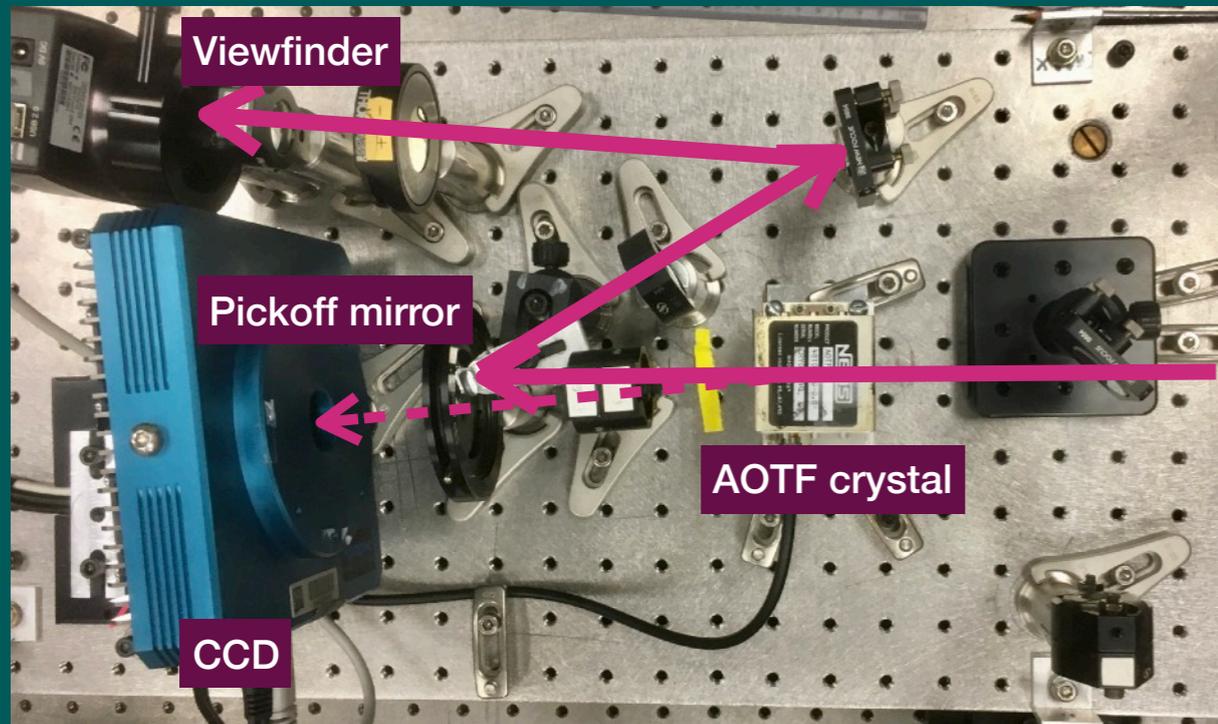


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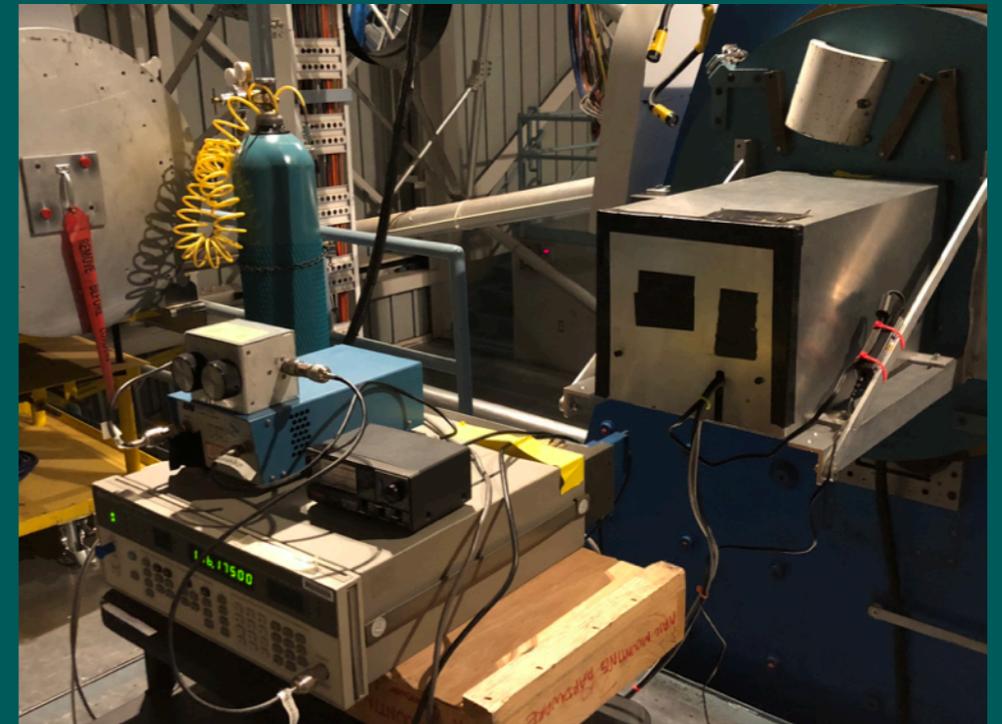
New Mexico State University

*Observing and modeling Jupiter in support of Juno:
Instrumentation, observations, and data reduction*

**NMSU Acousto-optic Imaging Camera (NAIC):
Built and characterized w/ NMSU engineers**



**NAIC mounted on the 3.5-m telescope
at Apache Point Observatory**

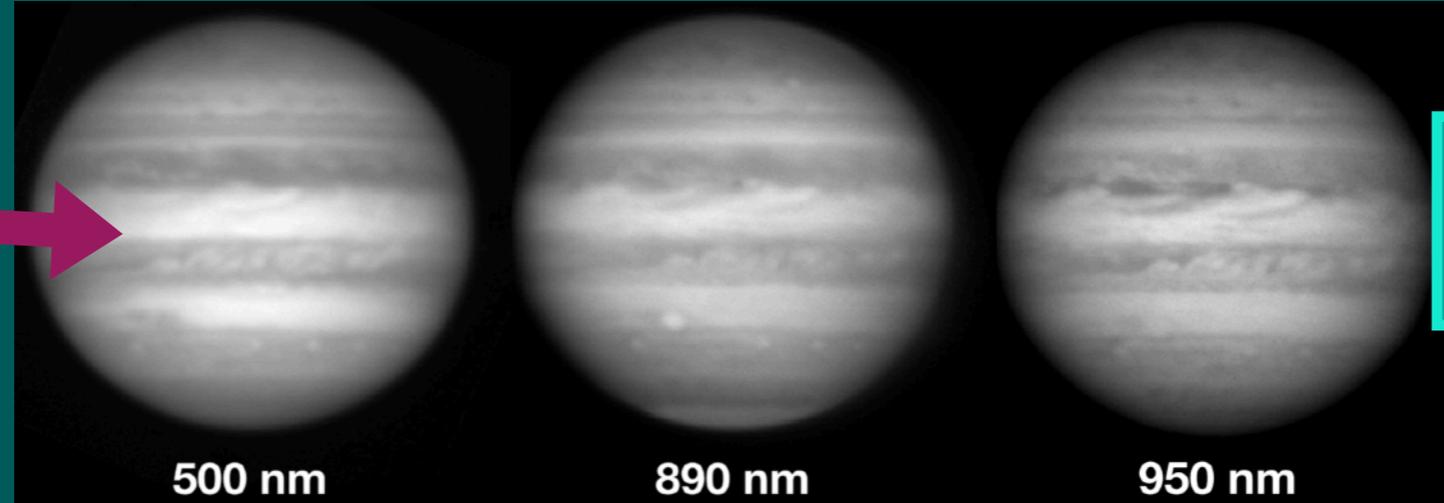
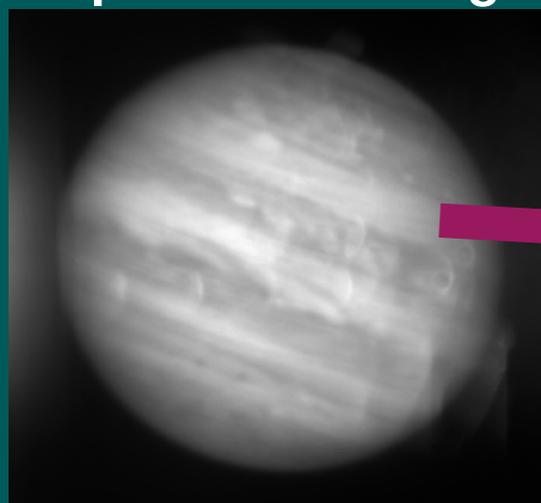


12 observing runs completed to date

Products: hyperspectral image cubes of Jupiter during Juno passes at 470-950 nm

Unprocessed image:

Selected wavelengths: Perijove 5 - March 26, 2017



**Find my pipeline at:
github.com/dahlek**

Emma Dahl

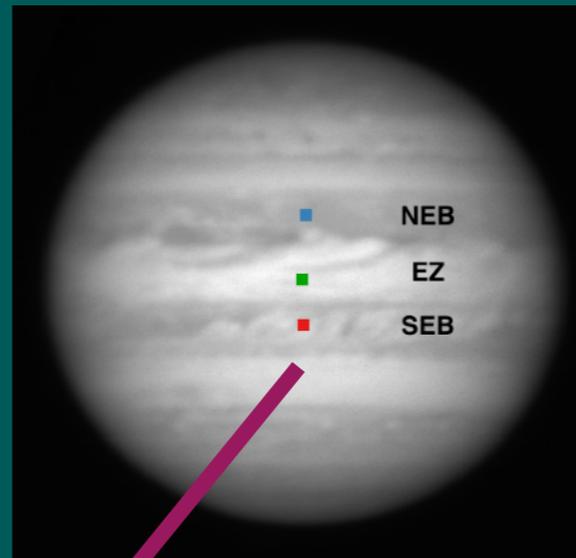
New Mexico State University

*Observing and modeling Jupiter in support of Juno:
Radiative transfer modeling - testing
the Creme Brûlée model*

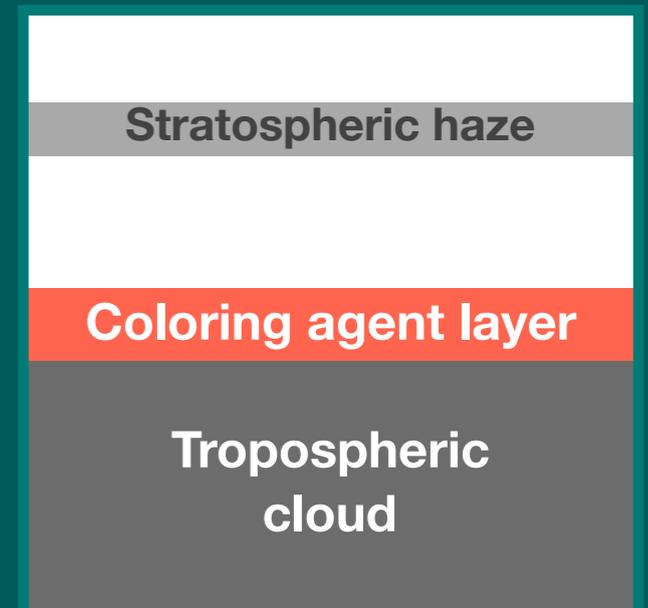
Big picture questions I'm working on:

What is the structure of Jupiter's uppermost cloud deck during the Juno era?

What makes Jupiter's bands and storms red?



Currently using the **NEMESIS** radiative transfer code to test the hypothesis of the Creme Brûlée model of Jupiter's clouds:

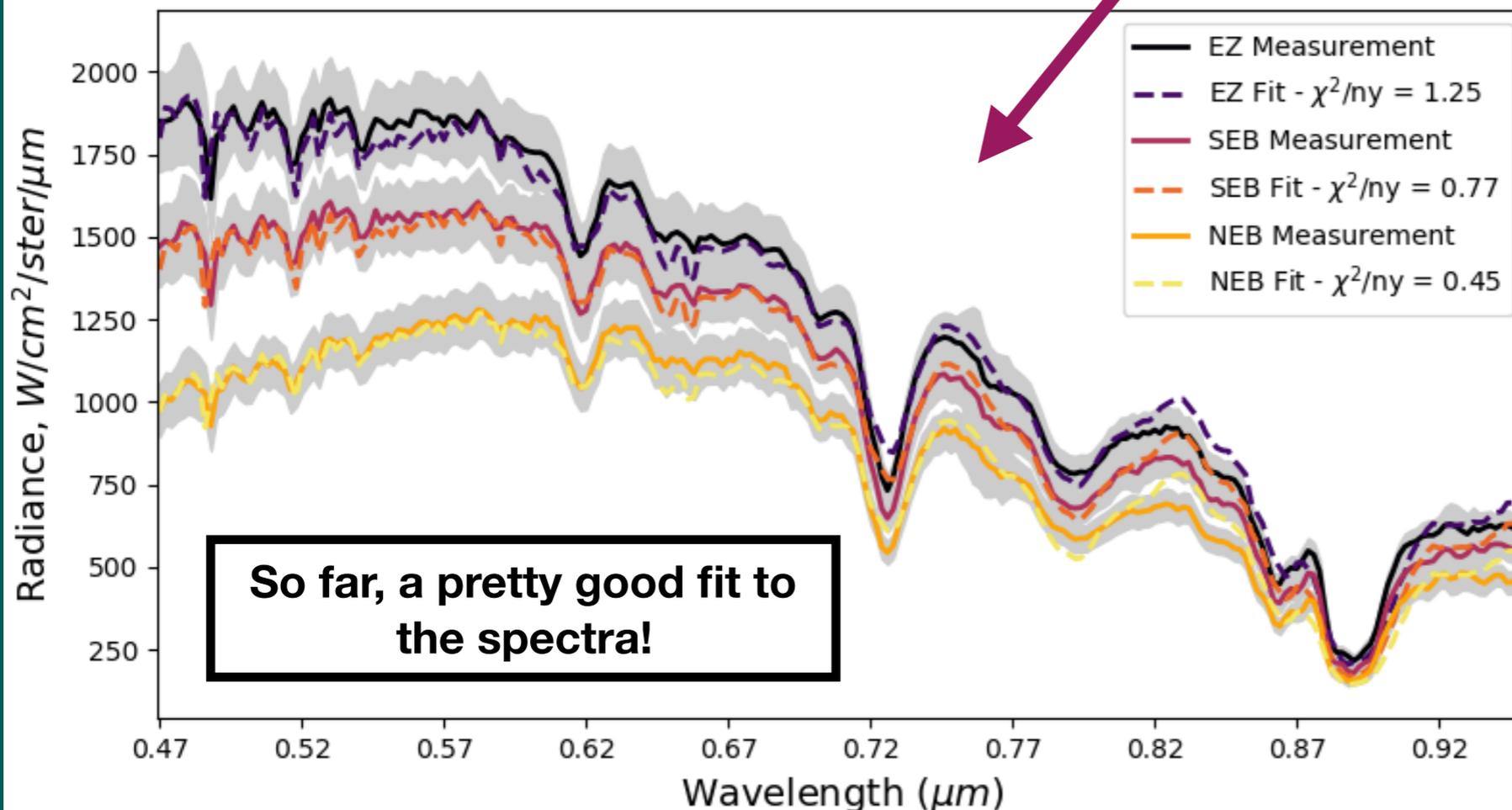


e.g. Baines et al. 2019

Dahl et al. 2020 in prep!

Further work:
Since these data were taken during Juno perijove passes, these data can also provide context for IR/microwave measurements

Cloud structure retrieval results



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Twitter - [@dahlek](https://twitter.com/dahlek)

Expected graduation date: Fall 2020

Thank you for your time!

