Longmont Astronomical Society
August 2005

Our Moon displayed on SOS

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Hello all,

We had a very good month for The Home Planet Stellar Views. The New moon dark sky trip this month was "The Weekend under The Stars" star party at Fox Park Wyoming, and it was Fox-tastic as usual. This is one I have made for most of the 15 years it has been going on. Thanks to Marty Curran and Cheyenne Astronomy Club for continuing this best star party of the year for us dark sky marines, who can never get enough dark sky views.

I headed up to Fox Park on Thursday, still raining and still telling myself it will clear. My wife Carol says I am a lunar-tic for sure but went with me anyway. We got half way to Laramie and the skies to north were clearing. I got to Fox Park and a huge crowd was already there. It has been turning into a week long event any more. I set up scopes and camp then skies did start to open up before dark even. They all were saying by midnight according to weather channel radio, but they cleared earlier. Wow!

Now we had to deal with very dewy night. Before I even started looking at dusk my view finder and Telrad were both dripping with water. Shroud got so wet after long night it was dripping water into scope. My Primary and Diagonal did not dew up at all just my eyepieces so we kept switching them around, putting into motor home to warm up. We stayed up till 2:30 am that night. Pretty good for long day, long drive then staying up late. I was pushing it some. I did not come here to sleep. The following nights were way better as far as dew, but cold front came thru with 26 for low temp. Friday dew turned to ice on the scopes by 3 am. Friday we stayed up till 3 am with Mars for parting shot to sleep on. Saturday night was even drier no dew even and a bit warmer, only 36 degrees for low. I met a long list of friends from NCAS, DAS, LAS and BASS members who made it to Fox Park from Colorado.

Galaxy M51 spiral you could see the super nova in it and NGC 891 galaxy dust lane pops right out in plain view, very good, Veil nebula, always awesome in dark sky, M13, globular cluster, stars almost poke you in the eye, Swan M17 in 30 scope in dark skies is as good as it gets. We have come to love the Fox Park darkness, great place, but cold even in summer, but hey no mosquito when it's cold out. Astro camp from Rock Springs showed up again this year, teenage kids learning the skies, way cool. We helped them along again this year, I had fun with them. Dawn and Dianna keep up the good work, tuff job in the cold there sometimes.

Jelm tour again this year but we had no view through the big boy. They had special camera hooked up so would be hard to switch to eyepiece views. We did the day trip up to summit. Very awesome place to visit, views in all directions, very special kind of feeling there with scope on top of hill, far away from city life. They opened the big mirror up and the dome shutter for us to take pictures, Wow! I still remember the views several years ago of the Cat's eye nebula at 1250 power in 92 inch mirror, blew me away. Rough road getting there but we had great views of Colorado to south, Medicine Bow to west, Never Summer range to the northwest.

Perseid meteors were everywhere for all three nights, probably best display I have seen for a week ahead of peak of meteor showers, but book said that was normal for Perseids, week ahead and a week after. I will be watching the skies this week, cloudy both peak mornings, I did get up Friday and Saturday at 3 am for cloud views only. Darn!

Solar views were the hit too, 5 PST solar scopes at Fox park, plus Dan Laszlo 90 mm and my 70 mm H alpha, Sun in H alpha is awesome and for cheap price for a small PST. I would recommend one to check it out. Picnic Barbecue at Flanders was cancelled cause of bad weather, but maybe we should try again? CU Mountain research station weekend is coming up for those who might want another try at high altitude observing near home here. Pretty darn good views if no clouds. East has light pollution, but the rest of sky is
pretty good for views only 35 miles from home. It is Labor Day weekend and we can use it for three nights. You do not have to stay over can come just for night views one night or stay in dorms but we need to get you to sign up with Julie or e mail me.

Our LAS friend and member Karen Mendenhal announced she is taking a job with Jen and Vic Winters in their Solar Eclipse tour company, I see stars. She will now get paid to go to South Pole places to see solar eclipses and other astronomy type tours they do. Icstars.com I think is their address. She is moving, so she will be leaving us soon. I will miss her and will have to go on a tour now to see her again. She did some trips with David Levy and she is the one to get him here for our annual Banquet for those lucky enough to have attended that one. LAS members are the Extreme team, we have done what others only talk about, pretty good for little old Longmont Club.

See you all next month at new moon dark sky somewhere. Bye, Gary

**M27 by Vern Raben**

It was exceptionally nice outside in our backyard last night. I just had to set up the scope. Below is an image of M27, taken with C11, F3.3 focal reducer, and a Stellacam2. Stack of 80 8.5 second exposures.
**Calendar**

September  
New Moon: 3rd  
1st qtr: 10th – Flanders Park  
Meeting: 15th

October  
New Moon: 1st  
1st qtr: 8th – Flanders Park  
Meeting: 20th

November  
New Moon: October 29th  
1st qtr: 5th – Flanders Park  
Meeting: 17th – Swap Meet

December  
New Moon: 3rd  
1st qtr: 10th – Flanders Park  
Meeting: 15th – Ray Warren – Stardust Return

**July meeting notes by Philippe Bridenne**

In July, we had a field trip rather than a meeting. We had the chance to visit with NOAA with Steve Albers. We started the visit by gathering in the reception area where we met Steve Albers. When our group reached a sufficient number of participants we headed towards a dark room to learn more about the “Science On a Sphere” project. Science On a Sphere provides a dramatic visualization of complex information in an understandable form for the public; a unique instrument for teaching students science, math, and geography; and a handy scientific tool to translate numerical information into visual images. Four projectors cast rotating images onto a sphere, approximately six feet in diameter to create the effect of a planet in space.

We were able to observe 3-D Surface of the Earth and Nighttime Lights, our Moon, Mars, Jupiter and its moons, our Sun, a spectacular Plate Tectonics/Paleo Animation, Pluto, Uranus, etc.. I cannot describe with words our spectacular it is. I have tried to explain to family and friends, but it is almost impossible. Even 2D pictures (below) do not come close to what we saw. You have to be in that room to get the full impact of this spectacular vision. Imagine! I was able to go around our Earth, our Moon, Jupiter, Io, Europa, our Sun...I could almost touch those objects! Incredible!

For more information, feel free to visit the Science On a Sphere web site at:  
http://www.fsl.noaa.gov/sos/description.html

After this wonderful spectacle, Steve took us to another location, the Space Environment Center. The Space Environment Center continually monitors and forecasts Earth's space environment; provides accurate, reliable, and useful solar-terrestrial information; conducts and leads research and development programs to understand the environment and to improve services; advises policy makers and planners; plays a leadership role in the space weather community; and fosters a space weather services industry. Space Environment Center is the Nation's official source of space weather alerts and warnings.  

The Space Environment Center (SEC) is one of the nine National Centers for Environmental Prediction and provides real-time monitoring and forecasting of solar and geophysical events, conducts research in solar-terrestrial physics, and develops techniques for forecasting solar and geophysical disturbances.
The SEC Forecast Center is jointly operated by NOAA and the U.S. Air Force and is the national and world warning center for disturbances that can affect people and equipment working in the space environment.

SEC works with many national and international partners who contribute data and observations; they share their data and products with them. They support efforts worldwide to inform users of space weather. Vi Raben shared with us the mission of SEC as well as explained why numerous customers need this information.

Among SEC customers, we have:

- U.S. power grid infrastructure
- Commercial airline industry
- Department of Transportation (use of GPS)
- NASA human space flight activities
- Satellite launch and operations
- U.S. Air Force operational support
- Commercial and public users (more than half a million hits per day on SEC web sites)

For more information, feel free to visit the Space Environment Center at:
http://www.sec.noaa.gov/index.html

Thanks to Steve Albers, Will von Dauster, Rhonda Lange, Vi and Vern Raben for a great field trip!

Field Trip at NOAA
Observing report from Dan Lafaive

Sorry I didn't have a chance to reply to your message, Mike. I just had enough time to send the e-mail out and then I was on the road.

Sounds like WUTS turned out to be a great time. I wish I had gone. I like the social atmosphere there, but I didn't want to risk the questionable weather. As a relative newbie, I really want to get as much summertime observing in as possible. Looks like I need to stick with Gary's blind faith! :)

I left Wednesday morning and jumped on I-80 heading west. I made it to Elko, Nevada at around 7pm. I got a hotel room in Elko, and then headed north on Nevada Highway 225. About 60-65 miles north, I came to the Wild Horse State recreation area. (WHSR - not to be confused with the Wild Horse campground which is a few miles south of there). As you come to the WHSR, you'll come to an intersection with a sign pointing to the left for the WHSR and another sign pointing to the right for the Big Bend campground. I turned right (onto a gravel road) because there were too many lights at WHSR. I went about 1/4 mile down the road and then took a left and went about 1000 feet to the top of a small hill.

Despite the fact that I was surrounded by mountains, the horizon was minimal obstructed. I could look at everything I wanted.

The area where I was at was not in a state park. Elevation was between 4-5,000 feet. Basically, once you get 40 miles north of Elko, you could take any of the dirt roads to the side and setup on them. It's pretty remote and there's very little traffic on these roads. I'd recommend going there with at least 2 people since you are in such a remote area.

The skies that night were perfectly clear. No clouds or haze. The Milky Way was breathtaking. Seeing was about 7/10. Jupiter was setting when I got there, so I didn't get a chance to take a look. I looked at M13 and various other objects. I was out for a few hours and then I decided to head back to Elko because I was tired after the long drive.

On Thursday, I traveled to Steens Mountain in Oregon. To get there, I took I-80 west to Winnemucca, Nevada, and then I took Highway 95 north to Burns Junction, Oregon. Then I took highway 78 to Burns, Oregon.

Burns is the only town of any size within 300 drive miles of Steens Mountain, so I gassed up there and got a good meal.

Then I headed south on state highway 205 to Frenchglen which is a small community at the western base of Steens Mountain.

The area is officially called the Steens mountain national recreation lands. Parts of it are run by BLM and parts of it are owned by local ranchers. On the south side of Frenchglen, on the left hand side, there's a dirt road that goes in a loop to the top of the mountain and then back down, coming back out on 205 about 10 to 15 miles sound to Frenchglen.

I took this dirt road loop to the Jackman Park campground and setup my tent there. This campground is about 21 miles down the Steens mountain loop. The road there is very dusty, so make sure your optical equipment is covered.

For observing, I went a few miles up the loop to the Kieger Gorge road. About 1000 feet up this road you come to the top of a small hill. I setup my scope alongside the road on Thursday night. This is at 9100 feet in elevation.
The skies were perfectly clear. They were darker and clearer than Fox Park. You can see some lights from Burns which is about 60 miles away. They're very dim and they don't cast any light dome. This area is the farthest point from an interstate highway in the lower 48 states. It has the darkest skies and the greatest transparency of the lower 48.
The weather can be problematic, however, so I wouldn't recommend going there unless the weather forecast clearly shows that there will be a period of several days of clear skies.

The Milky Way was incredible. The dark dust clouds clearly stood out against the background of stars.

I looked at M13 and it was stunning. With my C9.25, I could resolve stars to the center of the glob. Seeing was awesome at 8 to 9/10. I could easily split the double into 4 distinct stars. At 454x I could discern airy disks with the relatively stable surrounding diffraction rings. I was out until 4am that night. Temperature was 58 degrees when I packed it in. It was somewhat breezy. May have been a problem with a Dobsonian. A person could easily setup in the lower elevations along the road and get unobstructed views without the winds as well, however. For more information check out this web-site:
http://www.patch.com/astro/starsites/#steens

On the second night, clouds came in during the day and they didn't break up until late in the evening. I got about 3 hours of observing in, however, and it was very calm with seeing at 9/10.

On Saturday night, I drove to Twin Falls, Idaho. To get there, you take Highway 20 out of Burns, Oregon, east to Ontario, Oregon and then get on I-84 east. Twin Falls is something like 100 miles east of Boise. I stayed at a hotel in Twin falls and did a late night viewing session about 60 miles sound off of Highway 93 just a few miles sound of Jackpot, Nevada. There was some light pollution there, but nothing that was problematic. I had still great views. I just took one of the dirt roads and drove 1/2 mile off the highway and setup on the side of the road. Skies were perfectly clear. Not as good as Steens, but at least as good as Fox Park. No wind. Seeing was 7/10. I stayed there for 3 hours and then headed back to Twin Falls, got to sleep at 5:30am.

It was a great trip. I like to explore new dark sky spots, but I'd prefer to have someone with me in these really remote locations. The problem is that you don't know if it's going to be a good idea to go on one of these drives until the last minute because you have to see what the weather's going to do, first, and I don't want to drive 600-1000 miles just to camp in the rain :)

Dark Skies, Dan Lafaive

**Fox Park report from Garry Garzone**
I knew when I saw that rainbow the day before I left for Fox Park that it usually clears after a storm, and sometimes it even shines with a rainbow. Fox-tastic weekend it was indeed. We stayed up for three spectacular nights of dark sky viewing. Weather looked bad for the "weekend under the stars", but hey, the weather could not have been better. Large turn out as usual, people from as far away as Israel, California, Nebraska, even Colorado, just kidding. The NCAS, DAS, LAS, BASS clubs made their way to Fox park for the 15th year of Weekend under the stars. Marcy and Marty from CAS are the best for keeping this event alive for so long. I was happy to share the 30 scope views with so many people again. We did Jelm tour, but no views, Darn, maybe next time?? Here are a few pictures, got lots to share again, will be sending out more soon, need sleep now. Work tomorrow. Coming down to earth is tuff after such a great weekend. Best weekend yet for me since last summer. Three nights in a row! We hit it just right! I love being in the right place at the right time again, I am so lucky sometimes, blind faith works?
Carol showing off Steve L earring, me at Jelm scope, mountain views, more, enjoy, thanks for looking. bye, Gary
Astronomical League’s Earth Orbiting Satellite Observing Club by Michael Hotka

I just recently completed the Astronomical League’s Earth Orbiting Satellite Observing Club and wish to share some of my thoughts on this program.

From what initially appeared to be an easy program, quickly turned into a very challenging and informative program. Whenever you are out after sunset, you can see a “satellite” fly overhead. When I initially choose to do this program, I said this would be a piece of cake to do, should take me a few nights to see the 24 satellites they wish me to observe.

The program is divided into categories. You need to choose and observe satellites that fit the categories. One category was observing Iridium flares. I saw this and said “this is the easiest category to fill”. You needed to see 4 Iridium flares, one in daylight or civil twilight.

The daytime flare was one of the hardest satellites to see of the entire program. I tried several times to see one from Boulder and learned that maybe you need to be near the flare center to see it. Well, through some internet detective work, I determined where heavens-above.com put the flare center in Boulder. It has too many trees to see the horizon. So, my last attempt to see a daytime Iridium flare from Boulder was 6:30 AM, 3 blocks south of the flare center. Never saw it.

By playing with heavens-above.com, I noticed that North Glenn, specifically the Mall at 104th and I-25, had an unusually large occurrence of daytime Iridium flare than any other location in our area. I found a bright one, about 15 minutes before sunset, drove over there and waited. Finally saw this one.

The whole program was full of learning how to observe a specific satellite. I learned how to fumble with a radio playing WWV time pulses, a tape recorder and still hold a pair of binoculars and track the satellite I was waiting for. You need to record the satellite passing 2 locations in the sky and I used the tape recorder to speak “Now!!” when the satellite passed a star I was waiting for it to pass. Later, I would play the tape and hear the “Now!!” on top of the WWV time pulses. I could get the satellite passing next to a star within a second of UT time.

The other aspect of this program is the surprises that abound during each observation. I remember I was waiting for a specific satellite to appear in the constellation Serpens Cauda. Near the appointed time that heavens-above.com said it would appear, about 6 other satellites appeared in this same starting point, but traveled different paths in the sky from the one I was waiting for. I cannot tell you how many times I followed the wrong satellite, just to have to make the observation of the satellite I wanted another night.

Another nice surprise was the speed of LEO satellites. LEO stands for Low Earth Orbit. These are dim and FAST!!! Other satellites, farther from the Earth, go through the binocular field of view at a reasonable rate. The LEOs shot through the field of view. I was stunned by the speed.

The biggest surprise of this entire program was that I thought every point of light that moved across the sky was a satellite. Rocket Bodies, a category of the program, are VERY bright objects. They are everywhere. And, many of the satellites we see that are true, electronic satellites, are dead. No longer active.

So, if you are looking for an observing program that is a lot different from looking at the Moon, planets and deep sky objects, this program is the one for you. The program gives you just enough information to get started, but not too much so you have to learn how to surf the internet to see if a satellite you are going to observe fits the category you want it to fit into. It's like playing Yatzee. For a given satellite (roll of the dice), you need to choose the best category the satellite fits into.
I really enjoyed this program and now have a new understanding and appreciation of these objects that orbit our Earth.

**Classified**

*To buy:*
Wanted: Large dob, say 14-15 inches, in good working order, preferably with digital settings circles. Thanks! Bill Travis, 303-530-5010, *wtravis@colorado.edu*

*To sell:*
I am trying to sell a Celestron Ultima 9.25. If the deal were local I would expect closer to $1,600 or so and accept credit cards. [http://www.astromart.com/viewad.asp?cid=233874](http://www.astromart.com/viewad.asp?cid=233874)
Jared Workman

I got a new (800mHz) computer & wish to sell my 3rd computer. It's a 433mHz, 64meg RAM, 9 Gig HD space, 33.6K modem, and SoundBlaster sound card, with a 15" monitor, programmable keyboard & MS mouse, with Windows 98 SE for sale. $180. No problems with it what-so-ever. Will deliver & setup within 30 miles of Ft. Collins. It would be great for a stand-alone application or a kid’s computer.
Contact Tom Teters *tomt@starmon.com*

For Sale: Orion EQ 120 Refractor; F/8. Items included: EQ mount, tripod, JMI Refractor hard case, telrad & telrad dew sheild, 1 1/4"Diag mirror, 6X30 Finders Scope, Collimation eye piece, 25 mm & 4mm eye pieces, Astrosystems new waterproof cover. All for $1,000 firm. Contact Marc and Julie at 303-682-5428 or email if interested; marcwiley@wildmail.com or *julie.carmen@colorado.edu*

Couch Potato Binocular chair. It all collapses down for transportation. I built this and it works great. $120.00. Contact Mike Hotka (mhotka@yahoo.com) with questions or comments.

Binocular parallelogram I built. Works great. Tripod not included. $70.00. Contact Mike Hotka (mhotka@yahoo.com) with questions or comments.

*To give:*
FREE: Monitor, HP D1195A 15" CRT, will display 1024x768. Clean, like new, works. Contact: Bob Noble *nobler@att.net*

If you have astronomy stuff to buy or to sell, send an email to your newsletter editor *philippe_bridenne@yahoo.com*

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**The LAS warehouse**

LAS logo T-Shirts:
Crewneck, navy blue, 8" white LAS logon on front
$10 - S, M, L, XL
$12 - 2XL
$13 - 3XL
$14 - 4XL
$2 - 5" LAS vinyl sticker, black or white

$5 - 4" LAS embroidered patch

$5 - VHS tape, "An Evening With David H. Levy", 3 January 2004

$1 - LAS Planisphere

2/$1 - LAS un-bumper sticker
September Sky Map

Europa on SOS