Errata

Erratum: Instability of certain shear flows in nematic liquids [Phys. Rev. A 9, 404 (1974)]

Pawel Pieranski and Etienne Guyon

In formulas (5.14) and (5.15), and on the abcissa of Figs. 9 and 10, the period T should be replaced by $T^* = T/2$. This does not affect the comparison between the experiments and the phenomenological model as the scales were normalized at the same point P for the two sets of curves.

Mme E. Dubois-Violette has kindly pointed out to us that a complete expression of the hydrodynamic equations including the convective terms leads to a first-order contribution in the shear s in the force equation along the flow direction y [Eq. (A12)], sv_z. In our problem with low shears, this leads to a negligible correction (~10^{-2} to 10^{-3}). However, this term is of fundamental interest as it leads to a closer formal analogy with the problem of electrohydrodynamic instabilities (where the electric field E plays the role of s). The effect of the convective term changes one time constant by a term proportional to s^2. This contribution corresponds to the reduction of one time constant as E^2 in the electrohydrodynamic problem.

A description of this effect and a detailed comparison between the sine-wave and square-wave instability modes will be given separately [E. Dubois-Violette, E. Guyon, P. Pieranski (to be published)].

Erratum: Phases of He^3 and He^4 monolayer films adsorbed on basal-plane oriented graphite [Phys. Rev. A 8, 1589 (1973)]

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We wish to correct our description of the manufacturing process of "Grafoil," which is the form of expanded graphite used as substrate in this study. Dr. Roger Bacon and Dr. M. B. Dowell (Carbon Products Division, Union Carbide Corp.) inform us that the material is composed of graphite particles which are exfoliated by treatment in a strongly oxidizing medium, rinsed and then rapidly heated. After the heat treatment the expanded particles are partially compressed and rolled to form highly oriented binderless flexible sheets with density of about one-half of crystalline graphite. Details of the manufacturing process are given in U.S. Patent No. 3 404 061. Typical chemical analyses and the physical properties of the material used in our studies are correct as given in the original paper. We are grateful to Dr. Bacon and Dr. Dowell for their advice.

Erratum: Perturbation approximation to the screened Coulomb gas [Phys. Rev. A 9, 396 (1974)]

Marvin Ross and Dan Seale

The expression for $\lim[G_{12}(S) - 1/S^2]$ as $S \to 0$ on p. 398 should have been written as

$$\lim_{S\to 0}\left(G_{12}(S) - \frac{1}{S^2}\right) = \left[15(\eta_2 - \eta_1)\left(\frac{1}{\mu_1} - 1\right)\mu_2 - 30(1+\xi) + \mu_2^2\left(\eta_1^2 - 2\eta_1 + 10 - 4\eta_1\eta_2 + 20\eta_2 + 10\frac{1}{\mu_1}(\eta_1\eta_2 + \xi + 2)\right.\right.$$
$$\left.\left. + \frac{1}{\mu_1^2}(\eta_2^2 - 2\eta_2 + 10 - 4\eta_1\eta_2 + 20\eta_1)\right)\right][-20(1+2\xi)]^{-1},$$

Also the expressions for the energy in Eqs. (5)–(7) are in atomic units.