

Interest in SX simulations

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- Accelerators of interest: GSI-SIS18, SIS100, HIT
- Type of simulations of interest
 - Spill structure:
 - ◆ 'nano' spill structure; only bunched beam; time scale: 10 ... 100 ns
 - ◆ Micro spill structure; all beams; time scale: 10 μ s
 - ◆ Macro spill structure; all beams; time scale: 100 ms
 - Beam loss on septum wires
 - Influence of magnetic field errors on beam dynamics
 - Dynamics of stored beam during extraction process, including effects of magnetic field errors
 - Transit time and tune distributions
- Main tools used at the moment
 - MAD-X
 - Xsuite
 - Elegant
- Main requirement for own simulations: speed
- Interest in innovation:
 - New types of excitation for KO SX