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The Effects of Sumatra 9.0 Earthquake on China Mainland

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The 9.0 earthquake occurred in Indonesian Island of Sumatra on December 26, 2004. The earthquake took place in the boundary between the Indian Plate and Euro-Asian Plate. In tectonics, the focus zone of the 9.0 earthquake is connected with strong seismic zone of China mainland, especially the Chuandian seismic zones through the Andaman Arc and Myanmar Sagaing fault. In history, earthquakes with magnitude 8.0 or so occurred in Sumatra Sea areas generally affect the China mainland seismic zone.

This paper elementarily collects the newest observational data before and after the 9.0 Sumatra earthquake and analyzes the effects of Sumatra 9.0 large earthquake on China mainland. The anomalies of coseismic and post-seismic effect such as the crustal deformation, underground water level, underground water temperature and macroscopic phenomena observed in China mainland are also collected. Finally, the possible physical mechanisms generating these coseismic and post-seismic anomalies are discussed.

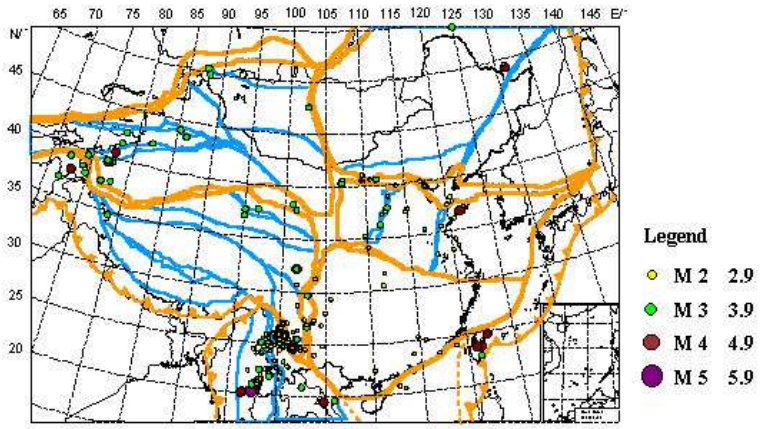

Figure 1. Distribution in earthquake M 2.0 in China mainland after the 9.0 large earthquake (Dec. 26, 2004-Jan.18, 2005)

References

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