PRECURSORS AND PROCESSES CULMINATING IN THE ANAK KRAKATAU DEC 2018 SECTOR COLLAPSE AND TSUNAMI

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SECTOR COLLAPSE PRECURSORS

Moderate Imaging Spectroradiometer (MODIS)

20 year eruptive activity from MODIS thermal data

Strong increase since 6/2018
Modelling of flank movement:

- Sliding plane 0.48 x 1.24 km²
- Strike NW-SE at 162°, dip 34°.
- Cumulative slip 3.3 m

Sentinel-1 InSAR time series suggest over 20 cm flank movement in 2018.
THE SECTOR COLLAPSE EVENT

Collapse at 13:55:49

The closest seismic station CGJI 64 km distance

Smoothed envelopes 0.4-1 Hz bandpass filtered
THE SECTOR COLLAPSE EVENT

The infrasound wave was identified at the infrasound array I06AU (a CTBTO station) >1,150 km away.