Report page ExoTIC-ISM

W17_G141_lc_13917.txt - 190

Input parameters:

Number of systematic models: 50
Wavelength mid point = 13968.12038455558
Wavelength half width = 45.40313482374586

Planet parameters:

Rp/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 = 0.9748789237861757
C2 = -1.0827580536771741
C3 = 0.9208676512177971
C4 = -0.30931945858322996

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 = [43 38 44 39 48]
DOF = [39. 40. 38. 39. 38.]
Chi-squared = [63.25938751 64.32155596 62.90385744 64.01144144 63.18703594]
AIC evidence = [301.49980018 301.46871596 301.17756522 301.12377322 301.03597597]
Weights = [0.20339754414184705 0.1971723432220279 0.14736720210521911 0.13964946287917873 0.1279114460913726]
SDNR = [324.12069314 326.69558873 323.19742575 325.89674977 323.91631659]

Top model Noise Statistics:

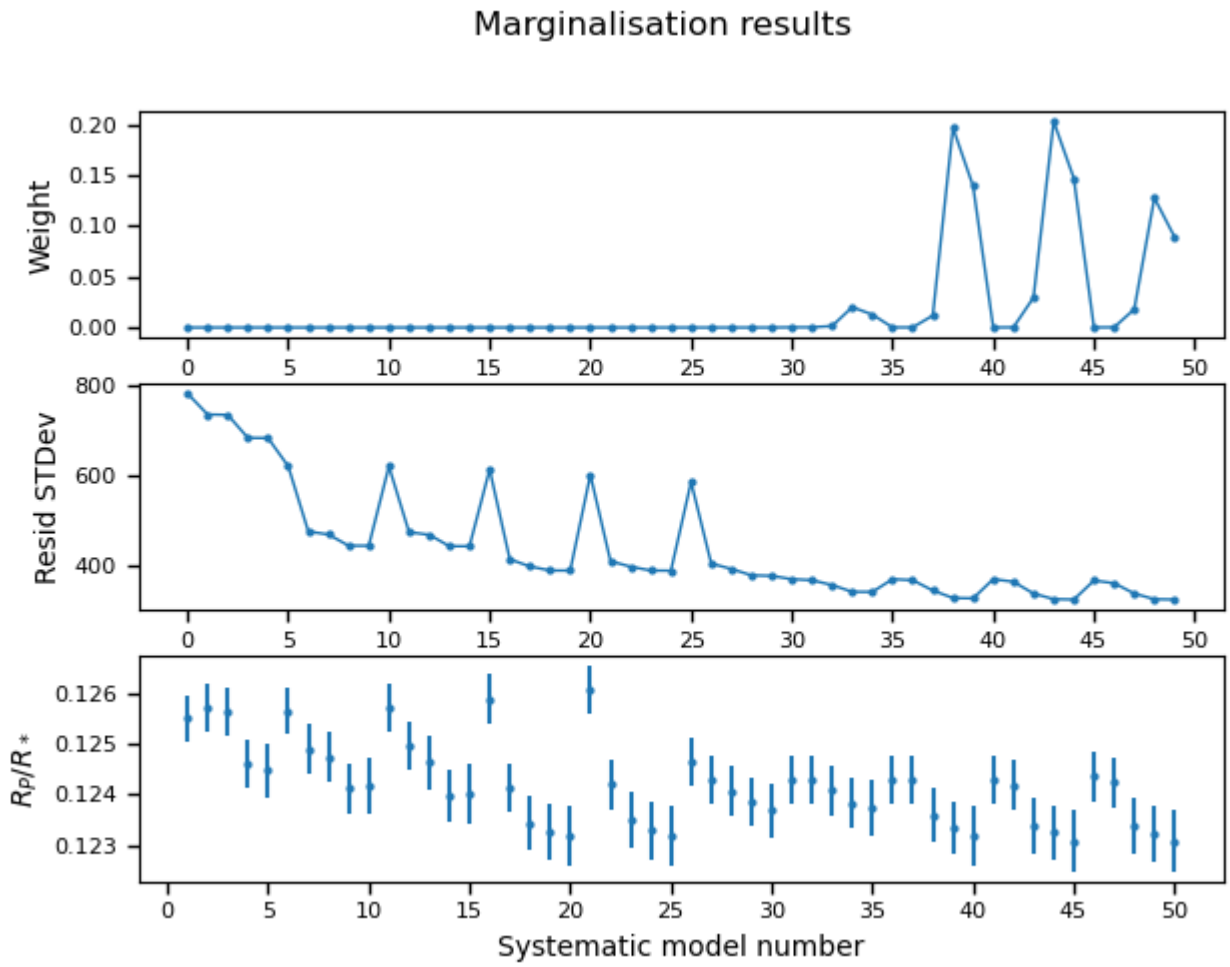
White noise = 0.0
Red noise = 0.0
Beta = 1.0
If the red-noise is significant it means the data is poorly fit by any of the systematic models. It is recommended that the input lightcurves are checked for additional noise sources.

Marginalised parameters:

If None, parameter was not fit for.

Rp/R* = 0.12324434733249395 +/- 0.0005839594403682968
Epoch (MJD) = 57957.97063277687 +/- 0.0005437822190789409
Inclination (rad) = None +/- None
Inclination (deg) = None +/- None
System density (Ms+Mp/R^3) = None +/- None
a/R* = None +/- None

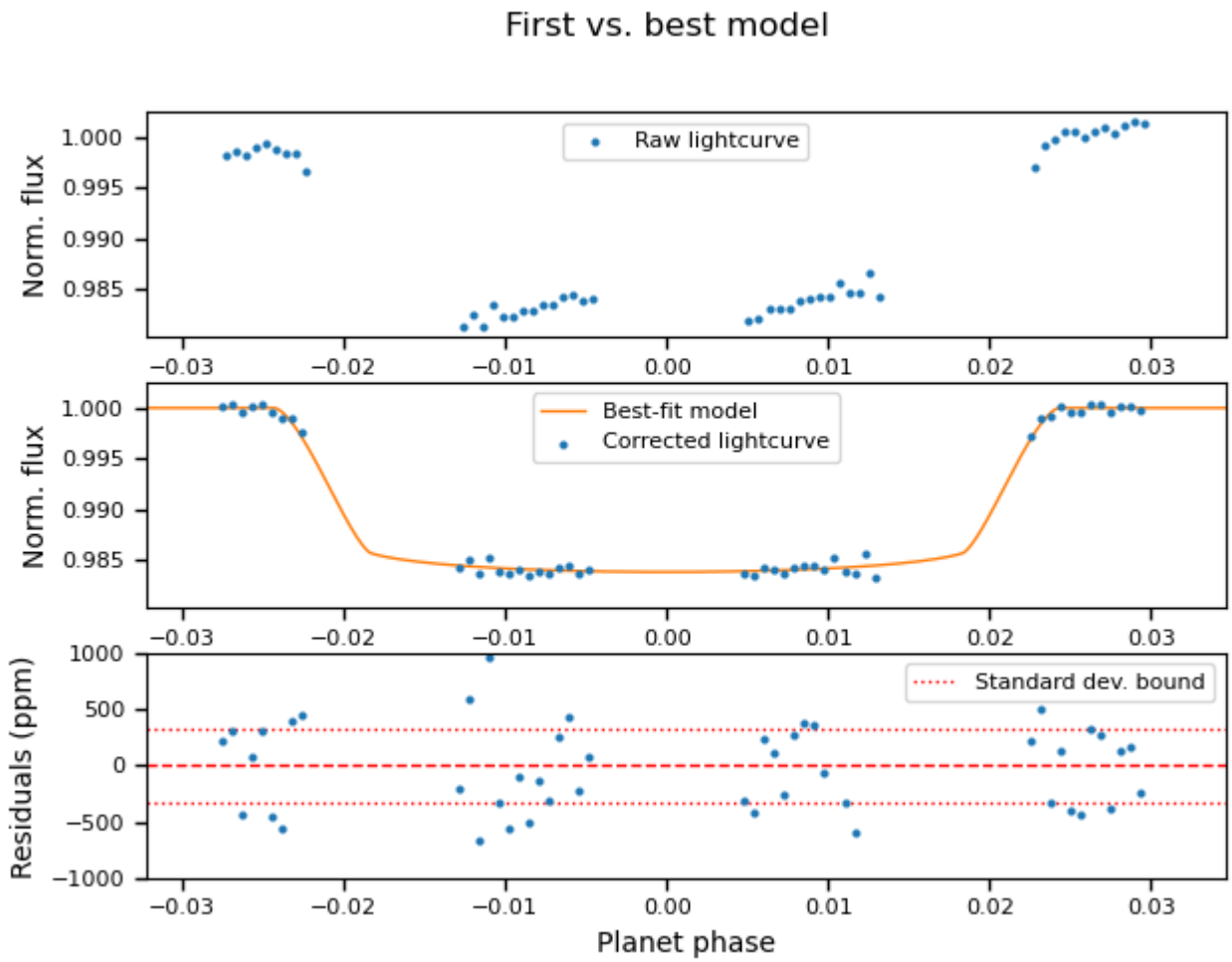
Systematics



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.