

Abstract Submitted
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Chaos in a Complex Plasma T.E. SHERIDAN, Physics, Ohio Northern University — Chaotic dynamics is found experimentally in a complex (dusty) plasma disk of three particles. A sinusoidal modulation of the plasma density excites both the center-of-mass and breathing modes. Low-dimensional chaos is seen for a 1:2 resonance between these modes. The dimension of the attractor is found to be 2.48 ± 0.05 , while the largest positive Lyapunov exponent is 0.17 ± 0.04 bits/sample.

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