JWST NIRSpec IFU Data Reduction

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The Target: GS_4891 (z ~ 3.7)

GA-NIFS: Co-evolution within a highly star-forming galaxy group at z~3.7 witnessed by JWST/NIRSpec IFS

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Received ... ; accepted ...

ABSTRACT

We present NIRSpec IFS observations of a galaxy group around the massive GS_4891 galaxy at $z \sim 3.7$ in GOODS-South that includes two other two systems, GS_4891_n to the north and GS_28356 to the east. These observations, obtained as part of the GTO Galaxy Assembly - NIRSpec IFS (GA-NIFS) program, allow us to study for the first time the spatially resolved properties of the interstellar medium (ISM) and the ionised gas kinematics of a galaxy at this redshift. Leveraging the wide wavelength range spanned with the high-dispersion grating (with resolving power R=2700) observations, covering from [O II] $\lambda\lambda$3726, 29 to [S II] $\lambda\lambda$6716, 31,

Observation

Proposal ID - 01216, PI -

Instrument - NIRSpec IFU

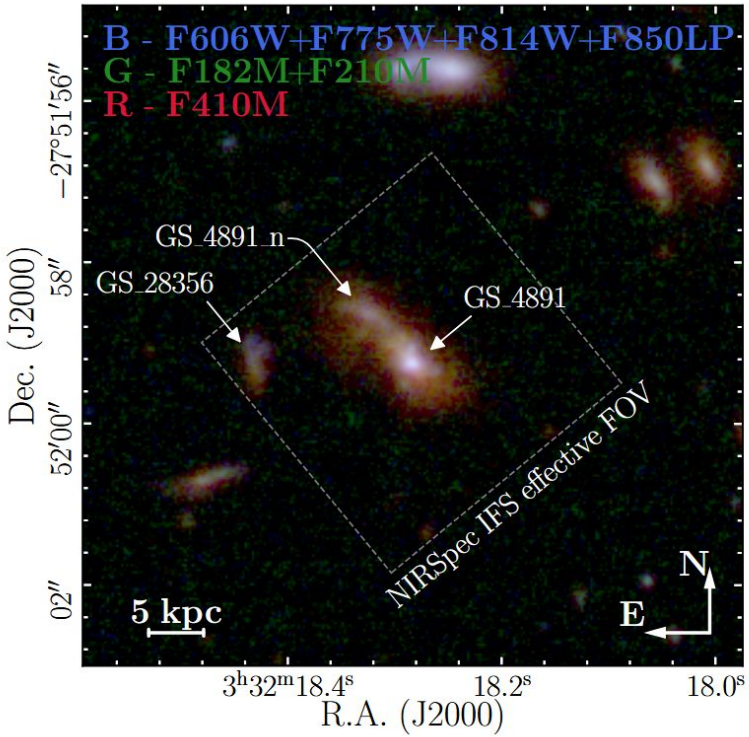
Filter/Grating

Clear/Prism

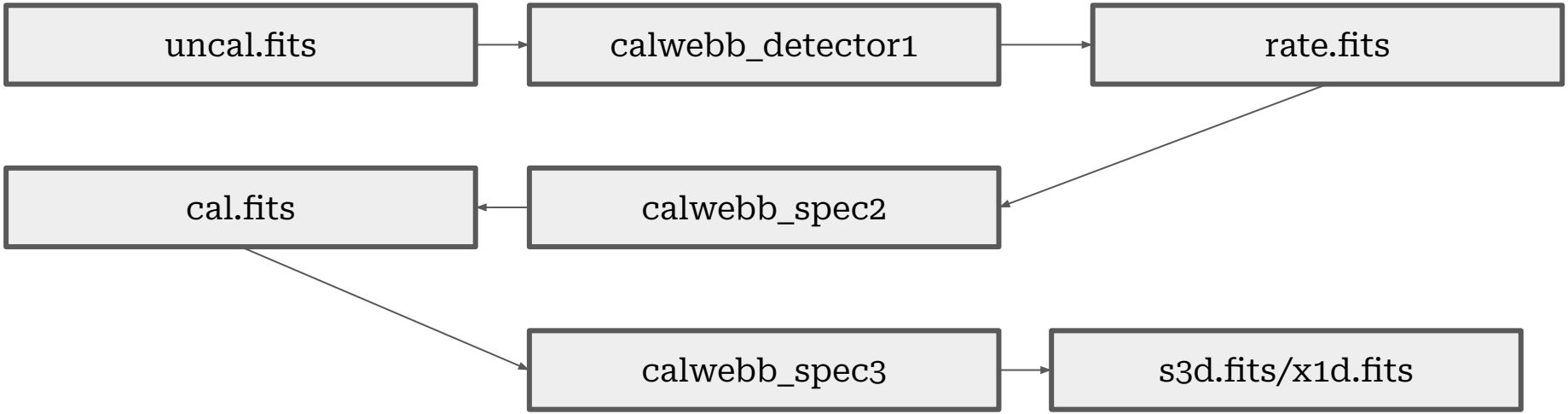
- R = 100
- 0.6 - 5.2 μm

F170LP/G235H

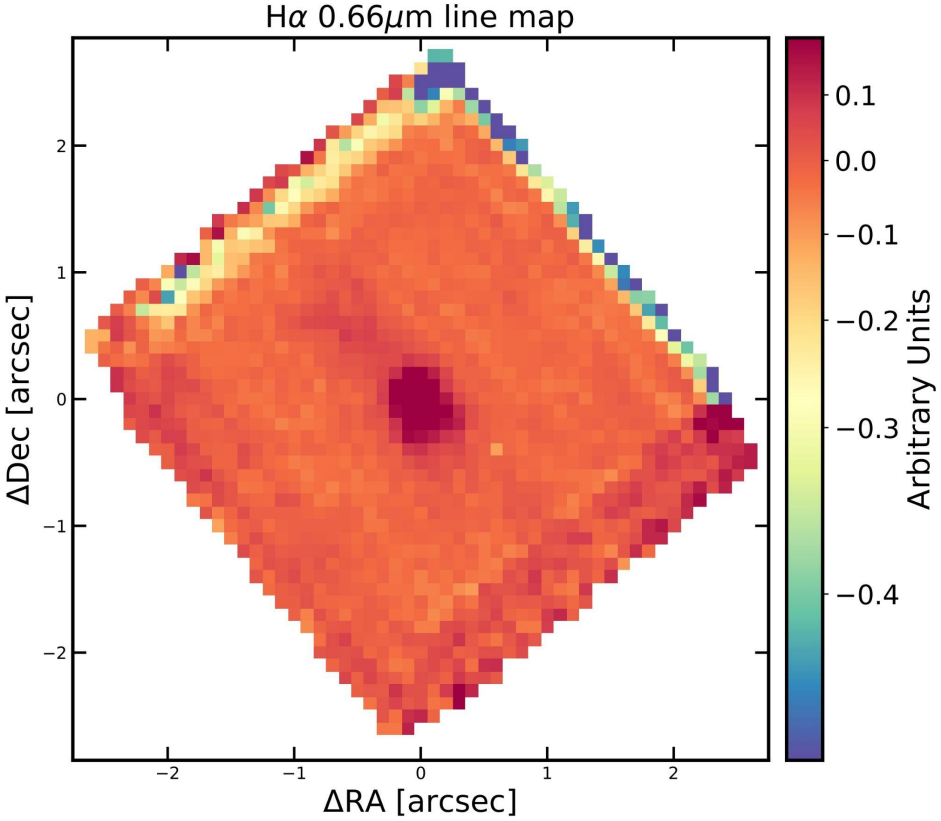
- R = 2,700
- 1.6 μm to 3.1 μm



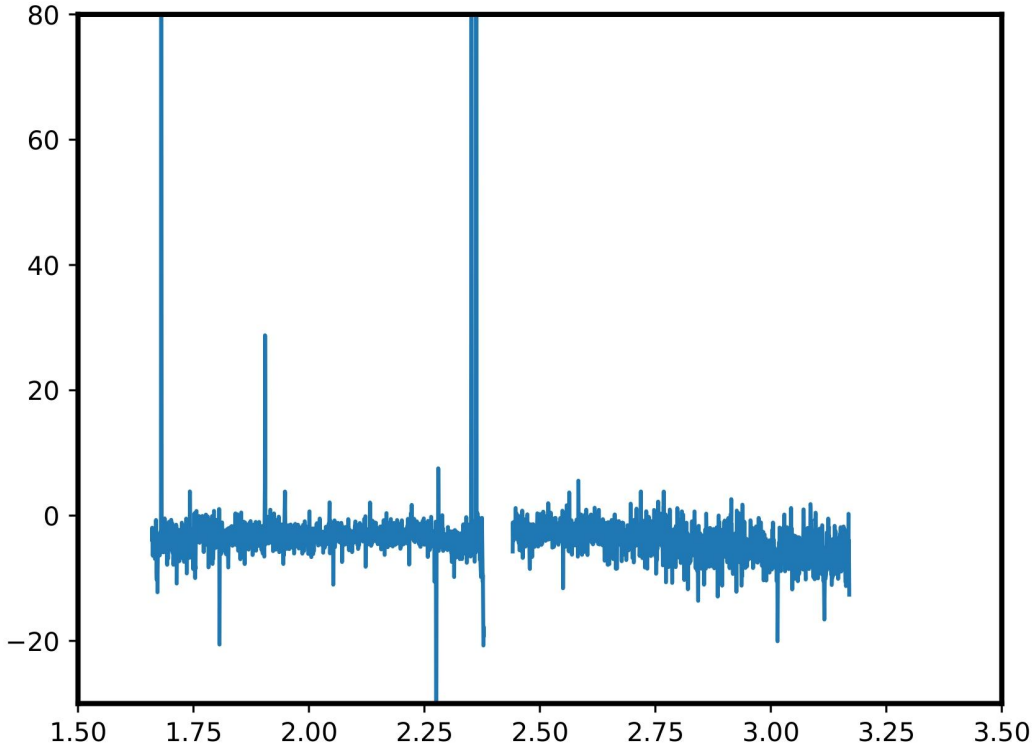
NIRSpec IFU Data Pipeline



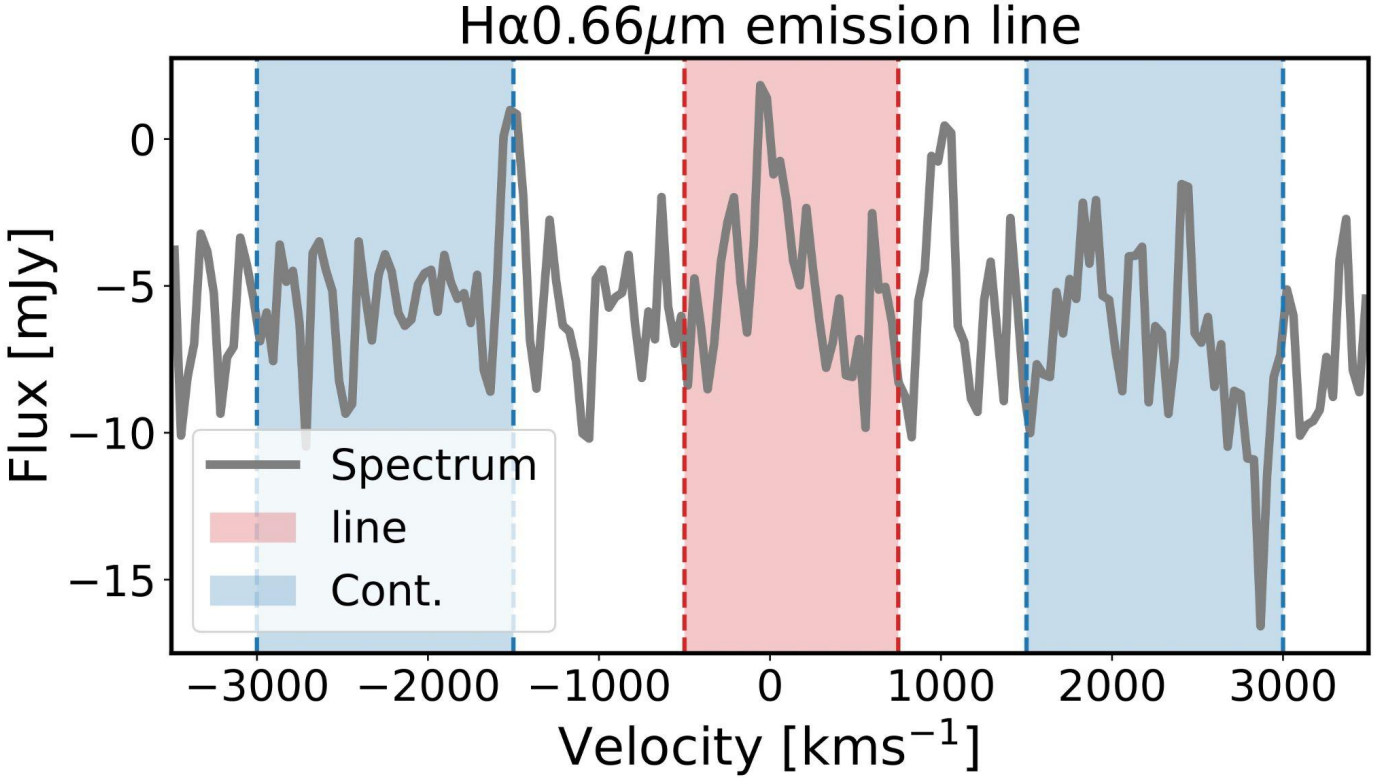
Reduced Products



Spectra



H-alpha Line


Hα0.66μm emission line
Flux [mJy]
0
−5
−10
−15
Spectrum
line
Cont.
−3000
−2000
−1000
0
1000
2000
3000
Velocity [kms^{-1}]