Abstract Submitted for the OSF07 Meeting of The American Physical Society

Mathematical Modeling of a non-linear oscillator ED TIMKO, MO AHOUJJA, REX BERNEY, Physics, University of Dayton — We discuss a simple experiment developed to show non-linear oscillations. The Data shows amplitude jumps as the frequency of the periodic driving force is slowly varied on the way up as well as on the way down past the resonance frequency for the linear system. A theoretical description using modified Duffing's Equation with damping is used to model the non-linear phenomenon.

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Date submitted: 28 Sep 2007

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