Joint DESY and University of Hamburg Accelerator Physics Seminar

and

X–FEL Beam Dynamics Seminar

Wednesday, October 27, 2003

(15:00 in Room 459/30b)

Modeling of the LCLS X–Ray Beamline

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Abstract

For Free–Electron Lasers, operating in the X–ray regime, the background signal of the spontaneous radiation can be comparable to or even larger than the expected FEL signal at saturation. Due to the low signal-to-noise ratio the detection of the FEL signal is obscured in the first part of the undulator and thus no information on the undulator quality of the undulator modules can be derived from the FEL amplification. To estimate the impact of the spontaneous radiation of the LCLS X-ray FEL, the start-end simulation has been extended to include the X-ray beamline. First results of the expected X–ray signal during the commissioning phase of LCLS, including the full spontaneous radiation background, is presented here.

NOTE THE UNUSUAL DATE AND TIME

D.P.Barber (MPY), J.Rossbach (Univ. HH) and M.Vogt (MPY).

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