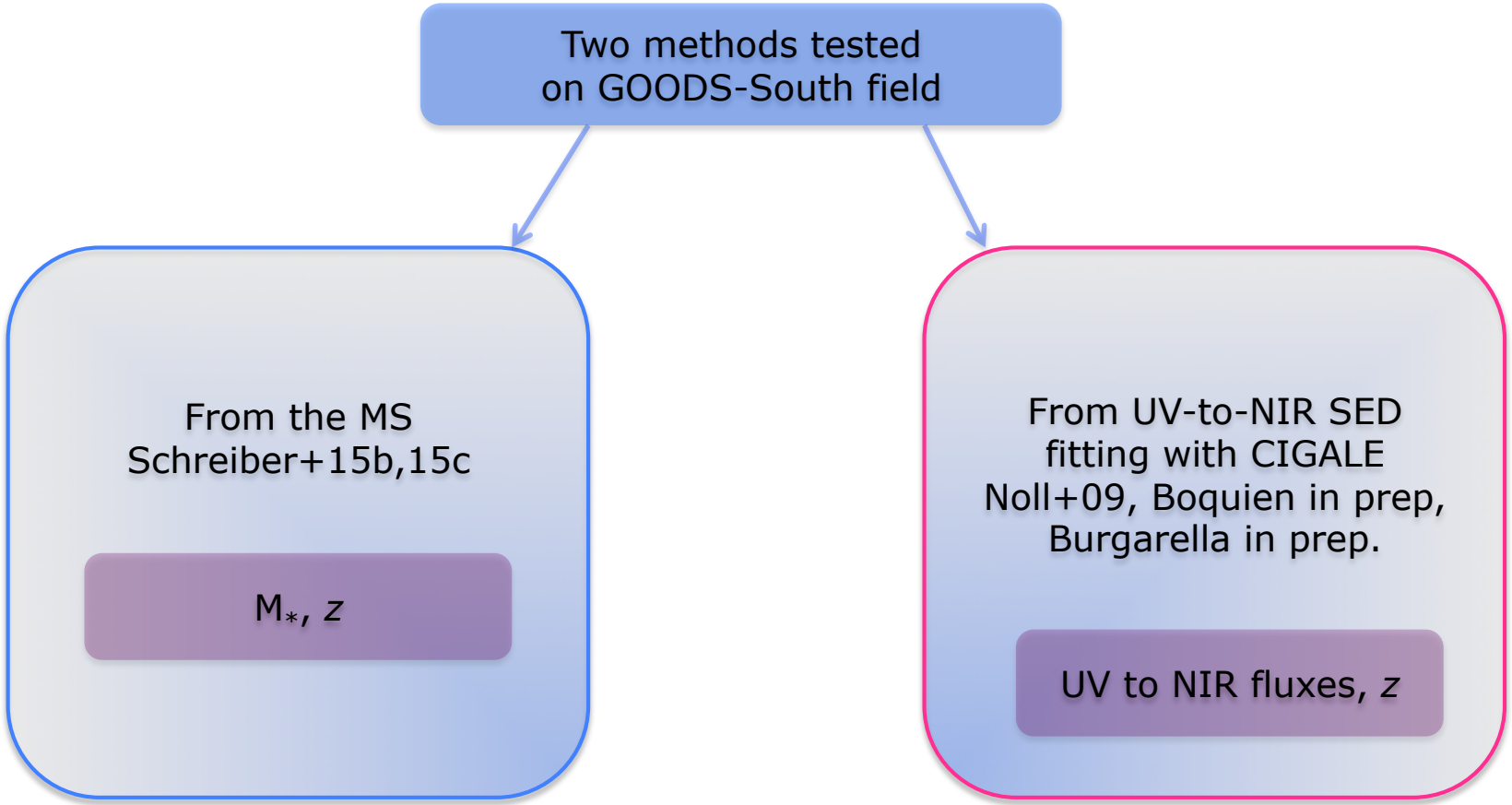

Priors improvement
and
catalogues check
Laure CIESLA

Goal: predict the 24 microns emission of sources from their UV-Opt-NIR fluxes or physical properties to improve the 24 microns priors.



From the MS
Schreiber+15b,15c

M_*, z

Assuming a MS relation

Total SFR

Assuming IRX=M_* (Heinis+13)

IR SFR

LIR

LIR, z

Dust Temperature
PAH fraction

IR Fluxes

Assuming Schreiber+15, To be submitted IR library

From UV-to-NIR SED fitting with CIGALE
Noll+09, Boquien in prep, Burgarella in prep.

BASED ON ENERGY BALANCE

UV to NIR fluxes, *z*

↓

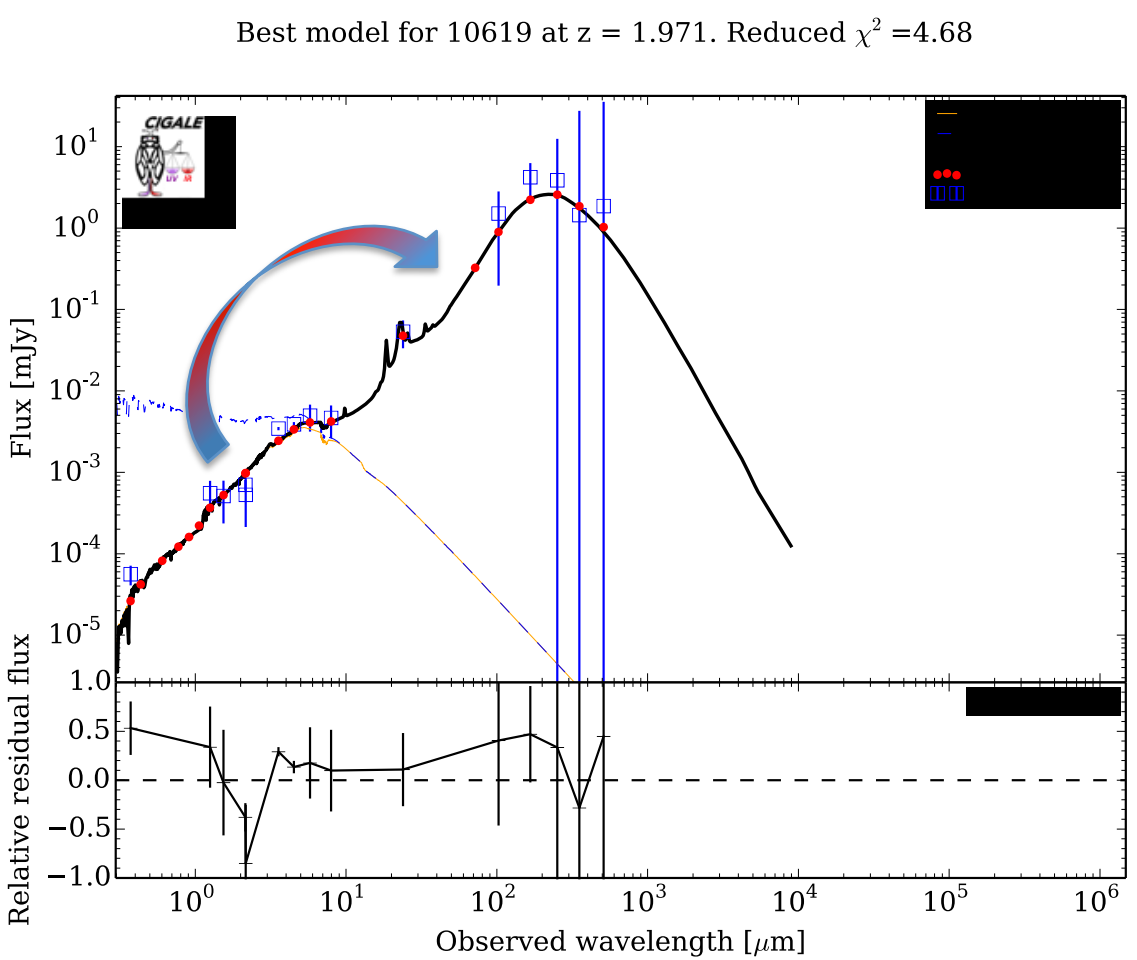
Attenuation

↓

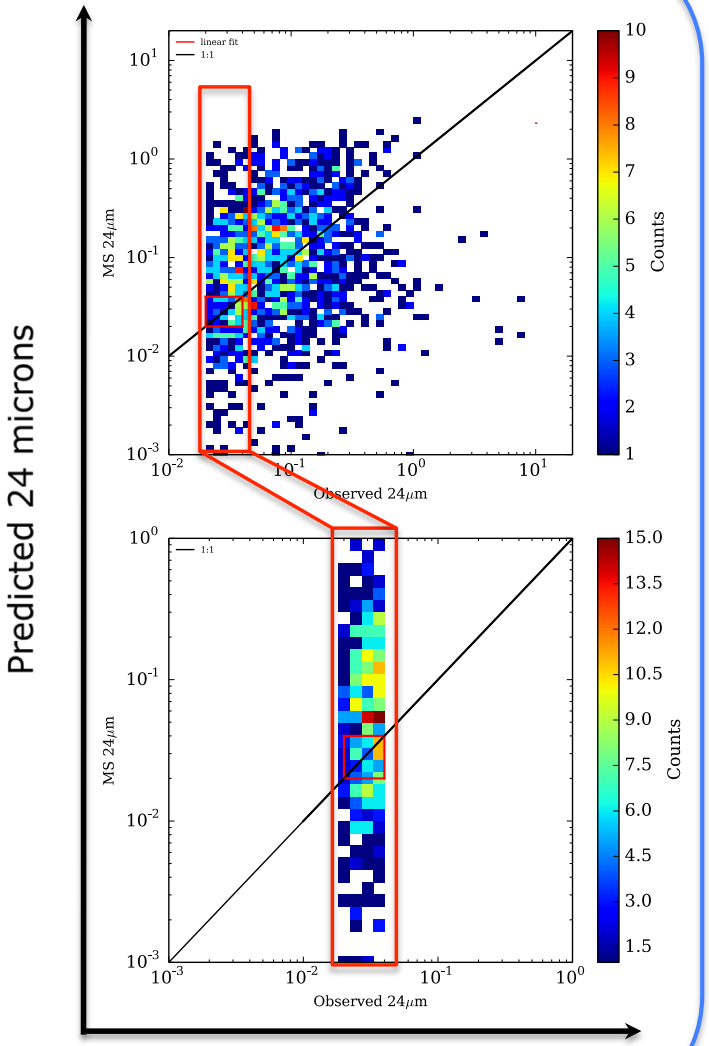
IR luminosity

↓ Assuming IR template

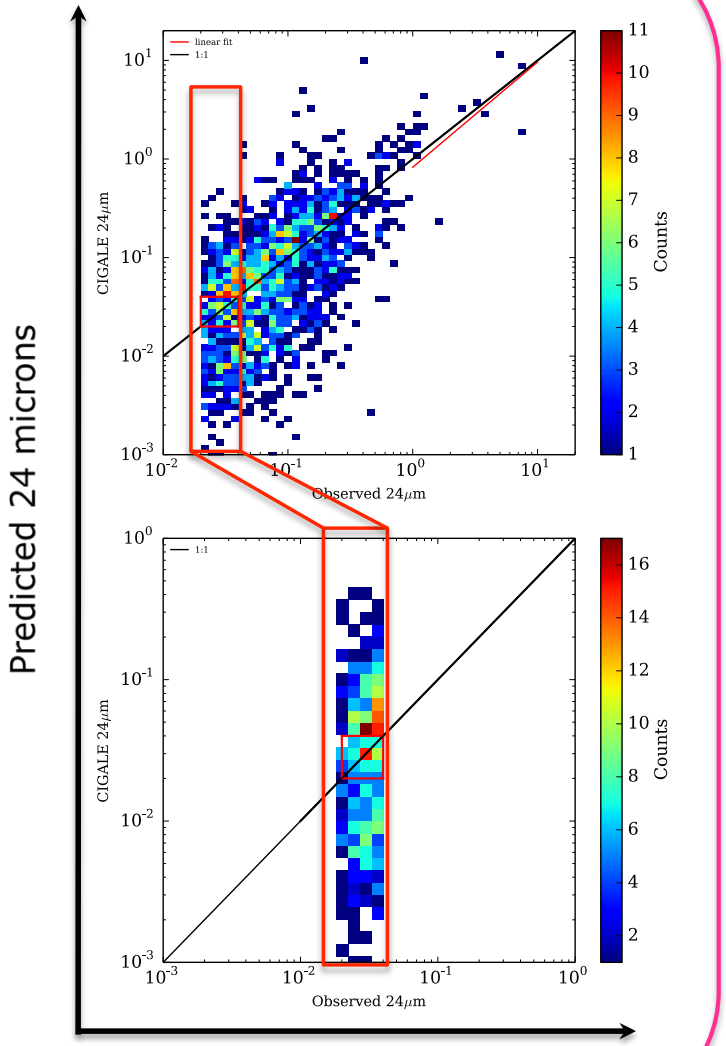
IR fluxes in any band

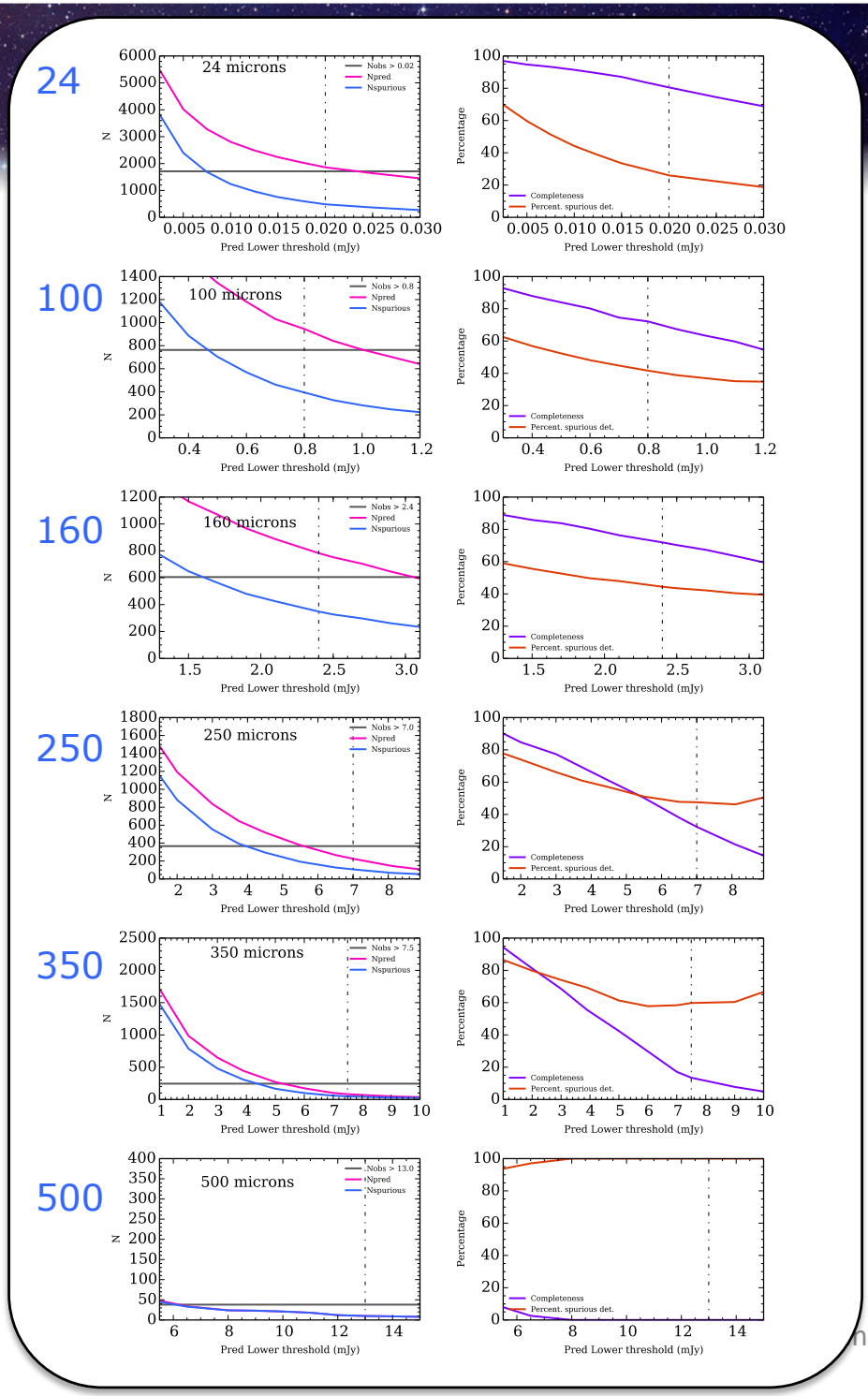


MS method



CIGALE

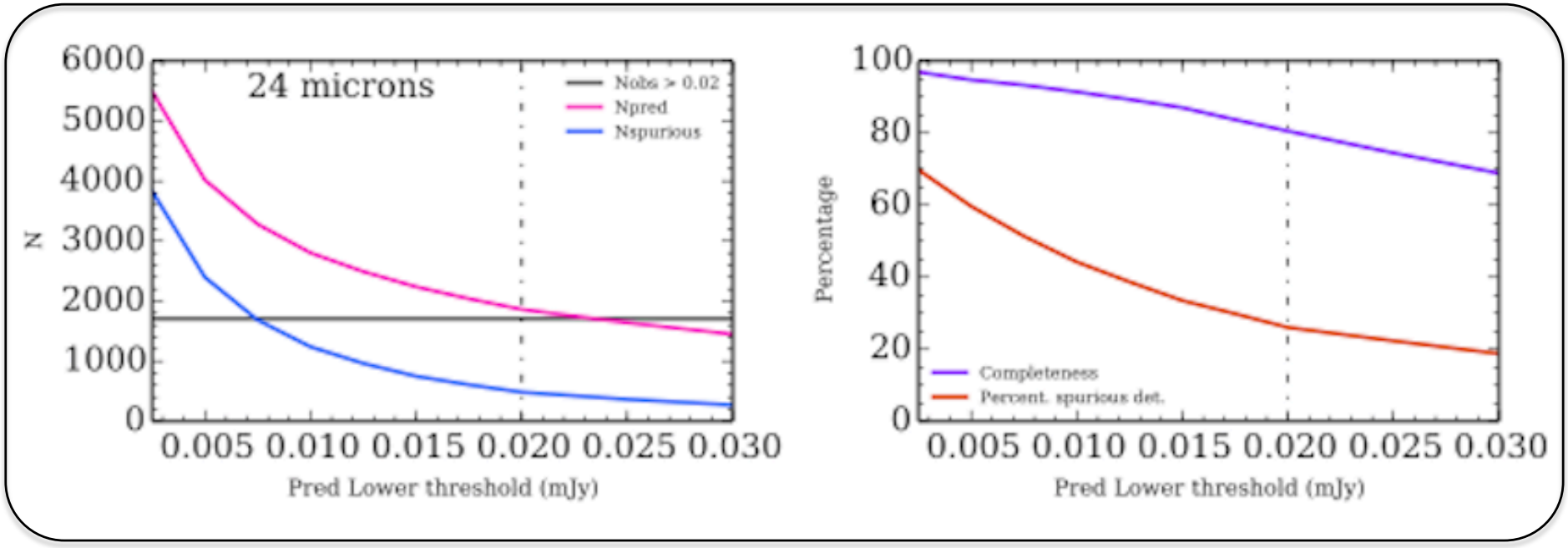




From the MS
Schreiber+15b,15c

24 um - det lim 0.2 mJy
100 um - det lim 0.8 mJy
160 um - det lim 2.4 mJy
250 um - det lim 7.0 mJy
350 um - det lim 7.5 mJy
500 um - det lim 13. mJy

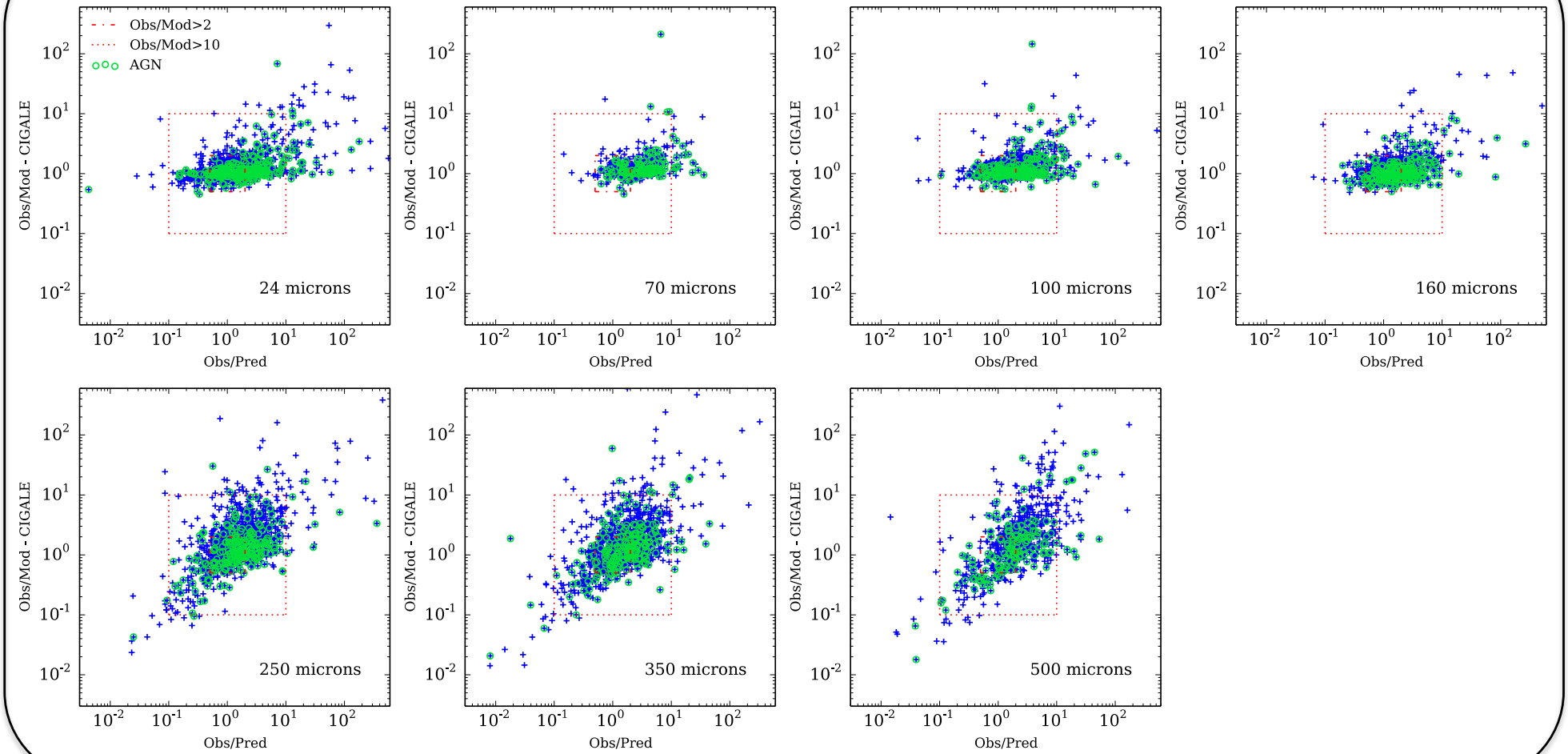
Schreiber+15



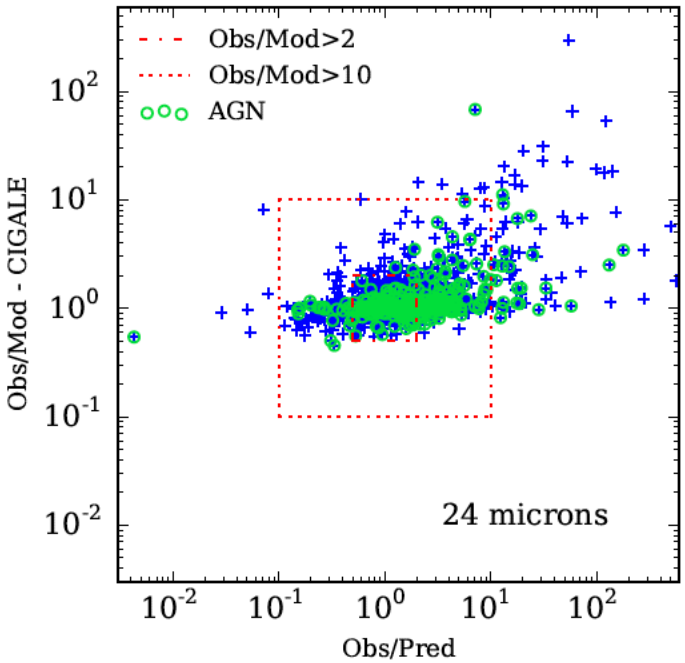
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500 um - det lim 13. mJy

Schreiber+15

Checking and testing IR catalogues

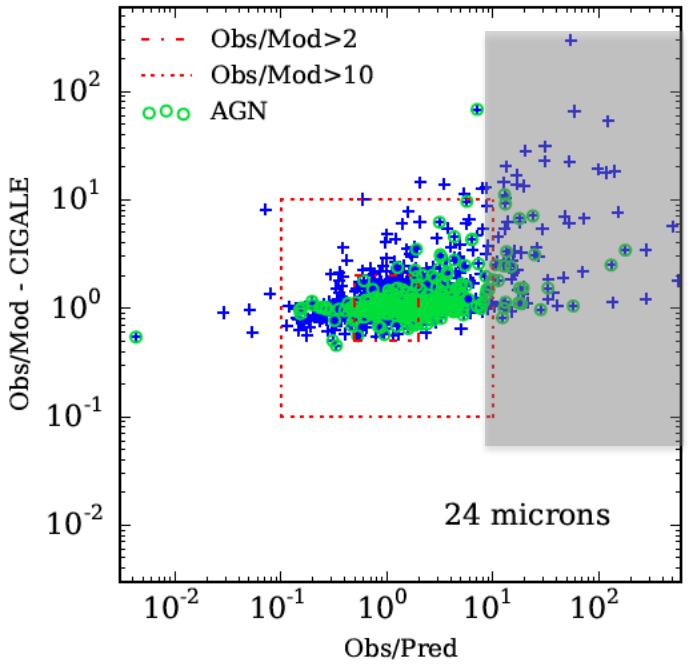


24 microns detections

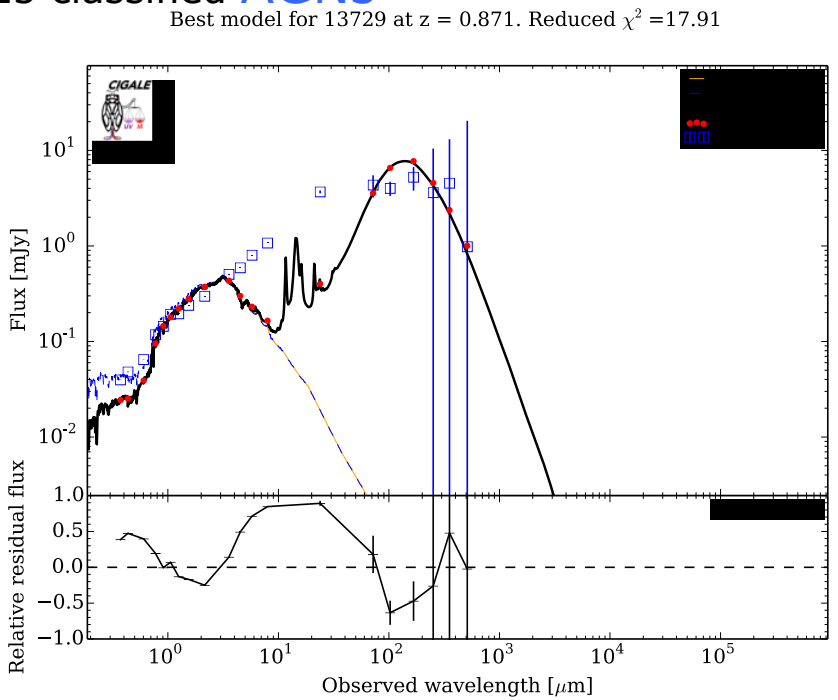


24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)

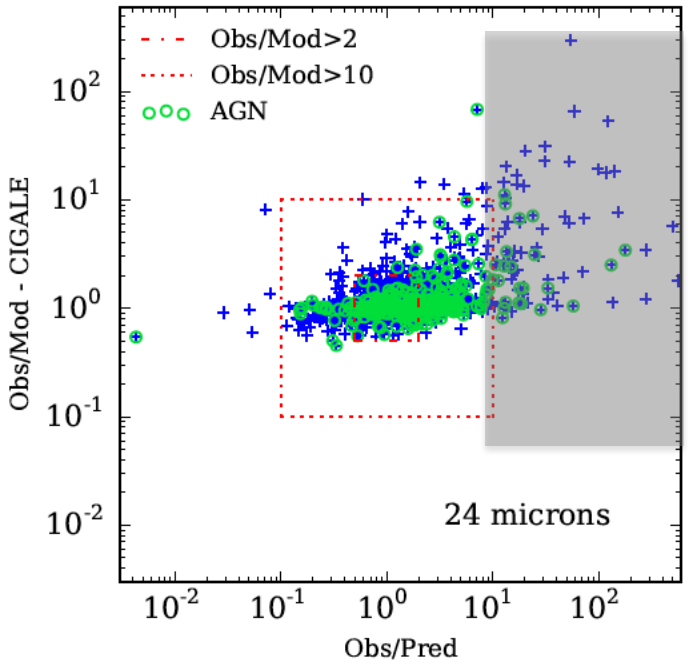


25 classified AGNs

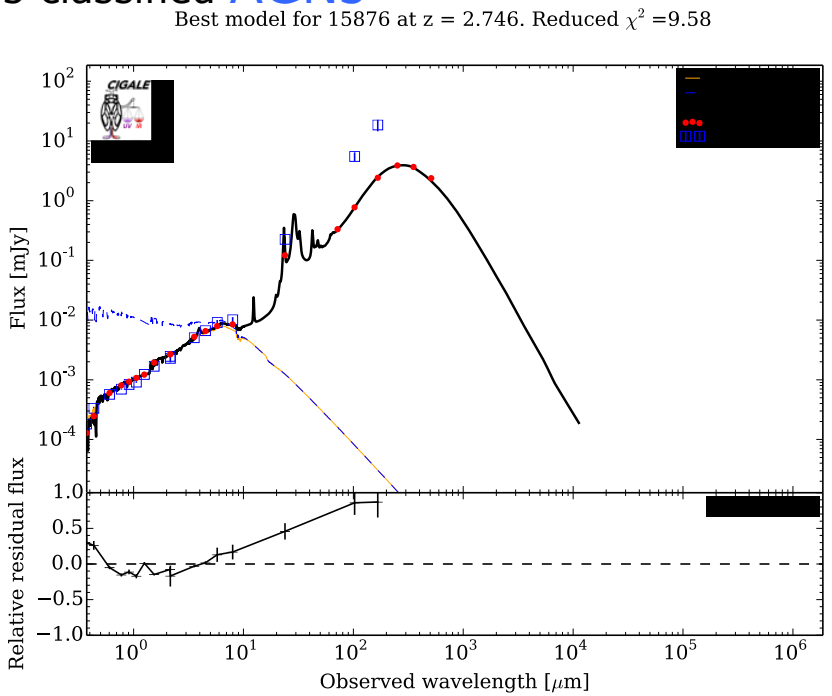


24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)

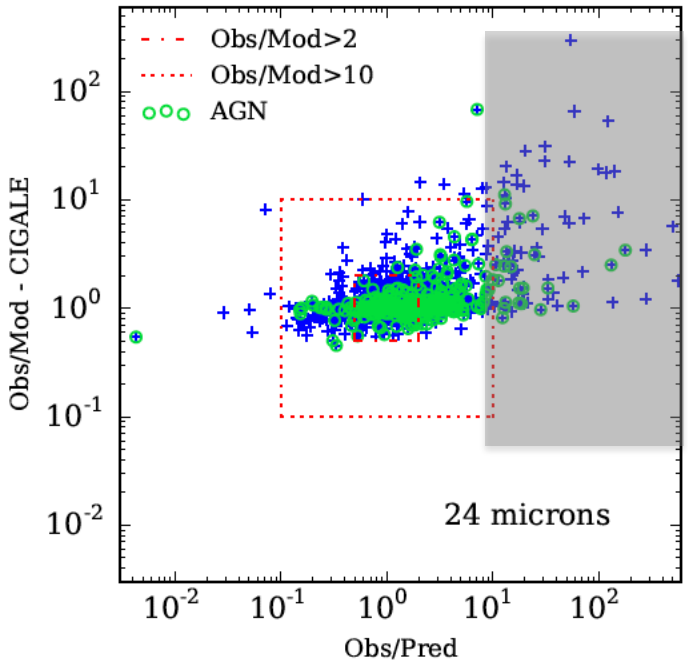


25 classified AGNs

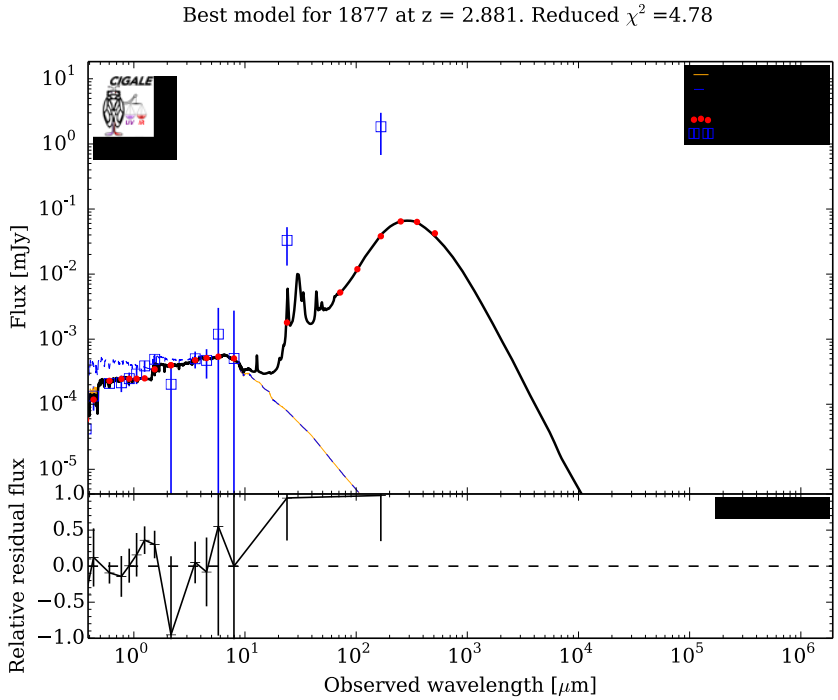


24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)

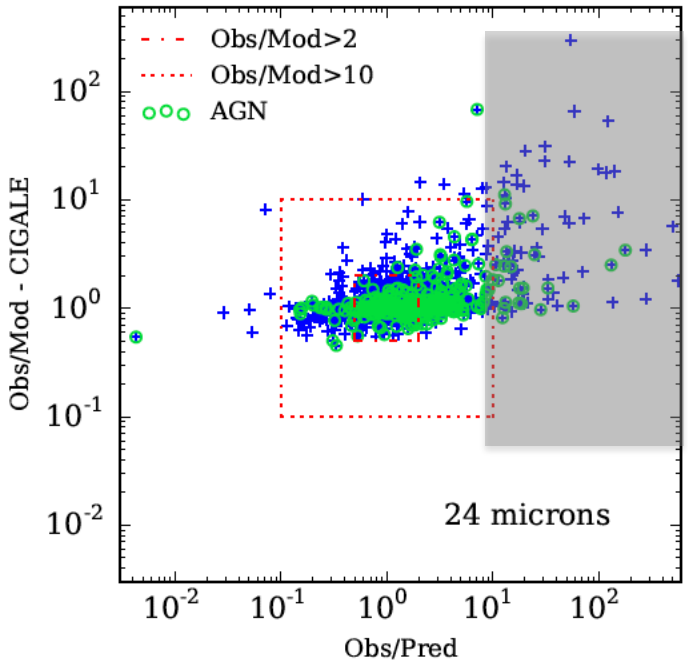


~52 classified as possible cross-match prob or bad photometry

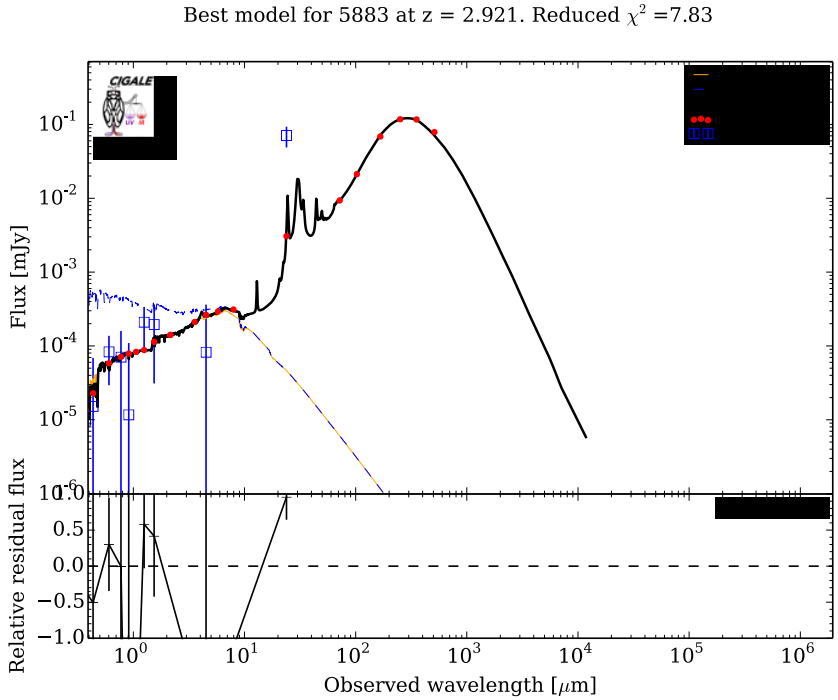


24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)

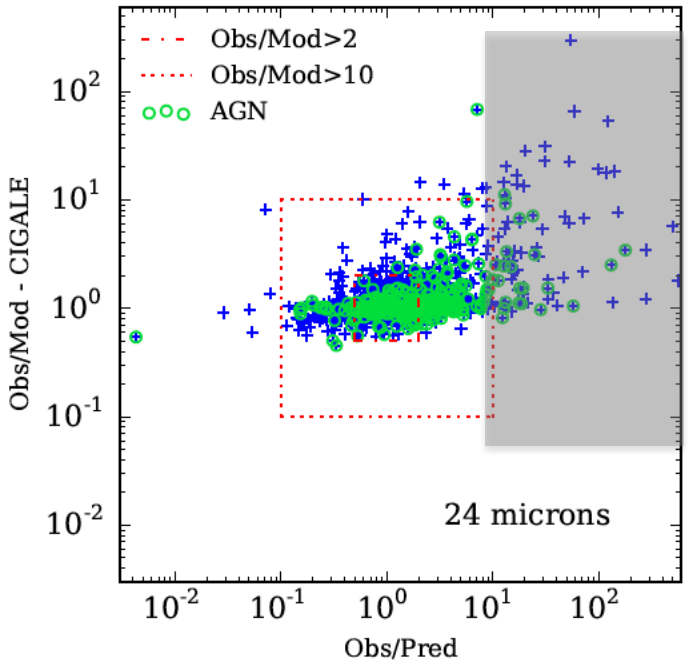


~52 classified as possible cross-match prob or bad photometry

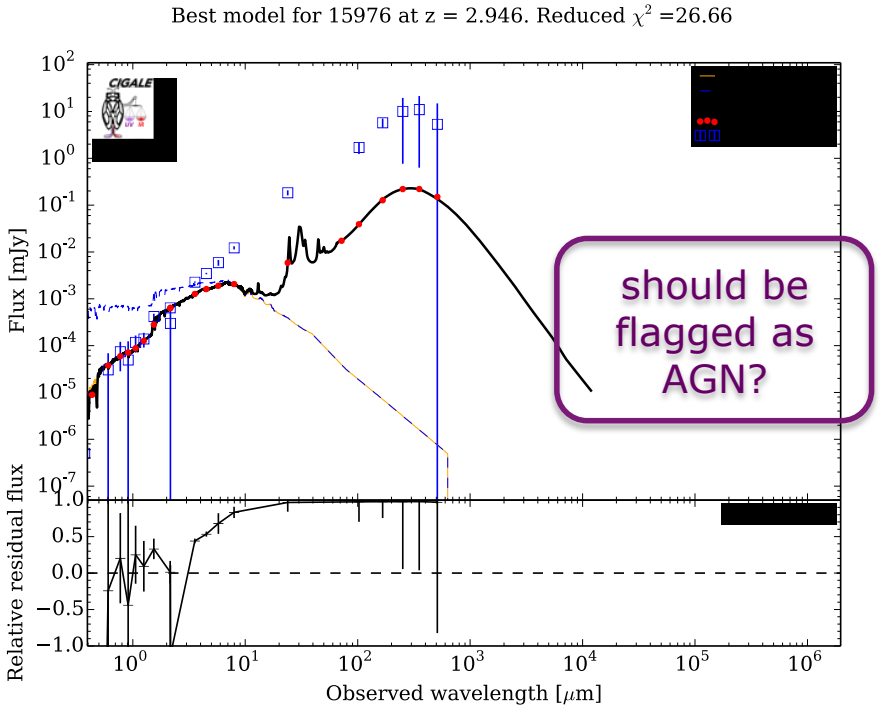


24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)



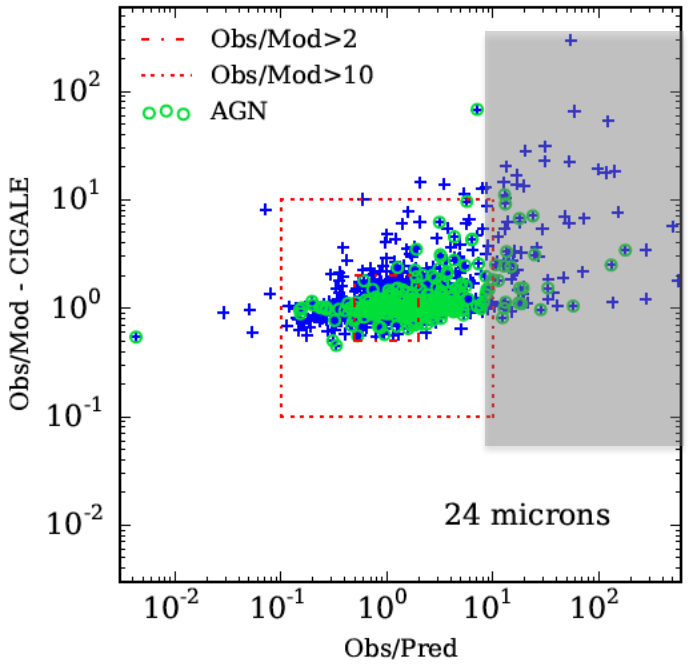
others could be interesting sources (probably already known) or SB



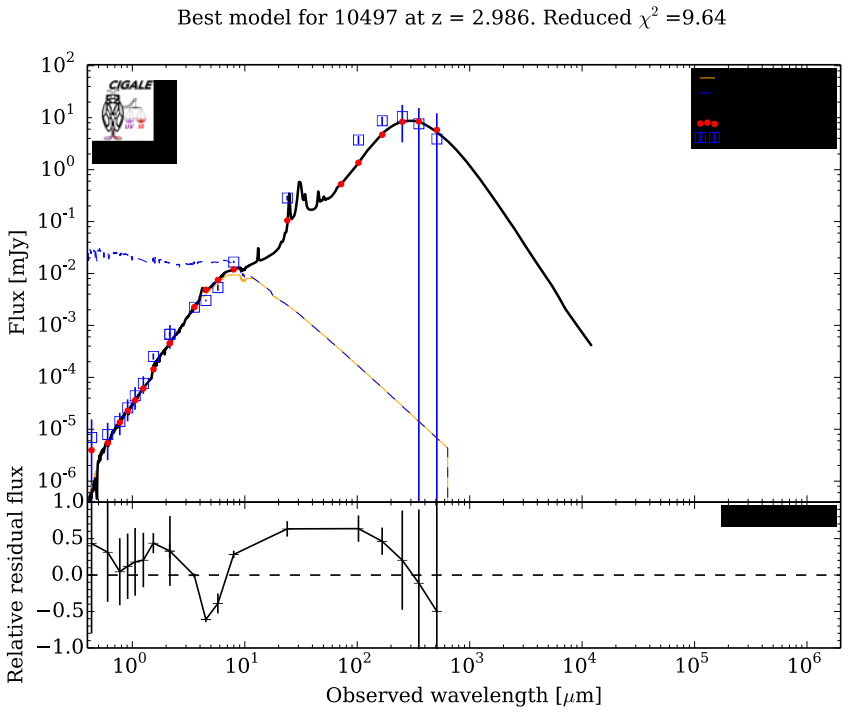
should be flagged as AGN?

24 microns detections

89 sources with Obs/Pred >10 (Corentin's method)

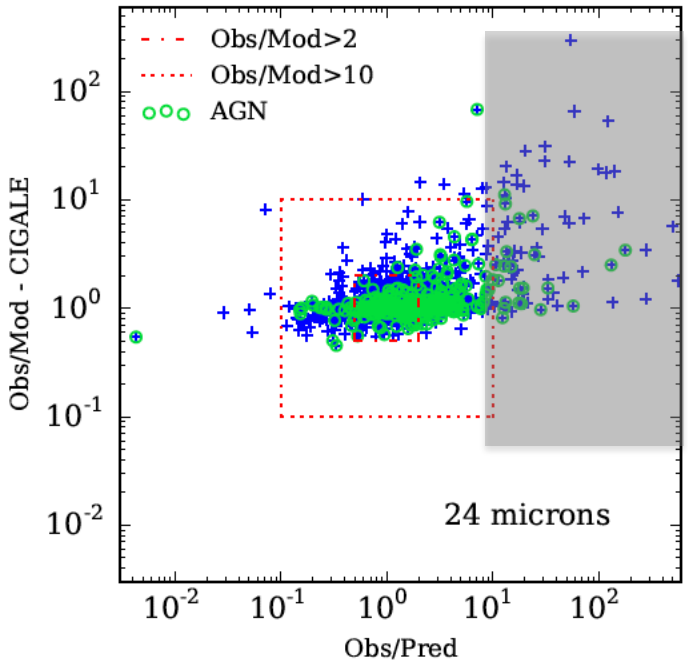


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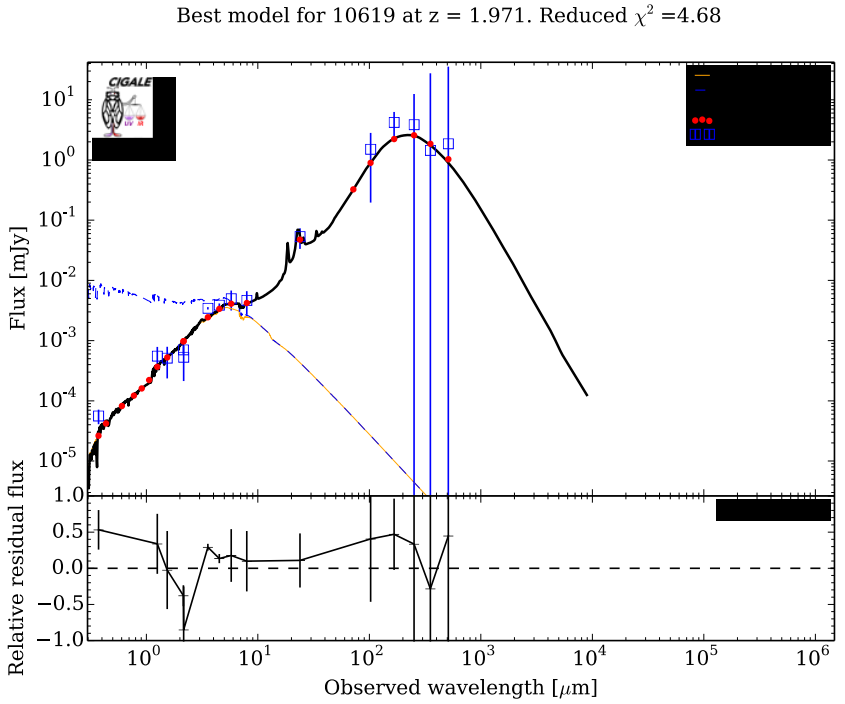


24 microns detections

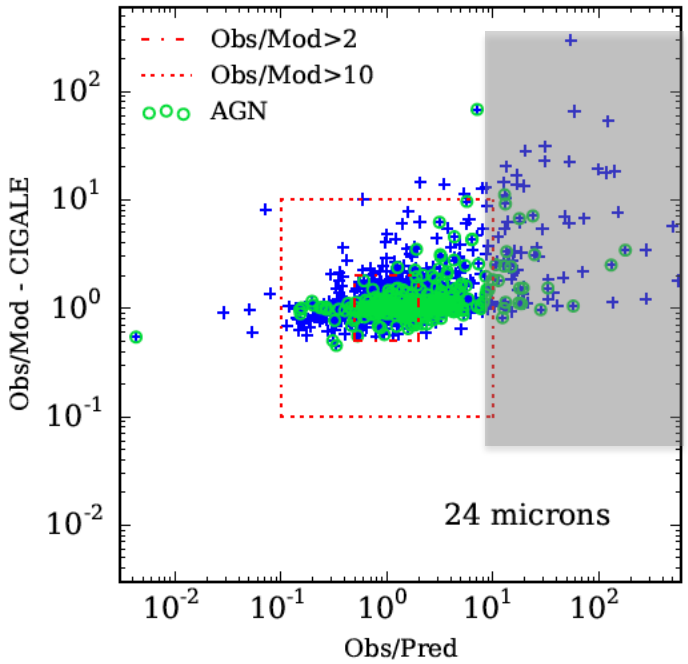
89 sources with Obs/Pred >10 (Corentin's method)



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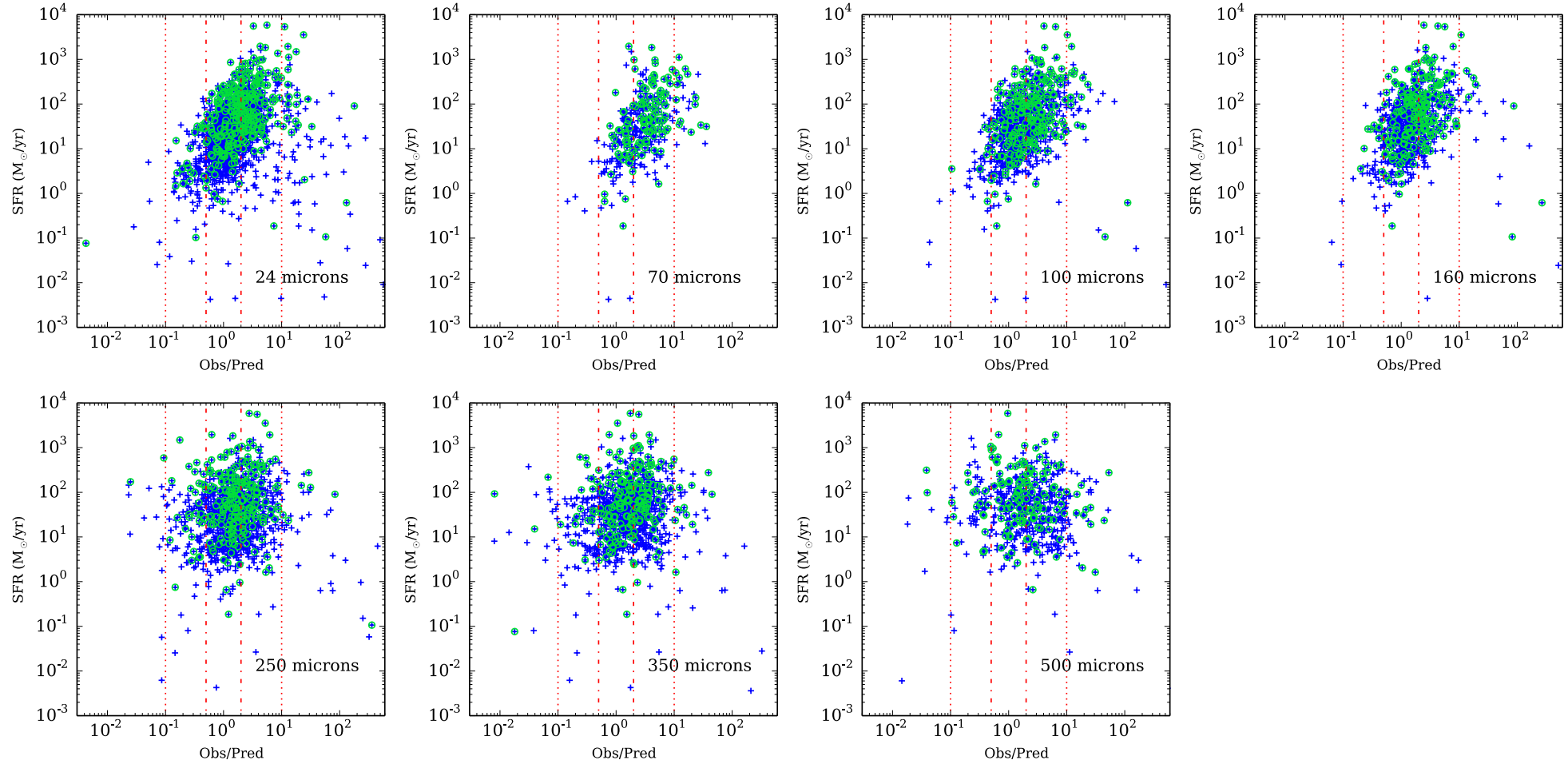


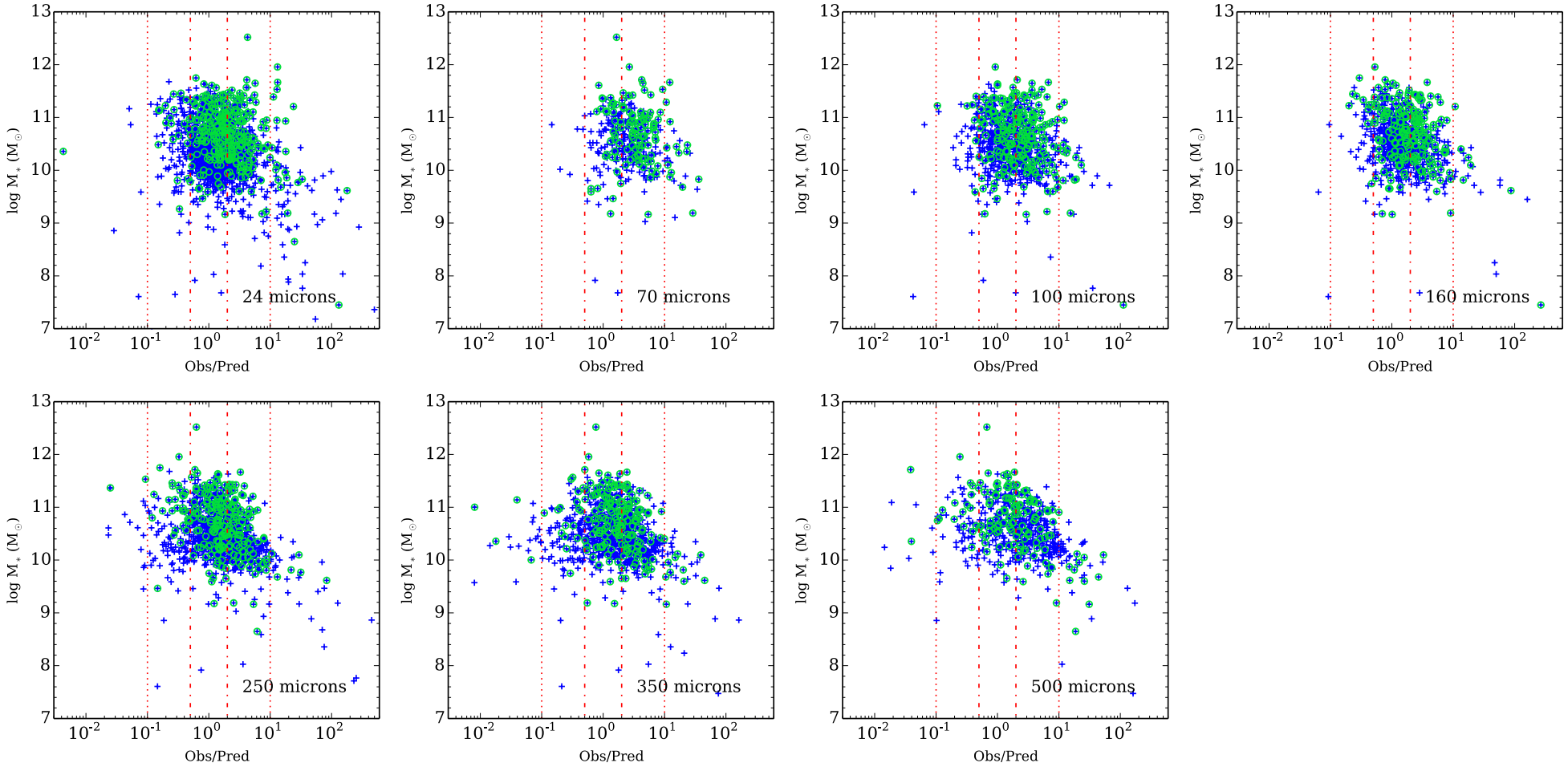
24 microns detections

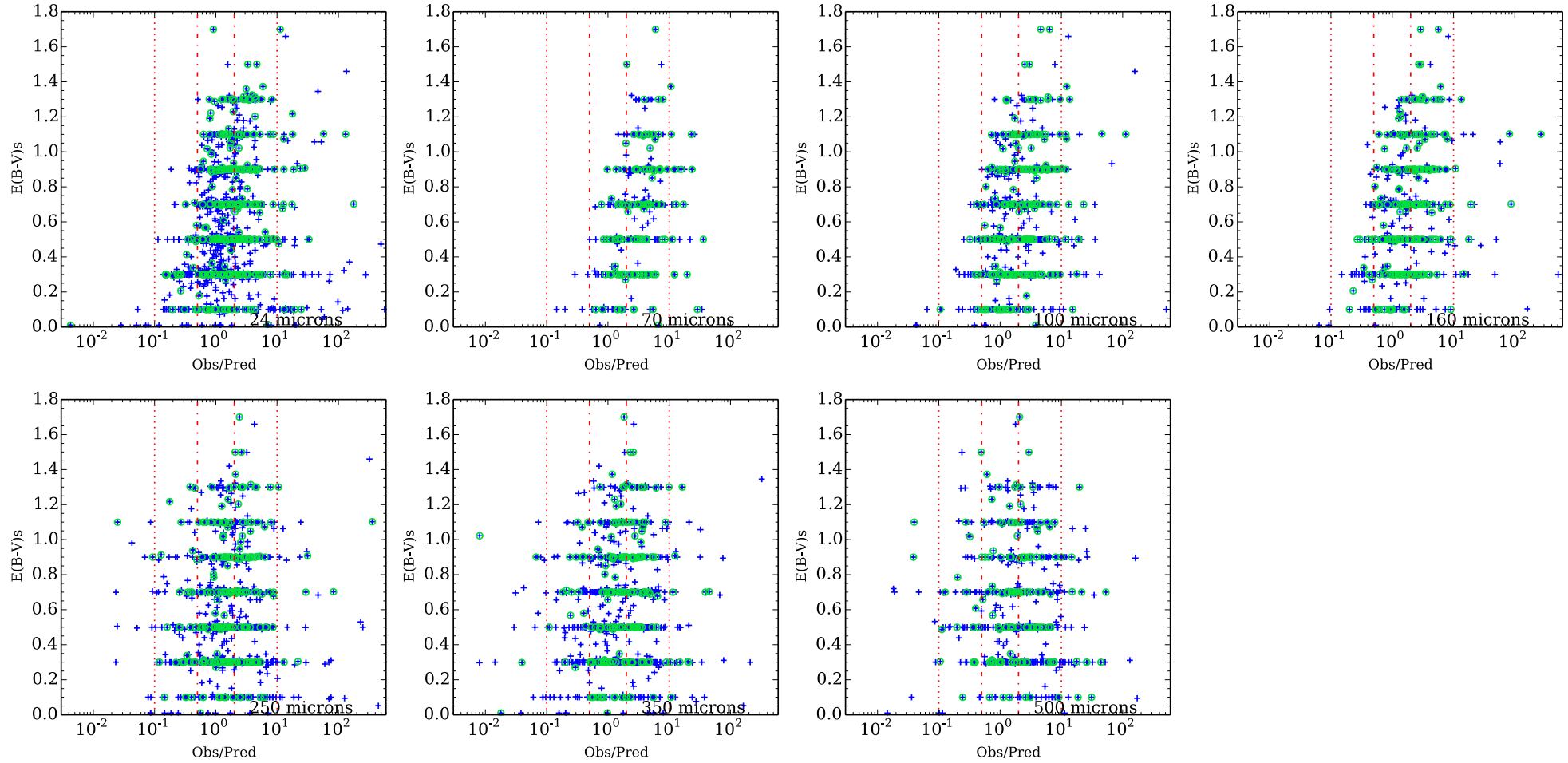


This test can be done at any IR band and on any catalogue.

Thank you!


24 microns
70 microns
100 microns
160 microns
250 microns
350 microns
500 microns
SFR (M$_\odot$/yr)
Obs/Pred


24 microns
70 microns
100 microns
160 microns
250 microns
350 microns
500 microns
log M$_*$ (M$_\odot$)
Obs/Pred


24 microns
70 microns
100 microns
160 microns
250 microns
350 microns
500 microns
E(B-V)s
Obs/Pred