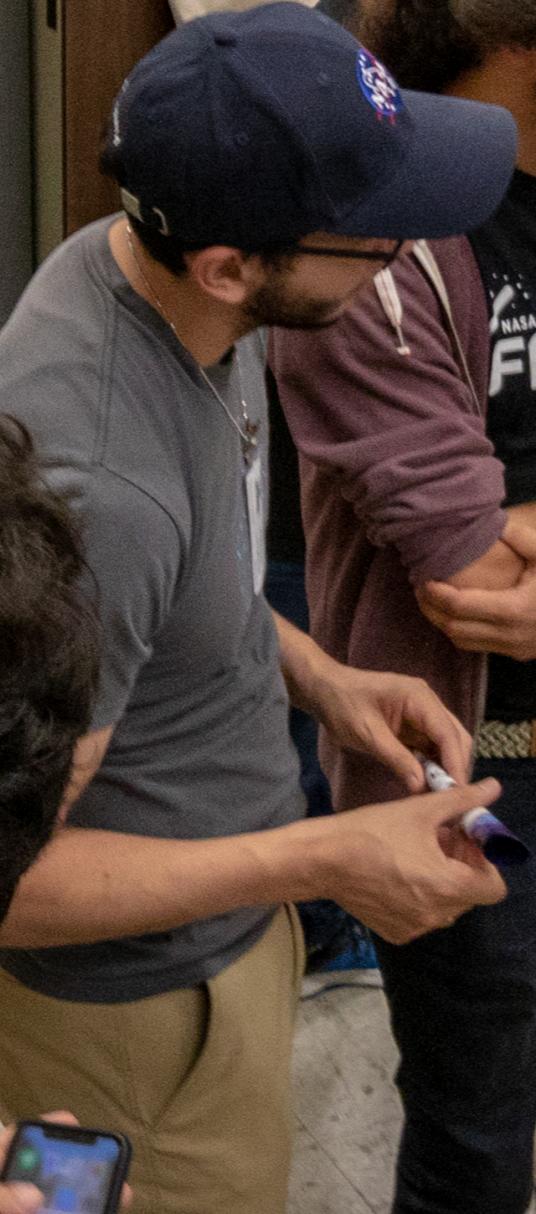


Ames Research Center





## Forecasting GPS Disruption

Kibrom Ebuly Abraha  
Laura Hayes  
Daniel Kumar  
Karthik Venkataramani



EXIT

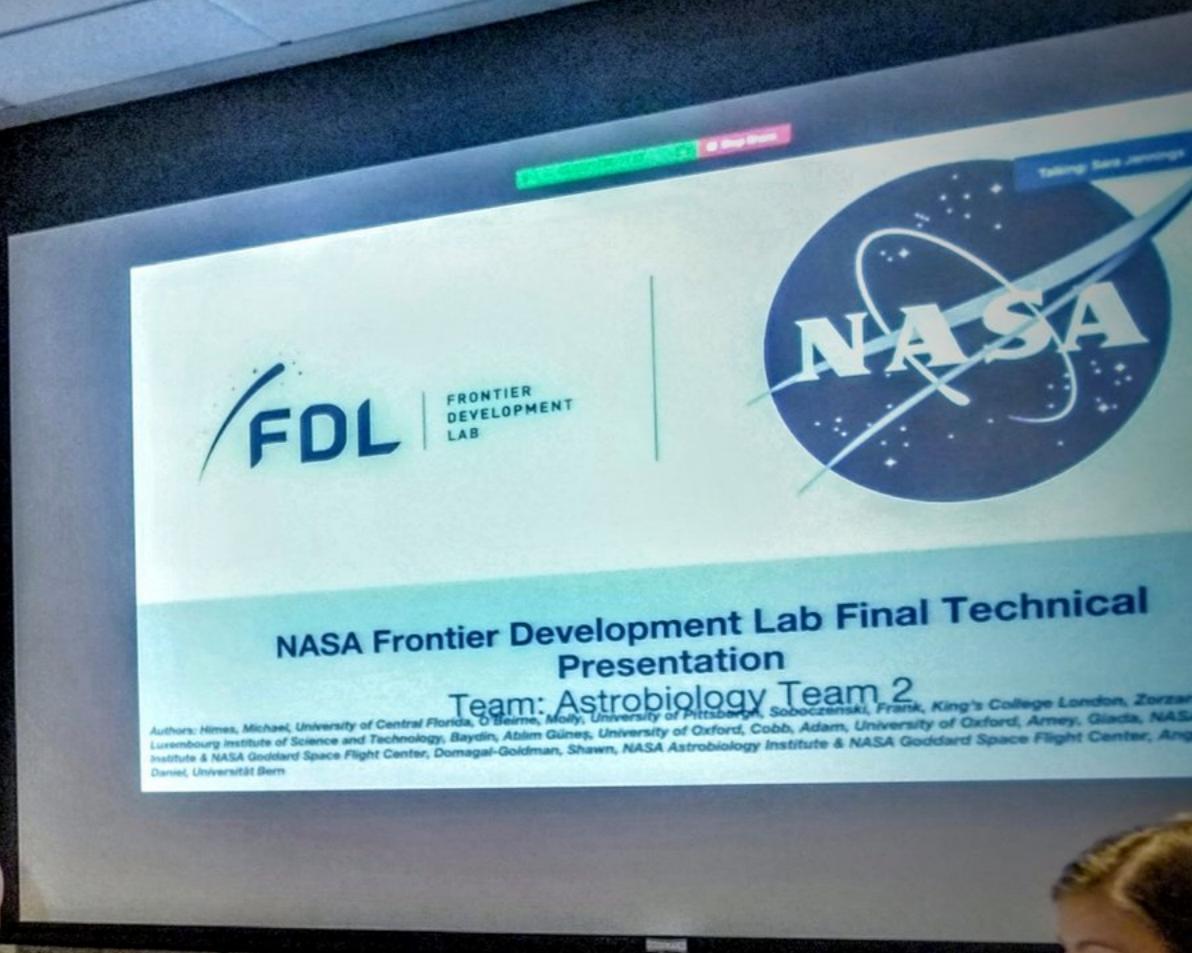


EXPLORING  
NEW FRONTIERS



NASA  
**FDL**







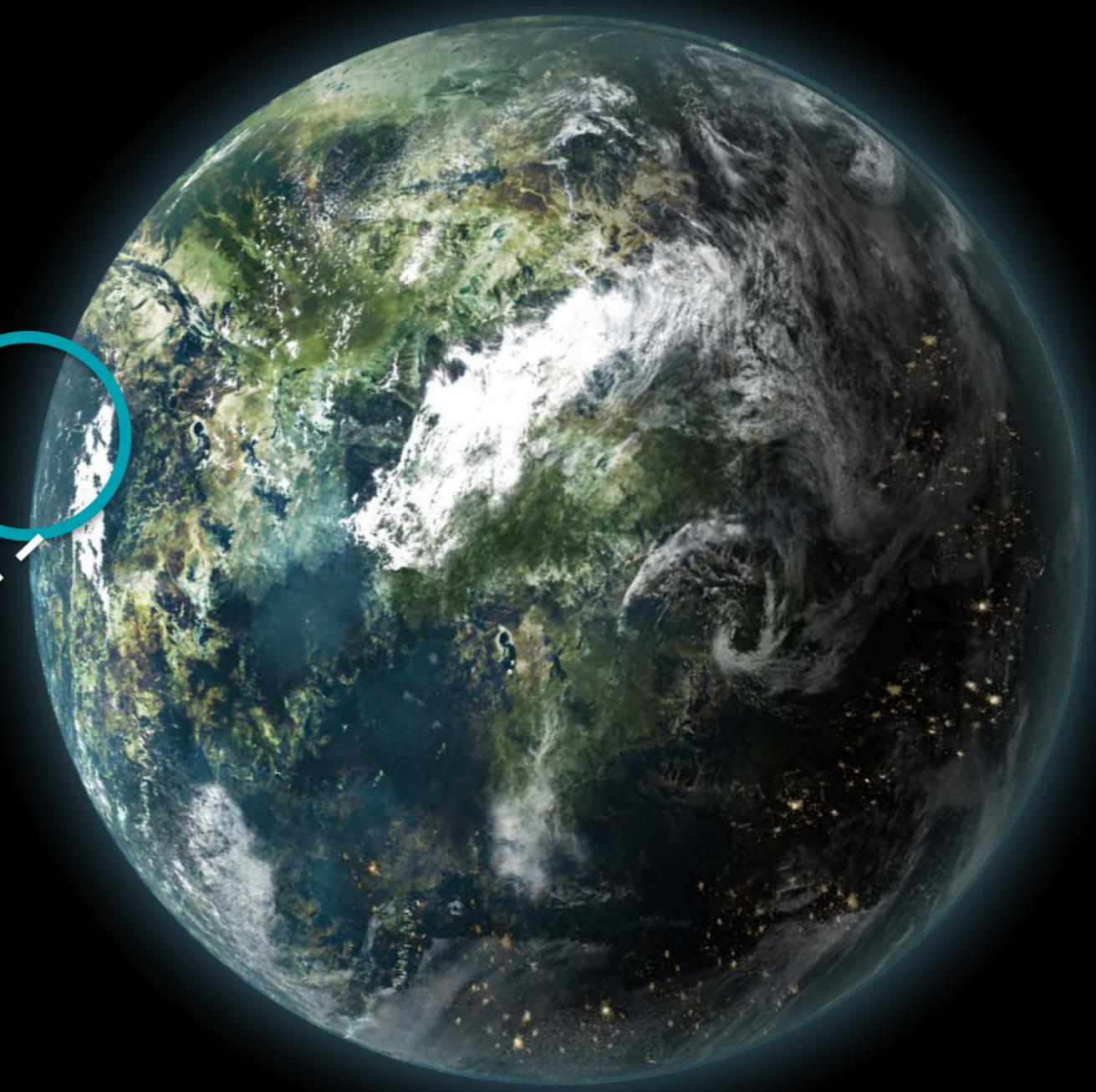




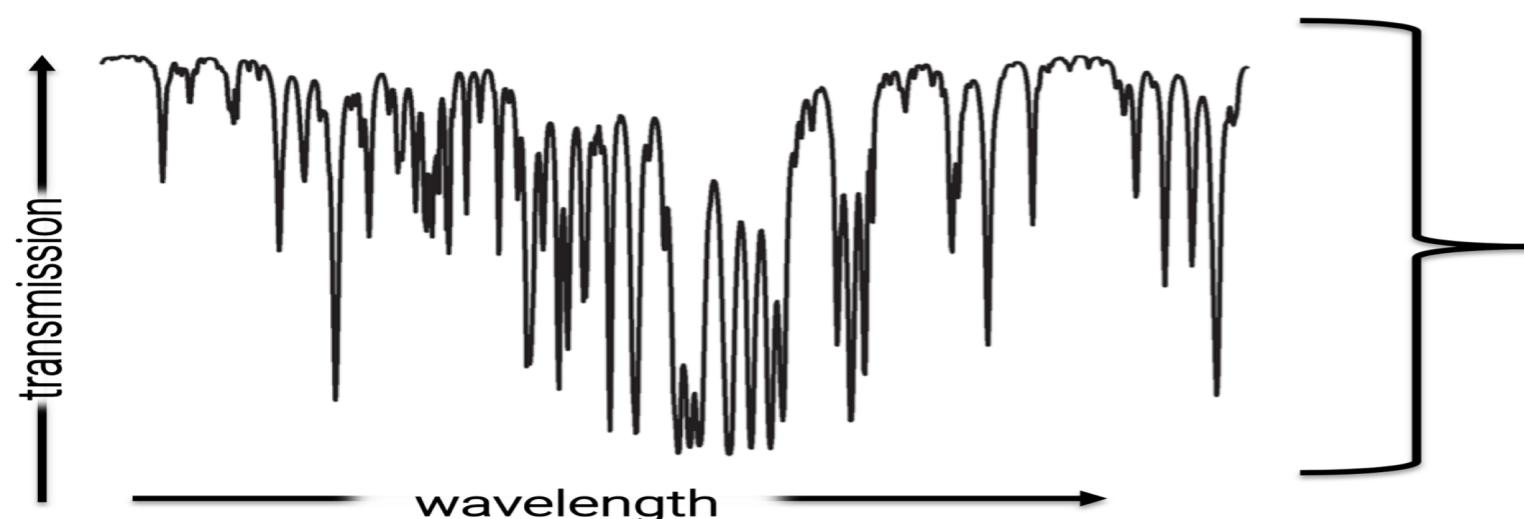




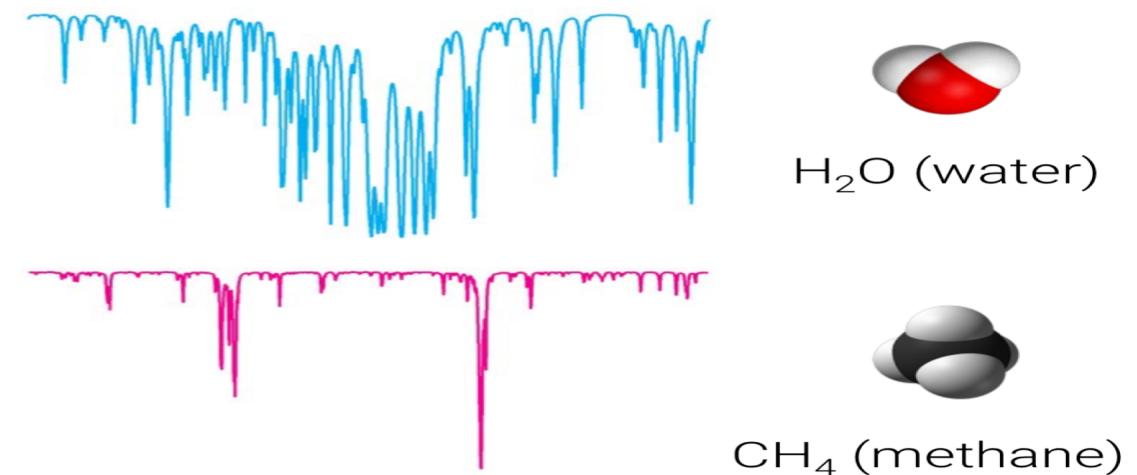
**Biohints** may be molecules, patterns or other signals that are known to be indicators of biological activity

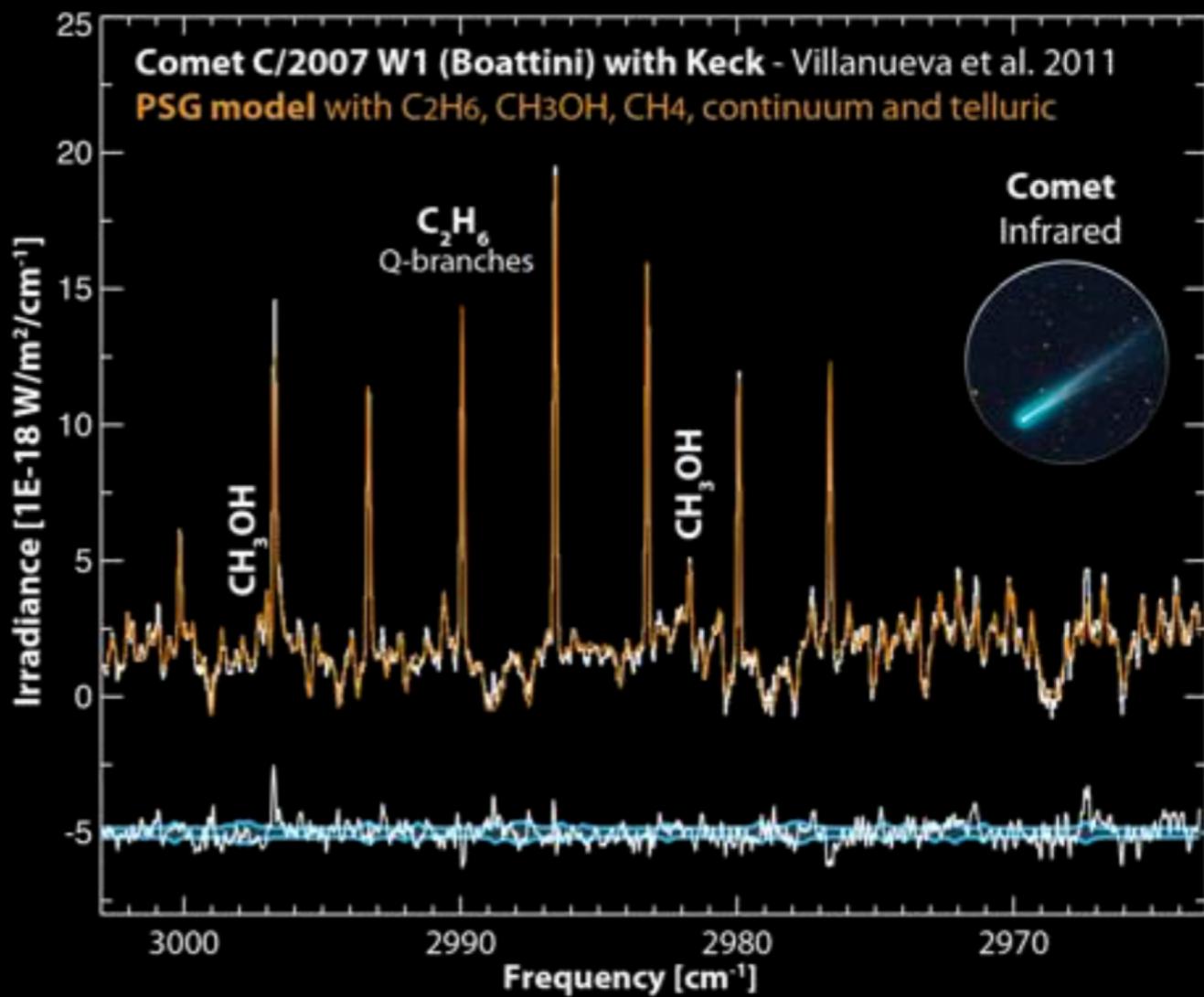
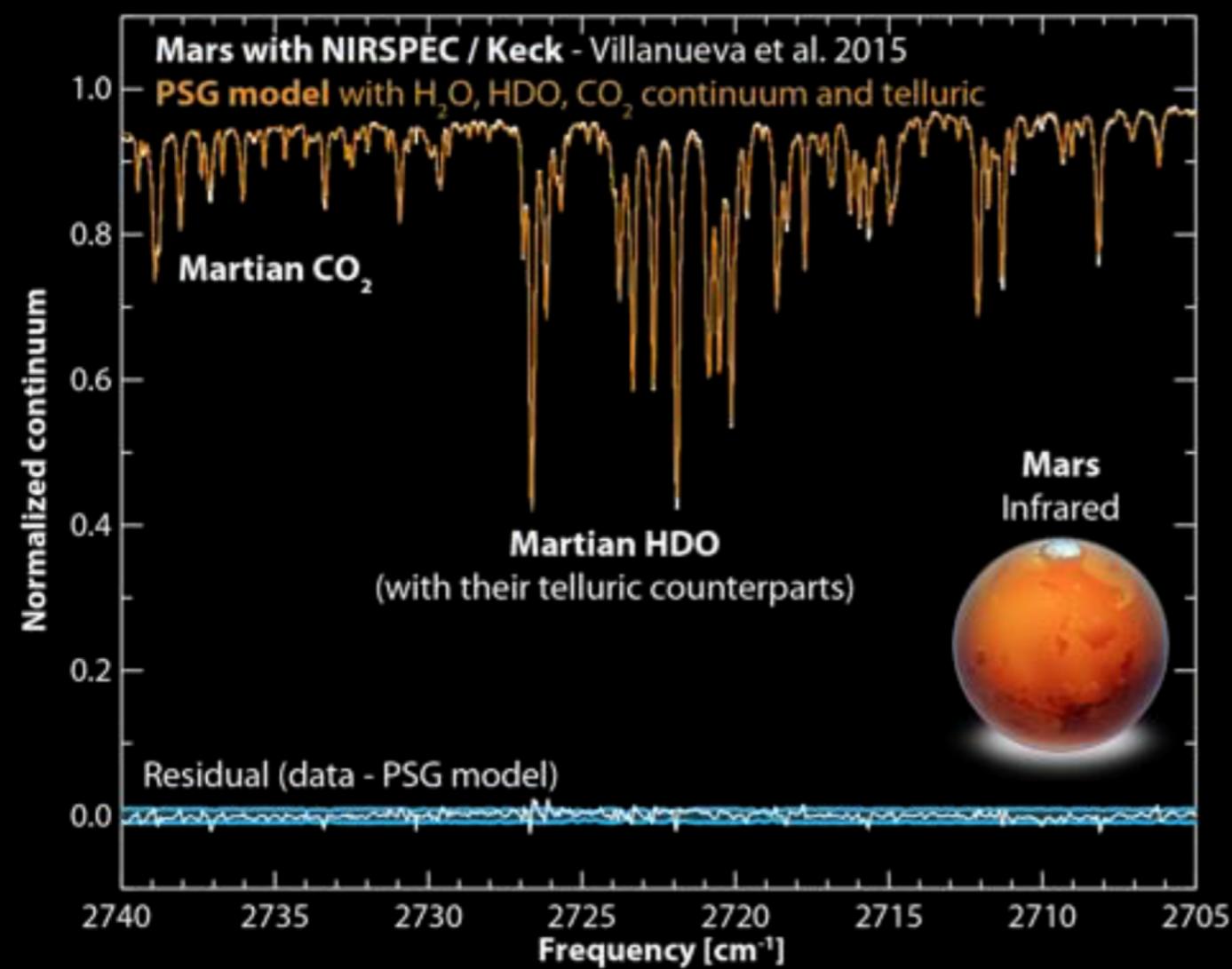


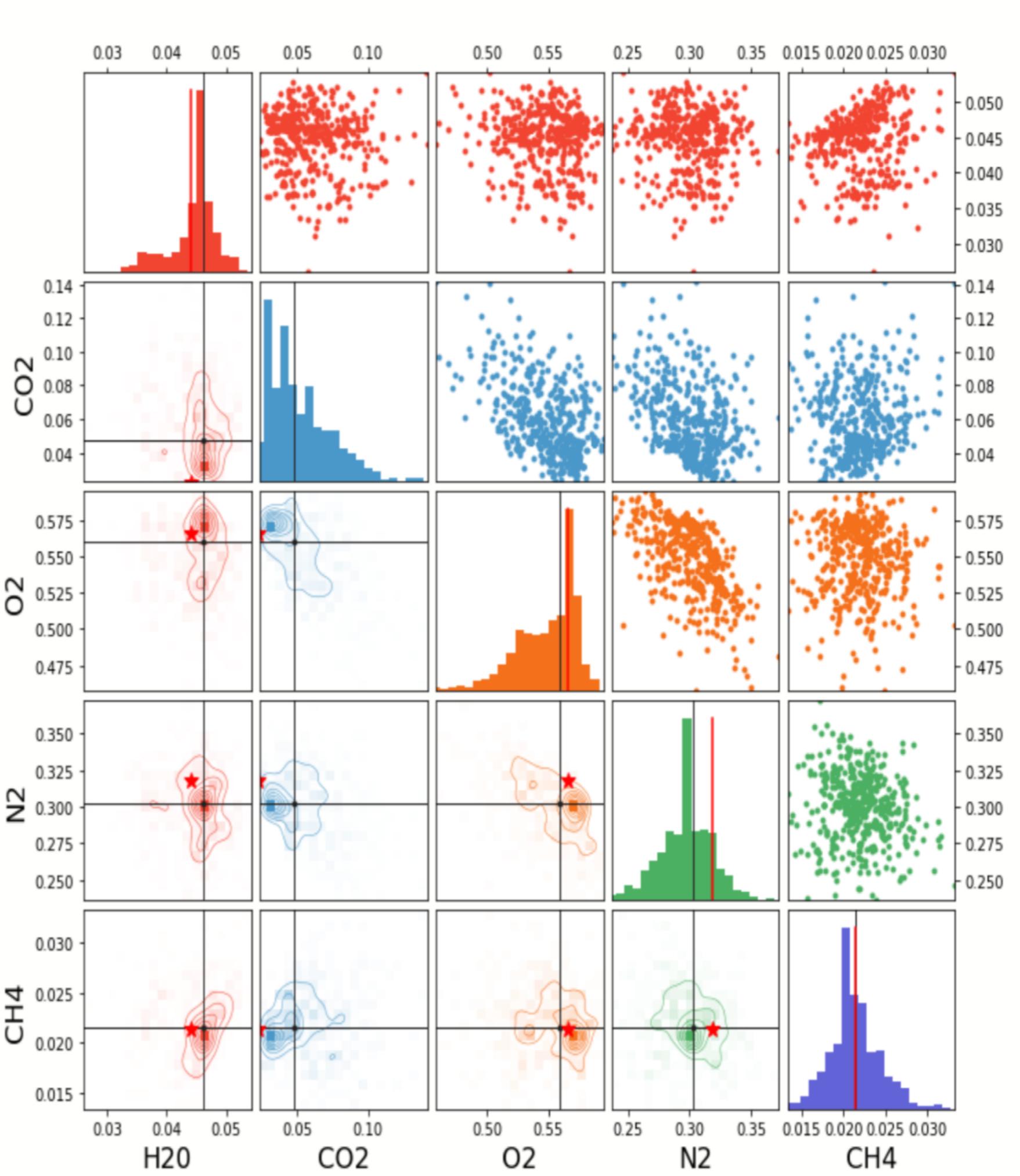
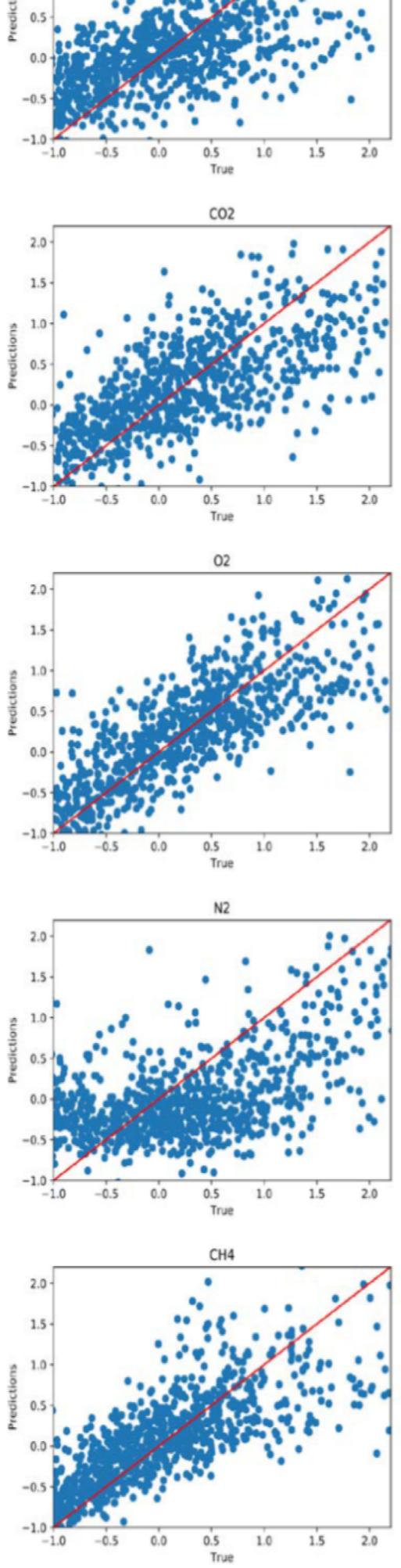
Planetary Spectrum  
(what we observe at high resolution)



Planetary Spectrum Components  
(what we have to deduce)







# Thirty-second Conference on Neural Information Processing Systems (NIPS)

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## Bayesian Deep Learning for Exoplanet Atmospheric Retrieval

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Atilim Güneş Baydin,<sup>e</sup> Adam D. Cobb,<sup>e</sup> Yarin Gal,<sup>f</sup> Daniel Angerhausen<sup>g</sup>

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### 1 Introduction

Over the past decade, the study of extrasolar planets has evolved rapidly from plain detection and identification to comprehensive categorization and characterization of exoplanet systems and their atmospheres. Atmospheric retrieval, the inverse modeling technique used to determine an exoplanetary atmosphere’s temperature structure and composition from an observed spectrum, is both time-consuming and compute-intensive, requiring complex algorithms that compare thousands to millions of atmospheric models to the observational data to find the most probable values and



NASA Ames Research Center - Silicon Valley - 2018



<http://www.frontierdevelopmentlab.org>

**You?**

**Language ?**



# Programming experience ?



**Technology ?**

**Practicals / Exercises ?**