

Abstract Submitted
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Measuring the Magnetic Moment of a Magnetic Dipole JAMES MORRIS, SETHFIELD SMITH, Francis Marion University — The purpose of these experiments is to investigate the interaction of a magnetic dipole moment with a magnetic field. Five experiments were conducted to measure the magnetic moment of a magnetic dipole, including Balancing Magnetic Torque and Gravitational Torque, Harmonic Oscillation of a Spherical Pendulum, Precessional Motion of a Spinning Sphere, Net Force in a Magnetic Field Gradient Using the Magnetic Force Balance, and Determining the Magnetic Moment from the $1/r^3$ Dependence of the Magnetic Field Along the axis of a Magnetic Dipole. The experimental setups and results will be presented and compared for each of the five experiments.

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