



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

American Association of Variable Star Observers  
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**AUfaTWs Featured Variable:  
 ? [cS adA\_ [Uba` 5WV[ [ 5WgefZW  
 I ZS`MadEV\$? a` efVd**

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 in 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 tonight is ? [cSž Kag US` X V [f Tk [ SY[ [ Y fZWzHŠaXefScē [ B[eUeSeTW Y S` Scāi ZVSV/ [fZ 3`XS B[eUeSf [fe f[bfiba[ f[ Y eagZ fa ? [cSž 3` afZWzHŠaXefScē Xad\_ W Tk fZW kSVWē UgeVd[ fZWŠUMaXFSGde fZW4g`ba[ fe fa fZW Vefzi ZVUMZWfi a ba[ f[ Y ↑ Vē [ fVēVf kag i [^X V ? [cSCEž

Ad\_ SkTW af`I Z[MSf [feTqYZfVē? [cS [e VSe[k h[eT Mfa fZW S] W VKW XadST agf ZSX aX[fe dagYZ k %\$Z/Sk bVd[Vē [f [eXS[ fVēfZS` US` T VēVW i [fZ kagdVWē S`a` Vž

? [cSe SdAS USee aXhSc[ST VefScē fZSf ZShW Ua\_ b`VWV Xge[ Y fZWkdZkVdYVW XgV`S` V SdMfZWUaa Vēf SdVēf S` V\_ aef`g\_ [ age dW Y[S` f efScēZfZWdT dYZf Vē hSc[Vē Se fZW efSdbg`eSfVēZDWW f: gTT VēbSUMFVWē UabW [ SYVēaX? [cSeZai Vh[VW UMaX\_ See efUe\_ [ Y Si Sk Xb\_ fZWefSdSf S dSfWaX` W 7SdZ\_ See bVdkVScž

More info: [www.aavso.org/featured-variables](http://www.aavso.org/featured-variables)

Try recording your observations below:


Time	Magnitude
_____	_____
_____	_____
_____	_____

**Star Finder Chart  
 for ? [cS**

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](http://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, because it could be confused as a star. So, 54 = magnitude 5.4.

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, plus the two that include the "arrowheads" of Taurus and Pisces at [aavso.org/featured-variables](http://aavso.org/featured-variables), will help you find ? [cS in the night sky. The  icon indicates the location of ? [cS.

## 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

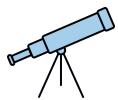
**Solar Database:** Sudden Ionospheric Disturbance (SID) Database, and data relating to sunspot observations

**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](http://www.aavso.org/ambassador-program)
- Email [Lward@aavso.org](mailto: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

