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**The effect of shear flow on ordered suspensions of active particles** SUDIPTO MUHURI, MADAN RAO, Raman Research Institute, Bangalore 560 080, India, SRIRAM RAMASWAMY, Indian Institute of Science — We explore the stability of orientationally ordered phases of a suspension of active particles, such as bacteria or motor- microtubule extracts, using a set of coarse grained hydrodynamic equations. While the orientationally ordered phase is linearly unstable, we show that it can be stabilised by the imposition of an external shear. We study the nonlinear response including shear banding in such active suspensions when subjected to steady or oscillating shear.

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