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**Viscous and inviscid velocity contributions near the turbulent/nonturbulent interface in a planar turbulent jet** FILIPE SOARES PEREIRA, CARLOS DA SILVA, IST - Technical University of Lisbon, GERRIT ELSINGA, JERRY WESTERWEEL, TU - Delft — Direct numerical simulations (DNS) of turbulent planar jets and shear free turbulence are used to assess the viscous and inviscid contributions to the entrainment velocity at the turbulent/nonturbulent (T/NT) interface, and their dependency on the Reynolds number and flow type. Whereas in shear free turbulence the viscous contribution dominates in the turbulent planar jet the inviscid contribution is more important. Furthermore, it is shown that as the Reynolds number increases the inviscid contribution becomes larger in both flows. Moreover it was observed that for the planar turbulent jet configuration the indirect estimation of the T/NT interface thickness using the local velocity does not match the T/NT interface thickness as observed from the conditional vorticity profile.

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