CONTINUOUS FREQUENCY COMB LASER

Innovative device generating a comb for tuneable, stable and continuous frequencies

Technological benefits

A flexible system
Selectable and tuneable lines

Source laser properties are retained
Shift at each pass to prevent interference:
- stability maintained
- laser line width unchanged

An extended comb
Bandwidth obtained greater than 15 nm (40 nm expected)

Continuous rating

Invention overview

Continuous frequency comb laser generated by multiple passes of the laser wave in an amplified fibre loop.
Use of two optical modulators enables the acquisition of regularly-spaced, tuneable and high-stability lines that benefit from the spectral quality of the source laser.

Commercial benefits

Low-cost technology
Simple and easy-to-qualify system
Made up of off-the-shelf components
Fast measurements

Potential applications

Characterisation of laser sources
Distance metrology
Spectroscopy
Atom cooling

TRL : 3

Patented invention, available under license

Space technology applications and value-enhancement serving the industry