

# High Quality tunable Brillouin optoelectronic oscillator

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## **Abstract**

A proposed scheme for improving the optoelectronic oscillator signal quality has been presented. A Brillouin ring laser loop fitted with an intensity modulator has been established. The modulator is excited by an RF signal. The loop output is detected by an APD. It shows an RF signal at the input frequency but with linewidth reduction up to two orders of magnitude and with improved phase noise. The setup is tested at different microwave frequencies generated by different sources.

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