

KIC 003848528

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})
003848528-01	OBS	No	497.344347	558.388633	325.9	4.979	7.4	6.8	1.14	6418	2.30	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003848528-01	OBS	FP	0.09	1	0	0	0	MOD_NONUNIQ_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.

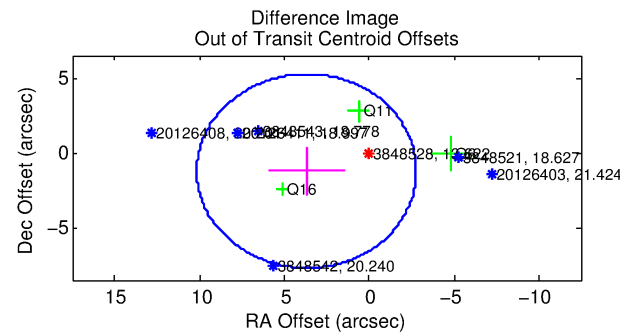
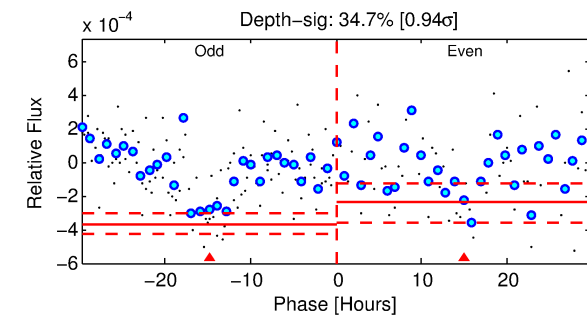
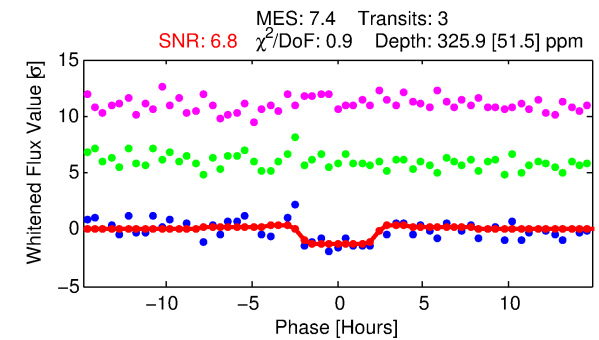
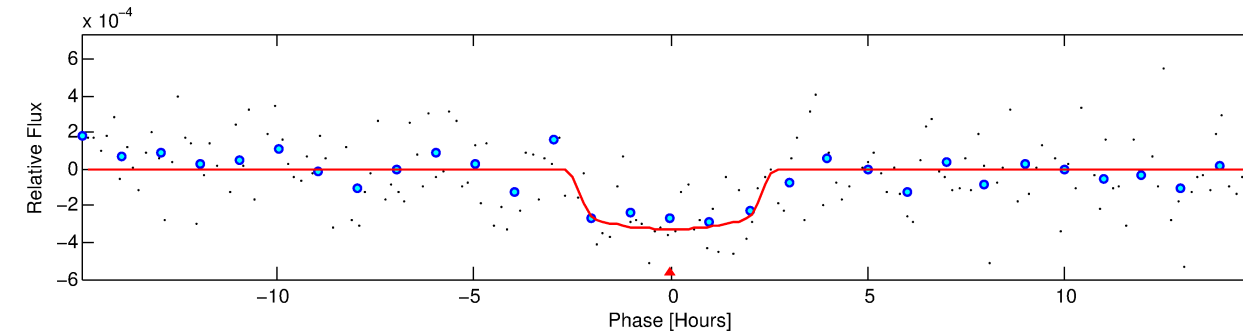
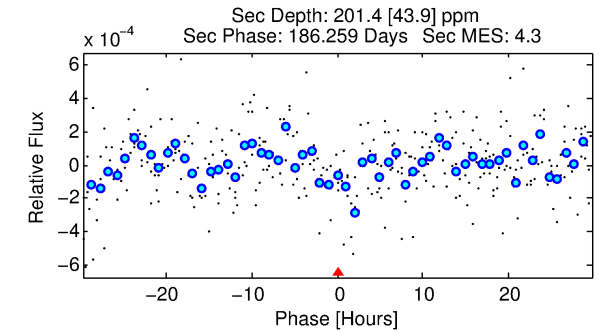
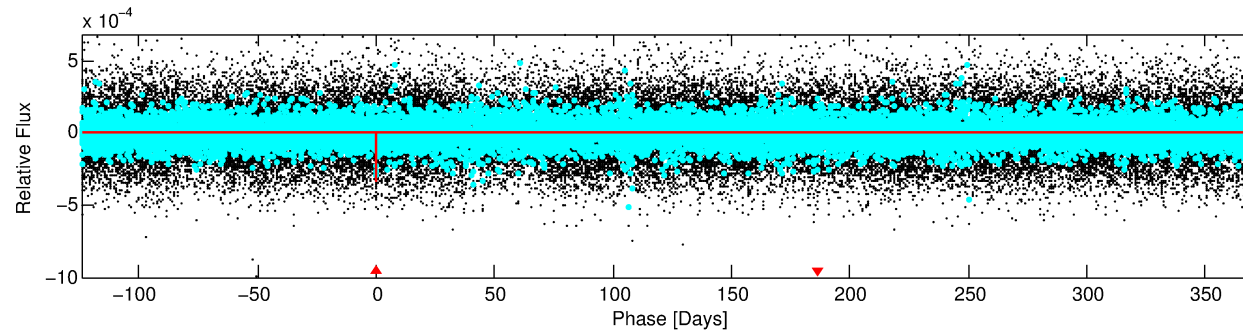
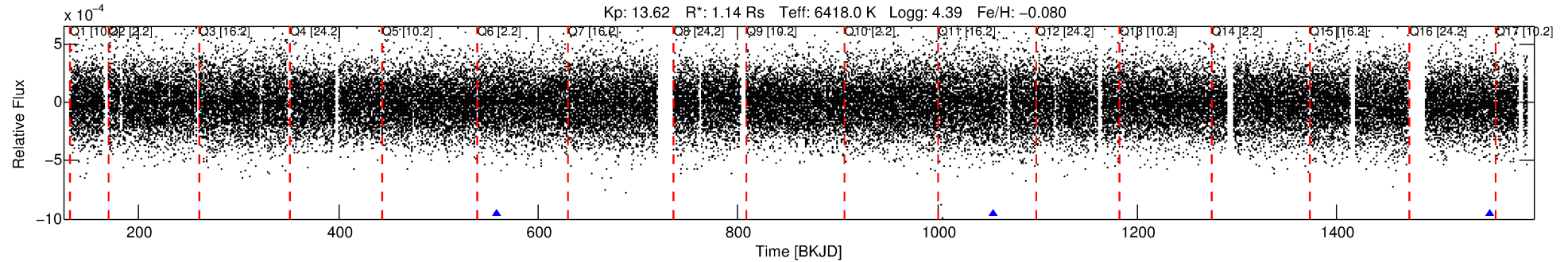
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003848528-01

No Significant Match Found

DV One-Page Summary

KIC: 3848528 Candidate: 1 of 1 Period: 497.344 d



DV Fit Results:

Period = 497.34435 [0.00763] d
Epoch = 558.3886 [0.0106] BKJD
Rp/R* = 0.0185 [0.0126]
a/R* = 450.72 [1626.99]
b = 0.83 [1.38]
Seff = 1.17 [0.46]
Teq = 265 [26] K
Rp = 2.30 [1.74] Re
a = 1.2956 [0.3411] AU
Ag = 35068.82 [50021.78] [0.70σ]
Teffp = 5617 [1942] K [2.76σ]

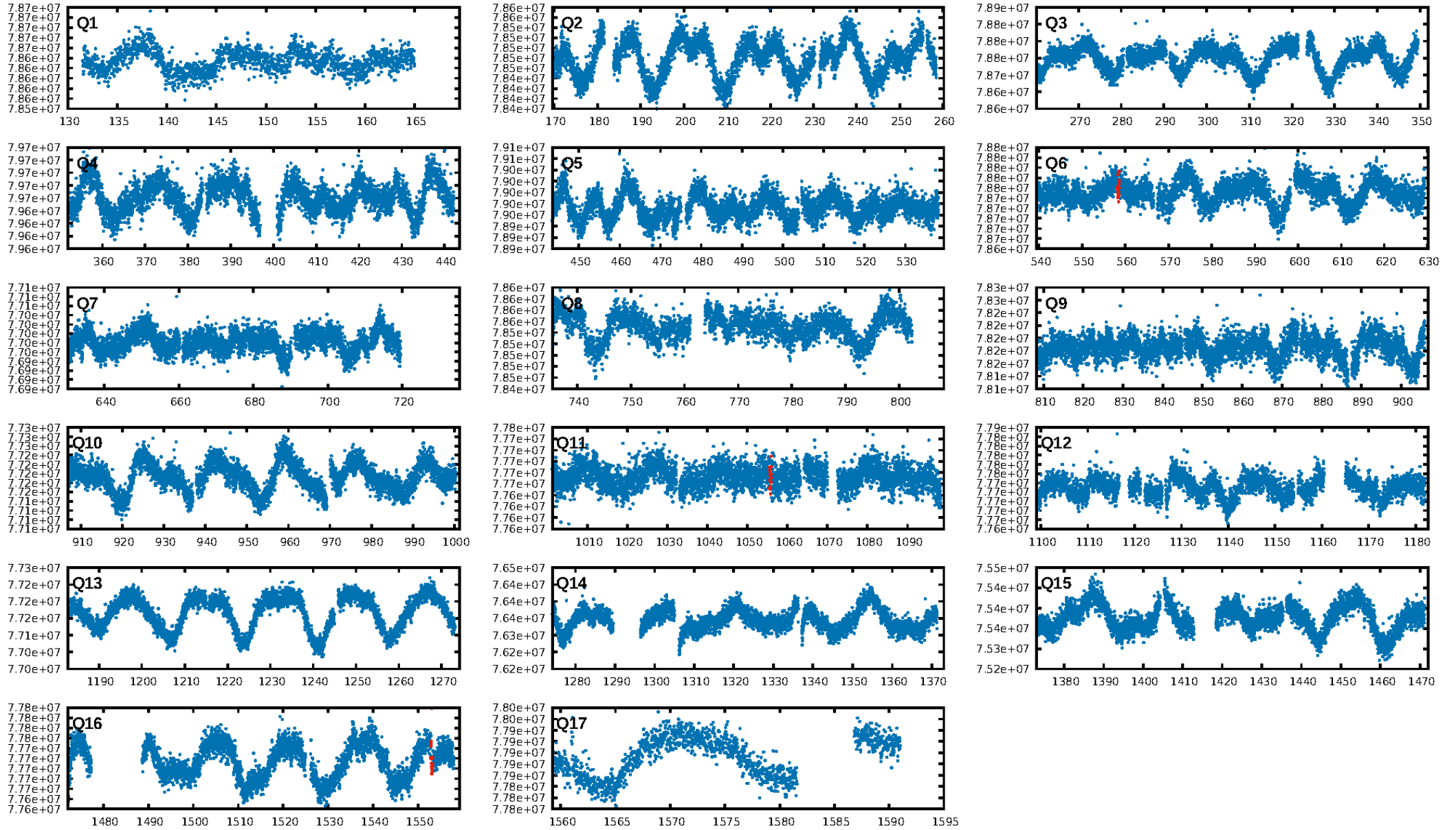
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.5%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 7.80e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.765
Centroid-sig: 22.4%
Centroid-so: 2.026 arcsec [1.12σ]
OotOffset-rm: 3.879 arcsec [1.80σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 3.765 arcsec [1.47σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

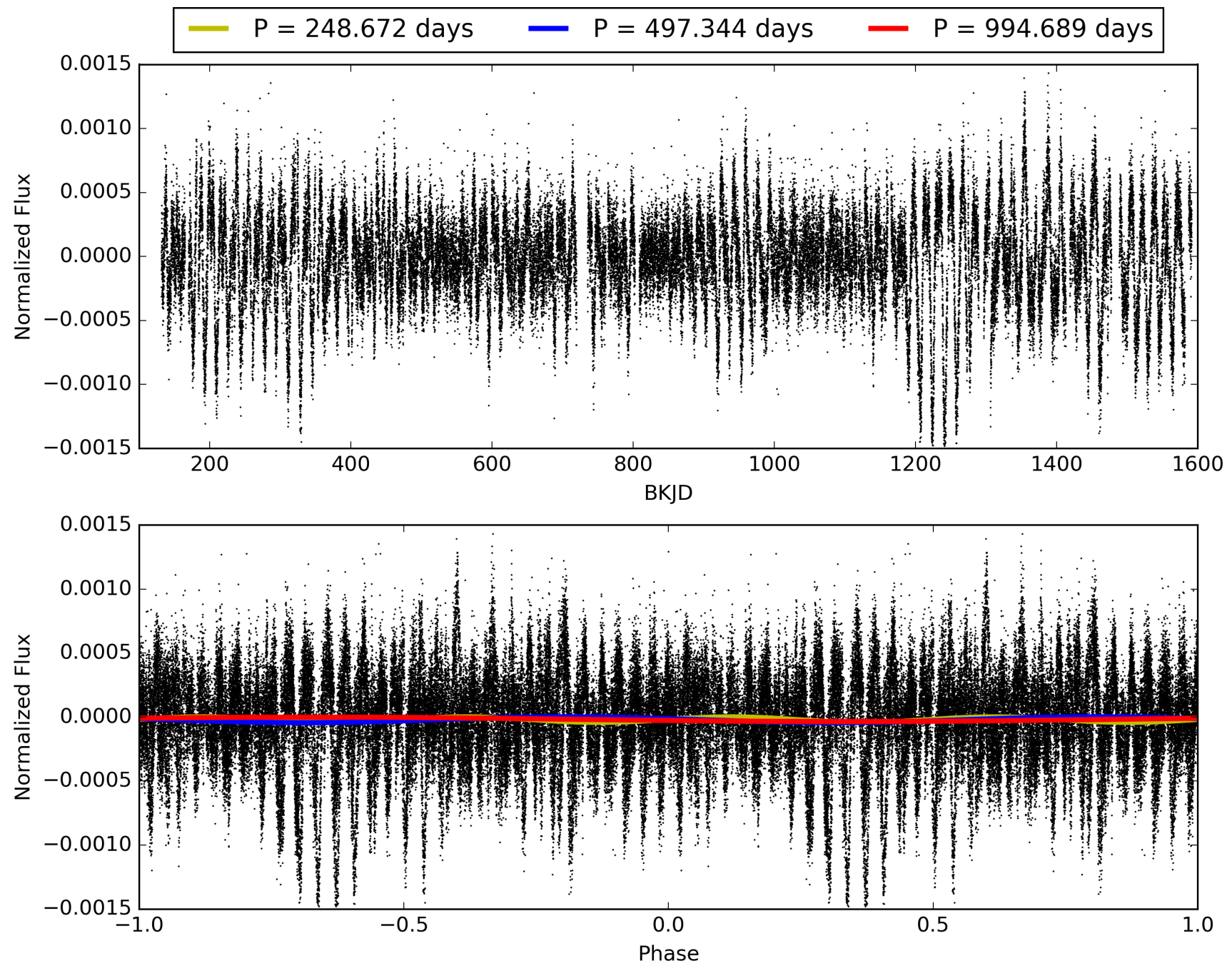
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:01:03 Z

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

TCE 003848528-01, PDC Light Curves

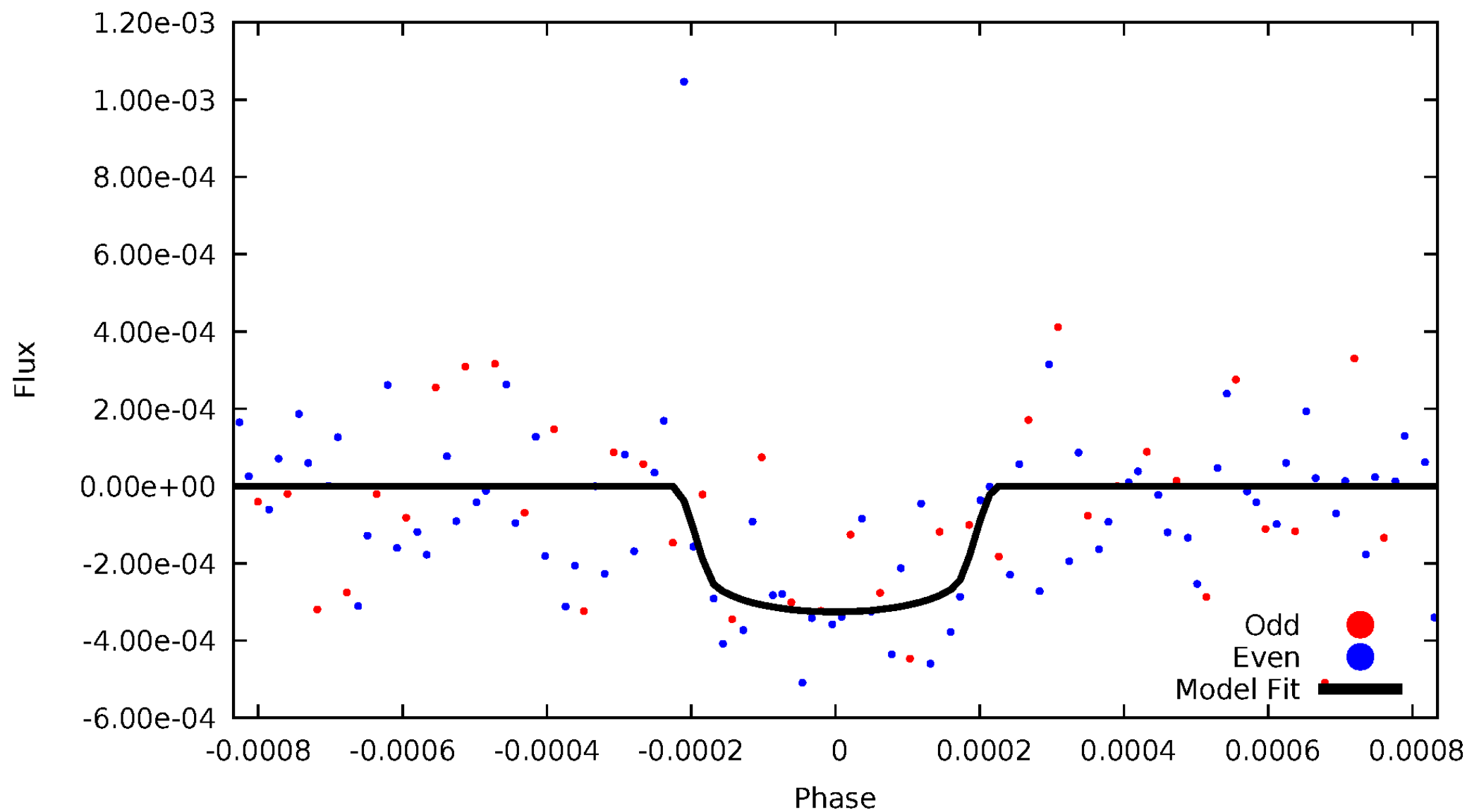


TCE 003848528-01



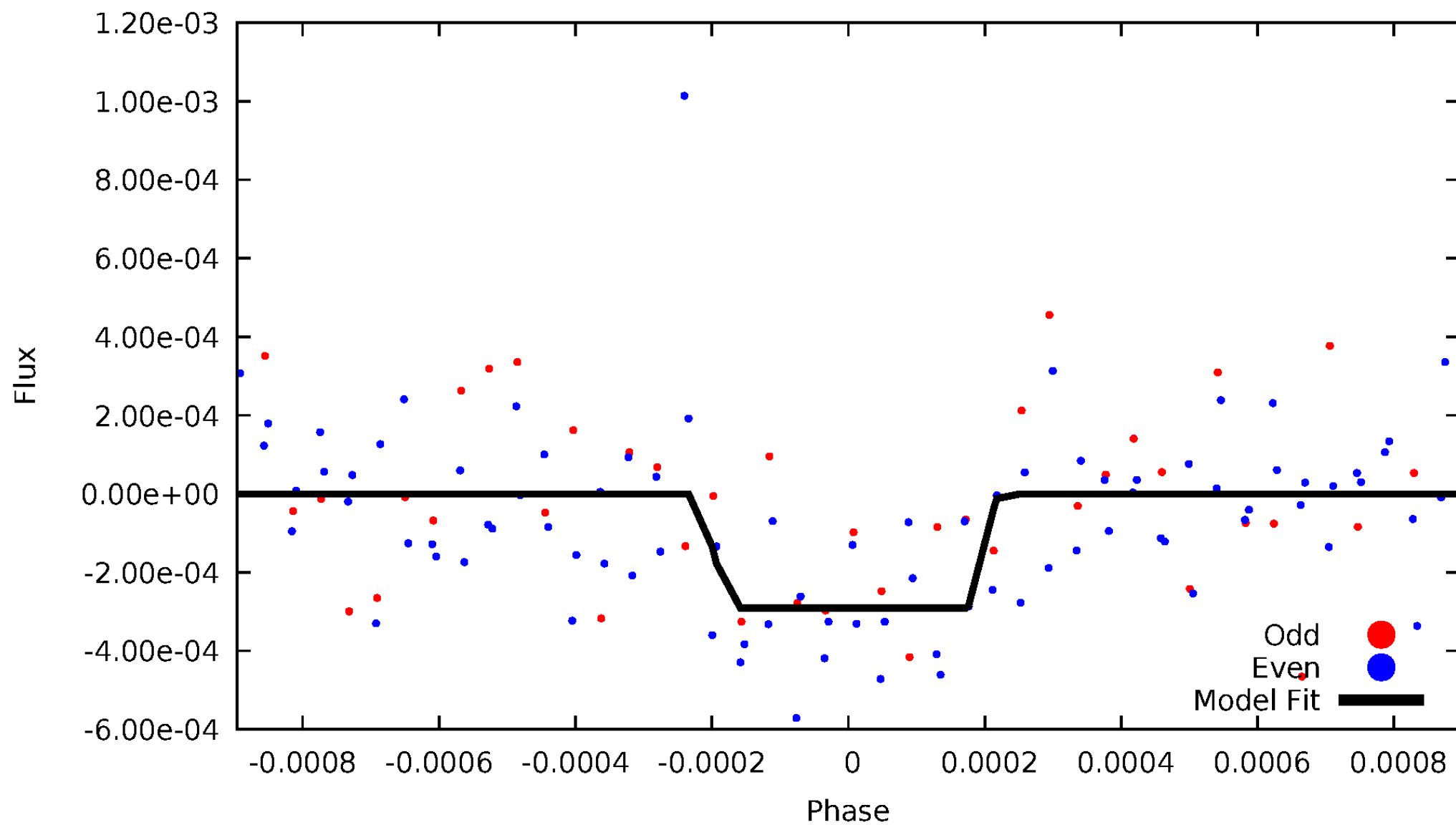
DV Odd/Even

TCE 003848528-01

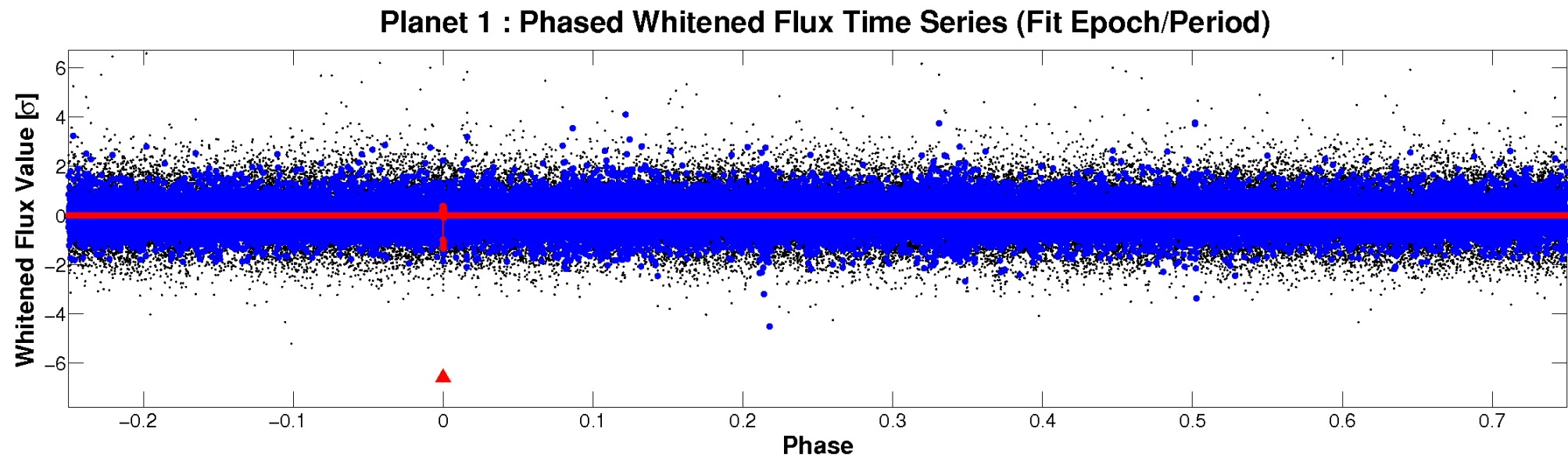
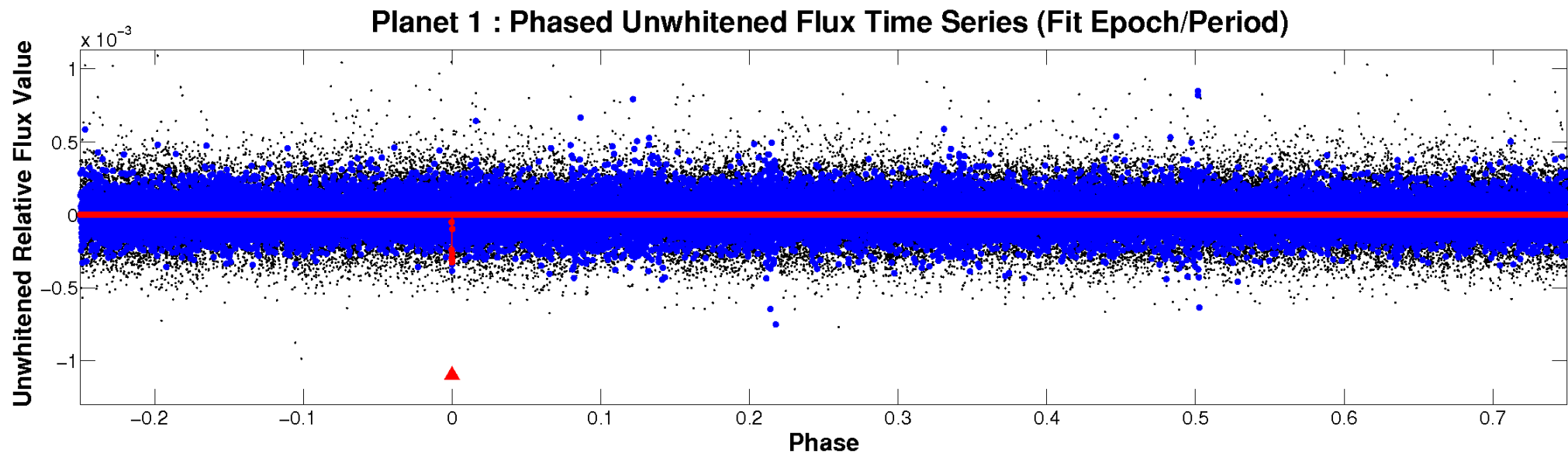


ALT Odd/Even

TCE 003848528-01



Non-Whitened Vs. Whitened Light Curve



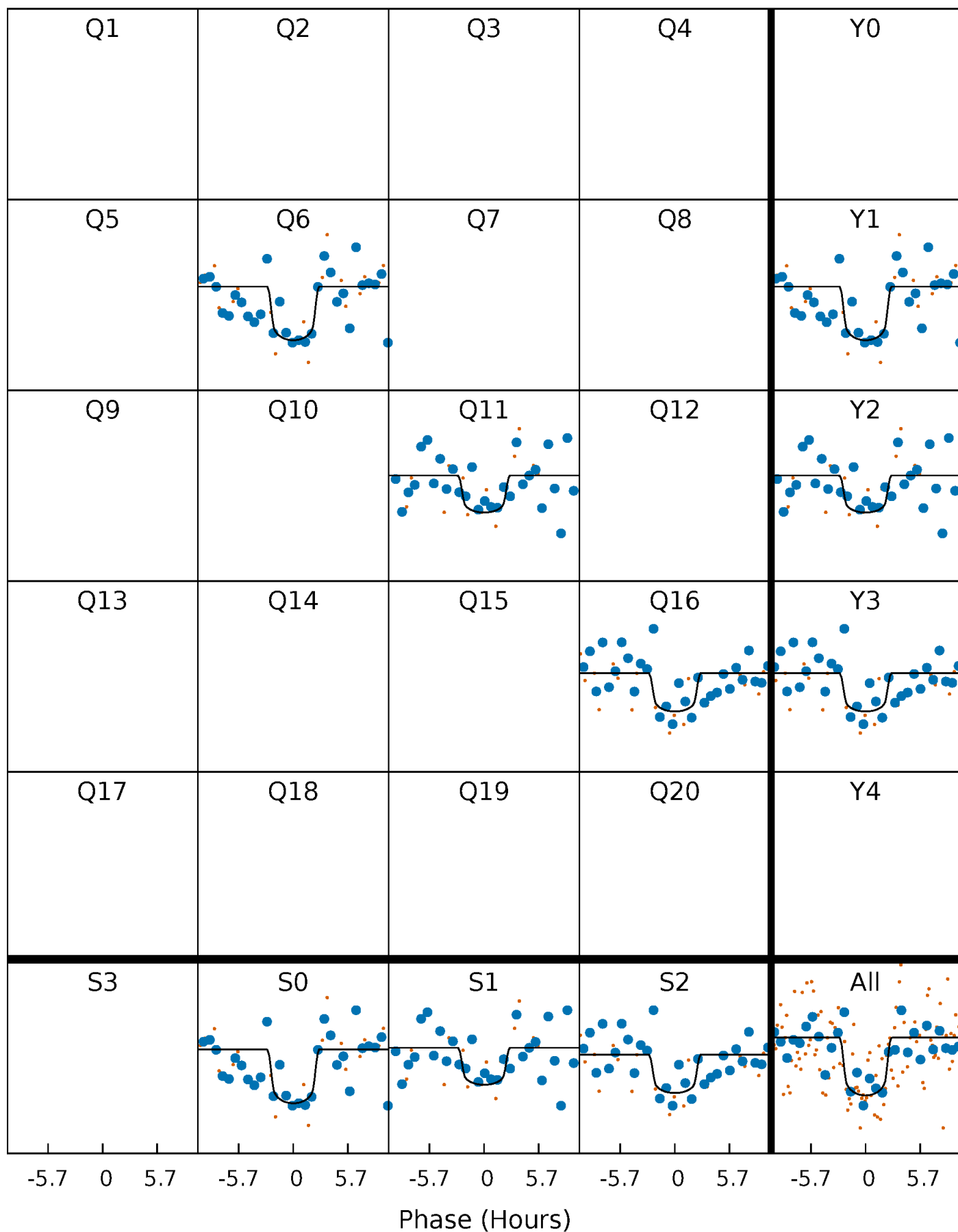
PDC Quarter-Phased Transit Curves

TCE 003848528-01 P=497.344347 Days $T_0=558.388633$ (BKJD)



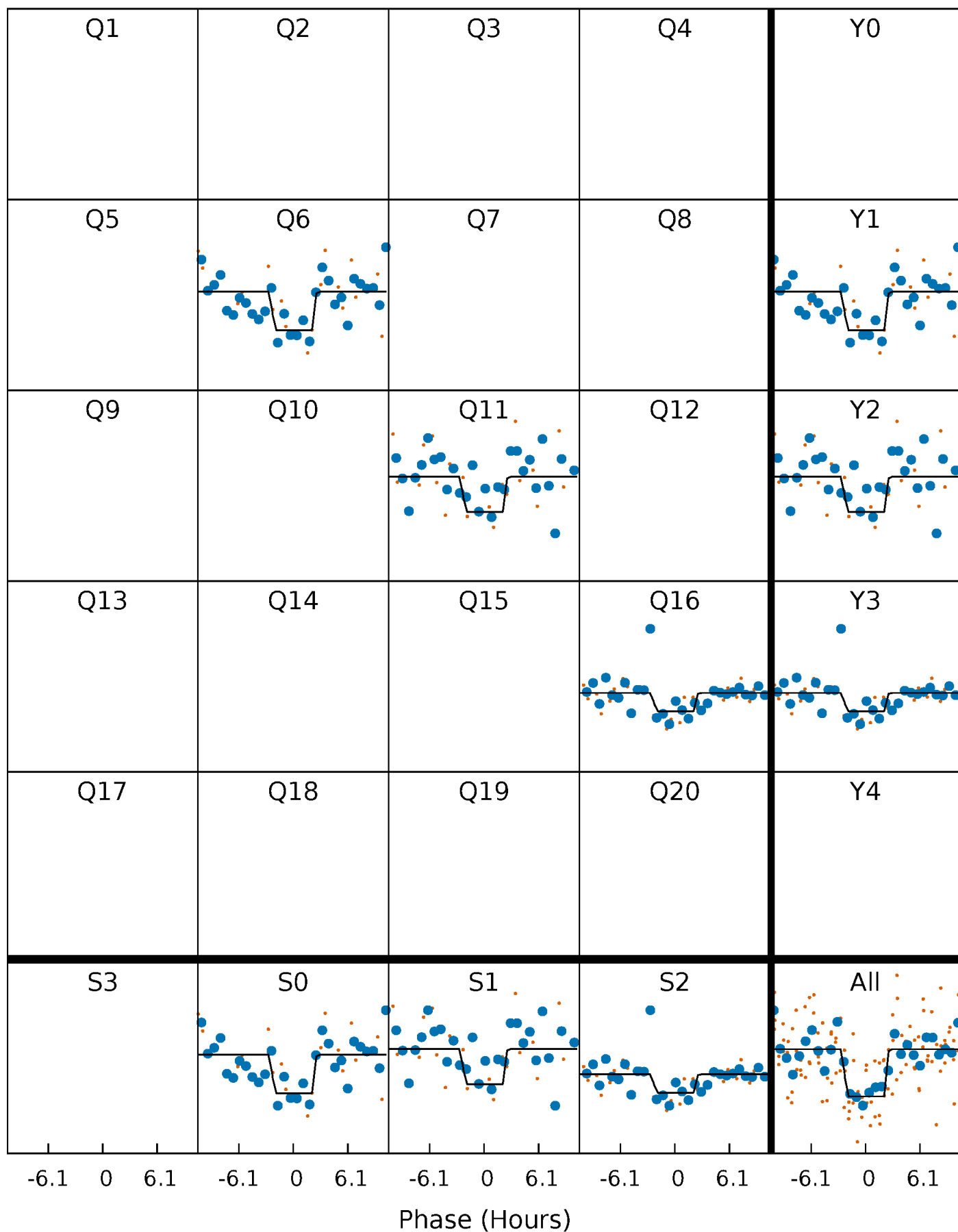
DV Quarter-Phased Transit Curves

TCE 003848528-01 P=497.344347 Days $T_0=558.388633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

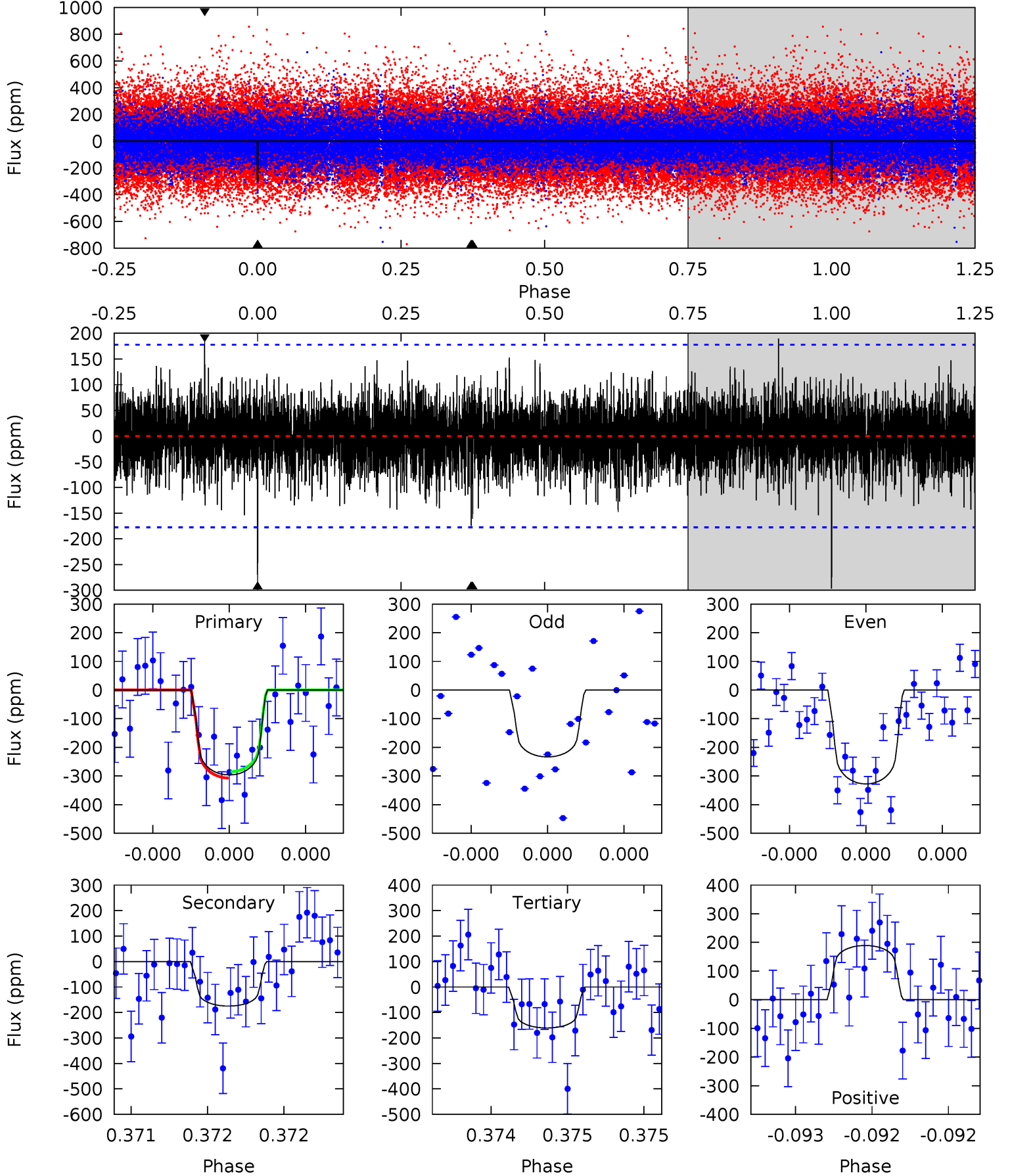
TCE 003848528-01 P=497.352850 Days $T_0=558.386820$ (BKJD)



DV Model-Shift Uniqueness Test

003848528-01, P = 497.344347 Days, E = 61.044286 Days

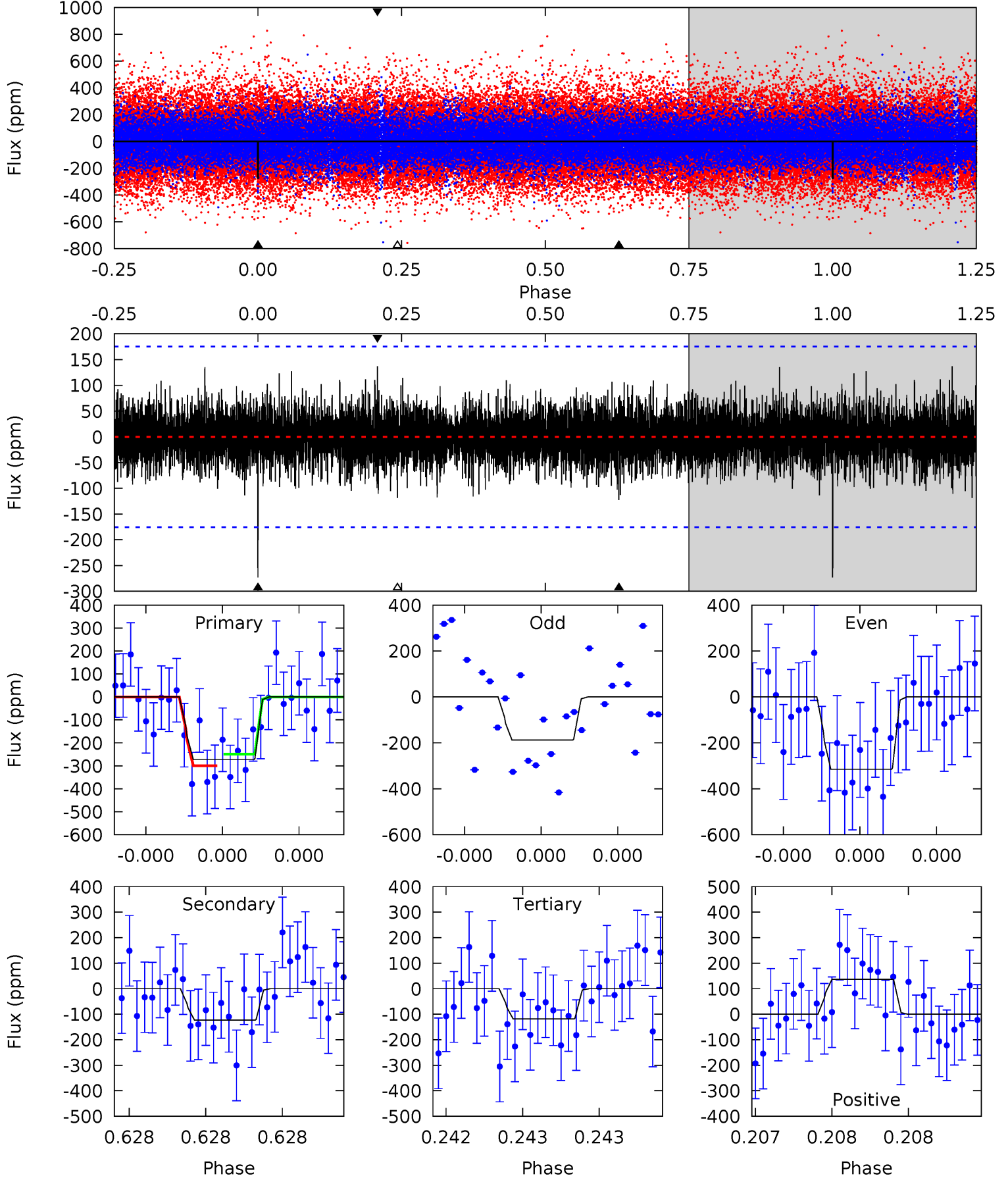
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	5.50	5.06	5.96	5.59	3.51	1.39	4.27	3.37	0.44	-0.46	1.38	0.94	0.39	0.34



Alt Model-Shift Uniqueness Test

003848528-01, P = 497.352850 Days, E = 61.033970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	3.93	3.79	4.38	5.61	3.53	1.06	4.92	4.34	0.14	-0.45	1.93	0.93	0.33	0.80



Stellar Parameters For KIC 003848528

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6418^{+144}_{-192}	$4.394^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.139^{+0.370}_{-0.148}$	$1.172^{+0.157}_{-0.157}$	$1.117^{+0.321}_{-0.599}$
	+2%/-3%	+1%/-4%	+312%/-375%	+32%/-13%	+13%/-13%	+29%/-54%
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 003848528-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-175 ± 32	$2.55^{+1.65}_{-1.30}$	377^{+27}_{-19}	5278^{+2491}_{-928}	24081^{+84643}_{-15036}
Alt.	-123 ± 31	$2.38^{+1.57}_{-1.31}$	376^{+26}_{-19}	5053^{+2468}_{-951}	19966^{+82758}_{-13195}

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

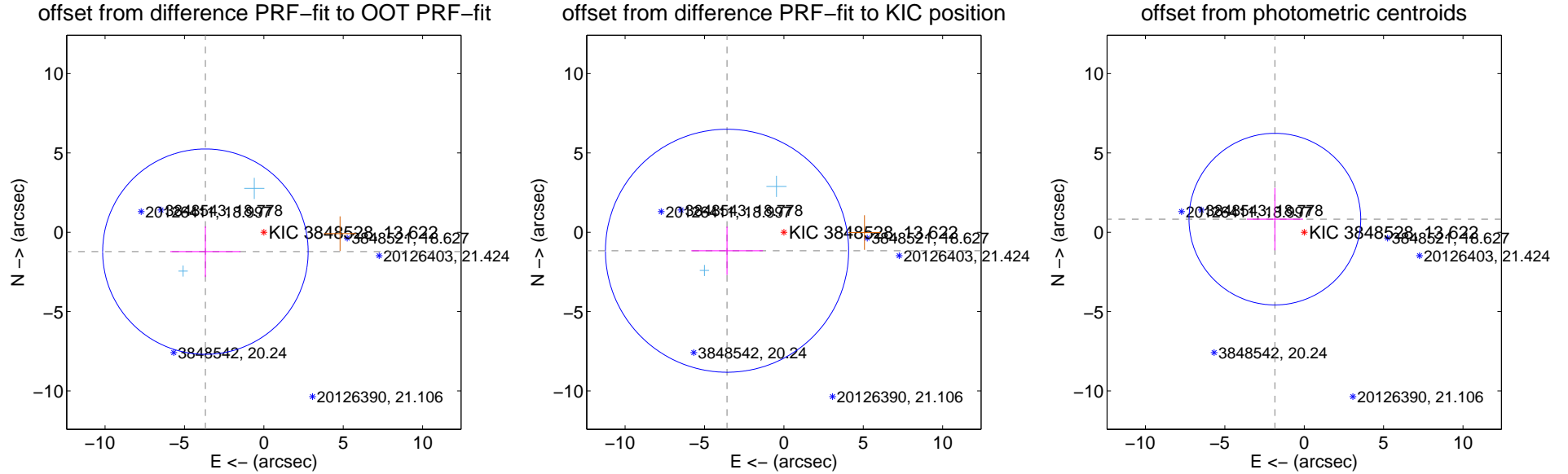
DV Centroid Data

Supplemental centroid analysis for 003848528-01. Kepler magnitude: 13.62. Transit SNR 6.77

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.879 ± 2.157	1.80	3.681 ± 2.210	-1.222 ± 1.594
PRF-fit source offset from KIC position	3.765 ± 2.553	1.47	3.580 ± 2.253	-1.165 ± 1.518
photometric centroid source offset	2.03 ± 1.80	1.12	1.85 ± 1.77	0.83 ± 1.97



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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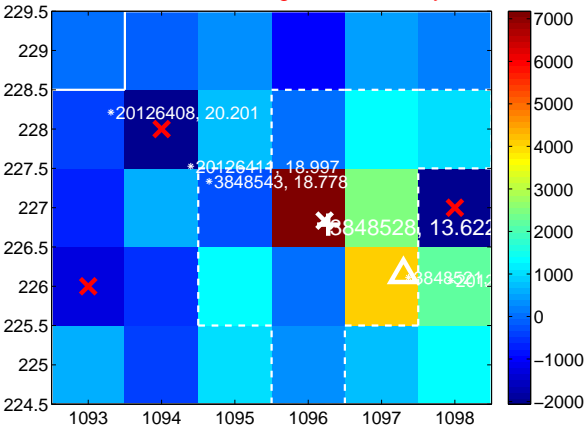
Q5 no difference image



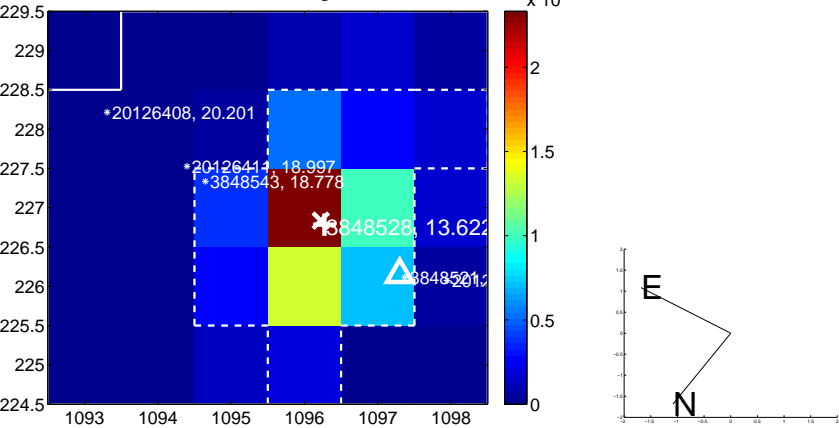
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



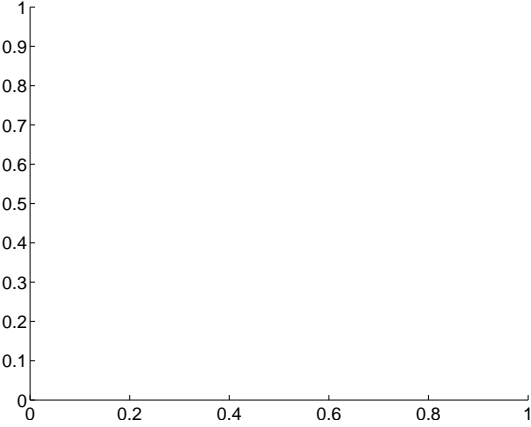
Q7 no difference image



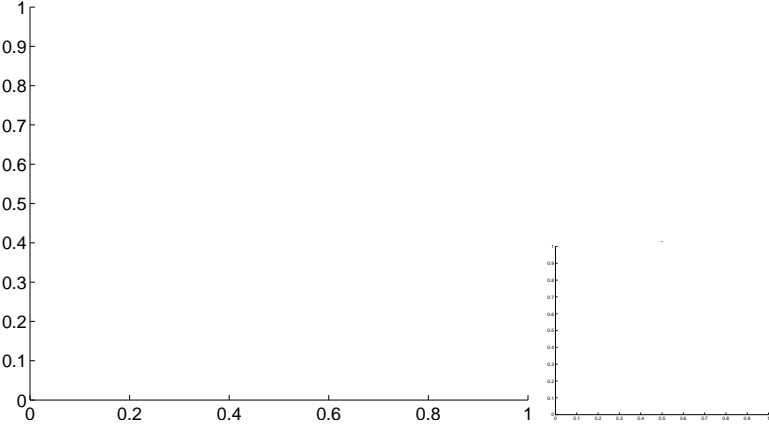
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



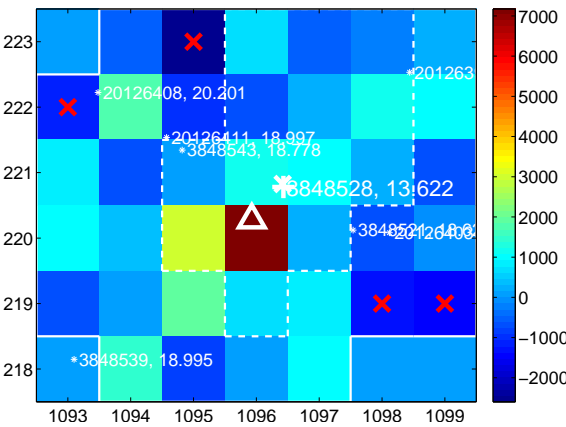
Q10 no difference image



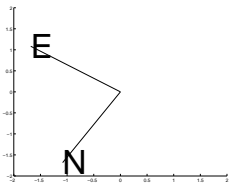
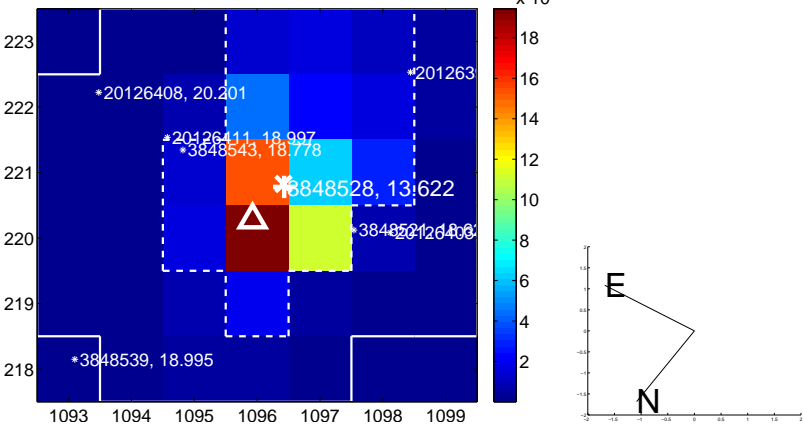
Q10 no OOT image



Q11 difference image



Q11 OOT image



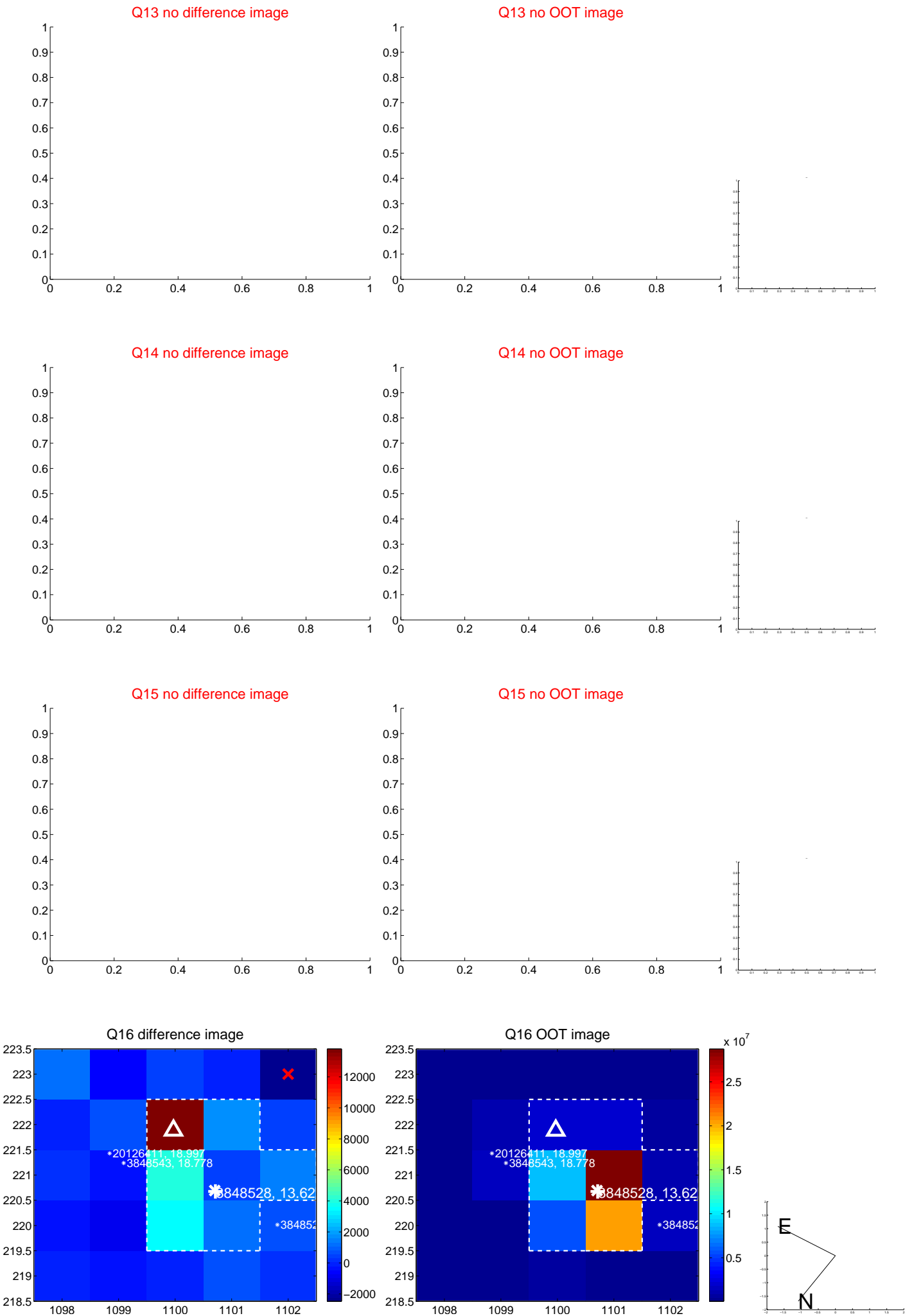
Q12 no difference image



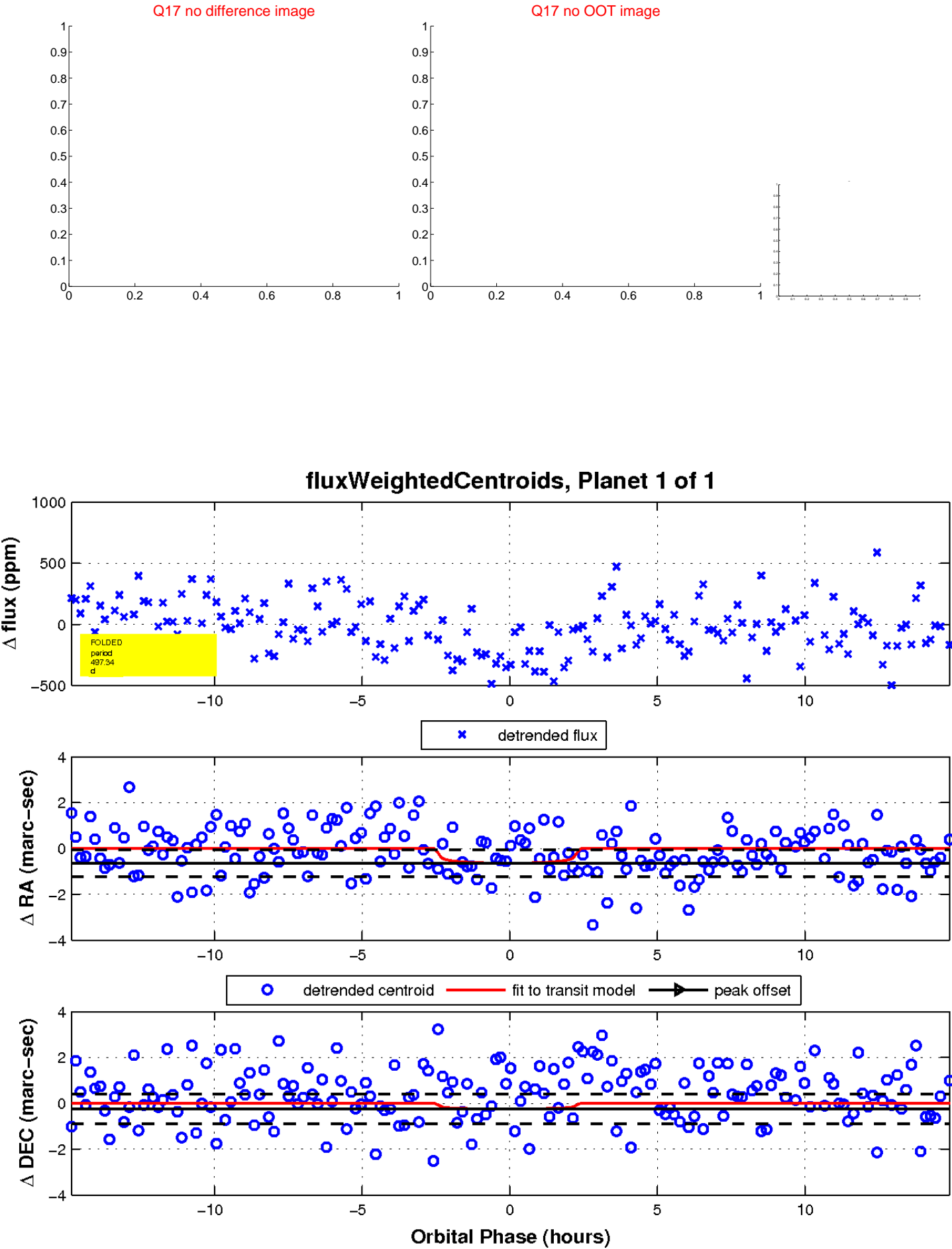
Q12 no OOT image



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

