

KMOS^{3D} REVEALS LOW-LEVEL STAR FORMATION ACTIVITY IN MASSIVE QUIESCENT GALAXIES AT $0.7 < z < 2.7$

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KMOS3D :

- 600 High-z Galaxy (~2016/9までで560天体)
- CANDELS fields
- 3 target-z bins : $z=0.7-1.1$, $1.3-1.7$, $1.9-2.7$
- $K_s < 23\text{magAB}$: 95% mass complete @ $M^*=9.7, 10.2, 10.5$
- ~0.5" seeing (0.4-0.8")
- 399天体でHa検出

UVJ銀河120天体

- 20 : Ha検出 =>
 - 2 : BLR ($\sigma=500-1000\text{km/s}$) / X-ray detected
 - 9 : AGN ($N2/H\alpha > 0.5$)
 - 9 : SFG
- 13 : marginal or contaminated Ha検出
 - 6 : SFG

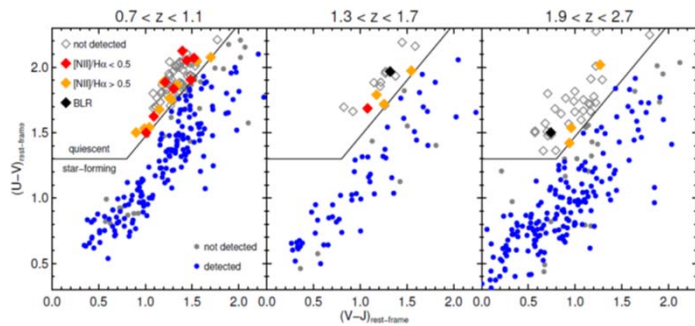


Figure 1. UVJ diagram for the KMOS^{3D} sample, split into redshift bins. The solid line separates quiescent (diamonds) from

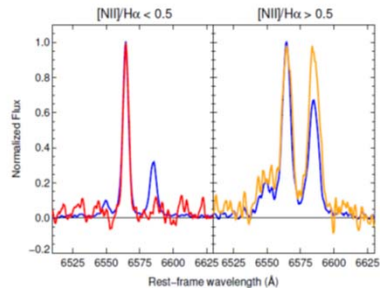


Figure 3. Stacked spectra of Ha-detected galaxies, split into

輝線が受かった星形成quiescent galaxiesの性質

- UVJカラーは境界線に近い
 - 多くはU-Vが青い => 1Gyr
 - U-Vで赤いのはold+dust?
- 多く(7/9)がcompanionを持っている
 - 3つのcompanionはHAE
- Kinematics
 - 5/9は~4kpc disk SF region
 - $\sigma=50-270\text{km/s}$: 典型的な同じ質量の銀河より小さい。ガスは星と異なった分布をしている?
- 金属量 : 星形成銀河より小さい?
- Ha vs IR SFR
 - Ha-SFR=0.7-7 Msol/yr (SEDから出した A_V 補正)
 - IR(24um)-SFR (3/9天体): IR-SFRはoverestimate
 - Old stellar populationがdust heatingに寄与しているのでは
 - Ha-Main sequenceのほうが分散が大きい
 - Haのほうがバーストの星形成に敏感? Extinction curveのばらつき?
- どういう天体なのか
 - Low metallicity
 - Minor merger
 - Rejuvenation event? Currently quenching?

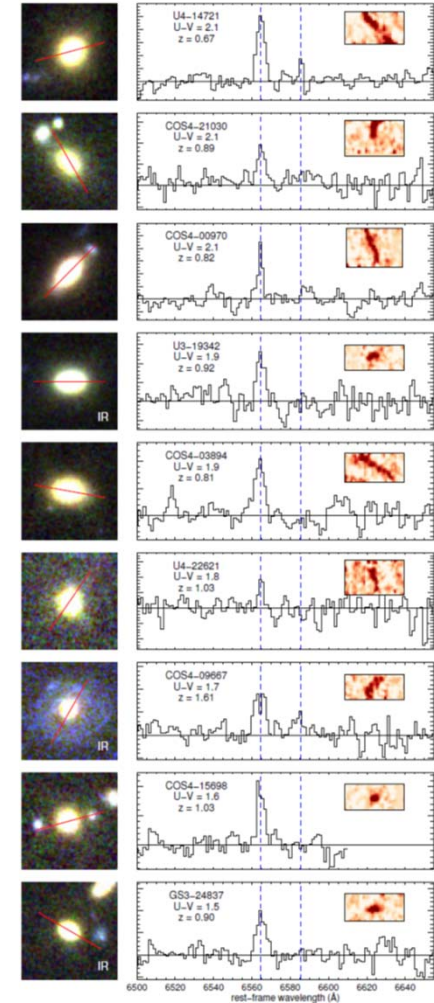


Figure 4. The sample of nine [N II]-weak quiescent galaxies,

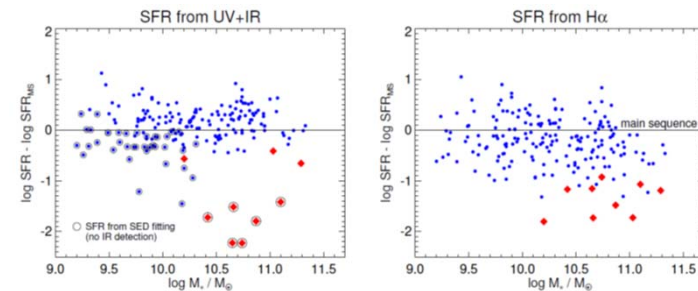


Figure 5. Vertical distance from the main sequence (as given by Whitaker et al. 2014), in logarithmic units, as a function of