



CHRISTY TO RELATE HIS DISCOVERY OF CHARON



JAMES W. CHRISTY

The discoverer of the satellite of Pluto, James W. Christy, Exploratory Development Staff, U. S. Naval Observatory, will speak to National Capital Astronomers at the September 9 meeting on his discovery and its significance to the astronomy of the outer solar system. He will follow with a discussion of the role of the individual in scientific discovery.

Christy noted a periodicity in the occasional elongation of the image of Pluto on plates taken by the astrometric telescope at the Flagstaff station of the Naval Observatory — plates that had been rejected as useless for measurement by other workers because of the elongations. Subsequent dynamical considerations by Robert Harrington of USNO led rapidly to confirmation by other observatories. The discovery was announced by the Observatory on July 7, 1978.

NCA will be further honored by the presence of Mrs. Charlene Christy, for whom the satellite was named, as nearly as possible in accord with the naming convention.

James W. Christy received his B.S. at the University of Arizona in 1965, and joined the staff of the Flagstaff, Arizona station of the U. S. Naval Observatory where he was employed 9 years before coming to the USNO at Washington, D. C. 7 years ago. His fields of study are radial velocities for galactic structure, spectroscopy and parallaxes of M-dwarfs, and color photography of galaxies.

SEPTEMBER CALENDAR — *The public is welcome.*

Friday, September 1, 8, 15, 22, 29, 7:30 PM — Telescope-making classes at American University, McKinley Hall basement. Information: Jerry Schnall, 362-8872.

Saturday, September 2, 4:00 PM — NCA picnic at Manassas Battlefield Park. See page 3 for details.

Monday, September 4, 11, 18, 25, 7:30 PM — Telescope-making classes at Chevy Chase Community Center, Connecticut Avenue and McKinley Street, NW. Information: Jerry Schnall, 362-8872.

Saturday, September 9, 6:15 PM — Dinner with the speaker at Bassin's Restaurant, 14th Street and Pennsylvania Avenue, NW. Reservations unnecessary.

Saturday, September 9, 8:15 PM — NCA monthly meeting at the Department of Commerce Auditorium, 14th and E Streets, NW. James Christy speaks.

Saturday, September 23, 4:00 AM — *Exploring the Sky* special — a pre-dawn program presented jointly by National Capital Astronomers and the National Park Service to open the annual Rock Creek Park Weekend festivities. Planetarium if cloudy. Glover Road south of Military Road, NW, near Rock Creek Nature Center. Information: Bob McCracken, 229-8321.

Saturday, September 30, 8:00 PM — *Exploring the Sky*, presented jointly by National Capital Astronomers and the National Park Service. Location as above. Planetarium if cloudy. Information: Bob McCracken, 229-8321.

MERAL CONVENTION HIGHLIGHTS

The 1978 Middle East Regional Convention of the Astronomical League was hosted by National Capital Astronomers on the weekend of August 18 at the Lathrop E. Smith Environmental Education Center in Rockville, Maryland.

Some of the highlights (there were others) heard by about 135 people were given by:

Dr. James Q. Gant, Association of Lunar and Planetary Observers and NCA, who spoke on techniques of lunar observation; Hugh Pettis, Silver Spring, MD, on his systematic study of solar activity; Dr. David Dunham, Director of the International Occultation Timing Association, on the discovery of a satellite of the asteroid (532) Herculina; Richard Binzel, USNO, who assisted James Christy and Robert Harrington in the computations, on the discovery of Charon, the satellite of Pluto; James Trexler, NCA President, who described a program for the optimization of rich-field telescope parameters.

Dr. Albert Boggess, Goddard Space Flight Center, NASA, Project Leader for the International Ultraviolet Explorer (IUE) satellite observatory, the dinner speaker, displayed a model of the IUE and described the project in considerable detail, and gave some of the early results, including the discovery of certain stars having unusually high heavy-metal abundances.

A popular hands-on attraction was Trexler's computer terminal with which participants could try the telescope-parameter-optimization program developed by Dr. John Eisele of the U. S. Naval Research Laboratory.

For the success of the convention, particular credits are due to G. R. Wright, Daniel Lewis, James Trexler, and David Hassler.

NOTES ON CURRENT RESEARCH

How distant are quasars?— The cosmological interpretation of their large spectral redshift places them at the greatest observed distances in the universe. There, their intrinsic brightness requires an energy source far exceeding the limits of present physical understanding. Thus far, no successful hypothesis has emerged which would place these objects at distances commensurate with reasonable energy sources, the rapid observed variations, and their huge redshifts.

As a cosmological test, Alan Stockton, of the Institute for Astronomy, University of Hawaii, describes a program of spectroscopy of all galaxies brighter than the red limit of the Palomar Sky Survey within 45 seconds radius of each of eight quasars. Of 29 galaxies, he has obtained redshifts for 25, 13 of which agree within $1,000 \text{ km s}^{-1}$ with those of the respective quasars. The striking statistical significance of these associations tends to corroborate the cosmological interpretation. *Astrophysical Journal*, August 1, 1978.

Black holes?— Close examination of six globular clusters, three of them X-ray sources, by the International Ultraviolet Explorer (IUE) satellite has revealed core details previously inaccessible, according to NASA. Dr. Herbert Gursky, et al., Harvard-Smithsonian Center for Astrophysics, report that a group of 10 to 20 bright blue stars orbit very close to the core, suggesting the possibility of a black hole at the center of the cluster. Prior to the IUE, the interior details were obscured by numerous red giants.

The evidence is by no means conclusive, Gursky emphasizes. Further dynamical study of the orbiting stars will be necessary to determine whether an additional gravitational source is present.

These observations were presented to the American Astronomical Society by L. W. Hartman, of the Center for Astrophysics, on June 28, 1978.

ALDEBARAN, HYADES CLUSTER TO BE OCCULTED LOCALLY

The first of a series of occultations of Aldebaran (M=1.1) and the Hyades cluster will be visible from the Washington, DC area on September 22, 1978. For the best of these, included below, an aperture of 5 cm or more will be adequate. This listing furnished by Michael Mangieri, Raymond Finkleman, and David Dunham. Call Dunham for observational information: (301) 585-0989.

UT Date	Time	Star (ZC)	Vis Mag	Moon Alt	Pcnt Sunlit	Cusp Angle	Sun Alt	Min Aper
09-22-78	02:44	635	3.9	3	70	62S	-	5 cm
09-22-78	05:36	659	6.4	35	69	53S	-	5 cm
09-22-78	07:33	667	5.3	56	68	74N	-	5 cm
09-22-78	08:42	677	4.8	65	68	38S	-	5 cm
09-22-78	11:25	692	1.1	58	67	-71S*	5	5 cm
09-22-78	12:44	692	1.1	44	67	74S	20	5 cm
09-23-78	10:18	806	5.1	68	58	38S	-8	5 cm
09-24-78	09:47	944	5.7	62	48	67N	-	5 cm

*Disappearance (Aldebaran). All other events are reappearances.

GRAZING OCCULTATION EXPEDITIONS PLANNED

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

UT Date	Time	Place	Vis Mag	Pcnt Sunlit	Cusp Angle	Min Aper
09-11-78	00:15	Urbana, MD	8.7	60	2S	20 cm
09-11-78	01:32	Templeton, VA	7.6	60	5S	13 cm
09-24-78	06:25	Gaithersburg, MD	8.4	49	7N	13 cm
09-24-78	07:47	Richmond, VA	9.2	49	7N	20 cm
09-25-78	06:12	Beltsville, MD	10.5	40	7N	30 cm
09-28-78	09:27	Beltsville, MD	5.1	14	3N	3 cm

NCA PICNIC AT MANASSAS BATTLEFIELD PARK ON SEPTEMBER 2

Bring your picnic dinner, telescopes, and guests, and enjoy another NCA outing at Manassas Battlefield Park on Saturday, September 2, at 4:00 PM.

Go west on I-66 approximately 17 miles from the Beltway to Route 234, right on 234 1.7 miles to the site on the left. Follow the dirt road to the picnic tables. Picnic will be held regardless of weather short of rain at the time.

NCA TO PARTICIPATE IN ROCK-CREEK-PARK-WEEKEND FESTIVITIES

At the request of the National Park Service, a special *Exploring the Sky* program will be held on Saturday morning, September 23, at 4:00 AM, opening the annual Rock Creek Park Weekend celebration. The location will be as usual, on Glover Road south of Military Road, NW, near Rock Creek Nature Center. If Jupiter and the Moon are obscured, a planetarium program will be given in the Nature Center.

For further information on the program, call Bob McCracken, 229-8321. For information on other Rock Creek Park Weekend activities, call the Park Headquarters, 426-6832.

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EXCERPTS FROM THE IAU CIRCULARS

1. June 12 — Maragon and Kwitter, University of California, Los Angeles, and Parkes, University College, London, detected an absorption spectrum in the optical counterpart of X-ray burster 4U 1837+04 (Ser X-1) with an image-tube scanner on the 305-cm Lick reflector. These are the first absorption features found associated with a burster.

2. July — R. D. Eberst, Royal Observatory, Edinburgh, discovered a comet and a fast-moving object in Microscopium on plates taken a year ago with the 122-cm Schmidt at Siding Spring.

3. August — J. D. Mulholland, University of Texas, examined an image of Pluto, obtained by P. J. Shelus on 1977 May 22 with the 208-cm reflector at McDonald Observatory, and found a 10-15 percent elongation as predicted by the Naval Observatory.

4. August 11 — H. E. Schuster, European Southern Observatory, discovered a fast-moving asteroidal object of 16th magnitude in Sculptor.

This listing courtesy R. N. Bolster.

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