

Detroit Astronomical Society Newsletter

42° 24' 37.7" N. Latitude

Crowell Recreation Center



83° 15' 24.5" W. Longitude

JULY/AUGUST/1990

FROM THE PRESIDENT

Looks like we have another new comet, Comet 1990 c, discovered by David Levy and based on IAU Circular 5030. Comet Levy could become a 3rd magnitude object by September. This could be better than Comet Austin, but remember that comet magnitudes are notoriously unpredictable.

There are a lot of astronomy conferences and observing sessions going on in the next couple of months so pick one and attend. After you attend, write a short article about it and send it to the editor for the next issue. Because of summer vacations and astronomy related events we will be meeting only once per month.

Those of you interested in the 1991 eclipse and would like a more technical report can send to the Navel Observatory for: United States Navel Observatory Circular no. 174; Total Solar Eclipse of July 11, 1991; Eclipse Circulars; U.S. Navel Observatory; Washington, DC 20392. I already received mine. It takes about 2-3 weeks and it is well worth a stamp. Its your tax dollars and its one time they are well spent.

While we are on the subject of eclipses, I was contacted by a past member who was on the March 7, 1970 eclipse tour with the DAS in Florida. He would like to obtain photographs and slides of the eclipse. He is also willing to pay for the cost of duplication and sending of the photos. Anyone having information on the March 1970 eclipse, send it to: James Trombley, 904 W. Rochelle #209, Irving, Texas 75062 or call 1-214-252-3678.

For updates on DAS activities and events, call the Skywatchers Hotline at 837-0130. Clear Skies!

Jack Brisbin

MEETING DATES

Friday July 13, 1990	Board of Directors 7:00 pm - 7:45 pm, General Meeting 7:45 pm - 8:30 pm
Friday August 3, 1990	Board of Directors 7:00 pm - 7:45 pm, General Meeting 7:45 pm - 8:30 pm

It is anticipated that by July the Crowell Recreation Center will have its operating hours reduced to 12:00 (noon) until 8:30 pm during the summer months, due to budget cutbacks.

MEMBERSHIP INTEREST

The Astronomy Day Event at the Seven Ponds Recreation Area turned out to be a reasonable gathering of participants. The indoor program featured talks by Chris Bayus and Richard Walker of the Genesee Astronomical Society. After John Lines briefing and introductions, Chris Bayus spoke of proper exposure techniques in astrophotography while Richard Walker spoke of occultations and procedures.

Later on in the evening, the skies did clear up about 75% for the observing session where light pollution was no problem.

The Seven Ponds facility has a fine auditorium for lectures and after that session, we took a break for a snack in an adjoining classroom. It was well worth the hour spent to get there.

The scheduled observing session at Eagle Point which is in the E.M. Warwick Conservation Center was a cancelled disappointment for me because of the heavy overcast and rainy weather. I'm sure no one else could have gone there or did they? One would have to have extremely high hopes for the weather to clear for observing under those conditions.

I wasn't able to make it to the Astroganza in East Lansing so I can't give a report on that event with the exception that the Warren Club did win the first prize in the Star Bowl competition which was a quiz contest. Congratulations to the Warren Club.

The 20th Apollo Rendezvous and Telescope Fair had four of our members attending this year. Bob Blanchard, Charles Watson and Frank Lipke were all winners of door prizes and Charles' son Todd was also a winner. That turned out to be a very good percentage of winners for the DAS.

Besides the usual displays, the telescope fair had three very fine telescopes on display among the half a dozen or so. There was a fork mounted Newtonian which I thought was very professional. A 20" Newtonian with the classical Dobsonian mount used by amateurs also displayed fine workmanship as did a Schiefspiegler. The latter scope has a very long focal ratio and an unobstructed light path which gives it the ability to give very sharp images. It is primarily used for lunar and planetary observing.

The principle speaker was Alan Dyar, an associate editor of Astronomy magazine. He gave a talk on how the magazine is put together and on amateur astronomy in general.

The temporary facility at the Northridge High School was totally adequate for space and the auditorium was extremely comfortable because of the soft cushioned seats although it was a bit large for the event. They could possibly hold the Apollo event at this same facility next year.

Take special note of the plan for SMURFS which is scheduled for August 17th and 18th. This is a good idea for all the local clubs to get together and have an amateur mini-conference of our own. A letter explaining all the details follows on page 6.

A reproduction of IAU Circular #5030 with the ephemeris for Comet Levy is provided on page 7 for the months of July and August.

The first convention I have data on is ALCON 90 and it's a big one involving three organizations. The Astronomical League, The Association of Lunar and Planetary Observers and the host organization, The Saint Louis Astronomical Society. This is a five day event from July 31 through August 4. It is too late for the mail order advance registration which ends July 1st. Late registration is \$35.00 per person or \$7.50 per day for an abbreviated stay. Washington University is the site of the convention which is in Saint Louis. Besides the usual schedule of events, ALCON has put together a number of sight seeing trips and tours of various institutions around the city.

If you are interested in going to Canada, the North York Astronomical Association is sponsoring STARFEST 90 at River Place near Mt. Forest which is located just south of the 44° latitude at about the 80° 48' longitude which I would estimate to be about 200 miles from Detroit. This event is scheduled for August 17th to the 19th. Registration fee before August 1st is \$25.00 and \$35.00 after. Spouse and children under 16 free. Camping facilities are available.

Normal, Illinois is the site of the Astronomy Rendezvous and Conference 1990 sponsored by the Twin Cities Amateur Astronomers on August 24th and 25th at Illinois State University. Normal is about 90 miles southwest of Chicago. Advance registration fee is \$14.00 with \$9.00 for the spouse and high school students. Registration on location is same except for loss of a meal privilege.

Mansfield, Ohio is the site of HIDDEN HOLLOW 90 sponsored by the Richland Astronomical Society. See their 31", f/7 Newtonian telescope which is one of the largest available to amateur astronomers. This event takes place on October 19th and 20th.

Anyone interested in any of the above events can contact me for a copy of the brochures.

Open House at Peach Mountain: Public star parties are held at Peach Mountain in Ann Arbor. Scheduled dates are July 21st and August 18th. They are cancelled if it is cloudy at sunset. For further information call Paul Etzler at 434-2574.

From Shallow Sky Bulletin: Editors of Astronomy and Sky & Telescope magazines have been honored by having asteroids named for them. The April 10th MPC batch lists (3617) Eicher, (3637) O'Meara, (3684) Berry, (3706) Sinnott, (3819) Robinson and (3841) di Cicco.

"Exploring Space" is the title of a special issue of "Scientific American" with 15 articles about recent space probe discoveries. This should be of special interest.

I just heard over the news of the problem with the Hubble Space Telescopes secondary mirror? This is certainly bad news for us cosmologists. How could they let something like that go without thoroughly inspecting it on the ground? This will certainly affect the very deep space observing the most.

In the New York Times science section of the April 3rd issue, appeared an article about an automated device for sweeping the heavens for supernovas. It is expected to find a supernova about once every two weeks. This device plus the one for removing the twinkling of starlight for ground observatories are a couple of advances for astronomy. Looks like these devices will be a big help for automating astronomy which will gather much more information for study and evaluation.

Lets welcome new members Marc Alexander, Martin Ivan, Ben Kid, Harold Thomason and Sharon Trigilio.

There are now two categories of membership, with and without Sky & Telescope. Regular membership dues without Sky & Tel. are \$18.00 per year. With Sky & Tel., the regular is \$32.50 per year. Junior is \$22.50 per year and family \$37.50 per year. Sky & Tel. is \$2.95 per copy at the magazine shop or \$35.40 per year. The membership with Sky & Tel. is still the best deal. Members should also include the Sky & Tel. renewal card with their dues.

Mail to: John Lines, Treasurer; 2795 Mercury Dr.; Lake Orion, MI 48035.

I'd like to apologize for the inverted pages in the previous newsletter. Seems like the printer had some new hired help.

OBSERVATIONAL HIGHLIGHTS

July	3	15UT	Venus 4° N of Aldebaran
	5	02	Moon passes 0.2° N of Antares
	7	09	Moon passes 2° S of Uranus
		20	Moon passes 3° S of Neptune
	8		Capricornid Meteors These meteors peak on four different days. July 16 and 26 and August 2. All have radiants around 20h30m-15°, slow 23-28 km/s, rates are sparse at 5-30, typically yellow.
		01	Full Moon
		14	Moon passes 1.5° S of Saturn
	9	00	Venus 2° S of 4.7 mag. ζ Tauri
	15	06	Jupiter in conjunction with Sun, and are almost in line with Earth and Saturn.
	16	08	Moon passes 8° N of Mars
	20		On this day in 1969 Armstrong and Aldrin were the first to walk on the Moon
		03	Moon passes 4° N of Venus
	22	03	New Moon
		21	Venus is 15' N of 3rd mag. γ Geminorum
	23	18	Moon passes 3° S of Mercury
	24	11	Venus is 16' N of 3rd mag. μ Geminorum

29		Delta Aquarid Meteors Radiant about 22h36m-17°. Another stream on August 7 at dec. 0°
06		Mercury 0.04° N of Regulus
August 1	09UT	Moon passes 0.1° N of Antares
3	14	Moon passes 2° S of Uranus
4	02	Moon passes 3° S of Neptune
09		Venus is a mere 7' N of mag. 3.5 ♄ Geminorum
18		Moon passes 1.6° S of Saturn
6	14	Full Moon
9	05	Venus 6.6° S of Pollux at mags. -3.9 and 1.2
12		Perseid Meteors Radiant 3h4m+58°, swift at 60 km/s, typically yellow, some white, brighter ones also green, orange and red
23		Venus 0.04° N of Jupiter in morning sky at mags. -3.9 and -1.8. Closest planetary conjunction observable in 1990
13	19	Moon passes 7° N of Mars
15	08	Mercury is 41" S of 5.4 mag. 75 Leonis
16		Saturn is 9' S of 5.6 mag. 50 Sagittarii
18	13	Moon passes 0.4° N of Jupiter
19	00	Moon passes 0.5° S of Venus
20	13	New Moon
22	12	Moon passes 0.2° S of Mercury
28	17	Moon passes 0.2° N of Antares
30	21	Moon passes 2° S of Uranus
31	09	Moon passes 3° S of Neptune

Multiple Stars

Epsilon (ε) Lyrae, the famous double double was discovered by William Herschel in 1779. All four components are easily observable with binoculars and all have the same color which is white. Type A2+A4 at coordinates 18h43m+39°37'.

Alpha Capricorni is a wide naked eye double with both having small companions. Type G9III+G3Ib at mags. 3.6 and 4.2, these are not a binary pair since the fainter star appears to be 5 times further. Coordinates are 20h15m+12°41'.

Iota (ι) Cassiopeiae is one of the finest triple stars in the sky. Some color differentiation can be detected. Although this is a triple star system, the primary appears to be a spectroscopic double which would add another star to the system. Type A5p+F5+G4 at mag. 4.5, the coordinates are 02h25m+67°11'.

Short Period Variables

V1010 Ophiuchi has a period of .661 days. Type A5V at mags. 6.1-7.0. Coordinates are 16h48m-15°39'.

U Ophiuchi has a period of 1.67 days. Type B5+B5 at mags. 5.8-6.6. Coord. 17h15m+1°15'.

U Sagittae has a period of 3.38 days. Type B8III+K at mags. 6.6-9.1. Coordinates are 19h51m+19°33'.

V505 Sagittarii has a period of 1.18 days. Type A0V+F8IV at mags. 6.5-7.5. Coordinates are 19h51m-14°40'.

Red Stars

SS Virginis is a type Ne(C5,3e) at mag. 6.0-9.6 and coor. 13h39m-18°53'

VW Ursea Majoris is an M2 at mag. 6.9-7.8 and coor. 10h55m+70°16'

VY Ursea Majoris is a C5II at mag. 6.0-6.6 and coor. 10h41m+67°40'

RY Draconis is an N star at mag. 5.6-8.0 at coor. 12h55m+66°16'

UX Draconis is also an N at mag. 6.0-7.0 at coor. 19h23m+76°28'

I dont have the actual color of these stars but as a general rule, an M5 has an index of +1.6 while an N star might have an index close to +5. A carbon star may be similar to the M star.

Color Stars

- 24 Comae Berenicis, orange yellow and light blue at mags. 5.2-6.7. Type K2+A7 at coor. 12h35m+18°23'
- ♄ Corvi is a green blue and orange pair. Type B9+dK2 at mags. 3.0-9.0. Coor. 19h45m-16°17'
- ♁ Cygni is orange and green blue. Type F5+dK6 at mags. 5.0-8.0. Coor. 19h45m+33°37'
- ♃ Sagittae is a triple. Colors are yellow green, orange and orange yellow. Type dF1+dG5+gK2 at mags. 6.6-8.5-7.0. Coor. 20h08m+20°46'
- ♄ Coronae Borealis is bluish white and smalt blue. Type B6+B7 at mags. 5.5-6.0. Coor. 15h35m+36°50'
- ♁ Draconis is an orange and blue pair. Type K0 at mags. 4.5-7.5. Coor. 18h50m+59°20'

R Coranae Borealis is a very remarkable star because of its irregular variability in magnitudes ranging from 5.6 to 14. Its luminosity has a tendency to suddenly fade out. Its a type F7 that has a tendency to also change. Its coor. are 15h46m+28°19'.

NGC 6543 is a small planetary nebula at magnitude 8.6 which appears as a bluish disc and has an O type star in the center. It locates very close to our solar systems north ecliptic pole. Its coordinates are 17h59m+66°38' in the constellation of Draco. If I may be a little presumptuous, I'd like to give it the name "The Pretzel Nebula" as pictured in Burnhams Handbook Volume 2.

Sources of observational data: Astronomical Calendar 1990 by Guy Ottewell, The Constellations by Lloyd Motz and Carol Nathanson, Astronomical Almanac by the U.S. Government, Burnhams Handbooks, Observing the Constellation by John Sanford and Sky & Telescope.

Any contributions to the newsletter should be mailed to:

Mike Cyrek, Editor
17149 Caldwell
Detroit, MI 48212-1226
(313) 366-3595
If no answer, leave message

A final thought: Lets all try to contribute to the dark sky effort by doing our part in using the proper lighting. Low pressure sodium lighting is not only the most efficient in wattage use but the least polluting as well. Also, lets not have any light directed skyward but pointed downward where the light is intended to be directed. This requires proper shielding over the light. This also reduces the skyglow.

GENERAL INFORMATION

The D.A.S. is a non-profit organization with membership open to any individual who is interested in astronomy. Guests are always welcome without charge or obligation. Our purpose is to encourage and promote the study of astronomy and related sciences.

The D.A.S. meets each Friday evening at the Crowell Recreation Center located at 16630 Lahser Road, Detroit, Michigan. The Center is 1/4-mile south of McNichols (Six Mile Road), on the east side of Lahser Road at the traffic signal light. This facility is a modern, well equipped building with ample off-street, lighted parking. It is operated by the City of Detroit Recreation Department and it is their finest facility serving this side of the city. Since we are their guests, it is important to be considerate in the use of the Crowell Recreation Center to insure our continued welcome.

The meetings consist of talks, lectures, films, slides, mirror making, sharing and fellowship with Astronomy as our common denominator. Scheduled events and features will begin at 8:30 p.m. The officers and Board of Directors meet privately on the first Friday of each month at 7:00 p.m. in the mirror polishing room. The regular business meeting for the general membership is held on the second Friday of each month and starts promptly at 8:00 p.m. We ask that the last person be out of the building by 10:30 p.m. to accommodate the building custodian.

During the summer months of July and August the Regular and Board of Director Meetings are suspended. Formal programs are reduced and emphasis is placed on scheduled star parties.

6

Dear Fellow Astronomer,

In an effort to promote amateur astronomy and to allow us to get together and eat, breathe, sleep and especially talk astronomy non-stop, several large gatherings have come about. The nearest, for those of us in the Michigan area are the Apollo Rendezvous in Dayton and Astrofest in Kankakee.

Having been to several of these over the years, our club started talking about having a Michigan version, a Southern Michigan Universal Regional Festival of Stargazers.

The idea is to get as many of the Michigan area clubs together for a weekend of swapping, talking and observing.

The plans for SMURFS are:

When: August 17 through 19 (Friday evening till Sunday morning)
Where: River View Campground, a private campground just north of Loomis off of the Loomis exit from US 10, near Clare.

What: Tentative Schedule

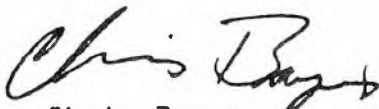
Fri. Aug. 17 6:00 Registration begins
7:30 Informal slide talks, open to all.
9:30-? Observing, either in the campground or in the field on top of the hill
Sat. Aug. 18 9:00 Swap Meet
1:00 Formal Talks, probably pre-arranged, although any of the talks from Friday night could be repeated for those showing up later.
9:30-? Observing
Sun. Aug. 19 Packing up and saying goodbye.

The purpose of this letter is to see if there is enough interest to pursue this idea.

Please bring this up at your next meeting and complete and mail back the enclosed postcard. In order to allow enough time to try to properly plan this, please return the card by April 30, 1990.

We would like to see this become an annual event, hopefully growing each year, possibly adding other events in the future. If you have any additional ideas or suggestions, please feel free to send them along. Also if you think anyone in your group would like to present a talk, formal or not, note it on the postcard.

All those responding will be kept alerted to the status of SMURFS. Thank you for your time. Clear skies,



Chris Bayus
G.A.S. President



Richard Walker
G.A.S. Secretary

**Central Bureau for Astronomical Telegrams
INTERNATIONAL ASTRONOMICAL UNION**

Postal Address: Central Bureau for Astronomical Telegrams
Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.

Telephone 617-495-7244/7440/7444 (for emergency use only)

TWX 710-370-6647 ASTROGRAM CAM EASYLINK 62794605

MARS DEN or GREEN@CFA.BITNET MARS DEN or GREEN@CFAPS2.SPAN

COMET LEVY (1990c)

The following parabolic orbital elements, from 24 observations May 21-June 5, are still preliminary, the ephemeris position in mid-August being uncertain by at least 1° (the ephemeris has m_1 varying as r^{-4}):

$$\begin{array}{ll} T = 1990 \text{ Oct. } 24.359 \text{ ET} & \omega = 242.579 \\ & \Omega = 138.570 \\ q = 0.93849 \text{ AU} & i = 131.623 \end{array} \left. \vphantom{\begin{array}{l} T \\ q \end{array}} \right\} 1950.0$$

1990 ET	α_{1980}	δ_{1980}	Δ	r	m_1
June 8	0 ^h 05 ^m 37	+28°29'9	2.577	2.359	9.8
13	0 04.99	+28 45.3			
18	0 06.15	+29 00.1	2.291	2.236	9.3
23	0 06.76	+29 13.7			
28	0 06.67	+29 26.6	1.992	2.111	8.7
July 3	0 06.73	+29 34.8			
8	0 03.72	+29 40.4	1.684	1.986	8.1
13	0 00.36	+29 40.5			
18	23 55.22	+29 32.7	1.370	1.861	7.4
23	23 47.71	+29 12.5			
28	23 36.96	+28 33.1	1.059	1.735	6.5
Aug. 2	23 21.68	+27 22.0			
7	22 59.97	+26 17.4	0.763	1.611	5.5
12	22 29.10	+21 39.1			
17	21 45.81	+16 20.9	0.520	1.488	4.3
22	20 48.37	+ 5 15.8			
27	19 41.01	- 7 37.8	0.428	1.369	3.5
Sept. 1	18 35.05	-19 16.8			
6	17 40.33	-27 07.9	0.556	1.256	3.7

COMET AUSTIN (1989c₁)

Total visual magnitude estimates (cf. *IAUC* 5022): May 25.97 UT, 5.4 (J.-C. Merlin, Le Creusot, France, 7×50 binoculars); 27.13, 5.5 (V. F. de Assis Neto, São Francisco de Oliveira, Brasil, 10×70 binoculars); 31.03, 6.2 (H. Mikus, Ljubljana, Yugoslavia, 7×50 binoculars); June 1.06, 6.1 (P. Schmeer, Bischmisheim, W. Germany, 20×80 binoculars); 3.42, 6.0 (C. S. Morris, Pine Mountain Club, CA, 10×50 binoculars; tail ~ 3°5 long); 5.31, 5.8 (J. E. Bortle, Stormville, NY, 10×50 binoculars).

1990 June 7

Daniel W. E. Green