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The APS linac refurbishment program at Argonne

Tuesday 3 June 2025 16:00 (2 hours)

The linac refurbishment program is an initiative to modernize the linear accelerator (linac) at the Advanced Photon Source (APS) for the APS Upgrade (APS-U). This program addresses critical operational challenges, including obsolete components and the need for higher beam energies. Key projects involve upgrading RF stations to 50 MW capacity using modern klystrons , solid-state modulators, and digital low level rf controls, enabling the linac to achieve higher energy. New thermionic RF guns are being developed and installed to replace aging guns, enhancing beam stability and reliability. Magnet power supplies are being overhauled with modern units that offer faster response times and improved control, and the timing system is being upgraded for better precision and flexibility. Collectively, these efforts ensure that the linac will meet the stringent performance and reliability requirements of the APS-U, supporting advanced scientific research with improved operational stability.

Footnotes

Paper preparation format

LaTeX

Region represented

America

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