

# The Objective View

Newsletter of the Northern Colorado Astronomical Society

September 2008

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## Other Events

Little Thompson Observatory Star Night:

September 19 7:30 pm <http://www.starkids.org>

CSU Madison Macdonald Observatory Public Nights

On East Drive, north of Pitkin Street

Tuesdays after dusk if clear, when class is in session

Cheyenne Astronomical Society Sep 19 8 pm

Cheyenne Botanic Garden

<http://home.bresnan.net/~curranm/>

Chamberlin Observatory Open House, dusk to 10 pm

Sep 6, Oct 4, Nov 8, Dec 6 303 871 5172

<http://www.du.edu/~rstencil/Chamberlin/>

Longmont Astronomical Society Sept 18 7 pm Dr. John

Spencer, SWRI, Cassini at Enceladus

FRCC, 2121 Miller Rd. See new web page design at:

<http://www.longmontastro.org/>

**Next Meeting: September 4 7:30 pm**

**International Year of Astronomy  
by Dr. Andrea Schweitzer**

**Club Business at 7:15 pm**

**Discovery Science Center  
703 E Prospect Ave, Fort Collins**

<http://www.ncastro.org/Sites/DiscoveryCtr.htm>

**Club Brochure:** [http://www.ncastro.org/Contrib/2008\\_Brochure.pdf](http://www.ncastro.org/Contrib/2008_Brochure.pdf)

## NCAS Programs

Oct 2 Chad Moore Dark Skies in Natl Park System

Nov 6 TBA

## Public Starwatch at Discovery Science Center, South Lot

Sept 5 7:30 pm

Oct 10 7:00 pm

Nov 7 6:30 pm

Dec 5 6:30 pm

## Bobcat Ridge Starwatch (near Masonville)

Sept 19 7:30 pm

## City of Greeley Starwatch at Crow Valley Campground

Sept 20 7:00 pm

## Rocky Mountain National Park Starwatching

Thanks to all for great support this summer. Volunteers please send a tally of your hours including August to Jeff\_Maugans at nps.gov

## August 7 Program: From Stars to Cars, by Roger Appeldorn

Sorry that your ed. missed this fine talk, I am looking forward to catching another showing by Roger in the future.

## Perseids 2008

I collected 117 meteors last night- enough to get some reasonable statistics. I've attached the frequency distribution graph for the evening (15-minute bins). There is a sharp peak just after UT 10:00, but otherwise the entire night just shows a gradual increase in frequency, as I'd expect from the rotation of the zenith into the stream. There is some evidence of an oscillation in activity, but not as strong as the night before. I did get quite a few fireballs, but they were fairly evenly distributed over the entire night.

I've updated my report at

<http://www.cloudbait.com/science/perseid2008.html> to show the activity just for the peak night and one night on either side (that is, the last three nights). Total meteor count was 311. I'm still collecting data, but the interference from the Moon is getting pretty extreme now. We'll see what I have tomorrow- I'll guess another 50 or so events. Looks like I've already caught a couple of good ones tonight.

Chris

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Chris L Peterson

Cloudbait Observatory

<http://www.cloudbait.com>

## NCAS Members Star Party at the Appeldorn's, August 28

Roger and Marilyn graciously opened their home and observatory for members for some exquisite observing. Skies were smoky early from the Idaho Falls wildfire. Clearing was effective later in the night, and views of DSOs were not compromised much above 30 degrees elevation at any point. Jupiter made its appearance early with a bit of band detail. The site near Red Feather Lakes gave Sky Quality meter values at best about 21.76, similar to Estes Park overhead and to the West, and better than RMNP to the East. Tom Teters, Nate Perkins, Greg Halac and Dan Laszlo caught M51 and M101 before they were lost in the treetops. Summer Milky Way favorites put on a great show including M22, M8, M20, M16, M17, M11, M27, NGC 6888 the Crescent Nebula, NGC 6826 the Blinking Planetary, the Veil Nebula, NGC 7662 the Blue Snowball, NGC 891 with dust lane, M31, M33, the Double Cluster, and M45. Roger demonstrated his roll-off observatory with CCD equipped SCT on a pier, recovered from a lightning strike last year. NGC 6888 was caught with a 30 second subexposure. We are indebted to Roger and Marilyn for their kind support of the club this summer!

## Foxpark Aug 29 to 31: Sky Quality Meter 21.9 to 22.0

Just back after a long night at Fox Park. Gary, Carol, Mike R. and Brian K. plan on staying another night. Not surprisingly there were a lots of ATVs with their toyhaulers. Unfortunately some kept driving around with lights blazing and kicking up dust quite late. There were several late arrivals -- the last one came in at 3 am. Bonfires, bright camping lanterns were problems. Also, one of the RVs nearby left an outside light on all night.

Even so, it was a great night, not a cloud in the sky, and no wind. Transparency was good as well. No mosquitoes as temperatures were in the 30 to 40 degree range. Fabulous dark skies their make finding faint stuff so much easier. I imaged six comets in the magnitude 11 to 14 range. Mike & Gary were busy bagging lots of faint fuzzies. An excellent night despite the irritations.

Vern

Hey all, We had another fabulous night Saturday, clear skies all night again, no wind, at night, even warmer than Friday night, never got to freeze mark I think, and a lot drier, less humidity, did not dew up, like Friday at 3 am or so. We stayed up late with Ray and Max Moe, Mike Roos, John Otto and Brian Simpson, till 4:30 am. We did the Crab nebula, Orion, and the Flame nebula as my parting shots for the night. Fall is in the air and sky.

Our friend John Otto and his wife Lois from Nederland, they own the 20 inch with roll off roof observatory, did show up for viewing. John stayed up late with us, too many views to name what we saw thru the night, with excellent full sky views, no clouds., we do get lucky sometimes.

Max Moe and Miranda, Ray and Lorraine Moe showed up to Block camper lights to the south, worked out great, then guy to north leaves his super bright coach light on. We worked around it and still had the most awesome skies, full Milky way views to tree tops.

Dan Laszlo showed up Saturday night too, he parked to the north on small road. We all walked over to see his 25 scope, very nice set up. Dan is a true die hard, loves those dark sky views, no wonder he owns a Obsession scope??

We had another rude awakening with all the obnoxious four wheelers there. Campfires and they are hauling logs over to their site with their mighty four wheelers, then build huge fires and turn on bright lights, wow! They sure burst my bubble, this place is not an astronomers only place. 20 to 30 wheelers and dirt bikes dusting up the skies, they do not even slow down coming into camp, lets see who can leave the biggest, bad-est dust trail???

We need a private piece of land to lease or use like with RAC and Leonard, will talk more at meetings.

Great weekend despite it all, we had great weather and clear skies, later, Gary

I was tardy to the site after the great night at Roger and Marilyn's, so drove around the North end at Foxpark around 9 pm Sat Aug 30. I hate to blast the DSMs with my dome lights so was able to take the spot where Greg and Nate had for WUTS. That was in the shade of RVs, I had no direct views of the campfires which died about 10:30, and the "porch" light that stayed on all night. Fortunately no RV races at 1 am Aug 31. Clouds were annoying a bit about 11 to MN, good clearance after MN. I have an object list from CTSP 2007, Jim Chandler at the Austin Astro Soc with a nice mix of interesting and near invisible targets. Highlights were the NGC 5981-2-5 trio, Abell 39 (dim), Sharpless 2-71 planetary, long look at NGC 6888 with a 17mm Nag looking for knots, NGC 7479 barred spiral, NGC 891 had good mottling, long look at NGC 246 one of Max Moe's favorite PN, NGC 253, NGC 1514 neat PN in Taurus. Some of the best SQM readings I've seen for Foxpark, several in the 21.9s and a 22.0! I can believe the 21.94 to 21.96 are legit at least, toward Pegasus predawn. It was also great to notice dark mottling in the Milky Way between Cygnus and the Zodiacal light in Auriga, best look at that I can remember. I think we had the Zodiacal Band dimly there in the South. Could not make out Geigenschein.

Cheers, Dan Laszlo, NCAS

## Geosat Flare Season

From Bjorn Gimle:

...and geostationary is the key --

For flaring to occur, the satellite must be stabilized, ie usually operative. 99% of these have close to 0.0 degrees inclination (some military sats have ~10 degrees) and a Mean Motion of ~1.0026 Thus, these satellites move in a band on the celestial sphere, whose declination depends on your latitude. (For me at

60N this is -8 degrees) And the shadow outline is roughly an 18-degree circle, centered on the Sun's Right Ascension + 12h, and the opposite declination, plus this offset. So for me today, with Sun at +8d, the center is around -16d, and these satellites pass in the upper part of this circle.

But most of these appear to have their panel normals pointing in the equatorial plane, so the reflections, appearing FROM declination +8, now reach the Earth at approximately 60S.

To locate the flaring sats with naked eye, or small binoculars, this rough info is sufficient. Since stars pass the satellites so slowly, they can be difficult to recognize, without comparing the "stars" you see to a sky chart. But a common digital camera, mounted on a tripod, with 30-60s exposure, easily shows them as dots among the trailing stars.

You can read more on my page

[http://www.algonet.se/~b\\_gimle/geoflare.htm](http://www.algonet.se/~b_gimle/geoflare.htm)

, which have links to

[http://www.algonet.se/GeoFlare\\_10150017\\_crop](http://www.algonet.se/GeoFlare_10150017_crop)

One of my first photos

[http://www.algonet.se/~b\\_gimle/programs/GeoFlare.xls](http://www.algonet.se/~b_gimle/programs/GeoFlare.xls)

Excel spreadsheet to compute RA/Dec of shadow outline.

[http://www.algonet.se/~b\\_gimle/gif/Totacet.gif](http://www.algonet.se/~b_gimle/gif/Totacet.gif)

shows SkyMap graphical prediction (horizontal projection) of satellites entering and leaving the shadow.

[http://www.algonet.se/~b\\_gimle/gif/1010\\_RA.gif](http://www.algonet.se/~b_gimle/gif/1010_RA.gif)

shows in RA/dec, including multiple outputs from my spreadsheet, how the shadow moves during a night. and others.

### Cassini Pinpoints Source of Icy Jets on Enceladus

See: <http://ciclops.org/index.php?js=1>

### STS-125 Rollout Postponed for Hurricane Hanna

HST repair mission is next, launch target Oct 8. See:

[http://www.nasa.gov/mission\\_pages/shuttle/main/index.html](http://www.nasa.gov/mission_pages/shuttle/main/index.html)

### Best Looks

Moon By Mercury, Venus, Mars 9/1

By Pleiades 9/20

by Jupiter 9/9, by Saturn 9/27

Mercury Trio with Mars and Venus 9/6 to 13

Jupiter In S in evening

Saturn Low in E predawn last 2 weeks

Uranus In Aquarius, middle of night

Neptune In Capricornus, late evening

Pluto In Sagittarius, in evening

## International Space Station Passes for Loveland – Fort Collins

September 2008

Date	Mag	Starts			Max. altitude			Ends		
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
<a href="#">2 Sep</a>	-0.3	05:00:52	18	NW	05:01:27	19	NNW	05:03:41	10	NNE
<a href="#">3 Sep</a>	1.1	03:55:01	14	NE	03:55:01	14	NE	03:55:29	10	NE
<a href="#">3 Sep</a>	0.5	05:27:27	10	NW	05:28:41	12	NNW	05:29:53	10	NNE
<a href="#">4 Sep</a>	0.4	04:20:44	16	N	04:20:44	16	N	04:21:51	10	NNE
<a href="#">5 Sep</a>	0.6	04:46:26	11	NNW	04:46:57	11	N	04:48:02	10	N
<a href="#">7 Sep</a>	0.8	05:40:28	10	N	05:41:33	11	N	05:42:38	10	NNE
<a href="#">8 Sep</a>	0.3	06:06:36	10	NNW	06:08:43	18	NNE	06:10:50	10	ENE
<a href="#">9 Sep</a>	0.8	04:58:30	10	NNW	04:59:42	12	NNE	05:00:55	10	NE
<a href="#">10 Sep</a>	0.2	05:24:35	10	NNW	05:26:49	19	NNE	05:29:02	10	ENE
<a href="#">11 Sep</a>	0.9	04:17:57	12	NNE	04:17:57	12	NNE	04:19:09	10	NE
<a href="#">11 Sep</a>	-1.3	05:50:53	10	NW	05:53:43	45	NNE	05:56:31	10	ESE
<a href="#">12 Sep</a>	0.1	04:44:04	19	N	04:44:51	21	NNE	04:47:10	10	ENE
<a href="#">12 Sep</a>	-2.0	06:17:32	10	WNW	06:20:21	47	SW	06:23:09	10	SE
<a href="#">13 Sep</a>	-1.6	05:10:22	26	NNW	05:11:41	52	NNE	05:14:32	10	ESE

<a href="#">14 Sep</a>	-1.9	05:36:55	23	W	05:38:16	40	SW	05:41:01	10	SSE
<a href="#">15 Sep</a>	0.7	04:32:03	13	ESE	04:32:03	13	ESE	04:32:28	10	ESE
<a href="#">15 Sep</a>	-0.1	06:03:44	11	WSW	06:04:35	12	SW	06:05:41	10	SSW
<a href="#">17 Sep</a>	-0.1	20:13:01	10	S	20:13:51	14	SSE	20:13:51	14	SSE
<a href="#">18 Sep</a>	-1.4	20:38:29	10	SW	20:40:30	38	SSW	20:40:30	38	SSW
<a href="#">19 Sep</a>	-0.7	19:30:33	10	S	19:32:46	20	SE	19:35:00	10	E
<a href="#">19 Sep</a>	-0.1	21:05:11	10	W	21:06:52	26	WNW	21:06:52	26	WNW
<a href="#">20 Sep</a>	-2.4	19:56:11	10	SW	19:59:06	74	SE	20:01:20	16	ENE
<a href="#">20 Sep</a>	1.3	21:32:38	10	WNW	21:32:57	12	WNW	21:32:57	12	WNW
<a href="#">21 Sep</a>	-0.7	20:22:57	10	W	20:25:40	33	NNW	20:27:13	19	NNE
<a href="#">22 Sep</a>	-2.3	19:13:50	10	SW	19:16:46	86	SE	19:19:42	10	NE
<a href="#">22 Sep</a>	0.4	20:50:27	10	WNW	20:52:26	16	NNW	20:52:55	16	N
<a href="#">23 Sep</a>	-0.5	19:40:40	10	W	19:43:19	30	NNW	19:45:58	10	NE
<a href="#">23 Sep</a>	1.2	21:18:27	10	NNW	21:18:29	10	NNW	21:18:29	10	NNW
<a href="#">24 Sep</a>	0.4	20:08:12	10	WNW	20:10:05	16	NNW	20:11:58	10	NNE
<a href="#">25 Sep</a>	-0.4	18:58:19	10	W	19:00:55	27	NNW	19:03:31	10	NE
<a href="#">25 Sep</a>	0.8	20:36:13	10	NNW	20:37:00	11	N	20:37:44	10	N
<a href="#">26 Sep</a>	0.4	19:25:53	10	NW	19:27:40	15	NNW	19:29:27	10	NNE
<a href="#">27 Sep</a>	0.7	19:53:58	10	NNW	19:54:35	11	N	19:55:12	10	N
<a href="#">28 Sep</a>	0.7	20:21:13	10	N	20:21:32	10	N	20:21:52	10	N
<a href="#">29 Sep</a>	0.7	19:11:34	10	NNW	19:12:00	10	N	19:12:34	10	N
<a href="#">29 Sep</a>	0.8	20:46:53	10	NNW	20:47:13	11	NNW	20:47:13	11	NNW
<a href="#">30 Sep</a>	0.6	19:38:34	10	N	19:39:01	10	N	19:39:28	10	NNE
<a href="#">1 Oct</a>	0.1	20:04:12	10	NNW	20:05:52	14	NNE	20:06:05	14	NNE

<http://www.heavens-above.com/main.aspx?lat=40.4997&lng=-105.05736&loc=Fort+Collins+CO+USA&alt=0&tz=MST>