

**Boyling, J. B.; Cole, E. A. B.**

**Six-dimensional Dirac equation.** (English) Zbl 0780.35109

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Summary: The Dirac equation in six-dimensional relativity (three space and three time) is considered and shown to correspond to particles which have spatial spin- $\frac{1}{2}$  and temporal spin- $\frac{1}{2}$ . Explicit forms of the spinor transformation are found. Plane wave solutions are obtained and their properties are given in terms of spatial and temporal spins and helicities. An expression is found for the charge conjugation operator.

**MSC:**

**35Q75** PDEs in connection with relativity and gravitational theory

**83A05** Special relativity

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**Keywords:**

plane wave solutions; six-dimensional relativity; spinor transformation; charge conjugation

**Full Text:** [DOI](#)

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