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Increase of seismic activity along the Hida mountain range after the 2011 off the Pacific coast of Tohoku earthquake

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Seismic activity along the Hida mountain range, central Japan, intensively increased soon after the occurrence of the main-shock of the 2011 off the Pacific coast of Tohoku earthquake. Around 10 minutes after the mainshock, two M4.5 class earthquake took place along the Hida mountain range and seismic activity increased since then. In this paper, we will focus on the activity in the vicinity of the Mt. Yake (Yake-dake) volcano. An M4.8 event occurred at 2011/3/11 14:57 (JST), which is 11 minutes after the mainshock of off Tohoku, at the northern flank of the Mt. Yake volcano followed by intense swarm activity. This activity is declining at the end of April, 2001. No temporal migration of the hypocenters has been observed. Focal mechanism of larger earthquakes exhibit reverse fault type with NW-SE compression stress field, which corresponds to the regional stress field. The former observation indicates that no magma transport is seen, and the latter indicates that local stress field is not disturbed by the volcanic activity, both of which show that this seismic activity is likely not related to the volcanic activity of the Mt. Yake in this stage.