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## The synchronization and timing system updating at CTFEL facility

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Chinese Academy of Engineering Physics terahertz free electron laser facility (CTFEL) is a superconducting linac-based user facility. It provides laser pulses with frequencies from 0.1 THz to 4.2 THz. CTFEL works in pulsed mode with a repetition of 10 Hz where up to about 54000 bunches at a bunch spacing of 18.5 ns are accelerated in one macro-pulse. To satisfy the high-precision synchronization requirement from user experiments, the synchronization system based on coaxial lines is updated to a continuous laser carrier and Michelson interferometer-based system. The timing system is updated to the event system.

### Footnotes

### Funding Agency

### I have read and accept the Privacy Policy Statement

Yes

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