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Moment Tensor Inversion Method for Determining Focal Mechanism of Bac Yen Earthquake (M4.0, date 2009/11/26) and Song Ma Earthquake (M4.7, date 2010/12/30)

Moment tensor inversion method used for determining the focal mechanism earthquakes have large magnitude occurred on the northwestern region of VietNam in recent years. In this study, the inverse results was calculated for the five earthquakes (including 2 aftershocks) have strong levels occurred in 2009 and 2010 on the northwestern region. Seismograms at the seismic stations recorded five earthquakes used in the inversion process. Synthesis seismograms results obtained after the inverse process well fitting with the real data and the correlation function up to 70-80%. The focal mechanism of the 5 earthquakes obtained by inverting the process have good results: All of focal mechanisms have stress state strike-slip type. The surface of maximum tangential stresses have large dip (δ) angle, with δ varies in the range from 70 -85 degree. The stress field compression in the direction north - south, separated in the direction east-west, fitting with tectonic characteristics on the northwestern region of VietNam.

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