

Abstract Submitted  
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**Modeling Galaxies in General Relativity** RYAN TANNER, Brigham Young University — Recently there has been some interest in relativistic models of galaxies which may give some correction to estimates of how much dark matter is present in a galaxy. There have been claims that the extent of the correction given by general relativity can remove the need to include dark matter in order to reproduce the flat rotation curves typical of galaxies. The method employed to make this claim involves treating a galaxy as a van Stockum dust, or pressureless fluid. I will consider this claim and investigate the problems and objections associated with this method, as it allows for closed timelike curves and disks of infinite density.

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