

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Multimessenger Asteroseismology of Core-Collapse Supernovae

JOHN RYAN WESTERNACHER-SCHNEIDER, Univ of Arizona, EVAN O'CONNOR, ERIN O'SULLIVAN, Stockholm University, IRENE TAMBORRA, Niels Bohr Institute, MENG-RU WU, Academia Sinica, SEAN M. COUCH, Michigan State University, FELIX MALMENBECK, KTH Royal Institute of Technology — We identify the proto-neutron star mode responsible for imprint on both gravitational waves and neutrinos in simulations using an eigenfunction matching procedure. This procedure reveals an unphysical enhancement of mode frequencies in pseudo-Newtonian simulations. We find evidence that the mechanism of imprint on neutrinos is via direct hydrodynamic modulation of the neutrinospheres.

John Ryan Westernacher-Schneider
Univ of Arizona

Date submitted: 09 Jan 2020

Electronic form version 1.4