

One year of AGILE Terrestrial Gamma-ray Flashes detection in the enhanced configuration

Martino Marisaldi (1,2), Alessandro Ursi (3,4), Andrea Argan (3), Marco Tavani (3), Claudio Labanti (1), Fabio Fuschino (1,5), Riccardo Campana (1), Andrey Mezentsev (2), and Nikolai Østgaard (2)

(1) INAF-IASF Bologna, Italy (marisaldi@iasfbo.inaf.it), (2) Birkeland Centre for Space Science, University of Bergen, Norway, (3) INAF-IAPS Roma, Italy, (4) Department of Physics, University of Roma Tor Vergata, Italy, (5) Department of Physics and Astronomy, University of Bologna, Italy

At the end of March 2015 the onboard configuration of the AGILE MiniCalorimeter was modified in order to disable the veto signal of the Anti-Coincidence shield. This change was motivated by the need to reduce the dead-time for TGF detection to a minimum. The change resulted in a ten fold improvement in Terrestrial Gamma-ray Flashes (TGFs) detection rate and in a nearly dead-time free TGF sample with events as short as 20 microseconds (M. Marisaldi et al., Geophys. Res. Lett. 42, 2015). Estimates based on the initial period of data acquisition in this enhanced configuration suggested the expected yearly TGF rate to be in the range 800-1000. We present here the updated statistical analysis of the enhanced AGILE TGF sample after one complete year of operations in the enhanced configuration.