Corona Borealis (CrB)

Evening Visibility: **May – July**
Opposition: May/June
Latitude Visibility: **+90° to -50°**
Online Information: | In-The-Sky.org | Constellation Guide.com |

Constellation Targets

HD-136176, Eta Coronae Borealis, Zeta 1 CrB, R CrB, V CrB, T CrB, Sigma CrB

Mythology/Back Story

Corona Borealis is known as The Northern Crown and consist of seven stars forming a semi-circular arc. The mythological legend associated with this constellation is that it represents the crown worn by Princess Ariadne of Crete when she married the god Dionysus.

Corona Borealis Supercluster

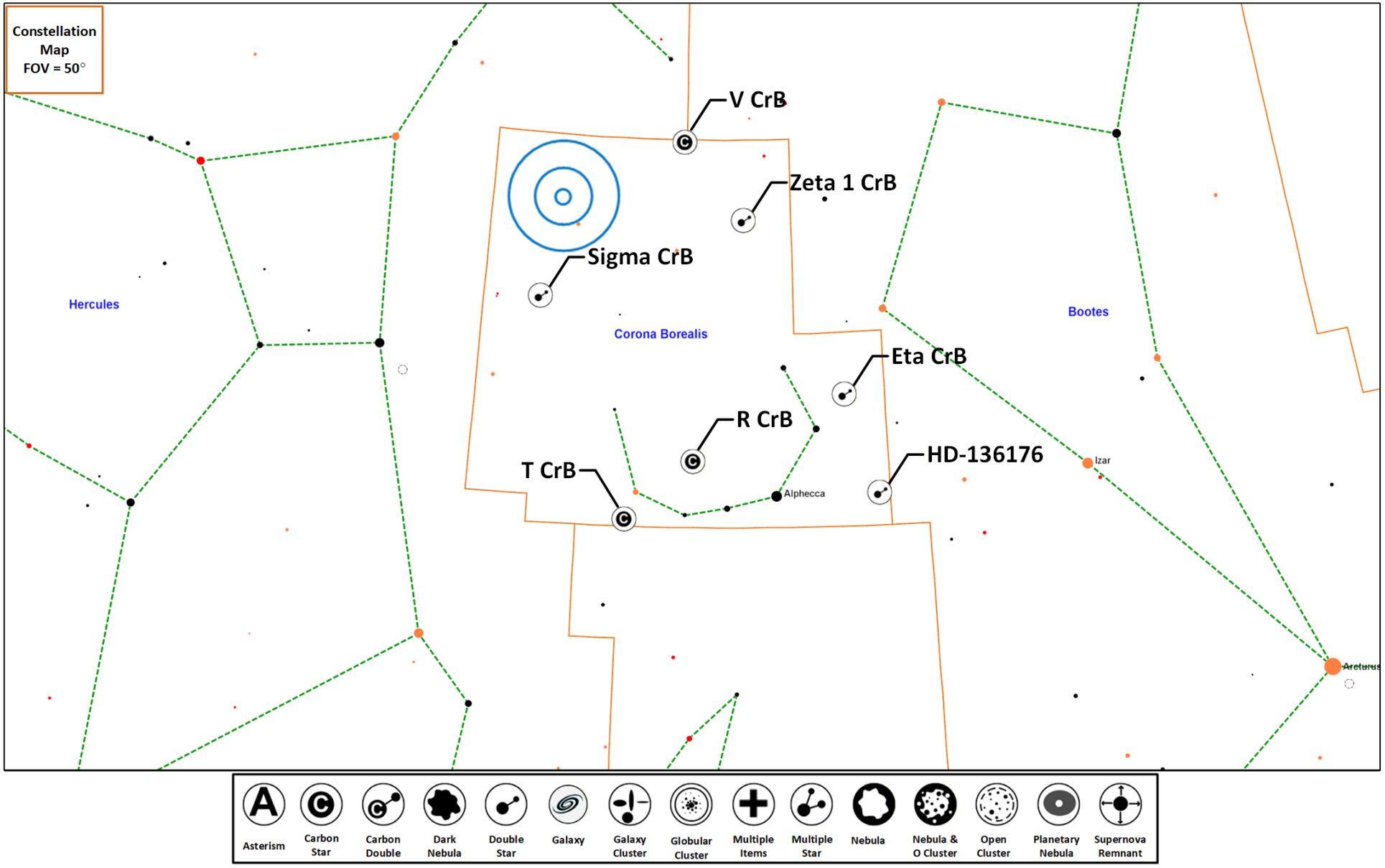
This super cluster of galaxies is dense and compact compared to other superclusters. It is estimated to have a mass between 0.6 and 12 x 10^{16} solar masses and cover a volume of 330 million light years wide and 130 million light years deep. The supercluster is composed of the galaxy clusters Abell 2056, Abell 2061, Abell 2065 (the most massive cluster of the group), Abell 2067, Abell 2079, Abell 2089 and Abell 2092. Galaxies in this supercluster are very dim due to the estimated distance of about 1 billion light years away, and as a result, none are featured in this guide.

Constellation Highlights

No open clusters or globular clusters are in this constellation. There are approximately 30 galaxies within the boundary of this constellation, most are quite dim with magnitudes in the range of 13.2 to 15.1 so are not featured here, as a result the guide for this constellation only consists of stars.

- **Sigma CrB** (DS) – Nice double star system resolved in small scopes
- **Zeta 1 CrB** (DS) – Easily resolve, evenly matched stars
- **V CrB** (CS) – BV index of +4.4 indicates this should be quite red.

Constellation Guide



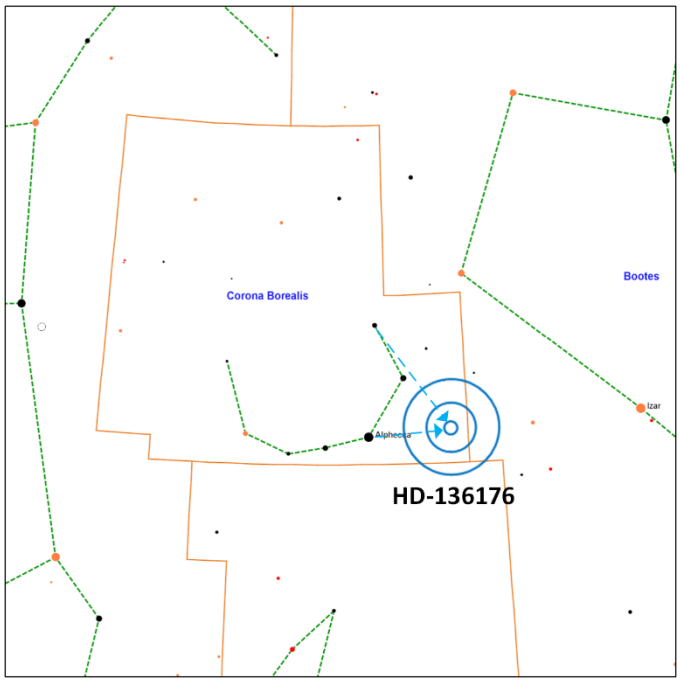
Constellation Guide

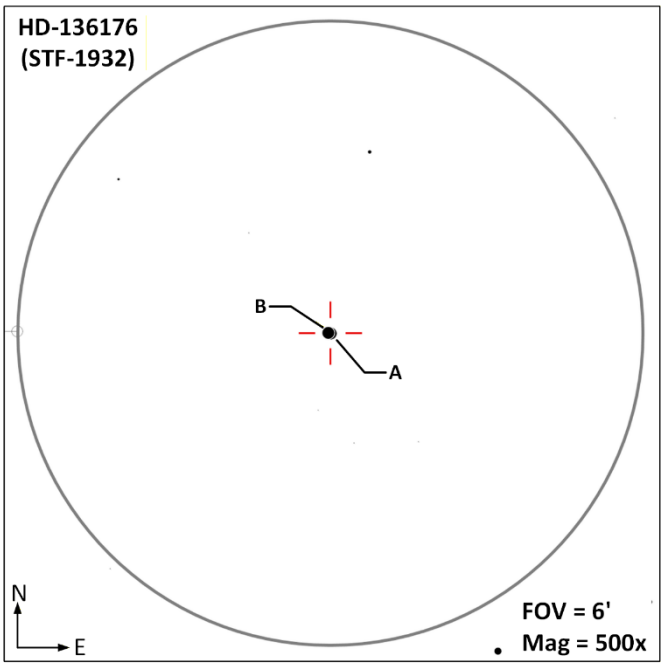
Constellation Objects Summary

Object (Type)	Links	Gear	Aliases	Stats
HD-136176 (DS)	1	T	SAO-083756, HIP 74893, STF 1932, ADS 9578, BD +27 2477, WDS 15183+2650	**AB** | M=7.3, 7.4 | Sep=1.6" | PA=270° | Period=197y | Color= Yellow-White, Yellow-White | Spec=F6V, F6V |
Eta CrB (DS)	1, 2	T	SAO-064673, HIP 75312, 2 CrB, HR 5728, HD 137108, Eta Coronae Borealis, η CrB, ADS 9617, WDS 15232+3017, BD +30 2653	**AB** | M=5.6, 6.0 | Sep=0.85" | PA=54° | Period=42y |Color=Yellow-White, Yellow | Spec=F8V, G0V |
Zeta1 CrB (DS)	1, 2	T	SAO-064833, HIP 76669, 7 CrB, HR 5833, HD 139891, STF 1965, ADS 9737, WDS 15394+3638, ζ1 Coronae Borealis, BD +37 2665	**AB** | M=5.0, 5.9 | Sep=6.3" | PA=306° | Color= Blue-White, Blue-White | Spec=B7V, B9V |
R CrB (CS)	1	B, T	SAO-084015, HIP 77442, HR 58880, HD 141527, BD +28 2477, GCVS270001, Variabilis Coronae	| Mag Range: 5.7 to 14.8 | Period=Months to years | Color=Yellow | BV=+0.6 |
V CrB (CS)	1	B, T	SAO-064929, HIP 77501, HD 141826, BD +40 2929, TYC 3054-0258-1, V Coronae Borealis	| Mag Range: 6.9 to 12.6 | Period= 357 days | BV=4.41 | Spec=C6, 2e |
T CrB (VS)	1	B, T	SAO-084129, HIP 78322, HR 5958, HD 143454, JEF 2, WDS 15595_2555, TYC 2037-1144-1, Blaze Star	| Mag Range: 10 to 2.0 | Period 80 years | BV=_1.31 |Spec=sdBe |
Sigma CrB (DS)	1, 2		SAO-065165, HIP 79607, 17 CrB, HR 6064, HD 146362, STF 2032, ADS 9979, BD +34 2750, WDS 16147+3352, σ Coronae Borealis	**AB** | M=5.6, 6.5 | Sep=7.3" | PA=240° | Period=657y | Color=Yellow, Yellow | Spec=G0V, G1V |

Blank

HD-136176 (DS **AB** | M=7.3, 7.4 | Sep=1.6” | PA=270° | Period=197y | Color= Yellow-White, Yellow-White | Spec=F6V, F6V |) Located 117 light years away and with a separation of only 1.6” a telescope with an aperture of 100mm (4”) or more will likely be required to separate the components in this system.





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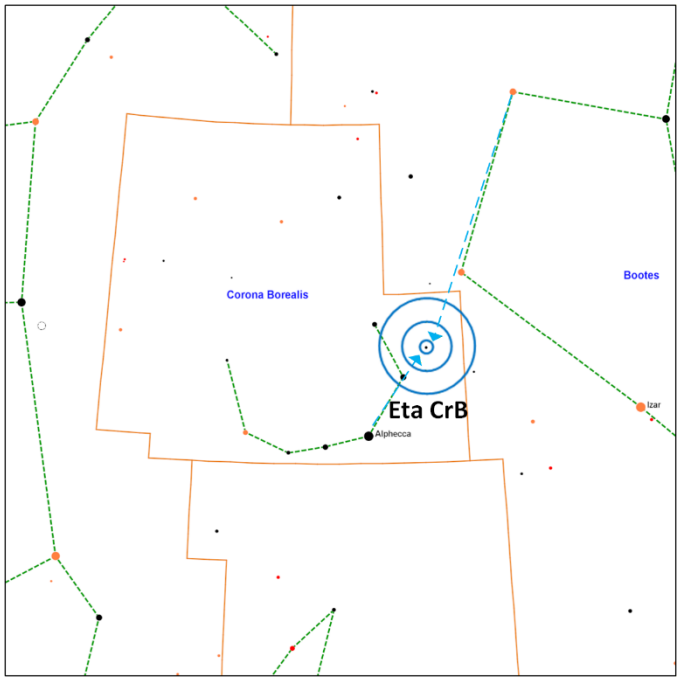
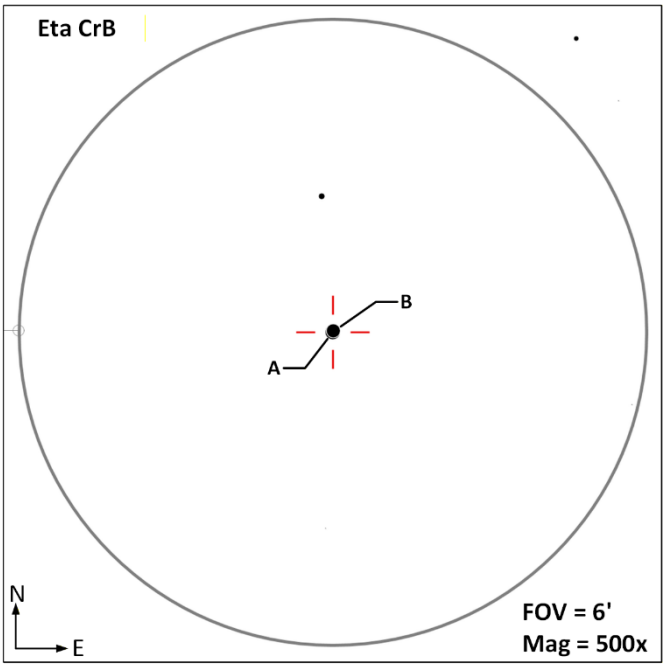
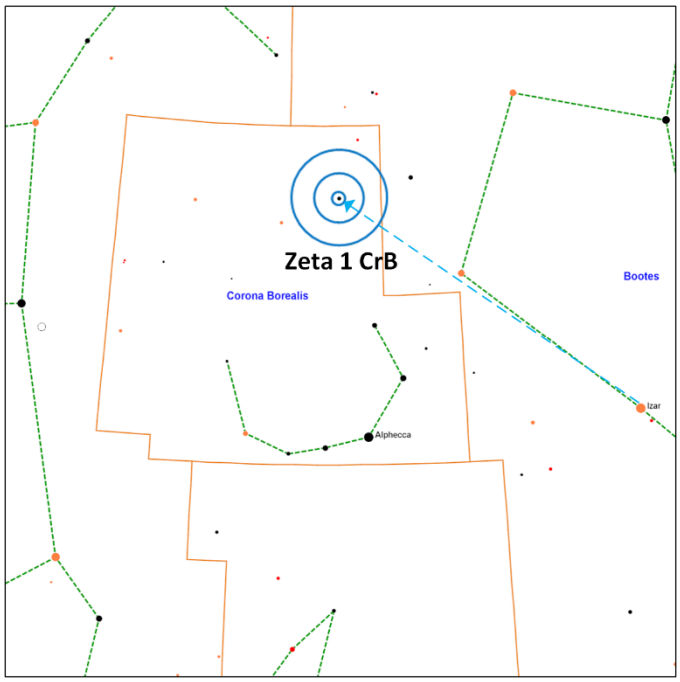
Eta CrB (DS **AB** | M=5.6, 6.0 | Sep=0.85” | PA=54° | Period=5,205y |Color=Yellow-White, Yellow | Spec=F8V, G0V |) Located 58 light years away, this is actually a triple star system, but the third star is a brown dwarf with a magnitude of 17, so not visible in most ground-based telescopes. A telescope of 150mm (6”) or more will be required to separate these stars.

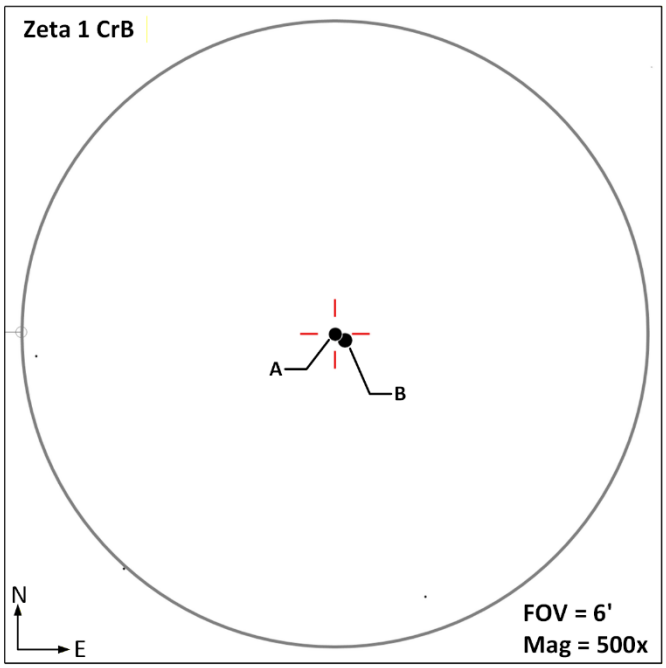




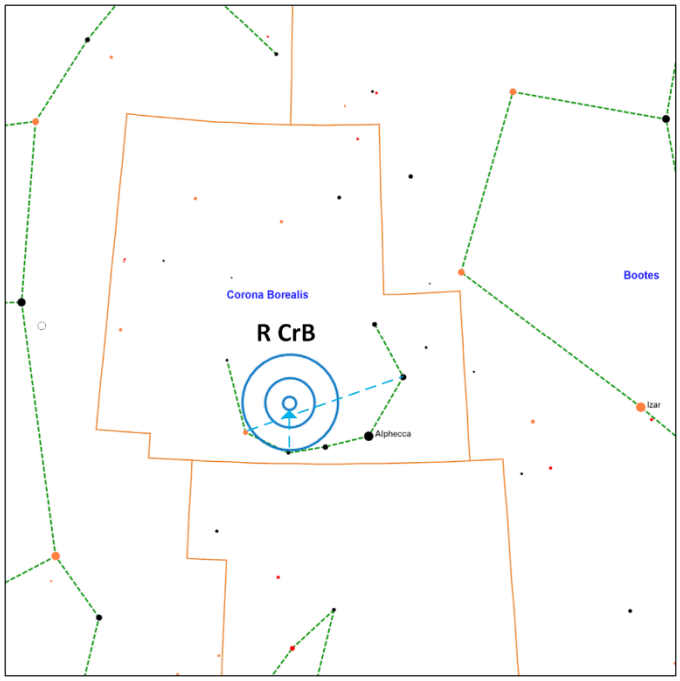
Constellation Guide

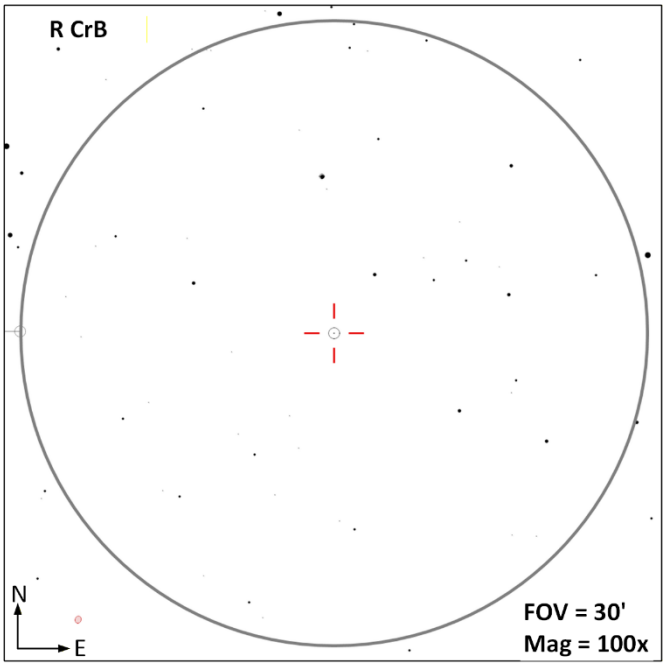
Zeta1 CrB (DS **AB** | M=5.0, 5.9 | Sep=6.3” | PA=306° | Color= Blue-White, Blue-White | Spec=B7V, B9V |) A popular double star with identically colored blue-white stars that should be easily resolved in most telescopes. The system is located 470 light years from earth.





R CrB (CS | Mag Range: 5.7 to 14.8 | Period=Months to years | Color=Yellow | BV=+0.6 |) A low-mass yellow supergiant variable star that ranges in magnitude from 5.7 to 14.8 at irregular intervals from months to years then gradually returning to is normal brightness of 5.7.





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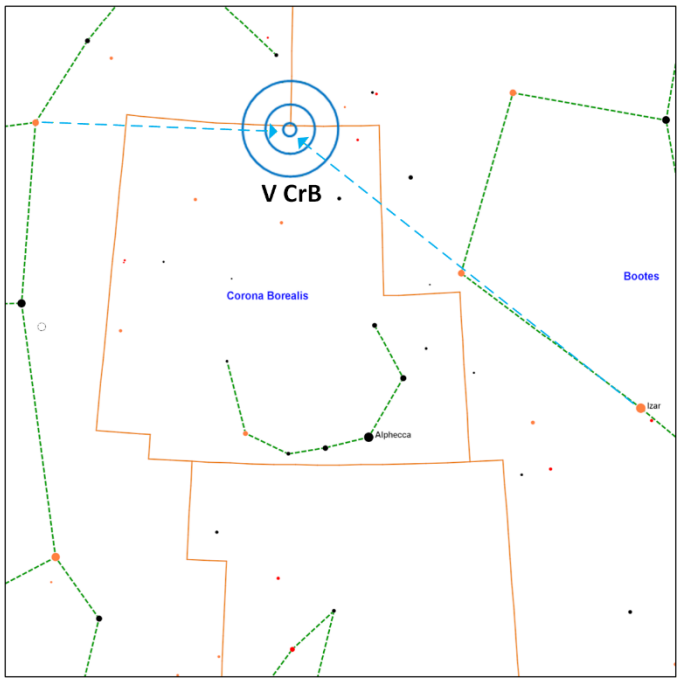
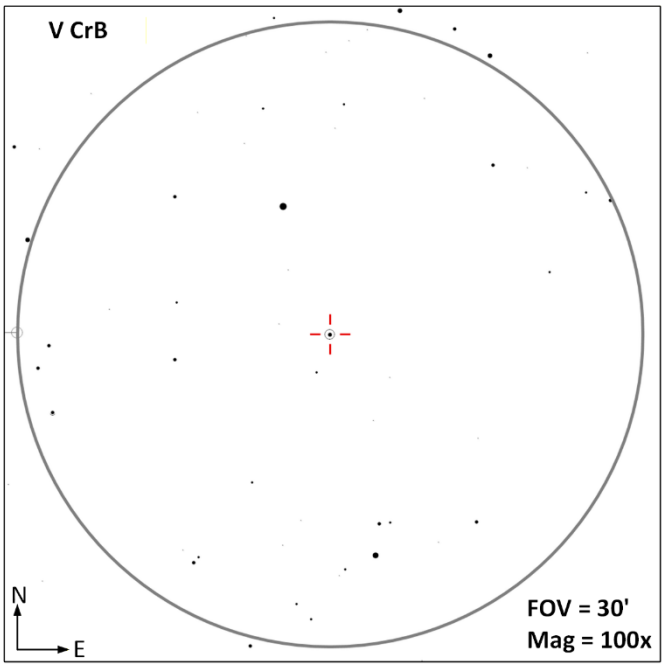
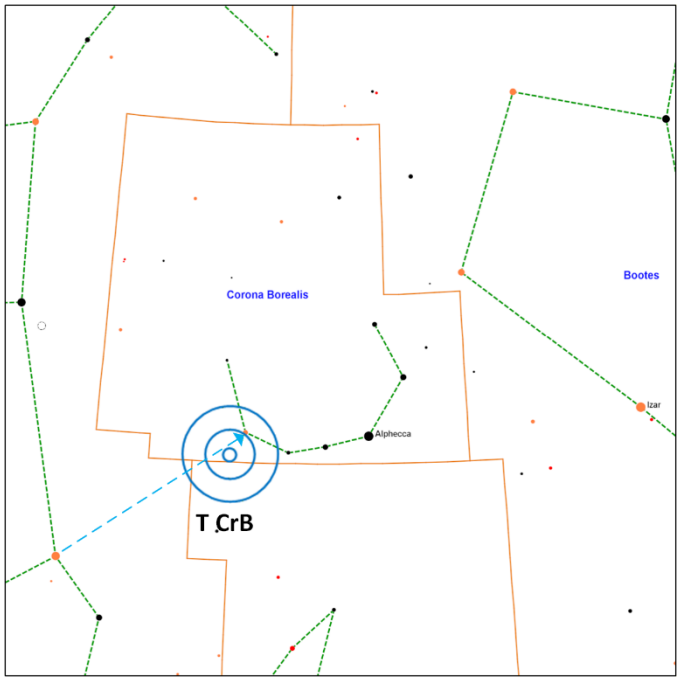
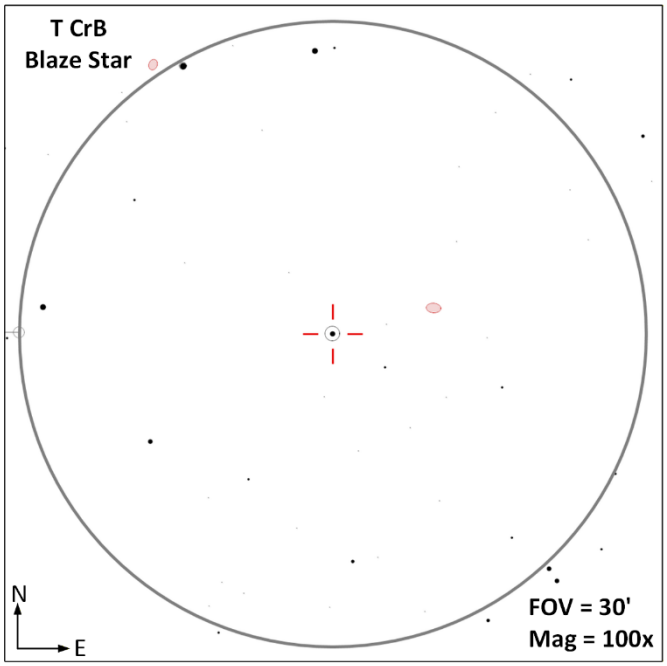
V CrB (CS | Mag Range: 6.9 to 12.6 | Period= 357 days | BV=4.41 | Spec=C6, 2e |) This is a Mira-type long period variable carbon star located about 2,900 light years away. This star is one of the largest stars discovered so far, if place in the center of our solar system it would reach out to parts of the asteroid belt.



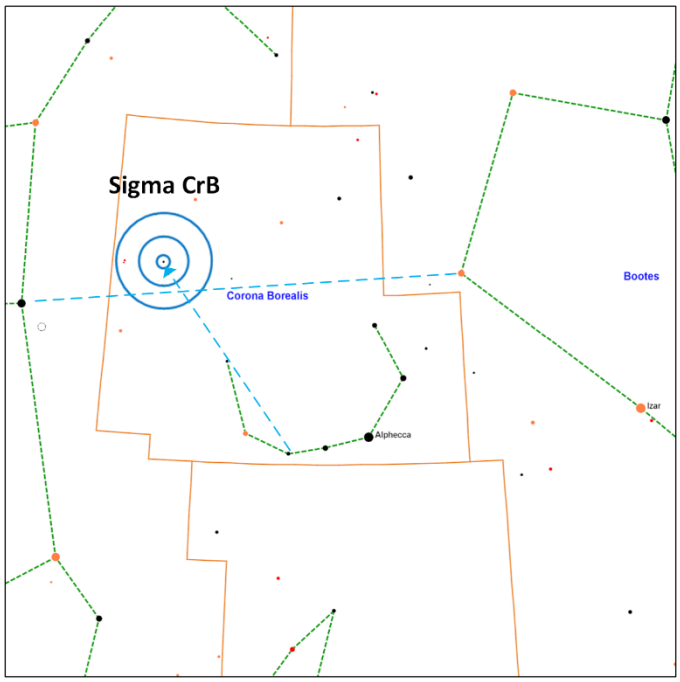


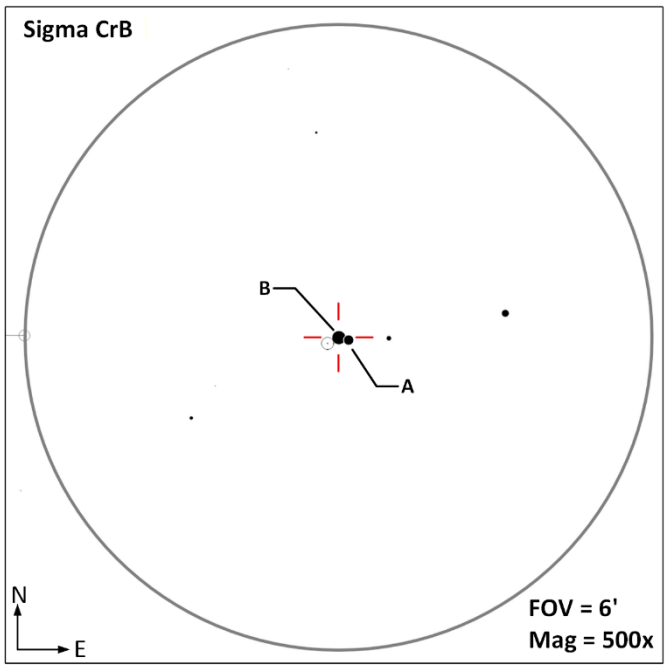
T CrB (VS | Mag Range: 10 to 2.0 | Period 80 years | BV=+1.31 |Spec=sdBe |) The Blaze Star is a recurrent nova star located 3,000 light years away. It is suspected that this star has a period of about 80 years for it to nova, indicating it may nova around 2027. This is a spectroscopic binary system.





Sigma CrB (DS **AB** | M=5.6, 6.5 | Sep=7.3” | PA=240° | Period=657y | Color=Yellow, Yellow | Spec=G0V, G1V |) This system is suspected of actually containing five members, but two are brighter and/or well separated. This system is located 74 light years away.





Constellation Guide

Observation Log: Corona Borealis (CrB)

Equipment Config A: _____ Config B: _____

Notes: _____

Date	Time	Config	Target	Notes

Date	Time	Config	Target	Notes

Constellation Guide

Observation Log: Corona Borealis (CrB)

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

The resources listed below were utilize to generate this document.

References

- 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: Bret Archinal, Steve Hynes
  - Sky Spot Books
    - Bright Telescopic Objects: Brent Watson
    - Select Double Stars: Brent Watson
    - Overlooked Objects: Bret Watson
- Asterisms
  - Astronomical League: Asterisms observing program List
  - Asterisms: Demeiza Ramakers
  - Pattern Asterisms: John Chiravalle
  - Milwaukee Astronomical Society: Binocular Asterisms
  - Deep-Sky.co.uk: Observing Asterisms (David Ratlege)
- 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

Applications

- SkyTools 4.1 Visual Professional
- AstroPlanner Version 2.4
- Cartes du Ciel Version 4.3
- Sky Safari Pro 7
- Microsoft Office Home and business 2021 - Word
- Microsoft Visio Professional 2021
- IrfanView Version 4.72