Periscopes enable the visitor to view the pendulum-type clocks which are maintained in the clock vault under constant temperature and air pressure. They are used as standard clocks to measure the time between star sights.

The Naval Observatory Library, comprising more than 46,000 volumes, is considered one of the finest libraries in the world on the subjects of astronomy and mathematics.

The Observatory grounds are now open to the public from 9:00 to 4:00 with specially conducted tours at 10:00 and 2:00. Tickets for the Thursday night observing parties are available without cost through the Chief Clerk's Office, U.S. Naval Observatory.

---Helen Lyons Harris

MR. BENJAMIN KING, Westchester Apartments, has been added to the Membership Committee.

STAR DUST mailing list is now maintained by the secretary. Please notify her of change of address, and names of prospective members.

MR. E. C. STANTON, retired and confined to his home, is looking for a man interested in astronomy to be his companion and share his home. Other remuneration will be arranged. Tel: Wisconsin 2307.

"EXPANDING THE UNIVERSE" and our minds was Dr. Shapley's theme at the Geographic lecture. Great strides have been made since astronomers learned about subatomic energy 40 years ago. The universe of our minds has expanded double and triple in one generation. Besides slides, he showed motion pictures of the sun's prominences, taken by Bernard Lyot in France.

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"OPTICAL GLASS PAST AND PRESENT" is the subject of the illustrated lecture to be given by Mr. Francis W. Glaze, Saturday, February 2d, 8 p.m. at the National Museum. Mr. Glaze is Assistant Chief of the Glass Section, Bureau of Standards. He has been connected with that organization since 1928 and previously was in charge of the chemical metallurgical laboratory of the Navy at Cavite, Philippine Islands.

NATIONAL CAPITAL ASTRONOMERS was the name selected after rejecting several proposed epithets at the business end of the January meeting. Not new, just streamlined.

The constitution and by-laws were further amended and approved. A copy will be furnished each member. Note particularly: 1. initiation fee is abolished; 2. all dues are payable in September; 3. husband and wife may have joint membership; 4. junior membership is established with no minimum age, dues $1.

THE TOPIC OF THE LAST MEETING was: "The Discovery of Unseen Planets." The speaker was Dr. Edgar W. Woolard. Dr. Woolard went into detail about the discovery of Neptune and Pluto. He revealed to us many interesting facts. For instance: Notice of the irregularities of Uranus' orbit as compared with the one mathematically calculated for it led to the discovery of first, Neptune and later, Pluto. The conclusion that can be drawn is this: If no one had discovered Uranus we would in all probability be stating now that there are only six planets in our solar system!

He also told how theoretical astronomy helped discover invisible components of binary and triple systems, the former being first observed in 1844 and the latter in 1888.

He brought out the fact that Strand of Swarthmore College found in 1943 that there was a third component of 61 Cygni having a mass only 1/60 that of our sun. Russell of Princeton has stated that the object may be called a planet.

Several interesting facts were brought out in the discussion that followed the talk. As an example: Did you know that the moons of Uranus can never cause a solar or lunar eclipse of that planet?

A very interesting fact brought out in Dr. Woolard's talk was that the discoverers of Uranus and Pluto--Herschel and Lowell--were amateur astronomers!

---Donal Buchanan, prospective junior member.

BOOK NOTES

"Is There Life on the Other Worlds," by Sir James Jeans, Smithsonian Publication 3709; "Is There Life in Other Worlds," by H. Spencer Jones, Smithsonian Pub. 3556. These somewhat similar presentations of a highly speculative subject are interesting, if not too conclusive. Both authors reach a positive answer to their own question by a simple consideration of the mathematical probability involved in the duplication of the general conditions of our own solar system. ---Eugene S. Henning.

The Public Library has: "Astronomy, What Everyone Should Know," by John S. Allen. Not a primer, but a good introduction to general astronomy. 199 p. 1945.

MISS DOROTHEA LAMORE, 4709 Guilford Road, College Park, is chairman of the Entertainment Committee.

THE NAVAL OBSERVATORY made news last fall when it was opened to the general public for the first time since before the war. The fact that its functions are of great interest to many people was evidenced by the large number that visited the Observatory's 72 acres on Navy Day.

Of special interest was the Observatory's contribution to the war effort. Aside from the correct time derived from the stars and made available to the armed forces, and its publications--the American Ephemeris, Nautical Almanac, and Air Almanac--the Material Division is the Navy's sole repair station for ships' chronometers and navigating watches. This division also repairs sextants, barometers, binoculars, telescopes, compasses, and other navigational gear for the fleet.

Starting out in 1834 as an observatory 16 feet square and having only one borrowed transit instrument, the Observatory has made great strides. Today there are two transit circles--6-in. and 9-in.--a 12-in. refracting telescope open to visitors on Thursday evenings, a 26-in. equatorial refractor used in the discovery of the two moons of Mars, a 10-in. refractor designed by an astronomer at the Observatory, and the newest instrument, the 40-in. reflecting telescope acquired in 1936. The last two are used chiefly for photographic purposes. In addition, an 8-in. photographic zenith tube is used to determine the correction to the sidereal clocks, and the variation of latitude.

Solar work is becoming increasingly important, and daily pictures of the disk are taken with the aid of the 5-in. photoheliograph. Visual observations are also made with the spectrohelioscope which enables the observer to see the sun in the first spectrum line of hydrogen.