

Orthonormal Wavelet Analysis of CGT in Fully Developed Asymmetric Turbulent Channel Flow**Yu-Lu Liu**, Jian-Bo Jiang, Xiang Qiu*Shanghai Institute of Applied Mathematics and Mechanics, Shanghai, China*

Orthonormal wavelet analyses are applied to the counter gradient transport (abbr. CGT) phenomena in the asymmetric fully developed turbulent channel flow. The main emphases are on the statistical characteristics of fluctuating velocity in the CGT region. The major results are the local counter-gradient transport phenomena happen on the various scales, thus it may be concluded that they are universal phenomena in turbulent flow; the global CGT phenomena are in close relation with the principal coherent scale.

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