

25 Best Double Stars for Small Refractors

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

25

Objects

22

Easy

2

Medium

1

Hard

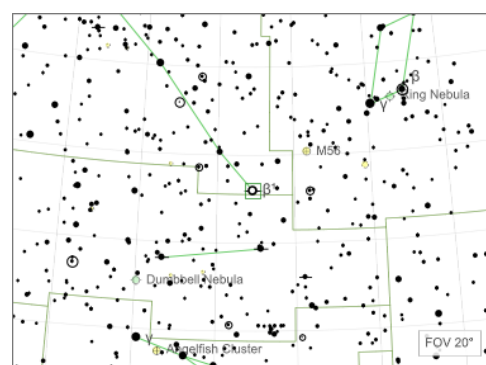
Boo · Cyg · Gem · Her · Dra · Mon · Ori · And · UMa · Leo · CVn · Cas

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

1 **Albireo** HIP 95947; Beta1 Cyg; 6 Cyg
● Double Star · Cyg

Easy

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
● Double Star · And

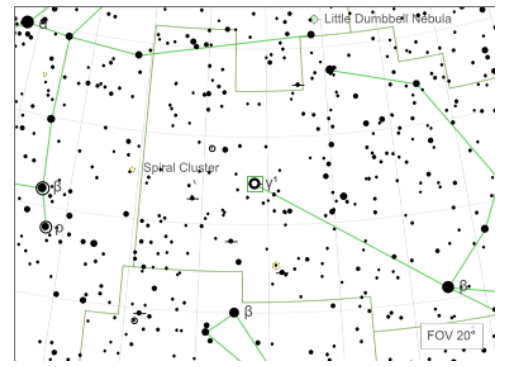
Easy

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

• Double Star • Gem

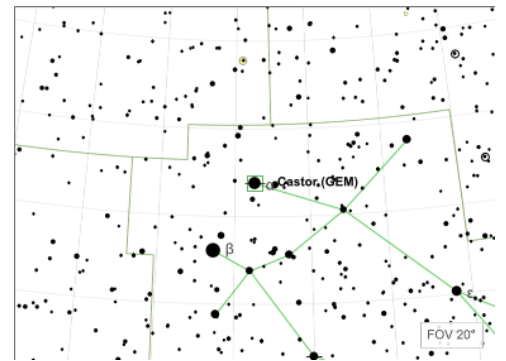
Easy

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

• Double Star • UMa

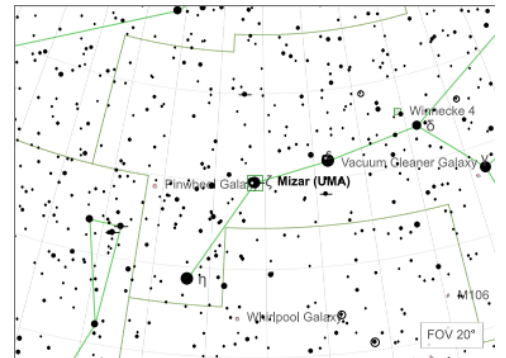
Easy

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

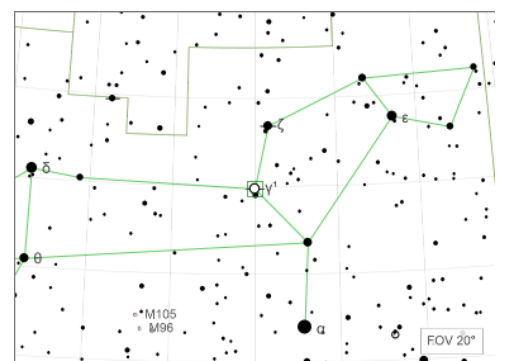
• Double Star • Leo

Easy

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

• Double Star • CVn • COR CAROLI

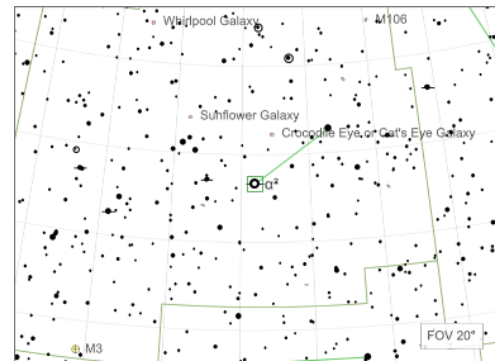
Easy

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

• Double Star • Boo

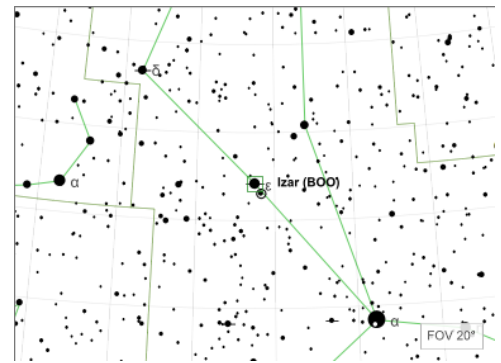
Easy

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

• Double Star • Her

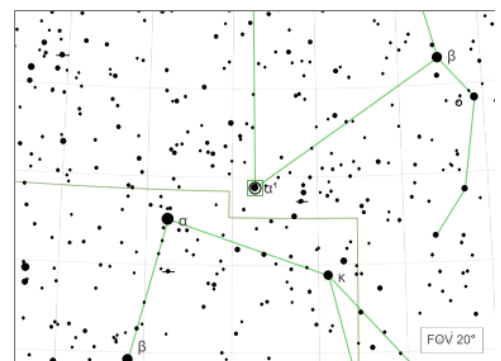
Easy

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

• Double Star • Cas

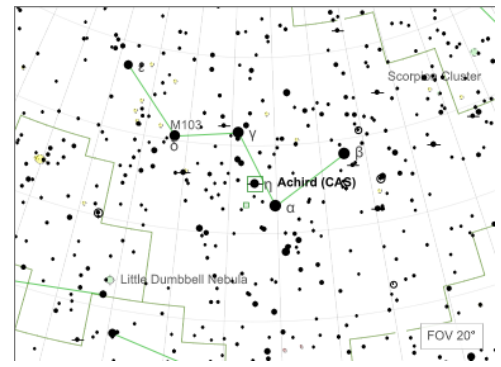
Easy

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

● Double Star · Cnc

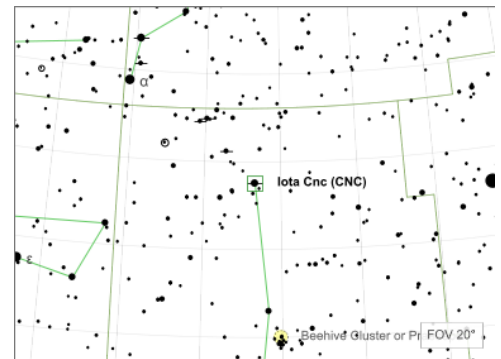
Easy

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

● Double Star · Del

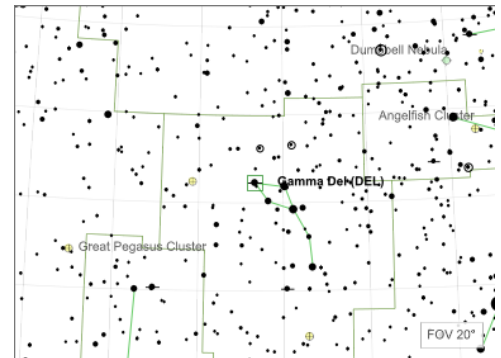
Easy

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

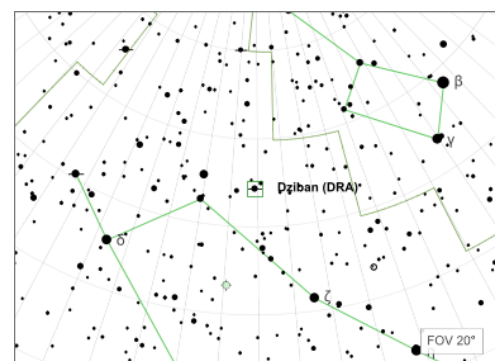
● Double Star · Dra

Easy

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

• Double Star · Dra

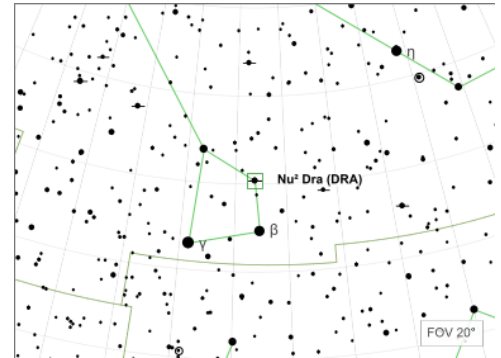
Easy

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

• Double Star · Cyg

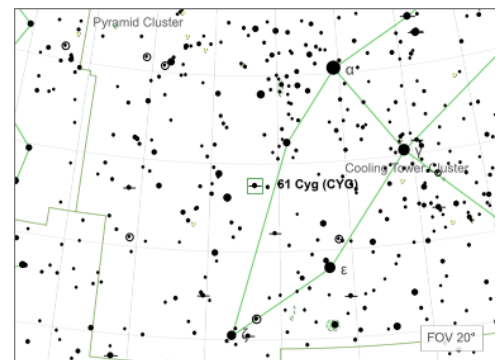
Easy

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

• Double Star · Her

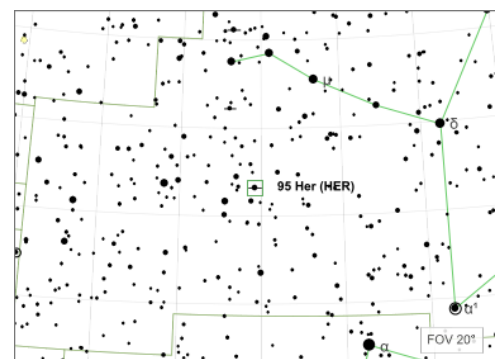
Easy

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. Clearly split at 80x+ in small apertures. A fine summer double.

Observed



16 **Beta Mon** HIP 30867; Beta Mon; 11 Mon

• Double Star · Mon

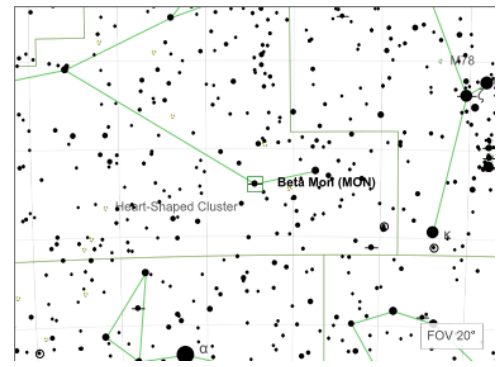
Easy

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

• Double Star · Ori

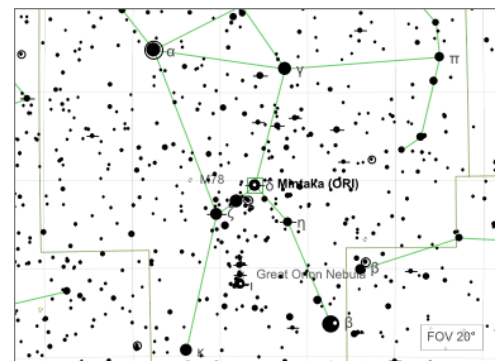
Easy

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 Epsilon¹ Lyr HIP 91919; Epsilon1 Lyr; 4 Lyr

• Double Star · Lyr

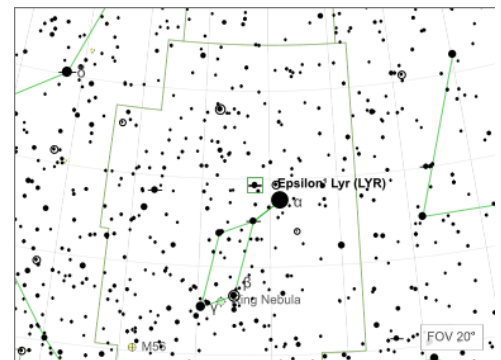
Medium

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

• Double Star · Boo

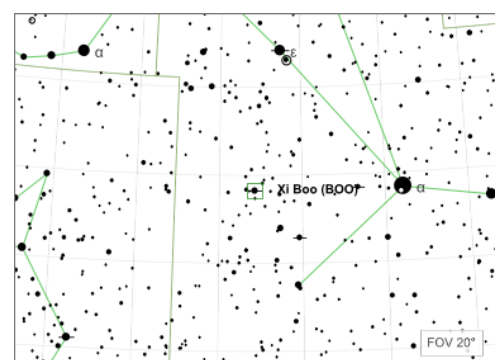
Easy

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



Observed

20 **Alrescha** HIP 9487; Alpha Psc; 113 Psc

• Double Star • Psc

Medium

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

• Double Star • Boo

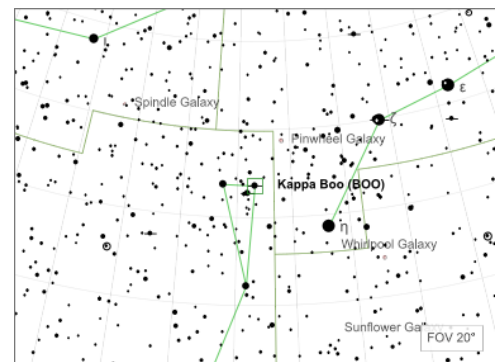
Easy

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

• Double Star • Ori

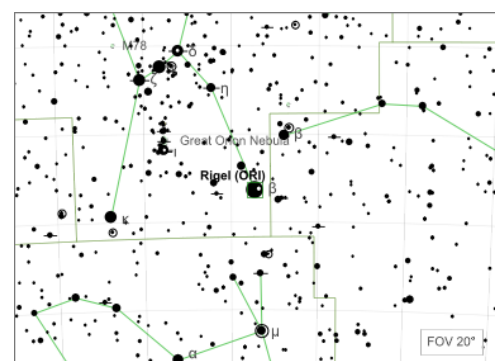
Easy

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

• Double Star • Mon

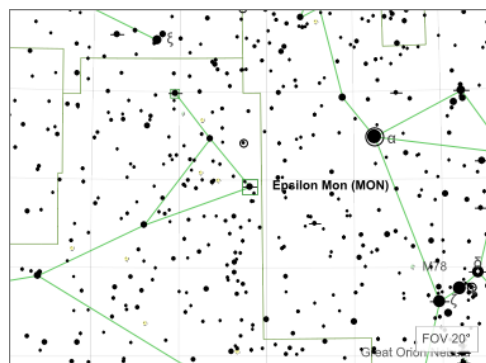
Easy

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
● Double Star · Com

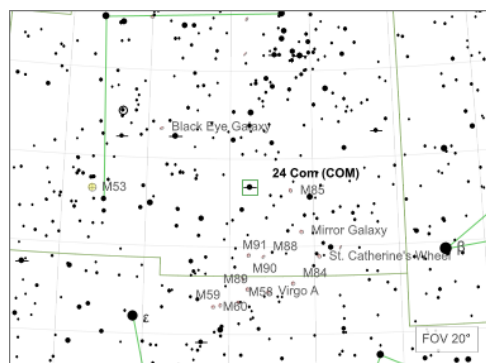
Easy

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
● Double Star · Gem

Hard

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

