

Longmont Astronomical Society

May 2006



Aurora picture by Bryan R. White

*The Home Planet Stellar Views
Calendar
April Meeting Notes
North Sterling Star Party report by Gary Garzone
How I Do What I Do by Mike Hotka
Starry Night photo of the month competition
The origin of the Astronomy Day
Astronomy Day in Longmont
Northwest Nebraska star party by Vern Raben
Classified
The LAS Warehouse
June Sky Map*

The Home Planet Stellar Views

Hello astronomers,

The Home Planet Stellar views were awesome from the Sterling Star party weekend. Several of the old die hards who always show up at every chance they can get for Dark skies, came out once again. Vern Raben, Leigh P , Brian Kimball and my wife, and a new guy John Figoski. We also had Dave Cole and his northeastern college kids from Sterling and his family and friends from town, even several couples from Fort Collins and Loveland area who were not in any astronomy club, but had been coming to see the stars for years they said.

North Sterling state park ranger, Bob Loomis gets a big thank you again from us at LAS. He met with us and came out to view Saturday night, the public viewing star night. I tested the tracking on 30 telescope that night, with lines of people at scope, sure does make it easier for me.

You all know how windy it gets there in Sterling, especially if you have been going there for the past several years, it's usually clear, and beautiful, but winds will shut you down for sure. Vern asked me about wind towers but when we first went there we had none up yet. First clue to windy area might be wind farms from Public Service?? Thursday it blew hard and rained hard all night long, no views were had. Friday we had an excellent night till about 3 am and Saturday night till 12:30 or so before the clouds rolled back in. Winds blew hard all day Friday and Saturday but did with some strange twist of fate, stop blowing right after dark for us. Brian, Vern, Leigh and I went to see those whirling monsters up close. Public service has huge wind farms along border of Northeastern Colorado and Nebraska. I tell you it was almost as exciting as star gazing, maybe? But to see them and hear the blades move thru the air, was way cool. You have to stand below one of those 90 and 120 foot tall towers with 60 foot blades to really appreciate how big they are. I took many pictures, but they do not come close to actually being under it as it moves. We timed the rotation, about 3 seconds, those babies were moving fast. The winds were about 20 to 35 mph in air, sometimes higher.

We had an awesome Astronomy day at Twin Peaks Mall once again. We had three great solar scopes set up outside and yes it did clear for views of Sun. We do seem to get lucky sometimes with weather. Andrew Planck's and my H alpha scopes, also one with white light solar filter too. We gave away many posters, cards, pictures and more. We had Night sky network demonstration of gravity, scopes set up in mall with several tables of stuff. We also did a Flanders star party that same night with a pretty good turn out again. Larry T from Boulder County day school from Gunbarrel brought out kids to Flanders that night. I want to thank the good turn out of Volunteers on Astronomy day, Brian Kimball, Michelle Lavers, Andrew Planck, Vern Raben, Terry Frazier, John and Gerdie Peterson, Philippe Bridenne, Mark W, Jeff L, Ray Warren, Bob Spohn, and a few more, like spouses for lunch. This was a huge out reach day and we did good you guys, thanks again, it does take some work to make it all work out so smoothly.

Terry Frazier and I gave a star party for FRCC Adam Jensen and his astronomy class. He got rained out a week before and I told him to reschedule, so we did it the Monday after the Sterling weekend trip. They were getting out of school that following week so it was there last chance for a star night, so we did last minute star party and it worked out good, clear mostly.

Comet 73P has been the treat for us astronomers this past month. Views at Sterling we could see four pieces of it in the vast dark skies of high plains. I just love comets from dark places, so much better. Twice what you see here in yard sometimes. I have seen comet from Flanders and yard here in Niwot but not as good. Vern and Brian have taken some pictures you have probably already have seen from my e mails. These comets seem to be moving faster , as it has been crossing the skies nearer to us now, you can almost feel it move, look again an hour or less later and it has moved against background stars. Always so much to do in life, so little time to do it, is what it always seems, get out and do some viewing of comet before it is history. Keep it cosmic, life is a trip you want to enjoy . later, Gary

Calendar

May:	New Moon:	27 th - Pawnee
	Meeting:	18 th – Topics: Stardust Sample Mission video from NASA
Jun:	New Moon:	24 th - Members' choice or....Rocky Mtn Star Stare: 22nd – 26th
	1st qtr:	3 rd – Flanders Park
	3rd qtr:	17 th – Tri-Town Party??? Michelle is this on again?
	Meeting:	15 th – Topics: Messenger Mission Update by Suzanne
Jul:	New Moon:	20 th , 21 st , and 22 nd – Fox Park Weekend under the Stars
	1st qtr:	1 st – Flanders Park – This is July 4th timeframe
	Meeting:	20 th – Topics: Mark Bagdy Nigh Sky Network Material review
Aug:	New Moon:	19 th or 26 th – Fox Park or Pawnee? And the date could go either way.
	1st qtr:	5 th – Flanders Park –
	Meeting:	17 th – Topics:
Sep:	New Moon:	23 rd – Pawnee
	1st qtr:	2 nd – Flanders Park. This is Labor Day weekend.
	Meeting:	21 st – Topics: Celestia astronomy software demo by Philippe
	1st qtr:	30 th – Flanders Park
Oct:	New Moon:	21 st - Pawnee
	1st qtr:	28 th – Flanders Park
	Meeting:	18 th – Topics:
Nov:	New Moon:	18 th - Pawnee
	1st qtr:	25 th – Flanders Park. This is Thanksgiving weekend.
	Meeting:	16 th – Swap Meet/Nominations
Dec:	New Moon:	23 rd - Pawnee
	1st qtr:	30 th – Flanders Park
	Meeting:	21 st – Topics: Elections

April 2006 Meeting notes

Since we have two long presentations, we skipped the officers' reports and went directly to the Starry Night® astronomy software demo followed by Bryan R. White Comets and Auroras 3-D slide and musical show.

Using Starry Night® Pro 5.8, Philippe illustrated the 3/29/06 solar eclipse viewed from Libya, the 5/15/2003 moon eclipse viewed from Erie, and viewed from the moon itself, the September 5th close encounter with Mars, the Mars retro-motion, the 6/8/2004 transit of Venus viewed from Barcelona (Spain), ISS orbiting the earth, and finally driving his "space ship" Philippe took us (at 10 times the speed of light) to Venus, we all flew between the rings and came back to earth. For more information on products from Starry Night® you may want to visit the following web site <http://www.starrynight.com/>

After a short break, Bryan R. White started a fantastic slide and musical show with pictures of comets, followed by popular request by a second show with aurora pictures. Absolutely amazing!
You can see many of Bryan's pictures on his web site at www.astro-photo.com.

You may also reach him private and/or public events at NBryanWhite@netscape.net or call him at (303) 346 4831

North Sterling Star Party report by Gary Garzone

A few brave souls bore the cold and winds of North Sterling star party. Thursday was nice, warm, dry and clear, then by evening winds picked up and it rained most of the night long with sheets of rain coming down. My scope was under cover but got wet, luckily not the mirrors.

Friday, Vern, Brian, Leigh and I ventured out to see where all the winds were coming from. Public Service has this huge windmill farm causing all the problems it seems. Whenever the wind mills were turning so were the winds blowing. They must have turned them off for Friday night because it was total clear skies and no winds all night long after a very long windy day. Friday night was one of those all night long clear skies viewing, so a long list of stellar wonders was seen.

Saturday during the day the winds blew hard again but by evening they stopped blowing. I think it's pretty cosmic since Star party viewing for general public was scheduled for Saturday evening. We had quite a few people from town again with small children, parents, grandparents, whole families. Good to see people still go out as families to events like these.

Sunday was beautiful morning to wake up to clear blue skies the way we like them in Colorado. Two out of three nights, not too bad I must say, well worth the drive there. Some of the best home planet stellar views come from the dark places we visit. There was a about a dozen of us all together, few die hards from LAS, couple from Windsor, another couple from Loveland, two guys from Denver, with 10 inch Meade scope. Dave Cole from Sterlings Northeastern College and his family and students. Bob Loomis, State park Ranger came out for views and was a great host. We thank the park service for all the great years we have been doing these star parties, 8 years now, Wow!

Pictures I got to share as always, I live for these kind of star party weekends. My wife Carol went along this time for a relaxing weekend under the stars. New LAS guy John Figoski got some 30 view treats in, long list of objects viewed again. We also found the comet, three pieces not four, still searching for other parts. I hope to get Brian K. to do a comet shot. Comet is a pretty good view even from the backyard here so check it out when you can. Later, Gary

How I Do What I Do? by Mike Hotka

In part five of How I Do What I Do, I will discuss tips and tricks I have learned to aid you in doing some of the observing club programs of the Astronomical League.

Lunar and Lunar II Observing Clubs

Being a deep sky kind of guy, I used to find the moon an annoyance. After completing both of these programs, I have found a new appreciation of this bright and near object.

On the moon, you do something called 'crater hopping'. Similar to 'star hopping', you move from a known crater to the one you are looking for on the observing list. To aid me in this, I purchased a lunar atlas. I purchased The Atlas of the Moon by Antonin Rukl. This book was invaluable in finding the exact features that I needed to observe.

Then I downloaded the Virtual Moon Atlas from the website http://www.astrosurf.com/avl/UK_index.html. Its free software! I used this program to determine when the terminator line would be near the objects on the lunar surface. Observing some of these features near lunar sunrise or sunset was vital to being able to see them. Lava domes and riles are impossible to see if the sun is too high. They disappear. But observing these objects within hours of the sunrise or sunset, illuminates them just so as to make them stand right out on the lunar surface.

Earth Orbiting Satellite Observing Club

I choose this program for I thought it would be easy. Geez. I see these things all the time, how hard can it be?

There were some challenging aspects of this program that were indeed, very surprising. I learned how to handle a tape recorder, binoculars and radio, all at once. I became very good at this. Also, I was surprised at the speed of low earth orbiting (LEO) satellites.

A nice formation set of satellites were Grace 1 and 2. Grace 2 follows Grace 1 by about a minute. The requirement of this program is to log the satellite going past 2 stars. Well, Grace 1 flew past the first star, and before Grace 1 passed by the second star, you need to go back, find Grace 2, log its time past the first star. Go back, pickup Grace 1 and log its passage by the second star, then pickup Grace 2 and log its time going past the second star.

These guys are faint, usually seen while twilight is happening and you need to use binoculars. It took me until the 3rd time Grace 1 and 2 passed overhead before I bagged the observation needed for the program. The first 2 passes were practice.

Using the web site <http://www.heavens-above.com> was instrumental to achieving a certificate for this program. There is a feature, once you enter a satellite name, to print the predicted path of the satellite. I used this printout to choose the two stars I would use in the observation of the pass of this satellite.

I also choose, when available, satellites that pass nearly overhead, for it gave you more time to spot the satellite before it passed by your first reference stars. For satellites like the Hubble Space Telescope, its always on the horizon for us here in Colorado, but is high in the sky at the Texas Star party.

I bought a radio that played WWV, the old time broadcast station. I found this to be invaluable, for if you took your eyes off the satellite to look at your watch, sometimes you could not pick it back up before it passed your second star. Did I mention that some of these move very fast!

I also used a tape recorder. So, this is how I planned to observe a satellite pass. I choose a satellite that matched one of the criteria of the program. I entered its name in heavens-above.com and noted when the next week it would be in a favorable position to be observed from my back yard. I would then print the predicted path chart for that satellite on that date and choose the two reference stars I would use for the observation.

On the night/morning of the pass, I would setup my equipment about 30 minutes before the pass. Tune the radio to WWV. About 5 minutes before the pass, I pressed the record button on the recorder and placed it in front of the radio playing WWV. If I needed to use binoculars, I would find a star ahead of my 1st reference star and sit on this star, waiting for the satellite to appear. Once I acquired the satellite (which is not easy, I missed a few), I followed it past the 1st reference star, picked up the recorder without taking my eyes off the satellite and said "Now". I put the recorder down in front of the radio again, playing the WWV time signal. When the satellite passed the 2nd reference star, I picked up the recorder and said "Now!". I put the recorder down in front of radio again to record more time signals from WWV as I watched the satellite continue across the sky until it disappeared in the earth's shadow or below the horizon.

Later, I would replay the tape with the WWV time signal and my Nows! and could nail the time the satellite passed the reference stars within a second. I then used the printout from heavens-above to add the time to the reference stars and this is what I handed in for my observation of that satellite.

Finding international active payloads was a challenge. I used the internet to research which countries owned which satellites. Then I looked for any recent data from the satellite, to indicate it was still active. This is the

learning part of the program, for I learned that a lot of countries have put satellites into orbit, not just the big countries.

Also, be prepared to miss an observation. There is a tremendous learning curve to this program. I learned one night that with the tape record in front of the speaker of the radio playing WWV, and my getting close to the recorder and shouting Now!, the recorder was overwhelmed by the radio signal and only recorded that. I never heard my Now!. That is why I picked up the recorder to near my mouth to say Now! and then place it back in front of the radio. I missed that satellite pass.

Iridium flares. We all have seen them, but you need to see one in the daytime. I found that two things about daytime iridium flares, one, you need to be very near the center of the flare. This information is on the heavens-above.com site for the satellite. If you pick your location, like Broomfield, one, you need to find WHERE in Broomfield heavens-above is predicting from (the center for Broomfield), and how far from the flare center this is (measured in kilometers). I found the Broomfield center to be about a mile from my house to the south, near the edge of a park by a fire station on Midway.

I also found that daytime Iridium flares have a higher probability of happening in Boulder and North Glenn. I observed mine in North Glenn. The Boulder Flare Center is near some ball fields just south of Arapahoe Road, in a student housing parking lot. The North Glenn Flare Center is about a ½ mile northwest of I-25 and 104th Ave. I setup near a bus stop, just west of the North Glenn Mall. The daytime flare I observed was directly overhead and bright.

To find the center of your location that heavens-above.com uses, I used mapquest.com and fed in the coordinates heavens-above.com used for the observing site. Then I could see where heavens-above.com was using. But feeding latitude and longitude to mapquest.com was not easy. I used mapquest.com and found my house. Then, on the address line that is displayed at the top of the web browser, I replaced my latitude and longitude that were used to find my house with the latitude and longitude heavens-above.com used for the center of the observation, and then hit return in this address line. Mapquest.com responded with a map with a star in the location of this latitude and longitude.

I hope that these tricks and tips will help you start and enjoy these 3 observing programs. I really enjoyed doing all these programs. The key is for you to enjoy them also.

Starry Night photo of the month competition

Starry Night® users are invited to send their quality astronomy photographs to be considered for use in the Starry Night® monthly newsletter. Featured submissions (best of month) will receive a prize of \$25 USD. Please read the following guidelines and see the submission e-mail address below.

Format: Digital images in either JPG, GIF or TIFF format.

Size: 700 pixels wide maximum.

File size should be less than 2 MB.

Include a caption: Your full name, location where photo was taken and any interesting details regarding your photo or how you took it. Please be brief.

Important notes: Starry Night® may edit captions for clarity and brevity. Starry Night® reserve the right to not use submissions. In submitting your image or images to Imaginova, you agree to allow Imaginova to publish them in all media -- on the Web or otherwise -- now and in the future. Imaginova will credit you, of course. Most important, you'll have the satisfaction of sharing your experience with the world!

Send images, following the above guidelines, to photo@starrynight.com (by sending an image you agree to the above terms, including Imaginova's right to publish your photos).

The origin of the Astronomy Day

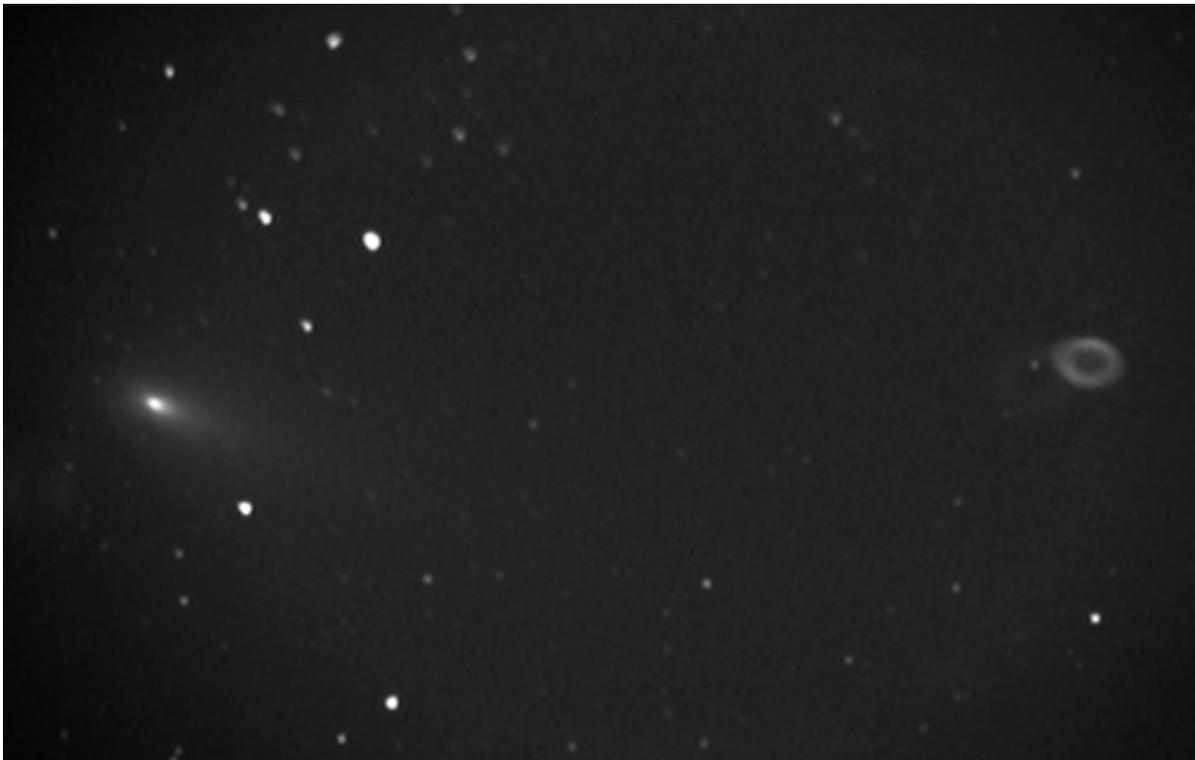
Astronomers, both amateur and professional, love sharing their passion for astronomy with the public. Observatories hold open houses, astronomy clubs hold star parties, but most of these events happen at fairly remote sites, where it's often hard to entice the casual visitor to attend. In 1973, Doug Berger in Northern California organized the first Astronomy Day with the idea of bringing astronomy to the public, rather than expecting the public to come to it. Events were held in city parking lots, shopping malls, anywhere people gathered. The idea quickly caught on, and Astronomy Day is now celebrated around the globe.

Astronomy Day takes place on the Saturday closest to First Quarter Moon between mid April and mid-May; this year Astronomy Day is on Saturday, May 6.

Why April–May? Because from most places, it's a pleasant time of year for outdoor activities. Certainly, at the mid-northern latitude where I live, it's too cold any earlier.

Why first quarter Moon? Because the cratered surface of the Moon offers the most spectacular views. Keen amateur astronomers may enjoy hunting down faint fuzzies when the Moon is not visible, but someone who has never looked through a telescope before will have a hard time seeing even a bright fuzzy, especially from an urban light polluted location!

The planets are also popular targets, and we've got the best of the bunch, Saturn, well placed in our evening sky. Many Astronomy Day events take place during the day, when safe solar observing can be done.



Comet 73P and M57

Thick cloud bank hung over my eastern horizon until about 10:30pm last evening. It cleared slightly for about 40 minutes. Below is the best of a lousy set of images shot through thin clouds. I had some problems with camera alignment as well. An animated version is available on my website at <http://www.raben.com/comets/73P-SW3-C-2006-05-07.gif> (1.5 M-bytes). Equipment used was Nexstar11 telescope, Meade F3.3 focal reducer, Astrovid Stellacam2 video camera. No wind, mostly cloudy, poor transparency, turbulence 6/10, and temperature 53 deg F. Vern.

Astronomy Day in Longmont



I want to thank all those who helped out again this year. It takes several people to run it all. We had three solar scopes set up outside west entrance to Mall. Two H Alpha ones and white light one, and a pair of binoculars with solar filter, with white light filter. We also had several scopes inside. We gave away lots of posters and JPL pictures etc. Good turn out of people, inside and out, was fun showing off the sun. Flanders was big crowd also, pretty good night, bunch of great scopes set up. Thanks to volunteers, it works out pretty well, proud of the LAS people who always help and come thru. Thanks again you guys, bye, Gary

Northwest Nebraska star party by Vern Raben

It is now less than a month until the first ever Northwest Nebraska star party which will be held on Memorial Day weekend, May 26 through the 28th. The maps of how to get there are too large to post here but they are available on my website:

<http://www.raben.com/starparty>

ACCOMODATIONS

Accommodations and rates are negotiable, however this is what they usually charge:

RVs and campers: they can provide some electrical hookups \$10 RV/day

Bed in farmhouse: \$15 per person/day. There are 4 rooms available in the guest house with 3 or 4 beds in each. Also, they have 3 more rooms in the basement of their main house.

I assume most will stay in RVs/campers.

I didn't ask about tents, I'm sure its okay maybe \$5/day ??

For those interested in historic sites, nearby Fort Robinson opens up on Memorial Day. Fort Robinson was the US Army's center of operations for battles with the Sioux tribes so there are many historic buildings/sites.

A number of geologic/paleontology sites are nearby as well, for example a place called "Round Top ?" where thousands of buffalo committed mass suicide. Also close is Toad Stool Park where many skeletons of mastodons, eohippus, and other prehistoric animals have been found.

For meals, there is a place called "Drifter Cook Shack" which is quite good and not far away. Otherwise, bring your own food. As I mentioned previously, we will have a kitchen available. Group meals are a possibility if anyone is interested. Grocery stores, gas, etc are available in Crawford so its not necessary to pack/plan everything.

Average temperature at end of May for this area is 75 deg F in the daytime and 52 deg at night. As always remember to bring full winter gear, sun block, mosquito repellent, etc as we never know what weather conditions will be.

Classified

To buy:

To sell:

New, never used Celestron NexStar 8i for sale. What's included besides the scope?

Steel carrying case for scope

Set of Plossi eyepieces

Set of color filters – eyepieces and filters come packed in a sturdy steel carrying case

Battery power pack and Michael Swanson's book, "NexStar User's Guide.

All of this for \$1,800. Please contact Bob Reece at 303-229-8319 or send an email to bobhistory@comcast.net

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>

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

I have an ORION SKYVIEW 4.5" Reflector telescope with finder scope; equatorial mount tripod, with 9mm and 25mm lenses, 1.25 mm Barlow and extra filters. The telescope is in great condition, just toooo advanced for my amateur status. All for \$500!

Contact Anna Vayr at 303-776-7167 or via email at anna.vayr@spot.colorado.edu

I own an Orion SkyView 8" EQ reflecting telescope (in excellent condition) with an AccuTrack SVD motor to keep the scope aligned with an object. My husband and I have decided to sell it for \$500, due to space and budget constraints during our current home remodel.

We want to sell the telescope to someone who can "do it justice", which is why I'm grateful if you wouldn't mind getting the word out to other keen astronomers who may be interested in buying it. I can be contacted by this email address or home tel. 970.577.0417 or Jennifer_Taylor@psdr3.k12.co.us

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

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

Light blue with the lapel logo and Dobsonian telescope.

\$1 LAS un-bumper stickers

\$5 LAS Observing Log Book

\$1 LAS Whizzy Wheel (astronomy calculator)

\$2 - 5" LAS vinyl sticker, black or white

\$5 - 4" LAS embroidered patch

\$1 - LAS Planisphere

