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Paper: Dual-Wavelength Single-Longitudinal Mode Fiber Laser Using Phase-Shift Bragg Gratings

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Abstracts: This paper presents a new stable dual-wavelength fiber-ring laser based on erbium-doped fiber amplification. The wavelength selection is made by a combination of fiber Bragg gratings and phase shift fiber Bragg gratings. Two laser emission lines were obtained simultaneously in single-longitudinal-mode operation showing a power-instability lower than 0.35 dB, an OSNR higher than 55 dB, a narrow-linewidth of 13 KHz and an optical output power around dBm for both wavelengths. This proposed configuration allows the individual control of the loss of each channel.