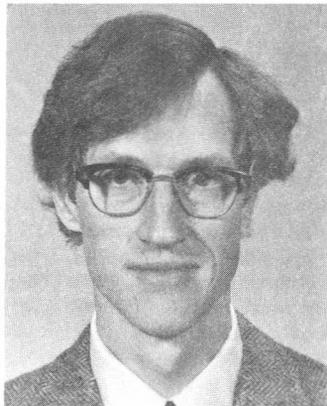




## MATHER TO INTRODUCE COSMIC BACKGROUND EXPLORER



DR. MATHER

Dr. John C. Mather, NASA Goddard, will describe the Cosmic Background Explorer (COBE) satellite, to be launched in 1989, at the 4 December meeting of National Capital Astronomers. Dr. Mather organized the group to propose the COBE in 1974.

The COBE satellite will study the diffuse infrared and microwave radiation remaining from the primeval explosion, the "Big Bang."

This radiation, which once was the dominant constituent of the universe, is the major evidence of conditions in those earliest times. Was the universe homogeneous or turbulent? Was there annihilation of regions of antimatter? When and how did the first objects form?

The COBE will carry three instruments to measure this radiation over the range from 1 micron to 1 cm. Both the theory of the early

universe and the NASA plans for the satellite will be described.

John C. Mather received his B. A. with Highest Honors from Swarthmore in 1968, and his Ph. D. in physics from the University of California at Berkeley in 1974. At the Goddard Institute for Space Studies in New York, he undertook a post doctoral study of stellar silicon monoxide masers. Since 1976 he has been Study Scientist and Project Scientist for the COBE at Goddard Space Flight Center at Greenbelt, Maryland. He is also Principal Investigator for one of the three COBE instruments.

### DECEMBER CALENDAR — *The public is welcome.*

Friday, December 3, 10, 17, 24, 31, 7:30 PM — Telescope-making classes at American University, McKinley Hall basement. For information: Jerry Schnall, 362-8872.

Saturday, December 4, 6:15 PM — Dinner with the speaker at the Thai Room II, 527 13th Street, NW. Reservations unnecessary.

Saturday, December 4, 8:15 PM — NCA monthly meeting at the Department of Commerce Auditorium, 14th and E Streets, NW. Dr. Mather will speak.

Tuesday, December 7, 14, 21, 28, 7:30 PM — Telescope-making classes at Chevy Chase Community Center, Connecticut Avenue and McKinley Street, NW. Information: Jerry Schnall, 362-8872.

Saturday, December 18, 8:00 PM — Discussion group at the Department of Commerce: "Star Catalogs, Atlases, and Other Aids." NCA: 320-3621.

## NOVEMBER LECTURE

Dr. Wayne Warren, NASA Goddard Space Flight Center, described and demonstrated the Astronomical Data Center of the National Space Science Data Center during the November 6 meeting of National Capital Astronomers.

The National Space Science Data Center (also known as World Data Center A) established in 1965, is one of several data centers located throughout the world. It is responsible for retrieval and archival of all space science data obtained from rockets and satellites, and provides special services for analysis of collected data. When possible, the data are reduced and documentation produced so that the data will be usable to the largest number of requesters.

The Astronomical Data Center is responsible for the development, improvement, and dissemination of machine-readable astronomical catalogs and data, in addition to the archiving and distribution of all data from the International Ultraviolet Explorer satellite mission. Of interest to astronomers are the services available from the Astronomical Data Center. Those astronomers who have a compatible computer system may make direct computer inquiries of the astronomical database. A bibliographical catalog, which contains indices to several journals, provides a unique service not available from libraries. Astronomical catalogs devoted to astrometry, photometry, spectroscopy, cross-identification of stars, and extragalactic objects are all available on machine-readable magnetic tape. More traditional media, such as punched-card, printout, or microfiche are also available, in most instances at no cost to the requester. Requests for complete catalogs will be filled in the form of magnetic tape. The requester must provide the tape.

One may learn of the services available by obtaining a copy of the Astronomical Data Center Bulletin. It is published semiannually and lists what catalogs are available or in the process of being entered into the data base. Documentation describing the format of a catalog is also available. When making requests for mailed data, one should allow 4 to 6 weeks lead time.

It is the hope of the Astronomical Data Center that small observatories will be able to dial into the computer and obtain all of the data on a star of interest or, with compatible graphics capability, even produce finder charts.

At the conclusion of his presentation, Dr. Warren demonstrated the use of the Astronomical Data Center, using a terminal to display requested data from magnetic tape.

Richard Bordelon

## NCA VISITS NASA GODDARD

On Wednesday 17 December NCA toured several facilities of NASA Goddard Space Flight Center. Mr. William P. O'Leary, Protocol and Congressional Relations Officer, our gracious host, escorted and guided us.

Beginning with a slide presentation, Mr. O'Leary reviewed the GSFC history, capabilities, and functions. He then escorted us to the Mission Control Center, the vast computer complex, the data routing center, the voice network control center, where we were greeted from JPL, Spain, England, and Australia; the IUE tracking facility, the environmental testing facility, and the IUE control room, where we were shown several satellite views of the sky.

There was far more than can be covered here. We thank Mr. O'Leary for this privilege, and David Hassler for the arrangements. Daniel Costanzo

## NCA PUBLIC DISCUSSION SESSION WELL ATTENDED, WELL RECEIVED

Our efforts to disabuse potential telescope purchasers of some widespread misconceptions, including the "power!" myth, seems to have been on target. Following a discussion of fundamentals, Jerry Schnall demonstrated telescope making while John Redlich and Stan Cawelti were kept busy demonstrating the representative telescopes they provided, until nearly 11:00 pm.

## OCCULTATION EXPEDITIONS PLANNED

Dr. David Dunham is organizing observers for the following grazing lunar occultations in December. For further information call Dave at 585-0989.

UT		Place	Vis	Pcnt	Cusp	Min
Date	Time		Mag	Sunlit	Angle	Aper
12-07-82	06:23	Hyattstown, MD	8.8	54	3N	20 cm
12-08-82	06:33	Gist, MD	8.6	43	3N	20 cm
12-10-82	08:51	Garrisonville, VA	8.0	22	3S	8 cm
12-18-82	22:28	Myersville, MD	9.1	11	11S	20 cm
12-30-82	11:34	Potomac, MD	8.8	During total lunar eclipse		

## NCA TO TOUR ARECIBO FACILITY IN FEBRUARY

National Capital Astronomers will visit the 1000-foot radiotelescope facility at Arecibo, Puerto Rico, during the Washington's Birthday holiday. We have engaged Executive Travel, Inc. to make the arrangements.

We will depart Saturday morning, 19 February, and return Tuesday evening, 22 February. From our hotel near the beach in San Juan, interesting side trips will be available, including Old San Juan and the Rain Forest.

Details will be mailed to members in early December. David Hassler will coordinate the trip.

## NCA WELCOMES NEW MEMBERS

Charles R. Allen, Jr.  
Spanish Garden Apts, #130  
Triangle, VA 22172

Richard Bordelon, #33  
3316 Woodburn Village Drive  
Annandale, VA 22003

Dr. David Gordon, # 301  
9120 Edmonston Court  
Greenbelt, MD 20771

Mr. & Mrs. E. John Hutzell  
3413 Tulane Drive, #13  
Hyattsville, MD 20783

Mr. & Mrs. Patrick J. Kearney  
7 Staton Drive  
Upper Marlboro, MD 20772

Dr. Eleanor S. Packman  
4301 Massachusetts Avenue, NW  
Washington, DC 20016

## NCA NOW SKY PUBLISHING AGENT, OFFERS MEMBERSHIP DISCOUNTS

National Capital Astronomers now offers significant discounts to members who purchase Sky publications. Orders and inquiries should be directed to Ruth S. Freitag, treasurer, 521-7831.

## CLAIM YOUR OBSERVER'S HANDBOOK

Several copies of the *Observer's Handbook* have not been picked up by those who ordered them. They should be either picked up at the December meeting at \$4.50, or requested to be mailed at \$5.25. Those remaining unclaimed by 10 December will be subject to sale. Make checks payable to National Capital Astronomers, and mail to Ruth S. Freitag, treasurer, 1300 Army-Navy Drive Apartment 806, Arlington, VA 22202.

## GET MORE FROM YOUR MEMBERSHIP

The services you enjoy as a member of NCA are provided by the efforts of several dedicated people who enjoy greater returns by participating in various interesting aspects of NCA operations. You too can enhance your membership by sharing your talents. If you can help with occasional typing, typesetting, summarizing lectures, technical writing, organizing tours, educational services, discussion groups, distribution, publicity, legal or insurance consulting, or coordinating observing projects, NCA needs you! Call NCA: 320-3621.

## EXCERPTS FROM THE IAU CIRCULARS

1. September 25 — Backer, Kulkarni, and Heiles, University of California; Davis, Arecibo Ionospheric Observatory; and Goss, University of Groningen detected a pulsar in 4C21.53 in Vulpecula with a period of only 1.558 ms.

2. October 1 — E. A. Harlan, Lick Observatory, observed (9) Metis visually on several nights with the 1-m reflector and 90-cm refractor in an unsuccessful search for a satellite. Occultation observations and elongated photographic images had indicated that a satellite might exist and be visible at the opposition of Metis.

3. October 16 — Jewitt, Danielson, Gunn, Westphal, Schneider, Dressler, Schmidt, and Zimmerman recovered Periodic Comet Halley (1982 i) using a charge-coupled device with the 5.1-m telescope. The recovery was confirmed on October 18 by Belton and Butcher using a charge-coupled device on the Kitt Peak 4-m telescope.

Robert N. Bolster

## U.S. NAVAL OBSERVATORY COLLOQUIUM SCHEDULED

On 16 December at 2:00 pm Dr. William C. Erickson of the University of Maryland and Director of Clark Lake Radio Observatory, Borrego Springs, California, will speak: "Radioastronomy at Long Wavelengths: Pulsars, Supernova Remnants, and Extragalactic Sources."

The colloquia are held in Room 200, Building 52, at the Naval Observatory. NCA members are welcome. Enter the Observatory at 34th Street and Massachusetts Avenue, NW, where the guard will require some identification and provide directions. Park behind Building 52. Coffee and tea will be served following the talk. Further information: 254-4540.

## FOR SALE

Telescope — Newtonian 10-inch F/6, with rotating Parks tube and rings, cross-axis mount and piers, 10-inch setting circles, motors, and clutches, \$650.00. Optec SSP-1 unused photometer with strip-chart recorder, \$990.00. Cleve Hopkins, (301) 972-0951.

*STAR DUST may be reproduced with proper credit to National Capital Astronomers.*

★ S T A R D U S T

WASHINGTON, D. C.



Published eleven times yearly by NATIONAL CAPITAL ASTRONOMERS, INC., a non-profit, public-service corporation promoting astronomy and related sciences through lectures, expeditions, discussion groups, tours, classes, public programs, and publications. President and Editor, Robert H. McCracken. Deadline 15th of preceding month. Information: (301) 320-3621. Material for publication: *STAR DUST*: 5120 Newport Avenue, Bethesda, MD 20816.

FIRST CLASS