

Performance of an optically-linked broadband seismometer for borehole observations

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Laser interferometers are displacement sensors with high resolution, low drift, and in-situ calibration referred to wavelength of light. Its application enables us to make a highly sensitive seismometer.

We have developed a borehole broadband seismometer by using a long-period pendulum, laser interferometers, and optical fibers. Performance of the seismometer measured in a 10-m-deep borehole in comparison with an STS broadband seismometer is reported.