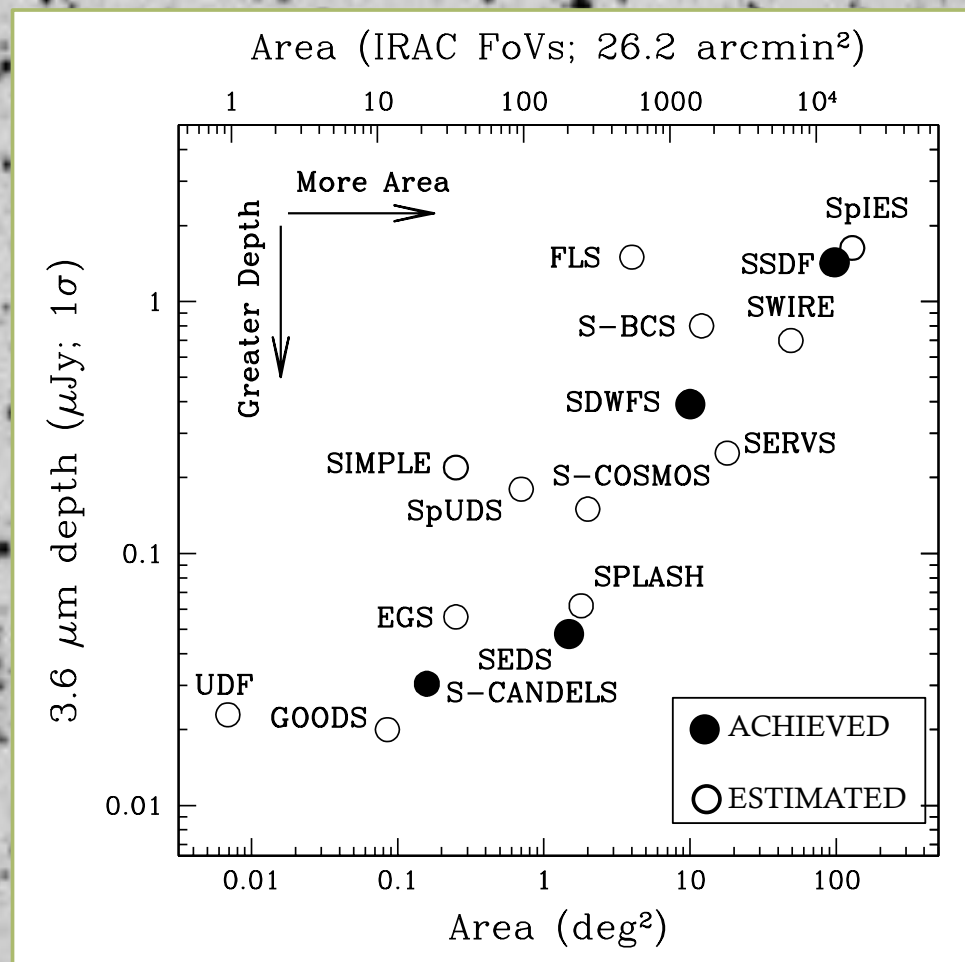


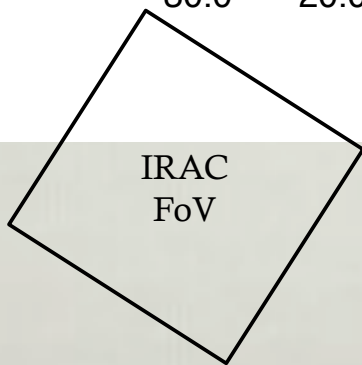
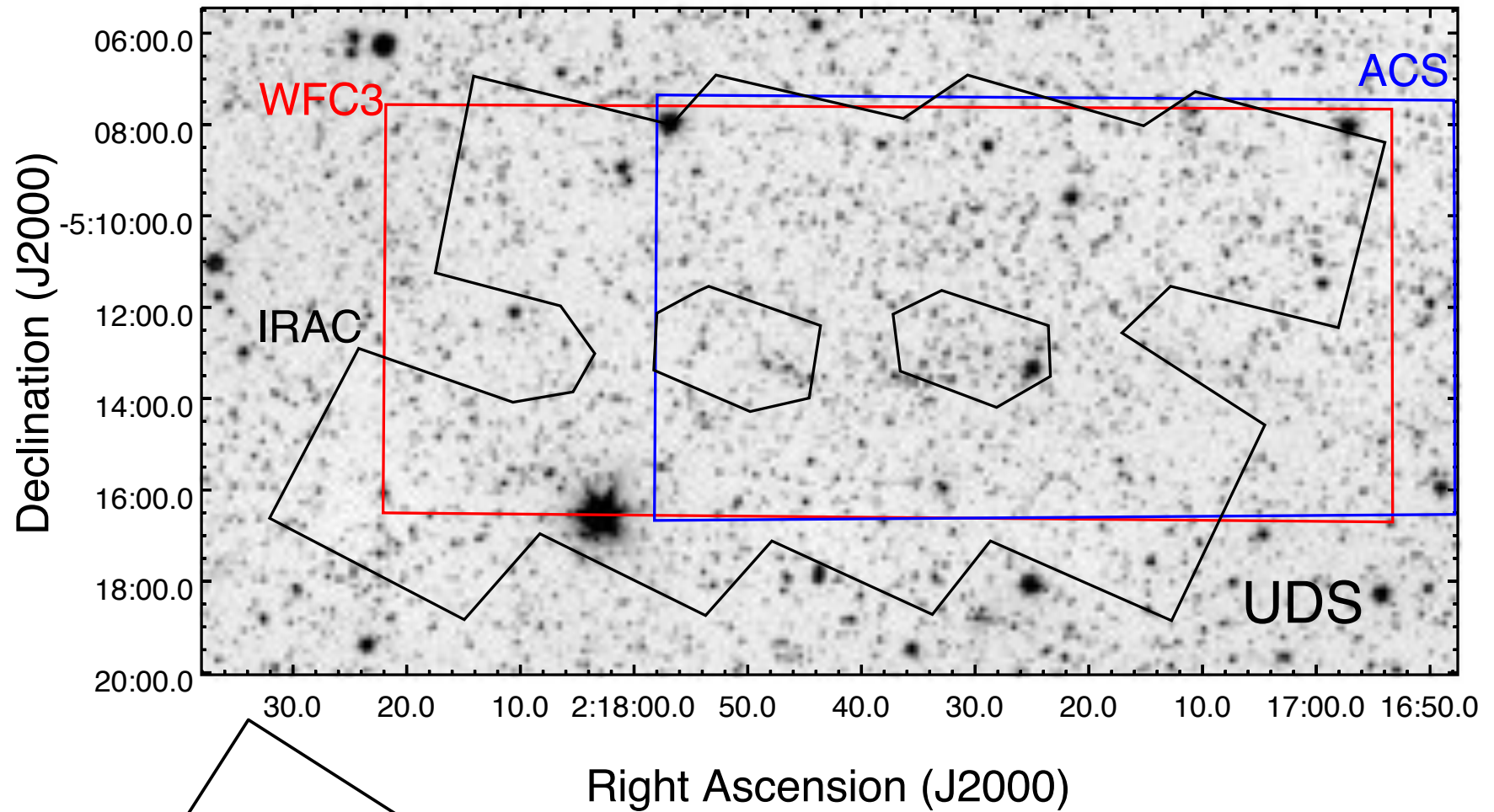


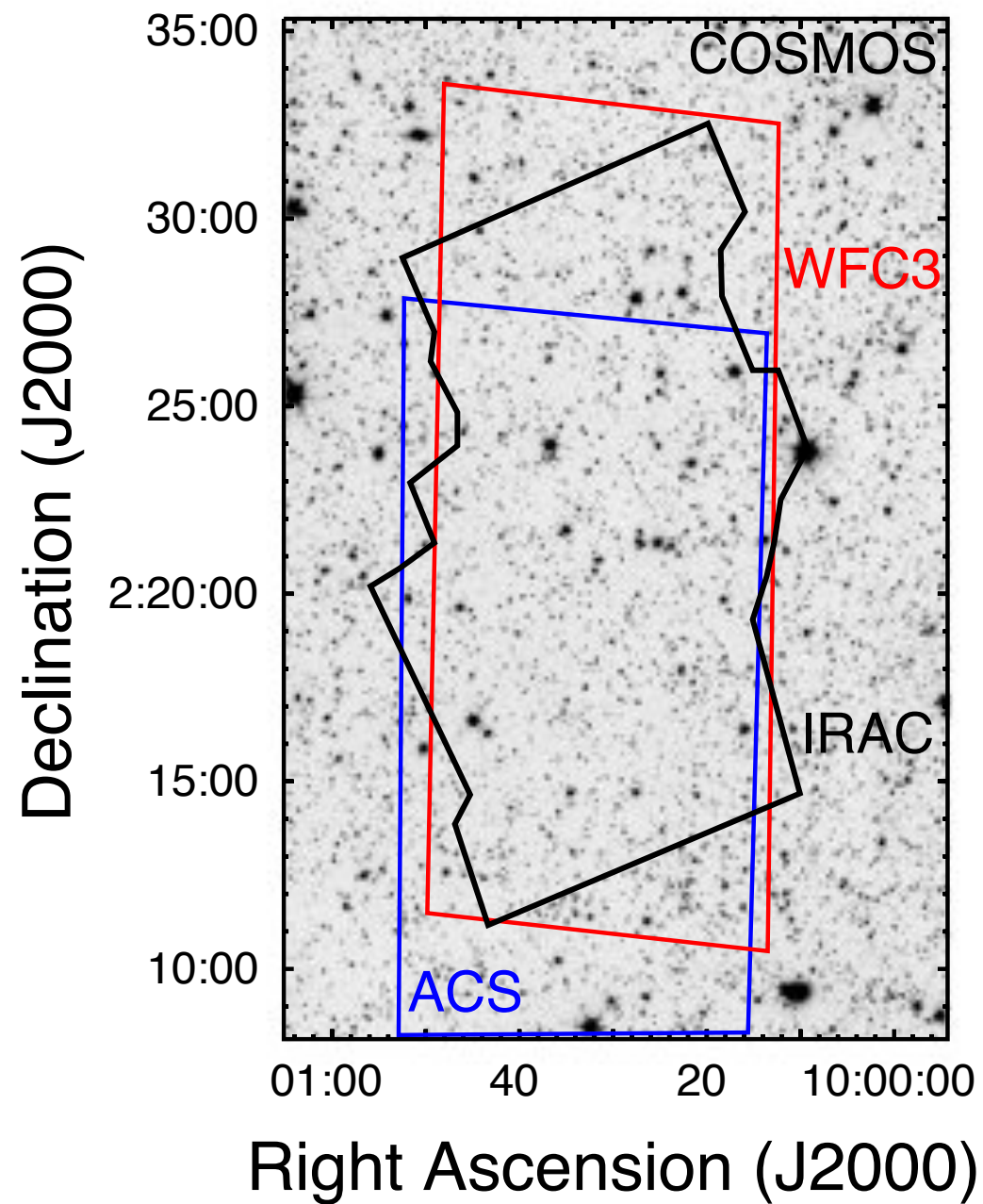
S-CANDELS Update

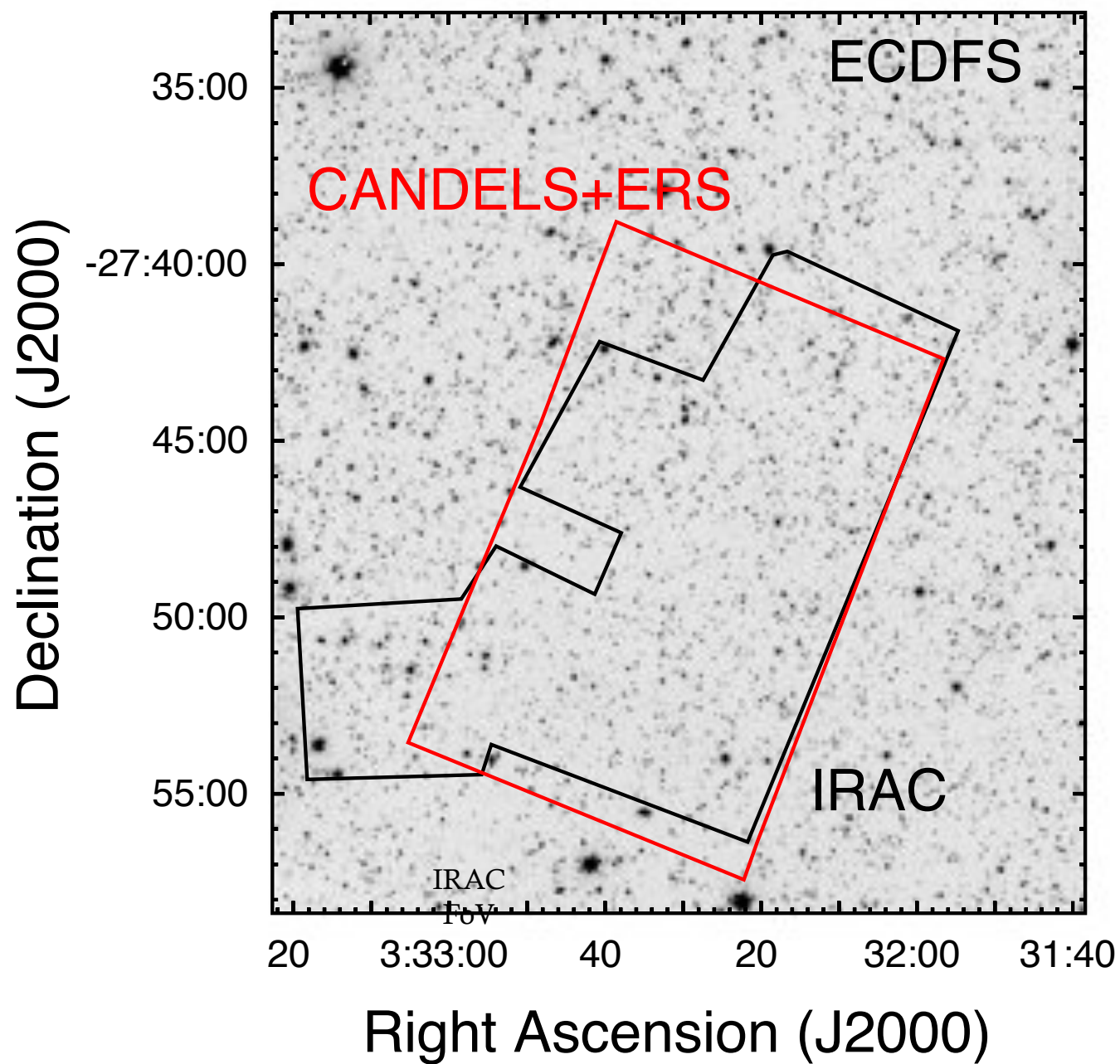


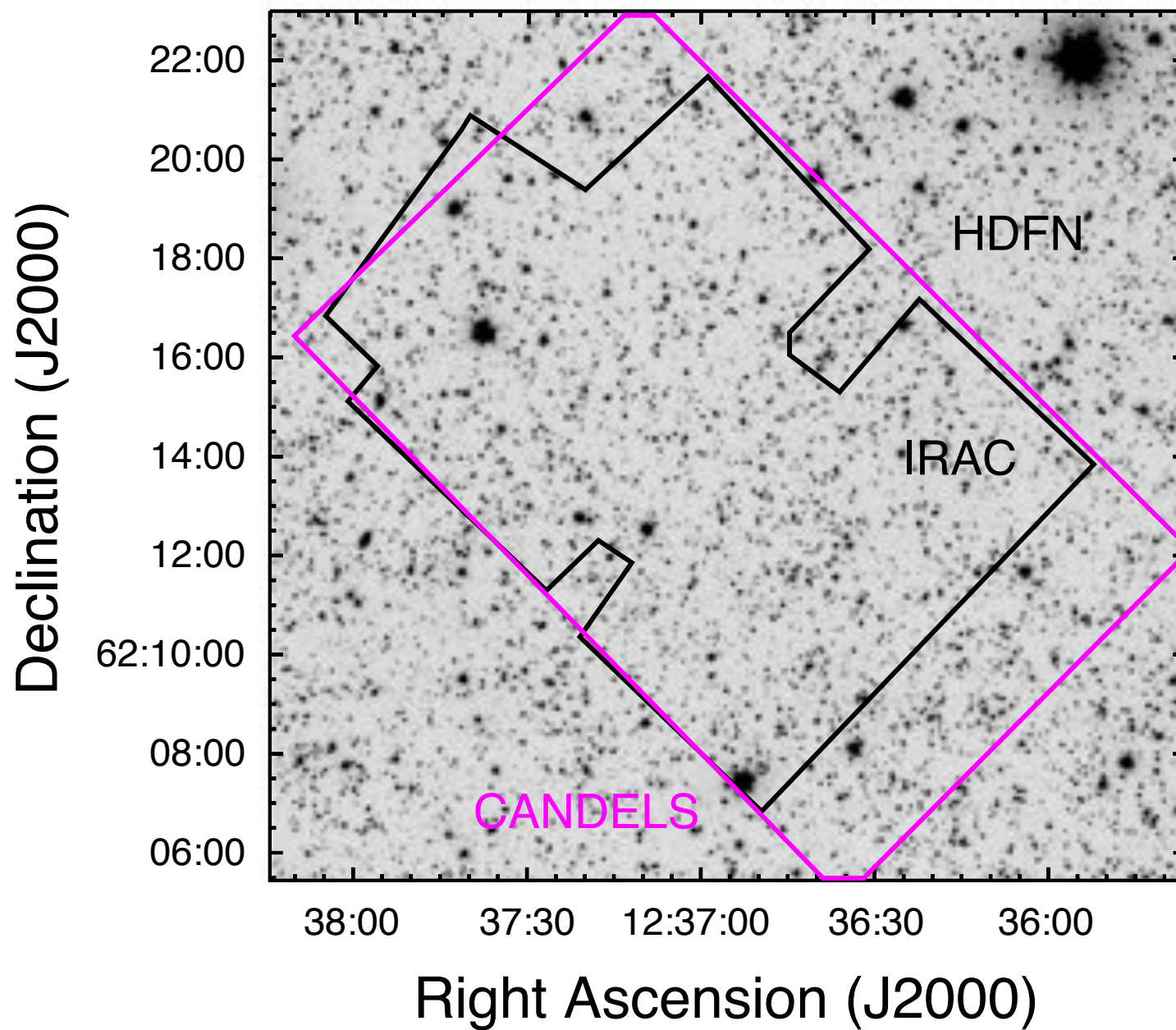
Ashby, Willner, Fazio (PI), Dunlop,
Egami, Faber, Ferguson, Grogin, Hora,
Huang, Koekemoer, Labbé, Wang





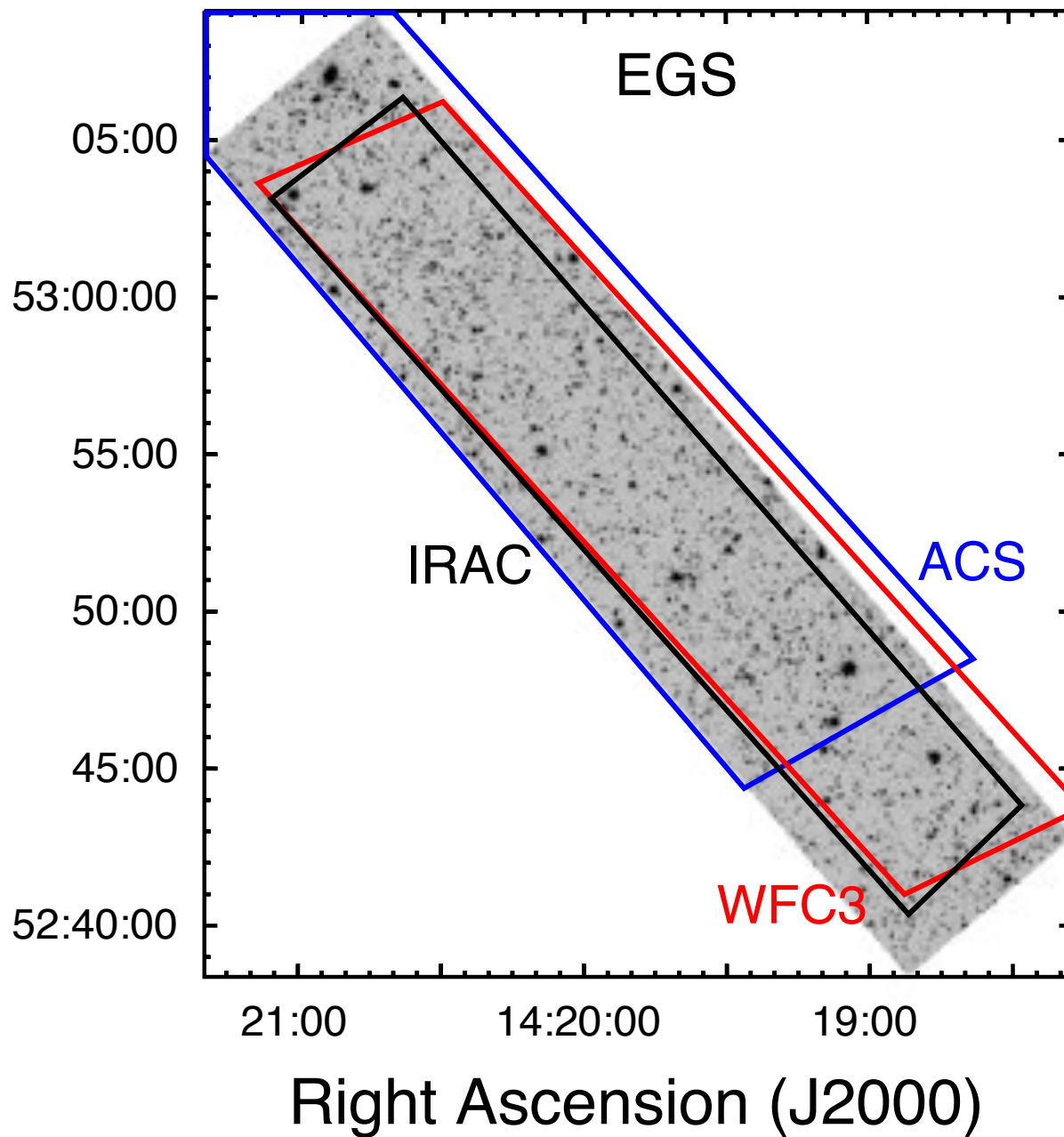






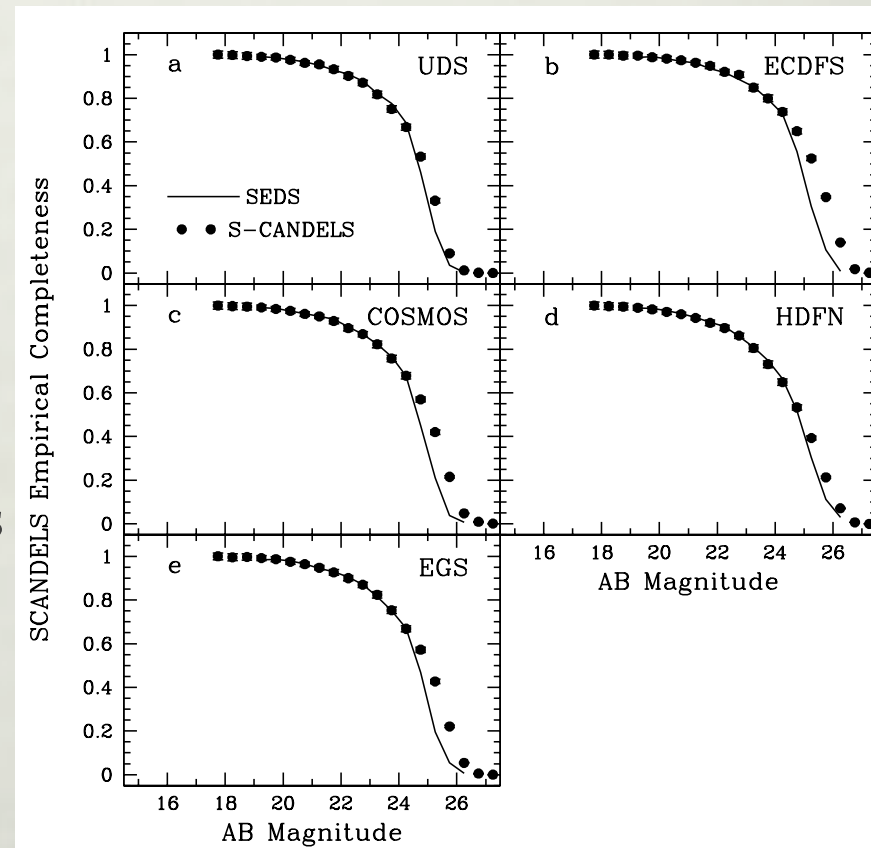


Declination (J2000)



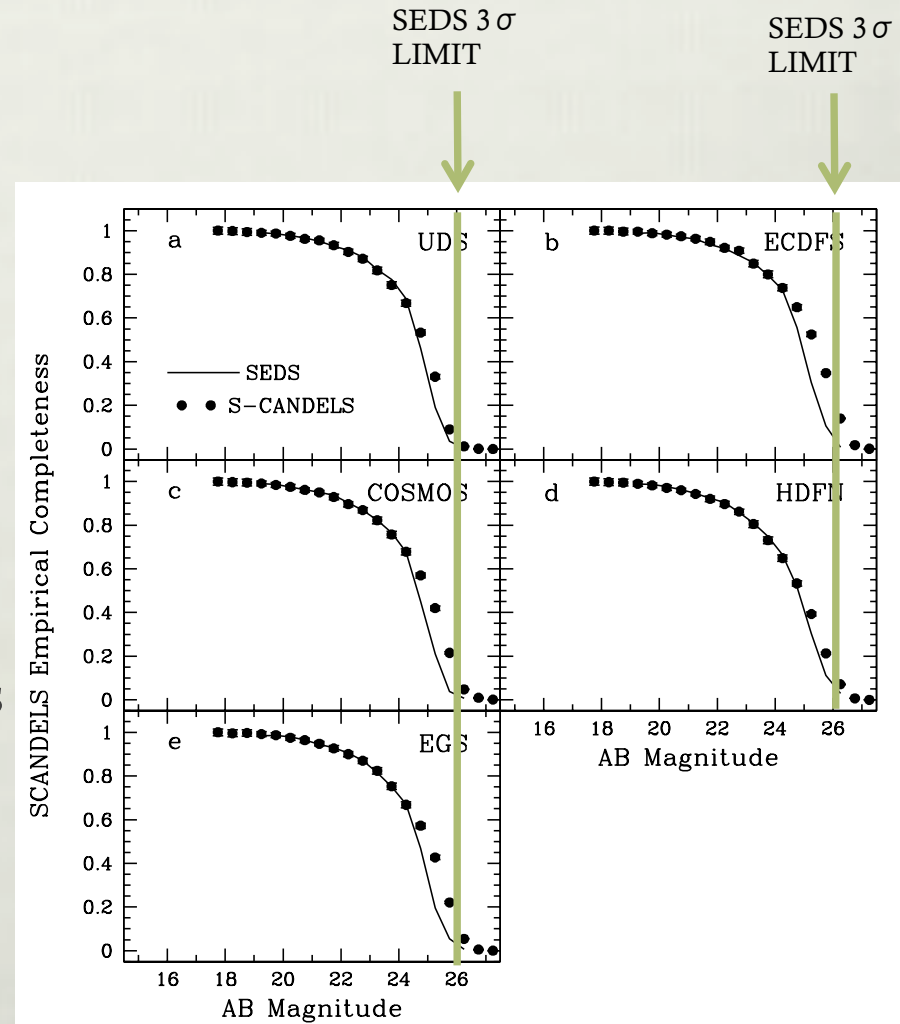
S-CANDELS is Confusion-Dominated

- ❖ No improvement over SEDS for $[3.6]=[4.5]<24$ mag
- ❖ But S-CANDELS detects more sources because it:
 - ❖ Has cleaner background
 - ❖ Separates blended sources
 - ❖ Finds fainter isolated sources

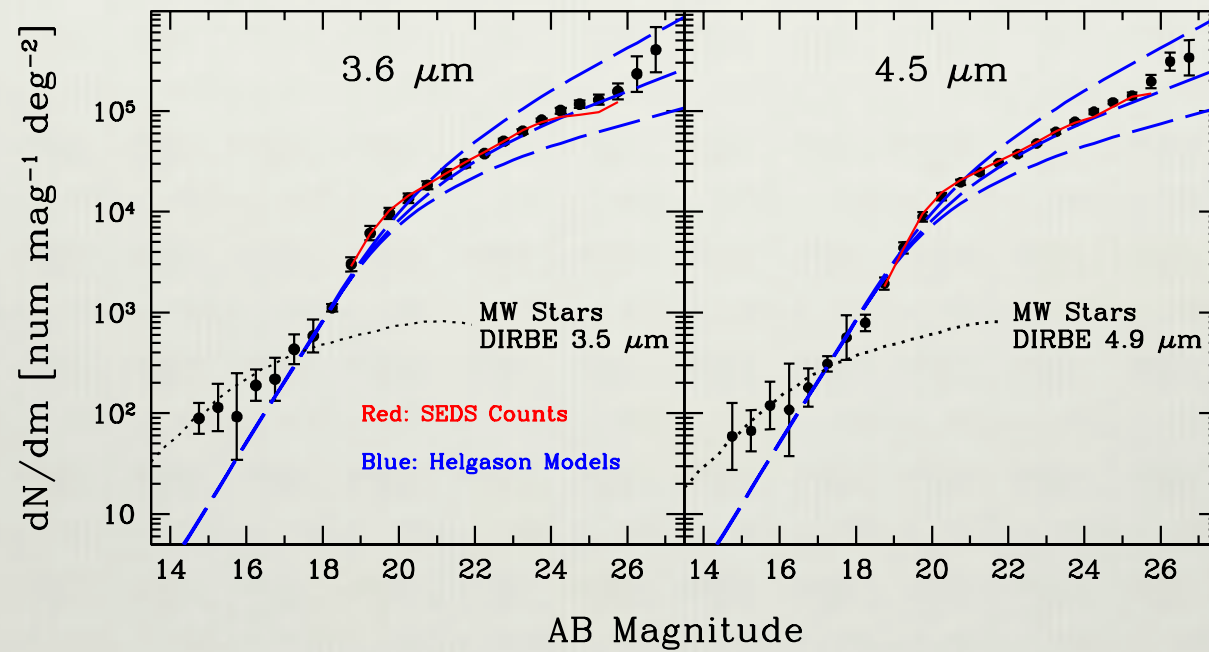


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S-CANDELS Reaches 26.5 AB mag



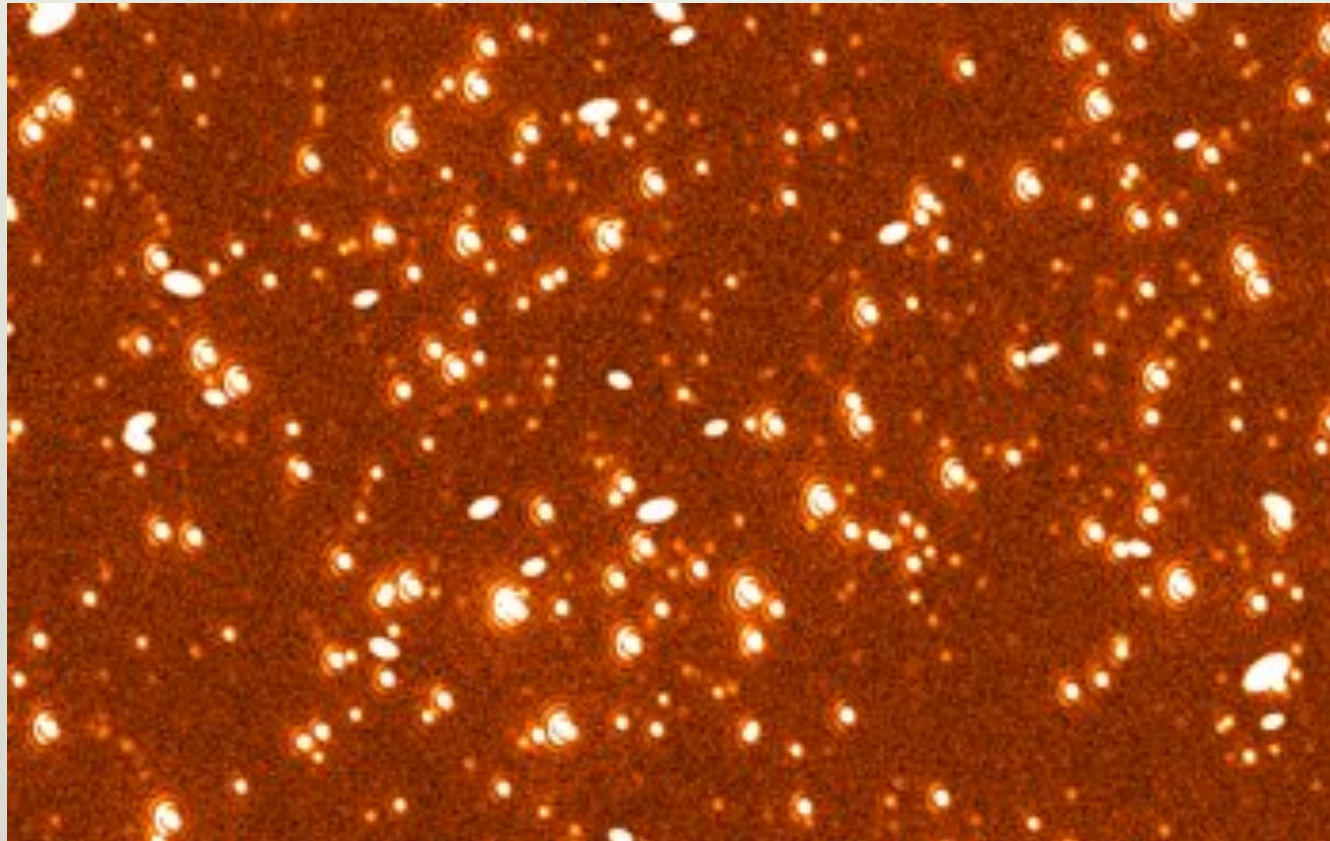
Be aware: S-CANDELS likely biased at faint magnitudes

Additional resolved CIB very small compared to SEDS:
total CIB remains $\sim 50\%$ of DIRBE estimate

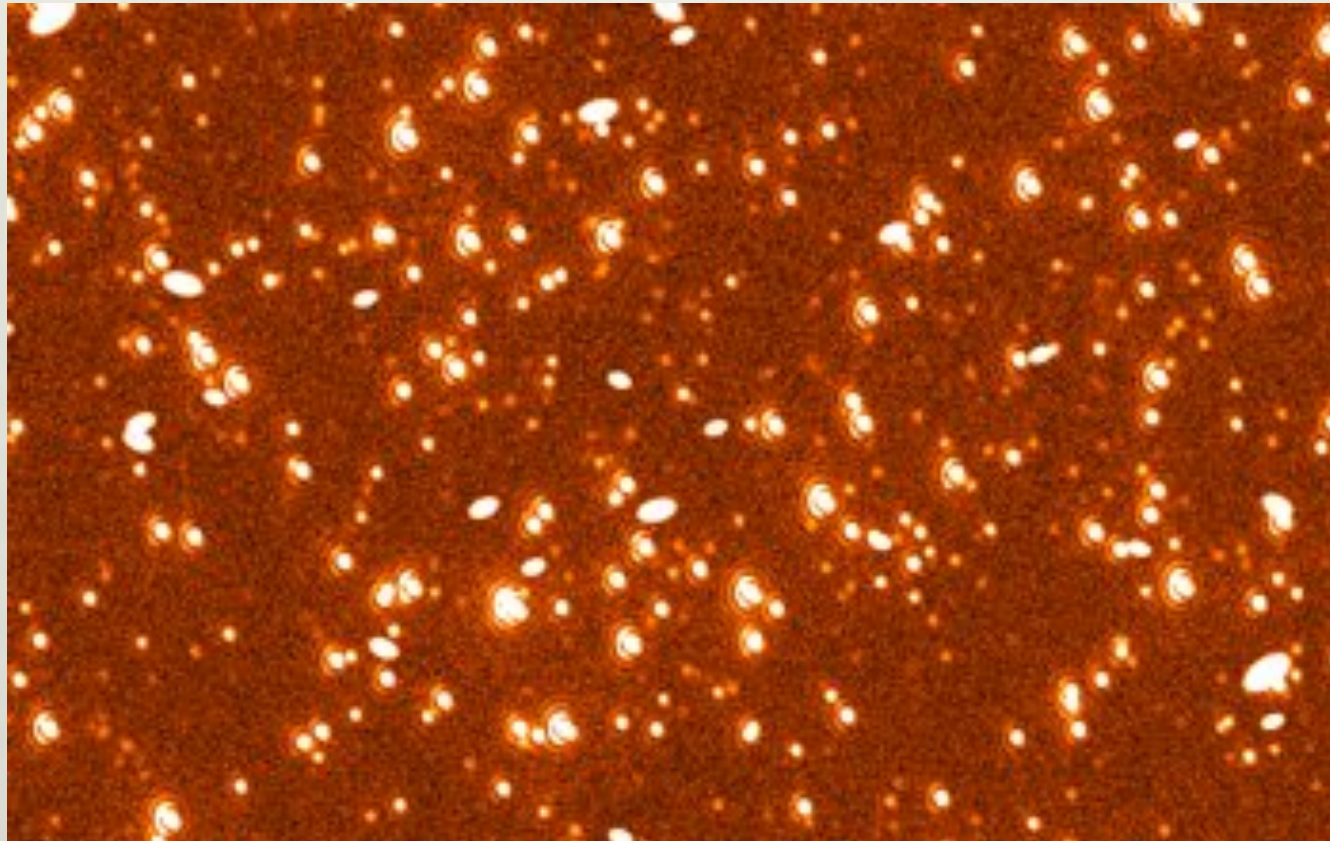
Implications for WISH Surveys

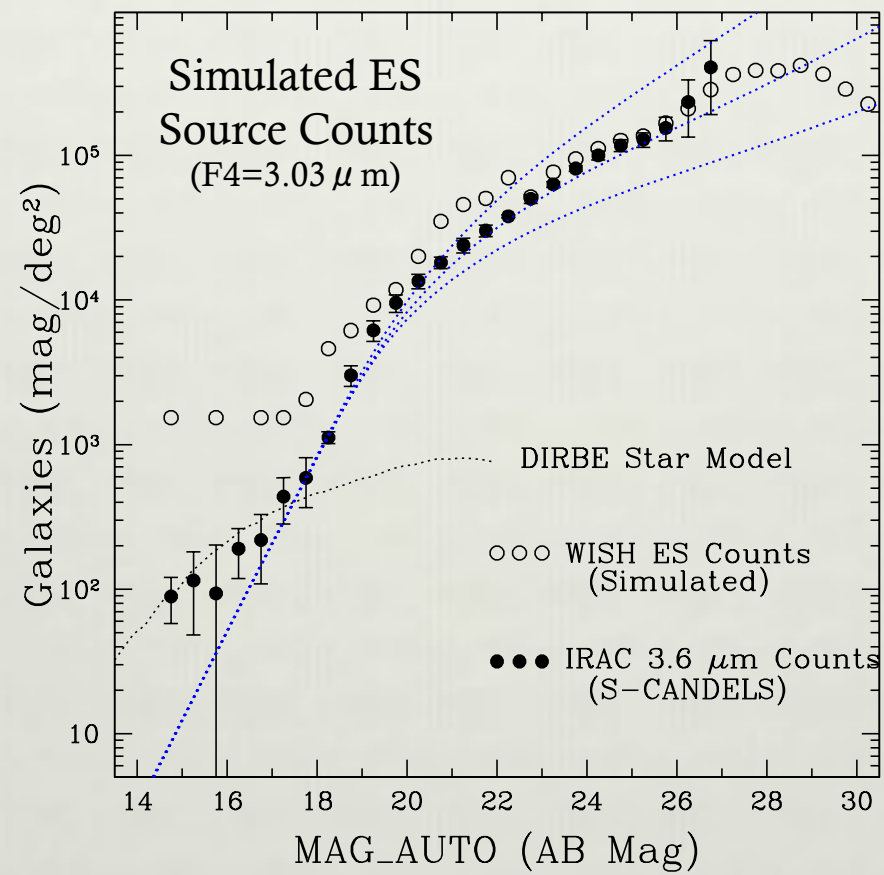
- ❖ Simulated WISH survey based on S-CANDELS
 - ❖ Milky Way stars inferred from DIRBE models
 - ❖ Galaxy counts extrapolated from deep IRAC imaging
 - ❖ PSFs appropriate to WISH (December 2013)
 - ❖ Measure incompleteness, confusion, etc in ‘template’ ES mosaic

Simulated WISH UDS



Simulated WISH UDS





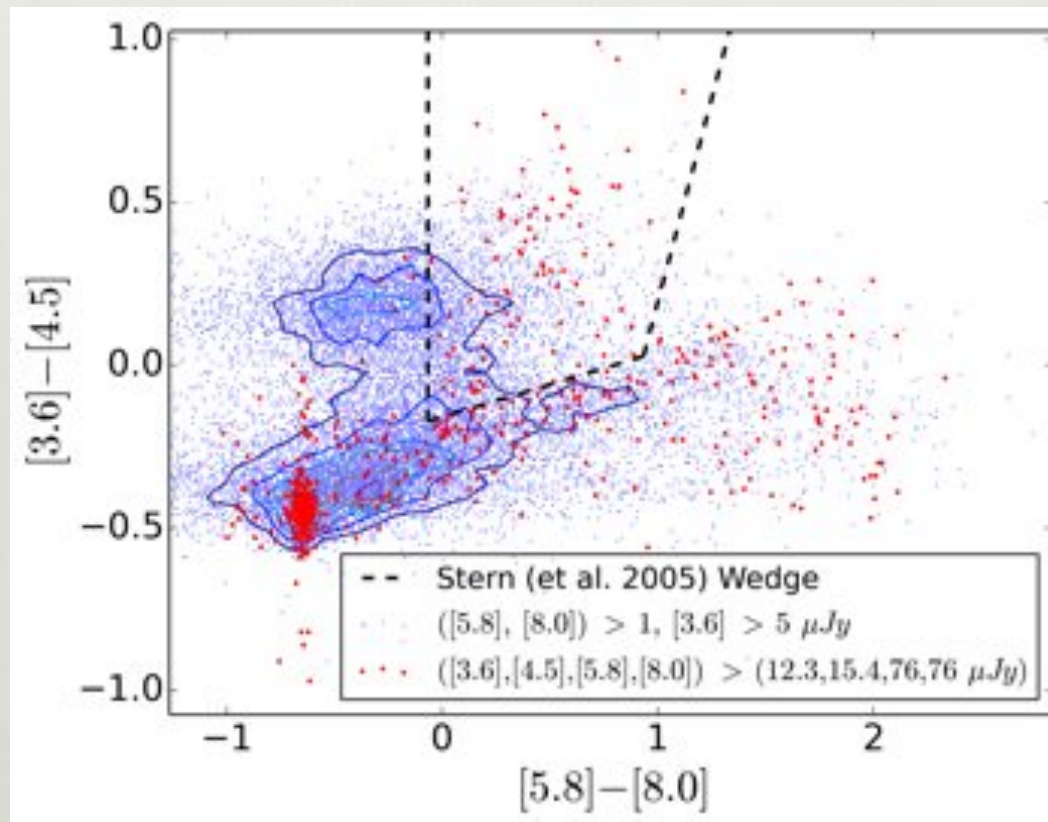
Implications for WISH Surveys

Survey	λ (μm)	Limit (5σ , AB)	Source Density (10^6 deg^{-2})	Confusion (beams/ source)
SEDS	3.6	25.5	0.2	30--40
S-CANDELS	3.6	26.0	0.3	20--28
UDS F3	2.3	28.0	1.1	150--200
UDS F4	3.0	28.0	1.1	90--120
UDS-II F5	4.0	28.0	1.1	50--70
ES F3	2.3	29.5	1.6	100--140
ES F4	3.0	29.5	1.6	60--80

'Extreme' IRAC Galaxies

Peter Senchyna

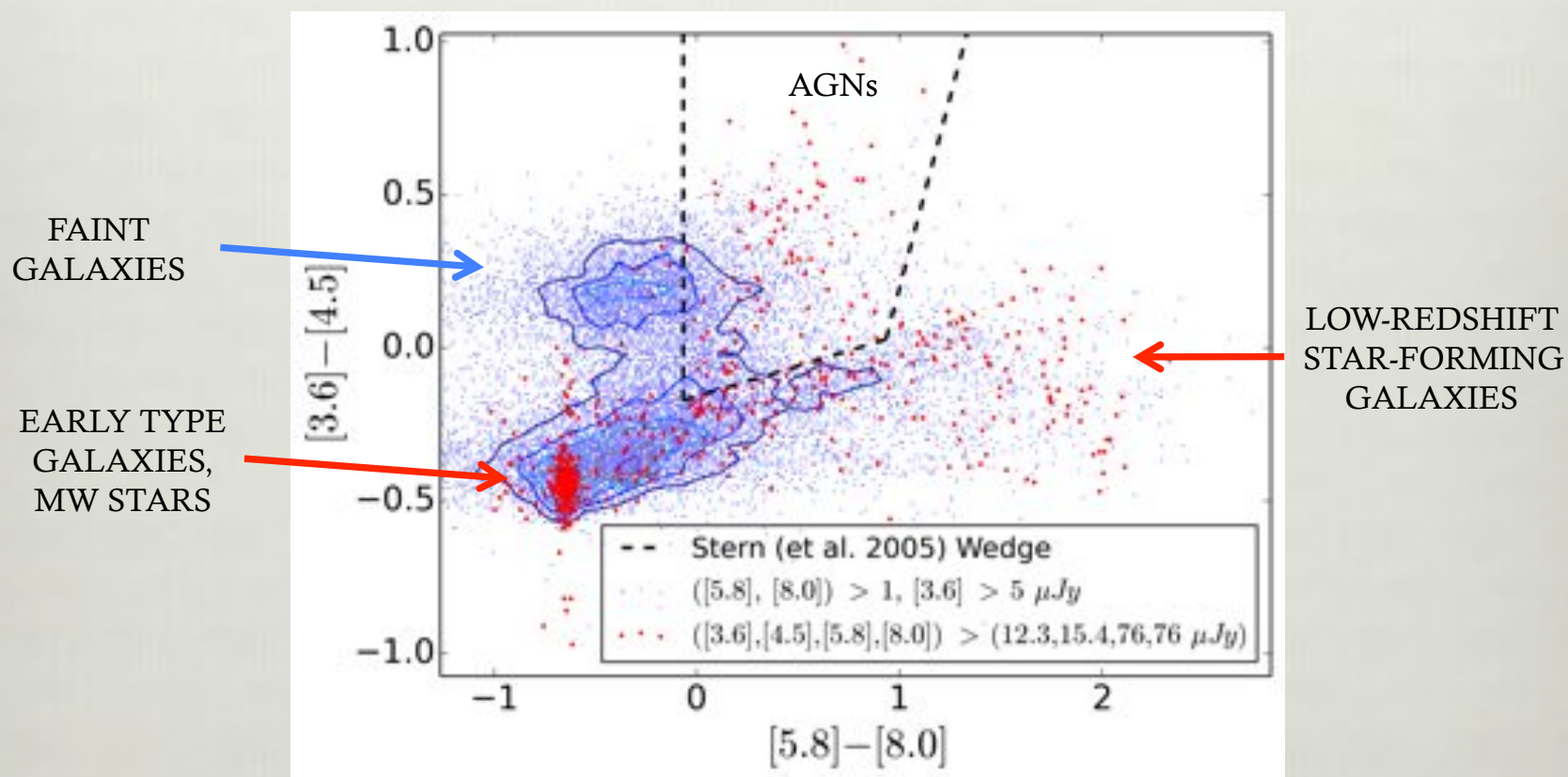
Univ. Washington Advisor: J. Dalcanton



'Extreme' IRAC Galaxies

Peter Senchyna

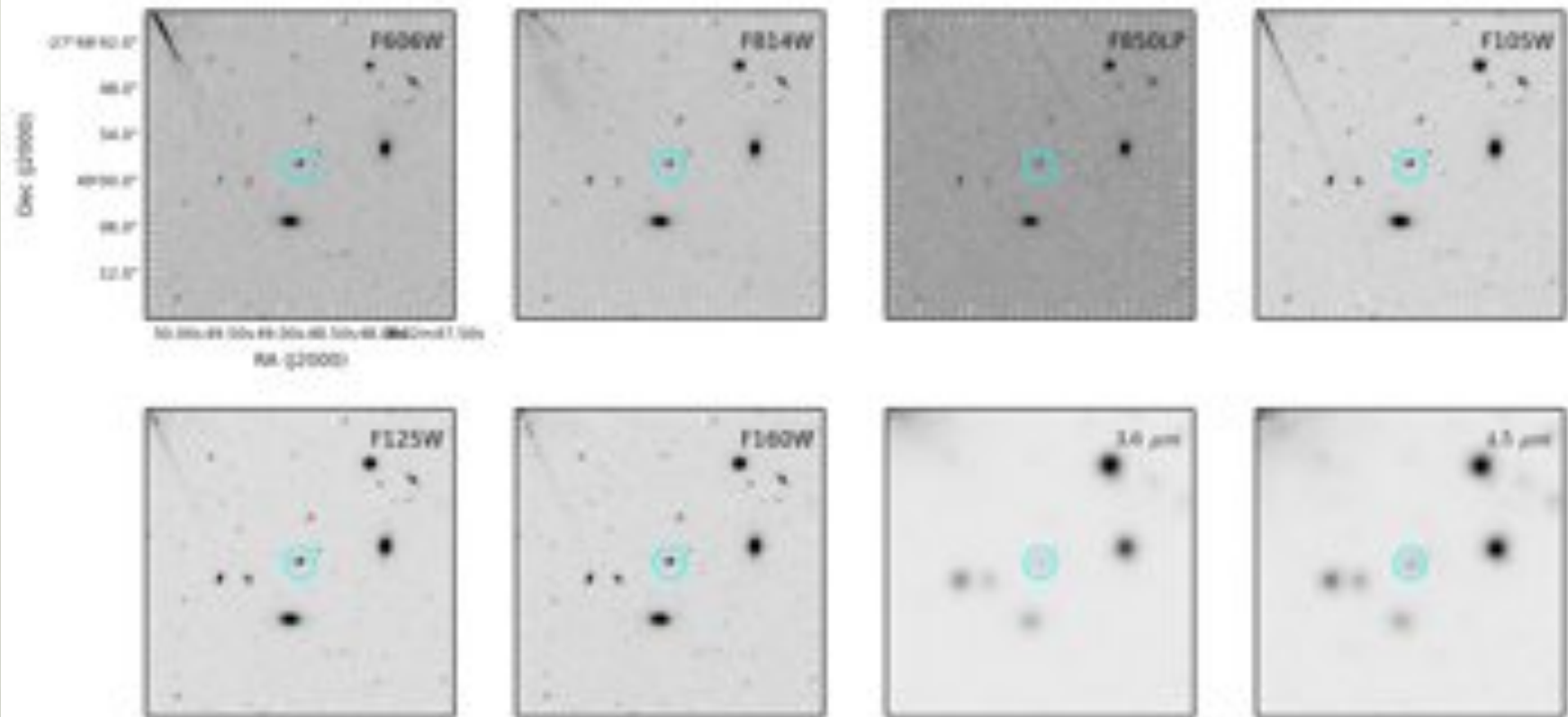
UW Advisor: J. Dalcanton



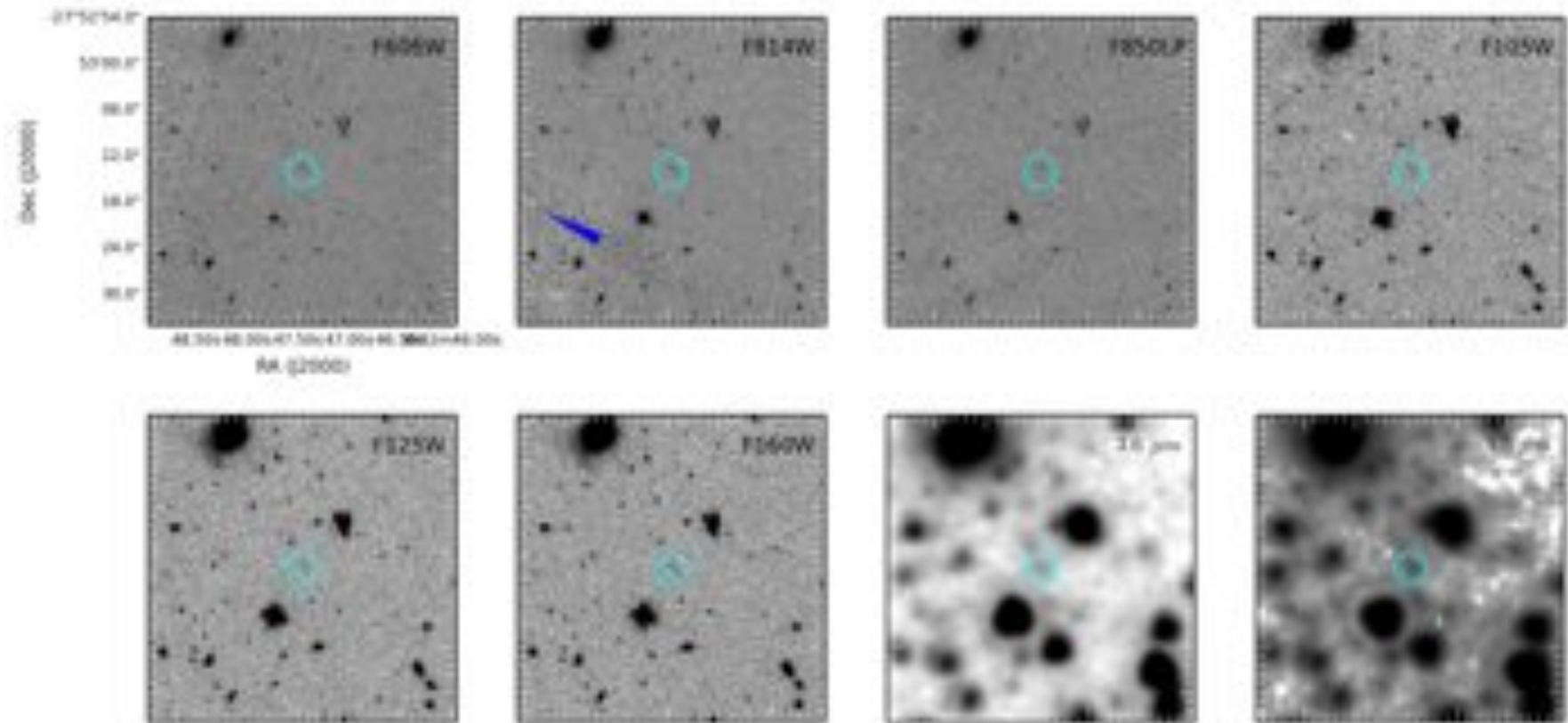
Selecting Extreme IRAC Galaxies

- ❖ Began with IRAC color cut: $[3.6]-[4.5]>0$
- ❖ Avoided mosaics' edges, low-coverage areas
- ❖ Constructed two samples:
 - ❖ 'HST-matched': only 1 F160W object within 1"
 - ❖ 'Unmatched': no F160W detections within 2"
 - ❖ Measured aperture photometry identically for both samples – hundreds of sources in UDS, ECDFS

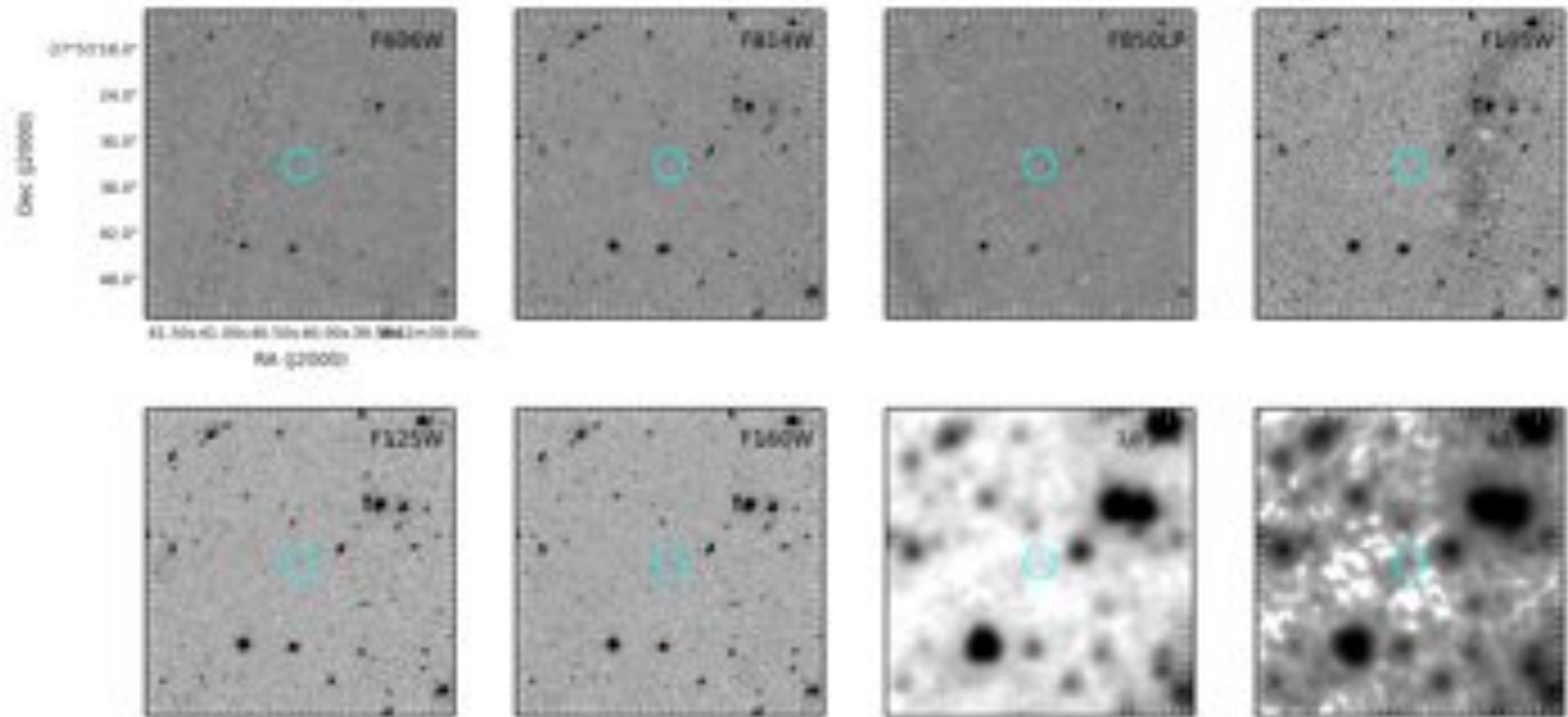
An ‘HST-Matched’ Galaxy



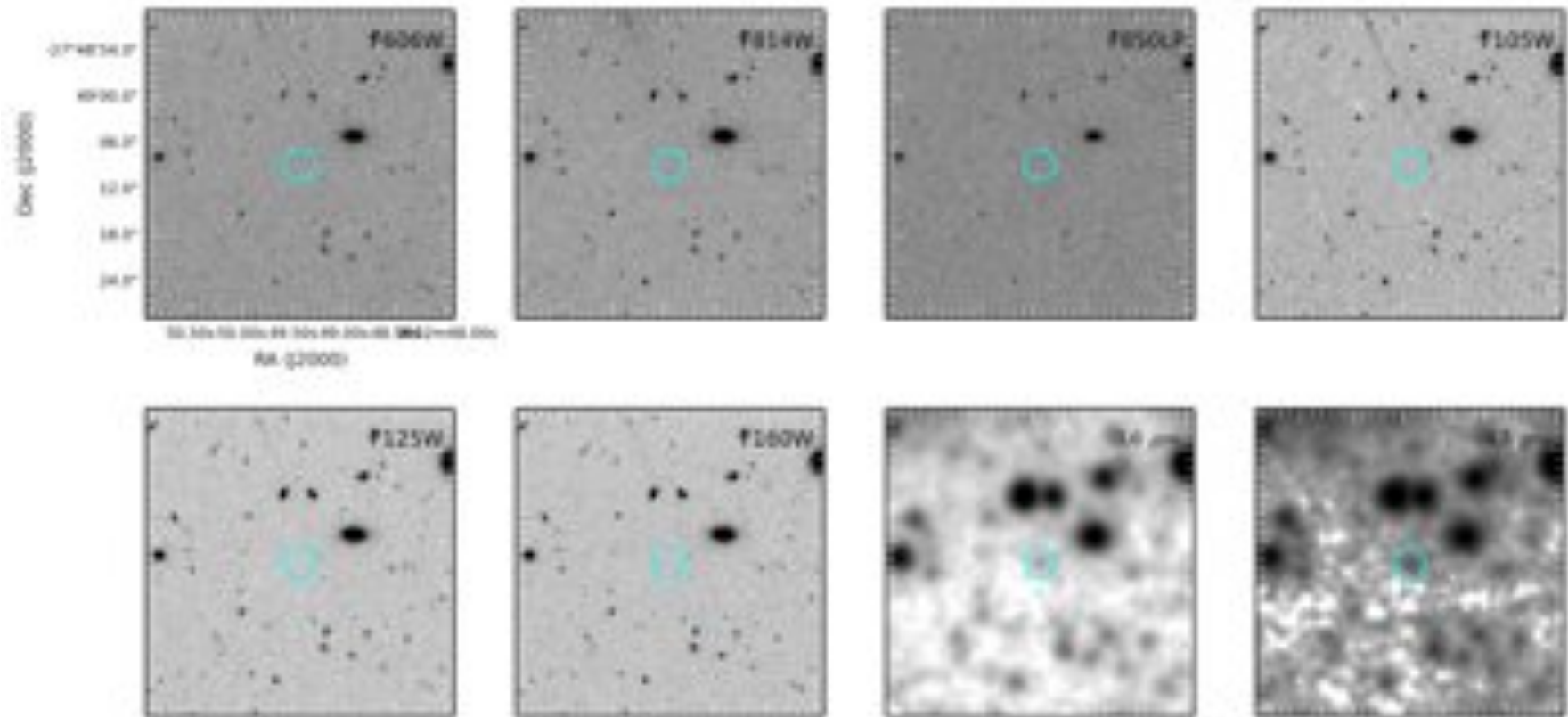
HST-‘Unmatched’ Galaxy. A Fluffy One.



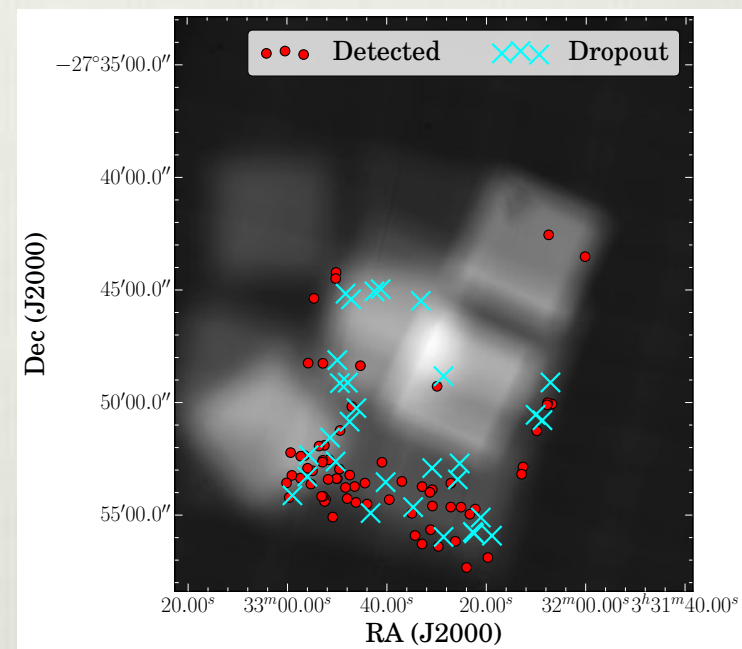
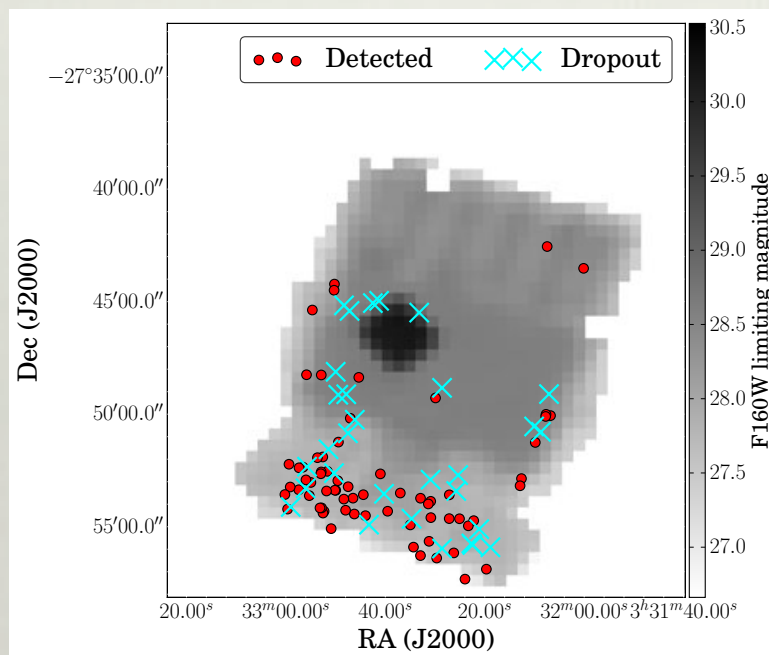
‘HST-Unmatched’ Galaxy. A Speck.



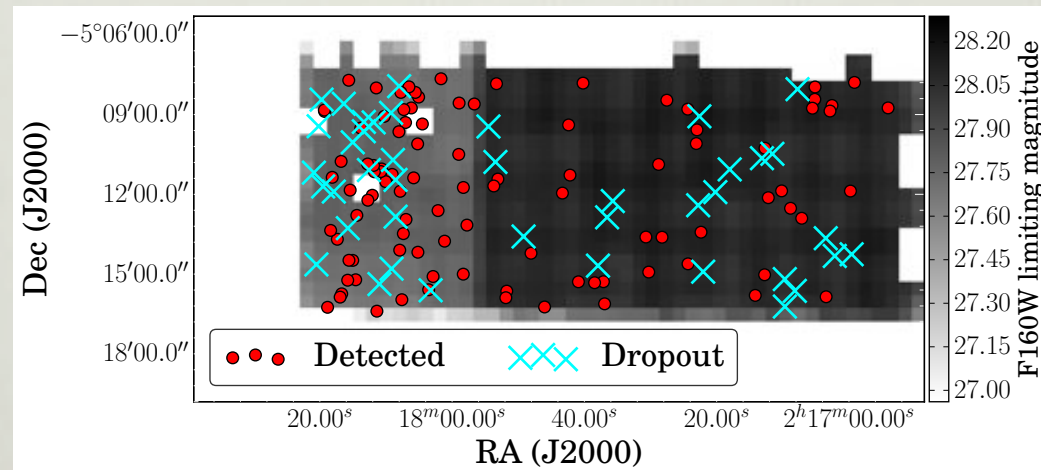
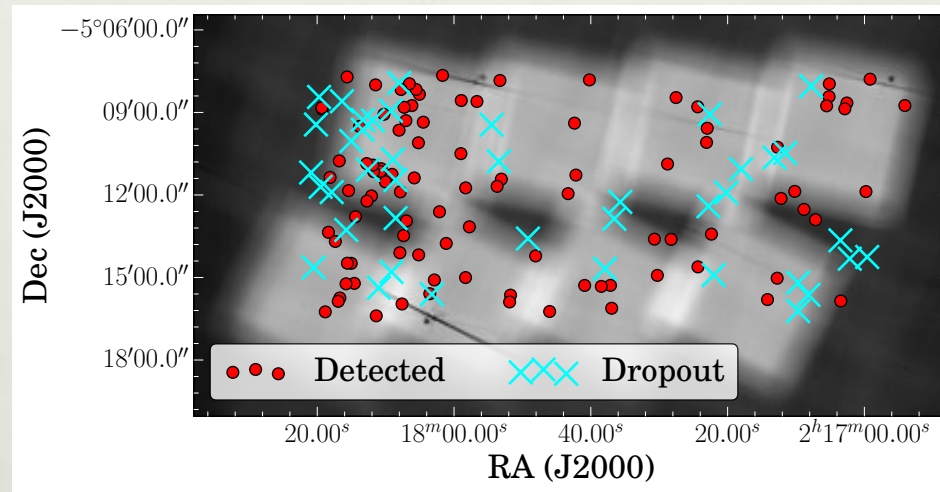
Nothing Apparent in any HST Band



(S-)CANDELS Coverage Maps: ECDFS



(S-)CANDELS Coverage Maps: UDS



Summary

S-CANDELS is complete; data soon to be public

S-CANDELS is revealing hundreds of new sources:

- ~2/3: Faint, extended sources at $z=2-3$
- ~1/3: Fainter, unresolved sources
- a few detected *only* by IRAC (...so far)

→ Many distant sources for WISH to find

→ WISH ES will have to cope with confusion
(at least in some bands)