

Abstract Submitted
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The classification of GRB050509B within the canonical GRB scenario GUSTAVO DE BARROS, MARIA GRAZIA BERNARDINI, Università di Roma “Sapienza,” ICRA & ICRANet, CARLO LUCIANO BIANCO, ICRA & ICRANet, LETIZIA CAITO, REMO RUFFINI, Università di Roma “Sapienza,” ICRA & ICRANet — Within the fireshell model, the canonical GRB scenario emphasizes the existence of two sharply different components: 1) the proper GRB (P-GRB), emitted at the transparency of the fireshell; 2) the “extended afterglow”, due to the interaction of the optically thin fireshell with the CircumBurst Medium (CBM). Modifying the relative intensities of these components all GRBs can be classified into the traditionally called “long” GRBs, the “fake” or “disguised” short GRBs and the “genuine” short GRBs. We show as a specific example for this classification the case of GRB050509B, considered in the literature as “short GRB with associated afterglow”. We analysed this GRB and we show that its astrophysical setting suggests univocally a classification as “fake” short GRB. Moreover, we show how the Amati relation is crucial in identifying the nature of GRBs, especially in cases of pucity of observational data.

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