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A Physical Model And A Critical Test MELVIN COOK, Holobeam Inc. — The particle model requires the use of independent postulates to explain various phenomena. This suggests the particle model is invalid. The distribution of a system in an undulatory state is derived and an interaction of such a system that generates the complex conjugate required for a real product is identified. A successful critical test of these elements of physical reality is achieved by examination of the products of weak decays of the neutral kaons. Based on determinism and local causality for the transitions of individual systems, they generate a classical probability identical in mathematical form to the Born probability postulate, provide a local mechanism for EPR correlations, explain wave-particle duality as a transition without requiring renormalization of particle self-energy, explain the measurement process, allow direct derivations of uncertainty relationships and give rise to irreversibility on the microscopic level.

> Melvin Cook Holobeam Inc.

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