

Applications in nuclear physics and nuclear industry

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In this talk detectors and facilities associated with the Birmingham Cyclotron will be discussed. The facility includes an MC40 Cyclotron at which a wide variety of both pure and applied research is carried out, from nuclear physics using both semiconductor and scintillation detectors, to radiation hardness testing of new detector systems along with nuclear applications and medical isotope production. Additionally, the cyclotron produces radio-tracers daily for the Positron Imaging Centre at Birmingham which has a number of novel detector arrays for PEPT — Positron Emission Particle Tracking — providing the ability to track particles in complex systems in real time with sub-millimetre precision.

An overview of the detectors and facilities at Birmingham will be given.