

## CORRIGENDUM

### On the thickness of soap films: an alternative to Frankel's law – CORRIGENDUM

ERNST A. VAN NIEROP, BENOIT SCHEID  
AND HOWARD A. STONE

doi: 10.1017/S0022112008000955, Published by Cambridge University Press,  
25 April 2008

Constructive conversations with Peter Howell led us to notice an error in the derivation of equation (2.2), and therefore in the calculation of film thickness  $h_0$  in (2.4). The evolution equation as developed in the derivation of (2.2) should have a minus sign due to the choice of coordinate system (with  $X$  being positive in the downward direction). As it stands, the solution given in (2.4) does not apply to extensional withdrawal of a film of fluid. Rather, the solution applies to the entrainment of a film into the bulk, where the entrainment speed is modified by surface viscosity  $\mu^*$ , e.g. as similar to the case of a foam lamella draining into a Plateau border at early time when  $h_0$  is nearly constant. See also, for example, the work by Breward & Howell (2002) and Naire *et al.* (2001) for related problems concerning the evolution of a film after it has been formed. We note that the manner in which variations of surface properties affect 'Frankel's law' for the case of a film formed by withdrawal from a bath remains an open question.

#### REFERENCES

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