

Abstract Submitted  
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**Recent Developments in Calibration of the IceCube Detector**

WILLIAM LUSZCZAK, Univ of Wisconsin, Madison, ICECUBE COLLABORATION — The IceCube Neutrino Observatory is a cubic kilometer of ice at the south pole instrumented with PMTs so as to function as a kiloton-scale water cherenkov detector. The scale, location, and design of the detector makes it capable of a wide array of scientific analyses, ranging from low energy neutrino-oscillation studies to high energy astrophysical neutrino point source searches. As IceCube collects more data, understanding the systematic uncertainties associated with the detector becomes increasingly important, and improvements in the modeling of these systematics can lead to a significant increase in the angular resolution of our detector. This talk will detail recent developments in IceCube detector calibration, including improvements in modeling of the Antarctic ice as well as improvements in describing PMT response. Additionally, this talk will discuss future plans for fully characterizing the angular and charge response of each individual PMT unit in the IceCube detector.

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