

MODEL

STAR

Teff = 3000
M = 0.16
R = 0.2
Logg = 5.0
[M/H] = 1

Teff = 3500
M = 0.44
R = 0.45
Logg = 4.8
[M/H] = 1

Teff = 4000
M = 0.64
R = 0.63
Logg = 4.6
[M/H] = 1

Teff = 5000
M = 0.8
R = 0.8
Logg = 4.5
[M/H] = 1

Teff = 7000
M = 1.5
R = 1.7
Logg = 4.2
[M/H] = 1

PLANET

Neptune
M = 0.05
R = 0.35
[M/H] = 100

SuperNeptune
M = 0.09
R = 0.54
[M/H] = 50

Saturn
M = 0.3
R = 0.8
[M/H] = 10

Jupiter
M = 1
R = 1
[M/H] = 3

SuperJupiter
M = 5
R = 0.9
[M/H] = 1

C/O

0.5 Solar

1.0 Solar

1.5 Solar

EACH MODEL CONTAINS

EQUIL TEMP → SETS SEPARATION

75 K

100 K

150 K

180 K

200 K

250 K

300 K

500 K

Pressure/Temperature profile for each Teq

Each Teq has

PHASE

0 deg

45 deg

90 deg

120 deg

140 deg

For each phase:

Stellar Spectrum and cloud-free Albedo, Planet/Star Flux Ratio, and Planet Spectrum from 0.3-2 um at R = 60,000

And cloudy models:

SEDIMENTATION EFFICIENCY F_SED



0.1

0.5

1

3

6

10



VERTICAL MIXING K_ZZ

1×10^9

1×10^{11}

75 MODELS

485 SPECTRA

36,375 TOTAL SPECTRA