



## **Seismic Monitoring of the Indian Ocean Tsunami**

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The 26 December 2004 Sumatra-Andaman earthquake of Mw 9.3 triggered a massive tsunami in the Indian Ocean. We here report on observations of the Indian Ocean tsunami at broadband seismic stations located on islands in the area. The tsunami induces long-period (>1000s) signals on the horizontal components of the sensor. Frequency-time analysis shows that the long-period signals can not be due to seismic surface waves, but that it arrives at the expected time of the tsunami. The waveforms are well correlated to tide gauge observations at a location where both observations are available. To explain the signals we favour tilt due to coastal loading but we can not at the present stage exclude gravitational effects. The density of broadband stations is expected to increase rapidly in the effort of building a earthquake monitoring system. They may unexpectedly become useful tsunami detectors as well.