

Study of the structure changes caused by volcanic activity in Mexico applying the lineament analysis to the Aster (Terra) satellite data.

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Mexico is one of the most volcanically active regions in North America. Volcanic activity in central Mexico is associated with the subduction of the Cocos and Rivera plates beneath the North American plate. Periods of enhanced microseismic activity, associated with the volcanic activity of the Colima and Popocatepetl volcanoes are compared to some periods of low microseismic activity. We detected changes in the number and orientation of lineaments, associated with the microseismic activity due to lineament analysis of a temporal sequence of high resolution satellite images of both volcanoes. 15 m resolution multispectral images, provided by the ASTER/VNIR instrument, were used. The Lineament Extraction and Stripes Statistic Analysis (LESSA) software package was employed for the lineament extraction.