



NEWSLETTER

RITTENHOUSE
ASTRONOMICAL
SOCIETY

Founded 1888 WWW.RITTENHOUSEASTRONOMICALSOCIETY.ORG

October 2009

OPEN TO PUBLIC AND STUDENTS
Upcoming Meeting on October 14th at
7:30 PM
The Franklin
20th Street and Benjamin Franklin Parkway

October's Meeting:

Member's Night

This month is our "Member's Night", where members of Rittenhouse Astronomical Society present topics of interest to our group. So far, we have five volunteers to present a topic of their interest, but there is room for more presenters.

Some of the scheduled topics to be presented at this meeting are:

- Educational Outreach - N.J. School for the Deaf*
- Scanning the Sky - SETI at home*
- Sky Tonight*
- RAS Networking*
- Navajo Cosmology*
- LRO and LCROSS Post Impact Update*

Please be sure to join us!

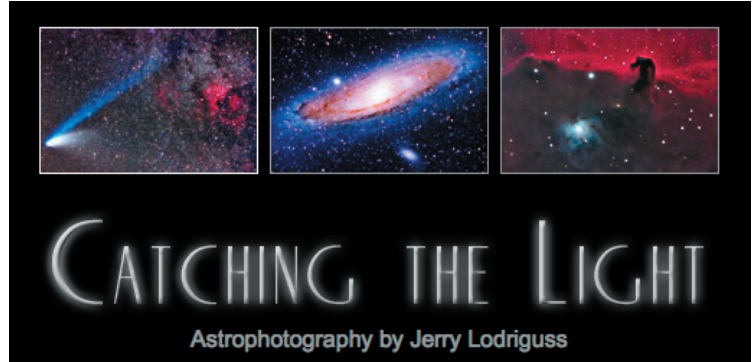


Membership Renewal/New

We started collecting this years membership dues this past month and want to encourage you to pay early. Look at your mailing label on your newsletter to check the status of your membership. Any questions feel free to ask at our next meeting.

Meeting Agenda

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



November's Meeting

Jerry Lodriguss

Jerry Lodriguss has developed and maintained an amazing web site titled "Catching the Light." When we started our RAS members network website, we included a link to his site since it was highly recommended by some of our members at that time as a resource others interested in astrophotography from our society would enjoy. Since it's posting, we notice many of the members using the link. We feel his work is best described as inspirational and awe inspiring. Now Jerry has a book on CD-ROM available to share some of his tips for success. Jerry will be our guest presenter in November (in lieu of our holiday gift ideas as originally posted) as his CD-ROM and some of the equipment he talks of may be the ideal gifts for an amateur astronomer. I know of a few newer members (and returning ones) that have expressed interest in astrophotography, so the timing for his presentation will suit us well. The CD-ROM is titled "A beginners guide to Digital SLR Photography."

Jerry is a local observer and is active in the Willingboro astronomical society. Willingboro members are wholeheartedly invited to attend. We have been enjoying his talent through our network website, it will be great to have him share his work in person.

Visible Planets 10/14/2009

	Rises	Transit	Sets
Mercury	05:54 am	11:55 am	05:55 pm
Venus	05:19 am	11:28 am	05:36 pm
Mars	12:11 am	07:13 am	02:50 pm
Jupiter	03:41 pm	08:45 pm	01:49 am
Saturn	05:10 am	11:20 am	05:31 pm

Driving the Milky Way

Project Report

Dr. Friedman talked about our IYA project “Drive me to the Milky Way” at our September meeting. We have a few more submissions that will be posted on our public website. This project is just developing and helps other society members know where you can travel to see the Milky Way. All are encouraged to submit their view and the location from which they have observed.

If possible, include a description of the weather, how it might have affected your view, and the portion of sky that you could see the hazy band of light we refer to as the Milky Way (actually every star you see is a member of the Milky Way.) Describe the sight you are observing from (a field, a small clearing, a large parking lot, tennis courts etc.) since others are interested in what the site looks like and how much of a clearing there is to see the sky. Some of us have favorite locations that only afford a view of part of the horizon (southern being preferred by most observers.).



To measure how much of the hazy band you see you can estimate by using your fist. If you hold it out at arm's length you can measure a 10 degree angle. By stacking fist over fist, you can measure up to the point that you begin to see the hazy glow of galaxy stars that are usually too far out and faint to see from city skies. Try it from both horizons' the galaxy would appear to reach. Anything else notable about the observing location is also appreciated. Are there public bathrooms nearby? Is it easily assessable by car or camper? Are there lights or areas to avoid nearby? These points might be additional information you can share.

If you are more experienced try to estimate the limiting magnitude of starlight visible from your site. Were any star clusters visible, possibly nebula? A description of how they appeared might also help others in our society.

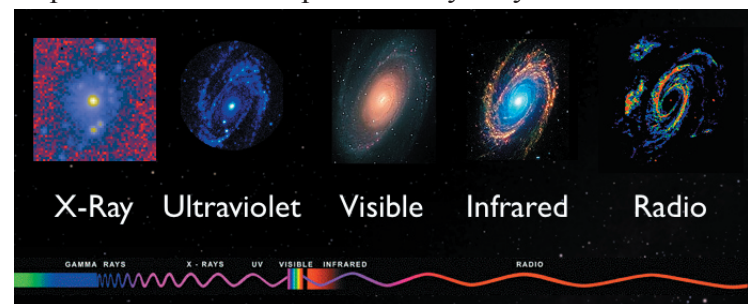
We appreciate the responses to date, let's keep the suggestions coming!

President's Message

Dr. Milton Friedman

There's no place to hide in the universe. From the days of Galileo through the mid-20th century, looking through a telescope told us everything about the cosmos, so we thought. The view in visible light was all we had.

When the space age dawned in the 1960s, astronomers began dissecting the universe at all wave lengths and discovered what was really going on out there. The 43.5 foot long Hubble Space Telescope with its 94.5 inch primary mirror, revealed the universe in visible, ultra-violet and near infrared. The Spitzer Space Telescope, launched in 2003, has looked through cosmic clouds of interstellar dust with infrared observing disks of dust around stars that give birth to planets. Spitzer studies the atmospheres of exoplanets and also maps the Milky Way in infrared.



The Chandra X-Ray Observatory peers into our galactic center and examines young stars and black holes. The International Gamma-ray Astrophysics Observatory (INTEGRAL) look at pulsars and also helps in the search for the source of cosmic rays. NASA's Fermi Gamma-ray Space Telescope analyzes gamma-rays from pulsars the rapidly spinning cores left when massive stars explode. The Swift satellite uses ultraviolet and x-rays to examine gamma ray bursts including one of the most distant object ever seen. Swift has returned the best view ever of the Andromeda Galaxy in ultra-violet.

The Wilkinson Microwave Anisotropy Probe (WMAP) mapped the cosmic microwave background (CMB) and verified the age of the universe at 13.73 billion years. Radio telescopes look for gravitational lenses in space and listen for messages from aliens.

Many space probes are out in our solar system reporting about our planets and their moons. We wonder if Galileo realized that what he saw through his telescope, as amazing as it was, was just the tip of the iceberg in learning what's out there.

Bereavement Notice: It is with sadness that we note the loss of Joan Summerfield who was a member of both Rittenhouse Astronomical Society and the Willingboro Astronomical Society. She also graciously volunteered her time at The Academy of Natural Sciences in Philadelphia. We wish her family all the best in this time of mourning.

Educational Outreach

Ruth M List

During the International Year of Astronomy, astronomers are encouraged to reach out and help others discover the wonders of the Universe in which we live. This summer I had a great opportunity to do just that.

I had the privilege this summer of being asked by the New Jersey School for the Deaf to help with their summer school lessons as an amateur astronomer and professional educator. The summer school program chooses a topic or area of focus for each week of summer school. They spend five days exploring the topic in depth. Many different strategies are used involving multiple modalities of intelligences. This summer the school chose to teach a week focused on astronomy. They thought it would be of interest to the students.

The teachers felt they needed someone with a stronger background in astronomy to assist them and since one of the teachers is a colleague of mine, I was asked if I would help with developing and delivering the lessons to the students. I thought this would be a great and unique opportunity for me to stretch my teaching abilities since I don't know sign language. It turned out to be a very rewarding experience. I was surprised at how much of the sign language alphabet I remembered from childhood and picked up on a few additional signs as well. Even more important the students learned a great deal about the Solar System. They were eager to learn and excited to participate in the lessons.

Please come and hear more about this outreach experience at our October meeting. It is our hope that a few students may join us at our meeting to share their experience first hand with our members.

NASA's LRO and LCROSS: Post Impact Update

Dr. Ken Kremer

At the October 14 RAS Monthly meeting, I will present a brief status report on NASA's newest lunar missions, the Lunar Reconnaissance Orbiter (LRO) and the Lunar Crater Observation and Sensing Satellite (LCROSS). The talk is titled "LRO & LCROSS Post Impact Update".

LCROSS is set to deliberately smash into the lunar south pole on 9 October 2009 at 7:30 AM EDT. The purpose is to search for frozen water ice inside the permanently shadowed Cabeus A crater target. LRO officially began its 1 year long Primary Science mission on September 15 after firing its propulsion rockets to enter a polar circular orbit 30 miles above the lunar surface.

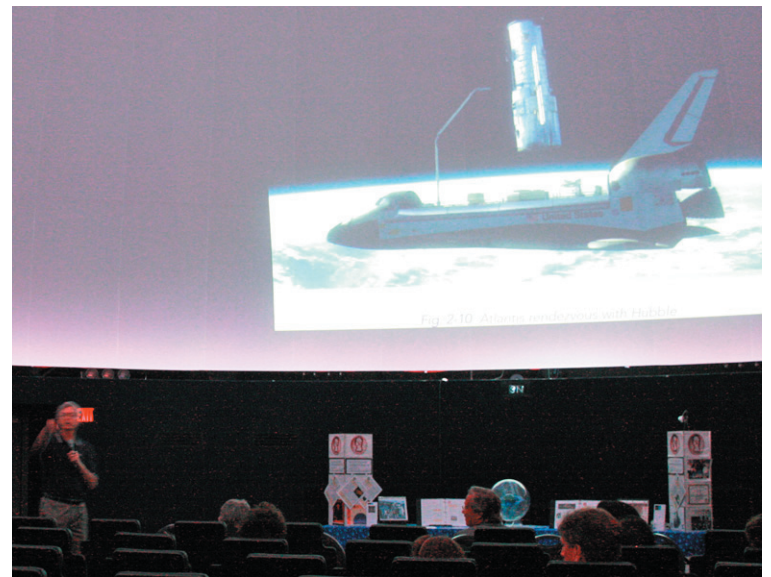
As this RAS newsletter goes to press, NASA officials announced the discovery of water on the moon's surface at a press conference on 26 September 2009. The robotic duo reignited NASA's long awaited 'Return to the Moon' after launching on June 18, 2009 from Cape Canaveral Air Force Station, FL.

Read my eyewitness reports online at The Planetary Society and collected at my website here: <http://www.rittenhouseastronomicalsociety.org/Dr.Kremer/K.htm>

Learn more in my feature article titled "LRO and LCROSS put US on Lunar trajectory" in the November 2009 issue of Spaceflight Magazine which publishes at the end of September. See also my detailed lunar report in the September 2009 RAS newsletter.

Astronomy Outreach:

Dr. Ken Kremer



"Fixing Hubble: Eyewitness to Shuttle Atlantis Launch to save The People's Telescope": On September 9, I presented a lecture at the Rittenhouse Astronomical Society (RAS) monthly meeting at the Franklin Institute. The talk described my up close eyewitness account of the thrilling launch of Space Shuttle Atlantis from the Kennedy Space Center. The historic mission to save 'The Peoples Telescope' was an extreme makeover which restored and upgraded Hubble to the apex of its scientific capabilities. On this final shuttle mission, STS-125, to the orbiting telescope, the 7 astronauts aboard Space Shuttle Atlantis were fully successful in rejuvenating the Hubble Space Telescope.



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



"LRO & LCROSS: America Returns to the Moon": On September 8, 2009 I presented a lecture at Princeton University at the invitation of the Amateur Astronomers Association of Princeton. The topic was NASA newest lunar missions, LRO & LCROSS. Read the lecture announcement here at the NASA LCROSS website: <http://lcross.arc.nasa.gov/news.htm>

My upcoming Astronomy talks include:

Rittenhouse Astronomical Society (RAS) at the Franklin Institute: Philadelphia, PA, Oct 14, Wed, 8 PM. "LRO & LCROSS Post Impact Update: America Returns to the Moon"

Stella Della Valley Star Party & Bucks-Mont Astronomical Association (BMAA): Ottsville, PA, Oct 17, Sat, 3 PM. "Fixing Hubble: Eyewitness to Shuttle Atlantis Launch to save The People's Telescope"

Website: <http://www.bma2.org/Sdv.html>

UACNJ Astronomy Symposium: Hope NJ, Oct 18, Sun, 2 PM. "Eyewitness to Hubble/Shuttle Launch & Personal Postcards from Mars" Website: <http://www.uacnj.org/>

<http://www.uacnj.org/pages/2009%20Symposium%20Tri-fold.pdf>

NJ Gifted Children at Mercer County Community College: West Windsor, NJ Oct 24, Sat, 9 AM. "Twin Robots Exploring Mars (IN 3-D)" Website: <http://www.njagc.org/>

Gloucester County College Astronomy Club: Sewell, NJ, Nov, TBD, 7 PM. "Fixing Hubble: Eyewitness to Shuttle Atlantis Launch to save The People's Telescope" Website: http://www.gccnj.edu/news_and_alerts/rotating_ads/ken_kremer.cfm

Riverside Elementary School, Family Astronomy Night: Princeton, NJ, TBD, 6 PM. "Phoenix and the Twin Mars Rovers (in 3-D)"

Please contact me by email for more info or presentations.

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NASA JPL Solar System Ambassador & The Planetary Society

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

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