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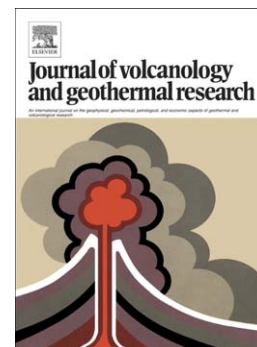
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Eruptive dynamics inferred from textural analysis of ash time series: the 2015
reawakening of Cotopaxi volcano

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Abstract

Forecasting future activity and performing hazard assessments during the reactivation of large andesitic volcanoes remain a great challenge for the volcanological community. On August 14, 2015 Cotopaxi volcano erupted for the first time in 73 years after approximately four months of precursory activity, which included an increase in seismicity, gas emissions, and minor ground deformation. Here we discuss the use of near real-time petrological monitoring of ash samples as a complementary aid to geophysical monitoring, in order to infer eruption dynamics and evaluate possible future eruptive activity at Cotopaxi. Twenty ash samples were collected between August 14 and November 23, 2015 from a monitoring site on the west flank of the volcano. These samples

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