RESEARCH FACILITIES AND PROGRAMS

Theoretical center in Trieste

The International Center for Theoretical Physics of the International Atomic Energy Agency was officially inaugurated on October 5 with the opening of a plasma-physics seminar in Trieste. The new facility is the outgrowth of plans and discussions dating back to September 1960. The IAEA Board of Governors made the final decision for its establishment in June 1963 after the Italian government had offered to construct a building for the center, to provide a cash contribution of $250 000 annually for five years, and to provide staff services and fellowships. The IAEA will contribute up to $55 000 per year in fellowships and professorships plus cash contributions up to $110 000 over four years.

Abdus Salam of Imperial College, London, is the first director of the Trieste center. The codirectors are W. B. Thompson and M. Rosenbluth of the United States and B. Kadomtsev of the Soviet Union. Paolo Budini of the University of Trieste is the center's deputy director. Work at the center during the first year will concentrate on high-energy physics, elementary particles, and plasma physics.

Scientist-astronauts

The National Aeronautics and Space Administration has begun to recruit scientists to take part in future manned space flights. December 31 has been set as the deadline for applications to join the first group of scientist-astronauts, whose selection is to be completed in the spring of next year.

The program is open to persons in scientific, medical, or engineering specialties, or in any combination of them. To be eligible an applicant must be a US citizen born on or after August 1, 1930, and must be not more than six feet tall. He must have a bachelor's degree and either a doctorate in the natural sciences, medicine, or engineering, or the equivalent in experience. For further information, prospective applicants should write to Scientist-Astronaut, PO Box 2201, Houston, Texas.

Radiation standards lab

An international radiation measurements laboratory located in the Parc de St. Cloud on the outskirts of Paris was dedicated on September 29. Established as part of the International Bureau of Weights and Measures, the new laboratory will promote the use and control of ionizing radiations for medical, industrial, and scientific purposes on a worldwide scale. It will also provide international intercomparisons for radiation measurement standards, including those for x rays, gamma rays, radionuclides, and neutrons. The laboratory is operated by a staff of ten persons under the direction of André Allisy.

Strongest magnetic field

On October 30, a magnetic field of 255 kilogauss, the strongest continuous field ever achieved by man, was generated at the National Magnet Laboratory in Cambridge, Mass. The previous record of about 150 kG was first achieved two years ago at the Naval Research Laboratory in Washington, D. C.

The 6000-pound NML magnet consists of three concentric copper solenoids having an over-all diameter of three feet and length of two feet. It draws 56 000 amperes with a power consumption of 10 megawatts. The magnet is cooled by a flow of 2000 gallons of water per minute during operation. A magnetic field of 205 kG was produced within a space 2⅛″ in diameter; when two iron poles were inserted, the field was raised to 255 kG within a region 2.5 mm in diameter and 0.25 mm in length. In the near future, the magnet is expected to produce a continuous field of 300 kG.

The NML high-field magnet will be used to study the magnetic, optical, electronic, and nuclear properties of solids. One of the first experiments to be performed has been the study of high-field superconductivity in niobium-tin.

D. Bruce Montgomery of the National Magnet Laboratory adjusts experimental apparatus mounted above NML's new 255-kilogauss magnet.

Originally proposed in 1958, construction of the new magnet began in March 1962. D. Bruce Montgomery directed its design and development.

The laboratory is supported by the Air Force Office of Scientific Research and operated by the Massachusetts Institute of Technology.

UCLA physics halls

The names of two former chairmen of the Physics Department at the University of California at Los Angeles have been given to two buildings housing physics research on the UCLA campus. The recently constructed Knudsen Hall is named after Vern O. Knudsen, UCLA's chancellor emeritus, who has been associated with the physics faculty for more than four decades. The second structure, once the physics-biology building, has been renamed Kinsey Hall in memory of the late E. Lee Kinsey, who died in May 1961. Professor Kinsey, a spectroscopist, joined the Physics Department in 1928 and served as its chairman from 1949 until his retirement ten years later. Professor Knudsen, who is known for his pioneering work in acoustics, particularly in the fields of physiological and architectural acoustics, headed UCLA's Physics Department from 1932 to 1938 and served as dean of the Graduate Division from 1934 to 1958. He was

named chancellor of UCLA in 1959 and retired in 1960.

The buildings contain facilities for research in spectroscopy, physical and physiological acoustics, and plasma, solid-state, high-energy, and upper-atmospheric physics. Knudsen Hall also has facilities for research associated with UCLA's 50-MeV sector-focusing cyclotron, which is located in an adjacent building. The two halls were formally dedicated at ceremonies held on May 16.

Isotope laboratory

California Institute of Technology has announced the completion of a $250 000 Isotope Handling Laboratory, which will be used for the study of nuclear structure. The 2700-square-foot structure is built entirely underground and includes three research laboratories, an isotope storage room, a decontamination room, and protected storage areas for solid and liquid radioactive wastes. The research group using the laboratory is headed by Felix Boehm and includes Rudolf Mössbauer and Jesse W. M. DuMond.

New tandem laboratory

The University of Montreal has announced plans for the construction of a laboratory of nuclear physics which will include two tandem accelerators arranged for use either independently or in cascade. One of the tandems will be a type EN, manufactured by High-Voltage Engineering Corp., which now operates at close to 15 MeV with protons, and up to about 200 MeV with heavy ions.

The experimental program will be largely centered on nuclear structure, but will also include radiation chemistry, biophysics, and nuclear medicine. Cost of the complete laboratory, including a new building, will be 4.2 million dollars, of which approximately half will be provided by the Province of Quebec, one quarter by Atomic Energy of Canada Limited, and the remainder by the National Research Council of Canada. The Laboratory is scheduled to be in operation during the summer of 1966.