

Southwest Florida Astronomical Society

SWFAS



The Eyepiece April 2009

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A MESSAGE FROM THE PRESIDENT

March has been a very busy, but successful month for us. A number of members have worked very hard volunteering their time at two major events this month. Our first event was for the Cape Coral Rotary Club and was held on March 6th at Rotary Park in Cape Coral. The event was attended by an estimated crowd of 150 people and was a good time for everyone. One attendee sent me an email that I did forward to all of you, but I would like to share it with you again, especially those members who do not have computers.

"To the members of the SWFLAS

My friends and I visited your star fest held Mar 6th at Rotary Park. Some of you might remember the middle age gentleman who walked with the cane? He suffers from several afflictions which include the loss of one leg, and a condition similar to Alzheimer's. He rarely gets out of the house now, due to his afflictions. In his earlier years, however, he had an amateur telescope and enjoyed star gazing immensely. We made special arrangements to get him out of the house to attend your star gazing party on March 6th. He kept going to all the various telescopes, enjoying the views, time after time, until exhaustion set in and he was no longer able to walk in the grass.

I would like to thank the group on his behalf, as you gave him an opportunity to relive some past memories, and to create some new ones at Rotary Park. He had an absolute blast! Your star gazing party was both fun and educational for all of us. I wish to thank the SWFLAS for taking the time, and for sharing their equipment with us on March 6th.

We certainly look forward to next year's event!
All our best!

Bruce Malo
Cape Coral, FL"

President's Message (continued)

I found this email very heart warming, and wanted to share it with all of you again. Folks, that is what it is all about.

Our second event was at the Christa McAuliffe Charter Elementary School in Cape Coral on March 13th. The event was attended by 155 parents and school children and was a terrific night, and enjoyed by everyone. The young people were absolutely great and well disciplined. They went from telescope to telescope to talk with all our volunteers and look through their telescopes. Some of our members worked with parents who had brought their own telescopes, showing them how to set up and use the scopes. Frank Mraz set up an "Ask the Astronomer" session in the cafeteria and spent the evening talking to parents and students and answering their questions. The school's Parent Teacher Organization donated \$200 to SWFAS and thanked us for providing such an entertaining evening. They are looking for a repeat performance next year. I want to thank everyone who volunteered their time to support these two events. Everyone appreciated your efforts.

Planets in the evening sky for April consist of Saturn (in the southeast) and Mercury (in the west). Venus, Mars and Uranus (in the east), and Jupiter (in the southeast) can be viewed in the morning sky. The Lyrid meteor shower also peaks in the predawn hours of April 22nd.

Please remember to pay your dues for 2009. Dues can be paid at our monthly meeting, or mailed to our post office box i.e. Southwest Florida Astronomical Society, Inc., PO Box 100127, Cape Coral, Florida 33910. Your continued support is greatly appreciated.

April Meeting

Our April meeting will be at the Calusa Nature Center Planetarium at 7:30 pm on Thursday, April 2nd. Our guest speaker for the evening will be Rick Piper, President of the Everglades Astronomical Society in Naples.

All About Saturn

The March 2009 What's Up Podcast is all about Saturn for International Year of Astronomy. It spans Galileo's first views of Saturn 400 years ago, to Cassini @ Saturn right now! Here it is: www.jpl.nasa.gov/video/index.cfm?id=821

The Hubble Telescope released gorgeous images of Saturn taken just a few weeks ago, while 4 of Saturn's moons crossed in front of the planet. Here is the Hubble news release: www.jpl.nasa.gov/news/news.cfm?release=2009-051

Viewing Saturn in 2009

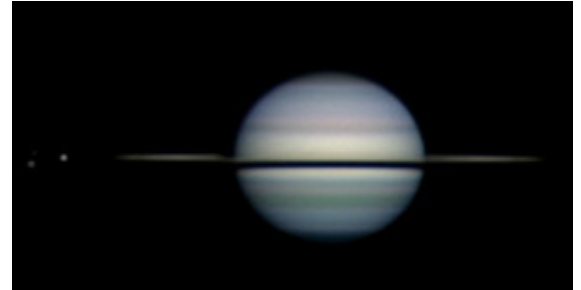
January through July are the best months to view Saturn this year. By March, Saturn rises at sunset for an earlier and more convenient viewing window. This year Saturn's rings are barely visible. They are nearly edge-on in January, and tilt up to a slight four-degree angle showing a last glimpse of the south side of the rings by May. After May the tilt narrows to edge-on in September. Saturn's conjunction with the Sun is also in September so this dramatic edge-on view will be difficult to see. Saturn will appear very

close to the Sun at dusk. Then in October Saturn is visible in the morning just before dawn. It will rise a little earlier each morning through the fall months.

Saturn Viewing Tips: This year the Cassini Division, the large gap between the rings of Saturn, will be challenging if not impossible to see. But some of Saturn's largest moons will cast dark round shadows on the planet, and astro-photographers will be on the lookout for fleeting storms which look like white spots on the southern part of the planet.

Caption: A view of Saturn and three of its moons (Tethys, bottom left; Mimas, bottom right; Dione, top). This image was taken Jan. 1, 2009 by Paulo Casquinha.

What will Saturn look like through a telescope? It depends. You may be able to see the planet and the narrowing rings clearly, depending on such variables as the power and cleanliness of your optics and eyepieces. Weather and atmospheric conditions



affect the view through your telescope, too. It is best to view Saturn when it is highest in the sky so there will be less atmospheric dust and turbulence between you and your target. In August through October, while both the Sun and the Earth cross the ring plane of Saturn, the planet will be near the Sun at sunset and then, after conjunction, visible before dawn. Unfortunately, Saturn will be very low on the horizon during these months. And we will see distorted views — distorted by the atmosphere magnified by the telescope eyepiece.

Saturn can be found in the constellation Leo until September.

April 2009: Saturn's ring inclination continues to widen to a 3.4° tilt. The ring surface you see is the south face of the rings for the next few months.

May 2009: Saturn starts the month in retrograde motion (moving westward). It will appear to stand still against the background stars of Leo on the 17th when Saturn resumes direct eastward motion. Look in the southwest sky for Saturn. The rings are open the widest of the year — to 4.1° this month. Look for Saturn near the moon on May 4th and again on the 31st.

June 2009: Saturn appears closer to Leo's Regulus than Virgo's Spica. Spica appears to be following Saturn across the southwestern sky. Saturn and Spica are close to the same magnitude. Notice the difference in color - Spica is white and Saturn is golden. Saturn's ring tilt remains at 4° this month, but will narrow next month. Look for Saturn near the moon on the 28th.

July 2009: Saturn is the only evening planet, and is found in the western sky this month, setting by 10:30 p.m. this month. The rings narrow to a 3.2° tilt this month. As Saturn's distance from Earth increases, and the ring tilt narrows, Saturn appears fainter.

August 2009: The best Saturn viewing window is ending, but the dramatic narrowing of the rings is worth attempting through a telescope. Take care not to look too closely at the setting sun, and never aim a telescope at the Sun when viewing other celestial objects like planets or you will damage your eyes.

Look for Saturn very low on the Western horizon just after sunset. It sets an hour after sunset by month's end. The rings have narrowed to only 1.9° this month. The Sun passes through Saturn's ring-plane on August 10th. The south face of the rings are very slightly tilted towards Earth, and the previously bright sun-lit ring, which looks like a straight line, will appear to have gone dark as we get a glimpse at the dark north side of

the rings for the first time. Look for Saturn near Mercury on the 18th and near the moon on the 25th.

September 2009: Saturn's rings become edgewise for the first time since 1996 on September 4th, when Earth passes through the ring-plane. But Saturn is so close to the sun — only 11° away and so low on the Western horizon - that it will be impossible to get a good look through a telescope. Saturn's conjunction with the Sun is September 20th, and by the end of the month, Saturn returns as a morning planet. When you look at Saturn in the dawn sky at the end of September and for the rest of the year you will be seeing the north face of the rings for the first time in 15 years!

October 2009: The early bird gets a wonderful view of Saturn, Mercury and Venus this month. On the 8th look for Saturn, tiny Mercury, and Venus together low on the eastern horizon 45 minutes before sunrise. On the 13th Venus and Saturn make a pretty pair. If you are up early, don't miss the moon near Mars on the 11th and 12th. And on the 16th the moon joins Venus and Saturn, all in the dawn sky. Saturn's ring tilt (showing the north face of the rings) is 1.5° this month.

Viewing Saturn's Moons:

The largest moon, Titan, is easily visible in most telescopes. At western and eastern maximum elongation, the moon appears as an 8th magnitude object orbiting approximately five ring diameters from the planet. Titan orbits Saturn in about sixteen days. The next brightest moon, 10th magnitude Rhea, can be found orbiting about two ring diameters from Saturn. Saturn's other visible moons are Tethys, Dione, Enceladus, Mimas, and Iapetus. Mimas and Enceladus are challenging to view because of their proximity to Saturn's rings. Iapetus is much brighter at western elongation (magnitude 10.1) than at eastern elongation (magnitude 11.9). One side of Iapetus has the reflectivity of snow, and the other side is as dark as coal. At its brightest, Iapetus is located twelve ring diameters west of the planet.

- from

<http://saturn.jpl.nasa.gov/Education/saturnobservation/viewing2009/>

Moon	Magnitude
Titan	8.4
Rhea	9.7
Tethys	10.3
Dione	10.4
Enceladus	11.8
Iapetus	10.1-11.9
Mimas	12.9

Moons are listed in order of brightness

Earth Hour

On Saturday March 28 at 8:30 p.m. local time millions of people, businesses, towns, and schools in more than 240 cities in 62 countries will turn off lights for one hour to make a statement about climate change legislation during Earth Hour 2009. Earth Hour is sponsored by the Washington, D.C.-based World Wildlife Fund (WWF) to show support for action on climate change. This will be the third Earth Hour in as many years. For more information, visit earthhour.org .

Vote on the Name of the Next Mars Rover

NASA has posted online nine names that are finalists for the agency's Mars Science Laboratory mission and invite the public to vote for its favorite. The non-binding poll to help NASA select a name opened March 23 and will accept votes through March 29. More than 9,000 students in kindergarten through 12th grades submitted essays proposing names for the rover in a nationwide contest that ended Jan. 25. NASA will

select the winning name, based on a student's essay and the public poll, and announce the name in April.

For worldwide participation beyond the contest, the public also has a chance to participate in "Send Your Name to Mars." The agency will collect names to be recorded on the microchip. Names will be collected via the contest Web link beginning March 23. Scheduled to launch in 2011 and land on Mars in 2012, the rover will use a set of advanced science instruments to check whether the environment in a selected landing region ever has been favorable for supporting microbial life and preserving evidence of such life. The rover also will search for minerals that formed in the presence of water and look for chemical building blocks of life. To view the nine finalist names and cast your vote, visit: <http://marsrovername.jpl.nasa.gov> .

- NASA News

NASA Launches *Eyes on the Earth 3-D*

New interactive features on NASA's Global Climate Change Web site give the public the opportunity to "fly along" with NASA's fleet of Earth science missions and observe Earth from a global perspective in an immersive, 3-D environment. Developed using a state-of-the-art, browser-based visualization technology, *Eyes on the Earth 3-D* displays the location of all of NASA's 15 currently operating Earth-observing missions in real time. These missions constantly monitor our planet's vital signs, such as sea level height, concentration of carbon dioxide in our atmosphere, global temperatures and extent of sea ice in the Arctic, to name a few. The new *Eyes on the Earth 3-D* features are online at <http://climate.jpl.nasa.gov>. Visitors to *Eyes on the Earth 3-D* can:

Ride along with a spacecraft, observing Earth as it sweeps below in accelerated time. View authentic data maps of ozone, sea level or carbon dioxide distribution, mapped onto the surface of the globe.

Compare the size of each satellite to a car or a scientist.

Blast through a global carbon dioxide map to uncover some of the world's most populous cities in the new interactive game, "Metropolis."

Exploring Space Lectures Webcast Live

The 2009 Exploring Space Lectures will feature world-class scholars discussing astronomy, the vastness of the universe, the search for Earth-like planets and our unpredictable sun. The lectures will be held at the National Air and Space Museum in Washington, D.C., and are free to attend. If you are unable to attend the lectures, they will be webcast live for free viewing online. Lecture videos will also be archived.

Why Is Astronomy So Popular?

David H. Levy, well-known interpreter of astronomy and sky lore, will discuss what makes astronomy such a popular subject. Astronomy imagery is everywhere in our culture -- in literature, songs, art, and on popular items from billboards to cars.

The lecture will take place on March 25, 2009, at 7:30 p.m. For more information, visit www.nasm.si.edu/events/eventDetail.cfm?eventID=1215 .

What IS the Universe?

Galileo's observations of the universe revealed depth and great dimension. As studies of astronomy continue, human understanding of the universe has changed in profound ways. Dr. Vera Rubin of the Carnegie Institution of Washington will look further at the

question, "What IS the universe?" The lecture will take place on April 9, 2009, at 7:30 p.m. For more information, visit www.nasm.si.edu/events/eventDetail.cfm?eventID=1217.

Are We Alone? Searching for an Exoplanet Like Home

For thousands of years people have wondered, "Are we alone in the universe?" Join Dr. Sara Seager, planetary science professor at MIT, as she discusses the race to discover a planet very similar to Earth and answer ancient questions about other worlds. The lecture will take place on May 27, 2009, at 7:30 p.m. For more information, visit www.nasm.si.edu/events/eventDetail.cfm?eventID=1218 .

Our Sun: Is It a Steady Performer?

Join solar astronomer Dr. Alan M. Title for a discussion about the sun. Get to know the sun a bit better, if only to appreciate that it is a more violent, and largely unpredictable, place than ever thought possible. The lecture will take place on June 18, 2009, at 7:30 p.m. For more information, visit www.nasm.si.edu/events/eventDetail.cfm?eventID=1219 .

NASA Budget Overview Shows Obama Support for One Additional Shuttle Flight, Return to Moon

The Obama administration's proposed 2010 budget provides \$18.7 billion for NASA. Including \$1 billion that went to NASA from the American Recovery and Reinvestment Act of 2009, the new budget proposal represents a \$2.4 billion increase over 2008 funding levels, according to the White House Office of Management and Budget. The budget blueprint continues to support the Bush administration's directive to finish the space station and retire the shuttle in 2010 and to return astronauts to the moon in the 2020s.

"NASA's astronauts and robotic spacecraft have been exploring our solar system and the universe for more than 50 years," according to an OMB budget overview. "The agency will create a new chapter of this legacy as it works to return Americans to the moon by 2020 as part of a robust human and robotic space exploration program.

"NASA also will send a broad suite of robotic missions to destinations throughout the solar system and develop a bold new set of astronomical observatories to probe the mysteries of the universe, increasing investment in research, data analysis, and technology development in support of these goals."

In the wake of the 2003 Columbia disaster, the Bush administration ordered NASA to finish the space station and retire the shuttle by 2010. At the same time, the agency was told to begin development of a new, safer manned spacecraft that could carry astronauts to and from low-Earth orbit and eventually, on to the moon.

The Constellation program that eventually was approved calls for development of a new rocket called Ares 1 that is made up of a five-segment shuttle solid-fuel booster and an advanced Apollo-era hydrogen-fueled upper stage. The Ares 1 would be used to boost new Orion crew capsules into orbit. A much more powerful, unmanned rocket called the Ares 5 would be developed later to launch lunar landers and to propel landers and Orion capsules on to the moon.

The Ares 1 will not be operational before late 2014 or early 2015. Between the retirement of the shuttle in 2010 and the debut of Ares 1/Orion, NASA astronauts will be forced to hitch rides to and from the space station aboard Russian Soyuz rockets.

Obama said during the presidential campaign that he hoped to narrow the five-year gap, but it's not clear how the new budget addresses that issue.

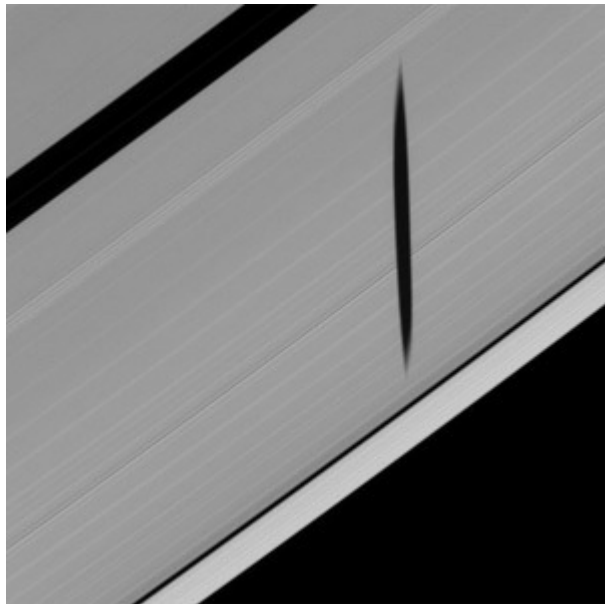
Critics have attacked the Constellation architecture on a variety of fronts, arguing other designs offer more flexibility, comparable safety and lower costs. The OMB's 2010 budget overview does not mention Ares rockets by name or indicate whether the new administration supports the current architecture beyond endorsing a return to the moon. While few details were included in the overview, the new budget reflects President Obama's campaign promise to look into adding one additional shuttle flight in 2010, presumably to carry a sophisticated physics experiment called the the Alpha Magnetic Spectrometer to the space station.

- *cbsnews.com*, 2/26/09

Watch Saturn's Shadow Dancing

Saturn is currently presenting itself to us with its rings and moon orbits nearly edge-on. I knew this would mean we'd see transits of the moons: from our view, the moons seem to pass directly over the face of Saturn.

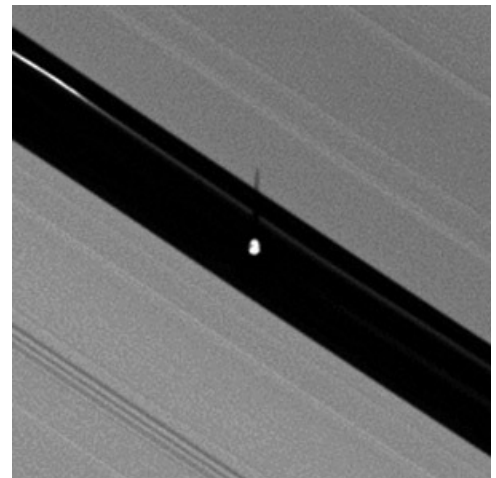
What I didn't think of is this also means the moons will cast shadows on the rings themselves! This is starting to happen now, and Cassini, our robot-on-the-spot, is now sending back spectacular pictures (like it ever sends back any other kind, duh) of these events! An animation (http://ciclops.org/view/5462/Moon_Shadow_in_Motion) shows



the tiny moon Epimetheus — only 70 miles across — casting its own shadow on the rings. While it was still a million kilometers from the tiny world, Cassini took a series of images that the ground team strung together into this beautiful and somewhat eerie animation. The shadow moves across the rings because Epimetheus's orbit isn't precisely aligned with the rings, it's tilted by less than a degree, but that's enough to send its stretched-out shadow drifting across the rings like a ghost as the moon bobs above the ring plane. *If you look at this still frame from the animation, you can see incredible detail in the rings, and even that the shadow is not quite symmetric; probably a reflection (so to speak) of Epimetheus' irregular shape.*

Some of the other moons are creating these dances as well; *here is a zoom of the even smaller flying-saucer-shaped Pan (just 12 miles across) as it orbits in a gap in the rings, casting its own shadow across the rings:*

Whoa, cool. Pan is actually orbiting in that ring gap, so the rings have to be almost perfectly edge-on to the Sun to get that shadow. Right now that's not quite the case; there's still a bit of a tilt. But as Saturn orbits the Sun that angle will diminish, and in a few months (in August) it'll be precisely 0. Then we'll see the shadows



stretching out along the rings, lengthened the same way your own shadow is elongated at sunset. As we approach this point in time — what's really the Equinox on Saturn, the same as the Equinox we just had on Earth — well see this more and more, so expect a ton more devastating animations and images from Cassini in the months to come!

- written by Phil Plait, the Bad Astronomer

Full story at: <http://blogs.discovermagazine.com/badastronomy/2009/03/23/watch-saturns-shadow-dancing/>



Apollo Upgrade by Dr. Tony Phillips

The flight computer onboard the Lunar Excursion Module, which landed on the Moon during the Apollo program, had a whopping 4 kilobytes of RAM and a 74-kilobyte "hard drive." In places, the craft's outer skin was as thin as two sheets of aluminum foil.

It worked well enough for Apollo. Back then, astronauts needed to stay on the Moon for only a few days at a time. But when NASA once again sends people to the Moon starting around 2020, the plan will be much more ambitious—and the hardware is going to need a major upgrade.

"Doing all the things we want to do using systems from Apollo would be very risky and perhaps not even possible," says Frank Peri, director of NASA's Exploration Technology Development Program.

So the program is designing new, more capable hardware and software to meet the demands of NASA's plan to return humans to the moon. Instead of staying for just a few days, astronauts will be living on the Moon's surface for months on end. Protecting astronauts from harsh radiation at the Moon's surface for such a long time will require much better radiation shielding than just a few layers of foil. And rather than relying on food and water brought from Earth and jettisoning urine and other wastes, new life support systems will be needed that can recycle as much water as possible, scrub carbon dioxide from the air without depending on disposable filters, and perhaps grow a steady supply of food—far more than Apollo life-support systems could handle.



Caption: The Chariot Lunar Truck is one idea for a vehicle equal to the lunar terrain. Each of the six wheels pivot in any direction, and two turrets allow the astronauts to rotate 360°.

Next-generation lunar explorers will perform a much wider variety of scientific research, so they'll need vehicles that can carry them farther across the lunar surface. ETDP is building a new

lunar rover that outclasses the Apollo-era moon buggy by carrying two astronauts in a pressurized cabin. "This vehicle is like our SUV for the Moon," Peri says. The Exploration Technology Development Program is also designing robots to help astronauts maintain their lunar outpost and perform science reconnaissance. Making the robots smart enough to take simple verbal orders from the astronauts and carry out their tasks semi-autonomously requires vastly more powerful computer brains than those on Apollo; four kilobytes of RAM just won't cut it. The list goes on: New rockets to carry a larger lunar lander, spacesuits that can cope with abrasive moon dust, techniques for converting lunar soil into building materials or breathable oxygen. NASA's ambitions for the Moon have been upgraded. By tapping into 21st century technology, this program will ensure that astronauts have the tools they need to turn those ambitions into reality.

Learn more about the Exploration Technology Development Program at www.nasa.gov/directorates/esmd/aboutesmd/acd/technology_dev.html. Kids can build their own Moon habitat at spaceplace.nasa.gov/en/kids/exploration/habitat.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

New on the Space Place Web Site: Why is Earth's core so hot?

Blistering hot molten rock bursts through weak places in Earth's crust. So what is down there and why is it so hot? Earth's core may seem as mysterious and remote as outer space, but scientists actually have learned a great deal about it. Listen to a scientist explain. Visit <http://spaceplace.jpl.nasa.gov/en/educators/podcast/> to subscribe to these Podcasts. Or listen now to this and the previous Podcasts on your computer or read the transcripts.

- Colleen Barboza, Education Outreach Coordinator, The Space Place



Announcing the New Glass & Mirrors ToolKit!

SWFAS has recently received the new Glass & Mirrors ToolKit. It is available for club members to borrow (as are our other Toolkits). Here is a preview (and more) of what's inside: http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=368

Upcoming Telecons

Mark your calendars for these two exciting upcoming telecons in our Monthly IYA 2009 Series (all beginning at 9 PM Eastern) starting with:

Thursday, March 26th -

Kris Koenig introducing 400 Years of the Telescope and Mike Simmons talking about the 100 Hours of Astronomy:

http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=362

Then mark your calendar for another on Tuesday, April 21st - Our Sun with Dr. Laura Peticolas. More information coming soon.

400 Years of the Telescope Premiers April 10

The PBS special will premier April 10th. Check your local listings for air time and date. Exclusive! Your club will have a chance to see it even before it is released on TV. Included in the new Glass and Mirrors ToolKit is a special NSN exclusive screening copy of the full documentary.

This is a beautiful history of telescopes told by interviews with astronomers around the world and narrated by Neil DeGrasse Tyson. Find out how the new ToolKit, the documentary, and a special planetarium show are working together to get the word out about the International Year of Astronomy and the wonders of telescopes:
http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=368

Quarterly Incentive

The ever popular replica Galileo Telescopes are up for grabs. All qualifying events held between January 1 and March 31, 2009 and logged by April 6 will be eligible for the drawing on Tuesday, April 7, 2009. The replica Galileo telescopes were donated by the Astronomical Society of the Pacific. Get logging!

Galileoscope

The National Optical Astronomy Observatory (NOAO) Galileoscopes are now shipping in late April 2009 and can be ordered at:

<https://www.galileoscope.org/gs/products>

Questions? Please contact Dr. Steve Pompea <spompea@noao.edu>

Kepler Launch is Successful

Kepler is on its way to space to search for Earth-like planets. Congratulations to the Kepler team for a successful launch. Did you know they sponsored one of our most popular ToolKits? Use your Shadows and Silhouettes ToolKit to communicate the excitement and thrill of this Mission. Read more here:

http://science.nasa.gov/headlines/y2009/06mar_keplerlaunch.htm?list1115242

Just like you, the Astronomical Society of the Pacific (ASP) believes in improving science literacy through the enjoyment of astronomy. To keep up-to-date on activities, events, and resources provided by the ASP, sign up for free monthly notifications here:

<http://www.astrosociety.org/pubs/newsletter.html>

- *Marni Berendsen, Kenneth Frank and Vivian White, Night Sky Network Administrators*

SWFAS Minutes – March 5, 2009

Bob Francis greeted new members, one of who wants to learn to use a new telescope. Bob said there is always a spare telescope for people to use.

He asked for support of upcoming events. There are two events in March: The Rotary Club viewing in Cape Coral on March 6th and the viewing at the Christa McAuliffe School in Cape Coral that had previously been rained out. The PTO there is supporting the star party. 150 tickets have been sold to send the 5th grade class graduates to Cape Kennedy. Help is definitely needed for that because a lot of kids will be there.

The Boy Scouts want an Astronomy night on April 24th, Friday in Punta Gorda at Camp Miles. That is about an hour drive from Fort Myers. He asked for support and about nine scopes were available.

The Winter Star Party was a success with warm weather and some wind although the men had cold showers. There were fantastic lectures there. People had to apply in September for a February event. Ticket can be sold if unable to attend. There were a few left over tickets this year. WSP had 649 people this year. Several countries were represented and it is one of the ten best Star Parties in the world.

The club is accepting dues now which are \$ 20 per year. For membership people can borrow a telescope and get an excellent newsletter.

There were 12 people from two clubs at the WSP and 6 people won prizes.

The treasurer's report was read by Stewart Rorer and approved. The closing balance on 2/28/09 was \$1126.69.

At the WSP, the Key Deer Refuge and the Dry Tortugas were visited by members.

The Fak viewing was only so-so. There was a fire in the Glades and clouds. Chuck Pavlick and Tony Heiner are the coordinators.

Laser pointers can be gotten for \$15- 30 on line vs. paying about \$100 at Orion.

The other viewing site is CRP. John Martin is the coordinator. He needs to know ahead of time by 5 pm if people are going. He will send out an e-mail when he is planning to go to CRP.

The Fak is beautiful but please don't go alone the first time. Someone will meet them in route.

Maria Dorilag is working on re-organizing the library and it is a work in progress now. The plan is to donate some of the older books to members or libraries. There are books there from 30 years ago. The books will be put in the lobby for members to take. A system will be set up that is easier to maintain.

Please e-mail pictures to Danny Secary or Dan Fitzgerald for the web site.

Bob Francis will send out information r/t getting to the Christa McAuliffe School for the star party.

The guest speaker was John Hicks who has studied the sun for 25 years and been an amateur astronomer for 30 years. Jack Newton encouraged him to use a Dobsonian. He has concerns with Global warming.

- *Submitted by Alice Mack.*

Nightfall

"How quickly do we grow accustomed to wonders.

"I am reminded of the Isaac Asimov story *Nightfall*, about the planet where the stars were visible only once in a thousand years. So awesome was the sight that it drove men mad. We who can see the stars every night glance up casually at the cosmos and then quickly down again, searching for a Dairy Queen."

- Roger Ebert, from a movie review in the ***Chicago Sun Times***

Calendar of Events

Thursday, April 2nd, 7:30 pm, **Meeting at the Calusa Nature Center Planetarium,**
Speaker: Rick Piper

Friday, April 24th, 7:00 pm, **Observing at Camp Miles in Punta Gorda**

Saturday, April 25th, dusk, **Observing at Caloosahatchee Regional Park**

Thursday, May 7th, 7:30 pm, **Meeting at the Calusa Nature Center Planetarium,**
Speaker: Carol Stewart

Saturday, May 3rd, dusk, **Observing at Caloosahatchee Regional Park**

Saturday, June 27th, dusk, **Observing at Caloosahatchee Regional Park**

Southwest Florida Astronomical Society, Inc.

P.O. Box 100127

Cape Coral, FL 33910

www.theeyepiece.org