

Report page ExoTIC-ISM

W17_G141_lc_11589.txt - 190

Input parameters:

Number of systematic models: 50
Wavelength mid point = 11629.85894113267
Wavelength half width = 68.10470223561788

Planet parameters:

$R_p/R^* = 0.12169232$
Epoch (MJD) = 57957.97108811848
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:

$C1 = 0.8516004781883769$
 $C2 = -0.8376983223604695$
 $C3 = 0.7865516933934371$
 $C4 = -0.2819293377902776$

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 = [40 45 41 49 46]
DOF = [42. 41. 41. 37. 40.]
Chi-squared = [61.93191572 61.2639193 61.91880705 58.18984374 61.25042099]
AIC evidence = [307.8594987 307.69349691 307.36605303 307.23053469 307.20024606]
Weights = [0.11048500384118537 0.09358573930280055 0.06745320746771465
0.0589044001832479 0.057147015549489394]
SDNR = [294.04035488 292.3784285 294.00183869 284.90830109 292.33920668]

Top model Noise Statistics:

White noise = 0.0004020055620122207

Red noise = 0.00011069585730846623

Beta = 1.360277427517087

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.

$R_p/R^* = 0.12270858080308904 \pm 0.0004895821200291671$

Epoch (MJD) = 57957.9706218613 \pm 0.0004696461155372941

Inclination (rad) = None \pm None

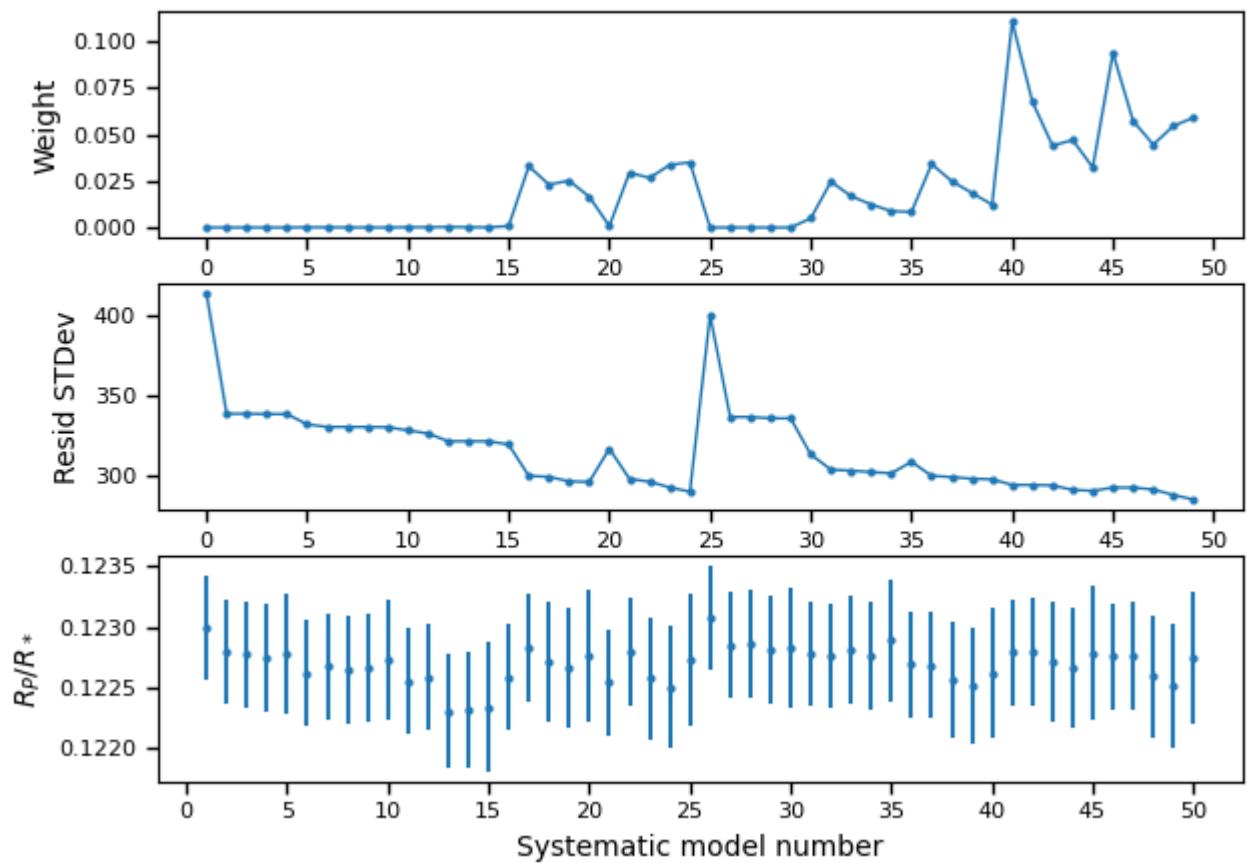
Inclination (deg) = None \pm None

System density ($M_s + M_p/R^3$) = None \pm None

$a/R^* =$ None \pm None

Systematics

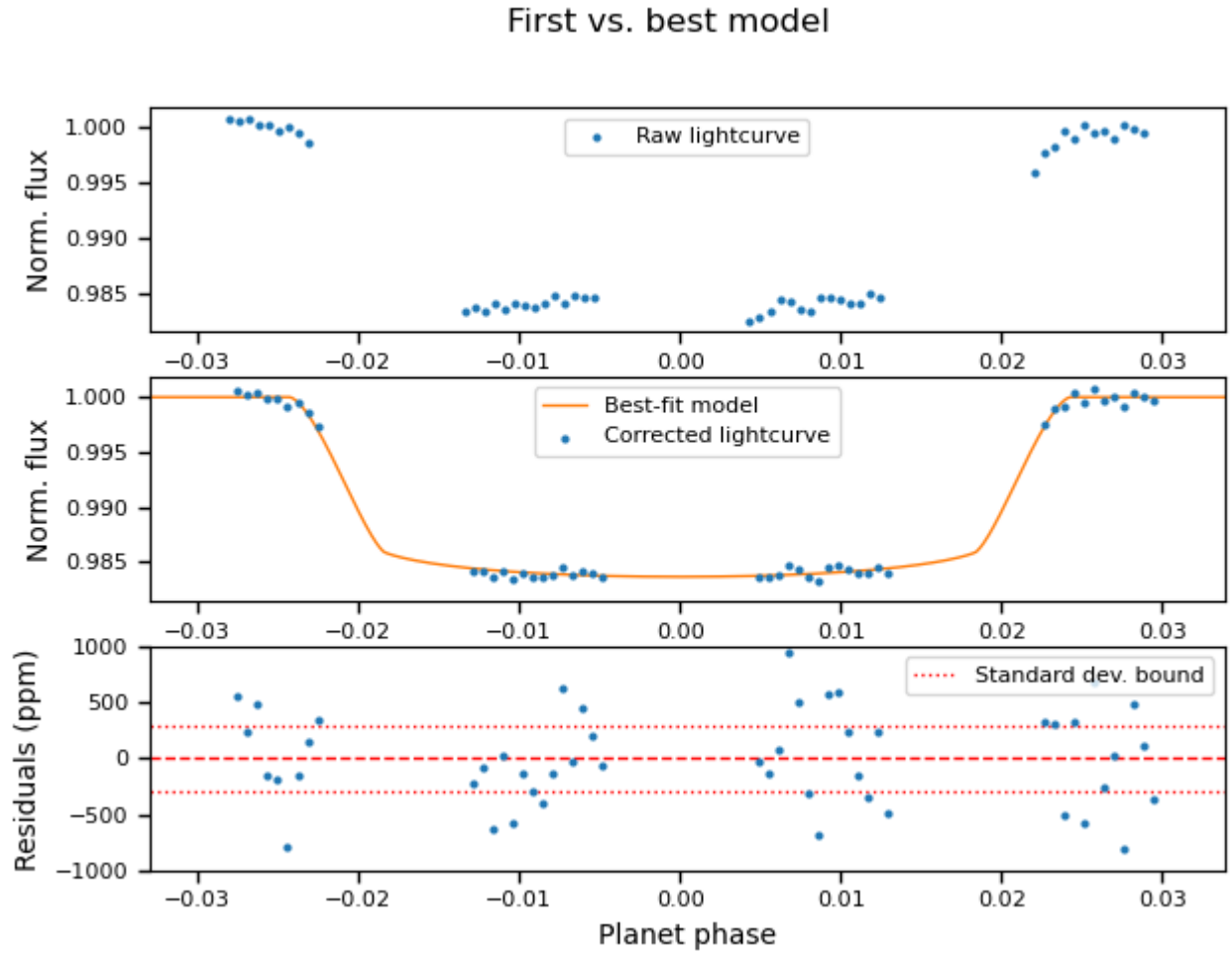
Marginalisation results



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.