ACCELERATOR SEMINAR

Hendrik Hähnel

IAP

Thursday, 24. September 2020 at 4 pm

Ort: KBW Hörsaal and Zoom-Meeting Room (ID: 980 2993 7726/ PW: 168559)

The FAIR proton linac - Beam Dynamics and Cavity Development

The FAIR proton linac is developed as the high current proton injector for the future FAIR antiproton production chain at GSI. It will provide a 70 mA proton beam at an energy of 68 MeV to the SIS18 synchrotron. This is achieved by a novel combination of 325 MHz CH-type cavities and KONUS beam dynamics for efficient proton acceleration at high beam currents. Beam dynamics will be presented including new simulations with cavity fieldmaps and detailed error studies - starting at RFQ injection. We will also discuss the special design features of the novel CH-type cavities for this application.



