

# Galaxy evolution in and around filaments

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- Most of the action takes place within filaments
- Filaments have specific velocity field, gas content (WHIM?), etc

Is there a difference in galaxy properties?

- Galaxy properties depend strongly on mass & envir. density
- These effects have to be neutralised to see filament-specific relations

Neutrality with respect to

- stellar mass
- environment density
- redshift

is critical!

- Galaxy sample: SDSS DR10
- vol-lim sample, 1Mpc smoothed enviro. density, single galaxies: Tempel et al. 2014a
- Filaments: Tempel et al. 2014b

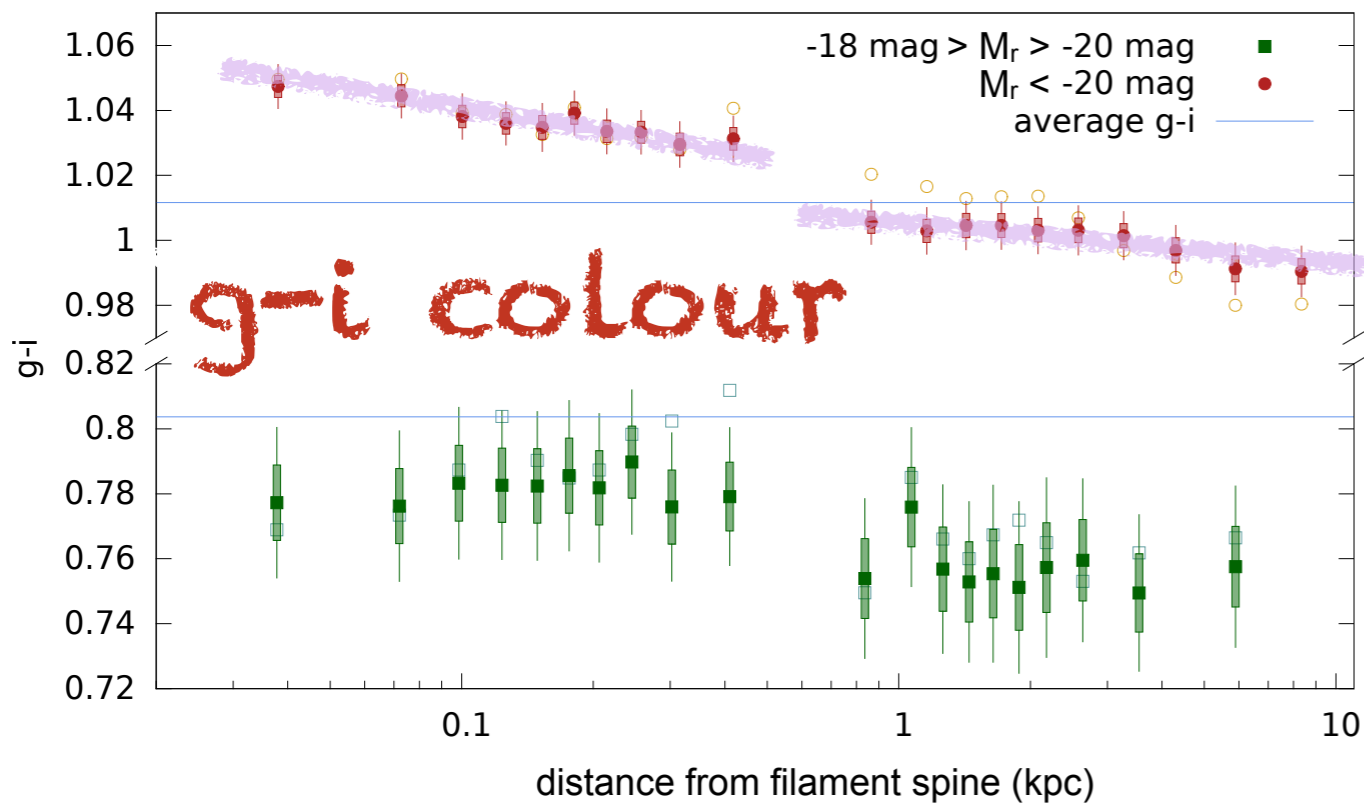
# Normalised distributions of

- stellar mass  
(Granada group estimates)
- envir. density  
(1Mpc smoothed luminosity density)

by binned weighting.

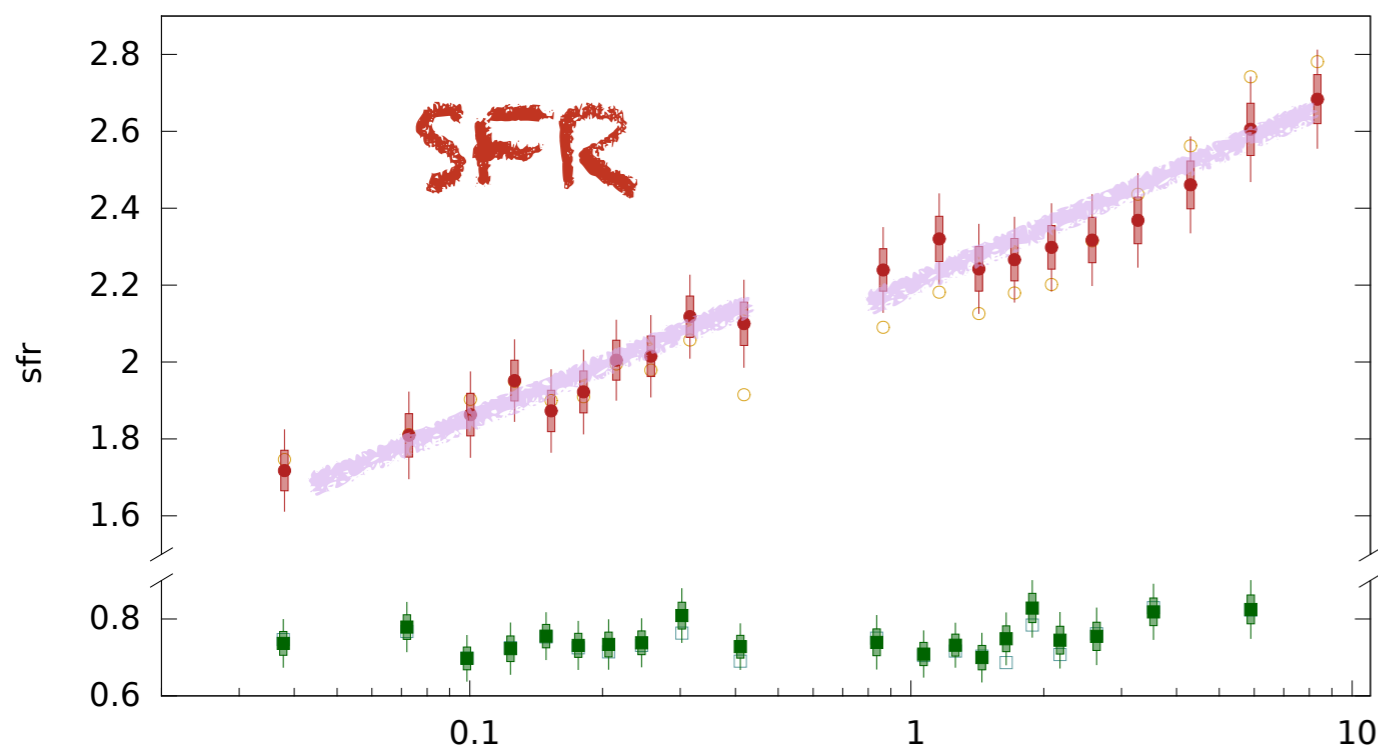
+ only isolated galaxies  
(only a minor improvement of neutrality)





bright sample:  
reddening towards centre

faint sample:  
no trend



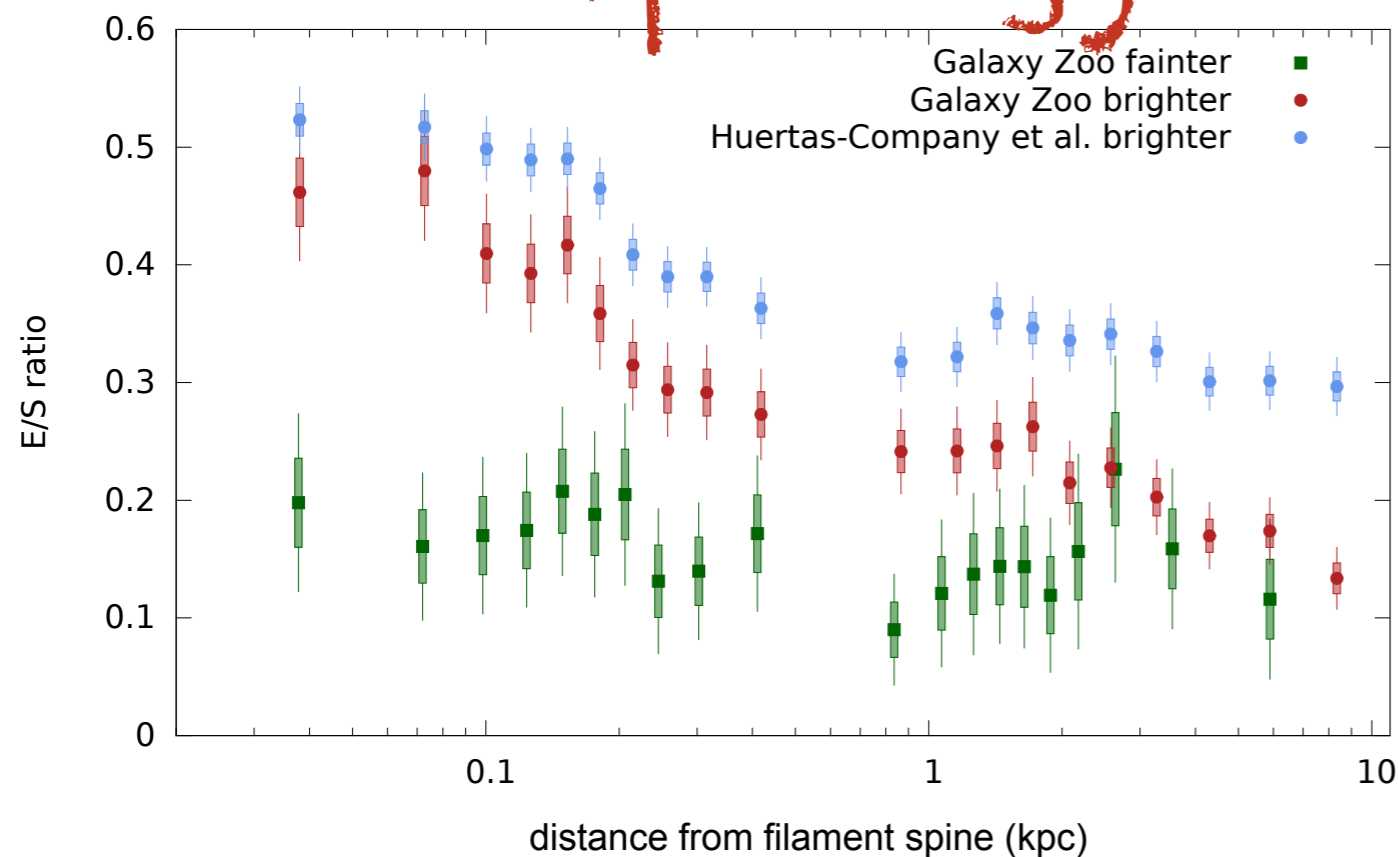
bright sample:  
Lower SFR towards centre

faint sample:  
no trend

Kuutma et al., submitted soon, contributions welcome



# morphology



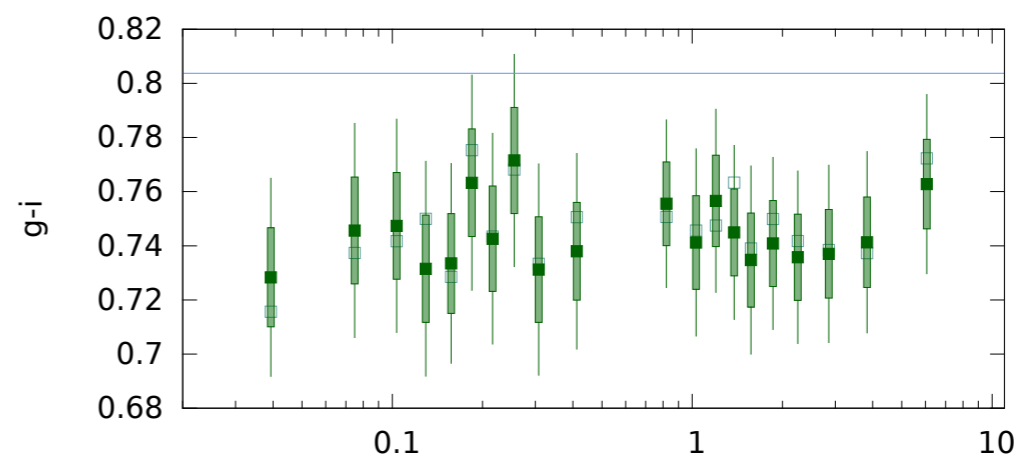
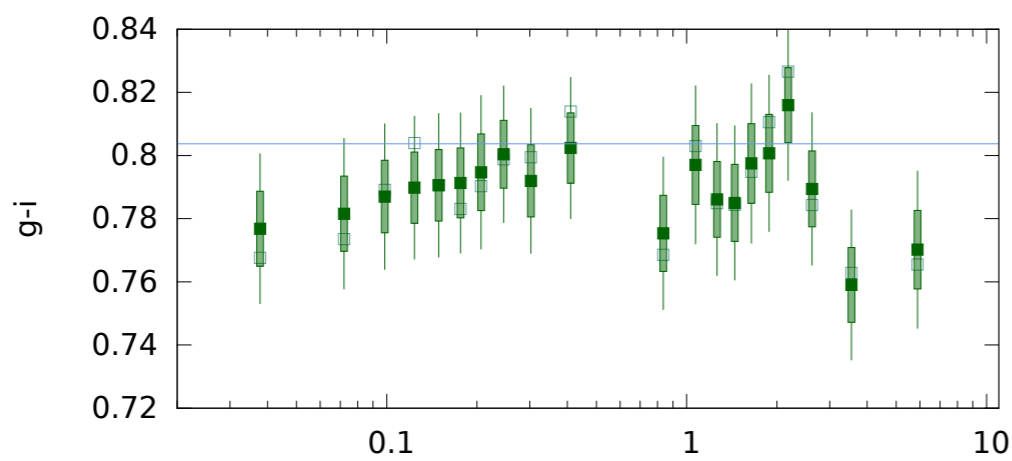
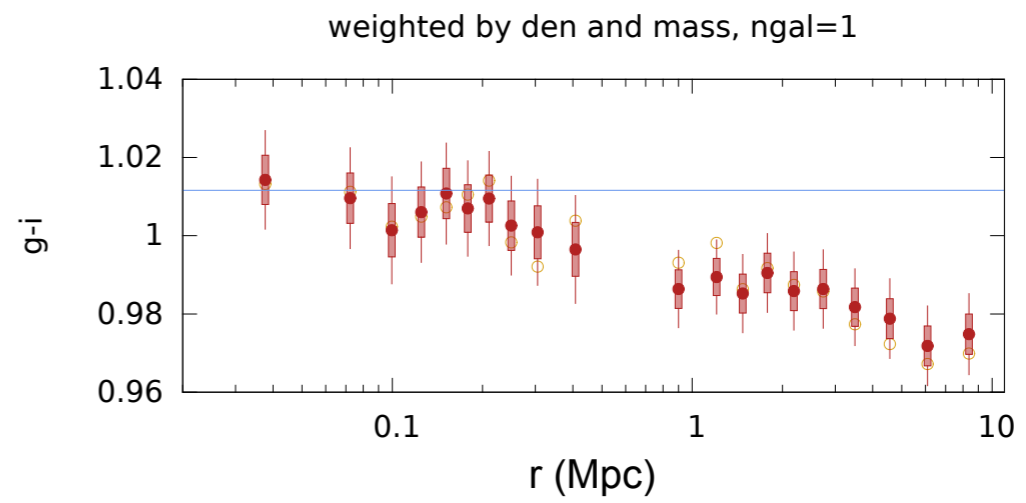
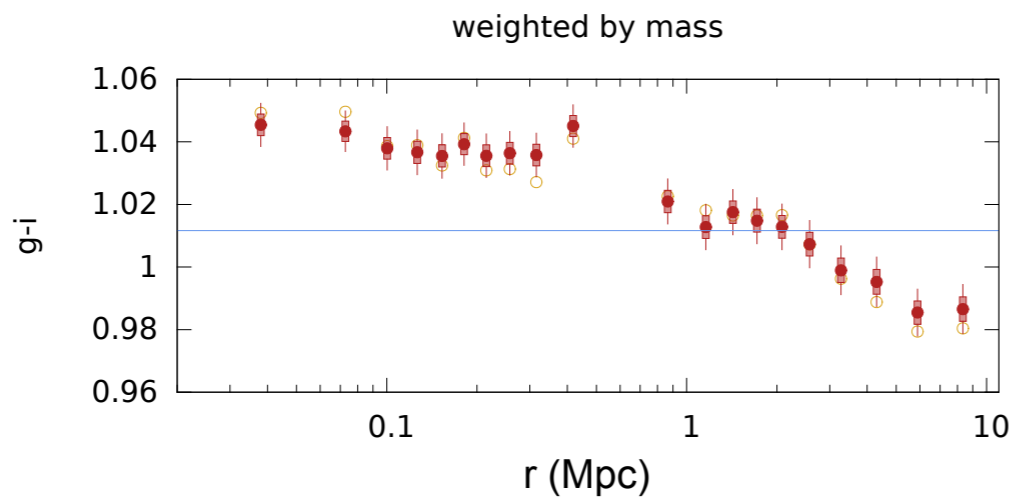
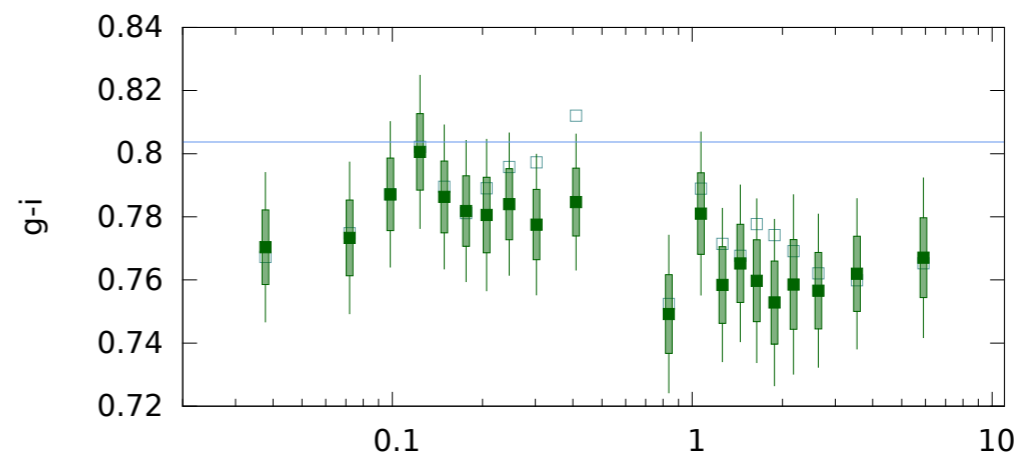
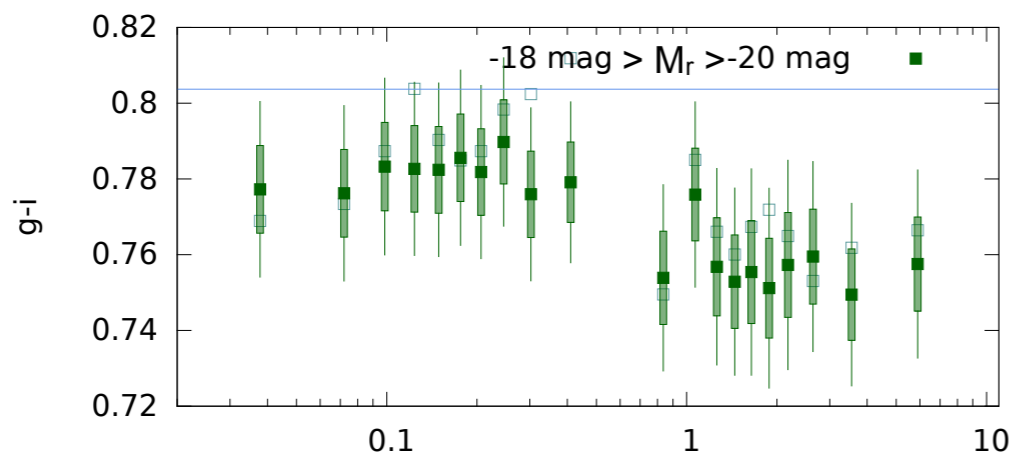
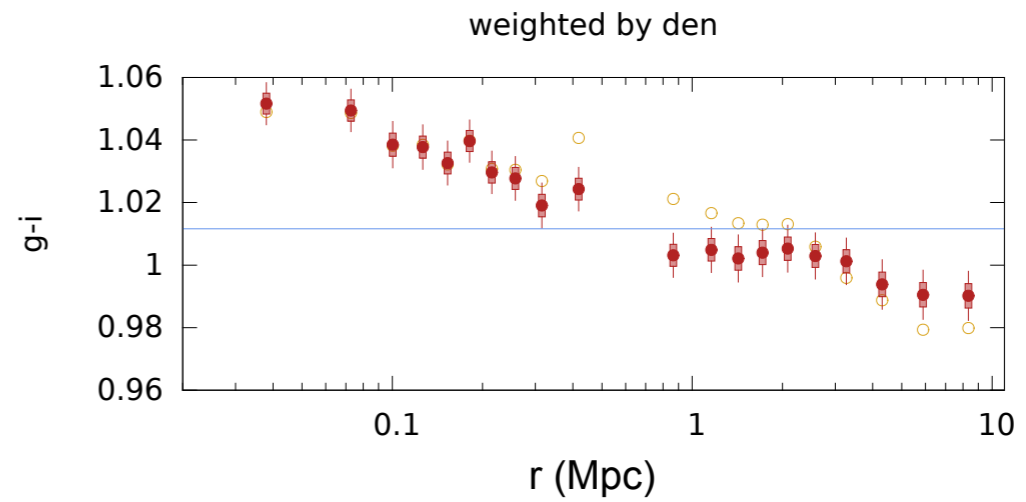
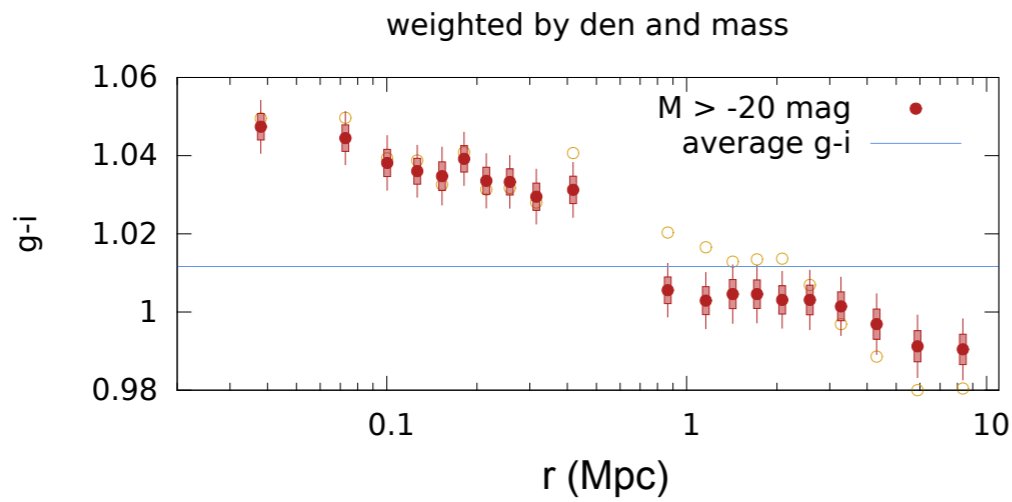
bright sample:  
more ellipticals towards centre

faint sample:  
no trend within errors

Kuutma et al., submitted soon, contributions welcome



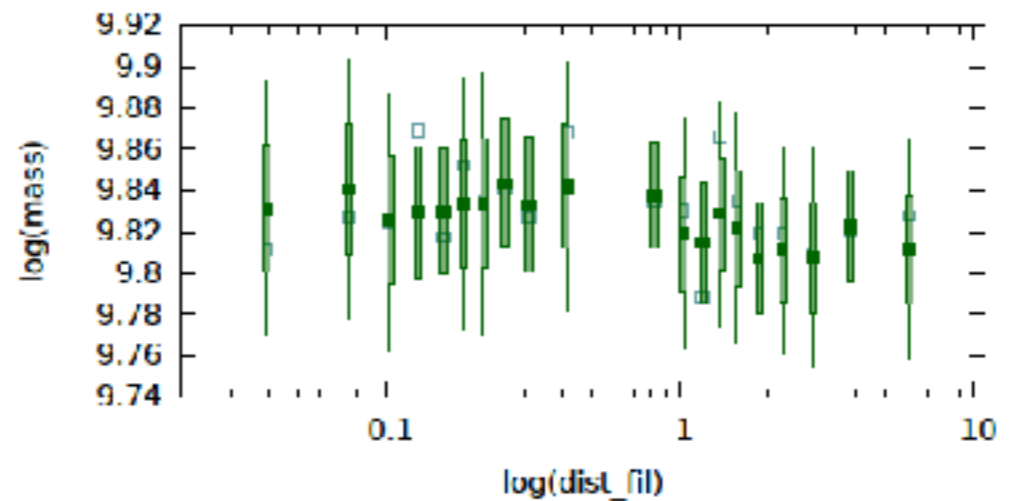
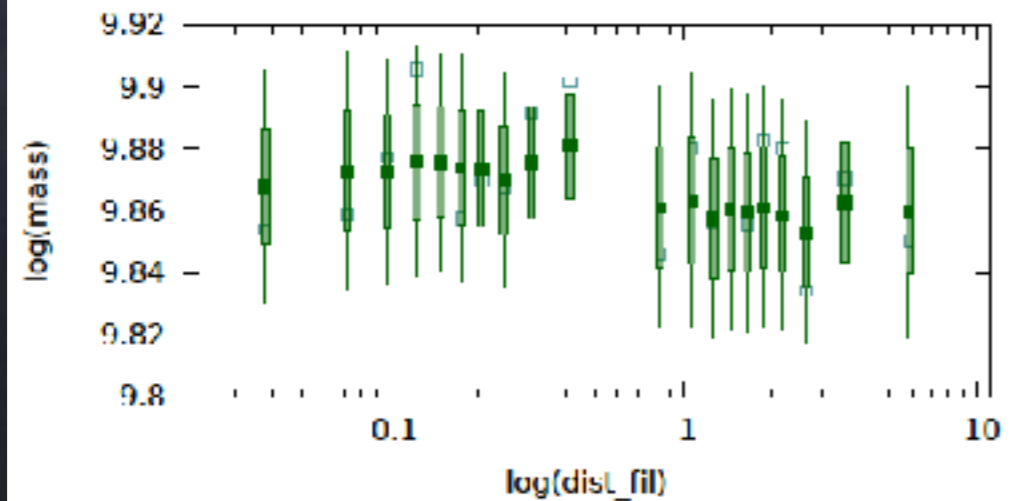
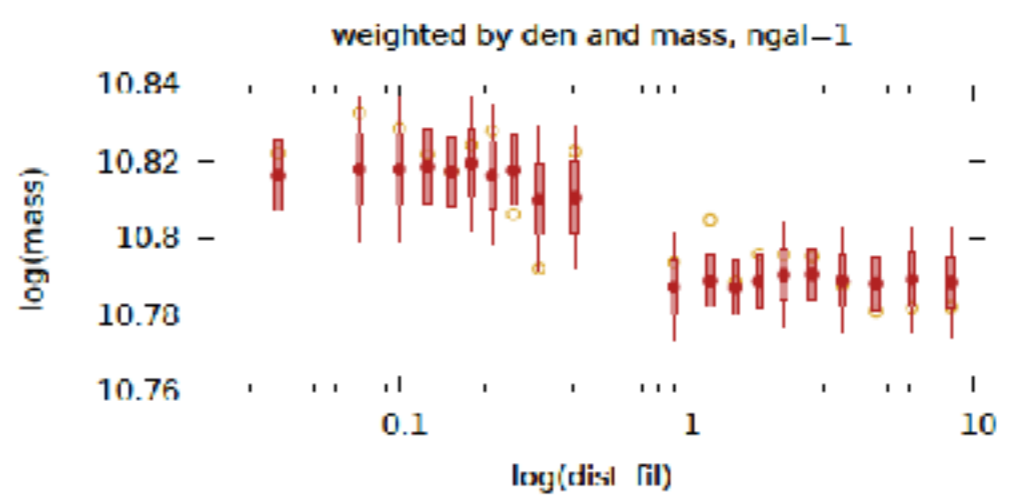
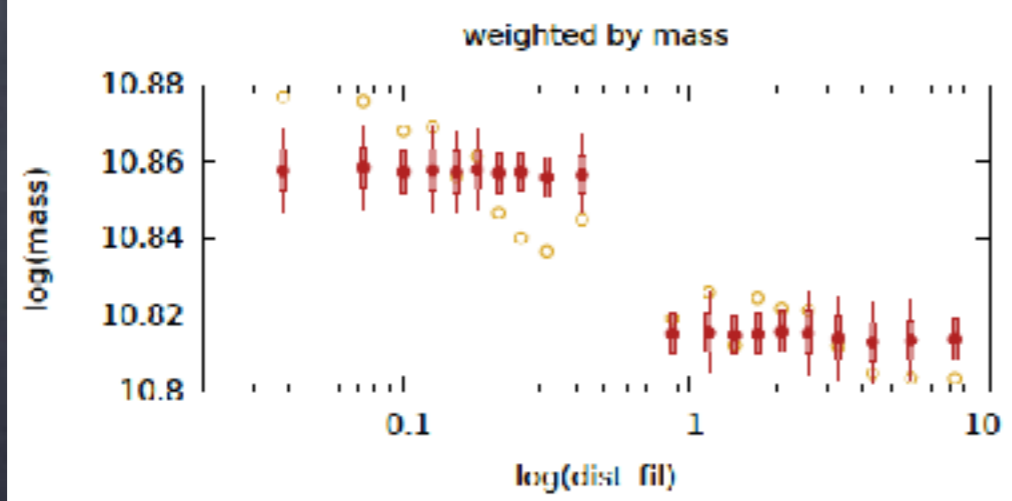
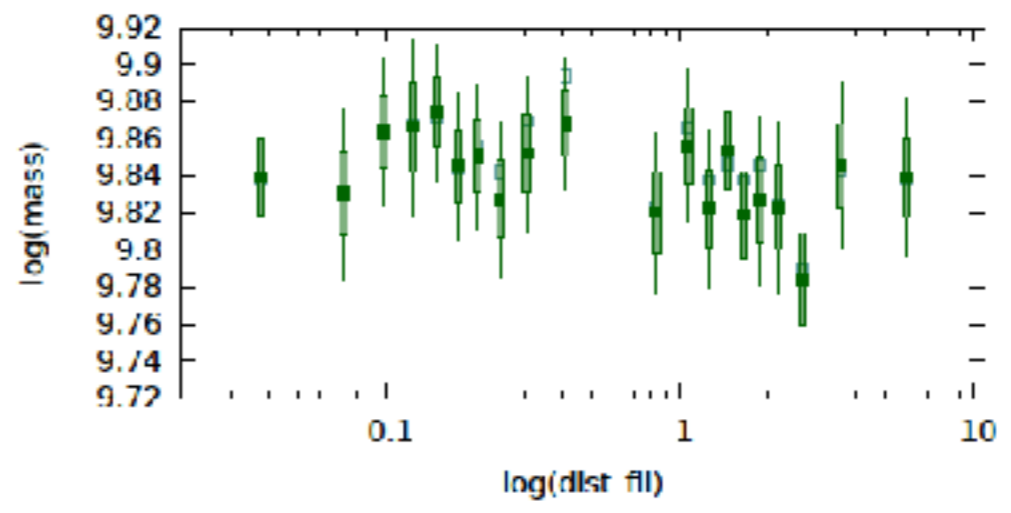
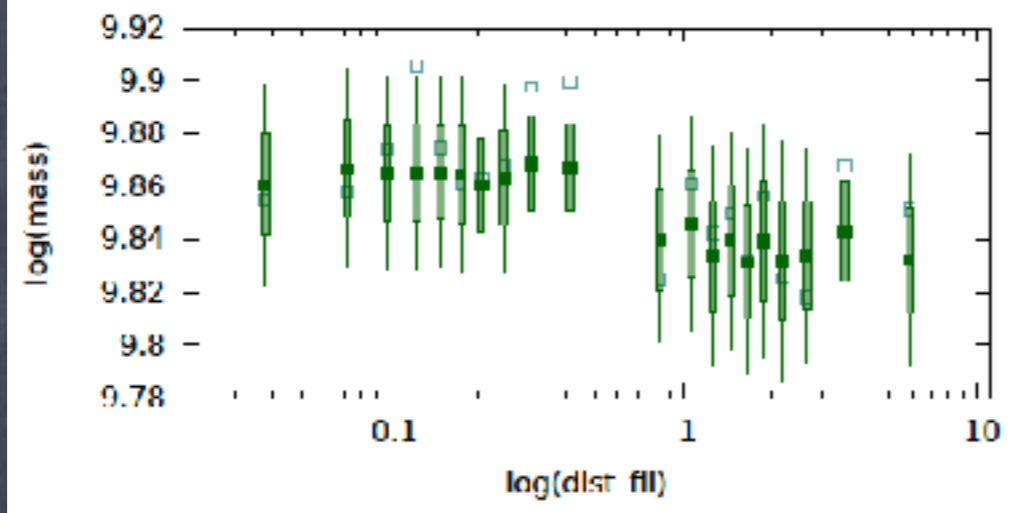
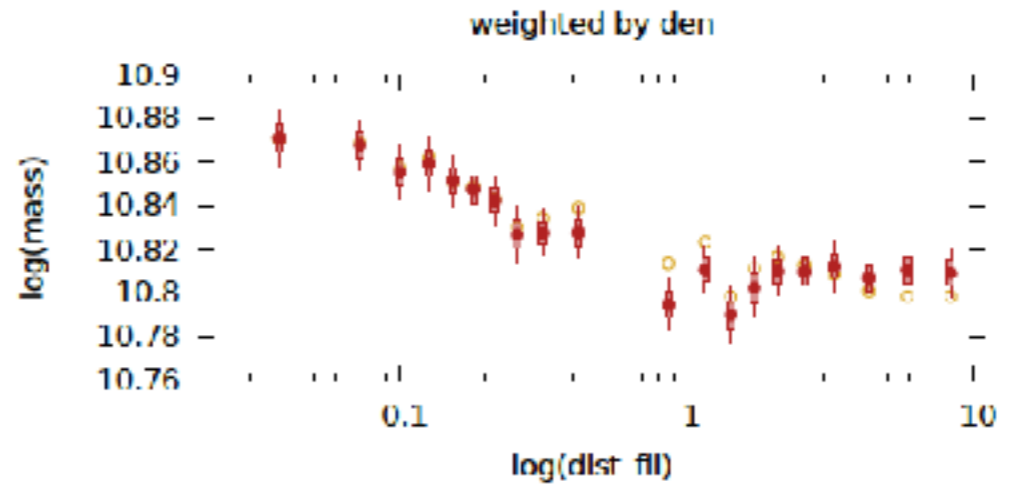
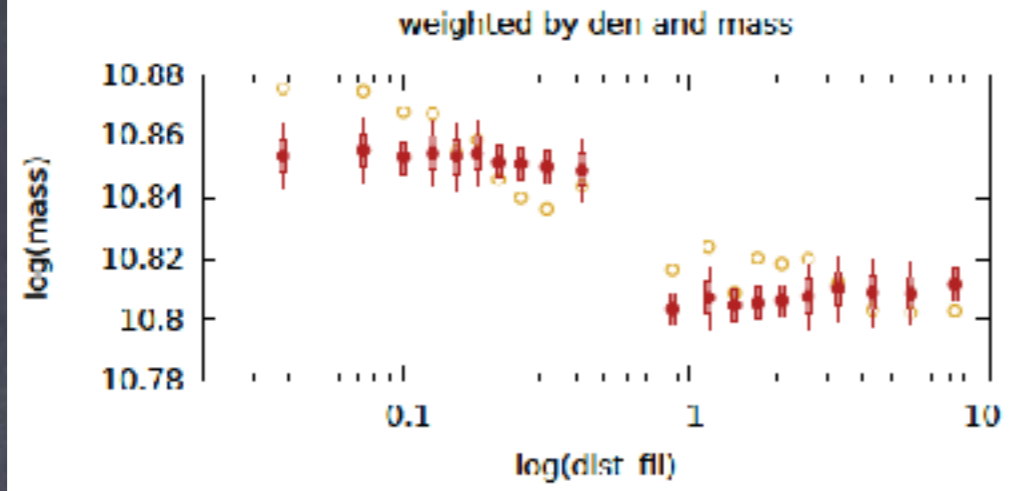
$M_r <$







for preserving  
kimchi  
temperature  
2.73 degrees,  
with very small  
fluctuations



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