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How common are TGFs?

N. Ostgaard (1), B. Carlson (1), R. S. Hansen (1), T. Gjesteland (1), and A. Collier (2)

- (1) University of Bergen, Dept. of Physics and Technology, Bergen, Norway (Nikolai.Ostgaard@ift.uib.no, +47 5558 2794),
- (2) SANSA Space Science / University of KwaZulu-Natal, Hospital Street, Hermanus, South Africa

Based on the daily detection rate of Fermi and RHESSI, taking into account their different orbits, combined with the two instruments different sensitivities we estimate the dead time losses in RHESSI as well as the true fluence distribution of TGF from space.

An independent Monte Carlo simulation of the dead time losses for RHESSI supports these results.

The new expanded list of RHESSI TGFs also support these results.

Given this distribution and the difference between distribution from space and source distribution we discuss the non-detection by ADELE and find that we cannot rule out that all lightning discharges may produce TGFs.