Report page ExoTIC-ISM

W17_G102_lc_10722.txt - 190

Input parameters:

Number of systematic models: 50
Wavelength mid point = 10741.745295302382
Wavelength half width = 71.32389609755228

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 = 0.8480897094541984
C2 = -0.8236582233406979
C3 = 0.7966515834548153
C4 = -0.28867518706729184

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 46 45 48 49]
DOF = [39. 40. 41. 38. 37.]
Chi-squared = [71.74120878 73.18467199 74.56551118 71.58666606 71.3509603]
AIC evidence = [302.47663234 302.25490073 302.06448113 302.05390369 301.67175658]
Weights = [0.25687948208985084 0.2057939500086603 0.1701117935014426 0.16832192943831467 0.11486198450995247]
SDNR = [310.85762609 313.8611097 316.90822381 310.5230224 310.03146541]

Top model Noise Statistics:

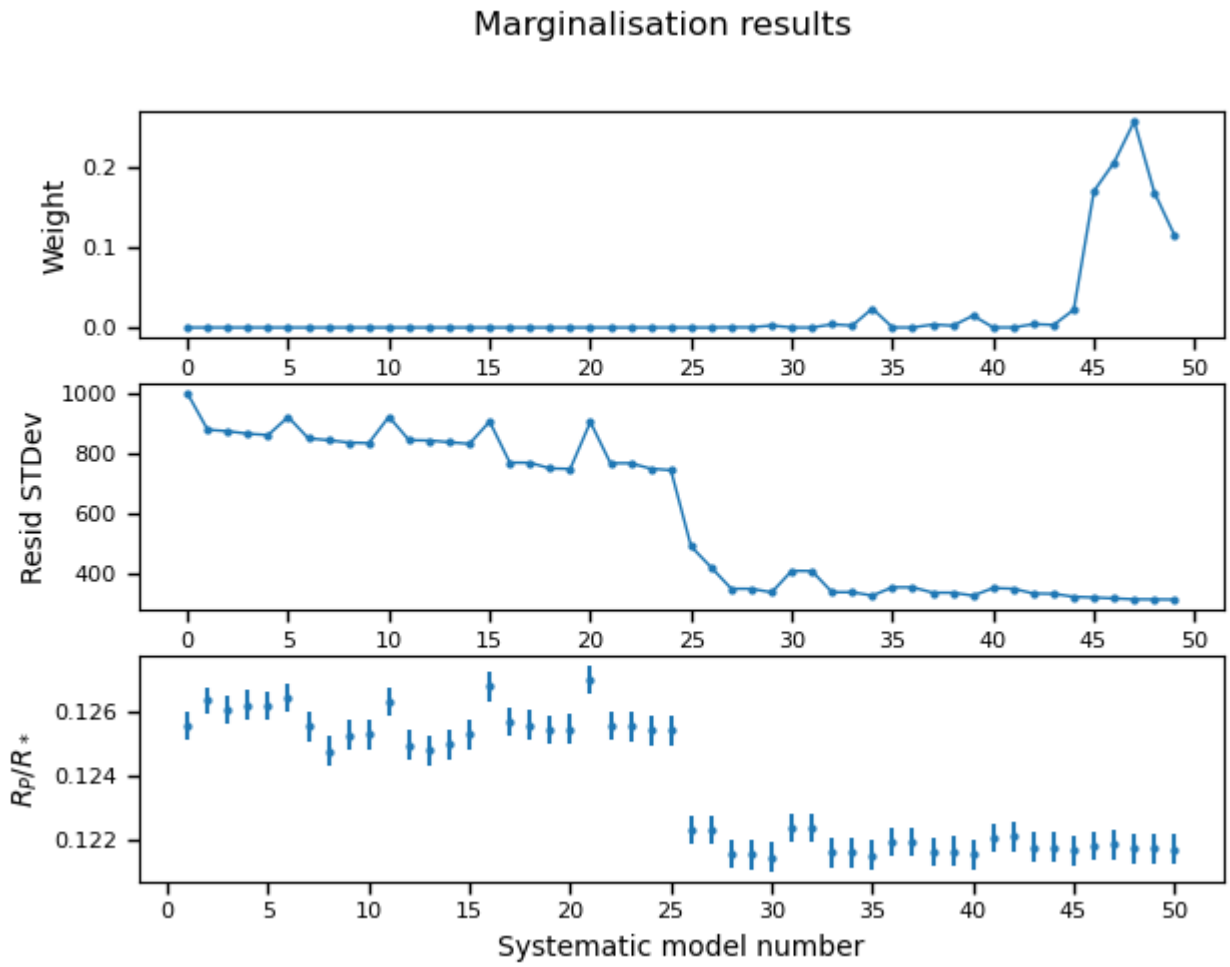
White noise = 0.0004146514803818243
Red noise = 0.00015200859949386983
Beta = 1.5603558892913787
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12177679650067467 +/- 0.00046393843206725584
Epoch (MJD) = 58021.4804230453 +/- 0.0004382882753437236
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

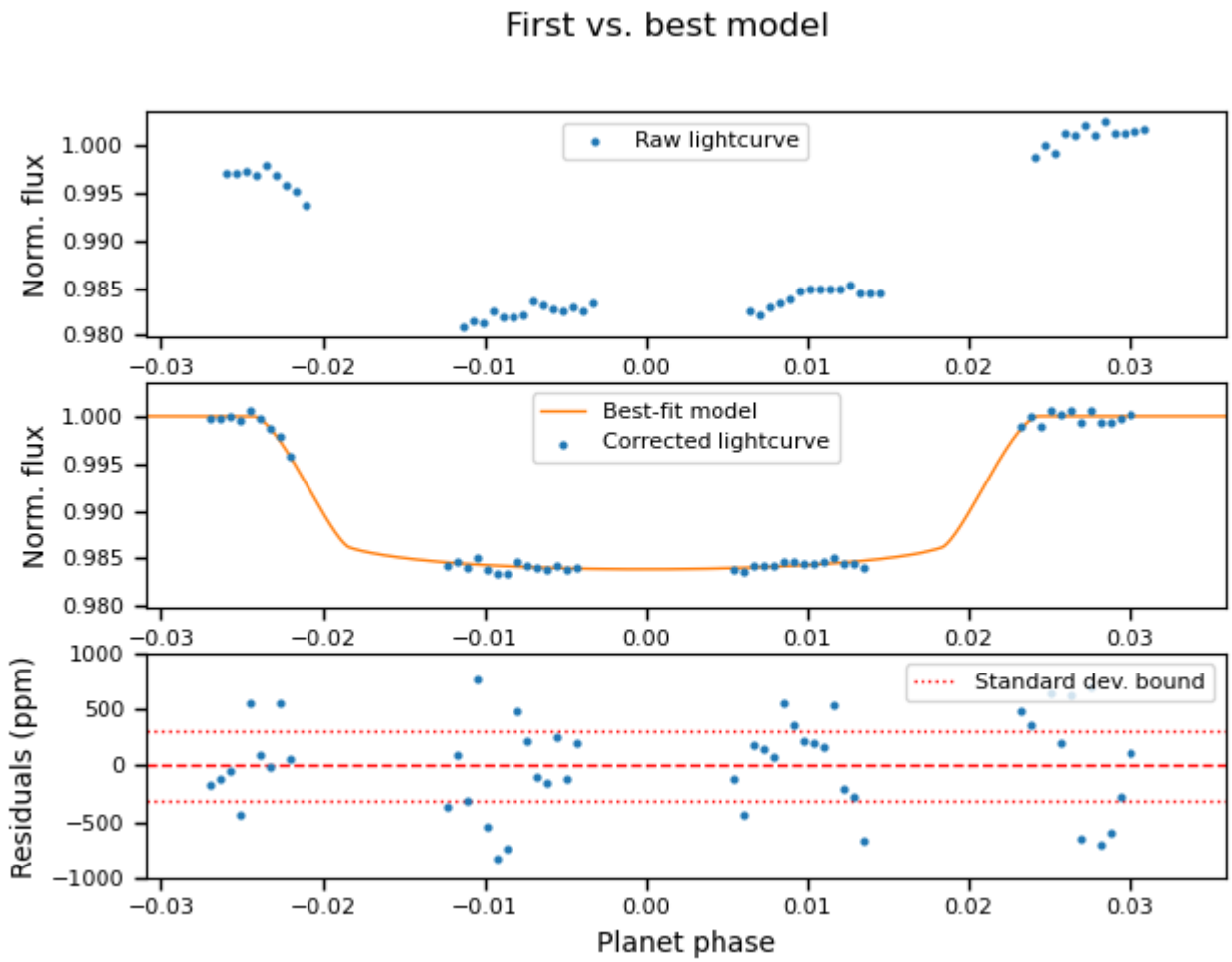
Systematics



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.