

Blue Glacier Project

GLACIER MOVEMENT has long been a source of interest to geologists because ice is a rock which undergoes solid flowage on the earth's surface, where the process can be observed. Last summer, as part of the IGY program, Caltech geologists started a study of the ice on the Blue Glacier in northwestern Washington. They set up a network of 50 markers on the surface of the glacier to measure the surface velocity and surface strain distribution, took seismic soundings to determine the thickness of the ice and configuration of the floor, and used a hotpoint bore to penetrate the depths of the ice to 740 feet to determine the vertical velocity profile of the glacier. Next summer the team will return to the Blue Glacier to continue their research.

An airview of the Blue Glacier, which is located just below the 7,954-foot summit of Mount Olympus in Washington.

W. Barclay Ray and Clarence Allen, both assistant professors of geology, and Ronald Shreve, instructor in geology, check the thickness of the glacier ice from a seismogram which records, photographically, the wave soundings from detonations.





Clarence Allen, assistant professor of geology, gets ready to make a dynamite charge for seismic wave soundings. The depth of the glacier is exactly 910 feet.



The edge of the ice field on Snowdome which feeds into the Blue Glacier—the immensity of the field can be gauged by the size of the two men on the lower right.