

Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Electron Paramagnetic Resonance of Transition Metal Ions: New Relativistic Effects at High Magnetic Fields AYO-DEJI AWOBODE, University of Ibadan, Ibadan, Nigeria — We calculate the shift in the Electron Spin Resonance (ESR) frequency due to an inhomogeneous term in the equation of motion describing the precession of the angular momenta of relativistic electrons coupled to a static magnetic field. It is proposed that the calculated frequency shift may be observed in transition metal complexes in which the contributions from the ligand field are completely and precisely known. Furthermore, it is shown that a measurable transient oscillation of the dipole moment occurs after the external magnetic field is suddenly switched off.

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Date submitted: 13 Nov 2011

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