Peaceful Uses of Atomic Energy

NEXT month in Geneva, Switzerland, scientists representing at least 65 governments and four specialized international agencies will take part in the Second International Conference on the Peaceful Uses of Atomic Energy. It will be held September 1–13 in the Palais des Nations and, as in the case of the first such conference in 1955, the sponsoring organization is the United Nations.

Sigvard Eklund, a nuclear physicist who has been director of research of the Swedish Atomic Energy Company in Stockholm since 1950, was appointed last fall as secretary-general of the conference, in which capacity he has been serving as an officer of the United Nations secretariat at UN headquarters in New York City. Prof. Eklund has been aided in the formidable task of planning the agenda and otherwise organizing the conference by Homi N. Sethna of India and Ivan Ulehla of Czechoslovakia. In addition, the basic scientific conference secretariat includes a carefully chosen international team of 21 scientific secretaries from 13 countries (all of whom are specialists in physics, chemistry, biology, or other fields pertinent to the theme of the conference). They have been responsible for evaluating the more than 2300 papers that have been submitted, of which fewer than one-third can finally be accepted for oral presentation in the time available during the conference. All of the papers submitted, however, will be published in the official *Proceedings*. Of the total number of papers received, over 700 have come from the United States. The next largest contributors among the participating nations are the United Kingdom with 195, the USSR with 190, and France with 163. Prof. Eklund has reported that "before the conference starts, there will be printed abstracts and papers containing 220 000 000 pages, half of which will be printed by the UN's own printing offices in New York and Geneva. The total weight of these documents will amount to 550 tons."

A revised but still provisional work program for the conference made public on July 7 calls for a schedule of 77 sessions distributed among five series of parallel technical sessions and one series of general sessions. The general sessions will deal with such topics as the future of nuclear power, experience with nuclear power plants, possibility of controlled fusion reactions, progress in the use of radioisotopes, recent developments in fundamental physics, and international collaboration in the field of atomic energy. The five series of technical sessions will cover developments in such areas as plasma physics, the physics of elementary particles, nuclear data and reactor theory, reactor physics and technology, chemistry, metallurgy, ceramics, isotopes and radiological protection, mining and processing of raw materials, and properties and fabrication of fuels and other reactor materials.

Preliminary planning for the conference was the responsibility of a seven-member United Nations advisory committee under the chairmanship of UN Secre-

tary-General Dag Hammarskjold. The committee members are scientists named by the governments of Brazil, Canada, France, India, the USSR, the United Kingdom, and the United States (whose representative is I. I. Rabi). In November 1957 the committee selected Francis Perrin of France to serve as president of the conference. Professor Perrin, an outstanding physicist, is France's high commissioner for atomic energy.

The program has been arranged to provide for three free afternoons during the twelve working days of the conference. The free periods will be used for private discussions or for informal sessions on topics of particular interest. On three evenings there will be lectures open both to the conference participants and to the general public where matters of more general interest will be discussed. The official languages of the conference will be English, French, Spanish, and Russian.

Twenty-one nations will conduct technical exhibits and demonstrations in a building specially constructed for the purpose on the grounds of the Palais des Nations. Plans for the United States' portion of the exhibition are perhaps not typical of those of the other twenty participating governments (the US has requested the use of more than a third of the building's 90 000 square feet of floor space) but they suggest, at least, that the show will tend towards the spectacular. In June, prior to his resignation, former AEC chairman Lewis L. Strauss announced that the US exhibit will include: operating experimental devices such as those used in laboratory research on controlled thermonuclear reactions; *two* working reactors; a full-scale model of the 38-foot-high pressure vessel and core of the Shippingport power reactor; scale models of other civilian power reactors that are operating or under construction in the US; and three operating laboratories—a health and safety laboratory which will be used to monitor the US exhibits, a radiochemistry and isotope laboratory, and a laboratory to demonstrate carbon-14 labeling techniques. The US exhibit will use 3000 kilowatts of electricity and it is estimated that 800 gallons of water per minute will be required to cool the thermonuclear devices. In addition, the US will send along 45 new technical films (each available to viewers in the four official languages) and will operate a technical information center in which there will be a comprehensive display of the books and periodicals on atomic energy subjects published in the United States. Other nations are also planning controlled fusion exhibits: the USSR is expected to show "models, diagrams, and equipment", the British exhibit will include a model of the ZETA device at Harwell, and a display is promised from France.

The conference *Proceedings* will be published in full by the United Nations as a 34-volume edition in English which will consist of the following: (1) material relating to the objectives and operation of the conference; (2) the record of all sessions; (3) complete texts of all papers submitted to the conference; and (4) a detailed index volume. The chief editor of the *Proceedings* will be John H. Martens, a staff member of the Technical Information Division at Argonne National Laboratory, who assisted in editing the 16-volume edition of the *Proceedings* of the first Geneva conference in 1955. The publication program is expected to be complete by June 1959, and to insure the early appearance of the volumes the printing is being done in several countries in Europe and North America. The volumes are expected to cost $15 per volume after they are out, but a special prepublication price of $435 has been announced for those who wish to order the full 34-volume set prior to November 30, 1958. Abridged editions in French and Spanish (estimated at 15 volumes each) will also be issued and will be available at a prepublication price of $190 per set. All orders or inquiries should be sent to the United Nations headquarters in New York.

Aeronautical Sciences

THE International Council of the Aeronautical Sciences, organized in 1957 by a group of aeronautical scientific societies in some twenty countries of the world, will hold its First Congress September 8–13 in the Instituto Nacional de Prevision, Madrid, Spain.

The program will commence with the Daniel and Florence Guggenheim International Memorial Lecture, to be delivered by Theodore von Karman, first honorary president of ICAS, and the Juan de la Cierva Lecture, which will be presented by Pedro Blanco. In addition to two general sessions, there will be special sessions on hypersonic flow, structures and aeroelasticity, heat transfer and heat barrier, jet engines and noise, boundary layer control, VTOL and STOL aircraft, heat-resistant materials, human engineering, and telecommand and telemetering.

Those wishing to attend the congress or desiring further information should contact Mr. S. Paul Johnston, Director, The Institute of Aeronautical Sciences, 2 East 64th Street, New York 21, N. Y. or Colonel Antonio Perez-Marin, Asociacion de Ingenieros Aeronauticos, Serrano 43, Madrid, Spain.

X-Ray Scattering from Metals

CURRENT experimental and theoretical developments in the field of small-angle x-ray scattering from cold worked metals will be reviewed at an international conference to be held September 23–25 at the Midwest Research Institute and the Linda Hall Library of Science and Technology in Kansas City, Mo. Lectures by invited specialists from several countries will form the nucleus of the conference and will serve as a basis for the discussion sessions. Conference participants will be housed at the University of Kansas, in a recently constructed dormitory which is easily accessible to the conference locality.

The proceedings of the 1958 International Conference on Small-Angle X-Ray Scattering from Metals will be published as a special section in *The Journal of Applied Physics*. Further information may be obtained from Midwest Research Institute, 425 Volker Boulevard, Kansas City 10, Mo.