

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-35-836 **Pete A McCoy*** (pam@usna.edu), Mathematics Department, U.S. Naval Academy, Annapolis, MD 21402, and **Reza Malek-Madani** (rmm@usna.edu), Mathematics Department, U.S. Naval Academy, Annapolis, MD 21402. *Analysis of the Paraxial Wave Equation: Part II*. Preliminary report.

The Paraxial Wave Equation arises in the modeling of laser propagation in a vacuum. We develop representation formulae for a class of solutions representing transverse electromagnetic waves in cylindrical coordinates. These representations are used to identify properties of the solutions. (Received September 30, 2004)