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CORRIGENDA

Azimuthal flow associated with inertial wave resonance in a precessing cylinder

By J. Jonathan Kobine

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Owing to a printing error, figure 7 on page 398 is wrong. The correct figure is printed below.

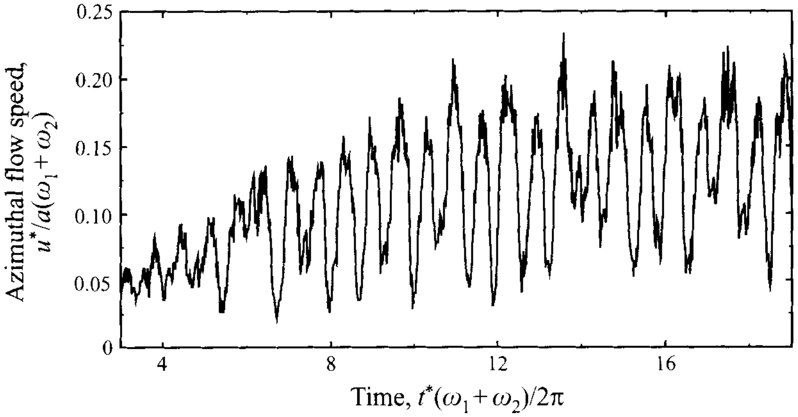

Figure 7 (corrected). Time series of azimuthal flow speed following initial growth phase. $\Omega = 0.782$, $\theta = 2.0°$, $r = 0.19$. Recording made from reference frame rotating with the cylinder.

The dynamics of coherent structures in the wall region of a turbulent boundary layer

By Nadine Aubry, Philip Holmes, John Lumley and Emily Stone

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The low-dimensional model described in this paper displays an intermittent phenomenon with ejection and sweep phases that strongly resemble the bursting phenomenon observed in the boundary layer. The probability distribution of inter-burst times has the observed shape (Stone & Holmes 1989, 1990, 1991; Holmes & Stone 1992). However, we now recognize that the bursting period predicted by the model is much longer than the bursting period observed in the boundary layer. Note that a factor of $[L_1 L_3]^{1/2}$ was omitted from the left-hand side of the equation in Appendix A of our paper, which had the accidental result of making the bursting periods comparable to observation; this was corrected in Sanghi & Aubry (1993), although its full implications were realized only recently. Specifically, all timescales indicated in the discussions and figures of this paper are compressed by the factor 333, and the remarks on pages 149 and 163 regarding homoclinic cycle duration, and quoting a bursting period of 100 wall units and a burst duration of 10 units, are in error. The amplitudes of the a (and therefore the statistics such as the Reynolds stresses, the two-point correlations, etc., together with the phase portraits) remain quantitatively correct.

A similar slow cycle has also been observed in direct numerical simulations of a minimal flow unit (Jimenez & Moin 1991). We believe that this results from the fact that, in the low-dimensional model, one follows the same coherent structure; this is also true in the minimal flow unit. In the real boundary layer, a succession of statistically independent coherent structures is observed. In effect, a single coherent structure bursts relatively infrequently, but when a succession of such is convected past the observation point, bursting is observed much more often. A simple statistical model of this situation restores the magnitude of the observed bursting period, although there is a great deal of flexibility in the various parameters involved. For a fuller discussion, see Podvin *et al.* (1996).

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A numerical simulation of unsteady flow in a two-dimensional collapsible channel

BY X. Y. LUO AND T. J. PEDLEY

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An integration error means that the results for the integrated rate of energy dissipation over upstream and downstream sections of the channel (figure 21, p. 221) are incorrect. We provide a replacement figure, showing the integrated dissipation rate over four sections of equal length (with x in the ranges 5–9, 9–13, 13–17, 17–21) together with the total dissipation rate (5–21), as functions of time during the predicted oscillations, for $Re = 300$ and the same three values of the longitudinal tension as in the original figure ($\beta = 30$, 32.5, 35). The steady flow values are also shown.

The interpretation of the results is virtually unchanged from that given on p. 220, in that the boundary layers in the upstream section contribute most to the dissipation during steady flow and during the gentle oscillations at only slightly subcritical tension ($\beta = 30$) while contributions from further downstream become more important as tension is decreased. However, it should be noted that in all cases shown the section providing the second highest dissipation rate is that which includes the primary separated eddy, $9 < x < 13$.

The reprinted figure appears on the facing page.

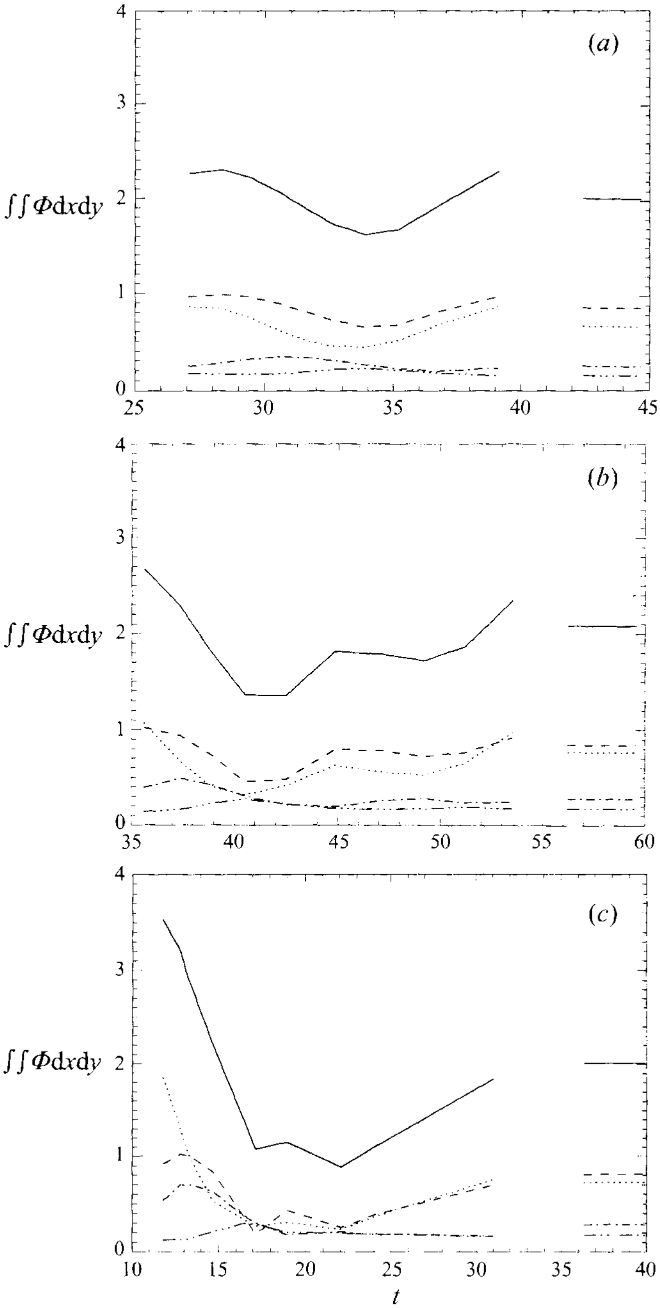

FIGURE 21 (corrected). Volume integrals of dissipation rate Φ over the whole channel and over four subsections $\int_0^{y_w}\int_a^b \Phi\,\mathrm{d}x\,\mathrm{d}y$: ——, $a = 5$, $b = 21$ (whole channel); – – –, $a = 5$, $b = 9$; ······, $a = 9$, $b = 13$; –·–·–, $a = 13$, $b = 17$; –···–···–, $a = 17$, $b = 21$. (*a*) Case I, $\beta = 30$; (*b*) case II, $\beta = 32.5$; (*c*) case III, $\beta = 35$. In all cases $Re = 300$, and the dissipation rates for steady flow at the same values of β and Re are shown at the right-hand side.