



Contribution ID: 216

Type: **Poster contribution**

Measuring the e^+e^- Flux above 1 TeV with HAWC

Saturday 1 August 2015 15:30 (1 hour)

The High-Altitude Water Cherenkov (HAWC) Observatory records the air showers produced by cosmic rays and gamma rays at a rate of about 15 kHz. While the events observed by HAWC are 99.9% hadronic cosmic rays, this background can be strongly suppressed using topological cuts that preferentially select electromagnetic air showers. Using this capability of HAWC, we can create a sample of air showers dominated by gamma rays and cosmic electrons and positrons. HAWC is one of the few operating observatories capable of measuring showers produced by e^- and e^+ primaries above 1 TeV, and can record these showers from 2/3 of the sky each day. We describe the sensitivity of HAWC to leptonic cosmic rays, and discuss prospects for the measurement of the e^+e^- flux and possible approaches for e^+ and e^- charge separation with the HAWC detector.

Collaboration

HAWC

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