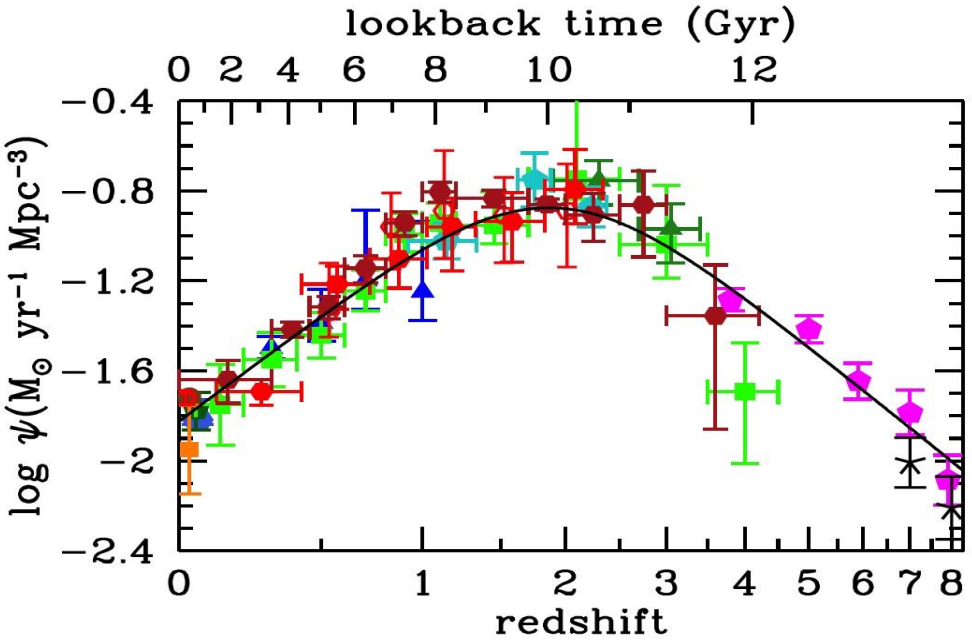
Galaxy Evolution Spectroscopic Explorer (GESE)



Madau & Dickinson 2014

This plot is rooted “in optical-IR astronomy, statistics, stellar populations, and phenomenology, rather than in the physics of the ISM, self-regulated accretion and star formation, stellar feedback, and SN-driven galactic winds.”

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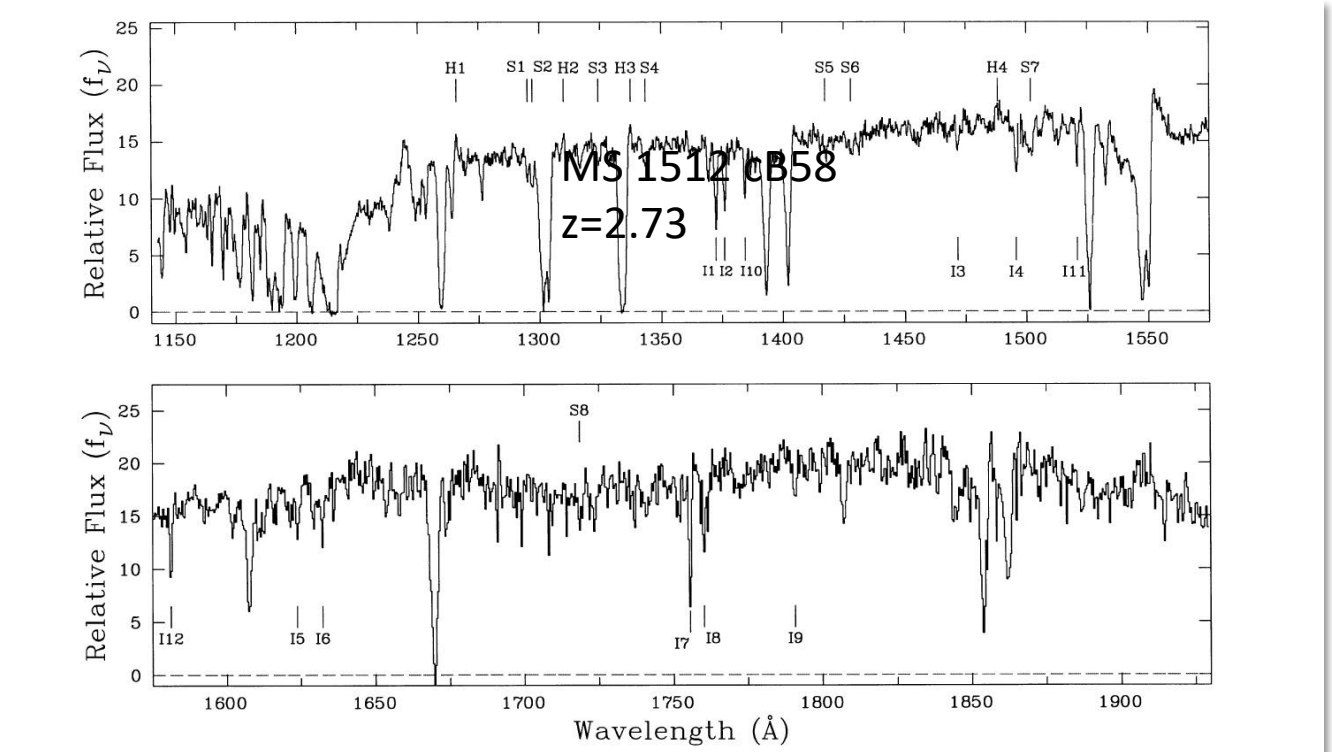

FIG. 1.—LRIS spectrum of MS 1512−cB58 reduced to the systemic redshift of the galaxy, $z_{stars} = 2.7268$. Tick marks above the spectrum identify weak stellar lines (labeled S*n*) listed in Table 1 and weak emission lines (labeled H*n*—see Table 4) that we attribute to H II gas. Tick marks below the spectrum (labeled I*n*) mark the positions of the intervening absorption lines listed in Table 6. The numerous interstellar lines in MS 1512−cB58 have not been marked

12/30/12

This rest far-UV spectrum yielded: SFR~40 $M_\odot$, protracted SF, IMF consistent with Salpeter IMF with M_u>50 $M_\odot$, Z~1/4 $Z_\odot$ (both stars & gas), N_{HI}=7.5x10^{20} cm^{-2}, galactic wind with velocity~ 200 km/s and rate ~60 $M_\odot$/yr, dust E(B-V)~0.1-0.3

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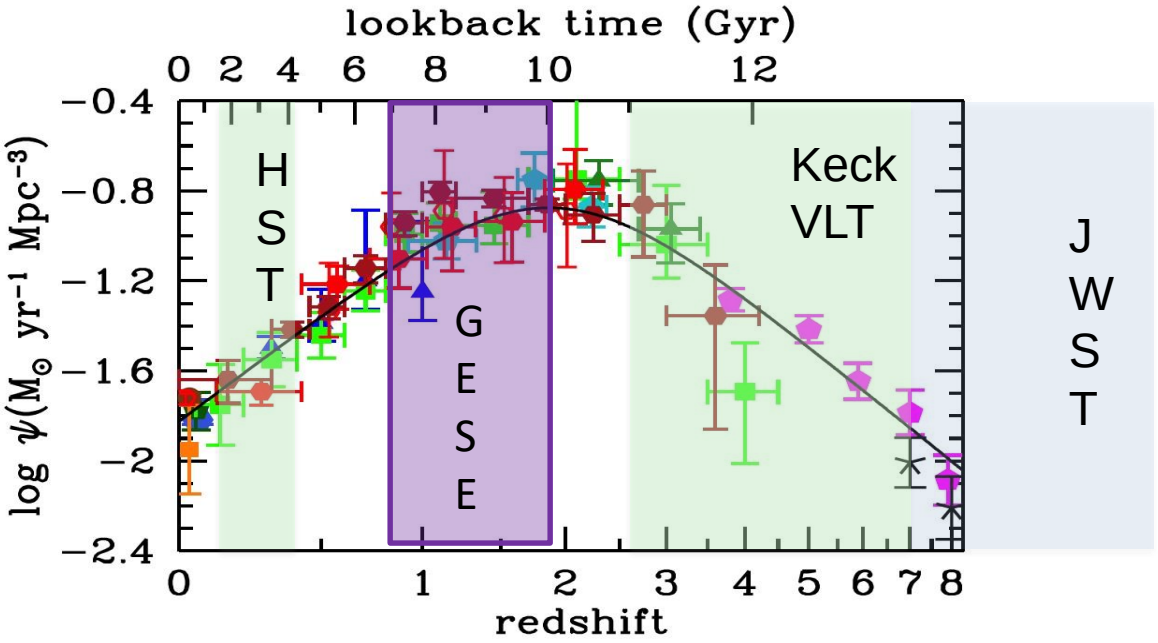

Madau & Dickinson 2014

There is no current or planned mission to make a rest-FUV spectroscopic survey of star-forming galaxies at z~-0.8 – 2.0.

GESE is designed to fill that hole.