Contribution ID: **96** Type: **not specified**

Spatial analysis and stabilization of multi-octave spanning laser pulses in an attosecond beamline

Detecting and analyzing beam profiles from sources spanning several octaves is challenging, but at the same time crucial to perform attosecond science experiments in a deterministic way.
You will gain insights into state-of-the-art applications of nonlinear optics and the limits of the technology in waveform synthesis. The task includes detailed beam analysis up to large-scale beam stabilization over a complete attosecond beamline including active beam stabilization with correlation to out-of-loop detection. Preferably, all recorded data will be fed into a self-programmed database (Python, Matlab, etc…) that enables kHz recording speeds and long-term archiving. Ideally, you will bring the motivation to work hands-on with electronics and optics in order to set up the detection, program with hardware for data acquisition and finally analyze it.

Group

FS-CFEL-UFOX

Project Category

A5. Lasers and optics

Special Qualifications

Primary authors: SCHEIBA, Fabian (FS-CFEL-2 (Ultrafast X-rays Group)); ROSSI, Giulio Maria (FS-CFEL-2 (Ultrafast X-rays Group))