

Aftershock Distribution and the Mainshock Fault Plane by MJHD method

2008/5/13

Nobuo HURUKAWA

International Institute of Seismology and Earthquake Engineering, BRI

SICHUAN, CHINA

Origin Time (USGS): 2008/5/12 06:28:00 UTC

Hypocenter (USGS): 31.021°N, 103.367°E, 10 km

Magnitude (Harvard CMT): $M_w = 7.9$

Data: 'Latest Earthquakes in the World - Past 7 days' by the US Geological Survey
Events Relocated: Mainshock and aftershocks until 2008/5/13 00:00:00

Method: Modified Joint Hypocenter Determination (MJHD) by Hurukawa

Results: Length of the aftershock area: 300km
Fault plane: Nodal plane striking NE-SW and dipping northwestward

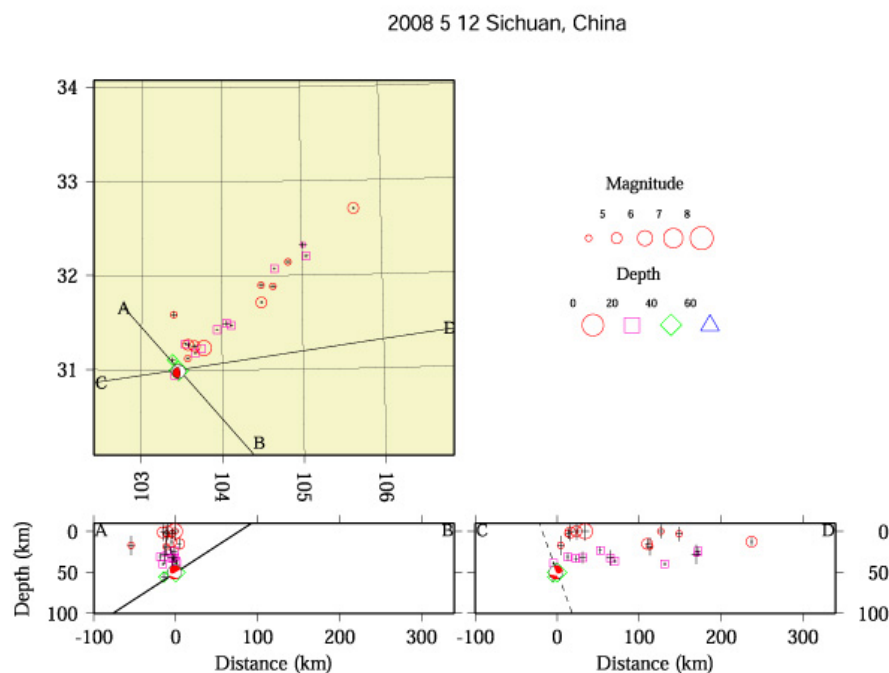


Fig. 1. Hypocenters relocated by the MJHD method. Global CMT solution is also shown. Epicentral distribution and two vertical cross sections along A-B and C-D lines, which are perpendicular to strikes of the two nodal planes, are shown. Two nodal planes are shown by lines in cross sections. The nodal plane corresponding to the fault plane is shown by a thick solid line in the A-B cross section. Note that focal depths are not accurate.

2008 5 12 Sichuan, China

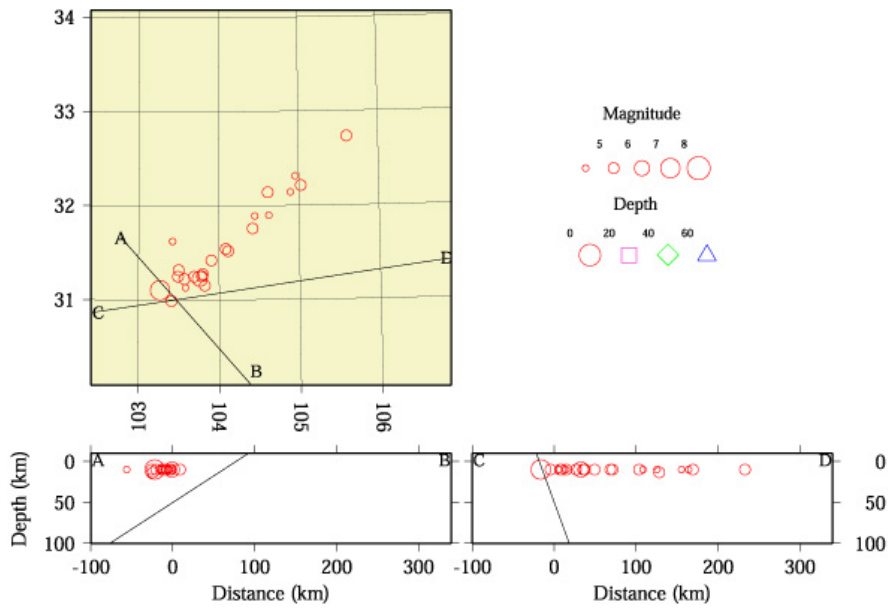


Fig.2 Hypocenters located by USGS. Two nodal planes are also shown by solid lines in cross sections.

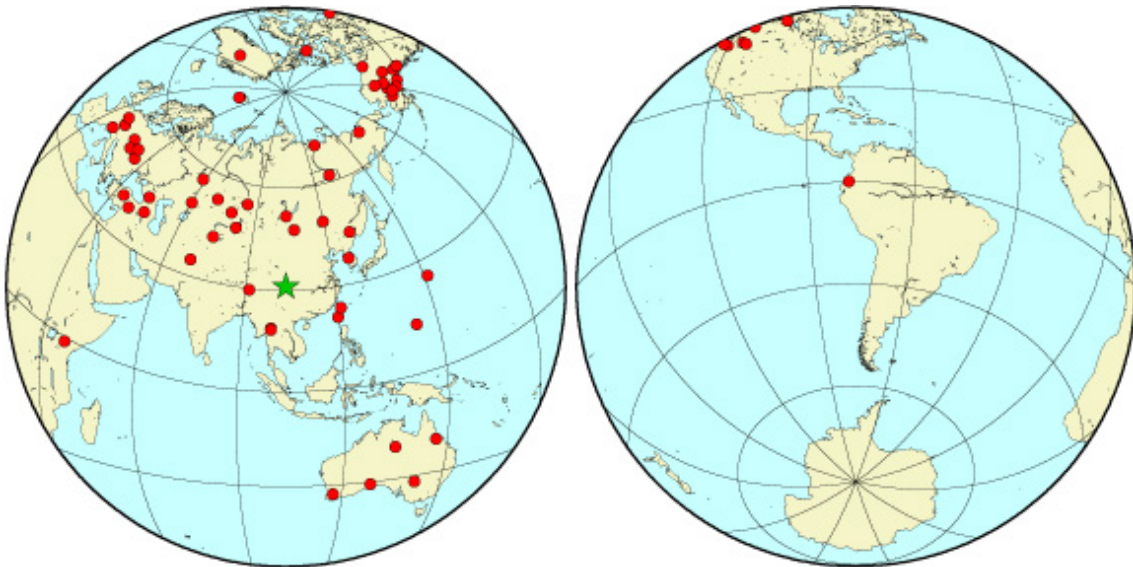


Fig. 3. Stations used in relocation.

References

- Hurukawa, N., Quick aftershock relocation of the 1994 Shikotan earthquake and its fault planes, *Geophys. Res. Lett.*, 22, 3159-3162, 1995.
- Hurukawa, N. and M. Imoto, Subducting oceanic crusts of the Philippine Sea and Pacific plates and weak-zone-normal compression in the Kanto district, Japan, *Geophys. J. Int.*, 109, 639-652, 1992.