

Longmont Astronomical Society

June 2005



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Hello all! We sure had another busy month with LAS. Wednesday night, I had teacher Adam Jensen and about 20 students from FRCC College come over to my place for a Star gazing session. We actually had great clear skies, despite the earlier outlook of rain. Thanks Ray Warren for coming over to help. Pretty hard to run 5 scopes and get 20 kids to find 6 to 8 objects each and write down in one night. Kids did stay late, past midnight even, I was impressed.

Terry Frazier and I did a Colorado Skies show Thursday night at Fiske planetarium, to a sold out house. Once again Terry did an awesome job, fun to do show with him. Terry is not a slacker. My son Vincent and his girlfriend Juliana showed up too, for a great sound and visual show that they will remember. I saw a doctor, friend of mine, at the restaurant we went to before the show with Terry Frazier and I invited him to see the show, so he brought his wife and two kids, Wow! We do have an impact on people. After the show he said it was a lot of fun.

Cal Wood Astronomy camp weekend with Andrew Planck went very well despite rains on Friday night. Saturday we did get some views in from midnight till 2:30 AM, then, the clouds rolled back in. Kids actually stayed up that long, after being cooped up inside because of rains, they were ready to run wild. My astronomy adventures have taken me to so many great places, like this one. Cal Wood is a beautiful area with 1040 acres, a private retreat, with trails thru woods, flowers in fields, greenest I have ever seen the hills with all the rains this spring. We stayed in Log cabins, with main building being huge log structure for large groups.

The CU Mountain Research Station weekend went very well with a large group of astronomers from LAS and BASS clubs. We had the best Home Planet Stellar views of the month at 9600 feet elevation. It is indeed a high place for viewing. Friday it rained hard all day, I packed up after work and went anyway; after all, I am a die hard. Skies did clear up before dark and we had great views until 3 am, before we headed back to our dorms. Heavy dew after all the rains, so finders and Telrads were hard to use. The tracking on 30 inches scope was working pretty well. The Veil nebula, M51, M101 were among my favorite views of the month.

Saturday morning, Andrew's solar scope was a big hit. Sun in H alpha is way cool to see. We had Dr. Allen Kiplinger run his 12 inch Meade scope in Dome at site during the day. We got to see Mercury and Venus, Sirius and few stars in daylight. You have to be careful to not get too close to sun. Dr. Allen Kiplinger is a solar scientist so of course some H alpha views too. Vern Raben took some H alpha pictures of the sun thru his scope, will put in newsletter if they came out good. Dr Allen Kiplinger, Ray Warren and Josh W. gave talks to members during the day.

Saturday was a nice beautiful day but by afternoon and evening it started to rain. We thought it was clearing about 11 PM, so we uncovered the scopes and within half hour it clouded back up and rained some more, which ended the night for viewing. Next morning I uncovered the soaking wet scope and had to use towel to soak up several inches of rain water in bottom. I was smart enough to pull out Servo cat tracking box and Sky commander Saturday night when the rains did not stop.

I want to thank everyone who came out for the Adventures this past month. We are the ones to make it happen, we are keeping astronomy alive and well, always searching for the perfect place to view. This month's adventures were a little slice of heaven again. I now have to come back down to the harsh reality, work Monday, but will still be glowing from the dark sky adventures that linger in my mind. Later, Gary

Calendar

July	New Moon: 7th – 10th: Rocky Mountain Star Stare 1st qtr: 9th – Flanders Park Meeting: 21st – NOAA – Steve Albers: Science on a Sphere Project 4th – Deep Impact on Mt. Evans
August	New Moon: 4th – 6th: Weekend Under the Stars – Fox Park 1st qtr: 13th – Flanders Park – Hispanic group Barbeque at Flanders shelter – 4 pm to 9 pm Meeting: 18th – Solar System Ambassador Update
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

May meeting notes

Meeting called to order by President Gary Garzone. We have an interesting meeting tonight, Deep Impact with Jim Crane!

Andrew Plank led discussion on June 3rd and 4th Cal Wood star party with the kids. Looking for someone interested in taking Jeff Laux's place.

Visitors: Bob Reese, found us online.

Officer's Reports:

President report by Gary Garzone: nothing to report.

Vice President report: nothing to report.

Secretary report by Mark Propp: Updated member roster has been sent to the members email list. Copy passed around to allow members to validate or correct info.

Webmaster report by Steve Albers: not too much to report. MER forum has been renamed to unmanedspaceflight.com, still linked to the web site. Not much to report. Monica commented that the space weather links are very helpful!

Treasurer report, by Julie Carmen: added \$300 to our account from astronomy day. Reported on balance.

Ray Warren: Store in car, have all of the regular stuff, t-shirts, planetariums, two new products in the works: the CD with images (looking for more contributions), and ???????

Newsletter Editor, Bob Spohn standing in for Philippe Bridenne. Passed out copies of the newsletter.

Astronomical League correspondent report by Bob Spohn. Last month we talked about Sombrero Galaxy, M104. Image of the day, Spitzer Image of the sombrero. Amazing!!! Looks like science fiction or something! Beautiful colors.

Tough month for doing observing, too many clouds!

A Tour of the Messier Catalog in Eight Spellbinding and Enlightening Episodes, this being Episode Four, the Realm of the Galaxies.

The Virgo galaxy cluster. Over 3000 galaxies stretching from the north in Canes Venatici to the south in Corvus. Stretching over 5 million light years in diameter, the "Realm" is approximately 60 million light years away.

Everyone who does the Messier objects do it their own way, but if you get lost you have to start over. Make sure you have a good star atlas, showing all of the galaxies you can see through your scope for positive identification. Do some planning beforehand, to know how to attack it. This is a rerun of what cofounder Bob Ross did back in 1993. He put together a 4 step approach. Thanks to Bob (who was almost able to come tonight).

This is a big group of galaxies! Those were just the Messiers... let's add a few NGC objects to the view. Wow! Now where are your M's?

Most of the "star hopping" will be converted into "galaxy hopping". It is very important as you go into the "Realm" that you maintain a clear understanding of where you are, where you were, where you are going, and the identifications of all galaxies.

I would add the obvious: make sure you have a star chart that will show you all of the galaxies you can see. Don't be afraid to ask for directions!

Start at top of Virgo, find Epsilon (47 Virginis)

M60: Elliptical Galaxy. It is one of the largest elliptical, comparable to M49. It has two galaxies in field of view (NGC 4647).

M59, another Elliptical Galaxy.

M58, a nice barred spiral.

M89, elliptical galaxy. Redshift suggests M89 may be quite closer to us than other bright members of the cluster.

M90, spiral galaxy, SB spiral. One of the larger galaxies in the cluster. No star formation except in the inner dust lane -- "fossil" galaxy.

The second section again starts at M60, going further West, to M87 (The Big Daddy).

M87, Elliptical Galaxy. 120,000 LY across, about 1/5 again as large as the Milky Way. May contain 4,000 to 15,000 globular clusters! Giant, massive galaxy, the heart of the cluster. E1 Elliptical.

M86, Lenticular Galaxy. S0 lenticular or E3 elliptical. Same field with M84.

M84, Lenticular Galaxy. Only about 17' apart from M86.

M88, nice spiral galaxy. Anchors the NE end of a chain of galaxies called Markarian's chain. Good object for smaller optics. Similar angle as M31.

M91, barred spiral galaxy. Was considered a lost object due to wrong position entered by Messier. See, even the great ones can get lost in there! Can you see the bar in good seeing and high power?

Showed image of Markarian's Chain, very cool!

The third section starts with the guide star 6 Coma Berenices. M98, M99, M100.

M98, spiral galaxy. Nearly edge-on. Very 'dusty' galaxy. 10th magnitude.

M99, spiral galaxy. Face-on spiral. One of the brighter spirals in the group.

M100, spiral galaxy. Largest spiral in the group. Can you see any arm structure?

M85, the northernmost Messier in the realm. Lenticular galaxy, similar to M84. Nice bright one.

Credits and acknowledgements: walkthrough: Bob Ross. Night Vision from Brian Simpson. Images from Brian Kimball, National Optical Astronomy Observatory. Info from Burnhams, etc.

Old business:

Upcoming star parties:

Andrew's Planck's Cal wood party June 3rd and 4th, already mentioned.

Rocky Mountain Research Station, the following weekend in June.. people who want to come need to pay by Memorial Day. There will be 5 or 6 cabins available. 25 signed up so far. If the sun is out Saturday morning, there will be a solar H-Alpha scope available up in the dome on the 12" Cassegrain. Presentations will be given. We will be mapping out the limited space available for scopes, room for 8-12 scopes besides there is electricity by the observing area, need 30 or 50 foot extension cord. There is a concrete pad (a bit rough). Gary did spend two nights up there, pretty fun.

Tri-town party, June 25th, Nolovack lake in Frederick, across from the Safeway. Directions will be in the newsletter. We had about 12 scopes there last time. All arranged with the PD, planning a late night. Hoping they open the driving range for our use also.

Mark Propp, star party for 3rd graders, next Friday 27th of May, at Flanders Park. 8:30 to 9:30 pm. Mark will send out email announcement.

Telescope building: Leigh Pierson. Rocker boxes, panels, bases are getting sanded now. Tubes been done for a year or so. Roy sanded one box down. Through the summer we'd like to get a couple of scopes put together and given out. Don Bunker bought a high volume low pressure spray gun to polyurethane the boxes, much better than doing by hand as we have been doing (too labor intensive). That's where we stand! Need to get a committee to allocate the scopes. Perhaps have schools do a letter writing campaign, along with curriculum, to keep the scope for a year. Probably rural schools preferred. Middle school or high school.

New business: Philippe: If you read the newsletter, this is our thickest newsletter ever, 14 pages. Nice article from Monica and Roy. Picture from Bill. Continue to send me your pictures. Editorial included, I was sitting next to Burt Rutan at conference I attended. He signed a document and signed my business card. I have the slides, great presentation! I gave him a LAS patch, maybe he will wear it next time he is in space! Burt had a standing ovation from 500 attendees. Spaceship one has neat feature, orients itself properly for proper and safe-entry, no need for computers.

Brian Simpson, presented Night Vision. Written in java, so it runs on Windows, Linux, and Macintosh. Wanted to put it on a web server application, Vern Raben offered his server.

"Star Charts R Us!" For example, pick a favorite target. Select Constellation: Orion. Many other choices, including limiting stellar magnitude. Click on "Create Chart" button.

URL is: <http://raben.com/nvsvr/chartinput.jsp>

Can customize, white background or black background. We will link to the LAS web site.

Julie wants to announce our annual picnic, August 13th, on the Calendar. Good news is, we are going to get a volleyball court and a shelter. It starts at 4pm. We will have BBQ food. Hopefully clear skies. It will be located at McIntosh lake in Flander's Park.

BREAK time! Store is open! Did everyone see the new T-shirts?

Jim Crane presentation: Deep Impact: Your First Look Inside a Comet.

Jim is an electrical engineer at Ball Aerospace, with a long career in space vehicles. Worked on over 7 missions, including QuickBird 1, QuickBird 2, Cassini, and now Deep Impact. Jim presented the beginnings of the Deep Impact project to LAS almost 3 days ago. Now the craft is on its way to a comet. Jim just returned from Cape Canaveral. He showed pictures from the launch buildings at the Cape. He also attended the launch of a Delta 2 rocket for Deep Impact. Ball Aerospace's first deep space mission!

He showed very interesting DVD video on Deep Impact.

Rocky Mountain Research Station Star Party report by Julie Carmen

I want to wrap up a short report to all of you and then send out a general report to the members that did not attend for their future reference.

We rented 8 rooms on Friday and 6 rooms on Saturday, as well as the kitchen for both nights. The Megaron class/conference room was thrown in for free. (It normally costs \$100/night to use). I wrote a check for \$730.00 for the weekend to University of Colorado. We utilized the kitchen and the great room as well as the Megaron class room and the observing dome.

In attendance we had a total of 21 overnight guests on Friday and 18 overnight guests on Saturday. We had 3 visitors to our event on Friday and 7 visitors on Saturday.



Friday started nice and laid back with folks showing up and moving in while others played Astronomy Monopoly. Philippe & Rolande brought Astronomy Monopoly and that was quite entertaining. Dinner was at 6:30pm and the presentations started at 7:40pm. Over all the presentations were most excellent! Thank you to all of the presenters. Look on the lists for possible links to some of them. The sky cleared up by 9:30pm on Friday and everyone went up to the observing site. Gary's 30 inch dob blew away everyone that looked through it. Andrew, Philippe, Marc, Julie, Ray, Vern, and Josh contributed with their scopes. (did I miss anyone?) Vern, Bill, Josh, David and others, worked with the 12" CST in the dome. Amazing night! We had four high school students and two grade school students that we're as interested in observing, but had a great time playing cards and staying warm in the dorms.

Parking was no problem, as we had CU MRS site all to ourselves. Everyone seemed to find a parking place around the cafeteria and across from the dormitory. The kitchen seemed overwhelmed with food, so the next time we must have more non-perishable items (cookies, chips, nuts, crackers, cereal, canned goods, etc...) and a lot more storage containers to store the cooked food in after a meal. Most of us ate leftovers for breakfast and dinner. Others brought their own lunches or went out to eat at Nederland. Thanks to Josh for the nice list of restaurants as this came in very handy.

We had a short meeting on Sunday morning. There were very good comments shared and ideas for another star party in the future. Steve Seibold, manager of CU MRS, suggested that the astronomy groups purchase their own lock for the gate, and then we can have as many keys as we need. Keeping the gate locked at all times is very important due to the summer season and the activity of possible trespassers does increase. There is a different access to the dome and only those that have been cleared to use the dome and telescope will be able to.

However, astronomer members can utilize the observing site with their own telescopes by contacting Steve and setting up times. He must always know who is coming to CU MRS, when, and why. We have the opportunity to work with a private site with excellent facilities. A strong professional relationship with CU MRS, LAS, and BASS is what we are working towards to develop our observing skills and to be of assistance in future teaching possibilities.

Saturday, Sept 3rd, is New Moon and Labor Day weekend. Steve Seibold has informed the groups that currently this weekend is available. We would have the site to ourselves and would be able to rent the dorms and some cabins for three nights. It would be helpful if we were to take a count of people that want to do this and will be available for this weekend. The Okie-Tex Star party is not this weekend but is Oct 1-9th. Expensive for some to rent a room or bunk for 3 nights but we can come up with a lot of creative ways for the families to take in an incredible weekend.

Ideas for a Labor Day Star Party;

Volleyball net and sand lot

Horseshoes

Fishing in nearby Rainbow Lakes

Astronomy presentations

Observing; day time and night time

Organized nature hikes

Astronomy Monopoly and other games for those interested BBQ pit is available for us to use if any of us wants to grill

We will be presenting the idea of a Labor Day, 3-day, Star Party to both groups.

It will be best to reserve this site with Steve ASAP. BASS meeting is on Saturday, June 25th. Only if there is enough interest and dedication to this event will we reserve it.

THANK YOU: I want to thank the members of LAS and BASS for all of your respect to this site and help with the event. Marc and I had so much help with clean up that we were out very early. Parents, please tell your children for me that I am very happy with their attitude and good presence at the star party. As far as I can tell, we had a weekend of no accidents and no destruction on the property. For any committee member who is running an event, this is so wonderful!



MARS SPECTACULAR! The bogus email chain letter.

June 10, 2005 | You will find below (in *italic*) another e-mail chain letter touting bogus astronomy is spreading across the internet. The letter, sometimes titled "Mars Spectacular," claims that on August 27th Mars will dazzle the world, appearing brighter than ever in history. The problem is that "August 27th" is actually August 27, 2003. Mars did have an unusually close pass by Earth that month — but since then, the chain letter has morphed in some versions to the point that Mars is supposed to look like the full Moon.

Mars will indeed have a fine apparition in 2005, but it will pass closest in October and November, and it will reach a maximum apparent diameter of 20 arc seconds compared to 25 arc seconds in 2003. And it will look like a bright star, not the full Moon.

A few years ago dozens of radio stations called Sky & Telescope about a chain letter claiming that the Moon was about to swing so close to Earth that it would turn night into day. I came up with a standard patter: "This chain letter is a good thing, not a bad thing. It's like an immunization. If you make a fool of yourself sending it to your all friends and family, you'll end up feeling like a fool. So you'll be less likely to send them the next chain letter, which may not be so benign."

*Close encounter with Mars in late August sounds like a good opportunity for a star party then. Let's discuss it at Thursday's meeting. Here's the info from UW geology dept:
Set your calendar to catch this in August!*

The Red Planet is about to be spectacular! This month and next, Earth is catching up with Mars in an encounter that will culminate in the closest approach between the two planets in recorded history. The next time Mars may come this close is in 2287. Due to the way Jupiter's gravity tugs on Mars and perturbs its orbit, astronomers can only be certain that Mars has not come this close to Earth in the Last 5,000 years, but it may be as long as 60,000 years before it happens again.

The encounter will culminate on August 27th when Mars comes to within 34,649,589 miles of Earth and will be (next to the moon) the brightest object in the night sky. It will attain a magnitude of -2.9 and will appear 25.11 arc seconds wide. At a modest 75-power magnification Mars will look as large as the full moon to the naked eye. Mars will be easy to spot. At the beginning of August it will rise in the east at 10p.m. and reach its azimuth at about 3 a.m.

By the end of August when the two planets are closest, Mars will rise at nightfall and reach its highest point in the sky at 12:30a.m. That's pretty convenient to see something that no human being has seen in recorded history. So, mark your calendar at the beginning of August to see Mars grow progressively brighter and brighter throughout the month.

Share this with your children and grandchildren. NO ONE ALIVE TODAY WILL EVER SEE THIS AGAIN

The Trickster by Don Cerow

As we begin our WEBWeek, Mercury is in the late degrees of the sign Gemini and will enter Cancer early Saturday morning, but will be moving through the constellation Gemini over the next few weeks. His motion is currently very fast, having just overtaken his buddy, the Sun, at considerable speed. But in mid-July, his progress will abruptly begin to slow as he starts to go retrograde, will reverse his motion, and the Sun will then once again overtake him.

Mythologically, the Sun and Mercury (Apollo and Hermes) were great friends, and astronomically we can understand why. While the Sun moves through the heavens at a relatively regular rate, returning to the same parts of the sky year after year, Mercury's motion cannot be geared in the same way. It were as though the Sun

had a bungee cord attached from him to his friend, and while our Fleet Footed Messenger races out ahead to do reconnaissance on the upcoming terrain, the bungee cord begins to stretch and pull, it's power growing stronger until finally Mercury slows down and then begins to reverse direction (retrograde motion), 'running' back behind the Sun until the bungee cord begins to tighten and Mercury again slows down, reverses his motion, and then begins to race forward out in front of the Sun.

This, in any event, is what it looks like to us as astronomically as we view these two planets from the Earth. Of course, much of this 'observation' needs to be perceived through computer software or on the dome of a planetarium, because as it happens in the sky, we would have to be looking into the glare of the Sun to see it, when this motion is lost in the daylight. For brief periods, we can see Mercury as he moves across the face of the Sun with a heliostat, a special telescope pointed right at the Sun which projects its image onto a wall or screen, using special filters to deal with the intense brightness. The word heliostat comes from another of the Sun's mythological names, Helios, a Greek God represented as the orb of the Sun who harnessed his four horse chariot by the sea each morning and, at the appropriate time, rose across the heavens at an incredibly steep angle, until he slowly levels out their path as they approach the mid-heaven, then began to descend once again at an equally steep angle as he finally met the western horizon. Mythologically, each of the four horses presumably represents one of the four seasons.

The only time we can actually see this close friend of the Sun is around the period when Mercury changes his mind... ah, motion, and is furthest from the Sun. This would be when our invisible 'bungee cord' is most stretched. When Mercury is at one of these extremes, we can pick him out, either in the early twilight of the evening, close to where the Sun has just gone down in the west, or, in the early morning hours in the east shortly before the Sun rises. It was for this reason that the Native Americans dubbed Mercury Coyote, the 'trickster', a mythological personality not dissimilar to Hermes. In an observational context, his motion is difficult to predict, and one might not be sure of when, or where, he might next appear. In his Greek persona, he stole Apollo's cattle by walking them backwards (to confuse following their trail), and insisted to Apollo that he couldn't have perpetuated the crime, because he was, after all, only a one-day old infant!

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>

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

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

\$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

July Sky Map

