Geophysical Research Abstracts
Vol. 13, EGU2011-13699, 2011
EGU General Assembly 2011

The 2006 Eruption of Mt. Merapi: Seismic, Deformation and Dome Observation

Antonius Ratdomopurbo
Geological Agency Indonesia, now at Earth Observatory of Singapore

The eruption of Merapi in the year 2006 is one of the eruptions that was monitored quite completely. The process from increasing seismicity and deformation which arrived on a dome formation could explain the characteristics of usual eruption at the volcano. The onset time of an effusive eruption and the beginning phase of lava dome formation could be observed clearly. It took about three weeks for the new dome to be unstable and to start creating a series of pyroclastic flow. In the beginning of April 2006, the average number of MP (summit quakes) events increase to about 160 events/days, from about 35 events a month before. However, number of lava rockfalls did not change significantly. Summit deformation, measured with EDM, was also detected. The strongest deformation was reported occurring at the south summit slope of Merapi volcano. Shortening of EDM distance was up to 3 meters relative to that of January 2006. On April 26, 2006, a new-born dome was visible marking the start of eruption phase. This eruption was preceded by a strong summit-tilt increase. The RSAM signal suddenly decreased just after the magma reached the summit surface. The subsequent daily photographs of the summit taken after the start of dome formation could indicate that during effusive eruption the rate of lava outflow is very small.