ACCELERATOR SEMINAR

Lars Groening GSI Helmholtzzentrum für Schwerionenforschung GmbH

Thursday, 1st February at 4 p.m.

KBW lecture hall Planckstraße 1, 64291 Darmstadt

"Extension of Busch's Theorem to Particle Beams"

In 1926, H. Busch formulated a theorem for one single charged particle moving along a region with longitudinal magnetic field. The theorem relates particle angular momentum to the amount of field lines being enclosed by the particle cyclotron motion. Recently it has been extended to accelerated particle beams. This talk reviews the original theorem and some of its applications as electron cooling and electron confinement. Then it derives its extension to beams and concludes with two applications on emittance manipulations with electron and ion beams.



Coordinator: Manuel Heilmann Secretary: Paola Lindenberg https://indico.gsi.de/categoryDisplay.py?categId=359

