

a 115-nm (14.5 THz) span to better than 3×10^{-15} relative to the optical frequency. Based on these results and the compatibility with CMOS electronics, this extremely compact source can serve as a fully chip-scale replacement for relatively bulky mode-locked lasers in many precision frequency metrology and ultrafast photonic applications. In particular, this robust source is ideal for applications where large comb tooth separation are desired such as the calibration of astronomical spectrographs [24–26], line-by-line pulse shaping [20,27], and ultra-high-speed communications systems.

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