(iii) The skewness and flatness factors are classical in turbulence studies. Of course, we can also compute other factors and the standardised quantile excess function.

(iv) Concerning the heavy gas dispersion, the order of magnitude of the variability is unity (Chatwin, J. Hazardous Materials, 6 (1982) 213–230). For the evaluation of the confidence intervals, we took a value corresponding to about 10% of the initial concentration, the standard deviation being equal to 0.1. With this estimation, we define the number of samples, this was only an estimation. Figures 20, 23 to 25 represent concentration profiles for three different X values, whereas Fig. 22 presents the maximum of the standard deviation inside the pictures, for different times, i.e. for all X values. The upper values of S_{MAX} are not surprising and mainly situated inside the counter-rotating vortices.

(v) The variability $I=S/\bar{C}$ is defined by analogy with the turbulence intensity, for example $I=u'/\bar{U}$ (see also Chatwin).

MICHEL AYRAULT
Laboratoire de Mécanique
des Fluides et Acoustique
B.P. 163, Ecole Centrale
de Lyon
69131 Ecully cedex
France

Editors' note

The Editors of this journal welcome discussions on the papers published in the journal. Discussions may be published as Letters to the Editor.