

New Studies of Emittance Growth and Correction Techniques for the TESLA Linac, A. MOSNIER, A. SERY*, CEA Saclay, Gif/Yvette, France - We studied the emittance growth in the TESLA linac caused by initial misalignments or by ground motion. The results of simulations by DILEM are compared with predictions by the model in which only some linear effects are considered for the linac and the ground motion is described by the power spectrum $P(\omega, k)$. We also investigated capabilities of one particular method of alignment, known as Balakin's scheme, to reduce the emittance growth rate in the TESLA linac. Last, the effect of synchrotron radiation emitted through the misaligned quads in the high energy part of the linac was simulated.

* Permanent address: Branch INP, Protvino, Russia.