

Discovery of energy extraction from a Kerr Black Hole by discrete "Black-Holic" quanta in GRB 190114C, GRB 130427A, GRB 160509A and GRB 160625B

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Almost fifty years after the paper "Introducing the Black Hole" by Ruffini and Wheeler and the Black Hole (BH) mass energy formula by Christodoulou, Ruffini and Hawking, we can finally assert that we have been observing the moment of creation of a BH in the BdHN I in GRB 190114C, GRB 130427A, GRB 160509A and GRB 160625B, with the corresponding rotational energy extraction process. The first appearance of the Supernova, the SN-rise, triggering the BdHN has been identified. The hypercritical accretion on the SN ejecta on the new NS (vNS) created in the SN, is shown to originate the X-ray afterglow observed by the NASA Niels-Gehrels SWIFT satellite (SWIFT). The hypercritical accretion of the SN on the NS binary companion in the BdHN I model leads to the formation of the newly formed BH. The onset of the GeV radiation coinciding with the BH formation has revealed self similar structures in the time resolved spectral analysis of all sources. Consequently, we find evidence for quantized-discrete-emissions in all sources, with energy quanta of 1037 ergs with repetition time of 10-14 sec. GRBs are the most complex systems ever successfully analyzed in Physics and Astrophysics, and they may well have a role in the appearance of life in the Cosmos. These results have been made possible by a long-lasting theoretical activity, a comprehensive unprecedented high quality data analysis, an observational multi-messenger effort by the astronomical, the physical and the space research communities. This observational effort is well epitomized by the original Vela Satellites, the NASA Compton space mission (CGRO), the Italo-Dutch Beppo SAX satellite, the Russian Konus Wind Satellite, the SWIFT satellite, the Italian AGILE satellite, the NASA FERMI mission and most recently the Chinese satellite HXMT. These space missions have been assisted by radio and optical equally outstanding observational facilities from the ground.

Primary author: RUFFINI, Remo (ICRANet, ICRA, INAF)

Presenter: RUFFINI, Remo (ICRANet, ICRA, INAF)

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