

# INFLUENCE OF THE LARGE EDDY SIMULATION SUBGRID-SCALES ON THERMAL RADIATION IN A NON-ISOTHERMAL TURBULENT PLANE JET

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ABSTRACT. DNS of a turbulent plane jet has been carried out along with the resolution of the RTE in order to analyse the role of the turbulent small-scales on the thermal radiation. LES *a-priori* and *a-posteriori* tests have been applied for thermal radiation. The comparison of the results highlights the subgrid-scale influence over the filtered radiation quantities. It is shown that the small scales play a relevant role in the jet edge zone, where the radiative heat transfer is less important. However, at large optical thickness, the role of the SGS-TRI can be significant and may need to be taken into account in the coupling of radiative transfer with LES.