Ks-band Thermal Emission from CoRoT-1b

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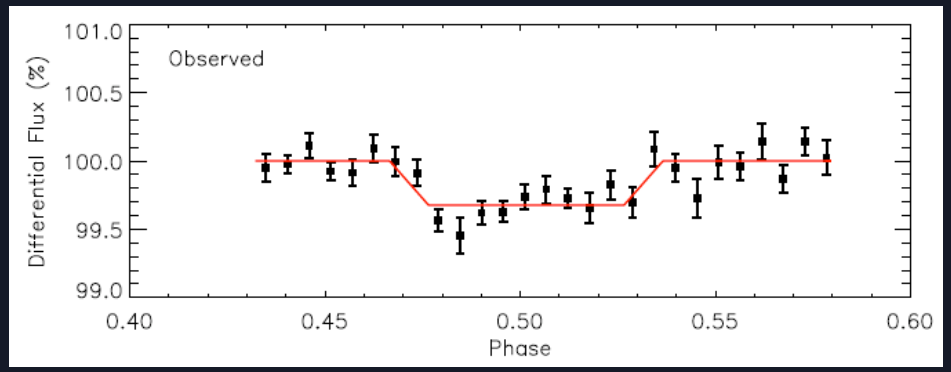
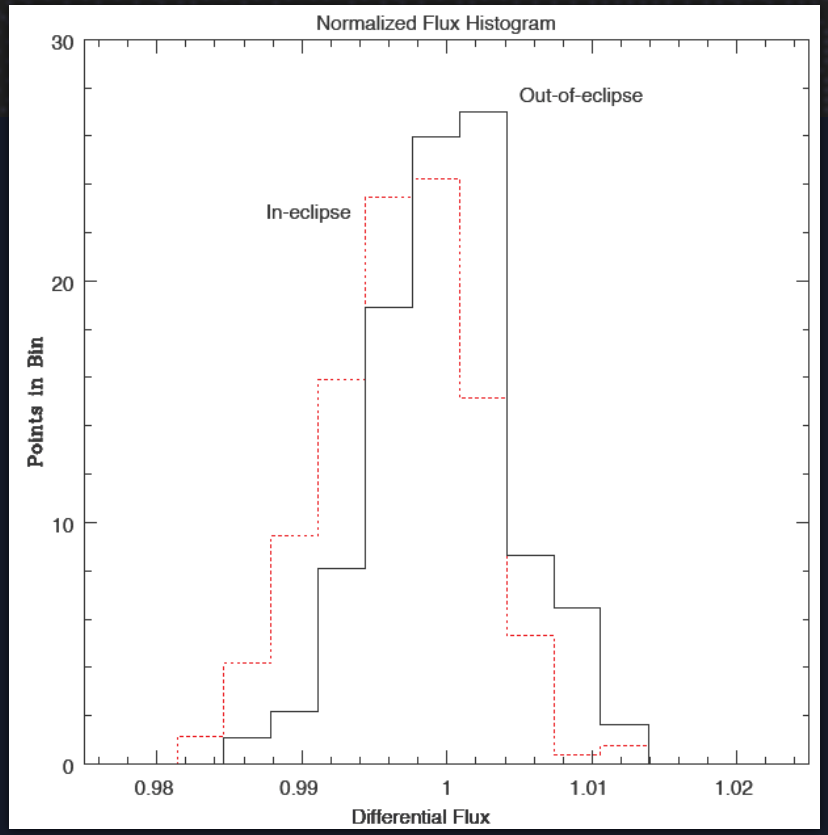
-Secondary Eclipse detections of CoRoT-1b:
CoRoT satellite (600 nm), Snellen et al. 2009
VLT / HAWK-I (NB 2.09 μm), Gillon et al. 2009
APO / NICFPS (Ks 2.15 μm), this work (in review)

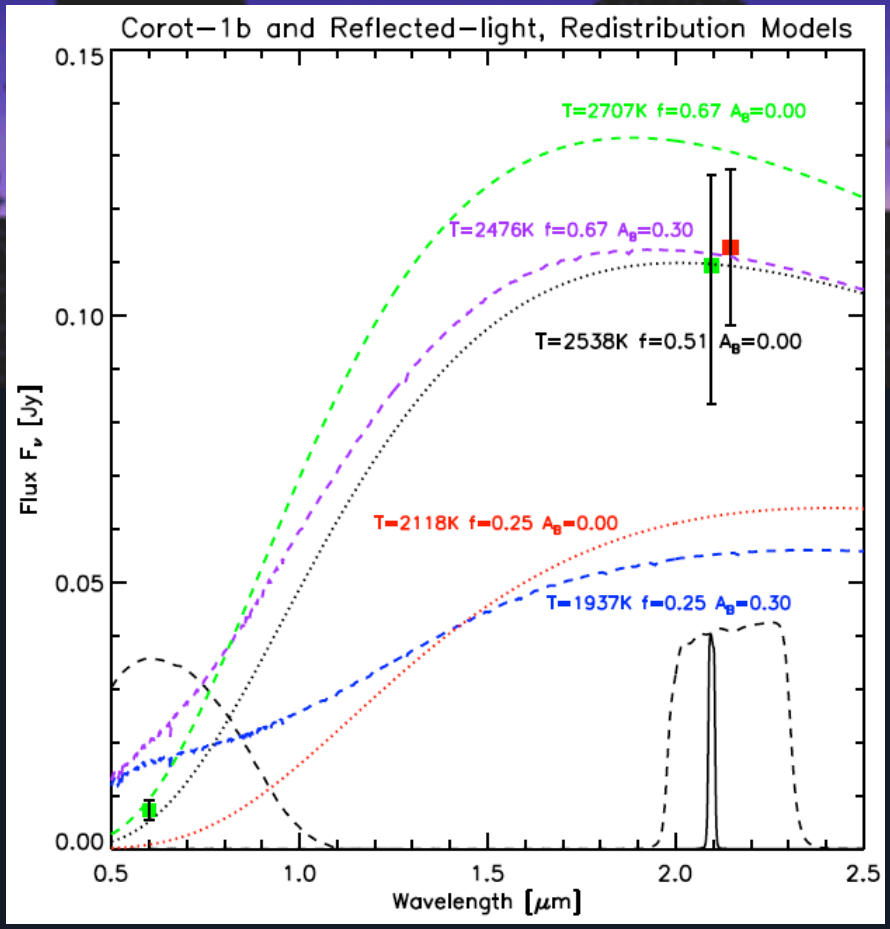
Only 2 other ground-based detections:
OGLE-TR-56b, VLT & Magellan z'-band (Sing & Lopez-Morales 2009)
TrES-3b, WHT K-band (de Mooij & Snellen 2009)

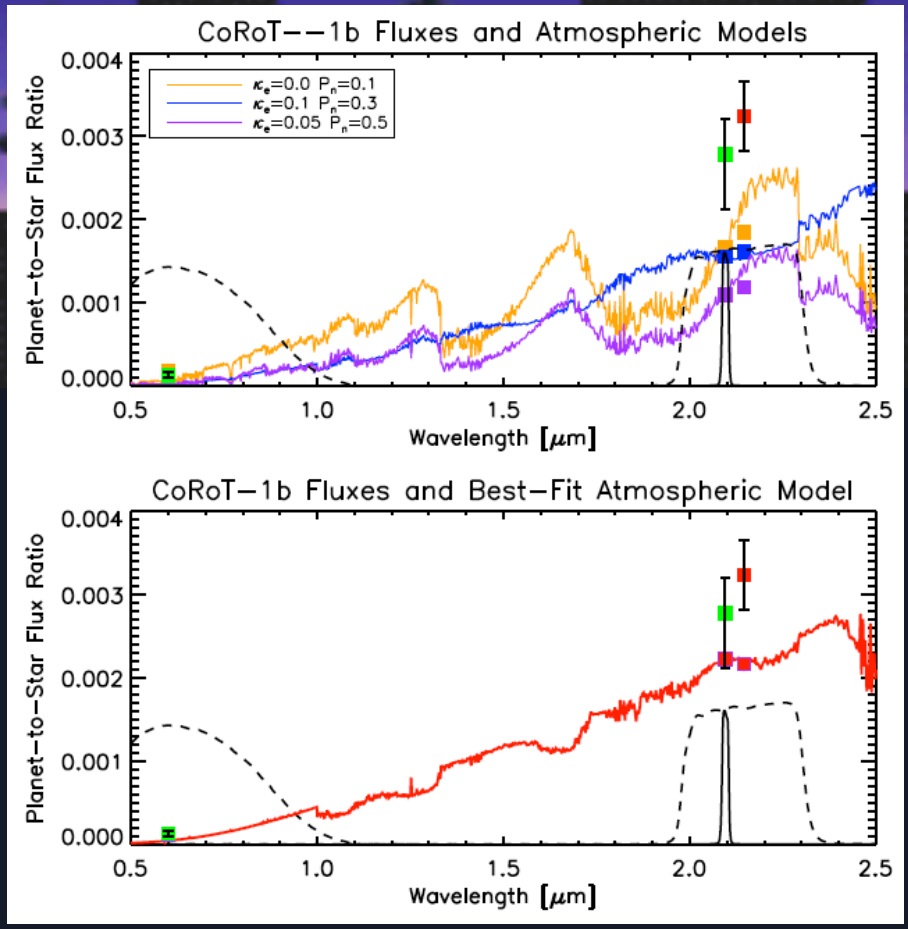


De-trended, differential lightcurve in 12-minute bins shows an eclipse depth of 0.324 +/- 0.042%



Comparison of 3 Observed Datapoints with Models





Blackbody models: Low albedo, low but nonzero energy redistribution, blackbody temperature 2538^{+60}_{-83} K

Atmosphere models: Best model has extra optical absorber (κ_e = 0.05 cm^2 g^{-1}) near 0.1 bar; again low albedo and energy redistribution