

The Secretary's Mailbox--The NCA secretary received a letter from Mr. Roy Williams, 2033 Lee Hi Road, S. W., Roanoke, Virginia, regarding the sale of a telescope. Mr. Williams, who is a member of the Amateur Astronomers of Roanoke, has a new telescope with an aluminum tube, equatorial mounted and setting circles, Unitron finder--model II 8X; 60X eyepiece is included. Mirror was done by machine.--Will send photos on request, and will sell for \$275.

---Tove Neville

Astronomical League Slate for 1956 - NCA Vote. At the April business meeting, the Astronomical League slate for 1956 was presented to the membership for a vote. The candidates were as follows:

- President: Grace C. Scholz, 410 Mason Hall Apts., Alex., Va.
- Vice President: Russell C. Maag, 904 S. Ohio, Sedalia, Mo.
- Secretary: Gene L. Tandy, 1805 N. River, Independence, Mo.
- Treasurer: Chandler H. Holton, 833 Drewry St., Atlanta, Ga.
- Exec. Sec'y: Wilma Cherup, 4 Klopfer St., Pittsburgh 9, Pa.

The vote was cast in favor of all the above candidates, and I think it was of particular pleasure for us here in NCA to vote again for our own most able Grace Scholz. The vote will be mailed to the executive secretary of the League.

---Tove Neville

NEW MEMBERS

- Jack Brotzman, 4729 1st St., S. W., Apt. 103 (24) JO 2-7299
- Philip A. Gross, 2232 Washington Ave., #104, Silver Spring, Md. JU 8-1123
- Mrs. Robert H. McCracken, 5120 Newport Ave. (16) OL 4-3321
- Martin Fred Schultz, 603 Oneida St., N. E. TU 2-3470
- Paul S. Thompson, 7802 Granada Dr., Landon Village, Bethesda, Md. OL 6-6531
- Michael Finegan, Fairfax Station, Va. BR 8-8260
- David L. Trafton, 5603 Gloster Road, (16) OL 2-5076

Let us all make it a point to attend the convention May 4-6 and get to know each other better.

Jewell Boling, Editor 1717 P Street, N.W. NO 7-7693

APR 29 1956

STAR DUST
National Capital Astronomers

May 1956

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MAY CALENDAR

Middle East Regional Convention May 4-6

May 4 (Fri.) Social gathering and registration for NCA's and visitors, from 6 p.m. to 10:30 at National Association of Home Builders, 1625 L Street, N.W. 8:00 p.m. two color movies of popular interest: "Direct Line to Decision," and "Piercing the Unknown," courtesy of International Business Machines Corporation. Mr. W. F. Holmborg, the Applied Science Representative of the IBM will be available for questions from the audience.

May 5 (Sat.) 8:30 a.m. Registration and exhibits at Commerce Auditorium.
9:00 a.m. to 12:00 Sessions
2:00 p.m. to 5:00 Sessions
6:00 p.m. Dinner at Graystone Restaurant, 730 17th St., N. W.
8:15 p.m. "The IGY and the Space Frontier," by Dr. Homer E. Newell, Jr., Naval Research Laboratory. (Dr. Joseph Kaplan will be unable to keep his engagement with us, but arranged for Dr. Newell to give his address.)
NCA election of officers following lecture.

May 6 (Sun.) 9:00 a.m. Artificial Satellite Tracking Program for Amateur Astronomers. Bob Wright.
10-10:30 Closing session.

NCA CALENDAR

May 13 (Sun.) EXPLORING THE SKY, Joint program of the NCA and the National Capital Parks, Fort Reno Park, 40th and Chesapeake Sts., N.W., 9 p.m. Come one and all and bring your telescope if you have one.

May 19 DISCUSSION GROUP with Leo Scott. "Optics of the (Sat.) Telescope and the Camera." Bring your optics problems for discussion. Mr. Scott will have the design for a very good refractor mimeographed and will pass copies out at this meeting. 8:30 Commerce Department Foyer.

May 19 JUNIOR JUNIOR MEETING (Juniors under twelve). (Sat.) 7:30 in Commerce Department Foyer, preceding Discussion Group. Regular members and senior juniors are welcome.

May 27 EXPLORING THE SKY, Joint program of the NCA and (Sun.) the National Capital Parks, Fort Reno Park, 40th and Chesapeake Streets, N. W., 9:00 p.m. Come one and all and bring your telescope if you have one.

Each Saturday morning (except May 5 - convention day) Telescope making class at Chevy Chase Community Center, 5600 block of Connecticut Avenue, 9-12 A.M. For more information telephone Hoy Walls at OLiver 2-5395. (Classes will continue thru June 16, then disband until September.)

"THE INTERNATIONAL GEOPHYSICAL YEAR AND THE SPACE FRONTIER" - The International Geophysical Year program is the biggest scientific project that has ever been undertaken. Hundreds of scientists scattered all over the earth from the Arctic to the Antarctic and on the high seas will take part in this great project that will start next summer. Astronomy will be one of the most important sectors of the IGY program for one of the latter's aims will be investigating the influence of the sun on the earth when the sunspot cycle will reach its height. Dr. Homer E. Newell, one of the leading scientists in the IGY, will describe the IGY program, giving particular attention to the upper atmosphere studies that will be undertaken, observations of the sun, the high altitude rocket flights planned, and the broad geographic coverage. He will also discuss the practical results that may be expected, such as improvements in weather forecasting. Dr. Newell is the

of visibility must also be considered. At present it is believed visibility will be on the order of 5th magnitude. The skin of the satellite will therefore be of a light metal combining minimum coefficient of expansion with the greatest possible tensile strength and a high reflecting power.

There will be two methods of keeping track of a satellite. The method for radio astronomers will be published in the magazine Q.S.T. Visual observation under the guidance of our own "Bob" Wright will be by telescope and binoculars. If the satellite subtends an angle of 40° it will be seen in Washington at dusk and again just before dawn. Because of its rapid motion it will be observable for about 2 minutes at each position. Orbital velocity is estimated at 25,000 ft. per second.

No precise date has been set for the launching but the site has been chosen on the coast of Florida so that the empty rockets will be dropped in the sea and not hurt anybody. The launching will be during the 1957 Geophysical Year, and at least six attempts will be made, perhaps more. Viking rockets having obtained an altitude of 135 miles show that the air there is rare enough for a successful circuit of the earth. ---Morton Schiff

LUNAR OCCULTATIONS FOR MAY

<u>Date</u>	<u>Star</u>	<u>Mag.</u>	<u>Age</u>	<u>Phase</u>	<u>E. S. T.</u>
May 14	BD / 16° 1551	7.4	4.5	D	8:01.1 P. M.
15	A ² Cno	5.7	5.5	D	9:40.4 P. M.
17	BD / 3° 2379	6.6	7.5	D	7:50.6 P. M.
17	BD / 2° 2334	6.7	7.6	D	10:27.2 P. M.
18-19	e Leo	5.1	8.7	D	12:47.8 A. M.

---A. L. White

DR. MILTON W. ROSEN, who was introduced to us by Mr. Ben Adelman, is one of the scientists assigned by the Naval Research Laboratory to "Project Vanguard." This is the artificial satellite program sponsored by the National Academy of Sciences, and the U. S. National Committee for the 1957 Geophysical Year. The International Chairman; Dr. Chapman of England, will provide the mathematical data needed to put the satellite in its orbit. The function of the United States will be to manufacture the rocket, the satellite itself, and the motors necessary to get it off the ground and place it where it should be. The Defense Department with its 10 years experience in rocketry will provide the launching site and all the technical assistance necessary. The rocket itself will be made by a commercial firm. The fuels will be provided by the Naval Research Laboratory and all scientific work will be coordinated by the laboratory. The rocket will have 3 stages; each stage will have a different type of fuel. The first two will be liquid and the third solid. The liquid fuels will differ in their chemical content. These motors will be mounted on gimbals. Because of lack of time, an extensive engine development program was not attempted. For this reason, the rocket is relatively inefficient.

The ratio of length to diameter is 19 to 1 of the overall rocket. The satellite itself will be protected by a cap from atmospheric pressure during the early stages of flight. Guidance of the missile in flight will be directed from an "intelligence" in the second stage rocket. It is hoped by the time this rocket falls off, the third (solid fuel) rocket will provide enough energy to put the artificial "moon" in its orbit. The problem of making the outer shell of the moon received careful consideration and has not yet been entirely solved. On one side will be the heat of the sun; on the other the cold of space. As it rotates quite rapidly, the changes will naturally cause expansion and contraction at great rate. This could be solved by special paints and also by some type of metal, but--and this is a big but--the problem

Superintendent of the Atmosphere and Astrophysics Division of the Naval Research Laboratory. He is a member of the Technical Panel on Rocketry and the Panel on the Earth-Satellite Program of the U. S. National Commission on the International Geophysical Year, and the Science Program Coordinator for Project Vanguard.

---Benjamin Adelman

REPORT OF NOMINATING COMMITTEE

The following is the report of the Nominating Committee given at the April meeting. Elections will be held at the May meeting.

- President: No nominee
- Vice-President: Robert H. McCracken
- Secretary: Elsa Dimick
- Treasurer: Gertrude C. Deller
- Trustee: (for four-year term)
Alexander L. White

While the Committee makes no nomination for the Presidency, the Chairman of the Committee plans to make a nomination from the floor. Other nominations from the floor for any office may be made at the time of election. The members of the Nominating Committee are: Elizabeth L. Goerner, Glenn E. Neville, and Grace C. Scholz, Chairman.

OBSERVATIONAL DATA

Mercury reaches greatest eastern elongation on May 2 and may be seen at this time, low in the west near Aldebaran, just after sunset. The planet reaches inferior conjunction on the 25th. Venus is a brilliant object in the west for several hours after sunset. The planet appears crescent shaped in a telescope and reaches greatest brilliancy on the 15th. Mars moves from Capricornus into Aquarius in May and may be seen in the southeast for several hours before sunrise. Jupiter is past the meridian at sunset and sets before midnight. It is in quadrature on the 13th. Saturn rises about sunset and sets about sunrise. It is in opposition on the 20th. The date of maximum intensity for the ETA AQUARID meteor shower is May 4. This shower averages 12 meteors per hour and is associated with Halley's Comet.

---A. L. White

SEE THE MAY ISSUE OF SKY AND TELESCOPE for details of the "Astronomy Special" to the Miami Convention of the Astronomical League. This will be a coach car with reserved seats, attached to a regular Miami train, arriving in Miami about 2 P.M. on Sunday, July 1. Thus you can travel with other amateurs and begin your astronomical holiday from the time you board the train on Saturday. You may return at any time you wish. Plan to participate in the conducted tour to Havana, probably leaving Miami immediately after the convention on Wednesday, July 4. There we will visit the Cuban National Observatory and other observatories in the greater Havana area. There will be sightseeing galore. No passport or visa is required of native-born Americans. There are no immunizations or inoculations. The only requirement is an identity card costing \$2.50.

The last date on which registration at \$1.00 will be accepted is May 1. Make your check or money order payable to MIAMI ASTRONOMICAL CONVENTION COMMITTEE and mail to Astronomical League Convention, c/o McAllister Hotel, Miami, Florida. From May 2 through July 1 registration will be \$2.00 per person or \$3.50 per entire family.

---Grace C. Scholz

THE NCA appreciates the courtesy of the National Association of Home Builders for making their auditorium available to us for the Regional Convention.

BOOK REVIEW: A NEW CATALOG OF NEBULA - (what to do on cold winter evenings when you can't observe). By Christopher Walker and Stephen Klingelhofer.

Two up-and-coming junior astronomers, being bored with enforced idleness during winter evenings when it was too cold or too cloudy for observing, undertook to list in catalog form all of the nebula, galaxies, and Messier objects shown on the Skolnate-Pleso Charts. They come up with a 14-page catalog listing 591 objects brighter than the 13th magnitude. The objects were listed numerically, beginning with No. 1 (their number) and classified as to type, i. e., planetary nebula, galactic clusters, globular clusters, etc. The size of the

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object in minutes of arc was given as well as the R.A. and declination. The "first edition" was distributed to friends in February 1956 and it could well be the basis for an "NGC" hobby for amateurs. The authors are to be commended for their efforts and it is hoped that they will bring out a second edition designed particularly for amateur observers. The cold and cloudy evenings of the winter 1956-57 would be a good time to undertake this project.

---Hoy Walls

NCA MEMBERS WITH TELESCOPES are again cooperating with the National Capital Parks in bringing their telescopes to nine public outings during the outdoor season for 1956. The following schedule has been arranged and appears in the National Capital Parks public catalogue of events.

Date	Place	Time
May 13, Sunday	Ft. Reno Park	9 p. m.
May 27, Sunday	Ft. Reno Park	9 p. m.
June 16, Saturday	Ft. Reno Park	9 p. m.
July 3, Tuesday	Barnard Hill Park	9 p. m.
July 15, Sunday	Ft. Reno Park	9 p. m.
August 5, Sunday	Ft. Reno Park	9 p. m.
August 14, Tuesday	Rock Creek Park Grove #17	8:30 p. m.
September 30, Sunday	Ft. Reno Park	7 p. m.
October 13, Saturday	Ft. Reno Park	7 p. m.

All members with telescopes are invited (requested) to save this schedule and plan on coming to several of these public service (and fun) outings. Ft. Reno Park is located at 40th and Chesapeake Sts., N. W. Barnard Hill Park is near the intersection of Bunker Hill Road and Eastern Avenue, N. E. Grove No. 17 is one-quarter mile south of Military Road and Oregon Avenue, N. W.

---Dana K. Law

BOOK REVIEW: A GALLERY OF SCIENTISTS by
Rufus Suter. \$3.00 Vantage Press,
Inc., 120 W. 31st Street, New
York 1, N. Y.

This vivid gallery of word portraits brings into new perspective the significance of the work of ten great men of science, from Aristotle through the centuries to Hume, Watt, and Kant. Particularly interesting are the author's analyses of each scientist's technique for studying the riddles of nature--for this is the very essence of scientific history.

Aristotle, first to experience awareness of inference; Dr. William Gilbert of Colchester, Elizabethan physician who fathered magnetic science, did spadework in the field of static electricity, and coined the Latin word from which "electric" is derived. Galileo, originator of telescopic astronomy and founder of modern physics; Blaise Pascal, physicist, mathematician, and Christian mystic, whose skeptic genius represented enlightened common sense--these are but a few who appear. A GALLERY OF SCIENTISTS is a volume to entertain, to engross, to instruct. From its illuminating pages one may learn with a discoverer's joy as he reads of great men to whom today's world owes so much.

The reader is led before each of these brilliant men as if he were in a gallery, and, as he pauses before each, the author quickly and expertly pens for him a word-sketch of the great one, both as a man and a scientist.

RUFUS SUTER, who is a frequent attendant at the monthly lectures of the National Capital Astronomers, and who once led for us a round table discussion devoted to memorials of Galileo in Italy, went as far afield as Florence, Padua, London, and Colchester to assemble data for this book. He haunted libraries, working painstakingly and conscientiously, to present not only a factually correct picture of his subject, but of his true background.

I recommend this book wholeheartedly. It is an adventure to read.

---Jewell Boling

LAST CALL FOR MIDDLE EAST REGION CONVENTION: National Capital Astronomers, hosts, Washington, D. C., May 4-6.

Here are the highlights of the program planned for you:

Friday evening Visitors from out of town who want to
May 4, 6:00-10:30 get in touch with friends, go to 1625
L Street, N. W. anytime after 6 p.m.
(National Association of Home Builders
auditorium) At 8 o'clock there will
be two good movies in color by
courtesy of the International Business
Machines Corporation.

Saturday Registration starts at 8:30 at the Commerce
May 5 Auditorium, 14th Street, N. W. between E Street
and Constitution Avenue. Bring your exhibits.
From 9 to noon there will be the opening session
and one on observing. The latter will feature
papers on Lunar Surfaces, Messier Objects,
Auroras and solar observing for IGY, and various
other topics.

Features of the afternoon session will include
a description of an Annular eclipse expedition
in Africa, a discussion of Tektites, some pa-
pers by juniors, a workshop for adults inter-
ested in working with junior groups, and an in-
strument session led by Leo Schoenig.

Dinner will be at 6 p.m. at the Graystone
Restaurant, 730 17th Street, N. W., for \$2.25.
Back at the Commerce Auditorium, at 8 o'clock,
Dr. Homer B. Newell, Jr., of the Naval Research
Laboratory, will speak on "The International
Geophysical Year and the Space Frontier."

Sunday morning There will be a session on the Artifi-
May 6 cial Satellite at the Commerce Auditorium
beginning at 9 o'clock. It will be fol-
lowed by a brief closing business session.

Send \$1.00 registration fee and your dinner reservation to:

Mrs. Lillian R. Gregor

3937 S Street, S. E.

Washington 20, D. C.