

**A NEW SOLUTION OF THE EINSTEIN-MAXWELL  
EQUATIONS FOR A SYSTEM WITH MASS, MAGNETIC  
MOMENT, CHARGE, AND ANGULAR MOMENTUM\***

LOUIS WITTEN

*University of Cincinnati, Cincinnati, Ohio, U.S.A.*

**Abstract.** A five parameter solution of the combined Einstein-Maxwell equations is given which describes a source containing mass, electric charge, magnetic dipole, higher multipole moments of all three kinds, and angular momentum. The solution is asymptotically flat and has a singular infinite red shift surface. Possible relevance of the solution to black hole physics is discussed.

\* Based on a paper entitled 'A Five Parameter Exterior Solution of the Einstein-Maxwell Field Equations' by F. Paul Esposito and Louis Witten, *Phys. Rev.* **D8**, 3302 (1974).