# Report page ExoTIC-ISM

## W17_G141_lc_15081.txt - 15081

### Input parameters:

Number of systematic models: 50
Wavelength mid point = 15080.49718773735
Wavelength half width = 113.50783705936465

#### 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 = 1.0676276023359899
C2 = -1.3246465695098204
C3 = 1.1397273468432785
C4 = -0.38861731961817975

#### 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 = [48 49 47 39 44]
DOF = [43. 42. 44. 44. 43.]
Chi-squared = [53.83674592 53.76885309 56.51143065 59.74428725 58.82665655]
AIC evidence = [341.84838175 341.38232817 341.01103939 339.39461109 339.35342644]
Weights = [0.41739271004727335 0.26190293147932375 0.18067234883661357 0.03588275664887366 0.03443495614753656]
SDNR = [276.41259889 276.23648842 283.35150492 291.34269338 288.96235124]

**Top model Noise Statistics:**

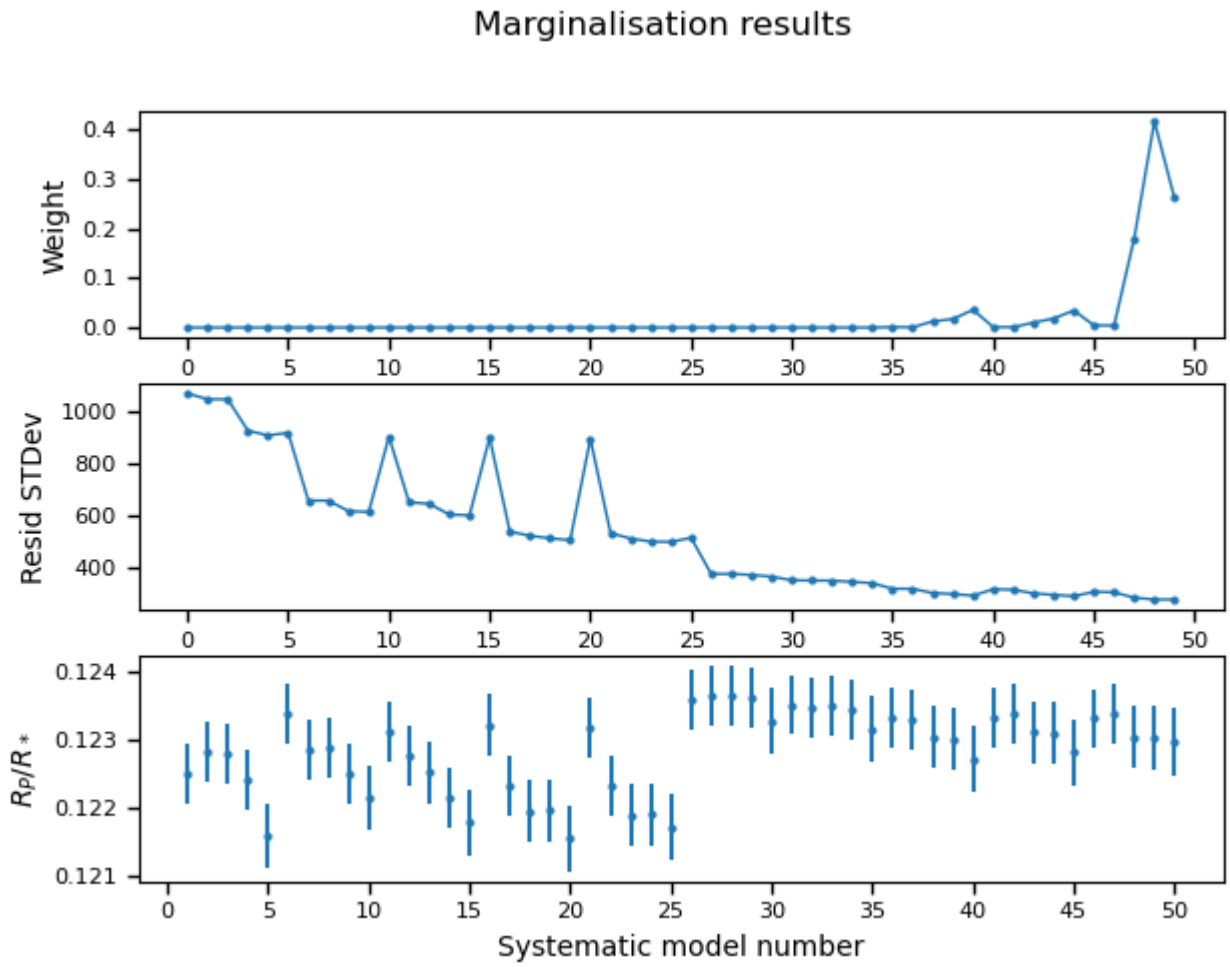
White noise = 0.0
Red noise = 0.0
Beta = 1.0
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

## Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12300423120461701 +/- 0.0004755114686298283
Epoch (MJD) = 57957.97035344603 +/- 0.0005923097529819599
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

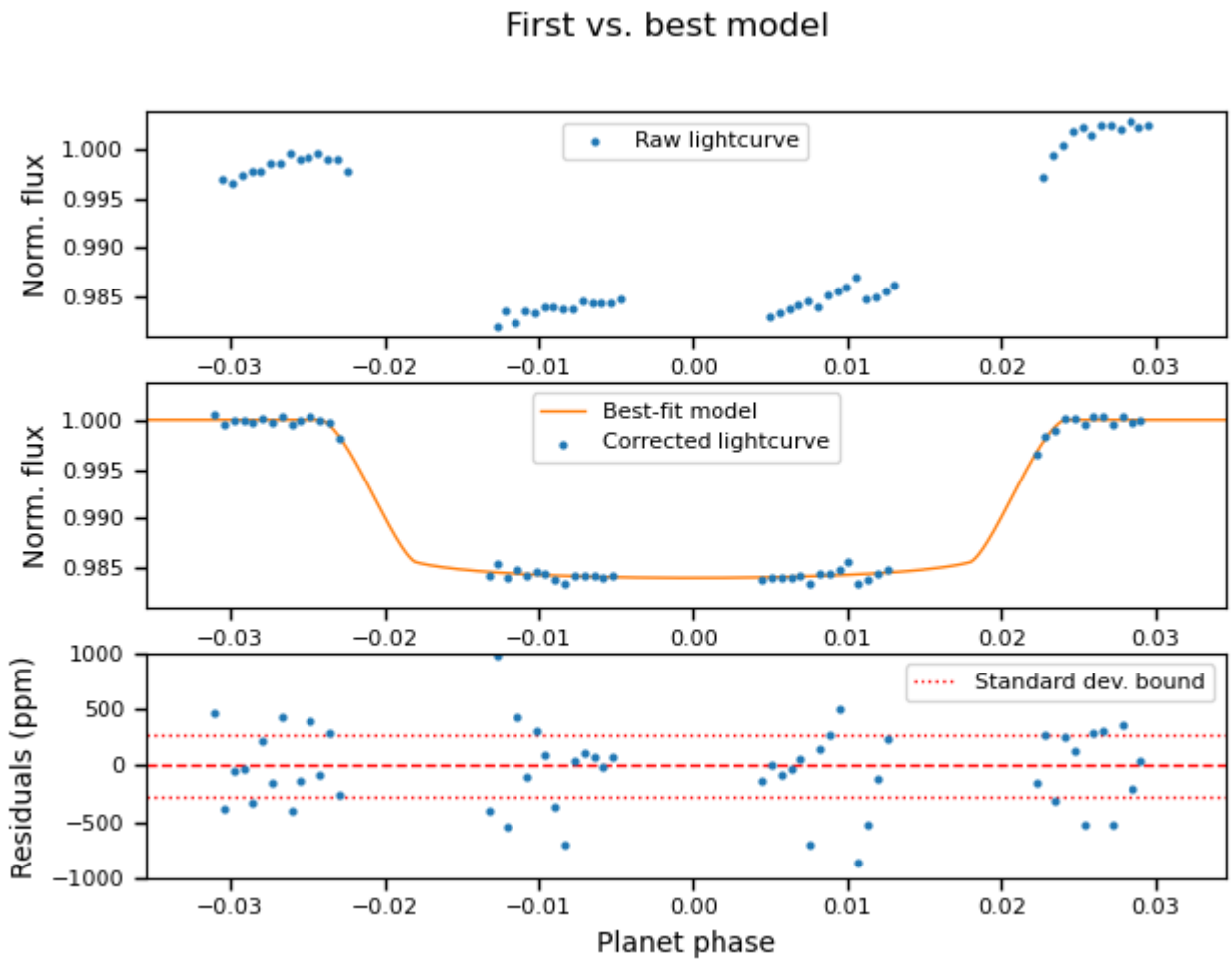
## Systematics




*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.