Contribution ID: **184** Type: **Speed talk**

Variable RF Parameters along European XFEL Bunch Trains

Friday 9 September 2022 10:41 (3 minutes)

Superconducting RF allows for long RF pulses compared to warm normal conducting machines. At the European XFEL these pulses are used to transport up to 2700 bunches to the user stations per pulse.
In order to allow for flexible control of beam properties the LLRF system was modified. We now have the ability to drive the RF pulses very flexible to accommodate either beam based corrections for e.g. energy variations along the train or even introduce advanced FEL delivery modes e.g. variable compression within an experiment.

In this presentation we show the high level controls for daily control room use as well as experiments done at the real machine.

Summary

Primary author: BEUTNER, Bolko (MPY (Beschleunigerphysik))

Presenter: BEUTNER, Bolko (MPY (Beschleunigerphysik))

Session Classification: Session 4: Beam Dynamics

Track Classification: ST - Beam dynamics