The Objective View April 2002

Newsletter of the Northern Colorado Astronomical Society

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Meetings first Thursday of each month

Next Meeting: April 4 7:30 PM
Little Thompson Observatory
By Tom Melscheimer

Meeting directions
Discovery Center Science Museum
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 Public Starwatch at Discovery Center
Bring a scope of binoculars to share on Friday nights near First Quarter Moon. Set up in the South parking lot. Contact Dan Laszlo with questions: djlaszlo@aol.com 498 9226
April 19 7 PM
May 17 8 PM

NCAS Star Party Dates
April 5, 6, 12, 13
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. Our standard nights are the weekend of the New Moon, sometimes a weekend before and after. The site is now officially wheelchair accessible, but there are no facilities so bring essentials. Call **Tom Teters, tomt@jymis.com,** with questions about star party status or dates, 482-5702 or 482-0807.

Longmont Astronomical Society 1st Quarter Moon Public Viewing Nights
April 20 (Astronomy Day!), May 18, June 15, July 13, August 17, September 14, October 12, November 9, December 7

NCAS Calendar

May John Morse, Eta Carinae and High Mass Stars
June Brian Rachford, Aurora Forecasting

Other Events

Little Thompson Observatory Star Night, Berthoud
April 19 7 PM Michael Hotka, The Solar System
http://www.starkids.org

Cheyenne Astronomical Society
April 19 7 PM
http://users.sisna.com/mcurran

Open House, Chamberlain Observatory, dusk to 10 PM
http://www.du.edu/~rstencel/Chamberlin/
April 20 303 871 5172

Longmont Astronomical Society
http://laps.fsl.noaa.gov/cgi/las.cgi
April 18

March 7 NCAS Business Meeting
Club business was deferred, for observation of Comet Ikeya-Zhang.

March 7 Program
Deep Impact Mission, by Jim Crane
Ball Aerospace

What would happen if a 350kg copper mass were to collide with a 6 km comet nucleus at 23000 miles per hour? JPL researchers hope to vaporize pristine material within the solid nucleus and analyze its spectrum. The impact will also help distinguish the correct model for the structure of the comet nucleus. The craft is launched on Jan 2 2004 with an instrument module and a detachable impactor that separate within a day of impact. In July, 2005, the impact and its consequences will be monitored by both the instrument package and ground observers. Jim Crane is the senior engineer integrating the various systems on the craft. Ball is recruiting amateur astronomers for a worldwide observing team. Gary Emerson is a Colorado contact for amateurs at Ball Aerospace, at 303 939 4702. There may be changes in the comet's coma visible from Earth. The comet is to be visible from Australia at the impact time. See:
www.ball.com/aerospace/deepimpact.html

Local Astronomy Internet Group
"Astro-Colorado is a Yahoo Group moderated by NCAS member Dave Larison. The site can be used for announcements, discussion of current observations, equipment questions, and file uploads. Anyone can view contents, but only members may post. See:
http://groups.yahoo.com/group/astro-colo

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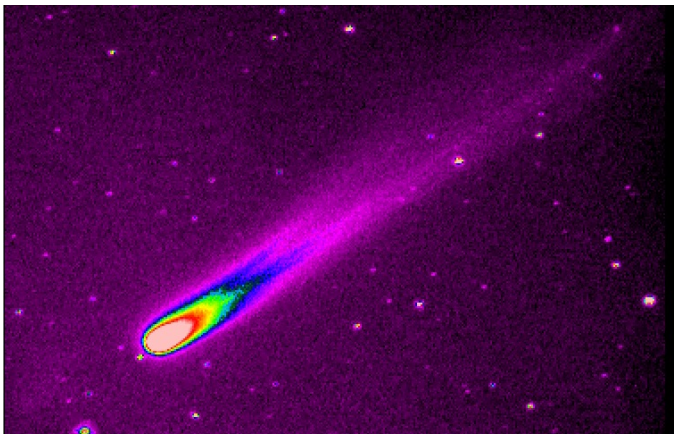
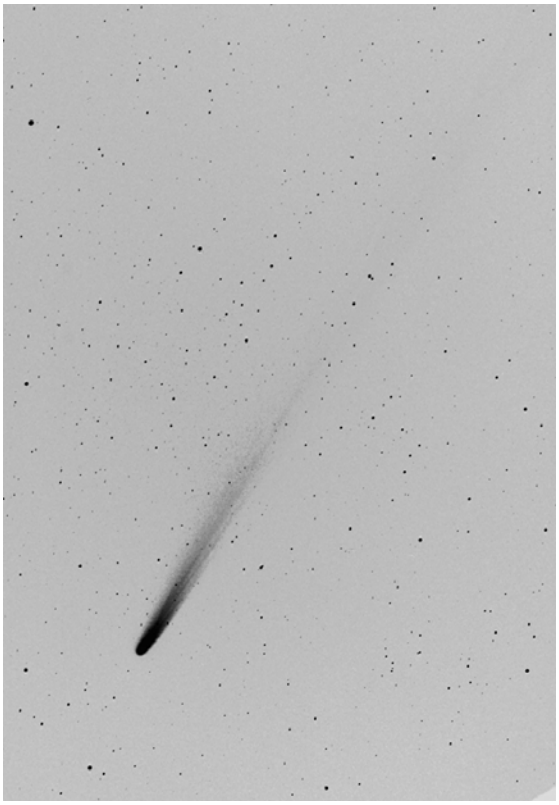


Comet Ikeya-Zhang by Tom Teters:
http://starmon.com/ikeyazhang.html

This image is a combination of two 17 sec. exposures using a ST-6 CCD camera through a Stellarvue 80mm refractor, tweaked with CCDops5.21 and Photshop5.5. Taken at 7:33pm Sat. March 9, 2002. This comet was only up about an hour after twilight, in Pisces, so I took as many shots as I could, but none of them higher than about 40* above the horizon. Notice the split in the tail. The color is false and displays differences in luminosity and the F.O.V. is 1* x 45'



Comet Ikeya-Zhang, March 19, 2002. 4° x 6°
Dan Laszlo, f/1.5 8" Schmidt Camera, 5 min, ISO 100
Kodak Elitechrome slide scan by Gerry Reynolds
More comet images: http://encke.jpl.nasa.gov/

From SKY & TELESCOPE's AstroAlert for Comets

COMET SNYDER-MURAKAMI

Within a few hours of each other on March 11th, Douglas Snyder in Palominas, Arizona, and Shigeki Murakami outside Niigata, Japan, spotted a faint, tailless comet moving northeastward through the constellation Aquila. Snyder was using a 20-inch reflector, Murakami an 18-inch.

Coming close on the heels of the similar visual discovery by Kaoru Ikeya and Daqing Zhang six weeks earlier, this new find further dispels the notion that professional surveys for near-Earth asteroids always catch in-bound comets long before amateurs with backyard telescopes have a chance. The visual feats of these four observers could inspire a whole new generation of amateur comet hunters.

According to the orbital elements calculated by Brian G. Marsden (Smithsonian Astrophysical Observatory) and published in Minor Planet Electronic Circular 2002-F23 of March 18, 2002, Comet Snyder-Murakami is now already headed back out of the solar system. When it passed through the perihelion point of its essentially parabolic orbit on February 21st, it was 1.47 astronomical units from the Sun (about as far out as Mars). This comet's orbit is inclined 92.6 degrees to the plane of the ecliptic.

The following ephemeris, calculated from Marsden's orbital elements, gives the comet's position each day for the next two months. "Delta" and "r" are its distance from the Earth and Sun, respectively, and the elongation is its angular separation from the Sun. Also listed are the comet's predicted magnitude and the constellation through which it is passing.

Roger W. Sinnott, Senior Editor, Sky & Telescope

Comet Snyder-Murakami, C/2002 E2

Date (0h UT)	RA (2000) h m	Dec. ° '	Delta (au)	r (au)	Elong. °	Mag.	Const.
Apr 01	19 15.1	+22 00	1.380	1.562	80.4	10.1	Vul
Apr 02	19 15.9	+23 14	1.376	1.567	80.9	10.1	Vul
Apr 03	19 16.7	+24 28	1.373	1.572	81.3	10.2	Vul
Apr 04	19 17.5	+25 43	1.371	1.577	81.8	10.2	Vul
Apr 05	19 18.2	+26 57	1.369	1.582	82.2	10.2	Lyr
Apr 06	19 18.9	+28 12	1.367	1.588	82.6	10.2	Lyr
Apr 07	19 19.6	+29 27	1.367	1.593	83.0	10.2	Lyr
Apr 08	19 20.2	+30 42	1.366	1.598	83.4	10.2	Lyr
Apr 09	19 20.9	+31 57	1.366	1.604	83.8	10.2	Lyr
Apr 10	19 21.5	+33 12	1.367	1.610	84.1	10.2	Lyr
Apr 11	19 22.0	+34 26	1.368	1.615	84.4	10.3	Lyr
Apr 12	19 22.6	+35 41	1.370	1.621	84.7	10.3	Lyr
Apr 13	19 23.1	+36 55	1.373	1.627	85.0	10.3	Lyr
Apr 14	19 23.6	+38 08	1.375	1.633	85.2	10.3	Lyr
Apr 15	19 24.0	+39 22	1.379	1.639	85.4	10.3	Lyr

Apr 16	19 24.4	+40 34	1.383	1.646	85.6	10.4	Lyr
Apr 17	19 24.8	+41 47	1.387	1.652	85.8	10.4	Lyr
Apr 18	19 25.1	+42 58	1.392	1.658	86.0	10.4	Lyr
Apr 19	19 25.4	+44 09	1.397	1.665	86.1	10.4	Cyg
Apr 20	19 25.7	+45 20	1.403	1.671	86.2	10.5	Cyg
Apr 21	19 25.9	+46 29	1.409	1.678	86.3	10.5	Cyg
Apr 22	19 26.0	+47 38	1.416	1.685	86.4	10.5	Cyg
Apr 23	19 26.2	+48 46	1.424	1.691	86.5	10.5	Cyg
Apr 24	19 26.2	+49 53	1.431	1.698	86.5	10.6	Cyg
Apr 25	19 26.2	+51 00	1.439	1.705	86.5	10.6	Cyg
Apr 26	19 26.2	+52 05	1.448	1.712	86.5	10.6	Cyg
Apr 27	19 26.1	+53 09	1.457	1.719	86.5	10.7	Cyg
Apr 28	19 25.9	+54 13	1.467	1.726	86.4	10.7	Cyg
Apr 29	19 25.6	+55 15	1.476	1.734	86.4	10.7	Cyg
Apr 30	19 25.3	+56 17	1.487	1.741	86.3	10.8	Dra
May 01	19 24.9	+57 17	1.497	1.748	86.2	10.8	Dra
May 02	19 24.5	+58 16	1.508	1.756	86.1	10.8	Dra
May 03	19 23.9	+59 14	1.519	1.763	86.0	10.9	Dra
May 04	19 23.3	+60 12	1.531	1.771	85.8	10.9	Dra
May 05	19 22.6	+61 08	1.543	1.778	85.7	10.9	Dra
May 06	19 21.7	+62 02	1.555	1.786	85.5	11.0	Dra
May 07	19 20.8	+62 56	1.567	1.794	85.3	11.0	Dra
May 08	19 19.8	+63 49	1.580	1.801	85.1	11.0	Dra
May 09	19 18.6	+64 40	1.593	1.809	84.9	11.1	Dra
May 10	19 17.3	+65 31	1.607	1.817	84.7	11.1	Dra

From SKY & TELESCOPE's AstroAlert for Comets

UPDATE ON COMET UTSUNOMIYA

New Comet Utsunomiya, whose discovery was announced March 20th, should brighten to about 6th magnitude in the coming weeks. But it lingers near the Sun throughout this period, so observations will be difficult. That's the indication of Brian G. Marsden's orbit calculations published in Minor Planet Electronic Circular 2002-F39. (Visit the Minor Planet Center Web site at http://cfa-www.harvard.edu/iau/mpc.html for information on subscribing to those circulars.)

Comet Utsunomiya reaches perihelion in the third week of April, when it will be between the orbits of Mercury and Venus. By then it will have crossed from the morning to the evening sky for observers in the Northern Hemisphere. The comet will be easier to observe from the Southern Hemisphere after mid-May, but soon thereafter it will fade rapidly as it departs the inner solar system.

The following ephemeris, based on Marsden's preliminary orbit, gives the comet's right ascension and declination (equinox 2000.0) at 0 hours Universal Time on each date. Also given are its distances from the Earth (Delta) and Sun (r), elongation, predicted magnitude, and the constellation through which it is passing.

Watch the observing section of SkyandTelescope.com for further updates on this object. (For example, the ephemeris may change slightly as the orbit is improved in the coming days.)

Roger W. Sinnott,Senior Editor, Sky & Telescope

Comet Utsunomiya, C/2002 F1

Date (0h UT)	RA (2000) h m	Dec. o '	Delta (au)	r (au)	Elong. o	Mag.	Const.
Mar 22	21 57.0	+08 05	1.548	0.889	32.6	8.9	Peg
Mar 23	22 01.2	+08 59	1.526	0.871	32.6	8.8	Peg
Mar 24	22 05.6	+09 54	1.505	0.853	32.5	8.7	Peg
Mar 25	22 10.1	+10 50	1.484	0.835	32.4	8.6	Peg
Mar 26	22 14.8	+11 48	1.464	0.817	32.2	8.5	Peg
Mar 27	22 19.7	+12 47	1.444	0.799	32.1	8.3	Peg
Mar 28	22 24.8	+13 47	1.424	0.782	31.9	8.2	Peg
Mar 29	22 30.1	+14 48	1.405	0.764	31.7	8.1	Peg
Mar 30	22 35.6	+15 50	1.387	0.746	31.4	7.9	Peg
Mar 31	22 41.4	+16 53	1.369	0.729	31.1	7.8	Peg
Apr 01	22 47.4	+17 56	1.352	0.712	30.8	7.7	Peg
Apr 02	22 53.7	+19 01	1.336	0.695	30.5	7.5	Peg
Apr 03	23 00.3	+20 05	1.320	0.678	30.1	7.4	Peg
Apr 04	23 07.2	+21 10	1.305	0.661	29.7	7.3	Peg
Apr 05	23 14.4	+22 15	1.291	0.645	29.3	7.1	Peg
Apr 06	23 21.9	+23 19	1.278	0.628	28.9	7.0	Peg
Apr 07	23 29.8	+24 23	1.266	0.613	28.4	6.9	Peg
Apr 08	23 38.1	+25 25	1.255	0.597	27.9	6.8	Peg
Apr 09	23 46.7	+26 26	1.244	0.582	27.4	6.6	Peg
Apr 10	23 55.7	+27 25	1.235	0.568	26.9	6.5	Peg
Apr 11	00 05.1	+28 21	1.227	0.554	26.4	6.4	Peg
Apr 12	00 14.8	+29 14	1.220	0.541	25.9	6.3	And
Apr 13	00 25.0	+30 03	1.214	0.528	25.3	6.2	And
Apr 14	00 35.4	+30 48	1.210	0.517	24.8	6.0	And
Apr 15	00 46.2	+31 29	1.206	0.506	24.3	5.9	And
Apr 16	00 57.3	+32 04	1.204	0.496	23.8	5.9	Psc
Apr 17	01 08.6	+32 33	1.203	0.487	23.3	5.8	Psc
Apr 18	01 20.1	+32 55	1.203	0.479	22.9	5.7	Psc
Apr 19	01 31.7	+33 11	1.204	0.472	22.4	5.6	Tri
Apr 20	01 43.4	+33 21	1.207	0.467	22.0	5.6	Tri
Apr 21	01 55.1	+33 23	1.210	0.463	21.7	5.6	Tri
Apr 22	02 06.6	+33 18	1.215	0.460	21.3	5.6	Tri
Apr 23	02 18.0	+33 07	1.221	0.459	21.1	5.5	Tri
Apr 24	02 29.2	+32 50	1.228	0.459	20.8	5.6	Tri
Apr 25	02 40.2	+32 26	1.235	0.460	20.6	5.6	Tri
Apr 26	02 50.8	+31 56	1.244	0.463	20.5	5.6	Per
Apr 27	03 01.0	+31 22	1.253	0.467	20.4	5.7	Per
Apr 28	03 10.8	+30 43	1.263	0.473	20.3	5.8	Ari
Apr 29	03 20.3	+30 00	1.273	0.479	20.3	5.8	Ari
Apr 30	03 29.3	+29 14	1.285	0.487	20.3	5.9	Ari
May 01	03 37.9	+28 25	1.296	0.496	20.3	6.0	Tau

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Way to go, Max!

From Ray Moe

To All,

My son Max (16 year old high school sophomore), asked me to let his deep sky\friends know that he just received confirmation that he has been accepted to this summers Advanced Teen Astronomy Camp at the University of Arizona. He will spend eight days at the Steward Observatory at Mount Lemon and Mount Bigelow with Dr. Don McCarthy, professor of Astronomy at the University of Arizona. They will be assigned research projects using the observatory's 60 inch and 61 inch telescopes, as well as specialized spectrometers, photometers and CCD's. Requirements for selection included a reference letter from his teacher and a 700 word essay (Max's essay was about 5,000 words). For those that might know Max, he has been anxious about whether he would be selected. Now he knows and has to wait. On a side note, Max, his Dad and Mom are heading to Texas this Saturday for our one week spring break. We will be visiting the McDonald Observatory area (Fort Davis and Big Bend) to see our National Parks/Monuments and other sites. Max hopes for four or five nights of new (or near new) moon observing to complete his remaining Herschels. Visiting sites by day, observing at night - when does his parents sleep and vacation. Oh well!

Max's Dad - Ray

Observing Report 03/09-10/2002
Cactus Flats (aka Pawnee Grasslands)

The "Flats" played host to a good sized group of photon starved astronomers last night. I arrived early in the afternoon to take in some Solar observing. Sunspot region 9866 was very active with a flare that lasted a good 20 minutes. It produced a spike that rose to a height of about 1/3 solar diameter, I had to move the image to the edge of field due to doppler shift so it was visible. This spike reached maximum height, separated and then faded away all in the span of 15 minutes, just amazing to watch. By sunset there were 8-10 vehicles with a few more arriving later. First order of the night was to locate comet Ikeya-Zhang on the western horizon. For those of you who have yet to see this comet I would recommend trying in the next few days. It is probably the most stunning comet since Hale-Bopp. A tight, slightly oval coma with a bright tail that split into two. I noticed a bluish color which was confirmed by some younger eyes in attendance. Spanning about 3.5 degrees in my binoculars it was also spectacular in telescopes. Early evening conditions favored planetary viewing. I watched a "barge" transit across Jupiter's SEB(?). Saturn was spectacular as ever with the planet casting a nice shadow on its highly inclined rings. As is usual at the Flats the seeing came and went the rest of the night. Transparency was good to very good all night so my agenda of Galaxy hunting was well served. This time of year little effort needs to be spent on an observing program, you can spend hours just hunting Messier's though I did manage to log some interesting Hickson groups along with some other "off the beaten path" type objects. Around 1:00a.m. someone mentioned that Omega Centauri would be rising soon. Remembering the night several years ago seeing this awesome object just above the horizon I noticed that stars were visible very low on the southern horizon. Tom T. checked its transit time on his laptop which was 2:15ish a.m. Knowing that if we wait that long it would be lost in the Denver nebula I started scanning the horizon at 1:30 a.m. Unfortunately since that night two years ago there are new houses south of the Flats (along with more going in) with one spotlight in the area I was scanning. I finally found it and we all had a look while Tom took some nice CCD images. I wonder just how far north this can be seen? By 2:30 a.m. the wind started to come up and soon everyone left began to break down and pack up for the drive home. All in all a great night to be out under the stars.

Till next time, Dave D

**** Surprise highlights the asteroid threat ****
From S Steele:
An asteroid as wide as a Boeing 747 narrowly missed Earth last week -- and we never knew it was coming. MSNBC's Alan Boyle reports on the "deep impact" gap.

http://www.msnbc.com/modules/exports/ct_email.asp?/news/177595.asp

Sky Images Wanted for Online Magazine
The new www.coloradomagazineonline.com
is interested in publishing amateur star pics in an ongoing column, "What's New In The Universe." Contact me if you are interested in submitting pics - with brief descriptive captions that describe the shot and telescopes used.
Mel Fenson, Editor tiger@indra.com

From: Dan Laszlo
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TO: