

# Kentucky SkyTalk



**Dr. Thomas Troland — [University of Kentucky](#)**

**Thursday - September 12, 2019 8:00 PM**

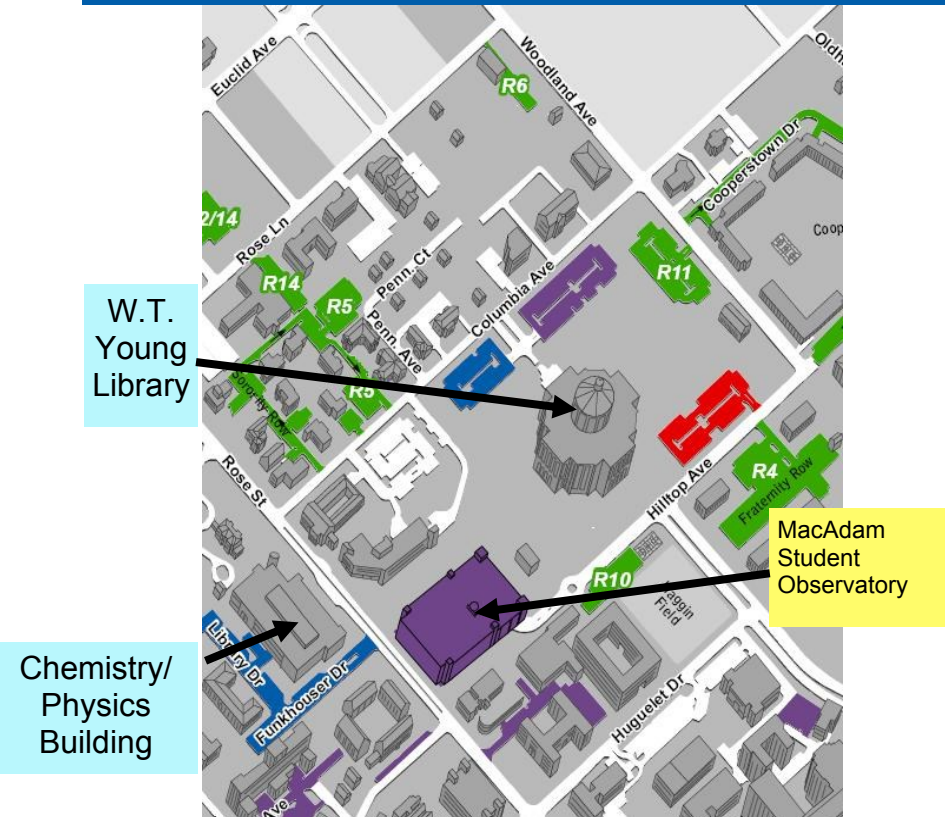
**Chem-Phys Building—Room 155**

***The Origins of the Elements***

A child might ask, "Where did I come from?" An astronomer might ask, "Where did the chemical elements come from, for example, the gold in Tutankhamun's mask?" The origins of the chemical elements are fundamental questions in astronomy. That silver ring you have. Where did the silver come from? From a silver mine? Yes, but where did it really come from? And what about the oxygen in the air we breathe? The stories of the origins of the elements are closely connected to the stories of the life cycles of stars. These stories are among the most fascinating in astronomy.

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

## How to find the MacAdam Student Observatory



W.T.  
Young  
Library

Chemistry/  
Physics  
Building

MacAdam  
Student  
Observatory

The parking structure can be accessed only via Hilltop Ave. You may park there without a permit after 7:30 PM. The SkyTalk presentation is about 50 minutes, followed by observing with our 20" telescope, weather permitting.

## Next month:

Dr. Isaac Shlosman

October 10, 2019 - **7:00 PM**

Chem-Phys Room 155

## The September Sky

At mid-northern latitudes, every spring after evening dusk and every fall before morning twilight, a faint glow of light appears approximately perpendicular to the horizon. It is a delicate light, destroyed — or mimicked — by the scattered light from cities, towns, and highways. Sometimes you will find planets lined up with the light cone, though not this fall. At present, the naked-eye planets are either too near the Sun or only visible in the evening sky. With modern detectors, the zodiacal light is easier to photograph than to see, though in this [image](#), taken from the southern hemisphere, everything is upside down from our point of view.

What is the origin of this light? A clue is its alignment with the plane of the solar system: the [ecliptic](#). All the major planets have orbits near the ecliptic plane. The light is sunlight scattered back toward the Earth by particles of dust, the size of smoke aerosols (~ a few microns in diameter). The most likely source is the debris from [short-period](#) comets.

Come and see the night sky through many different telescopes at the [Blue Grass Amateur Astronomy Club](#)'s outings at Raven Run. The remaining (Saturday) dates in 2019 are:

Sep 28 & Oct 26

Call [Raven Run](#) an hour before sunset to verify that the weather will be sufficiently clear. You will find an [all-sky finder chart](#) for this month 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>

