

## Source process of the 2004 Sumatra Earthquake

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On December 26, 2004, a huge earthquake with a magnitude of 9.0 occurred off the west coast of northern Sumatra. We investigated the source process by using teleseismic P- and SH-wave data. The main source parameters are as follows: the seismic moment  $3.5 \times 10^{22}$  Nm ( $M_w = 9.0$ ); (strike, dip, rake) = (340, 8, 112); the depth of initial break point 35km; source duration 360 sec; and the maximum slip 8.9 m; the fault length to be about 850 km. This earthquake was an interplate earthquake associated with the subduction of the India plate. The rupture propagated northwestward. In this area, a great earthquake occurred from the 19th century to the beginning of the 20th century (1833, 1861, 1881, 1907, 1941) along the Sunda Trench. We could not know the exact source area of these old events. Our result shows a possibility that the 2004 Sumatra earthquake was a recurrent event of the 1881 Car Nicobar and 1861 northern Sumatra earthquakes.