Abstract Submitted
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Spatially modulated kinks in shallow granular layers[1] CLAUDIO FALCÓN, JUAN MACÍAS, Departamento de Física, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, Casilla 487-3, Santiago, Chile — We report on the experimental observation of spatially modulated kinks in a shallow one-dimensional fluidized granular layer subjected to a periodic air flow. We show the appearance of these solutions as the layer undergoes a parametric instability. Due to the inherent fluctuations of the granular layer, the kink profile exhibits an effective wavelength, *a precursor*, which modulates spatially the homogeneous states and drastically modifies the kink dynamics. We characterize the average and fluctuating properties of this solution. Finally, we show that the temporal evolution of these kinks is dominated by a hoping dynamics, related directly to the underlying spatial structure.

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