



Contribution ID: 67 Contribution code: TUAC04

Type: Contributed Oral Presentation

Terawatt-attosecond hard X-ray free-electron laser pulse generation at the European XFEL

Tuesday 20 August 2024 10:10 (25 minutes)

Despite significant advancements in generating attosecond pulses in the extreme ultraviolet and soft X-ray regimes, achieving high-power attosecond pulses at Ångstrom wavelengths has remained a considerable challenge. The generation of intense attosecond hard X-ray pulses is pivotal for probing the structural and electronic dynamics of matter with unprecedented precision. Recently, we proposed and experimentally demonstrated a new method to generate terawatt-attosecond pulses at Ångstrom wavelengths using X-ray free-electron lasers (FEL). This presentation will detail our recent experiments at the European XFEL, showcasing the successful production of stable high-power single-mode hard X-ray FEL pulses.

Footnotes

Funding Agency

Primary author: YAN, Jiawei (European XFEL GmbH)

Presenter: YAN, Jiawei (European XFEL GmbH)

Session Classification: SASE-FEL

Track Classification: SASE-FEL