

## High spectral purity millimetre-wave modulated optical signal generation using fibre grating lasers

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*F.N. Timofeev, S. Bennett, R. Griffin, P. Bayvel, A.J. Seeds, R. Wyatt, R. Kashyap and M. Robertson. "High spectral purity millimetre-wave modulated optical signal generation using fibre grating lasers." 1998 MTT-S International Microwave Symposium Digest 98.3 (1998 Vol. III [MWSYM]): 1221-1224.*

Millimetre-wave optical signal generation by heterodyning two semiconductor fibre grating lasers is demonstrated for the first time. The resulting beat signal, has an extremely narrow linewidth ( $<100$  kHz), is continuously tuneable (0-40 GHz) and exhibits negligible chirp under direct 2.6 Gbit/s modulation.

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