



Estimation of peak ground acceleration by Q-models

J.S. Wang and K.J. Chen

Dept. of Earth Sciences, National Taiwan Normal University, Taipei, Taiwan, (kjchen@ntnu.edu.tw)

The inversion technique was used in this study to obtain a 3-D Q-structure model. The velocity structures in the same area which already inferred will be taken into consideration as a reference for the calculation of the ray tracing. We use the new high-quality data recorded by CWBSN and TSMIP. Based on these structures and site effect, the estimated peak ground acceleration of any located earthquake in this area can be evaluated. The deviation between these estimated amplitude and the maximum amplitudes of these events observed at stations of CWBSN are obtained. The results show that most of the deviation is small than 30%. It indicates that we can predict the maximum amplitude of ground acceleration for any events occurred in Taiwan area under the accuracy of 70 % (probability).