January Constellations of the Month

Aries

Small Scope Objects:

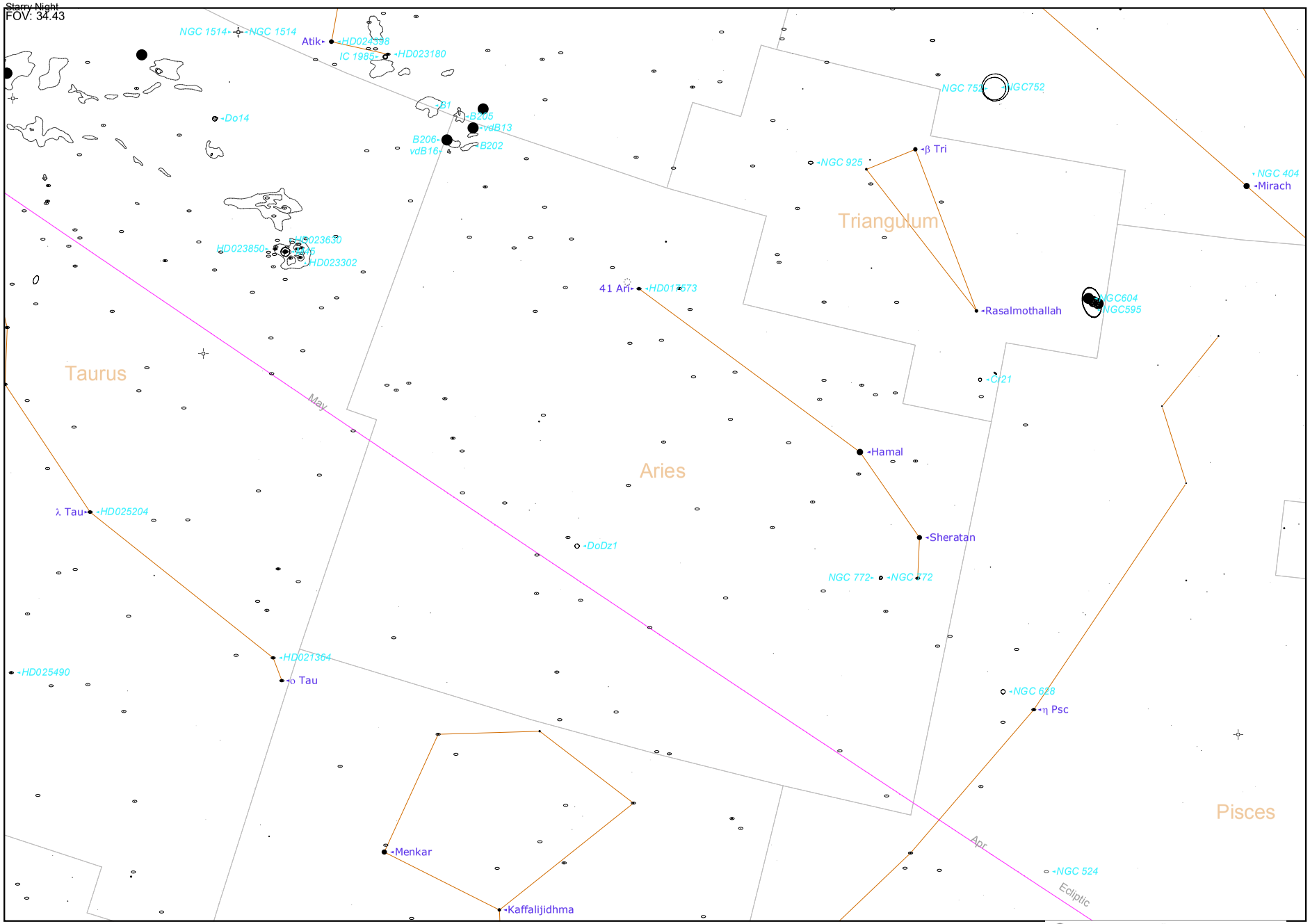
✓	Name	R.A.	Decl.	Details
	☐ Arietis	01hr 53m	+19° 18′	A pair of equal magnitude blue-white stars, shining at mag 4.8. Separation is 7.8 arc seconds. Easily split in any scope. One of the first known doubles - Hooke, 1664.
	1 Arietis	01hr 50m	+22° 17′	A slightly harder double, components are mag. 6.2 and 7.2, with a separation of 2.8 arc seconds in PA 166°. Orange and light blue in colour.
	NGC 772	01hr 59.3m	+19° 01′	A bright Sb spiral galaxy, 7.1 x 4.5 arc minutes in size. Visual magnitude is 10.3, with a bright core. Larger scope owners look for 14th mag. NGC 770, 4 arc minutes south. (110NGC)

Big Scope Objects:

✓	Name	R.A.	Decl.	Details
	DoDz 1	02hr 47m	+17° 12′	A loose open cluster of 12 stars, mag. 8.5 and fainter. 12 arc minutes in diameter. Located SW of 5th magnitude 42 (Pi) Arietis.
	NGC 821	02hr 08m	+11° 00′	A bright E2 elliptical galaxy, 2.5 x 1.5 arc minutes. Magnitude 10.8, mottled appearance in larger scopes.
	NGC 972	02hr 34m	+29° 19′	An Sc spiral galaxy. This elongated smudge glows at mag. 11.3, 3.6 x 2.4 arc minutes in size.
	NGC 1156	02hr 59m	+25° 14′	An interesting irregular galaxy. 3.1 x 2.3 arc minutes in size, mag 11.7. A bright core with patchy mottling in the surrounding halo with larger scopes.
	NGC 877	02hr 18m	+14° 33′	A small, round Sc galaxy 2.4 x 1.8 arc minutes in size. Mag 11.8. Look for NGC 876 (mag 14.5) 2 arc min SW, and NGC 871 (mag 14.2) 12 arc minutes west.
	NGC 803	02hr 03m	+16° 02′	An inclined Sb spiral galaxy, 4.3 x 2 arc minutes. Mag 12.4

Challenge Object:

✓	Name	R.A.	Decl.	Details
	vdB16	03hr 28m	+29° 47′	A faint reflection nebula surrounding a 9th magnitude star, 7.4 x 5.2 arc minutes. As with most reflection nebula, filters will not help. Use generous quantities of dark sky and aperture, with medium to high magnification.



Viewing from Prince George, Canada
Chart centre (J2000): RA: 2h 39m 08.6s Dec: 21° 03' 10"
Altitude: 55° 6.926', Azimuth: 205° 53.640' (south west)

Long: -122° 43' 42" Lat: 53° 55' 09"
2010/01/10 8:30:26 PM (Local)
Limiting Magnitude: 7.2

Canis Major

Small Scope Objects:

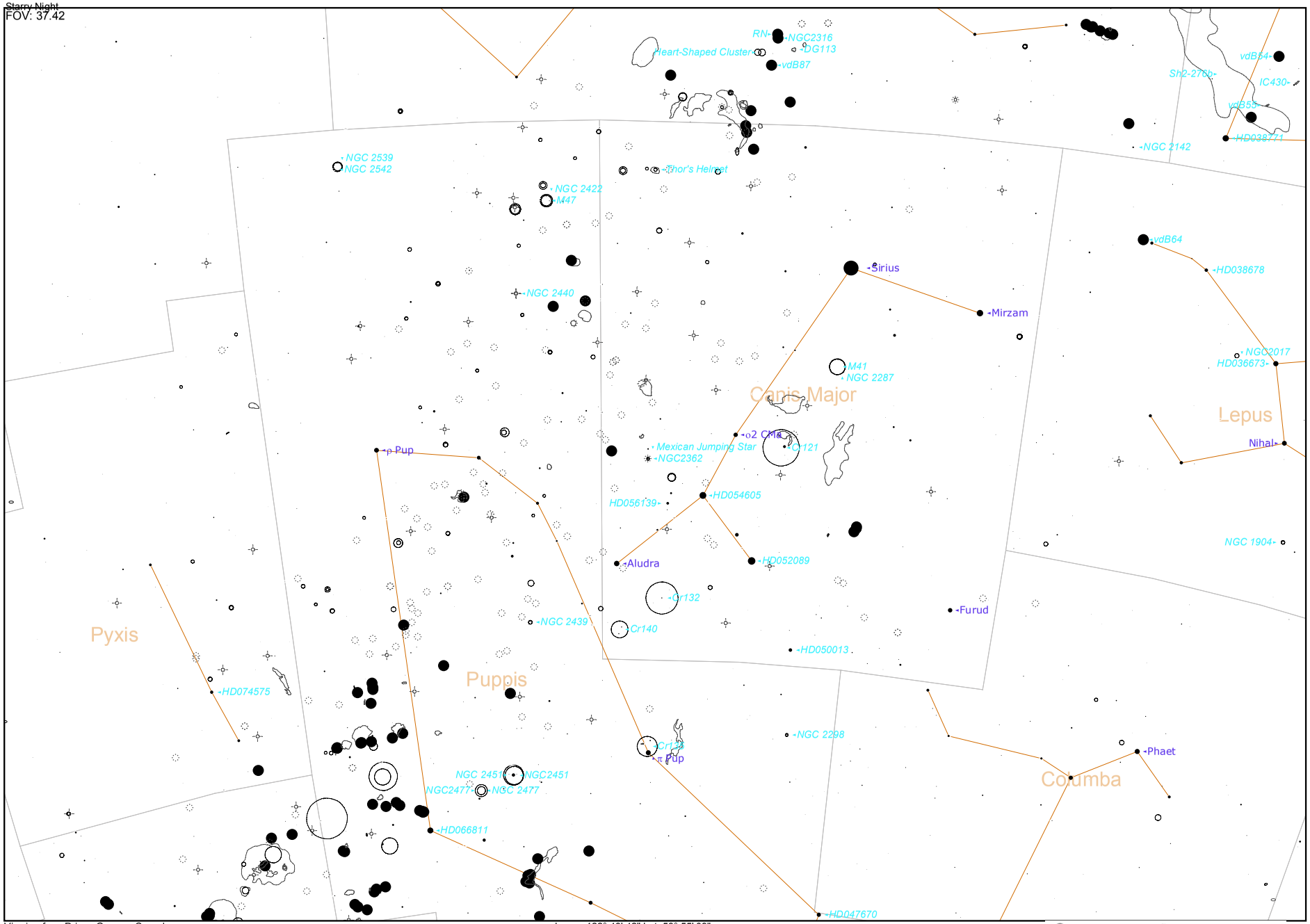
✓	Name	R.A.	Decl.	Details
	M41 (NGC 2287)	06hr 47.0m	-20° 44′	The finest open cluster in Canis Major, about 4° south of Sirius. Easily visible in binoculars, or to the naked eye from a dark site. Contains about 100 stars within 30 arc minutes diameter magnitude 7 and fainter, total magnitude 5.0.
	NGC 2383	07hr 24.8m	-20° 56′	A fainter, compact open cluster, only 2 arc minutes in size. Contains 50 stars, magnitudes 12 and fainter. Total magnitude 8.8. Use higher power to resolve.
	NGC 2362	07hr 18.7m	-24° 58′	Another bright compact cluster surrounding a 4th magnitude star. One of the youngest star clusters, approx. 1 million years. 60 stars mag. 7.5 to 13, 6 arc minutes in diameter. Total magnitude 4.1
	NGC 2243	06hr 29.8m	-31° 17′	A rich open cluster of 100 stars, compressed into 5 arc minutes. Total magnitude 9.4. Resembles a globular cluster. Use high power to resolve.

Big Scope Objects:

✓	Name	R.A.	Decl.	Details
	IC 2165 (PK221-12.1)	06hr 21.7m	-12° 59′	A magnitude 12.5 planetary nebula, 6 arc seconds in size. Bluish in colour, use high power to distinguish it from nearby stars.
	NGC 2207	06hr 16.4m	-21° 22′	An Sc spiral galaxy, 4.3 x 2.9 arc minutes. Magnitude 10.6 with a bright nucleus, and a dark lane cutting across the minor axis. Forms an interacting pair with IC 2163, magnitude 12.6, 3 x 1.2 arc minutes.
	NGC 2217	06hr 21.7m	-27° 14′	An SBa barred spiral galaxy, elongated E-W. 4.8 x 4.4 arc minutes, magnitude 10.4.
	NGC 2359 (Gum 4)	07hr 18.6m	-13° 12′	A more challenging emission nebula. 8 x 6 arc minutes in size. Responds well to UHC or OIII filters. (110NGC)
	NGC 2283	06hr 46m	-18° 14′	A faint 13th magnitude galaxy located 1.5° south of Sirius. 3.7 x 2.8 arc minutes in size, in a rich star field.

Challenge Objects:

✓	Name	R.A.	Decl.	Details
	IC 468	07hr 17.5m	-13° 05′	Located just NW of NGC 2359 (above), this faint patch of nebulosity covers 20 x 20 arc minutes of sky and will require filters to observe.
	IC 2177 complex	07hr 05m	-11° 20′	An enormous complex of emission and reflection nebulosity, with several embedded open clusters. About 2° in length, oriented N-S. Filters and good skies will be more important than telescope size.



Viewing from Prince George, Canada
Chart centre (J2000): RA: 7h 17m 21.0s Dec: -25° 10' 52"
Altitude: 10° 50.830', Azimuth: 182° 27.629' (south)

Long: -122° 43' 42" Lat: 53° 55' 09"
2010/01/11 12:16:26 AM (Local)
Limiting Magnitude: 7.0

Globular Cluster
Cluster
Quasar
Variable
Multiple
Planetary
Galaxy

Canis Minor

Naked Eye Objects:

✔	Name	R.A.	Decl.	Details
	☐ CMi (Procyon)	07hr 39m	+05° 14′	The fifth closest naked-eye star, 11.3 light-years away, mag 0.4. An optical double with a mag. 11.6 star, 2 arc minutes away in P.A. 13°. A binary star with a white dwarf companion, 5 arc seconds away at mag 12.9. (CMi)

Small Scope Objects:

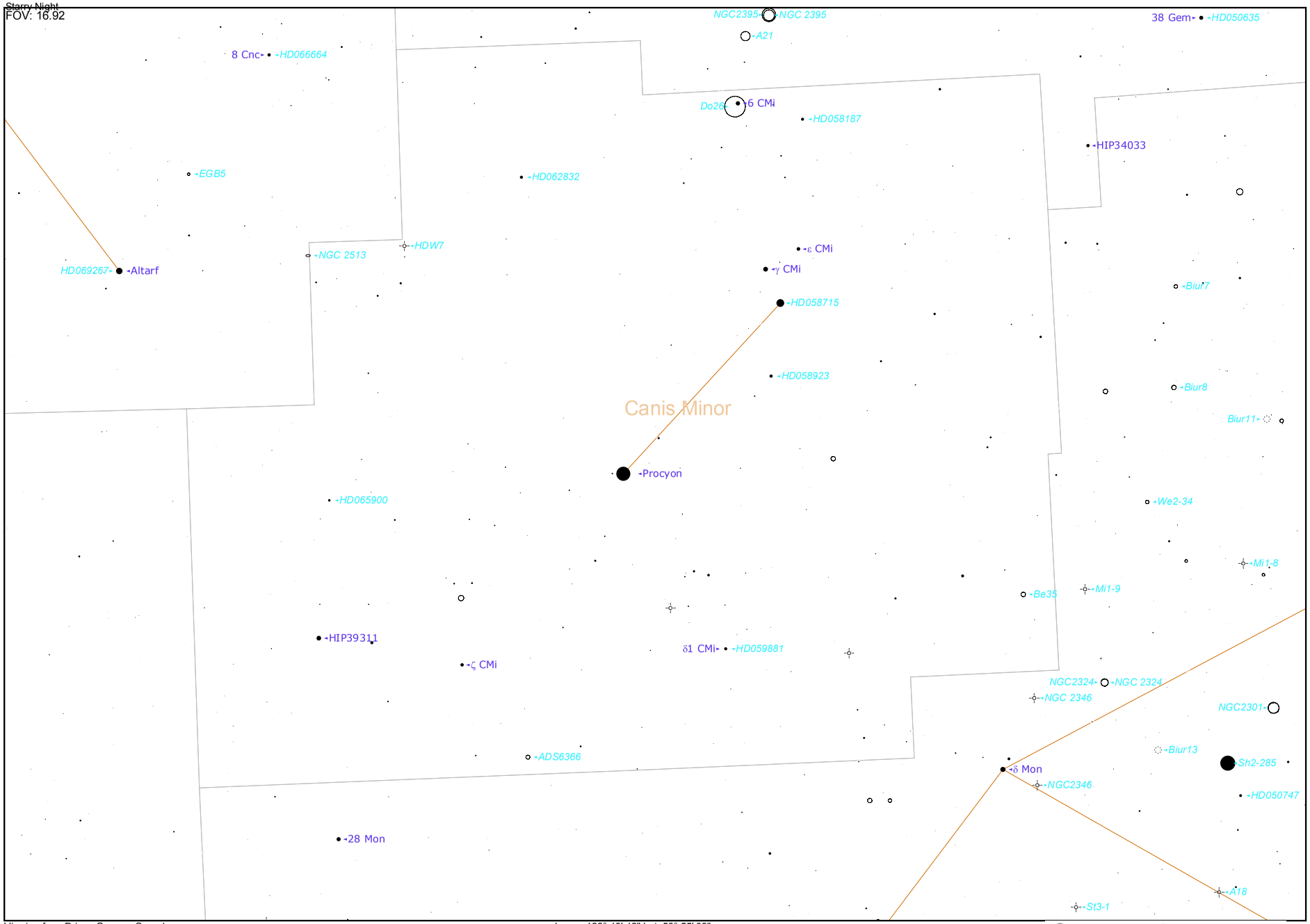
✔	Name	R.A.	Decl.	Details
	NGC 3115	10hr 05.2m	-07° 43′	The "Spindle Galaxy" - a bright lenticular galaxy at mag. 10.0. 4 x 1 arc minutes in size, showing little detail. (110NGC) (Sex)
	NGC 3169 Group	10hr 14m	+03° 04′	The brightest member of a multiple galaxy group, mag 11.1, an Sa spiral measuring 5.4 x 2.7 arc minutes. Look for NGC 3166 nearby at mag 11.3 and NGC 3156 37 arc minutes south at mag. 13.1. (Sex)

Big Scope Objects:

✔	Name	R.A.	Decl.	Details
	Abell 24	07hr 52m	+03° 00′	A tricky planetary nebula, 6 x 5.5 arc minutes across. Mag. 13.6 with a mag 17.1 central star. (CMi)
	NGC 2485	07hr 56m	+07° 29′	A compact Sa spiral, 1.6 arc minutes across, mag 13.1 (CMi)
	NGC 2470	07hr 54m	+04° 28′	A faint mag 13.6 Sa-b galaxy, 1.9 x 0.5 arc minutes (CMi)
	NGC 3110	10hr 04m	-06° 28′	A mag 13.5 galaxy, 1.5 x .7 arc minutes in size. (Sex)
	NGC 3423	10hr 51m	+05° 50′	A nice Sc spiral on the Leo/Sextans border. Mag 11.6, 3.8 x 3.2 arc minutes in size. (Sex)

Challenge Objects:

✔	Name	R.A.	Decl.	Details
	Abell 22	07hr 36m	+01° 42′	A small, very faint planetary. Mag. 15.4, 87 x 60 arc seconds. Will require filters, large optics and an experienced observer! (CMi)


Starry Night
FOV: 16.92
NGC2395
NGC 2395
A21
38 Gem
HD050635
8 Cnc
HD066664
Do26
6 CMi
HD058187
HIP34033
EGB5
HD062832
HDW7
NGC 2513
ε CMi
HD069267
Altarf
γ CMi
Biur7
HD058715
HD058923
Biur8
Canis Minor
Biur11
Procyon
HD065900
We2-34
Mi1-8
Mi1-9
Be35
HIP39311
δ1 CMi
HD059881
ζ CMi
NGC2324
NGC 2324
NGC 2346
NGC2301
Biur13
ADS6366
δ Mon
Sh2-285
NGC2346
HD050747
28 Mon
A18
St3-1
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Taurus

Naked Eye Objects:

✓	Name	R.A.	Decl.	Details
	Hyades	04hr 27m	+16° 00′	A large "V" shaped open cluster 5.5° across, forming the face of Taurus. Aldeberan marks the "eye" of the bull but is a foreground object. The second closest cluster to us, at 40 parsecs away.
	M45	03hr 47.0m	+24° 07′	The "Pleiades" or "Seven Sisters" - another bright open cluster. The seven brightest stars should be visible from a dark site. Located 120 parsecs away it is smaller and fainter than the Hyades.

Small Scope Objects:

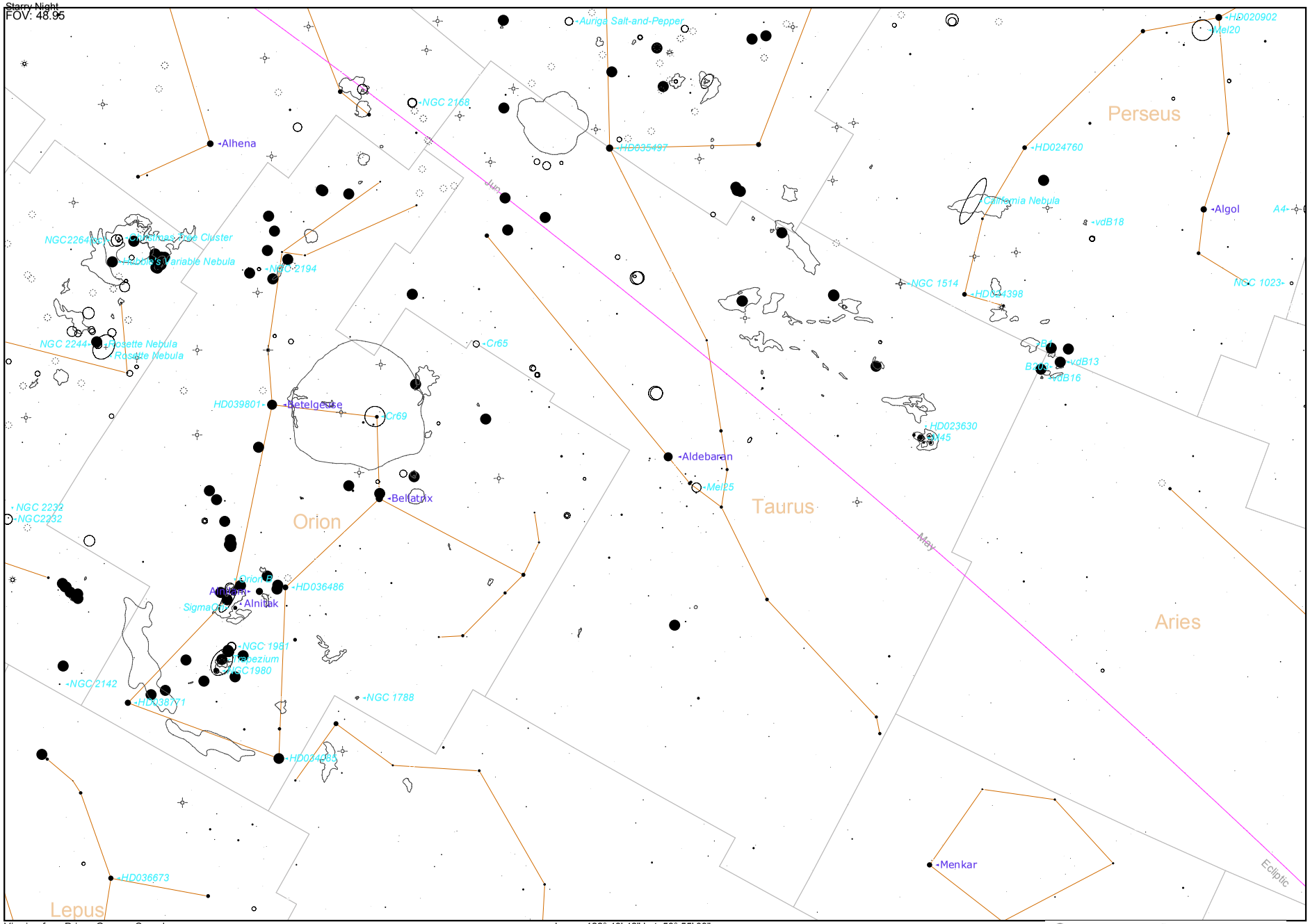
✓	Name	R.A.	Decl.	Details
	M1 (NGC 1952)	05hr 34.5m	+22° 01′	The "Crab Nebula" - the brightest example of a supernova remnant, formed in 1054 and still expanding. 8 x 6 arc minutes in size glowing at mag. 8.5.
	NGC 1647	04hr 46m	+19° 04′	An easy open cluster of 200 stars. Measuring 45 arc minutes and shining at mag. 6.4. Often overlooked due to it's proximity to the Hyades.
	NGC 1746	05hr 03m	+23° 49′	An open cluster of about 20 stars. Magnitude 6.1 covering 42 arc minutes. Look for NGC 1750 and NGC 1758 superimposed on NGC 1746.
	NGC 1807	05hr 11m	+16° 32′	Another cluster of 20 stars squeezed into 17 arc minutes. An easy target at mag. 7.0. NGC 1817 lies next door and contains 3 times as many stars. Bright at mag. 7.7, 16 arc minutes in size.

Big Scope Objects:

✓	Name	R.A.	Decl.	Details
	NGC 1514	04hr 09.2m	+30° 47′	A planetary nebula with low surface brightness. 1.9 arc minutes in diameter, magnitude 10 with a 9th mag. central star. (110NGC)
	DoDz 14	04hr 06m	+27° 26′	(Dolidze) A poor open cluster of 18 stars with a diameter of 12 arc minutes.
	DoDz 4	05hr 36m	+25° 57′	(Dolidze-Dzimselejsvili) A large bright loose cluster of 45 stars covering 28 arc minutes of sky.
	NGC 1587	04hr 40m	+00° 40′	A small elliptical galaxy 1.7 x 1.5 arc minutes, mag 11.7.
	NGC 1589	04hr 31m	+00° 52′	A spiral galaxy in the same field as NGC 1587. 3.2 x 1 arc minutes in size, magnitude 11.7.
	NGC 1642	04hr 43m	+00° 37′	A face-on spiral, resembling a small M101. 1.8 x 1.6 arc minutes in size, magnitude 12.5.

Challenge Objects:

✓	Name	R.A.	Decl.	Details
	NGC 1554 and NGC 1555	04hr 21m	+19° 32′	"Hind's Variable Nebula" - a faint reflection nebula associated with the variable star T Tauri. About 30 arc seconds in size forming an arc.
	NGC 1435	03hr 46m	+23° 47′	The "Merope Nebula" in M45. A faint reflection nebula visible with small scopes, but good skies are a must.



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