Erratum: Intermittency, scaling, and the Fokker-Planck approach to fluctuations of the solar wind bulk plasma parameters as seen by the WIND spacecraft [Phys. Rev. E 67, 056404 (2003)]

Bogdan Hnat,* Sandra C. Chapman, and George Rowlands (Received 16 June 2005; published 18 August 2005; publisher error corrected 7 October 2005)

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Equations (4), (5), and (A8) of the original paper have an error. The corrected equations (4), (A8) should read

$$\frac{b_0}{a_0}(\delta x_s) \frac{dP_s}{d(\delta x_s)} + P_s + \frac{\alpha}{a_0}(\delta x_s)^{1/\alpha} P_s = C(\delta x_s)^{1/\alpha - 1},\tag{1}$$

The corrected solution (5) is then given by

$$P_s(\delta x_s) = \frac{a_0}{b_0} \frac{C}{|\delta x_s|^{a_0/b_0}} \exp\left(-\frac{\alpha^2}{b_0} (\delta x_s)^{1/\alpha}\right) \times \int_0^{\delta x_s} \frac{(\delta x_s')^{a_0/b_0} \exp\left(\frac{\alpha^2}{b_0} (\delta x_s')^{1/\alpha}\right)}{(\delta x_s')^{2-1/\alpha}} d(\delta x_s') + k_0 H(\delta x_s). \tag{2}$$

The homogeneous solution $H(\delta x_s)$ is given by Eq. (6) of the original paper.

We have verified that these corrections have minimal impact on the solution fitted in Fig. 11 of the paper. The corrected solution is plotted here in Fig. 1 and still provides satisfactory approximation of the observed probability density function (PDF). This solution has been obtained with parameters α =0.41, a_0/b_0 =2.0, k_0 =0.0625, which are identical to those used in the original paper and b_0 =25 (previously b_0 =10) and C=1×10⁻⁵ (previously C=1.25×10⁻³).

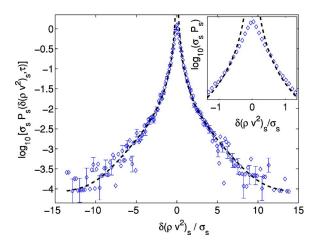


FIG. 1. (Color online) Functional form of the rescaled PDF given by Eq.(2) (dashed line) plotted over the fluctuations PDF of the $\delta(\rho v^2)$ bulk parameter.

^{*}Electronic address: hnat@astro.warwick.ac.uk