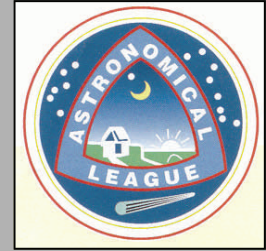




ASSET NEWSLETTER
STARGAZER



ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS
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MARCH 2011

ASSET March Meeting ,
 Friday The 11th, 7:00 PM.
 2 Star Parties Scheduled in
 March for the Public,
 Shangri La in Orange and
 the Rescheduled SP at
 Dishman Ele. School
 Read Lonnie's article

**"If March comes in like a LION,
 it will go out like a LAMB?"**

**"If March comes in like a LAMB,
 it will go out like a LION?"**

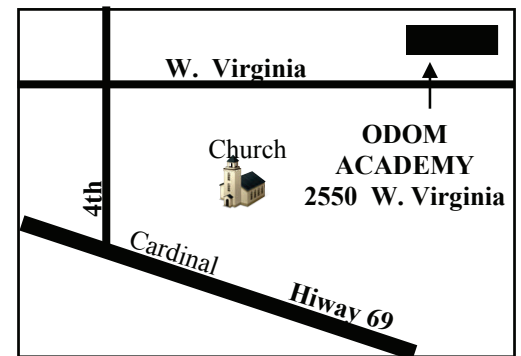
Is there any truth to this saying???
We will see what happens in 2011!



OR



THE CLUB WEB SITE: asset-astronomer.org



MARCH RAMBLINGS

Things are getting busy.
 The Dishman Elementary star party is scheduled for Tuesday, March the 8th at 7:00p.m. with a backup date of Wednesday the 9th.

Shangri La SP is scheduled for Thursday March the 10th 5:00 p.m., Astronomers can set up their telescopes. At 6:00 p.m., Pizza, Salads, Cookies and Drinks for all in the café. Families of astronomers are welcome. At 6:45 p.m. Star Party begins.

Friday, March the 11th is our scheduled monthly meeting and it is going to be a good one. Bring a friend and let's set an attendance record.

(More of Lonnie's report on page 2)



ASSET Minutes February 11, 2011

Roger informed everyone of a star party at X Bar May 4-7. This will a small, informal group similar to last year. I was in that group and it was a very enjoyable experience. There is someone who wants to put an ad in our newsletter and will pay us \$60/month. Donna wants to look into this to make sure this doesn't affect our non-profit status with the IRS. Terry and Cat received Outreach certificates. There will be a star party at Shangri La on March 10 from 7-9 p.m. Lonnie had a presentation about the moon. Bill gave information about the sun, but also about the satellites (STEREO) that are sending us such good solar data. Thank you Lee Ann for the refreshments. We adjourned after Tonight's Sky. Attendance: 22.

Brenda Tantzen, ASSET Secretary

THE OBSERVING CORNER - BY OUR MEMBERS

(Lonnie's Ramblings & Observings, Con't. from Page 1)

Hodges Garden's Star Party is approaching fast; it starts on Wednesday, March the 30th and runs till Sunday, April the 3rd. This is a great Star Party to break in a new tent.

We have had some decent weather for observing, and things should continue to improve. I met Terry Myer, Friday the 25th, on South China Road (Ricky's Place) and we did some observing. The skies were rock steady and I pointed my 10" dob at the trapezium and all six visible stars were just as plain as could be. I was able to log 5 Caldwell's and observed many more fine objects. I stayed till around midnight and left it to Terry, I'm pretty sure he made an *all nighter* (he's an observing machine). It was nice to just get out under the stars.

See you at the meeting.

Lonnie

Hi Howard,

Had a nice observing session with Lonnie Friday night / Saturday morning. In spite of the clouds, I still managed to get 47 objects total for the month; 2 for Caldwell and 45 for Herschel. Hope this Spring brings better weather. I know everyone is *chomping at the bit* to go out. Also, Will and I are teaming up to do the *Sunspotters Club*. So far it's going well. We are both excited.

Terry

Messenger to Orbit Mercury March 18, 2011

NASA's biggest challenge comes on March 17, 2011. They have high hopes on this complex mission, and while it has already returned significant images and new information, orbiting Mercury is the goal.

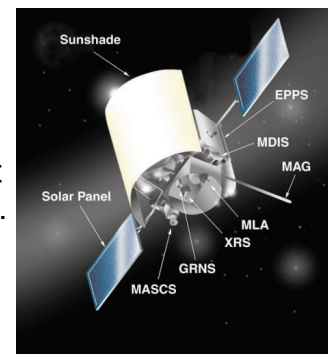
NASA **MESSENGER** spacecraft's planned orbit about Mercury will be highly elliptical (egg-shaped), 200 kilometers (124 miles) above the surface at the lowest point and more than 15,193 kilometers (9,420 miles) at the highest. The spacecraft will enter orbit on March 18, 2011.

At the outset of the orbital phase of the mission, the plane of the spacecraft's orbit is inclined 82.5° to Mercury's equator, and the low point in the orbit is reached at a latitude of 60° North.

About 31% of the spacecraft's propellant is required for Mercury orbit insertion -- the process of placing the spacecraft into its primary science orbit around Mercury. **MESSENGER's** thrusters must slow the spacecraft by just over 0.86 kilometers (0.53 miles) per second. As the spacecraft approaches Mercury, the largest thruster must be pointed close to the forward velocity (backwards) direction of the spacecraft.

Undoubtedly, there will be surprises. But here are the questions NASA is hoping to be answered. Number one is, "Why is Mercury so dense"? Number two is, "What is the geologic history of Mercury"? Number three is, "What is the nature of Mercury's magnetic field"? Number four is, "What is the structure of Mercury's core"? Number five is, "What are the unusual materials at Mercury's poles"? And number six is, "What volatiles are important at Mercury"?

MESSENGER gives us a lot to ponder as we watch this beautiful little "evening star" climb up our western sky and pass mighty Jupiter this month. The ancients marveled at Mercury, their "messenger of the gods."



Green Lasers: A Hidden Danger

Did you read the warning label on your laser. Like many of you, I never head off to a star party without my trusty green laser pointer close at hand. These great and increasingly inexpensive gadgets have really revolutionized how we point out sights in the night sky to newbies and veteran skywatchers alike. Researchers at the U.S. National Institute of Standards and Technology said it turns out that these laser pointers don't create green light from the get-go, but instead generate a collimated beam of infrared energy that's converted to green light when it's passed through a special crystal.

The most serious problem by far comes when laser pointers are aimed towards aircraft. People have been **arrested** and even **jailed** for shining lasers towards planes and helicopters. There is no specific threshold between a "safe" laser beam, and a potentially hazardous one, and a clearly dangerous beam. The laser is **not a toy**, so use it with an unusual amount of thought and safety, such as a rifle or hand gun!

For direct damage to the eye, the exact severity will be due to many factors: beam power, exposure time, beam/eye relative motion, distance from the laser, and retinal injury location. From a safety standpoint, what you should do depends on the laser's power. There is no need for a laser over 5 milliwatts for most pointing purposes. For astronomy pointing purposes, you can see the beam of a green laser in the 4 to 5 mw range easily.



IMPACT OF LIGHT POLLUTION ON BATS

All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Many species of bats are known to sample the light levels before emerging from their roost; and only emerging for their night's hunting when the light intensity outside reaches a critical level after sunset. Floodlighting disrupts the normal 24-hour pattern of light and dark which is likely to affect the natural behavior of bats. Light near a roost access point will delay bats from emerging and shorten the amount of time available to them for foraging. Bright light may reduce social flight activity and cause bats to move away from the light area to an alternative dark area.

Illuminating a bat roost creates disturbance and may cause the bats to desert the roost. Due to the decline in bat numbers, all species of bat are protected by the Wildlife & Countryside Act (1981). Lighting in the vicinity of a bat roost causing disturbance could constitute an offence.

In addition to causing disturbance to bats in the roost, artificial lighting can also affect the feeding behavior of bats. Where lighting is permitted, as may be necessary for public safety, conditions should be imposed to ensure the impact of the lighting on the bats is kept to a minimum.

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DAYLIGHT SAVING TIME STRIKES AGAIN

This month millions of Americans will get up feeling more fatigued than usual, curse their alarm clocks, and drive groggily to work as though suffering from jetlag. Their circadian rhythms are thrown off in a significant way, and in some cases, they won't recover from this for weeks. A study released last year predicts that this week will see a marked increase in male suicide rates, and according to an article in the New England Journal of Medicine and a few other case studies, traffic accidents increased by as much as ten percent the first work morning due to this epidemic of exhaustion.

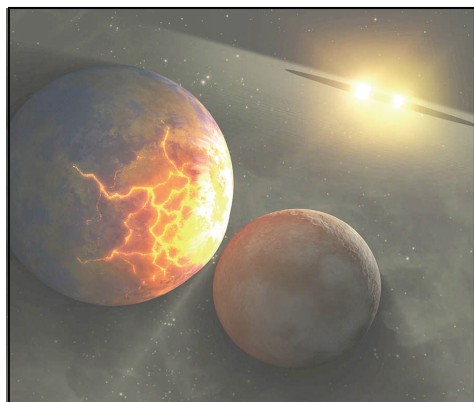
Thank Goodness the Sun is Single

By Trudy E. Bell

It's a good thing the Sun is single. According to new research, Sun-like stars in close double-star systems "can be okay for a few billion years—but then they go bad," says Jeremy Drake of the Harvard-Smithsonian Astrophysical Observatory in Cambridge, Mass.

How bad? According to data from NASA's Spitzer Space Telescope, close binary stars can destroy their planets along with any life. Drake and four colleagues reported the results in the September 10, 2010, issue of *The Astrophysical Journal Letters*.

Our Sun, about 864,000 miles across, rotates on its axis once in 24.5 days. "Three billion years ago, roughly when bacteria evolved on Earth, the Sun rotated in only 5 days," explains Drake. Its rotation rate has been gradually slowing because the solar wind gets tangled up in the solar magnetic field, and acts as a brake.



Planetary collisions such as shown in this artist's rendering could be quite common in binary star systems where the stars are very close.

But some sun-like stars occur in close pairs only a few million miles apart. That's only about five times the diameter of each star—so close the stars are gravitationally distorted. They are actually elongated toward each other. They also interact tidally, keeping just one face toward the other, as the Moon does toward Earth.

Such a close binary is "a built-in time bomb," Drake declares. The continuous loss of mass from the two stars via solar wind carries away some of the double-star system's angular momentum, causing the two stars to spiral inward toward each other, orbiting faster and faster as the distance shrinks. When each star's rotation period on its axis is the same as its orbital period around the other, the pair effectively rotates as a single body in just 3 or 4 days.

Then, watch out! Such fast spinning intensifies the magnetic dynamo inside each star. The stars "generate bigger, stronger 'star spots' 5 to 10 percent the size of the star—so big they can be detected from Earth," Drake says. "The stars also interact magnetically very violently, shooting out monster flares."

Worst of all, the decreasing distance between the two stars "changes the gravitational resonances of the planetary system," Drake continued, destabilizing the orbits of any planets circling the pair. Planets may so strongly perturbed they are sent into collision paths. As they repeatedly slam into each other, they shatter into red-hot asteroid-sized bodies, killing any life. In as short as a century, the repeated collisions pulverize the planets into a ring of warm dust.

The infrared glow from this pulverized debris is what Spitzer has seen in some self-destructing star systems. Drake and his colleagues now want to examine a much bigger sample of binaries to see just how bad double star systems really are.

They're already sure of one thing: "We're glad the Sun is single!"

Read more about these findings at the NASA Spitzer site at www.spitzer.caltech.edu/news/1182-ssc2010-07-Pulverized-Planet-Dust-May-Lie-Around-Double-Stars. For kids, and adults, the Spitzer Concentration game shows a big collection of memorable (if you're good at the game) images from the Spitzer Space Telescope. Visit spaceplace.nasa.gov/en/kids/spitzer/concentration/.

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



FACTS AND TRIVA IN ASTRONOMY

1. The average distance between neighboring galaxies is about a million light-years.
2. Stars in our galaxy are, on the average, 4 or 5 light-years apart.
3. The explanation for Venus's brightness is its 20-mi.-thick cloud cover that reflects 3/4 of the light that strikes it.
4. The 1st astronomer in modern terms, a collector and analyzer of data, was Hipparchus 150 B.C.
5. Copernicus proposed that the sun was the center of the solar system in about 1500 A. D.

MORE STAR PARTY INFORMATION

Sorry about some of this repeat info, but here are the directions to Dishman: **The school is at 34 Champions Drive, which is 1 1/3 miles west on Walden Road from I-10. Turn right or North on Champions and drive to the end of the street and you are there.** The *Dishman Elementary star party* is scheduled for **Tuesday, March the 8th at 7:00p.m.** with a **backup date of Wednesday the 9th**. Be there early enough to set up your telescopes. I plan to arrive at 6 PM.

Shangri La SP is scheduled for **Thursday March the 10th**. Astronomers can **set up their telescopes at 5:00 p.m.** At 6:00 p.m. there will be Pizza, Salads, Cookies and Drinks for all in the café. Families of astronomers are welcome. At 6:45 p.m. Star Party begins. **As you know Shangri-La is in Orange on Park Street.**

We need all the volunteers possible because of the Public Participation Expected!

As you can see, weather permitting, we have a very busy schedule. But if the weather does cooperate, we will have a great time bringing astronomy to many students and Shangri La patrons. I hope you are able to help out, as we are expecting many observers.

Friday, March the 11th is our scheduled monthly meeting.

Thanks, Lonnie

I RECEIVED THIS COMMUNICATION A COUPLE OF WEEKS AGO -

Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001

Dear Astronomy Club, Lowell Observatory has developed a new program, specifically designed for members of *amateur astronomy clubs*.

Please see the following link that thoroughly describes what clubs can do while at Lowell: www.lowell.edu/outreach/content/general/Astro_club_tours.pdf Over 80,000 visitors come to Lowell each year to tour our campus, but there is much more to see than we can possibly cover in a brief visit. I invite your club to visit and participate in your own tour, designed specifically around your club's interests. You'll have an opportunity to see our research telescopes with one of our astronomers, see our instrument lab where the cameras and equipment for the telescopes are made, spend a night observing on Percival Lowell's 24-inch Clark refractor, or see the telescope of the future - our 4.3-meter Discovery Channel Telescope now nearing completion. If you have any questions you can reach me at 928-233-3267.

I would be pleased to provide references of amateur > astronomers that are familiar with our programs and facilities, and answer > any questions. I look forward to personally welcoming your club to Lowell Observatory.

Sincerely, Russell Tweed, Development Manager, tweedr@lowell.edu.

Wouldn't it be great for most of our club to make a trip like this. What a blast. Think about it?

Kelly Taylor sent an email out this last month stating, "My 12 inch SCT is for sale". Kelly is an amazing wealth of astronomy info. It only takes a few minutes when talking to him to know that he is a person you can learn from and maybe have your astronomy problem solved. Optics, amateur telescope making, light pollution are some subjects he is very familiar with. In fact I would like him to give a report on light pollution, which I haven't even consulted about it with Lonnie yet.

Anyway give Kelly a call or email about his scopes.

FOR SALE: The 12 SCT is Flocked and Comes with a Moonlight Focuser with 10 to 1 reduction. This 12" OTA only, no mount \$1500.00. The focuser coast \$390.00 plus shipping.



ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS MONTHLY CALENDAR						
◀ February		~ March 2011 ~			April ▶	
Sun	Mon	Tue	Wed	Thu	Fri	Sat
CLAIBORNE PARK SP SATURDAY THE 12TH,		1	2	3	4 NEW MOON ●	5 THE RANCH STAR PARTY
6 Moon farthest from Earth, Apogee	7	8	9	10	11 ASSET CLUB MEETING 7:00PM	12 FIRST QUARTER ☾
13 DAYLIGHT SAVING TIME STARTS	14 MERCURY AND JUPITER CLOSE TOGETHER, 40 MIN. AFTER SUNSET	15	16	17	18	19 FULL MOON ○
20 EQUINOXS, SPRING BEGAINS	21	22	23	24	25	26 LAST QUARTER ☽
27 VENUS IS A THIN CRESCENT IN THE MORNING THE LAST WEEK IN MARCH	28	29	30	31	Notes: Moon closest to Earth Saturday the 19th, Perigee	

The Solar System in March 2011

Mercury - This is a perfect month to find the elusive planet MERCURY and see it for several nights in a row during mid March. Starting on March 13, look due west about 35 minutes after sunset, making sure that you have a very good and unobstructed view of that direction. On that date, Mercury will be to the LOWER RIGHT of bright yellow JUPITER, *USE BINOCULARS*. - in PISCES

Venus - Venus is now very low in the eastern predawn skies, visible only a few minutes before twilight begins. The planet is approaching solar conjunction and will become an increasingly difficult object in eastern skies. The planet will re-emerge in the west by early summer 2011. - in CAPRICORNUS

Mars - Mars is now hidden from view from the glare of the Sun. - In AQUARIUS

Jupiter - After a spectacular season in which we saw the South Equatorial Belt disappear and then re-erupt, Jupiter is setting early in the evening with MERCURY close. - In PISCES

Saturn - The ringed planet is now high in the eastern sky, rising about 8:30 p.m. the first week of March and very favorably placed for telescopic views of its magnificent ring system by midnight local time. The remarkable ringed planet rises about the time that evening twilight is ending and the skies are getting quite dark. By midnight, it will be nearly overhead and the best views afforded at that time. NOTE that Saturn is experiencing the LARGEST STORM ever recorded on any planet, an event that began in December 2010; this mighty storm stretches for thousands of miles and appears incredibly bright to even small telescopes. - in VIRGO

Uranus - This distant planet is nearing the Sun and is not favorably viewable in March 2011; will appear only 1 degree to the west of brilliant Jupiter and near MERCURY in mid-March (see above). - in PISCES.

Neptune - Rising only one hour ahead of the sun, a very difficult morning object. - in CAPRICORNUS.

Pluto - Pluto is viewable far in the SSE skies during morning hours, but is quite faint and difficult at this time; a telescope is needed to view this 14th magnitude distant planet - In SAGITTARIUS