

The Amati relation in Gamma-Ray Bursts: observations, implications and perspectives.

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The correlation between spectral peak energy, $E_{p,i}$, and isotropic-equivalent total radiated energy, E_{iso} , referred to as “Amati relation” in the scientific literature, is one of the most relevant and investigated properties of Gamma-Ray Bursts (GRBs), with strong implications for prompt emission physics, identification and understanding of different sub-classes, using these phenomena for measuring cosmological parameters. I will review the observational status of the Amati relation, its main properties and consequences, the expected developments from near future (e.g., SVOM) and next generation (e.g., THESEUS) space missions dedicated to GRBs.

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