

Starscan

Johnson Space Center
Astronomical Society

Volume 24, Number 5 May 2008



**ONCE AGAIN.....
WE MAKE THE MUCH-NEEDED TRIP TO
FT. McKAVETT**



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Message from the el Presidente

Folks,

First off, I want to thank everyone that came out to the Fort this trip, April 3-6. What an event! I always have mixed feelings about the Spring trip as for me, in comparison to October, the quality of the skies seems to me to be more variable in the Spring. There are times, all we have done is either pitch a tent or pull the trailer, and just have the "party" in Star Party. (For those that came a particular year, it was cold and rainy trip, but we had a well "lubricated" Elvis entertaining us at the old Outback restaurant - who could forget!) Please don't misinterpret me, I've always had fun at the Spring gathering but this time was special because for the most part we had some quality skies to work with all three nights, the wind not withstanding. The food at Buchholtz Ranch, Buddy's, and the Naturalists gathering was exceptional - I actually brought quite a bit of food back with me. Not to say the number of large Dobs that showed up too, I don't think I've ever seen as much glass on that observing field as there was on this trip. May is a light month for us as all that is on the calendar are the LPI events and the Lunar Grazing that is being spearheaded by our own Paul Maley and who will be talking about this at our May meeting. June, however, is a big one with TSP staring off the first day.

Until next month...

Clear skies and good imaging,
David Haviland

LETTER FROM THE EDITOR

By Connie Haviland

This edition has stories from the trip to Fort McKavett. Don't forget to take notice of Paul Maley's occultation happening this month. Keep in mind, we are coming up to the summer and there won't be any star parties scheduled. It is full of pictures and adventures. Hope you enjoy.

LETTER TO THE EDITOR

Hi everyone: this is a reminder that the big Saturday night May 10 lunar occultation of a 6th magnitude star here in Seabrook is happening. We invite all of you to please come down on that Saturday night to help us collect data. As a reminder, the link to this is: <http://www.eclipsetours.com/events1.html>

All sites will be set up on old Highway 146 which is seldom traveled. We will have stakes with numbers positioned for each person separated roughly by 100 feet (30m). Aspects of the grazing occultation are very convenient and it will definitely be the best such event for all of 2008.

Please email me back if you have not already done so and specify the equipment (video or visual) that you will use. We especially need the assistance of all video observers.

Paul D. Maley

29.6049N, 95.1069W, alt.6m
email: pdmaley@yahoo.com



Star Parties for 2008

By John Erickson

MAY

May 10 - Lunar Occultation (Seabrook)

JUNE

June 01-08 - Texas Star Party

June 28 - Moody Gardens Star Party

JULY

July—No Star Party

AUGUST

August—No Star Party

SEPTEMBER

September 06 - Moody Gardens Star Party

September 27 - Haak Winery Star Party

OCTOBER

October 18 - Astronomy Day @ George Observatory

October 23 to 26 - Fort McKavett Star Party

NOVEMBER

November 01 - Haak Winery Star Party

DECEMBER

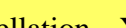
December 12 - No Star Party

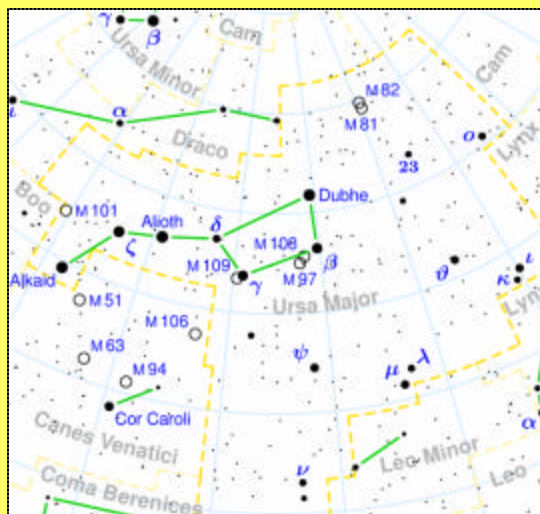
A Short Chronicle of My Messier Trek


By Fred Miller



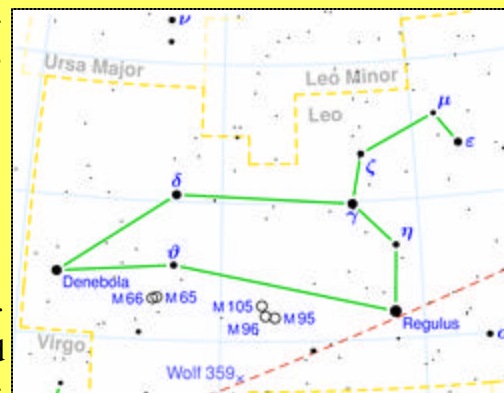
After using a couple of loaner scopes and reading, I decided that my objective would be to learn the sky and improve my observing skills. To do this my thought was to do what others had done and complete the Messier list with eyepiece sketches and observing notes to focus my attention. For equipment I chose a modest three-inch refractor of high optical quality, mounted on an alt-az mount. I ordered the mount and scope. Then I headed for my first star party to jump start things.

 I began my trek with the Ursa Major constellation. Yes, I could find the Big Dipper! What I found was, the more I looked at an object, the more I saw. When I left TSP in 2005, I had logged all the Messier objects in that constellation plus Canes Venatici. I was hooked! I would read about each object in the field. This exercise kept me from missing many details. I got some surprises along the way to my quest. I found different objects required different techniques to acquire them.



My initial technique was to  put a non-magnifying red dot finder on the approximate point in the sky where I thought the object was. I then looked through my lowest power eyepiece sweeping side-to-side looking for a fuzzy light source. When I found it the eyepiece was changed to increase magnification for a closer look.

When I tackled the Virgo Cluster at TSP 2006, I started by putting the tail star of Leo (Denebola) in the low power eyepiece field and let the galaxies drift by. This started out OK, but soon broke down, in that I wasn't sure what galaxy I was looking at. I thought about this and what I worked out was that my low-power eyepiece field of view was exactly the same distance as that across the three belt stars of Orion. I placed a clear acetate sheet over Orion on a detailed 10th magnitude star chart set and drew a circle to match the eyepiece view with a black marker.



With this I started with Denebola on the star chart and counted the number of fields over and down or up to the target I was seeking. I did the same movement with the telescope on the actual sky and “bam”—there it was! Easier than falling off a log! The finder sheet technique worked very well until I was searching for the Seyfert Galaxy, M77. What I thought was just another 10th magnitude star. Actually a quasar blazing straight at me from the core of the galaxy. I confirmed my suspicion after

The [Circinus Galaxy](#), a Seyfert 2 galaxy. Credit: A. S. Wilson, P. L. Shopbell, C. Simpson, T. Storchi-Bergmann, F. K. B. Barbosa, M. J. Ward, [WFPC2](#), [HST](#), [NASA](#).

hours of looking, by a peek through a neighbor's larger scope. I used a higher power (9mm) long eye relief (20mm) eyepiece and by increasing the distance from the eyepiece to my eye, this narrowed the field of view until the bright nearby star (omega ceti) was no longer burning out the faint arms of the galaxy so I could see them. At one point I found myself looking at the wrong keystone asterism when hunting for M13. After expending much time searching, I found my error. A very humbling experience!

On my last three objects, M76, M33 and M74, the red dot finder-sweep technique along with the clear finder sheet and star chart method had to be altered again. On M76 ("Little Dumbell"), I had to place the low



power eyepiece field carefully on the center of where the object should be. I did not see it until reaching 50 power due to its small size. (A good lesson for future small and distant objects!) On M33 and M74, I had to again carefully center the scope using a detailed star chart and eyepiece field calibrated finder sheet. I used a 3-inch finder and averted vision. (No! – Not averted imagination!), I figured I would only see them in the fast finder, but to my surprise, once I spotted both objects, I could look straight at them and pick up some detail in the f/9 scope. I finished with M74. I am told by club members that most people

finish with this one.

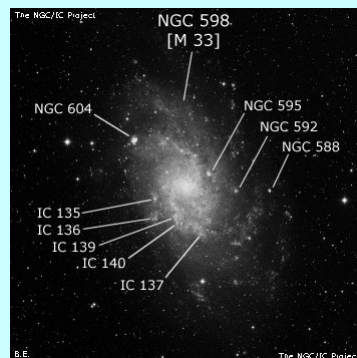
These last three objects were found on a night that started cloudy and overcast till about 11 PM. I think a small cold front pushed through and cleared the air, but it was not cold that October night. I did hyperventilate and covered my head with a windbreaker to bag M74. I previously thought near freezing weather would be required for the last two. So it shows you that patience pays, and you should not believe everything you read.



In case you are wondering, my eyes are 60 years old. It took two years and five months and most objects were found at dark sky star parties. My advice to other novices is: Head to the hills! Stop reading books and internet posts. Go to a star party and meet real observing people. Avoid astro nazi snobs who know everything and chose easy-to-use quality equipment. Don't be an astro Chicken Little and expect objects to fall out of the sky and into your lap. Relax and enjoy the experience, there is much for your personal discovery up there. For you gear-heads, I used a Stellarvue 80BV f/9.4 (80/9D objective) achromatic 80mm refractor, serial number 00007, on a Universal Astronomics Micro Star mount, on a 21" Sanford and Davis (shortened) camera tripod. I had a

Feathertouch focuser installed mid-way through my Messier hunt. I now only want one of these on all my future scopes.

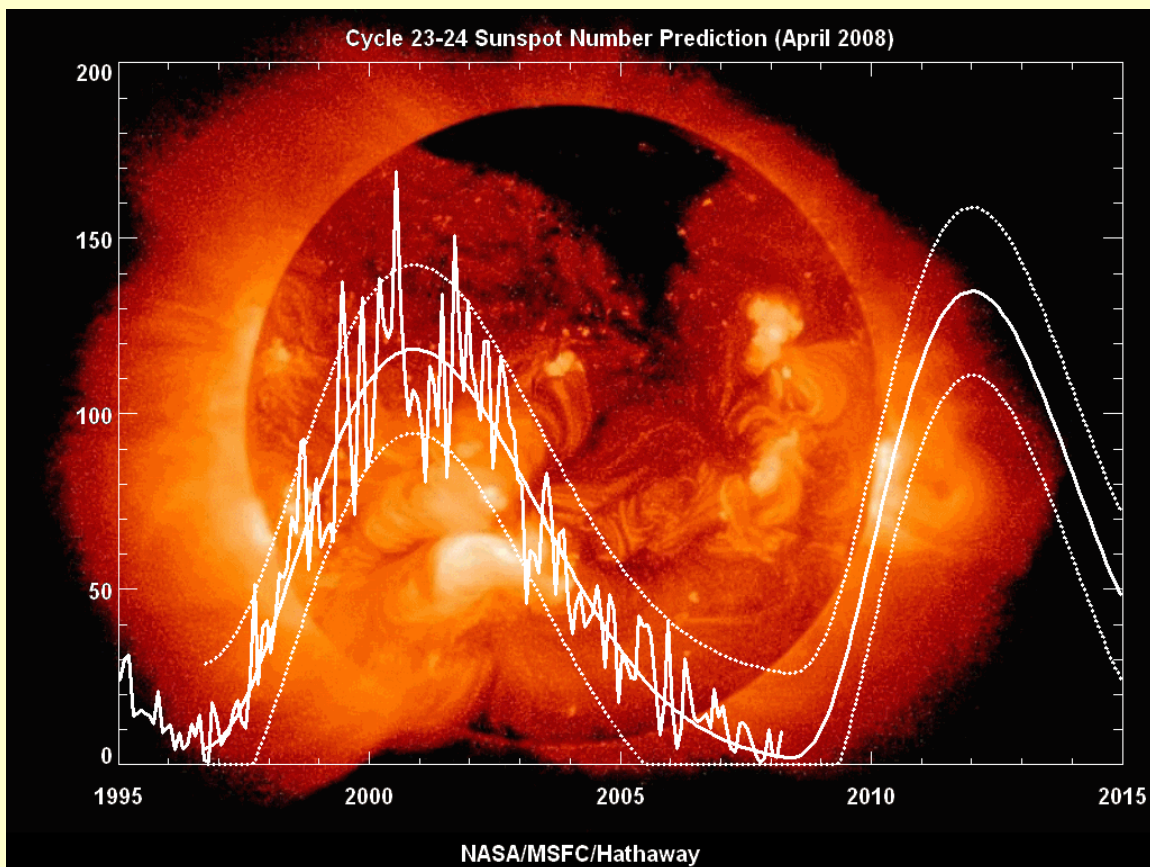
The experience has been quietly exhilarating! A new scope has been ordered to tackle the Herschel 400. Yes, I am hooked and a grin appears on my face when I think about my amateur astronomy adventures, both past and future.



SPACE CENTER HOUSTON (SCH) SUPPORT

By Walt Gardiner

This is Walt Gardiner, as a member of JSCAS, I was at SCH on April 2 with my Meade 8 inch SC scope and solar filter. I arrived at 9:00 on Wednesday and was directed to set up out in front of the SCH building. After 2 hours and 20 minutes of clouds, I was rained out. At no time on Wednesday was I able to view the sun because of cloud coverage. I arrived at 9:10 AM on Thursday and set up my scope, in front again. This time I was hampered by cloud coverage the whole day. At least I was able to let approximately 130 kids and 40 adults, view the sun. There appeared to be two relatively small sun spots at the lower left of the sun. On Friday, I arrived at 9:20 AM and was again denied access to the sun by the clouds. I finally departed at 12:30. It was one day, a success; two days, a failure in the mission. In truth, any additional scope would have been a waste of resources.



http://solarscience.msfc.nasa.gov/images/ssn_predict_1.gif





MAY OBSERVING

★ SSO: (Solar System Objects) Summary for the 15 May 08

| Object | Const | Mag | % Ill | Rise Time | Transit | Set Time |
|-----------------------------|-------|-------|-------|-----------|---------|----------|
| Sun | Tau | -26.7 | 100 | 06:27 | 13:15 | 20:05 |
| Mercury | Tau | 0.7 | 32 | 07:44 | 14:48 | 21:55 |
| Venus | Ari | -3.9 | 99 | 06:12 | 12:52 | 19:37 |
| Mars | Cnc | 1.4 | 91 | 11:16 | 18:08 | 01:04 |
| Jupiter | Sgr | -2.5 | 99 | 00:12 | 05:22 | 10:32 |
| Saturn | Leo | 0.5 | 100 | 13:31 | 20:05 | 02:36 |
| Uranus | Aqr | 5.9 | 100 | 03:24 | 09:17 | 15:10 |
| Neptune | Cap | 7.9 | 100 | 02:02 | 07:32 | 13:02 |
| Pluto | Sgr | 13.9 | 99 | 22:27 | 03:49 | 09:11 |
| Comet Boattini C/2007 W1 | Hya | 7.5 | 72 | 14:29 | 19:37 | 00:41 |

Highlighted times denote daylight events.

Lunar phases for May 08

| | | | |
|---|---|--|---|
| New  | First  | Full  | Third  |
| 05 th 12:18 | 12 th 03:47 | 20 th 02:11 | 28 th 02:57 |

Central Daylight Time

Meteor showers for May 08

| Shower | Activity Period | Maximum Activity |
|--------------------|-----------------|------------------|
| Eta Aquarids (ETA) | Apr 19-May 28 | 5-May |
| Eta Lyrids (ELY) | May 03-May 12 | 8-May |

★ BSO: (Bright Sky Objects)

Mel 111 (Cr 256, Coma Cluster) – Open Cluster in Com. Magnitude 1.8, Size 275', 80 Stars.

NGC 5139 (C 80, Omega Centauri) – Globular Cluster in Centarus, Magnitude 3.9, Size 55'.

NGC 5272 (M 3) - Globular Cluster in Canes Venatici, Manitude 6.3, Size 18.0'.

NGC 5194 (M 51, Arp 85, Whirlpool Galaxy) – Galaxy in Canes Venatici, Magnitude 8.1, Size 10.3' x 8.1'.

★ DSO: (Dark Sky Objects)

NGC 4826 (M 64, Black Eye Galaxy) – Galaxy in Como Berenices, Magnitude 8.5, Size 9.3' x 5.4'.

NGC 5055 (M 63, Sunflower Galaxy) - Galaxy in Canes Venatici, Magnitude 8.6, Size 13.7' x 7.3'.

NGC 4485/4490 (Arp 269, Cocoon Galaxy) - Galaxies in Canes Venatici, Magnitude 12.3/10.3, Size 2.6' x 1.9'/6.3' x 2.7'.

NGC 4567/4568 (Siamese Twins) – Galaxy System in Canes Venatici, Magnitude 12.1/11.7, Size 3.3' x 2.0'/4.8' x 2'.

★ CDMP: (Chris' Don't Miss Pick)

NGC 4594 (M-104) Sombrero Galaxy in Virgo, Magnitude 8.3, Size 8.9' x 4.1'.

I was so inspired with the views of the galaxies in the big glass while at Fort McKavett and upon return seeing Glenn's image, I chose the Sombrero Galaxy (M 104) for this month's CDMP.

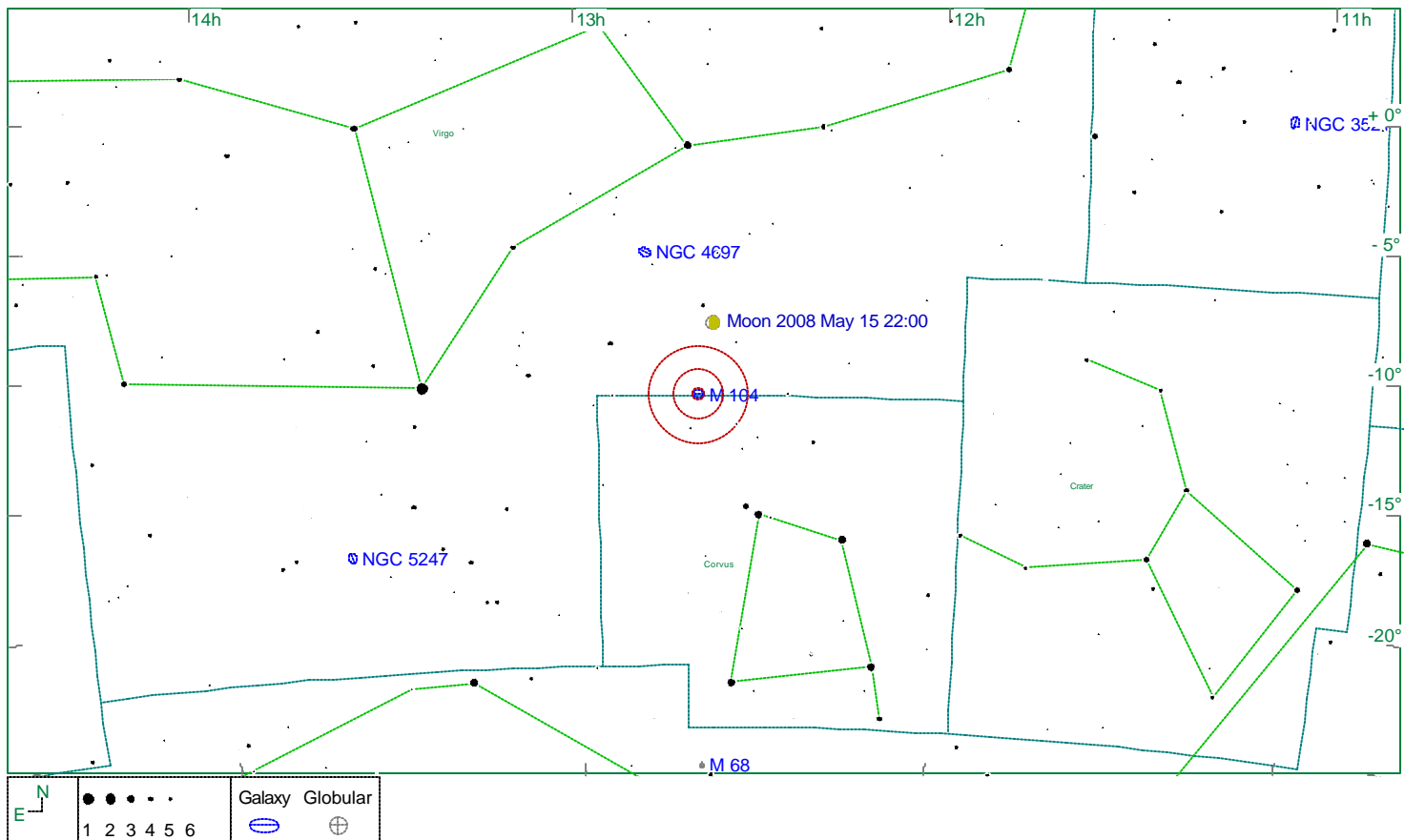
Messier 104 (NGC 4594) is numerically the first object of the catalog which was not included in Messier's originally published catalog. However, Charles Messier added it by hand to his personal copy on May 11, 1781, and described it as a "very faint nebula." It was Camille Flammarion who found that its position coincided with Herschel's H I.43, which is the Sombrero Galaxy (NGC 4594), and added it to the official Messier list in 1921. This object is also mentioned by Pierre Méchain as his discovery in his letter of May 6, 1783. William Herschel found this object independently on May 9, 1784.

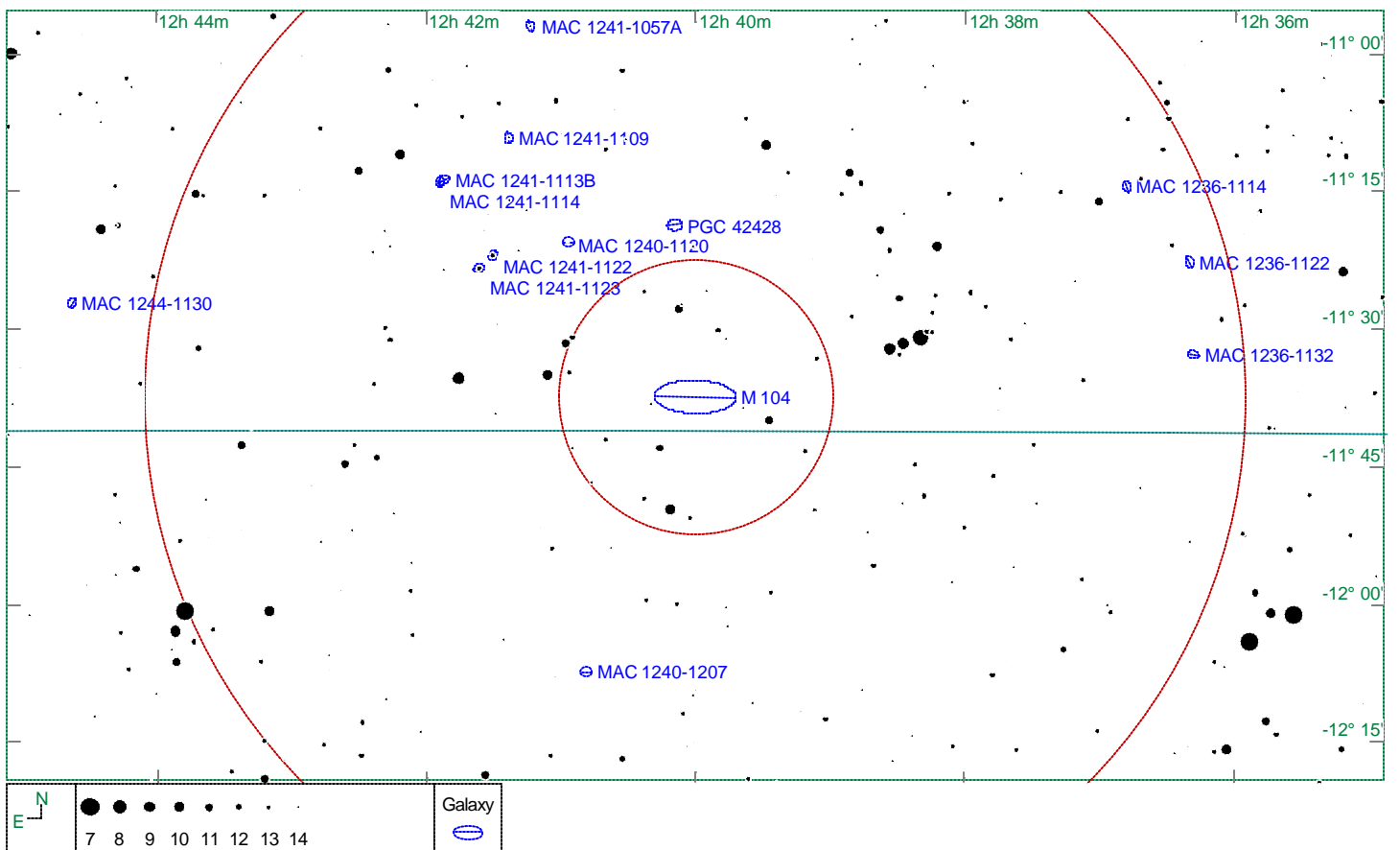
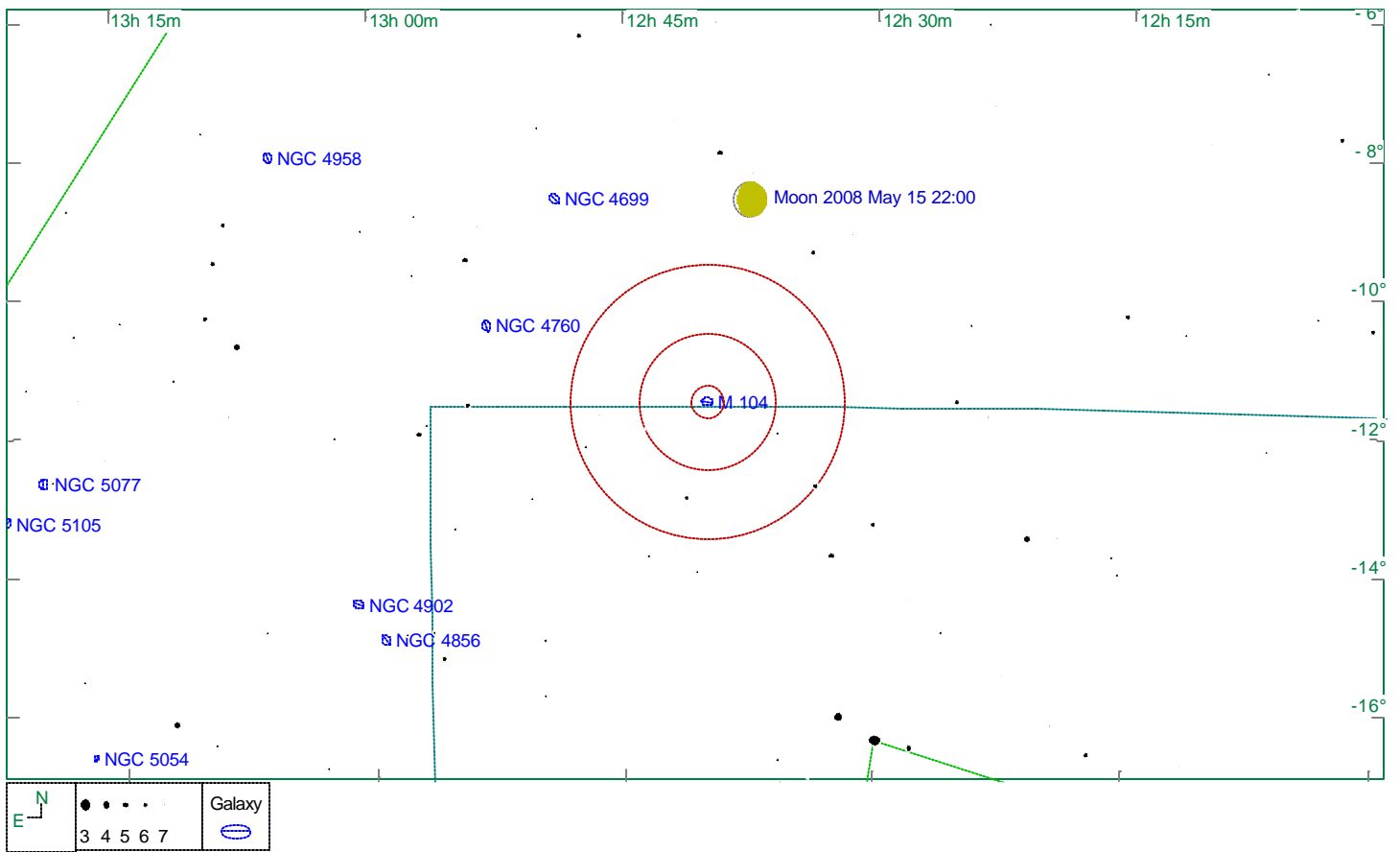
This brilliant galaxy was named the Sombrero Galaxy because of its appearance. According to de Vaucouleurs, we view it from just 6 degrees south of its equatorial plane, which is outlined by a rather thick dark rim of obscuring dust. This dust lane was probably the first discovered, by William Herschel in his great reflector.

This galaxy is of type Sa-Sb, with both a big bright core, and as one can see in shorter exposures, also well-defined spiral arms. It also has an unusually pronounced bulge with an extended and richly populated globular cluster system - several hundred can be counted in long exposures from big telescopes.

This galaxy was the first one with a large red-shift found, by Vesto M. Slipher at Lowell Observatory in 1912. Its red-shift corresponds to a recession velocity of about 1,000 km/sec (it is caused by the Hubble effect, i.e. the cosmic expansion). This was too fast for the Sombrero to be an object in our Milky Way galaxy. Slipher also detected the galaxy's (then the nebula's) rotation.

M104 is the dominating member of a small group of galaxies, the M104 group or NGC 4594 group of galaxies. For this and further info go <http://www.seds.org/> or <http://www.ngcic.org/> for more information.





MAP THE MOON NIGHT COMING TO SEABROOK!

By Paul D. Maley

As announced a few months ago, JSCAS members have a fantastic opportunity to participate in gathering science data which will improve information on the heights of lunar mountains at the north pole of the Moon. **On Saturday night May 10, a 6.3 magnitude star will appear to clip darkened mountain peaks and alternately disappear and reappear for observers along Old Highway 146 over a 4-minute period.** We need your help to time this important astronomical event! Although the path does move over a very narrow band about 2 km in width extending from Amarillo to Galveston, the Seabrook location provides a very safe area for setting up a large number of closely spaced telescopes. The closer the spacing the higher the resulting resolution of the data being collected.

What is your job? Track the star as it approaches the north pole (dark side) of the moon and when it disappears call 'out' immediately into your tape recorder. When it reappears, call 'back'. Keep doing this for as many times (any where from 1 to 4 times) as occurs at your station. After the occultation we ask you to not to forget to turn in your audio tape so we can reduce it. A micro-cassette tape is preferred. If it is on some weird or outdated format (like reel to reel tape) we will likely not be able to reduce the data.

Any telescope will work for this as long as you can clearly see about $\frac{1}{4}$ of the moon in the field of view and track it from about 10:03 to 10:08pm. Avoid rickety mountings! A motorized telescope mount will be highly beneficial since manually tracking the moon can be distracting while you are waiting for the star to wink on and off. But if you have a Dobsonian or other scope that requires manual pushing, that will suffice provided you also have a tape recorder and radio properly positioned so that your voice and the time signals record simultaneously. You do not want to be messing about moving equipment around during the occultation. **Key minimum requirements: telescope (several eyepieces), tape recorder and short wave time signal receiver (or FM car radio).** We will be transmitting time signals on FM during the event (frequency to be announced).

The plan is to set up all observers along the west side of Old Hwy 146 with each person separated from the next by about 100 to 300 feet depending on the number of participants. No two observers will see precisely the same thing since your displacement relative to the path of the occultation will assure that a unique part of the lunar topography causes the disappearance characteristics for you. If for some reason you do not see any occultation this is still very valuable data since it establishes an upper limit on lunar mountain peak heights for those librations; so do not be discouraged.

Park your car off the road on the west side and scout the area around the car to be sure there are no obstructions, fire ants, standing water, etc. This will have been done in advance; but double check anyway to be sure you are comfortable with your site.

For more information and a detailed timeline, check out the web link: <http://www.eclipsetours.com/events1.html> Read the plan and process carefully. PRINT OUT THE HOUSTON TIMELINE section and bring it with you. **But before you leave your house, wait until 6pm on May 10 and check the site again to see if a GO or NO GO sign is posted indicating the expedition is either going forward or will be cancelled for weather reasons only.**

Our meeting place is shown in figure 1 where Red Bluff meets Old Highway 146. At the intersection you will be directed to a series of stakes set up by Doug Rask along the west side of Old Hwy 146 and given a piece of paper specifying your assigned stake number and the FM frequency over which we will broadcast time signals. If you are unfamiliar with radio station WWV, time ticks are broadcast

your watch. So, since the occultation occurs after 10pm the announcer will say each minute 'At the tone the time will be 3 hours 4 minutes Coordinated Universal Time' and this will be the same as 10:04pm, for example. Drive to the stake with that number, set up your equipment and follow the timeline as posted on the web link. Set up your scope as close to the stake as you can. The stake has been surveyed and it is vital you set up next to it. Leave it alone after you depart the site since it will be picked up later.

JSC Amateur Radio Club will have a car set up in the middle of the zone re-broadcasting time signals. Do not forget to record these signals plus your voice during the specified period listed in the timeline. A test period of transmission will occur between 9:30 and 9:40pm. Then the signals will be cut off. Be certain the volume of time signals is high enough, especially if you are using the interior car radio so that your tape recorder picks up your voice and the signals. Then at 9:50 time signals will again be continuously transmitted on FM and will be terminated at 10:10pm. All this is written in the timeline posted at <http://www.eclipsetours.com/events1.html>. Don't forget to bring this timeline with you. The purpose of having two persons at each site is so that the observer can focus on equipment set up and the second person can keep him/her on track with the time. It is very easy to lose track of time if you are encounter unexpected equipment difficulties. Note there are no bathrooms in the area!

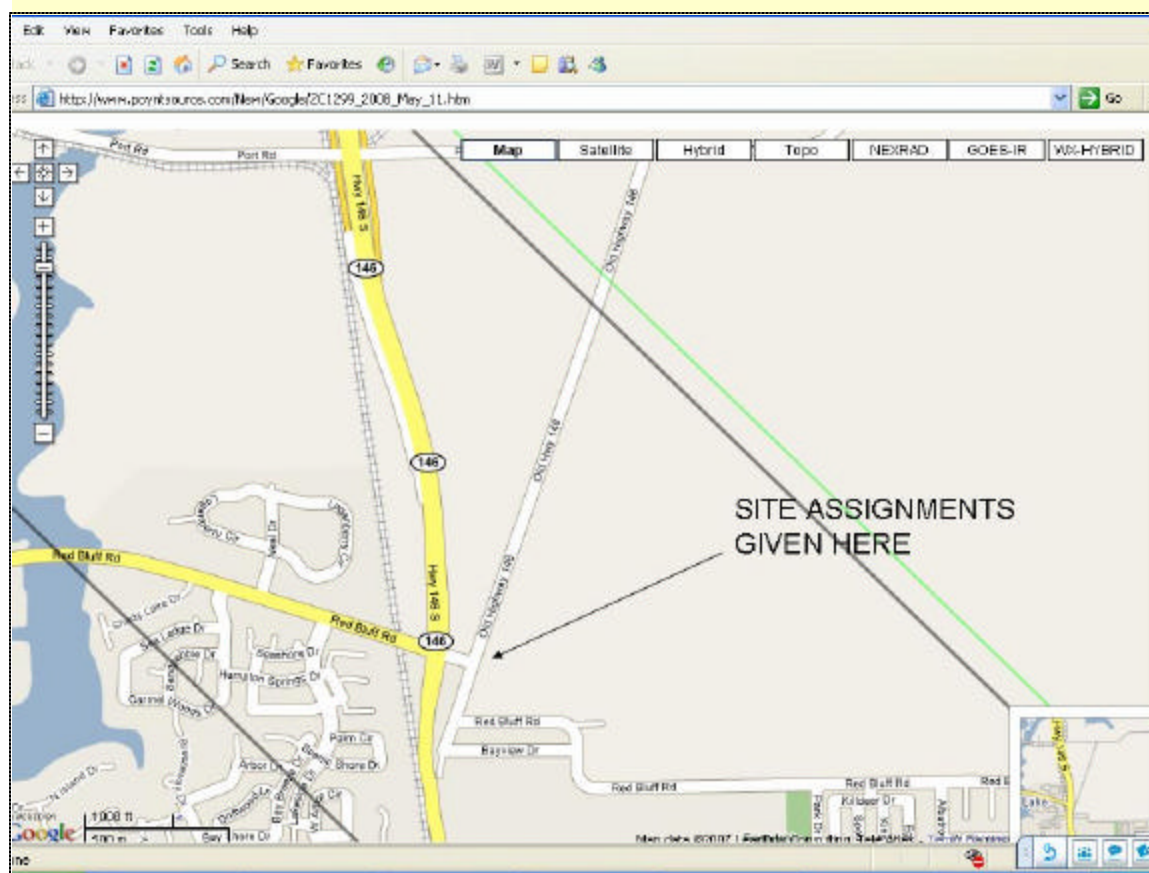


Figure 1. Meeting location. Be here between 8:45 and 9:00pm on May 10. Please don't be late!

You will need to be sure you are looking at the correct pole of the moon. Figure 2 shows the view with the unaided eye and with binoculars –NOT necessarily the same view through your telescope. You will need to watch for a small star to appear near the dark limb. The moon will appear

to be moving toward it. If in doubt about whether you are looking at the right place, switch to the alternate pole. You can also move your telescope to the right. The moon will be located due west. Pushing it to the right is in the direction of north and hence, the limb you see before the moon completely leaves your field of view is going to be the north lunar pole.

If you have not contacted me already and would like to participate, please send an email to pdmaley@yahoo.com or call me at 281.2440208 and let me know of your interest. We will be glad for you to witness this very favorable phenomenon.

CHARLIE'S CHALLENGE

Mark V. Sykes of the Planetary Science Institute argues in the 28 March issue of "Science" (p1765) that a better definition of a planet than the one recently adopted by the International Astronomical Union is as follows: "A planet is a round object (in hydrostatic equilibrium) orbiting a star." He concludes that there would currently be 12 solar planets including the asteroid Ceres, Pluto and Charon as a double planet, and the recently discovered and distant Eris. Sykes objects to the current definition that requires that a planet clear the area around its orbit of other regularly orbiting bodies because of the Trojan asteroids that straddle Jupiter's orbit. He also objects to an unintended consequence of the current definition that would require planets increasingly far from the Sun to be increasingly massive.

"Science" is perhaps the most prestigious scientific journal in the world, so those of you who object to Pluto's exclusion now have some scientific heft on your side. My question would be, following John Gorkdeuk's excellent presentation on the subject: What about the Earth's Moon? It is round and its orbit is always curved away from the Sun.

NEWS FROM AROUND THE CLUB

Lisa posted this last month, but bears repeating. I know we have very dedicated astronomers out there and JSCAS members are very community oriented. So the community is asking for our help.

I need telescopes for a star party on Wednesday, May 21st, at the LPI. LPI is putting on a lecture regarding black holes and other deep sky anomalies, for a gifted co-op program for kids, ages 5-16. Afterwards, we would like to have some scopes set up for the kiddos to look through. The lecture is from 5:30 to 7:30 and we would like to do some viewing from 7:30 to (approximately) 9pm. I believe sunset is around 7:20ish. Please respond if you can come. The email address to respond to can be either on the list-serv or me personally, at tullyfields@gmail.com . Thanks....

Lisa Hommel

May 09 - JSCAS Meeting - Paul Maley

May 10 - Lunar Occultation (Seabrook)

May 21 - LPI gifted coop kids group lecture and star gazing (Wednesday)

Hi guys,

Here's a URL that shows how the Shuttle components are assembled prior to launch. Kinda resembles Chuck's telescope assembly procedure..<g>

<http://bmwsporttouring.com/ubbthreads/showflat.php?Cat=0&Board=UBB11&Number=1016238>

Andy Saulietis aka Yoda

Here is an example of what you will see



"Pappy's Star"

By David Haviland

I had a very peculiar thing happen while doing the public star party Saturday night at the Fort. My CGE had been giving me some temper tantrums and all was well when I wiped his little mind clean. I wanted to start off Saturday night being able to cue in what I wanted and not have to “fight” with the Go-To during a public star party. I started fresh with time, location, etc., telling it to go back to the Factory Defaults seemed to have worked well. After aligning on Polaris, I had it slew over to Beattleguise and once aligned I told it go find something obvious like M42. Within a short punch of the button, it was there and M42 was in the 25mm FOV it all of its glory. A couple of people wandered up and looked and were impressed as it is always fun to get that "Oh my gosh!" expression from folks peering through the scope.

Well, the next group was group of about five. They were a pleasant group, and they looked at M42 and were as impressed as the couple before. However, once they were done with M42 the elder lady of the group approached me with a request. It turns out that that three of them were siblings and their father had passed away about two weeks prior. What they had done was in memory of their late father is that they had "purchased" a star for him and they were asking me to cue up "Pappy's" star in my scope. I swallowed hard and told them I'd try to find his star but told them there were billions of them out there. I went on to say that what I would be able to find would not be a lone star in the field of view but his star would be among many in view. What I did not tell them was that my concern was that I considered my scope cursorily aligned (in my opinion). Sure it would slew to objects I cued in and that I could peck out objects with minor adjustments but it was not tuned to the extent such that objects dialed in would pop-up dead center.

Fortunately, they had a piece of paper with what became conflicting bits of information, leading me to think the agency that sent this along, erred in some way or there was an error in transcription as the RA and Dec were hand-written but at least they had a printed star-chart of the location of this star. By star-hopping geometry, divide the distance between Alniltak (leftmost star of Orion's belt) and Betelgeuse in thirds, go a third the way up to Betelgeuse, from that point, go 90' west a third of the distance traveled up from Alniltak. This basically put "Pappy's" star slightly up and to the left of Alnilam, or the middle star of Orion's belt – Just about where I put a yellow circle in the figure. I thought with a 25 mm the FOV would be good enough to get to the field simply by guesstimating where the star rested, but my concern centered around the RA and Dec. As a point of reference, and I don't know what compelled me to do it, but I poked around on my hand controller for the RA and Dec of M42. The RA was close, which I understood since I'm in the neighborhood but the Dec may as well been off in the direction of Mars for all I knew. It was nowhere near Betelgeuse's belt, let alone the intended star. Thinking I was missing something and the CGE knew something I didn't, I went ahead and plugged in the RA and Dec numbers for "Pappy's" star and hit "Enter", if for nothing else but for my own quest to know if they needed to check the coordinates. Sure enough, my CGE 11 was pretty much in line with the intended star in RA but was pointing well below Orion's foot, quite near the horizon, when it came to Dec. Whoopsie! Even the group recognized something wasn't quite right and I suggested they needed to double check the location of "Pappy's" star. So, as one might guess, I opted for the "star-hopping" approach hoping the map was correct and the RA and Dec were transcribed incorrectly. I asked for the map back and told the scope to slew back to M42 and I manually guided it to where my eye, the Tel-Rad, and gut told me "Pappy's" star best rest. I took a peek, focused a bit, took the brightest star in the FOV and centered it. I told them this was my best guess and that based on the star chart I felt confident that their star was in the FOV, though not necessarily the brightest one there. They all took turns looking at it and it was clearly an emotional moment for them. All I could do at this point was sit back and hope they found what they were looking for. I know they asked at least one other person nearby the same thing and I never caught up with that person to determine if he had any better luck that I did, or did not have.

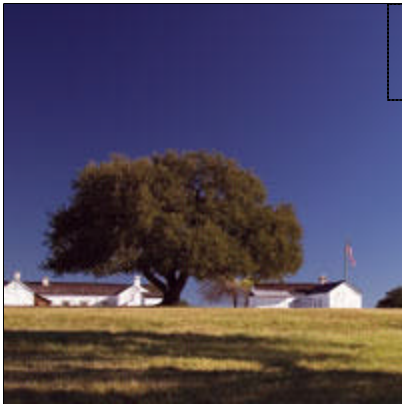


FORT (Forward Observing Recon Team)

By Ken Lester (special operations team)



FEEDBACK FROM THE APRIL FT. MCKAVETT STARPARTY— (cont.)



My spring trip to Fort McKavett was one of the best times I've had! Not only did I have great friends to visit with, but Friday night was the best imaging sessions I've ever had. This trip I was making an attempt to image galaxies. M104, otherwise known as the Sombrero Galaxy, is one of my favorite objects to view through my 20" Obsession. I've attempted to image this galaxy at my house in Santa Fe Texas but the light pollution severely limited my ability to obtain a suitable image for posting. Combining dark skies and calm winds at the fort, this was a special night to remember. Glenn Schaeffer

M104-The Sombrero Galaxy - The Sombrero Galaxy, also known as M104 or NGC 4594, is an unbarred spiral galaxy in the constellation Virgo. It has a bright nucleus, a large central bulge, and my favorite visually, a prominent dust lane. The dark dust lane and bulge give this galaxy the appearance of a sombrero. At 9.0 magnitude, this galaxy is one, if not my favorite galaxy to observe through my 20" Obsession telescope visually. This was my first trip to Fort McKavett that I was not haunted by winds. (At least Friday night) I was able to obtain suitable 64 sub-frames out of 74.



Photographic Details:

Date & Location: April 4th, 2008, Fort McKavett, Texas.

Scope: Obsession 20" f/5 on a Tom Osypowski Dual Axis Equatorial Platform, Orion 100mm f/6 Guidescope.

Autoguider: SC1 Mod Celestron Neximage Cam, Shoestring GPUSB guide port interface adapter, and Guidemaster software.

Camera: Canon 20D DSLR (non-modded), homemade serial control shutter release cable, and DSLR Shutter from Stark Labs.

Filters: None

Conditions: Temp 49F, Humidity 29%, Winds calm, Transparency 9/10, Seeing 7/10.

Exposures: 64 x 60sec @ 3200 ISO Sub Frames, 10 Darks average combined for master dark.

Post-processing: 3504x2336 Raw files converted to Lossless 16-bit FITS, calibrated, aligned, and combined with ImagePlus. Final processing PhotoImpact Pro.



Operation H B² 50
(Operation Happy Birthday Bob, 50th)

In addition to the regular fun that we are used to on our trips to Fort McKavett there were some last minute plans put in place to have an early celebration of Bob Taylor's 50th Birthday! Upon checking the calendar and trying to decide a good time to celebrate this momentous occasion it was decided on Thursday afternoon to proceed with plans to pull the whole thing together with a deadline of noon on Saturday. That's right a day and a half to complete the task at hand! We had the advantage of already having all of the people present that would make this celebration a success. A team was formed and everyone went into action! We pulled it off (even with a last minute cake/bead malfunction).

Project Personnel:

Project Manager – Karen Taylor

Technical Consultant – Steve Scott

Logistics & Procurement Team:

Shirley Schaeffer

Karen Taylor

Sonia Scott

Steve Scott

Becky Ramotowski

Acknowledgement Coordinator (Signature gatherer) – Ann Micklos

Project Scheduler – Shirley Schaeffer

Historical Commissioner in charge of Paleontology:

Becky Ramotowski

Shane Ramotowski

Implementation:

Lead Technician – Aldora Louw

Quality & Safety – Ann Micklos

Tactical Diversion Specialist – Shane Ramotowski

BIRTHDAY BOY – BOB TAYLOR



Birthday cake complete with dinosaurs and LED's!





This is a small report on my new Celestron CPC 9.25' XLT telescope.



First light was on March 14, 2008 at Ken Lester's place. We set it up and went to M42 and WOW what a sight. We also explored other objects and what a sight, I saw more than I have ever seen thru my Orion 4.5' EQ Short Tube. My first thoughts were "I have a scope now." At the Fort on Friday and Saturday nights, April 04/05, I spent time on M51, the Whirlpool galaxy. I could also see the companion galaxy and that something was going on between them, but what? The longer I looked the more I could see of the spirals of the bigger galaxy and the spiral arm going toward the smaller galaxy. I used both a 40mm and a 25mm eyepiece. My favorite object is M42, the Orion Nebula, where I also used the 40mm and 25mm eyepieces. I saw the trapezium and WOW!! I also looked at Saturn, M65/66 of the Leo Triplet, M36, M104 and M64. What a view. I know the universe is vast and exciting but now that I have a scope that lets me look further than I have ever, I am just amazed at my new hobby: Astronomy. I am glade that I am with JSCAS and a wonderful, nice and helpful bunch of people. I just wish I could see everyone more than twice a year. Thanks



Lynn Dippel

This is an image on my blog that I made at the Fort. This one was done at 4:30 that Saturday morning. There were only a couple of people on the field, so I took that opportunity to paint the Fort ruins with my red LED flashlight. Looks like I need to practice painting a bit more, so I'll try it again in the Fall. In the meantime enjoy. I had a blast, and can't wait to return.



Editor's Picks for
the Wired.com Night Photo Contest. By Wired.com Photo Department Star Trails at Fort McKavett
"Fort McKavett, Texas. Nikon D70 on tripod 20 minutes f/4 ISO 400."

Submitted by Becky Ramotowski

What's Happening at the George!!!

Cynthia Gustava

George Observatory May Events

Friday Night Groups (all times are 19:30 to 22:00)...Volunteers for domes and deck scopes are needed. Contact Cynthia Gustava at cynm31@comcast.net.

May 2 – Home School Star Party (Building Manager: Peggy Halford)

May 9 – Memorial Middle School (100 people...Building Manager: Betty Glass)

May 16 – Gonzalez Elementary (40 people...Building Manager: Cynthia Gustava)

May 23 – HMNS Member's Night (Building Manager: Barbara Wilson)

Saturday Night Public Viewing (dusk to 23:00)...Volunteers for domes and deck scopes are needed. Contact the building manager teams below.

May 3 – Mary Lockwood and Joe Mills <mplockwood@att.net or k5jmm@yahoo.com>

May 10 – Barbara and Buster Wilson <bwilson@hmns.org or retsub@ix.netcom.com>

May 17 – Justin McCollum and Carl Sexton <justinmccollum@hotmail.com or carlsexton@hotmail.com>

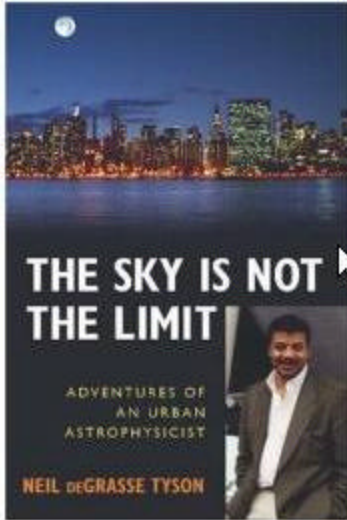
May 24 – Leonard Ferguson and Cynthia Gustava <leonardferguson@mac.com or cynm31@comcast.net>

May 31 – Jack McKaye and Wes Whiddon <jemckaye@comcast.net or wwhiddon@concentric.net>



JSCAS LIBRARY & BOOK REVIEW

By Bob and Karen Taylor



Cool, classy, articulate and brilliant—rarely do all of those adjectives apply at once to an astrophysicist. But Neil de Grasse Tyson is no ordinary scientist; as the director of New York City's Hayden planetarium, his job is to inspire the public with the beauty and grandeur of the universe, just as he was inspired there in his youth. *The Sky Is Not the Limit* is his memoir of the events leading from his birth to his acceptance of his dream job and beyond, and is a marvelously entertaining look at one man's pursuit of his life's calling. Tyson emphasizes the nurturing roles played by his parents, friends and teachers, in contrast to the sometimes well-meaning but always disappointing discouragement he experienced from all sides in his quest for his Ph.D.

Of course, it's still shamefully difficult for a black American scientist to merit the same quality of attention as his or her peers, and Tyson's insights into the subtle but still-pervasive racism in academia are enlightening. His description of his own shock at seeing himself on television—a black man sought as an expert on something other than being black—is powerfully moving. But, as with his other books, like the gorgeous *One Universe: At Home in the Cosmos*, the quest for knowledge is more important than the obstacles, and his spirit, determination and sense of humor prove that the sky really isn't the limit. —Rob Lightner

A huge THANK YOU goes out to Hernan Contreras for his donation of books to the JSCAS Library. Hernan dropped a box of books off that I will be adding to the library here at the Taylor house. Here is a list of the books he donated:

The Origin of Earth – W.M. Smart
Frontiers of Astronomy – Fred Hoyle
Celestial Objects for Common Telescopes, Vol I, The Solar System – Rev.T.W.Webb
Celestial Objects for Common Telescopes, Vol II, The Stars – Rev.T.W.Webb
Peterson Field Guides Stars and Planets – Pasachoff/Menzel
Photoelectric Photometry of Variable Stars – Hall/Genet
Observational Astronomy for Amateurs – J.B.Sidgwick
The Handbook of Astronomical Image Processing – Berry/Burnell
The Finest Deep-Sky Objects – Mullaney/McCall
Planets and Life – P.H.A.Sneath
Observing Variable Stars, A guide for the beginner – David H. Levy
Introductory Astronomy & Astrophysics – Zeilik/Smith
Sky Catalogue 2000.0, Vol 2, Double Stars, Variable Stars & Nonstellar Objects – Hirshfeld/Sinnott
Atlas of Deep-Sky Spondors – Hans Vehrenberg
Catalogue of the Universe – Murdin/Allen
National Geographic Picture Atlas of Our Universe – R.A. Gallant

Your generosity is truly appreciated!
JSCAS Librarian,
Karen Taylor

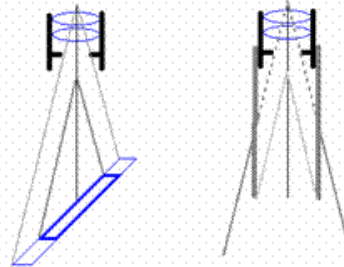




We have had several things coming and going in previous months, but we don't have anything to post this month.

ADVANTAGE Telescope Repair

- ❖ Telescope restorations
- ❖ Pristine optics cleaning
- ❖ Precise "Last Word" collimation
- ❖ Repairs, modifications, maintenance
- ❖ Lowest price repairs in the U.S.
- ❖ Local pick-up, USPS, or FedEx Ground shipping



PO Box 2238 Brenham, TX 77834 in "Blue Bell" Country
Call: 713-569-7529



JSCAS Mirror Lab

Matt Hommel

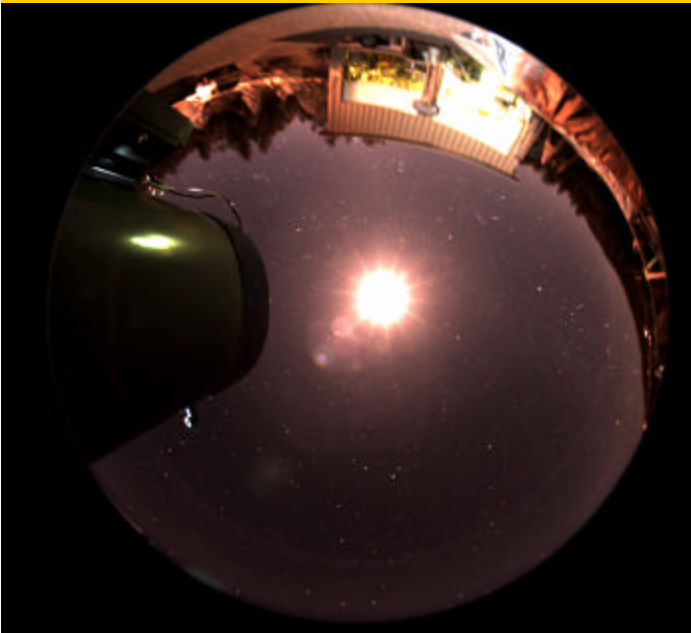


I have forwarded all the required specs to the engineer who will be building the internal mechanism for the mirror coater. He is flooded with work right now and it will be awhile before he can complete the design.

Cheers,
Matt.

Members' Gallery—May 2008
Taken by Several Members of the Club

THIS MONTH WE HAD SEVERAL GREAT SHOTS TAKEN BY OUR MEMBERS, SO I INCLUDED AS MANY AS I COULD.



This image was taken with an STL11000 color camera with an 8mm fisheye, 5min at f5.6. Taken piggyback on the JSC-EOL 16" SCT at my place in NM-Star's End. Strictly gee-whiz!

Also, one taken at FtMcKavett a few weeks ago, same setup except 60sec exposure and accidentally left-in red filter

Taken by Andy Saulietis



Atlas V launch, April 14th, taken by our newest photographer, Karen Taylor. Nice job Karen!!



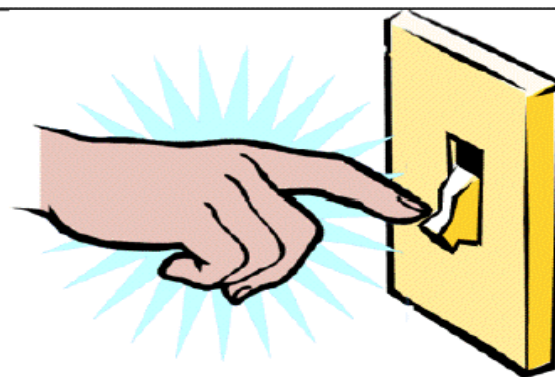
LIGHTS OUT – EARTH

Above is one example of our efforts in participation with “Lights Out” around the world. This is the Golden Gate Bridge with her lights out.

Help turn off the lights...

Join the
International Dark-Sky Association (IDA)
<http://www.darksky.org>

"To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting."



Brazosport Astronomy Club
Meets the Third Tuesday of the month, 7:45p.m.
At the Planetarium
400 College Drive
Clute, Texas (For more information, contact Judi James at the Planetarium 979-265-3376)

Fort Bend Astronomy Club <http://www.fbac.org>
Meets the third Friday of the month, 7:00 p.m.
First Colony Conference Center
3232 Austin Pkwy
Sugarland, Texas

Houston Astronomical Society <http://spacibm.rice.edu/~has>
Meets the first Friday of the month, 8:00 p.m.
University of Houston, University Park
Science and Research Building, Room 117

**Houston
Area
Astronomy
Clubs**

Johnson Space Center Astronomical Society

2008-Club Officers

President – David Haviland
Vice President – Chris Randall
Secretary – David Haviland
Starscan Editor – Connie Haviland
Star Party Chairperson – John Erickson
Librarian – Bob and Karen Taylor
Historian – Susan De Chellis
Scientific Expeditions – Paul Maley
Web Master—Chris Randall

SIGS

Observing Awards – Triple Nickel
Astronomy 101 – Triple Nickel
CCD Imaging – Al Kelly
Binocular Observing – “OPEN”
Telescope Making – Bob Taylor
Deep Sky Observing – Chris Randall

Starscan Submission Procedures

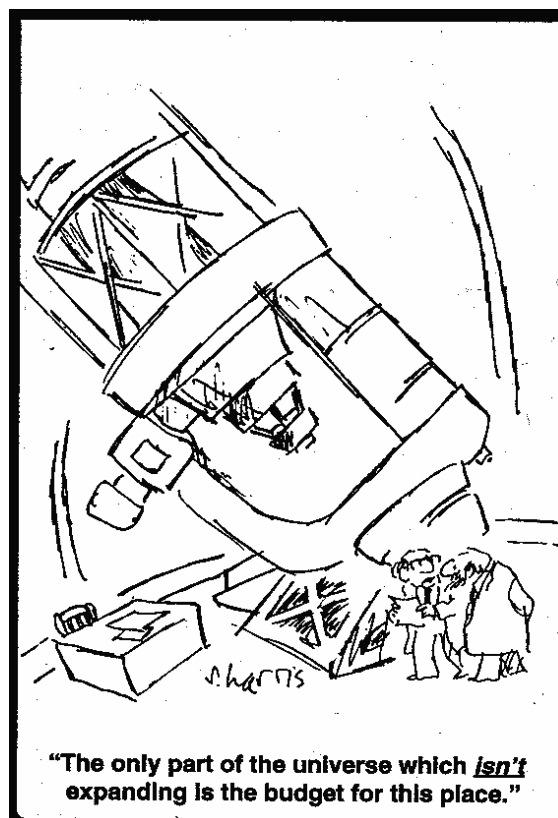
Original articles of some relation to astronomy will be accepted up to 6 p. m. (18:00 hrs) on the 25th of each month. THE most convenient way to submit articles or a Calendar of Events is by email and is preferred, but hard copies (CD, disk) are also accepted. All articles must include author's name and phone number. Also include any picture credits. Word, WordPerfect, and text files will be accepted. I have set up a special email account so that I can keep all of the Starscan articles, pictures, information, etc, separate from all of the other email I get. This makes it much easier to edit and set up the Starscan

Please send all submissions to:

conniesstarscanaccount@gmail.com

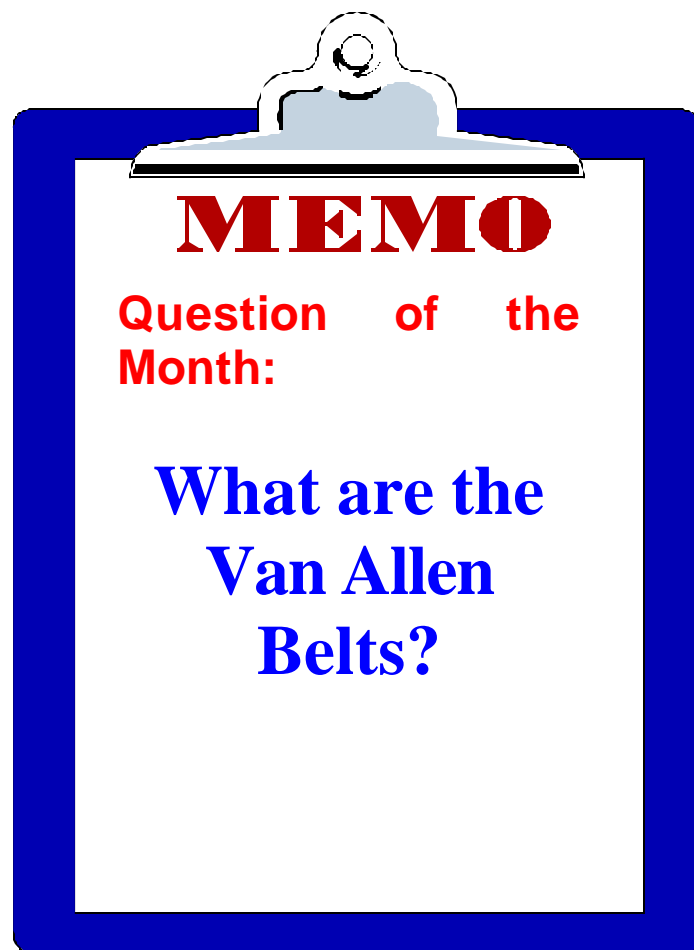
The author of individual articles bears all responsibility for publishing any e-mail addresses in the article on the World Wide Web

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Astronomy and Kids

This is the section strictly for kids (or kids at heart). We will be including information, stories, ideas, puzzles or anything that has to do with astronomy. The only difference here is, it will be directed for children. We don't discourage parents or any other adult to get involved. In fact, we encourage it strongly. So we hope you enjoy this section and if it touches a child's interest in astronomy, our



WORD SEARCH SOLUTION

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(Over,Down,Direction)

APOLLO(1,6,NE)

ASTRONAUT(20,6,W)

ASTRONAUTICAL(1,7,SE)

CATASTROPHISM(22,5,S)

COLLIMATION(18,26,NE)

CONFIGURATION(14,3,SW)

COSMIC(4,4,SE)

ETACARINAE(1,24,E)

FOSSIL(15,21,S)

GEOLOGY(12,15,N)

INTERFEROMETER(1,14,NE)

KEYHOLE NEBULA(3,30,E)

KILMER(23,19,SW)

METEORITES(29,9,S)

MOODY GARDENS(30,4,W)

OBSERVATOR(18,19,SE)

PALEONTOLOGY(12,16,NW)

SATURN(5,20,E)

SCHMIDT(8,10,NW)

STARPARTY(15,20,SW)

YURI GAGARIN(13,18,N)

Playing with Magnetism

Introduction:

What is magnetism? We have all had the experience of using simple magnets to hold notes on surfaces such as refrigerator doors. Magnetism is the force produced by magnets which does all of the "holding". Magnetism is also a very important force in nature which can move hot gases in stars, and in the space around Earth. The students will investigate magnetism and magnetic forces. The students will explore the attracting and repelling properties of magnets through hands on experiences.

Objectives:

- The students will investigate that magnets are attracted to items, which contain metals such as iron.
- The students will experience that a magnetic force is an invisible force.
- The students will explore a magnet's attracting and repelling properties.

Key Terms:

Magnet - a metal that can attract certain other metals.

Magnetic Properties - refers to an item which can attract or repel items as a magnet does.

Poles - refers to the two areas of a magnet where the magnetic effects are the strongest. The poles are generally termed the north and south poles. Poles that are alike (both north or both south) will repel from each other, while poles that are different (one north, one south) will attract to each other.

Materials:

Magnets – one per student

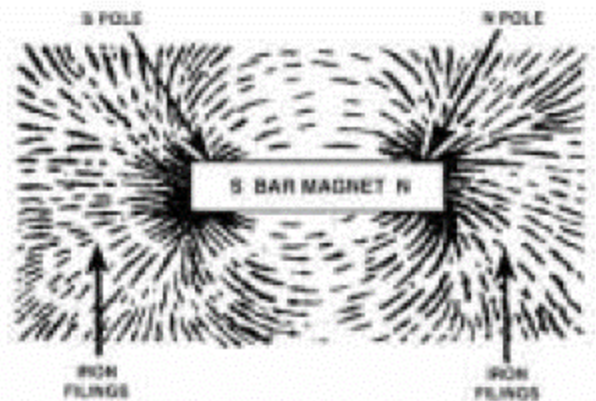
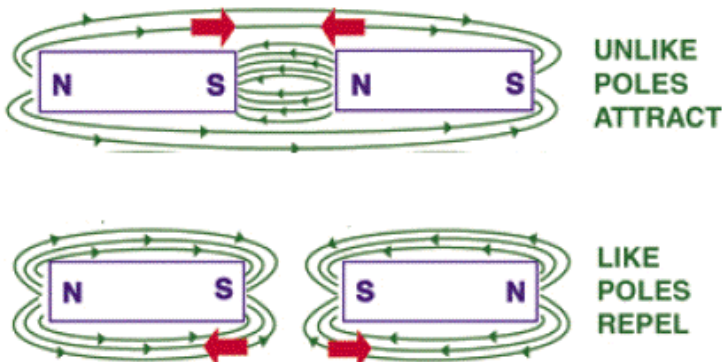
Paper clips

String

Books

Ruler

Various metal samples to test.



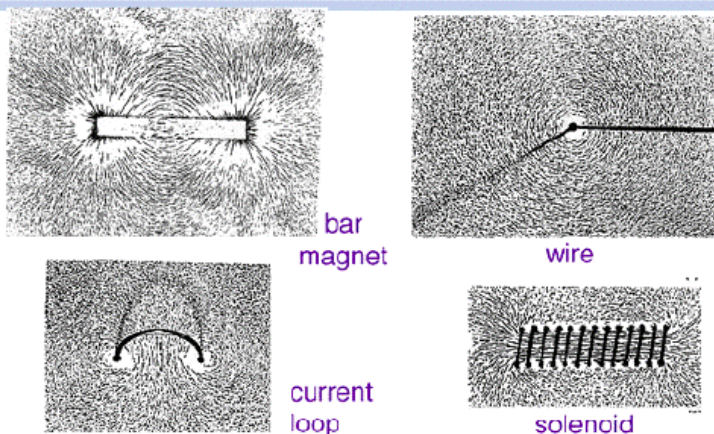
PROCEDURE:

- Give each student a magnet. Have the students explore the metallic samples that the magnet would be attracted to. The students should look at the objects and find common characteristics. The students should record their findings in a learning log.
- Tape one end of a piece of string to a desk; tie the other end onto a paper clip. Take a second piece of string and suspend the magnet from a ruler anchored with books. Adjust the level of books so that the distance between the magnet and the paper clip allows the clip to stand up without touching the magnet. The students should see that a magnetic force could be invisible. You can place pieces of paper or cloth between the clip and the magnet to show the strength of the magnetic force. Can the students find materials that block magnetic forces?
- With the string still attached, have the students try to raise the paper clip from the desk with a magnet. They should try to accomplish this without letting the magnet and paper clip touch. The students should keep a log of how they were able to accomplish this; what methods and strategies were used.
- Allow the students time to explore the attracting and repelling properties of magnets. They should be able to demonstrate that a magnet has two ends or poles that will attract or repel from other poles. Have the students observe what happens when two magnets are repelling from each other. The students should find a partner and discuss what they have seen and whether their classmate was able to discover the same properties.

Conclusions:

The students will learn the characteristics of magnetism. The students will demonstrate the attracting and repelling properties of magnets.

Examples of Iron Filings Defining Magnetic Field Lines



CROSSWORD PUZZLE

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S C D E G Z W G H I R F O I R P B F C M I I B S I Z T S X Z
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U F B F N N W T Q Z M E R U H H Y I C M L V P S O I Z O Y I
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AVERTED VISION
 BETALEONIS
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 CASSIOPEIA
 DELTA SCUTI

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 MESSIER
 OCCULTATION
 POLES

SEYFERT GALAXY
 SOMBRERO
 SUNSPOT
 URSA MAJOR
 VIRGO
 VIRGO CLUSTER

ANSWER TO LAST MONTH'S "QUESTION OF THE MONTH"

Mr. Contreras mentioned this in an email that brought on some interesting comments about the names of the week and their origin. Do you know what they are?

The week is seven days because of the 5 wandering stars (planets) the ancients could see plus the sun and the moon. Some of the names of week days were later changed for gods names in English, but the week days in Spanish still retain vestigages of the original names.

| | |
|-------------------|---------------------|
| Sunday (Sun) | Domingo |
| Monday (Moon) | Lunes (lunar) |
| Tuesday | Martes (Mars) |
| Wednesday | Miercoles (Mercury) |
| Thursday | Jueves (Jupiter) |
| Friday | Viernes (Venus) |
| Saturday (Saturn) | Sabado (Sabath) |

This was a news article I found online and I felt that it would be something that should be noted for all ages. I only put it here because sometimes children are unaware of what could happen.

http://abclocal.go.com/ktrk/story?section=news/national_world&id=6067510

Man gets jail for shining laser at pilot



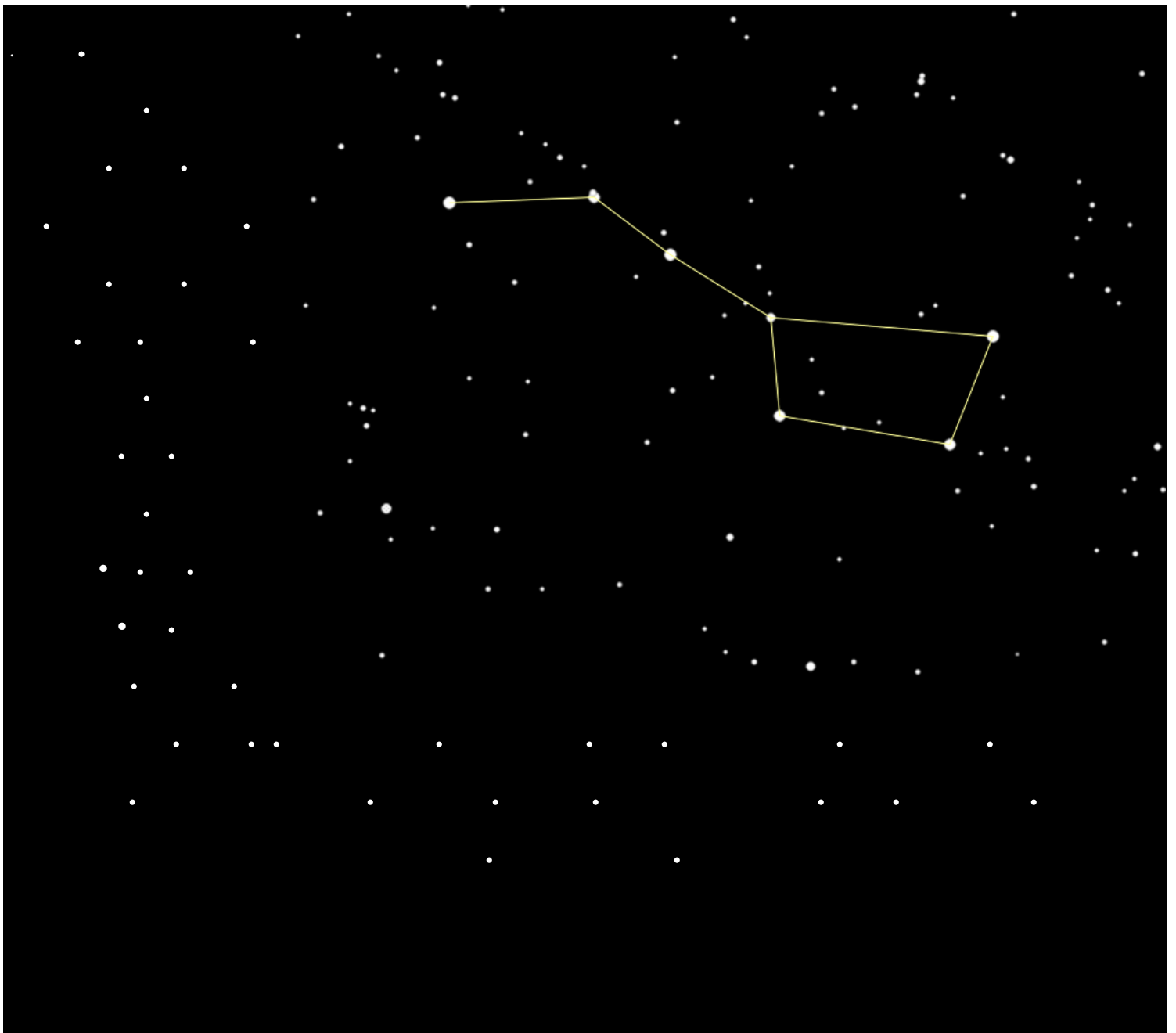
ADELAIDE, Australia -- An Australian man was sentenced Tuesday to nearly three years in jail for shining a laser pointer at a police helicopter and temporarily blinding the pilot.

Lanfranco Baldetti, 23, pleaded guilty to prejudicing the safe operation of an aircraft and to a number of weapons offenses for shining a green laser at a helicopter being used by police to track reckless drivers in the central city of Adelaide last June.

"What occurred here was a disaster in the making," Judge David Smith said in issuing the sentence of two years and 10 months. The verdict comes in the wake of a series of laser attacks on airplanes in Sydney that prompted the federal government to restrict sales of laser pointers -- typically used in classrooms and presentations. Some of the planes had to divert their landings due to the laser glare.

During the trial, the South Australian District Court heard that the pilot of the unmarked chopper saw the light flashing around the cockpit and was temporarily blinded by two flashes to his eyes. "The flashes were approximately half a second apart and during the exposure he could see nothing but green," Smith said. "It took him a few seconds to regain normal vision in order to read his instruments."

The Civil Aviation Safety Authority said the sentence would send a message to those contemplating shining lasers at aircraft.



*Snoopy says, never stop looking
up..reach for the stars and may you al-
ways have clear skies!!!!*

