

## **Gamma-ray bursts and the most distant supernovae in the Universe**

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Discovery of relation between long-duration gamma-ray bursts (GRBs) and core-collapse supernovae (SNe) is the most important achievement in this domain during recent 10 years. Now the search for SNe signs in photometry and spectra of GRB optical transients became the main observational direction both for large ground-based telescopes and space platforms. The GRBs themselves are already considered as a probe for studying processes of massive star-forming at cosmological distances up to  $z \sim 10$ . Irrespective of specific models of this phenomenon, it might be said now that when observing GRBs we observe SNe which, probably, are always related to the relativistic collapse of massive stellar core in very distant galaxies.