

A change of p-value before and after the largest aftershock for the 1994 far off Sanriku earthquake

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We investigated the change of p-value before and after the largest aftershock of the 1994 far off Sanriku earthquake by using the ETAS model. The aftershock area for the mainshock is divided into the eastern region where the mainshock occurred and the western region where the largest aftershock occurred. What we found is that the p-value for the western region in the period just before the largest aftershock is significantly smaller than that in the period after the largest aftershock. On the contrary, the p-value for the eastern region becomes smaller after the largest aftershock, and about a year later relatively large aftershocks occurred. These results imply that the p-value before a large earthquake might be smaller than that after a large earthquake.