



Contribution ID: 226

Type: **Poster ARD**

The SIS100 laser cooling facility at FAIR

Monday 3 November 2025 19:45 (3 minutes)

The heavy-ion synchrotron SIS100 is (at) the heart of the Facility for Antiproton and Ion Research (FAIR) in Darmstadt, Germany. It is designed to accelerate intense beams of heavy highly charged ions up to relativistic velocities and to deliver them to unique physics experiments, such as those planned by the APPA/SPARC collaboration. In order to cool these extreme ion beams, bunched beam laser cooling will be applied using a dedicated facility at the SIS100. We will use a novel 3-beam concept, where laser beams from three complementary laser systems (cw and pulsed) will be overlapped in space, time and energy to cover a very broad ion velocity range and thus maximize the cooling efficiency. We will present this project and give an update of its current status, including the laser and detector systems that will be used.

Speed talk:

Normal speed talk selection

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Session Classification: Poster