Contribution ID: **20** Type: **Poster**

Results of the Magnetic Measurements of the Super-FRS First-of-Series Dipole Magnet.

Abstract—The facility for Antiproton and Ion Research (FAIR) is an international superconducting accelerator facility currently under construction at Helmholtz Center for Heavy Ion Research (GSI) in Darmstadt, Germany [1]. The main part of the FAIR is the Superconducting Fragment Separator (Super-FRS) - a powerful two-stage, large-acceptance, in-flight separator made of 197 superferric magnets. Measurements of all the magnets are taking place at CERN in a dedicated cryogenic facility[3]. The first Series Dipole magnet (Type 2 - 11 degrees bending) was delivered at CERN at the beginning of 2022 and underwent extensive magnetic measurement testing [5]. The second type of the main dipole magnet (Type 3 - 9.5 degrees) was delivered in February 2024. The magnetic field was scanned using a new dedicated system developed by CERN, the so-called Translating Fluxmeter [6]–a PCB coil array installed on a moving trolley that passes through the magnet aperture.

Primary author: KOSEK, Pawel (GSI)

Co-authors: BEAUMONT, Anthony (GSI); LIEBSCH, Melvin (CERN)

Presenter: KOSEK, Pawel (GSI)