

Abstract Submitted
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Is Transport in Accretion Disks Primarily Local or Non-local?

ERIC G. BLACKMAN, University of Rochester — Accretion disks likely involve some combination of local and non-local angular momentum transport. Coronae and jets provide evidence for large scale transport and disk thermal emission may provide evidence for local transport. Identifying the principles that determine the relative local vs. nonlocal fraction poses a set of challenges and highlights a significant gap between numerical simulation results and improved, practical mean field accretion theory. The dominant mechanisms of transport may in fact be non-local and non-viscous. Even the magneto-rotational instability (MRI) for example, often invoked as a source of local turbulence, may produce predominantly non-local transport. I will overview progress and open issues on these themes, drawing in concepts from disk theory, dynamo theory, and corona formation.

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