MARGINAL SYNCHRONIZATION OF SPIN-WAVE AMPLITUDES IN A MODEL FOR CHAOS IN PARALLEL PUMPING

A. Krawiecki[a], **and A. Sukiennicki**[a,b]
[a]Faculty of Physics, Warsaw University of Technology,
Koszykowa 75, PL-00-662 Warsaw, Poland
[b]Department of Solid State Physics, University of Łódź
Pomorska 149/153, PL-90-283Łódź, Poland

9.7 cm

A model for chaos in high-power parallel pumping is considered based on nonlinear interactions of two groups of parametric spin wave pairs. If spin wave pairs within each group have identical damping, frequencies and interaction coefficients with other pairs, all of them are excited in the chaotic regime and marginal synchronization of amplitudes of spin wave pairs belonging to the same group is observed. In the case of small differences between spin wave pairs only a low number of pairs from each group is excited. On the basis of this result, possible explanation of the origin of low dimensional chaos usually observed experimentally in parallel pumping is proposed.

13.4 cm

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Corresponding author :
Andrzej Krawiecki

Address for correspondence :
Wydział Fizyki Politechniki Warszawskiej
Koszykowa 75
00-662 Warszawa

Email address :
akraw@if.pw.edu.pl