

Abstract Submitted  
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**Broad spectrum period adding chaos in a transistor circuit.**

THOMAS CARROLL, Naval Research Lab — Period adding chaos, in which a driven system makes transitions such as period 2-chaos-period 3-chaos-period 4, is well known. In most cases, however, the frequency of the chaotic signal is close to the frequencies of the periodic signals. I have done experiments with a simple circuit in which the chaos has a very broad power spectrum, covering 6 orders of magnitude. I have confirmed this broad band feature in numerical simulations of the circuit. These experiments have technological implications, because they show that a narrow band high frequency signal could produce broad band interference in even simple circuits.

Thomas Carroll  
Naval Research Lab

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