Shear wave splitting observed in the Yonaguni Island, southwestern part of the Nansei-islands

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We investigated the shear-wave splitting in the upper mantle of Yonaguni Island, southwestern part of Nansei islands. We compute the direction of fast S wave and the time lag between two splitted S waves by using correlation of horizontal seismograms. The result shows that the degree of the time lag is less than 0.1 s in the events, which occurred beneath the Yonaguni Island. The fast direction is E-W or N-S. Thus, degree of the seismic anisotropy is small beneath the Yonaguni Island. On the other hand, average of the time lag is 0.35 s in the events, which occurred beneath the Okinawa Trough. The fast direction is E-W. Therefore, the degree of seismic anisotropy is large beneath the Okinawa Trough. This suggests that the crack and melt would be distributed beneath the Okinawa Trough.