Abstract Submitted for the DNP08 Meeting of The American Physical Society

Non-inertial effects in reactions of astrophysical interest¹ JUNT-ING HUANG, CARLOS BERTULANI, PLAMEN KRASTEV, Texas A&M University-Commerce — We report on novel effects due to non-inertial motion in reactions occurring in stars, and elsewhere. Applying Einstein's equivalence principle, we explore the corrections induced by strong gravitational fields on nuclear reactions in massive and/or compact stars. We find that non-inertial effects will appreciably modify the excitation processes in nuclear and atomic collisions.

¹DE-FG02-08ER41533 and DE-FC02-07ER41457

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Date submitted: 27 May 2008 Electronic form version 1.4