Spatial Variation of b-value around Mt. Fuji influenced by the Eastern Shizuoka Earthquake of 15 March 2011

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The Eastern Shizuoka earthquake occurred on March 15, 2011 (Mj6.4). The hypocenter of the earthquake was approximately 6 km southwest of Mt. Fuji's peak at a subsurface depth of about 15 km. Estimating spatial variation of the b-value of the Gutenberg–Richter relation is important in the examination of time and spatial changes in volcanic and seismic activity after large earthquakes. This study aims to evaluate changes in seismic activity after the 2011 Eastern Shizuoka earthquake using the spatial variation of the b-value. Hypocentral data from July 2001 to December 2017 was obtained from the JMA catalog. As a result, the b-value for earthquakes around Mt. Fuji was significantly smaller during the period after the 2011 Eastern Shizuoka earthquake than during the period from July 2001 through February 2011, and it continued to gradually recover after the Eastern Shizuoka earthquake.

Keywords: b-value, Mt. Fuji, 2011 Eastern Shizuoka Earthquake