

Abstract Submitted
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The Cosmic Muon Detector Array at Westmont College¹ WARREN ROGERS, Westmont College, MONA COLLABORATION — At Westmont College we have designed and constructed the Cosmic Muon Detector Array (CMDA), consisting of 8 1-m long position-sensitive scintillator detector bars arranged in two layers of 4 detectors each, one above the other. The purpose of the array has been to measure and monitor the cosmic muon flux over a large angular range in the sky - approximately $\pm 50^\circ$ (north-south) by $\pm 30^\circ$ (east-west), by correlating event positions between the two layers. The CMDA also monitors the long term north-south sky flux ratio, binned by sidereal hour, to look for possible flux correlations from cosmic sources including the galactic core. The detectors, electronics, and analysis software was modeled after the Modular Neutron Array (MoNA) located at the NSCL, Michigan State University, and simultaneous flux correlations for the CMDA and MoNA were monitored for approximately 1 week. After taking over a year's worth of data, the original array burned in a campus wildfire, which was then replaced by the second generation array (currently in operation). The CMDA serves both as a training ground for students preparing for participation in MoNA collaboration experiments as well as for Westmont student research experience.

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