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CORRIGENDUM

Nonlinear spatial evolution of an externally excited instability wave in a free shear layer

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In an early version of their paper, Churilov & Shukhman (1994) reported a different value for $C^{(3)}$ than given by the least member of (5.53) of the subject paper (page 312). As a result of a typographical error in the lower limit of the integral in (5.53), they concluded that the contribution from the closed streamline region had been omitted and that the contribution from outside that region had been computed incorrectly. However, the contribution from the closed streamline region $-2 < \bar{\phi} < 2$ was included in our result and agrees with their value, but our computed contribution from the exterior region contained an error. The corrected value,

$$C^{(3)} = \frac{1}{\pi} \int_{-2}^{+\infty} \frac{I_1^2}{I} \, \mathrm{d}\bar{\psi} = 2.500\,756\,26...,$$

is in agreement with their finding. The error in the constant $C^{(3)}$ was not detected because the corresponding error in the constant D, defined by (5.67) and whose corrected value is 3.448 011 4..., was sufficiently small so that the agreement between the two-term large-$\bar{\lambda}\bar{x}$ (quasi-equilibrium) asymptotic solution and the numerical results was already quite adequate. The corrected value of $C^{(3)}$ leads to a further improvement of the agreement as can be seen in the revised figures 3 and 4.

The following is a list of additional typographical errors: equation (2.1) should read $\delta_0 = 2\theta_0$; (2.35) is the contribution to $\Phi_2^{(0)}$ at $y = 0$ from the additional term (2.34); the minus sign in the second member of (5.46) should be a plus sign; the inequality on page 317, second line, should read $\bar{\lambda} > 0$; $x_3 = O(\epsilon^{\frac{1}{2}})$ at the end of the first paragraph on page 323; in (7.14), the subscript on ψ should be $\frac{4}{3}$, A'_∞ should be $2A_\infty^2$, and $\cos[\cdot]$ should be $\sin[\cdot]$; the subscript on ψ should be $\frac{5}{3}$ in (7.15); and the factor of 2 multiplying the last member of (7.27) should not be there.

REFERENCE

Churilov, S. M. & Shukhman, I. G. 1994 Nonlinear spatial evolution of helical disturbances to an axial jet. *J. Fluid Mech.* **281**, 371–402.
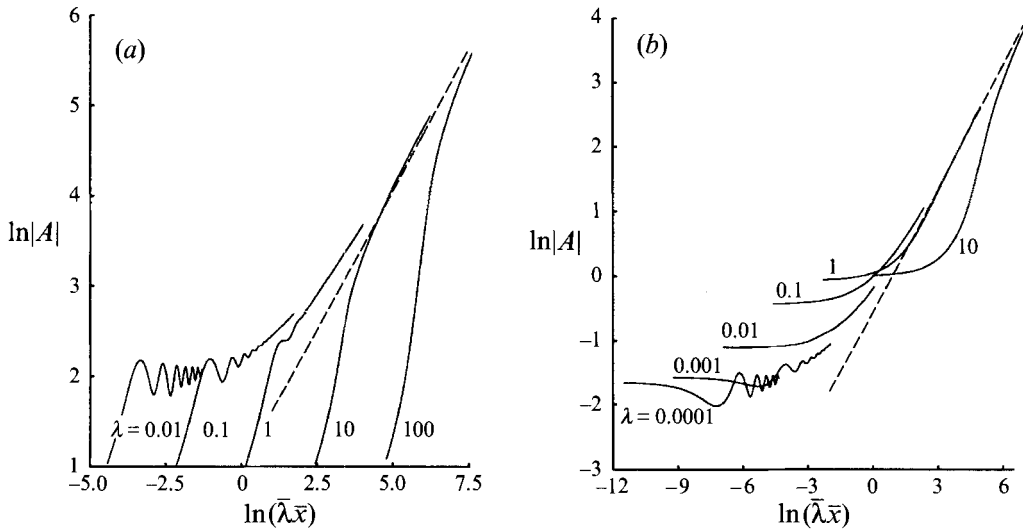
FIGURE 3 (revised). Scaled fundamental instability-wave amplitude as a function of slow streamwise distance times the viscous parameter $\bar{\lambda}$ for various values of $\bar{\lambda}$. Solid curves: numerical solution of non-equilibrium vorticity equation. Dashed curves: two-term asymptotic expansion (5.12). (a) $\bar{U} = 1$; (b) $\bar{U} = 3$.
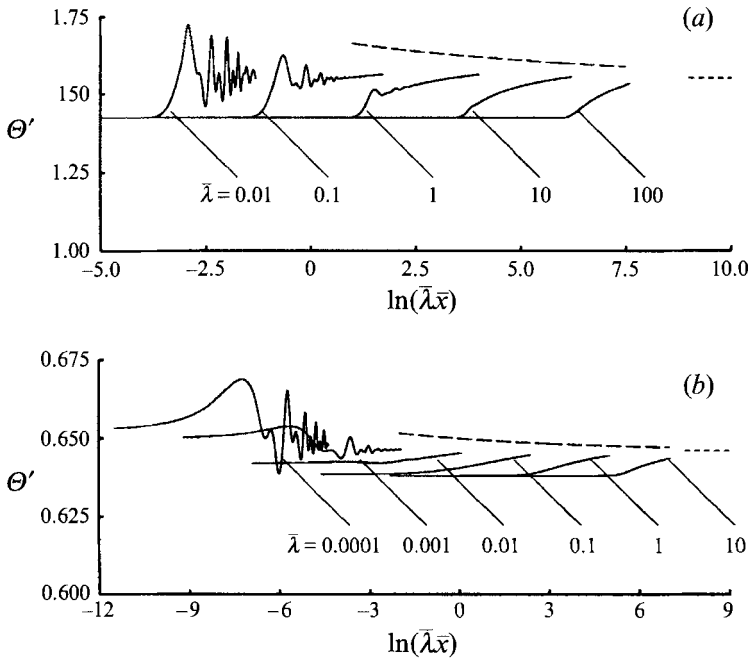

FIGURE 4 (revised). Scaled wavenumber of the instability-wave amplitude $\Theta' = \mathrm{Im}(-A'/A)$ as a function of slow streamwise distance times the viscous parameter $\bar{\lambda}$ for various values of $\bar{\lambda}$. Solid curves: numerical solution of non-equilibrium vorticity equation. Dashed curves: two-term asymptotic expansion (5.12). Dotted curves: leading-order asymptotic result θ'_∞. (a) $\bar{U} = 1$; (b) $\bar{U} = 3$.