

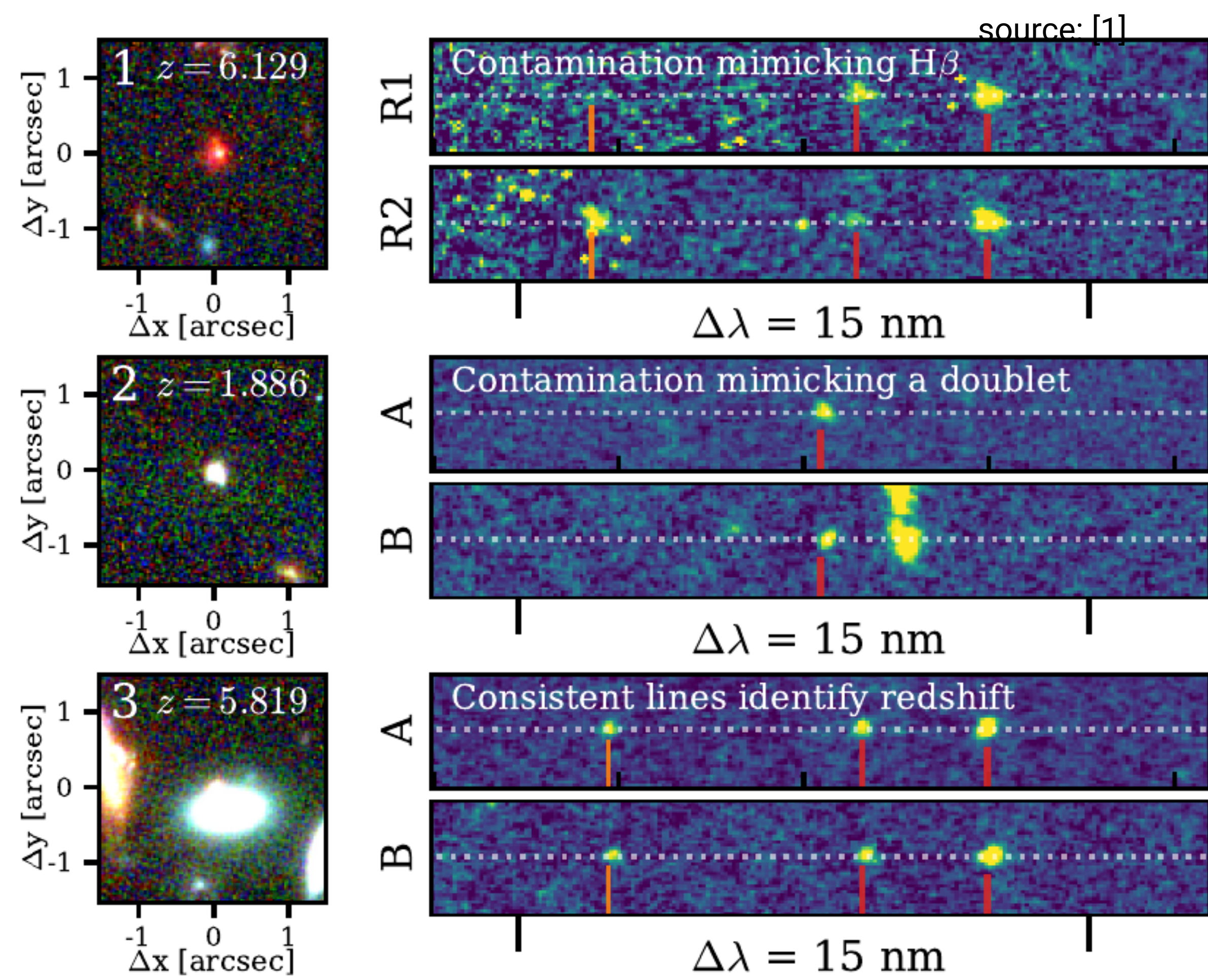
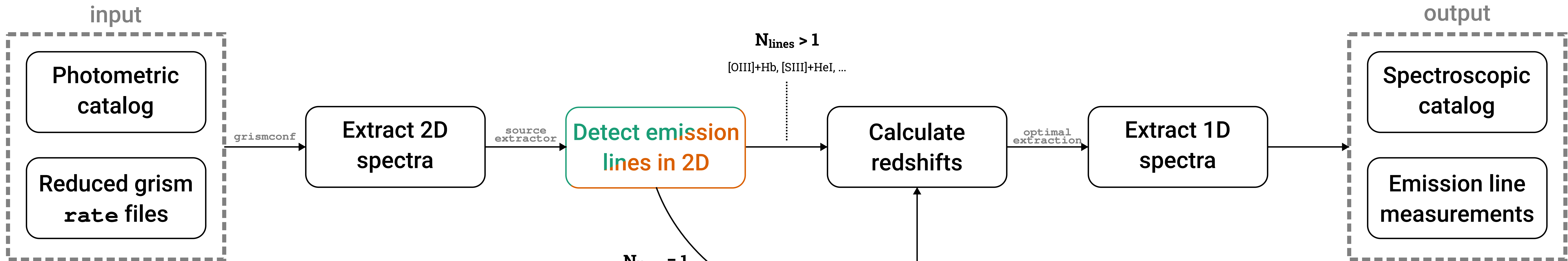
# ALLEGRO

A “line-first” approach to the NIRCcam/grism data reduction

- Robustness to **contamination**
- Robustness to **photo-z errors**
- Well-understood **selection function**

Ivan Kramarenko<sup>1</sup>, Jorryt Matthee<sup>1</sup>

<sup>1</sup>Institute of Science and Technology Austria (ISTA)  
E-mail: [Ivan.Kramarenko@ista.ac.at](mailto:Ivan.Kramarenko@ista.ac.at)

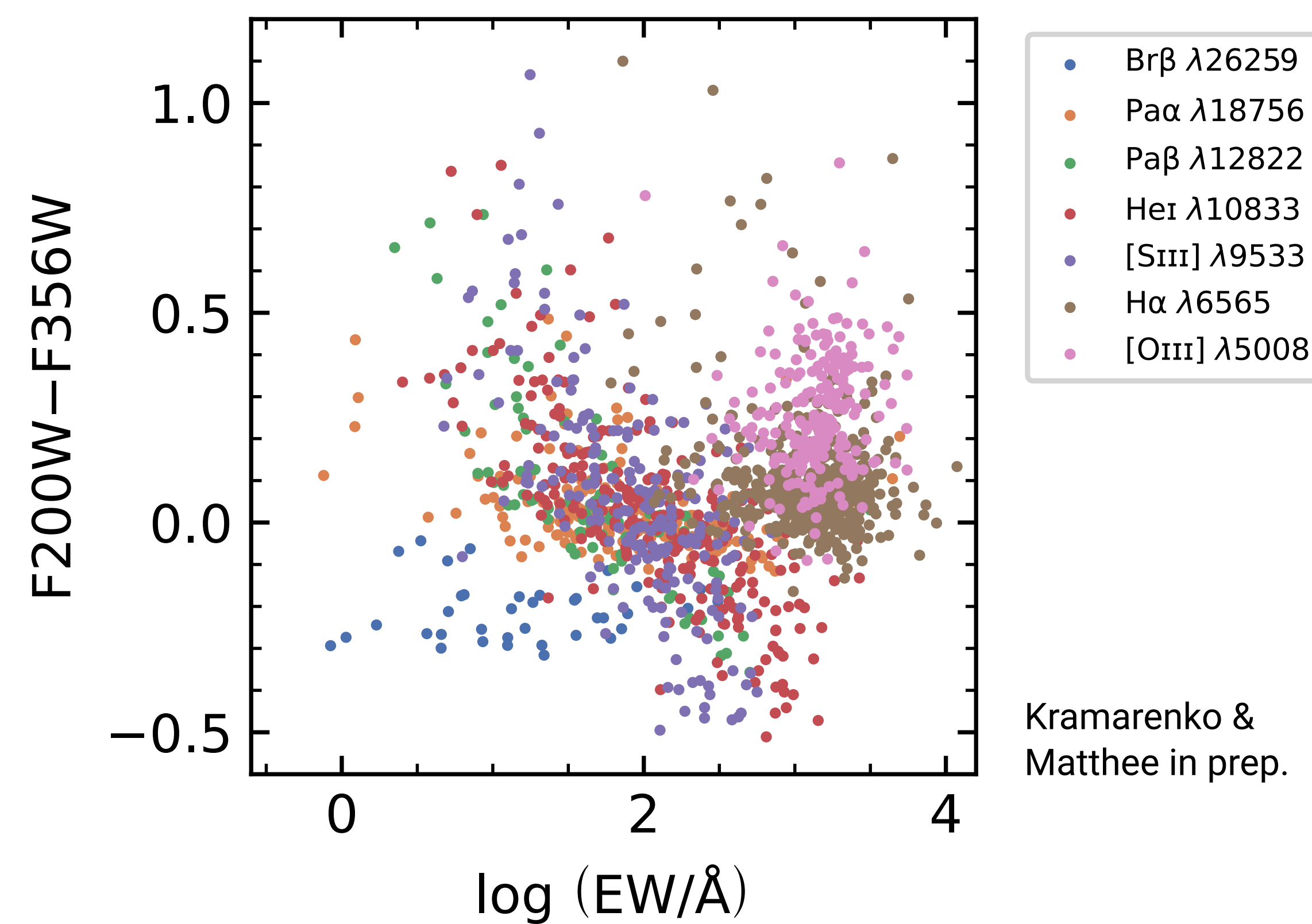


Contamination can be robustly identified in objects observed at **two roll angles**, or in **two NIRCcam modules**

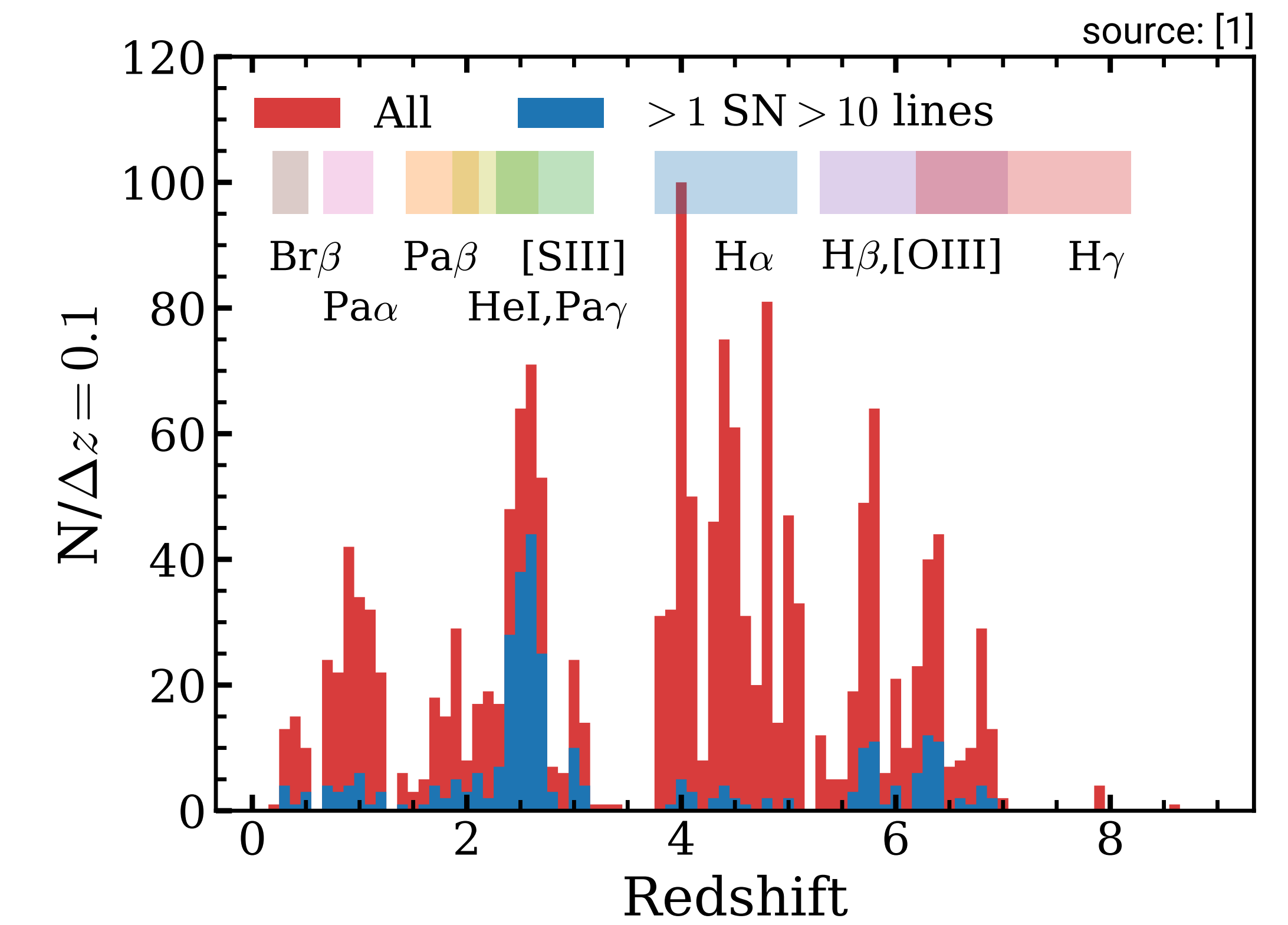
“No Line Left Behind” (NLLB)

Separating emission lines in the **Color vs. EW** space

- The method does not rely on photometric redshifts
- Photometry in F115W, F200W, F356W is enough to have a >90% accuracy for lines like H-alpha



Kramarenko & Matthee in prep.



## Datasets:

ALT<sup>1</sup> (PIs: Matthee & Naidu)  
EIGER<sup>2</sup> (PI: Lilly)  
COLA1<sup>3</sup> (PI: Matthee)

## References:

1. Naidu R. P., et al., 2024, arXiv e-prints, p. arXiv:2410.01874
2. Kashino D., et al., 2023, ApJ, 950, 66
3. Torralba-Torregrosa, A., et al. 2024, A&A, 689, A44

