Abstract Submitted
for the DFD12 Meeting of
The American Physical Society

Study of Waving of grass using soap film RAVI SINGH, SHREYAS MANDRE, AMALA MAHADEVAN, Brown University, L. MAHADEVAN, Harvard University, MAHESH BANDI, Okinawa Institute of Science and Technology — Wind blowing over a grass field incites synchronized response from the grass blades, which appear as waves. This effect is called Mo-nami in a terrestrial setting, while in an aquatic setting it is termed as Ho-nami. We use a combination of experimental observations, numerical simulations and theoretical analysis to understand this effect. The experiment is conducted in two-dimensional realization of these phenomenon in a gravity driven soap film tunnel. Nylon filaments attached to the boundaries of the soap film play the role of the grass. We provide a preliminary characterization of this analog model for synchronized oscillations of grass.

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Date submitted: 09 Aug 2012 Electronic form version 1.4