



## NCA ANNUAL FILM NIGHT IN MAY



*The earth from Apollo 16, April 16, 1972  
(NASA photo)*

Three professionally-produced astronomical films will highlight the Annual Business Meeting and Elections of National Capital Astronomers on May 5.

*Voyage into Darkness*, filmed by Eclipse Cruises, Inc., aboard the TSS *Olympia* last summer, shows the total solar eclipse that most of the land-based NCA members missed. The 45-minute color film will give the many members headed for the 1973 eclipse a good idea of what to expect aboard ship and what to bring.

*Apollo 16*, the official NASA summary of the next-to-last lunar mission and the latest film in the series, shows the enormous Saturn V in action, exploration using the lunar rover, and the post-lunar blast-off walk in space.

*Exploration of the Planets* summarizes current NASA programs in planetary research and the ways in which observations from Mariner flybys have greatly altered our ground-based conceptions of planetary conditions.

### MAY CALENDAR

Friday, May 4, 11, 18, 25, 7:30 PM — Telescope-making classes at American University, McKinley Hall basement. Information: Jerry Schnall, 362-8872.

Saturday, May 5, 8:15 PM — NCA monthly meeting at the Department of Commerce Auditorium, 14th Street and Constitution Avenue, NW. Three films will be shown. Election of new officers will take place **BEFORE** the films. **ALL MEMBERS PLEASE BE PRESENT SO THAT THERE IS A QUORUM.**

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

Saturday, May 12, 8:30 PM — Exploring the Sky, presented jointly by NCA and the National Park Service. Glover Road south of Military Road, NW, near Rock Creek Nature Center. Information: Bob McCracken, 229-8321.

Goddard Space Flight Center Scientific Colloquia — Fridays at 4:00 PM in the auditorium of Building 3.

May 4 — Black Holes and Cosmology

May 11 — Incidence of Cancer

May 18 — UV Photography from the Moon

May 25 — Energetic Solar Electrons (J. A. Van Allen)

June 1 — Gamma-Ray Astronomy

## 1973 NCA ELECTION

At the May meeting, members will elect officers for the fiscal year beginning July 1, 1973. The Nominating Committee, composed of Charles P. Shephard, Chairman, Alexander L. White, Jay H. Miller, and Bruce Muirhead presents the following slate:

President — John A. Eisele  
Vice-President — Henning W. Leidecker  
Secretary — Estelle Finkle  
Treasurer — Lawrence C. Torrance  
Sergeant-at-Arms — Arthur B. Jarvis  
Trustee — James J. Krebs (replacing Robert N. Bolster)

The trustees have agreed that only the election part of the annual meeting will take place before the films. Members shall register as they arrive and shall receive a single ballot form. Nominations may also be made at the meeting.

## APRIL LECTURE

Dr. M. R. Kundu, professor of astronomy at the University of Maryland, surveyed solar radio astronomy for us at the April 7 meeting of NCA.

Radio study of the sun began in 1942 with the use of British radar equipment. Because publication of this work was delayed by military secrecy, the first paper in the field to be published was by a former NCA vice-president — Grote Reber. The discovery of Planck's Law probably had delayed solar radio work for decades, a fascinating chapter in the history of astronomy.

Optical information comes from a solar layer only about 300 miles deep. At radio wavelengths we see a much greater range of solar depths, from thermal emission well below the photosphere at millimeter wavelengths to plasma emissions far out in the corona at wavelengths of tens of meters.

Our speaker summarized the properties of the main types of stellar radio emission — thermal, synchrotron, Cerenkov, and plasma — and the nature of their emission from the sun in particular, as seen on oscilloscopes and strip-chart records. These types enable early and indirect detection of solar flares so that they may be studied by other instruments, and give a three-dimensional picture of flares.

Near San Diego, California, a University of Maryland team is building a telescope composed of 720 vertical helix antennas to detect interference fringes from solar flares at frequencies between 20 and 60 MHz. The 49 pencil-beam lobes of reception will be used to study the interplanetary solar corona, for correlation with satellite solar wind measurements.

Dr. Kundu brought with him a film produced by his colleagues at Calgoora Radio Astronomy Observatory in Australia. This study of type-III radio emissions, using the 96 45-foot dishes of the interferometer 1.8-mile-diameter circle, is one of the finest science films we have ever seen. Kundu concluded his lecture by answering a number of questions on solar polarization problems.

## MERAL CONVENTION

The Mid-East Regional Convention of the Astronomical League will convene on Saturday morning, June 9, 1973, at the Quality Courts Motel in Towson, Maryland, hosted by the Baltimore Astronomical Society. There will be papers by amateurs, talks by professionals, a telescope fair, a flea-market, astrophotography exhibits, and a contest, with a special banquet in the evening. Advanced registration is \$2.00 per member, or \$3.00 per family. See Bob Wright, EV4-6748. Those wishing to give papers, contact William Rever III, 1306 Dulaney Valley Road, Towson, Maryland 21204.

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## NOTES FROM MEMBERS

George Lovi, author of the *Sky and Telescope* "Rambling Through the Skies" column, wrote June LoGuirato that, "Incidentally, you might be interested in knowing that the company I'm associated with, Viewlex, Inc., has just installed a sophisticated planetarium in the Smithsonian Air and Space Museum which I personally aligned and adjusted."

Father Francis Heyden wrote June from Manila that, "I am the astronomy section for solar observations with spectroheliograph and Lyot-type filter. The radio astronomy section is strictly for the sun with low resolution but covering six frequencies. Then there is the ionosphere station and the seismic section with three sites for observations."

"My job includes a solar flare reporting setup that stands by teletype equipment for immediate notices to the Air Force... and NOAA... I brought a lot of spectrographic equipment with me so that in a year or so I shall be doing some more work with the sun and astrophysical metals."



Hopewell Observatory

In this 180° view of the night sky, centered on  $\beta$ -Geminorum, south is at the bottom, west is at the right. Note the Big Dipper at upper left, and the aircraft trace crossing M42 in Orion at lower right. William Winkler made this one-hour exposure at 0330 UT, March 25, 1973, on Tri-X at f/5.6.

## DIRECTORY CORRECTIONS

1. Henning Leidecker's telephone number is 864-6816.
2. Nace Crawford is a Junior Member.
3. James Kreb's address and telephone number are: 617 E Street, SE, Washington, D. C. 22203; 544-5080.

## NCA SCIENCE FAIR AWARDS 1973

Richard Muniz, John Lohman, Victor Slabinski, Bill Winkler, Henning Leidecker, Bob Wright, Paul Burnett, Jerry Schnall, and Wilbur Lund generously gave part of a weekend to judge astronomy-related exhibits at the five County Science Fairs. The following students have won one-year memberships in the Society and subscriptions to *Sky and Telescope* Magazine for projects of outstanding quality:

## Eastern Fairfax

- Arlin Crotts, Jr. (photoelectric photometry)
- Mark Goode (astrophotography, Michelson Interferometer)

## Western Fairfax

- Howard Schellenberg (stellar photography)
- Debbie Saba, Debbie Hewett (joint, constellation study)

## Arlington

- David McAllester (Kepler's Law simulator)
- William Kennon (Stonehenge as calendar)

Prince Georges — unreported: District of Columbia — no awards.

ABSTRACTS FROM THE IAU CIRCULARS

1. March 5 — P. Wild, Astronomical Institute, Berne, discovered a fast-moving object of 15th magnitude in Leo.

2. March 7 — Dr. L. Kohoutek, Hamburg Observatory, Bergendorf, discovered another comet (1973f). Just south of Cancer in Hydra, it was of 16th magnitude. It is expected to become visible to the naked eye in November, when it will be 3 hr west of the sun and 5° north of it. It will reach  $m = 0$  while 2 hr west and 2° south, and may reach  $m = -10$  while passing 0°5 north of the sun on 28 December.

3. March 13 — J. Gibson, Observatorio Austral Yale Columbia, El Leoncito, discovered a fast-moving object in Centaurus. About 15th magnitude, the object will pass 0.1 AU from the earth around May 11.

4. April 1 — Dr. Kohoutek discovered a 17th-magnitude supernova in NCG 4944.

FOR SALE

An original Copernicus Text: "Instituto Astronomica, Iuxta Hypotheses tam Veterum quam Copernici & Tychoonis: Dictata Parifiis A Petro Cassendo," and so on. M.DC.LVI, 328 pages in latin plus some poetry. Several diagrams. Best offer over \$40.00. Available for inspection at the May meeting. Mabel Sterns, 462-4972.

Refractor, Edmund 3-inch f/15, equatorial mount, wooden tripod, setting circles, dew cap, 2 oculars, and a Barlow; \$110.00 delivered. Eric Broody, 229-4261.



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