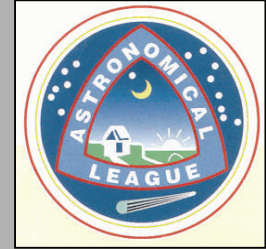




ASSET NEWSLETTER *STARGAZER*



ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS
P O BOX 7943
BEAUMONT, TEXAS 77726-7943

President - Lonnie Mosley
president@asset-astronomer.org

Vice President - Eddie Treviño
vice-president@asset-astronomer.org

Secretary - Brenda Tantzen
secretary@asset-astronomer.org

Treasurer - Roger Dillon
treasurer@asset-astronomer.org

Newsletter Editor - Howard Minor
newslettered@asset-astronomer.org

MAY 2010 ISSUE

**ASSET MEETING
AT THE BISD
PLANETARIUM,
THE CORNER OF
19TH STREET AND
NORTH STREET.**

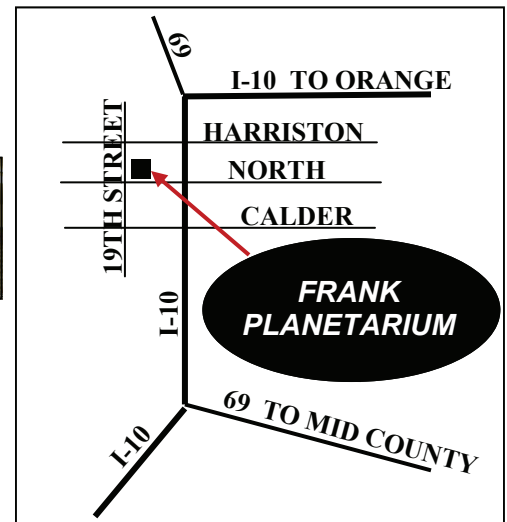
PLEASE **DO NOT** GO TO
THE ODOM SCHOOL!
MEETING TIME THE
SAME, 7:00 PM



Lonnie has our meeting all lined out. Sharon Rigsby has the planetarium show & Eddie has a talk on Nebula & Lonnie will do his short. A great time!



THE CLUB WEB SITE,
asset-astronomer.org



ASSET Minutes - April 9, 2010

Twenty-nine members attended. Lonnie asked if anyone who would be interested in taking on the job of a monthly "Astronomy News" column for the Enterprise. I hope you saw the article in the Enterprise by Sarah Moore about astronomy, with contributing information and comments from Lonnie. It was well done. Roger distributed new rosters and a proposed budget for next year. !!!DRUM ROLL!!! Howard was awarded an Open Cluster (advanced program, no less) certificate. Bill's solar report ended with two beautiful shots of auroras. One with Iceland's Eyjafjallajökull volcano erupting in the foreground, and the other looking across cold, dark Antarctica. Howard made a short presentation about his planned trip to Eldorado in June. He also told us about planetary nebulae. Justin finished up with a program showing a method of plotting on a graph a star's brightness, temperature and size called a Hertzsprung-Russell Diagram. Thanks, Julie for the refreshments. April 13, 2036 is on a Sunday. Whew!! If it had been on a Friday . . . ???!!

Brenda Tantzen ASSET Secretary

THE OBSERVING CORNER - BY OUR MEMBERS



What a great club!

I look back over my approximately ten years with ASSET and feel good about our attendance. 20 to 25 plus almost every meeting. I just want to say thanks for showing up month after month faithfully. This picture shows only part of you that were there last meeting. Jane and I enjoy every meeting and our observing with you at Claiborne and the "Ranch".

DON'T FORGET THE PLANETARIUM FRIDAY NIGHT!

FROM EDDIE T. -

Hello all...Well, I finally got to see the new observing site near Hillister. It is a beautiful location with open horizon in all directions...a nice place to meet and observe!

There were 11 of us at the Ranch for the April Star Party. There were great views of Venus near a crescent Mercury, Mars overhead, and Saturn with four visible moons!

The highlight of my evening was the tight open cluster NGC 2244, located in Monoceros. An oxygen III filter revealed the enormous Rosette Nebula NGC 2237 which surrounds the cluster! The stars of the cluster formed from the material in the nebula and the radiation from these new stars excites the atoms in the nebula causing it to emit radiation. The Rosette Nebula is a great emission nebula!

Until next time, Eddie.



YOU ALL READ THIS ONE: It is from Paul Mulvogue, a past member who rejoined this year.

He says, "You might consider this an interesting article for the newsletter. I just recently became aware that Tau CMa, (Canis Major) the bright central star of the beautiful open cluster, NGC 2362, is known as the "Mexican Jumping Star". Apparently this started at a 7 Dec 1996 California Fremont Peak observing party. The following comments were made by Bill Arnett:

"Meanwhile, a nearby observer discovered an interesting phenomenon. While viewing a nice open cluster with a bright foreground star (NGC 2362 and tau CMa) through a 14", he commented that when the wind jiggled the telescope, the foreground star appeared to move in a different direction from the cluster stars. This announcement, predictably, was greeted with jeers -- until the jeerers looked themselves, and discovered that everyone could see the effect. Most interesting! Presumably the effect has something to do with persistence of vision causing the perceived image of the bright star to remain in place longer than the perceived images of the much fainter cluster stars."

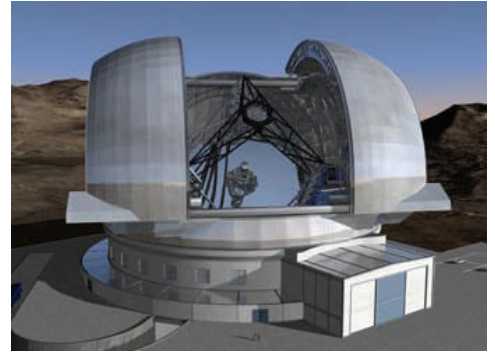
Tau CMa was immediately dubbed "The Mexican Jumping Star".

Continued on page 3, JUMPING STAR

Site Picked for World's Largest Telescope

The European Southern Observatory announced where they plan to build the E-ELT, short for European Extremely Large Telescope.

With a billion-euro price tag and a construction timetable projecting "first light" by 2018, the world's largest telescope will be a monster. Its primary's interlocked mosaic of 1,000 hexagonal mirrors will create an aperture 138 feet (42 m) across. To put this in perspective, the E-ELT's *secondary* mirror will itself be bigger than the venerable Hale Telescope's 200-inch primary.



The chosen location is the summit of Cerro Armazones, a remote peak in central Chile. Topping out at 10,020 feet (3,060 m), it's not nearly the highest perch for a professional observatory. Mauna Kea's summit, for example, is 13,796 feet (4,207 m) above sea level. But these days telescope location is more about "attitude" than altitude. Key factors include maximizing cloud-free nights, atmospheric stability ("seeing"), its water-vapor content (for infrared observations), and even the cost of construction and operation. The ESO's site-selection team spent years assessing a short list of five peaks in Chile and on La Palma in the Canary Islands.

Continued from page 2, JUMPING STAR

"When I went over to my 12" Meade LX200 to verify the location I noticed much to my surprise that the effect was absent using my scope. I tried several different eyepieces and methods of inducing field motion but in all cases the bean refused to jump. I'm guessing that the jumping effect is visible only if the star field appears to move rapidly with sufficient amplitude (the 14" Dob that we saw the effect with was wobbling horribly in the wind and felt a little springy when tapped; the LX200 was somewhat more stable (it was mounted in altaz mode)."

BTW, Burham's (p445) makes no mention of the Jumping effect but does have some interesting text about the cluster and the star. Apparently, the Mexican Jumping Star is a real brute with a mass of 50 to 300 solar masses and a luminosity 50,000 times our Sun's. The cluster is very young, even as open clusters go, about 1 million years.

This is also mentioned on page 257 of Deep Sky Companions: The Caldwell Objects by O'Meara .

Paul relates that; "the jumping star effect was very prominent in my 20" dob @229x."

Paul

Well, Paul wrote this back in April and I didn't get it in the StarGazer last month. Sorry Paul! Now NGC 2369 is low in the SW and not favorable. But give it a try. Howard

ROBERT M. HAS ITEMS FOR SALE:

For Sale 3' Edmond Reflector F-6 with Eyepiece and Tripod. A good kids' scope at \$80.00.

Also, a 6X30 Celestron Finder, excellent condition with a direct image, not inverted, \$20.00. Call Robert M. (409) 724-6783

EXPLANATION —

Sorry folks about being late with the StarGazer. Jane & I planned a vacation sometime back to Southern California. We covered new territory for us, in 18 days and 5,000 miles. We got back last Friday night. The June issue will be on time. Thanks!!

A Rock Hound is Born

It's tough to be a geologist when you can't tell one rock from another. Is that a meteorite or a chunk of lava? A river rock or an impact fragment? Houston, we have a problem!

It's a problem Spirit and Opportunity have been dealing with for the past six years. The two rovers are on a mission to explore the geology of the Red Planet, yet for the longest time they couldn't recognize interesting rocks without help from humans back on Earth.

Fortunately, it is possible to teach old rovers new tricks. All you have to do is change their programming—and that's just what NASA has done. "During the winter, we uploaded new software to Opportunity," says Tara Estlin, a rover driver, senior member of JPL's Artificial Intelligence Group, and the lead developer of AEGIS, short for Autonomous Exploration for Gathering Increased Science. "AEGIS allows the rover to make some decisions on its own."

Estlin and her team have been working for several years to develop and upload increasingly sophisticated software to the rovers. As a result, the twins have learned to avoid obstacles, identify dust devils, and calculate the distance to reach their arms to a rock.

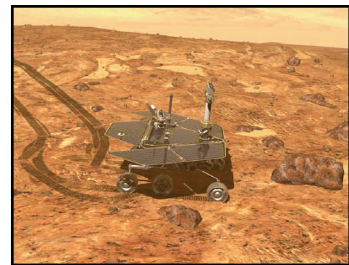
With the latest upgrade, a rock hound is born. Now, Opportunity's computer can examine images that the rover takes using its wide-angle navigation camera (NavCam) and pick out rocks with interesting colors or shapes. It can then center its narrower-angle panoramic camera (PanCam) on targets of interest for close-up shots through various color filters. All this happens without human intervention. The system was recently put to the test; Opportunity performed splendidly.

At the end of a drive on March 4th, the rover settled in for a bit of rock hunting. Opportunity surveyed the landscape and decided that one particular rock, out of more than 50 in the NavCam photo, best met criteria that researchers had set for a target of interest: large and dark. "It found exactly the target we would want it to find," Estlin says. "It appears to be one of the rocks tossed outward onto the surface when an impact dug a nearby crater."

The new software doesn't make humans obsolete. On the contrary, humans are very much "in the loop," setting criteria for what's interesting and evaluating Opportunity's discoveries. The main effect of the new software is to strengthen the rover-human partnership and boost their combined exploring prowess.

Mindful that Opportunity was only supposed to last about six months after it landed in 2004, Estlin says "it is amazing to see Opportunity performing a brand new autonomous activity six years later."

What will the rock hounds of Mars be up to six years from now? Stay tuned for future uploads! Learn more about how the AEGIS software works at <http://scienceandtechnology.jpl.nasa.gov/newsandevents/newsdetails/?NewsID=677>. If you work with middle- or high-school kids, you'll find a fun way to explore another kind of robot software—the kind that enables "fuzzy thinking"—at http://spaceplace.nasa.gov/en/educators/teachers_page2.shtml#fuzzy.



Opportunity spots a rock with its NavCam that its AEGIS software says meets all the criteria for further investigation.

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



IT HAS BEEN REWARDING! - As I have finished this certificate, the "Open Cluster," I look back at why I am enjoy doing them. Bill pushed me into start logging and working for a "pin" at the star parties that have prepared programs of observing to get a pin. I really had no intention to do so, but Bill kept hounding me and after getting a couple of pins for my hat and I saw people with a bunch on their hats, I just got sucked into it all. And now of course I love the challenge of finding those faint pin points of light. **Howard**



The Classification of X-ray Solar Flares

Bill is on the way to the Texas Star Party (TSP). So I am throwing in a spot on the Sun for him on the X-ray Solar Flares.

A solar flare is an explosion on the Sun that happens when energy stored in twisted magnetic fields (usually above sunspots) is suddenly released. Flares produce a burst of radiation across the electromagnetic spectrum, from radio waves to x-rays and gamma-rays.

Scientists classify solar flares according to their x-ray brightness in the wavelength range 1 to 8 Angstroms. There are 3 categories: **X-class flares** are big; they are major events that can trigger planet-wide radio blackouts and long-lasting radiation storms. **M-class flares** are medium-sized; they can cause brief radio blackouts that affect Earth's polar regions. Minor radiation storms sometimes follow an M-class flare. Compared to X- and M-class events, **C-class flares** are small with few noticeable consequences here on Earth. Bill has told us all that stuff, of course, but this article is a good reminder. *And here is the latest on Mr. Sun.*

AMAZING ERUPTIONS: This weekend, magnetic fields around sunspot 1069 became unstable and erupted--over and over again. On May 8th alone, the active region produced more than half a dozen flares. NASA's Solar Dynamics Observatory (SDO) video-recorded each of the explosions with a clarity ten times better than HDTV. You should go to spaceweather.com and click on the image to view a sample first-look movie: very interesting.

The "Ranch" Star Party This Saturday Night For All Of Us That Didn't Do TSP! We need to meet at the Café in Hillister and leave together at 7 PM. Lonnie is taking us into the ranch though a new entrance which is shorter, easier and quicker. So we will have to be together. I am looking forward to this one. I have a new eyepiece and haven't really tried it out yet. I have put a list of Objects to Observe together for possible seeing. Saturday night the Moon will be a sliver on the horizon, less than 24 hours old, and the ISS will be in the NW below Polaris at 9:45. Also, many deep sky objects will be at our disposal. My list includes Saturn and Mars, the Bee Hive Cluster, NGC 2369 (Mexican Jumping Bean Cluster), and Omega Centaurus. The Cat's Eye Nebula, the Ring, other planetaries with numerous galaxies like M 51 and M 101, plus Markarian's Chain in Virgo. Galaxies all over the place. For Globular clusters, M3, M13, & M56. There are good double stars in Bootes, that we usually overlook. Of course many, many more goodies. You bring a list also and we will have a great evening.

NOW DON'T FORGET THE PLANETARIUM SHOW AND ASSET MEETING FRIDAY NIGHT, 7PM.

ADVANTAGE

Telescope Repair


Repair and Upgrades for all makes;
FOR SALE: Refurbished Telescopes,
All Designs, Cleaning, Collimation, &
Star Testing, Custom Fabrication;
A Schmidt Cassegrain Scope Specialist



CALL 713-569-7529 For Complete Service

~ May 2010 ~

ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS MONTHLY CALENDAR

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	MAY ASSET MEETING AT THE BISD FRANK PLANETARIUM					1 MAY DAY
2	3	4	5 ETA AQUARID METEORS	6 LAST QUARTER ☾	7	8
9 	10	11	12	13 NEW MOON ●	14 ASSET CLUB MEETING 7:00PM	15 DARK SKY, <u>THE RANCH</u> STAR PARTY
16	17	18	19	20 FIRST QUARTER ☽	21	22 <u>CLAIBORNE PARK</u> STAR PARTY
23	24	25	26	27 FULL MOON ○	28	29
30	31 MEMORIAL DAY	Notes: Moon farthest from Earth, May 6th, Apogee		Moon closest to Earth, May 20th, Perigee		

The Solar System in MAY 2010

Mercury - The tiny planet MERCURY will be positioned such that it will be invisible throughout May 2010 for earthbound viewers. - In ARIES.

Venus - The brightest and closest to earth of all planets, brilliant VENUS shines magnificently in the evening skies throughout late spring and summer this year. Watch for the brilliant planet to be positioned just "above" (east of) the tiny crescent moon on the evening of May 15. Venus shines at a bright MINUS 3.9 magnitude and extends a size seen from earth of 12 arc seconds. - in TAURUS

Mars - Now fading rapidly and moving farther from Earth, Mars is no longer a viable target telescopically, showing a tiny 5 arc second disk similar to that seen typically of far distant Uranus. Mars moves from the constellation of Cancer into Leo, the Lion during May. - In CANCER/LEO

Jupiter - The mightiest of planets, JUPITER now rises about 4 a.m.. local time and is high in bright dawn skies by month's end. The gas giant will be located VERY close to the faint planet URANUS, and visible together (about 3 degrees apart) in a very wide field telescope. Jupiter is rising earlier each morning on its way to a very favorable opposition to Earth this fall. - In PISCES

Saturn - Now the dominant evening planet, with the warm nights of May, you should invite your neighbors over for a neighborhood star party and impress them with the views of the remarkable ringed planet through your telescope; even the smallest telescope can reveal the now-nearly edge-on ring system and even the largest of its moons, Titan. The rings, now decreasing their tilt to about 2 degrees from exactly edge-on to Earth, will fade somewhat during May. - in VIRGO

Uranus/Neptune - A very poor time to attempt to spot the two giant outer worlds, Uranus and Neptune; both rise only slightly ahead of the sun in the southeastern sky during dawn. Note that early in the month Uranus will be very close to the much brighter, yellow, planet JUPITER - in PISCES & CAPRICORNUS.

Pluto - Now rising high in the sky in the southern constellations of Serpens Cauda and Sagittarius, our most distant world, although no longer considered a "planet" will be favorably placed for telescopic discovery.