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As built front ends for the Advance Photon Source MBA upgrade

Wednesday 17 September 2025 17:00 (1 hour)

The Advanced Photon Source (APS) upgrade from double-bend achromats (DBA) to multi-bend achro-mats (MBA) lattice is completed. All storage ring components and front ends were installed between April 2023 to April 2024 and fully commissioned. Some major changes have been made on front ends since our last front end design paper published in MEDSI2018 proceedings. The changes are: 1) Removed clearing magnet from all front ends, 2) Incorporated a Burn-Through-Mask (BTM) as the first fixed mask for all Insertion Device (ID) front ends, 3) Added a new-design diamond window to replace beryllium window for windowed High Heat Load Front End (HHLFE). The upgraded APS front ends will only have three types: a) HHLFE for single beam, b) Canted Front End (CFE) for canted beam, c) Bending Magnet Front End (BMFE) for bending magnet beam. This paper presents the as-built version of all three types of front ends.

Footnotes

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