

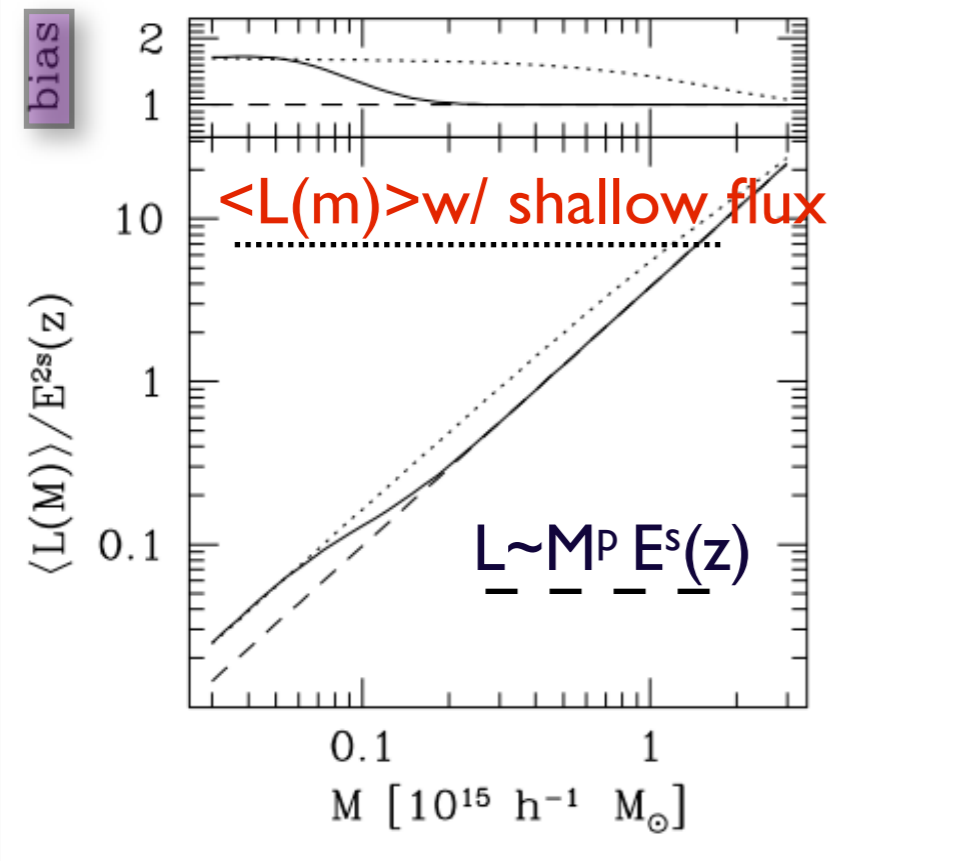
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arXiv:0706.2189



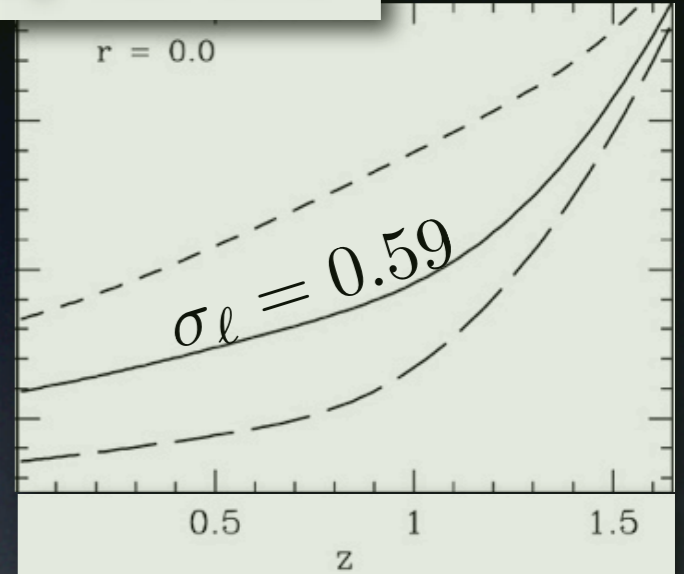
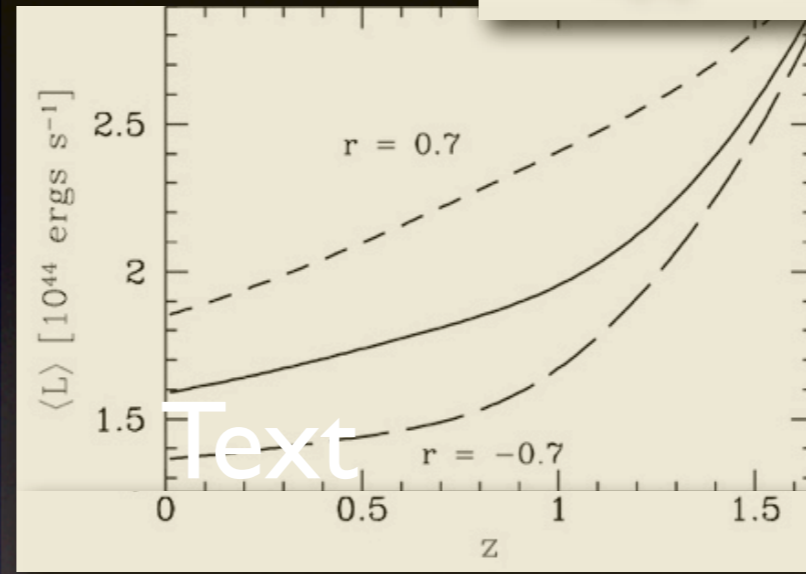
More than Meets the Eye:

Selection and Covariance Scaling Relations of X-Ray Galaxy Clusters



$\langle L(z) \rangle$ w/ deep flux limit

Mean Luminosity is **Biased**
by the Flux Limit
(depends on the scatter)



Fixed:
slope, scatter, etc.

Vary:
(L-T correlation)
 $r = -0.7, 0, 0.7$

Fixed:
correlation, $r = 0$

Vary:
slope, scatter, etc.

$\sigma_l = 0.35$ - - - - -
 $\sigma_l = 0.72$ - - -

Survey selection effects and population intricacies necessitate precise understanding of mass proxy (observable) distributions.

Take advantage of *Self-Calibration* techniques in tandem with *Mock Surveys* (ours coming soon) to inform Cosmology and Survey analysis.

Degeneracies among scaling parameters confuses search for evolution