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Observationally constraining the jet power extracted from spinning black holes

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Black holes of all sizes, from stellar to supermassive, launch relativistic jets of magnetized plasma that can radiate across the entire electromagnetic spectrum. These flows originate from near-event horizon scales, where ordered magnetic fields threading the plasma likely play a defining role in their collimation and source of power. Depending on where the power is extracted from in the system, e.g., the inner accretion flow or the ergosphere of the black hole, there can be a markedly different dependence of observed power on black hole spin. Further complicating our ability to derive the spin from observations is the fact that the exact relationship between jet emission properties and spin will be very model dependent, and the fact that jets themselves evolve depending on the state of the accretion flow. I will present an overview of the current state of the art in understanding black hole jet observations and their relation to spin, as well as discuss some special cases like our Galactic center's supermassive black hole Sgr A*, and the evolving jets observed in X-ray binary systems.