

Low-Energy Reactions

CONFERENCE on Low-Energy Nuclear Reac-A tions was held in Moscow, November 19-27, 1957. The sessions had the following titles: Reactions with Light Nuclei, Polarization Effects, Neutron Reactions, Deuteron Reactions, Coulomb Excitation and Proton Reactions, Weak Interaction Problems, Photonuclear Reactions, Nuclear Reactions Induced by Heavy Ions, and Nuclear Models. There were about 600 nuclear physicists at the meetings of whom 35 were foreign guests of the Soviet Academy of Sciences, about half of them from Eastern Europe. Other countries represented were Canada, China, Denmark, Egypt, France, Great Britain, India, Italy, Sweden, and the United States. The foreign visitors were shown many research laboratories and two physics departments in universities. The visitors had a choice of visiting Kiev or Leningrad in addition to Moscow. Most of the visitors were shown the following accelerators: four cyclotrons, two electrostatic accelerators, three Cockcroft-Walton accelerators, three electron synchrotrons, a synchrocyclotron, and the synchrophasotron. In addition they saw two reactors, an isotope separation plant, and a metallurgical hot laboratory.

The foreign visitors were perhaps most impressed by the amount and quality of experimental equipment available in the universities for the training of physics students and by the large number of physicists being trained. For example, the University of Leningrad graduates 250 students a year from a 5-year physics curriculum, in the later parts of which the students specialize in one of the physics research fields, at Leningrad primarily in β -ray spectroscopy.

The extensive program of entertainment and the cordial reception reported by previous visitors to Russia were given to the foreign visitors to this conference also.

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Second Geneva Conference

International Conference on Peaceful Uses of Atomic Energy, the United Nations General Assembly passed a resolution in December 1955 recommending that a second such conference be organized under UN auspices within two or three years. Planning is already far advanced for the Second International Conference on Peaceful Uses of Atomic Energy, which is to be held

September 1-13 of this year in Geneva, Switzerland, and the United States has accepted an invitation to take part in the program.

Primary responsibility for planning and directing United States technical participation has been assigned by the Department of State to the Atomic Energy Commission. The AEC has established an office for that purpose (Office for International Conference, US Atomic Energy Commission, Washington 25, D. C.) and has appointed a technical director who will plan and coordinate all technical aspects of the role to be played by the United States in the 1958 Geneva conference. The newly appointed US technical director is L. D. P. King of the Los Alamos Scientific Laboratory. Dr. King, a physicist, has been a member of the scientific staff at Los Alamos since 1943. Before being named to his new post he was a group leader in the Laboratory's K Division, which is concerned with research and development of experimental power reactors. He is on loan to the AEC from Los Alamos.

Several thousand invitations to submit abstracts of scientific papers for presentation at the conference were distributed to research and academic institutions late last year by the AEC's office for United States participation in the conference. It has been emphasized that the number of papers that can be presented at Geneva is limited, and organizations have been urged to provide as comprehensive a coverage of subject material as possible in the papers to be submitted for consideration. In addition to the program of technical papers, the United States is planning to develop "an outstanding technical exhibit, a highly informative technical film program, and a collection of representative technical publications for distribution to the conference delegates".

The provisional agenda for the conference provides for a number of general sessions to consider such topics as the planning and development of nuclear power plants, the use of radioisotopes and the employment of nuclear energy for purposes other than the generation of electricity, operational experience in health and safety, recent developments in fundamental physics, and the possibility of developing controlled fusion reactors.

The program will also include four separate groups of parallel technical sessions.

Series 1, consisting of thirteen sessions, will deal with reactor technology, basic applications of chemistry in atomic energy, properties of reactor materials, processing of irradiated fuel elements, treatment of radioactive wastes, handling of highly radioactive materials, and experience in radioactivity problems arising from the operation of reactors and chemical plants.

Series 2 (sixteen sessions) will include information on problems in nuclear fusion, physics of elementary particles, physics of fission, nuclear data, reactor theory and calculation, fuel cycles and economics of nuclear power, prototype power reactors, use of research and test reactors, and reactor experiments.

Series 3 (fifteen sessions) will cover dosimetry and