

Abstract Submitted
for the NEF08 Meeting of
The American Physical Society

Vector Current Coupling for Gravity DOUGLAS SWEETSER, none
— Rank 1 field theories for gravity are ignored in the literature, one solid reason being the vector current coupling term. Feynman's lucid analysis of the phase of a current-current interaction for motion along one axis demonstrates the transverse current has spin 1 symmetry. Forces mediated by particles with odd spin have like charges repel, which is right for EM, wrong for gravity. The analysis is repeated without restricting the motion along an axis. The transverse terms have the expected symmetry. The other terms contain a symmetry consistent with a spin 2 particle. Forces mediated by particles with even spin have like charges attract. Therefore a vector current could be used for gravity. Rank 1 field theories for gravity need to be considered with more care.

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none

Date submitted: 18 Sep 2008

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