

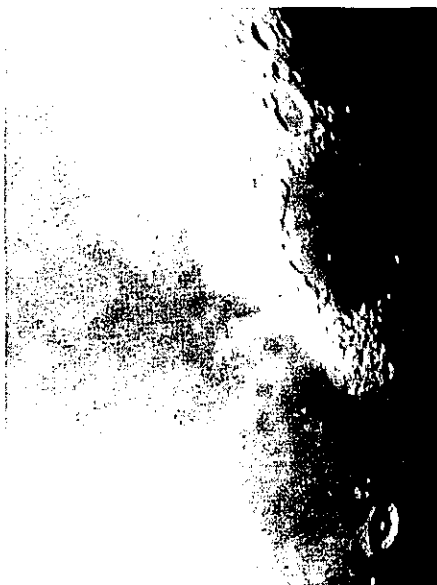
MD - DC JUNIORS

With the coming of the New Year the MD-DC JUNIORS are revising their monthly schedule. We now meet twice a month, probably one Saturday afternoon and one Friday evening (the two scheduled for January are Saturday the 13th at 2:00 PM and Friday the 26th at 7:30 PM.) A change in meeting place is also contemplated from the Chevy Chase Community Center to the Cedar Lane Unitarian Church. The lectures of our own J. L. Holloway will be supplemented by discussions on practical and observational astronomy as well as talks by other scientists. It is hoped that many of our juniors may take advantage of this wonderful opportunity.

Snow did not prevent eight juniors from attending the December meeting to hear a talk on celestial mechanics. The high point of the meeting was the derivation of Kepler's Third Law (his harmonic law) which states that the ratio of the cube of the mean distance from the sun to the square of the period is the same for all planets.

The pictures printed below were taken by the writer during this past summer. The moon picture is a 1/30 second afocal exposure.

Chris Walker, Junior Editor



★ STAR DUST



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VATICAN OBSERVATORY

Photo by Bill Young, Jr.
Washington Univ. News Service

A rare treat is in store for the NCA at the January 6 meeting in the person of noted astronomer Reverend Martin F. Mc Carthy S. J. of the Vatican Observatory. Fr. Mc Carthy will show present and former sites of the surroundings of the observatory located since 1925 at the Papal summer residence, Castel Gandolfo in the Alban Hills. He will describe the instruments and current research of the observatory which is one of the oldest and most modern in Europe.

In 1578 Pope Gregory XIII decided upon the reform of the calendar. To assist him in this project he called upon Fr. Christopher Clavius and his confreres who made the observations and calculations required. One of their successors in the 19th Century was Fr. Angelo Secchi who just a hundred years ago was engaged in pioneer work in lunar and solar photography and had begun the study of stellar spectra which established him as one of the founders of modern astrophysics.

Studies of variable stars first made at Washington, D. C. later in the Vatican Gardens at Rome were the specialty of Fr. John Hagen, Director of the Vatican Observatory from 1906 to 1930.

Fr. Mc Carthy was ordained to the priesthood in 1940 and received his doctorate in astronomy at the Georgetown Observatory. He has pursued as his fields of specialization the spectral classification of stars and photoelectric and photographic photometry at numerous large observatories in the United States and Canada including Mt. Wilson and Mt. Palomar Observatories. He is presently working at the Georgetown University in the Department of Astronomy. In a few months he will return to his post at the Vatican Observatory.

NCA TRIP TO ANNAPOLIS

On Saturday, November 25, a group of 25 to 30 members and guests traveled to the U. S. Naval Academy at Annapolis, Maryland. There they were treated to an exhibit of the capabilities of the Spitz Planetarium. Lt. Bassett USN of the Academy staff directed the showing and in addition gave those present a capsule version of the cadets course in celestial navigation using some special projectors he has developed.

Everyone who attended expressed their thanks to Lt. Bassett and his co-worker for giving their time. Thanks are also due to Mr. William Croin, who arranged the tour.

Page 2 THE MOST INTERESTING STAR

The "most interesting star", our sun, and its effects on the earth were described by our December speaker, James S. Pickering of the Hayden Planetarium, New York City. The normally visible disk of the sun, 864,000 miles in diameter, is called the photosphere and is the residence of many of the optically interesting phenomena on the sun. The granular rice-grain has been shown clearly by the recent balloon photographs of the sun. The sun spots appear black only by contrast to the bright photosphere as they are still at the temperature of 7000° F. The spots have magnetic polarity and wax and wane in number with a period of a little over eleven years.

Above the photosphere lies the rosy-hued chromosphere. It is in some way connected with the prominences, both quiescent and eruptive, which can be seen on the limb of the sun using special astronomical equipment or during a solar eclipse. An eclipse is necessary for good observation of the solar corona, a tenuous cloud of luminous gas which is apparently at a temperature of many million degrees. The observed shape of the corona is correlated with the sun spot cycle.

The same processes which cause sun spots often give rise to flares - large but brief increases in brightness over a limited area of the sun. The flares hurl charged particles out of the sun. When these particles interact with the magnetic field of the earth, they cause disruption of long range radio communication by changing the properties of the ionosphere. At least some of the "Northern Lights" displays are particles ejected by these flares.

Jim Krebs

CALENDAR FOR JANUARY

- 2,9,16,23,30 TELESCOPE MAKING CLASS at the Chevy Chase Community Center, 7:20 - 10:00 PM with Roy Walls
- 5 OBSERVING AT THE FIVE INCH 7:30 - 10:00 PM at the Naval Observatory with Larry White.
- 6 THE VATICAN OBSERVATORY by Rev. Martin F. Mc Carthy, S. J. Dept. of Commerce Auditorium, 8:15 PM. Business meeting follows.
- 12 DISCUSSION GROUP Robert Hackman will show Stereoscopic Views of the Moon. Dept. of Commerce 8:15 PM. Meeting of the trustees and officers follows.
- 13 MD - DC JUNIORS MEETING, Cedar Lane Unitarian Church 8:00 PM. Lecture on the Milky Way Galaxies. For additional information phone Leith Holloway at 581-7870.
- 26 MD - DC JUNIORS MEETING at the Cedar Lane Unitarian Church 7:30 PM.

MAKSUTOV CLUB

At the discussion group meeting on November 10, 1961 some ten persons indicated that they would each be interested in making a Maksutov telescope. It is expected that the first meeting of the group will be Friday, January 12 at the Chevy Chase Community Center. Details will be announced at the January business meeting.

ADVANTAGES OF LEAGUE MEMBERSHIP

We have recently received a letter from Wilma Cherub, Executive Secretary of the Astronomical League. In this letter she says, "Several people have asked the question, what are the benefits of Astronomical League Membership. I would like to take this opportunity to enumerate the privileges and benefits of the Astronomical League.

1. Advantages of national representation under an organized group.
2. Association with amateur astronomers in far reaching areas.
3. Conventions on a regional and national level through which an exchange of ideas; personal contact with other amateur astronomers; opportunities to hear and speak with prominent professional astronomers, are made possible.
4. Subscription to annual proceedings on National Conventions (last year's are available for borrowing from Bob Wright or Betty Lipscomb).
5. Individual subscriptions to Reflector, the official publication.
6. Book service through which members may purchase books on Astronomy and related sciences at a ten percent discount from list price.

Mrs. Virginia Cummings
7512 Chambers Creek Road
Takoma 66, Washington

7. Library through which certain books may be borrowed. (Mrs. Cummings)
8. Instrument section through which professional assistance is given in solving problems of instrumentation etc.
George T. Keene
100 Southern Parkway
Rochester 18, New York
9. Junior activities assistance is given to students or juniors members for the advancement of their astronomical activities; certificates are awarded under certain requirements to juniors; an annual cash award is made to outstanding juniors.
Gary Ross
12811 Allen Road
Oak Park 37, Michigan
10. Representation on the American Association for the advancement of Science Council.
The booklet, Preparing and Presenting a Paper, is available upon request for the Executive Secretary,
Wilma Cherub
4 Klopfer Street
Pittsburgh 9, Penna.

NEW MEMBERS

Dr. Delores L. Peirson 6209 Balfour Drive, W. Hyattsville, Md.
Janice and James Duffy 1136 Valley Drive, Alexandria, Va.
Edwin T. Lurcott 9327 Dubarry Ave., Lanham, Maryland

Junior Members

Bernard Leikind 8416 Tenth Avenue, Silver Spring, Md.
John Stone 224 Waterway Drive, Falls Church, Va.
