

## The January Sky

Most of the time the color of a star indicates its mass. Knowing the mass of a star is to know its life cycle. The brightest star in the constellation Perseus ([Mirfak](#)) and the brightest star in Canis Minor ([Procyon](#)) are good examples of how [star colors](#) can be deceiving. Both stars have a yellow-white hue, but are very different otherwise. Procyon is one of the nearest stars to the Sun at 11 light-years. It's half again as massive as the Sun and 7 times brighter. Its prominence in the night sky comes from its proximity.

Mirfak *appears* only 1/4<sup>th</sup> as bright as Procyon, but at a distance of 500 light-years it's intrinsically 600 times brighter. In the end, both stars, like our Sun, will become red giants, enrich the interstellar medium with carbon, nitrogen, and oxygen, and become a white dwarf, just like Procyon's faint [white dwarf](#) companion.

The Bluegrass Amateur Astronomy Club and [Raven Run Nature Sanctuary](#) present free [star parties](#) through the year. If clear, the Saturday dates for 2020 are: March 21, April 18, May 23, June 20, July 18, August 15, September 19, and October 17. See their [website](#) for details.

You will find an [all-sky finder chart](#) highlighting Procyon and Mirfak [at our web site](#).

## MacAdam STUDENT OBSERVATORY

UK's MacAdam Student Observatory, designed and built in 2007, was officially opened in 2008. The Observatory is located atop Parking Structure #2 between the W.T. Young Library and the Chemistry-Physics Building, and its dome houses a high-quality 20-inch reflecting telescope plus a variety of state-of-the-art optical instruments. The Observatory is dedicated to serving UK students as well as astronomy enthusiasts of every age and experience level throughout Kentucky.

Are you interested in informal talks on astronomy and astrophysics? Are you curious about telescope design and operation? Would you care to take a look through the eyepiece?

The Department of Physics & Astronomy in UK's College of Arts & Sciences welcomes you! Join us to experience the excitement of stargazing through a powerful telescope. An up-to-date calendar of events can be found on our website:

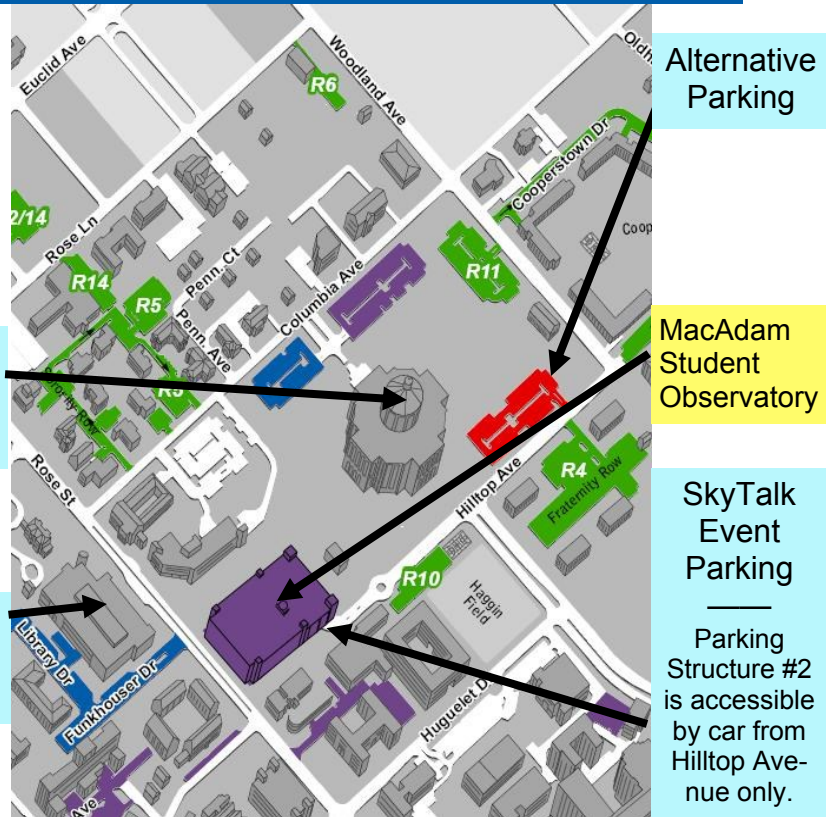
<https://pa.as.uky.edu/observatory>

### Our Speaker:



Tim Knauer has been the director of the MacAdam Student Observatory since its founding in 2007. In his career he's been part of engineering projects as diverse as aeronautics and food refrigeration. He prefers classical, jazz, Shakespeare, and golden retrievers.

## How to find the MacAdam Student Observatory



### Monthly Meetings

The MSO hosts monthly public-observing sessions, each with a kick-off 40 minute presentation in the Chemistry-Physics Building. The presentations will take place even on cloudy nights. If the sky is clear, the observatory will open after the talk! Can't make the SkyTalk? Then come after!

### Next month:

Dr. Joseph P. Straley

### **Can Renewable Energy Replace Fossil Fuels?**

February 13, 2020 - **7:00 PM** - Chem-Phys Room 155

## Kentucky SkyTalk



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**Tim Knauer— University of Kentucky**

**Thursday - January 9, 2020 7:00 PM**

**Chemistry-Physics Building Room 155**

### ***Eta Carinae: A Star With a Past ...and No Future***

*Eta Carinae* is too far south to be observed north of Cairo, Egypt, making it unobservable to astronomers before the renaissance. It was recorded by some early southern explorers, including Edmund Halley. In the 1840's, it increased its luminosity by 10x. At its peak, it radiated energy at a rate 20 million times the Sun's. Modern instrumentation have revealed much that was hidden and presented more mysteries. One thing is certain: at only three million years old, *Eta's* life is nearly over.

Tonight's *Kentucky SkyTalk* is part of an ongoing series. These are presented by the UK Department of Physics and Astronomy, and the MacAdam Student Observatory. Held every 2<sup>nd</sup> Thursday of the month, they are always free and open to the public.