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The control and monitoring system for the APS-U front-end XBPM*

The Advanced Photon Source Upgrade (APS-U) project aims to enhance the performance and capabilities of the APS, delivering brighter and more coherent x-ray beams to support cutting-edge scientific research. A critical component of this upgrade is the front-end X-ray Beam Position Monitor (XBPM) system, which plays a vital role in ensuring beam stability and precision. This paper presents the design and implementation of the control and monitoring system for the APS-U front-end XBPM. The system integrates advanced hardware and software solutions to achieve real-time monitoring of x-ray beam position. Key features include high-resolution data acquisition, robust signal processing algorithms, and seamless integration with the APS-U control architecture. The system utilizes the Experimental Physics and Industrial Control System (EPICS) input/output controllers (IOCs) to interface with front-end instruments. By leveraging EPICS IOCs, the system achieves high reliability and flexibility.

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No

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

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Author: XU, Shifu (Argonne National Laboratory)

Co-authors: SHANG, Hairong (Argonne National Laboratory); YANG, Bingxin (Argonne National Laboratory)

Presenter: XU, Shifu (Argonne National Laboratory)

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