General Relativistic Effects on Kepler Systems TAYLOR MOR-
GAN, JARED JAY, DAVID NEILSEN, Brigham Young University — The Kepler
satellite has observed several extra-solar planetary systems. The masses of the plan-
ets are determined from their observed cross sectional area; and the density is in-
ferred from a stability analysis of the planetary systems using Newtonian gravity.
Using post-Newtonian equations, we explore how general relativistic effects alter
the stability properties of planetary systems, and possible changes to the inferred
masses of the Kepler planets. We also explore the chaotic nature of 3-body systems
in general relativity.

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