TITLE: GCN CIRCULAR
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SUBJECT: LIGO-Virgo S190512at: AGILE GRID observations
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In response to the LIGO-Virgo GW event S190512at T0 = 2019-05-12 18:07:14.422 UTC (GCN #24503), analysis of AGILE data shows that the satellite at T0 was in the South Atlantic Anomaly (SAA). Scientific telemetry was inhibited during the time interval (T0 -13 s; T0 + 834 s).

We performed a preliminary analysis of the AGILE Gamma-Ray Imaging Detector (GRID) in the first interval available after the SAA, between T0 +840s and T0+940s. In this time interval, due to Earth occultation and Solar Panel constraints, the GRID exposure covered only about 1% of the LIGO/Virgo 90% c.l. localization region (LR), observed at off-axis angles of about 60 deg.

An analysis of the data in the energy range 50 MeV - 10 GeV in this integration time was performed, and preliminary 3-sigma upper limits (UL) values within the small accessible LIGO/Virgo localization region are:
from 8.9e-7 erg cm^-2 s^-1 to 1.0e-6 erg cm^-2 s^-1 for an integration time of 100s.

We also performed a search for a transient counterpart in the time window from T0 + 1 ks to T0 + 10 ks. In this time interval due to Solar Panel constraints, the GRID exposure covered about 40% of the LR, observed at off-axis angles from about 55 to 100 deg. Preliminary 3-sigma upper limits values are:
from 2.8e-9 erg cm^-2 s^-1 to 1.0e-8 erg cm^-2 s^-1 for an integration time of 9 ks.

An image of the AGILE-GRID exposure of S190512at in the time window from T0 + 1 ks to T0 + 10 ks is available at the site:
https://tools.ssdc.asi.it/ImgView/Agile/AGILE_exp_T0p1k-T0p10k_S190512at9

These measurements were obtained with AGILE observing a large portion of the sky in spinning mode.