

A Science Service Feature

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? WHY THE WEATHER ? Mailed August 1, 1931

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Authority on Meteorology.

HOW MUCH ICE?

German explorers in Greenland have been measuring the depth of the ice cap by an acoustic process, which consists of setting off explosions and registering, with the aid of a seismograph, the time required for the sound wave to travel down to the underlying rock and to be echoed back to the surface of the ice. The latest measurement reported was made at a point 39 miles from the coast, where the depth of the ice was found to be 4,100 feet. Perhaps within a few years enough of these soundings will have been made to give us an approximate idea of the total volume of the ice under which Greenland lies buried.

No such measurements have yet been made of the vastly larger ice sheet overlying Antarctica. Wright and Priestley, the glaciologists of Captain Scott's expedition, estimated its average thickness to be not more than 2,000 feet. On the other hand, Professor Meinardus, a veteran German polar authority, believes that the land of Antarctica is only about as high as the nearest parts of Africa, South America and Australia, averaging about 2,000 feet, and that all of the great Antarctic plateau above that level is ice. The altitude of the plateau is supposed to range from 6,000 to 10,000 feet above sea level. On this basis he computes for the ice sheet a volume of 26,000,000,000,000 cubic yards. There is enough ice in it, he thinks, to cover all Europe to a depth of over 6,500 feet, or to blanket the whole earth under a layer between 120 and 130 feet thick. Melted down, it would raise the level of the ocean 100 feet.

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