



## Twelve Years of RHESSI TGFs – The second RHESSI TGF catalog.

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The Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI) satellite has been observing TGFs from satellite orbit since 2002. The first RHESSI catalog was presented by Grefenstette et. al., 2009. Here we will present the second RHESSI catalog. This catalog consist of TGFs, identified by our search algorithm, from 2002 through 2013. This search has resulted in the largest collection of TGF events so far. Several of the TGFs are matched with ground based VLF network such as the World Wide Lightning Location Network (WWLLN) and DUKES VLF/ULF receivers. By only including TGFs that occur within 5000 km from the DUKE receivers we found that vast majority of TGFs were matched with a DUKE sferic.

We will also present a new TGF that occur simultaneously with both a lightning flash observed by the Lightning Imaging Sensor (LIS) on-board the Tropical Rainfall Measuring Mission (TRMM) satellite and WWLLN.