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## PINGU and the Neutrino Mass Hierarchy

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The Precision IceCube Next Generation Upgrade (PINGU) is a proposed IceCube in-fill array designed to measure the neutrino mass hierarchy using atmospheric neutrino interactions in the ice cap at the South Pole. PINGU will have a neutrino energy threshold of a few GeV with a multi-megaton effective volume. We present PINGU's expected sensitivity to the hierarchy with optimized geometry and with consideration of a full complement of systematic uncertainties. We also present PINGU sensitivity to other topics in neutrino oscillations, as well as to low-mass dark matter and earth core composition.

**Primary author:** COWEN, Douglas (Pennsylvania State University)

**Presenter:** COWEN, Douglas (Pennsylvania State University)

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