Report page ExoTIC-ISM

W17_G102_lc_9281.txt - 9281_clipped

Input parameters:

Number of systematic models: 50
Wavelength mid point = 9279.60542530254
Wavelength half width = 178.30974024388343

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 = 0.8637787532654201
C2 = -0.794661143117203
C3 = 0.7827119514514975
C4 = -0.28379420269097133

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 = [45 48 46 49 47]
DOF = [45. 42. 44. 41. 43.]
Chi-squared = [96.86622903 94.04613929 96.83395781 93.8843947 96.35523357]
AIC evidence = [331.45496073 331.3650056 330.97109634 330.9458779 330.71045846]
Weights = [0.2620722657328306 0.23952676468856474 0.16154050283508511 0.15751764054138845 0.12447663418034159]
SDNR = [274.14490258 270.171661 274.08716539 269.93425274 273.42574979]

Top model Noise Statistics:

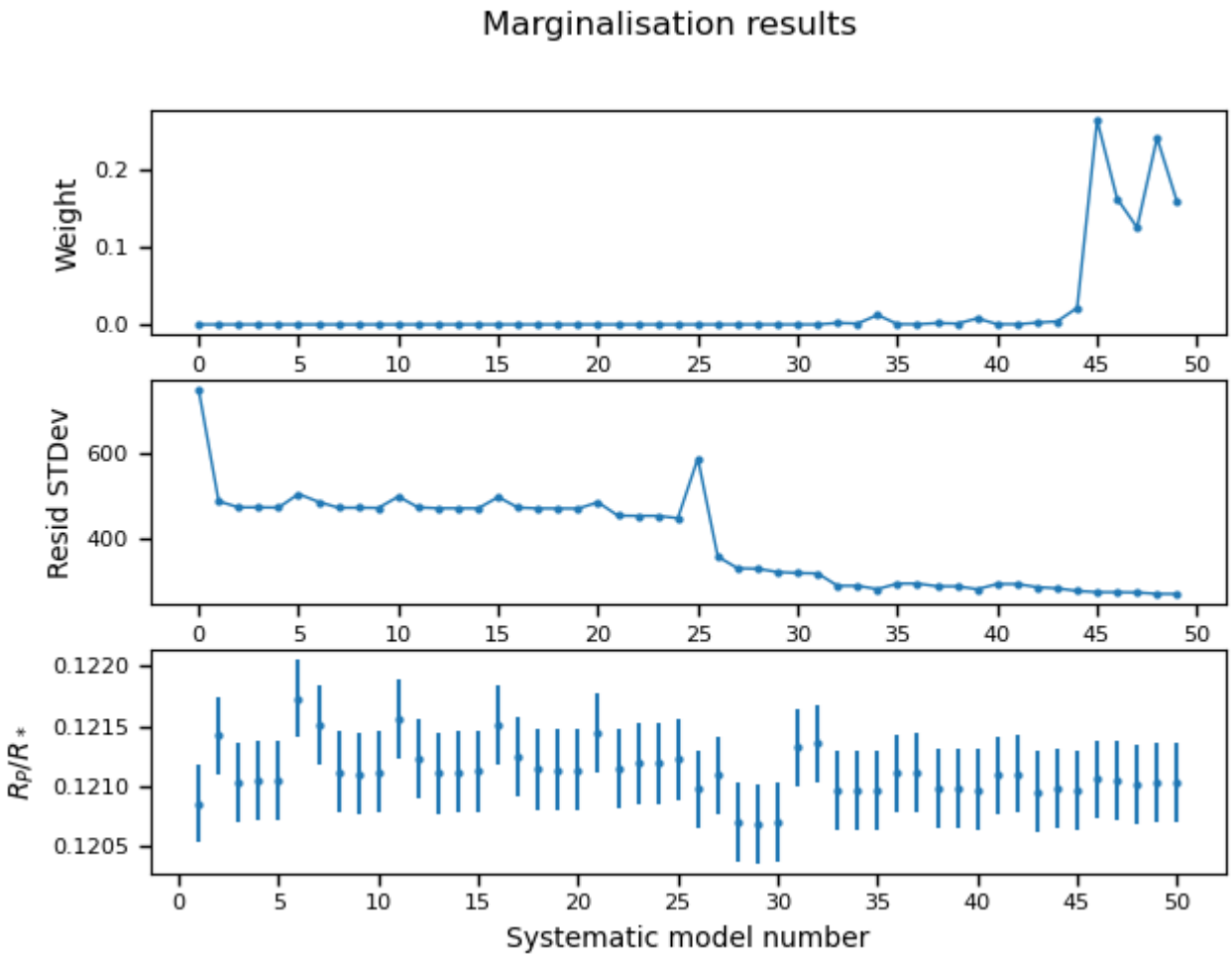
White noise = 0.00037713139468514763
Red noise = 9.429424187562657e-05
Beta = 1.2615597890399775
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12103750671199066 +/- 0.0003288252415379269 6
Epoch (MJD) = 58021.478881213276 +/- 0.0003658487211929647
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

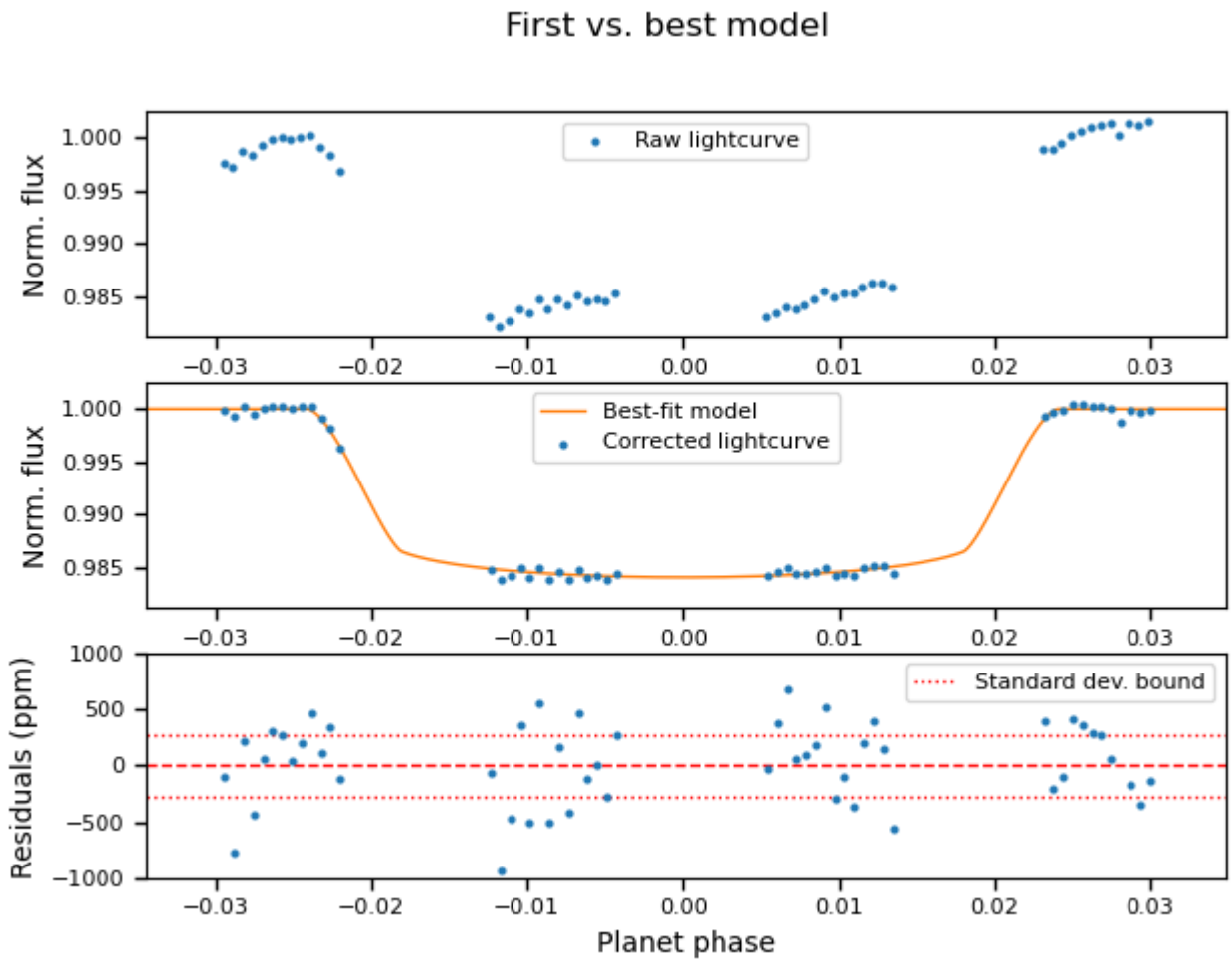
Systematics



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.