

SPATIALLY RESOLVED M/L ACROSS THE CMD: CALIFA RESULTS

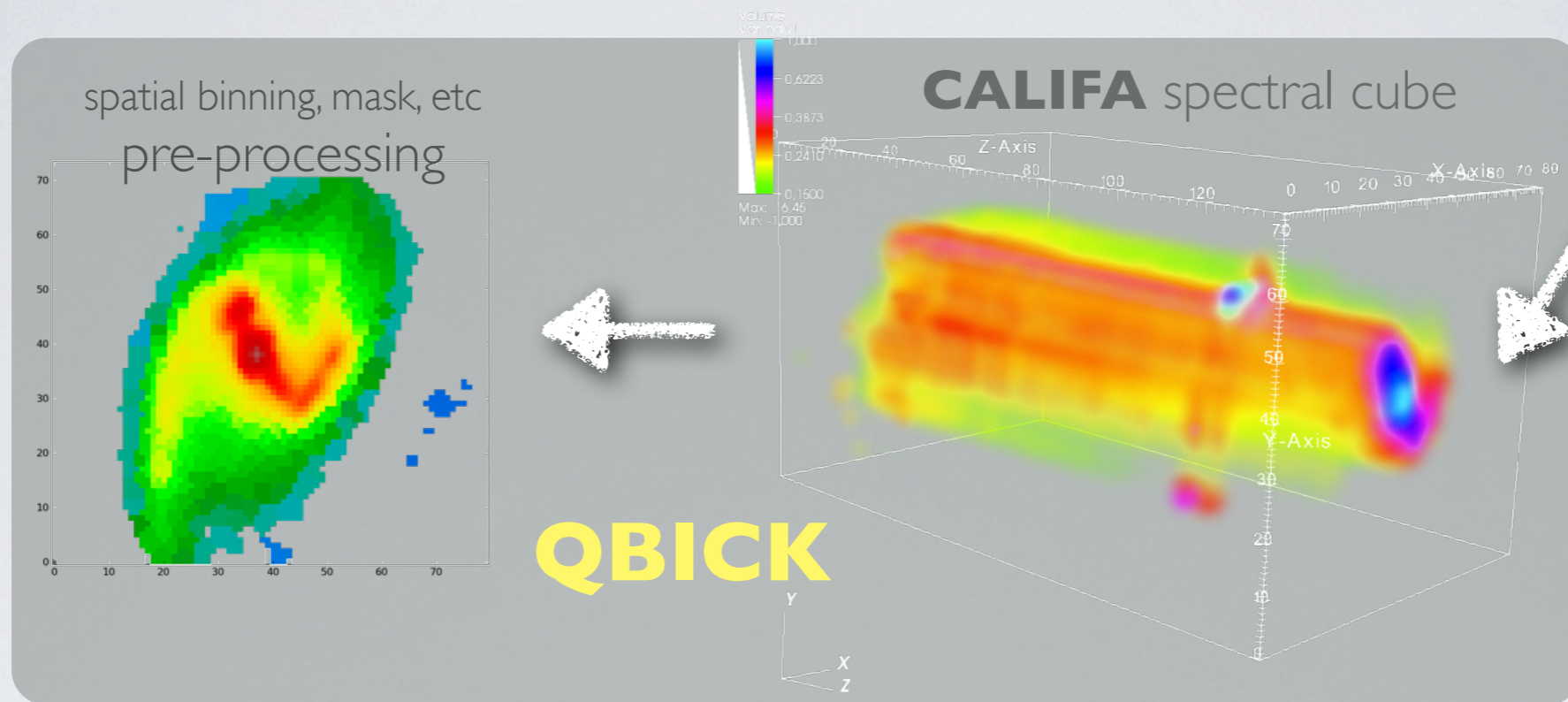
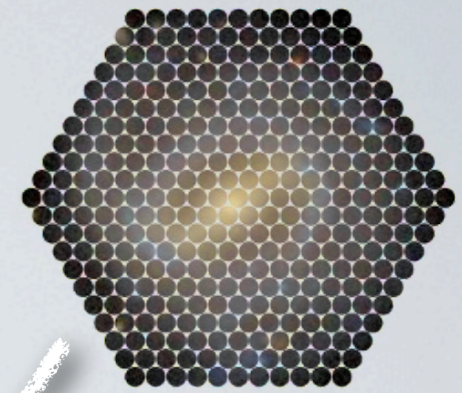
Rubén García-Benito
(IAA-CSIC)

Rosa González-Delgado
Enrique Pérez
Roberto Cid Fernandes
&
the CALIFA collaboration

PRELIMINARY

INAOE • July 25 • GH 2013

Processing & Analysis pipelines

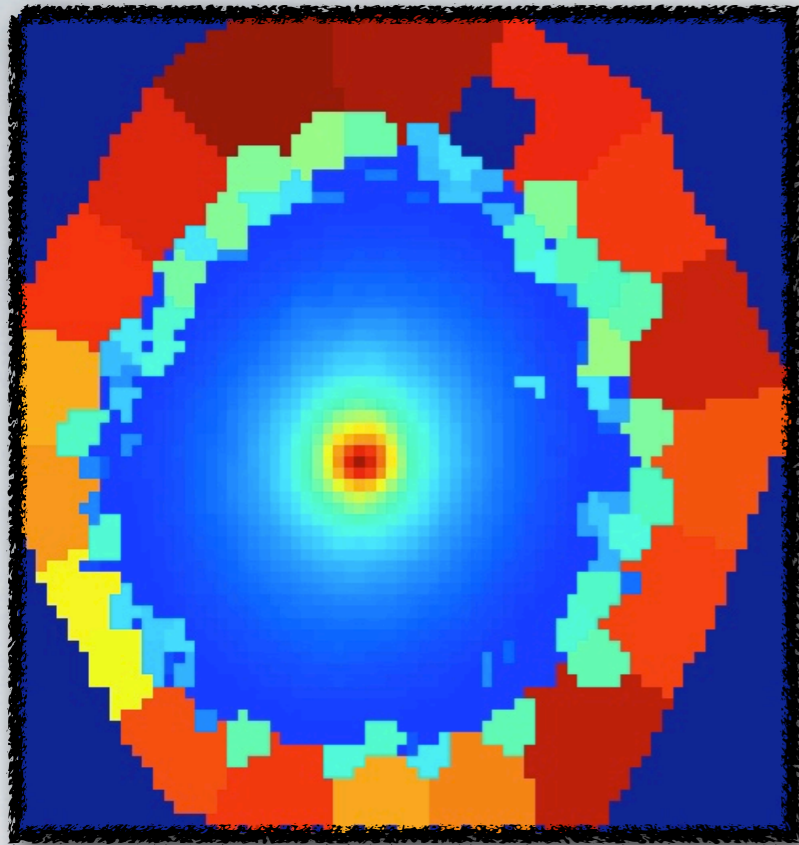


de-construct

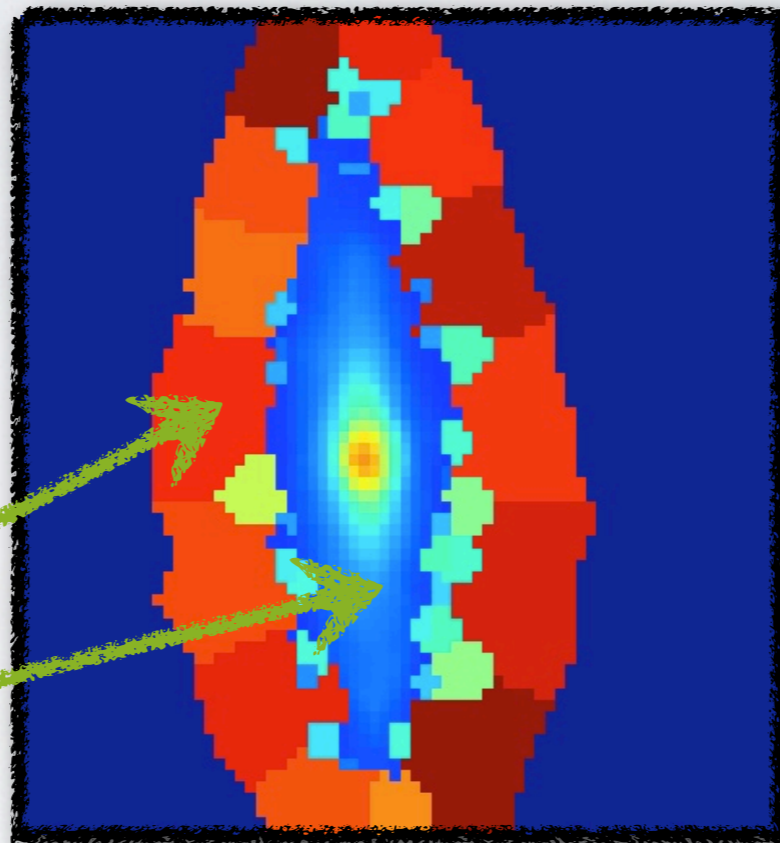


Spatial Binning (Voronoi)

S/N ~ 20

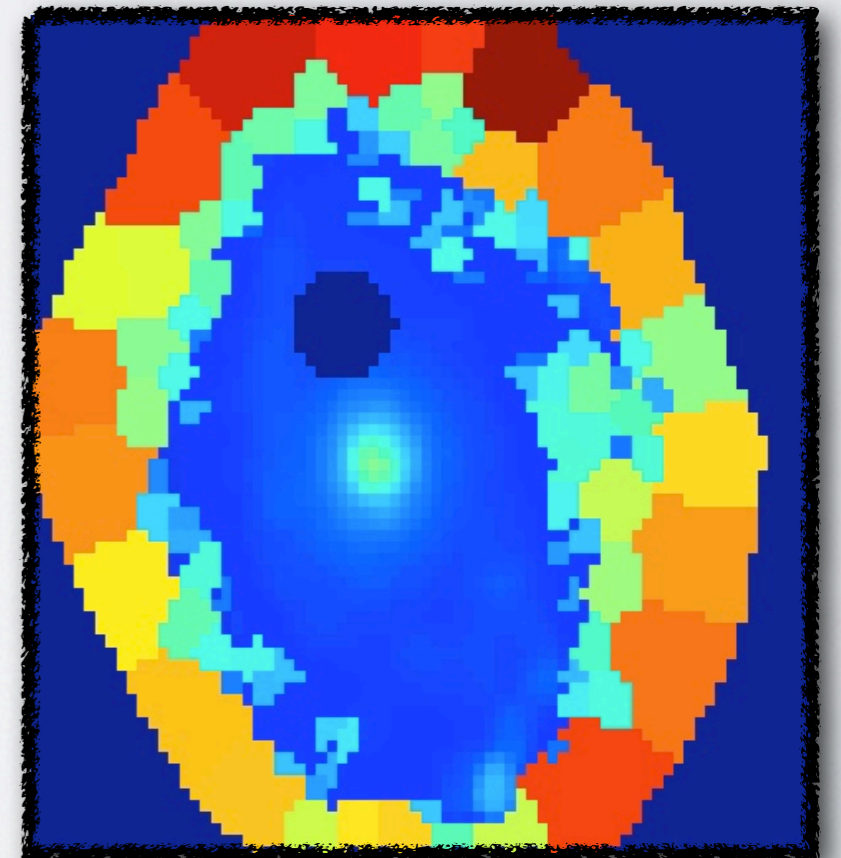


CALIFA 900

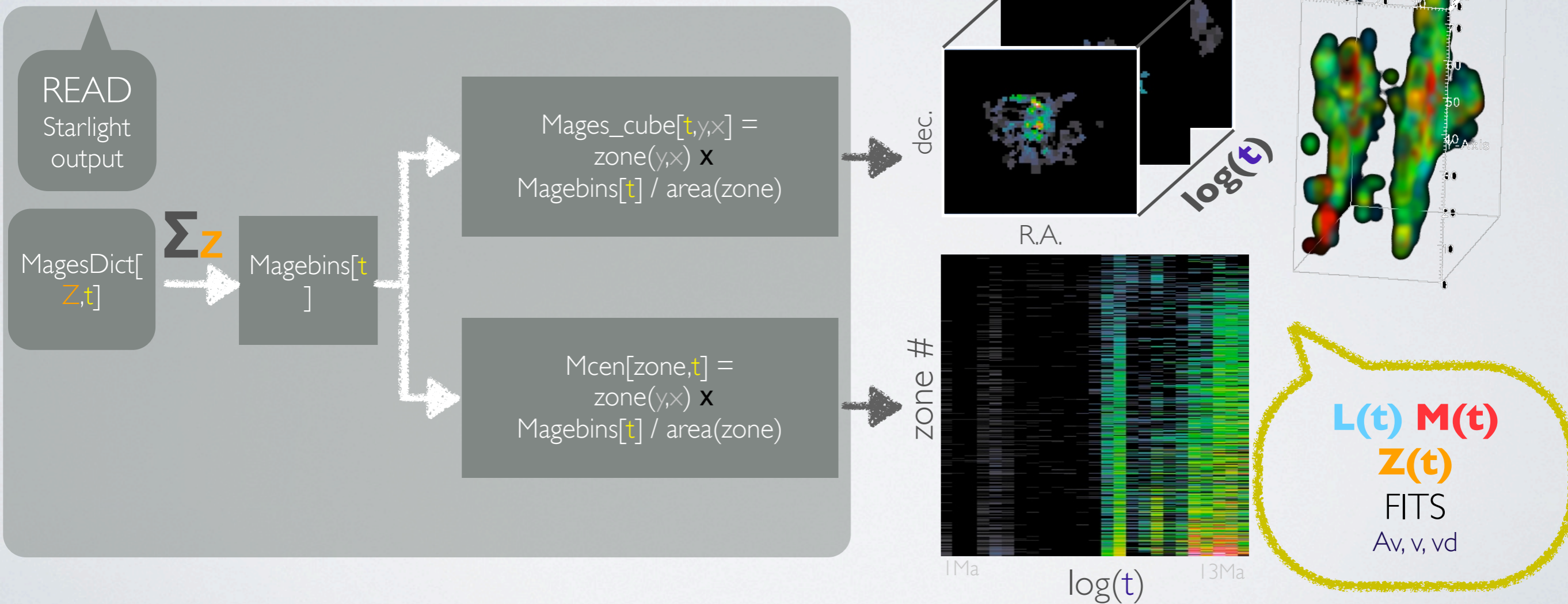
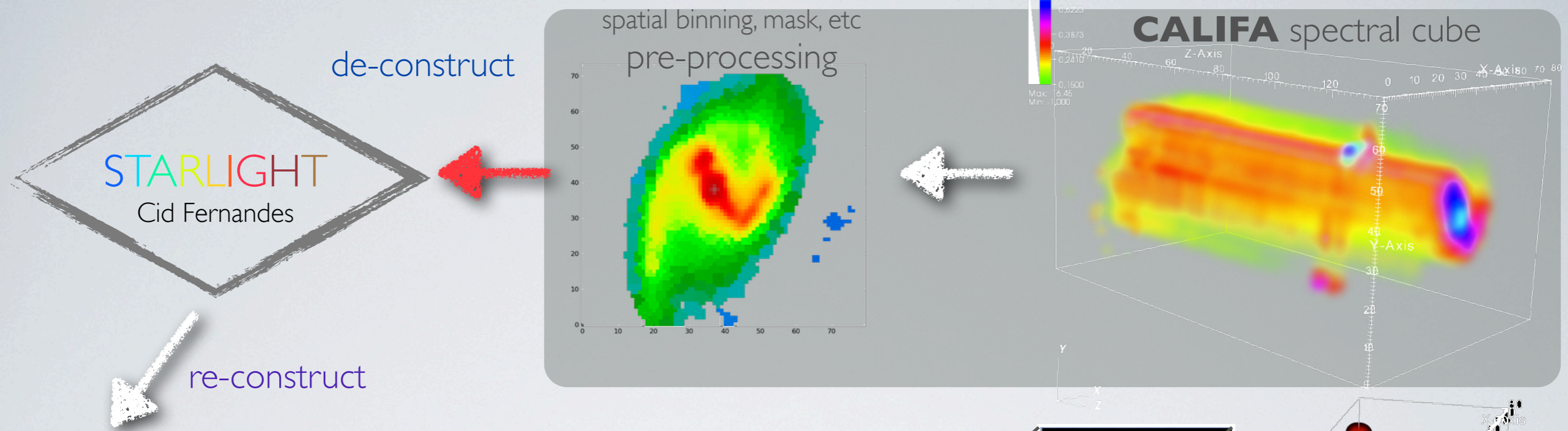


CALIFA 001

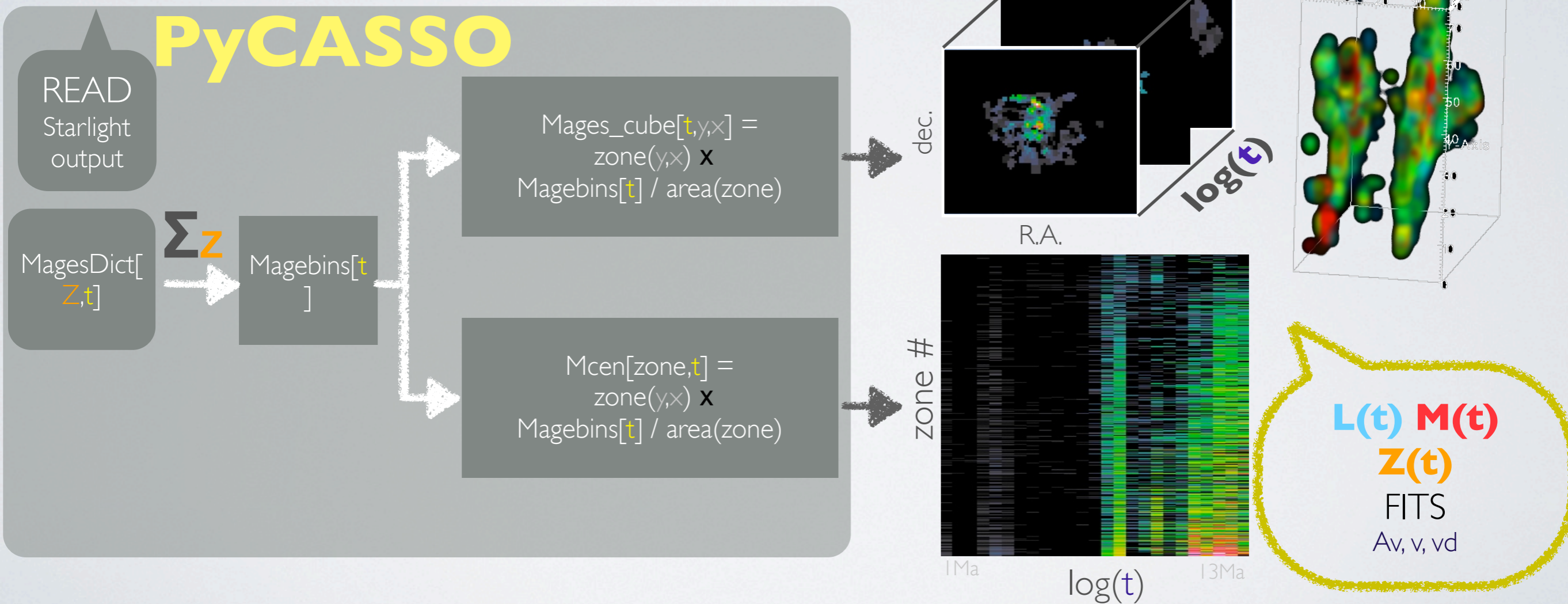
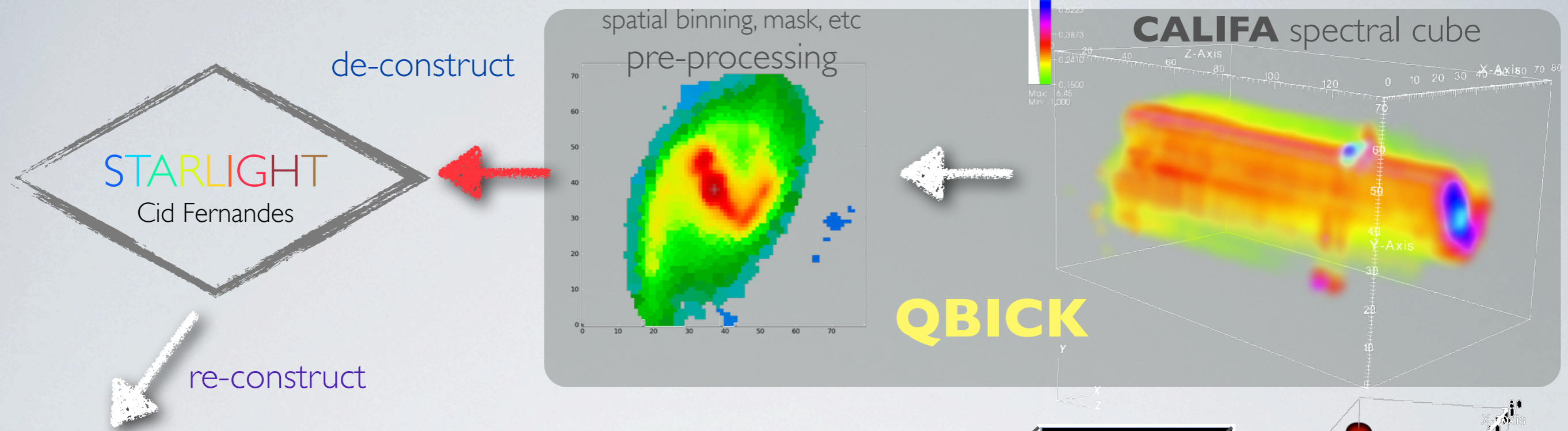
CALIFA 277



Zones



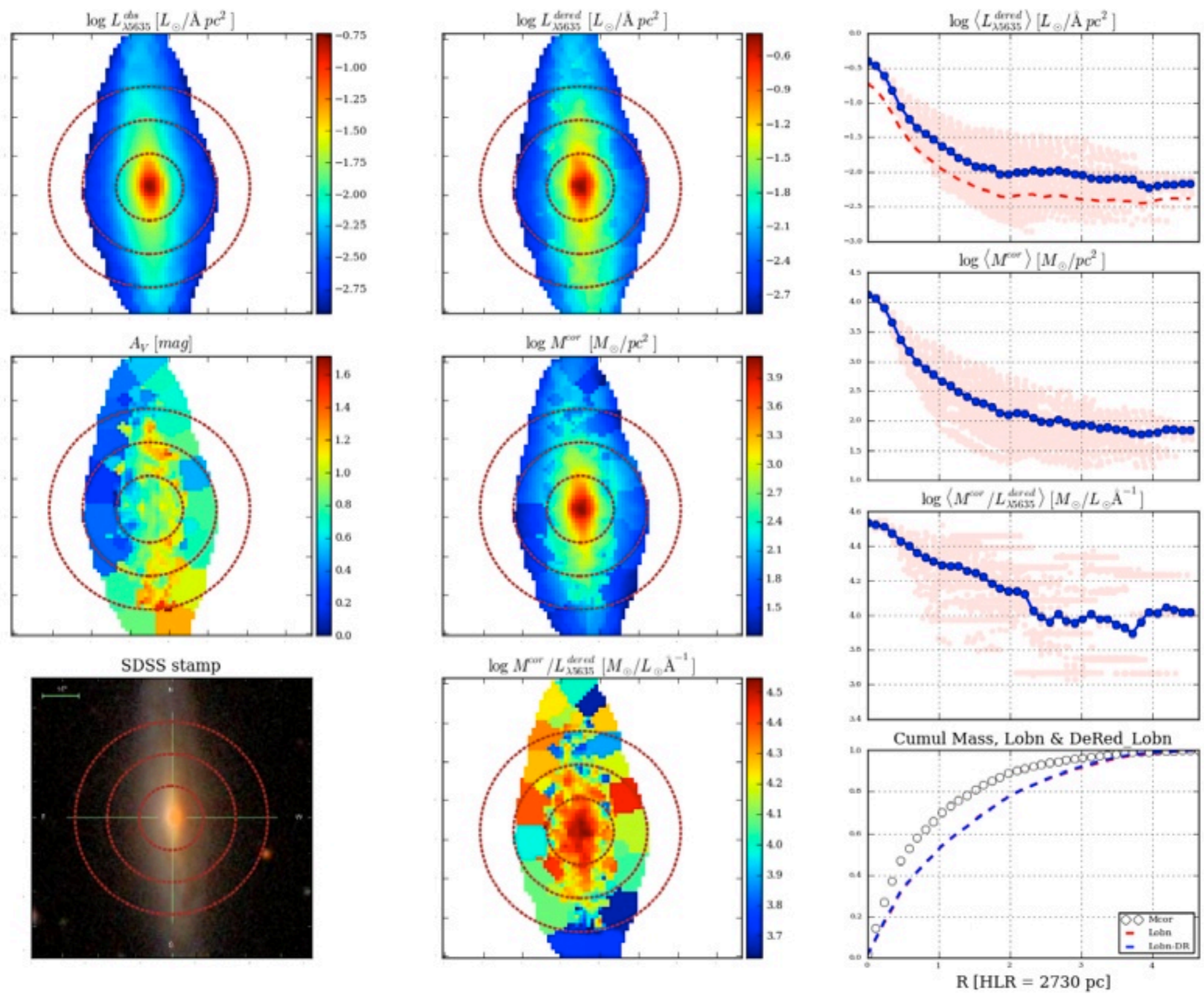
Processing & Analysis pipelines



Processing & Analysis pipelines

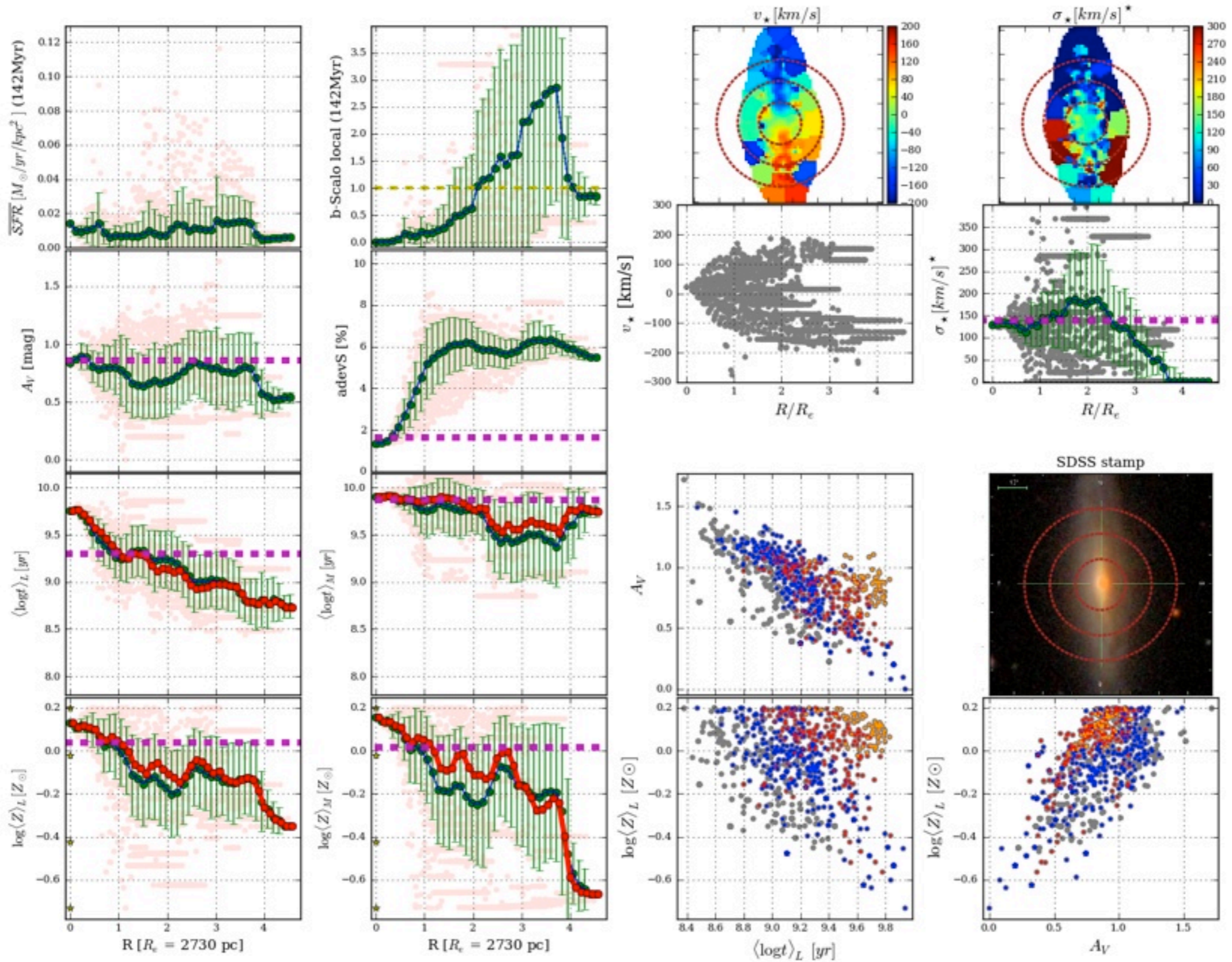
PyCASSO Products

[DossierFig02] ... K0001 q027 c512 w/base Bgsd01 || FWHM=0.5dex ; $\Delta R=1.0$ pix || IC5376



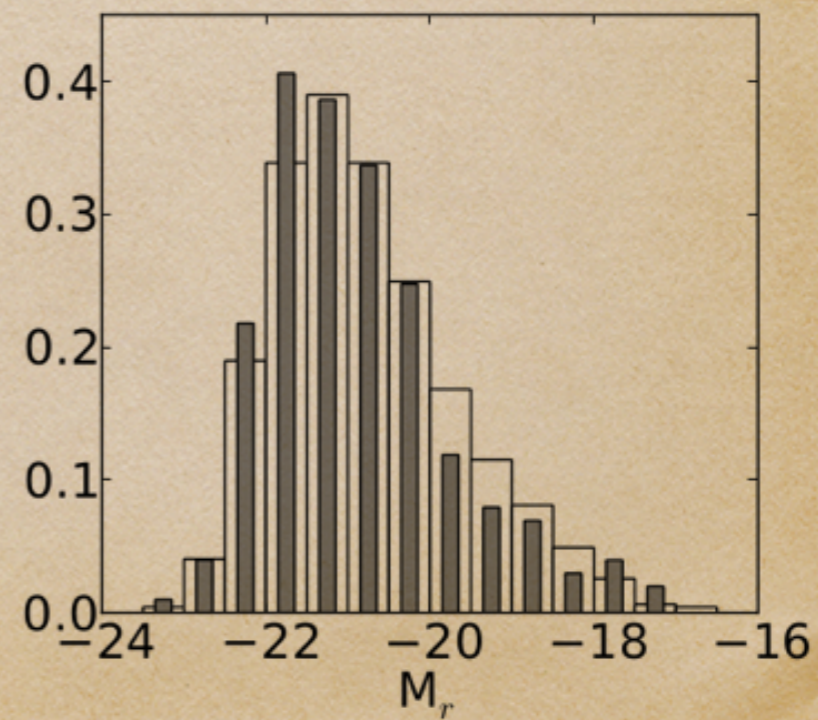
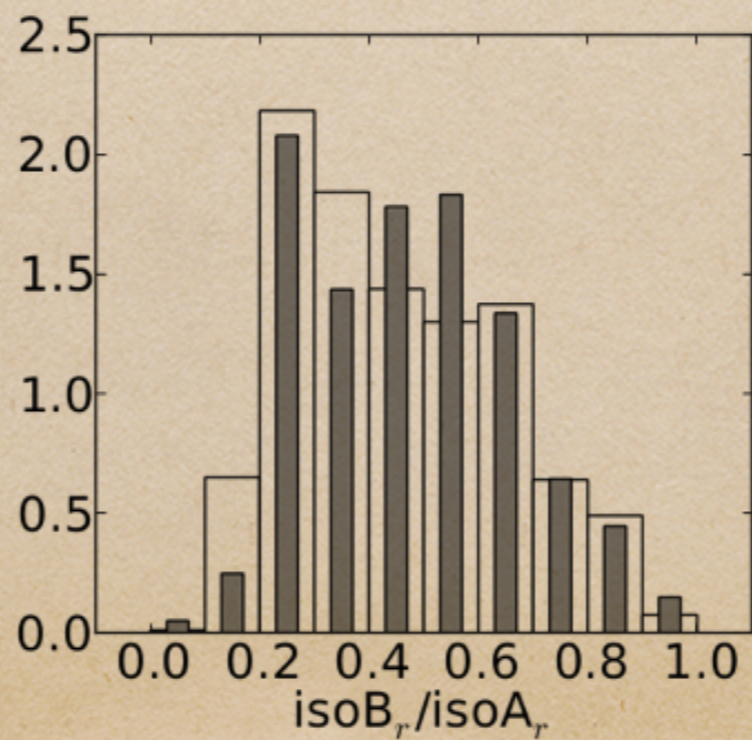
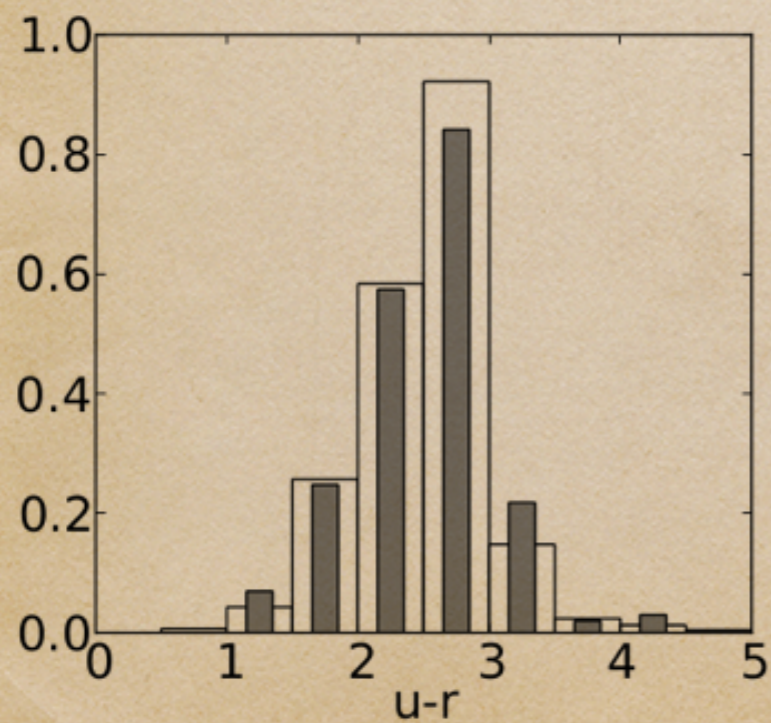
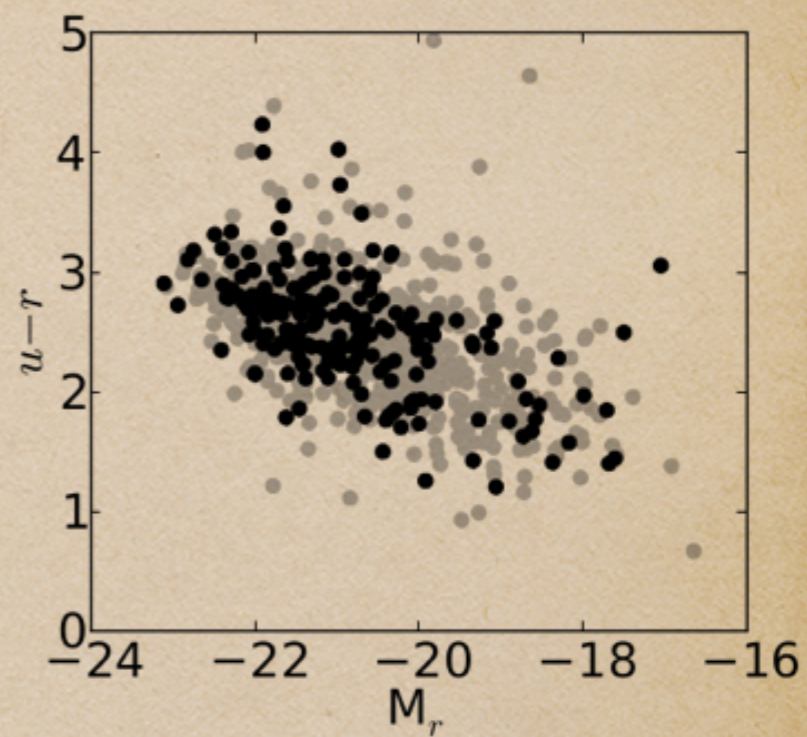
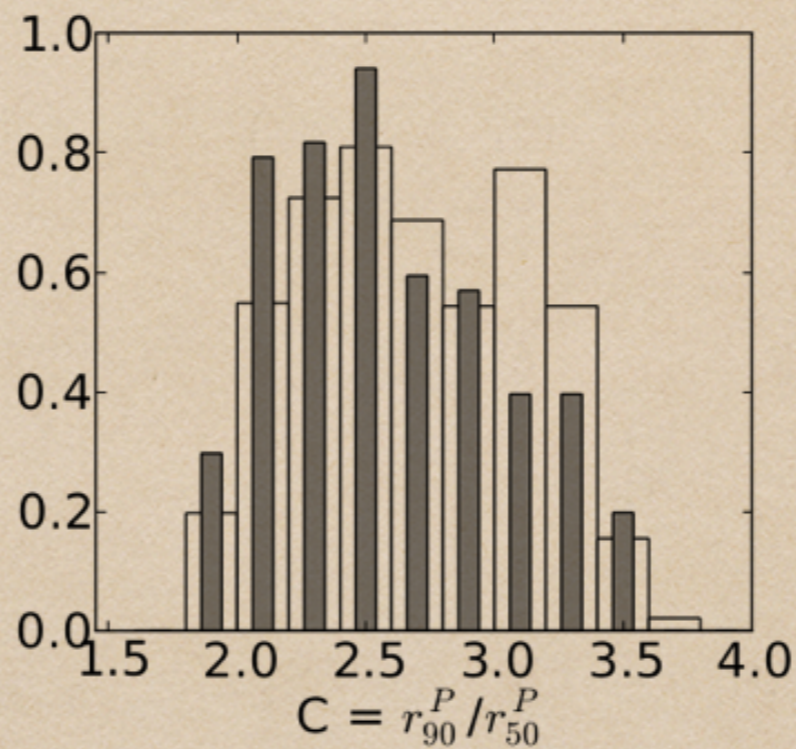
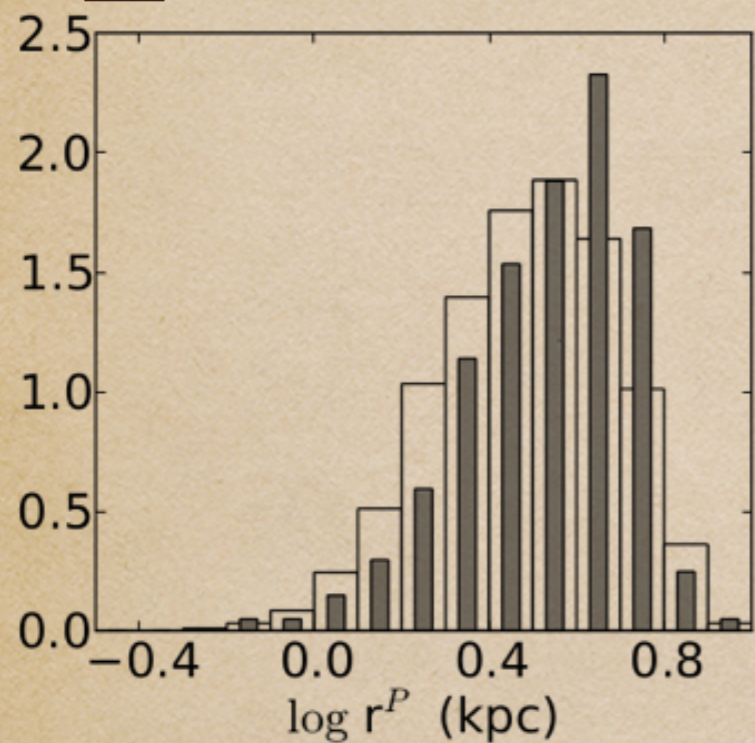
PyCASSO Products

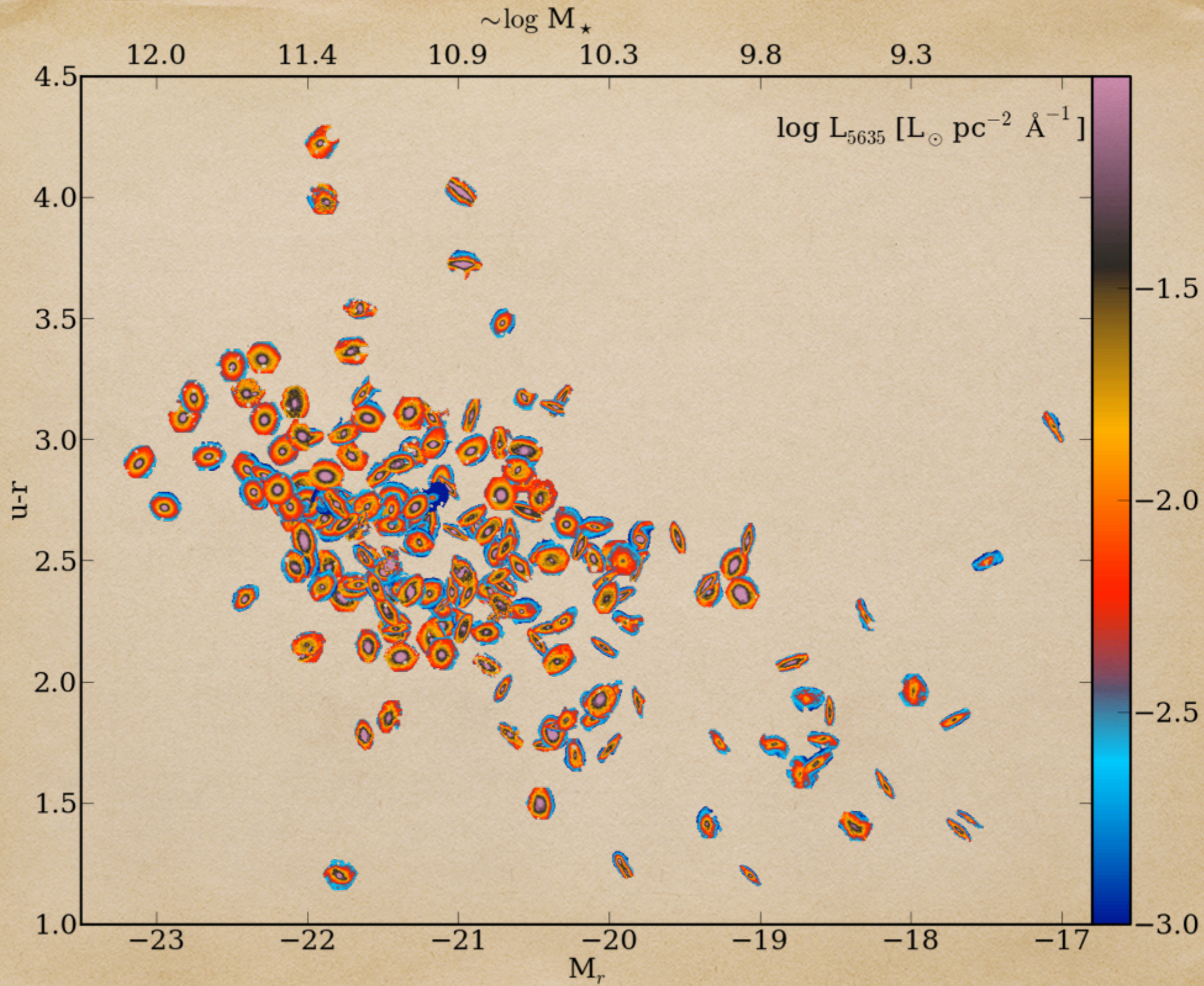
[DossierFig01] t & R profiles || K0001 q027 c512 w/base Bgsd01 || FWHM=0.5dex ; $\Delta R=1.0$ pix || IC5376

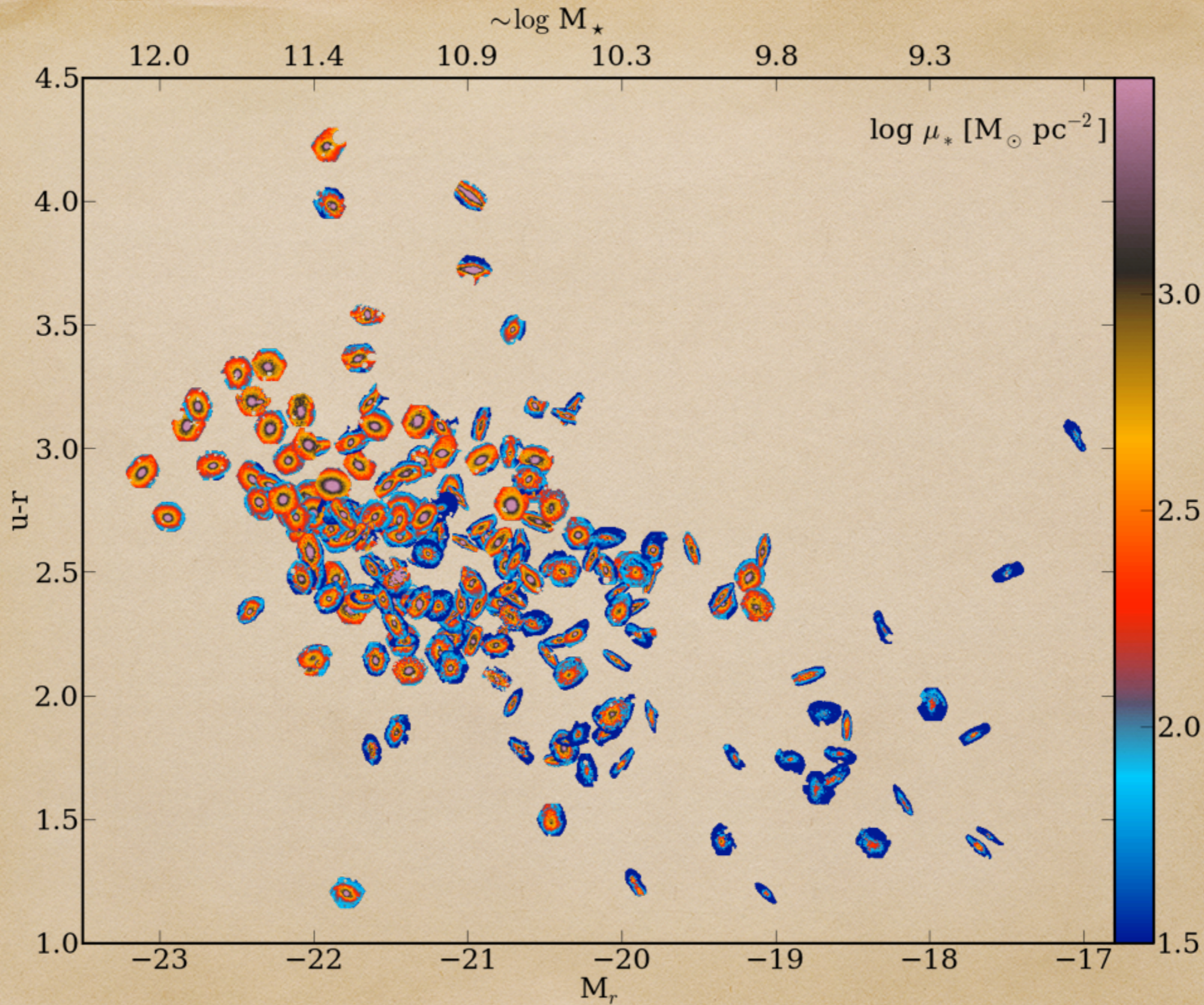


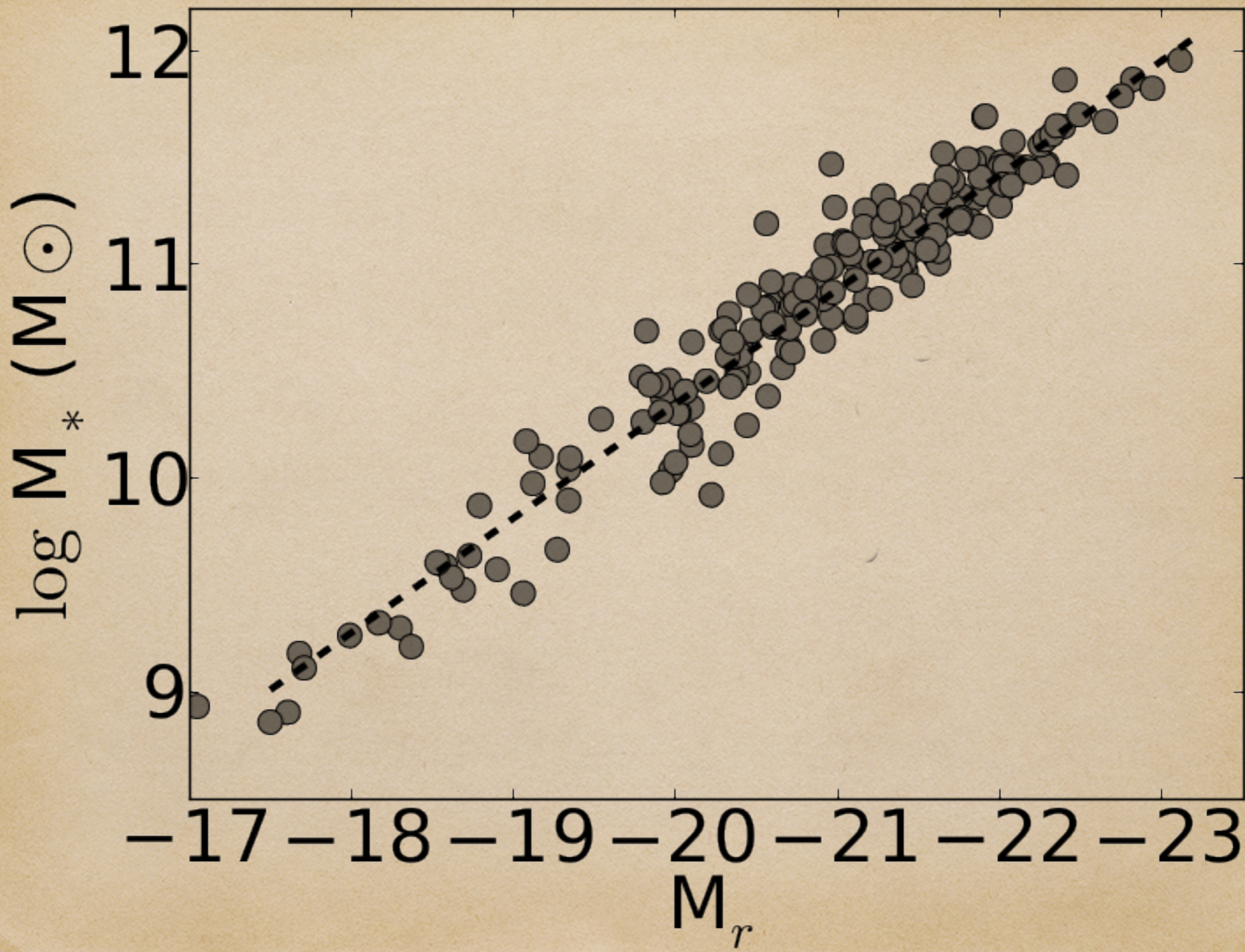
Mother sample

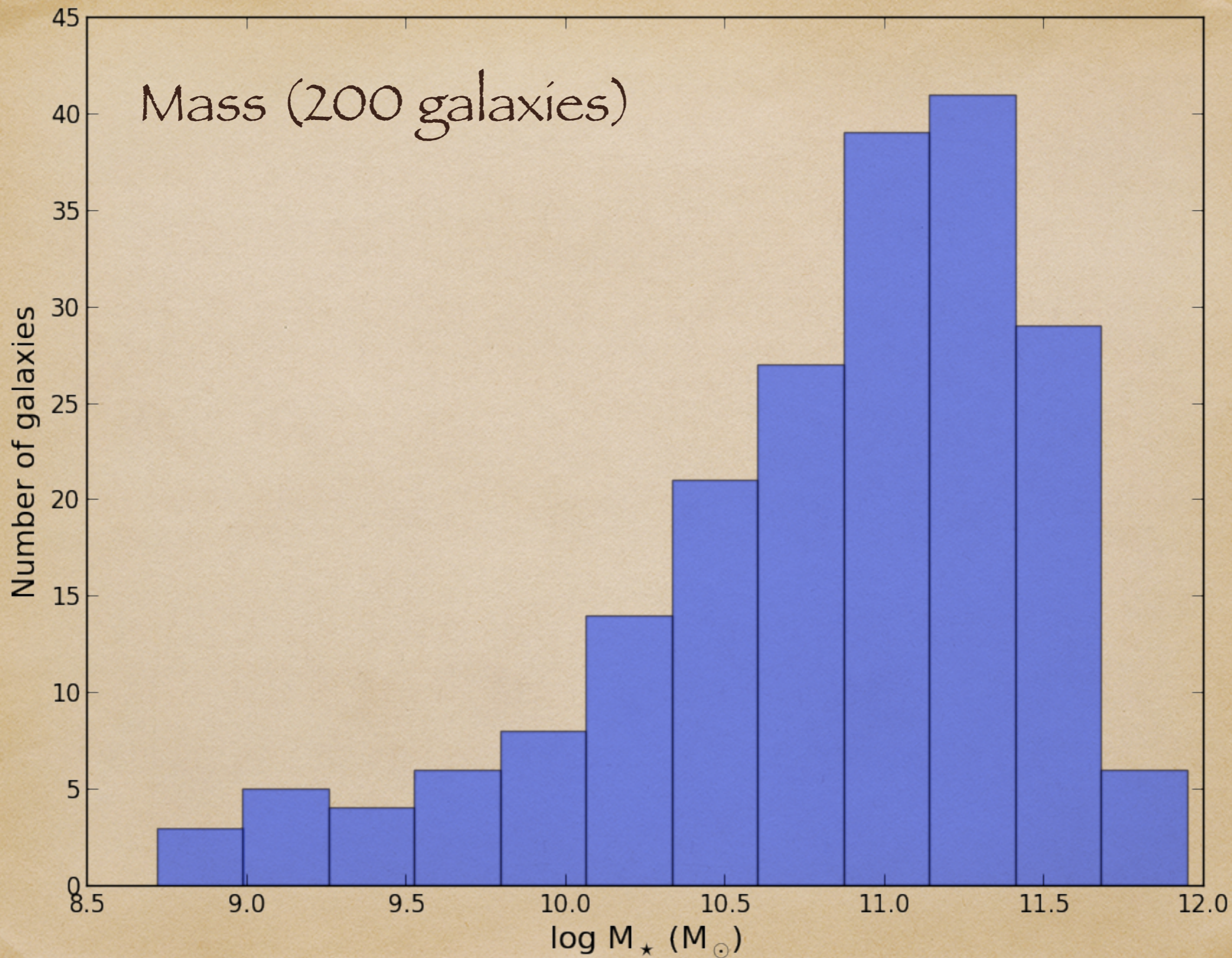
200 galaxies

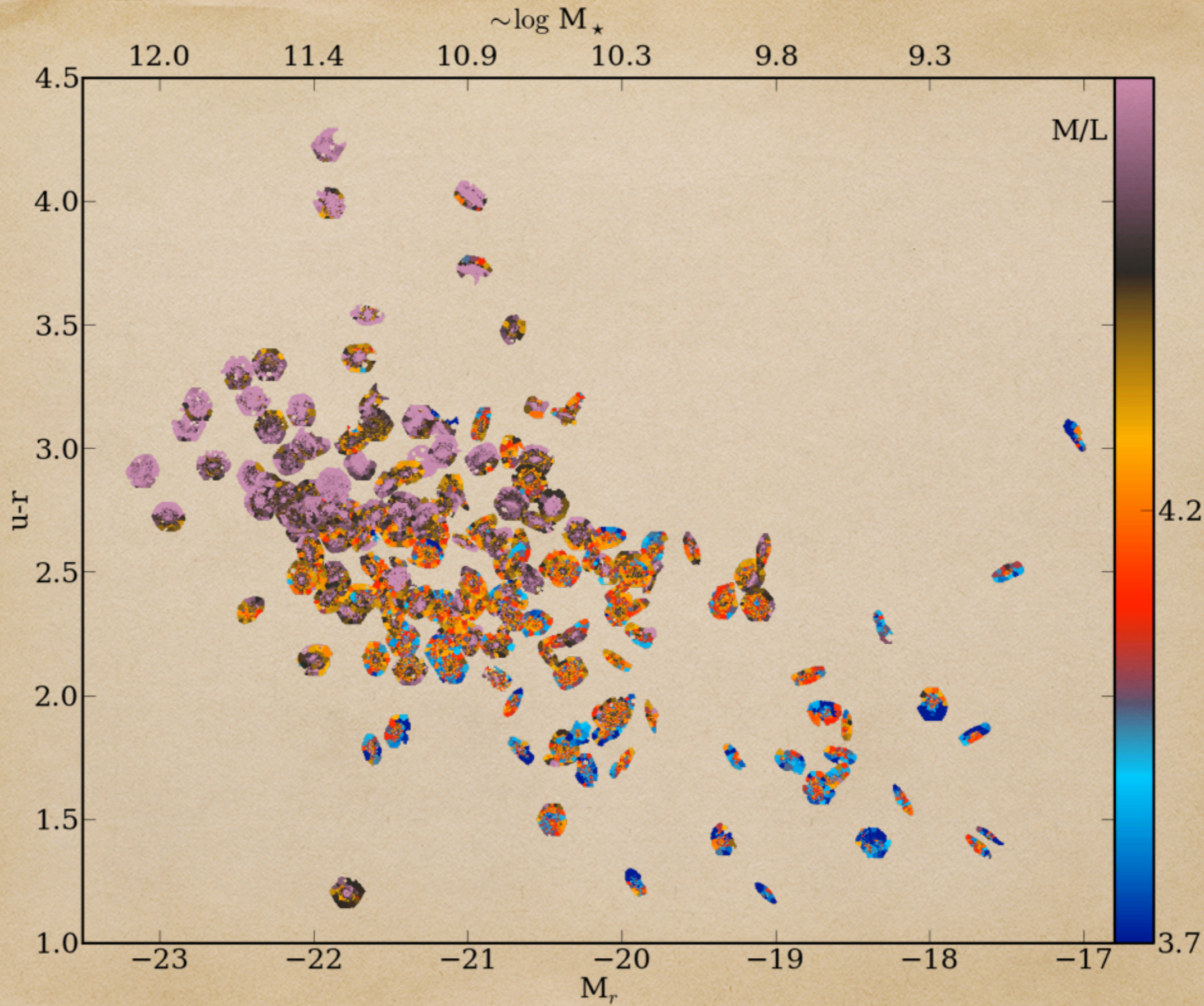








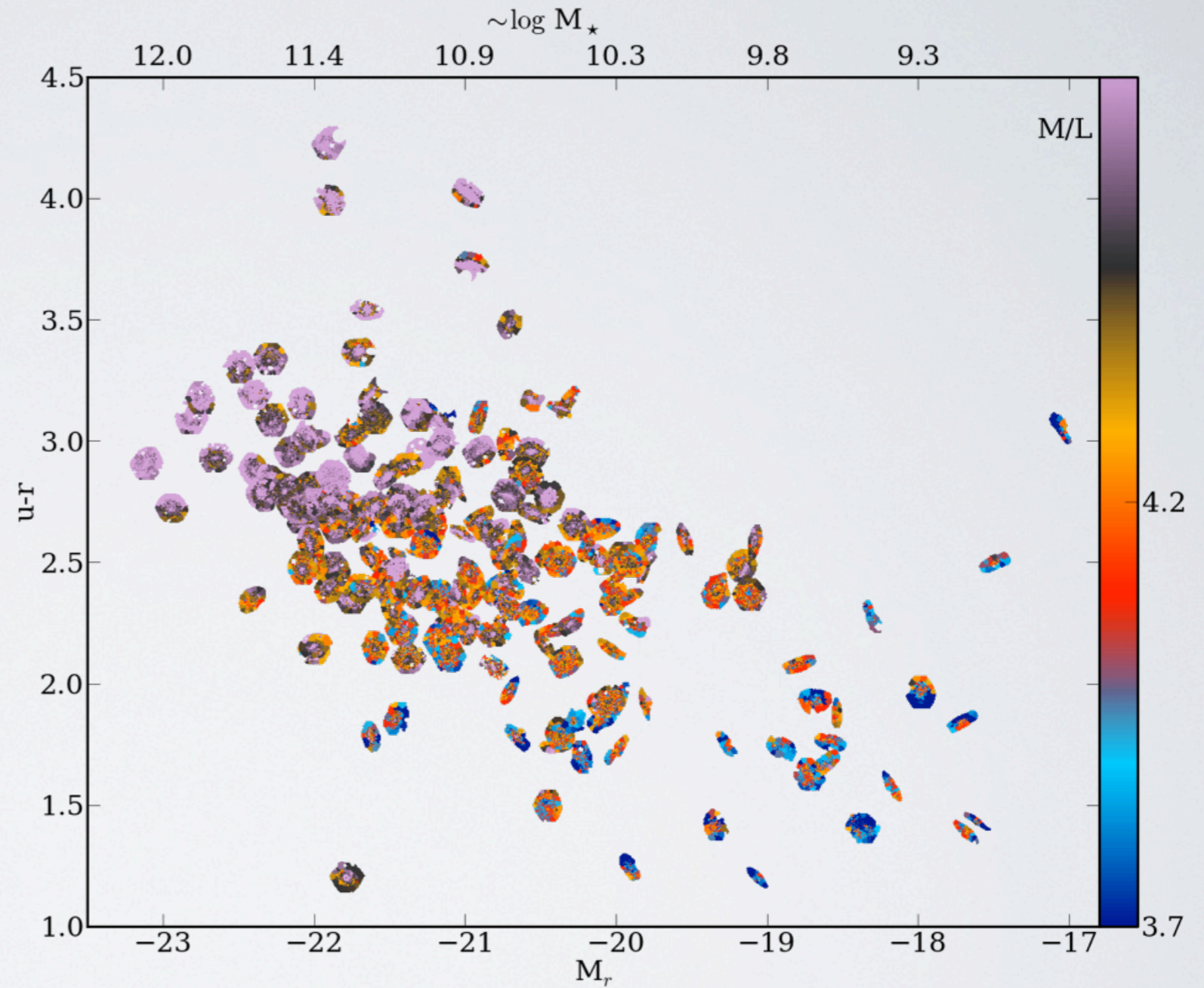




Why M/L with CALIFA?

Observers: L  M

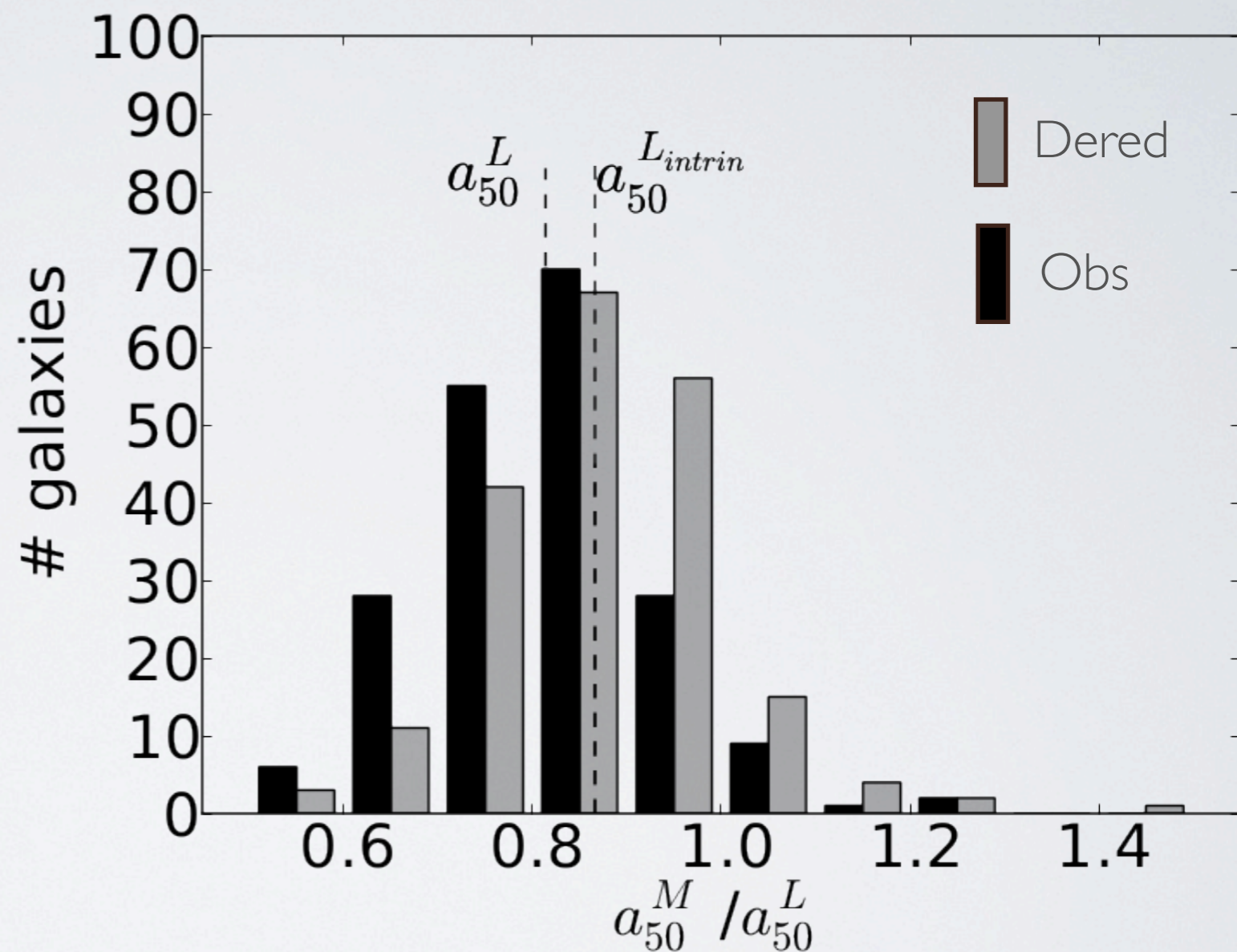
Theoreticians: M  L



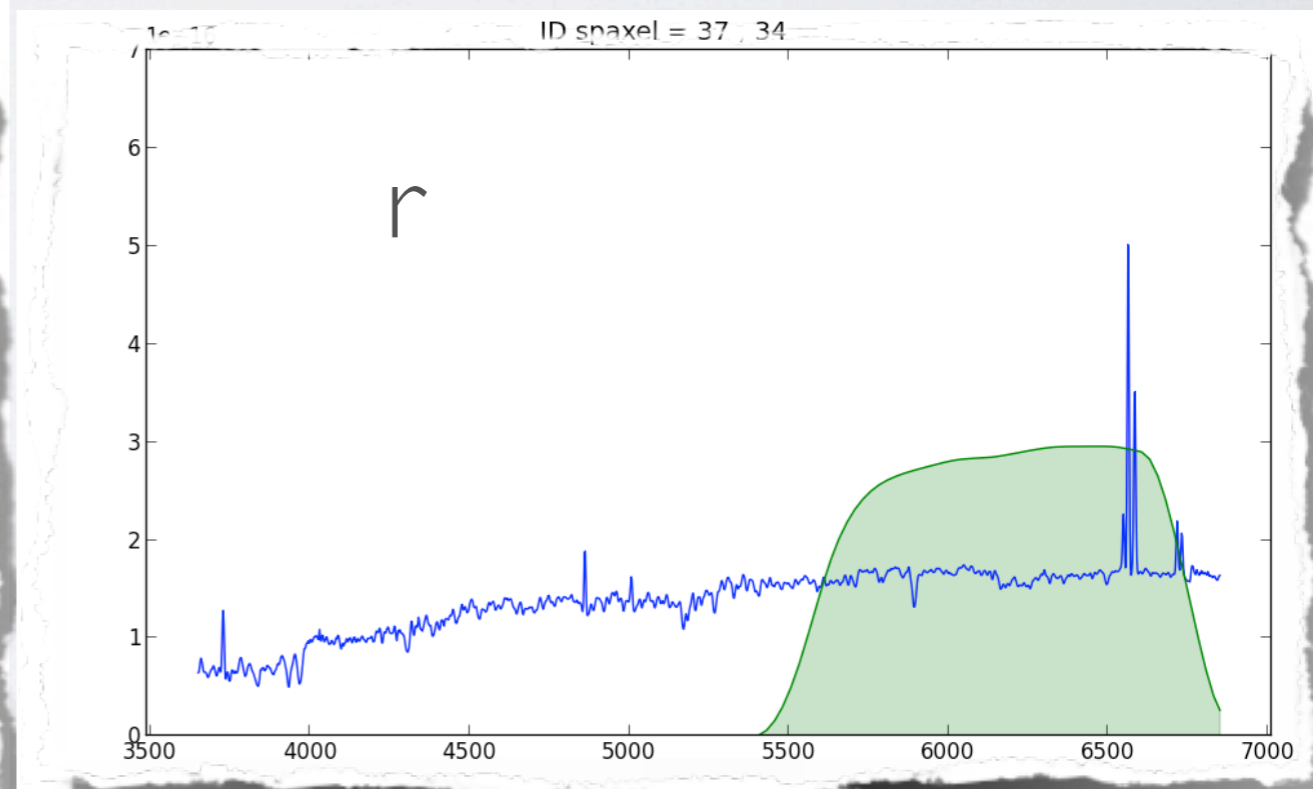
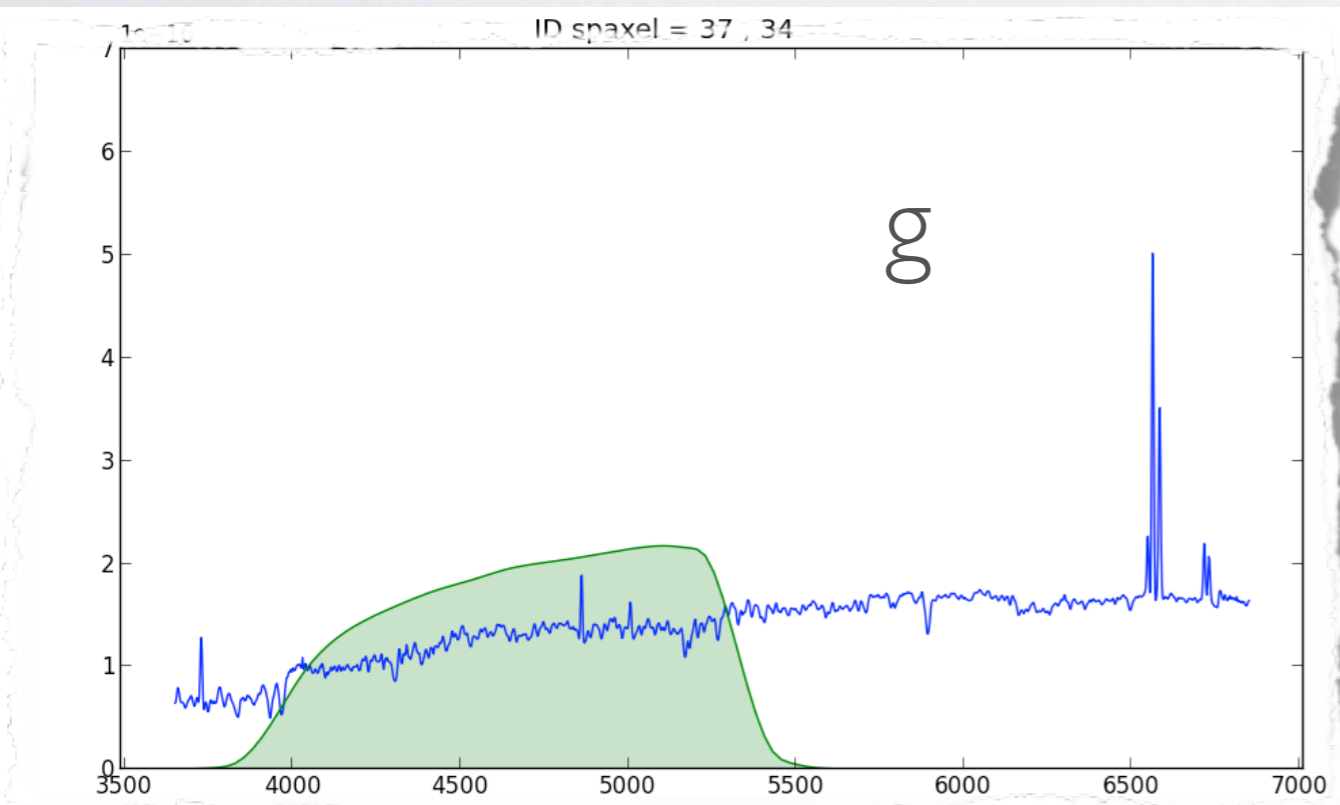
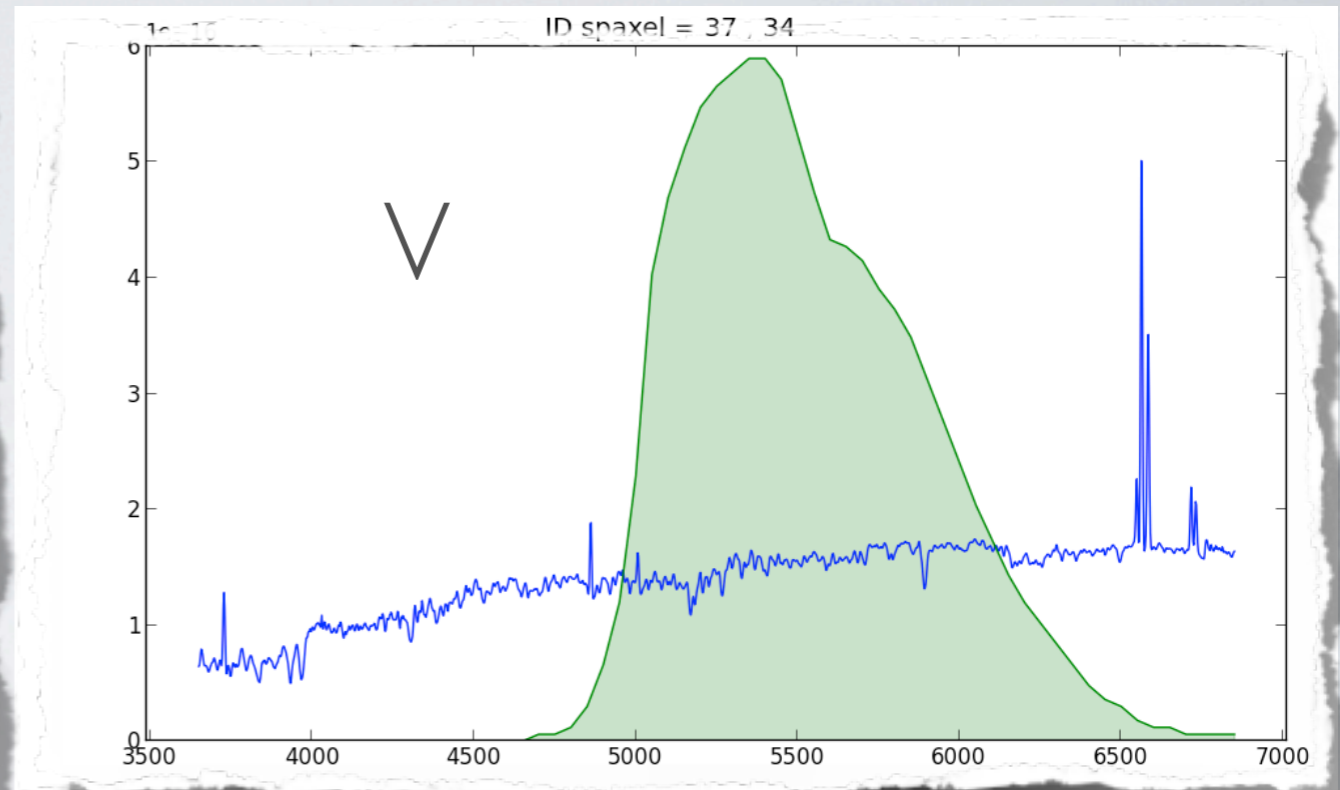
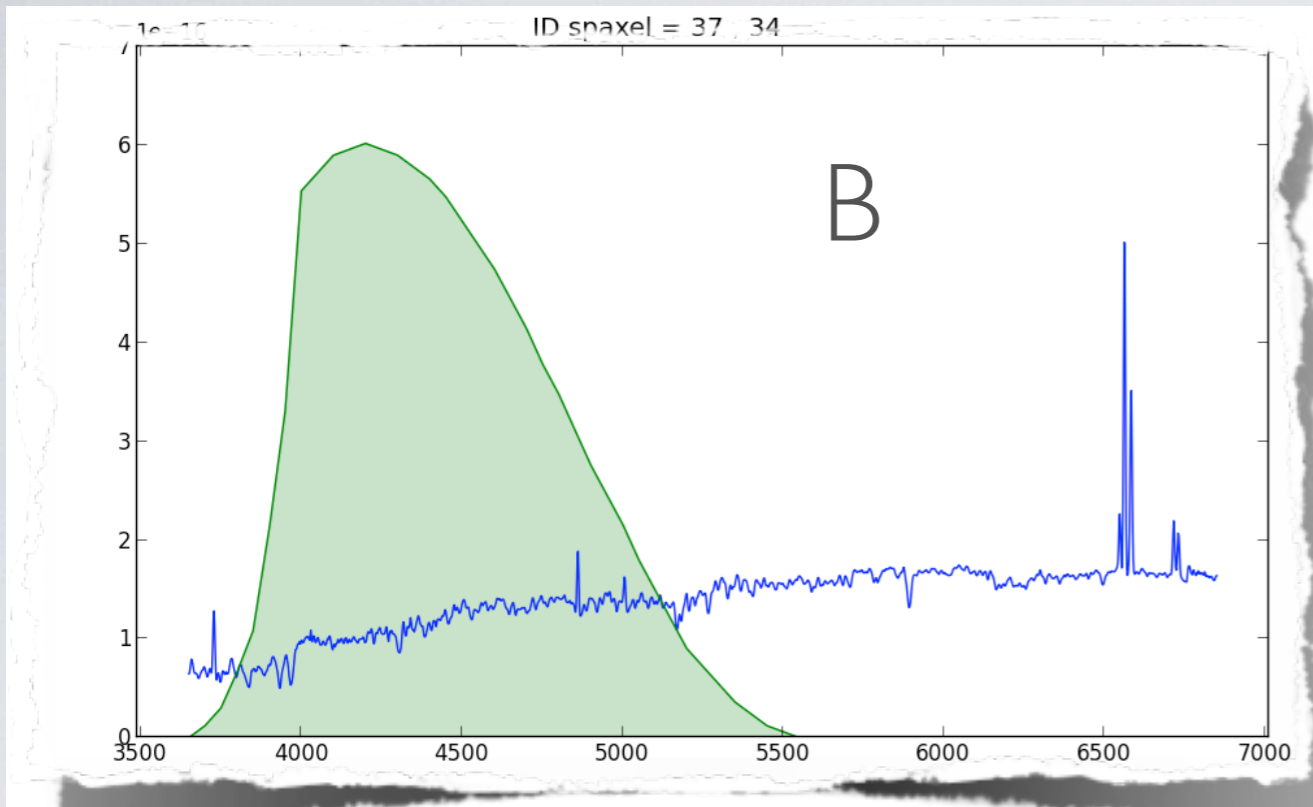
Why M/L with CALIFA?

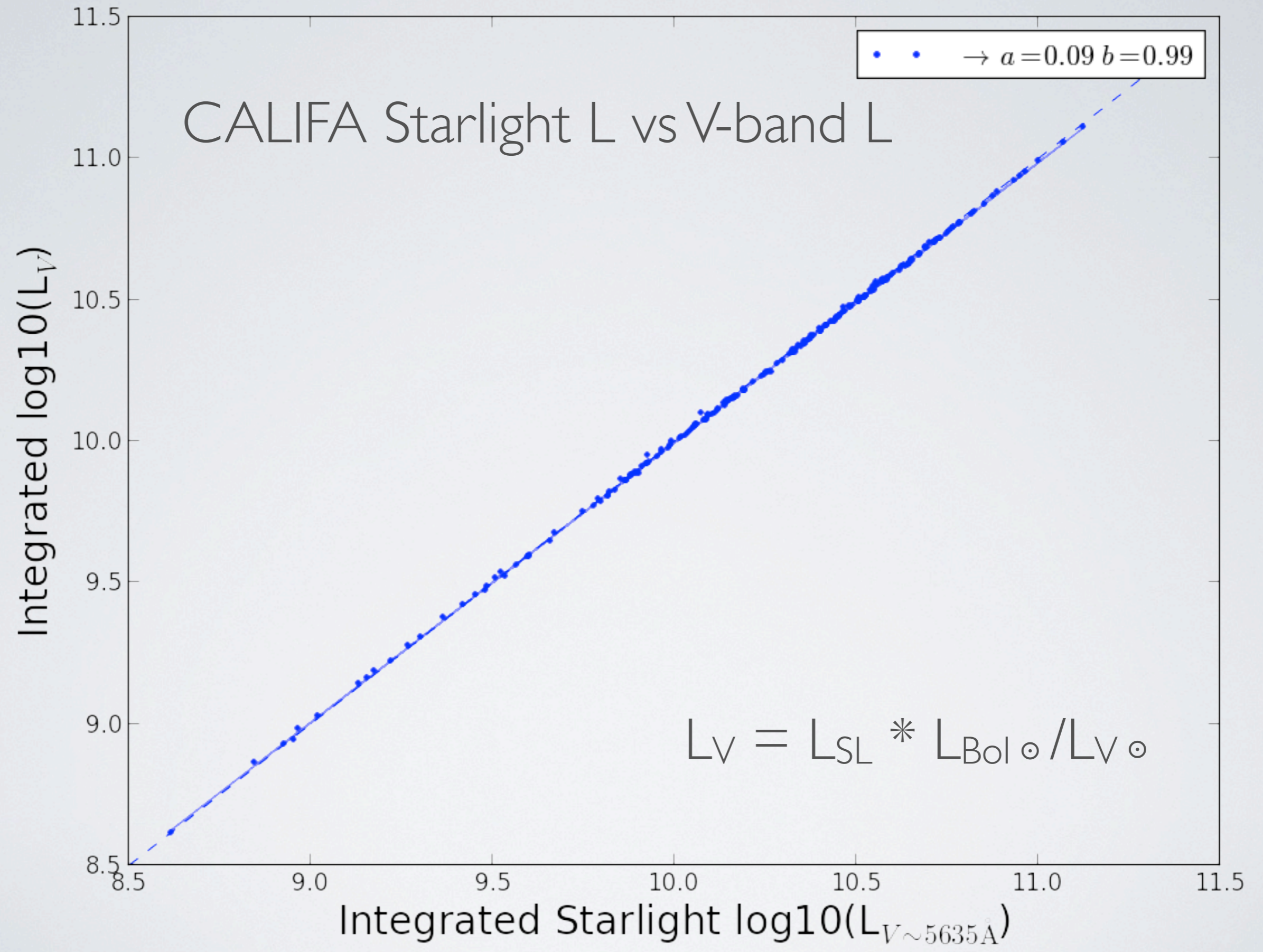
Lots (type) of galaxies!

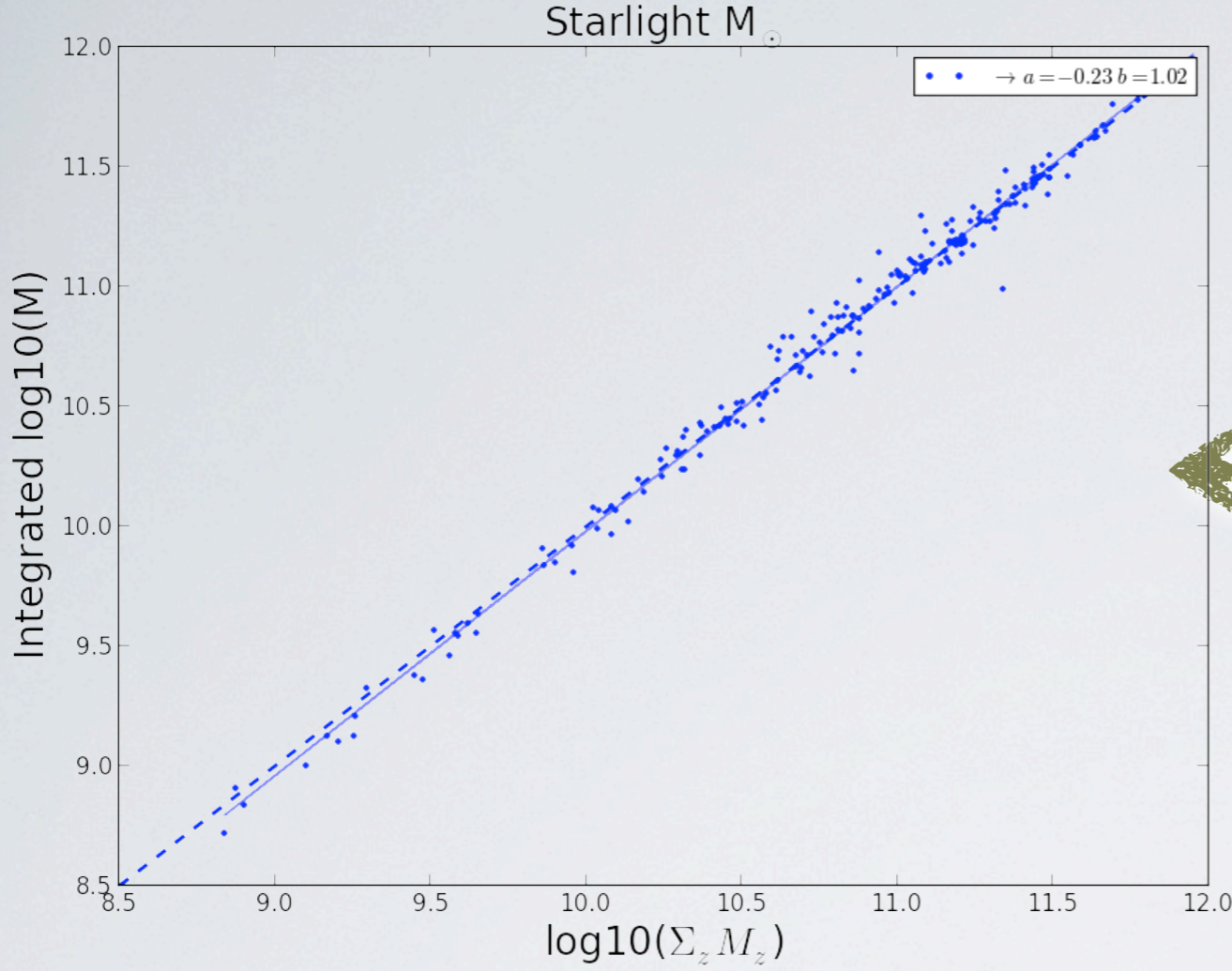
Spatially resolved!



“Observed” bands



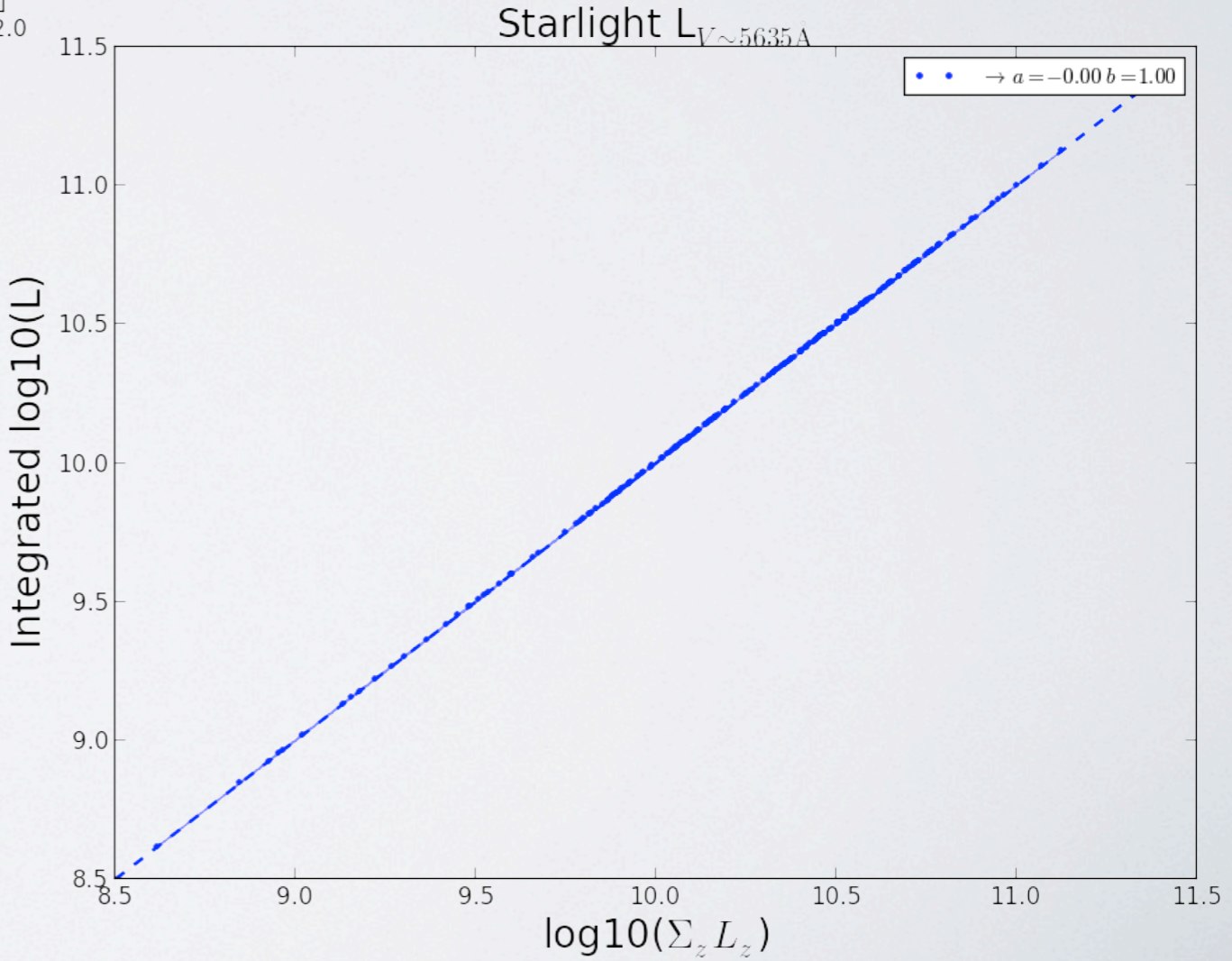




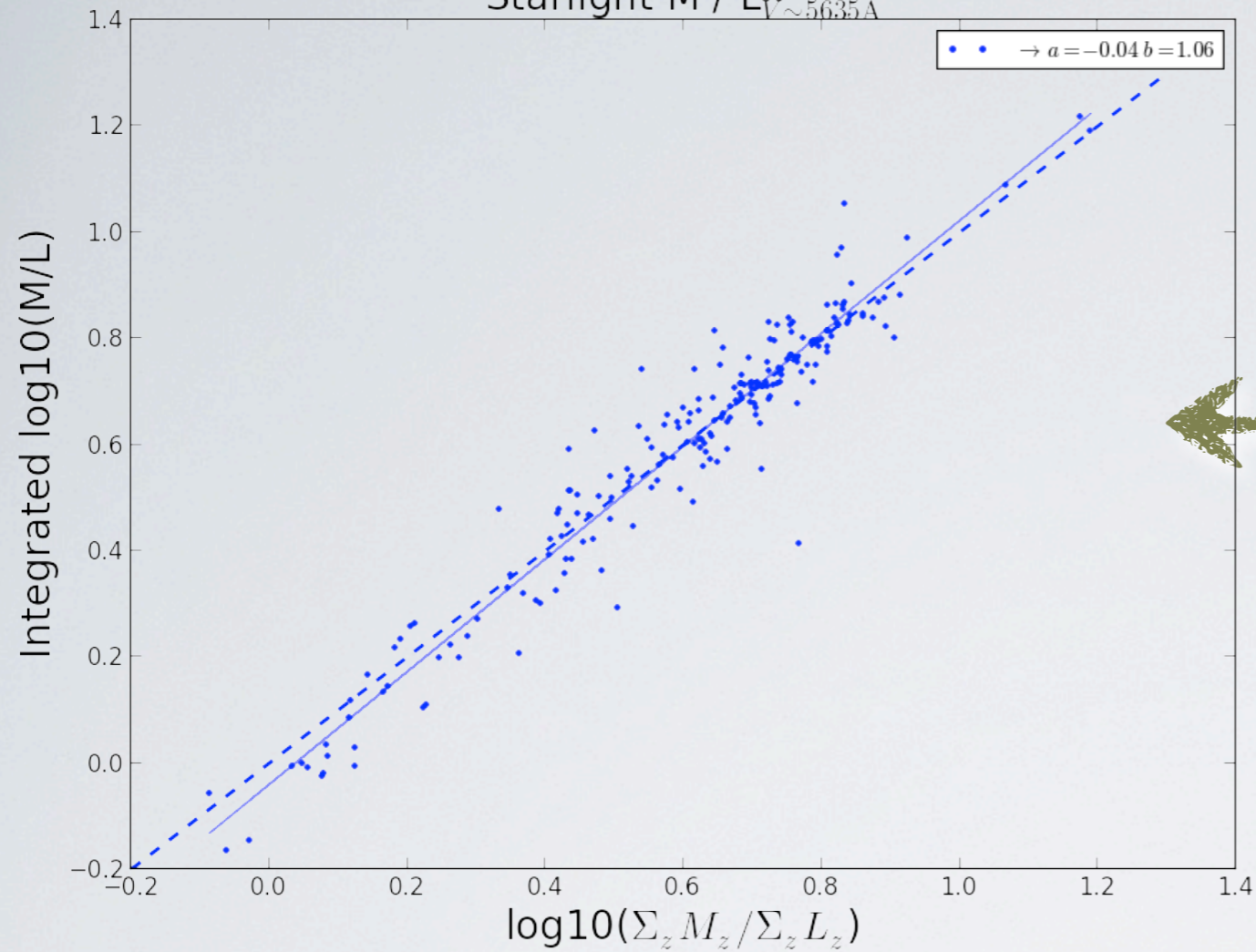
Integrated Mass
vs
 ΣM Zones



Integrated L
vs
 ΣL Zones



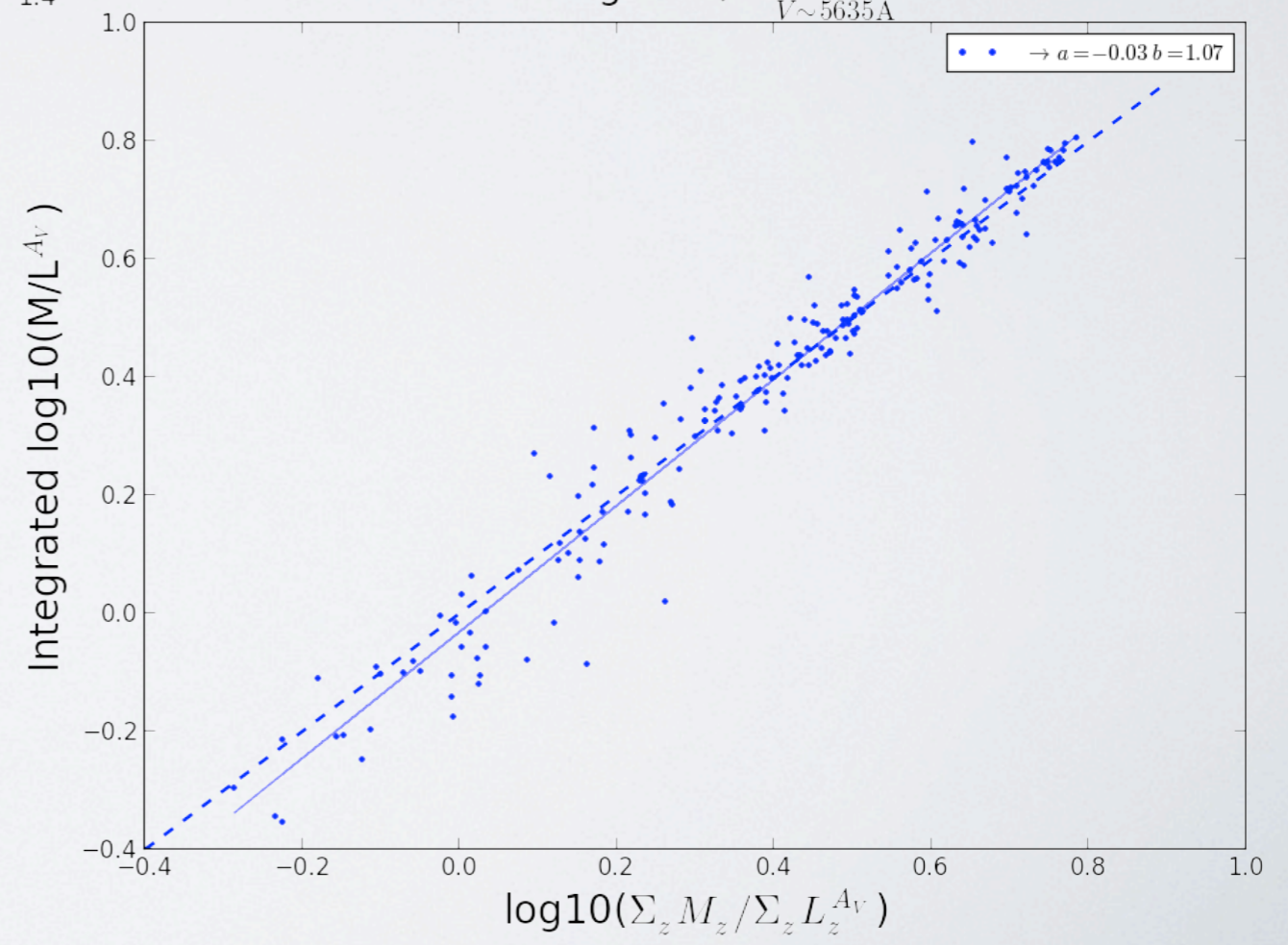
Starlight $M/L_{V \sim 5635\text{\AA}}$



Integrated M/L
vs
 $\Sigma M / \Sigma L$ Zones



Starlight $M/L_{V \sim 5635\text{\AA}}^{A_V}$



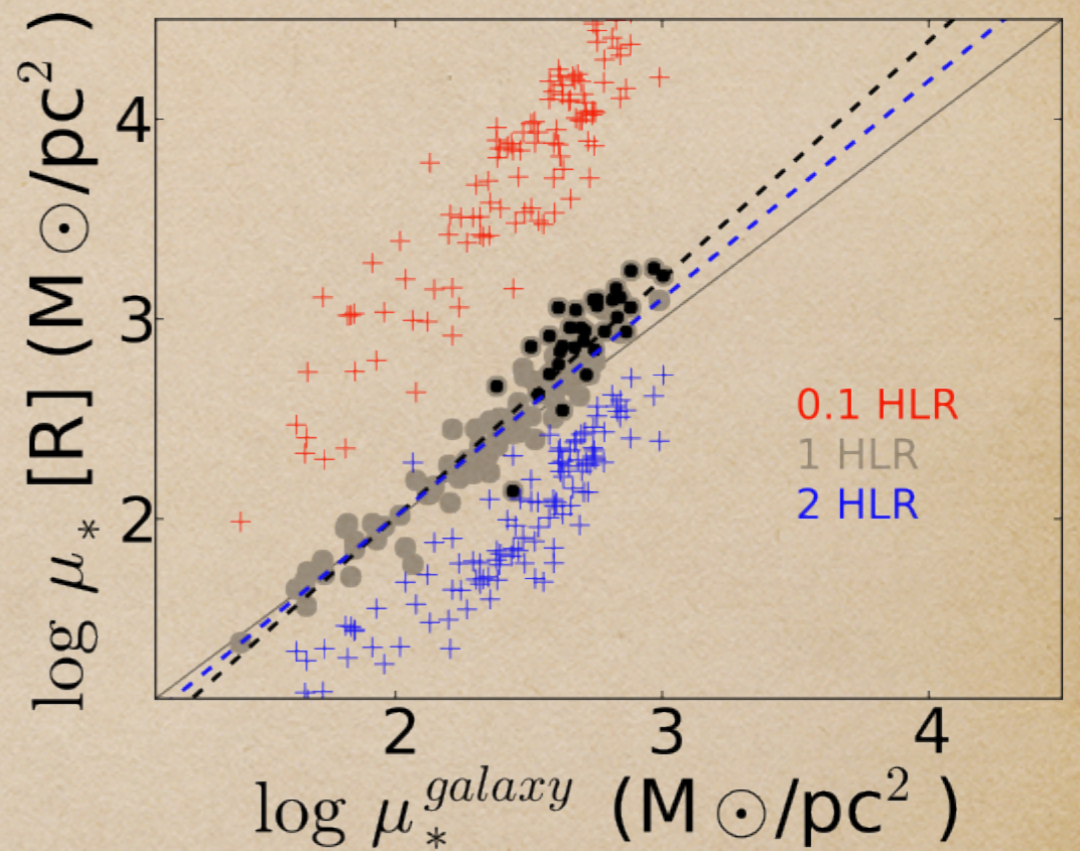
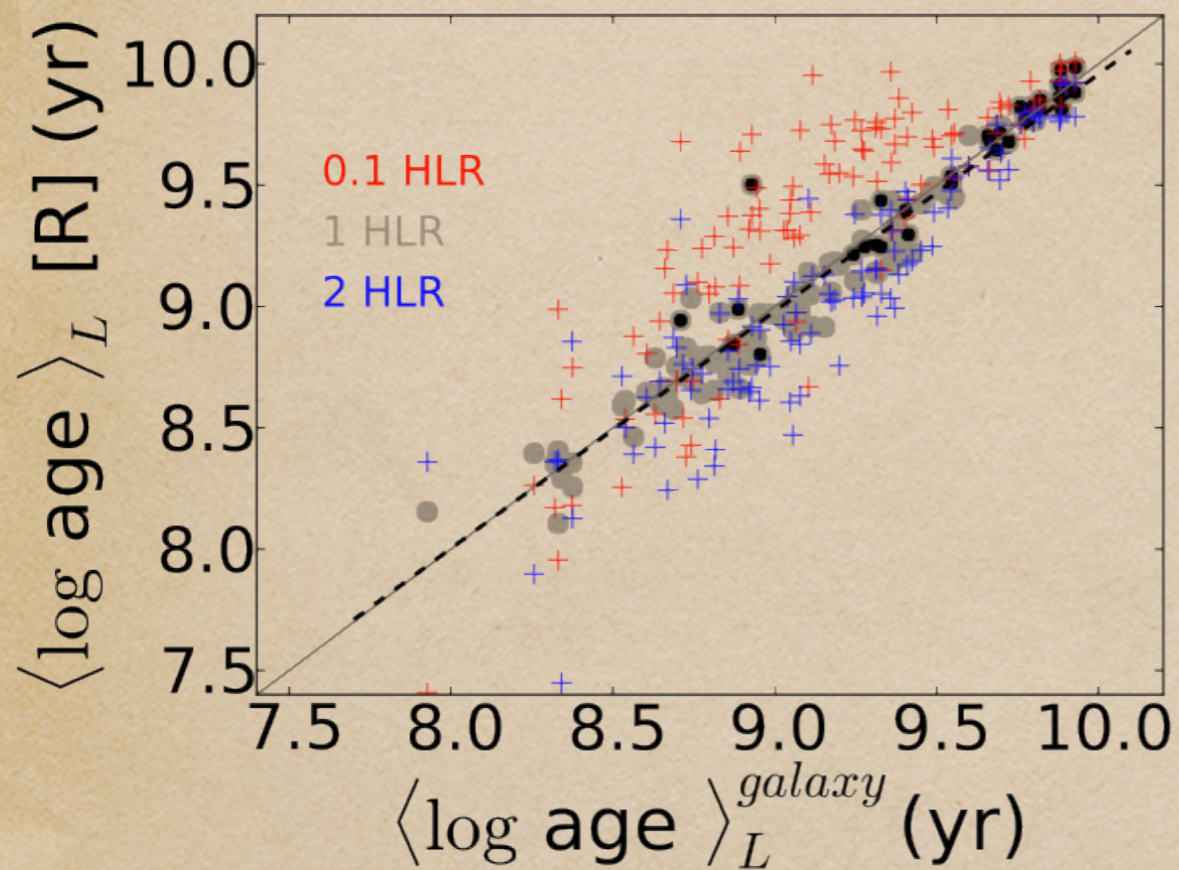
Integrated M/L_{AV}
vs
 $\Sigma M / \Sigma L_{AV}$ Zones

(Deredden)



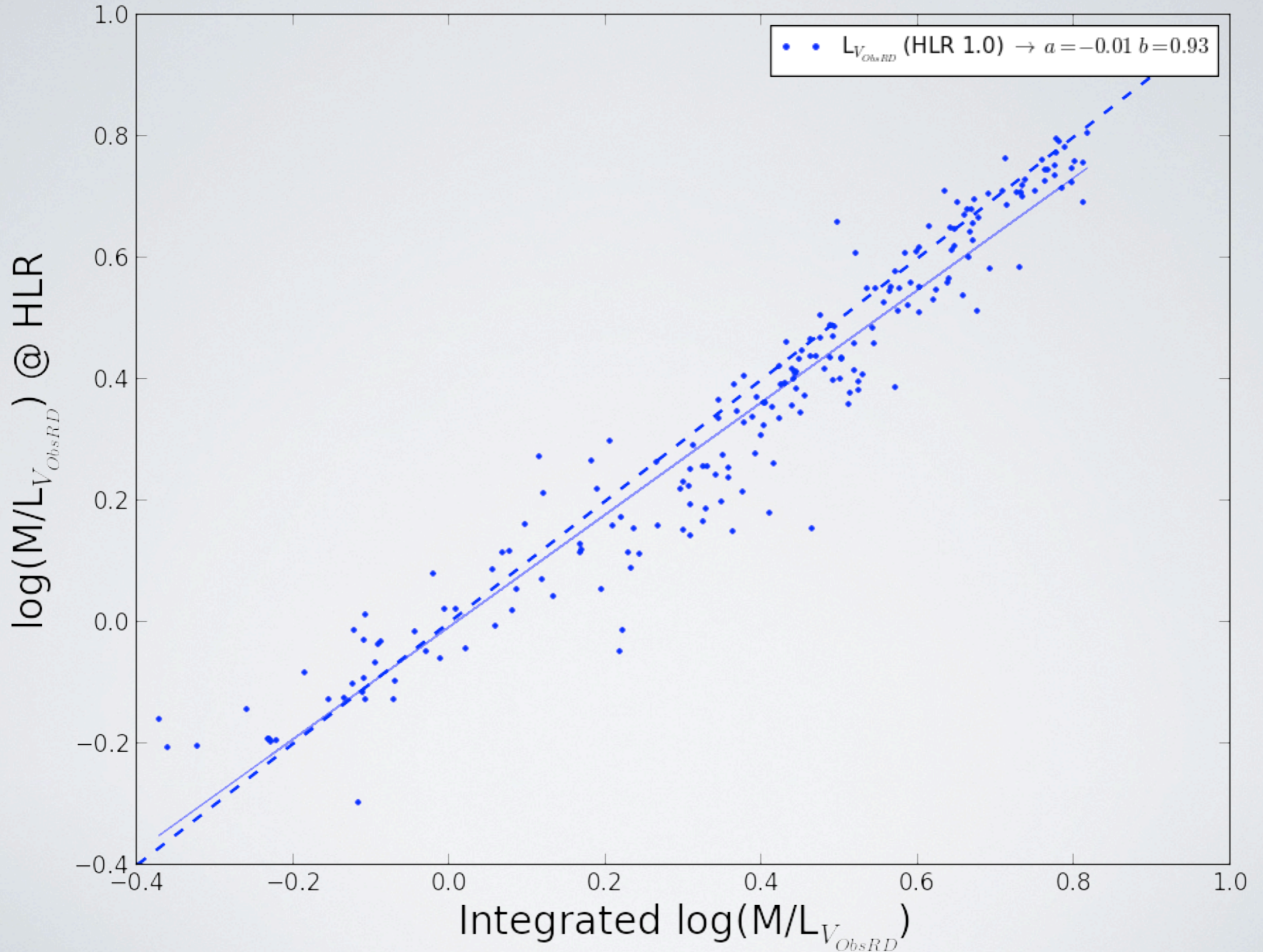
Effective radius are really “effective”

(Cid Fernandes)

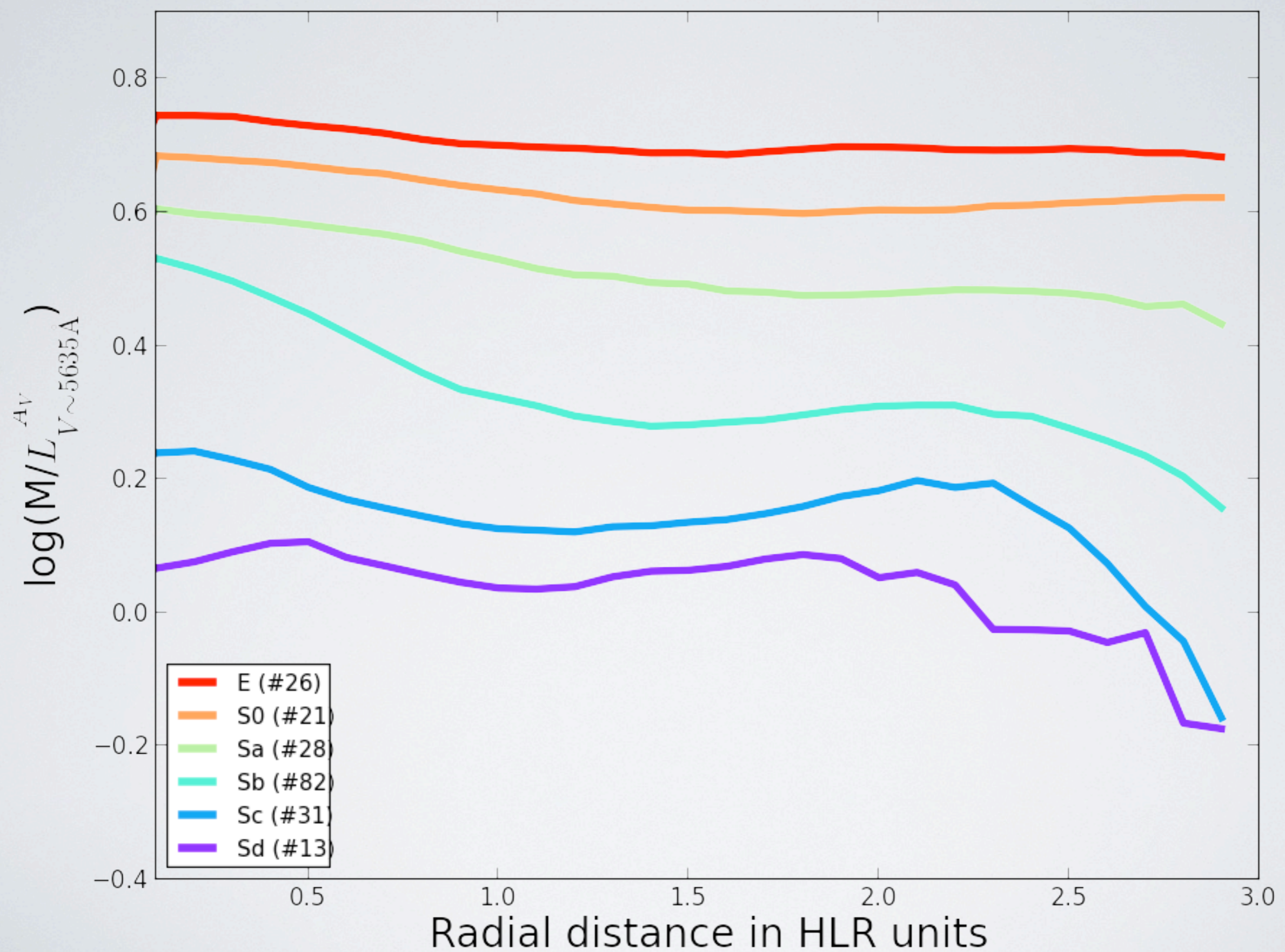


González-Delgado+2013, A&A (submitted)

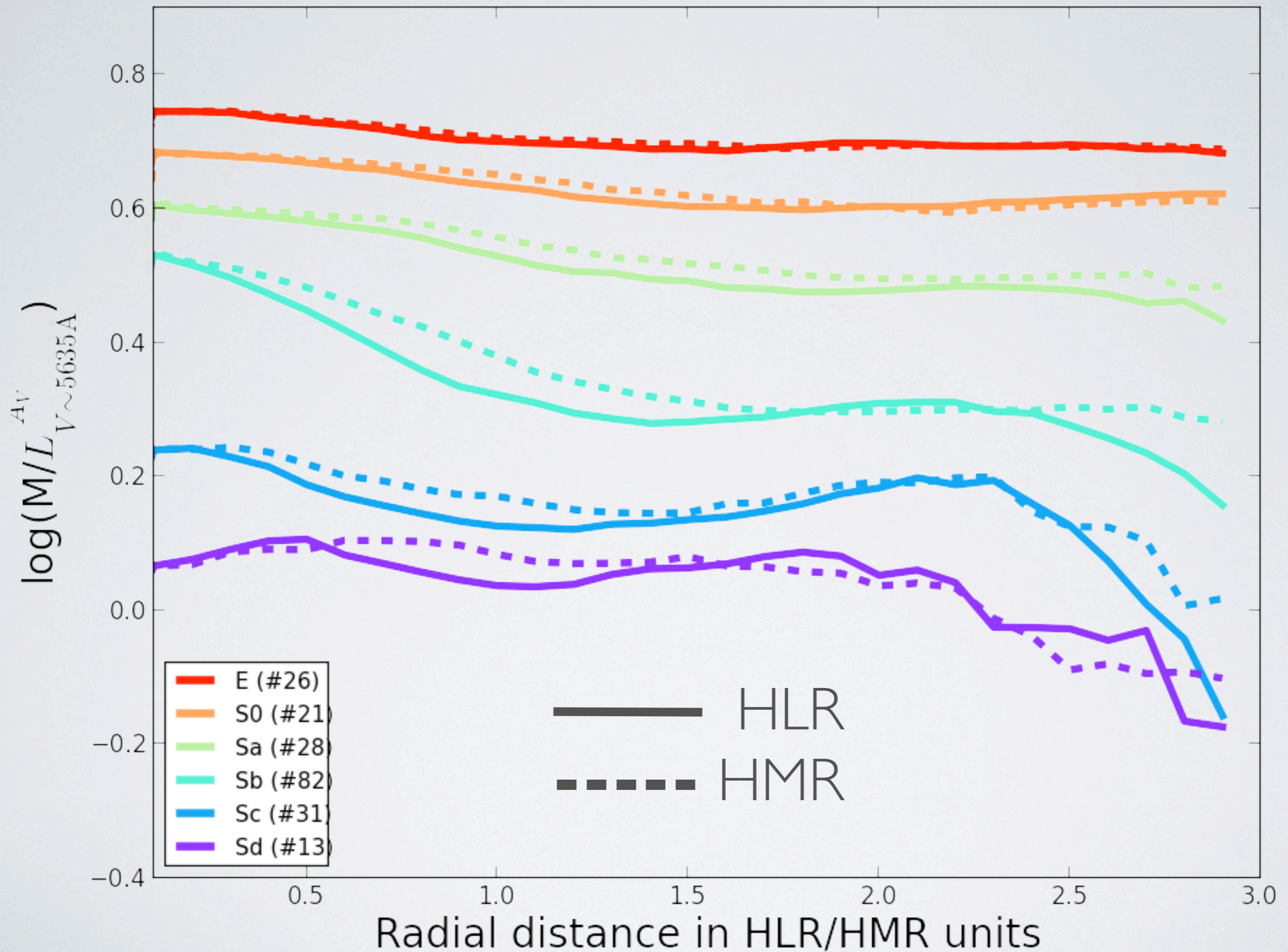
M/L_V-Dered @ HLR vs Integrated M/L_V-Dered



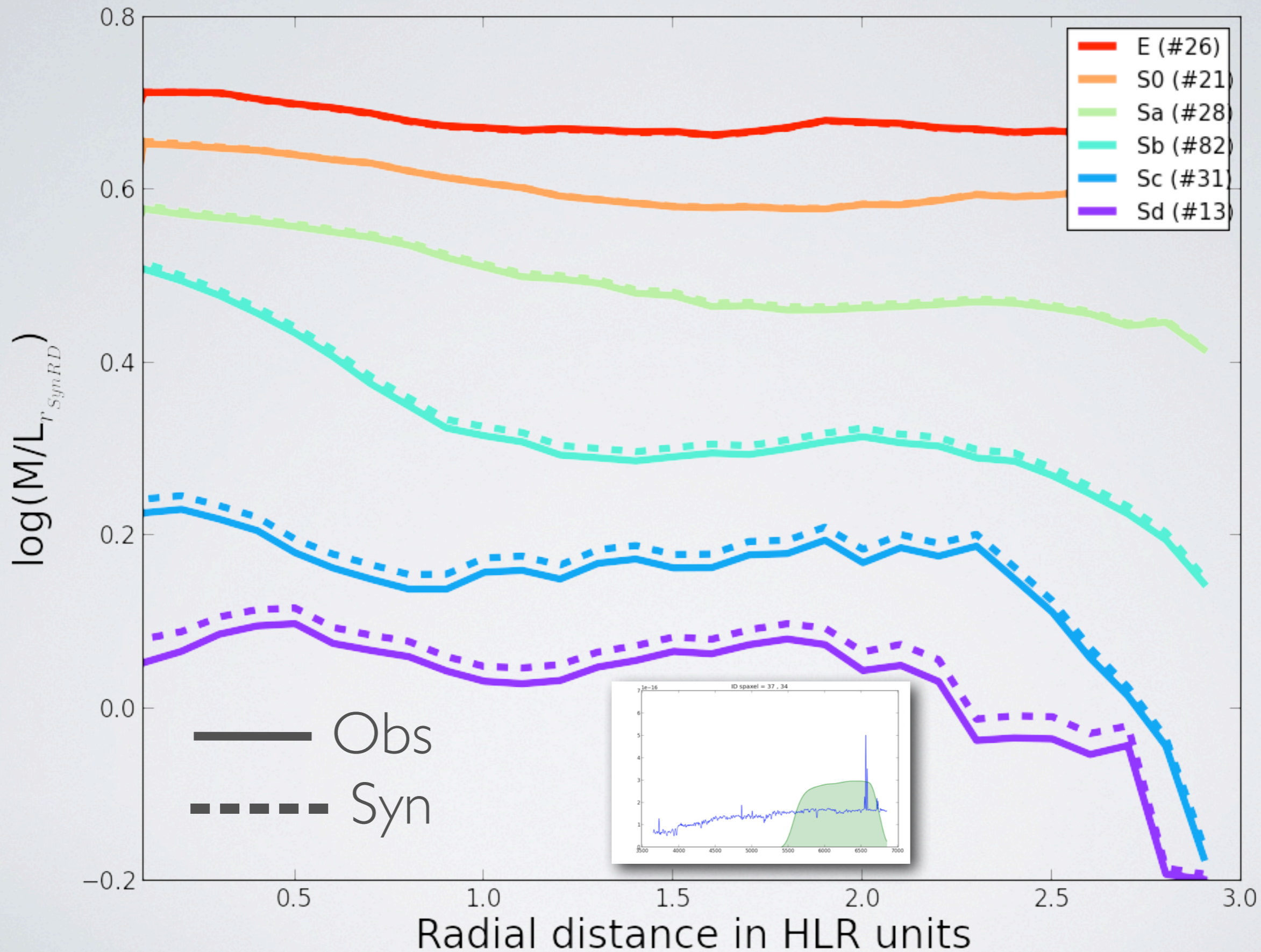
Radial M/L_{Dered} - Morphology



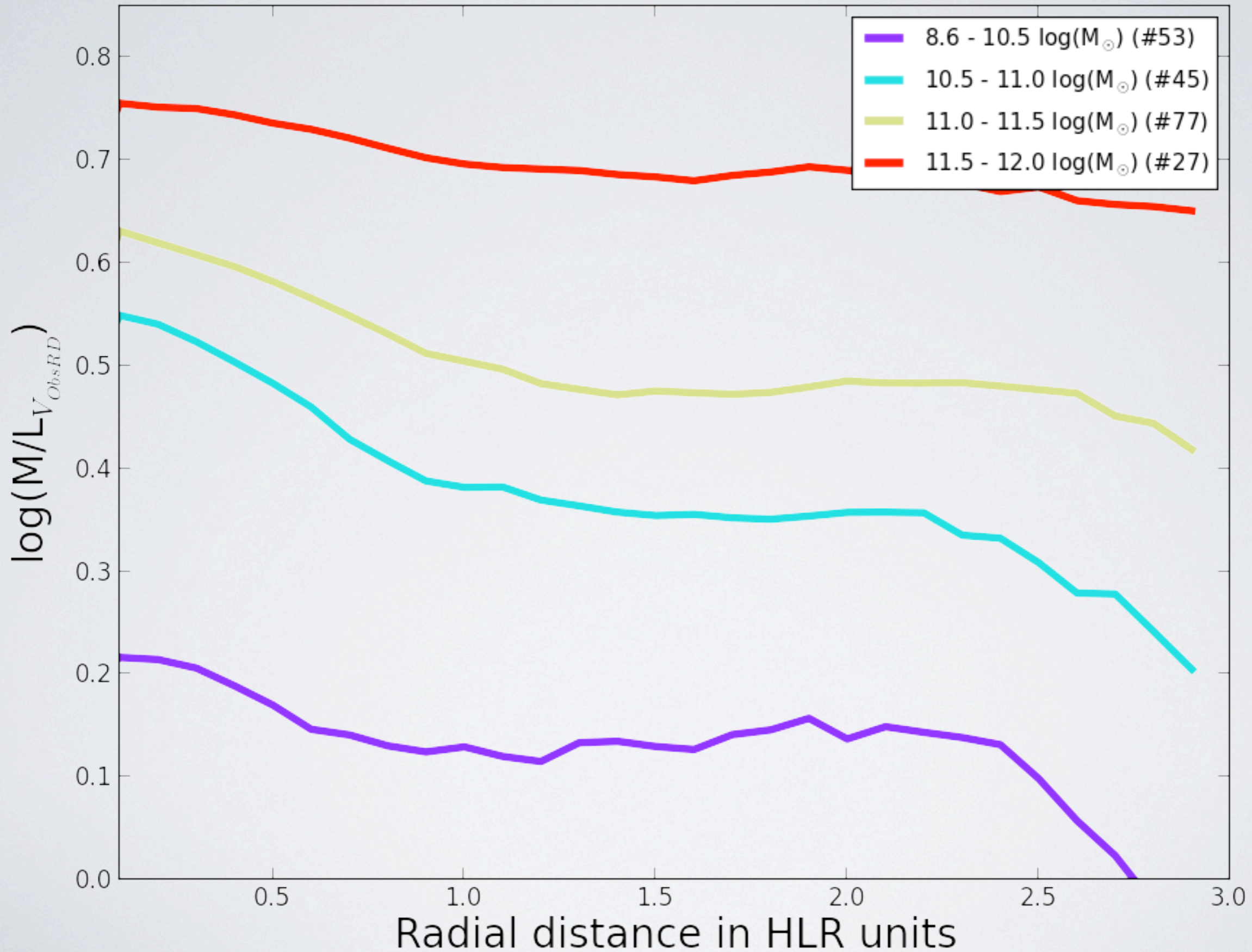
Radial M/L_{Dered} - Morphology - HLR vs HMR



Radial M/L_{Dered} - Morphology - Obs vs Syn



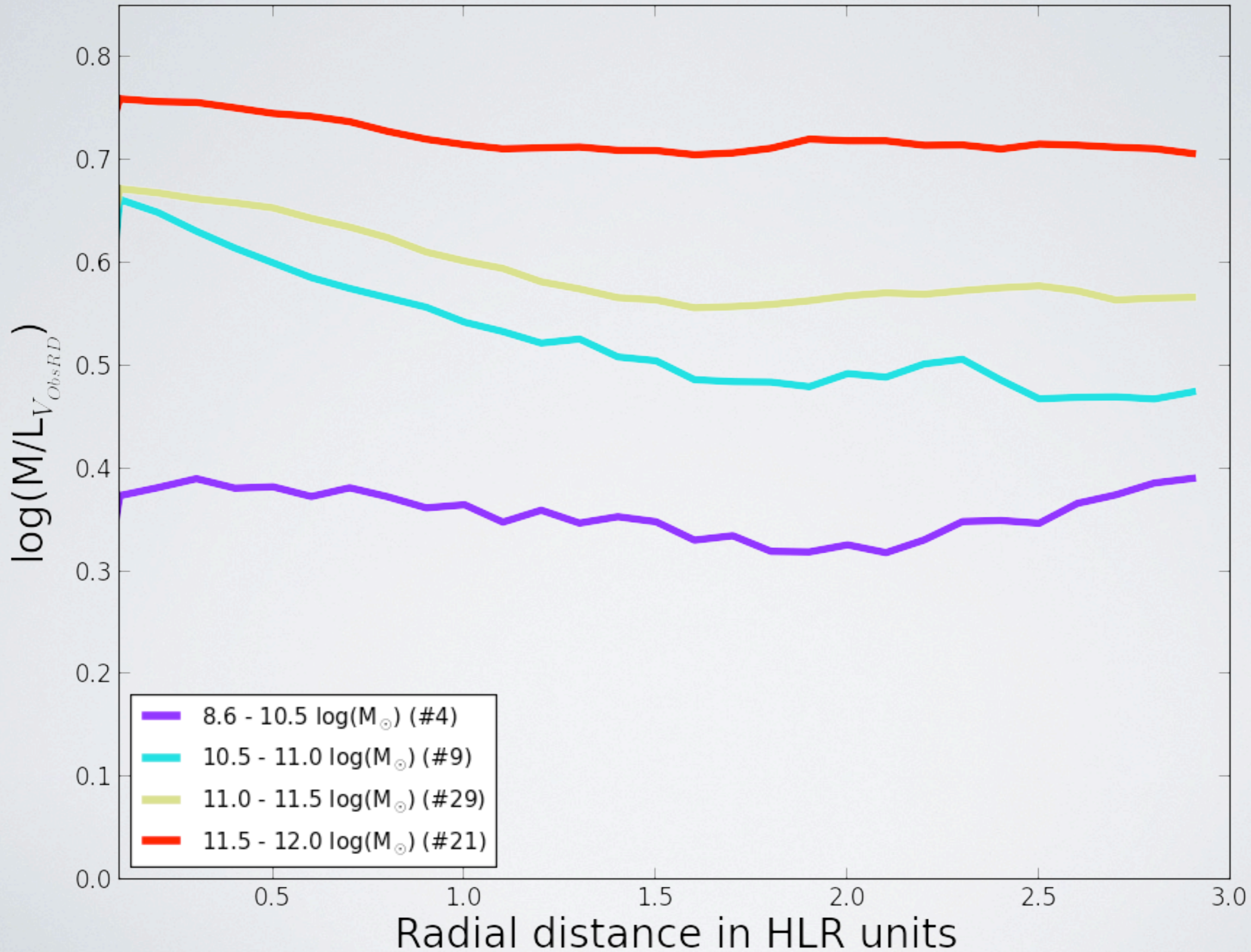
Radial M/L_{Dered} - Mass



Radial M/L_{Dered} - Mass & C

$$C = r_{90}^P / r_{50}^P$$

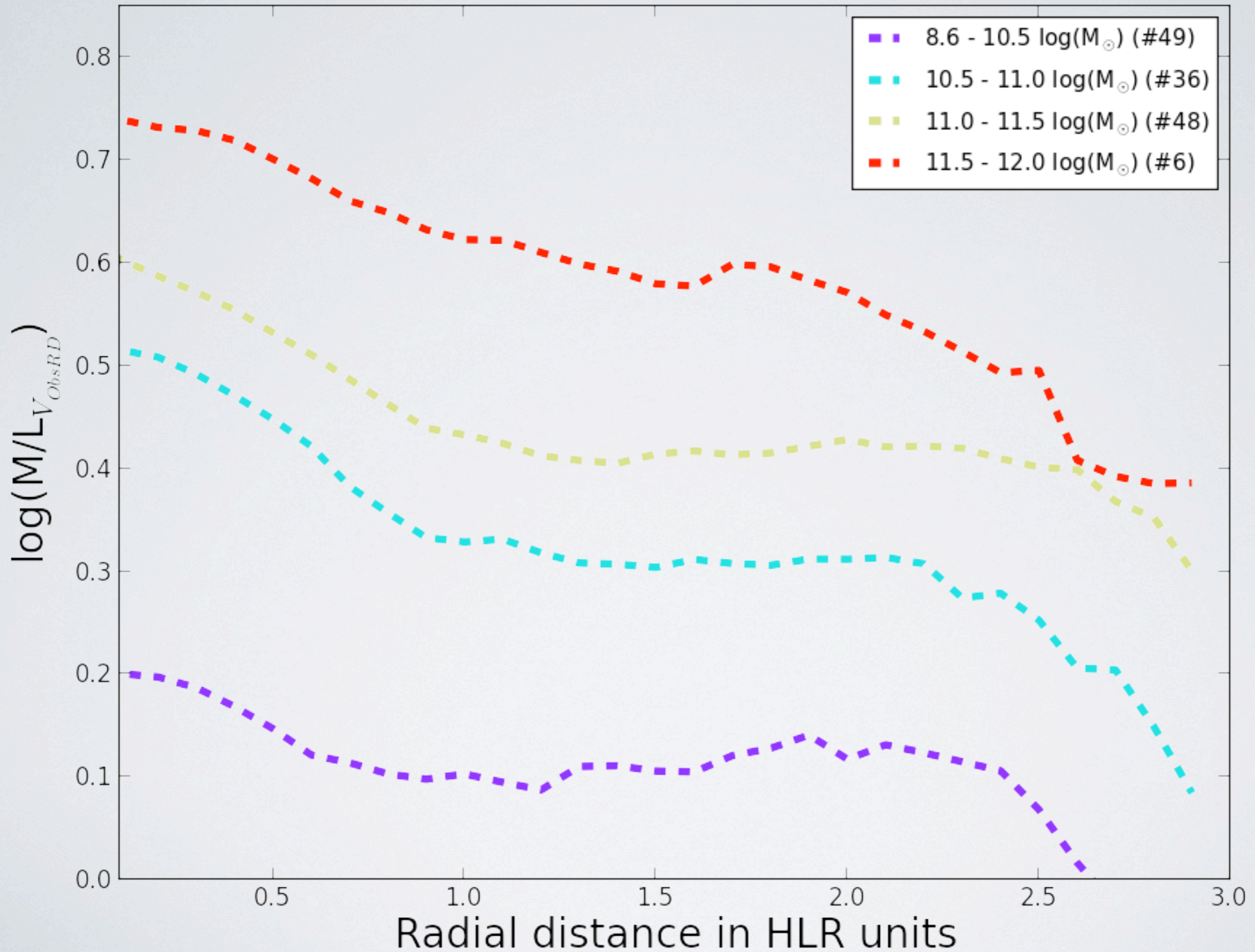
$C \geq 2.8$



Radial M/L_{Dered} - Mass & C

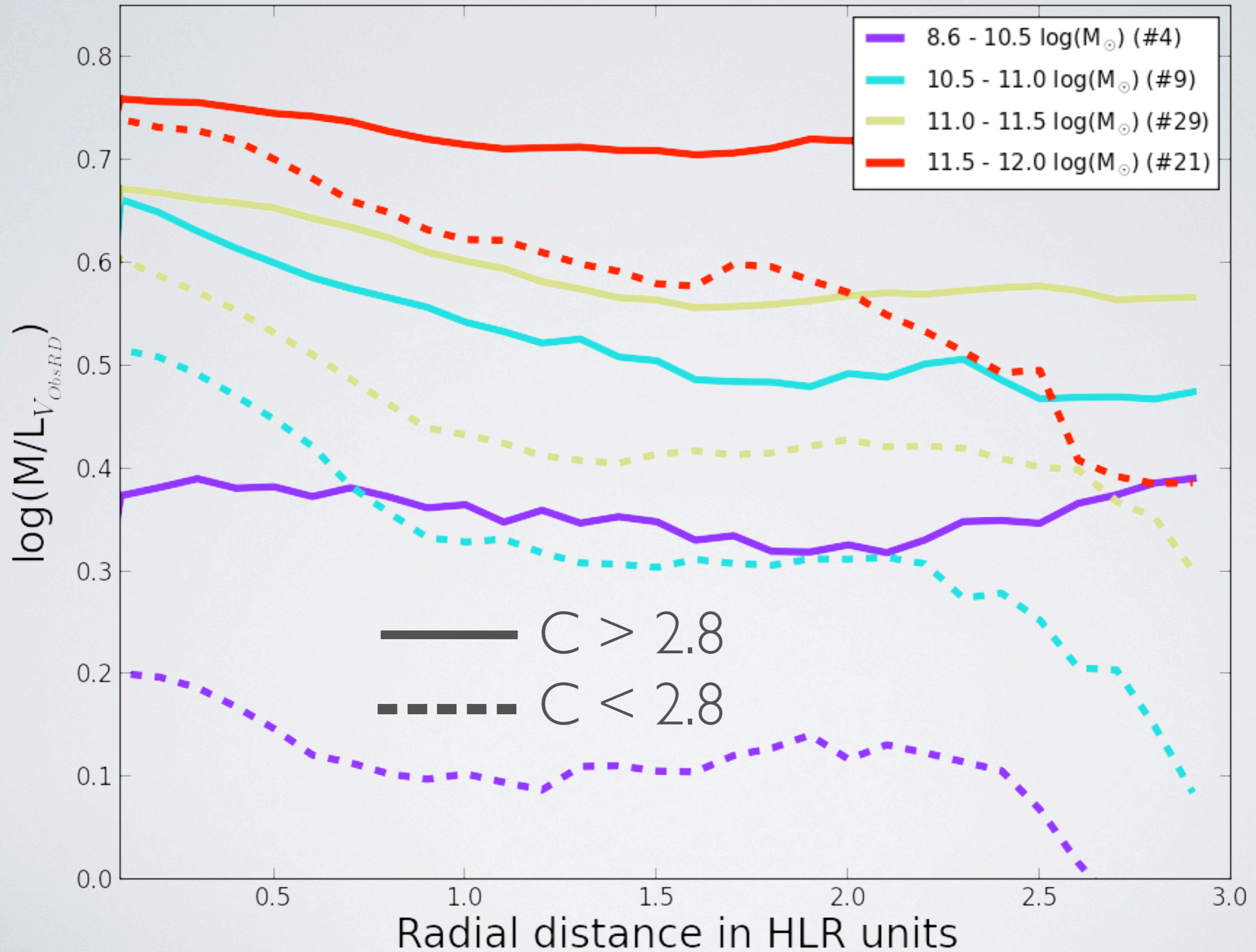
$$C = r_{90}^P / r_{50}^P$$

$C < 2.8$

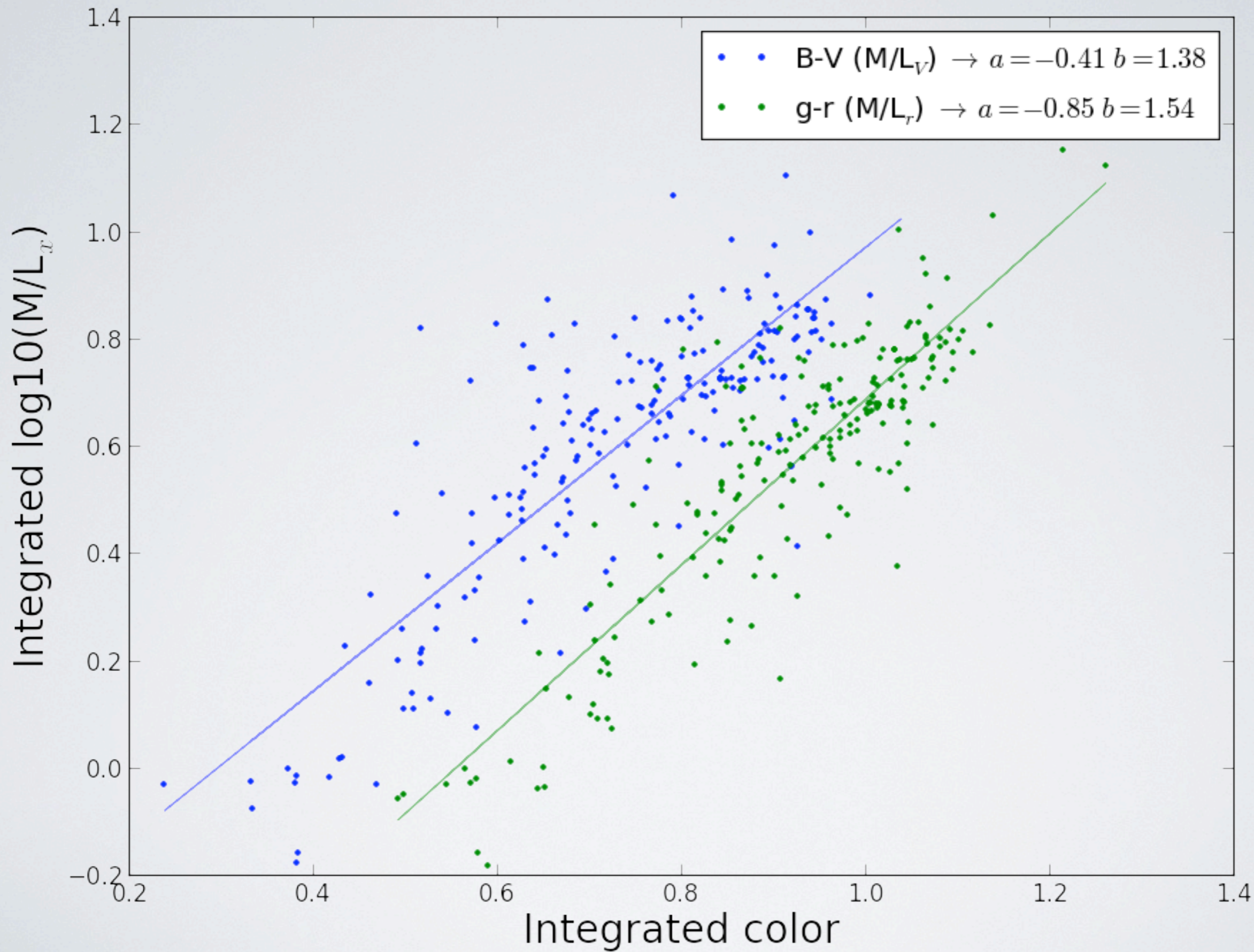


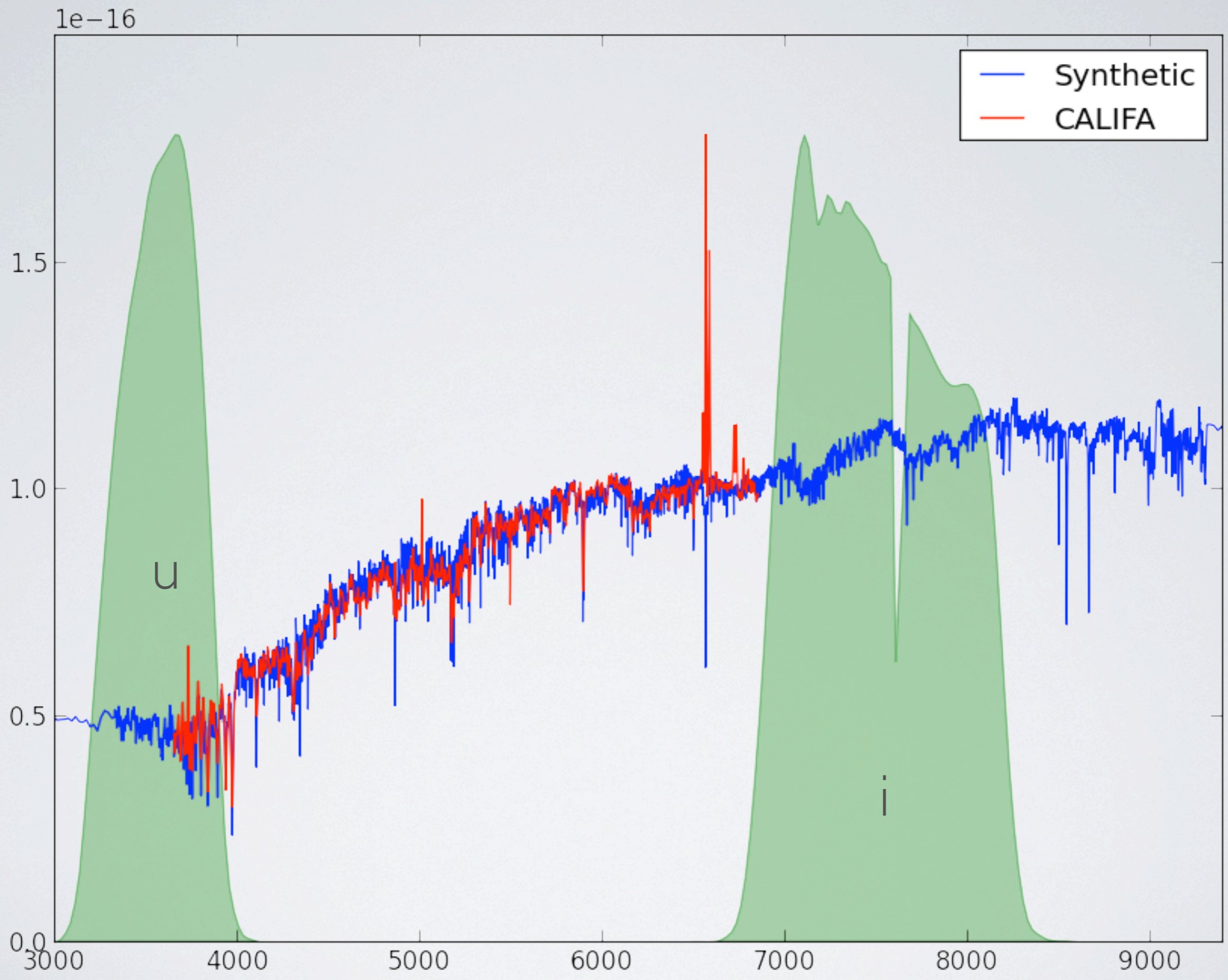
Radial M/L_{Dered} - Mass & C

$$C = r_{90}^P / r_{50}^P$$



M/L - Color





SPATIALLY RESOLVED M/L
ACROSS THE CMD:

CALIFA RESULTS

THANKS!

Rubén García-Benito

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