Oceanic plates may accelerate after megathrust earthquakes (D. Anderson, Science 1975). This was indirectly substantiated by Heki and Mitsui (EPSL 2011), who analyzed crustal deformation of an island arc after large inter-plate earthquakes. Here we present data suggesting post-seismic velocity change of the Minami-Torishima (Marcus) station, the only GNSS station on the Pacific Plate ~2000 km southeast of NE Japan. There, continuous GNSS observations started in 2002, and showed linear movement toward NW of ~7 mm/year (nu-Nu'ELS frame). Here we show two stories based on the two data sets showing different post-3.11 velocity changes, a baseline-approach solution (F3 solution of GSI), and the PPP approach (JPL). Geophysical interpretation depends on which solution is correct.

**Story #1** According to the F3 solution, the station showed coseismic jump of ~1 cm toward the epicenter in the 2011 Tohoku-oki earthquake. At the same time, the velocity showed distinct increase of ~10 percent without changing the azimuth, resulting in post-2011 speed of ~8.5 mm/year. On the other hand, station movements on the stable part of the Philippine Sea Plate suggest that the velocity change is not compensated by the increase of the azimuth. This was indirectly substantiated by Heki and Mitsui (EPSL 2013), who analyzed crustal deformation of an island arc after large inter-plate earthquakes. Here we present data showing the existence of unexpected velocity changes for stations within the stable interior of the Philippine Sea Plate.

**PPP approach (sideshow.jpl.nasa.gov/post/series.html)**

Due to three M9-class earthquakes, global scale disturbances of "secular" velocities of GNSS stations worldwide are going on and may distort the kinematic reference frame.

Errors of the reference-frame origin would emerge as the translation, rotation, and scale change of the whole network. We examined the existence of unexpected velocity changes for stations within the stable interior of the Philippine Sea Plate.