Detection of initial transient and estimation of statistical error in time-resolved turbulent flow data

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Analysis techniques are proposed for estimating the magnitude of statistical error and detecting the presence of initial transient content in statistically stationary random data. The methods are tested for synthesised analytical signals and real data from the unsteady measurement and simulation of turbulent flows. The results obtained demonstrate that the proposed techniques are reliable and robust. The implications for practical unsteady CFD and turbulent flow measurement in terms of improved quality, minimised uncertainty and reduced user burden are discussed, and perspectives for further work are outlined.

The presentation slides are in English, however the presentation can be held in English or German.

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