

be undertaken under the auspices of the Carnegie Institution of Washington.

The project, which calls for the establishment of some 20 scientific stations on six continents and in every zone except the Antarctic, is under the direction of Dr. Arthur H. Compton, of the University of Chicago.

Dr. Ralph D. Bennett, associate professor of electrical measurements at the institute, with the cooperation of Dr. J. L. Dunham of Harvard University, will undertake cosmic radiation studies in Alaska, California and Colorado. Dr. Bennett made preliminary radiation studies in Colorado last year and since then he has developed a portable counting tube apparatus. It is planned to set up this instrument at high altitudes in the Rocky Mountains for measurements of the stopping power of different materials for the particles which actuate the counting tube. Dr. Bennett has left Cambridge to join his party in the west.

During the investigations measurements of cosmic radiation will be carried on continuously, day and night, over a long period, to determine whether there is a diurnal variation. The survey will also make it possible to compare directly intensities of radiation at many points. These studies are expected to show definitely whether cosmic radiation is associated with terrestrial locality.

Dr. Robert B. Brode, of the University of California, visiting professor of physics at the Institute of Technology, will cooperate with Dr. Bennett and Dr. Dunham in measurements in the California mountains. In Colorado the party will have the assistance of Professor J. C. Stearns, of the University of Denver. Professor M. S. Vallarta, of the department of physics, will join the party of Professor Compton when it begins its investigations in the highlands of Mexico. Dr. Compton's party will also make measurements in Hawaii, Australia, New Zealand, Peru, the Canal Zone and in northern Canada in the vicinity of the north magnetic pole.

The Asiatic survey will be directed by Professor J. M. Benade, of Lahore, who will make investigations in Ceylon, Java and northern India. South African observations will be made by Professor S. M. Naude, of the University of Cape Town. Dr. E. O. Wollan, of the University of Chicago, will go to Spitzbergen and other European points. Dr. Allen Carpe, of New York, lost his life recently in the beginning of the cosmic radiation survey at the head of the Muldrow Glacier on Mt. McKinley in Alaska.

CONFERENCE OF THE INTERNATIONAL STANDARDS ASSOCIATION

ENGINEERS of eighteen nations met in Milan, Italy, on May 30 to open a series of technical conferences

aimed to secure international uniformity in standards for airplane and automobile parts, cutting tools, iron and steel, and other subjects.

The conferences, to extend through the ninth of June, are under the auspices of the International Standards Association, which includes in its membership the national standardizing bodies of the United States, France, Germany, Italy and 14 other nations.

Ernest Wooler, chief engineer of the Timken Roller Bearing Company of Canton, Ohio, an American delegate, will discuss before the conference on ball and roller bearings the American proposal to replace the thousand different types and sizes now manufactured in the United States alone.

Subjects which will be studied by the conference on aeronautics in an effort to secure greater international uniformity in essential features of airplanes, are: direction of rotation of the engine, safety belts, propeller hubs, electric voltages aboard airplanes, floats for seaplanes, parts of the steering equipment and engine control levers, dimensions and arrangement of instruments, instrument dials, identification colors for pipe lines, screwed pipe connections and valves, screw threads and principles for the computation of rating of airplanes and engines.

Other conferences will be held on cutting tools, center heights and dimensions of shaft ends of electric motor and driven machines, shafting keys, fluid meters and sieves for testing purposes.

The countries which will be represented at the International Standards Association conferences through their national standardizing bodies are: Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Germany, Holland, Hungary, Italy, Japan, Norway, Poland, Roumania, Russia, Sweden, Switzerland and the United States.

EXPERIMENTAL FORESTS ESTABLISHED IN MINNESOTA

THREE field laboratories, comprising a total of approximately 5,396 acres, have been set aside as experimental forest areas within the Chippewa and Superior National Forests in Minnesota by the U. S. Forest Service. These areas were chosen after a careful study as being representative of the various types and conditions found in the forested area of Northern Minnesota.

The Cutfoot Experimental Forest is located approximately twenty-four miles from Deer River and is well stocked with thrifty, growing timber which is largely Norway and jack pine, although other types are also represented. The Pike Bay Experimental Forest lies approximately six miles southeast of Cass Lake. It is predominantly an aspen-hardwood type, but includes a small area of virgin white and Norway pine.