Sixteenth Marcel Grossmann Meeting



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The Supernova of GRB 190114

Thursday, 8 July 2021 08:15 (35 minutes)

GRB190114C (z = 0.42) is the first GRB firmly detected at TeV energies. Like most long GRBs at low-tointermediate redshifts, it exhibits a clearly detected accompanying supernova, SN2019jrj, whose properties are similar to those of known core-collapse supernovae. However, SN2019jrj differs from classical GRB-SNe (like the prototypical SN1998bw) in being less luminous and having narrower absorption lines, i.e. lower photospheric velocities, which translates into a lower kinetic energy. I will review the facts and current knowledge acquired in more than 20 years of research on GRB-SNe, in the light of the GRB190114C/SN2019jrj event.

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