

# The Objective View

Newsletter of the Northern Colorado Astronomical Society

July 2006

Greg Halac, President, Web Editor 970 223 7210  
pres@

Nate Perkins, Vice President 970 207 0863  
vp@

Dave Chamness, Treasurer and AL Correspondent  
treas@ 970 482 1794

Dan Laszlo, Secretary and Newsletter Editor  
sec@ office 970 498 9226  
add ncastro.org to complete email address

Longmont Astronomical Society  
July 20 7 pm FRCC, 2121 Miller Rd  
Mark Bagdy Night Sky Network  
<http://longmontastro.org/>

## June 1 Program

### What's New from the International Dark Sky Association Dr. Bob Stencel and Aaron Reid

Dr. Stencel and Aaron presented a thorough review of the dilemmas posed by inappropriate lighting. Evidence continues to mount for ecological and public health consequences. Light trespass, glare complaints, and long-term economic savings are driving use of fully shielded fixtures which give task-appropriate, reduced output. The City of Fort Collins has a well-conceived lighting ordinance. Attached are a selection of documents for members' use. Web links:

<http://wcacastronomy.org/coloida.html>

[www.darksky.org](http://www.darksky.org)

[www.darksky.org/fixtures/fsa-fixtures.html](http://www.darksky.org/fixtures/fsa-fixtures.html)

<http://www.colocode.com/ftcollins/landuse/article3.htm#sec3d2d4>

Skyglow meter and database

[www.unihedron.com](http://www.unihedron.com)

**Next Meeting: July 6, 7:30 PM**

## Lunar 100, Part II Lee Gregory, NCAS

**NCAS Business at 7:15 PM**

**Meeting directions Discovery Science Center**  
703 East Prospect Rd, Fort Collins  
<http://www.dcsm.org/index.html>

In Fort Collins, from the intersection of College Ave and Prospect Rd, head East about 1/2 mile. See the Discovery Center sign to the South. Enter the West Wing at the NE corner. From I-25, take Exit 268, West to Lemay Ave, continue West 1/2 mile, see Discovery Center on the left.

Note Prospect is closed at the Poudre River until Fall 2006.

**NCAS Programs, Discovery Science Center**  
Aug 3 Roger Appeldorn Astrophotography

**Rocky Mtn Natl Park Starwatch, Upper Beaver Meadows**  
At dusk: July 14, 28; Aug 4, 18

## Other Events

Little Thompson Observatory Star Night  
Aug 18 7:30 pm  
<http://www.starkids.org>

CSU Madison Macdonald Observatory Public Nights  
On East Drive, north of Pitkin Street  
Tuesday pm if clear, when class is in session

Cheyenne Astronomical Society, Cheyenne Botanical Garden  
July 20, 21, 22 Weekend Under The Stars, Foxpark WY  
<http://home.bresnan.net/~curranm/wuts.html>

Chamberlin Observatory Open House, dusk to 10 pm  
Jul 1, Aug 5, Sep 30, Oct 28, Dec 2, Dec 30 303 871 5172  
<http://www.du.edu/~rstencel/Chamberlin/>

## NCAS Business, June 1 2006

President Greg Halac called the meeting to order. NCAS programs were announced, featuring Lee Gregory on the Lunar 100 in July, Roger Appeldorn on Astrophotography in August. Dates for starwatching at Rocky Mountain National Park are June 16, 30; July 14 and 28; August 4 and 18. Linda Hamilton from Lory State Park requested volunteers to assist with a starwatch for youth workers. Greg asked about member interest in subscription lists devoted to urgent alerts, coordinating observing, and astrophotography. The treasurer's report by Dave Chamness shows \$842 in our account. A thank you to Rodney Howe who donated a pair of Edmund Scientific 6" f/4 mirrors. Tom Fay announced the CSU Statistics Conference, which has a half-day crash course on wavelet functions. Members may use the NCAS site for email and web space is available. More images are needed to illustrate the site. The Kansas Cosmosphere is holding Astro Camp, July 28-30.

## Rocky Mountain Star Stare Report from Nate Perkins

RMSS was a pretty good time. I arrived at dusk on Thurs, due to work that day. It's something around a 3-1/2 hour drive from Fort Collins. The location is just past Lake George, up Hwy 24 out of Colorado Springs in the Pike National Forest. It's a very pretty place. I used my ATM 12" f5 scope for this

observing, coupled with an equatorial platform.

Partially cloudy on Thursday night during the drive up. I set up scope, pitched tent, had a quick bite. I briefly met one of my neighbors, a fellow named Doug from Denver. There were probably 150-200 people there on Thursday, in a very large open clearing (as big or bigger than Foxpark, I'd guess, and most were fairly spread out). By the time it was getting to dusk the clouds had cleared and we got some okay views of Jupiter as it was darkening. GRS was in transit and one of the moons (not sure which) was just coming off of transit. Festoons were clearly visible, seeing was 3 or 4 out of 5. Used Speers 5-8 zoom as well as TMB 6 and 5mm monocentrics. As the dark was falling, I took a look at some of the common Messiers and a few of the Leo galaxies (esp the Leo triplet M65/M66/NGC3628). Also briefly looked at NGC3593. At about 10:25 there was a meteor from Cyg across UMa. There was a \*lot\* of dew from an earlier rain, and I'm glad I was using a secondary heater. Unfortunately just as it was getting truly dark the clouds were also rolling in, starting as a haze and then thickening in the west. As the clouds were rolling in I got a look at the Blinking Planetary. But by 10:45 it was pretty well toast and thoroughly clouded. I stayed up until 12am, and it looked a bit like rain so I unplugged the scope, covered it and went to sleep. Thursday night was very warm, probably in the mid-40's, significantly warmer than the typical Foxpark.

I woke up at 3:30am briefly, looked outside the tent and saw a crystal sky. Thought about getting up again, but I was pretty tired from a long week at work. &^%\$\*(

Friday morning it was beautiful clear. I got up around 8 and took my mountain bike into Lake George, about 10 miles away. I saw Randy and Judy Cunningham at the exit and chatted with them for a while. I also registered onsite at the front tent; the Colorado Springs folks were friendly hosts. The ride to Lake George was a breeze, downhill fast doing just under 30mph most of the way. Stopped at the local restaurant there and had some huevos rancheros. A few of the retired folks there in the cafe were real characters, hamming it up with the waitresses. Then I biked back (uphill, taking much longer). There were some beautiful meadows with streams running through them. I stopped at a few ponds and other areas, saw sandpipers, redwing blackbirds, swallows, etc. I took quite a few photos.

In the afternoon I napped for a while. The weather was good, probably in the high 70's with a light breeze. After the nap, I saw one of the guest speakers, a professional astronomer who lectured on the history of discovering quasars and the nature of quasars. I did a little walkabout of the site afterwards. There seemed to be a disproportionately high fraction of computerized SCTs, mostly in the 10-14" range. There were also a number of Dobs, although not as many nor as large as typically seen at Foxpark (there were perhaps three or four 18-20" Dobs, mostly Obsession). There were a number of smaller refractors, and a few smaller Dobsonians. I ran into a few people who were interested in amateur telescope building, but I only saw a couple of examples of ATM crafted scopes being

used. I ran into one of the Colorado Springs organizers, who asked me about my shirt (I was wearing a WUTS 2002 shirt), and about the conditions at Foxpark. There were a few adults organizing activities for kids, and I saw an impromptu baseball game going on. There seemed to be a fair number of families there. I was left with the impression that RMSS is more family-friendly (both activity wise and weather wise) than WUTS.

On Friday night there was a catered barbecue (extra charge) as well as a second guest speaker lecturing on "Astronomy 101." I opted to laze in the good weather at my campsite, cooked a pretty good tuna steak, and napped a little more.

Friday night's sunset put on a good show with the few remaining clouds. The cumulus clouds were lit up in a beautiful orange, and the clouds chased off nicely as sun was setting. Friday was much drier, with no dew heater needed, and was constantly clear. That night's viewing was very good, some of the best I've had in a while. The seeing was inferior to Thursday, but the transparency was excellent. The darkness was almost as good as Foxpark; there was a low light dome visible in the east from Colo Springs (perhaps extending to 10 degrees), and another smaller dome SSE whose origin I was unsure of. I started with a few doubles (epsilon Boo, split at with Burgess Planetary 4mm; and epsilon Lyr, best at about 187x; Albireo), and then moved on to the brighter Messiers like the Ring (both at 375x and 150x, better at 150x). At incomplete darkening (perhaps mag 5), the spiral form of the arms on M51 was clearly noticeable, suggesting good things to come. I briefly looked at NGC4361 in Corvus (I wanted to see this one before it got too low). This is a fair sized planetary, very blue, with a relatively bright central star. At about the same time, the Wild Duck cluster in Scutum was outstanding with a 12mm Radian, and it was still relatively low in the sky. At about 11:05pm there was a relatively bright Iridium flare off the tail of Leo.

I spent part of the evening hopping the galaxies around Leo and Coma in some detail, tracing through M98, M100, M99 and continuing north through NGC4350/4450, M85, and NGC4293. M85 and (I believe) NGC4354 make a nice pair in the 12mm. Then, I spent some time on the lower portion around M84/M85 and going south and west. This was much more difficult, because of the density of galaxies I frequently lost my place.

M13 near zenith was particularly outstanding in either the 12mm Radian or the S-W 5-8 at lowest setting. M51 at full dark showed detailed dust lanes in the main galaxy, although the connection between the two galaxies was not readily seen.

A portion of the night was also spent hopping Sagittarius and Scutum again, including the Lagoon, Trifid (easily seen dark lanes), the Swan nebula, M26, the Sagittarius Star Cloud, M7. Other objects seen included the Splinter galaxy in Dra (NGC5907). This one makes a good eyepiece pair with (NGC5866? NGC5879?). This is a good contrast between a nearly edge-on galaxy as compared with a nearly face-on galaxy.

Several of the usual objects were also seen (Dumbell Nebula,

| Date   | Mag  | Starts   |     |     | Midpoint |     |     | Ends     |     |     |
|--------|------|----------|-----|-----|----------|-----|-----|----------|-----|-----|
| ISS    |      | Time     | Alt | Az  | Time     | Alt | Az  | Time     | Alt | Az  |
| 03 Jul | -0.5 | 22:19:47 | 10  | WNW | 22:22:30 | 52  | SW  | 22:22:57 | 47  | S   |
| 04 Jul | -0.1 | 21:07:28 | 10  | NW  | 21:10:15 | 43  | NNE | 21:13:00 | 10  | ESE |
| 04 Jul | 1.5  | 22:43:15 | 10  | W   | 22:44:38 | 15  | WSW | 22:44:38 | 15  | WSW |
| 05 Jul | -0.5 | 21:30:07 | 10  | WNW | 21:32:56 | 54  | SW  | 21:35:00 | 16  | SE  |
| 06 Jul | 1.5  | 21:53:30 | 10  | W   | 21:55:23 | 16  | SW  | 21:56:46 | 12  | SSW |
| 08 Jul | 1.5  | 21:03:38 | 10  | W   | 21:05:33 | 17  | SW  | 21:07:30 | 10  | S   |

M3, etc). The Veil was good as well; normally the best views of the Veil I've had are with OIII filter. For some reason, I was getting better views that night without an OIII filter and with moderate magnification instead. The 12mm is proving to be my favorite eyepiece, and it spent 90% of the night in the scope.

During both day and night I had a few visitors come by to either ask about my scope or to share a few views through the eyepiece. I was surprised at the relatively high number of first-timers. During the night I'd show some people the usual suite of summer star party objects, and a couple were surprised that people will find the brighter Messiers without a map ;-P

Friday night was significantly colder than Thursday night, but still warmer than Foxpark. I went to sleep a little before two on Saturday morning, waking at about 7:15 to pack up and head back to Fort Collins.

Overall RMSS is a great star party; with more formal activities and access to civilization than WUTS has. The skies are slightly inferior to WUTS but the weather is a little more comfortable. The surrounding area is beautiful to bike or hike during the daytime.

Cheers,  
Nate

### Weather Satellite Calipso's Laser Seen at Ground Level

Sent: Wed, 28 Jun 2006 10:52:33 +0000

Subject: Chasing Calipso

Laser light from Calipso (29108U) was successfully observed last night (6/28, 09:12:40 UT) in a clear dark sky with maybe a slight amount of haze present. Two observers about 100 meters apart east west both saw a fan of about 1/2 dozen green beams of light emanating from zenith. To the western observer the beams were about 20 degrees long. The eastern observer (me) saw a quick flash of easy to see bright beams at least 40 degrees long. Both observers had the impression that the beams were passing to the east. The eastern observer was positioned on Calipso's geodetic nadir ground track as predicted by STK from a fresh Space-Track element set. We may have gotten lucky but with the right amount of cloud cover or haze I predict the Calipso laser should be easy to see for observers within a few hundred meters of the ground track. Fresh Space-Track elements and a little luck should be good enough. Be sure to calculate geodetic position coordinates and not geocentric coordinates as the difference is significant.

Gregg Hendry

From:  
Daniel Laszlo  
2001 S Shields St Building H  
Fort Collins CO 80526

TO: