

## The Southern Sumatra Tsunami of September 12, 2007 and Transition of the Cumulative Tsunami Magnitude

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Accompanied with the southern Sumatra, Indonesia earthquake on September 12, 2007(epicentr:4.517S,101.382E ,d=30km, Mw8.4, USGS),a tsunami was observed at many tidal stations of the Indian Ocean. Inundation heights reached 2- 4m on the west coast of Sumatra (Imamura,et.al.,2008). The double amplitudes were 1.14m at Rodrigue(SW Indian Ocean) and 0.60m at Colombo by the refracted effect. By judging from the diagram of the attenuation of wave-height with distance, the tsunami magnitude is determined to be  $m=2$ ,which is the same value of the 2005 Nias tsunami. These values are two grade small compared to earthquake magnitude with similar in other region.

At each 500km segment of the Sumatra coast during the 100-years, the cumulative value of tsunami magnitude is largest in the north region. The second value is the present generating area, and the south region is pretty small. The seismic gap exists about 300km segment between the 2005 Nias tsunami and the present tsunami source.