

president of the Council; E. Amaldi (Italy) and J. H. Bannier (Netherlands), who were elected as vice presidents; and Cecil Powell (United Kingdom), who was named to succeed Prof. Amaldi as chairman of CERN's Scientific Policy Committee.

Spain was admitted as the 14th Member State of CERN by the unanimous vote of the delegates attending the Council meeting, an event which was ceremonially symbolized by the hoisting of the Spanish flag at Meyrin. The other thirteen European nations making up CERN's membership are Austria, Belgium, Denmark, France, the German Federal Republic, Greece, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and Yugoslavia.

Solid-State Division at Harwell

Britain's Atomic Energy Research Establishment at Harwell has formed a Solid-State Physics Division in order to exploit for fundamental purposes the specialized research facilities available at Harwell for solid-state investigations. In particular, work on neutron diffraction and scattering will be extended.

The new division is headed by W. M. Lomer and will consist initially of three research groups, with a fourth to be added later. One group, under G. E. Bacon, will be concerned with neutron crystallography, with emphasis given to magnetic and structural investigations and studies in crystal chemistry. Another group, headed by R. D. Lowde, will employ a variety of techniques, such as time-of-flight measurement and the scattering of cold neutrons, to study the dynamics of crystals and of spin systems. Magnetic investigations with polarized neutrons and studies of various physical properties, involving the use of radioactive tracers, resonance, and other techniques, will form the work of a third group under the leadership of A. D. Le Claire.

The division is planning the addition of another group to study defects in crystals. There will be opportunity, according to Dr. Lomer, for university participation in the Solid-State Division's research program.

More Francs for Research

The French government has increased its appropriations for scientific research by seventy-five percent over the amount allocated to research in 1959, according to Pierre Piganiol, special assistant for science to the Premier of the French Republic. Dr. Piganiol, speaking at a three-day conference on basic research in France and the United States held at New York University recently, stated that the French government supports by far the largest part of the country's scientific research and thus "controls the living force of scientific creation" in France. He noted that the steps taken a short time ago to reorganize French research led not only to increased support for basic science but also to a series of studies aimed at identifying scientific objectives of national importance.

European Space Organization

A Western European agency for space research, to be created as a cooperative venture of eleven nations, was brought a step closer to reality on December 1 when delegates from ten of the countries involved approved the establishment of a preparatory commission for the proposed organization. An agreement to that effect was signed by the governments of Great Britain, Belgium, the Netherlands, Norway, and Sweden at the close of a four-day meeting at Meyrin, Switzerland, site of the laboratories of the European Organization for Nuclear Research. The delegates of five other governments (Denmark, France, Italy, Spain, and Switzerland) also signed the document, although they did so provisionally since the agreement must be ratified under the constitutional requirements of their countries. The West German delegation was not empowered to sign, but it was anticipated that the Bonn government would soon add its endorsement to the agreement. Spain participated in the early part of the conference as an observer, and was then admitted as a member state.

The intergovernmental commission, according to the terms of the pact, will be established when at least six governments have given their formal approval and as soon as 70 percent of the initial \$190 000 budget is guaranteed. Nearly 40 percent of that total is represented by the scheduled contributions of the first five signatory powers. The task of the commission, once it comes into being, will be to formulate plans for setting up the international space research agency. This procedure is similar to that followed prior to the establishment of the CERN organization; the reasoning behind the present project, moreover, is reminiscent of the arguments in favor of creating CERN which were advanced by European physicists a decade ago. Proponents of the cooperative space research program hold that full development of the technological capabilities required in an age of rockets, satellites, missiles, and space vehicles is essential to the future of all industrialized nations. While no Western European government is individually in a position to support the huge costs of developing its own space program, it is argued, a collaborative effort in which the expenses might be shared by several nations is the only practical solution open to the countries of Western Europe.

Britain and France already have made investments in missile research and development which can prove valuable in the initial stages of the proposed space program. The British "Blue Streak" missile, which was abandoned last year as a military weapon, has been mentioned as representing a useful basis for the first stage of a satellite launcher, while the British "Black Knight" has been considered for possible use as a second-stage rocket. France has a firing range at Colomb-Bechar in the Sahara, and Britain would presumably have access to the Woomera range in Australia.