



Building the red
sequence through
gas-rich major
mergers at $z \sim 0.5-2$



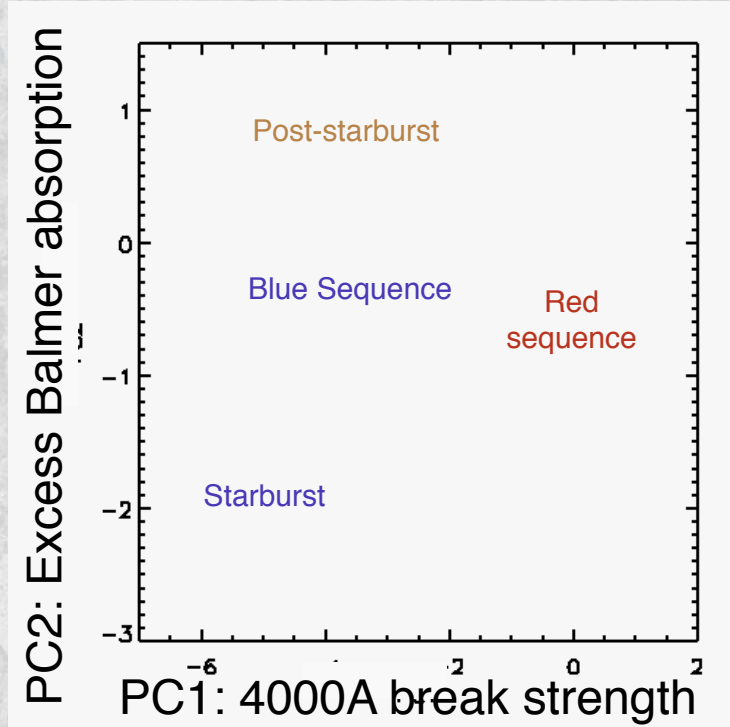
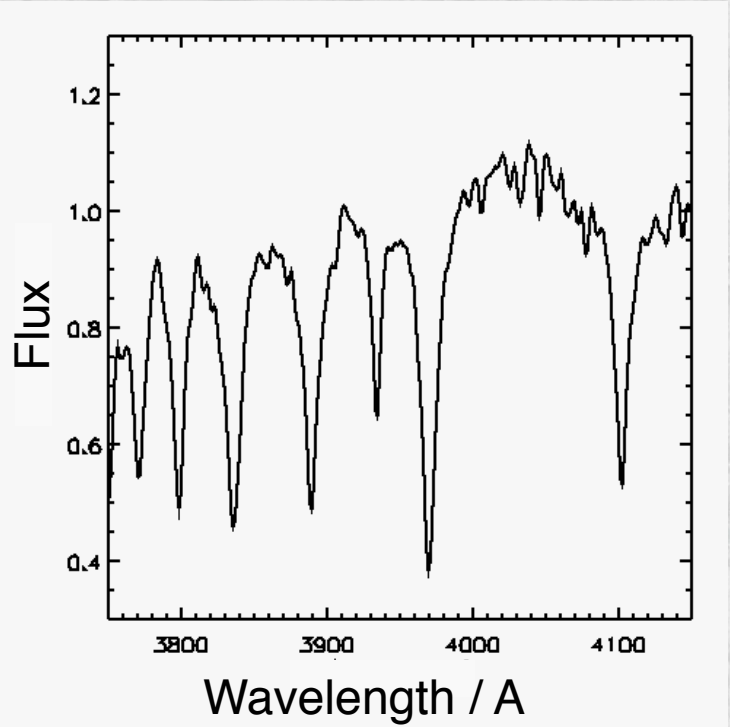
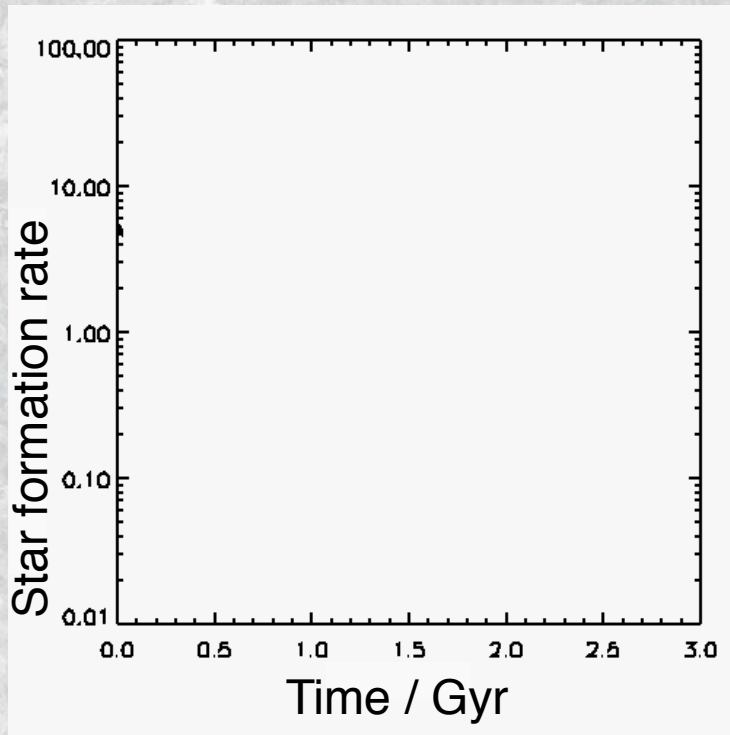
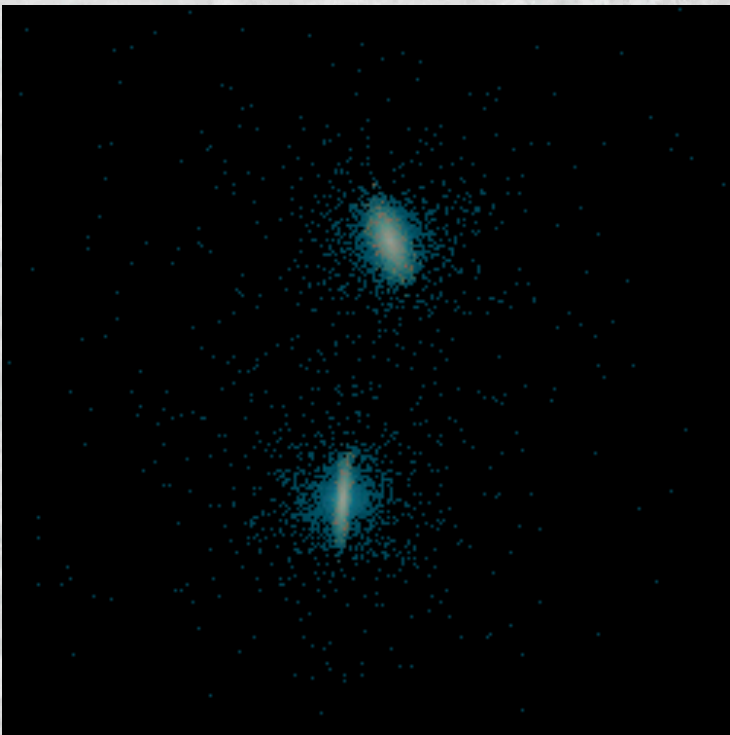
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600
YEARS

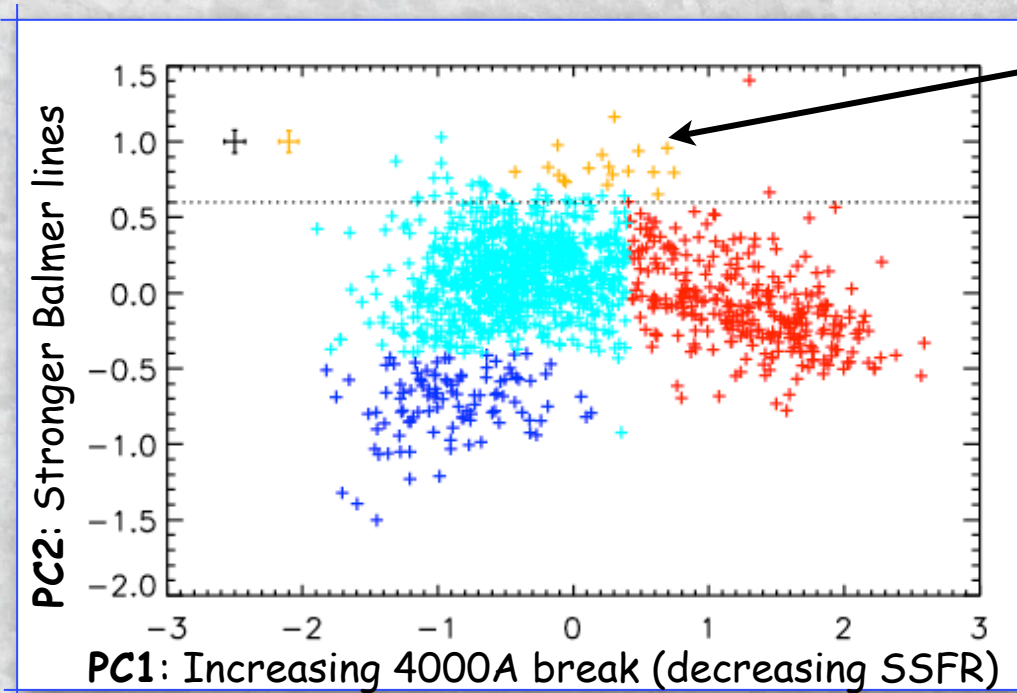




Wild, Walcher, Johansson et al. 2009

Post-starburst galaxies: more than an interesting curiosity

$0.5 < z < 1.0$: VVDS



- Number of PSBs
- Stellar mass
- No residual SF
 - Heading for red-sequence
- Duration of detectability from toy or SPH models

Blue → red mass flux via PSB phase vs. total

$$0.4 < \frac{\dot{\rho}_{B \rightarrow R, \text{PSB}}}{\dot{\rho}_{B \rightarrow R}} < 0.8$$

Wild, Walcher, Johansson et al. 2009

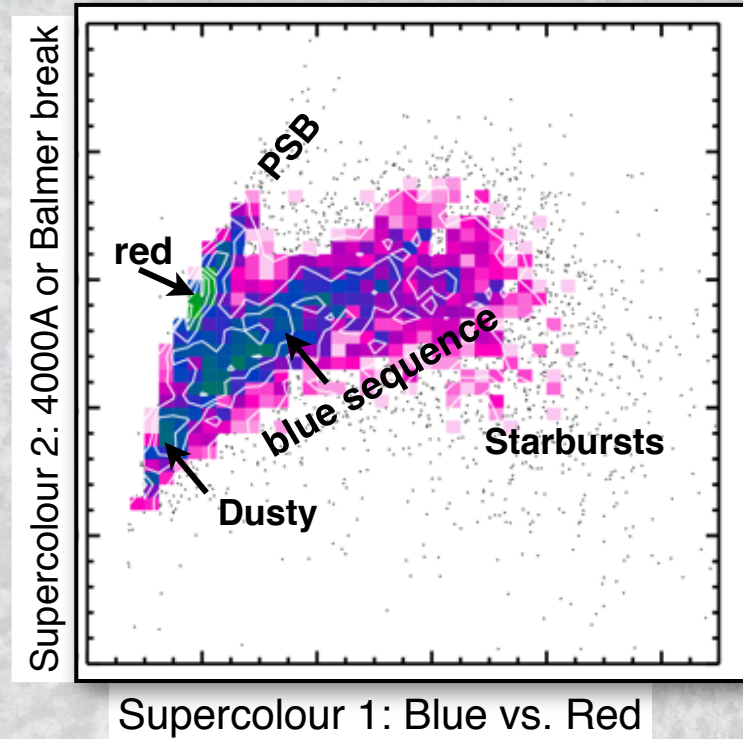
Only “high” z interesting (where red-sequence is growing)

Spectroscopy is expensive (deep enough to see stellar continuum)

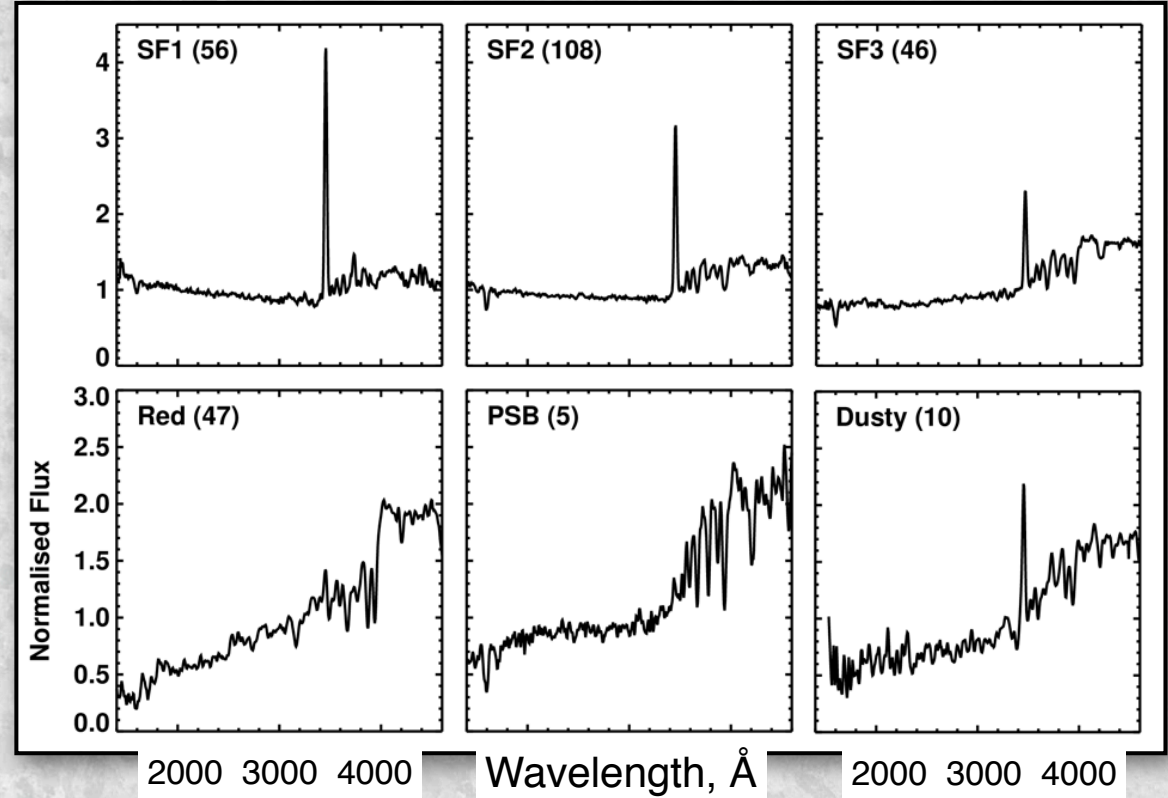
Post-starburst galaxies are rare (need large surveys)

Photometric surveys are nearly as good: Colour-colour diagrams identify a clear PSB sequence

UKIDSS ultra-deep survey
 $0.9 < z < 2.0$



Stacked spectra using super-colour selection:
UDS-z $0.9 < z < 1.2$



- ◆ # density of phot. PSBs at $z \sim 1-2 \approx$ # density spec. PSBs at $z \sim 0.7$
- ◆ Optimally defined linear combinations of filters
 - uses a Principal Component Analysis and sparse sampling (Connolly & Szalay 1999)
 - FULL, GOOD QUALITY optical-NIR SED coverage