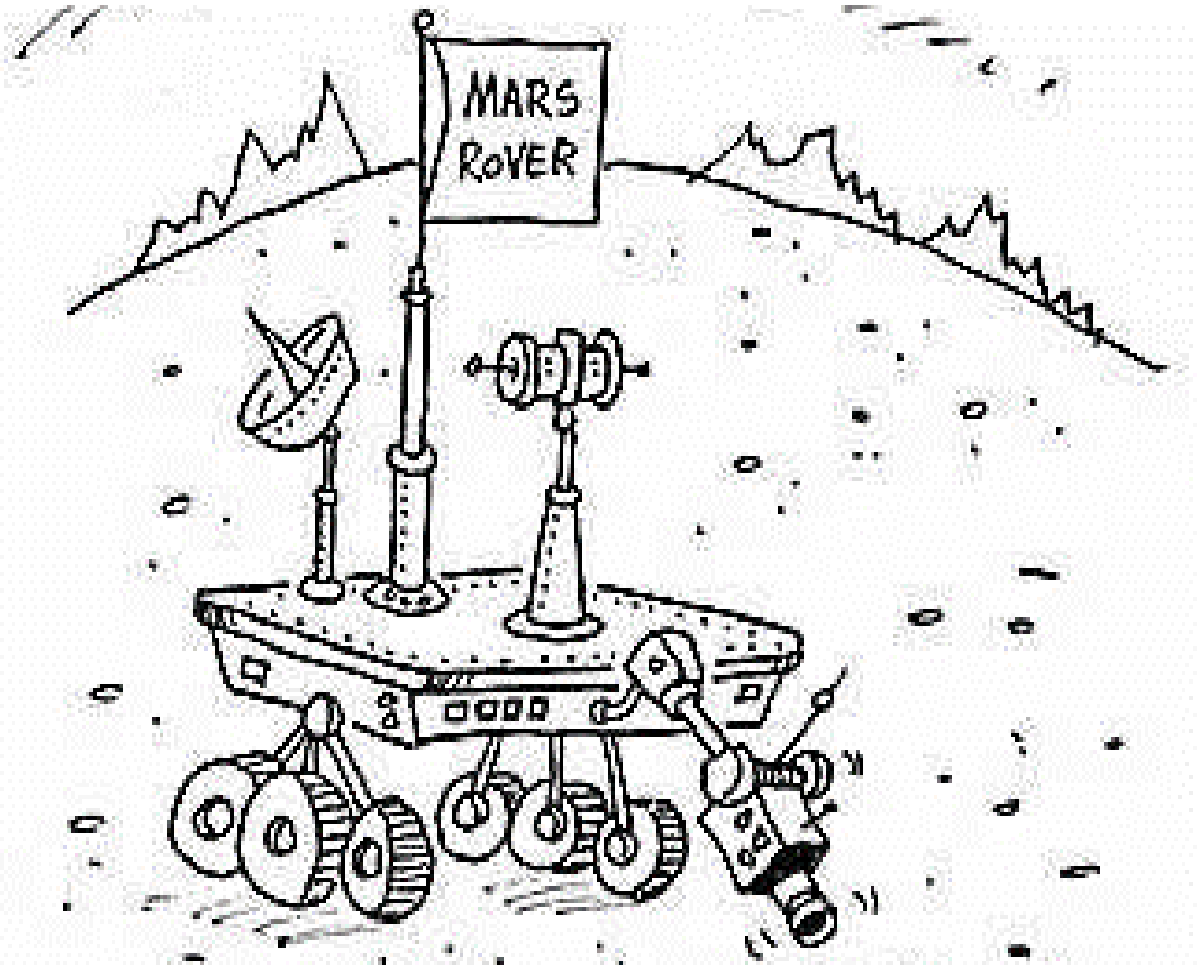
Starscan

Johnson Space Center
Astronomical Society

Volume 24, Number 9 September 2008

FORTY YEARS
AND
COUNTING!



THAT'S RIGHT….WATER ON MARS

TABLE OF CONTENTS

Message from the el Presidente

Hey Everyone!!!

Well folks here we are staring a slide into September. Yes, I'm still pining for a fort trip but before the Fort, there are a few things are coming up fast for us. On September 6th we have a Moody Garden's Star Party, followed by our monthly meeting on the 12th where our own Dennis Webb will present "Observing Orders of Magnitude". On Sept 27th, we have our Haak Wine Star party and then folks we move into a very busy October. We'll discuss October at the meeting.

On a personal note, it was a pleasure to meet Jim Gilliam, the President of the Galveston Stargazers Group last Saturday. I commend them, they have actually found a spot on the island, which is free, where they could get some viewing done and we even noted a hint of the Milky Way. We were tucked near a closed outdoor theatre within line of sight of the State Park. We had a great time with them but the skeeters sort of cut short the socializing.!

Clear skies!
David Haviland

LETTER FROM THE EDITOR

By Connie Haviland

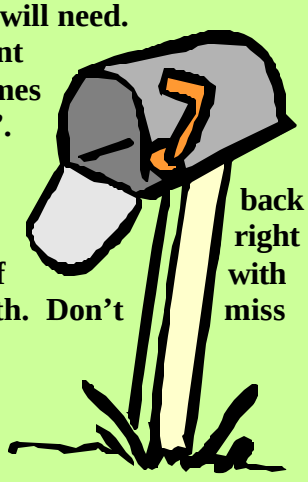
Hi Everyone!!

Well, I was away for a couple of weeks and came back to put together another Starscan for all of our readers. I hope you find this edition full of interesting contributions from our members.

Oh..and don't forget the All-Club meeting next month at HCC on Oct. 17.
Enjoy!!!!

LETTER TO THE EDITOR

Well, I didn't receive a letter per se, but I did offer to post the star parties and meetings for the Galveston Stargazer Group's star-parties. I feel that they are close enough where those in the area might want to participate in Galveston's activities, too. Hey, if you haven't seen where they meet for star parties, you should go. I would suggest taking some Off right now because of the rain. Otherwise, bring some blood for the transfusions you will need. LOL. Actually, it is no different than our backyard when it comes to those pesky "blood suckers". So I have placed their schedule back near the "FOR SALE" section right now, but it will be sectioned off with our star parties after this month. Don't miss it..



Star Parties for 2008

By John Erickson

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 StarParty

NOVEMBER
November 01 - Haak Winery Star Party

DECEMBER
December 12 - No Star Party

NASA's Phoenix touches, tastes Martian water

1 Aug, 2008, 0937 hrs IST, PTI

Courtesy of The Economic Times

NEW YORK: Scientists say that Mars has water and this is first time that it has been "touched and tasted." Laboratory tests aboard NASA's Phoenix Mars Lander, they say, have identified water in a soil sample. The lander's robotic arm delivered the sample on Wednesday to an instrument that identifies vapors produced by the heating of samples.

"We have water," said William Boynton of the University of Arizona, lead scientist for the Thermal and Evolved-Gas Analyzer (TEGA). "We've seen evidence for this water ice before in observations by the Mars Odyssey orbiter and in disappearing chunks observed by Phoenix last month, but this is the first time Martian water has been touched and tasted."

With enticing results so far and the spacecraft in good shape, NASA also announced operational funding for the mission will extend through September 30. The original prime mission of three months ends in late August. The mission extension adds five weeks to the 90 days of the prime mission. "Phoenix is healthy and the projections for solar power look good, so we want to take full advantage of having this resource in one of the most interesting locations on Mars," chief scientist for the Mars Exploration Program at NASA Headquarters in Washington, Michael Meyer, said.

The soil sample came from a trench approximately two inches deep. When the robotic arm first reached that depth, it hit a hard layer of frozen soil. Two attempts to deliver samples of icy soil on days when fresh material was exposed were foiled when the samples became stuck inside the scoop.
Most of the material in Wednesday's sample had been exposed to the air for two days, letting some of the water in the sample vaporize and making the soil easier to handle. "Mars is giving us some surprises," said Phoenix principal investigator Peter Smith of the University of Arizona.

"We're excited because surprises are where discoveries come from. One surprise is how the soil is behaving. The ice-rich layers stick to the scoop when poised in the sun above the deck, different from what we expected from all the Mars simulation testing we've done." "That has presented challenges for delivering samples, but we're finding ways to work with it and we're gathering lots of information to help us understand this soil." Since landing on May 25, Phoenix has been studying soil with a chemistry lab, TEGA, a microscope, a conductivity probe and cameras.

Besides confirming the 2002 finding from orbit of water ice near the surface and deciphering the newly observed stickiness, the science team is trying to determine whether the water ice ever thaws enough to be available for biology and if carbon-containing chemicals and other raw materials for life are present. The mission is examining the sky as well as the ground. A Canadian instrument is using a laser beam to study dust and clouds overhead.

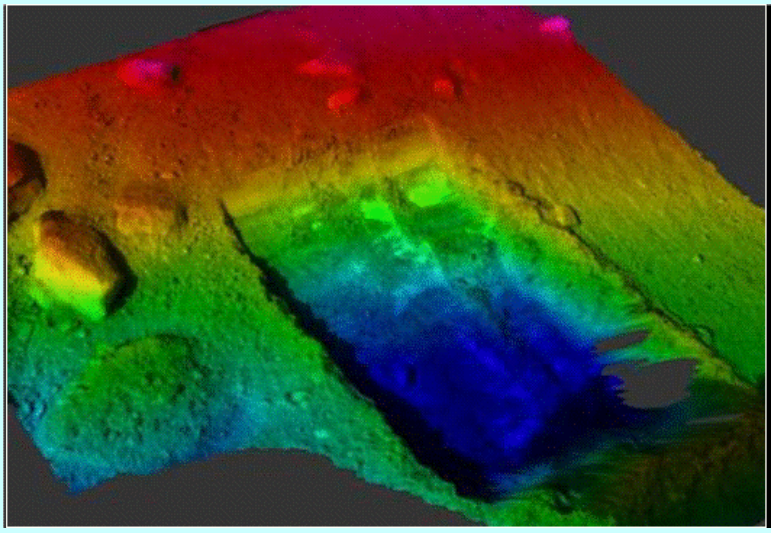
"It's a 30-watt light bulb giving us a laser show on Mars," said Victoria Hipkin of the Canadian Space Agency. A full-circle, color panorama of Phoenix's surroundings also has been completed by the spacecraft.

"The details and patterns we see in the ground show an ice-dominated terrain as far as the eye can see," said Mark Lemmon of Texas A&M University, lead scientist for Phoenix's Surface Stereo Imager camera. "They help us plan measurements we're making within reach of the robotic arm and interpret those measurements on a wider scale."

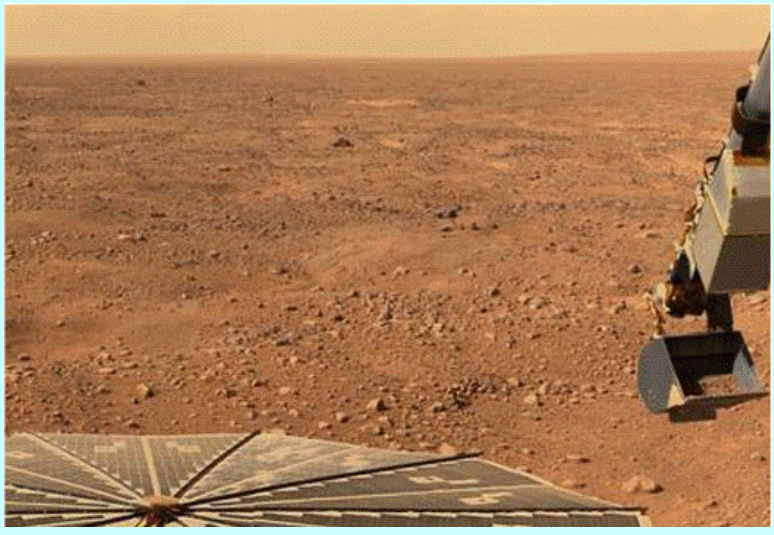
The following has been taken from Discovery website. For more information go to http://dsc.discovery.com/news/2008/08/01/phoenix-ice-zoom.html

Exposed
This color image acquired by NASA's Phoenix Mars Lander's Surface Stereo Imager shows one trench informally called "Dodo-Goldilocks" after two digs on June 12, by Phoenix's Robotic Arm, which exposed what is now confirmed to be frozen ice.

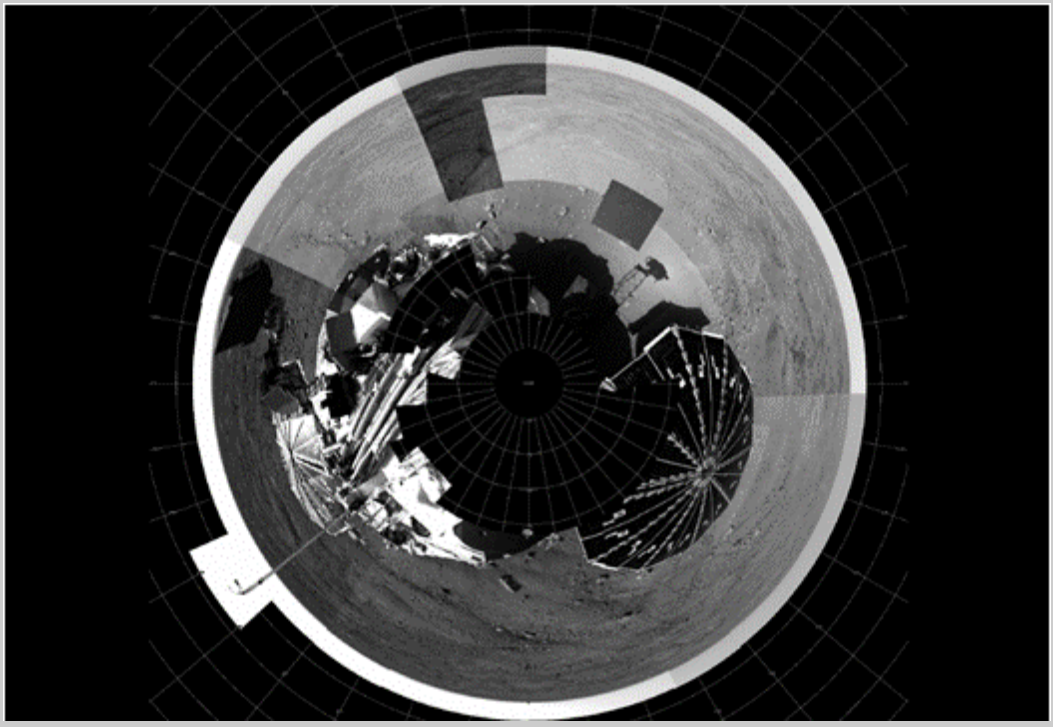
AP Photo/NASA/JPL/Cal Tech |



Sol 18: This color-coded elevation map shows the depth of trenches dug by Phoenix's Robotic Arm. Nicknamed "Dodo" (left) and "Goldilocks" (right), the two trenches became one on June 12, 2008. The resulting depression is 8.7 inches wide and 13.8 inches long. Its deepest portion -- pictured here in dark blue -- is almost 3 inches deep.
NASA/JPL-Caltech/University of Arizona/Texas A&M University/ NASA Ames Research Center



Sol 16: Pictured here is the lander's Robotic Arm, which dug the "Dodo-Goldilocks" trench, with a soil sample in its scooper. The image was taken just before the sample was delivered to the Optical Microscope for further study.
NASA/JPL-Caltech/University of Arizona/Texas A&M University/ NASA Ames Research Center



Sol 9: The Surface Stereo Imager captured the individual images that were knit together to form this mosaic of the terrain encircling Phoenix.
NASA/JPL-Caltech/University of Arizona

Sol 3: This image of the Canadian-built weather station in operation (with the cover open) was acquired by Phoenix on its third Martian day. The onboard lidar shoots a green laser into the atmosphere [ok “green laser” owners, looks like they love them, too] at the optimal wavelength for detecting dust and gas in the atmosphere. It is also equipped with temperature sensors to determine temperatures at three different heights above the surface.

NASA/JPL-Caltech/University of Arizona

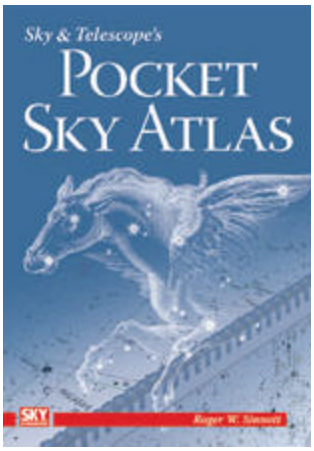
THERE WAS A TOTAL SOLAR ECLIPSE IN AUGUST

In this photo released by China's Xinhua News Agency, the total solar eclipse is observed at 7:21 pm (1121 GMT) on Friday, Aug. 1, 2008 in north of Xi'an, capital of northwest China's Shaanxi Province. The total solar eclipse, the first that can be viewed in China in the new century, occured on Friday. (AP Photo/Xinhua, Ding Haitao)

In this photo released by China's Xinhua News Agency, the total solar eclipse is observed at 7:15 pm (1115 GMT) on Friday, Aug. 1, 2008 in Jinta County of Jiuquan City, northwest China's Gansu Province. The total solar eclipse, the first that can be viewed in China in the new century, occured on Friday. (AP Photo/Xinhua, Han Chuanhao)

A man helps a child to look at a solar eclipse through exposed film in Xian, China Friday Aug. 1, 2008. Millions of Chinese along the ancient Silk Road gathered Friday to gaze at a total solar eclipse, an event traditionally fraught with superstitious meaning coming one week before the start of the Beijing Olympics. (AP Photo/Cara Anna)

A BOOK REVIEW FOR THE CLUB



Normally I don't do too many book reviews unless it is a book that really reaches out and grabs my attention. Well, I came across one: "Sky and Telescope's Pocket Sky Atlas" by Roger Sinnott is one I highly recommend. How I came across this little gem is the story since my initial exposure to the book wasn't traditional. While watching a weather balloon video courtesy of Becky Ramotowski in the Barracks at Fort McKavett one day, I noted this little fellow in a small pile of items belonging to JSCAS's own Ann Micklos. I looked at it for a bit, and of course returned it. It impressed me but then when Connie and I already have a full shelf of books, I had to ask "Do we need another star chart or atlas?" You can guess the answer.

Then something happened while preparing and traveling for the 2008 April Ft. McKavett trip: I left most of the star charts on the shelf at home. I'd pulled a few down and into a small pile but that pile never quite made it into the car before heading out. I had just cleared Kerrville when I realized I was going to have to fly from memory or suck-up and borrow a chart now and then. I did a little of both with thanks to Charlie McCloud who let me use whatever book he wasn't using at the time. I've forgotten it all at one time or another, eyepiece cases, TelRads, telescope hardware, you name it, and now all star charts. You would have thought I learned by now or at least learned the sky.

Well, at the last night at the Fort, who wanders up to where Charlie and I were observing, plunks her stuff down and walks away for a bit? Ann. Resting on top of her pile again was "S&T's Pocket Sky Atlas". With permission I quickly nabbed the book and headed back to my scope where I was able to ferret out a few more things to see. The size and "handy-ness" of the book sold itself right there on the spot.

S&T advertises the book as a "pocket guide". Well, it certainly doesn't fit in your pocket, but measuring 6 by 9 inches, it will fit comfortably in your eye piece case or tucked away in a corner of your telescope box. A big plus for this book is that it isn't cumbersome to use either in storage or in use. Although the pages aren't dew-proof, the charts are printed on heavy high quality paper that would tolerate a little of a moist night time sky. The spiral back makes flipping from one chart to another easy and a clothespin easily keeps the pages from flipping in an even a moderate wind. To be blunt, the online S&T advertisement does the book no justice whatsoever. S&T should re-think the marketing for this little gem. They could be selling a LOT more. In my view it is well worth the $19.95. From the ad: "This 80-chart atlas contains more than 30,000 stars to magnitude 7.6 and approximately 1,500 deep-sky objects (including 675 galaxies to magnitude 11.5). Included are extra close-up charts of the Orion Nebula, Pleiades, Virgo Galaxy Cluster, and Large Megellanic Cloud." The *only* way I can see how this book can be improved is re-print the 110 pages on dew-proof water resistant paper and it would still be bargain even if $10 higher in price.

The large star charts and what-nots can still come with me but just in case they get left behind again, this little book is getting tucked away in my equipment box where it fits nicely. It will always be there.

David Haviland

Canyon Observing with a Vixen 90mm
Chris Wells

Every year I influence the family vacation to escape from the Houston area around the new moon period. I am always reminded that this is a family vacation and not to get too carried away with astronomy and risk a grumpy follow on day. You know the scene.

This year was a full 2 week vacation that included Red Rock Canyon, Zion National Park, Grand Canyon, Bryce, Hoover Dam etc. I wasn't sure what observing I would get in but I had to try anyway.

The first problem in the planning process is what telescope to take, even more problematic this time since we are flying when airlines are being increasingly more restrictive on baggage. Luckily we booked South West Airlines who allowed 2 luggage items per persons without surcharge. I decided to take my old Vixen 90mm F9 fluorite APO mounted on a Tele Vue Gibraltar mount. I borrowed a golf bag hard case spent a day arranging and rearranging items and packaging materials before I was comfortable with my choices. Having my telescope masquerade as golf clubs worked well for transport.

One of the main advantages of the Vixen 90mm is that the lens cell unscrews which enabled me to carry all optical components as carry on items and reassemble easily without collimation issues to solve. Every piece of glass from the lens cell, camera, eyepieces, diagonal and focal reducer were scrunched into a single oversize carry on bag.

Zion Observing – 25th July 2008

At Zion, we stayed at a friend's log cabin and as luck would have it the very first night was clear. We'd driven that very day from Los Vegas so it was going to be only a short trip around some show piece objects. I left the DSCs turned off just to test myself a little and was glad to be able to find some old favorites.

Observing notes

M51 – easily saw both galaxies but the images were soft due to seeing.
NGC 6992 – excellent views of the Veil through the wide field 90mm. The veil really jumped out with a UHC filter but was unable to resolve any filamentary structure.
M27 – bright nebular contrasted well with the sky, the lugs of the dumbbell just discernable.
M13 – stars partially resolved at higher magnification
NGC 869 and 886 – double cluster was simply beautiful in this scope

Grand Canyon North Rim – 29th July 2008

I'd repacked my telescope for the journey in the hope of using it at least once. There was unfortunately no real observing place so I left my scope in the car. With inky black skies on the 2nd night, I couldn't resist and decided to set up in the parking lot.

This was very nerve wracking and ended up dodging a high rate of inflow and outflow traffic consisting of pedestrians, cars and RVs. This gives a whole new meaning to the term "grab and go scope". The environment was not conducive to quality observing but what's a milky way starved amateur to do but go for it anyways. One pedestrian didn't see me waving my red flashlight and judging by the sounds of astonishment he made must have jumped a mile.

Naked eye star test

Using the chain of stars that make up the little dipper, the skies were easily magnitude 6, in fact much better with ink black spaces between stars.

Observing notes

M8 and M20 – could easily make out the dark lanes within the Triffid.
M17 – very bright and contrasted well with the background sky without a filter being need.
M13 – stars partially resolved at higher magnification.

I actually ended up spending a lot more time observing without the telescope because of the traffic dodging. So I mainly used the opportunity to reacquaint myself with the sky after frequently finding myself lost amongst the myriad of stars.

Zion Observing – 30th July 2008

We stayed at a friend's log cabin with a fence line that adjoins Zion National Park. The main deck area is broad but a lot of the main objects I wanted to see were in Sagittarius which was the other side of the cabin. So, I ended up observing from the dusty driveway as shown below.

Naked eye star test

Using stars in Bootes as a visual test, I could easily see a mag. 5 but mag. 6 was a stretch. So transparency was good but not excellent.

Using Epsilon Lyra I was unable to split then stars which explained the soft images I'd seen earlier.

The next 2 nights were clouded out. On Monday we traveled to the North Rim Grand Canyon for 2 nights in a log cabin.

Jupiter and Sagittarius are at center. Sorry about the double exposure but this was my only shot where the Milky Way stood out.

M17, M8, M20 and M16 were some of the best I've seen. M22 resolved to many stars.

NGC 6520 and B86 (hole in the sky) were awe-some and the highlight of the evening.

M92 was more compact and in my option brighter than M13.

M51 almost revealed it's spiral structure.

M29 in Cygnus. This was my first ever viewing of this object and I can see why I failed to see it before. It's a beautiful cluster but almost lost in the star field.

NGC 6992 and NGC 6940 (both sides of the Veil). Awesome with a UHC.

NGC 6940 Open Cluster – 1st ever viewing.

NGC 6888 – this to me was a challenge object given only 90mm of aperture and revealed it's faintly. I have tried in vain many time before even with a C8 so was delighted to snag this object with my Vixen.

The biggest surprise viewing object for me for the North American Nebula (NGC 7000). I placed into the field of view a photographic focal reducer taking my F9 scope down to F5.6. There was not enough in-focus so I removed the diagonal and almost had to lie down to use the scope. Without any filter, I was rewarded with spectacular views of this huge object.

The double cluster was awesome again at both F9 and F5.6.

M31 and it's 2 companion galaxies were bet also with the F5.6.

It's through this experience operating at F5.6, why I now understand some people shorten their re-fractor tubes!

Zion Observing – 31st July 2008

This was my last night viewing and I quickly amassed a multitude of objects in the Vixen including M97, M81 and M82 (same FOV), M102 edge on galaxy etc. I focused however on giving our host and friend a personal tour using her own telescope, a Deep Sky Hardin 6". I collimated the scope took in many of the objects. This DSH $99 purchase was a real performer when and if you found an object. The finder was terrible but it's ability to resolve globular clusters was awesome. Hopefully our friend is now a convert.

So in summary, I managed 4 nights under the stars with some wonderful views. The little old Vixen performed wonderfully and is a reminded of what can be viewed by using a small scope from dark skies. I didn't get to observe from Bryce Canyon but from what I hear, being the highest area in the grand staircase offers the best night sky views. Perhaps next year…

I'm thoroughly looking forward to Ft McKavett this coming October and taking advantage of the increased luggage size available in the mini van and increase aperture !

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

Object	Const	Mag	% Ill	Rise Time	Transit	Set Time
Sun	Leo	-26.7	100	07:05	13:214	19:24
Mercury	Vir	0.3	48	09:10	14:47	20:29
Venus	Vir	-3.9	89	09:10	14:55	20:44
Mars	Vir	1.7	98	09:00	14:46	20:37
Jupiter	Sgr	-2.4	99	15:28	20:37	01:43
Saturn	Leo	1.0	100	06:21	12:41	19:05
Uranus	Aqr	5.7	100	19:17	01:08	07:00
Neptune	Cap	7.8	100	17:48	23:20	04:48
Pluto	Sgr	14.0	99	14:11	19:36	00:57

Highlighted times denote daylight events.

Lunar phases for September 08

First	Full	Third	New
07th 09:04	15th 04:13	22nd 00:04	29th 03:12

Central Daylight Time

SEPTEMBER OBSERVING

BSO: (Bright Sky Objects)

NGC 7078 (M 15) - Globular Cluster in Pegasus, Magnitude 6.3 Size 18.0'.
NGC 7099 (M 30) - Globular Cluster in Capricornus, Magnitude 6.9 Size 12.0'.
NGC 6934 (C 47) - Globular Cluster in Delphinus, Magnitude 8.9 Size 7'.
NGC 6981 (M 72) - Globular Cluster in Aquarius, Magnitude 9.2 Size 6.6'.

DSO: (Dark Sky Objects)

NGC 7023 (C 4) – Bright Nebula in Cepheus, Magnitude 6.8 Size 14' x 14'.
NGC 7009 (C 55, Saturn Nebula) – Planetary Nebula in Aquarius, Magnitude 8.3 Size 44" x 23".
NGC 7027 – Planetary Nebula in Cygnus, Magnitude 10.4 Size 60".
NGC 7006 (C 42) - Globular Cluster in Delphinus, Magnitude 10.6 Size 3.6'.

CDMP: (Chris' Don't Miss Pick)

NGC 7089 (M 2) - Globular Cluster in Aquarius, Magnitude 6.6 Size 16.0'.

It was discovered by Jean-Dominique Maraldi on September 11, 1746. Charles Messier independently rediscovered and cataloged it exactly 14 years later, on September 11, 1760, as a "nebula without stars." William Herschel was the first to resolve it into stars.

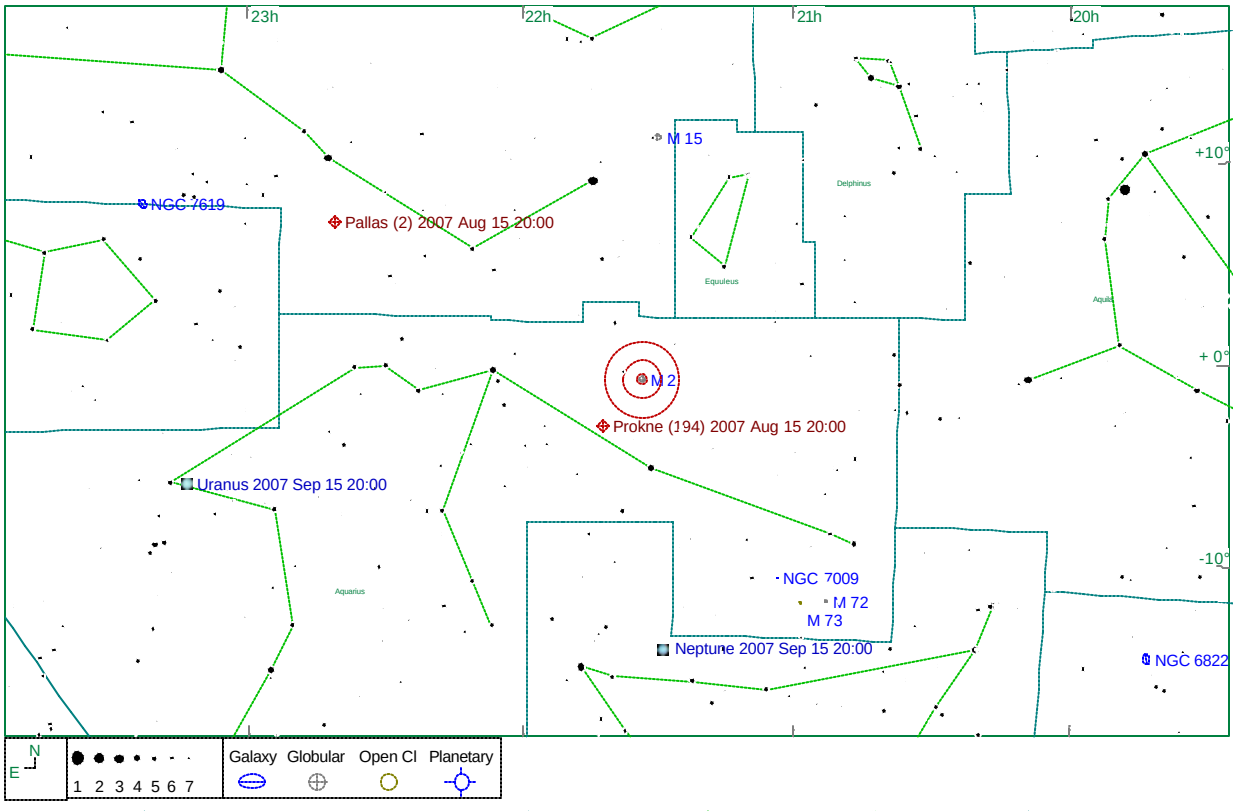
M2 has a diameter of about 175 light-years, contains about 150,000 stars, and is one of the richer and more compact globular clusters, as its classification in density class II indicates. At about 37,500 light years (according to W.E. Harris' database), it lies well beyond the Galactic Center. Visually it is of apparent magnitude 6.5 and about 6 to 8 minutes of arc in diameter, with a bright, compressed central region of about 5'. On typical photographs it can be traced to

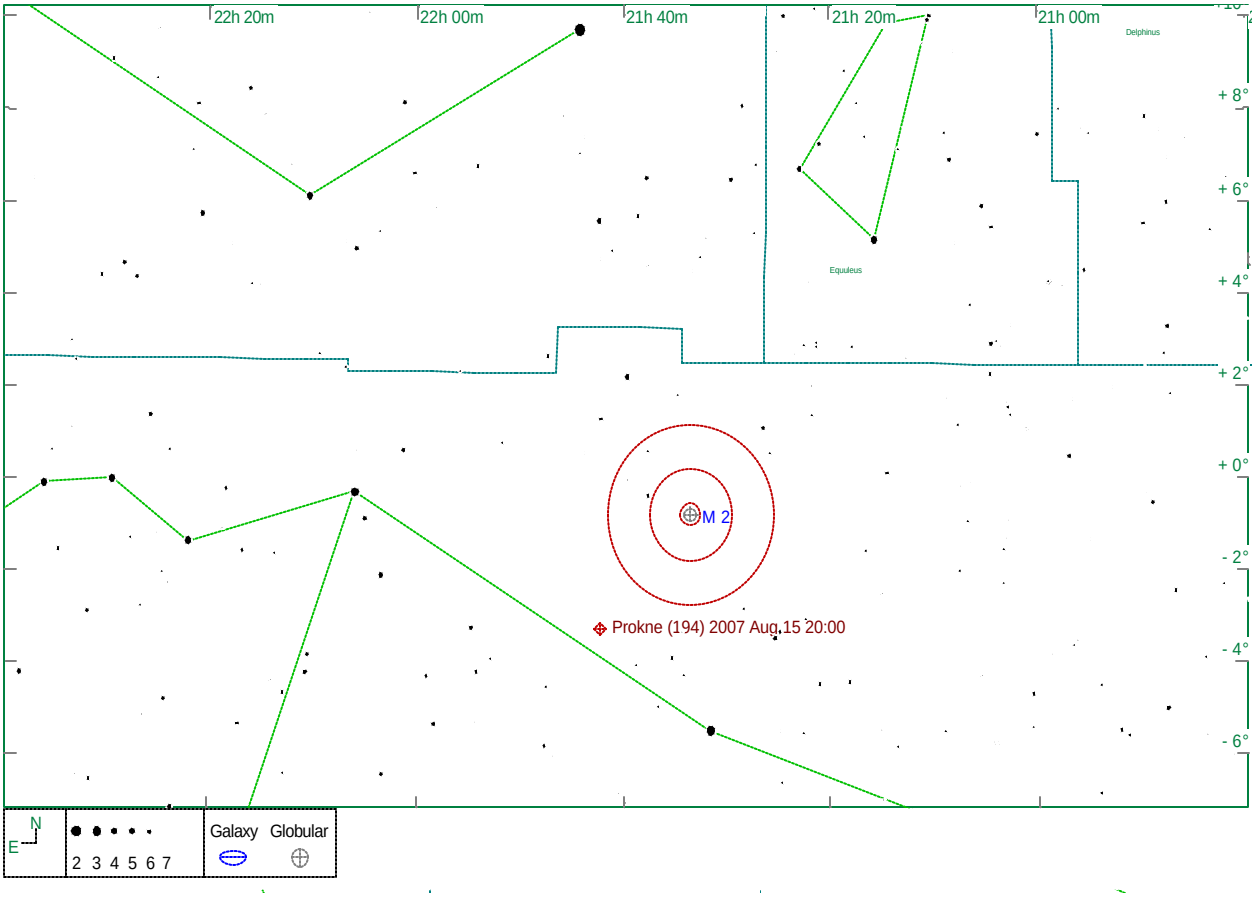
M2's brightest stars are red and yellow giants of magnitude 13.1, while its horizontal branch stars have an apparent brightness of 16.1. The cluster's overall spectral type has been given with F0, its color index as -0.06; modern values are spectral type F4, B-V = 0.66.

From its color-magnitude diagram, Halton Arp (1962) has estimated the age of M2 as about 13 billion years and to be about the same as that of globular clusters M3 and M5. M2 is approaching us at the low velocity of 5.3 km/sec. Situated in the Galactic halo, it has been classified as an "H2" halo globular by Woltjer (1975) and Nincovic (1983); the latter estimating its orbital eccentricity at 0.60.

With its visual magnitude of 6.5 mag, M2 is a difficult object for naked-eye observing, but an easy target for the slightest optical aids like binoculars or opera glasses, in particular as it is situated in a star-poor field. A four-inch obstruction-free telescope doesn't resolve this cluster, but only shows some of the brightest member stars spread over the mottled nebulous background image caused by the unresolved stars. With an 8-inch, this globular cluster is partly resolved into stars, well into the center under good viewing conditions. Larger scopes, 10-inch up, are required to fully resolve this cluster. A peculiar dark lane crosses the north-east edge of the cluster, suggestions of which are visible in our image; larger telescopes (16-inch up) show several other, less prominent darker features or regions.

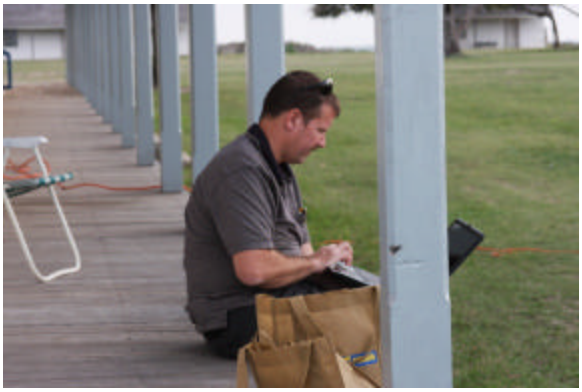
For this and more information go to http://seds.org/





I want to thank Chris Randall for all of his help with this portion of the Starscan. Without him, this portion would not be possible. He has had some changes in his daily activities at work and his schedule has become very busy; and yet he still gives of himself for the club. See, Hernan is still in need of a little more time to get started. Chris says he will still be available for help with your observing, thanks a lot for your viewer ship and clear dark skies. Hernan, we pray for a speedy recovery and rehab.

Connie



Folks:

In times past, people that have wanted to take advantage of the club discount have had to write their check, put it in with the renewal slip, and then either mail it to me at my home or chase me down at a meeting. In most cases, within a week, I have sent out the renewal. Sometimes, and I don't really mind, the renewals have gone out at my expense for the postage. Without hesitation, question, or fail, it is not the most efficient means to maintain club subscriptions. So as secretary, I'd like to try something new...

You get all your stuff ready for the subscription, whether it be Astronomy or Sky & Telescope, you keep it - you hang on to it. Email (most reliable) or tell me when you see me that you want to take advantage of the club discount for either or both of these publications and that you need a supporting letter. What I'll do is get the letter together and email the "letter from the treasurer/secretary" back to you as a PDF. You print it off, and enclose it with your renewal. For this to work your computer must have Adobe Reader (which is free) and a means to print it. I would like this procedure to become the "Standard Operating Procedure" for Astronomy/S&T discounts through JSCAS. For those still not in the computer age, we can process things as we have in the past.

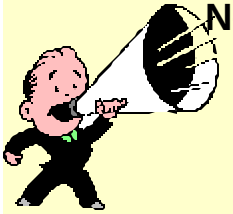
Clear skies,
David Haviland

FORT (Forward Observing Recon Team)

By Ken Lester (special operations team)

The fall Fort McKavett Star Party is two months away. Many people have already signed up and I'm attaching a list of who has confirmed and the living arrangements that I have down for them. (see next page—17) This list is current up to August 24, 2008. If people want to be added to the list or need to make a correction to the list please email me at: lisa@riverofstars.net You can also email me if you have any questions or concerns.

Ken and I were so happy that we were able to attend the August meeting and see so many dear friends. It was also great to meet several new club members and share some information and pictures of Fort McKavett. I talked to the club about doing a school presentation at Junction Elementary. We did not give a school presentation last spring and we won't be doing one in March of 2009 since it will be Spring Break for all of the area schools. Please let me know if you all are going to be able to put together a few presenters. I also threw out the idea of people talking about their careers and how they became interested in astronomy. I won't talk to my principal about a school presentation until I hear that presenters have been lined up.



Need volunteers

What's Happening at the George!!!

Cynthia Gustava

George Observatory September Events

Friday Night Groups (all times are 20:30 to 22:30)…Volunteers for domes and deck scopes are needed. Contact Cynthia Gustava at cynm31@comcast.net.

Sep 26 – Girl Scout Sky Search Overnight (Building Manager: Peggy Halford)

Sep 28 – Special Sunday Night Event: Australian Space School (Building Manager: Cynthia Gustava)

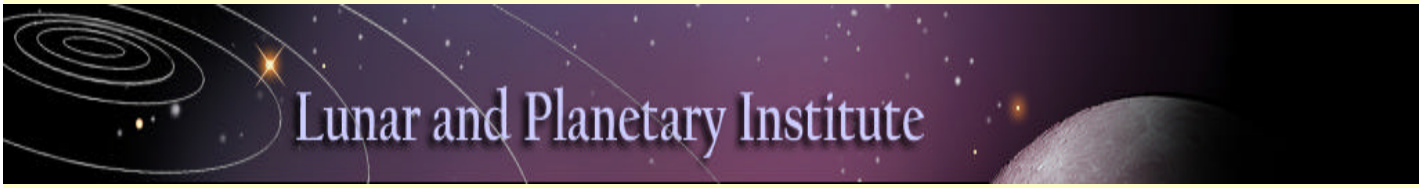
Saturday Night Public Viewing (dusk to 23:00)…Volunteers for domes and deck scopes are needed. Contact the building manager teams below.

Sep 6 – Jack McKaye and Wes Whiddon jemckaye@comcast.net or wwhiddon@concentric.net

Sep 13 – Tracy Knauss and Keith Rivich birdbarn2000@yahoo.com or icgalaxies@cs.com

Sep 20 – Cynthia Gustava and Leonard Ferguson cynm31@comcast.net or leonardferguson@mac.com

Sep 27 – Mary Lockwood and Joe Mills mplockwood@att.net or k5jmm@yahoo.com



Family Space Day is a free family event geared for families with children ages 5-8. The event focuses on space science topics with activities that are parent-driven. Each month we will explore a different space science topic. We will provide hands-on activities, information, books and resources to those who attend. The event is come-and-go and does not require an RSVP. For questions, please contact Katy Buckaloo at 281.486.2106 or Buckaloo@lpi.usra.edu. Visit our website at www.lpi.usra.edu/education/space_days/.

Our upcoming schedule (dates, times, topics subject to change)

September 20th	10am- 1pm	Robotics
October 18th	10am - 1pm	The moon and the Lunar Reconnaissance Orbiter
November	Date and time TBA	tentative telescope observing session

S&T Astronomy Day Awards for 2008

One of amateur astronomy's most important and rewarding annual rites is Astronomy Day, when hundreds of local clubs provide the public with an introduction to the wonders of stargazing. It's a great opportunity to get an up-close look at — and through — telescopes big and small.

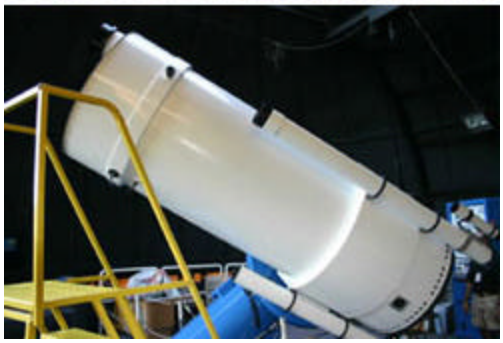
This past year Astronomy Day fell on May 2nd, following a trial autumn event last September. Afterward the Astronomical League judged which events did the best job of fulfilling the goal of "bringing astronomy to the people," and now that the voting is over I'm pleased to announce the winner of this year's S&T Astronomy Day Award.

The envelope, please . . .

It's a tie!

George Observatory, southwest of Houston in Brazos Bend State Park, boasts a 36-inch telescope along with 18-, 14-, and 11-inch instruments.
Houston Museum of Natural Science

Winner #1 is a consortium of clubs in the Houston area who banded together for a mega-event at George Observatory, located about 30 miles southwest of the city. Home to NASA's Johnson Space Center, Houston is a big, astro-attuned metropolis, so it's little wonder that thousands of people came out for the event last October 20th.



The 6-hour-long bash included too many speakers and events to list, but you can relive the day in words and pictures here. All told, 140 volunteers banded together from the following organizations:

- Astronomical Society of South East Texas
- Fort Bend Astronomy Club
- George Observatory, Houston Museum of Natural Science
- Houston Astronomical Society
- JSC Astronomical Society
- North Houston Astronomy Club

Winner #2 couldn't be more different. The Local Group Astronomy Club, located in Southern California's Santa Clarita Valley, is a small club with big ideas. Its members took a tried-and-true route for their Astronomy Day observance, setting up exhibits and demonstrations in a local library on June 10th. And at day's end they'd spent less than $200 (compared to $4,500 for the celebration at George Observatory).

Participants got a chuckle while learning "How Big Is Big, and How Far is Far?" during the Astronomy Day activities hosted by the Local Group of Santa Clarita Valley (California).
Local Group Astronomy Club

What set the Local Group apart was the event chairman: 13-year-old Maxwell Ward. According to club president Steve Petzold, Ward is a "prodigious amateur astronomer" who took over much of the planning and coordination of June 10th's activities. He was ably assisted by 12-year-old Christian Borao and, of course, adult members of the club.

Read about the Local Group's activities at the club's website or, better yet, check out its YouTube video about the day's events.

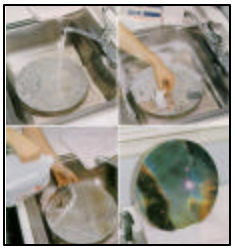
If your club participated in Astronomy Day, please do me two favors. First, add a comment below to let everyone know what you did and how things went. Second, mark your calendar for May 2, 2009, and make sure you're in the running for next year's S&T Astronomy Day Award!

Don't miss next month's All-Club meeting and Astronomy Day at the George. http://www.hmns.org/see_do/george_observatory/astronomy_day.asp?r=1

Name	Number	BBQ	Paid	HQ	Brks	Tent	RV	Camper		
Charlie & Pat McLeod-confirmed	2	2		2-safe						
Ann (Patches) Micklos-confirmed	1	1		1-corner						
Randy & Dolly Brewer-confirmed	2	2					2			
Jack Peterson-confirmed	1	1			1					
David & Connie Haviland-confirmed	2	2					2			
Al Kelly-confirmed	1	1			1					
Hernan Contreras-confirmed	1	1			1					
Lynn Dipple-confirmed	1	1		1-OQ10?		???				
Chris Wells & his Dad Des Wells-confirmed	2	2		field						
Ken & Sheila Steele-confirmed	2	2		2-OQ10?						
Becky & Shane Ramotowski-confirmed	2	2		2-Buf.						
Ken & Lisa Lester-confirmed	2	2						ranch		
Bob & Karen Taylor-confirmed	2	2					2			
David & Aldora Louw-confirmed	2	2					2			
Steve & Sonia Scott-confirmed	2	2					2			
Shirley & Glenn Schaeffer - confirmed	2	2					2			
Fred Miller-confirmed	1	1			1					
Helen Baffes-confirmed possibly husband & grown son	1	1		1-OQ 10?						
Sean & Verlin O'Keefe-confirmed	2	2		OQ 10?						
Matt & Lisa Hommel-confirmed	4	4					4		Host	Site
Andy & Susan Saulitis-confirmed-2 possible friends	2	2		road						

JSCAS Mirror Lab

Matt Hommel



NOTHING THIS MONTH,THE SUN IS TOO BRUTAL AND THE HEAT TOO MUCH TO TAKE ON, IN THE MIRROR LAB,
IN THE SUMMER.

GALVESTON STARGAZORS GROUP

I AM POSTING THIS HERE FOR THIS MONTH, BUT WILL BE POSTING IT AROUND OUR SCHEDULE AFTER THIS MONTH, SO THOSE WHO WANT TO DO MORE STAR-PARTIES CAN KEEP THIS IN MIND

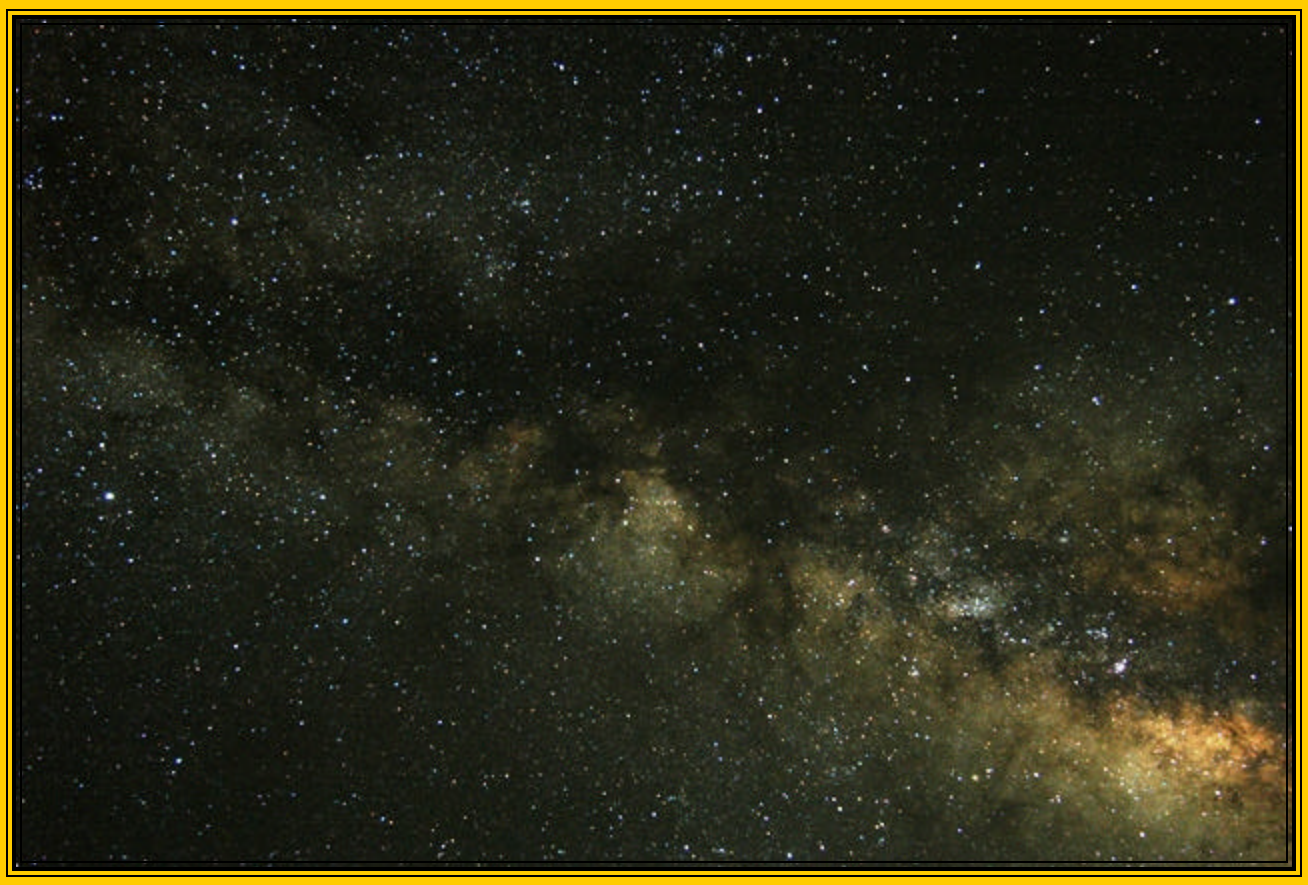
SEPTEMBER, 2008
9-3 - GSG MEETING
9-6 - MOODY GARDENS STAR PARTY
9-13 - GSG SIDEWALK ASTRONOMY
9-26 - BRAZOSPORT STAR PARTY
9-27 - HAAK WINERY STAR PARTY
9-30 - INTRO TO STARGAZING CLASS

OCTOBER, 2008
10-1 - GSG MEETING
10-11 - GSG SIDEWALK ASTRONOMY
10-17 ALL CLUBS MEETING (HCC)
10-18 - ASTRONOMY DAY (GEORGE)
10-24 - BRAZOSPORT STAR PARTY
10-25 - GSG STAR PARTY

NOVEMBER, 2008
11-1 - HAAK WINERY STAR PARTY
11-5 - GSG MEETING
11-8 - GSG SIDEWALK ASTRONOMY
11-21 - BRAZOSPORT STAR PARTY
11-22 - GSG STAR PARTY

DECEMBER, 2008
12-3 - GSG MEETING
12-6 - GSG XMAS PARTY
12-16 - BRAZOSPORT XMAS PARTY

Members' Gallery—September 2008
By
Becky Ramotowski



THE MILKY WAY

18 July, 2008
Milky Way on a clear night
Nikon D70

LOOK FAMILIAR? OF COURSE, THIS IS VERY CLOSE TO WHAT YOU SEE AT FORT McKAVETT, NEXT MONTH

Light pollution:
Any adverse effect of artificial light including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste.

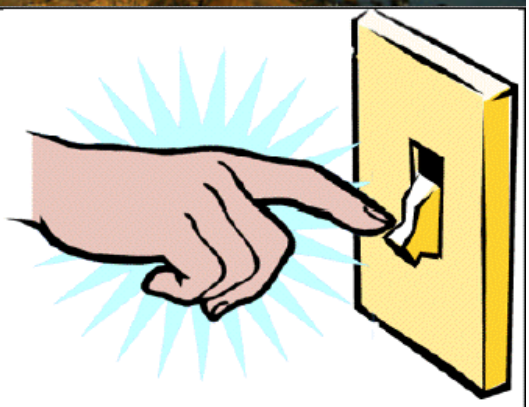
.Do you have a question about light pollution, protecting the night sky, or IDA's resources? **Get Help from IDA** http://www.darksky.org/mc/page.do?sitePageId=56399

Photograph © Phil Hart

IDA
THE LIGHT POLLUTION AUTHORITY

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."



Houston Area Astronomy Clubs

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

North Houston Astronomy Club http://www.astronomyclub.org
Meets the fourth Friday of the month, 7:30 p.m.
In the Teaching Theatre at Kingwood College
20000 Kingwood Drive
Kingwood, Texas

Galveston Stargazers
Meets the first Wednesday of the month At Home Cut Donuts, 6807 Stewart Rd, Galveston, TX
From 7PM to 9PM.
Contact: Jim Gilliam at Jim.Gilliam@dars.state.tx.us or
At (409)795-3620, M - F, 8AM to 5PM

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 – Chris Randall
Scientific Expeditions – Paul Maley
Web Master—Chris Randall

SIGS

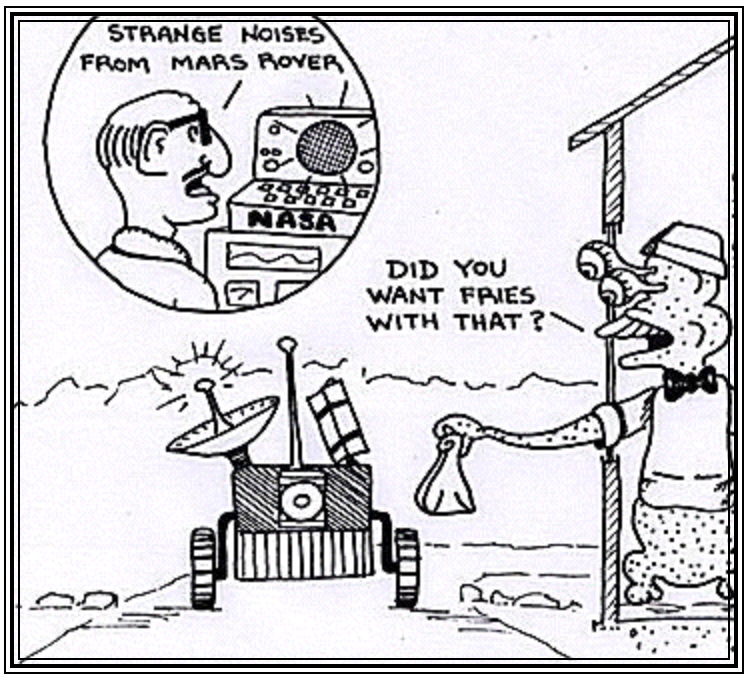
Observing Awards – Triple Nickel
Astronomy 101 — Triple Nickel
CCD Imaging – Al Kelly
Binocular Observing – "OPEN"
Telescope Making – Bob Taylor
Deep Sky Observing – Hernan Contreras

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 is much easier to edit and set up the Starscan

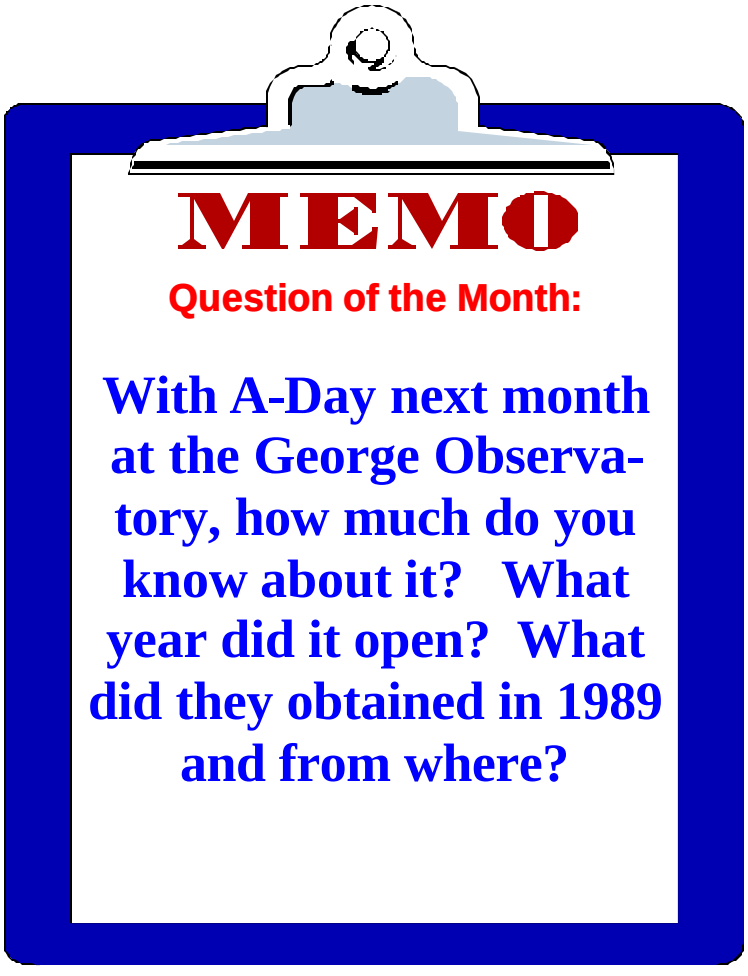
Please send all submissions to:
conniesstarscanaccount@gmail.com

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



Astronomy and Kids

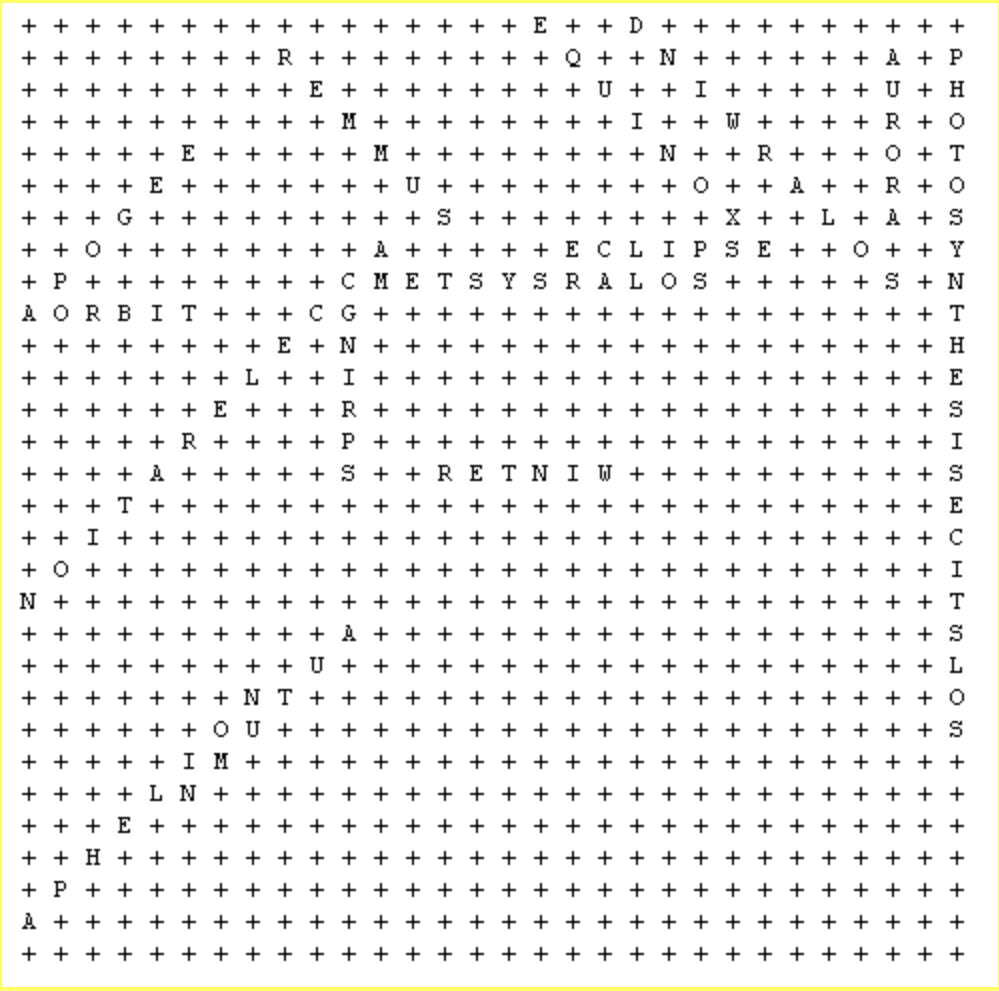
This is the section strictly for kids (or kids at heart). We will be including information, stories, ideas, puzzles or anything that has to do with astronomy. The only difference here is, it will be directed for children. We don't discourage parents or any other adult to get involved. In fact, we encourage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



WORD SEARCH SOLUTION

N

W



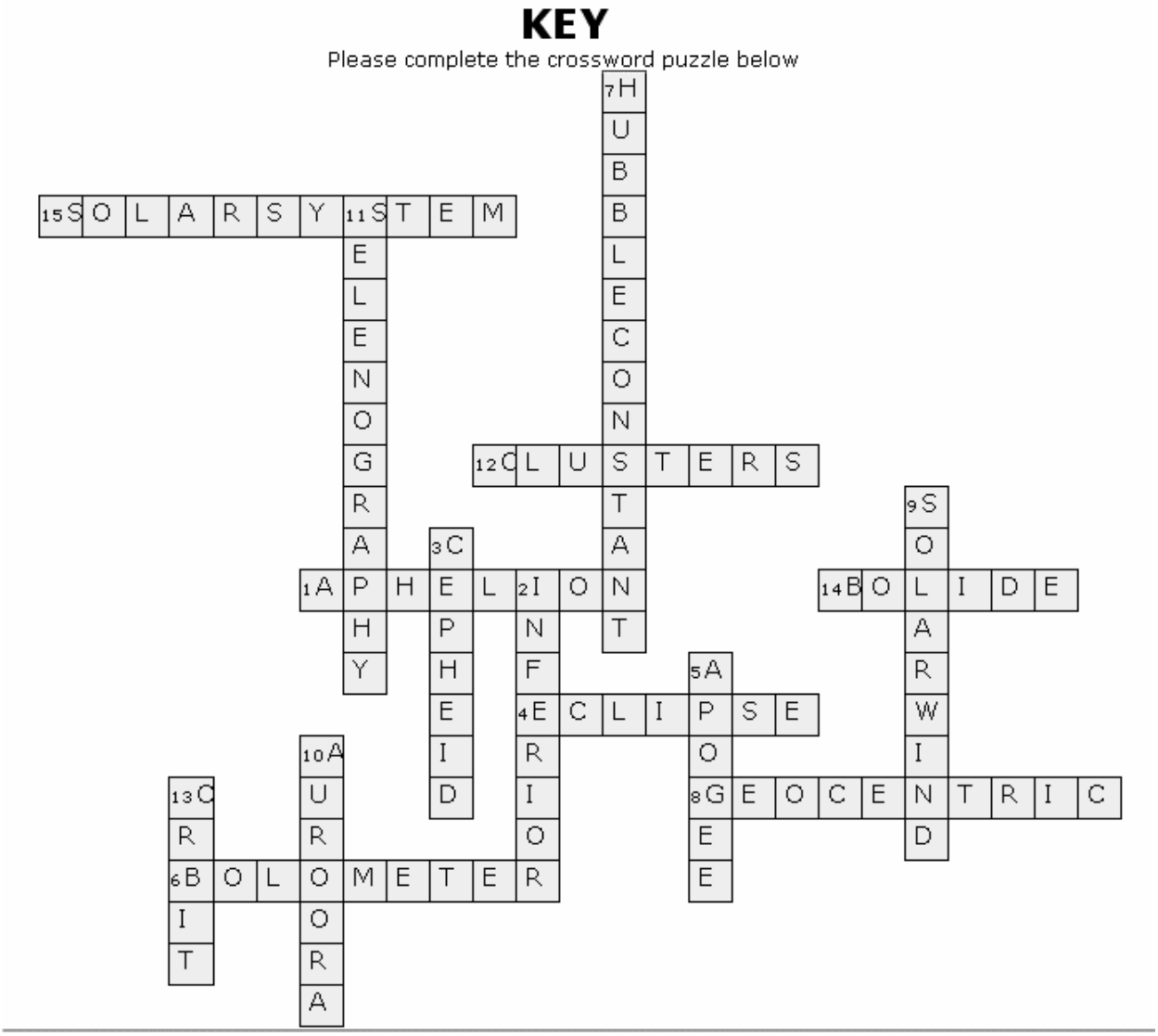
E

S

	(Over,	Down,	Direction)
ACCELERATION	(12,	8,	SW)
APHELION	(1,	29,	NE)
APOGEE	(1,	10,	NE)
AURORA	(28,	2,	S)
AUTUMN	(11,	20,	SW)
ECLIPSE	(18,	8,	E)
EQUINOX	(17,	1,	SE)
ORBIT	(2,	10,	E)
PHOTOSYNTHESIS	(30,	2,	S)
SOLARSYSTEM	(22,	9,	W)
SOLARWIND	(28,	9,	NW)
SOLSTICE	(30,	23,	N)
SPRING	(11,	15,	N)
SUMMER	(14,	7,	NW)
WINTER	(19,	15,	W)

SOLUTION TO AUGUST'S CROSSWORD PUZZLE

Provide



Across:

1. The point in an objects orbit around the Sun when it is furthest from the Sun.
4. When our view of one object in the sky is blocked by either another object, or the Earths shadow.
6. A sensitive radiation detector.
8. Simply means the Earth in the Center.
12. A group or stars, or galaxies which are held together by their common gravity.
14. A brilliant meteor, which may explode during its descent through the Earth's atmosphere.
15. The system of planets and other objects orbiting the star Sol, which happens to be our Sun.

Down:

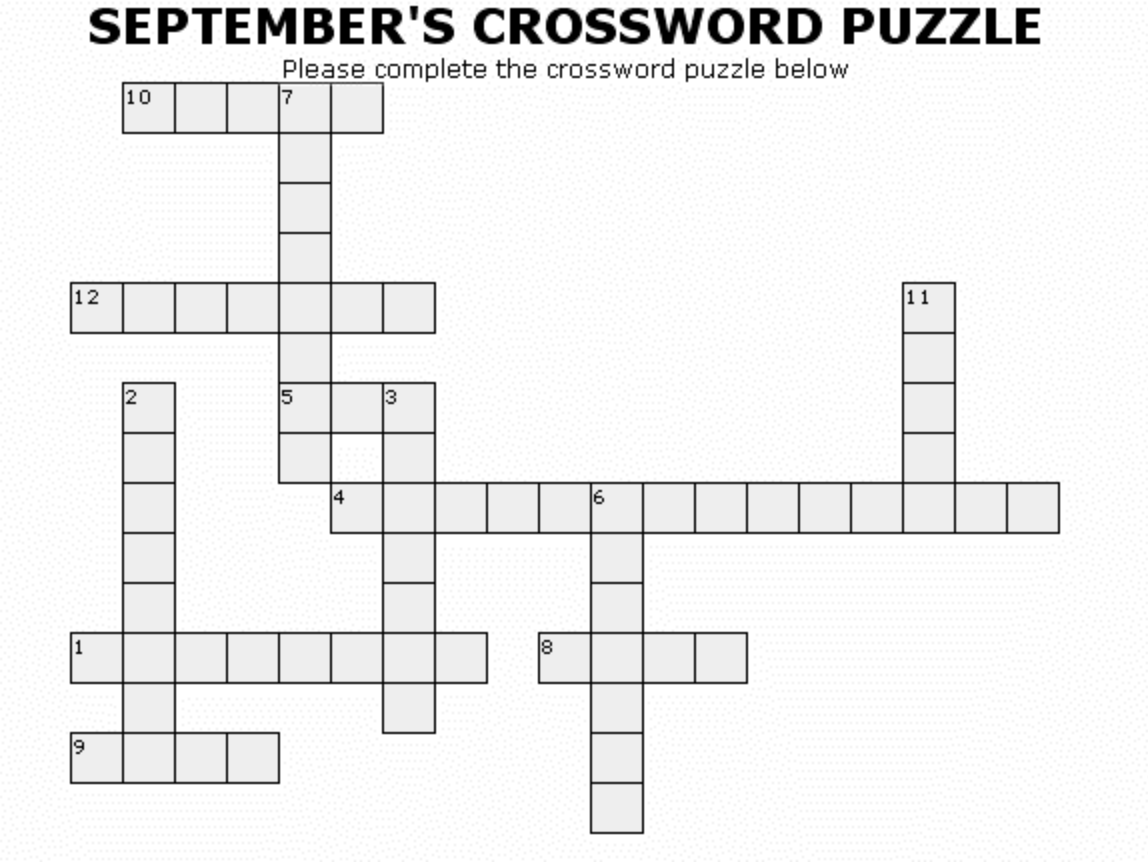
2. Mercury and Venus which lie closer to the Sun than the Earth are called _____ planets.
3. A variable star that scientists can use to determine how distant a galaxy, or star cluster is.
5. The point in an objects orbit around the earth when it is furthest from the Earth.
7. The relationship between the distance of an object, and the speed at which it is traveling away from us.
9. A steady flow of particles streaming out from the Sun in all directions.
10. Glowing, dancing curtains of light in the upper atmosphere of a planet
11. The study of the Moon's surface
13. The path one object takes around another

NAME _____

DATE _____

SEPTEMBER'S CROSSWORD PUZZLE

Please complete the crossword puzzle below



Across:

1. REGIONS IN THE ASTEROID BELT WHERE ALMOST NO ASTEROIDS CAN BE FOUND ARE CALLED _____GAPS.
4. THE RELATIONSHIP BETWEEN THE DISTANCE OF AN OBJECT, AND THE SPEED AT WHICH IT IS TRAVELING AWAY FROM US. THE FURTHER AWAY AN OBJECT IS THE FASTER AWAY FROM US IT IS TRAVELING.
5. WHAT WAS FOUND ON MARS LANDER
8. THE EDGE OF ANY OBJECT IN OUTER SPACE.
9. A STAR WHICH SUDDENLY FLARES UP TO MANY TIMES ITS ORIGINAL BRIGHTNESS BEFORE FADING AGAIN.
10. THERE WAS A TOTAL _____ECLIPSE IN AUGUST.
12. NAME FOR MARS LANDER

Down:

2. A VERY SMALL PARTICLE WITH NO MASS OR CHARGE.
3. TWICE A YEAR, WHEN THE DAY AND NIGHT ARE THE SAME AMOUNT OF TIME ALL AROUND THE WORLD.
6. WHEN OUR VIEW OF ONE OBJECT IN THE SKY IS BLOCKED BY EITHER ANOTHER OBJECT, OR THE EARTHS SHADOW.
7. NAME THE NEXT SPACE SHUTTLE TO BE LAUNCHED
11. WHERE WAS THE BEST VIEW OF THE AUGUST ECIPSE?

Andromeda

Transit Date of principal star: 23 September

Andromeda was the daughter of Cepheus and Cassiopeia. Mother thought she and daughter were more beautiful than any of Poseidon's many nymphs, and she taunted the God of the Seas until he just couldn't take it any longer. Poseidon punished the vane mother by chaining her daughter naked to a rock, to be sacrificed to a dreadful sea monster.
Some writers identify this monster with Cetus, another constellation. But I can find no reference in the classical texts that directly name the monster as Cetus. (In fact the very name means "whale", hardly a dreadful sea monster.)

Perseus, fresh from slaying the Gorgon Medusa, was passing by. Attracted by Andromeda's beauty, and no doubt the generally heroic opportunities the situation offered, he agreed to rescue her. But only if he could marry Andromeda afterwards.

Cepheus and Cassiopeia were not anxious for their daughter to wed Perseus, but they had little choice, so agreed. Perseus skimmed over the water, thus confusing the monster, and then cut off the monster's head. The wedding followed soon afterwards.

At the wedding relatives distrupted the proceedings, probably at Cassiopeia's insistence. In the following melee both Cassiopeia and Cepheus lost their life. Poseidon put them both in the heavens (well, it was the least he could do...).

Much later Athene put Andromeda in the same region of the sky, between mother and father.

The asterism consists of the brightest star, Alpheratz (or Sirrah) denoting Andromeda's head, and the rest of the principal stars marking other parts of the young woman's body. But I like to think that the other stars in fact trace Andromeda's flowing hair, and I've drawn the constellation to reflect that idea.

The Bayer stars are not very bright, as the constellation generally ranges from third and fourth magnitude stars.
There are a number of fine binaries and several variables, and some very nice deep sky objects, including perhaps the most famous spiral galaxy of all.

Double stars:

Gamma[1] *and gamma*[2] *Andromedae* form a noted binary with colour contrast, gold and blue.

The binary is a multiple system. AB: 2.5, 5; PA 63º, and separation 10".
BC (the primary of which is gamma[2]) form a very close binary with an orbit of 61 years: 5.5, 6.3; currently the component is at PA 104º and separation 0.5"

Kappa Andromedae is a wide and rather faint binary: 4, 11; 194º, 46.8".
Pi Andromedae is alse faint and wide: 4.4, 8.9; 173º, 36".
Tau Andromedae: 5, 10; 329º, 52.5".
Phi Andromedae has a 370 year orbit: 5, 6.5; 154º, 0.5".
Omega Andromedae: 5, 12; 122º, 1.9".

Variable stars:

Zeta *Andromedae* is an EB variable: 3.9-4.1 with period of 17.77 days.
Lambda Andromedae is an RS CVn type variable: 3.7-4.0, 54.2 day period.
Omicron Andromedae is a gamma Cas type variable, ranging from 3.6 to 3.8.
R Andromedae: a Mira type variable with a period of 409.33 days, ranging from 5.8 to 14.9. In 2000 the maximum should occur in April.

Deep Sky Objects:

One of Andromeda's greatest attractions is the spiral galaxy known as M 31. There are also several more deep sky objects worthy of attention.

M31 (NGC 224), "The Andromeda Galaxy", is the finest spiral galaxy in the heavens, and probably the most well known.

The galaxy lies at about a fifteen degree angle from being edge-on; it has a bright oval nucleus. Its distance is approximately 2.3 million light years. Dust lanes become visible in medium-sized telescopes.

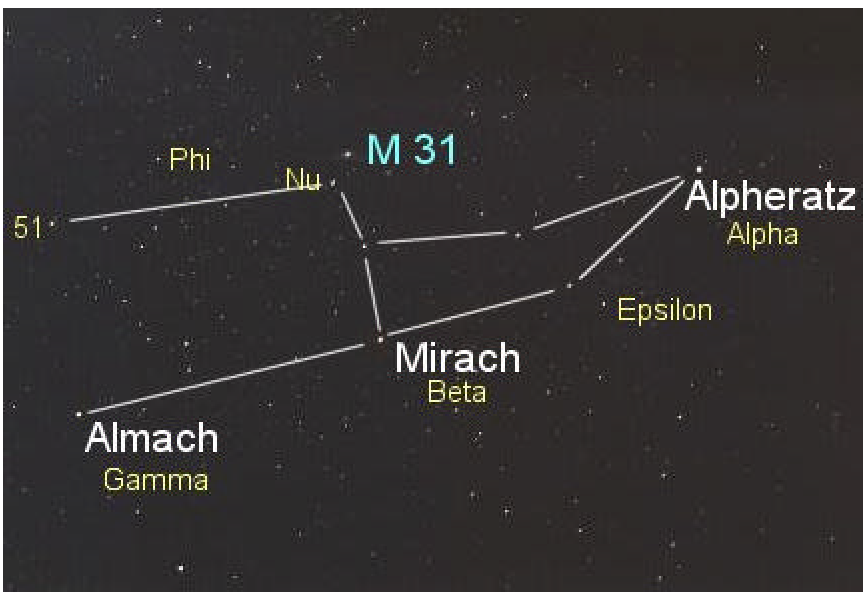
M32 (NGC 221) is the brightest elliptical satellite of M31, although rather faint compared to the latter. This galaxy is located almost half a degree to the south of M31 and is best seen in large telescopes.

M110 (NGC 205) is another elliptical galaxy, and a larger companion to M31 but much dimmer. It lies about thirty-five arc-minutes NW of M31.

NGC 752 is an open cluster of perhaps a hundred rather scattered stars. It's about four and a half degrees south of gamma Andromedae, and two degrees west.

NGC 891 is rather faint, but quite a nice edge-on spiral with clearly distinguished dust-lane in large telescopes. It's four degrees due east of gamma Andromedae.

NGC 7662, sometimes called "Blue Snowball", this is a blue-green planetary nebula with a very faint central star which is apparently variable (estimated to range from 12 to 16 visual magnitude). The nebula is found about 2.5º WSW of iota And.



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Question of the Month: AUGUST

Constellations represented many things to many cultures. Aquarius represented one thing to many cultures, what did it represent?

Answer: Water Bearer

WORD SEARCH

F K I D I S U G E B J R L W H C X L W M P G E T J G N C Q S
I C M E M J S O M L P Q D V N W P G B E J J C F P K P Y B N
D C R V A H W E N G V Y L E I A V L K F A R R X W T P Q I N
E N D G X E X Q S T I F Q J T N F J W A M R V W D H J H X D
N X D G D P T W D E J G R W Q J O R B A F Z P F N R A Q E E
I O F A F W R O B M U T B U B P R P X M E E J U N O D Z Q D
U W R N L T R O I N O S W H C O B V M S V V U Y W U B I R T
F Y U S Q T G Z V M O X B E K S U R E Y W K H S H N F K Z F
E V A F Q E C V R R Y T Y C I P K Y J J X J P I L Y V B A B
B V S D L R C X R U L T R H O Z O E O Y V D S V M L B F L U
R S D C V H E P Q T D O M G M Y D A G Q J U B I J Y M T F J
Q E K O X B W D E L T T U H S X X C Y H V G A Y Y I V J G T
R X S H I D J M N Q V V Z Y W C G D S Q R O R Y O R E C C C
U P R N I W O A S A J N A E O C T U T S A V B S O W M W B V
U S O L A F E C I S M D O T T K Y K R F L A F B T X L H O A
I P Y I C N Y K C C H M D P T N M X A Z O L O C C O U O I P
S P A G D O O W K R I K O P H O E N I X S T J V Y B N Y V Y
C C V Z H V Z T R Y Y A I C R F I H O E I E F U B I R I X J
K D Z W Z O H K G I M N Z E E H A B M C C F X L R Z S I C A
W G H S Y M M I S E B H P T C N I T B S Q A E T N K W V Y W
V I P N A Z Q N Q L C D T Y U M S F O I S C U E N P C Q U W
D A E R H H V A W H T L D P N F L R F T O E L Q O Y T R K J
V V S A M T E R R Y T B I L A M D N F N N W J U V Z Q P J R
X W L A D M X Z X R L Z A P W R S Y S A E Z K I A F M Q U G
E U H H M L N F M T Z I V R S D F T G L R H Y N Z T S G T L
W B N X N L V B A E Z N M Z S E A R Y T R E B O O S D F L B
G T N B A P U D J D Y W W B M N X C F A A A D X V A W U T X
S D I K P J A I D I Q I X W T W I E O I M D Q N R B W F W C
D R L U N A R A M Y M A J S B Y T K A H D C P R A U V J R B
M F A W D M W N N L S X W D Z T V A G F U N V P K L F D S J

SOLAR
CHINA
ICE
PHOENIX
ATLANTIS
ECLIPSE
EQUINOX
KIRKWOOD GAPS
LUNAR
LIMB
HUBBLE CONSTANT
NOVA
NEUTRINO
LANDER
ROBOTIC
MARS
SHUTTLE
COMMANDER

Snoopy says, never stop looking up..reach for the stars and may you always have clear skies!!!!