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**Experimental Study of Energy Localization in a Nonlinear Electrical Lattice** LARS ENGLISH, RITOBAN BASU THAKUR, RYAN STEARRETT, DICKINSON COLLEGE, PHYSICS TEAM — Experimental results are presented that reveal the formation of intrinsic localized modes (ILMs) in a nonlinear electrical lattice. The lattice studied is a discrete transmission line consisting of two inductors and a diode (with voltage-dependent capacitance) per unit cell, and it forms a ring. We show that when this ring circuit is driven uniformly at large amplitudes, an instability of the uniform mode leads to the appearance of sharply localized features. Under certain driving conditions, these ILMs can become locked to the driver.

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