OBSERVATION LIST

25 Best Double Stars for Small Refractors

A curated selection of 25 showpiece double stars observable with small refractors (≤100mm aperture) from the northern hemisphere. Chosen for color contrast, easy resolvability, and visual beauty.

25	22	2	1
Objects	Easy	Medium	Hard

Boo · Cyg · Gem · Her · Dra · Mon · Ori · And · UMa · Leo · CVn · Cas

Visibility scored for: **150mm Reflector** · Bortle 4

1 Albireo HIP 95947; Beta1 Cyg; 6 Cyg

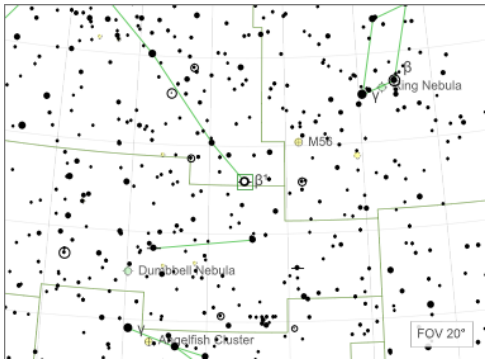
Easy

• Double Star · Cyg

Position	RA 19h 30m 43.3s Dec +27d 57' 35"
Magnitude	3.1 mag
Distance	433 ly
Visibility	9.5 / 10

Notes

The finest color-contrast double in the sky. Gold and sapphire components at 34.7" separation — split easily at any magnification. Mags 3.1 + 5.0. A must-see at every star party.



☐ Observed

2 Almaak HIP 9640; Gamma1 And; 57 And

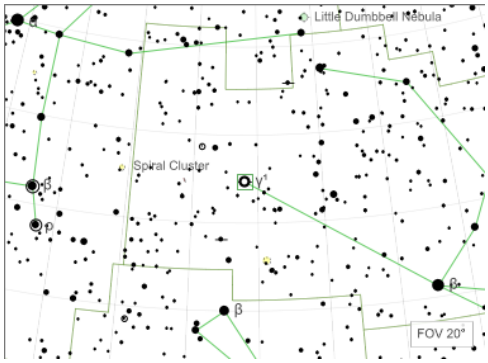
Easy

• Double Star · And

Position	RA 02h 03m 54.0s Dec +42d 19' 47"
Magnitude	2.3 mag
Distance	251 ly
Visibility	9.5 / 10

Notes

Often called the 'autumn Albireo'. Gorgeous orange primary with blue-green companion at 9.6" separation. Mags 2.3 + 5.0. Companion is itself a close triple system.



☐ Observed

3 Castor HIP 36850; Alpha Gem; 66 Gem

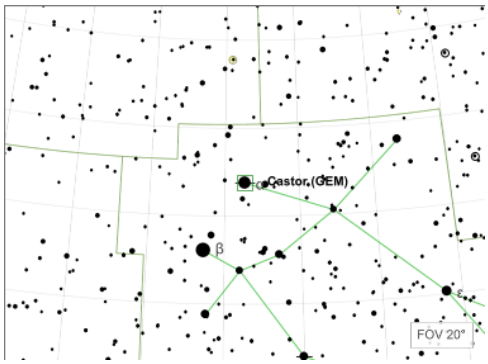
Easy

• Double Star · Gem

Position	RA 07h 34m 36.0s Dec +31d 53' 18"
Magnitude	2.0 mag
Distance	52 ly
Visibility	9.5 / 10

Notes

A bright, nearly equal white pair at 6.0" separation. Mags 2.0 + 3.0. Actually a sextuple star system — each visible component is a spectroscopic binary, plus a distant eclipsing binary (YY Gem).



☐ Observed

4 Mizar HIP 65378; Zeta UMa; 79 UMa

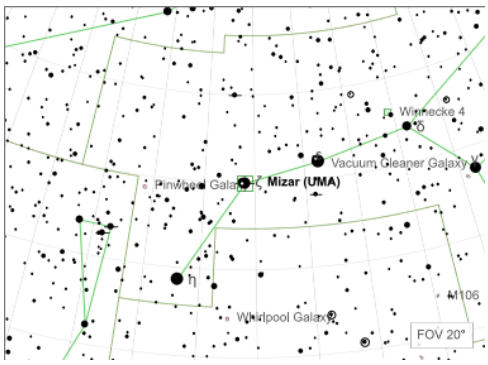
Easy

• Double Star · UMa

Position	RA 13h 23m 55.5s Dec +54d 55' 31"
Magnitude	2.3 mag
Distance	69 ly
Visibility	9.5 / 10

Notes

The most famous double star. Mags 2.3 + 3.0 at 14.4" separation, easily split. Naked-eye pair with Alcor (11.8' away). First telescopic double ever recorded (1617). Both are spectroscopic binaries.



☐ Observed

5 Algieba HIP 50583; Gamma1 Leo; 41 Leo

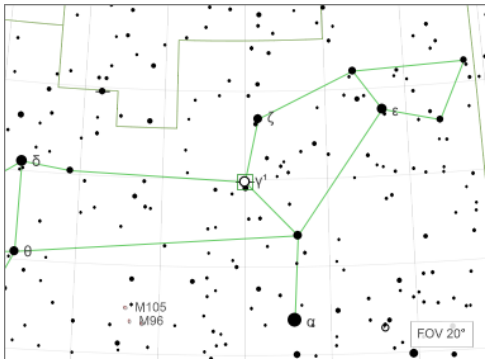
Easy

• Double Star · Leo

Position	RA 10h 19m 58.3s Dec +19d 50' 30"
Magnitude	2.6 mag
Distance	148 ly
Visibility	9.5 / 10

Notes

A splendid golden pair of giant stars. Mags 2.6 + 3.6 at 4.5" separation. Both components shine warm yellow-orange. Needs 50x+ to split cleanly, but well worth the effort.



☐ Observed

6 Alpha2 CVn HIP 63125; Alpha2 CVn; 12 CVn

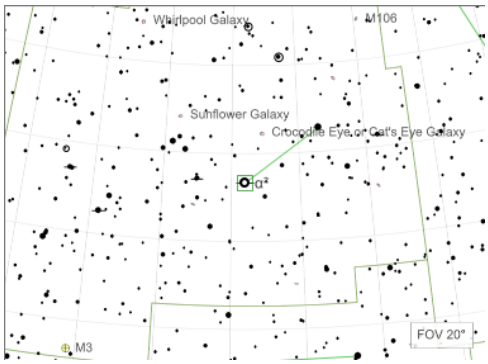
Easy

• Double Star · CVn · *COR CAROLI*

Position	RA 12h 56m 1.7s Dec +38d 19' 6"
Magnitude	2.9 mag
Distance	115 ly
Visibility	9.5 / 10

Notes

Named by Edmond Halley in honor of King Charles II. Mags 2.9 + 5.5 at 19.4" separation. White primary with subtle blue companion. The primary is the prototype of the Alpha² CVn magnetic variable stars.



☐ Observed

7 Izar HIP 72105; Epsilon Boo; 36 Boo

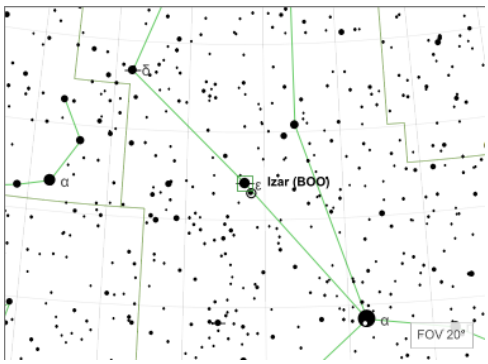
Easy

• Double Star · Boo

Position	RA 14h 44m 59.2s Dec +27d 04' 27"
Magnitude	2.7 mag
Distance	202 ly
Visibility	8.5 / 10

Notes

Struve named it 'Pulcherrima' — the Most Beautiful. Gold primary with blue companion at just 2.8" separation. Mags 2.7 + 4.8. A tight test for 60mm refractors; clean in 80mm+. One of the sky's great jewels.



☐ Observed

8 Rasalgethi HIP 84345; Alpha1 Her; 64 Her

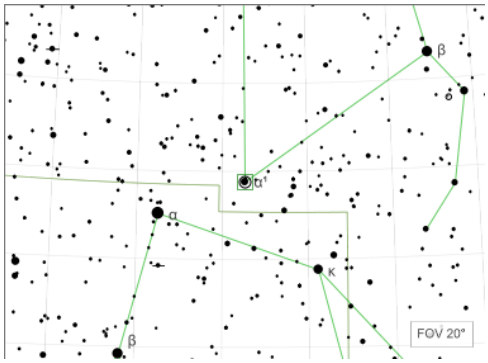
Easy

• Double Star · Her

Position	RA 17h 14m 38.9s Dec +14d 23' 25"
Magnitude	3.5 mag
Visibility	9.4 / 10

Notes

Deep orange supergiant primary with blue-green companion at 4.9" separation. Mags 3.5 + 5.4. The primary is a semiregular variable (mag 3.0–4.0). Stunning color contrast.



☐ Observed

9 Achird HIP 3821; Eta Cas; 24 Cas

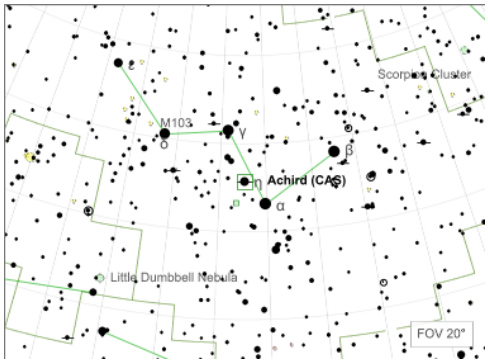
Easy

• Double Star · Cas

Position	RA 00h 49m 6.0s Dec +57d 48' 57"
Magnitude	3.4 mag
Distance	19 ly
Visibility	9.4 / 10

Notes

Golden-yellow primary with a faint reddish companion (a K-type red dwarf) at 11.6" separation. Mags 3.4 + 7.4. A nearby star system at just 19.4 light-years. Circumpolar from mid-northern latitudes.



☐ Observed

10 Iota Cnc HIP 43103; Iota Cnc; 48 Cnc

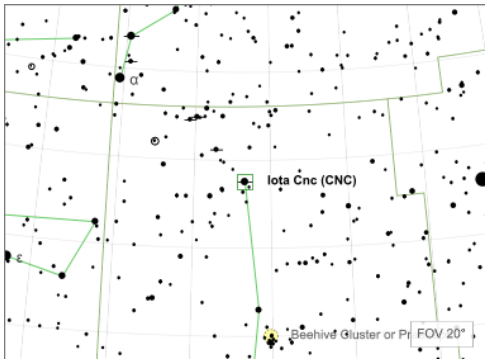
Easy

• Double Star · Cnc

Position	RA 08h 46m 41.8s Dec +28d 45' 36"
Magnitude	4.0 mag
Distance	192 ly
Visibility	9.5 / 10

Notes

A lovely gold-and-blue pair at a generous 30.4" separation. Mags 4.0 + 6.0. One of the finest doubles in Cancer, sometimes called a 'mini-Albireo'. Easily split in any telescope.



☐ Observed

11 Gamma Del HIP 102532; Gamma2 Del; 12 Del

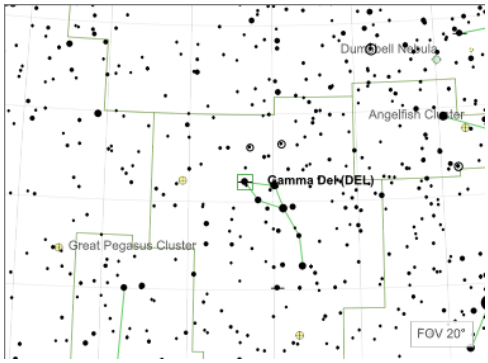
Easy

• Double Star · Del

Position	RA 20h 46m 39.5s Dec +16d 07' 27"
Magnitude	4.3 mag
Distance	125 ly
Visibility	9.5 / 10

Notes

A warm golden pair in the charming constellation Delphinus. Mags 4.3 + 5.0 at 9.8" separation. Some observers see subtle orange and yellow-green tints. A delightful summer target.



☐ Observed

12 Dziban HIP 86614; Psi1 Dra; 31 Dra

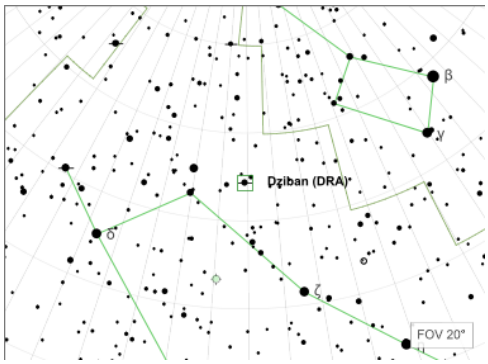
Easy

• Double Star · Dra

Position	RA 17h 41m 56.3s Dec +72d 08' 56"
Magnitude	4.6 mag
Distance	60 ly
Visibility	9.5 / 10

Notes

An easy near-equal pair at 30.2" separation. Mags 4.6 + 5.6. Both white-yellow stars. Circumpolar from northern latitudes, making it available year-round. A pleasant, clean split.



☐ Observed

13 Nu² Dra HIP 85829; Nu Dra; 25 Dra

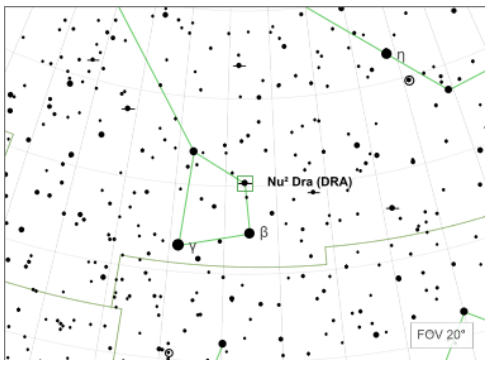
Easy

• Double Star · Dra

Position	RA 17h 32m 16.0s Dec +55d 10' 23"
Magnitude	4.9 mag
Distance	93 ly
Visibility	9.5 / 10

Notes

Identical twins — two mag 4.9 white stars separated by a generous 62.3". Easily split in binoculars or a finder scope. A true binary with an orbital period of thousands of years. Circumpolar.



☐ Observed

14 61 Cyg HIP 104214; 61 Cyg

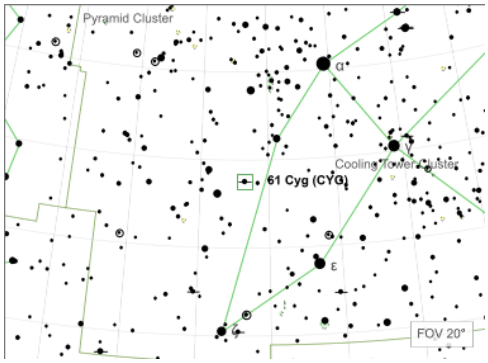
Easy

• Double Star · Cyg

Position	RA 21h 06m 54.6s Dec +38d 44' 45"
Magnitude	5.2 mag
Distance	11 ly
Visibility	9.5 / 10

Notes

Historic: the first star to have its distance measured by parallax (Bessel, 1838). Mags 5.2 + 6.1 at 28.7" separation. Two orange K-dwarf stars. Only 11.4 light-years away — one of our nearest stellar neighbors.



☐ Observed

15 95 Her HIP 88267; 95 Her

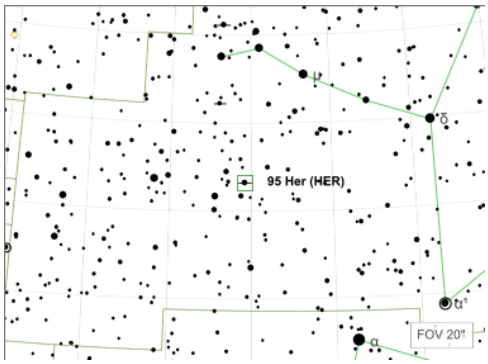
Easy

• Double Star · Her

Position	RA 18h 01m 30.4s Dec +21d 35' 44"
Magnitude	5.0 mag
Visibility	9.5 / 10

Notes

A beautiful near-equal pair. Mags 5.0 + 5.2 at 6.3" separation. Some observers report subtle gold and silver tints. Cleanly split at 80x+ in small apertures. A fine summer double.



☐ Observed

16 Beta Mon HIP 30867; Beta Mon; 11 Mon

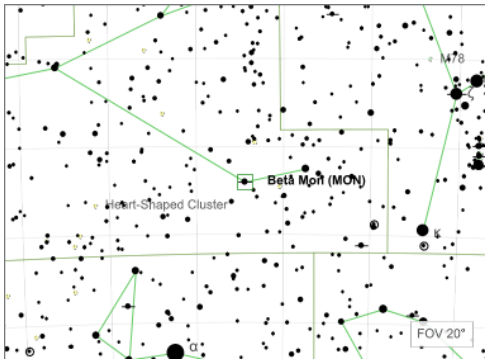
Easy

• Double Star · Mon

Position	RA 06h 28m 49.0s Dec -7d 01' 58"
Magnitude	4.6 mag
Distance	155 ly
Visibility	9.5 / 10

Notes

An exquisite triple star system: three white-blue stars in a gentle arc. Mags 4.6 + 5.0 + 5.4. William Herschel called it 'one of the most beautiful sights in the heavens'. The closer pair at 7.1", outer at 10".



☐ Observed

17 Mintaka HIP 25930; Delta Ori; 34 Ori

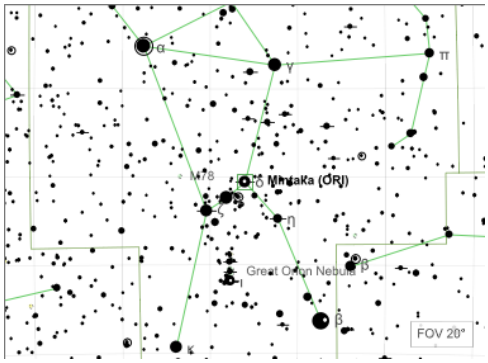
Easy

• Double Star · Ori

Position	RA 05h 32m 0.4s Dec -0d 17' 57"
Magnitude	2.2 mag
Distance	1.1 kly
Visibility	9.4 / 10

Notes

The westernmost star of Orion's Belt. Mags 2.2 + 3.8 at a wide 51.7" separation. Both components are hot blue-white supergiants. An easy and impressive pair in any instrument, even binoculars.



☐ Observed

18 Epsilon^{1} Lyr HIP 91919; Epsilon1 Lyr; 4 Lyr

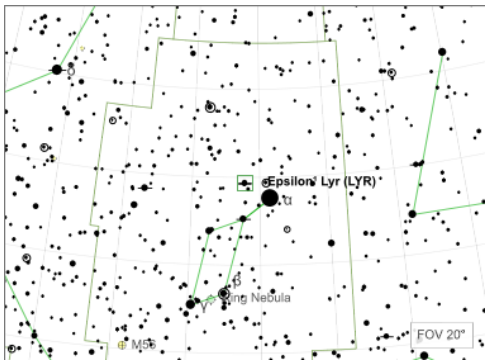
Medium

• Double Star · Lyr

Position	RA 18h 44m 20.4s Dec +39d 40' 12"
Magnitude	5.1 mag
Distance	155 ly
Visibility	7.8 / 10

Notes

The famous Double-Double near Vega. Naked eye or binoculars show two stars 209" apart. Each star splits again into tight pairs (2.3" and 2.8") at 150x+ — the classic refractor resolution test.



☐ Observed

19 Xi Boo HIP 72659; Xi Boo; 37 Boo

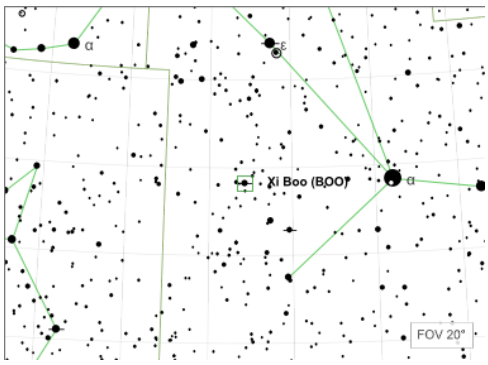
Easy

• Double Star · Boo

Position	RA 14h 51m 23.3s Dec +19d 06' 4"
Magnitude	4.5 mag
Distance	21 ly
Visibility	9.4 / 10

Notes

Orange primary with red dwarf companion at 7.2" separation. Mags 4.6 + 7.0. A nearby system at 22 light-years. The color contrast intensifies at higher magnification. 370-year orbital period.



☐ Observed

20 Alrescha HIP 9487; Alpha Psc; 113 Psc

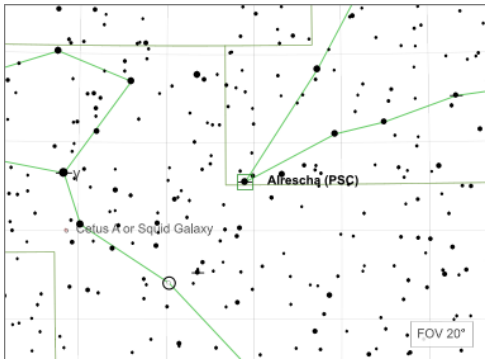
Medium

• Double Star · Psc

Position	RA 02h 02m 2.8s Dec +2d 45' 49"
Magnitude	4.3 mag
Distance	652 ly
Visibility	6.8 / 10

Notes

The 'Knot' tying the two fish of Pisces. Mags 4.3 + 5.2 at 4.0" separation. A near-equal white pair that requires steady seeing and 100x+. Currently widening — easier to split each passing decade.



☐ Observed

21 Kappa Boo HIP 69483; Kappa2 Boo; 17 Boo

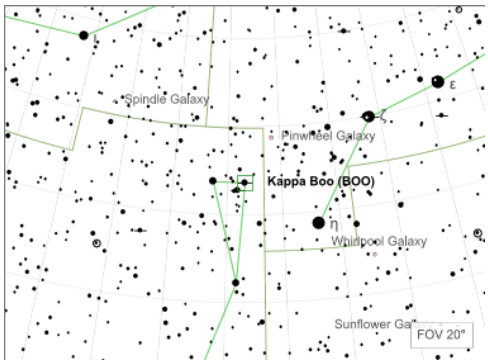
Easy

• Double Star · Boo

Position	RA 14h 13m 29.0s Dec +51d 47' 25"
Magnitude	4.5 mag
Distance	326 ly
Visibility	9.4 / 10

Notes

A clean unequal pair with a white primary and fainter companion at 13.4" separation. Mags 4.5 + 6.6. Easy to split and a fine sight in a rich Milky Way field. A true physical binary system.



☐ Observed

22 Rigel HIP 24436; Beta Ori; 19 Ori

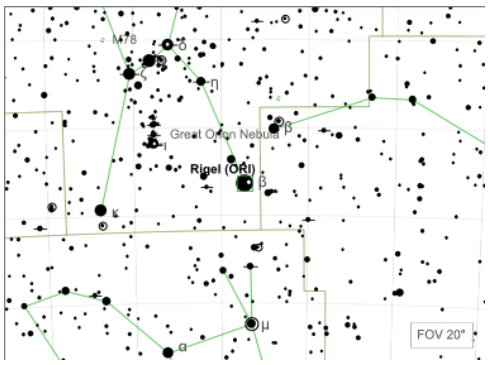
Easy

• Double Star · Ori

Position	RA 05h 14m 32.3s Dec -8d 12' 6"
Magnitude	0.1 mag
Distance	860 ly
Visibility	9.5 / 10

Notes

A glare challenge: the mag 6.8 companion hides just 9.5" from the brilliant blue-white supergiant. Requires steady seeing, clean optics, and 150x+. Rewarding when caught — a classic test of refractor quality.



☐ Observed

23 Epsilon Mon HIP 30419; Epsilon Mon; 8 Mon

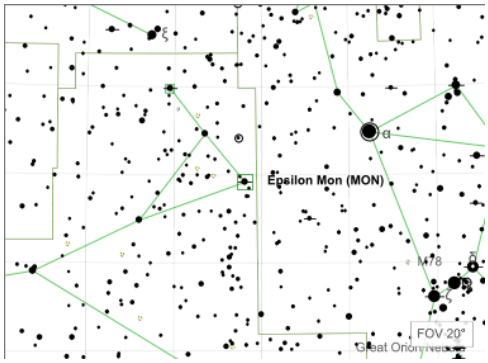
Easy

• Double Star · Mon

Position	RA 06h 23m 46.1s Dec +4d 35' 34"
Magnitude	4.4 mag
Distance	130 ly
Visibility	9.4 / 10

Notes

A delicate unequal pair in the Unicorn. Mags 4.4 + 6.6 at 12.9" separation. Subtle yellow and blue tints. A pleasant winter double, best at moderate magnification.



☐ Observed

24 24 Com HIP 61418; 24 Com

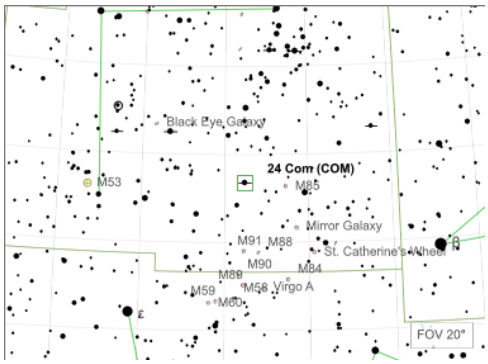
Easy

• Double Star · Com

Position	RA 12h 35m 7.8s Dec +18d 22' 37"
Magnitude	5.0 mag
Distance	1.6 kly
Visibility	9.4 / 10

Notes

A lovely gold and blue pair at 20.2" separation. Mags 5.0 + 6.8. Set in a beautiful field of faint stars in Coma Berenices. Often overlooked, but one of the prettiest spring doubles.



☐ Observed

25 Lambda Gem HIP 35350; Lambda Gem; 54 Gem

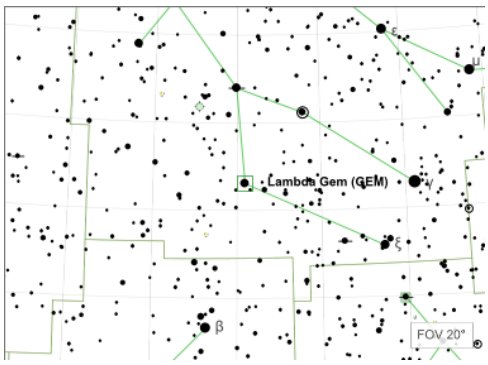
Hard

• Double Star · Gem

Position	RA 07h 18m 5.6s Dec +16d 32' 25"
Magnitude	3.6 mag
Distance	101 ly
Visibility	4.6 / 10

Notes

An attractive unequal pair. Mags 3.6 + 5.0 at 9.7" separation. White primary with slightly cooler companion. A fine winter double easily split at moderate magnification.



☐ Observed

Observing Notes