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Analysis thermal anomaly of the Nepal Mw7.9 earthquake on 25 April 2015 using OLR data

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An Mw7.9 earthquake, located at the front of the India-Eurasia collision belt, hit Nepal on April 25th, 2015. The temporal and spatial variations of outgoing long wave radiation (OLR) around the time of Nepal earthquake Mw7.9 April 25th, 2015 have been analyzed based on nine years data (2006-2014) using combined Robust Satellite Technique (RST) and vorticity methods. The results show that on April 4th an increase of emitted infrared radiation was observed from the satellite data and an anomaly developed on south of the epicenter. The maximum anomalies, located westward from the epicenter about 100 kilometers, were found on April 24th. Mechanisms for triggering the event are not yet known and still many theoretical questions on the quantitative link between long wave radiation and tectonic stress need to be answered. Earthquake prediction is still a challenging work to us. Much work needs to be done in how to obtain the seismic precursor information.

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