

The Objective View December 2000
Newsletter of the Northern Colorado Astronomical Society

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Meetings first Thursday of each Month

Next Meeting:
December 7 7:30 PM
Solar Ultraviolet Astronomy, by Tom Woods
University of Colorado

Club business will precede the program at 7PM
Nominees are needed for 2001 Club Officers

December 7 NCAS Meeting Directions

Discovery Center Science Museum
703 E Prospect Rd, Fort Collins
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 its NE corner. From I-25, take Exit 268, West to Lemay Ave, continue West 1/2 mile, see Discovery Center on the left.

Scopes are appreciated at monthly evening starwatches. Set up in the South parking lot on the Friday nights near 1st quarter Moon. Contact Dan Laszlo if you can come, 498-9226, djlaszlo@aol.com. Weather cancellations will be posted at 472-3990. Events to come:

January 12	7 PM
February 2	7 PM
March 2	7 PM
March 30	7 PM
April 27	8 PM
May 25	8:30 PM

NCAS Star Party Dates, December 15, 16, 22, 23

Cactus Flats site is on undeveloped parcel of prairie about 6 miles west of Briggsdale. Take Colo Highway 14 East from I-25 (Exit 269). From there about 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 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. If the weather is bad on a Friday night we will try the following night. The site is now officially wheelchair accessible, but there are no facilities

so bring essentials. Call Tom Teters, tom@ezlink.com, with questions about the star party status, site or dates, 482-5702 or 482-0807.

**The First N.C.A.S. Invitational Star Party-
May 17-19, 2001**

This will be the First Star Party of the 2001 season to be held in the M.A.R.S. area. It will be held at Virginia Dale, Colorado (Two Chicks Paintball), just South of the Wyoming border on Hwy 287. This is 40 miles north from the 'Y' in N. Ft. Collins, Colorado and approximately 28 miles South of Laramie, Wyoming at an elevation of 7560'. More to come from Tom T.

Other Events

Little Thompson Observatory Star Night, Berthoud 7 p.m.
Dr. Dennis Ebbets, Next Generation Space Telescope
December 15 <http://www.starkids.org>

Denver Museum of Nature and Science 303 322 7009
<http://www.dmns.org/space/current.htm>
Solar telescopes on West Patio
January 13 11 AM to 3 PM

Cheyenne Astronomical Society Christmas Party
December 16 6 p.m. RSVP 635-5944 or 634-7312

Open House, Chamberlain Observatory, dusk
December 2 303 871 5172

Longmont Astronomical Society 7PM
December 14 at Longmont Christian School 550 Coffman St

DAS Star Party at Deer Trail Site
December 23 For more info:
<http://www.denverastro.org>

November 2 Meeting: Show and Tell by

NCAS Members

Visitors of celestial origin were brought by Dave Chamness. He had a stony meteorites, a stony-iron mesosiderite, a slice of an iron meteorite from Namibia. It was etched to show its crystal structure. The crystals are believed to require a slow cooling rate, a few degrees C per million years, and come from an asteroid's core. He had a few tektites, molten ejecta from impacts on Earth, some Canyon Diablo material, and a Nan Tan iron specimen with fumes of sulfuric acid. Most highly valued meteorites are palasites with gemstones in an iron matrix, and meteorites from Mars and the Moon.

Dorothy Pillmore brought her books of stamps. She started collecting when a Brazil stamp shop caught her eye in 1952. Her space collection grew wildly with the launch of Sputnik, and she suspects that many countries have balanced their budgets selling stamps that celebrate the Space Age. Pete Curry brought a scrapbook of CCD images he has accumulated with his Celestron Fastar system. It has a SBIG 237 chip and an internal color wheel. He is imaging his way through the Messier Catalog and has recorded about 80 objects. He is awaiting a G11 mount with a goto option, which should speed his project considerably. Jan Kok told of the impact of a Ken Van Lew astronomy talk at Dunn Elementary. His daughter's interest was kindled, and Jan remounted a 60mm f/5 refractor on a barn-door style tracking table, based on plans in Scientific American. He used an AC motor from Thom Peck. It was great for Hale-Bopp pictures. Jan's recent reading included Astronomical Algorithms by Jan Meeus, and the August 2000 Scientific American on the Universe' Unseen Dimensions. Bill Berglin brought an ST 80 refractor on a Dobsonian style mount, similar to the weightless refractor mount in a recent Sky & Telescope magazine. He cut side bearings of oak and faced them with Melamine. Tom Fay made a Dobsonian mount for his Meade 10" equatorial reflector. It is a solid mount of birch plywood. The base runs teflon furniture glides on a Formica surface. Milk carton polyethylene rings around the center bolt give support to ease turning resistance. Patrick Earhart brought the Celestron 8 which he bought for the 1979 solar eclipse. The orange-tube scope has brought him enjoyable views, but he is interested in something larger. He brought a Kendrick SCT collimator to demonstrate. Dan Laszlo had a 6 inch f/9 Newtonian with a homemade mirror mounted in a length of aluminum irrigation pipe. It has a low profile focuser from Gary Wolanski and 3/4" secondary mirror from Protostar. Doug Hunt doesn't care to risk hypothermia in winter, and his curiosity about globular clusters led him to analyze the question: How do stars move in a globular cluster? He set initial conditions of 1000 stars of uniform mass scattered randomly in an 1800 light-year cube. He is running thousands of iterations with a brute force algorithm, and viewing a sampling of images. His model looks like a globular cluster at 500 million years, and has undergone 3 iterations of collapse. He is planning to scale up the problem fourfold, limited only by computing time. We hope to see a movie someday, Doug!

NCAS Business for November 2

President Dave Chamness called the meeting to order. Membership in the International Deep Sky Association was renewed. Star parties to come at the Discovery Center and Pawnee National Grasslands were announced. Dennis Ebbetts talk about the Hubble Space Telescope at Little Thompson Observatory was announced. The possibility of an NCAS star party at the Virginia Dale site was discussed, to be organized by Tom Teters. Dave Chamness offered to host an NCAS star party at his home in January. Ken Van Lew invited members to a show at Fiske Planetarium November 8.

NCAS Dues

If this text is highlighted, we haven't heard from you in quite a while. If you'd like to continue on the NCAS mailing list for The Objective View, please be sure to send dues for 2001 to Treasurer Dee Wanger at: 2948 Silverwood Dr, Fort Collins CO 80525.

Scope For Sale

For Sale: Celestron 8 inch telescope. Scope, wedge, tripod and digital setting circles, f/10 focal ratio, plus Telrad, solar filter and storage locker, all in excellent condition. Recently laser collimated. Asking \$700 or best offer. Call Patrick Earhart (970) 898-1057 days, (970) 204-9009 evenings.

Software For Sale SkyMap Pro version 4. \$25.

By Chris Marriot of the UK. I have the complete printed manual for it too which would be helpful for the beginner. I also downloaded the last 'service pack' for the program which handles any bugs from its original release date. It is a powerful program comparable to the Sky. Current version is Seven which goes for \$95 these days. Contact Randy Moench, 7348 Poudre Canyon Hwy, Bellvue CO 970-491-8429

Magazine Renewals

Members are entitled to discounts on Sky and Telescope, and Astronomy Magazine. Member rates are \$29.95 for S&T. Rate is \$29 for Astronomy Magazine. Please write a check to the magazine(s) of your choice, for the proper amount and forward to Dan Laszlo, 2001 S Shields St Building H, Fort Collins CO 80526.

Best Looks

Moon	By Saturn & Jupiter 12/8 to 10 by Mars 12/20, by Venus 12/29
Mercury	In E, dawn, first week
Venus	Low in SW at dusk
Mars	Passes Spica in Virgo
Jupiter & Saturn	In E Taurus, in evening
Uranus & Neptune	Uranus 1 deg from Venus 12/23 Neptune 2 deg from Venus 12/11
Geminid meteors:	December 12-13, Moon will interfere with peak

Partial Solar Eclipse for Christmas Day

First contact is at 8:29 AM, maximum eclipse for us at 9:44 AM, and eclipse ends at 11:06 AM. Do not look directly at the Sun at any time! Use an approved eclipse viewer, or a safe projection technique. A pinhole in the side of a box will make a tiny but clear image of the eclipsed sun inside the box on the opposite side. A small hand mirror will throw a large image of the Sun on the shaded side of a building 20 to 50 feet away.

Major Meteor Showers Through The Year from George Zay

Jan 1/3	Quadrantids	80 per hour	bluish
Apr 20/21	Lyrids	10 per hour	rapid, 15% trails
May 4	Eta Aquarids		
Jul 29	S Delta Aquarids	18 per hour	
Aug 6	S Iota Aquarids	7 per hour	
Aug 12/13	Perseids	80 per hour	fast, 45% trails
Aug 13	N Delta Aquarids	18 per hour	
Aug 25	N Iota Aquarids	7 per hour	
Oct 8/10	Draconids		
Oct 21	Orionids	20 per hour	fast
Nov 4	S Taurids		
Nov 14	Leonids	18 per hour	swift, high % of trails
Dec 13/14	Geminids	80 per hour	rapid, yellow, 4% trails
Dec 21/22	Ursids		

Mir Complex

Date	Mag	Starts		Max. Altitude		Ends	
		Time	Alt Az	Time	Alt Az	Time	Alt Az
03 Dec	1.8	05:00:26	20 ENE	05:00:26	20 ENE	05:01:27	10 ENE
03 Dec	0.8	06:31:41	10 WNW	06:33:43	19 NNW	06:35:46	10 NNE
04 Dec	1.3	05:17:40	20 NE	05:17:40	20 NE	05:18:44	10 NE
05 Dec	1.3	05:34:31	17 NNE	05:34:31	17 NNE	05:35:31	10 NNE
06 Dec	1.5	05:51:02	13 N	05:51:02	13 N	05:51:52	10 NNE
12 Dec	1.8	05:53:55	11 N	05:54:29	11 NNE	05:55:23	10 NNE
13 Dec	1.4	06:08:52	12 NNW	06:10:18	17 NNE	06:12:12	10 ENE
14 Dec	0.4	06:23:39	12 NW	06:25:50	31 NNE	06:28:18	10 E
15 Dec	2.3	05:07:23	11 NE	05:07:23	11 NE	05:07:38	10 NE
15 Dec	-1.0	06:38:19	10 NW	06:41:00	84 NNE	06:43:43	10 SE
16 Dec	1.3	05:21:53	21 NE	05:21:53	21 NE	05:23:32	10 E
17 Dec	1.9	03:59:55	10 N	04:01:04	12 NNE	04:02:14	10 NE
17 Dec	-0.4	05:36:16	53 NE	05:36:16	53 NE	05:38:46	10 ESE
18 Dec	-0.6	05:50:32	48 SW	05:50:40	48 SW	05:53:16	10 SE
19 Dec	1.0	06:04:41	17 SW	06:04:49	17 SW	06:06:42	10 S
27 Dec	1.7	17:53:03	10 SE	17:53:15	10 SE	17:53:15	10 SE
28 Dec	0.4	18:03:28	10 SSW	18:05:42	26 SE	18:05:42	26 SE
29 Dec	-1.0	18:15:21	10 SW	18:17:53	76 S	18:17:53	76 S
30 Dec	0.4	18:27:39	10 WSW	18:29:48	35 NW	18:29:48	35 NW
31 Dec	1.6	18:40:12	10 WNW	18:41:28	17 NW	18:41:28	17 NW

ISS Note times may change after STS-97 mission

Date	Mag	Starts		Max. Altitude		Ends	
		Time	Alt Az	Time	Alt Az	Time	Alt Az
09 Dec	2.7	17:59:39	10 SSE	18:00:35	13 SE	18:00:35	13 SE
10 Dec	1.9	18:30:55	10 SW	18:32:41	30 SSW	18:32:41	30 SSW
11 Dec	2.0	17:28:46	10 S	17:31:05	20 SE	17:32:31	15 E
11 Dec	3.5	19:03:44	10 WSW	19:04:29	16 W	19:04:29	16 W
12 Dec	0.1	18:00:21	10 SW	18:03:26	83 SE	18:04:02	52 ENE
13 Dec	1.5	16:57:24	10 SSW	17:00:05	29 SE	17:02:49	10 ENE
13 Dec	2.1	18:33:04	10 W	18:35:16	27 NW	18:35:16	27 NW
14 Dec	0.5	17:29:03	10 WSW	17:32:05	66 NNW	17:34:17	17 NE
15 Dec	2.1	18:01:35	10 W	18:04:06	23 NNW	18:04:58	20 N
16 Dec	3.1	18:34:35	10 NW	18:35:23	12 NNW	18:35:23	12 NNW
17 Dec	2.3	17:29:16	10 WNW	17:31:33	19 NNW	17:33:41	11 NNE
18 Dec	2.9	18:01:57	10 NW	18:03:12	12 N	18:03:38	12 N
20 Dec	2.9	17:28:25	10 NNW	17:29:25	11 N	17:30:24	10 NNE
21 Dec	2.8	17:59:45	10 N	18:00:22	11 N	18:00:22	11 N
23 Dec	2.7	17:24:26	10 NNW	17:25:24	11 N	17:26:22	10 NNE
24 Dec	2.2	17:53:45	10 NNW	17:55:34	16 NNE	17:55:34	16 NNE
25 Dec	2.1	18:22:54	10 NW	18:24:21	22 NNW	18:24:21	22 NNW
26 Dec	2.0	17:17:06	10 NNW	17:19:17	18 NNE	17:21:16	11 ENE
26 Dec	2.8	18:52:07	10 WNW	18:53:04	18 WNW	18:53:04	18 WNW
27 Dec	0.7	17:45:51	10 NW	17:48:39	41 NNE	17:50:01	24 E
28 Dec	0.9	18:14:43	10 WNW	18:17:36	52 SW	18:18:52	27 SSE
29 Dec	0.4	17:07:57	10 NW	17:10:49	51 NNE	17:13:43	10 ESE
29 Dec	3.4	18:44:24	10 W	18:46:01	14 SW	18:47:37	10 SSW
30 Dec	1.7	17:36:29	10 WNW	17:39:17	39 SW	17:42:02	10 SSE
31 Dec	4.0	18:06:19	10 WSW	18:07:12	11 SW	18:08:05	10 SSW