.4	open cluster
C14	4.3	open cluster
C18	9.2	elliptical galaxy
C24	11.6	seyfert galaxy
C41	1.0	open cluster
C8	9.5	open cluster
M33	5.7	spiral galaxy
M34	5.5	open cluster
M45	1.6	open cluster


Camelo-
pardalis
Cassiopeia
C8
gam Cas
Rukba
1
2
3
4
C14
Miram
5
C18
51 And
Mirphak
del Per
Perseus
nu. Per
M34
6
C24
Algol
7
C28
bet Tri
9
8
Triangulum
10
M33
Mothallah
c Ari
Aries
M45
Electra
Hamal
Sheratan
C41
M74

November: 45° North (3)

1: STTA 28 (RA: 02 38 58, DEC: +62 35 29)

***STTA 28**: mag.:6.65 | 7.56, sep.:67.9" , p.a.148°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 12369

2: STF 389 AB (RA: 03 30 11, DEC: +59 21 58)

***STF 389 AB**: mag.:6.42 | 7.89, sep.:2.6" , p.a.72°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 24062

3: HJ 1088 AB (RA: 01 42 18, DEC: +58 37 40)

***HJ 1088 AB**: mag.:6.34 | 9.79, sep.:19.5" , p.a.168°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 22520

4: S 436 (RA: 03 49 20, DEC: +57 07 06)

***S 436**: mag.:6.46 | 7.17, sep.:58.3" , p.a.77°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 24244

5: Struve 331 (RA: 03 00 52, DEC: +52 21 06)

***STF 331**: mag.:5.21 | 6.17, sep.:12" , p.a.86°*

A bright and easily separated white-blue pair.

Identifiers: Struve 331 | SAO 23763 | HIP 14043 | GDR2 9385318656

6: Almach (RA: 02 03 54, DEC: +42 19 48)

***STF 205 A,BC**: mag.:2.31 | 5.02, sep.:9.8" , p.a.64°*

A spectacular pairing of an intense orange primary with a fainter blue secondary.

Johann Tobias Mayer discovered the binary nature of this strongly colored system in 1778. In 1842, Wilhelm Struve found the blue B component is itself a double star with a separation of around 1". Spectroscopy reveals the fainter component of the B system is also a double resulting in a quadruple star system.

Identifiers: Almach | SAO 37734 | HIP 9640

7: STT 69 (RA: 03 59 40, DEC: +38 49 13)

***STT 69**: mag.:6.6 | 9.13, sep.:1.4" , p.a.323°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 56866

8: DCH 11A B (RA: 03 44 33, DEC: +32 08 37)

***DCH 11A B**: mag.:3.54 | 6.26, sep.:5.4" , p.a.338°*

A close pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 56680

9: STF 548 AB (RA: 04 28 52, DEC: +30 21 42)

***STF 548 AB**: mag.:6.44 | 8.03, sep.:14.9" , p.a.36°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 57249

10: Iota Tri (RA: 02 12 22, DEC: +30 18 11)

***STF 227**: mag.:5.26 | 6.67, sep.:3.9" , p.a.68°*

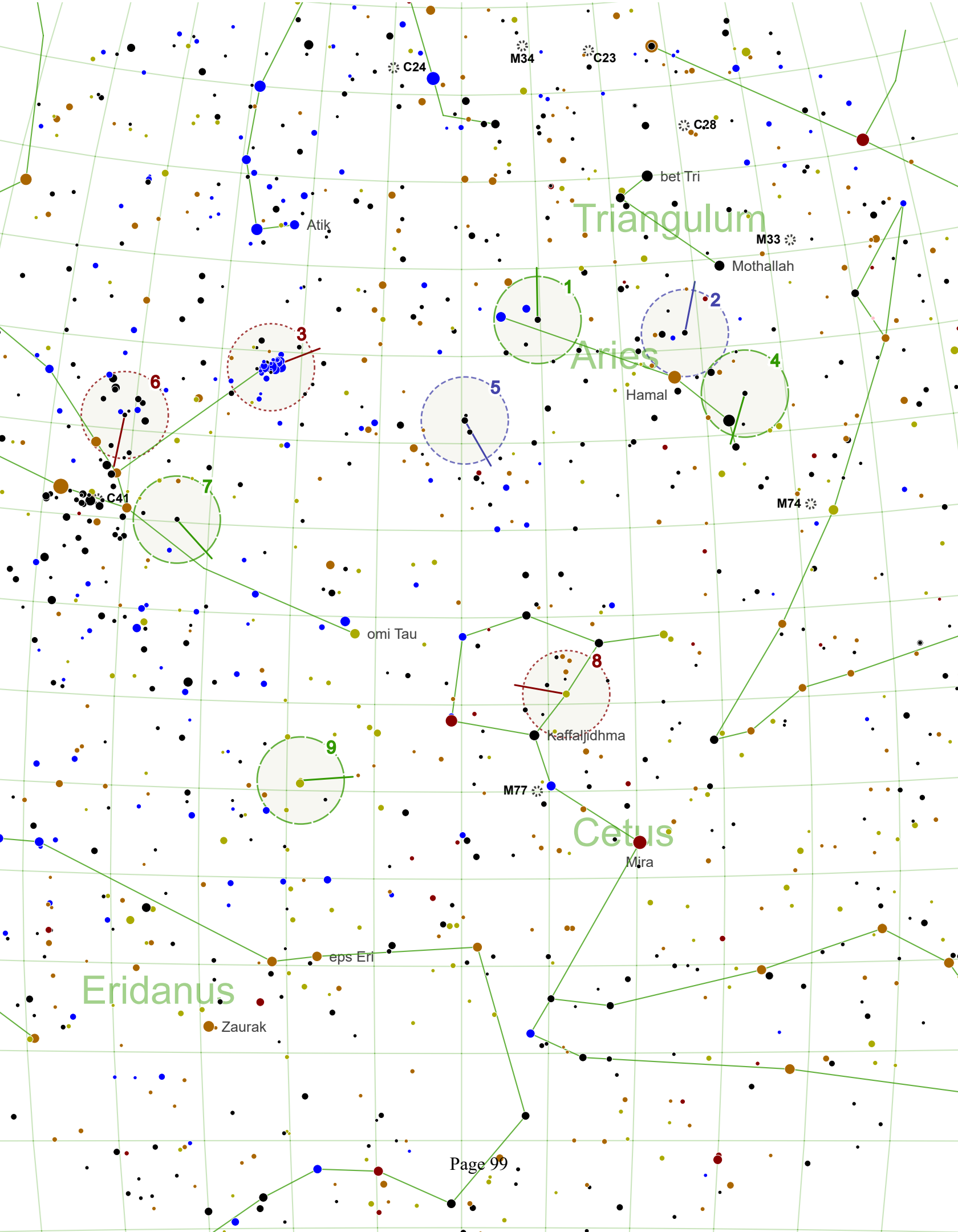
A tight, bright pair of well-matched yellow and blue stars.

Although only two stars are visible, this system is quadruple as the A and B components are spectroscopic binaries.

Identifiers: Iota Tri | SAO 55347 | HIP 10280

Deep Sky Objects

DSO	Mag.	Type
C14	4.3	open cluster
C18	9.2	elliptical galaxy
C24	11.6	seyfert galaxy
C28	5.7	open cluster
C41	1.0	open cluster
C8	9.5	open cluster
M33	5.7	spiral galaxy
M34	5.5	open cluster
M45	1.6	open cluster
M74	9.4	spiral galaxy


C24
M34
C23
C28
bet Tri
Triangulum
Atik
M33
Mothallah
1
2
3
Aries
4
6
5
Hamal
C41
7
M74
omi Tau
8
Kaffaljidhma
9
M77
Cetus
Mira
eps Eri
Eridanus
Zaurak

November: 10° North (1)

1: 33 Ari (RA: 02 40 41, DEC: +27 03 40)

STF 289*: mag.:5.3 | 9.56, sep.:28.6″ , p.a.1°*

A bright yellow primary with a faint blue companion, widely separated.

Also known as Barani I. Circumstellar dust has been detected in this system.

Identifiers: 33 Ari | SAO 75510 | HIP 12489 | GDR2 4883932160

2: 10 Ari (RA: 02 03 39, DEC: +25 56 08)

STF 208 AB*: mag.:5.82 | 7.87, sep.:1.6″ , p.a.349°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 75114

3: Alcyone (RA: 03 47 29, DEC: +24 06 19)

STFA 8 AB*: mag.:2.83 | 6.27, sep.:117.6″ , p.a.291°*

STFA 8 BD*: mag.:6.27 | 8.22, sep.:86.2″ , p.a.345°*

STFA 8 BE*: mag.:6.27 | 8.73, sep.:75.2″ , p.a.305°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 76199

4: 1 Ari (RA: 01 50 09, DEC: +22 16 30)

STF 174*: mag.:6.33 | 7.21, sep.:2.9″ , p.a.164°*

A close pair with a brighter yellow primary and blue secondary.

Identifiers: 1 Ari | SAO 74966 | HIP 8544 | GDR2 357332864

5: Eps Ari (RA: 02 59 13, DEC: +21 20 26)

STF 333 AB*: mag.:5.17 | 5.57, sep.:1.3″ , p.a.210°*

A tight pairing of a bright primary and a bright companion.

Identifiers: SAO 75673

6: BU 87 (RA: 04 22 23, DEC: +20 49 16)

BU 87*: mag.:6.21 | 8.6, sep.:1.9″ , p.a.168°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 76571

7: Struve 495 (RA: 04 07 42, DEC: +15 09 46)

STF 495 AB*: mag.:6.11 | 8.77, sep.:3.6″ , p.a.222°*

A close pair of yellow stars. The primary is almost three magnitudes brighter than the secondary, meaning it is roughly 15 times brighter.

This binary lies 5 degrees to the west of the Hyades, the nearest star cluster to the Earth, only 153 light-years distant.

Identifiers: Struve 495 | SAO 93775 | HIP 19261 | GDR2 521351552

8: Nu Cet (RA: 02 35 52, DEC: +05 35 36)

STF 281*: mag.:4.97 | 9.08, sep.:8.1″ , p.a.80°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 110635

9: Struve 422 (RA: 03 36 47, DEC: +00 35 16)

STF 422*: mag.:6 | 8.9, sep.:6.7″ , p.a.274°*

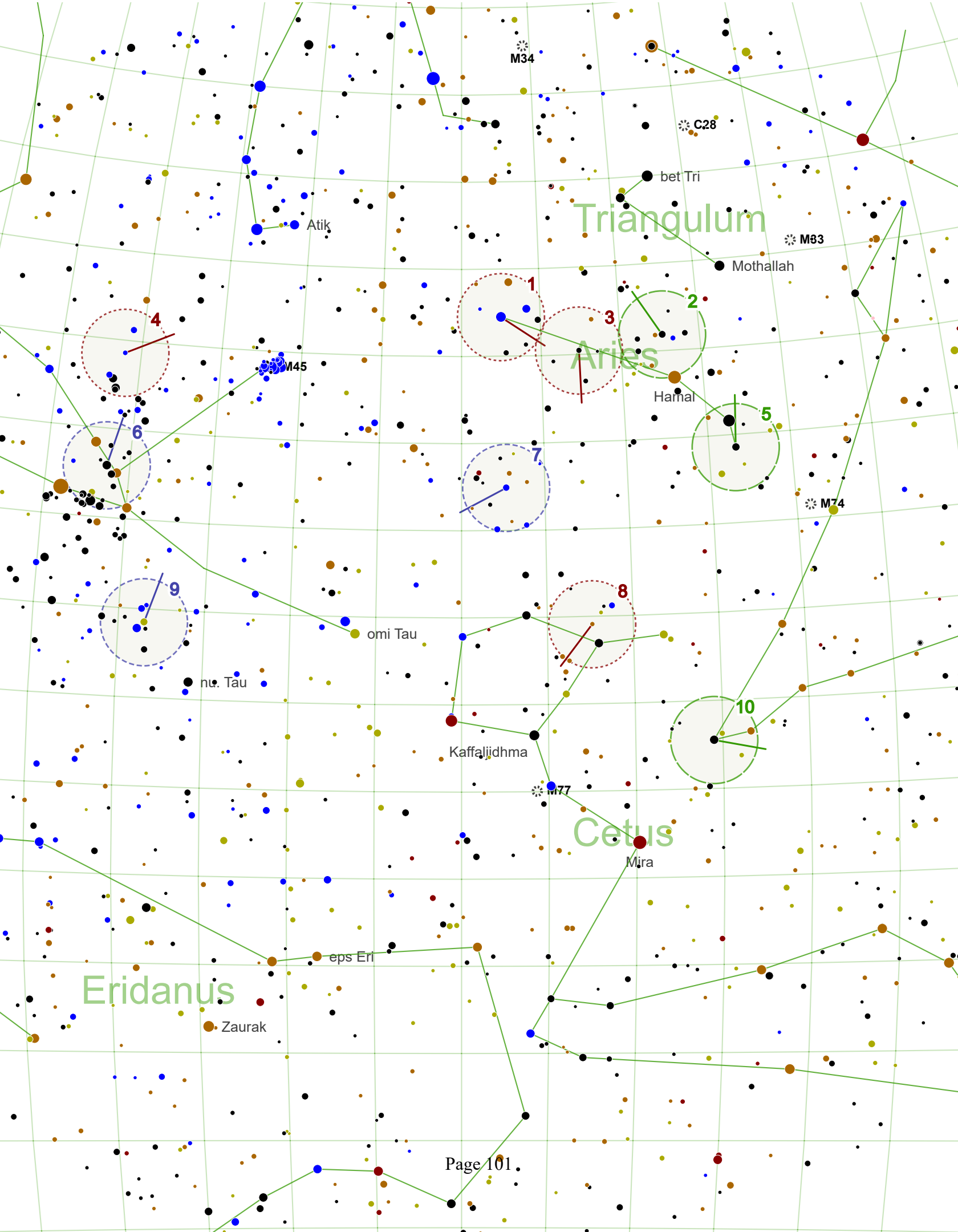
A bright yellow primary close to a relatively faint orange companion.

The system is an RS Cvn-type variable system, where an evolved G-class star with a spectroscopic companion has significant starspots that rotate in and out of view.

Identifiers: Struve 422 | SAO 111291 | HIP 16846 | GDR2 92671872384

Deep Sky Objects

DSO	Mag.	Type
C23	9.9	barred spiral galaxy
C24	11.6	seyfert galaxy
C28	5.7	open cluster
C41	1.0	open cluster
M33	5.7	spiral galaxy
M34	5.5	open cluster
M74	9.4	spiral galaxy
M77	8.9	spiral galaxy


M34
C28
bet Tri
Triangulum
Atik
M33
Mothallah
1
2
3
4
Aries
M45
Hamal
5
6
7
M74
9
8
omi Tau
nu. Tau
10
Kaffaljidhma
M77
Cetus
Mira
eps Eri
Eridanus
Zaurak

November: 10° North (2)

1: H 6 5 AD (RA: 02 49 59, DEC: +27 15 38)

***H 6 5 AD**: mag.:3.63 | 8.8, sep.:122.3″ , p.a.237°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 75596

2: 14 Ari (RA: 02 09 25, DEC: +25 56 24)

***H 6 69 AB**: mag.:4.99 | 8.01, sep.:93.1″ , p.a.35°*

***H 6 69 AC**: mag.:5.02 | 7.97, sep.:106″ , p.a.279°*

A very wide triangle of three stars; the bright primary is yellowing and the other two components are significantly fainter.

This is a gravitationally bound, physical double, 289 light-years from the Earth.

Identifiers: 14 Ari | SAO 75171 | HIP 10053 | GDR2 2601324672

3: STF 271 AB (RA: 02 30 32, DEC: +25 14 07)

***STF 271 AB**: mag.:5.93 | 9.94, sep.:12.8″ , p.a.183°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 75407

4: 62 Tau (RA: 04 23 60, DEC: +24 18 04)

***STF 534 AB**: mag.:6.36 | 7.94, sep.:29.1″ , p.a.291°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 76591

5: Gamma Ari (RA: 01 53 32, DEC: +19 17 39)

***STF 180 AB**: mag.:4.52 | 4.58, sep.:7.4″ , p.a.1°*

An equal pair of icy blue stars with close separation.

Robert Hooke discovered this double in 1664. Hooke is most famous for his microscope work, but made significant contributions in physics, geology, architecture and paleontology, as well as astronomy.

Identifiers: Gamma Ari | SAO 92681 | HIP 8832 | GDR2 367308544

6: Del3 Tau (RA: 04 25 29, DEC: +17 55 40)

***KUI 17 AB**: mag.:4.26 | 7.85, sep.:1.8″ , p.a.341°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 93923

7: Pi Ari (RA: 02 49 18, DEC: +17 27 52)

***STF 311 AB**: mag.:5.32 | 7.95, sep.:3.2″ , p.a.118°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 93127

8: BU 518 (RA: 02 29 35, DEC: +09 33 56)

***BU 518**: mag.:6.23 | 9.85, sep.:1.5″ , p.a.143°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 110565

9: 47 Tau (RA: 04 13 56, DEC: +09 15 50)

***BU 547 AB**: mag.:5.05 | 7.32, sep.:1.3″ , p.a.339°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 111674

10: Alrisha (RA: 02 02 03, DEC: +02 45 49)

***STF 202 AB**: mag.:4.1 | 5.17, sep.:1.8″ , p.a.260°*

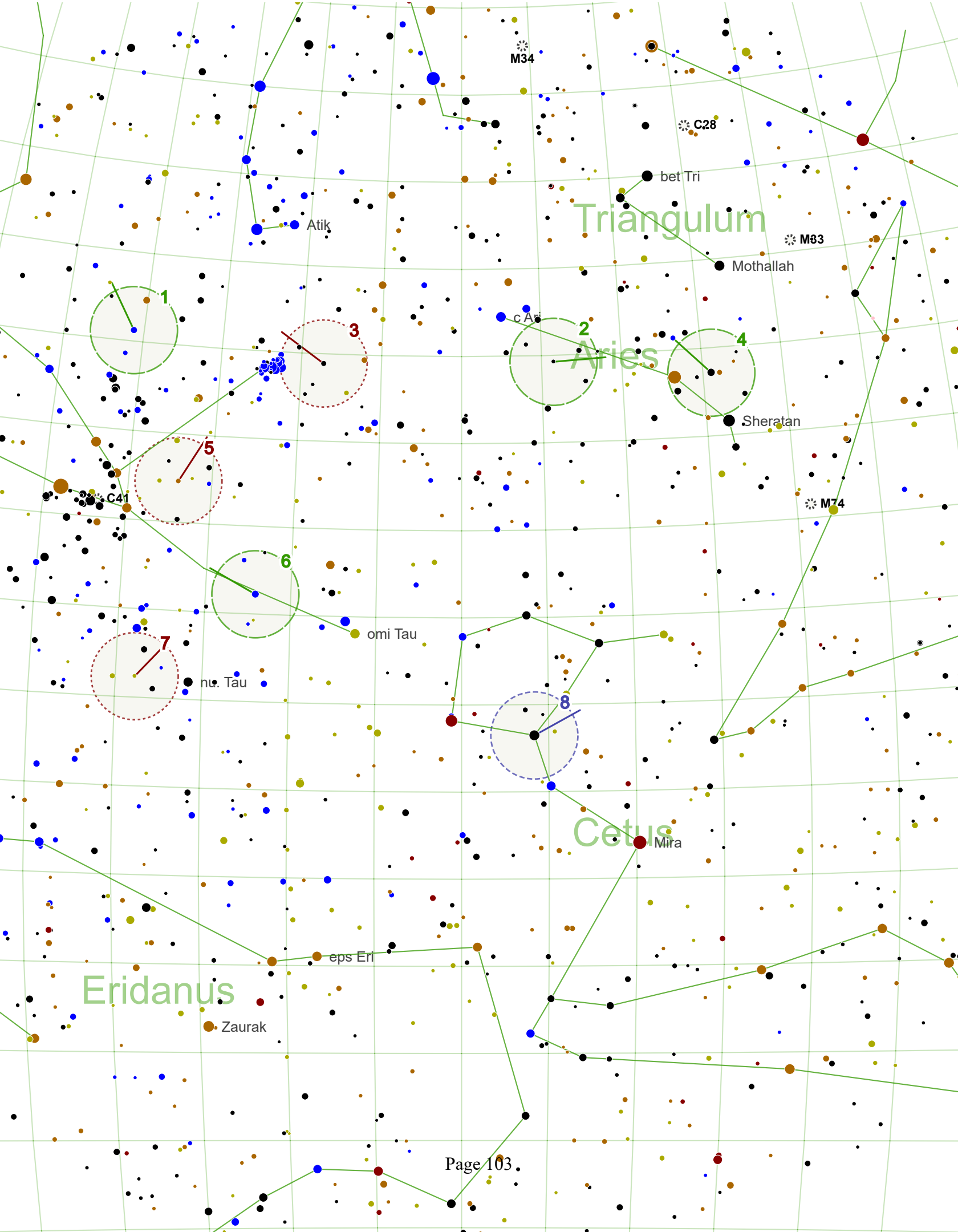
An extremely tight pair of bright, white stars.

Although classified as Alpha Piscium, Alrisha (or Alrescha) is only the third brightest star in the dim constellation of Pisces.

Identifiers: Alrisha | SAO 110291 | HIP 9487 | GDR2 2517584007848935808

Deep Sky Objects

DSO	Mag.	Type
C28	5.7	open cluster
M33	5.7	spiral galaxy
M34	5.5	open cluster
M45	1.6	open cluster
M74	9.4	spiral galaxy
M77	8.9	spiral galaxy


M34
C28
bet Tri
Triangulum
Atik
M33
Mothallah
1
3
c Ari
2
Aries
4
Sheratan
5
C41
M74
6
omi Tau
7
nu. Tau
8
Cetus
Mira
eps Eri
Eridanus
Zaurak

November: 10° North (3)

1: Chi Tau (RA: 04 22 35, DEC: +25 37 46)

***STF 528 AB**: mag.:5.37 | 8.54, sep.:19.4" , p.a.25°*

An easily separated white-blue pairing, where the secondary is also reasonably bright so seeing the color is easier.

Identifiers: Chi Tau | SAO 76573 | HIP 20430 | GDR2 2453366528

2: 30 Ari (RA: 02 37 01, DEC: +24 38 50)

***STFA 5 AB**: mag.:6.5 | 7.02, sep.:37.9" , p.a.275°*

Two bright yellow stars, almost equally matched and widely separated.

Identifiers: 30 Ari | SAO 75471 | HIP 12189 | GDR2 9030066560

3: STF 412 AB,C (RA: 03 34 27, DEC: +24 27 52)

***STF 412 AB,C**: mag.:5.94 | 9.92, sep.:22.4" , p.a.53°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 75999

4: Lambda Ari (RA: 01 57 56, DEC: +23 35 46)

***H 5 12 AB**: mag.:4.8 | 6.65, sep.:37.3" , p.a.48°*

A bright, wide pair with good colors: the A component is yellow and the B component is blue.

"Lambda" is the traditional English spelling, but the official Unicode spelling for the character is "lamda", following representations during drafting of the Unicode standard by the Greek national body.

Identifiers: Lambda Ari | SAO 75051 | HIP 9153 | GDR2 7609412352

5: STT 72 AB (RA: 04 07 59, DEC: +17 20 24)

***STT 72 AB**: mag.:6.1 | 9.71, sep.:4.8" , p.a.327°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 93777

6: 30 Tau (RA: 03 48 16, DEC: +11 08 36)

***STF 452 AB**: mag.:5.06 | 9.77, sep.:9.2" , p.a.60°*

An unusual blue-red color combination, with reasonable separation, but the faint red companion needs a larger telescope to bring out its color.

Identifiers: 30 Tau | SAO 93611 | HIP 17771 | GDR2 767519232

7: V774 Tau (RA: 04 15 29, DEC: +06 11 14)

***STTA 45 AB**: mag.:6.38 | 7.01, sep.:63.7" , p.a.316°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 111698

8: Kaffaljidhma (RA: 02 43 18, DEC: +03 14 09)

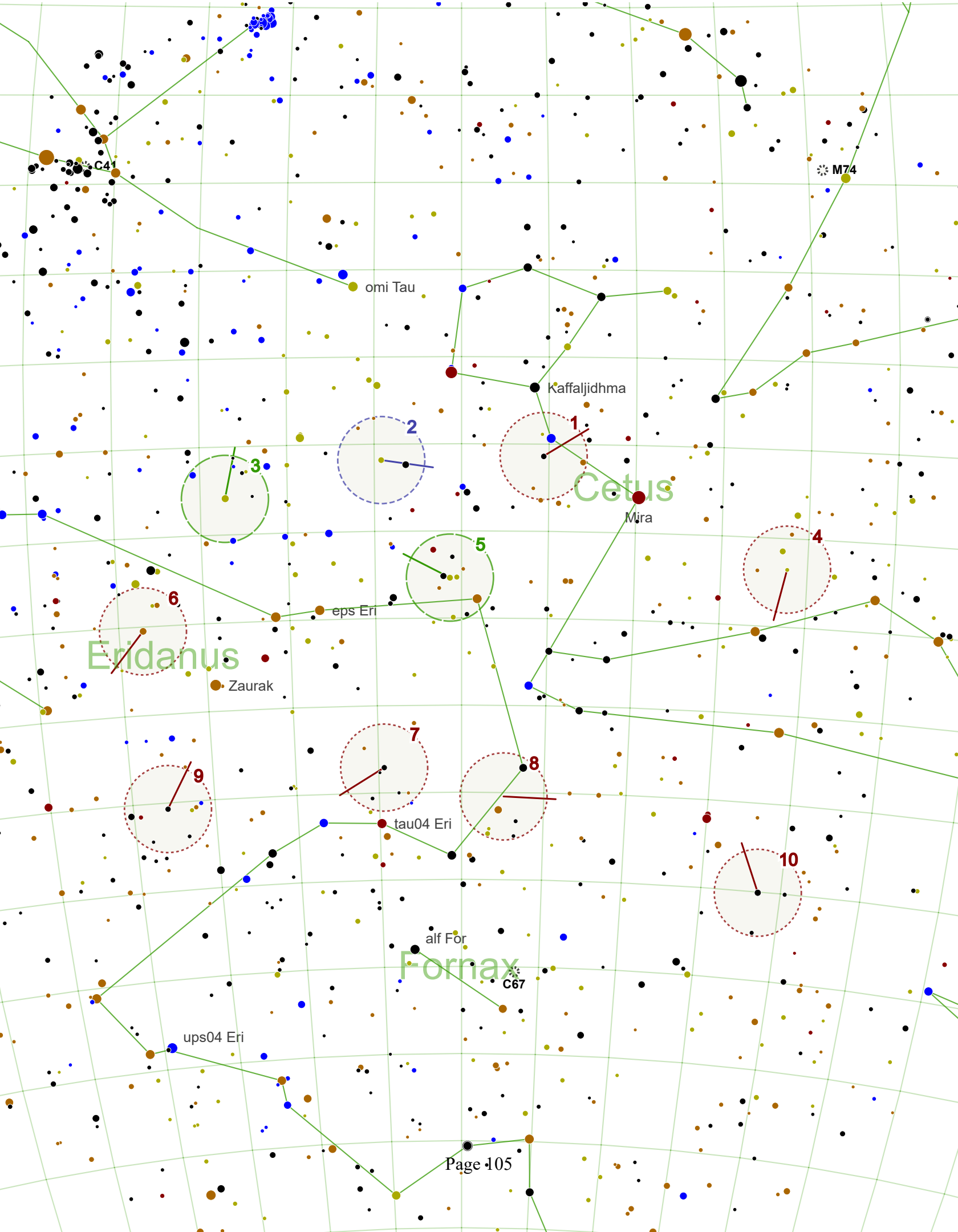
***STF 299 AB**: mag.:3.54 | 6.18, sep.:1.9" , p.a.299°*

A tight pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 110707

Deep Sky Objects

DSO	Mag.	Type
C28	5.7	open cluster
C41	1.0	open cluster
M33	5.7	spiral galaxy
M34	5.5	open cluster
M74	9.4	spiral galaxy


C41
M74
omi Tau
Kaffaljidhma
1
2
3
Cetus
Mira
4
5
6
eps Eri
Eridanus
Zaurak
7
8
9
tau04 Eri
10
alf For
Fornax
C67
ups04 Eri

November: -10° South (1)

1: 84 Cet (RA: 02 41 14, DEC: -00 41 44)

***STF 295**: mag.:5.82 | 9.68, sep.:3.8″ , p.a.301°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 130055

2: 95 Cet (RA: 03 18 22, DEC: -00 55 49)

***AC 2 AB**: mag.:5.6 | 7.97, sep.:1.2″ , p.a.262°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 130408

3: 32 Eri (RA: 03 54 17, DEC: -02 57 17)

***STF 470 AB**: mag.:4.8 | 5.89, sep.:6.9″ , p.a.349°*

A close double with bright components; yellow and white.

This double offers a very strong color contrast, because of the intrinsic color of the stars and their apparent brilliance.

Identifiers: 32 Eri | SAO 130806 | HIP 18255 | GDR2 73003772032

4: BU 6 AB (RA: 01 44 44, DEC: -06 45 58)

***BU 6 AB**: mag.:6.65 | 8.91, sep.:2.2″ , p.a.165°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

5: Rho2 Eri (RA: 03 02 42, DEC: -07 41 08)

***BU 11**: mag.:5.4 | 8.9, sep.:1.4″ , p.a.63°*

A bright yellow-orange star with an extremely close, faint companion.

Rho2 is the central star of asterism of three equally bright stars in a 1° long line, namely Rho1, Rho2 and Rho3 Eridani.

Identifiers: Rho2 Eri | SAO 130254 | HIP 14168

6: 39 Eri (RA: 04 14 24, DEC: -10 15 21)

***STF 516 AB**: mag.:5.03 | 8.53, sep.:6.4″ , p.a.143°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 149478

7: HJ 3565 (RA: 03 18 41, DEC: -18 33 35)

***HJ 3565**: mag.:5.88 | 8.17, sep.:8″ , p.a.122°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 148897

8: HJ 3533 (RA: 02 49 47, DEC: -20 14 46)

***HJ 3533**: mag.:7.56 | 8.19, sep.:37.8″ , p.a.267°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 168080

9: SRT 2 (RA: 04 11 36, DEC: -20 21 22)

***SRT 2**: mag.:5.82 | 7.68, sep.:61.8″ , p.a.334°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 169206

10: Eps Scl (RA: 01 45 39, DEC: -25 03 09)

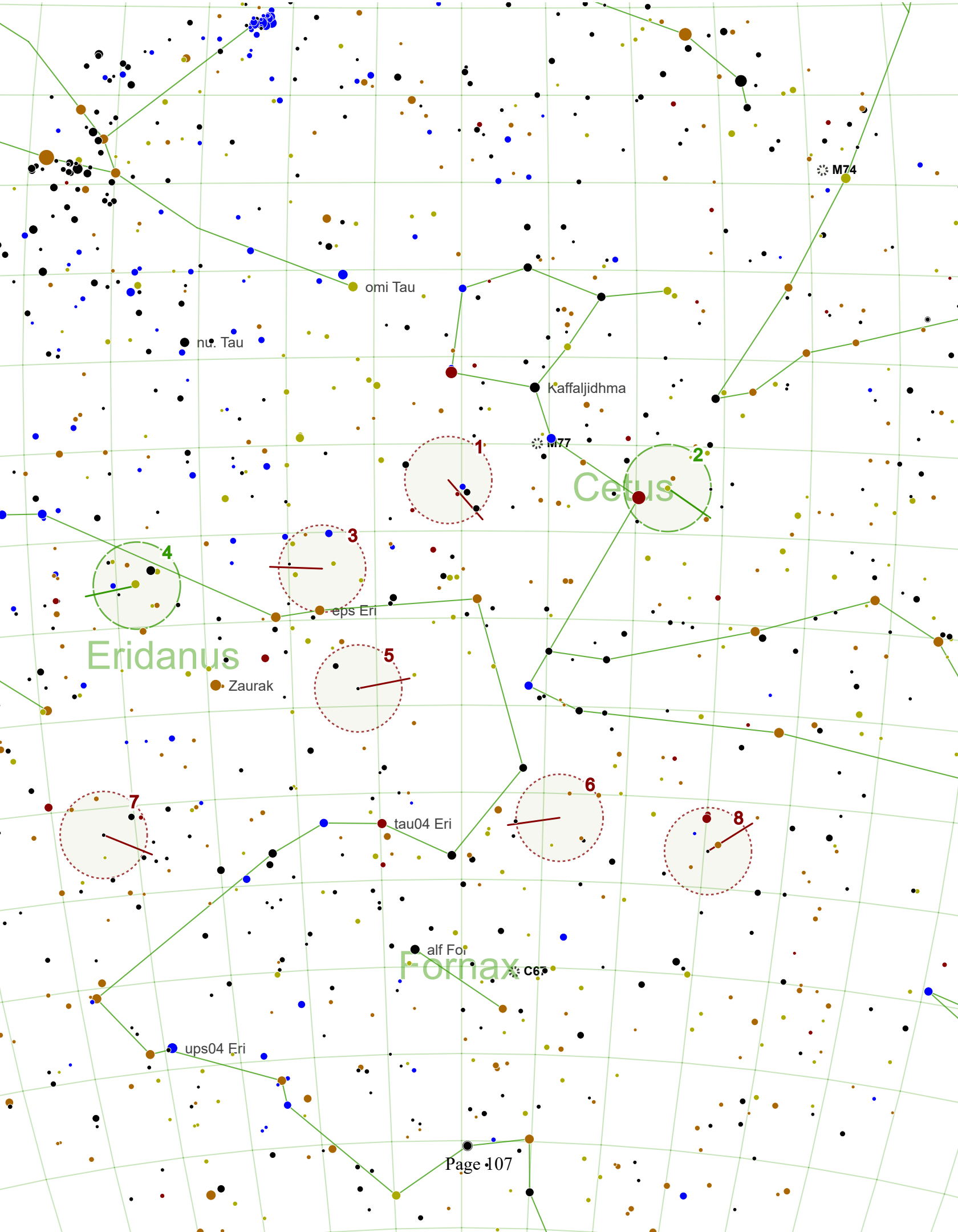
***HJ 3461 AB**: mag.:5.38 | 8.5, sep.:5.1″ , p.a.18°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 167275

Deep Sky Objects

DSO	Mag.	Type
C41	1.0	open cluster
C67	9.2	barred spiral galaxy
M74	9.4	spiral galaxy


M74
omi Tau
nu. Tau
Kaffaljidhma
M77
1
2
Cetus
3
4
eps Eri
Eridanus
5
Zaurak
6
7
tau04 Eri
8
alf For
Fornax
C67
ups04 Eri

November: -10° South (2)

1: STF 341 AB (RA: 03 03 02, DEC: -02 05 11)

***STF 341 AB**: mag.:7.57 | 9.97, sep.:8.7″ , p.a.221°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

2: 66 Cet (RA: 02 12 48, DEC: -02 23 37)

***STF 231 AB**: mag.:5.72 | 7.71, sep.:16.8″ , p.a.235°*

A comfortably separated yellow and blue pair.

Nearby Mira is a wildly variable star, varying between magnitude 3.0 and 10.1 over a period of 332 days. Sometimes Mira peaks at magnitude 2.0 but this is rare. The next peaks in visual luminosity are at 2021-08-18, 2022-07-16, and 2023-06-13.

Identifiers: 66 Cet | SAO 129752 | HIP 10305 | TY2 4690-01110-1

3: STF 411 AB (RA: 03 32 15, DEC: -07 05 24)

***STF 411 AB**: mag.:7.36 | 9.19, sep.:18.8″ , p.a.88°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

4: Omicron2 Eri (RA: 04 15 16, DEC: -07 39 10)

***STF 518 A,BC**: mag.:4.43 | 9.31, sep.:82.7″ , p.a.102°*

A brilliant yellow-orange primary distantly separated from a dim white companion.

The secondary component is a white dwarf (spectral class DA3). The primary is is an orange dwarf, and only shines so brightly in our skies as the system lies just 16 light-years from Earth.

Identifiers: Omicron2 Eri | SAO 131063 | HIP 19849

5: BU 12 (RA: 03 24 25, DEC: -13 59 35)

***BU 12**: mag.:7.02 | 9.13, sep.:2.4″ , p.a.281°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 148943

6: HJ 3511 (RA: 02 35 59, DEC: -21 24 13)

***HJ 3511**: mag.:7.17 | 8.66, sep.:14.7″ , p.a.98°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 167903

7: BU 184 (RA: 04 27 55, DEC: -21 30 15)

***BU 184**: mag.:7.4 | 7.7, sep.:1.9″ , p.a.248°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 169475

8: AA Cet (RA: 01 59 01, DEC: -22 55 11)

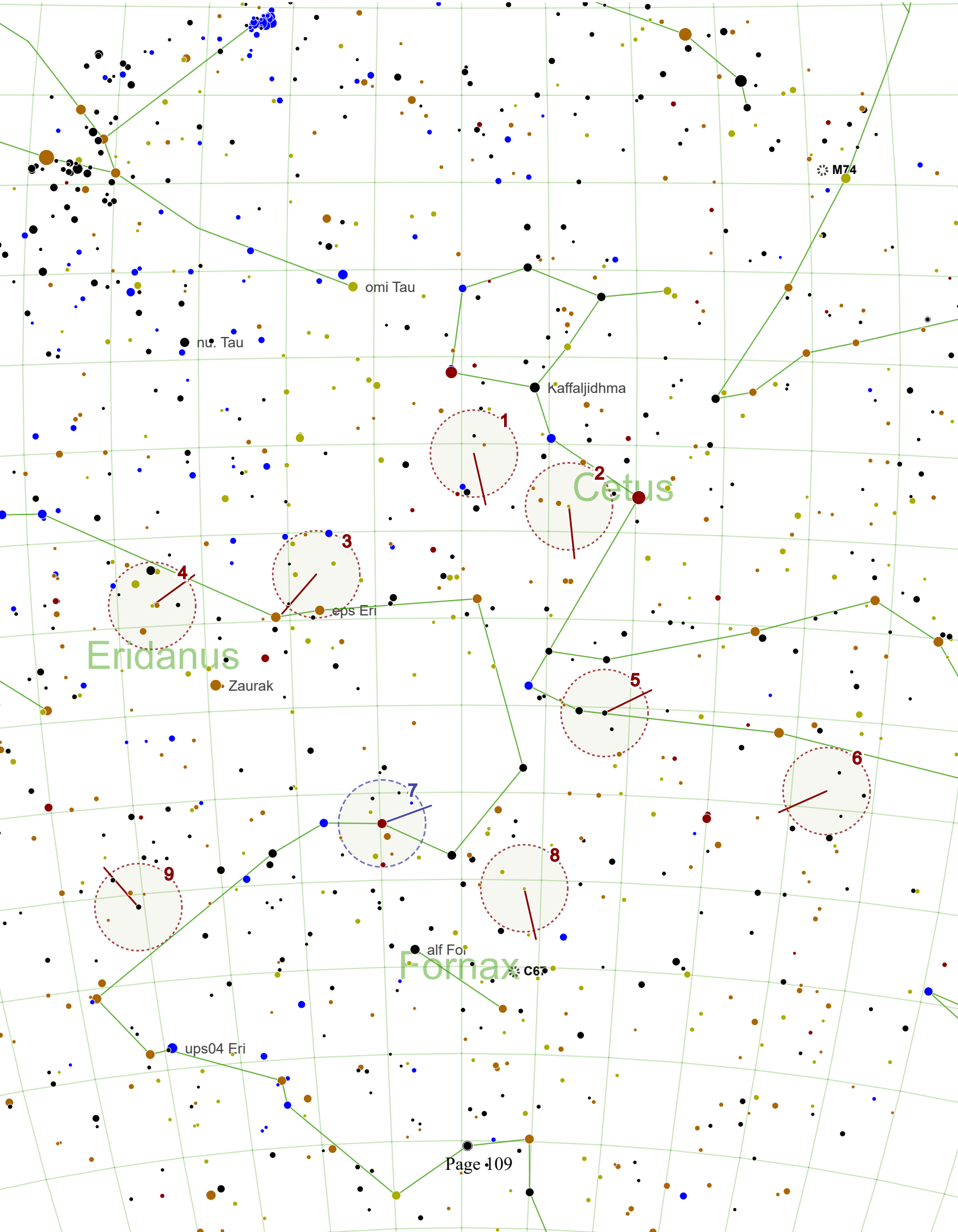
***H 2 58 AB**: mag.:7.28 | 7.56, sep.:8.7″ , p.a.302°*

A close pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 167451

Deep Sky Objects

DSO	Mag.	Type
C67	9.2	barred spiral galaxy
M74	9.4	spiral galaxy
M77	8.9	spiral galaxy


M74
omi Tau
nu. Tau
Kaffaljidhma
1
2
Cetus
3
4
eps Eri
Eridanus
Zaurak
5
6
7
8
9
alf For
Fornax
C67
ups04 Eri

November: -10° South (3)

1: STF 330 (RA: 02 57 11, DEC: -00 34 28)

***STF 330**: mag.:7.25 | 9.06, sep.:8.9″ , p.a.193°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 130205

2: 79 Cet (RA: 02 35 20, DEC: -03 33 38)

***MUG 2 AB**: mag.:5.7 | 9.3, sep.:6.3″ , p.a.186°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO

3: CLL 2 (RA: 03 33 38, DEC: -07 24 54)

***CLL 2**: mag.:7.61 | 7.96, sep.:66.7″ , p.a.139°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO

4: HJ 2224 (RA: 04 11 56, DEC: -08 50 15)

***HJ 2224**: mag.:6.55 | 9.76, sep.:57.1″ , p.a.306°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

5: AB Cet (RA: 02 26 00, DEC: -15 20 28)

***H 3 80 AB**: mag.:5.88 | 9.1, sep.:12.2″ , p.a.296°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 148386

6: HJ 2052 (RA: 01 31 34, DEC: -19 01 23)

***HJ 2052**: mag.:6.86 | 7.47, sep.:80.8″ , p.a.114°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 147861

7: Tau4 Eri (RA: 03 19 31, DEC: -21 45 28)

***JC 1 AB**: mag.:3.91 | 9.5, sep.:5.8″ , p.a.290°*

A close pairing of a brilliant primary and a faint companion.

Identifiers: SAO 168460

8: BSO 1 AB (RA: 02 44 15, DEC: -25 29 44)

***BSO 1 AB**: mag.:7.04 | 8.5, sep.:12.6″ , p.a.193°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 168012

9: HJ 3644 AB,D (RA: 04 21 31, DEC: -25 43 42)

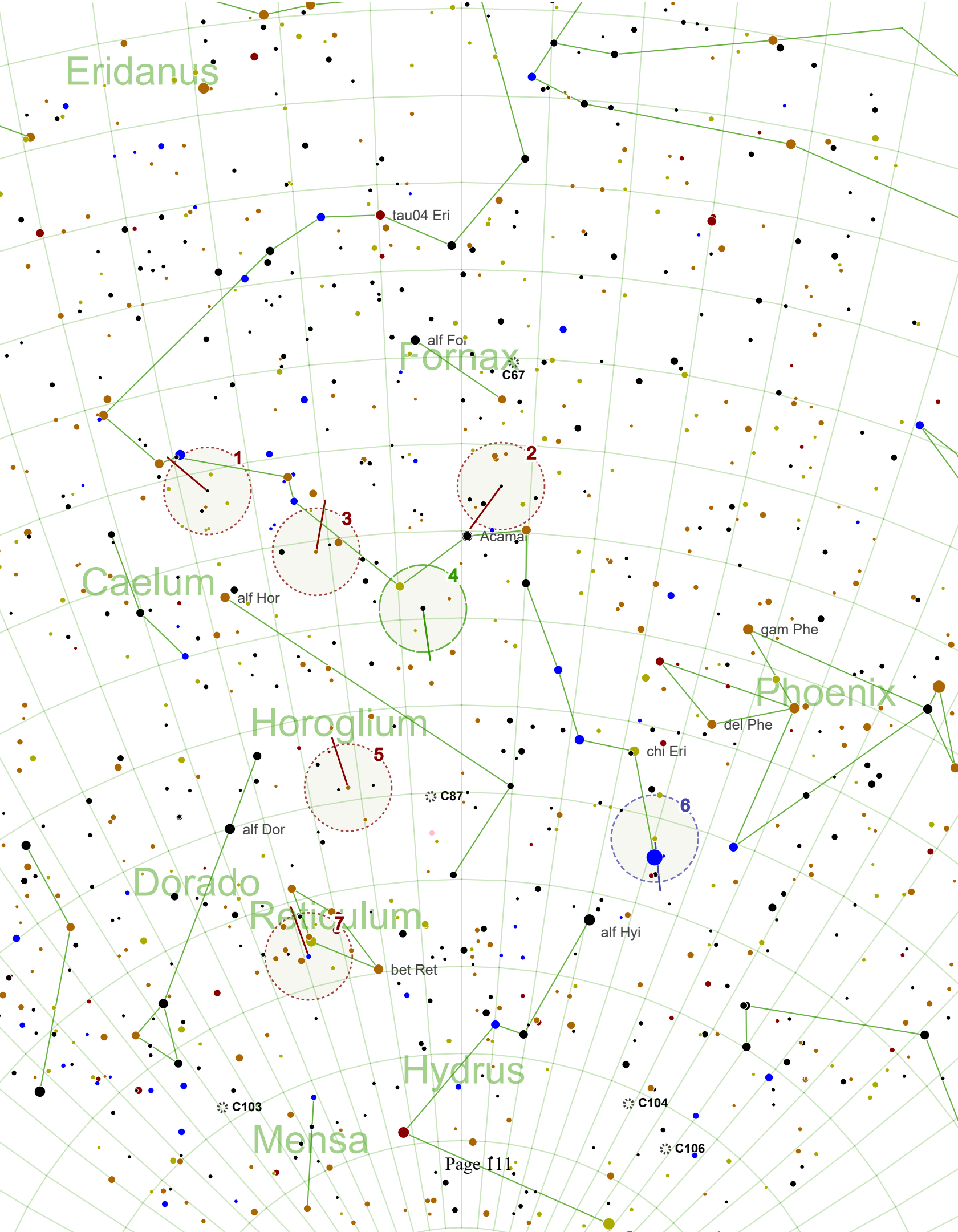
***HJ 3644 AB,D**: mag.:6.15 | 8.23, sep.:43.7″ , p.a.41°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 169368

Deep Sky Objects

DSO	Mag.	Type
C67	9.2	barred spiral galaxy
M74	9.4	spiral galaxy


Eridanus
tau04 Eri
alf For
Fornax
C67
1
2
3
4
Acamar
Caelum
alf Hor
gam Phe
Phoenix
del Phe
Horoglium
5
chi Eri
C87
6
alf Dor
Dorado
Reticulum
7
alf Hyi
bet Ret
Hydrus
C103
C104
Mensa
C106

November: -45° South (1)

1: HJ 3628 (RA: 04 12 31, DEC: -36 09 09)

HJ 3628*: mag.:7.17 | 7.95, sep.:49.7″ , p.a.50°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 194831

2: HJ 3532 (RA: 02 48 38, DEC: -37 24 04)

HJ 3532*: mag.:7.01 | 8.11, sep.:5.3″ , p.a.144°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 193926

3: HJ 3589 AB (RA: 03 44 06, DEC: -40 39 37)

HJ 3589 AB*: mag.:6.65 | 9.29, sep.:5″ , p.a.350°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 216459

4: HJ 3556 (RA: 03 12 26, DEC: -44 25 11)

HJ 3556 AB,C*: mag.:6.42 | 8.76, sep.:3.7″ , p.a.188°*

A yellowish primary very close to significantly fainter secondary.

The primary is itself a double but at barely 0.2" separation is unsplittable in amateur instruments.

Identifiers: HJ 3556 | SAO 216209 | HIP 14913 | GDR2 74392311168

5: HJ 3592 (RA: 03 44 34, DEC: -54 16 27)

HJ 3592*: mag.:6.47 | 9.26, sep.:4.9″ , p.a.18°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 233252

6: p Eri (RA: 01 39 48, DEC: -56 11 36)

DUN 5*: mag.:5.78 | 5.9, sep.:11.6″ , p.a.186°*

A comfortably separated pairing of a bright primary and a bright companion.

Identifiers: SAO 232492

7: The Ret (RA: 04 17 40, DEC: -63 15 20)

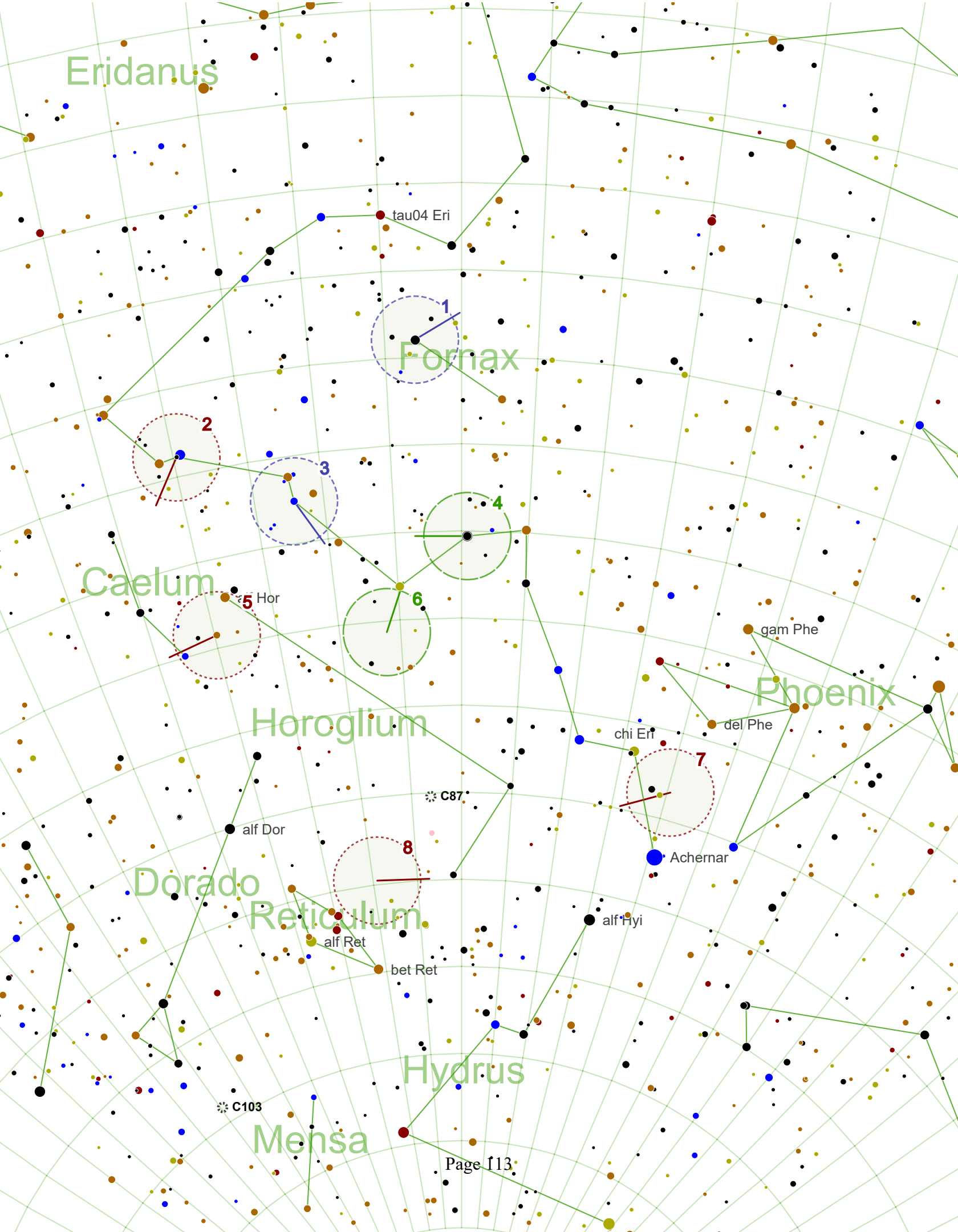
RMK 3*: mag.:6.04 | 7.67, sep.:5.6″ , p.a.20°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 248986

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C104	6.6	globular cluster
C106	4.0	globular cluster
C67	9.2	barred spiral galaxy
C87	8.4	globular cluster


Eridanus
tau04 Eri
1
Fornax
2
3
4
Caelum
5
Hor
6
gam Phe
Phoenix
del Phe
Horoglium
chi Eri
7
C87
alf Dor
8
Achernar
Dorado
Reticulum
alf Hyi
alf Ret
bet Ret
Hydrus
C103
Mensa

November: -45° South (2)

1: Fornacis (RA: 03 12 05, DEC: -28 59 15)

HJ 3555*: mag.:3.98 | 7.19, sep.:5.4″ , p.a.301°*

A close pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 168373

2: HJ 3642 AB (RA: 04 19 03, DEC: -33 54 16)

HJ 3642 AB*: mag.:6.51 | 8.73, sep.:5.2″ , p.a.157°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 194923

3: f Eri (RA: 03 48 36, DEC: -37 37 13)

DUN 16*: mag.:4.72 | 5.25, sep.:8.2″ , p.a.216°*

A close pairing of a bright primary and a bright companion.

Identifiers: SAO 194551

4: Theta Eri (RA: 02 58 16, DEC: -40 18 17)

PZ 2*: mag.:3.2 | 4.12, sep.:8.2″ , p.a.90°*

A close, balanced double composed of two brilliant white stars.

The system is composed of Theta1 and Theta2 Eridani and bears the proper name Acamar. In classical Greece this system marked the end of the river constellation Eridani, while in modern times the river continues south to the similarly named Achernar (both Achernar and Acamar mean "end of the river").

Identifiers: Theta Eri | SAO 216113 | HIP 13847 | GDR2 71869592832

5: HJ 3643 (RA: 04 19 17, DEC: -44 16 04)

HJ 3643*: mag.:5.45 | 8.64, sep.:70.3″ , p.a.115°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 216749

6: HJ 3576 (RA: 03 24 34, DEC: -45 39 47)

HJ 3576*: mag.:7.34 | 8.82, sep.:2.8″ , p.a.342°*

A very close pair with a white primary.

It is not clear if this pair is gravitationally bound. The primary is 449 light-years from Earth.

Identifiers: HJ 3576 | SAO 216302 | HIP 15883 | GDR2 61065332096

7: DUN 4 (RA: 01 38 49, DEC: -53 26 20)

DUN 4*: mag.:7.15 | 8.49, sep.:10.2″ , p.a.105°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 232483

8: DUN 14 (RA: 03 38 10, DEC: -59 46 35)

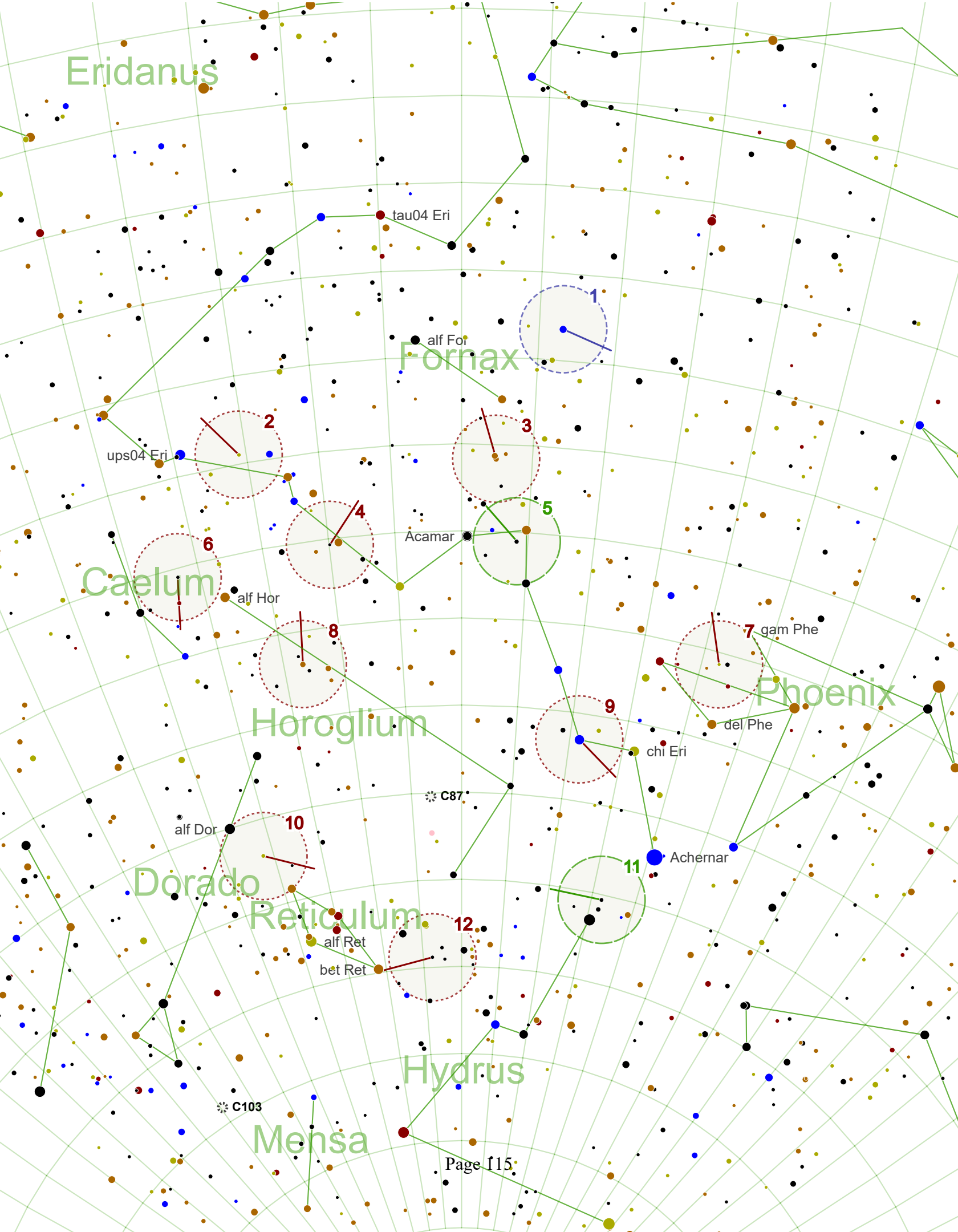
DUN 14*: mag.:7 | 8.34, sep.:57.4″ , p.a.272°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 233197

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C87	8.4	globular cluster


Eridanus
tau04 Eri
1
alf For
Fornax
2
ups04 Eri
3
4
5
Acamar
6
Caelum
alf Hor
8
7
gam Phe
Phoenix
Horoglium
9
del Phe
chi Eri
C87
alf Dor
10
Achernar
11
Dorado
Reticulum
12
alf Ret
bet Ret
Hydrus
C103
Mensa

November: -45° South (3)

1: Ome For (RA: 02 33 51, DEC: -28 13 56)

HJ 3506*: mag.:4.95 | 7.71, sep.:11″, p.a.246°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 167882

2: BU 1004 AB (RA: 04 02 03, DEC: -34 28 56)

BU 1004 AB*: mag.:7.26 | 7.94, sep.:1.1″, p.a.46°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 194709

3: Eta2 For (RA: 02 50 15, DEC: -35 50 37)

HJ 3536*: mag.:6.02 | 9.97, sep.:4.9″, p.a.16°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 193940

4: DUN 15 (RA: 03 39 45, DEC: -40 21 08)

DUN 15*: mag.:6.93 | 7.72, sep.:7.5″, p.a.327°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 216431

5: HJ 3527 (RA: 02 43 20, DEC: -40 31 39)

HJ 3527 AB*: mag.:6.97 | 7.2, sep.:2.3″, p.a.41°*

A tight pair of blue stars with third distant and dim companion.

This system is 595 light-years from the Earth.

Identifiers: HJ 3527 | SAO 216019 | HIP 12708 | GDR2 04644963968

6: HJ 3650 AB (RA: 04 26 38, DEC: -40 31 46)

HJ 3650 AB*: mag.:7.04 | 8.23, sep.:2.8″, p.a.183°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 216803

7: I 51 (RA: 01 34 21, DEC: -45 41 28)

I 51*: mag.:7.14 | 9.35, sep.:1.6″, p.a.8°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 215567

8: SKF 949 (RA: 03 53 33, DEC: -46 53 37)

SKF 949*: mag.:6.06 | 8.47, sep.:76.4″, p.a.3°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 216540

9: Phi Eri (RA: 02 16 31, DEC: -51 30 44)

DUN 6 AB*: mag.:3.52 | 9.32, sep.:89.6″, p.a.224°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 232696

10: RMK 4 (RA: 04 24 12, DEC: -57 04 17)

RMK 4*: mag.:6.87 | 7.23, sep.:4.5″, p.a.256°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 233506

11: HJ 3475 (RA: 01 55 20, DEC: -60 18 45)

HJ 3475*: mag.:7.18 | 7.23, sep.:2.5″, p.a.78°*

An equal and extremely tight pair of yellowish stars.

The minimally brighter primary is a F-type main sequence star 181 light-years from Earth.

Identifiers: HJ 3475 | SAO 248461 | HIP 8957 | GDR2 54010869760

12: DUN 12 A,BC (RA: 03 15 11, DEC: -64 26 38)

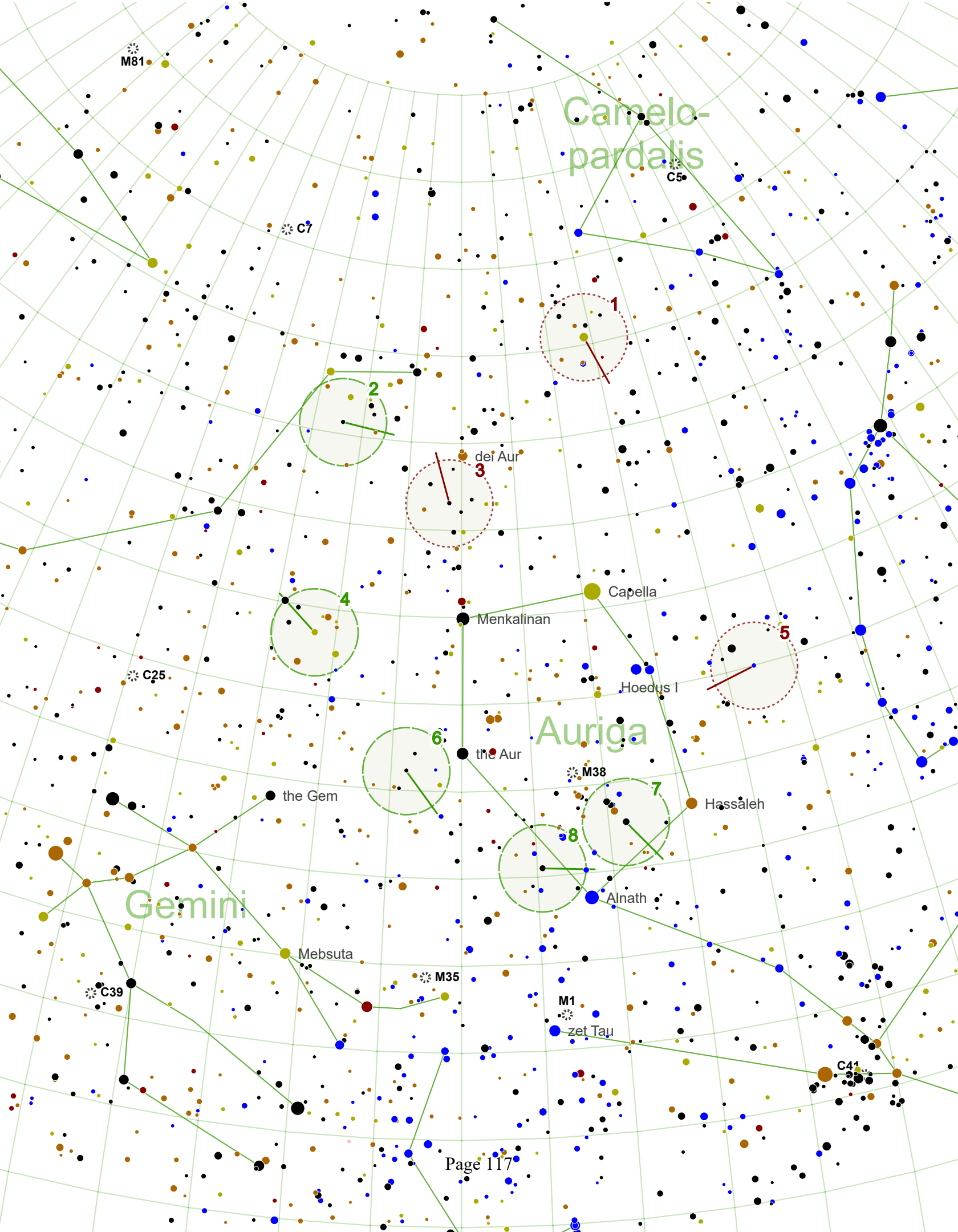
DUN 12 A,BC*: mag.:6.68 | 8.96, sep.:19.2″, p.a.105°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 248764

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C87	8.4	globular cluster


M81
Camelo-
pardalis
C5
C7
1
2
dei Aur
3
4
Capella
Menkalinan
5
C25
Hoedus I
Auriga
6
the Aur
M38
7
the Gem
Hassaleh
8
Alnath
Gemini
Mebsuta
M35
C39
M1
zet Tau
C41

December: 45° North (1)

1: Bet Cam (RA: 05 03 25, DEC: +60 26 32)

***S 459 AB**: mag.:4.12 | 7.44, sep.:84.2″ , p.a.209°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 13351

2: Struve 958 (RA: 06 48 12, DEC: +55 42 15)

***STF 958 AB**: mag.:6.28 | 6.34, sep.:4.5″ , p.a.256°*

Two tightly bound, perfectly matched bright stars.

Identifiers: Struve 958 | SAO 25962 | HIP 32609 | GDR2 8386708864

3: 35 Cam (RA: 06 04 29, DEC: +51 34 24)

***STT 128 A,BC**: mag.:6.41 | 9.26, sep.:39.5″ , p.a.15°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 25548

4: Psi5 Aur (RA: 06 46 44, DEC: +43 34 37)

***SHJ 75 AB**: mag.:5.31 | 8.65, sep.:29.4″ , p.a.42°*

A very wide yellow-blue duo. The primary is very bright and strongly colored.

With Psi 5 Aurigae centered in the finder, bright open cluster NGC 2281 is is just on the southern edge of the finder.

Identifiers: Psi5 Aur | SAO 41330 | HIP 32480 | GDR2 4452337792

5: STF 552 (RA: 04 31 24, DEC: +40 00 37)

***STF 552**: mag.:6.78 | 7.18, sep.:9″ , p.a.117°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 57278

6: Struve 872 (RA: 06 15 39, DEC: +36 08 55)

***STF 872 AB**: mag.:6.89 | 7.38, sep.:11.4″ , p.a.216°*

An easily separated pair of stars. Neither star is particularly bright, perhaps leading to fanciful star colors variously reported as pinkish or lilac.

Theta itself is a challenging double with components separated by 4.1" and 4.6 magnitudes.

Identifiers: Struve 872 | SAO 58905 | HIP 29725 | GDR2 11912257664

7: 14 Aur (RA: 05 15 24, DEC: +32 41 15)

***STF 653 AC**: mag.:5.03 | 7.33, sep.:14.3″ , p.a.225°*

A bright yellow-blue pairing with comfortable separation.

The bright emission Flaming Star nebula is two degrees to the north of this double.

Identifiers: 14 Aur | SAO 57799 | HIP 24504 | GDR2 8220217344

8: 26 Aur (RA: 05 38 38, DEC: +30 29 33)

***STF 753 AB,C**: mag.:5.46 | 8.41, sep.:12.4″ , p.a.269°*

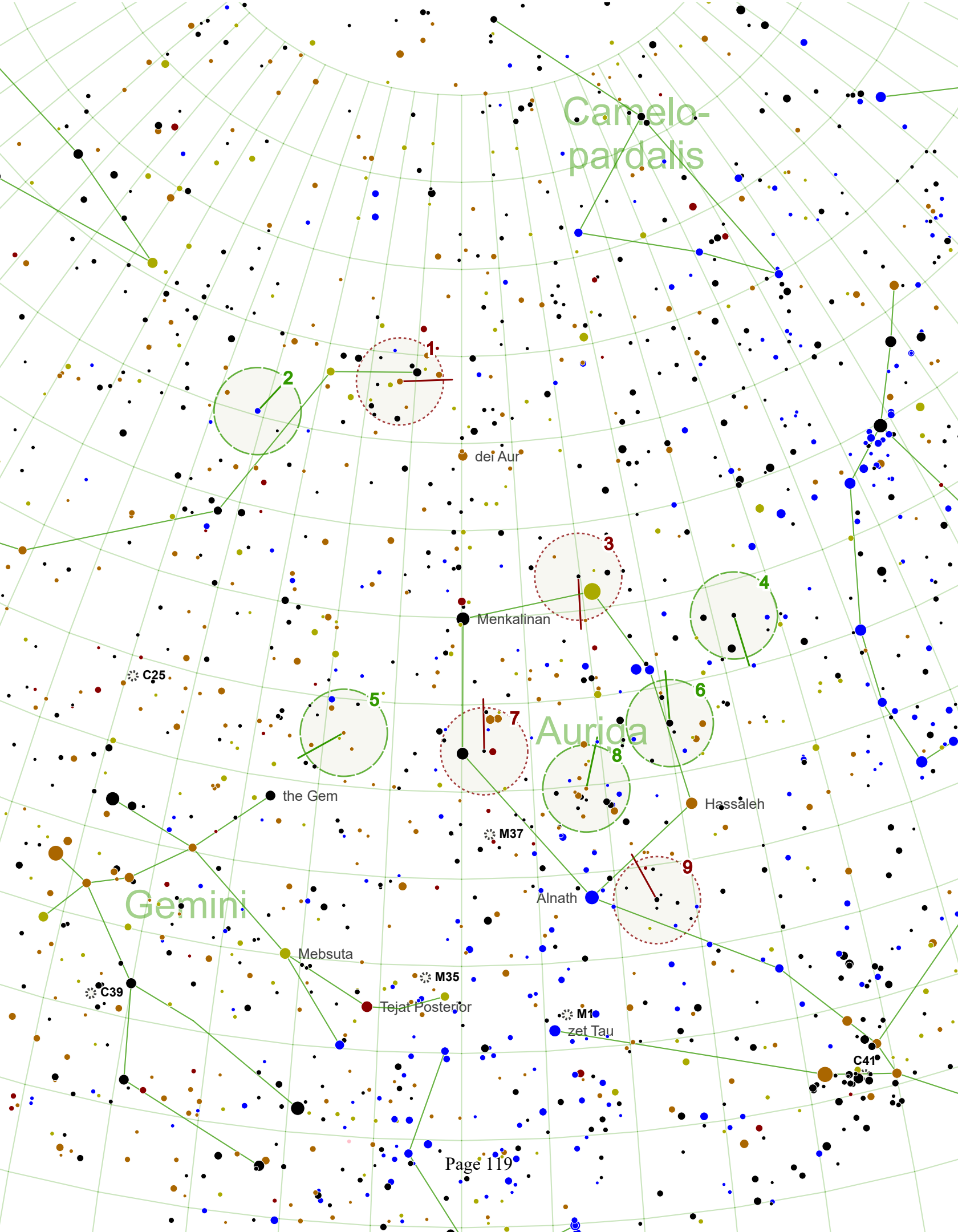
A bright yellow primary easily separated from a significantly fainter blue companion.

Wonderful open cluster Messier 37 lies just three degrees to the north-east.

Identifiers: 26 Aur | SAO 58280 | HIP 26536 | GDR2 41986921216

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C39	9.9	planetary nebula
C41	1.0	open cluster
C5	9.2	spiral galaxy
C7	8.9	spiral galaxy
M1	8.4	supernova remnant
M35	5.3	open cluster
M38	7.4	open cluster
M81	6.9	spiral galaxy


Camelo-
pardalis
1
2
dei Aur
3
4
Menkalinan
C25
5
6
7
Auriga
8
the Gem
Hassaleh
M37
9
Alnath
Gemini
Mebsuta
M35
C39
Tejat Posterior
M1
zet Tau
C41

December: 45° North (2)

1: S 514 AC (RA: 06 26 49, DEC: +58 25 03)

***S 514 AC**: mag.:5.38 | 7.92, sep.:94.9″ , p.a.272°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 25733

2: 19 Lyn (RA: 07 22 52, DEC: +55 16 53)

***STF 1062 AB**: mag.:5.76 | 6.71, sep.:13.8″ , p.a.317°*

An easily separated and reasonably balanced yellow-blue pairing.

This system of two hot B-class stars is about 680 light-years away. The primary is 166 times more luminous than the Sun.

Identifiers: 19 Lyn | SAO 26312 | HIP 35785 | GDR2 8587778432

3: STF 681 AB (RA: 05 20 39, DEC: +46 57 50)

***STF 681 AB**: mag.:6.61 | 9.21, sep.:23.2″ , p.a.183°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 40251

4: 57 Per (RA: 04 33 25, DEC: +43 03 50)

***SHJ 44 AB**: mag.:6.12 | 6.83, sep.:121.4″ , p.a.197°*

A distantly separated pair of moderately bright, balanced, white stars.

This pair is very wide nd best viewed in the finder scope or binoculars. Open cluster NGC 1582 lies a degree to the north.

Identifiers: 57 Per | SAO 39604 | HIP 21242

5: STT147 (RA: 06 34 19, DEC: +38 04 34)

***STT 147 A,CD**: mag.:6.77 | 9.85, sep.:44.5″ , p.a.119°*

***STT 147 AB**: mag.:6.77 | 8.69, sep.:42.7″ , p.a.74°*

A moderately bright yellow primary with two small blue companions, forming a widely separated triangle.

Identifiers: STT147 | SAO 59230 | HIP 31340 | GDR2 4998228864

6: Omega Aur (RA: 04 59 15, DEC: +37 53 25)

***STF 616 AB**: mag.:5 | 8.21, sep.:4.7″ , p.a.5°*

A yellow primary with a closely bound faint orange companion.

Open star cluster NGC 1778 lies two degrees to the south east of this double.

Identifiers: Omega Aur | SAO 57548 | HIP 23179 | GDR2 3956317312

7: BU 1053 (RA: 05 53 29, DEC: +37 20 21)

***BU 1053**: mag.:6.91 | 8.83, sep.:1.9″ , p.a.1°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 58535

8: Struve 698 (RA: 05 25 13, DEC: +34 51 19)

***STF 698 AB**: mag.:6.65 | 8.33, sep.:31.4″ , p.a.348°*

A wide orange-blue pair. The two stars are separated in brightness by almost exactly two magnitudes.

Identifiers: Struve 698 | SAO 57999 | HIP 25343 | GDR2 4103451264

9: V1156 Tau (RA: 05 09 45, DEC: +28 01 50)

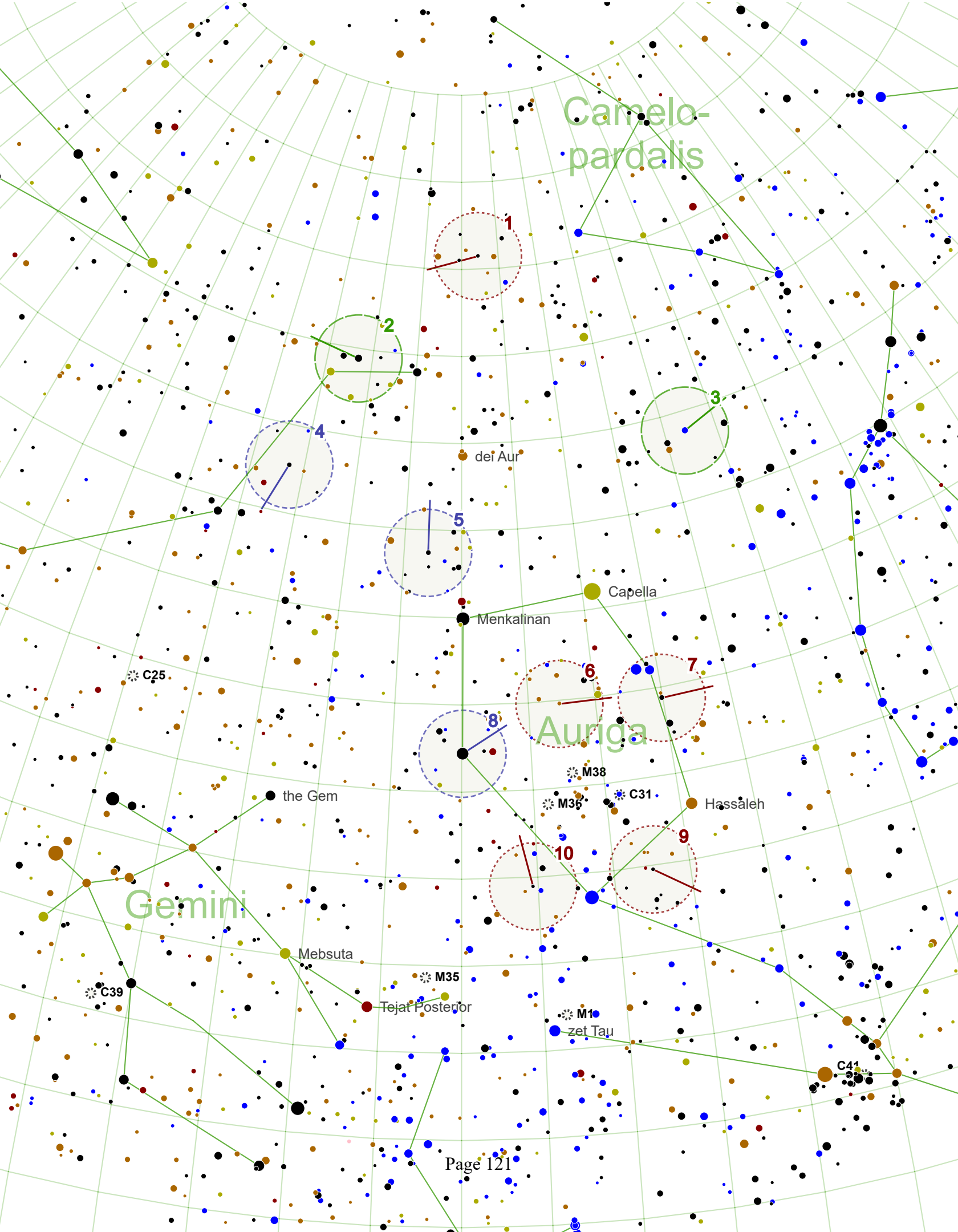
***STF 645 A,BC**: mag.:6.04 | 9.11, sep.:11.3″ , p.a.29°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 76990

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C39	9.9	planetary nebula
C41	1.0	open cluster
M1	8.4	supernova remnant
M35	5.3	open cluster
M37	6.2	open cluster


Camelo-
pardalis
1
2
3
4
5
6
7
8
9
10
dei Aur
Capella
Menkalinan
C25
Auriga
M38
M36
C31
Hassaleh
the Gem
Gemini
Mebsuta
M35
C39
Tejat Posterior
M1
zet Tau
C41

December: 45° North (3)

1: STF 780 AB (RA: 05 51 01, DEC: +65 45 15)

***STF 780 AB**: mag.:6.95 | 8.23, sep.:4″ , p.a.105°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 13627

2: 12 Lyn (RA: 06 46 14, DEC: +59 26 30)

***STF 948 AB**: mag.:5.44 | 6, sep.:1.9″ , p.a.65°*

***STF 948 AC**: mag.:5.44 | 7.05, sep.:8.9″ , p.a.309°*

***STF 948 BC**: mag.:6 | 7.05, sep.:9.9″ , p.a.300°*

A close pair with a bright yellow primary and a reasonably bright blue companion.

Identifiers: 12 Lyn | SAO 25939 | HIP 32438 | GDR2 71970061184

3: 1 Cam (RA: 04 32 02, DEC: +53 54 39)

***STF 550 AB**: mag.:5.78 | 6.82, sep.:10.4″ , p.a.309°*

A reasonably balanced and separated white-blue pair.

Position 1 Camelopardalis on the north-eastern edge of the finder and a bright pair of clusters will come into view on the opposite edge: NGC 1528 and NGC 1545. The clusters are each around the size of the full Moon and separated by 1.5 degrees, so the cluster pair make a nice sight at very low magnification.

Identifiers: 1 Cam | SAO 24672 | HIP 21148 | GDR2 1446188288

4: STF 1009 AB (RA: 07 05 40, DEC: +52 45 31)

***STF 1009 AB**: mag.:6.87 | 7.01, sep.:4.4″ , p.a.148°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 26144

5: 41 Aur (RA: 06 11 37, DEC: +48 42 40)

***STF 845 AB**: mag.:6.16 | 6.86, sep.:7.5″ , p.a.358°*

A close pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 40925

6: STTA 63 (RA: 05 30 45, DEC: +39 49 33)

***STTA 63**: mag.:6.49 | 7.69, sep.:75.2″ , p.a.277°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 58129

7: 5 Aur (RA: 05 00 18, DEC: +39 23 41)

***STT 92 AB**: mag.:6.02 | 9.5, sep.:4.2″ , p.a.283°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 57559

8: The Aur (RA: 05 59 43, DEC: +37 12 46)

***STT 545 AB**: mag.:2.6 | 7.2, sep.:4.1″ , p.a.303°*

A tight pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 58636

9: STTA 61 AB (RA: 05 09 44, DEC: +29 47 55)

***STTA 61 AB**: mag.:6.72 | 8.49, sep.:68.4″ , p.a.245°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 76989

10: STF 764 (RA: 05 41 21, DEC: +29 29 15)

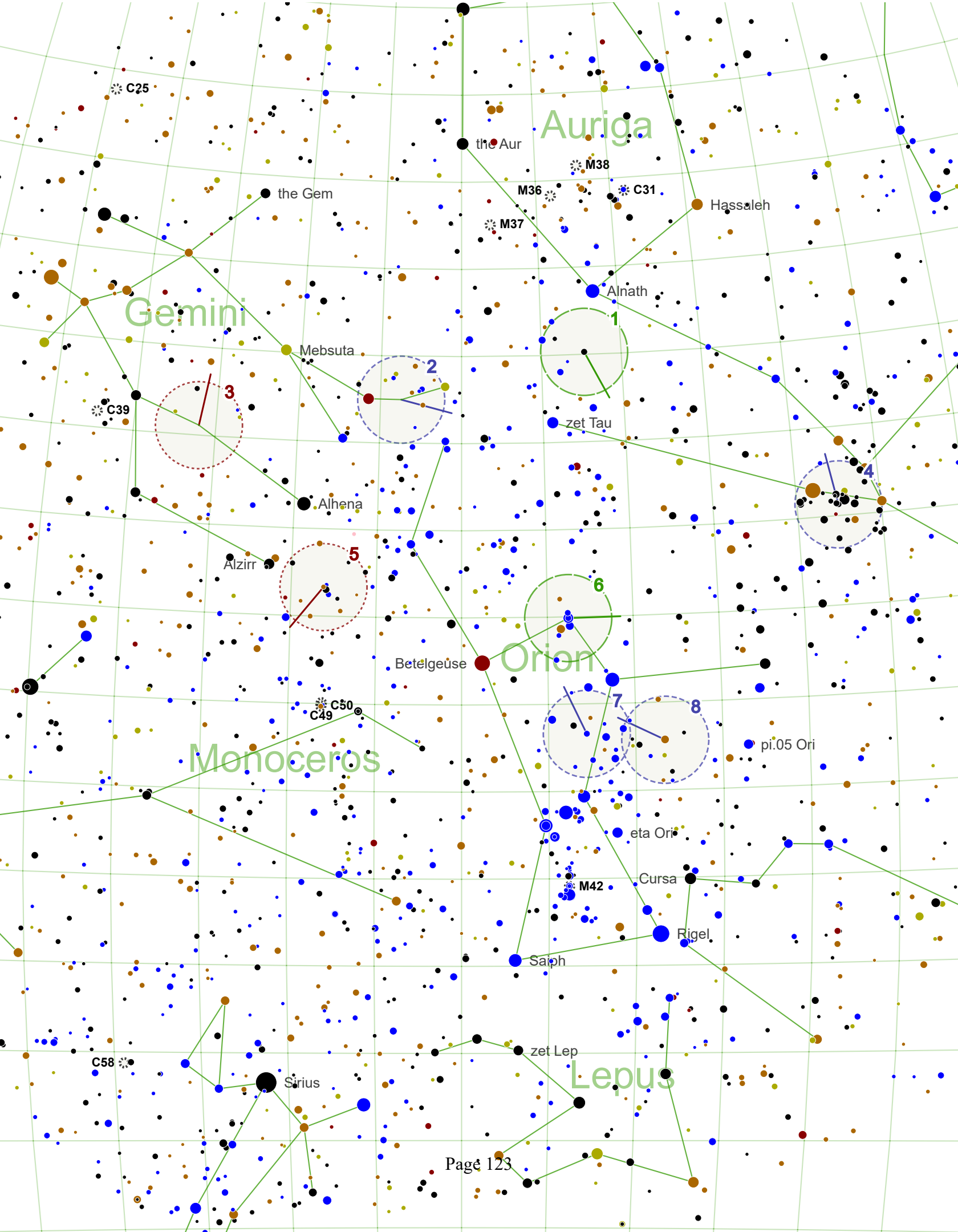
***STF 764**: mag.:6.38 | 7.08, sep.:25.8″ , p.a.15°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 77393

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C31	6.0	bright nebula
C39	9.9	planetary nebula
C41	1.0	open cluster
M1	8.4	supernova remnant
M35	5.3	open cluster
M36	6.3	open cluster
M38	7.4	open cluster


C25
Auriga
the Aur
M38
M36
C31
Hassaleh
the Gem
M37
Alnath
Gemini
1
Mebsuta
2
3
C39
zet Tau
4
Alhena
Alzirr
5
6
Orion
Betelgeuse
C50
C49
7
8
pi.05 Ori
Monoceros
eta Ori
M42
Cursa
Rigel
Saiph
zet Lep
C58
Sirius
Lepus

December: 10° North (1)

1: 118 Tau (RA: 05 29 16, DEC: +25 09 01)

***STF 716 AB**: mag.:5.83 | 6.68, sep.:4.6" , p.a.209°*

A bright white primary with a closely bound yellow secondary. The secondary is reasonably bright, enhancing the color of the pair.

118 Tauri is 118 light-years away. If you position 118 Tauri in the northern quadrant of the finder, the supernova remnant the Crab Nebula will appear on the south-eastern edge of the finder.

Identifiers: 118 Tau | SAO 77201 | HIP 25695 | GDR2 01913604352

2: Propus (RA: 06 14 53, DEC: +22 30 25)

***BU 1008**: mag.:3.52 | 6.15, sep.:1.8" , p.a.255°*

A tight pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 78135

3: SHJ 77 AC (RA: 07 04 07, DEC: +20 34 13)

***SHJ 77 AC**: mag.:4.05 | 7.66, sep.:100.2" , p.a.347°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 79031

4: 80 Tau (RA: 04 30 09, DEC: +15 38 16)

***STF 554**: mag.:5.7 | 8.12, sep.:1.4" , p.a.15°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 93970

5: STT 146 (RA: 06 32 23, DEC: +11 40 25)

***STT 146**: mag.:6.17 | 9.89, sep.:29.2" , p.a.140°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 95803

6: Lamda Ori (RA: 05 35 08, DEC: +09 56 03)

***STF 738 AB**: mag.:3.51 | 5.45, sep.:4.3" , p.a.44°*

***STF 738 AD**: mag.:3.51 | 9.63, sep.:78.5" , p.a.272°*

A close pair of white stars, with a brilliant primary and bright secondary.

Identifiers: Lamda Ori | SAO 112921 | HIP 26207 | GDR2 83942617088

7: 33 Ori (RA: 05 31 15, DEC: +03 17 32)

***STF 729 AB**: mag.:5.71 | 6.74, sep.:1.8" , p.a.26°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 112861

8: Rho Ori (RA: 05 13 17, DEC: +02 51 40)

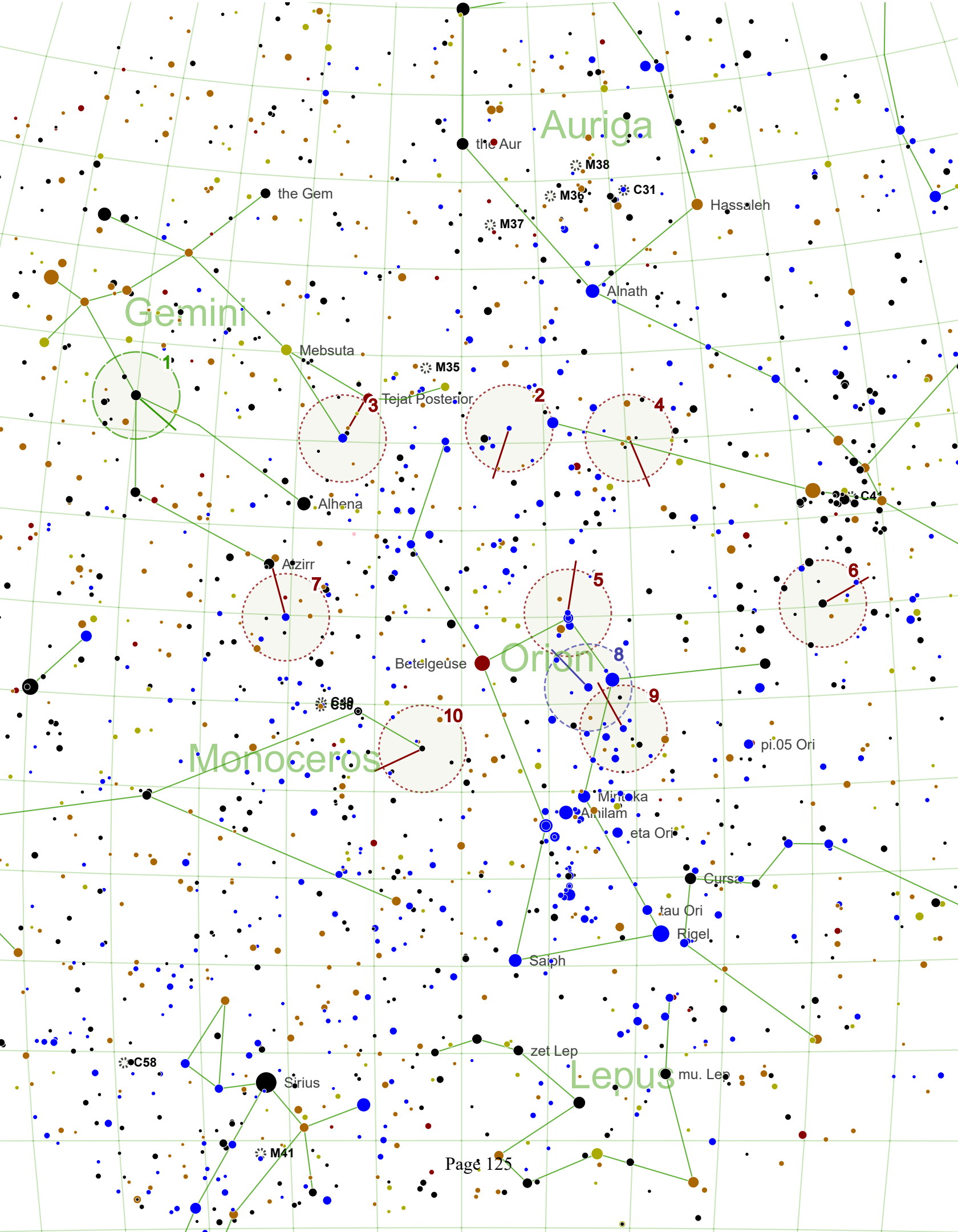
***STF 654 AB**: mag.:4.62 | 8.5, sep.:6.4" , p.a.65°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 112528

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C31	6.0	bright nebula
C39	9.9	planetary nebula
C49	9.0	bright nebula
C50	4.8	open cluster
C58	7.2	open cluster
M36	6.3	open cluster
M37	6.2	open cluster
M38	7.4	open cluster
M42	4.0	diffuse nebula


Auriga
the Aur
M38
M36
C31
Hassaleh
the Gem
M37
Alnath
Gemini
Mebsuta
M35
Tejat Posterior
1
2
3
4
Alhena
C41
Alzirr
7
5
6
Betelgeuse
Orion
8
9
C49
C50
10
Monoceros
pi.05 Ori
Mintaka
Alnilam
eta Ori
Cursa
tau Ori
Rigel
Saiph
zet Lep
C58
Sirius
Lepus
mu. Lep
M41

December: 10° North (2)

1: Wasat (RA: 07 20 07, DEC: +21 58 56)

STF 1066*: mag.:3.55 | 8.18, sep.:5.5″ , p.a.229°*

Delta Geminorum or Wasat is a brilliant white star with a close orange-yellow companion.

The primary is a subgiant star 61 light-years from the Sun. The system is believed to be 1.6 billion years old.

Identifiers: Wasat | SAO 79294 | HIP 35550 | GDR2 1953646464

2: STTA 67 AB,C (RA: 05 48 22, DEC: +20 52 10)

STTA 67 AB,C*: mag.:6.01 | 8.29, sep.:75.4″ , p.a.162°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 77578

3: Nu Gem (RA: 06 28 58, DEC: +20 12 44)

STTA 77 AB*: mag.:4.1 | 8.01, sep.:112.8″ , p.a.330°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 78423

4: STF 680 (RA: 05 19 15, DEC: +20 08 04)

STF 680*: mag.:6.22 | 9.66, sep.:9.1″ , p.a.203°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 77098

5: STT 111 (RA: 05 35 13, DEC: +10 14 24)

STT 111*: mag.:5.65 | 9.68, sep.:2.8″ , p.a.351°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 94671

6: 88 Tau (RA: 04 35 39, DEC: +10 09 39)

SHJ 45 AB*: mag.:4.27 | 7.84, sep.:69.2″ , p.a.300°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 94026

7: STF 950 AC (RA: 06 40 59, DEC: +09 53 45)

STF 950 AB*: mag.:4.66 | 7.79, sep.:3″ , p.a.214°*

STF 950 AC*: mag.:4.66 | 9.9, sep.:16.9″ , p.a.15°*

STF 950 AE*: mag.:4.66 | 8.86, sep.:73.5″ , p.a.139°*

STF 950 AH*: mag.:4.66 | 9.81, sep.:89.6″ , p.a.168°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 114258

8: 32 Ori (RA: 05 30 47, DEC: +05 56 53)

STF 728*: mag.:4.44 | 5.75, sep.:1.4″ , p.a.44°*

A tight pairing of a bright primary and a bright companion.

Identifiers: SAO 112849

9: 23 Ori (RA: 05 22 50, DEC: +03 32 40)

STF 696*: mag.:4.95 | 6.76, sep.:32″ , p.a.29°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 112697

10: STF 855 AB (RA: 06 08 58, DEC: +02 29 59)

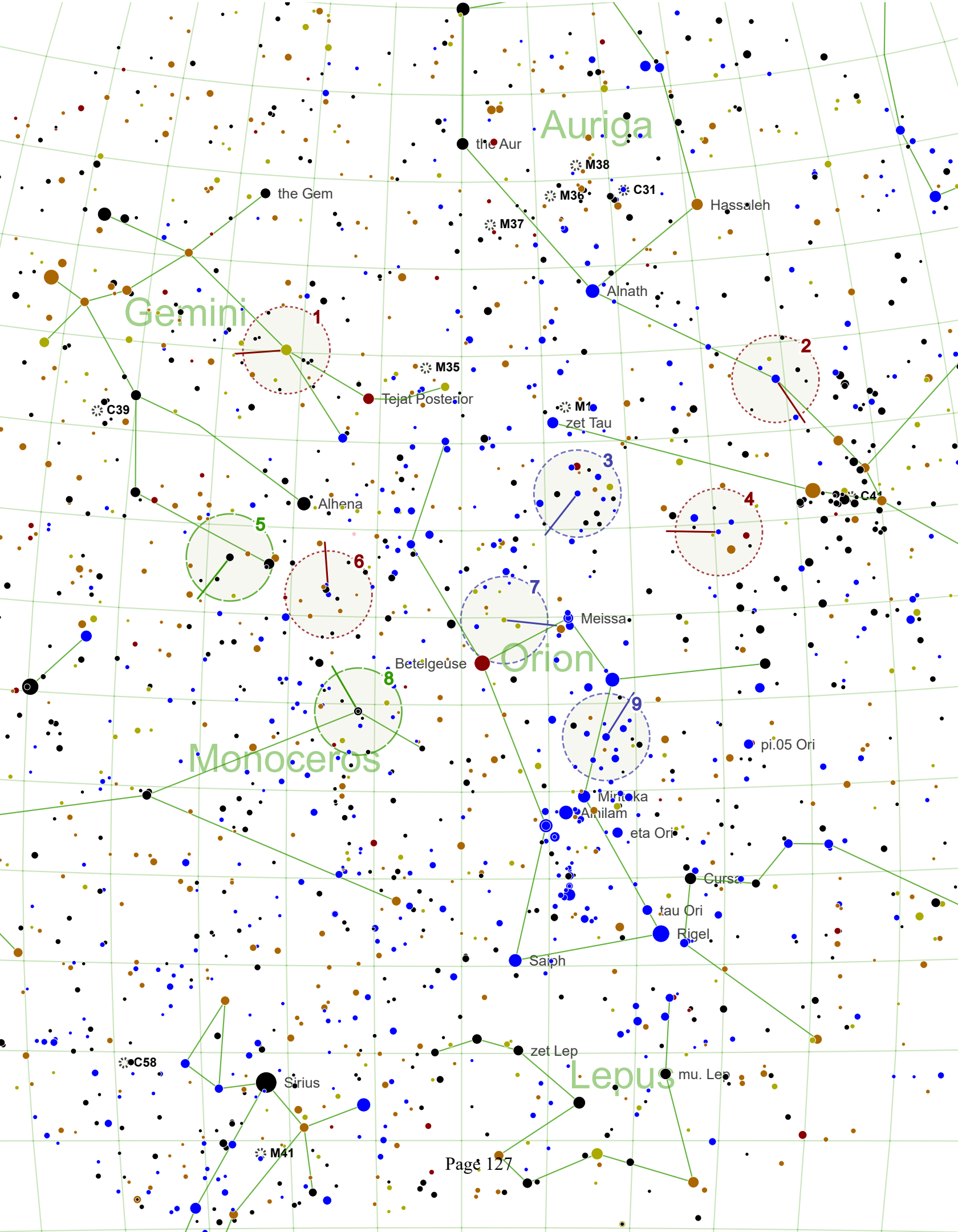
STF 855 AB*: mag.:5.68 | 6.68, sep.:29.1″ , p.a.115°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 113507

Deep Sky Objects

DSO	Mag.	Type
C31	6.0	bright nebula
C41	1.0	open cluster
C49	9.0	bright nebula
C50	4.8	open cluster
C58	7.2	open cluster
M35	5.3	open cluster
M36	6.3	open cluster
M37	6.2	open cluster
M38	7.4	open cluster
M41	4.6	open cluster


Auriga
the Aur
M38
M36
C31
Hassaleh
M37
the Gem
Alnath
Gemini
1
2
M35
Tejat Posterior
C39
M1
zet Tau
3
4
C41
Alhena
5
6
7
Meissa
Orion
Betelgeuse
8
9
pi.05 Ori
Monoceros
Mintaka
Alnilam
eta Ori
Cursa
tau Ori
Rigel
Saiph
zet Lep
C58
Sirius
Lepus
mu. Lep
M41

December: 10° North (3)

1: Mebsuta (RA: 06 43 56, DEC: +25 07 52)

S 533*: mag.:3.14 | 9.64, sep.:109.5″ , p.a.94°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 78682

2: Tau Tau (RA: 04 42 15, DEC: +22 57 25)

S 455 AB*: mag.:4.24 | 7.02, sep.:62.5″ , p.a.214°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 76721

3: STF 730 AB (RA: 05 32 14, DEC: +17 03 29)

STF 730 AB*: mag.:6.06 | 6.44, sep.:9.7″ , p.a.142°*

A close pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 94630

4: SHJ 49 AC (RA: 04 58 59, DEC: +14 32 36)

SHJ 49 AB*: mag.:6.06 | 7.43, sep.:39.3″ , p.a.306°*

SHJ 49 AC*: mag.:6.06 | 9.6, sep.:54″ , p.a.89°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 94240

5: 38 Gem (RA: 06 54 39, DEC: +13 10 40)

STF 982 AB*: mag.:4.75 | 7.8, sep.:7.4″ , p.a.142°*

A brilliant white primary with close yellow companion.

Quite close to us, this system is only 98 light-years distant, and the components are separated by about 184 AU. The secondary is a G-class star similar to the Sun but somewhat fainter and yellower.

Identifiers: 38 Gem | SAO 96265 | HIP 33202 | GDR2 95121612032

6: STF 921 (RA: 06 31 10, DEC: +11 15 05)

STF 921*: mag.:6.12 | 9.09, sep.:16.2″ , p.a.4°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 95766

7: HEI 670 (RA: 05 50 03, DEC: +09 52 16)

HEI 670*: mag.:5.97 | 8.36, sep.:1.1″ , p.a.264°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 113179

8: Epsilon Mon (RA: 06 23 46, DEC: +04 35 34)

STF 900 AB*: mag.:4.42 | 6.64, sep.:12.2″ , p.a.30°*

An unequal pair of bright yellow stars, easily separated.

Only 121 light-years away, Epsilon Mon A is a subgiant star 25 times brighter than the Sun, while the B star is only twice as bright as the Sun.

Identifiers: Epsilon Mon | SAO 113810 | HIP 30419 | GDR2 81815810432

9: Psi Ori (RA: 05 26 50, DEC: +03 05 47)

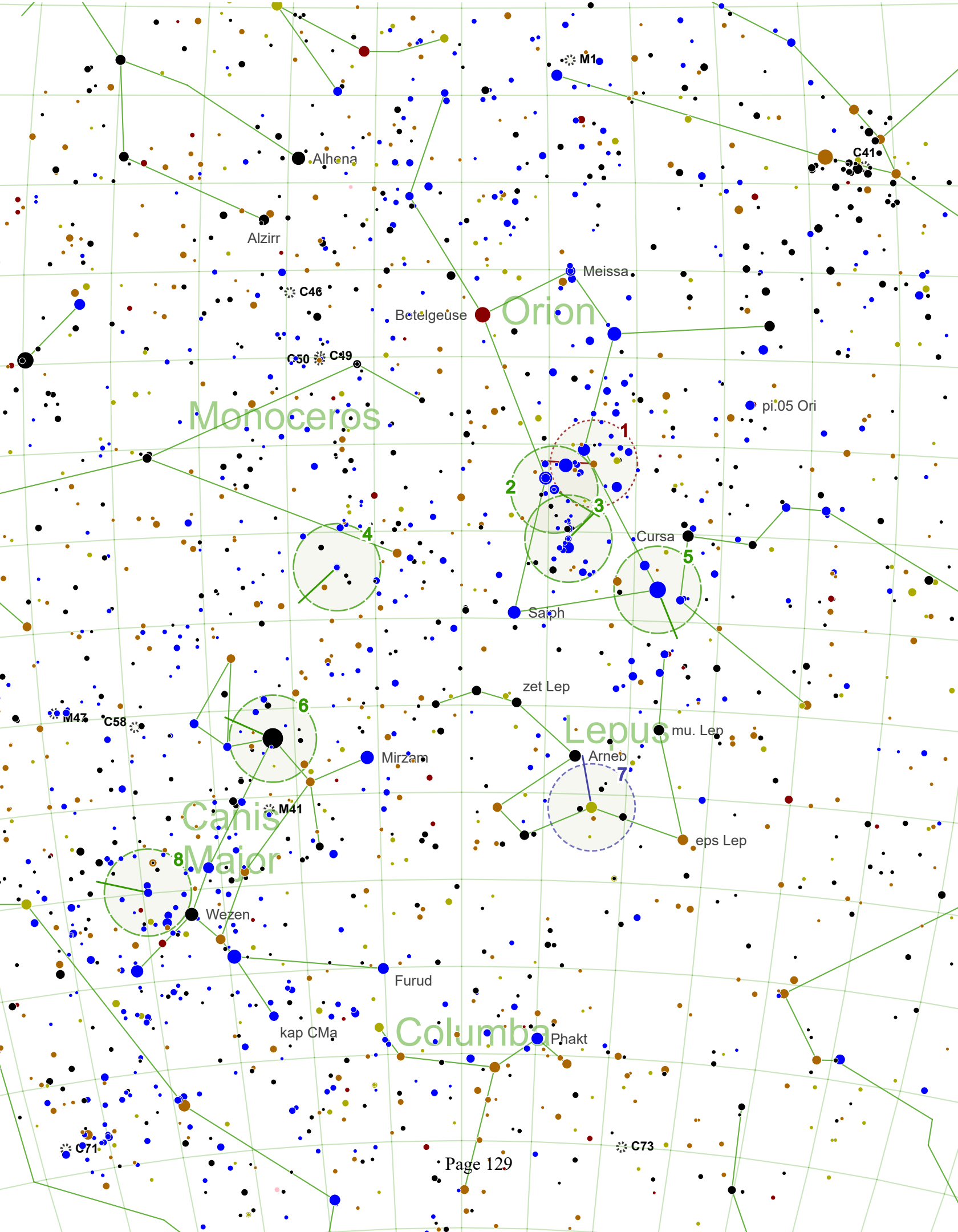
KNT 3 AB*: mag.:4.57 | 8.62, sep.:3″ , p.a.328°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 112775

Deep Sky Objects

DSO	Mag.	Type
C31	6.0	bright nebula
C39	9.9	planetary nebula
C41	1.0	open cluster
C58	7.2	open cluster
M1	8.4	supernova remnant
M35	5.3	open cluster
M36	6.3	open cluster
M37	6.2	open cluster
M38	7.4	open cluster
M41	4.6	open cluster


M1
Alhena
C41
Alzirr
Meissa
C46
Betelgeuse
Orion
C50
C49
Monoceros
pi.05 Ori
1
2
3
4
Cursa
5
Saph
zet Lep
6
M47
C58
Lepus
mu. Lep
Mirzam
Arneb
7
M41
Canis
Maior
eps Lep
8
Wezen
Furud
kap CMa
Columba
Phakt
C71
C73

December: -10° South (1)

1: 31 Ori (RA: 05 29 44, DEC: -01 05 32)

STF 725*: mag.:4.69 | 9.7, sep.:12.7″ , p.a.87°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 132176

2: Sigma Ori (RA: 05 38 45, DEC: -02 36 00)

STF 761 BC*: mag.:8.39 | 8.55, sep.:8.5″ , p.a.269°*

STF 762 AB,C*: mag.:3.76 | 8.79, sep.:11.4″ , p.a.239°*

STF 762 AB,D*: mag.:3.76 | 6.56, sep.:12.9″ , p.a.84°*

STF 762 AB,E*: mag.:3.76 | 6.34, sep.:41.4″ , p.a.62°*

STF 762 DC*: mag.:6.56 | 8.79, sep.:23.8″ , p.a.252°*

STF 762 EC*: mag.:6.34 | 8.79, sep.:52.9″ , p.a.242°*

STF 762 ED*: mag.:6.34 | 6.56, sep.:29.8″ , p.a.233°*

A blue primary, flanked by one fainter star to the west, and two relatively bright white stars to the east, all easily separated from the primary.

A complex star system, The primary is a very tight pair separated by only 0.3". This can only be split in extremely large telescopes, leaving four easily seen components. A further tiny component lies close to the primary (mag. 12, p.a. 20°, 3.2").

Identifiers: Sigma Ori | SAO 132408 | HIP 26549 | GDR2 39446556544

3: Theta2 Ori (RA: 05 35 23, DEC: -05 24 58)

STF 748 AB*: mag.:6.55 | 7.49, sep.:8.9″ , p.a.32°*

STF 748 AC*: mag.:6.55 | 5.06, sep.:12.9″ , p.a.133°*

STF 748 AD*: mag.:6.55 | 6.38, sep.:21.4″ , p.a.96°*

STF 748 BC*: mag.:7.49 | 5.06, sep.:17″ , p.a.164°*

STF 748 BD*: mag.:7.49 | 6.38, sep.:19.4″ , p.a.121°*

STF 748 CD*: mag.:5.06 | 6.38, sep.:13.4″ , p.a.62°*

STFA 16 AB*: mag.:5.03 | 6.19, sep.:52.3″ , p.a.94°*

STFA 16 BC*: mag.:6.19 | 8.46, sep.:76.5″ , p.a.102°*

STFA 17 AD*: mag.:5.03 | 5.06, sep.:134.4″ , p.a.315°*

A very wide line of three bright white stars, often overlooked as it is on the border of the spectacular Orion Nebula.

Best viewed at lower magnifications.

Identifiers: Theta2 Ori | SAO 132321 | HIP 26235

4: Beta Mon (RA: 06 28 49, DEC: -07 01 59)

STF 919 AB*: mag.:4.62 | 5, sep.:7.1″ , p.a.133°*

STF 919 AC*: mag.:4.62 | 5.39, sep.:9.9″ , p.a.126°*

STF 919 BC*: mag.:5 | 5.32, sep.:3″ , p.a.109°*

A wonderful triple showing a brilliant bluish primary closely separated from a tight pair of bluish stars.

Situated in the inky void between Orion and Sirius, this is a hard to find compared to other nearby doubles.

Identifiers: Beta Mon | SAO 133316 | HIP 30867 | GDR2 65675574272

5: Rigel (RA: 05 14 32, DEC: -08 12 06)

STF 668 A,BC*: mag.:0.3 | 6.8, sep.:9.2″ , p.a.202°*

Rigel, one of the brightest stars in the sky, has a moderately bright companion that seems very faint in the glare of its primary. The separation is reasonable and the white secondary contrasts nicely with the blue primary.

The secondary is actually a close double but the separation is only 0.1".

Identifiers: Rigel | SAO 131907 | HIP 24436 | HD 34085

6: Sirius (RA: 06 45 09, DEC: -16 42 58)

AGC 1 AB*: mag.:-1.47 | 8.44, sep.:11.3″ , p.a.66°*

A ferociously brilliant white primary moderately separated from a relatively dim white dwarf companion.

The secondary is a tiny Earth-sized white dwarf, among the smallest deep sky objects visible in an amateur telescope. The little companion, known affectionately as the "Pup", is lost in the glare of the primary, but standing alone would be an easy binocular target. To tame Sirius, try spotting the Pup in twilight.

Identifiers: Sirius | SAO 151881 | HIP 32349 | HD 48915

7: Nihal (RA: 05 28 15, DEC: -20 45 33)

BU 320 AB*: mag.:2.9 | 7.5, sep.:2.7″ , p.a.10°*

A tight pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 170457

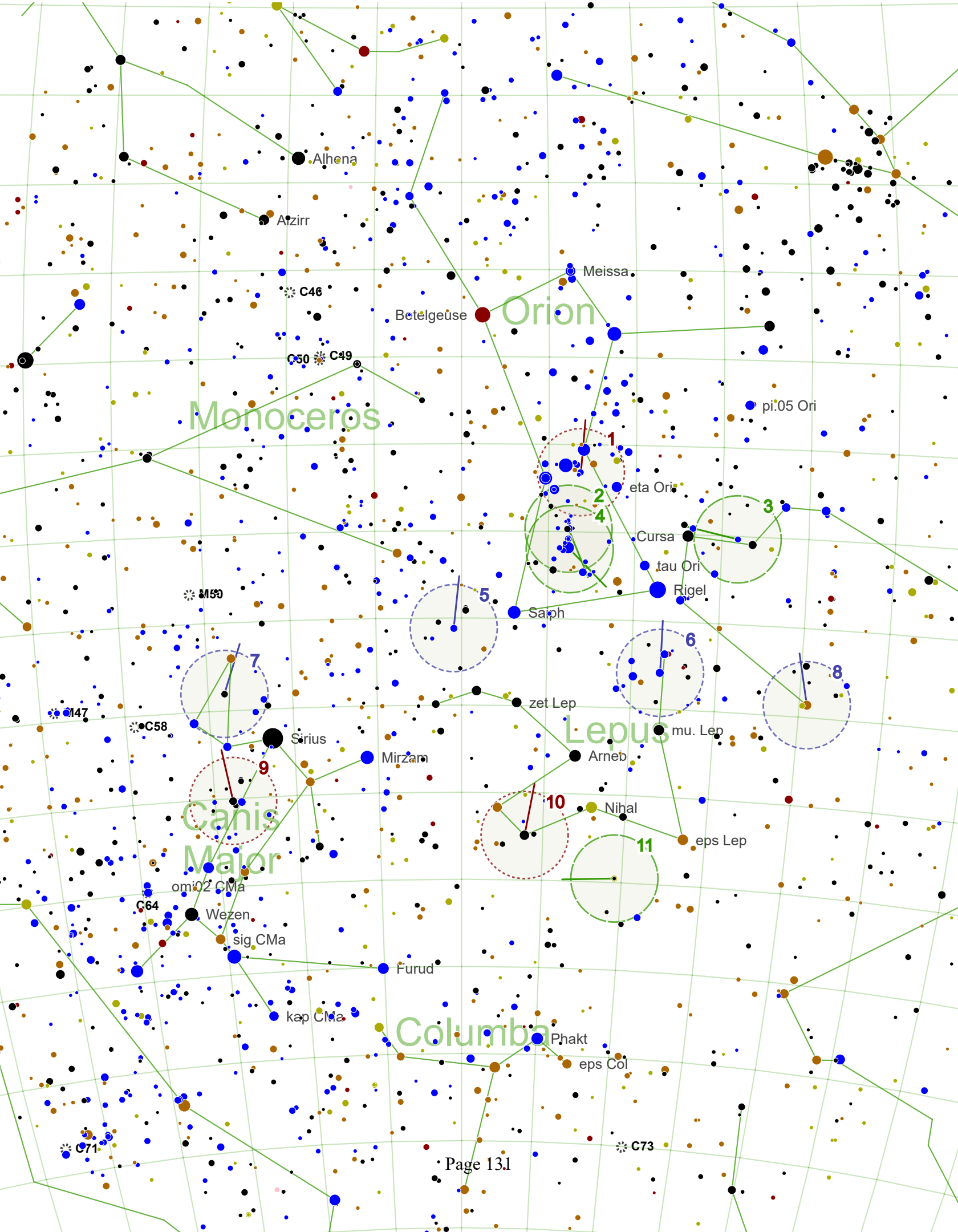
8: Tau CMa (RA: 07 18 42, DEC: -24 57 16)

HJ 3948 AD*: mag.:4.42 | 8.22, sep.:83.5″ , p.a.78°*

A brilliant blue primary with two faint stars close to the east, and a brighter component some distance beyond them.

Tau CMa dominates open cluster Caldwell 64 (also known as the Tau CMa cluster.

Identifiers: Tau CMa | SAO 173446 | HIP 35415 | GDR2 13676667392


Alhena
Aïzirr
Meissa
C46
Betelgeuse
Orion
C50
C49
Monoceros
pi.05 Ori
1
eta Ori
2
4
3
Cursa
tau Ori
Rigel
M50
5
Saiph
6
7
8
M47
C58
zet Lep
Lepus
mu. Lep
Sirius
Mirzam
Arneb
9
10
Nihal
eps Lep
11
Canis
Maior
omi02 CMa
C64
Wezen
sig CMa
Furud
kap CMa
Columba
Phakt
eps Col
C71
C73

December: -10° South (2)

1: BU 1048 (RA: 05 32 41, DEC: -01 35 31)

***BU 1048**: mag.:5.3 | 9.8, sep.:2.2" , p.a.355°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 132234

2: 42/45 Ori (RA: 05 35 23, DEC: -04 50 18)

***DA 4 AB**: mag.:4.61 | 7.5, sep.:1.2" , p.a.202°*

A very wide and bright binocular pair, the brighter star (42 Ori) being bluish and the other white.

There is a third magnitude 7.1 star between 42 and 45 Orionis. This optical double is shrouded in the nebulosity of M43 (De Mairan's Nebula).

Identifiers: 42/45 Ori | SAO 132320 | HIP 26237 | GDR2 52067563392

3: 62 Eri (RA: 04 56 24, DEC: -05 10 17)

***SHJ 48 AB**: mag.:5.46 | 8.93, sep.:66.1" , p.a.76°*

A distantly separated pair, with a bright, blue primary and a significantly fainter secondary.

Identifiers: 62 Eri | SAO 131614 | HIP 22958 | GDR2 89532331904

4: Struve 747 (RA: 05 35 03, DEC: -06 00 07)

***STF 745 AB**: mag.:8.25 | 9.35, sep.:28.7" , p.a.347°*

***STF 747 AB**: mag.:4.7 | 5.51, sep.:36.3" , p.a.224°*

A very wide pair of well matched and bright white stars.

Identifiers: Struve 747 | SAO 132301 | HIP 26199 | GDR2 66581304832

5: 3 Mon (RA: 06 01 50, DEC: -10 35 53)

***BU 16**: mag.:4.99 | 7.96, sep.:2" , p.a.354°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 151037

6: Kap Lep (RA: 05 13 14, DEC: -12 56 26)

***STF 661**: mag.:4.43 | 6.77, sep.:2.2" , p.a.357°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 150239

7: Mu CMa (RA: 06 56 07, DEC: -14 02 34)

***STF 997 AB**: mag.:5.27 | 7.14, sep.:2.9" , p.a.343°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 152123

8: Sceptrum (RA: 04 38 11, DEC: -14 18 14)

***KUI 18**: mag.:4.02 | 6.95, sep.:1" , p.a.8°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 149781

9: Pi CMa (RA: 06 55 37, DEC: -20 08 12)

***H N 123**: mag.:4.71 | 9.6, sep.:11.6" , p.a.13°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 172579

10: Gam Lep (RA: 05 44 28, DEC: -22 26 54)

***H 6 40 AB**: mag.:3.64 | 6.28, sep.:95.5" , p.a.349°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 170759

11: HJ 3752 (RA: 05 21 46, DEC: -24 46 23)

***HJ 3752 AB**: mag.:5.44 | 6.58, sep.:3.5" , p.a.91°*

***HJ 3752 AC**: mag.:5.44 | 9.32, sep.:59.8" , p.a.104°*

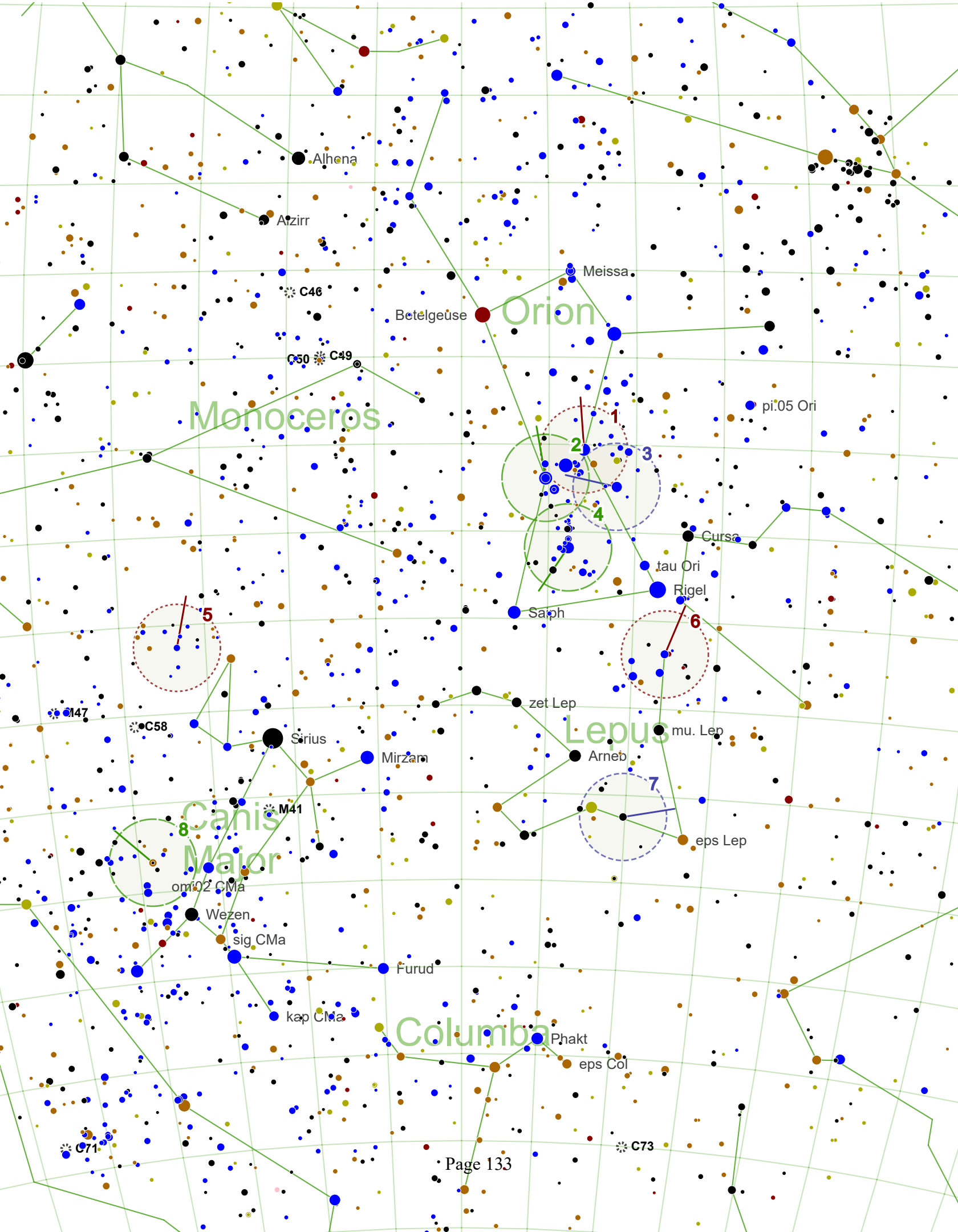
A bright yellow primary with a fairly bright and very close secondary.

Messier 79, a magnitude 8.6 globular cluster) is less than a degree to the north east.

Identifiers: HJ 3752 | SAO 170351 | HIP 25045 | GDR2 91568577536

Deep Sky Objects

DSO	Mag.	Type
C46	10.0	bright nebula
C49	9.0	bright nebula
C50	4.8	open cluster
C58	7.2	open cluster
C64	4.1	open cluster
C71	5.8	open cluster
C73	7.3	globular cluster
M47	5.2	open cluster
M50	6.3	open cluster


Alhena
Aïzirr
Meissa
C46
Betelgeuse
Orion
C50
C49
Monoceros
pi.05 Ori
1
2
3
4
Cursa
tau Ori
Rigel
Saiph
5
6
I47
C58
Sirius
zet Lep
Lepus
mu. Lep
Mirzam
Arneb
7
M41
Canis
Major
8
eps Lep
omi02 CMa
Wezen
sig CMa
Furud
kap CMa
Columba
Phakt
eps Col
C71
C73

December: -10° South (3)

1: STFA 14 AC (RA: 05 32 00, DEC: -00 17 57)

***STFA 14 AC**: mag.:2.41 | 6.83, sep.:56.2" , p.a.4°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 132221

2: Zeta Ori (RA: 05 40 46, DEC: -01 56 33)

***STF 774 AB**: mag.:1.88 | 3.7, sep.:2.2" , p.a.167°*

***STF 774 AC**: mag.:1.88 | 9.55, sep.:58.5" , p.a.10°*

A fiercely brilliant close blue-blue pairing, made difficult by the brightness of the primary.

Zeta Orionis, or Alnitak, is the astrophotographer's devil as it overwhelms pictures of the Flame and Horsehead nebulae. In addition it is the brightest O-class star in Earth's sky, which makes it very blue, which is a difficult star color to control in astrophotographs.

Identifiers: Zeta Ori | SAO 132444 | HIP 26727 | GDR2 28221605248

3: Algjebba (RA: 05 24 29, DEC: -02 23 50)

***DA 5 AB**: mag.:3.56 | 4.87, sep.:1.9" , p.a.77°*

A tight pairing of a brilliant primary and a bright companion.

Identifiers: SAO 132071

4: Iota Ori (RA: 05 35 26, DEC: -05 54 36)

***STF 752 AB**: mag.:2.77 | 7.73, sep.:12.5" , p.a.146°*

***STF 752 BC**: mag.:7.73 | 9.81, sep.:41.1" , p.a.94°*

In the same field as Struve 747, Iota Orionis is a brilliant white star with an easily separated and reasonably bright blue companion.

Iota Orionis is one the brightest member of loose star cluster NGC 1980. NGC 1980 is regarded as a slightly older version of the Trapezium cluster that illuminates the Orion Nebula, but how two similar clusters can form so closely together is a subject of further study.

Identifiers: Iota Ori | SAO 132323 | HIP 26241 | GDR2 46640875904

5: STF 1026 AB,C (RA: 07 06 41, DEC: -11 17 38)

***STF 1026 AB,C**: mag.:5.39 | 9, sep.:17.8" , p.a.350°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 152394

6: Iot Lep (RA: 05 12 18, DEC: -11 52 09)

***STF 655 AB**: mag.:4.47 | 9.92, sep.:11.9" , p.a.337°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 150223

7: HJ 3750 (RA: 05 20 27, DEC: -21 14 23)

***HJ 3750**: mag.:4.72 | 8.45, sep.:4" , p.a.279°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 170327

8: HJ 3945 (RA: 07 16 37, DEC: -23 18 56)

***HJ 3945 AB**: mag.:5 | 5.84, sep.:26.5" , p.a.50°*

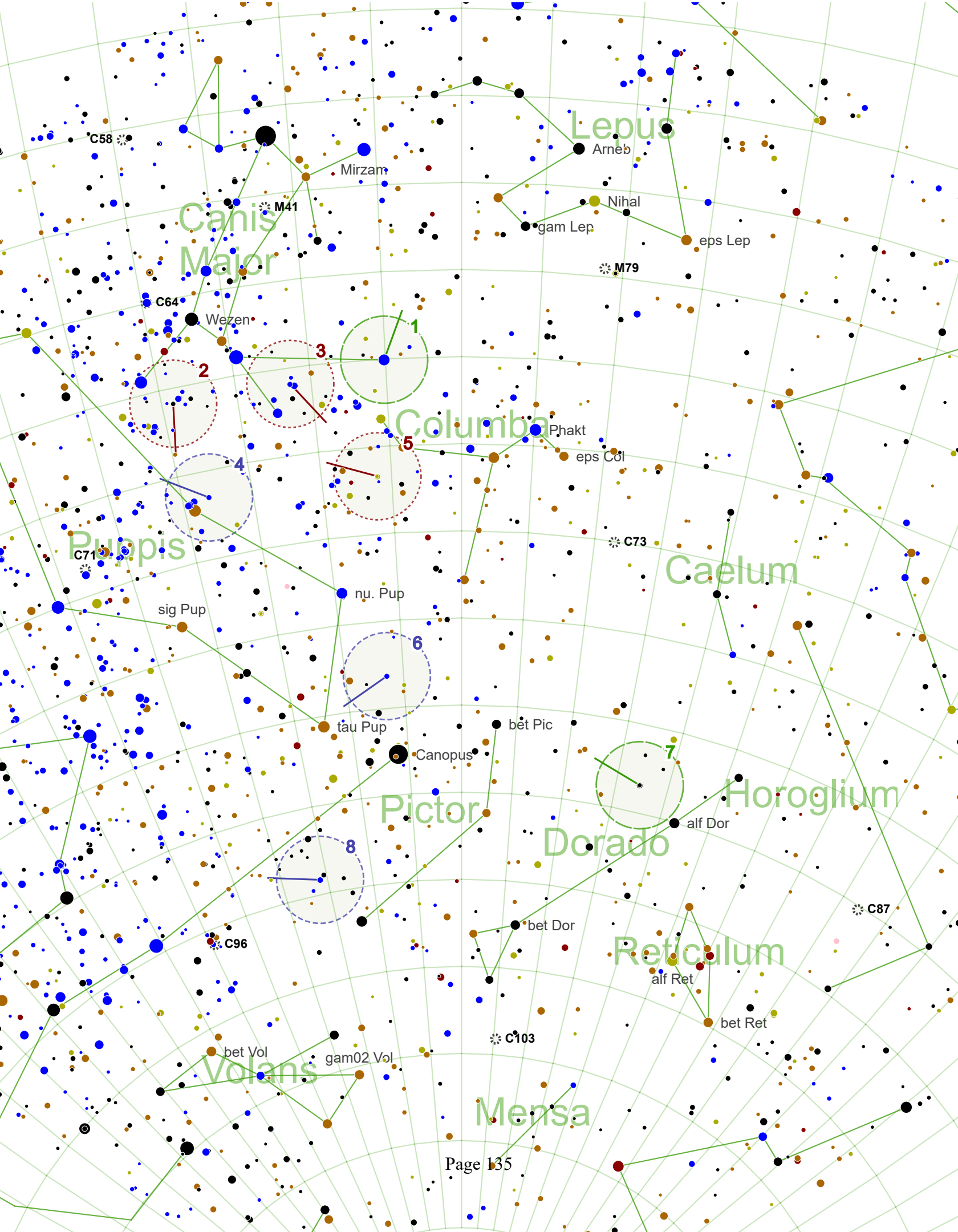
A bright, wide and balanced pair of stars, the primary being orange, and the secondary pale yellow.

Open star cluster NGC 2367 (mag. 7.9) lies two degrees to the north east.

Identifiers: HJ 3945 | SAO 173349 | HIP 35210 | GDR2 60635836928

Deep Sky Objects

DSO	Mag.	Type
C46	10.0	bright nebula
C49	9.0	bright nebula
C50	4.8	open cluster
C58	7.2	open cluster
C71	5.8	open cluster
C73	7.3	globular cluster
M41	4.6	open cluster
M47	5.2	open cluster


Lepus
Arneb
Mirzam
Nihal
gam Lep
eps Lep
C58
M41
Canis Major
M79
C64
Wezen
1
2
3
4
5
6
7
8
Columba
Phakt
eps Col
Puppis
C71
C73
Caelum
nu. Pup
sig Pup
tau Pup
bet Pic
Canopus
Pictor
Horoglium
alf Dor
Dorado
C87
bet Dor
C96
Reticulum
alf Ret
bet Ret
C103
bet Vol
gam02 Vol
Volans
Mensa

December: -45° South (1)

1: Zeta CMa (RA: 06 20 19, DEC: -30 03 48)

***SMY 1 AB**: mag.:2.96 | 7.81, sep.:169.6″, p.a.340°*

A brilliant bluish primary distantly separated from a fairly apparent orange secondary.

Also known as Furud. Arabic astronomers gave the name Furud ("the solitary ones") to many otherwise anonymous stars, but the name has been officially granted to Zeta CMa by the IAU.

Identifiers: Zeta CMa | SAO 196698 | HIP 30122

2: BSO 2 (RA: 07 16 57, DEC: -30 53 49)

***BSO 2**: mag.:6.32 | 7.82, sep.:37.5″, p.a.183°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 197789

3: HP CMa (RA: 06 45 31, DEC: -30 56 56)

***HJ 3891**: mag.:5.66 | 8.21, sep.:5″, p.a.223°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 197177

4: V363 Pup (RA: 07 12 26, DEC: -36 32 40)

***BU 757**: mag.:6.03 | 8.35, sep.:2.5″, p.a.69°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 197694

5: DUN 28 AC (RA: 06 24 01, DEC: -36 42 28)

***DUN 28 AC**: mag.:5.73 | 6.91, sep.:63.5″, p.a.75°*

***HJ 3857 AB**: mag.:5.73 | 9.83, sep.:13″, p.a.255°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 196774

6: G Pup (RA: 06 25 44, DEC: -48 10 37)

***I 156**: mag.:5.87 | 8.07, sep.:1″, p.a.125°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 217922

7: Iota Pic (RA: 04 50 55, DEC: -53 27 42)

***DUN 18 AB**: mag.:5.61 | 6.24, sep.:12.8″, p.a.59°*

An easily separated, balanced pair of bright yellowish stars.

Identifiers: Iota Pic | SAO 233709 | HIP 22531 | GDR2 72882315648

8: V450 Car (RA: 07 03 15, DEC: -59 10 41)

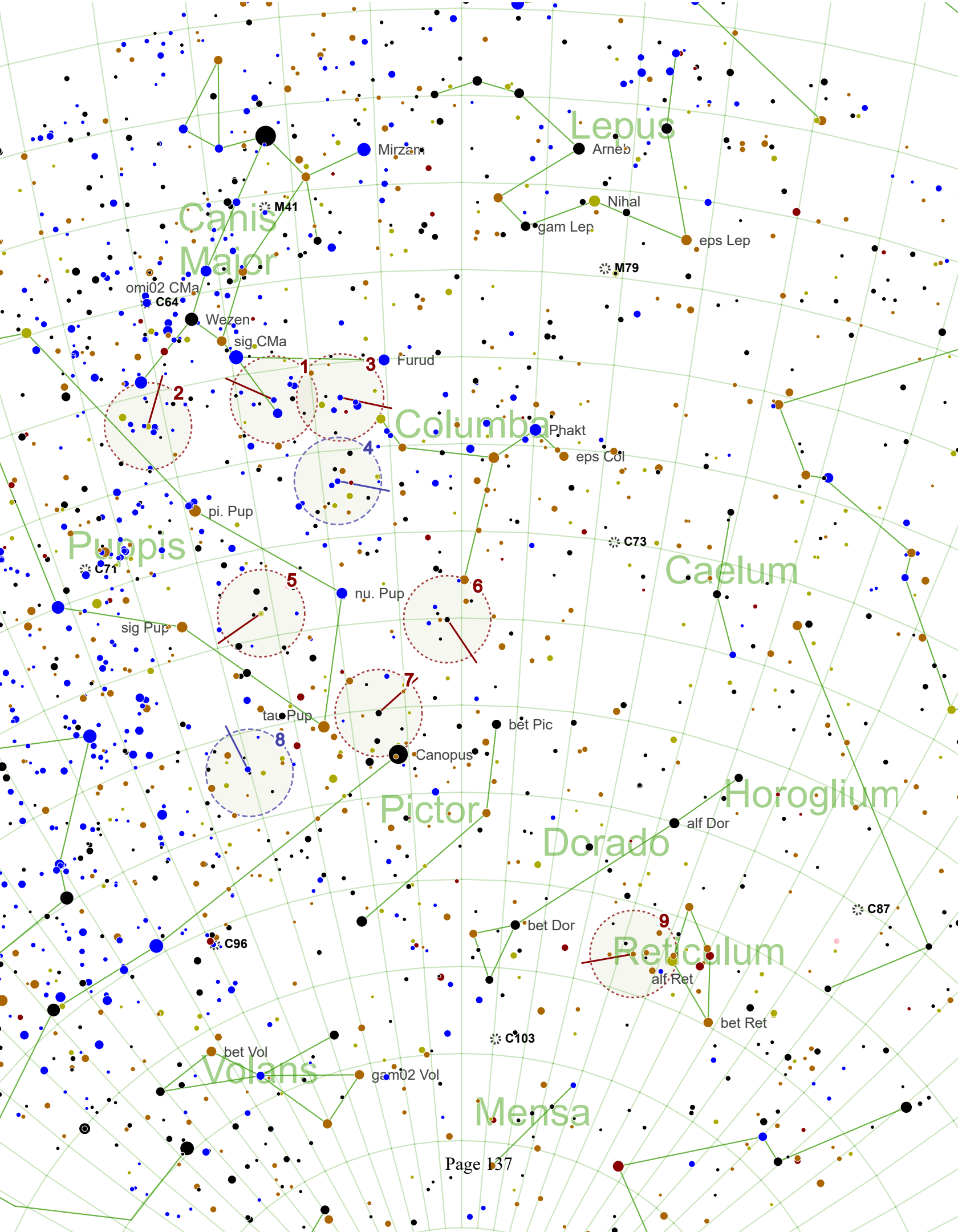
***DUN 39**: mag.:5.83 | 6.78, sep.:1.3″, p.a.88°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 234890

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C58	7.2	open cluster
C64	4.1	open cluster
C71	5.8	open cluster
C73	7.3	globular cluster
C87	8.4	globular cluster
C96	3.8	open cluster
M41	4.6	open cluster
M79	7.7	globular cluster


Lepus
Arneb
Mirzam
Nihal
gam Lep
eps Lep
M79
Canis Major
M41
omi02 CMa
C64
Wezen
sig CMa
Furud
1
2
3
4
Columba
Phakt
eps Col
pi. Pup
Puppis
C71
C73
Caelum
5
6
nu. Pup
sig Pup
7
tau Pup
8
bet Pic
Canopus
Pictor
Horoglium
alf Dor
Dorado
C87
bet Dor
9
Reticulum
alf Ret
bet Ret
C96
C103
bet Vol
Volans
gam02 Vol
Mensa

December: -45° South (2)

1: HZ CMa (RA: 06 50 23, DEC: -31 42 22)

***H 5 108 A,BC**: mag.:5.76 | 7.71, sep.:42.7″, p.a.66°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 197263

2: DUN 47 A,CD (RA: 07 24 44, DEC: -31 48 32)

***DUN 47 A,CD**: mag.:5.4 | 7.58, sep.:97.1″, p.a.344°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 197964

3: HJ 3869 (RA: 06 32 39, DEC: -32 01 50)

***HJ 3869**: mag.:5.68 | 7.87, sep.:24.7″, p.a.258°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 196919

4: BU 755 AB (RA: 06 35 24, DEC: -36 46 48)

***BU 755 AB**: mag.:5.86 | 6.94, sep.:1.6″, p.a.259°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 196978

5: DUN 38 AB (RA: 07 03 57, DEC: -43 36 29)

***DUN 38 AB**: mag.:5.61 | 6.68, sep.:21.3″, p.a.125°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 218421

6: HJ 3834 AB (RA: 06 04 40, DEC: -45 04 44)

***HJ 3834 AB**: mag.:6.02 | 8.98, sep.:6.1″, p.a.214°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 217706

7: DUN 30 AB,CD (RA: 06 29 49, DEC: -50 14 21)

***DUN 30 AB,CD**: mag.:5.97 | 7.98, sep.:11.7″, p.a.312°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 234539

8: RMK 6 AB (RA: 07 20 21, DEC: -52 18 42)

***RMK 6 AB**: mag.:6 | 6.51, sep.:9″, p.a.27°*

A close pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 235110

9: HJ 3670 (RA: 04 33 34, DEC: -62 49 25)

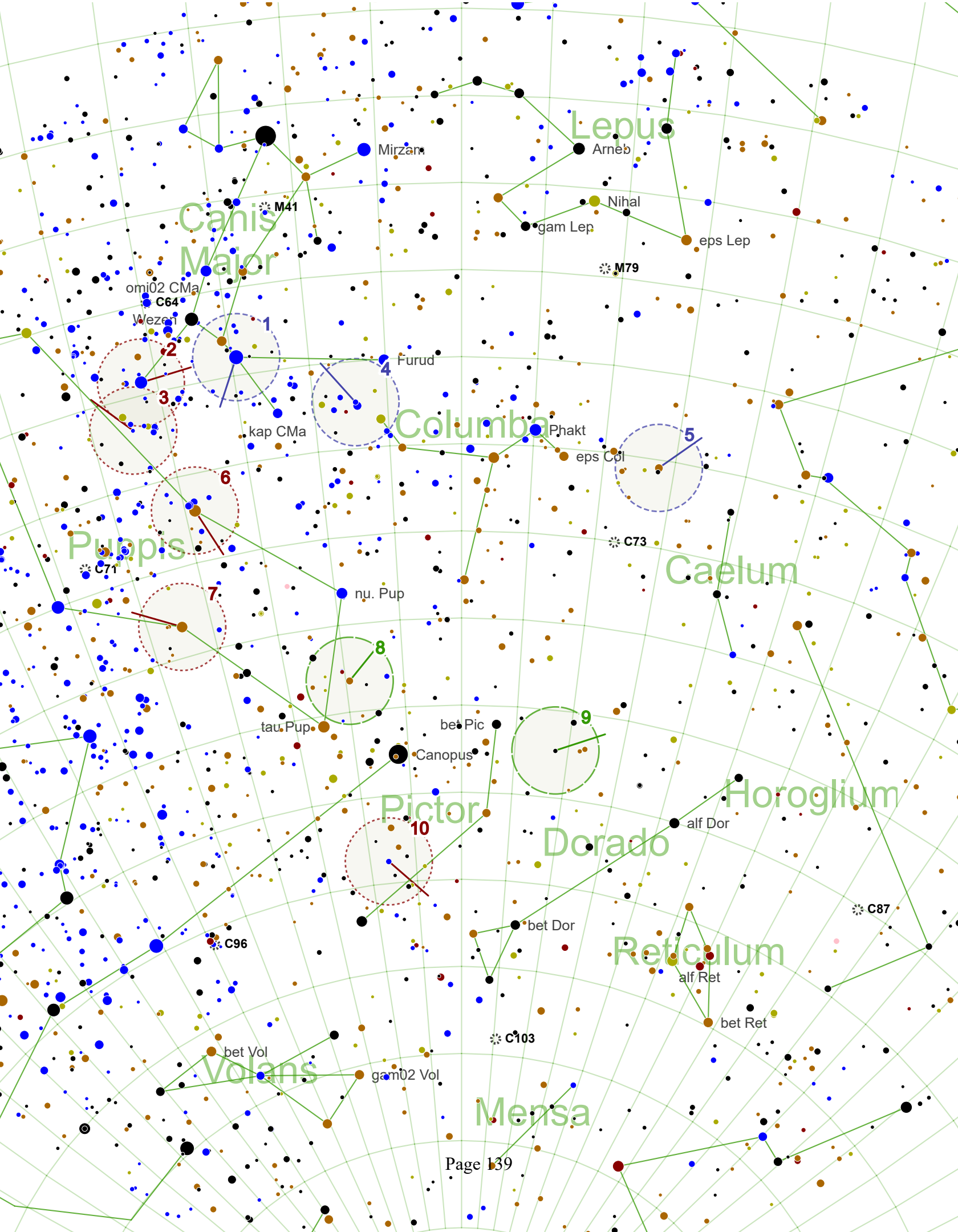
***HJ 3670**: mag.:5.9 | 9.3, sep.:31.8″, p.a.100°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 249054

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C64	4.1	open cluster
C71	5.8	open cluster
C73	7.3	globular cluster
C87	8.4	globular cluster
C96	3.8	open cluster
M41	4.6	open cluster
M79	7.7	globular cluster


Lepus
Arneb
Mirzam
Nihal
gam Lep
eps Lep
M79
Canis Major
M41
omi02 CMa
C64
Wezen
1
2
3
4
Furud
kap CMa
Columba
Phakt
eps Col
5
6
Puppis
C71
C73
Caelum
nu. Pup
7
8
tau Pup
bet Pic
9
Canopus
Horoglium
Pictor
alf Dor
10
Dorado
C87
bet Dor
C96
Reticulum
alf Ret
bet Ret
C103
bet Vol
Volans
gam02 Vol
Mensa

December: -45° South (3)

1: Adhara (RA: 06 58 38, DEC: -28 58 20)

***CPO 7**: mag.:1.5 | 7.5, sep.:7.9″ , p.a.162°*

A close pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 172676

2: Aludra (RA: 07 24 06, DEC: -29 18 11)

***SMY 2**: mag.:2.45 | 6.77, sep.:177″ , p.a.287°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 173651

3: DUN 49 (RA: 07 28 51, DEC: -31 50 54)

***DUN 49**: mag.:6.34 | 6.95, sep.:9″ , p.a.54°*

A close pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 198038

4: IY CMa (RA: 06 28 39, DEC: -32 22 16)

***BU 753**: mag.:5.86 | 7.6, sep.:1.2″ , p.a.42°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 196861

5: Gam Cae (RA: 05 04 24, DEC: -35 28 59)

***JC 9**: mag.:4.71 | 8.17, sep.:3.2″ , p.a.305°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 195532

6: Pi Pup (RA: 07 17 09, DEC: -37 05 51)

***DUN 43 AB**: mag.:2.89 | 7.94, sep.:66.5″ , p.a.213°*

A wide pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 197795

7: Sig Pup (RA: 07 29 14, DEC: -43 18 05)

***DUN 51**: mag.:3.25 | 8.81, sep.:22.1″ , p.a.74°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 218755

8: Y Pup (RA: 06 38 38, DEC: -48 13 13)

***DUN 31**: mag.:5.14 | 7.38, sep.:12.9″ , p.a.321°*

A bright yellow-orange primary easily separated from a very slightly bluish secondary.

Half a degree to the north east, HIP 31966 (mag. 6.7) and HIP 31962 (mag 6.7) form a lovely very wide but equal orange and blue pairing (192" separation),

Identifiers: Y Pup | SAO 218093 | HIP 31765 | GDR2 86235237248

9: DUN 20 (RA: 05 24 46, DEC: -52 18 58)

***DUN 20 AB,C**: mag.:6.24 | 6.74, sep.:38.3″ , p.a.288°*

A balanced and widely separated pair of fairly bright, white stars.

The primary is also double, being a balanced pair of stars separated by a mere 0.4".

Identifiers: DUN 20 | SAO 233965 | HIP 25303 | GDR2 29385988992

10: Mu Pic (RA: 06 31 58, DEC: -58 45 14)

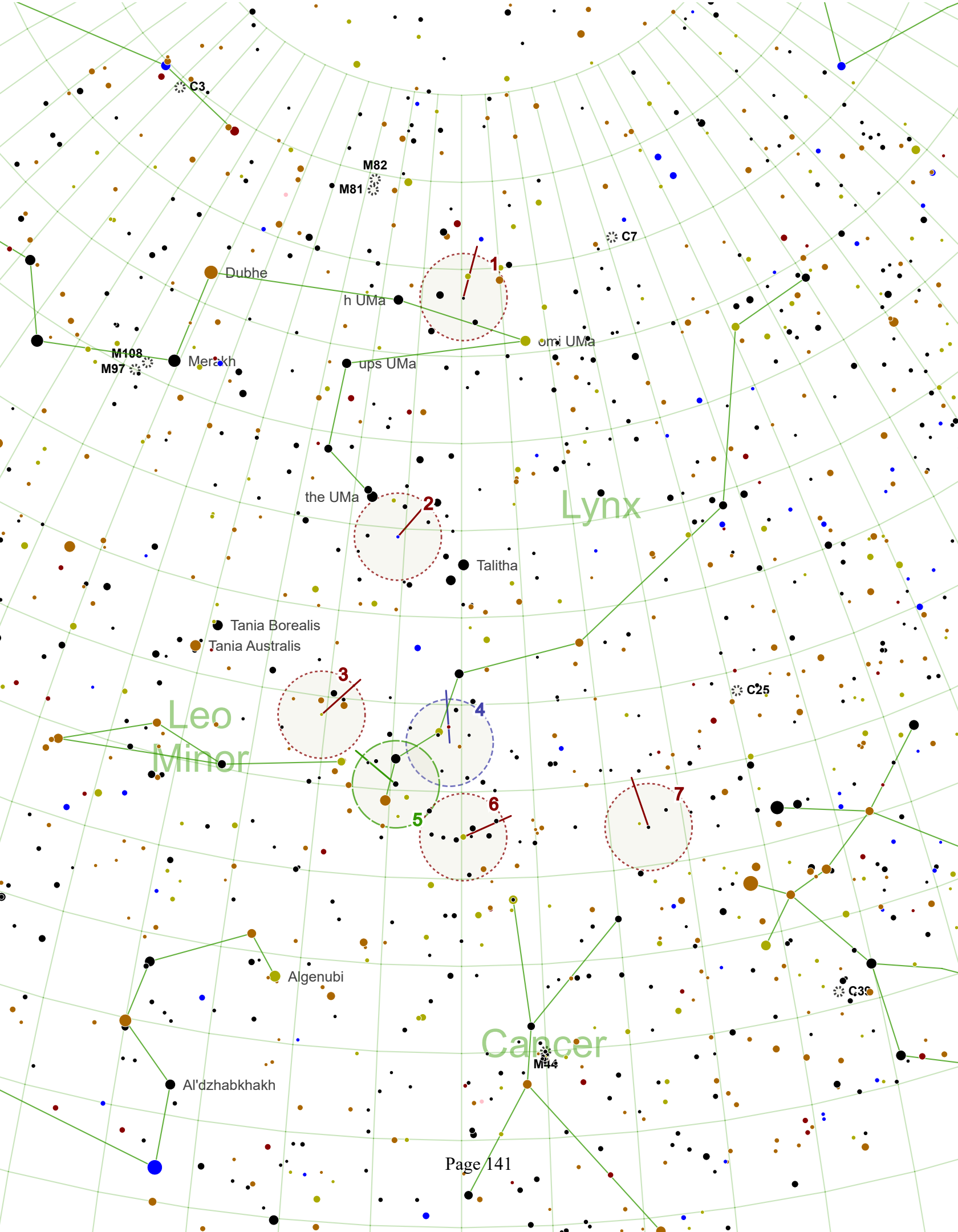
***HJ 3874**: mag.:5.63 | 9.33, sep.:2.5″ , p.a.229°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 234564

Deep Sky Objects

DSO	Mag.	Type
C103	4.0	bright nebula
C64	4.1	open cluster
C71	5.8	open cluster
C73	7.3	globular cluster
C87	8.4	globular cluster
C96	3.8	open cluster
M41	4.6	open cluster
M79	7.7	globular cluster


C3
M82
M81
C7
1
Dubhe
h UMa
omi UMa
M108
M97
Merakh
ups UMa
the UMa
2
Lynx
Talitha
Tania Borealis
Tania Australis
3
4
C25
Leo
Minor
5
6
7
Algenubi
C39
Cancer
M44
Al'dzhabkhakh

February: 45° North (1)

1: BU 408 (RA: 08 59 01, DEC: +63 25 43)

***BU 408**: mag.:7.35 | 9.59, sep.:2.8″, p.a.345°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 14723

2: STF 1340 AB (RA: 09 22 32, DEC: +49 32 41)

***STF 1340 AB**: mag.:7.08 | 8.99, sep.:6.3″, p.a.319°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 42825

3: STF 1374 AB (RA: 09 41 22, DEC: +38 57 02)

***STF 1374 AB**: mag.:7.28 | 8.65, sep.:2.8″, p.a.312°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 61629

4: MUG 1 (RA: 09 03 27, DEC: +37 50 29)

***MUG 1**: mag.:5.5 | 7.7, sep.:1.7″, p.a.4°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 61224

5: Struve 1333 (RA: 09 18 26, DEC: +35 21 51)

***STF 1333**: mag.:6.63 | 6.69, sep.:1.8″, p.a.50°*

A challenging pair of equal white stars separated by less than two arc seconds.

Once you have Struve 1333 in view, the fine doubles 38 Lyncis, Struve 1338, Struve 1369 and Struve 1282 are short hops away.

Identifiers: Struve 1333 | SAO 61387 | HIP 45661 | GDR2 3219596800

6: Sig3 Cnc (RA: 08 59 33, DEC: +32 25 07)

***SHJ 100 AB**: mag.:5.32 | 8.97, sep.:90.3″, p.a.294°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 61177

7: STF 1187 AB (RA: 08 09 30, DEC: +32 13 19)

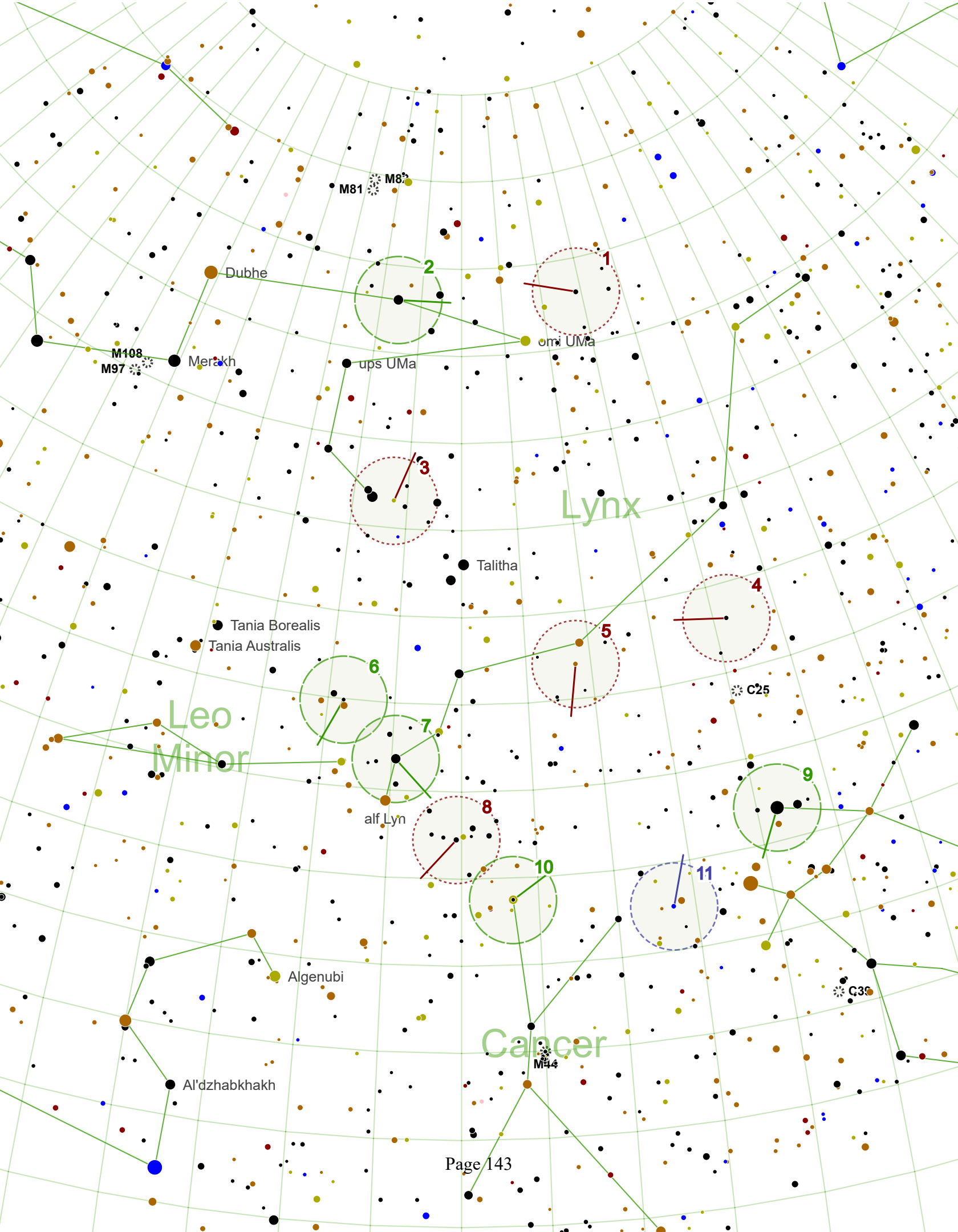
***STF 1187 AB**: mag.:7.19 | 7.98, sep.:3″, p.a.19°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 60604

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C3	9.7	barred spiral galaxy
C39	9.9	planetary nebula
C7	8.9	spiral galaxy
M108	10.0	spiral galaxy
M44	3.7	open cluster
M81	6.9	spiral galaxy
M82	8.4	irregular galaxy
M97	9.9	planetary nebula


M81
M82
Dubhe
M108
M97
Merakh
ups UMa
omi UMa
Lynx
Talitha
Tania Borealis
Tania Australis
C25
Leo
Minor
alf Lyn
Algenubi
Al'dzhabkhakh
C39
Cancer
M44
1
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3
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6
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9
10
11

February: 45° North (2)

1: SHJ 86 AB (RA: 08 02 31, DEC: +63 05 25)

***SHJ 86 AB**: mag.:6.15 | 7.53, sep.:51.6″ , p.a.81°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 14407

2: 23 UMa (RA: 09 31 32, DEC: +63 03 42)

***STF 1351 AB**: mag.:3.65 | 9.19, sep.:22.7″ , p.a.267°*

A brilliant yellowish primary well separated from a faint secondary.

Located nearly 78 light-years from Earth, the primary of this gravitationally bound system burns with nearly 15 times the light of the Sun.

Identifiers: 23 UMa | SAO 14908 | HIP 46733 | GDR2 89128664960

3: STT 200 (RA: 09 24 56, DEC: +51 34 26)

***STT 200**: mag.:6.53 | 8.57, sep.:1.2″ , p.a.336°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 27246

4: STT 174 (RA: 07 35 56, DEC: +43 01 51)

***STT 174**: mag.:6.62 | 8.26, sep.:1.9″ , p.a.92°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 41877

5: S 565 AB (RA: 08 24 43, DEC: +42 00 19)

***S 565 AB**: mag.:6.2 | 8.56, sep.:84.6″ , p.a.175°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 42342

6: Struve 1369 (RA: 09 35 22, DEC: +39 57 48)

***STF 1369 AB**: mag.:6.98 | 7.98, sep.:25.1″ , p.a.150°*

An orange-yellow pair, widely separated.

The primary is an eclipsing binary system with a period of 1.68 days.

Identifiers: Struve 1369 | SAO 42931 | HIP 47053 | GDR2 9701758080

7: 38 Lyn (RA: 09 18 51, DEC: +36 48 09)

***STF 1334 AB**: mag.:3.92 | 6.09, sep.:2.6″ , p.a.222°*

A bright white primary narrowly separated from a brightish white secondary.

A dim galaxy, NGC 2859, lies 2.5 degrees SSE of this double.

Identifiers: 38 Lyn | SAO 61391 | HIP 45688 | GDR2 8347151360

8: 66 Cnc (RA: 09 01 24, DEC: +32 15 08)

***STF 1298 AB**: mag.:5.95 | 8.56, sep.:4.4″ , p.a.137°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 61202

9: Castor (RA: 07 34 36, DEC: +31 53 18)

***STF 1110 AB**: mag.:1.93 | 2.97, sep.:5.4″ , p.a.52°*

***STF 1110 AC**: mag.:1.93 | 9.83, sep.:71.6″ , p.a.164°*

***STF 1110 BC**: mag.:2.97 | 9.83, sep.:73.8″ , p.a.168°*

A tight pair of very brilliant, bluish stars.

Perhaps you are like me and occasionally confuse Castor for its evil twin Pollux. For reference, Castor is the one to the north!

Identifiers: Castor | SAO 60198 | HIP 36850 | GDR2 4913021056

10: Iota Cnc (RA: 08 46 42, DEC: +28 45 36)

***STF 1268**: mag.:4.13 | 5.99, sep.:31.3″ , p.a.307°*

A strongly colored deeply yellow and blue pair. The separation is wide but both components are bright.

The yellow primary is a G-class giant star over 200 times brighter and 3.5 times more massive than the Sun, while secondary is a main-sequence dwarf roughly twice the mass of the Sun and only 16 times brighter.

Identifiers: Iota Cnc | SAO 80416 | HIP 43103 | GDR2 0011771264

11: 17 Cnc (RA: 08 05 37, DEC: +27 31 47)

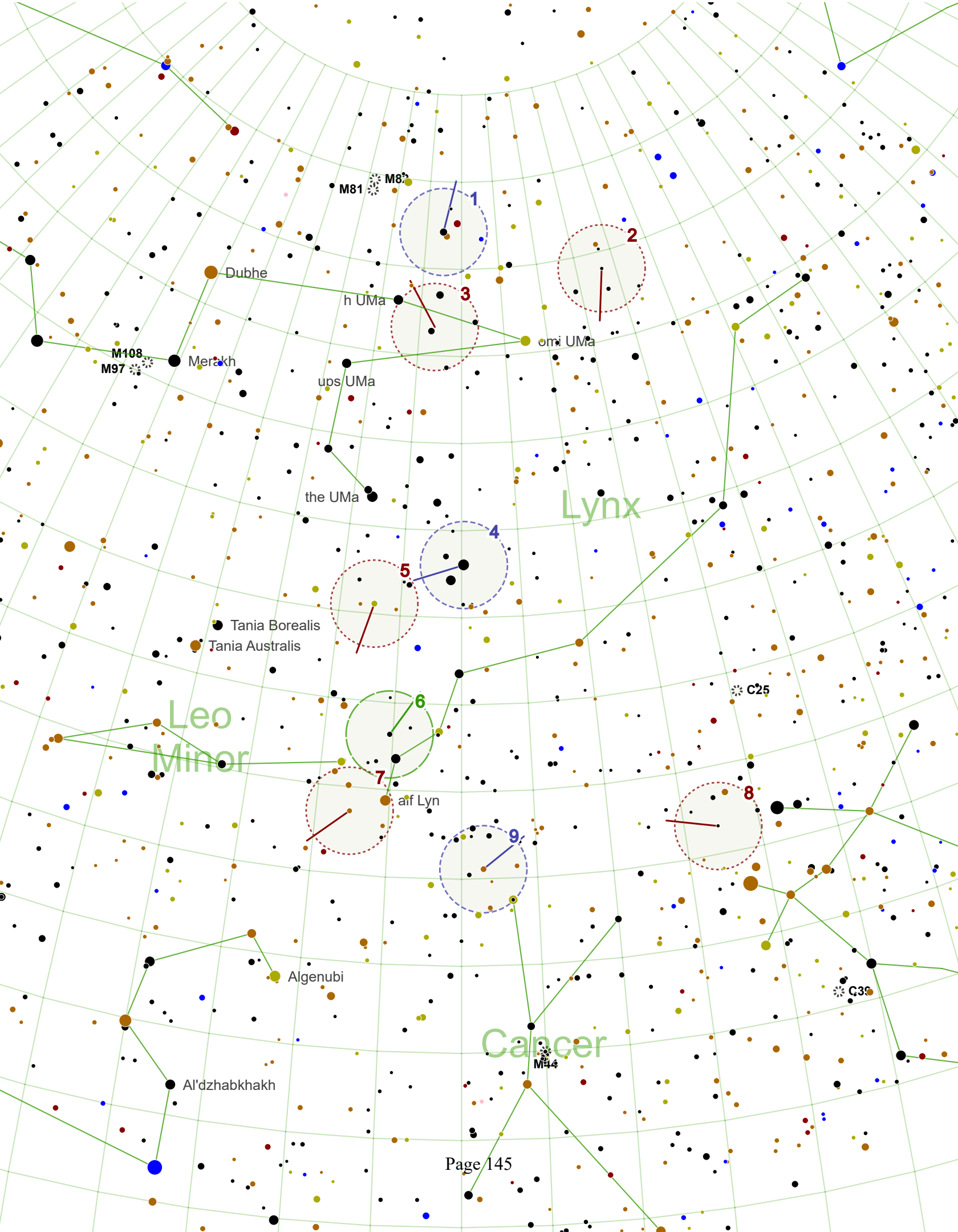
***STF 1177**: mag.:6.69 | 7.41, sep.:3.5″ , p.a.350°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 79928

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C39	9.9	planetary nebula
M108	10.0	spiral galaxy
M44	3.7	open cluster
M81	6.9	spiral galaxy
M82	8.4	irregular galaxy
M97	9.9	planetary nebula


M81
M82
1
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Dubhe
h UMa
omi UMa
M108
M97
Merakh
ups UMa
the UMa
Lynx
4
5
Tania Borealis
Tania Australis
C25
Leo
Minor
6
7
aif Lyn
8
9
Algenubi
C39
Cancer
M44
Al'dzhabkhakh

February: 45° North (3)

1: Sig2 UMa (RA: 09 10 24, DEC: +67 08 03)

STF 1306 AB*: mag.:4.87 | 8.85, sep.:4.6″ , p.a.346°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 14788

2: STF 1127 AC (RA: 07 47 00, DEC: +64 03 07)

STF 1127 AB*: mag.:7.02 | 8.45, sep.:5.6″ , p.a.340°*

STF 1127 AC*: mag.:7.02 | 9.72, sep.:11.6″ , p.a.178°*

STF 1127 BC*: mag.:8.45 | 9.72, sep.:16.9″ , p.a.173°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 14326

3: STF 1315 (RA: 09 12 46, DEC: +61 40 33)

STF 1315*: mag.:7.33 | 7.65, sep.:25.1″ , p.a.28°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 14808

4: Iot UMa (RA: 08 59 12, DEC: +48 02 31)

HJ 2477 A,BC*: mag.:3.13 | 9.2, sep.:2.3″ , p.a.107°*

A tight pairing of a brilliant primary and a faint companion.

Identifiers: SAO 42630

5: 41 Lyn (RA: 09 28 40, DEC: +45 36 06)

S 598 AB*: mag.:5.5 | 7.8, sep.:69.7″ , p.a.160°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 42876

6: Struve 1338 (RA: 09 20 59, DEC: +38 11 18)

STF 1338 AB*: mag.:6.72 | 7.08, sep.:1″ , p.a.324°*

The tightest double in this book, Struve 1338 consists of two well-balanced white stars split by a mere arc second.

In all but very large telescopes and very good seeing conditions, the most that can be achieved is a slight elongation of the star.

Identifiers: Struve 1338 | SAO 61411 | HIP 45858 | GDR2 6439695232

7: 7 LMi (RA: 09 30 43, DEC: +33 39 20)

HJ 1166 AB*: mag.:5.97 | 9.66, sep.:61.3″ , p.a.125°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 61529

8: STTA 89 (RA: 07 51 00, DEC: +31 36 49)

STTA 89*: mag.:6.83 | 7.69, sep.:76.6″ , p.a.84°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 60380

9: 57 Cnc (RA: 08 54 15, DEC: +30 34 46)

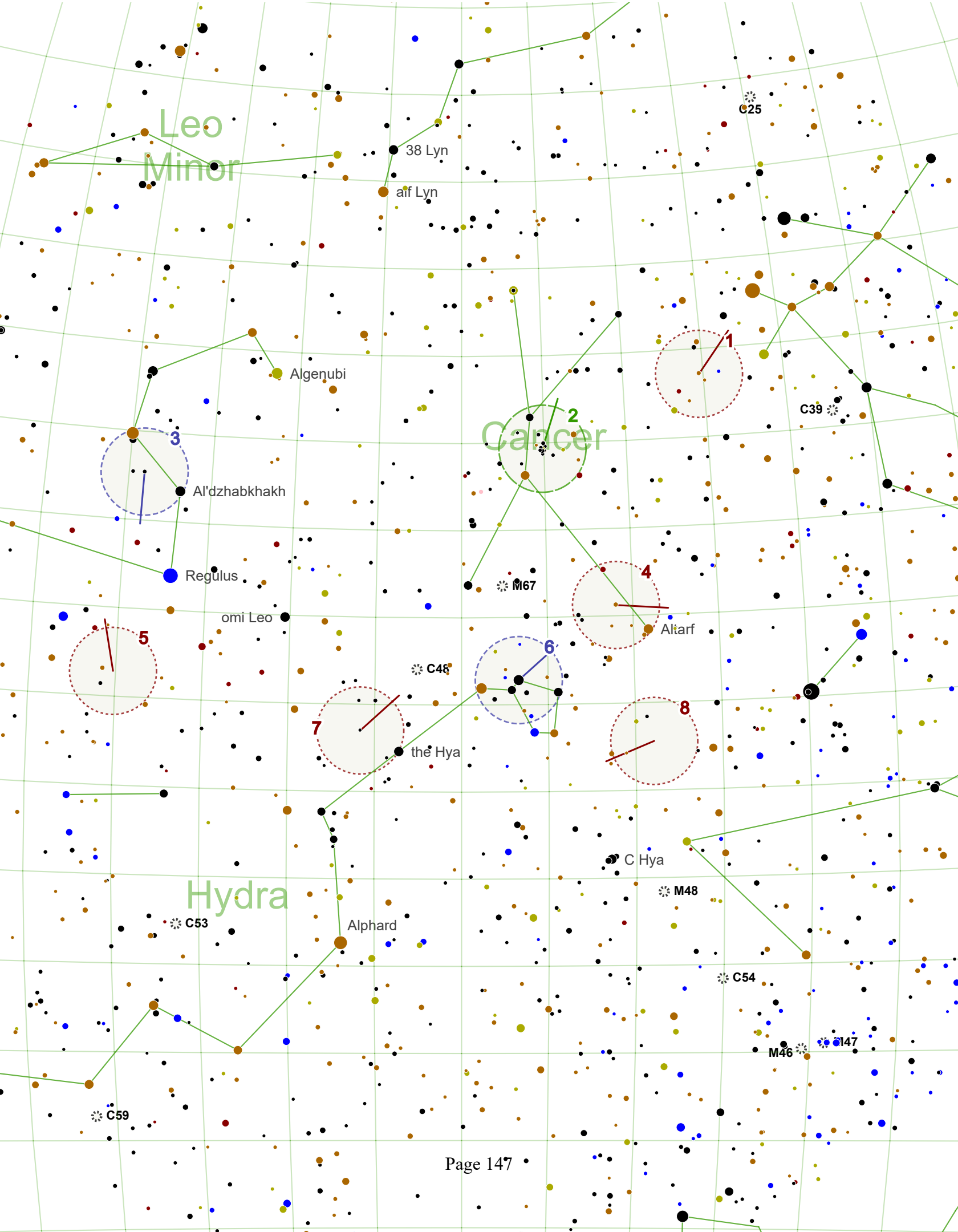
STF 1291 AB*: mag.:6.09 | 6.37, sep.:1.5″ , p.a.309°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 61125

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C39	9.9	planetary nebula
M108	10.0	spiral galaxy
M44	3.7	open cluster
M81	6.9	spiral galaxy
M82	8.4	irregular galaxy
M97	9.9	planetary nebula


Leo Minor
38 Lyn
aif Lyn
C25
Algenubi
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2
Cancer
C39
3
Al'dzhabkhakh
Regulus
M67
4
Altarf
omi Leo
5
6
C48
7
the Hya
8
C Hya
M48
Hydra
C53
Alphard
C54
M46
M47
C59

February: 10° North (1)

1: STF 1171 (RA: 08 01 01, DEC: +23 34 59)

***STF 1171**: mag.:6.48 | 9.95, sep.:2.1″, p.a.326°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 79864

2: Struve 1254 (RA: 08 40 22, DEC: +19 40 12)

***STF 1254 AC**: mag.:6.52 | 7.61, sep.:62.5″, p.a.343°*

A wide yellow-blue pairing, but the small blue component is very faint.

The primary is a K-class giant 712 light-years from the Sun. It is not clear if the companion is gravitationally bound to the primary, or if this is just a line-of-sight pairing.

Identifiers: Struve 1254 | SAO 98021 | HIP 42549 | GDR2 0936069632

3: STT 215 (RA: 10 16 16, DEC: +17 44 25)

***STT 215**: mag.:7.25 | 7.46, sep.:1.5″, p.a.175°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 99032

4: 21 Cnc (RA: 08 23 55, DEC: +10 37 55)

***A 2961**: mag.:6.34 | 9.42, sep.:1.3″, p.a.267°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 97788

5: STF 1426 AB,C (RA: 10 20 32, DEC: +06 25 48)

***STF 1426 AB,C**: mag.:7.3 | 9.43, sep.:7.6″, p.a.9°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

6: STF 1273 AB,C (RA: 08 46 47, DEC: +06 25 08)

***STF 1273 AB,C**: mag.:3.49 | 6.66, sep.:2.7″, p.a.312°*

A tight pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 117112

7: STF 1347 (RA: 09 23 16, DEC: +03 30 05)

***STF 1347**: mag.:7.33 | 8.26, sep.:21.1″, p.a.312°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

8: STF 1210 AB (RA: 08 15 49, DEC: +02 48 05)

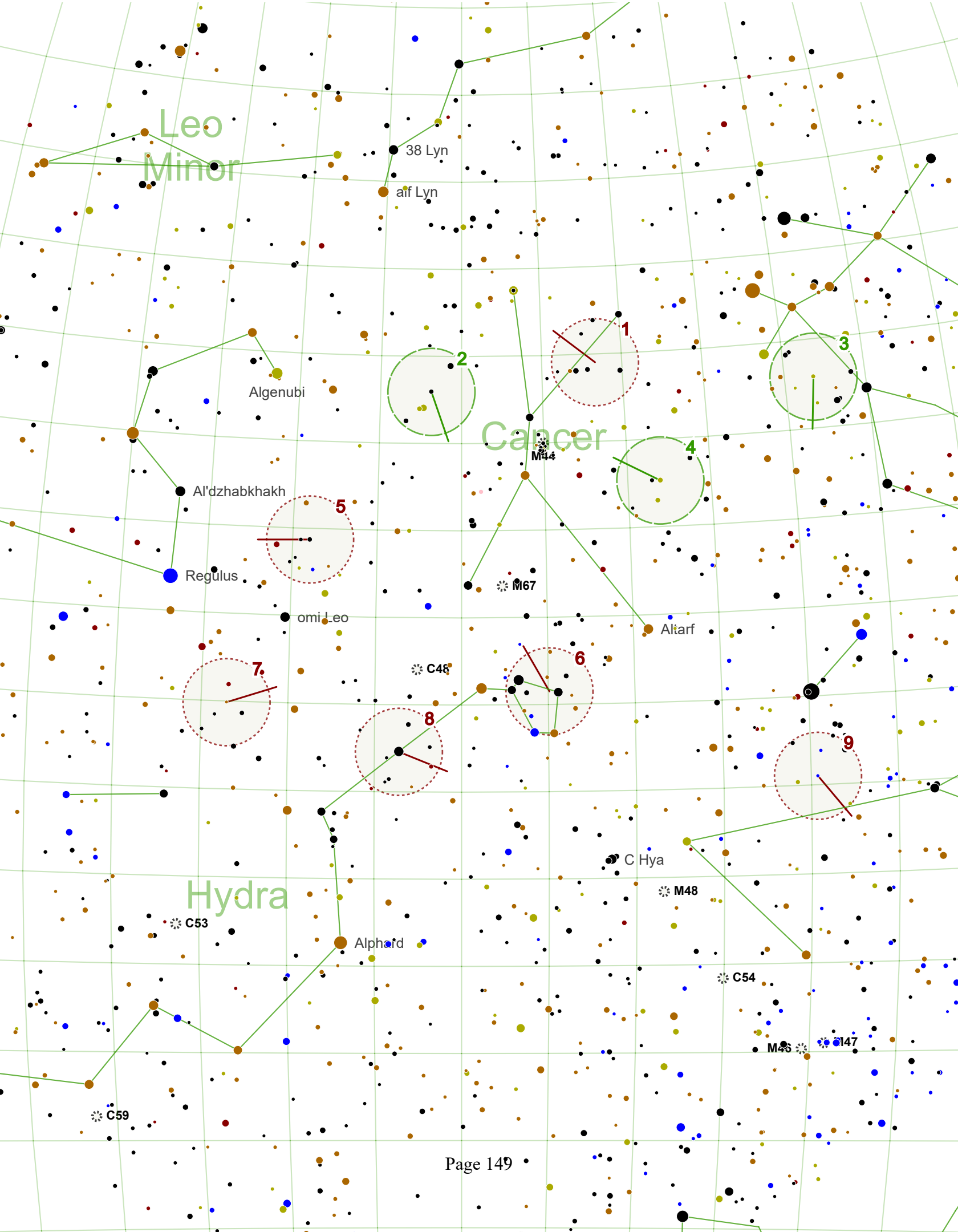
***STF 1210 AB**: mag.:7.25 | 9.45, sep.:15.7″, p.a.113°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

Deep Sky Objects

DSO	Mag.	Type
C25	10.4	globular cluster
C39	9.9	planetary nebula
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C54	7.6	open cluster
C59	8.6	planetary nebula
M46	6.0	open cluster
M47	5.2	open cluster
M48	5.5	open cluster
M67	6.1	open cluster


Leo Minor
38 Lyn
aif Lyn
Algenubi
Cancer
M44
Al'dzhabkhakh
Regulus
omi Leo
M67
Altarf
C48
C Hya
M48
Hydra
C53
Alphard
C54
M46
M47
C59
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8
9

February: 10° North (2)

1: 24 Cnc (RA: 08 26 40, DEC: +24 32 04)

STF 1224 A,BC*: mag.:6.92 | 7.53, sep.:5.7″ , p.a.53°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 80184

2: Struve 1311 (RA: 09 07 27, DEC: +22 58 51)

STF 1311 AB*: mag.:6.92 | 7.13, sep.:7.5″ , p.a.199°*

A close pair of equal yellowish stars.

Only 190 light-years from Earth, this system is composed of two F-class stars. Larger telescopes might spot a C component (magnitude 13.2, separation 27.8, position angle 117°). The C component is not gravitationally bound to the other two components, and is instead only a background star.

Identifiers: Struve 1311 | SAO 80643 | HIP 44768 | GDR2 7313623168

3: Struve 1108 (RA: 07 32 51, DEC: +22 53 15)

STF 1108*: mag.:6.62 | 8.21, sep.:11.7″ , p.a.179°*

A yellow primary comfortably separated from a blue secondary.

With this double centered in the finder, Caldwell 39 (a planetary nebula) lies on the SSW edge of the finder circle. Open cluster NGC 2420 is in the SE quadrant of the finder.

Identifiers: Struve 1108 | SAO 79489 | HIP 36690 | GDR2 3847454592

4: Zeta Cnc (RA: 08 12 13, DEC: +17 38 51)

STF 1196 AB*: mag.:5.3 | 6.25, sep.:1.1″ , p.a.1°*

STF 1196 AB,C*: mag.:4.92 | 5.85, sep.:6.3″ , p.a.64°*

STF 1196 AC*: mag.:5.3 | 5.85, sep.:6.2″ , p.a.62°*

STF 1196 BC*: mag.:6.25 | 5.85, sep.:5.5″ , p.a.70°*

An equal pair of closely bound and bright yellow stars.

One and a half finder circles NEE is the wonderful Beehive Cluster. Under dark skies this cluster rivals the Pleiades as a naked-eye sight!

Identifiers: Zeta Cnc | SAO 97646 | HIP 40167 | GDR2 1593509376

5: 7 Leo (RA: 09 35 53, DEC: +14 22 46)

H 5 58*: mag.:6.31 | 9.39, sep.:41″ , p.a.90°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 98662

6: STF 1255 AB (RA: 08 39 44, DEC: +05 45 51)

STF 1255 AB*: mag.:7.33 | 8.56, sep.:26.1″ , p.a.30°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

7: 9 Sex (RA: 09 54 07, DEC: +04 56 44)

S 605*: mag.:6.89 | 8.4, sep.:53.5″ , p.a.287°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

8: The Hya (RA: 09 14 22, DEC: +02 18 51)

HJ 2489 AB*: mag.:3.85 | 9.9, sep.:20.9″ , p.a.248°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 117527

9: STT 176 AB (RA: 07 38 30, DEC: +00 30 18)

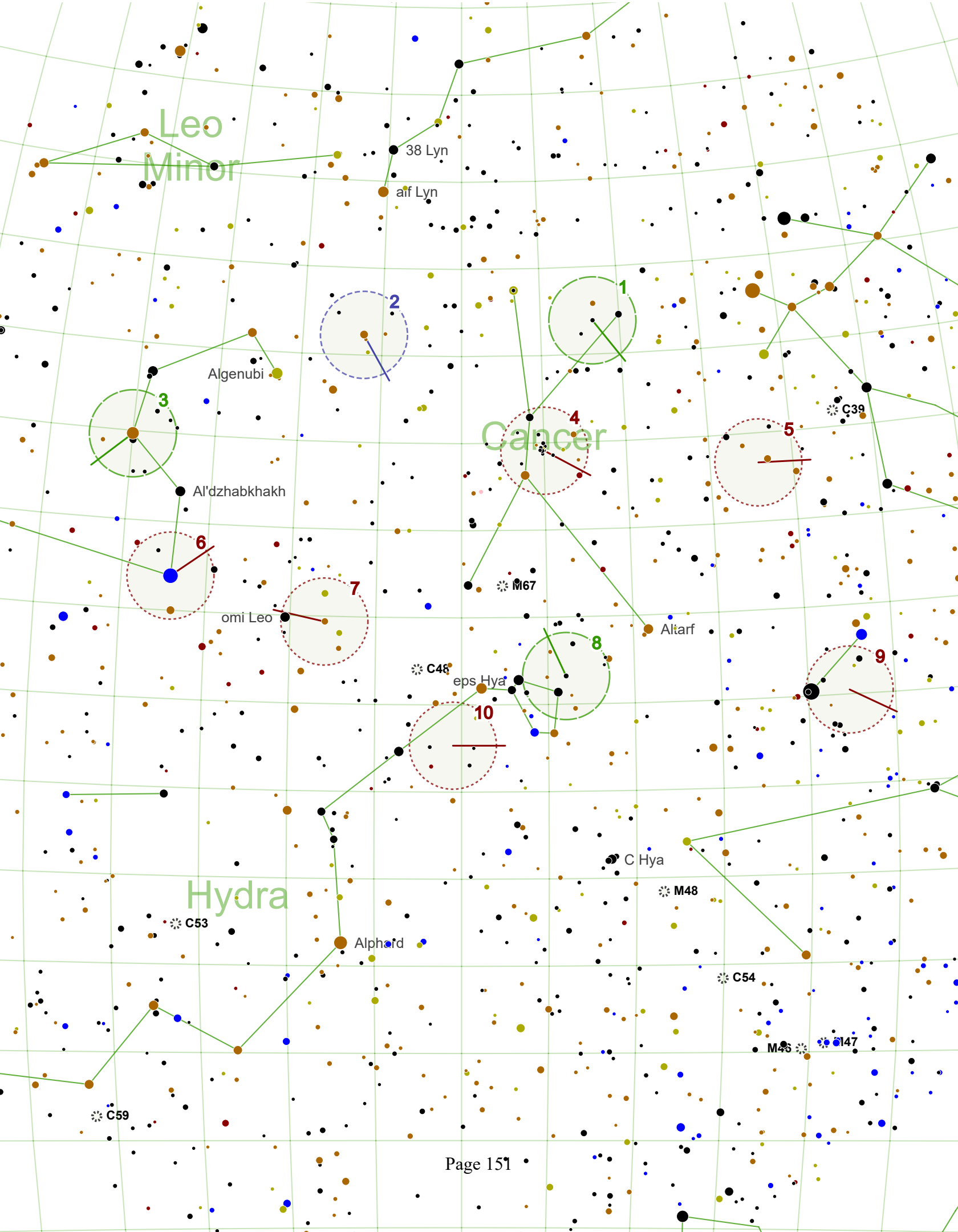
STT 176 AB*: mag.:7.21 | 9.24, sep.:1.5″ , p.a.220°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 115733

Deep Sky Objects

DSO	Mag.	Type
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C54	7.6	open cluster
C59	8.6	planetary nebula
M44	3.7	open cluster
M46	6.0	open cluster
M47	5.2	open cluster
M48	5.5	open cluster
M67	6.1	open cluster


Leo Minor
38 Lyn
aif Lyn
1
2
Algenubi
3
Cancer
4
C39
5
Al'dzhabkhakh
6
M67
7
omi Leo
Altarf
8
C48
eps Hya
9
10
C Hya
M48
Hydra
C53
Alphard
C54
M46
M47
C59

February: 10° North (3)

1: Phi2 Cnc (RA: 08 26 47, DEC: +26 56 08)

STF 1223*: mag.:6.16 | 6.21, sep.:5.2″ , p.a.219°*

Two identical bright white stars nearly touching each other.

Once you have found this one, the good news is lovely Iota Cancri is a finder circle away to the north east.

Identifiers: Phi2 Cnc | SAO 80188 | HIP 41404 | GDR2 0631907456

2: Al minliar al asad (RA: 09 24 39, DEC: +26 10 57)

BU 105 AB*: mag.:4.6 | 9.7, sep.:2″ , p.a.209°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 80807

3: Gamma Leo (RA: 10 19 58, DEC: +19 50 29)

STF 1424 AB*: mag.:2.37 | 3.64, sep.:4.7″ , p.a.127°*

Known variously as Gamma Leonis or Algeiba, this is one of the finest yellow-yellow doubles, being both bright, fairly balanced and tightly bound.

The components are at least 170 astronomical units apart and orbit each other in roughly 500 years. The A component has at least one exoplanet.

Identifiers: Gamma Leo | SAO 81298 | HIP 50583

4: S 571 AD (RA: 08 39 56, DEC: +19 33 11)

S 571 AD*: mag.:7.31 | 6.67, sep.:92.1″ , p.a.242°*

S 571 AG*: mag.:7.31 | 7.47, sep.:45.7″ , p.a.158°*

A wide pairing of a fairly faint primary and a fairly bright companion.

Identifiers: SAO 98013

5: STF 1140 (RA: 07 48 23, DEC: +18 20 12)

STF 1140*: mag.:7.01 | 8.65, sep.:6.4″ , p.a.273°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 97260

6: Regolo (RA: 10 08 22, DEC: +11 58 02)

STFB 6 AB*: mag.:1.4 | 8.24, sep.:179.2″ , p.a.304°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 98967

7: 6 Leo (RA: 09 31 58, DEC: +09 42 57)

SHJ 107*: mag.:5.22 | 9.3, sep.:37.1″ , p.a.77°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 117751

8: Struve 1245 (RA: 08 35 51, DEC: +06 37 14)

STF 1245 AB*: mag.:5.98 | 7.16, sep.:10.1″ , p.a.25°*

A well matched white-yellow pair, easily separated.

Struve 1245 is only 82 light-years from the Sun. The secondary star is similar to the Sun, but slightly cooler.

Identifiers: Struve 1245 | SAO 116929 | HIP 42172 | GDR2 8593414016

9: STF 1103 (RA: 07 30 34, DEC: +05 15 17)

STF 1103*: mag.:7.12 | 8.64, sep.:4.2″ , p.a.245°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

10: BU 211 (RA: 09 01 59, DEC: +02 40 16)

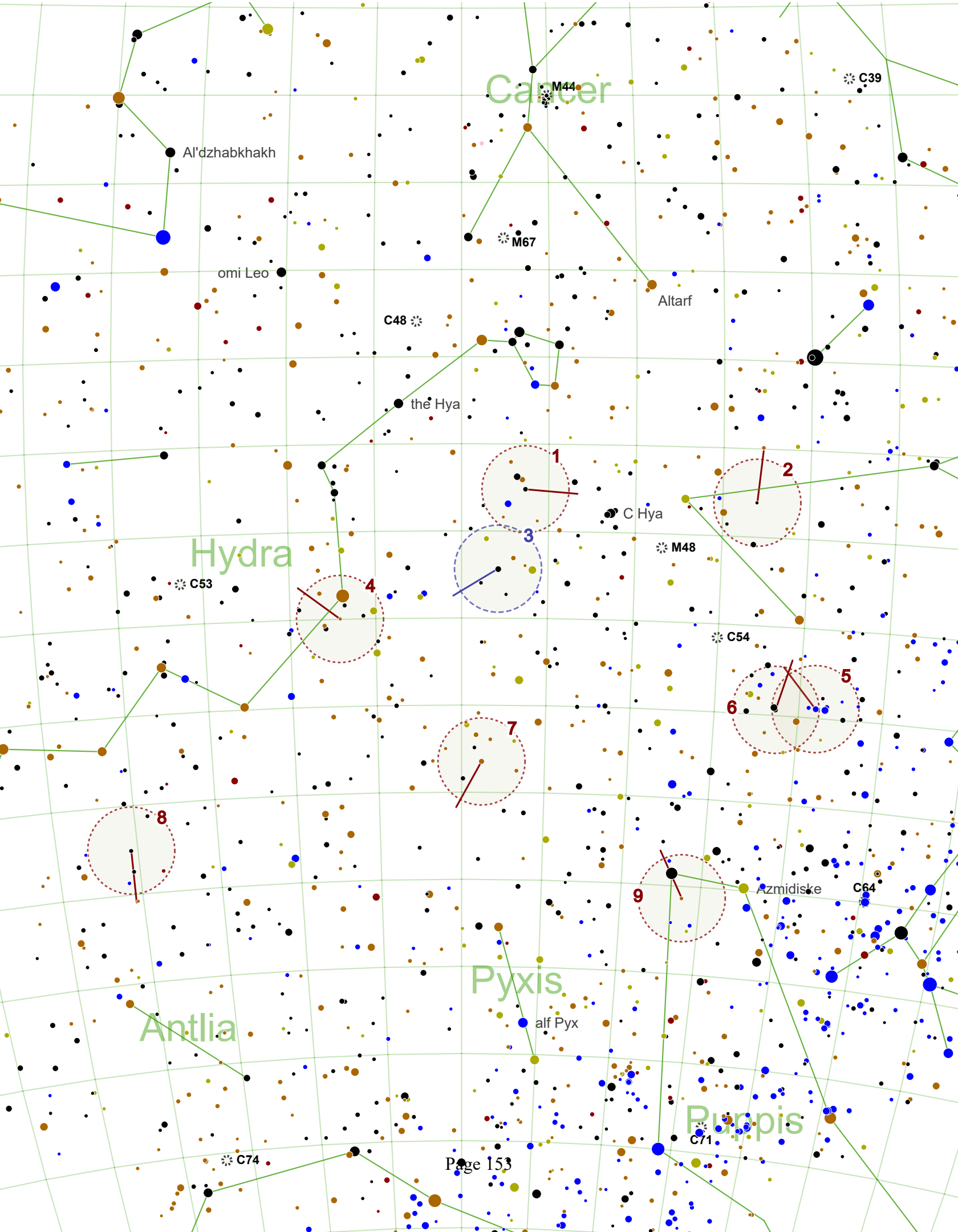
BU 211*: mag.:7.34 | 8.77, sep.:1.1″ , p.a.270°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

Deep Sky Objects

DSO	Mag.	Type
C39	9.9	planetary nebula
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C54	7.6	open cluster
C59	8.6	planetary nebula
M46	6.0	open cluster
M47	5.2	open cluster
M48	5.5	open cluster
M67	6.1	open cluster


Cancer
M44
C39
Al'dzhabkhakh
M67
omi Leo
Altarf
C48
the Hya
1
2
C Hya
3
M48
Hydra
C53
4
C54
5
6
7
8
9
Azmidiske
C64
Pyxis
alf Pyx
Antlia
Puppis
C71
C74

February: -10° South (1)

1: STF 1270 (RA: 08 45 21, DEC: -02 36 04)

***STF 1270**: mag.:6.89 | 7.54, sep.:4.7″, p.a.265°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 136243

2: STF 1154 (RA: 07 52 08, DEC: -03 03 15)

***STF 1154**: mag.:7.13 | 9.26, sep.:2.8″, p.a.353°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

3: 15 Hya (RA: 08 51 34, DEC: -07 10 38)

***BU 587 AB**: mag.:5.75 | 7.41, sep.:1.2″, p.a.121°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 136345

4: STF 1357 AB (RA: 09 28 21, DEC: -09 59 13)

***STF 1357 AB**: mag.:6.94 | 9.85, sep.:7.7″, p.a.54°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 136878

5: STF 1120 AC (RA: 07 36 04, DEC: -14 29 34)

***STF 1120 AC**: mag.:5.64 | 9.74, sep.:19.8″, p.a.37°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 153118

6: 2 Pup (RA: 07 45 29, DEC: -14 41 26)

***STF 1138 AB**: mag.:6 | 6.73, sep.:16.7″, p.a.341°*

A comfortably separated pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 153363

7: S 585 (RA: 08 55 12, DEC: -18 14 28)

***S 585**: mag.:5.9 | 7.24, sep.:64.2″, p.a.151°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 154745

8: BU 219 (RA: 10 21 36, DEC: -22 31 43)

***BU 219**: mag.:6.7 | 8.52, sep.:1.8″, p.a.186°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 178723

9: I 487 (RA: 08 04 33, DEC: -25 41 59)

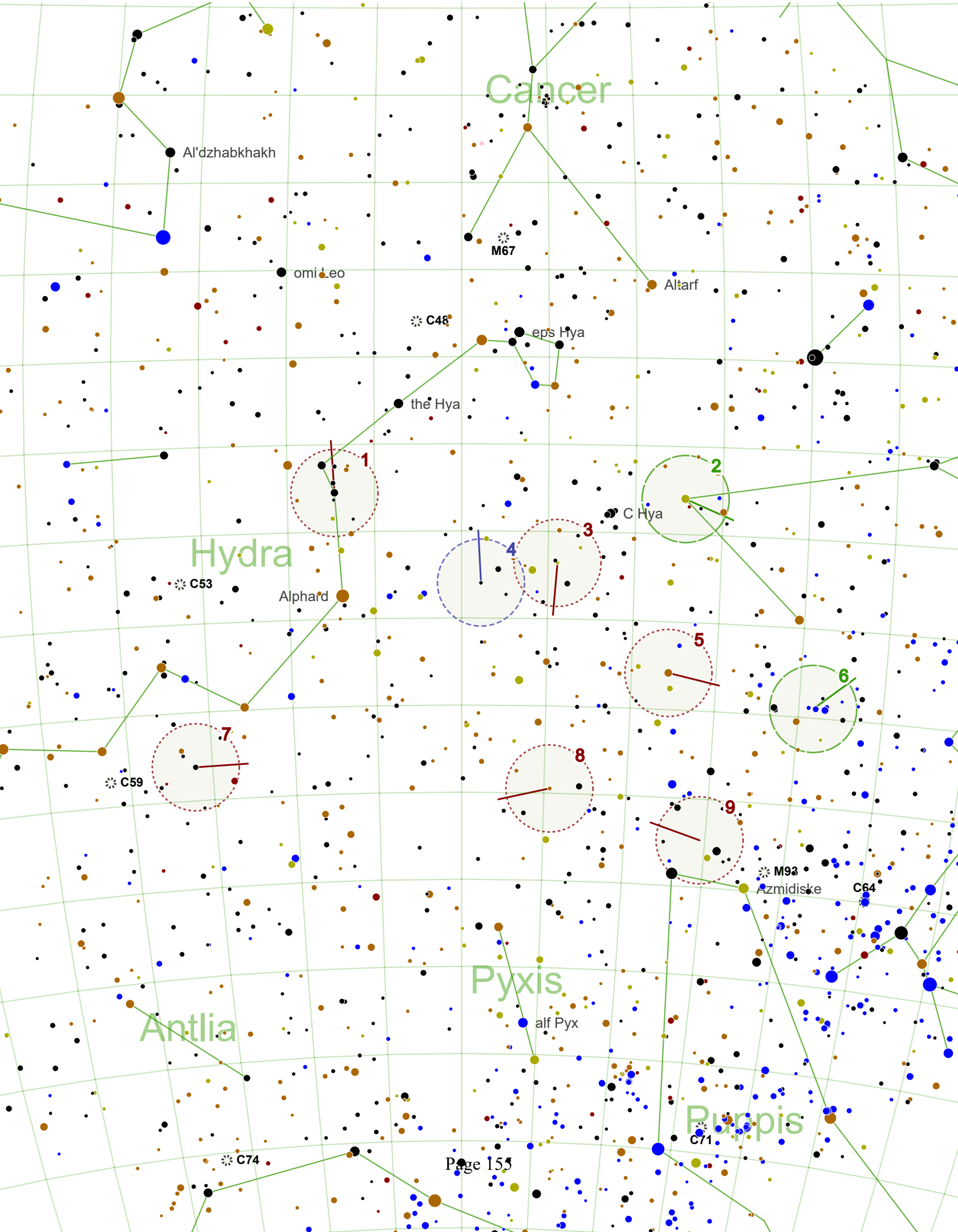
***I 487**: mag.:6.6 | 9.98, sep.:1.9″, p.a.24°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 175114

Deep Sky Objects

DSO	Mag.	Type
C39	9.9	planetary nebula
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C54	7.6	open cluster
C64	4.1	open cluster
C71	5.8	open cluster
C74	8.2	planetary nebula
M44	3.7	open cluster
M48	5.5	open cluster
M67	6.1	open cluster


Cancer
Al'dzhabkhakh
M67
omi Leo
Altarf
C48
eps Hya
the Hya
1
2
C Hya
3
4
Hydra
C53
Alphard
5
6
7
C59
8
9
M93
Azmidiske
C64
Pyxis
alf Pyx
Antlia
Puppis
C71
C74

February: -10° South (2)

1: Tau1 Hya (RA: 09 29 09, DEC: -02 46 08)

HJ 1167*: mag.:4.64 | 7.28, sep.:67.5" , p.a.4°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 136895

2: Zeta Mon (RA: 08 08 36, DEC: -02 59 02)

STF 1190 AC*: mag.:4.46 | 9.68, sep.:64.9" , p.a.246°*

A widely separated triple system with two brighter yellow components and a fainter orange companion.

The main component is yellow supergiant six times the mass of the Sun with 2,200 times the luminosity.

Identifiers: Zeta Mon | SAO 135551 | HIP 39863

3: V401 Hya (RA: 08 37 50, DEC: -06 48 25)

HJ 99 AB*: mag.:6.82 | 8.27, sep.:60.5" , p.a.175°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

4: 17 Hya (RA: 08 55 30, DEC: -07 58 16)

STF 1295*: mag.:6.73 | 6.93, sep.:4" , p.a.3°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 136409

5: SHJ 91 AE (RA: 08 11 16, DEC: -12 55 37)

SHJ 91 AE*: mag.:4.82 | 9.37, sep.:70.1" , p.a.256°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 153942

6: STF 1121 (RA: 07 36 36, DEC: -14 29 04)

STF 1121 AB*: mag.:6.92 | 7.3, sep.:7.4" , p.a.306°*

STF 1121 AG*: mag.:6.92 | 7.66, sep.:84" , p.a.3°*

A close and equal pair of bluish stars.

With the double centered in the finder, there are three open clusters in view - M46 to the east, NGC 2423 to the north, and M47 in the center.

Identifiers: STF 1121 | SAO 153143 | GDR2 88012822272

7: SHJ 110 AC (RA: 10 04 03, DEC: -18 06 05)

SHJ 110 AC*: mag.:6.22 | 6.97, sep.:21.2" , p.a.274°*

A wide pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 155704

8: BU 207 (RA: 08 38 40, DEC: -19 44 13)

BU 207*: mag.:6.59 | 9.22, sep.:4.4" , p.a.102°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 154492

9: BU 333 AC (RA: 08 01 19, DEC: -22 20 13)

BU 333 AB*: mag.:7.15 | 9.2, sep.:1.7" , p.a.43°*

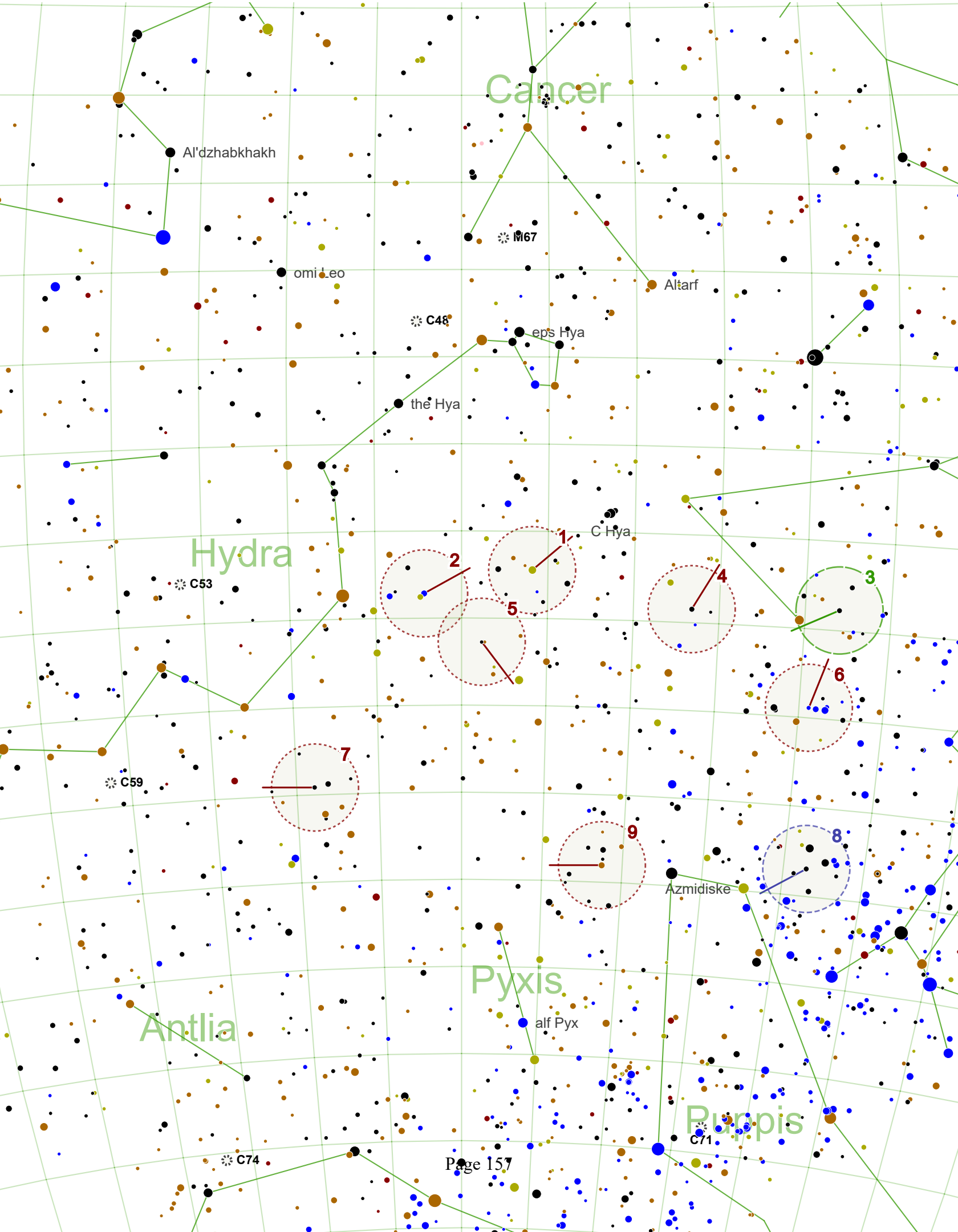
BU 333 AC*: mag.:7.15 | 7.62, sep.:43" , p.a.70°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 174989

Deep Sky Objects

DSO	Mag.	Type
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C59	8.6	planetary nebula
C64	4.1	open cluster
C71	5.8	open cluster
C74	8.2	planetary nebula
M67	6.1	open cluster
M93	6.0	open cluster


Cancer
Al'dzhabkhakh
M67
omi Leo
Algrf
C48
eps Hya
the Hya
Hydra
C Hya
C53
1
2
3
4
5
6
7
C59
9
8
Azmidiske
Pyxis
alf Pyx
Antlia
Puppis
C71
C74

February: -10° South (3)

1: F Hya (RA: 08 43 40, DEC: -07 14 01)

***S 579 AB**: mag.:4.72 | 8.2, sep.:78.8″ , p.a.310°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 136221

2: 19 Hya (RA: 09 08 42, DEC: -08 35 22)

***KUI 38**: mag.:5.6 | 9.47, sep.:1.3″ , p.a.299°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 136604

3: STF 1112 (RA: 07 32 06, DEC: -08 52 51)

***STF 1112**: mag.:6.03 | 8.73, sep.:23.9″ , p.a.113°*

A yellow primary widely separated from a somewhat fainter white secondary.

The binary system is only 91 light-years from Earth. Open star cluster NGC 2396 (mag. 7.4) lies just beyond the southern edge of the finder circle.

Identifiers: STF 1112 | SAO 134806 | HIP 36640 | GDR2 81541641600

4: STF 1183 AB (RA: 08 06 27, DEC: -09 14 40)

***STF 1183 AB**: mag.:6.22 | 7.77, sep.:30.6″ , p.a.328°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 135505

5: S 584 (RA: 08 55 17, DEC: -11 22 18)

***S 584**: mag.:6.88 | 8.84, sep.:63.6″ , p.a.217°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 154743

6: S 557 (RA: 07 37 39, DEC: -14 26 27)

***S 557**: mag.:6.51 | 8.74, sep.:66″ , p.a.338°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 153172

7: S 604 (RA: 09 35 34, DEC: -19 35 00)

***S 604**: mag.:6.34 | 9.44, sep.:51.8″ , p.a.90°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 155323

8: n Pup (RA: 07 34 19, DEC: -23 28 25)

***H N 19**: mag.:5.82 | 5.85, sep.:9.9″ , p.a.118°*

A close pairing of a bright primary and a bright companion.

Identifiers: SAO 174019

9: S 568 (RA: 08 25 04, DEC: -24 02 46)

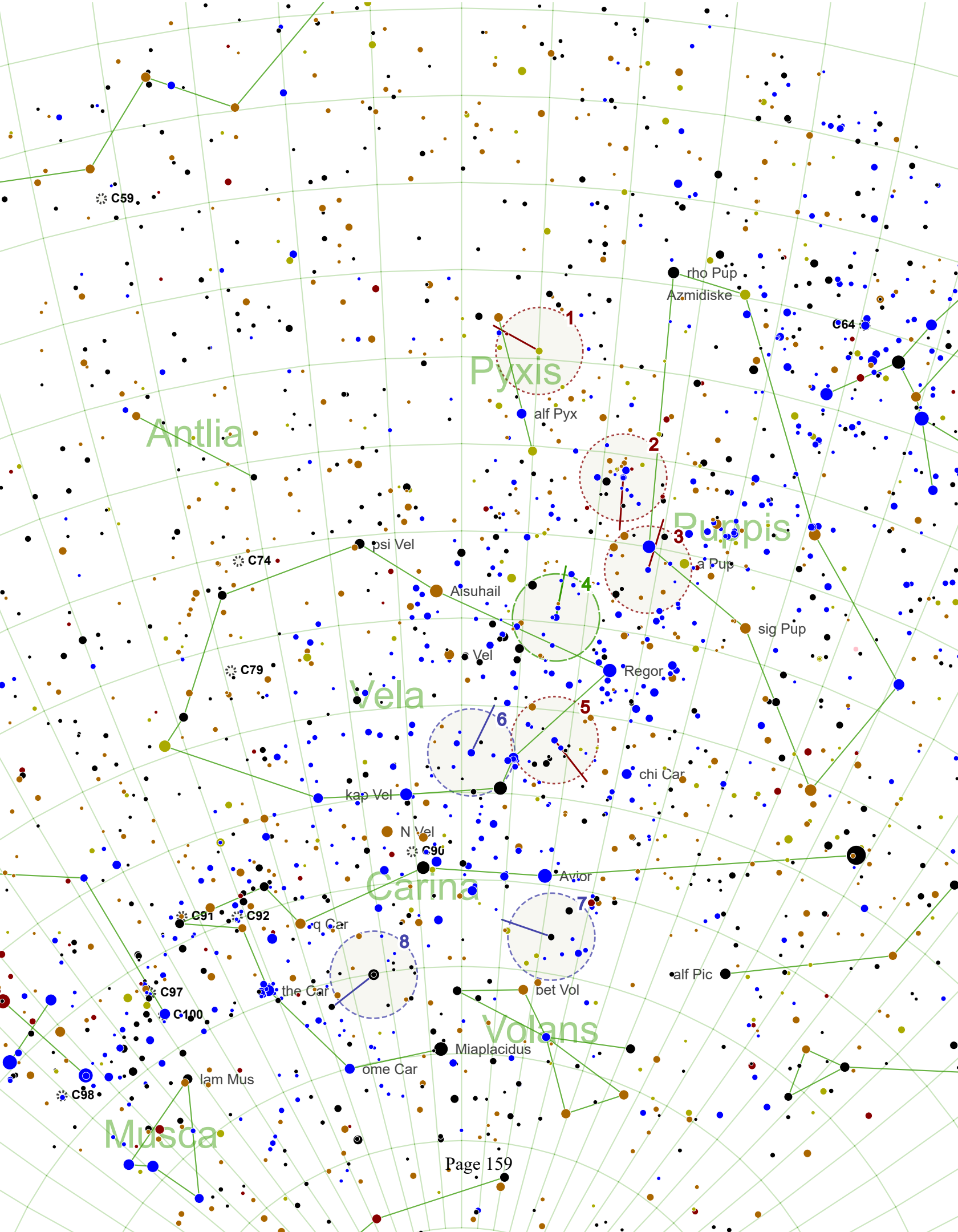
***S 568**: mag.:5.48 | 8.43, sep.:42.7″ , p.a.90°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 175783

Deep Sky Objects

DSO	Mag.	Type
C48	10.3	spiral galaxy
C53	9.1	elliptical galaxy
C59	8.6	planetary nebula
C71	5.8	open cluster
C74	8.2	planetary nebula
M67	6.1	open cluster


C59
rho Pup
Azmidiske
C64
1
Pyxis
alf Pyx
Antlia
2
Puppis
3
psi Vel
C74
a Pup
Alsuhail
4
sig Pup
Vel
C79
Regor
Vela
5
6
chi Car
kap Vel
N Vel
C90
Avior
Carina
7
C91
C92
q Car
8
alf Pic
C97
the Car
bet Vol
C100
Volans
Miaplacidus
ome Car
lam Mus
C98
Musca

February: -45° South (1)

1: Zet Pyx (RA: 08 39 42, DEC: -29 33 40)

HJ 4120*: mag.:4.97 | 9.59, sep.:52.2″ , p.a.61°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 176253

2: OS Pup (RA: 08 13 58, DEC: -36 19 20)

DUN 67*: mag.:5.03 | 5.99, sep.:66.8″ , p.a.176°*

A wide pairing of a bright primary and a bright companion.

Identifiers: SAO 198969

3: V336 Pup (RA: 08 02 45, DEC: -41 18 35)

HJ 4038*: mag.:5.48 | 8.98, sep.:26.5″ , p.a.343°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 219339

4: DUN 70 (RA: 08 29 27, DEC: -44 43 29)

DUN 70*: mag.:5.16 | 6.95, sep.:4.3″ , p.a.349°*

A bright blue primary with a very close and fairly bright secondary.

The double is situated in a wide region of diffuse nebulosity cataloged as Ced 106a/e.

Identifiers: DUN 70 | SAO 219996 | HIP 41639

5: DUN 69 AB (RA: 08 25 31, DEC: -51 43 39)

DUN 69 AB*: mag.:5.14 | 9.63, sep.:25.7″ , p.a.218°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 235962

6: H Vel (RA: 08 56 19, DEC: -52 43 22)

R 87*: mag.:4.7 | 7.72, sep.:2.5″ , p.a.334°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 236417

7: C Car (RA: 08 15 16, DEC: -62 54 56)

RMK 8*: mag.:5.27 | 7.62, sep.:4.2″ , p.a.71°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 250164

8: Ups Car (RA: 09 47 06, DEC: -65 04 19)

HJ 4252*: mag.:8.74 | 9.13, sep.:12.3″ , p.a.303°*

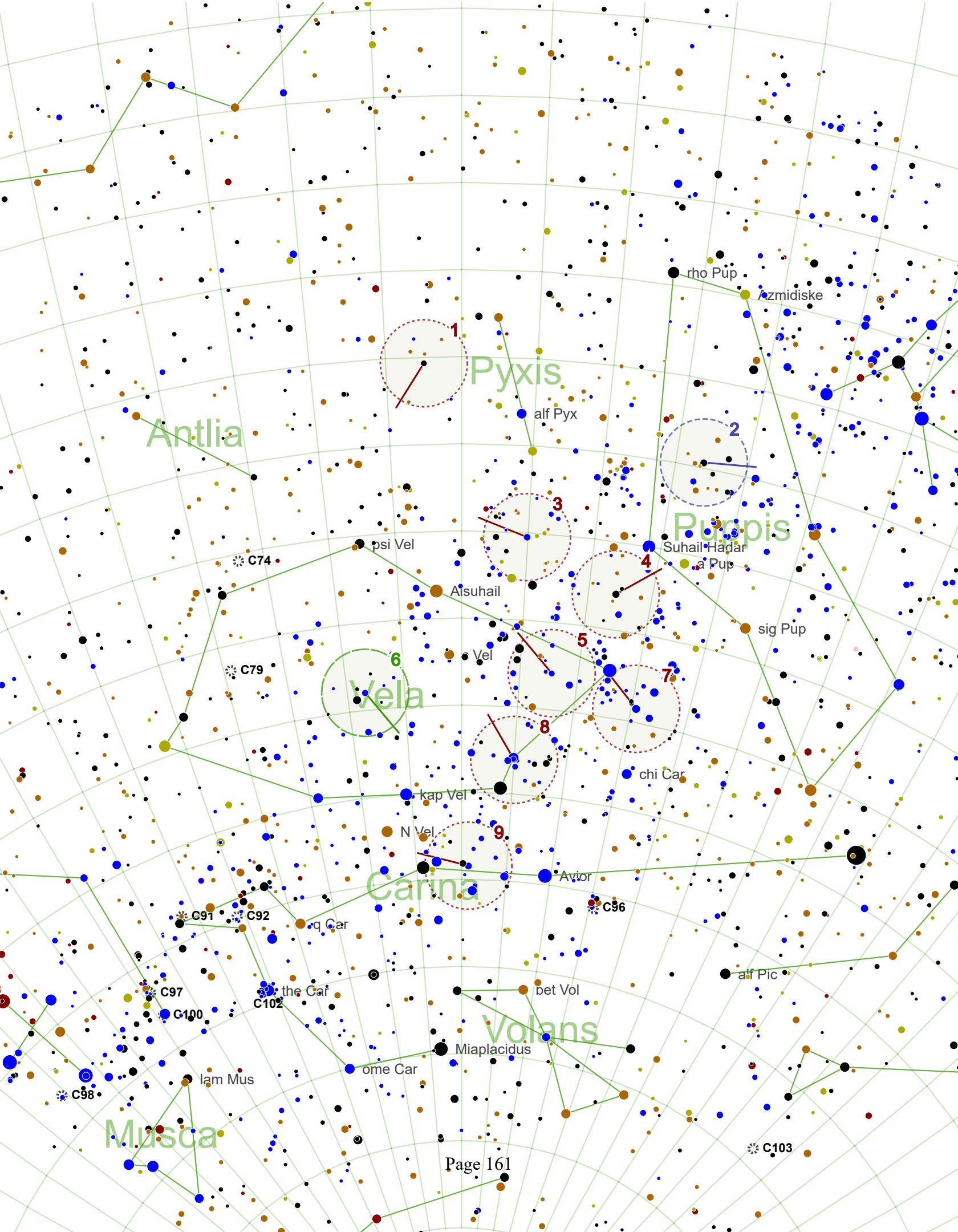
RMK 11*: mag.:3.02 | 6, sep.:5.1″ , p.a.128°*

A close pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 250695

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C59	8.6	planetary nebula
C64	4.1	open cluster
C74	8.2	planetary nebula
C79	6.7	globular cluster
C90	9.7	planetary nebula
C91	3.0	open cluster
C92	6.2	bright nebula
C97	5.3	open cluster
C98	6.9	open cluster


Pyxis
Antlia
Puppis
Vela
Carina
Volans
Musca
1
2
3
4
5
6
7
8
9
rho Pup
Azmidiske
alf Pyx
psi Vel
C74
Suhail Hadar
a Pup
Alsuhail
sig Pup
C79
chi Car
kap Vel
N Vel
Avior
C96
C91
C92
q Car
alf Pic
C97
the Car
C102
C100
bet Vol
Miaplacidus
ome Car
lam Mus
C98
C103

February: -45° South (2)

1: Eps Pyx (RA: 09 09 56, DEC: -30 21 55)

***H N 96 A,BC**: mag.:5.59 | 9.54, sep.:17.6″ , p.a.148°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 200047

2: 212 Pup (RA: 07 52 16, DEC: -34 42 20)

***HWE 65**: mag.:5.12 | 8.59, sep.:3.9″ , p.a.265°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 198540

3: NY Vel (RA: 08 40 19, DEC: -40 15 50)

***COO 74**: mag.:5.21 | 9.06, sep.:4.6″ , p.a.68°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 220252

4: HJ 4057 (RA: 08 11 26, DEC: -42 59 14)

***HJ 4057**: mag.:4.77 | 9.81, sep.:26.7″ , p.a.299°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 219569

5: HJ 4104 AC (RA: 08 29 05, DEC: -47 55 44)

***HJ 4104 AB**: mag.:5.51 | 7.17, sep.:3.5″ , p.a.244°*

***HJ 4104 AC**: mag.:5.51 | 9.23, sep.:19.6″ , p.a.40°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 219985

6: HJ 4220 (RA: 09 33 45, DEC: -49 00 19)

***HJ 4220**: mag.:5.54 | 6.19, sep.:2″ , p.a.220°*

A well-balanced pair, with a bright bluish primary and a tightly bound, fairly bright companion.

Open cluster NGC 2972 (magnitude 9.9) is two degrees to the south east.

Identifiers: HJ 4220 | SAO 221288 | HIP 46914 | GDR2 60957618560

7: HJ 4025 AD (RA: 07 58 14, DEC: -49 14 42)

***HJ 4025 AD**: mag.:4.47 | 9.88, sep.:39″ , p.a.38°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 219226

8: NZ Vel (RA: 08 39 58, DEC: -53 03 17)

***HJ 4126**: mag.:5.2 | 8.66, sep.:16.8″ , p.a.30°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 236157

9: b1 Car (RA: 08 56 58, DEC: -59 13 46)

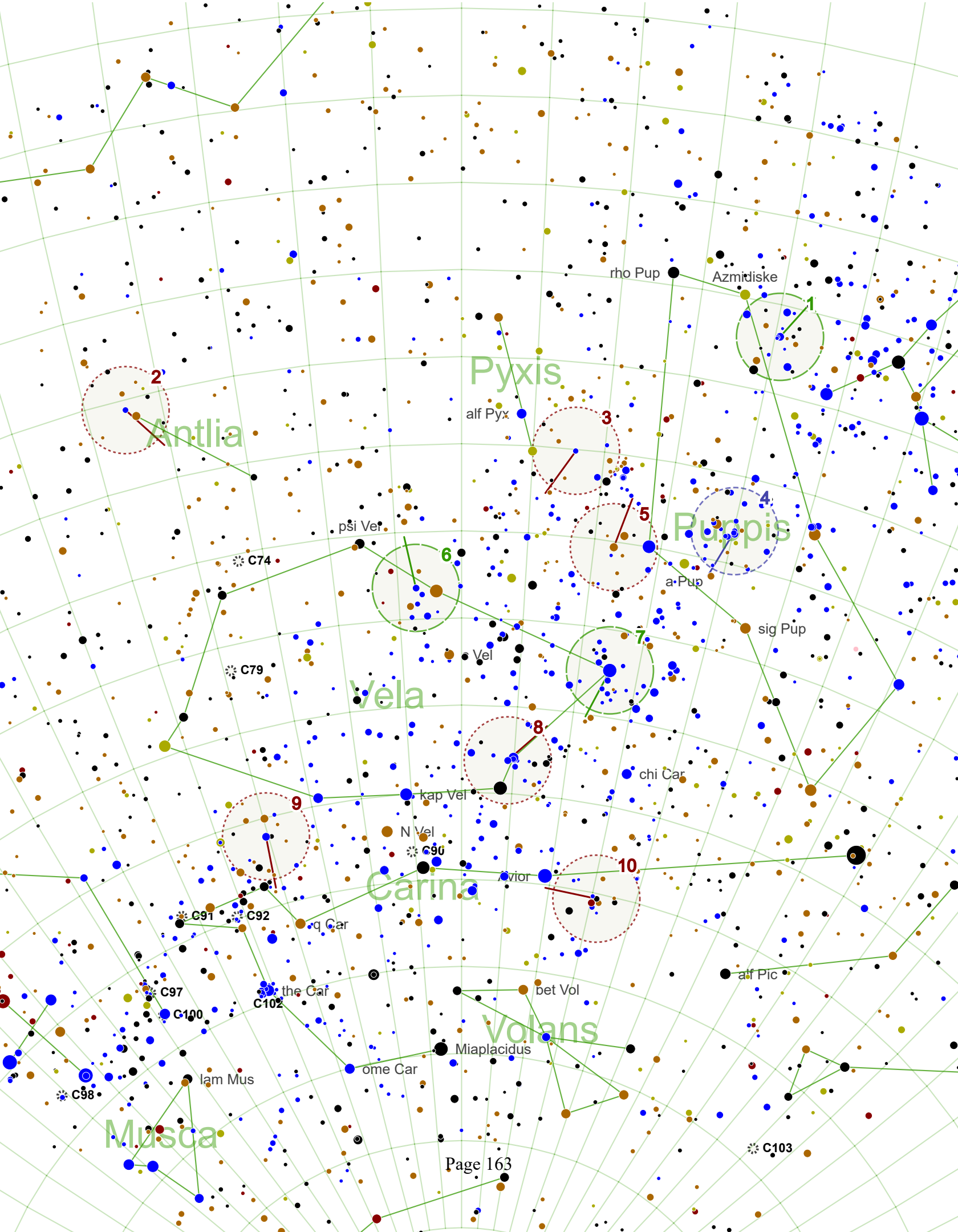
***DUN 74**: mag.:4.87 | 6.58, sep.:40.1″ , p.a.76°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 236436

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C102	1.9	open cluster
C103	4.0	bright nebula
C74	8.2	planetary nebula
C79	6.7	globular cluster
C91	3.0	open cluster
C92	6.2	bright nebula
C96	3.8	open cluster
C97	5.3	open cluster
C98	6.9	open cluster


rho Pup
Azmidiske
1
Pyxis
2
Antlia
alf Pyx
3
4
Puppis
5
psi Vel
6
C74
a Pup
sig Pup
7
Vel
C79
Vela
8
chi Car
9
kap Vel
N Vel
C90
10
Carina
C91
C92
q Car
C97
C100
the Car
C102
bet Vol
alf Pic
Volans
Miaplacidus
ome Car
lam Mus
C98
Musca
C103

February: -45° South (3)

1: Kappa Pup (RA: 07 38 50, DEC: -26 48 14)

***H 3 27 AB**: mag.:4.4 | 4.62, sep.:9.9" , p.a.318°*

A close pair of brilliant, bluish stars.

NGC 2453, a magnitude 8.3 open cluster, is in the eastern quarter of the finder view.

Identifiers: Kappa Pup | SAO 174199 | HIP 37229 | DGR2 14549657728

2: Del Ant (RA: 10 29 35, DEC: -30 36 25)

***H N 50**: mag.:5.56 | 9.84, sep.:10.3" , p.a.228°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 201442

3: XY Pyx (RA: 08 27 59, DEC: -35 06 50)

***GLI 96 AB**: mag.:5.71 | 9.7, sep.:25.1" , p.a.144°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 199260

4: d2 Pup (RA: 07 39 44, DEC: -38 08 22)

***I 160**: mag.:5.77 | 8.59, sep.:1.2" , p.a.149°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 198265

5: h2 Pup (RA: 08 14 03, DEC: -40 20 52)

***HJ 4062**: mag.:4.44 | 9.5, sep.:59.4" , p.a.339°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 219635

6: HJ 4191 (RA: 09 14 24, DEC: -43 13 39)

***HJ 4191**: mag.:5.22 | 9.2, sep.:5.9" , p.a.13°*

A bright, bluish primary with a close faint companion.

Less than a degree north east of the double KL Vel.

Identifiers: HJ 4191 | SAO 220978 | HIP 45344 | GDR2 76191999616

7: Gamma Vel (RA: 08 09 32, DEC: -47 20 12)

***DUN 65 AB**: mag.:1.79 | 4.14, sep.:41.2" , p.a.221°*

***DUN 65 AC**: mag.:1.79 | 7.26, sep.:61.5" , p.a.152°*

***DUN 65 BC**: mag.:4.14 | 7.26, sep.:60.9" , p.a.113°*

***DUN 65 CD**: mag.:7.26 | 9.25, sep.:33.9" , p.a.123°*

An extremely brilliant blue primary widely separated from a brilliant blue companion.

The primary is a Wolf-Rayet star, an unstable monster with a titanic stellar wind driven by the extreme surface temperature of the star.

Identifiers: Gamma Vel | SAO 219504 | HIP 39953

8: HY Vel (RA: 08 42 25, DEC: -53 06 50)

***BSO 18 A,BC**: mag.:4.79 | 5.45, sep.:76.3" , p.a.311°*

***BSO 18 BC,D**: mag.:5.45 | 9.9, sep.:60.4" , p.a.267°*

A wide pairing of a bright primary and a bright companion.

Identifiers: SAO 236205

9: RMK 13 AC (RA: 10 20 55, DEC: -56 02 36)

***RMK 13 AB**: mag.:4.49 | 7.19, sep.:7.2" , p.a.102°*

***RMK 13 AC**: mag.:4.49 | 9.22, sep.:36.2" , p.a.191°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 237959

10: LDS 198 AB (RA: 07 57 47, DEC: -60 18 11)

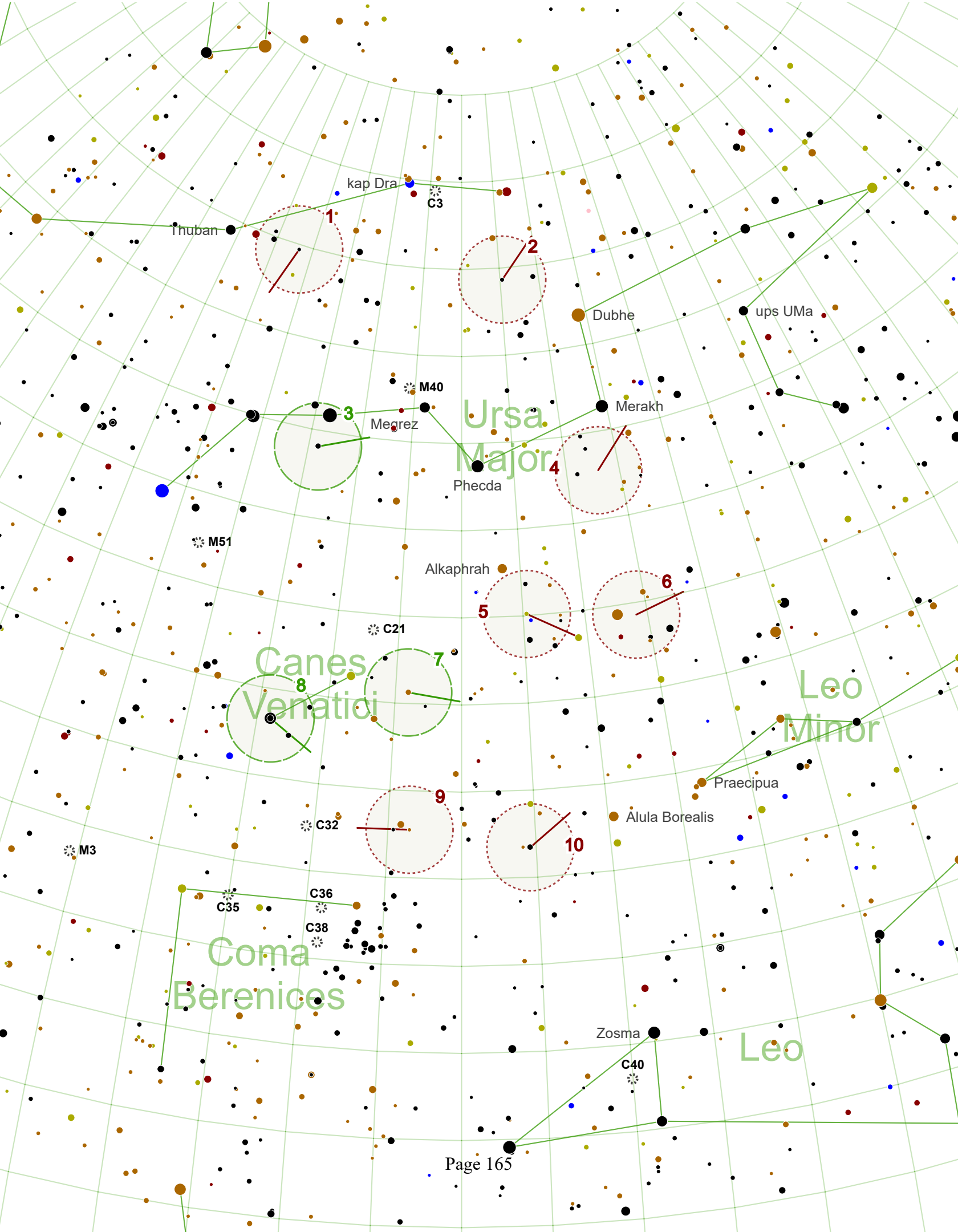
***LDS 198 AB**: mag.:5.4 | 9.87, sep.:60.6" , p.a.78°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 250035

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C102	1.9	open cluster
C103	4.0	bright nebula
C74	8.2	planetary nebula
C79	6.7	globular cluster
C90	9.7	planetary nebula
C91	3.0	open cluster
C92	6.2	bright nebula
C97	5.3	open cluster
C98	6.9	open cluster


kap Dra
C3
Thuban
1
2
Dubhe
ups UMa
M40
Ursa
Major
3
Megrez
Merakh
4
Phecda
M51
Alkaphrah
5
6
C21
Canes
Venatici
7
8
Leo
Minor
Praecipua
9
C32
Alula Borealis
10
M3
C36
C35
C38
Coma
Berenices
Zosma
Leo
C40

April: 45° North (1)

1: STTA 123 AB (RA: 13 27 05, DEC: +64 44 08)

***STTA 123 AB**: mag.:6.65 | 7.03, sep.:69.2″ , p.a.145°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 16078

2: STF 1559 (RA: 11 38 49, DEC: +64 20 49)

***STF 1559**: mag.:6.81 | 8.01, sep.:2″ , p.a.326°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 15580

3: Struve 1695 (RA: 12 56 18, DEC: +54 05 58)

***STF 1695 AB**: mag.:6.04 | 7.75, sep.:3.7″ , p.a.280°*

A bright yellow primary tightly separated from a fainter blue companion.

The spectacular triple system of Mizar and Alcor lies one finder circle to the east.

Identifiers: Struve 1695 | SAO 28572 | HIP 63143 | GDR2 72198878848

4: STF 1510 (RA: 11 08 00, DEC: +52 49 18)

***STF 1510**: mag.:7.65 | 9.03, sep.:5.6″ , p.a.328°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 27918

5: STF 1561 AB (RA: 11 38 45, DEC: +45 06 30)

***STF 1561 AB**: mag.:6.53 | 8.23, sep.:8.9″ , p.a.246°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 43841

6: HJ 2554 (RA: 11 03 39, DEC: +44 19 46)

***HJ 2554**: mag.:7.44 | 9.3, sep.:37.2″ , p.a.296°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 43594

7: 2 CVn (RA: 12 16 08, DEC: +40 39 37)

***STF 1622**: mag.:5.86 | 8.71, sep.:11.6″ , p.a.260°*

A yellow-blue pairing with easy separation.

Three galaxies lie close to this double. Find NGC 4151 two degrees to the south-west, while NGC 4369 two degrees to the south-east. Three degrees to the north east is NGC 4490.

Identifiers: 2 CVn | SAO 44097 | HIP 59831 | GDR2 25675920512

8: Cor Caroli (RA: 12 56 02, DEC: +38 19 06)

***STF 1692 AB**: mag.:2.85 | 5.52, sep.:19.3″ , p.a.230°*

A brilliant white primary star with a more orange secondary, easily separated.

The name means "Charles' Heart" and was given the name by King Charles II of England's physician, who claimed the star shone especially bright on the night the king was restored to power following a period of revolution.

Identifiers: Cor Caroli | SAO 63257 | HIP 63125 | GDR2 16348324992

9: STF 1615 AB (RA: 12 14 07, DEC: +32 47 03)

***STF 1615 AB**: mag.:6.99 | 8.61, sep.:26.8″ , p.a.88°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 62904

10: 62 UMa (RA: 11 41 34, DEC: +31 44 46)

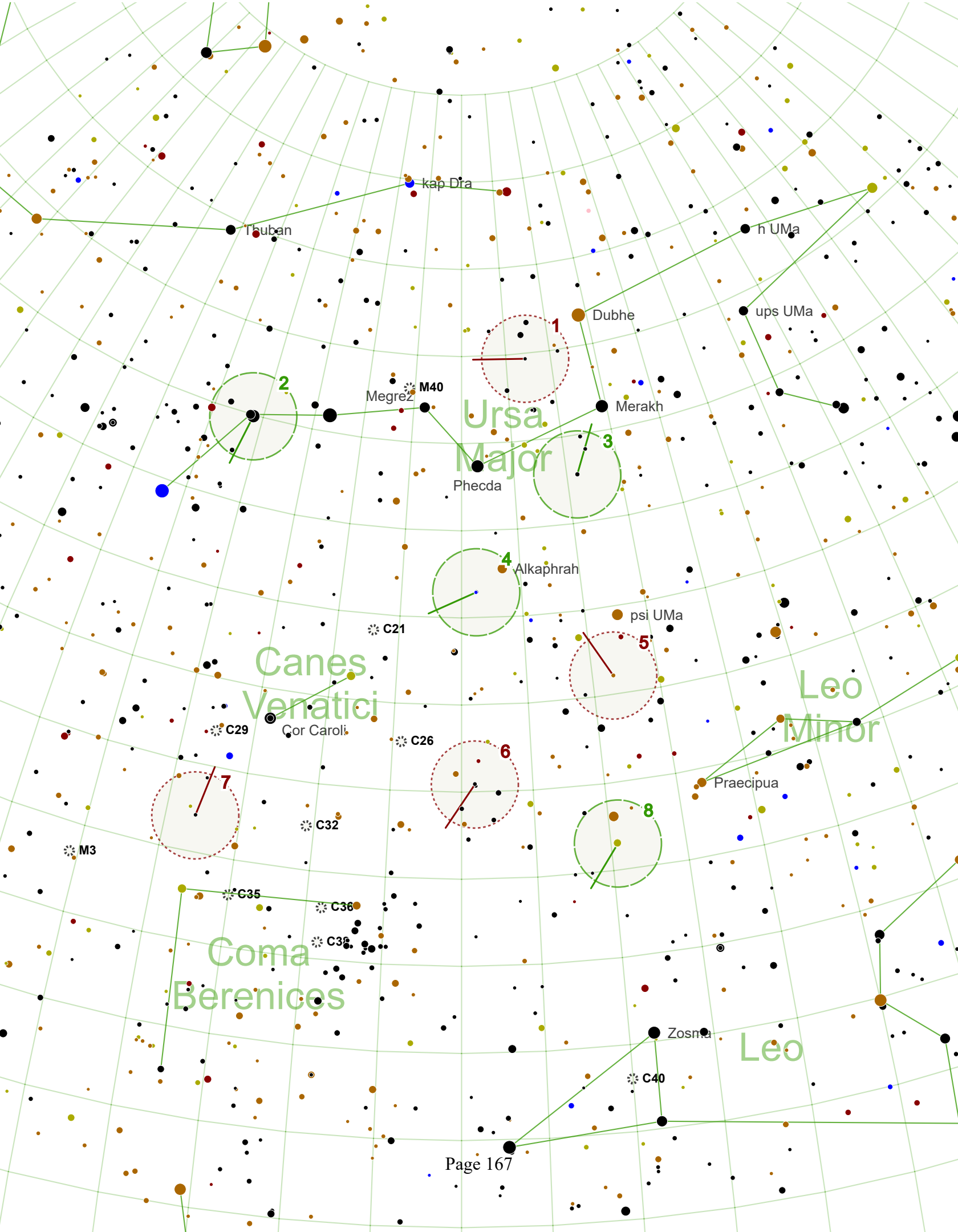
***STT 575 AB**: mag.:5.79 | 9.75, sep.:44″ , p.a.311°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 62658

Deep Sky Objects

DSO	Mag.	Type
C21	9.4	irregular galaxy
C3	9.7	barred spiral galaxy
C32	9.3	spiral galaxy
C35	11.4	elliptical galaxy
C36	9.8	spiral galaxy
C38	9.6	barred spiral galaxy
C40	10.9	barred spiral galaxy
M3	6.2	globular cluster
M40	8.4	double star
M51	8.4	spiral galaxy


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Thuban
h UMa
Dubhe
ups UMa
1
2
M40
Megrez
Merakh
Ursa
Major
3
Phecda
4
Alkaphrah
psi UMa
C21
5
Canes
Venatici
Leo
Minor
C29
Cor Caroli
C26
6
Praecipua
7
8
C32
M3
C35
C36
C38
Coma
Berenices
Zosma
Leo
C40

April: 45° North (2)

1: STF 1544 (RA: 11 31 19, DEC: +59 42 03)

***STF 1544**: mag.:7.33 | 8.02, sep.:12.2" , p.a.91°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 28043

2: Mizar (RA: 13 23 55, DEC: +54 55 32)

***STF 1744 AB**: mag.:2.23 | 3.88, sep.:14.6" , p.a.153°*

A delightful triple system of white stars easily separated in any telescope.

Those with good eyesight can see the star is double with the naked eye, but a telescope reveals a delightful triple system composed of fierce white stars. This system is unusual as the outlying member has its own official name, Alcor.

Identifiers: Mizar | SAO 28737 | HIP 65378 | GDR2 79345330944

3: Struve 1520 (RA: 11 16 04, DEC: +52 46 23)

***STF 1520**: mag.:6.54 | 7.81, sep.:12.4" , p.a.344°*

An easily separated pairing of two yellowish stars.

Identifiers: Struve 1520 | SAO 27970 | HIP 55044 | GDR2 5463337728

4: 65 Uma (RA: 11 55 06, DEC: +46 28 37)

***STF 1579 AB,C**: mag.:6.68 | 8.32, sep.:3.9" , p.a.43°*

***STF 1579 AB,D**: mag.:6.68 | 6.97, sep.:62.5" , p.a.114°*

***STF 1579 CD**: mag.:8.32 | 6.97, sep.:61.9" , p.a.117°*

A white primary with a tightly bound secondary.

The Primary is itself an extreme double, with a magnitude 9.0 companion with a separation of 0.3" at position angle 358°.

Identifiers: 65 Uma | SAO 43945 | HIP 58112 | GDR2 2546451840

5: HO 50 (RA: 11 13 40, DEC: +41 05 20)

***HO 50**: mag.:6.47 | 8.36, sep.:3" , p.a.35°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 43649

6: STT 241 (RA: 11 56 17, DEC: +35 26 53)

***STT 241**: mag.:6.82 | 8.74, sep.:1.8" , p.a.146°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 62763

7: STT 261 (RA: 13 12 02, DEC: +32 05 08)

***STT 261**: mag.:7.4 | 7.64, sep.:2.6" , p.a.338°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 63396

8: Xi UMa (RA: 11 18 11, DEC: +31 31 45)

***STF 1523 AB**: mag.:4.33 | 4.8, sep.:2.2" , p.a.149°*

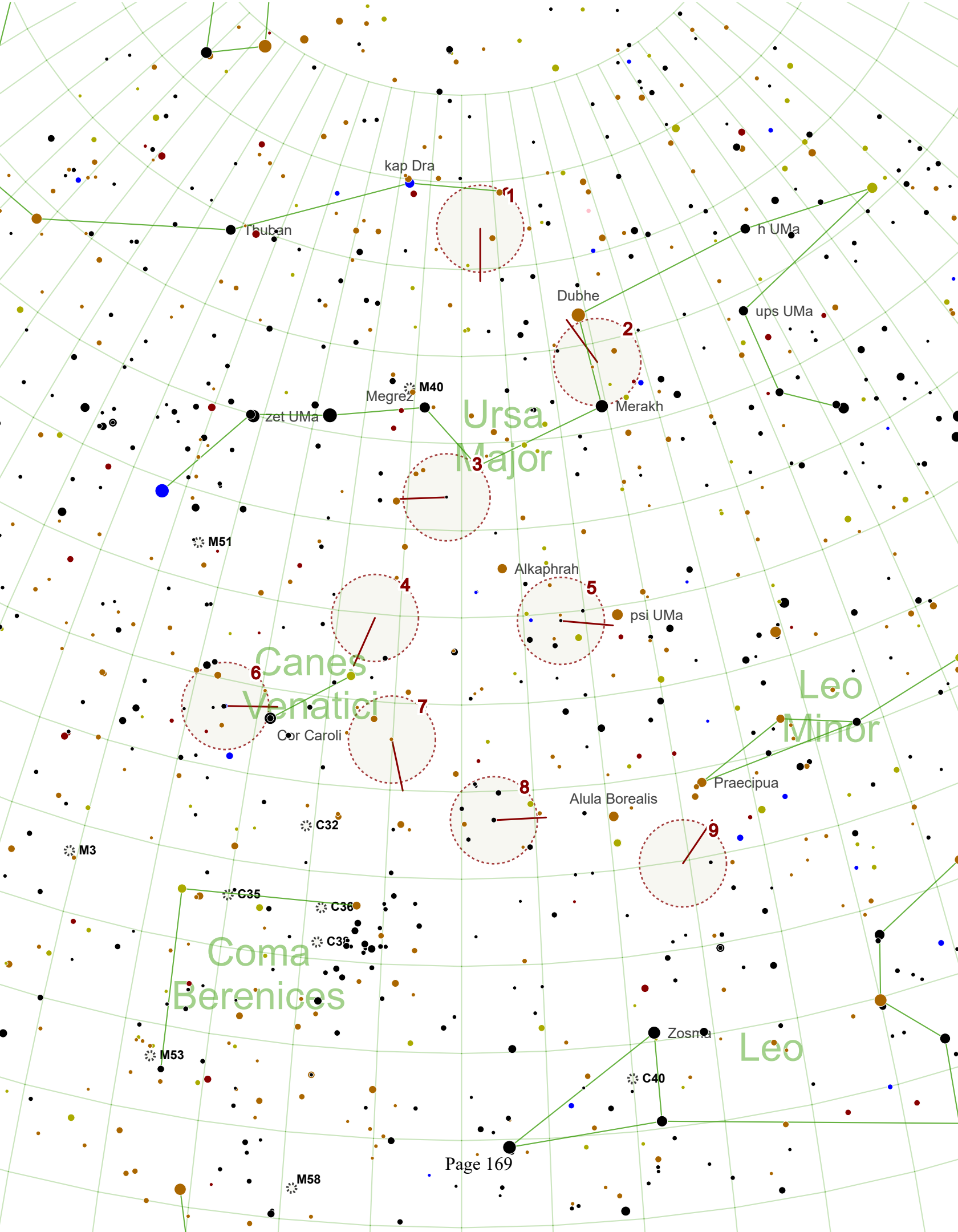
A bright white-yellow pair separated by anything between 1.6 and 3.0 arc seconds.

Also known as Alula Australis, this was the first binary to have its 60-year orbit calculated in 1828. This is one to watch over the years as the separation evolves and the position angle rotates.

Identifiers: Xi UMa | SAO 62484 | HIP 55203

Deep Sky Objects

DSO	Mag.	Type
C21	9.4	irregular galaxy
C26	10.6	spiral galaxy
C29	9.8	barred spiral galaxy
C32	9.3	spiral galaxy
C35	11.4	elliptical galaxy
C36	9.8	spiral galaxy
C38	9.6	barred spiral galaxy
C40	10.9	barred spiral galaxy
M3	6.2	globular cluster
M40	8.4	double star


kap Dra
Thuban
1
h UMa
Dubhe
ups UMa
2
M40
Megrez
Merakh
zet UMa
Ursa
Major
3
M51
Alkaphrah
4
5
psi UMa
Canes
Venatici
6
7
Cor Caroli
Leo
Minor
Praecipua
8
Alula Borealis
9
C32
M3
C35
C36
C38
Coma
Berenices
Zosma
Leo
M53
C40
M58

April: 45° North (3)

1: STF 1573 (RA: 11 49 10, DEC: +67 19 43)

STF 1573*: mag.:7.5 | 8.3, sep.:10.9″ , p.a.180°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 15640

2: STF 1495 (RA: 10 59 49, DEC: +58 54 23)

STF 1495*: mag.:7.25 | 8.84, sep.:34.2″ , p.a.36°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 27861

3: STF 1600 (RA: 12 05 34, DEC: +51 55 52)

STF 1600*: mag.:7.63 | 8.28, sep.:7.8″ , p.a.92°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 28241

4: STF 1645 AB (RA: 12 28 04, DEC: +44 47 40)

STF 1645 AB*: mag.:7.49 | 8.08, sep.:9.7″ , p.a.156°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 44187

5: STF 1542 (RA: 11 27 56, DEC: +44 33 57)

STF 1542*: mag.:6.93 | 9.65, sep.:3.5″ , p.a.265°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 43750

6: BU 608 BC (RA: 13 09 42, DEC: +38 32 02)

BU 608 BC*: mag.:6.26 | 9.23, sep.:1.3″ , p.a.269°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 63374

7: STF 1632 (RA: 12 20 14, DEC: +37 54 08)

STF 1632*: mag.:6.83 | 9.98, sep.:10.1″ , p.a.192°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 62953

8: ARG 101 (RA: 11 51 10, DEC: +33 22 30)

ARG 101*: mag.:6.27 | 9.28, sep.:45.8″ , p.a.273°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 62731

9: COU 961 AB (RA: 11 01 49, DEC: +29 52 17)

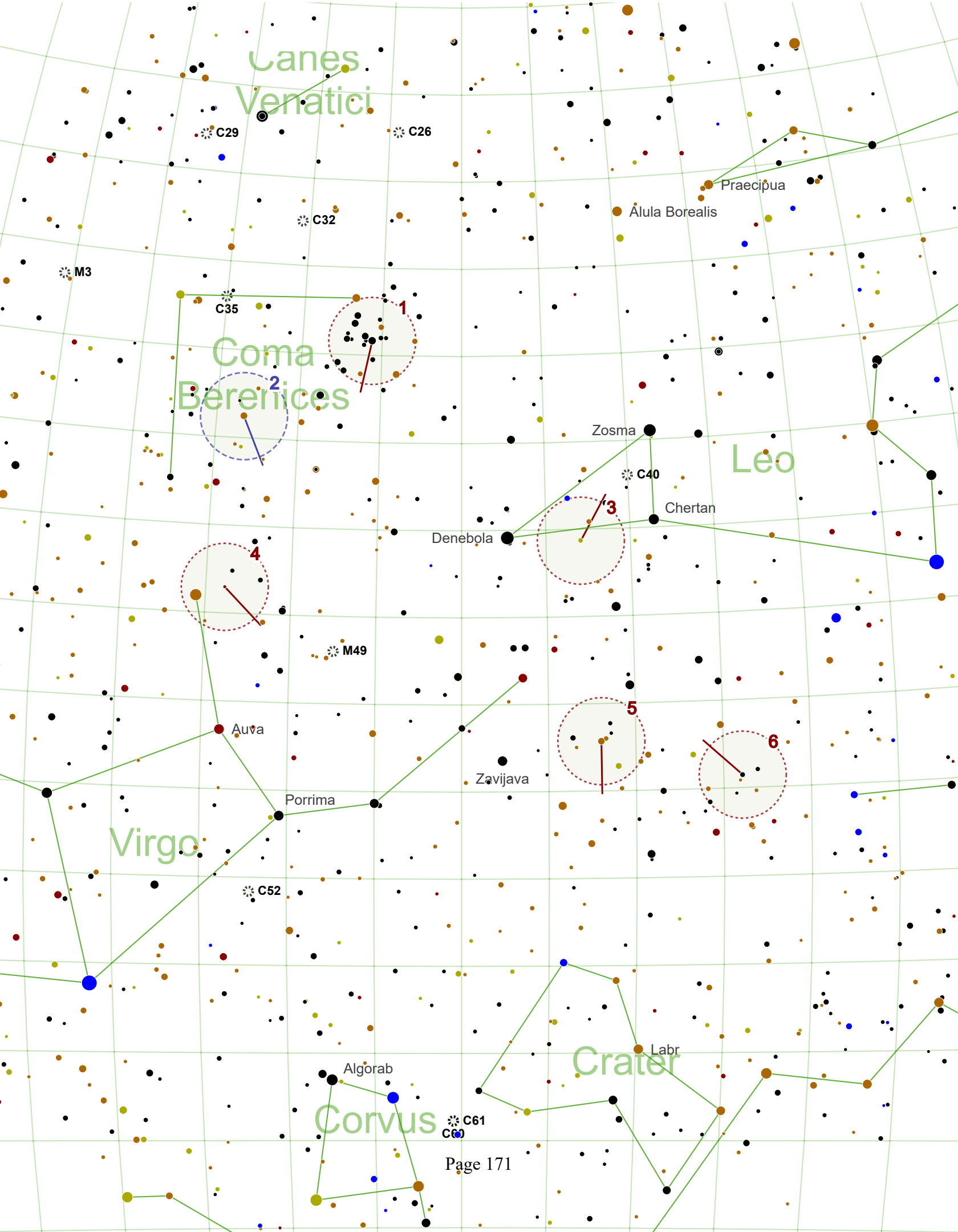
COU 961 AB*: mag.:7.2 | 9.36, sep.:1.3″ , p.a.326°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 62361

Deep Sky Objects

DSO	Mag.	Type
C32	9.3	spiral galaxy
C35	11.4	elliptical galaxy
C36	9.8	spiral galaxy
C38	9.6	barred spiral galaxy
C40	10.9	barred spiral galaxy
M3	6.2	globular cluster
M40	8.4	double star
M51	8.4	spiral galaxy
M53	7.6	globular cluster
M58	9.7	barred spiral galaxy


Canes Venatici
C29
C26
C32
M3
C35
Praecipua
Alula Borealis
1
Coma Berenices
2
Zosma
Leo
C40
3
Chertan
Denebola
4
M49
5
6
Auva
Zavijava
Porrima
Virgo
C52
Crater
Labr
Algorab
Corvus
C61
C60

April: 10° North (1)

1: SHJ 143 AC (RA: 12 22 30, DEC: +25 50 46)

***SHJ 143 AC**: mag.:4.86 | 8.9, sep.:65.2″ , p.a.167°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 82273

2: 35 Com (RA: 12 53 18, DEC: +21 14 42)

***STF 1687 AB**: mag.:5.15 | 7.08, sep.:1.2″ , p.a.201°*

***STF 1687 AC**: mag.:5.15 | 9.76, sep.:28.5″ , p.a.127°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 82550

3: 88 Leo (RA: 11 31 45, DEC: +14 21 52)

***STF 1547 AB**: mag.:6.33 | 9.14, sep.:15.3″ , p.a.332°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 99648

4: STF 1689 (RA: 12 55 30, DEC: +11 29 46)

***STF 1689**: mag.:7.11 | 9.13, sep.:30.2″ , p.a.223°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 100337

5: Tau Leo (RA: 11 27 56, DEC: +02 51 22)

***STFA 19 AB**: mag.:5.05 | 7.47, sep.:89.2″ , p.a.181°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 118875

6: 55 Leo (RA: 10 55 42, DEC: +00 44 13)

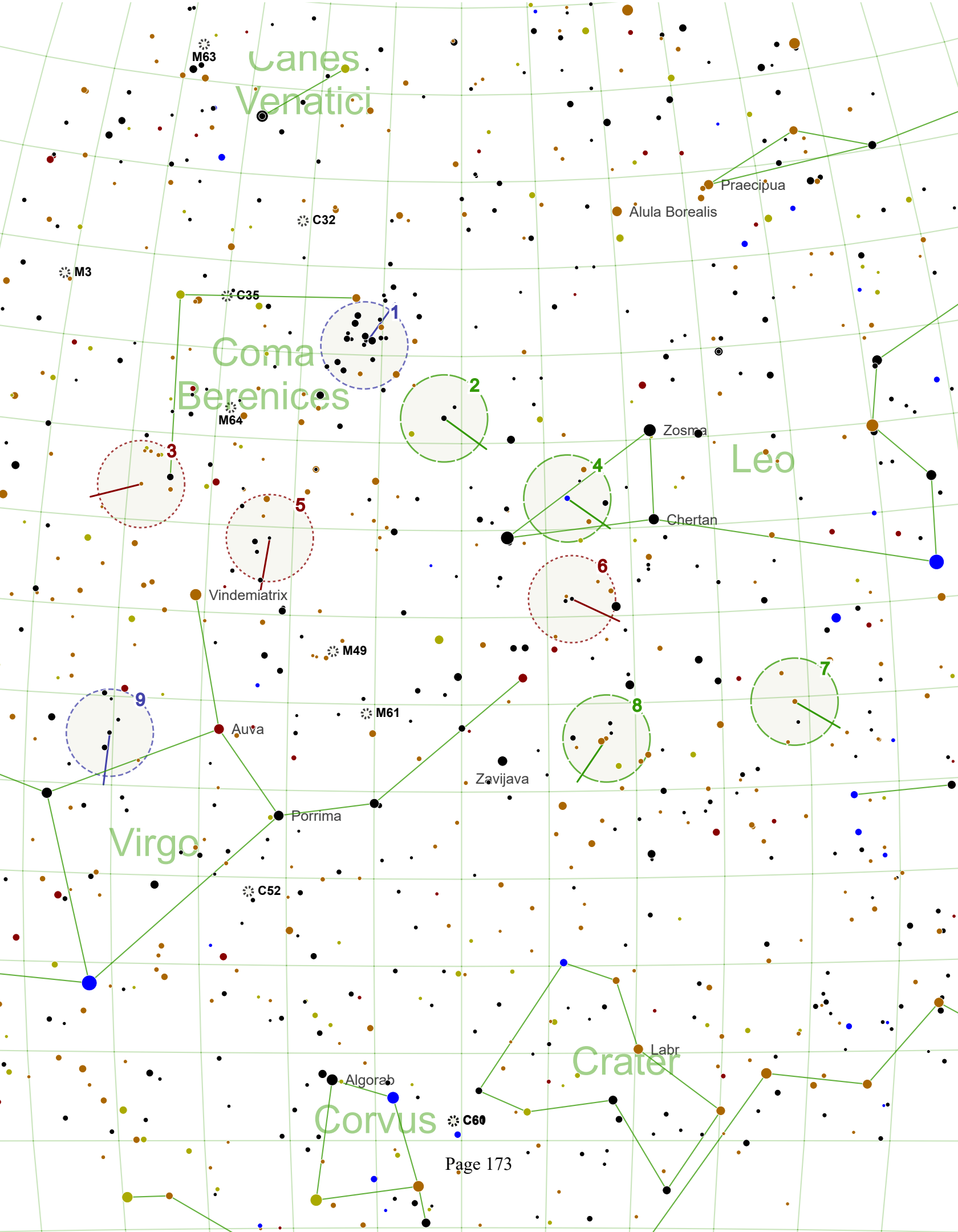
***BU 1076**: mag.:5.98 | 9.02, sep.:1.1″ , p.a.49°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 118574

Deep Sky Objects

DSO	Mag.	Type
C26	10.6	spiral galaxy
C29	9.8	barred spiral galaxy
C32	9.3	spiral galaxy
C35	11.4	elliptical galaxy
C40	10.9	barred spiral galaxy
C52	9.3	elliptical galaxy
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
M3	6.2	globular cluster
M49	8.4	elliptical galaxy


M63
Canes Venatici
C32
Praecipua
Alula Borealis
M3
C35
1
Coma Berenices
M64
2
Zosma
Leo
3
4
5
Chertan
6
Vindemiatrix
M49
7
9
M61
8
Auva
Zavijava
Porrima
Virgo
C52
Crater
Labr
Algorab
Corvus
C60

April: 10° North (2)

1: STF 1639 AB (RA: 12 24 27, DEC: +25 34 57)

***STF 1639 AB**: mag.:6.74 | 7.83, sep.:1.8" , p.a.324°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 82293

2: 2 Com (RA: 12 04 17, DEC: +21 27 33)

***STF 1596**: mag.:6.18 | 7.48, sep.:3.4" , p.a.234°*

A white primary with a tightly bound and fairly apparent secondary.

The bright Coma Berenices open cluster (Melotte 111) is one finder circle to the north east.

Identifiers: 2 Com | SAO 82123 | HIP 58858 | GDR2 73730936448

3: BU 800 AB (RA: 13 16 51, DEC: +17 01 02)

***BU 800 AB**: mag.:6.66 | 9.5, sep.:7.7" , p.a.104°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 100491

4: 90 Leo (RA: 11 34 42, DEC: +16 47 49)

***STF 1552 AB**: mag.:6.26 | 7.31, sep.:3.1" , p.a.209°*

***STF 1552 AC**: mag.:6.26 | 9.77, sep.:63.4" , p.a.235°*

A balanced pair of fairly bright bluish stars, very closely separated.

Three faint galaxies lie toward the western edge of the finder circle: NGC 3686, NGC 3684 and NGC 3681. This system is 1897 light-years from Earth.

Identifiers: 90 Leo | SAO 99673 | HIP 56473

5: STF 1678 (RA: 12 45 26, DEC: +14 22 25)

***STF 1678**: mag.:7.16 | 7.68, sep.:37.5" , p.a.170°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 100236

6: HDS 1642 AB (RA: 11 34 10, DEC: +11 01 26)

***HDS 1642 AB**: mag.:6.62 | 9.43, sep.:1.2" , p.a.245°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 99668

7: 35 Sex (RA: 10 43 21, DEC: +04 44 52)

***STF 1466 AB**: mag.:6.23 | 7.13, sep.:6.8" , p.a.240°*

An unusual orange-yellow pairing, reasonably balanced and closely separated.

A difficult double to locate far south east of Regulus. South east of Regulus lies 47 Leonis (magnitude 3.8), a very interesting pulsating variable star and also a spectroscopic binary. 47 Leonis is very massive, around 21 times the mass of the Sun and nearly 300,000 brighter than the Sun.

Identifiers: 35 Sex | SAO 118449 | HIP 52452 | GDR2 36489909632

8: 83 Leo (RA: 11 26 45, DEC: +03 00 47)

***STF 1540 AB**: mag.:6.55 | 7.5, sep.:28.6" , p.a.146°*

A fairly bright yellow primary with an easily apparent orange secondary, widely separated.

The galaxy NGC 3640 (mag. 10.4) lies toward the eastern edge of the finder view.

Identifiers: 83 Leo | SAO 118864 | HIP 55846

9: STF 1734 (RA: 13 20 42, DEC: +02 56 32)

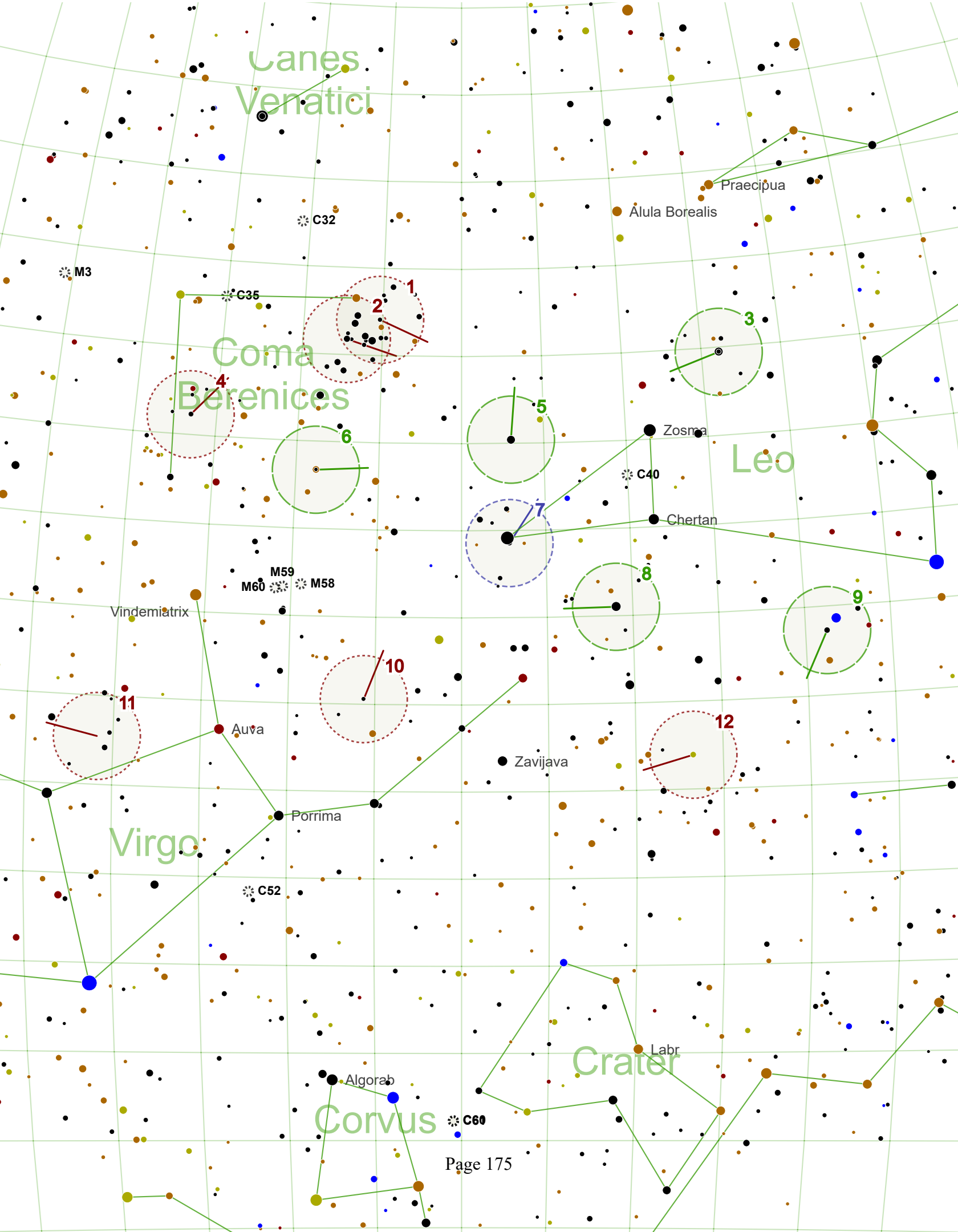
***STF 1734**: mag.:6.77 | 7.29, sep.:1.1" , p.a.173°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 119889

Deep Sky Objects

DSO	Mag.	Type
C32	9.3	spiral galaxy
C35	11.4	elliptical galaxy
C52	9.3	elliptical galaxy
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
M3	6.2	globular cluster
M49	8.4	elliptical galaxy
M61	9.7	spiral galaxy
M63	8.6	spiral galaxy
M64	8.5	spiral galaxy


Canes Venatici
Praecipua
Alula Borealis
C32
M3
C35
1
2
Coma Berenices
3
4
5
6
Zosma
Leo
C40
7
Chertan
M59
M60
M58
8
9
Vindemiatrix
10
11
Auva
12
Zavijava
Porrima
Virgo
C52
Crater
Labr
Algorab
Corvus
C60

April: 10° North (3)

1: STF 1633 (RA: 12 20 41, DEC: +27 03 16)

STF 1633: *mag.:7.04 | 7.13, sep.:9″ , p.a.245°*

A close pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 82254

2: 17 Com (RA: 12 28 55, DEC: +25 54 46)

STFA 21 AB: *mag.:5.23 | 6.64, sep.:146.4″ , p.a.251°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 82330

3: 54 Leo (RA: 10 55 37, DEC: +24 44 59)

STF 1487: *mag.:4.48 | 6.3, sep.:6.6″ , p.a.112°*

A bright white primary which shines very close to a fairly bright white companion.

Two galaxies are nearby, both faint. NGC 3437 lies 2 degrees SSE, and NGC 3344 is 3 degrees east.

Identifiers: 54 Leo | SAO 81583 | HIP 53417 | GDR2 10033740160

4: 39 Com (RA: 13 06 21, DEC: +21 09 13)

COU 11 AB: *mag.:6.1 | 8.75, sep.:1.6″ , p.a.314°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 82650

5: 93 Leo (RA: 11 47 59, DEC: +20 13 08)

STFB 7 AB: *mag.:4.59 | 9.03, sep.:75.5″ , p.a.356°*

A bright white primary very widely separated from a faint companion.

There is a small galaxy one degree west of 93 Leonis.

Identifiers: 93 Leo | SAO 81998 | HIP 57565 | GDR2 11362055168

6: 24 Com (RA: 12 35 08, DEC: +18 22 37)

STF 1657: *mag.:5.11 | 6.33, sep.:20.2″ , p.a.272°*

An orange-blue pair, with a reasonable bright secondary and easy separation.

Track just over one finder south and your finder should be full of galaxies, light pollution permitting. Track two finders further East and your finder should show the globular clusters Messier 53 and NGC 5053.

Identifiers: 24 Com | SAO 100160 | HIP 61418 | GDR2 69267207296

7: BU 603 AB (RA: 11 48 39, DEC: +14 17 03)

BU 603 AB: *mag.:5.97 | 8.53, sep.:1″ , p.a.327°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 99800

8: 78 Leo (RA: 11 23 55, DEC: +10 31 47)

STF 1536 AB: *mag.:4.06 | 6.71, sep.:2.2″ , p.a.92°*

A tight white-yellow pair. The secondary is not too faint, but the primary shines brilliantly.

The system lies only 78 light-years away. The yellow companion star is very similar to the Sun, with a mass approximately 8% greater. If you place 78 Leonis nn the south eastern edge of a finder, the famous Leo Triplet of galaxies fills the opposite quadrant.

Identifiers: 78 Leo | SAO 99587 | HIP 55642 | GDR2 30249291008

9: 49 Leo (RA: 10 35 02, DEC: +08 39 02)

STF 1450: *mag.:5.8 | 7.9, sep.:2″ , p.a.157°*

A bright white primary with an extremely close, reasonably apparent companion.

One finder circle to the north east, the finder view is full of galaxies, including M95, M96, M105, NGC 3384, NGC 3412, NGC 3377, and NGC 3367. The brightest is M96 at magnitude 9.25.

Identifiers: 49 Leo | SAO 118380 | HIP 51802 | GDR2 97365638528

10: 17 Vir (RA: 12 22 32, DEC: +05 18 20)

STF 1636: *mag.:6.53 | 9.31, sep.:21″ , p.a.338°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 119360

11: STF 1740 (RA: 13 23 39, DEC: +02 43 24)

STF 1740: *mag.:7.13 | 7.39, sep.:25.6″ , p.a.75°*

A wide pairing of a fairly faint primary and a fairly faint companion.

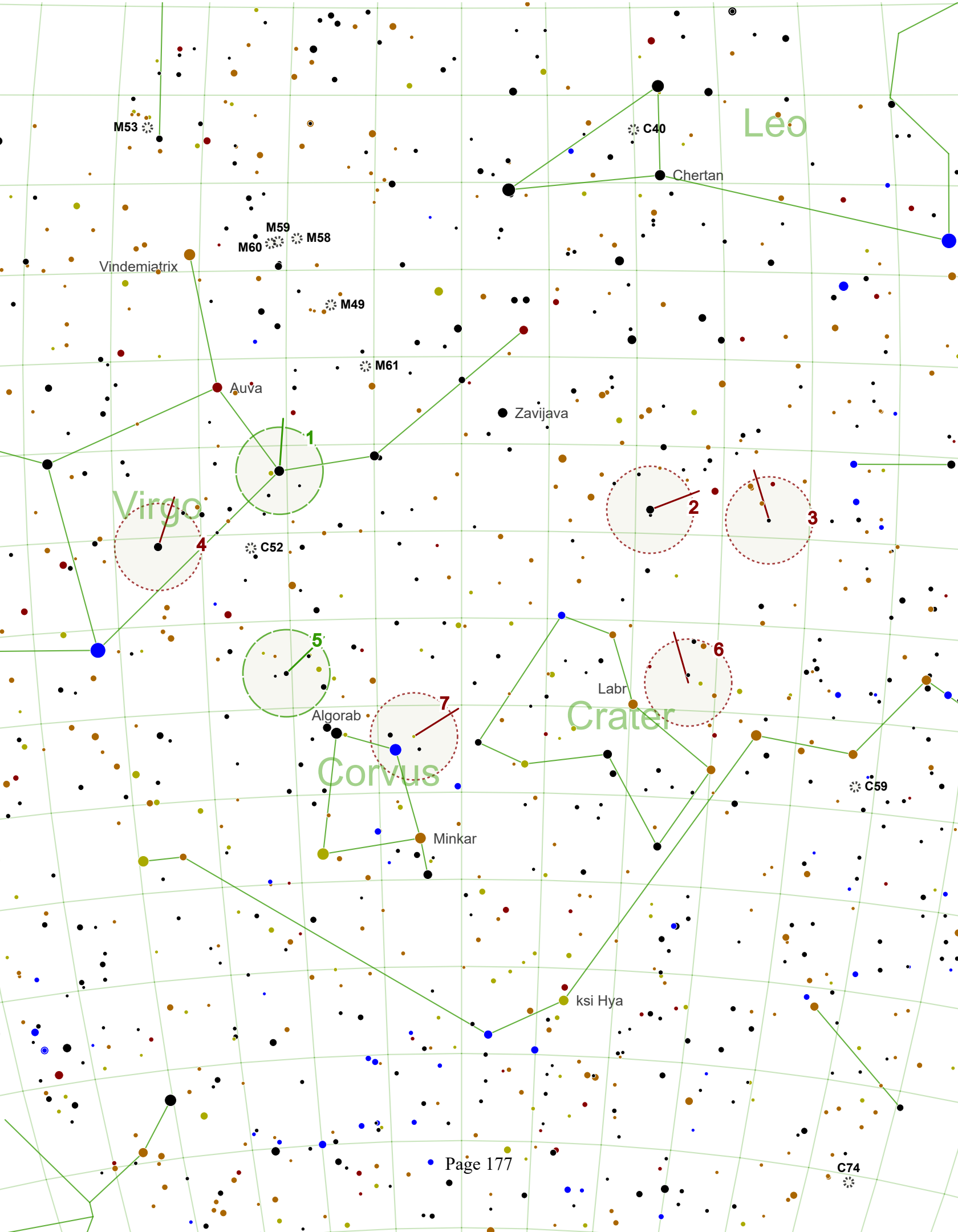
Identifiers: SAO

12: 65 Leo (RA: 11 06 54, DEC: +01 57 20)

BU 599: *mag.:5.65 | 9.72, sep.:2.8″ , p.a.107°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 118668


Leo
Virgo
Crater
Corvus
M53
C40
Chertan
M59
M60
M58
Vindemiatrix
M49
M61
Auva
Zavijava
1
2
3
4
C52
5
6
7
Algorab
Labr
Minkar
C59
ksi Hya
C74

April: -10° South (1)

1: Porrima (RA: 12 41 40, DEC: -01 26 58)

***STF 1670 AB**: mag.:3.48 | 3.53, sep.:3″ , p.a.356°*

An almost perfectly equal and very close pair of brilliant yellowish stars.

The galaxy NGC 4753 lies just beyond the eastern edge of the finder circle when this double is centered.

Identifiers: Porrima | SAO 138917 | HIP 61941

2: Phi Leo (RA: 11 16 40, DEC: -03 39 06)

***SHJ 121**: mag.:4.48 | 9.75, sep.:86.8″ , p.a.291°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 138102

3: 40 Sex (RA: 10 49 17, DEC: -04 01 24)

***STF 1476**: mag.:7.08 | 7.82, sep.:2.4″ , p.a.17°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 137808

4: The Vir (RA: 13 09 57, DEC: -05 32 20)

***STF 1724 AB**: mag.:4.4 | 9.39, sep.:7″ , p.a.342°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 139189

5: 58 Crv (RA: 12 41 16, DEC: -13 00 54)

***STF 1669 AB**: mag.:5.88 | 5.89, sep.:5.3″ , p.a.314°*

A close pair of bright, yellowish stars, with a third faint, widely separated component.

With this double centered in the finder, the famous Sombrero Galaxy (M104, magnitude 8.0) is in the northern quarter of the finder circle.

Identifiers: 58 Crv | SAO 157448 | HIP 61910 | GDR2 41368899712

6: STF 1509 (RA: 11 06 30, DEC: -13 25 03)

***STF 1509**: mag.:7.43 | 9.36, sep.:32.9″ , p.a.16°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 156461

7: S 634 AB (RA: 12 11 23, DEC: -16 47 27)

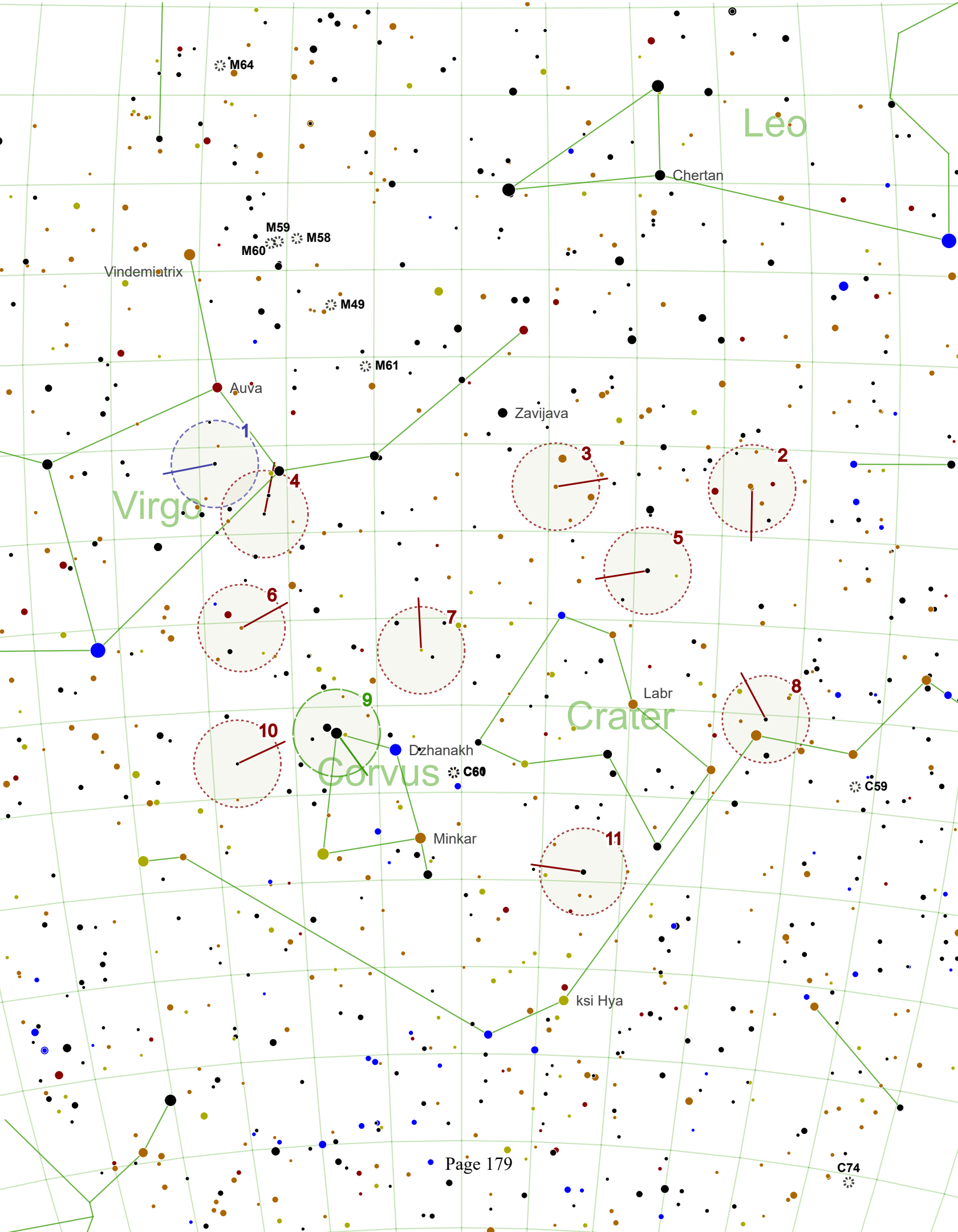
***S 634 AB**: mag.:7.17 | 8.79, sep.:4.6″ , p.a.302°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 157133

Deep Sky Objects

DSO	Mag.	Type
C40	10.9	barred spiral galaxy
C52	9.3	elliptical galaxy
C59	8.6	planetary nebula
C74	8.2	planetary nebula
M49	8.4	elliptical galaxy
M53	7.6	globular cluster
M58	9.7	barred spiral galaxy
M59	9.6	elliptical galaxy
M60	8.8	elliptical galaxy
M61	9.7	spiral galaxy


M64
Leo
Chertan
M59
M58
M60
Vindemiatrix
M49
M61
Auva
Zavijava
1
2
3
4
Virgo
5
6
7
8
9
10
Labr
Crater
Dzhanakh
C60
Corvus
C59
Minkar
11
ksi Hya
C74

April: -10° South (2)

1: STT 256 (RA: 12 56 27, DEC: -00 57 17)

***STT 256**: mag.:7.33 | 7.61, sep.:1.1″ , p.a.101°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 139053

2: S 617 (RA: 10 53 25, DEC: -02 15 19)

***S 617**: mag.:6.22 | 8.71, sep.:35.2″ , p.a.179°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 137863

3: STF 1560 (RA: 11 38 24, DEC: -02 26 09)

***STF 1560**: mag.:6.42 | 9.43, sep.:4.9″ , p.a.279°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 138314

4: STF 1677 (RA: 12 45 17, DEC: -03 53 17)

***STF 1677**: mag.:7.3 | 8.12, sep.:16.1″ , p.a.349°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

5: BU 600 AC (RA: 11 16 58, DEC: -07 08 05)

***BU 600 AC**: mag.:6.15 | 8.22, sep.:53.2″ , p.a.99°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 138106

6: STF 1682 AB (RA: 12 51 23, DEC: -10 20 18)

***STF 1682 AB**: mag.:6.59 | 9.69, sep.:29.6″ , p.a.299°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 157550

7: STF 1604 AC (RA: 12 09 29, DEC: -11 51 25)

***STF 1604 AC**: mag.:6.86 | 8.12, sep.:10.5″ , p.a.3°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 157111

8: STF 1474 AB (RA: 10 47 38, DEC: -15 15 43)

***STF 1474 AB**: mag.:6.66 | 7, sep.:65.9″ , p.a.28°*

***STF 1474 AC**: mag.:6.66 | 7.59, sep.:72.6″ , p.a.27°*

***STF 1474 BC**: mag.:7 | 7.59, sep.:6.6″ , p.a.15°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 156235

9: Delta Crv (RA: 12 29 52, DEC: -16 30 56)

***SHJ 145 AB**: mag.:2.95 | 8.47, sep.:24.2″ , p.a.216°*

A brilliant bluish primary widely separated from a moderately faint companion.

This bright star, also known as Algorab, is a mere 87 light-years from Earth.

Identifiers: Delta Crv | SAO 157323 | HIP 60965 | GDR2 71216143488

10: S 643 (RA: 12 54 00, DEC: -18 02 15)

***S 643**: mag.:7.07 | 8.17, sep.:23.5″ , p.a.295°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 157580

11: JC 16 AB (RA: 11 29 39, DEC: -24 27 51)

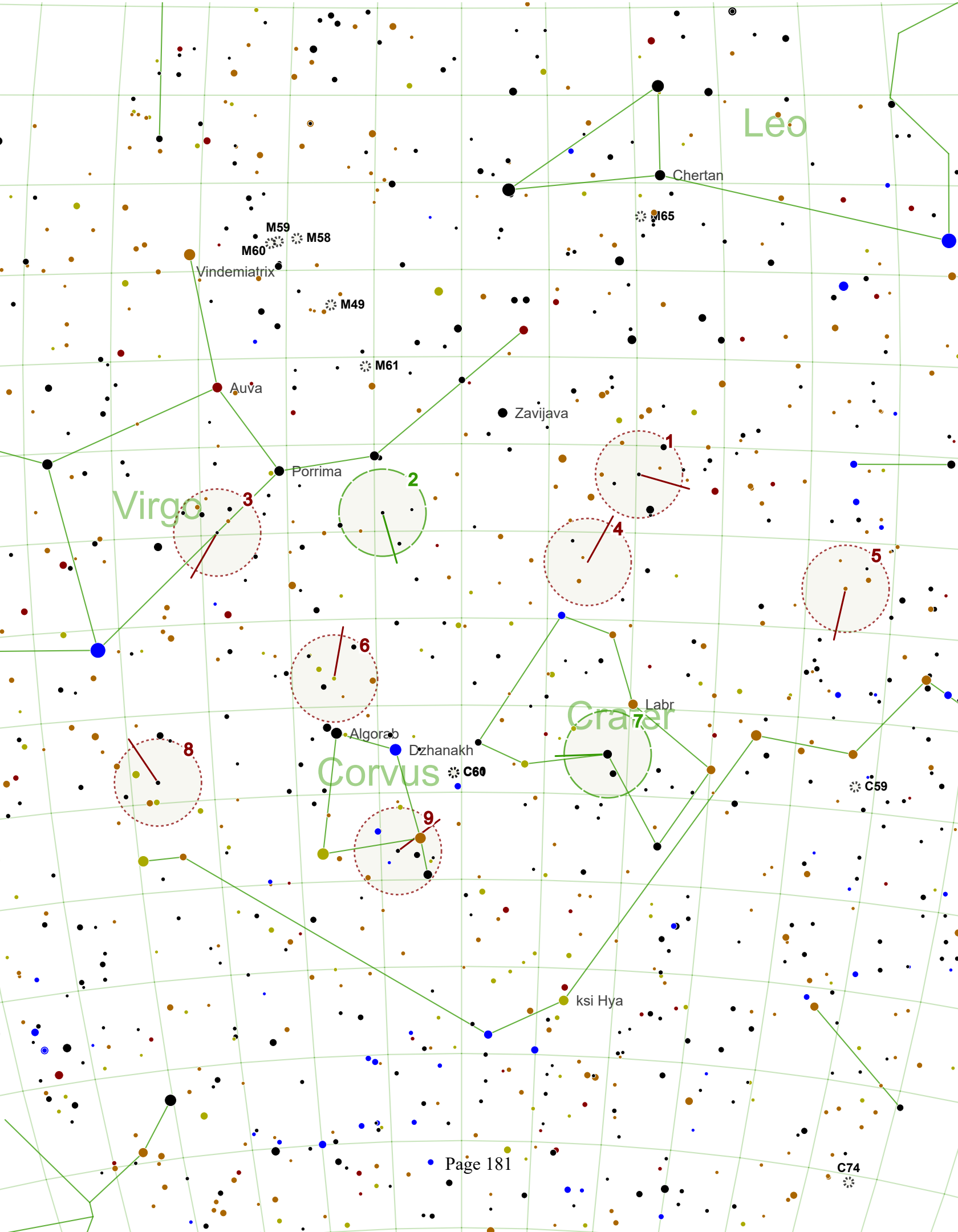
***JC 16 AB**: mag.:5.82 | 8.6, sep.:8.2″ , p.a.82°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 179935

Deep Sky Objects

DSO	Mag.	Type
C59	8.6	planetary nebula
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
C74	8.2	planetary nebula
M49	8.4	elliptical galaxy
M58	9.7	barred spiral galaxy
M59	9.6	elliptical galaxy
M60	8.8	elliptical galaxy
M61	9.7	spiral galaxy
M64	8.5	spiral galaxy


Leo
Chertan
M65
M59
M58
M60
Vindemiatrix
M49
M61
Auva
Zavijava
Porrima
Virgo
1
2
3
4
5
6
7
8
9
Labr
Crater
Algorab
Dzhanakh
Corvus
C60
C59
ksi Hya
C74

April: -10° South (3)

1: STF 1529 (RA: 11 19 23, DEC: -01 39 18)

STF 1529*: mag.:7.1 | 7.91, sep.:9.3″ , p.a.254°*

A close pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO

2: STF 1627 (RA: 12 18 10, DEC: -03 56 56)

STF 1627*: mag.:6.55 | 6.9, sep.:20.1″ , p.a.196°*

An equal and easily separated pair of fairly bright white stars.

This pair of F-class main sequence stars is only 172 light-years from Earth.

Identifiers: STF 1627 | SAO 138704 | HIP 59984 | GDR2 78922038528

3: STF 1690 (RA: 12 56 15, DEC: -04 51 50)

STF 1690*: mag.:7.18 | 8.95, sep.:5.8″ , p.a.150°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

4: STF 3072 (RA: 11 30 51, DEC: -06 43 08)

STF 3072*: mag.:7.72 | 9.93, sep.:10″ , p.a.331°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

5: STF 1441 AB (RA: 10 30 59, DEC: -07 38 15)

STF 1441 AB*: mag.:6.51 | 8.81, sep.:2.8″ , p.a.167°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 137614

6: BU 28 AB (RA: 12 30 05, DEC: -13 23 36)

BU 28 AB*: mag.:6.49 | 9.58, sep.:2.1″ , p.a.350°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 157326

7: Gamma Crt (RA: 11 24 53, DEC: -17 41 02)

HJ 840*: mag.:4.09 | 7.9, sep.:4.4″ , p.a.92°*

A close pair with a brilliant white primary somewhat fainter secondary.

Only 82 light-years away, the primary is an A-type main sequence dwarf.

Identifiers: Gamma Crt | SAO 156661 | HIP 55705 | GDR2 85853638912

8: 54 Vir (RA: 13 13 27, DEC: -18 49 35)

SHJ 161*: mag.:6.78 | 7.19, sep.:5.4″ , p.a.34°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 157798

9: BU 920 (RA: 12 15 47, DEC: -23 21 14)

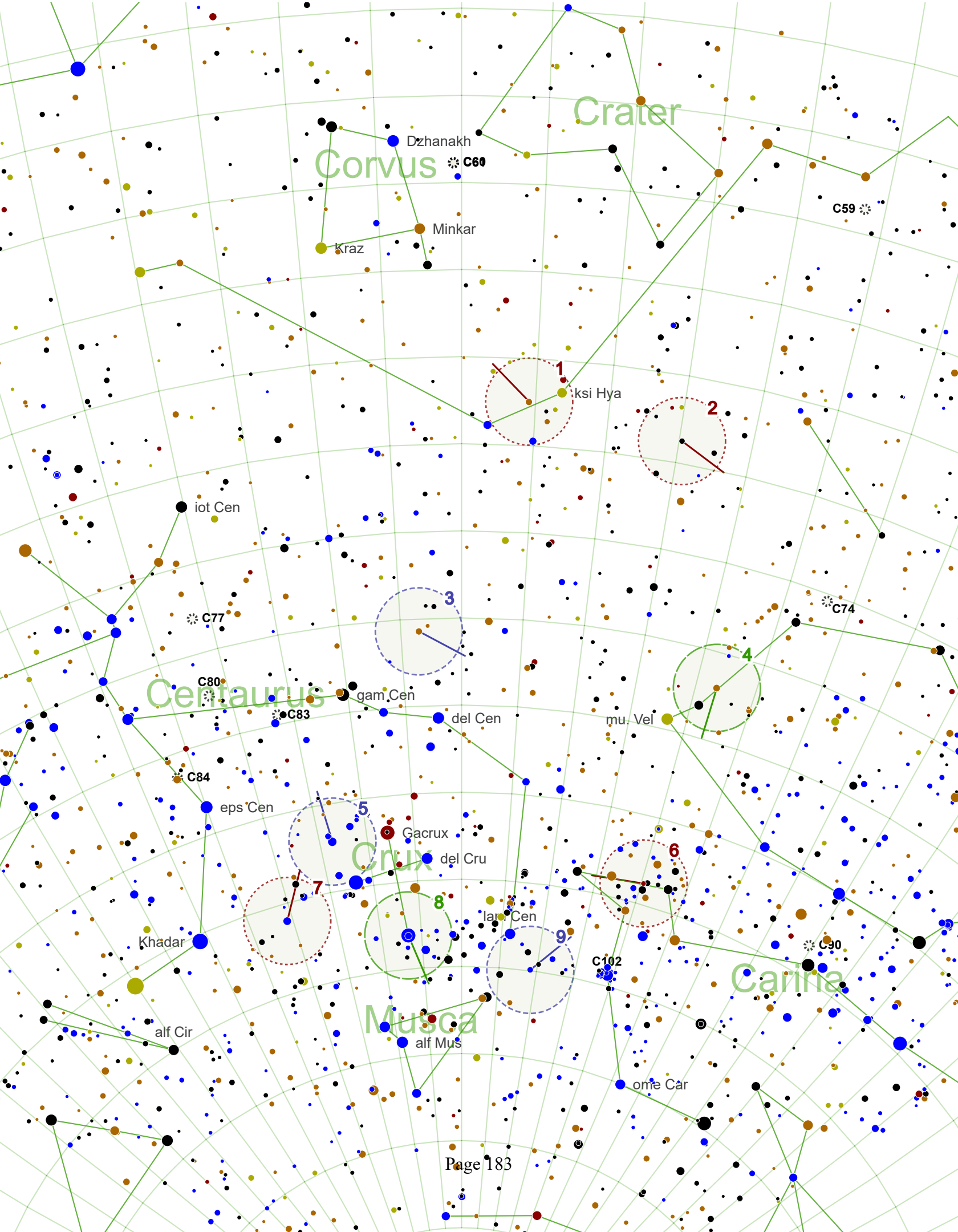
BU 920*: mag.:6.86 | 8.22, sep.:2″ , p.a.307°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 180619

Deep Sky Objects

DSO	Mag.	Type
C59	8.6	planetary nebula
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
C74	8.2	planetary nebula
M49	8.4	elliptical galaxy
M58	9.7	barred spiral galaxy
M59	9.6	elliptical galaxy
M60	8.8	elliptical galaxy
M61	9.7	spiral galaxy
M65	9.3	spiral galaxy


Crater
Corvus
Dzhanakh
C60
C59
Minkar
Kraz
1
ksi Hya
2
iot Cen
C77
3
C74
4
C80
Centaurus
gam Cen
C83
del Cen
mu. Vel
C84
eps Cen
5
Gacrux
Crux
del Cru
6
7
8
lam Cen
9
Khadar
C102
C90
Carina
Musca
alf Cir
alf Mus
ome Car

April: -45° South (1)

1: HJ 4465 AC (RA: 11 41 44, DEC: -32 29 58)

***HJ 4465 AC**: mag.:5.37 | 8.34, sep.:66.1", p.a.44°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 202717

2: I 211 (RA: 10 59 14, DEC: -33 44 15)

***I 211**: mag.:5.77 | 9.5, sep.:1.8", p.a.233°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 201976

3: D Cen (RA: 12 14 03, DEC: -45 43 26)

***RMK 14**: mag.:5.78 | 6.98, sep.:2.7", p.a.242°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 223297

4: HJ 4330 (RA: 10 32 57, DEC: -47 00 12)

***HJ 4330 AB**: mag.:5.15 | 8.55, sep.:40.3", p.a.163°*

A bright orange primary widely separated from a fairly faint white secondary.

Identifiers: HJ 4330 | SAO 222136 | HIP 51635 | GDR2 06787969536

5: Mu1 Cru (RA: 12 54 36, DEC: -57 10 40)

***DUN 126 AB**: mag.:3.94 | 4.95, sep.:34.5", p.a.17°*

A wide pairing of a brilliant primary and a bright companion.

Identifiers: SAO 240366

6: GLI 152 (RA: 10 38 60, DEC: -58 49 01)

***GLI 152**: mag.:6.18 | 7.95, sep.:27.1", p.a.81°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 238304

7: DUN 133 AB,C (RA: 13 22 38, DEC: -60 59 18)

***DUN 133 AB,C**: mag.:4.49 | 6.15, sep.:60.4", p.a.346°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 252284

8: Alpha Cru (RA: 12 26 36, DEC: -63 05 57)

***DUN 252 AB**: mag.:1.25 | 1.55, sep.:3.5", p.a.111°*

***DUN 252 AC**: mag.:1.25 | 4.8, sep.:89", p.a.203°*

***DUN 252 BC**: mag.:1.55 | 4.8, sep.:89", p.a.203°*

Two extremely brilliant blue stars, very close together. A third very bright component lies distantly from them.

The system is has 6 members, but only 3 can be resolved visually. The brightest component is fully 25,000 times brighter than the Sun.

Identifiers: Alpha Cru | SAO 251904 | HIP 60718

9: HJ 4432 (RA: 11 23 21, DEC: -64 57 15)

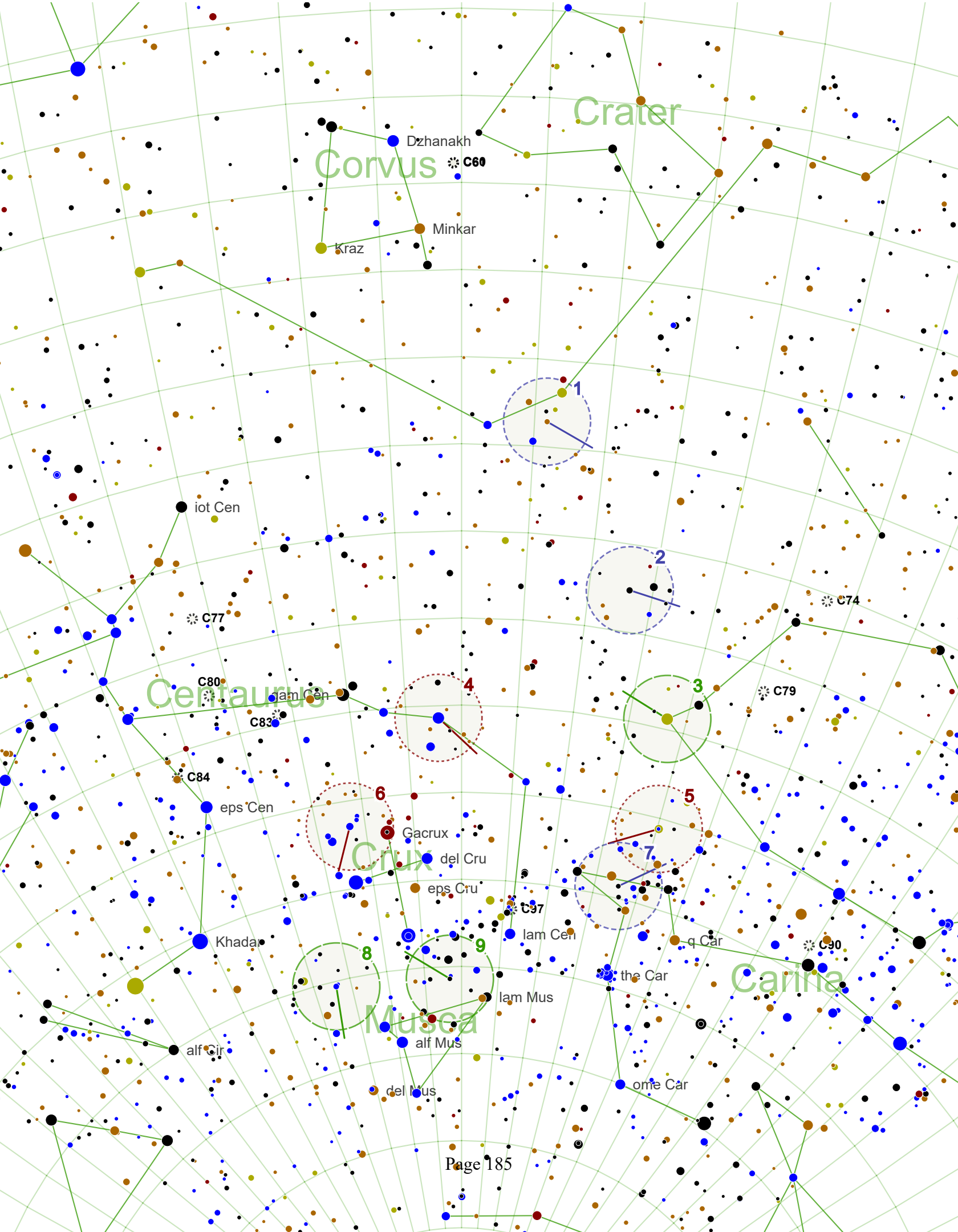
***HJ 4432**: mag.:5.37 | 6.56, sep.:2.5", p.a.309°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 251383

Deep Sky Objects

DSO	Mag.	Type
C102	1.9	open cluster
C59	8.6	planetary nebula
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
C74	8.2	planetary nebula
C77	7.0	peculiar galaxy
C80	3.6	globular cluster
C83	9.5	spiral galaxy
C84	7.6	globular cluster
C90	9.7	planetary nebula


Crater
Corvus
Dzhanakh
C60
Minkar
Kraz
1
iot Cen
2
C77
C74
C80
Centaurus
lam Cen
4
3
C79
C83
C84
eps Cen
6
5
Gacrux
Crux
del Cru
7
eps Cru
C97
lam Cen
Khadar
8
9
q Car
C90
the Car
Carina
lam Mus
Musca
alf Mus
alf Cir
del Mus
ome Car

April: -45° South (2)

1: HJ 4455 AB (RA: 11 36 35, DEC: -33 34 12)

***HJ 4455 AB**: mag.:6.01 | 7.77, sep.:3.4″, p.a.240°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 202622

2: V815 Cen (RA: 11 07 17, DEC: -42 38 19)

***HJ 4409**: mag.:5.24 | 7.73, sep.:1.3″, p.a.252°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 222581

3: Mu Vel (RA: 10 46 46, DEC: -49 25 13)

***R 155**: mag.:2.82 | 5.65, sep.:2.3″, p.a.58°*

A very brilliant yellow primary with a bright yellow companion, very tightly separated.

This gravitationally bound binary system is only 117 light-years from Earth.

Identifiers: Mu Vel | SAO 222321 | HIP 52727 | GDR2 34681413248

4: JC 2 AC (RA: 12 08 22, DEC: -50 43 21)

***JC 2 AC**: mag.:2.51 | 6.35, sep.:216.9″, p.a.227°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 239689

5: x Vel (RA: 10 39 18, DEC: -55 36 12)

***DUN 95 AB**: mag.:4.38 | 6.06, sep.:51.8″, p.a.106°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 238309

6: HJ 4548 AB (RA: 12 46 23, DEC: -56 29 20)

***HJ 4548 AB**: mag.:4.59 | 8.93, sep.:51.1″, p.a.166°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 240235

7: R 161 (RA: 10 49 24, DEC: -59 19 26)

***R 161**: mag.:6.12 | 7.42, sep.:1.1″, p.a.295°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 238514

8: Theta Mus (RA: 13 08 07, DEC: -65 18 22)

***RMK 16 AB**: mag.:5.65 | 7.55, sep.:5.5″, p.a.189°*

A close pair of blue stars with a bright primary and moderate secondary.

The secondary in an intensely hot Wolf-Rayet star, boiling of its outer layers of gas in an intense stellar wind.

Identifiers: Theta Mus | SAO 252162 | HIP 64094 | GDR2 66471945984

9: HJ 4498 (RA: 12 06 23, DEC: -65 42 34)

***HJ 4498 AB**: mag.:6.13 | 7.74, sep.:8.8″, p.a.59°*

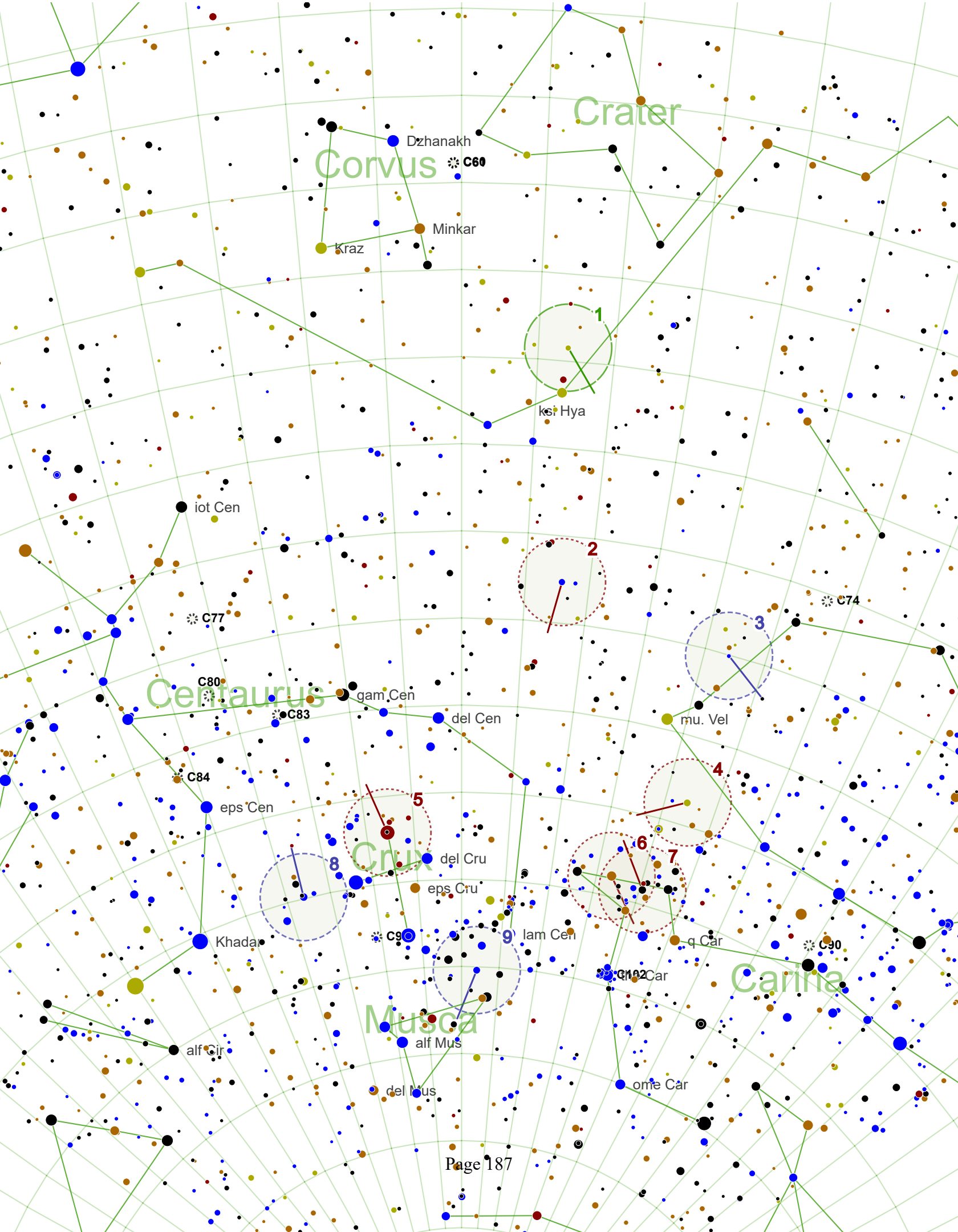
A fairly bright yellow primary with an orange companion close by.

NGC 4463 a magnitude 7.2 open star cluster, is on the eastern edge the finder view.

Identifiers: HJ 4498 | SAO 251738 | HIP 59050 | GDR2 30979343616

Deep Sky Objects

DSO	Mag.	Type
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
C74	8.2	planetary nebula
C77	7.0	peculiar galaxy
C79	6.7	globular cluster
C80	3.6	globular cluster
C83	9.5	spiral galaxy
C84	7.6	globular cluster
C90	9.7	planetary nebula
C97	5.3	open cluster


Crater
Corvus
Dzhanakh
C60
Minkar
Kraz
1
ksi Hya
iot Cen
2
C74
3
C77
C80
Centaurus
gam Cen
C83
del Cen
mu. Vel
C84
4
eps Cen
5
6
7
Crux
del Cru
8
eps Cru
Khadar
C90
9
lam Cen
q Car
C102
Carina
Musca
alf Mus
alf Cir
del Mus
ome Car

April: -45° South (3)

1: 17 Crt (RA: 11 32 16, DEC: -29 15 40)

***H 3 96**: mag.:5.64 | 5.73, sep.:9.6″ , p.a.210°*

A close, equal pair of bright, somewhat yellow stars.

This physical binary system is one of our closest neighbors at a distance of only 26 light-years. The two components are separated by roughly 241 AU. Both components are about three times the brightness of the Sun.

Identifiers: 17 Crt | SAO 179968 | HIP 56280 | GDR2 08703712896

2: BSO 6 (RA: 11 28 35, DEC: -42 40 27)

***BSO 6**: mag.:5.13 | 7.38, sep.:13.9″ , p.a.164°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 222813

3: s Vel (RA: 10 31 57, DEC: -45 04 00)

***PZ 3**: mag.:5.64 | 5.97, sep.:13.2″ , p.a.218°*

A comfortably separated pairing of a bright primary and a bright companion.

Identifiers: SAO 222126

4: Y Vel (RA: 10 31 22, DEC: -53 42 56)

***HJ 4329 AB**: mag.:4.95 | 8.58, sep.:80.9″ , p.a.104°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 238146

5: Gacrux (RA: 12 31 10, DEC: -57 06 48)

***DUN 124 AB**: mag.:1.83 | 6.45, sep.:133.2″ , p.a.24°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 240019

6: u Car (RA: 10 53 30, DEC: -58 51 12)

***DUN 102 AB**: mag.:3.88 | 6.23, sep.:160.4″ , p.a.205°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 238574

7: t2 Car (RA: 10 38 45, DEC: -59 10 59)

***DUN 94**: mag.:4.89 | 7.48, sep.:14.6″ , p.a.21°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 238295

8: I 424 AB,C (RA: 13 12 18, DEC: -59 55 14)

***I 424 AB,C**: mag.:4.55 | 8.4, sep.:1.9″ , p.a.14°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 240645

9: COO 130 (RA: 11 51 51, DEC: -65 12 21)

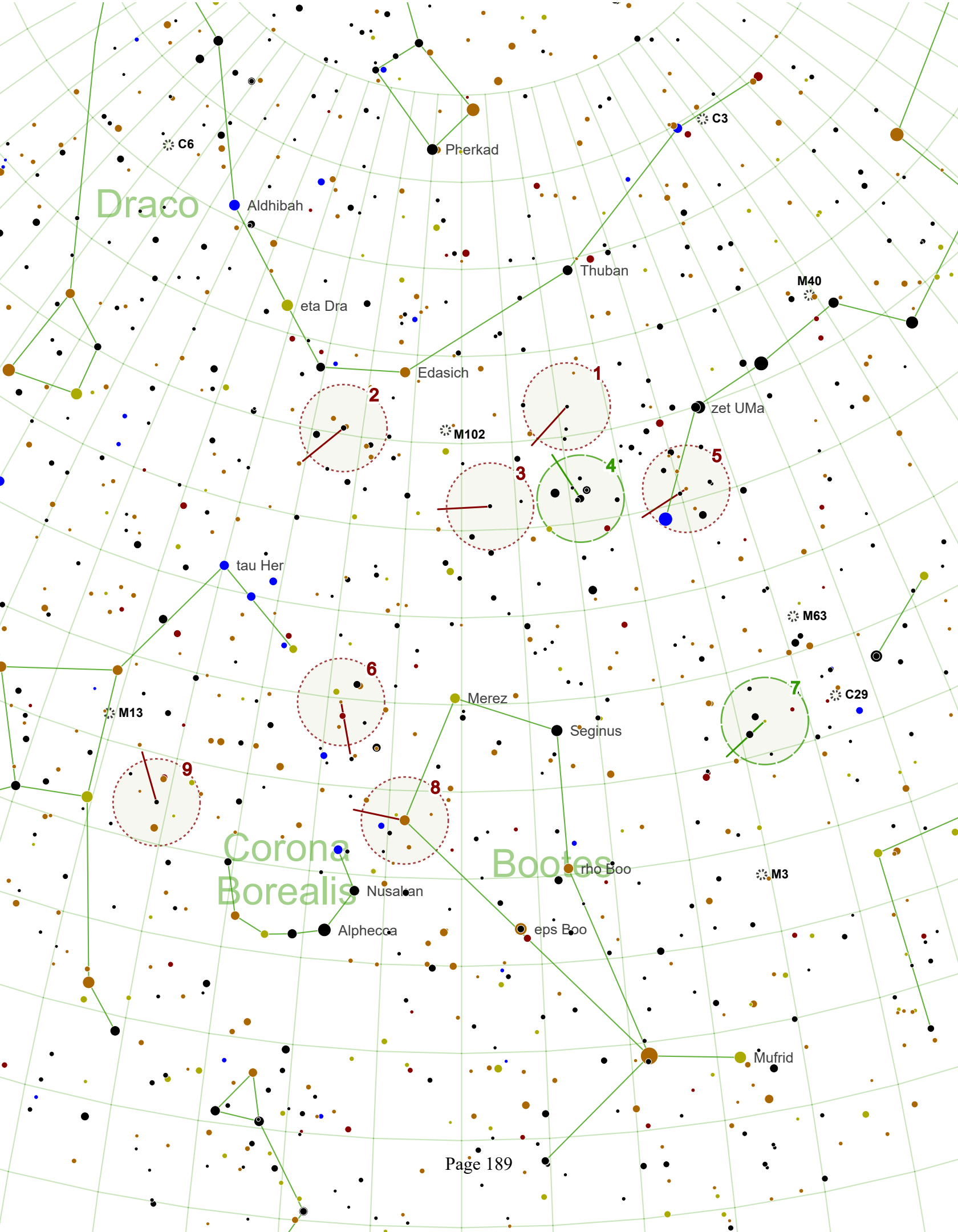
***COO 130**: mag.:4.97 | 7.25, sep.:1.4″ , p.a.158°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 251617

Deep Sky Objects

DSO	Mag.	Type
C102	1.9	open cluster
C60	11.3	spiral galaxy
C61	13.0	spiral galaxy
C74	8.2	planetary nebula
C77	7.0	peculiar galaxy
C80	3.6	globular cluster
C83	9.5	spiral galaxy
C84	7.6	globular cluster
C90	9.7	planetary nebula
C98	6.9	open cluster


Draco
C6
Pherkad
C3
Aldhibah
Thuban
M40
eta Dra
Edasich
1
2
zet UMa
M102
3
4
5
tau Her
M63
6
Merez
C29
7
M13
Seginus
9
8
Corona
Borealis
Bootes
rho Boo
M3
Nusakan
Alphecca
eps Boo
Mufrid

May: 45° North (1)

1: STF 1831 AB (RA: 14 16 08, DEC: +56 42 46)

***STF 1831 AB**: mag.:7.16 | 9.56, sep.:5.8" , p.a.138°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 29074

2: BU 946 (RA: 15 47 38, DEC: +55 22 36)

***BU 946**: mag.:5.91 | 9.53, sep.:2.3" , p.a.129°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 29668

3: STF 1889 AB (RA: 14 49 32, DEC: +51 22 28)

***STF 1889 AB**: mag.:6.53 | 9.64, sep.:15.1" , p.a.93°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 29296

4: Iota Boo (RA: 14 16 10, DEC: +51 22 01)

***STFA 26 AB**: mag.:4.76 | 7.39, sep.:39" , p.a.33°*

A very wide pairing of a bright yellow primary and a blue companion.

Two degrees to the east lies slightly brighter Asellus Primus ("the first donkey"). This star has a dim magnitude 11.46 companion (an M2.5 red dwarf a third of the mass of the sun) separated by 70" at a position angle of 182°.

Identifiers: Iota Boo | SAO 29071 | HIP 69713 | GDR2 33122255744

5: STF 1770 (RA: 13 37 43, DEC: +50 42 54)

***STF 1770**: mag.:6.93 | 8.18, sep.:1.7" , p.a.123°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 28819

6: STT 298 AB (RA: 15 36 02, DEC: +39 48 09)

***STT 298 AB**: mag.:7.16 | 8.44, sep.:1.2" , p.a.190°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 64800

7: Struve 1755 (RA: 13 32 22, DEC: +36 49 06)

***STF 1755**: mag.:7.34 | 8.1, sep.:4.1" , p.a.133°*

A fairly equal and very close pairing; the primary is yellow.

The is only an optical double - the components are not part of the same system.

Identifiers: Struve 1755 | SAO 63593 | HIP 66042 | GDR2 57146586240

8: Del Boo (RA: 15 15 30, DEC: +33 18 53)

***STFA 27 AB**: mag.:3.56 | 7.89, sep.:105.3" , p.a.78°*

A wide pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 64589

9: 23 Her (RA: 16 22 56, DEC: +32 19 59)

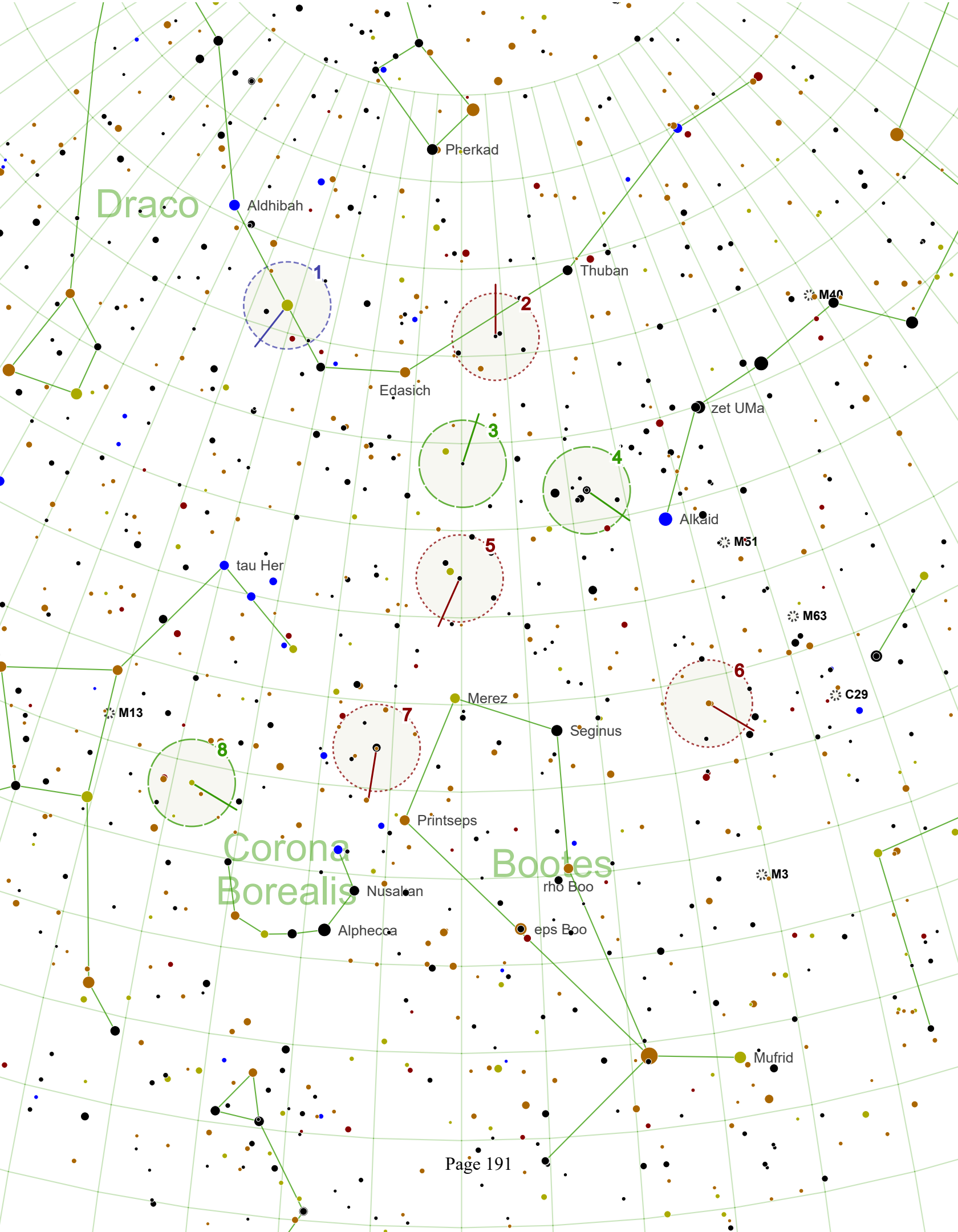
***H 5 38**: mag.:6.41 | 9.79, sep.:31" , p.a.16°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 65262

Deep Sky Objects

DSO	Mag.	Type
C29	9.8	barred spiral galaxy
C3	9.7	barred spiral galaxy
C6	8.8	planetary nebula
M102	9.9	lenticular galaxy
M13	5.8	globular cluster
M3	6.2	globular cluster
M40	8.4	double star
M63	8.6	spiral galaxy


Draco
Pherkad
Aldhibah
Thuban
M40
Edasich
zet UMa
Alkaid
M51
tau Her
M63
M13
Merez
Seginus
C29
Printseps
Corona Borealis
Bootes
M3
Nusakan
rho Boo
Alphecca
eps Boo
Mufrid
1
2
3
4
5
6
7
8

May: 45° North (2)

1: Eta Dra (RA: 16 23 60, DEC: +61 30 51)

STT 312 AB*: mag.:2.8 | 8.2, sep.:4.7″, p.a.142°*

A tight pairing of a brilliant primary and a faint companion.

Identifiers: SAO 17074

2: STF 1882 AB (RA: 14 44 04, DEC: +61 05 54)

STF 1882 AB*: mag.:6.92 | 9.23, sep.:11.3″, p.a.0°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 16478

3: SHJ 191 (RA: 14 59 35, DEC: +53 51 37)

SHJ 191*: mag.:6.86 | 7.57, sep.:40.4″, p.a.342°*

A balanced (but somewhat less bright) pair of yellow stars with very wide separation.

Best at very low magnification. "Asellus" means "donkey colt". Asellus Primus has an 11th magnitude red dwarf companion (separation: 70").

Identifiers: SHJ 191 | SAO 29372 | HIP 73366 | GDR2 28192378752

4: Kappa Boo (RA: 14 13 29, DEC: +51 47 24)

STF 1821 AB*: mag.:4.53 | 6.62, sep.:13.8″, p.a.235°*

A very bright white primary component nicely separated from a reasonably bright blue secondary.

Identifiers: Kappa Boo | SAO 29046 | HIP 69483 | GDR2 67598402944

5: BX Boo (RA: 15 00 39, DEC: +47 16 39)

STT 291*: mag.:6.33 | 9.62, sep.:35.7″, p.a.156°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 45326

6: S 654 AB (RA: 13 46 60, DEC: +38 32 34)

S 654 AB*: mag.:5.62 | 8.91, sep.:71.3″, p.a.239°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 63739

7: Alkalurops (RA: 15 24 30, DEC: +37 22 37)

STF 1938 Ba,Bb*: mag.:7.09 | 7.63, sep.:2.2″, p.a.2°*

STFA 28 AB*: mag.:4.33 | 7.09, sep.:109.2″, p.a.171°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 64686

8: Sigma CrB (RA: 16 14 41, DEC: +33 51 31)

STF 2032 AB*: mag.:5.62 | 6.49, sep.:7.4″, p.a.239°*

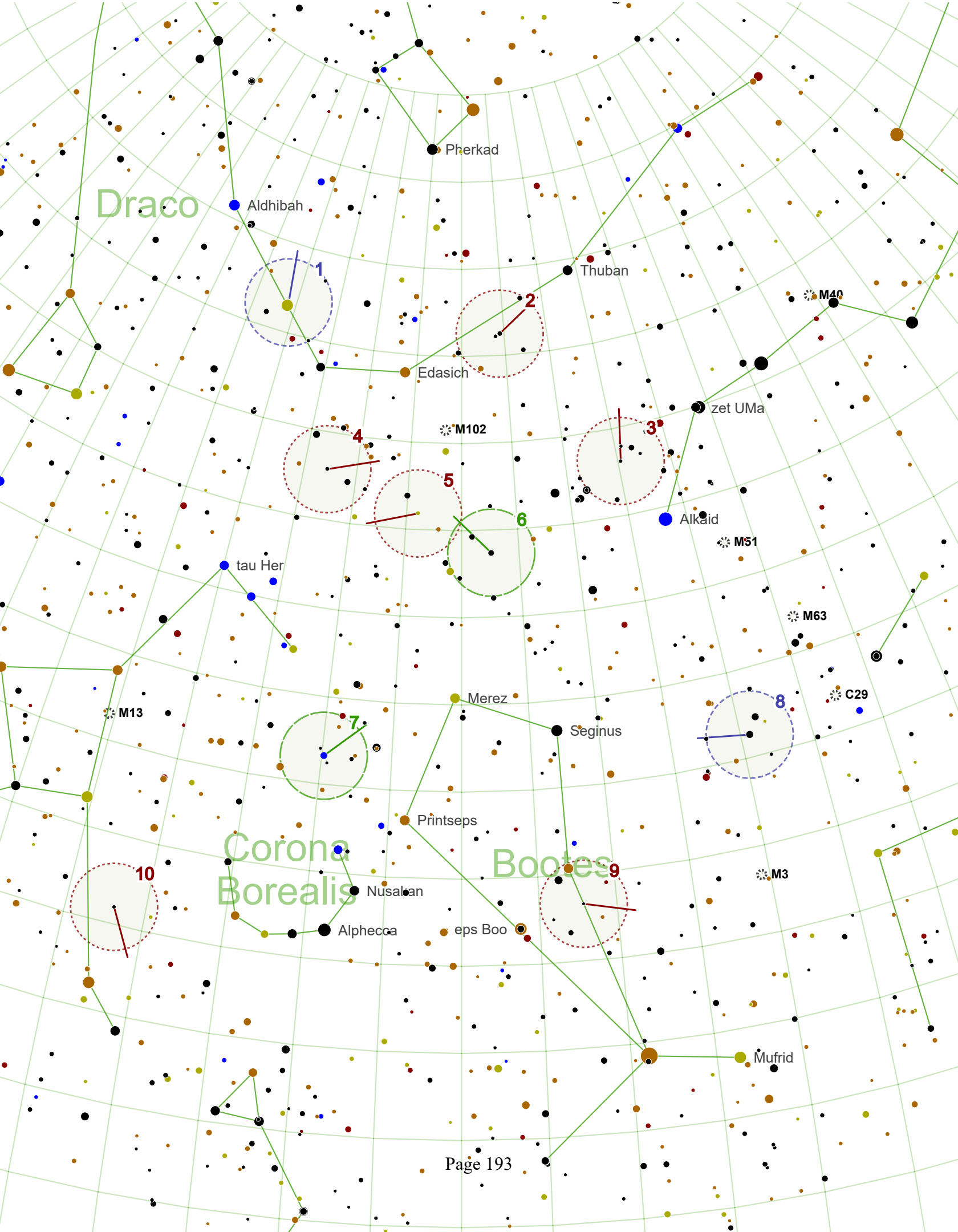
A well balanced yellow pair with quite close separation.

Don't forget to slide one and quarter finder circles to the north east to view Messier 13, the Great Globular Cluster.

Identifiers: Sigma CrB | SAO 65165 | HIP 79607 | GDR2 62170960512

Deep Sky Objects

DSO	Mag.	Type
C29	9.8	barred spiral galaxy
M13	5.8	globular cluster
M3	6.2	globular cluster
M40	8.4	double star
M51	8.4	spiral galaxy
M63	8.6	spiral galaxy


Pherkad
Draco
Aldhibah
1
Thuban
2
M40
Edasich
zet UMa
M102
4
3
5
6
Alkaid
M51
tau Her
M63
C29
M13
Merez
8
7
Seginus
Printseps
Corona
Borealis
Bootes
10
9
M3
Nusakan
Alphecca
eps Boo
Mufrid

May: 45° North (3)

1: STF 2054 AB (RA: 16 23 47, DEC: +61 41 47)

***STF 2054 AB**: mag.:6.15 | 7.09, sep.:1″ , p.a.350°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 17073

2: DL Dra (RA: 14 42 03, DEC: +61 15 43)

***STF 1878**: mag.:6.33 | 9.16, sep.:4.1″ , p.a.314°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 16466

3: STF 1795 (RA: 13 58 55, DEC: +53 06 23)

***STF 1795**: mag.:6.91 | 9.83, sep.:8″ , p.a.2°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 28955

4: STF 1984 AB (RA: 15 51 10, DEC: +52 54 25)

***STF 1984 AB**: mag.:6.89 | 8.94, sep.:6.4″ , p.a.279°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 29691

5: STTA 137 (RA: 15 15 51, DEC: +50 56 18)

***STTA 137**: mag.:6.56 | 8.94, sep.:67.2″ , p.a.101°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 29464

6: 39 Boo (RA: 14 49 41, DEC: +48 43 16)

***STF 1890**: mag.:6.31 | 6.67, sep.:2.6″ , p.a.46°*

A balanced tightly bound pair of yellow stars.

This system is charging towards the Sun at 31 km/s, but as it is a mere 224 light-years away there is no immediate cause for concern. The brighter star is actually a spectroscopic binary so this is a triple star system.

Identifiers: 39 Boo | SAO 45231 | HIP 72524 | GDR2 42798813824

7: Zeta CrB (RA: 15 39 23, DEC: +36 38 09)

***STF 1965**: mag.:4.96 | 5.91, sep.:6.3″ , p.a.306°*

A well-matched pair of bright bluish stars, closely separated. The pair are both blue, but some observers report seeing the fainter companion as greenish.

This system is formed by two hot B-class main sequence stars, 473 light-years from the Sun.

Identifiers: Zeta CrB | SAO 64834 | HIP 76669 | GDR2 06328813568

8: 25 CVn (RA: 13 37 28, DEC: +36 17 41)

***STF 1768 AB**: mag.:4.98 | 6.95, sep.:1.7″ , p.a.94°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 63648

9: STF 1850 (RA: 14 28 33, DEC: +28 17 26)

***STF 1850**: mag.:7.11 | 7.56, sep.:25.2″ , p.a.263°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 83374

10: STF 2049 (RA: 16 27 55, DEC: +25 59 03)

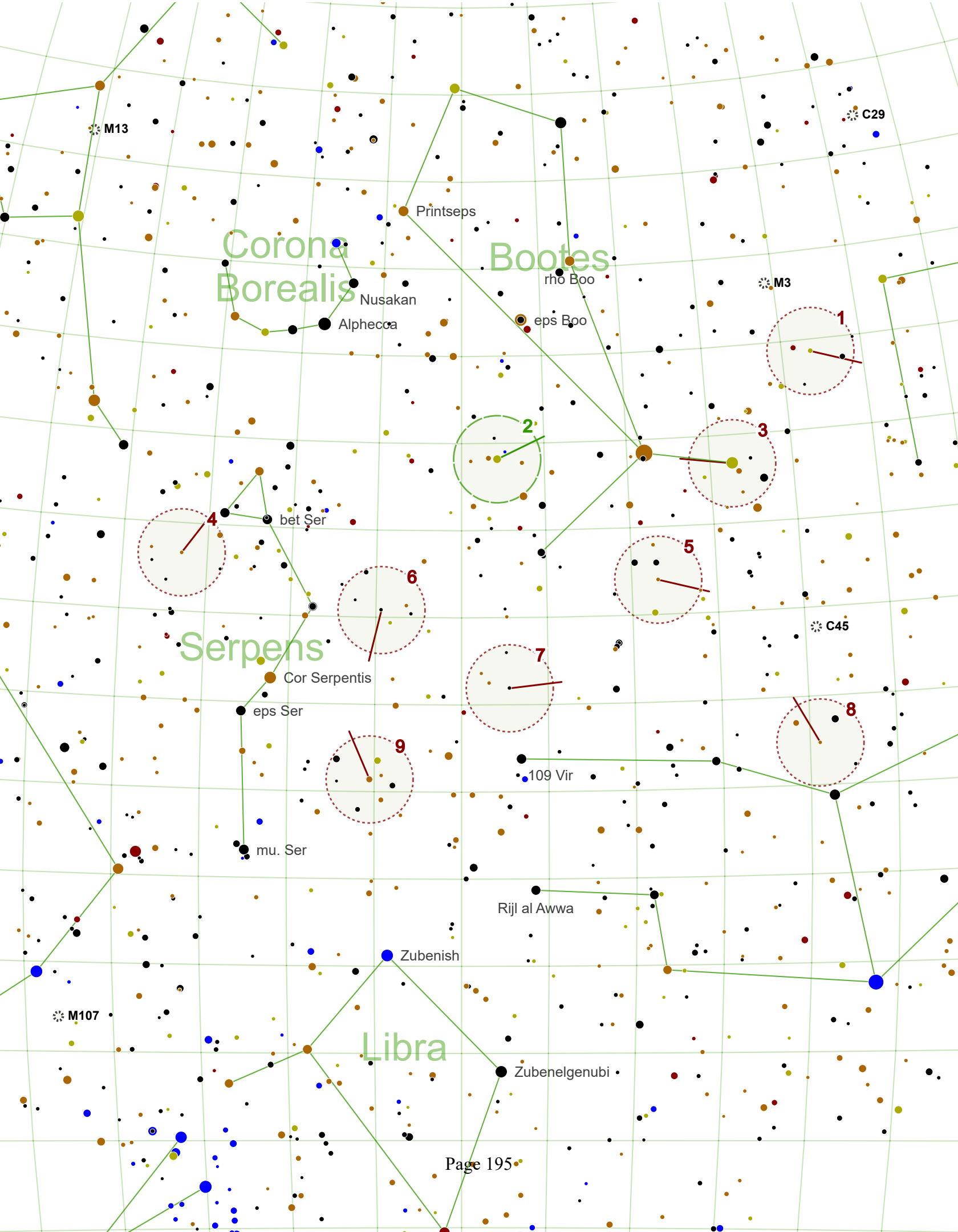
***STF 2049**: mag.:7.33 | 8.1, sep.:1.1″ , p.a.195°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 84393

Deep Sky Objects

DSO	Mag.	Type
C29	9.8	barred spiral galaxy
M102	9.9	lenticular galaxy
M13	5.8	globular cluster
M3	6.2	globular cluster
M40	8.4	double star
M51	8.4	spiral galaxy
M63	8.6	spiral galaxy


M13
C29
Printseps
Corona Borealis
Nusakan
Alphecca
Bootes
rho Boo
eps Boo
M3
1
2
3
4
bet Ser
5
6
Serpens
C45
Cor Serpentis
7
eps Ser
8
9
109 Vir
mu. Ser
Rijl al Awwa
Zubenish
M107
Libra
Zubenelgenubi

May: 10° North (1)

1: A 567 (RA: 13 32 48, DEC: +24 20 48)

***A 567**: mag.:6.21 | 9.71, sep.:1.5" , p.a.257°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 82875

2: Xi Boo (RA: 14 51 23, DEC: +19 06 02)

***STF 1888 AB**: mag.:4.76 | 6.95, sep.:5.3" , p.a.296°*

A close yellow-orange duo, with a bright primary and brightish secondary.

Identifiers: Xi Boo | SAO 101250 | HIP 72659 | GDR2 38916392704

3: Muphrid (RA: 13 54 41, DEC: +18 23 52)

***SHJ 169**: mag.:2.72 | 9.99, sep.:114.9" , p.a.85°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 100766

4: STF 2007 AB (RA: 16 06 03, DEC: +13 19 16)

***STF 2007 AB**: mag.:6.89 | 7.98, sep.:37.7" , p.a.322°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 101922

5: STT 279 (RA: 14 13 49, DEC: +11 59 52)

***STT 279**: mag.:6.84 | 9.13, sep.:2.2" , p.a.257°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 100922

6: STF 1931 AB (RA: 15 18 42, DEC: +10 25 40)

***STF 1931 AB**: mag.:7.2 | 8.07, sep.:13.4" , p.a.166°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 101480

7: STF 1883 (RA: 14 48 53, DEC: +05 57 16)

***STF 1883**: mag.:7.02 | 8.95, sep.:1" , p.a.277°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

8: STF 1764 AB (RA: 13 37 44, DEC: +02 22 56)

***STF 1764 AB**: mag.:6.79 | 8.56, sep.:16.1" , p.a.31°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

9: 6 Ser (RA: 15 21 02, DEC: +00 42 55)

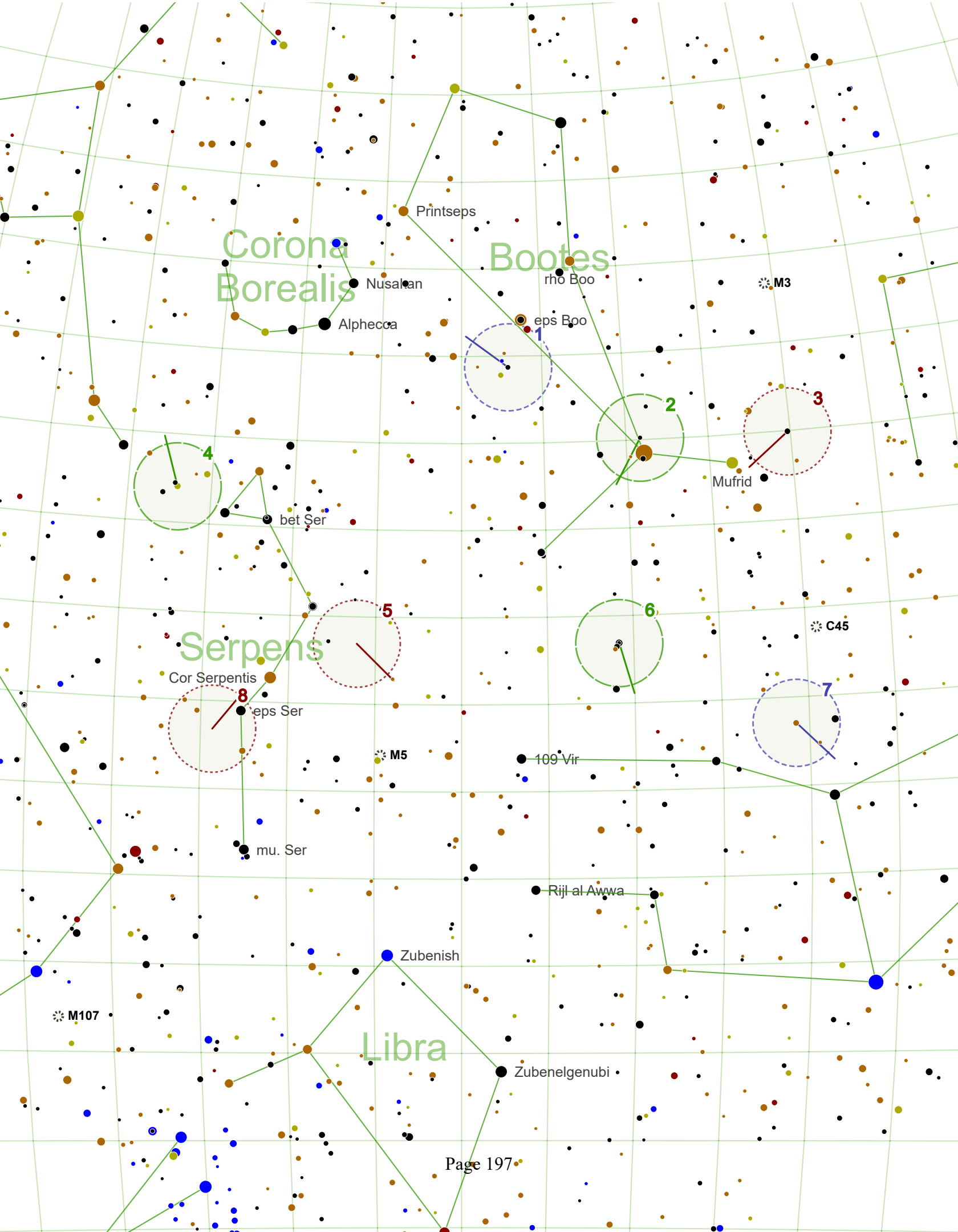
***BU 32 AB**: mag.:5.53 | 8.78, sep.:3.4" , p.a.23°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 120955

Deep Sky Objects

DSO	Mag.	Type
C29	9.8	barred spiral galaxy
C45	10.2	spiral galaxy
M107	7.9	globular cluster
M13	5.8	globular cluster
M3	6.2	globular cluster


Printseps
Corona Borealis
Nusakan
Alphecca
Bootes
rho Boo
M3
eps Boo
1
2
3
Mufrid
4
bet Ser
5
6
C45
Serpens
Cor Serpentis
8
eps Ser
7
M5
109 Vir
mu. Ser
Rijl al Awwa
Zubenish
M107
Libra
Zubenelgenubi

May: 10° North (2)

1: STF 1884 (RA: 14 48 23, DEC: +24 22 01)

STF 1884*: mag.:6.58 | 7.48, sep.:2.2″ , p.a.54°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 83535

2: Struve 1825 (RA: 14 16 33, DEC: +20 07 19)

STF 1825*: mag.:6.47 | 8.42, sep.:4.4″ , p.a.153°*

A very close yellow-orange pairing.

The system is 106 light-years away.

Identifiers: Struve 1825 | SAO 83259 | HIP 69751

3: 1 Boo (RA: 13 40 40, DEC: +19 57 20)

STF 1772 AB*: mag.:5.76 | 9.6, sep.:4.4″ , p.a.133°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 82942

4: Kappa Her (RA: 16 08 05, DEC: +17 02 49)

STF 2010 AB*: mag.:5.1 | 6.21, sep.:26.8″ , p.a.14°*

A reasonably balanced and bright, but widely separated, pair of yellow stars.

The planetary nebula IC 4593 is one finder circle south and very slightly east of this double.

Identifiers: Kappa Her | SAO 101951 | HIP 79043 | GDR2 34296727296

5: ARY 73 (RA: 15 24 20, DEC: +08 28 54)

ARY 73*: mag.:7.14 | 9.43, sep.:43.4″ , p.a.225°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

6: Struve 1835 (RA: 14 23 23, DEC: +08 26 48)

STF 1835 A,BC*: mag.:5.03 | 6.78, sep.:6.4″ , p.a.197°*

A bright white primary close to a yellow secondary.

The system is 216 light-years away.

Identifiers: Struve 1835 | SAO 120426 | HIP 70327 | HIP 16168739456

7: 84 Vir (RA: 13 43 04, DEC: +03 32 16)

STF 1777*: mag.:5.55 | 8.31, sep.:2.7″ , p.a.227°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 120082

8: STF 1987 (RA: 15 57 15, DEC: +03 24 19)

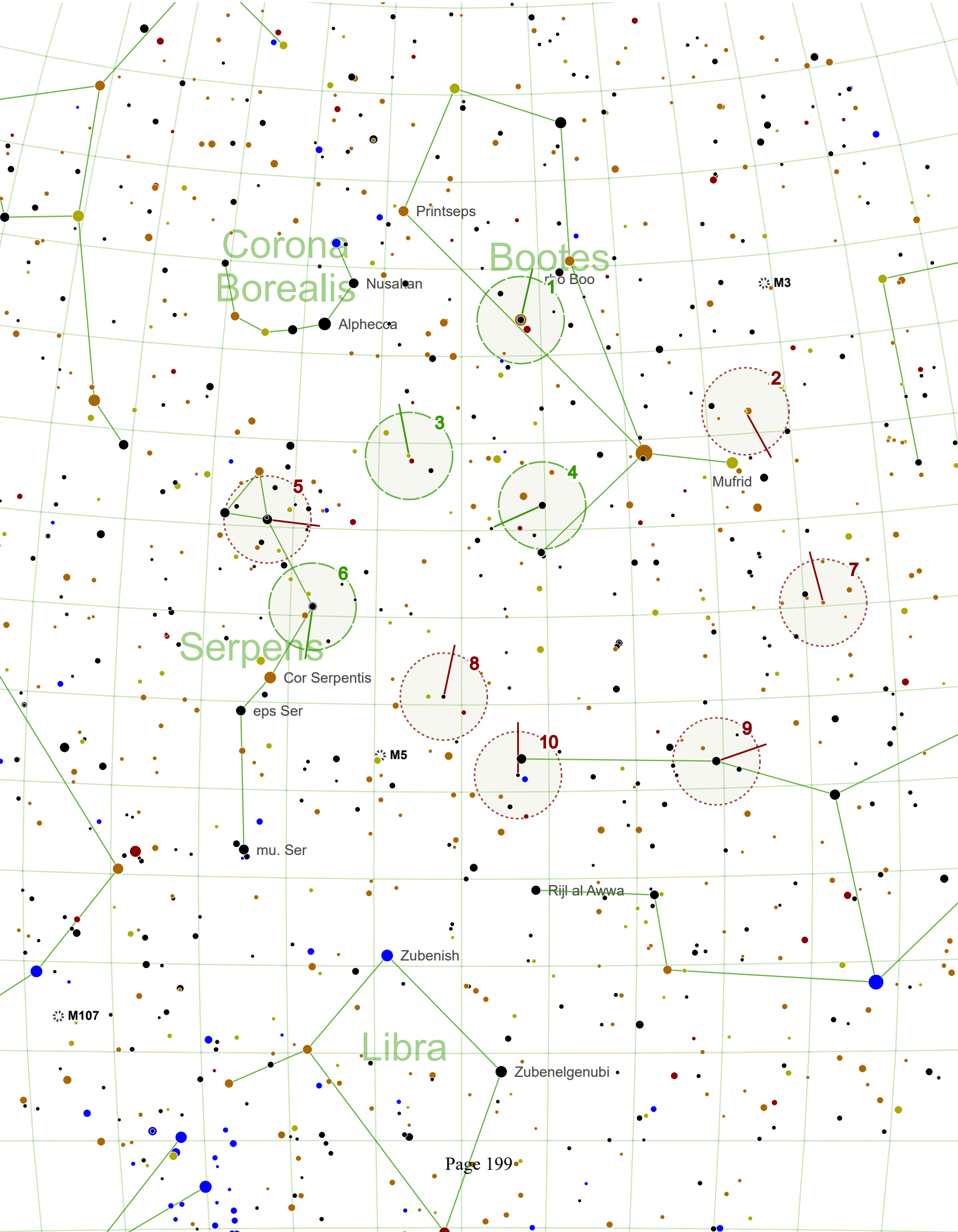
STF 1987*: mag.:7.31 | 8.71, sep.:10.4″ , p.a.320°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

Deep Sky Objects

DSO	Mag.	Type
C45	10.2	spiral galaxy
M107	7.9	globular cluster
M3	6.2	globular cluster
M5	5.6	globular cluster


Printseps
Corona Borealis
Nusakan
Alphecca
Bootes
rho Boo
M3
1
2
3
4
5
6
7
8
9
10
Mufrid
Serpens
Cor Serpentis
eps Ser
M5
mu. Ser
Rijl al Awwa
Zubenish
M107
Libra
Zubenelgenubi

May: 10° North (3)

1: Izar (RA: 14 44 59, DEC: +27 04 30)

***STF 1877 AB**: mag.:2.58 | 4.81, sep.:2.9" , p.a.347°*

A fine and very narrowly separated orange-yellow pair. Both components shine brilliantly.

Izar is also known as Epsilon Bootis or Pulcherrima. This last name, meaning "loveliest", was awarded by Friedrich Georg Wilhelm von Struve, perhaps the most renowned of all double star observers.

Identifiers: Izar | SAO 83500 | HIP 72105 | GDR2 89901591168

2: S 656 (RA: 13 50 24, DEC: +21 16 36)

***S 656**: mag.:6.93 | 7.37, sep.:86.2" , p.a.209°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 83022

3: Struve 1919 (RA: 15 12 43, DEC: +19 17 10)

***STF 1919**: mag.:6.71 | 7.38, sep.:23.2" , p.a.11°*

A less bright and quite wide yellow-blue pairing.

Identifiers: Struve 1919 | SAO 101437 | HIP 74432

4: Pi Boo (RA: 14 40 44, DEC: +16 25 06)

***STF 1864 AB**: mag.:4.88 | 5.79, sep.:5.4" , p.a.114°*

A close and reasonably balanced pair of white stars.

Pi Bootis is 305 light-years from the Sun.

Identifiers: Pi Boo | SAO 101138 | HIP 71762 | GDR2 87617291520

5: Chow (RA: 15 46 11, DEC: +15 25 19)

***STF 1970 AB**: mag.:3.66 | 9.96, sep.:29.9" , p.a.263°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 101725

6: Delta Ser (RA: 15 34 48, DEC: +10 32 20)

***STF 1954 AB**: mag.:4.17 | 5.16, sep.:4" , p.a.172°*

A reasonably balanced and very tight yellow-yellow pair.

The orbit of these two F-type stars has been calculated at 3200 years with a separation of 375 astronomical units (nearly ten times the distance between Pluto and the Sun).

Identifiers: Delta Ser | SAO 101623 | HIP 76276 | GDR2 58411028096

7: HJ 228 (RA: 13 35 33, DEC: +10 12 18)

***HJ 228**: mag.:6.6 | 8.99, sep.:70.1" , p.a.15°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 100630

8: STF 1904 (RA: 15 04 06, DEC: +05 29 34)

***STF 1904**: mag.:7.19 | 7.37, sep.:10.1" , p.a.348°*

A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 120822

9: Tau Vir (RA: 14 01 39, DEC: +01 32 40)

***SHJ 171 AB**: mag.:4.25 | 9.41, sep.:82.4" , p.a.289°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 120238

10: STF 1881 (RA: 14 47 05, DEC: +00 58 15)

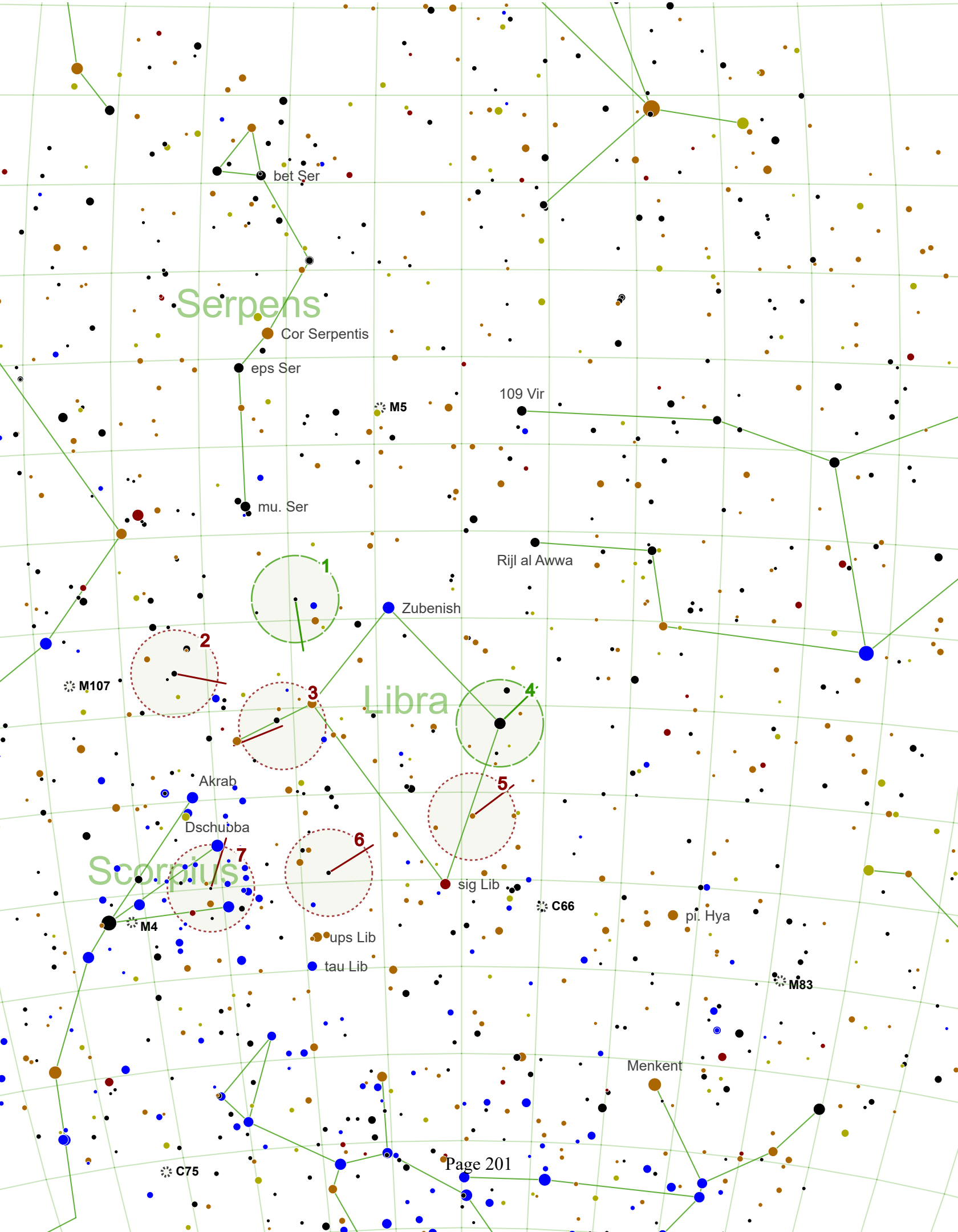
***STF 1881**: mag.:6.74 | 8.81, sep.:3.5" , p.a.0°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 120657

Deep Sky Objects

DSO	Mag.	Type
M107	7.9	globular cluster
M3	6.2	globular cluster
M5	5.6	globular cluster


bet Ser
Serpens
Cor Serpentis
eps Ser
M5
109 Vir
mu. Ser
Rijl al Awwa
1
Zubenish
2
M107
3
Libra
4
Akrab
5
Dschubba
6
7
Scorpius
sig Lib
C66
pi. Hya
M4
ups Lib
tau Lib
M83
Menkent
C75

May: -10° South (1)

1: Struve 1962 (RA: 15 38 40, DEC: -08 47 29)

STF 1962: *mag.:6.44 | 6.49, sep.:11.7", p.a.189°*

An easily separated equal pair of yellow stars.

Zubeneschamali means the "northern claw" of Scorpius, although now the star is classified as the brightest star of Libra.

Identifiers: Struve 1962 | SAO 140672 | HIP 76603 | GDR2 01723597440

2: 11 Sco (RA: 16 07 36, DEC: -12 44 43)

BU 39 AB: *mag.:5.77 | 9.77, sep.:3.3", p.a.259°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 159715

3: BU 35 AB (RA: 15 42 46, DEC: -16 00 49)

BU 35 AB: *mag.:7.27 | 8.69, sep.:2.4", p.a.112°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 159453

4: Alpha Lib (RA: 14 50 53, DEC: -16 02 30)

SHJ 186 AB: *mag.:2.74 | 5.19, sep.:231.1", p.a.314°*

A brilliant white primary with distant bright, white companion.

This system of F-class main sequence stars (with the delicious proper name of Zubenelgenubi) is 76 light-years from Earth.

Identifiers: Alpha Lib | SAO 158840 | HIP 72622 | GDR2 07860824832

5: KX Lib (RA: 14 57 28, DEC: -21 24 56)

H N 28 AB: *mag.:5.88 | 8.18, sep.:26.1", p.a.307°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 183040

6: LAL 123 AB (RA: 15 33 10, DEC: -24 29 26)

LAL 123 AB: *mag.:6.94 | 7, sep.:9.3", p.a.302°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 183565

7: BU 38 (RA: 16 02 52, DEC: -25 00 52)

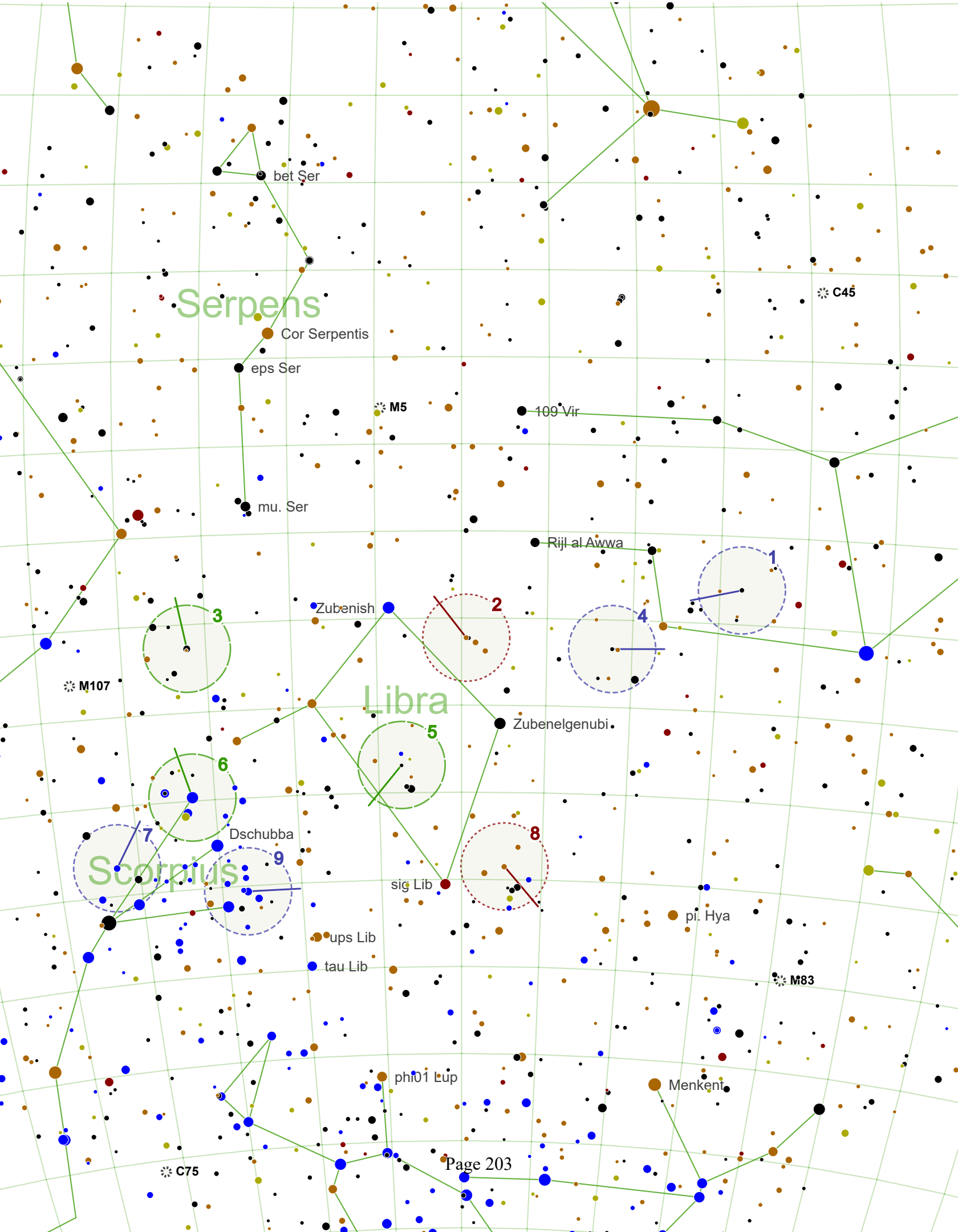
BU 38: *mag.:7.17 | 9.45, sep.:4.5", p.a.343°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 184058

Deep Sky Objects

DSO	Mag.	Type
C66	10.2	globular cluster
C75	5.8	open cluster
M107	7.9	globular cluster
M4	5.6	globular cluster
M5	5.6	globular cluster
M83	7.6	spiral galaxy


bet Ser
Serpens
Cor Serpentis
eps Ser
M5
109 Vir
C45
mu. Ser
Rijl al Awwa
1
2
3
4
Zubenish
M107
Libra
Zubenelgenubi
5
6
7
Dschubba
9
Scorpius
8
sig Lib
pi. Hya
ups Lib
tau Lib
M83
phi01 Lup
Menkent
C75

May: -10° South (2)

1: STF 1788 AB (RA: 13 54 58, DEC: -08 03 32)

***STF 1788 AB**: mag.:6.68 | 7.26, sep.:3.7" , p.a.101°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 139618

2: 18 Lib (RA: 14 58 54, DEC: -11 08 38)

***STF 1894 AB**: mag.:6 | 9.83, sep.:19.7" , p.a.38°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 158946

3: Xi Sco (RA: 16 04 22, DEC: -11 22 23)

***STF 1998 AB**: mag.:4.84 | 4.86, sep.:1.1" , p.a.13°*

***STF 1998 AC**: mag.:4.84 | 7.3, sep.:7.5" , p.a.43°*

***STF 1998 BC**: mag.:4.86 | 7.3, sep.:8.8" , p.a.38°*

***STF 1999 AB**: mag.:7.43 | 7.99, sep.:11.9" , p.a.98°*

Xi Sco (Graffias) is a triple star system. The yellow primary can be split by larger telescopes into a an equal pale yellow pair with a separation of 1.1". Lesser telescopes show a single yellow point distantly separated from a fairly apparent blue companion.

While in the region of Scorpius, turn your telescope to Antares and try to resolve its blue companion (or is it green?).

Identifiers: Xi Sco | SAO 159665 | HIP 78727 | GDR2 92367555200

4: STF 1837 (RA: 14 24 41, DEC: -11 40 11)

***STF 1837**: mag.:6.87 | 7.94, sep.:1.2" , p.a.270°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 158550

5: SHJ 195 (RA: 15 14 28, DEC: -18 25 43)

***SHJ 195**: mag.:6.79 | 8.32, sep.:47.5" , p.a.141°*

A widely separated, fairly balanced pair of yellowish stars.

With this double centered in the finder, globular cluster NGC 5897 (magnitude 8.5) is on the southern edge of the finder circle.

Identifiers: SHJ 195 | SAO 159118 | HIP 74593 | GDR2 95725037696

6: Beta Sco (RA: 16 05 26, DEC: -19 48 19)

***H 3 7 AC**: mag.:2.59 | 4.52, sep.:13.4" , p.a.20°*

A moderately separated pair of brilliant bluish stars.

Also known as Acrab, this spectacular pairing is the AC component of a complex arrangement. The A component is a fairly balanced 0" double, while a very faint B component is separated by only 0.3" from A. The C component is also a 0.1" double. A and C are not gravitationally bound however.

Identifiers: Beta Sco | SAO 159682 | HIP 78820 | GDR2 6247207266936828288

7: Rho Oph (RA: 16 25 35, DEC: -23 26 47)

***H 2 19 AB**: mag.:5.07 | 5.74, sep.:3" , p.a.334°*

A tight pairing of a bright primary and a bright companion.

Identifiers: SAO 184382

8: H 6 117 AB (RA: 14 49 19, DEC: -24 15 05)

***H 6 117 AB**: mag.:5.84 | 8.57, sep.:64.5" , p.a.220°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 182898

9: 2 Sco (RA: 15 53 37, DEC: -25 19 38)

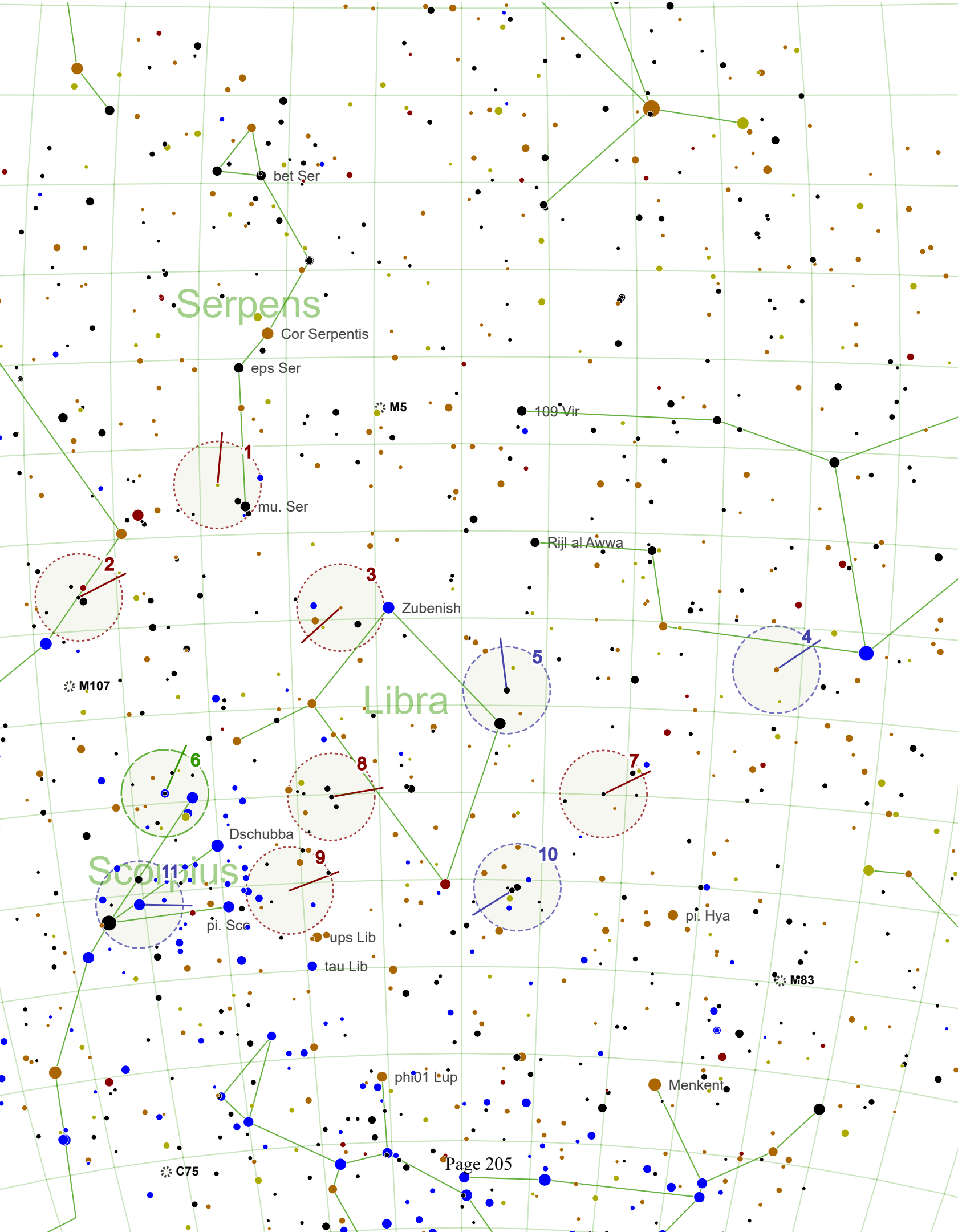
***BU 36 AB**: mag.:4.69 | 6.98, sep.:2" , p.a.273°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 183896

Deep Sky Objects

DSO	Mag.	Type
C45	10.2	spiral galaxy
C75	5.8	open cluster
M107	7.9	globular cluster
M5	5.6	globular cluster
M83	7.6	spiral galaxy


bet Ser
Serpens
Cor Serpentis
eps Ser
M5
109 Vir
1
mu. Ser
Rijl al Awwa
2
3
Zubenish
4
5
M107
Libra
6
8
7
Dschubba
Scorpius
9
10
11
pi. Sco
ups Lib
tau Lib
pi. Hya
M83
phi01 Lup
Menkent
C75

May: -10° South (3)

1: STF 1985 (RA: 15 55 55, DEC: -02 09 51)

***STF 1985**: mag.:7.03 | 8.65, sep.:6″, p.a.355°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

2: STF 2048 AB (RA: 16 28 49, DEC: -08 07 43)

***STF 2048 AB**: mag.:6.58 | 9.74, sep.:5.6″, p.a.297°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 141195

3: SHJ 202 AB (RA: 15 28 10, DEC: -09 20 53)

***SHJ 202 AB**: mag.:6.95 | 7.61, sep.:52″, p.a.132°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO

4: 86 Vir (RA: 13 45 56, DEC: -12 25 36)

***BU 935 AB**: mag.:5.66 | 8.47, sep.:1″, p.a.304°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 158152

5: Mu Lib (RA: 14 49 19, DEC: -14 08 56)

***BU 106 AB**: mag.:5.61 | 6.62, sep.:2″, p.a.7°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 158821

6: Nu Sco (RA: 16 11 60, DEC: -19 27 38)

***BU 120 AB**: mag.:4.35 | 5.31, sep.:1.3″, p.a.1°*

***H 5 6 AC**: mag.:4.35 | 6.6, sep.:41.3″, p.a.336°*

***MTL 2 CD**: mag.:6.6 | 7.23, sep.:2.4″, p.a.56°*

A bright, extremely tight and balanced pair of blue stars.

This double, also known as Jabbah, lies in front of of the Blue Horsehead Nebula (IC 4592).

Identifiers: Nu Sco | SAO 159763 | HIP 79374 | GDR2 81070158080

7: SHJ 179 AB (RA: 14 25 30, DEC: -19 58 12)

***BU 225 BC**: mag.:7.16 | 8.37, sep.:1.2″, p.a.91°*

***SHJ 179 AB**: mag.:6.61 | 7.16, sep.:35″, p.a.296°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 158558

8: S 672 (RA: 15 31 43, DEC: -20 09 54)

***S 672**: mag.:6.31 | 8.94, sep.:11.2″, p.a.280°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 159317

9: BU 354 (RA: 15 43 12, DEC: -25 24 56)

***BU 354**: mag.:7.31 | 9.3, sep.:5.9″, p.a.291°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 183731

10: 54 Hya (RA: 14 46 00, DEC: -25 26 35)

***H 3 97 AB**: mag.:5.12 | 7.25, sep.:8.1″, p.a.122°*

A close pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 182855

11: Alniyat (RA: 16 21 11, DEC: -25 35 34)

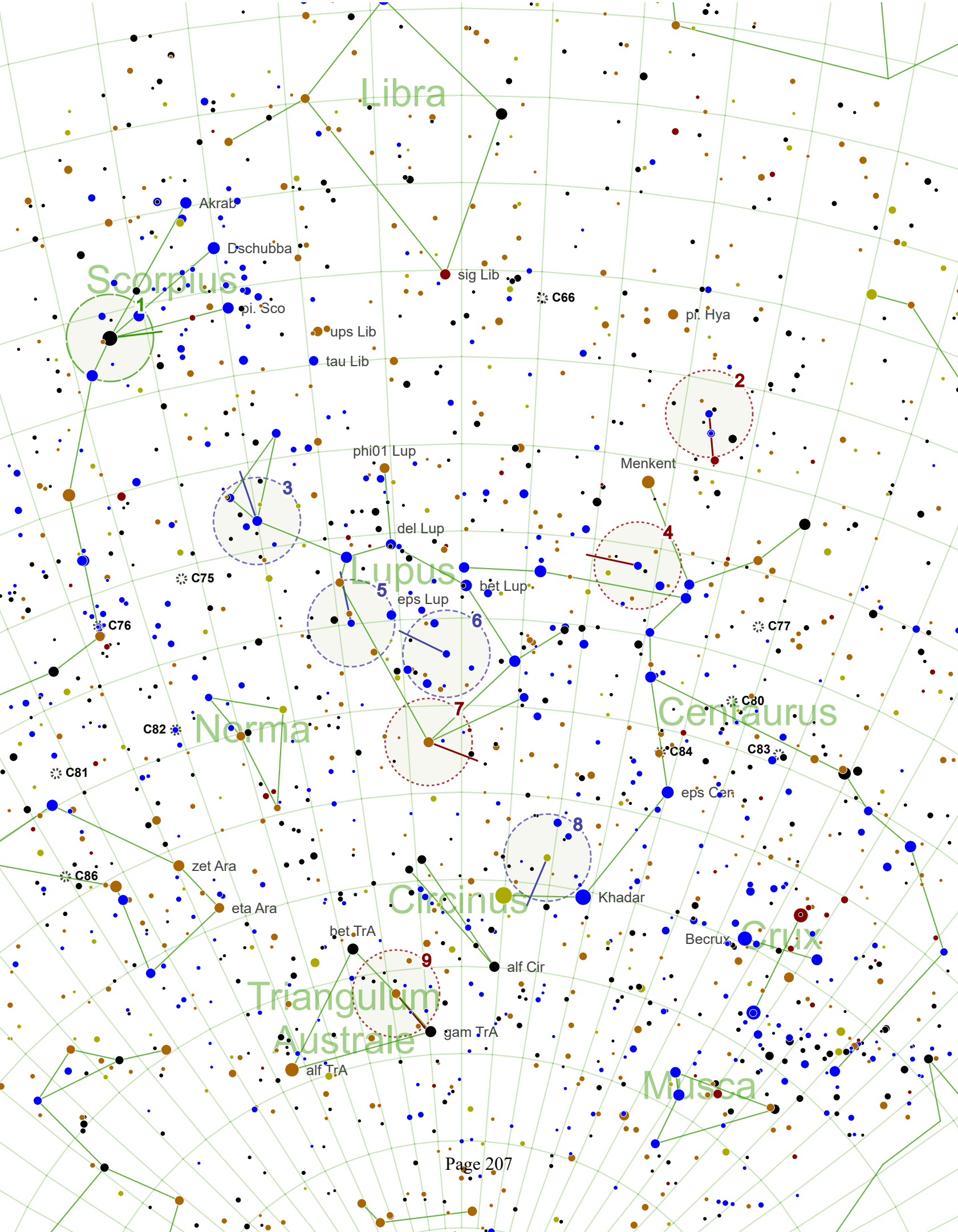
***H 4 121 AB**: mag.:2.89 | 8.42, sep.:20.5″, p.a.269°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 184336

Deep Sky Objects

DSO	Mag.	Type
C75	5.8	open cluster
M107	7.9	globular cluster
M5	5.6	globular cluster
M83	7.6	spiral galaxy


Libra
Akrab
Dschubba
Scorpius
1
pi. Sco
sig Lib
C66
pi. Hya
ups Lib
tau Lib
2
phi01 Lup
Menkent
3
del Lup
4
Lupus
C75
5
eps Lup
bet Lup
6
C76
C77
7
C80
Centaurus
C82
Norma
C84
C83
C81
eps Cen
8
zet Ara
C86
Circinus
Khadar
eta Ara
bet TrA
Becrux
Crux
9
alf Cir
Triangulum
Australe
gam TrA
alf TrA
Musca

May: -45° South (1)

1: Antares (RA: 16 29 24, DEC: -26 25 55)

***GNT 1**: mag.:0.96 | 5.4, sep.:2.6″ , p.a.277°*

A fiercely brilliant and intensely red primary with a very close, bright, blue or green companion.

Antares means the "rival of Mars" as this star's color competes with that of the Red Planet. This is a gravitationally bound binary system about 550 light-years from Earth. Antares is fairly red (B-V color index: 1.86).

Identifiers: Antares | SAO 184415 | HIP 80763

2: 4 Cen (RA: 13 53 13, DEC: -31 55 39)

***H N 51**: mag.:4.72 | 8.53, sep.:14.8″ , p.a.185°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 204944

3: Eta Lup (RA: 16 00 07, DEC: -38 23 48)

***RMK 21 AB**: mag.:3.37 | 7.5, sep.:14.8″ , p.a.19°*

***RMK 21 AC**: mag.:3.37 | 9.39, sep.:114.9″ , p.a.248°*

A comfortably separated pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 207208

4: Chi Cen (RA: 14 06 03, DEC: -41 10 46)

***WFC 145 AB**: mag.:4.31 | 8.49, sep.:85.2″ , p.a.78°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 224673

5: d Lup (RA: 15 35 53, DEC: -44 57 30)

***HJ 4788**: mag.:4.68 | 6.51, sep.:2.1″ , p.a.12°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 225950

6: Pi Lup (RA: 15 05 07, DEC: -47 03 04)

***HJ 4728**: mag.:4.56 | 4.6, sep.:1.6″ , p.a.64°*

A tight pairing of a bright primary and a bright companion.

Identifiers: SAO 225426

7: Zet Lup (RA: 15 12 17, DEC: -52 05 57)

***DUN 176**: mag.:3.5 | 6.74, sep.:71.7″ , p.a.249°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 242304

8: DUN 159 AB (RA: 14 22 37, DEC: -58 27 33)

***DUN 159 AB**: mag.:5.03 | 7.59, sep.:9.1″ , p.a.157°*

A close pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 241673

9: Eps TrA (RA: 15 36 43, DEC: -66 19 01)

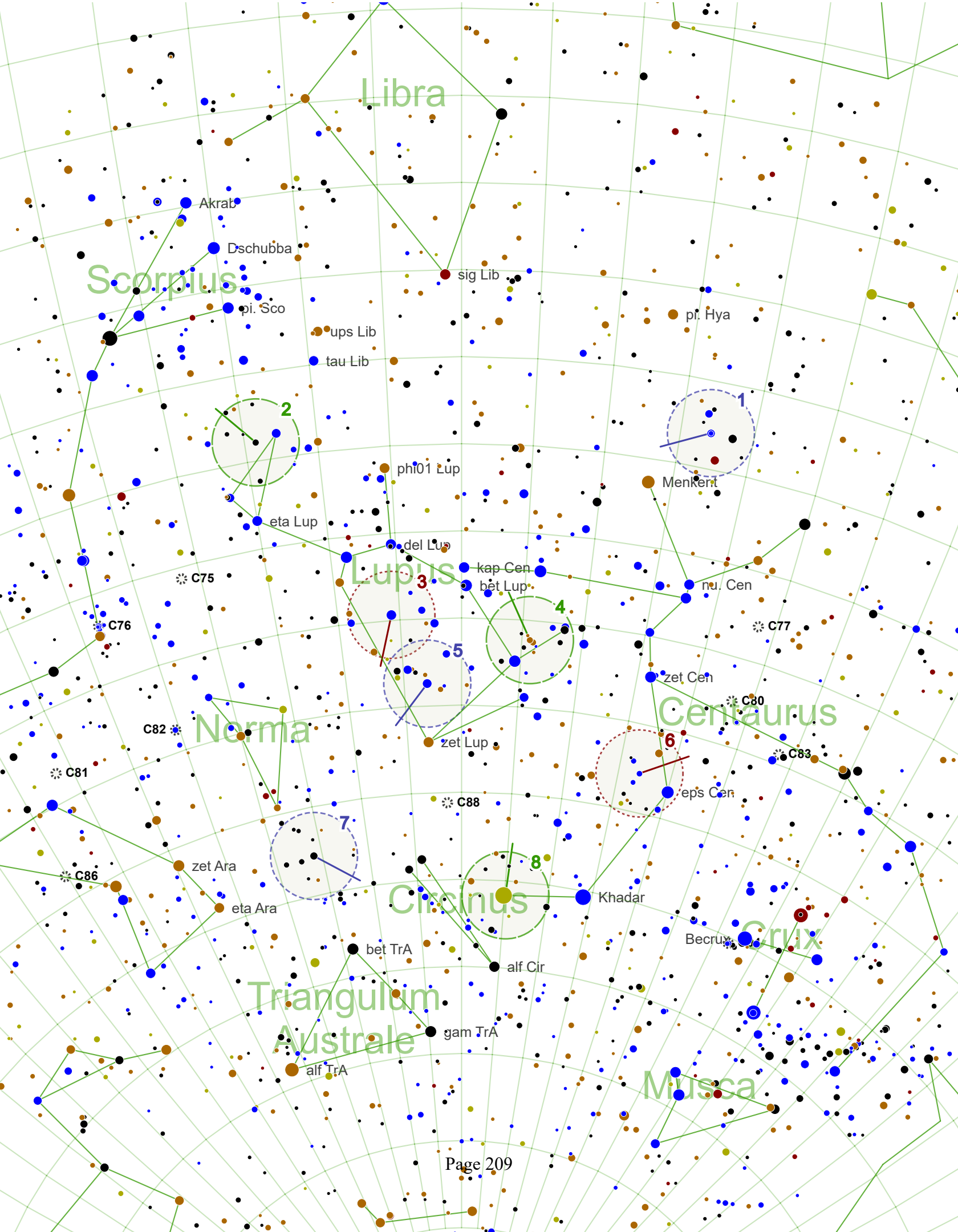
***DUN 188**: mag.:4.23 | 9.36, sep.:81.9″ , p.a.220°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 253226

Deep Sky Objects

DSO	Mag.	Type
C66	10.2	globular cluster
C75	5.8	open cluster
C76	2.6	open cluster
C77	7.0	peculiar galaxy
C80	3.6	globular cluster
C81	8.1	globular cluster
C82	5.2	open cluster
C83	9.5	spiral galaxy
C84	7.6	globular cluster
C86	5.6	globular cluster


Libra
Akrab
Dschubba
Scorpius
pi. Sco
sig Lib
pi. Hya
ups Lib
tau Lib
2
1
phi01 Lup
Menkent
eta Lup
del Lup
Lupus
kap Cen
bet Lup
nu. Cen
C75
3
4
C76
C77
5
zet Cen
C80
Centaurus
C82
Norma
zet Lup
6
C83
C81
eps Cen
C88
7
8
zet Ara
C86
Circinus
Khadar
eta Ara
Becrux
Crux
bet TrA
alf Cir
Triangulum
Australe
gam TrA
alf TrA
Musca

May: -45° South (2)

1: 3 Cen (RA: 13 51 50, DEC: -32 59 39)

***H 3 101**: mag.:4.5 | 5.97, sep.:7.8" , p.a.105°*

A close pairing of a bright primary and a bright companion.

Identifiers: SAO 204916

2: Xi Lup (RA: 15 56 53, DEC: -33 57 58)

***PZ 4**: mag.:5.09 | 5.56, sep.:10.2" , p.a.50°*

A bright white primary with an almost as bright blue companion close by.

Globular cluster NGC 5986 (mag. 6.9) lies one finder circle to the south.

Identifiers: Xi Lup | SAO 207144 | HIP 78105 | GDR2 02400278016

3: DUN 182 AC (RA: 15 22 41, DEC: -44 41 22)

***DUN 182 AC**: mag.:3.56 | 9.1, sep.:26.2" , p.a.168°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 225712

4: HJ 4690 (RA: 14 37 20, DEC: -46 08 00)

***HJ 4690 AB**: mag.:5.55 | 7.65, sep.:19.2" , p.a.24°*

A bright yellow primary easily separated from a white secondary.

The primary is itself an equal double (separation 0.2"). Tau 1 and 2 Lupi form a lovely binocular double on the north-western edge of the finder view.

Identifiers: HJ 4690 | SAO 225062 | HIP 71500 | GDR2 32950518528

5: Kap1 Lup (RA: 15 11 56, DEC: -48 44 16)

***DUN 177**: mag.:3.83 | 5.52, sep.:26.3" , p.a.143°*

A wide pairing of a brilliant primary and a bright companion.

Identifiers: SAO 225525

6: N Cen (RA: 13 52 05, DEC: -52 48 42)

***RMK 18**: mag.:5.24 | 7.5, sep.:18.5" , p.a.289°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 241239

7: HJ 4825 AB,C (RA: 16 03 32, DEC: -57 46 30)

***HJ 4825 AB,C**: mag.:4.64 | 8.02, sep.:11" , p.a.242°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 243279

8: Rigel Kent (RA: 14 39 36, DEC: -60 50 02)

***RHD 1 AB**: mag.:-0.01 | 1.33, sep.:6.1" , p.a.352°*

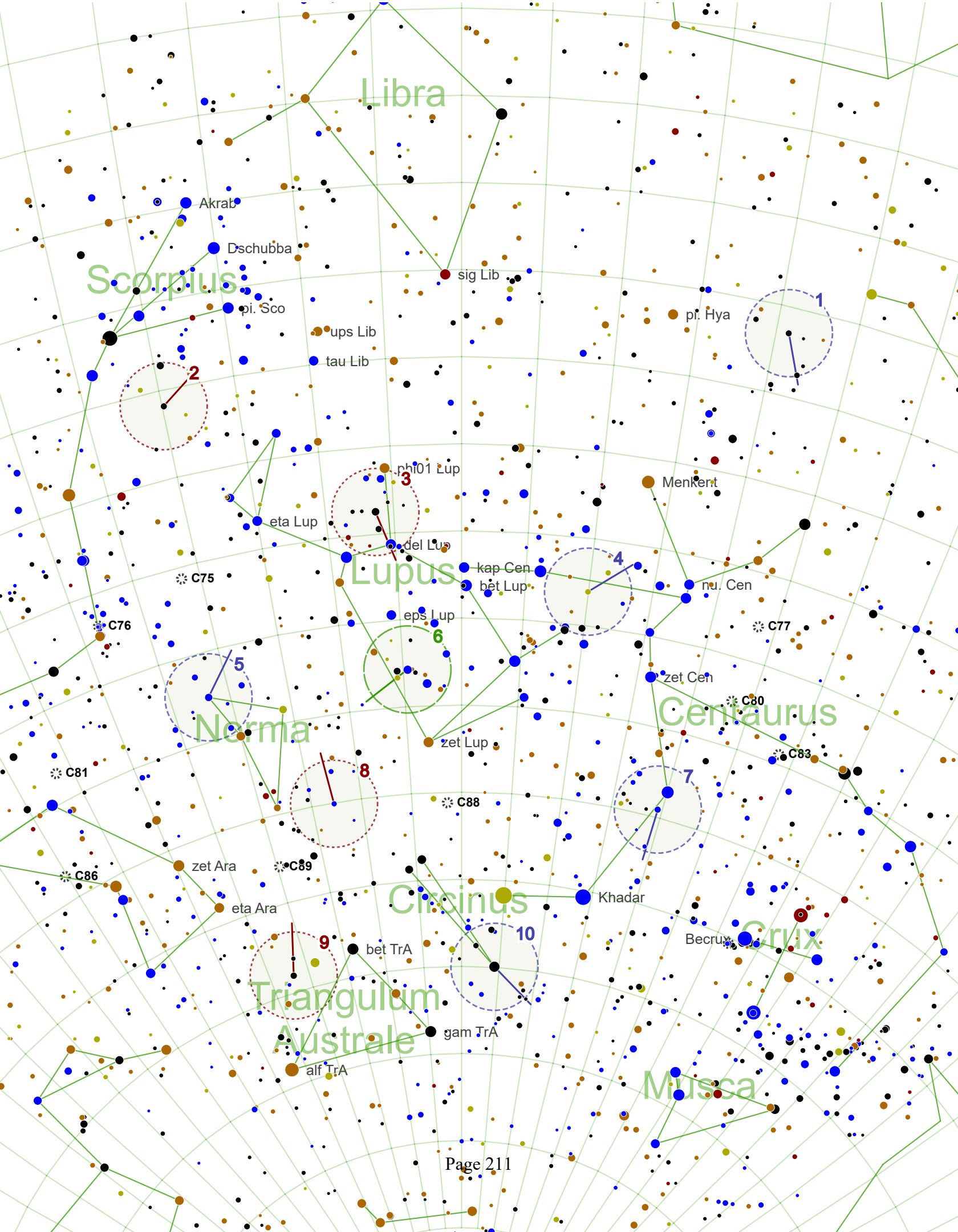
A close, extremely brilliant pair with a yellow primary and orange secondary.

Famous as being the closest star system to the Sun, the third member of this system is Proxima Centauri. At Magnitude 12.7 and over 999" from the primary, Proxima is highly elusive.

Identifiers: Rigel Kent | SAO 252838 | HIP 71683 | GDR2 48286736896

Deep Sky Objects

DSO	Mag.	Type
C75	5.8	open cluster
C76	2.6	open cluster
C77	7.0	peculiar galaxy
C80	3.6	globular cluster
C81	8.1	globular cluster
C82	5.2	open cluster
C83	9.5	spiral galaxy
C86	5.6	globular cluster
C88	7.9	open cluster
C94	4.2	open cluster


Libra
Akrab
Dschubba
Scorpius
pi. Sco
sig Lib
ups Lib
tau Lib
pi. Hya
1
2
phi01 Lup
3
Menkent
eta Lup
del Lup
Lupus
kap Cen
bet Lup
4
nu. Cen
C75
C76
C77
eps Lup
6
5
zet Cen
C80
Centaurus
Norma
zet Lup
C83
C81
8
7
C88
zet Ara
C89
C86
Circinus
Khadar
eta Ara
Becrux
Crux
9
bet TrA
10
Triangulum
Australe
gam TrA
alf TrA
Musca

May: -45° South (3)

1: H N 69 AB (RA: 13 36 49, DEC: -26 29 43)

***H N 69 AB**: mag.:5.74 | 6.6, sep.:10.2" , p.a.190°*

A comfortably separated pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 181790

2: BSO 12 AB (RA: 16 19 33, DEC: -30 54 24)

***BSO 12 AB**: mag.:5.55 | 6.88, sep.:23.6" , p.a.318°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 207558

3: k Lup (RA: 15 25 20, DEC: -38 44 01)

***DUN 183 AB**: mag.:4.59 | 9.38, sep.:93.3" , p.a.203°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 206616

4: HJ 4672 (RA: 14 20 10, DEC: -43 03 32)

***HJ 4672**: mag.:5.77 | 7.94, sep.:3.5" , p.a.301°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 224838

5: Eps Nor (RA: 16 27 11, DEC: -47 33 17)

***HJ 4853**: mag.:4.51 | 6.12, sep.:22.9" , p.a.334°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 226773

6: Mu Lup (RA: 15 18 32, DEC: -47 52 31)

***DUN 180 AC**: mag.:4.93 | 6.34, sep.:23.1" , p.a.128°*

***DUN 180 BC**: mag.:4.99 | 6.34, sep.:23.3" , p.a.128°*

An extraordinarily tight pair of equally brilliant bluish stars, with a widely separated, fairly bright, white third component.

Just beyond the south-eastern edge of the finder circle are two globular clusters: NGC 5927 (mag. 8.9) is closest, with NGC 5946 (mag 10.7) nearly two degrees further east.

Identifiers: Mu Lup | SAO 225638 | HIP 74911

7: Q Cen (RA: 13 41 45, DEC: -54 33 34)

***DUN 141**: mag.:5.2 | 6.53, sep.:5.6" , p.a.163°*

A close pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 241076

8: V360 Nor (RA: 15 51 07, DEC: -55 03 20)

***DUN 193 AB**: mag.:5.77 | 9.07, sep.:16.2" , p.a.15°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 243044

9: Iot TrA (RA: 16 27 57, DEC: -64 03 29)

***DUN 201**: mag.:5.29 | 9.42, sep.:16.6" , p.a.2°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 253555

10: Alp Cir (RA: 14 42 30, DEC: -64 58 30)

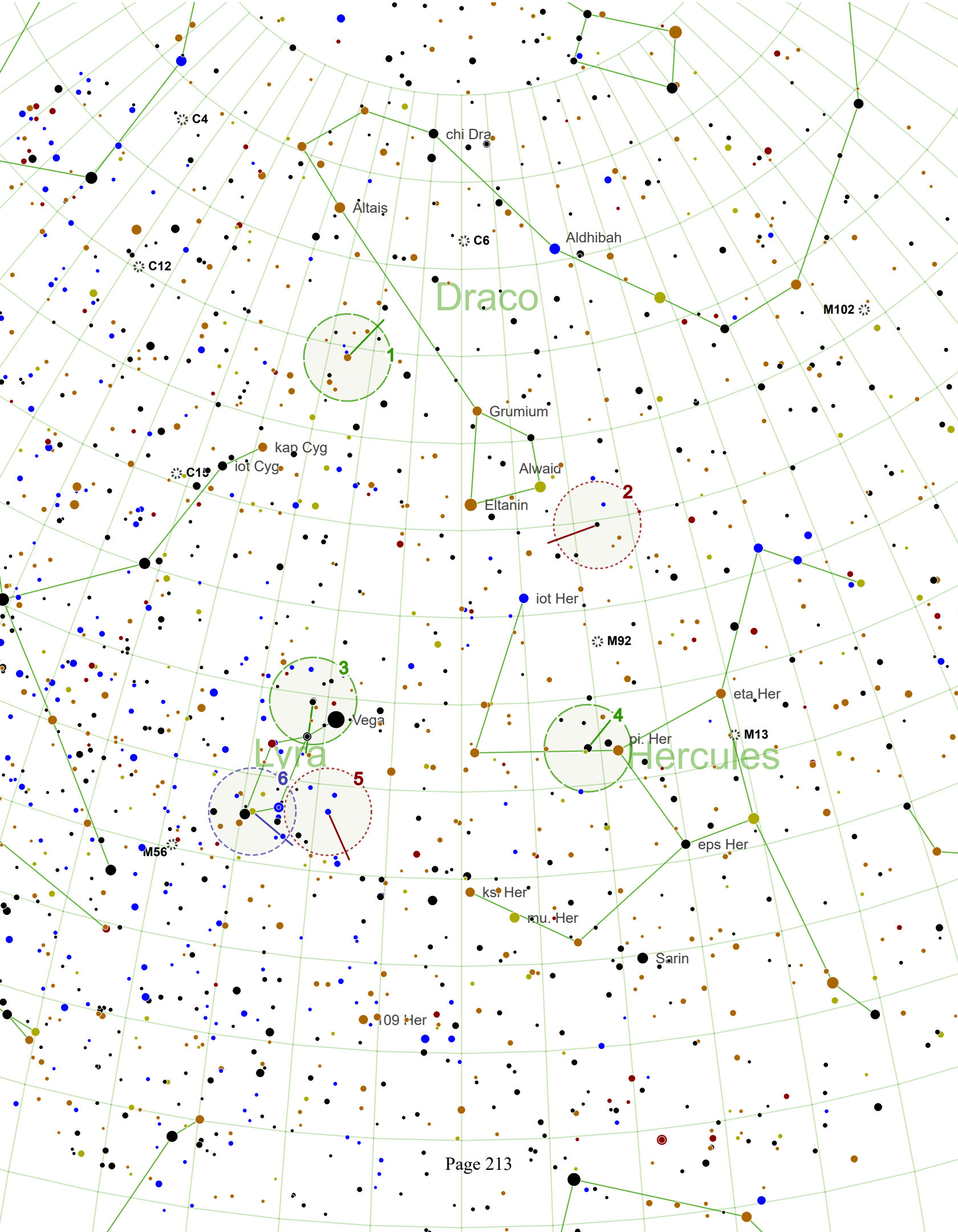
***DUN 166 AB**: mag.:3.18 | 8.47, sep.:15.7" , p.a.224°*

A comfortably separated pairing of a brilliant primary and a faint companion.

Identifiers: SAO 252853

Deep Sky Objects

DSO	Mag.	Type
C75	5.8	open cluster
C76	2.6	open cluster
C77	7.0	peculiar galaxy
C80	3.6	globular cluster
C81	8.1	globular cluster
C83	9.5	spiral galaxy
C86	5.6	globular cluster
C88	7.9	open cluster
C89	5.4	open cluster
C94	4.2	open cluster


C4
chi Dra
Altais
C6
Aldhibah
C12
Draco
M102
1
Grumium
kap Cyg
iot Cyg
C15
Alwaid
Eltanin
2
iot Her
M92
3
Vega
eta Her
4
pi. Her
M13
Lyra
Hercules
6
5
M56
eps Her
ksi Her
mu. Her
Sarin
109 Her

July: 45° North (1)

1: Omi Dra (RA: 18 51 12, DEC: +59 23 18)

***STF 2420 AB**: mag.:4.77 | 8.26, sep.:37.6″ , p.a.316°*

A widely separated pair. The strongly yellow primary has an adequately bright blue companion.

Some see the companion as green!

Identifiers: Omi Dra | SAO 31218 | HIP 92512 | GDR2 53382133632

2: STF 2142 AB (RA: 17 11 40, DEC: +49 44 47)

***STF 2142 AB**: mag.:6.18 | 9.35, sep.:4.9″ , p.a.110°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 46561

3: Epsilon Lyr (RA: 18 44 20, DEC: +39 40 12)

***STF 2382 AB**: mag.:5.15 | 6.1, sep.:2.3″ , p.a.344°*

***STF 2383 CD**: mag.:5.25 | 5.38, sep.:2.4″ , p.a.74°*

***STFA 37 AB,CD**: mag.:4.67 | 4.56, sep.:209.5″ , p.a.172°*

Two pairs of tightly bound and very well balanced bright white stars. The pairs are separated by over three arc minutes (one tenth of a full Moon), but each pair is split by only just over 2 arc seconds.

Identifiers: Epsilon Lyr | SAO 67310 | HIP 91919 | GDR2 60363229312

4: Rho Her (RA: 17 23 41, DEC: +37 08 45)

***STF 2161 AB**: mag.:4.5 | 5.4, sep.:4.1″ , p.a.321°*

A very close equally matched pair with a brilliant white white primary and slightly fainter blue companion.

The primary star is itself a double with a separation of 0.252”, beyond the capabilities of amateur instruments. The components of the primary have been resolved using speckle interferometry.

Identifiers: Rho Her | SAO 66000 | HIP 85112 | GDR2 27125084416

5: STF 2349 AB (RA: 18 36 37, DEC: +33 28 08)

***STF 2349 AB**: mag.:5.39 | 9.4, sep.:7.2″ , p.a.204°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 67164

6: BU 648 AB (RA: 18 57 02, DEC: +32 54 05)

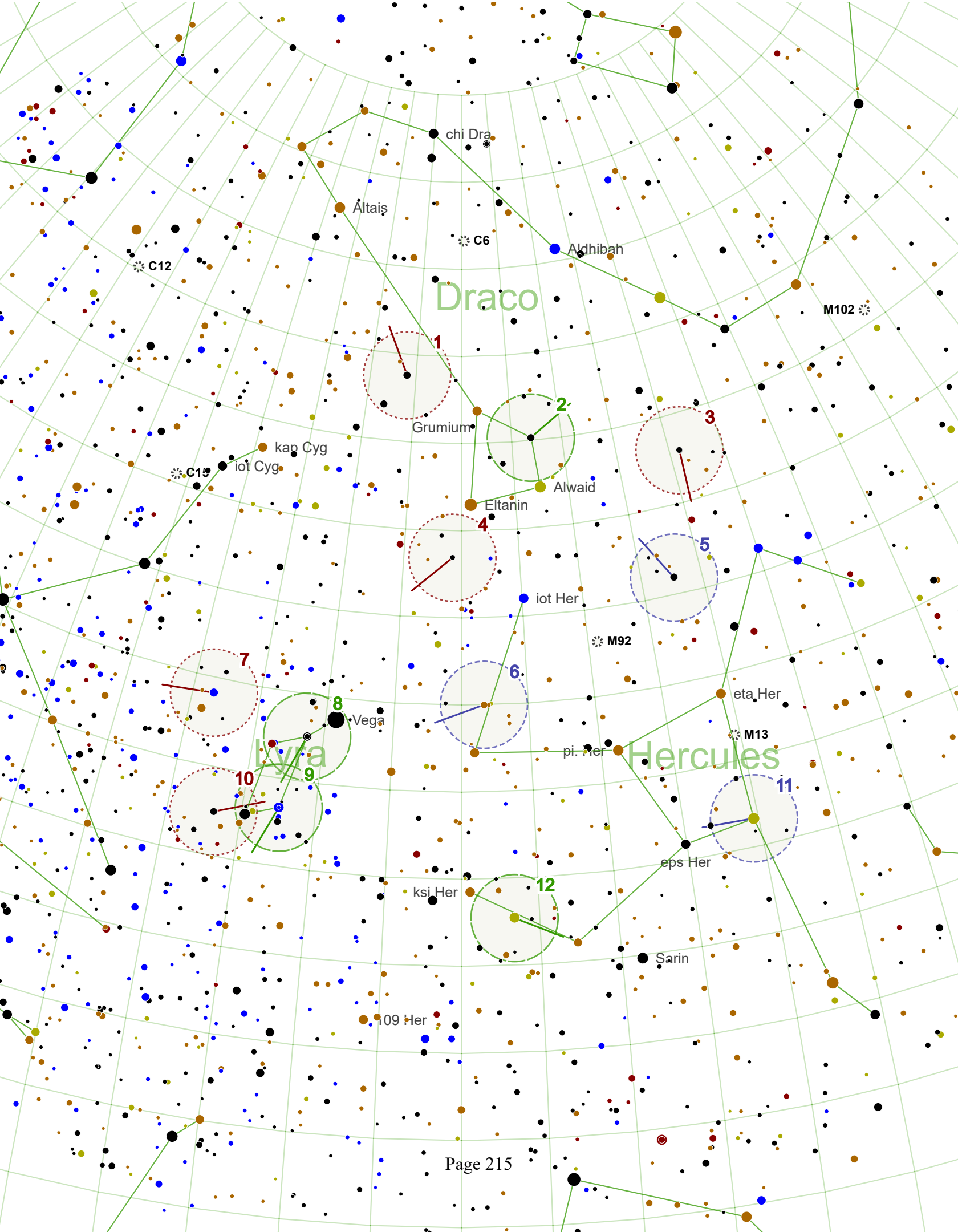
***BU 648 AB**: mag.:5.34 | 7.96, sep.:1.3″ , p.a.230°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 67612

Deep Sky Objects

DSO	Mag.	Type
C12	9.7	spiral galaxy
C15	9.8	planetary nebula
C4	6.8	bright nebula
C6	8.8	planetary nebula
M102	9.9	lenticular galaxy
M13	5.8	globular cluster
M56	8.3	globular cluster
M92	6.4	globular cluster


chi Dra
Altais
C6
Aldhibah
C12
Draco
M102
1
Grumium
2
3
kap Cyg
C15
iot Cyg
Alwaid
Eltanin
4
5
iot Her
M92
7
6
8
Vega
eta Her
M13
Lyra
pi. Her
Hercules
10
9
11
eps Her
ksi Her
12
Sarin
109 Her

July: 45° North (2)

1: STF 2323 AC (RA: 18 23 55, DEC: +58 48 02)

***STF 2323 AB**: mag.:5.06 | 8.07, sep.:3.8" , p.a.348°*

***STF 2323 AC**: mag.:5.06 | 7.95, sep.:88.9" , p.a.20°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 30949

2: Nu Dra (RA: 17 32 16, DEC: +55 10 22)

***STFA 35**: mag.:4.87 | 4.9, sep.:62.1" , p.a.311°*

A very wide pair of balanced, very bright white stars.

Possibly best viewed in the finder scope!

Identifiers: Nu Dra | SAO 30450 | HIP 85829 | GDR2 48150735744

3: STFA 30 AC (RA: 16 36 14, DEC: +52 55 28)

***STF 2078 AB**: mag.:5.38 | 6.42, sep.:3.2" , p.a.104°*

***STFA 30 AC**: mag.:5.38 | 5.5, sep.:90.2" , p.a.193°*

***STFA 30 BC**: mag.:6.42 | 5.5, sep.:90.1" , p.a.194°*

A wide pairing of a bright primary and a bright companion.

Identifiers: SAO 30013

4: STF 2277 AB (RA: 18 03 09, DEC: +48 27 51)

***STF 2277 AB**: mag.:6.25 | 8.93, sep.:26.8" , p.a.129°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 47173

5: 52 Her (RA: 16 49 14, DEC: +45 58 60)

***BU 627 A,BC**: mag.:4.84 | 8.45, sep.:2" , p.a.42°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 46305

6: 90 Her (RA: 17 53 18, DEC: +40 00 29)

***BU 130**: mag.:5.28 | 8.76, sep.:1.6" , p.a.110°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 47037

7: Aladfar (RA: 19 13 45, DEC: +39 08 46)

***STF 2487 AB**: mag.:4.38 | 8.58, sep.:28.4" , p.a.81°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 68010

8: Zeta Lyr (RA: 18 44 46, DEC: +37 36 18)

***STFA 38 AD**: mag.:4.34 | 5.62, sep.:43.7" , p.a.150°*

A very widely separated double that can be split in the finder scope. It has two bright yellow components differing in brightness by 1.6 magnitudes.

Identifiers: Zeta Lyr | SAO 67321 | HIP 91971 | GDR2 99811529472

9: Beta Lyr (RA: 18 50 05, DEC: +33 21 46)

***STFA 39 AB**: mag.:3.63 | 6.69, sep.:45.7" , p.a.149°*

Two very widely separated white stars.

The primary varies between magnitude 3.4 and 4.4 over a period of 13 days. Nearby Gamma Lyrae to the east is magnitude 3.2 so it acts as a yardstick. The famous Ring Nebula lies nearby, one degree to the south east.

Identifiers: Beta Lyr | SAO 67451 | HIP 92420 | GDR2 95054381056

10: 17 Lyr (RA: 19 07 26, DEC: +32 30 06)

***STF 2461 AB**: mag.:5.26 | 9.1, sep.:3.2" , p.a.281°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 67835

11: Zet Her (RA: 16 41 17, DEC: +31 36 10)

***STF 2084**: mag.:2.95 | 5.4, sep.:1.5" , p.a.100°*

A tight pairing of a brilliant primary and a bright companion.

Identifiers: SAO 65485

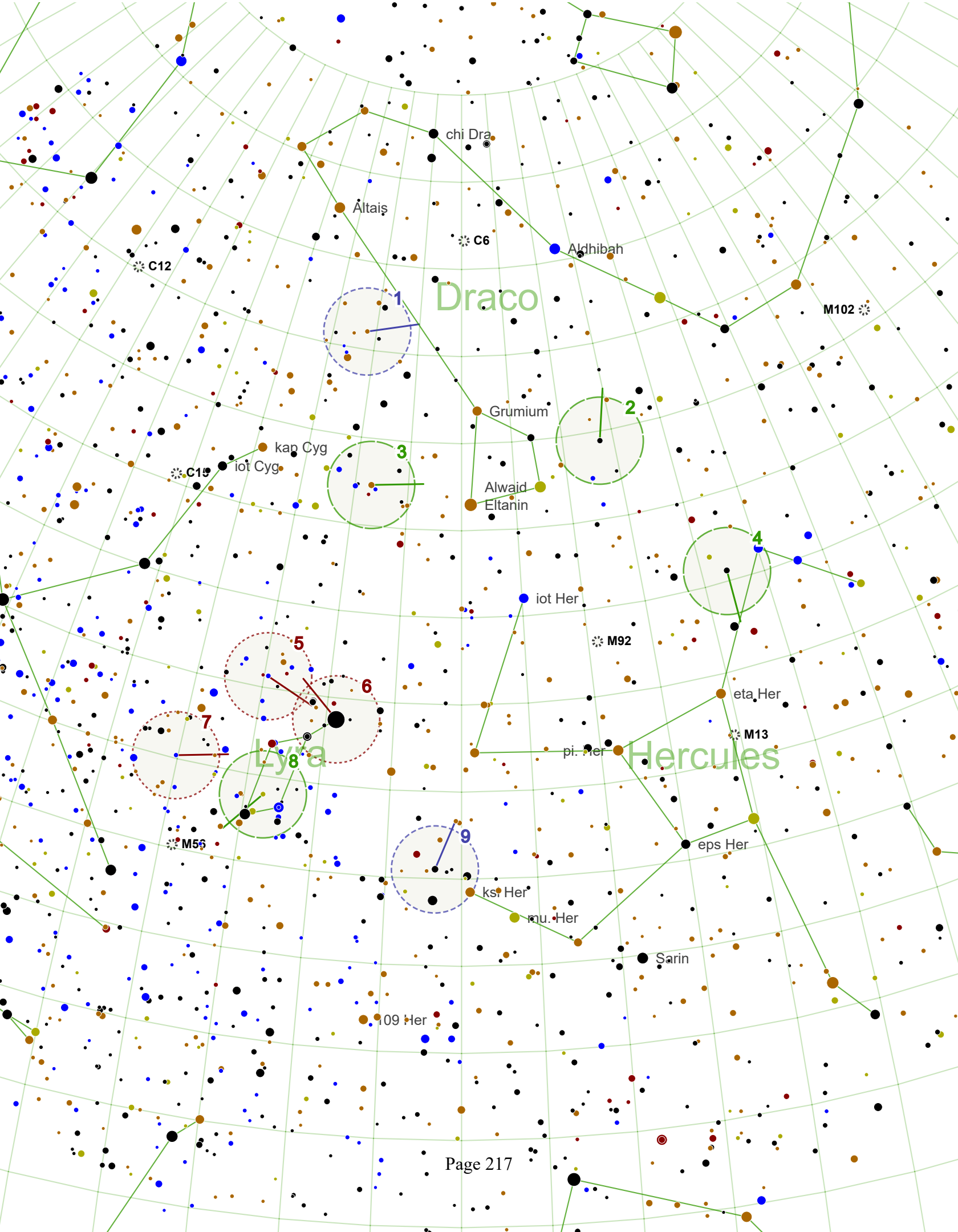
12: Mu Her (RA: 17 46 28, DEC: +27 43 14)

***STF 2220 A,BC**: mag.:3.49 | 9.78, sep.:35.5" , p.a.249°*

A brilliant yellow primary widely separated from a vastly fainter red secondary.

This double is an opportunity to see a red dwarf, namely the faint secondary. Red dwarfs are ubiquitous but very faint. The primary in this system is similar in mass to the Sun but much older and becoming a giant. The primary has an another M-class companion that can be detected spectroscopically. The secondary is a double with a 43 year orbit, currently separated by 1.35".

Identifiers: Mu Her | SAO 85397 | HIP 86974


chi Dra
Altais
C6
Aldhibah
C12
Draco
1
M102
Grumium
2
kap Cyg
3
C15
iot Cyg
Alwaid
Eltanin
4
iot Her
M92
5
6
eta Her
7
M13
Lyra
8
pi. Her
Hercules
M56
9
eps Her
ksi Her
mu. Her
Sarin
109 Her

July: 45° North (3)

1: STF 2403 (RA: 18 44 18, DEC: +61 02 53)

STF 2403*: mag.:6.25 | 8.35, sep.:1.1" , p.a.278°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 17995

2: Mu Dra (RA: 17 05 20, DEC: +54 28 14)

STF 2130 AB*: mag.:5.66 | 5.69, sep.:2.6" , p.a.357°*

A tightly bound pair of yellow stars.

Mu Draconis is also known as Alrakis or Arrakis, and gives its name to Frank Herbert's dessert world famous for its Spice and sandworms. Mu Dra is also part of the Arabic constellation the Mother Camels.

Identifiers: Mu Dra | SAO 30239 | HIP 83608 | GDR2 96285626624

3: Struve 2348 (RA: 18 33 57, DEC: +52 21 13)

STF 2348 AB,C*: mag.:5.5 | 8.65, sep.:25.7" , p.a.271°*

A yellow primary widely separated from a moderately faint white secondary.

The system is 638 light-years from the Sun.

Identifiers: Struve 2348 | SAO 31051 | HIP 91013

4: Struve 2063 (RA: 16 31 47, DEC: +45 35 54)

STF 2063*: mag.:5.69 | 8.7, sep.:16.3" , p.a.195°*

An easily separated white-yellow double.

Position this double in the south-western quadrant of the finder and globular cluster NGC 6229 is in the north-eastern quadrant.

Identifiers: Struve 2063 | SAO 46147 | HIP 80953 | GDR2 77983938560

5: STF 2431 (RA: 18 58 47, DEC: +40 40 45)

STF 2431*: mag.:6.17 | 9.61, sep.:19" , p.a.236°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 47965

6: STFB 9 AE (RA: 18 36 56, DEC: +38 47 01)

H 5 39 AB*: mag.:0.09 | 9.5, sep.:83.7" , p.a.184°*

STFB 9 AE*: mag.:0.09 | 9.5, sep.:86.6" , p.a.39°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 67174

7: HAU 24 AB (RA: 19 20 33, DEC: +35 11 09)

HAU 24 AB*: mag.:6.27 | 9.99, sep.:45.1" , p.a.271°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 68164

8: STT525 (RA: 18 54 53, DEC: +33 58 07)

SHJ 282 AC*: mag.:6.14 | 7.6, sep.:45.4" , p.a.350°*

STT 525 AB*: mag.:6.14 | 9.12, sep.:1.8" , p.a.130°*

A colorless pair very widely separated. In addition to the two main components, a third faint component might be glimpsed within 2" of the primary.

The fine double Beta Lyrae and the bright star Sulafat share the finder view with O. Struve 525. One degree due south of O. Struve 525 is a faint smudge - the famous Ring Nebula (Messier 57).

Identifiers: STT525 | SAO 67566 | HIP 92833 | GDR2 39831689088

9: 99 Her (RA: 18 07 02, DEC: +30 33 43)

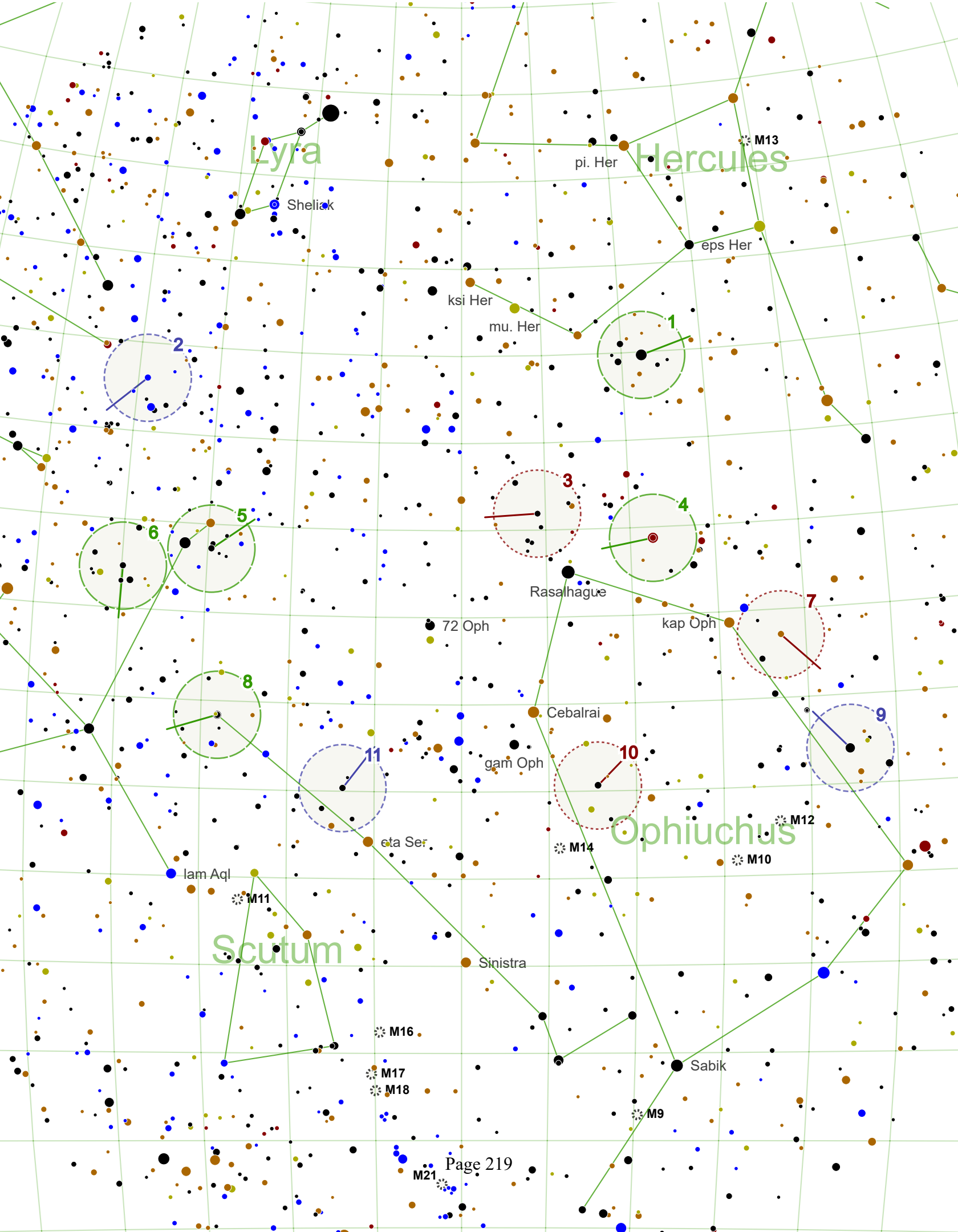
AC 15 AB*: mag.:5.13 | 8.96, sep.:1.5" , p.a.337°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 66648

Deep Sky Objects

DSO	Mag.	Type
C12	9.7	spiral galaxy
C15	9.8	planetary nebula
C6	8.8	planetary nebula
M102	9.9	lenticular galaxy
M13	5.8	globular cluster
M56	8.3	globular cluster
M92	6.4	globular cluster


Lyra
Hercules
Ophiuchus
Scutum
Sheliak
pi. Her
M13
eps Her
ksi Her
mu. Her
1
2
3
4
5
6
7
8
9
10
11
Rasalhague
72 Oph
kap Oph
Cebalrai
gam Oph
eta Ser
M14
M12
M10
lam Aql
M11
Sinistra
M16
M17
M18
Sabik
M9
M21

July: 10° North (1)

1: Delta Her (RA: 17 15 02, DEC: +24 50 22)

***STF 3127 AB**: mag.:3.12 | 8.3, sep.:13.8" , p.a.291°*

A close white-blue pairing. The primary is brilliant but the secondary is just over 5 magnitudes fainter.

This system is only 75 light-years from the Sun. It bears the traditional name of Sarin.

Identifiers: Delta Her | SAO 84951 | HIP 84379 | GDR2 35276520320

2: 2 Vul (RA: 19 17 44, DEC: +23 01 32)

***BU 248 AB**: mag.:5.43 | 8.75, sep.:1.8" , p.a.128°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 87036

3: BU 1251 AB (RA: 17 41 59, DEC: +15 57 08)

***BU 1251 AB**: mag.:5.59 | 9.38, sep.:1.4" , p.a.94°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 103033

4: Alpha Her (RA: 17 14 39, DEC: +14 23 25)

***STF 2140 AB**: mag.:3.48 | 5.4, sep.:4.6" , p.a.102°*

A reasonably balanced orange-blue pair, very close with a brilliant primary and bright secondary.

Some report that through some trick of the contrast, the secondary can appear greenish.

Identifiers: Alpha Her | SAO 102680 | HIP 84345 | | GDR2 95116193408

5: 11 Aql (RA: 18 59 06, DEC: +13 37 21)

***STF 2424 AB**: mag.:5.32 | 9.3, sep.:20.8" , p.a.304°*

A wide pair with a white primary and a faint blue companion.

The two stars are not physically bound but only lie on the same line of sight. Open cluster NGC 6738 is two degrees south of this cluster.

Identifiers: 11 Aql | SAO 104308 | HIP 93203 | GDR2 21465681536

6: 28 Aql (RA: 19 19 39, DEC: +12 22 29)

***S 717 AB**: mag.:5.55 | 9.02, sep.:60.7" , p.a.175°*

A bright yellowish primary with a distant much fainter companion.

The pair are gravitationally bound. The primary is also a variable star, V1208 Aquilae.

Identifiers: 28 Aql | SAO 104722 | HIP 94982 | GDR2 89873075200

7: 43 Her (RA: 16 45 50, DEC: +08 34 57)

***SHJ 239 AB**: mag.:5.33 | 9.29, sep.:84.1" , p.a.229°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 121843

8: Theta Ser (RA: 18 56 13, DEC: +04 12 13)

***STF 2417 AB**: mag.:4.59 | 4.93, sep.:22.4" , p.a.106°*

A widely separated pair of bright blue stars.

With this double centered in the finder, two open clusters lie just beyond the eastern edge of the finder circle: NGC 6755 and the much fainter NGC 6756.

Identifiers: Theta Ser | SAO 124068 | HIP 92946 | GDR2 84413726208

9: Marfic (RA: 16 30 55, DEC: +01 59 03)

***STF 2055 AB**: mag.:4.15 | 5.15, sep.:1.4" , p.a.46°*

A tight pairing of a bright primary and a bright companion.

Identifiers: SAO 121658

10: WFC 193 (RA: 17 28 50, DEC: +00 19 50)

***WFC 193**: mag.:5.44 | 9.75, sep.:46.8" , p.a.316°*

A wide pairing of a bright primary and a faint companion.

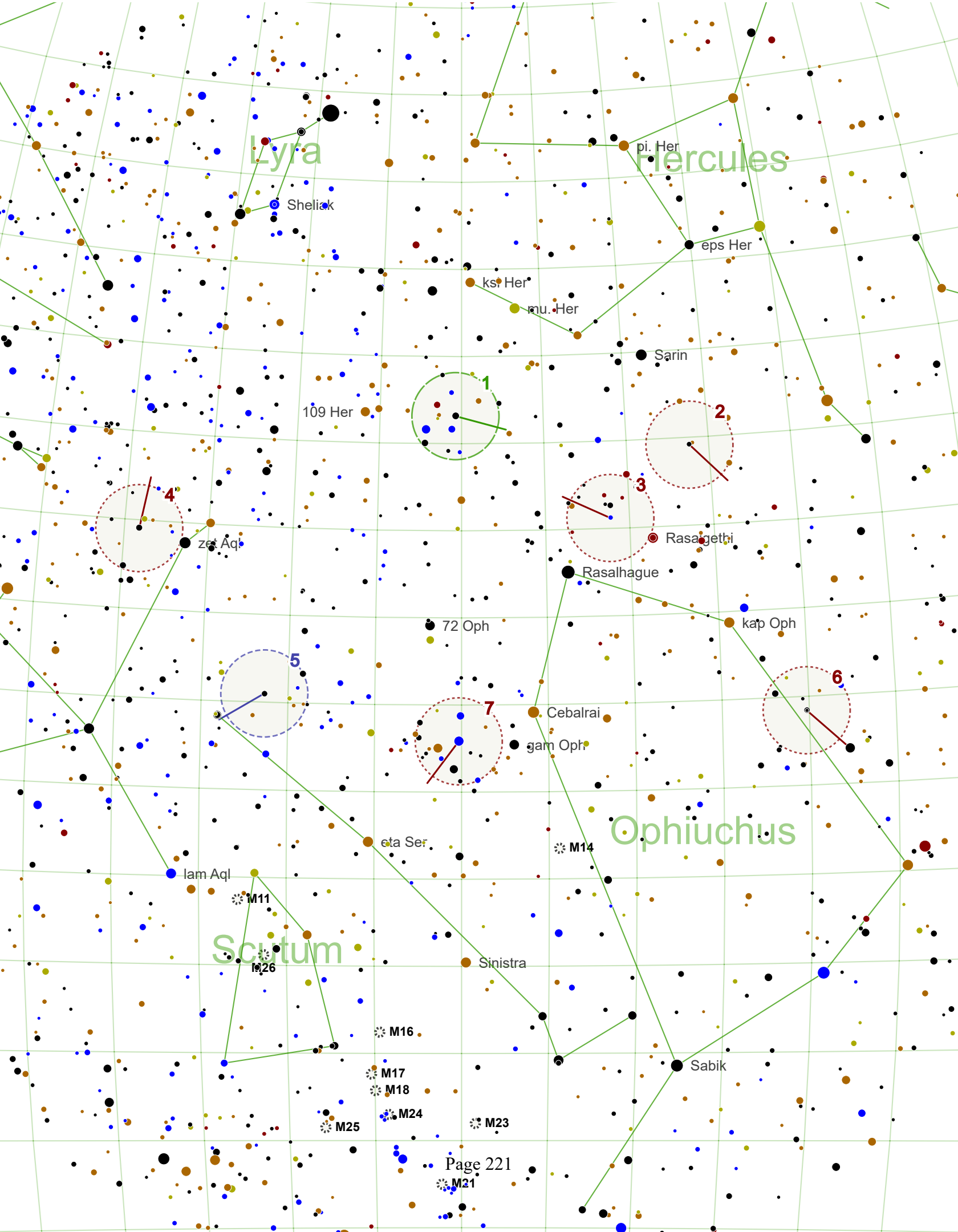
Identifiers: SAO 122418

11: 59 Ser (RA: 18 27 13, DEC: +00 11 46)

***STF 2316 AB**: mag.:5.38 | 7.62, sep.:3.9" , p.a.322°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 123497


Lyra
Hercules
Ophiuchus
Scutum
Sheliak
pi. Her
eps Her
ksi Her
mu. Her
Sarin
109 Her
1
2
3
4
5
6
7
zet Aql
Rasalgethi
Rasalhague
72 Oph
kap Oph
Cebalrai
gam Oph
eta Ser
lam Aql
M14
M11
M26
Sinistra
M16
M17
M18
M24
M25
M23
Sabik
M31

July: 10° North (2)

1: 95 Her (RA: 18 01 30, DEC: +21 35 45)

STF 2264*: mag.:4.85 | 5.2, sep.:6.4″ , p.a.255°*

A bright white-yellow pairing with close separation.

About half a billion years young, this pair of large stars are separated by at least 900 astronomical units.

Identifiers: 95 Her | SAO 85648 | HIP 88267 | GDR2 44112599424

2: PRY 2 AB (RA: 17 04 41, DEC: +19 35 57)

PRY 2 AB*: mag.:6.19 | 9.29, sep.:1.8″ , p.a.227°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 102579

3: STF 2160 AB (RA: 17 24 34, DEC: +15 36 22)

STF 2160 AB*: mag.:6.4 | 9.28, sep.:3.9″ , p.a.66°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 102806

4: STF 2489 AB (RA: 19 16 27, DEC: +14 32 41)

STF 2489 AB*: mag.:5.67 | 9.3, sep.:8.3″ , p.a.347°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 104668

5: STF 2375 AB (RA: 18 45 28, DEC: +05 30 00)

STF 2375 AB*: mag.:6.34 | 6.73, sep.:2.6″ , p.a.120°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 123886

6: 37 Her (RA: 16 40 39, DEC: +04 13 11)

STFA 31 AB*: mag.:5.76 | 6.92, sep.:69.3″ , p.a.229°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 121776

7: H 6 2 AC (RA: 18 00 39, DEC: +02 55 54)

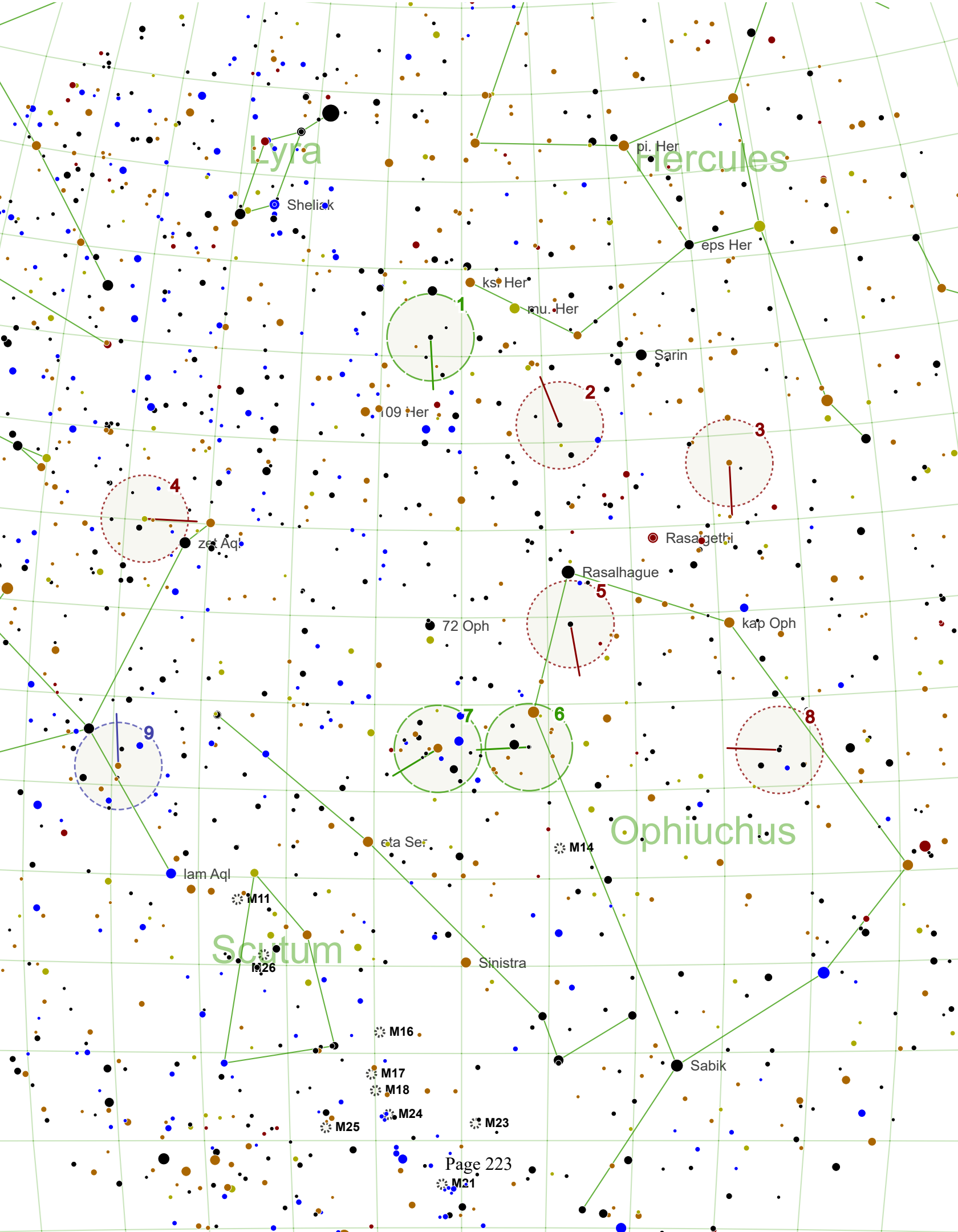
H 6 2 AC*: mag.:3.96 | 8.06, sep.:54.7″ , p.a.143°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 123013

Deep Sky Objects

DSO	Mag.	Type
M11	6.3	open cluster
M14	7.6	globular cluster
M16	6.4	open cluster
M17	7.0	diffuse nebula
M18	7.5	open cluster
M21	6.5	open cluster
M23	6.9	open cluster
M24	4.6	star cloud
M25	6.5	open cluster
M26	8.0	open cluster


Lyra
Hercules
Ophiuchus
Scutum
Sheliak
pi. Her
eps Her
ksi Her
mu. Her
Sarin
109 Her
1
2
3
4
5
6
7
8
9
zet Aql
Rasagethi
Rasalhague
72 Oph
kap Oph
eta Ser
M14
lam Aql
M11
M26
Sinistra
M16
M17
M18
M24
M25
M23
Sabik
M31

July: 10° North (3)

1: 100 Her (RA: 18 07 50, DEC: +26 06 04)

***STF 2280 AB**: mag.:5.81 | 5.84, sep.:14.3" , p.a.183°*

Two almost identical bright white stars, comfortably separated.

The two components are similar to Sirius, the brightest star in our sky (aside from the Sun of course). Even though the 100 Herculis system is very close (160 light-years away) the two components are barely visible without a telescope - which gives an idea of how unimpressive Sirius is in absolute terms!

Identifiers: 100 Her | SAO 85753 | HIP 88818 | GDR2 75911466624

2: STF 2190 AB (RA: 17 35 60, DEC: +20 59 47)

***STF 2190 AB**: mag.:6.13 | 9.48, sep.:10.4" , p.a.22°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 85232

3: 54 Her (RA: 16 55 22, DEC: +18 25 60)

***BU 954 AB**: mag.:5.4 | 9.6, sep.:2.4" , p.a.183°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 102476

4: STTA 178 (RA: 19 15 20, DEC: +15 05 01)

***STTA 178**: mag.:5.69 | 7.64, sep.:89.6" , p.a.267°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 104655

5: 53 Oph (RA: 17 34 37, DEC: +09 35 12)

***STFA 34 AB**: mag.:5.8 | 7.5, sep.:41.3" , p.a.190°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 122526

6: 61 Oph (RA: 17 44 34, DEC: +02 34 46)

***STF 2202 AB**: mag.:6.13 | 6.47, sep.:20.8" , p.a.93°*

A widely separated pair of white stars. Both components are fairly bright.

With Cebalrai centered in the finder, globular cluster NGC 6426 lies between Cebalrai and 61 Oph, while the north eastern quadrant of the finder is filled by the Summer Beehive Cluster (IC 4665).

Identifiers: 61 Oph | SAO 122690 | HIP 86831 | GDR2 89983293696

7: 70 Oph (RA: 18 05 27, DEC: +02 29 59)

***STF 2272 AB**: mag.:4.22 | 6.17, sep.:6.7" , p.a.121°*

A brilliant yellow star with a bright orange companion. The pair are quite close, especially given their apparent magnitude. The gap is currently near the maximum.

70 Oph is 16.6 light-years from the Sun. William Herschel calculated its 88 year orbit proving gravity applies beyond the Solar System. Behind 70 Oph looms a loose group of stars, Melotte 186. Stelle Doppie lists 15 very faint companions.

Identifiers: 70 Oph | SAO 123107 | HIP 88601 | GDR2 89937892096

8: 19 Oph (RA: 16 47 10, DEC: +02 03 52)

***STF 2096 AB**: mag.:6.09 | 9.68, sep.:23.9" , p.a.88°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 121859

9: 23 Aql (RA: 19 18 32, DEC: +01 05 06)

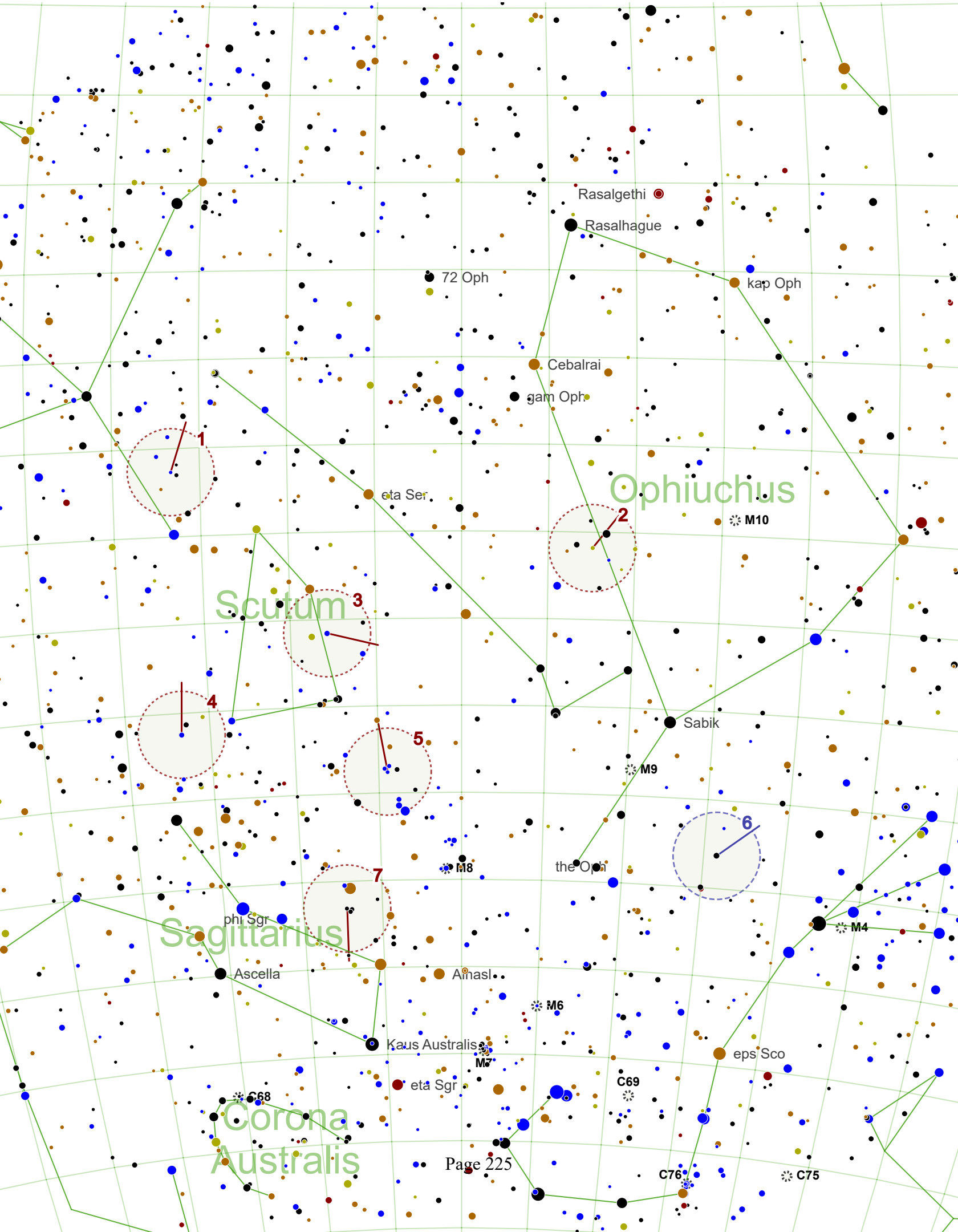
***STF 2492 AB**: mag.:5.28 | 8.29, sep.:3.3" , p.a.2°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 124487

Deep Sky Objects

DSO	Mag.	Type
M11	6.3	open cluster
M14	7.6	globular cluster
M16	6.4	open cluster
M17	7.0	diffuse nebula
M18	7.5	open cluster
M21	6.5	open cluster
M23	6.9	open cluster
M24	4.6	star cloud
M25	6.5	open cluster
M26	8.0	open cluster


Rasalgethi
Rasalhague
72 Oph
kap Oph
Cebalrai
gam Oph
eta Ser
Ophiuchus
M10
1
2
Scutum
3
4
5
Sabik
M9
6
M8
the Oph
7
phi Sgr
Sagittarius
M4
Ascella
Amasl
M6
Kaus Australis
M7
eps Sco
C69
eta Sgr
C68
Corona Australis
C76
C75

July: -10° South (1)

1: STF 2447 AB (RA: 19 06 35, DEC: -01 20 46)

***STF 2447 AB**: mag.:6.83 | 9.62, sep.:14.1″, p.a.343°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

2: BU 1089 AB (RA: 17 29 47, DEC: -05 55 10)

***BU 1089 AB**: mag.:6.57 | 8.98, sep.:1.4″, p.a.321°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 141691

3: STF 2325 (RA: 18 31 26, DEC: -10 47 45)

***STF 2325**: mag.:5.77 | 9.31, sep.:12.4″, p.a.257°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 161569

4: S 710 (RA: 19 06 52, DEC: -16 13 45)

***S 710**: mag.:6.1 | 8.42, sep.:6.4″, p.a.0°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 162201

5: SHJ 263 AB (RA: 18 17 51, DEC: -18 47 55)

***SHJ 263 AB**: mag.:6.75 | 9.25, sep.:53.7″, p.a.11°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 161278

6: 24 Oph (RA: 16 56 48, DEC: -23 09 01)

***BU 1117**: mag.:6.25 | 6.32, sep.:1″, p.a.305°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 184822

7: WNO 6 (RA: 18 28 57, DEC: -26 34 56)

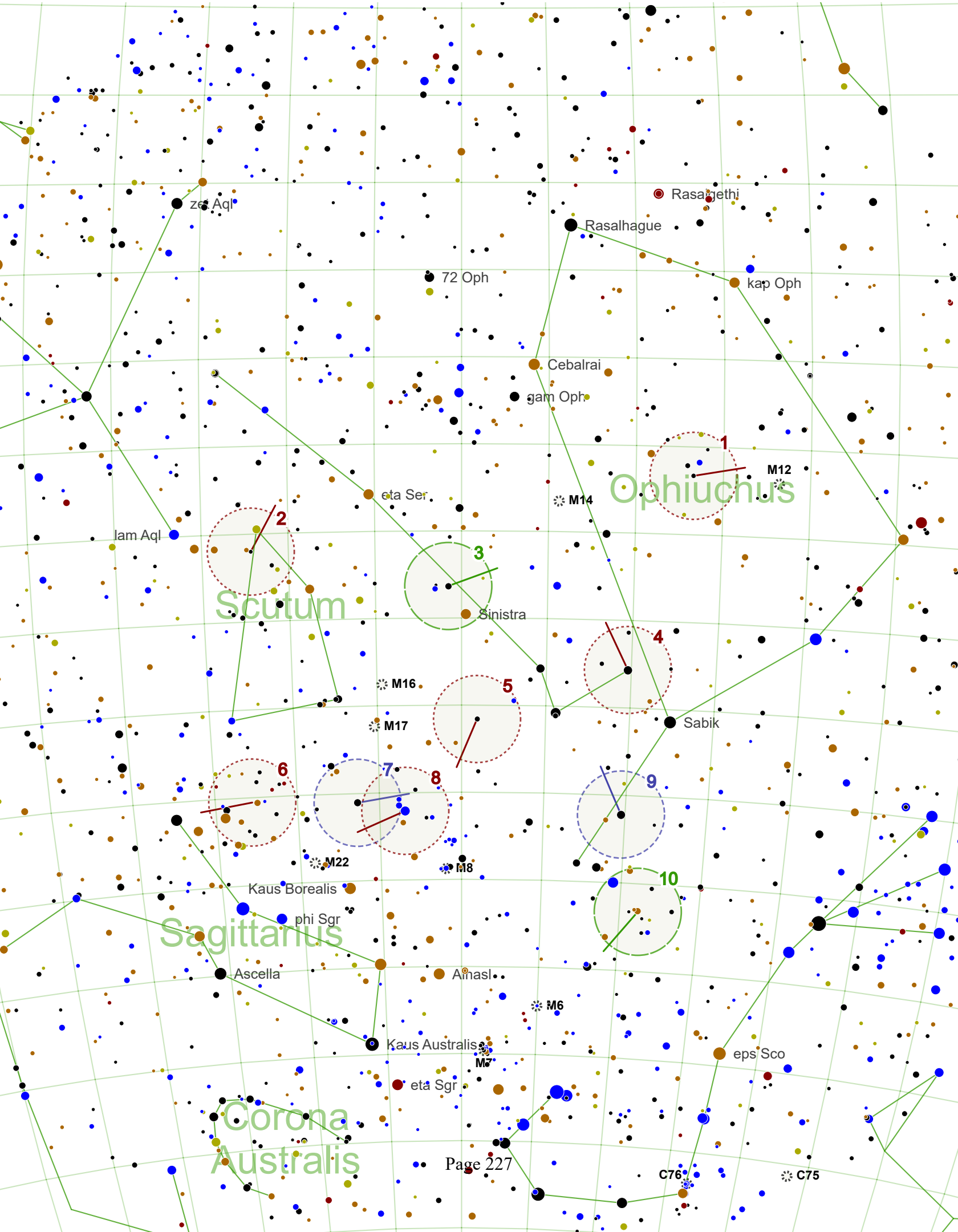
***WNO 6**: mag.:6.67 | 7.99, sep.:41.8″, p.a.182°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 186863

Deep Sky Objects

DSO	Mag.	Type
C68	9.7	bright nebula
C69	12.8	planetary nebula
C75	5.8	open cluster
C76	2.6	open cluster
M10	6.6	globular cluster
M4	5.6	globular cluster
M6	4.2	open cluster
M7	3.3	open cluster
M8	6.0	diffuse nebula
M9	7.7	globular cluster


Rasalgethi
Rasalhague
72 Oph
kap Oph
Cebalrai
gam Oph
1
M12
Ophiuchus
M14
eta Ser
lam Aql
2
3
Scutum
Sinistra
4
M16
5
M17
Sabik
6
7
8
9
M22
M18
10
Kaus Borealis
phi Sgr
Sagittarius
Ascella
Ainasl
M6
Kaus Australis
M7
eps Sco
eta Sgr
Corona
Australis
C76
C75

July: -10° South (2)

1: STF 2122 (RA: 17 06 53, DEC: -01 39 22)

STF 2122*: mag.:6.38 | 9.73, sep.:20.3" , p.a.279°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 141522

2: STF 2391 AB (RA: 18 48 39, DEC: -06 00 16)

STF 2391 AB*: mag.:6.52 | 9.59, sep.:37.7" , p.a.332°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

3: Tau Oph (RA: 18 03 05, DEC: -08 10 49)

STF 2262 AB*: mag.:5.27 | 5.86, sep.:1.5" , p.a.290°*

An extremely tight, balanced pair of yellowish stars.

The double lies between two globular clusters: NGC 6539 (mag. 8.9) lies within a degree to the north-east, and NGC 6517 (mag. 11.1) lies within a degree to the south.

Identifiers: Tau Oph | SAO 142050 | HIP 88404 | GDR2 76094715520

4: Nu Ser (RA: 17 20 50, DEC: -12 50 49)

SHJ 247*: mag.:4.33 | 9.44, sep.:45.6" , p.a.25°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 160479

5: HJ 2814 AB (RA: 17 56 19, DEC: -15 48 44)

HJ 2814 AB*: mag.:5.93 | 9.16, sep.:20.6" , p.a.157°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 160915

6: BB Sgr (RA: 18 50 60, DEC: -20 17 42)

PLT 3 AB*: mag.:6.7 | 7.5, sep.:93.6" , p.a.101°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 187349

7: 21 Sgr (RA: 18 25 21, DEC: -20 32 30)

JC 6*: mag.:5.03 | 7.43, sep.:1.7" , p.a.280°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 186794

8: HJ 2822 AE (RA: 18 13 46, DEC: -21 03 32)

HJ 2822 AD*: mag.:3.85 | 9.96, sep.:48.2" , p.a.312°*

HJ 2822 AE*: mag.:3.85 | 9.22, sep.:50.2" , p.a.114°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 186497

9: Xi Oph (RA: 17 21 00, DEC: -21 06 46)

DON 832 AB*: mag.:4.4 | 8.9, sep.:2" , p.a.23°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 185296

10: 36 Oph (RA: 17 15 21, DEC: -26 36 06)

SHJ 243 AB*: mag.:5.12 | 5.12, sep.:5.1" , p.a.139°*

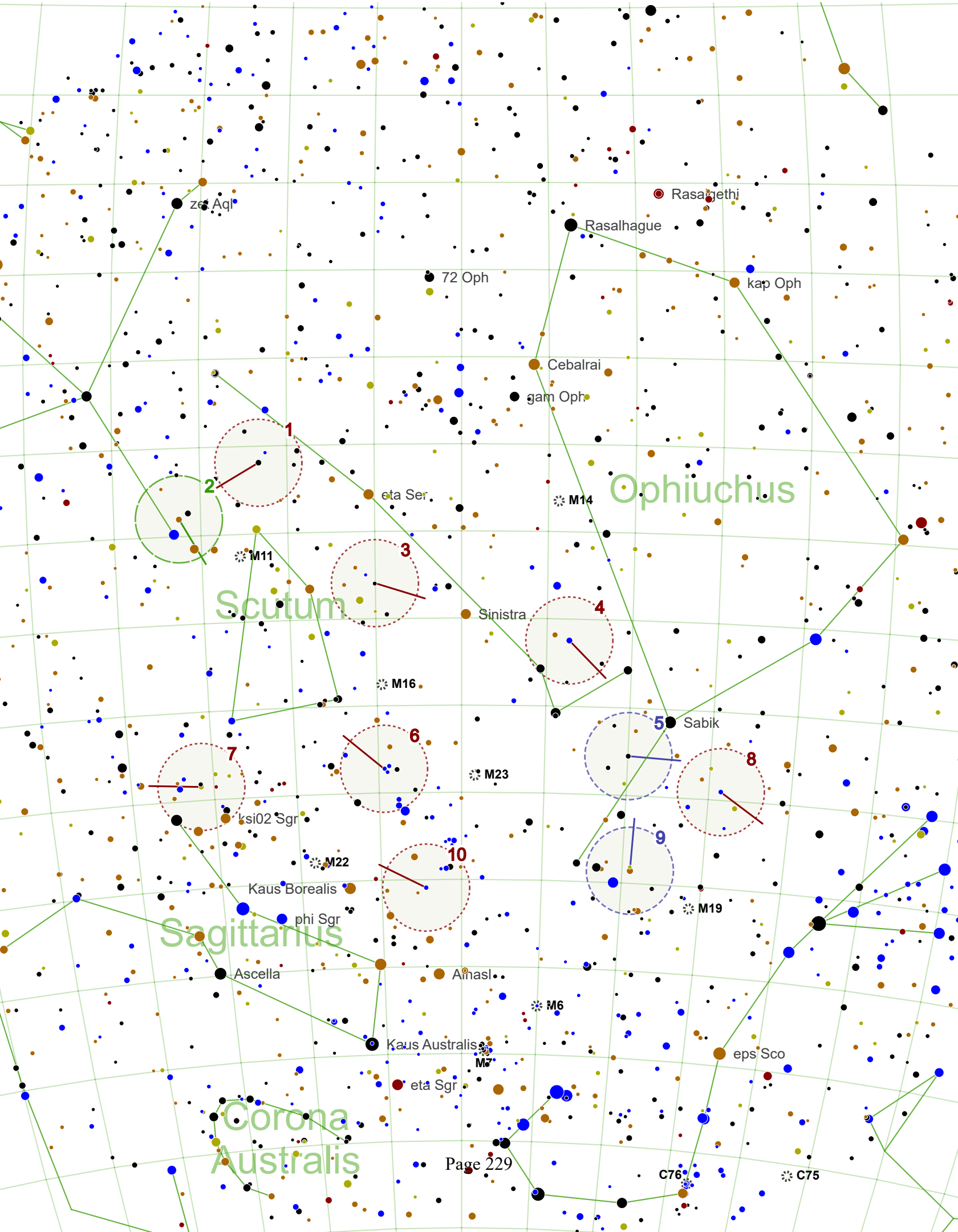
A bright, equal pair of orange dwarfs, closely separated.

There are three globular clusters in the finder view. NGC 6293 (mag. 9.0) is a degree to the west. NGC 6319 (mag. 9.0) is nearly two degree to the south. NGC 6355 (mag. 11.0) is two degrees to the east. This double if only 19 light-years from Earth.

Identifiers: 36 Oph | SAO 185199 | HIP 84405

Deep Sky Objects

DSO	Mag.	Type
C75	5.8	open cluster
C76	2.6	open cluster
M12	6.7	globular cluster
M14	7.6	globular cluster
M16	6.4	open cluster
M17	7.0	diffuse nebula
M22	5.1	globular cluster
M6	4.2	open cluster
M7	3.3	open cluster
M8	6.0	diffuse nebula


Rasalgethi
Rasalhague
72 Oph
kap Oph
Cebalrai
gam Oph
1
2
eta Ser
M14
Ophiuchus
M11
3
Scutum
Sinistra
4
M16
5
Sabik
6
7
8
M23
ksi02 Sgr
9
M22
10
Kaus Borealis
M19
phi Sgr
Sagittarius
Ascella
Ainasl
M6
Kaus Australis
M7
eps Sco
eta Sgr
Corona
Australis
C76
C75

July: -10° South (3)

1: 5 Aql (RA: 18 46 29, DEC: -00 57 42)

***STF 2379 AB**: mag.:5.88 | 7.02, sep.:12.5″ , p.a.121°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 142606

2: 15 Aql (RA: 19 04 58, DEC: -04 01 53)

***SHJ 286**: mag.:5.52 | 6.98, sep.:39.6″ , p.a.211°*

A very wide pair of yellow stars.

Good at low powers as the star lies in the Milky Way. The region is rich in dark nebulae - Barnard 132 and Barnard 120 lie to one to two degrees to the east and west respectively of this double.

Identifiers: 15 Aql | SAO 142996 | HIP 93717 | GDR2 92802784384

3: STF 2303 (RA: 18 20 05, DEC: -07 58 53)

***STF 2303**: mag.:6.62 | 9.25, sep.:1.5″ , p.a.253°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

4: HJ 4964 AB (RA: 17 34 46, DEC: -11 14 31)

***HJ 4964 AB**: mag.:5.54 | 9.88, sep.:54.9″ , p.a.224°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 160653

5: BU 126 AB (RA: 17 19 53, DEC: -17 45 23)

***BU 126 AB**: mag.:6.34 | 7.56, sep.:2.4″ , p.a.265°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 160462

6: SHJ 264 AB,C (RA: 18 18 43, DEC: -18 37 11)

***SHJ 264 AB,C**: mag.:6.86 | 7.63, sep.:17.2″ , p.a.51°*

A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 161304

7: HJ 5082 AB (RA: 19 03 04, DEC: -19 14 44)

***HJ 5082 AB**: mag.:6.15 | 9, sep.:7.7″ , p.a.89°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 162130

8: SHJ 240 AB (RA: 16 57 04, DEC: -19 32 24)

***SHJ 240 AB**: mag.:6.59 | 7.59, sep.:4.4″ , p.a.233°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 160180

9: Omi Oph (RA: 17 18 01, DEC: -24 17 13)

***H 3 25**: mag.:5.23 | 6.64, sep.:10.8″ , p.a.355°*

A comfortably separated pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 185237

10: V3792 Sgr (RA: 18 08 54, DEC: -25 28 23)

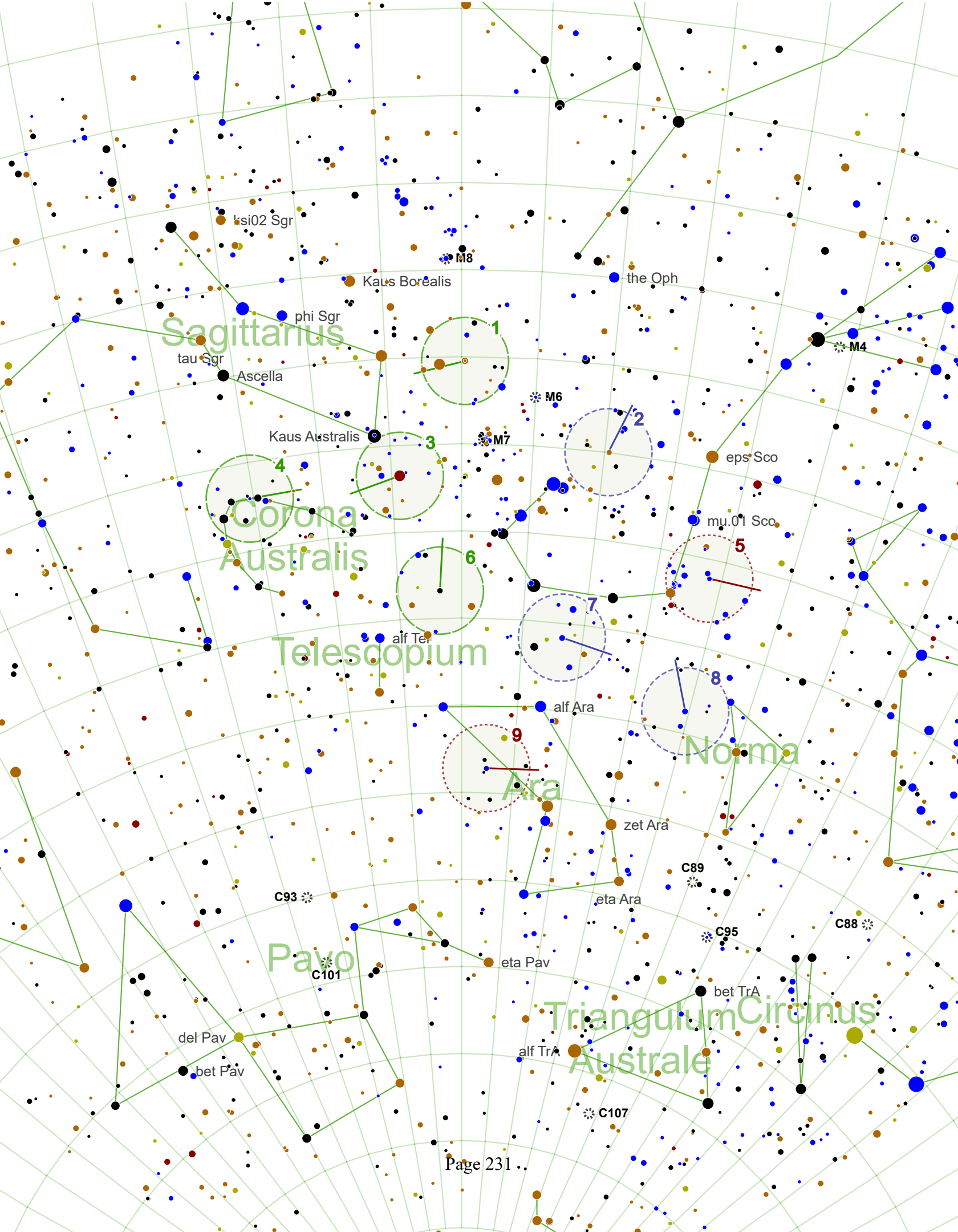
***WNO 21**: mag.:6.78 | 8.76, sep.:13.5″ , p.a.64°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 186350

Deep Sky Objects

DSO	Mag.	Type
C75	5.8	open cluster
C76	2.6	open cluster
M11	6.3	open cluster
M14	7.6	globular cluster
M16	6.4	open cluster
M19	6.8	globular cluster
M22	5.1	globular cluster
M23	6.9	open cluster
M6	4.2	open cluster
M7	3.3	open cluster


ksi02 Sgr
M8
Kaus Borealis
the Oph
phi Sgr
Sagittarius
1
M4
tau Sgr
Ascella
M6
2
Kaus Australis
3
M7
eps Sco
4
Corona
Australis
mu.01 Sco
5
6
7
alf Tel
Telescopium
alf Ara
8
9
Norma
Ara
zet Ara
C89
C93
eta Ara
C88
C95
eta Pav
Pavo
C101
bet TrA
Triangulum
Australe
Circinus
del Pav
alf TrA
bet Pav
C107

July: -45° South (1)

1: PZ 6 (RA: 17 59 05, DEC: -30 15 11)

***PZ 6 AB**: mag.:5.39 | 6.96, sep.:5.9″ , p.a.104°*

A bright red star with a fairly bright, yellow companion close by.

Two globular clusters are around one degree to the east of this double. Furthest east of these is magnitude 10.7 NGC 6528, while the one to the west closest to PZ 6 is magnitude 9.5 NGC 6522.

Identifiers: PZ 6 | SAO 209553 | HIP 88060 | GDR2 83404244736

2: MLO 4 AB (RA: 17 18 57, DEC: -34 59 23)

***MLO 4 AB**: mag.:6.37 | 7.38, sep.:1″ , p.a.333°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 208670

3: Eta Sgr (RA: 18 17 38, DEC: -36 45 41)

***BU 760 AB**: mag.:3.3 | 8, sep.:3.5″ , p.a.110°*

A trio of stars, a brilliant red primary and very close secondary are distantly separated from a very faint third component.

The primary, also known as Hamalwarid or Arkab, is 145 light-years from the Earth.

Identifiers: Eta Sgr | SAO 209957 | HIP 89642

4: BSO 14 (RA: 19 01 04, DEC: -37 03 42)

***BSO 14 AB**: mag.:6.33 | 6.58, sep.:12.8″ , p.a.280°*

A fairly bright, balanced double, easily separated. Both components have a blue hue.

The finder is richly decorated with bright stars. Less than a degree to the north west is NGC 6723, a magnitude 7.9 globular cluster.

Identifiers: BSO 14 | SAO 210816 | HIP 93371 | GDR2 02462393088

5: CPO 70 AB (RA: 16 43 54, DEC: -41 06 48)

***CPO 70 AB**: mag.:6.11 | 6.22, sep.:97.3″ , p.a.257°*

A wide pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 227123

6: HJ 5014 (RA: 18 06 50, DEC: -43 25 30)

***HJ 5014**: mag.:5.65 | 5.68, sep.:1.8″ , p.a.357°*

An extremely tight pairing of two equally bright white stars.

Caldwell 78, a magnitude 7.3 globular cluster, is half a degree south east of this binary system. Two degrees to the south west is another globular cluster, NGC 6496 (magnitude 8.6).

Identifiers: HJ 5014 | SAO 228708 | HIP 88726 | GDR2 56508792576

7: HJ 4949 AB (RA: 17 26 52, DEC: -45 50 35)

***DUN 216 AC**: mag.:5.63 | 7.12, sep.:102.5″ , p.a.312°*

***HJ 4949 AB**: mag.:5.63 | 6.46, sep.:2.1″ , p.a.251°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 227971

8: MLO 8 AB (RA: 16 41 20, DEC: -48 45 47)

***DUN 206 AC**: mag.:5.71 | 6.76, sep.:10.2″ , p.a.265°*

***MLO 8 AB**: mag.:5.71 | 8.4, sep.:1.7″ , p.a.11°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 227049

9: Ups1 Ara (RA: 17 50 28, DEC: -53 36 45)

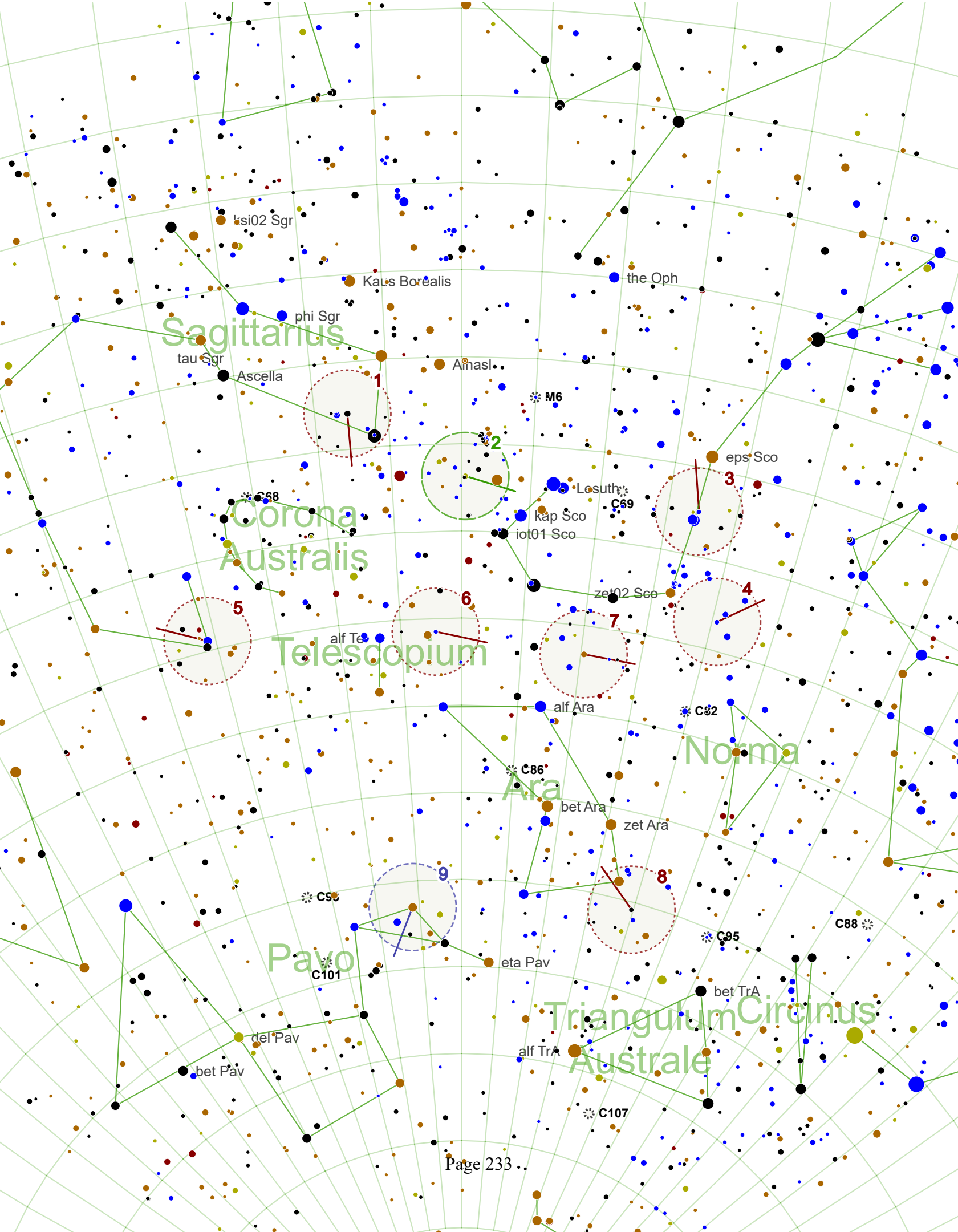
***HJ 4978**: mag.:5.69 | 9.22, sep.:12.3″ , p.a.268°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 245065

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C107	9.3	globular cluster
C88	7.9	open cluster
C89	5.4	open cluster
C93	5.4	globular cluster
C95	5.1	open cluster
M4	5.6	globular cluster
M6	4.2	open cluster
M7	3.3	open cluster
M8	6.0	diffuse nebula


ksi02 Sgr
Kaus Borealis
the Oph
phi Sgr
Sagittarius
tau Sgr
Ascella
Ainasl
1
M6
2
eps Sco
3
C68
Corona
Australis
Lesuth
C69
kap Sco
iot01 Sco
zet02 Sco
4
5
6
7
alf Tel
Telescopium
alf Ara
C82
Norma
C86
Ara
bet Ara
zet Ara
8
9
C96
C88
C95
Pavo
C101
eta Pav
bet TrA
Triangulum
Australe
Circinus
del Pav
alf TrA
bet Pav
C107

July: -45° South (2)

1: HWE 43 AB (RA: 18 31 05, DEC: -32 59 20)

***HWE 43 AB**: mag.:5.41 | 9.78, sep.:3.4″ , p.a.185°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 210257

2: Dunlop 219 (RA: 17 58 56, DEC: -36 51 30)

***DUN 219 AB**: mag.:5.84 | 7.75, sep.:54.2″ , p.a.253°*

A yellow primary with two widely separated companions, one extremely faint.

Brilliant M7, a magnitude 3.3 open cluster, is on the north-western edge of the finder view.

Identifiers: Dunlop 219 | SAO 209545 | HIP 88038 | GDR2 26191922688

3: HJ 4889 (RA: 16 51 00, DEC: -37 30 52)

***HJ 4889**: mag.:6.23 | 7.77, sep.:6.8″ , p.a.4°*

A close pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 208089

4: V1003 Sco (RA: 16 38 26, DEC: -43 23 54)

***HJ 4867 AB**: mag.:5.83 | 9.59, sep.:16.4″ , p.a.295°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 226989

5: Arkab prior (RA: 19 22 38, DEC: -44 27 32)

***DUN 226**: mag.:3.98 | 7.21, sep.:28.4″ , p.a.76°*

A wide pairing of a brilliant primary and a fairly faint companion.

Identifiers: SAO 229646

6: HJ 5015 (RA: 18 08 30, DEC: -45 46 01)

***HJ 5015**: mag.:6.15 | 9.55, sep.:4.3″ , p.a.258°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 228734

7: BSO 13 AB (RA: 17 19 04, DEC: -46 38 10)

***BSO 13 AB**: mag.:5.61 | 8.88, sep.:10.8″ , p.a.259°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 227816

8: B 1818 (RA: 16 40 50, DEC: -60 26 47)

***B 1818**: mag.:6.29 | 9.09, sep.:1.3″ , p.a.35°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 253651

9: Xi Pav (RA: 18 23 14, DEC: -61 29 38)

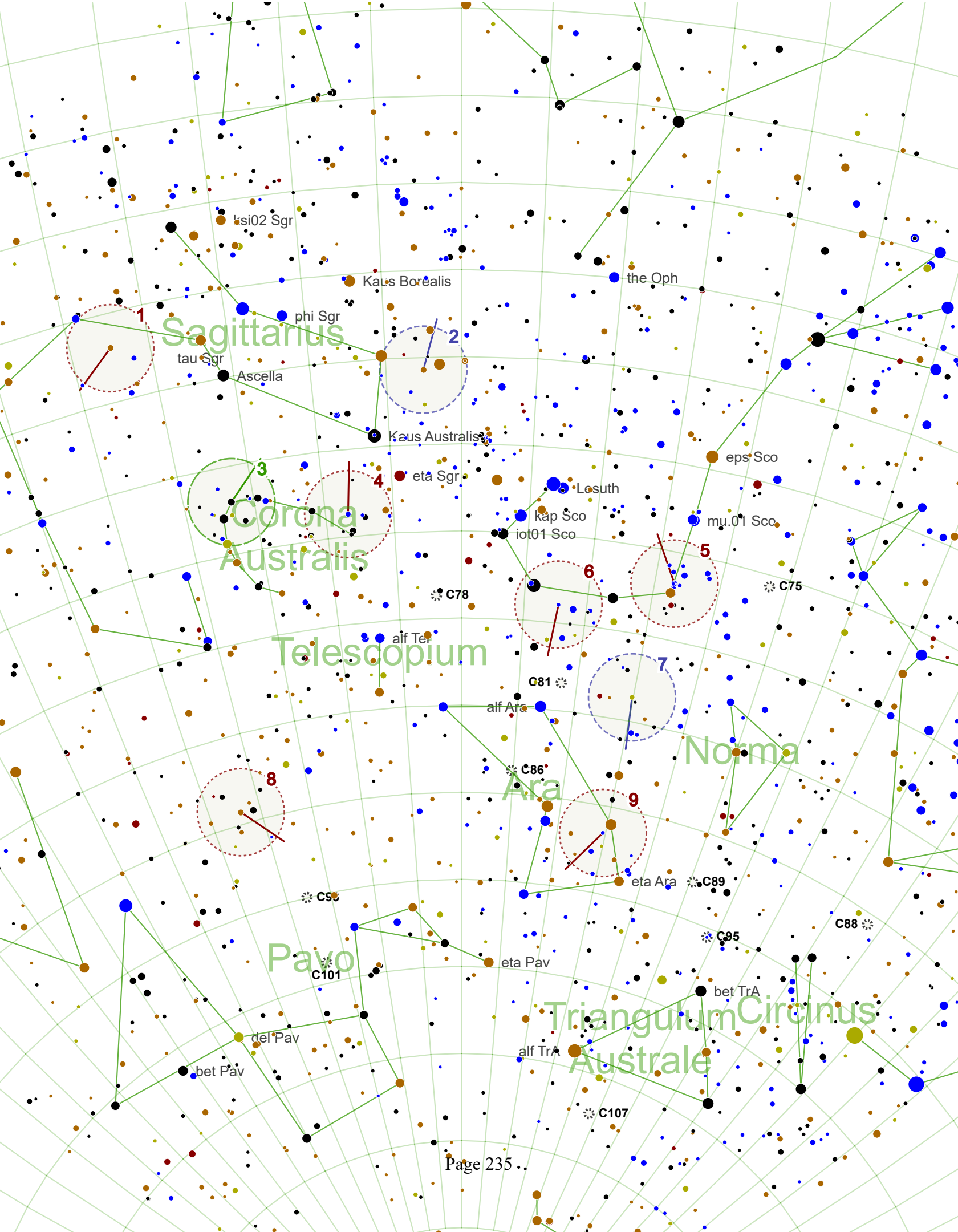
***GLE 2**: mag.:4.54 | 8.1, sep.:3.7″ , p.a.159°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 254226

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C107	9.3	globular cluster
C68	9.7	bright nebula
C69	12.8	planetary nebula
C82	5.2	open cluster
C86	5.6	globular cluster
C88	7.9	open cluster
C93	5.4	globular cluster
C95	5.1	open cluster
M6	4.2	open cluster


ksi02 Sgr
Kaus Borealis
the Oph
phi Sgr
Sagittarius
tau Sgr
Ascella
Kaus Australis
eps Sco
eta Sgr
Lesuth
kap Sco
iot01 Sco
mu.01 Sco
Corona Australis
C78
C75
alf Tel
Telescopium
C81
alf Ara
Norma
C86
Ara
eta Ara
C89
C88
C95
Pavo
eta Pav
C101
bet TrA
Triangulum Australe
Circinus
del Pav
bet Pav
alf TrA
C107

July: -45° South (3)

1: H N 119 (RA: 19 29 52, DEC: -26 59 08)

***H N 119**: mag.:5.61 | 8.82, sep.:7.5" , p.a.144°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 188192

2: BU 245 (RA: 18 10 06, DEC: -30 43 43)

***BU 245**: mag.:5.77 | 7.99, sep.:4.1" , p.a.345°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 209803

3: Gamma CrA (RA: 19 06 25, DEC: -37 03 48)

***HJ 5084**: mag.:4.53 | 6.42, sep.:1.5" , p.a.326°*

A brilliant yellowish primary tightly bound to a fairly bright companion.

This system is a mere 56 light-years from Earth.
The system is always very tightly separated, but the separation is slowly increasing, exceeding 1.7" by 2028.

Identifiers: Gamma CrA | SAO 210928 | HIP 93825 | GDR2 45032456832

4: Kap2 Cra (RA: 18 33 23, DEC: -38 43 34)

***DUN 222**: mag.:5.58 | 6.16, sep.:20.5" , p.a.359°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 210295

5: JC 23 AF (RA: 16 54 02, DEC: -41 48 23)

***HJ 4892 FH**: mag.:6.59 | 9.6, sep.:8.8" , p.a.300°*

***JC 23 AF**: mag.:5.65 | 6.56, sep.:56.7" , p.a.19°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 227377

6: DUN 217 (RA: 17 29 01, DEC: -43 58 26)

***DUN 217**: mag.:6.29 | 8.52, sep.:13.4" , p.a.168°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 228010

7: SEE 316 (RA: 17 00 27, DEC: -48 38 52)

***SEE 316**: mag.:6.34 | 7.69, sep.:1" , p.a.173°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 227542

8: HJ 5114 AB (RA: 19 27 48, DEC: -54 19 31)

***HJ 5114 AB**: mag.:5.85 | 8.24, sep.:76.1" , p.a.236°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 246110

9: HLD 131 (RA: 17 01 07, DEC: -56 33 18)

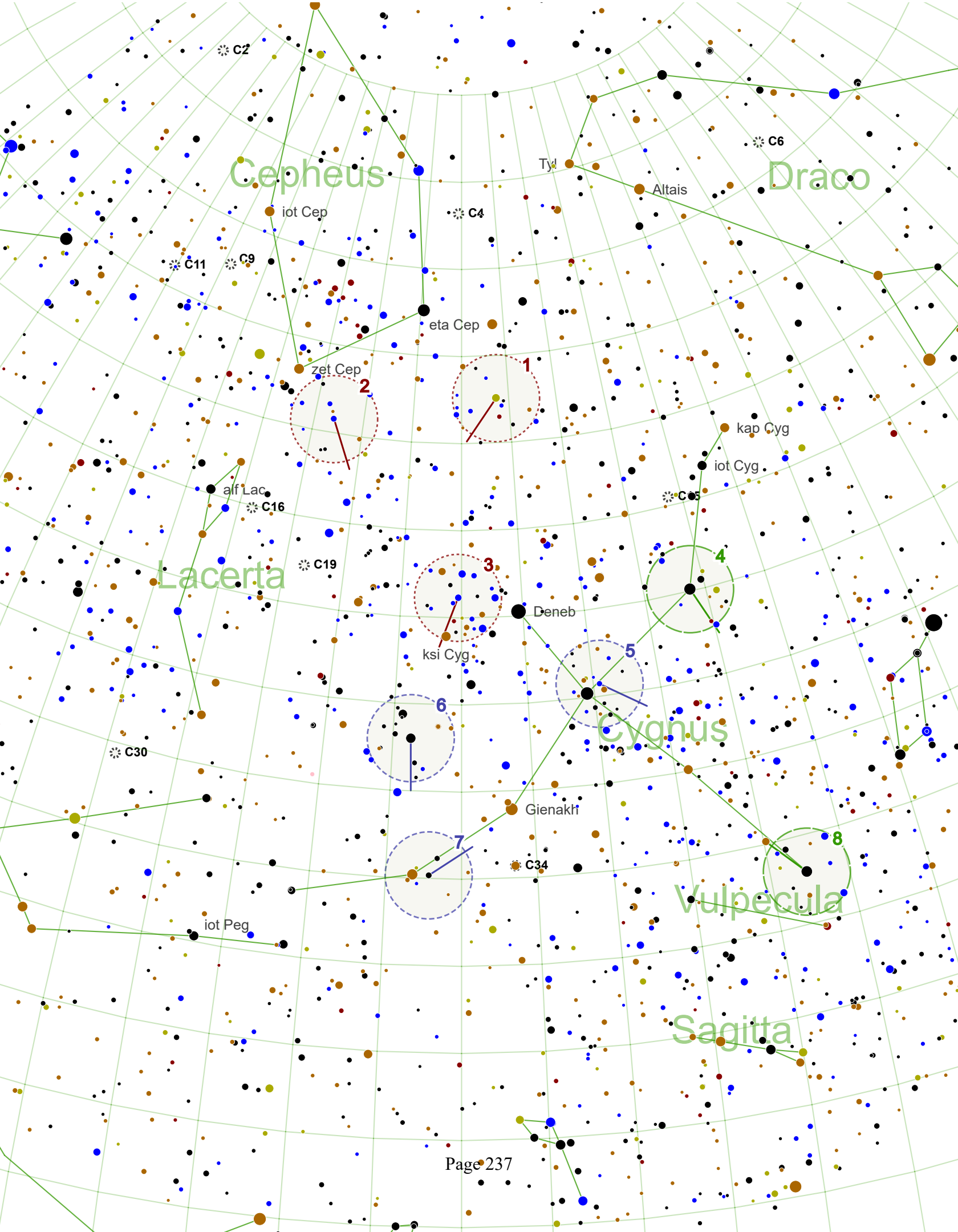
***HLD 131**: mag.:6.37 | 9.86, sep.:2.2" , p.a.134°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 244356

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C107	9.3	globular cluster
C75	5.8	open cluster
C78	6.6	globular cluster
C81	8.1	globular cluster
C86	5.6	globular cluster
C88	7.9	open cluster
C89	5.4	open cluster
C93	5.4	globular cluster
C95	5.1	open cluster


Cepheus
Draco
Lacerta
Cygnus
Vulpecula
Sagitta
C2
C6
C4
C11
C9
C16
C19
C30
C5
C34
iot Cep
eta Cep
zet Cep
Tyl
Altais
kap Cyg
iot Cyg
alf Lac
Deneb
ksi Cyg
Gienakh
iot Peg
1
2
3
4
5
6
7
8

August: 45° North (1)

1: Ups1 Cep (RA: 20 45 21, DEC: +57 34 47)

***ENG 76 AB**: mag.:4.57 | 9.86, sep.:48.4" , p.a.146°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 32862

2: STF 2840 AB (RA: 21 52 01, DEC: +55 47 48)

***STF 2840 AB**: mag.:5.64 | 6.42, sep.:18.1" , p.a.197°*

A comfortably separated pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 33819

3: 60 Cyg (RA: 21 01 11, DEC: +46 09 21)

***STT 426**: mag.:5.4 | 9.53, sep.:2.9" , p.a.159°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 50359

4: Delta Cyg (RA: 19 44 58, DEC: +45 07 50)

***STF 2579 AB**: mag.:2.89 | 6.27, sep.:2.8" , p.a.214°*

A very close and unbalanced pair with a brilliant blueish primary and reasonably bright white secondary.

Delta Cygni (aka Fawaris) shares the finder circle with bright open cluster NGC 6811, which lies towards the north-western edge of the finder circle.

Identifiers: Delta Cyg | SAO 48796 | HIP 97165 | GDR2 87999414656

5: STF 2666 AB (RA: 20 18 07, DEC: +40 43 56)

***STF 2666 AB**: mag.:5.96 | 8.24, sep.:2.8" , p.a.245°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 49438

6: Tau Cyg (RA: 21 14 47, DEC: +38 02 43)

***AGC 13 AB**: mag.:3.83 | 6.57, sep.:1" , p.a.180°*

A tight pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 71121

7: V389 Cyg (RA: 21 08 39, DEC: +30 12 20)

***STF 2762 AB**: mag.:5.7 | 8.1, sep.:3.3" , p.a.303°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 70968

8: Beta Cyg (RA: 19 30 43, DEC: +27 57 35)

***STFA 43 AB**: mag.:3.19 | 4.68, sep.:34.9" , p.a.54°*

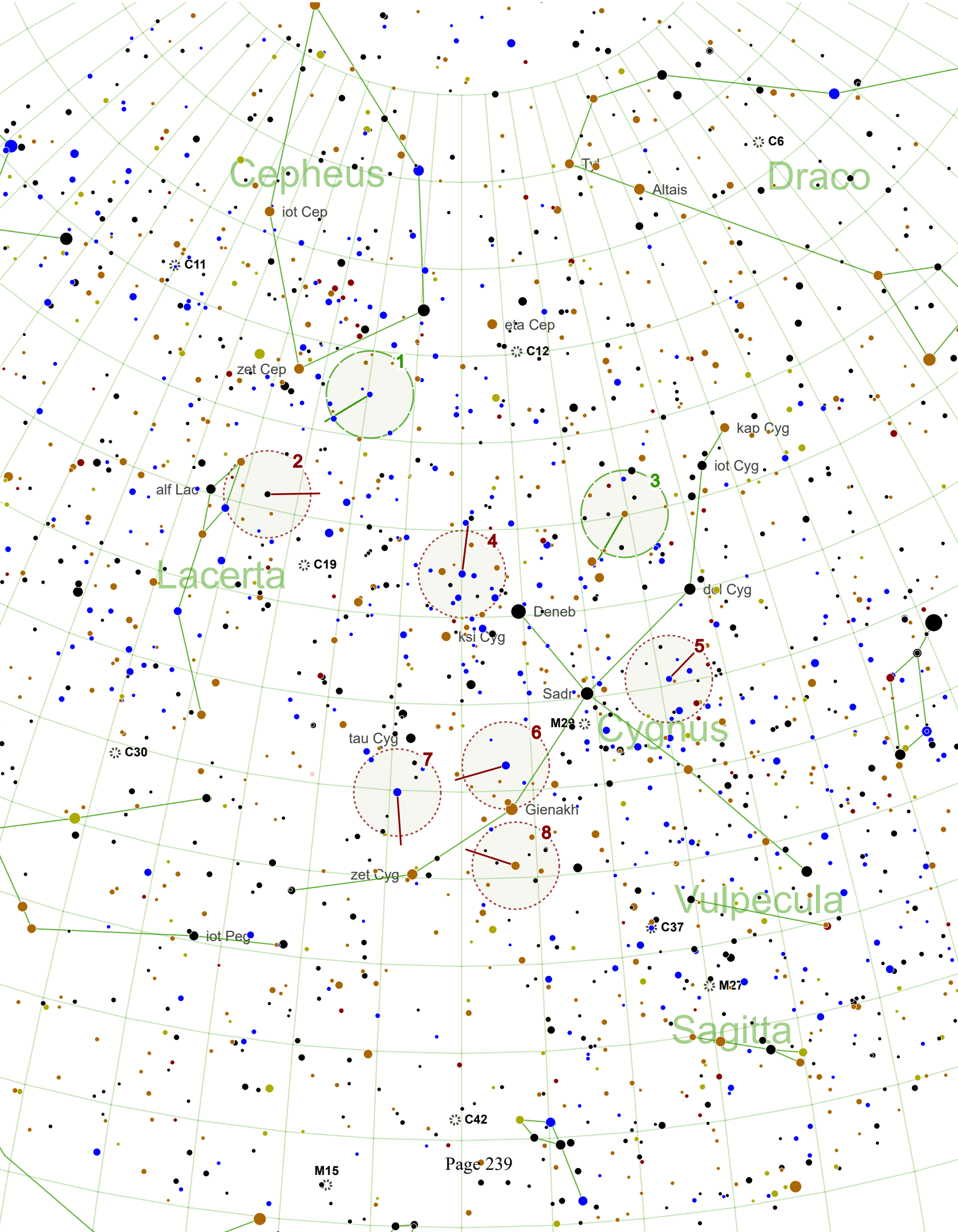
This is the renowned Albireo, a brilliant deep yellow primary with a bright and delicate blue companion.

Perhaps the most famous of all doubles, Albireo stands out for its strong color, bright components and easy separation. Albireo is approaching the Sun, and in several million years this double will be the brightest star in Earth's sky. Let's hope there will still be somewhere dark and quiet to look up at it.

Identifiers: Beta Cyg | SAO 87301 | HIP 95947 | GDR2 60302988160

Deep Sky Objects

DSO	Mag.	Type
C11	7.0	bright nebula
C15	9.8	planetary nebula
C16	6.4	open cluster
C19	10.0	bright nebula
C2	11.6	planetary nebula
C30	9.5	barred spiral galaxy
C34	8.0	supernova remnant
C4	6.8	bright nebula
C6	8.8	planetary nebula
C9	7.7	bright nebula


Cepheus
Draco
Lacerta
Cygnus
Vulpecula
Sagitta
iot Cep
C11
eta Cep
C12
zet Cep
1
C6
Tyl
Altais
kap Cyg
iot Cyg
2
alf Lac
3
C19
4
Deneb
ksi Cyg
del Cyg
5
Sadr
M29
6
tau Cyg
7
C30
Gienakh
8
zet Cyg
iot Peg
C37
M27
C42
M15

August: 45° North (2)

1: Struve 2816 (RA: 21 38 58, DEC: +57 29 20)

***GUI 36 CD**: mag.:7.48 | 7.53, sep.:30.6″ , p.a.325°*

***STF 2816 AC**: mag.:5.73 | 7.48, sep.:11.8″ , p.a.121°*

***STF 2816 AD**: mag.:5.73 | 7.53, sep.:20.6″ , p.a.339°*

Possibly yellow and white (the yellow primary being bracketed by by two fainter white stars). Alternately, the primary might be blue.

The primary holds a surprise for those with large telescopes, dark skies and preternaturally keen eyes: 1.8” from the primary lies a magnitude 13.3 star. At moderate magnification, another double appears to the north-east: Struve 2819, a pair of white stars (magnitudes 7.4 and 8.6; separation: 12.9”; position angle: 59°).

Identifiers: Struve 2816 | SAO 33626 | HIP 106886 | GDR2 37123250432

2: HJ 1741 AD (RA: 22 11 10, DEC: +50 49 24)

***HJ 1741 AD**: mag.:5.4 | 9.96, sep.:73.5″ , p.a.271°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 34143

3: 26 Cyg (RA: 20 01 22, DEC: +50 06 17)

***H 5 47 AB**: mag.:5.17 | 8.94, sep.:41.8″ , p.a.150°*

A bright orange primary very widely separated from a dim secondary.

This is not a physical double. The primary is 434 light-years from Earth.

Identifiers: 26 Cyg | SAO 49098 | HIP 98571 | GDR2 61746272768

4: 59 Cyg (RA: 20 59 50, DEC: +47 31 15)

***STF 2743 AB**: mag.:4.74 | 9.43, sep.:21″ , p.a.353°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 50335

5: BU 1474 AB (RA: 19 57 14, DEC: +40 22 04)

***BU 1474 AB**: mag.:5.44 | 9.31, sep.:64.8″ , p.a.316°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 49011

6: S 765 AC (RA: 20 47 25, DEC: +36 29 27)

***S 765 AC**: mag.:4.76 | 9.65, sep.:82.8″ , p.a.106°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 70505

7: STT 433 AC (RA: 21 17 55, DEC: +34 53 49)

***STT 433 AC**: mag.:4.36 | 9.95, sep.:22.1″ , p.a.184°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 71173

8: 52 Cyg (RA: 20 45 40, DEC: +30 43 11)

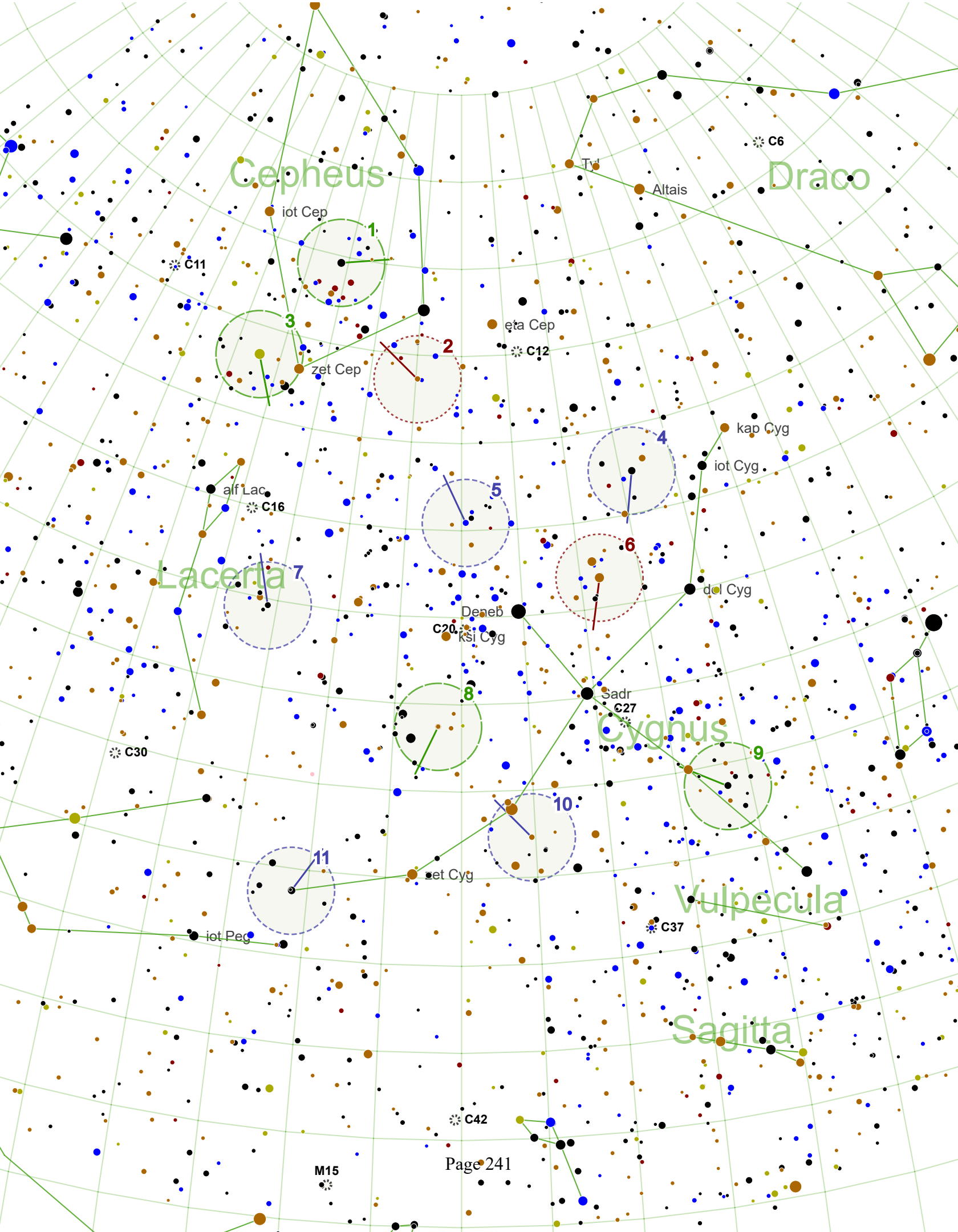
***STF 2726**: mag.:4.33 | 9.53, sep.:5.9″ , p.a.72°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 70467

Deep Sky Objects

DSO	Mag.	Type
C11	7.0	bright nebula
C12	9.7	spiral galaxy
C19	10.0	bright nebula
C30	9.5	barred spiral galaxy
C37	5.7	open cluster
C42	10.6	globular cluster
C6	8.8	planetary nebula
M15	6.2	globular cluster
M27	7.4	planetary nebula
M29	7.1	open cluster


Cepheus
Draco
Lacerta
Cygnus
Vulpecula
Sagitta
iot Cep
eta Cep
zet Cep
Tyl
Altais
kap Cyg
iot Cyg
alf Lac
del Cyg
Deneb
ksi Cyg
Sadr
zet Cyg
iot Peg
C6
C11
C12
C16
C20
C27
C30
C37
C42
M15
1
2
3
4
5
6
7
8
9
10
11

August: 45° North (3)

1: Xi Cep (RA: 22 03 47, DEC: +64 37 41)

***STF 2863 AB**: mag.:4.45 | 6.4, sep.:8.1" , p.a.274°*

A bright white primary with a close moderately fainter white secondary.

Identifiers: Xi Cep | SAO 19827 | HIP 108917 | GDR2 10659419264

2: V381 Cep (RA: 21 19 16, DEC: +58 37 25)

***STF 2790 AB**: mag.:5.85 | 9.27, sep.:4.6" , p.a.45°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 33318

3: Delta Cep (RA: 22 29 10, DEC: +58 24 55)

***STFA 58 AC**: mag.:4.21 | 6.11, sep.:41" , p.a.191°*

A bright, widely separated yellow and blue pair.

The primary is the prototype of the Cepheid variables, varying strongly between magnitude 3.5 and 4.4 over 5.4 days. Cepheids proved other galaxies are island universes. Nearby Espilon Cep is roughly magnitude 4.2 and can serve as a comparison, being sometimes brighter or fainter than Delta. Another nearby star is magnitude 3.35 Zeta Cep, roughly Delta's maximum brightness.

Identifiers: Delta Cep | SAO 34508 | HIP 110991 | GDR2 54723522432

4: Psi Cyg (RA: 19 55 38, DEC: +52 26 20)

***STF 2605 AB**: mag.:5.03 | 7.52, sep.:2.9" , p.a.175°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 32114

5: STF 2741 AB (RA: 20 58 30, DEC: +50 27 42)

***STF 2741 AB**: mag.:5.94 | 6.79, sep.:2" , p.a.25°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 33034

6: STFA 50 AC (RA: 20 13 38, DEC: +46 44 29)

***STFA 50 AC**: mag.:3.93 | 6.97, sep.:108.6" , p.a.173°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 49337

7: V1942 Cyg (RA: 22 02 57, DEC: +44 38 60)

***BU 694 AB**: mag.:5.71 | 7.76, sep.:1" , p.a.8°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 51595

8: 61 Cyg (RA: 21 06 54, DEC: +38 44 58)

***STF 2758 AB**: mag.:5.2 | 6.05, sep.:31.9" , p.a.154°*

An orange-red pair with wide separation. I see both components as orange.

This double is only 11 light-years away and was the first star whose distance from Earth was measured. Astronomers had a clue it might be a close star because the system has an extremely high proper motion relative to other stars, suggesting it is nearer.

Identifiers: 61 Cyg | SAO 70919 | HIP 104214 | GDR2 27813442688

9: 17 Cyg (RA: 19 46 26, DEC: +33 43 39)

***STF 2580 AB**: mag.:5.06 | 9.25, sep.:26.1" , p.a.68°*

A bright yellowish primary widely separated from a dim secondary.

Only 69 light-years from Earth, this pair are gravitationally bound.

Identifiers: 17 Cyg | SAO 68827 | HIP 97295

10: 49 Cyg (RA: 20 41 03, DEC: +32 18 26)

***STF 2716 AB**: mag.:5.75 | 8.1, sep.:2.8" , p.a.45°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 70362

11: Mu1 Cyg (RA: 21 44 09, DEC: +28 44 33)

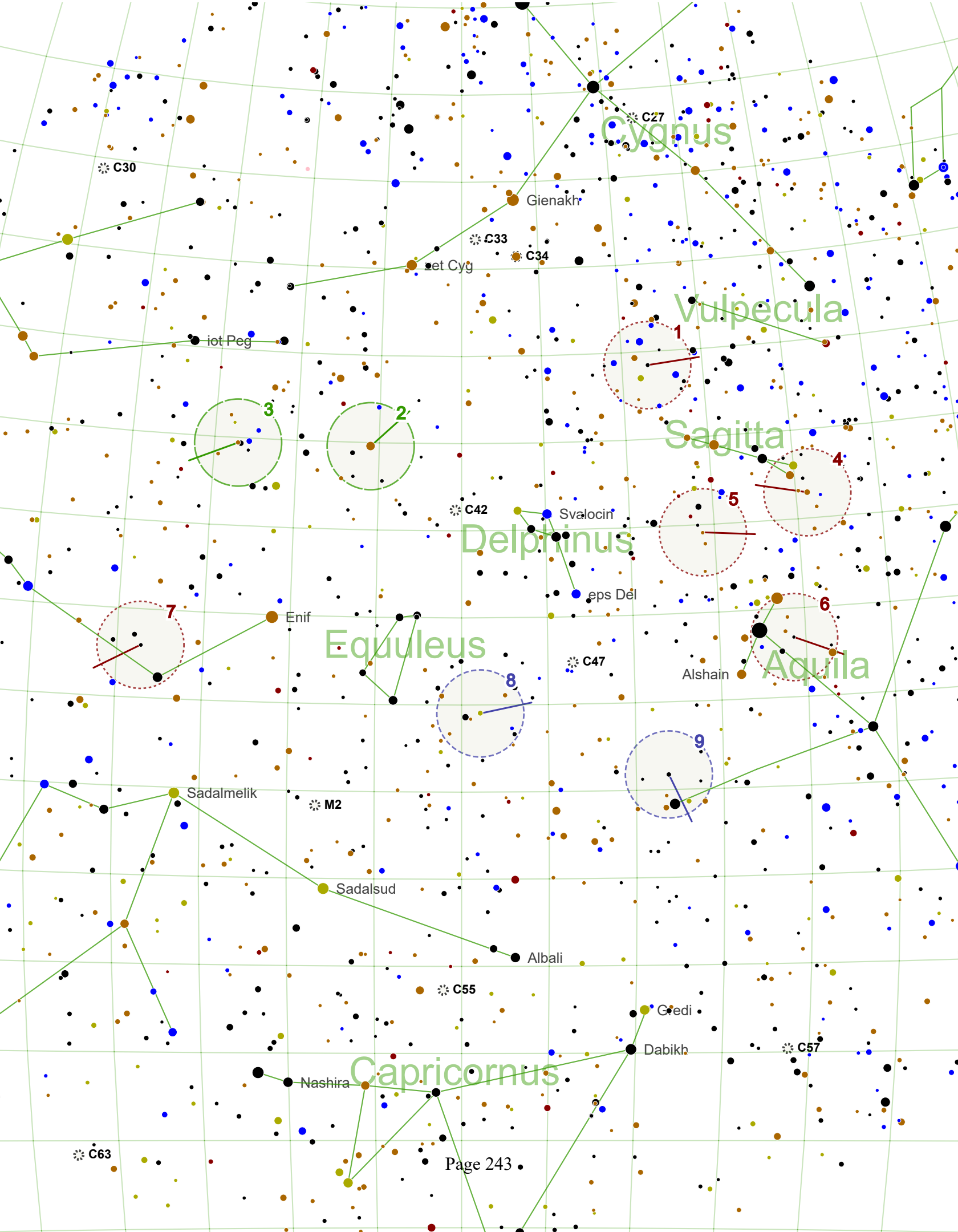
***STF 2822 AB**: mag.:4.75 | 6.18, sep.:1.5" , p.a.323°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 89940

Deep Sky Objects

DSO	Mag.	Type
C11	7.0	bright nebula
C12	9.7	spiral galaxy
C16	6.4	open cluster
C20	6.0	bright nebula
C27	7.5	bright nebula
C30	9.5	barred spiral galaxy
C37	5.7	open cluster
C42	10.6	globular cluster
C6	8.8	planetary nebula
M15	6.2	globular cluster


Cygnus
C27
C30
Gienakh
C33
C34
eet Cyg
Vulpecula
iot Peg
1
2
3
Sagitta
4
5
C42
Svalocin
Delphinus
eps Del
6
7
Enif
Equuleus
C47
Alshain
Aquila
8
9
Sadalmelik
M2
Sadalsud
Albali
C55
Gedi
Dabikh
C57
Capricornus
Nashira
C63

August: 10° North (1)

1: STF 2653 AB (RA: 20 13 41, DEC: +24 14 20)

***STF 2653 AB**: mag.:6.72 | 9.18, sep.:2.7″ , p.a.279°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 88377

2: 1 Peg (RA: 21 22 05, DEC: +19 48 16)

***STFB 11 AB**: mag.:4.2 | 9.3, sep.:36.1″ , p.a.312°*

A triple system, with a brilliant orange primary with two faint companions, one very close and the other quite widely separated.

The system lies 156 light-years from the Earth.

Identifiers: 1 Peg | SAO 107073 | HIP 105502 | GDR2 65372381056

3: Struve 2841 (RA: 21 54 17, DEC: +19 43 05)

***STF 2841 A,BC**: mag.:6.45 | 7.99, sep.:22.4″ , p.a.110°*

A wide yellow-blue pairing. Some see some green in the secondary.

The system lies 336 light-years from the Sun.

Identifiers: Struve 2841 | SAO 107489 | HIP 108119 | GDR2 05784806784

4: Eps Sge (RA: 19 37 17, DEC: +16 27 46)

***H 6 26 AB**: mag.:5.77 | 8.35, sep.:87.4″ , p.a.82°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 105061

5: STF 2616 (RA: 20 02 46, DEC: +14 34 58)

***STF 2616**: mag.:6.85 | 9.64, sep.:3.4″ , p.a.268°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 105589

6: STF 2562 AB (RA: 19 42 46, DEC: +08 22 58)

***STF 2562 AB**: mag.:6.95 | 8.69, sep.:27.2″ , p.a.251°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

7: STF 2878 AB (RA: 22 14 29, DEC: +07 58 34)

***STF 2878 AB**: mag.:6.94 | 8.11, sep.:1.6″ , p.a.116°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

8: STF 2735 (RA: 20 55 41, DEC: +04 31 58)

***STF 2735**: mag.:6.45 | 7.54, sep.:2″ , p.a.282°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 126373

9: STF 2644 (RA: 20 12 35, DEC: +00 52 00)

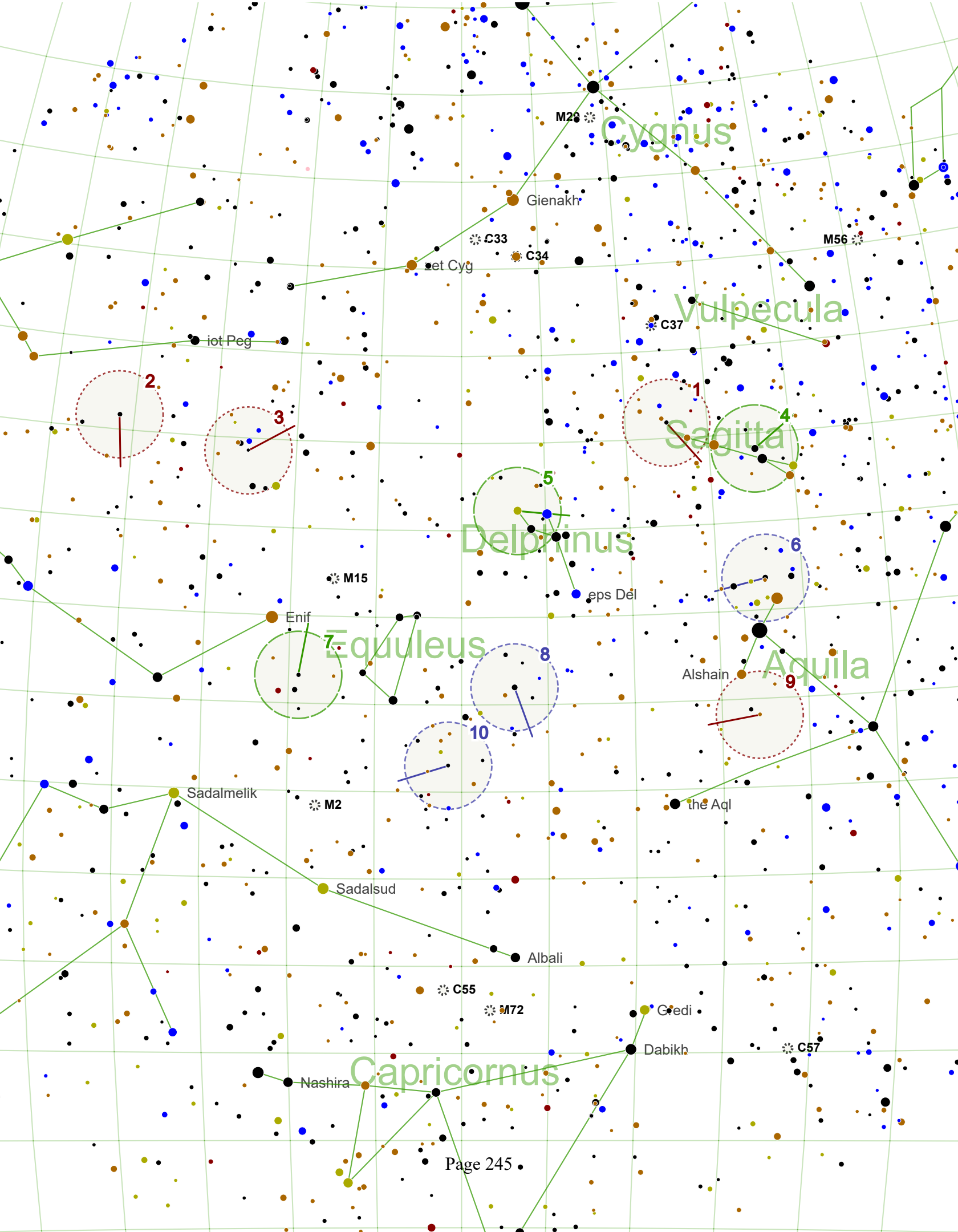
***STF 2644**: mag.:6.92 | 7.06, sep.:2.6″ , p.a.206°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 125567

Deep Sky Objects

DSO	Mag.	Type
C27	7.5	bright nebula
C30	9.5	barred spiral galaxy
C33	8.0	supernova remnant
C34	8.0	supernova remnant
C42	10.6	globular cluster
C47	8.9	globular cluster
C55	8.3	planetary nebula
C57	9.3	irregular galaxy
C63	6.5	planetary nebula
M2	6.5	globular cluster


Cygnus
Gienakh
M29
C33
C34
M56
eet Cyg
Vulpecula
C37
iot Peg
2
3
1
4
Sagitta
5
Delphinus
6
M15
eps Del
Enif
7
Equuleus
8
Aquila
Alshain
9
10
Sadalmelik
M2
the Aql
Sadalsud
Albali
C55
M72
Gedi
Dabikh
C57
Nashira
Capricornus

August: 10° North (2)

1: STF 2637 AC (RA: 20 09 57, DEC: +20 54 53)

***STF 2637 AB**: mag.:6.56 | 8.85, sep.:11.6" , p.a.331°*

***STF 2637 AC**: mag.:6.56 | 7.52, sep.:91.9" , p.a.222°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 88276

2: 33 Peg (RA: 22 23 40, DEC: +20 50 54)

***STF 2900 AB**: mag.:6.28 | 9.18, sep.:1.1" , p.a.181°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 90462

3: STF 2834 AB (RA: 21 51 40, DEC: +19 18 25)

***STF 2834 AB**: mag.:6.93 | 9.89, sep.:4.3" , p.a.298°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 107450

4: Zeta Sge (RA: 19 48 59, DEC: +19 08 31)

***STF 2585 AB,C**: mag.:5.04 | 9.01, sep.:8.3" , p.a.311°*

A bright yellow primary with a much fainter blue secondary.

The white primary is actually an extreme double (a balanced pair with separation 0.19", separation angle 150°). Globular cluster Messier 71 is in the same finder circle as Zeta Sagittae, lying 1.5 degrees SEE.

Identifiers: Zeta Sge | SAO 105298 | HIP 97496

5: Gamma Del (RA: 20 46 40, DEC: +16 07 27)

***STF 2727 AB**: mag.:4.36 | 5.03, sep.:8.9" , p.a.265°*

A very bright yellow primary close to a bright blue secondary.

Some claim to to see a bit of green in the secondary but green is not widely accepted as a possible star color.

Identifiers: Gamma Del | SAO 106476 | HIP 102532 | GDR2 13341086464

6: Pi Aql (RA: 19 48 42, DEC: +11 48 57)

***STF 2583 AB**: mag.:6.34 | 6.75, sep.:1.4" , p.a.105°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 105282

7: 3 Peg (RA: 21 37 44, DEC: +06 37 06)

***STFA 56 AB**: mag.:6.18 | 7.5, sep.:38.7" , p.a.349°*

A bright white primary distantly separated from a reasonably apparent yellowish secondary.

7 Pegasus, a very red giant, is just over a degree south east of this double.

Identifiers: 3 Peg | SAO 126940 | HIP 106783 | GDR2 61831057792

8: 13 Del (RA: 20 47 48, DEC: +06 00 30)

***BU 65**: mag.:5.64 | 8.24, sep.:1.5" , p.a.200°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 126222

9: STF 2587 (RA: 19 51 27, DEC: +04 05 19)

***STF 2587**: mag.:6.71 | 9.42, sep.:4.3" , p.a.101°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

10: STF 2744 AB (RA: 21 03 03, DEC: +01 31 56)

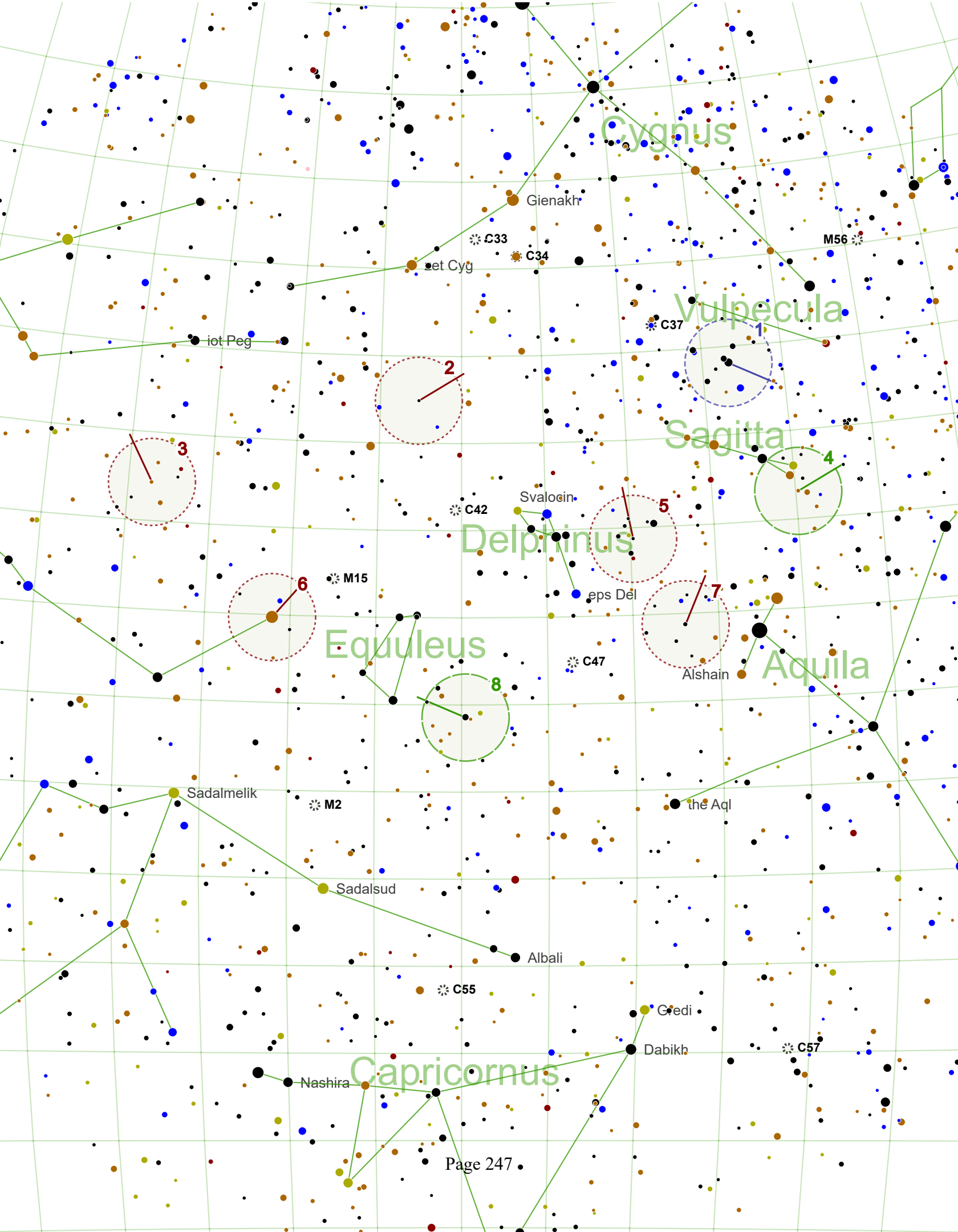
***STF 2744 AB**: mag.:6.76 | 7.33, sep.:1.2" , p.a.107°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 126491

Deep Sky Objects

DSO	Mag.	Type
C33	8.0	supernova remnant
C34	8.0	supernova remnant
C37	5.7	open cluster
C55	8.3	planetary nebula
C57	9.3	irregular galaxy
M15	6.2	globular cluster
M2	6.5	globular cluster
M29	7.1	open cluster
M56	8.3	globular cluster
M72	9.3	globular cluster


Cygnus
Gienakh
C33
C34
M56
eet Cyg
Vulpecula
C37
1
iot Peg
2
3
Sagitta
4
Svalocin
C42
5
Delphinus
6
M15
eps Del
7
Equuleus
C47
Alshain
Aquila
8
Sadalmelik
M2
the Aql
Sadalsud
Albali
C55
Gedi
Dabikh
C57
Nashira
Capricornus

August: 10° North (3)

1: 13 Vul (RA: 19 53 28, DEC: +24 04 47)

***DJU 4**: mag.:4.63 | 7.37, sep.:1.4" , p.a.247°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 87883

2: STF 2769 AB (RA: 21 10 32, DEC: +22 27 17)

***STF 2769 AB**: mag.:6.65 | 7.42, sep.:18.1" , p.a.301°*

A comfortably separated pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 89505

3: STF 2877 AB (RA: 22 14 18, DEC: +17 11 22)

***STF 2877 AB**: mag.:6.65 | 9.23, sep.:24" , p.a.25°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 107756

4: H N 84 (RA: 19 39 25, DEC: +16 34 16)

***H N 84**: mag.:6.38 | 9.46, sep.:28.4" , p.a.301°*

A wide pair with a strongly orange primary and fainter blue companion.

From William Herschel's New list of doubles compiled in the 1820s, hence the "H N" nomenclature.

Identifiers: H N 84 | SAO 105104 | HIP 96688 | GDR2 51899730432

5: STF 2665 A,BC (RA: 20 19 21, DEC: +14 22 15)

***STF 2665 A,BC**: mag.:6.88 | 9.55, sep.:3.3" , p.a.12°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 105957

6: S 798 AC (RA: 21 44 11, DEC: +09 52 30)

***S 798 AC**: mag.:2.53 | 8.74, sep.:143.9" , p.a.318°*

A wide pairing of a brilliant primary and a faint companion.

Identifiers: SAO 127029

7: STF 2628 (RA: 20 07 50, DEC: +09 23 59)

***STF 2628**: mag.:6.6 | 8.66, sep.:3" , p.a.338°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 125478

8: Eps Equ (RA: 20 59 05, DEC: +04 17 38)

***STF 2737 AB,C**: mag.:5.3 | 7.05, sep.:10.6" , p.a.67°*

***STF 2737 BC**: mag.:6.31 | 7.05, sep.:10.6" , p.a.66°*

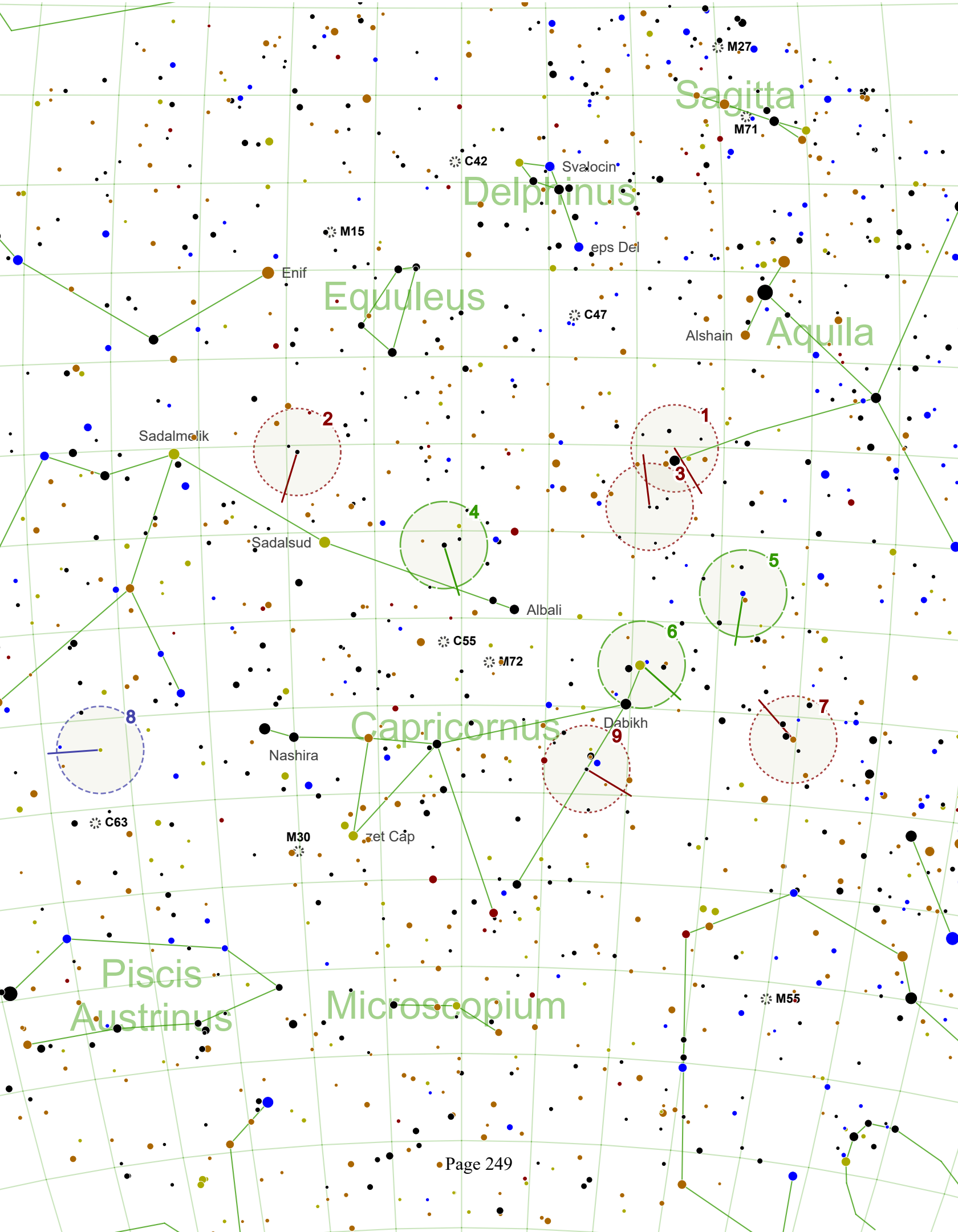
A yellow-blue combination with a moderately bright secondary. Easy separation.

10 degrees to the south-east of this double is the bright globular cluster Messier 2, while 8 degrees to the north-west is another bright globular cluster, namely Caldwell 47 (NGC 6934).

Identifiers: Eps Equ | SAO 126428 | HIP 103569

Deep Sky Objects

DSO	Mag.	Type
C33	8.0	supernova remnant
C34	8.0	supernova remnant
C37	5.7	open cluster
C42	10.6	globular cluster
C47	8.9	globular cluster
C55	8.3	planetary nebula
C57	9.3	irregular galaxy
M15	6.2	globular cluster
M2	6.5	globular cluster
M56	8.3	globular cluster


M27
Sagitta
M71
C42
Svalocin
Delphinus
M15
eps Del
Enif
Equuleus
C47
Alshain
Aquila
2
1
Sadalmelik
3
4
Sadalsud
5
Albali
C55
6
M72
8
Capricornus
Dabikh
7
9
Nashira
C63
M30
zet Cap
Piscis
Austrinus
Microscopium
M55

August: -10° South (1)

1: S 735 (RA: 20 11 19, DEC: -00 07 35)

***S 735**: mag.:7.16 | 7.98, sep.:56.4" , p.a.211°*

A wide pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 144151

2: STF 2809 AB (RA: 21 37 34, DEC: -00 23 26)

***STF 2809 AB**: mag.:6.22 | 9.36, sep.:31.1" , p.a.163°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 145533

3: RST 4659 AB (RA: 20 16 50, DEC: -03 29 30)

***RST 4659 AB**: mag.:7.16 | 9.19, sep.:1.8" , p.a.7°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

4: 12 Aqr (RA: 21 04 05, DEC: -05 49 23)

***STF 2745 AB**: mag.:5.8 | 7.5, sep.:2.5" , p.a.197°*

A very tight yellow-blue system, with the small blue component sufficiently bright to show some color.

Just over one finder circle south of of this double is the bright planetary nebula, Caldwell 55 (NGC 7009).

Identifiers: 12 Aqr | SAO 145065 | HIP 103981 | GDR2 42353215104

5: 57 Aql (RA: 19 54 38, DEC: -08 13 38)

***STF 2594 AB**: mag.:5.65 | 6.35, sep.:36.3" , p.a.171°*

A very wide and balanced pair of bright, bluish stars.

This pair of hot B-type main sequence stars are roughly 480 light-years from Earth. As with manyB-type stars, they rotate extremely fast (the A component has a rotational velocity of 190 km/s.

Identifiers: 57 Aql | SAO 143898 | HIP 97966 | Struve 2594

6: Alpha1/2 Cap (RA: 20 17 39, DEC: -12 30 30)

***HJ 607 AC**: mag.:4.24 | 9.6, sep.:47.4" , p.a.228°*

A distantly separated pair of brilliant white stars.

Superb in the finder scope.

Identifiers: Alpha1/2 Cap | SAO 163422 | HIP 100027

7: HJ 599 AC (RA: 19 40 43, DEC: -16 17 35)

***HJ 599 AC**: mag.:5.42 | 7.65, sep.:45.5" , p.a.41°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 162883

8: 53 Aqr (RA: 22 26 34, DEC: -16 44 32)

***SHJ 345 AB**: mag.:6.29 | 6.39, sep.:1.2" , p.a.94°*

An extremely tight and exactly equal pair of yellow suns.

C63, the Helix Nebula, lies one finder circle south of this double.

Identifiers: SAO 165077

9: Omi Cap (RA: 20 29 54, DEC: -18 34 59)

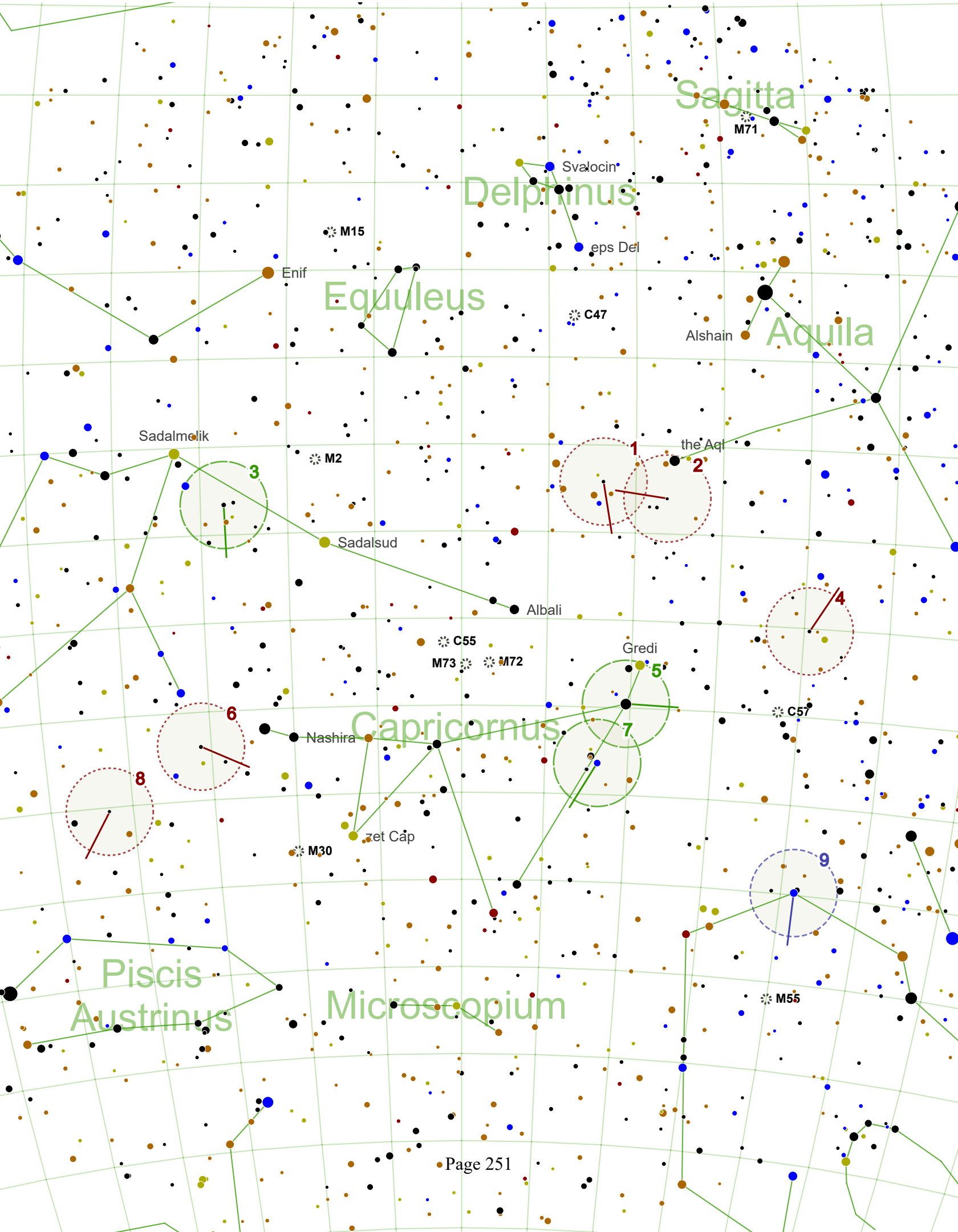
***SHJ 324 AB**: mag.:5.91 | 6.68, sep.:22" , p.a.239°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 163626

Deep Sky Objects

DSO	Mag.	Type
C42	10.6	globular cluster
C47	8.9	globular cluster
C55	8.3	planetary nebula
C63	6.5	planetary nebula
M15	6.2	globular cluster
M27	7.4	planetary nebula
M30	7.2	globular cluster
M55	6.3	globular cluster
M71	8.2	globular cluster
M72	9.3	globular cluster


Sagitta
M71
Svalocin
Delphinus
M15
eps Del
Enif
Equuleus
C47
Alshain
Aquila
Sadalmelik
M2
the Aql
1
2
3
Sadalsud
Albali
4
C55
M73
M72
Gredi
5
C57
6
Nashira
Capricornus
7
8
zet Cap
M30
9
Piscis
Austrinus
Microscopium
M55

August: -10° South (2)

1: S 749 AB (RA: 20 27 28, DEC: -02 06 10)

***S 749 AB**: mag.:6.76 | 7.51, sep.:60.1″ , p.a.189°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO

2: STF 2643 (RA: 20 12 47, DEC: -02 59 45)

***STF 2643**: mag.:7.09 | 9.4, sep.:3″ , p.a.81°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

3: STF 2838 (RA: 21 54 36, DEC: -03 18 04)

***STF 2838 AB**: mag.:6.29 | 9.52, sep.:16″ , p.a.183°*

An easily separated pair of white stars with a bright primary and a faint secondary.

This double is a line of sight coincidence; the two components are not gravitationally bound.

Identifiers: STF 2838 | SAO 145735 | HIP 108144 | GDR2 75057612800

4: STF 2545 AB (RA: 19 38 43, DEC: -10 09 24)

***STF 2545 AB**: mag.:6.79 | 8.54, sep.:3.7″ , p.a.326°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 162843

5: Beta Cap (RA: 20 21 01, DEC: -14 46 53)

***STFA 52 AB**: mag.:3.15 | 6.08, sep.:205.2″ , p.a.266°*

A brilliant yellow primary distantly separated from bright white secondary.

Also known as Dabih ("butcher"), this binary system is almost exactly 100 parsecs from us (327 light-years).

Identifiers: Beta Cap | SAO 163481 | HIP 100345

6: 29 Aqr (RA: 22 02 26, DEC: -16 57 52)

***S 802 AB**: mag.:7.22 | 7.15, sep.:3.8″ , p.a.247°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 164830

7: Pi Cap (RA: 20 27 19, DEC: -18 12 42)

***BU 60 AB**: mag.:5.13 | 8.53, sep.:3.5″ , p.a.148°*

A very close pair, with a bright blue primary and fairly faint secondary.

The primary has six times the mass and 238 times the luminosity of the Sun.

Identifiers: Pi Cap | SAO 163592 | HIP 100881 | GDR2 73140593152

8: KV Aqr (RA: 22 25 48, DEC: -20 14 13)

***S 808 AB**: mag.:7.13 | 8.01, sep.:6.9″ , p.a.153°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 191131

9: 52 Sgr (RA: 19 36 42, DEC: -24 53 01)

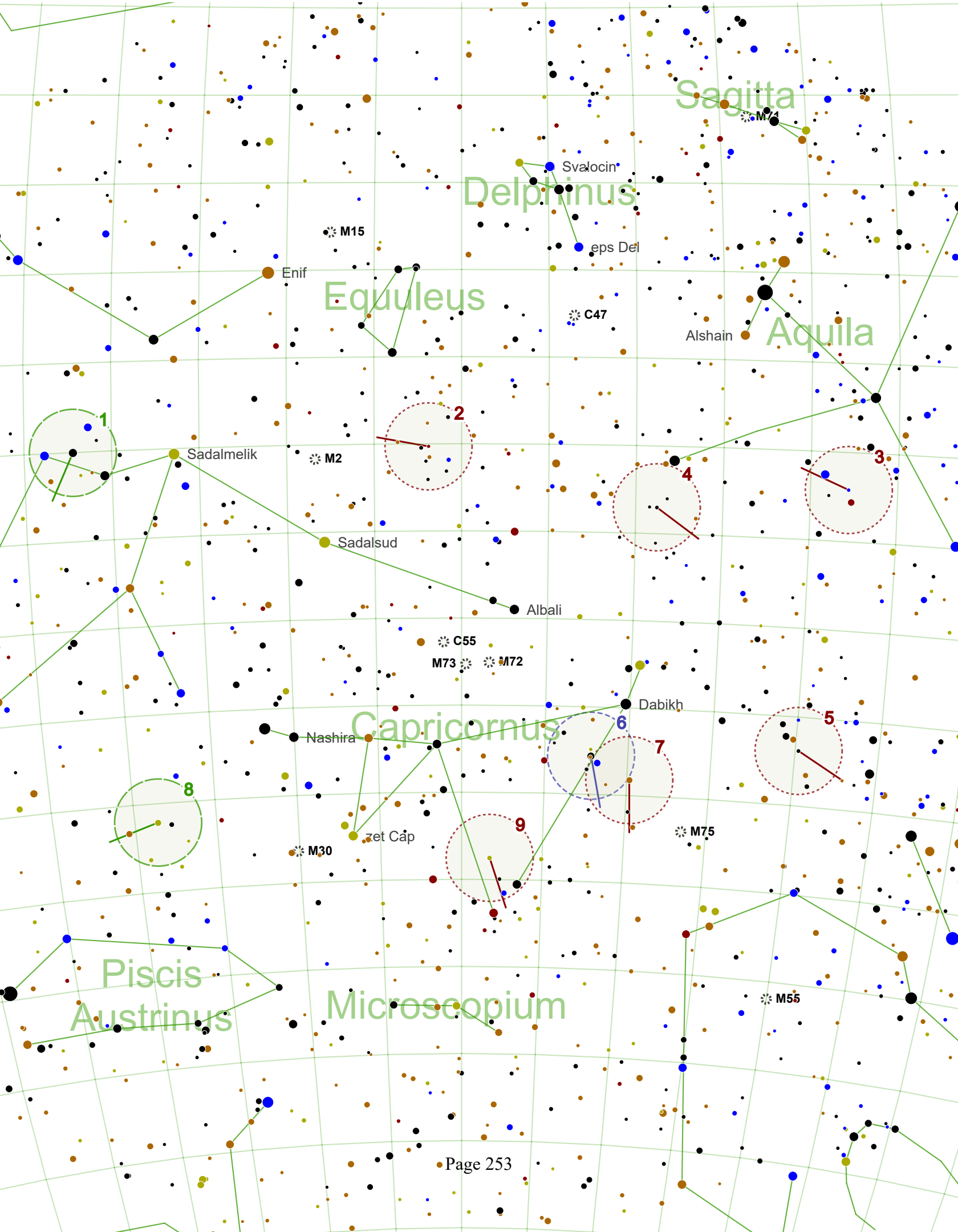
***BU 654**: mag.:4.7 | 9.2, sep.:2.4″ , p.a.173°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 188337

Deep Sky Objects

DSO	Mag.	Type
C47	8.9	globular cluster
C55	8.3	planetary nebula
C57	9.3	irregular galaxy
M15	6.2	globular cluster
M2	6.5	globular cluster
M30	7.2	globular cluster
M55	6.3	globular cluster
M71	8.2	globular cluster
M72	9.3	globular cluster
M73	9.0	asterism


Sagitta
Svalocin
Delphinus
M15
eps Del
Enif
Equuleus
C47
Alshain
Aquila
1
2
3
4
Sadalmelik
M2
Sadalsud
Albali
C55
M73
M72
Dabikh
Capricornus
5
6
7
Nashira
8
9
M75
zet Cap
M30
Piscis
Austrinus
Microscopium
M55

August: -10° South (3)

1: Zeta Aqr (RA: 22 28 50, DEC: -00 01 12)

***STF 2909 AB**: mag.:4.34 | 4.49, sep.:2.4" , p.a.157°*

A balanced, tight pair of white stars.

Located in the center of a a Y-shaped asterism of fourth magnitude stars that fills the finder view.

Identifiers: Zeta Aqr | SAO 146107 | HIP 110960

2: STF 2755 (RA: 21 07 33, DEC: -00 09 50)

***STF 2755**: mag.:6.88 | 9.86, sep.:25.4" , p.a.80°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 145121

3: V822 Aql (RA: 19 31 16, DEC: -02 06 37)

***D 20 AB**: mag.:7.22 | 9.58, sep.:1.3" , p.a.65°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

4: STF 2654 (RA: 20 15 11, DEC: -03 30 13)

***STF 2654**: mag.:6.96 | 8.14, sep.:14.4" , p.a.233°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO

5: S 722 AB (RA: 19 39 13, DEC: -16 54 28)

***S 722 AB**: mag.:7.17 | 7.45, sep.:10.3" , p.a.236°*

A comfortably separated pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 162853

6: Rho Cap (RA: 20 28 52, DEC: -17 48 49)

***SHJ 323 AB**: mag.:4.97 | 6.88, sep.:1.8" , p.a.190°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 163614

7: Sig Cap (RA: 20 19 24, DEC: -19 07 07)

***H 5 87**: mag.:5.43 | 9.43, sep.:56" , p.a.180°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 163445

8: 41 Aqr (RA: 22 14 18, DEC: -21 04 29)

***H N 56 AB**: mag.:5.63 | 6.72, sep.:5.2" , p.a.112°*

A close, balanced with a bright orange primary and yellowish secondary.

It is not clear if the pair are gravitationally bound, but the orange primary is a K-type giant 233 light-years from Earth.

Identifiers: 41 Aqr | SAO 190986 | HIP 109786 | GDR2 69260987520

9: HJ 3003 (RA: 20 53 01, DEC: -23 46 60)

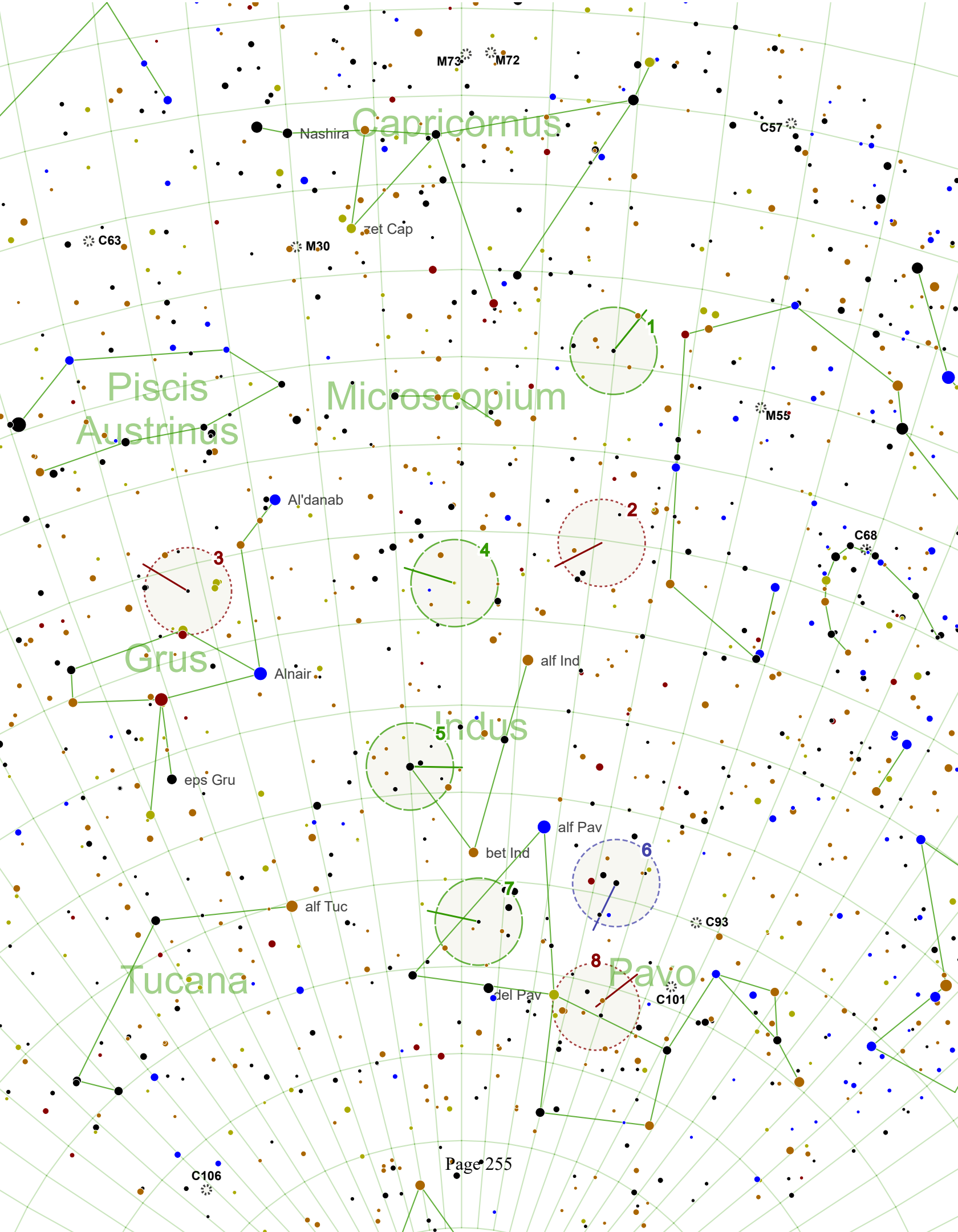
***HJ 3003**: mag.:6.57 | 8.57, sep.:1.4" , p.a.198°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 189801

Deep Sky Objects

DSO	Mag.	Type
C47	8.9	globular cluster
C55	8.3	planetary nebula
M15	6.2	globular cluster
M2	6.5	globular cluster
M30	7.2	globular cluster
M55	6.3	globular cluster
M71	8.2	globular cluster
M72	9.3	globular cluster
M73	9.0	asterism
M75	8.5	globular cluster


M73
M72
Capricornus
Nashira
C57
zet Cap
C63
M30
1
Piscis
Austrinus
Microscopium
M55
Al'danab
2
3
4
C68
Grus
Alnair
alf Ind
Indus
5
eps Gru
alf Pav
bet Ind
6
7
alf Tuc
C93
Tucana
8
Pavo
del Pav
C101
C106

August: -45° South (1)

1: HJ 5188 (RA: 20 20 28, DEC: -29 11 50)

***HJ 5188 AC**: mag.:6.66 | 7.55, sep.:27.3" , p.a.321°*

A complex of 6 stars, centered on a fairly bright white primary. The widely separated C component is moderately bright, but the remaining four members are all faint.

The primary is 443 light-years from Earth. It is not clear if the members are gravitationally bound together.

Identifiers: HJ 5188 | SAO 189164 | HIP 100288 | GDR2 22396076928

2: DUN 230 (RA: 20 17 50, DEC: -40 11 05)

***DUN 230**: mag.:7.42 | 7.72, sep.:9.7" , p.a.117°*

A close pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 230134

3: JC 19 AB (RA: 22 24 39, DEC: -41 26 25)

***JC 19 AB**: mag.:6.68 | 8.15, sep.:14.8" , p.a.59°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 231123

4: DUN 236 (RA: 21 02 13, DEC: -43 00 08)

***DUN 236**: mag.:6.68 | 6.95, sep.:57.4" , p.a.73°*

A fairly bright, nearly equal pair, with a yellow primary widely separated from an orange companion.

This gravitationally bound pair of subgiants is 268 light-years from Earth.

Identifiers: DUN 236 | SAO 230492 | HIP 103814 | GDR2 42680733824

5: Theta Ind (RA: 21 19 52, DEC: -53 26 57)

***HJ 5258 AB**: mag.:4.5 | 6.93, sep.:7.3" , p.a.269°*

A brilliant white primary with a close fairly bright yellow companion.

99 light-years from Earth, the primary is probably itself a double, with a separation of 0.06" and an orbital period of 1.3 years.

Identifiers: Theta Ind | SAO 246965 | HIP 105319 | GDR2 69563201152

6: I 121 Aa,Ab (RA: 19 50 45, DEC: -59 11 37)

***I 121 Aa,Ab**: mag.:5.48 | 7.09, sep.:1.3" , p.a.154°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 246293

7: RMK 8550 (RA: 20 51 38, DEC: -62 25 46)

***RMK 26 AB**: mag.:6.23 | 6.58, sep.:2.4" , p.a.78°*

An equal and very tight pair of bright white stars.

This pair of stars similar to Sirius is 249 light-years from Earth.

Identifiers: RMK 8550 | SAO 254883 | HIP 102962

8: HJ 5132 (RA: 19 43 60, DEC: -66 17 51)

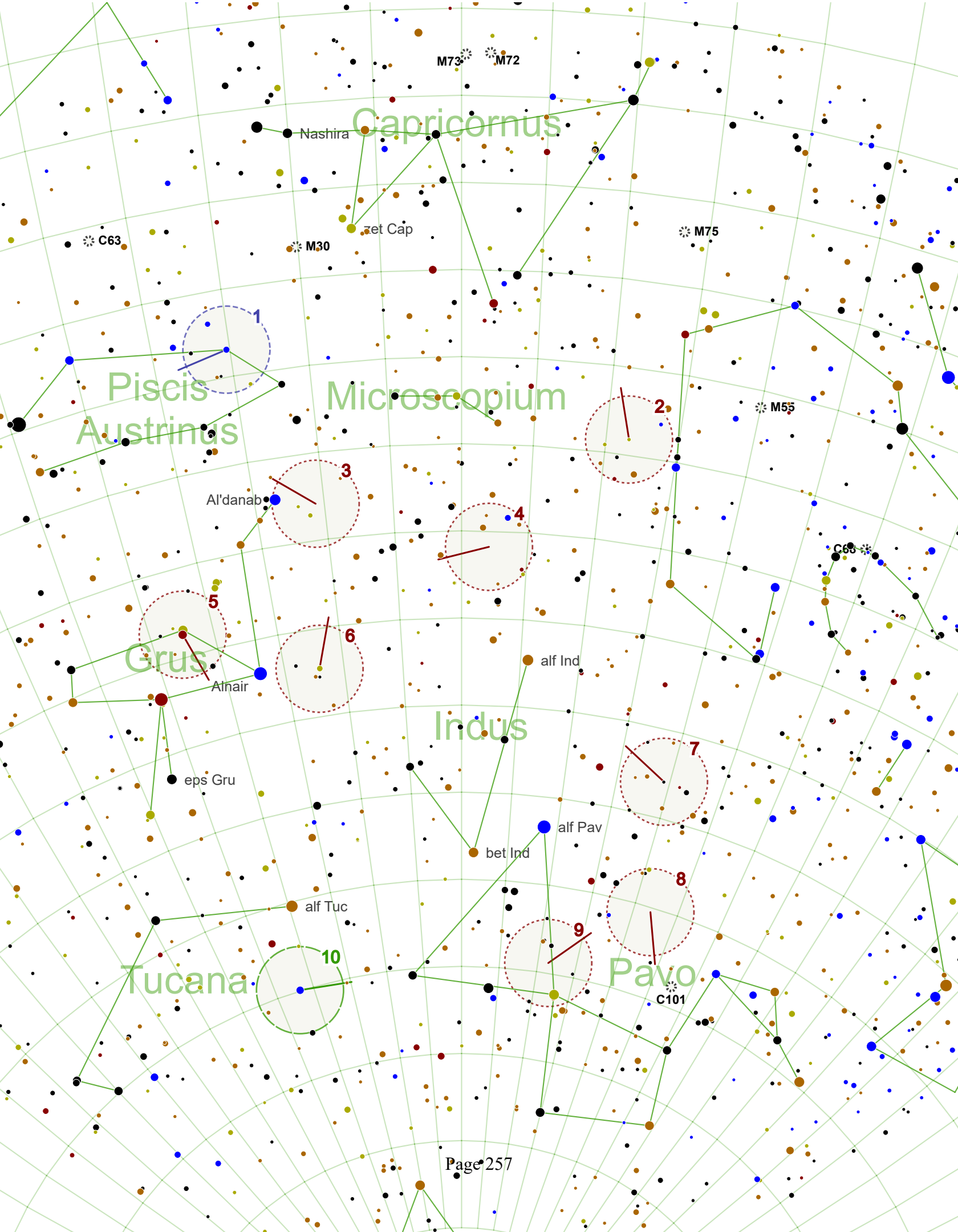
***HJ 5132**: mag.:7.61 | 9.74, sep.:21.6" , p.a.308°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 254636

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C106	4.0	globular cluster
C57	9.3	irregular galaxy
C63	6.5	planetary nebula
C68	9.7	bright nebula
C93	5.4	globular cluster
M30	7.2	globular cluster
M55	6.3	globular cluster
M72	9.3	globular cluster
M73	9.0	asterism


M73
M72
Capricornus
Nashira
zet Cap
C63
M30
M75
1
Piscis
Austrinus
Microscopium
2
M55
3
Al'danab
4
C60
5
Grus
6
Alnair
alf Ind
Indus
7
eps Gru
alf Pav
bet Ind
8
alf Tuc
9
10
Tucana
Pavo
C101

August: -45° South (2)

1: Eta PsA (RA: 22 00 50, DEC: -28 27 14)

***BU 276**: mag.:5.7 | 6.77, sep.:1.9″ , p.a.113°*

A tight pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 190822

2: HJ 5178 AB (RA: 20 13 42, DEC: -34 07 04)

***HJ 5178 AB**: mag.:7.05 | 8.2, sep.:2.8″ , p.a.9°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 211916

3: HJ 5288 (RA: 21 42 29, DEC: -37 55 60)

***HJ 5288**: mag.:7.6 | 9.08, sep.:19.7″ , p.a.60°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 213217

4: HJ 5228 (RA: 20 51 41, DEC: -40 54 22)

***HJ 5228**: mag.:7.37 | 9.33, sep.:32.5″ , p.a.104°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 230405

5: Del2 Gru (RA: 22 29 45, DEC: -43 44 57)

***DUN 239**: mag.:4.33 | 9.71, sep.:60.4″ , p.a.210°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 231161

6: BSO 15 (RA: 21 48 16, DEC: -47 18 13)

***BSO 15**: mag.:5.64 | 8.76, sep.:79″ , p.a.350°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 230846

7: COO 238 (RA: 19 42 16, DEC: -52 56 57)

***COO 238**: mag.:7.7 | 9.3, sep.:3.5″ , p.a.47°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 246224

8: I 117 (RA: 19 32 12, DEC: -60 16 11)

***I 117**: mag.:7.53 | 8.19, sep.:1.1″ , p.a.185°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 254592

9: HJ 5171 AB (RA: 20 14 35, DEC: -64 25 47)

***HJ 5171 AB**: mag.:6.94 | 9.75, sep.:17.3″ , p.a.305°*

***HJ 5171 AC**: mag.:6.94 | 9.96, sep.:34.6″ , p.a.335°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 254757

10: Delta Tuc (RA: 22 27 20, DEC: -64 57 59)

***HJ 5334 AB**: mag.:4.49 | 8.73, sep.:6.8″ , p.a.279°*

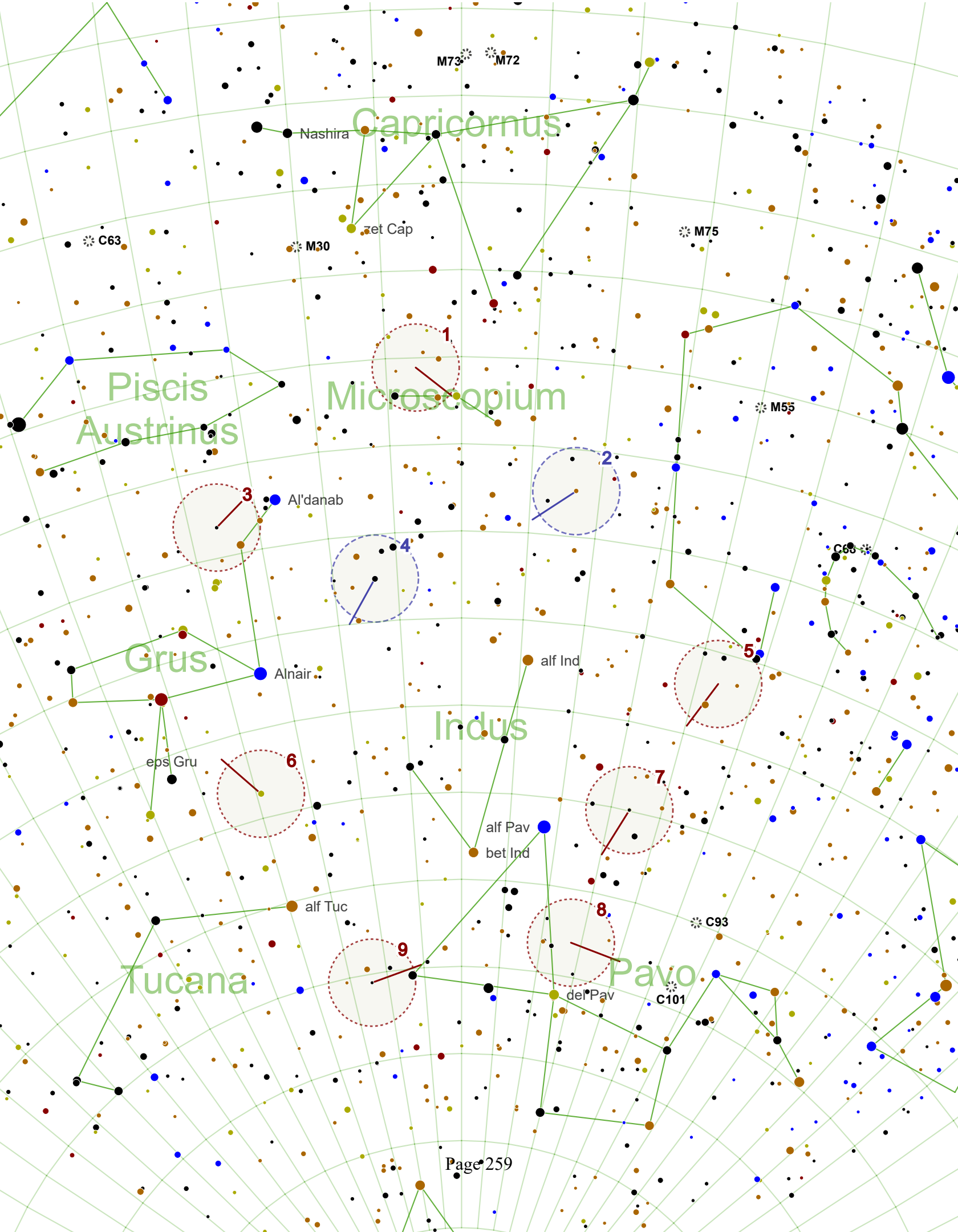
A brilliant bluish primary close to a fairly faint secondary.

The primary is three times the mass of the Sun and only 232 million years old. The pair appear to be gravitationally bound.

Identifiers: Delta Tuc | SAO 255222 | HIP 110838 | GDR2 08023617664

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C63	6.5	planetary nebula
C68	9.7	bright nebula
M30	7.2	globular cluster
M55	6.3	globular cluster
M72	9.3	globular cluster
M73	9.0	asterism
M75	8.5	globular cluster


M73
M72
Capricornus
Nashira
zet Cap
C63
M30
M75
1
Piscis
Austrinus
Microscopium
M55
2
3
Al'danab
4
C65
Grus
Alnair
alf Ind
5
Indus
eps Gru
6
7
alf Pav
bet Ind
alf Tuc
8
C93
9
Tucana
Pavo
del Pav
C101

August: -45° South (3)

1: BU 251 (RA: 21 12 07, DEC: -30 35 22)

***BU 251**: mag.:7.37 | 9.35, sep.:1.8″ , p.a.232°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 212786

2: R 321 (RA: 20 26 53, DEC: -37 24 11)

***R 321**: mag.:6.58 | 8.09, sep.:1.6″ , p.a.123°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 212126

3: HJ 5319 (RA: 22 12 02, DEC: -38 18 11)

***HJ 5319**: mag.:7.65 | 7.66, sep.:2.1″ , p.a.316°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 213631

4: MLO 6 AB (RA: 21 27 02, DEC: -42 32 52)

***MLO 6 AB**: mag.:5.63 | 8.15, sep.:2.8″ , p.a.151°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 230692

5: I 118 (RA: 19 32 53, DEC: -46 46 38)

***I 118**: mag.:7.39 | 9.42, sep.:1.2″ , p.a.143°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 229739

6: HDO 298 (RA: 22 18 16, DEC: -53 37 38)

***HDO 298**: mag.:5.4 | 9.7, sep.:1.9″ , p.a.49°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 247400

7: DUN 227 (RA: 19 52 38, DEC: -54 58 16)

***DUN 227**: mag.:5.8 | 6.39, sep.:23″ , p.a.148°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 246311

8: HJ 5163 (RA: 20 05 09, DEC: -63 03 42)

***HJ 5163**: mag.:7.73 | 8.44, sep.:1.3″ , p.a.249°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 254722

9: I 19 AB (RA: 21 48 44, DEC: -65 30 10)

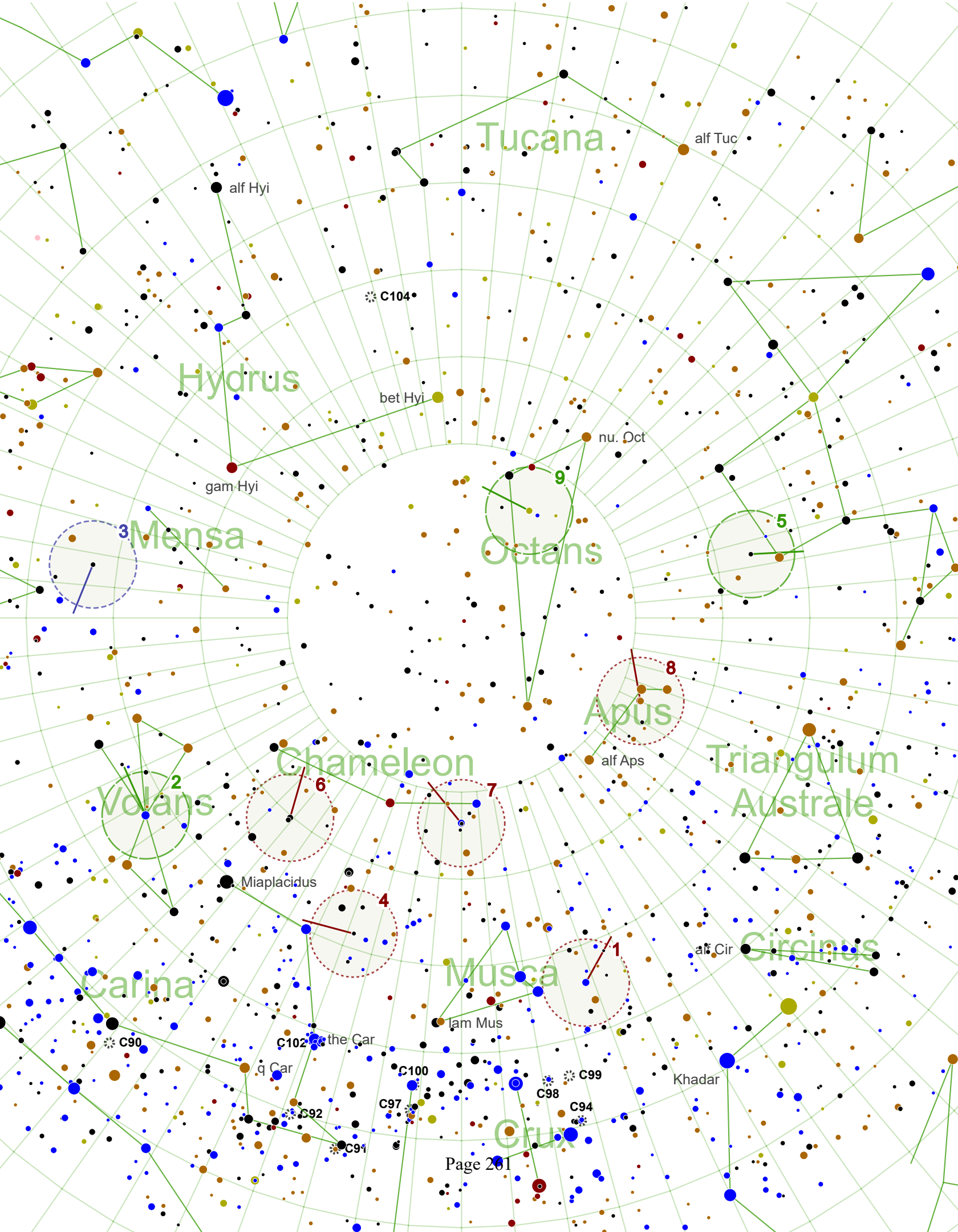
***I 19 AB**: mag.:7.31 | 8.74, sep.:1.5″ , p.a.290°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 255076

Deep Sky Objects

DSO	Mag.	Type
C101	9.0	barred spiral galaxy
C63	6.5	planetary nebula
C68	9.7	bright nebula
C93	5.4	globular cluster
M30	7.2	globular cluster
M55	6.3	globular cluster
M72	9.3	globular cluster
M73	9.0	asterism
M75	8.5	globular cluster


Tucana
alf Tuc
alf Hyi
C104
Hydrus
bet Hyi
nu. Oct
gam Hyi
9
5
3
Mensa
Octans
8
Apus
alf Aps
Chameleon
6
7
2
Volans
Triangulum
Australe
Miaplacidus
4
Circinus
alf Cir
1
Musca
Carina
lam Mus
C90
C102
the Car
q Car
C100
C99
C98
C97
C94
C92
C91
Khadar
Crux

Southern Circumpolar Sky (1)

1: DUN 131 AC (RA: 13 15 15, DEC: -67 53 40)

***DUN 131 AC**: mag.:4.76 | 7.24, sep.:58.2″, p.a.331°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 252224

2: Epsilon Vol (RA: 08 07 56, DEC: -68 37 01)

***RMK 7**: mag.:4.38 | 7.31, sep.:5.7″, p.a.24°*

A close, unbalanced pair with a very bright blue primary and white secondary.

This system is composed of four stars. The primary is actually a spectroscopic pair of blue B-class stars, while the secondary is a spectroscopic pair of white A-class stars.

Identifiers: Epsilon Vol | SAO 250128 | HIP 39794 | GDR2 08289935232

3: I 276 (RA: 05 26 60, DEC: -68 37 22)

***I 276**: mag.:6.66 | 6.95, sep.:1.5″, p.a.158°*

A tight pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 249281

4: DUN 99 AB (RA: 10 44 20, DEC: -70 51 35)

***DUN 99 AB**: mag.:6.26 | 6.47, sep.:62.6″, p.a.75°*

***DUN 99 AC**: mag.:6.26 | 9.75, sep.:42.6″, p.a.45°*

A wide pairing of a fairly bright primary and a fairly bright companion.

Identifiers: SAO 256750

5: R 314 (RA: 18 49 44, DEC: -72 59 45)

***R 314**: mag.:6.2 | 8.08, sep.:2″, p.a.273°*

A very tight double consisting of a fairly bright blueish primary and a significantly fainter secondary.

Discovered by H C Russell, a prolific double star observer and a pioneer of photographic astronomy; he discovered over 500 southern hemisphere double stars.

Identifiers: R 314 | SAO 257630 | HIP 92394 | GDR2 13847155712

6: HJ 4206 AB,C (RA: 09 17 25, DEC: -74 53 40)

***HJ 4206 AB,C**: mag.:5.32 | 9.55, sep.:7.1″, p.a.344°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 256599

7: FGL 1 AB,C (RA: 11 59 38, DEC: -78 13 18)

***FGL 1 AB,C**: mag.:4.91 | 6.62, sep.:134″, p.a.39°*

A wide pairing of a bright primary and a fairly bright companion.

Identifiers: SAO 256894

8: Del1 Aps (RA: 16 20 21, DEC: -78 41 44)

***BSO 22 AB**: mag.:4.9 | 5.41, sep.:103″, p.a.10°*

A wide pairing of a bright primary and a bright companion.

Identifiers: SAO 257380

9: Lambda Oct (RA: 21 50 55, DEC: -82 43 08)

***HJ 5278**: mag.:5.56 | 7.26, sep.:3.5″, p.a.63°*

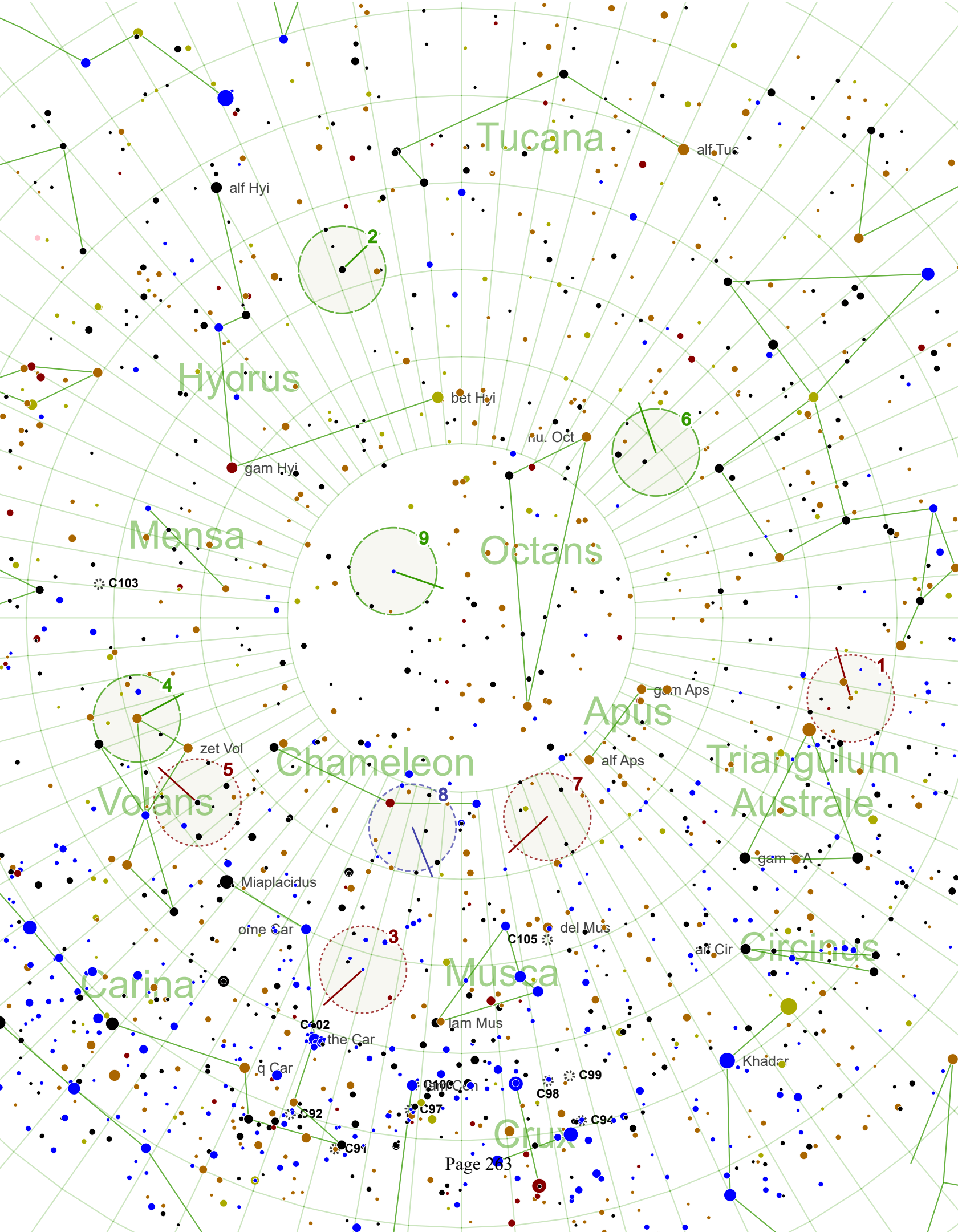
And very close pair with a bright yellow-orange primary and a white companion.

The primary star is a giant star 102 times the luminosity of the sun. It is also thirteen times the diameter of the Sun.

Identifiers: Lambda Oct | SAO 258914 | HIP 107843 | GDR2 63360976256

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C102	1.9	open cluster
C104	6.6	globular cluster
C90	9.7	planetary nebula
C91	3.0	open cluster
C92	6.2	bright nebula
C94	4.2	open cluster
C97	5.3	open cluster
C98	6.9	open cluster
C99	20.0	dark nebula


Tucana
alf Tuc
alf Hyi
2
Hydrus
bet Hyi
nu. Oct
6
gam Hyi
Mensa
9
Octans
C103
4
gam Aps
Apus
1
zet Vol
5
Chamaeleon
alf Aps
7
Triangulum Australe
8
Volans
gam TrA
Miaplacidus
ome Car
3
C105
del Mus
alf Cir
Circinus
Carina
Musca
C102
lam Mus
the Car
Khadar
q Car
C100
C99
C98
C97
C92
C94
Crux
C91

Southern Circumpolar Sky (2)

1: DUN 214 AB (RA: 17 13 18, DEC: -67 11 48)

***DUN 214 AB**: mag.:5.99 | 8.78, sep.:39.1″ , p.a.16°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 253827

2: Kappa Tuc (RA: 01 15 46, DEC: -68 52 33)

***HJ 3423 AB**: mag.:4.88 | 7.54, sep.:4.6″ , p.a.314°*

***I 27 CD**: mag.:7.76 | 8.26, sep.:1″ , p.a.357°*

A tight pair of light yellow and yellow stars distantly separated from an extremely tight pair of orange suns.

A fine triple system, even quadruple on perfect nights with a large telescope. The system is in our stellar neighborhood, being a mere 68 light-years from Earth.

Identifiers: Kappa Tuc | SAO 248346 | HIP 5896

3: HJ 4393 (RA: 10 57 20, DEC: -69 02 17)

***HJ 4393**: mag.:6.6 | 8.67, sep.:8.7″ , p.a.132°*

A close pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 251195

4: Gam2 Vol (RA: 07 08 45, DEC: -70 29 56)

***DUN 42**: mag.:3.86 | 5.43, sep.:14.2″ , p.a.298°*

A brilliant orange primary easily separated from a bright yellowish companion.

This physical double is 140 light-years from Earth. The brighter K-class giant is Gamma 2 Volantis, while the companion, a main sequence F star, is Gamma 1 Volantis.

Identifiers: Gam2 Vol | SAO 256374 | HIP 34481 | GDR2 95348357120

5: BSO 17 AC (RA: 08 19 49, DEC: -71 30 54)

***BSO 17 AB**: mag.:5.31 | 5.59, sep.:64″ , p.a.58°*

***BSO 17 AC**: mag.:5.31 | 7.67, sep.:98.4″ , p.a.48°*

***BSO 17 BC**: mag.:5.59 | 7.67, sep.:37.2″ , p.a.30°*

A wide pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 256497

6: Mu2 Oct (RA: 20 41 44, DEC: -75 21 03)

***DUN 232**: mag.:6.51 | 7.07, sep.:16.6″ , p.a.19°*

A well balanced and easily separated pair of yellow suns.

The pair are quite similar to our Sun, although somewhat brighter (the primary is 3.7 times the Sun's luminosity). Mu2 Oct has a massive exoplanet at least 6.9 times Jupiter's mass.

Identifiers: Mu2 Oct | SAO 257836 | HIP 102125 | GDR2 18965772416

7: S Cha (RA: 13 33 14, DEC: -77 34 10)

***HJ 4590**: mag.:6.58 | 9.22, sep.:22″ , p.a.133°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 257060

8: DI Cha (RA: 11 07 21, DEC: -77 38 07)

***GHE 27 AB**: mag.:6.4 | 8.3, sep.:2.5″ , p.a.284°*

***REP 17 AB**: mag.:6.22 | 7.28, sep.:4.6″ , p.a.202°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO

9: R 38 (RA: 03 42 33, DEC: -85 15 43)

***R 38**: mag.:6.63 | 8.08, sep.:1.9″ , p.a.251°*

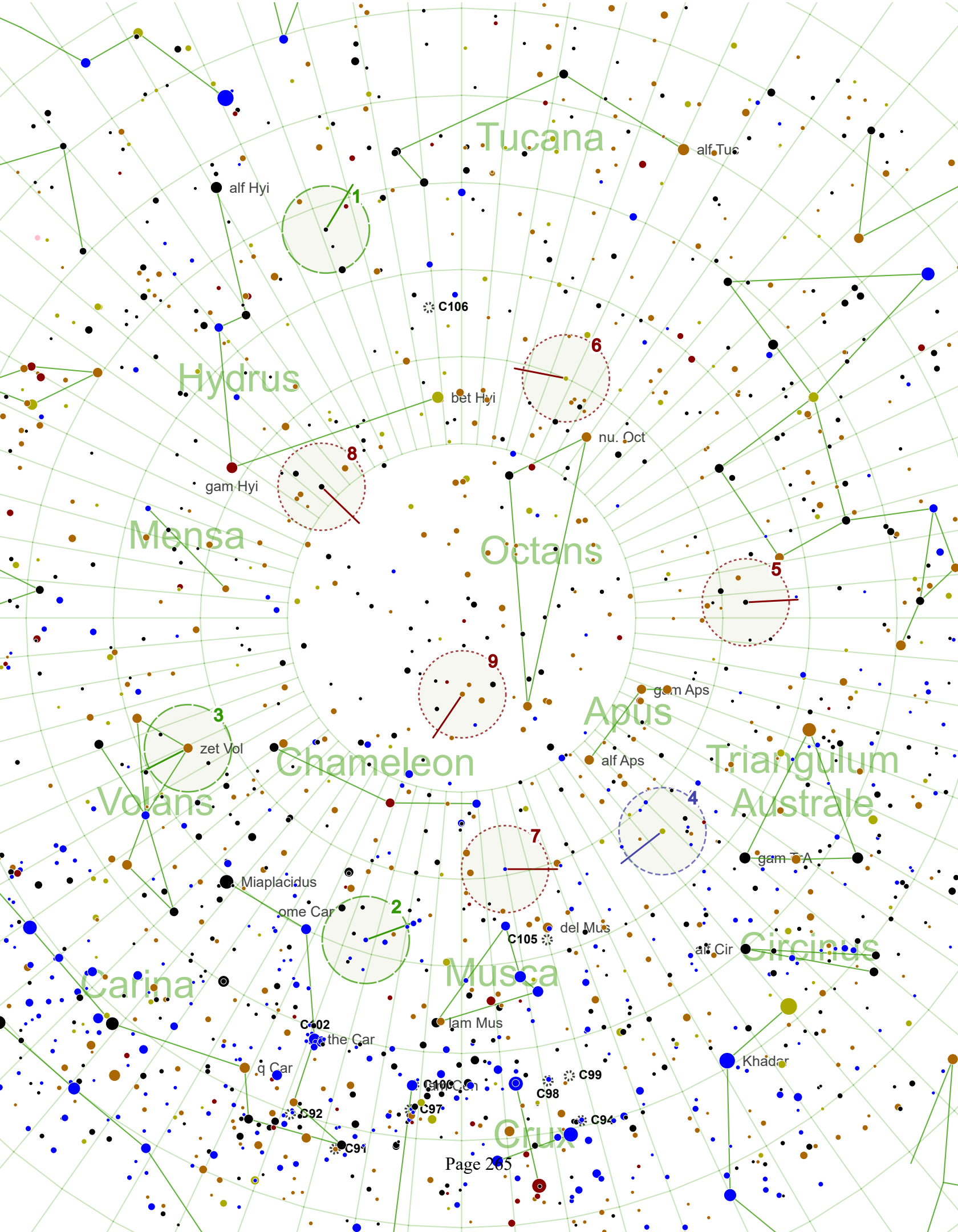
A very tight double, but the moderately bright blueish primary does not overwhelm the fainter secondary.

The "R" code in the Washington Double Star Catalog refers to H C Russell's observations from Sydney in the period 1871 to 1881.

Identifiers: R 38 | SAO 258356 | HIP 17328 | GDR2 82770275968

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C102	1.9	open cluster
C103	4.0	bright nebula
C105	7.3	globular cluster
C91	3.0	open cluster
C92	6.2	bright nebula
C94	4.2	open cluster
C97	5.3	open cluster
C98	6.9	open cluster
C99	20.0	dark nebula


Tucana
alf Tuc
alf Hyi
1
C106
Hydrus
6
bet Hyi
nu. Oct
8
gam Hyi
Mensa
Octans
5
9
gam Aps
Apus
3
zet Vol
Chameleon
alf Aps
Triangulum Australe
Volans
4
7
gam TrA
Miaplacidus
ome Car
2
del Mus
C105
alf Cir
Circinus
Carina
Musca
C102
the Car
lam Mus
Khadar
q Car
C100
C99
C98
C97
C92
C94
Crux
C91

Southern Circumpolar Sky (3)

1: HJ 3426 (RA: 01 17 04, DEC: -66 23 50)

***HJ 3426**: mag.:6.41 | 8.27, sep.:2.4" , p.a.329°*

An extremely close pairing, with a fairly bright white primary and moderate secondary.

The system is 307 light-years from Earth. Globular cluster Caldwell 104 (mag. 6.6) is one finder circle to the south, and the Small Magellanic Cloud is a further two degrees south of that.

Identifiers: HJ 3426 | SAO 248350 | HIP 5992 | GDR2 35297588480

2: HJ 4383 (RA: 10 53 42, DEC: -70 43 13)

***HJ 4383**: mag.:6.38 | 7.09, sep.:1.5" , p.a.290°*

An extremely tight and relatively balanced pair of bluish stars.

The brilliant "Southern Pleiades" open cluster (IC 2602) is one finder circle north of this double. This cluster, also known as the Theta Carinae cluster after its brightest member, is the third brightest open cluster in Earth's sky.

Identifiers: HJ 4383 | SAO 256770 | HIP 53272 | GDR2 70702032640

3: Zeta Vol (RA: 07 41 49, DEC: -72 36 22)

***DUN 57**: mag.:4.06 | 9.32, sep.:16" , p.a.117°*

A very bright orange primary star comfortably separated from a much fainter companion.

The system is also known as DUN 57, after its discoverer J Dunlop (1829). The primary is an orange giant 11 times the radius of the Sun. With Zeta Volantis centered, the double HJ 3997 lies to the southern edge of the finder circle.

Identifiers: Zeta Vol | SAO 256438 | HIP 37504 | GDR2 88430032256

4: I 236 (RA: 14 53 14, DEC: -73 11 24)

***I 236**: mag.:5.87 | 7.59, sep.:2.3" , p.a.128°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 257206

5: HDO 284 AB (RA: 18 12 34, DEC: -73 40 21)

***HDO 284 AB**: mag.:5.96 | 9.14, sep.:2.1" , p.a.273°*

A tight pairing of a bright primary and a faint companion.

Identifiers: SAO 257571

6: DUN 238 AB (RA: 22 25 51, DEC: -75 00 56)

***DUN 238 AB**: mag.:6.19 | 8.85, sep.:20.9" , p.a.79°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 258036

7: I 296 (RA: 12 39 15, DEC: -75 22 14)

***I 296**: mag.:6.6 | 9.1, sep.:2" , p.a.270°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 256967

8: BN Hyi (RA: 03 07 32, DEC: -78 59 21)

***HJ 3568**: mag.:5.7 | 7.7, sep.:14.9" , p.a.226°*

A comfortably separated pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 255962

9: HJ 4490 (RA: 12 02 20, DEC: -85 37 54)

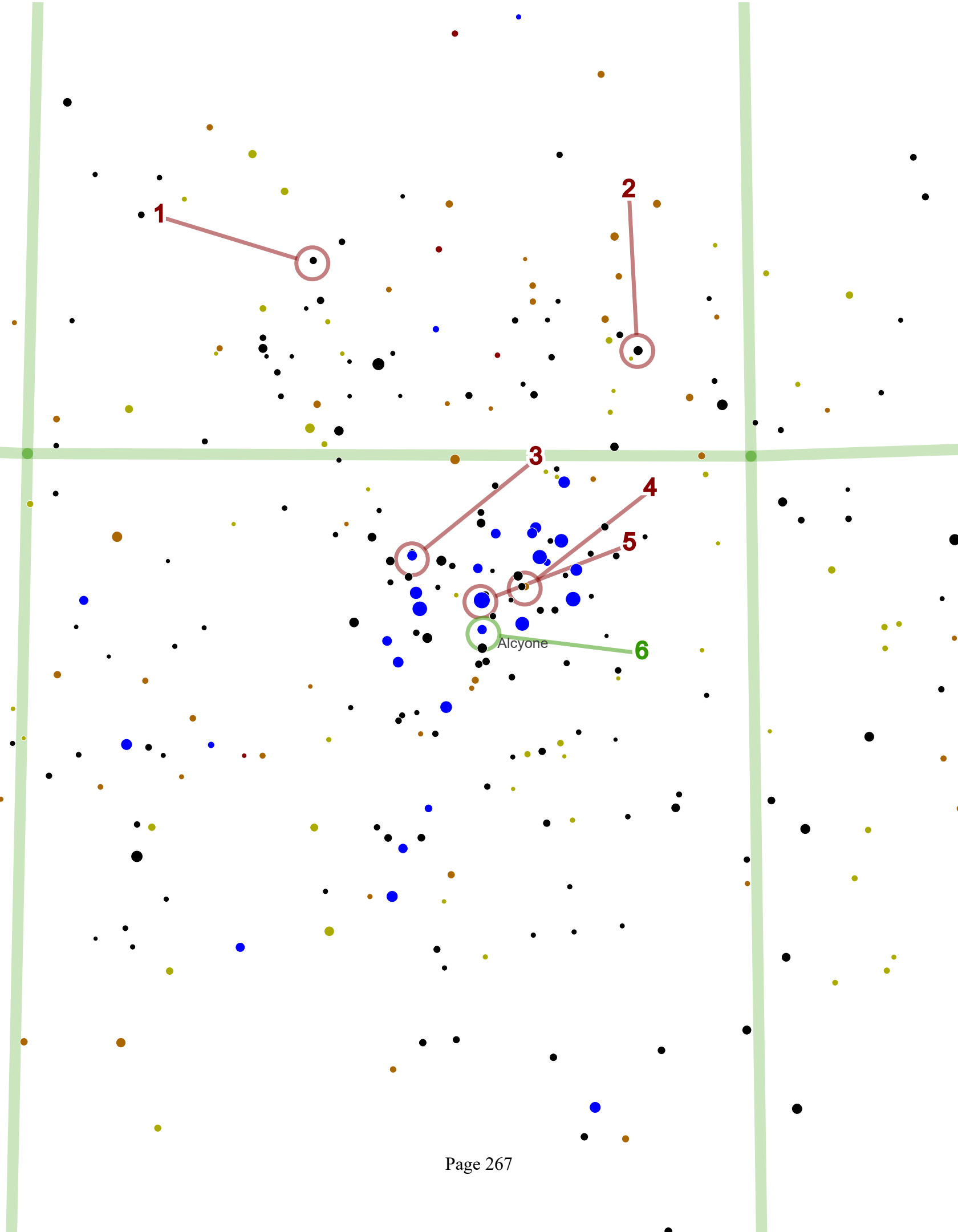
***HJ 4490**: mag.:6.17 | 8.97, sep.:24.8" , p.a.146°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 258632

Deep Sky Objects

DSO	Mag.	Type
C100	4.5	open cluster
C102	1.9	open cluster
C105	7.3	globular cluster
C106	4.0	globular cluster
C91	3.0	open cluster
C92	6.2	bright nebula
C94	4.2	open cluster
C97	5.3	open cluster
C98	6.9	open cluster
C99	20.0	dark nebula


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Alcyone
6

Mel 22 (Pleiades)

1: HJ 3253 (RA: 03 52 10, DEC: +26 13 53)

HJ 3253*: mag.:8.09 | 9.7, sep.:31.9″ , p.a.73°*

A wide pairing of a faint primary and a faint companion.

Identifiers: SAO 76284

2: STF 435 (RA: 03 43 07, DEC: +25 40 53)

STF 435*: mag.:7.2 | 8.87, sep.:13.2″ , p.a.3°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 76094

3: STTA 40 AB (RA: 03 49 22, DEC: +24 22 52)

STTA 40 AB*: mag.:6.58 | 7.53, sep.:86.8″ , p.a.309°*

A wide pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 76236

4: S 437 AB,C (RA: 03 46 16, DEC: +24 11 24)

BU 536 AB*: mag.:8.13 | 9.39, sep.:1″ , p.a.179°*

S 437 AB,C*: mag.:8.13 | 7.7, sep.:38.8″ , p.a.308°*

A wide pairing of a faint primary and a fairly faint companion.

Identifiers: SAO 76169

5: Alcyone (RA: 03 47 29, DEC: +24 06 19)

STFA 8 AB*: mag.:2.83 | 6.27, sep.:117.6″ , p.a.291°*

STFA 8 BD*: mag.:6.27 | 8.22, sep.:86.2″ , p.a.345°*

STFA 8 BE*: mag.:6.27 | 8.73, sep.:75.2″ , p.a.305°*

A wide pairing of a brilliant primary and a fairly bright companion.

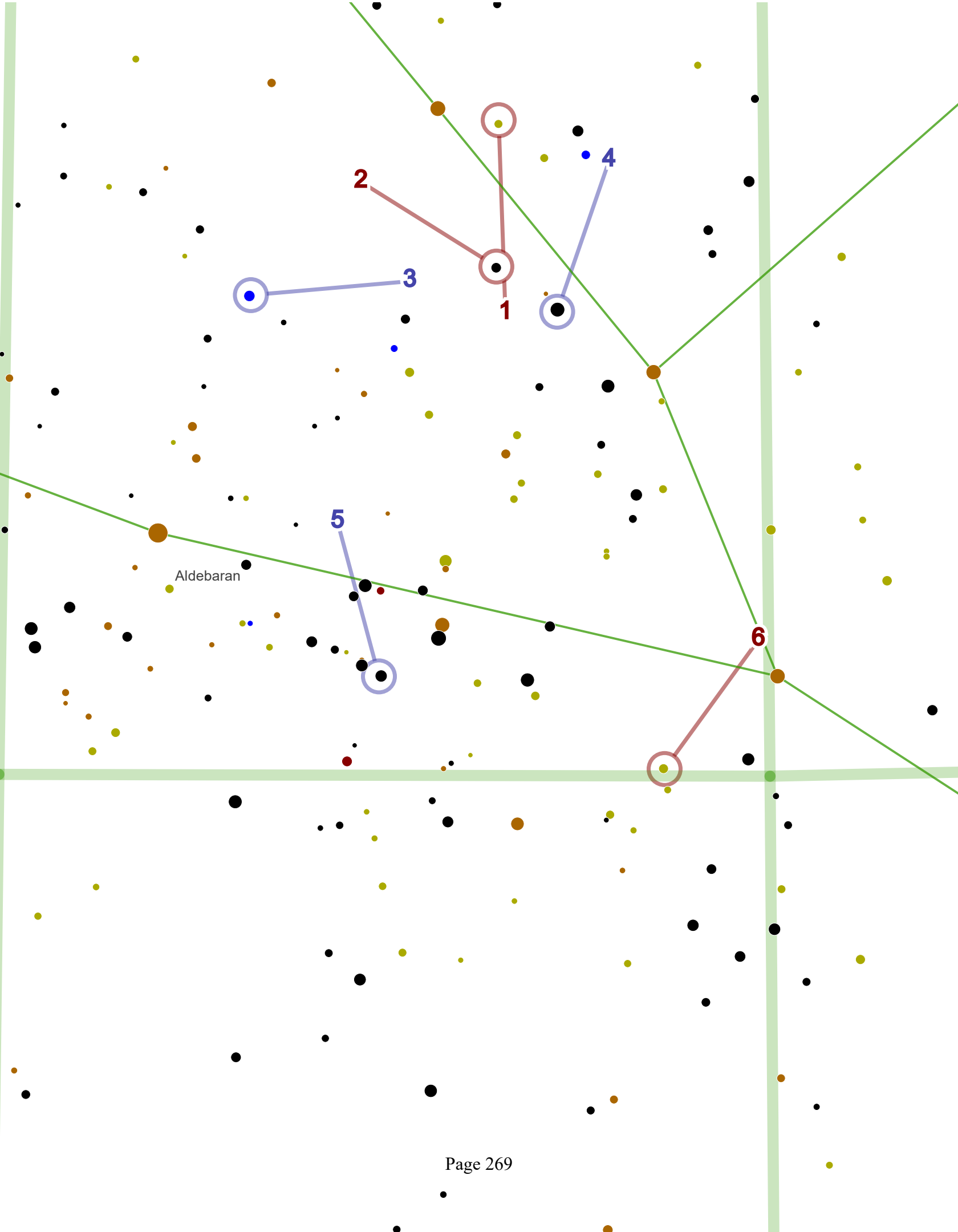
Identifiers: SAO 76199

6: Struve 450 (RA: 03 47 24, DEC: +23 54 53)

STF 450 AB*: mag.:7.29 | 9.4, sep.:5.7″ , p.a.263°*

A close pair of white stars, not very bright but easily found.

Identifiers: Struve 450 | SAO 76197 | GDR2 611941376


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Aldebaran

Mel 25 (Hyades)

1: STF 546 (RA: 04 27 01, DEC: +19 07 04)

***STF 546**: mag.:7.94 | 9.21, sep.:7″, p.a.182°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 93940

2: STF 545 AB (RA: 04 27 05, DEC: +18 12 27)

***STF 545 AB**: mag.:6.92 | 8.78, sep.:19″, p.a.58°*

A comfortably separated pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 93942

3: STF 559 (RA: 04 33 33, DEC: +18 01 00)

***STF 559**: mag.:6.97 | 7.02, sep.:3.1″, p.a.275°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 94002

4: Del3 Tau (RA: 04 25 29, DEC: +17 55 40)

***KUI 17 AB**: mag.:4.26 | 7.85, sep.:1.8″, p.a.341°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 93923

5: 80 Tau (RA: 04 30 09, DEC: +15 38 16)

***STF 554**: mag.:5.7 | 8.12, sep.:1.4″, p.a.15°*

A tight pairing of a bright primary and a faint companion.

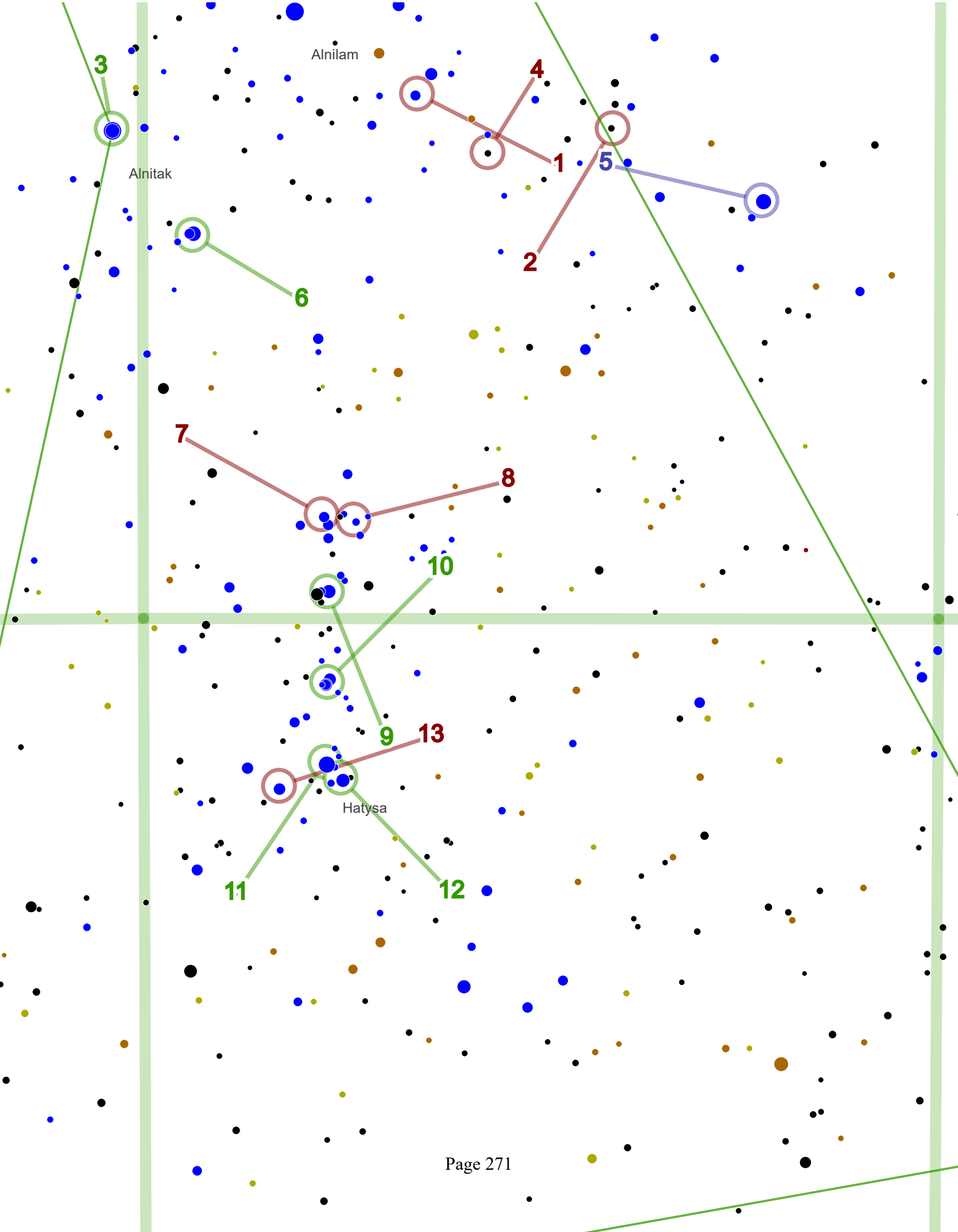
Identifiers: SAO 93970

6: STT 82 AB (RA: 04 22 44, DEC: +15 03 22)

***STT 82 AB**: mag.:7.31 | 8.63, sep.:1.2″, p.a.324°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 93896


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Alnilam
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NGC 1980 (Orion)

1: STF 734 AC (RA: 05 33 07, DEC: -01 43 02)

***STF 734 AB**: mag.:6.67 | 8.22, sep.:1.6" , p.a.355°*

***STF 734 AC**: mag.:6.67 | 8.35, sep.:29.2" , p.a.243°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 132247

2: HJ 702 (RA: 05 28 13, DEC: -01 56 28)

***HJ 702**: mag.:8.46 | 9.35, sep.:24.2" , p.a.149°*

A wide pairing of a faint primary and a faint companion.

Identifiers: SAO

3: Zeta Ori (RA: 05 40 46, DEC: -01 56 33)

***STF 774 AB**: mag.:1.88 | 3.7, sep.:2.2" , p.a.167°*

***STF 774 AC**: mag.:1.88 | 9.55, sep.:58.5" , p.a.10°*

A fiercely brilliant close blue-blue pairing, made difficult by the brightness of the primary.

Identifiers: Zeta Ori | SAO 132444 | HIP 26727 | GDR2 28221605248

4: STF 731 AB (RA: 05 31 21, DEC: -02 05 57)

***STF 731 AB**: mag.:8.61 | 9.16, sep.:4.8" , p.a.328°*

A tight pairing of a faint primary and a faint companion.

Identifiers: SAO

5: Algjebba (RA: 05 24 29, DEC: -02 23 50)

***DA 5 AB**: mag.:3.56 | 4.87, sep.:1.9" , p.a.77°*

A tight pairing of a brilliant primary and a bright companion.

Identifiers: SAO 132071

6: Sigma Ori (RA: 05 38 45, DEC: -02 36 00)

***STF 761 BC**: mag.:8.39 | 8.55, sep.:8.5" , p.a.269°*

***STF 762 AB,C**: mag.:3.76 | 8.79, sep.:11.4" , p.a.239°*

***STF 762 AB,D**: mag.:3.76 | 6.56, sep.:12.9" , p.a.84°*

***STF 762 AB,E**: mag.:3.76 | 6.34, sep.:41.4" , p.a.62°*

***STF 762 DC**: mag.:6.56 | 8.79, sep.:23.8" , p.a.252°*

***STF 762 EC**: mag.:6.34 | 8.79, sep.:52.9" , p.a.242°*

***STF 762 ED**: mag.:6.34 | 6.56, sep.:29.8" , p.a.233°*

A blue primary, flanked by one fainter star to the west, and two relatively bright white stars to the east, all easily separated from the primary.

Identifiers: Sigma Ori | SAO 132408 | HIP 26549 | GDR2 39446556544

7: STF 750 (RA: 05 35 31, DEC: -04 21 51)

***STF 750**: mag.:6.43 | 8.39, sep.:4.2" , p.a.61°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 132325

8: STF 743 (RA: 05 34 43, DEC: -04 23 32)

***STF 743**: mag.:7.74 | 8.25, sep.:1.8" , p.a.284°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

9: 42/45 Ori (RA: 05 35 23, DEC: -04 50 18)

***DA 4 AB**: mag.:4.61 | 7.5, sep.:1.2" , p.a.202°*

A very wide and bright binocular pair, the brighter star (42 Ori) being bluish and the other white.

Identifiers: 42/45 Ori | SAO 132320 | HIP 26237 | GDR2 52067563392

10: Theta2 Ori (RA: 05 35 23, DEC: -05 24 58)

***STF 748 AB**: mag.:6.55 | 7.49, sep.:8.9" , p.a.32°*

***STF 748 AC**: mag.:6.55 | 5.06, sep.:12.9" , p.a.133°*

***STF 748 AD**: mag.:6.55 | 6.38, sep.:21.4" , p.a.96°*

***STF 748 BC**: mag.:7.49 | 5.06, sep.:17" , p.a.164°*

***STF 748 BD**: mag.:7.49 | 6.38, sep.:19.4" , p.a.121°*

***STF 748 CD**: mag.:5.06 | 6.38, sep.:13.4" , p.a.62°*

***STFA 16 AB**: mag.:5.03 | 6.19, sep.:52.3" , p.a.94°*

***STFA 16 BC**: mag.:6.19 | 8.46, sep.:76.5" , p.a.102°*

***STFA 17 AD**: mag.:5.03 | 5.06, sep.:134.4" , p.a.315°*

A very wide line of three bright white stars, often overlooked as it is on the border of the spectacular Orion Nebula.

Identifiers: Theta2 Ori | SAO 132321 | HIP 26235

11: Iota Ori (RA: 05 35 26, DEC: -05 54 36)

***STF 752 AB**: mag.:2.77 | 7.73, sep.:12.5" , p.a.146°*

***STF 752 BC**: mag.:7.73 | 9.81, sep.:41.1" , p.a.94°*

In the same field as Struve 747, Iota Orionis is a brilliant white star with an easily separated and reasonably bright blue companion.

Identifiers: Iota Ori | SAO 132323 | HIP 26241 | GDR2 46640875904

12: Struve 747 (RA: 05 35 03, DEC: -06 00 07)

***STF 745 AB**: mag.:8.25 | 9.35, sep.:28.7" , p.a.347°*

***STF 747 AB**: mag.:4.7 | 5.51, sep.:36.3" , p.a.224°*

A very wide pair of well matched and bright white stars.

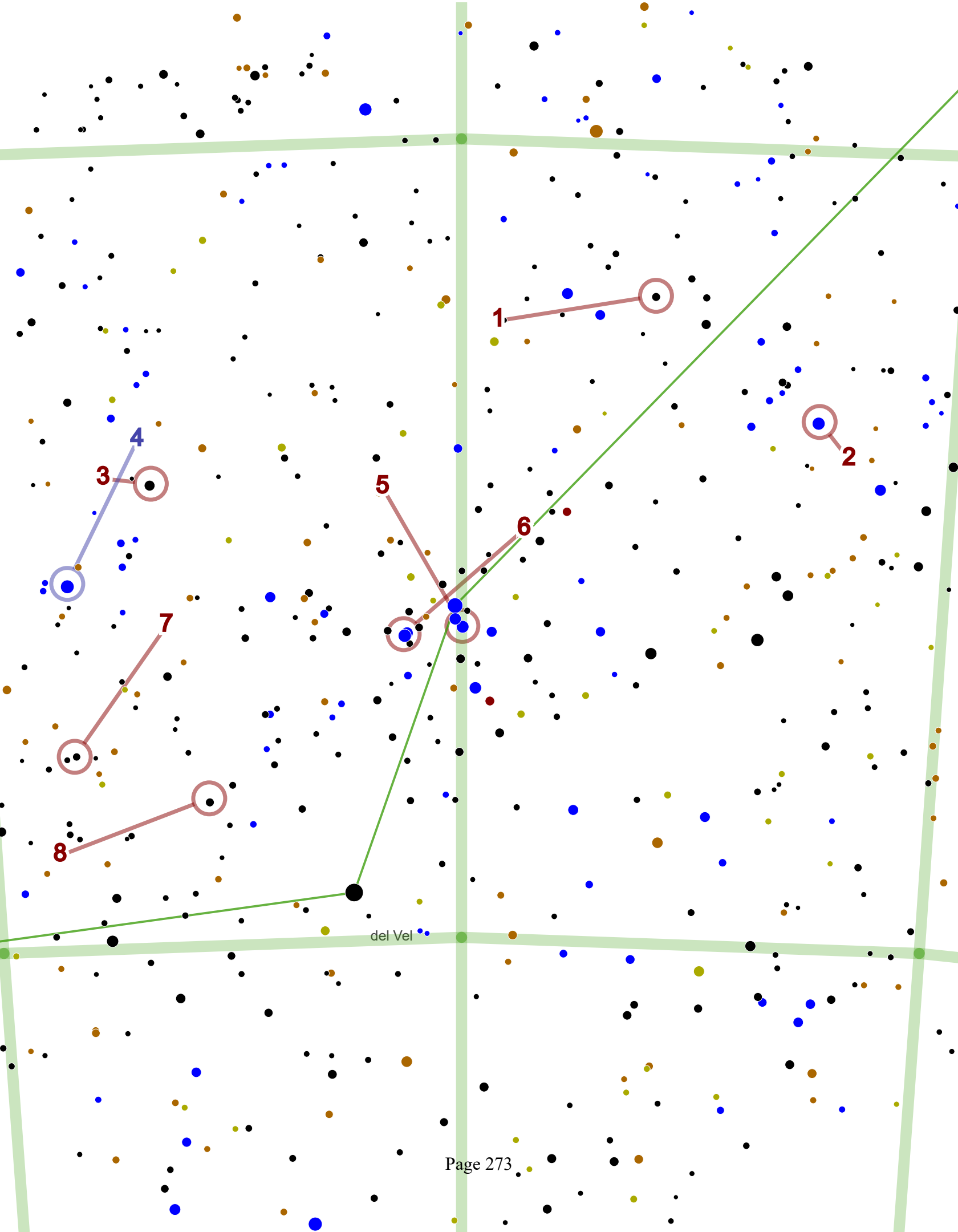
Identifiers: Struve 747 | SAO 132301 | HIP 26199 | GDR2 66581304832

13: STF 754 (RA: 05 36 36, DEC: -06 03 53)

***STF 754**: mag.:5.71 | 9.24, sep.:5.3" , p.a.288°*

A close pairing of a bright primary and a faint companion.

Identifiers: SAO 132359


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IC 2391 (Omicron Velorum Cluster)

1: COO 72 (RA: 08 32 16, DEC: -50 58 17)

***COO 72**: mag.:8.44 | 9.69, sep.:3.6″ , p.a.99°*

A tight pairing of a faint primary and a faint companion.

Identifiers: SAO 236064

2: DUN 69 AB (RA: 08 25 31, DEC: -51 43 39)

***DUN 69 AB**: mag.:5.14 | 9.63, sep.:25.7″ , p.a.218°*

A wide pairing of a bright primary and a faint companion.

Identifiers: SAO 235962

3: CPO 9 (RA: 08 52 41, DEC: -52 07 44)

***CPO 9**: mag.:6.63 | 8.22, sep.:2.9″ , p.a.84°*

A tight pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 236362

4: H Vel (RA: 08 56 19, DEC: -52 43 22)

***R 87**: mag.:4.7 | 7.72, sep.:2.5″ , p.a.334°*

A tight pairing of a bright primary and a fairly faint companion.

Identifiers: SAO 236417

5: NZ Vel (RA: 08 39 58, DEC: -53 03 17)

***HJ 4126**: mag.:5.2 | 8.66, sep.:16.8″ , p.a.30°*

A comfortably separated pairing of a bright primary and a faint companion.

Identifiers: SAO 236157

6: HY Vel (RA: 08 42 25, DEC: -53 06 50)

***BSO 18 A,BC**: mag.:4.79 | 5.45, sep.:76.3″ , p.a.311°*

***BSO 18 BC,D**: mag.:5.45 | 9.9, sep.:60.4″ , p.a.267°*

A wide pairing of a bright primary and a bright companion.

Identifiers: SAO 236205

7: COO 78 (RA: 08 56 25, DEC: -53 48 05)

***COO 78**: mag.:8.93 | 9.01, sep.:10.7″ , p.a.325°*

A comfortably separated pairing of a faint primary and a faint companion.

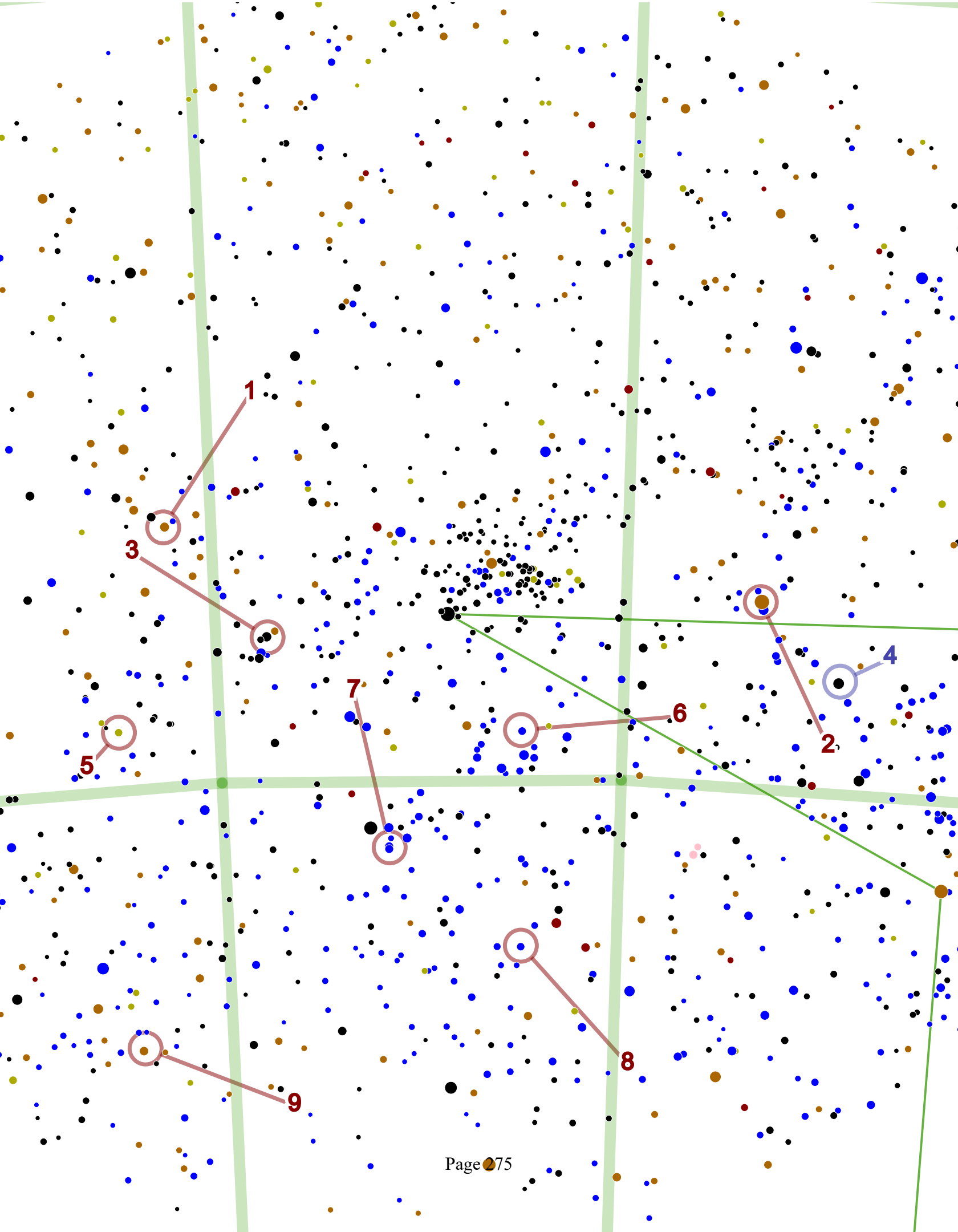
Identifiers: SAO 236422

8: HJ 4148 (RA: 08 50 47, DEC: -54 06 47)

***HJ 4148**: mag.:8.15 | 9.95, sep.:5.6″ , p.a.111°*

A close pairing of a faint primary and a faint companion.

Identifiers: SAO 236326


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NGC 3532 (Wishing Well Cluster)

1: SKF 2009 (RA: 11 22 16, DEC: -58 23 10)

***SKF 2009**: mag.:6.74 | 9.59, sep.:53.5″ , p.a.327°*

A wide pairing of a fairly bright primary and a faint companion.

Identifiers: SAO 239003

2: u Car (RA: 10 53 30, DEC: -58 51 12)

***DUN 102 AB**: mag.:3.88 | 6.23, sep.:160.4″ , p.a.205°*

A wide pairing of a brilliant primary and a fairly bright companion.

Identifiers: SAO 238574

3: R 163 A,BC (RA: 11 17 28, DEC: -59 06 19)

***R 163 A,BC**: mag.:7.24 | 7.6, sep.:1.6″ , p.a.58°*

A tight pairing of a fairly faint primary and a fairly faint companion.

Identifiers: SAO 238939

4: R 161 (RA: 10 49 24, DEC: -59 19 26)

***R 161**: mag.:6.12 | 7.42, sep.:1.1″ , p.a.295°*

A tight pairing of a fairly bright primary and a fairly faint companion.

Identifiers: SAO 238514

5: HRG 56 AB (RA: 11 25 00, DEC: -59 39 06)

***HRG 56 AB**: mag.:8 | 9.97, sep.:6.8″ , p.a.138°*

A close pairing of a faint primary and a faint companion.

Identifiers: SAO 239048

6: GLI 159 (RA: 11 05 03, DEC: -59 42 49)

***GLI 159**: mag.:7.72 | 9.2, sep.:17.5″ , p.a.275°*

A comfortably separated pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 238749

7: BSO 19 A,BC (RA: 11 11 39, DEC: -60 26 36)

***BSO 19 A,BC**: mag.:7.81 | 8.54, sep.:52.5″ , p.a.13°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 251307

8: DUN 105 (RA: 11 04 56, DEC: -61 03 06)

***DUN 105**: mag.:7.58 | 9.83, sep.:23.9″ , p.a.222°*

A wide pairing of a fairly faint primary and a faint companion.

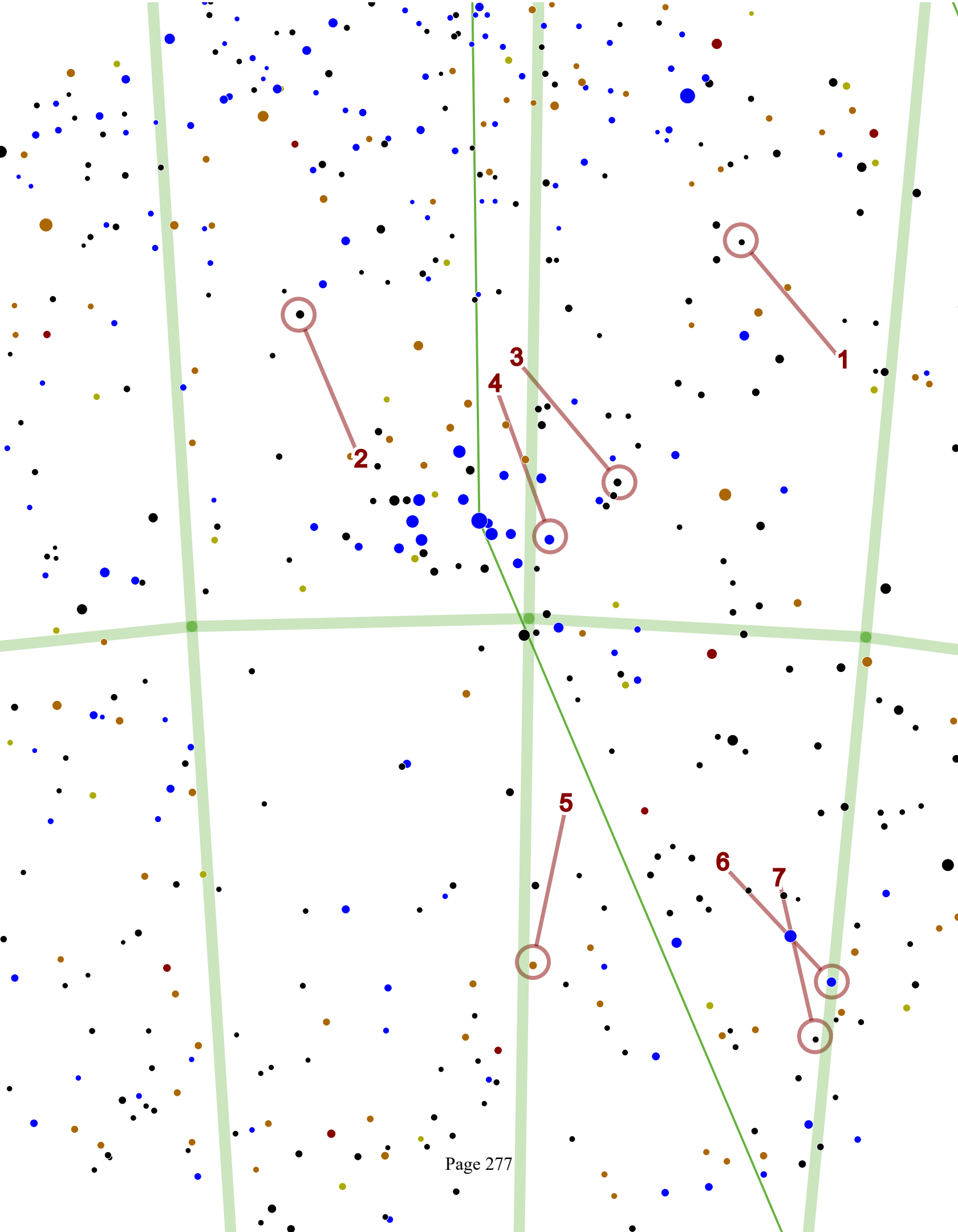
Identifiers: SAO 251253

9: BSO 5 (RA: 11 24 40, DEC: -61 38 51)

***BSO 5**: mag.:7.68 | 8.76, sep.:7.8″ , p.a.249°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 251393


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IC 2602 (Southern Pleiades)

1: DUN 85 (RA: 10 28 48, DEC: -62 35 02)

DUN 85*: mag.:8.3 | 8.76, sep.:22″ , p.a.220°*

A wide pairing of a faint primary and a faint companion.

Identifiers: SAO 250976

2: I 418 (RA: 10 53 01, DEC: -63 05 17)

I 418*: mag.:8.04 | 8.2, sep.:2.1″ , p.a.203°*

A tight pairing of a faint primary and a faint companion.

Identifiers: SAO 251162

3: DUN 93 AB (RA: 10 34 56, DEC: -64 08 02)

DUN 93 AB*: mag.:7.47 | 8.36, sep.:24.3″ , p.a.40°*

A wide pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 251022

4: R 152 (RA: 10 38 51, DEC: -64 29 53)

R 152*: mag.:7.17 | 8.86, sep.:2″ , p.a.20°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 251043

5: NZO 19 (RA: 10 39 24, DEC: -67 09 56)

NZO 19*: mag.:7.67 | 9.77, sep.:5.4″ , p.a.348°*

A close pairing of a fairly faint primary and a faint companion.

Identifiers: SAO

6: R 141 (RA: 10 20 04, DEC: -67 10 04)

R 141*: mag.:7.45 | 8.33, sep.:1.9″ , p.a.43°*

A tight pairing of a fairly faint primary and a faint companion.

Identifiers: SAO 250923

7: HJ 4314 AB (RA: 10 20 49, DEC: -67 31 33)

HJ 4314 AB*: mag.:8.33 | 8.84, sep.:19″ , p.a.13°*

A comfortably separated pairing of a faint primary and a faint companion.

Identifiers: SAO 250928

Acknowledgements

This book would not be possible without the prior work of many others, so I would like to offer my thanks here to a number of my main resources. Sadly there are other resources that I have used over the years to which I also owe thanks but which have become part of the furniture of my mind and have thus been overlooked on the following list.

Jim Kaler has provided rich information on many stars both in published works and also freely through the Internet:

http://stars.astro.illinois.edu/

The Washington Double Star Catalog is the prime resource for detailed data on double stars, and I referred to it via the following queryable online database:

https://www.stelledoppie.it/

Raw data for the Washington Double Star Catalog can be found here:

http://www.astro.gsu.edu/wds/

This is one of the most popular online observing lists for double stars, and got me started with serious double star observing:

http://users.compaqnet.be/doublestars/

The planetarium software Stellarium has been helpful, particularly in selecting double stars that are bright and easily locatable:

http://stellarium.org/

Wikipedia is a phenomenal resource and more trustworthy than many think - but double checking is always advisable, both for Wikipedia and any other online resource!

https://en.wikipedia.org/wiki/Main_Page

The Henry Draper catalog compiled by Annie Jump Cannon is the main resource for star positions in the charts. Some variables and high proper motion star have been manually corrected by me.

https://ui.adsabs.harvard.edu/abs/1993yCat.3135....0C/abstract

The charts would be labelled with incomprehensible Henry Draper numbers without the help of this catalog that cross references Flamsteed and Bayer designations with HD numbers.

https://cdsarc.unistra.fr/viz-bin/cat/IV/27A

In addition to the Bayer and Flamsteed designations, the IAU provides official and usually widely accepted names for a few stars:

https://www.iau.org/public/themes/naming_stars/

The Apache Software Foundation and the Apache FOP contributors provided the PDF and SVG rendering software required for this book. They said FOP 0.96 was dead, but 20 years later it is still going strong. Version 2.6 and counting!

https://xmlgraphics.apache.org/fop/

The World Wide Web Consortium developed the XSL FO and SVG standards used by Apache FOP. In this modern age of the shifting sands of "living standards", I want to give a shout out to good old fashioned standards hammered out by a committee and running to hundreds of pages. The work that went into creating these standards opened up technical publishing technology to the world.

https://www.w3.org/TR/xsl/

https://www.w3.org/TR/SVG2/

The cover image shows 11 and 12 Camelopardalis. The image was taken by David Ritter.

https://en.wikipedia.org/wiki/User:Dritter_wiki

This book received constructive input from the members of Stargazer's Lounge and Cloudy Nights, which brought about many improvements, from diagram colors to indexing of information.

Linda Clarke contributed many hours of patient editing, diagram adjustment, and data normalization that made this book possible.

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