Report page ExoTIC-ISM

W17_G102_lc_10722.txt - 10528_clipped

Input parameters:

Number of systematic models: 50
Wavelength mid point = 10717.970663269864
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 = 0.8447454650275423
C2 = -0.8130322592207289
C3 = 0.7839299387524209
C4 = -0.2821998281576621

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 = [47 45 48 49 46]
DOF = [43. 45. 42. 41. 44.]
Chi-squared = [69.09092936 71.67323594 68.73867064 68.13944506 71.33627986]
AIC evidence = [331.82963702 331.53848373 331.50576638 331.30537918 331.20696177]
Weights = [0.20846753522231712 0.1558088649129914 0.1507937007355198 0.12341164483327412 0.11184433875683164]
SDNR = [293.81250493 299.23259374 293.05445131 291.75476141 298.47193987]

Top model Noise Statistics:

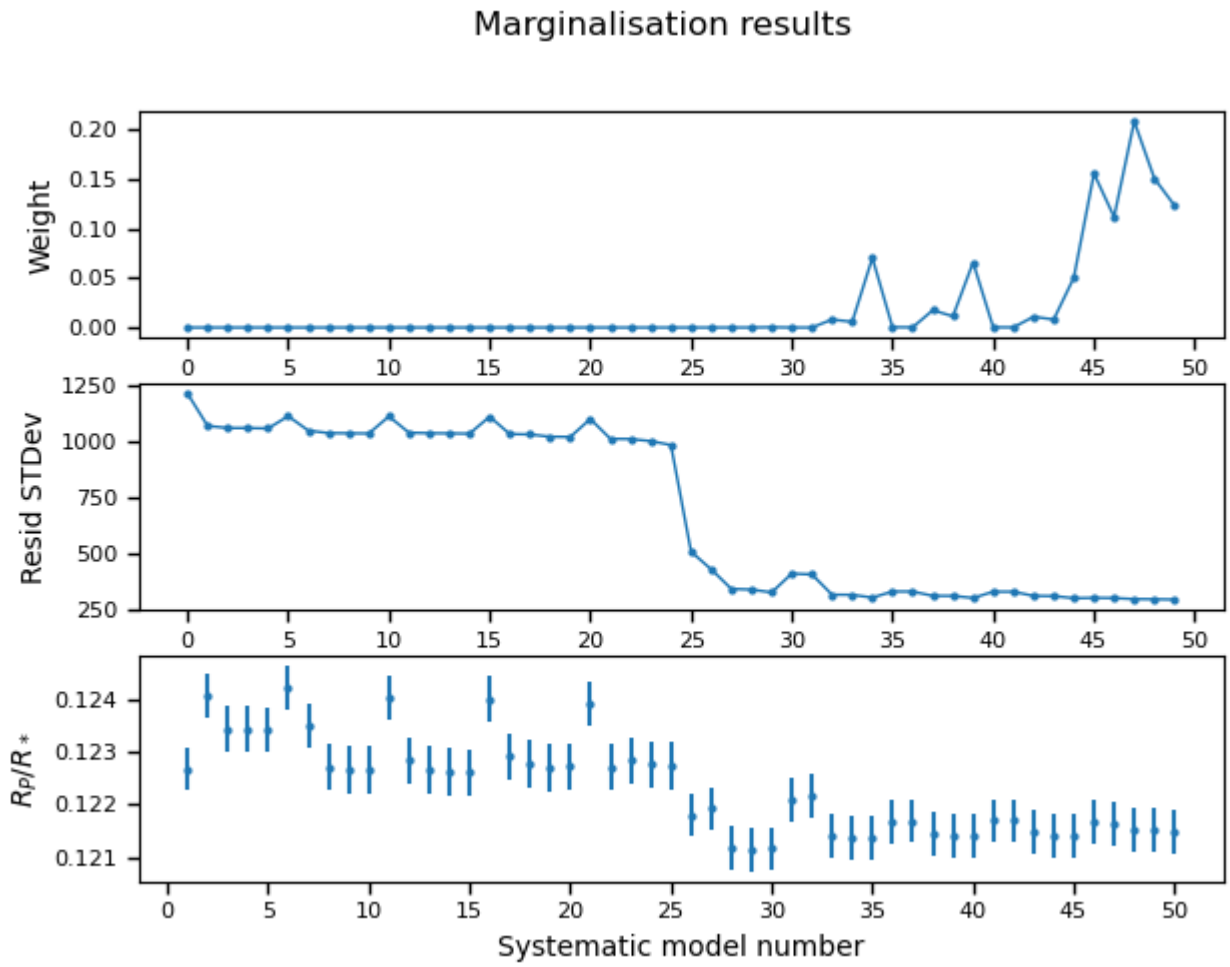
White noise = 0.00041237121078613304
Red noise = 5.349504773644283e-05
Beta = 1.0796995741207456
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12152816140121357 +/- 0.0004294154927574563
Epoch (MJD) = 58021.47874205433 +/- 0.0004488726002042904 6
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

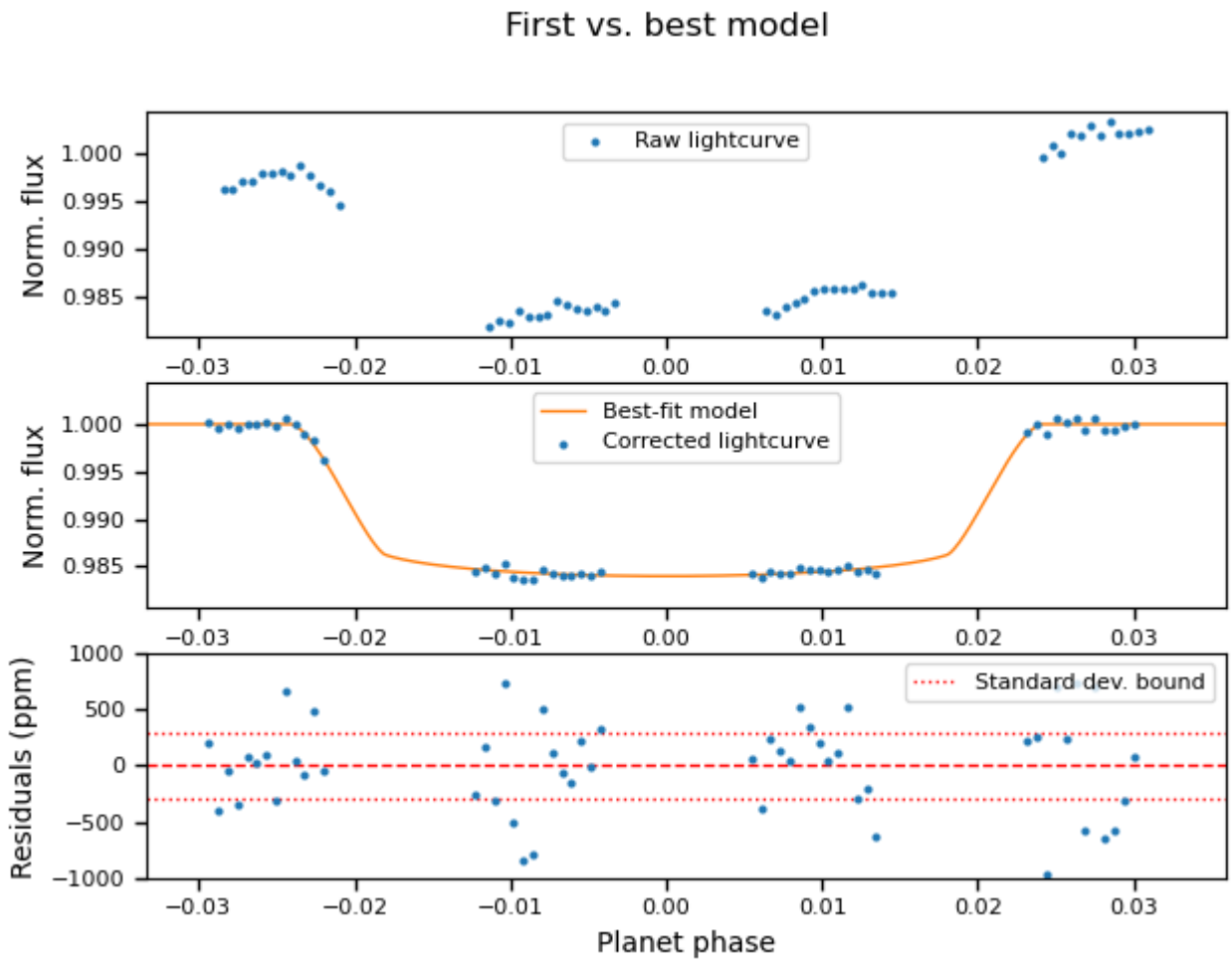
Systematics



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.