Abstract Submitted
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Phase diagram of a Wigner crystal KESHAV SHRIVASTAVA[1], University of Hyderabad — We examine the experimental data of absorption of r.f. in the 2- d electron gas in the range from 80 to 400 MHz. We convert all of the frequencies into temperature units by writing $h\nu=k_{BT}$. Thus, for example, 80MHz=3.84 mK. The transition temperatures so derived are a few millikelvin(mK). The energy of the state is $2\nu_{(=-)}\mu_{BB}$ (B=μ H). The pressure is -$(dU/dV)_\sigma$. We devide the field by a constant H_o=35Tesla so that the range occurs between 0.5 and 1.0. When the limit of field is extended to infinity 5.76 mK and 13.68 mK become 0.296 and 0.703 which correspond to 1/3 and 2/3. From our theory we identify the spin from the fraction. The H/H_o versus temperature phase diagram in the range from 0.5 mK to 18.5 mK is thus obtained. Because of the use of limit, it corresponds to insulating lattice of electrons which is called the Wigner solid. 1. K. Lai, W. Pan, D. C. Tsui et al PRB 69,125337(2004). 2. K. N. Shrivastava, Phys. Lett. A. 326, 469(2004); A113,435(1986). 3. K. N. Shrivastava, Introduction to quantum Hall effect, Nova Sci. N. Y. (2002)

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