Title
Beam Sensitivity to Cavity Geometry in a Standing Wave FEL/TBA

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Beam Sensitivity To Cavity Geometry In A Standing Wave FEL/TBA*, J.S. KIM and A.M. SESSLER, LBL—Standing wave free electron lasers (SWFEL) have been extensively studied as drivers of the Two-Beam Accelerator (FEL/TBA). The sensitivity of the beam with respect to the errors in field amplitude and phase has been studied using a 1-dimensional numerical simulation code.[1] To examine the beam sensitivity in a more realistic geometry, the coupling impedance formalism[2] has been utilized in the 1D numerical code described in Ref. 1. Results of these studies will be presented.

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[1]G. Rangarajan and A. Sessler, Lawrence Berkeley Laboratoy Report LBL-32463, 1992, to be published in the Proc. of the Workshop on Advanced Accelerator Concepts, Port Jefferson, June 1992.

[2]J.S. Wurtele, D.H. Whittum and A.M. Sessler , Lawrence Berkeley Laboratoy Report LBL-32580, 1992, to be published in the Proc. of the Workshop on Advanced Accelerator Concepts, Port Jefferson, June 1992.