Optical luminosity functions of XXL galaxy clusters

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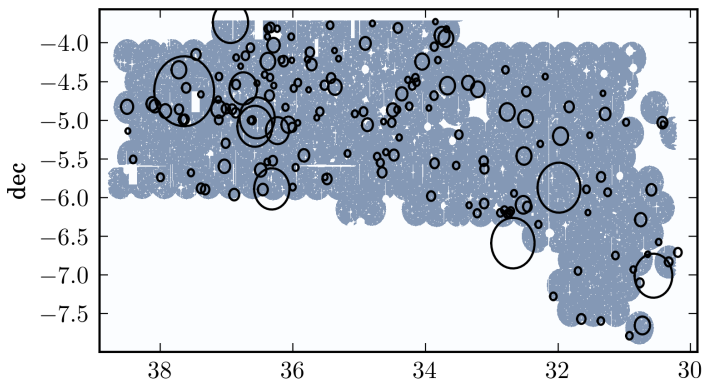
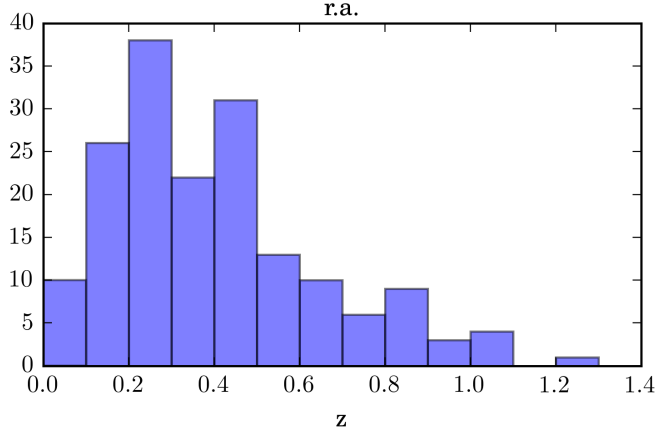
Motivations

- Formation and evolution of galaxies in clusters
- Integrated luminosities as mass proxy



Objectives

- Study optical LF of a sample of 173 XXL GC spanning a wide range in redshift
- Check for:
  1) evolutionary effects
  2) dependence on richness or X-ray luminosity
  3) link with cluster morphologies



Method

- Membership: photo-zs + bkg subtraction
- Richness estimation complete up to z=0.8
- Individual LFs computed in mapp and Mabs

Results (*Ricci et al. in prep.*)

- $>$ 50% of the sample consistent with fiducial LF with $< M_r^* >= -21.4$, $< \alpha >= -0.75$
- m_i^* up to z=1.22 concordant with SSP model evolution with $z_{form} = 3$

Perspectives

- Stack the clusters and investigate the evolution with z, N_{gal}, L_x and the morphology
- Use K-band, test and compare the different mass proxies