



# L-Band Harmonic Mode Locking of Single-, Two-, and Three-Soliton Bunches from C-Band Amplifier in a Figure-of-Eight Fiber Laser

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Auteur	Guesmi, Khmaies [1], Semaan, Georges [2], Salhi, Mohamed [3], Meng, Yichang [4], Bahloul, Faouzi [5], Leblond, Hervé [6], Sanchez, François [7]
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Mots-clés	harmonic mode locking [8], long-wavelength range [9], soliton bunches [10]
Résumé en anglais	We report the experimental emission above 1.6 $\mu\text{m}$ of harmonic mode locking of single-, two-, and three-soliton bunches in a C-band Er:Yb codoped silica fiber laser. The laser cavity consists of two connected fiber loops in the figure-of-eight configuration. In such a system the mode-locking regime arises spontaneously due to the nonlinear optical loop mirror, which acts as a saturable absorber. The 1.6 $\mu\text{m}$ oscillation is enhanced by minimizing the linear intra-cavity losses. Depending on the pump power and the polarization controllers, the laser generates harmonic mode locking above 1.6 $\mu\text{m}$ containing patterns with one, two or three pulses. These two last regimes have not been achieved so far at a long-wavelength range.
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua15046">http://okina.univ-angers.fr/publications/ua15046</a> [11]
Lien vers le document	<a href="http://www.nipne.ro/rjp/2016_61_7-8/1330_1338.pdf">http://www.nipne.ro/rjp/2016_61_7-8/1330_1338.pdf</a> [12]

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