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The role of vorticity in the turbulent/thermal transport of a channel flow with local blowing

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1. Highlights

- DNS of an incompressible turbulent channel flow with localized blowing
- Turbulent transport due to the $\overline{v'\omega'_z}$ increased significantly
- The thermal and spanwise vorticity fluctuations are highly correlated
- Energy redistribution among two specific spanwise wavelengths

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