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Advanced Rare Isotope
Laboratory (ARIEL)

Accelerator Readiness for 30 MeV

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Accelerator Division

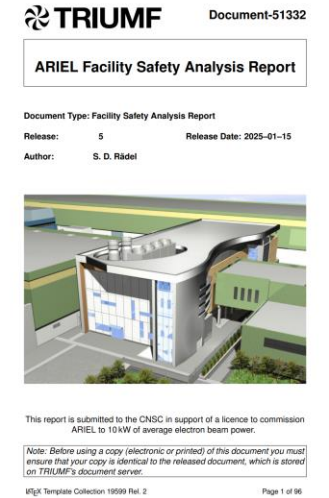
2026-05-19



Discovery,
accelerated

New ARIEL SAR structure

- Licensing ARIEL (commissioning and operating) requires a complete and restructured SAR
- The current ARIEL SAR is dominated by the e-Linac
- SAR restructuring includes:
 - ARIEL Overview
 - e-Linac Safety Analysis Report
 - EHBT and BL4N "tunnel" Safety Analysis Report
 - ARIEL target station + target hall + target systems Safety Analysis Report
 - ARIEL Hot Cell 1 – Facility Safety Analysis Report
 - Target production system Safety Analysis Report
- e-Linac Class II license → Class I license required



Document package for finishing commissioning

- Beam currently limited to 100 W (commissioning power)
- Progress toward higher power is driven by commissioning document approvals
- Several documents are already in review and approval stages

The screenshot displays a dashboard with four columns representing different stages of document processing:

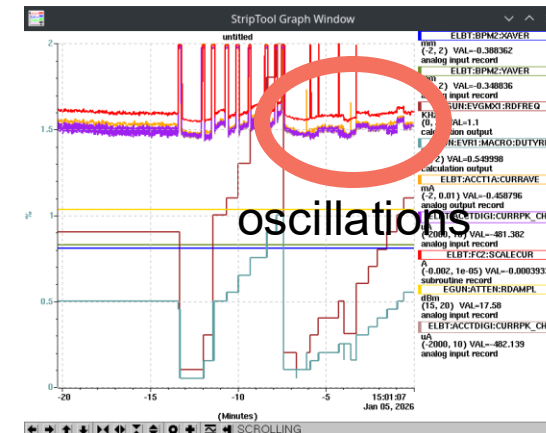
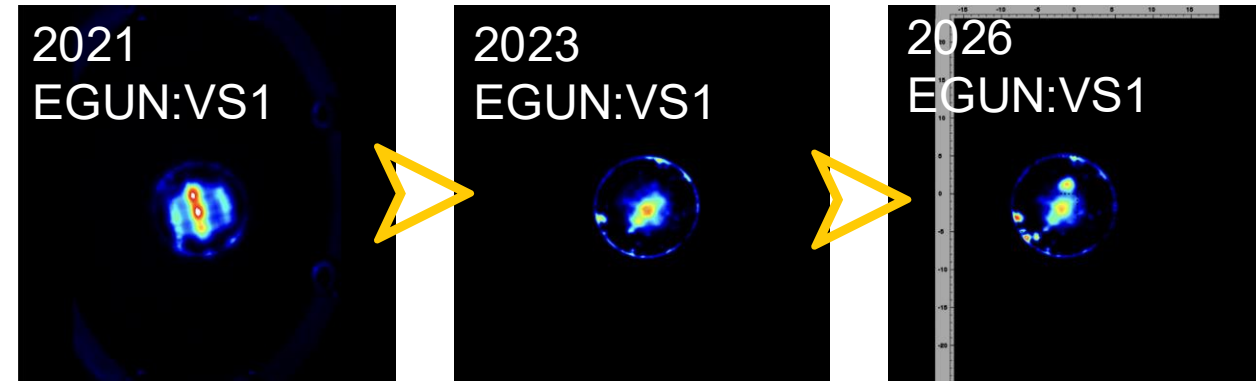
- Not Started:** Contains four tasks, including "E-Linac MPS Interlock Test Procedure and Current Status" and "[Needs Obsolete] Beam Position Interlock for the e-linac High-Energy Beam Dump (EHD)".
- In Development:** Contains two tasks, including "E-Linac Tune Lock Commissioning Record" and "Record of Commissioning - E-LINAC Vacuum System - Phase 1".
- Review Routing:** Contains three tasks, including "Commissioning Record for the E-LINAC BLM EABT/EABD/EHAT/EHDT Section" and "E-Linac High Energy Beam Dump Commissioning Record".
- Approval Routing:** Contains six completed tasks, including "EHDT Upgrade Integration and Test Plan" and "Prerequisites and test plan for e-Linac Tuning Dump".

Red plus signs are overlaid on the dashboard, highlighting specific tasks in the "In Development" and "Approval Routing" columns.

Other things we are working on during shutdown

- Swapping aging Cathode
- Refining electronics dump collimator
- We will install a Solid State Amplifier for EINJ
- Mitigating gun oscillations

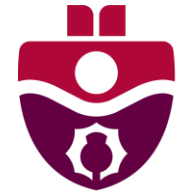
Gun evolution



Thank you
Merci



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