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ERRATUM

A local-analytic-based discretization procedure for the numerical solution of incompressible flows (*Int. J. Numer. Meth. Fluids* 2005; **49**:657–699)

Figure 21 shows the one-dimensional energy spectra of velocity fluctuations using an unconventional scaling. The energy of the fluctuations was computed using the magnitude of the signal $|u|, |v|$ and not the square of the magnitude $|u|^2, |v|^2$. The slope of the energy spectra in Figure 21 is -1.5, close to the reported $-5/3 = -1.667$. When we use the conventional scaling, the slope is -3, which is the expected slope for two-dimensional turbulence. The factor of 2 is due to the squaring of the magnitude of the signal and a consequence of the log–log scale used to plot the spectra.

Below we present the data of Figure 21, using the normalized conventional scaling of the energy. The frequency is normalized by the dominant shedding frequency, or Strouhal frequency at the corresponding Reynolds number. The energy spectra shows the -3 slope in the inertial subrange, indicating that the flow in the wake is turbulent and that M3 and M4 resolution is adequate at the corresponding Reynolds number.

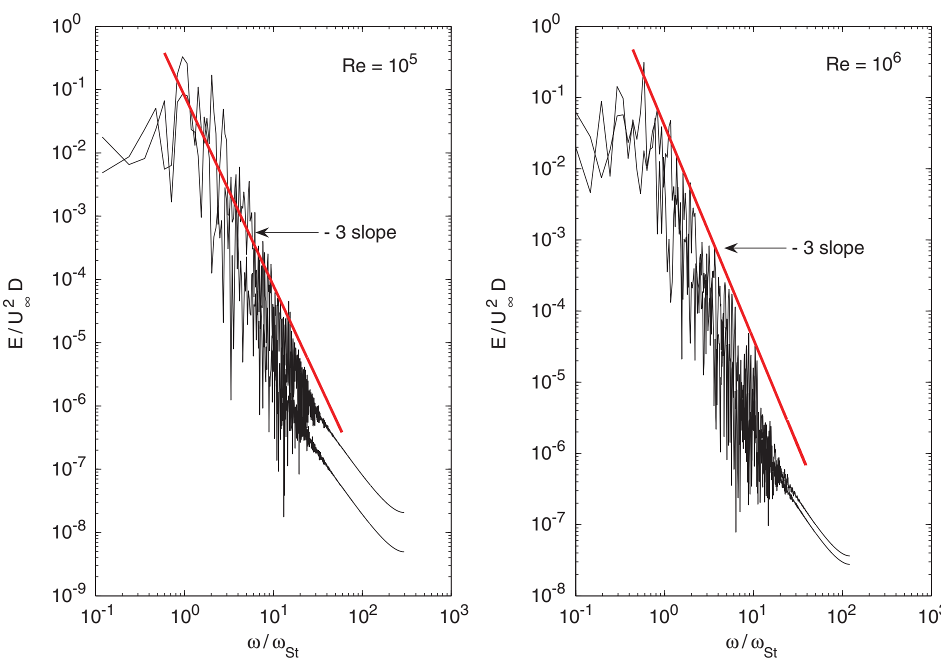

Figure 21. One-dimensional energy spectra 0.25 cylinder diameters away from the base of the cylinder for simulations at $Re = 10^5$ and $Re = 10^6$ using M3 and M4 resolution, respectively.

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