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CALTECH AND THE IGY

SEISMOLOGICAL RESEARCH

ONE OF THE IGY PROJECTS conducted by Caltech's Seismological Laboratory is the construction of two fused quartz extensometer installations in South America.

When completed, the extensometers will provide three kinds of observational data. First, measurements of secular strain changes occurring in the great Andes mountain range; second, measurements of the tidal strains of the earth produced by the gravitational action of the sun and moon; and third, recording of ultra-long-period seismic waves, including possible free vibrations of the earth excited by earthquakes. It is possible that measurements of secular strains made at an adequate

number of stations over a long enough time interval may give sufficient information to determine the nature of the strain pattern habit of a region, and so provide the basis for the prediction of earthquakes. The time required for such a study may well run into several centuries.

One of the new extensometers is located in the outskirts of Santiago, Chile, and the other is in Chosica, a small settlement some 30 kilometers from Lima, Peru. Both installations are being done with the cooperation of local agencies, the University of Chile at Santiago, and the Peruvian Committee of the IGY at Chosica.

For their contribution to the joint effort, the local