SPECTRAL ENERGY DISTRIBUTIONS OF $Z > 2$ GALAXIES IN THE HUBBLE DEEP FIELD

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Broadband spectral energy distributions ($V_{606}, I_{814}, J, H, K_s$) of 17 spectroscopically confirmed $z > 2$ Hubble Deep Field galaxies were compared with spectral synthesis models wich had been corrected for dust using the reddening law for star-forming regions. Sawicki & Yee (AJ submitted) contains the detailed description, while here we summarise the main results.

We find that the spectroscopically confirmed Lyman break galaxies in the Hubble Deep Field:

1. Are dominated by very young (typically < 0.2 Gyr) stellar populations (see Figure below). The absence of older populations implies that star formation at high z is episodic rather than continuous.
2. Have enough dust to suppress rest-frame UV flux by a factor of > 10.
3. Have large star formation rates — typically $60h^{-2}M_{\odot}yr^{-1}$ (see Fig.).
4. Produce, in a typical star-forming episode, $\frac{1}{15}$–$\frac{1}{20}$ the stellar mass contained in a present-day L^* galaxy (see Fig.).

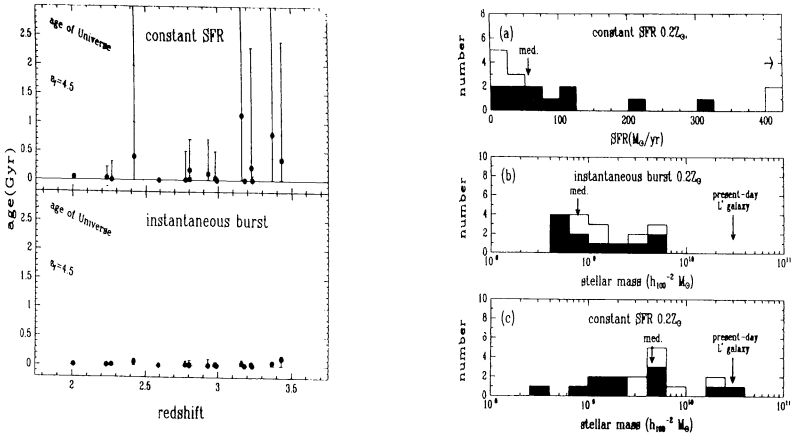

Figure 1. **Left: Ages of dominant stellar populations from constant SFR and instantaneous burst fits. Right: Star formation rates and resultant masses of stellar populations.**

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