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

Q. Li, Y. L. He, Y. Wang, and W. Q. Tao

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

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

Equation (32a) should read

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

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

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

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

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

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