

KIC 003733480

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})
003733480-01	OBS	No	515.662277	153.904605	185.9	7.091	7.8	8.1	1.49	5966	2.21	1.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003733480-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

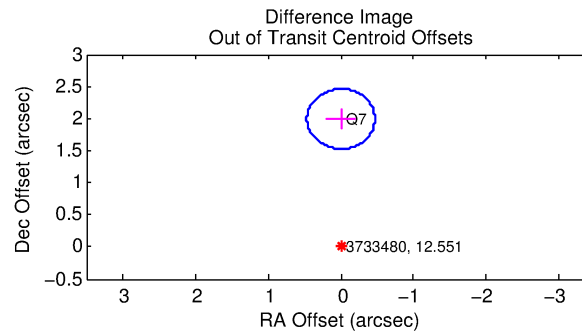
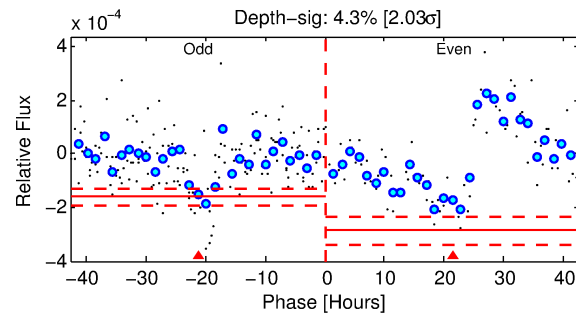
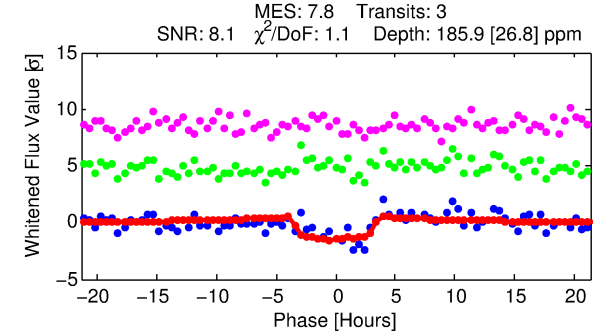
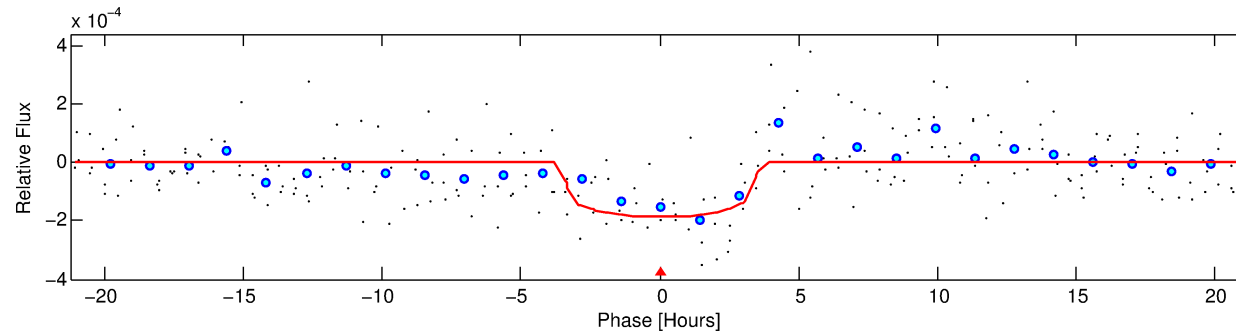
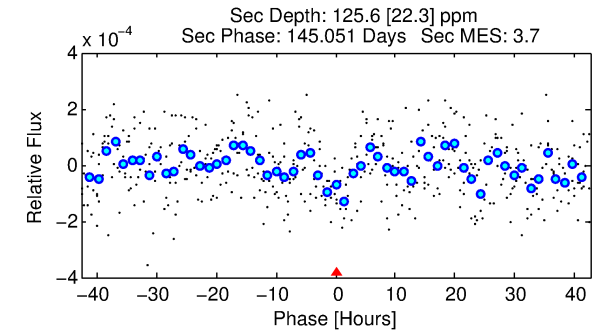
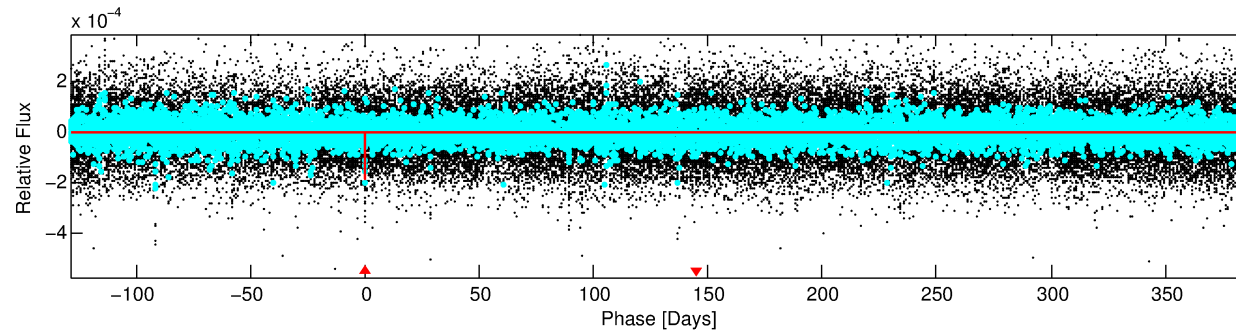
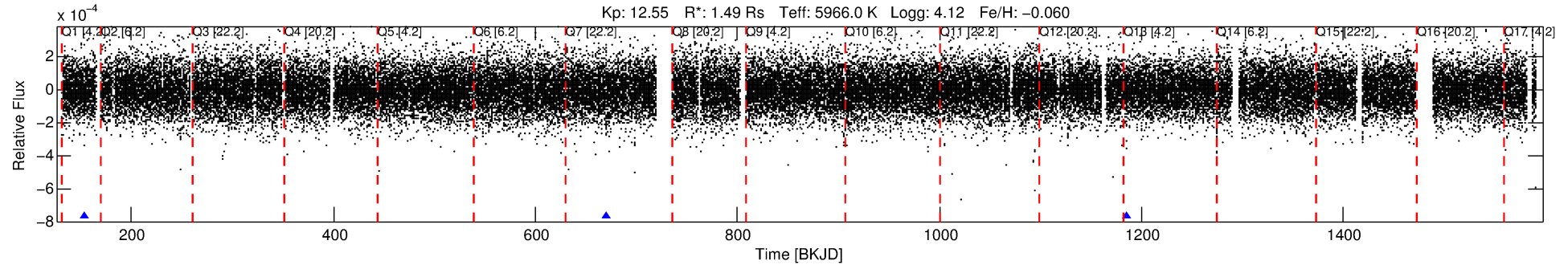
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003733480-01

No Significant Match Found

DV One-Page Summary

KIC: 3733480 Candidate: 1 of 1 Period: 515.662 d



DV Fit Results:

Period = 515.66228 [0.00835] d
Epoch = 153.9046 [0.0136] BKJD
Rp/R* = 0.0136 [0.0224]
a/R* = 372.39 [2986.95]
b = 0.76 [4.50]
Seff = 1.53 [0.80]
Teq = 284 [37] K
Rp = 2.21 [3.70] Re
a = 1.2804 [0.3996] AU
Ag = 23185.07 [77163.77] [0.30σ]
Teff = 5413 [4457] K [1.15σ]

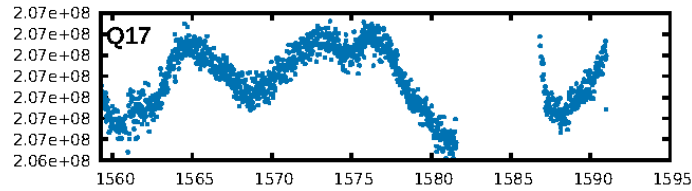
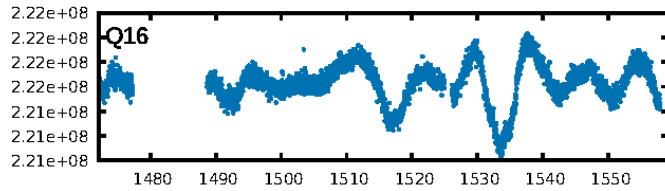
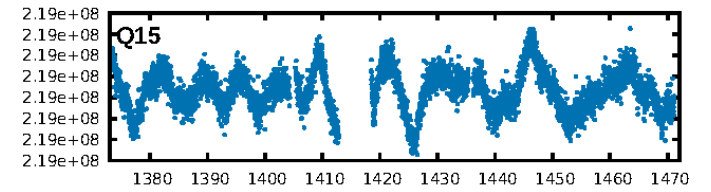
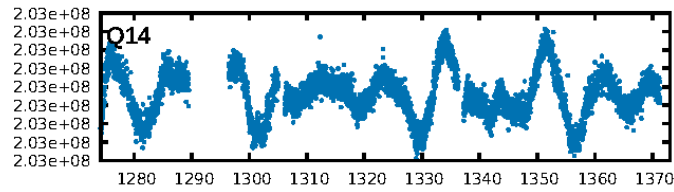
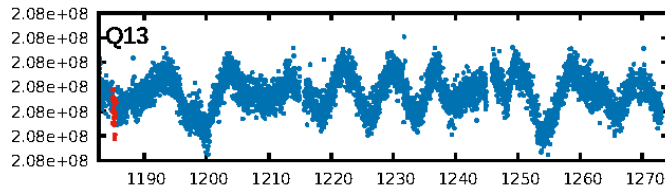
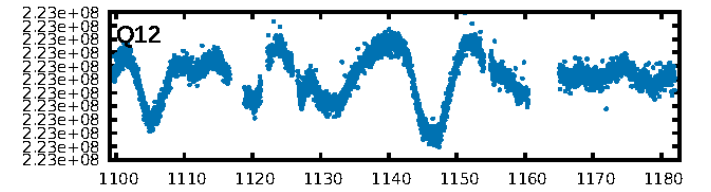
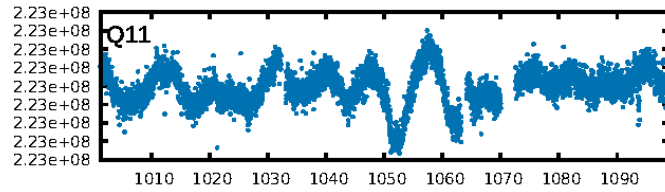
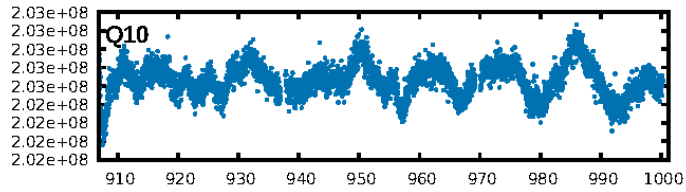
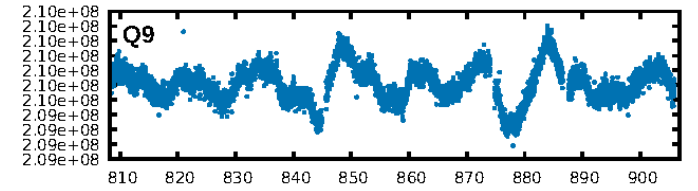
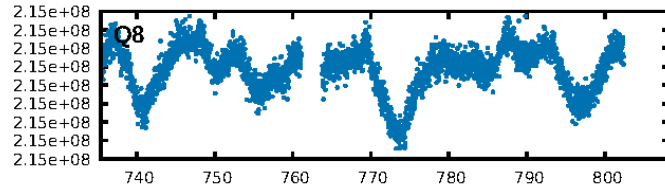
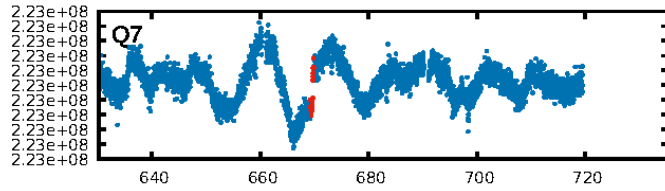
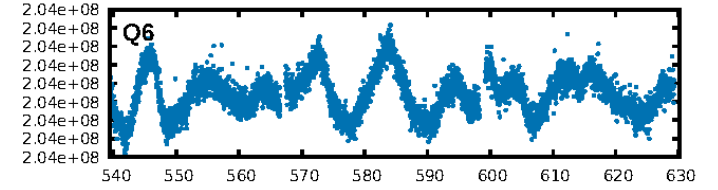
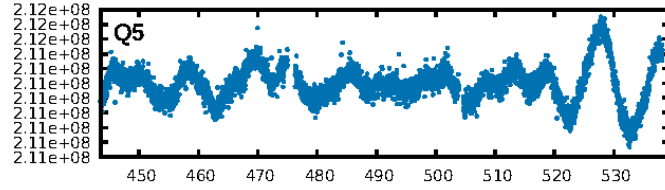
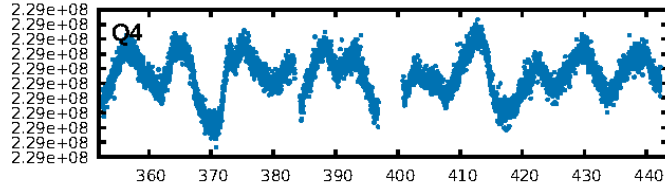
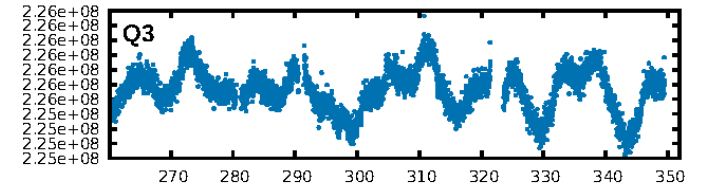
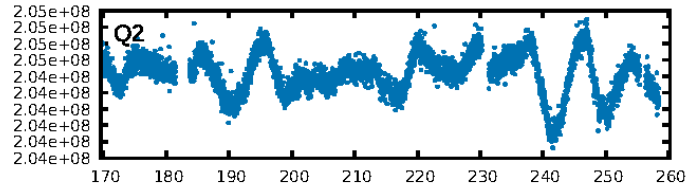
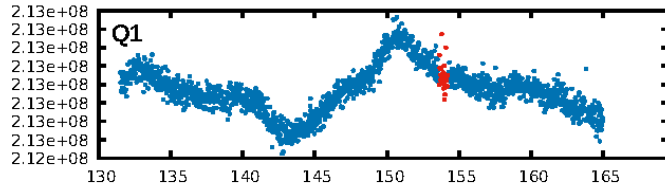
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.5%
ModelChiSquareGoF-sig: 97.9%
Bootstrap-pfa: 5.94e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -7.243
Centroid-sig: 21.9%
Centroid-so: 1.670 arcsec [1.22σ]
OotOffset-rm: 1.994 arcsec [12.80σ]
KicOffset-rm: 2.293 arcsec [14.71σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

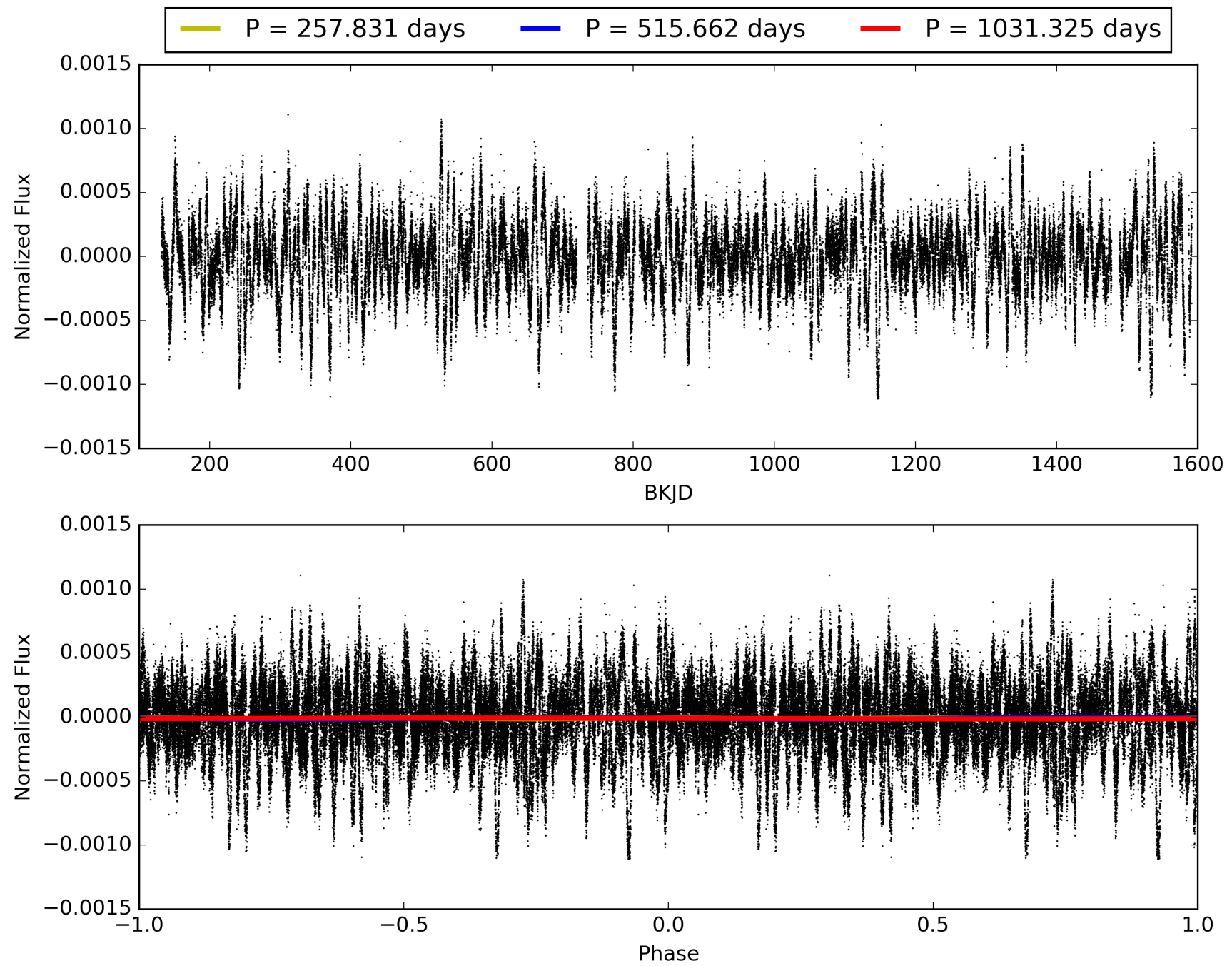
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:00:38 Z

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

TCE 003733480-01, PDC Light Curves

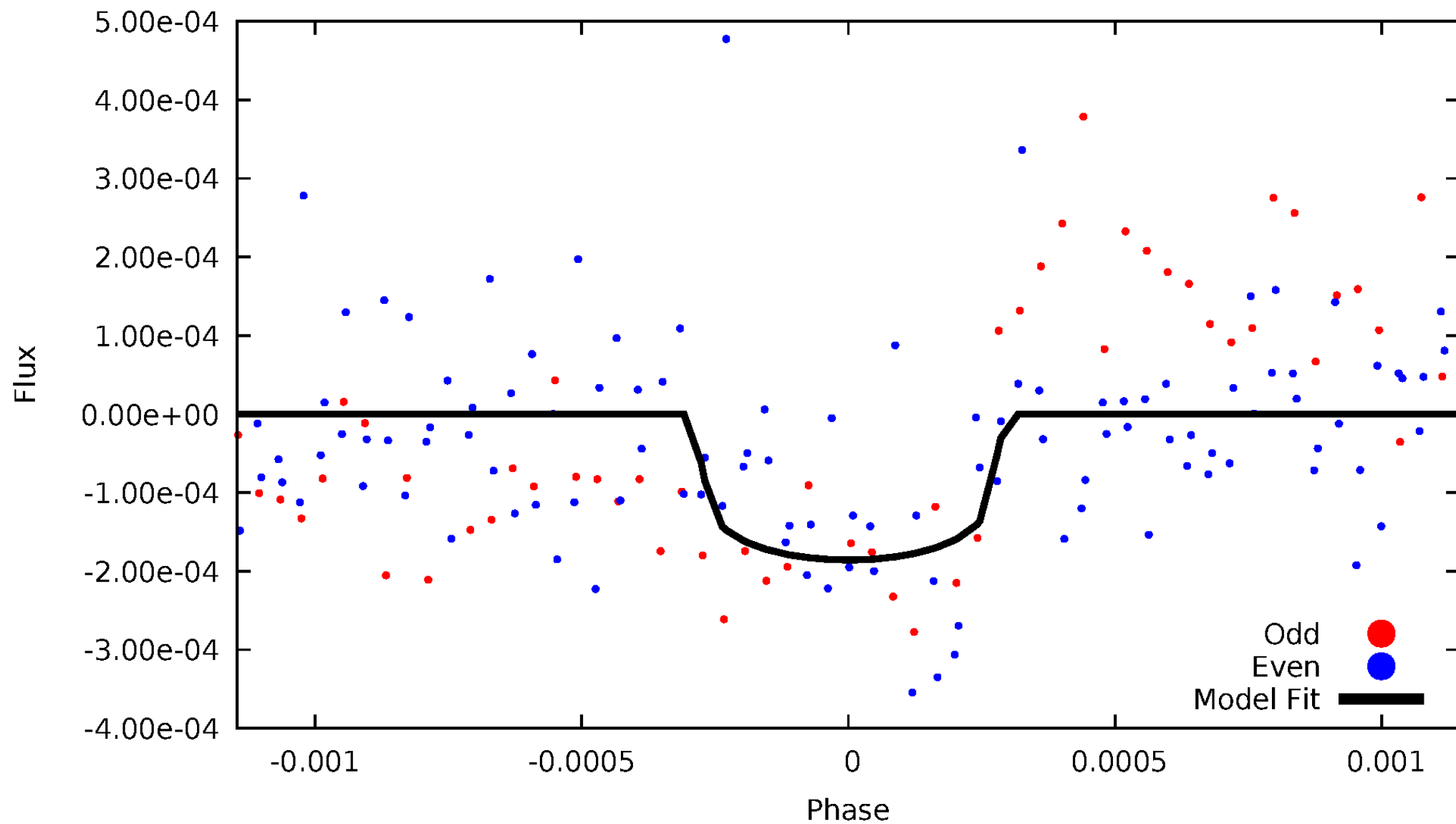


TCE 003733480-01



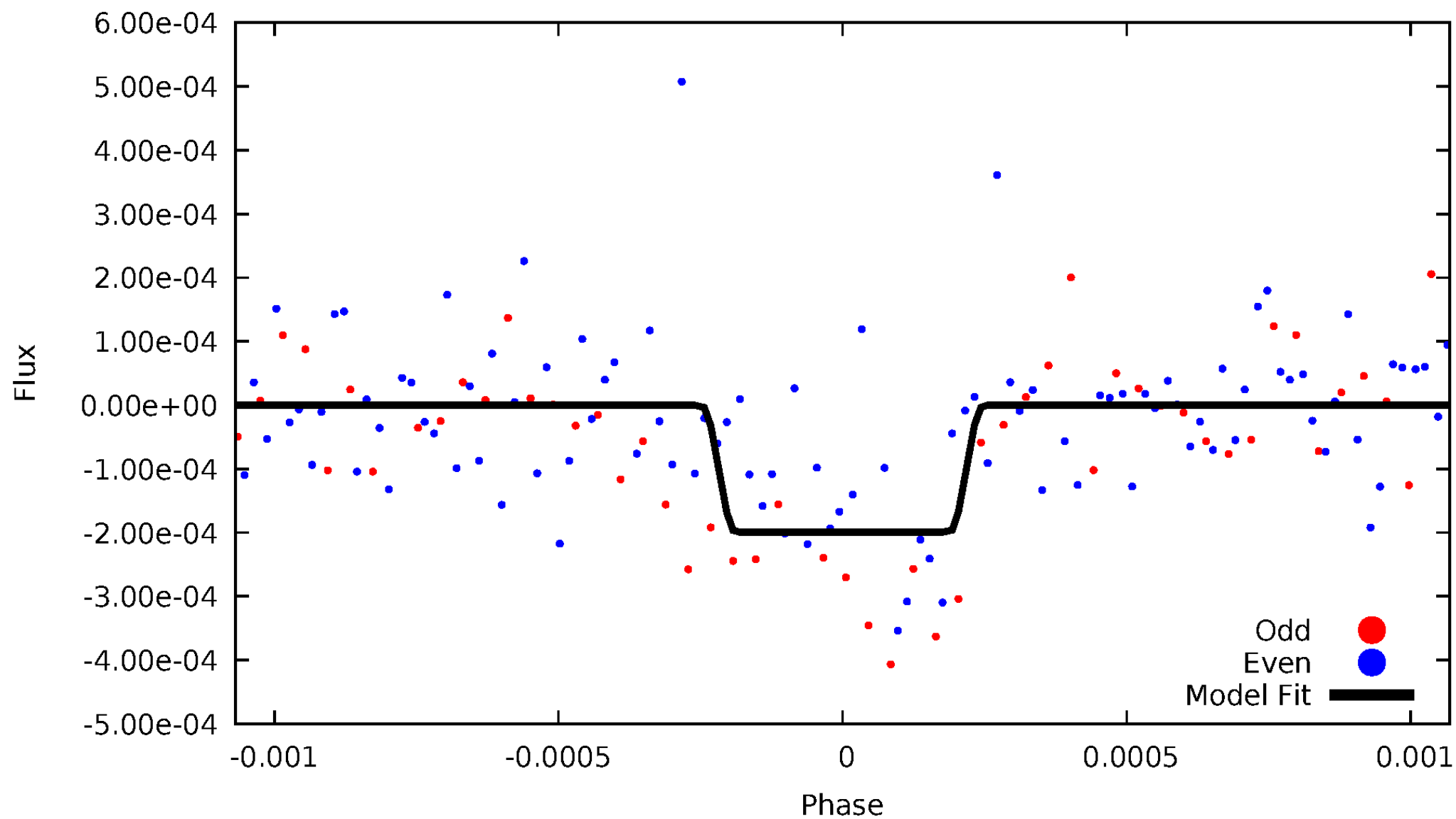
DV Odd/Even

TCE 003733480-01



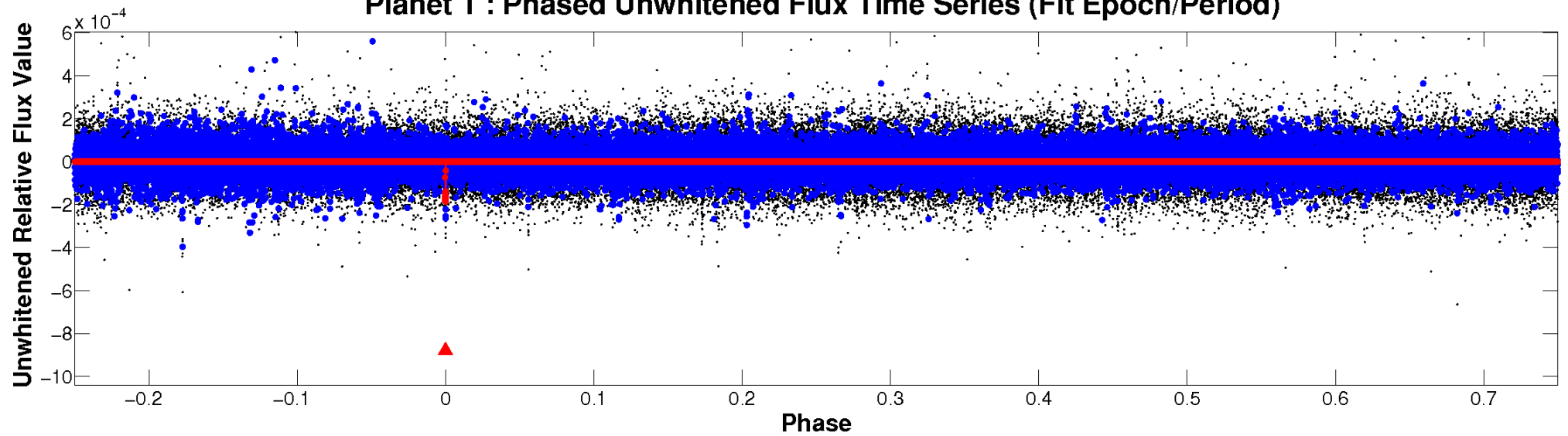
ALT Odd/Even

TCE 003733480-01

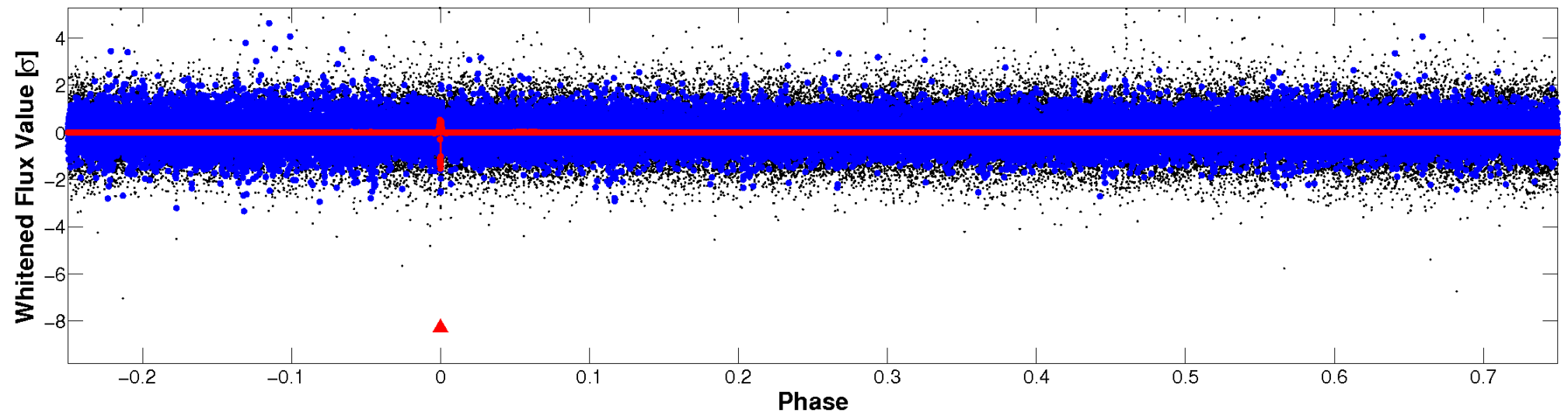


Non-Whitened Vs. Whitened Light Curve

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

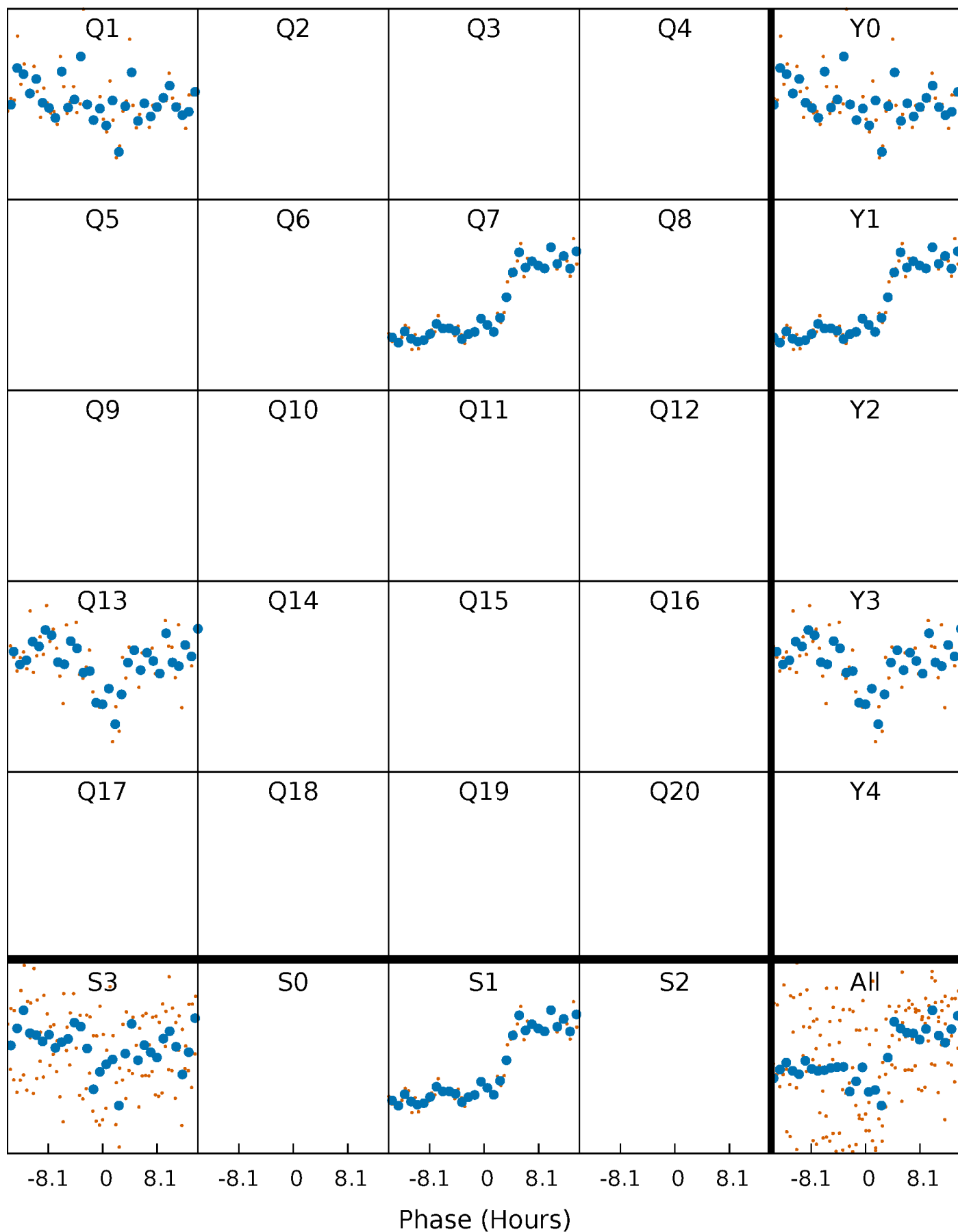


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



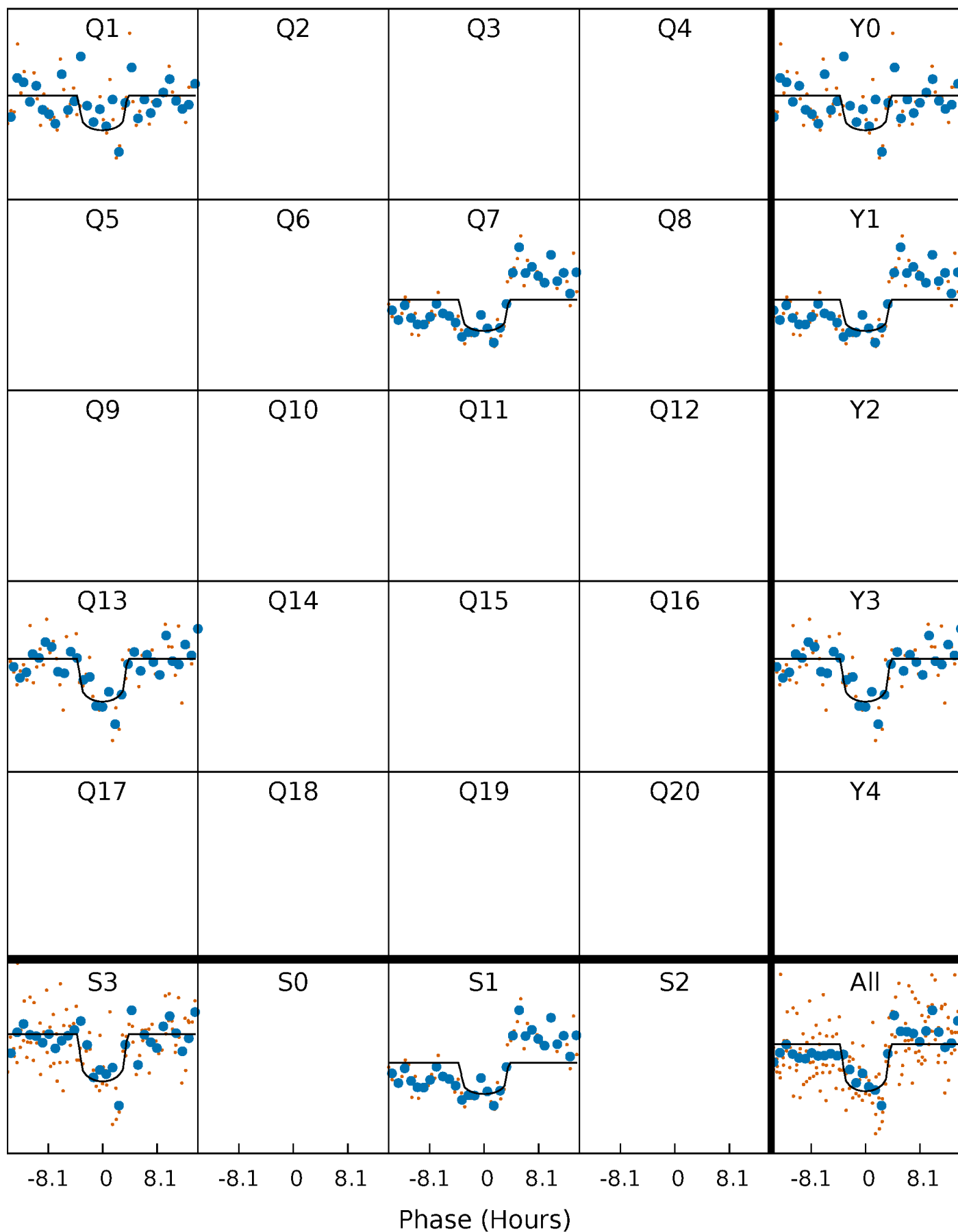
PDC Quarter-Phased Transit Curves

TCE 003733480-01 P=515.662277 Days $T_0=153.904605$ (BKJD)



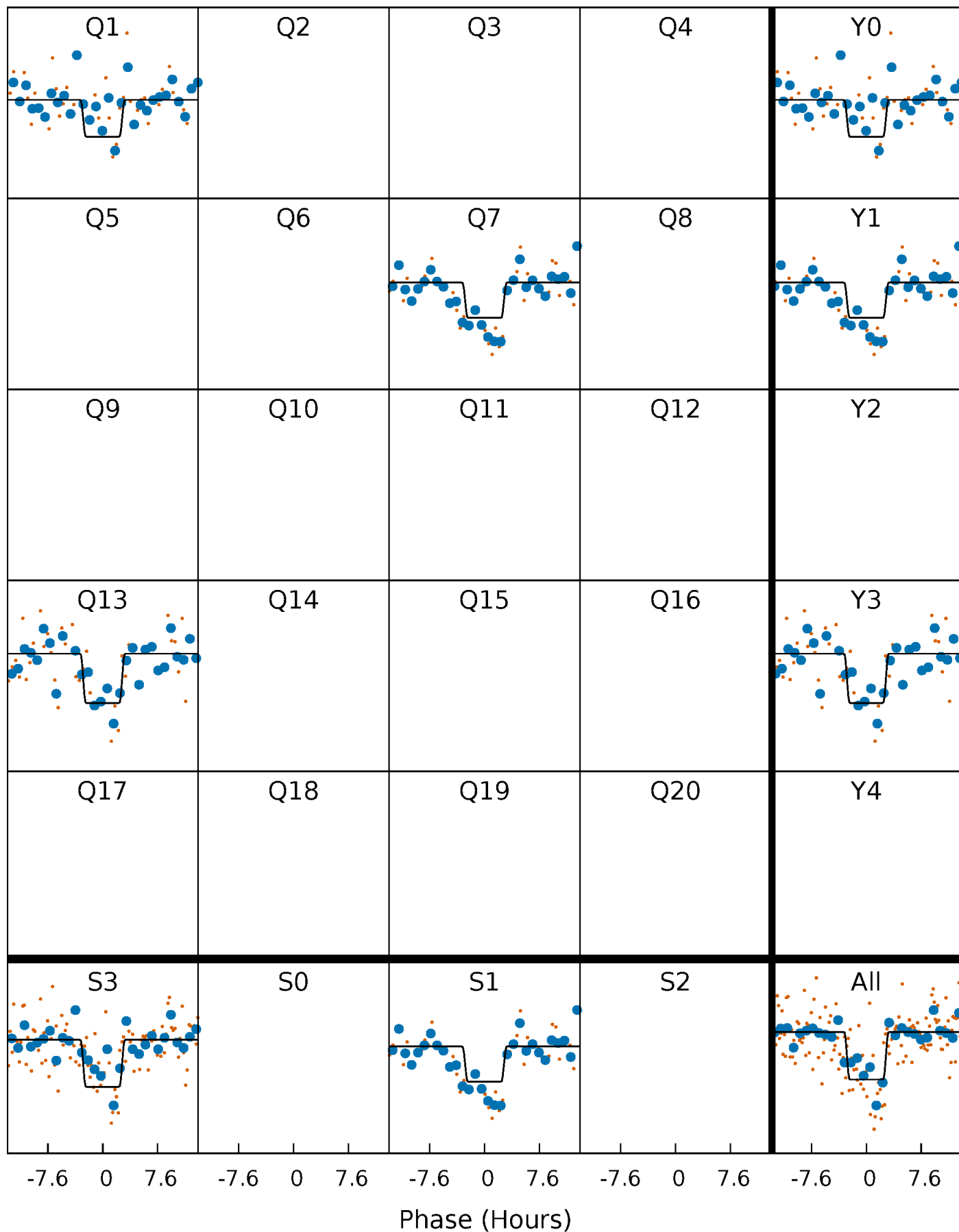
DV Quarter-Phased Transit Curves

TCE 003733480-01 P=515.662277 Days $T_0=153.904605$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

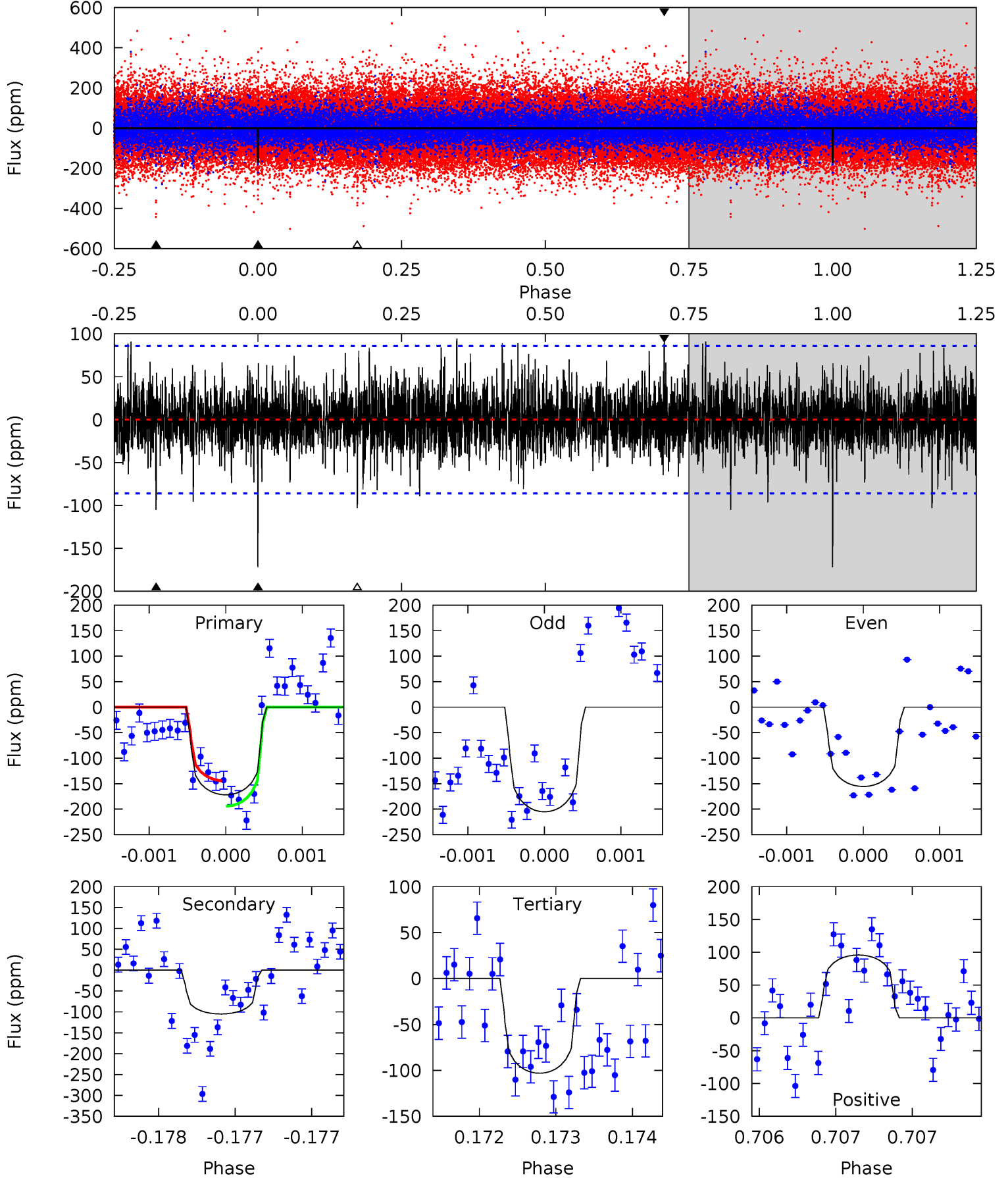
TCE 003733480-01 P=515.654509 Days $T_0=153.932224$ (BKJD)



DV Model-Shift Uniqueness Test

003733480-01, P = 515.662277 Days, E = 153.904605 Days

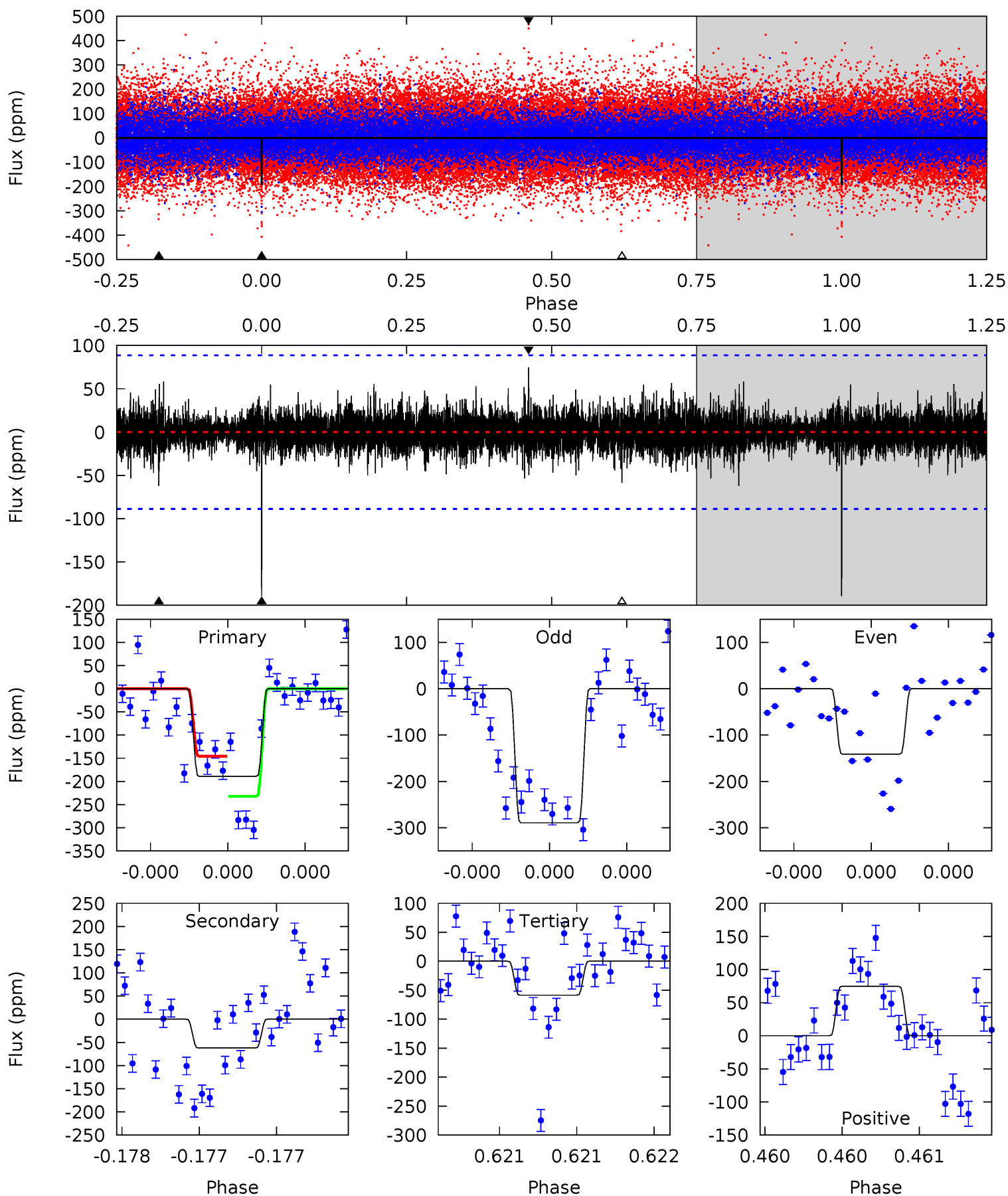
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	6.77	6.64	6.17	5.54	3.43	1.50	4.43	4.90	0.12	0.60	1.53	0.86	0.36	1.58



Alt Model-Shift Uniqueness Test

003733480-01, $P = 515.654509$ Days, $E = 153.932224$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	3.90	3.67	4.68	5.58	3.49	0.89	8.22	7.22	0.22	-0.78	4.34	1.01	0.28	2.72



Stellar Parameters For KIC 003733480

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5966^{+190}_{-211}	$4.115^{+0.293}_{-0.158}$	$-0.060^{+0.250}_{-0.300}$	$1.488^{+0.395}_{-0.483}$	$1.053^{+0.156}_{-0.140}$	$0.450^{+0.897}_{-0.201}$
	+3%/-4%	+7%/-4%	+417%/-500%	+27%/-32%	+15%/-13%	+199%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003733480-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-105 ± 16	$3.38^{+3.34}_{-2.24}$	392^{+31}_{-34}	4325^{+2910}_{-854}	8469^{+64971}_{-6395}
Alt.	-62 ± 16	$3.34^{+3.30}_{-2.25}$	391^{+30}_{-38}	3883^{+2476}_{-723}	4780^{+44735}_{-3556}

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 $A_{obs} \gg 1.0$

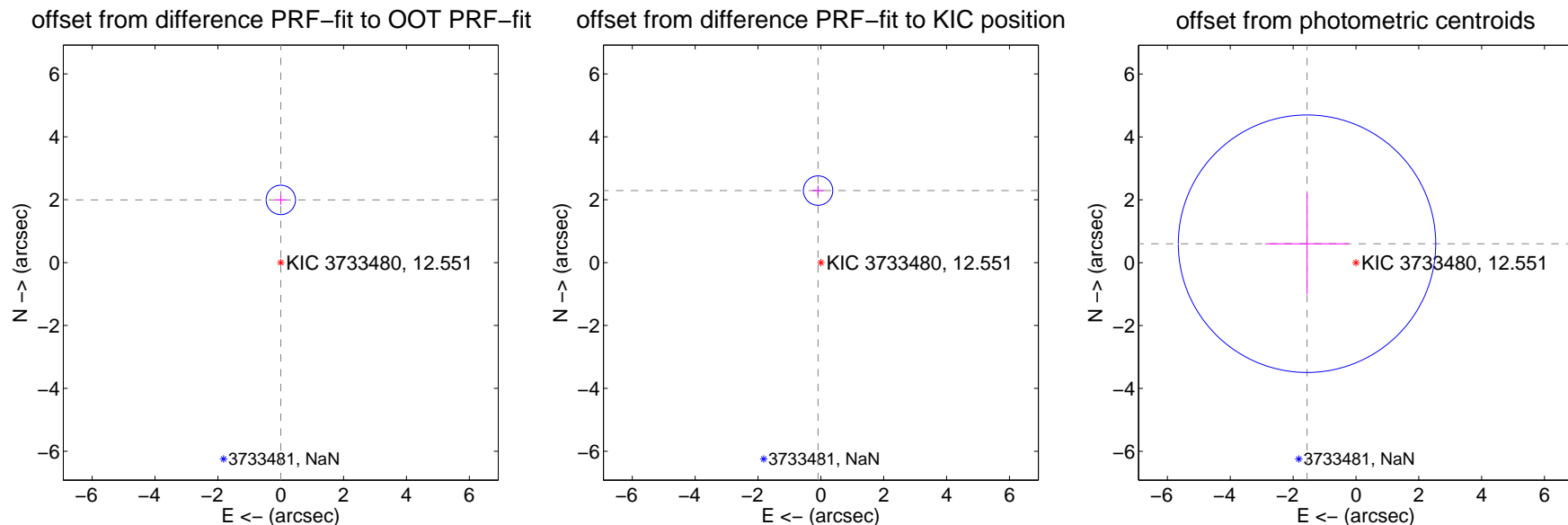
DV Centroid Data

Supplemental centroid analysis for 003733480-01. Kepler magnitude: 12.55. Transit SNR 8.14

There are 1 quarters with good PRF difference image offsets

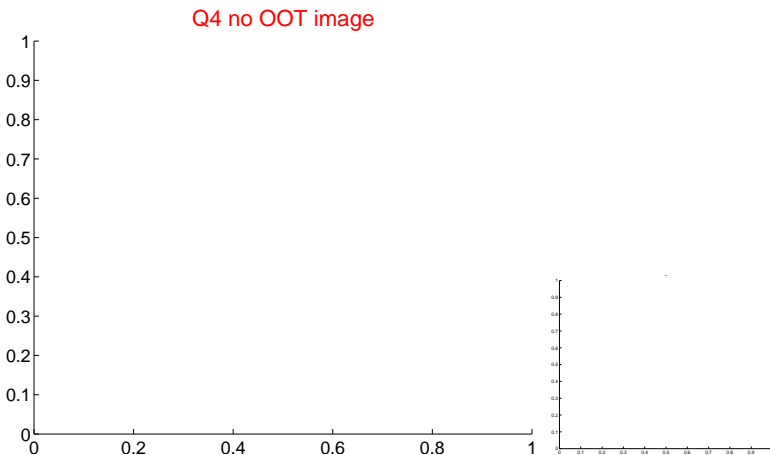
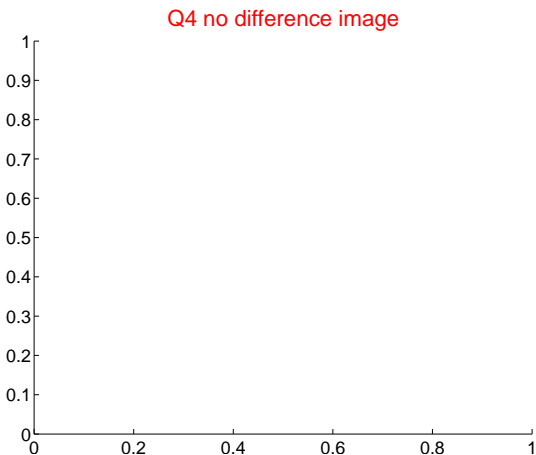
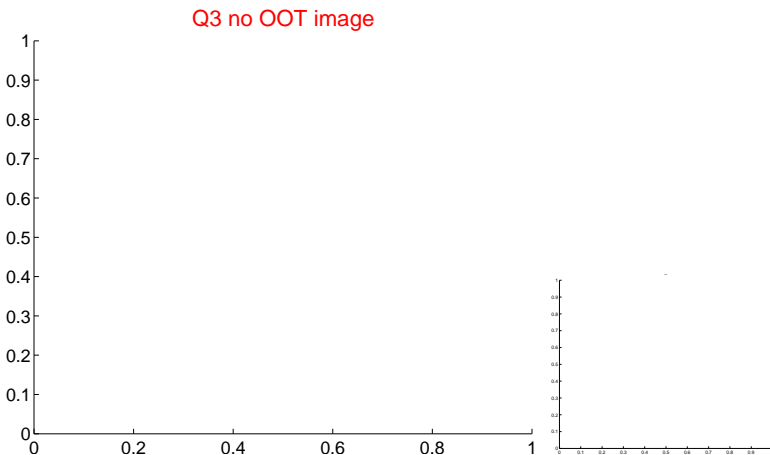
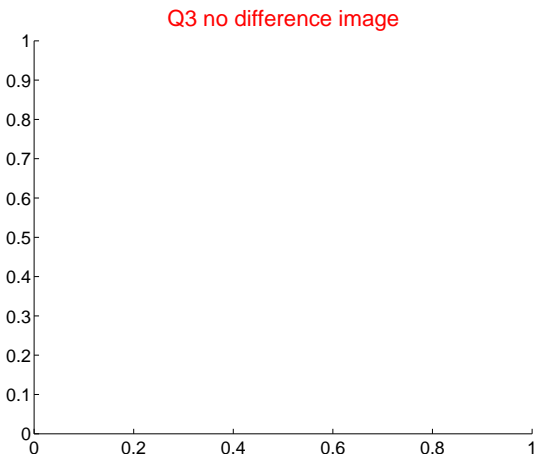
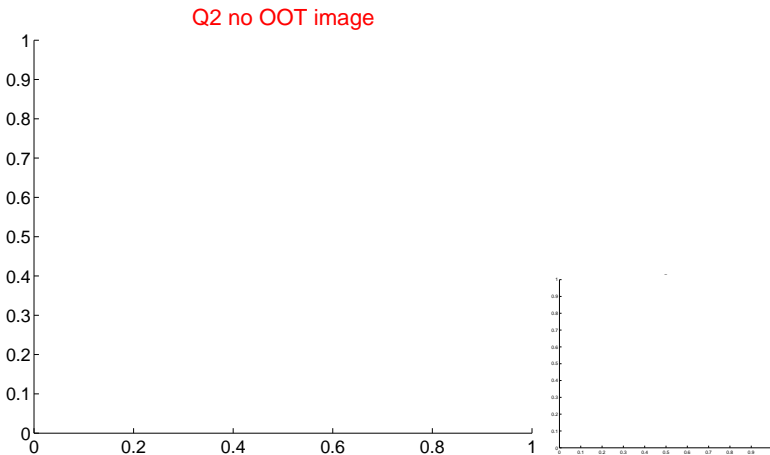
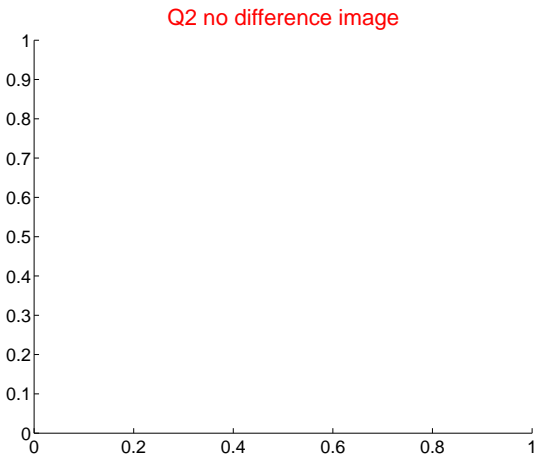
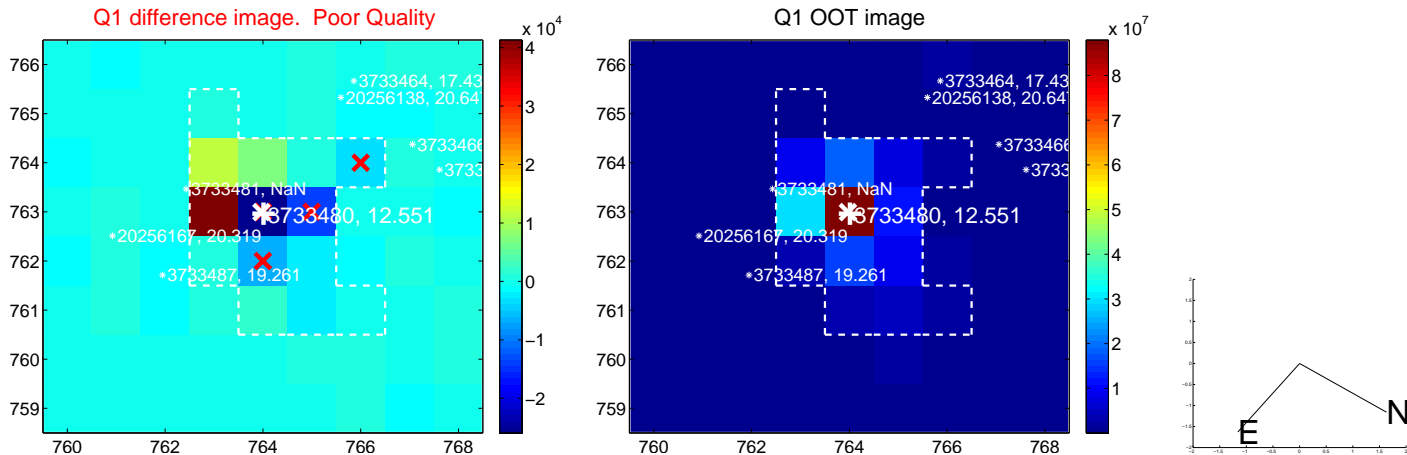
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.994 ± 0.156	12.80	-0.002 ± 0.183	1.994 ± 0.156
PRF-fit source offset from KIC position	2.293 ± 0.156	14.71	0.089 ± 0.183	2.291 ± 0.156
photometric centroid source offset	1.67 ± 1.37	1.22	1.56 ± 1.33	0.60 ± 1.61



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.

Q5 no difference image



Q5 no OOT image



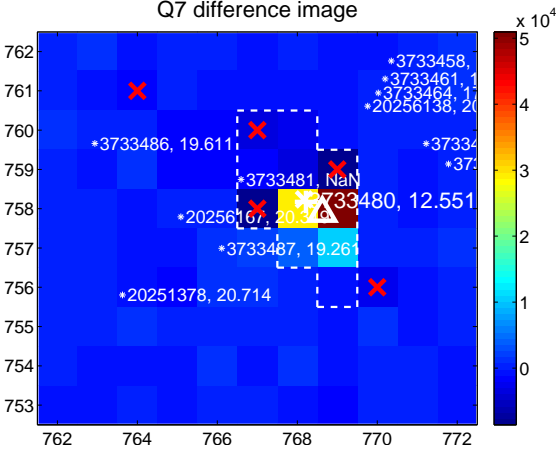
Q6 no difference image



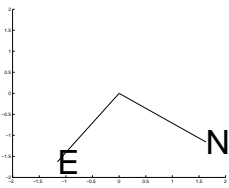
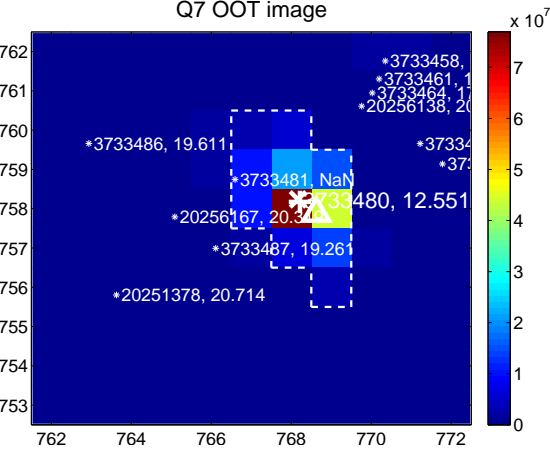
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image



Q8 no OOT image



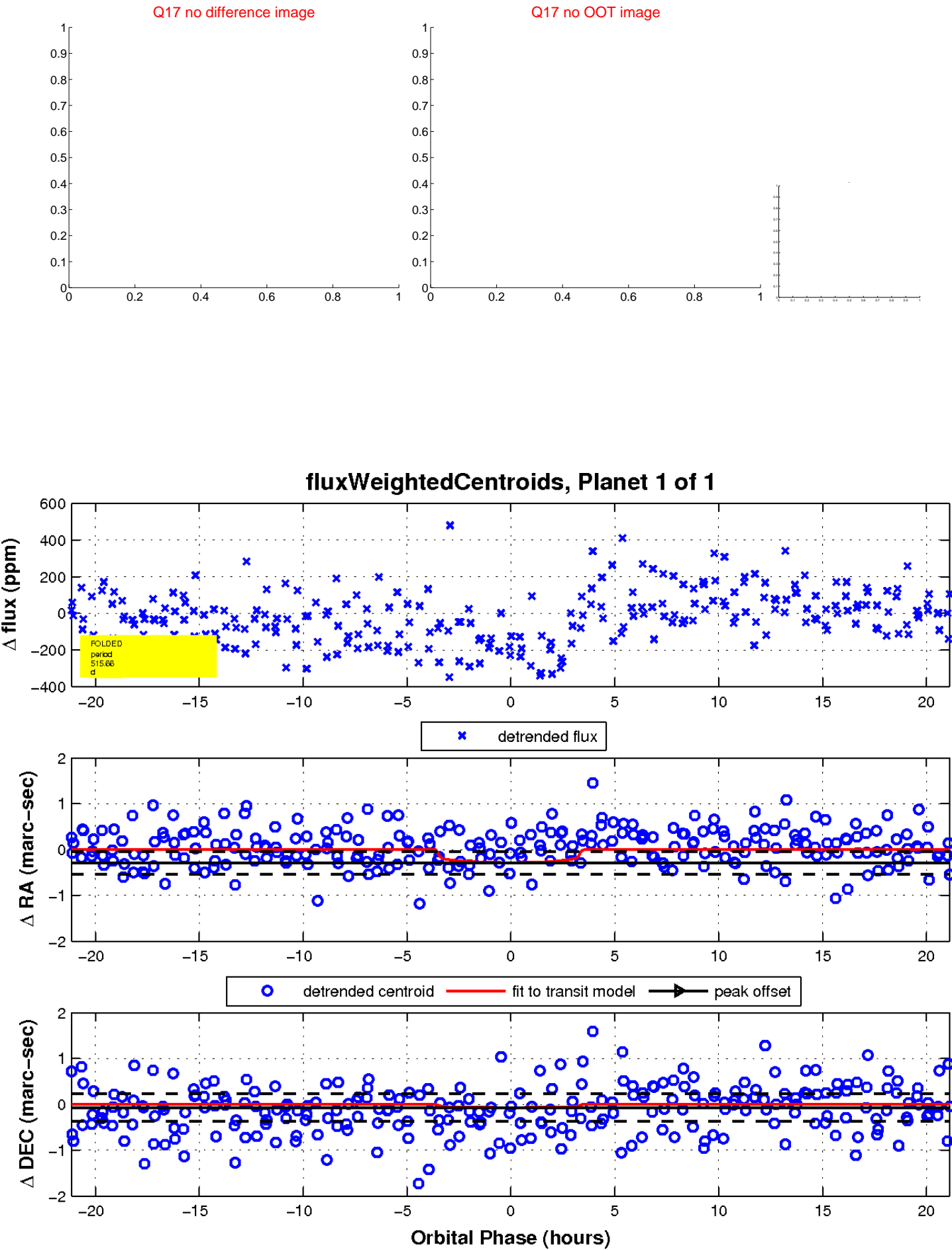
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

