



28th June 2011 - 14:15
FLASH HALL (28c) - Seminar Room

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sFLASH - present status and commissioning results

The free-electron laser in Hamburg (FLASH) was previously being operated in the self-amplified spontaneous emission (SASE) mode, producing photons in the XUV wavelength range. Due to the start-up from noise the SASE-radiation consists of a number of uncorrelated modes, which results in a reduced coherence. One option to simultaneously improve both the coherence and the synchronization between the FEL-pulse and an external laser is to operate FLASH as an amplifier of a seed produced using high harmonics generation (HHG). An experimental set-up - sFLASH, has been installed to test this concept for the wavelengths below 40 nm. The sFLASH installation took place during the planned FLASH shutdown in the winter of 2009/2010. The technical commissioning, which began in the spring of 2010, has been followed by seeded-FEL commissioning, FEL-characterization and pilot experiments. In this contribution the present status and the sFLASH commissioning results will be discussed.