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CORRIGENDUM

Stability of thermocapillary flows in non-cylindrical liquid bridges

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As pointed out by V. M. Shevtsova, the boundary condition (2.7*c*) for the interface $h(z)$ involving the hot-wall contact angle α contained an error. The correct equation is

$$\frac{1}{\Gamma}h'\left(z=\tfrac{1}{2}\right) = -\tan\left(\alpha_h - \tfrac{1}{2}\pi\right). \qquad (2.7c)$$

The majority of the results are not affected, because the aspect ratio was $\Gamma = 1$. Results obtained for a given volume fraction $\mathscr{V}$ are correct, because (2.7*c*) was not used. Likewise, figure 24 and table 10 remain unchanged, because they were calculated for $\Gamma = 1$.

The data for specified hot-wall contact angle α and $\Gamma \neq 1$ are corrected in the following. The corrected streamlines of figure 6 on p. 46 are shown here.

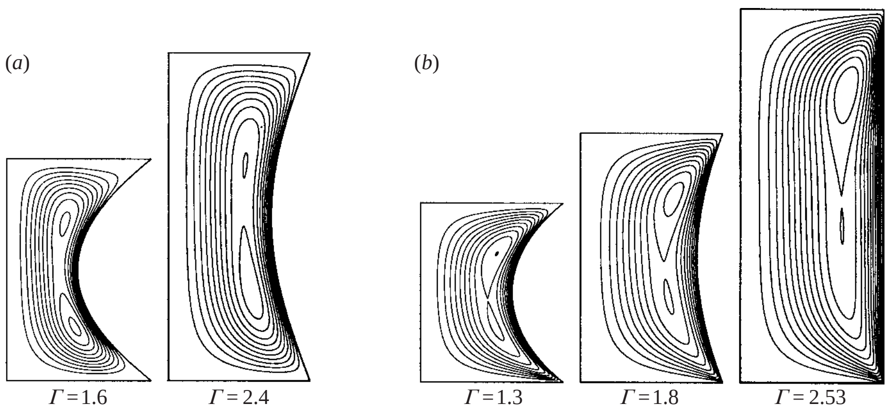

Figure 6 (corrected). Streamlines illustrating the existence of a hyperbolic stagnation point at aspect ratios slightly above the values given in table 3. (*a*) $Pr = 0.02$, $Re = 2000$, $\alpha = 40°, 70°$. (*b*) $Pr = 4$, $Re = 800$, $\alpha = 40°, 70°, 90°$.

α (deg.)	$Pr = 0.02$ $Re = 2000$	$Pr = 4$ $Re = 800$
40	1.51	1.24
70	2.34	1.70
90	$> 2\pi$	2.51

Table 3 (corrected). Aspect ratio Γ as function of the contact angle at which a hyperbolic stagnation point appears in the basic flow ($Bo = Gr = 0$).

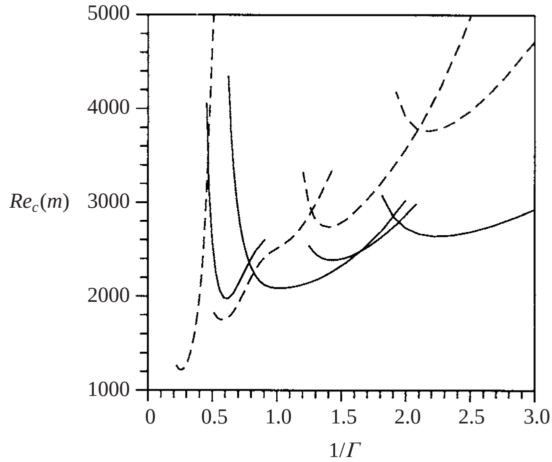

FIGURE 15 (corrected). Curves of neutral stability for $Pr = 0.02$ and $Bo = Gr = 0$ as a function of the inverse aspect ratio $1/\Gamma$. The full lines indicate $\alpha = 70°$, the dashed lines $\alpha = 115°$. The azimuthal wavenumber of the neutral curves are $m = 1, 2, 3$ in increasing order from left to right, i.e. for decreasing aspect ratio.

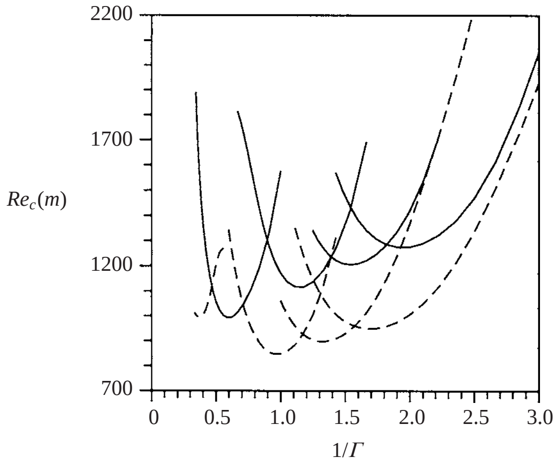

FIGURE 23 (corrected). Curves of neutral stability for $Pr = 4$ and $Bo = Gr = 0$ as a function of the inverse aspect ratio $1/\Gamma$. The full lines indicate $\alpha = 70°$ and the dashed lines $\alpha = 110°$. The azimuthal wavenumber of the neutral curves increases for each set of curves with decreasing aspect ratio from left to right as $m = 1, 2, 3, 4$.

The aspect ratios for which a hyperbolic point appears in the flow for fixed Reynolds numbers (table 3 on p. 47) are given here in corrected form.

The corrected version of figure 15 on p. 57 shows that the shift with respect to Γ of the minima of the neutral curves is significant only for long bridges (large Γ). This can be understood in terms of an *effective aspect ratio*: the scaled neck radius for concave shapes is smaller than unity and varies from $h_{\text{min}}(\alpha = 70°, \Gamma = 0.4) = 0.96$ to $h_{\text{min}}(\alpha = 70°, \Gamma = 2.9) = 0.54$, while a convex shape represents a smaller effective aspect ratio, because the scaled maximum radius is larger than unity and varies from $h_{\text{min}}(\alpha = 115°, \Gamma = 0.4) = 1.04$ to $h_{\text{min}}(\alpha = 115°, \Gamma = 3) = 1.37$.

The discussion of the corrected figure 23 on p. 64 does not need to be changed.