12th MT ARD ST3 Meeting 2024 in Darmstadt 3 to 5 July



Contribution ID: 65

Type: Poster and Speed Talk

Investigation of transit time spread in tune scan slow extraction at SIS18 GSI

Friday 5 July 2024 10:36 (3 minutes)

The temporal structure of the slowly extracted beams on the 100 microseconds time scale is crucial for fulfilling the demands of fixed target experiments and hadron therapy. The transit time is a crucial quantity in beam dynamics considerations, and its spread provides a mechanism for the improvement of the quantity of the slowly extracted spill. Transit time measurements in tune scan slow extraction were performed at SIS18, with the machine tune excited by stepwise and sinusoidal signals. Spills were evaluated, and the results from sinusoidal tune excitation indicate an increasing tendency of the transit time spread along the extraction time. The results and associated technical limitations were discussed.

Summary

Primary authors: YANG, Jiangyan (GSI); CRESCIMBENI, Lorenzo (Friederich schiller universität jena); FORCK, Peter (GSI); SINGH, Rahul (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); Dr SORGE, Stefan (GSI); SIEBER, Thomas (GSI)

Presenter: YANG, Jiangyan (GSI)

Session Classification: Session 4: Beam Dynamics

Track Classification: Beam dynamics