

Summer Particle (Astro) Physics Workshop (2022)

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Super-Kamiokande

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The discovery of neutrino oscillation in atmospheric neutrinos by Super-Kamiokande (Super-K) and solar neutrinos by the Sudbury Neutrino Observatory (SNO) led to their experiment's PIs sharing the 2015 Nobel Prize in Physics. Both of these are water Cherenkov detectors, Super-K with light water, and SNO with heavy water. A new generation of water Cherenkov detectors is being built to make precision measurements of neutrino oscillation, and to search for a potentially large CP-violation of neutrinos. This talk will present a brief physics overview of neutrino oscillation, and progress towards building a new Intermediate Water Cherenkov Detector in the J-PARC beamline that will be part of the next generation of CP-violation searches with neutrinos.

Presenters: Dr AJMI, Ali; JAMESON, Blair (University of Winnipeg)