



Astronomy Club of Tulsa

OBSERVER

September 2005

<http://www.AstroTulsa.com>

ACT, Inc. has been meeting continuously since 1937 and was incorporated in 1986. It is a nonprofit, tax deductible organization dedicated to promoting, to the public, the art of viewing and the scientific aspect of astronomy.

What

The Astronomy Club of Tulsa Meeting

When

26 September 2005 at 7:30 P.M.

Where

Room M1 inside Keplinger Hall, the Science & Engineering Building at TU. Enter the parking lot on the East Side of Keplinger Hall from Harvard and 5th Street. This will take you directly toward the staircase to enter the building. Room M1 is the first room on the left.



President's Message

Craig Davis

At our next club meeting - September 16th, 7:30 P.M., Room M-1 Keplinger Hall at TU - we will be sharing with everyone the long, hot and tedious excursion out to New Mexico for the Impact with Temple 1 comet back on July 4th. This presentation will be given by the group of club members that made the long trek westward, Tim Davis, Steve Chapman, Jerry Mullenix and me. Neta Apple was also with us but unfortunately Neta had to move to the Kansas City area as soon as we got back. I confidently assure you that you will like but get antsy to head out that direction in the years to come. The skies are spectacular along with the overall variety and beauty that stands with the lay of the land. Several club members have been in that area but then again, there are several more that haven't. Sit back and enjoy what you'll see and hear - I'm sure you will.

We're now winding down and saying goodbye to this summer and looking anxiously forward to the upcoming season with an abundance of mild weather and open clear skies. There have been plenty of good nights the past month but then again, we've had plenty of bad ones too. Even so, we all should be very thankful that we have not been struck with such weather and the final result of said weather as those along the Gulf Coast. Having become common knowledge we know what cities have been destroyed or torn apart so much that it's

difficult to either fully understand or many people not fully willing to accept what has happened. With such a tremendous overnight change that has taken place for so many hopefully all will go well for each of them now. Now is the time to look up and forward for all the people affected, not down and out for only a few. Time will tell, time will tell.

I would like everyone to be aware of the upcoming "MARS WATCH" that will be held in November. Specific information concerning this will be relayed to all at the next club meeting along with steady information notes attached to our web page. At present it will be held at Mohawk Park, working in conjunction with the Oxley Nature Center, just as we had before. Without a doubt there will be plenty of club members volunteer for this public event and we will hopefully have as many people come out to enjoy the time taking an impressive view at Mars and its polar caps as well as several of the other wonders that sit proudly above us too.

Clear Skies to all,

Craig D. Davis
President



<http://www.letstalkstars.com/>

"Lets Talk Stars" is a weekly radio program hosted by David Levy. It features interviews with leading astronomers and discussions of a wide variety of astronomy related topics.

David Levy is well known for his life long love of the stars and is a frequent writer for Astronomy and Sky & Telescope. The programs I listened to are about an hour in length. The download file can be planned in Windows media or other formats. It will take DSL or Cable modem since the download files are about 50-meg in size.

Earth is racing toward Mars at a speed of 23,500 mph, which means the red planet is getting bigger and brighter by the minute. Details at:

http://science.nasa.gov/headlines/y2005/27may_approachingmars.htm

David's ASTRO CORNER

By David Stine

"Perseids 2005"

We had an excellent turnout for last months Perseid Meteor Shower and most people were not disappointed. It probably wasn't as good as last years shower in terms of numbers, but the bright meteors made up for that. We probably saw over 500 meteors from 11p.m. to 5a.m. from cumulative total from observers KC Lobrecht, Craig Davis, Gerry Andries, Steve Chapman, Teresa Kincannon, Tamara and Owen, and several others that my mind escapes me right now. The latest count from the International Meteor Organization was 3,077 Perseids. There was no clear peak time but the morning of August 12th had the highest rates with an average of 40-50 per hour. The morning of August 13th averaged 25-30 and the morning of August 11th averaged 16-20. The next meteor shower will be the Leonids in November, but under an almost full moon in Leo, so you really have to be a die hard to even try to observe this one. Oh, for the days of the Fireballs.

"Mars Update"

Mars is here and shining very bright in your morning backyard. Soon it will be moving into the evening skies. Some of our members have already taken some excellent shots of the planet. There are several links on the internet for getting ready for Mars and what to expect and even which side you are looking at from your location. Below is a list of some of the best links for more information on this years Mars encounter. The Astronomy Club of Tulsa and Oxley Nature Center will be hosting an observing session for the public November 11-12 at Mohawk Park. I hope you will be there with your telescope, and if it is anything like it was in 2003, we will need everyone's help. Mars Watch II (for a better lack of a title) should be an exciting and fun event for everyone. So mark your calendars and be ready to take Tulsa to the Stars.

Mars Watch and Information Links:

<http://www.arksky.org/> - Best site I have seen.

<http://elvis.rowan.edu/marswatch/> -International Mars Watch 2005 site. Great site.

<http://elvis.rowan.edu/marswatch/cgi-bin/marsview.cgi> - Gives you a view of what Mars looks like at any given time.

http://skyandtelescope.com/observing/objects/planets/article_929_3.aso When you get to this site find: LAUNCH S&T'S MARS PROFILER.

With these sites you should know everything you need to know about Mars

and become an expert on Mars for our Mars Watch II in November.

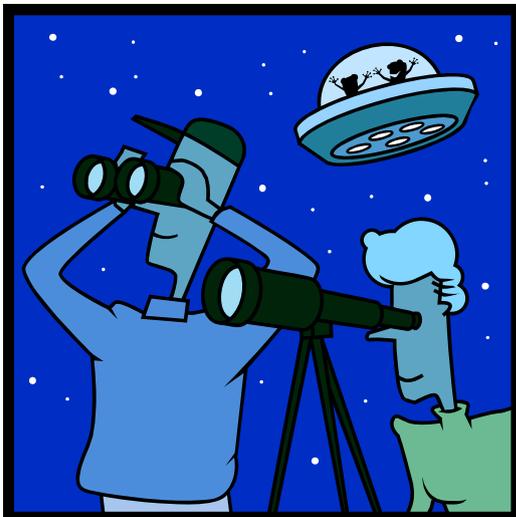
"International Space Station"

We had several excellent passes of the International Space Station over Tulsa recently. I had several reports from club members of the passes. Many showed their neighbors and family the bright space station as it passed over. There is nothing more rewarding than showing our hobby of Astronomy to others. Thanks to all who reported and also to all who have told me they appreciate the notices and my Astro Alerts.

"The Next Bright Comet - Is it Coming"

Bright comets come about 4-12 years on the average. By bright we are talking about Mg. 2. Comets that are Mg. 0 or brighter average 8-to as much as 24 years and a comet at least -3mg. 25-50 years between appearances. The last bright naked eye comet was Hale-Bopp in 1997 and the last truly dazzling comet was Comet West in 1976, almost 30 years ago. We are due as far as the law of averages for a spectacular comet. Somewhere out there it may be on its way in to visit us and any day someone will discover it. Even if this comet is still years away we are due at least a 2nd Mg. comet and we might just get one next spring. In 1995 periodic comet Schwassmann-Wachmann-3, traveling in a 5.3 year orbit around the Sun, fragmented into several pieces, injecting massive amounts of dust into space and making this comet much brighter than normal. The largest fragment which is labeled "C" is to come within 6.8 million miles from Earth on May 13, 2006. In one week the fragment will rapidly travel through the constellations Cygnus, Pegasus, and Pices. According to Japanese comet expert, Seiichi Yoshida, the comet could become as bright as Mg. 2 as it passes Earth, making it the brightest comet to appear in nine years. The secret word is "could". No one knows if the fragments even survived. But this is one comet that everyone who follows comets will be watching in the coming months to see if this is the first bright comet of this century. As Fred L. Whipple, a legendary comet expert, once said, "It you must bet, bet on a horse, not a comet."

That's it from my corner this month, keep your eyes skyward.



Lands Tidbits

by John Land Sept 6, 2005

NEW RATE CHANGES in ASTRONOMY magazine rates. As of August 1st the rates went up to \$ 34 / year or \$ 60 for two years.

DON'T LET YOUR MEMEBERSHIP or Subscriptions LAPSE!! Check your MAILING LABEL for membership expiration date. Those receiving Email should get a reminder when your membership is up for renewal or you may contact John Land.

Please NOTE CHANGES in Annual Dues and magazine rates on membership form. You may also renew magazine subscriptions through the club for substantial discounts.

A NEW GUEST SIGN IN SECTION on the Website is already bringing the club new contacts for potential new members.

Changing EMAIL - When you change your email or mailing address be sure to send me the new information so I can update the club records. You can use the Join feature on the club web page to make changes.

Several of you are using SPAM BLOCKING software that prevents you from receiving club information and news updates. Contact John Land for commonly used email senders.

Club Memberships and Renewals:

Adults - \$ 35 per year includes Astronomical League Membership

Students \$ 15 without League membership.

Students \$ 20 with League membership. Student shall be defined as a person 25 or younger actively taking courses at a college or trade school or persons still in High school or below. Adult Students over 25 may join at the student rate for one year if enrolled in an Astronomy course in an area college.

We now have an automated on line registration form on the website for new AND renewal memberships plus magazine subscriptions. You simply type in your information and hit send to submit the information. <http://www.astrotulsa.com/Club/join.asp>

You can then print a copy of the form and mail in your check.

Astronomy Club of Tulsa - 25209 E 62nd St - Broken Arrow, OK 74014

Magazine Subscriptions: If your magazines are coming up for renewal, try to save the mailing label or renewal form you get in the mail. Do NOT mail renewals back to the magazine! To get the club discount you must go through the club group rate.

NEW RATE

Astronomy is \$ 34 for 1 year or \$ 60 for 2 years. www.astronomy.com

Sky & Telescope is \$33 / yr www.skyandtelescope.com Sky and Telescope also offers a 10% discount on their products.

NIGHT SKY is \$18/yr. An exciting new bi-monthly magazine for beginning or casual astronomers. <http://nightskymag.com/>

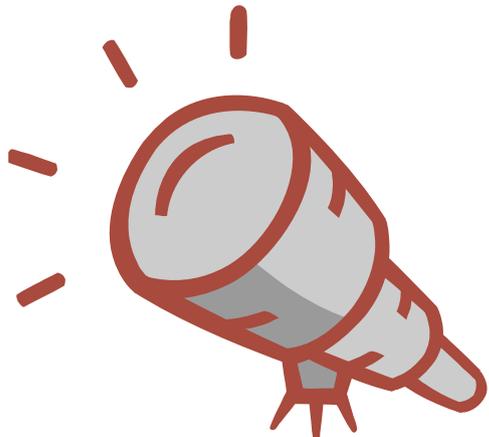
Address Corrections- Email changes - Questions:

You may forward questions to the club call our message line at 918-688-MARS (6277) by email membership@astrotulsa.com Please leave a clear message with your name, phone number, your question - along with address or email Please make email subject lines that address your question.

Telescope for sale

I have an 8" Celestron Nexstar for sale. The scope comes with all original equipment including the shipping box. This scope is GO-TO , No GPS, but no \$2500 either. I use my hand held GPS to input my location, it works just fine. I bought it new and have used it (Straight Story !!) 4 or 5 times. It is in original new shape, no scratches dents or mars of any sort. The sale price is \$995

A.W.Mullen
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EVENTS AT RMCC OBSERVATORY:

SEP

- 9 Fri 7:30 PM St Catherine School (25)
- 12 Mon 7:30 PM Ohess Home School (20)
- 30 Fri 6:00 PM Club Star Party, members and guests
- 1 Oct Sat 6:00 PM Backup for star party if cancelled on Friday

OCT

- 19 Wed 6:00 PM Bartlesville church youth group (25)
- 28 Fri 6:00 PM Club Star party, members and guests
- 29 Sat 6:00 PM Backup for star party if cancelled on Friday

NOV

- 4 Fri 6:00 PM Club Star party, members and guests
- 5 Sat 6:00 PM Backup for star party if cancelled on Friday

EVENTS AWAY FROM OBSERVATORY

SEP

- 15 Thur 6:30 PM Jarmin Elem School (40)
- 16 Fri 7:30 PM General Meeting at TU, Keplinger Hall
- 24 Sat 6:30 PM Girl Scouts Jamboree (200) at Box Ranch north of Sapulpa
- 27 Tue (Time TBA) Edison Middle School (200) at Dry Gulch NE of Pryor

OCT

- 1-9 Okie-Tex Star Party, Oklahoma panhandle near Kenton <http://www.okie-tex.com/>
- 14 Fri 7:30 PM General Meeting at TU, Keplinger Hall
- 21 Fri 6:00 PM Holland Hall School (50)

NOV

- 11 Fri and 12 Sat 6:00-10:00 PM, Mars Watch II, Mohawk Park
- 18 Fri 7:30 PM General Meeting at TU, Keplinger Hall

We are always looking for volunteers to help at our group events. If you would like to volunteer to help at one of these events, please let me know at least a week in advance. We are happy to have help from anyone who wants to help, no matter what your experience level is.

Tim Davis
VP, ACT
dtimothy14@cox.net
918-665-8134

Night Sky Network

By Jerry Mullennix

Well another month has slid by and while the weather has mucked up a few nights the majority has been very fine. In the last month we have made two trips to Tall Grass with one being extremely nice and the other being a night of fighting dew. We had our August Star Party and at least three other nights of observation at the observatory. If you were not there you missed a few very nice evenings of observation. If you were not informed about opportunities to go out and do astronomy on a moments notice then you need to be added to the email list. You can send an email to either Tim Davis (dtimothy14@cox.net) or me (jerrym@pantherenergy.us) requesting to be added to the list. These observation venues are available to everyone in the club who would like to join us. Keep in mind that these get scheduled on a moments notice and can be canceled just as quickly if weather or clouds sneak in on us.

August 31, 2005 was the physical year end for NASA and as such our Night Sky Network has had the events logged reset to zero for the following year. This is true for all clubs participating in the program. September 1st represents a new year beginning and a valuable opportunity to plan our outreach program for the next year. One of my primary objectives for the up coming year is to make as many of our scheduled observatory groups a NSN event. This gives us the chance to compete with much larger clubs in the total number of not only events but people reached. We logged 11 events last year with Neta Apple's help and we were the only club to log an event at the Okie-Tex Star Party and we remain one of only two clubs participating in the State of Oklahoma. The other being Pegasus Astronomical Society in Norman.

By logging events that are already scheduled at the observatory we should easily match or surpass last year's total. We are also ready to start planning special events such as the Mars Watch already scheduled at Oxley Park. I would like to make sure that we never let these events go by without becoming a logged event for our club.

Speaking of Mars, if you have not glanced up at her then you are already missing a real treat. Don't wait for Mars to get as big as the moon before you look. Alright I could not resist that comment due to the huge number of people that actually believed this might happen. It is a bit humorous to think about all the people on our planet who went out on August 27th armed with inaccurate two year old information from the internet, looking at the sky for something as big as the moon. In truth there probably were not a handful of them who could actually point Mars out in the sky. For all our sakes I pray we never see an object blotting out as much of the sky as the moon does. The consequences here on earth would be equal to any extinction event we have ever suffered and that would be without the object striking us.

For those of you who would like to hear and learn more about Mars Dr. Steven Squyres, the principal scientist for the twin Mars rover missions, will share a

one-hour teleconference with the members of the Night Sky Network on Thursday, September 29, 2005 at 6 pm Pacific (10 pm Our Time).

Dr. Squyres will provide an up-to-date summary of the mission of Spirit and Opportunity, from their initial conception through their launch, landing, and operations on the surface of Mars. His talk will be followed by an "opportunity" for you to ask questions of Dr. Squyres about his amazing experiences...

If you would like to join me in this teleconference with Dr. Squyres please send me an email requesting details to participate. This is a first come first serve invitation to hear in depth science about Mars directly from NASA. I need to have a total number of participants ready and cannot include you if I do not have your request prior to September 22nd. If you cannot participate but would still like to hear the information provided you can get a copy of the mp3 file from me after NASA releases it a few days after the teleconference. Two NSN clubs who have members attending the September 29th telecon will receive a signed copy of Dr. Squyres new book, Roving Mars. A random drawing among those who called in will be held on September 30th. In keeping with the Mars theme, the Astronomical Society of the Pacific will be giving away five Mars Globes in October. Based on more than 6000 images, this wonderful 12" globe approximates the planet's true color and features. Includes official names for 140 features.

All qualifying outreach events our club logs between July 1st and September 30th count as a "ticket" in the drawing! The drawing will take place October 11th. The five winning clubs will be notified by email and their names will be posted on the Night Sky Network Discussion Board by October 14th...

Now, not to let Mars have all of the planetary spotlight if you are not aware Saturn has made her way back around. I looked out the front door at 5:30am a week or so ago and saw a very bright object in the eastern sky. After looking for a moment it struck me this had to be Saturn as she was 20 degrees above the horizon eliminating Mercury as a possibility. I nearly tripped over myself to get to my big bins (25 X 100) which would allow me to see the rings and sure enough there they were tilted as if to say "I sure did miss you Jerry." Saturn holds a very special places with me, as far as planets go. Some planets are like a small country town without a lot going on, but Saturn is like a major metropolis with moons with atmospheres, rings with enough diversity to keep you studying for a lifetime, winds in excess of 1100mph and weather systems that would swallow our entire planet

If you have not been keeping up with Cassini then you will be pleased to know the craft is working flawlessly and every aspect of the mission is being achieved. What we learn with this mission will keep astronomers busy for decades trying to figure out how Saturn works and how that knowledge will apply to an understanding of our early solar system...

ASTRO CORNER ALERT

DAVID STINE

A major flare has erupted from the Sun that has been classified as an X17.1. This is a very strong and rare flare as very few solar flares reach the X-Class rating an even fewer exceed the X10 level. This event was strong enough to saturate one of the X-Ray sensors on the GOES spacecraft and almost saturated both sensors. Fortunately the coronal mass ejection was ejected well to the southeast of Earth. The CME came from Region 10798 which produced periods of severe geomagnetic storming last month. Its unusual for a sunspot group to last this long. It is now just coming into view around the eastern limb of the Sun and will be renamed 10808. They are expecting additional flares and possibly as strong as X10. These may be directed toward earth and we could experience a direct hit. The region will slowly rotate across the solar disk in the next two weeks. If it retains its ferocious self, it may produce serious effects on Earth. Power grids may suffer from induced currents, large areas on Earth including Tulsa, may spot periods of auroral activity, sensitive industries on earth can be effected such as electrical power generation facilities, ionospheric radio communications, satellite communications, cellular phone networks, sensitive fabrication industries and others. However, there is no health threat to humans as the combined effects of the Earth's magnetic field and the ionosphere protect human activities. Region 10808 will be best positioned to cause electrical havoc on Earth, with maximal effects possible from roughly September 11-18. Spacecraft will remain vulnerable to potential strong space radiation storms through to about September 23. It will be interesting to begin observing this group through telescopes with proper filters in the coming days to see what develops. When new alerts happen I will inform you through my Astro Alerts.

The Classification of X-ray Solar Flares or "Solar Flare Alphabet Soup"

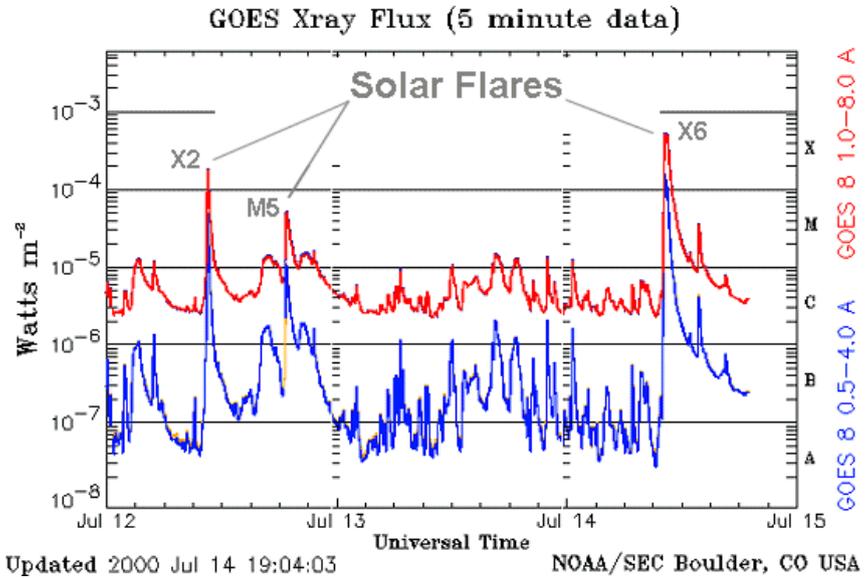
<http://spaceweather.com/glossary/flareclasses.html>

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. [more information]

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 generally 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.

This figure shows a series of solar flares detected by NOAA satellites in July 2000:



Each category for x-ray flares has nine subdivisions ranging from, e.g., C1 to C9, M1 to M9, and X1 to X9. In this figure, the three indicated flares registered (from left to right) X2, M5, and X6. The X6 flare triggered a radiation storm around Earth nicknamed the Bastille Day event.

Class	Peak (W/m ²) between 1 and 8 Angstroms
B	$I < 10^{-6}$
C	$10^{-6} <= I < 10^{-5}$
M	$10^{-5} <= I < 10^{-4}$
X	$I >= 10^{-4}$

Astronomy Club of Tulsa membership (\$35/year) includes membership in the Astronomical League and subscription to ACT's "Observer" and AL's "Reflector". "Astronomy" (\$34/year) and "Sky and Telescope" (\$33/year) are also available through the club. For more information contact John Land at 918.357.1759. Permission is hereby granted to reprint from this publication provided credit is given to the original author and the Astronomy Club of Tulsa Observer is identified as the source.

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