



Contribution ID: 267

Type: Poster

【436】 A CsI detector system at low temperatures for an antimatter gravity measurement

Wednesday 23 August 2017 12:35 (1 minute)

The AEgIS Collaboration at CERN will perform the world's first direct measurement of the Earth's gravitational acceleration on antimatter, by sending an antihydrogen beam through a classical deflectometer. I will present a detector for a first measurement of the gravitational effects on an antimatter system. The detector consists of pure Caesium Iodide crystals and commercially available Silicon Photomultipliers to measure the light produced in the corresponding annihilation processes. The CsI crystals decay times and spectra were characterized using a Na^{22} source at room and at low temperatures. Furthermore, the behaviour of the SiPMs at low temperatures was examined. A measurement at the GRACE line using antiprotons is planned for June.

Author: Mr KALISTA, Sebastian (Stefan Meyer)

Co-authors: Prof. ZMESKAL, Johann (Stefan Meyer Institute for Subatomic Physics); Prof. WIDMANN, Eberhard (Stefan Meyer Institute for Subatomic Physics)

Presenter: Mr KALISTA, Sebastian (Stefan Meyer)

Session Classification: Poster Session

Track Classification: Nuclear, Particle- and Astrophysics (TASK - FAKT)