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Title: From Supernovae, to Hypernovae to Binary Driven Hypernovae

Abstract: Our concept of Induced Gravitational Collapse (IGC paradigm) from an incipient Supernova into a companion Neutron Star, has unlocked the understanding of seven different families of GRBs, indicating the path for the formation of Black Holes in the Universe. An authentic laboratory of relativistic astrophysics has been unveiled in which new paradigms have been introduced in order to advance in the knowledge of the most energetic, distant and complex systems of our Universe. A novel paradigm of the Cosmic Matrix has been introduced which parallel, in a relativistic cosmic level, the concepts of an S Matrix introduced by Feynmann, Wheeler and Heisenberg in the quantum world of microphysics. Here the "in" states are represented by a Neutron Star and a Supernova, the "out" states, generated, in less then a second, by a new Neutron Star and a Black Hole. This novel field of research needs very powerful technological observations in all wavelength ranging from Radio, to Optical, to X and Gamma radiation all the way to ultra-high-energy cosmic rays.