

MULTIPHASE INSTABILITIES IN ASTROPHYSICS

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Many astronomical structures are, in essence, multiphase flows. I will describe analytic and numerical work on the stability of some examples: ionization fronts (as seen in the well-known Orion nebula) and dust-driven winds. These specific examples lead on to a more general discussion of the Whitham theory of flow stability in damped hyperbolic systems, and of the nature of characteristic information.