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## Waveform control for attoscience in condensed matter (I)

*Monday 11 June 2018 11:15 (30 minutes)*

We create and control intense transient waveforms by compressing in space and time optical pulses down to a single half-cycle, nearly 1 femtosecond ( $1 \text{ fs} = 10^{-15} \text{ s}$ ) in duration. By measuring the optical waveform using an in-situ attosecond ( $1 \text{ as} = 10^{-18} \text{ s}$ ) technique we confirm the pulse reshaping. We use the intense transient as a source for generating isolated attosecond pulses from both gases and condensed matter. Furthermore, we develop a general single-shot technique to directly and in real-time measure electric field waveforms.

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