

KIC 008748384

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})
008748384-01	OBS	No	380.285946	167.427756	656.3	19.252	7.6	7.8	0.80	5490	2.20	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008748384-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

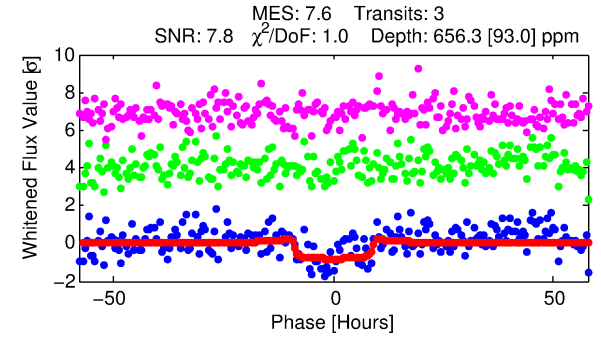
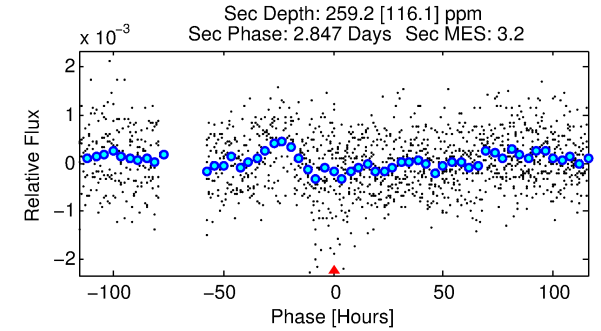
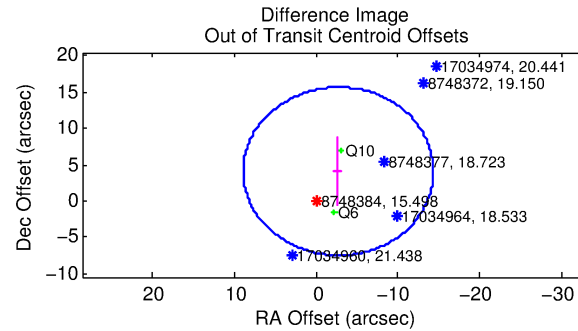
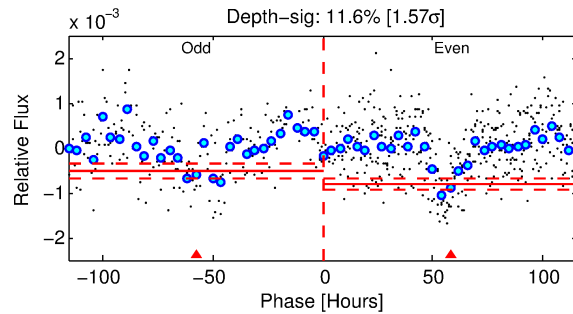
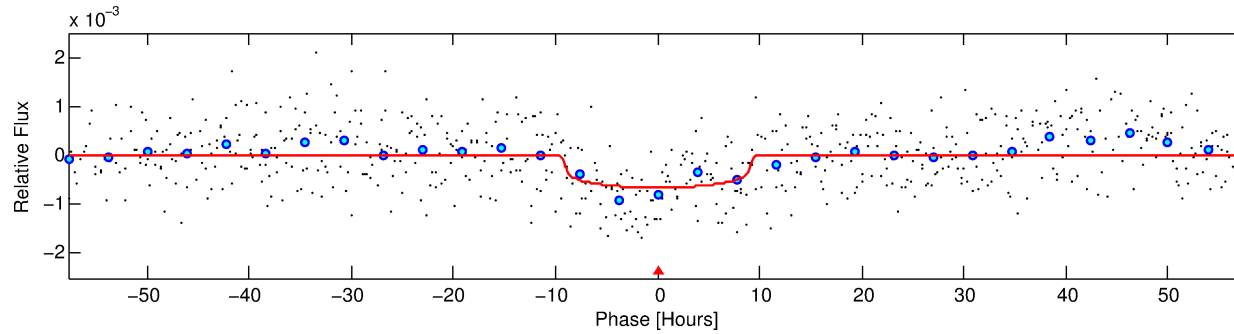
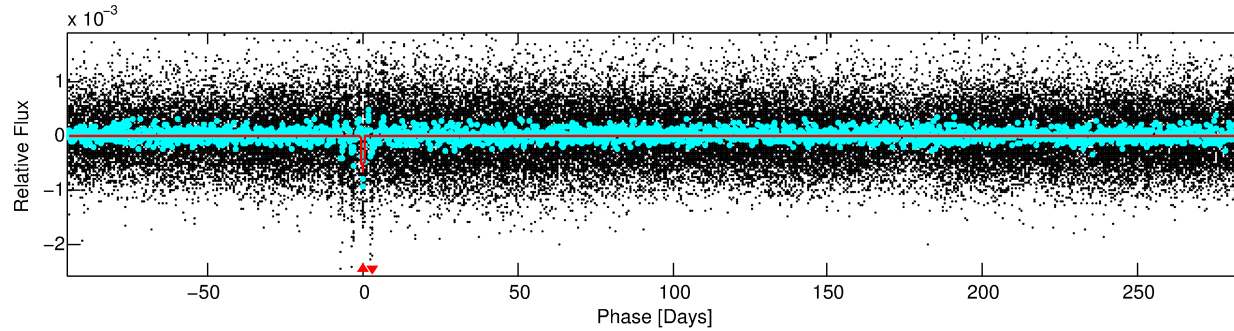
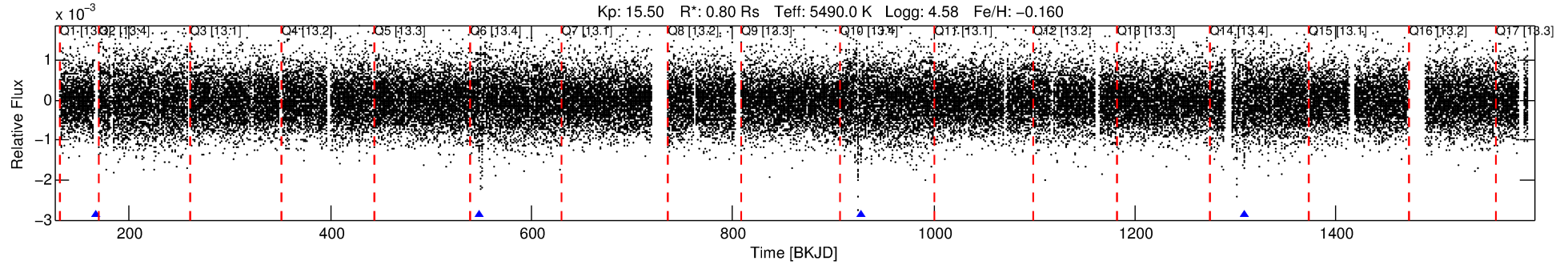
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008748384-01

No Significant Match Found

DV One-Page Summary

KIC: 8748384 Candidate: 1 of 1 Period: 380.286 d



DV Fit Results:

Period = 380.28595 [0.02044] d
Epoch = 167.4278 [0.0449] BKJD
Rp/R* = 0.0253 [0.0072]
a/R* = 108.19 [122.12]
b = 0.73 [0.72]
Seff = 0.53 [0.15]
Teq = 218 [16] K
Rp = 2.20 [0.79] Re
a = 0.9841 [0.1809] AU
Ag = 28509.78 [21924.19] [1.30 σ]
Teffp = 4376 [801] K [5.19 σ]

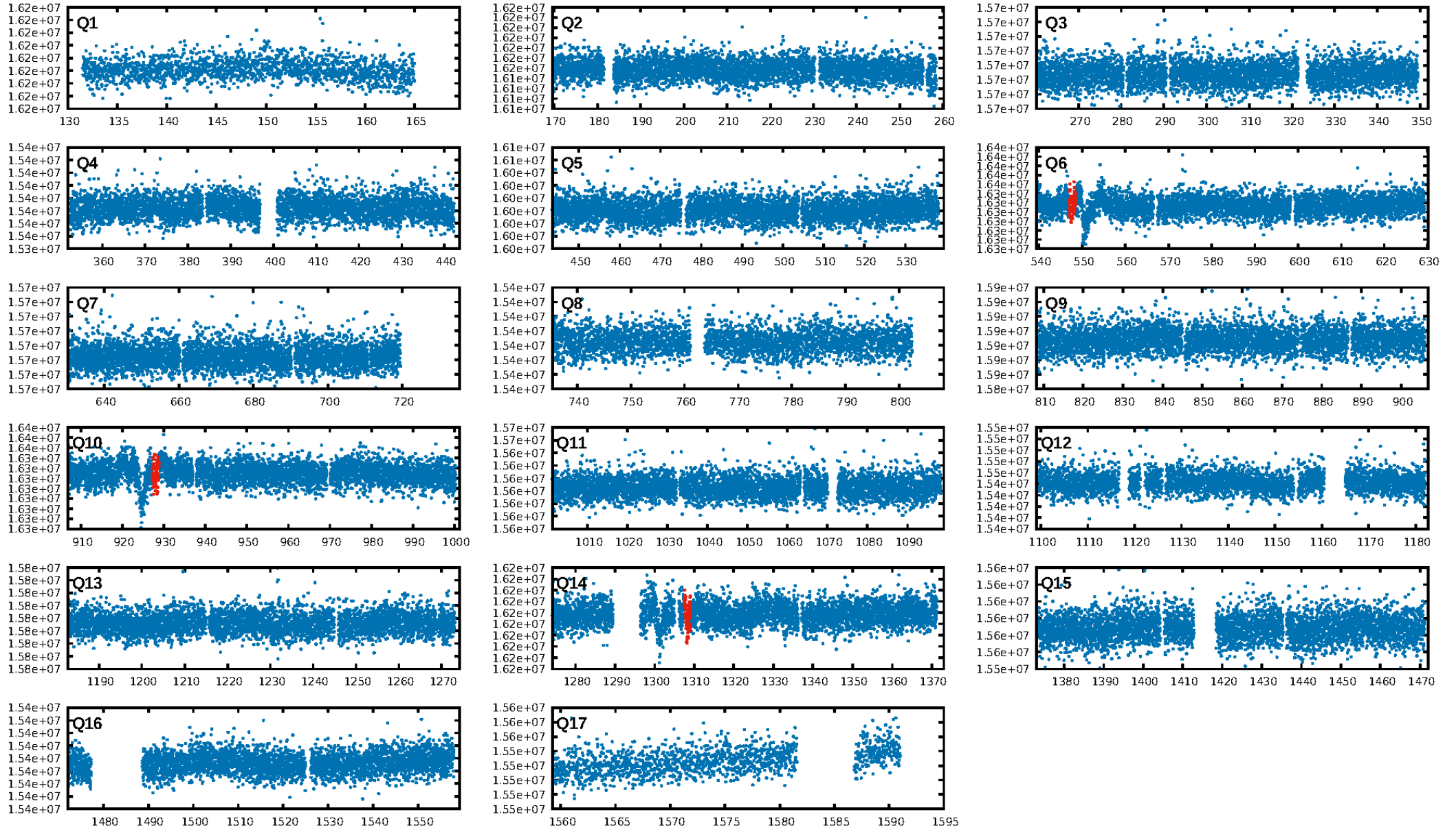
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.7%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 2.58e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7357
Centroid-sig: 0.6%
Centroid-so: 4.258 arcsec [2.58 σ]
OotOffset-rm: 4.893 arcsec [1.27 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 4.959 arcsec [1.29 σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

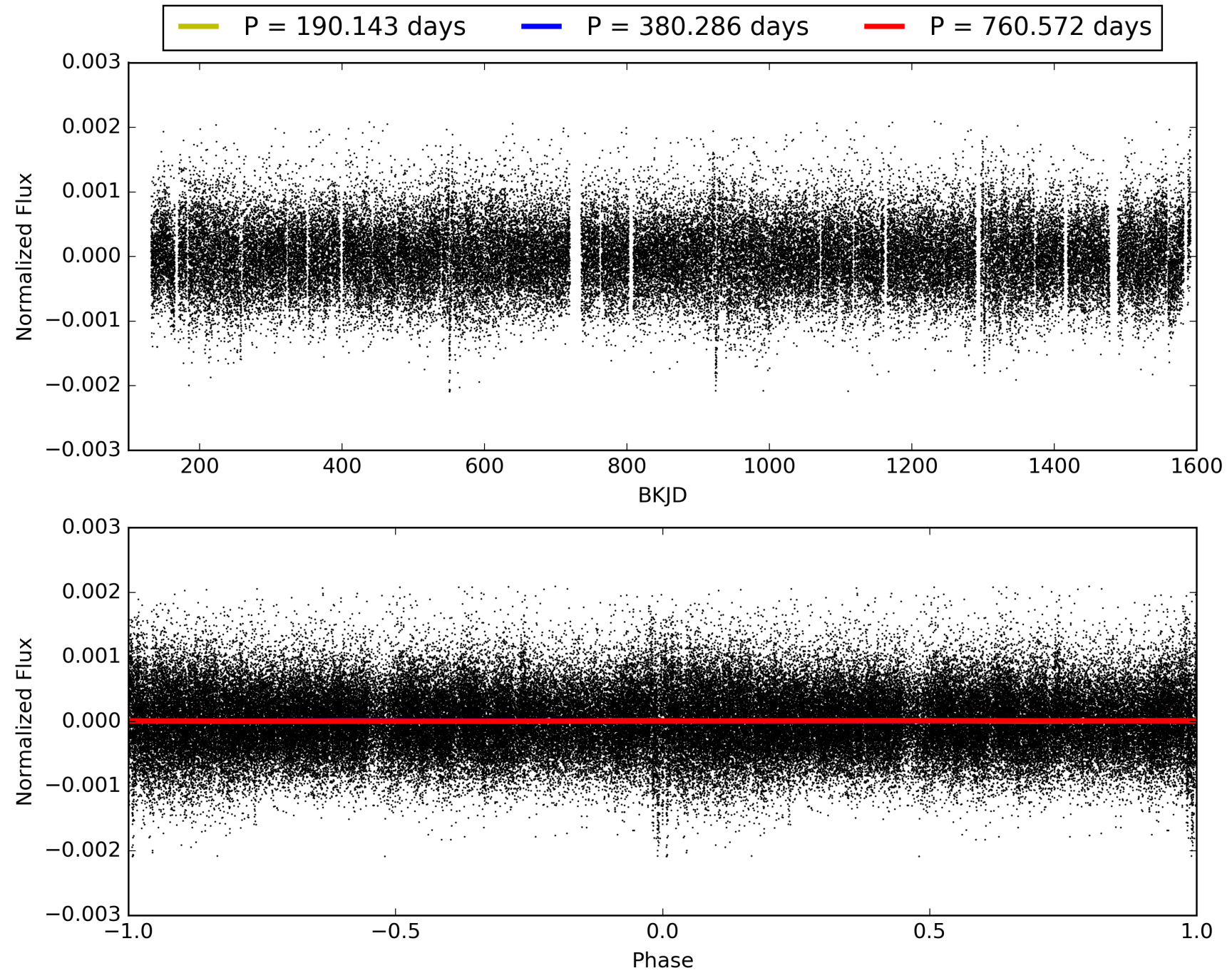
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:02:34 Z

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

TCE 008748384-01, PDC Light Curves

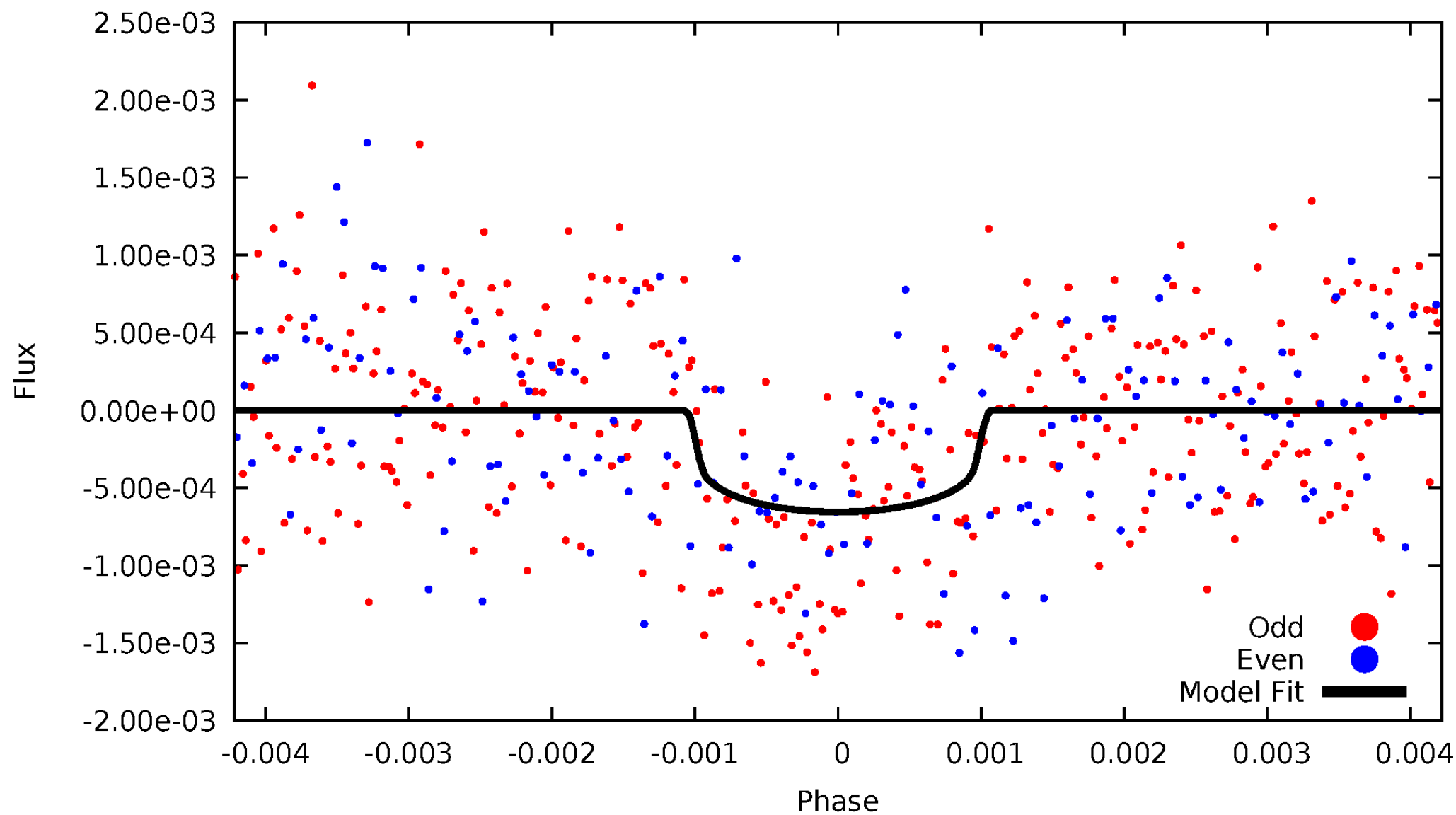


TCE 008748384-01



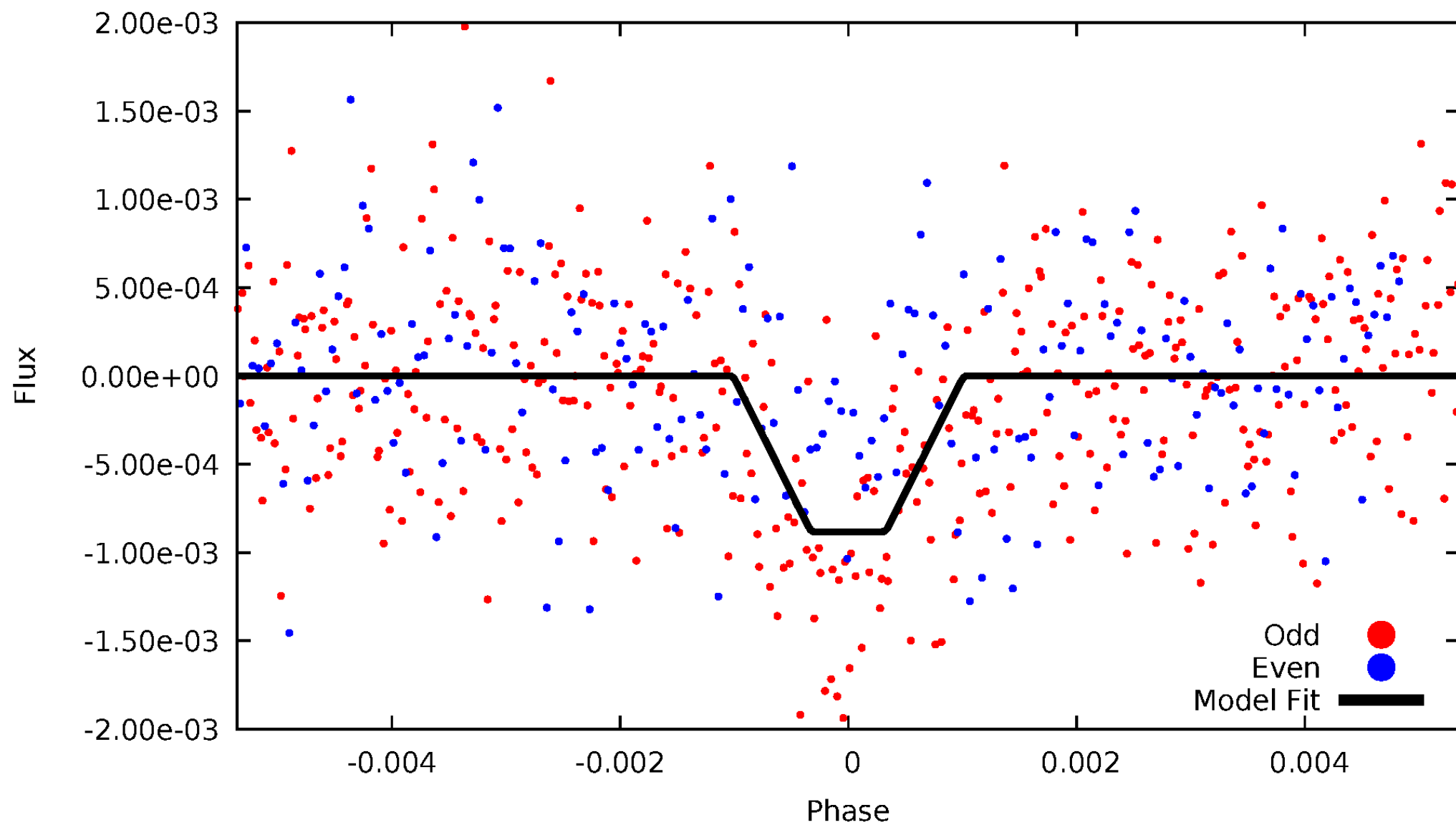
DV Odd/Even

TCE 008748384-01

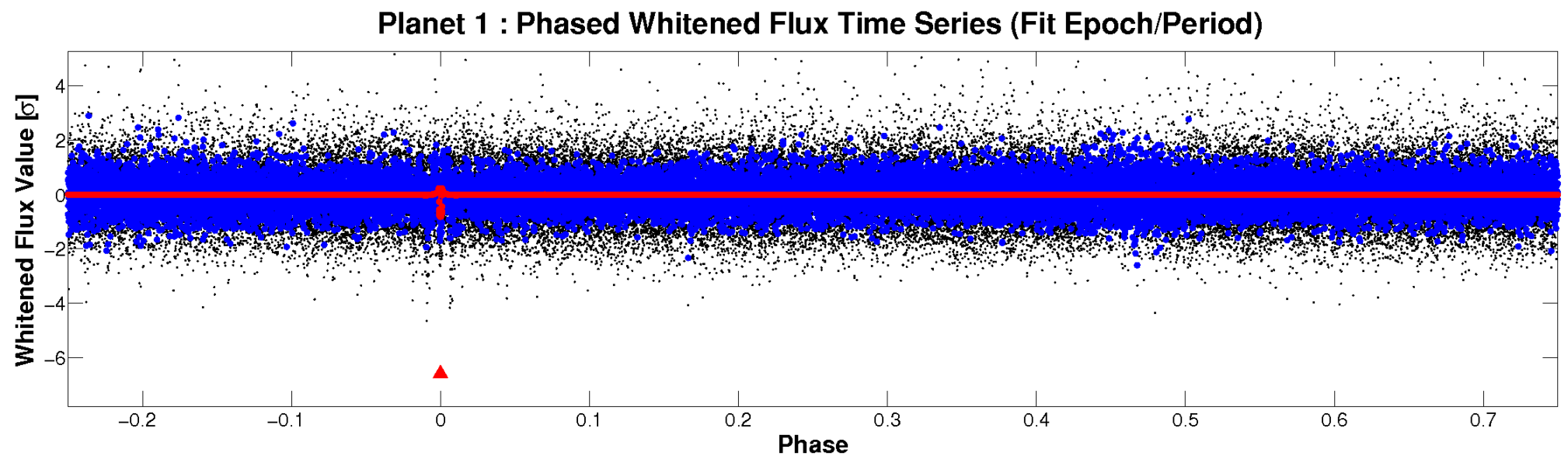
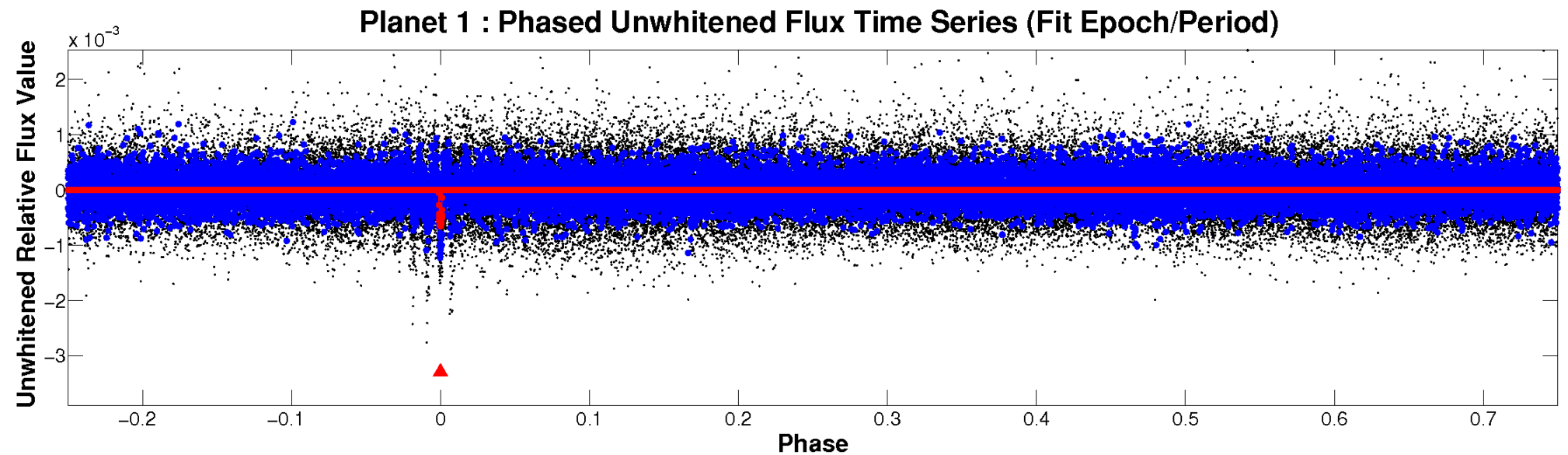


ALT Odd/Even

TCE 008748384-01

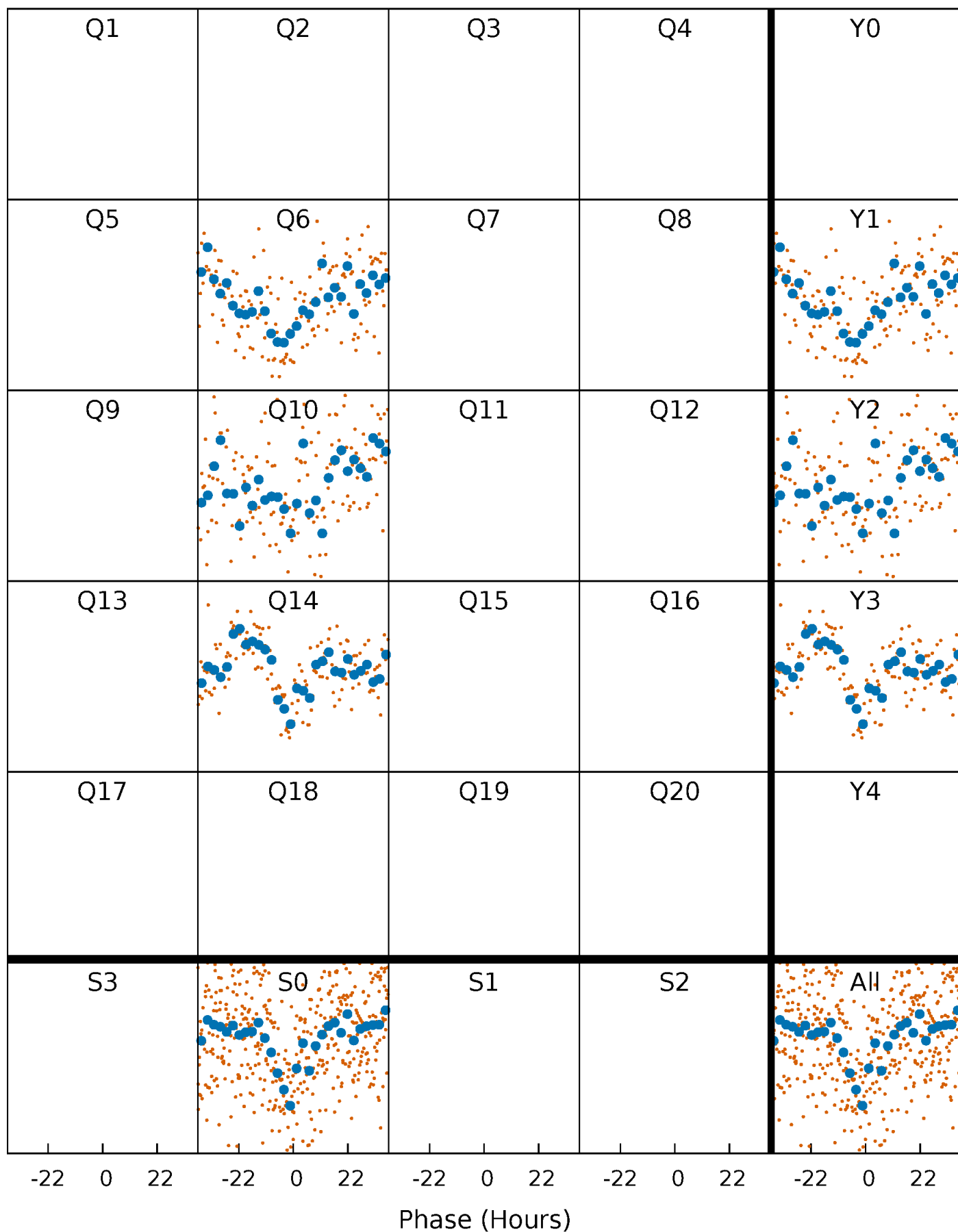


Non-Whitened Vs. Whitened Light Curve



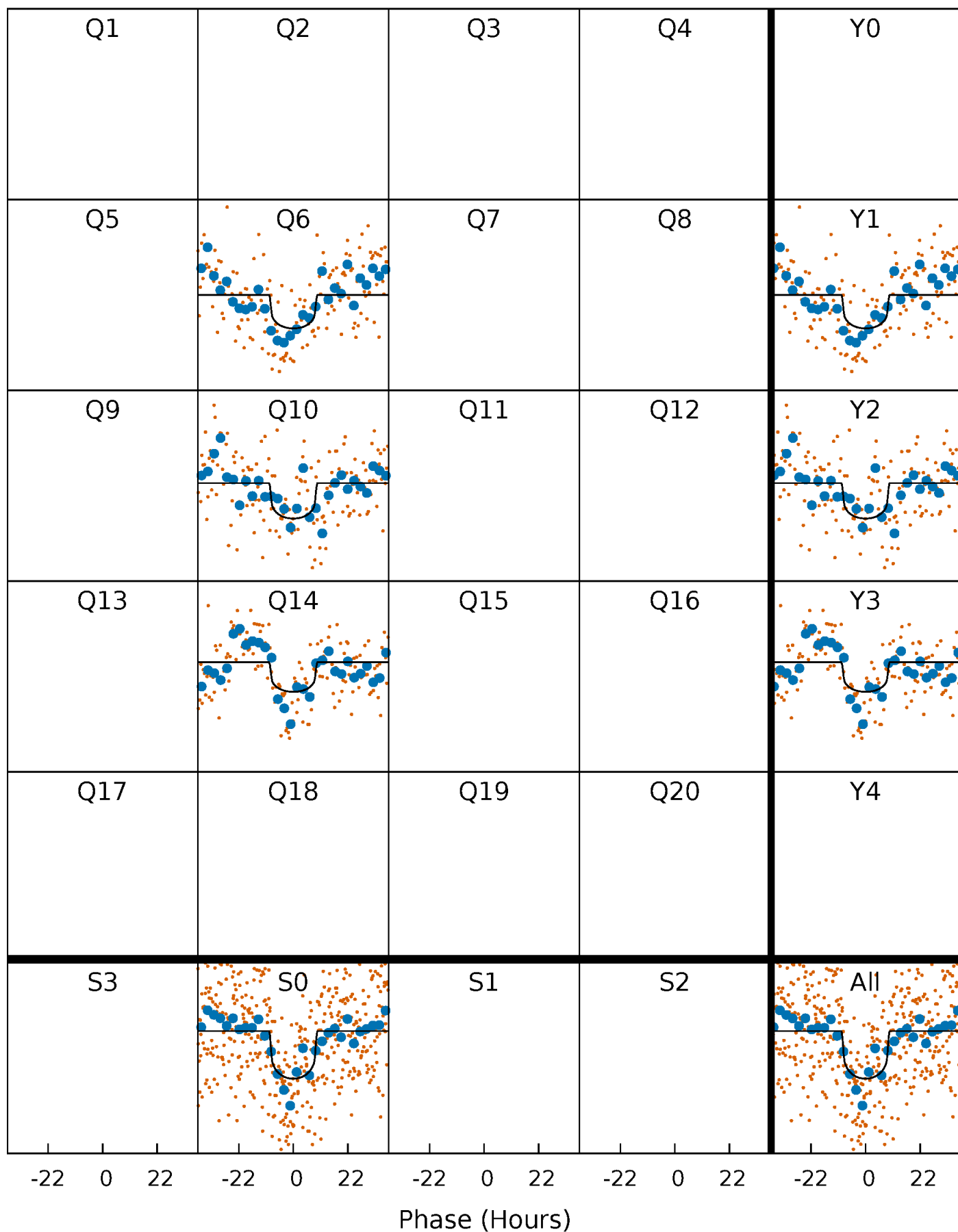
PDC Quarter-Phased Transit Curves

TCE 008748384-01 $P=380.285946$ Days $T_0=167.427756$ (BKJD)



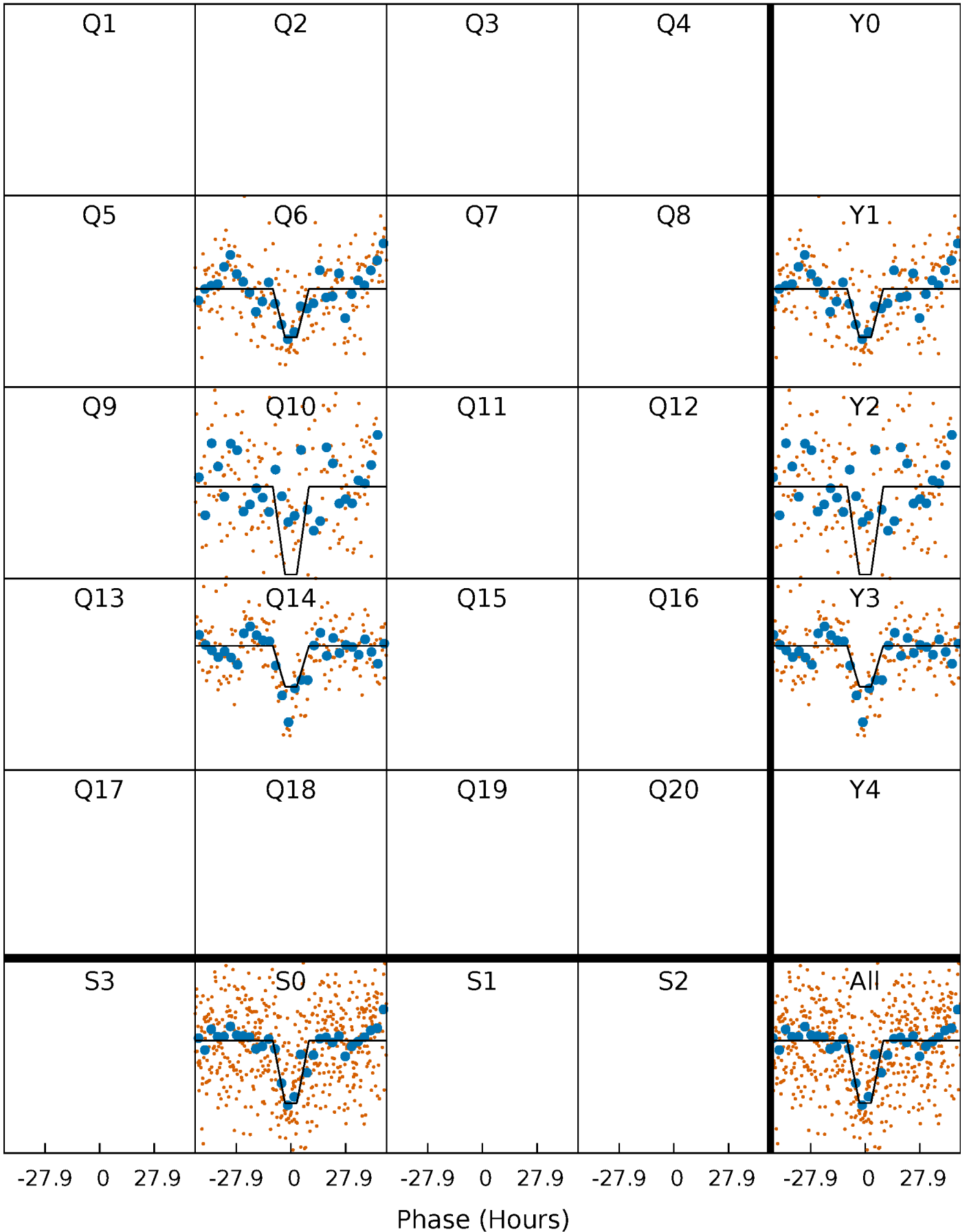
DV Quarter-Phased Transit Curves

TCE 008748384-01 P=380.285946 Days $T_0=167.427756$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

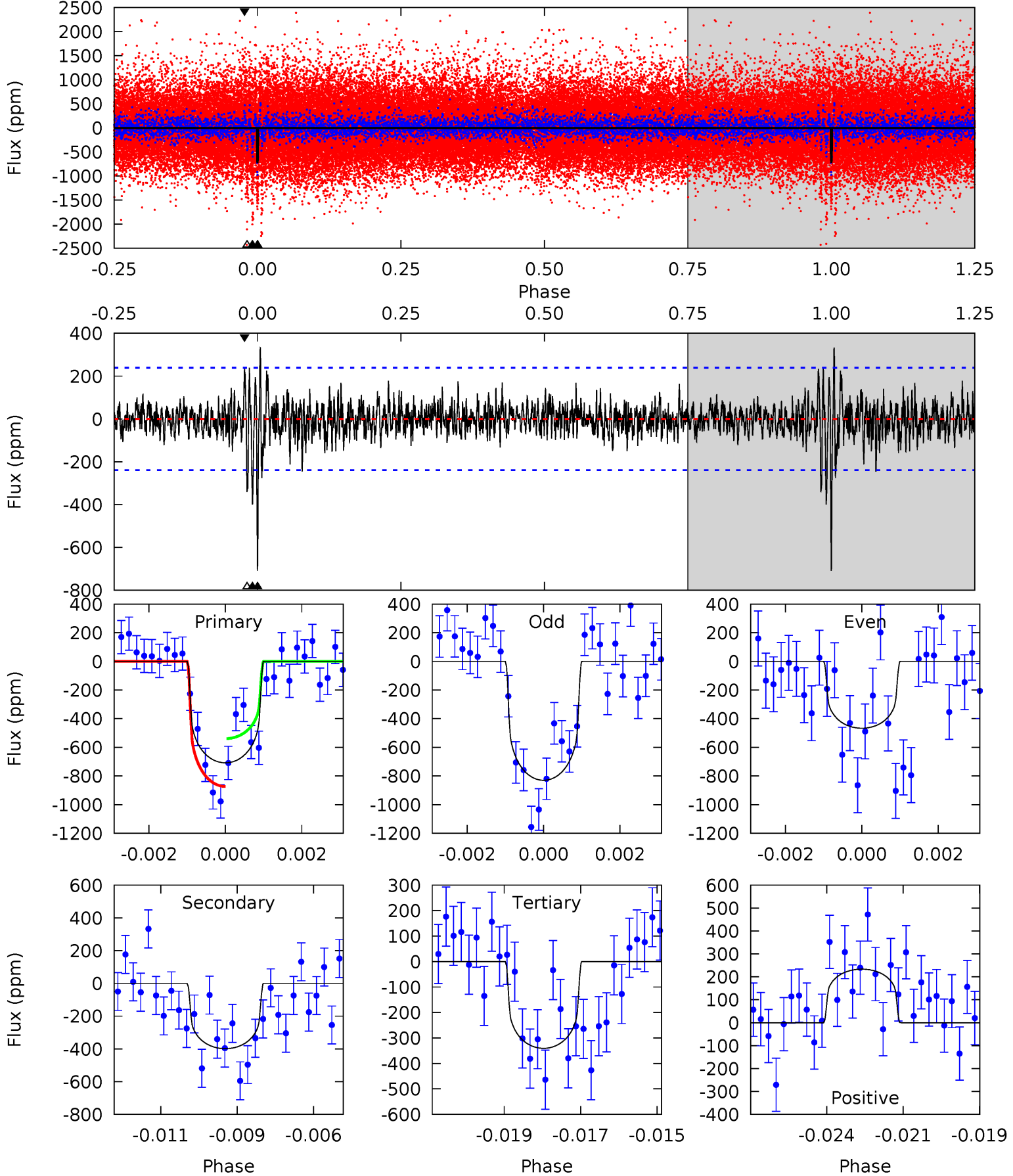
TCE 008748384-01 P=380.323041 Days $T_0=167.271081$ (BKJD)



DV Model-Shift Uniqueness Test

008748384-01, P = 380.285946 Days, E = 167.427756 Days

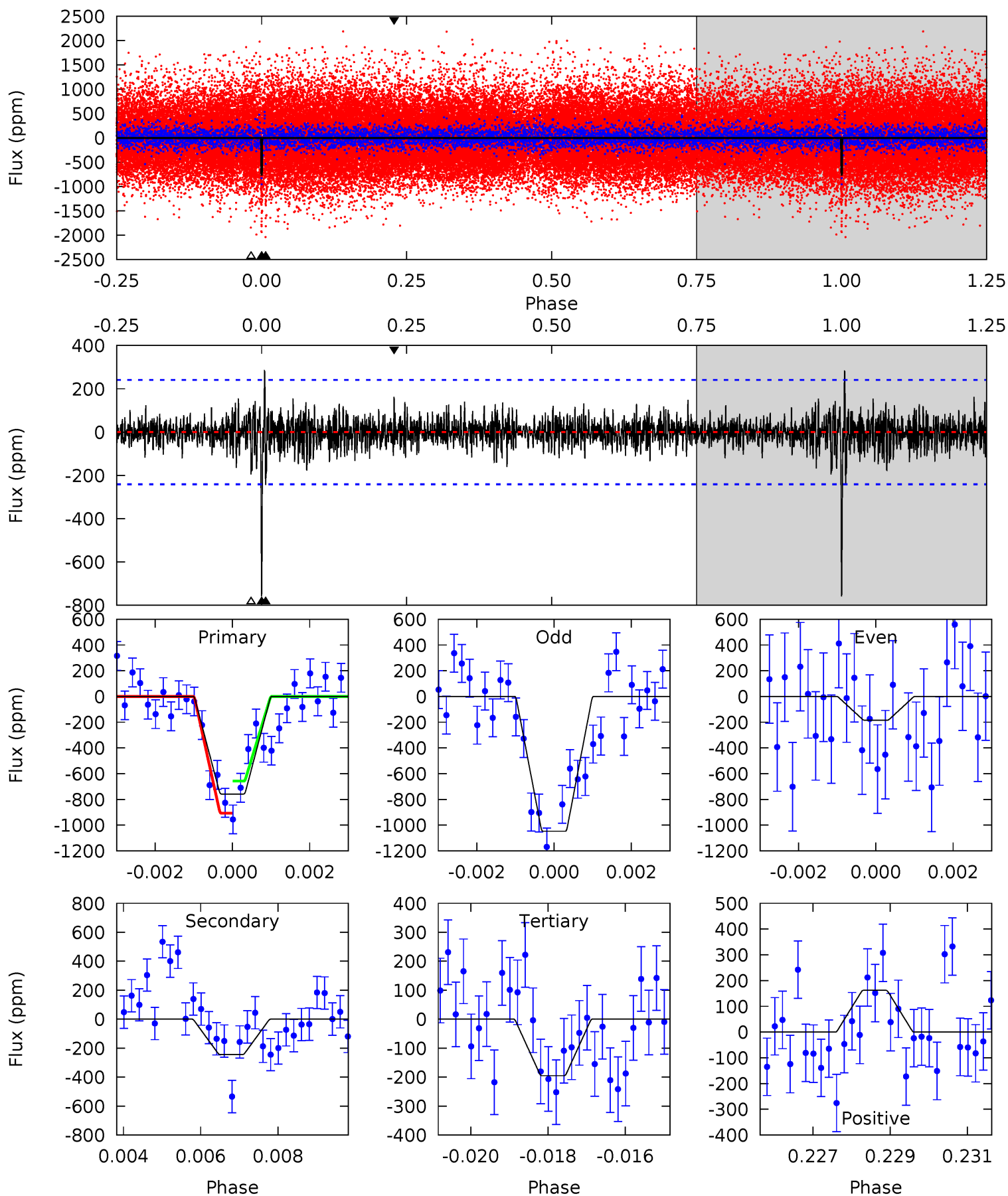
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	8.86	7.57	5.19	5.31	3.07	1.35	8.17	10.6	1.29	3.67	3.83	0.90	0.32	3.71



Alt Model-Shift Uniqueness Test

008748384-01, P = 380.323041 Days, E = 167.271081 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	5.39	4.31	3.58	5.32	3.08	1.10	12.4	13.2	1.08	1.81	9.00	0.96	0.27	2.75



Stellar Parameters For KIC 008748384

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5490^{+166}_{-149}	$4.580^{+0.038}_{-0.143}$	$-0.160^{+0.300}_{-0.300}$	$0.796^{+0.176}_{-0.075}$	$0.888^{+0.083}_{-0.102}$	$2.481^{+0.475}_{-1.069}$
	+3%/-3%	+1%/-3%	+188%/-188%	+22%/-9%	+9%/-11%	+19%/-43%
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 008748384-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-399 ± 45	$2.25^{+0.69}_{-0.66}$	311^{+15}_{-12}	4990^{+849}_{-528}	40879^{+41123}_{-16749}
Alt.	-244 ± 45	$2.68^{+0.68}_{-0.64}$	310^{+16}_{-12}	4214^{+472}_{-338}	17303^{+14308}_{-6418}

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

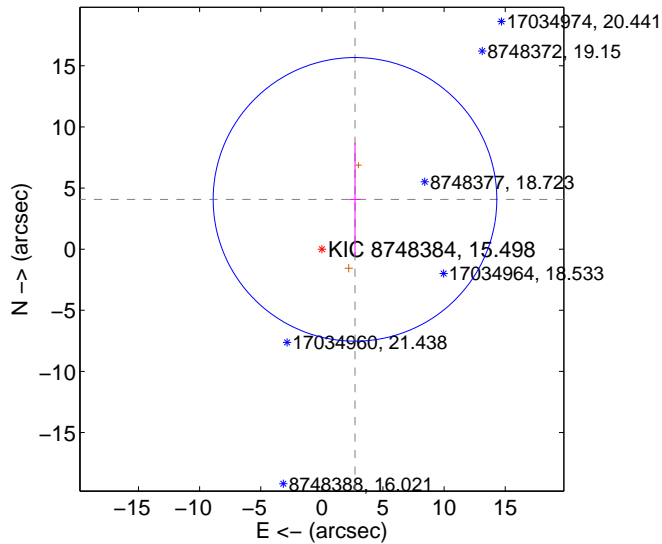
Supplemental centroid analysis for 008748384-01. Kepler magnitude: 15.50. Transit SNR 7.81

There are 0 quarters with good PRF difference image offsets

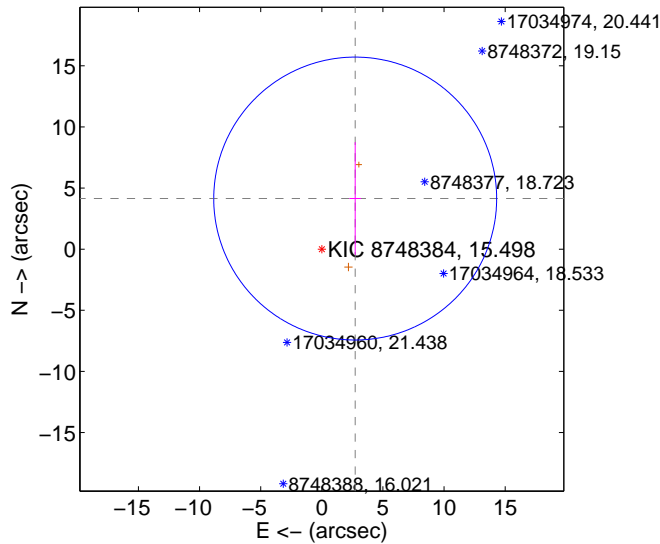
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.893 ± 3.866	1.27	-2.710 ± 0.450	4.074 ± 4.634
PRF-fit source offset from KIC position	4.959 ± 3.856	1.29	-2.730 ± 0.481	4.140 ± 4.609
photometric centroid source offset	4.26 ± 1.65	2.58	-3.57 ± 1.59	2.33 ± 1.79

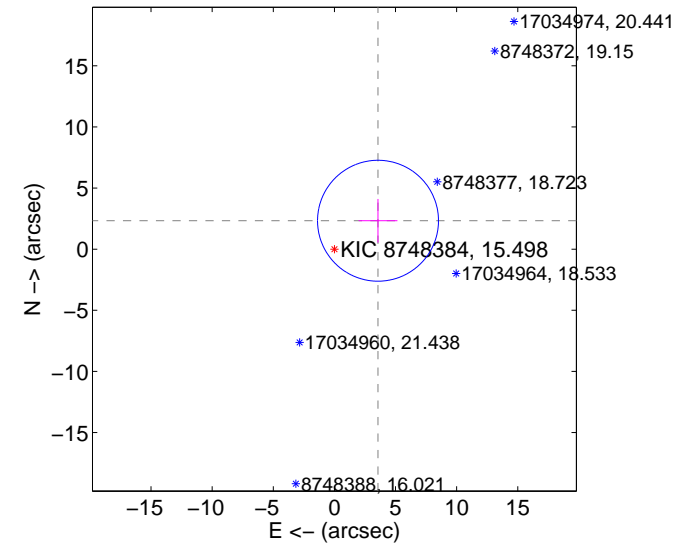
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

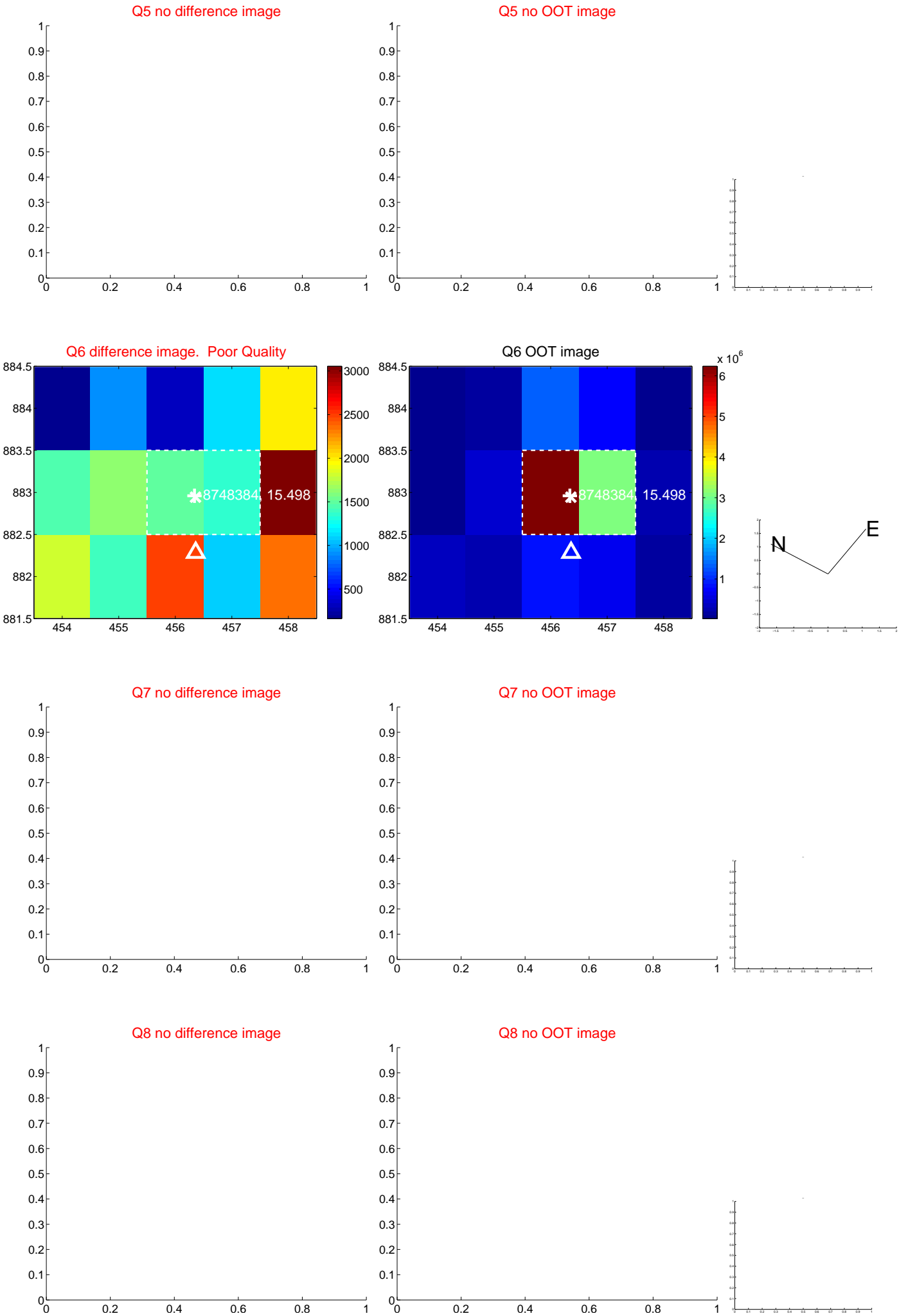


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

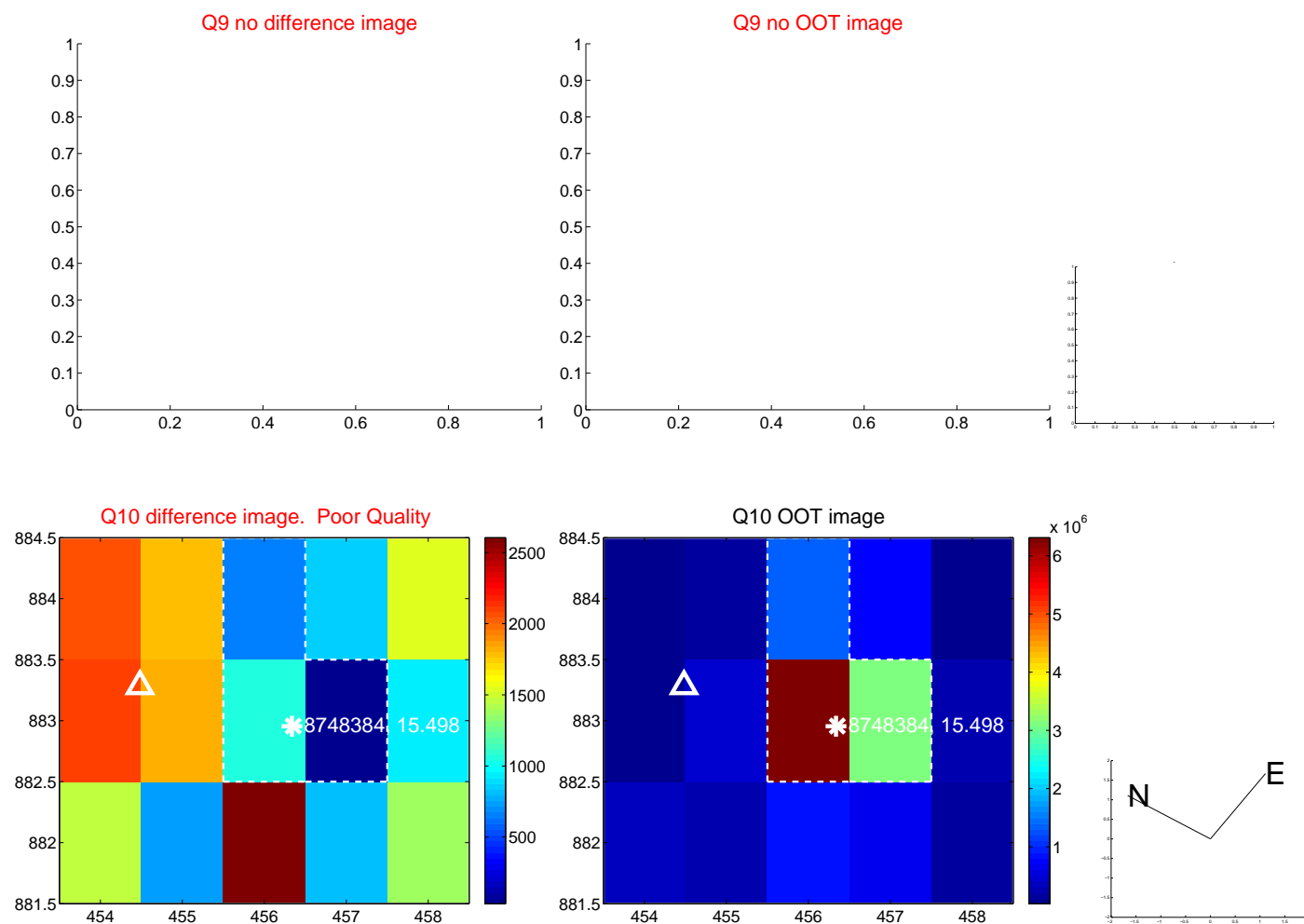
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



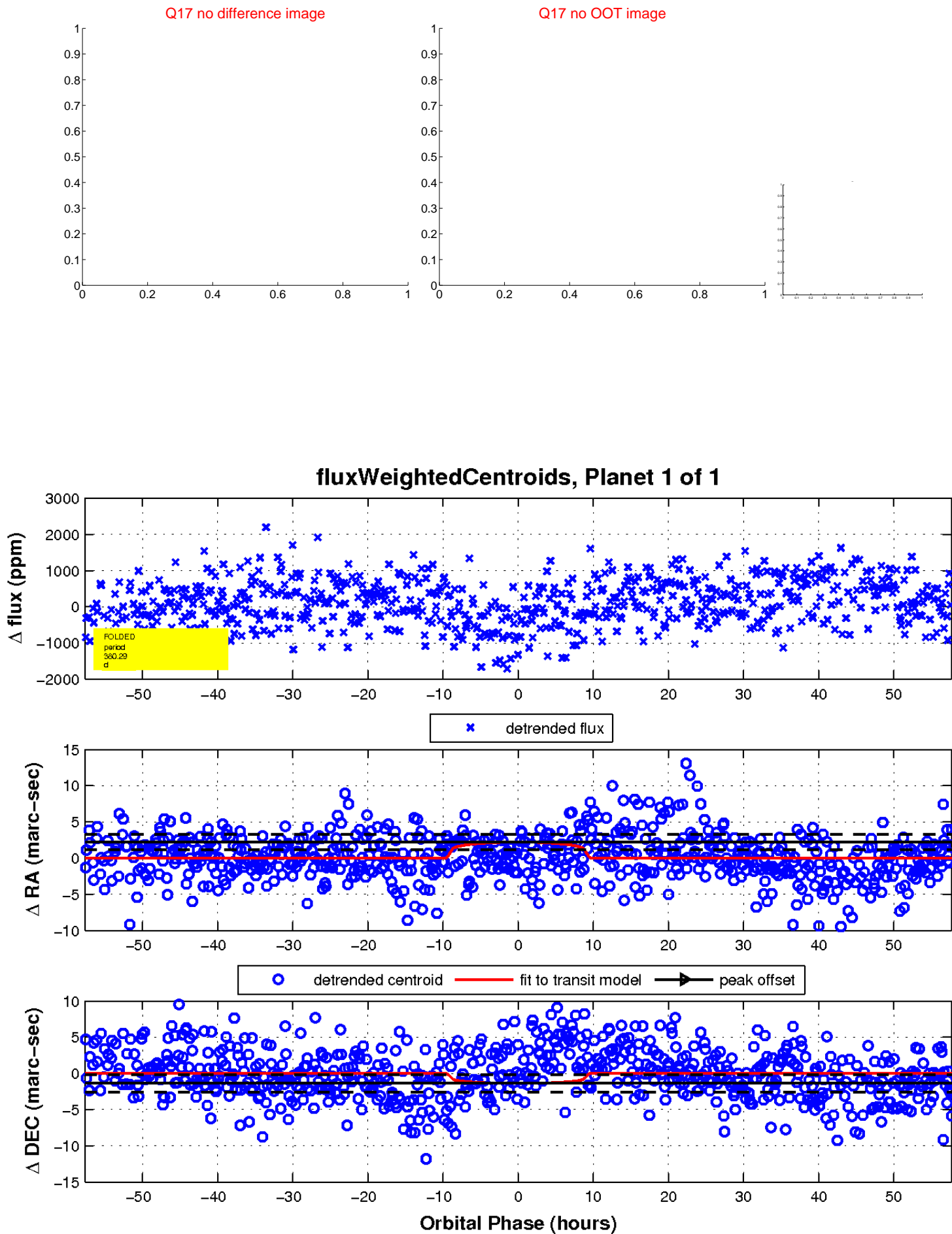
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

