Report page ExoTIC-ISM

W17_G102_lc_8588.txt - 190

Input parameters:

Number of systematic models: 50
Wavelength mid point = 8602.028412375781
Wavelength half width = 71.32389609755319

Planet parameters:

Rp/R* = 0.12169232
Epoch (MJD) = 58021.48064883803
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 = 0.8857361565172863
C2 = -0.8327831350867563
C3 = 0.8168482406445599
C4 = -0.2927868051720134

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 34 44 29 48]
DOF = [37. 40. 38. 41. 38.]
Chi-squared = [59.34718279 62.77052699 60.80603818 64.5093575 61.51782148]
AIC evidence = [295.17575577 294.96408367 294.94632807 294.59466841 294.59043642]
Weights = [0.1899014450326763 0.15367394647942495 0.1509694546520205 0.10620995797242037 0.10576142841803125]
SDNR = [364.33356439 374.67734477 368.97999472 379.51184596 370.84345599]

Top model Noise Statistics:

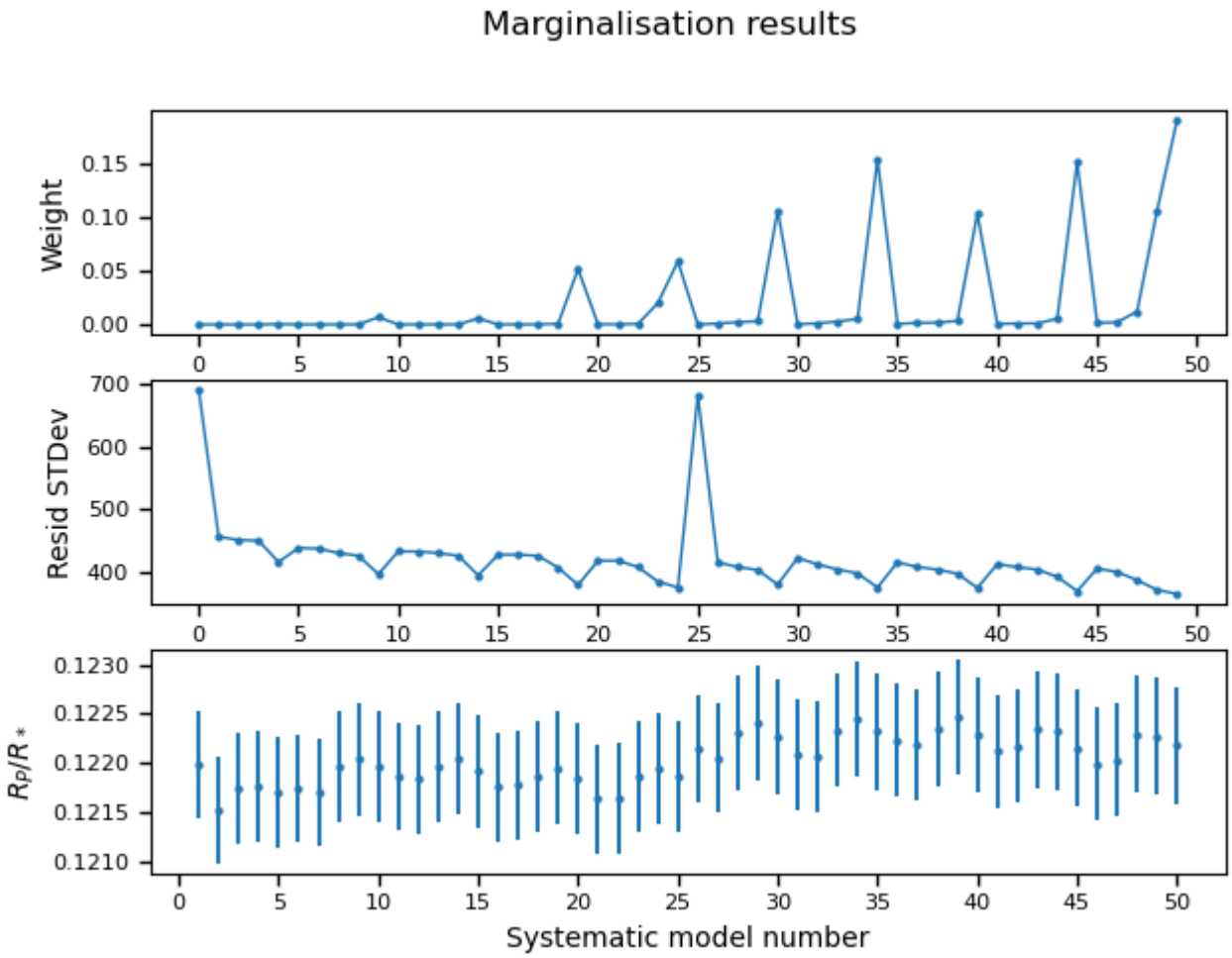
White noise = 0.0004968707564906817
Red noise = 0.0001419405777346845
Beta = 1.3822736528878001
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12218799818205064 +/- 0.0006065840632704817
Epoch (MJD) = 58021.480051822466 +/- 0.0005958529733560256
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

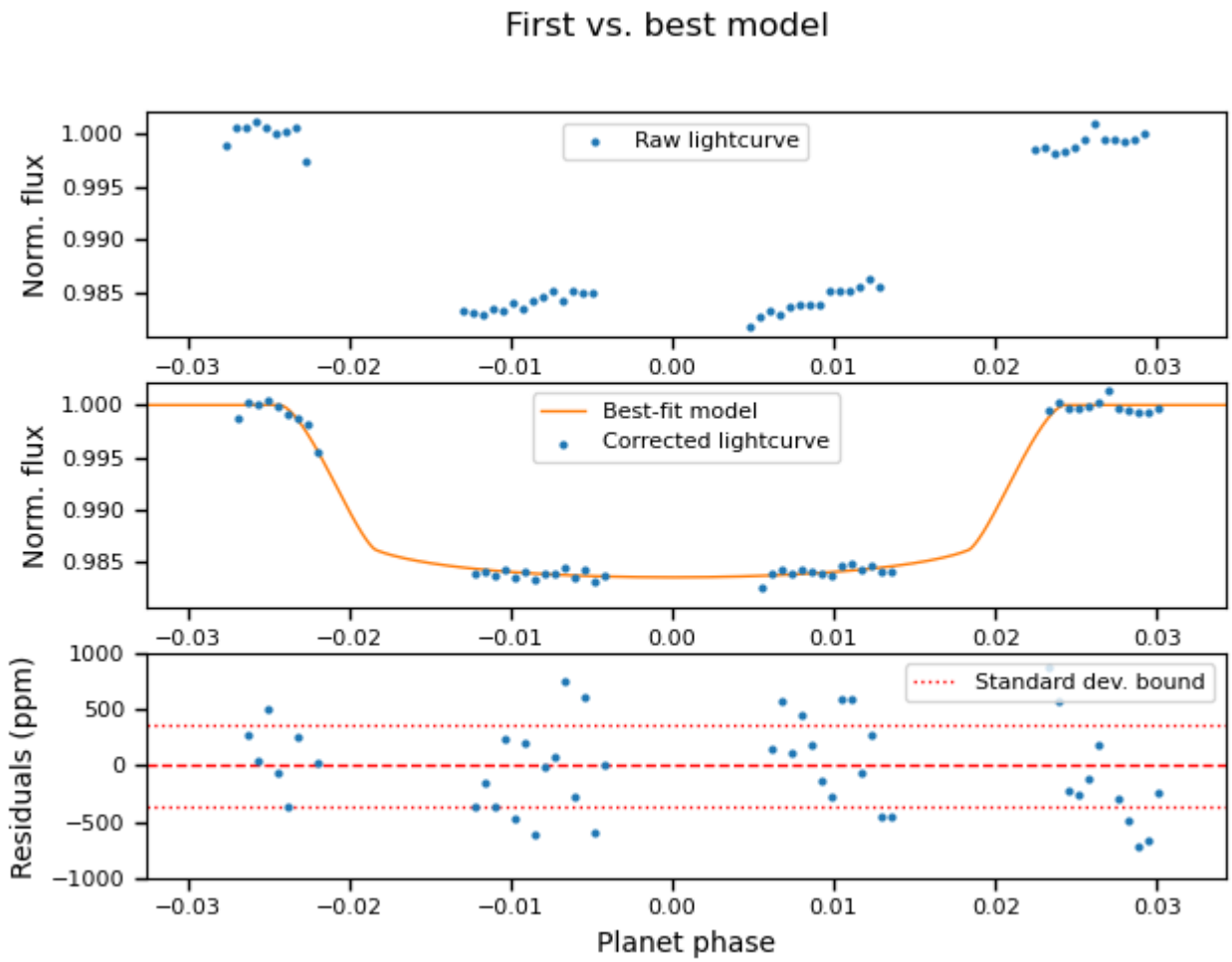
Systematics



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.