Instrumentation of the Krakatau Monitoring System (Indonesia)

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In the last year a new multi-parameter monitoring system has been installed on Krakatau island volcano in Indonesia. The system is designed for long-term continuous monitoring of various geophysical and environmental parameters. Installations on the edifice of Anak Krakatau itself consist of three sites in a triangular setting around the volcanic cone. The distance between the stations are less then $1\,km$. Each site is equipped with a $24\,bit$ digitizer, seismometer, either short period or broad-band, differential GPS and ground temperature sensors, forming the backbone of the system. In addition chemical und physical parameters of fumaroliuc gases, sea-level, meteorological parameters (humidity, temperature, windspeed, rain) and electromagnetic fields are recorded. One more site is installed on the neighbour island Sertung with a seismometer and a digital camera for visual control of volcanic activity with a distance from crater of $5\,km$. All this sites are connected by WLAN. The data acquisition center is located $50\,km$ far from the Island on Java and receives the data streams via radio links. The server in the observatory preprocesses, archives and plots the incoming realtime data streams.

The two main objectives are: (i) To improve early warning procedures for volcanic risk in the Sunda Strait and adjacent densely populated areas of South Sumatra and West Java. (ii) To achieve a better understanding of dynamic processes inside the volcano and of external forcing that may influence the activity of Anak Krakatau. This poster gives an overview of the installations on the Krakatau island group. We would like to encourage discussion on the possibilities and difficulties of such monitoring systems on island volcanoes.