Report page ExoTIC-ISM

W17_G102_lc_10528.txt - 10528_clipped

Input parameters:

Number of systematic models: 50
Wavelength mid point = 10527.773607009722
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 = 0.8444790766544659
C2 = -0.8017011450323023
C3 = 0.7796750487953075
C4 = -0.28215235267492206

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 47 44 43]
DOF = [42. 41. 43. 42. 43.]
Chi-squared = [80.52568117 80.46743374 82.71766144 82.94289312 85.12247238]
AIC evidence = [326.13201798 325.6611417 325.53602784 324.923412 324.33362237]
Weights = [0.31974505035263606 0.19966634099302882 0.17618486726861549 0.09548011295184469 0.052938367328998995]
SDNR = [314.63903229 314.54294971 318.75682774 319.42741897 323.56829008]

Top model Noise Statistics:

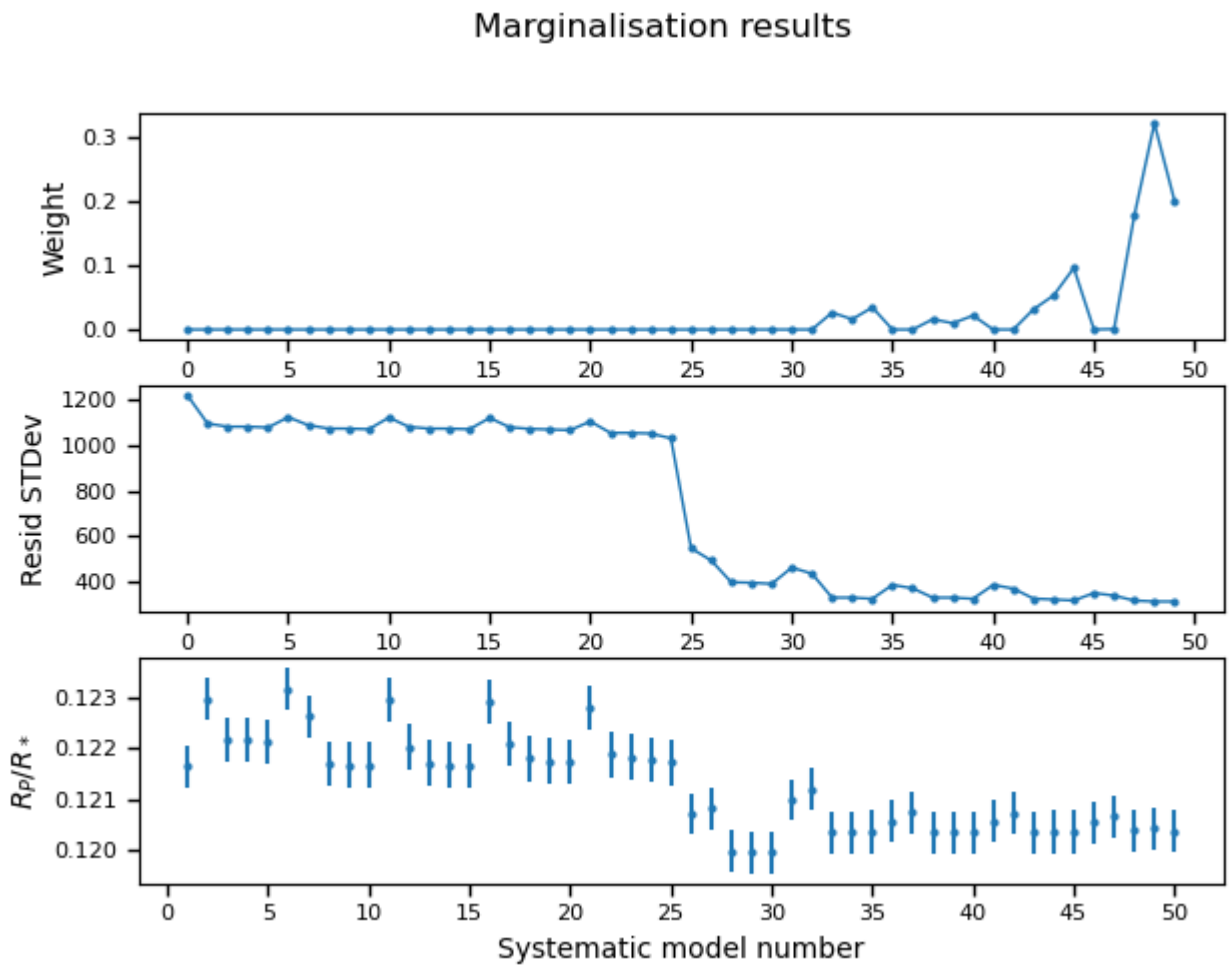
White noise = 0.0004092226626033387
Red noise = 0.00018326465826241445
Beta = 1.6420398430888967
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.1203924399901868 +/- 0.0004184836734611552
Epoch (MJD) = 58021.479122592704 +/- 0.00047787407838537196
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

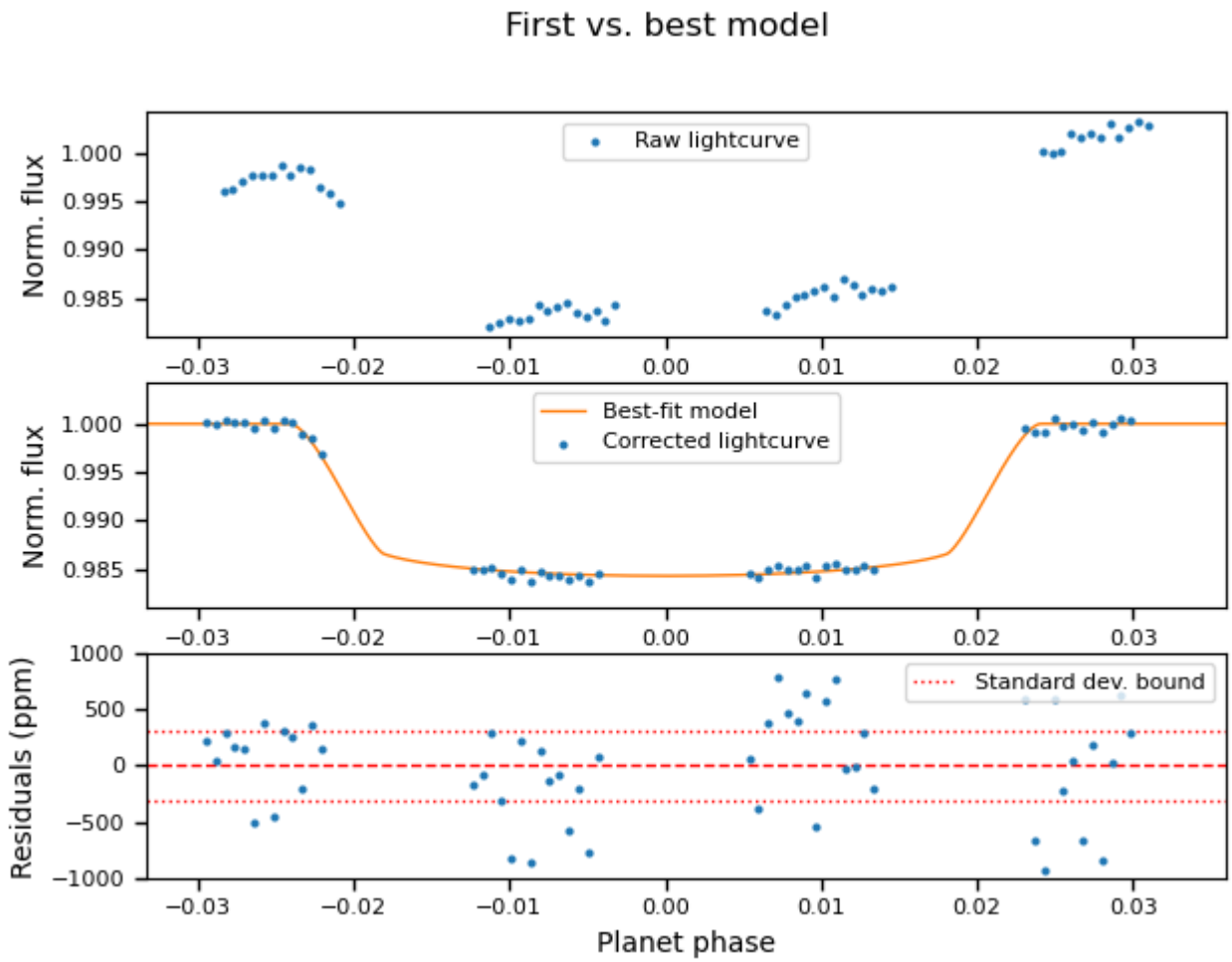
Systematics



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.