Stress change at the San'in region and Inland Earthquke

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We investigated the stress field in and around the earthquake belt along the Japan Sea in the Chugoku district in Japan, by a stress inversion of polarity data from the two Joint Seismological Observations conducted mainly by the Japanese universities. First, we estimated a spatial change in the stress field along the earthquake fault of the 2000 Western Tottori earthquake, by using the data of the Joint Aftershock Observation. We inferred that the direction of the maximum principal stress rotates counterclockwise from N100E in the southernmost end of it to N120E in the northernmost end. Second, we used the data of the Seinan Joint Seismological Observation and found that the direction of the maximum principal stress rotates counterclockwise from N100E in the Chugoku district to N120E along the earthquake belt. As shown in the above, these two results are consistent with each other. Thus, it is likely that the stress field in the earthquake belt is different from that around the belt. These results suggest that large intraplate earthquakes are not generated by regional stress but local stress anomalies.