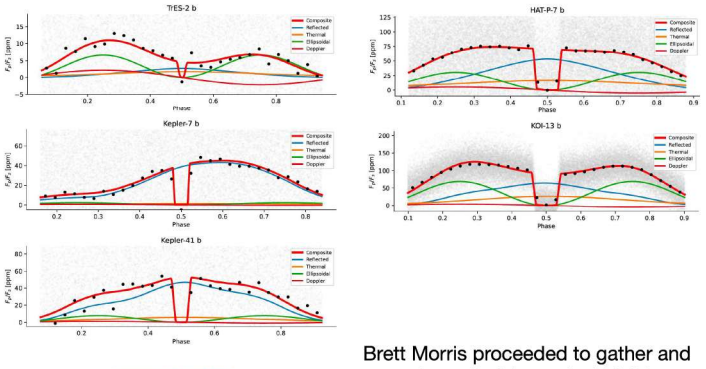
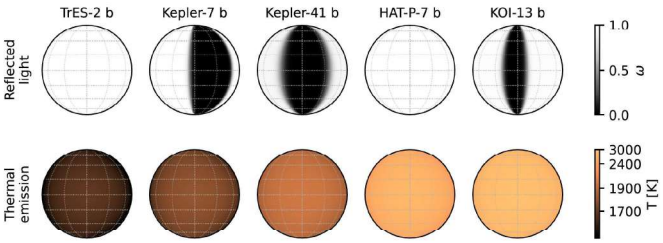
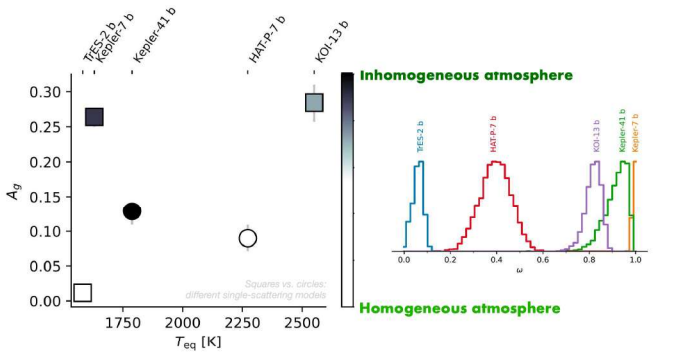


Brett Morris proceeded to gather and re-analyze all of the optical/visible phase curves measured by the Kepler mission

Separating reflected light versus thermal components
(with assumptions on the latter)

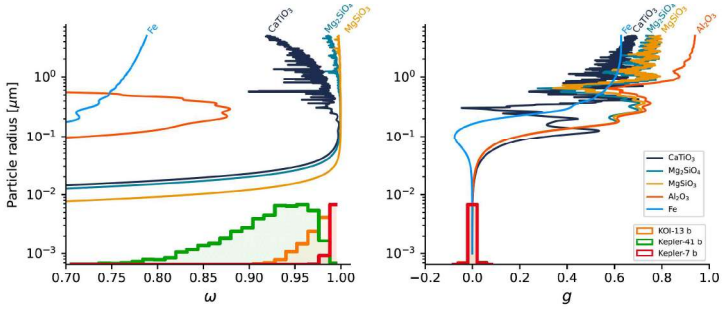


Are hot Jupiters cloudy/hazy? [Kepler data]
(The perspective from photometry)

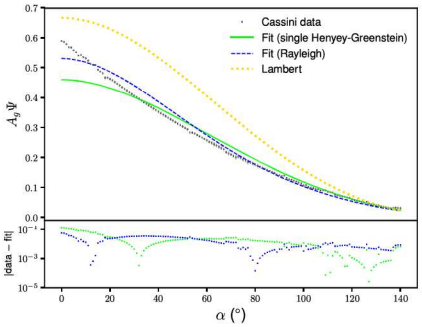


Key Idea:
Difficult to imagine an inhomogeneous atmosphere that is cloud-free!

Inhomogeneous atmospheres: constraints on particle radius using Mie theory



A longstanding puzzle with interpreting phase curves of Jupiter [Cassini data]



Cassini "millenium flyby" of Jupiter

Classic reflection laws provide poor fits, especially near the peak

Data have never been interpreted within a Bayesian framework

ICARUS 113, 134–155 (1995)

An Experimental Study of Light Scattering by Large, Irregular Particles

AUDREY F. MCGUIRE AND BRUCE W. HAPKE
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Suggests irregular scatterers are adequately represented by a **double Henyey-Greenstein** reflection law

Note that this is a fitting function *not* based on physics

What is unclear to me is if a good fit using this reflection law implies that the particles are irregular (?)

Essentially, this allows for **simultaneous forward** and **backward scattering lobes**