tion of the turbulent kinetic energy values within the street canyon by integrating over the range of possible values for the parameters. To our knowledge, it is the first study to quantify uncertainties directly relating to the k-ε model constants, see Najm (2009) for a review of direct computation of numerical uncertainties in CFD outputs. Probabilistic statements can thus be made about critical thresholds for turbulence and flow speeds that could not be stated before.

This paper demonstrates the Bayesian calibration process of a CFD model for one particular case study. A suggestion for future work would be to perform the same process for flows with different Reynolds numbers thus testing the sensitivity of the k-ε model constants to changes in the Reynolds number. In this case we chose the k-ε model as its limitations have been well documented by previous research making it an ideal candidate for calibration. However the calibration process can be used on any independent CFD input parameter therefore Bayesian calibration posesses a wide range of possibilities for CFD modeling in the future including investigating the uncertainties inherent within other turbulence models.

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