

DETROIT ASTRONOMICAL SOCIETY



NEWSLETTER OCTOBER/NOVEMBER 1981

FROM THE PRESIDENT

Now that the summer months have passed, the nights are cooler; there are fewer mosquitoes; our star sets earlier and, until the weather turns very cold, the time and conditions for viewing astronomical objects can only improve. Looking back at our August/September Activities will give our members only a small taste of our exciting programs for October/ November. The Detroit Astronomical Society is "on the move " ... increasing its membership every month, new movies and speakers to update our knowledge, trips to fantastic conventions, star parties for members and star shows for the public , If you want to be part of this "growing and productive" Society, come to the meetings and see what's happening.

A List of Past and Future Activities are as follows:

- 1) D.A.S. had a great turnout at Stellafane this year with clear nights both Friday and Saturday. More people were there this year than last. G. Frey won a 3rd Special Exhibit Award for a "Modified Curved Bolt Star Tracker" for astrophotography. .
- 2) Several members are going to the "Asrrofest" in Wisconsin. They will leave September 25 to renew acquaintances with members of clubs in the North Central Region.
- 3) October 6 will be our star show at the Farmington Library (see attached information). We are looking for D.A.S. members willing to take their telescopes to the Library. We also need extra people who can help answer questions. This is a big problem area, in that the person operating the telescope and answering questions from the public cannot effectively answer all other questions -- and there are many being asked. All questions are very basic and elementary about telescopes and astronomy which I feel can be answered by ANY of our members -- please volunteer your help!
- 4) "Swap Shop" -- Something new !! On Saturday, October 17, 1981 The Detroit Astronomical Society will host "The First Annual Inter-Club Swap Shop" at the Crowell Center, between 11 a.m. and 3 p.m., All members of the Detroit, Livonia and Warren Astronomical Societies are urged to bring their items down for trade or sell (the Clubs do not get a percentage).
- 5) To improve our Library, we have ordered all back issues of "Telescope Making" and will be receiving new issues every 2 months. These are Reference Materials and cannot be taken from the Society meeting room. However, we hope they will be used extensively.
- 6) IMPORTANT!! Read the article from our Treasurer about rate increases! ! !
- 7) Newsletter Articles -- The Deadline for submitting articles for the December/January Newsletter is November 13, 1981. Present all articles to G. Frey

Gary Frey
President

A NOTE FROM THE MEMBERSHIP CHAIRMAN

As all of us know, price increases have almost become a way of life. Inflation continues to take its toll on all of us, and the D.A.S. is no exception. You have, no doubt, noticed the announcements in Sky and Telescope regarding an increase in price. Their subscription rate increase is effective November 1, 1981.

This rate increase, along with the recent hike in postage rates and projected future increases in postage and printing costs, has made it necessary for the D.A.S. to increase its membership rates. Thus, effective November 1, 1981, all classes of membership will be increased by the amount of Two dollars and fifty cents.

In an effort to help soften the effect of this increase, we will accept any renewal at the current rate as long as it is in my hand or, if mailed, postmarked by October 15, 1981. We sincerely regret any inconvenience that this rate increase may cause.

Sincerely,

George L. Eyster II
Membership Chairman

CALENDAR OF COMING EVENTS

- October 2 Board of Directors Meeting, 7:00 p.m.
Movies: 1) "To be announced" 8:30 p.m.
2) "To be announced"
Workshop Activities
- October 6 Star Show at Farmington Library, 7:00 p.m.
- October 9 General Meeting, 8:00 p.m.
Lecture by Chuck Fausel, 8:30 p.m.
"Observing Variable Stars"
Workshop Activities
- October 16 Workshop Activities
- October 17 "Swap - Shop" at Crowell Center, 11 a.m. - 3 p.m.
- October 23 Lecture by John Staschke, 8:30 p.m.
"Gregorian Report"
Workshop Activities
- October 30 Movies: 1) "To be announced" 8:30 p.m.
2) "To be announced"
Workshop Activities
- November 6 Board of Directors Meeting, 7:00 p.m.
Movies: 1) "To be announced" 8:30 p.m.
2) "To be announced"
Workshop Activities
- November 13 General Meeting, 8:00 p.m.
Lecture by John Roemmelt, 8:30 p.m.
"A Partial Photometric Study of a ω Ursa Majoris Type Eclipsing
Binary $V\omega$ Cephei"
Workshop Activities
- November 20 Lecture by Ed Dvorak, 8:30 p.m.
"Glacial Periods -- Explained by Astronomical Theories"
Workshop Activities
- November 27 Workshop Activities

OBSERVERS REVIEW

October Mars begins to rise about 1 om, EDT this month. Mercury, Jupiter and Saturn can be seen very low in the east just before sunrise by the end of the month.
Venus is in the southwest at sunset.

Sat. 3) Andromedid Meteor Shower, extant earlier phase peak (Aug. 31-Nov. 29)

Tue , 6) First Quarter Moon 3:45 a.m. EDT

Sat. 10) Draconid Meteor Shower peak 11 p.m. EDT (Oct. 7-10)

Tue , 13) Full Moon (Hunters' Moon) 8:49 a.m. EDT

Sun. 18) Mercury in inferior conjunction 7:00 a.m. EDT

Mon. 19) Last Quarter Moon 11:40 p.m. EDT

Tue.20) Orionid Meteor Shower peak 6 p.m. EDT (Oct. 2-Nov. 7) about 25 per hour.

Fri. 23' & Sat. 24) Point Pelee Observing Session

Sun. 25) Return to EST. Set clocks back 1 hour.

Tue.27) New Moon 3:13 p.m. EST

Thur. 29) RCA Satcom 5 is due for launch by a Delta from Cape Canaveral.

November Mercury is 17° above the southeastern horizon at sunrise

Mars rises after midnight

Jupiter rises about 4 a.m. EST

Saturn rises about 3 a.m. EST

Venus can be seen low in the southwest just after sunset.

Wed. 4) First Quarter Moon 8:09 a.m. EST

Thur. 5) Mercury 1.2° N. of Jupiter Taurid Meteor Shower peak (Sept. 15-Dec. 15)

Wed. 11) Full Moon 5:26 p.m. EST

Sat. 14) Andromedid Meteor Shower peak (Aug. 31-Nov. 29)'

Tue , 17) Leonid Meteor Shower peak 3 a.m. EST (Nov. 14-20)

Wed. 18) Last Quarter Moon 9:54 a.m. EST

Thur.26) New Moon 9:38 a.m. EST

Fri. 27 & Sat. 28) Point Pelee Observing Session

Nancy Waggoner

MIRROR ACTIVITY NEWS

New members Kim Pender, Richard Smith and Dave Bloomfield are all started on mirrors; Kim a 6" f-7, Rick an 8" f-6 and Dave 06" f-8.

Gary Mattson has recently purchased a 10" kit and will soon be grinding.

Dave Corkery is working on a 4-1/4" mirror. It was originally planned as an f-10 system. However, since he subsequently received a reflector of that type as a gift, he decided to change the focal ratio to f-5 for use as a rich-field instrument.

Duncan Payne is still working on his 6" f-6. Along with Duncan are Brian Keller (8" f-6) and Kevin Dehne (8" f-6), all in the fine grinding stage.

John Staschke is nearly finished with his 10" Gregorian optics, all that remains is the final figuring of the 3 -1/4" elliptical secondary.

Jeff Thrush is starting to polish his 8" f-5.5 mirror that he started some time ago.

John and Myrna Pendry are in the process of parabolizing their 8" f-60

Several members are at present inactive after starting mirrors but as cooler weather approaches we're sure they will resume work.

Marty Kunz and Mike Manyak

\$50.00 TELESCOPE CERTIFICATE

The Detroit Astronomical Society received a \$50.00 certificate at the 1981 Apollo Rendezvous for the largest member attendance. This certificate is from "Sky Research" and applicable to \$50.00 OFF any Sky Research telescope purchase. Since our Club specializes in making our own optics and telescopes, the Club does not need a commercial telescope.

Therefore, this certificate will be given to any Club member who wishes to purchase a telescope from Sky Research -- first come, first served, with the certificate being offered through November 27, 1981; after which, it will be returned to the Apollo Rendezvous. For the catalogue and certificate, please contact Gary Frey.

Gary Frey

CURVE BOLT DRIVES

If you have recently looked at the cost of a gear and worm drive from a major supplier, spending two or three hundred dollars for this type of drive unit may well be out of your budget.

A long lost financial alternative whose time has come is the curve bolt drive. Curve bolt drives offer a financial alternative that many amateurs have not yet capitalized on. Whether it's tracking enjoyment or astrophoto intrigue, the curve bolt drive brings both within the reach of any amateur telescope enthusiast. I obtained the following formula and information from the Oct. 1980 issue of Sky and Telescope (page 333), which is well worth reading because the pictures used to show construction of the curve bolt drive are very informative and helpful.

The formula is a simple one: $R = 1436.5 \times (n/2\pi T)$

n = the turning rate of the drive nut in revolutions per minute.

T = the threads per inch of the threaded rod, example: 20 threads per inch, and for those who are knowledgeable in the field of gearing T would also be considered the pitch of the curve bolt.

For about one dollar, you can purchase a 36 inch piece of 1/4 x 20 threaded rod and save yourself two to three hundred dollars.

Pi is 3.14 the calculation is very simple and R is the determining factor that equals the size of gear you are using.

R = the distance between the center of the threaded rod and the polar shaft's center; this would also be the radius of a gear of equal size.

1,436.5 is the number of minutes required for the polar shaft to make one revolution and considered the drive rate for astrophotography. It was figured out by a Harvard astronomer. We accept this as a true known constant for this formula.

T = 20, N = 1.0, R = 11.43 this equals a 23-inch diameter gear approx.

T = 20, N = 1.5, R = 17.15 this equals a 34-inch diameter gear approx.

T = 20, N = 2.0, R = 22.86 this equals a 45-inch diameter gear approx.

When N = 1.5, the spacing between each thread is equal to 40 seconds of movement or approx. equals 1303 minute per inch.

Jack Brisbin

CHANNEL 56 -- WTVS

Returning is Dr. Carl Sagan and his acclaimed thirteen-part series COSMOS, which reveals the wonders of science, astronomy and space exploration. This encore presentation will be shown Tuesdays at 8:00 p.m., and be repeated later that night at 1:00 a.m., and again on Sundays at 7:00 p.m. The series begins September 29.

Crestwood School Planetarium -- 1501 N. Beech Daly, Dearborn Heights. The one-hour long programs begin at 7:30 p.m., -- modest admission fee.

Sept. 29-30 Return to Saturn. Voyager 2 encounter with Saturn via photos, movies, sound recordings.

Oct. 12-13-14 Fall skies for little people. For children, ages 3 to 8.

Nov. 17-18 Space is for You. Asteroids, comets, space ventures.

Ed Dvorak

ADDITIONS AND REVISIONS TO MEMBERSHIP LIST PUBLISHED MARCH 1981

NEW MEMBERS

David T. Bloomfield
3206 Schoolhouse Dr.
Drayton Plains, MI 48020
673-8031

Austin Mamo
6178 Runnymede
Canton, MI 48187
455-6147

Kimberly Pender
17750 Eddon
Melvindale, MI 48122
381-1251

Richard B. Smith
29727 Grandon
Livonia, MI 48150
None

Marc Stavenga
29822 Adams
Gibraltar, MI 48173
675-6530

Jeffery D. Thrush
11355 Old Goddard Rd. Apt. #13
Allen Park, MI 48101
388-1626

REVISIONS & CORRECTIONS

Jerry & Nancy Cacciaglia
Revise Area Code to 312

Daniel M. Cimbora
E. 2704 38th St.
Spokane, WA 99203

Edward Indyk
P.O. Box 194
Lake Orion, MI 48035

Claude McEldery
B 21-103
51314 Village North
New Baltimore, MI 48047

John & Myrna Pendery
10765 Lincoln
Huntington Woods, MI 48070



DETROIT ASTRONOMICAL SOCIETY

14298 LAUDER
DETROIT, MICHIGAN 48227
837-0130

MEETINGS: CROWELL RECREATION CENTER
16630 LASHER (Near 6 Mile Road) • DETROIT, MICHIGAN
(EVERY FRIDAY NIGHT AT 8:30 P.M.)



STAR SHOW



DATE: Tuesday, October 6, 1981

LOCATION: Farmington Community Library - 32737 W. 12 Mile
(Between Orchard Lake and Farmington Roads)

TIME: 7:00 - 10:00 P.M.

SCHEDULE OF EVENTS:

TELESCOPE DEMONSTRATIONS: Beginning ½ hour before sunset, Telescope Design, Construction and Usage will be explained by the operator for each telescope present.

LECTURE: General Lecture on Astronomy and Related Science with information and description of objects to be viewed.

OBSERVING: After the lecture, each telescope will be observing an object. The telescope operator and assistant will have detailed information on the object being viewed. There will be additional people (not operating telescopes) available for questions.