J. Fluid Mech. (1998), *vol.* 369, *p.* 381. Printed in the United Kindgom

CORRIGENDUM

Effects of jet flow on jet noise via an extension to the Lighthill model

By Herbert S. Ribner

Journal of Fluid Mechanics, vol. 321 (1996), pp. 1–24

A remark in the text requires amendment. The first two paragraphs of p. 15 refer to the 'compact eddy' simplifying assumption commonly made in jet noise theory: it is interpreted in terms of an approximation to a four-dimensional Fourier transform. This was a slip, the reference should have been to a three-dimensional part of a four-dimensional transform. Specifically, lines 8–10 should be amended to read: '…He did, however, avoid the four-dimensional Fourier transform in part…by invoking the 'small eddy' assumption'; and the second sentence in the second paragraph should be amended to read: 'As noted, the 'compact eddy' approximation reduces this to a simple volume integral multiplied by a one-dimensional Fourier transform (time delay to frequency)'. (And further on in the paragraph Ribner (1994) should read Ribner (1995).)

In practice, the one-dimensional Fourier transform is also usually sidestepped by a drastic simplification: its product with ω^4 (being the spectrum emitted by unit volume) is approximated as a δ-function. That is, this relatively narrowband spectrum is effectively compressed into a single frequency, a specified function of position $\boldsymbol{y}$. An implicit assumption in all this, which is not supported by measurments (Chu 1966), is that the source correlation function R_{km} is separable in space and time.

Corrections for some important typographical errors are as follows:

p. 7, equation (19): $G^*(\boldsymbol{x}, \boldsymbol{y}-\boldsymbol{x}/2|\omega)$ should be replaced $G^*(\boldsymbol{x}, \boldsymbol{y}-\xi/2|\omega)$.

p. 9, equation (40): $\mathrm{d}^3\boldsymbol{v}$ should be replaced by $\mathrm{d}^3\boldsymbol{y}$.

p. 11, equation (47): $R_{km}(\boldsymbol{x}, \xi_m, \tau)\,\mathrm{e}^{-\mathrm{i}\boldsymbol{k}\cdot\xi_m+\mathrm{i}\varpi\tau}\,\xi_m\,\mathrm{d}\tau$ should be replaced by

$$R_{km}(\boldsymbol{y}, \xi_m, \tau)\,\mathrm{e}^{-\mathrm{i}\boldsymbol{k}\cdot\xi_m+\mathrm{i}\varpi\tau}\,\mathrm{d}^3\xi_\mathrm{m}\,\mathrm{d}\tau \quad \text{(two errors).}$$

p. 12, equation (52): y_0 should be replaced by $\boldsymbol{y}_{ref}$.

p. 19, equation (A 3): $\dfrac{1}{c_0^2}\dfrac{\partial^2 \rho}{\partial t^2}-\dfrac{\partial^2 p}{\partial t^2}$ should be replaced by $\dfrac{1}{c_0^2}\dfrac{\partial^2 p}{\partial t^2}-\dfrac{\partial^2 \rho}{\partial t^2}$

REFERENCES

Chu, W. T. 1966 Turbulence measurements relevant to jet noise. University of Toronto, Institute for Aerospace Studies. *UTIAS Rep.* 119.