aavso

to enable anyone, anywhere, to participate in scientific discovery through variable star astronomy

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June's Featured Variable: Y Canum Venaticorum in Canes Venatici the Hunting Dogs

I bet you have seen a star twinkling —the air surrounding Earth makes it look like the star is sparkling! Even if we went to outer space, we could see many stars change brightness.

"Variable stars" continuously dim, brighten, and dim. Some complete this pattern in under a second, while others take years.

One variable star YOU can see this month is Y Canum Venaticorum in the constellation Canes Venatici, "The Hunting Dogs."

Y Canum Venaticorum, formally nick-named "La Superba," is located about a third of the way from Chara (Beta Canum Venaticorum) toward the famous pair Alcor and Mizar in the handle of the Big Dipper.

In dark skies, La Superba is just barely visible to the naked eye, but its red color makes it obvious in binoculars. La Superba is one of the reddest stars known. It is a semi-regular variable star whose brightness drops by 75% over a period of every 157 days.

It is the brightest of the giant red carbon stars —stars that have a fairly high concentration of carbon in their atmosphere. It is such a large star that if it replaced the Sun, its outer atmosphere would extend beyond Mars.

Time	Magnitude
_____	_____
_____	_____
_____	_____

Star Finder Chart for Y Canum Venaticorum

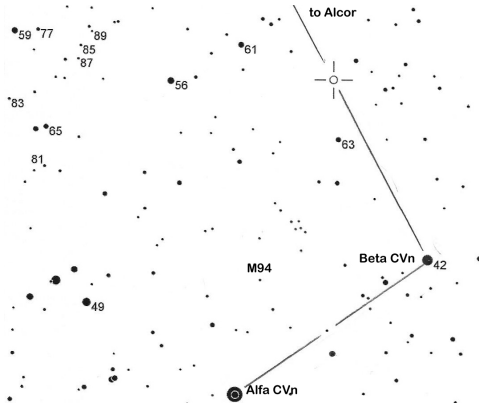
It is easy to estimate the brightness (magnitude) of a star, but first note:

- in finder charts like below, brighter stars are indicated by larger dots
- the *brighter* the star, the *lower* the magnitude number
- magnitudes are written to the nearest tenth—but with*out* a decimal point, which could be confused as a star. So, 42 = magnitude 4.2
- in this chart, magnitudes for comparison stars—nearby stars to compare a given star's brightness to—are noted

Find two comparison stars close to your given variable star's brightness—one brighter and one dimmer. Then observe in the night sky: is the variable's brightness half-way between the two comparisons'? A quarter? Really close? Apply that fraction to the difference between the two magnitudes and you estimated the star's brightness for that time!

This comparison and finder chart for Y Canum Venaticorum (YCVn) will help you estimate its brightness.

The ⊹ icon indicates the location of Y CVn.



About the AAVSO

The American Association of Variable Star Observers (AAVSO) is an international nonprofit organization of citizen and professional astronomers interested in stars that change in brightness—variable stars.

From its earliest days in 1911, AAVSO members have included some of the most prolific astronomers of the 20th & 21st centuries.

AAVSO Databases

AAVSO International Database (AID): The largest and most comprehensive digital variable star database in the world, with over 43 million variable star observations—a free resource for the entire scientific community

Variable Star Index (VSX): a collection of up-to-the-minute data on over 200,000,000 specific variable stars

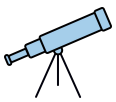
Spectroscopy Database: spectroscopic observations of stars

Solar Database: Sudden Ionospheric Disturbance (SID) Database, and data relating to sunspot observations

Exoplanet Database: long-term follow-up information on planets orbiting other stars

Community

Explore



Education

Connect with the AAVSO

Who are AAVSO Members?

- A **citizen scientist**—contributes to science by acquiring data on variable objects and submitting them to our databases, or other activities, such as data mining.
- An **educator or mentor**—teaches observing skills to fellow AAVSO observers, through instructing AAVSO CHOICE courses or being a mentor.
- A **student**—is learning how to find a star, set up a telescope, observe, submit data, or is increasing their astronomy knowledge
- A **professional astronomer**— uses AAVSO data and services to advance their research
- An **AAVSO Ambassador**—a student or young professional representing AAVSO through astronomy education and activities

Interested in becoming an ambassador?

- www.aavso.org/ambassador-program
- Email Lward@aavso.org

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You, your friends, and colleagues are also invited to join us for:

AAVSO's free-to-all 2021 Webinar Series!

Come to one or all! Most Saturdays of the year.

See the schedule and sign up:

https://www.aavso.org/2021-webinars

AAVSO can help YOU become a citizen astronomer!

Discover the benefits of membership and join us!

https://www.aavso.org/join-aavso#benefits

Benefits include being able to participate in our **mentor program**: beginners are paired with an experienced observer for guidance and techniques:
https://www.aavso.org/mentor-program

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AAVSO Tools for Beginner Observers:

Beginner Tutorials: aimed at those with absolutely no experience, these introduce variable star science basics and then provide "challenges" for you to apply the concepts:
https://www.aavso.org/tutorials

AAVSO Online Forum: talk to peers for advice: https://www.aavso.org/forum

Observing Manuals: each one is dedicated to a type of observing, including visual, CCD, DSLR, Spectroscopy, Solar, and more:
https://www.aavso.org/observing-manuals

CHOICE Courses: peer-taught informal online observing courses:
https://www.aavso.org/choice-astronomy

Let's connect and explore