

Abstract Submitted  
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**A modification of Einstein-Schrodinger theory which closely approximates Einstein-Weinberg-Salam theory**<sup>1</sup> JAMES SHIFFLETT, Washington University in St. Louis — The Lambda-Renormalized Einstein-Schrodinger theory is a modification of the original Einstein-Schrodinger theory in which a cosmological constant term is added to the Lagrangian, and this theory has been shown to closely approximate Einstein-Maxwell theory. Here we generalize this theory to non-Abelian fields by allowing the fields to be composed of 2x2 Hermitian matrices, and we consider the case where the symmetric part of the fields are multiples of the identity matrix. The resulting theory incorporates the U(1) and SU(2) gauge terms of the Weinberg-Salam Lagrangian, and when the rest of the Weinberg-Salam Lagrangian is included, we get a close approximation to Einstein-Weinberg-Salam theory. In particular, the field equations match those of Einstein-Weinberg-Salam theory except for additional terms which are  $< 10^{-13}$  of the usual terms for worst-case field strengths and rates of change accessible to measurement. The Lagrangian density is invariant under U(1) and SU(2) gauge transformations.

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