

Correction to: Unsteady translational motion of a slip sphere in a viscous fluid using the fractional Navier-Stokes equation

E.A. Ashmawy^{1,2,a}

¹ Department of Mathematics and Computer Science, Faculty of Science, Beirut Arab University, Beirut, Lebanon

² Department of Mathematics and Computer Science, Faculty of Science, Alexandria University, Alexandria, Egypt

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After publication of the paper, the author noticed that some mistakes occurred in the following equations, which have now been corrected as given below.

Equation (1) should read

$$\rho\tau_0^{\alpha-1}\frac{\partial^\alpha\vec{q}}{\partial t^\alpha} = -\nabla p + \mu\nabla^2\vec{q}, \quad (1)$$

where τ_0 is a positive constant with the dimensions of time.

Equations (3a) and (3b) should read

$$\rho\tau_0^{\alpha-1}\frac{\partial^\alpha q_r}{\partial t^\alpha} = -\frac{\partial p}{\partial r} - \frac{\mu}{r^2\sin\theta}\frac{\partial}{\partial\theta}E^2\psi, \quad (3a)$$

$$\rho\tau_0^{\alpha-1}\frac{\partial^\alpha q_\theta}{\partial t^\alpha} = -\frac{1}{r}\frac{\partial p}{\partial\theta} + \frac{\mu}{r\sin\theta}\frac{\partial}{\partial r}E^2\psi. \quad (3b)$$

Equations (7a) and (7b) should read

$$\rho\tau_0^{\alpha-1}s^\alpha\bar{q}_r = -\frac{\partial\bar{p}}{\partial r} - \frac{\mu}{r^2\sin\theta}\frac{\partial}{\partial\theta}E^2\bar{\psi}, \quad (7a)$$

$$\rho\tau_0^{\alpha-1}s^\alpha\bar{q}_\theta = -\frac{1}{r}\frac{\partial\bar{p}}{\partial\theta} + \frac{\mu}{r\sin\theta}\frac{\partial}{\partial r}E^2\bar{\psi}. \quad (7b)$$

The relations after eq. (9) should read

$$\ell^2 = s^\alpha/\nu \quad \text{and} \quad \nu = \mu\tau_0^{1-\alpha}/\rho.$$

Moreover, in the numerical calculations the value $\nu/a^2 = 1$ was assigned. These amendments do not affect the results of the paper.

^a e-mail: emad_ashm@yahoo.com