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The analysis of observed coseismic deformation and dynamic triggering of Ms 8.0 Wenchuan Earthquake

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The cosiesmic deformation of Ms 8.0 Wenchuan Earthquake was observed almost all over China. There are 84 sets of strain instruments in the whole country, and 61 sets of them had obvious coseismic steps. Meanwhile, 757 tilt items of 945 tilt data was observed coseismic changes, among which 179 of them did not have data on May 12, 2008. Because of the difference of selected cell value, the observation step changes can't be used for comparative study. Considering the stability of tidal data, we normalized the strain and tilt data before and after the earthquake and the result showed that the step changes had a good consistency with the epicentral distance. We also analysis the step directions of the coseismic step, the distribution of the directions had a good correlation with the earthquake mechanism. By using the method of high-pass filter, we analyzed the seismic wave of the broadband stations of the whole country, especially the volcanic areas. Some small earthquakes could be picked up after the Ms 8.0 Wenchuan Earthquake.