## Enhanced Mixing at Low Reynolds Numbers Through Elastic Turbulence

Chris Goddard and Ortwin Hess

Imperial College London, Department of Physics, London, SW7 2AZ, UK

Reprint requests to C. G.; E-mail: c.goddard@imperial.ac.uk

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A generic nonlinear Maxwell model for the stress tensor in viscoelastic materials is studied under mixing scenarios in a three-dimensional steady lid-driven cavity flow. Resulting laminar and turbulent flow profiles are investigated to study their mixing efficiencies. Massless tracer particles and passive concentrations are included to show that the irregular spatio-temporal chaos, present in turbulent flow, is useful for potential mixing applications. A Lyapunov measure for filament divergence confirms that the turbulent flow is more efficient at mixing.

Key words: Maxwell-Model Fluid; Turbulence; Mixing.