

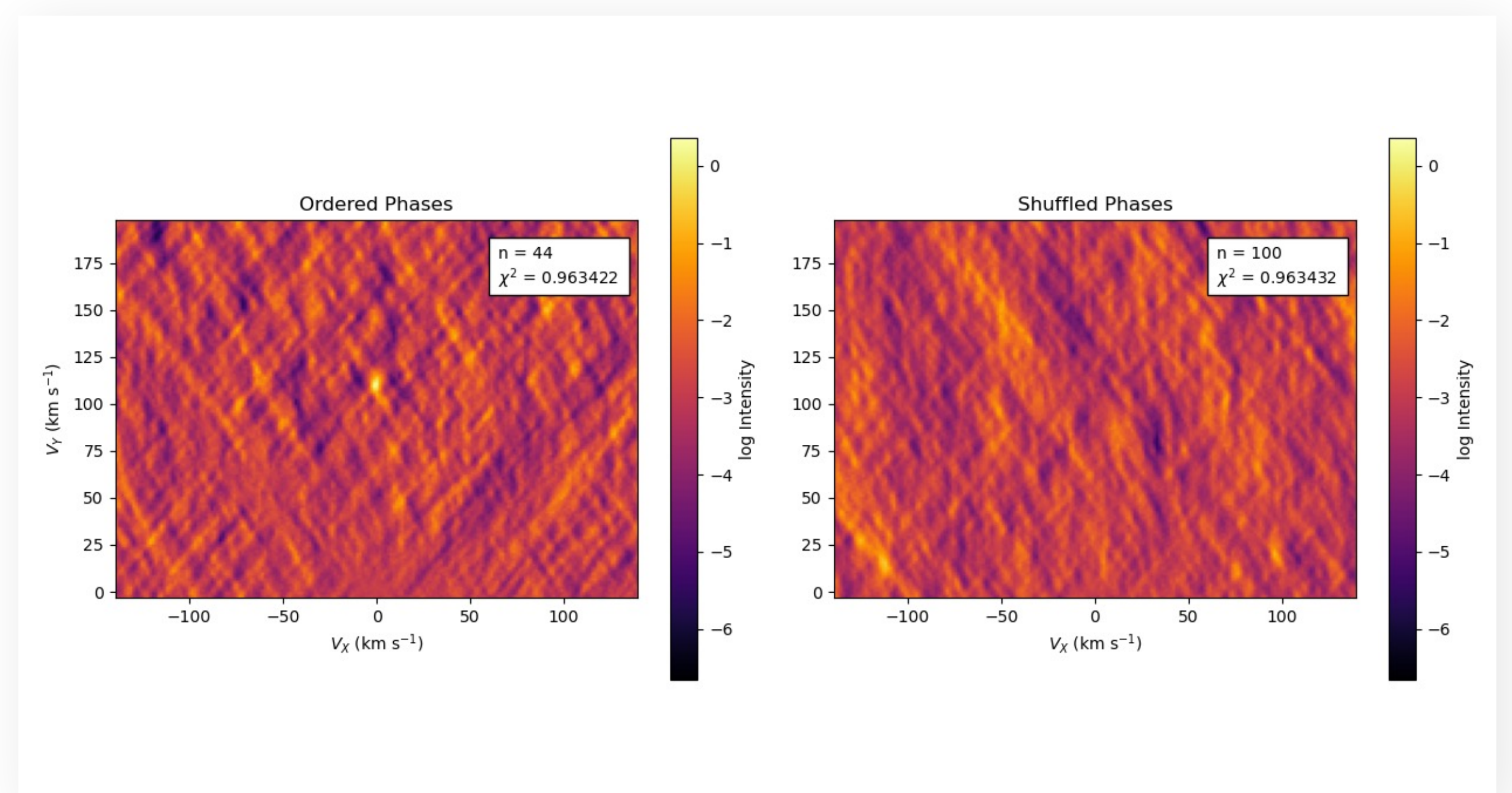
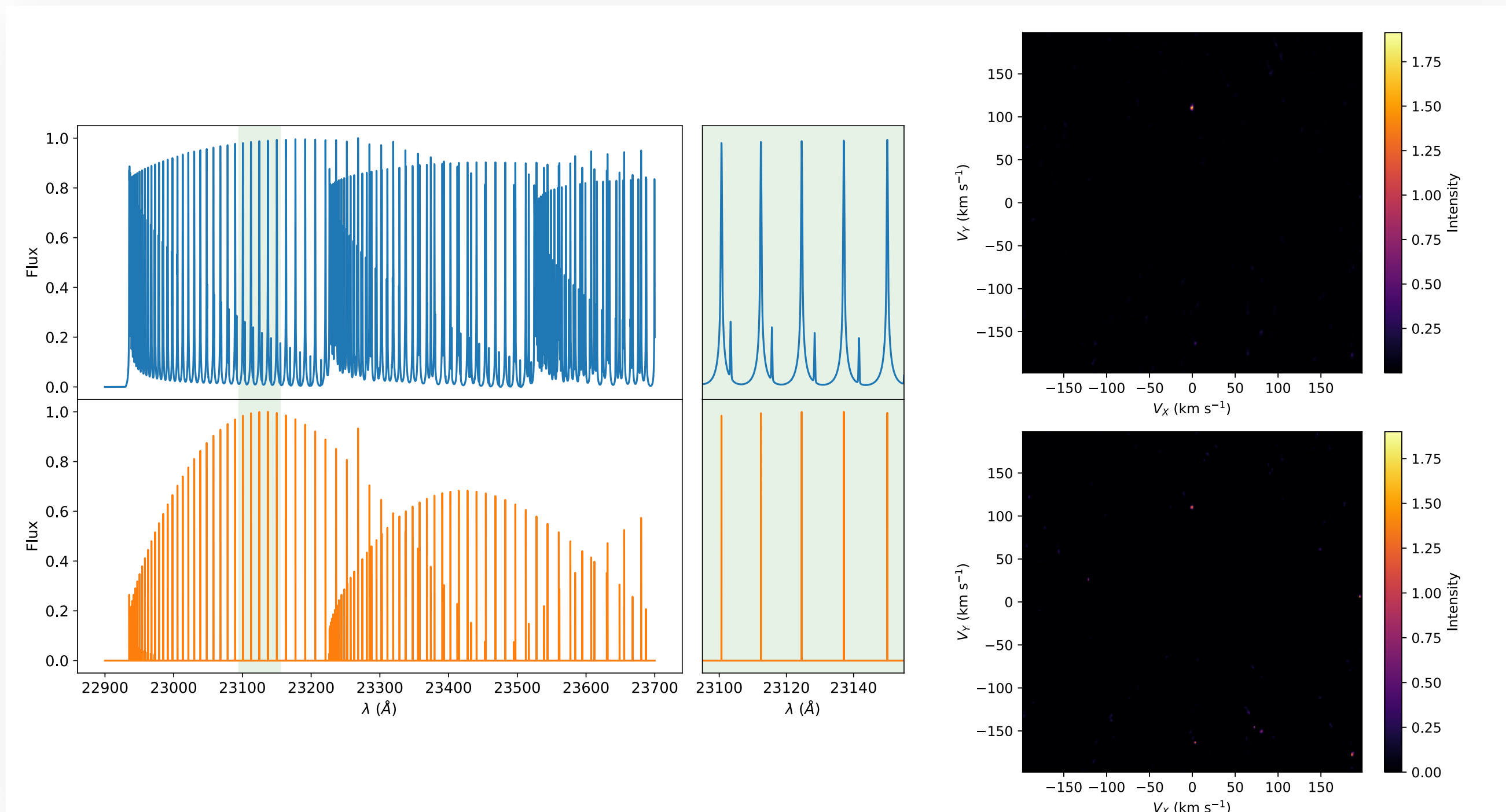
# The Future of Exoplanetary Doppler Tomography

## The Next Generation of Atmospheric Characterisation

**Background:** Doppler Tomography, an alternative to Cross-Correlation Spectroscopy, was originally designed for binary star systems and needs to be fine tuned to achieve top results with exoplanets

**Atmospheric Modelling:** Detailed models create more informative output than line lists

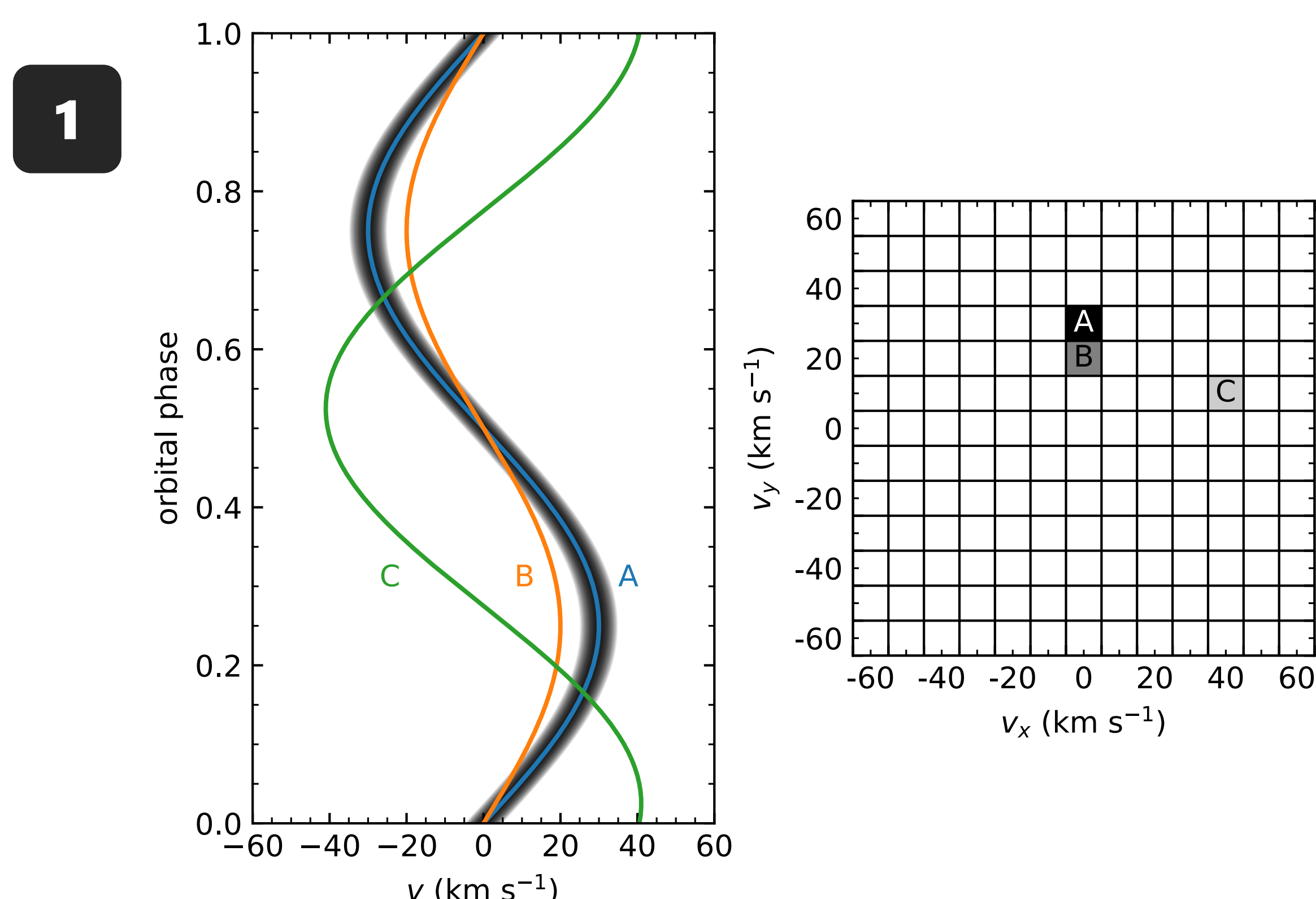
**Significance:** Iterating to target entropy rather than target  $\chi^2$  avoids convergence issues



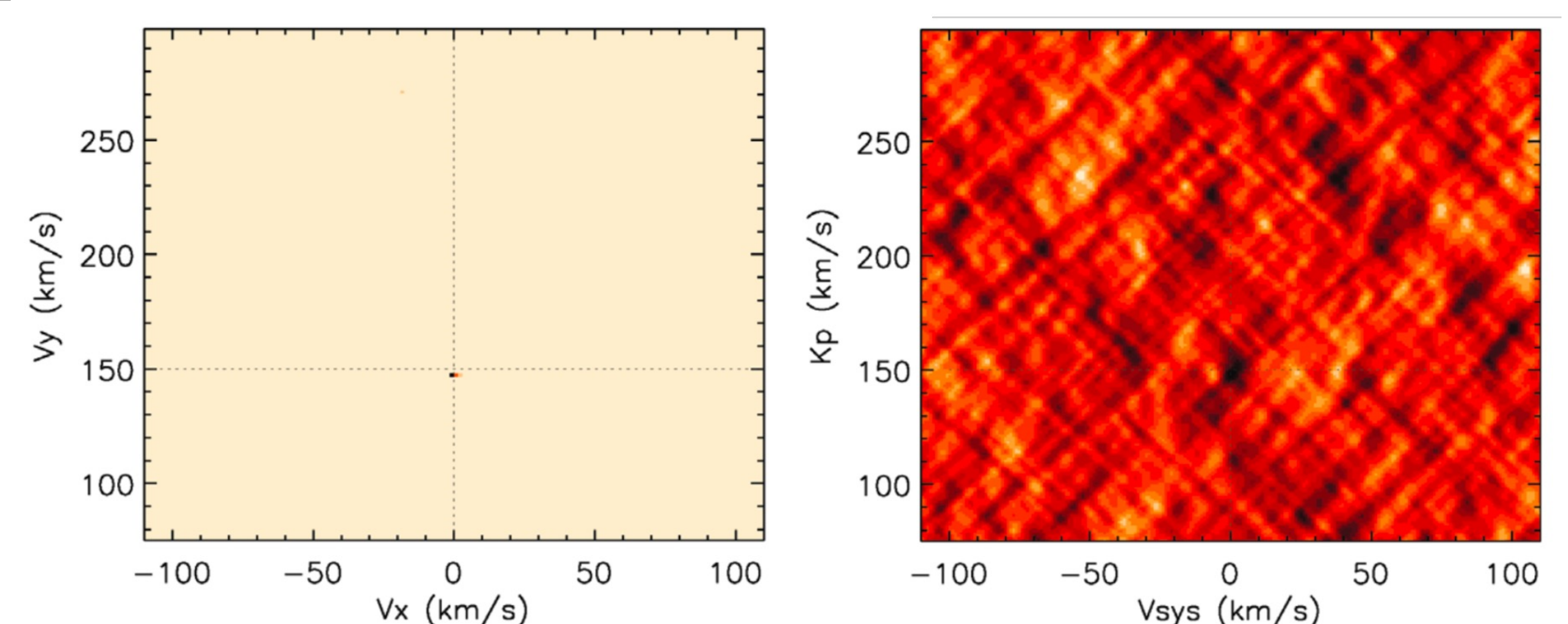
## Methods

High-Res

Emission



2



**Limitations:** Doppler tomography can only be used with high-resolution emission spectroscopy, requires at least  $\frac{1}{4}$  orbital phase coverage, and works best for fast moving / bright planets (e.g. Hot Jupiters)



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