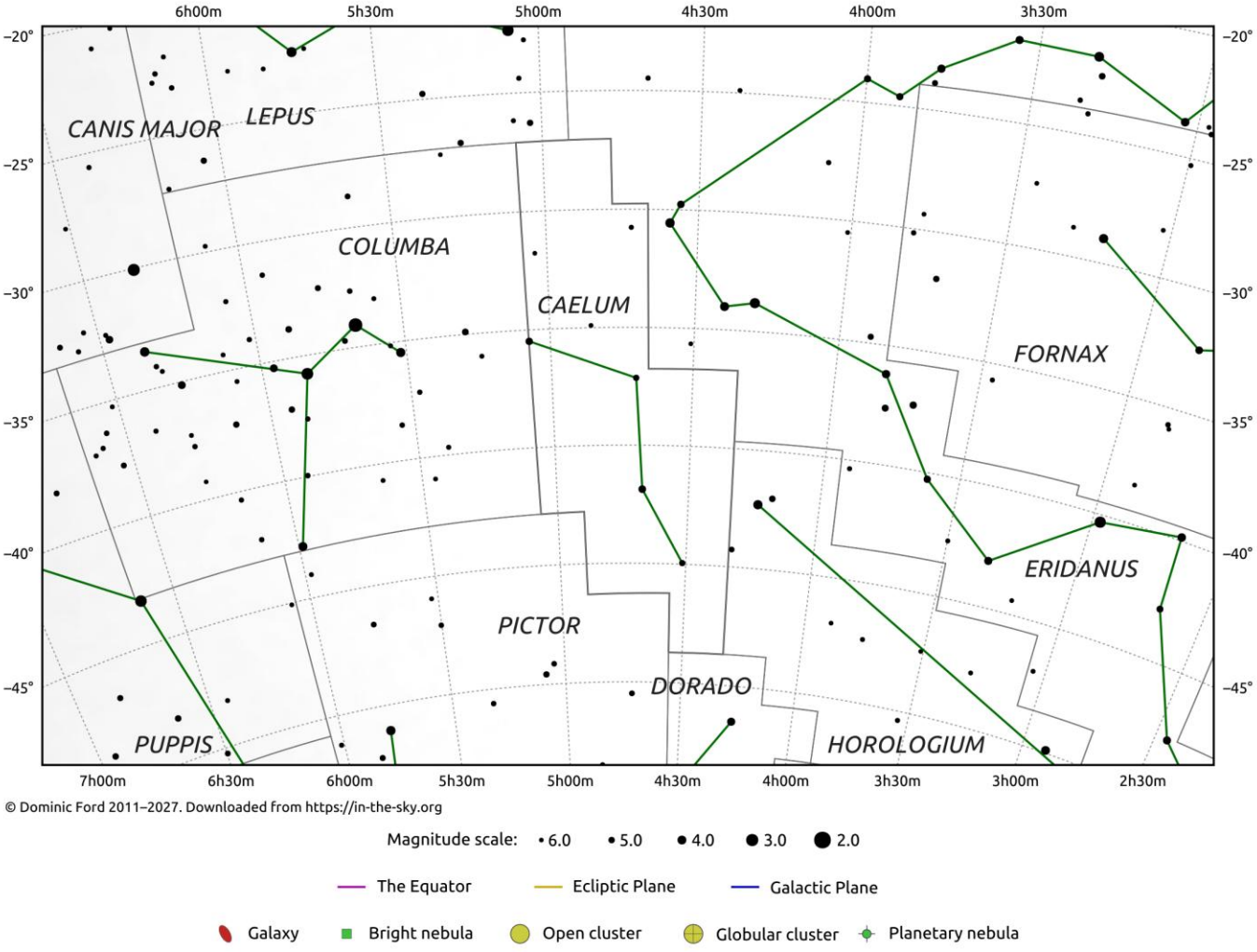
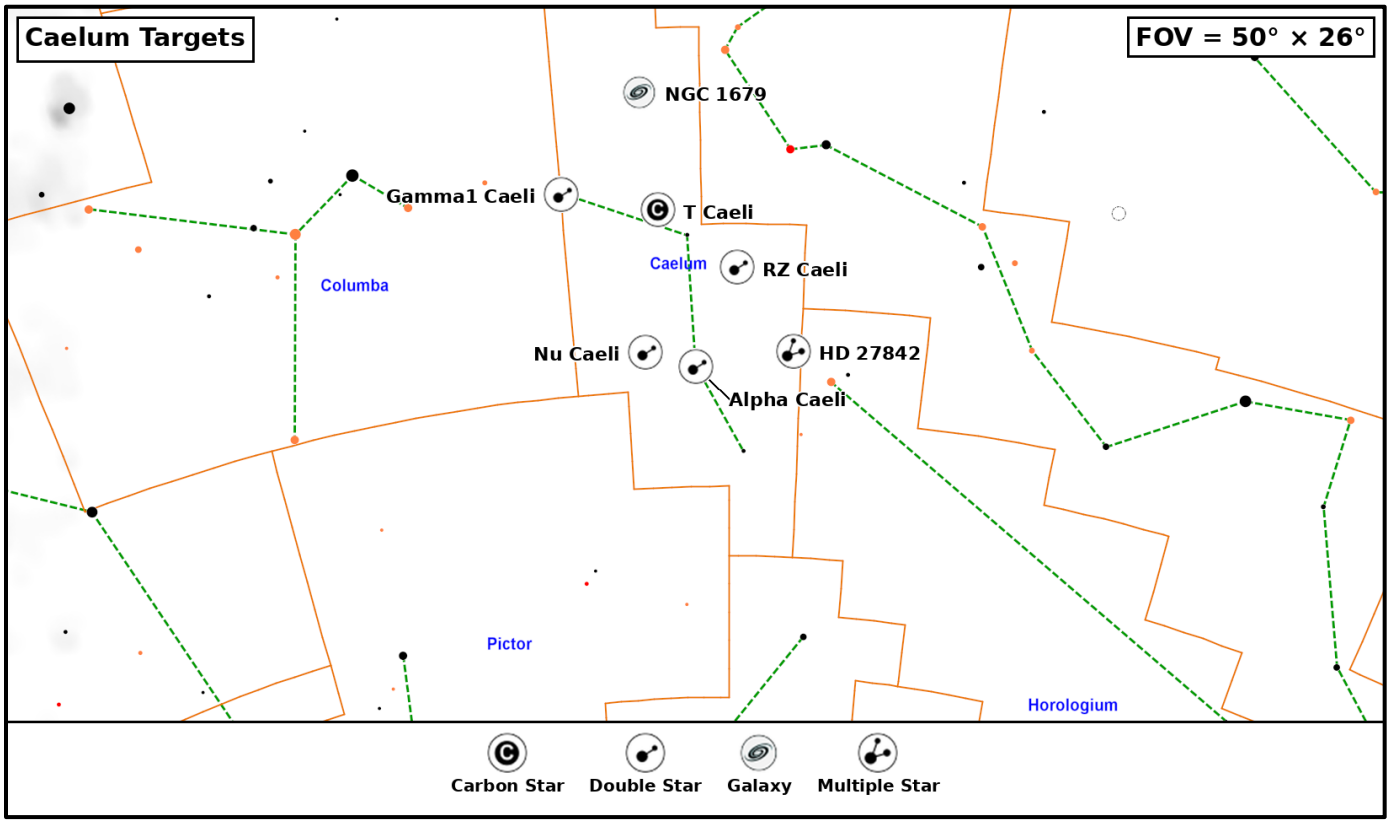
Constellation: Caelum (Cae)

Evening Visibility: **November – January**
Opposition: **December**
Latitude Visibility: **+40° to -90°**
Online Information: | In-The-Sky.org | Constellation-guide.com |

In-The-Sky.org Constellation Map



Constellation Guide



Constellation Targets

HD 27842, RZ Caeli, Alpha Caeli, T Caeli, NGC 1679, Nu Caeli, Gamma1 Caeli

Constellation Object Types Summary

Objects: 7 | Double/Multiple Stars: 5 | Galaxies: 1 | Carbon Stars: 1

Mythology/Back Story

Caelum is Latin for "the chisel" — the engraver's kind, not the identically spelled Latin word for "sky." It is one of the 14 southern constellations created by the French astronomer Nicolas Louis de Lacaille, who charted the southern skies from the Cape of Good Hope in 1751–52. He drew it as two crossed engraving tools tied with a ribbon. Being a modern constellation, it has no ancient story: nobody has yet composed a myth about a chisel. Caelum is the eighth-smallest constellation and faint, lying far from the plane of the Milky Way, with no Messier or Caldwell objects but a handful of faint galaxies and a few double and variable stars for patient observers.

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Constellation Highlights

Caelum rewards patience rather than spectacle: its best sights are a handful of double stars and one galaxy.

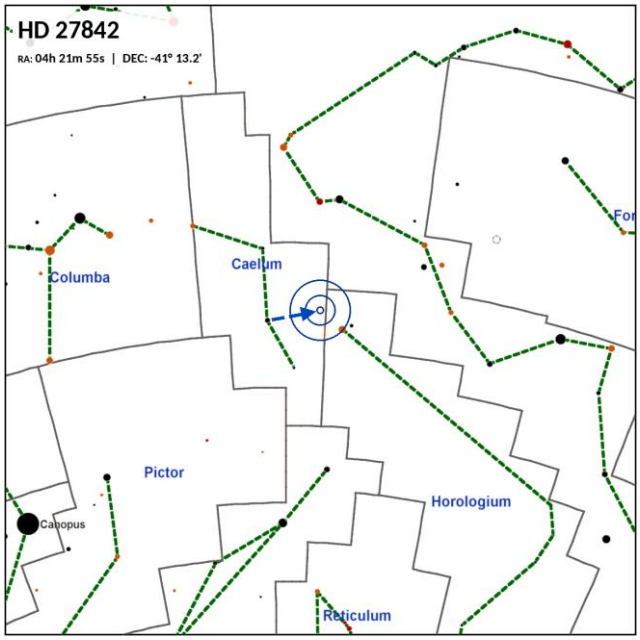
- **Alpha Caeli** (DS) – Caelum's brightest star, with a flaring red dwarf companion.
- **Gamma1 Caeli** (DS) – The finest double in the constellation, an orange giant with a close, unequal companion.
- **NGC 1679** (G) – The one galaxy in Caelum visible in many telescopes, a lopsided barred spiral that requires a dark sky.

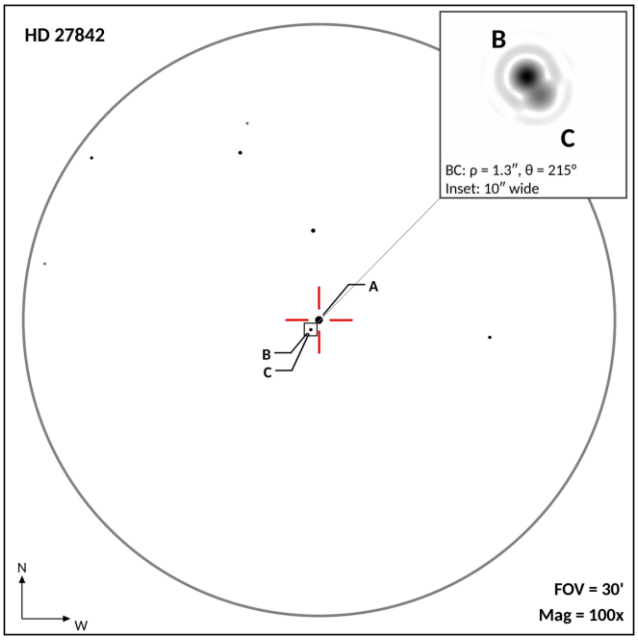
Constellation Targets Summary List

Object (Type)	Links	Gear	Aliases	Stats
HD 27842 (MS-3)	1	B, T	SAO-216765; HIP-20385; HJ 3646; WDS04219-4113; CoD -41 1386; CPD -41 473; I 272	**AB** | Mag=8.0 / 10.1 | Sep=38.1" | PA=138° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F5/6V | Color=yellow-white | **BC** | Mag=10.1 / 11.3 | Sep=1.3" | PA=215° | mBortle=9 | mApt=114mm | RecMag=180x |
RZ Caeli (DS)	1	T	SAO-195118; HIP-21213; HD 29087; WDS04330-3817; BU 747; CoD -38 1628; CPD -38 461; RZ Cae	**AB** | Mag=7.9 / 9.8 | Sep=3.2" | PA=222° | mBortle=9 | mApt=70mm | RecMag=80x | Magnitude Range=7.62 to 7.90 | Period=2.5d | Spec=A4V | Color=white |
Alpha Caeli (DS)	1, 2	T	SAO-216926; HIP-21770; Alp Cae; HR 1502; HD 29875; α Cae; Alpha Cae; HDO190; CD-42 1587; FK5 1129; WDS04406-4152; CPD -42 513	**AB** | Mag=4.5 / 12.5 | Sep=7.5" | PA=137° | mBortle=4 | mApt=300mm | RecMag=30x | Spec=F2V / M0.5V | Color=yellow-white / red |
T Caeli (CS, VS)		B, T	SAO-195295; HIP-22247; HD 30593; T Cae; CoD -36 1884; CPD -36 582	Magnitude Range=7.47 to 7.91 | Period=158d | Spec=C6,4 | BV=+2.59 | Color=red |
NGC 1679 (G)		T	NGC-1679; Levy-47; PGC 16120; ESO 422-1; UGCA 96; MCG -5-12-4; IRAS 04480-3203	Mag=11.6 | Size=3.1'x2.2' | SB=22.3 | mBortle=3 | mApt=180mm | MC=SBm |
Nu Caeli (DS)	1, 2	T	SAO-217032; HIP-22488; HR 1557; HD 30985; ν Cae; Nu Cae; HJ 3697; CD-41 1593; WDS04503-4119; CPD -41 581	**AB** | Mag=6.1 / 10.4 | Sep=12.9" | PA=254° | mBortle=9 | mApt=60mm | RecMag=20x | Spec=F2/3V | Color=yellow-white |
Gamma1 Caeli (DS)	1, 2	T	SAO-195532; HIP-23595; HR 1652; HD 32831; Gam Cae; γ^1 Cae; Gamma1 Cae; CD-35 2089; JC9; WDS05044-3529; CPD -35 586	**AB** | Mag=4.6 / 8.2 | Sep=3.2" | PA=305° | mBortle=9 | mApt=130mm | RecMag=80x | Spec=K2III-IIIb / G8IV | Color=orange / yellow |

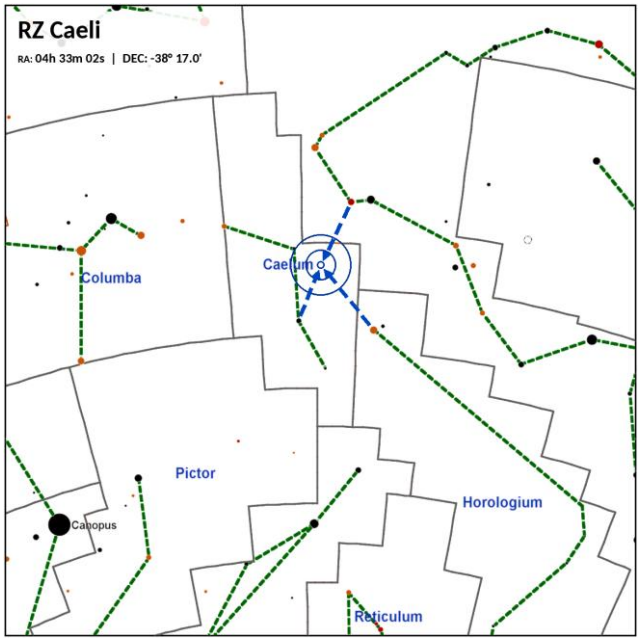
Blank

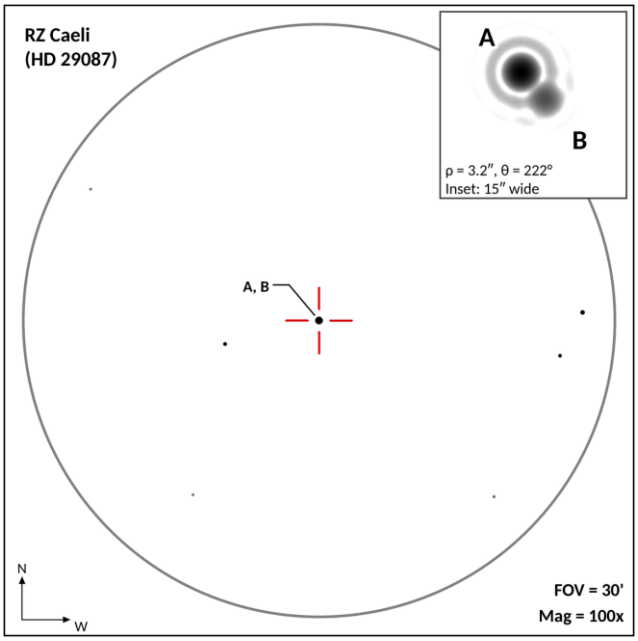
HD 27842 (MS-3 || **AB** | Mag=8.0 / 10.1 | Sep=38.1" | PA=138° | mBortle=9 | mApt=50mm | RecMag=10x | Spec=F5/6V | Color=yellow-white || **BC** | Mag=10.1 / 11.3 | Sep=1.3" | PA=215° | mBortle=9 | mApt=114mm | RecMag=180x |) Located 240 light years away. This is a physical triple. The wide AB pair lies about 2,800 AU apart, while B has a close companion, C, about 100 AU from it, needing a 4.5-inch telescope and steady air to split.





RZ Caeli (DS || **AB** | Mag=7.9 / 9.8 | Sep=3.2" | PA=222° | mBortle=9 | mApt=70mm | RecMag=80x | Magnitude Range=7.62 to 7.90 | Period=2.5d | Spec=A4V | Color=white |) Located 430 light years away. The primary is an Algol-type eclipsing binary, two stars too close to resolve, one periodically passing in front of the other. Whether the visible companion is bound to them is undetermined.





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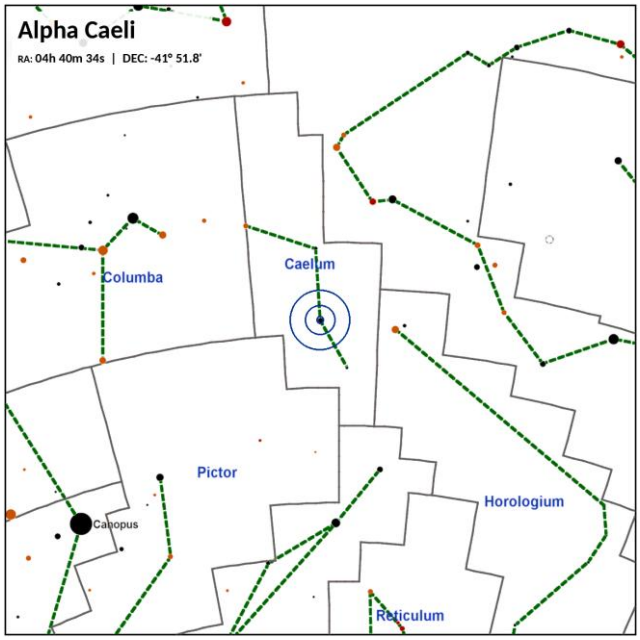
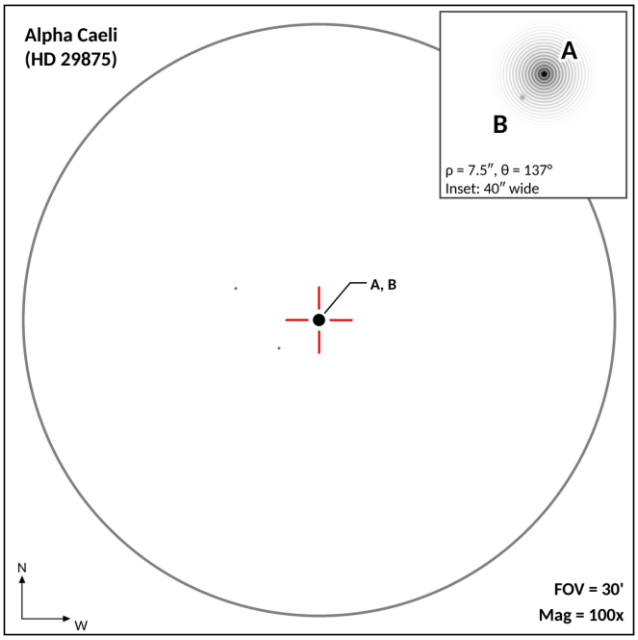
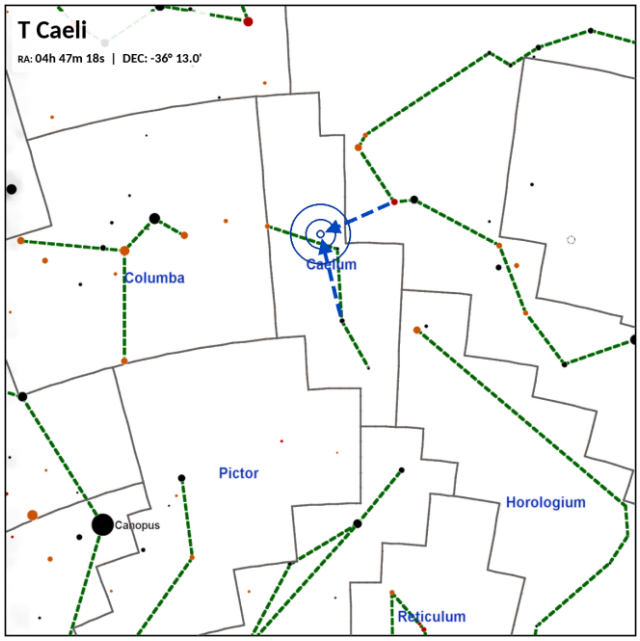
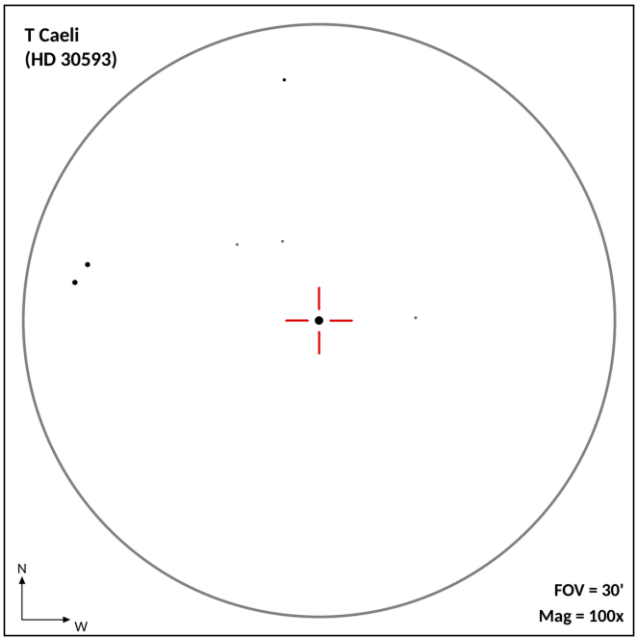
Alpha Caeli (DS || **AB** | Mag=4.5 / 12.5 | Sep=7.5" | PA=137° | mBortle=4 | mApt=300mm | RecMag=30x | Spec=F2V / M0.5V | Color=yellow-white / red |) The brightest star in Caelum, yellow-white and on the main sequence, with a red dwarf companion that periodically flares. The companion is faint and buried in the primary's glare, needing a 12-inch telescope and a steady night to view; whether the two are bound is undetermined.



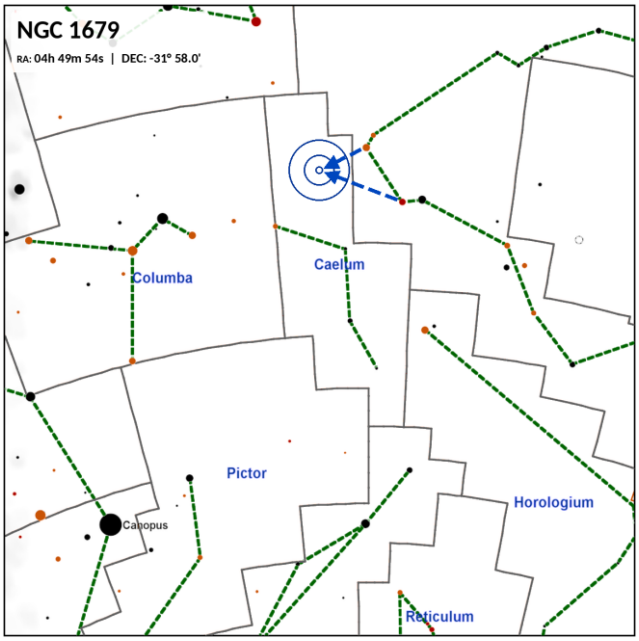


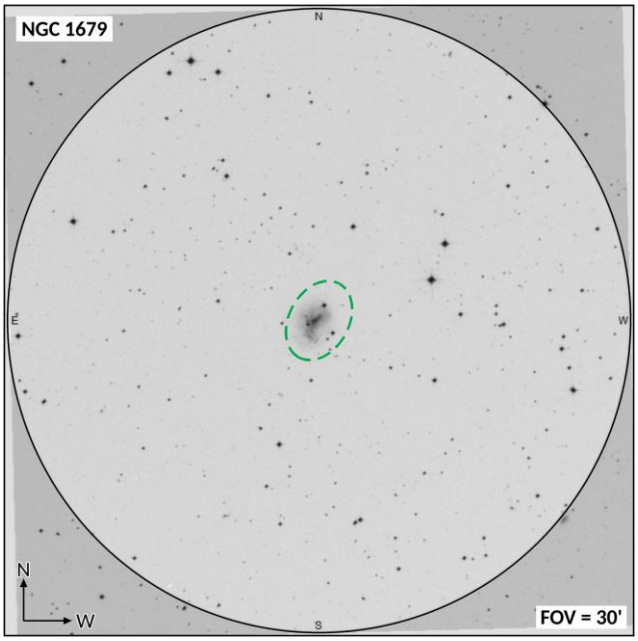
T Caeli (CS, VS || Magnitude Range=7.47 to 7.91 | Period=158d | Spec=C6,4 | BV=+2.59 | Color=red |) Located 4,200 light years away. A semi-regular (SRb) carbon star: a cool giant whose atmosphere holds more carbon than oxygen, wrapping it in soot that filters out blue light. Its deep color shows well in binoculars or a small telescope. BV=+2.59 indicating a color of Red.



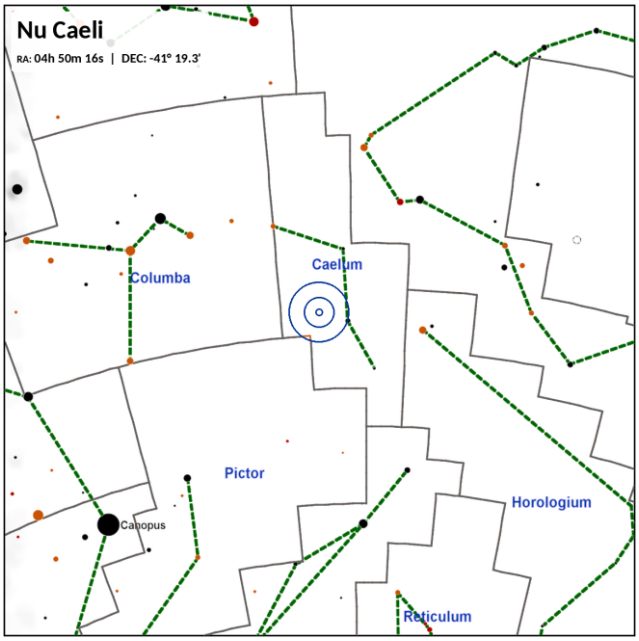


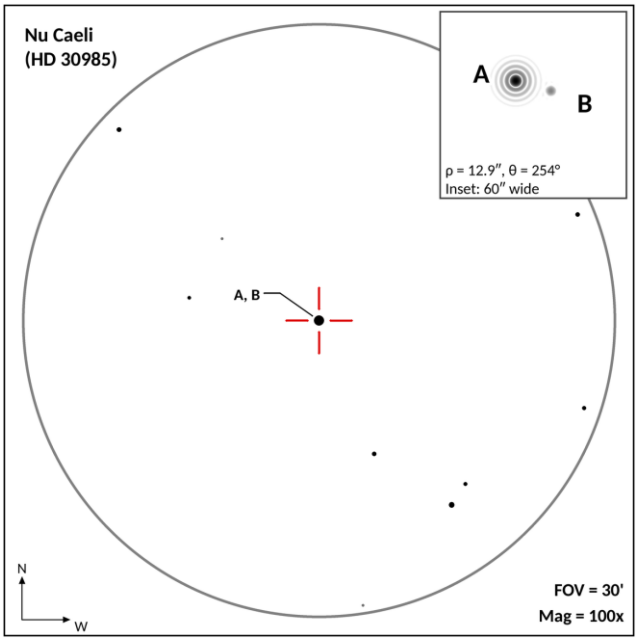
NGC 1679 (G || Mag=11.6 | Size=3.1'x2.2' | SB=22.3 | mBortle=3 | mApt=180mm | MC=SBm |) Located 33 million light years away with an estimated physical diameter of 30,000 light years. A barred Magellanic spiral, irregular and lopsided, with active star formation across its disk. About a third the width of the Milky Way. Dark sky and a moderate telescope are needed to show more than a faint glow.





Nu Caeli (DS || **AB** | Mag=6.1 / 10.4 | Sep=12.9" | PA=254° | mBortle=9 | mApt=60mm | RecMag=20x | Spec=F2/3V | Color=yellow-white |) A yellow-white star either on the main sequence or just evolving off it, with a much fainter companion wide enough to separate in a small telescope. The two are not physically bound.





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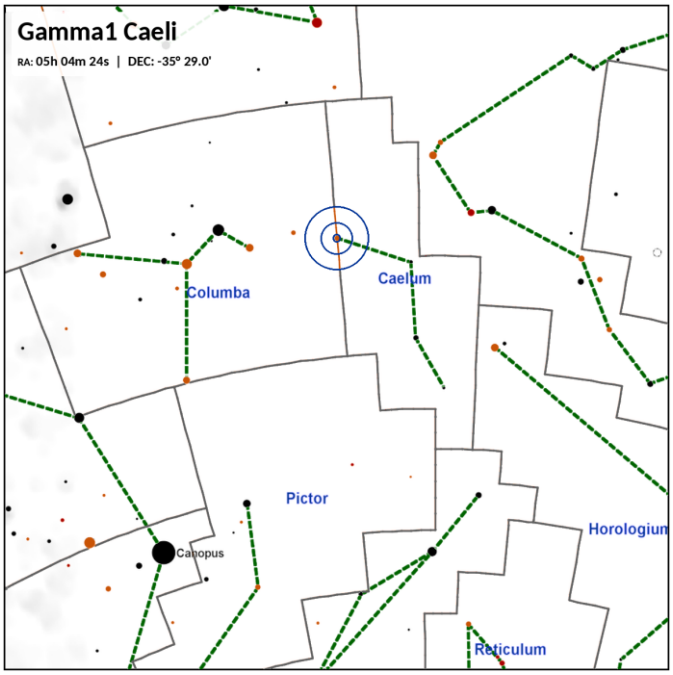
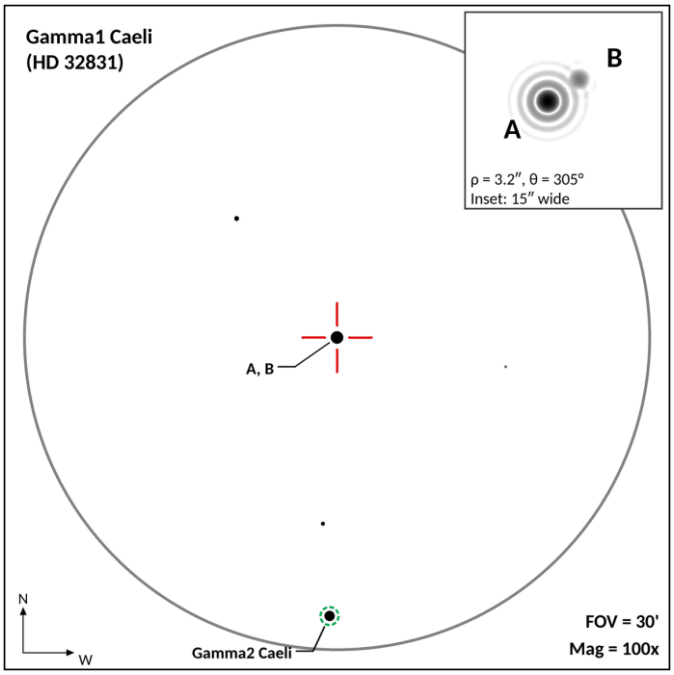
Gamma1 Caeli (DS || **AB** | Mag=4.6 / 8.2 | Sep=3.2" | PA=305° | mBortle=9 | mApt=130mm | RecMag=80x | Spec=K2III-IIIb / G8IV | Color=orange / yellow |) An orange giant with a yellow subgiant companion, close enough to need a 5-inch telescope to divide cleanly. This is a physical pair. Gamma2 Caeli, the Delta Scuti variable X Caeli (a star that pulses every few hours), lies 13 arcminutes south; the two are an unrelated line-of-sight pairing.





Observation Log: Caelum (Cae)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Observation Log: Caelum (Cae)

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
  - Hartung's Astronomical Objects for Southern Telescopes: David Malin, David Frew
- 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