

Abstract Submitted  
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**Experimental Study of Backwards-Wave Solitons in an Electrical Lattice** S.G. WHEELER, L.Q. ENGLISH, Dickinson College, Department of Physics, DICKINSON PHYSICS TEAM — Discrete solitons are generated in an electrical lattice consisting of capacitive and inductive elements in which the group velocity of a wave-packet is always opposite to the phase velocity. Furthermore, the lattice is nonlinear by virtue of using diodes (pn junctions) for which the effective capacitance varies with voltage, instead of regular capacitors. We find experimentally that backwards-wave solitons can be produced in this system, and we study (among other things) the profile and propagation of this novel type of soliton as a function of experimental parameters.

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