Report page ExoTIC-ISM

W17_G141_lc_14693.txt - 14693

Input parameters:

Number of systematic models: 50
Wavelength mid point = 14694.570541735511
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 = 1.0477024157737937
C2 = -1.2644423046667457
C3 = 1.0916163033229385
C4 = -0.3742654739356913

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 = [49 37 39 38 42]
DOF = [42. 46. 44. 45. 45.]
Chi-squared = [61.04350268 65.45155038 63.77963175 65.18438162 65.4494162]
AIC evidence = [334.02763677 333.82361292 333.65957223 333.4571973 333.32468001]
Weights = [0.17951727635817447 0.14638609297612792 0.12423897333494306 0.1014769807982039 0.0888824484329238]
SDNR = [316.34704784 327.59026079 323.36084256 326.87770224 327.61989724]

Top model Noise Statistics:

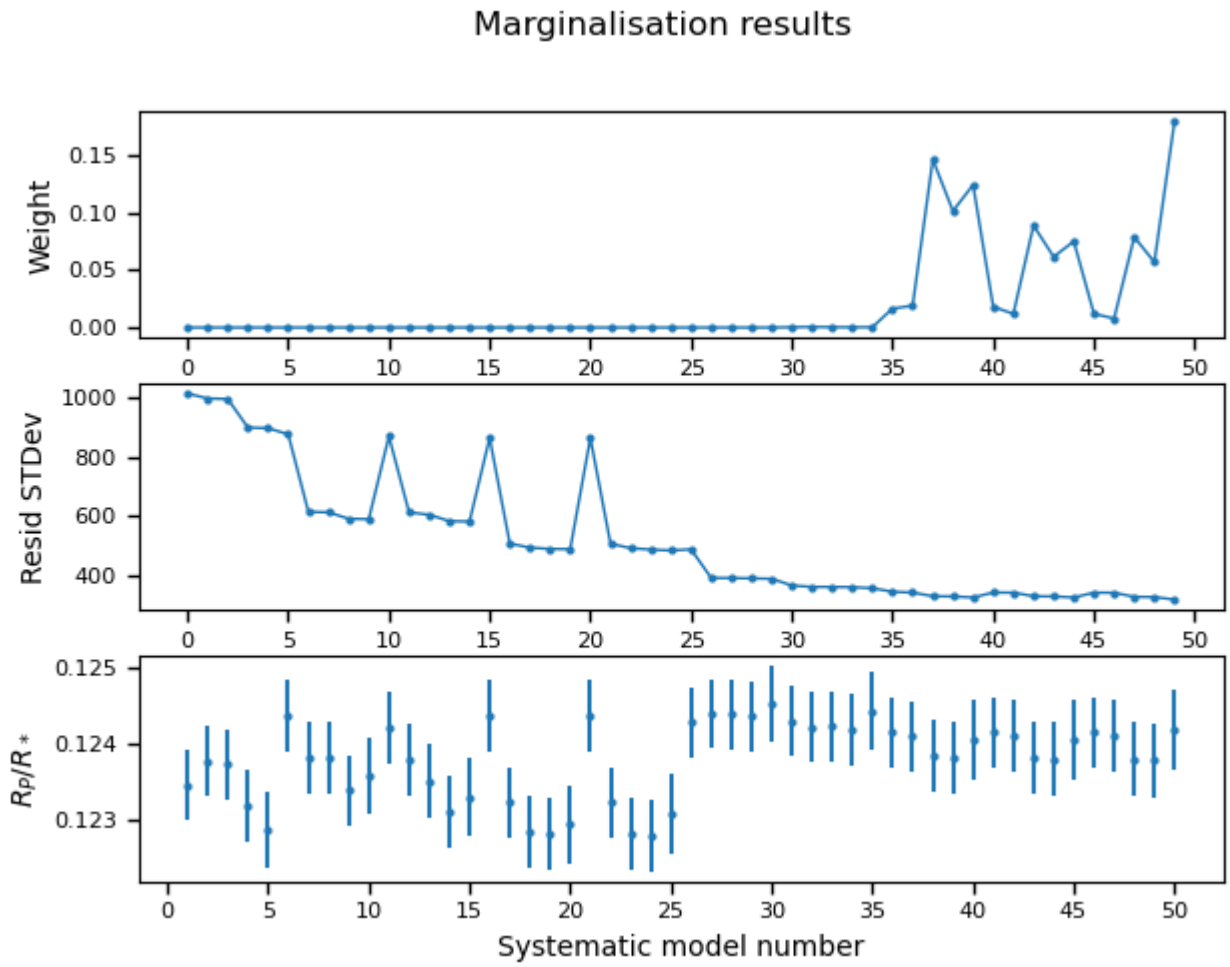
White noise = 0.0
Red noise = 0.0
Beta = 1.0
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.1239464860540479 +/- 0.0005197771558524829
Epoch (MJD) = 57957.96966376164 +/- 0.0005673426589686503
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

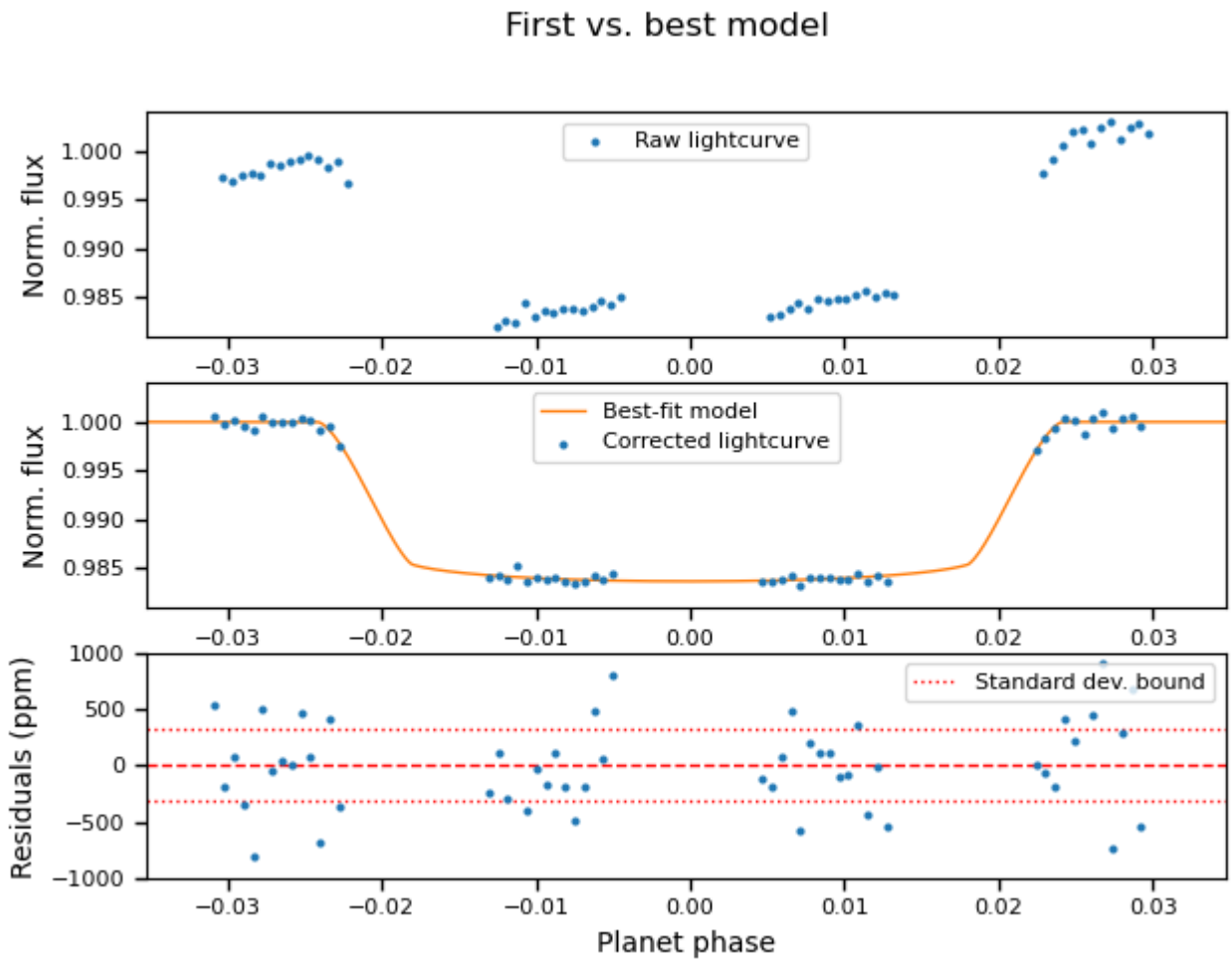
Systematics



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.