Contribution ID: **67** Type: **Contributed**

Experimental investigation of approximately 130 keV kinetic energy antiprotons annihilation on nuclei.

Tuesday, 11 June 2013 10:05 (25 minutes)

The study of the antiproton cross section on nuclei at low energies (eV-MeV region) has implications for fundamental cosmology as well as for nuclear physics.
On the other hand, the existing data of antinucleon-nucleon (or -nucleus) annihilation cross-sections are confined to energies above approximately 1 MeV.
The ASACUSA collaboration at CERN recently measured antiproton annihilation cross
section at 5.3 MeV kinetic energy on different kinds of nuclei. Such results showed compatibility with the black-disk model with the Coulomb correction [1]. But till now experimental difficulties prevented the investigation at energies below approximately 1 MeV.
We report here about the first experiment performed at much lower kinetic energies, namely approximately 130 keV.

[1] A. Bianconi et al., Phys. Lett. B 704, (2011) 461;

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Session Classification: Hadron Physics

Track Classification: Hadron Physics and Nuclear Physics with Antiprotons