

Abstract Submitted
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Precise measurements of dynamic susceptibility near Curie temperature¹ MATTHEW D. VANNETTE, ATHENA SAFA-SEFAT, JOERG SCHMALIAN, SERGEY L. BUD'KO, PAUL C. CANFIELD, RUSIAN PROZOROV, Ames Laboratory and Department of Physics & Astronomy, Iowa State University, Ames IA 50011 — We report tunnel diode resonator measurements of the 10 MHz dynamic magnetic susceptibility in the vicinity of the Curie temperature on a variety of ferromagnetic compounds with T_c ranging from 4.5 K for CeVSb3 to 325 K for LaMn2Ge2. The outstanding sensitivity of the technique allows for a detection of the magnetic signal at pico-emu level. A sharp peak in susceptibility in the critical region is rapidly suppressed by applying relatively weak DC magnetic fields. Measurements are compared to specific heat, resistivity, and DC magnetization data. Results of scaling analysis in the critical fluctuations region are presented.

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