

# SciNeGHE 2016 High-energy gamma-ray experiments at the dawn of gravitational wave astronomy



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## AGILE observations of Gravitational Wave events

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We will present the AGILE capabilities to detect the electromagnetic counterparts of Gravitational Wave (GW) sources recently discovered by LIGO. The follow-up of the events discovered so far and the perspective for future discoveries will be discussed.

The combination of Tracker, miniCalorimeter, Anti Coincidence as a gamma-ray imager, makes the AGILE-GRID an optimal instrument for follow-up observations of large localization regions of GW sources. This can be achieved thanks to the following characteristics: 1) a very large FoV (2.5 sr), 2) an accessible sky of about 80% every 7 minutes with a sensitivity of  $10^{-8}$  erg  $\text{cm}^{-2}$   $\text{s}^{-1}$  at  $E > 30$  MeV on  $\sim 100$  s, 3) sub-millisecond trigger for very fast events detectable by MCAL in the range 0.4-100 MeV.

In addition to them, the improved localization capability (2-3 arcmin) expected to be provided by the reactivation of the hard X-ray monitor, SuperAGILE.

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