The Objective View

June 2006

Newsletter of the Northern Colorado Astronomical Society

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Next Meeting: June 1, 7:30 PM

What's New from Intl Dark Sky Association
Dr. Bob Stencel and Aaron Reid

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.

NCAS Programs, Discovery Science Center

July 6	Lee Gregory	Lunar 100, Part 2
Aug 3	Roger Appeldorn	Astrophotography

Rocky Mtn Natl Park Starwatch, Upper Beaver Meadows
At dusk: June 16, 30; July 14, 28; Aug 4, 18

Other Events

Little Thompson Observatory Star Night
June 16 7:30 pm Suzanne Traub-Metlay, MESSENGER to Mercury http://www.starkids.org

CSU Madison Macdonald Observatory Public Nights
On East Drive, north of Pitkin Street
Tuesdays 7:30-8:30 pm if clear, when class is in session

Cheyenne Astronomical Society, Cheyenne Botanical Garden
June 16 9 pm
http://home.bresnan.net/~curranm/

Chamberlin Observatory Open House, dusk to 10 pm
Jun 3, Jul 1, Aug 5, Sep 30, Oct 28, Dec 2, Dec 30 303 871 5172 http://www.du.edu/~rstencel/Chamberlin/

Longmont Astronomical Society
June 15 7 pm FRCC, 2121 Miller Rd
Suzanne Traub-Metlay, MESSENGER mission to Mercury
http://longmontastro.org/

May 4 Program
NCAS Members Show and Tell

Bob Michael drew on his geological training to envision a virtual voyage to Mars' Olympus Mons, on Earth, at the site of Mauna Loa, Hawaii. Mauna Loa and Mauna Kea are 2 coalescing shield volcanoes which comprise a God-forsaken wilderness in the tropics. The volcanoes arise where the basaltic East Pacific Plate overlays a mantle hotspot. It is an island assembly factory. The oldest Hawaiian Islands are about 4000 feet high. Maui is 10,000 feet, and Mauna Loa is over 13,000 feet high. Seamounts from this mechanism can be traced for thousands of miles. They are not perfectly spaced, so the plate motion (or the hotspot) is episodic. Mars has no plate tectonics. It was too small to hold heat. Olympus Mons has been dead for hundreds of millions of years. Its lava all accumulated in one spot. The trail on Mauna Loa runs to the crater rim. It is a 30 mile round trip. The slope is gentle but the mountain is enormous. It rises 13,000+ feet from sea level, contrasting with Longs Peak which juts only 9,000 feet above the nearby plain. New Zealand Christmas Trees grow near the trailhead. The hike goes over pillow lava and cinders. At 10,000 feet is the Red Hill Shelter Hut. The area is always desolate. The floor of Death Valley CA can be lush by comparison. There are acres of bare basalt. No lichens and few bacteria are present. The Rockies have a corridor to colonize them. Wandering off the trail is not advisable. Falling into a lava tube would be traumatic or fatal, with cuts from glassy shards. Olympus Mons may be smoother with millions of years of weathering. The summit caldera requires a multiple image panorama. Mauna Kea does not have a caldera. It has sprouted observatories and remains one of the best observing sites available. The summits well illustrate how alien landscapes appear.

Nate Perkins brought his homebrew equatorial platform. He wished to ease observing at high power with his 12 inch ultralight Newtonian. He illustrated the principle of platform tracking as pared down from a massive polar axis. Tracking for 45 to 60 minutes is possible. Jan van Gastel's website has a helpful calculator for equatorial platform dimensions. Nate's woodworking skills were less critical for the platform. One novel approach to many people is generation of accurate sectors with large radius by tacking a long board at one end and attaching a router at the other. The platform is driven by a geared unipolar stepper motor. The platform motion is 1 revolution per day. An inexpensive, $20 surplus motor would work. To minimize vibration at the eyepiece, a motor with fine stepping is desirable. Electronics were purchased ($15) but can be homebrew as well. Nate contained a speed controller in a project box. He is considering a limit switch.

Commercial platforms may be ordered from Tom Osypowski. JMI carries the Johnsonian platforms.

Images with Nate's drive can be seen at:
http://home.comcast.net/~nathan_perkins/misc/astro.htm

NCAS Business
May 4 2006
President Greg Halac called the meeting to order. Public observing nights were announced at Discovery Science Center and Observatory Village. NCAS programs were announced, featuring Dr. Bob Stencel in June, Lee Gregory on the Lunar 100 in July, Roger Appeldorn on Astrophotography in August. Greg Halac plans to support National Astronomy Day on May 5 with his solar telescope. Dates for starwatching at Rocky Mountain National Park are June 16, 30; July 14 and 28; August 4 and 18. Greg asked about member interest in subscription lists devoted to urgent alerts, coordinating observing, and astrophotography. The treasurer's report by Dave Chamness shows $813 in our account. 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. A digital imaging Q & A would be appreciated by several members.

From Andrea Schweitzer: Titan Movie

When you have 5 minutes and some bandwidth, check out this movie and get the Huygen's-eye-view of what it was like to land on Saturn's moon, Titan! Andrea

Titan Descent Data Movie
http://photojournal.jpl.nasa.gov/catalog/PIA08117

This movie, built with data collected during the European Space Agency's Huygens probe on Jan. 14, 2005, shows the operation of the Descent Imager/Spectral Radiometer camera during its descent and after touchdown. The camera was funded by NASA.

The almost four-hour-long operation of the camera is shown in less than five minutes. That's 40 times the actual speed up to landing and 100 times the actual speed thereafter.

Pawnee Memorial Day Report from Gary G

Friday I had to work and did not get to drive to the Nebraska Star party with Vern, Real dark skies up there. I settled for Cactus flats again for two nights. Friday winds and clouds reminded me of Sterling, I could not see any wind mills on horizon but it was blowing that hard at times. At 3 am I awoke to terrible roar of high winds, went out side where 30 scope was tied off and covered up, I was checking it out when winds got worse and huge 60 mph gust fromn opposite direction pushed scope over like it was nothing. I was looking for a tornado, that is how it happens, but in total dark skies with clouds it is very dark outsdie, wind rain ,lighting, scary . what if it was a tornado, no where to duck out of the weather on the high plains like that. Next morning I checked out damage, scope survived flip over , mirrors were in tack and OK. I thank God and my lucky stars, we were viewing again Saturday night. Those astro Systems scopes are tuff.
Saturday night we had big crowd at Pawnee, 15 people and 9 scopes, I counted. Bernie and Jim from DAS club, old Astronomy friends showed up. They did Fox park Friday night but campers with fires drove them away to Pawneee for Saruday night views. Cloudy mostly with a few good sucker holes at times but it never did clear as we hoped . Fun weekend despite it all, always fun to get away, maybe do better next month new moon, see you in the dark, later, GG

Northwest Nebraska Star Party Report from Vern Raben

Friday night was mostly cloudy with haze. We got a couple hours viewing through fair-sized sucker holes, but even the sucker holes were hazy. Turbulence was poor as well. Light domes were visible about 4-5 degrees over various town to the south and east. This was quite disappointing and surprising given the small population of the surrounding area The light domes would probably shrink a bit with more transparent conditions. In my opinion, the darkness of this site is better than Sterling, but not as good as Fox Park or Merrit Reservoir.

Saturday afternoon we visited the nearby Hudson-Meng bison kill site and Toadstool Geologic Park. A friend from high school, who is a paleontologist, spent the afternoon with us pointing out fosil tracks and geology features. It is amazing what a trained eye can see and others cannot until we're shown. Saturday evening was worse than the previous evening with more clouds, haze, and even fewer sucker holes.

Sunday looked promising with clear skies through the late afternoon. Around 6 pm that all changed with the arrival of wind, lightening, rain and some small hail. The scopes spent the evening safely inside our host's barns and sheds thanks to some last minute heroic efforts.

Our hosts, Verona and Lonnie, were great. They spent lots of time chatting with us and giving us some idea of the rewards and difficulties they have had as farmers and ranchers in a quiet, beautiful, and remote location. They have the rare ability of making everyone feel truly welcome as guests in their home.

Vern

Comet in 3-D by Stefan Seip, Forwarded by Brian Kimball:

http://www.astromeeting.de/comets/060503SchwWas_3D1024.htm

From the Astronomical League

How can I learn more about the Astronomical League?

Amateur astronomers from across the country benefit from perusing the many pages of the Astronomical League's website, www.astroleague.org. Naturally, this is the place to go if you're looking for information about upcoming events and League news. But there is so much more...

Want to learn all about one of the great League observing programs? Go to www.astroleague.org/observing.html

Do you know of a worthy candidate for one of the many League awards? Look at http://www.astroleague.org/al/awards/awards.html

Are you interested in buying a particular book about our fascinating hobby? Then go to www.astroleague.org/al/bookserv/bookserv.html

There is even something to help your club function better. Try www.astroleague.org/al/socaids/socaidid.html

Make the most of your Astronomical League membership! To find out more about what the Astronomical League offers you, why not log on to www.astroleague.org today?

TSP 2006 report by Dan La Faive

This year's Texas Star Party was pretty good. Much better than last year, I'm told. We had 1 night that was a wash due to clouds, 3 nights where we were able to do a lot of observing up until 1-3AM before clouds rolled in, and then 3 nights that were pretty much cloud free. Really nice views at this very dark sky site. It's about as dark as Fox Park. Be sure to bring warm clothes, however. The temp did get down into the upper 30's a few nights. Got to look at a number of neat southern sky asterisms. My favorite was Omega Centauri, which is a globular cluster that spans over 1/2 degree FOV and in fact has the largest FOV of any glob. It comes up about 10 degrees above the southern horizon at TSP at around 1 AM. It's worth going to the party just for that. Also looked at a couple of brighter galaxies that are in the low southern sky at that latitude. Most nights I looked at dim fuzzies. Lots of galaxies especially in Virgo. I was even able to see Copeland's Septet, which is very dim and quite a challenge with my C9.25 GPS. All the favorites were incredible as well - M51, M13, Lagoon Nebula, Swan, etc... Seeing was so-so most nights. One night the seeing was incredible and Saturn looked absolutely stunning! Also got some good views of the comet and Jupiter. Many people there do imaging. There was a really interesting presentation about imaging with webcams. Vern, you should go there sometime, there's tons of useful info. Attendance was low this year with only 500 people as opposed to the usual 700. But there were plenty of scopes there. I did get it chance to look through the 36 inch Obsession (not as good a view as Gary's - can't raise it up high enough to get above the thicker atmosphere). One thing that I thought was neat was that a few of the folks built wooden half-steps into their ladders so that you were never in between steps when you got to the eyepiece. Gary, have you ever looked at this? TSP is hosted at Prude Ranch on the western side of the Davis Mountains in the desert of western Texas, and it's a nice setup to for an event this size. They have RV hookups, tent camping, and bunkhouses. I was originally going to tent camp, but I upgraded to a bunk bed. Some of the facilities are a bit old and need some fixing up, but everything was acceptable. I got the meal plan to, and meals were great!

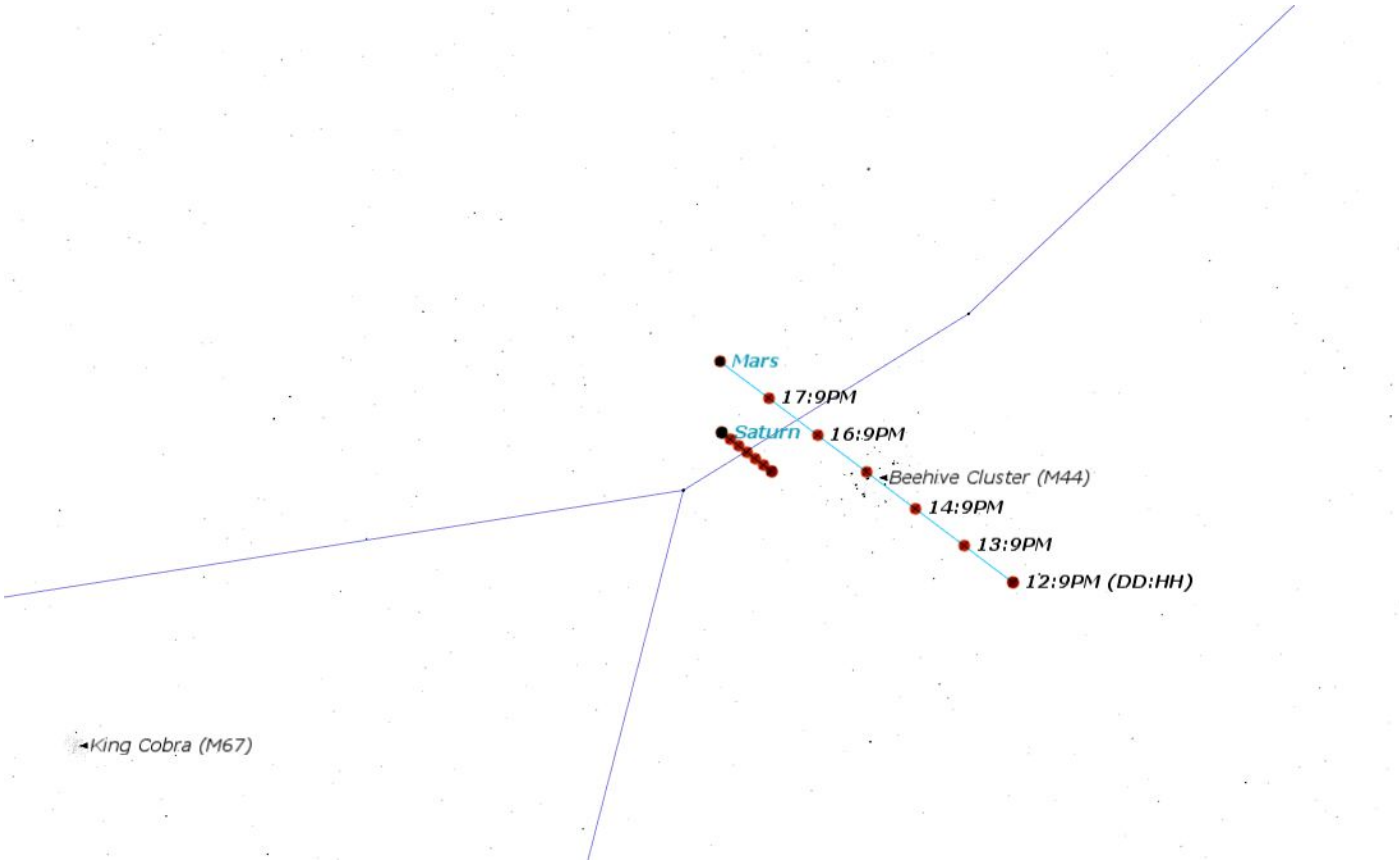
The absolute coolest things about the accommodations were:

1. high speed wireless internet access on the observing fields, great for looking up the weather or the orbital info for comet fragments.
2. 10pm to 3am snack place that served hot cocoa, coffee, hot dogs, chili dogs, chili, ice cream, etc... Nothing hits the spot like some hot food and drink at 2am. That helps keep a person going until sunrise.

Anyway, I thought the Texas Star Party was great and I'd strongly recommend it as an excellent event to attend.

Web Site: http://www.texasstarparty.org/

See you under dark skies!
Dan LaFaive



Mars crosses the Beehive Cluster June 12 to 18

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

TO:

International Space Station Passes – Loveland-Fort Collins June 2006

Date	Mag	Starts	Max. Altitude	Ends
		Time Alt. Az.	Time Alt. Az.	Time Alt. Az.
31 May	1.6	04:19:07 10 S	04:20:58 16 SE	04:22:48 10 E
01 Jun	-0.3	04:41:13 12 SW	04:43:46 51 SE	04:46:35 10 ENE
02 Jun	1.5	03:31:53 15 SE	03:31:53 15 SE	03:33:40 10 E
03 Jun	-0.4	03:53:50 37 S	03:54:38 50 SE	03:57:25 10 ENE
04 Jun	2.2	02:44:21 10 E	02:44:21 10 E	02:44:24 10 E
04 Jun	-0.2	04:15:42 19 W	04:17:27 46 NW	04:20:19 10 NE
05 Jun	0.5	03:06:08 35 E	03:06:08 35 E	03:08:08 10 ENE
05 Jun	1.3	04:38:18 10 WNW	04:40:35 20 NNW	04:42:53 10 NNE
06 Jun	-0.2	03:27:50 45 WNW	03:28:07 47 NW	03:31:00 10 NE
07 Jun	2.0	02:18:07 15 ENE	02:18:07 15 ENE	02:18:45 10 ENE
07 Jun	1.4	03:49:28 13 WNW	03:51:12 21 NNW	03:53:30 10 NNE
08 Jun	1.0	02:39:40 33 NNE	02:39:40 33 NNE	02:41:34 10 NE
08 Jun	2.2	04:12:59 10 NW	04:14:22 13 NNW	04:15:47 10 NNE
09 Jun	1.5	03:01:09 20 NW	03:01:42 21 NNW	03:04:01 10 NNE
10 Jun	2.1	01:51:14 17 NE	01:51:14 17 NE	01:52:01 10 NE
10 Jun	2.3	03:23:24 10 NW	03:24:48 13 NNW	03:26:14 10 NNE
11 Jun	1.8	02:12:34 20 N	02:12:34 20 N	02:14:25 10 NNE
12 Jun	2.4	02:33:49 10 NW	02:35:08 13 NNW	02:36:36 10 NNE
13 Jun	2.3	01:23:38 17 NNE	01:23:38 17 NNE	01:24:43 10 NNE
13 Jun	2.7	04:32:55 10 NNW	04:34:24 13 NNE	04:35:54 10 NE
14 Jun	2.5	01:44:37 12 NNW	01:45:21 13 NNW	01:46:50 10 NNE
14 Jun	2.0	04:55:02 10 NNW	04:57:24 22 NNE	04:59:45 10 E
15 Jun	2.3	00:34:03 15 NNE	00:34:03 15 NNE	00:34:55 10 NNE
15 Jun	2.8	03:43:07 10 NNW	03:44:33 13 NNE	03:46:01 10 NE
16 Jun	2.6	00:54:13 11 NW	00:55:28 13 NNW	00:56:58 10 NNE
16 Jun	2.0	04:05:11 10 NNW	04:07:30 21 NNE	04:09:50 10 ENE
16 Jun	-0.5	22:04:46 10 SSW	22:07:27 38 SE	22:10:09 10 ENE
16 Jun	1.7	23:40:15 10 W	23:42:37 23 NNW	23:45:00 10 NNE
17 Jun	2.8	02:53:13 10 NNW	02:54:37 13 NNE	02:56:01 10 NE
17 Jun	0.2	04:27:24 10 NW	04:30:11 50 NNE	04:33:04 10 ESE
17 Jun	-0.3	22:27:06 10 WSW	22:29:48 58 NW	22:32:46 10 NE
18 Jun	2.7	00:03:58 10 NW	00:05:28 13 NNW	00:07:00 10 NNE
19 Jun	-0.3	21:37:00 10 WSW	21:39:51 61 NNW	21:42:40 10 NE
19 Jun	2.7	23:13:50 10 NW	23:15:22 13 NNW	23:16:56 10 NNE
20 Jun	2.0	02:25:08 10 NNW	02:27:24 20 NNE	02:29:40 10 ENE
20 Jun	-0.7	03:59:49 10 WNW	04:02:35 48 SW	04:05:26 10 SE
20 Jun	1.8	22:00:01 10 W	22:02:25 24 NNW	22:04:50 10 NNE
21 Jun	2.7	01:13:06 10 NNW	01:14:23 12 NNE	01:15:41 10 NE
21 Jun	1.0	02:47:13 10 NW	02:48:48 26 NNW	02:48:48 26 NNW
21 Jun	2.7	22:23:35 10 NW	22:25:09 14 NNW	22:26:45 10 NNE

International Space Station Passes – Loveland-Fort Collins June 22-30 2006

Date Mag	Starts Time Alt. Az.	Max. Altitude Time Alt. Az.	Ends Time Alt. Az.
22 Jun 2.1	01:34:57 10 NNW	01:36:24 18 N	01:36:24 18 N
22 Jun 1.8	21:09:44 10 W	21:12:09 24 NNW	21:14:36 10 NNE
23 Jun 2.6	00:22:52 10 NNW	00:24:07 12 NNE	00:25:21 10 NE
23 Jun 2.6	21:33:13 10 NW	21:34:50 14 NNW	21:36:27 10 NNE
24 Jun 2.3	00:44:39 10 NNW	00:45:56 17 N	00:45:56 17 N
24 Jun 2.9	21:57:27 10 N	21:57:37 10 N	21:57:48 10 N
24 Jun 2.5	23:32:32 10 N	23:33:43 12 NNE	23:34:54 10 NE
25 Jun 2.6	01:06:37 10 NW	01:06:40 10 NW	01:06:40 10 NW
25 Jun 1.9	23:54:15 10 NNW	23:56:10 19 NNE	23:56:10 19 NNE
26 Jun 2.7	21:06:49 10 NNW	21:07:08 10 N	21:07:26 10 N
26 Jun 2.4	22:42:06 10 N	22:43:13 12 NNE	22:44:20 10 NE
27 Jun 2.1	00:16:09 10 NW	00:17:02 17 NNW	00:17:02 17 NNW
27 Jun 1.7	23:03:45 10 NNW	23:05:51 18 NNE	23:06:37 17 NE
28 Jun 2.3	21:51:34 10 N	21:52:36 11 NNE	21:53:39 10 NNE
28 Jun 1.0	23:25:34 10 NW	23:27:31 31 N	23:27:31 31 N
29 Jun 1.7	22:13:08 10 NNW	22:15:11 18 NNE	22:17:09 11 ENE
29 Jun 1.9	23:47:39 10 WNW	23:48:27 17 WNW	23:48:27 17 WNW
30 Jun 2.3	21:00:55 10 N	21:01:53 11 NNE	21:02:51 10 NNE
30 Jun 0.3 2	2:34:53 10 NW	22:37:37 36 NNE	22:38:05 33 ENE