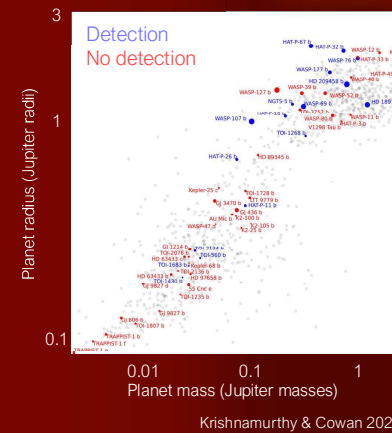




“The study of exoplanets has to shift from 'discovering' towards 'studying and understanding'.
A large-scale survey of exoplanets is required – Ariel's key objective is to perform such a survey.”



HELIUM: A HOT TOPIC



Intricate correlations between detections and stellar, planetary & orbital properties
(Linssen+2024, Krishnamurthy & Cowan 2024, Giulluy+2023, Allart+2023)

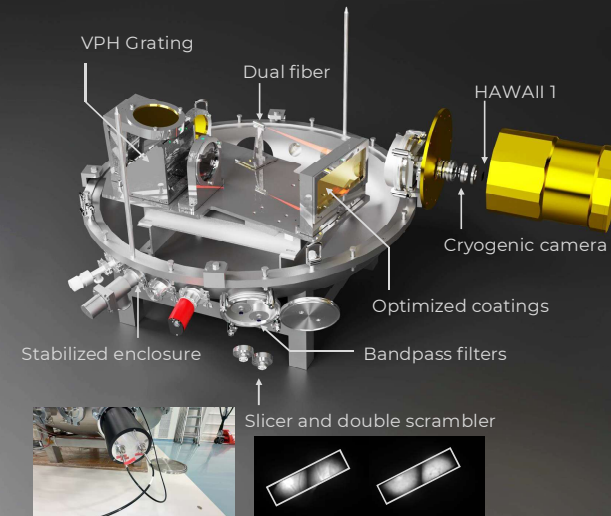
- 28 detections, 10 non-detections, and 52 upper limits*
- (Weak) correlations between atmospheric mass loss, XUV/FUV flux, and stellar mass/temperature
- Significantly more measurements are required
- This requires an unbiased survey combined with systematic data interpretation
- Long-term monitoring can reveal star-planet interactions
- Existing spectrographs are too competitive

*IAC ExoAtmospheres database



NIGHT: a dedicated instrument

- Narrow wavelength range – highly optimized in efficiency
- Reaches higher S/N
- Compact design, visitor instrument
- Provides flexibility



NIGHT SPECS

- 1081-1085 nm bandwidth
- R: ~60,000
- High-efficiency VPH grating
- 2.2" fibers (@152)
- First light at OHP152

