Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Selective Excitation of Stellar Oscillations of a Magnetar with an Externally Coupled Tangled Magnetic Field JOSEPH BRETZ, ANTHONY VAN EYSDEN, BENNETT LINK, Montana State Univ — Magnetars are neutron stars with strong magnetic fields (10^{15} Gauss) that form tangled configurations to stabilize. Some of them produce giant flares that exhibit quasi-periodic oscillations which have been attributed to stellar oscillations that modulate the emission. A tangled magnetic field supports normal modes that agree with observed quasi-periodic oscillations. We show that for a tangled field that extends outside of the magnetar, a local deposition of energy leads to selective mode excitation.

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Date submitted: 12 Jan 2018 Electronic form version 1.4