

August's Featured Variable: R Aquilae in Aquila the Eagle

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 R Aquilae, located off the trailing edge of the western wing of Aquila the Eagle. It is about 5 degrees south of Zeta Aquilae, the wing tip.

At its brightest, R Aquilae is visible to the naked eye as a dim, red star. Dimmed, it is just visible in binoculars. Its period from one dimming to the next is about 270 days, but this has been decreasing at an average rate of 9 hours per year since first known in 1915.

To view the "Summer Triangle," which includes this star, find two more stars:

Beta Lyrae (a.k.a. Sheliak) in the constellation Lyra, the Harp. It is even visible in light-polluted urban skies! It is at the southwest corner of the parallelogram of bright stars that make up the Lyra constellation.

Chi Cygni in Cygnus the Swan nearby!

Visit www.aavso.org/featured-variables for more information.

Time

Magnitude

_____	_____
_____	_____
_____	_____

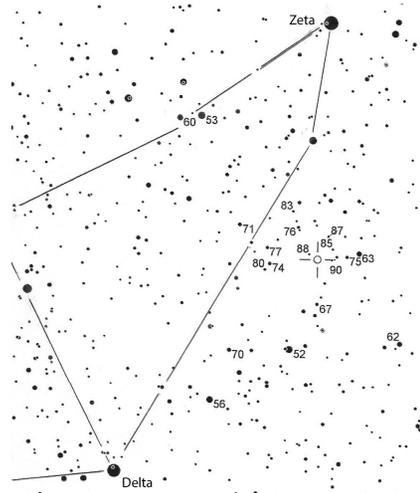
Star Finder Chart for R Aquilae

You can estimate a star's brightness (magnitude), but first note: in star comparison and finder charts like below or on www.aavso.org/featured-variables:

- brighter stars are indicated by larger dots
- the *brighter* the star, the *lower* the magnitude number
- any magnitudes given are to the nearest tenth—but *without* a decimal point, which could be confused as a star. So, 88 = magnitude 8.8

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 finder chart will help you find R Aquilae in the night sky. The  indicates the location of R Aquilae.



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

American Association of Variable Star Observers
185 Alewife Brook Parkway, suite 410
Cambridge, MA 02138, USA
+1 (617) 354-0484
aavso@aavso.org

www.aavso.org

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

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

Discover the benefits of membership and join us!

aavso.org/membership

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

Interested in becoming an AAVSO ambassador?

Ambassadors are students or young professionals representing AAVSO through conducting astronomy education and outreach.

aavso.org/ambassador-program

AAVSO can help YOU become a citizen astronomer!

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: aavso.org/tutorials

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

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

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

Everyone is invited to join us for:

AAVSO 111th Annual Meeting & Workshop

Nov. 4 - 8, 2022 | Tucson, Arizona
aavso.org/111

AAVSO webinars

About three Saturdays per month
aavso.org/participate

