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Paper: Stability Comparison of Two Ring Resonator Structures for Multiwavelength Fiber Lasers Using Highly Doped Er-Fibers

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Abstracts:

An experimental comparison of stability between two different fiber laser topologies is carried out. The lasers are based on ring resonators that include highly doped Er-fibers. Both topologies use fiber Bragg grating reflectors in order to select the emission wavelengths. The experimental results confirms that the novel topology based on fiber optic circulators arranged in a hybrid serial-parallel configuration offers better stability and a higher optical signal-to-noise ratio (OSNR) than the simpler one based on a parallel configuration.