



Contribution ID: 299 Contribution code: MOAI12

Type: **Invited Oral Presentation**

The FLASH facility status

Monday 19 August 2024 11:45 (10 minutes)

The FLASH facility is driven by a superconducting linac producing 5000 electron bunches per second (1 MHz burst @ 10 Hz) at a max. electron beam energy of 1.35 GeV. The bunches can be distributed between 2 FEL beamlines and a dedicated beamline for beam driven plasma acceleration research. With more than 8000 h of beam operation, of which roughly 4500 h are dedicated to user experiments, FLASH hosts 40 experiments per year. With a strong upgrade programme called FLASH2020+, the facility is adjusting its scope to facilitate the increasing demands of next generation experiments. Already available to users is an increased photon energy in the fundamental (up to 390 eV) and at variable polarisation in 3rd harmonic via afterburner (up to 950 eV). In a currently ongoing shutdown, the transformation of FLASH1 to the first high repetition rate externally seeded FEL beamline for user experiments is in focus and will pose drastic changes to the beam properties available to users. The high complexity of parallel SASE and seeded operation, necessitating vastly different electron beam properties, has recently been successfully tackled demonstrating EEHG lasing in parallel to FLASH2 operation.

Footnotes

Funding Agency

Primary author: SCHAPER, Lucas (Deutsches Elektronen-Synchrotron)

Presenter: SCHAPER, Lucas (Deutsches Elektronen-Synchrotron)

Session Classification: First Lasing, New FEL projects and Facility Reports

Track Classification: New FEL projects and Facility Reports