

# Magnetar Giant Flares as Gamma-Ray Bursts

*Wednesday 14 April 2021 19:15 (15 minutes)*

Cosmological Gamma-Ray Bursts (GRBs) are known to arise from neutron star mergers and collapsars. We have identified 4 GRBs within 5 Mpc which are inconsistent with such an origin: they appear to be extragalactic Magnetar Giant Flares (MGFs). These are the closest known GRBs, the signals from the most distant known magnetars, and suggest a broadly morphology of MGFs than previously known. They require an intrinsic rate higher than any previously detected extragalactic high energy transient, which further suggests magnetars as sources of repeating GRBs and that common core-collapse supernovae are the dominant progenitors of magnetars.

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**Session Classification:** Exploring the Cosmos: GRB-1

**Track Classification:** Gamma-ray Bursts