

Joint Press Release

Highest energy, commercial phase stabilized femtosecond laser:

Kapteyn-Murnane Laboratories (KMLabs), a leader in state-of-the-art, cryo-cooled, ultrafast lasers and Menlo Systems, a leading developer and manufacturer of instrumentation for high-precision metrology, jointly announce the highest available pulse energies produced by a commercially-available, phase stabilized femtosecond laser amplifier.

Recent carrier-envelope phase stabilization of a KMLabs Dragon femtosecond laser amplifier using Menlo Systems' femtosecond phase stabilization units for laser oscillators (XPS800) and laser amplifiers (APS800) demonstrated sub-30 fs phase stabilized pulses with energies of up to 2 mJ at 1 kHz repetition rate. These record-breaking results were demonstrated in a customer's lab.

KMLabs uses their proprietary cryo-cooling technology platform to produce laser amplifier systems with repetition rates up to 20 kHz and average powers reaching 30 W, that have been shipped to customers worldwide. KMLabs and Menlo Systems are now scaling up the achievable phase stabilized pulse energies, with phase stabilized amplifier systems of 1 mJ at 20 kHz, and 3 mJ at 10 kHz currently in manufacturing.

Phase stabilized amplifier systems are being increasingly used for numerous phase sensitive experiments that require ultrashort pulses and very high peak powers. Such experiments include, for example, the control of strong-field processes in extreme nonlinear optics and high harmonic attosecond pulse generation.

For further information please visit www.kmlabs.com and www.menlosystems.com or contact Dr. Kendall Read (kread@kmlabs.com) or Dr. Bernhard Schmidt (b.schmidt@menlosystems.com).