Galaxies in Emission & Absorption with MUSE











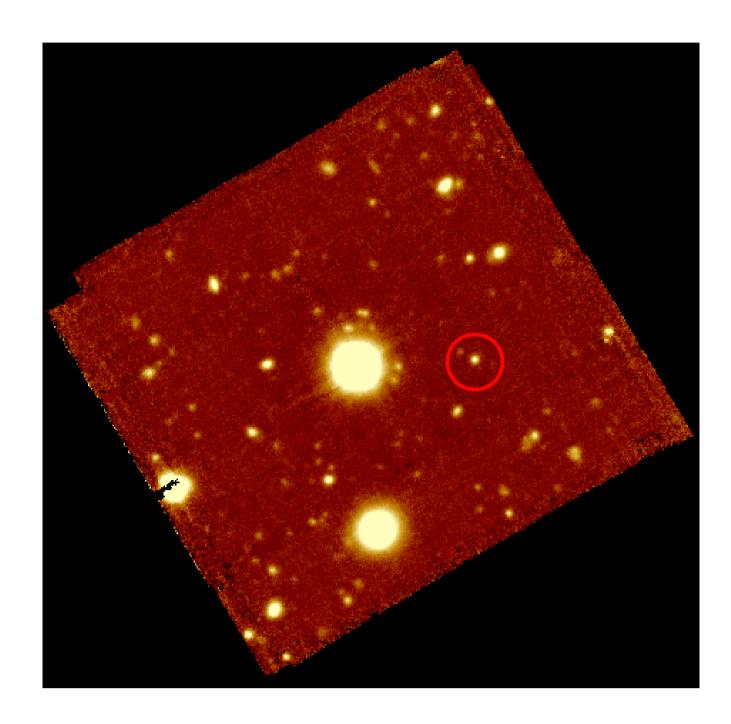


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Introduction

We demonstrate the richness of MUSE data for our quasar centered fields of 1'x1', or 300x300 spectra, respectively. The shown target is one example of our GTO program (PI: Joop Schaye).



VLT/MUSE:

White image of a complete data cube. Centered is the QSO.

The galaxy seen in emission and absorption in the top right panel is indicated by the red circle. This cube consists of 8 individual exposures à 900 sec. The lower left panel shows several OVI absorption systems in another QSO spectrum for which we identified counterparts in emission at 50-190 kpc distance.

Image: Hubble/ACS . (1) (*

Emitter-absorber pairs at different impact parameters

Ollb

at ~83 kpc distance

at ~105 kpc distance

at ~110 kpc distance

at ~190 kpc distance

Olla

Nellla

[OIII]b

5920.83

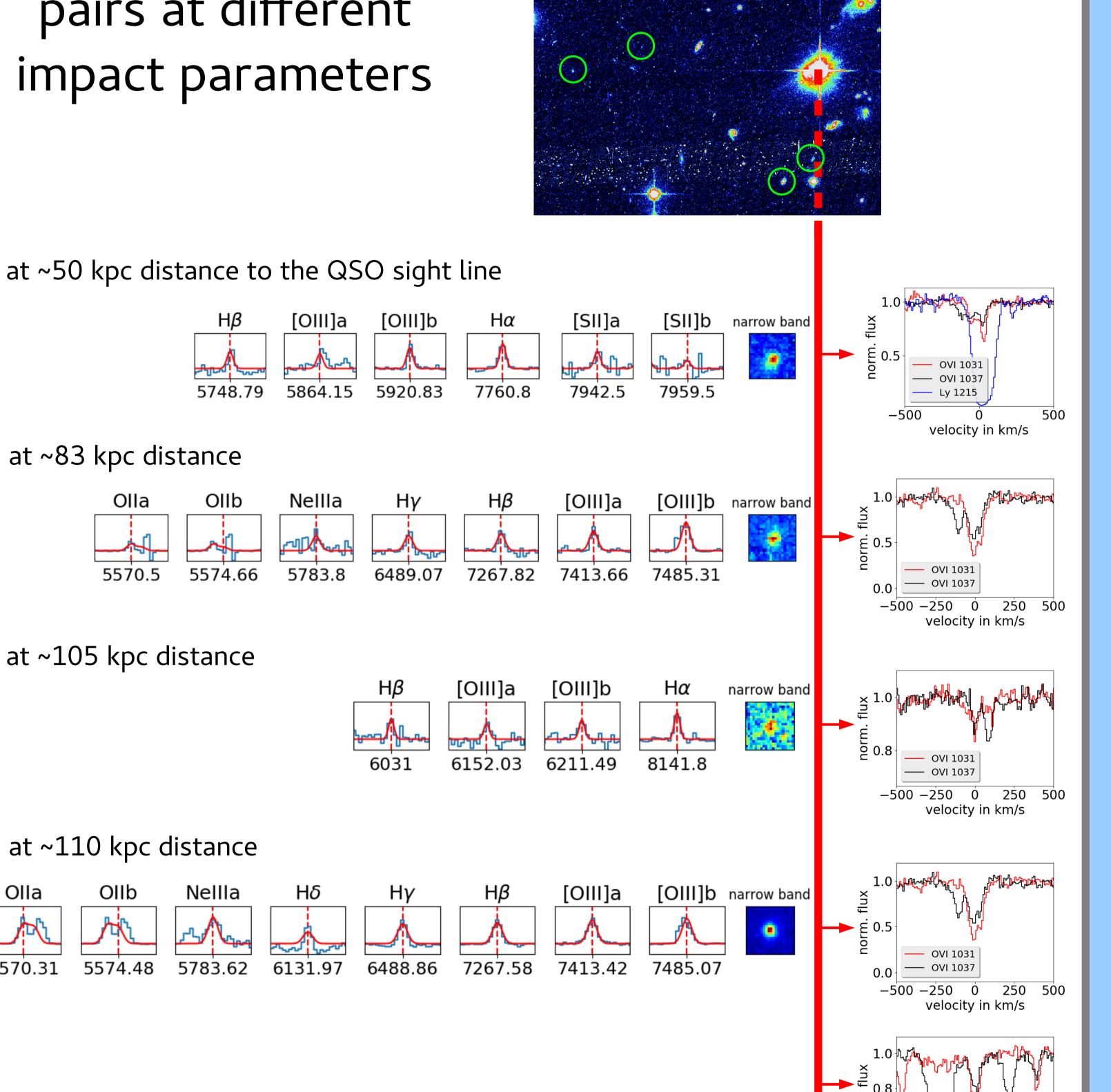
6489.07

5864.15

Nellla

5783.8

6131.97



Impact parameter

[SII]a

[OIII]a

[OIII]b

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Nellla

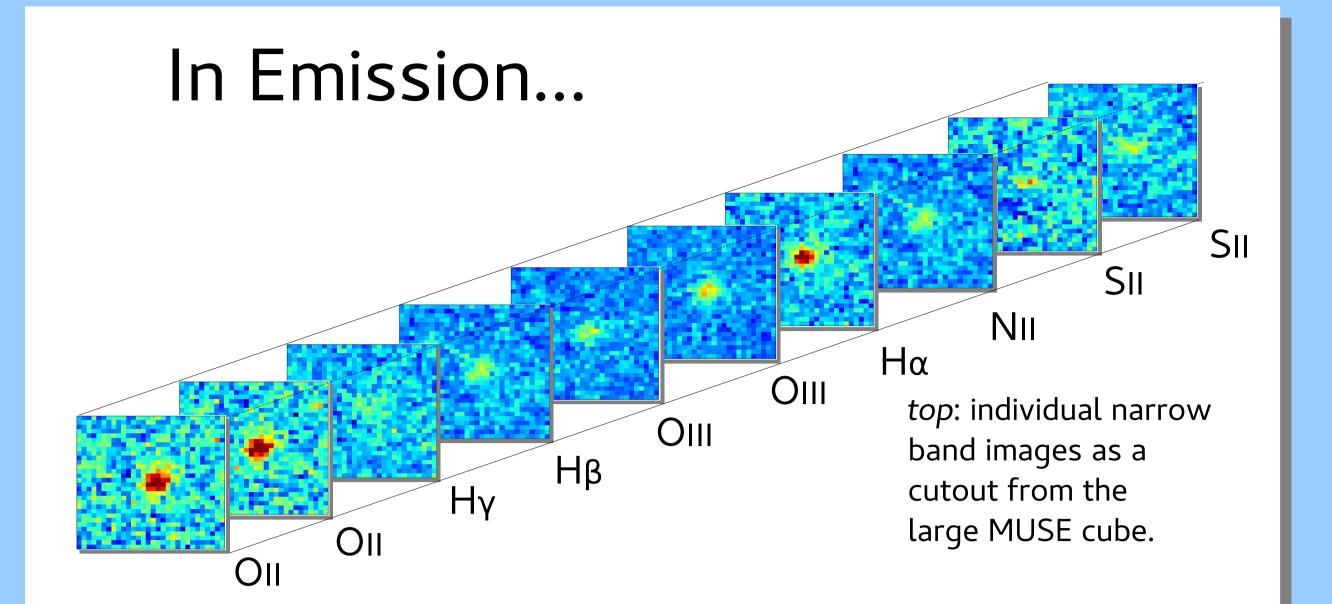


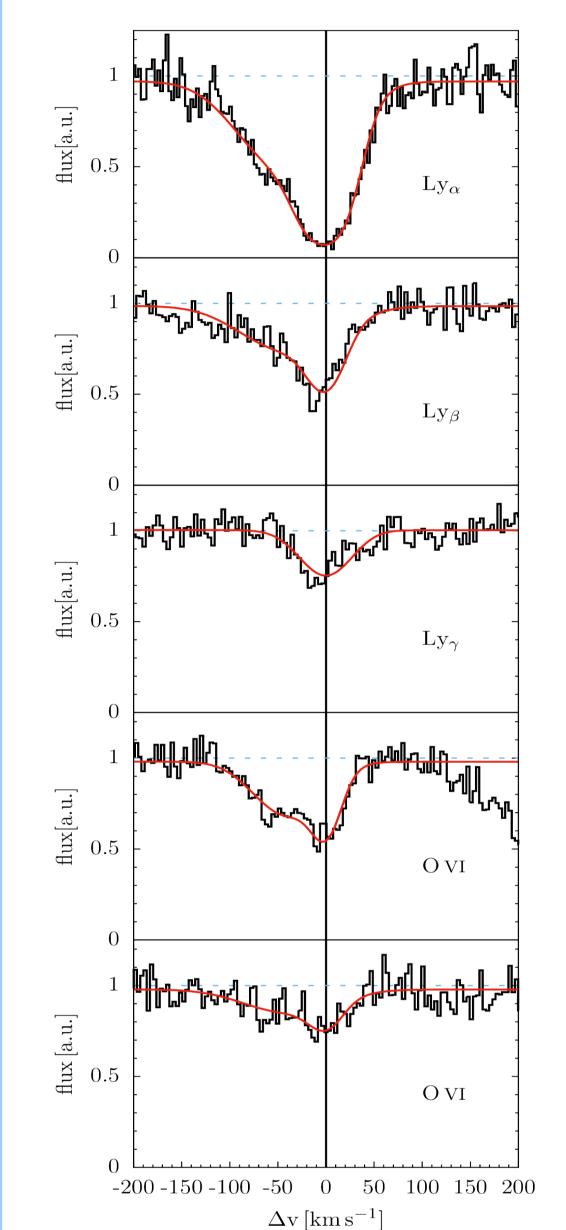
-500 -250 0 250 500 velocity in km/s

narrow band

[SII]b

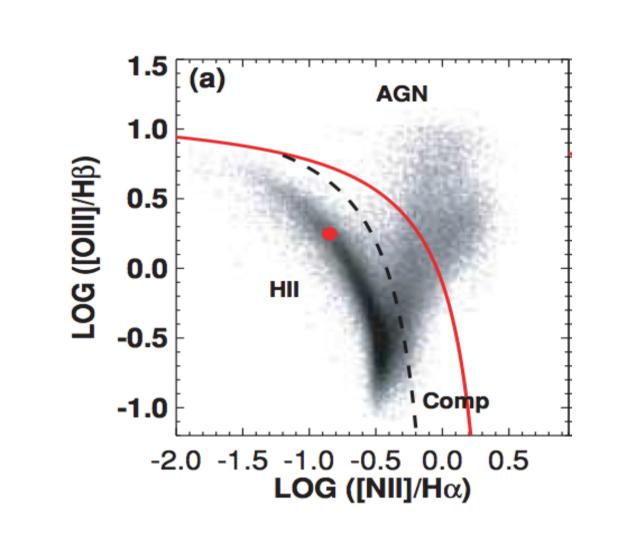






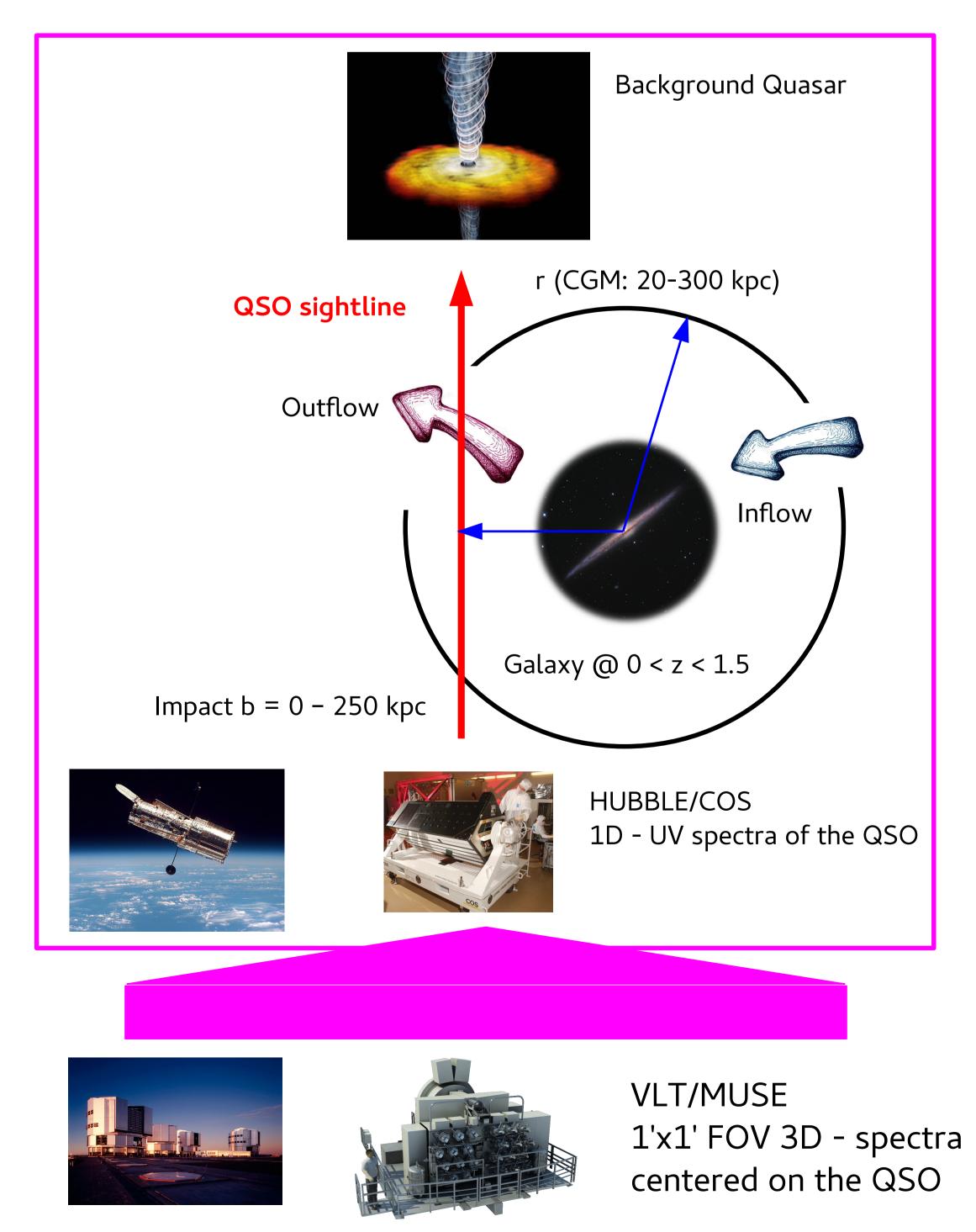
...and absorption.

In the UV COS data of the QSO, Ly- α , β , γ as well as the Ovi doublet are seen exactly at the redshift (within 20 km/s) of the emission galaxy at a projected distance of ~ 70 kpc.



BPT plot. The red point marks the galaxy. The red line separates the star forming galaxies from AGN. Based on Kewley et al. (2006).

Observations



Images: Courtesy of ESO/NASA