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Optical-Wavelength Paramagnetic Phaser (Lecture Notes). Section 3.1. Nonlinear Balance Equations of Motion

D. N. Makovetskii

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In this work I present a detailed description of the simplest nonlinear model for an optical wavelength paramagnetic phaser, which is an acoustic analog of the class-B lasers. Despite of its simplicity, this model gives a satisfactory explanation of experimental data for optical-wavelength paramagnetic phasers based on high-quality acoustic Fabry-Perot resonators. In particular, this model was successfully used both for qualitative and quantitative interpretation of deterministic chaotic motions observed in spin-phonon system of a nonautonomous ruby phasers at liquid helium temperatures (see arXiv:0704.0123v1 [nlin.CD]).

Comments:	14 pages. This is a section of my work on chaotic dynamics in solid-state dissipative optical-wavelength systems
Subjects:	**Optics (physics.optics)**; Other Condensed Matter (cond-mat.other); Chaotic Dynamics (nlin.CD)
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