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camp manager. Later in the season, Maynard M. Miller led a party of four men to the upper Taku Glacier for additional field work. It is of interest that since the inception of the Juneau Ice Field Research Project in 1948, a total of 23 members of the American Alpine Club have taken part in the field work.

The 1953 season brought to a close a five-year concentrated study on Taku Glacier by the Project while at the same time it inaugurated the glacio-meteorological research on Lemon Creek Glacier. Taku Glacier will not be neglected entirely in the future. Periodic observations such as snow surveys and the photography of the trimlines and terminal areas will be continued. Emphasis has been shifted to Lemon Creek Glacier because of certain of its attributes. The glacier is easily delineated areally, is readily accessible on foot from Juneau, requires half the number of personnel in the study team, and because of its small size, can be investigated in its entirety. According to current plans, it is anticipated that Lemon Creek Glacier will be used as one of the representative glaciers of the coordinated studies to be undertaken during the International Geophysical Year (IGY) 1957-1958.

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Project Officer

Juneau Ice Field Research Project

THE INTERNATIONAL GEOPHYSICAL YEAR, 1957-58

In response to a request from the International Council of Scientific Unions, the National Academy of Sciences-National Research Council, in February 1953, formed a United States National Committee to develop a program of geophysical observations to be carried out by the United States during the International Geophysical Year 1957-58.

This United States National Committee, assisted by various working groups, prepared tentative proposals for submission to the Special Committee for the International Geophysical Year, which has been appointed by the International Council of Scientific Unions. These proposals, together with those prepared by national committees of other nations, were carefully studied at

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the first meeting of the Special Committee held at Brussels, June 30th to July 3rd. At this first meeting Dr. Sydney Chapman was elected *President*; Lloyd V. Barker, *Vice-President*; and Marcel Nicolet, *General Secretary*.

One of the tasks of the United States National Committee is to inform the scientific and general public of its purposes and plans, and it is hoped that during the long period of preparation and during the actual one and a half years of the program, factual and interesting accounts will provide the necessary background for a better understanding of the undertaking.

It is obvious that it will not be possible to cover all aspects of the vast field of geophysical studies during the IGY. The dates selected were designed to coincide with the expected period of maximum solar activity, and the eleven working groups at the Brussels meeting dealt with the following subjects: *i*) meteorology, *ii*) latitude and longitude determinations, *iii*) geomagnetism, *iv*) the ionosphere, *v*) aurorae and airglow, *vi*) solar activity, *vii*) cosmic rays, *viii*) glaciology, *ix*) oceanography, *x*) the selection and announcement of world days for specially intensive observations during the IGY, and *xi*) publication.

The United States National Committee for the IGY held its third meeting on November 5th and 6th in Washington, D. C., at the new headquarters of the National Science Foundation. Joseph Kaplan, professor of physics at the University of California and Chairman of the Committee, presided. Among the reports presented was one by A. Lincoln Washburn, Chairman of the Arctic Regional Committee and one of the American Alpine Club's outstanding authorities on Arctic research. After a discussion period the National Committee appointed a coordinating group to develop and draft the scientific program to be carried out by the United States. Members of this group were designated as reporters on specific portions of the program as follows: *World Days*, Alan Shapley, National Bureau of Standards; *Meteorology*, H. Wexler, U. S. Weather Bureau; *Magnetism*, E. B. Roberts, U. S. Coast and Geodetic Survey; *Aurorae and Airglow*, C. T. Elvey, University of Alaska; *Cosmic Rays*, Serge A. Korff, New York University; *Polar Activity*, Seth B. Nicholson, Mt. Wilson Observatory; *Ionosphere*, H. G. Booker, Cornell

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University; *Longitude and Latitude*, G. M. Clemence, U. S. Naval Observatory; *Glaciology*, William O. Field, American Geographical Society; *Oceanography*, E. H. Smith, Woods Hole Oceanographic Institution; *Rockets*, J. A. Van Allen, Princeton University; and *Publications*, Executive Secretary of the United States National Committee.

Of particular interest to members of the American Alpine Club will be the glaciological and cosmic ray programs, for William O. Field, Dr. Serge A. Korff, and Dr. Terris Moore, President of the University of Alaska, with the assistance of the Office of Naval Research, the Office of the Quartermaster General, the U. S. Air Force, and the Regents of the University of Alaska, established the Mount Wrangell Observatory for cosmic ray and other affiliated scientific studies on the summit of Mount Wrangell, Alaska.

CHRISTINE L. ORCUTT

COSMIC RAYS AND MOUNTAIN OPERATIONS

Since about the year 1900 it has been known that even the most carefully insulated electroscope would slowly lose its charge. This effect was thought to be due to ionizing radiation from ubiquitous traces in the earth of radioactive minerals of radium, thorium, and uranium. In the year 1912, an Austrian physicist, Dr. Victor F. Hess, carried an ionization chamber aloft in a balloon in an effort to get away from the local effect. He found that the radiation *increased* as he went to higher and higher elevations and he postulated that these rays come from outside the earth. Later work indicated that the rays come from all directions, bearing no relationship to the positions of the heavenly bodies or the Milky Way, but seeming truly cosmic in origin.

From these first experiments of Hess to the present day a tremendous amount of research and ingenuity has gone into the ever-expanding field of investigation of cosmic rays. The primary radiation impinging on the top of the atmosphere is extremely energetic, being composed of atomic nuclei, mainly of hydrogen and helium, having a speed very nearly that of light. These nuclei collide with air atoms, causing extensive showers of nuclear, mesonic, electronic, and photonic debris. But the at-