Dense GPS observation across the Median Tectonic Line -Estimates of deep structure and locking depth-

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Horizontal crustal velocities derived from dense GPS campaign measurements across the Median Tectonic Line (MTL), after removal of the effect of subduction of the Philippine Sea plate, have been applied to estimate dip-angle and locking depth of MTL and relative block motion across it. Velocity field shows that the block south of MTL moves to the west at about 5mm/yr with respect to the northern one, and also that a deformation boundary is located about 15-30km north of MTL. Assuming a dip-angle as 35 degrees to the north and a relative block motion as 5mm/yr based on seismic reflection survey and GPS campaign measurements, respectively, the best-fit model shows that the locking depth of MTL is 15-20km.