



Contribution ID: 625 Contribution code: THPA123

Type: **Poster Presentation**

Development of a new online model application for the high-energy beam transfer lines at GSI

Thursday, 11 May 2023 16:30 (2 hours)

The high-energy beam transfer lines at GSI serve numerous experimental stations such as HADES, HTC and HTD as well as the fragment separator FRS and the storage rings ESR and CRYRING with a wide range of different heavy ion beams from the SIS18 synchrotron. The large amount of experiments carried out during beam times under different beam conditions require frequent changes of beam optics and beam steering in the transfer lines. In the past, the online model tool “Mirko Expert” was available for this purpose, which however is not compatible with the new control system infrastructure. Therefore, a new online model application based on the MAD-X beam dynamics simulation code and the JMad programming interface is under development in Java. This paper presents the concept and features of the new online model application, as well as possible future extensions. Efforts to overcome discrepancies in the present Mirko and MAD-X optics models are also discussed.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: HESSLER, Christoph (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Co-authors: OHLIG, Markus (GSI Helmholtzzentrum für Schwerionenforschung GmbH); SCHUETT, Petra (GSI Helmholtzzentrum für Schwerionenforschung GmbH); REIMANN, Stephan (Goethe Universität Frankfurt)

Presenter: HESSLER, Christoph (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Session Classification: Thursday Poster Session

Track Classification: MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects: MC6.T33: Online Modelling and Software Tools