

Scientific potential of the AMANDA-II high energy neutrino detector

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The second phase of the AMANDA program to detect high energy neutrinos from astrophysical sources was completed in February, 2000 and has taken data routinely since that time. About one year later, during the next Antarctic campaign, detector calibration studies were performed. This paper outlines the scientific program of the AMANDA-II detector and describes the potential contribution to each goal. Detector performance, such as the effective area as a function of muon energy and zenith angle and angular resolution, is used to estimate the minimum detectable flux for several specialized analysis procedures.