Report page ExoTIC-ISM

W17_G102_lc_8588.txt - 8588_clipped

Input parameters:

Number of systematic models: 50
Wavelength mid point = 8578.253780343264
Wavelength half width = 95.09852813007092

Planet parameters:

Rp/R* = 0.1255
Epoch (MJD) = 58021.48064883803
Inclination (deg) = 86.93051272857655
Eccentricity = 0.0
Omega (deg) = 0.0
Period (days) = 3.7354850226
a/R* = 7.025

Stellar parameters:

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

Output parameters:

Limb-darkening coefficients:

C1 = 0.8763747132477385
C2 = -0.8070778474173368
C3 = 0.7973957246241058
C4 = -0.2886069398770283

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 = [49 44 19 48 34]
DOF = [41. 42. 43. 42. 44.]
Chi-squared = [55.32954497 56.33159806 58.79870895 57.86055604 60.11908163]
AIC evidence = [324.1845503 324.18352375 323.44996831 323.41904476 323.28978197]
Weights = [0.22171504690225086 0.22148756354236562 0.10635802503182282 0.10311939079239446 0.09061544355262353]
SDNR = [338.87552132 342.04501559 349.65872468 346.53198072 353.11206233]

Top model Noise Statistics:

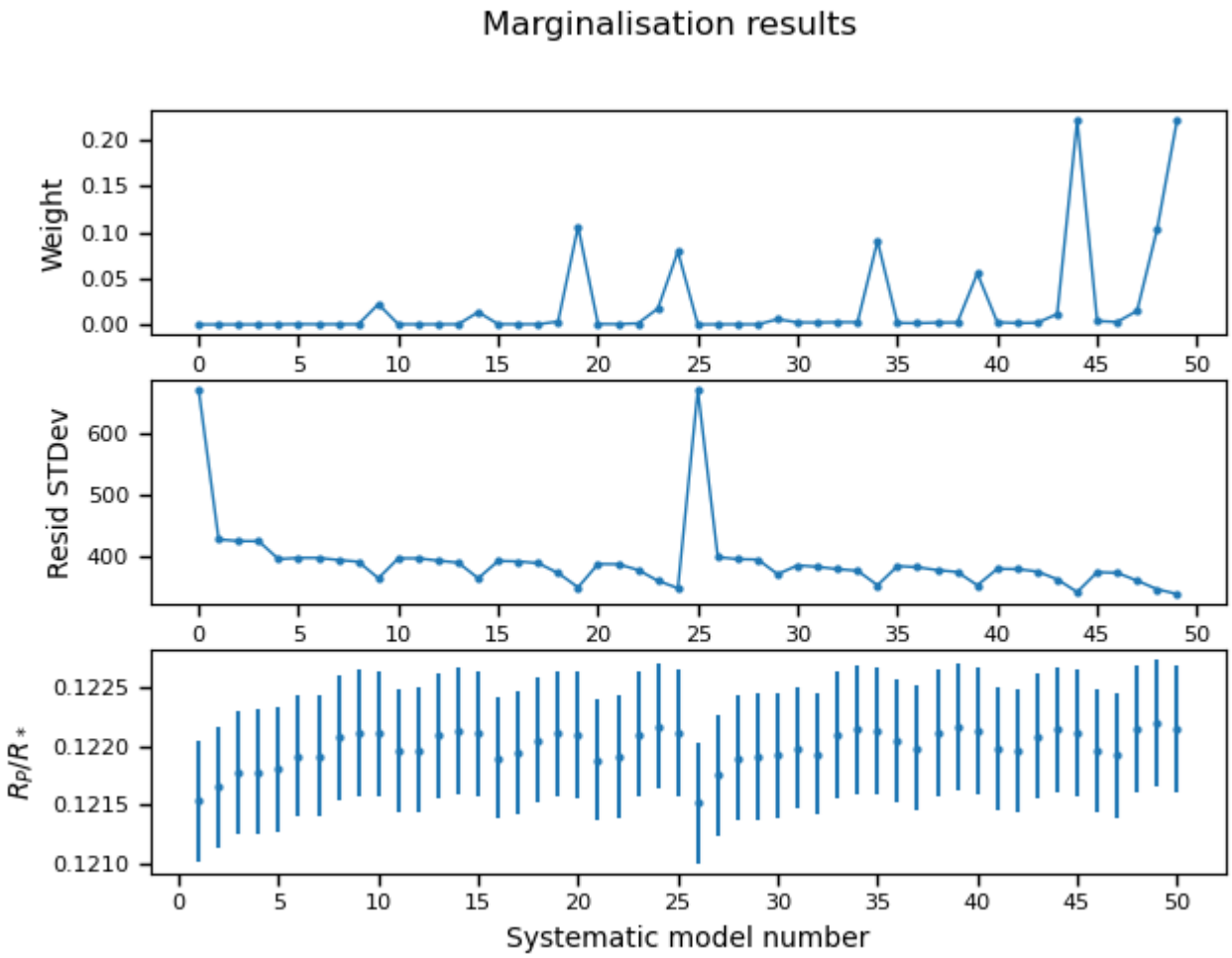
White noise = 0.0004752035742569517
Red noise = 6.511750621885807e-05
Beta = 1.0884037422627904
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12212781072439584 +/- 0.0005399509822456524
Epoch (MJD) = 58021.47843597311 +/- 0.0005945957107441422
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

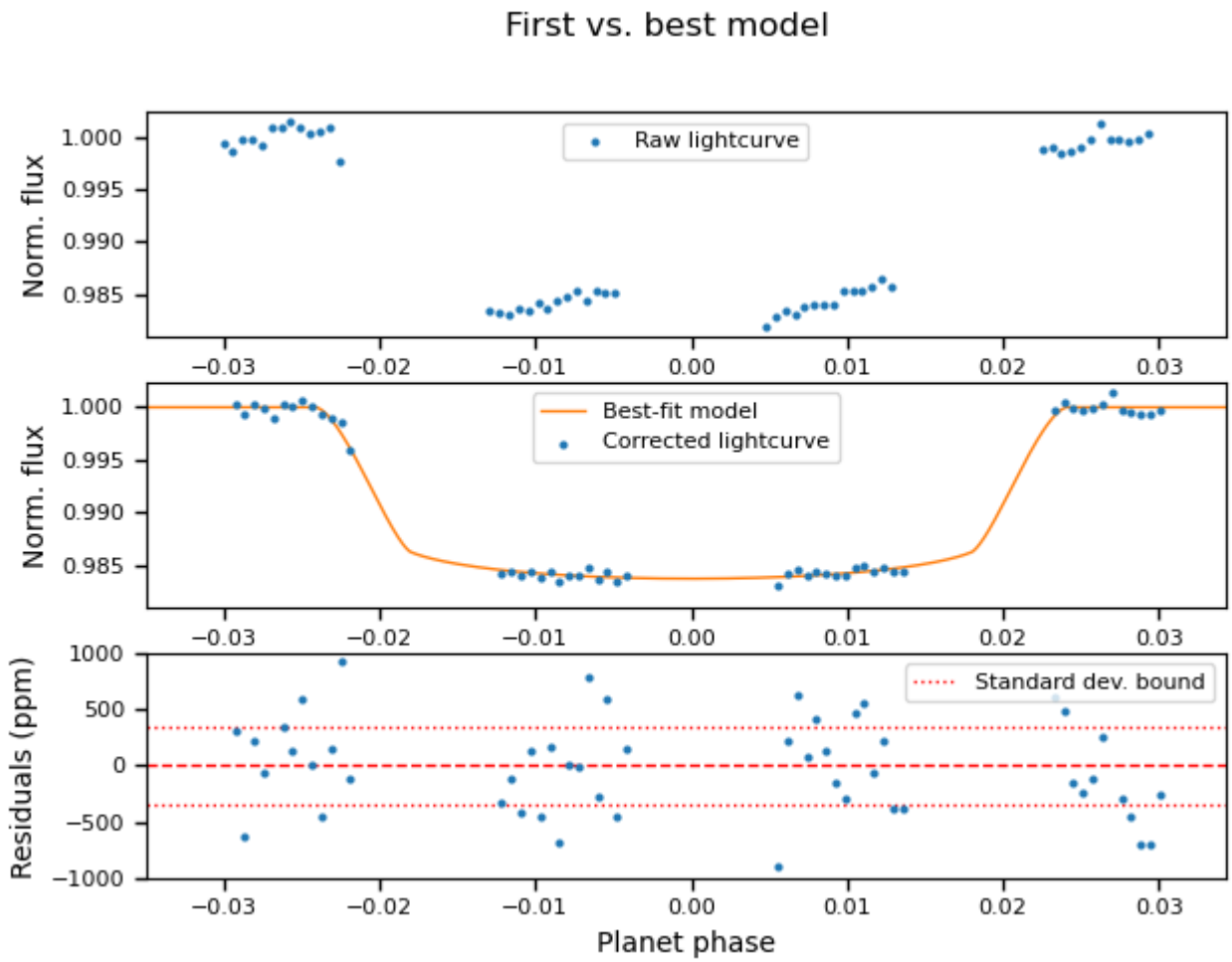
Systematics



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.