



ASSET NEWSLETTER
STARGAZER



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JANUARY 2011

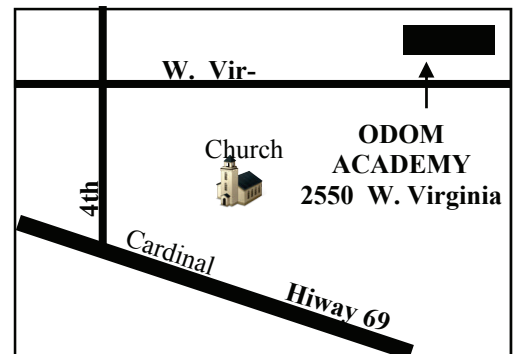
Friday, January 14th, at 7:00 pm,
Odom Academy Library, 2550 W. Vir-
ginia, is our January ASSET meeting

DO NOT FORGET YOUR MONEY, CHECK, OR
WHATEVER TO PAY YOUR DUES FOR 2011.

"MEET TO EAT", BEFORE THE MEETING WILL
BE AT THE **OUTBACK STEAK HOUSE**, ON
SOUTH I-10. COME FROM THE NORTH & TAKE
THE WASHINGTON BLVD. EXIT OFF I-10.



THE CLUB WEB SITE:
asset-astronomer.org



LONNIE'S WORDS OF WISDOM FOR 2011

Hello all. I hope you have had a Happy New Year so far. Our club had a very good 2010 and I am sure that 2011 will be a great year for us. Hopefully we will continue to grow and bring our passion to the public with star parties and other events. Along with Shangri La, we should have more involvement with the local schools. As always it's you, the members that make this a great club. This is going to be my last year as President, so you need to be considering if it's your turn. We will be electing new officers in December, so if you are thinking about running for one of the positions, let me know. Hodges Gardens Star Party is March 30 thru April 3rd. This year I am hoping we can have a large turnout of ASSET members, as it is really close and not very expensive to attend. It is a great one for your first star party. I will talk more about it at our January meeting. Also if you got a Christmas present, bring it to the meeting so we can take a look. I got a great laser collimator I am bringing. We are having a star party at Dishman Elementary on Thursday, the before our meeting. I will be sending out e-mails with updates. Hopefully the weather will cooperate. I think 150 to 200 students will be attending. I hope to see you there and at the meeting. — **Lonnie**

Olympus Mons on Mars is the largest volcano in our solar system, 3X's taller than Mount Everest.
A new star is born in our galaxy every 18 days. (I question that; I think it is 19 days?)
February 1865 is the only month in recorded history not to have a full moon....

THE OBSERVING CORNER - BY OUR MEMBERS

Well, December brought 3 events for us. First our Christmas Dinner Meeting, and then the Geminids Meteor Shower, and finish off with the Total Eclipse of the Moon. So here is our members reports.



Lonnie & Janie drove up to Bubba's and Lea Ann's

Lonnie wrote on December 14th. You should have been there. I saw a meteor!! Bubba and I went out twice and stayed about an hour each, 8:30 to 9:30 and 11 to 12. I counted around 40 or 50. It was worth the trip. *Lonnie*



Subject: Life Cycle of a Star

Hello everyone! I found this information on the life cycle of stars. It is interactive and presents great information. Some of it may seem simple, but stay with it because it builds in complexity. I really enjoyed the interactive animations. Hope you enjoy it!

http://aspire.cosmic-ray.org/labs/star_life/starlife_main.html

Have a Blessed Holiday, Eddie T.



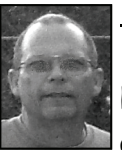
Sent: Tuesday, December 14, 2010 9:05 AM Subject: Meteor Shower

Wow, is all I can say about last night. I saw more than I could count! South China road was very nice too. Even with the moon it was nice and dark. I tried taking some long time exposures to see if I could capture one, but I haven't looked at the data yet to see if it worked or not. Either way I got some great star trail shots. Awesome night. I hope all of you got a chance to see some meteors. *Will.*



Sent: Tuesday, December 14, 2010 11:06 PM, Subject: Meteor Shower

Well the idea is to go out, Will, and count the flyers and which way they went. But aside from that, just seeing a nice shower is great. I was out from 3 am till 4 am and from my yard I was only able to count (for sure) 53 in the hour that I was timing. Did see two, almost directly out of the radiant, or almost as the streaks that were only about half the distance from Castor to Pollux. Several were twice as bright as Capella. A few were not very bright but all were kinda slow from the Radiant. Nice night....now my neck is hurting real bad! *See Ya ...Bill Christian*



Sent: Tuesday, December 14, 2010 12:18 PM, Subject: South China Road

Hi Howard. I mentioned earlier that a well was being drilled down the road from Rickey's Place. That has stopped now and I'm going back to the driveway to observe, and anybody that is interested, it is good place to observe. I had a WONDERFUL observing session Dec.12/13. I arrived and set up by 9:30PM and rested until about 12:20 in the morning when the moon sank from sight. Then I started observing. From the time I left the house till the time I was driving home from 4:30 to 5:45AM I enjoyed a constant barrage of meteors from the Geminids. *(Continued on page 3, South China Road)*

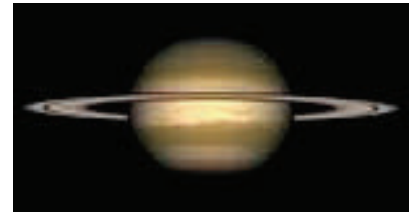
(Continued from page 2, South China Road)

It was like observing with an orchestra playing beautiful music in the background. It was the coldest night I ever endured. I've lost weight and don't have as much flab to resist the cold. There was a steady wind to start with, then it died down to nothing as the morning progressed. My highlight of the night was two objects that are together. I found the star cluster NGC 2244 in Monoceros, which looked like three pairs of stars stacked in a column. It was a weird cluster. The middle pair of stars was actually two pairs themselves. I couldn't find the nebula that was supposed to surround it at first-the Rossette Nebula. I put a UHC filter in, and it showed up like magic. The whole thing was BEAUTIFUL in the 20". It looked like a big, out-of-shape doughnut. I could tell the intense radiation from the stars blew the gas from the nebula away - the sky around the stars was black and completely clean. The heaviest nebulosity was west - northwest of the star cluster. I believe I saw more than the picture in Stephen O'Meara's Caldwell Book shows. All in all, I came away with six objects seen in the Caldwell and six in Herschel 400. Not a bad night! While taking everything down, I had to shake off ice from the telescope parts!! Ice was all over the truck and all my other equipment, so I guess it was pretty cold that morning, but it was worth it!!


Terry

SATURN IS COMING AGAIN

In 2011 its rings are widening and becoming more observable. Rising now about mid-night, it is time to get out and enjoy its rings and moons. Ask amateur telescope users what's the most beautiful thing in the sky, and lots of them will say Saturn. In fact many say their first sight of it was what turned them on to astronomy. A view of Saturn in a good telescope often draws gasps from visitors, who after a lifetime of seeing cartoon ringed planets are awed by viewing the original. But you can never see Saturn as well as you want! The planet is tiny as telescopic targets go; it's barely 21 arc seconds in diameter at its most favorable oppositions. Saturn's ring system is 2.25 times as wide as the ball — but that's still smaller than the width of Jupiter near opposition. However, with time, patience, and a top-quality 4-inch or larger telescope, you can tease out more of the planet's secrets than many observers suspect. But don't expect Hubble-like performance from your backyard telescope.



Subject: News notes from Robert M.

 Hello everyone! The club is getting a pair of *Oberwerk 10 x50* wide-angle, waterproof binoculars. If you weren't at the XMAS dinner party, I announced I am donating the binoculars and these are really nice, etc! They will be at the Jan. meeting for you to see. See the article at the right. Also, Vixen has just come out with some new 10x50's with an 8.5 F.O.V.

Hope everyone's been getting out observing with the great weather the past two months. I've done a lot of viewing from the house showing the neighbors things. Our contact at the ranch, Jim Overstreet saw the comet back in Oct. I missed seeing it! *Happy Holidays to all !!!*



The *Oberwerk 10x50WA* is the most compact porro-prism binocular. This is one of the only water-proof binoculars available that uses a convenient center focus, which is made possible by the use of super-stiff ceramic ocular bridges. Because the 10x50WA focuses to less than 30 feet, it's great for bird watching as well. Includes the finest BAK4 prisms, fully coated optics throughout, and high-quality broadband multi-coated objectives. The bright, wide 6.5° field of view also makes these ideal for binocular astronomy.

Later---

Astronomers Stumble onto Huge Space Molecules

By Trudy E. Bell and Tony Phillips

Deep in interstellar space, in the swirling gaseous envelope of a planetary nebula, hosts of carbon atoms have joined together to form large three-dimensional molecules of a special type previously seen only on Earth. Astronomers discovered them almost accidentally using NASA's Spitzer Space Telescope.

"They are the largest molecules known in space," declared Jan Cami of the University of Western Ontario, lead author of a paper with three colleagues published in *Science* online on July 22, 2010, and in print on September 3.

Not only are the molecules big: they are of a special class of carbon molecules known as "fullerenes" because their structure resembles the geodesic domes popularized by architect Buckminster Fuller. Spitzer found evidence of two types of fullerenes. The smaller type, nicknamed the "buckyball," is chemical formula C_{60} , made of 60 carbon atoms joined in a series of hexagons and pentagons to form a spherical closed cage exactly like a black-and-white soccer ball. Spitzer also found a larger fullerene, chemical formula C_{70} , consisting of 70 carbon atoms in an elongated closed cage more resembling an oval rugby ball.

Neither type of fullerene is rigid; instead, their carbon atoms vibrate in and out, rather like the surface of a large soap bubble changes shape as it floats through the air. "Those vibrations correspond to wavelengths of infrared light emitted or absorbed—and that infrared emission is what Spitzer recorded," Cami explained.

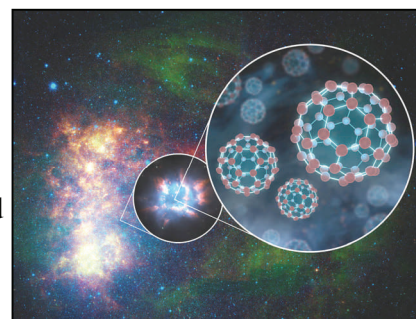
Although fullerenes have been sought in space for the last 25 years, ever since they were first identified in the laboratory, the astronomers practically stumbled into the discovery. Co-author Jeronimo Bernard-Salas of Cornell University, an expert in gas and dust in planetary nebulae, was doing routine research with Spitzer's infrared observations of planetary nebulae with its spectroscopy instrument. When he studied the spectrum (infrared signature) of a dim planetary nebula called Tc 1 in the southern-hemisphere constellation of Ara, he noticed several clear peaks he had not seen before in the spectra of other planetary nebulae.

"When he came to me," recounted Cami, an astrophysicist who specializes in molecular chemistry, "I immediately and intuitively knew it I was looking at buckyballs in space. I've never been that excited!" The authors confirmed his hunch by carefully comparing the Tc 1 spectrum to laboratory experiments described in the literature.

"This discovery shows that it is possible—even easy—for complex carbonaceous molecules to form spontaneously in space," Cami said. "Now that we know fullerenes are out there, we can figure out their roles in the physics and chemistry of deep space. Who knows what other complex chemical compounds exist—maybe even some relevant to the formation of life in the universe!" Stay tuned!

Learn more about this discovery at <http://www.spitzer.caltech.edu>. For kids, there are lots of beautiful Spitzer images to match up in the Spitzer Concentration game at <http://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.



Superimposed on a Spitzer infrared photo of the Small Magellanic Cloud is an artist's illustration depicting a magnified view of a planetary nebula and an even further magnified view of buckyballs, which consist of 60 carbon atoms arranged like soccer balls.



This total lunar eclipse was captured January 20-21, 2000. (Mr. Eclipse/Fred Espenak) The first total lunar eclipse in two years graced the sky the night of Monday, Dec. 20. At NASA, we're pretty excited about last month's lunar eclipse, so we're offering a number of features and activities for astronomy buffs and moon-gazers alike. To learn about the science behind eclipses, visit NASA's Eclipse page, where Mr. Eclipse provides information about viewing the eclipse from all over the United States.

Why Astronomy, Why

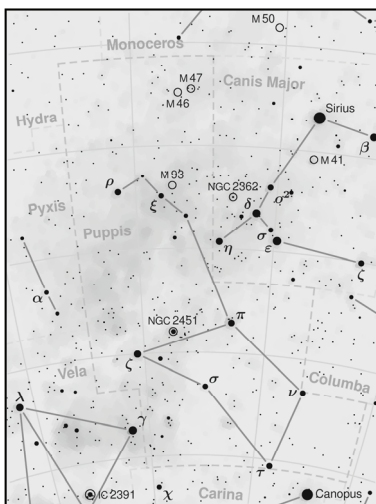
So what is it about astronomy that so captures our imagination? For some of us it is the idea of someday traveling to a distant star, for others it means an evening spent under the Milky Way with a telescope. Astronomy makes me feel like I'm on a rocket ship of discovery. Nothing else quite makes me feel that way! For many, the passion for astronomy turned to a desire to share such wonders with others, like a star party. Just as my eyes light up when I observed Saturn or Jupiter in a telescope, I enjoy watching that same expression on the face of others..... knowing that I was a part of it and the possibility that I was somewhat responsible for changing how we look at things in the night sky. I hope you are curious about astronomy and I guess that is the reason you are at our club. See you on the 14th, ASSET Club Meeting, and "let the night sky light up your life".....Howard

SUPPORT BUILDS IN FIGHT TO DIM LIGHT POLLUTION By Haya El Nasser

The push to turn down the lights in American cities is gaining broad support from several unlikely allies —from conservationists and builders to city planners and the military. Dark-sky legislation — laws that require measures such as shielding outdoor lighting to reduce light pollution — have been embraced by about 300 counties, cities and towns.

More than 50 state bills have been introduced in the past two years and seven were enacted. Eighteen states —Arizona, Arkansas, California, Colorado, Connecticut, Hawaii, Maine, Minnesota, Missouri, New Hampshire, New Mexico, New York, Oklahoma, Rhode Island, Texas, Vermont, Virginia and Wyoming — have adopted dark-sky legislation in recent years, according to Bob Parks, executive director of the Tucson-based International Dark-Sky Association.

The laws have won support in states such as Texas, home to several military bases, because night lights interfere with military exercises. Trying to simulate flying over remote parts of Afghanistan is difficult when the skies are aglow from the glare of city lights.

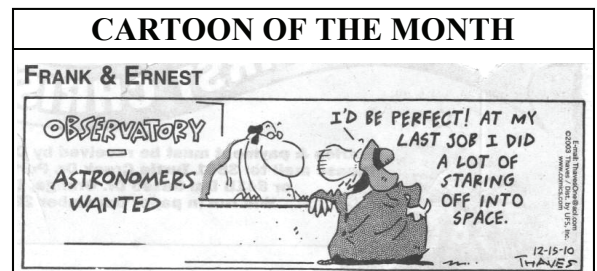


CONSTELLATION OF THE MONTH, **PUPPIS**

This constellation is in the right position for January observations. Located fairly high in the SE right after Canis Major with its bright shining Sirius.

Puppis is part of the ancient constellation Argo Navis, the ship of the Argonauts. The Milky Way runs through it causing many interesting star fields.

Several good objects for binocs are 3 Messier's, M46, M47, & M93, plus the yellow super giant *xi Pup* of 3.34 mag that shows an orange companion when viewed through the binoculars. For the telescope, the planetary nebula NGC 2438 is located at the border of *M46*. and one of the most beautiful clusters in this area is NGC 2477. Also the planetary nebula *NGC 2440* lies in a region rich with stars. Now go check your atlases for all the deep sky objects in Puppis. Worthwhile!



PLEASE PAY YOUR DUES AT THE JAN. CLUB MEETING!

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ASTRONOMICAL SOCIETY OF SOUTH EAST TEXAS MONTHLY CALENDAR

◀ December		~ January 2011 ~					February ▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
Mercury appears bright in morning sky in early January.		Partial Solar Eclipse occurred January 4th across parts of Europe & Asia.				1	
2	3	4 NEW MOON ●	5	6	7	8 THE RANCH STAR PARTY	
9	10 Moon farthest from Earth, Apogee	11	12 FIRST QUARTER ◐	13	14 ASSET CLUB MEETING 7:00PM	15 CLAIBORNE PARK SP	
16	17	18	19 FULL MOON ○	20	21 Moon closest to Earth, Perigee	22	
23	24	25	26 LAST QUARTER ◑	27	28	29	
30	31	Notes: Venus is high in the morning southeastern sky all month.					

The Solar System in JANUARY 2011 :

Jupiter, Uranus and Neptune all are currently grouped in the western sky at sunset, Jupiter of course being the brightest.

Mercury - The bright planet MERCURY will pop out in bright early dawn skies during the first part of January; look for Mercury rising about ONE HOUR before sunrise in the southeast; you will see bright VENUS first, and then look downward, to the lower left of Venus where you may spot Mercury early this month! - in SAGITTARIUS.

Venus - Our sister planet, Venus starts our 2011 in magnificent style, as the brightest object in morning skies other than the moon. The planet rises about 3-4 a.m. each morning and is high in eastern skies at dawn, making a beautiful start to every morning this month. - in SAGITTARIUS-SCORPIUS

Mars - The red planet is unobservable, being hidden by the glare of the sun. - in SAGITTARIUS

Jupiter - Looking WEST the first bright yellow star like object that will be visible in these January evenings will be mighty JUPITER. Still hanging around after putting on quite a nice show in 2010. Look for the redevelopment of the dark South Equatorial Belt during early 2011! Jupiter this month is extremely close to the more distant planet URANUS, being only a few degrees from that tiny world throughout the month. - in PISCES

Saturn - Our ringed planet is slowly tilting back our way so that its magnificent ring system can be viewed in all of its splendor. Saturn will rise about midnight and be high overhead by dawn, rising a few minutes earlier each night of the month. Try photographing it with your digital camera. - in VIRGO

Uranus - The distant planet, now visible in western twilight during early evening twilight and is located side-by-side with mighty Jupiter. This very dim object can be seen in binoculars or better still, small telescope. - in PISCES.

Neptune - At a faint magnitude 8.9 and WEST of Uranus, the distant Neptune is very low in southwestern skies during early evening hour. - in CAPRICORNUS

Pluto - Now is hidden completely by the glare of the sun and not visible. - In SERPENS