

Measurement of the re-entrant lepton spectrum with the High-Energy Particle Detector on board CSES-01

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Executive Summary:

This work is about the measurement of the re-entrant albedo all-electrons spectrum (in the energy range from 10 MeV to 100 MeV) performed by the High-Energy Particle Detector onboard the CSES-01 satellite. There are a few experimental data at energies below 100 MeV, thus HEPD-01 can extend measurements of previous satellite experiments such as PAMELA or AMS and improve the theoretical model for secondary particles production. The data analysis techniques used to select re-entrant leptons inside the HEPD-01 detector are described, and the preliminary spectrum of HEPD-01 is reported together with PAMELA data and a theoretical model.