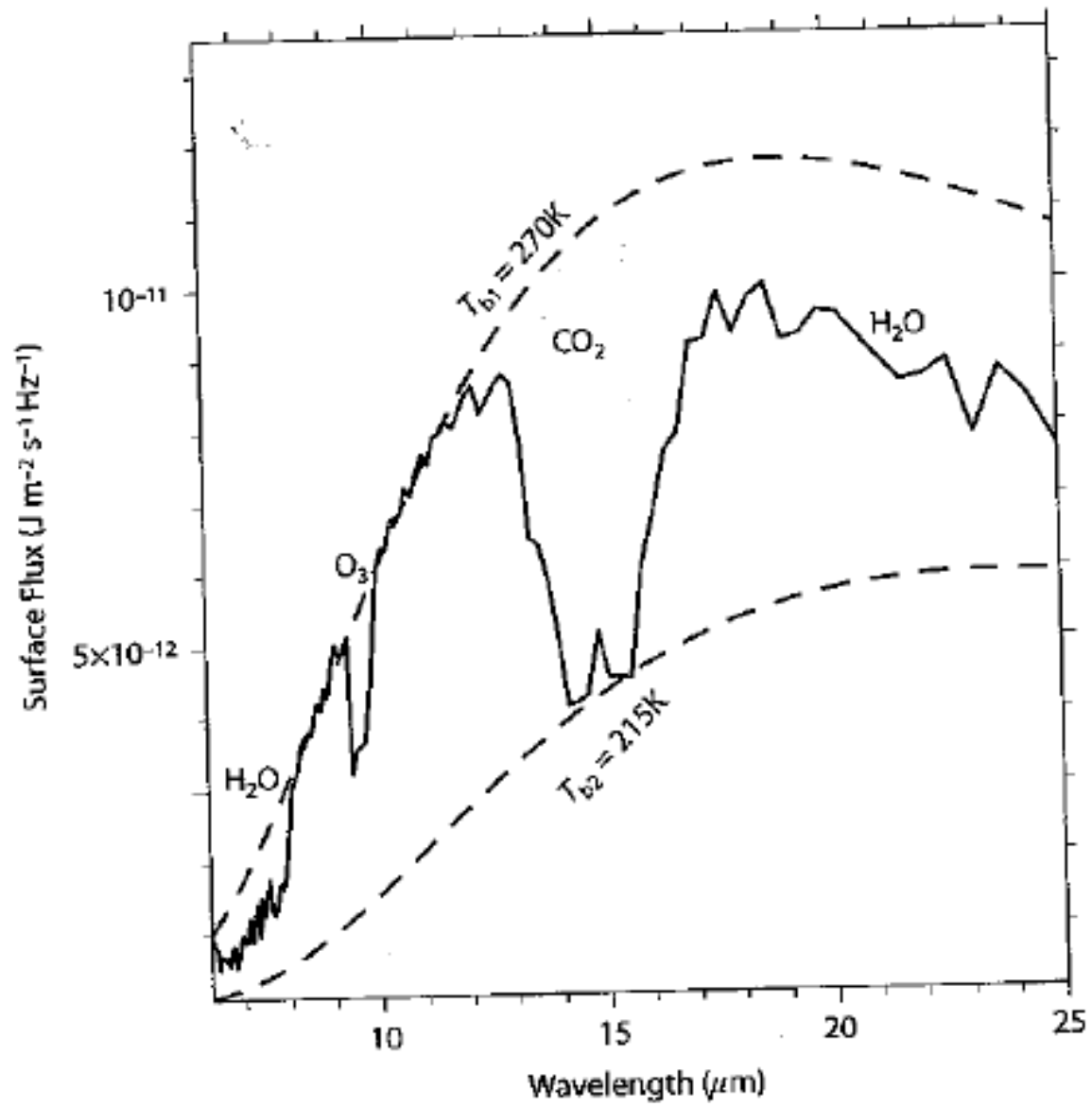
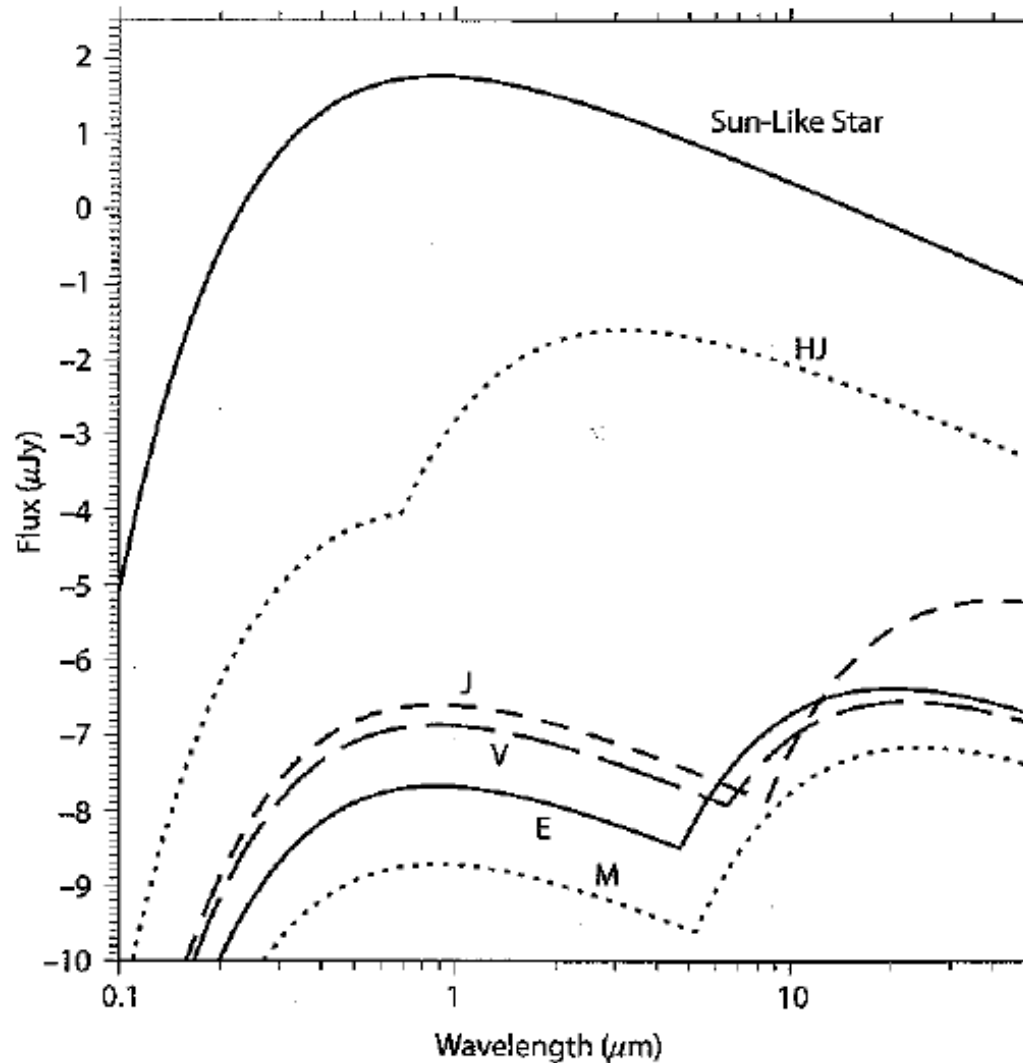
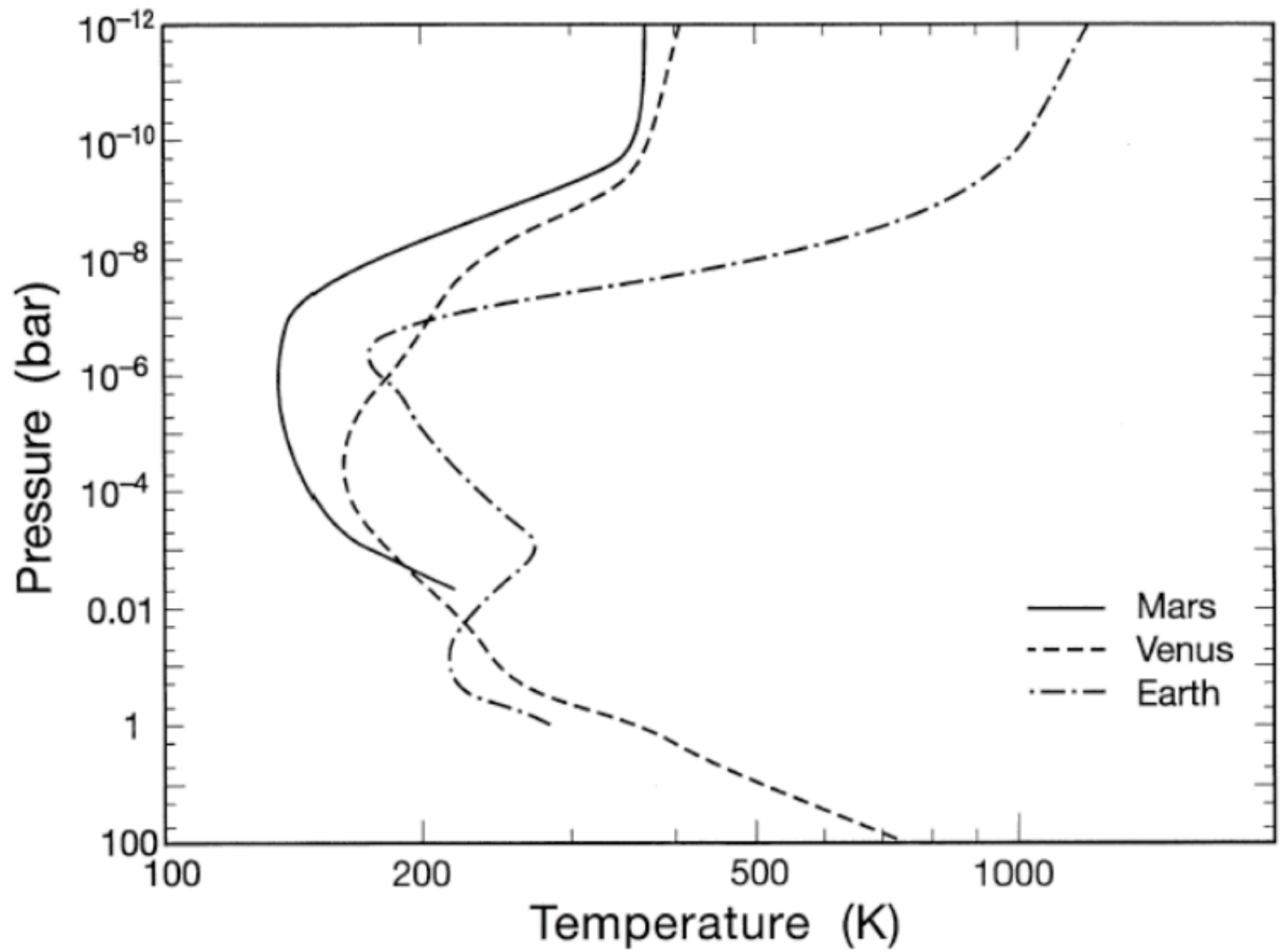


Hubbard et al. (2002)





The approximate spectra (in units of $10^{-26} \text{ W m}^{-2} \text{ Hz}^{-1}$) of some solar system bodies as seen from a distance of 33 light years. The Sun is represented by a black body of 5750 K. The planets Jupiter, Venus, Earth, and Mars are shown and are labeled with their first initial. A representative hot Jupiter exoplanet is also shown.



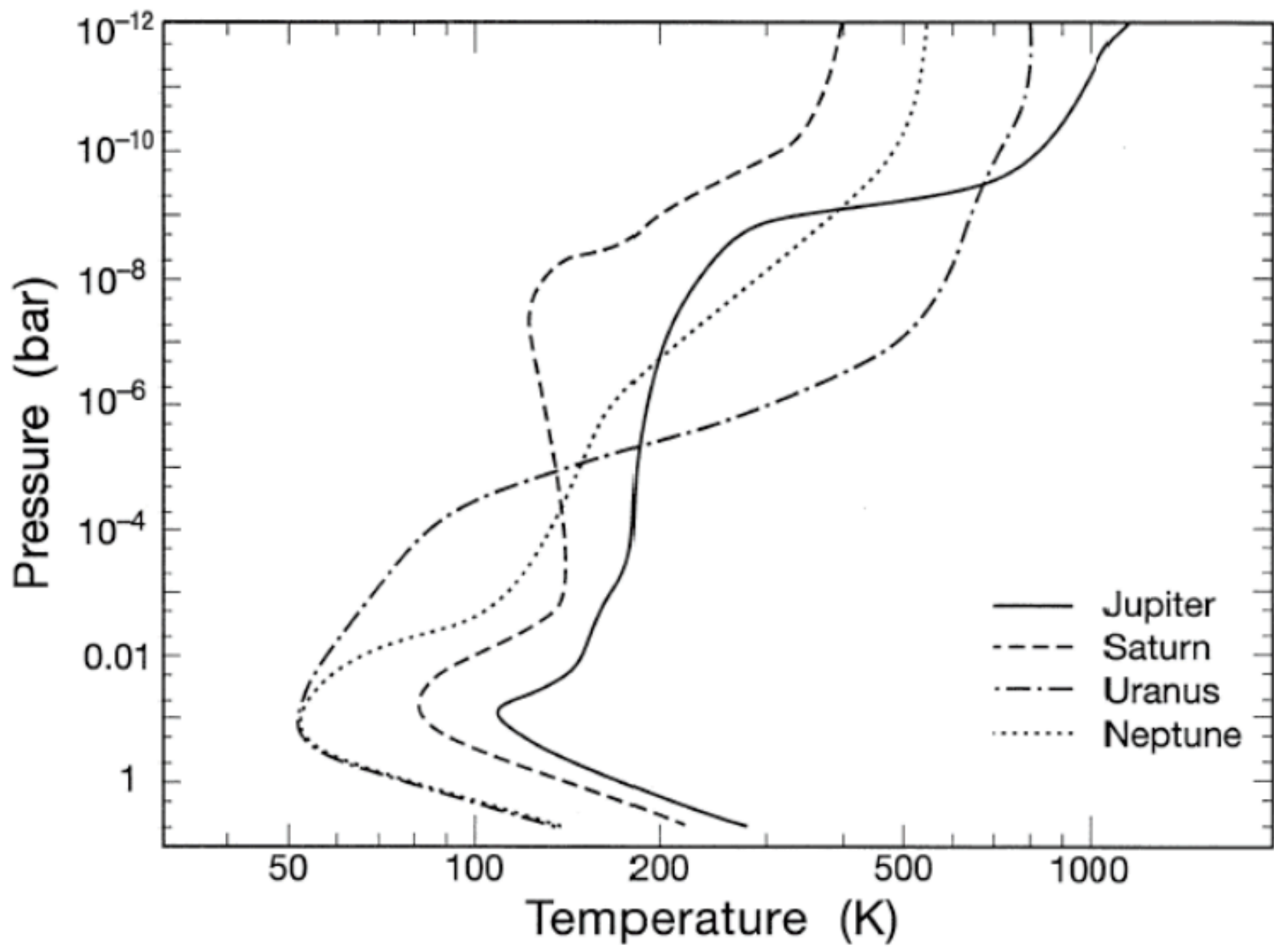
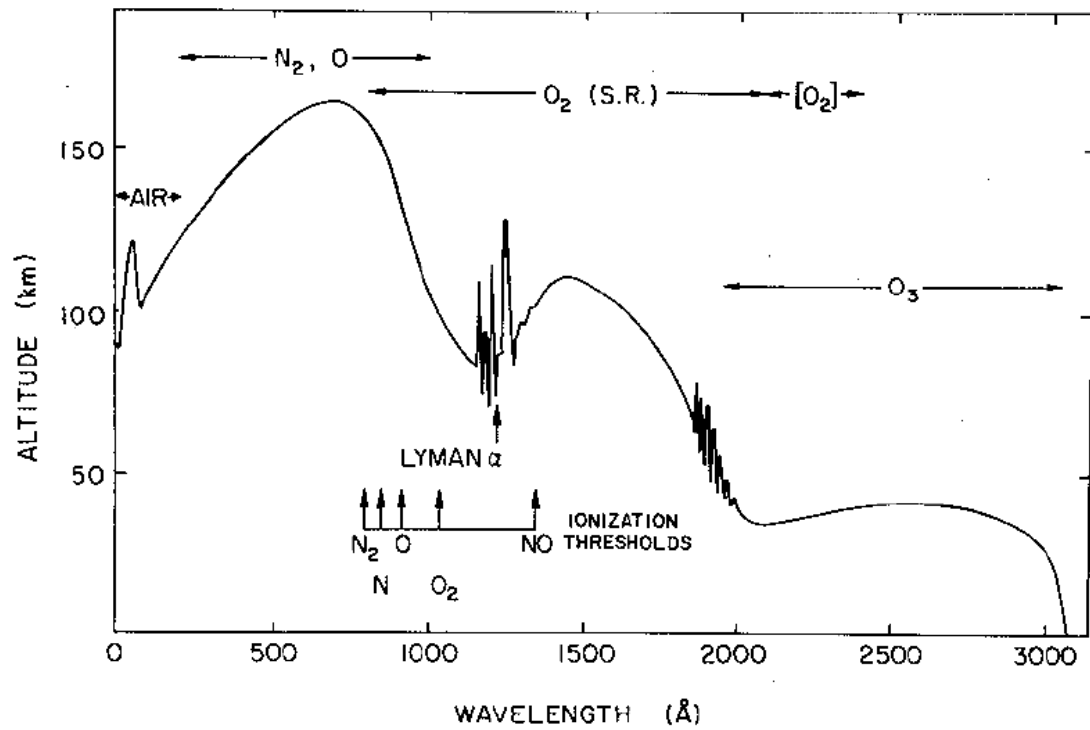
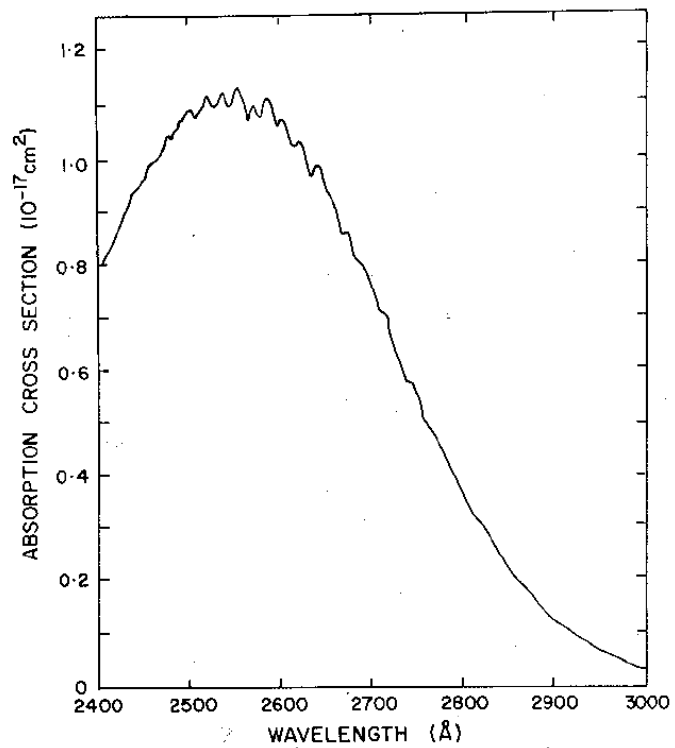


TABLE 1.3 *Characteristics of the Jovian Planets*

	Jupiter	Saturn	Uranus	Neptune
Mean density (g/cm ³)	1.34	0.70	1.58	2.30
Effective temperature (°K)	124.4	95.0	58	55.5
Equilibrium temperature (°K)	109.5	82.3	57	46
Total flux/solar heat	1.668	1.78	<1.3	1.1
Internal flux (erg cm ⁻² sec ⁻¹)	5444	2000	<180	285
Adiabatic lapse rate (°K/km)	1.9	0.84	0.85	0.86
Tropopause temperature (°K)	105	85	54	52
Tropopause pressure (mbar)	140	80	100	200
Exospheric temperature (°K)	700-1000	420	700	—



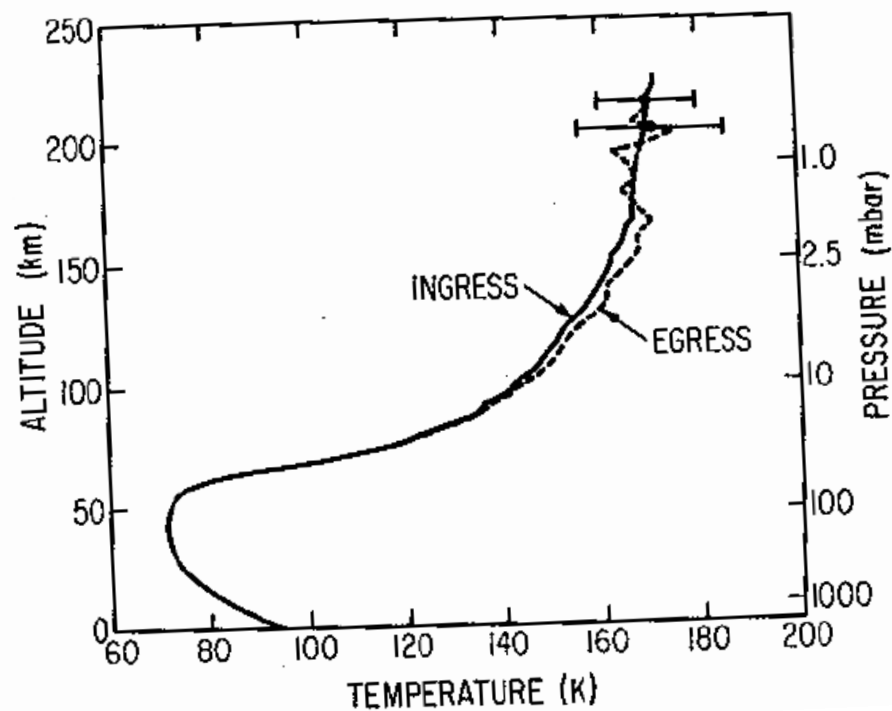
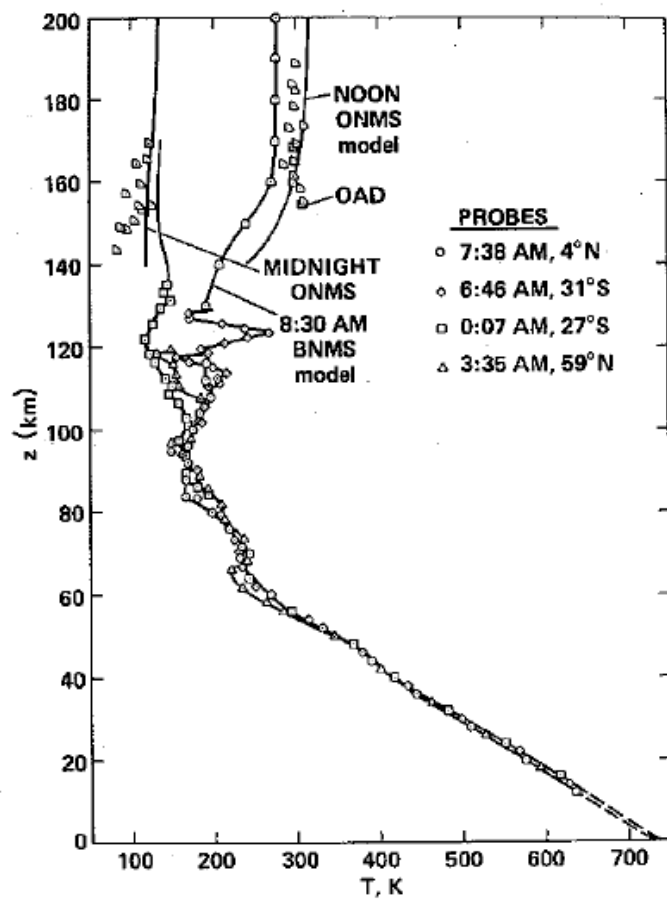


Fig. 1.14 Temperature profiles of the Venus atmosphere from the surface to 200 km, compiled by Seiff from Pioneer Venus observations. The acronyms refer to various experiments: B, probe bus; O, orbiter; NMS, neutral mass spectrometer; and AD, atmospheric drag. [After HUNTEN *et al.* (1983).]

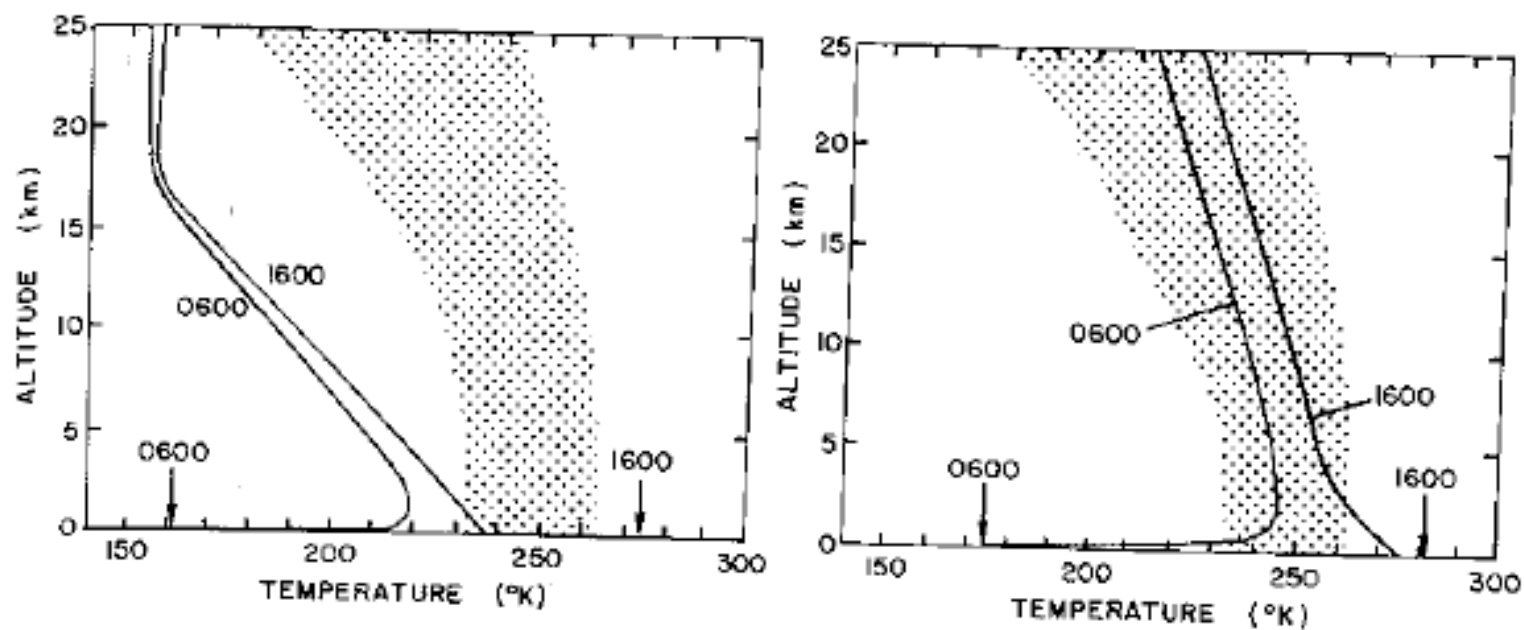
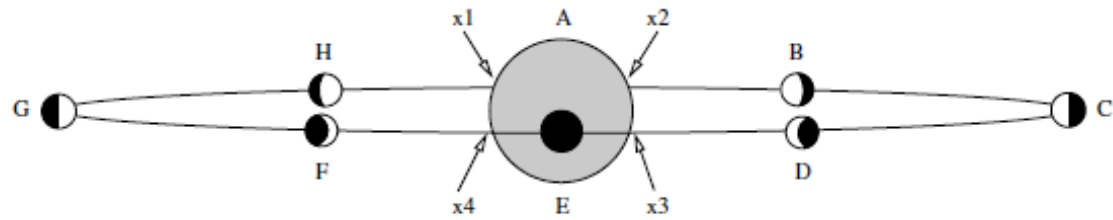
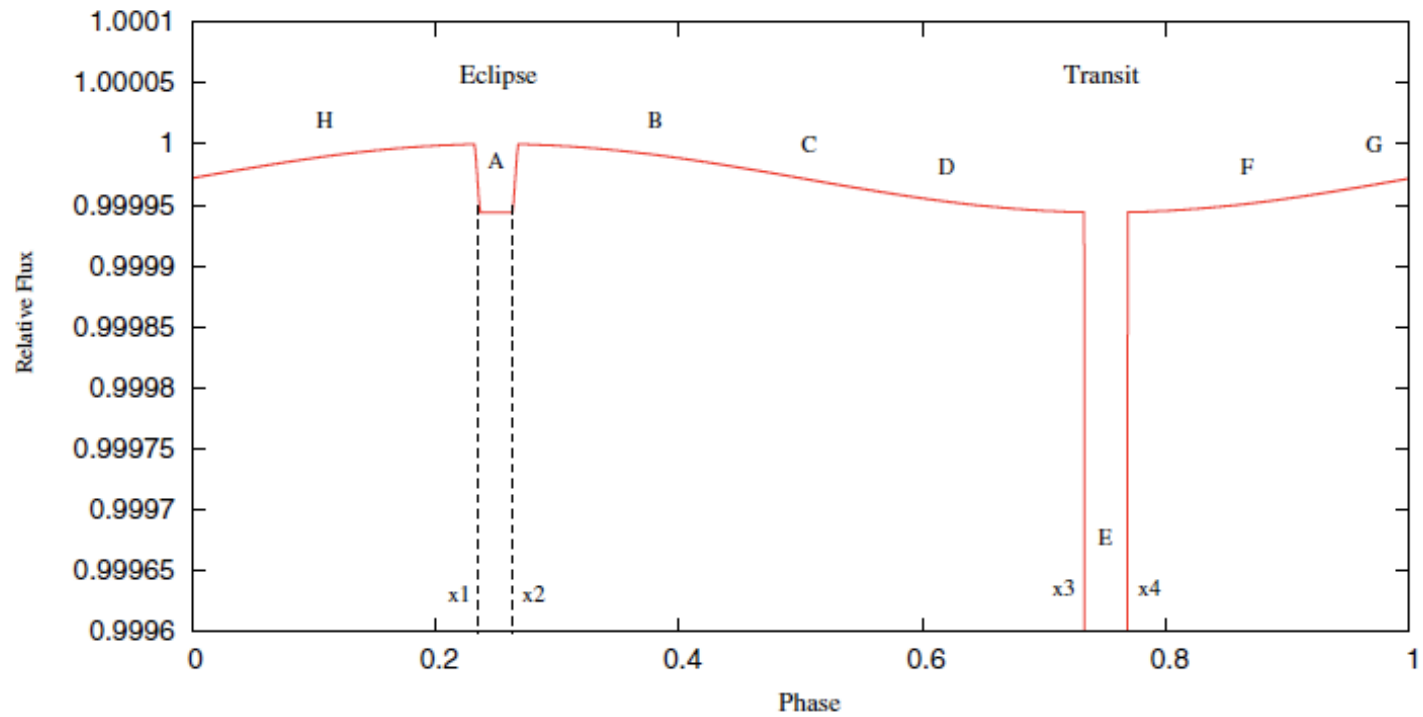


Fig. 1.20 Temperature profiles for Mars showing the effect of direct solar heating due to dust absorption. The shaded areas show the region of Mariner 6 and 7 observations. The curves at the left are calculated for a clear CO_2 atmosphere and at the right for one containing dust. [Calculations are due to GIERASCH and GOODY (1972).]



Rowe et al. (2008)

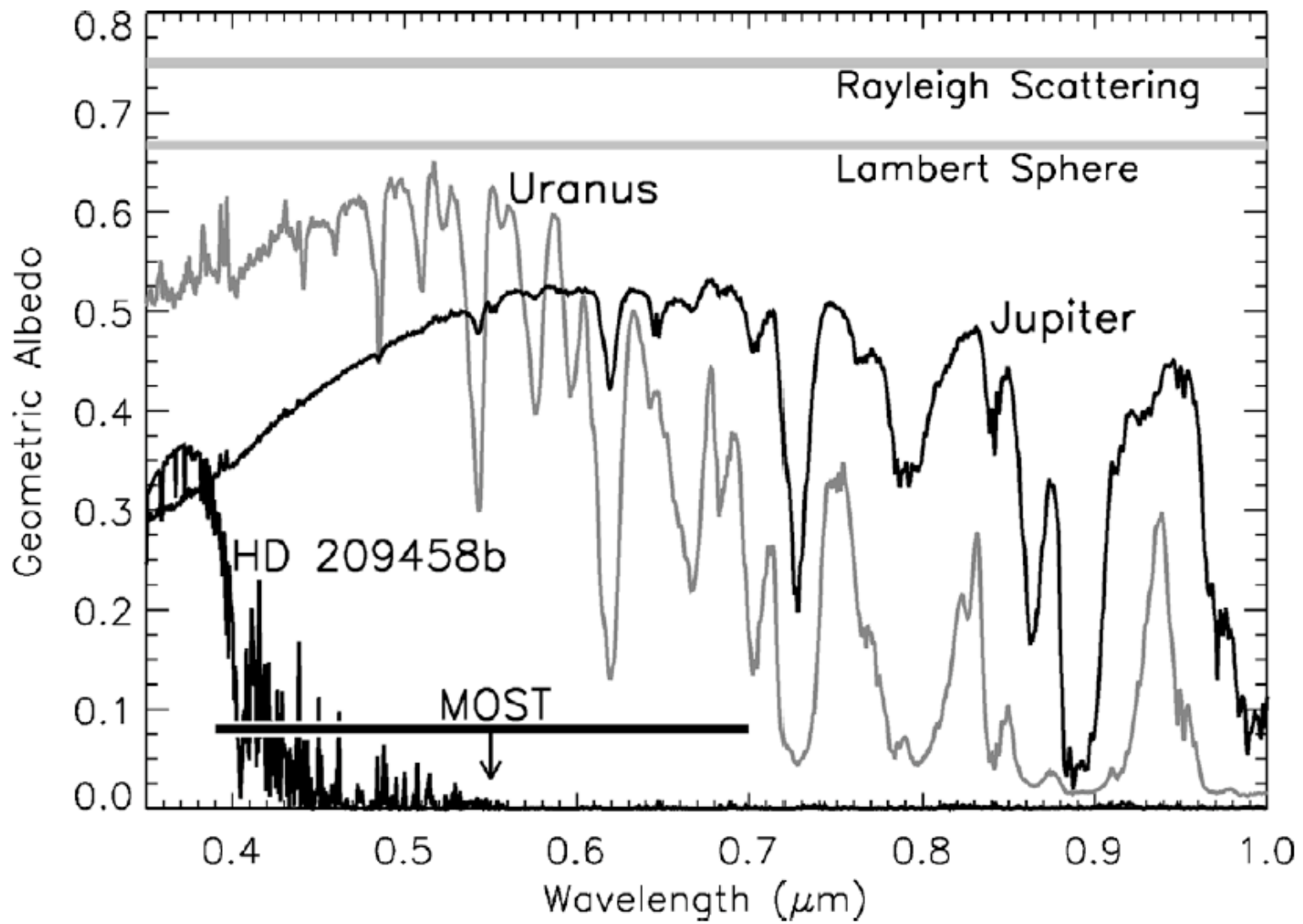
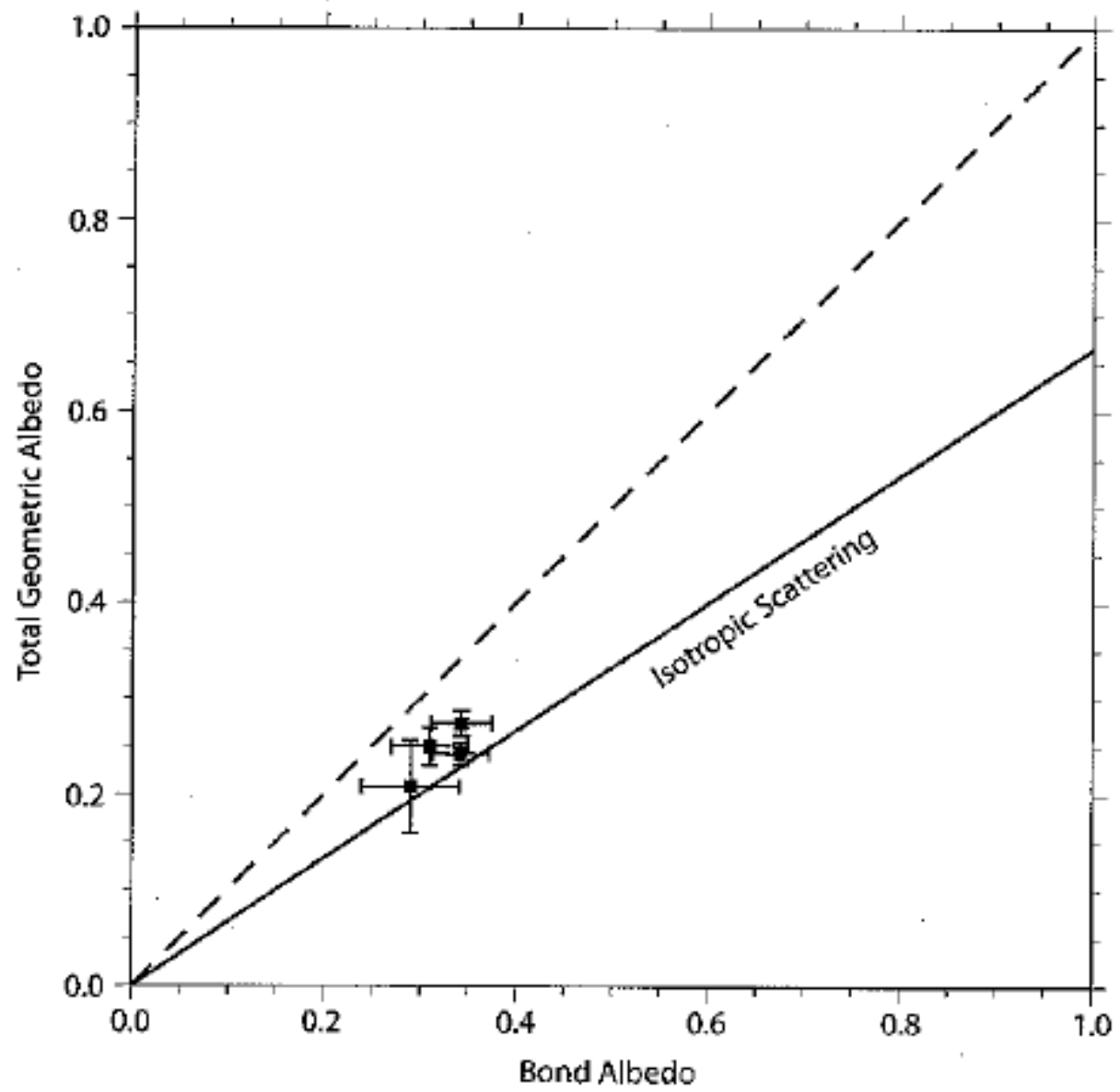
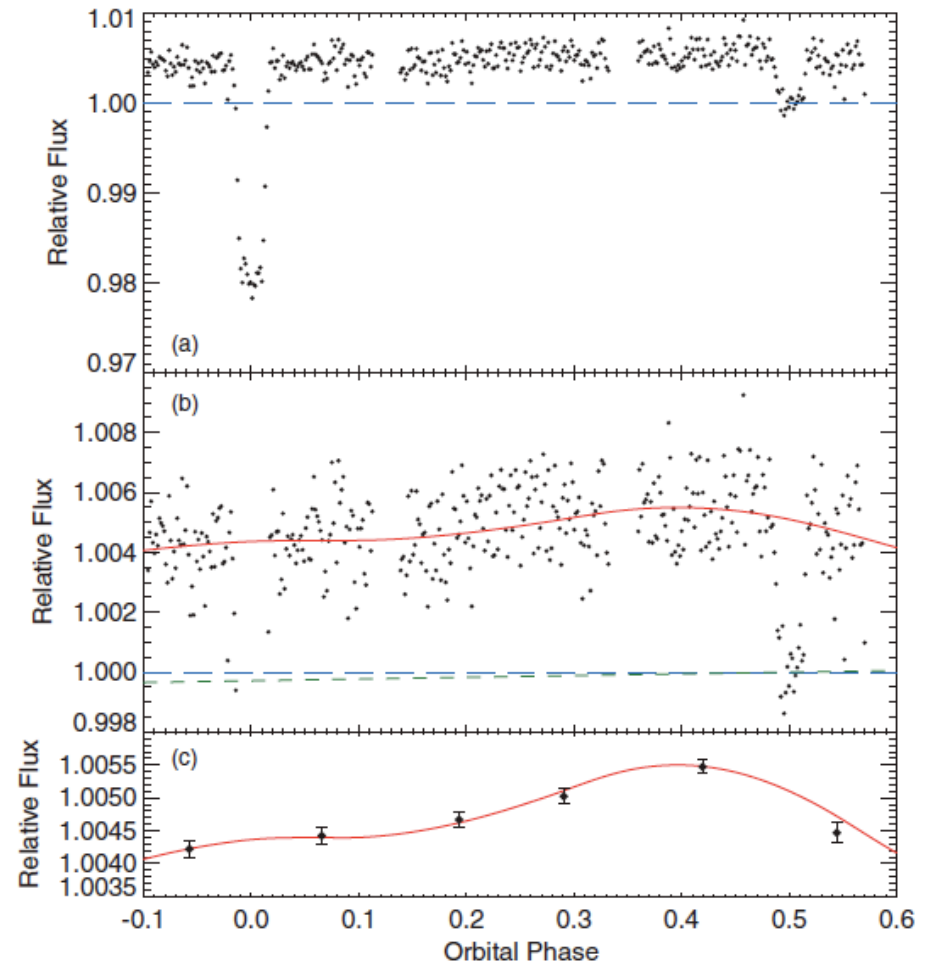
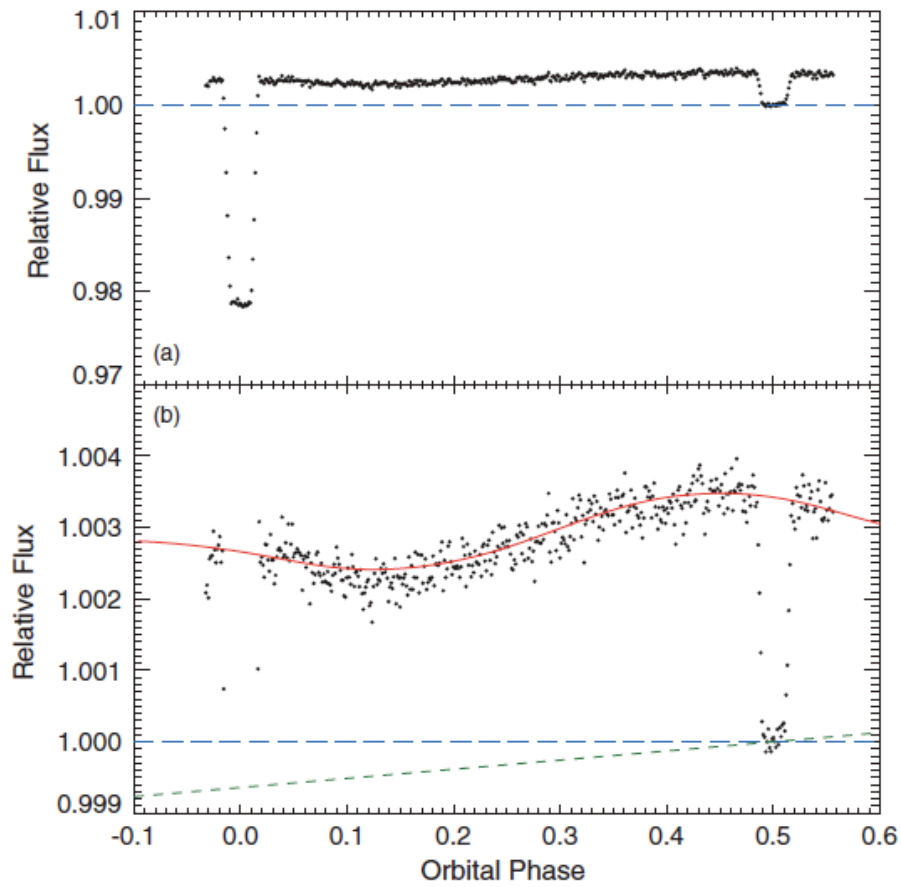


Table 3.1 Temperatures and albedos of solar system planets.

Planet	T_{eff}	T_{eq}	A_{g}	A_{B}
Mercury			0.106	0.119
Venus	~ 230	230	0.65	0.750
Earth	~ 255	253	0.367	0.306
Mars	~ 212	209	0.150	0.250
Jupiter	124.4 ± 0.3	109	0.52	0.343
Saturn	95.0 ± 0.4	80	0.47	0.342
Uranus	59.1 ± 0.3	58	0.51	0.300
Neptune	59.3 ± 0.8	46	0.42	0.290

$A_{\text{g}}(\nu)$ is at ~ 500 nm. Values from [3].





Knutson et al. (2009)

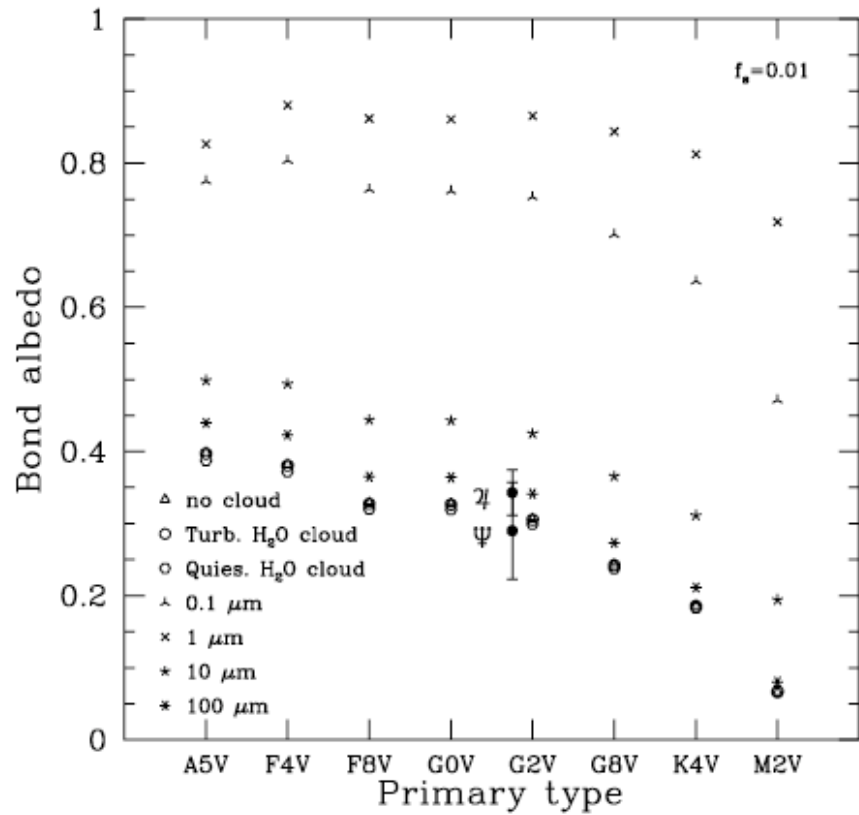


FIG. 8a

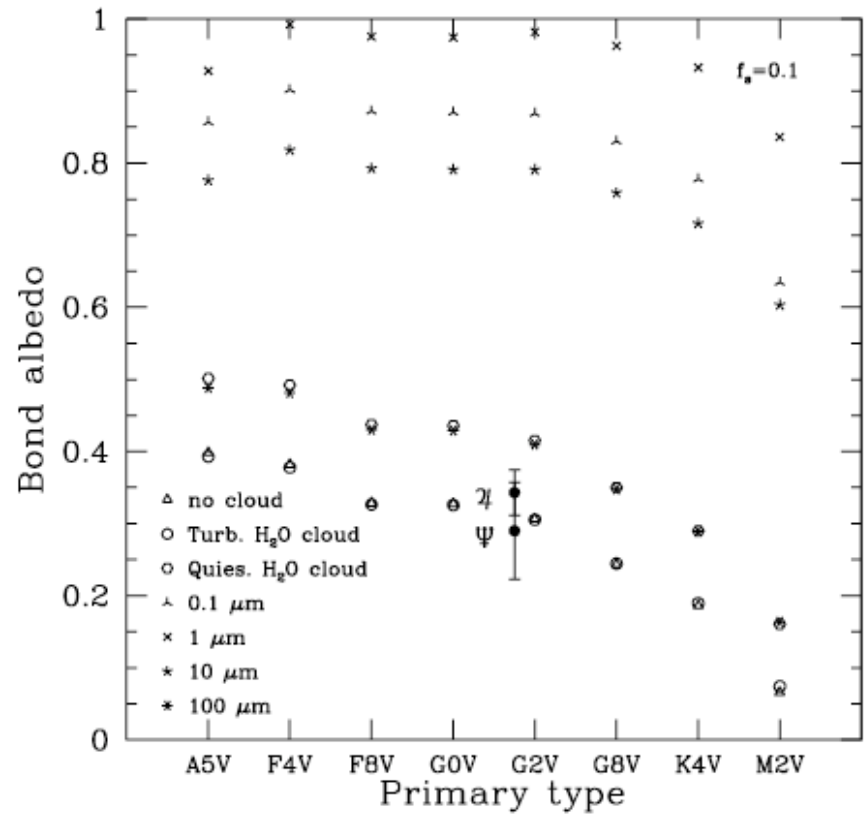
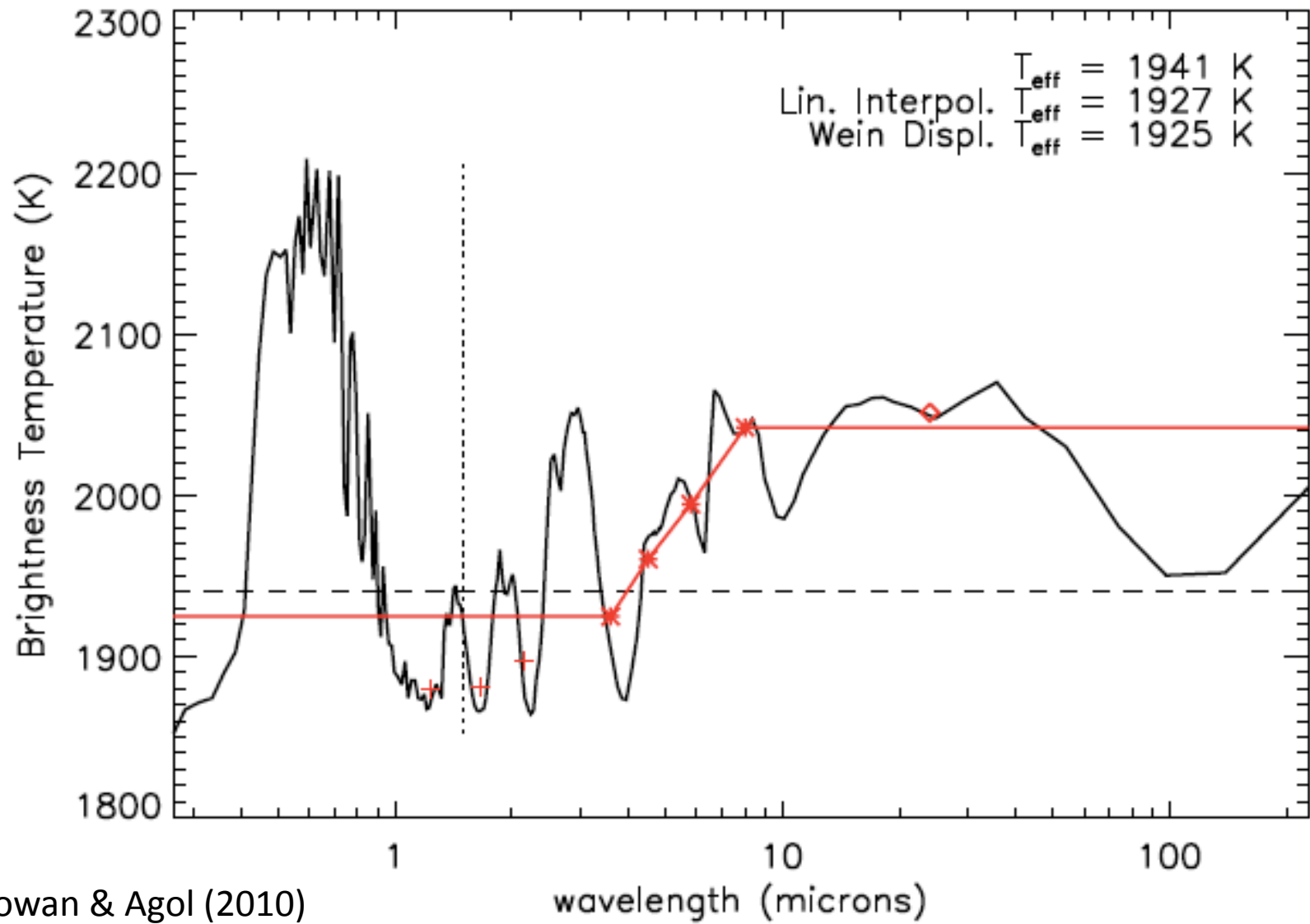
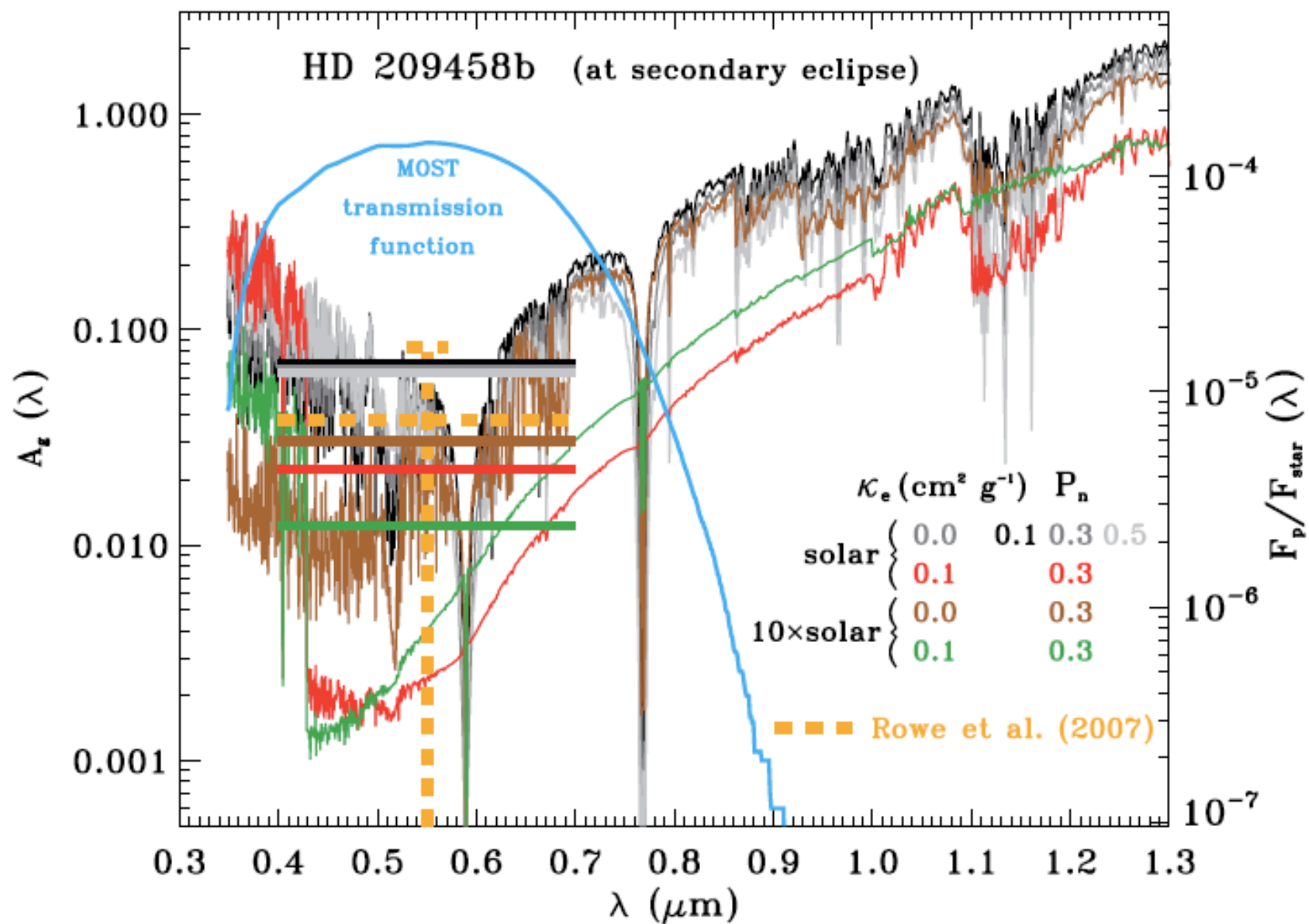


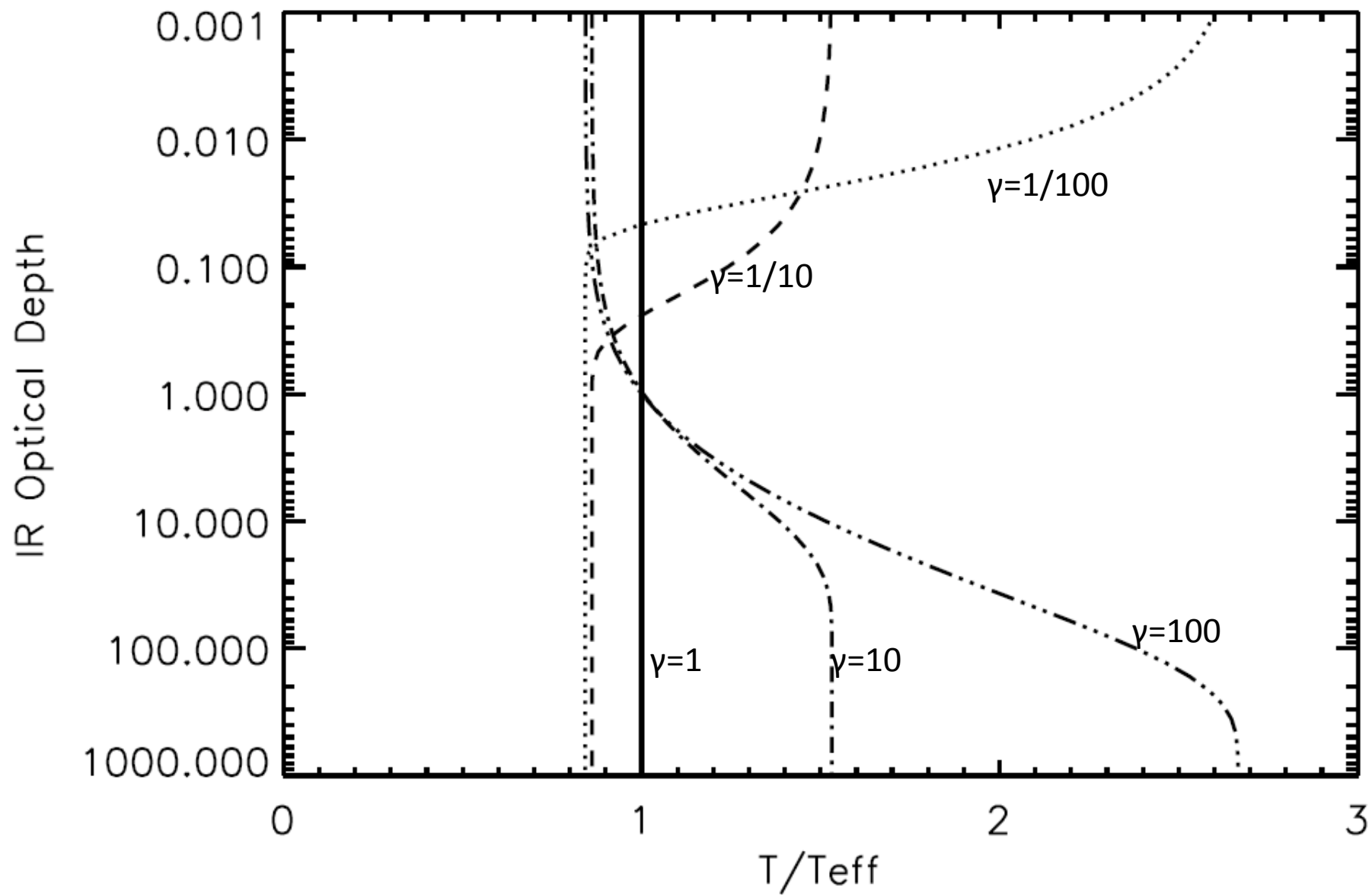
FIG. 8b

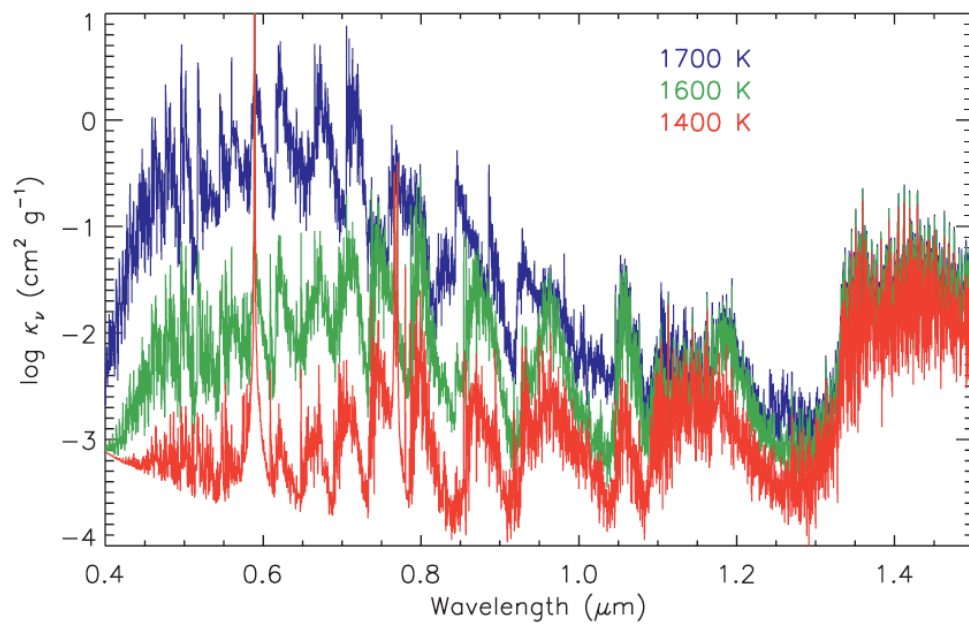
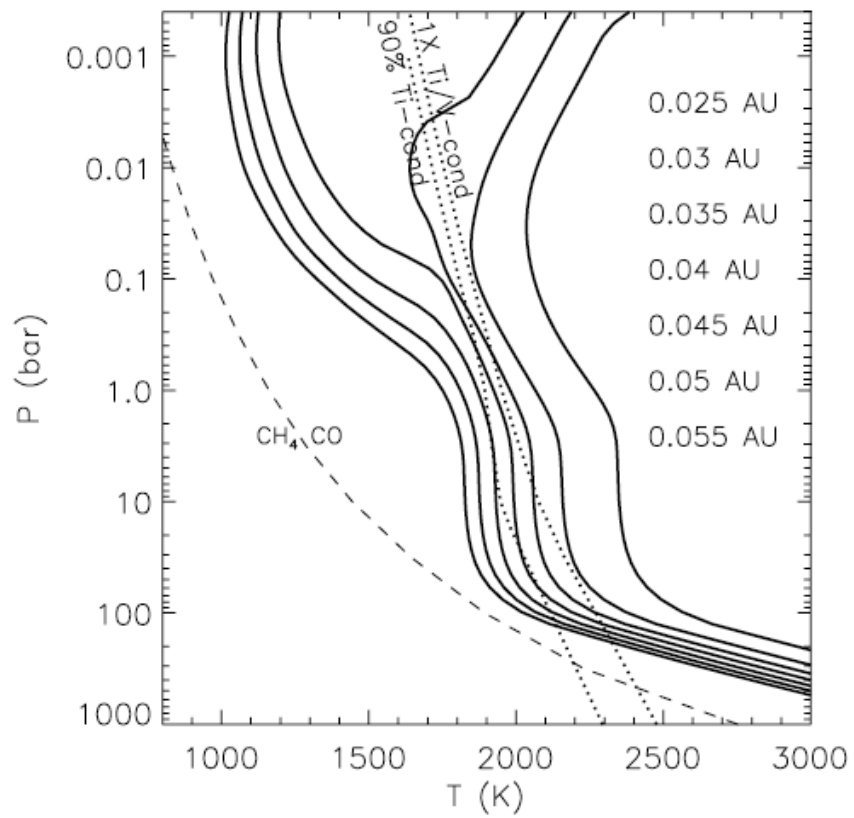
Marley et al. (1999)

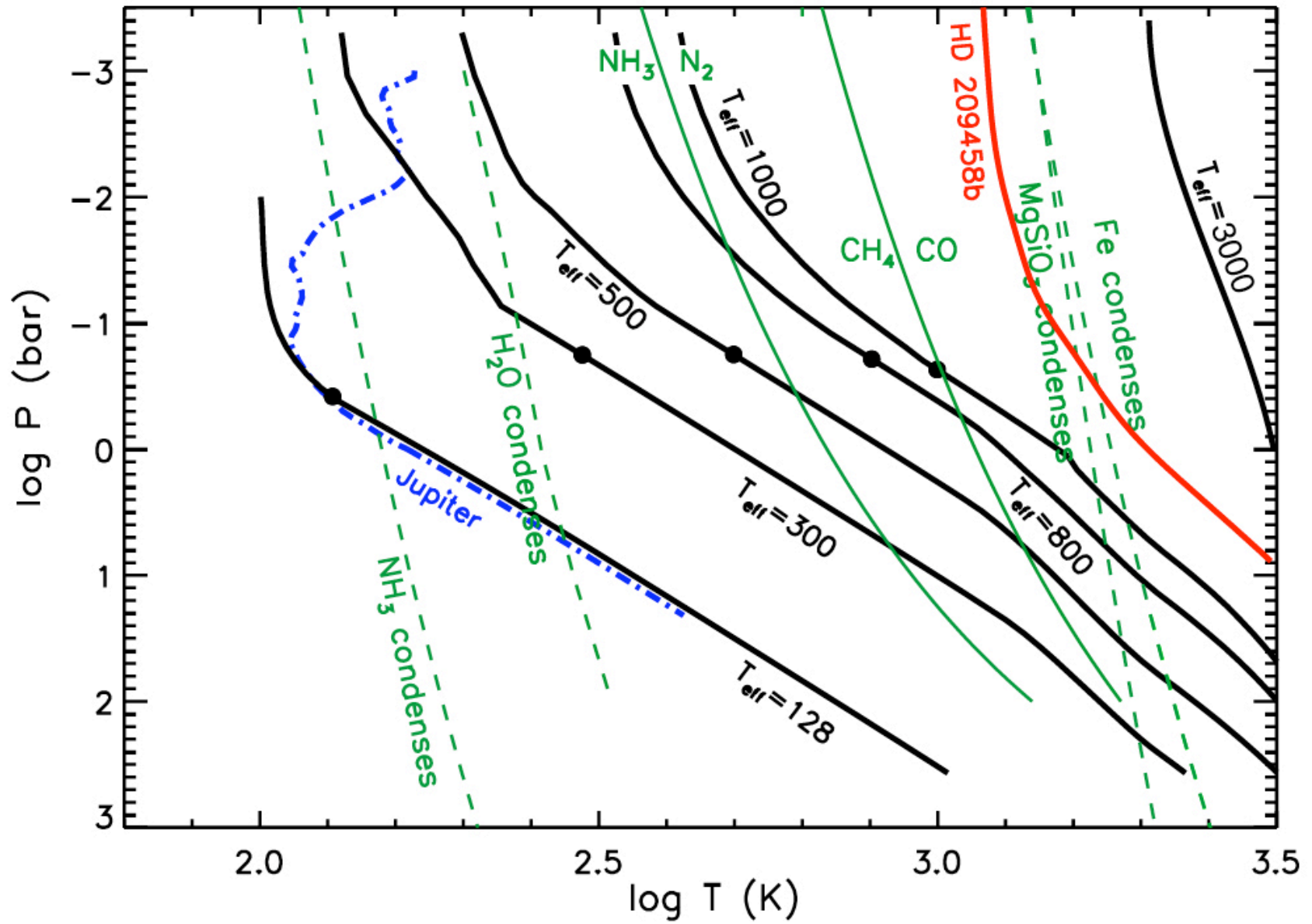




Burrows et al. (2008)







Hubbard et al. (2002)