

Abstract Submitted
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A New invariant $ds=ds_t+ds_\phi$ in the String Theory Action Leads to Replacing The General Covariance In the SM Dirac Equation Gauge Derivatives With An Equivalent General Covariance In The Metric That This Dirac Equation is Derived From JOEL MAKER, PRA — Substituting the invariant $ds=ds_t+ds_\phi$ into the string theory action gives a cross term $2ds_tds_\phi$ (ds was squared in finding the string theory action area) implying spin thus requiring linearization of a diagonalized ds^2 . Here $ds_t = \sqrt{g_{oo}}dt$ This linearization replaces $ds=ds_t+ds_\phi$ with a matrix $ds=\alpha_t ds_t + \alpha_\phi ds_\phi$ and thereby replaces the general covariance in the gauge derivatives in the Standard Model (SM) with a general covariance in the *original* metric (given that $ds_t = \sqrt{g_{oo}}dt$) that is used to start the derivation of the SM Dirac equation. This puts in the general covariance at the very beginning of the Dirac equation derivation, *where it belongs*. The result is a new Dirac equation ($\sqrt{g_{\mu\mu}}\gamma_\mu\partial\psi/\partial x_\mu + i\omega\psi=0$ with $\mathbf{g}_{oo}=1-2e^2/rm_e c^2=1-r_H/r$) that does not require the covariant gauge derivatives anymore but yet still *retains* the general covariance creating a **ONE** free parameter theory, instead of 18 of the SM. For example this new Dirac equation has a singularity-stability radius r_H and, because of equivalence principle considerations, is allowed only *one* type of charge e . Thus near r_H the $2P_{3/2}$ state for this new Dirac equation gives a $\psi^{tt}\psi$ azimuthal trifolium, 3 lobe shape; so this ONE charge e (so don't need **color** to guarantee this) spends **1/3** of its time in each lobe (**fractionally charged** lobes), the lobe structure is locked into the center of mass (**asymptotic freedom**), there are **six** 2P states (corresponding to the 6 flavors) ; which are the **main properties of quarks!** Thus we end up with the experimental implications of the Standard Model (SM) by postulating just ONE particle with mass and string theory finally then exchanges its excessive generality for a Ockam's razor optimized theory.

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