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Results from CXLS commissioning

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The Compact X-ray Light Source (CXLS) is a compact source of femtosecond pulses of x-rays that is now commissioning in the hard x-ray energy range 4-20 keV. It collides the beams from recently developed X-band distributed-coupling, room-temperature, standing-wave linacs and photoinjectors operating at 1 kHz repetition rates and 9300 MHz RF frequency, and recently developed Yb-based lasers operating at high peak and average power to produce fs pulses of 1030 nm light at 1 kHz repetition rate with pulse energy up to 200 mJ. These instruments are designed to drive a user program in time-resolved x-ray studies such as SAXS/WAXS, XES and XAS, femtosecond crystallography as well as imaging. The different technical systems also act as prototypes for the more advanced CXFEL discussed elsewhere in these proceedings. We present the performance of the CXLS technical components and initial x-ray results.

Footnotes

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