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The Orbital Gyromagnetic Factor of Relativistic Electrons AYODEJI AWOBODE, University of Illinois at Urbana-Champaign — An analog of the Bargmann-Michel-Telegdi (BMT) equation which describes the motion of the spin four-vector S is derived for the orbital magnetic moment L. It is shown that in addition to the term in dL/dt describing the precession of the orbital angular momentum in a magnetic field, there appears a term which may imply the possibility of an anomalous contribution to the orbital g-factor g_L. Experiments to measure the anomaly are discussed.

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