

# Determination of fault plane using 4 Dimensions seismic source model

# Yuji Yagi[1]

[1] BRI

<http://iisee.kenken.go.jp/staff/yagi/>

The determination method of focal mechanism using long period components of seismic wave have been well established. On the other hand, since one focal mechanism can explain two faulting models, it is difficult to select true fault plane from such the long period analysis. In this study, I construct the 4 Dimensions (latitude, longitude, depth and time) seismic source model using teleseismic body wave, and then determined fault plane from the obtained model. I constructed the 4D source model of the 2003 Loyalty islands earthquake and the 2004 Nigata-tyetu earthquake, and found that the seismic moment is released on and around one fault plane that coincides with suitable fault plane estimated from after-shock distribution.