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Preliminary study of relaxation mechanisms for dusty plasma clusters ANDREW KURTZ, WILLIAM THEISEN, TERRANCE SHERIDAN, Ohio Northern Univ — Dusty plasma particles in a confining potential well regularly form into single layer plasma clusters under certain experimental conditions. The time evolution of these particles from random thermal motion to regular lattice structures is being investigated. The strongly coupled particles shift and rotate in a two-dimensional plane in order to achieve an equilibrium position. Each slip stick adjustment in the structure results in less overall systemic energy. In the process of shifting, changes in the height and width of the clusters were found and are seen to be inversely proportional.

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