$$\langle \phi'^2 \rangle = \int_{-\infty}^{\infty} dm\, P(m)\phi'^2 = a\sigma P(0) .$$

On the same page (middle of second column) where it reads "replacing ϕ'^2 by $\sigma\delta(m),\ldots$" it should read "replacing ϕ'^2 by $a\sigma\delta(m),\ldots$". The second line of Eq. (A17) in the Appendix, should read as follows:

$$C_\infty(i,i) = \frac{1}{\eta_1^2}\frac{T_0}{\alpha-2} = -\nabla^2 C_\infty(1,1) + \frac{T_0}{\eta_1^2} . \tag{A17}$$

Erratum: Lagrangians of physics and the game of Fisher-information transfer [Phys. Rev. E 52, 2274 (1995)]

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Equations (21a) and (21b) should read

$$I \equiv J \equiv (4/\hbar^2) \int\int d\boldsymbol{\mu}\, dE\, P(\boldsymbol{\mu},E)(-\mu^2 + E^2/c^2) , \tag{21a}$$

$$c \sum_{n=1}^{N/2} \phi_n^* \phi_n \equiv P(\boldsymbol{\mu},E) . \tag{21b}$$

Thus, a factor c was removed from the old Eq. (21a) since it belongs, instead, within definition (21b) of P. The result is that Eq. (22) now reads

$$J = \left[\frac{4}{\hbar^2}\right]\left\langle -\mu^2 + \frac{E^2}{c^2} \right\rangle . \tag{22}$$

The lack of a c in the first factor then obviates the following remark about c five lines below: "In the first factor, a parameter c is already fixed as a universal constant, from the EPI general relativity derivation [16]."

Using the new identity (21b), and the normalization of P, in Eq. (27) gives the information

$$J \equiv I = (2mc/\hbar)^2 \equiv (2/\mathcal{L})^2 , \tag{27a}$$

where $\mathcal{L}$ is the Compton wavelength for the particle. But, by Eq. (1) of the paper, I relates to the minimum mean-square error e^2 of estimation of the particle four position, as

$$e_{\min}^2 = 1/I . \tag{1}$$

Hence, Eq. (27a) predicts that the minimum root-mean-square error e is one-half the Compton wavelength. This is reasonable, since the Compton wavelength is a limiting resolution length in the measurement of particle position. The upshot is that the information-based derivation (now) makes a reasonable prediction on resolution, as well as deriving the Klein-Gordon and Dirac equations (the main thrust of the paper).

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