On the Connection of Gamma-Ray Bursts and X-Ray Flashes

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Classification of gamma-ray bursts (GRBs) into groups has been intensively studied by various statistical tests since 1998. It has been suggested that next to the groups of short/hard and long/soft GRBs there could be another class of intermediate durations. For the Swift/BAT database Veres et al. 2010 (ApJ, 725, 1955) it was found that the intermediate-duration bursts might be related to X-ray flashes (XRFs). On the other hand, Řípa and Mészáros 2016 (Ap&SS, 361, 370) and Řípa et al. 2012 (ApJ, 756, 44) found that the intermediate-duration GRBs in the RHESSI database are spectrally too hard to be given by XRFs. Also, in the BATSE database the intermediate-duration GRBs can be only partly populated by XRFs. The key ideas of the Řípa and Mészáros 2016 (Ap&SS, 361, 370) article are summarized in this poster.

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