

# The Objective View

Newsletter of the Northern Colorado Astronomical Society

August 2004

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Cheyenne Astronomical Society  
Aug 12 – 15 Weekend Under The Stars, Foxpark WY  
Aug 20 7 pm Cheyenne Botanical Garden  
<http://home.bresnan.net/~curran/>

Open House, Chamberlain Observatory, dusk to 10 pm  
Aug 21, Sep 18 303 871 5172  
<http://www.du.edu/~rstencil/Chamberlin/>

Longmont Astronomical Society  
Aug 19 7 pm Longmont Christian School, 550 Coffman St  
<http://longmontastro.org/>

**Next Meeting: August 5 7:30 PM**

## Show and Tell

## NCAS Members

### NCAS Business at 7 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.

### Rocky Mountain National Park Starwatching 2004

Site is the end of the Upper Beaver Meadows road, starting at dusk. Ranger Jeff Maugans plans to add New Moon weekends. Summer 2004 dates: August 6, 13, 20. Contact Dan Laszlo if you are interested as a volunteer, [djlaszlo@aol.com](mailto:djlaszlo@aol.com), 970 498 9226.

### NCAS Dark Sky Star Party Dates

#### August 20, 21

Cactus Flats site is on undeveloped parcel of prairie about 6 miles West of Briggsdale. Take Colo Hwy 14 East from I-25 (Exit 269). Go 19 miles East to Ault. Continue 18 miles East of Ault. At County Rd 65 (Milepost 170), turn North, go one mile. Site is through the wire gate on the right, no road, close gate and set up. Beware of the cactus. The site is now officially wheelchair accessible, but there are no facilities so bring essentials. Call **Tom Teters**, [tomt@starmon.com](mailto:tomt@starmon.com), with questions about star party status or dates, 482-5702.

## Other Events

Little Thompson Observatory Star Night, Berthoud  
August 20 Star Night  
<http://www.starkids.org>

## June 3 Program

**MacDonald Observatory, the AAS meeting, and the University of Arizona Astronomy Camp, by Max Moe**

The Spring was a whirlwind of travel for Max. He headed South for Spring Break, stopping first at the National Solar Observatory at Sunspot NM. Calling ahead is recommended, and the staff was happy to show off their collection of telescopes. He saw their 130 foot solar tower, their 3.5 meter telescope, and the Sloan Digital Sky Survey instruments. SDSS correlates photo and spectroscopy data for quasars and galaxies. Fiber optics are plugged into plates to yield spectroscopy data rapidly. Max then went to observe at MacDonald Observatory, near Prude Ranch, Texas. He was granted access as part of the Astronomical League NYAA Award, and was able to spend several nights with the UT astronomers. The 82 inch telescope was looking at pulsating white dwarf stars, seeking changes in pulsations which would imply planets. The 107 inch telescope was looking at high redshift quasars. He saw some unusual instruments, including the Hobby-Eberle Telescope. Its effective aperture is over 8 meters. It feeds 2 spectrometers in giant meat freezers under the floor. Max can strongly recommend the area for spring break observing. The American Astronomical Society was overwhelming for the quantity of research presented. NASA Chief Sean O'Keefe addressed the research community on the agency's direction. Shuttle safety and HST options were reviewed. Max enjoyed a variety of topics, especially astrophysics. After AAS, it was soon time to trek to the University of Arizona Astronomy Camp in Tucson. He enjoyed it 10 times more this time. He had two new Fermi problems to solve. If he got a penny each time someone in the US said "Ouch!", how long would it take to make a billion dollars? Shown a rough graphic of a bus, which way was its front? With a 60 inch telescope, he got his best ever look at M104, and nice views of M57 and M51. Massive ladybug flights were in progress. They made a field trip to Mt. Graham to tour the Large Binocular Telescope. It has 1 of 2 8.4 meter primaries in place. The whole top of the building rotates. A field derotator is needed. Back at Mt. Lemmon, happy campers fired the liquid N2 cannon and enjoyed liquid N2 ice cream. Other students studied the spectrum of Wolf-Rayet stars, calculated the distance to the center of the Milky Way based on globular cluster distribution, and reported on light curves of eclipsing binaries and Type 1A supernovae. An asteroid and a Kuiper Belt object were imaged. Max elected to focus on planetary nebula

structure and composition. He showed animations of two models, a helical planetary and a bipolar planetary. His observing time was limited, but he obtained spectra for IC 4634. This allowed him to derive a temperature estimate in the outer regions. His value of 44000K, in great agreement with the published value 45000K. Max will round out his summer with an astrophysics program at the University of Colorado this summer.

#### NCAS Business, July 1 2004

President Dan Laszlo called the meeting to order. Brad Jarvis announced the upcoming Mars Society meeting. Nate Perkins gave the treasurer's report. NCAS is now sponsor of the Clear Sky Clock at Cactus Flats. Astronomical League dues are in. Member dues are \$15 annually. Dan Laszlo announced dates for Rocky Mountain National Park.

#### Forwarded by Dave Larison

Subj: [FRAC] S&T - An Excellent Year for the Perseids

Date: Saturday, July 24, 2004 8:38:40 AM

From: DLskygazer@aol.com

To: front-range-tac@seds.org

Encouraging outlook on the Perseids this year, peaking on Aug. 12. -DL

#### Sky and Telescope - An Excellent Year for the Perseids

...The consensus among meteor astronomers is that the particles of the new, 1990s peak were probably shed by Comet Swift-Tuttle during its swing by the Sun in 1862, and that as far as this rich filament of meteoroids is concerned, the show is over. But now, astronomers Esko Lyytinen of Finland and Tom Van Flandern of Washington, DC, suggest that the new Perseid peak could stage a return appearance in 2004. They predict that this year, the one-revolution rubble trail released in 1862 will be passing just 0.00132 astronomical unit (about 200,000 km) inside Earth's orbit at the time of solar longitude 139.440°. That's 20:50 UT on August 11th, favoring meteor watchers in Eastern Europe and eastern North Africa eastward to central Russia, India, and western China.

Lyytinen and Van Flandern base their prediction on the same techniques they used (rather successfully) in forecasting the intensities of the Leonid showers from 1999 through 2002. "It is very uncertain what kind of a shower this will give," notes Lyytinen. "If the numbers of particles released for the 1862 trail were the same as for the Leonid parent comet, I would say a ZHR [zenith hourly rate] of around 100 is possible. But," he adds, "we must also consider that the Perseid parent comet is a lot bigger than the Leonid comet, so there may even be a slight chance of storm-level activity," meaning a ZHR of 1,000 or more. Lyytinen and Van Flandern believe that most of these meteors could be rather faint, 3rd and 4th magnitude. If an outburst happens, it is likely to last no more than about 40 minutes.

Last, because recent perturbations by Jupiter are directing old Perseid meteoroids about 0.01 a.u. closer to the Sun, the core of

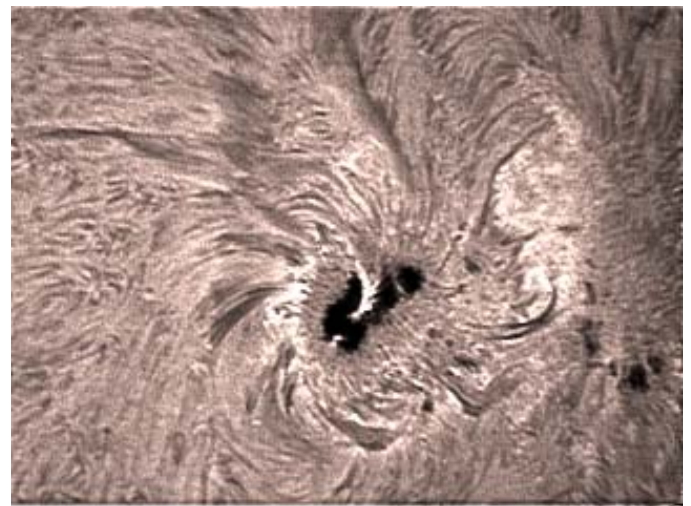
the broader, "traditional" stream may be shifted closer to Earth's orbit, resulting in a stronger-than-average annual shower. In fact, Lyytinen and Van Flandern suspect that the Perseids tend to put on stronger-than-average displays at 12-year intervals (12 years being Jupiter's orbital period), and that 2004 is one of the favored years. The 1992 display might not qualify for comparison because the parent comet was nearby — but 1980 brought an excellent show punctuated by many fireballs, and 1968 was rated quite good despite bright moonlight.

Will we be similarly rewarded this year? If so, the enhancement would come into play only around the date of the normal maximum, perhaps even appearing as a new, additional peak.

**In 2004 that time is 11h Universal Time on August 12th (7 a.m. Eastern Daylight Time, 4 a.m. Pacific Daylight Time). So North America, especially the West and Hawaii, is optimally positioned to catch the peak.**



Sunspot 652 July 18 2004 Baader AstroSolar filter C102F  
Keith's Image Stacker with Nikon CP4500 Quicktime movie



Sunspot 652 July 19 2004 H-Alpha filter SM90 on C102F  
KIS stacked images from Nikon CP4500 Quicktime movie  
Dan and Andrew Laszlo

## Sounds of Saturn Ring Plane Passage, from Tom T & Philippe

When the Cassini craft preformed the Saturn Orbital Insertion and traveled twice between the gap F & G rings, I read it collided with about 1000 micrometeors, and there was a sound file made from these impacts.

[http://science.nasa.gov/headlines/y2004/images/hailstorm/61980main\\_PIA06410-Sounds-movie.mov](http://science.nasa.gov/headlines/y2004/images/hailstorm/61980main_PIA06410-Sounds-movie.mov)

**Subj: [FRAC] Fox -tastic**

Date: Tuesday, July 20, 2004 10:40:55 AM  
From: gary30views@earthlink.net  
To: members@longmontastro.org, front-range-tac@seds.org

Fox Park is an observer's dream sometimes and this past weekend was what dreams are made of. Several of the Dark Sky marines showed up for a rather dewy Friday night but very clear, after showers and rain that day. Saturday was total clear skies thru entire night, only half as dewy as Friday. LAS people, Bill Travis, Don and Lisa, Ken, Dick Latt, Bill Possel, Dave D, Steve, Terry and Zach Lynch and dogs, Carol, my wife, and myself, Gary, and dog, Sammie.

We all got to see both Comets that are still up Q4 And K 7 I think, which still are a very nice view. Huge list of objects seen, over 50 for me just on Saturday night. We stayed up till we dropped about 3:30 am Saturday morning and 3 am Sunday morning. Saturday during the day we even got some great solar views thru Dave Dunn's H alpha and Baader solar film scopes too. I tried pictures in both H alpha and Baader and none of my H alpha ones came out good but sun spot pictures came out good. Will send out pictures soon.

Blue sky like a normal summer day in high country, lows of 36 degrees and highs in low 80's, I just love viewing from Foxpark, still my favorite place, We are ready for WUTS Marty and Marcy, see you next month. bye. GG

## Forwarded by Andrea Schweitzer Asteroid Deflection

From: Brian Enke <benke@boulder.swri.edu>  
Subject: Asteroid deflection mission

<http://www.cnn.com/2004/TECH/space/07/13/asteroid.deflection/index.html>

## Binoculars for Sale

11x80 binoculars in excellent condition, with caps and case.  
\$145. Contact [REScline@aol.com](mailto:REScline@aol.com)

## URL for Clear Sky Clocks for Colorado

[http://cleardarksky.com/csk/prov/Colorado\\_clocks.shtml](http://cleardarksky.com/csk/prov/Colorado_clocks.shtml)

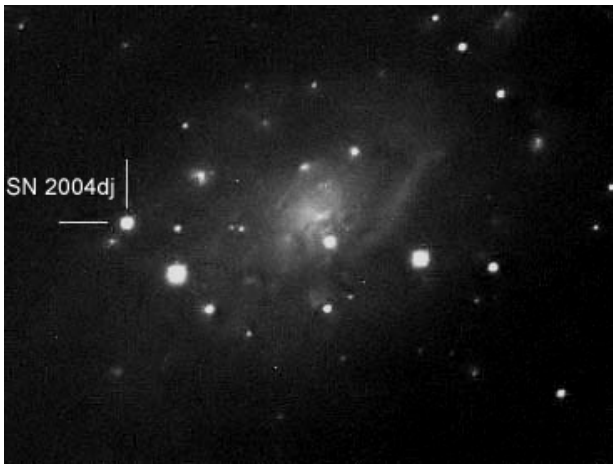
## Best Looks

Moon	By Venus 8/11, 12 Occults NGC2266 8/12 ends 0353 MDT By Saturn 8/13 By Jupiter 8/17
Mercury	Low in W at dusk first 10 days
Venus	Bright in E predawn. By Saturn 8/31
Mars	Difficult in W at dusk By Regulus 8/9
Jupiter	Low in W evenings
Saturn	Low in E predawn
Uranus	In Aquarius midnight
Neptune	In Capricornus midnight
Pluto	In Serpens Cauda - Oph late evenings

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

**TO:**

From Paul Deans, Sky and Telescope



Supernova 2004dj is shown on this view of NGC 2403; the image is 10 arcminutes wide and north is up. *Image by Koichi Itagaki, courtesy David Bishop.*

On July 31, 2004, Japanese astronomer Koichi Itagaki discovered a supernova in the outskirts of the nearby spiral galaxy NGC 2403 (also known as Caldwell 7) in Camelopardalis. At magnitude 11.2, the supernova is unusually bright; its host galaxy is only 14 million light-years away. The new object is located at right ascension 7h 37m 17s, declination  $+65^{\circ} 35' 58''$  (2000.0), placing it approximately 160 arcseconds east and 10 arcseconds north of the galaxy's nucleus. The announcement was made August 2nd on IAU 8377, issued by the [Central Bureau for Astronomical Telegrams](#).

NGC 2403 is almost 100,000 light years across, and at magnitude 8.5 is fairly easily seen in a small telescope or even large binoculars under a dark sky free of light pollution. There are a number of foreground stars in the immediate vicinity of the galaxy that could be confused with the supernova; use the photo above to identify the correct one. The galaxy itself is clumpy due to the presence of large numbers of H II star-forming regions in its spiral arms. NGC 2403 belongs to the Coma-Sculptor Cloud of galaxies that includes our Local Group.

link to Sky & Telescope coverage:

[http://skyandtelescope.com/observing/objects/variablestars/article\\_1315\\_1.asp](http://skyandtelescope.com/observing/objects/variablestars/article_1315_1.asp)