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Surface slip vectors along the Yunotake fault during the April 11, 2011 earthquake of Mj 7.0 at eastern Fukushima

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A Mj 7.0 (Mw 6.8) earthquake on April 11, 2011 at east Fukushima Prefecture, NE Honshu, Japan caused surface ruptures along the Idosawa and Yunotake faults. We investigated the distribution of slip vectors along the Yunotake fault. The rupture is a normal fault and linearly extend for 15.6 km between 37 3.94 N, 140 40.59E and 36 59.16N, 140 49.91E. Slip vectors along the 10 to 14 km-long central section of the main strand are almost constant. The hangingwall (SW) side moves 40-60 cm vertically and 30-50 cm horizontally toward S30-45W relative to the footwall (NE) side along the section. There is a gap of 800 m long in the southeastern part of the main strand. Two subsidiary strands, which branches toward the northeast from the main strand on both side of the gap, forms a depression on the footwall side.

Keywords: east Fukushima earthquake of April 11, 2011, surface rupture, Yunotake fault, slip distribution, slip vector