

JUNE - A NEW LOOK AT THE OLD MOON - Concluded from page 5

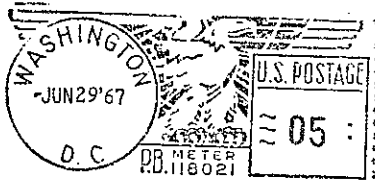
Surveyer photographs show that solid rock lies only about 50 feet below the lunar surface. With only one-sixth of the earth's surface gravity, the moon could now support mountains six times higher than the Himalayas. However, lunar mountains formed while the moon was still warm and soft and not capable of supporting high mountains. There are no mountain-building processes taking place on the moon at present.

- Leith Holloway

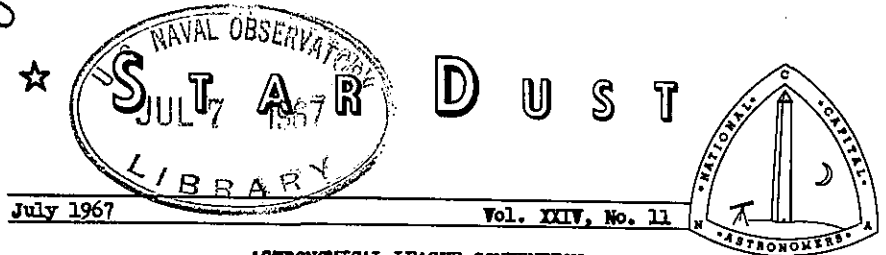
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July 1967

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ASTRONOMICAL LEAGUE CONVENTION
GEORGETOWN UNIVERSITY, WASHINGTON, D. C.
JUNE 30, JULY 1,2,3,4, 1967

The National Capital Astronomers is the host society for the 1967 General (National) Convention of the Astronomical League and it is hoped that the NCA will wholeheartedly support this convention.

Friday activities will be confined primarily to Copley Lounge and the Georgetown Observatory from 6 PM to 11 PM. To reach Copley Lounge, enter the Campus through the main gate at "O" Street and immediately turn right and follow signs to the Lounge. There you will find the registration desk and exhibits. If you arrive Saturday, then you may go either to the Lounge or directly to the Science Building. The Registration desk will be at the Science Building Saturday after 8 AM. All sessions will be held at the Science Building.

We will visit the Georgetown Observatory, one of the oldest Observatories in the United States. A trip will be made to the U.S. Naval Observatory. There will also be a trip through the Goddard Space Flight Center where pre-flight tests of many of the U.S. satellites are made. We will visit the Smithsonian Institution for a lecture and guided tour of their astronomical exhibits.

VERY IMPORTANT IF YOU PLAN TO ATTEND THE CONVENTION BANQUET.....Because the banquet will be held on a holiday weekend, we are required to advise the caterers on Wednesday June 28 (two days before the convention opens) the number of persons that will attend. If you wish to attend the banquet and have not made your reservation, please call: Miss Thelma Cressy GO 5-6343, Ext. 201 (after 6 PM) and advise her to reserve a place for you. Your reservation must be in by June 28.

The papers program will cover all phases of astronomy. Both AAVSO and ALPO will arrange and present sessions.

A Junior session will give our younger members a chance to present papers. A session on Instruments and Accessories (telescope making included) should be a favorite with many who attend. There will be other sessions covering many phases of astronomy.

There will be an astronomical exhibit in Copley Lounge. Several Commercial exhibits will be there as well as numerous exhibits from individual members. The ALPO will have a large exhibit of photos, maps, and drawings.

Following is a list of the special events and their costs:

- Registration fee--Individual \$2.00 Family \$3.00
- Smithsonian Trip, Saturday July 1 -----\$1.00
- Goddard Space Flight Center Trip, Sunday, July 2-----\$2.00
- Convention Banquet, Sunday, July 2-----\$5.00
- Naval Observatory Trip, Monday, July 3-----\$1.00
- Proceedings of the 1967 Astronomical League General Convention-----\$3.00

- Bob Wright,
Convention Chairman

THREE DECADES OF NATIONAL CAPITAL ASTRONOMERS

This year marks the 30th anniversary of the organized amateur astronomers in Washington—August 27 to be exact. Stephen Nagy, a "telescope nut," W. Sherman Lyons, a professional astronomer, and a few others enlisted some of the newspapers in publicizing a meeting at the Naval Observatory. About 25 persons responded. The outcome was a committee appointed to draft by-laws and a constitution. At the next meeting, on October 1, 1937, the first of the lecture series, nearly 80 persons signed the charter. Mr. Nagy became president, W.S. Lyons, vice president, and G. A. Peterson, treasurer. They held those offices for six years. Mrs. Catherine Ruth was the first secretary.

Monthly lectures were held at the National Museum until Room 43 could no longer accommodate the crowd. Then we moved to the Commerce Auditorium until it was closed for remodeling in 1966. At present, the Interior Department is our host.

Almost immediately Mr. Nagy with the help of some others, obtained permission to open a telescope-making class at Central High School. By November 1937, 16 members were busy pushing glass. The class came to a halt in 1942 when the war caused shortages of material, but was resumed in 1947 under the guidance of Bob McLellan.

NCA has sponsored classes in descriptive astronomy, celestial navigation, and constellation study at irregular intervals.

When a 5-inch Alvan Clark refractor was offered for sale in 1938, the club bought it. Naval Observatory allowed us to mount it in a small building and let us use a similar shelter for storing members' telescopes. The war put a temporary stop to these conveniences, but since then the Observatory has allowed us the use of one building for the 5-inch.

Regular observation nights were set for members. Then in 1939, a public observation in Meridian Park was publicized and we were overwhelmed with a turnout of 400 or so. That was the beginning of our star parties. About 1945, the National Capital Parks included observing sessions in its series of nature programs, and NCA was glad to take part. It still cooperates with the Park Service during the summer season.

For many years, a monthly discussion group gave members an opportunity to ask questions and discuss astronomy informally. Field trips have led to many observatories within a day's round trip. Our first organized visit to Georgetown Observatory was in 1946; to the Georgetown seismology station in 1939.

"National Capital Amateur Astronomers Association" was shortened to National Capital Astronomers in 1946. The same year, juniors were admitted to membership and since then they have formed their own subsidiaries in Maryland and Virginia. Prior to that time, there had been attempts to organize junior astronomers, the most notable of which was a group under the leadership of Bob Patch, high-school son of our member, Robert Patch.

Several hopes and dreams faded into oblivion during the years. NCA has had its difficulties as well as a fair share of success.

"Star Dust" first appeared in October 1943. Late in 1948 or early 1949, "Junior Star Dust" made its bow as a bimonthly paper. Now it comprises part of the parent publication. (Continued on page 3).

***** JUNIOR REPORTS *****

P.G.C. ACTIVITIES

On the evenings of June 9 and 15, the P.G.C. Juniors held their final star party in preparation for the upcoming convention. All types of photographic equipment, from the astro-camera to box-type cameras have been used to secure photographs which will represent the work of the P.G.C. Juniors at the convention.

The convention promises to be an interesting and informative event especially for Juniors, therefore, it is urged that all Juniors be sure not to miss it.

-- Tom O'Brien
Vice President, P.G.C. Juniors

WEATHER IN WASHINGTON

Since the beginning of 1967, I have been keeping track of the weather astronomically speaking for Washington. For January-May period, I recorded the following results:

4 Very Clear Nights (No moon, 5-6 mag.)
65 Average Clear Nights (first or last quarter moon, haze, 3-4 mag.)
15 Partly Clear Nights (full moon, partly cloudy, bad haze, 2 mag.)
67 Cloudy Nights (moon only) or nothing.

-- Steve Holland

OBSERVATIONAL DATA FOR JULY

Mercury -- too close to the sun to be seen this month.
Venus - a brilliant object in the evening sky and is an interesting telescopic item as it changes from half to crescent phase.
Mars - on the meridian at sunset and is fading as the earth races ahead in its orbit and leaves Mars behind.
Jupiter - slowly dies in the west soon after sunset.
Saturn - rises about midnight in the constellation Pices, rings are back.
The Aquarid meteor shower - July 26-31 with slow, long paths of about 20 per hour will receive some interference from the L.Q. moon. The forerunners of the Perseids shower will begin to fall toward the end of July, promising a climax on Aug. 12-14 with little interference from the F.Q. moon.

-- Steve Holland

JUNE - A NEW LOOK AT THE OLD MOON - Continued from page 4.

Over 99% of what happens on the moon is associated with meteorite impact. Volcanic activity there is only a secondary effect produced by heat from collisions by meteorites. The lunar mare probably resulted from lava flows created by a salvo of very large bodies striking our side of the moon. There are no mare on the other side of the moon indicating that the mare formation was a single catastrophic event.

The character of craters depends not only on the velocity of the impacting meteorite but also on the strength of the surface struck. Craters formed on the moon in the 4.5 billion years since it cooled, and hardened were made by fast moving meteorites striking a lunar surface hard as granite. These craters are deep, and a great deal of material was violently ejected from them upon impact creating many secondary craters and, in some cases, rays. The craters on the mare are examples of these. (Continued on page 6).

Early in the program of radar astronomy, NCA was called upon to count meteors at the National Bureau of Standards station at Sterling, Va., in correlation with observations by radar. Moonwatch of World War II took form within NCA. Prototype of the moonscope evolved here. The Johnsonian telescope designed by Lyle Johnson has gained wide recognition. Grazing occultations, sunspot observations, and many other programs have contributed to scientific research.

NCA takes pride in its members who have set up their telescopes or given slide programs for schools, churches, Scouts, National Capital Parks programs, other amateur societies, and various groups, sometimes driving considerable distances.

NCA was host to the national amateur astronomers in 1947 before they were formally organized, to the Astronomical League in 1951, and is pleased to entertain the League again this year. Two of its members have served as president of the League, and three hold the annual League award.

The writer pleads for the indulgence of all of those who have contributed so much to the NCA but who were not alluded to here. This sketch was written on very short notice and is notable for its omissions.

---Mabel Sterns

STERLING ANDERSON ELECTED PRESIDENT

The annual NCA elections were held at the June meeting and the following officers were elected for the 1967-68 year and will take office on July 1. Mr. Anderson, who has served NCA as Vice President and has secured many excellent speakers this last year, was elected President. Mr. Jerome Hudson will be the new Vice President, his main duty will be to arrange the programs for the coming year. He would appreciate any suggestions you might have of speakers and/or topics. Mrs. Nora Keel, who joined the society only this past year, will be the Secretary. Mr. Robert Bolster, our most efficient Treasurer, will remain in office for another term. Mr. James Sharpe joins Mrs. Margaret Noble, Mr. Hoy Walls, and Mrs. Ellen Stolarik on the Board of Trustees. Congratulations to these new officers and best wishes for a successful year. Their pictures and biographies will appear in the next issue of Star Dust.

NEW MEMBERS

The following new members were received at the June meeting:

Regular Member

James M. Stephens
111 Dogwood St. N.W.
Vienna, Virginia 22180

Junior Member

Robert Pariseau
200 Fort Meade Rd. #910
Laurel, Maryland 20810

The Science Fair winners were formally presented their award certificates and memberships at the June meeting.

DIAL-A-SATELLITE

For precise time and exact locations of satellite passages visible to the naked eye and other astronomical data, dial 737-8855. An up-to-date report is prepared daily by the Smithsonian Astrophysical Observatory.

ASTRONOMY CLASSES

Glasses are being offered this summer in astronomy by the Prince Georges County Board of Education and by the Smithsonian Associates of the Smithsonian Institution. For information about the classes this summer or in the fall at the Smithsonian, call 381-5157. They have classes divided by age group for children from 4 to 17.

A NOTE OF THANKS

I wish to take this opportunity to thank each person from the NCA that has helped in any way with the planning and carrying out of the 1967 Astronomical League Convention.

- Bob Wright, Chairman

EXPLORING THE SKY PROGRAM

For many years, NCA has co-operated with the National Park Service in presenting summer star parties for the public. These programs are held at picnic grove #16 in Rock Creek Park. This is located on Glover Road--south of Military Road. The dates this month are July 15 and 29 at 9:00 P.M. All NCA members are urged to attend and bring their telescopes. These are very interesting and rewarding sessions. (You can show off the new telescope you built this year in one of the NCA telescope making classes). For further information, please contact Mr. Robert McCracken at OU 2-5395.

MOVING

Emil Volcheck, one of our outstanding NCA members, is moving to Chatanooga, Tennessee. We wish Emil the best of luck in his new home, but are sorry to see him leave NCA.

JUNE - A NEW LOOK AT THE OLD MOON

In the first several hundred years of lunar history more changes occurred than in the remaining 4.5 billion years since. So stated our June speaker, Dr. Ernst J. Opik, the internationally renowned astrophysicist.

The moon formed quickly, in only about 350 years (The earth formed in only 50,000 years), from planetesimals which condensed from six or more rings circling the young earth within Roche's limit. Once tidal friction caused them to recede from the earth beyond this limit within which large satellites break to pieces by gravitational shearing, these moonlets were free to combine into one large moon. The formation proceeded so rapidly that tremendous heat was generated softening the surface of the moon. Meteorites striking the moon during this early period were slow moving (3 km./second) and hit a hot surface soft as sandstone. Craters thus produced were shallow. Examples of the early craters are those in the lunar highlands near the south pole of the moon. (Continued on pps. 5 and 6.)