

## Slow Slip event beneath Yonaguni Island, western Ryukyu Island

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Aseismic slip event started 2001 in western Ryukyu region. The spatial pattern of the observed anomalous ground motion for the period between July 2002 and July 2007 indicated southeastward motion of around 3 cm at stations Yonaguni and Hateruma in the western Ryukyu region. Maximum uplift of 3 cm is observed at station Yonaguni where the maximum horizontal motions occurred. The surface displacements due to fault dislocations were calculated assuming an elastic half space. Geometric parameters such as fault center coordinates, fault width/length, dip, strike, and depth were optimized by grid search to realize the smallest post-fit residuals. The fault is centered beneath Yonaguni Island and as deep as 35 km, and its dimension is 84 km in length and 30 km in width. It dips 30 degrees toward NNE with strike 290 degrees (Fig. 4). Cumulative moment amounts to the equivalent of an  $M_w=7.2$  earthquake. The fault plane is just west of the faults of repeating SSE (Heki and Kataoka, 2008).