



NEWSLETTER

# RITTENHOUSE ASTRONOMICAL SOCIETY

Founded 1888 [WWW.RITTENHOUSEASTRONOMICALSOCIETY.ORG](http://WWW.RITTENHOUSEASTRONOMICALSOCIETY.ORG)

June 2009

OPEN TO PUBLIC AND STUDENTS  
Upcoming Meeting on June 10th at  
7:20 PM  
The Franklin  
20th Street and Benjamin Franklin Parkway

## June's Meeting:

*"Gustav Holst - The Planets"*

*Lori Weidner and Ed McCaffrey*

Last year we invited Lori Weidner and Ed McCaffrey (local area music teachers) to guide us in a presentation titled "Gustav Holst- The Planets." They are returning as our guest speakers for our June meeting. Currently, Lori teaches music grades K-5 at Schweitzer Elementary School and Kindergarten music at Hoover Elementary School in the Neshaminy School District. She also teaches piano and guitar students privately. She has completed graduate courses in choral conducting, Orff, Kodaly, and several other topics relating to music education. Her passion is to help her students develop a lifelong love of creating and enjoying music. Ed McCaffrey teaches music grades 6-8 for the Methacton School District at the Arcola Intermediate School. He supervises the chorus program for all three grades and is a favorite guitar instructor.

The Holst presentation was originally developed by Dr. Gerald Mallon as the Planetarium Director at the Methacton School District. Ed and Lori have had the opportunity to present the lesson jointly to the middle school students at Arcola Intermediate School. We felt that the presentation would bode well as a closing night for our academic year and our meeting is scheduled in the Fels planetarium.

On their last visit they shared the classroom portion of the Holst lesson with our society members as we met in

### Meeting Agenda

7:20 - Prelude
7:30 - Astronomy Lesson
President's Message
Sky This Month
Guest Speaker
Rooftop Observing - Weather Permitting



*When Music and the Planets Unite*

Musser Hall. Our student lesson that evening showed us what we can expect to see of each of the visible planets through telescopes and binoculars. We followed that with Mr. McCaffrey and Ms. Weidner doing an overview of the musical aspects and characteristics that Gustav Holst used to convey the mythology of the planets along with a first listen to the suite of music. The presentation was well received by RAS members and guests.

At our upcoming June meeting, we plan to present the segment meant for delivery in a planetarium. Our student lesson will review the various gods and goddesses and the associated mythologies of the planets that bear their names. Those who attended our recent meetings know that the Fels planetarium has had an upgraded projection system installed. During our Holst presentation in June, members will be treated to viewing the new high resolution views of the planets utilizing the new projection system. Dave Walker stated that it should be a real treat to all who attend, since other than the planet Saturn, no one in our society has had a chance to see the new planet visuals.

If any of our lessons were to lend themselves to family members and friends, our June presentation fits the bill. Please feel free to invite family and friends for our final gathering of the 2008/09 academic year.

### Visible Planets 06/10/2009

	Rises	Transit	Sets
Mercury	04:28 am	11:26 am	06:24 pm
Venus	03:16 am	09:55 am	04:34 pm
Mars	03:17 am	10:05 am	04:53 pm
Jupiter	12:26 am	05:42 am	10:59 am
Saturn	12:28 pm	06:56 pm	01:24 am

## President's Message

*Dr. Milton Friedman*

Many of our older Rittenhouse members have known that Pluto had been the ninth planet since 1930, that Ceres, the largest and first to be discovered asteroid also called a minor planet, never expected to be demoted like Pluto. The possibility of finding planets beyond our solar system was thought impossible for years to come with our present knowledge and telescopes. It seemed beyond our capabilities that exoplanets would become the hot topic of astronomy and, if Earth-like ones were discovered, the possibility would exist that some might harbor life.



As of May 20, 2009, planets beyond our solar system have been found and total 347. Of these, 235 are gas giants, 80 are hot Jupiters and 4 are circling pulsars. Most of them are located within 300 light years of our sun. There are so many telescopes looking for exoplanets, we're lucky to be able to see the nighttime sky as these instruments orbit above us. A French scope known as CoRoT detected a possible Earth-sized planet twice the size of our planet but too hot for life. The latest discovery is a more likely planet 1.9 times the mass of Earth located 20.5 light years away in the constellation Libra. Gliese 581e was discovered on April 21 by ground-based radial velocity technique but, because it orbits very close to its star, the newly discovered planet would also be too hot for life to exist as we know it. Another planet orbiting the star is Gliese d which is larger than Gliese e but is in the habitable zone.

To search for planets the size of our Earth, NASA has successfully launched its Kepler spacecraft that will study 100,000 stars for three-and-a-half years looking for planets a half to twice the size of Earth. Kepler watches those stars for signs of dimming from a planet passing in front of the star. This transit method is the best we have at this time. If Earth-like planets are found, and if there is a habitable zone on the planet, liquid water might be up there and, if temperature, atmosphere and other factors are like ours, the possibility of life beyond Earth will become stronger.

Stay tuned for discoveries. The odds are getting better that our cousin clubs might soon expand.

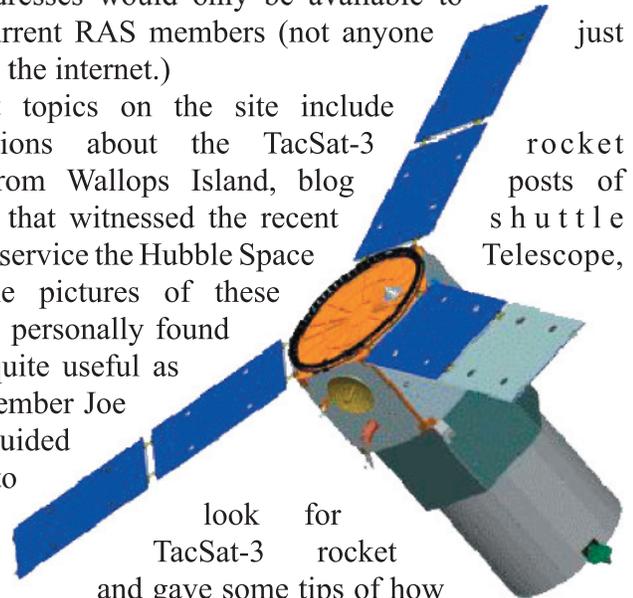
## Network Update

*Ted Williams*

Our RAS membership on-line network has been active since January 2009 and now has approximately 30 of our 88 members signed on. This site (powered by NING) is a location that members can share pictures, blogs, forum posts, videos, music, and establish a personal page to represent them. The network provides a communication conduit for members to get in touch with other members. Recently we have posted an e-mail listing of all members that have signed on the network to further facilitate communication between members. The intent is to eventually post all e-mails of members in the organization on the site. Keep in mind our networking site is private, and only other paid members can gain access to the listings, so all e-mails addresses would only be available to fellow current RAS members (not anyone just searching the internet.)

Recent topics on the site include conversations about the TacSat-3 rocket launch from Wallops Island, blog posts of members that witnessed the recent shuttle launch to service the Hubble Space Telescope, and some pictures of these events. I personally found the site quite useful as fellow member Joe Steiber guided us as to what to look for with the TacSat-3 rocket launch and gave some tips of how to follow the launch via internet video feeds. Thanks to Joe and the networking site, I was able to see the ICBM missile from my back yard in suburban Philadelphia just 1 minute after launch as it made it's way up the Eastern Seaboard. I had no idea that a launch from Wallops Island could be seen from the Philadelphia area, but thanks to Joe's tips and guidance, I spied my first!

If you have joined RAS to meet fellow astronomy enthusiasts, the membership network is a benefit provided with your membership dues that you don't want to pass up. Please contact us if you would like an invite to join. We require that you use a picture or icon that defines you when you join, and there are a few optional profile questions that you will be asked to fill out. Please know that all information including your picture can be changed at anytime once you join the network is private and can only be seen by other RAS members.



## May's Meeting:

*Review*

We want to thank Steve Berr for sharing with us many different cultural perspectives of the stars in our heavens. It was interesting to listen to how similar and yet how different each culture interpreted the objects in the sky.

Many of the stories dealt with explaining the creation of our planet Earth and the motions of Sun, Earth, Moon and Stars. Many focused on telling a story that would explain the change in star patterns from one season to the next, and explain why the stars in the North appear all year, just move in a circle.

Most of the cultures shared a common view of the Big Dipper as seeing those stars to be an animal. Sometimes a bear or even a dog. Many of the stories tied constellations together to explain their positions and relevance to each other.

It was a very enjoyable evening with good stories and a lively interaction discussion about the significance of the cultural stories in religious sects. All and all an informative evening.

## Reminder: DON'T MISS IT

*April 4 - September 7*



**Your Officers and  
Members-At-Large**

**Hope you have a Great Summer!**

President.....	Milt Friedman
Vice-President.....	Alan Daroff
Secretary/WebMaster.....	Ted Williams
Treasury/Newsletter.....	Ruth M List
NASA Liason.....	Dr. Ken Kremer
Instructional Technology Advisor.....	Mike Mountjoy
Fels Planetarium Liason.....	Dave Walker
Observatory Liason.....	Carol Ludolph
Student Liason.....	Daniel McCormick
Science Journalist.....	Eric Van Osten
Astrophysics/Cosmology enthusiast.....	Ivin Williams

## NASA Ambassador Update:

*Dr. Ken Kremer, NASA Ambassador*

### SHUTTLE ATLANTIS AND ASTRONAUT CREW RETURN SAFELY TO EARTH AFTER REJUVENATING HUBBLE

I recently returned from a wonderful experience witnessing the May 11 launch of Space Shuttle Atlantis direct from the Kennedy Space Center Press Center. That is as close as humans can safely observe. I had press credentials and was reporting for The Planetary Society and Spaceflight magazine on Atlantis mission to repair and upgrade the Hubble Space Telescope for the last time.

Altogether I have published 13 reports so far online at The Planetary Society (see below) on the Hubble mission, NASA's soon to launch new lunar probe, LRO, and my interviews with top NASA officials on Hubble, Shuttle and the Future Exploration of Mars and Saturn.

Space Shuttle Atlantis and her crew of 7 astronauts glided in to a smooth and triumphant touchdown on Sunday, May 24 at 11:39 AM EDT at Edwards Air Force Base in California on runway 22 in the Mojave Desert. The high stakes flight of STS-125 completely renovated and rejuvenated the iconic Hubble Space Telescope and enables a new chapter of breathtaking, cutting edge science discoveries most of which we can only barely imagine today. Popularly known as 'The People's Telescope', Hubble is now at the "Apex of its Capabilities".

The landing had been delayed by two straight days of very poor weather at Cape Canaveral which improved only slightly on the last possible try. To insure a safe landing, the NASA entry team ordered a diversion in Atlantis return trip from the primary landing site at the Kennedy Space Center (KSC) to the alternate landing strip at Edwards AFB.

For complete details, please read my reports online covering the entire flight with numerous pictures at The Planetary Society here:

- Atlantis and Crew Return Safely to Earth after Rejuvenating Hubble <http://planetary.org/blog/article/00001962/>
- Memorial Day: Remembering the fallen who gave their lives exploring space <http://planetary.org/blog/article/00001963/>
- Farewell to Hubble, Obama Calls, Astronauts Testify to Congress as Shuttle is Set to Land <http://www.planetary.org/blog/article/00001958/>
- Hubble Astronauts Boldly Go Where No One has Gone Before! <http://www.planetary.org/blog/article/00001954/>
- LRO & LCROSS Up-Close Tour <http://www.planetary.org/blog/article/00001947/>
- Hubble Spacewalks: 2 Down, 3 to Go, Never Routine <http://www.planetary.org/blog/article/00001945/>

- Atlantis Astronauts Rocket into Space and Grab Hubble  
<http://planetary.org/blog/article/00001943/>
- One-on-One Chat with Ed Weiler on Hubble and the Future of Mars Exploration  
<http://planetary.org/blog/article/00001940/>
- Atlantis Launches on a Final Mission to Hubble  
<http://planetary.org/blog/article/00001938/>
- Fueling Atlantis! T Minus 6 Hours and Counting  
<http://planetary.org/blog/article/00001936/>
- Atlantis Exposed to the Heavens -- T Minus 14 Hours from Blast-off to Hubble  
<http://planetary.org/blog/article/00001935/>
- “Go” at T-2 days from launch -- Hubble Science Instruments Preview  
<http://planetary.org/blog/article/00001934/>
- Astronauts Fly into Cape. Countdown Clock Ticking for Mission to Save “The People’s Telescope”  
<http://planetary.org/blog/article/00001932/>
- NASA’s Final Servicing Mission to the Hubble Space Telescope  
<http://planetary.org/blog/article/00001931/>



*Ken Kremer and Space Shuttle Atlantis at Launch Pad 39 A on the day before Blast-Off to the Hubble Space Telescope. Read my reports on the entire mission online at The Planetary Society.  
Credit: Ken Kremer*

### NEWS ALERT:

The Lunar Reconnaissance Orbiter (LRO) is set to blast-off on June 17. I toured the spacecraft up-close in the clean room. Read my report (above) with pictures at the Planetary Society

- Ken Kremer, NASA Ambassador  
- Email: kremerken@yahoo.com

## Astronomy Outreach

*Dr. Ken Kremer*

Hubble and the Exploration of the Solar System by NASA and ESA was the topic of my outreach talks to astronomy clubs in Florida in May during the Space Shuttle mission to repair Hubble.



*Floridians including the parents of Atlantis astronaut Andrew Feustel attend astronomy club lectures by Ken Kremer, during the STS-125 mission, to learn about Hubble and NASA's Solar System exploration missions as they are transported "Beyond Earth" and standing "On Mars" through the power of 3 D imaging techniques. Over 180 attended my talks at The Villages Astronomy Club and The Plantation Astronomy Club titled "Mars, Saturn, Asteroids and Beyond in 3 D".  
Credit: Ken Kremer*

See more pictures and details here from my talk at The Villages Astronomy Club:

<http://www.vlgastroclub.org/31601.html>

<http://www.thevillagesdailysun.com/articles/2009/05/20/news/news01.txt>

Please contact me for more info or science outreach presentations by email. My upcoming Astronomy talks include:

Stella Della Valley Star Party: Ottsville, PA, Oct 17, 7 PM. "Mars, Saturn, Asteroids and Hubble Servicing Mission in 3-D"

**Dr. Ken Kremer Email: kremerken@yahoo.com**  
**NASA JPL Solar System Ambassador & The Planetary Society**

**Website: <http://www.rittenhouseastronomicalsociety.org/Dr.Kremer/K.htm>**

Our **NEW** Mailing Address:

**Rittenhouse Astronomical Society**  
**P.O. box 283**  
**Feasterville, PA 19053-0283**