



The AGILE gamma-ray legacy archive and the "user-friendly" AGILE-LV3 web tool in the ASI-SSDC MWL environment.



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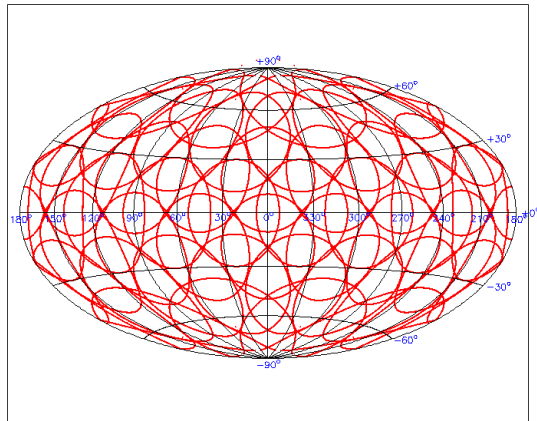


The AGILE-LV3 web tool for easy gamma-ray analysis

Do you have a favourite source or region in the sky and are you curious to know what is the AGILE gamma-ray satellite view of it during more than 10 years of observations? Try this: <http://www.ssdsc.asi.it/mmia/index.php?mission=agilelv3mmia>

What's behind the tool?

The AGILE Level-3 archive of Counts, Exposure, and Diffuse γ -ray Background maps:



Centers and dimensions of the 48 rings used as a basis for the creation of the Level-3 AGILE map archive. All-sky Hammer-Aitoff projection in Galactic coordinates. Coordinates of every map center has been determined using the HEALPix algorithm [K.M. Górski et al., 2005].

AGILE Data Center main activities: raw data reduction and processing from LV0 to LV3:

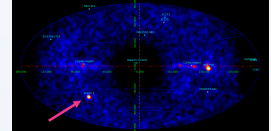


INPUT/OUTPUT

Example: AGILE and the MONSTER Black Hole 3C 454.3 (we call it the "CRAZY DIAMOND")

QUERY INPUT:

- Source name or sky coordinates in your favorite sky coordinate system: Equatorial, Galactic or Ecliptic.



OUTPUT from the Database:

- All AGILE available observations of the source.
- Light curve at a click of the mouse with bins of the selected duration (28-day default).
- Waiting time: from few seconds to few minutes (depends on # of selected bins).

Web interface for official interactive on-line Maximum Likelihood analysis on AGILE data. It does not require any locally installed SW or calibrations! Tested also with students: two of them kindly provided 2 brief video tutorials (< 5 minutes). See credits.

Result (html format) of ML analysis in each time-bin, to estimate flux and significance of the source, taking into account all other known sources in the region and the diffuse γ -ray background:

PLANNED UPDATES

- WARNINGS:** for sources located in crowded regions of the Galactic plane and in the region of 5x5 degrees around the Galactic Center the interactive AGILE-LV3 Maximum Likelihood online analysis might not be reliable at the moment.

Future AGILE-LV3 Tool planned improvements (work in progress):

- updated list of known AGILE sources to be queried within the Region of Interest (ROI) after the publication of new AGILE Catalogs (including extended sources);
- updated scientific software and calibrations;
- updated AGILE diffuse background model in the Galactic Center region.

STAY TUNED!

Acknowledgements and contacts

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