

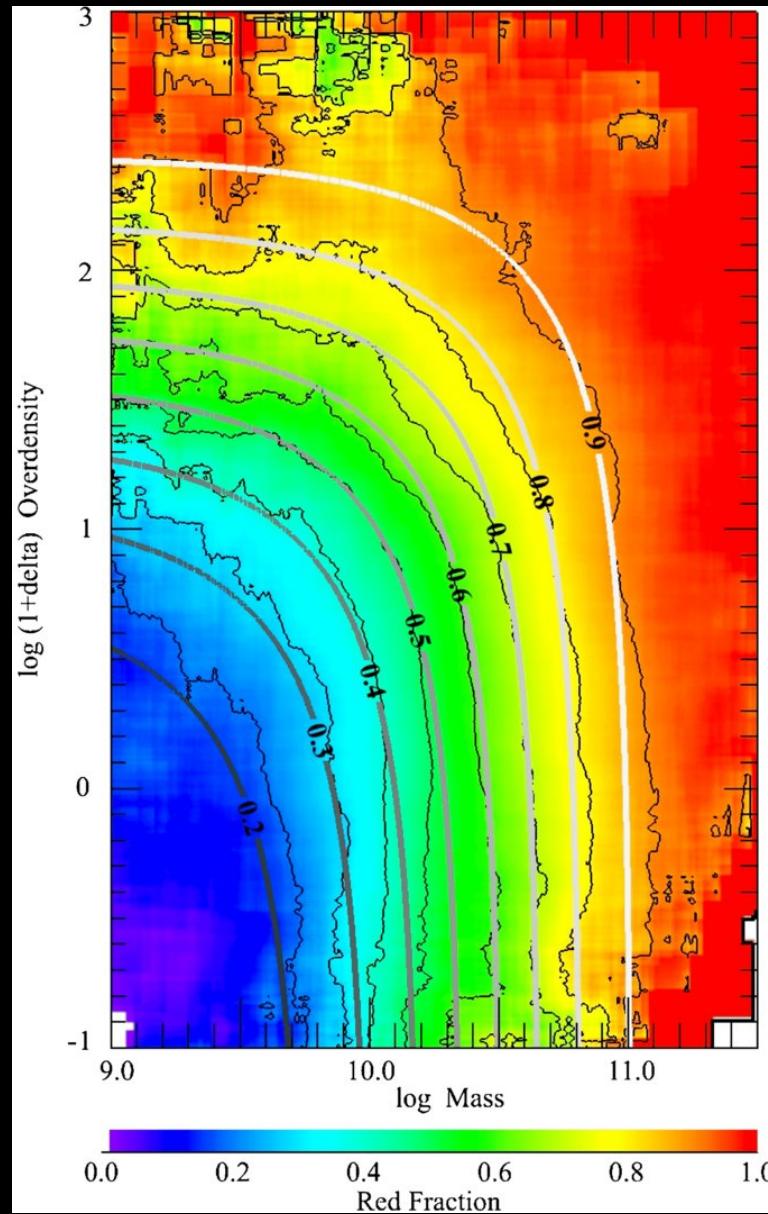
Lancaster
University



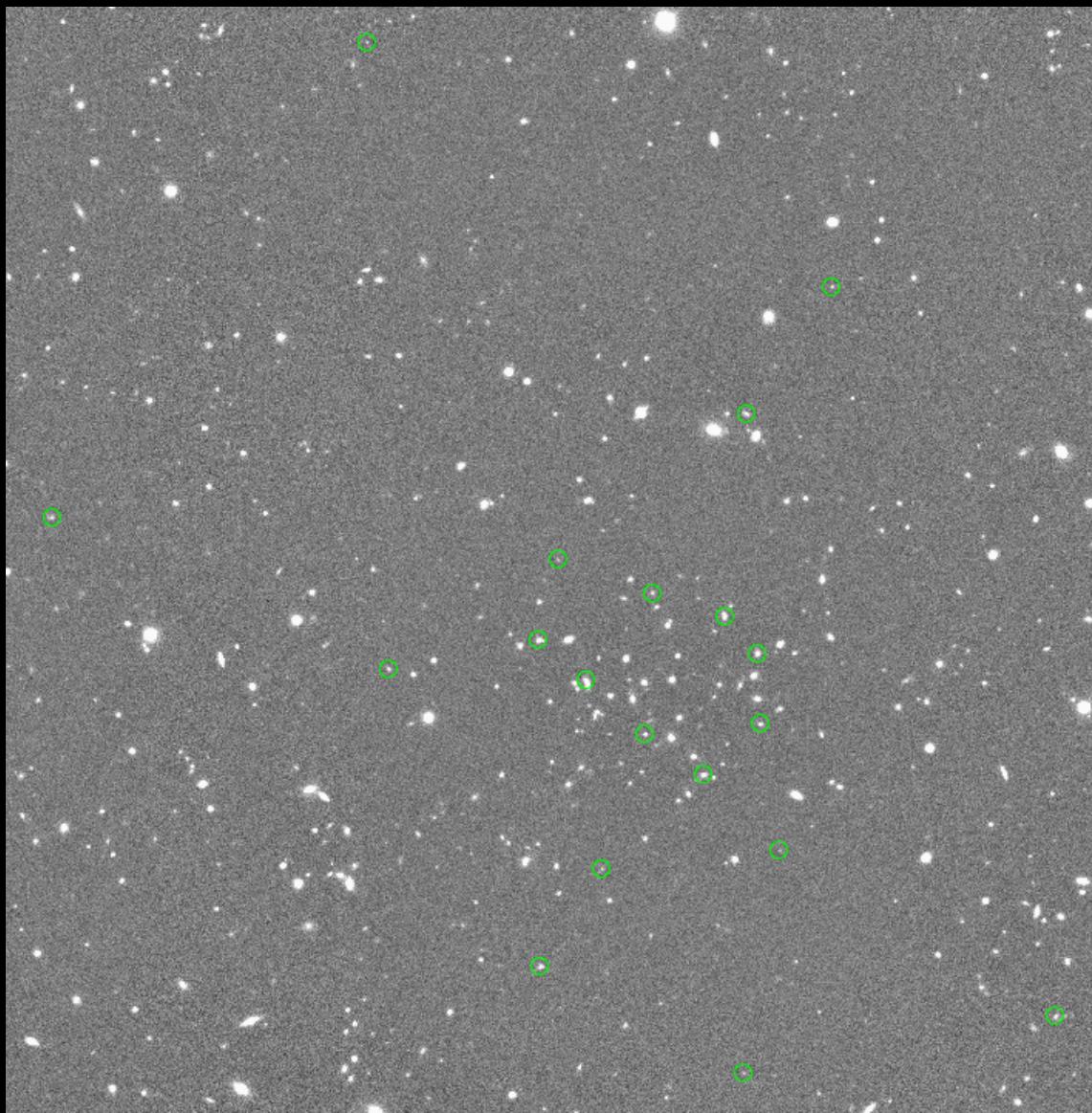
Nick Amos (he/him)
Supervisor: John Stott and the KMOS Cluster Survey
(PIs: R. Bender [MPE], R. Davies [Oxford])

Cluster environment

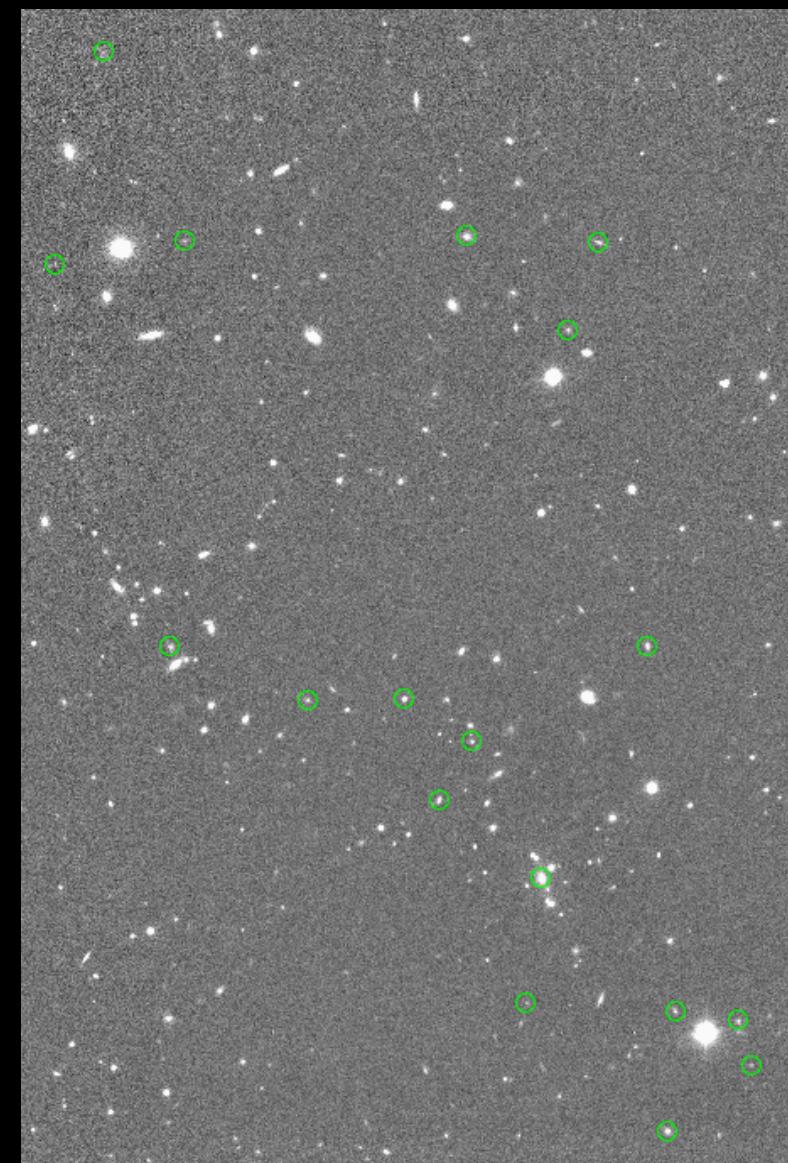
- Internal processes
- Environmental interactions



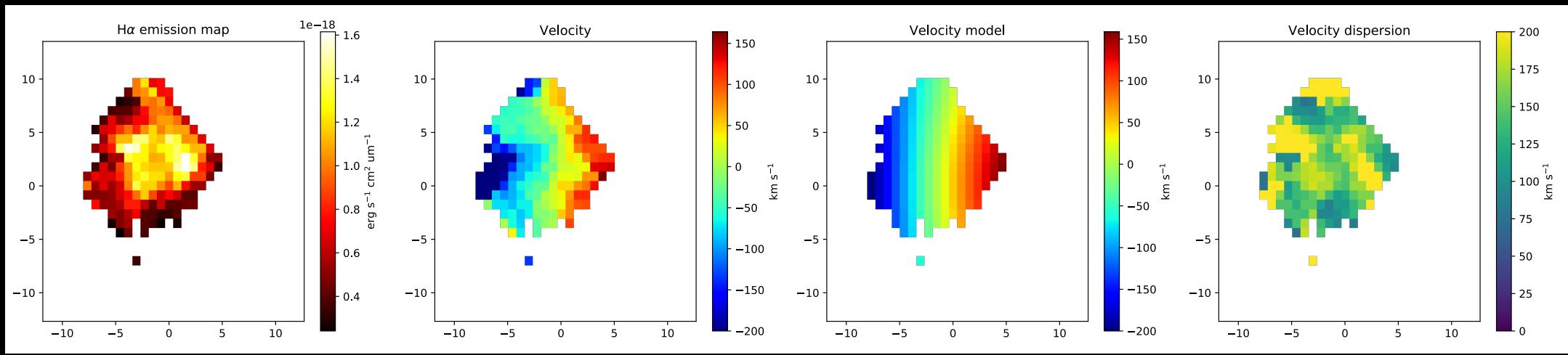
Peng et al.,
2010



XMMXCS J2215.9-1738 $z \sim 1.46$ - $M_{200} \sim 2.1 \times 10^{14} M_\odot$



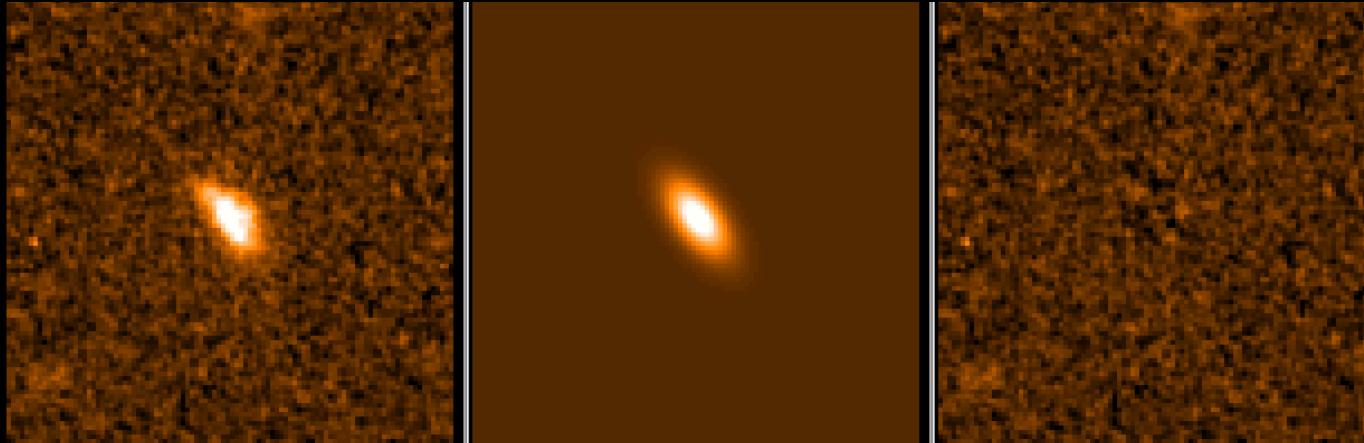
XMMU J2235.3-2557 $z \sim 1.39$ - $M_{200} \sim 7.7 \times 10^{14} M_\odot$



'The kinematics of cluster galaxies at $z \sim 1.4$ ' Amos et al., in prep

Comparison to field galaxies:

HST/WFC3 - F160W

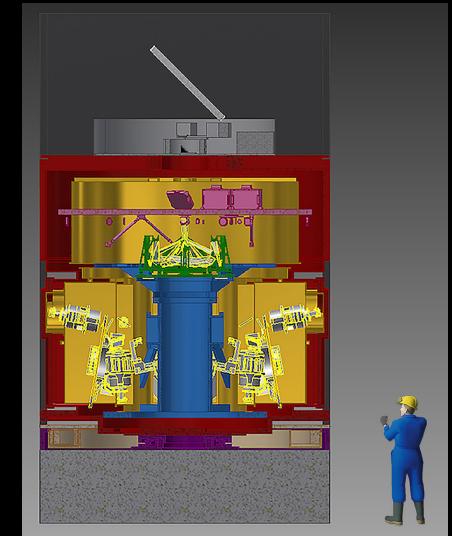
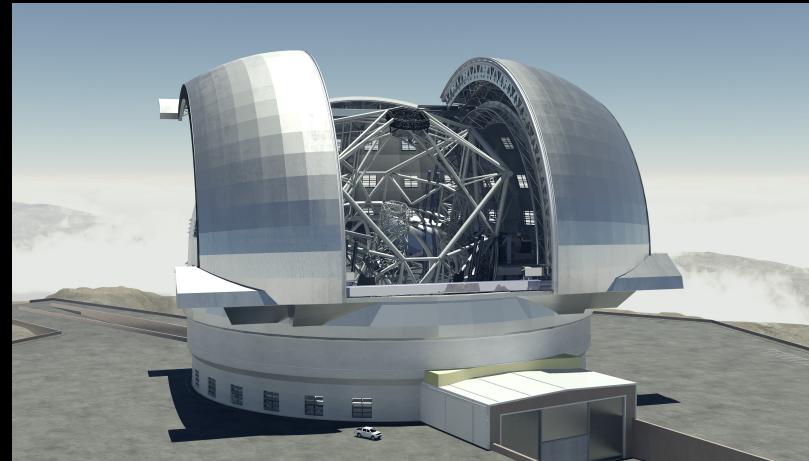


- KROSS
- KGES
- Stellar mass to total mass
- Velocity dispersion vs SFR
- Gas fraction



**Near Infrared
Spectrograph - NIRSpec**
NASA/ESA

Spectral resolution $R \sim 100 - 2700$
Range of spaxel scales:
 $0.1'' \times 0.1''$
FOV - $3'' \times 3''$ (IFU mode)



**High Angular Resolution
Monolithic Optical and
Near-infrared Integral field
spectrograph - HARMOHI**
ESO

Spectral resolution $R \sim 3000 - 20000$
Range of spaxel scales:
 $0.03'' \times 0.06''$ to $0.004''$
FOV - $6'' \times 9''$

Questions?