Abstract Submitted for the MAR09 Meeting of The American Physical Society

Linear temperature dependence of the spin susceptibility in Fepnictides. DMITRI V. EFREMOV, ANDREY V. CHUBUKOV, ILYA M. EREMIN, MAXIM M. KORSHUNOV, DMITRI L. MASLOV — We argue that linear T dependence of the spin susceptibility $\chi > T$ observed in Fe pnictides can be explained within the itinerant Fermi liquid model of hole and electron bands. The spin susceptibility is linear in T in a generic Fermi liquid in 2D. We show that for pnictides, the prefactor for the T term comes chiefly from intra-band scattering and is strongly enhanced compared to an ordinary Fermi liquid as it contains precisely the same interaction that gives rise to spin-density-wave ordering. We compare theoretical slope with the data.

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Date submitted: 21 Nov 2008

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