



Contribution ID: 198

Type: poster

The ANGUS 200TW laser at the LUX plasma accelerator and its online diagnostics system at the laser repetition rate

Wednesday, 27 September 2017 19:30 (1 hour)

Laser-plasma based acceleration has matured into a technique providing high-energy electron beams able to drive undulator-based x-ray light sources. The LUX beamline, currently built up in a collaboration between University of Hamburg, DESY and ELI-Beamlines, is designed to be such a light source. The plasma acceleration stage is driven by the 5 Hz 200 TW laser system ANGUS. Recently first accelerated electrons have been shown. In this presentation the ANGUS laser system and its transport beamline will be briefly introduced. The implementation of the online diagnostics with a data acquisition system at the laser repetition rate will be presented. Furthermore long term stability measurements will be discussed in view of accessibility, reliability and suitability of the laser as a driver for laser plasma wake field acceleration.

Primary author: Mr SCHNEPP, Matthias (Center for Free-Electron Laser Science and Department of Physics, University of Hamburg)

Co-authors: MAIER, Andreas (CFEL/UHH); Mr WERLE, Christian (University of Hamburg); Mr KIRCHEN, Manuel (University of Hamburg); TRUNK, Maximilian (University of Hamburg); Mr DELBOS, Niels (University of Hamburg / Center for Free Electron Laser Science); Mr WINKLER, Paul (DESY); Mr MESSNER, Philipp (University Hamburg); Mr JALAS, Soeren (Center for Free-Electron Laser Science and Department of Physics, University of Hamburg); JOLLY, Spencer (Center for Free-Electron Laser Science & Department of Physics, Hamburg University, Hamburg, Germany); Mr LEROUX, Vincent (University of Hamburg)

Presenter: Mr SCHNEPP, Matthias (Center for Free-Electron Laser Science and Department of Physics, University of Hamburg)

Session Classification: Wine and Poster Session 2 (WG4-WG5-WG6-WG7)

Track Classification: WG7 - High Brightness Power Sources: from Laser Technology to Beam Drivers