



Earthquake-Lightning Signature Probed by Tropical Rainfall Measuring Mission

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The lightning activity is one of the key parameters to understand the atmospheric electric fields near the Earth's surface and the lithosphere-atmosphere-ionosphere coupling during the earthquake preparation period. A statistical study shows more lightning before magnitude $M \geq 5.0$ earthquakes in Taiwan during 1993–2004. In this paper, the Lightning Imaging Sensor (LIS) onboard Tropical Rainfall Measuring Mission (TRMM) is used to statistically exam the lightning activity 30 days before and after 198 $M \geq 7.0$ earthquakes in the tropical area of the globe during the 17-year period of 1988-2014. The statistical results show that lightning activities over epicenter significantly enhance before the earthquakes.