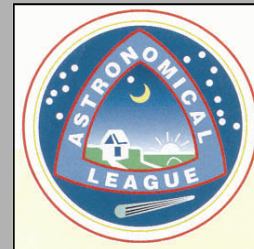




ASSET NEWSLETTER *STARGAZER*



ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS
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AUGUST 2010 ISSUE

**ASSET MEETING FOR AUGUST
IS ON FRIDAY THE 13TH, AT
7 PM, IN THE LIBRARY AT
ODOM ACADEMY**



THE CLUB WEB SITE,
asset-astronomer.org

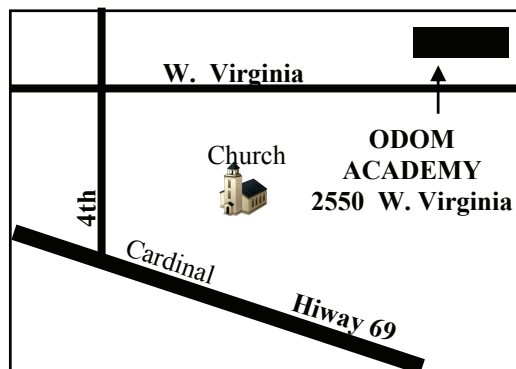


LONNIE'S MESSAGE

Hello all. I hope you have had a good month. This month has been lousy for observing, but the other day I saw a double rainbow. The bottom rainbow was really bright and the colors were spectacular. It hung around for ten minutes or so. Hopefully our trip to Hillister will be cloud free. Last month a few of us braved the clouds and made the Hillister Star Party. The clouds were off and on, mostly on, but a good time was had by all. Eddie had a model of the solar system. The Sun was a soccer ball and Mercury was a pin head. When you walk the distances of the outer planets (yes he included Pluto) you get an idea of just how far the planets are from each other. We are going to have a meeting full of information, so bring a friend. One subject up for discussion is the light pollution problem. Several members have expressed interest in this subject, so we will see where it leads us. If any one of you has a special interest in this and would like to head up this project, let me know. There have been some very interesting programs on TV. Have you seen any? "Through the Worm Hole" with Morgan Freeman has been a really good series. "The Universe" has been running back to back on another channel. Roger sent out an e-mail for our pre-meeting meal. It is going to be at Gino's Italian Restaurant in Beaumont. I hope you can make it there as it's a great way to get to know everyone. Last month we had around 14 show up and everyone had a great time.

Hope to see you soon !

Lonnie



JULY ASSET MEETING MINUTES



We had a great turnout for a summer evening with 32 people attending the ASSET meeting on July 9; 14 of our members made it for dinner. Lonnie called the meeting to order and Roger gave the Treasurer's Report. He said there was a balance of approximately \$2,100 in our account. Lonnie then presented AL awards to Roger and Donna for the Astronomy League Outreach Program. Eddie received an award and pin for the Binocular Messier that he had completed. Way to go! Eddie said he would like to put a list on the website of members' names and the AL awards they have earned.

Lonnie reported on the new binocular telescope on Mount Graham in Arizona. It is the largest optical telescope in the world with a price tag of approximately \$120 million. It will ultimately achieve image sharpness up to 10X greater than the Hubble.

(Continued on page 2, Minutes)

THE OBSERVING CORNER - BY OUR MEMBERS

Well, July was not kind to us for those who tried to observe. Rain, rain and clouds. A few of us did go to "the ranch," and seeing was just minimal, but we always enjoy even limited activity. And also Claiborne SP was hopeless. Claiborne SP just has a hard time, doesn't it?

In August, Sat. the 7th is the "Ranch SP" (dark sky), and Sat. the 14th is the Claiborne SP. I will be letting you know all the arrangements for the Ranch SP, and Chris Mitchell is our organizer of the Claiborne SP. Watch for his updates on Thursday or Friday before CSP!

FOR SALE Hey everyone. This person has a Meade 16" Dob for sale. Make offer!! Call Debbie Morrison (254) 372-3006 Further info, call Mike Hargis 866-4685. VERY LOW PRICE!

(continued from page 1, Minutes)

Roger and Bill reported on the Texas Star Party. They had 3 good nights of observing and 457 people attending.

Our guest speaker for the evening was Dr. C. Renee James. Dr. James is a professor of astronomy and physics at Sam Houston State University in Huntsville. She has recently written a book titled *Seven Wonders of the Universe That You Probably Took for Granted*, which will be released later this year. Her entertaining talk was on 2 of the wonders in her book, light and time.

Thank you Alice and Gary for the tasty refreshments that we enjoyed during the break.

Jane substituting for Brenda; ASSET Secre-

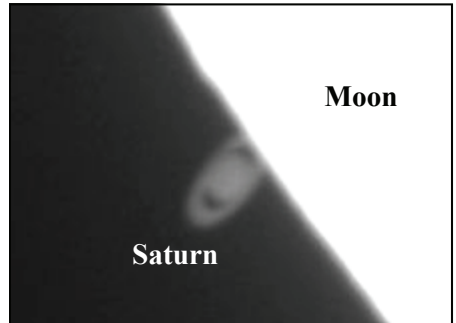
ROGER'S EARLY EMAIL, REPEATED, Where is dinner?

Subject: ASSET Pre-Meeting Dinner - August 13, 2010

Some ASSET members have not been aware of where the ASSET pre-meeting dinner will be held, so this email in advance of the newsletter will provide an early notice.

For August, 2010 we will meet at Gino's Italian Restaurant on Friday, August 13 at 5:30 PM. This restaurant is across from Parkdale Mall at 4318 Dowlen Road. It was previously named Joe's Pizza and Pasta. Please note that you will actually turn onto Westridge Lane off of Dowlen Road to enter their parking lot.

Gino's is on the right side of Westridge Lane when you turn off of Dowlen Road. Further down Westridge Lane, on the left, is King Palace Chinese Buffet so if you see that you went too far. **Hope to see you at Gino's and the meeting.**



I caught Saturn emerging from behind the Moon, Feb. 20th, 2002. It was an accident completely. I had just remembered the event 5 minutes before it happened. I was lucky to have my scope set up, and I ran in the house and got my camera. I set the scope on the Moon and waited only a few minutes, and here it came! If I would had planned to photograph it, I would surely have missed it. Turned out to be one of my better observing sessions. This is a goodie from the past. **Howard**



Hello All. We had a great learning experience at the Star Party in Hillister on Saturday.

"Earth as a Peppercorn" is an exercise that will help you visualize just how big our solar system really is. Using a peppercorn to represent the Earth, we built a model of the Sun and the planets using common everyday items. The size and distances of the model were scaled to proportion, so it was an excellent representation of our solar system, only much smaller. Lonnie and Chris helped lay it out, and all I can say is "WOW!" You read about it in books, you acknowledge the distances and sizes, maybe you've seen a model or two, but this was different. This is the difference between reading a thing and comprehending it. Plan on being there the next time we do "Earth as a Peppercorn!"

Eddie T.

A NEW DIRECTION FOR ASSET ?

It was brought to our attention a couple of months ago and the question was asked, *"What are we doing about Light Pollution?"* Well, as a club, nothing! So I decided to start an article each month to introduce us to the problem of Light Pollution. The IDA, below is one way to approach Light Pollution. Lonnie called me this month and said he was very interested in what we can do as a club. So here is our start, and we want your ideas on the subject and we will discuss Light Pollution at the next meeting.



The International Dark-Sky Association

Once a source of wonder--and one half of the entire planet's natural environment--the star-filled nights of just a few years ago are vanishing in a yellow haze. Human-produced light pollution not only mars our view of the stars; poor lighting threatens astronomy, disrupts ecosystems, affects human circadian rhythms, and wastes energy to the tune of \$2.2 billion per year in the U.S. alone.

IDA is the recognized authority on light pollution. Founded in 1988, IDA is the first organization to call attention to the hazards of light pollution, and in 22 years of operation our accomplishments have been tremendous.

We promote one simple idea: light what you need, when you need it. We know some light at night is necessary for safety and recreation. We work with manufacturers, planners, legislators, and citizens to provide energy efficient options that direct the light where you want it to go, not uselessly up into the sky.

Our approach of public awareness and extensive partnerships is improving nighttime lighting on six continents.

Here is a note from our speaker at the July meeting. She did an excellent job and those of you who could not make it missed a treat.

To: "LONNIE MOSLEY"

<mosley198@sbcglobal.net>

Date: Sunday, July 11, 2010, 9:58 PM

Hi-

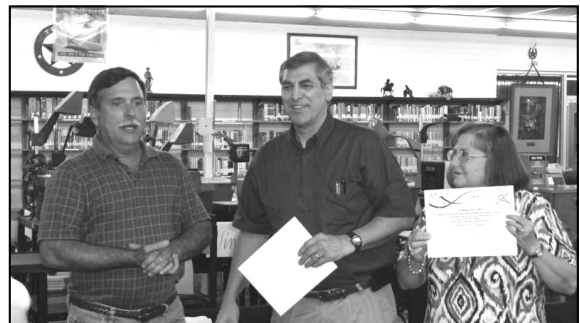
I just wanted to say thanks to the whole club for having me down to talk and for being such an enthusiastic audience. I honestly wasn't sure how coherent I was going to be after 3 hours in the car with two toddlers. Let me know if there's anything else I can do for you guys in the future. Your club is extremely active and everyone in it seemed super friendly. Also, good luck with the dark skies campaign. The International Dark Sky Association is my favorite resource for information about making the public aware.

Clear skies!

-Renee

AWARD TIME:

The members earning awards is growing. In July Donna & Roger Dillon earned the -----
--Award.



Also Eddie Treviño earned his Binocular Messier.



Congratulations to them for Doing A Little Extra!
Lonnie loves to make these presentations.

The Sun Can Still Remind Us Who's Boss by Dr. Tony Phillips

Grab your cell phone and take a good long look. It's indispensable, right? It tells time, surfs the web, keeps track of your appointments and, by the way, also makes phone calls. Modern people can hardly live without one.

One good solar flare could knock it all out.

"In the 21st century, we're increasingly dependent on technology," points out Tom Bogdan, director of NOAA's Space Weather Prediction Center in Boulder, Colorado. "This makes solar activity an important part of our daily lives."

Indeed, bad space weather can knock out power systems, telecommunications, financial and emergency services—basically, anything that needs electronics to work. That's why NOAA is building a new fleet of "space weather stations," the GOES-R satellites.

"GOES-R will bring our existing fleet of weather satellites into the 21st century," says Bogdan. "They're designed to monitor not only Earth weather, but space weather as well."

NOAA's existing fleet of Geostationary Operational Environmental Satellites (GOES) already includes some space weather capabilities: solar ultraviolet and X-ray telescopes, a magnetometer and energetic particle sensors. GOES-R will improve upon these instruments and add important new sensors to the mix.

One of Bogdan's favorites is a particle detector named "MPS-Low," which specializes in sensing low-energy (30 eV – 30 keV) particles from the sun. Who cares about low-energy particles?

It turns out they can be as troublesome as their high-energy counterparts. Protons and other atomic nuclei accelerated to the highest energies by solar flares can penetrate a satellite's exterior surface, causing all kinds of problems when they reach internal electronics. Low-energy particles, particularly electrons, can't penetrate so deeply. Instead, they do their damage on the outside.

As Bogdan explains, "Low-energy particles can build up on the surfaces of spacecraft, creating a mist of charge. As voltages increase, sparks and arcs can zap electronics—or emit radio pulses that can be misinterpreted by onboard computers as a command."

The Galaxy 15 communications satellite stopped working during a solar wind storm in April 2010, and many researchers believe low-energy particles are to blame. GOES-R will be able to monitor this population of particles and alert operators when it's time to shut down sensitive systems.

"This is something new GOES-R will do for us," says Bogdan.

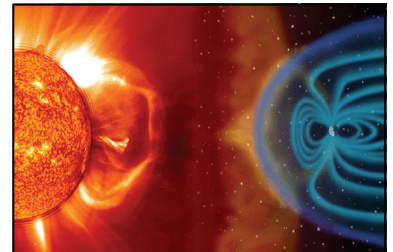
The GOES-R magnetometer is also a step ahead. It will sample our planet's magnetic field four times faster than its predecessors, sensing vibrations that previous GOES satellites might have missed. Among other things, this will help forecasters anticipate the buildup of geomagnetic storms.

And then there are the pictures. GOES-R will beam back striking images of the sun at X-ray and extreme UV wavelengths. These are parts of the electromagnetic spectrum where solar flares and other eruptions make themselves known with bright flashes of high-energy radiation. GOES-R will pinpoint the flashes and identify their sources, allowing forecasters to quickly assess whether or not Earth is in the "line of fire."

They might also be able to answer the question, Is my cell phone about to stop working?

The first GOES-R satellite is scheduled for launch in 2015.

Check www.goes-r.gov for updates. Space weather comes down to Earth in the clear and fun explanation for young people on Scijinks, <http://scijinks.gov/space-weather-and-us>.



In spite of Earth's protective magnetosphere, solar storms can wreak havoc with Earth satellites and other expensive electronics on the ground.

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



AUGUST IS PERSEID METEOR TIME

The Perseid meteor shower is an annual meteor shower that is extremely regular in its timing and can potentially be visible for weeks in the late summer sky.

The Perseid meteor shower is named after the constellation Perseus, which is located in roughly the same point of the night sky where the Perseid meteor shower appears to originate. The source of the Perseid meteor shower is actually debris from the comet Swift-Tuttle. Every year, the earth passes through the debris cloud left by the comet when the earth's atmosphere is bombarded.

In the US and the rest of North America, meteor shower activity usually peaks sometime around August 12th, when it is not unusual to see at least 60 meteors per hour streaking across the Northeast sky. The meteors are certainly bright, but they are actually only tiny objects, usually no more than a grain of sand. They travel at speeds of 50 miles per second.

The Perseid meteor showers were observed as far back as two thousand years ago, and in ancient Europe, the Perseid meteor shower was known as the "Tears of St. Lawrence." The best place to observe the Perseid meteor shower (or any meteor shower for that matter), is somewhere dark, away from light pollution, and with the moon out of the field of vision. The less light visible, the more brilliant the meteor shower will be. *This year, peak viewing occurs on August 12-13, 2010 beginning at dark, growing more spectacular in the early morning hours until dawn.*

ADVANTAGE

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WEATHER AND SEEING

Some atmospheric factors indicate the quality of "seeing," or the steadiness of an astronomical image. An air mass colder than the ground will produce puffy cumulus clouds and unsteady air, but it's usually relatively free of dust. An air mass warmer than the ground will produce stratiform clouds, haze, or mist, and hold copious amounts of dust, but astronomical images will be steadier. Bad seeing is almost guaranteed at least 24 hours following the passage of a front (the boundary between warm and cool air masses) or trough (an elongated area of low pressure). Seeing can be very good with thin cirrus clouds aloft, but the opposite is true when high cirrus clouds combine with low-level crosswinds.



CLAYTON JETER HAS A REMINDER ABOUT THIS STAR PARTY!

Hey all... just another reminder of the Fort Griffin star party. It's next month: August 6 thru the 11th.

I've had a great response from folks from different clubs throughout Texas!

We hope to see you there. Email or call if you plan to attend. I'll be happy to answer all your questions.

Clayton

ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS MONTHLY CALENDAR

~ August 2010 ~

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 MARS 2° FROM SATURN	2	3 LAST QUARTER	4	5	6	7 THE RANCH STAR PARTY
8	9 NEW MOON	10 Moon closest to Earth, Perigee	11 PERSEID METEORS, 4 NIGHTS	12	13 ASSET CLUB MEETING 7:00PM	14 CLAIBORNE PARK SP
15	16 FIRST QUARTER	17	18	19 * JOHN FLAMSTEED BORN 1646	20	21
22	23 VENUS 2° FROM MARS	24 FULL MOON	25 Moon farthest from Earth, Apogee	26	27	28
29	30	31	Notes: * Originator of the Flamsteed Star Numbers			

The Solar System in AUGUST 2010

Mercury - Now in early evening skies, but not favorable observation during any part of August. It has a very low inclination relative to Earth at this time and is very difficult to see.- In LEO

Venus - Our brightest planet is an "evening star" for August, the brightest object in western skies at dusk. Immediately to its left and up a bit you will find MARS (quite red) and SATURN (yellowish), both significantly dimmer than Venus. By the end of the month, Venus will move somewhat southward from the Earth vantage point, lower to the SSW horizon only 30 minutes after sunset. Note that SATURN will now be far to the right of Venus and MARS just to the upper right of brilliant Venus. At magnitude minus 4 - In VIRGO.

Mars - Mars has now moved far from Earth into our western twilight skies, and is a very disappointing telescopic object, a bit of a tiny red dot viewed even at high magnification. In VIRGO.

Jupiter - Now shining like a bright yellow beacon in some very "star poor" skies, our largest of all planets reaches opposition early this fall. Well up at dark and rising in east at about the time that evening twilight ends in the opposite western sky, Jupiter will be joined by more distant NEPTUNE during the second week of this month, shining far greater than the magnitude 7.8 distant world...so faint that a telescope is required to spot the dot of light from Neptune. Jupiter, on the other hand, will shine brighter at midnight than any other object in the sky except the moon and Venus. Very low in southern skies for the past several years, telescopic viewing of this world, along with the four Galilean satellites which encircle it, has been hampered by the Earth's own air, making clear views quite difficult for observers in the northern hemisphere. HOWEVER, Jupiter is a bit larger than it has appeared to us in decades during 2010 and will be considerably higher in northern skies, so 2010 heralds the return of good telescopic observations for northern observers of Jupiter. Best viewing of the giant world will be when it is highest in the sky, just before dawn. In AQUARIUS.

Saturn - Very disappointing telescopically and difficult to view low in western skies, Saturn stays grouped with Mars and Venus (see above) throughout August; by the end of this month, Saturn will disappear from favorable telescopic observation until winter 2011. - in LEO/Virgo

Uranus - This distant, blue world is visible easily in a good 5-6 inch telescope; overhead about 2 a.m. It rises about an hour after Jupiter, but is far easier to spot in a telescope than is Neptune, which is nearly twice as distant from Earth as is Uranus. See the finder note below! - in AQUARIUS.

Neptune - Look for this distant but huge world, right "above" (to the north of) very bright JUPITER during the first weeks of this month. - in AQUARIUS.

Pluto - Our most distant world, although no longer considered a "planet" will be favorably placed for telescopic spotting (about an 8 inch telescope is needed) at dark, low in southern skies; note that on the 1st of the month, this distant world will appear just to the "upper left" of moon; . - In SAGITTARIUS-Ophiuchus