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Broadband Seismometers are good tsunameter

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Following the great earthquake of 26 December 2004, several studies have reported observations of the subsequent tsunami at seismic broadband stations. In this study we search for other recordings of tsunamis by seismic stations. For this purpose we use the stations of the Global Seismic Network. The events used are selected from the Tsunami Database of the National
Geophysical Data Center (NGDC). We analyzed data from the great earthquake (Mag 8.3) of the 5 November 2006 which occurred 495 km SSW of Severo-Kurilsk, Kuril Islands, Russia. This event generated a tsunami observed throughout the Pacific Basin. Data from 25 stations in the north Pacific Ocean have been analyzed and 15 of those recorded the tsunami wave. The interpretation is based on the fact that the instruments are responding to the combination of horizontal displacement, tilt and perturbation in gravity caused by the tsunami [Yuan et al. 2005, Okal 2006]. We have constructed a section of seismic tsunami records and compare the propagation velocity with computations and observations of the tsunami propagation by the NGDC.