

JUNIOR DIVISION NEWS

On January 16th at 8 P. M. in Room 1851 of the Department of Commerce Building there will be a Winter Convention of all members of the NCA Junior Division. All junior members and all senior members under 21 living in D. C., Maryland, and Virginia are not only invited but are urged to attend. The tentative agenda for this joint meeting includes hearing project reports, planning observing programs for next spring and summer including World Nights for 1960, reading correspondence received from other junior societies, and discussing problems of mutual interest to all sections of the Division. So be sure to attend! Interested adult senior members are welcome to attend this convention and observe the proceedings.

Maryland-DC Juniors should note that there will be no Discussion meeting at the Chevy Chase Community Building this month.

The World Night project reports have been completed for the year 1959. Copies of these reports, as well as that of the Program Chairman, will be sent to the British Astronomical Association, the A.L.P.O., and all other societies cooperating with the NCJA on Project World Night, 1959.

-Steve Klingelhofer-

VIRGINIA JUNIORS

We wish to thank Dr. Otto Franz of Naval Observatory who provided our group with a talk that will be long remembered. His lecture was illustrated with several slides dealing with the study of Galactic Clusters and how this has helped formulate and explain the theory of stellar evolution. We also would like to thank Mr. Holloway, who was kind enough to bring a slide projector, and the Westover Baptist Church for allowing us to use their large meeting hall for this occasion. About 30 people were present, 20 of whom were members of the McLean Astronomy Club. We all found the lecture and the question and answer session quite rewarding. Our wish for 1960 is that we will have other astronomers address our group.

Mr. LoGuirato has mimeographed lists of all the books on astronomy owned by various members of the Virginia group. Thus we have formed our own lending library.

The Club was happy to present Miss Betts with a piece of jewelry in order to show her in a small way how much we appreciate her coming to our aid when we needed it most.

-June LoGuirato-

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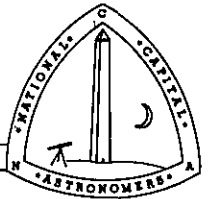
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v. 17 #5

~~Vol. XVII, No. 3~~

January 1960

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COMPUTING THE STAIRWAYS TO THE STARS SUBJECT OF NCA TALK



Our speaker this month will be Mrs. Jaylee M. Burley of the National Aeronautics and Space Administration. Her subject will be "Trajectories to the Moon and Planets".

News of artificial satellite launchings and rocket firings toward the moon and beyond have become almost commonplace these days although the Space Age is actually now only a little over two years old. Developments in this field have been almost too rapid to keep up with. The problem of computing the paths (or trajectories) of the forthcoming deep space probes is a very complicated one. In her talk, Mrs. Burley will explain how NASA scientists will compute the rocket orbits before flights and how they will track these celestial rockets on the way to their selected lunar and planetary targets. This work is truly a fascinating and exciting application and extension of classical celestial mechanics.

Mrs. Burley is a mathematician with the Theoretical Division of the Goddard Space Flight Center of NASA. She has an A. B. degree from the University of North Carolina and an M. S. from Stanford University. She is now working toward her PhD degree in Astronomy at Georgetown University. Before coming to NASA in March 1959 she was a mathematician at the Operations Research Office in Bethesda of the Johns Hopkins University. She has also taught mathematics at the University of North Carolina.

JANUARY JAUNTS

- 4,11,18,25 - TELESCOPE MAKING CLASS 7:30-10, Chevy Chase Community Bldg. 5601 Conn. Av. Hoy Walls, Instructor
- 6,13,20,27 - TELESCOPE MAKING CLASS 7:30-9:30 PM Bladensburg Mat. Center, 4600 Varnuw St. Bill Isherwood, Instructor
- 8,15,22,29 - TELESCOPE MAKING CLASS 7:30 PM, Fairfax High School, Grady Whitney, Instructor
- 8,22 - VIRGINIA JUNIORS MEETINGS at Westover Baptist Church, 1125 N. Patrick Henry Dr., Arl., Va. Rm. 234, 8 PM
- 9 - TRAJECTORIES TO THE MOON AND PLANETS - Mrs. Jaylee M. Burley. Business meeting follows, Dept. of Comm. 8:15 PM
- 16 - JUNIOR CONVENTION - 8 PM Rm. 1851, Dept. of Comm. Bldg. 14th & Constitution Av., NW. All NCJAs please attend.
- 23 - DISCUSSION GROUP - 8 PM Topic: "Astronomy, Just for Fun", led by Bob Wright. Dept. of Comm. Auditorium
- 29 - OBSERVING AT THE 5" - 7:30 PM at Naval Observatory with Larry White. NCA card will admit you.

* Second Saturday because of New Year's weekend.

WE BEGIN TO GRIND

The telescope making class was started by Mr. Nagy in 1938 and the meetings were first held in the old Central High School. The class then moved to Langly Jr. High School where it met for several years. During the war years, there was no special meeting place but, after the war, the class was reestablished at Central High School. The class was moved in 1948 to R. M. McLellan Shop near 6th & R. I. Ave., NE, then to Roosevelt High School and finally to the Chevy Chase Recreation Center where it has been meeting since about 1950.

Mr. Nagy was the first instructor. He was assisted during this early period by R. M. McLellan, Leo Scott, Mr. Evans (who helped Richey with the Navy's 40"), Mr. U. S. Lyons and Leroy Beufer. NCA members who were later actively connected with the class include C. A. Peterson, R. C. Masters, Morgan Cilley, Bob Wright, Wm. Harris, Mr. Barr, Carl Nerntz and others. During the formative period assistance was also rendered by Mr. Levitt and Ed Bailey of Fels Planetarium, Philadelphia, Pa., by Mr. Luce of Hayden Planetarium, New York City and by Mr. Cumberland of the Cumberland Optical Company, Silver Spring, Maryland.

From July 15, 1948 to July 1, 1955, a period of seven years, the class was under the direction of Miss Irene Warthen. During a portion of this period she was assisted by Mr. George Borreson. About 150 telescopes were started by class members during this period. Miss Warthen furnished most of the early history included in this story.

Since 1955 the class has been conducted by the undersigned. Valuable assistance has been rendered by Joe Lubar, Bob Moore, Dana Law, Bill Isherwood, Bob McCracken, Glen Neville, and especially by Mr. M. R. Jones and his son, Freddy. Between 1955 and 1959, about 140 telescopes were started by class members. It is estimated that 350 telescopes have been started since the class began in 1938. About 40% of these have been completed.

Last year the class became too large, some 25 mirrors being worked on each meeting. Two meetings per week were held for some time which eased the situation somewhat. About this time the Prince Georges Schools thru their science supervisor Mr. Owens, offered to sponsor a class and provide the necessary space. This resulted in establishing a class, for school children only, under the direction of Bill Isherwood in Bladensburg, Md. Later a similar offer was made by the Fairfax High School and a class was established there under the direction of Grady Whitney. This class is open to everyone.

Our classes are made up of persons of all ages and professions. Boys and girls as young as 9 or 10 years have completed telescopes as well as grandfathers of 75. We have had doctors, lawyers, Naval Commanders, Army and Marine Corps Colonels, government officials and scientists, school teachers, housewives, and school children in our classes. Telescope making is a favorite science fair project and many of our class members have done well in this competition. One class member, Robert Moore, took first place in the Westinghouse Talent Search.

Practically all telescopes made in the class are of the simple Newtonian type. Facilities are available for making more complex instruments but there is little or no demand for them. The class maintains a stock of mirror blanks, glass tools and other parts for sale to members. Any profit from these sales is turned in to the NCA Treasurer. Pyrex mirror blanks and plate glass tools are available in the following sizes: 4 $\frac{1}{4}$ ", 6", 8", 10" and 12 $\frac{1}{4}$ ". So, if you are interested in having a telescope, join one of the classes and start grinding.

-Hoy Walls-

AND GRIND

Grady Whitney is another NCAer who hails from the south. Born in Atlanta, Georgia, Grady was always interested in science and spent most of the Second World War in Europe as a Meteorologist for the Air Force. Following the war, he obtained his degree in Physics from Emory University. Upon graduation, he headed north where he found a job at the Bureau of Standards and a wife in Virginia. While working in the Optical Division of the Bureau, his interest in lenses and other astronomical devices flourished. He is particularly interested in crystals which transmit the outer ranges of the spectrum. During this period, he joined the NCA and last year started a telescope making class in Fairfax where he has about 17 members composed of groups from McLean High School, Arlington and even Alexandria. He is now employed at the Naval Weapons Laboratory as a physicist and in his "spare" time has built his own home and even some of the furniture.



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JANUARY DISCUSSION MEETING

Bob Wright will lead our January discussion group on the evening of the 23rd. His topic is "Astronomy, Just for Fun". Anybody who has ever attended one of Bob's discussion meetings knows that he always provides an interesting and lively session. Why don't you come out that night and enjoy exchanging ideas on having "fun with Astronomy". Remember, that's on the fourth Saturday night at 8 P. M. in the foyer of the Department of Commerce Auditorium.

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NEW MEMBERS

REGULAR

Fred P. Miller	6203 Cloverdale Dr., Wash., DC	LO 7-4519
Leland F. Ramsdell	54 Shaw Ave., Silver Spring, MD	MA 2-0311
Mr. & Mrs. G. Quinton Jones	3010 Chestnut St., N. W.	EM 3-0102

JUNIORS

Robert Schwerzel	1621 Poplar Dr., Falls Church, Va.	JE 4-4146
George LoGuirato	RFD #1, Clifton, Va.	ER 8-9017