Errata: The Nature of the Fifth Dimension in Classical Relativity

Equation (11) is incorrect. This negates the conclusions of Section 7. For the cosmological implications, see instead the recent paper, *Variation of the Gravitational Constant in the Radiation-Dominated Universe*.

Equation (16) is missing a factor of ϕ. It should read:

$$\widetilde{U}_5 = \widetilde{g}_{5a}\widetilde{U}^a = \phi^2 k A_\nu \widetilde{U}^\nu + \phi^2 \widetilde{U}^5 \tag{16}$$

The note at the end of Section 8, that (3) and (16) imply $d\tau/ds$ is constant, is only true for constant ϕ.

Equation (17) is missing a factor of ϕ^2. It should read:

$$2\widetilde{\Gamma}^\nu_{5\mu} = k\phi^2 g^{\nu\alpha} F_{\mu\alpha} \tag{17}$$

Equation (21) is missing a factor of ϕ^2. It should read:

$$\widetilde{\Gamma}^\mu_{\alpha\beta} = \Gamma^\mu_{\alpha\beta} + \frac{k^2}{2}\phi^2 g^{\mu\nu}(A_\alpha F_{\beta\nu} + A_\beta F_{\alpha\nu}) \tag{21}$$