

Cyclotron Colloquium, Tuesday, February 23 at 10:30 AM

"Decay Spectroscopy at FAIR Using the Advanced Implantation Detector Array (AIDA)"

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Abstract:

The objective of the Advanced Implantation Detector Array (AIDA) project is to develop, commission and exploit a state of the art silicon detector array for decay spectroscopy experiments at the SuperFRS, FAIR. Multi-GeV exotic ions will be implanted into the silicon detector array and AIDA will perform spectroscopy quality implantation-decay correlation measurements of subsequent charged particle decays with energies from 10's of keV to ~MeV. The challenge is to achieve this within microseconds of the high-energy implant and with an instrumentation density to match the very high degree of detector segmentation required for the observation and characterisation of long-lived decays. Details of the proposed science program, AIDA technical specification, and current project status will be presented.