MODIS thermal observations of the May 2003 Anatahan eruption

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The following figure summarises thermal observations of the current eruption of Anatahan provided bv the HIGP MODIS Thermal Alert Team (http://modis.higp.hawaii.edu). The most recent hot-spot (as of 17:00 GMT on 28 May 2003) was observed on 24 May. Each red dot defines the geodetic location of the pixels flagged by our MODVOLC algorithm (Wright et al., 2002) as containing volcanic hotspots. However, as this coordinate describes the centre point of each pixel, the hot-spots could in fact have been located anywhere in the square orange boxes (which portray the nominal 1 km pixel size of the MODIS instrument.) The yellow circles denote the absolute limits within which the volcanic hot-spots responsible for the anomalies must have been sited (based on a statistical analysis of long-term hot-spot location stability at other volcanoes). The hot-spot locations are referenced to WGS-84 ellipsoid. Map coordinates are in UTM zone 55 (north). The large amounts of ash produced during the eruption will have obscured some thermal anomalies from the MODIS sensor. The current activity appears to be heavily concentrated in the eastern crater.

Reference:

Wright, R., Flynn, L.P., Garbeil, H., Harris, A.J.L., and Pilger, E. (2002). Automated volcanic eruption detection using MODIS. *Remote Sensing of Environment*, **82**, 135-155.

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MODIS Thermal Alerts detected at Anatahan

