able at the upper end. The laboratory is under the direction of Professor A. Rostagni of the University of Padua. The station is open the year around.

Another important improvement is being made at the Pic du Midi laboratory in the Pyrenees. This laboratory, at about 9300 feet, was accessible only on foot with a freight cableway for heavy equipment. At present a new teleferique, the longest in Europe, is under construction. It is anticipated that in a year or so passengers and freight will be able to reach the laboratory much more easily.

At the Aiguille du Midi, above Chamonix on the shoulder of Mt. Blanc, a new teleferique is also under construction. Completion is expected in 1954, at which time access to this laboratory will also be greatly improved.

Serge A. Korff
New York University

European Physics Laboratory

Site in Switzerland is Chosen

The proposed European Nuclear Physics Laboratory is to be located on a plateau near Lake Geneva in Switzerland, it was decided on October 6th by the ten-nation European Council for Nuclear Research (CERN) during a conference held in Amsterdam. CERN, established with the help of the United Nations Educational, Scientific, and Cultural Organization, represents Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Sweden, Switzerland, and Yugoslavia. The decision is reported to have been influenced by arguments that Swiss neutrality would offer some protection for the laboratory in the event of war. Also, as has been noted before, Switzerland possesses ample resources of hydroelectric power and offers a reasonably central location for the member nations of the Council.

Present plans call for equipping the nuclear center with two accelerators—a 600 Mev synchrocyclotron and a proton machine originally expected to provide beams of from six to ten billion electron volts, but which is now apparently visualized as a 30 Bev collossus. The latter figure, it is reported, was proposed following disclosure of a scheme developed at Brookhaven National Laboratory for a revised method of accelerator focusing that is expected to result in far higher than present energies with no corresponding increase in magnet size. Professor O. Dahl of Norway, head of the CERN working group responsible for planning the large accelerator, has estimated that construction will require approximately six years and that the machine will probably cost about five million dollars.

Northern Lights

Created in the Laboratory

The origin of the aurora borealis, a subject of much speculation and scholarly debate, may quite plausibly be ascribed to proton and alpha particle bombardment of the upper atmosphere, according to Aden B. Meinel of the University of Chicago's Yerkes Observatory. In experiments involving the kevatron at the University's Institute for Nuclear Studies, Meinel and C. Y. Fan have managed to produce effects resembling those of the northern lights in air at various pressures less than normal which they bombarded with both alpha particles and protons. Spectroscopic analysis of the visible light produced when these particles collided with atoms in the air indicated a striking similarity to the northern lights. It is surmised that much of the light of the aurora is produced by the movement of air molecules in the upper atmosphere when struck by heavy particles from outer space which have been trapped by the earth's magnetic field and directed toward the polar regions. Part of the effect, it is suggested, is light produced when electrons associated with atmospheric atoms are captured by protons. The experiments were aimed at confirming the theory advanced two years ago by Meinel concerning the origin of the aurora.

New Journals

Acta Metallurgica to Appear in January

The first number of an international journal for the science of metals, *Acta Metallurgica,* will be issued in January, 1953. Planned initially to appear every second month, the journal will be edited by Bruce Chalmers, professor of metallurgy at the University of Toronto, and will have the stated aim of providing a medium for the publication of papers describing theoretical and experimental investigations that contribute to the understanding of the properties and behavior of metals in terms of fundamental particles, forces, and energies. Suitable papers will be published in any language, with summaries in French, German, and English.

Acta Metallurgica was originally sponsored by the American Society for Metals, and steps preliminary to the initial publication have been taken by an interim board of governors for the ASM under the chairmanship of Cyril S. Smith, director of the University of Chicago's Institute for the Study of Metals. The Institute of Metals in Japan has recently become an additional sponsoring society.

The following societies are cooperating in the publication of *Acta Metallurgica:* Instituto del Hierro y del Acero (Spain); American Institute of Mining and Metallurgical Engineers; American Institute of Physics; Metallografiska Institutet (Sweden); Physical Society of Finland; The Indian Institute of Metals; Assoçiacão Brasileira de Metais; Institute of Metals (England); Iron and Steel Institute (England); Société Française de Métallurgie; The Chemical Society (England); Associazione Italiana di Metallurgia; Deutsche Gesellschaft für Metallkunde; and Verein Deutscher Eisenhüttenleute.

The sponsoring societies will support the journal financially and their representatives will have membership on the Board of Governors that establishes the policy for the journal. Cooperating societies assist in the mechanics of obtaining subscriptions for the journal, and from their representatives certain members of