



Contribution ID: 460 Contribution code: WEMG015

Type: **Poster Presentation with Mini Oral**

Upgrading the ATLAS tune archiving system

Wednesday 24 September 2025 15:39 (3 minutes)

The Argonne Tandem Linear Accelerating System (ATLAS) facility at Argonne National Laboratory is a National User Facility capable of delivering ion beams from hydrogen to uranium. The existing tune archiving system, which utilizes Corel's Paradox relational data-base management software, is responsible for retrieving and restoring machine parameters from previously optimized configurations. However, the Paradox platform suffers from outdated support, a proprietary programming language, and limited functionality, prompting the need for a modern replacement.

To address these limitations, ATLAS is transitioning to a new archiving system based on PySide for the user interface, InfluxDB for time-series data storage, and FastAPI for backend communication.

Funding Agency

Footnotes

Author: BUNNELL, Kenneth (Argonne National Laboratory)

Co-authors: RAMASWAMY, Ananth (University of Illinois Urbana-Champaign); BLOMBERG, Ben (Argonne National Laboratory); DICKERSON, Clayton (Argonne National Laboratory); Mr STANTON, Daniel (Argonne National Laboratory); NOVAK, David (Argonne National Laboratory); DUNN, Gavin (Argonne National Laboratory); TORRES, Matthew (Argonne National Laboratory)

Presenter: BUNNELL, Kenneth (Argonne National Laboratory)

Session Classification: WEMG Mini-Orals (MC01, MC05, MC10)

Track Classification: MC10: Software Architecture & Technology Evolution