

Dynamic Maps in Optical Resonators

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RESUMEN

In this talk the dynamic behavior of a beam within a ring phase conjugation optical resonator is modeled using bi-dimensional iterative maps. Three well known iterative maps are described: Duffing, Tinkerbell and Hénon, and are used to describe optical resonators. It is explicitly shown how the difference equations of the above maps can be used in order to describe the dynamic behavior of what we call; Tinkerbell, Duffing and Hénon Beams i.e. Beams that behave according to those maps. The matrix of a map generating element is found in terms of the specific parameter of the map, the state variables and the resonator parameters for each one of the previous maps.

Palabras clave: Optical Resonators