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CORRIGENDA

'Resonant surface waves'

By J. R. OCKENDON AND H. OCKENDON

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The asymptotic solution of (C 1),

$$\frac{\gamma^2}{2}\frac{d}{dX}\left[X\left(\frac{dX}{dY}\right)^2\right]+4k+2GX=\frac{2Y^2}{X^2}, \tag{C 1}$$

and the discussion leading to (3.15) are incorrect. For $Y \gg \gamma$, the appropriate scaling is $\overline{Y} = -\gamma^{-1}Y$, $dY^*/d\overline{Y} = \psi(Y)$ and $X \sim X_0(Y, Y^*)+\gamma X_1(Y, Y^*)+\ldots$. X_0 is periodic in Y^* and satisfies

$$\tfrac{1}{2}\psi^2 X_0(\partial X_0/\partial Y^*)^2+4kX_0+GX_0^2 = C(Y)-(2Y^2/X_0).$$

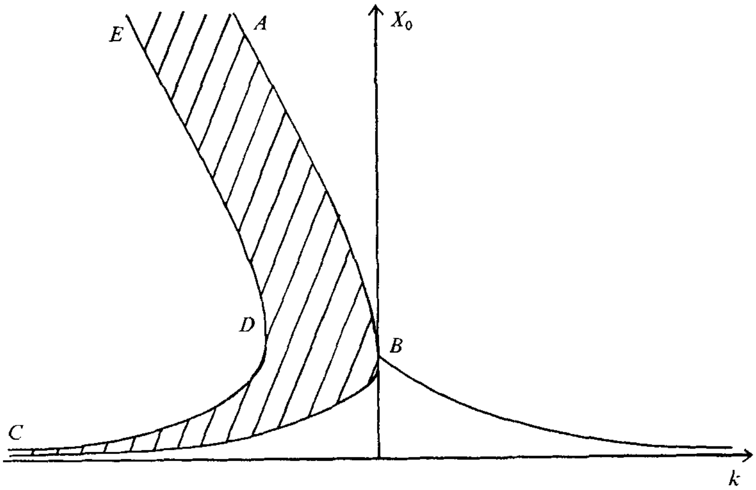

FIGURE 1. Responses curves for $G > 0$.

Thus, since $Z = \frac{1}{2}X\,dX/d\overline{Y}$, the solution as $\gamma \to 0$ is a tightly coiled spiral lying in the surface

$$Z^2 = \tfrac{1}{2}(-GX_0^3-4kX_0^2+CX_0-2Y^2).$$

The solvability condition for the linear equation for X_1 gives

$$\frac{d}{dY}\int_{\alpha_1}^{\alpha_2}(-GX_0^3-4kX_0^2+CX_0-2Y^2)^{\frac{1}{2}}\,dX_0 = 0,$$

where $\alpha_1(Y)$ and $\alpha_2(Y)$ are the two positive zeros of the integrand. C and Y can be related parametrically in terms of elliptic functions. Again, ψ is determined by the condition that X_0 has constant period in Y^*.

There is a different response curve for each intersection of this spiral with the initial surface. For small γ these intersections are all close to each other and lie on the curve given by

$$Y^2+Z^2 = V^2X_0, \quad GX_0^2+4kX_0+2V^2 = C(Y).$$

The extreme values of X_0 for a given k occur in $Z = 0$ and are given by

$$X_0 = \alpha_i(V\surd X_0) \quad (i = 1, 2),$$

i.e.

$$GX_0^2+4kX_0+2V^2 = C(V\surd X_0),$$

where C depends on k as well as X_0. This curve can be drawn using computed values of $C(Y)$ and is shown in figure 1 as ABC. For a given X_0, the minimum k occurs when $Y = 0$ since $C(Y)$ increases monotonically with Y and $C(0) = 0$. At this point, $GX_0^2+4kX_0+2V^2 = 0$ and this curve is shown in figure 1 as CDE. The remaining response curves lie close to each other in the shaded region between ABC and CDE. Figure 1 replaces figure 2(a) in the original paper.

'Oscillating flow over a cylinder at large Reynolds number'

By H. A. Dwyer and W. J. McCroskey

J. Fluid Mech. vol. **61**, 1973, p. 753

The labels $\theta = 78°$ and $\theta = 82°$ to curves in figure 8(b) should be transposed.