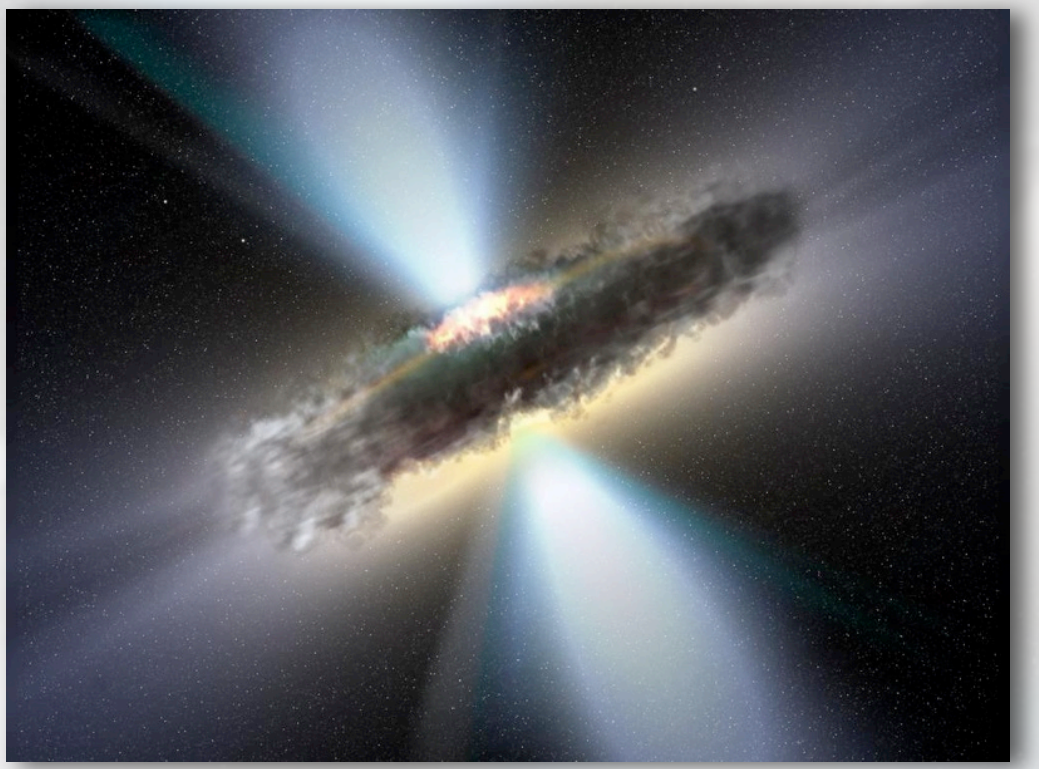
How common are obscured AGN at z~1?

Jennifer Donley, University of Arizona



ESA / V. Beckmann (NASA-GSFC)

Collaborators: George Rieke, Pablo Pérez-González, Almudena Alonso-Herrero, Jane Rigby

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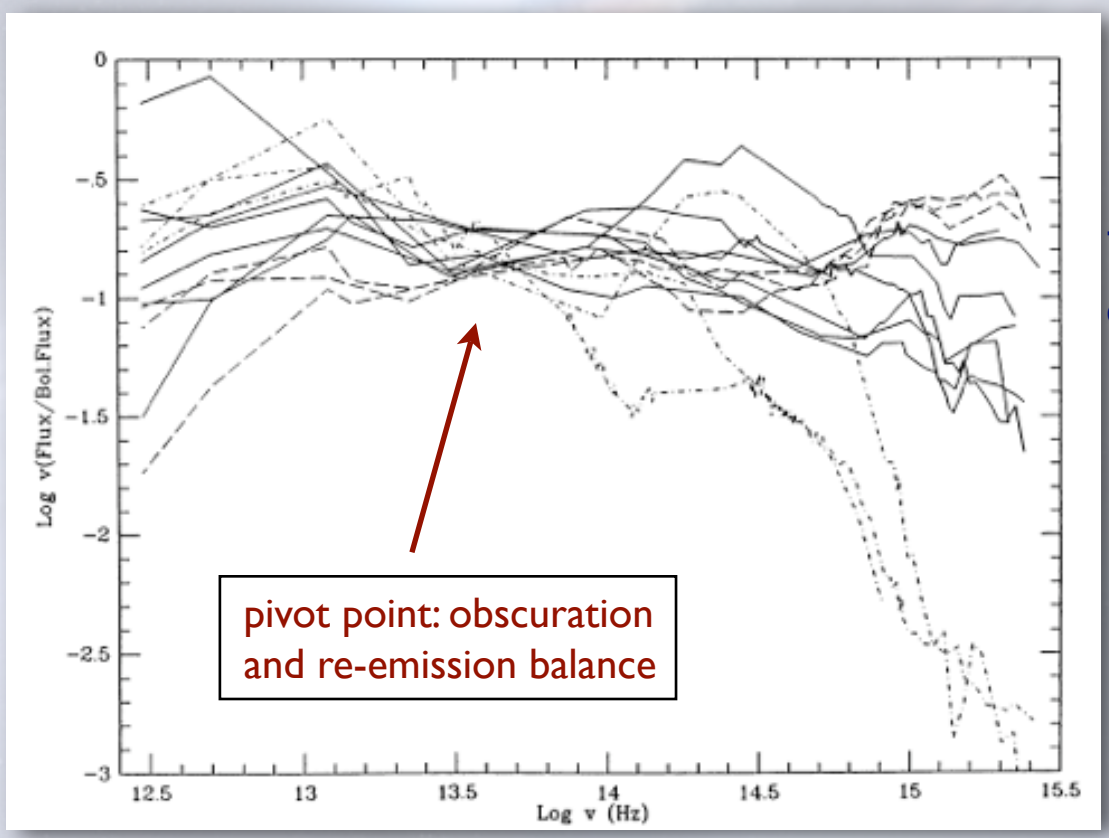

Spinoglio & Malkan 1989

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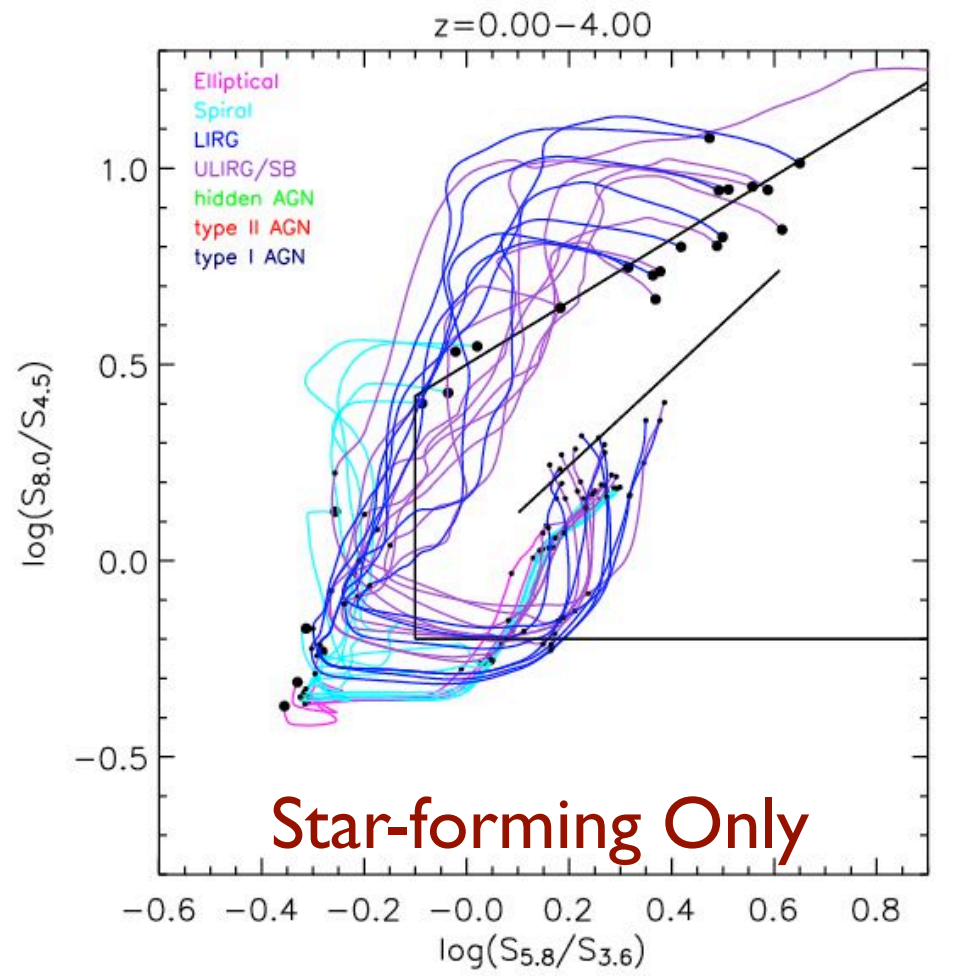
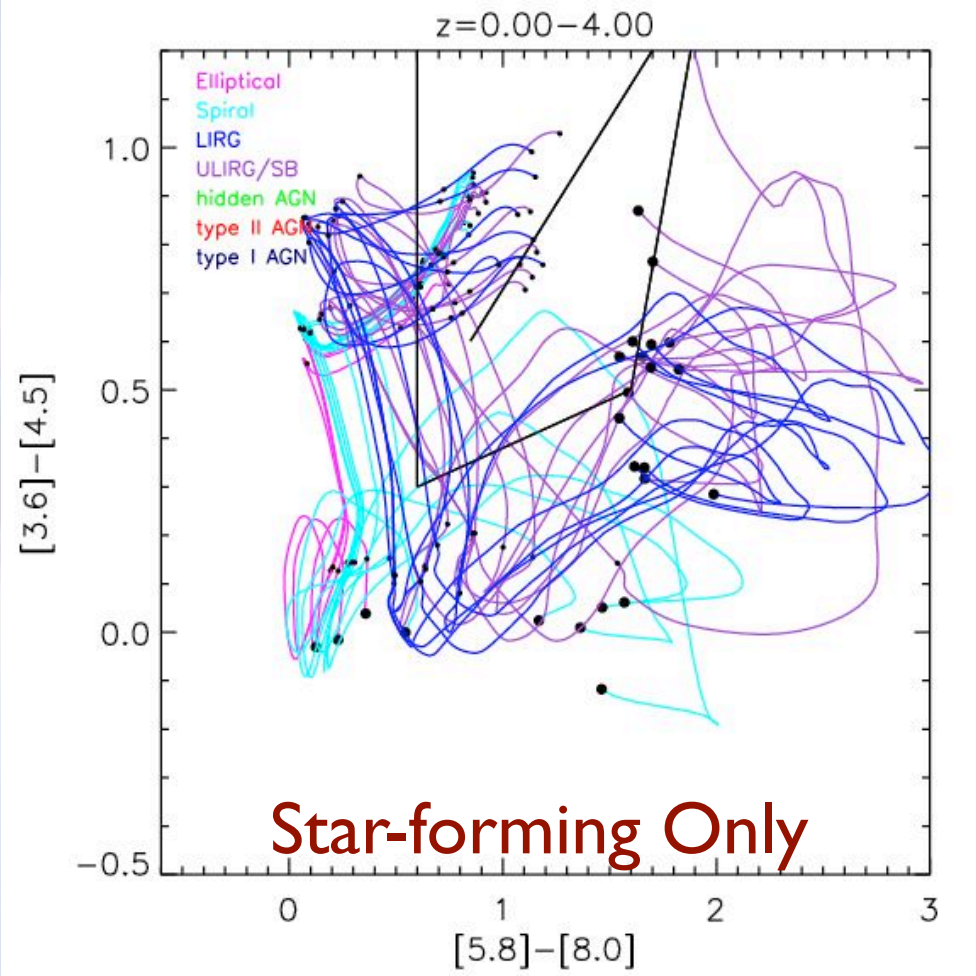
Sample: 410 MIPS 24μm sources in GOODS-S with:

- z=0.5-1.5 (spectroscopic or new photometric)

Infrared Color Selection

Templates from Polletta et al. 2007 and Alonso-Herrero, private communication





Lacy et al. 2004

Stern et al. 2005

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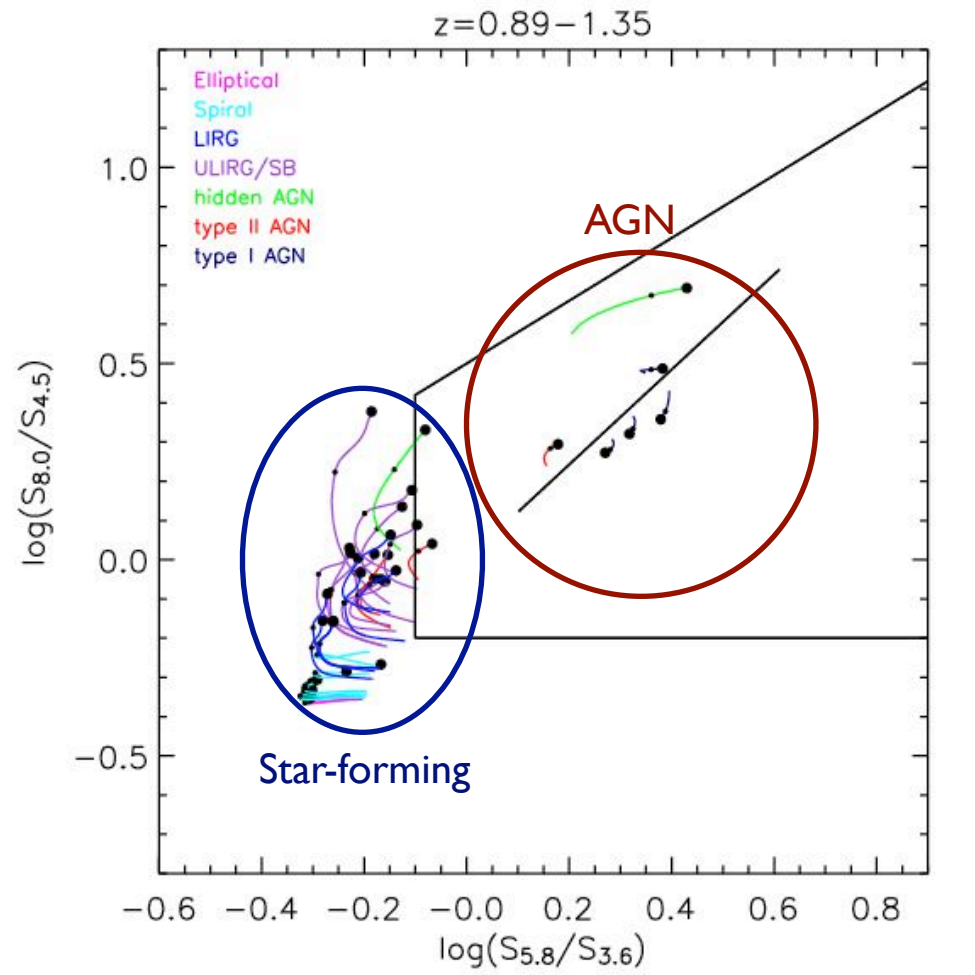

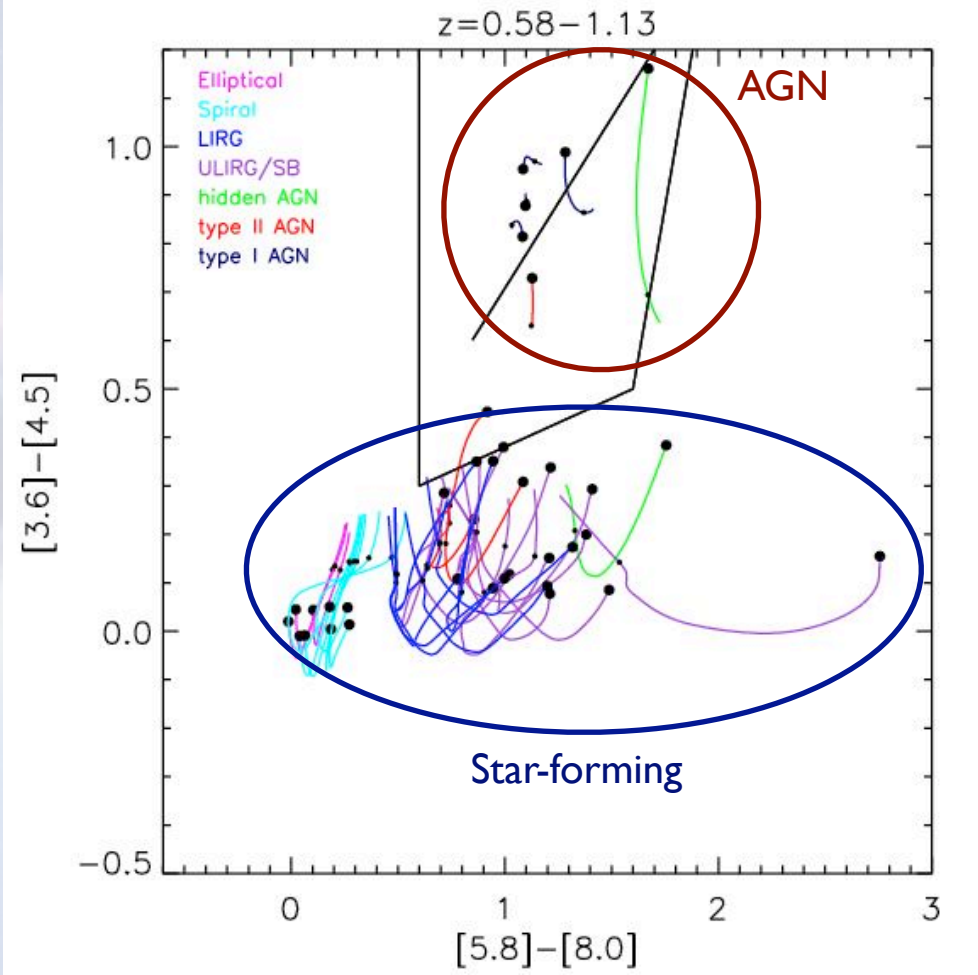

Reliability of infrared color selection can be greatly improved by combining color and redshift information: most reliable redshift is z~1

(Obscured) AGN in the MIPS z~1 sample

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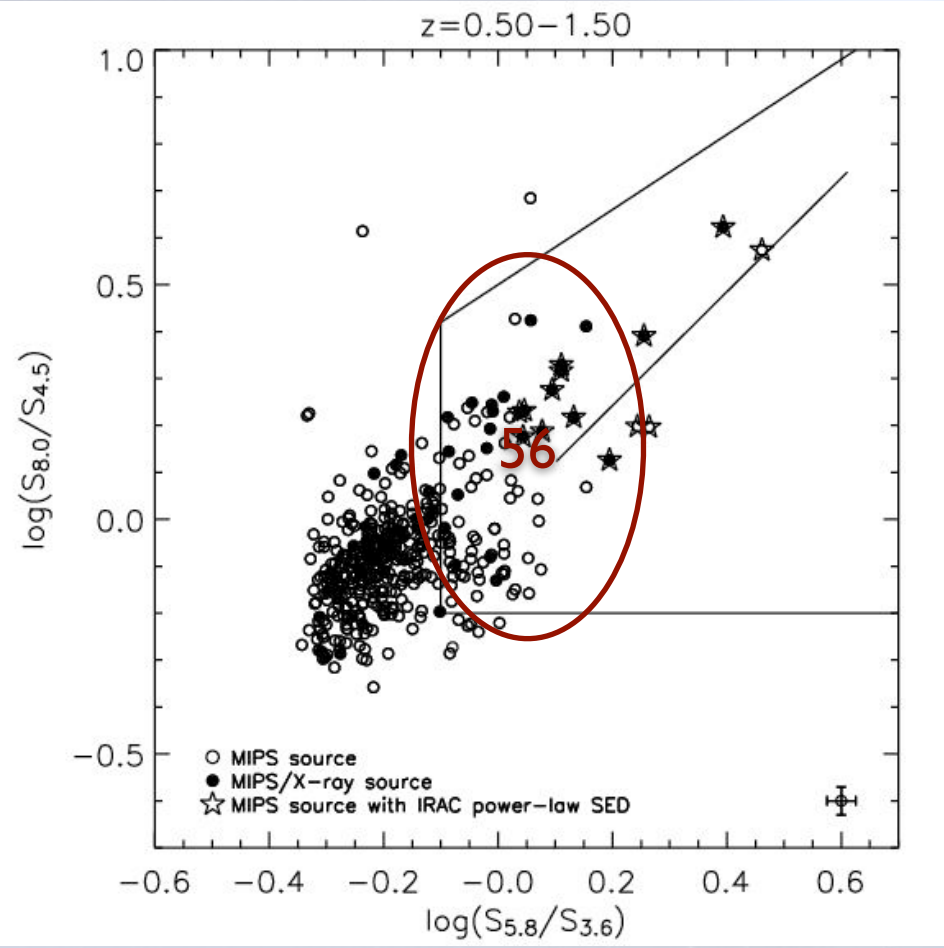

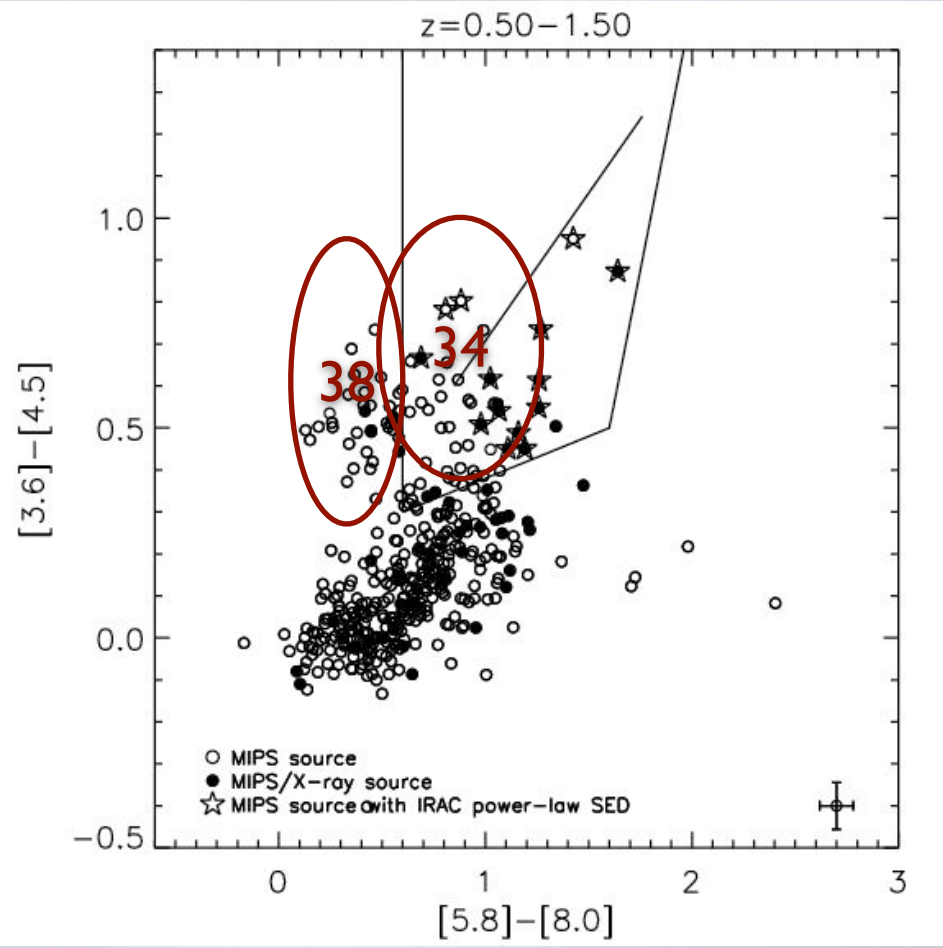

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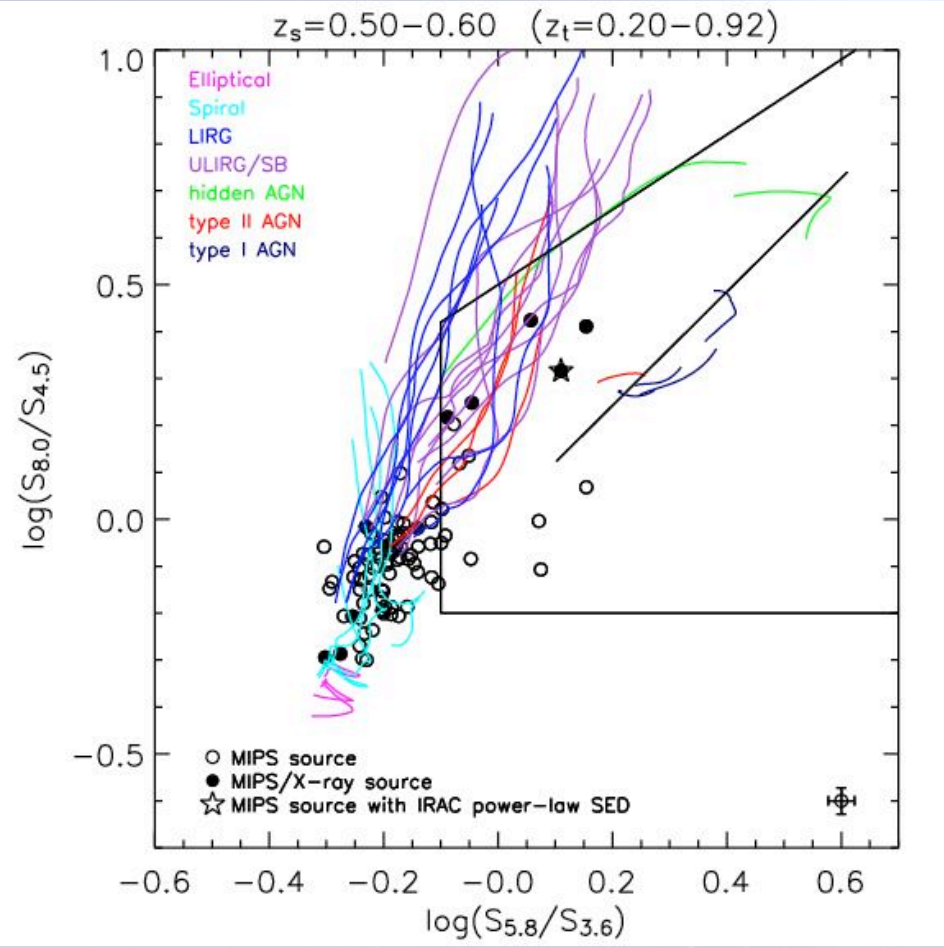

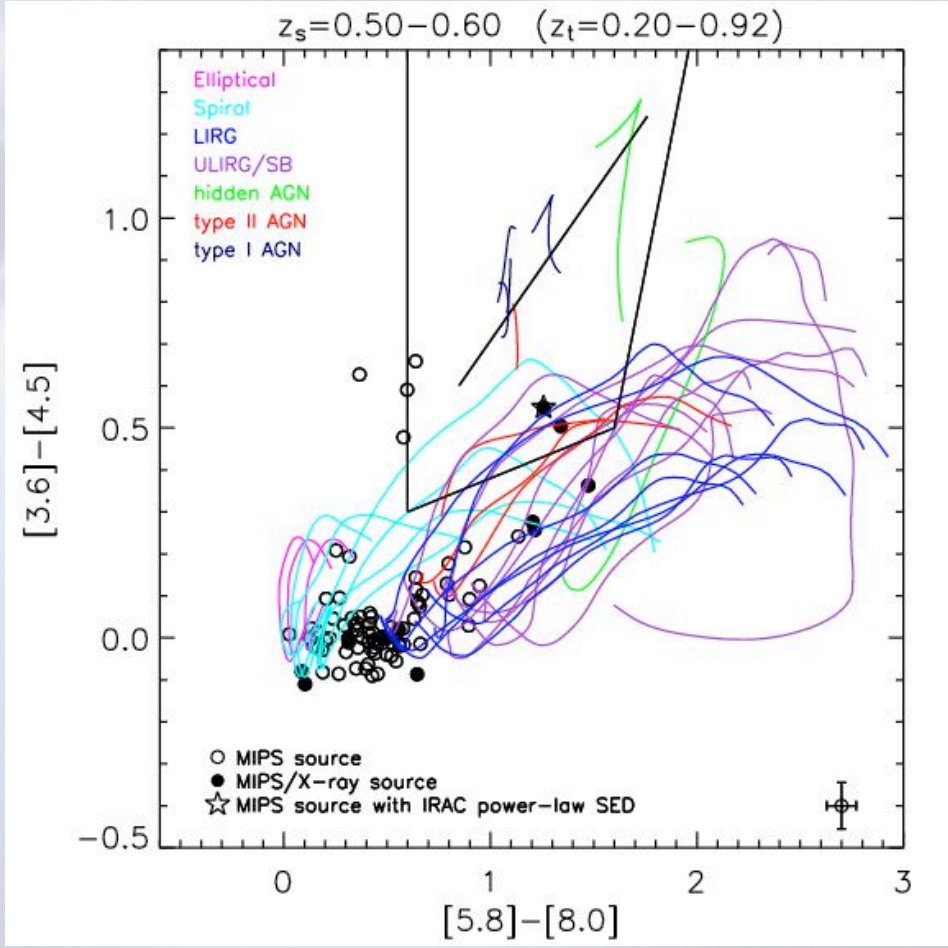

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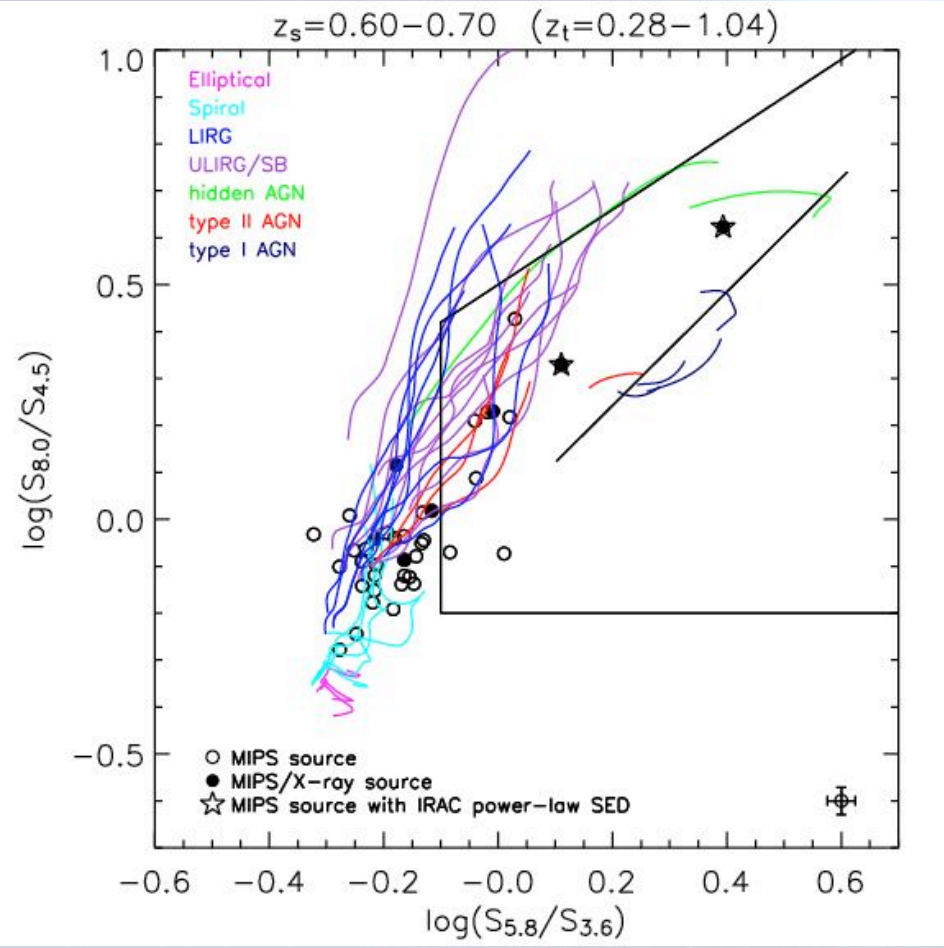

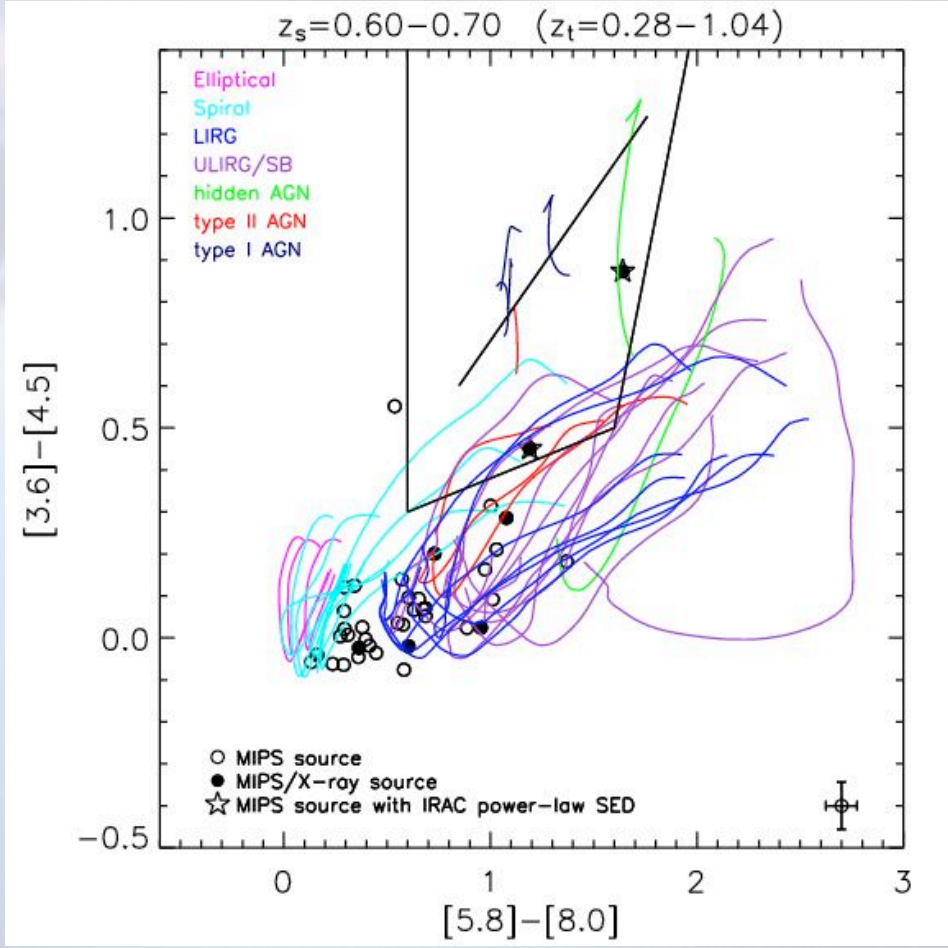

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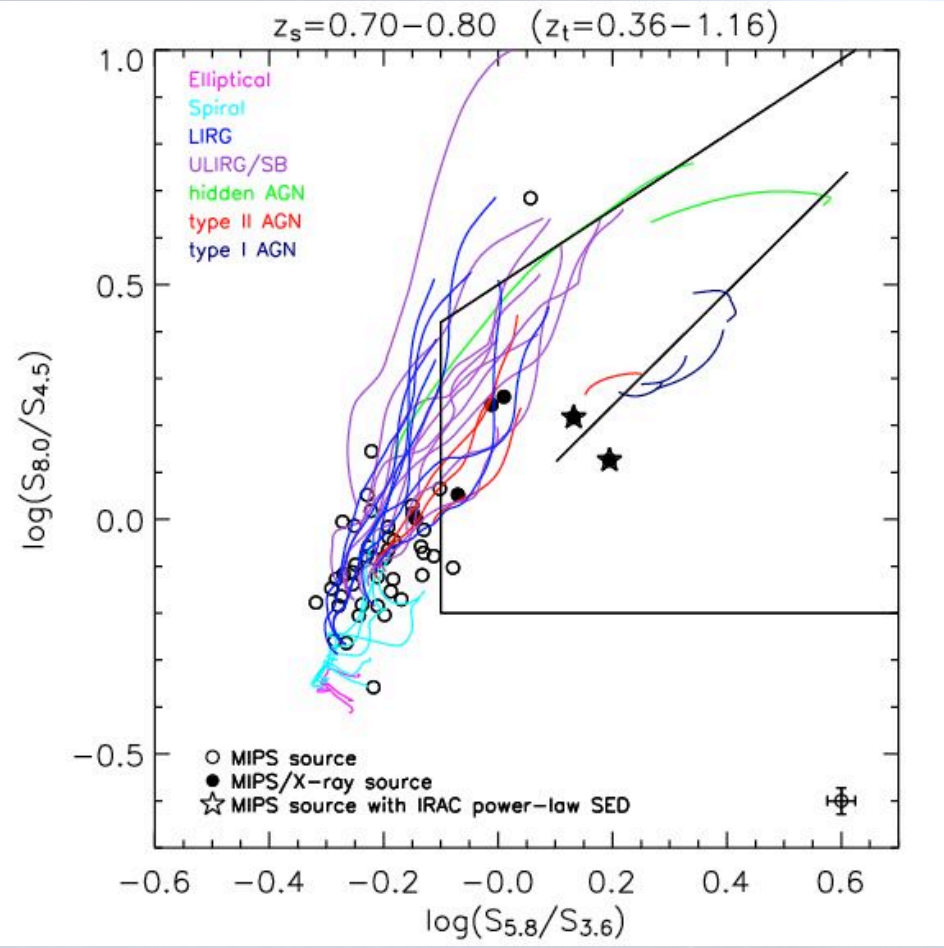

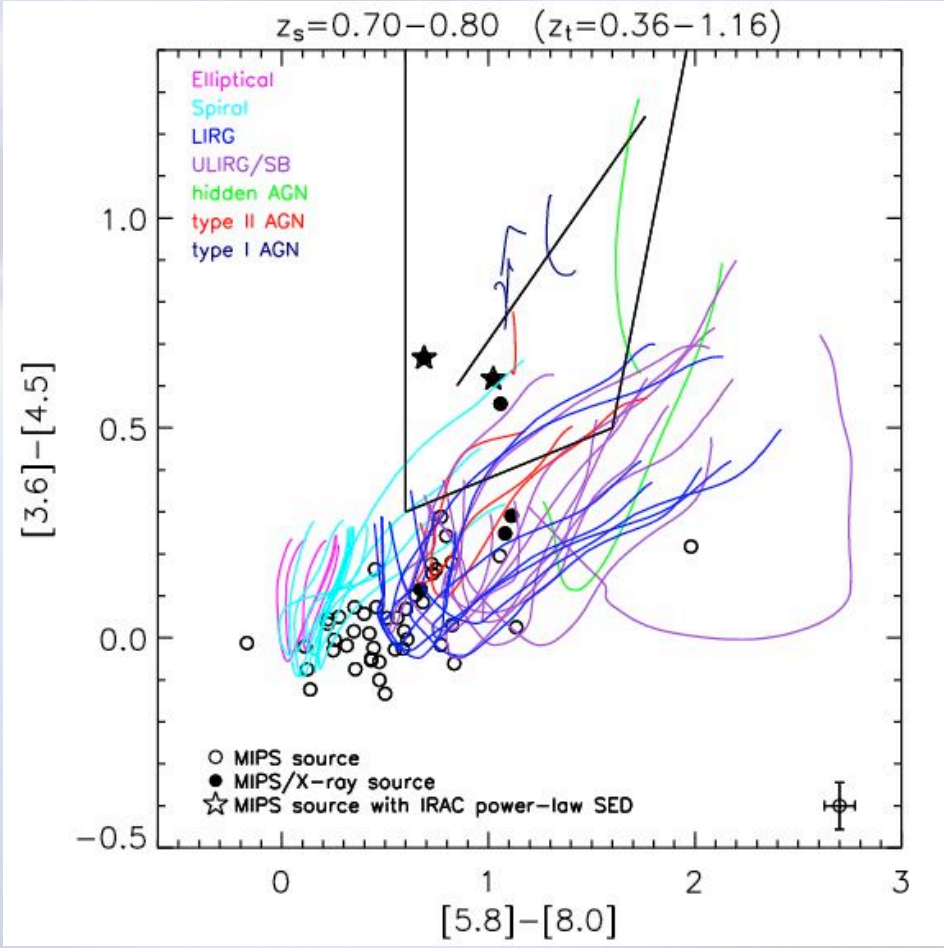

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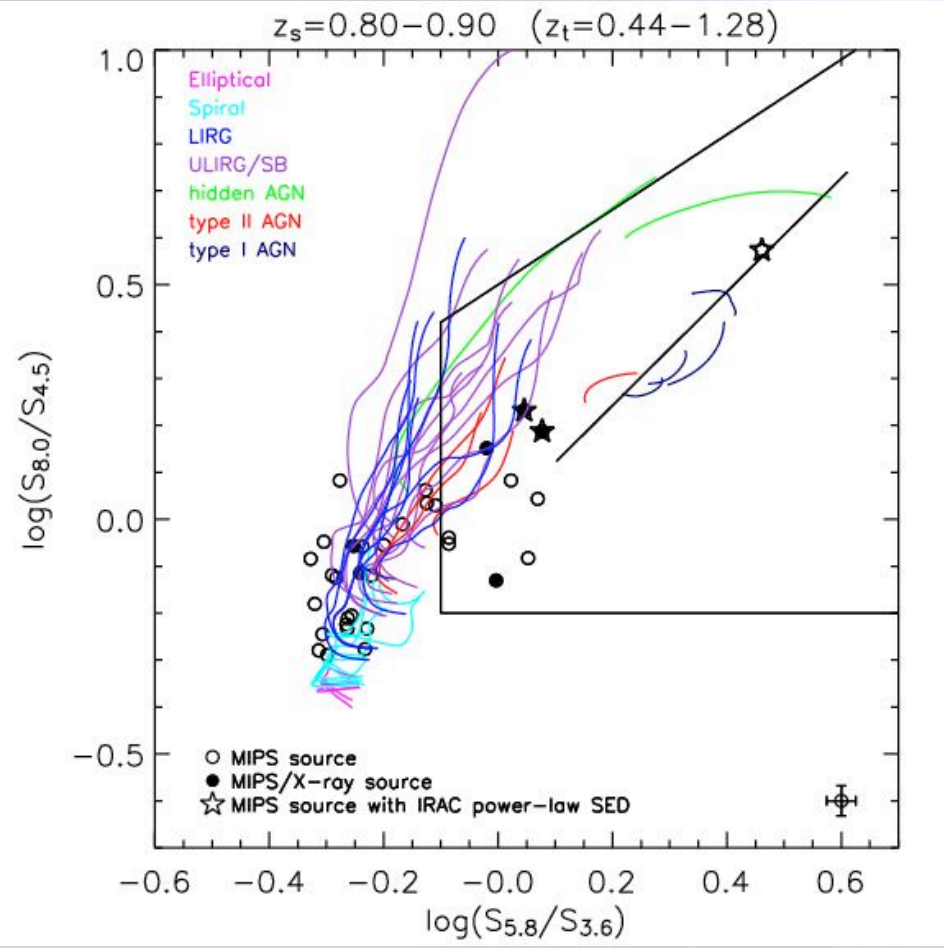

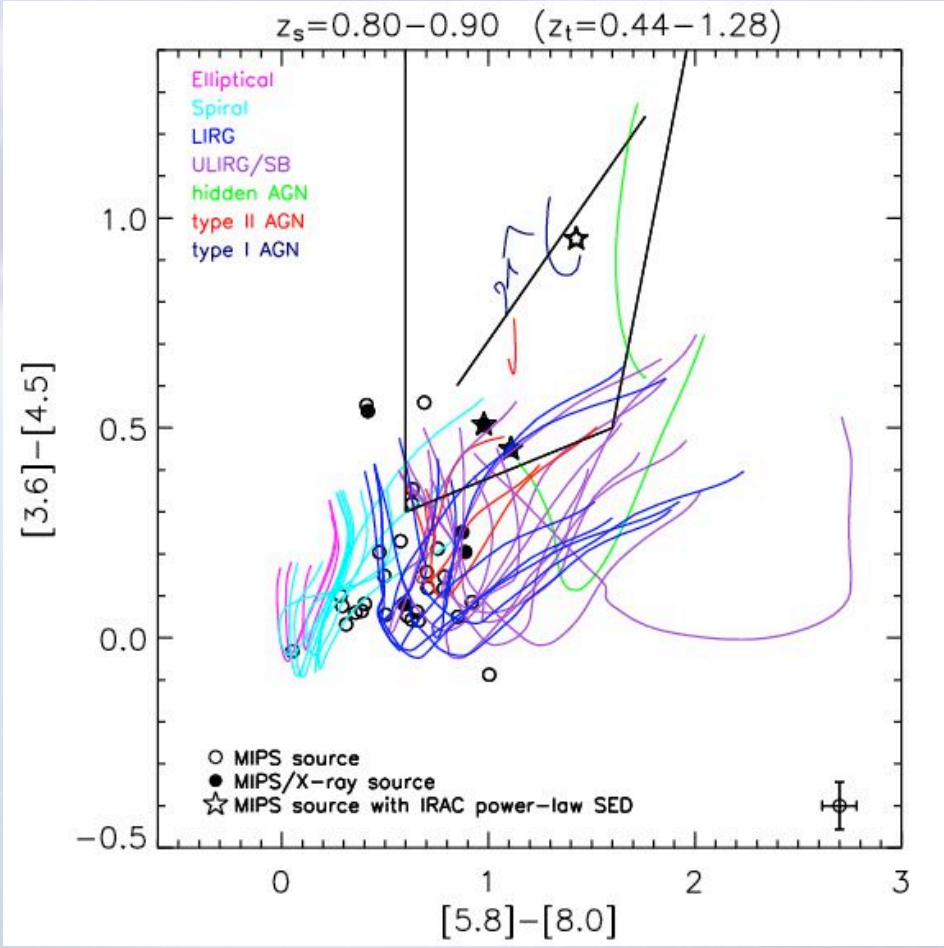

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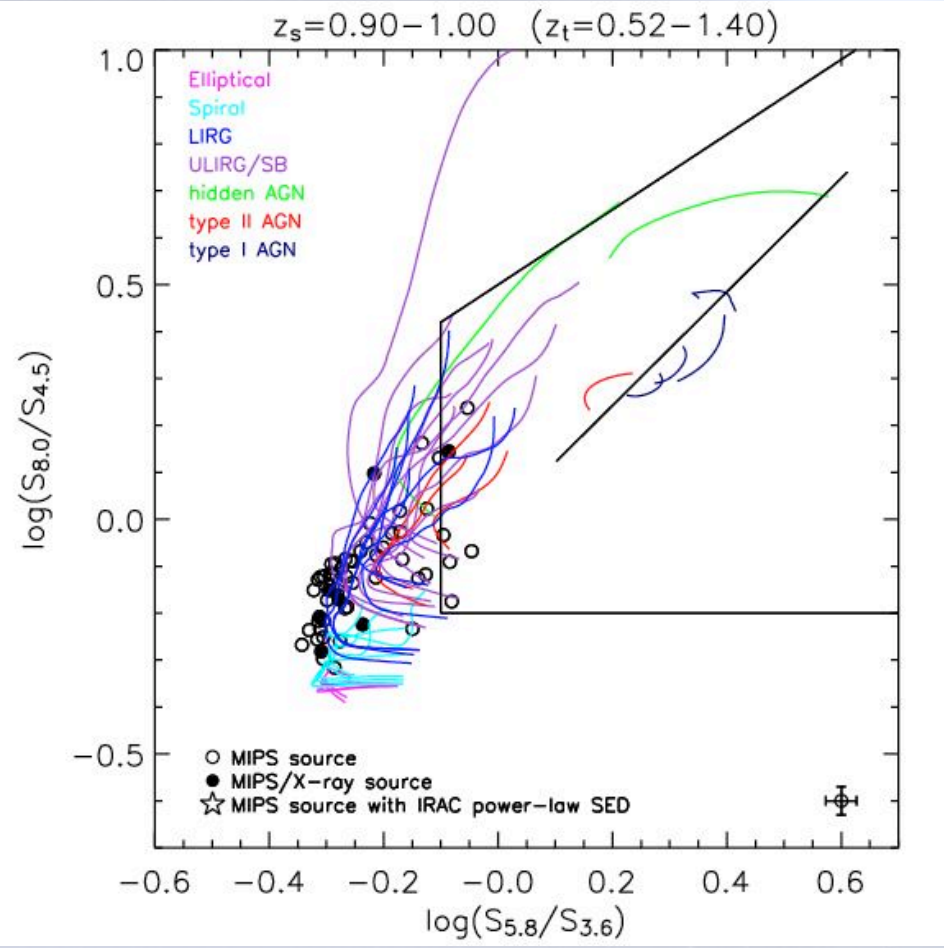

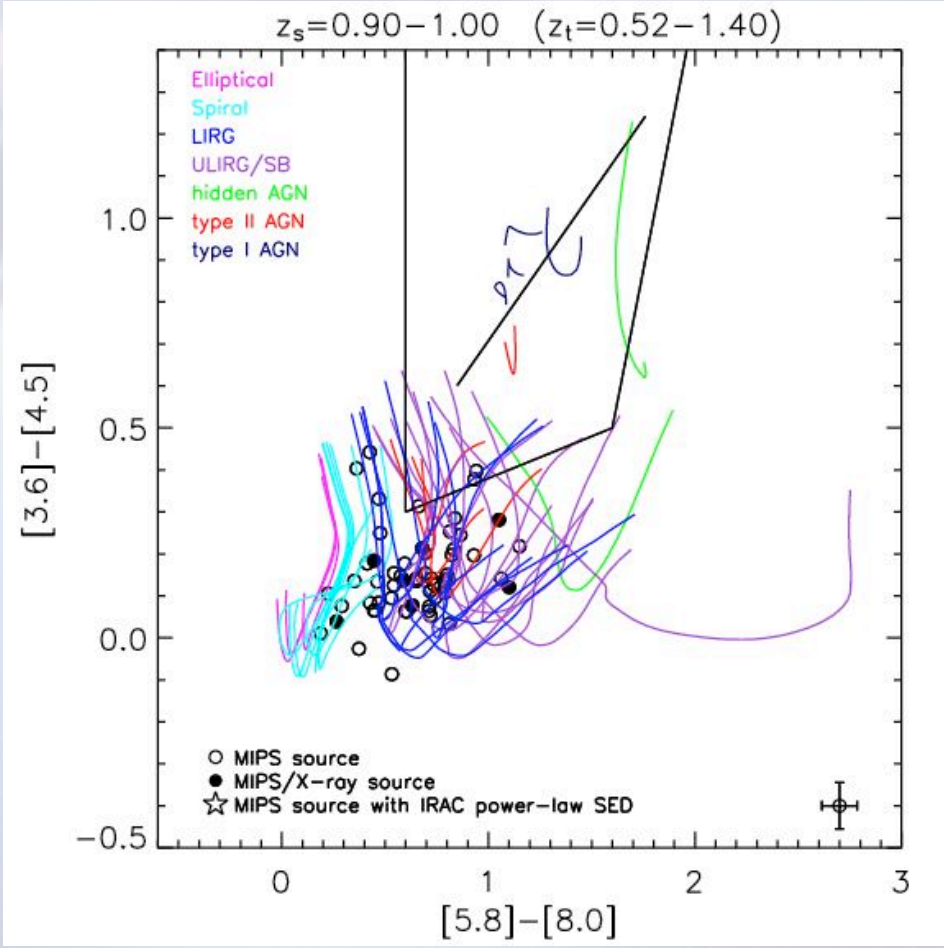

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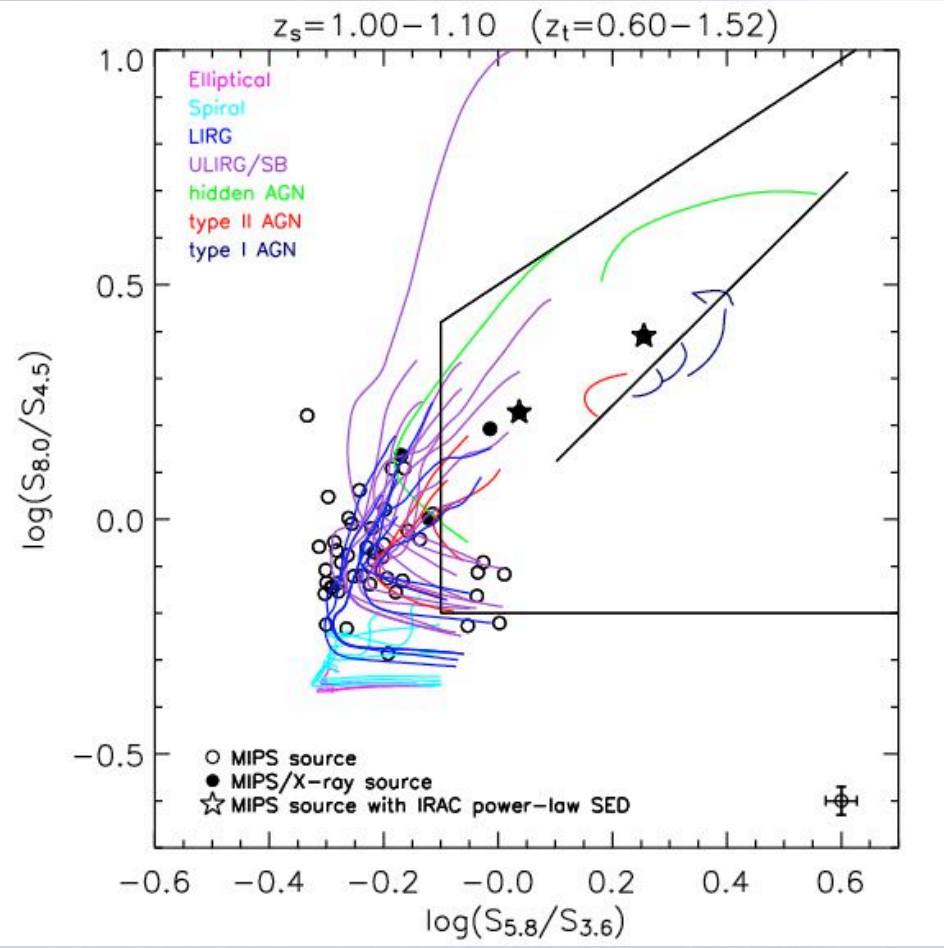

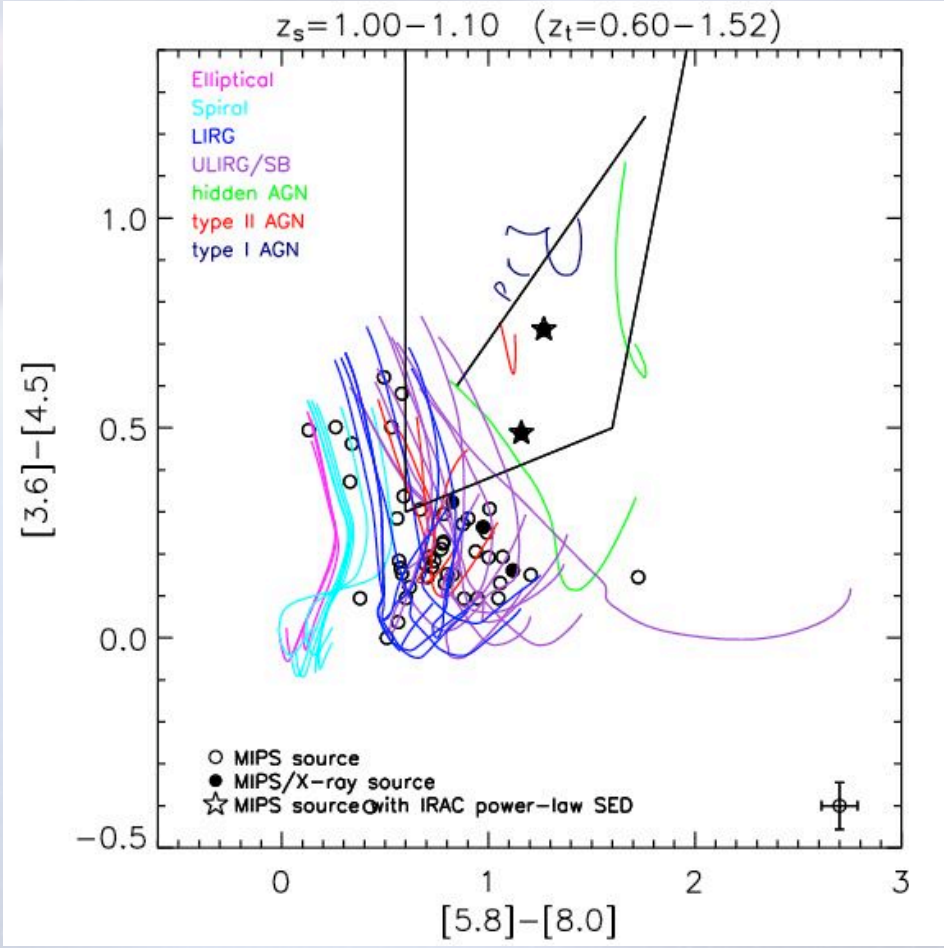

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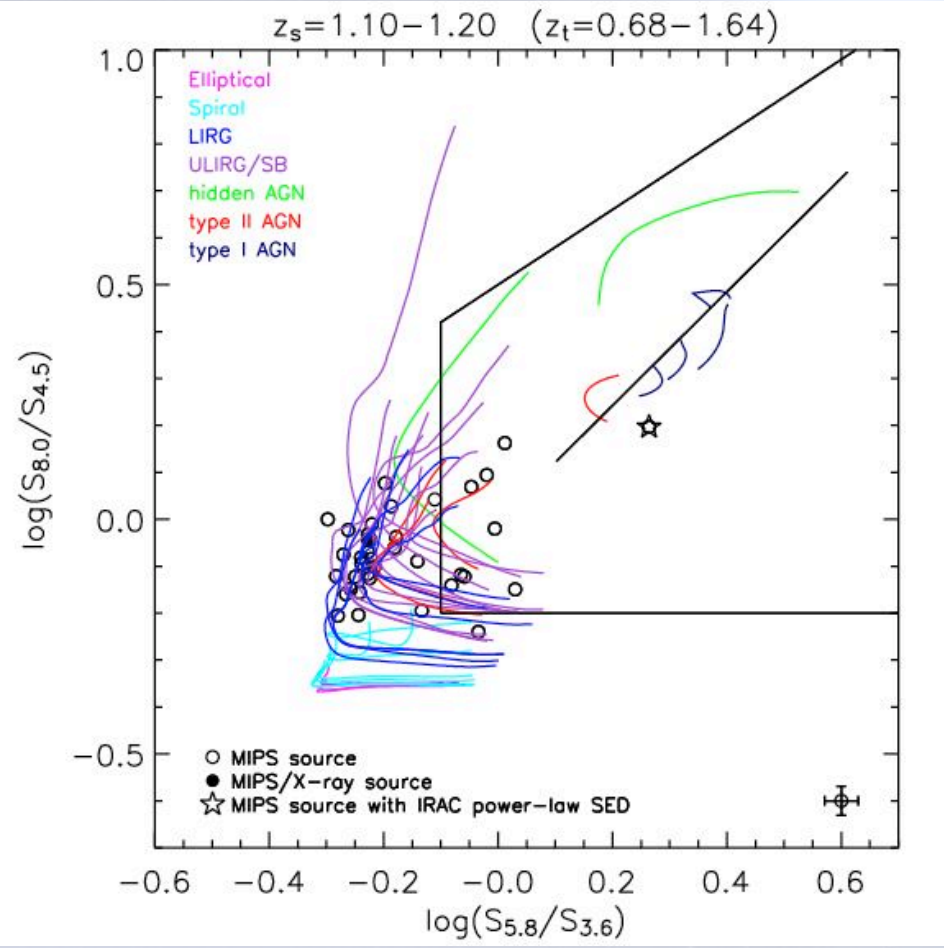

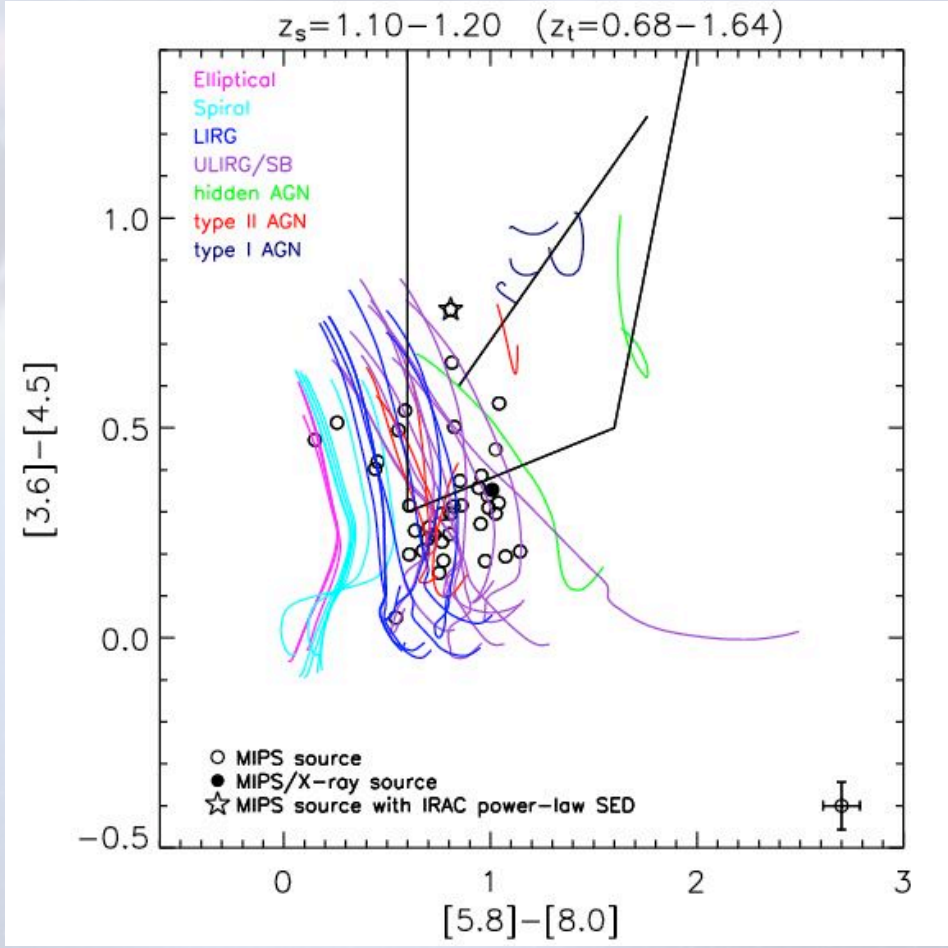

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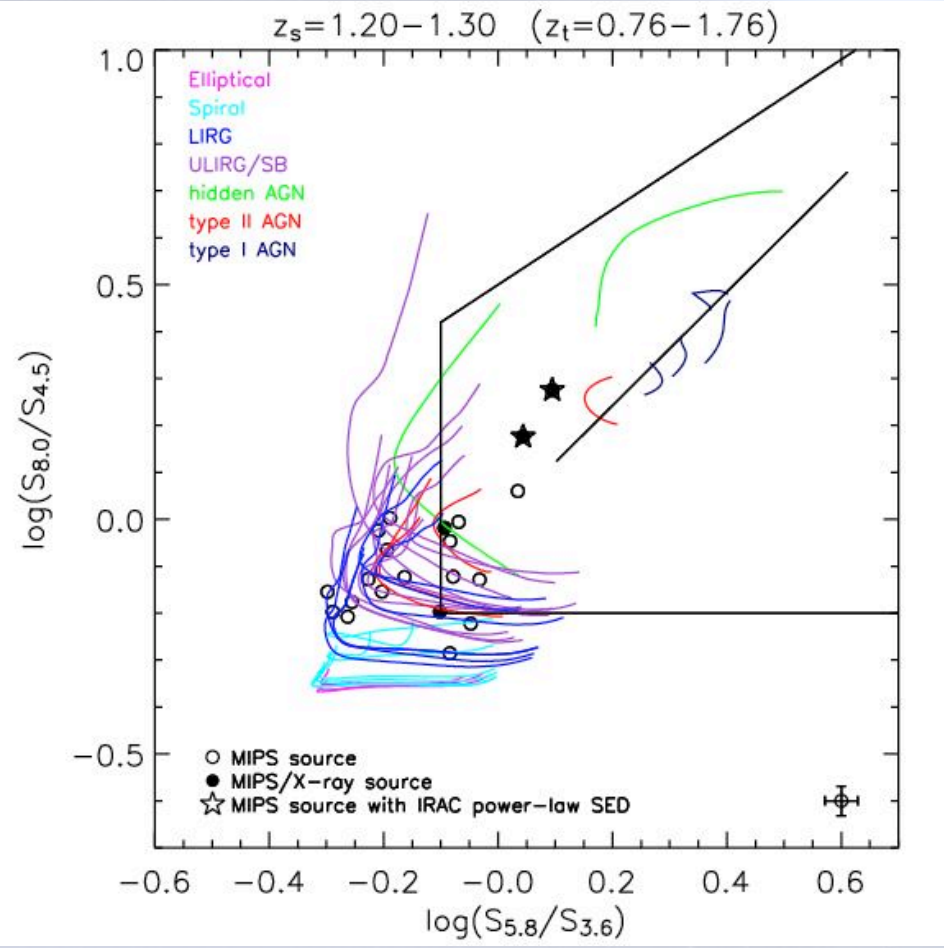

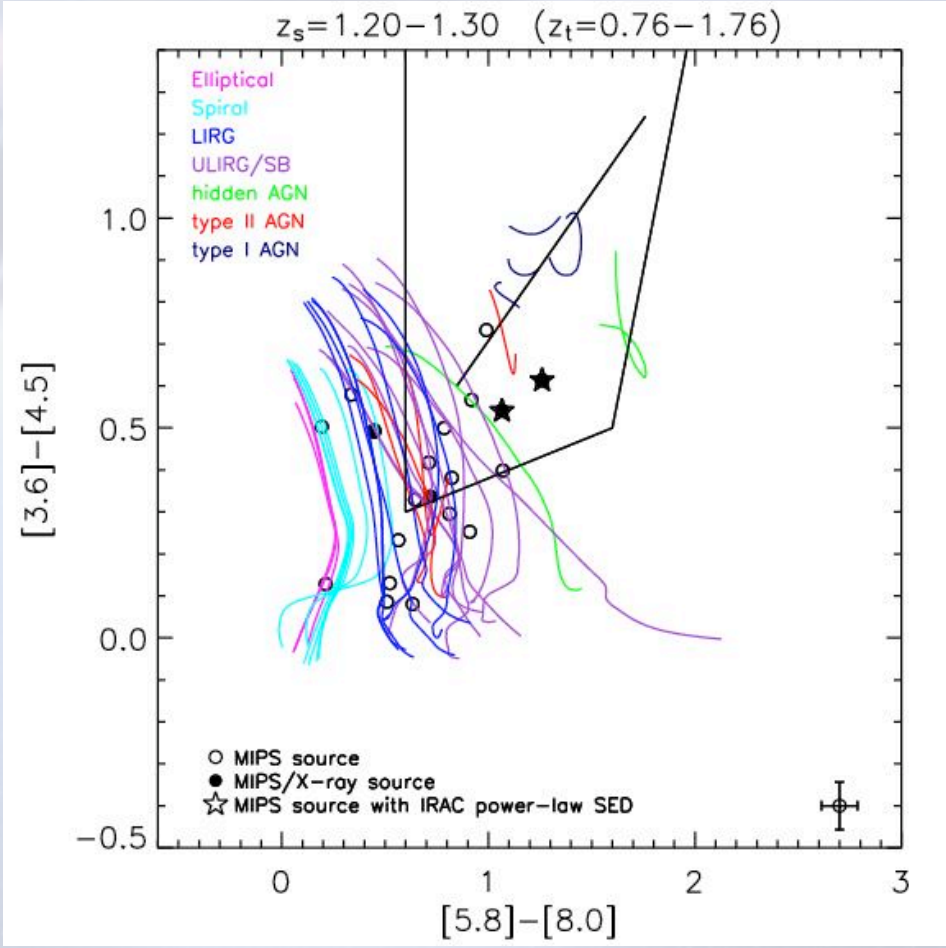

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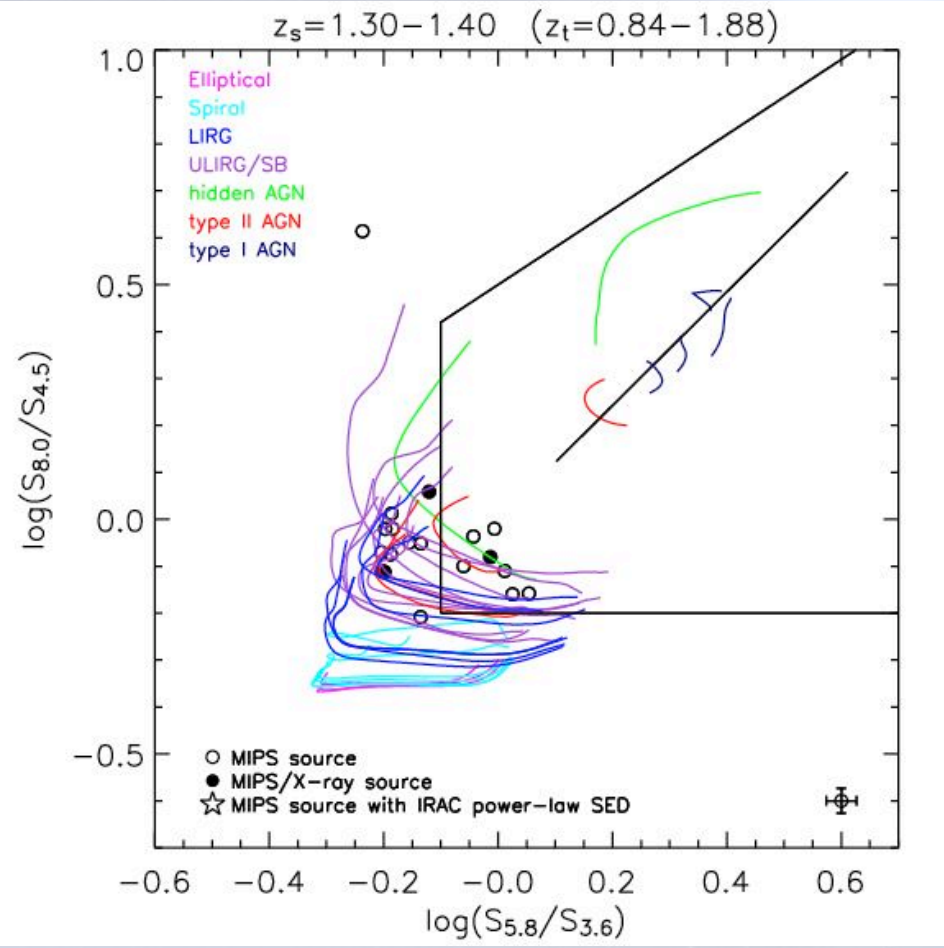

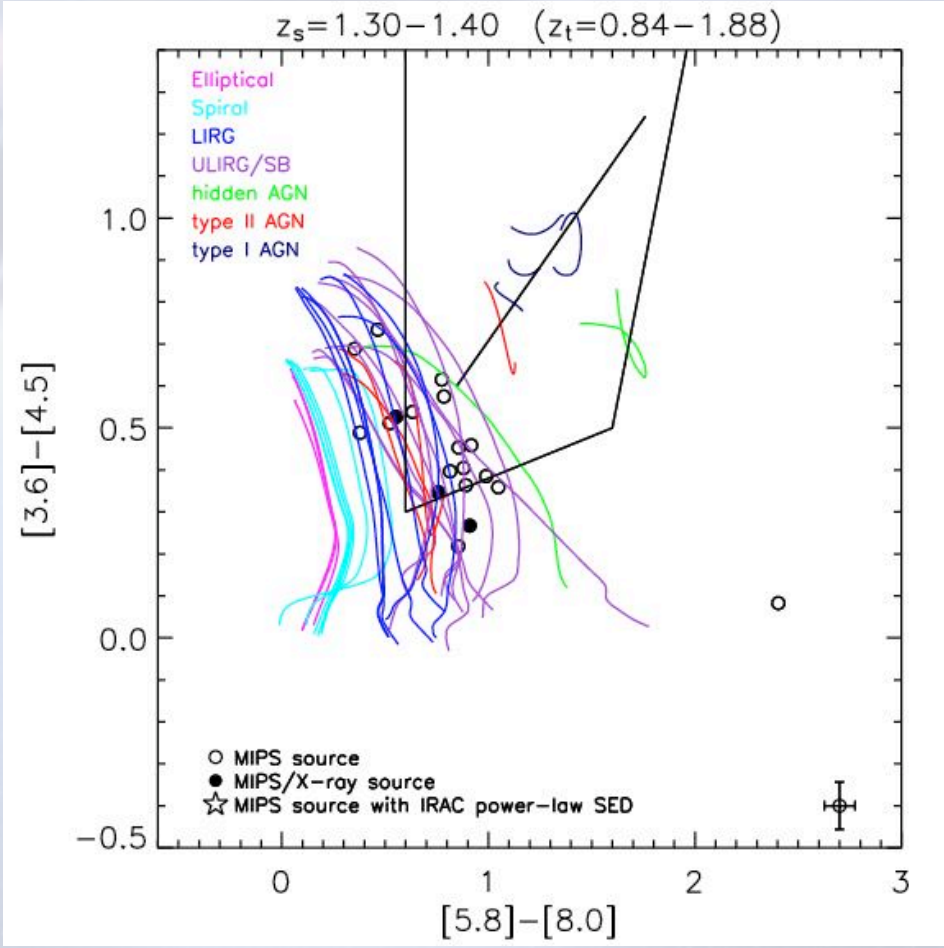

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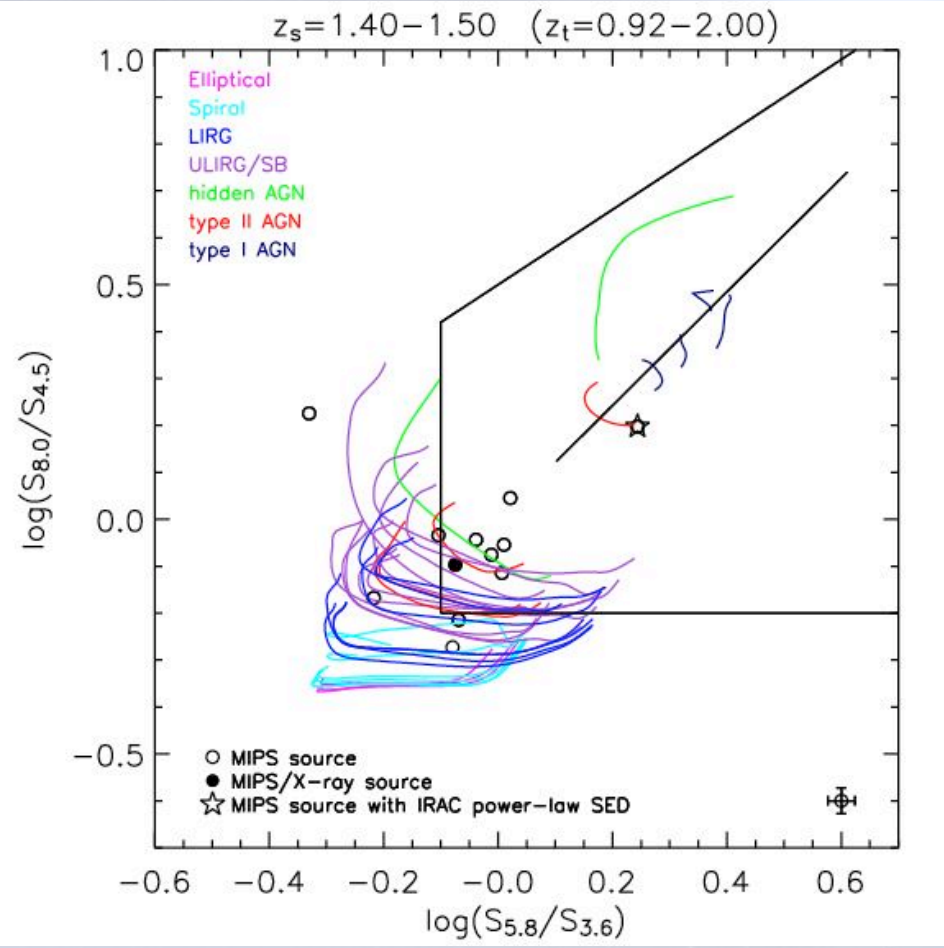

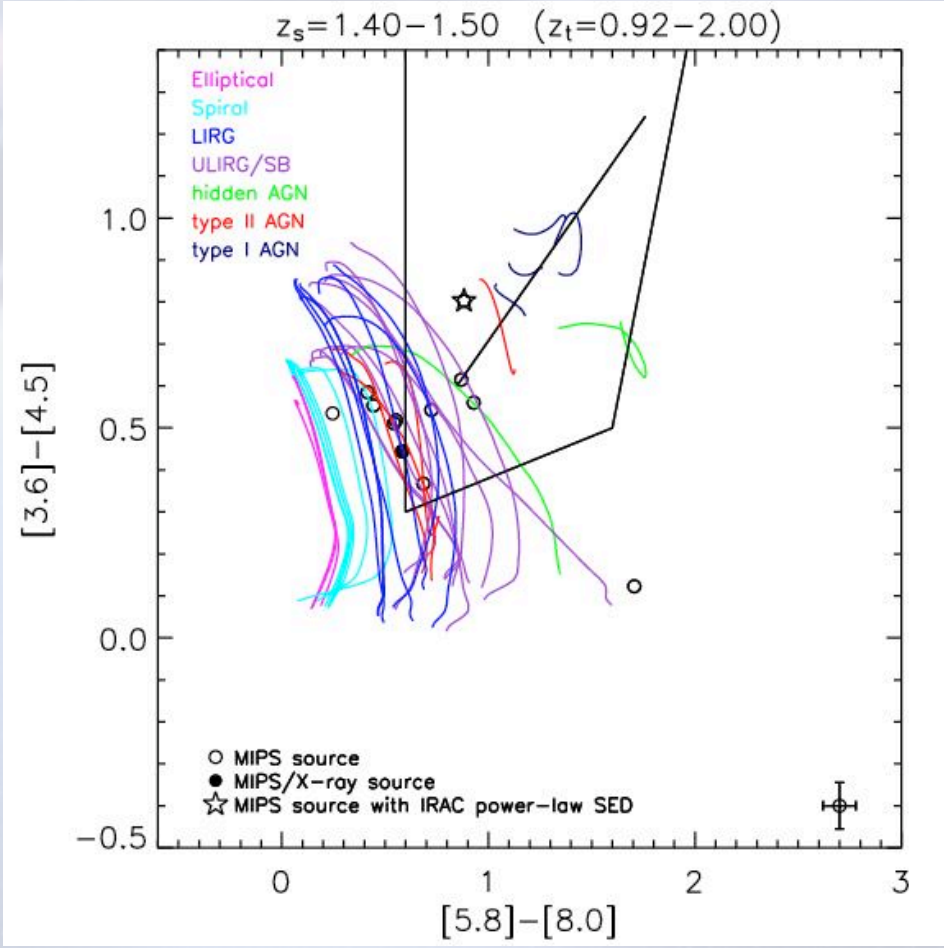

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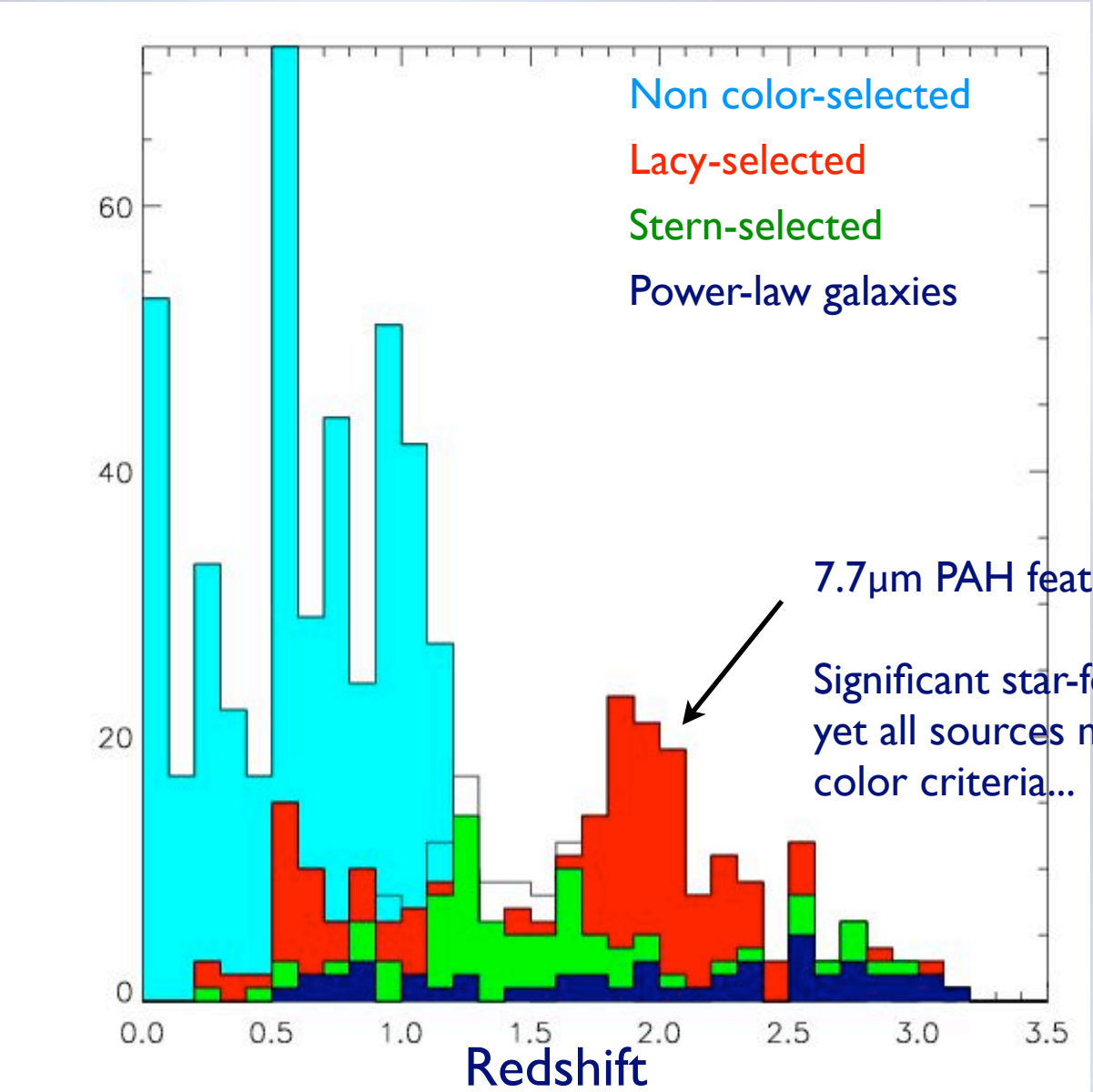
- Additional heavily obscured and Compton-thick AGN may exist in the 24 μm sample, but their NIR/MIR (1-5 μm) emission is not dominated by the AGN.

The full MIPS sample



7.7μm PAH feature shifts into band

Significant star-forming population, yet all sources meet the Lacy et al. color criteria...