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IceCube Detector Efficiency with Muons

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The IceCube neutrino observatory is the world's largest neutrino detector. Designed to measure the highest energy neutrinos produced in astrophysical events, IceCube has recently reported the first observed flux of extragalactic very high energy neutrinos. One of the primary challenges of operating the detector is providing robust calibrations for energies ranging from ˜10 GeV to a few PeV. In addition to in situ calibrations with embedded LEDs in the detector, a novel analysis using minimum ionizing atmospheric muons has been developed to provide an absolute measurement of the digital optical module in-ice efficiency.
Presented will be the status of this calibration analysis for the IceCube detector.

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