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Status and first results of the APS-U, the high-brightness upgrade of the Advanced Photon Source at the Argonne National Laboratory

Tuesday, 21 May 2024 14:30 (30 minutes)

The Advanced Photon Source Upgrade (APS-U) is a 4th generation 6-GeV synchrotron light source based on a hybrid seven-bend achromat lattice with a record emittance goal of ~ 40 pm-rad. It is the first storage ring light source that implements full-charge bunch injection in a scheme known as swap-out. APS-U completely replaces the APS storage ring while largely keeping the original injectors and increases the photon brightness by a factor of 500. Complete removal of the old APS storage ring, installation of the new APS-U, integration with existing infrastructure, and commissioning was scheduled to be completed in one year, by Apr 2024. The talk will describe both challenges and successes in the pre-installation assembly, equipment removal and installation process, commissioning status, and early results.

Footnotes

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North America

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