

## Research and development of the IsoDAR experiment

*Friday, 23 June 2017 10:00 (15 minutes)*

The ISOtope Decay-At-Rest (IsoDAR) experiment is designed to provide a unique search for short baseline  $\bar{\nu}_e$  oscillations. By measuring  $\bar{\nu}_e$  disappearance over an L/E of approximately 0.6-7.0 m/MeV with a kiloton class detector like KamLAND, we can conclusively test the current global allowed regions for a 3+1 sterile neutrino hypothesis. IsoDAR expands on several key technologies to make this measurement possible. These include the development of a high-current H<sub>2</sub><sup>+</sup> ion source, an investigation into using a radio-frequency quadrupole as a buncher/pre-accelerator for the axial injection into a compact cyclotron, and the design of a high-power beryllium target. In this talk, we will present the latest results.

**Primary author:** AXANI, Spencer (MIT)

**Co-authors:** Dr WINKLEHNER, Daniel (Massachusetts Institute of Technology); CONRAD, Janet (MIT)

**Presenter:** AXANI, Spencer (MIT)

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