# Title
Few-cycle oscillator pulse train with constant carrier-envelope-phase and 65 as jitter

## Authors
Stefan Rausch,\textsuperscript{1,2} Thomas Binhammer,\textsuperscript{3} Anne Harth,\textsuperscript{1,2} Emilia Schulz,\textsuperscript{1,2} Martin Siegel,\textsuperscript{1,2} and Uwe Morgner\textsuperscript{1,2,4}

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## Abstract
We report on an octave-spanning Ti:sapphire laser oscillator stabilized to carrier-envelope-offset frequency zero, generating a pulse train with constant field profile for every pulse. Stabilization is realized using an extended self-referenced locking scheme enabling to lock the carrier-envelope-offset phase with less than 65 attosecond rms timing jitter. The stabilized system features a pulse repetition rate of 100 MHz with pulses as short as 4.5 fs and 220 mW average output power. With this laser system it was possible for the first time to demonstrate a spectral interference pattern of $10^{11}$ oscillator pulses in

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## Institute
\textsuperscript{1}Institute of Quantum Optics, Leibniz Universität Hannover, Welfengarten 1, D-30167 Hannover, Germany
\textsuperscript{2}Centre for Quantum Engineering and Space-Time Research (QUEST), Welfengarten 1, D-30167 Hannover, Germany
\textsuperscript{3}VENTEON Laser Technologies GmbH, D-30827 Garbsen, Germany
\textsuperscript{4}Laser Zentrum Hannover e.V, Hollerithallee 8, D-30419 Hannover, Germany