

Stray-field investigations on sharp ferromagnetic tips by electron holography

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The leakage field produced by sharp ferromagnetic probes employed for magnetic force microscopy has been investigated by electron holography. Interference fringes obtained with the double exposure technique are found to be in good qualitative agreement with calculations based on a macroscopic dipole model for the sensor tips. We show that it is possible to measure the probes' magnetic flux through the evaluation of the phase difference in the simulated map.