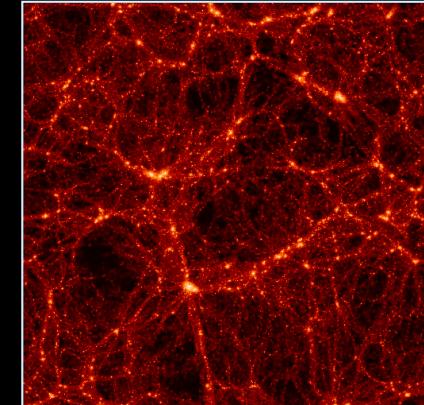
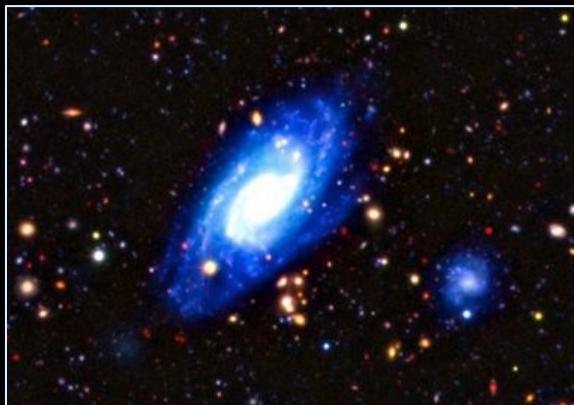
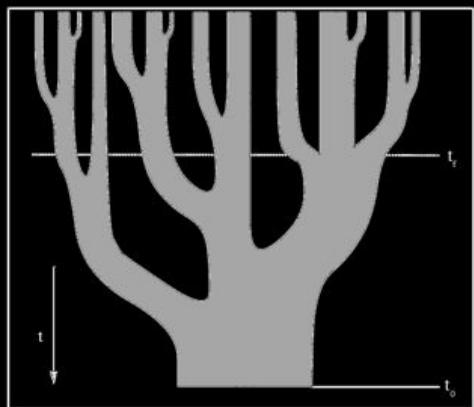
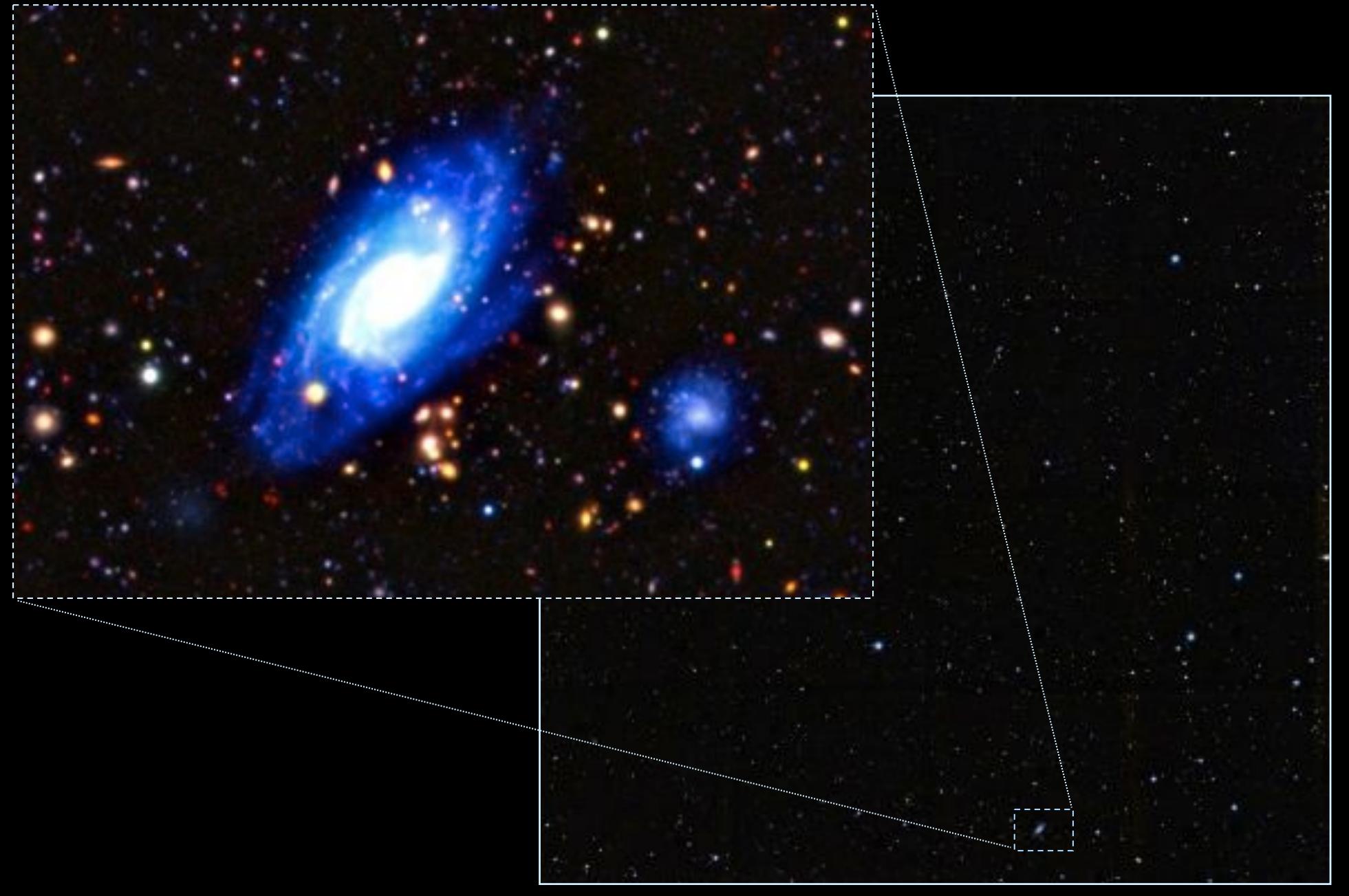


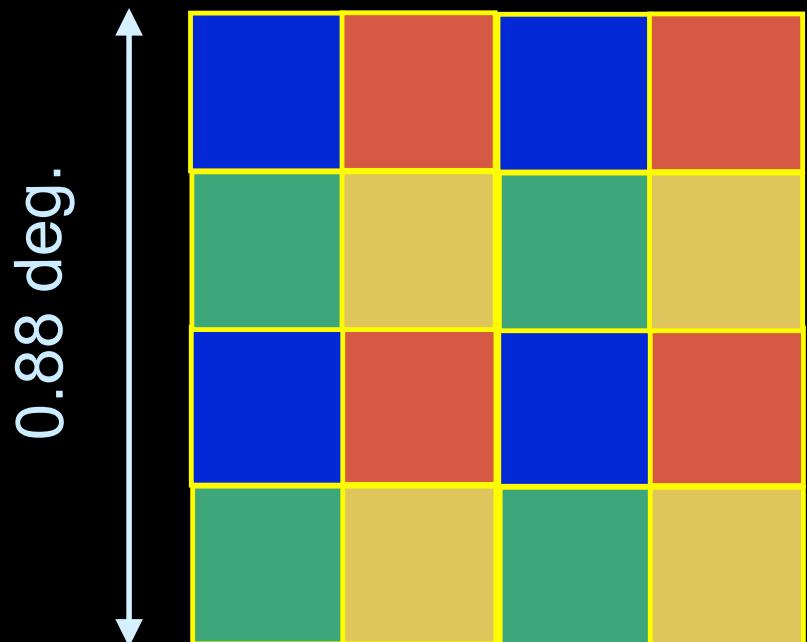
UKIDSS UDS

Status and Science Highlights





UDS JHK Imaging



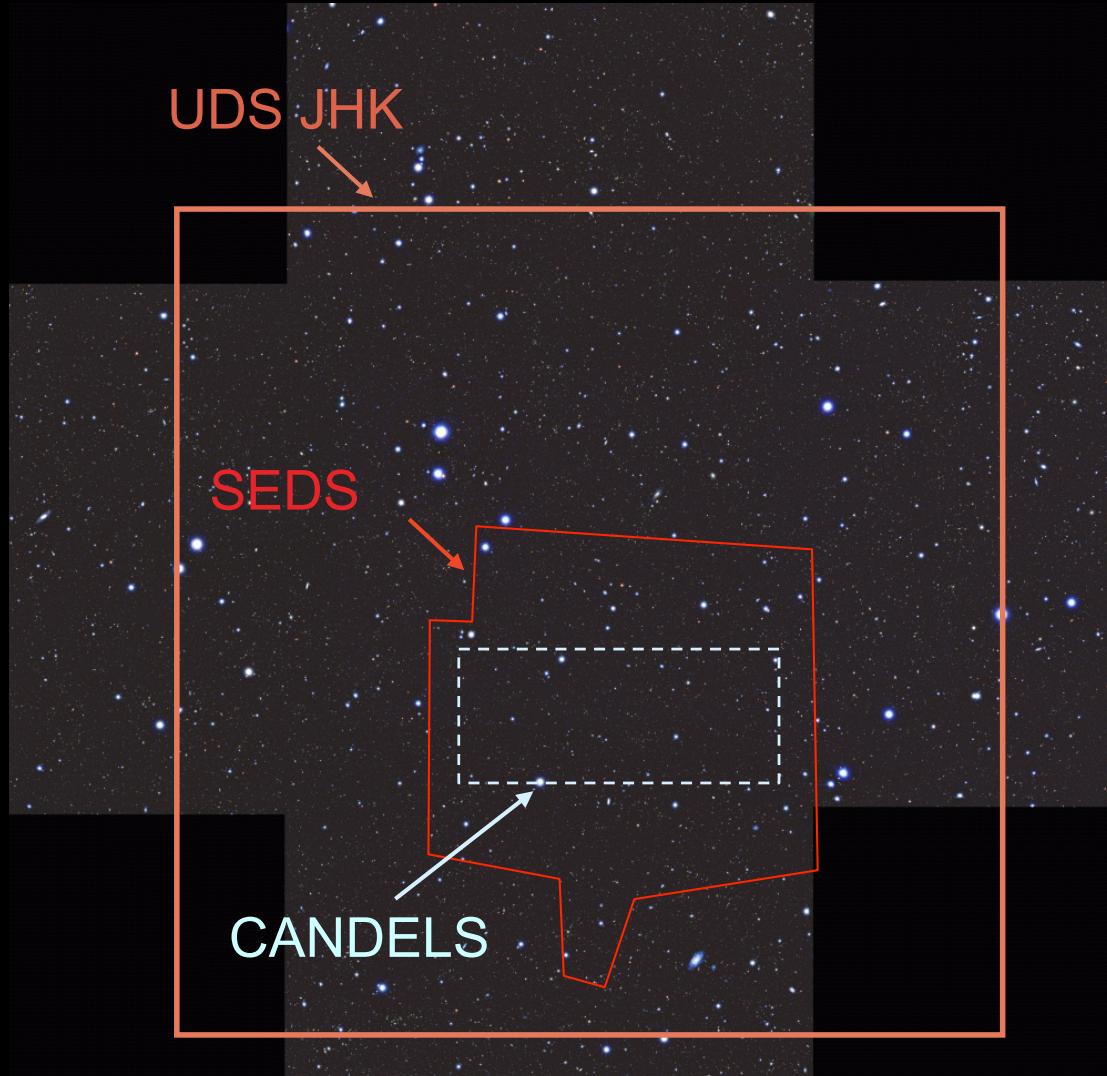
Depths achieved so far:
(AB, 5σ , 2" apertures)

DR8: J=24.9, H=24.2, K=24.6
(494 hours)

2012: J=25.3, H=24.8, K=25.0
(840 hours)

Deepest IR survey over this area.

Key imaging data in the UDS



Optical (CFHT +Subaru)
U=27.2, B=27.5, V=26.7, R=27.0,
i'=26.8, z'=26.0 (AB)

Near-IR (VISTA):
Y~24.2 (AB)

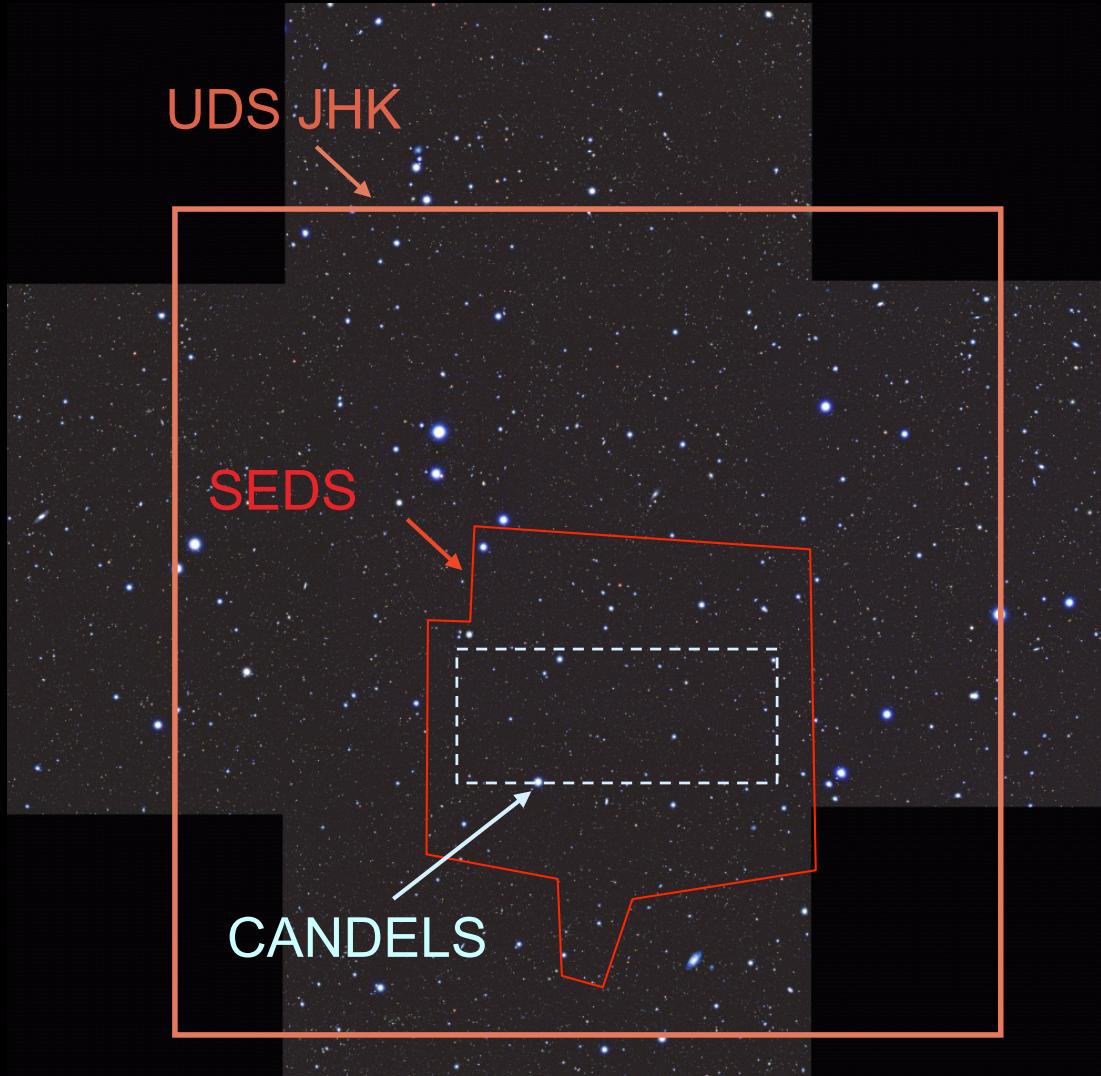
Near-IR (Spitzer IRAC):
SPUDS: ~24 (AB) 3.6, 4.5 μ m
(0.8 deg²)
SEDS: ~26 (AB) at 3.6, 4.5 μ m
(0.17 deg²)

Mid-IR (Spitzer IRAC)
~80 μ Jy 24 μ m (SPUDS)

X-ray:
XMM-Newton 100ks + 6x50ks

Radio:
VLA 12 μ Jy rms 1.4Ghz

NEW data in the UDS



Near-IR (VISTA):

Y~24.2 (AB)

Spitzer IRAC:

SPUDS: ~24 (AB) 3.6, 4.5 μ m
(0.8 deg 2)

SEDS: ~26 (AB) at 3.6, 4.5 μ m
(0.17 deg 2)

Spitzer MIPS

~80 μ Jy 24 μ m (SPUDS)

HST CANDELS

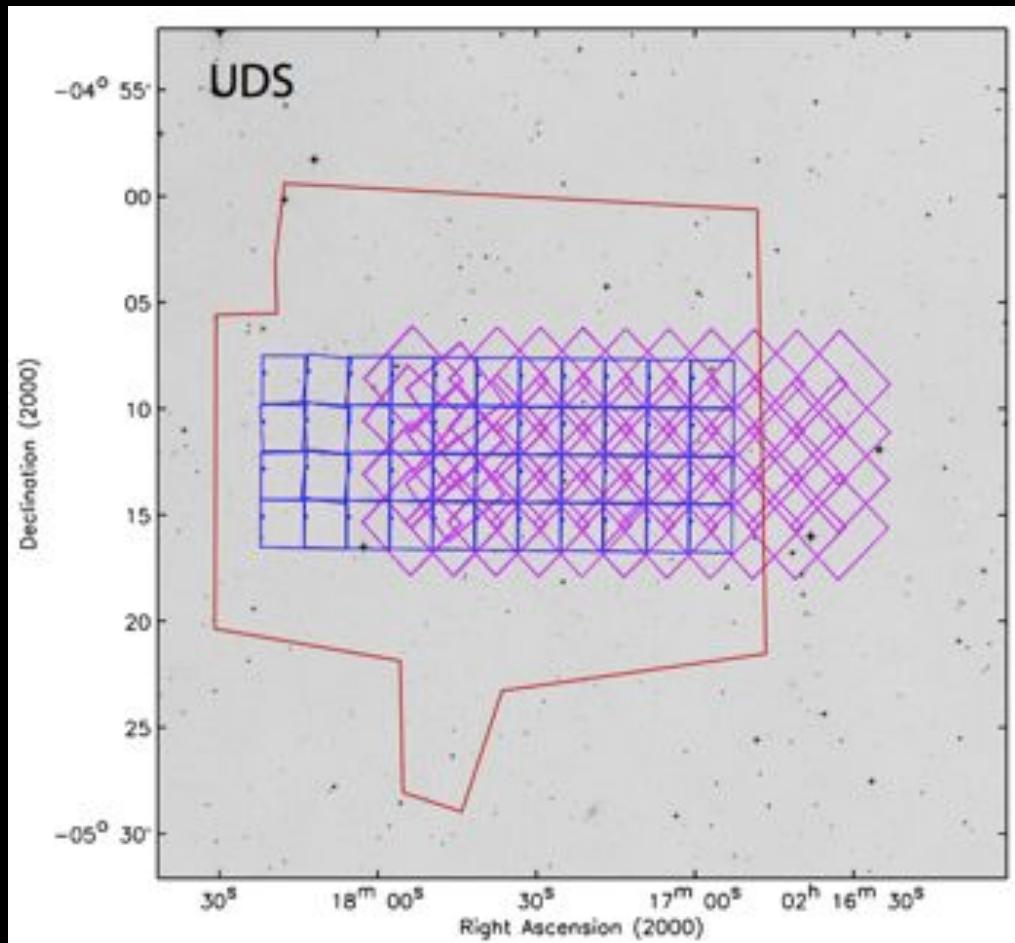
WFC3 (JH) + ACS (VI)
~ 27 mag (point-source)

UDSz Spectroscopy

~ 3000 spectra (VIMOS/FORS2)
~ 1500 secure redshifts

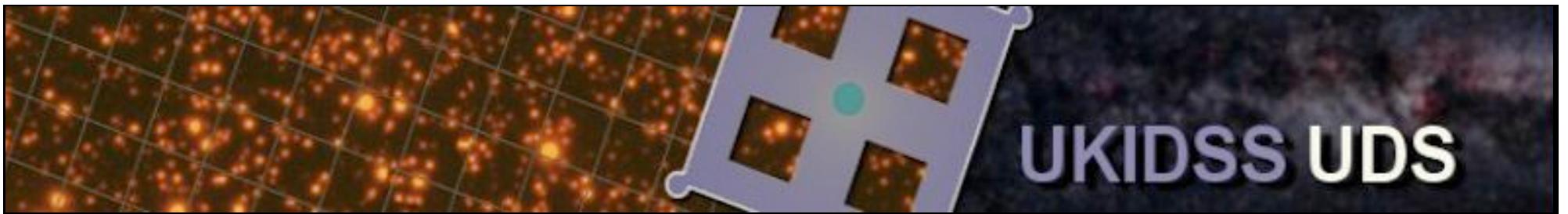
CANDELS

Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey

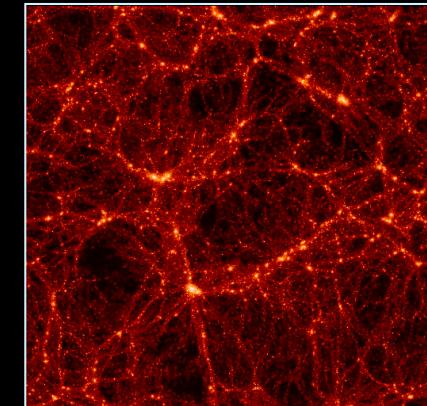
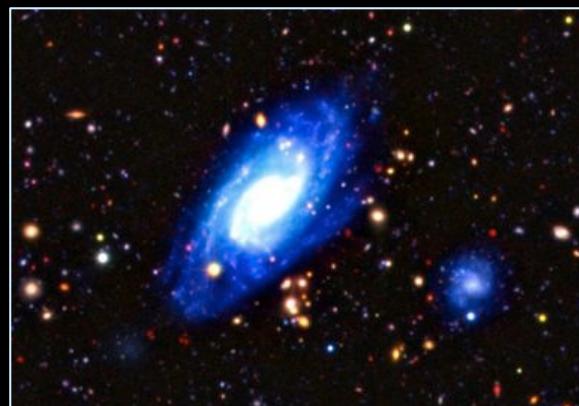
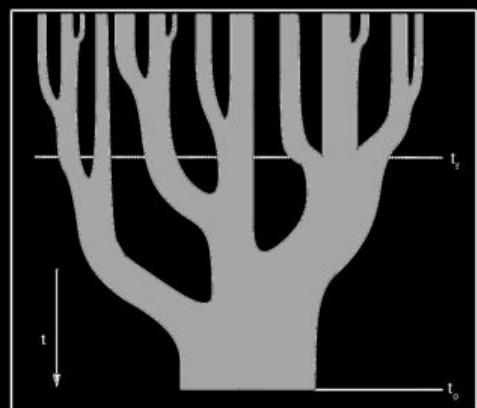


Point source limits (5σ)
 $J, H: \sim 27 AB$
 $V, I: \sim 28.5 AB$



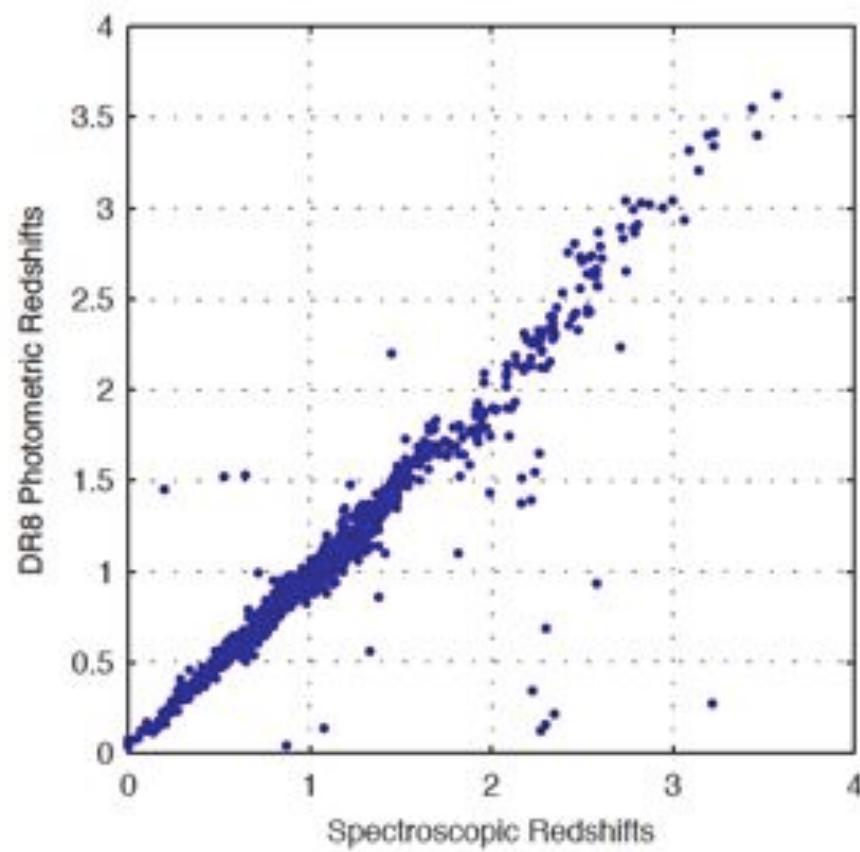


Selected Recent Science Highlights

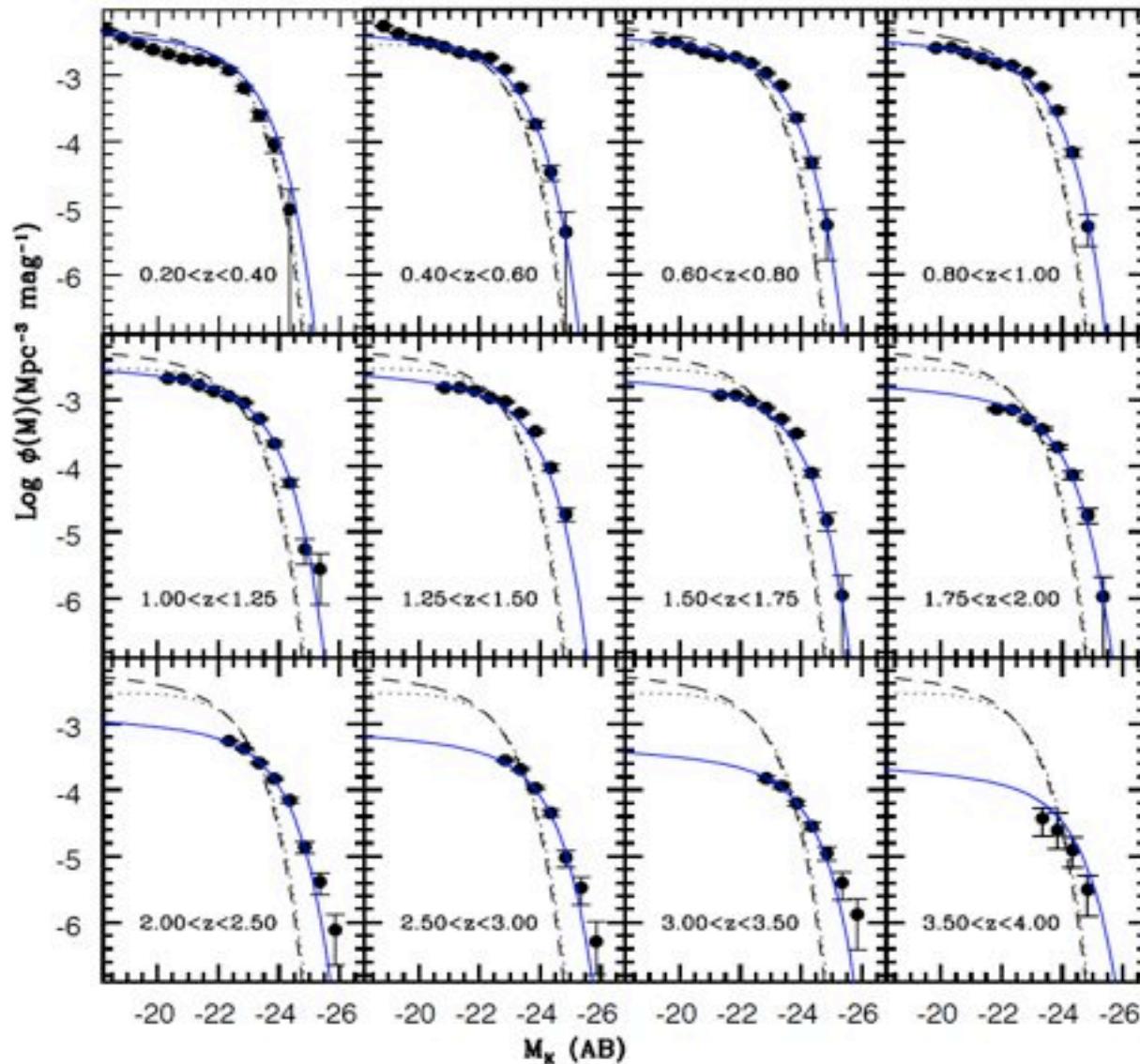


Photometric redshifts

$$\delta z/(1+z) \sim 0.025$$

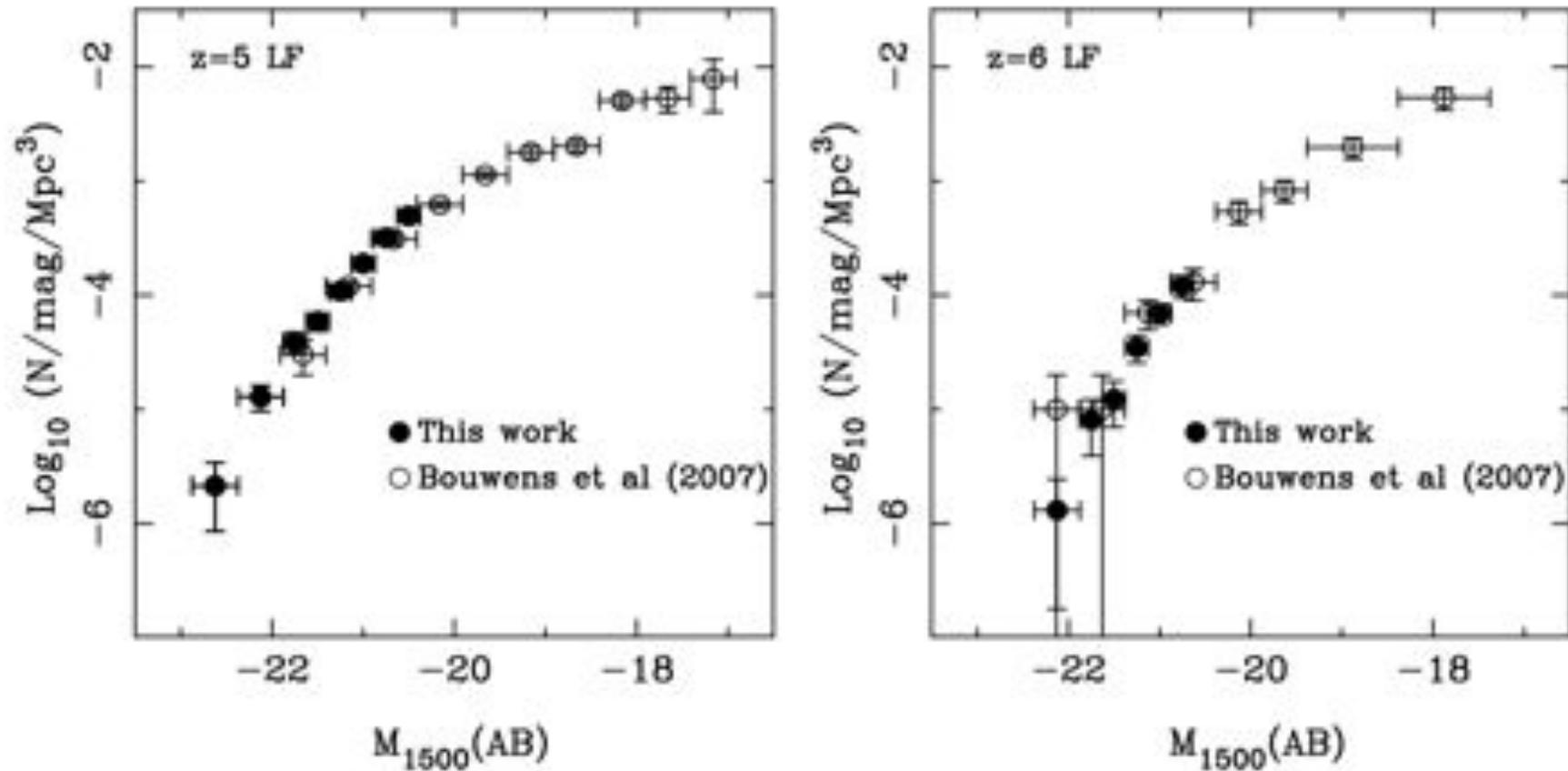


Evolution of the K-band luminosity function



Cirasuolo et al. 2010

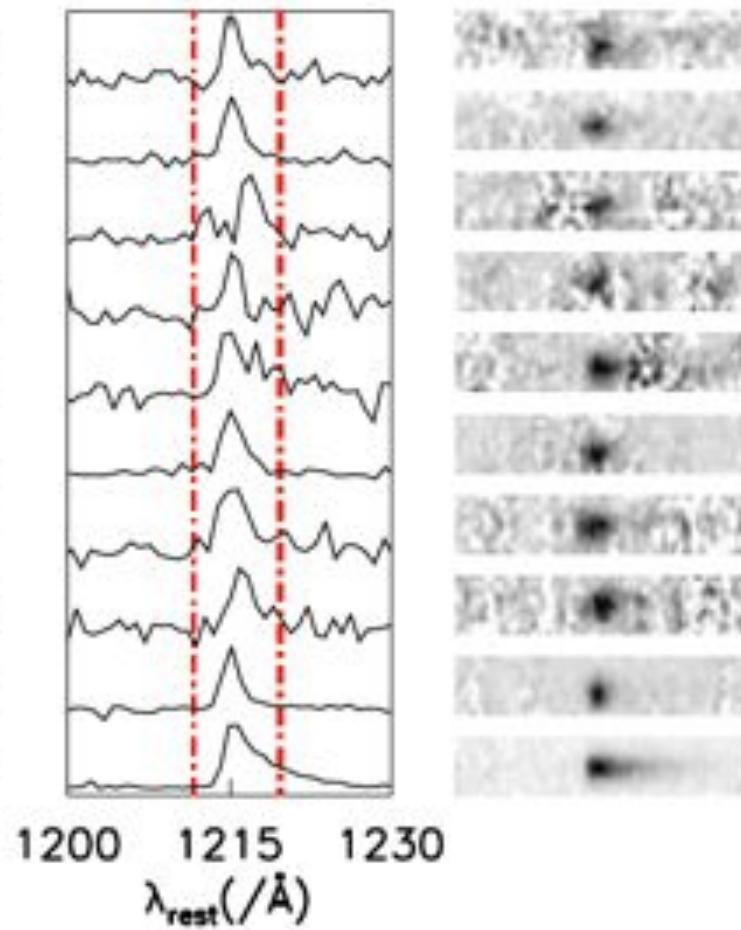
Galaxy luminosity functions at $z>5$



McLure et al. 2009

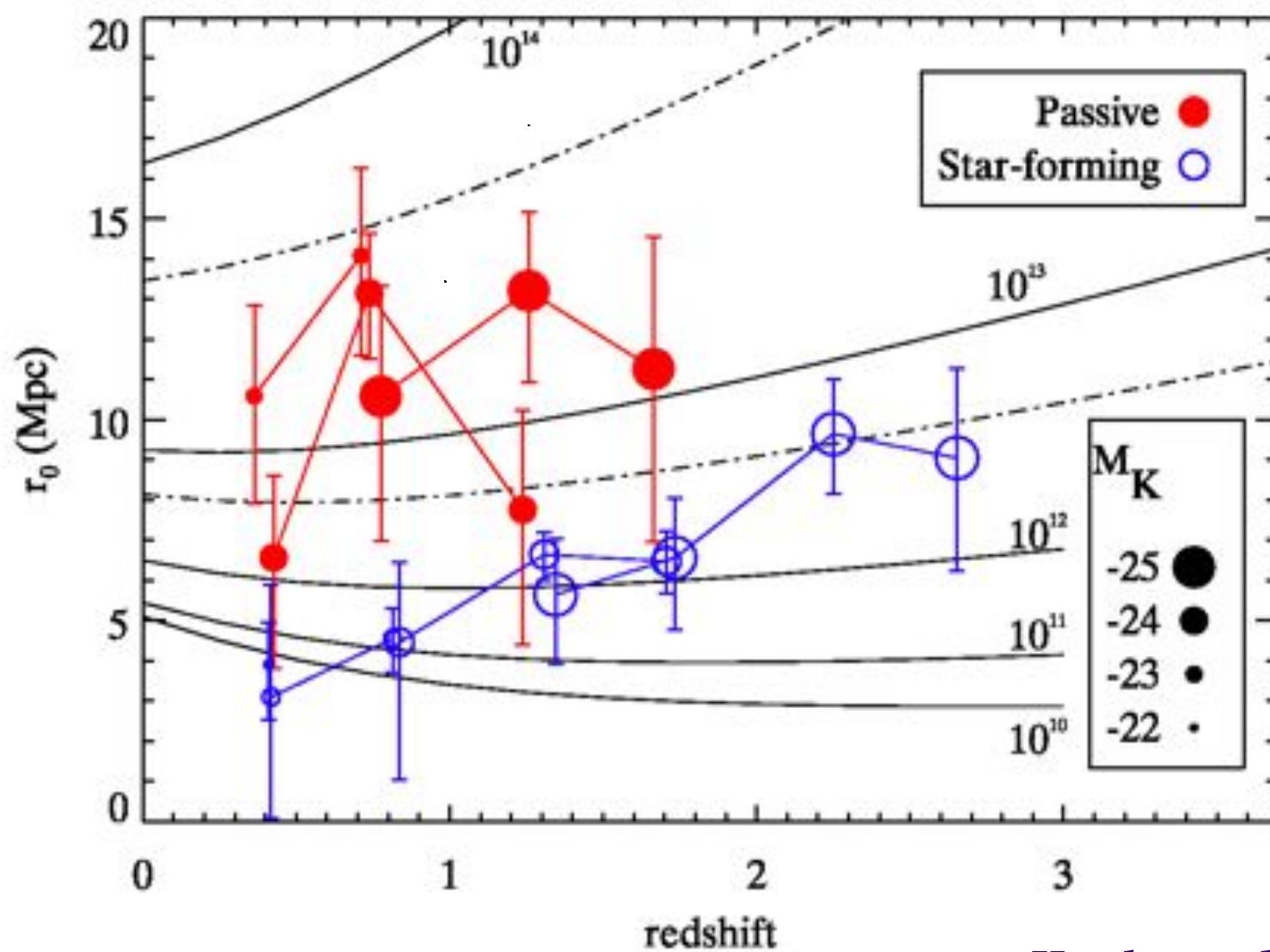
Confirmation of $z > 6$ galaxies at VLT

UUOS_J02:17:01.4-05:03:09.4 $z=6.487$
UUOS_J02:18:41.0-05:12:47.4 $z=6.475$
UUOS_J02:19:22.0-04:55:36.3 $z=6.216$
UUOS_J02:16:53.0-04:46:23.3 $z=6.213$
UUOS_J02:18:38.9-05:09:44.0 $z=6.190$
UUOS_J02:17:35.5-05:10:32.6 $z=6.120$
UUOS_J02:18:07.1-04:58:41.5 $z=6.050$
UUOS_J02:16:16.5-05:02:17.7 $z=6.046$
UUOS_J02:18:00.9-05:11:37.8 $z=6.027$
UUOS_J02:16:27.8-04:55:34.2 $z=6.010$



Curtis-Lake et al. (2012)

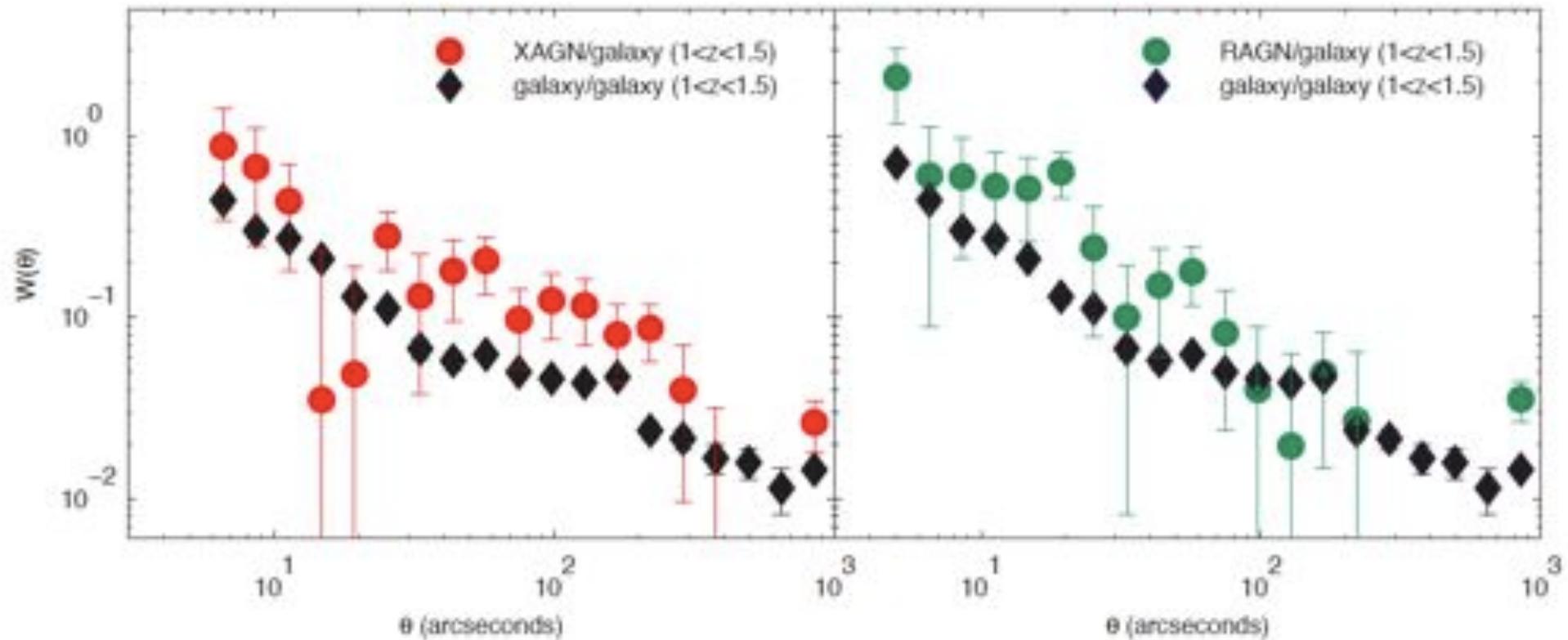
Clustering evolution with redshift



Hartley et al. (2010)

The halo masses of AGN at $z \sim 1.5$

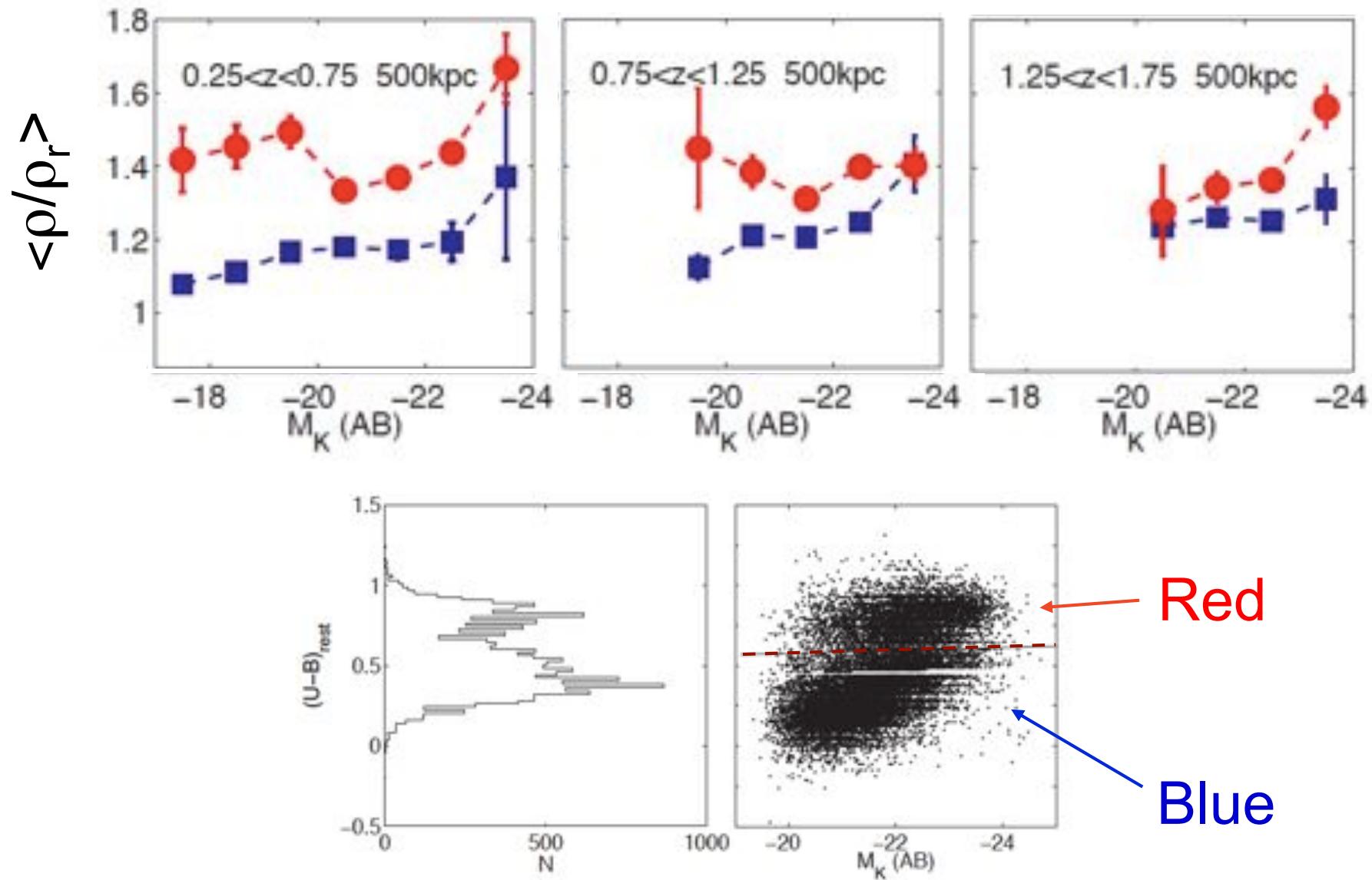
Bradshaw et al. (2011)



$$r_0 \sim 13 \pm 2 \text{ Mpc} \quad \rightarrow \quad M > 10^{13} M_\odot$$

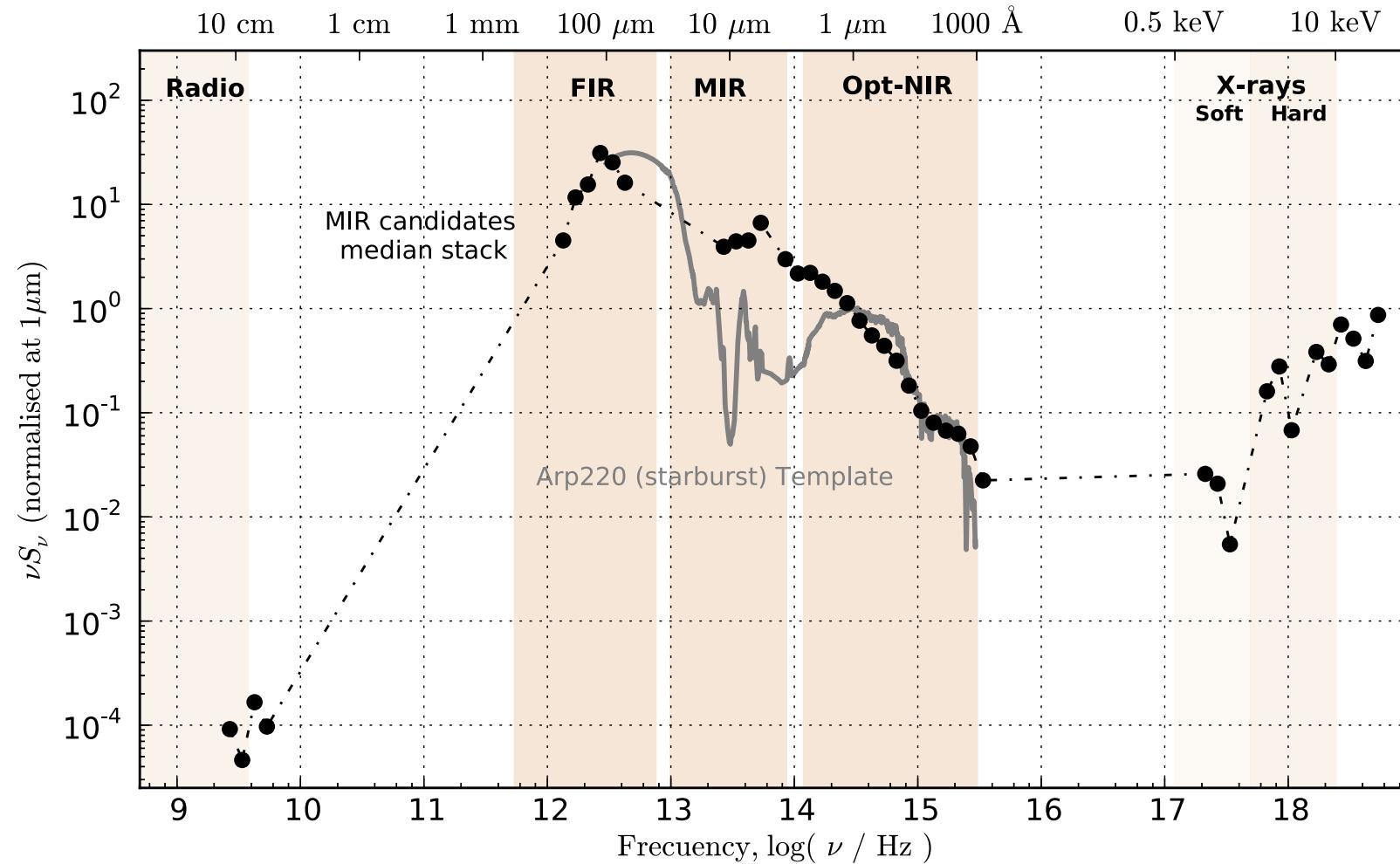
Galaxy environments

Chuter et al. (2011)

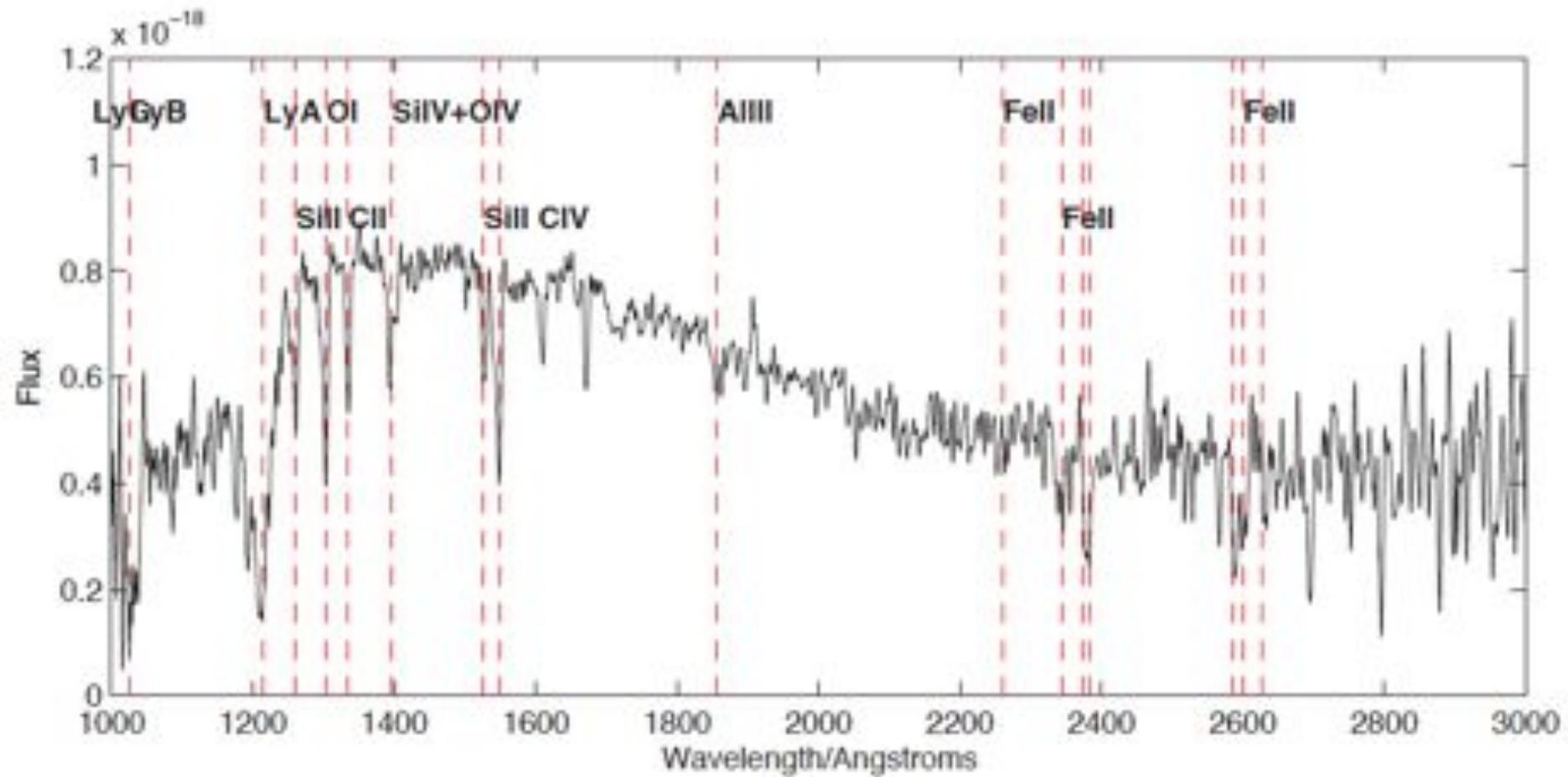


Type 2 quasars

Botti et al. (2012)



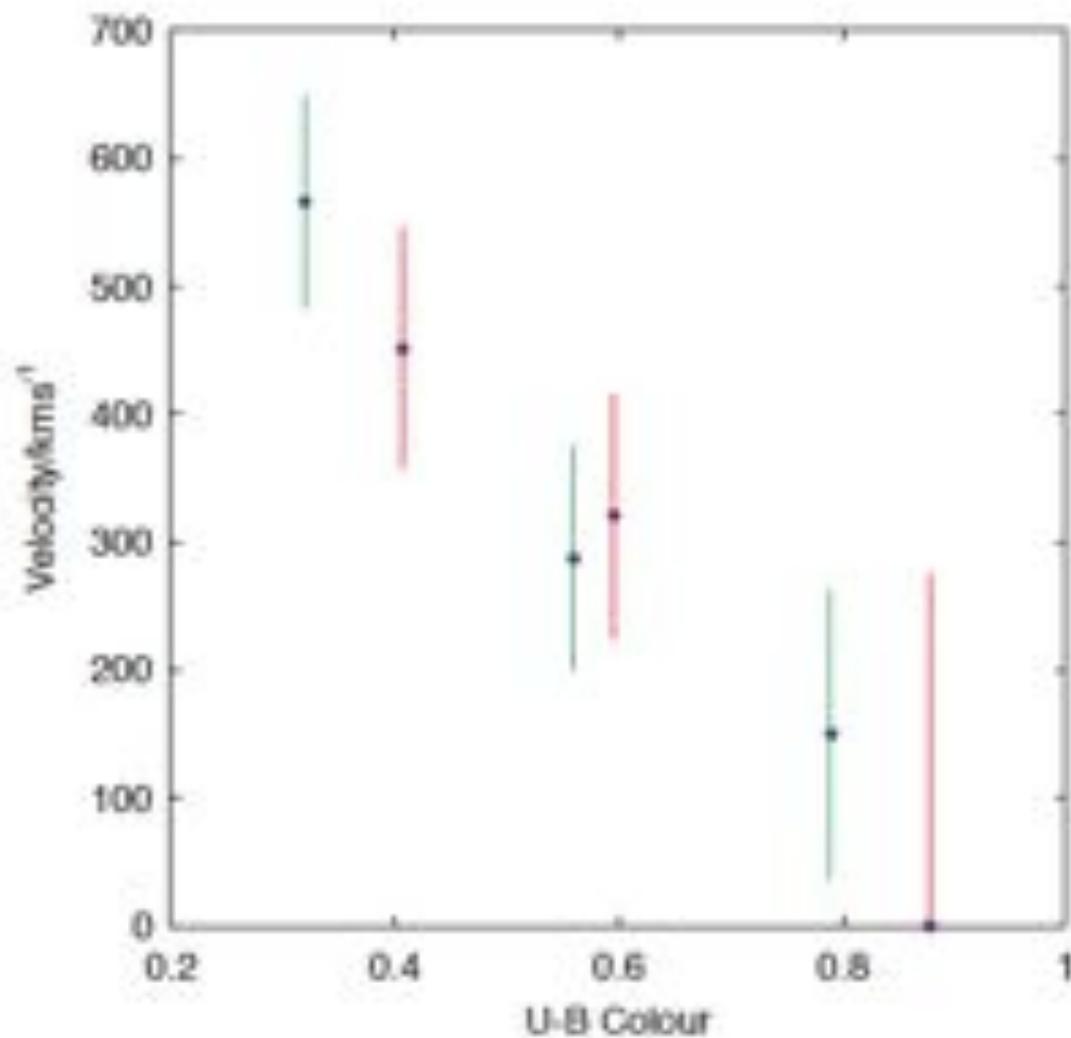
UDSz spectroscopy; outflows and metallicity



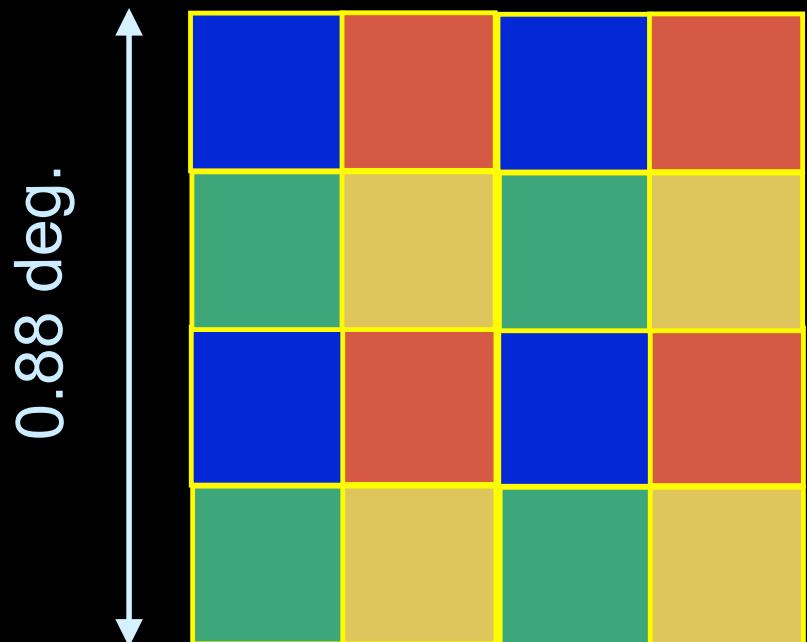
(b) Template of galaxies between $1.8 \leq z \leq 4.0$ without Lyman-alpha emission

Bradshaw et al. (2012)

Ubiquitous outflows driven by star formation



UDS JHK Imaging



Depths achieved so far:
(AB, 5σ , 2" apertures)

DR8: J=24.9, H=24.2, K=24.6
(494 hours)

2012: J=25.3, H=24.8, K=25.0
(840 hours)

Deepest IR survey over this area.

Fin