



Contribution ID: 651 Contribution code: TUPC08

Type: **Poster Presentation**

## A review of the 2023 antiproton physics run in the CERN antimatter factory

*Tuesday, 21 May 2024 16:00 (2 hours)*

Despite a shorter-than-scheduled physics run due to a hardware problem, the AD/ELENA antiproton complex delivered record beam intensities to the experiments during the 2023 run. This paper reviews the performance of both the CERN Antiproton Decelerator (AD) and the Extra Low ENergy Antiproton (ELENA) decelerator and their associated transfer lines. It presents the main improvements that allowed these record beam intensities to be delivered to the experiments. Emphasis is put on the optimization of the injection line, progress made on the stochastic and electron cooling performance, increased deceleration efficiency and stability, and the software tools used. Remaining issues and potential future improvements for the coming run will also be presented.

### Footnotes

### Funding Agency

### Paper preparation format

LaTeX

### Region represented

Europe

**Primary author:** BOJTAR, Lajos (European Organization for Nuclear Research)

**Co-authors:** LEFORT, Bertrand (European Organization for Nuclear Research); DUPUY, Bruno (European Organization for Nuclear Research); GAMBA, Davide (European Organization for Nuclear Research); JOERGENSEN, Lars (European Organization for Nuclear Research); PONCE, Laurette (European Organization for Nuclear Research); FREYERMUTH, Pierre (European Organization for Nuclear Research); PASINELLI, Sergio (European Organization for Nuclear Research); DUTHEIL, Yann (European Organization for Nuclear Research)

**Presenter:** BOJTAR, Lajos (European Organization for Nuclear Research)

**Session Classification:** Tuesday Poster Session

**Track Classification:** MC1: Colliders and other Particle and Nuclear and Physics Accelerators:  
MC1.A04 Circular Accelerators