

At the Junior Convention, October 1, there was a discussion of the World Night program, and the relations between the two Junior groups. Barry Sperling cited three reasons for a break in formal coordination: one, there is not enough business; two, there is the problem of transportation; three, there is a lack of enthusiasm. The result is that the next Junior Convention may be the last -- it is scheduled for January 14, at 8:00 P.M. Then the World Night program will be set up and outside clubs informed. It is interesting to note that our Junior delegate to the Astronomical League Convention was besieged with questions from representatives of other groups that had somehow not replied to our request for cooperation.

At present a rather ambitious astrophotography project is going on using members' equipment. Lewis Acker's 8" clock-driven equatorial with a wide-angle camera mounted on the side has been used for plates for the Georgetown University research program, under Father Hayden's guidance. Also the light-gathering power of Rick Falwell's 12½ inch reflector will prove very useful for faint objects. There is no doubt that with experience very fine astro-pictures will be obtained.

Christopher Walker
MD-DC Junior Editor

VIRGINIA JUNIORS

The Virginia Juniors are happy to announce that the first section of their BOOK OF THE SKY has been published and distributed. This busy group is now in the process of organizing their next publication - an Astronomical Fact Sheet. In this venture they are endeavoring to explain the appearance of most of the important sky objects as seen through different optical devices. They later plan to expand this sheet and offer it to Northern Virginia High School science groups at a nominal rate.

NEW MEMBERS

Regular

Daniel Spitz 7607 Joffa Place, Springfield, Va. WO 4-5358

Juniors

Leo Mark Leva 7115 Bradley Blvd., Bethesda, Md. EM 5-1073
Karl Stein 2305 North Richmond St., Arl., Va. JA 2-1352

LET'S GROW

Enclosed you will find a membership form which we hope each of you can use. With more people interested in astronomy than ever before, we hope that each of you will bring one or more interested friends to join the NCA at the next meeting.

★ STAR DUST

Washington, D. C.

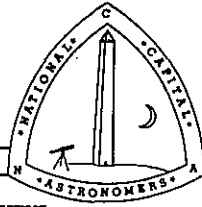


Published monthly except August by and for members of the NATIONAL CAPITAL ASTRONOMERS, INCORPORATED, a non-profit, public-service organization promoting interest and education in astronomy and the related sciences. President, Henry I. Metz; Vice President, Thomas E. Wells; Secretary, Mrs.

John Stolarik; Treasurer, William Lipscomb. Trustees: Sam C. Feild, Jr., Mrs. William Lipscomb, Glen E. Neville, Leo W. Scott. Editor, Mrs. Paul B. Griffith, OI 4-8904; Assistant Editor, Mrs. Worthington Talcott; Junior Division Editors, Chris Walker and June LoCultraro; Astronomy, Alexander White; Publicity, Mrs. William Lipscomb; Photography and Production, Sam C. Feild, Jr.; Distribution, Morton Schiff. Deadline tenth of each month.

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STAR DUST



NOVEMBER, 1960

Vol. XVIII, No. 3

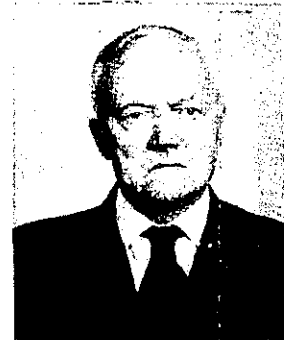
COMETS TO BE THE SUBJECT OF NEXT NOA LECTURE

It will be a privilege to have as our next speaker Dr. Ernst J. Öpik, visiting professor of astrophysics, U. of Maryland, and research associate (on leave), Armagh Observatory in N. Ireland.

Comets are living remnants of a remote past, dating from the origin of the solar system. Their study may lead to information about the mode of condensation of primordial matter.

They are also a source of interplanetary meteors and dust. Their gaseous envelopes and tails are subjected to forces other than gravitational. They are thus likely to offer valuable information regarding the properties of interplanetary space.

In collisions with the Earth, comet nuclei may have exerted a fatal influence on the development of life in the remote past and, over a million years, may endanger life in the future, too.



Dr. Ernst J. Öpik

For all of these reasons, the study of comets is not a matter of mere curiosity. A review of the motion, structure, and probable origin of the comets will be given, partly according to the original views of the speaker.

Dr. Öpik is a native of Estonia, a small country under communist rule. He graduated in astronomy at Moscow U. in 1916, was an astronomer in Tashkent in central Asia, and at Tartu, Estonia; visiting lecturer at Harvard; Estonian Rector of Baltic U., which was run by Baltic refugees and the British Military Government in Hamburg after the war. His most recent popular book is "The Oscillating Universe" (a Mentor paperback).

NOVEMBER NOTICES

- 5 - COMETS - Dr. Ernst J. Öpik. Business meeting follows. Dept. of Commerce Auditorium, 8:15 P.M.
 - 11 - OBSERVING AT THE 5" - 7:30 PM at the Naval Observatory with Larry White. NOA card will admit you.
 - 11 - VIRGINIA JUNIORS MEETING - Westover Baptist Church, 1125 N. Patrick Henry Drive, Arlington, Va. Room 234, 8 PM
 - 12 - MD - DC JUNIORS MEETING - Chevy Chase Community Building, 5601 Conn. Ave., NW, 2:30 PM. Jim Krebs will lead a discussion on THE INNER PLANETS.
 - 19 - DISCUSSION GROUP - Astronomical Coordinate Systems led by Bob Mc Cracken. Executive Meeting follows. Dept. of Commerce Foyer, 8 PM
- TELESCOPE MAKING CLASSES - 7:30 P. M.**
 Monday - Chevy Chase Comm. Ctr., 5601 Conn. Ave., - Roy Walls
 Wednesday - Bladensburg Met. Ctr., 4600 Vaux - Bill Isherwood
 Friday - Fairfax High School - Grady Whitney

FATHER HAYDEN SPEAKS ON SPECTROSCOPY

At the October meeting Father Francis J. Hayden, S.J., who is the Director of the Georgetown University Observatory, spoke on Planetary Spectroscopy. Father Hayden began by explaining that an incandescent source gives a solid continuous spectrum, while a rarified gas as in a neon sign, gives individual bright lines, and a rarified gas cooler than its dense background gives dark lines against a solid background. These dark lines are absorption lines.

The spectra of many stars were photographed and studied. These were sorted out and the various kinds given letters alphabetically. When these groups were arranged in sequence according to the stars' temperature the order was obafgkmns which can be remembered from "Oh, be a fine girl. Kiss me now. Smack!"

One of the most commonly known uses of spectra is to determine the chemical composition of a body. A study of the spectra of Mars, Jupiter, and Venus shows no free oxygen or water in their atmospheres, but does show large quantities of nitrogen tetroxide which with an introduction of water would produce concentrated nitric acid. Also, along the lines of chemical identification, Father Hayden has shown that many of the faint or unknown lines in the spectrum of the sun can be identified with lines of titanium oxide and zirconium oxide. He plans to try to identify more of the unknown lines. Another interesting project would be to put the polar caps of Mars on the slot of a spectroscopic and thereby determine of what the caps are composed. This would not be as simple as it may sound, for it would entail using a mirror with a fifty foot focal length and exposures in the order of a week. Thus we see many interesting and important answers can be obtained through spectroscopic work.

--- Ellen Stolarik

GET WELL SOON

Members of the NCA are most regretful that our past president, Lillian Gregor, has been ill and in the hospital. We all wish her a speedy recovery and trust that we will find her busily working with the NCA soon again.

PLEASE NOTE

Important to every member of the NCA are a series of Executive Meetings which our president, Mr. Metz, has inaugurated. Officers, and committee heads thus have a chance to meet regularly with the trustees and help formulate plans for future NCA activities and growth.

The next meeting of this group, which has met twice already, will take place at the Dept. of Commerce on November 19, following the Discussion Group. The agenda for that meeting is as follows: 1. Print up pamphlets for publicity, 2. Space problem - meetings, storage, shops, etc., 3. Membership campaign plan, 4. Future status of current observing program.

The Discussion Group for that evening will be led by Bob McCracken and the topic will be Astronomical Coordinate Systems. It promises to be an interesting evening, so plan to attend.

BOOKS ANYONE?

Our secretary, Ellen Stolarik, will be able to order any astronomical books for you at a 10% discount. She has a list of possibilities which she will bring to the next meeting. So be sure to see her if you are interested.

TELESCOPE MAKING CLASSES

The NCA now has three telescope making classes that are going concerns, namely: the Chevy Chase at the Chevy Chase Community Center, the Prince Georges County at Prince Georges Material Center at Bladensburg, and the Fairfax at Fairfax High School. Inquiries have been received about starting additional classes.

The Chevy Chase and Fairfax High School classes are open to anyone. The Prince Georges County class is limited to Prince Georges County school children.

Class membership has been quite varied - from ten years old boys and girls to Marine Corps Colonels, World Bank officials, biologists, chemists, engineers, Drug and Radio store managers, builders, housewives, Congressional staff members, members of Diplomatic staffs and others.

Telescope making and the use of telescopes have become one of the popular High School Science Fair projects. Most of the class members do not belong to the NCA, however many of these do join NCA and become valuable members of the organization.

It is believed that these classes should have better support of the NCA membership. Last year only a very few NCA members visited any of the classes.

There is a need to develop additional instructors and any person who has made a telescope would be welcomed in this capacity. There is particular need at this time for such assistance in the Prince George and Fairfax High School classes.

Practically all of the class projects have been simple Newtonian telescopes. Occasionally a member will return to make a larger telescope, but such effort has likewise been confined to the simple Newtonian telescope.

While this simple telescope is one of the best reflector types, in fact, Mr. Thomas Cave says it is the best, other types give good results too and some of the latter have special features that make them more desirable than the Newtonian.

It is thought that some NCA members might be interested in making some of the more sophisticated types of telescopes or attachments. To this end an advanced telescope making class can and will be established if there is sufficient interest on the part of the NCA membership.

Some of the projects that might be undertaken in an advanced class are:

1. Achromatic lenses for a refractor
2. The Johnsonian-type reflectors
3. The Maksutov and other catadioptric telescopes
4. Schmidt camera
5. Eyepieces
6. Spectroscopes for telescope use
7. Development of camera attachments and photographic techniques
8. Photoelectric equipment

We now have basic equipment for undertaking most of these projects and additional equipment will be acquired as the need develops. Some optical glass is available without cost.

The Chevy Chase class now meets in the shop at the Chevy Chase Community Center on Monday evenings. This space is available on Thursday evenings for an advanced class.

If any members are interested in any advanced projects, please let me know and if there is sufficient demand, an advanced class will be started.

--- Hoy Walls, OLiver 2-5395