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First injection and lattice commissioning of APS upgrade storage ring

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APS Upgrade is a 6 GeV fourth-generation light source that has been recently assembled at Argonne National Laboratory. APS-U storage ring utilizes hybrid seven-bend achromat with reverse bends and promises a design natural emittance of 42 pm·rad. Due to very strong focusing and highly nonlinear lattice, the first-turn trajectory correction and establishing first stored beam rely heavily on automated correction algorithms. We will describe the automated correction process and present the results of the APS-U lattice commissioning which covers commissioning steps from first injection to orbit correction to lattice correction.

Footnotes

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