

Abstract Submitted  
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**Multi-scale distribution of energy transfer in two-dimensional turbulence** MICHAEL TWARDOS, MICHAEL RIVERA, ROBERT ECKE, Los Alamos National Laboratory — The scale-by-scale distribution of energy transfer is experimentally investigated in the inverse energy cascade range of two-dimensional turbulence. These experiments analyze data taken from a electromagnetically forced stratified fluid layer using a multi-scale method derived from the filtering approach for measuring scale-to-scale energy transfer. We find that the majority of energy transferred to scales above a given length scale comes from length scales that are significantly (*i.e.* a factor of eight) smaller. Further analysis of terms arising from an expansion of the multiscale equation allow for some speculation as to the energy transfer mechanisms at work in the inverse cascade of two-dimensional turbulence.

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