Abstract Submitted for the DPP11 Meeting of The American Physical Society

Wave spectra of strongly coupled magnetized plasmas¹ HANNO KAEHLERT, ITAP, Christian-Albrechts Universitaet zu Kiel, ALEXI REYNOLDS, School of Physics and Astronomy, University of Birmingham, TORBEN OTT, MICHAEL BONITZ, ITAP, Christian-Albrechts Universitaet zu Kiel — Results are presented for the wave propagation in a strongly coupled, magnetized one-component plasma. For different angles of the wave vector with respect to the external magnetic field we discuss the dispersion and polarization based on the quasi-localized charge approximation (QLCA) [1]. Further, the results of the QLCA are compared with molecular dynamics simulations, extending previous results for two-dimensional systems, e.g. [2,3]. The dependence of the wave spectra on the coupling parameter and the magnetic field strength is examined.

[1] G. Kalman and K. I. Golden, Phys. Rev. A 41, 5516 (1990).

[2] L.-J. Hou, P. K. Shukla, A. Piel, and Z. L. Miskovic, Phys. Plasmas 16, 073704 (2009).

[3] M. Bonitz *et al.*, Phys. Rev. Lett. **105**, 055002 (2010); T. Ott *et al.*, Phys. Rev. E **83**, 046403 (2011).

¹Support by the Deutsche Forschungsgemeinschaft via SFB-TR 24 and DAAD via the RISE program is acknowledged.

Hanno Kaehlert ITAP, Christian-Albrechts Universitaet zu Kiel

Date submitted: 13 Jul 2011

Electronic form version 1.4