

Abstract Submitted
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Characterizing particle orbits in general stationary axis-symmetric vacuum spacetimes¹ JEANDREW BRINK, Caltech — Determining the nature of a central compact object in a highly curved spacetime, requires detailed knowledge of the orbital trajectories of probe particles within this spacetime. The Carter Constant fully characterizes the geodesic structure of the Kerr spacetimes making the computation of observational waveforms for extreme mass ratio inspirals (EMRI's) possible. In more general stationary axis-symmetric vacuum (SAV) spacetimes not much is known. The first results of a method to systematically check for higher order Killing tensors which may describe orbital motion in general SAV spacetimes are presented.

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