

MEASUREMENT OF THE DEUTERON SPECTRA IN LOW EARTH ORBIT WITH AMS

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We report on the measurement of the deuteron spectrum in the kinetic energy range 0.1 to 0.85 GeV/n performed with the Alpha Magnetic Spectrometer. In addition to the cosmic component, a second spectrum of atmospheric origin has been observed at energies below the geomagnetic cutoff. The analysed data correspond to ≈ 30000 deuterons collected during the STS-91 space shuttle flight at an altitude of about 80 Km on a 51.7° inclined orbit. The measured flux at different latitudes and over all longitudes will be presented and the influence of this new result on Cosmic Rays propagation models will be discussed.