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AGILE observations of the ultra-luminous GRB 221009A

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The ultra-luminous, long-duration transient event GRB 221009A was detected by several observatories - as the most luminous gamma-ray burst ever observed - from radio to VHE gamma rays, up to tens of TeV. AGILE detected an extraordinary incoming flux of hard X-ray and high-energy gamma-ray photons during this unprecedented event. The high-energy emission (from tens of keV up to GeV energies) has been recorded by the AGILE detectors with an almost-continuous time coverage, monitoring the transition between the prompt and the afterglow phase, up to ~20 ks after the onset of the GRB. AGILE time-resolved spectra and light curves are presented in a multi-frequency context, focused on the observed high-energy component of this intense GRB. The AGILE simultaneous hard-X/gamma-ray observations during the key phases of the burst will be crucial to give robust constraints to the physical evolution of the GRB's high-energy emission.

Primary author: PIANO, Giovanni (INAF-IAPS)

Co-authors: FOFFANO, Luca (INAF-IAPS); TAVANI, Marco (INAF IAPS)

Presenter: PIANO, Giovanni (INAF-IAPS)

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