



Astronomy Club of Tulsa

# OBSERVER

December 2004

<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**

10 December 2004 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.

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## **President's Message**

**Craig Davis**

Before we know it Christmas will be here and then New Years Day. Thanksgiving just flew by and hopefully everyone had a wonderful time.

We've already been trapped quite a while from some of the cooler temps settling in as well as the persistent layers of clouds. But that's simply the way things are around this part of the country and we'll have to grow very accustomed to it – not much of a choice available to us at all.

At our up-coming December club meeting, Friday the 10th, we are sure to have a good time as Pete Krone, Astronomics, Inc. Norman, OK will be our guest speaker. Pete Krone has been with Astronomics for quite some time and also independently builds exceptionally fine quality dobsonians. A very good example of Pete's work is held by club member Tony White, a marvelous 18" DOB. Pete will bring us up to speed on all of the new items of equipment and accessories that are now available from Astronomics. That alone will be both very fascinating and the closer we draw to Christmas, very tempting. Look forward to having Pete speak to us; it'll be a lot of fun for all.

I'm truly sorry that due to the weather we had to cancel the public viewing event for the lunar eclipse. After a great deal of planning and work to get things ready to accommodate an anticipated large crowd at Hunter Park, well, the weather didn't cooperate with us at all. We will have to now wait until 2007 for the next full lunar eclipse as the one we've just missed out on. Hopefully the weather will be in a better state when that time arrives.

The Machholz comet is now up and eyeball "fuzzing". Machholz is positioned approx. 7 degrees above the horizon at 10:30 P.M. It is about 20 degrees below and to the right of Rigel in Orion or from a different perspective, directly between Niha in Lepus and Upsilon2 Eridani. In simple terms, due SE and is now at 6.54 magnitude. This pretty comet, very similar to Hale-Bopp, should be a fairly easy one to locate. Once you've found it, not to far away, is also M79, a 7.7 magnitude globular cluster. Tossing in the 50mm might allow you to locate both at the same time – maybe. I have no doubts whatsoever that it should be seeable with binoculars. That region of the sky will be a good area to concentrate on since you will be in the locale of several other Messier objects – M41, M42, M43, and M50. So if any of you may happen to be working on you League Messier Certificate, you could log in an additional five as well as the comet. Which takes us back to what the main point is – comet Machholz. All in all, this comet in particular will be a very good one to find and take a close look at.

From the question that I had posed to all of you at our last club meeting it came through quite clear that all of you are in full favor of both building new concrete pads to set up on as well as having an outlet at each one. A true thanks to all! Since then I have laid out an initial proposal for where the pads will be located on the grounds and how many. At present the preliminary number of new pads will be four. They will be laid out along a line that runs adjacent to the south fence line and then an additional line more towards the center of the grounds. The reason for them to be located in this fashion is due to the slope of the grounds on the northern side not far from the center. It would be much more difficult and costly to build the pads on a considerable slope in comparison to a much more level and flat segment of the grounds available. Each pad will be 8' x 8' square and there will be an outdoor outlet mounted at each one. Of course it would be good to have small red runway type lights embedded in the corners of each pad but when you get really fancy, well, that would cost the club way to much. There will be enough separation allowed between all of the pads so that you will be able to pull in next to it, unload, setup and enjoy. Remember, this is a preliminary, but when the weather changes for the better then the project will begin. There may be a few changes made here and there, as is commonplace, but overall they will come about and be completed. So by next summer it will be easier for more of you to setup on a level concrete pad instead of grass and rocky ground. As a matter of fact, once this is done, there will then be a total of seven pads available. Not to bad, right?

As was mentioned before, perhaps the weather gods will take a break and we'll all be able to get at least two or three hours of good observing time in before our next club meeting. NO! Don't think that all you have to do is go out in the middle of your concrete driveway and drop a good Plossl or Nagler, as a sacrifice to the weather gods, and that they'll give you perfectly clear skies! Nope, they quit doing that about fifty years ago. It'll all work out, honest!!! Just ask Santa, he knows!

I'd like to very much welcome our new Vice President, Tim Davis and our new Secretary, Teresa Kincannon. Both Tim and Teresa are exceptional additions to the club's officers, and I have no doubts whatsoever as to how much help they will contribute to the club. A Thanks is directed to all of you – it was you that made this possible.

MERRY CHRISTMAS TO ALL, AND TO ALL A REMARKABLY CLEAR NIGHT!!!

Clear skies, (please)  
Craig D. Davis  
President

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## ASTRONOMY EVENTS

Tentatively scheduled dates below are bracketed with question marks. The number of persons expected is in parenthesis.

### EVENTS AT RMCC OBSERVATORY:

#### DEC

- 03 Fri 17:00 Club Star Party
- 04 Sat 17:00 Back Up for 12/03
- 18 Sat 16:30 Claremore Junior High (12)

### EVENTS AWAY FROM OBSERVATORY

#### DEC

- 10 Fri 07:30 Regular Club Meeting at TU Keplinger Hall

Gerry Andries  
Observatory Group Director  
Astronomy Club of Tulsa  
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## Night Sky Network

Neta Apple

With the advent of fall and the upcoming holidays, requests for us to do outreach and educational events have come to a standstill. The fall has been such a rush of events. I hope that we can now finally have time to sit down together so that those who are interested (or just plain curious) can see the materials that we received from the Astronomical League of the Pacific and JPL as part of our kit. I have looked forward to sharing this with you for two months! No doubt we will find many of us in need of a warm up break at a star party and we can play with our toys while we get warm. I can also bring the kit on a meeting night and we can look at it before time for the meeting if anyone wants.

In spite of the weather causing us to have to cancel several planned events, we have logged enough events to receive our next kit in January. This one will be about galaxies. We need to log one more event by September 30, 2005 to remain on the list. I have no doubt that we will have done many more than that by then!

Did anyone else listen in on the teleconference last month with Dr. Massimo Stiavelli of the Space Science Telescope Institute? I downloaded the presentation and listened. It was very interesting to hear about the Hubble Ultra Deep Field image, what they were looking for, how it was done and what they hope to do with the James Webb Space Telescope.

Many of you already know that my husband, Rick, has taken a job in Kansas City. This was not our first choice, but we do find that we like to be able to eat. Due to budget cuts his job here was eliminated. He will be staying there to work, but will be home often. The boys and I will be remaining in our home here. I will continue to work on outreach and educational activities and to represent our club in the NSN with the same enthusiasm, and maybe more.

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## Mystery Solved!!!

Scientists have shown that the moon is moving away at a tiny, although measurable distance from the earth every year.

If you do the math, you can calculate that 85 million years ago the moon was orbiting the earth at a distance about 35 feet from the earth's surface.

This would explain the death of the dinosaurs - the tallest ones, anyway.

## JUST ONE CLUB MEMBERS ADVENTURE

Jerry Mullennix

Made it out three nights over the turkey weekend with Sat night being the best I've had in a while. I got my green laser pointer working as a finder scope and it worked beyond my wildest dreams. After I got it aligned I started using the GOTO alignment procedure with my Celestron scope and after adjusting the star with the hand controller to where the beam was on its appointed star, it fell in the view of a 10mm eyepiece 17 straight times. I did one alignment process without ever looking in the eyepiece and when I punched in the Ra and Dec of the Machholz (C/2004 Q2 Mag 6.34) comet, it was in the eyepiece the first time I looked. (It found the comet in a full moon with no additional alignment other than pointing the beam at the alignment stars.) I can't say enough about it. I still need to get the hand switch to work correctly and I believe the design of the holder could be dramatically improved, I think the adjustment knobs should be more like the ones you would find on a red dot finder. I now plan to build a better mousetrap. The bonus to the way this works is after I find the objects it is so easy for others to see the exact spot in the sky my scope is turned too. The guy that made the holder claims that close by dobs can just turn to the beam and be right on object with you. I believe it and it could be a great teaching aid for students or other viewers with binoculars. Next weekend the moon will not rise until late so I will have a chance to demonstrate it if you make it to the star party (weather willing).

Zac was out last night as well as Rick Ryan and we played with Zac's LPI camera on the moon and got a few of the techniques down to the point it has renewed my interest in my own LPI camera (thought about throwing it away, Meade is less than honest with their claims on ease of use and level of performance). The camera took some great moon shoots with Zac's homemade refractor. (The job he did on that beautiful refractor is a story all its own) Orion (M42) at Mag 5.1 and Saturn were amazing, although, Saturn (Mag -0.05) was washed white by the proximity of the moon (Mag -12.66) and I could barely make out the Cassini Division with my 8" SCT scope. Wednesday night it showed its natural color when I was up with Craig, Zac and Jim. The comet appeared very faint but you could make out the coma and I can't wait to look at it without the moon fighting me. About the end of the first week of Jan it will be in the Pleiades (M45) with an expected Mag of 4.13 easily naked eye. I think a view of the comet surrounded by the seven sisters could be a spectacular site. Among some of the other objects I saw were M-57 (faint Mag 9.5), the Saturn Nebula C-55 or NGC7009 (even fainter (visually) at Mag 8.0 but still visible) and M45 (always nice). I can relate all of this to fact the laser pointer did the alignment so when I punched the objects in I have a high level of confidence that I am on object so if it is not visible you change eyepieces and adjust focus. (I don't use parafoveal eyepieces) Keep in mind the full moon had so much of the objects detail washed out.

I guess the moral of this story is; "Don't let the cold, some clouds or even a full moon keep you from going out. You could miss a great night of viewing."

The shot of Orion is one I took with my Sac 7 camera using My Celestron 8i mounted on an equatorial wedge, I wasn't going to show any of my pics until I had more practice but Zac thought it looked pretty good. This is a composite of one 45 sec dark frame and 20-30 sec exposures stacked with FitsX and Photoshop. I used the color setting in the software and camera not individual RGB filters. I've seen a lot better but I think this is not bad for a \$400 camera. Before you run out and buy one though, keep in mind this is one of 8 exposures I tried that evening and the only one that produced a usable image. I suggest anyone thinking about CCD should borrow or rent some equipment and try it first; you may find the cumbersome process is not for you. This equipment is expensive and much easier to buy than to sell if you don't like using it. It takes far more practice and equipment than any of them advertises.

Look for me at night  
Jerry Mullennix



## DAVIDS ASTRO CORNER

David Stine

The Leonids turned out to be a bust in terms of comparing the activity with other showers, so we didn't miss much when we were completely clouded out of the picture this year. I think this is the first year that I have not seen one Leonid. We have two highly active showers coming just around the corner. The old faithful dependable Gemini Shower will max out in the early afternoon of December 13th, however on the same morning and that night should show some high activity. For those of you that are not aware of this shower this is one shower that is not associated with a comet or at least an active comet. Its parent is an asteroid, which possibly could be a dead comet some say. The advantage of this shower is that it starts in the early evening as Gemini is starting to rise. People don't have to get up early in the morning or stay up all night like most showers. The higher the radiant the more meteors you are likely to see. Gemini actually reaches the zenith by 10p.m., so anytime between 7p.m.-Midnight should be active. The activity will continue after midnight until dawn for those real die-hard meteor chasers like me. The meteors will seem to be coming from Gemini and that is where it gets its name. These meteors are fairly bright and can be seen even under urban skies, but the darker location you are in the better your chances will be. We will be having our annual Gemini Meteor Shower Party at the observatory Monday night and Tuesday morning Dec. 13-14. Plan to attend.

The second shower will be January 3 the Quadrantids. This has been a very active shower in the past years, however because of the time of year few people make the effort to watch it. Those that do usually see as many as one a minute or more. There have been years when the Quadrantids stormed producing thousands in an hour. Now wouldn't that be something to see. These meteors seem to come from the constellation of Bootes, but they get their name from a now defunct constellation called Quadrans Muralis. The radiant never reaches a high altitude like most meteor showers and the best time to view is between 11p.m. January 3 until the beginning of morning twilight on January 4th. The radiant basically forms a triangle with Polaris being one point, the Big Dipper being the other point and the Quadrantid radiant being the other point below the Big Dipper. Primarily it will be situated toward the Northeast, so you should be viewing in that direction. The maximum usually is quite sharp and can go from 40 meteors an hour to over 200 at that time. The only problem this year is that we have a very bright moon in the sky, so you will be lucky to see the dimmer meteors that will cut how many you see in an hour to half. If you have the opportunity and we have clear skies, bundle up and see what happens.

Our next decent bright comet, Comet Machholz Q2 has arrived and is now visible in the evening skies south and west of the Constellation Lepus, which is

south of Orion. The comet actually rises at 7p.m. but wait until it reaches its maximum elevation at midnight for best results. Of course it rises a little bit earlier each evening so by late December it will be in the sky by dusk and be 40 degrees in elevation almost due south. The night of the Gemini Meteor Shower would be a good opportunity to observe the comet, as it will be approx. 5.3 Mg. and should be naked eye. It is approximately 6.4 Mg. as of this writing, but by Christmas it should be an easy naked eye object from a dark sky location at 4th Mg. Club member Jerry Mullinex was able to locate the comet recently without any trouble. Many new reports are coming in daily and it seems the comet is very active, so by Christmas we could have a beautiful comet gracing our evening skies. You can find a nice chart showing the comets location for now and through next year. On January 8-9 the comet will make a nice pass by the Pleiades and at that time should be around 4th Mg. By the first part of February the comet will go circumpolar and be in the sky all night. For a daily ephemeris to follow and locate the comet by go to the site: [http://cfa-www.harvard.edu/iau/Ephemerides/Comets/2004Q2\\_1.html](http://cfa-www.harvard.edu/iau/Ephemerides/Comets/2004Q2_1.html).

To follow the comets progress from reports across the world go to <http://encke.jpl.nasa.gov/>

This site also has reports of all the comets that are being observed also. Another great site for following comets that also has excellent charts with each can be found at <http://www.skyhound.com/sh/comets.html>

There are several more comets that are now viewable in the evening and morning sky and you can find out more information at the skyhound site on these comets.

We have another opportunity to see the moon occult Jupiter next week on the morning of December 7. The moon will rise with Jupiter next to it and eventually pass in front of the planet at 2:51a.m. CST. The best part of the occult will happen when Jupiter reappears on the dark side at 3:43a.m. About 15 minutes prior to Jupiter reappearing, its moon Callisto will first appear then 10 minutes later the moon Ganymede will appear then in five minutes Jupiter itself. This will be an awesome sight when the planet just pops out from the dark side of the moon near Mare Crisium. Two minutes later Europa appears. It is behind Jupiter and therefore won't be visible. For those of you who missed last month's daytime occultation this one should not be missed. This will be the last occultation of Jupiter until 2017 for North America. If you go to the following site you can see an animation of how the occultation will look: [http://science.nasa.gov/headlines/y2004/images/moonjupiter/JUP\\_OCC.GIF](http://science.nasa.gov/headlines/y2004/images/moonjupiter/JUP_OCC.GIF)

While watching the occultation, after Jupiter goes behind the moon and you are patiently waiting for the planet to reappear on the other side, try and see if you can see a rare view of the huge crater Mare Orientale. During the times of



Dec. 5-7 and again January 1-4 the moon will have tipped a bit presenting a partial view of the largest crater on the backside of the moon. We can never see the total crater unless you are fortunate to orbit the moon, but at least every so often when the moon is tipped or librated enough a partial view of the rim can be seen right on the edge of the moon. Use the highest powers your telescope can handle in locating this elusive crater. It will be on the bright side of the moon during this time.

On Christmas morning everyone always wakes up before the Sun rises to see what Santa brought them, so this year go out and look to the East for a close conjunction of Mercury and Venus. They will present a beautiful Christmas Star less than two degrees from each other. Above those two you will find rudy color Mars and south of Venus the star Antares. A beautiful Christmas morning site for everyone.

Congratulations to our latest Observing Award receiver, Kevin Harris. Kevin received his Messier Certificate recently. I would also like to take this opportunity to congratulate all the members who have achieved various observing certificates this year. Brad Young and Gary Buckmaster achieved the supreme observing award this year by receiving the Master Award. This now makes three Astronomy of Tulsa Club members who have achieved this feat, KC Lobrecht was the very first in the club to receive this and her certificate number is 17. There have been only 34 people receive this certificate, so it is a rare accomplishment. Keep up the good work and hopefully these winners will inspire other members to take on the challenge of achieving an observing certificate this coming year.

We have had such terrible weather lately, lets hope the skies will cooperate with us in the next few months. One member had a good idea for these times when it is cloudy. What do you astronomers do on stretches of cloudy days, what kind of projects, books you read, etc? Lets hear from you and we will publish it in a new column called: "What I Do On A PEA SOUP Day". Bob Boston suggested this and maybe it will get some good dialog started about astronomy-oriented projects that don't require clear skies. Also Bob would like some help getting started in astrophotography. If anyone has that expertise Bob would appreciate any help you can give him.

Don't miss a new article that is starting this month in the newsletter call "Just One Club Members Adventure". This will be an opportunity for any of you out there to write about an astronomical adventure that you have had in recent months and share with us. This month Jerry Mullenix tells of his recent adventure.

That's about it from my corner this month; I wish everyone clear skies and a great holiday season. Keep your eyes skyward.

## Astroland Tidbits

By John Land

Its that time of year for many of you to renew your memberships and magazine subscriptions. To spend up your renewals use the online forms at <http://www.astrotulsa.com/Club/join.asp> Please send any inquiries about your membership or other club matters to [membership@astrotulsa.com](mailto:membership@astrotulsa.com)

**2005 Astronomy Calendars ARE IN !** - 2005 Deep Space Mysteries Wall Calendars from Astronomy magazine are here. We have 50 extra Calendars that we could not sell at the eclipse watch. As club members you can get yours for \$ 8.00 each a 33% discount over the cover price. Need several for Christmas or office gifts? Buy 3 for \$23 or 5 or \$ 37 They will be available to those attending the club meeting on a first come first served basis. If you cannot attend the meeting contact John Land to reserve a calendar.



**2005 Royal Canadian Observers Handbooks** - will be available this year at \$16.50 each. We only have 1 copy remaining. Can reorder if we have 10 or more additional orders. The Canadian Observer's handbook has been the recognized source of astronomical events and tables since 1911. You find easy to read monthly charts detailing events for 2005 plus many pages for observing planets, comets and asteroids. For details see [www.rasc.ca](http://www.rasc.ca)

**ON LINE Club Memberships and Renewals:** Club memberships are \$25 per year for adults and \$15 per year for students.

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.

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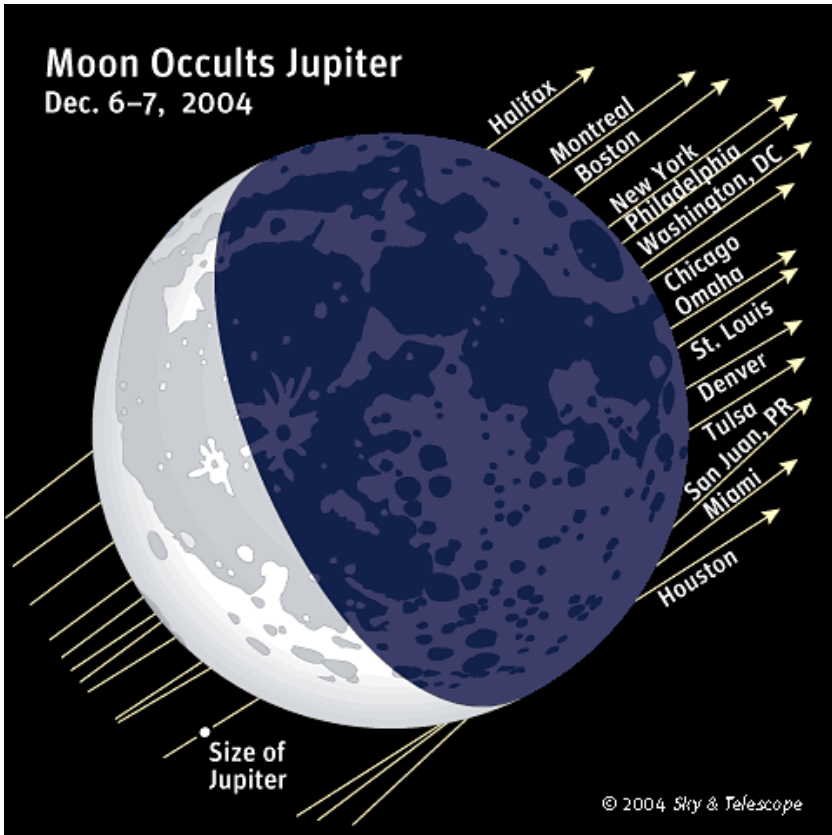
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and Telescope also offers a 10% discount on their products. NIGHT SKY is \$18 / yr A exciting new bi-monthly magazine for beginning or casual astronomers. <http://nightskymag.com/> The club has coupons for a free issue

**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](mailto: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. The spam filters may DELETE emails without clear identification!



Astronomy Club of Tulsa membership (\$25/year) includes membership in the Astronomical League and subscription to ACT's "Observer" and AL's "Reflector". "Astronomy" (\$29/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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