















## Conclusion

In this work, a turbulent flow case behind a 3D grid structure is investigated. The velocity vector fields show interacting jets due to the grid. A decay power law for TKE is applied successfully. To investigate the influence of spatial resolution of PIV measurements on the TKE dissipation rate calculations, two cameras with different spatial resolutions are used. While one camera meets the criterion given by Saarenrinne and Piirto (2000), the other camera does not. As expected, significantly different results for  $\varepsilon$  are obtained. A correction method (Smagorinsky approach) is used to overcome this issue. It leads to results which lie much closer together and are also very close to an integral estimation. In conclusion, the Smagorinsky approach is suitable to estimate the TKE dissipation rate from PIV datasets with a standard spatial resolution.

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