

Prof. Jason Dexter

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Friday, October 3, 11:00 am. Osborne A204

Black Hole Accretion from the Inside Out



It is now possible to image black holes with event horizon scale resolution, providing a new means of studying how astrophysical black holes grow by feeding on ionized gas. I will show that the data can be used to study magnetic fields near the event horizon, and argue that the magnetic fields near Sgr A* and M87 are dynamically important. I will further discuss numerical simulations of black hole accretion with radiative cooling, including their predictions for high energy flares and for the structure and appearance of more luminous accretion flows.

Short Bio

Jason Dexter received his PhD from the University of Washington in 2011 and was a postdoctoral fellow at UC Berkeley and a junior research group leader at the Max Planck Institute for Extraterrestrial Physics before joining the faculty at CU Boulder in 2019. His research group uses computational and analytic models to study how black holes grow by accreting from infalling gas and making predictions for how these systems should appear in astronomical observations. He has worked in particular on the Event Horizon Telescope and GRAVITY experiments which make spatially resolved observations close to black hole event horizons.