

# Decomposing the Morphologies of AGN Hosts

Victoria Bruce

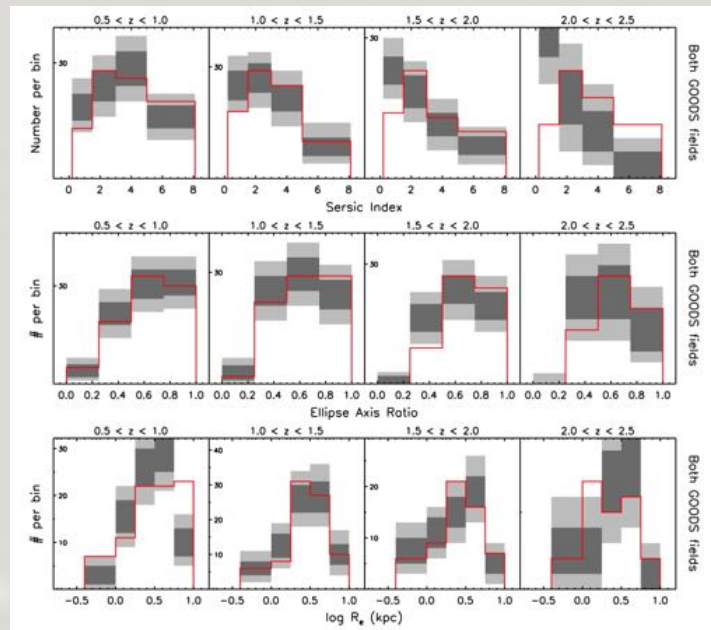
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Collaborators: Jim Dunlop & the CANDELS team



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# AGN Host Morphology Studies



Are AGN hosts better modeled with an additional central point source component ?

Rosario et al. 2015

- Near-IR and optical data for morphological decompositions: CANDELS-GOODSS in WFC3+ACS and accompanying ground  $U_{\text{CTIO}}$  to  $K_{\text{s ISAAC}}$  with IRAC 3.6 to  $8\mu\text{m}$ .
- AGN catalogue : 4Ms Chandra Hsu et al. 2014

## Mass Matching:

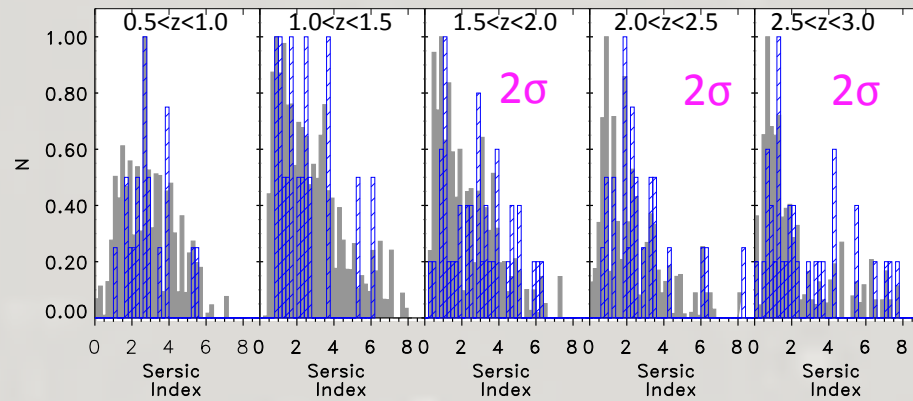
- Binned in 0.5 redshift bins
- 1000 bootstrap samples
- Median of samples within each property bin

## Morphological Decompositions:

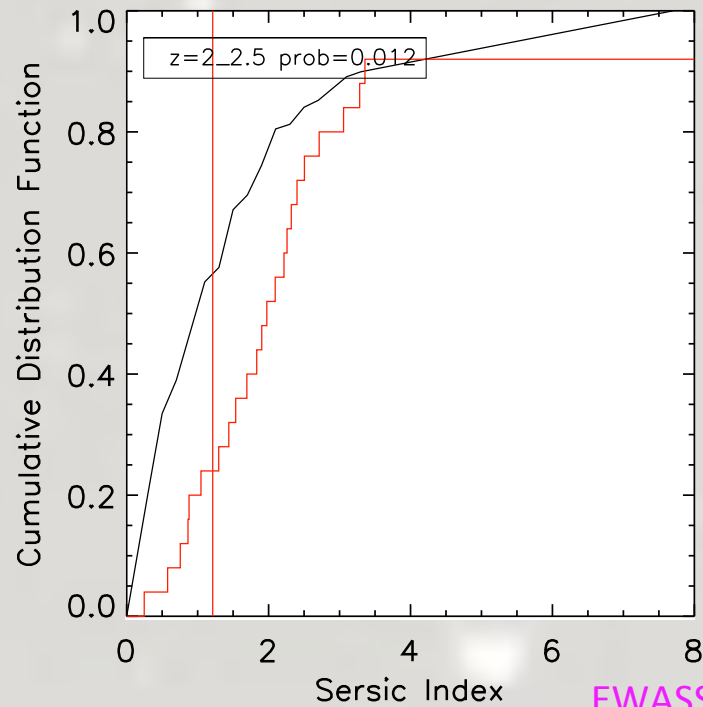
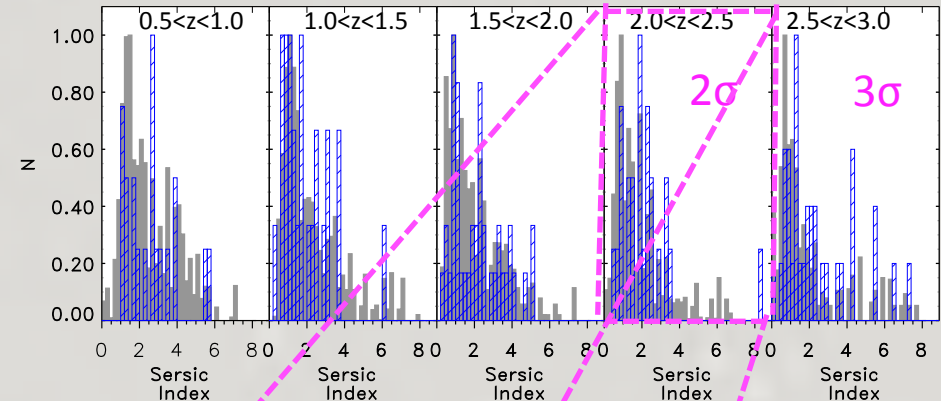
- Follows Bruce et al. 2012 & 2014a
- Bulge  $n=4$  + Disk  $n=1$  + PSF
- H band decompositions extended to ACS
- Uncertainties: light fractions 10%, sizes 20%

# Single Sérsic Fits

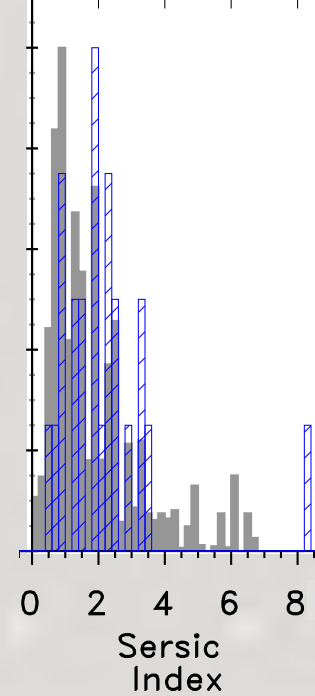
single Sérsic only



single Sérsic + point source

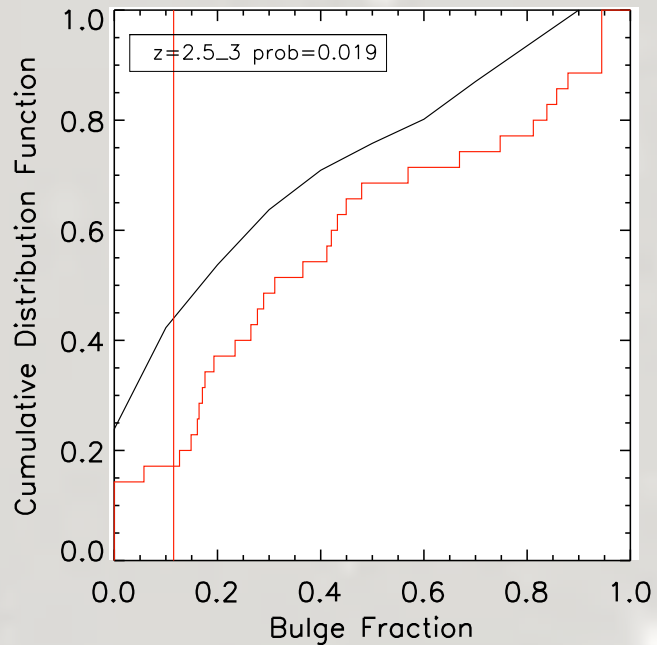
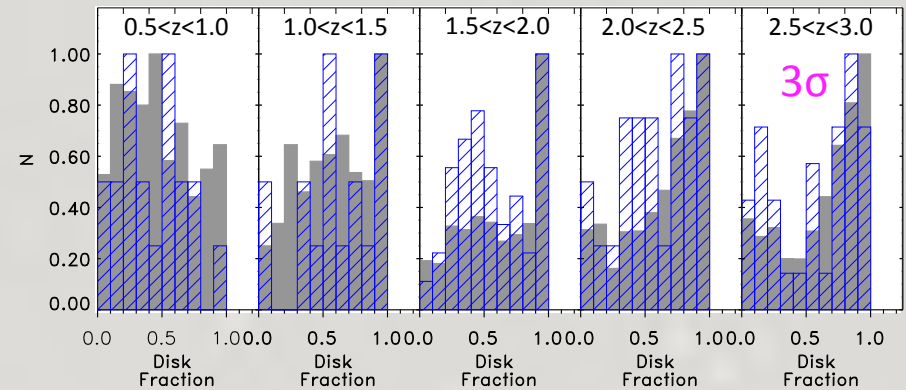
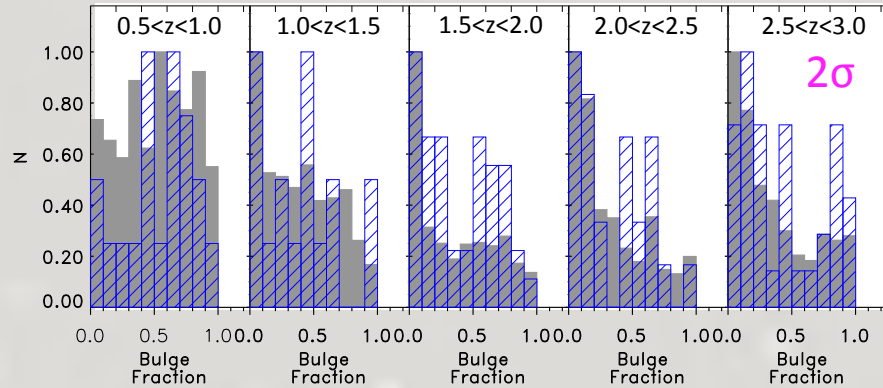


EWASS 2015



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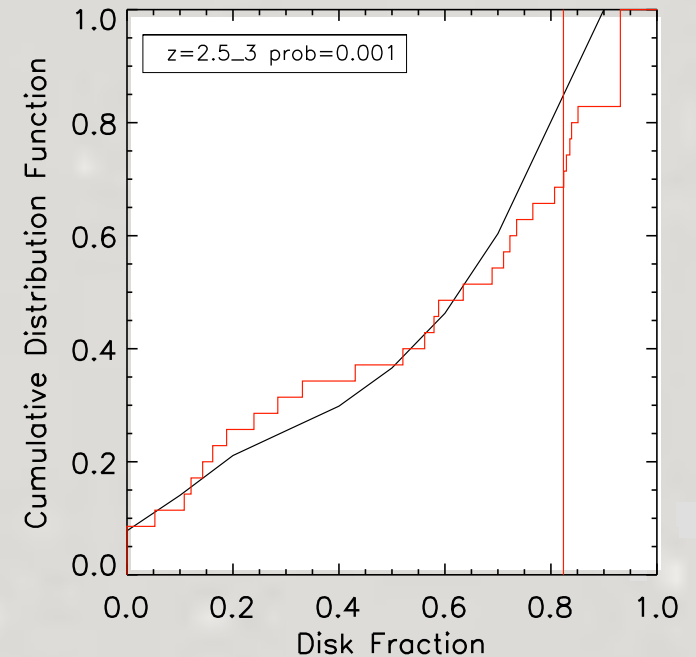
# Multiple Sérsic Fits



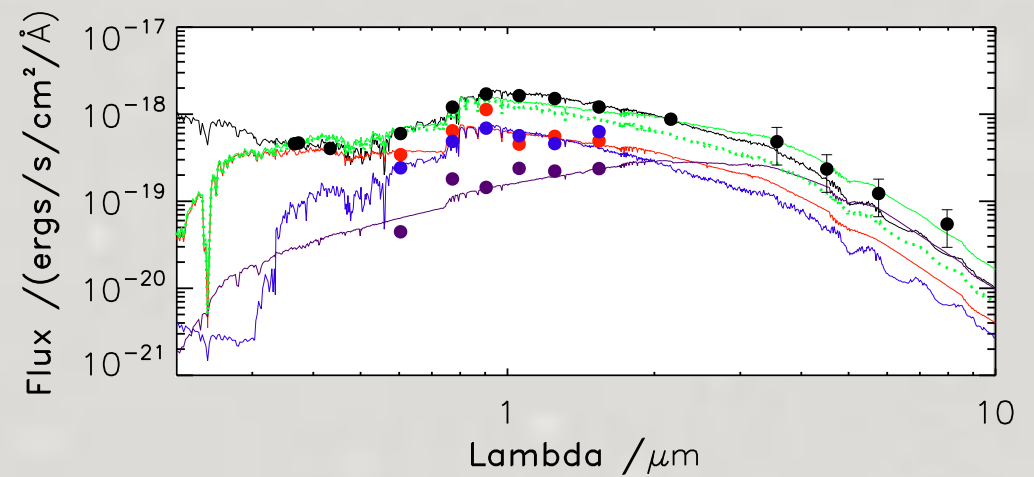
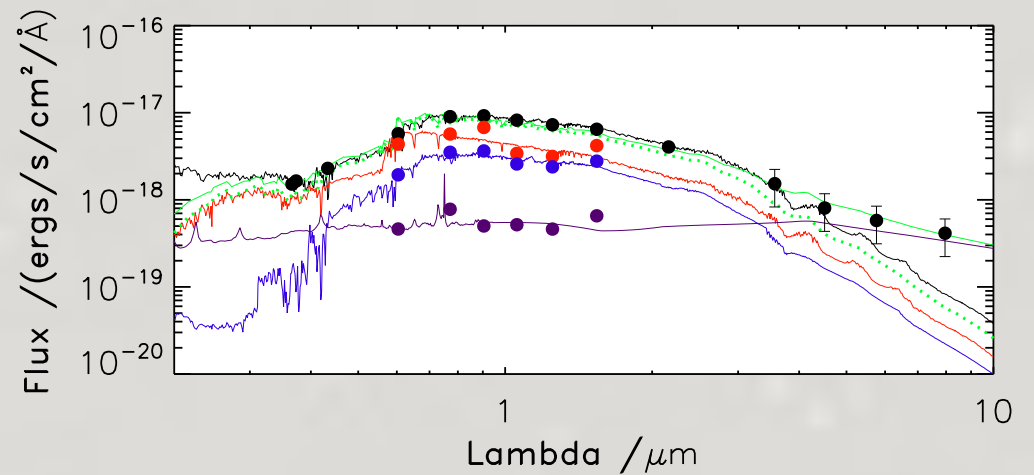
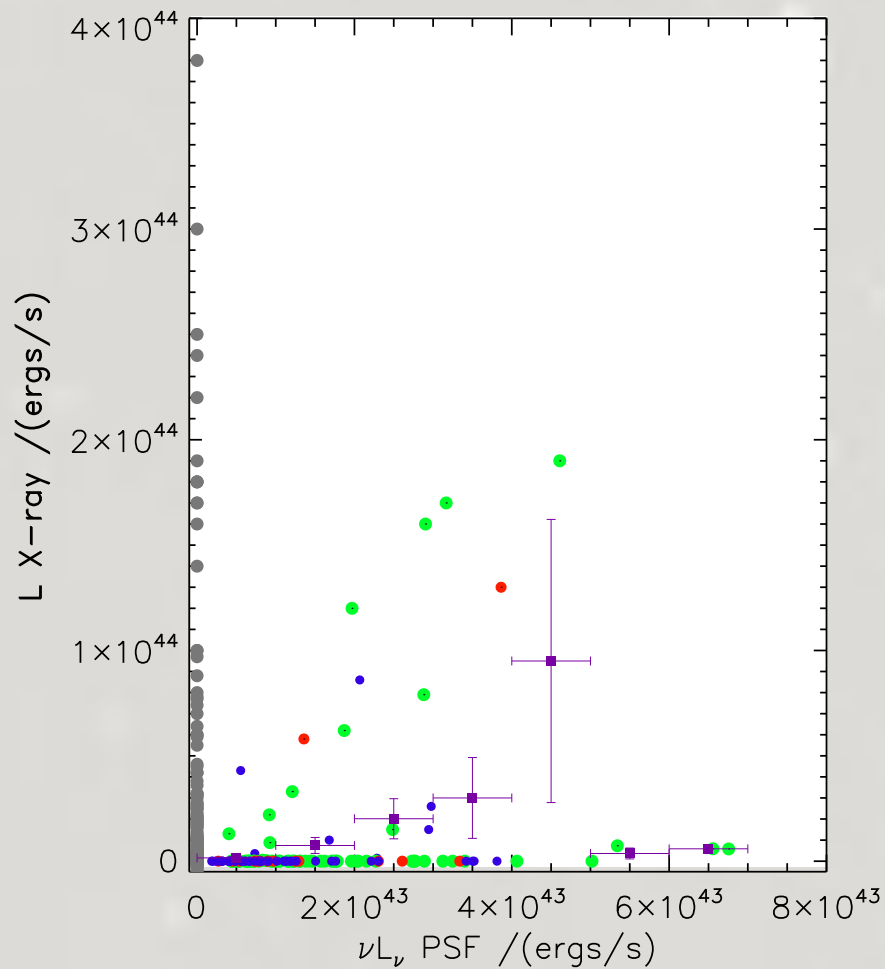
AGN have:

- fewer low bulge fractions
- more low disk fractions
- more pure bulges

➔ still bulgier



# The Nature of the Point Source



# The Nature of the Point Source

