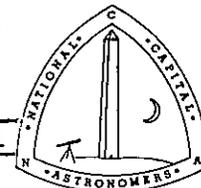




UNPERTURBED

by feeble tellurian efforts, the earth's natural satellite displays a rugged central region in this excellent photograph by Lyle Johnson. Our own Dr. James Q. Gant's crater is indicated by the marginal marks. Photo: 16" f:5, 1/5 sec. Microfile, on night of November 11/12, 1957.



September, 1958

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## KUPPERIAN OPENS LECTURE SEASON



Dr. James E. Kupperian, Jr.

A new, ultraviolet map of the sky is being developed which offers promise of vastly increasing our knowledge of the universe. Just as radio astronomy has, in the past few years, opened the invisible radio cosmos to us, rocket astronomy is providing our first clear look into the heavens with the shorter wavelength ultraviolet radiations.

These early observations have revealed large nebulosities which would, if visible, be among the most spectacular features of the sky.

Because ultraviolet energy, like light, is the result of atomic processes, these new observations will complement those of radio astronomy, made possible by electrical activity of the source. Thus, through the combination of the two techniques, much may be learned about both the visible and invisible sources.

In his September 6 lecture, Dr. James E. Kupperian, Jr., will describe the techniques and results of this powerful new tool.

Dr. Kupperian, an upper air research physicist of the Naval Research Laboratory, was graduated from the Webb Institute of Naval Architecture, the University of Delaware, and the University of North Carolina, where his Doctorate was conferred in 1952.

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## SEPTEMBER CALENDAR

- 6 (Saturday) - "FAR ULTRAVIOLET RADIATION OF THE NIGHT SKY" - by Dr. James E. Kupperian, Jr., at the Department of Commerce Auditorium, 14th and E Streets, NW, 8:15 PM.
- 13 (Saturday) - MONTHLY JUNIOR MEETINGS with Leith Holloway will be resumed. Chevy Chase Community Center at 2:00 PM.
- 13 (Saturday) - "EXPLORING THE SKY" - jointly with the National Capital Parks, at 8:00 PM at Fort Reno Park, 40th and Chesapeake Streets, NW. Bring friends and telescopes.
- 20 (Saturday) - DISCUSSION GROUP - In the Foyer of the Department of Commerce Auditorium, at 8:00 PM.
- 22 (Monday) - TELESCOPE MAKING CLASS resumes with Hoy Walls at 7:30 PM, Chevy Chase Community Center.
- 26 (Friday) - GROUP OBSERVING at the NCA 5" with Patrick Moretti, 8:00 PM at the Naval Observatory. NCA card will admit you.

## ASTRONOMY COURSES OFFERED

The NCA will offer a free, public course in astronomy at the Guy Mason Community Center this fall. Mr. U. S. Lyons, who is an astronomer with the U. S. Naval Observatory, will teach. Planned for adults, the course is another cooperative project between NCA and the D. C. Department of Recreation.

The Graduate School of the U. S. Department of Agriculture will offer an elementary course in descriptive astronomy. Registration at the Department will be September 13 - 20. Information may be obtained from Instructor, Mr. Armstrong Thomas, FE 3-3642.

There is a possibility that the Extension Division of the University of Virginia, Arlington, will offer a course in astronomy this semester. Call the University of Virginia, JA 8-6660.

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## ANOTHER PLANETARIUM NEARBY

The Prince Georges County Public School System has purchased a Spitz model A planetarium and has installed the instrument in the Prince Georges County Public School Materiel Center in Bladensburg, on Tilden Road near Kenilworth Avenue.

It will be used by the school system in connection with their science program.

The dome has a diameter of about 23 feet and will seat about 60 persons.

The instrument will be under the immediate supervision of Mr. Howard B. Owens, Science Supervisor. Mr. Owens recently became a member of NCA. Mr. Ferd Gardano is the lecturer.

Hoy J. Walls

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## BOB WRIGHT RECORDS MOONPROBE TRY AT SILVER SPRING

On the morning of August 17, with antennas oriented toward Cape Canaveral, Bob Wright and Bob McCracken attempted to record telemetry signals from the first Moonprobe vehicle. At approximately the time the giant Thor - A exploded, the signals began to appear, then undulated in a regular way which nearly always indicated that the rocket is tumbling. Something was wrong! In about two minutes the signals had disappeared, and within a few more minutes the radio confirmed the unfortunate result.

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## MRS. DICKERSON RESIGNS; MRS. ROTBART APPOINTED

Mrs. Lorraine Dickerson, NCA Secretary Elect, has found it necessary to resign because of personal plans. A meeting of the Trustees was held on August 21 for the purpose of filling the vacancy by appointment, pursuant to Article III, Section 2, of the NCA bylaws. Mrs. David Rotbart, having accepted the responsibilities of the office, was appointed thereto by the Trustees.

We thank Mrs. Dickerson for the effort as we welcome our new Secretary, Mrs. Rotbart, to the staff.

Robert H. McCracken, President

## LYLE JOHNSON SPOTS SMALL VANGUARD AGAIN

For the second time, Lyle Johnson has obtained a telescopic fix on the seven-inch Vanguard sphere, using his famous 16-inch "Johnsonian" f:5 reflector with a 1¼-inch Erfle ocular, giving a 1.1° field at 64X. The result of this excellent observation: 17 hrs. 35.8 min., 22.9°N., July 16, 3:00:41 UT. Magnitude: 14.

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## OBSERVATIONAL DATA FOR SEPTEMBER

Mercury is a morning star in September and reaches greatest western elongation on the 9th. It may be seen on the morning of the 10th, when it will be very close to Regulus.

Venus is a morning star rising an hour before the sun. It will pass close to Regulus on the 9th.

Mars is in Taurus and rises a few hours after sunset.

Jupiter is near the horizon in the southwest at sunset.

Saturn is in Ophiuchus and sets a little while before midnight.

## LUNAR OCCULTATIONS DURING SEPTEMBER

Date	Star	Mag.	Age	Phase	Time (EST)	P
Sept. 8-9	68 Gem	5.1	25.3	R	4:33.7 AM	214°
Sept. 18	BD-18°4320	6.9	5.5	D	8:54.6 PM	104°
Sept. 21	BD-17°5699f	7.1	8.6	D	11:11.7 PM	114°

A. L. White, Astronomy Editor

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## CELESTIAL NAVIGATION BY BIRDS

The navigation powers of birds have fascinated investigators for more than a century. In August the Scientific American gives account of researches which have produced a new answer to this long-standing mystery. Rigidly controlled experiments were made to test birds placed in a planetarium. The birds' behavior, confirmed by experiments with other birds, leaves no room for doubt that birds have a hereditary mechanism for orienting themselves by the stars. The birds automatically know the right direction with their very first glimpse of the sky. Without previous experience and with no cue but the stars, the birds are able to locate themselves in space and time and find their way to their destined homes. They circle helplessly when clouds hide the stars. The article asks, "What evolutionary process was it that endowed these animals with the highly sophisticated ability to read the stars?"

Jewell Boling

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## SOLAR ATMOSPHERE MAY BE "MISSING LINK"

"Hot spots" in the sun's corona offer at present the most promising lead to an explanation of the sun's production of cosmic rays, according to an interesting presentation by Harold Zirin, astronomer of the High Altitude Observatory of the University of Colorado, in the same (August) issue of Scientific American.

Jewell Boling