



## **ASIM - Fermi simultaneous observation of Terrestrial Gamma-ray Flashes**

Martino Marisaldi (1), Nikolai Østgaard (1), Torsten Neubert (2), Victor Reglero (3), and the ASIM Team and collaborators

(1) University of Bergen, Birkeland Centre for Space Science, Department of Physics and Technology, Bergen, Norway (martino.marisaldi@uib.no), (2) National Space Institute, Technical University of Denmark, Denmark, (3) University of Valencia, Spain

There are currently three active space missions with Terrestrial Gamma-ray Flashes (TGF) detection capabilities: the AGILE and Fermi satellites, and the Atmosphere Space Interaction Monitor (ASIM) mission onboard the International Space Station. Depending on orbital parameters, pairs of these detectors periodically get closer than few hundreds kilometers, observing the same region on the Earth surface for up to several tens of seconds. This offers the unique chance to observe the same TGF from two different viewing angles. In principle, such observations would allow to probe the TGF production geometry and possibly put constraints on production models and electric field geometry at the source.

Here we present two TGFs simultaneously detected by ASIM and Fermi on 21 June and 05 September 2018. We present location data, light curves, and possible constraints to emission geometry based on coupled observations. We show that, given the ASIM higher effective area and lower orbital altitude, ASIM is detecting about an order of magnitude larger number of photons than Fermi, allowing a much more detailed analysis.