

Abstract Submitted
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The Peak Optical Luminosity versus the Orbital Period of Black Hole X-ray Binaries VICTORIA BLACKMON, THOMAS MACCARONE, Texas Tech University — We compare the peak optical luminosity with the orbital period for a sample of 21 stellar-mass black hole candidates with good measurements of both quantities. We find that the peak absolute magnitude for the outbursts follows a relation with $M_V = 3.07\log P + 2.99$, which corresponds to a $L_V \propto P^{1.23}$ relation. This is a similar relationship to that found for cataclysmic variables. We discuss the implications of these results for finding black hole X-ray binaries in other galaxies and in our own Galaxy with the Large Synoptic Survey Telescope and with other future large time domain surveys.

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