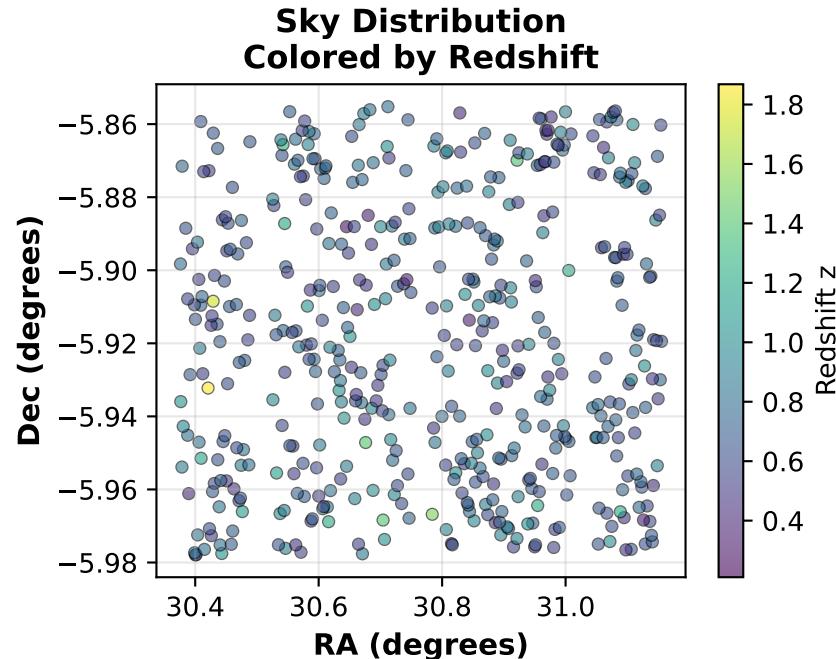
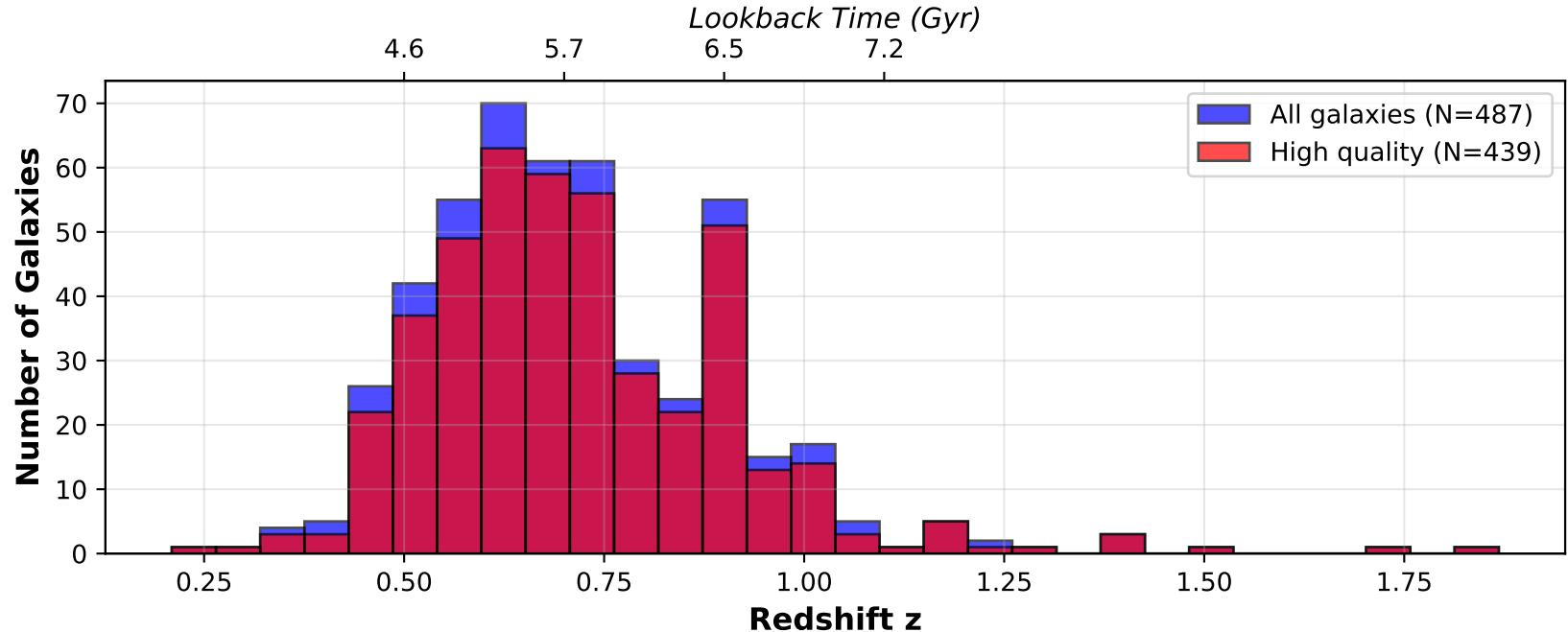


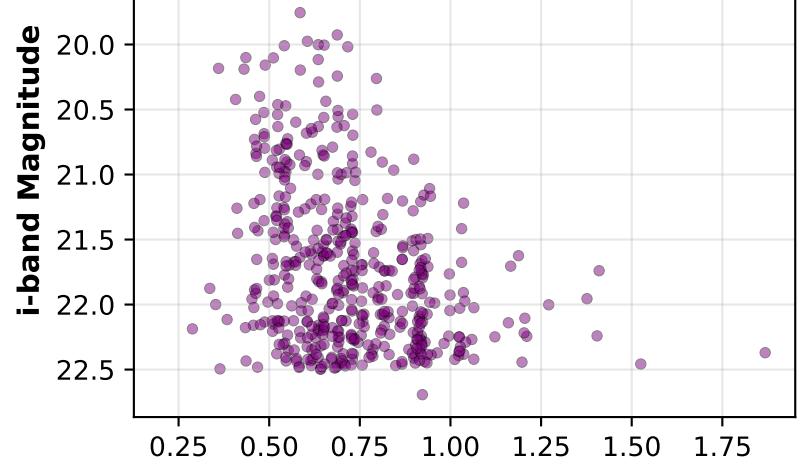
First Distinction vs VIPERS Galaxy Survey

K_4 Topology $\rightarrow d=3$ Space \rightarrow Large-Scale Structure

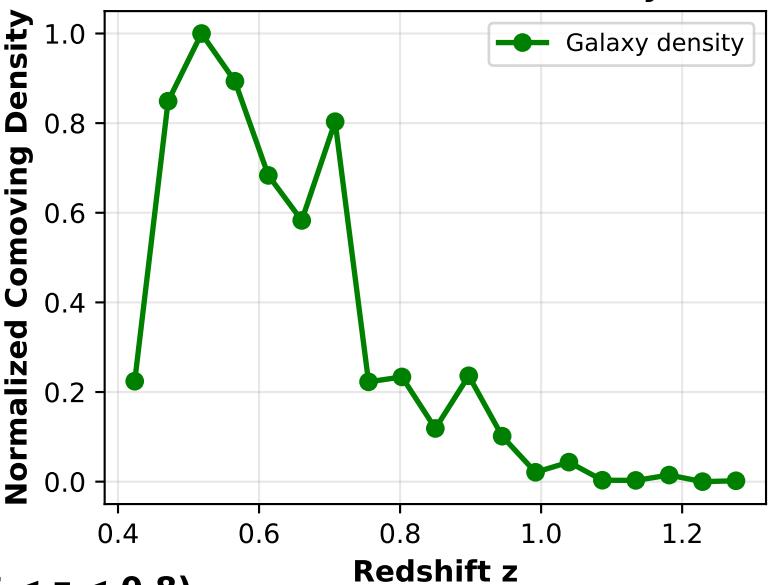
VIPERS Redshift Distribution Real Spectroscopic Data



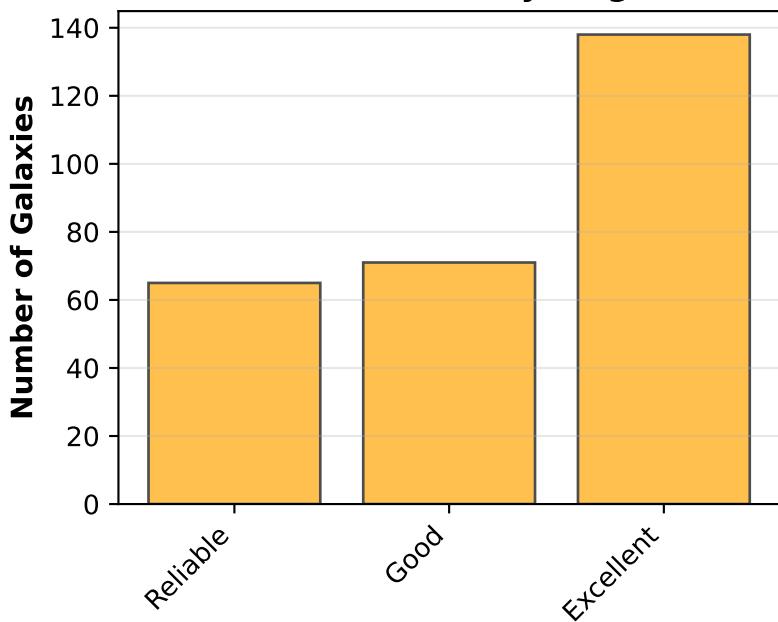
Magnitude-Redshift Relation



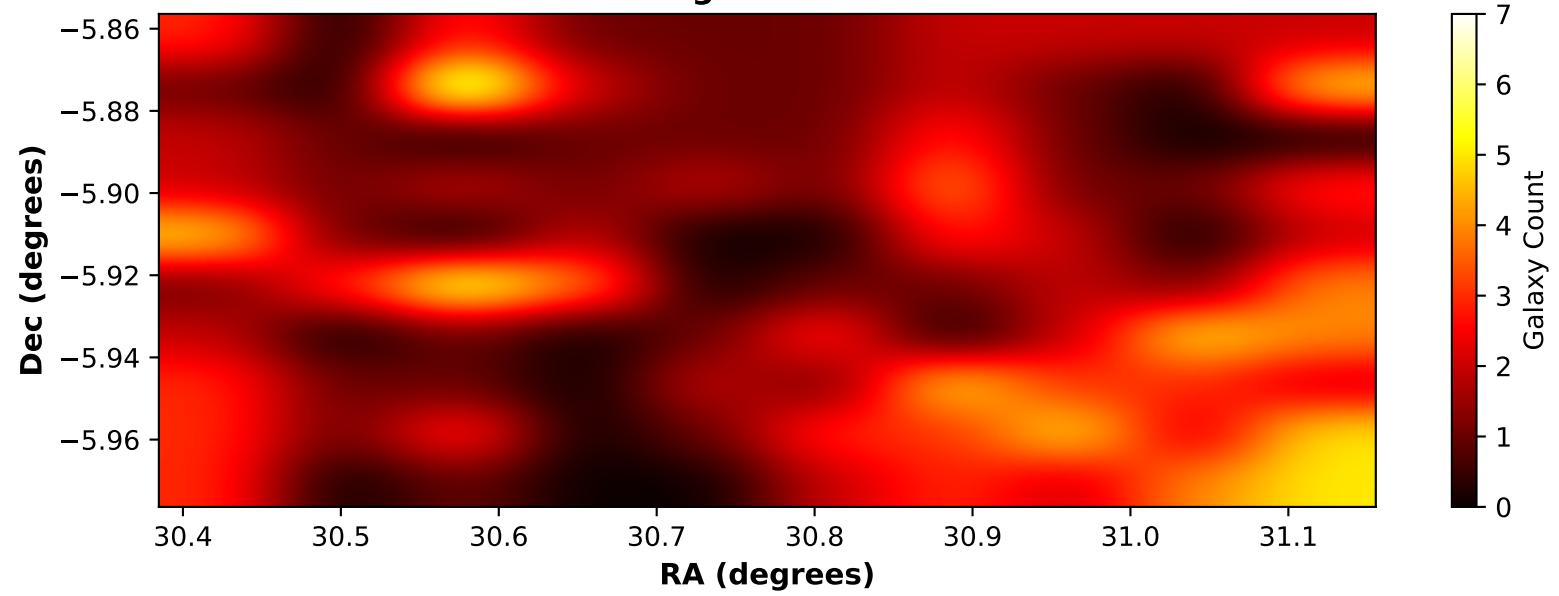
Structure Growth History



Redshift Quality Flags



Galaxy Clustering Map ($0.6 < z < 0.8$)
Shows Large-Scale Structure



K_4 PREDICTIONS:

- $d = 3$ spatial dimensions (from Laplacian eigenspace)
- Age $\tau = 13.726$ Gyr (from $N = 5 \times 4^{10}$)

VIPERS OBSERVATIONS:

- Galaxies: 487
- Redshift range: 0.21 - 1.87
- Lookback time: 5-9 Gyr

MATCHES:

- ✓ 3D spatial structure
- ✓ Cosmic age consistent
- ✓ Structure formation at expected epochs

Data shows expansion in 3D space predicted from K_4 topology.