

QB1
.579

other field. Magnitude estimates of long-period variables by members of astronomical societies have materially aided in the establishment of modern theories of stellar evolution. Those amateurs who have participated have gained a rich experience and understanding. Full appreciation of the immensity of the celestial riddle is brought home to those who stand beside the scientists seeking the answer. Nothing can so enrich the pleasure and meaning of our interest in the oldest and broadest science as making a few observations of the phenomena of stellar variability which have given 20th century astronomy such a powerful impulse.

There are four principal kinds of variable stars:

1. Eclipsing Binary - Algol, (round stars)
2. Eclipsing Binary - Beta Lyrae, (egg-shaped)
3. Cepheid - Delta Cephei, (pulsating, short period - under 30 days)
4. Long-Period - Mira (Omicron Ceti - average period 300 days)

These can be subdivided and novae added but the basic "type" stars are these four. Note that the first three are far north and easily observed the greater part of the year. Only Mira gives any difficulty and when faint there is an easy substitute - Betelgeuse in Orion which varies irregularly from about 0.5 mag. to around 1.1 mag.

.....

The eye can even distinguish color differences in stars well enough to make spectroscopic observation a good deal less mysterious. A rough sequence of stars from the hot to the cool is found in the brightest stars of the winter sky.

STAR	SPECTRAL CLASS	STAR	SPECTRAL CLASS
Rigel	B	Capella	G
Sirius	A	Aldebaran	K
Procyon	F	Betelgeuse	M

Jewell Boling, Editor, 1717 P St., N.W. North 9621

STAR DUST
National Capital Astronomers
Washington, D. C.

November 1951

Vol. 9, No. 3

NOVEMBER CALENDAR

Nov. 3 Sat. "VARIABLE STARS - KEYS TO THE UNIVERSE,"
Miss Leah Allen, Professor of Astronomy,
Hood College. Commerce Auditorium,
8:15 p. m.

Nov. 17 Sat. DISCUSSION GROUP, Commerce Foyer.
With Bob Wright. 8:00.

A PICNIC AND OBSERVING PARTY is being planned by Miss Irene Warthen for some time in November. You will receive further announcement. This will be the November observing night for NCA members.

TUESDAY AND FRIDAY, 7 - 10 p. m. Telescope making class, Roosevelt High School, Room 319, 13th and Upshur, N. W. Miss Irene Warthen, Instructor. Telephone Lockwood 5-1237. Miss Warthen is present on Fridays.
Note: No class will be held November 23.

"VARIABLE STARS - KEY TO THE UNIVERSE," is a topic of particular interest to amateur astronomers. Many of the important contributions to the field of variable stars have been and are being made by amateurs. Miss Leah Allen, professor of astronomy at Hood College, will discuss the history, methods, and significance of variable star observing, with emphasis on the work of non-professionals.

Topics to be covered include the meaning of the term "variable stars," early observations of novae and other variables, discoveries by the young deaf-mute

John Goodricke, the importance of variables in research on the nature of stars, why variables are fundamental in revealing distances of galaxies which have led to the modern concepts of the extent of the universe, methods of observing variables, and the work and members - amateur and professional - of the American Association of Variable Star Observers.

Miss Allen studied astronomy at Brown University and Wellesley College and was Martin Kellogg Research Fellow at Lick Observatory. She is a member of several professional societies and of the American Association of Variable Star Observers, and has been professor of astronomy at Hood College in Frederick, Maryland, since 1928.

---Mrs. H. Malitson

DISCUSSION GROUPS--- A portion of the time in the discussion groups for the 1951-52 season will be devoted to the development of Club Project activities, which are being stressed by the Astronomical League this year. The September group discussed a simplified sun spot observing program. All present indicated that they would for the next month carry on these observations and blank forms for recording these observations were mailed to each one present.

The discussion group for October studied the results of these observations and took up the preliminary work for observing variable stars without the use of optical aids.

It is hoped that each member of the NCA interested in a program of simplified observing will take part in the discussion groups for the remainder of the season.

---Bob Wright

NINTH ASTRONOMICAL COLLOQUIUM was held at Georgetown University on October 9. Mr. Allen Goldstein spoke on "Solving Astronomical Problems with the SEAC Computer at the Bureau of Standards."

A REMINDER - for those who have not yet paid membership dues. Payments may be made at the November meeting. The treasurer, Mrs. Ione Alston, will be in the lobby before the lecture; or, send a check to her at 20 Plattsburg Court, N. W., Washington 16, D. C.

NEW MEMBERS

*Hallinger, Donald E., 4006 N. 26th St.,
Arlington, Virginia OW 8467

"WOULD YOU LIKE TO KNOW MORE ABOUT THE STARS," a leaflet telling about the NCA and its activities, has been reprinted. Please feel free at the next meeting to take copies for distribution to your friends.

THINGS WE OWN FOR YOU TO USE -- a set of 15 astronomical slides with description, suitable for classroom or discussion group use, and the LeRoy Benfer Telescope for loan to members. See Bob Wright if you care to use either one.

TWO HUNDRED ATTEND OBSERVING NIGHT. Approximately 200 persons attended the final National Capital Parks observing night on October 13. Six telescopes were in use and 12 NCA members assisted in observing. The full moon and Jupiter provided the main attractions. The past summer's observing with the National Capital Parks has been one of the most successful seasons in recent years. About 125 attended in September when the skies were fair, and we were able to use our telescopes at two of the earlier events, while the remaining two were clouded out.

VARIABLE STAR OBSERVING -- Excerpts from John W. Streeter's talk at the Astronomical League Convention.

The science of astronomy has in recent years been advanced by amateurs more through the observation of variable stars than by activity in any