

# Dual-comb modelocked laser oscillators with high power and low noise

*Wednesday, 31 August 2022 10:00 (15 minutes)*

We present a platform for high-power dual comb sources from a single spatially-multiplexed oscillator cavity. We demonstrate femtosecond pulses and Watt-level average output powers with low-noise operation over short and long timescales. Our 80 MHz version is ideal for pump-probe measurements, while our 1 GHz version supports coherent dual-comb spectroscopy.

**Primary authors:** PHILLIPS, Christopher (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland); PUPEIKIS, Justinas (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland); WILLENBERG, Benjamin (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland); NUSSBAUM-LAPPING, Alexander (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland); CAMENZIND, Sandro (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland); CALLEGARI, Fabio (Nanoscopy and NIC, Istituto Italiano di Tecnologia (IIT), Genova, Italy); BENAYAD, Abdelmjid (Universite de Caen Normandie, CIMAP, Caen, France); CAMY, Patrice (Universite de Caen Normandie, CIMAP, Caen, France); KELLER, Ursula (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland)

**Presenter:** PHILLIPS, Christopher (ETH Zurich, Institute for Quantum Electronics, Zurich, Switzerland)

**Session Classification:** SSL 4 Short pulse generation & amplification