

chambers for x rays between 1 and 20 Å and 44 and 60 Å, and ion chambers for ultraviolet emanations between 1080 and 1350 Å. The data obtained on the daily average x-ray flux will be provided to the Institute for Telecommunications Sciences and Aeronomy, Boulder, Colo., for rapid publication.

Hydromechanics projects sought

The David Taylor Model Basin is soliciting proposals for contract research on topics in fluid mechanics that are of interest to the Navy. This invitation is for projects to be paid for during fiscal 1967 under a continuing program maintained by the Bureau of Ships. Although the program is administered by the David Taylor Model Basin, recipients of grants will work in their own nongovernment laboratories.

Areas of interest include resistance, propulsion, stability, control, seakeeping characteristics, radiation of underwater sound, and other problems applicable to surface and subsurface naval craft. Deadline for submitting proposals is the middle of March. Inquiries about the program or the format of proposals should be sent to Stuart F. Crump, Contract Research Administrator, Code 513, David Taylor Model Basin, Washington, D.C. 20007. The actual proposals should be submitted to: Commanding Officer and Director, att: Code 513.

Dusting the upper atmosphere

Two rockets and a balloon were sent up to collect micrometeoroid particles in the upper atmosphere during the Leonid meteor shower at the end of November. The Leonids are a swarm of tiny particles orbiting the sun in an elliptical path that evidently crosses the earth's orbit. Once a year the earth meets the swarm, and a meteor shower lasting several days results. The particles are thought to be cometary debris captured by solar gravitation.

A rocket was fired from White Sands on Nov. 16 carrying collecting surfaces amounting altogether to about a square yard of area. These were extended at the proper height

and successfully swept up samples of the particles (diameters less than a thousandth of an inch). At the time of writing, scientific analysis of the recovered material had not been completed. Principal investigator for this shot is Neil H. Farlow of the Ames (Iowa) Research Center.

The second rocket, fired on Nov. 17, carried collection devices provided by Curtis L. Hemenway of the Dudley Observatory (Albany, N. Y.), which were not described. According to reports in early December, the firing achieved its purpose in spite of the failure of a recovery parachute.

The balloon, also under Hemenway's scientific direction, flew from Palestine, Texas, on Nov. 18 and 19. It cruised at 95 000 ft for 5 to 10 hr at a time. Results of the balloon experiment were not available at the time of writing.

The National Aeronautics and Space Administration provided financial and technical support.

New management for Argonne

The recently established Argonne Universities Association has elected its first trustees and officers. AUA is a corporation of 26 universities formed to participate in a tripartite agreement for the management of Argonne National Laboratory. Other parties to the agreement are the Atomic Energy Commission and the University of Chicago, which operates the laboratory.

Fred H. Harrington, president of the University of Wisconsin, was elected chairman of the board of trustees of AUA. John A. Cooper, dean of sciences at Northwestern University, is vice president; Wilbur K. Pierpont, vice president of the University of Michigan, is secretary treasurer; and D. Robert Thomas is assistant secretary treasurer. A president for AUA will be elected later.

AUA was formed in response to recommendations of a committee chaired by John Williams of the University of Minnesota, which studied the management of the laboratory. Its membership includes universities (the University of Chicago is one), ranging in location from Arizona to Ohio. Under the new management plan,

AUA will formulate, approve, and review policies and programs of the laboratory, and the University of Chicago will operate the laboratory in "a manner responsive to the policies established by the new corporation." AUA's first task will be to negotiate a tripartite agreement for the operation of the laboratory.

Solar-radiation alarm system

Development of a system to provide warnings when solar radiation reaches levels dangerous to astronauts has begun in Houston. A monitoring station recently constructed at the NASA Manned Spacecraft Center is the first part of a chain that will include stations at Grand Canary Island and Canarvon, Australia.

Equipment of the Houston station consists of two monitoring telescopes. One is a hydrogen-alpha solar-patrol instrument fitted with special filters to provide an optical image of the solar surface. A 35-mm camera permits time-lapse photography of the development of a solar flare. There are also an occulting cone for coronal observation and a grid that enables observers at different stations to compare findings. The telescope has a 4-in aperture.

The other scope is a mirror and objective lens system that delivers an 8-in white light image of the sun to a spectrograph. The total cost of the Houston station was \$171 000.

If the network spots a developing solar flare, warnings can be flashed to astronauts (for example, those on the moon) in time for them to take shelter since excess radiation generated by the flare would take several days to reach them.

Yeshiva science center

Yeshiva University has begun construction of a \$15-million science center to house its Belfer Graduate School. The building, which will have 200 000 sq ft of space, will stand at Amsterdam Ave and 184th St. in New York City. It will replace a leased building now occupied by the Belfer School. Major portions of the building will be devoted to physics, a computer center, mathematics, nuclear research, chemistry, biophysics, and astrophysics.