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INTERNATIONAL GEOPHYSICAL YEAR: 1957-58

IN 1882, scientists co-operated in studies which they called the first International Polar Year. This was concerned with the investigation of such geophysical phenomena as magnetic storms and the aurora. It was believed at that time that the aurora were a reflection of light from icebergs at the North Pole, but this was disproved when it was found that aurora did not increase in frequency as one went further north. The second Polar Year was arranged fifty years later, principally to gather data about magnetic storms. Facts ascertained at that time are still being studied.

Now it is planned in 1957-58 to change the name to the International Geophysical Year, reflecting the more comprehensive purposes of the studies, and to have about 150 ionospheric observatories ready for action. The original idea

for this Geophysical Year came from Sydney Chapman (Britain) and Lloyd V. Berkner (America). The investigation is so vast that a Central Planning Committee is being set up, with a Secretariat that will remain in being for five years afterwards to organize analysis of the data. These data are bound to be useful to the scientists working at the International Seismological Summary in Kew, England, where earthquakes are mapped; the International Isostatic Institute in Helsinki, Finland, concerned with the ever more exact determination of the changing shape of the earth; the International Latitude Service in Turin, Italy; and the Bureau de L'Heure, in Paris, France, that gives us our internationally accepted time signals.

THE GREAT KAMCHATKA EARTHQUAKE OF NOVEMBER 4, 1952

A VERY great earthquake (Sequake) shock with its epicentre now fixed by the U.S. Coast & Geodetic Survey at $52^{\circ} \frac{1}{2}$ N. lat., and 159° E. long., near the East Coast of Kamchatka, with its time of origin at $16^h 58^m 20^s$ G.M.T., was recorded by the seismographs of the Colaba Observatory on the night of the 4th-5th November 1952. The shock was of very great intensity and has been assigned magnitude $8\frac{1}{2}$, same

order as the great Assam earthquake of August 1950. It was followed by 28 aftershocks upto November 16th, 1952, some of which could themselves be classified as moderate earthquakes. The main shock gave rise to a huge tidal wave which affected North Japan Islands and spread over North Pacific. No information is yet available regarding the damage in the neighbourhood.

VACUUM FUSION APPARATUS

VACUUM fusion gas analysis apparatus is finding increasingly wide use in laboratories engaged in quality control work, as well as research and development. National Research Corporation have developed the type 09-1240 vacuum fusion unit, which is convenient and versatile. It combines features which have been developed in the laboratories of National Research as well as in outstanding analytical laboratories all over the world.

A wide variety of ferrous and non-ferrous pure metals and alloys including titanium, molybdenum, stainless steels, high temperature alloys, and electronic alloys can be quantitatively analyzed for total oxygen, nitrogen and hydrogen content. Sensitivity as high as one part in ten million is possible. A high degree of accuracy and reproducibility is possible with proper operation which can easily be mastered by the analyst.