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An Ultra-sensitive Fibre Frequency Reference for Short-term Laser Stabilisation

Tuesday 13 December 2022 12:00 (15 minutes)

We present an all-optical-fibre frequency reference with a state-of-the-art short-term stability of $0.1 \text{ Hz}/\sqrt{\text{Hz}}$, limited by double Rayleigh backscattering. The system also reaches the fibre thermal noise limit at infrasonic frequencies.

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