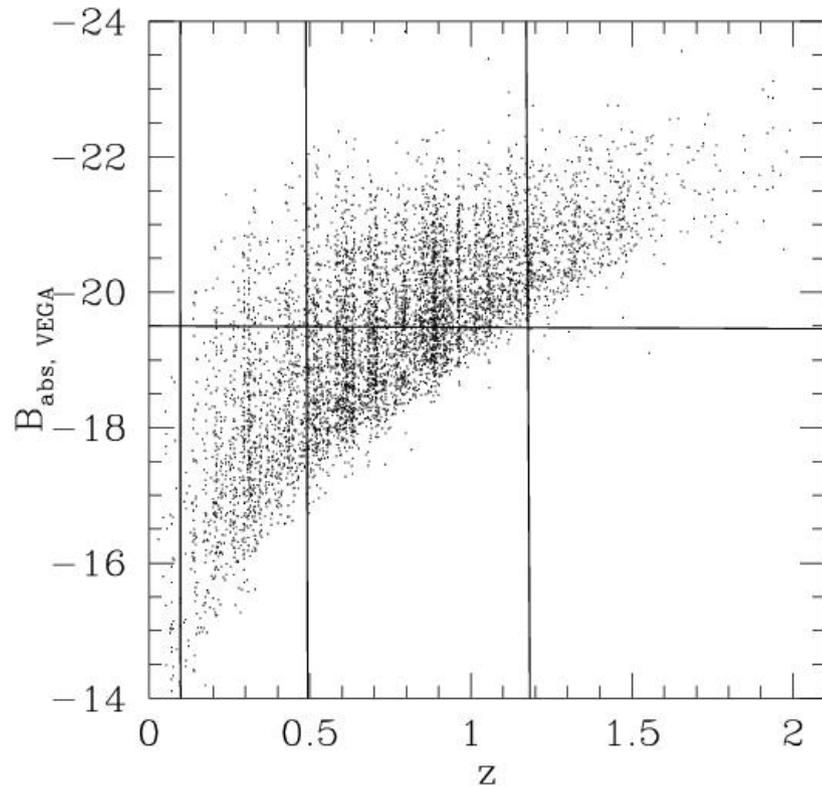


Correlation function per luminosity

Scientific justification:

- * Currently luminous galaxies tend to be more clustered than fainter ones
- * This is in a general agreement with the hierarchical models of galaxy formation
- * But: the detailed dependence difficult to establish
- * And: no measurement in high- z Universe yet
- * So: VVDS

Correlation function – luminosity dependence



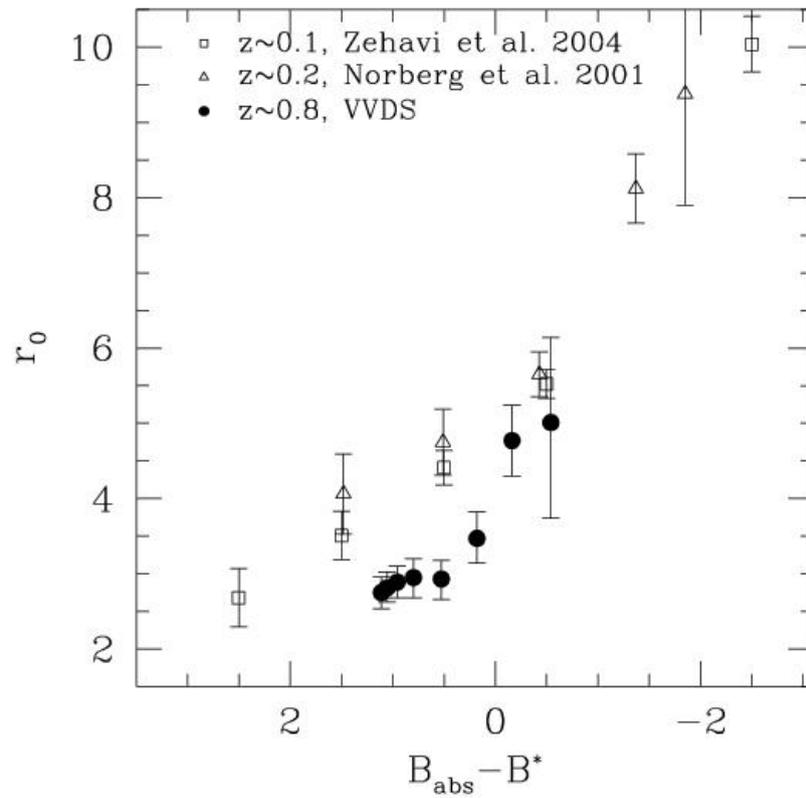
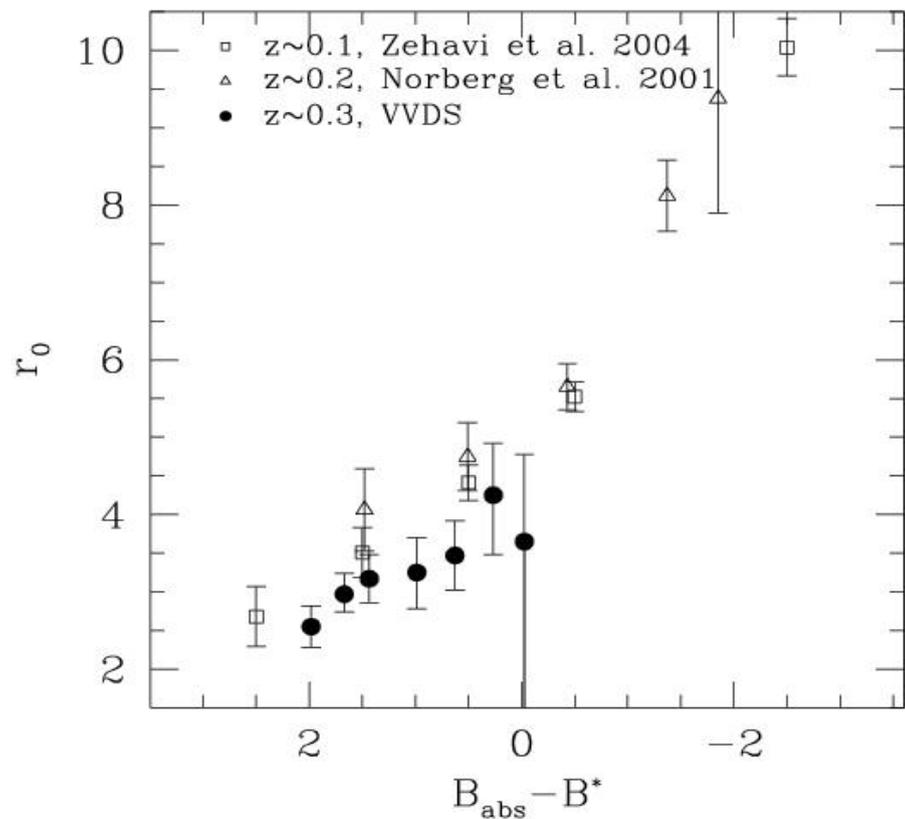
- F02 galaxies with flag >1
- two broad (~ 3.5 Gy) z slices $[0.1, 0.5]$ and $[0.5, 1.2]$
- within each, a series of volume limited or “quasi” volume-limited sub-samples

z slices - comments

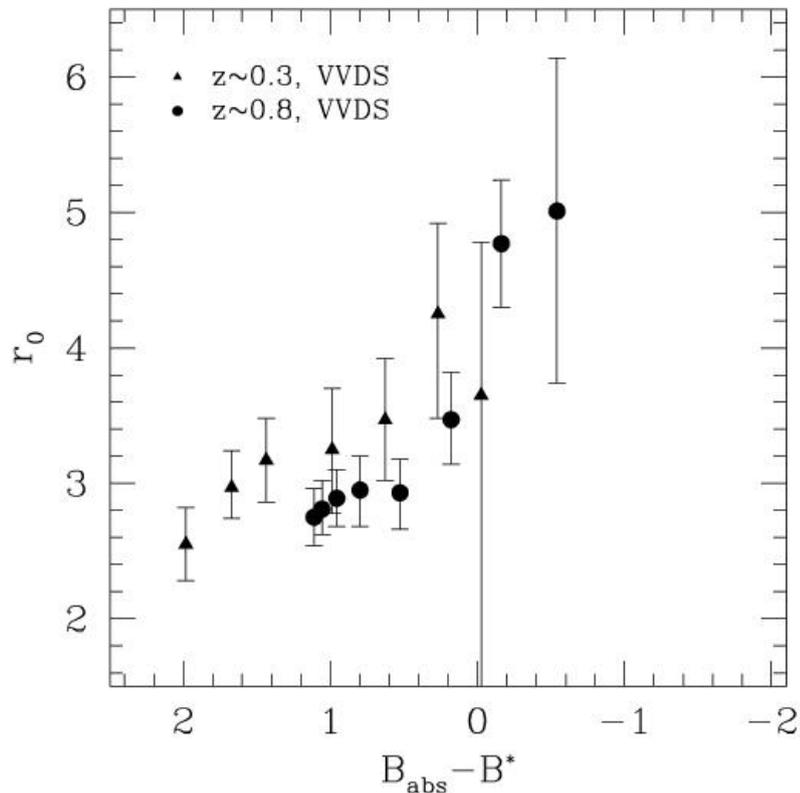
- In both slices obviously we do not probe the same population of galaxies
- However, the low-z slice allows for comparisons with existing local surveys
- and the results from these can be compared to our measurements from the high-z slice
- “true” volume limited catalogues possible for $B_{\text{abs}} > -17$ (low z) and $B_{\text{abs}} > -19.5$ (high z)

$r_0(B_{\text{abs}}-B^*)$

high- and low- z VVDS vs SDSS and 2dF

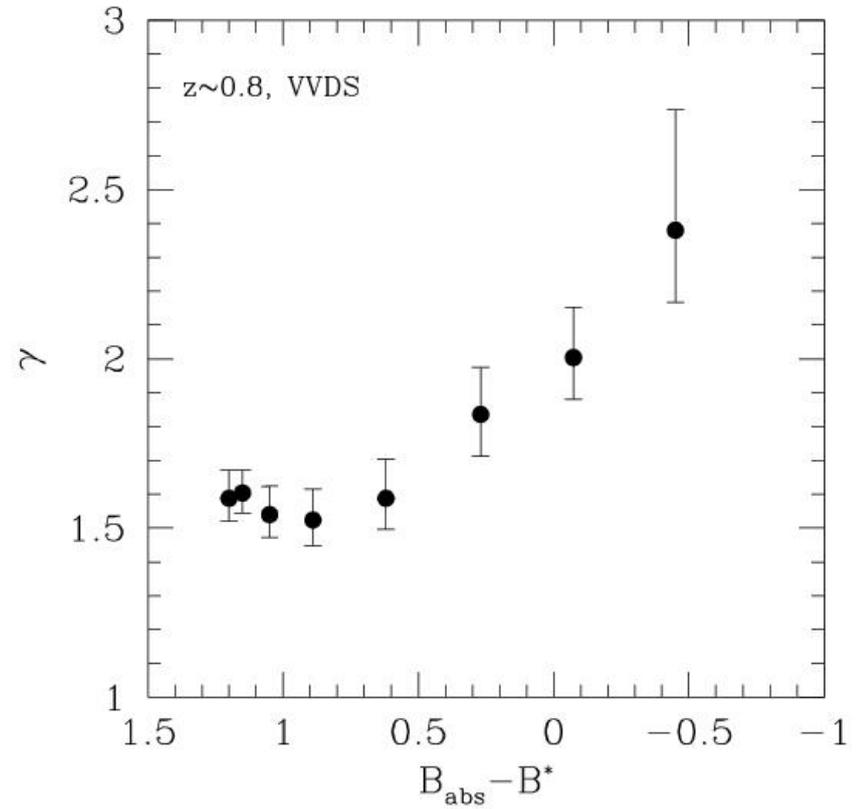
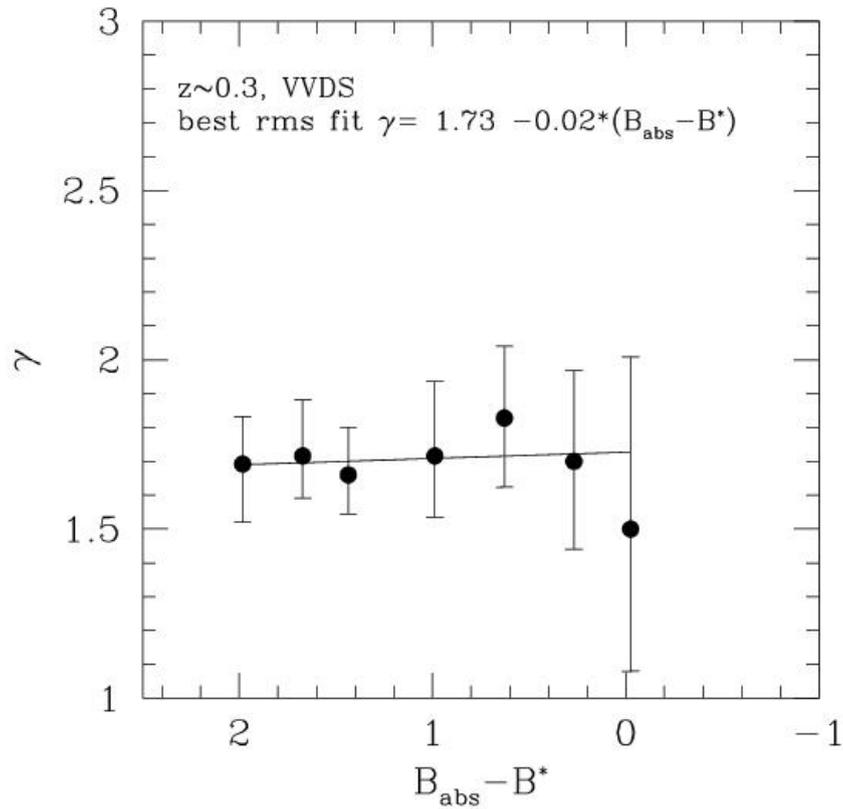


$r_0(B_{\text{abs}}-B^*)$ in low and high z VVDS

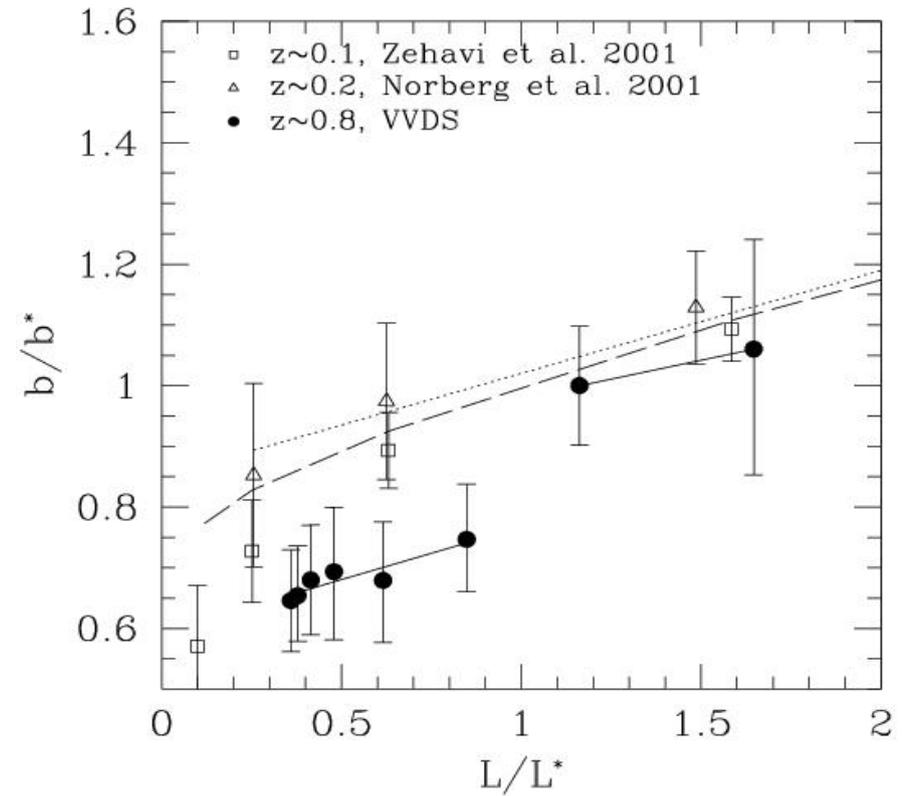
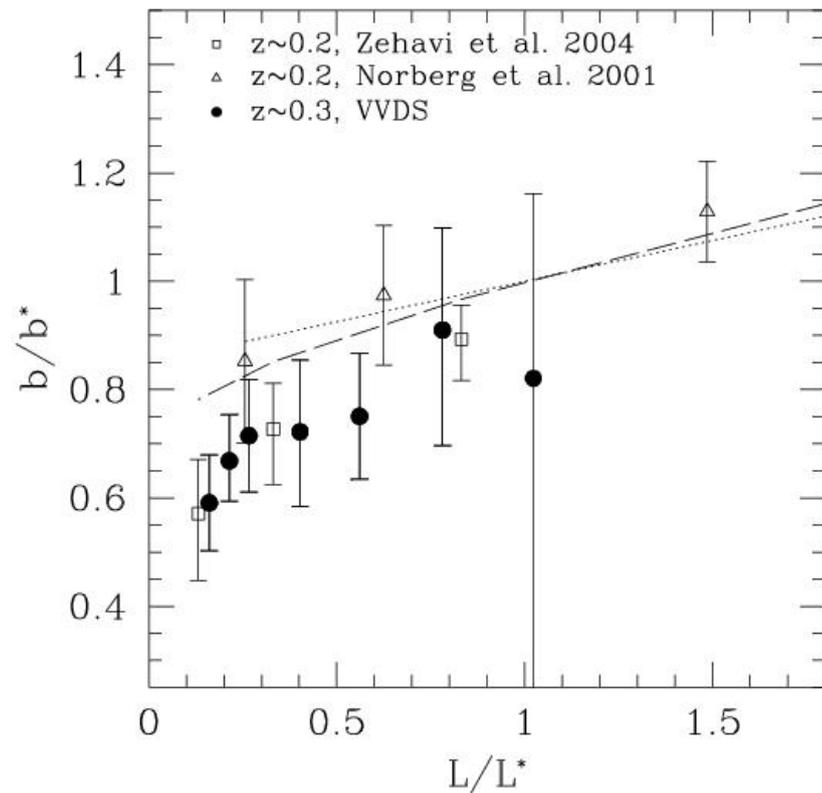


- clearly different
- low-z measurements agree within error bars with local surveys
- high z – clear sudden rise of r_0 for galaxies with $B > B^*$ (exactly as in local surveys but faint galaxies less clustered than local)

low and high z VVDS – $\gamma(B_{\text{abs}}-B^*)$



Relative bias – comparison with local surveys



Summary

- low- z : r_0 lower but in agreement with local surveys, same for b/b^* ; γ in agreement
- high z r_0 changes with luminosity as in local surveys (and in agreement with hierarchical models)
- high- z γ changes significantly with luminosity (effect of change of type mixture? rather no, change is $\sim 10\%$ while in low- z it is $\sim 30\%$); similar results lately obtained for LGBs (multiple galaxies in massive haloes suggested)