Obscured AGN in the UKIDSS Ultra Deep Survey

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UKIDSS Ultra Deep Survey

Combines:

Large area ~ 0.8 □^{2}

Multi-wavelength data

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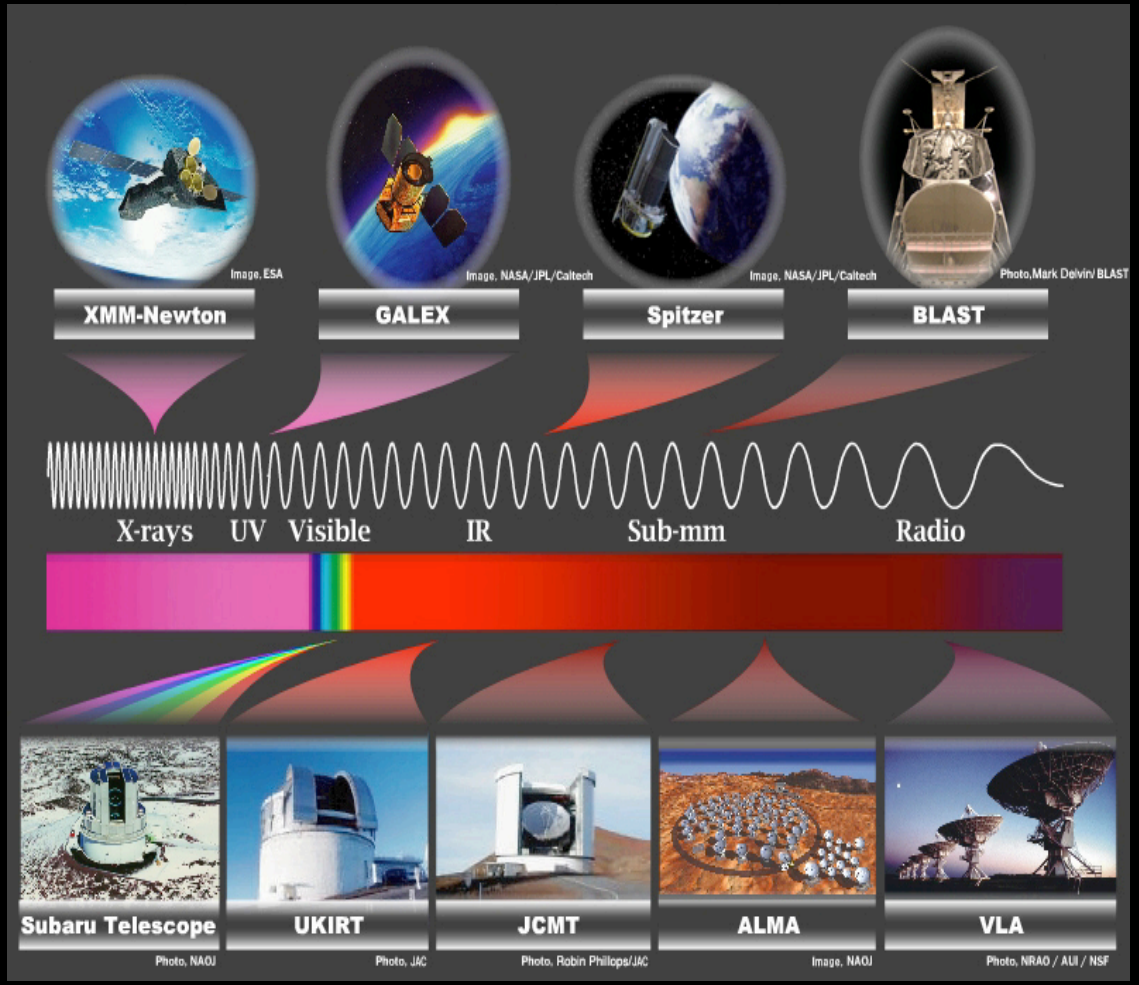
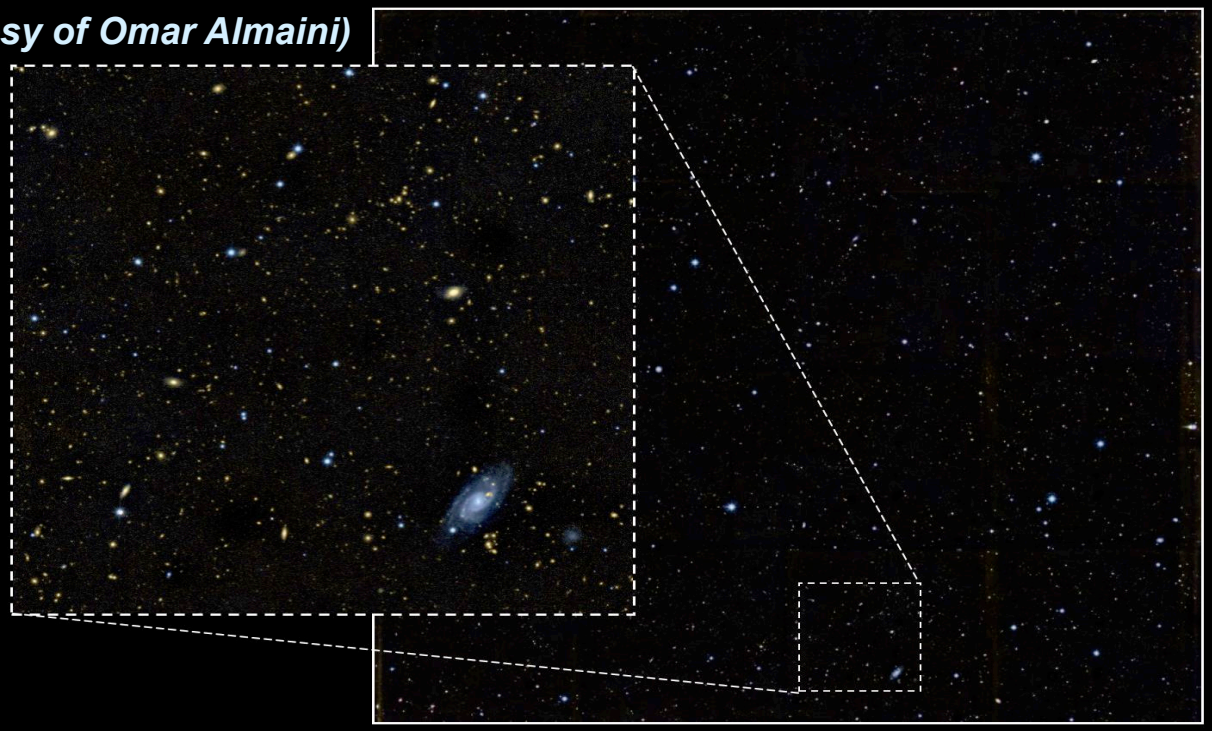
Multi-wavelength data

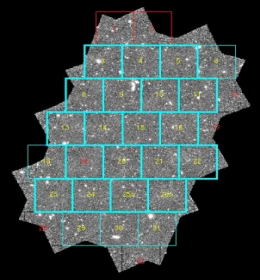


UKIDSS Ultra Deep Survey

(Courtesy of Omar Almaini)



UKIDSS UDS



GOODS

FIRES

RADIO: 7 μJy beam^{-1} to 20 μJy beam^{-1} *(Ibar et al. 07; Simpson et al. 06)*

Mid-IR: Spitzer- SWIRE 200 μJy at 24μm *(Surace et al. 2005)*

Optical / Near-IR
(Subaru and UKIRT) → Photometric redshifts with $\Delta z/(1+z) = 0.04$

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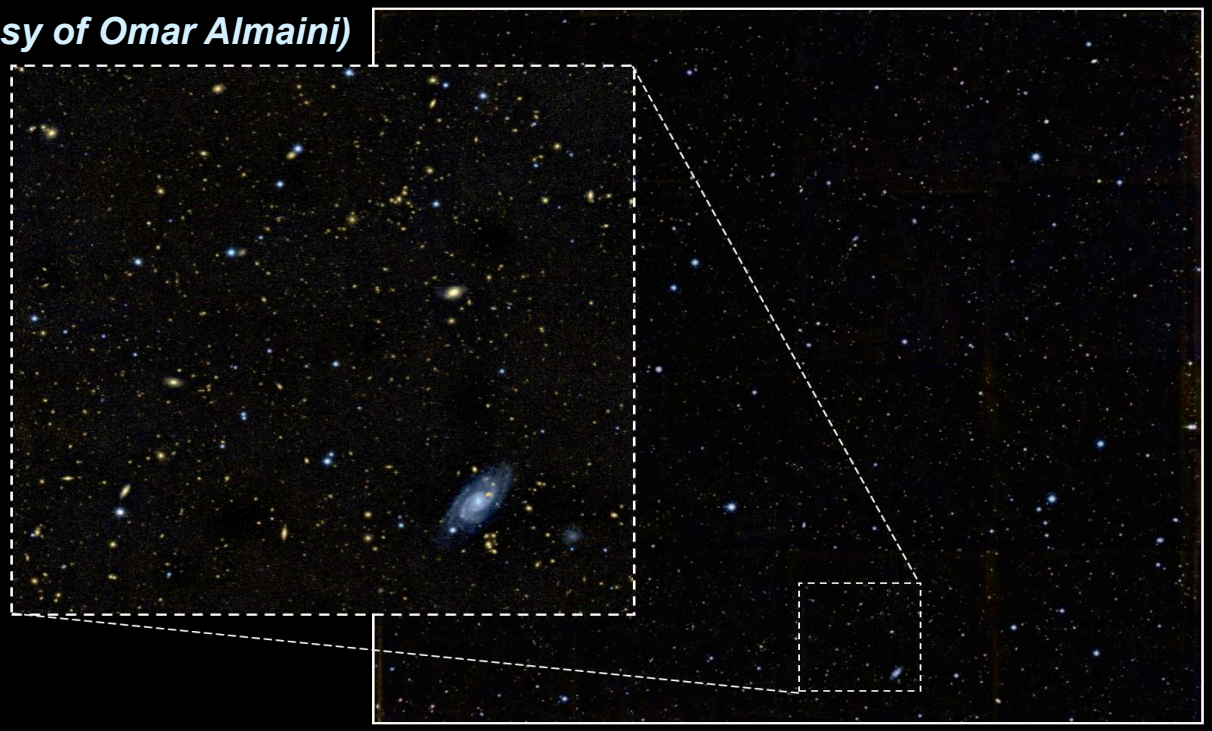

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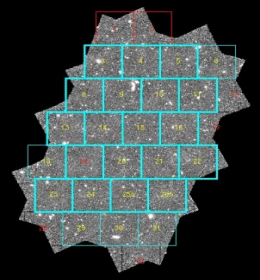

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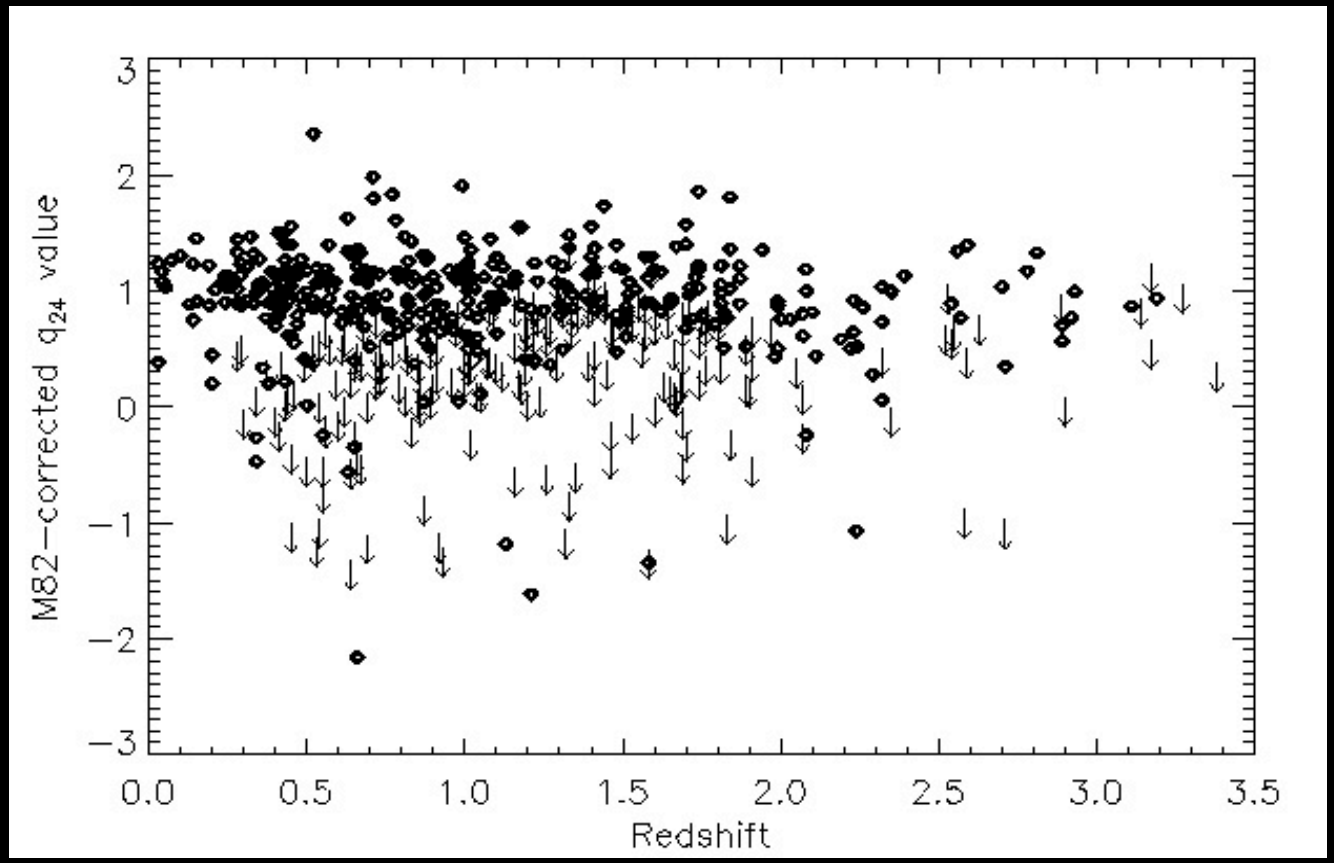
IR/Radio correlation

$q_{24} = \mathrm{Log}(S_{24} / S_{1.4})$



Ibar et al. 2007

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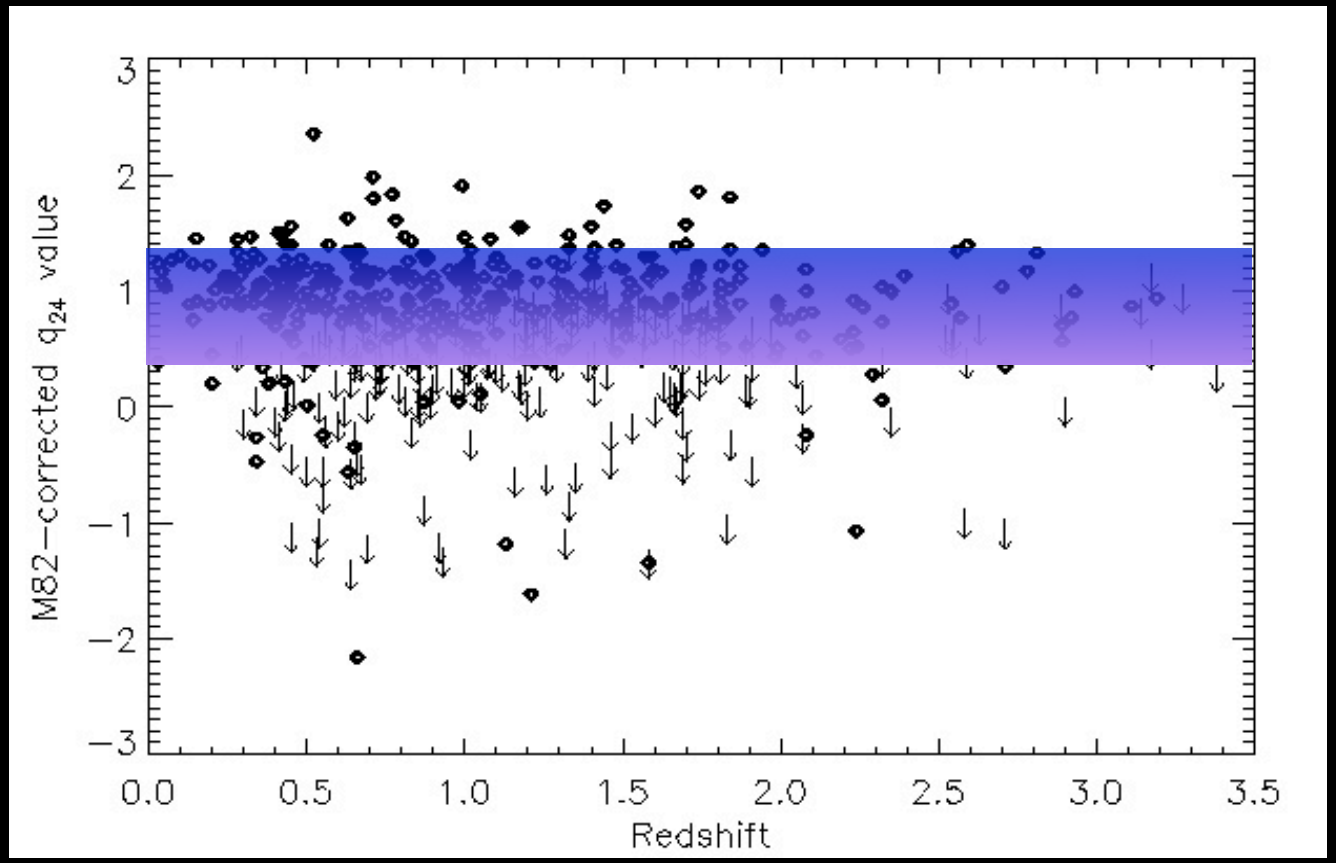
Star-forming



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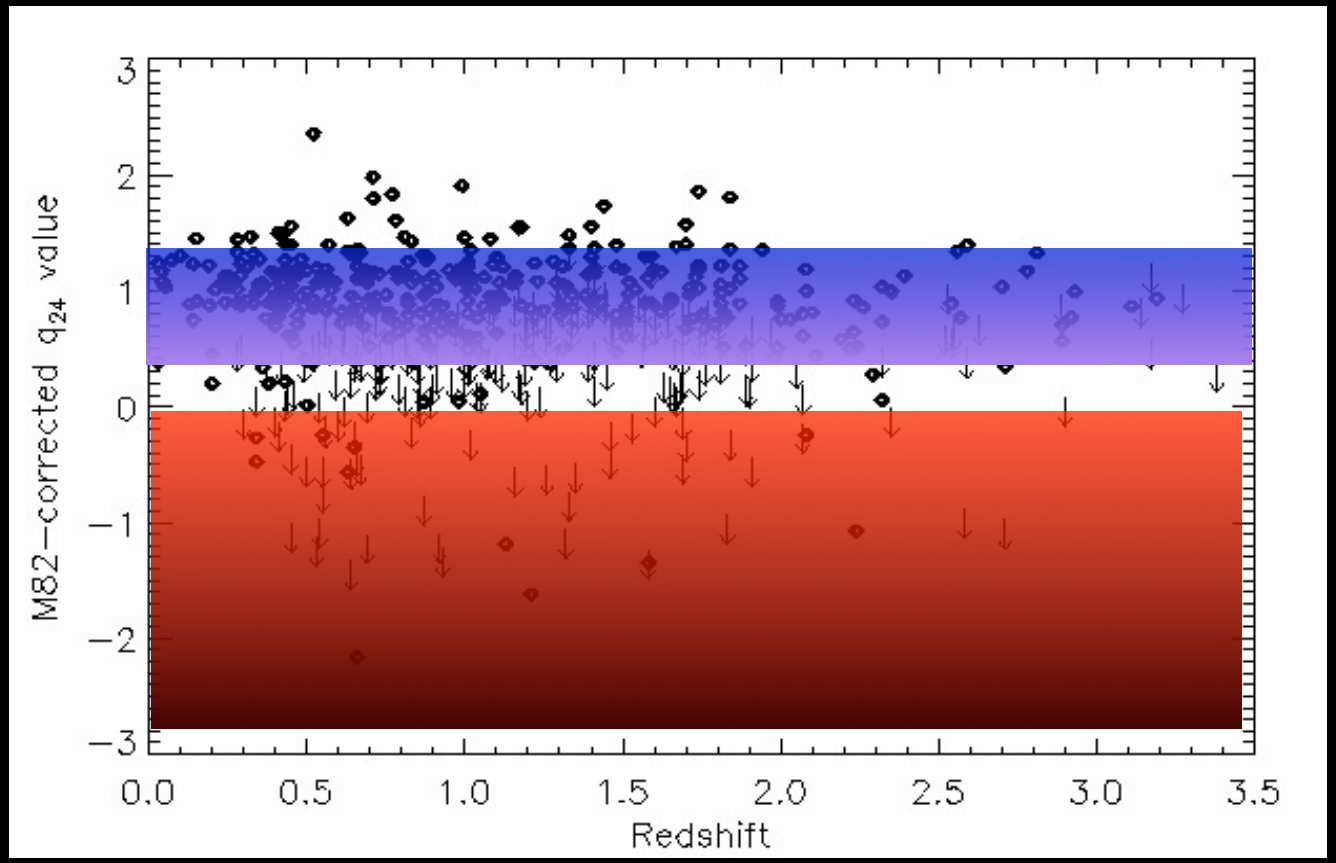
Star-forming

Radio-excess AGN



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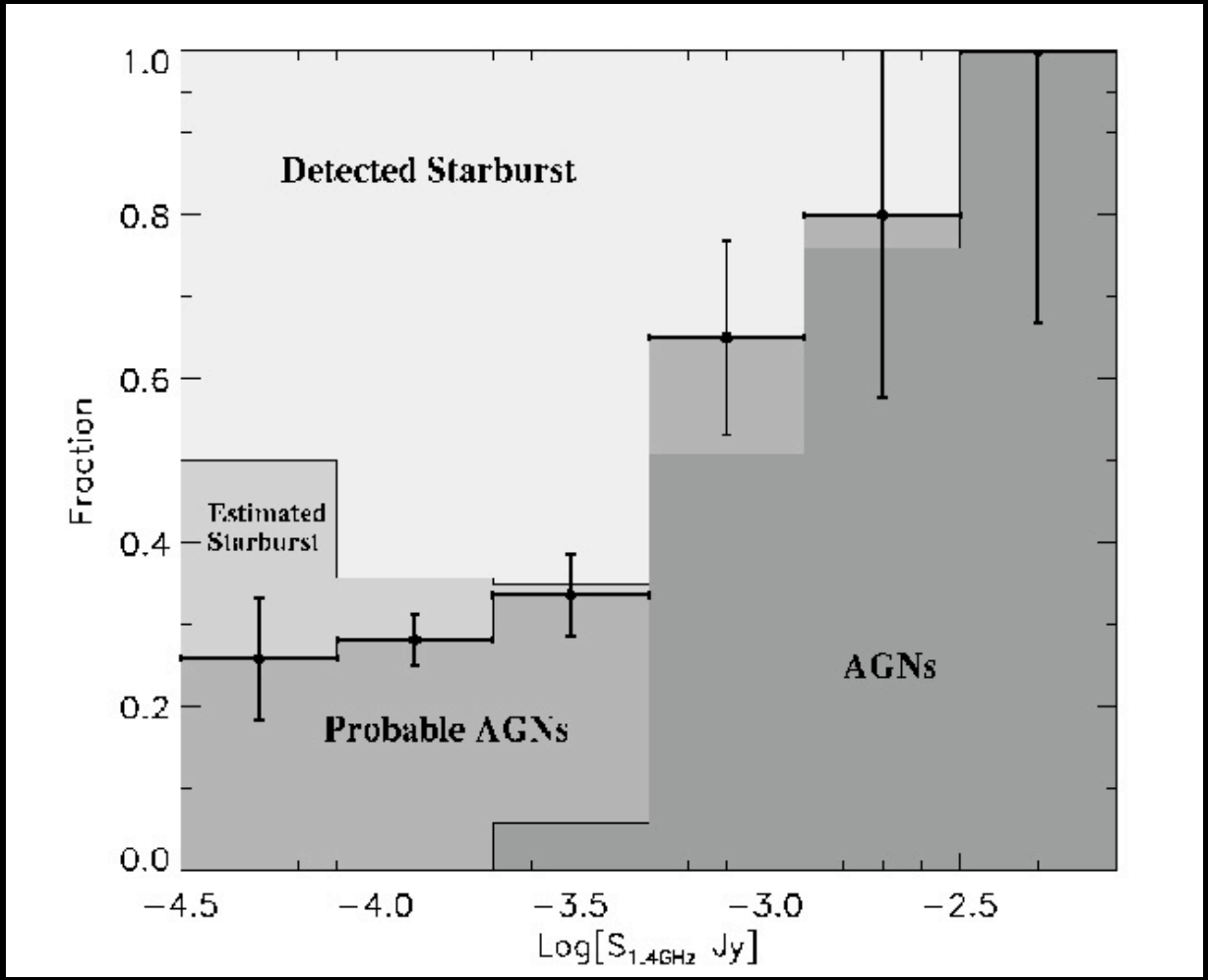
AGN in sub-mJy radio population

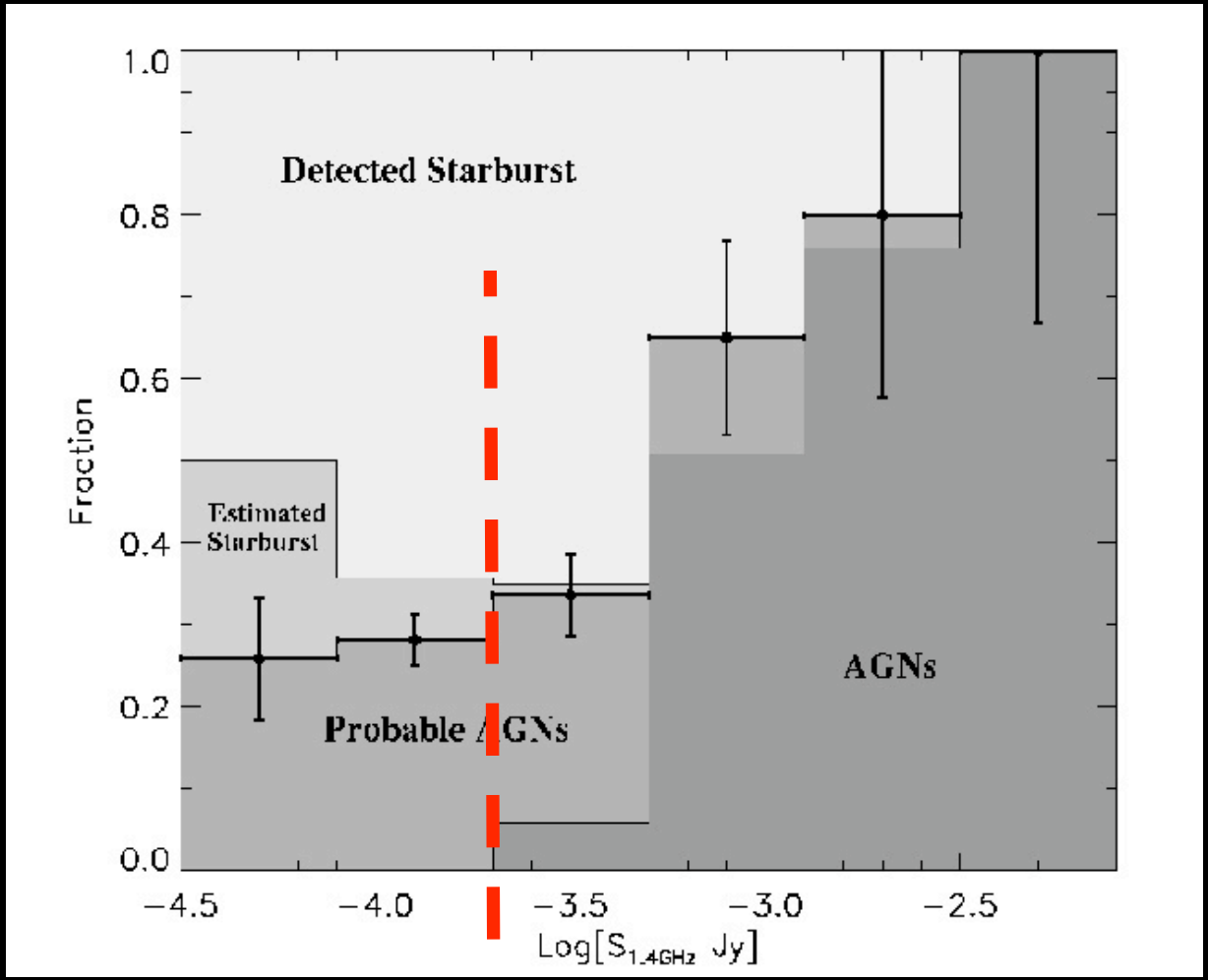


Ibar et al. 2007

AGN in sub-mJy radio population

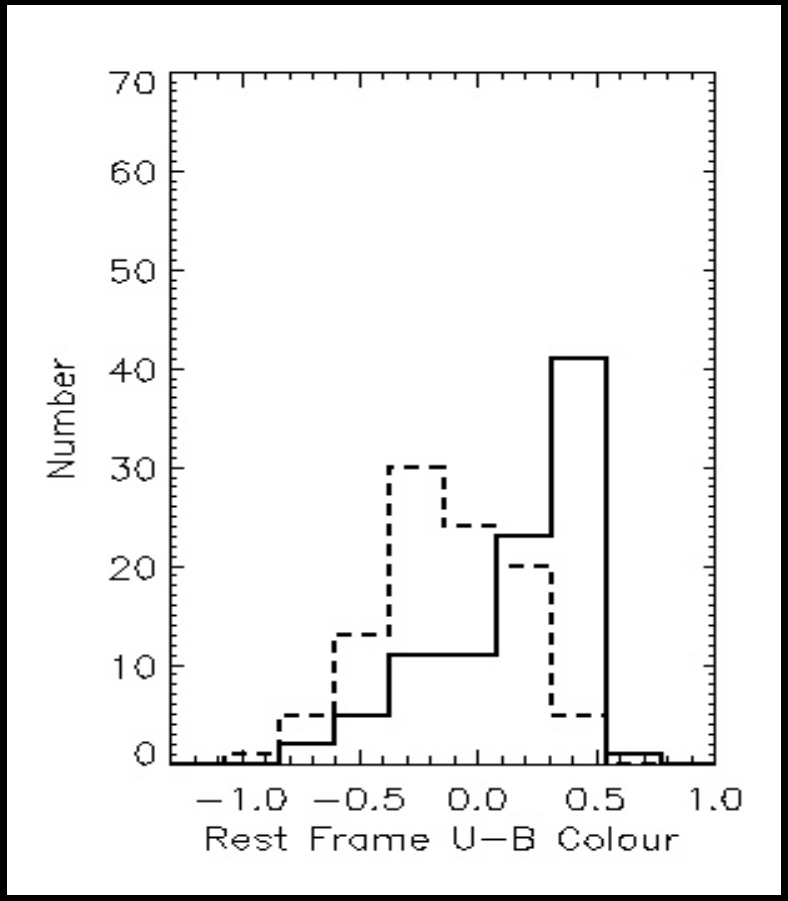
At $S_{1.4}$ = 200μJy

> 30% are AGN



Ibar et al. 2007

Multi-wavelength properties



Ibar et al. 2007

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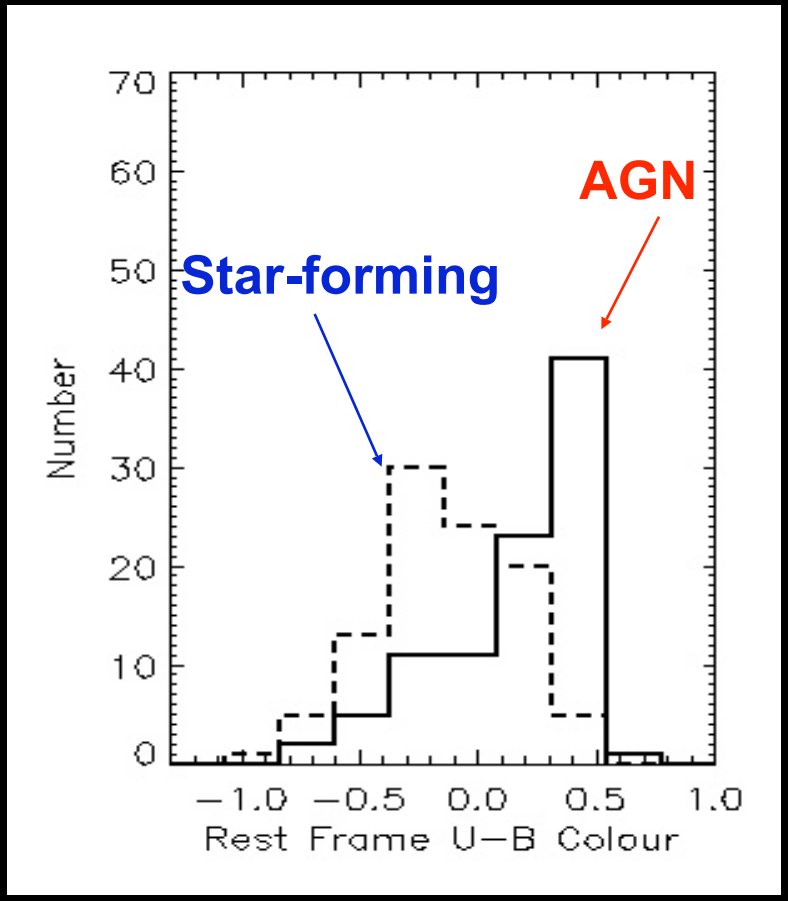

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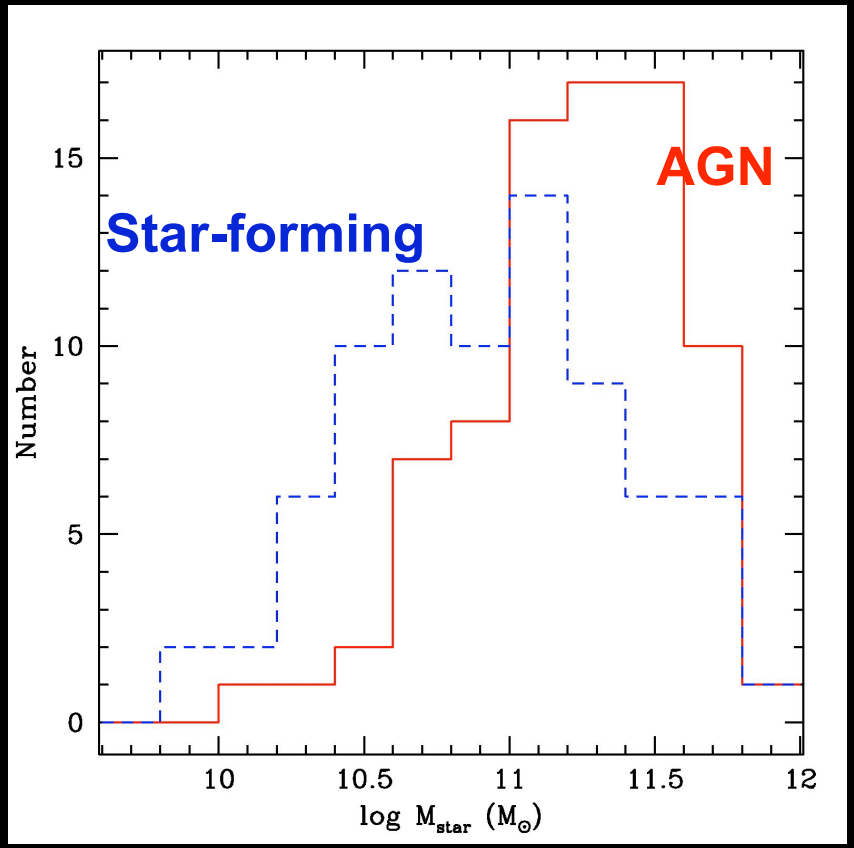

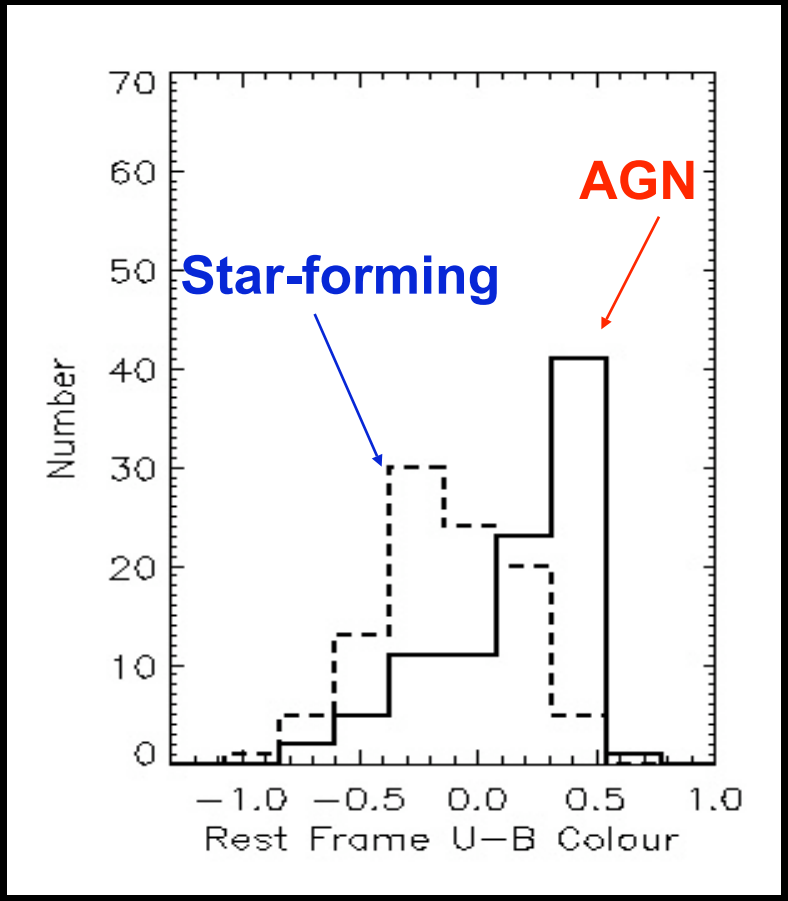

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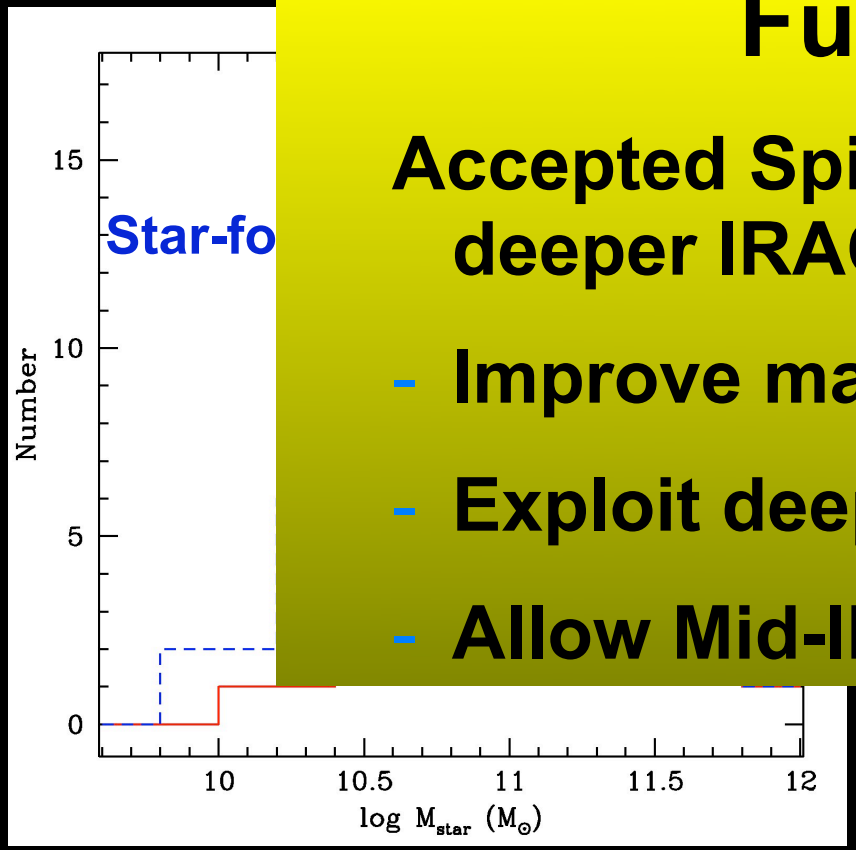
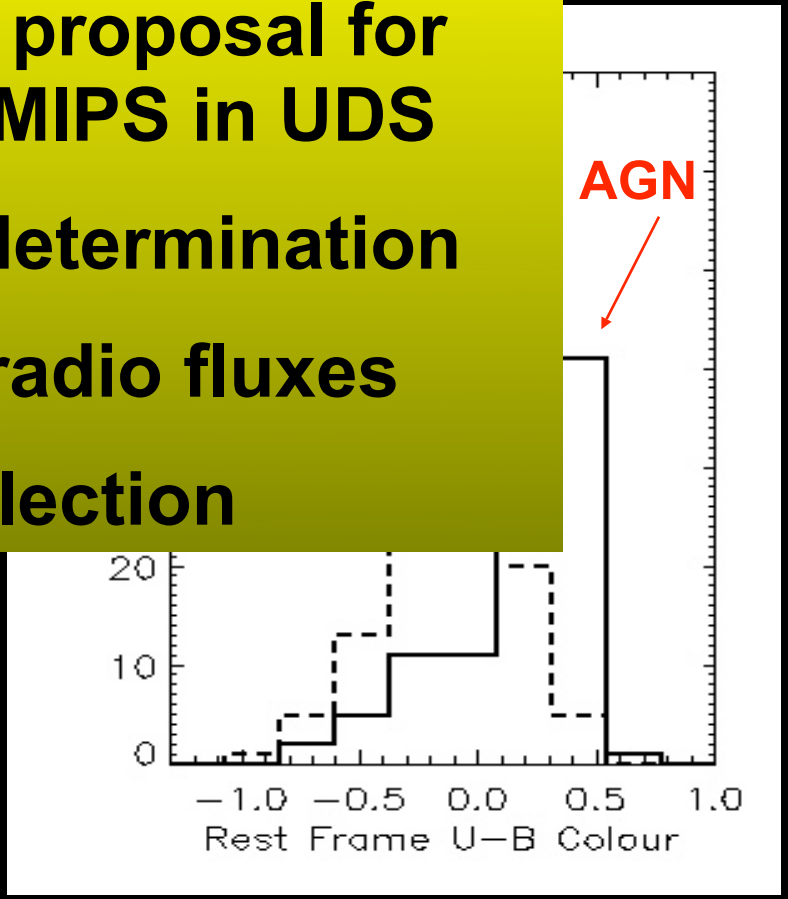
Multi-wavelength properties

Future

Accepted Spitzer proposal for deeper IRAC & MIPS in UDS

- **Improve mass determination**
- **Exploit deeper radio fluxes**
- **Allow Mid-IR selection**





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