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Constructing a two scintillator paddle telescope for cosmic ray flux measurements DAVID CAMP, XIAOHANG ZHANG, CAROLA BUTLER, Georgia State University, MATHES DAYANANDA, XIAOCHUN HE, Georgia State University — The evolution of the Earth’s climate is of growing concern. There is evidence of a causal relationship between cosmic ray muon flux and cloud cover and it is expected that long term variations in cosmic ray flux may influence Earth’s temperature changes [1]. It has been observed that a muon telescope with a variable angular acceptance at Earth’s surface can be used to study correlations between flux distribution and barometric pressure. The muon flux from the cosmic ray particles positively correlates with seasonal temperature variations and anti-correlates with pressure variations [2]. In this talk, the construction of a new two scintillator paddle telescope prototype will be presented along with preliminary results from this detector.

[1] Henrik Svensmark, Influence of Cosmic Rays on Earth’s Climate, Phys. Rev. Lett. 81, 22 (1998).

[2] Serap Tilav, Paolo Desiati, Takao Kumwabara, Dominick Rocco, Florian Rothmaier, Matt Simmons, and Henrik Wissing, “Atmospheric Variations as Observed by IceCude,” Proceedings of the 31st ICRC, 2009.

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