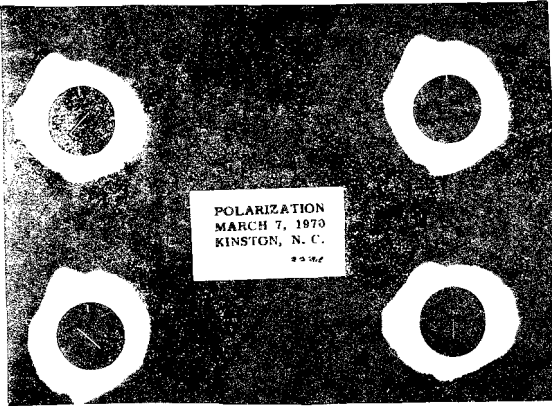
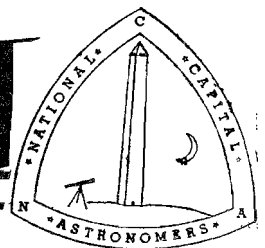


STAR DUST

Nov. 1, 1970 • Vol. XXVII • No. 3



These photos showing the coronal polarization were taken by Bob McCracken at the March 7th eclipse. The small mark at the top indicates the solar N. pole, while the long bar is the degree of rotation of the polarization. These were taken through a refractor with eye-piece projection. JTL.

VALUE OF OCCULTATIONS DISCUSSED BY DR. VAN FLANDERN ...

Thomas C. Van Flandern obtained his B.S. in mathematics from Xavier University in Cincinnati, Ohio in June 1962. He then participated as an astronomy graduate student and a teaching fellow at Georgetown University in 1962 and 1963. He obtained his Ph.D. in Astronomy from Yale University, New Haven, Connecticut in June of 1969. He has worked at the Nautical Almanac Office from June '64 through September '66, and at the U.S. Naval Observatory during the summer of '66 and from February 1967 to the present. He has published several articles related to occultations. The article most familiar to our readers would probably be "Extreme Grazing Occultations", Sky and Telescope, Vol. 29, Number 6, 1965, pages 386-87. This is also reprinted as U.S. Naval Observatory No. 60, a bulletin.

Dr. Van Flandern will discuss "Lunar Motion Studies from Occultation Data". This is concerned with the prediction, observation, preliminary reduction and analysis of both total and grazing occultations of at an international level. Numerous scientific results have been derived from analysis of occultation data and these are detailed. He will also discuss future plans and ways in which amateur astronomers, particularly the NCA, can participate in these projects.

FROM THE PRESIDENT...

David Nordin has resigned as assistant editor of Star Dust due to the press of other duties. He will continue to supply NCA with his original drawings and the society thanks him for the devotion and care he has contributed.

The telescope making classes supervised by Jerry Schnall and associates are in the process of moving to new quarters in the basement of McKinley Hall, the Physics building at American University. NCA thanks Dr. Henning Leidinger and Bill Pala for making possible these better quarters for the mirror makers, and we look forward to a warm relationship with American University.

As the Washington Academy of Science begins another year, your president will initially act as delegate to the board of Managers from NCA.

One of the finest discussion groups in years was held on October 17th as James Trexler presented a discussion of his 1970 solar eclipse photography. He and his family did all the delicate color film processing and printing themselves. The result was the August 1970 Sky and Telescope cover photograph. Mr and Mrs. Bob Wright were the gracious hosts, providing not only some excellent after - discussion observing at their roll off roof observatory but also plenty of cider and doughnuts.

Requests for quotations on remounting the 5-inch NCA reflector on a mount equivalent to that of the 6-inch Unitron have been sent to the Criterion and Unitron Companies.

The U.S. Naval Observatory has indicated that they would approve enlarging the NCA facility on their grounds, at our expense. We have no plans to do so at the present.

NOTICE !!!

As editor I really don't mind a bit of scurrying, however - this is getting silly. ANY MATERIAL recieved after the 15th of November will NOT get in STAR DUST. If adhered to - this month would have consisted of my bylines! Heed and take warning.

Occultations***

The need for occultation observation stems from our lack of exact knowledge of the earth's rotation and the moon's rotation. In the recording of occultations the observer should know his exact geographic position (especially true in grazing occultations) record the exact time of disappearance and reappearance in Universal Time, the date, type of instrument used, magnification, and the quality of observing. Under these conditions. The stars occluded should be noted by their Zodical Catalogue number. Under the best conditions, stars of magnitude 7.5 can be seen on disappearance into the dark limb and magnitude 6.6-7.5 on reappearance. Reappearance from the bright limb is limited to magnitude 3.5 and disappearance to 4.5. The following references go into greater detail.

Extreme Grazing Occultations, Van Flandern, Sky and Telescope, 29(6): 386-87, 1965 USNO Bull No. 60

Photoelectric Recording of Stellar Occultations, H. E. Butler, Monthly Not. of the Royal Astronomical Soc. Vol. III, No. 4, p195

For grazing occultations- On the Orientation of C. B. Watts Charts of the Marginal Zones of the Moon, Monthly Nat. Royal Astron. Soc. 149:81-90, 1970; Watts, C. B., Astronomical Journal, 60:443, 1955.

Eisele shows N.R.L. satellites.,

On October 10th, the NCA met at the Naval Research Laboratory Auditorium to hear Dr. John Eisele and Jerry Phillips discourse on space satellite technology. Numerous demonstrations and laboratory mock-ups used in the actual construction of several operational satellites helped to elucidate the complexity, high cost and technical difficulties encountered in the construction and operation of these mechanisms. Dr. Eisele and his associate, Mr. Phillips, demonstrated the deployment of several satellites and the mechanisms used in the construction and operations of arials used in these satellites. Refreshments served by Dr. Eisele were enjoyed by all. The demonstrations of the complexity and dedication which the United States Space Science is associated with made for a very memorable evening for which the NCA thanks its hosts.

BW

Perusal of the Griffith Observer for the coming month notes that two meteor showers are in the offering. The first, occurring on Nov. 5th will be maximum about 9 to 10 PM. The second, the famous Leonid shower will occur about 4:30 on the 17th of November. This magazine is published by The Griffiths Observatory and is good for the observation oriented amateur. Subscription is \$3 yearly, P.O. Box 27787, Los Angeles California, 90027. It is edited by Paul E. Rogers.

JL

New MEMBERS...

Donald and Karin Allen, 7807 Winterberry Place, Bethesda, Md. 20034, Phone 229-0756, Joint Membership

Mark Emler, 3302 Clearwood Court, Falls Church, Virginia, Ph. 532-7651, Junior Member.

Joseph and Kathryn Gentile, 13105 Oakland Street, Arlington, Va. 22206, Phone 671-5656, Joint Membership.

Ray X. and David R. (Junior) Hawkins, 501 Oneida Way, Forest Heights, Md. Phone 626-5346, Joint Membership.

Mr. and Mrs. Edward C. Laughery, 7332 Lee Highway Apt. 104, Falls Church, Virginia 22046. Phone 573-2710, Joint Membership.

Henning and Martha Leidecker, 1703 East-West Highway, # 612, Silver Spring, Maryland 20910, Phone 587-8125, Joint Membership.

Dr. and Mrs. Stanley Polombo, 6315 Utah Ave., N.W., Washington, D.C., 20015, Phone EM2-8833, Joint Membership.

Carl Edwin Rose, 13005 Vandalia Drive, Rockville, Md. 20853, Ph. 933-1272 Regular Membership.

Richard Schwenz, 6503 Randall Place, Falls Church, Va. 22044, Ph. 532-1719 Junior Membership.

Kenneth and Philomena Short, 6000 67th Ave., Riverdale, Maryland 20840, Phone 301-459-0254, Joint Membership.

Mr. and Mrs. William A. Siegfried, 7914, Eagle Ave., Alexandria, Va. 22306, Phone 780-4393, Joint Membership.

James and Luba Stowell, 4224 Albemarle St. N.W., Washinton, D.C. 20016, Phone 244-5718, Joint Membership.

Please correct the following address:

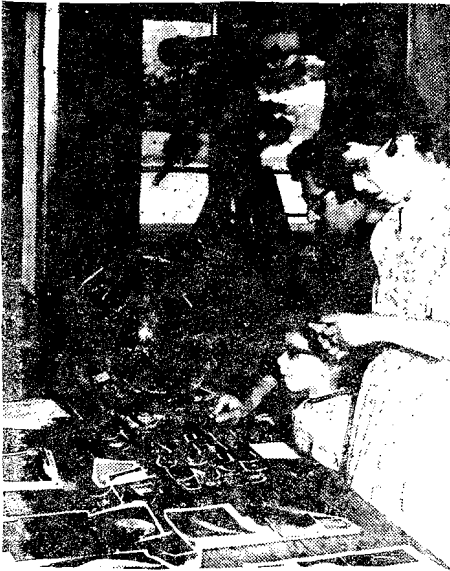
Mark Watson, 523 Walker St. S.W., Vienna, Virginia, 22108, Phone 281-4382.

B

CALENDAR...

- Saturday, November 7, 6:15 PM - Dinner with the speaker, Dr. Tom Van Flandern of the U.S. Naval Observatory at Bassins, 14th and Pa. Avenue, N.W., Call Legowik: 946-8996 or Winkler: 762-5135 before 2 PM, no reservations are needed but advance warning is desired.
- Saturday, November 7, 8:15 PM, November meeting of the NCA at the Department of Commerce Auditorium, 14th and E Street, N.W. Dr. Thomas Van Flandern speaks on Lunar Motion Studies from Occultation Data.
- Saturday, November 14, 2:00 PM - Junior Meeting of the Maryland - D.C. Juniors at the Chevy Chase Public Library. For additional information contact Jean Radoan at 434-0443.
- Saturday, November 21, 8:15 PM - Discussion Group meets at the Dept. of Commerce, room 2062. Dr. John Eisele will give an illustrated talk on "Sundials and the Equation of Time".
- Friday, November 20, 8:00 to 10:00, viewing at the 5-inch at the Naval Observatory with Larry White.
- Monday, November 30, 8:00 to 10:00, viewing at the 5-inch at the Naval Observatory with Dr. Krebs.
- Friday, November 6, 13, 20, 27, 7:30 to 10:00 Telescope Making Classes with Mr. Jerry Schnall at the McKinley Building on the American University campus, in the basement physics laboratory.

Below: Jay Miller and his wife are inspecting an exhibit at the reception of the NCA into the Washington Academy of Science this summer.



4.

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