

Abstract Submitted  
for the DPP20 Meeting of  
The American Physical Society

**Dust experiments under strong magnetic fields** ANDRE MELZER, HARALD KRUEGER, STEFAN SCHUETT, MICHAEL HIMPEL, Institute of Physics, University Greifswald — Experiments on dusty plasmas under various magnetic fields strengths have been performed. First, the dynamics of a cluster of micron-sized particles is studied over a wide range of magnetic field strengths. From the cluster dynamics the dust charge and the plasma screening length are derived. Second, the behavior of dust-density waves in dust clouds of micron-sized particles is investigated. From the comparison of the measured wave properties and a model dispersion relation, the ion density and the dust charge are extracted. It is seen that the dust and plasma quantities show only little variation with magnetic field strength.

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Date submitted: 29 Jun 2020

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