Messier Marathon Star Party April 1

Pronghorn antelope herds dotted Highway 14 at sunset near Crow Valley Campground on the evening of the NCAS Star Party. Randy Cunningham and other members of the Longmont Astronomical Society formed a light-bucket brigade. They shared views with their Newtonians ranging from 16" to 25". Zodiacal light was prominent above the two day old Moon. A glimpse of the Horsehead Nebula was possible as Orion slipped into the West. It was a galaxy rich night, as the 25" Obsession Newtonian of Bob Luffel revealed details of the spiral structure of M51, and the dust lane of NGC 4565. The galaxy cluster Abell 1656, 400 million light-years distant, was a field strewn with galaxies and rare foreground stars. Mars had a shrinking disk and North Polar Cap. The 90 mile asteroid 9 Metis was prominent near galaxy NGC 3628. Gerry Reynolds demonstrated the ease of his computerized 10" Schmidt-Cassegrain. Bring your Messier Marathon checklist to the next meeting so we can determine who spotted the most objects without computer assist.

Next Star Party: Hermit Park, April 29

The opportunity to see a few hundred galaxies in an evening will again present, in the dark skies of Hermit Park. Take US 34 to Estes Park and turn south on US 36 (towards Lyons). The highway will climb up a long grade. At the top of the hill, take the first right onto Hewlett Packard property and a dirt road that will curve back to the North. Stop at the first building on the right (this is the place to sign in). Say you are here for the star party and are the guest of Gerry Reynolds. Continue to follow the main dirt road that winds to the west over a ridge and toward a valley to the west, until you come to a big grass meadow. We will set up at a pavilion off to the left (south) and an accompanying access road. Please do NOT drive onto any meadows. If you bring a telescope and wish to spend the night and stay with your telescope, you may set up a tent by the telescope. Since this area is not a normal camping area, no fires are allowed in the meadow. Cooking may be done under the pavilion using stoves or designated pits. If regular camping is desired, this will need to be done in the designated campgrounds on a space available basis, ask when you sign in. The grounds keeper has asked for an approximate head count, so if you plan on coming, please RSVP with Gerry Reynolds at 226-0705. He is ready for any frost this time with a dew zapper on 20' extension cables.

Solar scopes, Astrophotos, People Wanted: April 23

Earth Day at Loveland Civic Center, 500 E 3rd, 11 am to 5 pm. Call Lee Youngblood if you can come: 669-8321

Scopes Needed for Astronomy Day May 6, and June 1

Club members are requested to bring telescopes to Fort Collins’ Discovery Center, 703 E Prospect, 8pm for public observing. Call Dorothy Pillmore, 223-9912, if you can. The Medical Society Family Star Party is June 1 at Pine Ridge. Call Donna Whittington for details, 225-1099.

Upcoming Events:

NCAS Meetings

May 27 Star Party, Crow Valley Campgrnd, Briggsdale
June 6: Star Party at Rolland Moore Park, Ft Collins
FRASC Events:

Apr 22 Tim Ferris “Is the Big Bang Dead?” Univ Denver
Bjarvis, TTeters Seyfert’s Sextet/HST proposal
Jun 23-25 Cheyenne Astro Soc at Curt Gowdy St Park
Jul 27-28 Denver Astro Society at Canyonlands, Utah
Aug 25-26 StarParty, FoxPark, Cheyenne Astr Soc+NCAS
Longmont Astronomical Society Star Parties:

April 29: Woodrow
May 27: Caribou
June 24, July 29, Aug 26 Deadman, with NCAS
Sept 22-23 Deadman, with NCAS, FRASC

Longmont Astronomical Society Programs:

3rd Thu of Month, New Creation Church, 550 Coffman St
May 18 Keith Gleason Sommer Bosch Observatory
June 15 Tom Johnston NGC Max Computer System
July 20 John Astalos Eclipses? Denver Astro Society
Aug 17 Tom Melsheimer Drives for 1-2 meter scopes
Sep 21 ARC Software Dance of the Planets

April’s Meeting: Remote CCD Imaging with The Sky software, Tom Bisque

Tom began by showing several dozen images he’s made. His ST6 CCD camera + 20" f/4 reflector in Golden made a fine match for those Virgo cluster galaxies. The 242 x 375 pixel chip delivers an 11 x 15 arcminute field. He also showed some nice "unguided" images with a 4" Genesis (on a Byers mount). In a 5 minute exposure, the images of the Orion Nebula had information comparable to plates obtained with the Palomar 48" Schmidt. Tom explained his preference for the TI chip in the ST6 camera, citing superior substrate, dynamic range, spectral range, and sensitivity, snagging images in 1/5 the time or less compared to chips with smaller pixels. He imaged the planetary nebula NGC 2438 in the field with M46 with a 3 second exposure that night. He made a pitch for photometric accuracy in imaging, distinct from juggling bits primarily to create artistic results. He gave a brief demo of the corrections necessary to create an accurate image, dark frame subtraction and light frame subtraction and flat field correction.
subtraction, and showed the value of false color isophotes to highlight subtle features. He cautioned users regarding maximum entropy deconvolution, a currently popular image processing technique. He has drawn on the extensive experience of Mike Palermiti and others to assemble a tutorial CDROM which is to include 900 images, illustrating the image acquisition and analysis. The limited field of view of the CCD has its drawbacks: it took 14 hours to assemble a mosaic of the Moon! In a live demo, the benefits of computer control for precise framing became obvious, as a 486DX laptop in Fort Collins connected via modem to the 20" scope in Golden. Tom took us from Sirius to M46 to a sequence of galaxies. Image transfer typically took about 5 minutes with a 9600 bps connection. As the computer cursor appeared to wander, he pointed out that the software recognized the need to roll the scope from one side of a German Equatorial mount to the other, prior to final aiming. It does take a humanoid in the observatory to handle the cables when slewing around the German Equatorial. At least the scope is in a roll-off shelter, so you don't have to wait for dome rotation as for the Mount Wilson remote telescope. He concluded with a brief show of SkyPro capabilities, including animation of asteroid 9 Metis' passage near NGC 3628 and pasting CCD galaxy images in place of the galaxy icons on the map in SkyPro.

Contact Software Bisque: 303-278-4478. The Sky, planetarium and telescope control, 5129, plus scope interface; Sky Pro, CCD control and image processing, $149. 20% discount for club members.

Business
Tom Teters has T-shirts and sweatshirts with the NCAS logo, $12 each. Donna Whittington provided final copies of the NCAS Constitution.

Club Telescope
Contact NCAS President Lee Youngblood, 669-8321, if you are ready to start pushing glass. Rough grinding of a 1U blank got underway in April.

Observing and Imaging Notes
Jim Weimer recently returned from views of the southern skies from Hawaii and the Bahamas. He unfortunately missed visiting the Keck telescope due to weather. Marianna Wagers has made the most of cold weather observing with binoculars. Jamie McArthur shared his first photographs of open clusters and the Orion Nebula with his 8" Schmidt-Cassegrain with his 8" Schmidt-Cassegrain.

Recommended Reading
Brad Jarvis: Kip Thorne's Black Holes and Time Warps
Steve Emmons: Ben Bova's Quest for Quasars

Try a New Astronomy BBS: 970-635-1845
Try out the CAP-SAR BBS at the May 2 NCAS meeting. Bring new blank 1.4 mb 3.5 inch diskettes if you wish to obtain astronomical satellite trackers SkyMap 5.7, TrakSat 3.3 for PC's, and Orbitrack 2.1.5 for Macintosh, astronomical shareware SkyMap 2.2 for Windows, and SkyChart 2000.0 for Macintosh. If you can't make it to the meeting, the service can be accessed with your modern software, up to 19,200-BN1. Download FirstClass BBS software. Expect no charge for local calls; your normal toll charges will apply if you're outside Loveland's local calling area. CAP-SAR BBS is in beta testing and is generally available 5-10pm MDT; daytime weekends.

Overhead in May: Saturn's Rings On Edge
Earth will carry us through the plane of Saturn's rings in May, and the view should change markedly as our perspective shifts from seeing the illuminated face of the rings to the side in shadow. Passage through the ring plane occurs on May 21, and the rings will most likely be invisible in amateur scopes for a few days around this date. If the air is sufficiently steady, the view should present an opportunity to see faint inner satellites, plus a thin dark ring shadow near the planet's equator.

Best Looks
Mercury: Easy in W, eves, 5/1 through 5/15
Venus: Brilliant all month before dawn
Near the crescent Moon 5/27
Mars: Regulus in Leo 1 degree away May 25 eve
Jupiter: Bright near Antares, opposition May 31
Saturn: View dark side of rings after May 21
Uranus: Mag 6 in W Capricornus
Neptune: Mag 8 in E Sagittarius
Pluto: Magnitude 13.7 in Ophiuchus/Libra

Mir (Spekr launch about May 10, call D Laszlo with 7's)

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From:
Northern Colo Astronomical Society
c/o Dr. Dan Laszlo
Aspen Medical Center

TO: