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【453】A compact scitillating fibre detector addon for ASACUSAs hodoscope

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The ASACUSA collaboration at CERNs Antiproton Decelerator aims to measure the ground-state hyperfine splitting of antihydrogen to test CPT symmetry. The Rabi-type setup consists of an antihydrogen source and a spectroscopy apparatus made out of a microwave cavity and a sextupole magnet, terminating in a detector.

Previously, this detector consisted of a BGO crystal and two layers of scintillating bars. For 2017s beamtime the detector was modified by incorporating two layers of scintillating fibers. These provide a spatial resolution in the order of millimeter which allows for efficient discrimination of cosmic background and advanced tracking. This contribution covers design and construction as well as results of preliminary performance studies.

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