

HAVE YOU PAID YOUR DUES?

If you have not already paid your dues for the coming year, please do so at once. Make your check or money order payable to the National Capital Astronomers and send to:

Mr. Frederick D. Cornelius
3101 Chichester Lane
Fairfax, Virginia 22030

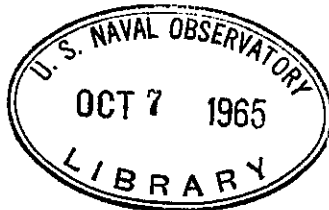
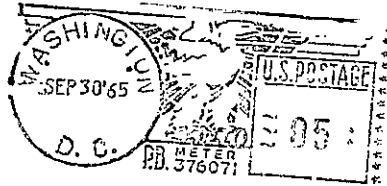
- Joint membership, with Sky and Telescope.....\$9.50
- Regular membership, with Sky and Telescope.....\$7.50
- Junior membership, with Sky and Telescope.....\$5.75
- Junior membership, without Sky and Telescope.....\$1.75

P.S.:

NCA Picnic and Star Party Come!
Fort Washington, Md.
Saturday, October 23, 1965
5p.m. to 11p.m.

Special permission has been granted to the NCA by the Park Service to use the picnic grove and parade ground for the Fall picnic and star party. The following rules must be followed: stay in the group, no wandering around
pick up all trash
put out cooking fires (these are charcoal burners, bring your own charcoal)
leave the grounds by 11 p.m.

Mrs. Noble will have the written permit for the whole group. Bring your own picnic dinner and your telescope. Your family and friends interested in astronomy are welcome. Last year we had a large group and the excellent cooperation of all. Come and enjoy the evening. Look on your road map to locate Fort Washington just off Md. route 210.



Library,
Naval Observatory
Washington 25, D.C.

QB
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★ STAR DUST



October 1965

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OUTSTANDING PHOTOGRAPHIC ENGINEER WILL ADDRESS N.C.A.

Color photography is a relatively recent technology in the field of astrophotography. The preparation of the film, its exposure and development is technically demanding and consequently the color plate has been principally a tool of professional workers. However, an increasing number of amateur astrographers have been trying their hands at color astrophotography with mixed success.

Our October speaker, Mr. George T. Keene of the Eastman Kodak Company, will perhaps suggest solutions to those of us who may have encountered problems in this field and indeed may inspire new workers. In any case, Mr. Keene's topic will prove interesting and informative to those merely wishing to be abreast of recent technological advances.

Mr. Keene will address himself to the problems of "Color Astrophotography" and comes to us with outstanding credentials by virtue of his work in color film technology and contributions to the professional and amateur literature.

Mr. Keene has a B.S. '50, and M.S., '53 in Chemical Engineering from
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CALENDAR

- OCTOBER 1 OBSERVING AT THE FIVE INCH on the grounds of the U. S. Naval Observatory with Larry White from 8:00-10:00 P.M.
- 2 COLOR ASTROPHOTOGRAPHY by George T. Keene of the Eastman Kodak Company in the Department of Commerce Auditorium at 8:15 P.M. Business meeting follows.
- 9 MD-DC JUNIORS meeting in the Silver Spring Library at 2:00 P.M.
- 16 DISCUSSION GROUP ON ASTROPHOTOGRAPHY at 8:15 P.M. in room 2062 at the Department of Commerce.
- 17 PRINCE GEORGES' COUNTY JUNIORS meeting at the home of Ted Noble at 2:00 P.M. Phone Lu 2-6721 for further details.
- 5,12,19,26 TELESCOPE MAKING GLASS at the Chevy Chase Community Center with Hoy Walls from 7:30 to 10:00 P.M. Come and make your own telescope. No charge for admission.
- 1,8,15,22,29 ADVANCED TELESCOPE MAKING GLASS at the Chevy Chase Community Center with Hoy Walls 7:30-10:00 P.M.
- NOVEMBER 6 TIME SCALES by Father Francis Hyden at 8:15 P.M. in the Department of Commerce Auditorium.

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Texas A&M and MIT respectively, as well as an M.S., '54, from the University of Rochester. He has been with the Eastman Kodak Company since 1952 where he spent ten years in the Color Technology Division. Currently, Mr. Keene is working in the Space Programs Organization, Apparatus and Optical Division. Our speaker is also an experienced optician having built 6", 10", and 12" instruments with a 20" world on the drawing board, and has had considerable experience in astronomical photography.

Some of Mr. Keene's professional affiliations are: American Association for the Advancement of Science, Fellow, Society of Motion Pictures and Television Engineers, Tau Beta Pi, American Men of Science, Fellow of Rochester Academy of Science (Chairman, Astronomy Section 55-56, Pres:1961-63), Fellow of the Rochester Museum, among others.

In his spare time, Mr. Keene enjoys astronomy, photography, rocket research, hunting, fishing, philately, earth sciences, etc.

Don't miss Mr. George T. Keene on "Color Astrophotography," with slide illustrations.

Partial List of Publications by George T. Keene:

Book:

Star Gazing with Telescope and Camera, Chilton Co. 1962.

Papers:

A Color Timing Method and Calculator, JSMPT, June 1958.

A Color Timing Calculating Machine, JSMPT, Nov. 1958.

Simulated Night Photography Using Color Revisal Films, JSMPT, June 1962.

Some Suggestions in Astrophotography, Sky and Telescope, Jan. 1959

Astrophotography, U. S. Camera, March 1960.

Color Astrophotography, Sky and Telescope, Aug. 1963.

PRESIDENT'S MESSAGE TO NCA MEMBERS

The National Capital Astronomers is a non-profit organization working to encourage the pursuit of astronomy as a hobby and a vocation. The majority of the members are amateur astronomers although some professional astronomers are members and as such, give guidance to the society.

Many activities are offered by the society, telescope making being one of the foremost. This year, 1965-66, should be an exciting year for the telescope makers as some exotic glass has been purchased. It would be interesting to make some unusual astronomical optics in the telescope classes. Follow the Star Dust calendar for dates and talk over some new projects with the leaders.

To make the NCA an active group, lend your support to the activities of the society. The lecture series, the discussion group, the special events and telescope making are just a few of the activities with which to associate yourself. New members need to make themselves known by "doing." Offer your services whether you are new to NCA or whether you have been an NCA'er for many years.

Help to make NCA's current year a good one.

Best wishes,
Margaret K. Noble

SEPTEMBER APPLICANTS FOR MEMBERSHIP

REGULAR

George P. Phillips
6504 Pinewood Dr.
Clinton, Maryland,
20735

Emil J. Volcheck, Jr.
417 N. Porter Street
Seaford, Delaware, 19973

Thomas E. Walls
3621 Newark St. N.W.#204
Washington, D. C., 20016

JUNIOR

Joseph Gerver
8504 16th Street
Silver Spring, Md.
20910

Michael Gerver
8504 16th Street
Silver Spring, Md. 20910

SEPTEMBER LECTURE - THE EXPLORATION OF INTERPLANETARY AND INTERSTELLAR SPACE

Although we ordinarily think of the space outside our own planet as cold and empty, our September speaker, Oran W. Nicks, Director of Lunar and Planetary Programs, at NASA, pointed out that in fact it is an active medium. It is threaded by magnetic fields, electromagnetic radiation and a variety of nuclear particles; but it is also the location of the other planets. Of these, Venus was described as the most mysterious and hence interesting because of its dense cloud cover which cannot be pierced by optical means. However, all of the planets are possible candidates for exploration by space probes. Launch vehicles with four or more stages will be necessary to reach the outer planets if chemical fuels are used. The opportunities for launching with optimum conditions occur at certain well-defined intervals - 19 mos. for Venus and 26 mos. for Mars. To reach Jupiter nuclear power supplies will be needed since solar panels will be useless with the radiation intensity only one-four hundredth that at earth.

Mr. Nicks reviewed some of the findings of the Mariner series of shots. Most spectacular were the pictures of the Martian craters sent back bit-by-bit by a 10 watt transmitter from a range of 135 million miles. In addition, Mariner IV found a magnetic field less than one-thousandth of the earth's and an atmospheric density only about 1% of ours. The occultation of the space probe gave an improved value for the planet's diameter.

In the future, more complex probes, including the 1,000 lb. Voyager, which will have orbiting capability and a landing capsule, are planned. Also multiple-planet probes such as a Venus-Mars mission appear quite feasible. Finally, since the trips to nearby stars which may have earth-like planets will take at least 4 to 20 years of travel time, they are considerably in the future.

- Jim Krebs

FINANCIAL STATEMENT

@ June 1965

<u>Income</u>	<u>Expenses</u>	
Dues	Treasurer	\$ 73.07
Observers Hdbk.	Publicity	47.50
Graphic timetable	Stardust	436.48
Juniors	Sky & Telescope	778.65
Other	Juniors	242.09
Total 1964-1965	Monthly Meetings	109.92
	Miscellaneous	
	Dues refund	\$ 9.17
	5-inch	14.94
	Obsv.Hdbk.	66.47
	Graphic T.T.	45.22
	Directory	70.00
	Special Mtgs.	18.28
	Discussion Grp.	7.50
	Astro.League	42.00
	Other	1.40
		274.98
	Total 1964-1965	\$1,962.69