

Afterslip of the 1978 Miyagi-Oki, Japan, earthquake (M=7.4) as detected from crustal deformation data.

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Based on the data of precise leveling and tide gauge observation, we revealed that the 1978 Miyagi-Oki, Japan, earthquake (M=7.4) was followed by a significant afterslip, which lasted about four years. The result of inversion analysis indicates that the afterslip area nearly coincides with the main shock fault plane, but the afterslip area is further extended to the shallower (trench side) and deeper (land side) extension of the main shock rupture plane; 1.8 m for the trench side, and 0.8 m for the land side for the two years following the main shock. Our result suggests that afterslip of a large earthquake may be a common nature for the subduction plane boundary in the region off the east coast of northeast Japan.