Japan Geoscience Union Meeting 2010
(May 23-28 2010 at Makuhari, Chiba, Japan)

SSS011-06 会場: 303 時間: 5月28日10:15-10:30

New Role of Broadband Seismic Network in Landslide Monitoring

New Role of Broadband Seismic Network in Landslide Monitoring

Lin Cheng-Horng[1*], 安藤 雅孝[1], Shin Tzay-Chyn[2], 熊谷 博之[3]

Cheng-Horng Lin[1*], Masataka Ando[1], Shin Tzay-Chyn[2], Hiroyuki Kumagai[3]

[1]Inst. Earth Sciences, Academia Sinica, [2]Central Wearther Bureau, [3]防災科学技術研究所

[1]Inst. Earth Sciences, Academia Sinica, [2]Central Wearther Bureau, [3]National Research Institute for Earth Sc

Natural disasters caused by landslides have increased significantly due to heavy rainfalls associated with global warming. To mitigate the potential hazard of landslides, how to monitor them becomes more important than ever. On August 8, 2009, Typhoon Morakot caused a lot of landslides and then killed 653 residents in Taiwan. Careful analyses of broadband seismic data in Taiwan and Japan show landslides were characterized by extremely long period seismic signals (20-50 sec). In total, 51 large landslides could be identified on August 8. The most fatal landslide earthquake was located at Hsiaolin village, where 474 people were buried. The inversion modelling of the long period seismic waveform shows that the seismic source was well represented by downhill siding of the large landslide. Thus, real-time warning for reducing potential disasters by landslides can be conducted by seismic monitoring in the future.

キーワード: Landslid, Shalin, Single force, Broad band Seismometer, Typhoon, Rayleigh wave
Keywords: Landslid, Shalin, Single force, Broad band Seismometer, Typhoon, Rayleigh wave