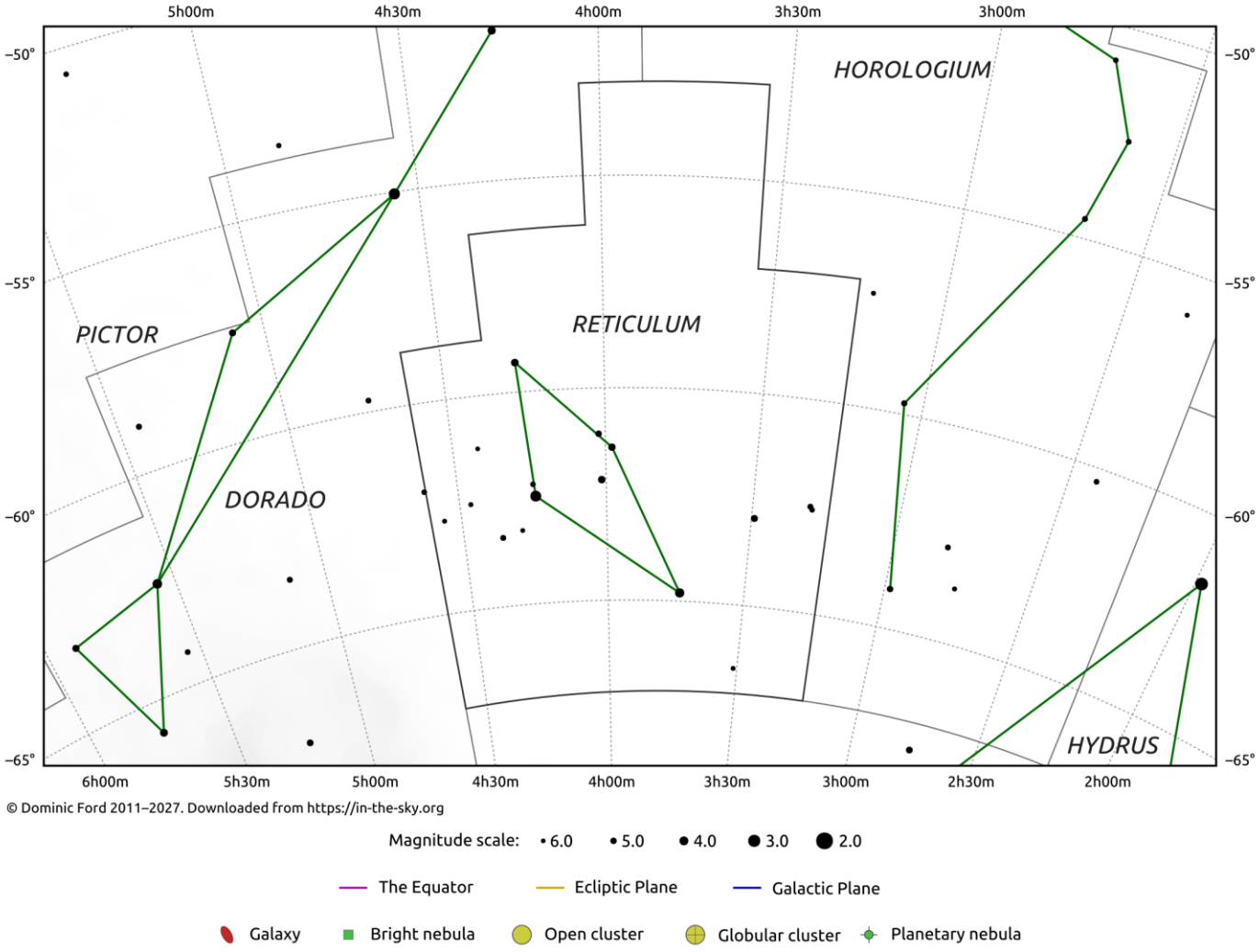
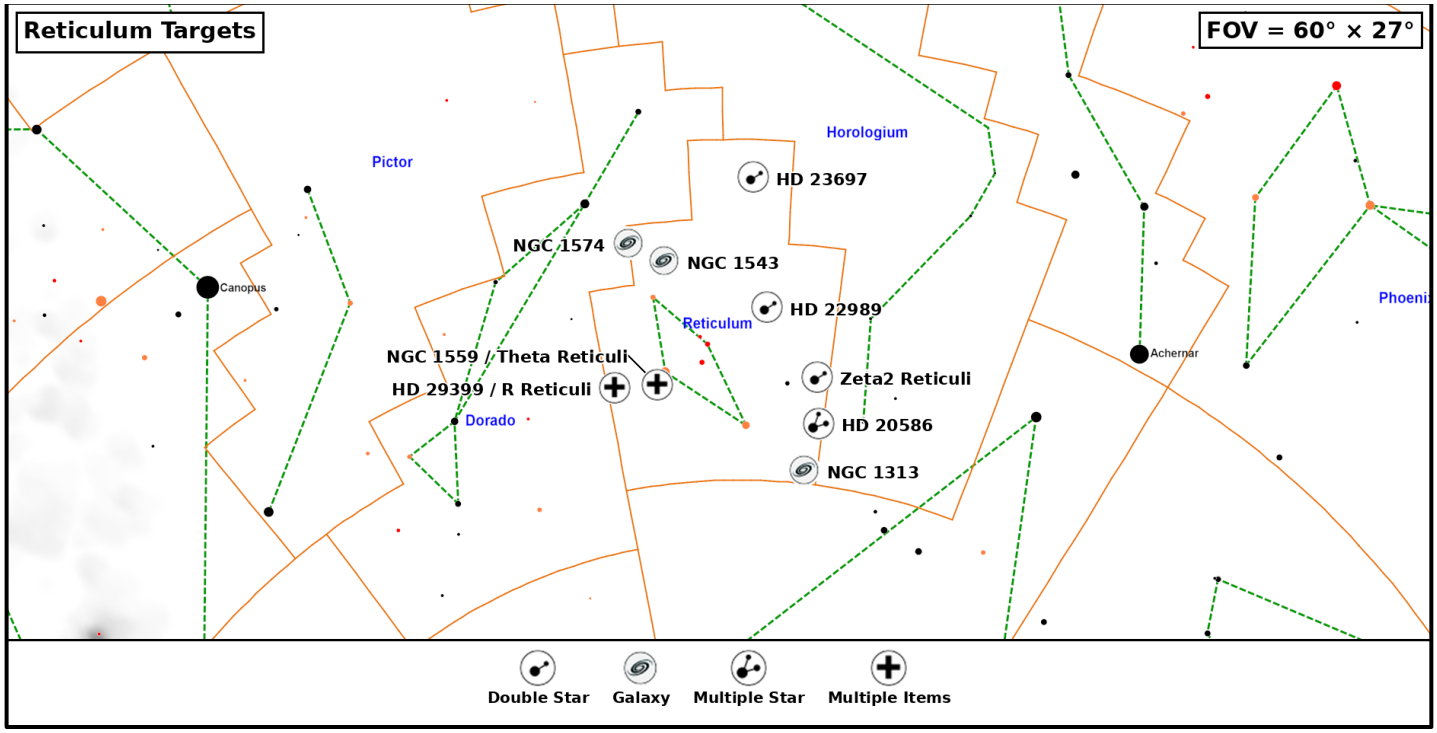
Constellation: Reticulum (Ret)

Evening Visibility: **October – December**
Opposition: **November**
Latitude Visibility: **+23° to -90°**
Online Information: | In-The-Sky.org | Constellation-guide.com |

In-The-Sky.org Constellation Map





Constellation Targets

HD 20586, Zeta2 Reticuli, NGC 1313, HD 22989, HD 23697, NGC 1543, NGC 1559, Theta Reticuli, NGC 1574, HD 29399, R Reticuli

Constellation Object Types Summary

Objects: 11 | Double/Multiple Stars: 6 | Galaxies: 4 | Variable Stars: 1

Mythology/Back Story

Reticulum is Latin for "the little net," and represents the reticle, a crosshair grid in a telescope eyepiece used to measure star positions. Isaac Habrecht II first placed a constellation here in 1621, calling it Rhombus after its diamond shape. In the 1750s Nicolas Louis de Lacaille, mapping the southern sky from the Cape of Good Hope, recast it as le Réticule Rhomboide for the reticle that timed his star crossings; the name was later Latinized to Reticulum. Reticulum ranks 82nd in size; its brightest star, third-magnitude Alpha Reticuli, was named Rhombus in 2024. Its faint diamond offers the Sun-like pair Zeta Reticuli, the Mira variable R Reticuli, and the galaxies NGC 1313 and NGC 1559.

Constellation Guide

Constellation Highlights

Reticulum is small and lies far from the Milky Way, so its best sights are bright galaxies and fine double stars. Most of the picks below appear on several well-known observing lists.

- **Zeta2 Reticuli** (DS) – A wide pair of Sun-like twins, split with the naked eye under a dark sky.
- **NGC 1559** (G) – A barred spiral with a Seyfert heart and a habit of producing supernovae.
- **NGC 1313** (G) – The Topsy Turvy Galaxy, a ragged starburst spiral bright enough for small telescopes.
- **Theta Reticuli** (DS) – A showcase pair, yellow and deeper yellow, easy in a small telescope.

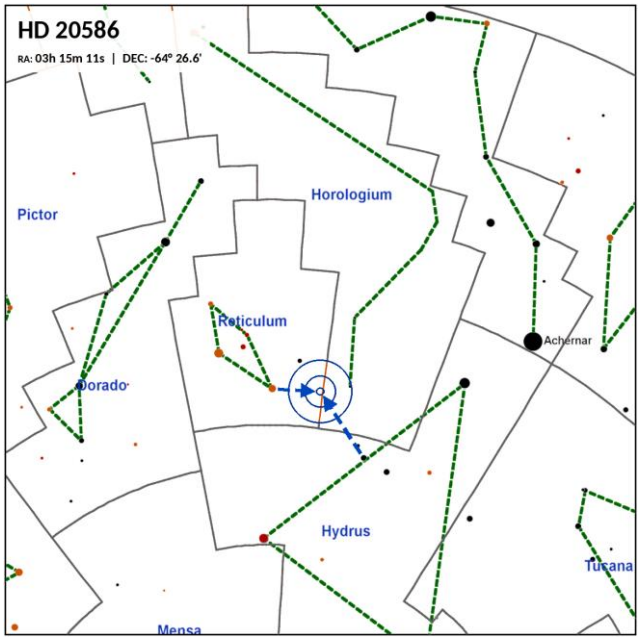
Constellation Targets Summary List

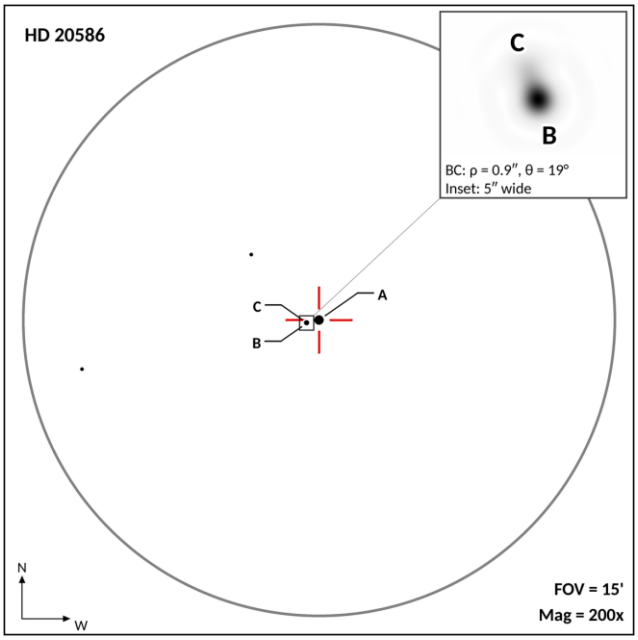
Object (Type)	Links	Gear	Aliases	Stats
HD 20586 (MS-3)	1	B, T	SAO-248764; HIP-15140; Δ12; WDS03152-6427; DUN 12; CPD -64 235; HIP-15144; RST 67	**A,BC** | Mag=6.7 / 9.0 | Sep=19.2" | PA=105° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F5 | Color=yellow-white | **BC** | Mag=9.6 / 9.9 | Sep=0.9" | PA=19° | mApt=130mm | RecMag=270x |
Zeta2 Reticuli (DS)	1, 2	B, T	SAO-248774; HIP-15371; HR 1010; HD 20807; ζ² Ret; ALB1; CP-62 265; WDS03182-6230	**AB** | Mag=5.3 / 5.6 | Sep=309.2" | PA=217° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=G2V / G2V | Color=yellow / yellow |
NGC 1313 (G)	1	T	NGC-1313; PGC 12286; ESO 82-11; VV 436; IRAS 03176-6640; Levy-344; SG-12; Dunlop 206; Bennett 13	| Mag=8.7 | Size=9.2'x6.9' | SB=21.8 | mBortle=6 | mApt=50mm | MC=SB(s)d |
HD 22989 (DS)	1	B, T	SAO-233197; HIP-16959; Δ14; WDS03382-5947; DUN 14; CPD -60 262	**AB** | Mag=7.0 / 8.3 | Sep=57.4" | PA=272° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F3V / F5 | Color=yellow-white / yellow-white |
HD 23697 (DS)	1	T	SAO-233252; HIP-17464; HR 1168; HJ 3592; CP-54 589; WDS03446-5416	**AB** | Mag=6.5 / 9.3 | Sep=4.9" | PA=18° | mBortle=9 | mApt=70mm | RecMag=50x | Spec=K1III / G4V | Color=orange / yellow |
NGC 1543 (G)	1	T	NGC-1543; SG-22; PGC 14659; ESO 118-10	| Mag=10.5 | Size=3.8'x2.8' | SB=21.7 | mBortle=6 | mApt=70mm | MC=(R)SB(l)0^0 |
NGC 1559 (G)	1	T	NGC-1559; SG-24; PGC 14814; ESO 84-10	| Mag=10.7 | Size=3.5'x2' | SB=21.4 | mBortle=6 | mApt=70mm | MC=SB(s)cd |
Theta Reticuli (DS)	1, 2	T	SAO-248986; HIP-20020; HR 1372; HD 27657; θ Ret; CP-63 316; RMK3; WDS04177-6315; CoD -63 143	**AB** | Mag=6.0 / 7.7 | Sep=4.1" | PA=2° | mBortle=9 | mApt=50mm | RecMag=60x | Period=26000y | Spec=B9III-IV / A5m | Color=yellow / deep yellow |
NGC 1574 (G)	1	T	NGC-1574; PGC 14965; ESO 157-22	| Mag=10.4 | Size=4'x3.8' | SB=22.0 | mBortle=5 | mApt=80mm | MC=SA0^- |
HD 29399 (DS)	1, 2	B, T	SAO-249054; HIP-21253; HR 1475; HJ 3670; CP-63 342; WDS04336-6249; CoD -63 153	**AB** | Mag=5.9 / 9.3 | Sep=31.8" | PA=100° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=K1III | Color=deep yellow / bluish |
R Reticuli (VS)	1	T	SAO-249053; HIP-21252; HD 29383; R Ret; S Ret	| Magnitude Range= 6.35 to 14.2 | Period=281d | Spec=M4-7.5e | BV=+1.10 | Color=red |

Blank

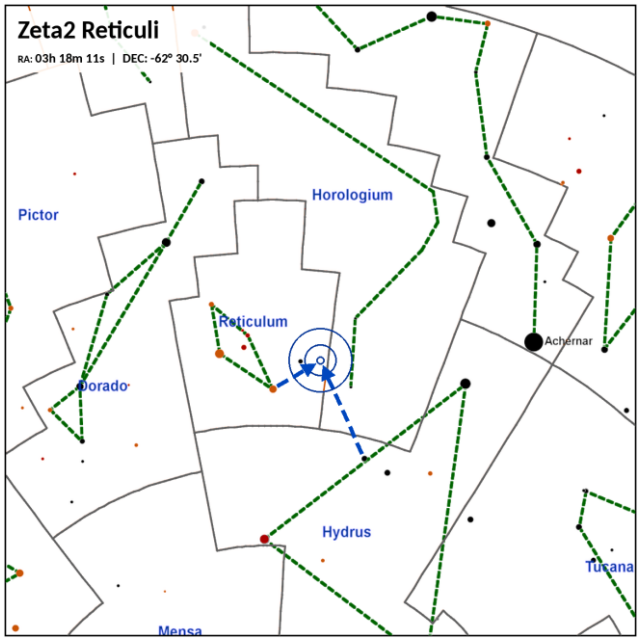
Constellation Guide

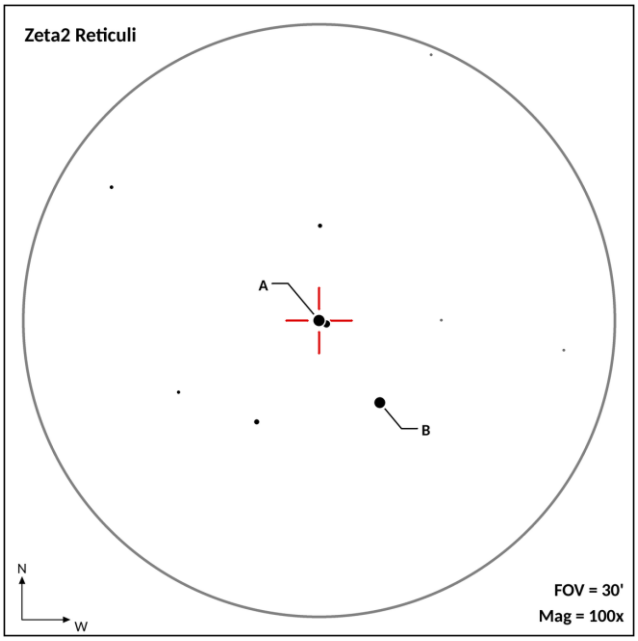
HD 20586 (MS-3 || **A,BC** | Mag=6.7 / 9.0 | Sep=19.2" | PA=105° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F5 | Color=yellow-white || **BC** | Mag=9.6 / 9.9 | Sep=0.9" | PA=19° | mApt=130mm | RecMag=270x |) Located 360 light years away. This is a physical triple: the bright yellow-white primary has an easy wide companion that is itself a tight pair of two nearly equal stars, a challenge to split. The close pair has shown steady orbital motion since its discovery in 1928, though no orbit has yet been computed.



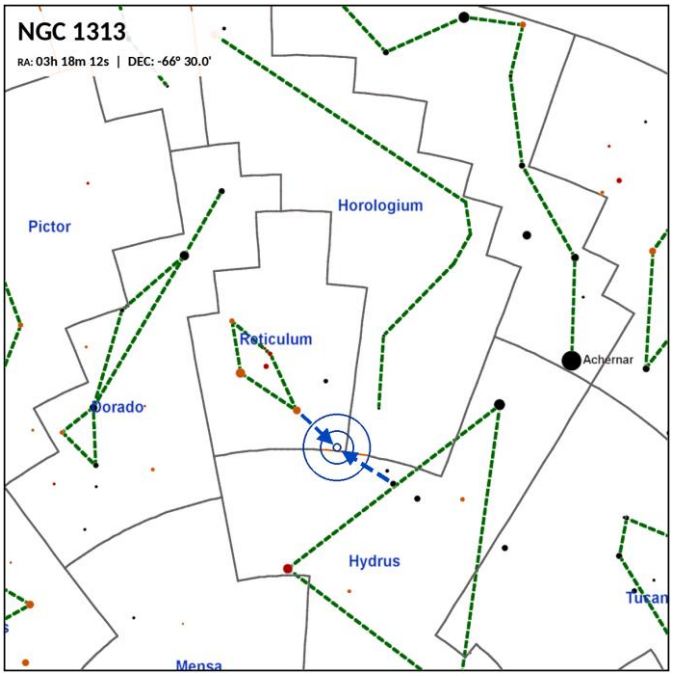


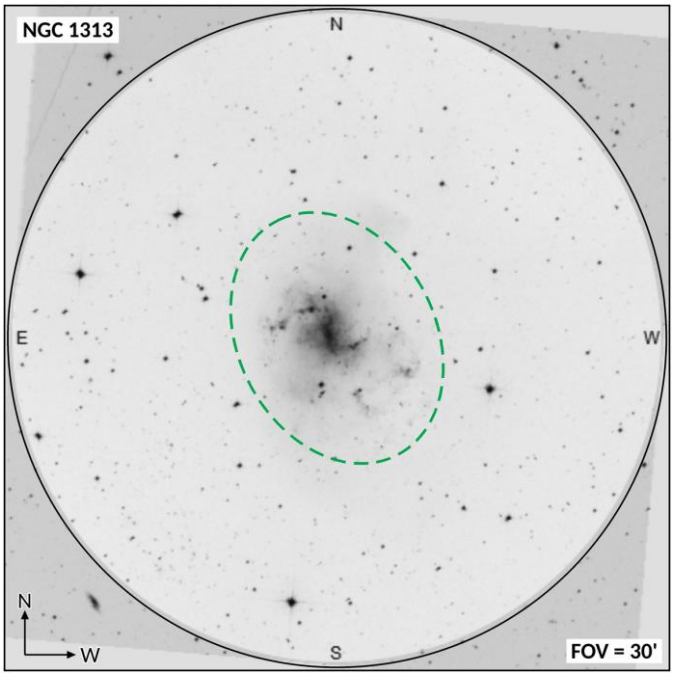
Zeta2 Reticuli (DS || **AB** | Mag=5.3 / 5.6 | Sep=309.2" | PA=217° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=G2V / G2V | Color=yellow / yellow |) This physical pair of Sun-like yellow dwarfs - each close to our Sun's mass and size - lies at least 3,750 AU apart, orbiting in 170,000 years or more. Under a dark sky the two can be split with the naked eye, and binoculars show them easily.



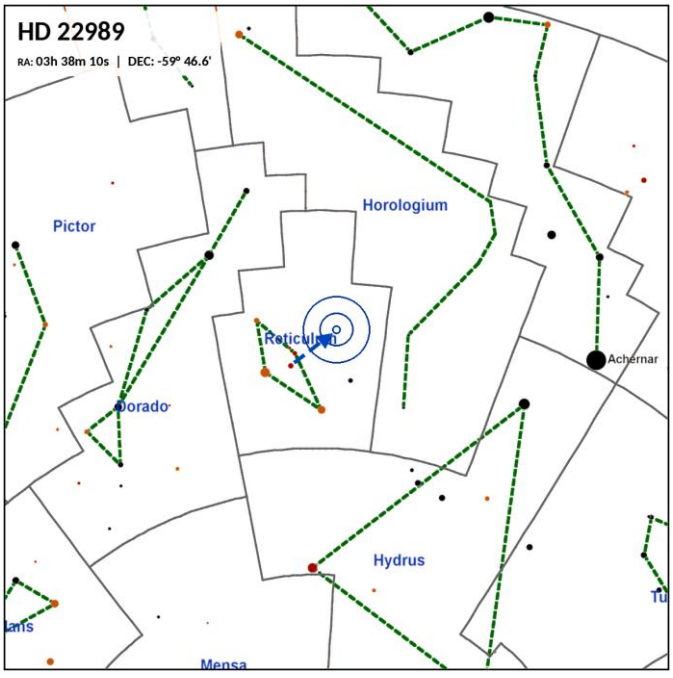


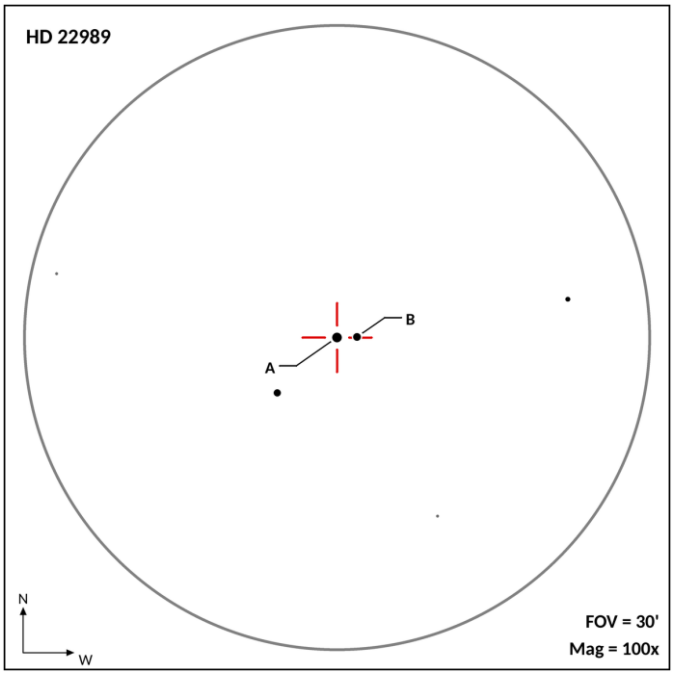
NGC 1313 (G || Mag=8.7 | Size=9.2'x6.9' | SB=21.8 | mBortle=6 | mApt=50mm | MC=SB(s)d |) The Topsy Turvy Galaxy, a barred spiral about 13 million light years away with an estimated physical diameter of 42,000 light years. Bursts of star formation give it a ragged look, and its bar sits off-center from its rotation axis, yet it has no close neighbor to explain the starburst activity of this galaxy.





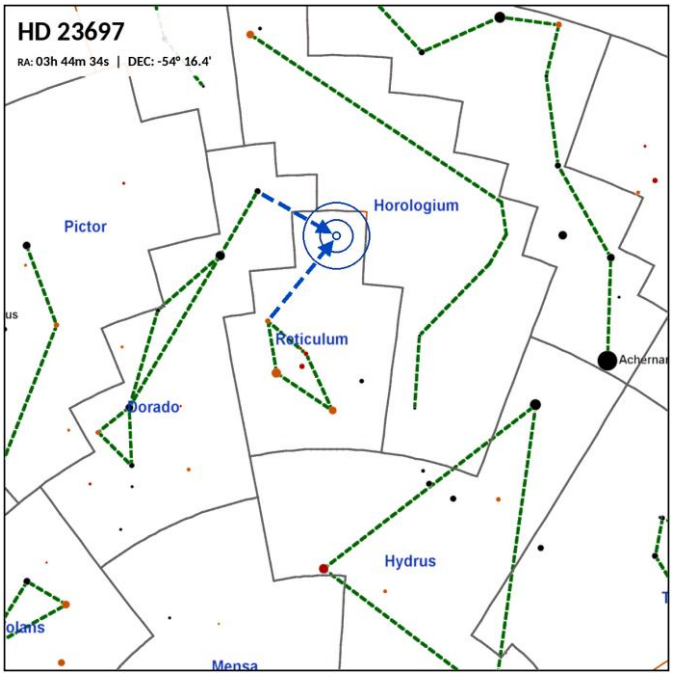
HD 22989 (DS || **AB** | Mag=7.0 / 8.3 | Sep=57.4" | PA=272° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F3V / F5 | Color=yellow-white / yellow-white |) Located 250 light years away. A very wide pair of closely matched yellow-white stars separated by about 4,400 AU (astronomical units); research indicates they are a true pair. Best at very low power, which keeps the generous separation comfortably in one field.

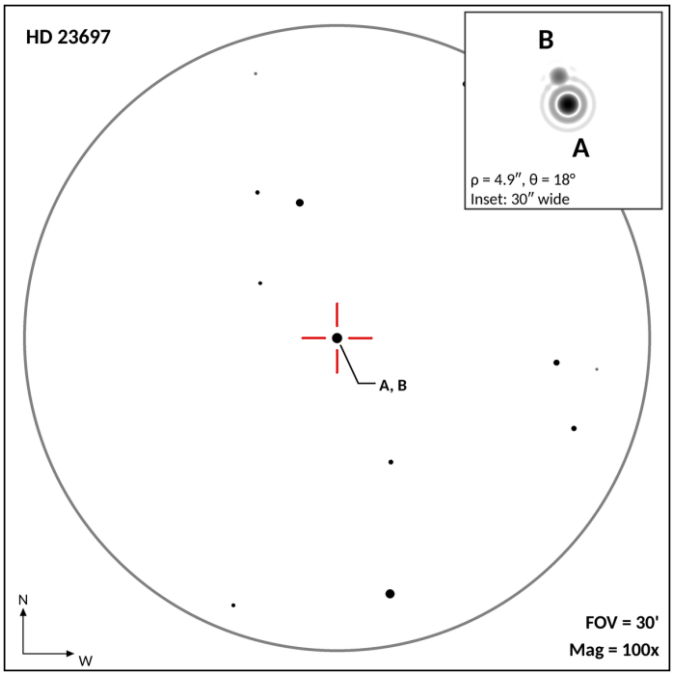




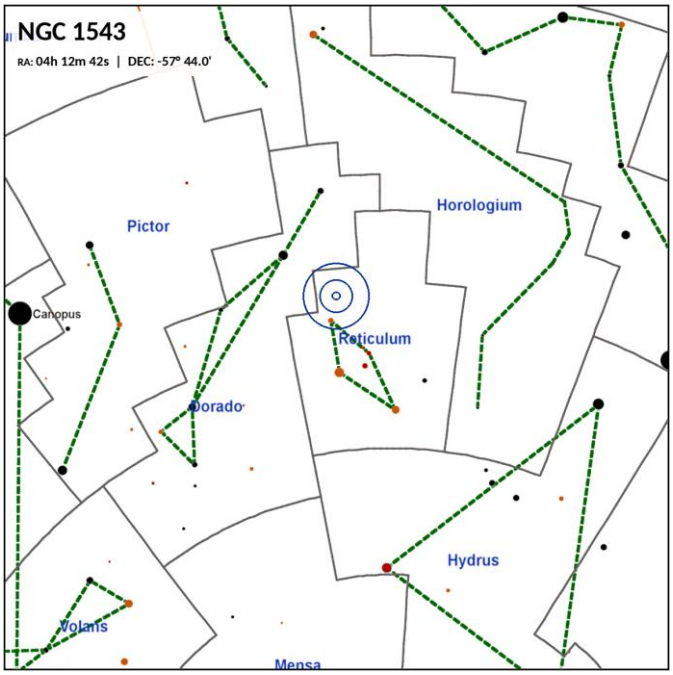
Constellation Guide

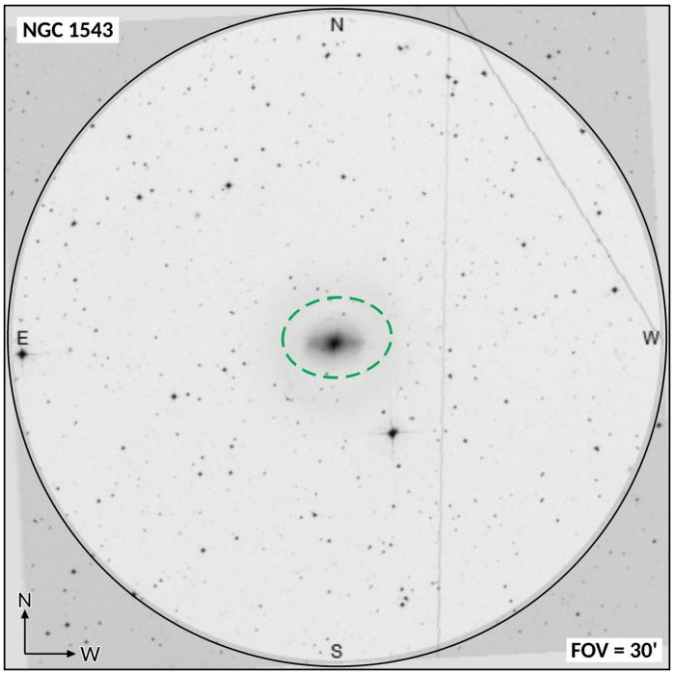
HD 23697 (DS || **AB** | Mag=6.5 / 9.3 | Sep=4.9" | PA=18° | mBortle=9 | mApt=70mm | RecMag=50x | Spec=K1III / G4V | Color=orange / yellow |) Located 250 light years away. An orange giant with a Sun-like yellow companion. This is a physical pair. The much fainter companion close beside the bright primary makes a clean split a pleasing test for a small telescope.



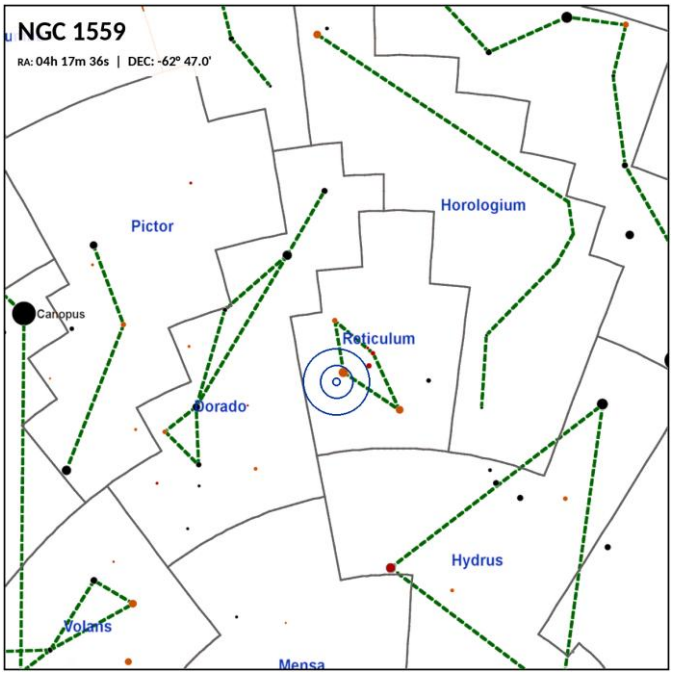


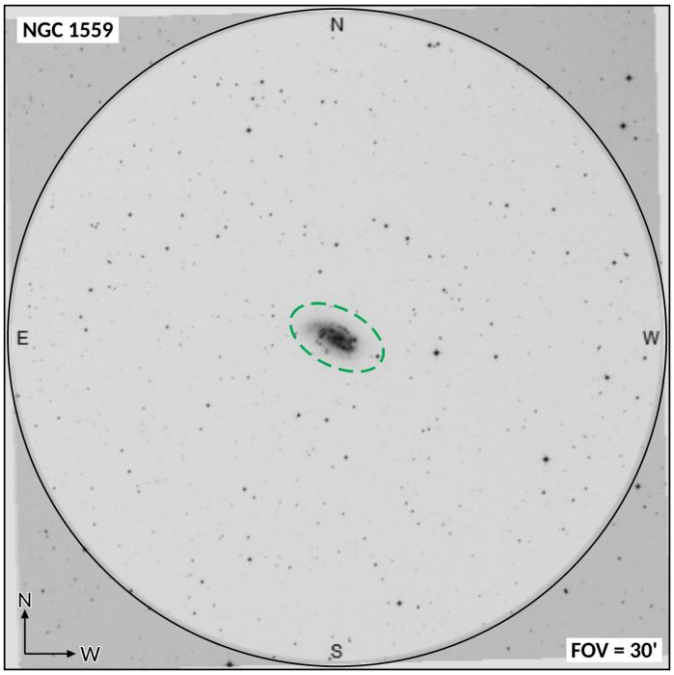
NGC 1543 (G || Mag=10.5 | Size=3.8'x2.8' | SB=21.7 | mBortle=6 | mApt=70mm | MC=(R)SB(l)0^0 |) A barred lenticular galaxy on the outskirts of the Dorado Group, about 56 million light years away with an estimated physical diameter of 59,000 light years. Seen nearly face-on, it shows a double bar and a faint outer ring of gas.



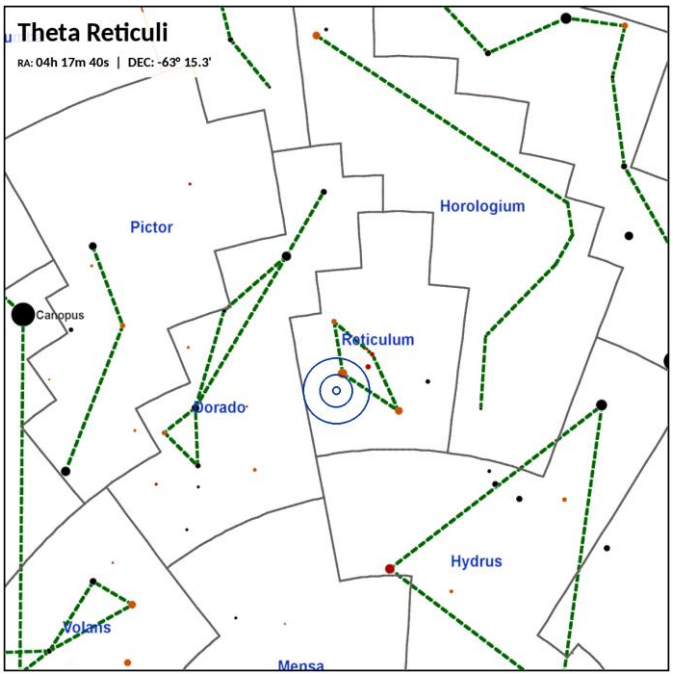


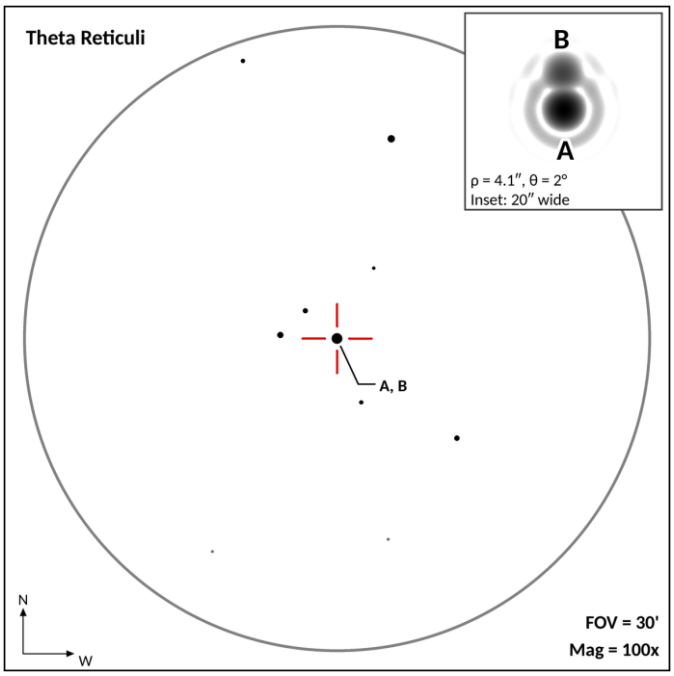
NGC 1559 (G || Mag=10.7 | Size=3.5'x2' | SB=21.4 | mBortle=6 | mApt=70mm | MC=SB(s)cd |) A barred spiral with a Seyfert nucleus (a compact, actively feeding core), about 49 million light years away with an estimated physical diameter of 60,000 light years. Four supernovae have been identified in this galaxy since 1984.



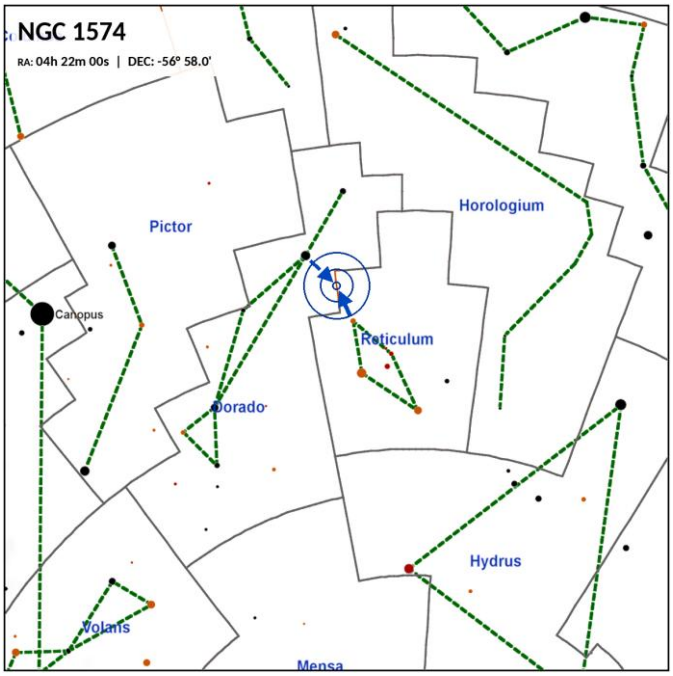


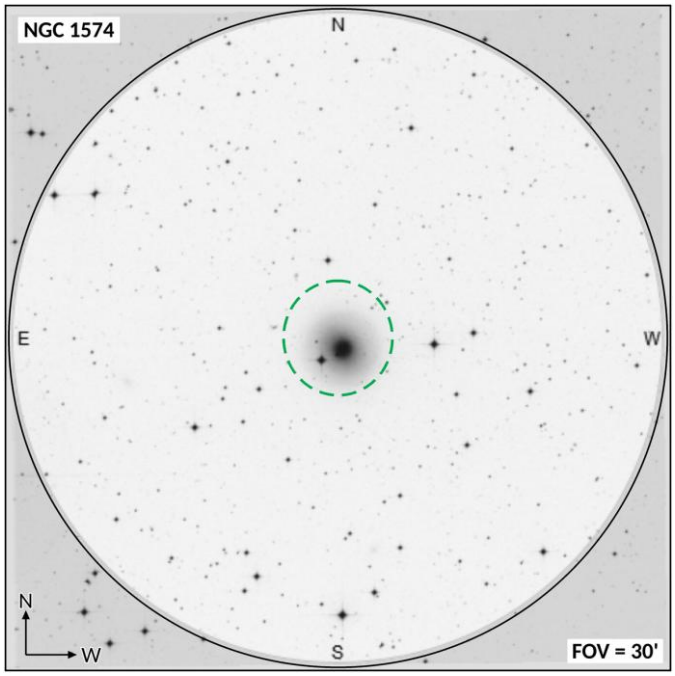
Theta Reticuli (DS || **AB** | Mag=6.0 / 7.7 | Sep=4.1" | PA=2° | mBortle=9 | mApt=50mm | RecMag=60x | Period=26000y | Spec=B9III-IV / A5m | Color=yellow / deep yellow |) A showcase pair, bright, easy and fairly close in a small telescope. The pair is physical; the primary is a hot subgiant with a luminosity 180 times that of our Sun's, the companion a metallic-line (Am) star, with an estimated 26,000-year orbit.



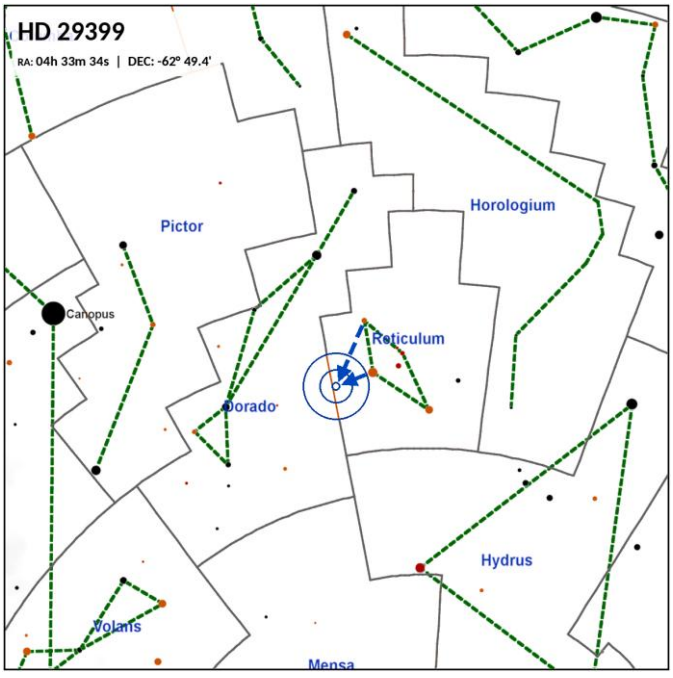


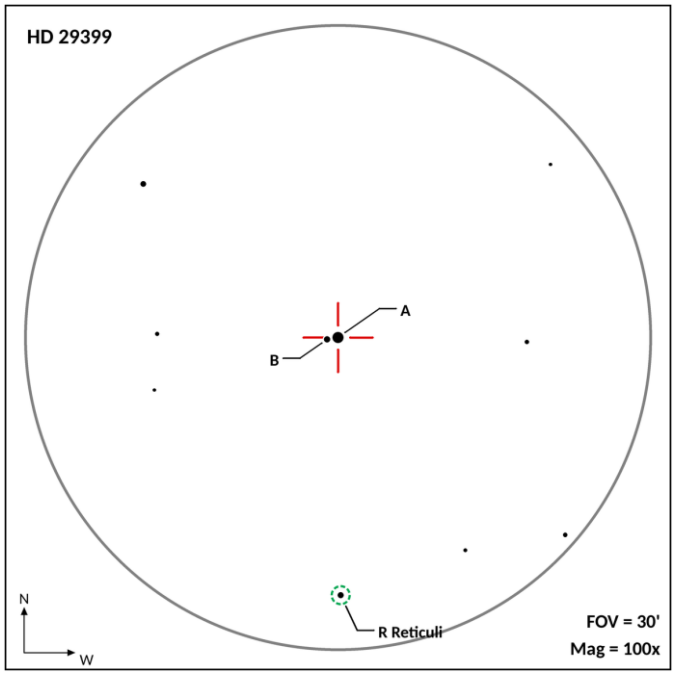
NGC 1574 (G || Mag=10.4 | Size=4'x3.8' | SB=22.0 | mBortle=5 | mApt=80mm | MC=SA0^- |) A lenticular galaxy in the Dorado Group, about 54 million light years away with an estimated physical diameter of 65,000 light years. Seen nearly face-on, a bar crosses its otherwise smooth disk, a black hole of about 100 million times the Sun's mass sits at its center, and its fellow group member NGC 1543 lies 1.5 degrees to the southwest.





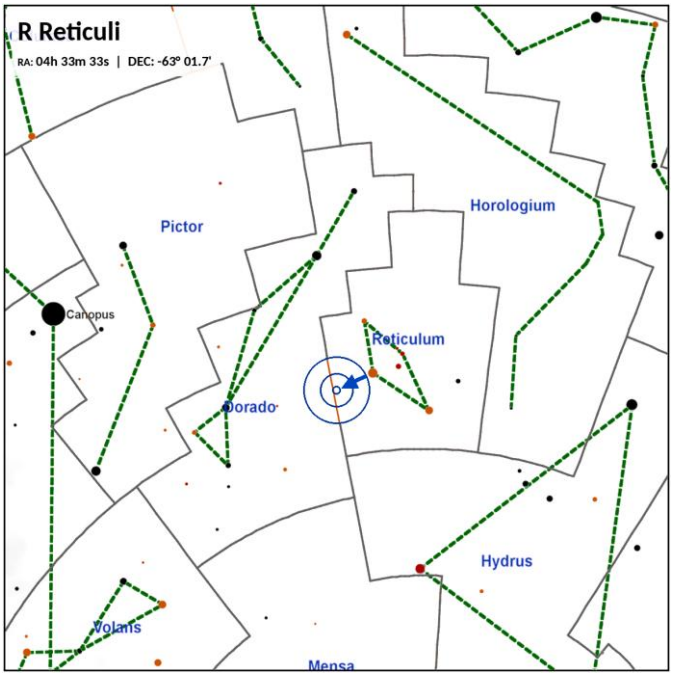
HD 29399 (DS || **AB** | Mag=5.9 / 9.3 | Sep=31.8" | PA=100° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=K1III | Color=deep yellow / bluish |) This is a physical pair: a K-type giant with a radius nearly five times that of our Sun's, with a faint dwarf companion. The giant hosts a gas giant planet of at least 1.7 Jupiter masses in a 2.4-year orbit, and the Mira variable R Reticuli lies just 12 arcminutes south.

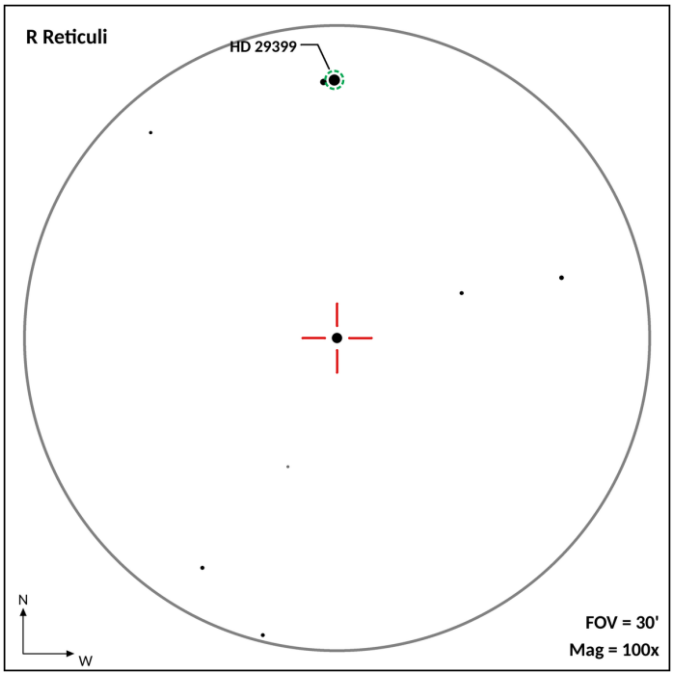




Constellation Guide

R Reticuli (VS || Magnitude Range= 6.35 to 14.2 | Period=281d | Spec=M4-7.5e | BV=+1.10 | Color=red |) A Mira-type variable: an aging red giant on the asymptotic giant branch (a late stage of a Sun-like star's life) that swells and fades by almost eight magnitudes (about 1,400x) each cycle - easy in binoculars at maximum, beyond most amateur telescopes at minimum.





Observation Log: Reticulum (Ret)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Observation Log: Reticulum (Ret)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Constellation Guide

References, Resources and Tools used to create this document

- Books
  - Objects in the Heavens: Peter Birren
  - Touring the Universe through Binoculars: Philip Harrington
  - The Deep Sky: Philip Harrington
  - Double and Multiple Stars and How to Observe Them: James Mullaney
  - Celestial Portraits: Tom Polakis
  - Star Clusters: Brent Archinal, Steve Hynes
  - Double Stars for Small Telescopes: Sissy Haas
- Asterisms
  - Astronomical League: Asterisms Observing Program list
  - Asterisms: Demelza Ramakers
  - Pattern Asterisms: John Chiravalle
  - Milwaukee Astronomical Society: Binocular Asterisms
  - Deep-Sky.co.uk: Observing Asterisms (David Ratledge)
- Saguaro Astronomy Club
  - Asterisms List
  - 110 Best of the NGC
  - Red Stars List
- Online
  - Wikipedia
  - The Garden Astronomer: Double, Multiple, and Special Star Observations List
  - Sky & Telescope: Colored Double Stars, Real and Imagined
  - In-The-Sky.org
  - Constellation-guide.com
  - Claude AI – Some Stats for targets
  - Aladin Lite – Source for a number of deep-sky images
  - Stelle Doppie, Washington Double Star Catalog – Double-star data and physical/optical verdicts
  - SIMBAD / Gaia EDR3, AAVSO VSX, LiveSky – Spectra, distances, variable-star elements

Applications

- AstroPlanner Version 2.4
- Cartes du Ciel Version 4.3
- SkySafari Pro 7
- Microsoft Office Home and Business 2021 - Word