



NEWSLETTER

RITTENHOUSE
ASTRONOMICAL
SOCIETY

Founded 1888 WWW.RITTENHOUSEASTRONOMICALSOCIETY.ORG

June 2007

OPEN TO PUBLIC AND STUDENTS
Upcoming Meeting on June 13th at
7:30 PM
Musser Hall
The Franklin Institute
20th Street and Benjamin Franklin Parkway

June's Meeting:

Inspired by the World's Leading Telescopes

Louis Berman

To paraphrase "Unusual Telescopes" author Peter L. Manly, "The important parts of a telescope are a few grams of reflective aluminum; everything else is simply mechanics!" If telescopes merely exist to gather light then he is surely correct. My contention, however, is that they also exist to inspire and astound. And for me at least the mechanics are totally fascinating. Indeed, I've had a lifelong love-affair with telescopes and observatories. In the last four months alone I've toured more than a dozen including



the US Naval Observatory in Washington, DC, Palomar Observatory on Mount Palomar, Yerkes Observatory in Williams Bay, WI, and the huge Gemini, Subaru and Keck telescopes on Mauna Kea, HI. My ongoing plan is to visit every notable telescope / observatory extant and to document my travails with a book (titled ScopeSeeing) to be

published late 2008.

The point of my presentation is that you can do this too! I will examine the process from selecting an observatory to negotiating for private access and observing time to wrangling your colleagues; everything you need to organize a successful trip of your own. I'll also show a couple of travelogues from my own trips to get you stoked!

~ Louis Berman



May's Special Event:

Brother Guy Consolmagno

May 9 was a highlight for the Rittenhouse Astronomical Society when Brother Guy Consolmagno came to Philadelphia and spoke at the Franklin Institute. The title of the Vatican astronomer's talk was "God, Astronomy and the Search for Elegance." I had invited Brother Guy several months before his guest appearance and the arrangements involved a ton of e-mails back and forth to work out the details.

Brother Guy explained how science and religion coexist and interact. His graduate work predicted and explained the evolution of the moons of the outer solar system and many features of which were later discovered by the Voyager spacecraft. He also showed that the asteroid Vesta was the parent of certain meteorites. He was the first to apply the concept of gravitational and electromagnetic forces on solar system dust.

Brother Guy will soon be returning to Rome but may come back to the United States next year. We thank him and wish him well.

~ Milt Friedman

Meeting Agenda

Student Check In	7:15 - 7:30 pm
Astronomy Lesson	7:30 - 7:50 pm
Call to Order: Dr. Milton Friedman	
Sky Tonight: Alan Daroff	
Guest Speaker	
Rooftop Observing: Weather Permitting	



Brother Guy inspired a hugh crowd in Stearns Auditorium

June Student Lesson:

Do It Yourself Star Finder - Planisphere

Our final lesson includes a project to take home. We will demonstrate the use of a "Rotating Star Finder" or what some refer to as a Planisphere. It is a flat rotating star map that is useable any time of the evening or any evening of the year. We will attempt to see some of the motions we discussed during this years student lessons using the rotating Star Finder. We will also review how circumpolar stars are located on the chart, along with the ecliptic path.

I have received very good feedback on the lessons. One point that is clear, it seems as if our adult members or guests are as equally interested in the student lessons as the students. Based on the feedback we plan to continue next year's meetings with the same format as this year.

~Ted Williams

Visible Planets 06/13/2007

	Rises	Transit	Sets
Mercury	06:59 am	02:23 pm	09:46 pm
Venus	08:59 am	04:16 pm	11:31 pm
Mars	02:28 am	08:56 am	03:23 pm
Jupiter	07:38 pm	12:22 am	05:06 am
Saturn	10:10 am	05:07 pm	12:04 am

Astronomy News Update:

Planets beyond our solar system continue to amaze us. The planet Gliese 581c was the first planet that is Earth-size and located in the habitable zone where water could be in the liquid state and where life might exist. Newly discovered, GJ436 is a planet the size of Neptune, approximately four times the diameter of Earth. GJ436 is unusual in that it's extremely hot, made of liquid water under pressure resulting in a possible giant ice planet. It was the first of that sized planet for which size, mass and composition have been determined. This was accomplished by the transit method, the passage of the planet in front of its star permitting accurate measurements.

~Dr. Milton Friedman

Student Lessons:

A Year in Review

Starting our meetings with a student lesson was a new effort this year. It was conceived as a way to broaden the appeal of our meetings to a wide range of ages. Starting meetings promptly at 7:30 proved the best spot to add the lesson. It allows members that have been with us for years, who possibly do not need a lesson, an additional 20 minutes until we officially call our meetings to order at 7:50 PM. Students can leave after the lesson or stay for the guest speaker / presentation and the open observatory (weather permitting.)

This year's lessons were based on basic astronomy concepts with a few special topics of interest thrown in the mix. They included:

October	Circumpolar Stars – How to locate them and why do they appear circumpolar?
November	Ecliptic Plane- Watching the transit of Mercury across the surface of the sun is enhanced by understanding the apparent path of the planets in the night sky.
December	Celestial Motions- Daily, Annual, Planetary, Precession, Proper
January	Constellations of the Galactic Plane
March	Categorize the Universe – Web Project
April	An Inconvenient Truth- Global Warming
June	Do it Yourself Star-Finder - Planisphere

In conjunction with these lessons we inaugurated the Student Apprentice program which was new this academic year. This permits continued student attendance without paying the membership fee. After attending six student lessons, students are granted membership for the next academic year in our organization. Repeated years will garner a letter of reference intended to be used as a reference for further education or as part of the student's portfolio of work.

If you have suggestions of additional topics for our student lessons, please contact us with your ideas at our website. You need not be a student to contribute your ideas. We are also interested in hearing from those members that may want to teach a 20 minute lesson. We currently have an open calendar for our 2007-2008 academic year.

~ Ted Williams

Our Mailing Address:

Rittenhouse Astronomical Society
 P.O. box 24665
 Philadelphia, PA 19111
 Checks Payable to "Rittenhouse Astronomical Society"