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GRMHD simulations of black hole accretion and jets¹

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As black holes accrete surrounding gas, they often produce relativistic, collimated outflows, or jets. Jets are expected to form in the vicinity of a black hole, making them powerful probes of strong-field gravity. However, how the properties of a jet connect to those of the accretion flow and the black hole (e.g. black hole spin) remains an area of active research. I will discuss recent progress in first-principles general relativistic magnetohydrodynamic (GRMHD) models of black hole accretion-jet systems, specifically the emerging picture of how jets form and the factors that determine jet properties.

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