Erratum

Tracer dispersion in power law fluids flow through porous media: evidence of a cross-over from a logarithmic to a power law behaviour

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The exact expression, valid for n < 1, of the approximate value of the dispersivity given in equation (21) of the paper is actually:

$$\lambda_{\rm app} = \frac{n^2}{(n-1)(n+1)(2n+1)} \left[\frac{(n+1)}{2} - \left(\frac{2n}{2n+1} \frac{1}{Pe} \right)^{n-1} \right].$$

This change results in small variations of the numerical values at all Péclet numbers when n is close to one and at small Péclet numbers for higher values of n. These variations do not invalidate however the key physical results of the paper, regarding in particular the cross-over from a logarithmic to a power law behaviour.

A typographic error should also be corrected in the Appendix:

$$\sigma_t^2 = \frac{n+1}{n-1} \left(1 - \cos\theta_0^{(n-1)/n} \right) + 2\overline{t} \, \frac{n+1}{n} \left(\cos\theta_0 - 1 \right) + \overline{t}^2 \left(1 - \cos\theta_0^{(n+1)/n} \right) + \left(t_0 - \overline{t} \right)^2 \cos\vartheta_0^{\frac{n+1}{n}}$$

The correct result was given in equation (20).

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