ACCELERATOR SEMINAR

Dr. Chen Xiao

GSI

Thursday, 08. August 2019 at 4 pm

KBW Lecture Hall Planckstraße 1, 64291 Darmstadt

Stable beam operation of drift tube linac cavities at voltages far below design

During the beam commissioning of the UNILAC's Alvarez-type drift tube linac at GSI, it has been observed by chance that high quality beams can be provided at full transmission even if some cavities are operated at voltages significantly below design value. Although these findings from the early 1980s were not well understood, such beams have been successfully delivered to hundreds of experimentalists to their full satisfaction. Recent improvements on longitudinal modeling of DTLs (Xiao et al., 2018) were applied to these scenarios, hence explaining them very well including prediction of stable off-design beams for new DTLs being presently under design.



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