John Adams Institute for Accelerator Science

Friday 26th July 2013 at 2:30pm
Fisher Room, Denys Wilkinson Building

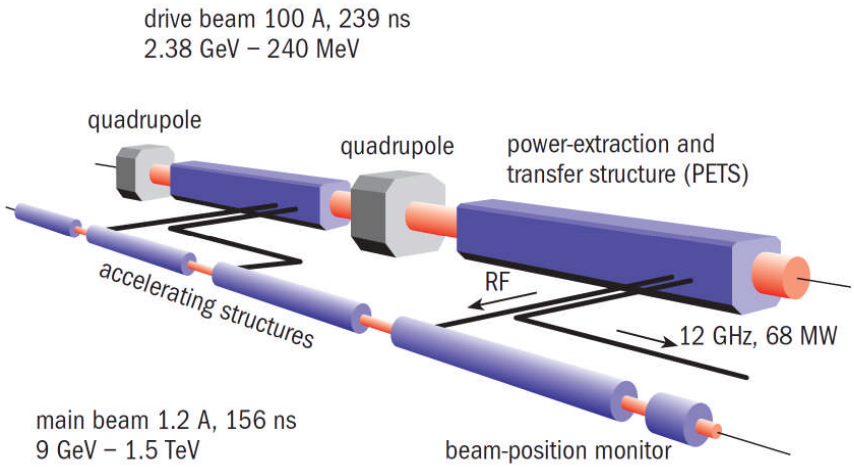
CLIC Drive Beam Phase Stabilisation

The seminar will be delivered by

Alexander Gerbershagen,
University of Oxford/CERN

Abstract: Luminosity recovery is one of the major challenges of the Compact Linear Collider (CLIC) design. Consequently, the work on CLIC stabilisation, in particular on CLIC Drive Beam longitudinal phase stabilisation, is one of the main areas of CLIC research and development efforts.

The talk introduces the elements of the CLIC design crucial for CLIC stability and describes the methodology used for the CLIC Drive Beam propagation studies. It summarises the results of the simulation studies of the Drive Beam propagation and presents the conclusions about the beam error tolerances without stabilisation system as well as with feedback and feed-forward stabilisation systems. It also summarises the phase measurements performed at the CLIC Test Facility (CTF3), and depicts the analysis of the errors sources. Finally, it presents a prediction of the effect of the proposed phase stabilisation system for CTF3 in development at JAI.



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