

ABSTRACT**Radio frequency oscillator and associated source and apparatus**

5 The present invention relates to a radiofrequency oscillator (10) comprising an optical resonator (18) being a ring waveguide allowing the propagation of a first wave in a first direction and of a second wave in a second direction, the second direction being opposite to the first direction, and the resonator (18) comprising an active optical medium generating a first optical line from the first wave and a second optical line from the second wave, the
10 resonator (18) being in contact with a part made of a material featuring a magneto-optic effect, an applier (20) of external magnetic field of adjustable intensity on the resonator (18) generating a frequency offset between the first wave and the second wave, and a processing circuit converting the beat between the two optical lines in a radiofrequency signal.

15 Figure 3