The Solomon Earthquake Tsunami on April 1, 2007– Tsunami Magnitudes in the Papua New Guinea, Solomon and New Hebrides Regions.

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[1] None

A large earthquake occurred in the northern Solomon Islands at 20:39 (UT) on April 1, 2007. The epicenter was lat 8 27.6’S, long 156 02.6’E, 10km depth with magnitude Ms7.9 (USGS). The villages at Gizo and Simba Islands in the tsunami source were washed away. According to the field investigation, the run-up heights reached 5 - 9m(Tsuji et al., 2007). The tsunami was also observed in the whole of the Pacific tidal stations. The double amplitudes were 60 - 110cm at the west coast of New Zealand ,caused by the diffracted effect. Judging from the attenuation of tsunami height with distance, tsunami magnitude is determined to be m = 2. The tsunami grade is normal comparing with earthquake magnitude.

Many tsunamis have been recorded along the PNG, Solomon and New Hebrides Islands since 1857 (Soloviev and Go, 1984). Large tsunamis (m=2.5-3) were generated in March 1888 (PNG), Oct.1931(Solomon) and March 1875, Jan. 1878 (New Hebrides).Most of tsunami magnitudes were related to earthquake magnitude. A few tsunamis as the 1998 PNG tsunami were the irregular heights. Since 1971, six tsunamis were observed in Japan with small amplitudes (10-30cm.). The seismic gap (M 8 class) exists in the southern region of New Hebrides.

Key words: Tsunami magnitude, Tsunami source, Historical tsunamis.