

# Astrophysics & Cosmology

# Outline of Cosmology Section

- Introduction (2 pages)
- Overview of Probes (1 page/table)
- Probes ( $\sim 1/2$  page each) (4 pages)
- Complementarity ( $1/2$  page)

Probe	Current/Reach (eV)	Key systematics	Current Surveys	Future Surveys
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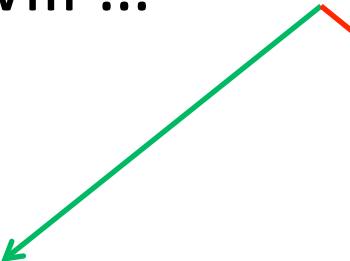
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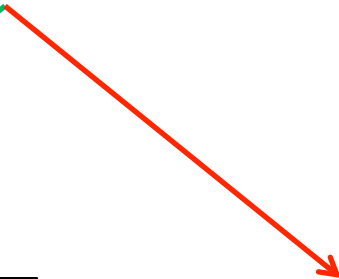
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Supernovae	NH (if $\Theta_{13} > 0.001$ ) IH (any $\Theta_{13}$ )	Emergent neutrino spectra	SuperK, IceCUBE	Nobel Liquids, Gadzooks

# Complementarity

- Neutrino mass helps cosmologists (e.g., tighter constraints on  $w$ )
- Neutrino mass as measured by terrestrial experiments represents a challenge to cosmology. Six-parameter fit to a wide variety of probes will ...



Be one of the great successes of cosmology



Require new physics (dark energy, inflation, curvature,...), the search for which will occupy future generations