Resolved Stellar Populations in Nearby Galaxies

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NGC 4068: HST

Optical CMDs

MS Stars
BHeB Stars
RHeB Stars
AGB Stars
RGB Stars

F814W

F606W−F814W

McQuinn et al 2010a
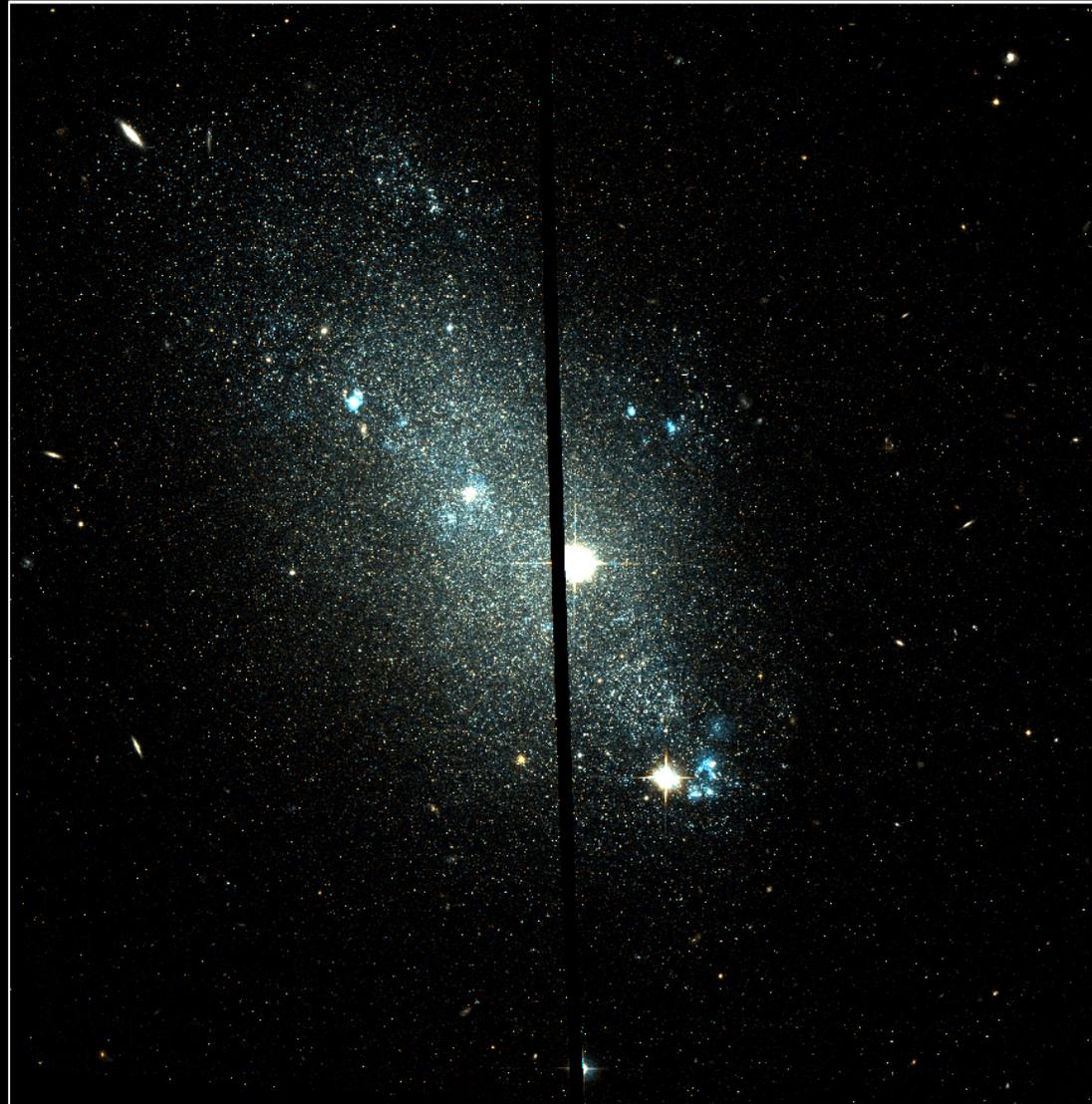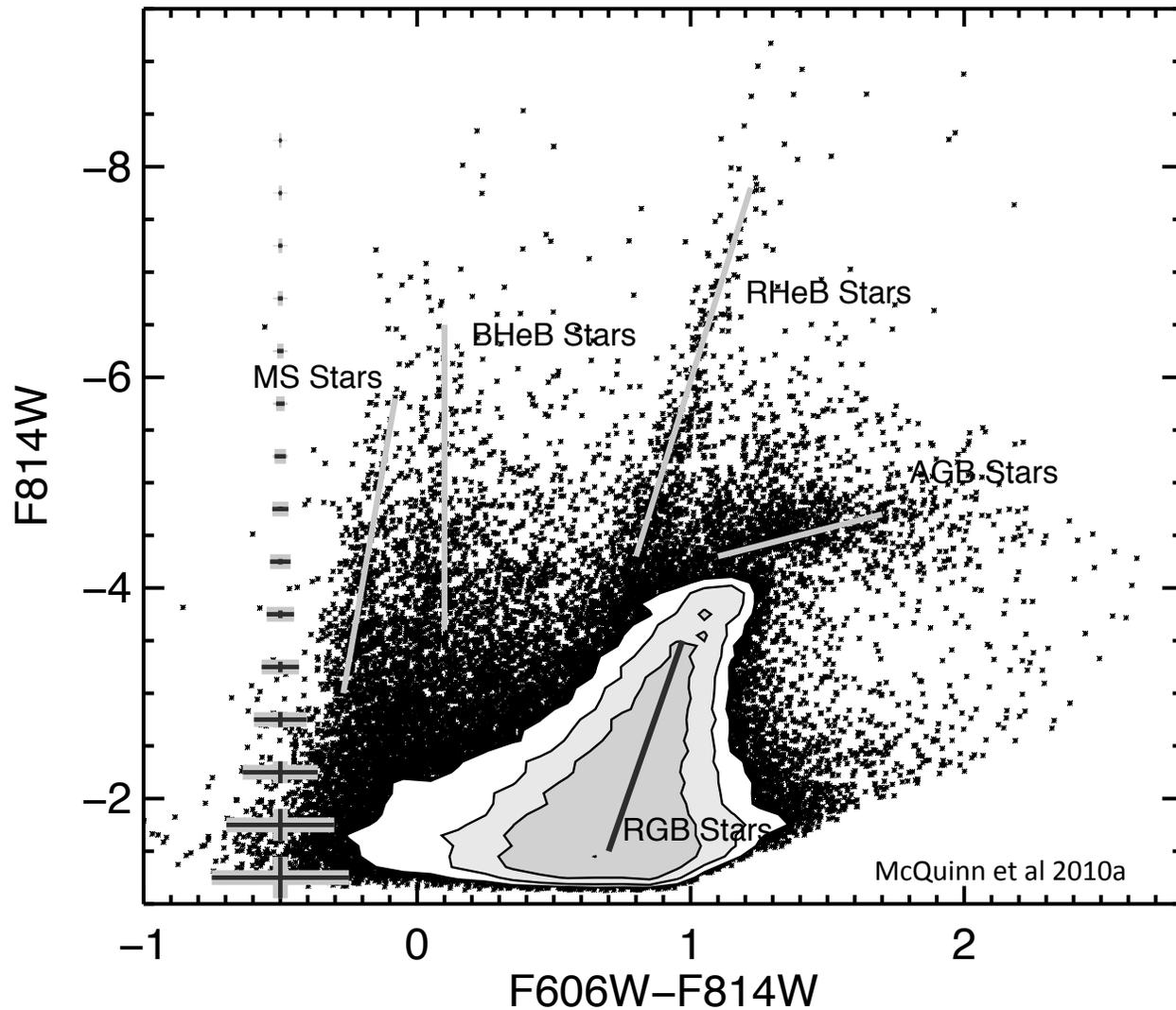
Star Formation Rate...
as a function of time

McQuinn et al 2010b

# Equivalent UV CMD

McQuinn et al. in prep.
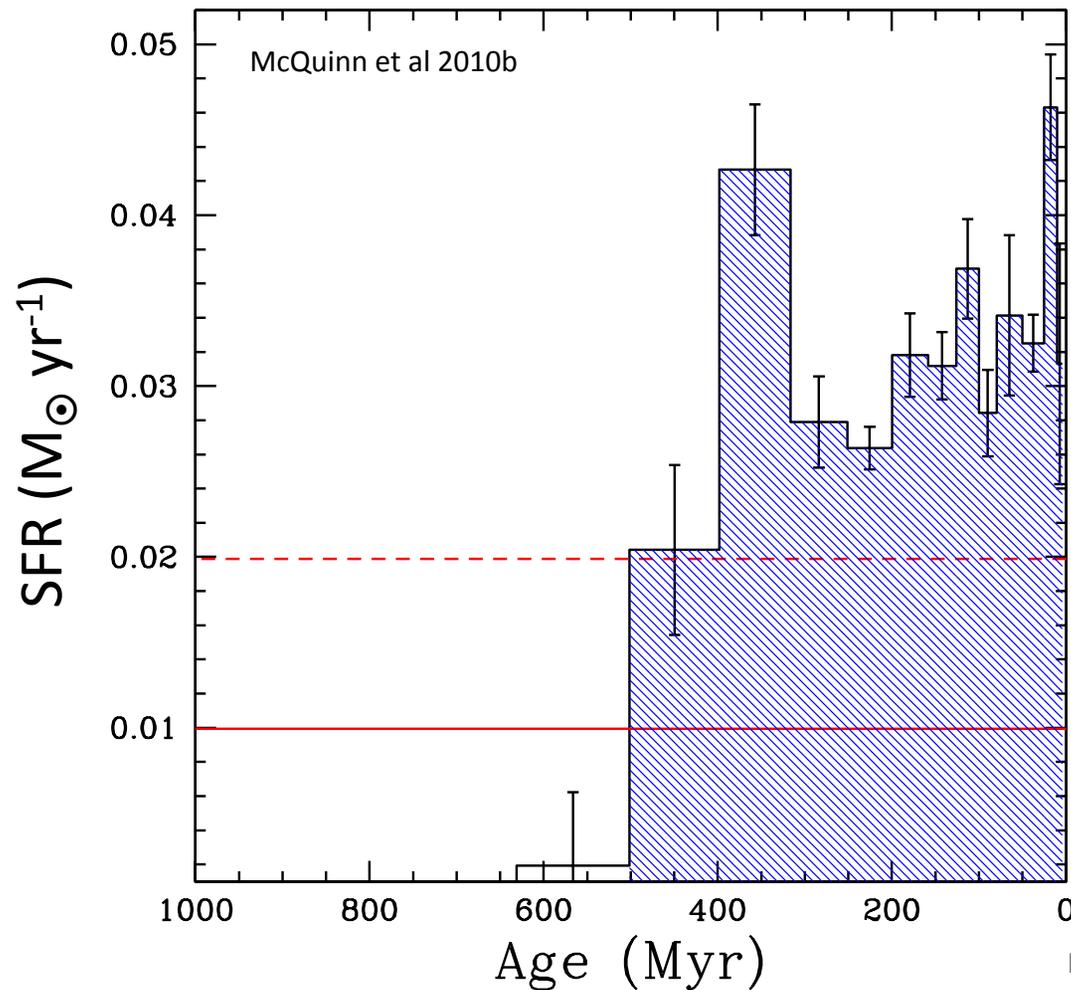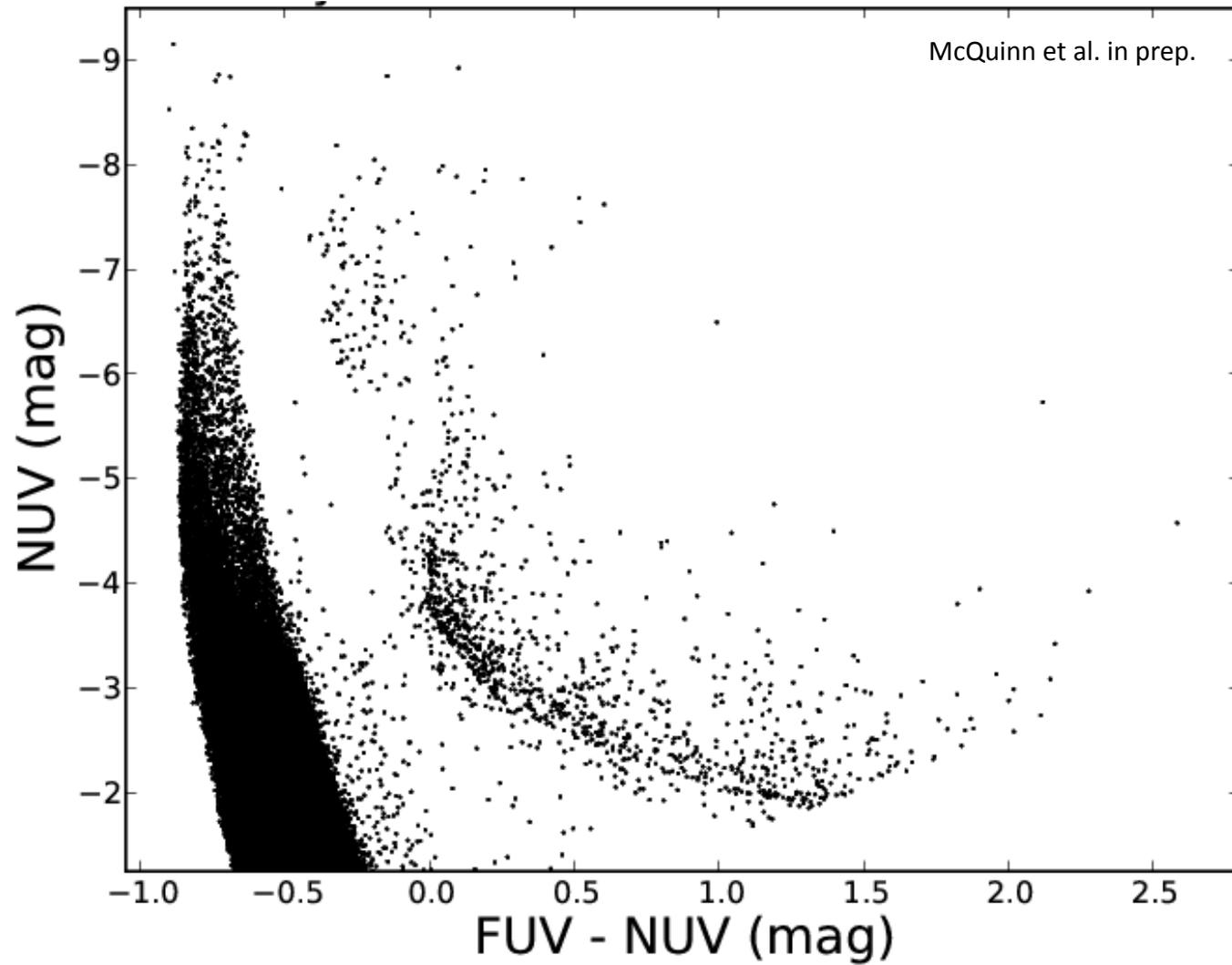
NGC 4068: GALEX
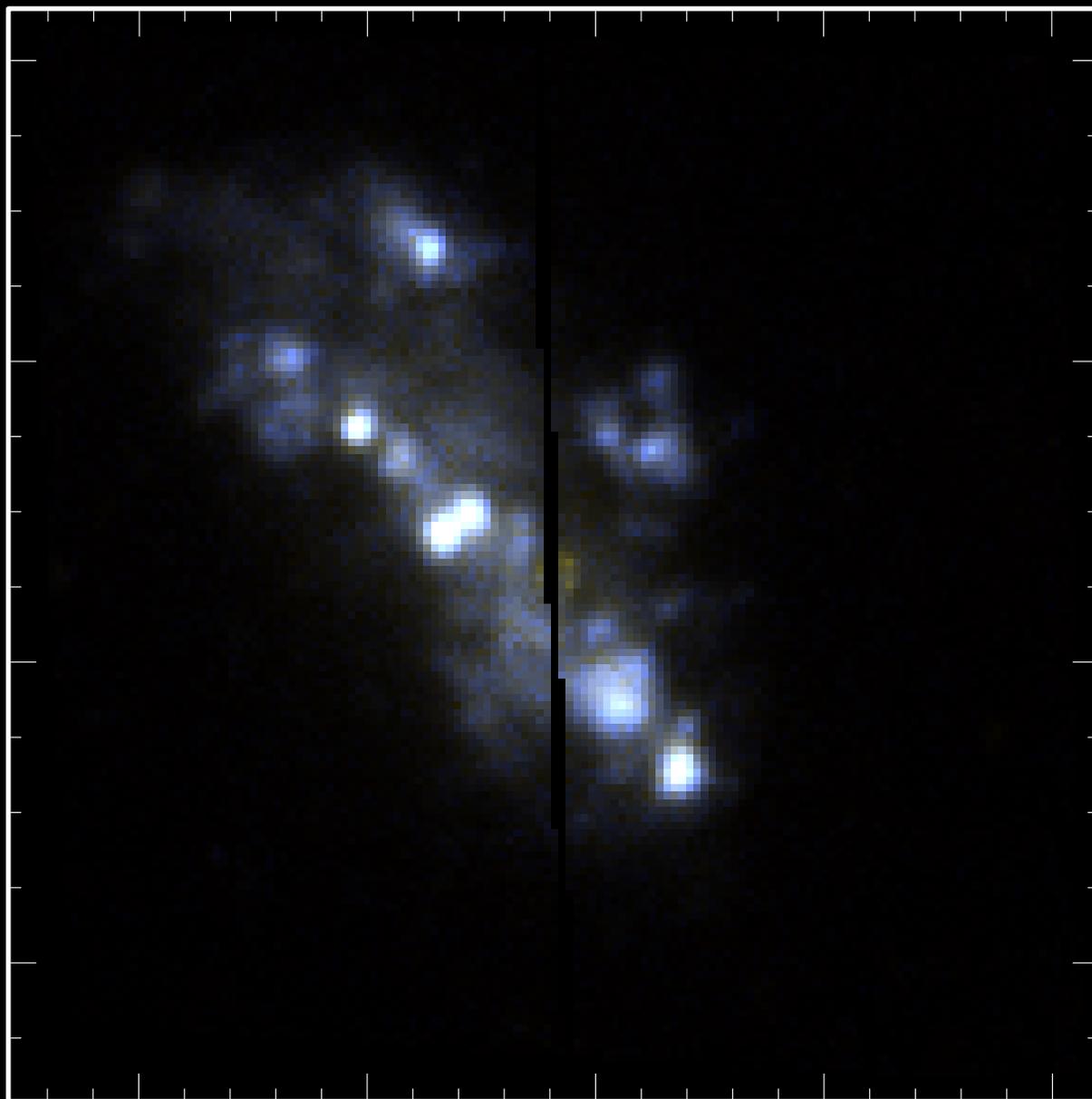
Right Ascension (J2000)

Can we connect Optical and UV fluxes?
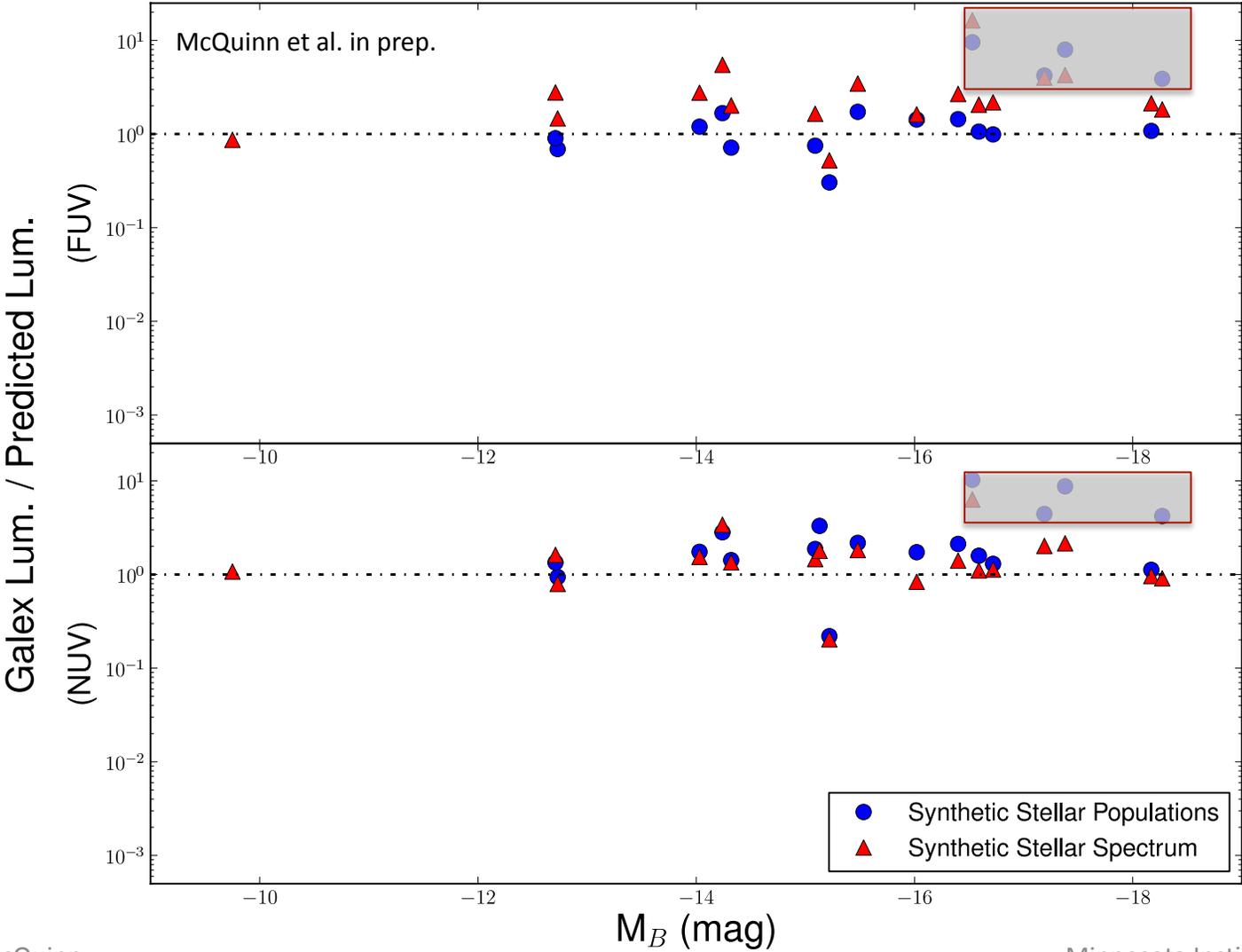

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Can we connect Optical and UV fluxes?

McQuinn et al. in prep.

Mismatch between SFRs

McQuinn et al. in prep.

Optical $\langle SFR \rangle_{100\,Myr}$/FUV SFR vs. FUV SFR ($M_\odot$ yr^{-1})

UV Resolved Stellar Populations

Dalcanton et al. 2012

PHAT Program

Kristen McQuinn
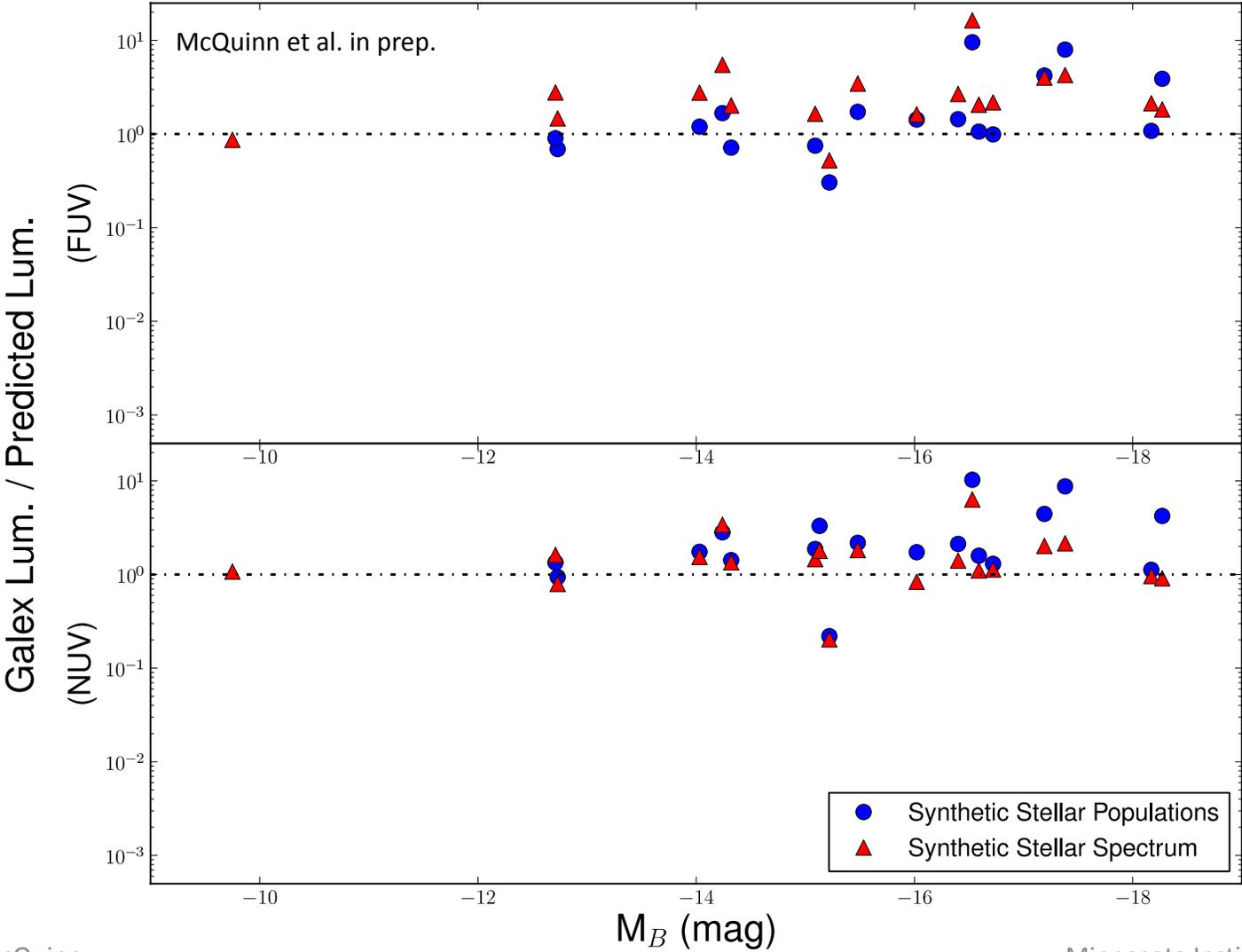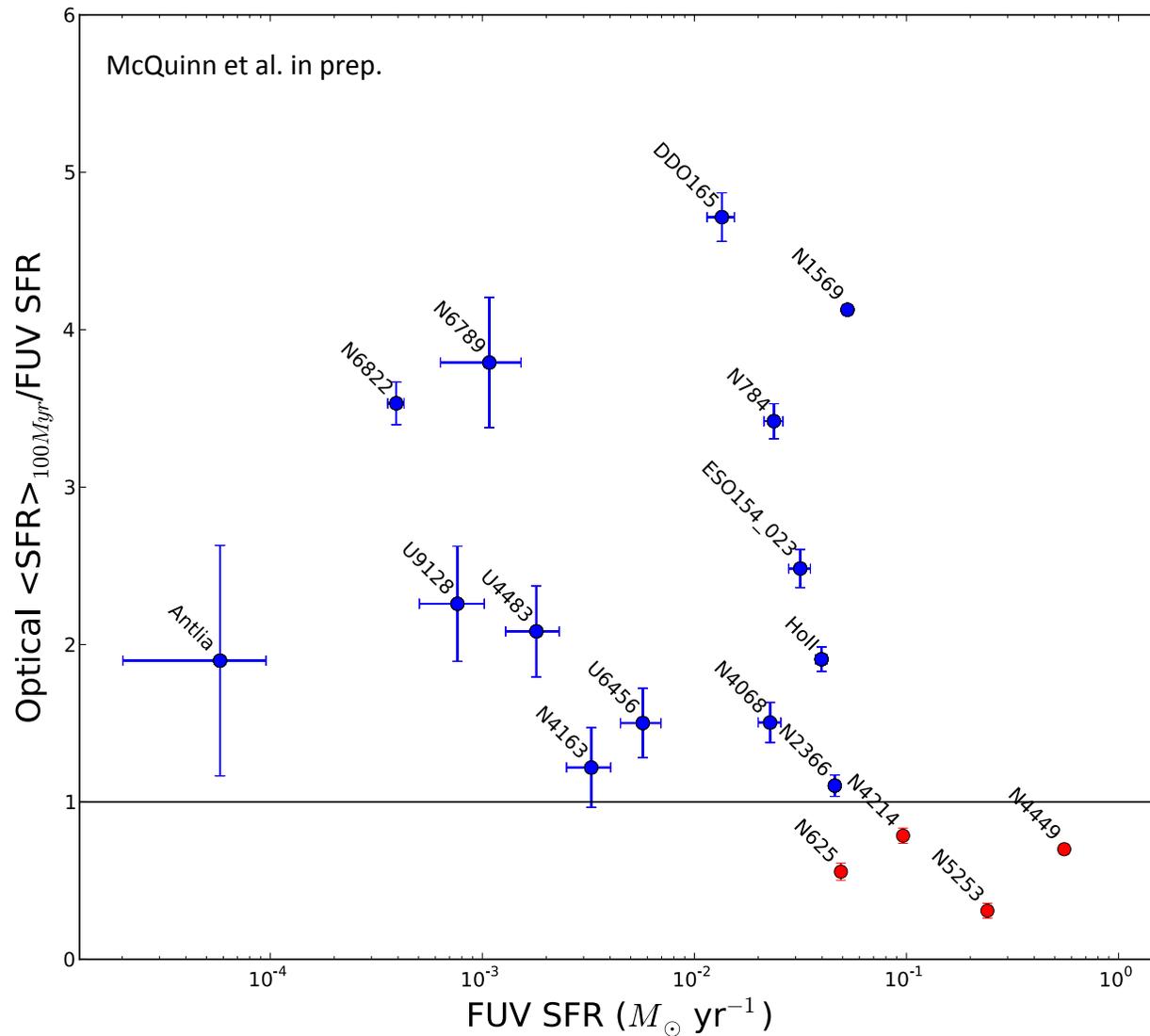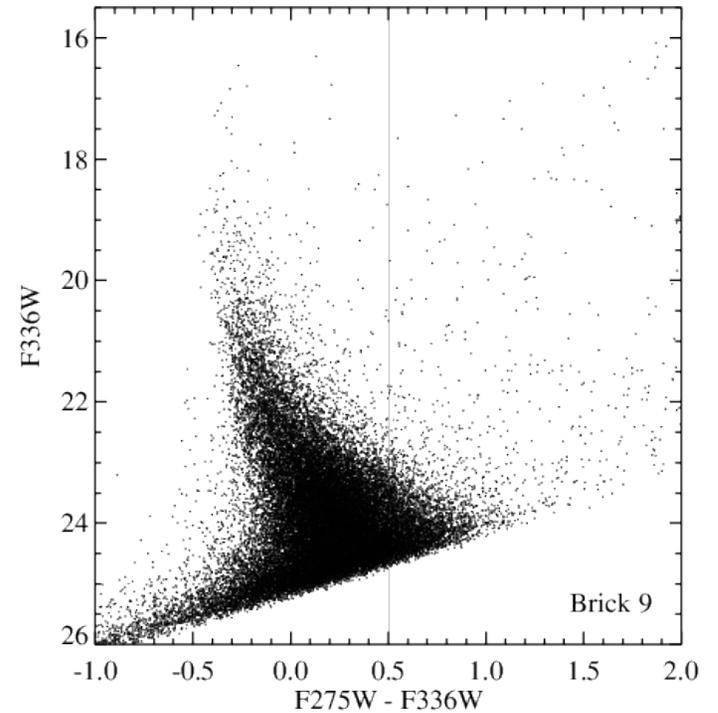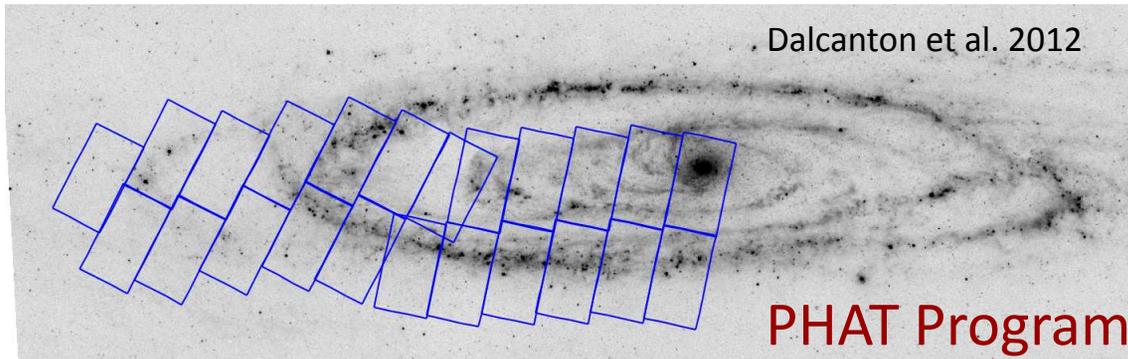
Chemical Enrichment Histories

Dolphin 2002
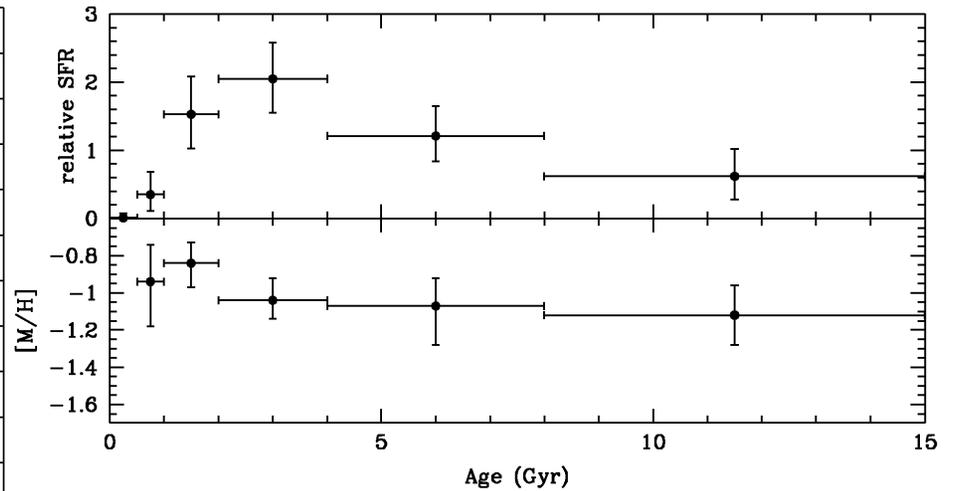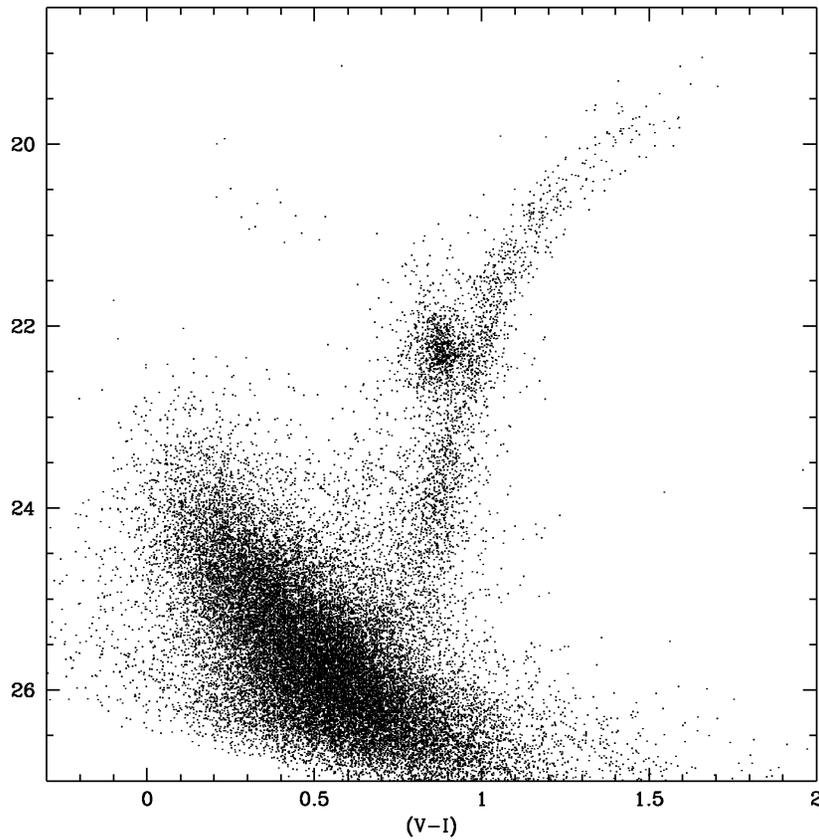
The Importance of the UV in SED Fitting

Romaniello et al. 2002

da Cunha et al. 2010
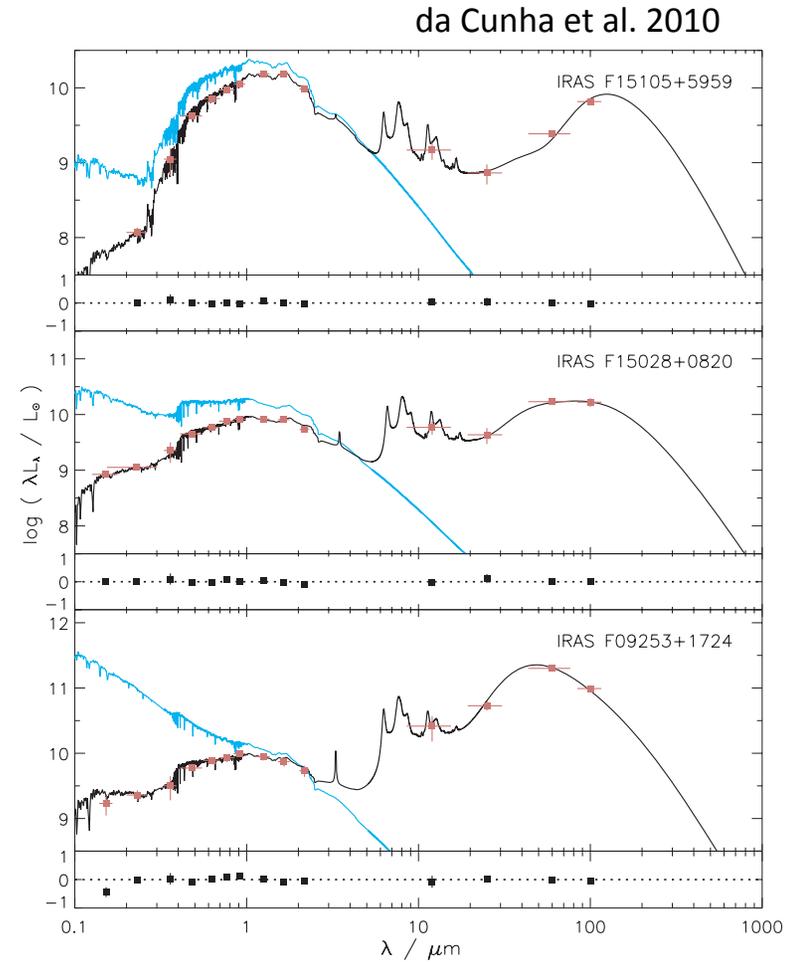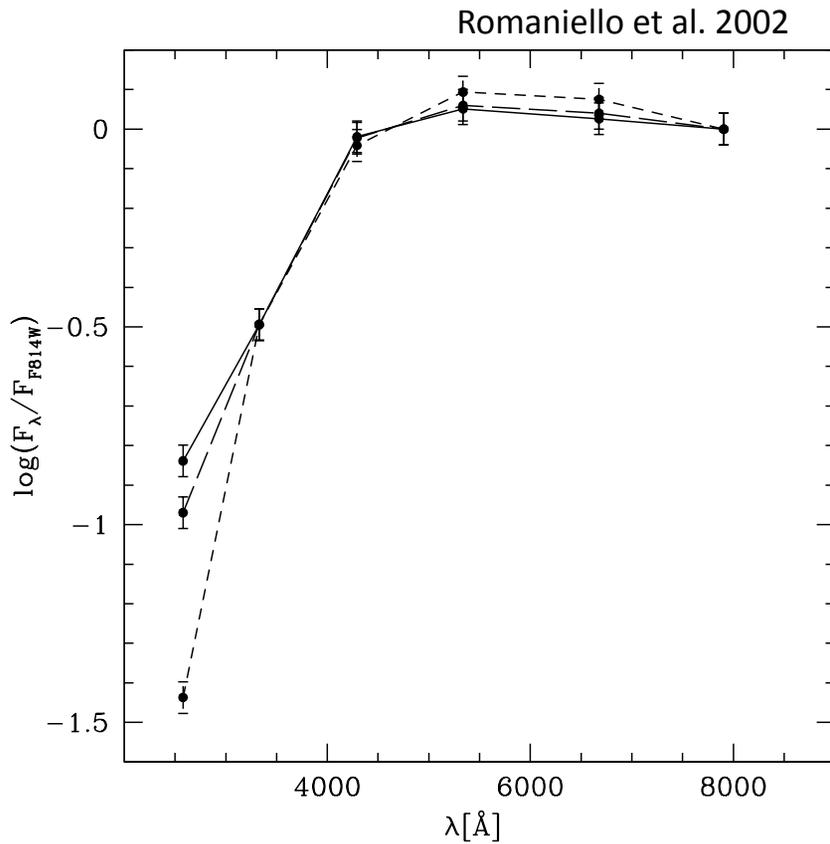
Summary

- Ground Truth on UV emission from stellar populations
  - Accurately predict the UV flux from composite stellar populations
  - FUV SFRs calculated from scaling relations are too low

- Future gains
  - Constraints on the recent chemical enrichment of galaxies as a function of radius
  - Improved models of UV bright BHeB stars
  - Relative weights of recent vs. intermediate and old SF in galaxies