

The Astroparticle Physics Conference

34th International Cosmic Ray Conference

34th International Cosmic Ray Conference July 30 - August 6, 2015 The Hague, The Netherlands

Contribution ID: 244

Type: Poster contribution

Development of a Front-End Electronics for YAC-III detectors of TibetASgamma experiment

Saturday 1 August 2015 15:30 (1 hour)

To measure the cosmic-ray composition at the knee energy region, Yangbajing Air shower Core (YAC) -III experiment is planned in Tibet, China.

We developed a front-end electronics to read out charge signal from YAC detectors.

The readout system consists of a charge-to-time converter circuit and a time-to-digital converter circuit.

The system has a linearity from less than 1 pC to more than 1000 pC to achieve

a wide readout range which is required to measure the burst size of air shower core

from 1 MIP to 10^6 MIPs (Minimum Ionization Particle) with two photomultipliers of a YAC detector.

Collaboration

- not specified -

Registration number following "ICRC2015-I/"

1082

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Session Classification: Poster 2 CR

Track Classification: CR-IN