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**A stable high-order multipatch method for black hole accretion simulations** WYATT BREGE, Washington State Univ — In black hole simulations it is difficult to maintain design order accuracy for fluid evolutions in regions near excision inner-boundaries of the horizon, where many methods remove information from the matter inflow of black hole-neutron star binary evolutions and other accretion type problems. With a multipatch Energy Stable Weighted Essentially non-Oscillatory (ESWENO) scheme, high order accuracy between patch interfaces and on domain data boundaries can be ensured for the hydrodynamic variables. We present applications of a working multipatch ESWENO, focusing on multidimensional shock capture and preliminary results for black hole accretion disk problems.

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