

Abstract Submitted
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Evolution **of** **Triangles**
in Quasi-Two-Dimensional Flow NICHOLAS OUELLETTE, SOPHIA MER-
RIFIELD, DOUGLAS KELLEY, Yale University — The anomalous transport of
scalar fields in complex flow has recently been explained by considering the nontriv-
ial shape dynamics of clusters of fluid elements. Here, we study the dynamics of
three-particle clusters—Lagrangian triangles—that minimally parameterize planes as
they are advected in a quasi-2D electromagnetically driven experimental flow. We
report results for the shape distributions as a function of the initial triangle size,
and discuss the impact of the flow structure on the subsequent triangle evolution.
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