



Contribution ID: 270 Contribution code: THXD1

Type: **Invited Oral Presentation**

Towards the COXINEL seeded Free Electron Laser with a laser plasma accelerator at HZDR

Thursday, 11 May 2023 09:00 (30 minutes)

Developing Free Electron Lasers using Laser Plasma Acceleration open great hopes for compact laboratory scale light sources. The COXINEL line developed at Synchrotron SOLEIL (France) has been moved at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) (Germany) for using high-quality electron beam generated by the 150 TW DRACO laser. After proper electron beam transport, seed and undulator radiation temporal, spectral and spatial overlaps, the seeded Free Electron Laser driven by the DRACO laser plasma accelerator has been observed in the UV. Good agreement is found between measurements and simulations.

Funding Agency

Footnotes

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Session Classification: MC03.3 - Novel Particle Sources and Acceleration Techniques (Invited)