Comparison of the source process of the 1968 Tokachi-Oki and 1994 Sanriku-Haruka-Oki earthquakes

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In Sanriku-Oki region, various types of large earthquakes occurred.In an attempt to extract the nature of the source variety,we examined the source process and the aftershock distribution of the Tokachi-Oki earthquake of 1968(Mw8.2) and of the Sanriku-Haruka-Oki earthquake of 1994(Mw7.7) using the same velocity structure and computational algorithm.

It is shown that the two earthquakes have a common asperity at the southwestern end of the fault areas,while the rupture started at different points. It is also remarkable that the aftershocks occured in the vicinities of the asperities and near the initial breaks where the seismic moment release was rather slow.