

Chirped Dissipative Solitons

Vladimir L. Kalashnikov

(Submitted on 27 Jan 2010 (v1), last revised 15 Feb 2010 (this version, v2))

The analytical theory of chirped dissipative soliton solutions of nonlinear complex Ginzburg-Landau equation is exposed. Obtained approximate solutions are easily traceable within an extremely broad range of the equation parameters and allow a clear physical interpretation as a representation of the strongly chirped pulses in mode-locked both solid-state and fiber oscillators. Scaling properties of such pulses demonstrate a feasibility of sub-mJ pulse generation in the continuous-wave mode-locking regime directly from an oscillator operating at the MHz repetition rate.

Comments: 10 pages, 5 figures, XVI Annual Seminar on Nonlinear Phenomena in Complex Systems (May 19-22, 2009, Minsk, Belarus)

Subjects: **Optics (physics.optics)**; Pattern Formation and Solitons (nlin.PS); Computational Physics (physics.comp-ph)

Cite as: [arXiv:1001.4918v2](https://arxiv.org/abs/1001.4918v2) [physics.optics]

Submission history

From: V. L. Kalashnikov [[view email](#)]

[v1] Wed, 27 Jan 2010 11:51:37 GMT (126kb)

[v2] Mon, 15 Feb 2010 12:38:39 GMT (127kb)

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