



Non-SVEA models for supercontinuum generation

Submitted by Hervé Leblond on Tue, 08/25/2015 - 16:24

Titre Non-SVEA models for supercontinuum generation

Type de publication Communication

Type Conférence invitée

Année 2015

Date du colloque 29/06-02/07/2015

Titre du colloque Nonlinear Photonics: Theory, Materials, Applications, NPh'15

Auteur Leblond, Hervé [1], Grelu, Philippe [2], Mihalache, Dumitru [3]

Pays Russie, Fédération de

Ville St Petersburg

Résumé en anglais We know that the modified Korteweg-de Vries (mKdV), the sine-Gordon (sG), and the mKdV-sG models can describe few-cycle optical pulse propagation beyond the slowly-varying-envelope approximation in transparent media. We show numerically that these models are also able to describe the generation of supercontinua with spectral bandwidths of several octaves. Several mechanisms of spectral broadening are highlighted, involving self-phase modulation, parametric interactions of high harmonics, and few-cycle-soliton generation.

URL de la notice <http://okina.univ-angers.fr/publications/ua13785> [4]

Liens

[1] <http://okina.univ-angers.fr/herve.leblond/publications>

[2] [http://okina.univ-angers.fr/publications?f\[author\]=24353](http://okina.univ-angers.fr/publications?f[author]=24353)

[3] [http://okina.univ-angers.fr/publications?f\[author\]=8696](http://okina.univ-angers.fr/publications?f[author]=8696)

[4] <http://okina.univ-angers.fr/publications/ua13785>

Publié sur *Okina* (<http://okina.univ-angers.fr>)