Report page ExoTIC-ISM

W17_G141_lc_13917.txt - 13917

Input parameters:

Number of systematic models: 50
Wavelength mid point = 13922.717249731833
Wavelength half width = 90.80626964749172

Planet parameters:

Rp/R* = 0.1255
Epoch (MJD) = 57957.97108811848
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 = 0.9734908718711904
C2 = -1.081455296465041
C3 = 0.9270441218336558
C4 = -0.3151107367802786

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 = [38 43 39 48 44]
DOF = [45. 44. 44. 43. 43.]
Chi-squared = [67.75420709 67.29400797 67.68537235 67.07888706 67.23220263]
AIC evidence = [334.2142143 333.94431386 333.74863167 333.55187431 333.47521653]
Weights = [0.24323131970175443 0.18569628876290986 0.15269314084919386 0.12542060607711336 0.11616541296047474]
SDNR = [320.00704269 319.05493093 319.85221464 318.56366444 318.91371454]

Top model Noise Statistics:

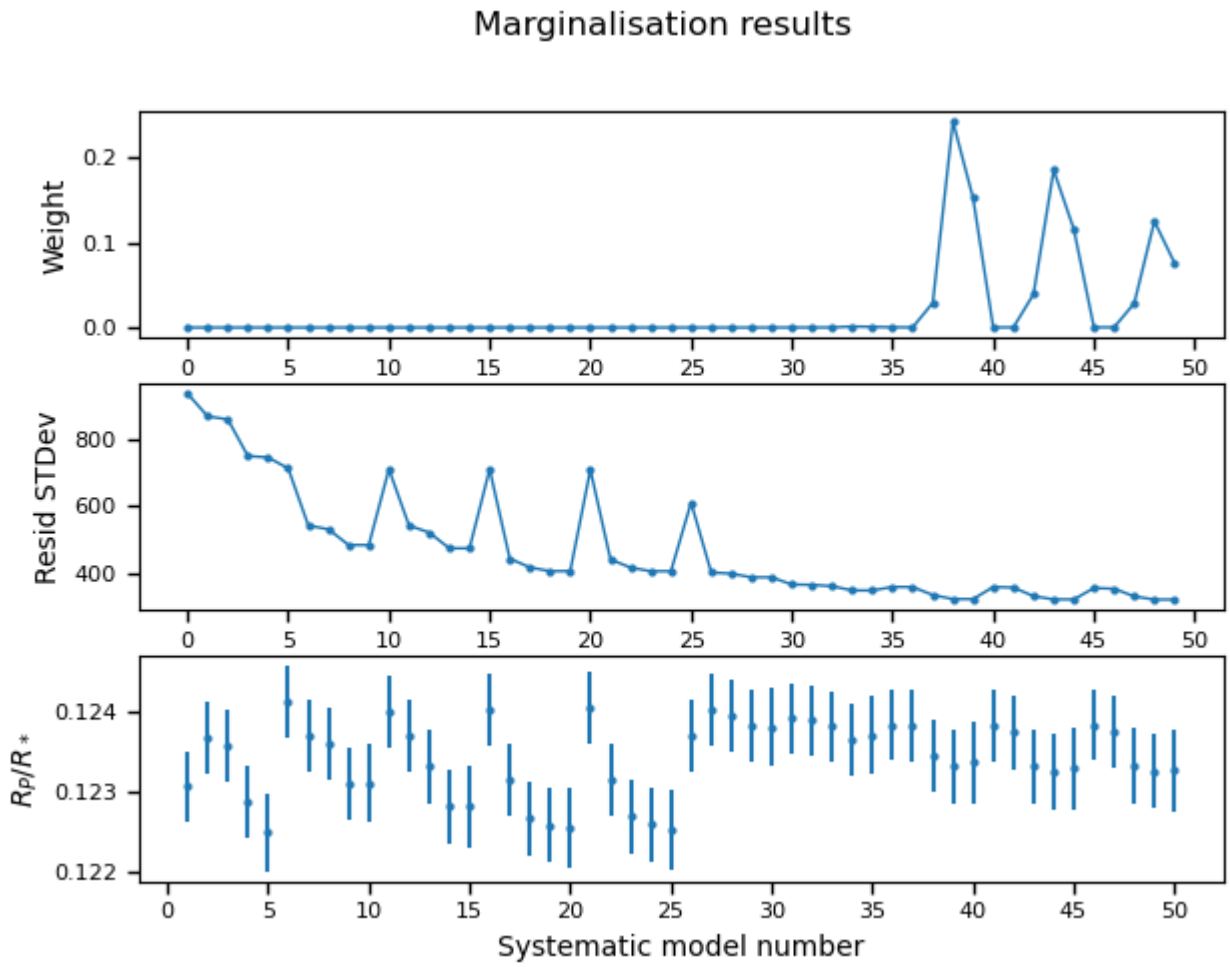
White noise = 0.0
Red noise = 0.0
Beta = 1.0
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12330292797409816 +/- 0.0004826622335859698 7
Epoch (MJD) = 57957.96899692163 +/- 0.0005776879223637075
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

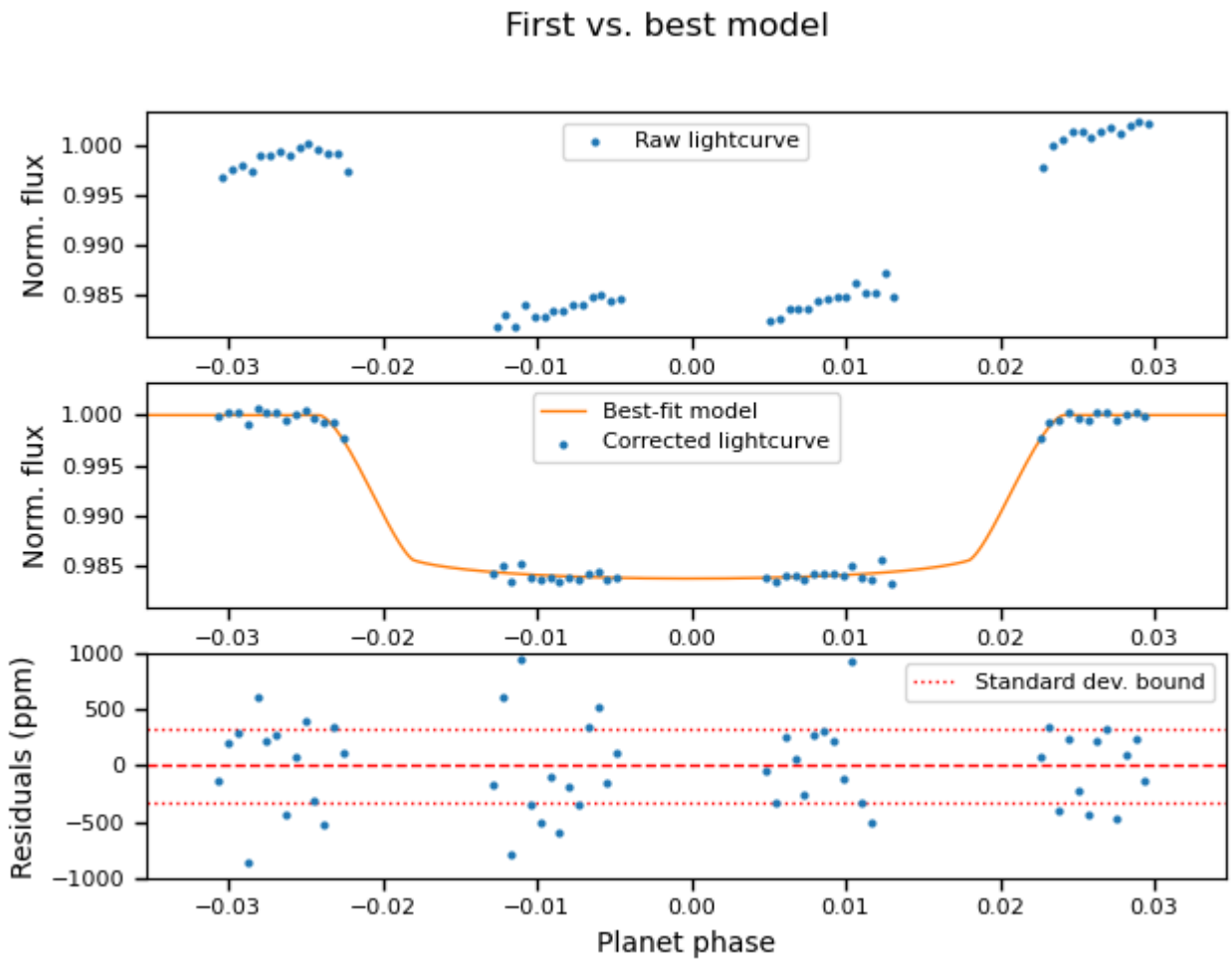
Systematics



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.