

## **A CsI detector system at low temperatures for an antimatter gravity measurement**

*Tuesday, 12 September 2017 18:00 (1 hour)*

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  $\text{Na}^{22}$  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 August.

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