

Digital Upgrade of the Low Energy Beam Transport Resonance Control System

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For the Los Alamos Neutron Science Center (LANSCE) at Los Alamos National Laboratory (LANL), the incremental upgrades of the legacy low level radio frequency (LLRF) equipment continue. The Low Energy Beam Transport (LEBT) LLRF control systems, including the resonance control system, will be upgraded to a modern, digital system during the 2024 maintenance period. The current resonance control system of the LEBT is original to the LANSCE accelerator from 1972. This paper will describe the technical requirements for the resonance control system of the LEBT and the additional features of the digital system for the upgrade. A discussion of the technical challenges associated with the upgrade is included.

Keyword

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