

A New 80 MHz Cavity in the Heavy Ion Synchrotron SIS18

Experiments and simulations regarding the micro spill structure of slowly extracted bunched beams have been performed at GSI for years. In SIS18 the bunch spacing was limited to a minimum of 185 ns due to the operating frequency range of the installed cavities and LLRF. To overcome this limit, which is not suitable for many detectors, a new cavity system was developed.

The cavity was installed in SIS18 in July 2023 and commissioned with beam in November 2023.

Challenges in the development and selected measurements with and without beam are presented.

Primary author: GROß, Kerstin (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Co-authors: Prof. KLINGBEIL, Harald (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI)); Dr HÜLSMANN, Peter (Deutsches Elektronen-Synchrotron); LAIER, Ulrich (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Presenter: GROß, Kerstin (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))