Report page ExoTIC-ISM

W17_G141_lc_12850.txt - 190

Input parameters:

Number of systematic models: 50
Wavelength mid point = 12901.146716197552
Wavelength half width = 158.9109718831105

Planet parameters:

Rp/R* = 0.12169232
Epoch (MJD) = 57957.97108811848
Inclination (deg) = 87.34635
Eccentricity = 0.0
Omega (deg) = 0.0
Period (days) = 3.73548535
a/R* = 7.0780354

Stellar parameters:

FeH (dex) = -0.25
Teff (K) = 6550.0
log(g) (cgs) = 4.2

Output parameters:

Limb-darkening coefficients:

C1 = 0.9089519351435547
C2 = -0.9331548432760733
C3 = 0.7913216558399772
C4 = -0.27040121063002964

Top five systematic models by their weight

Check the chi-squared values and the AIC evidence for reasonable fits.
If the chi-squared values far exceed the DOF then it is likely that the input data contains additional noise, double check the spectral extraction.
Model numbers = [48 49 39 44 38]
DOF = [38. 37. 39. 38. 40.]
Chi-squared = [52.33643479 51.86238212 54.69774634 54.61585548 57.13061139]
AIC evidence = [324.98209526 324.7191216 324.30143949 323.84238492 323.58500696]
Weights = [0.29112492512434973 0.2238058221757855 0.1473921465396676 0.09313426170096128 0.07199985994072547]
SDNR = [201.95048468 201.01598185 206.50561189 206.32744681 211.10461369]

Top model Noise Statistics:

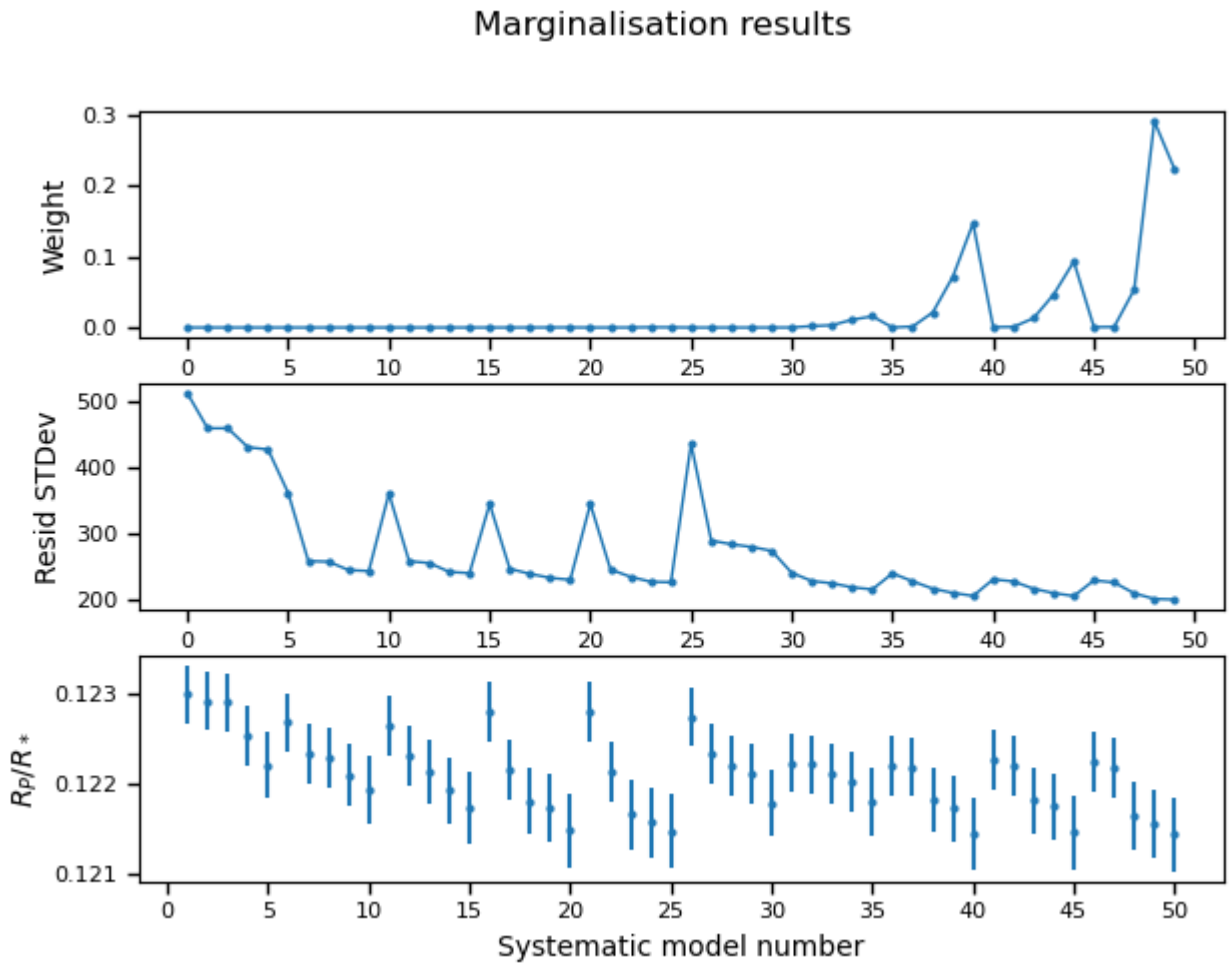
White noise = 0.0002847792673774775
Red noise = 2.2540090392313766e-05
Beta = 1.0366982167305294
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12154542830561092 +/- 0.00041794789915506383
Epoch (MJD) = 57957.971344617545 +/- 0.00040860920136758167
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

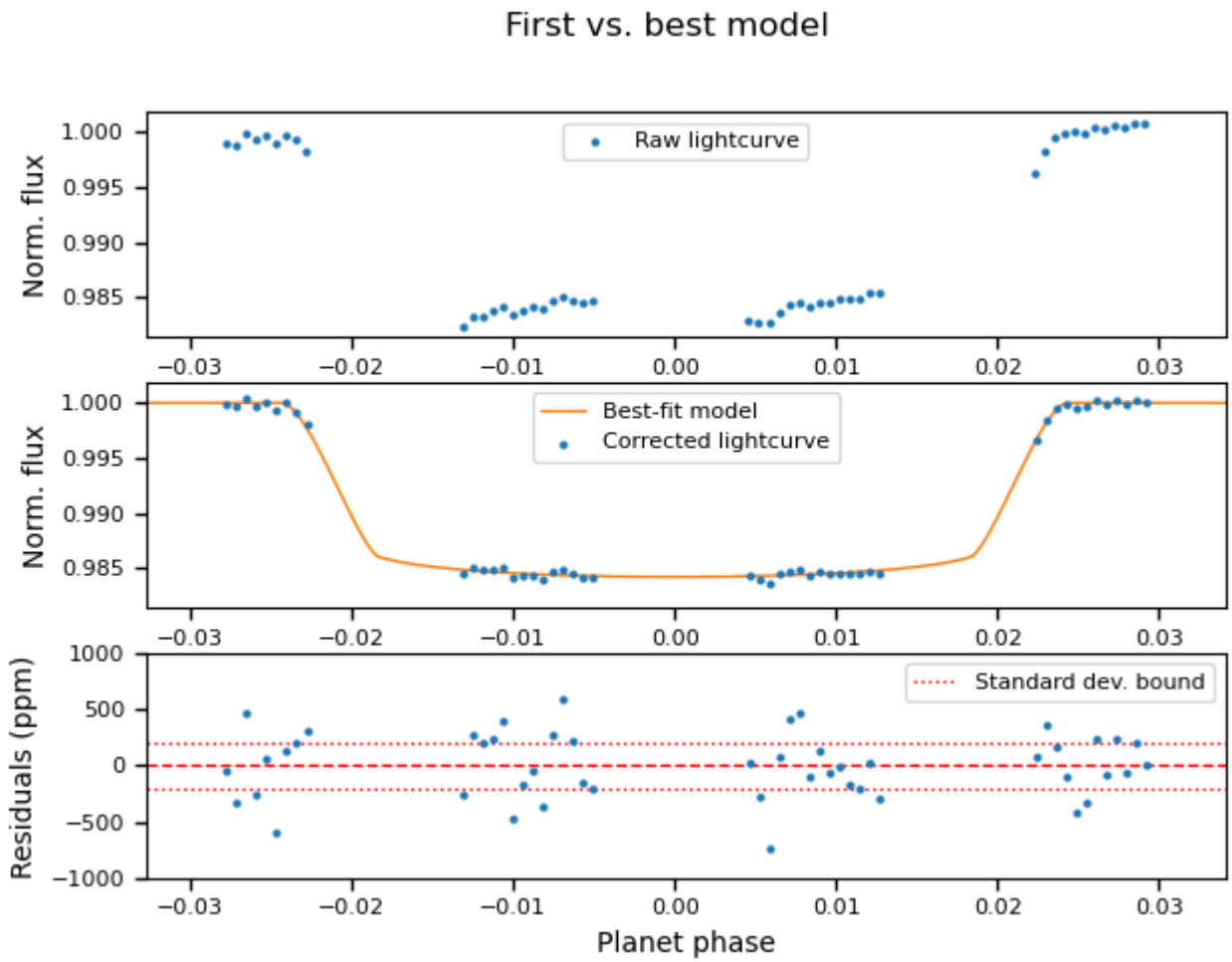
Systematics



Top: Evidence-based weight associated with each systematic model when fit with the data. *Middle:* Standard deviation of the residuals after correcting for each systematic model. *Bottom:* Radius ratio

measured from the transit depth when the light curve has been corrected using each systematic model. *If present, grey crosses mark discarded systematic models (poor AIC evidence).*

Lightcurves



Top: Input lightcurve with no systematic model correction applied. *Middle:* Lightcurve corrected by highest weight systematic model plotted with the smooth planetary transit model centred on the mid-transit time. *Bottom:* Residuals and uncertainties associated with the middle panel lightcurve. The upper and lower standard deviation bounds are shown in dotted lines relative to zero.