

Abstract Submitted
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Compression of Yb:KGW Laser Pulses with Multi-Plate and Hollow-Core Fiber Compressors JOHN BEETAR, SHIMA GHOLAM-MIRZAEI, SEAN BUSCZEK, STEVEN SOLIS, ISRAEL CASTILLO, MICHAEL CHINI, Univ of Central Florida — We investigate the spectral broadening and compression of pulses from a Yb:KGW laser amplifier separately with the use of a multi-plate continuum (MPC) and a hollow-core fiber (HCF). The pulses were compressed from 280 fs to below 20 fs using a single pass multi-stage multi-plate continuum utilizing thin fused silica windows. Similar spectra, with a Fourier transform-limited duration of 12 fs, are obtained in a 1.4 m long xenon filled hollow-core fiber. We further compare the compression factor and energy throughput of the two pulse compressors. Our results suggest that both the MPC and HCF systems can generate a broad supercontinuum capable of supporting few-cycle pulses from moderately high average power Yb:KGW laser sources.

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