

DETROIT ASTRONOMICAL SOCIETY



NEWSLETTER

February/March 1981

FROM THE PRESIDENT

This year D.A.S. is planning on expanding its activities and improving member participation in the society. We have two new directors, a new film chairman, star show chairman program chairman and librarian. We will have two regularly scheduled programs each month (2nd and 4th Friday), and encourage all members to bring forth ideas and presentations to help develop and expand our programs.

The following is a brief description of this years activities:

- 1) Our observing committee will be establishing dates and locations for Society star parties and Point Pelee observing groups. Your help and active participation in presenting star shows to the public will greatly improve our membership and community interest in astronomy.
- 2) So far, three trips are being investigated this year. Trips such as the "Space Shuttle" launch, Stellafane convention and Apollo Rendezvous are being planned. A letter was written to Washington in an attempt to obtain "special car passes" for the space shuttle launch.
- 3) Our new librarian is compiling a list of the books and materials available to be used by our membership. This list will be published in a later newsletter.
- 4) About 12 mirrors were completed by our members last year, which is a great achievement. Seven are being worked on at the present time.
- 5) In the past two months, the society has obtained eighteen new members. We hope this is a trend to indicate a renewed interest in astronomy.
- 6) We are attempting to obtain a club historian to trace our past achievements, membership quota and enlighten us about our past history.
- 7) A college level astronomy course is being given by Dr. Blass. The course is open to all DAS members only, and meets Tuesdays, 7:00-8:30 PM in the U of D Engineering Building.
- 8) Many members have participated in helping the society achieve its goals by being an officer, director, presenting lectures, slide presentations, or giving of their time and services in other areas. This year, these members will be honored for service rendered.

As you can see, we are beginning a new phase in the history of DAS. To promote and recognize member activity, expand our programs and workshops, encourage astronomy related trips, increase an interest in astronomy through public shows and improve our members knowledge of the universe through the astronomy course being presented by Dr. Blass.

The Societies officers and directors can only guide and present ideas to the

membership, but cannot carryout or physically control all the planned activities. Your help and participation is needed to achieve the goals of the Society. If we all sit back and expect the "other person" to carry the load, then the DAS will slowly dissolve into an ineffective-lifeless-forgotten bunch of people.

-Gary J. Frey
President

OFFICERS, DIRECTORS AND CHAIRMAN-1981

The following are a special group of members who have agreed to work with the president to help the Society move forward. These members will give their time and talent to help fellow members with their interests. I am pleased to be associated with them and look forward to a rewarding year.

	-Gary Frey
President	Gary Frey
Vice President	Ed Dvorak'
Secretary	Marty Kunz
Treasurer	George Eyster II
Directors	Larry Applebaum
	Frank Lipke
	Richard Lloyd
	Mike Manyak
	John Staschke
	Nancy Waggoner
Chairman	
Membership	George Eyster II
Mirror Grinding	Marty Kunz
Mirror Polishing & Figuring	Mike Manyak
Equipment	Marty Kunz
Star Show	Gary Mattson
Observing Committee (star Parties & Pt. Pelee)	Claude McEldery & Nancy Waggoner
Librarian	Richard Thomas
Film	Ed Indyk
Program	Gary Frey

MIRRORS FINISHED IN 1980

The following DAS members have completed their mirror-making activity in 1980 - at our Friday night workshop. They now join an elite group of mirror makers who have, hopefully, gone on to complete their telescopes.

Ed Bennett	6"	Mike Rock	6"
Alan Bennett	4¼"	John Roemmelt	8"
Jack Brisbin	8"	Mark Schiefsky	6"
George Eyster	8"	John Staschke	4¼" & 6"
Gary Frey	8"	Dave Steel	8"
Paul Paluzzi	8"		

These mirror makers will be receiving recognition in April for their efforts. We hope we can look through their finished telescopes at star parties.

-Mike Manyak

Throughout the year many members will start to make a mirror or finish last years mirror. The following list will be updated every two months to show the progress of our mirror makers.

GRINDING

John and Myrna Pendery	8"f6	#80
Jan Theisen	8"f5	#80
Frank Grondzieleski	8"f6	#80
Milan Radakouk	6"	#80

GRIT

POLISHING

Dan Cimbor	8"f7
John Staschke	10"f4
Jeff Fesko	12½"f5

-Mike Manyak

-Marty Kunz

CALENDAR OF COMING EVENTS

- Feb. 3- Astronomy Class, 7-8:30 PM, U of D, Engineering Building Room #301, Lecture by Dr. Blass*
- Feb. 6- Board of Directors Meeting, 7 PM.
- Movies: 1) universe 2) Moon- Giant step in Geology
- Workshop Activities
- Feb.10- Astronomy Class *(see Feb 3)
- Feb.13- General Meeting,8PM
- Lecture: "Spring Constellations" 8:30 PM Richard Lloyd, lecturer.
- Workshop Activities
- Feb.17- Astronomy Class *(see Feb, 3)
- Feb.20- Workshop Activities
- Feb.24- Astronomy Class *(see Feb, 3)
- Feb.27- Lecture: "Intensification-Almost as Good as Cold camera or Gas Hypersensitizing" 8:30 PM Gary Frey, lecturer.
- Workshop Activities
- March 3- Astronomy Class *(see Feb. 3)
- March 6- Board of Directors Meeting, 7PM.
- Movies: 1) Mars Minus Myth 2) Space Beyond Tomorrow
- Workshop Activities
- March10- Astronomy Class * (see Feb. 3)
- March13- General Meeting, 8 PM
- Lecture: "Zodiac constellations" 8:30 PM Richard Lloyd, lecturer.
- Workshop Activities
- March17-Astronomy Class * (see Feb. 3)

March20-Workshop Activities

March24- Astronomy Class * (see Feb 3)

March27-Lecture: "To be announced", 8:30 PM, Marty Kunz, lecturer.

March31- Astronomy Class * (see Feb 3)

* Astronomy class for DAS members only

OBSERVERS REVIEW

Every two months the "Observers Review" will present information of interest for astronomers. This year Nancy Waggoner and Claude McEldery will be arranging the star parties and Point Pelee observing sessions. If you are willing to have a star party please contact Nancy or Claude as soon as possible.

THE SKY OR WHAT WILL BE OUT THERE (MAYBE)

February

Venus is a morning star this month but difficult to see so near sunrise
Mercury might be seen 30 to 45 minutes after sunset Feb. 1-10.
Zodiacal light may be seen 1 to 2 hours after sunset toward the end of February on clear moonless nights.

Mon 2 - Groundhog Day

Wed 4 - New moon 5:14 Pf'.1 EST

Wed 11 - 1st quarter moon 12 :49 Fr-j EST, look for the Asteroid vesta (magnitude 6.2) in central Leo.

10th: 10h 45m 21s, + 17° 14.3'.

20th: 10h 36m 34s, + 18° 40.2'.

Wed 18 - Full moon 5:58 PM EST

Thur19 - 2:00 AM EST Jupiter passes 1°9' south of Saturn second of three conjunctions (1st was Jan 14, 3rd will be July 30)

Thur26 - Last quarter moon 8 :14 PM EST

Peak of Delta Leonid Meteor Shower (FEB 5- March 19)

up to 3 per hour

Comstar 4 is due for launch by an Atlas centaur from Cape Canaveral

March

Fri 6- New moon 5:31 AM EST

Thur12 - 1st quarter moon 8:50 PM EST

GOES 5 will be launched by a Delta into a geostationary orbit

Tue 17 - (tentatively) first Space Shuttle test flight from Cape Canaveral

Fri 20 - Full moon 10:22 AM EST vernal Equinox (SPRING!)

12:03 PM EST

22-24 March Geminid Meteor Shower up to 40 per hour

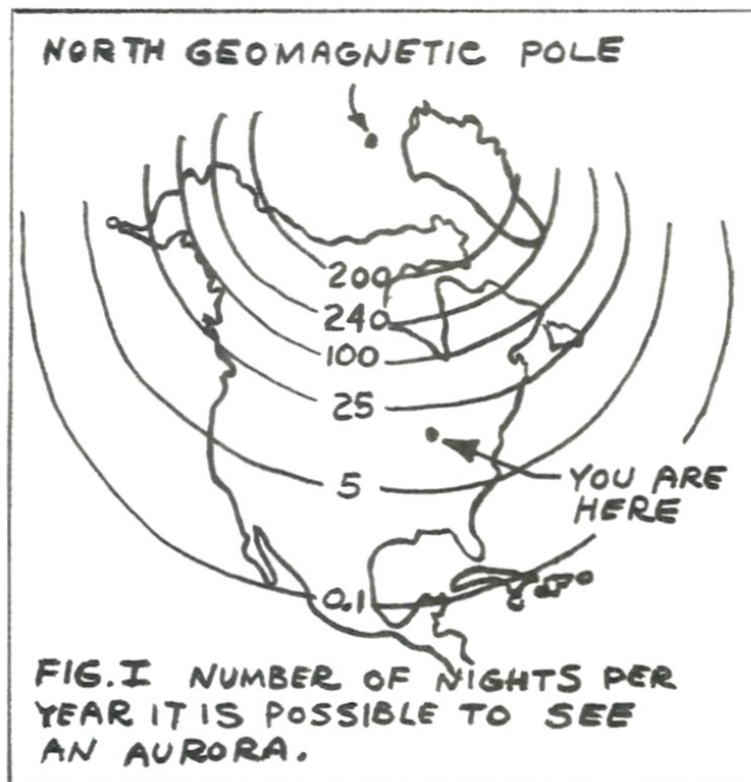
Sun 28 - Last quarter Moon 2:34 PM EST

- Nancy Waggoner

NOTES ON AURORAS GATHERED AT THE UNIVERSITY OF ALASKA, FAIRBANKS
DURING MY VACATION OF AUGUST 1980

The Aurora, or Northern Lights is a curious phenomenon that is being studied intently at U of A because of the favorable observing at this northern latitude and with the benefit long hours of darkness in the winter season. Our Michigan location is within the reaches of observing the aurora but few have seen them because of city light pollution and with our latitude of 42° we can only expect a maximum of approximately 20 opportunities during anyone year. We don't need any apparatus to observe the aurora, just a little luck and an awareness of the phenomenon. Observing opportunities can be greatly increased by traveling north within our state.

The Aurora can occur at either polar area, in the north we call it "aurora Borealis" meaning dawn of the north. A typical aurora may be 50 to 70 miles above the earth and several hundred miles long. The colorful light we see is the result of some electrons being sent by the solar winds which are trapped by the earth's magnetic field lines and strike atoms of gas in our atmosphere. Our magnetic field thus becomes the guide to funnel the aurora near the geomagnetic pole. When an electron strikes an oxygen molecule a pale green light is given off and when nitrogen is struck, red light can be seen. Fig. I shows a map of North America. The numbers next to the circular lines represent the number of nights per year on the average it is possible to see an aurora, assuming that the observer could watch all night, every night and with clear skies. By checking my national geographic globe I find the geomagnetic pole is just west of the northern part of Greenland at $75\frac{1}{2}^{\circ}$ north latitude and 101° west longitude; this point would be the center of the northern aurora zone (not the north geographic pole).



-E. Dvorak

VERY AMBITIOUS PROJECT

A Gregorian Telescope

On September 26th of 1980 I started to work on a 10" mirror blank. My plans are to make a 10" f/24, 2'40" EFL Gregorian telescope. The primary is an f/4 and the secondary with 6X magnification. The Gregorian telescope is similar to a Cassegrain, except the secondary mirror is past the primary's focus point, instead of in front of it, and it is concave instead of convex, which brings the image right side up instead of upside down. The diameter of the secondary is 3.25" with a focal length of 8.75". The distance from the secondary mirror to the EFL is 61.2" which gives a film diameter of .94". The 10" mirror blank should have been completed by January 23rd or 30th, which will make it 17 or 18 Friday nights working on it. The optics and tube assembly should be complete before summer.

- John Staschke

WHAT'S IN OUTER SPACE?

In the vacuum of outer space there are countless activities taking place. concentrate on one cubic centimeter of interstellar space and the geometric center thereof. It is possible to have 41,253 light waves pass through this center at 1° angle from each other. If the light waves coming through the center were ½° apart there would be 82,506 light waves passing through this 1 cm cube. Also, there are magnetic fields, cosmic rays, x-rays, hydrogen and charged particles in this 1 cm cube void of space.

All this energy comes from all directions which is 3600 squared. The distance of the source of energy (from distant stars) may be 10 light years, 1000 l.y., millions l.y. away.

So in this 1 cubic cm of pure nothingness there are millions of energy waves and its all in total darkness.

- Frank Lipke

THE IDEAL AMATEUR SCOPE

The Newtonian-Cassegrain

Recently, I have been thinking about, what type of telescope I would like to make for my next effort. I like deep space photography, but I also like observing and trying to photograph lunar and planetary details. Most amateurs go for a medium focal length Newtonian, and for a first effort this is probably the best bet. Most of us, however, are never really satisfied with the first scope and we begin to look for new horizons. For those of us who can afford to buy ready made optics, the Newtonian Cassegrain combination presents only one major obstacle. The collimation of the system, especially when going from Cassegrain to Newtonian or back, is very exacting and can be quite tricky for the novice. Any errors, especially in the Cassegrain system alignment will shew up as very bad astigmatism.

For the adamant mirror grinder who likes a challenge, the most difficult aspect will be figuring the secondary mirror for the Cassegrain.

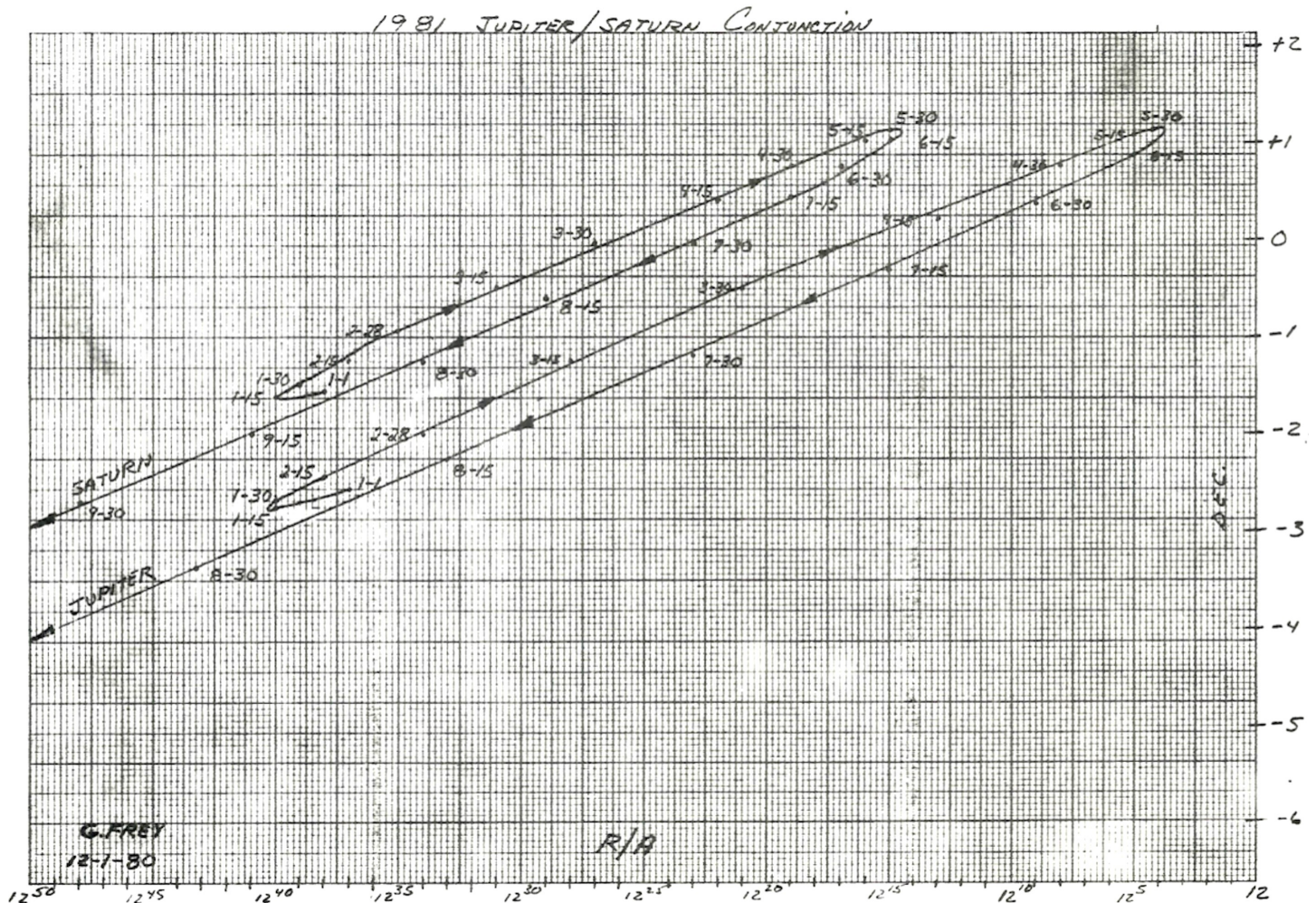
East test set ups require either a large spherical mirror or a large optical flat or both. Since neither of these items is inexpensive and the flat is very difficult to make) this project may be more than most amateurs will want to tackle. But along with the drawbacks there are rewards. Most Cassegrain systems call for an f/4 or f/5 primary mirror. Used at its Newtonian prime focus, this mirror provides high photographic speed with a wide field for deep space work. Used at its Cassegrain focus with a three or four times magnification secondary, it will provide extra long focal lengths which are required for fine planetary photographs and observing. Basically these are the major pluses and minuses. Whether or not the combination Cassegrain-Newtonian is ideal is highly debatable. For me, I like the pluses a lot and I think I'll give it a try.

-George Eyster II

JUPITER/SATURN-3 TIMES!

Triple Conjunction: Readers have doubtless noticed the close proximity of Jupiter and Saturn in Virgo. Some may not realize, however, that this formation represents only the first phase in a series of three conjunctions that the two giant planets will undergo this year. The first Close association has already taken place on December 31; the remaining two will occur on March 4 and July 23. Throughout this entire period, the two planets will be separated by no more than 1½ degrees. The simultaneous retrograding of both planets in the region of the sky is responsible for the phenomenon. Such a triple conjunction will not occur again until the year 2238.

- Richard Lloyd.



ANNOUNCEMENTS

MIRROR BLANKS: Our stock of mirror blanks is running low and we plan to place an order with Corning glass in about two months. Normally we order only 4½", 6" and 8" blanks. If any member wants to include specific requests please contact Ed Dvorak or Mike Manyak.

ATTENTION ALL MEMBERS: Our next newsletter will include a complete listing of DAS members including address and phone number. The purpose of the listing is to encourage inter-member contact and advance our astronomy interests. If anyone objects to the listing of their address or phone number please contact Ed Dvorak 17386 Fox, Redford, Mi. 48240.

PLAN YOUR VACATION TIME NOW:

- Apollo Rendezvous June 12 (Fri) & 13 (Sat) Dayton, Ohio
- Stellafane July 31 (Fri) & Aug 1 (Sat) Springfield, Vermont

NEW MEMBERS SINCE DECEMBER 1, 1980

- Ed Baker _
- Frank Grondzieleski & family (Deloris, Brad, Dana)
- John and Myrna Pendery
- Milan Radakouk & family (June, Danica, Linda) I
- Robert Radnick
- John Rickloff
- Dennis Seroka
- Jan Theisen & family (Janet, Erik, Andrew)

18½", f/6 MIRROR FOR SALE

Ground through #750 grit, 5/8" thick at center and 7/8" thick at edge,
ground from "port hole glass" \$100.00

Contact: Greg Taylor
1430 New Jersey Avenue
Marysville, Mi. 48040
364-7127