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INTEGRAL and GW: the present and future perspectives

The talk will summarize the scientific implication of the INTEGRAL observations of the LVC O2 run and, in particular, of the upper limits for the BH-BH mergers and the detection of the first prompt electromagnetic counterpart coincident with a GW170817.

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Summary

The first detection of the prompt electromagnetic counterpart coincident with a GW170817 has been a forward step in our knowledge of NS-NS merging.

An unexpected result was the extremely low isotropic luminosity of the event relative to other short gamma-ray bursts (SGRBs) with known redshifts, revealing a population of low luminosity SGRBs. The most popular interpretation has been that GRB 170817A was viewed off-axis, rather than that the event had an intrinsically low luminosity. In either case, this

result has spurred off-line searches for SGRBs below instrument trigger thresholds in hopes of finding similar events.

We will present a data set from the INTEGRAL soft gamma-ray detector IBIS/PICsIT (~200 keV - 10 MeV) to corroborate the list of publicly available un-triggered SGRB candidates reported by Fermi/GBM.

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