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Status of the PINGU detector

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Scientists have created the world's largest neutrino telescope, the IceCube Neutrino Observatory, in one of the planet's most extreme environments at South Pole Station Antarctica. Completed in 2010, and instrumenting more than a cubic-kilometre of ice, IceCube also includes a low-energy detector array, called DeepCore, that has performed world-leading indirect dark matter searches and very high statistic studies of atmospheric neutrinos down to approximately 10 GeV. Building on the success of DeepCore, a new infill array called PINGU (the Precision IceCube Next Generation Upgrade) is now being proposed that would further reduce the in-ice energy threshold to a few GeV. Such a detector would be capable of significantly expanding the current low-energy program, including the potential to make a first determination of the neutrino mass ordering. In this talk we will discuss the design and sensitivity of the PINGU detector.

Collaboration

IceCube

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