HIGH-ENERGY COSMIC-RAY ANTIPROTONS WITH THE CAPRICE98 EXPERIMENT

M. Boezio for the WiZard/CAPRICE Collaboration

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Observations of cosmic-ray antiprotons were performed by the balloon-borne experiment CAPRICE98 that was flown on 28-29 May 1998 from Fort Sumner, New Mexico, USA. The experiment used the NMSU-WIZARD/CAPRICE98 balloon-borne magnet spectrometer equipped with a gas Ring Imaging Cherenkov detector, a time-of-flight system, a tracking device consisting of drift chambers and a superconducting magnet and a silicon-tungsten calorimeter. We report on the absolute-antiproton-energy spectrum determined in the kinetic energy region at the top of the atmosphere between 3.2 and 49.1 GeV.