

Major mergers, minor players: luminous AGN through cosmic time

Tim Hewlett

Supervisors: Carolin Villforth, Vivienne Wild

Collaborators: Jairo Mendez-Abreu, Milena Pawlik, Kate Rowlands



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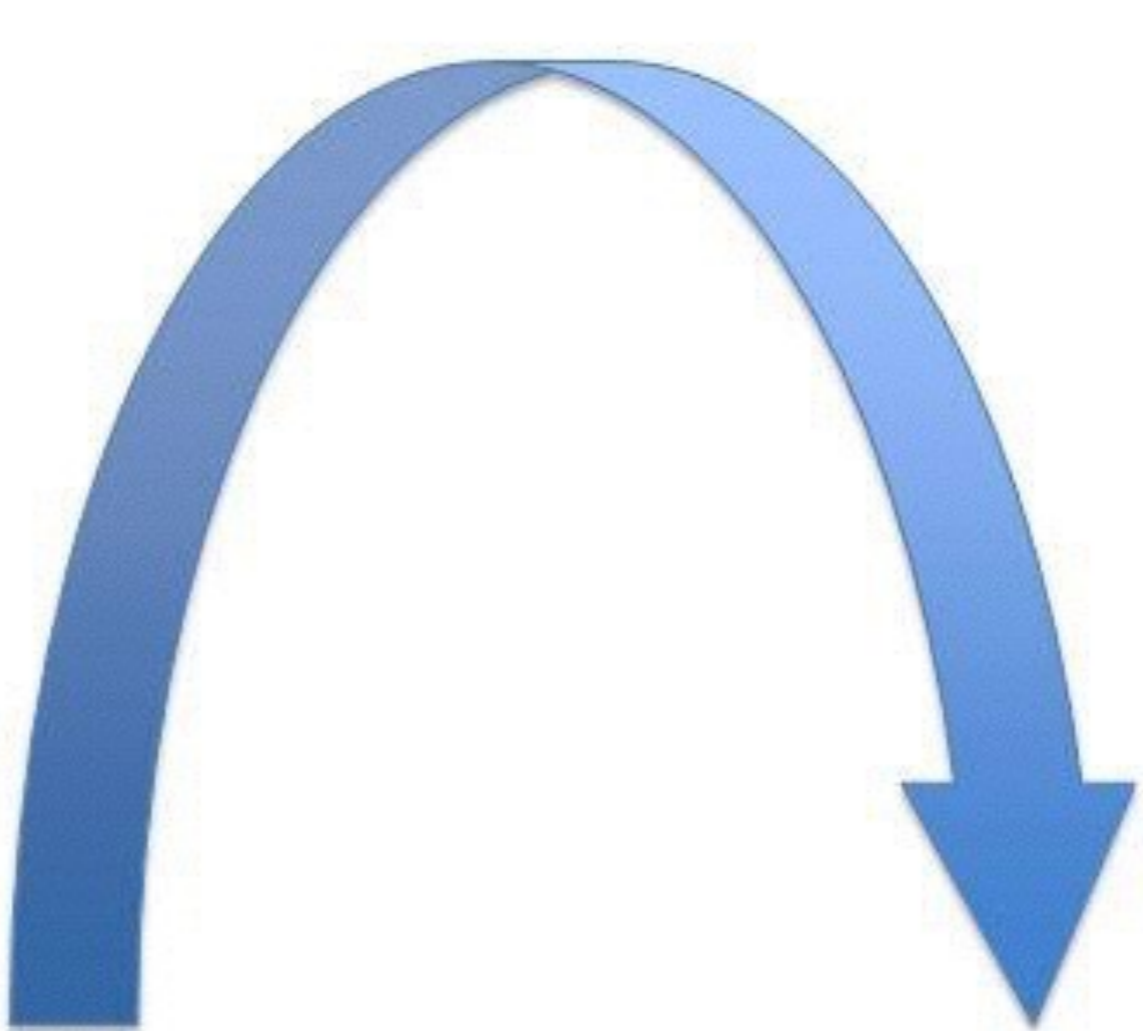
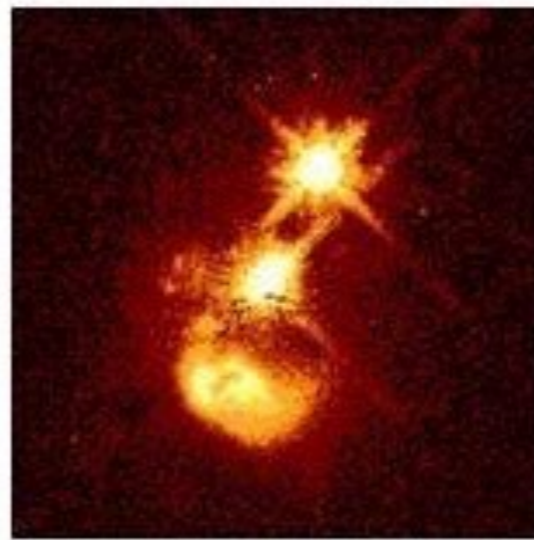
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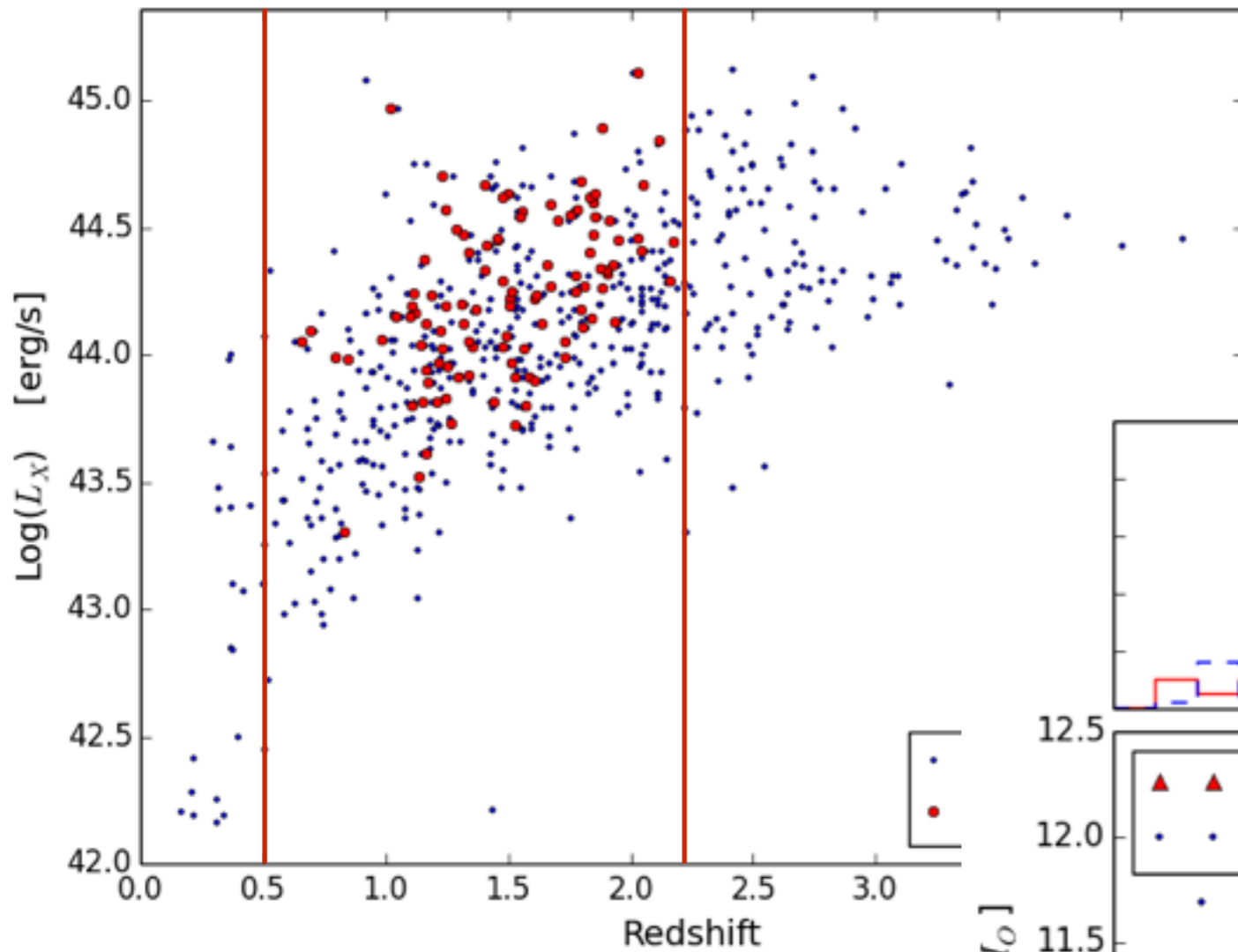


Hopkins et al. 2008

Do we see evidence that
mergers must trigger AGN?

No.

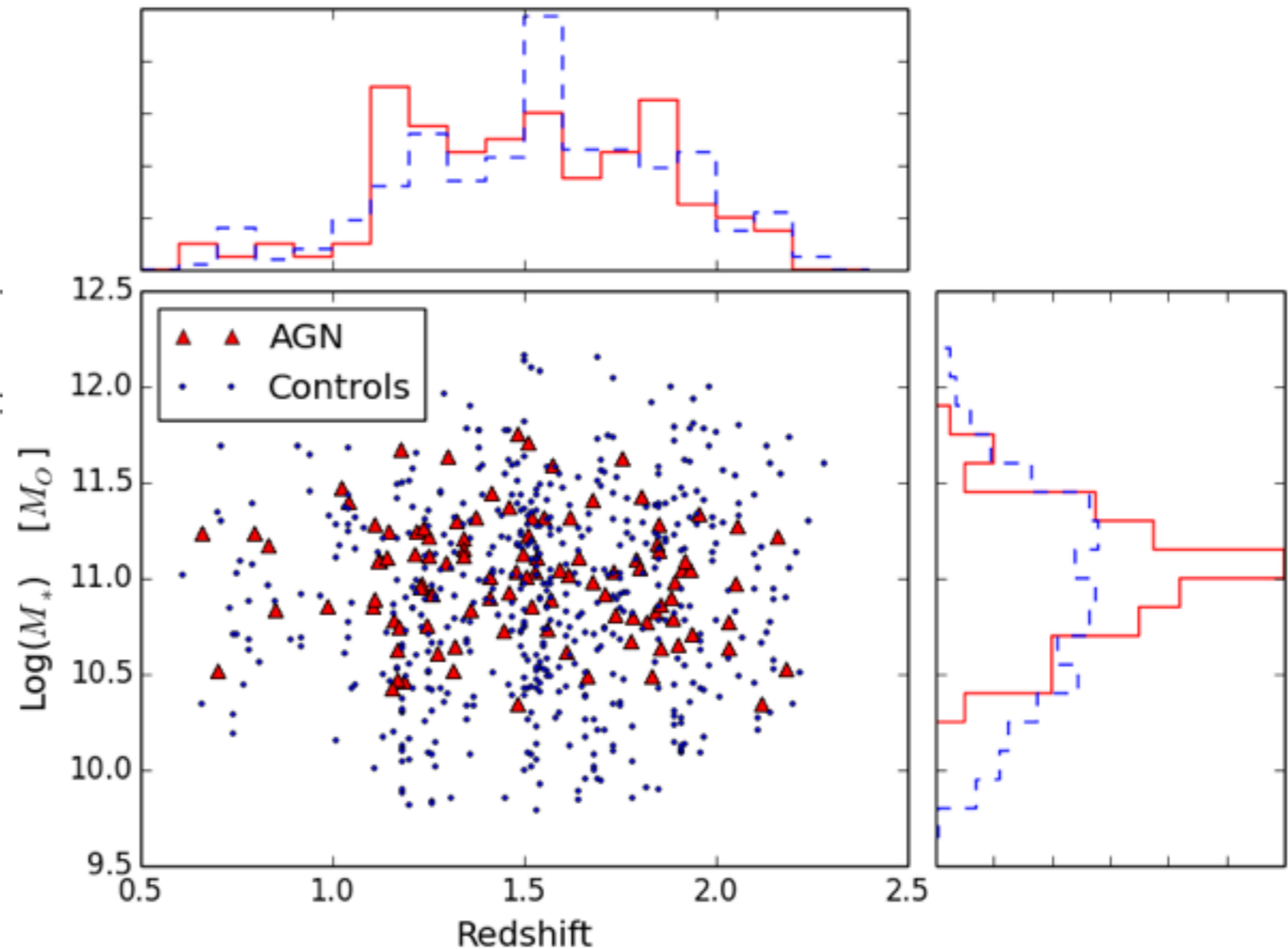
Sample



$$\log(M_{BH}) = 8.46 + 1.05 \log\left(\frac{M_{bulge}}{10^{11}M_{\odot}}\right)$$

McConnell & Ma 2013

- COSMOS field
- HST data, F814W band
- 106 X-ray selected AGN
- $10^{44} < L_{\text{Bol}} < 10^{47} \text{ erg s}^{-1}$
- 486 control galaxies



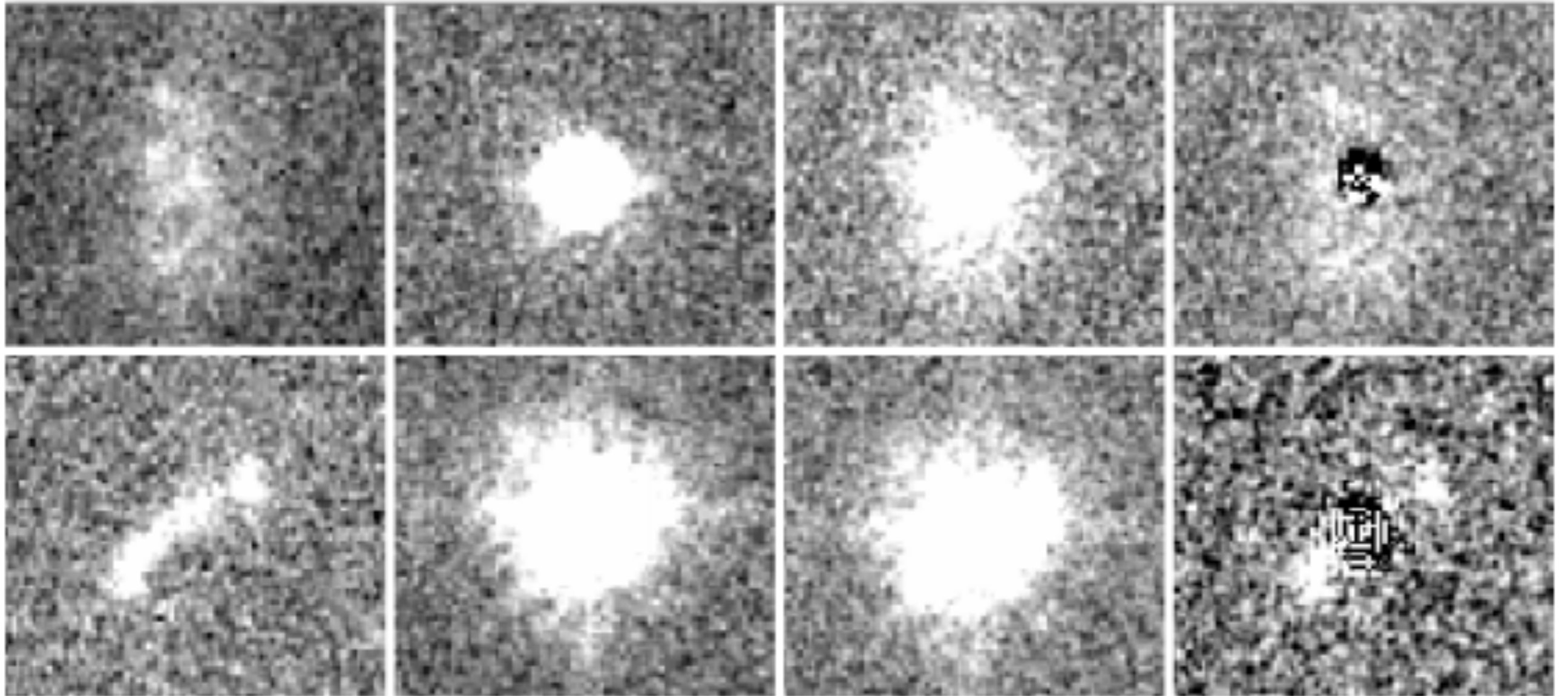
Galfit*

Control galaxy

Point Source

Control Galaxy + PS

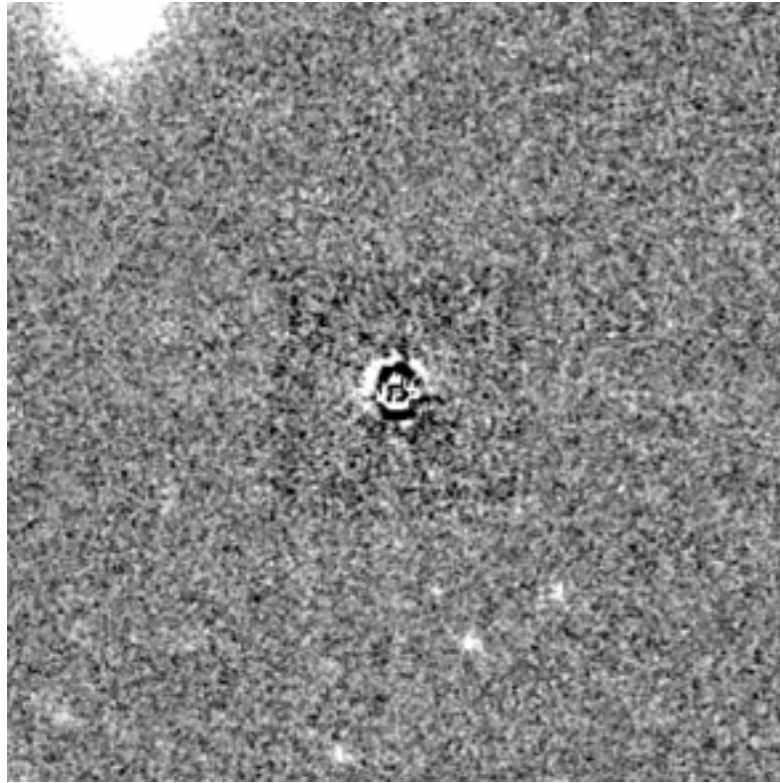
PS re-subtracted



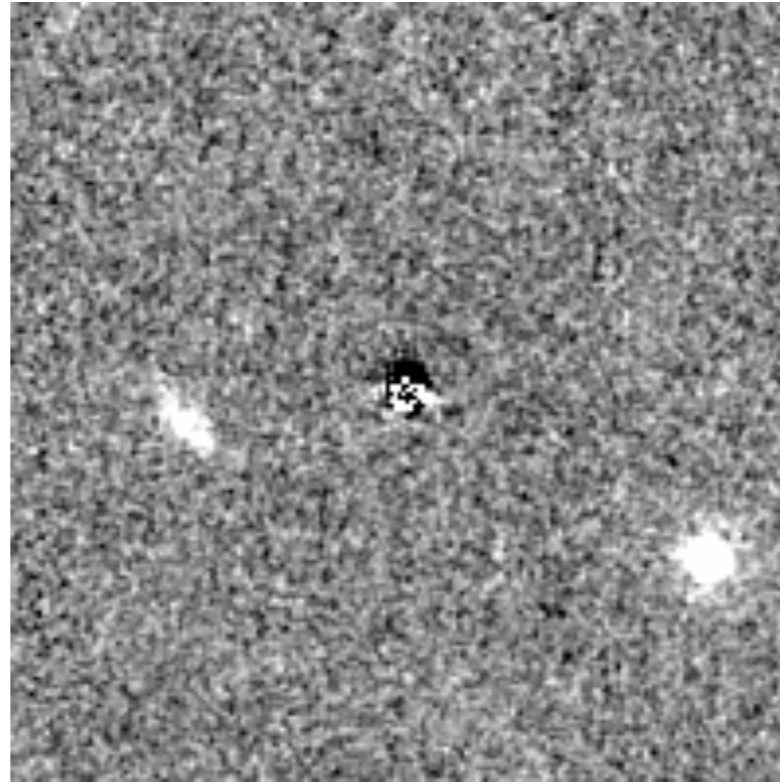
Hewlett et al. submitted

*Peng et al. 2002; 2009

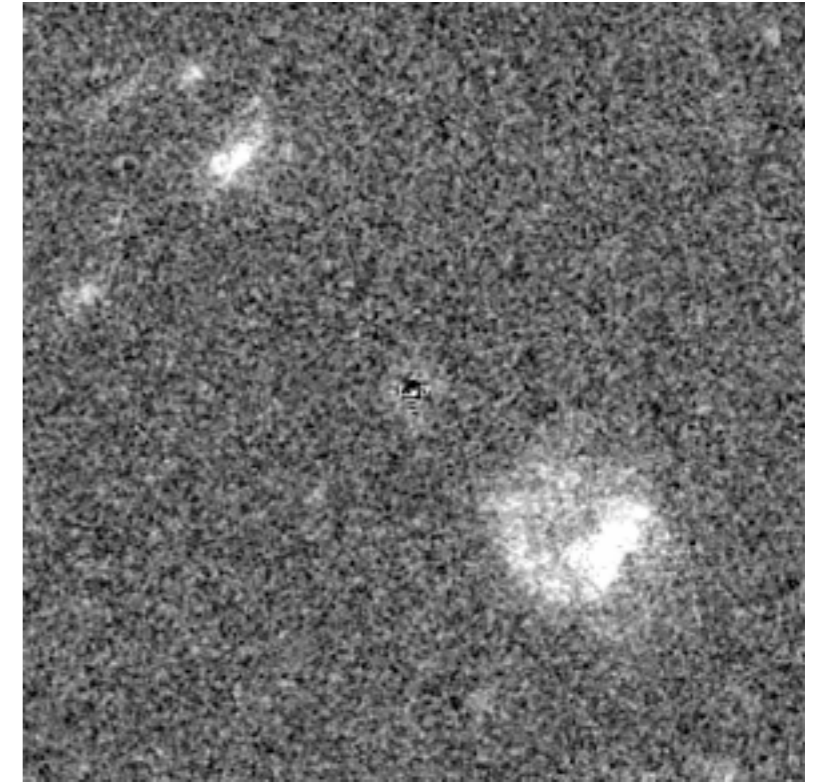
Classification



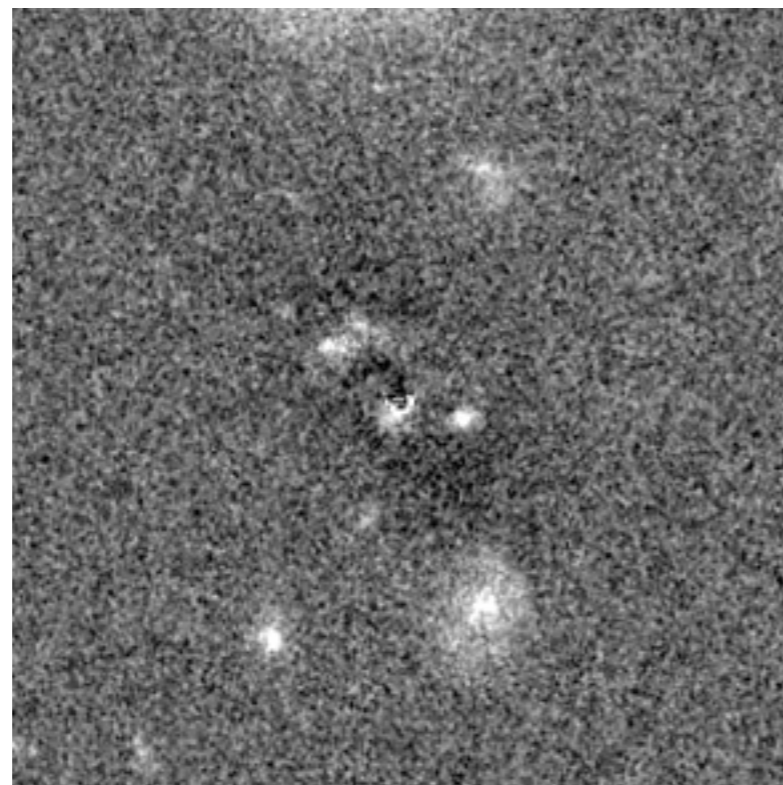
PSF dominated



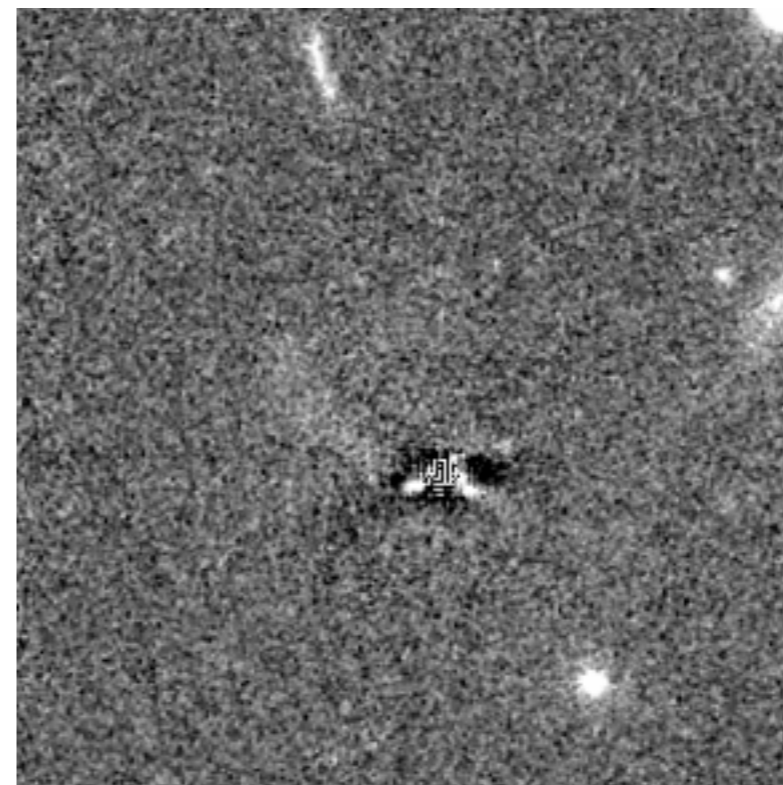
Undisturbed 1



Undisturbed 2

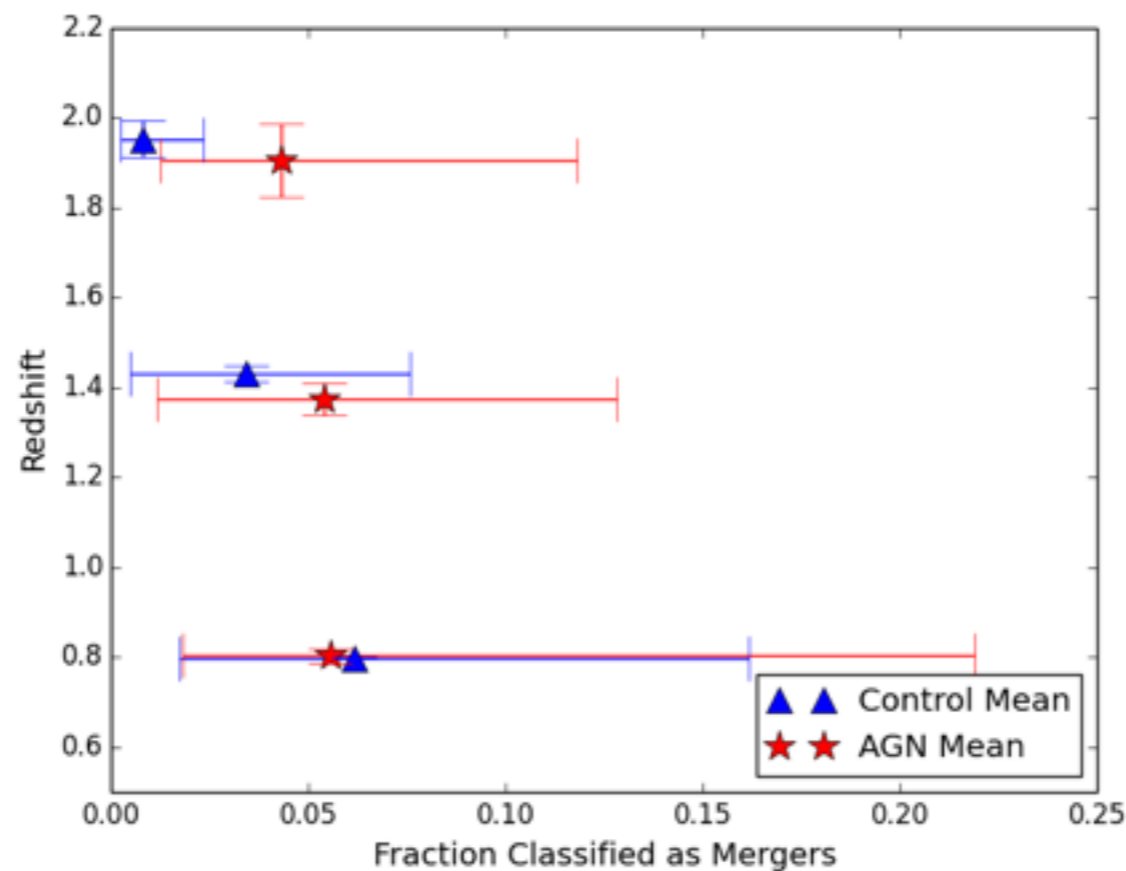
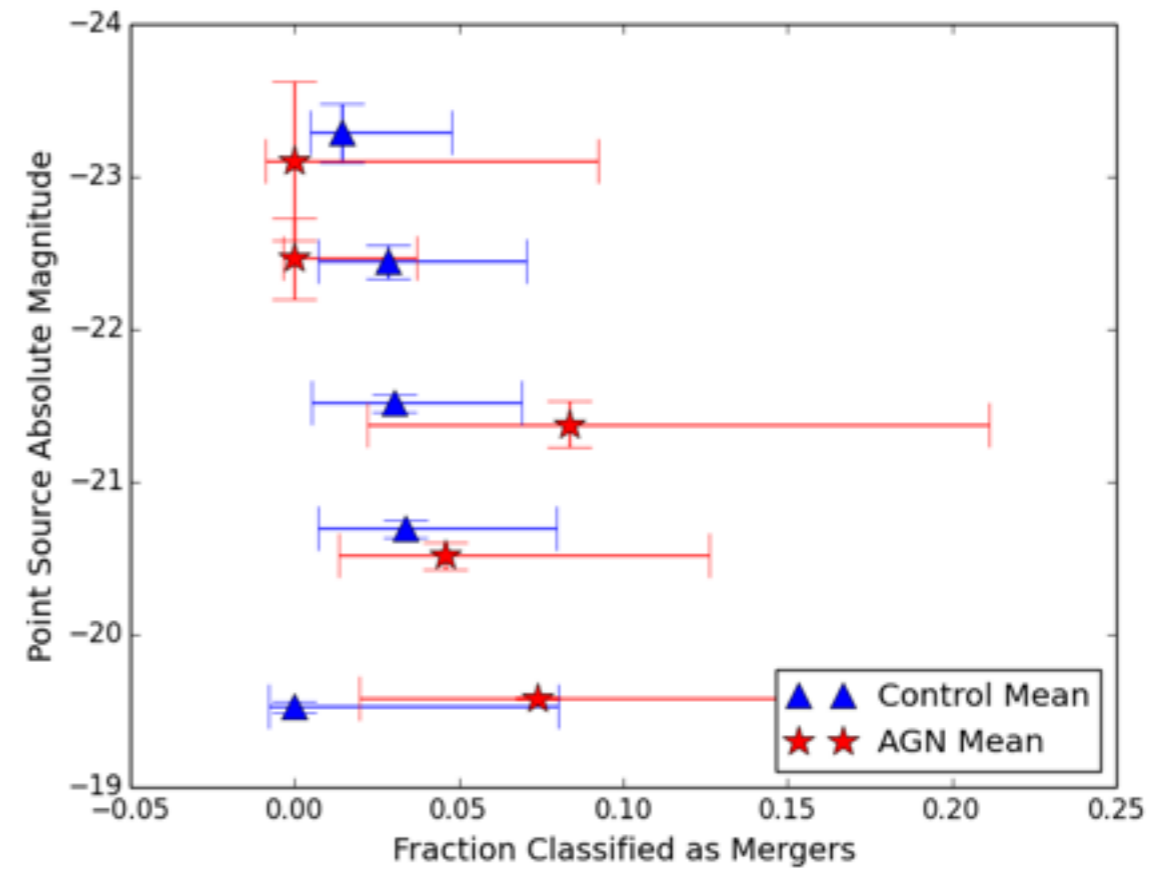
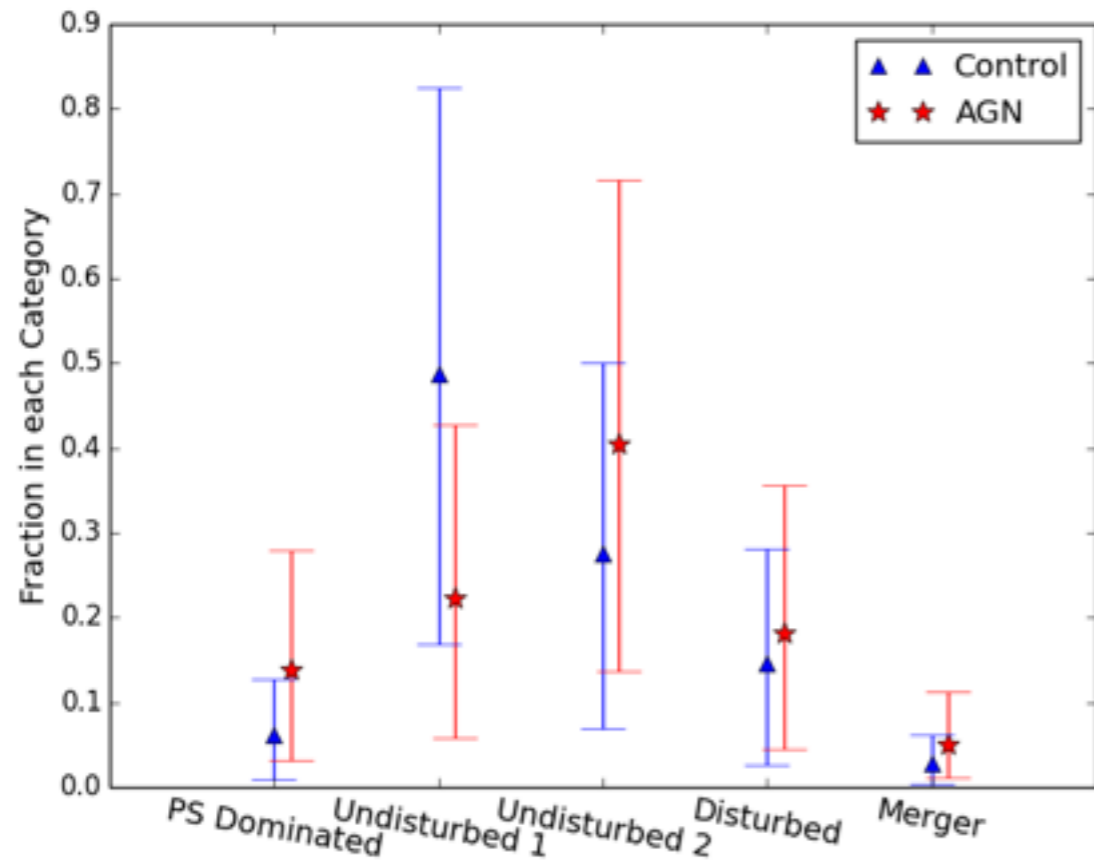


Disturbed



Merger

Results: visual classification



So do we see evidence that mergers must trigger AGN?

No.

- Qualification: we find no evidence that X-ray selected AGN with $0.5 < z < 2.2$ are predominantly triggered by galaxy mergers.

Thanks for listening

Tim Hewlett