

Monitoring submarine landslides on Hawaii Island - Experiment by SIO

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Marine Physical laboratory, Scripps Institution of oceanography, has started 3-year program of seafloor geodesy for monitoring submarine landslides on the southeastern slope of Hawaii Island. Key instruments are precision acoustic transponders developed jointly with the Japanese Ocean Hemisphere Program (OHP). In October-November 2000 a NSF-funded cruise was carried out on board the R/V Roger Revelle. After side-scanning sonar mapping, we deployed eight units of precision transponders, and carried out GPS/Acoustic positioning at each triangle of them. A transponder for OHP program could measure precise slant ranges as much as 14 km at 4.8 km water depth. Several seafloor benchmarks with a diameter of about 1 m were also deployed for ocean bottom gravimetry planned in another cruise.