Seventeenth Marcel Grossmann Meeting



Contribution ID: 312

Type: Invited talk in a parallel session

Magnetar Giant Flares

Thursday, 11 July 2024 17:00 (30 minutes)

Magnetars were discovered as soft gamma-ray repeaters by gamma-ray burst monitors. Their most energetic events are giant flares, seen as a bright, short flash followed by an exponentially-decaying periodic tail. There have been 3 such events seen in the Milky Way and Large Magellanic Cloud in ~60 years of observing. When these events occur in nearby galaxies their tail emission is undetectable, and they appear as short gamma-ray bursts. We have now identified 6 extragalactic magnetar giant flares, allowing for the first population studies on rates and host galaxy types, providing key information in the quest to understand their progenitors. We will discuss recent results and on-going work.

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Session Classification: Galactic and extragalactic magnetars: recent observations and theoretical

progress

Track Classification: Compact Objects and Stellar Evolution (CO): Galactic and extragalactic magnetars: recent observations and theoretical progress