



PHYSICS DIVISION
Heavy Ion Discussion Group

Wei Jia Ong

Michigan State University

Neutron Stars and Casinos

Electron capture- β decay cycling in neutron star crusts has the potential to significantly impact the thermal structure of a neutron star and thus its cooling profile. The strength of this process, known as Urca cooling, depends both on the abundance of the isobar chain in the crust and the nuclear properties of the nuclei involved. Due to the neutron-richness of matter in the neutron star crust, these properties are mostly experimentally-unconstrained, and astrophysical modelling of Urca cooling has to rely on theoretical calculations or systematics. An experimental technique designed to maximally measure decay radiation has been used at the National Superconducting Cyclotron Laboratory to determine the β decay transition strengths ^{61}V . Preliminary results and future experiments will be presented.

Friday, October 13, 2017

3:30 pm

Building 203 – Conference Room R-150