The 17 July 2006 Java Tsunami Earthquake

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Supplementary Figures
Supplementary Figure 1S. Example STF estimation using the R1 arrival observed at station ULN, Ulan Baatur, Mongolia ($\Delta = 57^\circ$, Azimuth = $0^\circ$N). The top panel shows the observed ground displacements, the middle panel shows the point source response using the global CMT double-couple solution ($M_o = 4.0 \times 10^{20}$ N-m), and the lower panel shows the STF obtained by iterative deconvolution.
Supplementary Figure 2S. Seismic moment estimates obtained by integrating the Rayleigh wave STFs estimated using the Global CMT best double couple geometry. Inset shows the moment distribution, which has a mean of $6.65 \times 10^{20}$ N-m and a standard deviation of $1.16 \times 10^{20}$ N-m; the median is $6.50 \times 10^{20}$ N-m. The values are about 60% larger than the Global CMT moment, which was based on wave periods shorter than 150 s.
Supplementary Figure 3S. Free-air marine gravity anomaly map [Sandwell, D. T. & Smith, W. H. F. 1997. Marine gravity anomaly from Geosat and ERS-1 satellite altimetry. *Journal of Geophysical Research* 102, 10039-10054.]. Gravity anomalies above the accretionary prism suggest a roughness that is similar in character to that in the seismic slip model. Regions of relative gravity high seem to correlate with regions of high seismic moment, but the agreement not perfect. Seismicity and slip maps are shown as in Figure 1.