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Magnetar Evidence in Central Engines of Peculiar Gamma-Ray Bursts

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Recent observations of peculiar gamma-ray bursts (GRBs), such as GRB 211211A and GRB 230307A, challenge the traditional view that hyper-accreting black holes power these events. Instead, key signatures—temporal, spectral, and kilonova features—suggest millisecond magnetars as central engines, formed in compact star mergers. This talk highlights recent progress in understanding magnetar-driven GRBs and discusses their implications for GRB progenitors, neutron star physics, and merger energetics.

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