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Towards a Conceptual Model of Quantum Mechanics CARL FREDERICK, Central Research Group — With the decline of the Copenhagen interpretation of quantum mechanics and the recent experiments indicating that quantum mechanics does actually embody 'objective reality', we propose a a 'mechanical', conceptual model for quantum mechanics. We note that space-time vacuum energy fluctuations imply curvature fluctuations. And those fluctuations are indicated by fluctuations of the metric tensor. The metric tensor fluctuations can 'explain' the uncertainty relations and non-commuting properties of conjugate variables. It also argues that the probability density $\Psi * \quad \Psi$ is proportional to the square root of minus the determinant of the metric tensor (the differential volume element) $|-g\mu\nu|$. We further argue that the metric elements are actually not stochastic but are torsionally oscillating at a sufficiently high frequency that measured values of same *appear*stochastic. This is required to allow that the position probability density be a *non*-stochastic variable. An oscillating metric yields, among other things, a model of superposition, photon polarization, and entanglement, and all within the confines of a 4-dimensional space-time. The proposed model is one of 'objective reality' but, of course, as required by Bell's theorem, at the expense of temporal locality.

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