MAGNETIC MEASUREMENTS AND TUNING OF FLASHII UNDUALTORS

P. Vagin, P. Neumann, A. Schoeps, M. Tischer, DESY, Hamburg, Germany

Abstract

FLASH II is an extension of the present VUV-FEL facility at DESY. It includes a new experimental hall to double the number of user stations, a separate tunnel with a 30m long planar undulator with 31.4mm period length, sharing the present FLASH linac. It will provide SASE radiation in a wavelength range of 4-60nm as well as 200µm THz radiation from an electromagnetic undulator and will allow for later implementation of various seeding schemes.

The SASE undulator design was adapted from the devices built for the PETRA light source while several simplifications and improvements in the mechanics and the drive concept have been realized.

We report on recent progress in the magnetic measurements and tuning results of these undulators. Details of the measurement tools will be discussed like peculiarities in the Hall probe calibration or noise issues of voltage integrators for stretched wire and search coil measurements.