



WESTERHOUT TO SURVEY INTERFEROMETRY



DR. WESTERHOUT

Dr. Gert Westerhout, Scientific Director of the United States Naval Observatory, will speak at the September 6 meeting of National Capital Astronomers on the principles of interferometers, both radio and optical.

The talk will to a large extent be tutorial; Dr. Westerhout will explain the advantages of interferometry, as well as the pitfalls and difficulties, both atmospheric and electronic. He will then discuss the Green Bank Interferometer operated by the National Radio Astronomy Observatory.

This interferometer is used exclusively by the U. S. Naval Observatory (since October 1978) to make radioastrometric observations, and is the first dedicated radioastrometry facility in the world. It consists of three 85-foot telescopes at the Green Bank site, and a 45-foot

telescope on a mountain 35 km away, connected with the main site by radio link.

By observing about 20 radio sources 24 hours a day, a precise determination of this baseline vector can be made with respect to a celestial inertial reference frame. Because the baseline is Earth-fixed, this yields precise information on Earth motion, e. g., changes in rotational velocity and axis wander, as well as very precise positions of the observed radio sources.

Born in the Netherlands, Dr. Westerhout received his Ph.D. in astronomy from Leiden University in 1958. He immigrated in 1962 to become Professor and Director of the new Astronomy Program at the University of Maryland, and is now a United States citizen. He built up the Astronomy Program to one of the ten best in the country.

In 1967 he left the University to become the Scientific Director of the U.S. Naval Observatory.

Dr. Westerhout's primary interest has been radioastronomical determination of the structure of the Milky-Way Galaxy. He published the first catalog of radio sources in the Galaxy, and more than 50 papers on radioastronomy. At the U.S. Naval Observatory he has changed fields somewhat, in that he is now in charge of the Nation's fundamental astronomy effort, both radio and optical, including astrometry and time determination.

Among the many functions he has served, he is immediate past president of the Commission on Radioastronomy of the International Union of Radio Science.

SEPTEMBER CALENDAR — *The public is welcome.*

Tuesday, September 2, 9, 16, 23, 30, 7:30 PM — Telescope-making classes at the Chevy Chase Community Center, Connecticut Avenue and McKinley Street, NW. Information: Jerry Schnall, 362-8872.

Friday, September 5, 12, 19, 26, 7:30 PM — Telescope-making classes at American University, McKinley Hall basement. Information: Jerry Schnall.

CALENDAR continued on page 2

CALENDAR - *continued*

Friday, September 5, 8:30 PM, September 12, 19, 26, 8:00 PM - Observing with the NCA 14-inch telescope with Bob Bolster, 6007 Ridgeview Drive, south of Alexandria off Franconia Road between Telegraph Road and Rose Hill Drive. Call Bob at 960-9126.

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

Saturday, September 6, 8:15 PM - NCA monthly meeting at the Department of Commerce Auditorium, 14th and E streets, NW. Dr. Westerhout will speak.

Saturday, September 13, 3:00 PM - Joint NCA - SPSE picnic. See article.

TREASURER'S REPORT

Balance on hand July 1, 1979		\$947.22
Income		
Membership dues	\$3435.10	
Telescope-making classes	400.30	
Gifts to telescope fund	186.50	
Trip to Green Bank Observatory	979.94	
Sale of Observer's Handbooks	96.00	
Total Income	<u>\$5097.84</u>	
Expenses		
Sky and Telescope subscriptions	\$1477.50	
Star Dust printing and postage	713.66	
Trip to Green Bank Observatory	911.00	
Purchase of Observer's Handbooks	126.00	
Astronomical League dues	96.74	
Insurance, supplies, miscellaneous	<u>348.39</u>	
Total Expenses	<u>\$3673.29</u>	
Excess of Income over Expenses		<u>1424.55</u>
Balance on hand June 30, 1980		\$2371.77

(Signed) D. G. Lewis
Treasurer

JOINT NCA-SPSE OUTING PLANNED

The Hopewell Corporation invites National Capital Astronomers and the Society of Photographic Scientists and Engineers Washington Chapter to enjoy a picnic followed by a night of observing on Saturday, September 13. The picnic will begin at 3:00 PM at Manassas National Battlefield Park. At 6:30 we will caravan a few miles to Hopewell observatory for a night of observation and celestial photography, weather permitting. The picnic will be held unless it is raining at the time.

To reach Manassas National Battlefield Park, go west on I-66 approximately 17 miles from the Beltway to Route 234, the Manassas exit. go right (north) on 234 1.7 miles to the picnic area on the left. Follow the short dirt road to the picnic tables.

Bring your picnic dinner, telescopes, if desired, cameras, family, and guests.

At the observatory, the Hopewell Corporation will provide coffee, tea, cocoa, and soft drinks. There are no sanitary facilities at the observatory.

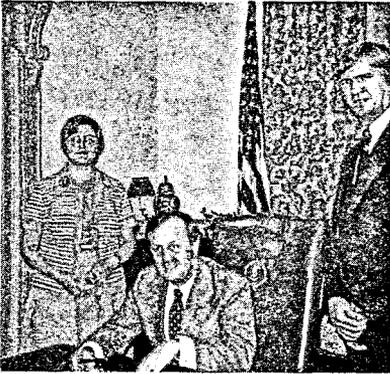
We look forward to exchanging photographic and astronomical techniques and making new friends.

OCCULTATION EXPEDITIONS PLANNED

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

Date	UT Time	Place	Vis Mag	Pcnt Sunlit	Cusp Angle	Min Aper
09-27-80	02:35	Barco, NC	4.4	89	12N	5 cm
		Star Mag	Asteroid Mag	Name of Asteroid		
09-04-80	11:12	El Paso, TX	8.9	12.5	(78) Diana	10 cm
09-15-80		Eastern U.S.	9.8	8.6	(6) Hebe	20 cm

ONE SMALL STEP....



Local governments in Virginia now "may regulate by ordinance outdoor lighting within an area one-half mile around planetariums, astronomical observatories and meteorological laboratories."

This authority was held by the House of Delegates until NCA member June LoGuirato worked for the passage of light-pollution legislation in the state.

Virginia's Governor John Dalton signs into law the new legislation at a Richmond ceremony in the presence of Miss LoGuirato and Senator Charles Waddell, who worked for passage of this local option.

Photo by Michael LoGuirato.

RALEIGH NC ASTRONOMICAL SOCIETY VISITS WASHINGTON

Members of the Raleigh, NC Astronomical Society met with an NCA group during their visit to Washington on the weekend of August 22-24. Following dinner with Bob McCracken and Drs. David and June Dunham, the group visited the NCA telescope-making class at the American University Physics Department. There, Jerry Schnall described and demonstrated telescope-making techniques and optical testing, and demonstrated the equipment for ion cleaning of mirrors and deposition of coatings by vacuum evaporation of aluminum and silicon monoxide.

David Dunham then discussed the occultation program with the group. Afterward, Bob McCracken accompanied them to the NCA 5-inch Clark refractor at the Naval Observatory, and, the following morning, on a visit to Hopewell Observatory.

The group then toured the National Air and Space museum and the U.S. Naval Observatory, their primary objective, before returning to Raleigh on Sunday.

We enjoyed meeting our guests and helping them enjoy their trip.

SMITHSONIAN OFFERS PROGRAMS

On the first Saturday morning of each month, the National Air and Space Museum offers elementary programs in the planetarium. The next program will be on September 6 at 9:00 AM.

EXCERPTS FROM THE IAU CIRCULARS

1. July 12 — M. Rosker, Hale Observatories, discovered a possible supernova of 14th magnitude between NGC 4374 and NGC 4406 in the Virgo cluster.

2. July 24 — S. van den Bergh, Dominion Astrophysical Observatory, reported that a red plate taken with the Hale 5-m telescope showed a faint filament 8' southeast of SS 433. (Ed. note — SS 433 is a peculiar object which displays anomalous radial velocity, appearing to approach and recede simultaneously.)

3. July 31 — Chernis and Petrauskas, Sternberg Astronomical Institute, Moscow, reported the discovery of a 9th-magnitude comet in southern Ursa Major. The discovery had not been confirmed as of 8 August.

4. July — D. J. Tholen, University of Arizona, reported that photometric studies of (216) Kleopatra showed it to be 59 to 126 km in maximum diameter, much smaller than the 219 km previously accepted. The object appears to be elongated, with a minimum diameter 1/2 of the maximum. Kleopatra is predicted to occult stars on October 10 and November 21, providing opportunities for direct measurement.

FOR SALE

Tasco 2.4-inch refractor, used, good condition, with 3 oculars, solar projection screen, and Porro-prism erecter for terrestrial use. Ron Bashian, evenings: 534-3555.

Newtonian 6-inch reflector, 50-inch fl. equatorial mount, all-aluminum, open frame, accessories. \$225.00. William Ritter, 1805 Ironton Drive, Oxon Hill, MD 20021, 839-5275.

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* STAR DUST



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