



Contribution ID: 1832 Contribution code: THPC70

Type: **Poster Presentation**

GSI electron lens for space charge compensation

Thursday, 23 May 2024 16:00 (2 hours)

The electron lens for space charge compensation is an R&D project to increase the primary beam intensity and thus the accelerator efficiency of SIS18 and eventually SIS100 for FAIR operation. As a first step, the principle of space charge compensation will be demonstrated in SIS18 with a single lens, aiming at a tune shift of 0.1. However, the design should also be compatible with the SIS100. Following the conceptual design studies, a technical design of the electron lens has been prepared and the main components of the electron lens are currently under development. This contribution gives an overview of the development of the electron lens, with particular emphasis on the main lens components and the studies carried out on the dynamics of the ion beam.

Footnotes

Funding Agency

Paper preparation format

LaTeX

Region represented

Europe

Primary author: SCHULTE-URLICHS, Kathrin (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Co-authors: ONDREKA, David (GSI Helmholtzzentrum für Schwerionenforschung GmbH); THOMA, Katrin (Goethe Universität Frankfurt); KIRK, Markus (GSI Helmholtzzentrum für Schwerionenforschung GmbH); DROBA, Martin (Goethe Universität Frankfurt); MEUSEL, Oliver (Goethe Universität Frankfurt); SPILLER, Peter (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Presenter: KIRK, Markus (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Session Classification: Thursday Poster Session

Track Classification: MC5: Beam Dynamics and EM Fields: MC5.D07 High Intensity Circular Machines Space Charge, Halos