

A Cosmic Ray Detector

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This project involved the design and construction of a simple cosmic ray detector that could be used in school demonstrations. Research was carried out into the different methods used in modern detectors and investigations were undertaken using an experimental test stand. This led to the development of a portable muon detector. The detector utilises 16 scintillators connected to a photomultiplier tube, the readout from which is processed using a field-programmable gate array. Logic programmes were designed to control an LED display showing the angular distribution of the through-going muons. Accompanying educational materials and a website were developed.



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