

# the physics community

## Ovadia succeeds Krohmer as AAPM president-elect

President-elect of the American Association of Physicists in Medicine is Jacques Ovadia. He succeeds Jack S. Krohmer, who is beginning his term as president. Ovadia is chairman of the department of medical physics at the Michael Reese Hospital, professor of radiology at the University of Chicago, and adjunct professor of physics at the Illinois Institute of Technology.



OVADIA

Ovadia's research interests include the therapeutic use of high energy electrons and x rays, short-lived isotope tracers, the mechanism of radiation action and pulse radiolysis. He earned his doctorate in nuclear physics in 1951 at the University of Illinois.

## Koch discusses copyright problems with abstracts

"Copyright provides the principal legal, scientific and economic protection for authors and publishers. It is also a key vehicle for defining property rights so as to insure the most accurate, economical and wide dissemination of primary-journal articles." This was the dual theme of a talk given by H. William Koch, director of the American Institute of Physics, to a 10 July meeting of the International Council of Scientific Unions Abstracting Board in Berlin. The problems of copyright violations by unauthorized cover-to-cover reproduction of journals have been much discussed (for example, *PHYSICS TODAY*, February, page 23). In his Berlin paper

Koch paid particular attention to abstracts, their use and misuse by abstracting and indexing services that are increasingly becoming computerized.

**Computer tapes of abstracts.** The INSPEC division of IEE is the principal abstracting and indexing service for physics. Since 1970, it has been photo-composing *Physics Abstracts* from a computer tape—making it the first major international abstracting and indexing service in physics to be completely computerized. AIP has provided similar abstracting and indexing services (Searchable Physics Information Notices, or SPIN) for its primary journals and other important physics journals—an outgrowth of an NSF-funded program intended to stimulate sharing of computer tapes by major abstracting and indexing services as they become computerized. The computerization of both AIP and IEE and the fact that over 25% of the entries in *Physics Abstracts* are from AIP journals are strong reasons, Koch said, for close cooperation between the two institutions.

Some of the AIP-IEE negotiations have borne fruit including the joint use of AIP's Physics and Astronomy Classification Scheme (PACS). The problem remains, however, that since January 1974 IEE has been sidestepping the issue of copyright of abstracts by rewriting AIP journal abstracts, which potentially leads to more serious difficulties. It is possible for a given primary-journal article to have both its original abstract and one or more rewritten versions on various computer tapes, and, Koch noted, errors are being introduced into the rewritten versions. Partly because of these errors as well as the existence of several versions, confusion will result when tapes are merged for subject-limited compilations, such as for energy or environment. For example, Chemical Abstracts Service tapes, INSPEC tapes and SPIN have three different versions of abstracts for an AIP-produced journal article, only one of which (SPIN) has been checked by the author in the review of his article's page proofs. When all three tapes are merged to produce a printed set of abstracts, which abstract is to be used? The original abstract written by the author would serve best and should be used verbatim in tape form by secondary publishers. Another serious problem that arises from errors in computer tapes is the inability to locate an author and hence his paper by a computer search if even a minor error in the spelling of his name exists on the computer tape.

**Cost Sharing.** The economic problem pointed out by Koch is the elimina-

tion of resource sharing of costly computer tapes. This happens when secondary publishers rewrite to avoid honoring the copyright of abstracts of the primary journals. Related to elimination of this cooperation is the development of competitive information services based on the abstracts and articles originating in primary journals. Koch urged cooperation between publishers of primary journals and secondary services by the honoring of copyrights. Further, he urged the verbatim use of abstracts in computerized form as a means of insuring accuracy and sharing the costs now assumed by the author and the publisher.

## Chapman wins AIP-US Steel science-writing prize

Robert D. Chapman has won the 1974 AIP-United States Steel Foundation Science Writing Award in physics and astronomy for his pamphlet, "Comet Kohoutek." Chapman is supervisory astrophysicist and head of the computations section in the laboratory for solar physics at the Goddard Space Flight Center, Greenbelt, Maryland. "Comet Kohoutek" was published by the Educational Programs Branch of the GSFC Office of Public Affairs.

H. William Koch, director of the American Institute of Physics, will present the award to Chapman at the annual meeting of Corporate Associates to be



CHAPMAN

held in Washington, D.C. on 15 November. The prize consists of \$1500, a citation and a Moebius strip trophy.

Chapman earned his PhD in astronomy from Harvard University in 1964. He was an assistant professor of astronomy at the University of California, Los Angeles from 1964 until 1967, when he assumed his present post at the Goddard. Since 1970 he has also been a lecturer in astronomy at the University of Maryland, College Park.

## APS doctoral employment service enters second year

Plans are completed for Fall enrollment in the APS Doctoral Employment Information Service. The American Institute of Physics conducts the DEIS

for the APS to promote the employment of PhD physicists seeking academic, industrial and governmental positions. All physicists who now have or expect to have doctorates by September 1975 may use the service.

Publication of a separate book of candidates seeking industrial employment is part of DEIS's expansion as it enters its second year. The new volume grew out of a suggestion of an APS review committee. The service will also offer the teaching volume to a large number of educational institutions and will distribute supplemental resumes for all volumes biweekly.

During the 1973-74 academic year 700 physicists submitted resumes and

supporting letters that were compiled into nine volumes organized into research areas or teaching. The service has supplied approximately 200 nine-volume sets and over 60 individual volumes to academic and industrial employers.

Prospective participants should enroll promptly to be considered for positions filled early in the 1974-75 academic year. Brochures and enrollment forms will be available by 20 September at physics department offices, placement centers throughout the country and from the Doctoral Employment Information Service, American Institute of Physics, 335 East 45th Street, New York, N.Y. 10017.

## Satellites

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MHz, the interference was about 20 times the acceptable level as set by the International Radio Consultative Committee (CCIR) with radio interference decreasing with increasing frequency in the band. There was also interest to see if interference would result from the third harmonic of the ATS-6 signal—the University of Michigan carried out tests at this frequency and found that the third-harmonic intensity was very low and should not interfere with radioastronomy bands in that region.

Data on the magnitude of SMS-1 interference are now being analyzed. Barry Turner, staff scientist at the National Radio Astronomy Observatory, finds that the interference level, defined for a single polarization and in terms of an isotropic antenna, is 17 times above the CCIR specifications. When a powerful antenna such as the 140-foot one at Green Bank is used, even crude astronomical observations could not be carried out when the telescope was pointed within five degrees of SMS-1. For sensitive work, involving signals of 0.005 flux units, Turner said, it was possible that SMS-1 would interfere with observations over the whole sky.

**The future.** The presence of ATS-6 and SMS-1 is undesirable for radioastronomy, Kerr noted, but there is nothing that can be done now to modify the satellite transmitters short of turning them off. Observers, he said, can put better filters on their receivers to remove interfering signals more effectively just adjacent to their observing band, and of course, avoid working when the observer, satellite and the object under study are nearly along the same line of sight. From the point of view of radioastronomers, Kerr said, "the important thing is to try to influence what happens in the future. We can perhaps

live with one or two satellites, but if twenty or a hundred satellites that interfere in this way are put up, it would be catastrophic." —RAS

## in brief

The Bartol Research Foundation of the Franklin Institute is celebrating its 50th anniversary.

The Astronomical Society of the Pacific is soliciting nominations for its 1975 Trumpler Award. The award is given to a recent PhD recipient who has done unusually important astronomy research. Heads of North American physics and astronomy departments may send nominations to Trumpler Award Nominations, Astronomical Society of the Pacific, 75 Southgate Ave, Daly City, Cal. 94015.

The Faculty Exchange Center helps to arrange exchanges of university and college faculty members within the US and overseas. For information write to FEC, PO Box 1866, Lancaster, Pa. 17604.

An NSF report, *An Analysis of Federal Research and Development Funding by Function, FY 1974-75* (NSF 73-316), may be obtained from the Superintendent of Documents, Washington, D.C., 20402, for \$1.90 per copy.

Salaries and unemployment rates are discussed in *Doctoral Scientists and Engineers in the U.S., 1973 Profile*. Single copies may be obtained without charge from the Commission on Human Resources, National Research Council, 2101 Constitution Ave., N.W., Washington, D.C., 20418.

Copies of *Graduate Science Education: Student Support and Postdoctorals, Fall 1972* (NSF 73-315) may be purchased from the Superintendent of

Documents, Washington, D.C., 20402, for \$2.85 each.

The new Free University of Iran, located in Tehran, will be a combined media university system for correspondence study; the university will be similar to the Open University in the UK. Sources of instruction will include correspondence texts, television and radio broadcasts and other audio-visual media, and traditional classroom interactions.

*Journal of Physics A: Mathematical, Nuclear and General* is expanding into the nuclear-physics field. The journal was monthly during 1973 and is scheduled to appear 18 times in 1974. Issues will alternate between nuclear topics and mathematical and general topics.

The US Small Business Administration has named Maxwell Laboratories Inc of San Diego, California as 1974 National Small Business Subcontractor of the Year.

New York State is supporting solar research with a \$200 000 appropriation for work to be done at the Atmospheric Sciences Research Center at the State University of New York at Albany.

*Energy Sources*, a quarterly, has appeared under the editorship of T. F. Yen. Volume one (four issues) is available for \$28.00 from Crane, Rusak, 347 Madison Ave, New York, N.Y. 10017.

US senior scientists and engineers are eligible for grants from the Alexander von Humboldt Foundation. Annual funding of DM 5 million will be available from the Foundation for research and teaching to be carried out on projects at German institutes. Monthly stipends range from DM 2 600 to 6 000 with travel expenses paid. For information, write to Alexander von Humboldt Foundation, D-53 Bonn-Bad Godesberg, Schillerstrasse 12, West Germany. □