CORRIGENDA

Kinematical studies of the flows around free or surface-mounted obstacles; applying topology to flow visualization

by J. C. R. Hunt, C. J. Abell, J. A. Peterka and H. Woo

J. Fluid Mech. vol. 86, 1978, pp. 179–200

We regret overlooking the fact that the first use of the result (2.12) for the numbers of surface saddle and node points in fluid mechanics was made by Dr A. Davey (*J. Fluid Mech.* **10**, 1961, p. 593).

Inexplicably and inexcusably the diagrams of surface shear stress lines labelled figure 15(*a*) (i) and (ii) should be exchanged with the streamline pattern labelled figure 13(*a*). Also, the caption for figure 13 on page 193 requires the insertion of the following words, immediately before (*b*):

(i) Plan view of shear-stress lines on the surface. (ii) Shear-stress lines on the top and sides of the cube.

In the caption for figure 15 on page 196 these same clauses beginning (i) and (ii) should be deleted.

On wave-action and its relatives

by D. G. Andrews and M. E. McIntyre

J. Fluid Mech. vol. 89, 1978, pp. 647–664

For the case of water waves, the derivation of Bretherton & Garrett's formula for the wave-action density was incorrectly described on p. 654 (see also appendix B). When the first term on the right of equation (B 2) is integrated with respect to the vertical co-ordinate x_3, the integral of $\partial(\overline{\xi_3 p'})/\partial x_3$ does not vanish, $\overline{\xi_3 p'}$ at the mean surface being twice the wave potential energy, to sufficient accuracy. (It is the Lagrangian, not the Eulerian, disturbance pressure which vanishes in this case; for their interrelation see equation (2.28), p. 619 of the preceding paper.)

The reference to Grimshaw (1978) on p. 645 of the preceding paper is incorrectly given; it should be *Phil. Trans. Roy. Soc.* A **292**, 391; Lighthill 1978*b* should be *J. Sound Vib.* **61**, 391–418. Some limitations of the theory are discussed in two articles by one of us (M.E.M.) in press with *Phil. Trans. Roy. Soc.* A and *Pure & Appl. Geophys.* (special issues on the middle atmosphere).

Magnetohydrodynamic flows and turbulence: a report on the Second Bat-Sheva Seminar

by H. Branover, J. C. R. Hunt, M. R. E. Proctor and E. S. Pierson
J. Fluid Mech., vol. 91, 1979, pp. 563–580

The second paragraph on p. 570 should be replaced by the following text:

Lykoudis (Purdue) gave an analysis of liquid-metal MHD generators with a shunt layer. Experiments at Argonne National Laboratory show that two-phase generators tend to have thin layers of pure liquid on the walls with two-phase flow (whose conductivity σ_1 may be smaller by a factor of 10^{-1} times that of the liquid σ_2) occupying the centre. The efficiency of these generators can be seriously reduced if the slow moving liquid layers act as a short circuit. Lykoudis described a fully-developed laminar-flow analysis for an MHD duct flow, to work out the effects of these two layers. He concluded that their behaviour is determined by a modified Hartmann number $\bar{M} \equiv M_1[(\eta_1/\eta_2)\ (\sigma_1/\sigma_2)]^{\frac{1}{2}}$, where M_1 is based on the two-phase core flow and η_1/η_2 is the ratio of the viscosities. In practice $M_1 \sim 5000$ and $\bar{M} > \frac{1}{2}M_1$. Lykoudis concluded that for the high Hartmann numbers at which generators operate the shunt layers did not diminish significantly the generator's efficiency. A similar two-layer analysis with heat addition has been performed by Owen, Hunt & Collier (1976).

Transport processes in dilute gases over the whole range of Knudsen numbers. Part 1. General theory

by L. C. Woods

J. Fluid Mech. vol. **93**, 1979, pp. 585–607

The symbol for lambda on pp. 591, 592 and in equation (2.29) should be Hellenic Greek: λ. Equation (2.15) should read:

$$\lambda_i = \ldots = \omega\delta_i\lambda_i \quad (\lambda_i \equiv C_i\tau_i).$$

All remaining lambdas are unchanged.