

## The June Sky

### For Your Eyes Only:

Last month we used the handle of the Big Dipper to find [Arcturus](#) and [Spica](#). This month we use the bowl of the Dipper to find Polaris, the North Star. [Polaris](#) is a moderately bright star as seen from Earth, just breaking into the top 50. Its fame and utility comes from the rough alignment with the Earth's rotation axis. (Looking straight up from the North Pole, and in your lifetime, you will always see Polaris. There is no correspondingly bright star at the South Pole.) It's a coincidental and temporary honor. The Earth's axis [precesses like a toy top, tracing out a cone](#) every 26,000 years. [Past pole stars](#) include [Vega](#) and [Thuban](#). Polaris will be closest to the actual pole in the year 2102. In the meantime, the [photographic star trail](#) remains one of the easiest ways to [begin taking photos of the night sky](#).

At 9PM in Lexington, on the night of the June SkyTalk, the star [Cor Caroli](#), *Heart of Charles*, is only  $2/5^{\text{th}}$  of the width of a full-moon away from the zenith. Cor Caroli also lies nearly directly above the Sun in the plane of the Milky Way. Therefore, when you look at that star, you are peering directly out of the plane of our galaxy.

### For Your Binoculars

Polaris is a [triple star system](#), and one of the companions is visible in binoculars. All three are about 400 light-years distant. Both stars visible in your binoculars are at the same distance, (they orbit each other), and nearly the same temperature. Therefore the fundamental observable difference is only one of size. Since the brighter star is 500 times brighter than its companion, it is  $\sqrt{500}$ , or  $\sim 20$ , times larger.

You can find an [all-sky finder chart](#) for this month at our web site:

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

## 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.

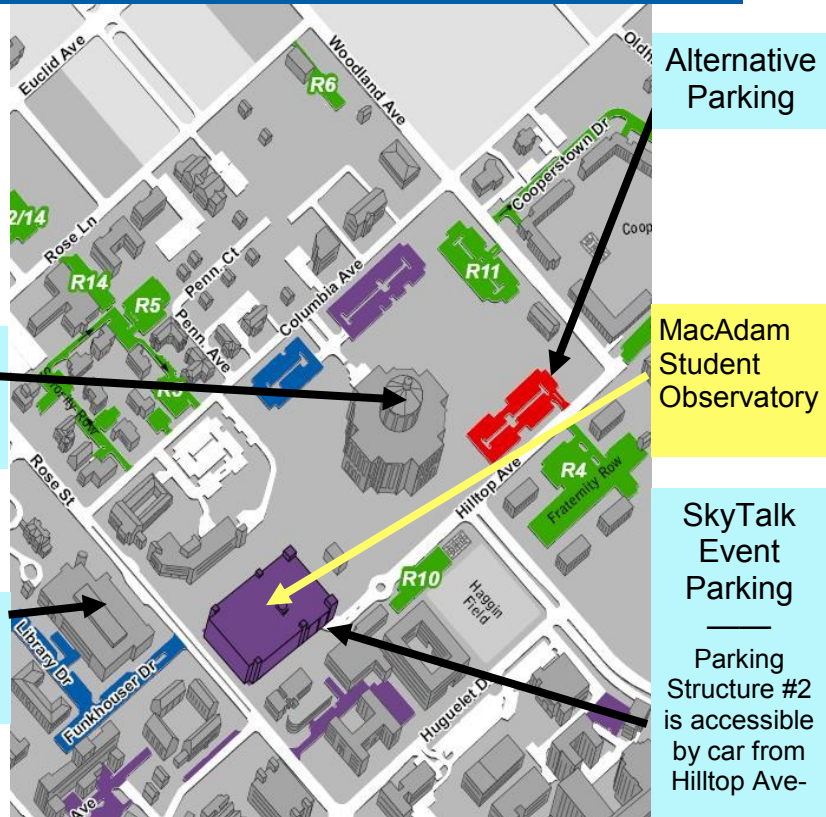
Are you interested in informal talks on astronomy and astrophysics? Are you curious about telescope design and operation? Would you care to take a look through the eyepiece?

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



W.T. Young Library

Chemistry/Physics Building

Alternative Parking

MacAdam Student Observatory

SkyTalk Event Parking

Parking Structure #2 is accessible by car from Hilltop Ave-

### Monthly Meetings

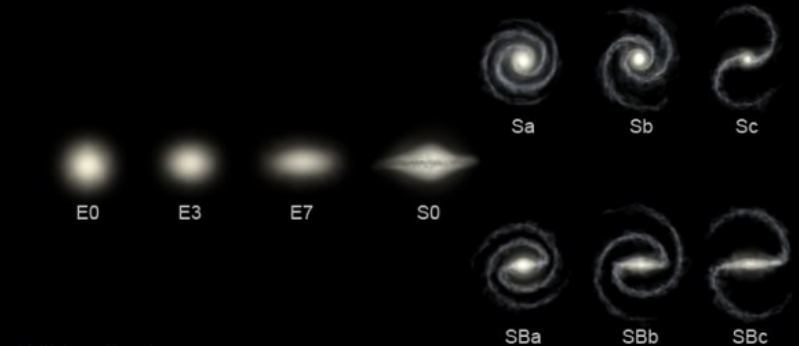
The MSO hosts monthly public-observing sessions, each with a kick-off 40 minute presentation in the Chemistry-Physics Building. The presentations will take place even on cloudy nights. If the sky is clear, the observatory will open after the talk! Can't make the SkyTalk? Then come after!

### Next month:

Furea Kiuchi—University of Kentucky  
July 12, 2012 - 8 PM - Chem-Phys Room 155  
***Exploring the Solar System with Robots***

## Kentucky SkyTalk

Hubble's tuning Fork Diagram



[Wikipedia Image](#)

Aaron Morris—[University of Kentucky](#)

Thursday - June 14, 2012 8PM

Chemistry-Physics Building Room 155

### ***Denizens of the Galactic Zoo***

What would you do if you were asked to describe an animal? Your first response would likely be, "What kind of animal?" Now, what if I asked you to describe a galaxy? That probably sounds like an easier question on the surface, but in reality, your response should be the same: "What kind of galaxy?" In this talk, we will cover the classification of galaxies based on their shape, size, color and other physical properties as well as the history of the discovery of galaxies and the ongoing work being done in the field today. Attendees are encouraged to bring a laptop or other personal computing device (such as a tablet) to be used for audience participation.

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.