

Abstract Submitted
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Kinetic Simulations of Black-Hole Magnetospheres: Jets, Reconnection, and the Connection to Turbulence KYLE PARFREY¹, Princeton University — Black holes launch powerful jets of plasma to relativistic velocities, using magnetic fields supplied by turbulent flows of accreting matter. Reconnection may be important for heating regions in or near the accretion flow to very high temperatures, producing a corona similar to that of the sun. I will describe the first general-relativistic simulations of collisionless black-hole magnetospheres, showing jet production directly tied to a reconnecting current sheet extending through the hole's event horizon. I will also show results of more idealized simulations which illustrate how the corona and jet can both be created by turbulence-generated magnetic structures.

¹Above ID is my "APS ID" – membership is pending

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