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## Collapsars: black hole properties, magnetic fields and r-process nucleosynthesis

Monday, 5 May 2025 16:45 (30 minutes)

Collapsars are known to be the origin of GRB jets, black hole populations, and even potentially important r-process production sites in the early universe. In this talk, I will demonstrate how we can study the central engines of collapsars and jets, and establish the natal properties of their black holes. In particular, I will discuss how collapsar black holes acquire the strong magnetic fields necessary for powering long GRB jets, and the crucial role the magnetic field plays in determining the black hole properties and ejecting r-process ejecta from accretion disks to power collapsar kilnovae.

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