Attempt to Detect Intra-plate SSEs Based on F3 Solution of GEONET

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Slow earthquakes have been detected all over the world and providing new insights into earthquakes. However, most of slow slip events (SSEs) were detected only on plate boundaries and intra-plate SSE was detected only once in Hokkaido. Thus, I attempt to detect intra-plate SSEs all over Japan using F3 solution of GEONET by GSI. I analyze the F3 data with six steps, i.e., (1) removing outliers by setting a term of mean + two times standard deviation for 1/4+1/4 year before-and-after each datum except for the datum itself and considering it is an outlier when it is out of the term, (2) removing disconnections estimated from the offsets and linear trends of 60+60 days before-and-after each datum with the least square method, (3) searching statistically significant temporal changes of the trends by using AIC, (4) cheking visually the time series in which the temporal changes are detected, (5) estimating the displacements from the trend chagnes, and (6) verifying the deformations by numerical calculation by setting rectangular faults.

As of 18th Feb 2019, my study has proceeded to the step (4). In the JpGU meeting, I will report the results of this analysis.

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