
Meetings

X-Ray Astronomy

X-RAY ASTRONOMY was the topic of a one-day conference held at the Smithsonian Astrophysical Observatory on May 20, attended by representatives of various universities and institutions engaged in research in this field. The program, chaired by A. V. Baez of SAO, included talks on the astrophysical aspects of x-ray astronomy by R. J. Davis of SAO and S. Olbert of the Massachusetts Institute of Technology. H. E. Hinteregger of the Air Force Cambridge Research Center spoke on the recent results that he and his co-workers obtained in measuring the x-ray flux above the earth's atmosphere. The problems of x-ray image formation by grazing incidence reflection were discussed by P. H. Kirkpatrick of Stanford. R. Giacconi of American Science and Engineering, and A. V. Baez each announced details of the status of their separate approaches to the design of an x-ray telescope. Dr. Giacconi demonstrated his grazing-incidence total-reflection flux collector, a visible-light analogue which sharply discriminated between closely separated point sources. Dr. Baez illustrated the high resolution obtainable with short wavelengths diffracted and focused by specially constructed Fresnel zone plates. He described his preliminary results with a reflecting "telescope" constructed of an array of crossed plane mirrors which simulated a matrix of pinhole camera images brought to a common focus.

The proceedings of the conference will be edited by A. I. Berman of Rensselaer Polytechnic Institute, and can be obtained by writing to the Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge 38, Mass.

A. I. Berman

Sigma Pi Sigma

THE Executive Council of Sigma Pi Sigma, physics honor society, held its annual meeting at Oberlin College on June 25-26, 1960, following the close of the meetings of the American Association of Physics Teachers. Members present were: Stanley S. Ballard, president; L. Worth Seagondollar, vice president; Marsh W. White, executive secretary; Vincent E. Parker, past president; and D. J. Tendam and George Barnes, councilors.

The report of the Executive Secretary indicated a year of activity that was one of the most satisfactory in the history of the Society.

In physical growth during the 1959-60 academic year the Society added eight new chapters, resulting in a

total of 107 active chapters in June, 1960. During this year 1200 new members were received into the chapters, giving a total active chapter membership of 2600 and a grand total in the Society of about 17 000. The chapters held more than 800 meetings during the year with a considerable number of visiting physicists but most of the programs utilized local student and faculty speakers.

At some 20 colleges and universities both chapters of Sigma Pi Sigma and student sections of the American Institute of Physics are maintained. The Executive Council of the Society has been giving consideration to plans for more effective coordination of the activities of these two organizations. Arrangements have been made for the Administrative Office of the Society to distribute to the chapter officers some of the literature prepared by the AIP for the use of physics students.

By action of the Convention of the Society in May, 1959, the chapters are now operating under ten regional organizations, each with a Zone Supervisor who automatically becomes a member of the National Executive Council. These Councilors act as general stimulators and coordinators of chapter activities. This system is designed to aid in the coordination of chapter activities and to maintain all of them as active working units. The Zone Supervisors arrange for annual regional conferences of the chapters in the zones. The programs of these conferences include science events, lectures, demonstrations, and student papers as well as business and social meetings.

The Council requested the Executive Secretary to promote further activity in the publication of chapter bulletins. Chapters at William Jewell College, Loyola University, Purdue University, and Manhattan College were commended for their especially fine publications and newsletters.

The National Constitution and Bylaws of the Society provide for the election of a limited number of honorary members by the Council after suggestions are received from the chapters. The Council agreed that hereafter such nominations will first be submitted to the entire group of current honorary members. If affirmative votes are received from two-thirds of the honorary members who participate, the nominee will be considered elected and eligible to be received into this class of membership. During the 1959-60 year the following honorary members were received: William Band, Washington State University; John W. Evans, Sacramento Peak Observatory; Vincent Schaefer, Munitalp Foundation; and Milton G. White, Princeton University.

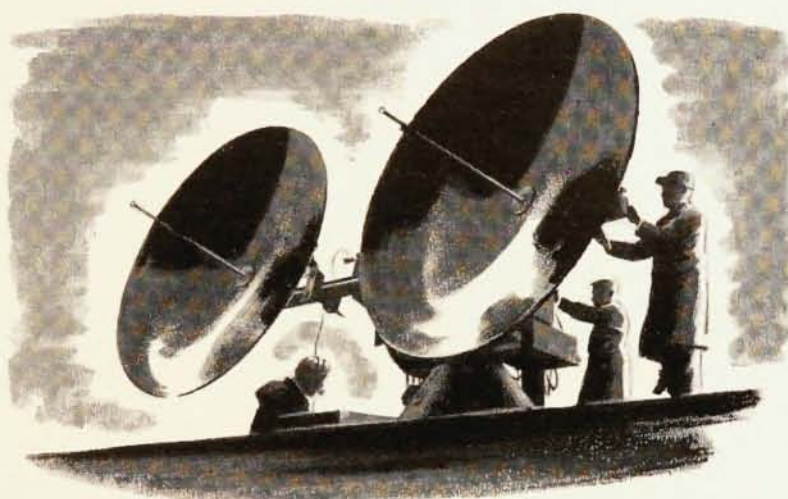
The Council gave consideration to several alternate long-range proposals for the staffing of the Executive Secretariat of the Administrative Office of the Society. These plans include seeking support from the alumni members of the Society, physics departments, and industrial organizations.

Policies with regard to the publications of the Society were reviewed by the Council. It was decided to work toward the publication of four issues of *The Radiations* each year and to continue issuing *The Bul-*



how to "Get Wind" of a tornado

The quest for accurate tornado "signatures" by scientists at CAL may one day permit tornado path prediction at great savings in life and property. Here, CAL engineers conduct meteorological radar echo studies applying Doppler radar techniques to weather observation. The heart of this program is a Doppler Velocity Measuring Tornado Warning System which has been developed for the United States Weather Bureau.



If you have a background of accomplishment in the fields of radar and electronics, and would like the opportunity to range into such areas as propagation of electromagnetic energy, atmospheric electricity, weather radar, and experimental radar systems, CAL has openings which you will find worth investigating.

More than 100 of the Laboratory's 400-man professional staff are electronic engineers or scientists.



**CORNELL AERONAUTICAL
LABORATORY, INC.**
of Cornell University

J. T. RENTSCHLER
CORNELL AERONAUTICAL LABORATORY, INC.
Buffalo 21, New York

Please send me a copy of "A Community of Science."

Name

Street

City Zone State

☐ Please include employment information.

DR

letin about eight times per year for the guidance of the chapter officers. New editions of *The Handbook for Chapter Officers* and the *Information Booklet* were authorized for early publication.

The next national convention of the Society was authorized for mid-October, 1962 or 1963 with a mid-western chapter as host.

Consideration was given to prospective charter grants for chapters at about ten strong colleges and universities during the 1960-61 year.

The meeting of the Council for the next year will be held on April 24, 1961, prior to the Washington meeting of the American Physical Society.

Marsh W. White

Pennsylvania State University

Electrical Insulation

THE annual Conference on Electrical Insulation of the National Academy of Sciences—National Research Council will take place October 17-19 at the National Bureau of Standards, Washington, D. C. In addition to technical sessions, there will be round-table discussions on dielectric breakdown in gases, liquids, and solids and fundamental aspects of new dielectric liquids (October 17) and on electrical discharges on insulation and fundamental aspects of new solid dielectric materials (October 18). Other program highlights include the presentation of the Whitehead Award and subsequently the J. B. Whitehead Memorial Lecture by Arthur R. von Hippel, whose subject is "In Search of Understanding". A banquet speech, "An Inside View of the Proximity Fuze Development", will be given by R. D. Huntoon. The chairman for local arrangements is the Conference secretary, Philip J. Franklin, Diamond Ordnance Fuze Laboratory, Washington, D. C., from whom further details can be obtained.

Society of Rheology

THEORETICAL and experimental papers dealing with such topics as normal stress effect, flow birefringence, rate of shear dependent viscosity, dynamic mechanical properties, creep, engineering applications of rheology, and theory of viscoelasticity will be presented at the 31st Annual Meeting of the Society of Rheology to be held from October 31 to November 2 in Pittsburgh, Pa. Registration and six technical sessions will take place at the Mellon Institute. The Society's Bingham Medal will be awarded at a smoker which will take place during the evening of November 1 at the Hotel Webster Hall.

The technical program will consist of discussions of the rheological properties of a wide variety of materials: mineral suspensions, blood, gelled oils, liquid crystals, and polymers (including their solutions and melts). There will also be a symposium on the mechanics of continua.

Further information on the meeting can be obtained from the chairman of the local arrangements committee, Hershel Markovitz, Mellon Institute, 4400 Fifth Avenue, Pittsburgh 13, Pa.

4th Welch Foundation Conference

MOLECULAR structure and organic reactions is the subject of the fourth in a series of conferences presented by the Robert A. Welch Foundation of Houston, Tex. The meeting is to be held November 7-9 at the Rice Hotel in Houston and will be presided over by W. O. Milligan, the Foundation's director of research.

About 600 scientists from the US and abroad are expected to take part in the conference, which will have as its principal speakers Arthur C. Cope (Massachusetts Institute of Technology), Vladimir Prelog (Laboratorium für Organische Chemie, Zürich), W. O. Baker (Bell Telephone Laboratories), R. Huisgen (University of Munich), R. B. Woodward (Harvard University), J. Monteath Robertson (University of Glasgow), Derek H. R. Barton (Imperial College, London), and Saul Winstein (University of California at Los Angeles). In addition twenty-four specialists will lead the scientific discussions following the formal addresses.

Since advance registration is desirable, persons interested in attending should contact Dr. W. O. Milligan, c/o P. O. Box 1892, Houston 1, Tex., as soon as possible.

Electronics

THE 12th Annual Mid-America Electronics Conference (MAECON) will be held November 14-16 at the Hotel Muehlebach in Kansas City, Mo. The meeting will begin with a round-table discussion on semiconductors and will continue with simultaneous sessions on semiconductors, microwaves, engineering education, and management. A banquet address will be given by William Shockley. Program and registration information can be obtained by writing to D. J. Patrick, 8930 Hardy Drive, Overland Park, Kan.

Irreversibility and Statistical Mechanics

GENERAL theory of irreversibility, random processes, liquids (theory and experiment), and irreversibility in gases and in plasmas are topics to be included in the program of a conference to be held by The Institute of Physics and The Physical Society of Great Britain. It will take place December 19-20 at Queen Mary College, London. Further information can be obtained from The Secretary, The Institute of Physics and The Physical Society, 47 Belgrave Square, London S. W. 1, England.

Microwave Theory and Techniques

ORIGINAL, contributed papers dealing with microwave research, development, and application are being sought by the Technical Program Committee of the 1961 National Symposium of the IRE Professional Group on Microwave Theory and Techniques (to be held May 15-17 at the Sheraton-Park Hotel, Washington, D. C.). Emphasis is expected to be placed on precision microwave measurements, particularly those involving plasmas, noise, parametric devices, etc.; solid-