

KIC 008748654

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})
008748654-01	OBS	No	478.289258	445.455159	221.8	11.603	8.4	8.5	1.21	6130	1.92	1.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008748654-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—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.

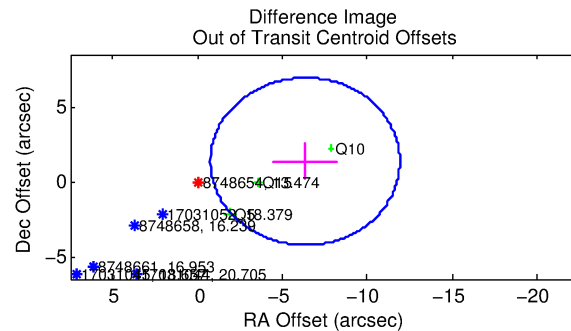
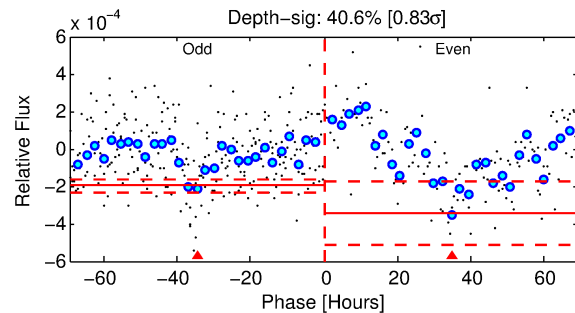
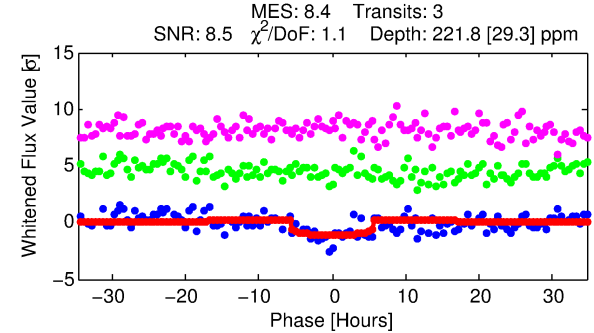
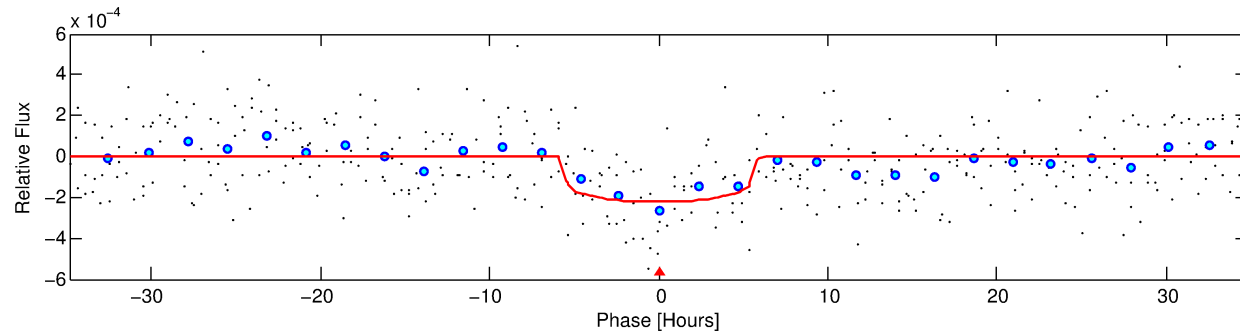
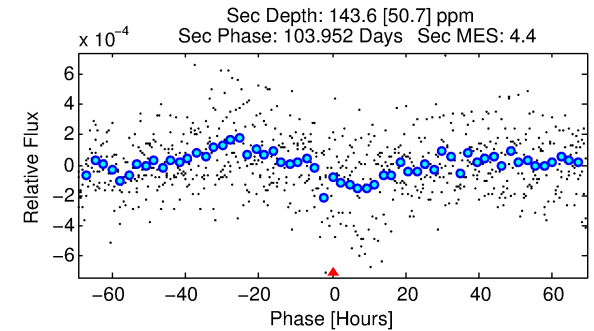
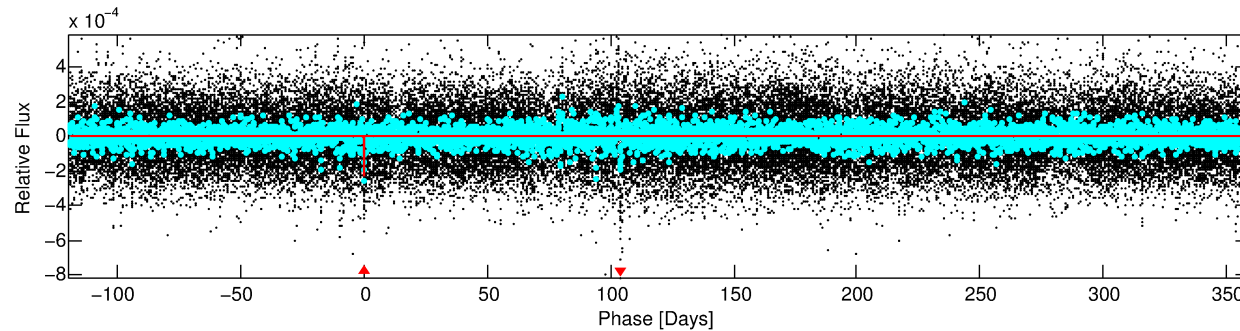
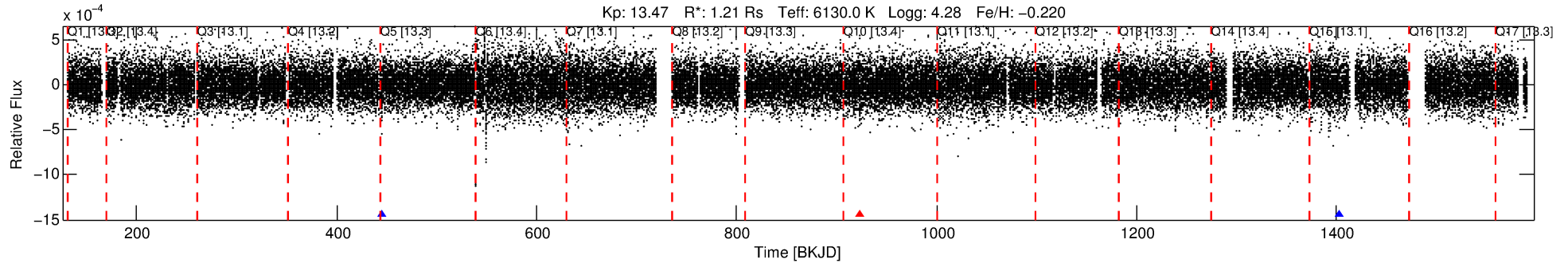
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008748654-01

No Significant Match Found

DV One-Page Summary

KIC: 8748654 Candidate: 1 of 1 Period: 478.289 d



DV Fit Results:

Period = 478.28926 [0.01458] d
Epoch = 445.4552 [0.0166] BKJD
Rp/R* = 0.0146 [0.0074]
a/R* = 233.93 [595.78]
b = 0.69 [1.93]
Seff = 1.29 [0.46]
Teff = 271 [25] K
Rp = 1.92 [1.13] Re
a = 1.1976 [0.2916] AU
Ag = 30831.64 [34872.80] [0.88σ]
Teffp = 5562 [1509] K [3.51σ]

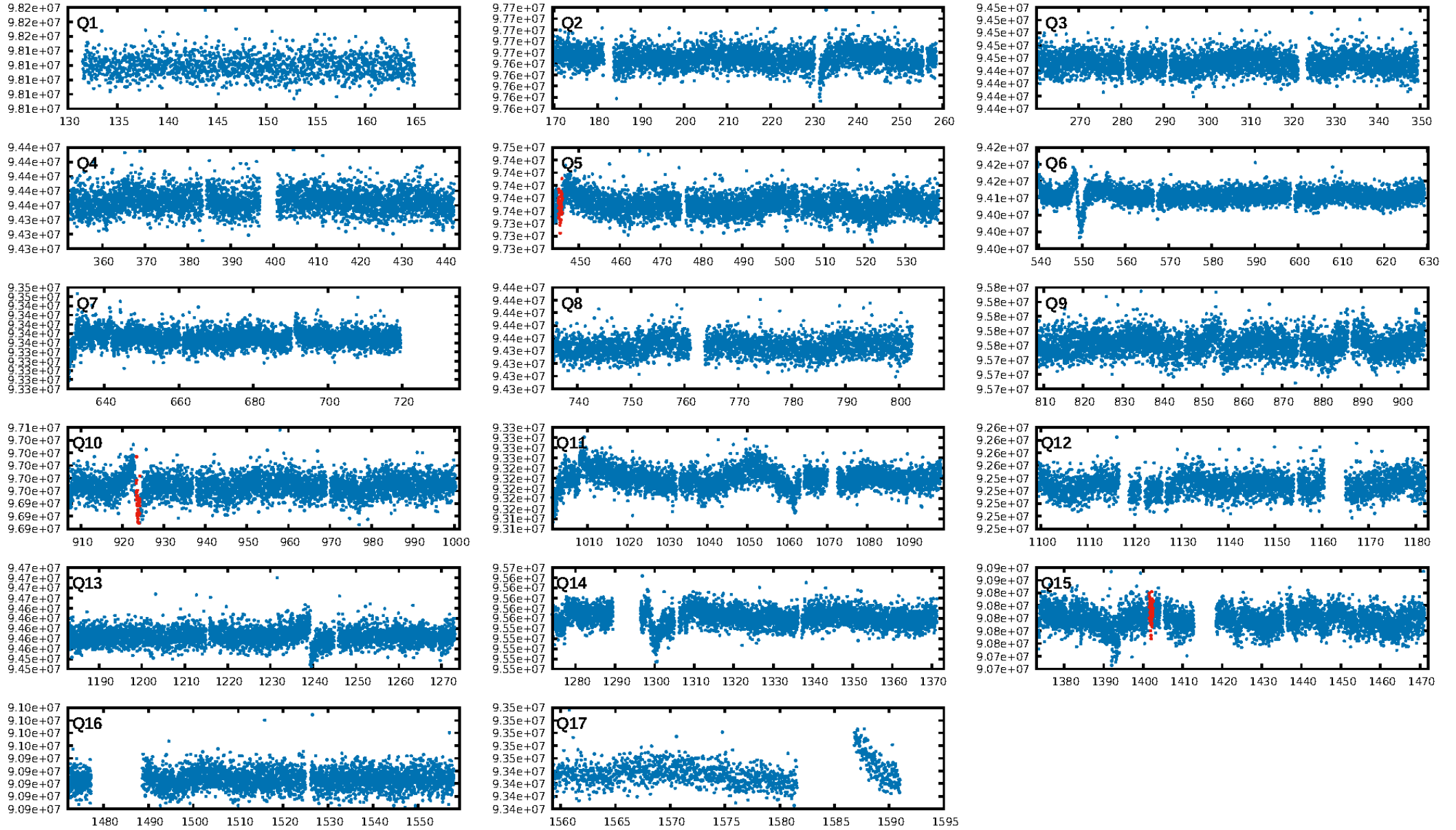
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.9%
ModelChiSquareGof-sig: 95.6%
Bootstrap-pfa: 2.50e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.3448
Centroid-sig: 12.4%
Centroid-so: 2.358 arcsec [1.55σ]
OotOffset-rm: 6.493 arcsec [3.49σ]
KicOffset-rm: 6.375 arcsec [3.43σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

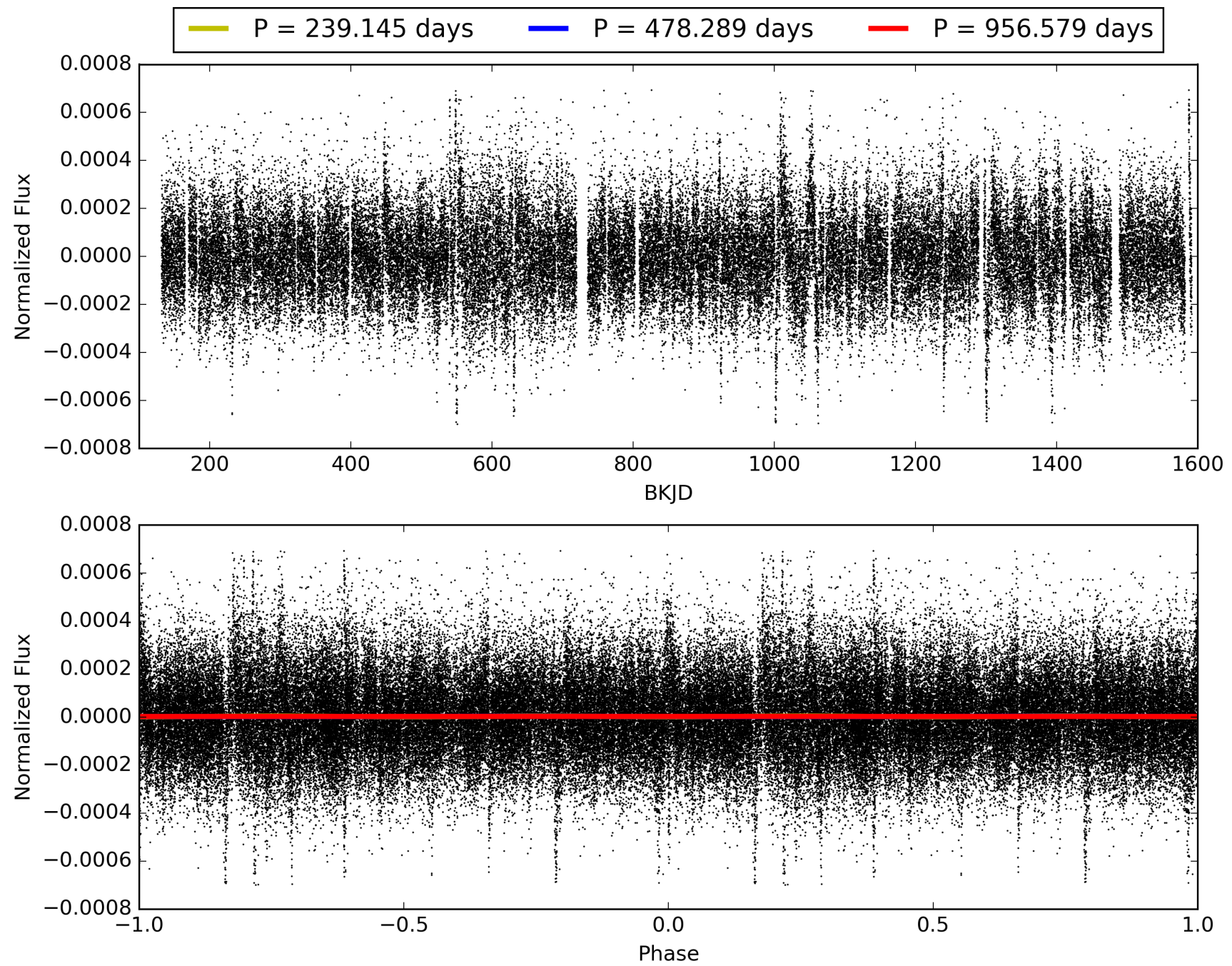
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:59:24 Z

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

TCE 008748654-01, PDC Light Curves

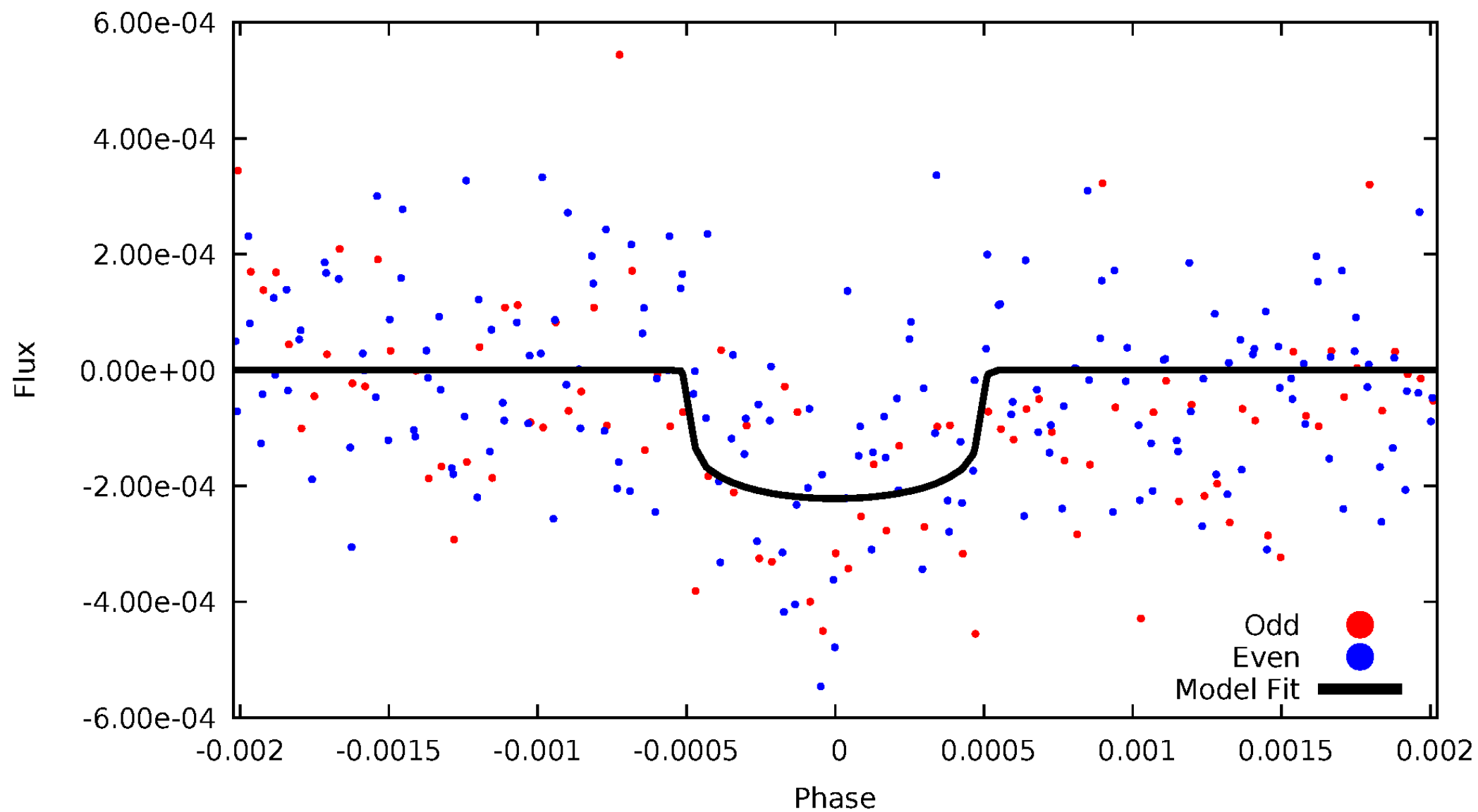


TCE 008748654-01



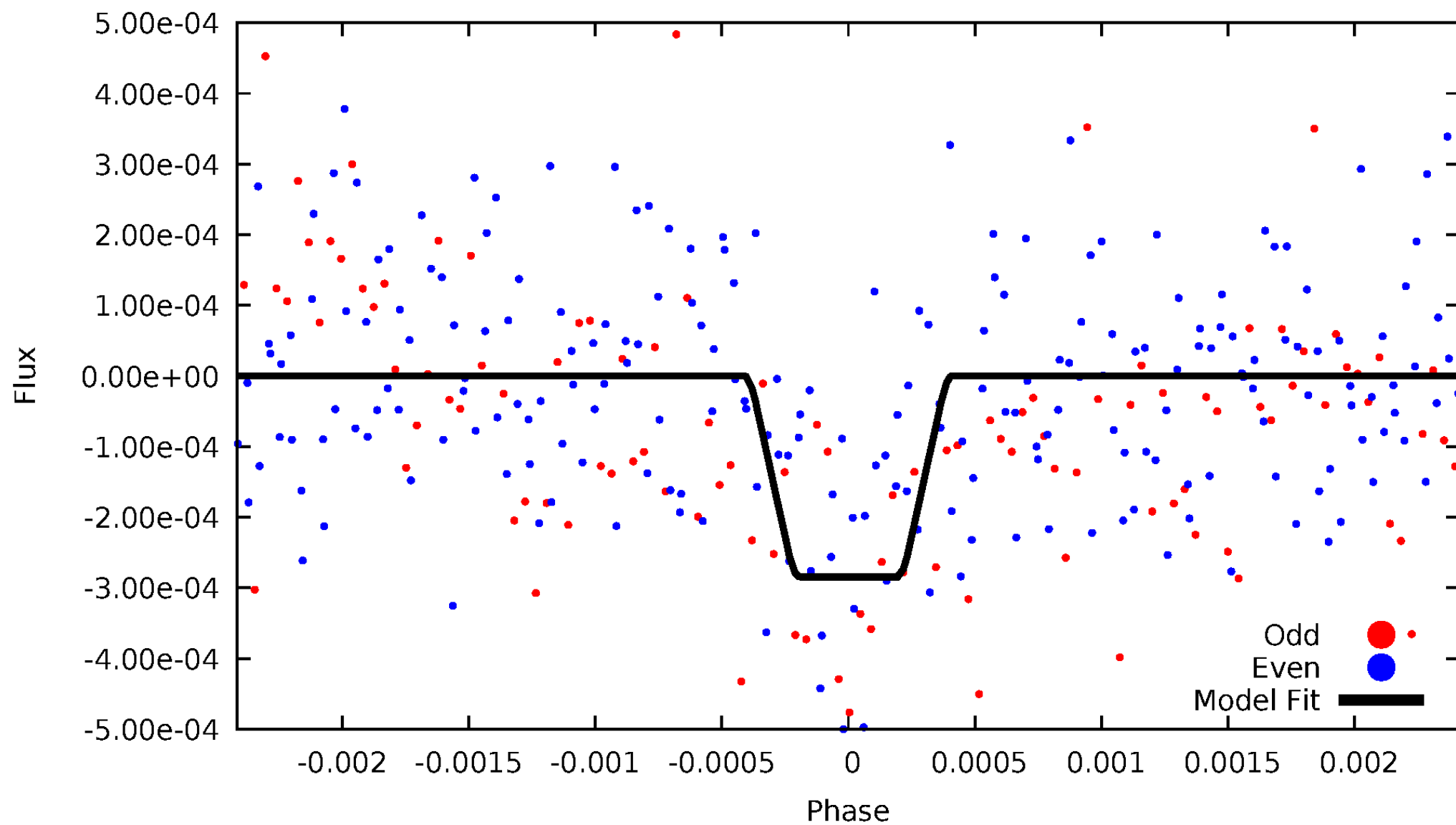
DV Odd/Even

TCE 008748654-01



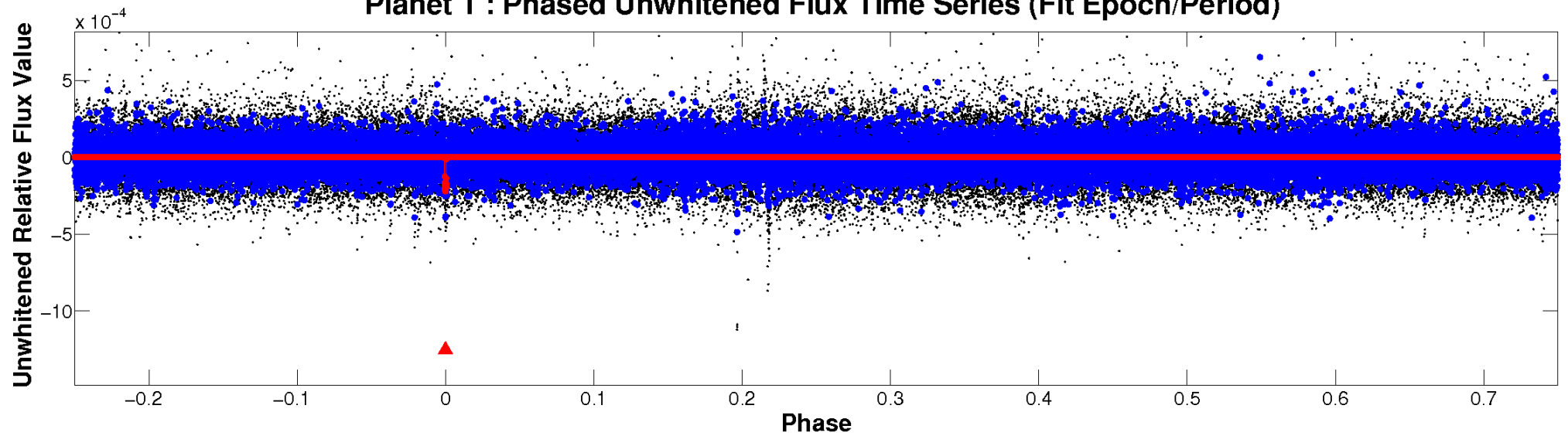
ALT Odd/Even

TCE 008748654-01

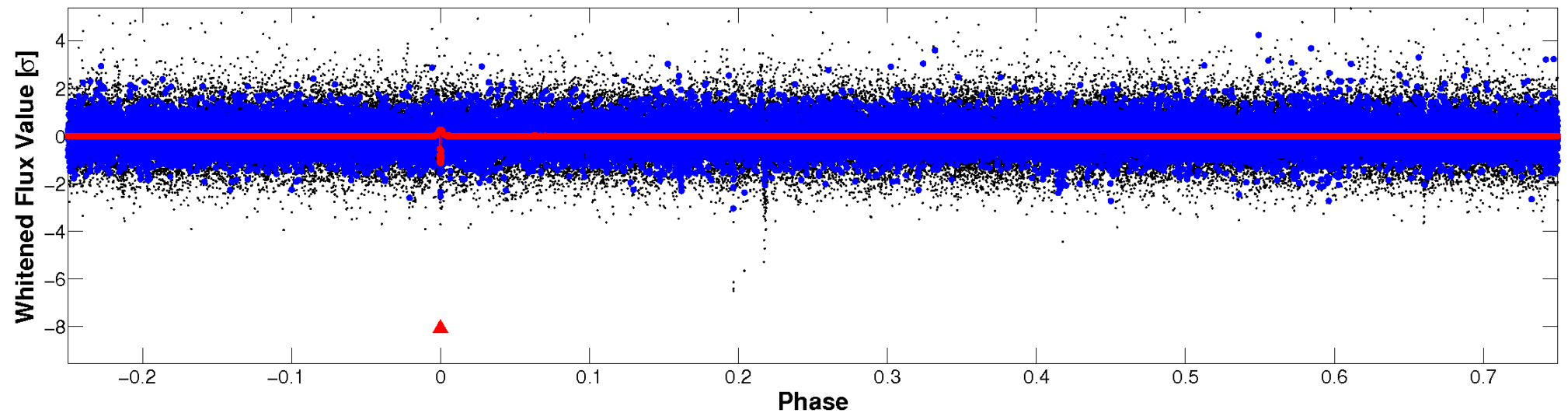


Non-Whitened Vs. Whitened Light Curve

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

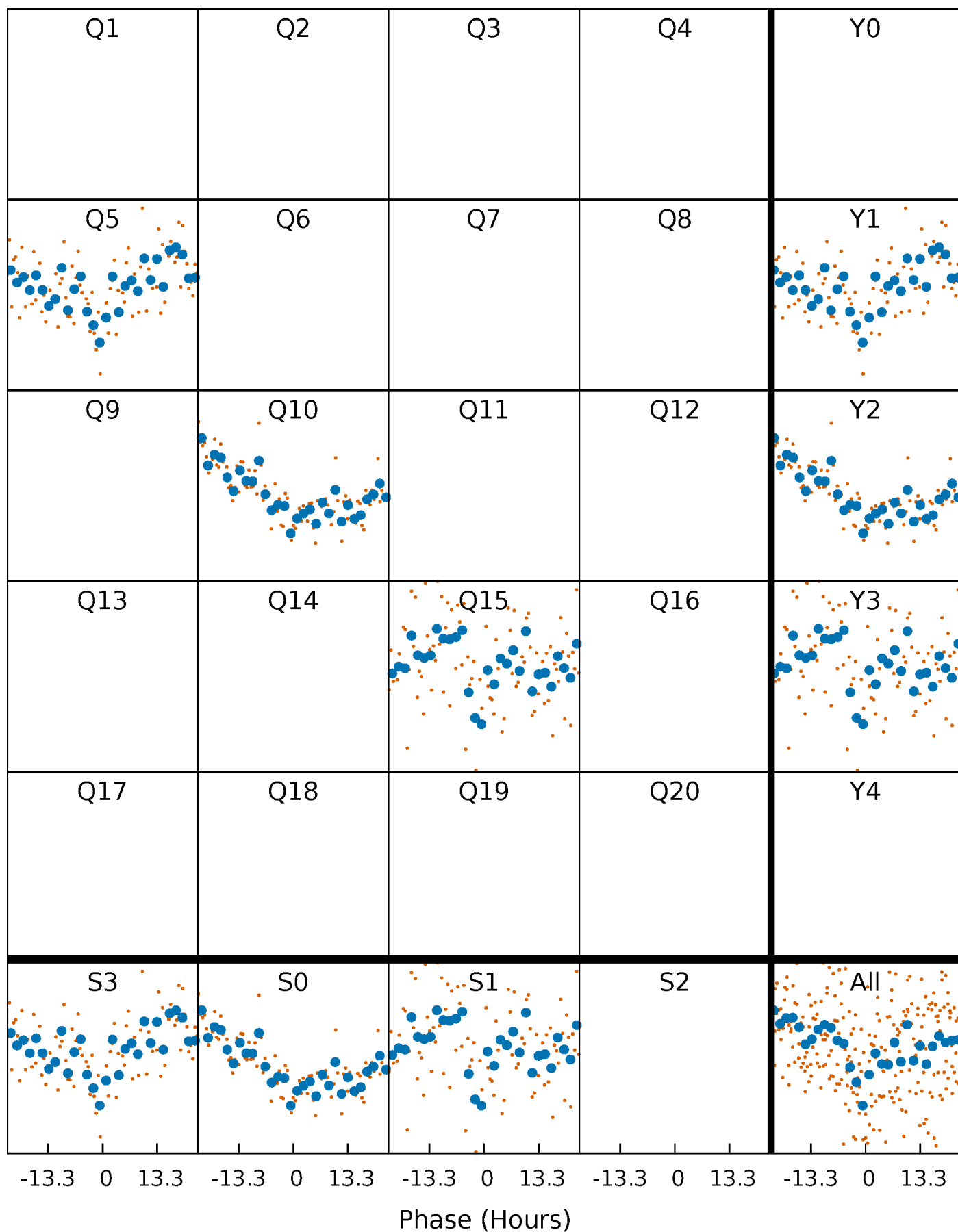


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



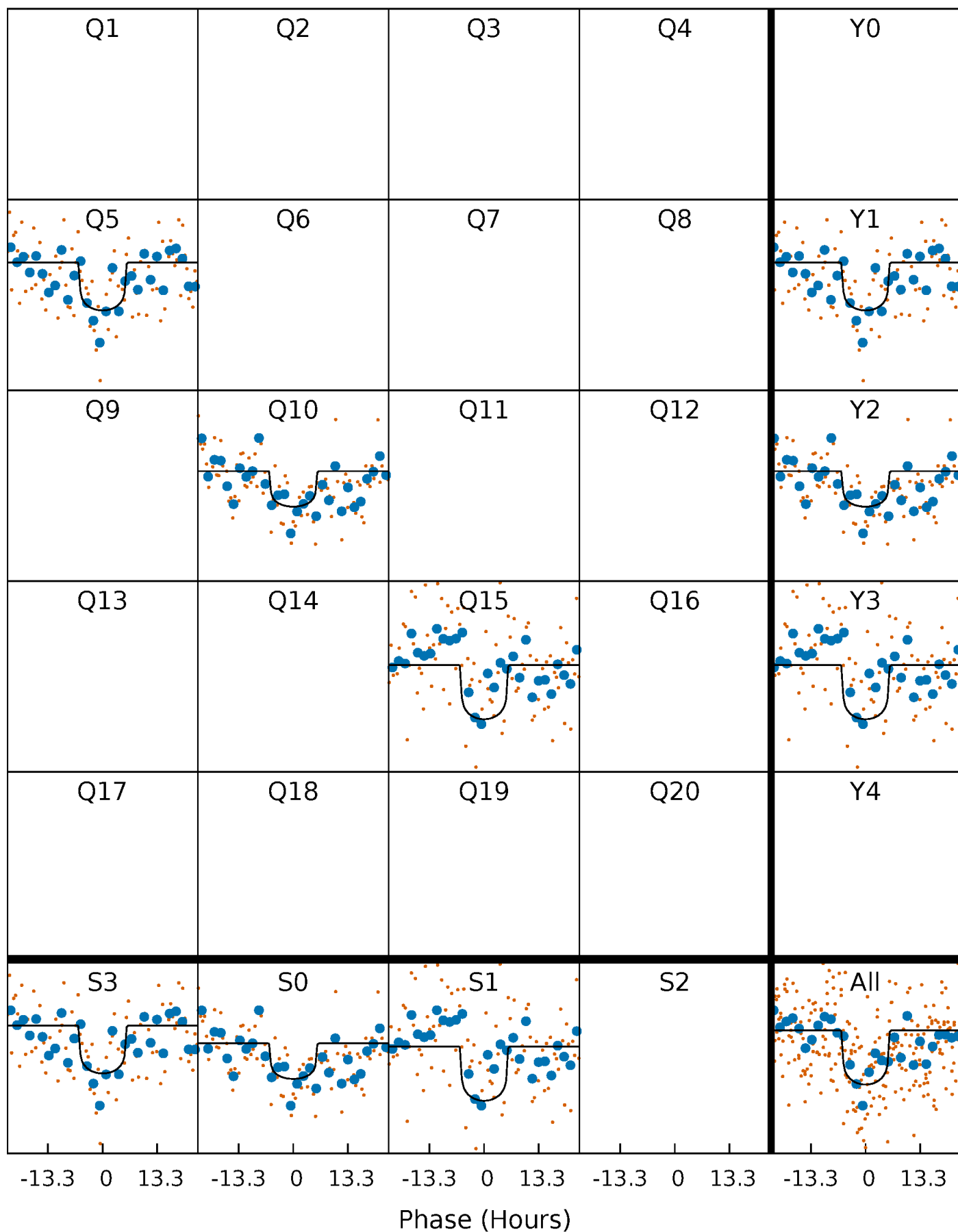
PDC Quarter-Phased Transit Curves

TCE 008748654-01 P=478.289258 Days $T_0=445.455159$ (BKJD)



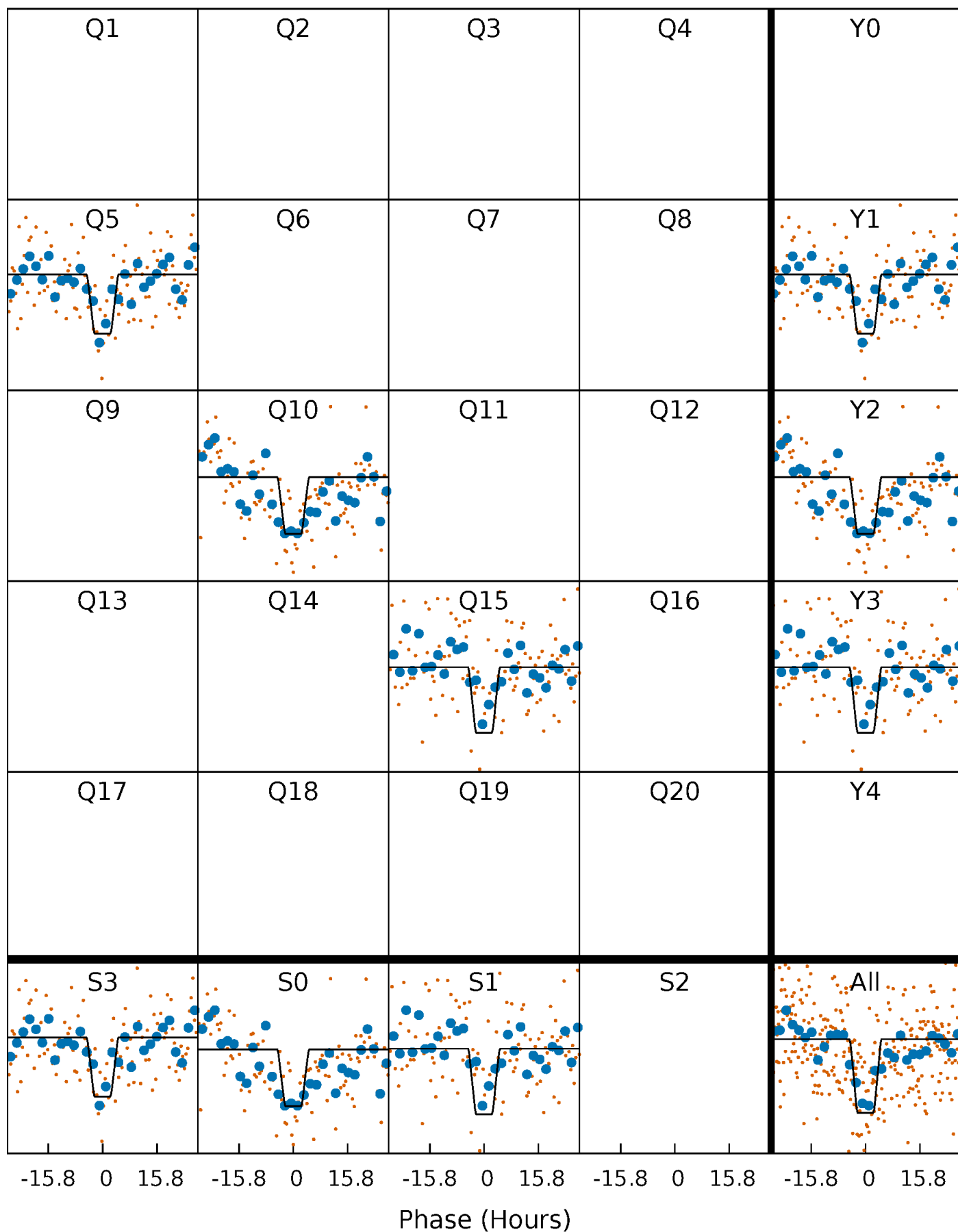
DV Quarter-Phased Transit Curves

TCE 008748654-01 P=478.289258 Days $T_0=445.455159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

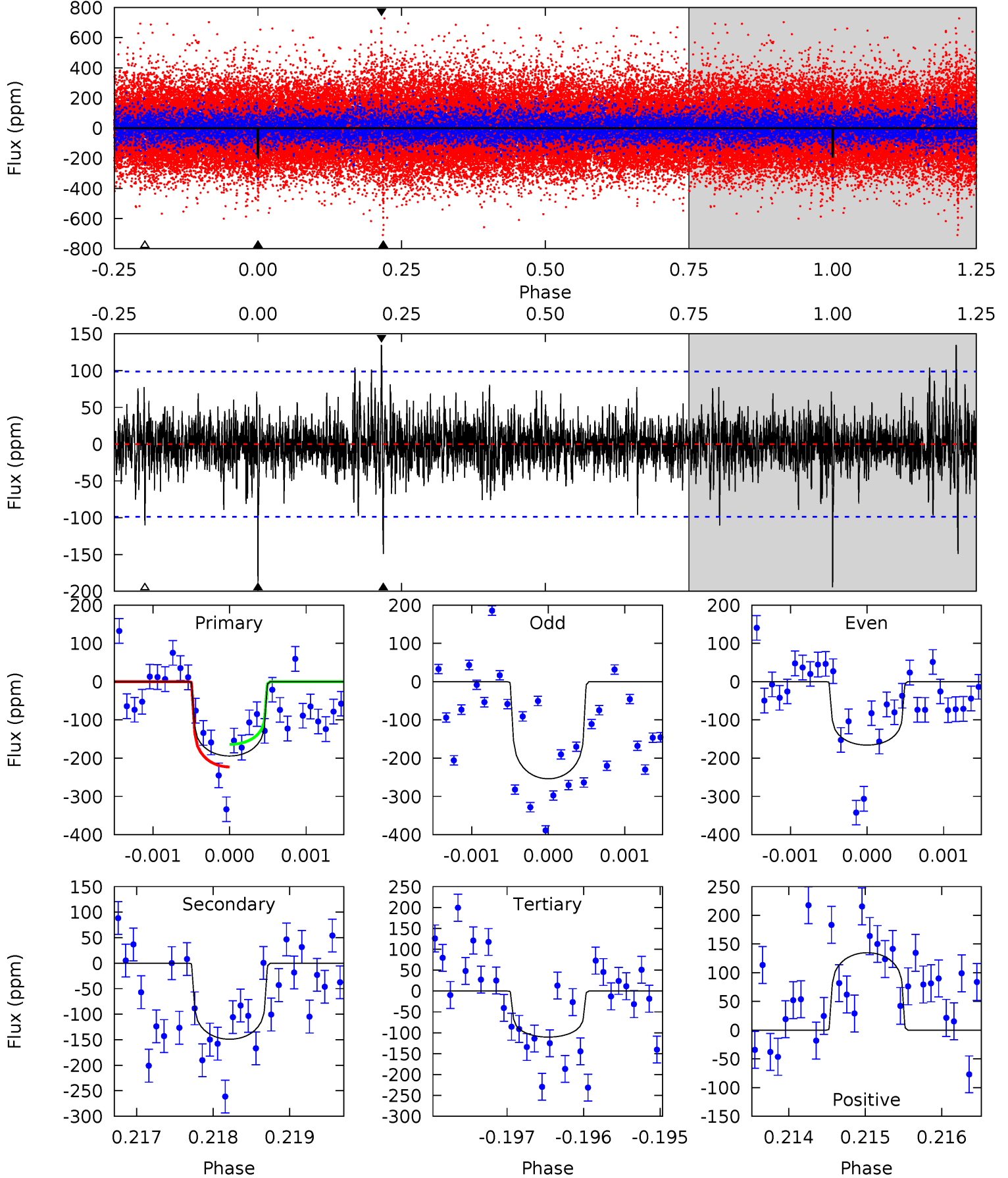
TCE 008748654-01 P=478.281528 Days $T_0=445.440909$ (BKJD)



DV Model-Shift Uniqueness Test

008748654-01, P = 478.289258 Days, E = 445.455159 Days

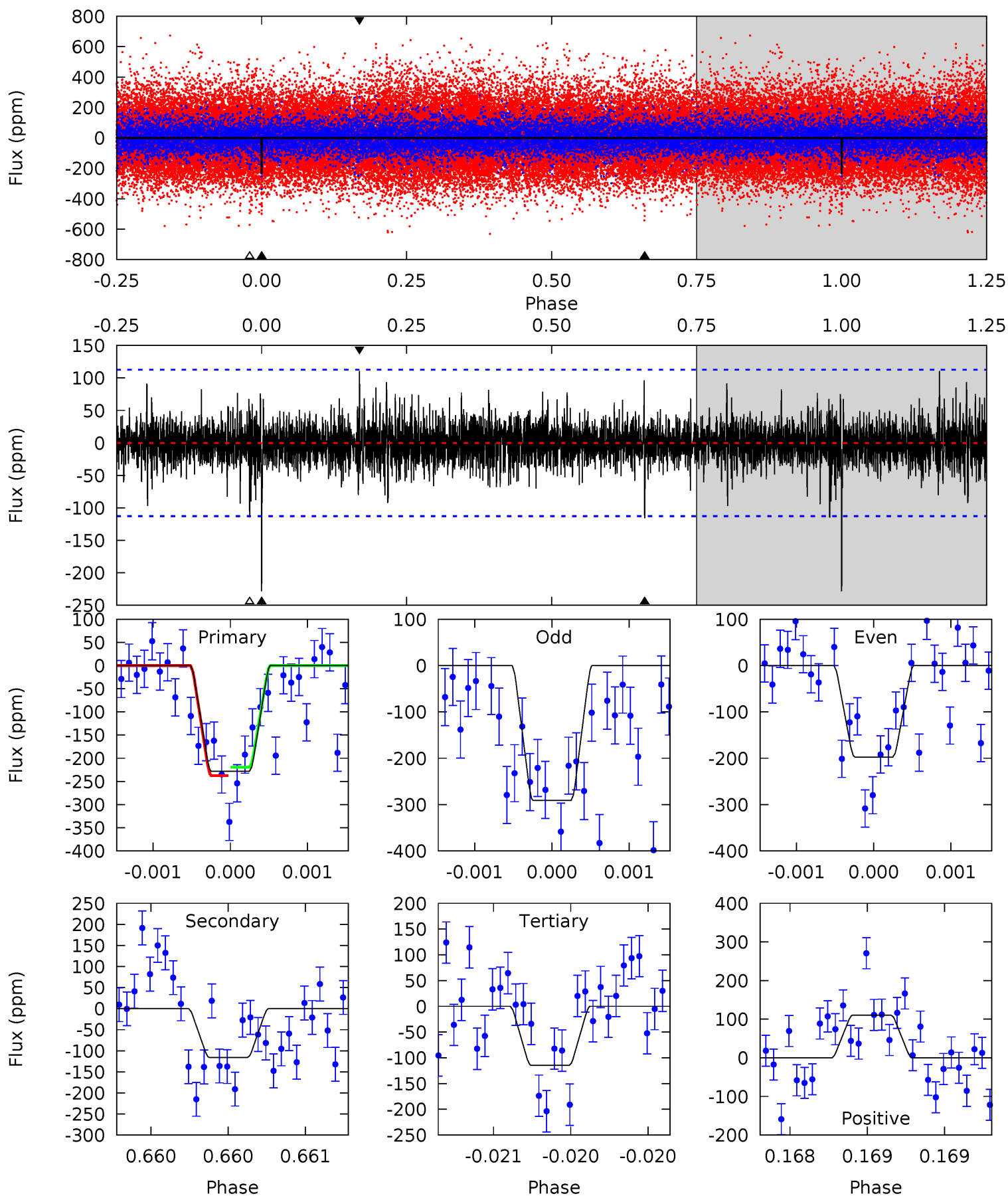
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	8.22	6.09	7.44	5.45	3.28	1.33	4.63	3.28	2.13	0.78	2.30	0.88	0.41	1.62



Alt Model-Shift Uniqueness Test

008748654-01, P = 478.281528 Days, E = 445.440909 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	5.66	5.59	5.39	5.49	3.36	1.14	5.55	5.74	0.07	0.26	2.16	1.04	0.33	0.45



Stellar Parameters For KIC 008748654

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6130^{+164}_{-182}	$4.275^{+0.162}_{-0.180}$	$-0.220^{+0.300}_{-0.300}$	$1.207^{+0.363}_{-0.272}$	$1.002^{+0.166}_{-0.125}$	$0.802^{+0.727}_{-0.377}$
	+3%/-3%	+4%/-4%	+136%/-136%	+30%/-23%	+17%/-12%	+91%/-47%
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 008748654-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-149 ± 18	$1.96^{+0.96}_{-0.92}$	380^{+28}_{-25}	5577^{+2179}_{-912}	30609^{+74331}_{-17301}
Alt.	-116 ± 21	$2.24^{+1.05}_{-0.98}$	380^{+28}_{-25}	4950^{+1541}_{-677}	18155^{+39682}_{-9981}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

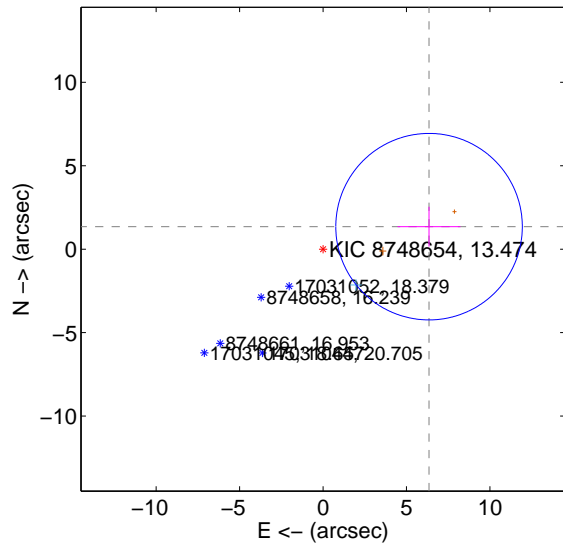
Supplemental centroid analysis for 008748654-01. Kepler magnitude: 13.47. Transit SNR 8.50

There are 1 quarters with good PRF difference image offsets

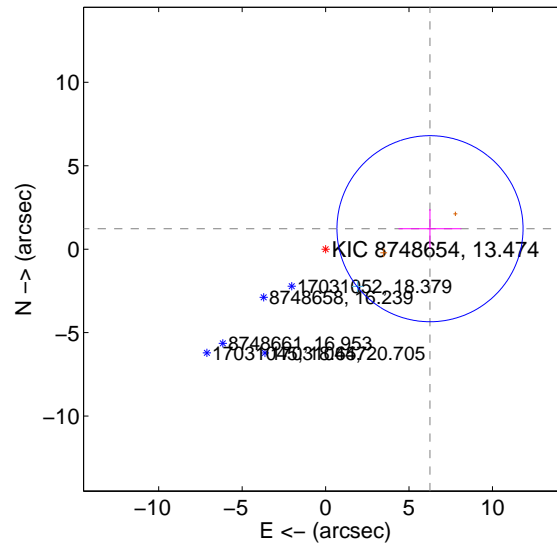
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.493 ± 1.862	3.49	-6.351 ± 1.887	1.348 ± 1.191
PRF-fit source offset from KIC position	6.375 ± 1.858	3.43	-6.256 ± 1.879	1.226 ± 1.178
photometric centroid source offset	2.36 ± 1.52	1.55	-1.71 ± 1.49	1.62 ± 1.55

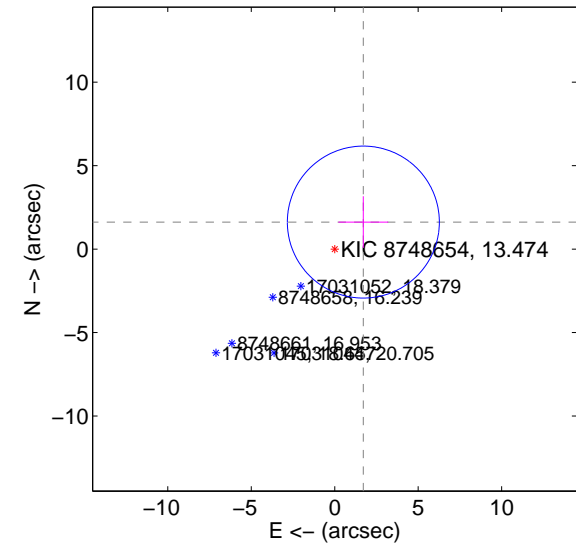
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

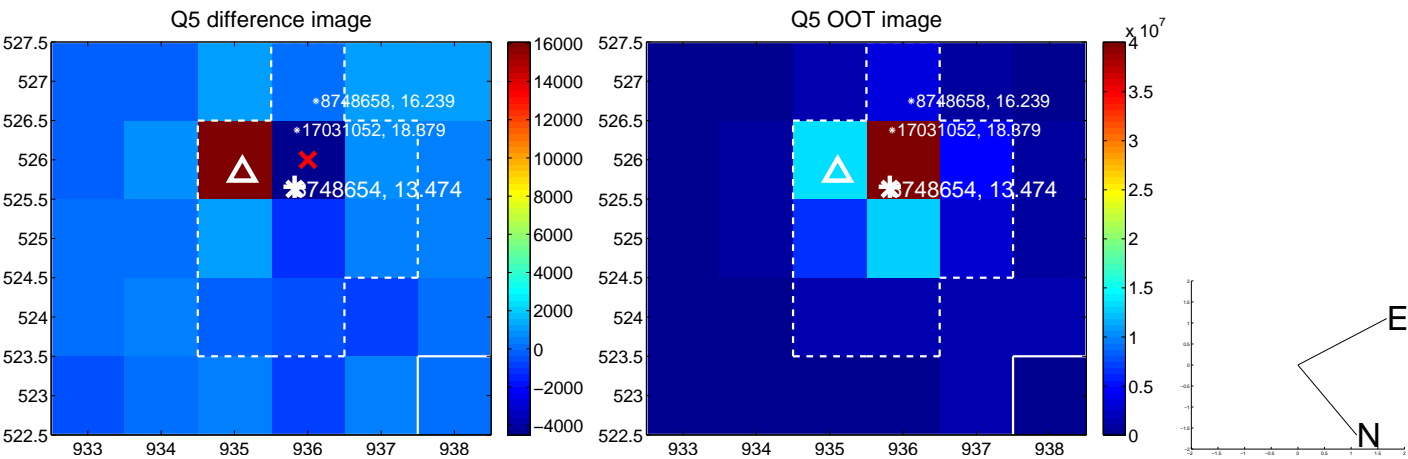


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.



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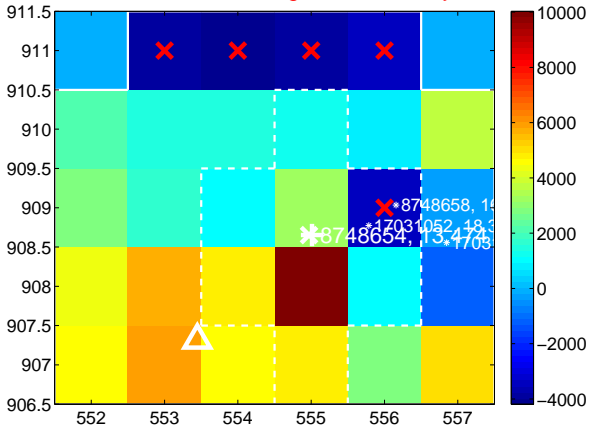
Q9 no difference image



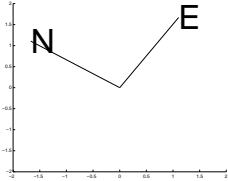
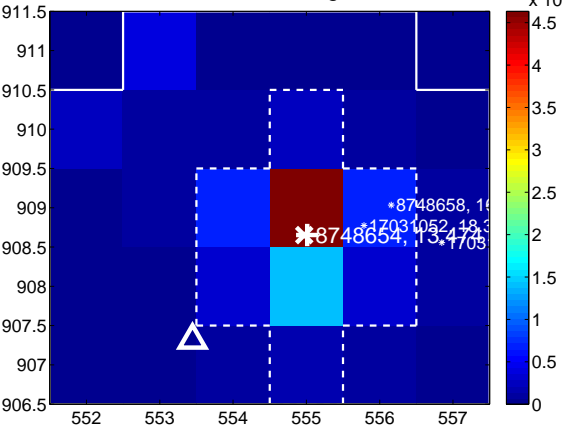
Q9 no OOT image



Q10 difference image. Poor Quality



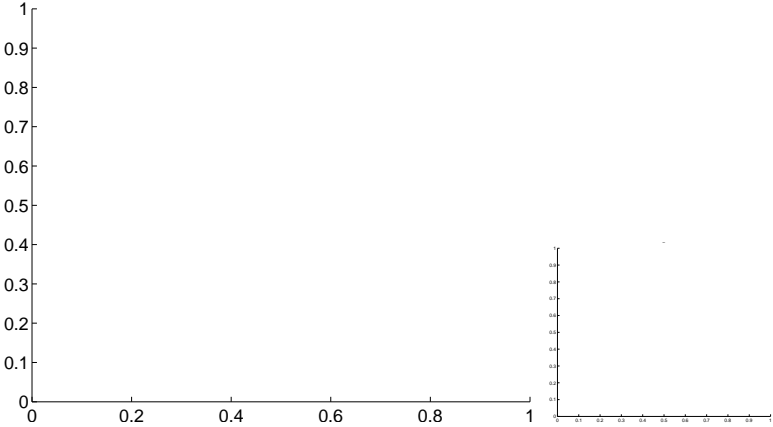
Q10 OOT image



Q11 no difference image



Q11 no OOT image



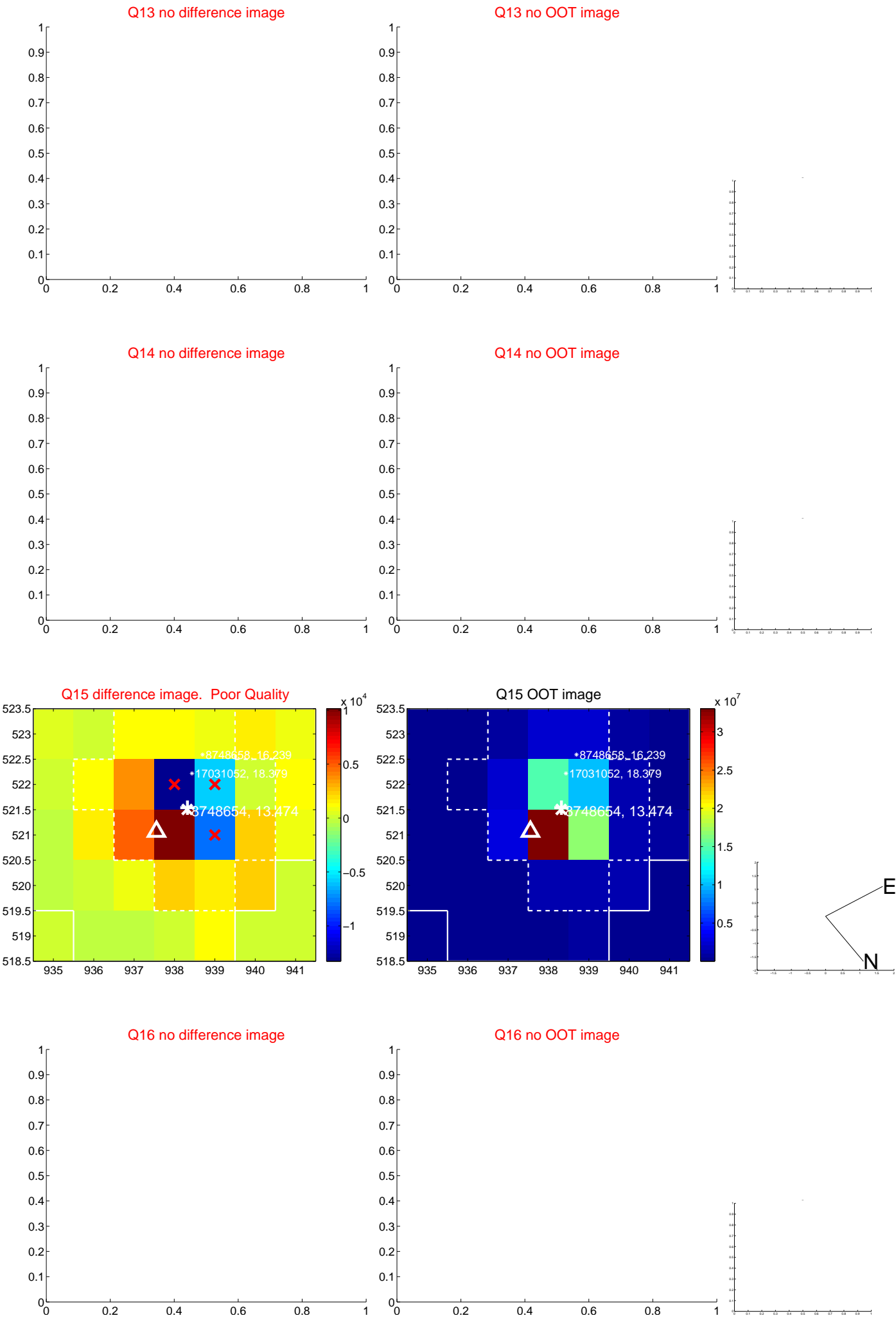
Q12 no difference image



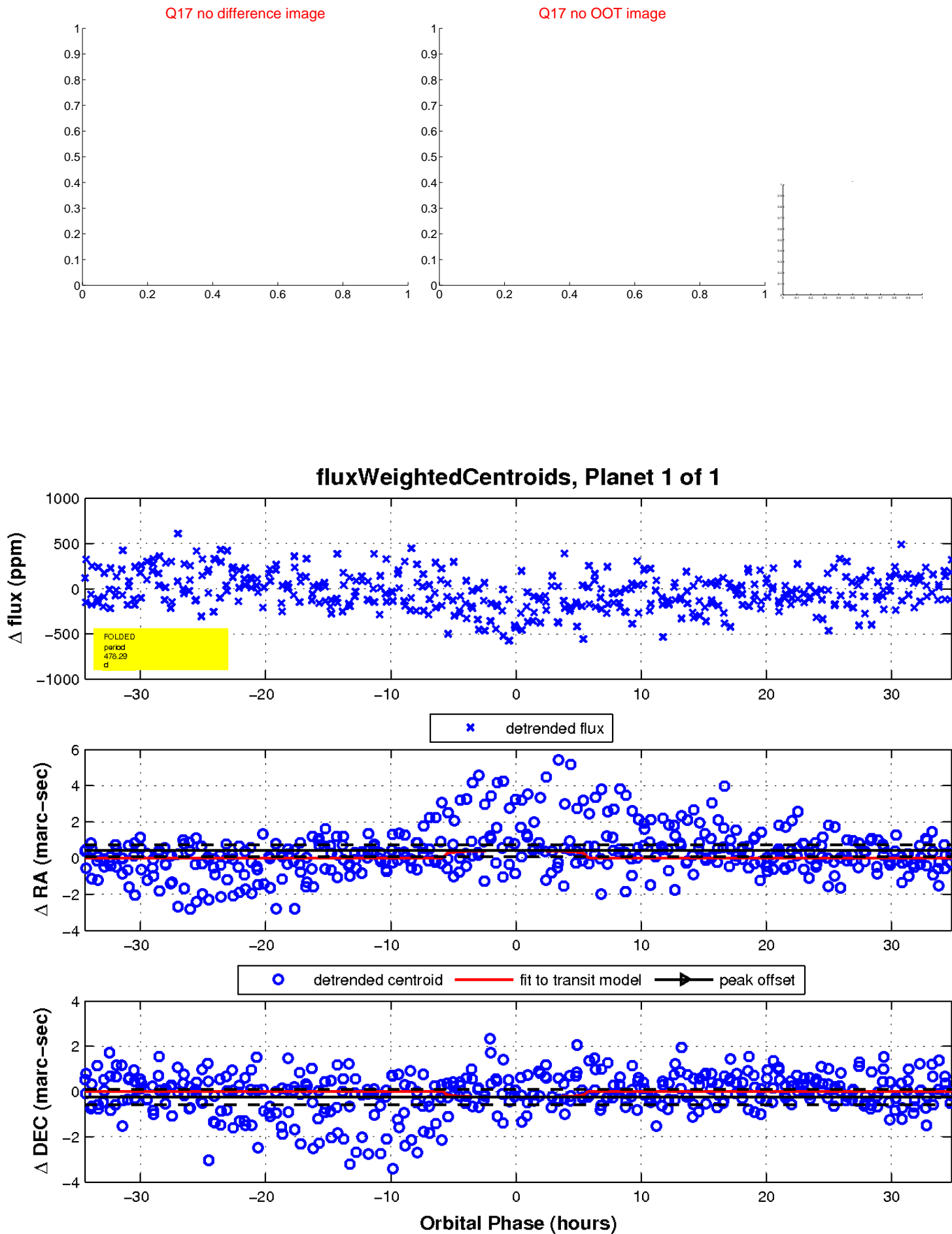
Q12 no OOT image



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



UKIRT Image

Declination

