

Selected Abstracts from Other Physical Review Journals

Abstracts of papers that are published in other Physical Review journals and may be of interest to Physical Review A readers are printed below.

Experimental observation of spectral oscillations in frequency modulation laser operation Stefano Longhi *Istituto Nazionale di Fisica per la Materia, Dipartimento di Fisica and CEQSE-CNR, Politecnico di Milano, Piazza Leonardo da Vinci 32, I-20133 Milano, Italy* (Received 4 May 2001; published 24 September 2001)

The experimental observation of transient coherent oscillations in the optical frequency spectrum of an Er–Yb solid-state laser with internal frequency modulation (FM) is reported. These oscillations, which arise in the presence of a slight detuning between the modulation frequency and the cavity axial mode separation, are tran-

siently observed when the modulator is switched on and appear as a damped breathing of laser spectral width superimposed to the relaxation oscillation dynamics of the laser intensity. The experimental results are in good agreement with the theoretical predictions which take into account both the fast dynamics of spectral oscillations and the slow dynamics of relaxation oscillations for the codoped Er–Yb laser system. [Phys. Rev. E **64**, 047201 (2001)]