

SCG061-03

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台湾車籠埔(チェルンブ)断層のマルチ異方性の観測 Multi anisotropy observations in the vicinity Chelungpu fault near Dakeng, Taiwan

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The 1999 Chi-Chi earthquake (Mw=7.6) take place in Taichung, Central Taiwan. The high rupture velocity and displacement record in northern part of Chelungpu fault. The total rupture length over 100 km and width large 35 km, the rupture propagated from south to north and the bending in the north end extend to East-West direction. The mainshock is pure thrust fault in the south and thrust with strike-slip type in the north. After the contentious drilling to 2 km depth, TCDP Hole-A collected various geophysical downhole measurements to determine the physical properties near the active fault. The Dipole Sonic logs (DSI) and Formation micro imagers (FMI) data are discussed, the velocity anisotropy amount and fast shear azimuth can be analyzed in DSI and the stress azimuth variation was displayed in image logs. The DSI result indicated the apparently anisotropy decreasing with the depth, the significant low anisotropy is occurred near the fault zone. Comparison with both stress indicating logs, shows that the most dislocation of azimuth in each log is close to the depth 1110 meters and consistence with the borehole breakout rotation. The rotation patterns are in agreement with each other caused by stress-induced anisotropy.

Keywords: DSI, Anisotropy, Stress roatation, Breakout, Chelungpu fault, FMI