

Identifying Faint Galaxies

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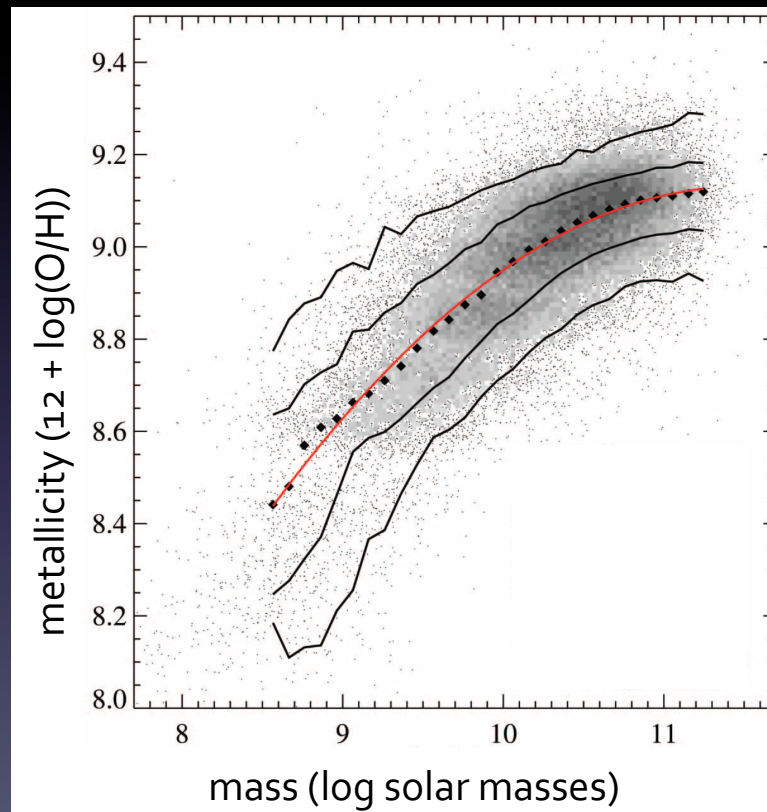
Advisor: Professor Crystal Martin

UCSB Department of Physics

Thursday, August 23rd, 2012



Long Term Goal: Study Mass Metallicity Relation



Tremonti 2004

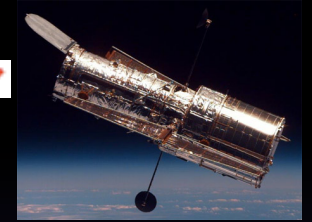
Spectroscopy: Initial Identification



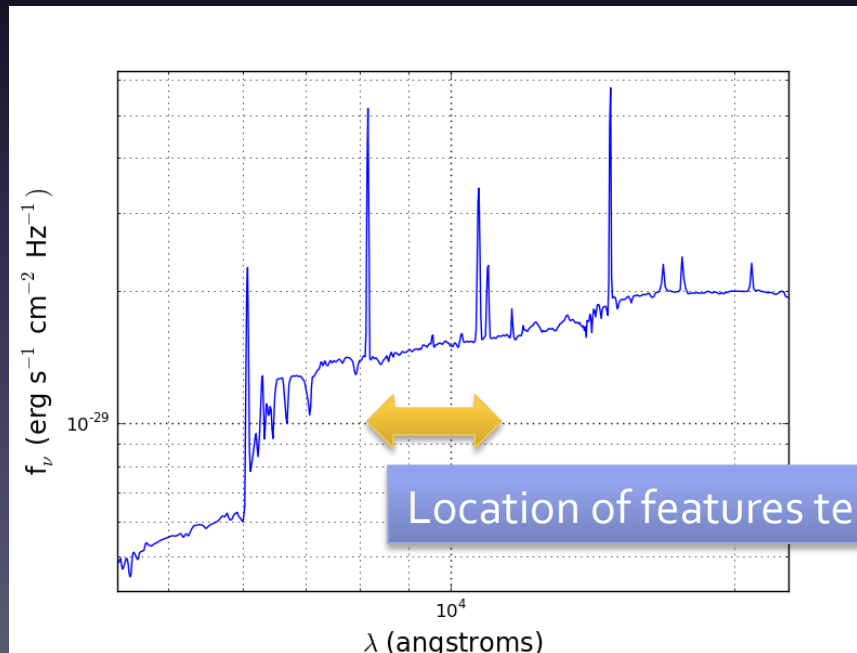
Redshift and Cosmology



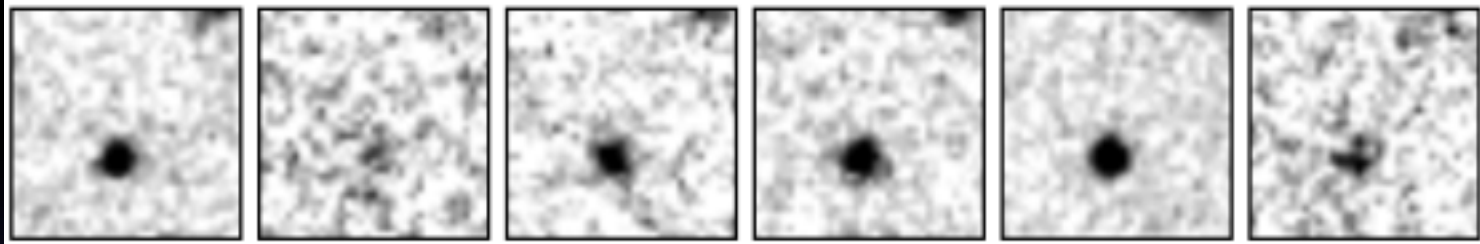
Galaxy is receding



Light is redshifted



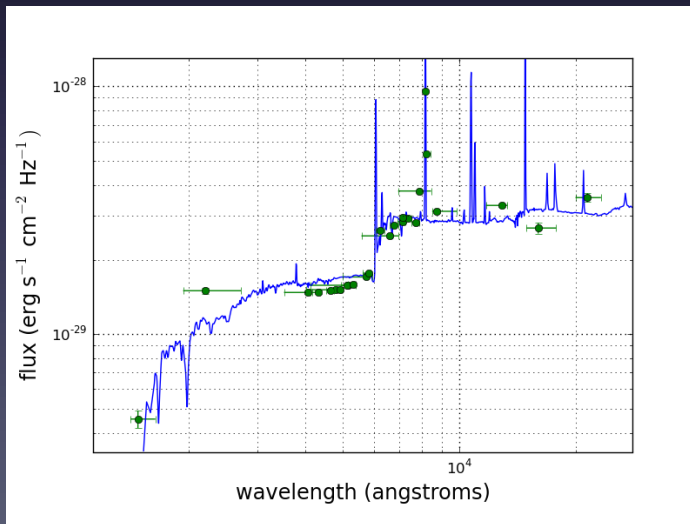
Identifying Galaxies



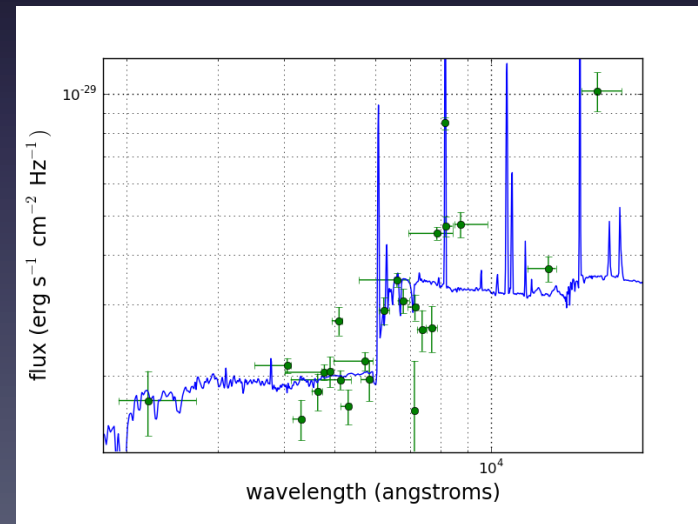
5 arcsec



Template Fitting

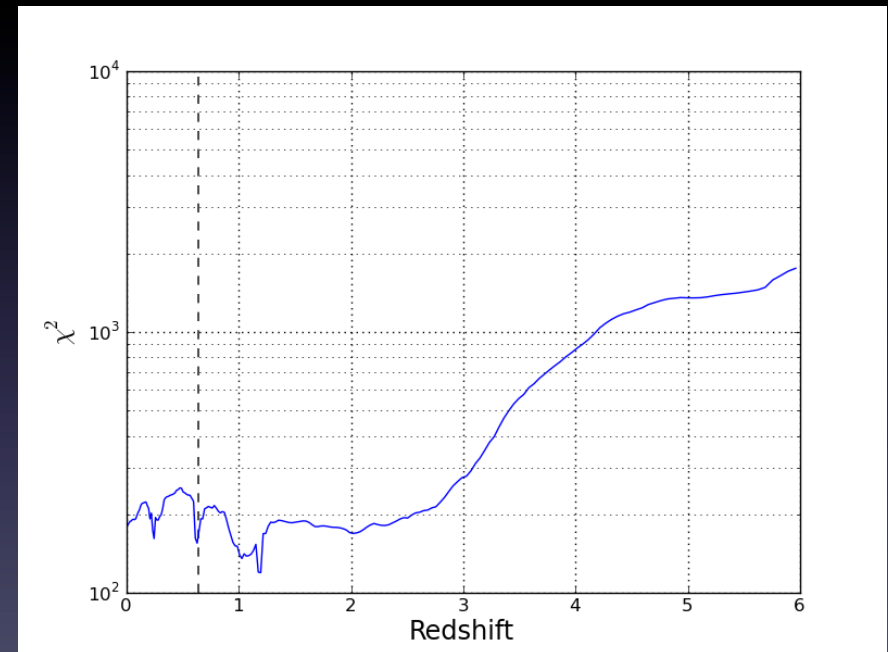
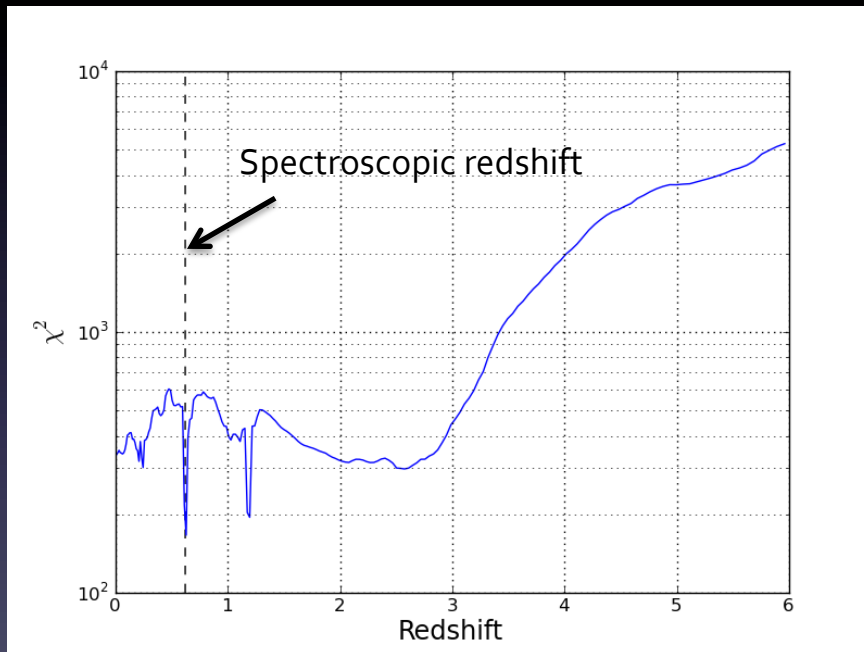


Good Fit



Loose fit

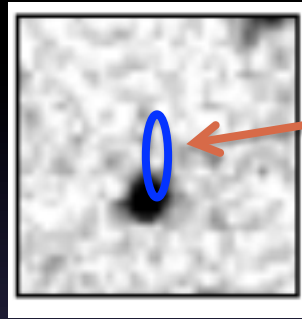
Results: Template Fitting



Most showed some sort of dip at target redshift

Statistics: Errors Unlikely

Sky around object



Position uncertainty

- 249,907 objects in field
- Area is 5,184,000 arcsec²
- Uncertainty is 0.47 arcsec²
- Typical number of objects in ellipse: 0.002

Acknowledgements

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Questions?