

Developments at the ANU Heavy Ion Accelerator Facility

Monday, 17 October 2022 15:30 (20 minutes)

The Heavy Ion Accelerator Facility (HIAF) at the Australian National University is reaching a series 50-year milestones in its operation of the 14UD tandem pelletron particle accelerator. Far from fading into the dying light, the accelerator and facility are instead pushing toward the future with an array of major infrastructure initiatives and an expanded range of industry relevant applications. Major capability upgrade projects include construction of a space radiation testing beam line as a component of Australia's National Space Qualification Network (NSQN) and an upgrade of ion beam injection with an additional alpha ion source and beam analysis hardware. Fundamental systems too are undergoing upgrades, with an extensive renewal of control hardware and underlying EPICS software and a replacement of an aging radiation protection system. Perhaps the biggest indicator of the optimism at HIAF amongst the current, shared challenges of the world is the replacement of all ceramic acceleration tubes and posts within the 14UD to increase stability and restore the peak achievable voltage to its historical maximums.

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Session Classification: General

Track Classification: Joint/Plenary Topics