Report page ExoTIC-ISM

W17_G141_lc_11783.txt - 11783

Input parameters:

Number of systematic models: 50
Wavelength mid point = 11788.76991301578
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 = 0.8663540229396005
C2 = -0.8681481477252405
C3 = 0.8062329938842538
C4 = -0.28604972663734407

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 = [12 13 37 17 22]
DOF = [47. 46. 46. 46. 45.]
Chi-squared = [47.49181181 47.43798309 47.46946192 47.49354386 46.68343675]
AIC evidence = [346.05549426 345.58240862 345.5666692 345.55462823 345.45968179]
Weights = [0.13745292249432917 0.0856437144868952 0.084306285080904 0.08329724289901803 0.07575231518598137]
SDNR = [264.48440308 264.29948274 264.40152614 264.50092912 262.21324952]

Top model Noise Statistics:

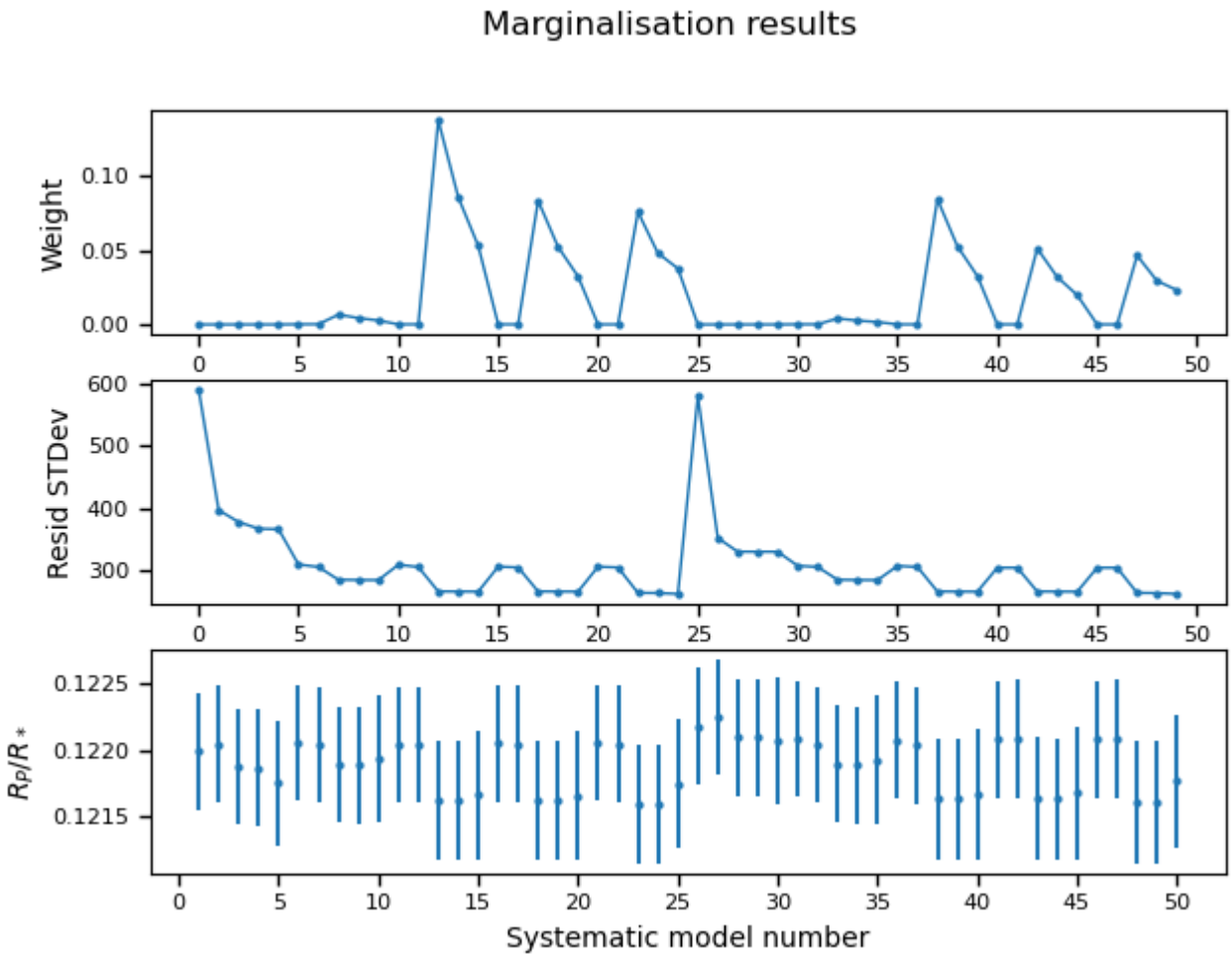
White noise = 0.0003665682133463212
Red noise = 7.800753116735556e-05
Beta = 1.197895188754707
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12164157703051731 +/- 0.00046426544408041746
Epoch (MJD) = 57957.969986198084 +/- 0.0005372912937901736
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

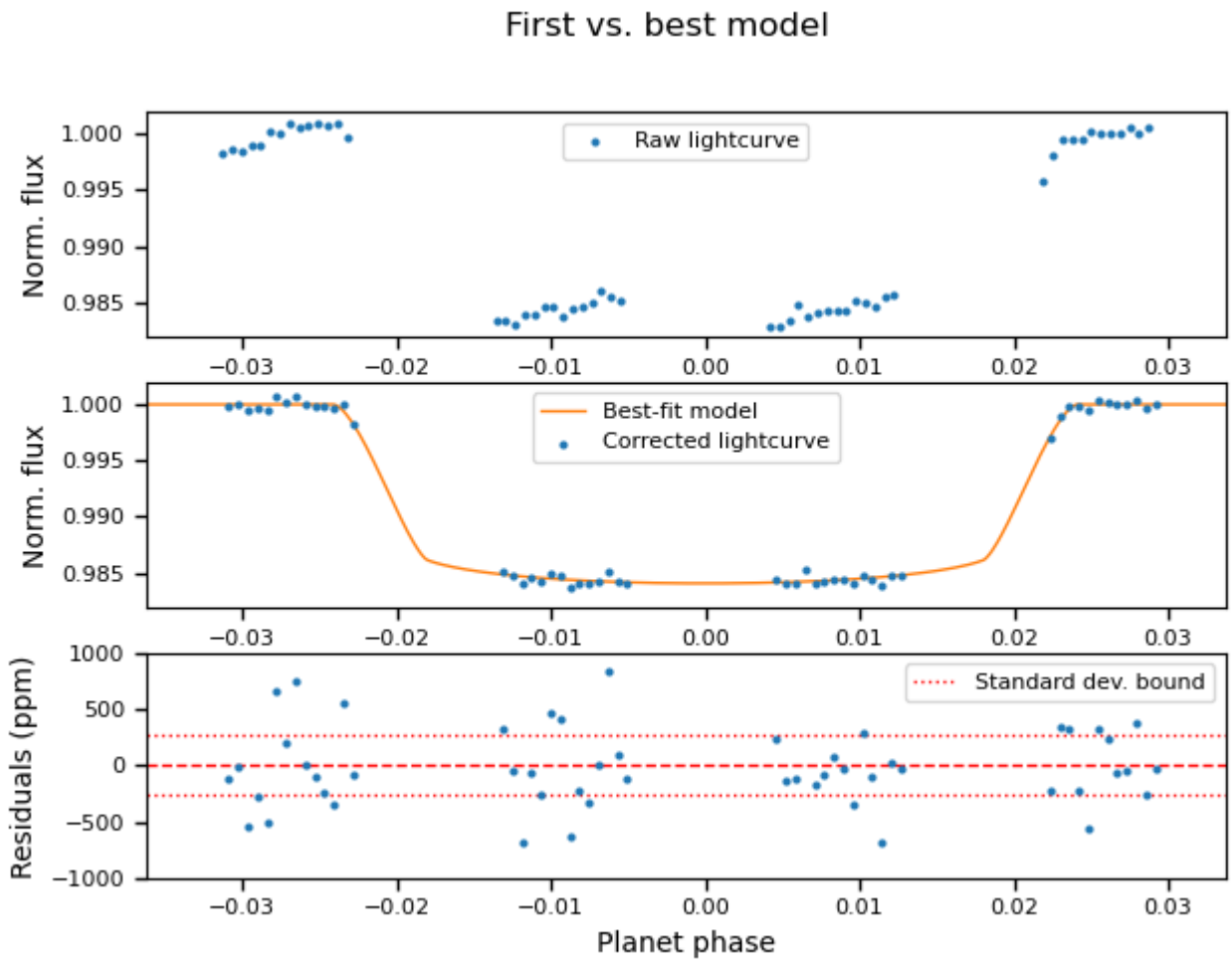
Systematics



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.