

KIC 011521137

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
011521137-01	OBS	No	25.421693	154.130476	2107.7	2.227	13.1	5.8	0.72	4927	3.21	12.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011521137-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

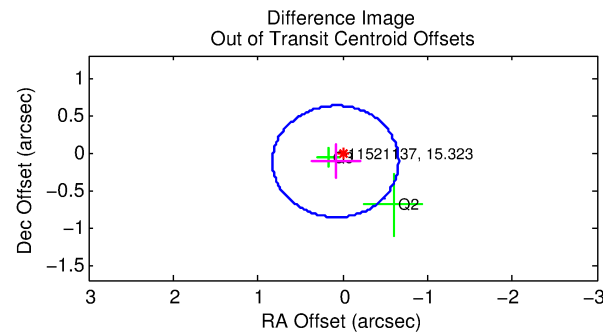
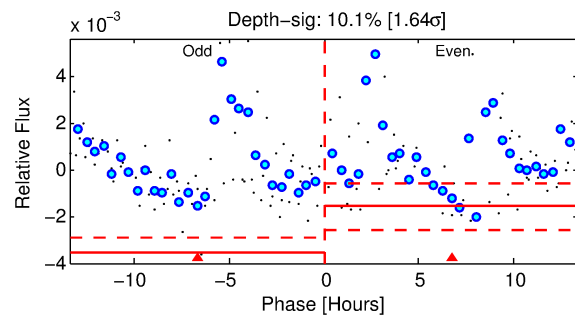
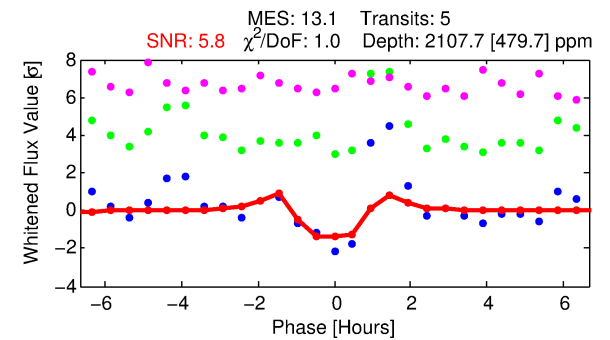
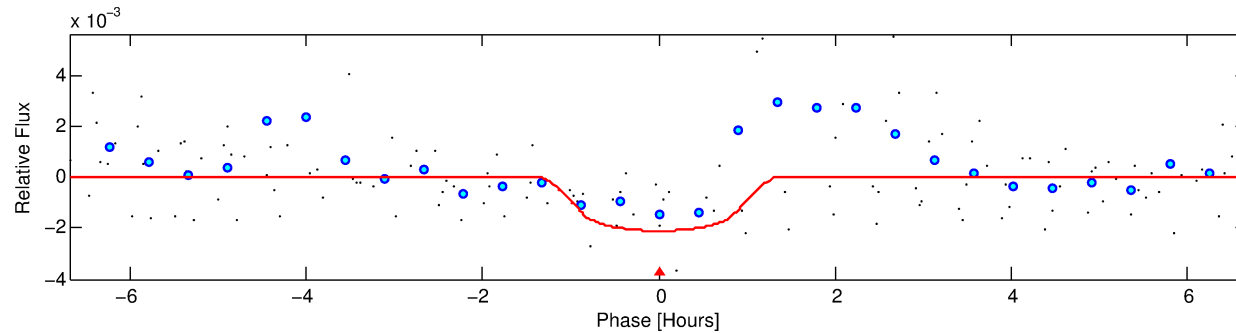
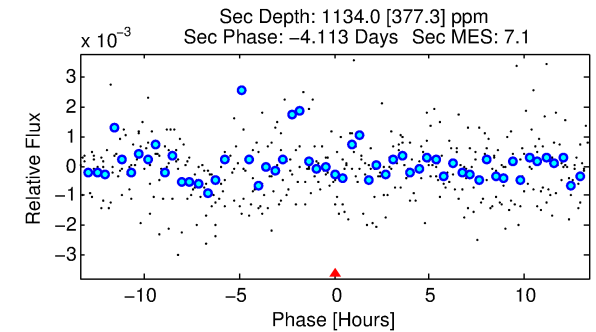
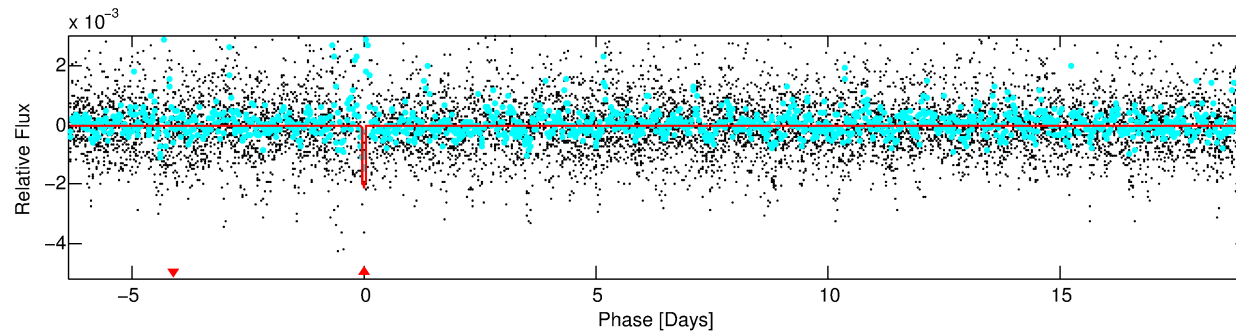
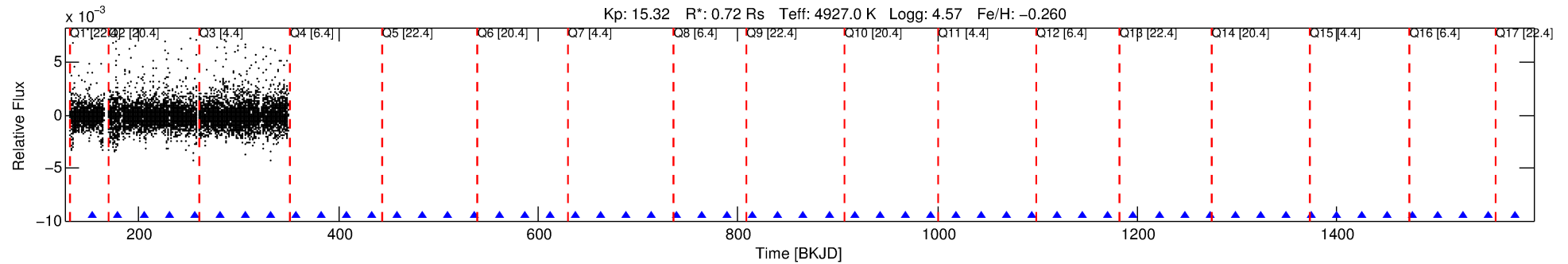
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011521137-01

No Significant Match Found

DV One-Page Summary

KIC: 11521137 Candidate: 1 of 1 Period: 25.422 d



DV Fit Results:

Period = 25.42169 [0.00267] d
Epoch = 154.1305 [0.0108] BKJD
Rp/R* = 0.0409 [0.3130]
a/R* = 89.81 [2322.18]
b = 0.15 [170.39]
Seff = 12.13 [2.07]
Teq = 476 [20] K
Rp = 3.21 [24.52] Re
a = 0.1498 [0.0129] AU
Ag = 1360.92 [20813.66] [0.07σ]
Teffp = 4468 [17084] K [0.23σ]

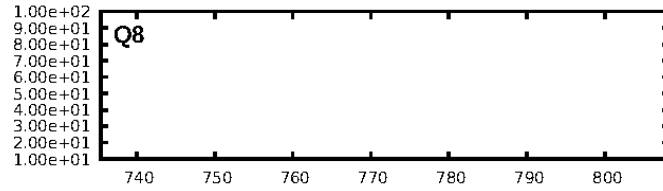
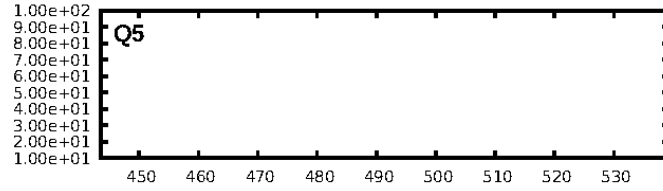
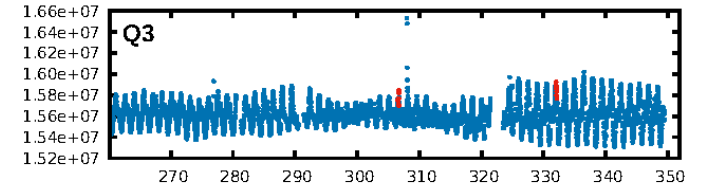
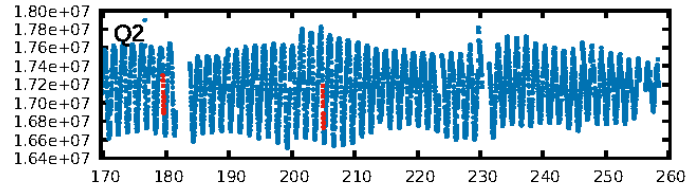
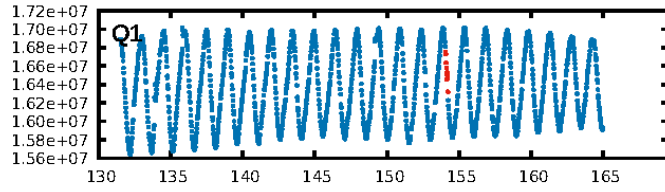
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.7%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 8.05e-27
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 8.222
Centroid-sig: 11.1%
Centroid-so: 0.777 arcsec [0.74σ]
OotOffset-rm: 0.143 arcsec [0.57σ]
KicOffset-rm: 0.136 arcsec [0.55σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

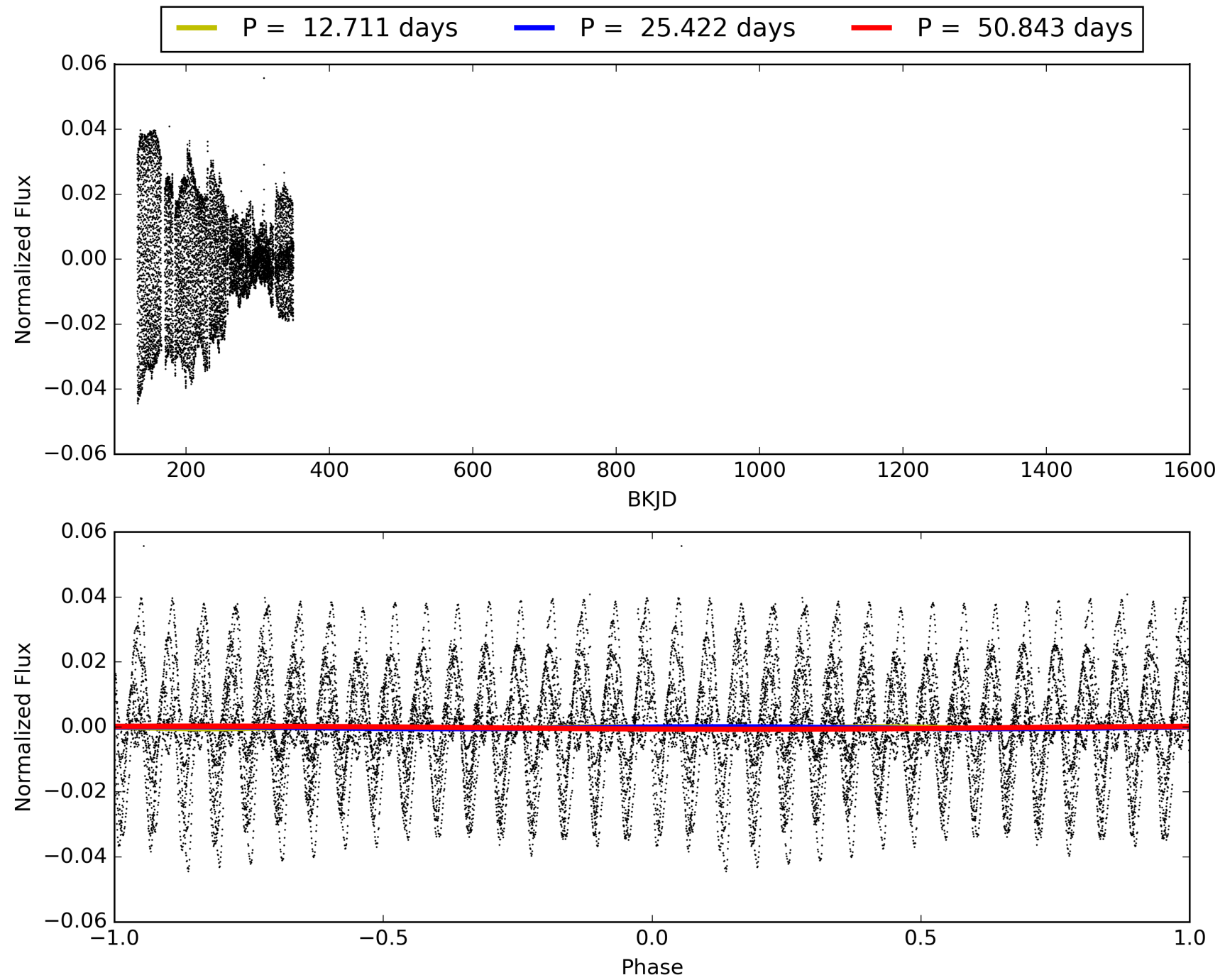
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:08:49 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011521137-01, PDC Light Curves

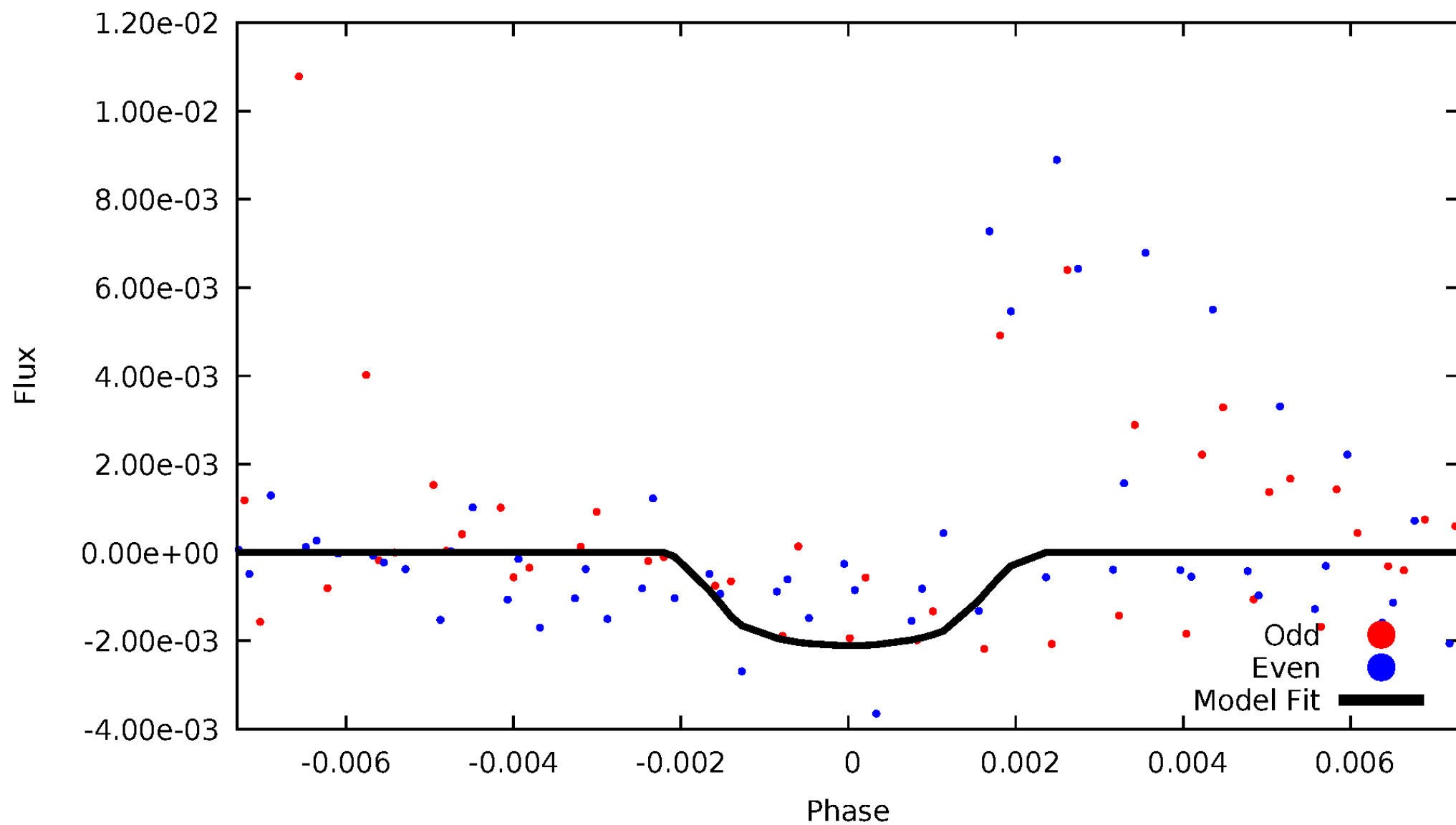


TCE 011521137-01



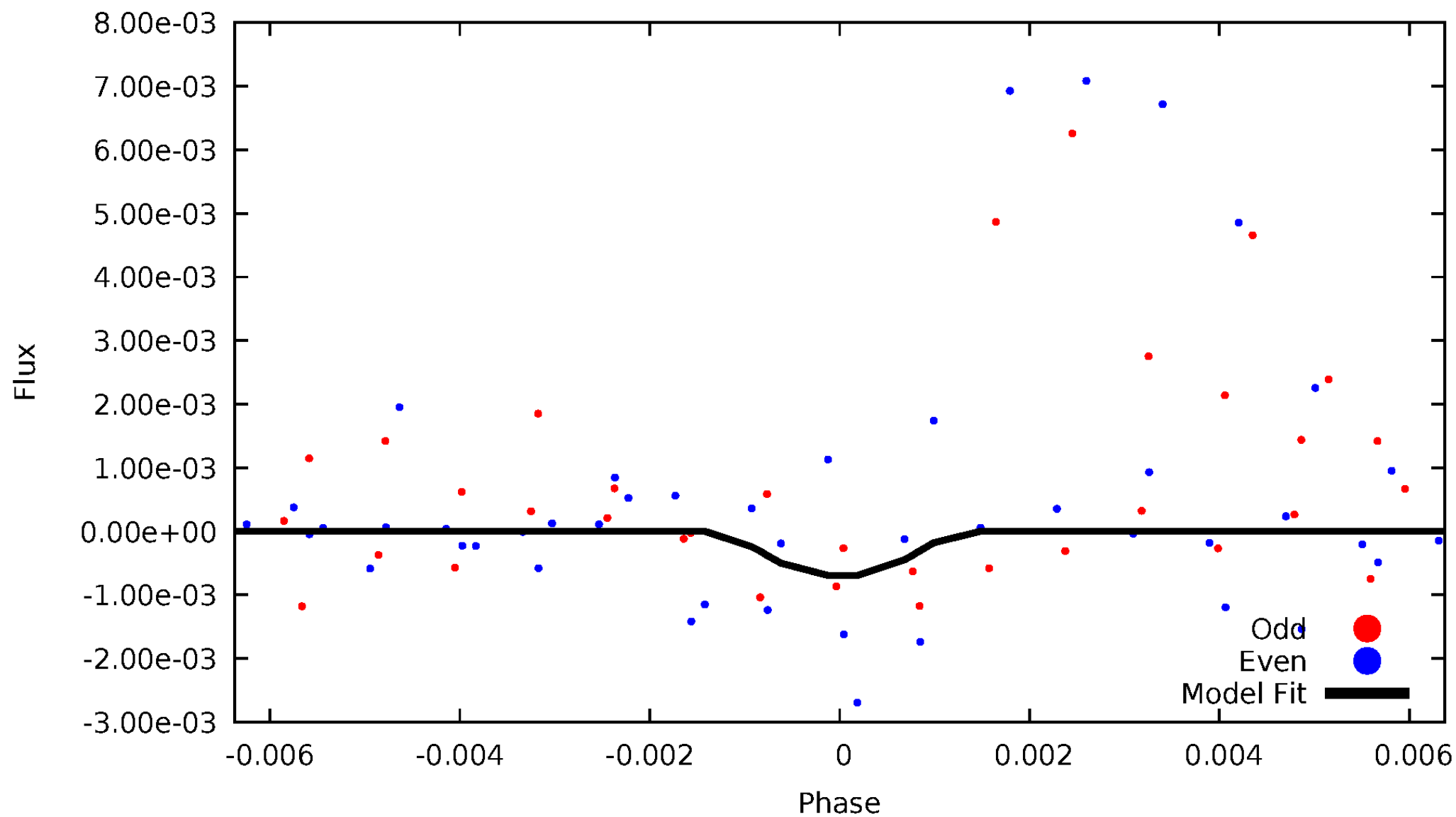
DV Odd/Even

TCE 011521137-01



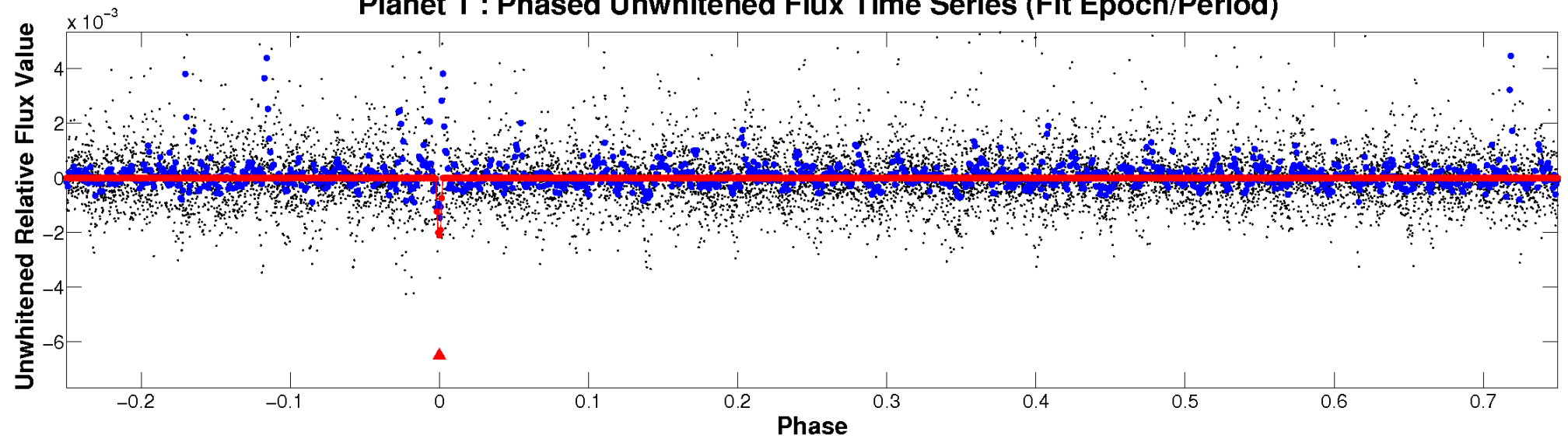
ALT Odd/Even

TCE 011521137-01

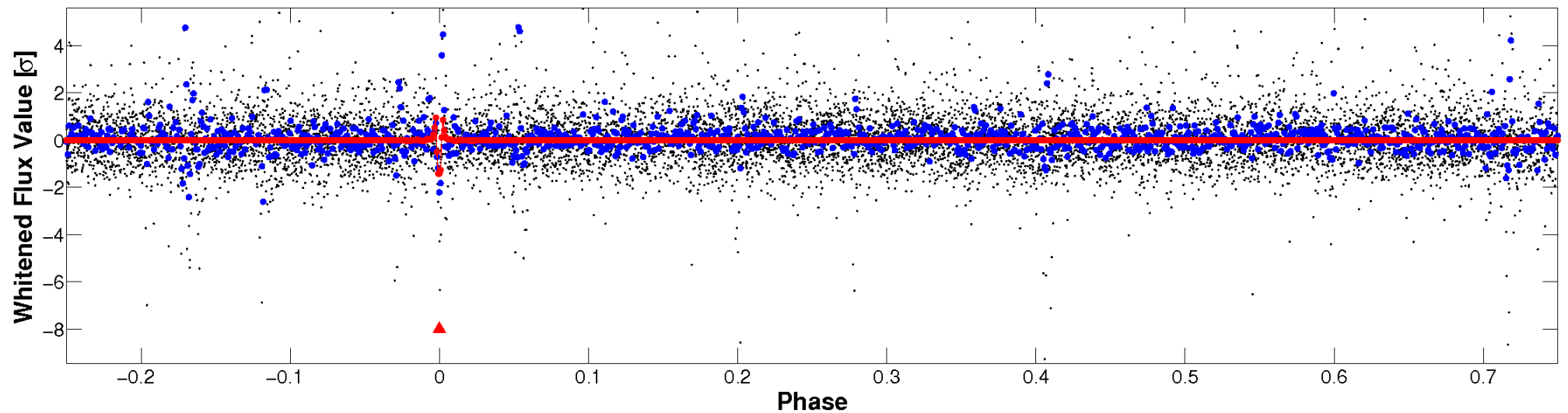


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

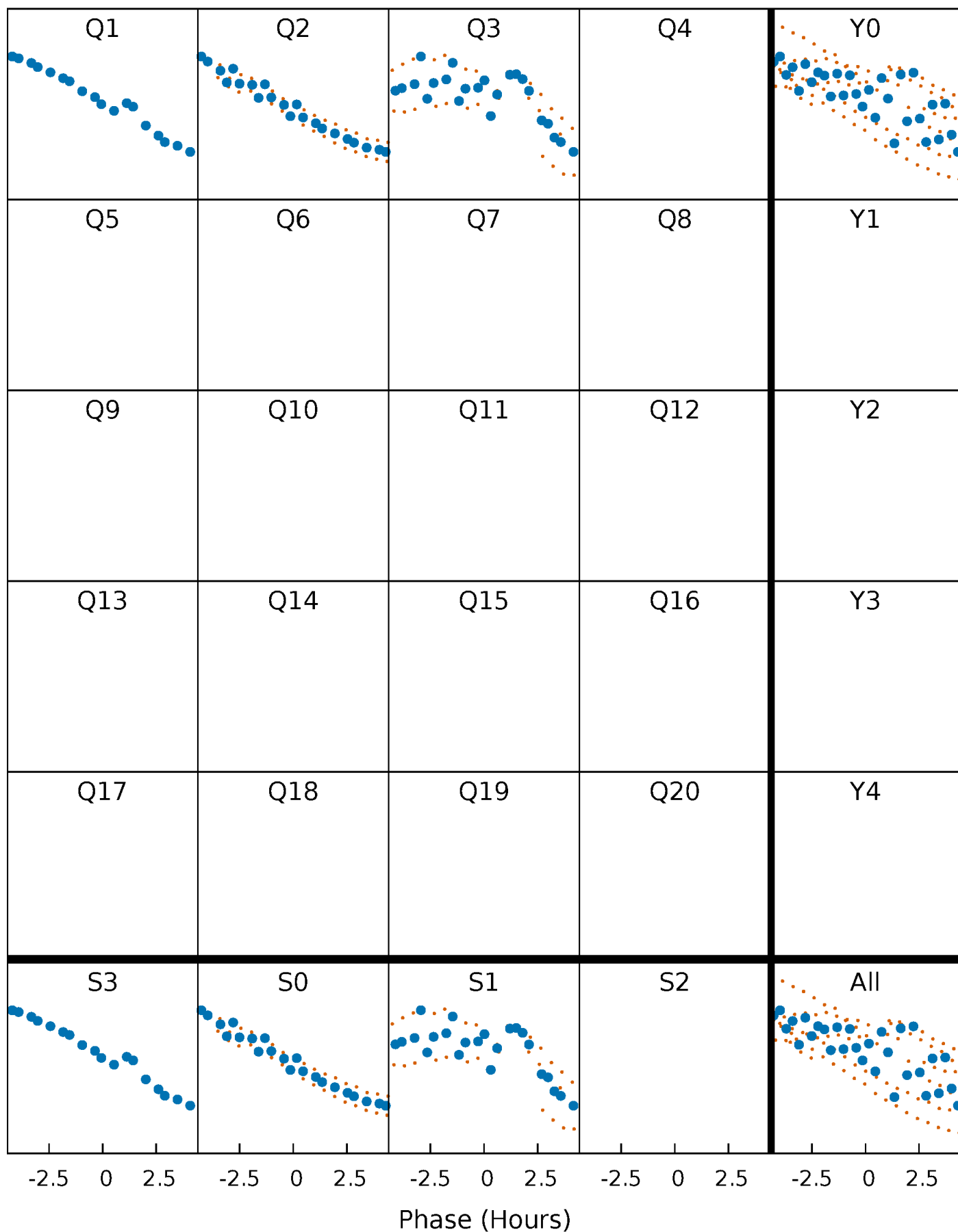


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



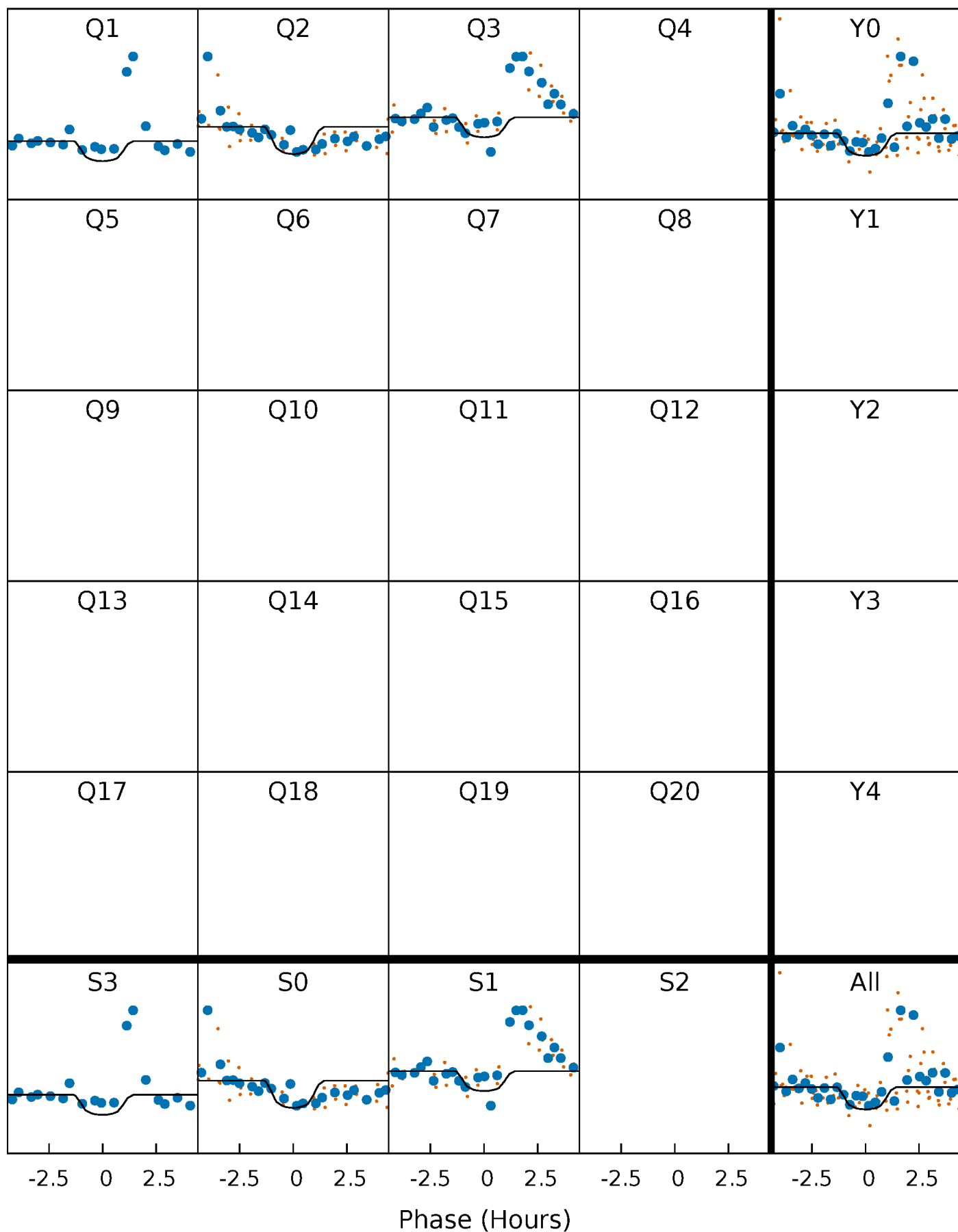
PDC Quarter-Phased Transit Curves

TCE 011521137-01 P= 25.421693 Days $T_0=154.130476$ (BKJD)



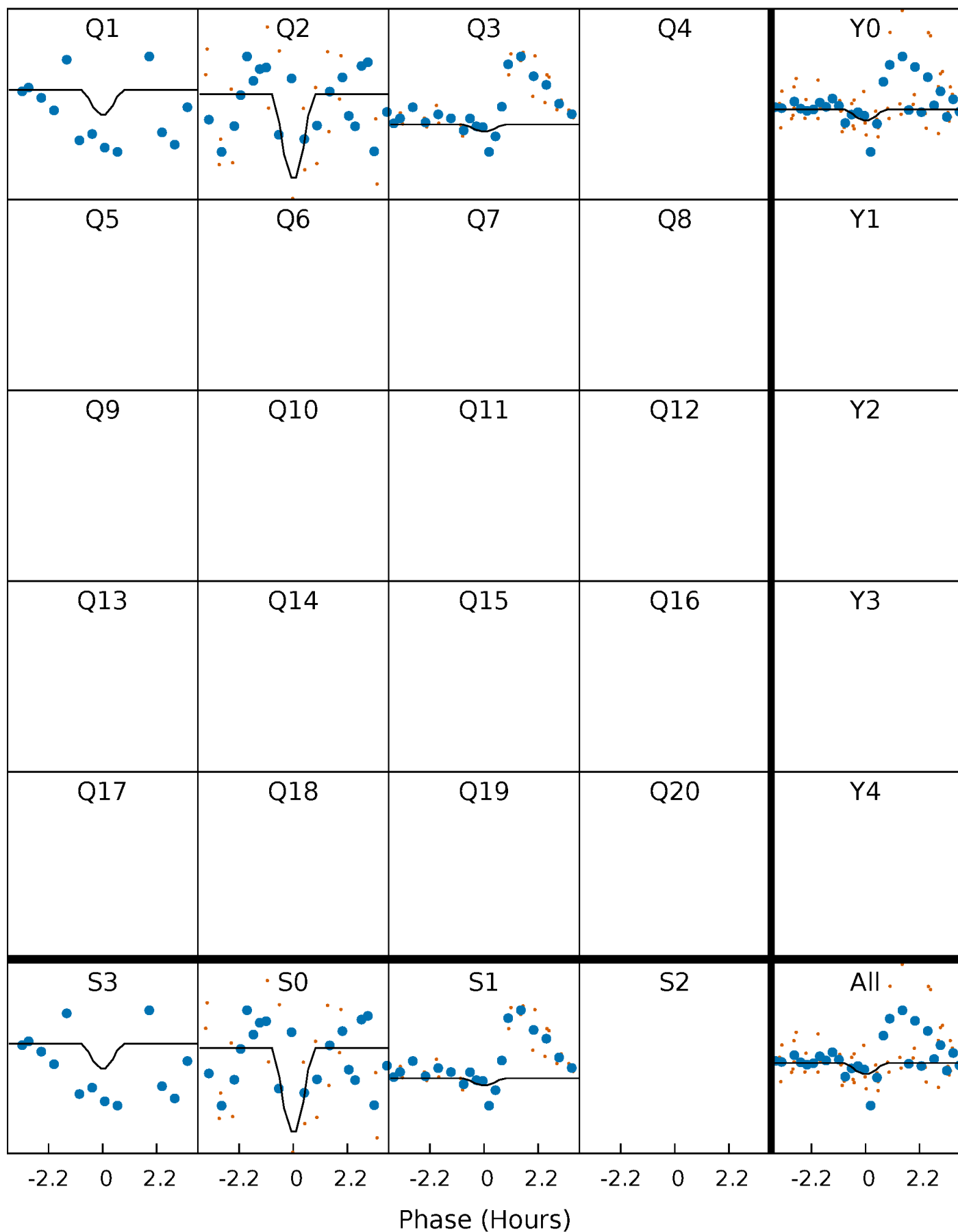
DV Quarter-Phased Transit Curves

TCE 011521137-01 P= 25.421693 Days $T_0=154.130476$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

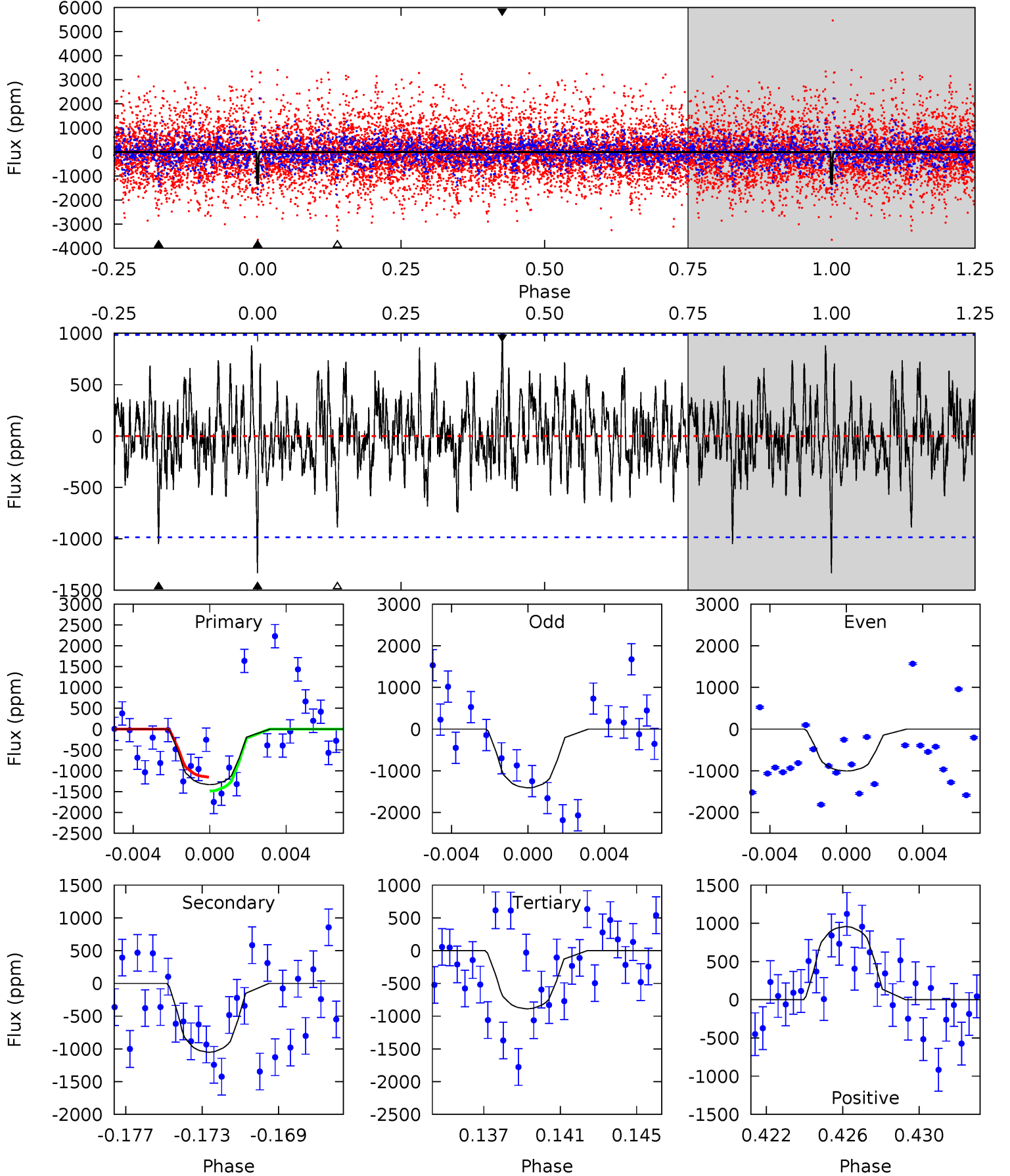
TCE 011521137-01 P= 25.422181 Days $T_0=154.131330$ (BKJD)



DV Model-Shift Uniqueness Test

011521137-01, $P = 25.421693$ Days, $E = 128.708783$ Days

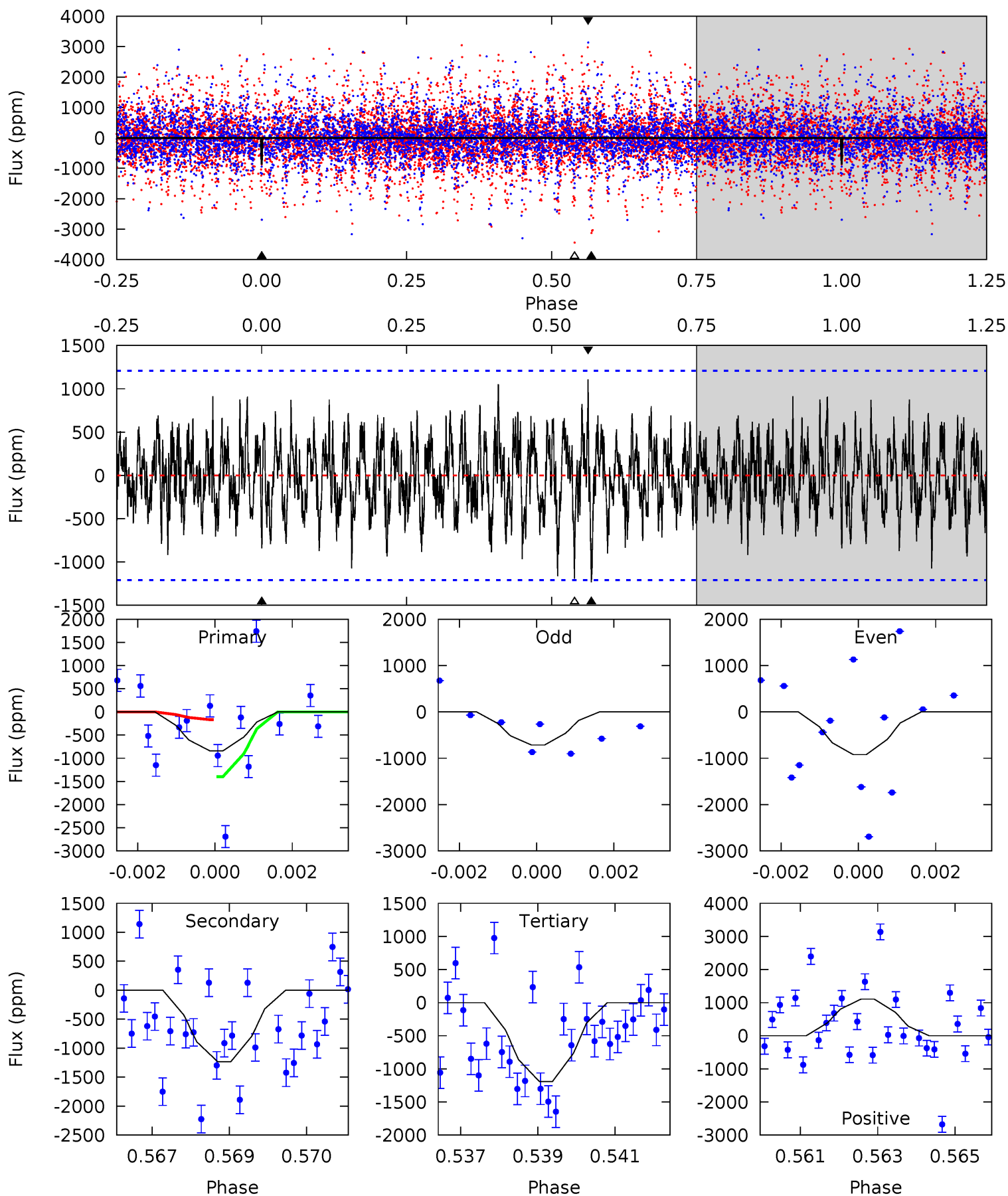
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	5.54	4.69	5.05	5.20	2.88	1.44	2.35	1.98	0.85	0.49	1.03	0.99	0.42	0.89



Alt Model-Shift Uniqueness Test

011521137-01, P = 25.422181 Days, E = 128.709149 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.72	5.45	5.26	4.89	5.34	3.12	1.55	-1.54	-1.17	0.19	0.56	0.44	0.75	0.47	2.72



Stellar Parameters For KIC 011521137

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+146}_{-146}	$4.567^{+0.066}_{-0.048}$	$-0.260^{+0.300}_{-0.300}$	$0.718^{+0.069}_{-0.075}$	$0.694^{+0.095}_{-0.047}$	$2.641^{+0.790}_{-0.470}$
	+3%/-3%	+1%/-1%	+115%/-115%	+10%/-10%	+14%/-7%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011521137-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1050 ± 189	$17.48^{+18.26}_{-11.74}$	663^{+25}_{-24}	2630^{+1015}_{-411}	42^{+369}_{-31}
Alt.	-1235 ± 226	$18.99^{+15.33}_{-13.52}$	663^{+24}_{-24}	2648^{+1117}_{-388}	44^{+427}_{-32}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

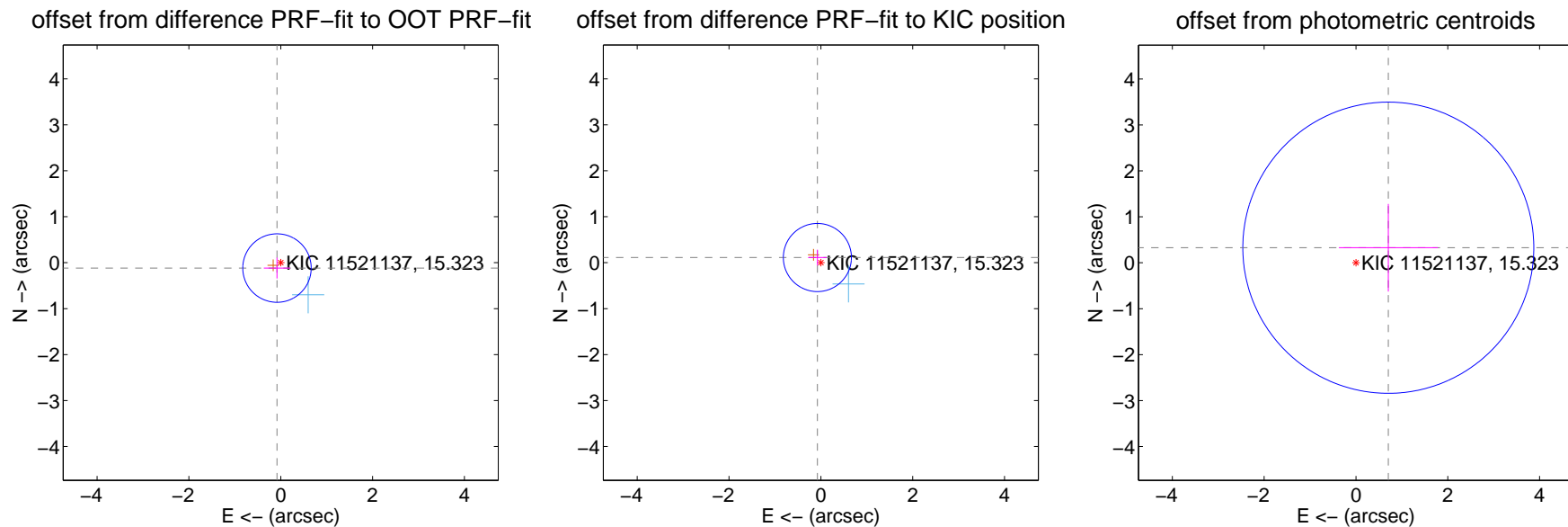
DV Centroid Data

Supplemental centroid analysis for 011521137-01. Kepler magnitude: 15.32. Transit SNR 5.81

There are 1 quarters with good PRF difference image offsets

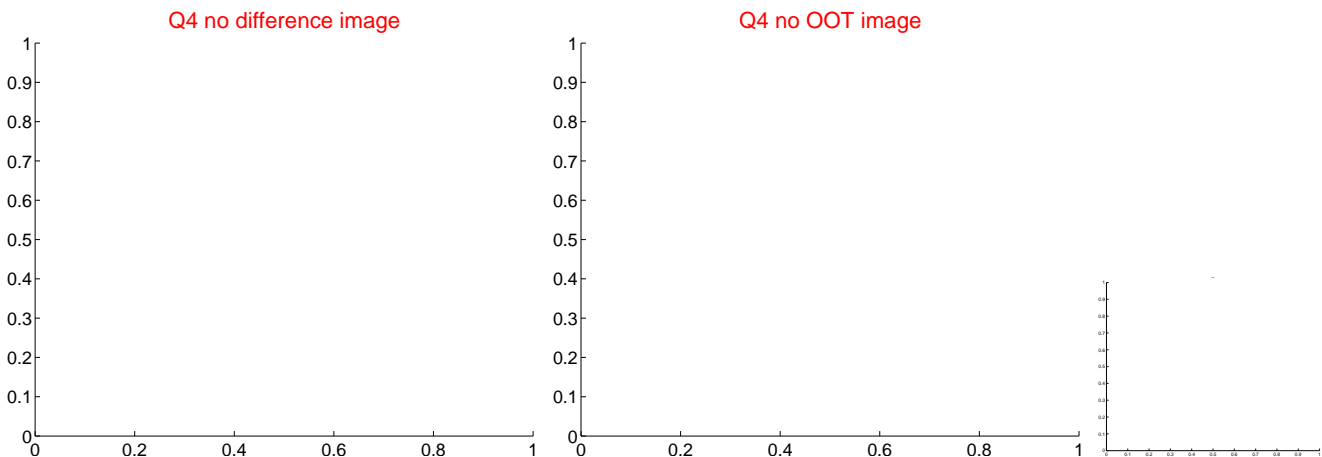
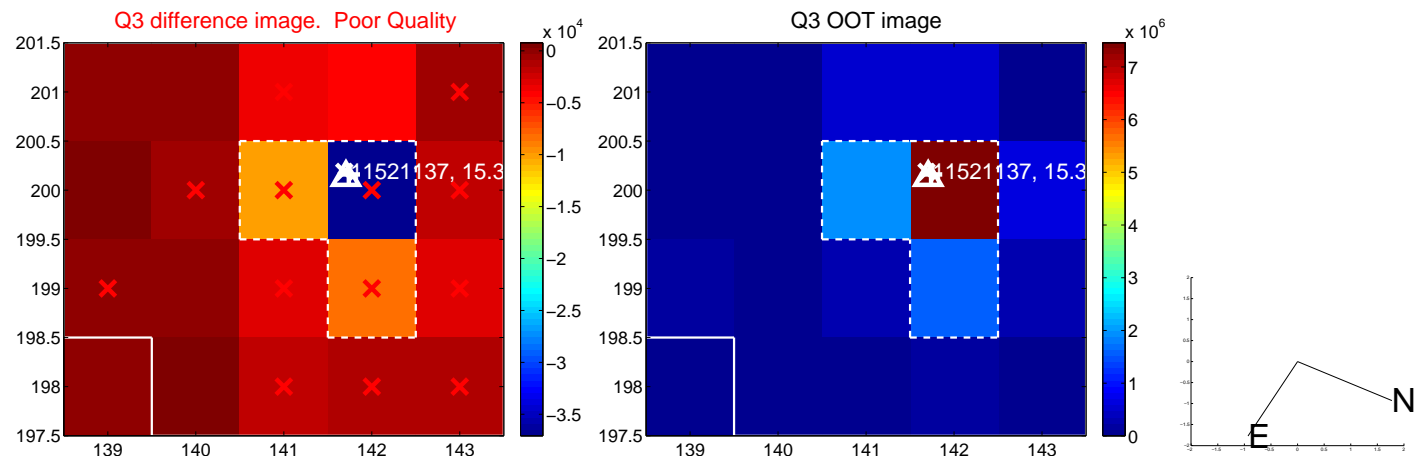
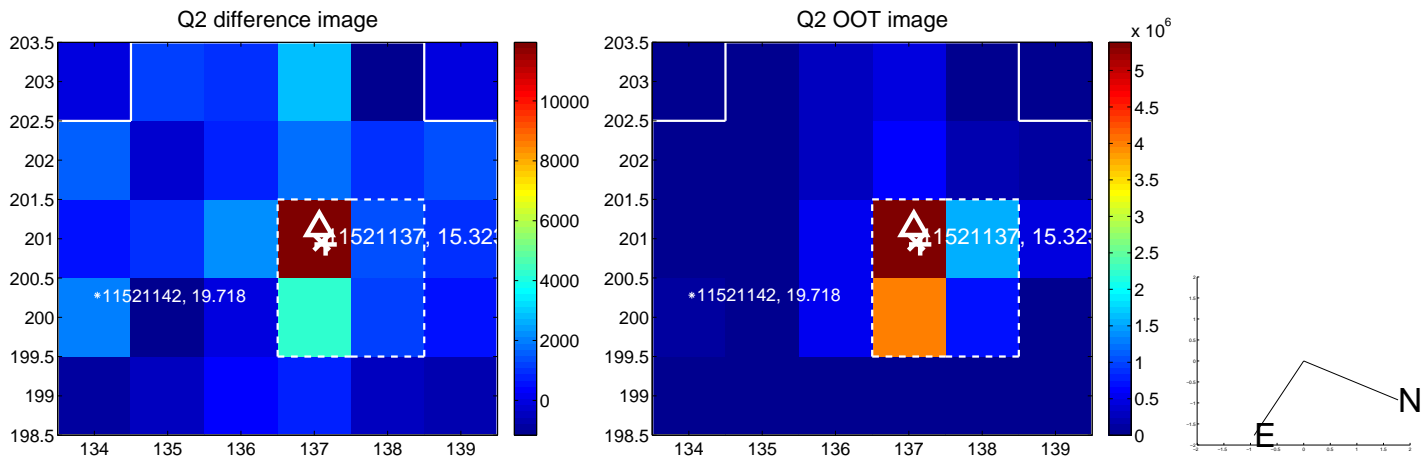
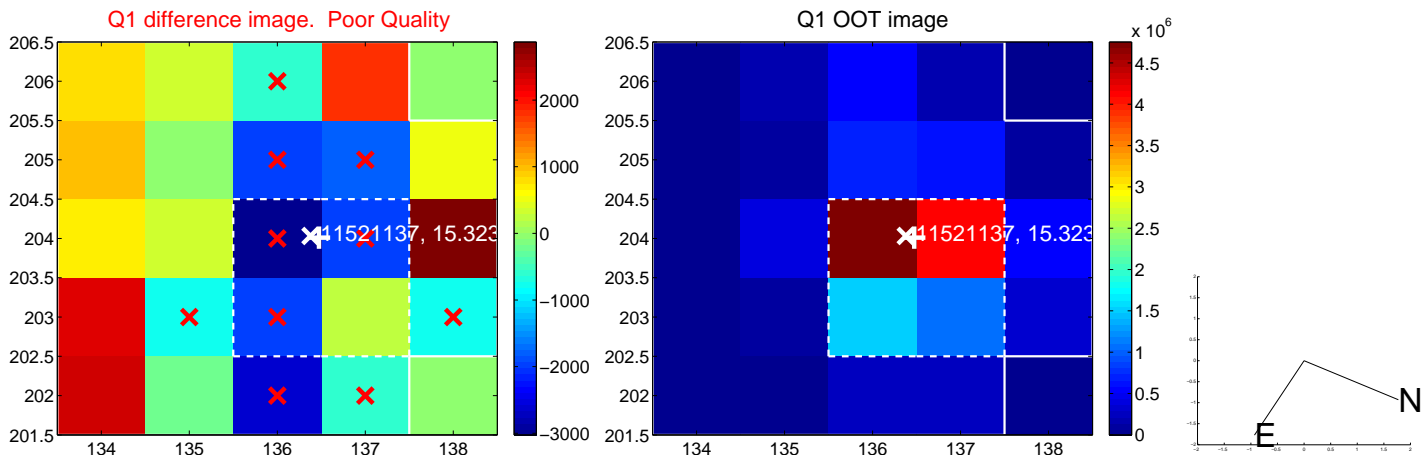
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.143 ± 0.248	0.57	0.082 ± 0.286	-0.117 ± 0.228
PRF-fit source offset from KIC position	0.136 ± 0.247	0.55	0.076 ± 0.202	0.113 ± 0.172
photometric centroid source offset	0.78 ± 1.06	0.74	-0.71 ± 1.08	0.33 ± 0.95



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



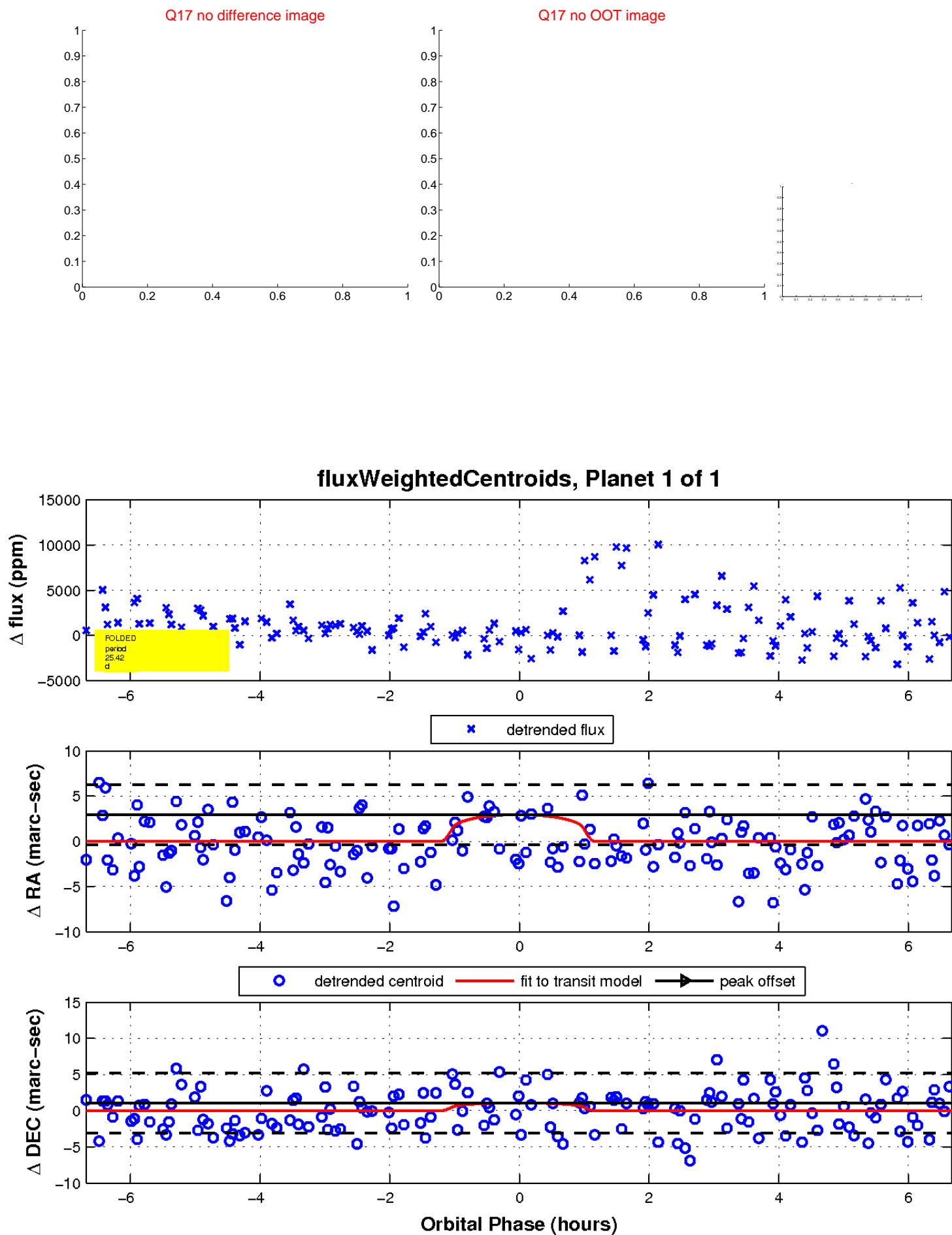
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

