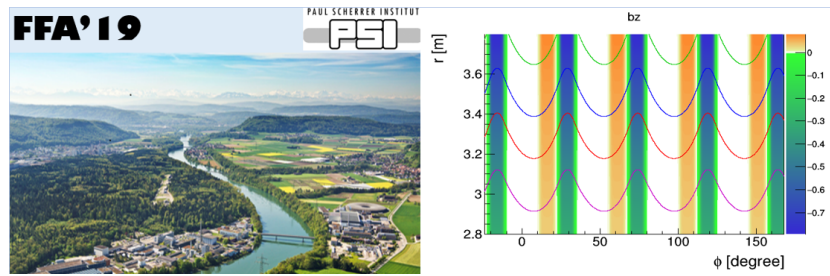


International Workshop on Fixed Field alternating gradient Accelerators (FFA'19)



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Longitudinal tomography in a scaling FFA

Thursday 21 November 2019 16:00 (45 minutes)

Abstract: Longitudinal tomography, already well established in synchrotrons, involves reconstructing the phase space using bunch monitor data obtained for a sufficient number of turns in a synchrotron oscillation. In this presentation it is shown how this technique can be adapted for the FFA case. The resulting tomography code is used to reconstruct the longitudinal phase space using data from the 150MeV scaling FFA at KURNS, Osaka, Japan. In the broadband RF cavity used at KURNS, multi-harmonic components can be significant. Using tomography, it is possible to establish the effect of these components on the longitudinal distribution.

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Session Classification: Beam Dynamics