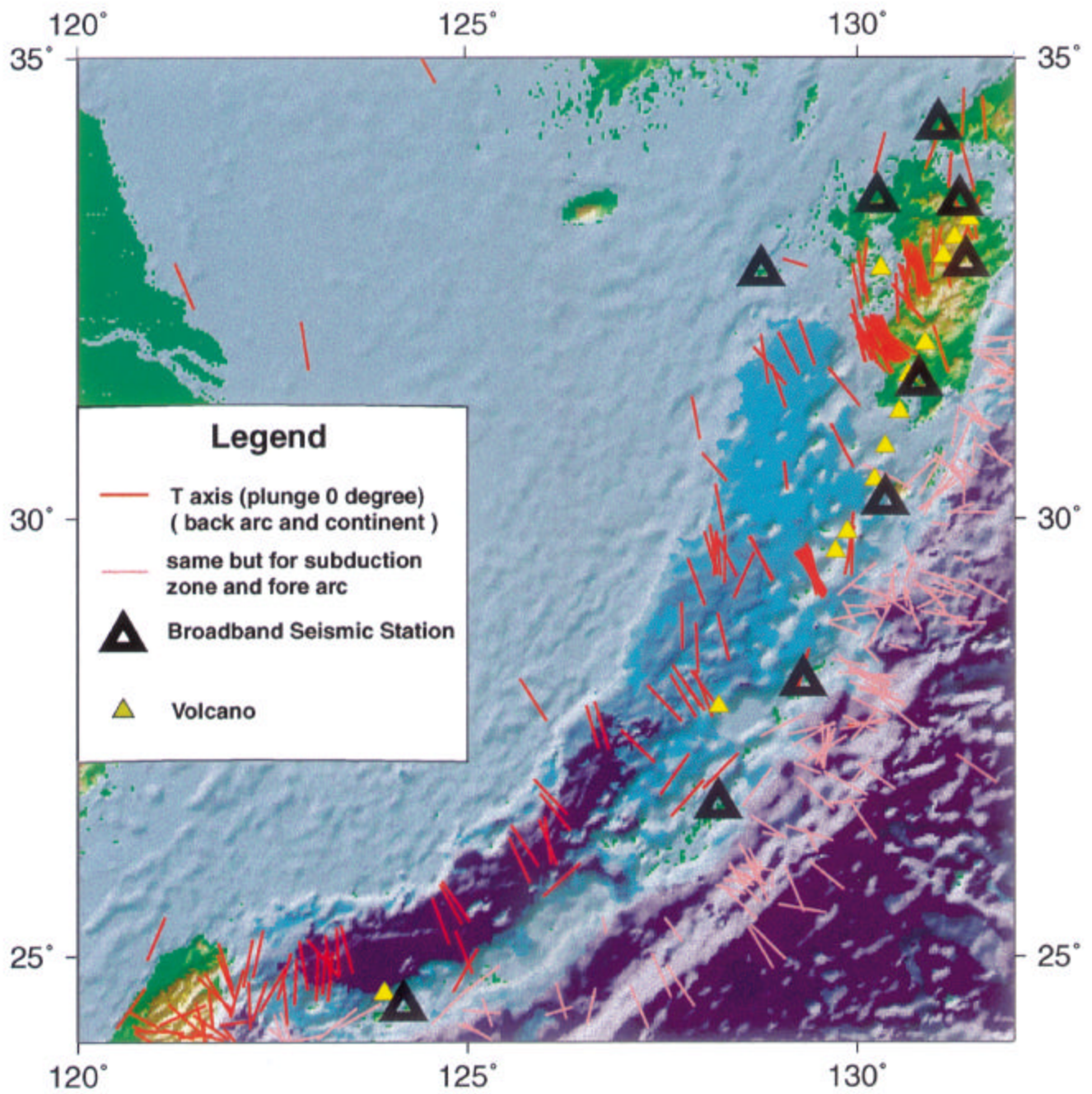


Stress field along the Okinawa trough revealed by focal mechanisms of shallow earthquakes

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Broadband seismic observation enables us to determine focal mechanisms of shallow earthquakes along Okinawa trough. Tension axes of mechanisms in SW part of the trough are consistent with present direction of the back arc spreading, but they are deviated clockwise in NE part relative to trough strike. Fault types also show similar regionality. In SW part, dominant fault type is normal fault, while in NE part, strike slip type is dominant. Our result may be important to recognize the effect of spreading in Okinawa trough on velocity field of SW Islands relative to the stable Eurasia and also to recognize complicated force balance around NE part of the Okinawa trough and northern part of the Ryukyu subductin zone.



T axis directions (NIED_MT and HCMT)
 Depth <= 30 km (centroid depth)