Susceptibility Measurements on Small Al Grains

Measured with a SQUID magnetometer

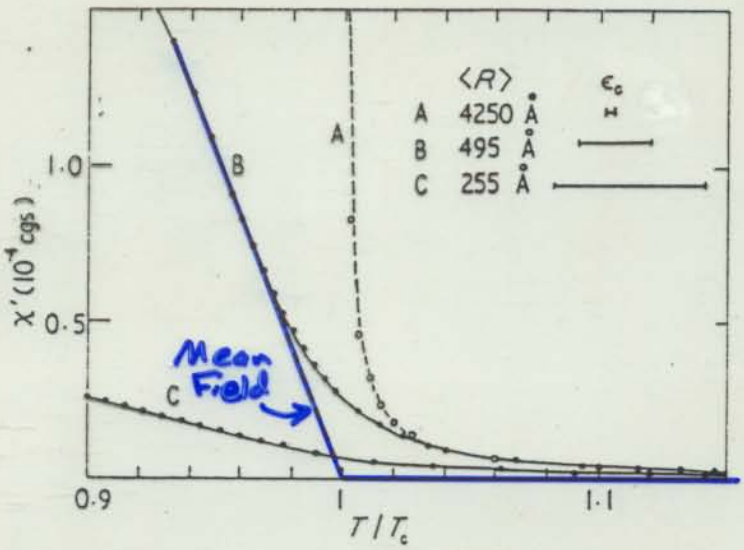

Figure 3. Measured diamagnetic susceptibility of aluminium powders with differing mean particle sizes. The full curves are the GL theory including fluctuation effects, averaged over particle distributions (after Buhrman and Halperin 1973)

$$\chi = -\frac{1}{4\pi}\,\frac{\mu_0 R^2 \langle |\psi|^2 \rangle (e^*)^2}{m^*}$$

$$\xi_{AL} = 16000\ \text{Å}$$

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Rep. Prog. Phys. 38, 1049 (1975).