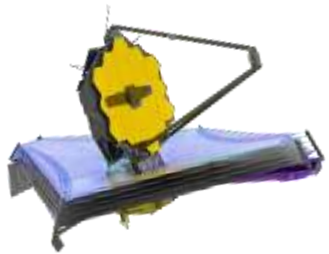
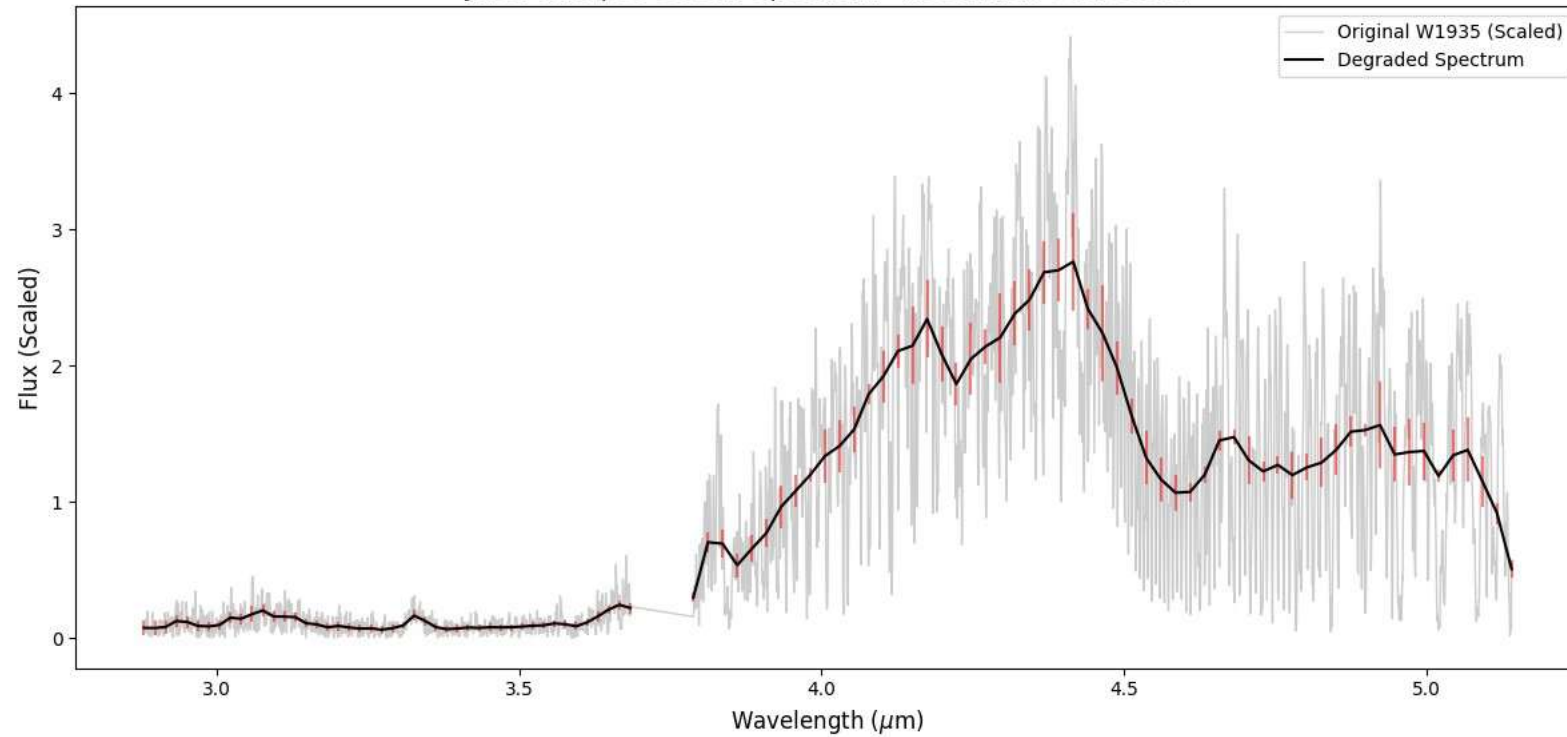


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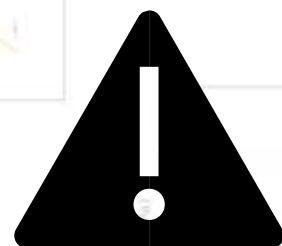
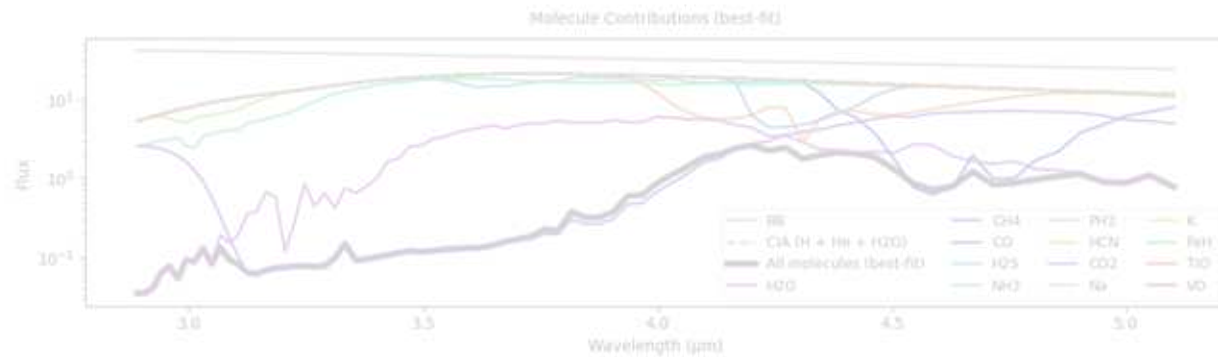
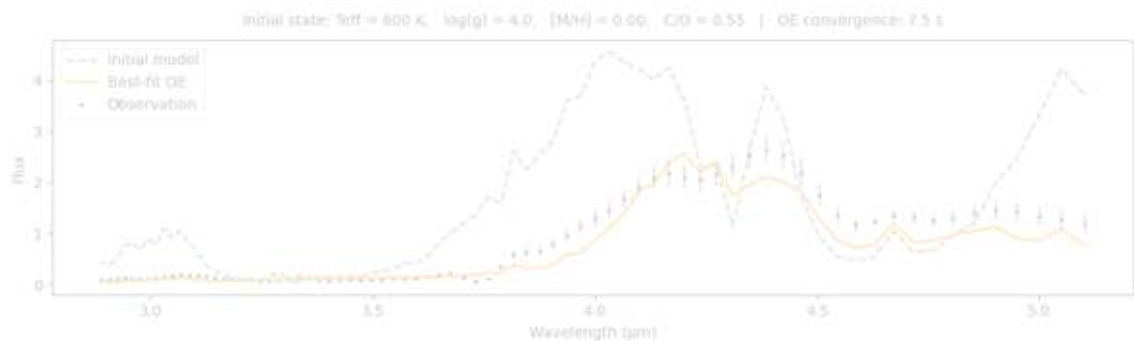
JWST NIRSpec G395H Spectrum - Resolution Decreased



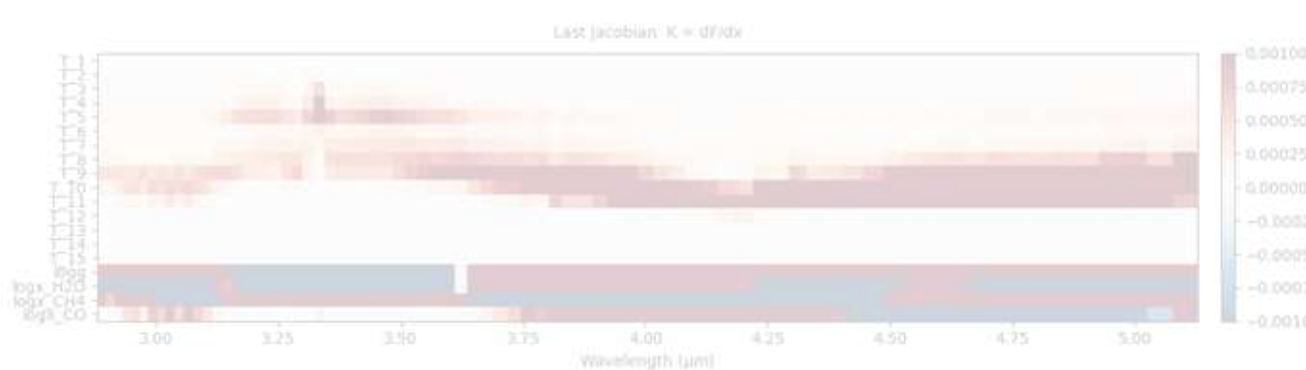
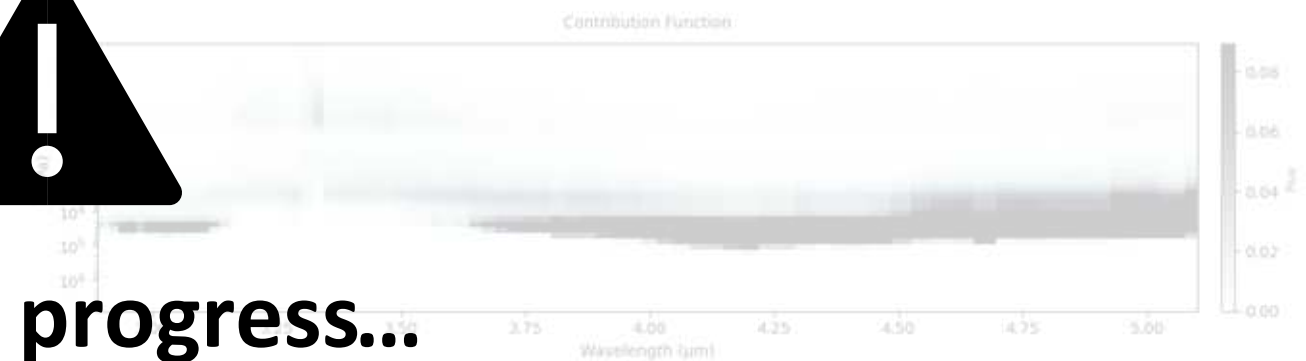
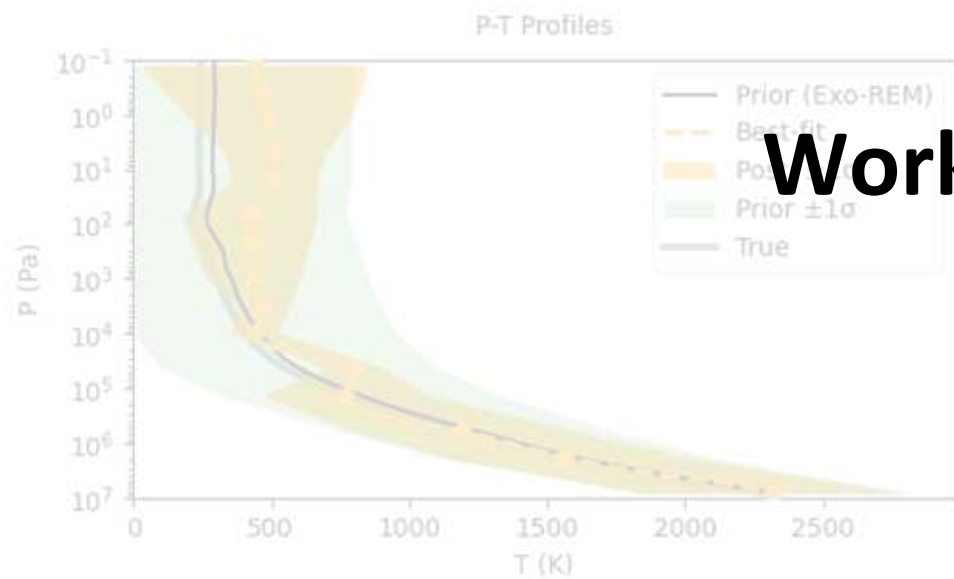
NIRSpec data provided

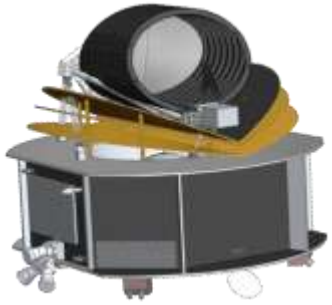
by J. Faherty

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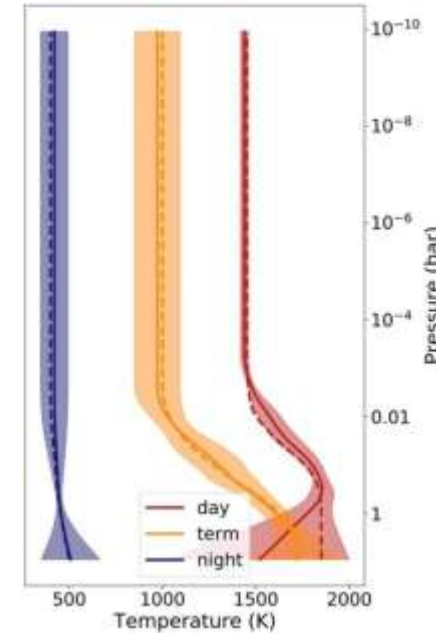
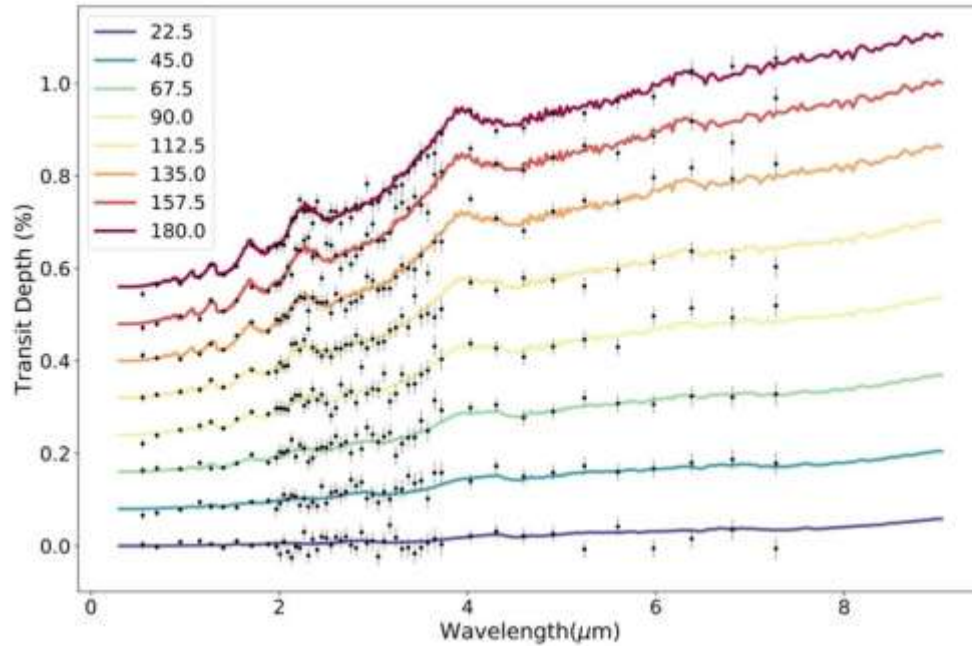


Work in progress...





Preparing for Ariel:



Changeat et al.
(2020c)

- ARIEL will deliver an extensive catalogue of

thermal emission, secondary eclipse, and phase curve observations.

- Optex will provide the intuition, speed and accuracy required to map thermal structures across this dataset.

Conclusions



Current status:

- Proof of concept validated through successful initial testing.
- Currently refining to model real observations and reproduce thermal inversions.

Prospects:

- Planned release as a public module coupled with Exo-k.
- Adding cloud and variability modules for complex targets (e.g., SIMP-0136).



- Scaling for high spectral resolution ground-based instruments (VLT, ELT).
- Implementing reflected light parametrization for future missions (e.g., PCS).

