

KIC 006878738

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})
006878738-01	OBS	No	581.398112	345.372867	1909.1	3.246	7.7	8.1	0.43	3621	2.00	0.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006878738-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

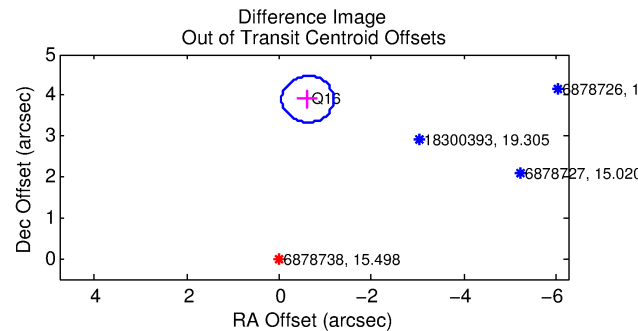
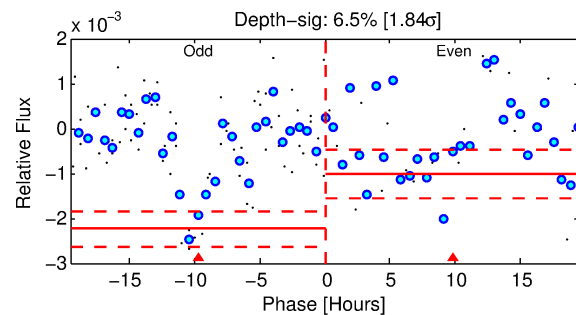
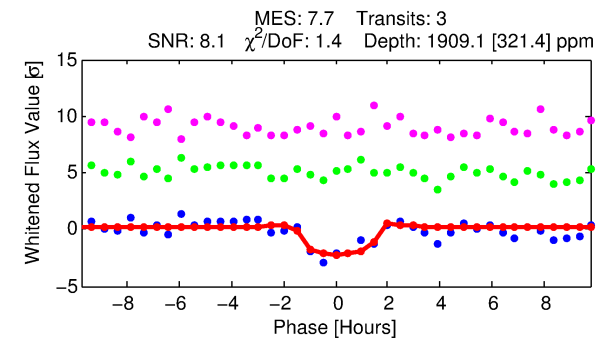
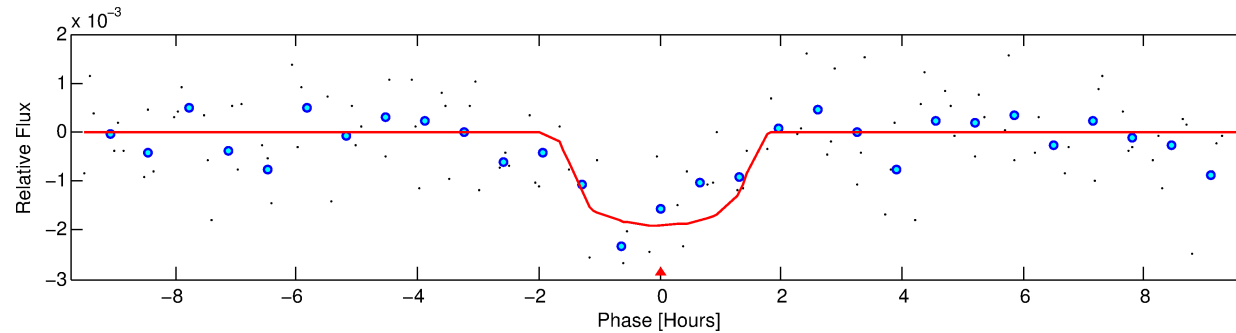
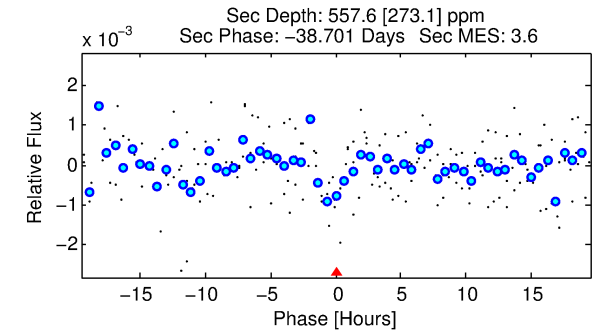
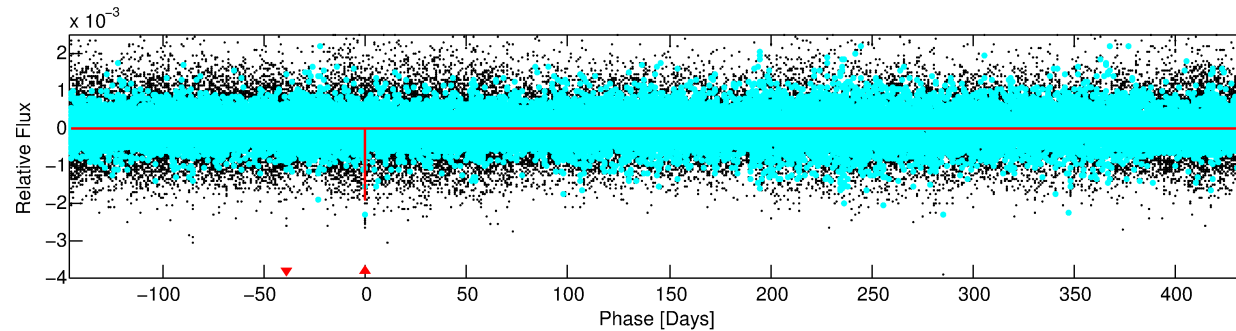
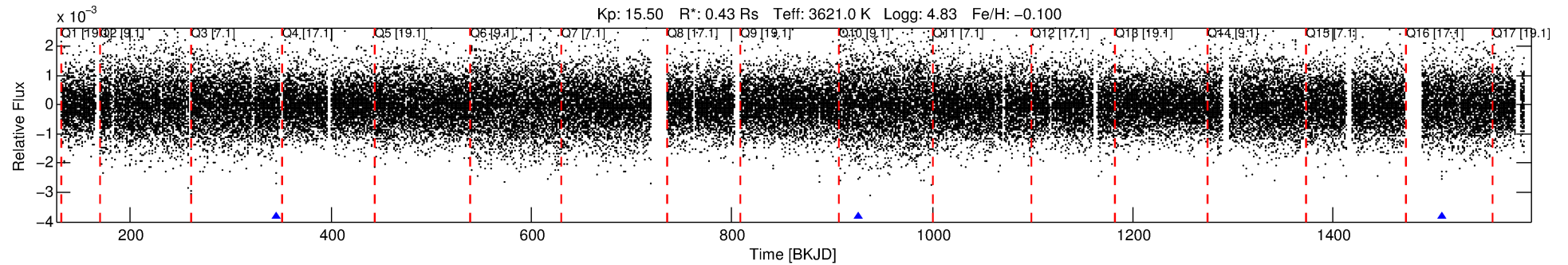
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006878738-01

No Significant Match Found

DV One-Page Summary

KIC: 6878738 Candidate: 1 of 1 Period: 581.398 d



DV Fit Results:

Period = 581.39811 [0.00661] d
Epoch = 345.3729 [0.0086] BKJD
Rp/R* = 0.0425 [0.0521]
a/R* = 1074.16 [5688.31]
b = 0.69 [4.11]
Seff = 0.03 [0.00]
Teq = 102 [3] K
Rp = 2.00 [2.46] Re
a = 1.0495 [0.0829] AU
Ag = 84074.02 [210160.22] [0.40σ]
Teff = 2698 [1686] K [1.54σ]

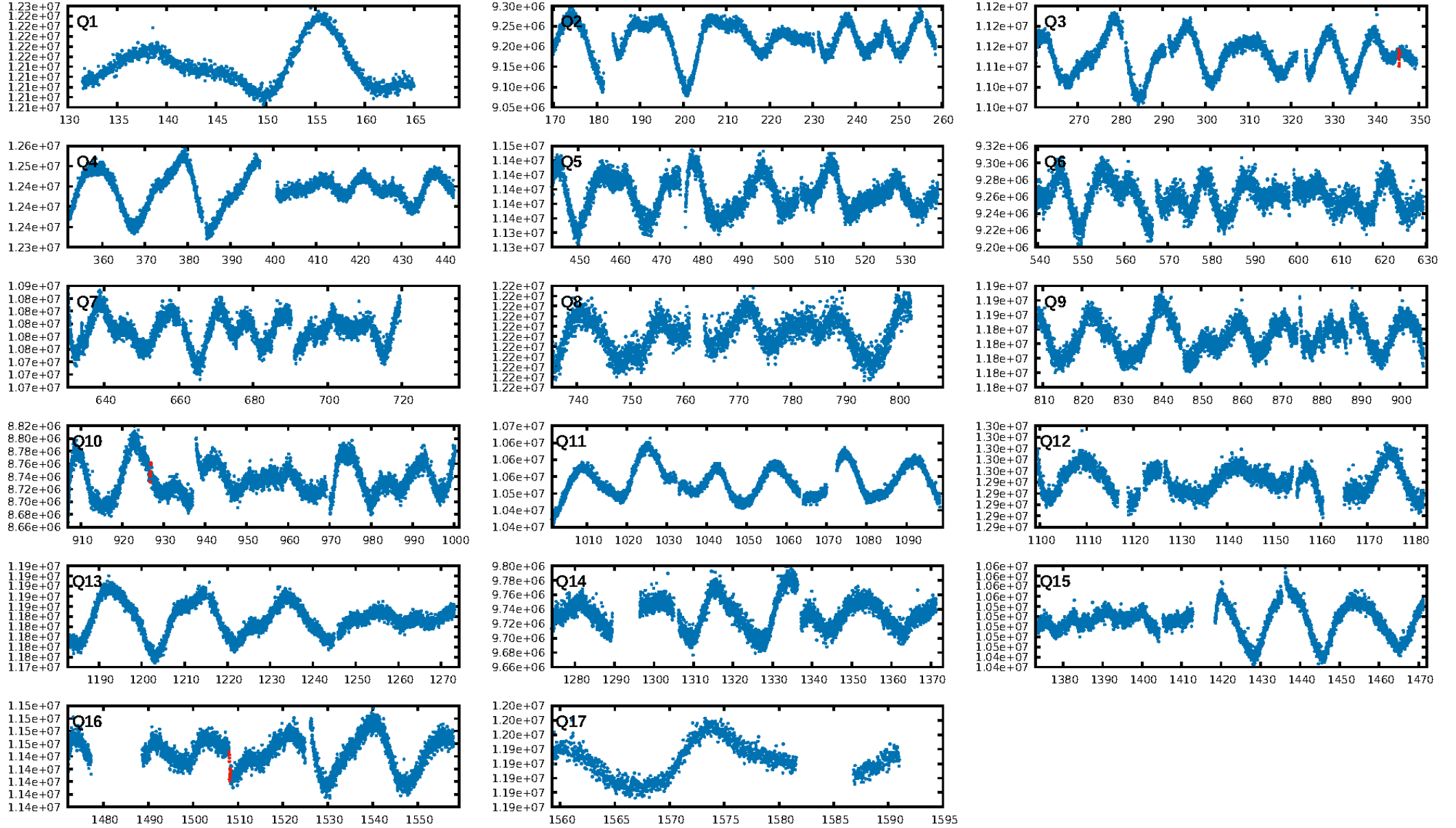
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 79.7%
Bootstrap-pfa: 7.59e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -6.18
Centroid-sig: 30.3%
Centroid-so: 0.501 arcsec [0.76σ]
OotOffset-rm: 3.949 arcsec [20.94σ]
KicOffset-rm: 3.072 arcsec [16.07σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

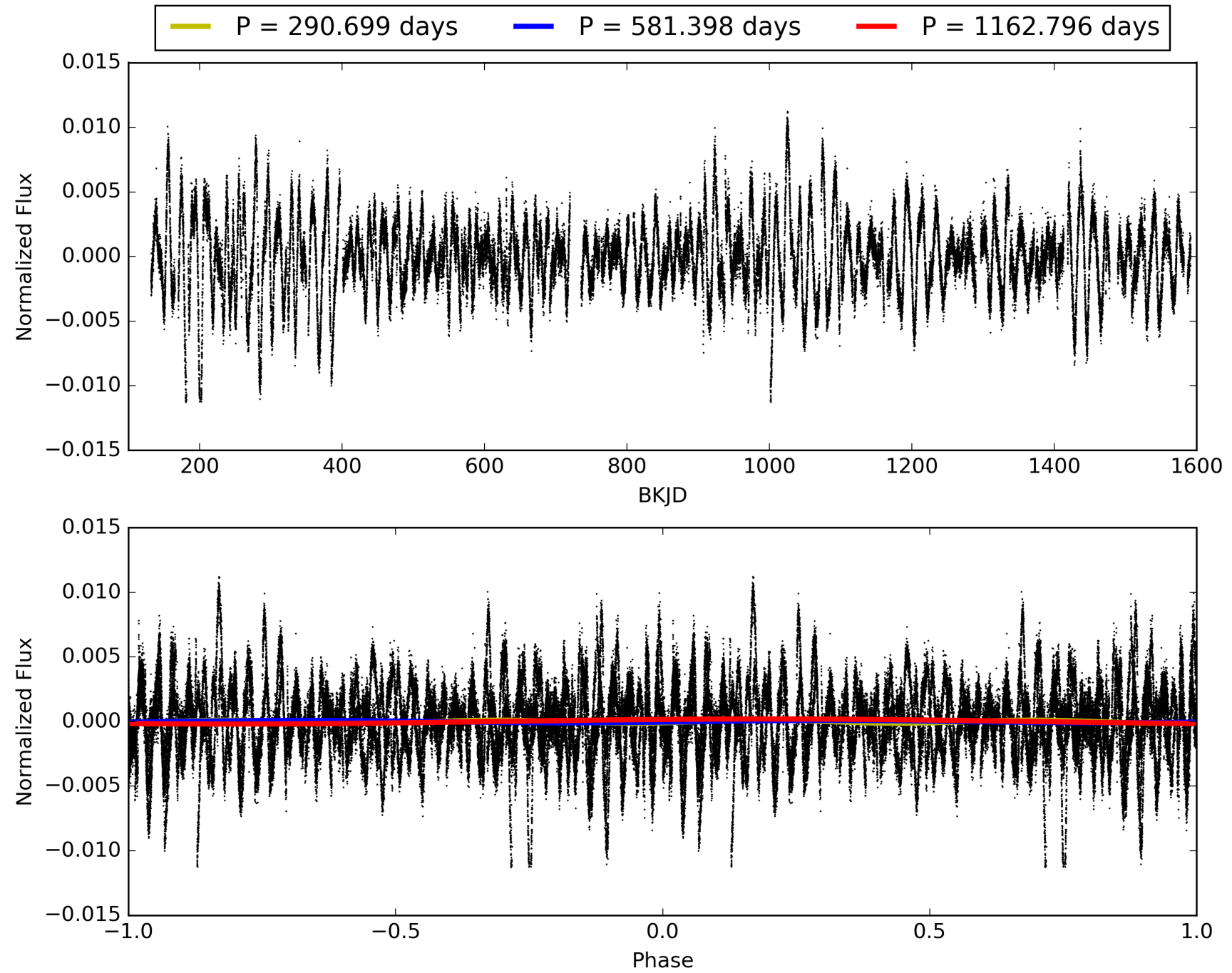
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:48:05 Z

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

TCE 006878738-01, PDC Light Curves

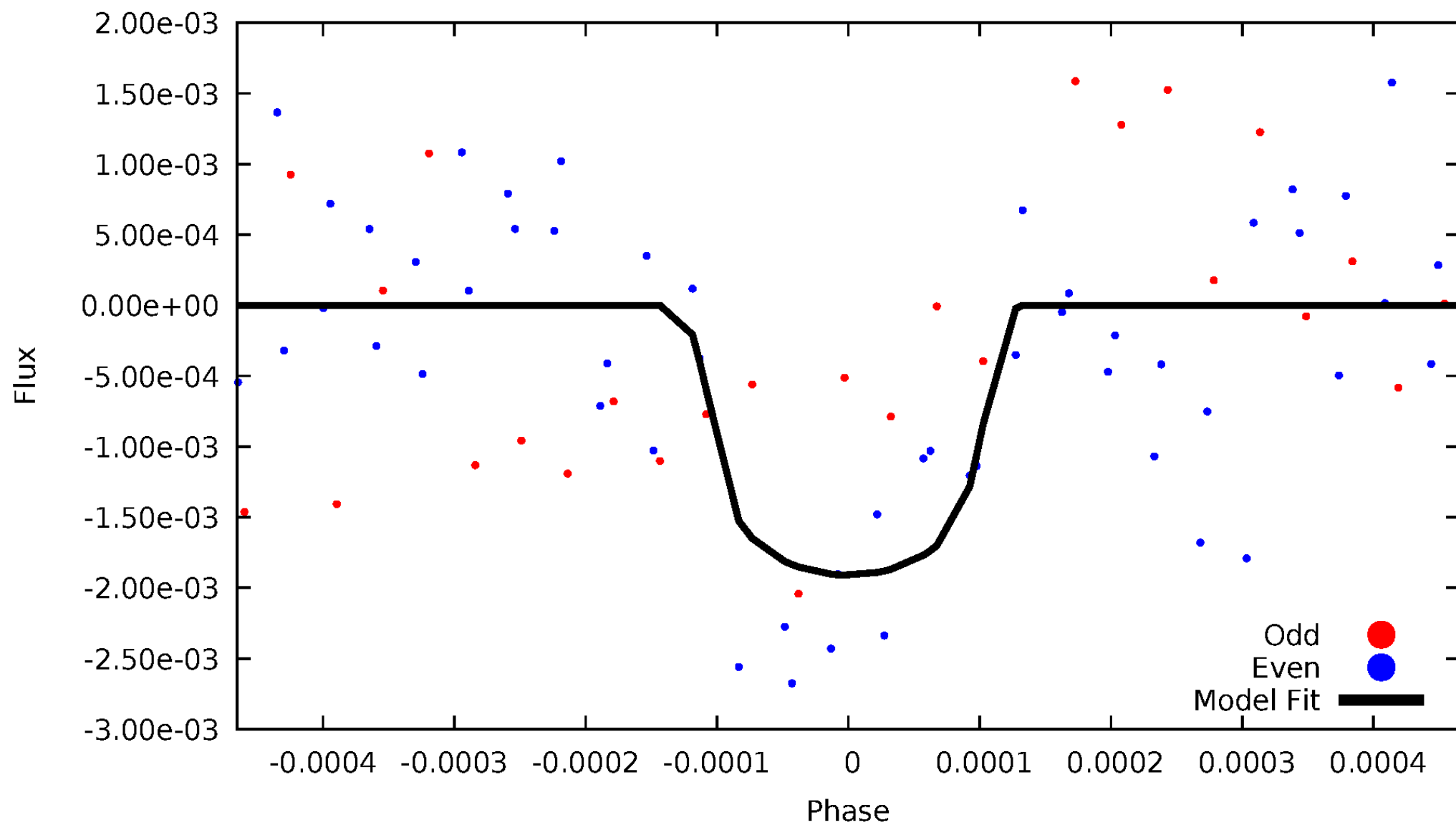


TCE 006878738-01



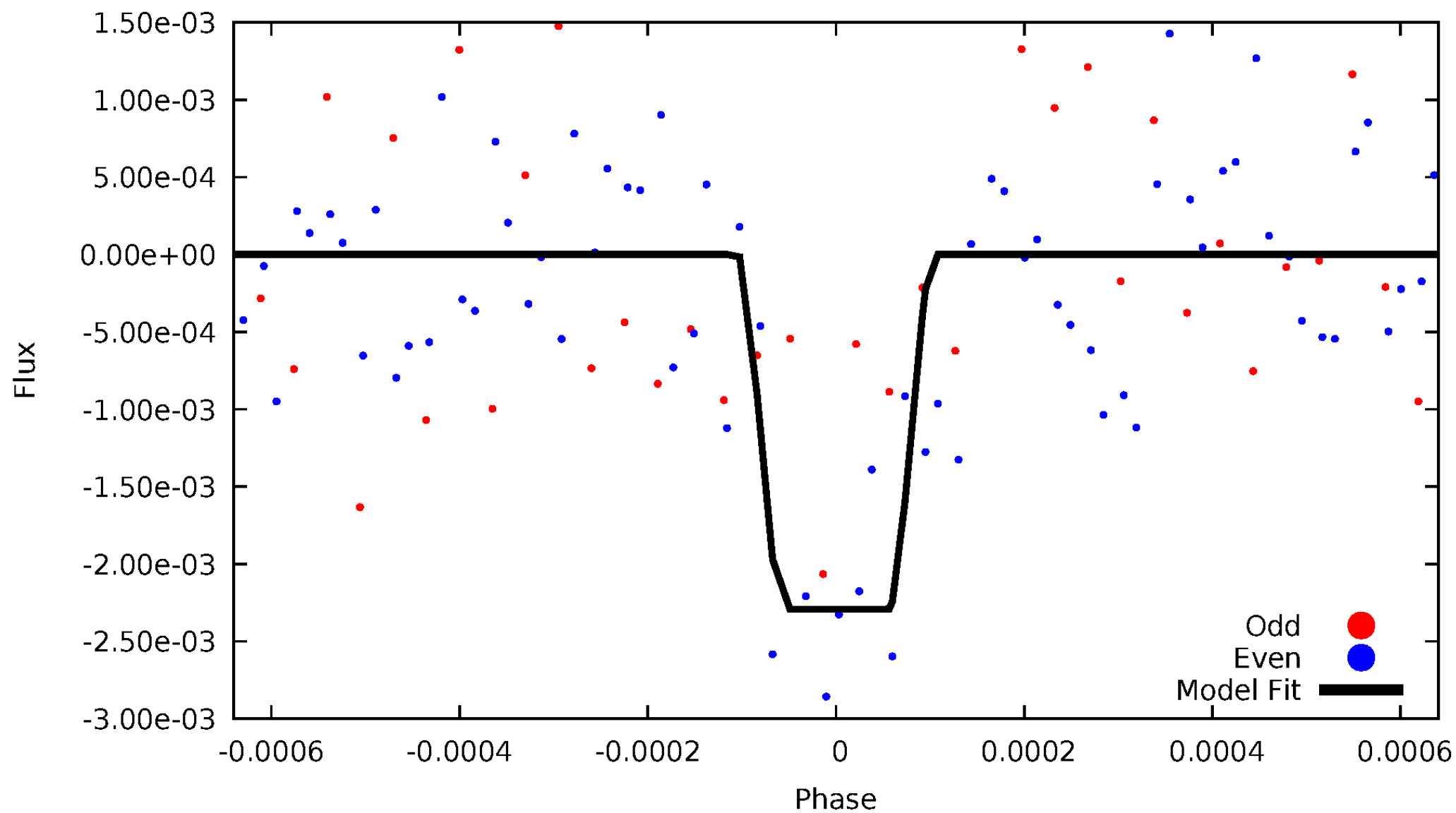
DV Odd/Even

TCE 006878738-01

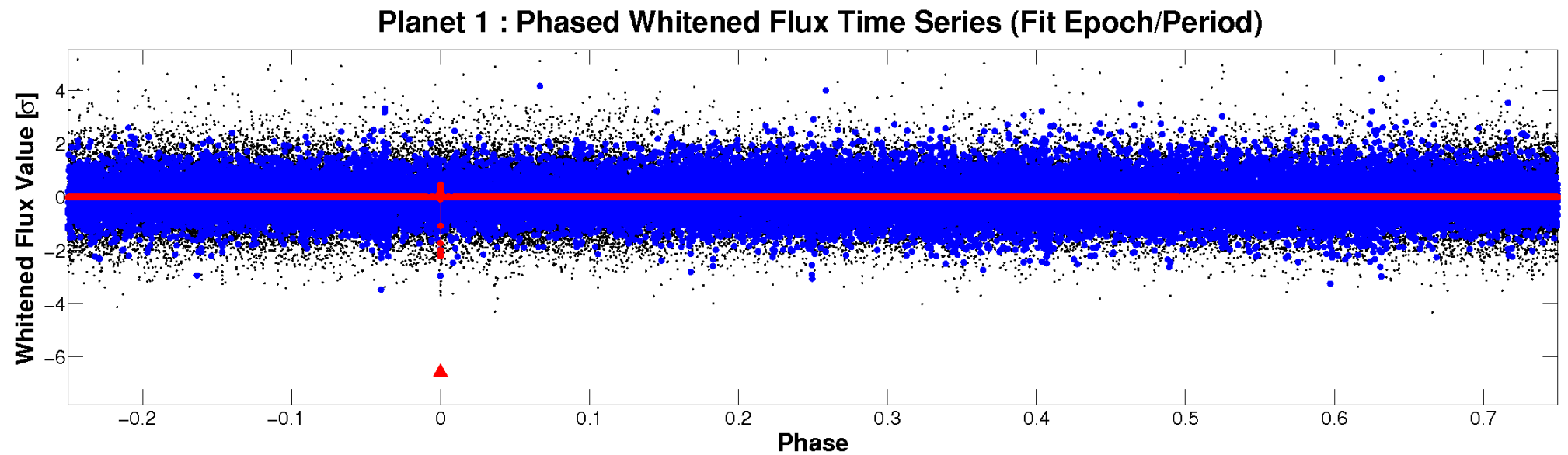
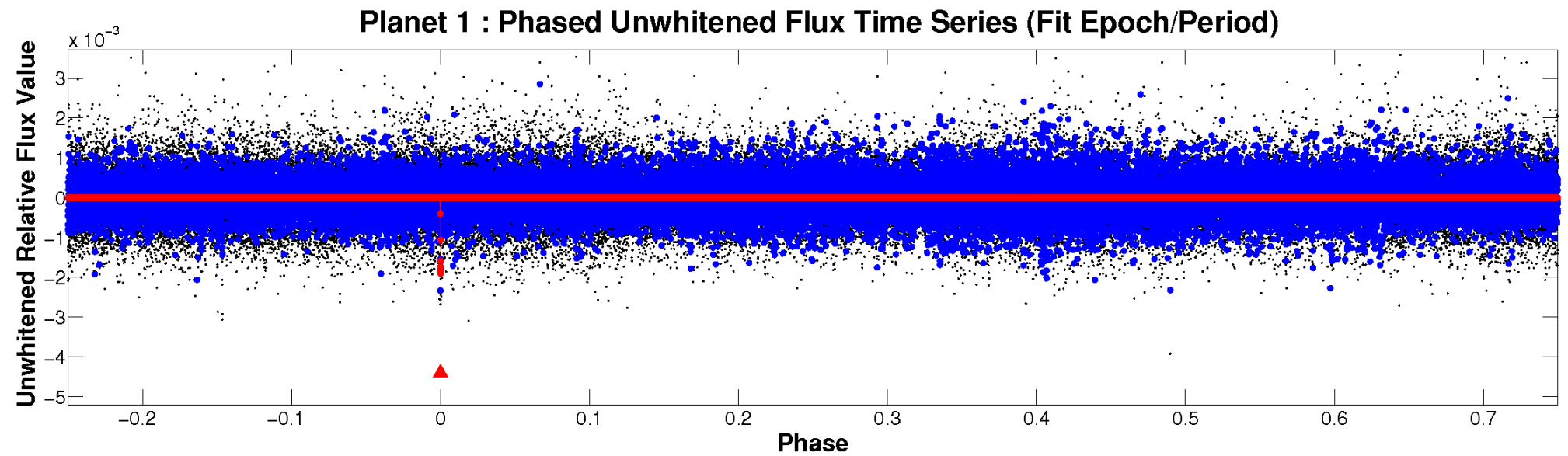


ALT Odd/Even

TCE 006878738-01

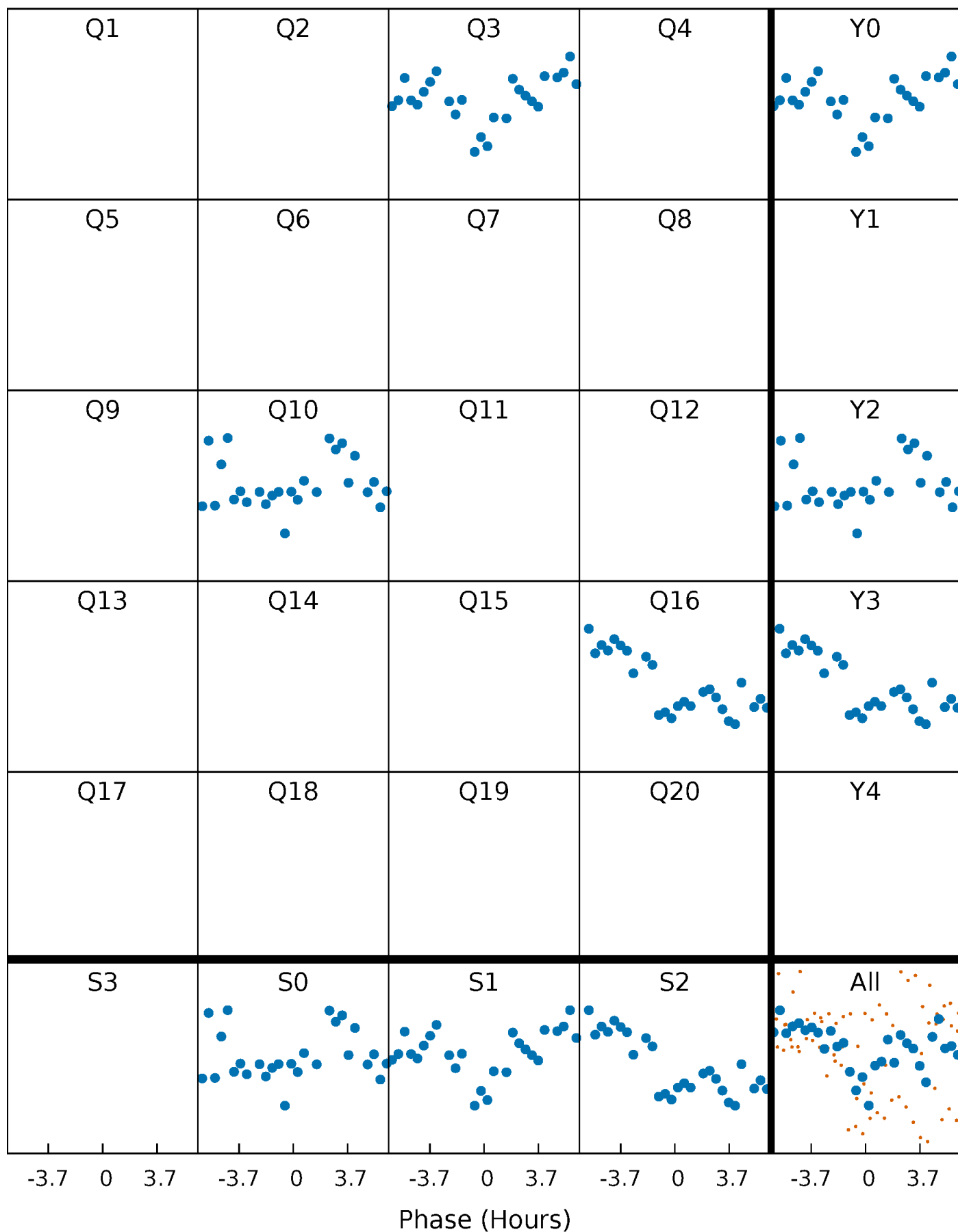


Non-Whitened Vs. Whitened Light Curve



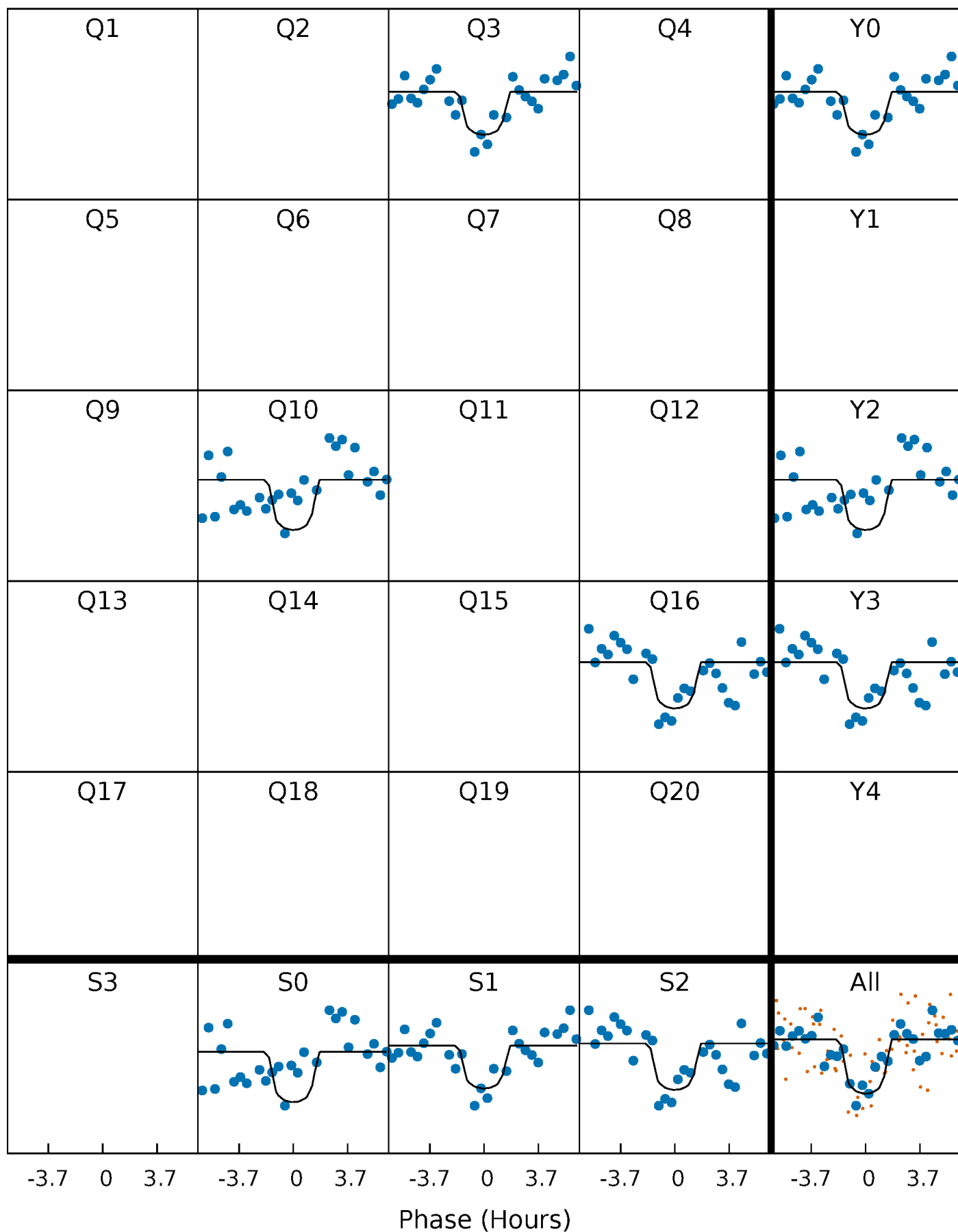
PDC Quarter-Phased Transit Curves

TCE 006878738-01 P=581.398112 Days $T_0=345.372867$ (BKJD)



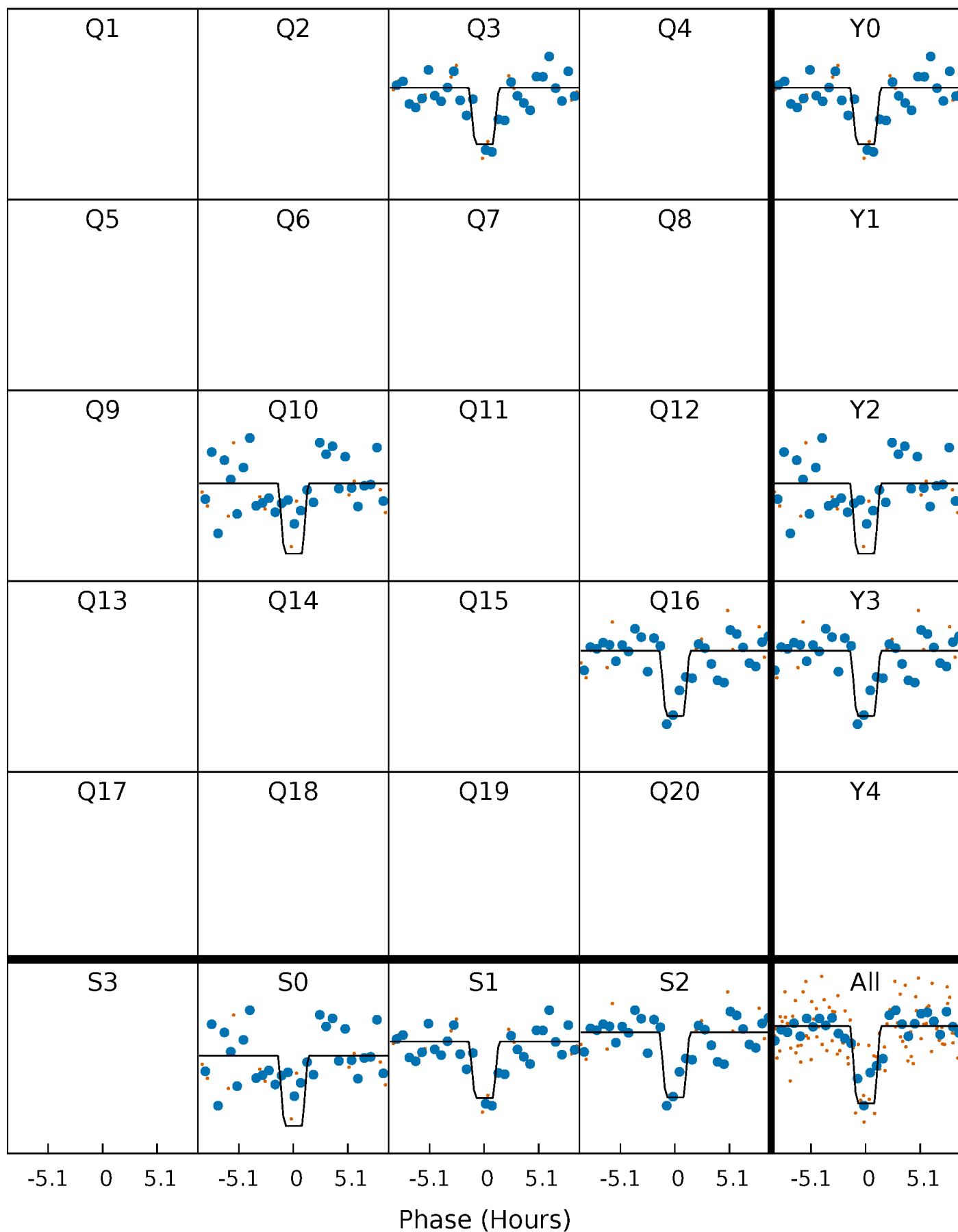
DV Quarter-Phased Transit Curves

TCE 006878738-01 P=581.398112 Days $T_0=345.372867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

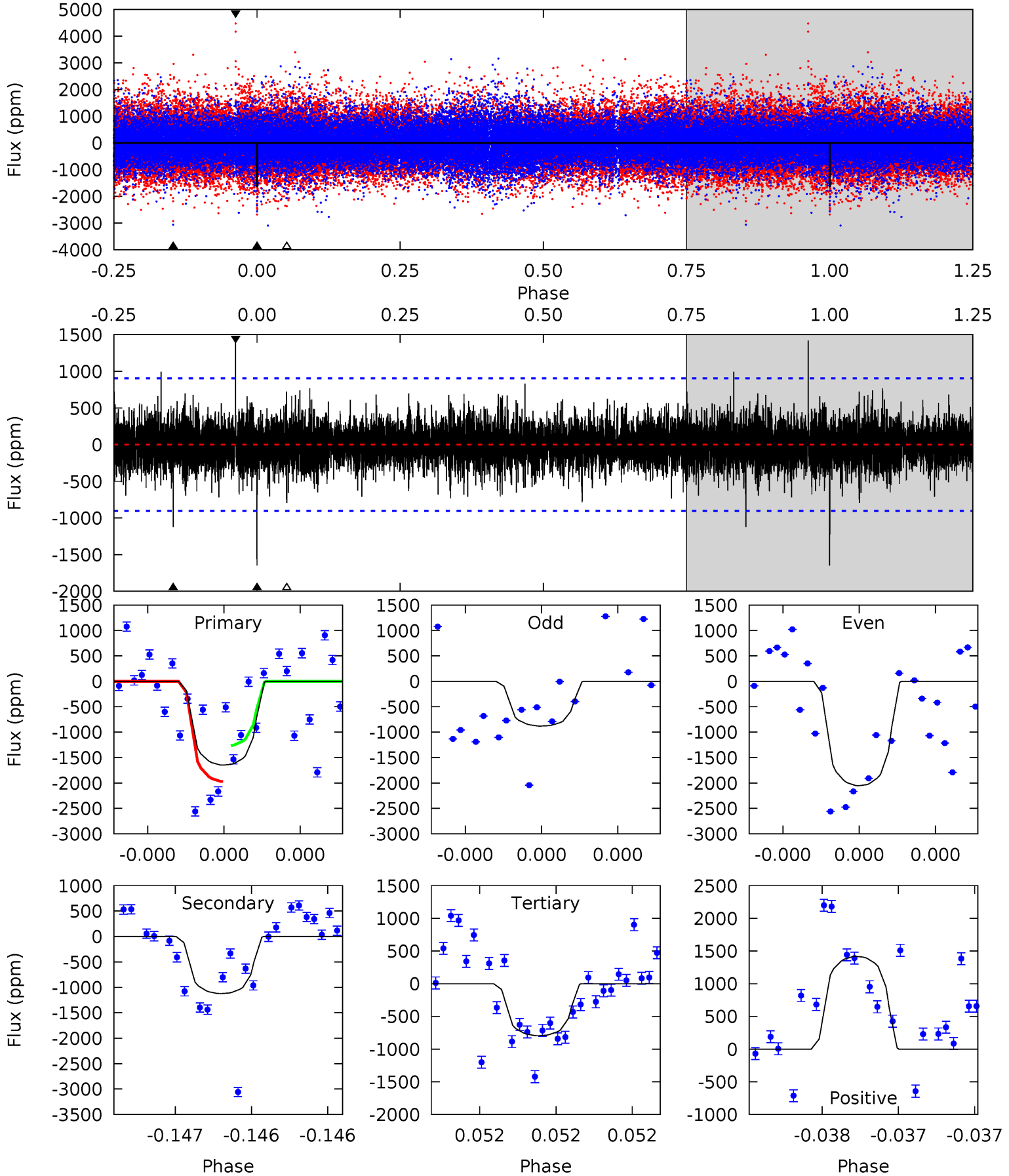
TCE 006878738-01 P=581.402894 Days $T_0=345.353939$ (BKJD)



DV Model-Shift Uniqueness Test

006878738-01, P = 581.398112 Days, E = 345.372867 Days

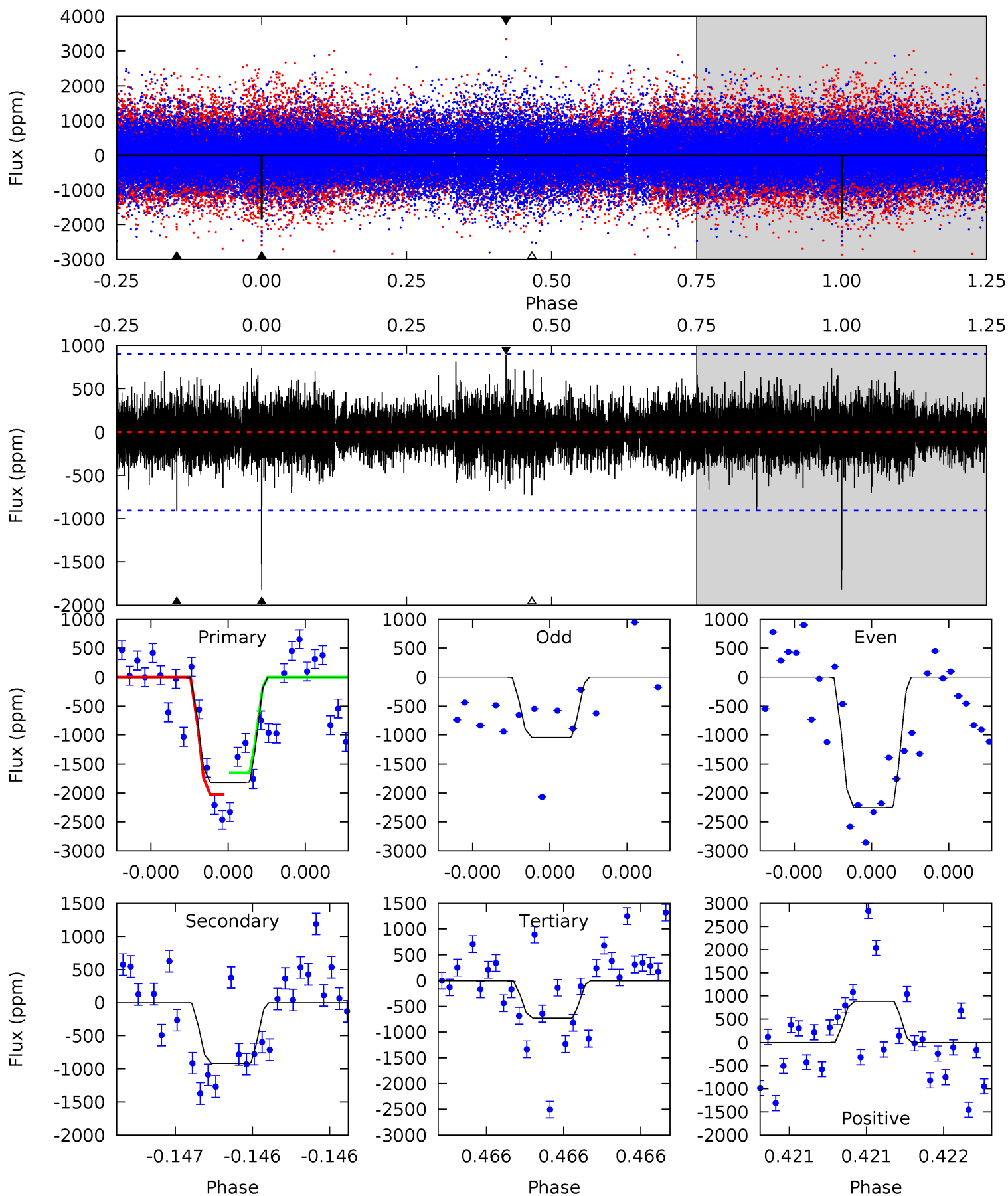
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.07	5.00	8.92	5.70	3.67	1.26	5.37	1.45	2.07	-1.85	3.61	0.81	0.46	2.22



Alt Model-Shift Uniqueness Test

006878738-01, P = 581.402894 Days, E = 345.353939 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	5.78	4.61	5.58	5.72	3.71	1.09	6.86	5.89	1.17	0.20	3.70	0.90	0.33	1.17



Stellar Parameters For KIC 006878738

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3621^{+65}_{-72}	$4.826^{+0.045}_{-0.036}$	$-0.100^{+0.100}_{-0.100}$	$0.432^{+0.034}_{-0.046}$	$0.454^{+0.031}_{-0.054}$	$7.922^{+2.088}_{-1.143}$
	+2%/-2%	+1%/-1%	+100%/-100%	+8%/-11%	+7%/-12%	+26%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 006878738-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1124 ± 159	$2.54^{+2.26}_{-1.63}$	143^{+4}_{-4}	3114^{+1311}_{-491}	$102571^{+737314}_{-73561}$
Alt.	-915 ± 158	$2.82^{+2.23}_{-1.73}$	143^{+3}_{-4}	2931^{+1006}_{-411}	$67769^{+389405}_{-46413}$

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 $A_{\text{obs}} \gg 1.0$

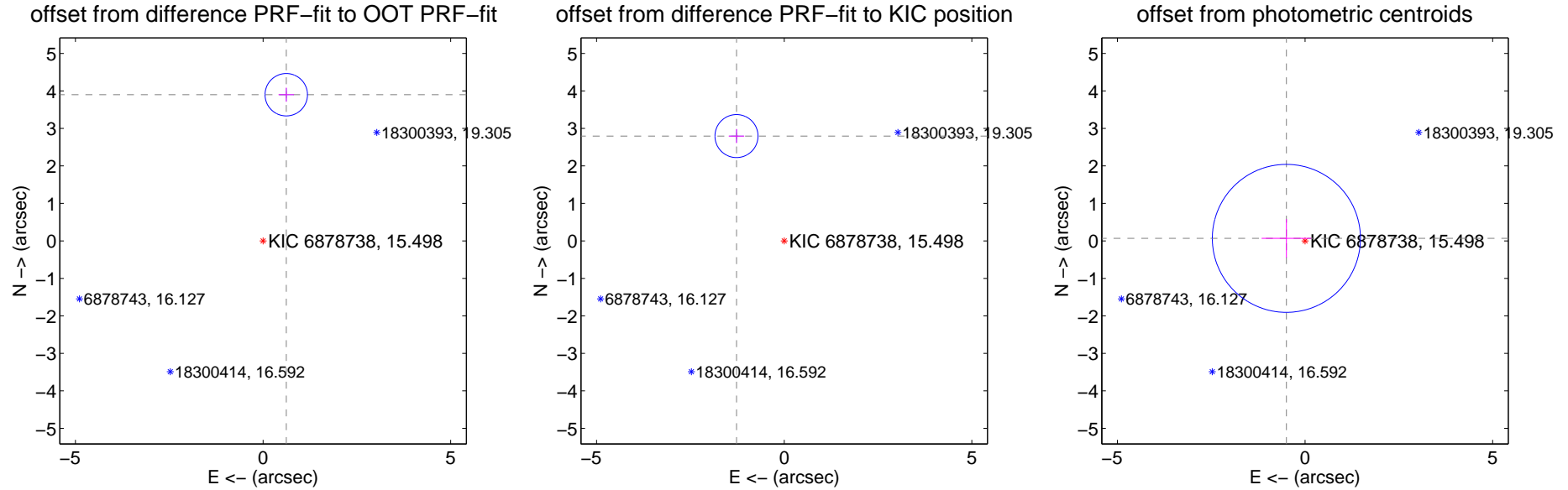
DV Centroid Data

Supplemental centroid analysis for 006878738-01. Kepler magnitude: 15.50. Transit SNR 8.11

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.19 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.949 ± 0.189	20.94	-0.618 ± 0.206	3.900 ± 0.188
PRF-fit source offset from KIC position	3.072 ± 0.191	16.07	1.272 ± 0.206	2.797 ± 0.188
photometric centroid source offset	0.50 ± 0.66	0.76	0.50 ± 0.66	0.07 ± 0.51



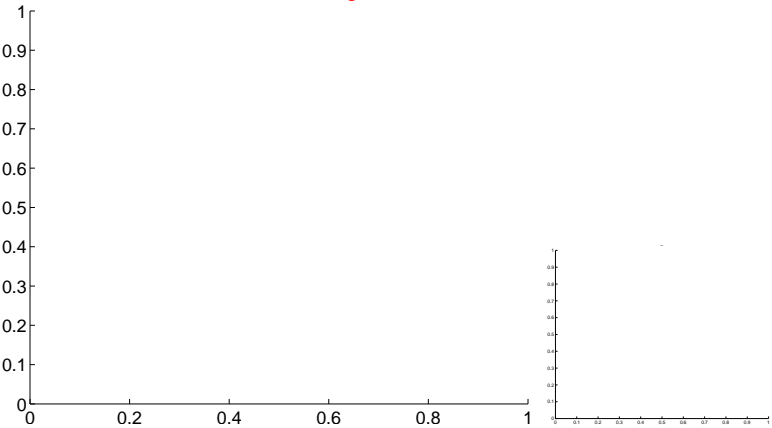
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q1 no difference image



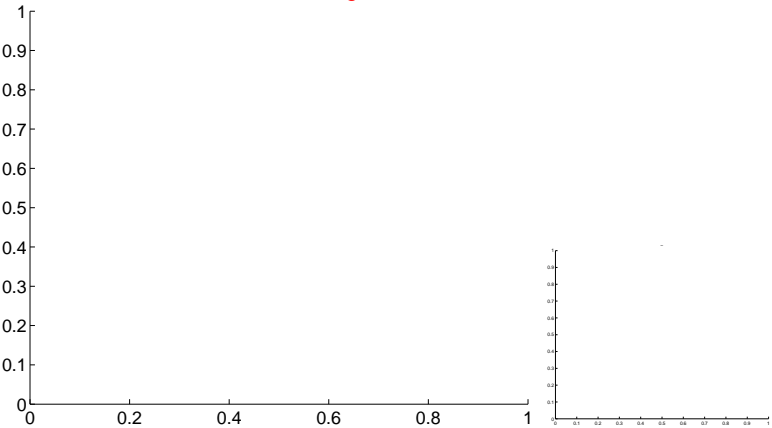
Q1 no OOT image



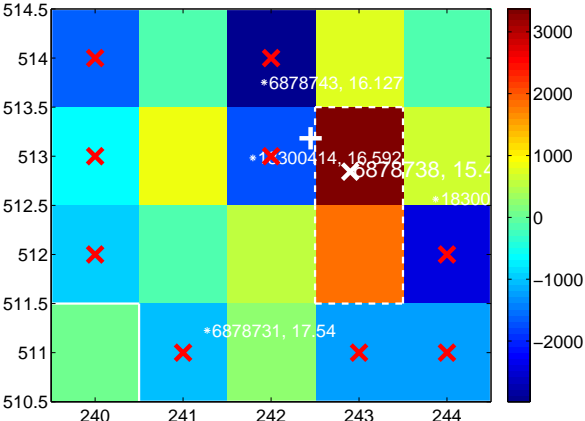
Q2 no difference image



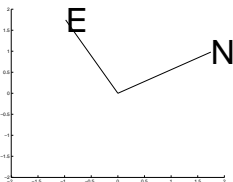
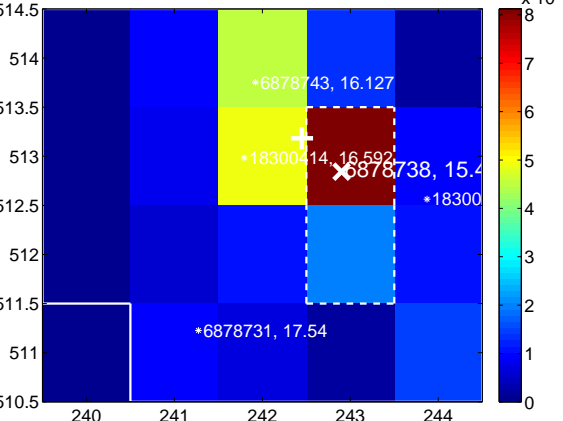
Q2 no OOT image



Q3 difference image. Poor Quality



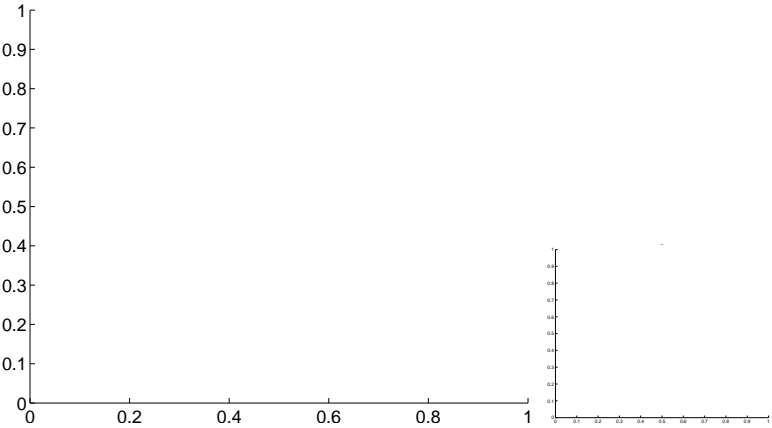
Q3 OOT image



Q4 no difference image



Q4 no OOT image



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.

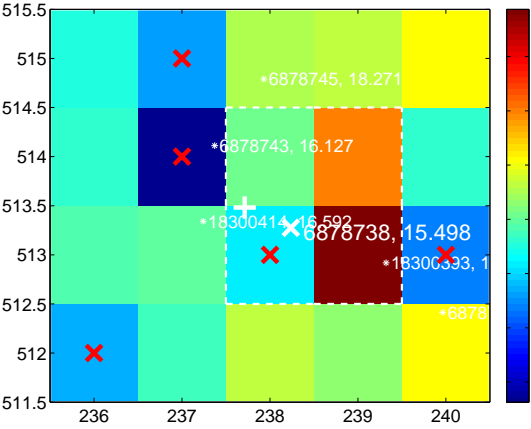
Q9 no difference image



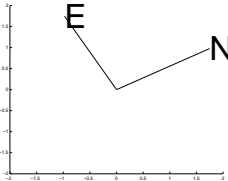
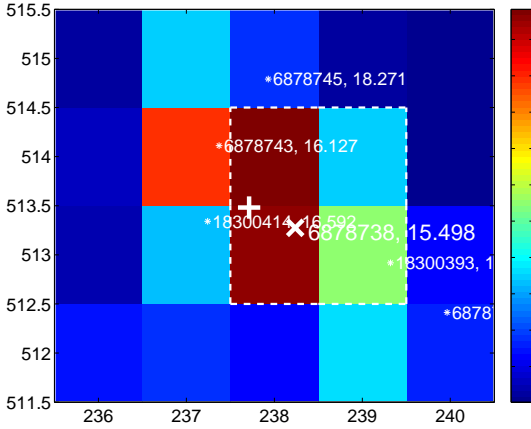
Q9 no OOT image



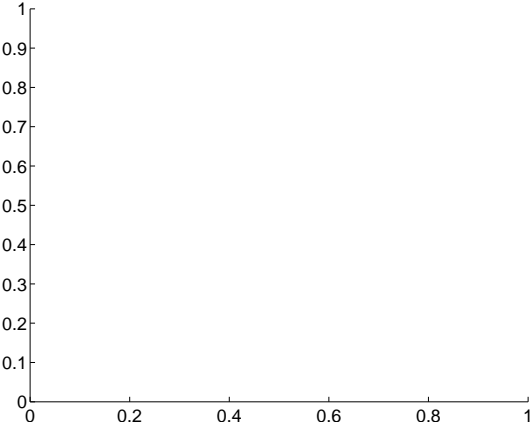
Q10 difference image. Poor Quality



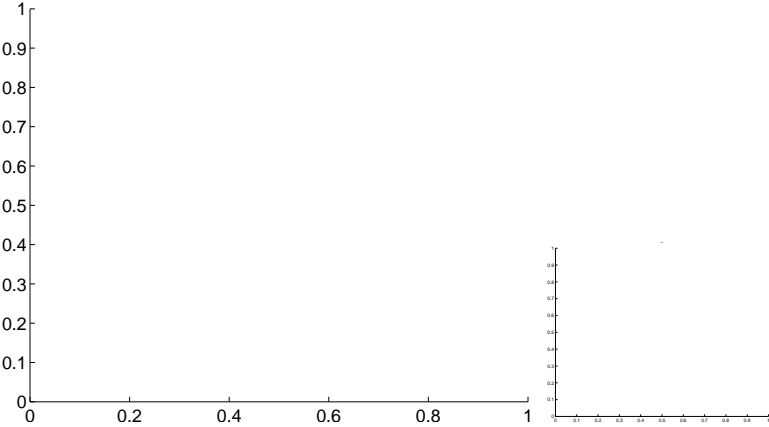
Q10 OOT image



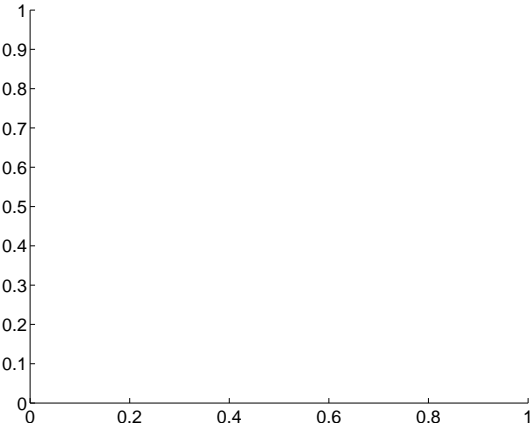
Q11 no difference image



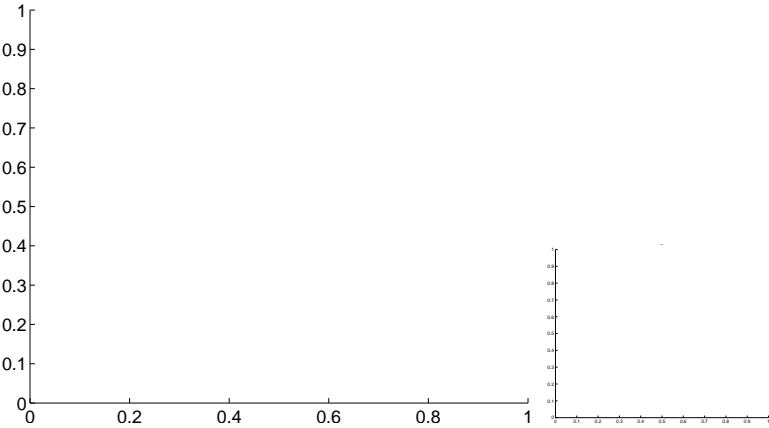
Q11 no OOT image



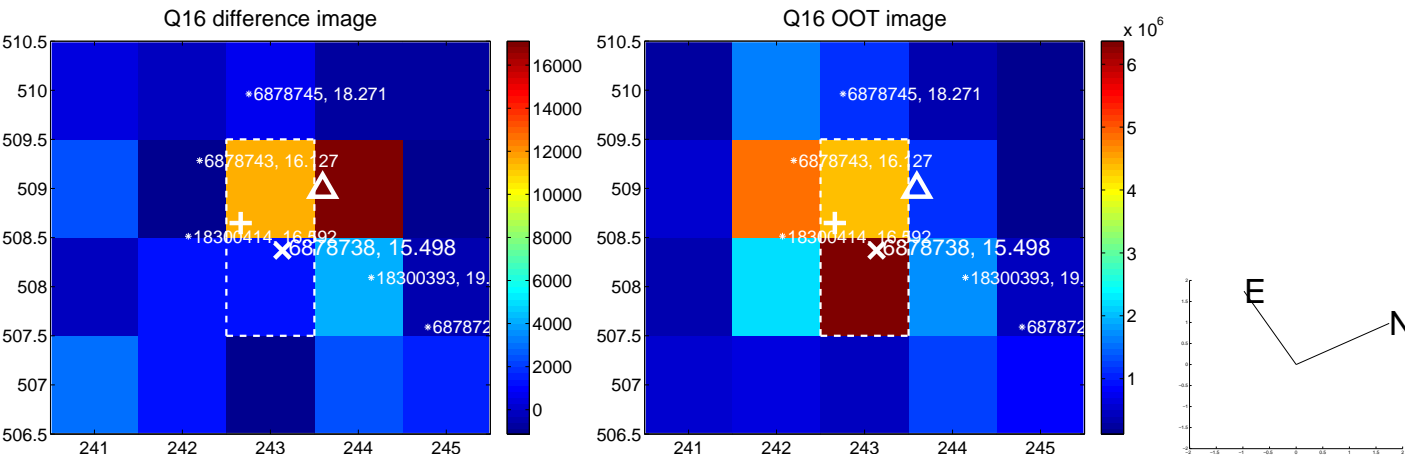
Q12 no difference image



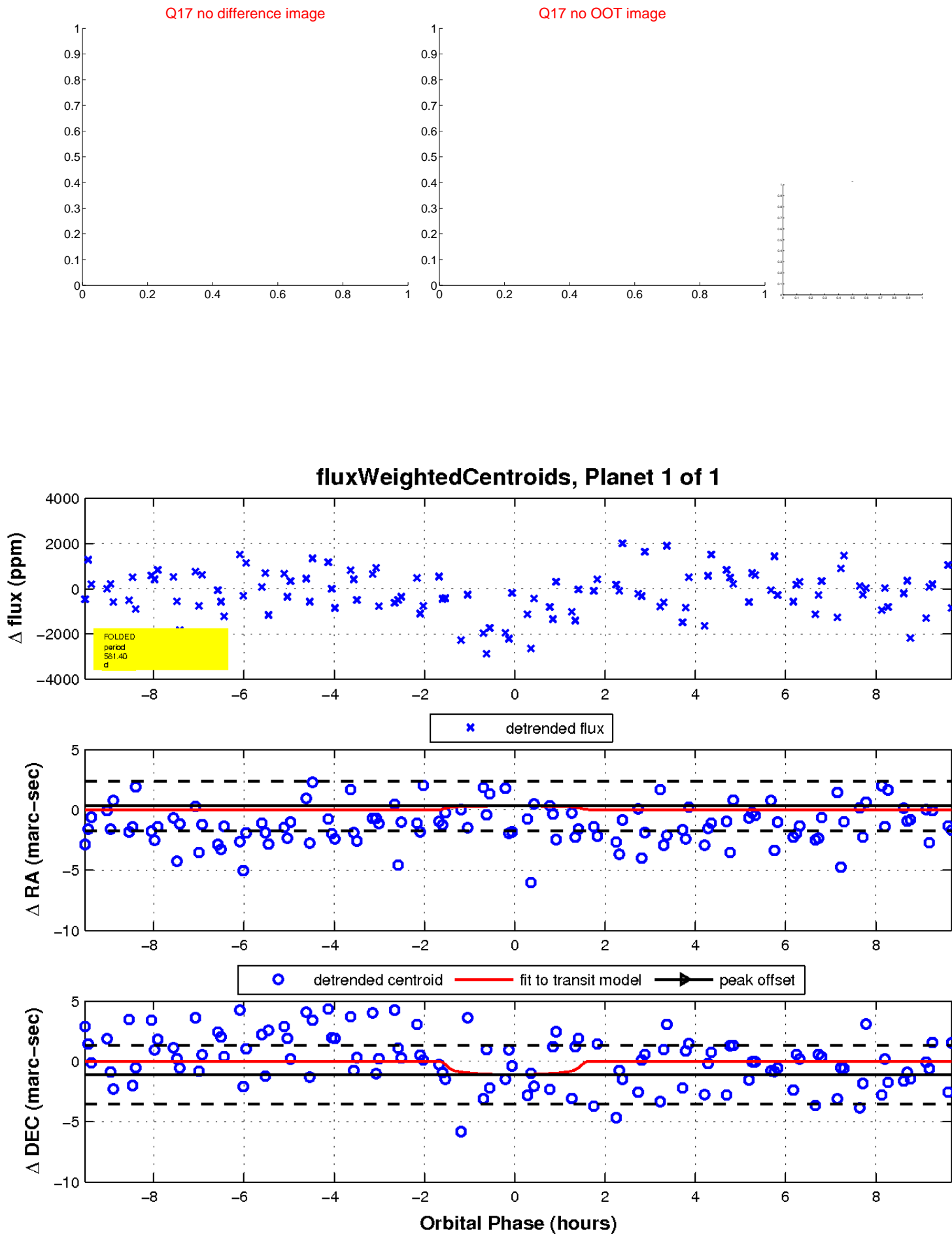
Q12 no OOT image



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.



UKIRT Image

