

Active structure related to the 2007 Chuetsu-oki earthquake

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The source area of the 2007 Chuetsu-oki earthquake was surveyed by high-resolution multi-channel seismic profiling system. The survey results are 1) there is no active fault in the aftershock area, 2) an active anticline lies along the northwestern margin of the source area, 3) an active fault exposed on the Sado bank that has been uplifted by SE dipping reverse fault. The active anticline is interpreted as a fault-bend fold of a SE dipping thrust under the anticline. The thrust is inferred to be NW extension of the source fault of the 2007 earthquake. There are other folds which were formed in different ages in and around the source area, suggesting that the geometry of the thrust system has been changing.