

## Swarm Activity at the Southwestern Frank of Mt. Norikura, Gifu Prefecture, Central Japan, in February and March, 2011

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An intense swarm activity was observed around the south-western frank of the Mt. Norikura, Gifu Prefecture, Central Japan, in February and March 2011. Swarm activity took place at 2:18 JST, February 27, 2011 with a Mjma 5.0 earthquake followed by a Mjma 5.5 event at 5:38 JST, February 27, which is the largest event in this activity, The activity decreased until the end of March, with slight re-activation until the end of December 2011. Focal mechanism solutions derived from the first P-wave motion analyses exhibit the NNW-SSE compression stress field that indicates these earthquakes are located on the ENE extension of the Takayama-Oppara fault system which roughly run NE-SW direction in Hida district, Gifu Prefecture.

We applied the matched-filter technique to this seismic activity if we could detect the temporal evolution of such an intense activity quickly. We selected thirty (30) templates earthquakes recorded at surrounding nine (9) seismic stations for matched-filter detection. More than 4,800 events are detected during the period from February 27 to March 31, which is about three times as JMA located. Number of earthquakes we could locate is about one third of detected events, which is roughly same as the JMA located. Although we have to check the precision and accuracy of our located events for precise discussion, we could say this method is one of the powerful tools to investigate the temporal variations of swarm activities.

Keywords: swarm activity, Hida district, Gifu Prefecture, Mt. Norikura-dake, Takayama-Oppara Fault, matched-filter technique