

Southwest Florida Astronomical Society SWFAS



The Eyepiece September 2008

Club Contacts

President:

Bob Francis

r.r.francis@comcast.net
(239-985-0137)

Vice President:

Mike Harden

mike@cosmosapparel.com
(239-369-0150)

Secretary:

Karen Nichols

(239-466-2627)

Treasurer:

Ramona Huddleston

ramonaseraph@juno.com

Program Coordinator:

Chuck Pavlick

cpav@swfla.rr.com
(239-560-1516)

Viewing Coords./Fakahatchee:

Tony Heiner

verahei@aol.com
(941-637-8849)

Chuck Pavlick

cpav@swfla.rr.com
(239-560-1516)

Viewing Coord./Caloosahatchee

Steve Nelson

sgnelson@comcast.net
(239-656-0465)

Librarian:

Jamie Knaub

silver_galaxy13@hotmail.com
(239-332-2565)

Club Historian:

Danny Secary

asecary@gmail.com
(239-470-4764)

Equipment Coordinator:

Sanders Lewallen

sanderslewallen@msn.com
(239-275-3435)

Website Coordinator:

Dan Fitzgerald

bigdan2204@comcast.net
(239-282-2292)

A MESSAGE FROM THE PRESIDENT

The summer season is moving right along with September just around the corner. This summer has not been very good for viewing with all the rain, and then tropical storm Fay. I hope that all of you survived the storm without any damage to your homes, and most important, remain in good health.

Steve Nelson will start up Saturday night viewing again at the Caloosahatchee Regional Park located seven miles east of SR 31 on SR 78. Steve has provided the following dates that he will be up at the park: September 20th, October 25th, November 22nd, and December 20th. He sets up at sunset and usually ends the viewing by 11:00 PM. Steve sends out an email reminding members about the viewing sessions, but if you have a question you can call him at home. Viewing sessions will continue each month during new moon at the Fakahatchee Strand Park off of SR 29, about 20 miles south of the toll booth on Alligator Alley. Anyone interested in going down to the FAK can contact Chuck Pavlick or Tony Heiner.

September offers some nice viewing for those members who like to follow the planets. At dusk from September 3rd through the 19th, Mercury, Venus, and Mars form a nice triangle. Jupiter still highlights the evening sky high in the south, and on September 7th, telescope viewers can watch a double shadow transit as two of Jupiter's moons cross the planet's face. Pluto can also be observed in the south after nightfall, but you will need a good size telescope and detailed finder chart to locate it. Late night viewing also brings Neptune and Uranus up around sunset, and setting around sunrise.

September Meeting

Our September meeting will be at the Calusa Nature Center Planetarium at 7:30 pm on Thursday, September 4th. We will be watching a video for our program this month.

Happy Anniversary MESSENGER

It's been four years since MESSENGER was launched atop a Delta II rocket on August 3, 2004, and they have been busy years. Since it began its odyssey, the spacecraft has travelled 2.69 billion miles relative to the Sun. It has executed four planetary flybys (one of Earth on August 2, 2005; two of Venus, on October 24, 2006, and June 5, 2007; and one of Mercury, on January 14, 2008), three deep-space propulsive maneuvers, and 15 smaller trajectory-correction maneuvers. Up next are two more passes by Mercury (October 6, 2008, and September 29, 2009) and then on March 18, 2011, MESSENGER will become the first spacecraft to enter into orbit around the innermost planet.

LCROSS Mission Update

There are places on the Moon where the sun hasn't shined for millions of years. Dark polar craters too deep for sunlight to penetrate are *luna incognita*, the realm of the unknown, and in their inky depths, researchers believe, may lie a treasure of great value. NASA is about to light one up.

Sometime between May and August 2009, depending on launch dates, the booster stage for NASA's LCROSS probe will deliberately crash into a permanently-shadowed lunar crater at 9,000 km/hr, producing an explosion equivalent to about 2,000 pounds of TNT. The blast will jettison material out of the crater into broad daylight where astronomers can search the debris for signs of lunar water.

Water *is* the treasure. NASA plans to send people back to the Moon by 2020 and eventually set up a lunar outpost. Water would be an invaluable resource for astronauts living and working on the Moon. Not only could people drink it, but water could be used to grow plants for food, or it could be split into hydrogen for rocket fuel and oxygen to replenish the outpost's air. It even could shield astronauts from dangerous space radiation.

Hence the kamikaze mission, called the Lunar CRater Observation and Sensing Satellite (LCROSS), to search for H₂O on the Moon. "If LCROSS's booster stage hits a patch of lunar regolith that contains at least 0.5 percent water ice, water should be detectable in the plume of ejecta," explains Anthony Colaprete, principal investigator for LCROSS. The other half of the LCROSS mission, a robotic satellite, will observe the impact and then itself crash into the Moon 4 minutes later. Most of the Moon is bone dry, of course. With virtually no atmosphere and 300° temperature swings between night and day, most of the Moon's surface is a hostile place for water. But there are a few cold, dark places where frozen water could stay put. At the lunar poles, the sun is always low on the horizon, so some crater ridges cast shadows that keep parts of the crater floors in perpetual darkness. Temperatures in the inky black shadows hover around 40° above absolute zero (-233° Celsius), cold enough for water ice to survive indefinitely.

"There's tantalizing evidence that water might be there," Colaprete says. A lunar orbiter called Clementine detected hints of water ice in some of these craters in 1994 and so did the 1999 Lunar Prospector mission, but unfortunately the data were not conclusive. That's where LCROSS comes in. Ice blasted into the sunlight by the impact would vaporize. Ultraviolet light from the sun would then split the H₂O molecules into H and

OH. Mission planners hope LCROSS's sensors will detect the fingerprint of H₂O in near-infrared light and also a characteristic wavelength emitted by OH at 308 nanometers. Currently, Colaprete's team is searching for the best impact sites inside various shadowed craters. Colaprete explains, "If we don't get ejecta into sunlight, it wouldn't matter if we hit an iceberg because we would never know it."

Choosing impact sites must also take another factor into account: visibility from Earth. Hundreds of amateur and professional astronomers will join the LCROSS robotic orbiter in watching the crash.

The explosion itself will probably be hidden by the walls of the target crater. Instead, what astronomers will look for is the impact plume. An expanding cone of ejecta will rise more than 6 kilometers above the lunar surface and spread outward for about 40 km in every direction. Glistening in the sunlight, the debris is expected to shine like a 6th to 8th magnitude star—invisible to the human eye but an easy target for backyard telescopes.

-from Science@NASA

International Year of Astronomy (IYA 2009)

The year 2009 marks the 400th anniversary of the astronomical telescope. In 1609, Galileo's improved view of the moon and the Milky Way launched humanity along a new road toward understanding our cosmic environment. No other scientific instrument has had such a profound impact on our view of the universe. The telescope's influence continues to dominate our attempts to perceive the cosmos, as astronomers struggle to decode the mysteries of newly discovered dark energy and matter in an accelerating universe.

The United Nations has declared 2009 to be the "International Year of Astronomy." On July 9, 2008, the US Congress declared our participation in IYA 2009. A number of global initiatives are planned. The theme of the IYA 2009 is "The Universe, Yours to Discover." The vision of the International Year of Astronomy 2009 is to help the citizens of the world rediscover their place in the Universe through the day and night time sky, and thereby engage a personal sense of wonder and discovery. All humans should realize the impact of astronomy and basic sciences on our daily lives, and understand better how scientific knowledge can contribute to a more equitable and peaceful society. Some of the events being planned are:

GLOBE at Night (March 16-28, 2009) Join thousands of other students, families and citizen-scientists hunting for stars during the second half of March 2009. Take part in this international event called GLOBE at Night to observe the nighttime sky and learn more about light pollution around the world.

100 Hours of Astronomy (April 2-5, 2009) This is a 100-hour, round-the-clock, round-the-globe event, including live webcasts from research observatories, public observing events and other activities around the world. One of the key goals is to allow as many people as possible to look through a telescope, as Galileo first did 400 years ago.

<http://www.astronomy2009.org/100hoursofastronomy/>

International Astronomy Day (May 2, 2009)

World Space Week (October 4–10, 2009) The Largest Annual Public Space Event on Earth Celebrated in over 50 Nations. www.worldspaceweek.org

You can read more about IYA 2009 at their website: www.astronomy2009.org. In addition, CELESTRON is a global sponsor and their website is very informative www.celestronlife.com/IYA2009

The Galileoscope

Who does not remember the first time they looked at the Moon through a telescope and were amazed by the details of the mountains and craters? The same is true for Jupiter's cloud belts and its Galilean moons, Saturn's rings and remote sparkling star clusters. Observing through a telescope for the first time is an experience that shapes our view of the sky and the Universe. The IYA2009 program wants to share this observational and personal experience with as many people as possible across the world and is developing a simple, accessible, easy-to-assemble and easy-to-use telescope that can be distributed by the millions. Ideally, every participant in an IYA2009 event should be able to take home one of these little telescopes. This simple telescope enables people to build and observe with a telescope that is similar to Galileo's. Sharing these observations and making people think about their importance is one of the main goals of IYA2009: *Promote widespread access to new knowledge and observing experiences.* A do-it-yourself Galileoscope could be the key to pursuing an interest in astronomy beyond IYA2009, especially for people who cannot afford to buy a commercial telescope. We aim to give 10 million people their first look through an astronomical telescope in 2009. This is achievable if, for example, 100,000 amateur observers each show the sky to 100 people. Millions of small telescopes are sold every year, but anecdotal evidence suggests that most are rarely used for astronomy. A worldwide Telescope Amnesty program will invite people to bring their little-used telescopes to IYA2009 events, where astronomers will teach people how to use them and offer advice on repairs, improvements or replacements, encouraging more people to stay involved in the hobby. - <http://www.astronomy2009.org/.../the-galileoscope-mainmenu-83.html>

NASA Sticks with October 8 Launch for Hubble Servicing Mission

NASA managers decided to stick with Oct. 8 as the target launch date for shuttle mission STS-125, a long-awaited flight by the shuttle Atlantis to service and upgrade the Hubble Space Telescope. They also agreed to stick with Nov. 10 for launch of the flight after that, a space station assembly mission by the shuttle Endeavour.

As it now stands, Commander Scott Altman and his six crewmates – pilot Gregory C. Johnson, robot arm operator Megan McArthur and spacewalkers John Grunsfeld, Michael Massimino, Andrew Feustel and Michael Good – plan to strap in for a dress-rehearsal countdown on Sept. 19.

If all goes well, Atlantis will blast off around 1:34 am on Oct. 8. After grappling the space telescope, the first of five spacewalks will begin around 6:50 pm on Oct. 10 to install two new instruments, a fine guidance sensor, a new set of batteries and a set of gyroscopes. The astronauts also will repair two instruments that malfunctioned earlier and install fresh insulation. The flight plan calls for the astronauts to release the refurbished telescope on Oct. 15 and to land back at KSC around 10:30 pm on Oct. 18. STS-125 had been targeted for launch Aug. 28, but the flight was delayed because of time needed to ready two external fuel tanks. The Hubble repair crew cannot seek "safe haven" aboard the international space station if a Columbia-class heat-shield problem occurs. As a result, NASA decided early on to have a second shuttle – Endeavour – prepped for launch on a rescue mission if necessary. Assuming no rescue flight is needed, Endeavour then would be used for the next station assembly mission, STS-126. - by William Harwood, CBS News Space Analyst, 8/14/08

Discord With Russia a Worry for NASA

Soyuz Will Soon Be Only Shuttle Flying to Space Station

NASA's ability to send its astronauts to the \$100 billion international space station is in danger of becoming a costly casualty of the Russia-Georgia war.

Because the American fleet of space shuttles will be retired in 2010 and the United States won't have a replacement ready until at least 2015, NASA wants to negotiate a contract this year to have Russia's Soyuz spacecraft transport all astronauts traveling to and from the station during the gap

But first, Congress has to pass a waiver to a 2000 law forbidding government contracts with nations that help Iran and North Korea with their nuclear programs, as Russia has done. Even before the Georgia incursion, the bill faced strong opposition, and key members said this week that the chances of granting a waiver now are slim.

"In an election year, it was going to be very difficult to get that waiver to pay hundreds of millions of dollars to an increasingly aggressive Russia, where the prime minister is acting more and more like a czar," said Sen. Bill Nelson (D-Fla.). "Now, I'd say it's almost impossible."

Nelson, who supports the waiver, said it is possible that no agreement will be reached and that as of 2011 Americans will have no way to get to the space station – leaving it to "degrade and burn up on reentry, or with us ceding it to those who can get there."

"Unfortunately, we have no plan but to rely on the Russians," said Rep. Bart Gordon (D-Tenn.), chairman of the House committee that oversees NASA. "The administration and budget office just haven't provided the funds to avoid that."

NASA Administrator Michael Griffin told Congress in April that passing the waiver was "urgent" and had to be done by Sept. 30 to give the Russians enough time to build the single-use Soyuz vehicles. Each one takes three years.

Griffin made clear that he did not consider NASA's near-total reliance on the Russians in the future to be a good or prudent thing – he called it "unseemly" – but he said the agency lacked the funds to build a shuttle replacement more quickly.

Spokesman David Mould said that NASA is still pushing for the waiver and that "we're optimistic everything will work out." He said Russian-American cooperation in space has been a major success even during times of great tension.

If the waiver passes and Bush signs it, NASA will still have to negotiate with Russia over the price of the service. Many members of Congress have voiced concerns that the Russians will "blackmail" NASA into paying a fortune because it has no alternative.

The space station, conceived and begun under President Ronald Reagan, has taken far longer to build and has cost far more than anyone then imagined. Construction is expected to be finished by fall of 2010, at which point the three American space shuttles will be grounded. NASA has already stopped ordering parts for the shuttles and has begun laying off workers, so they will not be available after 2010 unless President Bush or his successor makes a dramatic change of course.

-by Marc Kaufman, Washington Post Staff Writer, 8/15/08

<http://www.washingtonpost.com/wp-dyn/content/article/2008/08/14/AR2008081403160.html>

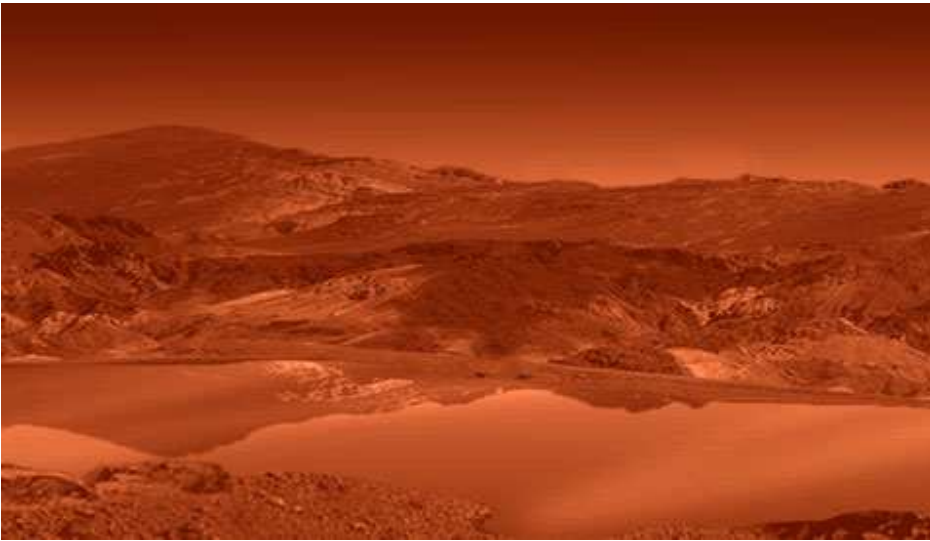
Judging the Effects of an Asteroid Collision

We've all seen the movies. A giant asteroid is heading toward Earth. Drastic action is needed to save life on Earth. These movies are pretty far-fetched, to say the least. But meteorites that are smaller than asteroids fall to Earth often.

Some suggest that a large meteorite strike was responsible for the demise of dinosaurs. Fortunately, most meteor impacts aren't serious. In fact, they seldom make the news. With that in mind, visit <http://down2earth.eu>. It is a fun way to gauge the impact of an asteroid. You begin by selecting the diameter of the asteroid. Then, specify its trajectory and speed. You can also select the density of the asteroid and its target. You'll get information on the depth and width of the crater formed. You can also see the collision's magnitude on the Richter scale. You can also see more information on the impact. Or, click on the map to view the effects of the collision.

News from the Cassini Mission

NASA Confirms Liquid Lake on Saturn Moon



Picture Caption: This artist concept shows a mirror-smooth lake on the surface of the smoggy moon Titan.

NASA scientists have concluded that at least one of the large lakes observed on Saturn's moon Titan contains liquid hydrocarbons, and have positively identified the presence of ethane. This makes Titan the only body

in our solar system beyond Earth known to have liquid on its surface.

Scientists made the discovery using data from an instrument aboard the Cassini spacecraft. Before Cassini, scientists thought Titan would have global oceans of methane, ethane and other light hydrocarbons. More than 40 close flybys of Titan by Cassini show no such global oceans exist, but hundreds of dark, lake-like features are present. Until now, it was not known whether these features were liquid or simply dark, solid material.

Ethane and several other simple hydrocarbons have been identified in Titan's atmosphere, which consists of 95 percent nitrogen, with methane making up the other five percent. Ethane and other hydrocarbons are products from atmospheric chemistry caused by the breakdown of methane by sunlight.

Some of the hydrocarbons react further and form fine aerosol particles. All of these things in Titan's atmosphere make detecting and identifying materials on the surface difficult, because these particles form a ubiquitous hydrocarbon haze that hinders the view. Liquid ethane was identified using a technique that removed the interference from the atmospheric hydrocarbons.

The visual and mapping instrument observed a lake, Ontario Lacus, in Titan's south polar region during a close Cassini flyby in December 2007. The lake is roughly 7,800 square miles in area, slightly larger than North America's Lake Ontario.

The ethane is in a liquid solution with methane, other hydrocarbons and nitrogen. At Titan's surface temperatures, approximately 300 degrees Fahrenheit below zero, these

substances can exist as both liquid and gas. Titan shows overwhelming evidence of evaporation, rain, and fluid-carved channels draining into what, in this case, is a liquid hydrocarbon lake.

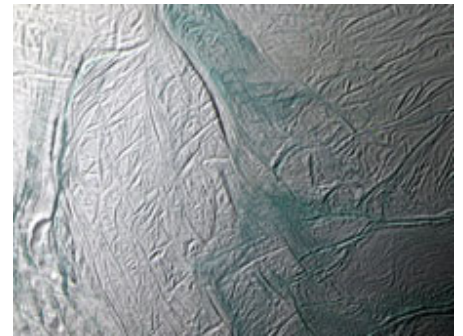
Earth has a hydrological cycle based on water and Titan has a cycle based on methane. Scientists ruled out the presence of water ice, ammonia, ammonia hydrate and carbon dioxide in Ontario Lacus. The observations also suggest the lake is evaporating. It is ringed by a dark beach, where the black lake merges with the bright shoreline. Cassini also observed a shelf and beach being exposed as the lake evaporates.

- More information is available at: <http://www.nasa.gov/cassini>,
<http://saturn.jpl.nasa.gov> and <http://wwwvims.lpl.arizona.edu> .

Cassini Pinpoints Source of Jets on Saturn's Moon Enceladus

In a feat of interplanetary sharpshooting, NASA's Cassini spacecraft has pinpointed precisely where the icy jets erupt from the surface of Saturn's geologically active moon Enceladus.

New carefully targeted pictures reveal exquisite details in the prominent south polar "tiger stripe" fractures from which the jets emanate. The images show the fractures are about 980 feet deep, with V-shaped inner walls. The outer flanks of some of the fractures show extensive deposits of fine material. Finely fractured terrain littered with blocks of ice tens of meters in size and larger (the size of small houses) surround the fractures.



One highly anticipated result of this flyby was finding the location within the fractures from which the jets blast icy particles, water vapor and trace organics into space. Scientists are now studying the nature and intensity of this process on Enceladus, and its effects on surrounding terrain. This information, coupled with observations by Cassini's other instruments, may answer the question of whether reservoirs of liquid water exist beneath the surface.

The high-resolution images were acquired during an Aug. 11, 2008, flyby of Enceladus, as Cassini sped past the icy moon at 40,000 miles per hour. A special technique, dubbed "skeet shooting" by the imaging team, was developed to cancel out the high speed of the moon relative to Cassini and obtain the ultra-sharp views.

Two more Enceladus flybys are planned for October. The first of those will cut Monday's flyby distance in half and bring the spacecraft to a remarkable 16 miles from the surface. Enceladus measures about 310 miles in diameter--just one-seventh the diameter of Earth's moon.

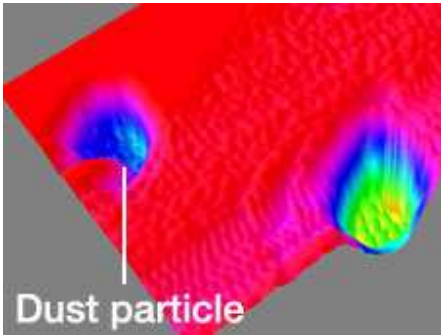
The new images, with jet source locations labeled, are available at:
<http://www.nasa.gov/cassini>, <http://saturn.jpl.nasa.gov> and <http://ciclops.org> .

- NASA News Release, 8/14/08

Phoenix Microscope Takes First Image of Martian Dust Particle

NASA's Phoenix Mars Lander has taken the first-ever image of a single particle of Mars' ubiquitous dust, using its atomic force microscope.

The particle -- shown at higher magnification than anything ever seen from another world -- is a rounded particle about one micrometer, or one millionth of a meter, across. It is a speck of the dust that cloaks Mars. Such dust particles color the Martian



sky pink, feed storms that regularly envelop the planet and produce Mars' distinctive red soil.

"This is the first picture of a clay-sized particle on Mars, and the size agrees with predictions from the colors seen in sunsets on the Red Planet," said Phoenix co-investigator Urs Staufer, who leads a Swiss consortium that made the microscope.

"Taking this image required the highest resolution microscope operated off Earth and a specially designed substrate to hold the Martian dust," said Tom Pike, Phoenix

science team member. "We always knew it was going to be technically very challenging to image particles this small."

The atomic force microscope can detail the shapes of particles as small as about 100 nanometers, about one one-thousandth the width of a human hair. That is about 100 times greater magnification than seen with Phoenix's optical microscope, which made its first images of Martian soil about two months ago. Until now, Phoenix's optical microscope held the record for producing the most highly magnified images to come from another planet.

"I'm delighted that this microscope is producing images that will help us understand Mars at the highest detail ever," Staufer said. "This is proof of the microscope's potential. We are now ready to start doing scientific experiments that will add a new dimension to measurements being made by other Phoenix lander instruments."

Mars' ultra-fine dust is the medium that actively links gases in the Martian atmosphere to processes in Martian soil, so it is critically important to understanding Mars' environment, the researchers said.

The particle seen in the atomic force microscope image was part of a sample scooped by the robotic arm from the "Snow White" trench and delivered to Phoenix's microscope station in early July. The microscope station includes the optical microscope, the atomic force microscope and the sample delivery wheel. It is part of a suite of tools called Phoenix's Microscopy, Electrochemistry and Conductivity Analyzer.

The latest Phoenix images and information are at <http://www.nasa.gov/phoenix> and <http://phoenix.lpl.arizona.edu> .

-from NASA News Release, 8/14/08



The Space Place

A Google for Satellites: Sensor Web 2.0

If you could see every satellite passing overhead each day, it would look like a chaotic meteor shower in slow motion.

Hundreds of satellites now swarm over the Earth in a spherical shell of high technology. Many of these satellites gaze at the planet's surface, gathering torrents of scientific data using a dizzying array of advanced sensors — an extraordinary record of our dynamic planet.

To help people tap into this resource, NASA researchers such as Daniel Mandl are developing a "Google for satellites," a web portal that would make requesting data from Earth-observing satellites almost as easy as typing a search into Google.

"You just click on it and it takes care of all the details for you across many sensors," Mandl explains.

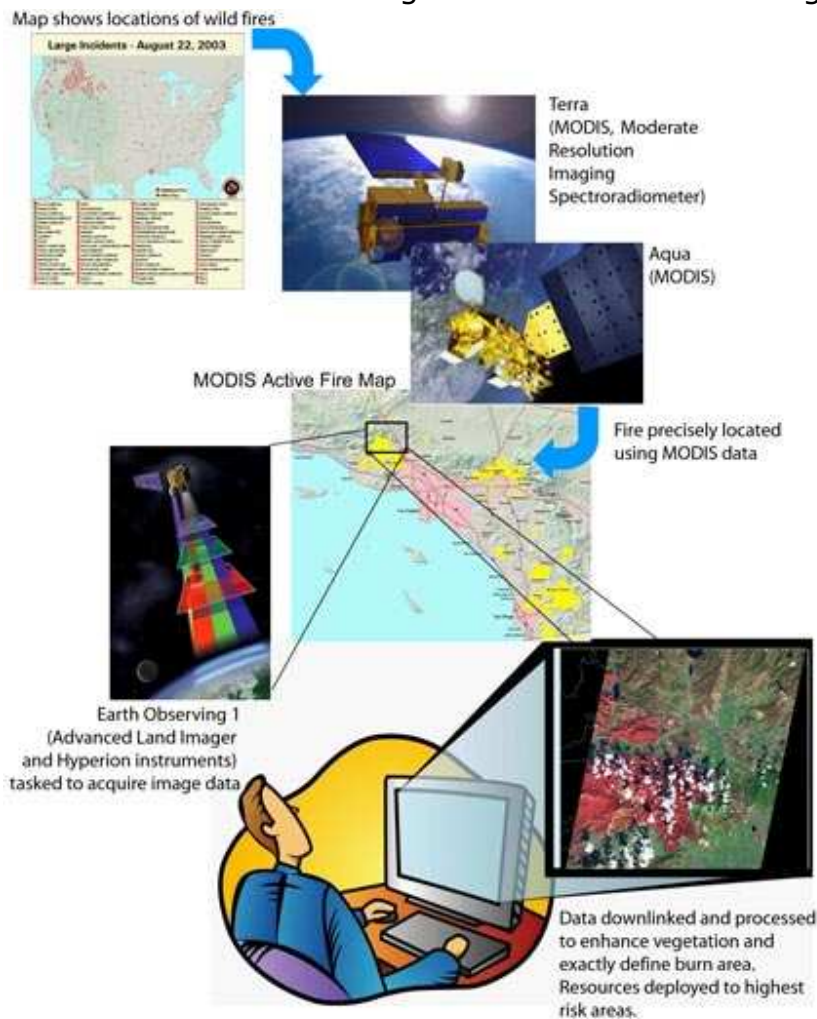
Currently, most satellites are each controlled separately from the others, each one dauntingly complex to use. But starting with NASA's Earth Observing-1 (EO-1) satellite, part of the agency's New Millennium Program, Mandl and his team are building a prototype that stitches these satellites together into a seamless, easy-to-use network called "Sensor Web 2.0."

The vision is to simply enter a location anywhere on Earth into the website's search field along with the desired information types — wildfire maps, vegetation types, floodwater salinity, oil spill extent — and software written by the team goes to work.

"Not only will it find the best sensor, but with proper access rights, you could actually trigger a satellite to take an image in the area of interest," Mandl says. Within hours, the software will send messages to satellites instructing them to gather the needed data,

and then download and crunch that raw data to produce easy-to-read maps.

For example, during the recent crisis in Myanmar caused by Cyclone Nargis, an experimental gathering of data was triggered through Sensor Web 2.0 using a variety of NASA satellites including EO-1. "One thing we might wish to map is the salinity of flood waters in order to help rescue workers plan their relief efforts," Mandl says. If the floodwater in an area was salty, aid workers would need to bring in bottled water, but if flood water was fresh, water purifiers would suffice. An early and correct decision could save lives. Thus far, Mandl and his team have expanded Sensor Web 2.0 beyond EO-1 to include three other satellites and an unmanned aircraft. He hopes to double the number of satellites in the network every 18 months, eventually weaving the jumble of



satellites circling overhead into a web of sensors with unprecedented power to observe and understand our ever-changing planet.

To learn more about the EO-1 sensor web initiatives, go to <http://eo1.gsfc.nasa.gov/new/extended/sensorWeb/sensorWeb.html>. Kids (and grown-ups) can get an idea of the resolution of EO-1's Hyperion Imager and how it can distinguish among species of trees—from space at http://spaceplace.nasa.gov/en/kids/eo1_1.shtml.

Picture Caption: A "Google for satellites" type of web portal will allow users to request real-time data from Earth observing satellites.

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



A Smashing Event: Two LCROSS webcasts for amateur astronomers on Aug 28

NASA plans to send people back to the Moon by 2020 and eventually set up a lunar outpost. Water would be an invaluable resource for astronauts living and working on the Moon. It even could shield astronauts from dangerous space radiation. To search for water ice on the Moon NASA will use the LCROSS mission. Find out about this exciting mission by tuning in to the webcasts.

The LCROSS webcast on August 28 is being broadcast live from NASA/Ames Research Center in California. You have two (2) opportunities to participate in the webcast, one at 1 p.m. EDT or at 6 p.m. EDT. The links for each are as follows:

1 pm: <http://quest.nasa.gov/lunar/ASP/webcast10am.html>

6 pm: <http://quest.nasa.gov/lunar/ASP/webcast3pm.html>

When you click on the above links, you may get a pop-up that asks you to trust a certificate. Select "Trust" on the pop-up to continue.

IMPORTANT: Be sure to test your system at least a few days BEFORE the webcast to check that your computer is set up to participate. Test your system at one of the websites above by clicking on the red link labeled "Test your Connection Early!" If a QuickTime window labeled "LCROSS" pops up and a movie plays, your system passed the test. Get additional instructions on how to set up your computer here:

<http://quest.nasa.gov/about/howto.html>

Log in to the NSN website (<http://nightsky.jpl.nasa.gov>) for even more details.

For more information about LCROSS, visit <http://lcross.arc.nasa.gov/> or www.nasa.gov/centers/ames/research/exploringtheuniverse/lunarorbiter_sum.html

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

SWFAS Minutes – August 8, 2008

7:30 – Planetarium Show and Video Taping

8:00 – Meeting called into session by President Bob Francis
Introduction and welcome to new members and visitors

Stewart Rorer and Bob are refurbishing the 12 ½ inch telescope in back of the planetarium. They have been working on the fiberglass tube, filling the holes with fiberglass filler. The finishing coat will be done next week. The next area to work on is the insides and the mirrors. Bob & Stewart took upon this project as a "thank you" to Calusa Nature Center for letting SWFAS use their facility and planetarium.

Stargazing Party in Georgia. Bob has information from the Atlanta Astronomy Club on this event, if anyone is interested. There is also a link on our website.

Mike Harden: Vice President – Not present. (Mike is starting up his business with Celestron)

Karen Nichols: Secretary – Minutes are in the newsletter.

Ramona Huddleston: Treasurer – Read the Treasurer's report.

Carole Holmberg: Newsletter Editor – Perseids Meteor Shower will occur early Tuesday morning. Best time to observe will be after 1AM or 2AM, when the moon sets. There should be about 2 per minute. There will no club events at Caloosahatchee Regional Park for this event.

Chuck Pavlick: Viewing Coordinator: Chuck sends out an email on Saturday afternoons if he will be going to the FAK that night. Next date to go to the FAK is August 23rd & 30th. The FAK is one of the best places in Florida to view the skies. It's one of the best darkest places in Florida.

Steve Nelson: Caloosahatchee Regional Park coordinator: Not present. Bob commented that this is a nice place to set up telescopes. There is asphalt for setting the scopes on. The location is near Rt. 31 & 78. It is not as dark as the FAK. It does have some light pollution. Viewing will start up again in September. (Editor's addition: The September date has been announced as Saturday, September 20th. Additional dates are October 25th, November 22nd, and December 20th.)

Jamie: Librarian – Not present.

Danny Secary: Club Historian – Not Present. Danny accepts any photos for the website. Send them or email them to him.

Dan Fitzgerald: Website Coordinator – Not present. SWFAS website is www.theeyepiece.org.

Sanders Lewallen: Executive Director of Calusa Nature Center & Planetarium – Members may borrow telescopes for up to 2 weeks. See Carole or Sanders to sign equipment out. If there are no reservations pending, one can extend the loan.

Meeting adjourned at 8:30PM.

Telescopes are set up behind the planetarium to observe.

Calendar of Events

Thursday, September 4th, 7:30 pm, **Meeting at the Calusa Nature Center Planetarium**

Monday, September 8th, **Telescope Observing at Calusa Nature Center and Planetarium** (SWFAS members are welcome to join us. Contact Carole at 275-3435 for more information)

Saturday, September 20th, sunset, **Telescope Observing at Caloosahatchee Regional Park**

Thursday, October 2nd, 7:30 pm, **Meeting at the Calusa Nature Center Planetarium**

Monday, October 6th, MESSENGER flies by Mercury

Wednesday, October 8th, 1:30 am, Launch of STS-125

Saturday, October 25th, sunset, **Telescope Observing at Caloosahatchee Regional Park**

Southwest Florida Astronomical Society, Inc.
P.O. Box 100127
Cape Coral, FL 33910

www.theeyepiece.org