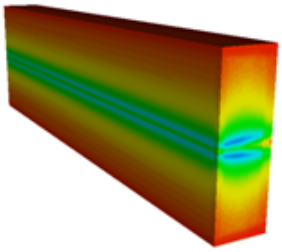

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Lattice optimization for low charge state heavy ion operation - Collimation concepts for beam ions after a charge change

Monday, 3 September 2007 16:45 (20 minutes)

We present a new lattice design concept for heavy ion synchrotrons which is optimized for the control of beam loss by projectile ionization.
The lattice cells of the FAIR SIS100 synchrotron has been designed as charge separators. Thereby ionized projectiles are well separated from the reference beam. The generated peaked loss distribution enables the operation of a highly efficient scraper system.
The main purpose of the scraper system is to suppress and controle the production of desorption gases and thereby stabilize the residual gas pressure dynamics.
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