

APS Update

Shutdown Work

- ID Installations
- Front End Installations
- Diagnostics Upgrades

Safety

- DOE Office of Assessment Audit

Shutdown ID Installations

- The IDs from Sector 3DS, 4DS and 21US were removed
 - The ID from Sector 3DS had new magnets installed, then was remeasured and reinstalled in Sector 3DS
 - The ID from Sector 4DS was remeasured and installed in Sector 26DS
 - The ID from Sector 21US was installed in Sector 30DS
- Lead was installed on the upper surface of the ID vacuum chamber and on the upper surface of the lower magnet structure as radiation shields in sector 3DS. This limits the minimum gap to 10.5 mm

High Heat Load Challenge

High heat load comparison in All FEs

Design heat load	IXS/Nano FE (sector 26,30)	CUFE (sector 21, 23,24)	FE v.1.5 (sector 16,22,31, 32)	FE v. 1.2 (original 16 FEs)	Current operating condition
Total Power (kW)	21	20	8.9	6.9	5.3
Peak power density (kW/mrad ²)	590	281	245	198	153
Operating parameter	Two inline U3.3 at 10.5 mm gap, 180 mA	Two canted 2.07-m-long, U3.3 at 10.5 mm gap, 200 mA	One U3.3 at 10.5 mm gap at 150 mA	One U3.3 at 11 mm gap at 130 mA	One U3.3 at 11 mm gap at 100 mA

Shutdown FE Installations

- FE Installations
 - New high heat load FE in S30 (IXS)
 - New high heat load FE in S26 (Nano)
 - Completed S23 BM FE installation
 - Completed Preparations for S11 BM FE (next shutdown)

Diagnosics

- 14ID XBPM
 - New design (B1-71), works well
- Top Up Monitor upgrade for 1296 bunch
 - Test in progress
- Injector BPMs
 - Improved injector performance
- XBPM Installation
 - S23BM, S26ID, S30ID