

STUDIES OF EMITTANCE BUMPS AND ADAPTIVE ALIGNMENT METHOD FOR ILC MAIN LINAC

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Abstract

International Linear Collider (ILC) is a proposed electron-positron accelerator requiring very small spot-size at the interaction point, and thus necessitates very tight tolerances on beamline elements. For static tuning of the machine a few methods like dispersion-free steering (DFS) or kick minimization (KM) techniques was proposed. The further suppression of emittance growth can be achieved by using close orbit emittance bumps. Stability of ILC is determined by the stability of the site, additional noises of beamline component, energy and kicker jitter and performance of the train-to-train and intra-train feedback. We discuss the performances of the Adaptive Alignment technique, which keeps accelerator dynamically aligned in presence of ground motion and technical noises. This presentation is an overview of two posters THPMN107 and TH-PMN108, presented at PAC07.

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