

Title:	On the Complementary Wave Interpretation of the Dirac Equation
Authors:	Bulathsinghala D. L., Wijewardena Gamalath K. A. I. L.
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Abstract:	<p>The Dirac equation consistent with the principles of quantum mechanics and the special theory of relativity, introduces a set of matrices combined with the wave function of a particle in motion to give rise to the relativistic energy-momentum relation. In this paper a new hypothesis, the wave function of a particle in motion is associated with a pair of complementary waves is proposed. This hypothesis gives rise to the same relativistic energy-momentum relation and achieves results identical to those of Dirac. Additionally, both the energy-time and momentum-position uncertainty relations are derived from the complementary wave interpretation. How the complementary wave interpretation of the Dirac equation is related to the time-arrow and the four-vectors are also presented.</p>