NON-GAUSSIANITY AND ADIABATICITY

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arXiv:1011.4934, 1104.5238

CONJECTURE

"An purely adiabatic power spectrum of primordial fluctuations is inconsistent with local-form non-gaussianities."

WHY?

- (e.g.) $f_{NL}^{(local)}$ requires superhorizon evolution
- Implies isocurvature
- Isocurvature bad:
  - Not observed
  - Evolving perturbations
- Must erase isocurvature
- Erasure affects non-gaussianity

ERASING ISOCURVATURE

- During inflation 
- After inflation
  - Curvaton 
  - Thermal equilibrium 

In Conclusion...

Fully predictive models of primordial local non-gaussianity must describe the complete evolution of fluctuations until adiabaticity or observation.