

Abstract Submitted
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Equation of state survey of black hole-neutron star mergers WY-ATT BREGE, Washington State Univ — By varying across several realistic equations of state in the regime in which most neutron star masses are most likely to appear, we can study how important a role these EOS's play in the properties of the post-merger accretion disk in mixed binary systems. In each system considered, the black hole has a mass of $M_{\text{BH}} = 7 M_{\odot}$ and a spin of $a^* = 0.9$, and the neutron star has a mass of 1.2 or 1.4 M_{\odot} . The realistic EOS's chosen satisfy experimental and observational constraints, and explore a wide range of neutron star compactnesses. We will address remaining uncertainties in the NS high-density EOS's and, principally, examine differences in the dynamical ejecta and consider implications for nucleosynthesis.

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