

Erratum: Coupled double-distribution-function lattice Boltzmann method for the compressible Navier-Stokes equations [Phys. Rev. E 76, 056705 (2007)]

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Several equations appeared with minor errors. Their correct forms are as follows.
Equation (28) should read

$$\tilde{f}^{eq} = \frac{\rho}{(2\pi RT)^{(D+\tilde{\kappa})/2}} \exp\left[-\frac{(\boldsymbol{\xi}-\mathbf{u})^2 + \eta^2}{2RT}\right]. \quad (28)$$

Equation (32a) should read

$$\bar{f}^{eq} = \int \tilde{f}^{eq} d\boldsymbol{\eta} = \frac{\rho}{(2\pi RT)^{D/2}} \exp\left[-\frac{(\boldsymbol{\xi}-\mathbf{u})^2}{2RT}\right] = f^{eq}. \quad (32a)$$

The expressions for ρ_5 , ρ_6 , ρ_7 , and ρ_8 in Eq. (51) should read

$$\rho_5 = \rho/4(\bar{u}_x \bar{u}_y^2 + \bar{u}_x \bar{u}_y + \bar{p} \bar{u}_x + \bar{p} \bar{u}_y + \bar{u}_x^2 \bar{u}_y + 0.5 \bar{p}^2 + \bar{u}_x^2 \bar{u}_y^2 + \bar{p} \bar{u}_x^2 + \bar{p} \bar{u}_y^2),$$

$$\rho_6 = \rho/4(-\bar{u}_x \bar{u}_y^2 - \bar{u}_x \bar{u}_y - \bar{p} \bar{u}_x + \bar{p} \bar{u}_y + \bar{u}_x^2 \bar{u}_y + 0.5 \bar{p}^2 + \bar{u}_x^2 \bar{u}_y^2 + \bar{p} \bar{u}_x^2 + \bar{p} \bar{u}_y^2),$$

$$\rho_7 = \rho/4(-\bar{u}_x \bar{u}_y^2 + \bar{u}_x \bar{u}_y - \bar{p} \bar{u}_x - \bar{p} \bar{u}_y - \bar{u}_x^2 \bar{u}_y + 0.5 \bar{p}^2 + \bar{u}_x^2 \bar{u}_y^2 + \bar{p} \bar{u}_x^2 + \bar{p} \bar{u}_y^2),$$

$$\rho_8 = \rho/4(\bar{u}_x \bar{u}_y^2 - \bar{u}_x \bar{u}_y + \bar{p} \bar{u}_x - \bar{p} \bar{u}_y - \bar{u}_x^2 \bar{u}_y + 0.5 \bar{p}^2 + \bar{u}_x^2 \bar{u}_y^2 + \bar{p} \bar{u}_x^2 + \bar{p} \bar{u}_y^2).$$