

The November Sky

[Rho Cassiopeia](#), an otherwise inconspicuous star, is hiding a secret. It's actually one of the brightest stars in our galaxy. It is only just visible to the naked eye for two reasons. First, it's more than 8,000 light years distant (almost 10% of the diameter of the Milky Way). Second, there is a lot of galactic dust in the way to dim its appearance.

Rho Cas is a star that is about the same color of the Sun, which means its surface temperature is about the same. The similarities end there. Were it put in place of the Sun, Mercury, Venus, Earth, and Mars would all be within the star. The intrinsic luminosity of the star is 500,000 times the Sun's. That luminosity comes with a price, though. *Rho Cas* only lives a few million years compared to the Sun's 10,000 million years. Ultimately it will explode as a [core collapse supernova](#). When? No one knows. When it does explode, it will be about as bright as Venus as seen from Earth.

In October, the first asteroid with a hyperbolic orbit was discovered. A convincing hyperbolic orbit for an asteroid means that it has enough energy to leave the Solar System, and still have a velocity of 26 km/s. This means that it had to originate from outside our star's environment. No doubt there will be more. Instead of being named [Rama](#) it was given the designation *A/2017 U1*. You can see its orbit from any direction by using internet explorer with Java enabled at this [NASA site](#).

You will find an [all-sky finder chart](#) and the PDF of this flyer at [our web site](#).

UK 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.

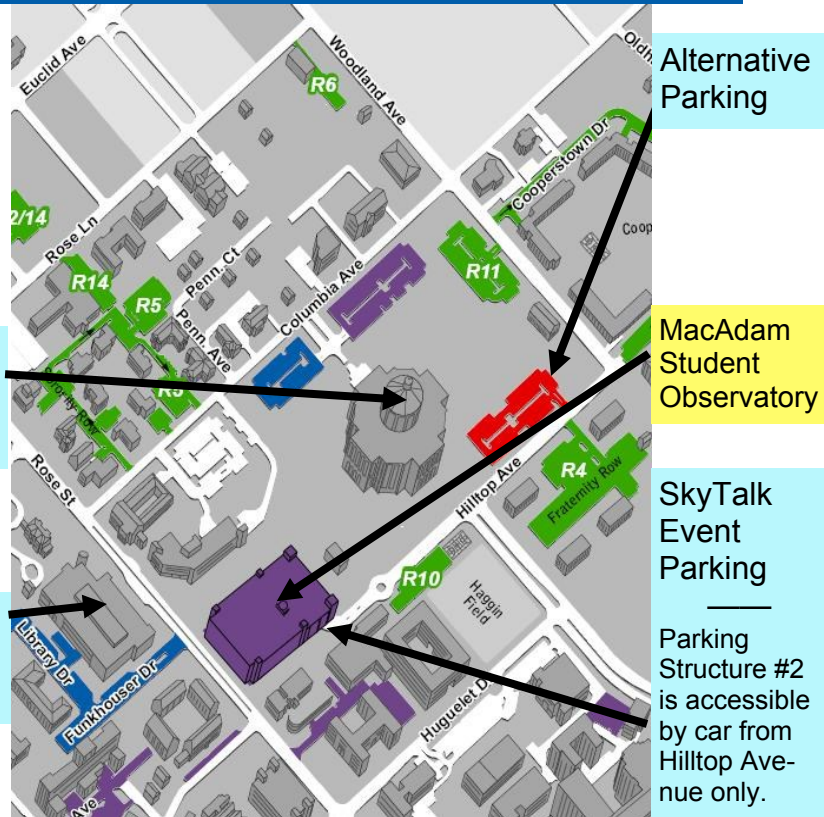
Are you interested in informal talks on astronomy and astrophysics? Are you curious about telescope design and operation? Would you care to take a look through the eyepiece?

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>



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. Gary Ferland

December 14, 2017 - **7:00 PM** - Chem-Phys Room 155

The Star of Bethlehem

Kentucky SkyTalk



Colliding galaxies NGC 2207 and IC 2163

Credit: [Debra Meloy Elmegreen \(Vassar College\) et al.](#), & the [Hubble Heritage Team \(AURA/STScI/ NASA\)](#)

Dr. Tom Troland— [University of Kentucky](#)
Thursday - November 9, 2017 7:00 PM
Chemistry-Physics Building Room 155

Artwork from the Heavens

The beauty of nature is not only found on Earth. It is also found in the sky. From planets of the Solar System to distant galaxies, the beauty of nature is breathtakingly revealed in modern astronomical images. Most of these images are obtained for scientific purposes. Nonetheless, they are works of art as well. We will examine some stunning and intriguing astronomical images. What do they reveal? Why are they important? Should not some of them hang in museums along with other great works of art?

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 2nd Thursday of every month, they are always free and open to the public.