

KIC 008906913

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})
008906913-01	OBS	No	545.747526	372.017428	383.2	4.344	7.4	6.9	1.79	5267	4.12	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008906913-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS—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.

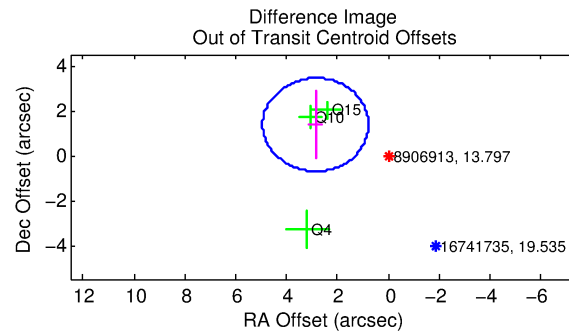
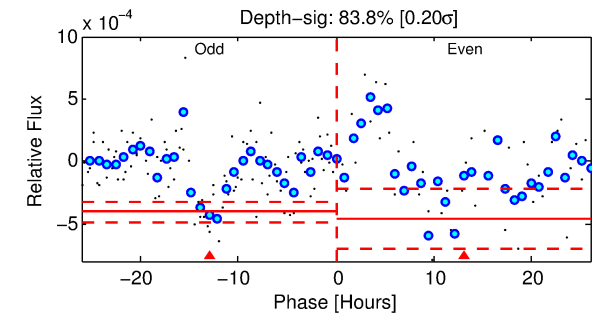
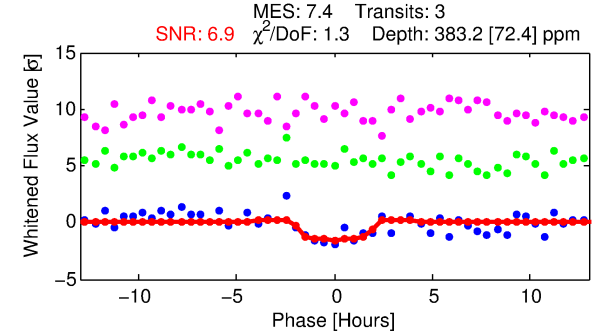
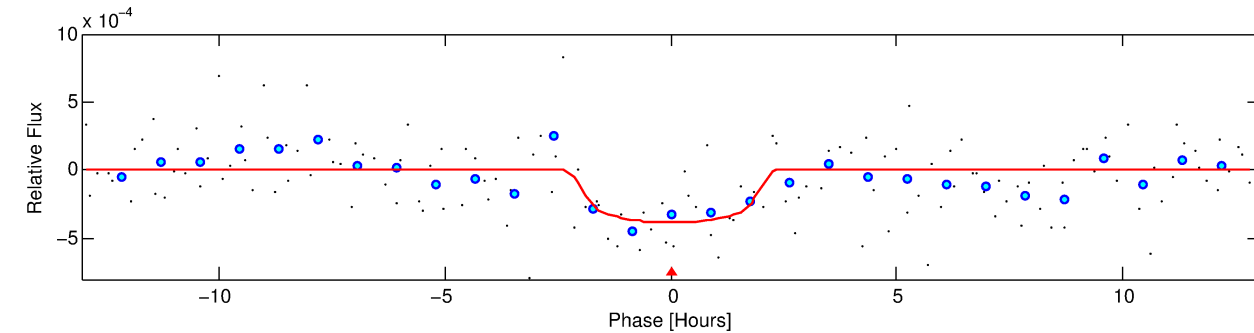
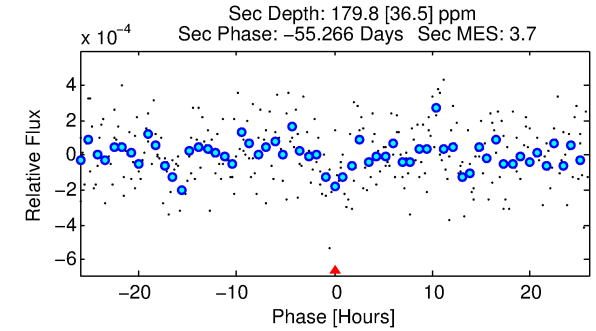
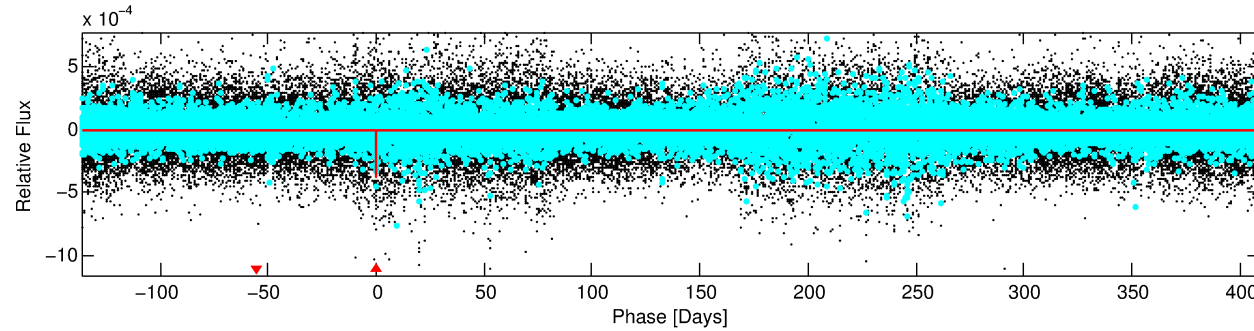
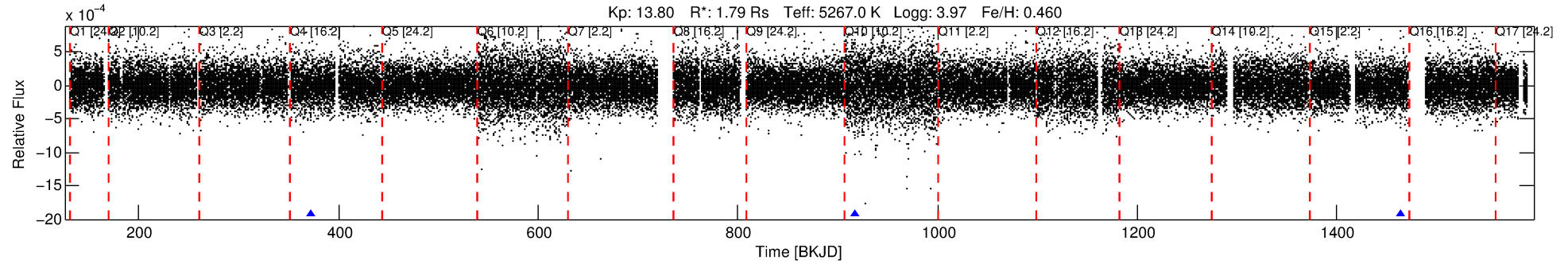
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008906913-01

No Significant Match Found

DV One-Page Summary

KIC: 8906913 Candidate: 1 of 1 Period: 545.748 d



DV Fit Results:

Period = 545.74753 [0.00924] d
Epoch = 372.0174 [0.0137] BKJD
Rp/R* = 0.0211 [0.0260]
a/R* = 514.25 [2495.59]
b = 0.87 [1.40]
Seff = 1.22 [1.05]
Teff = 268 [58] K
Rp = 4.12 [5.45] Re
a = 1.3446 [0.6838] AU
Ag = 10545.81 [27611.33] [0.38σ]
Teffp = 4198 [2601] K [1.51σ]

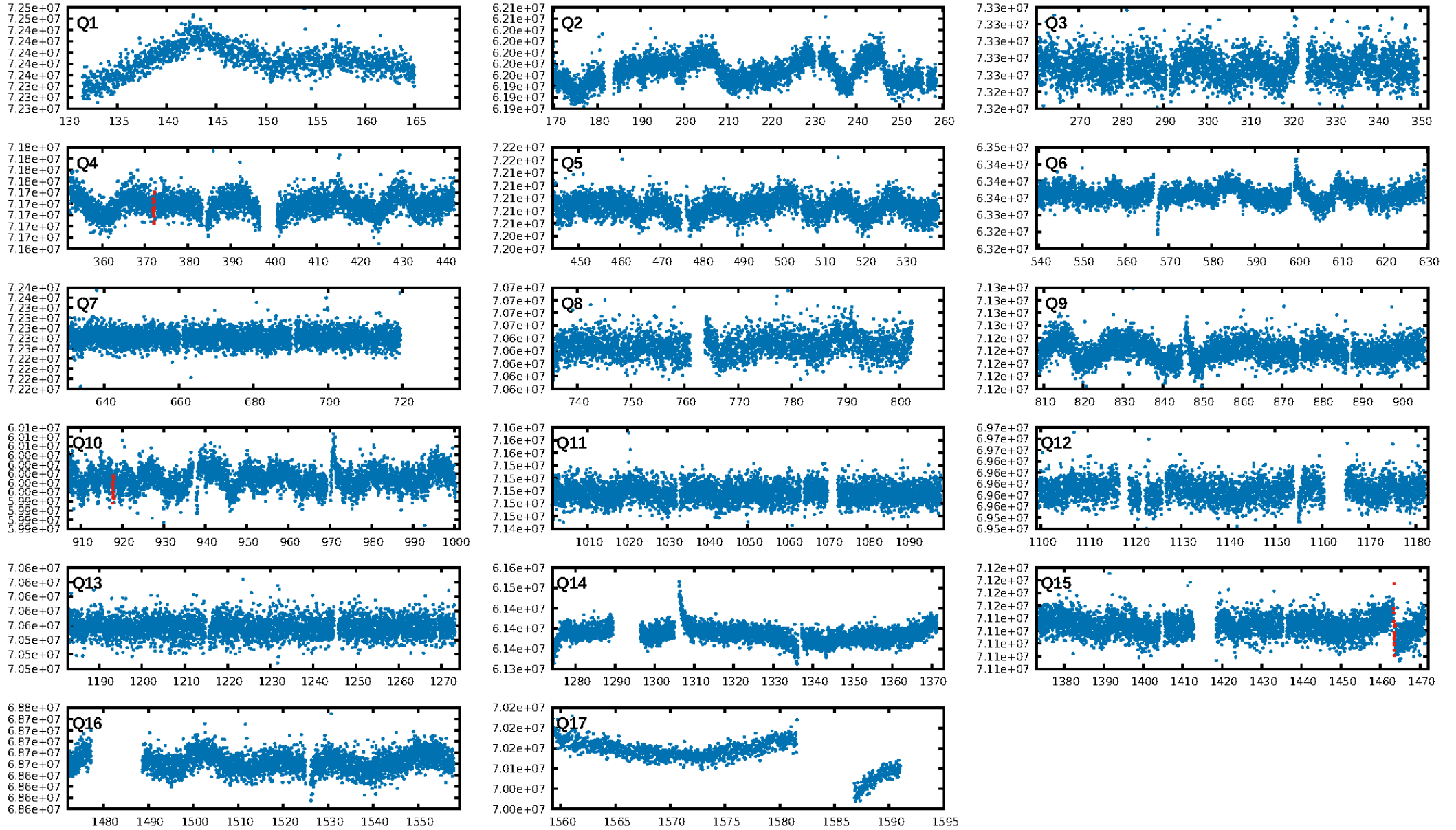
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.2%
ModelChiSquareGoF-sig: 97.7%
Bootstrap-pfa: 4.93e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19.95
Centroid-sig: 3.6%
Centroid-so: 1.649 arcsec [1.02σ]
OotOffset-rm: 3.169 arcsec [4.58σ]
KicOffset-rm: 3.064 arcsec [4.79σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

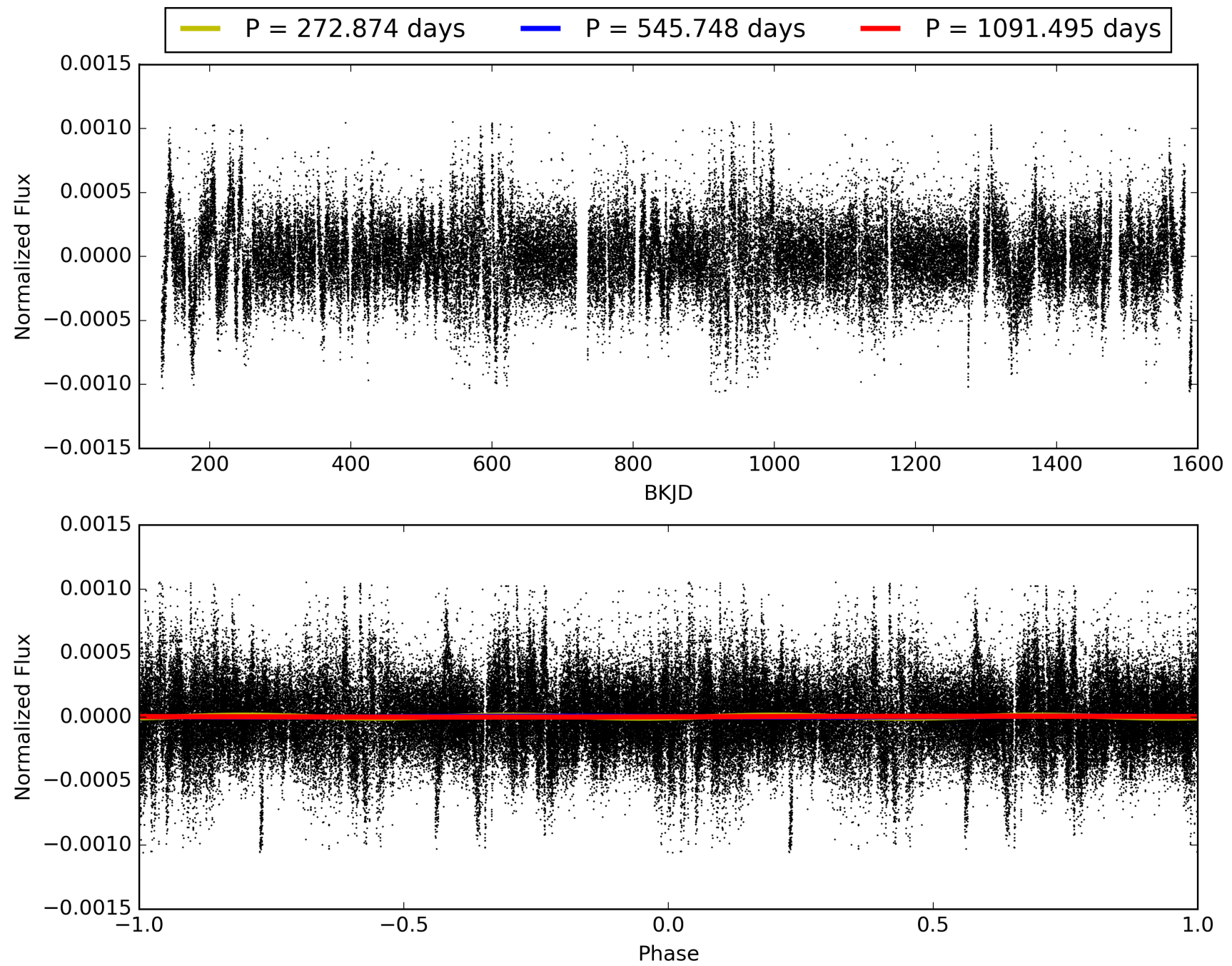
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:20:41 Z

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

TCE 008906913-01, PDC Light Curves

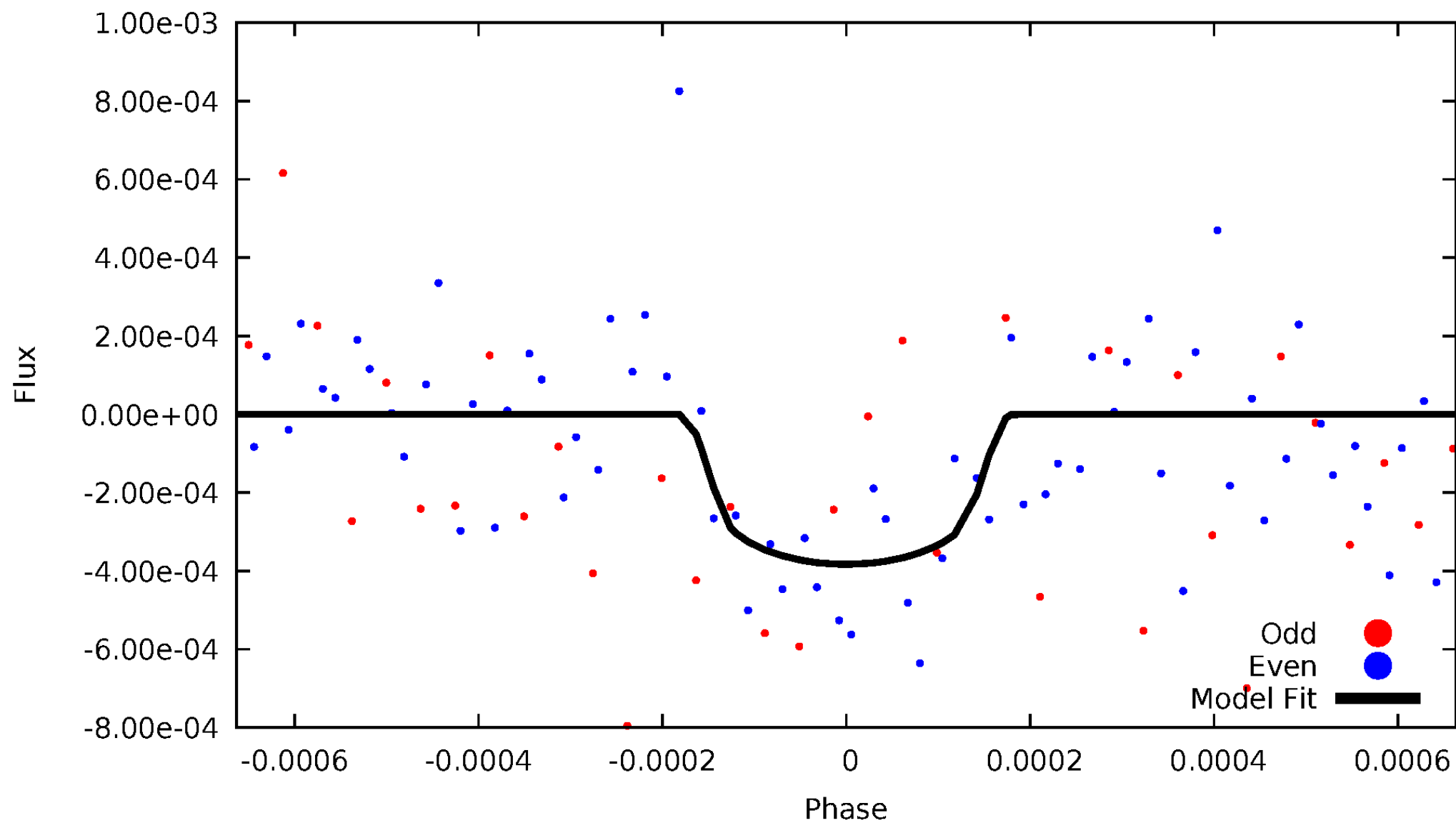


TCE 008906913-01



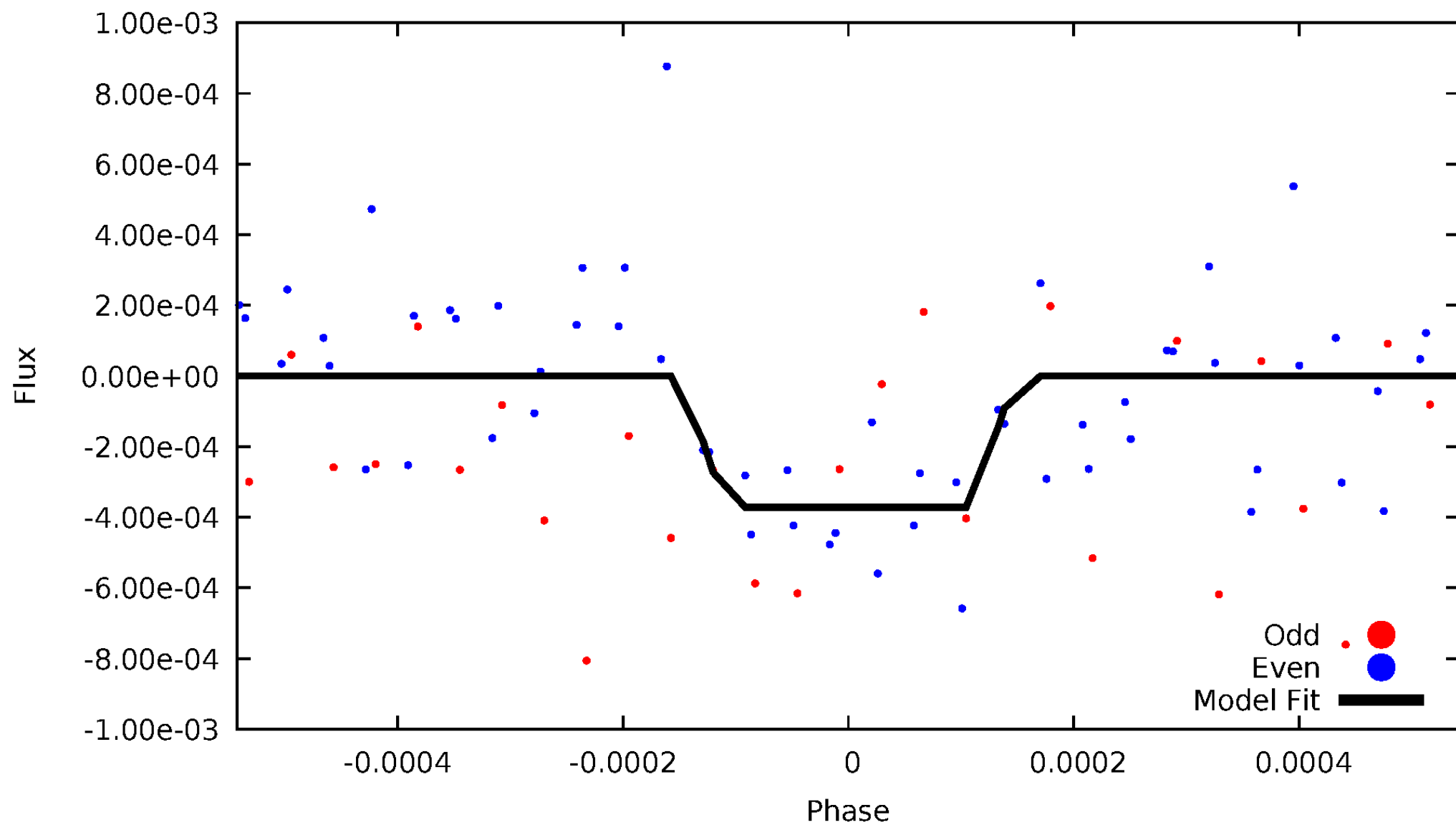
DV Odd/Even

TCE 008906913-01



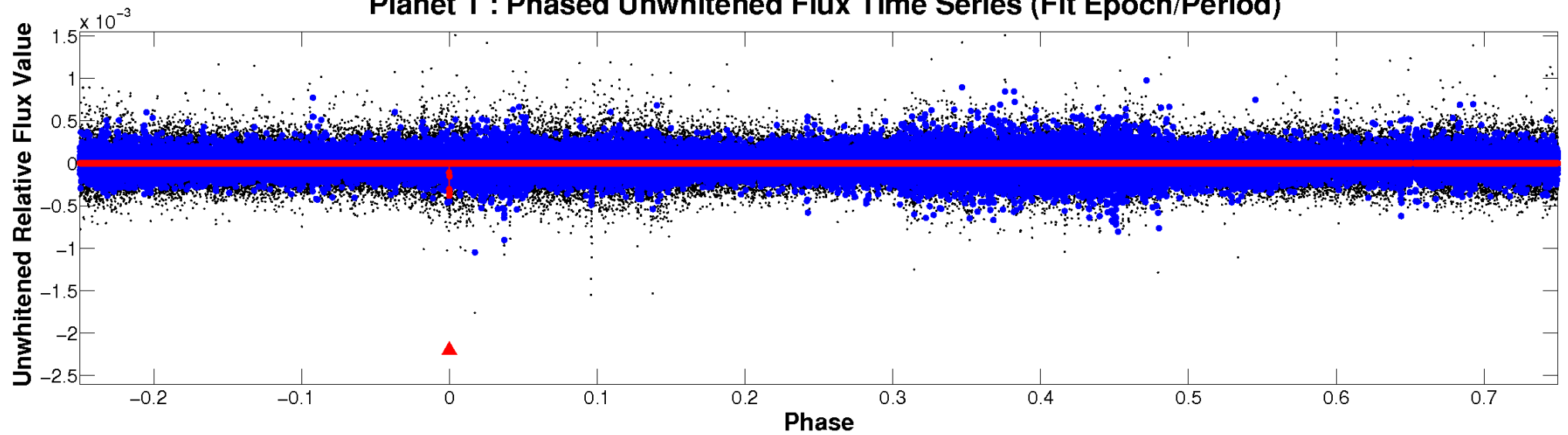
ALT Odd/Even

TCE 008906913-01

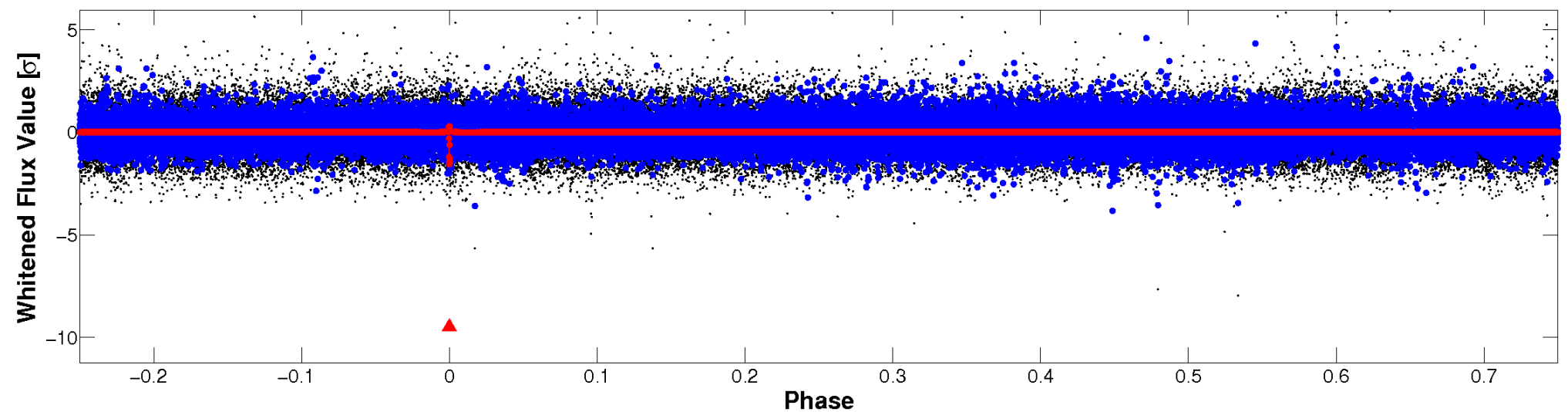


Non-Whitened Vs. Whitened Light Curve

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

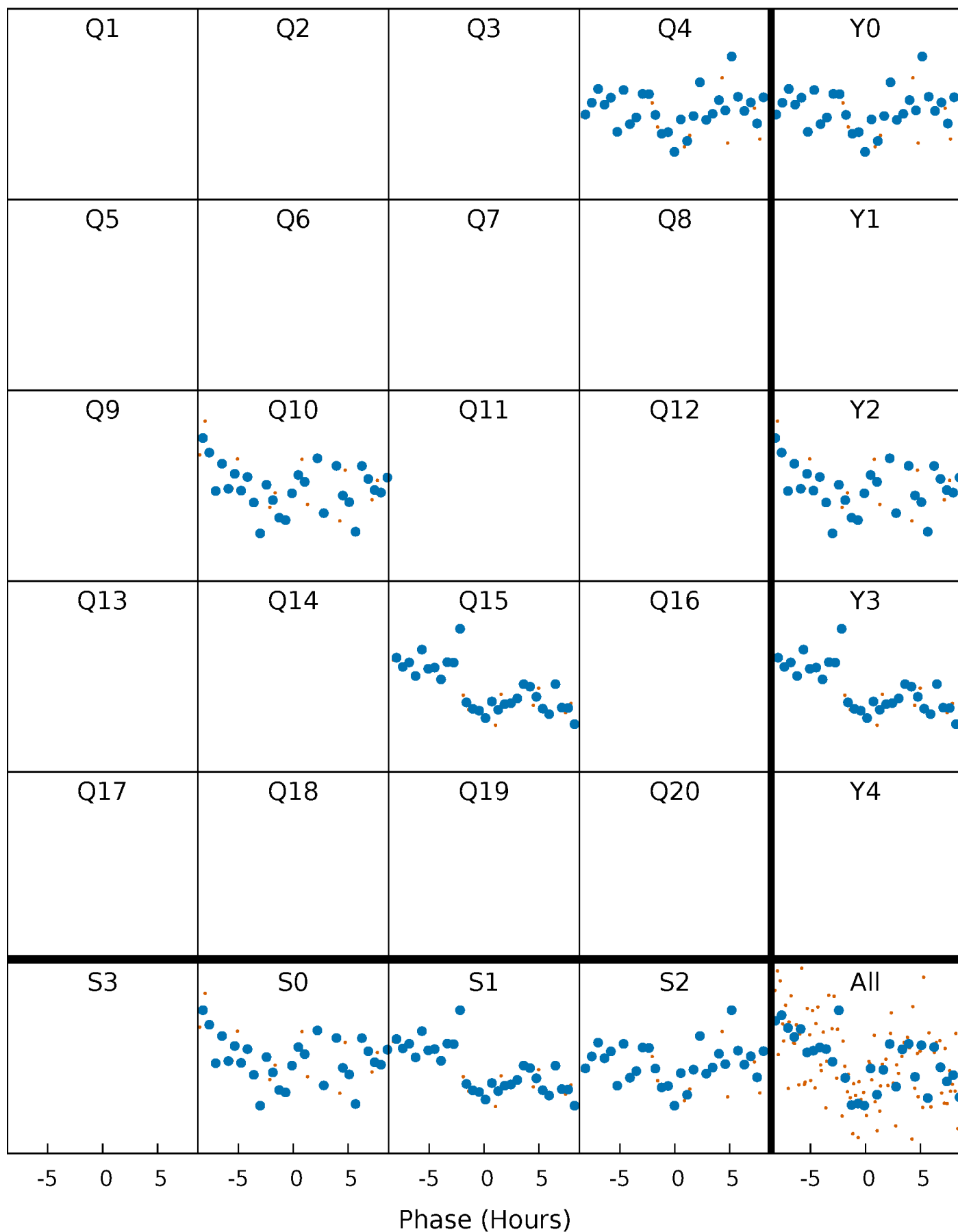


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



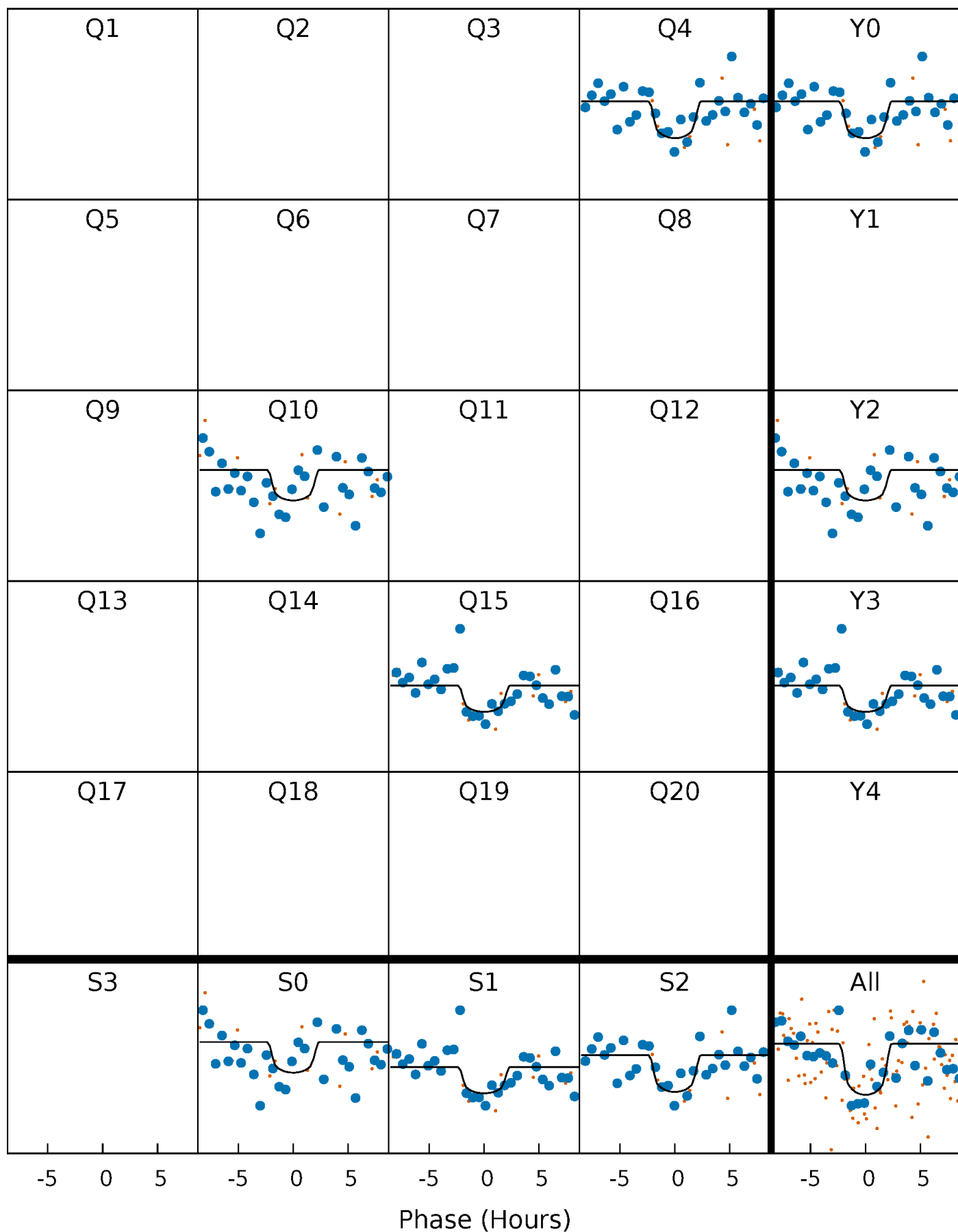
PDC Quarter-Phased Transit Curves

TCE 008906913-01 P=545.747527 Days $T_0=372.017428$ (BKJD)



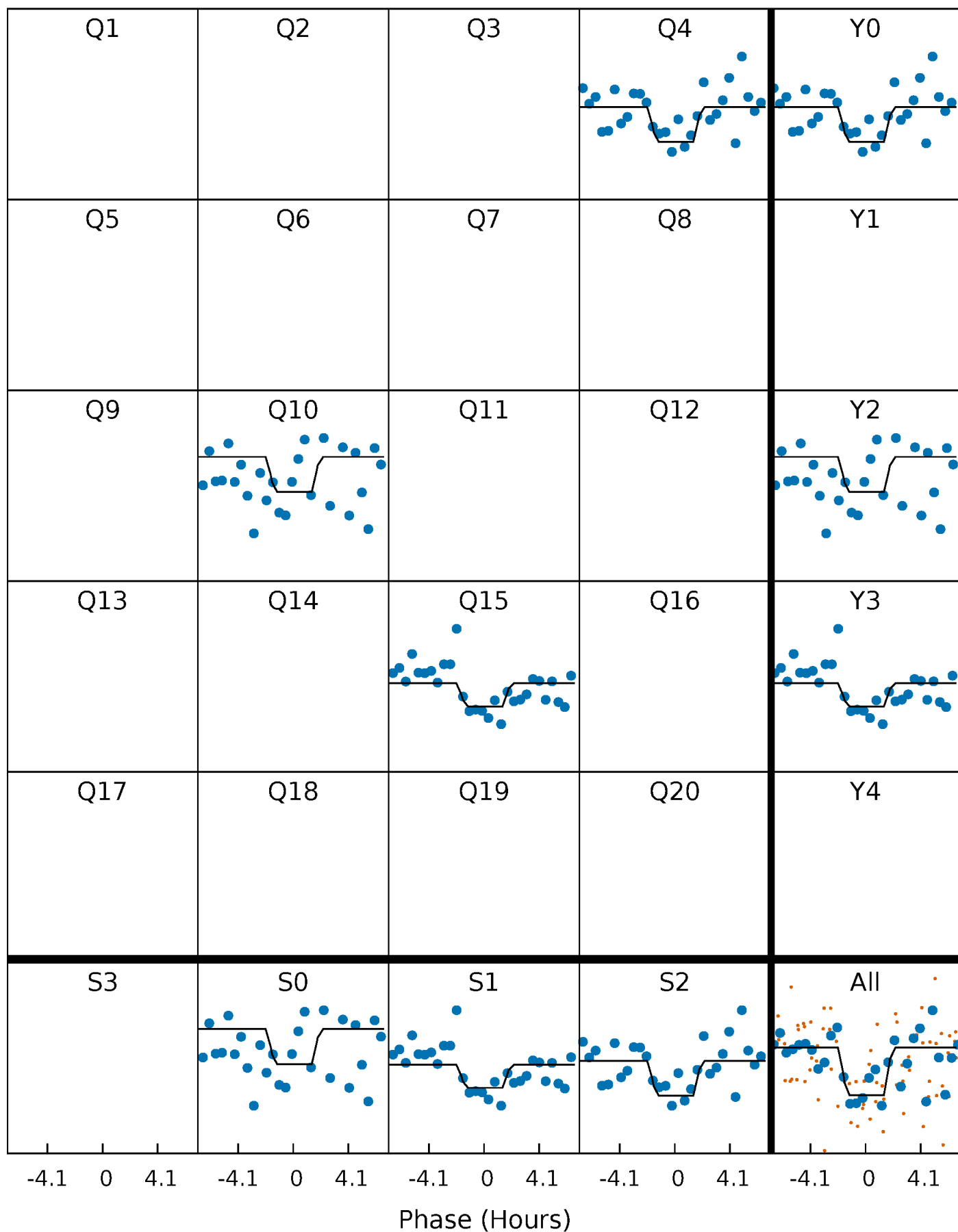
DV Quarter-Phased Transit Curves

TCE 008906913-01 P=545.747527 Days $T_0=372.017428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

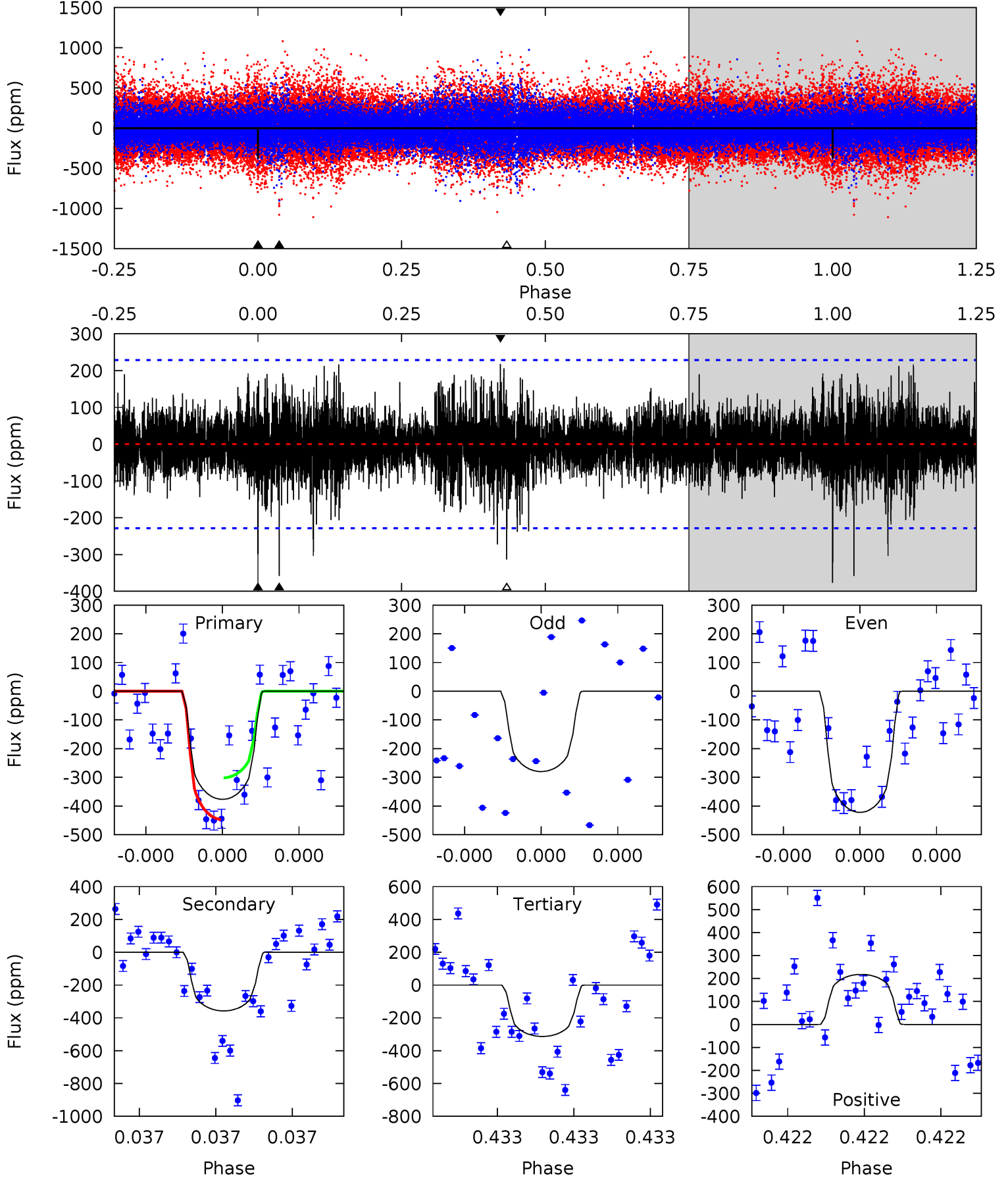
TCE 008906913-01 P=545.739521 Days $T_0=372.022216$ (BKJD)



DV Model-Shift Uniqueness Test

008906913-01, P = 545.747527 Days, E = 372.017428 Days

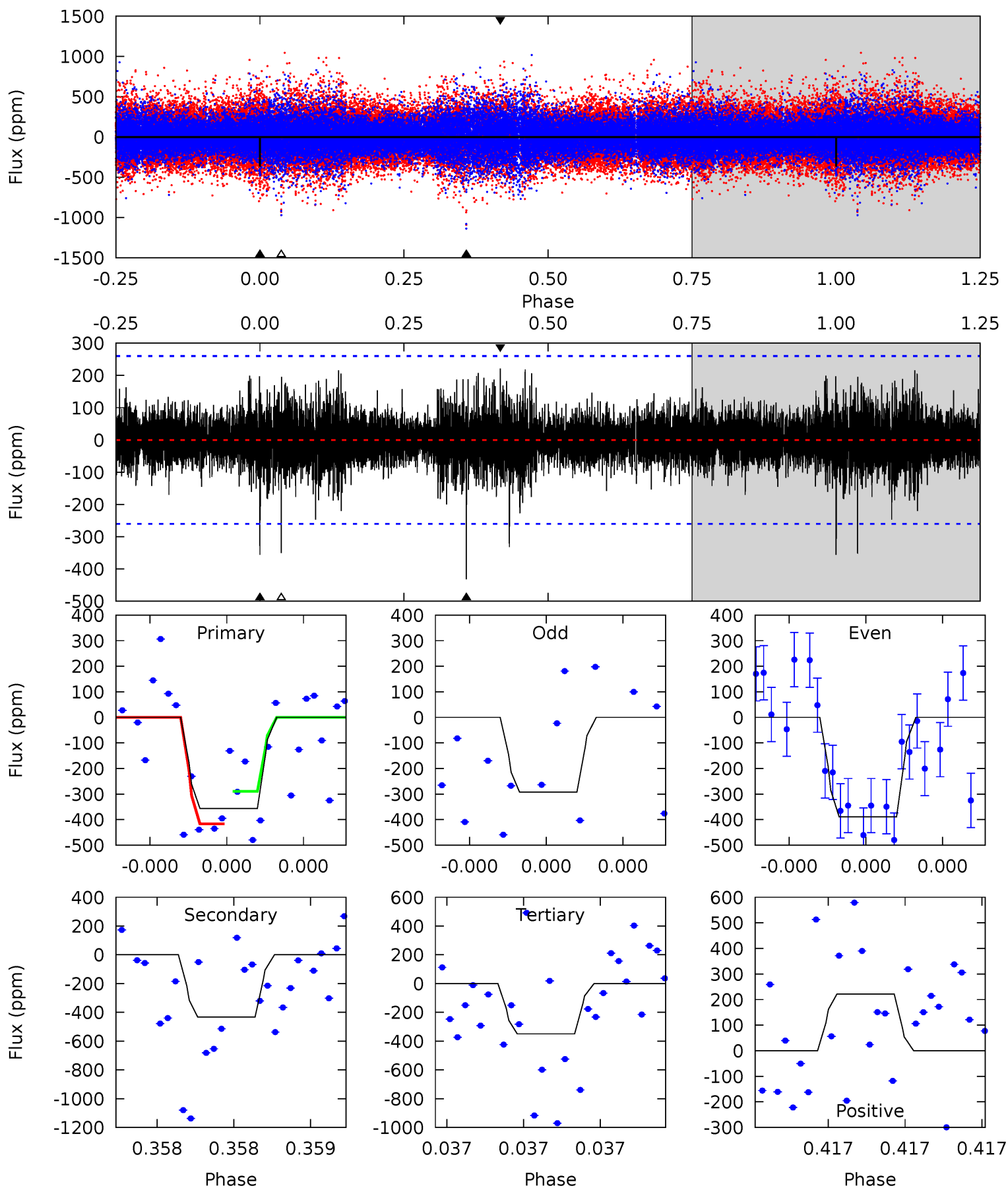
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.30	8.83	7.73	5.38	5.64	3.58	1.31	1.57	3.92	1.10	3.45	1.56	1.00	0.37	1.79



Alt Model-Shift Uniqueness Test

008906913-01, P = 545.739521 Days, E = 372.022216 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.78	9.44	7.64	4.83	5.68	3.65	1.11	0.13	2.95	1.80	4.61	0.98	1.13	0.34	1.39



Stellar Parameters For KIC 008906913

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5267^{+175}_{-159}	$3.970^{+0.517}_{-0.172}$	$0.460^{+0.050}_{-0.250}$	$1.788^{+0.498}_{-0.853}$	$1.088^{+0.141}_{-0.188}$	$0.268^{+1.529}_{-0.128}$
	+3%/-3%	+13%/-4%	+11%/-54%	+28%/-48%	+13%/-17%	+571%/-48%
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 008906913-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-358 ± 41	$4.74^{+4.77}_{-3.14}$	369^{+33}_{-51}	4538^{+2786}_{-923}	$15022^{+127252}_{-11129}$
Alt.	-432 ± 46	$5.06^{+4.29}_{-3.39}$	368^{+34}_{-48}	4650^{+3107}_{-886}	$16612^{+148455}_{-11801}$

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

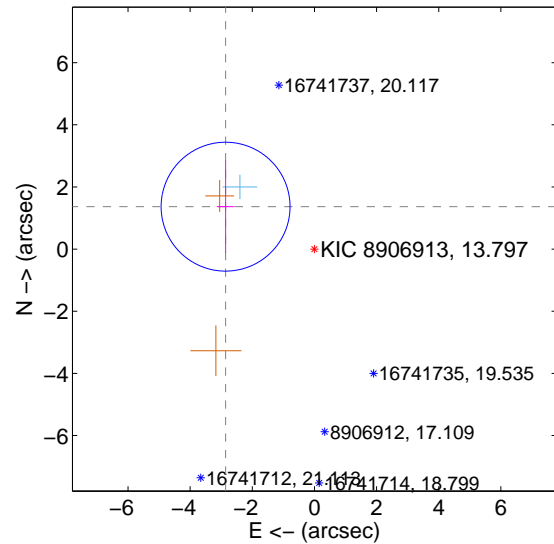
Supplemental centroid analysis for 008906913-01. Kepler magnitude: 13.80. Transit SNR 6.93

There are 1 quarters with good PRF difference image offsets

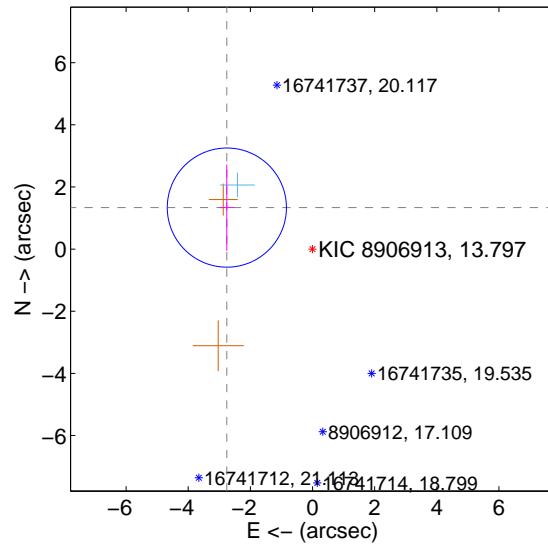
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.169 \pm 0.692	4.58	2.860 \pm 0.284	1.366 \pm 1.490
PRF-fit source offset from KIC position	3.064 \pm 0.639	4.79	2.757 \pm 0.229	1.336 \pm 1.388
photometric centroid source offset	1.65 \pm 1.61	1.02	0.72 \pm 1.51	-1.48 \pm 1.64

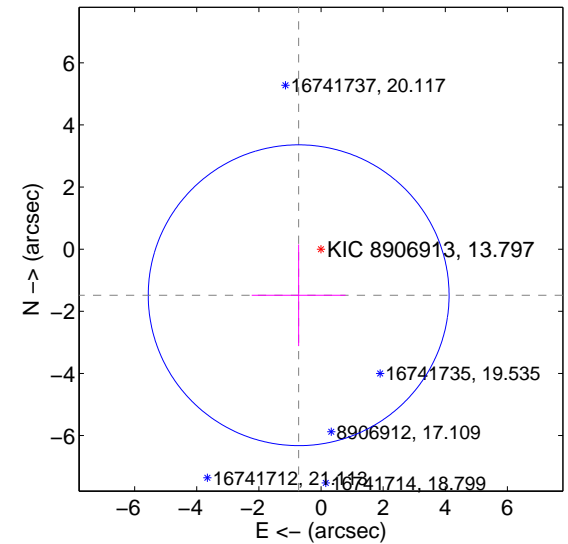
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

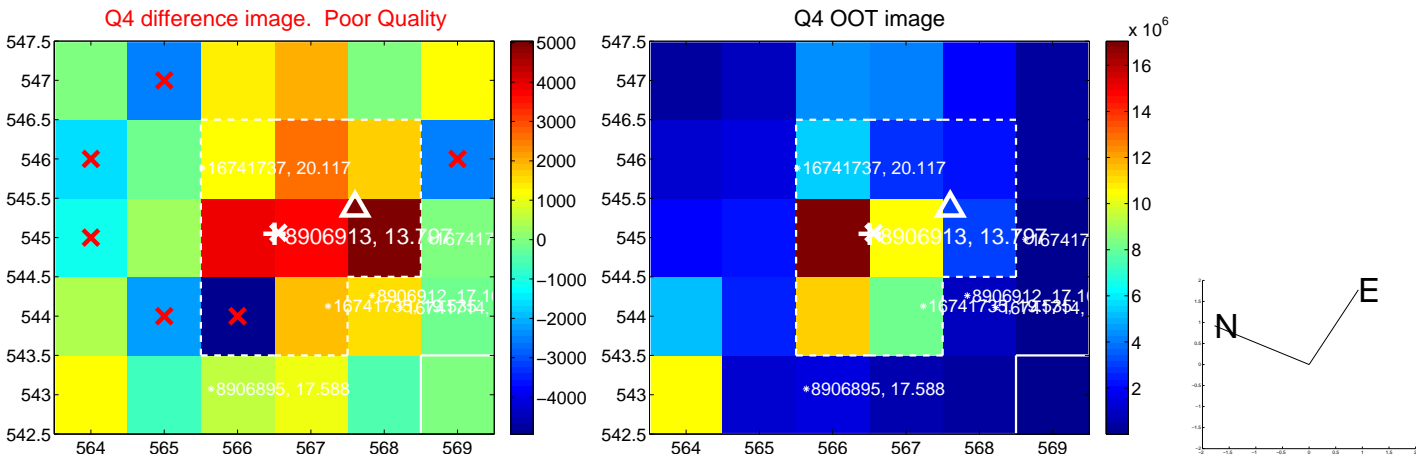
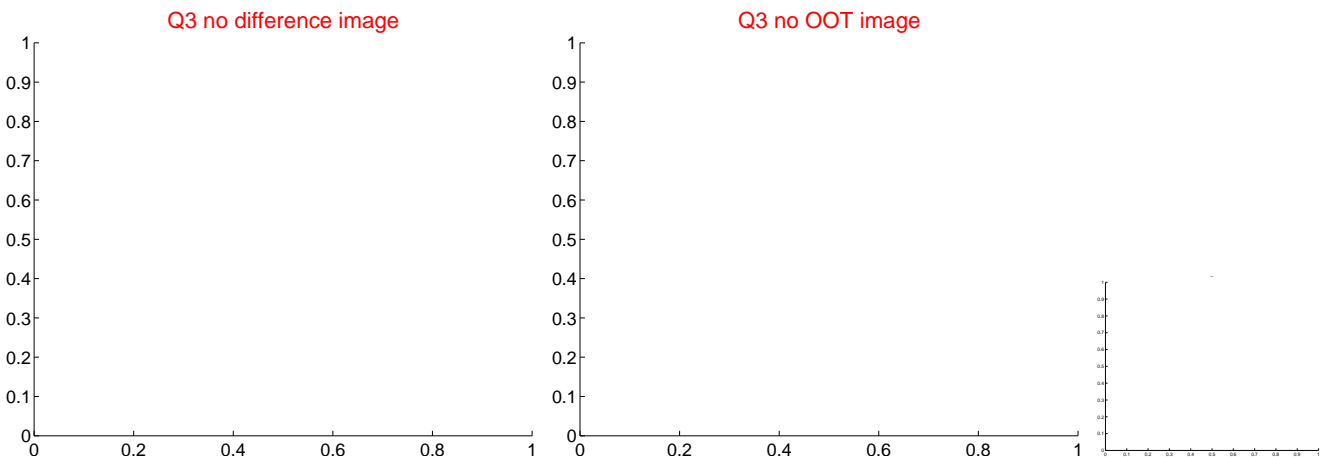
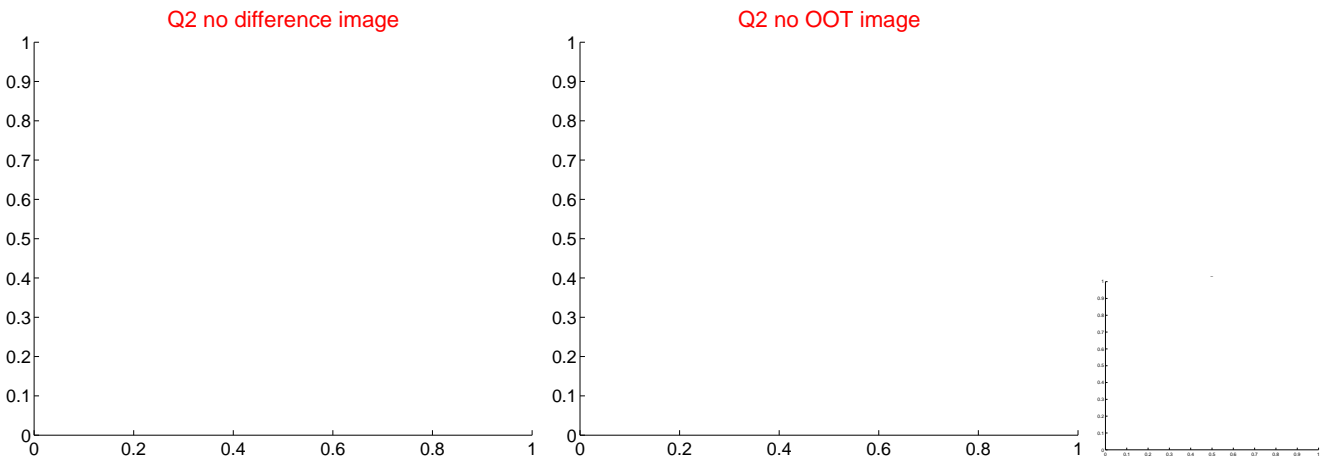
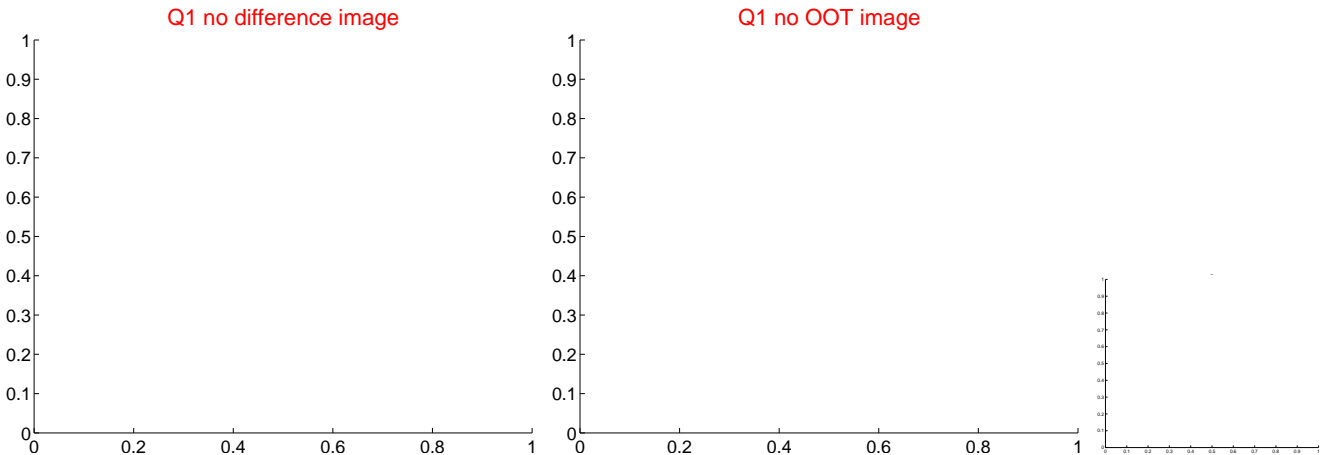


offset from photometric centroids



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.

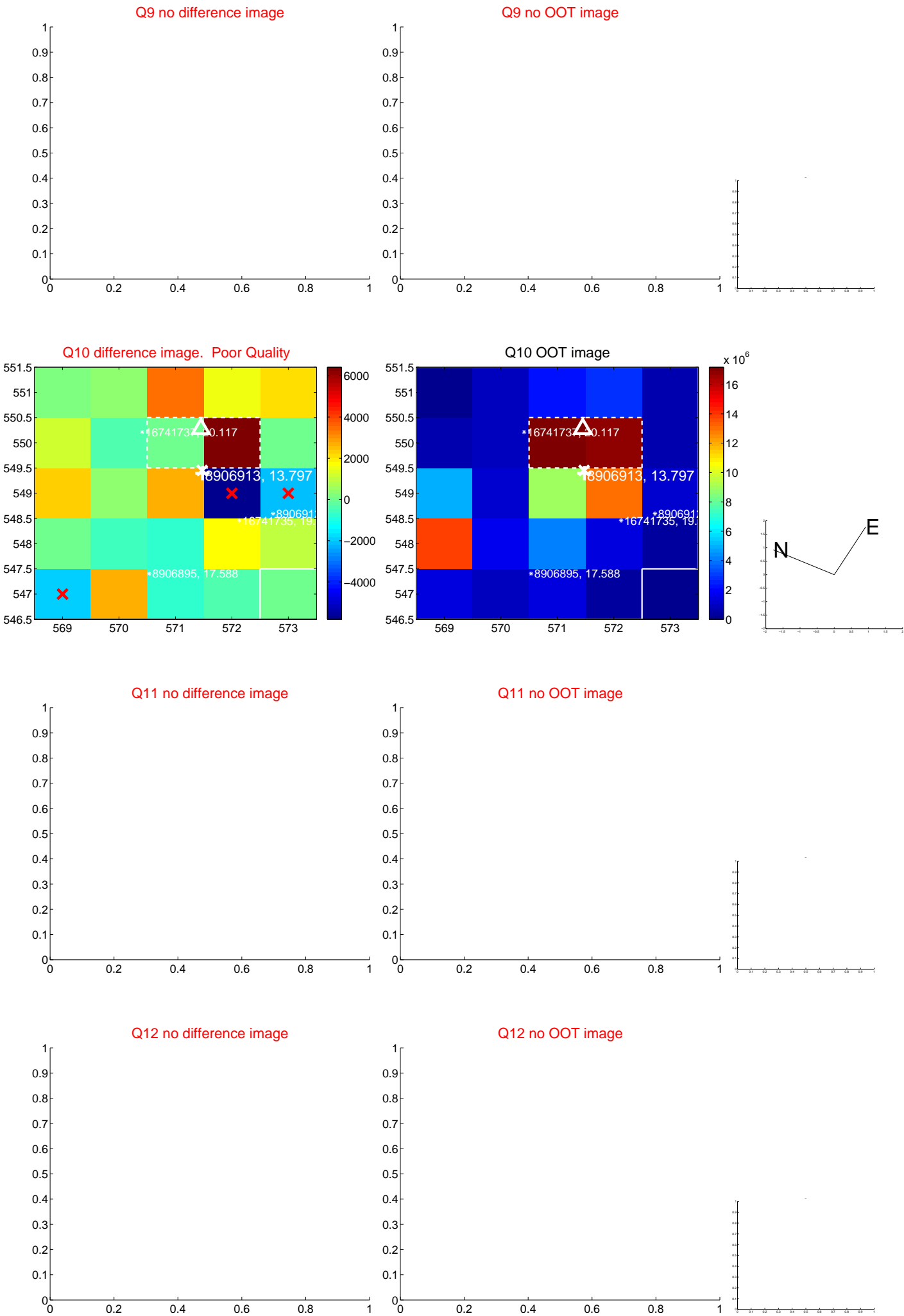
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



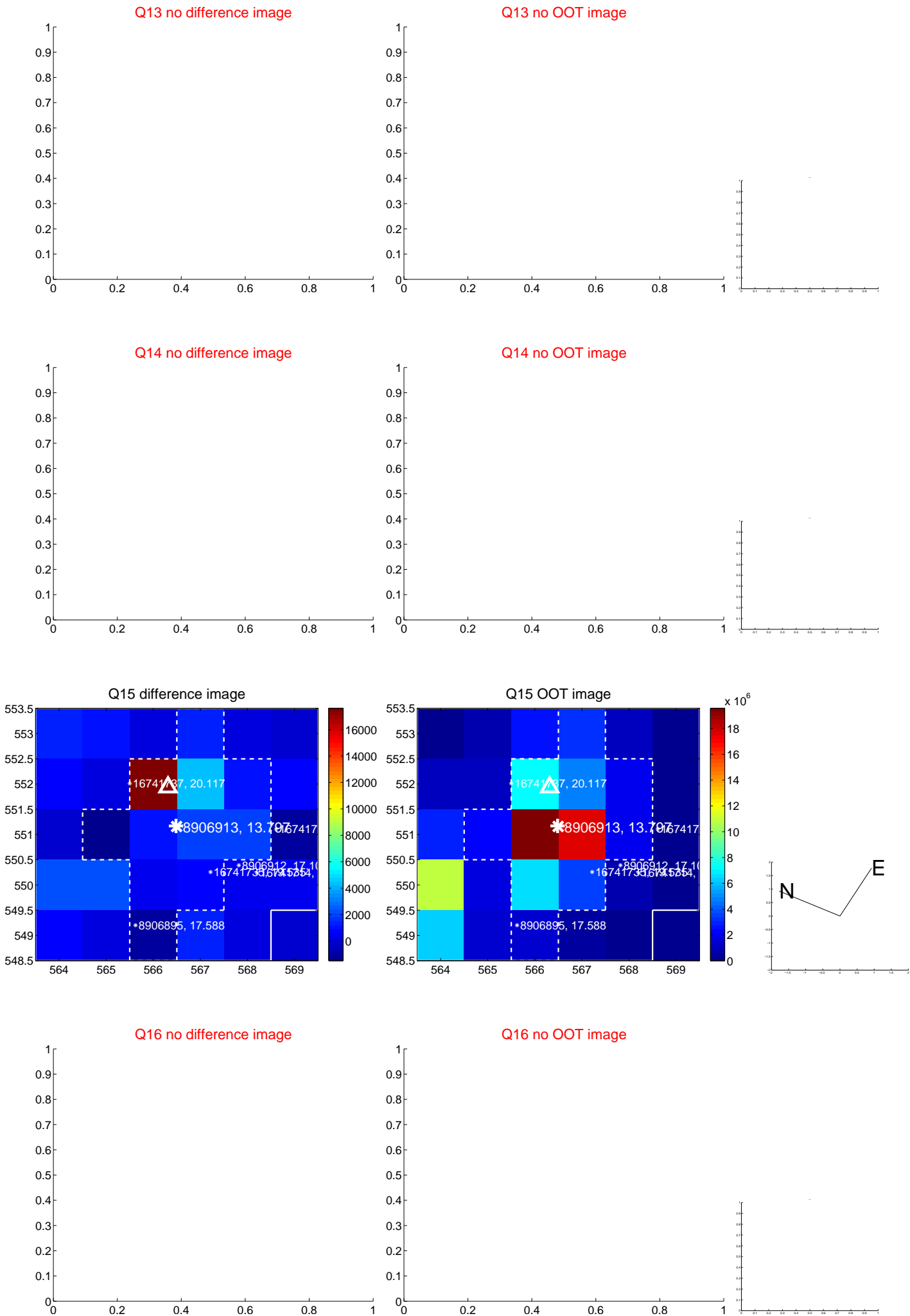
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



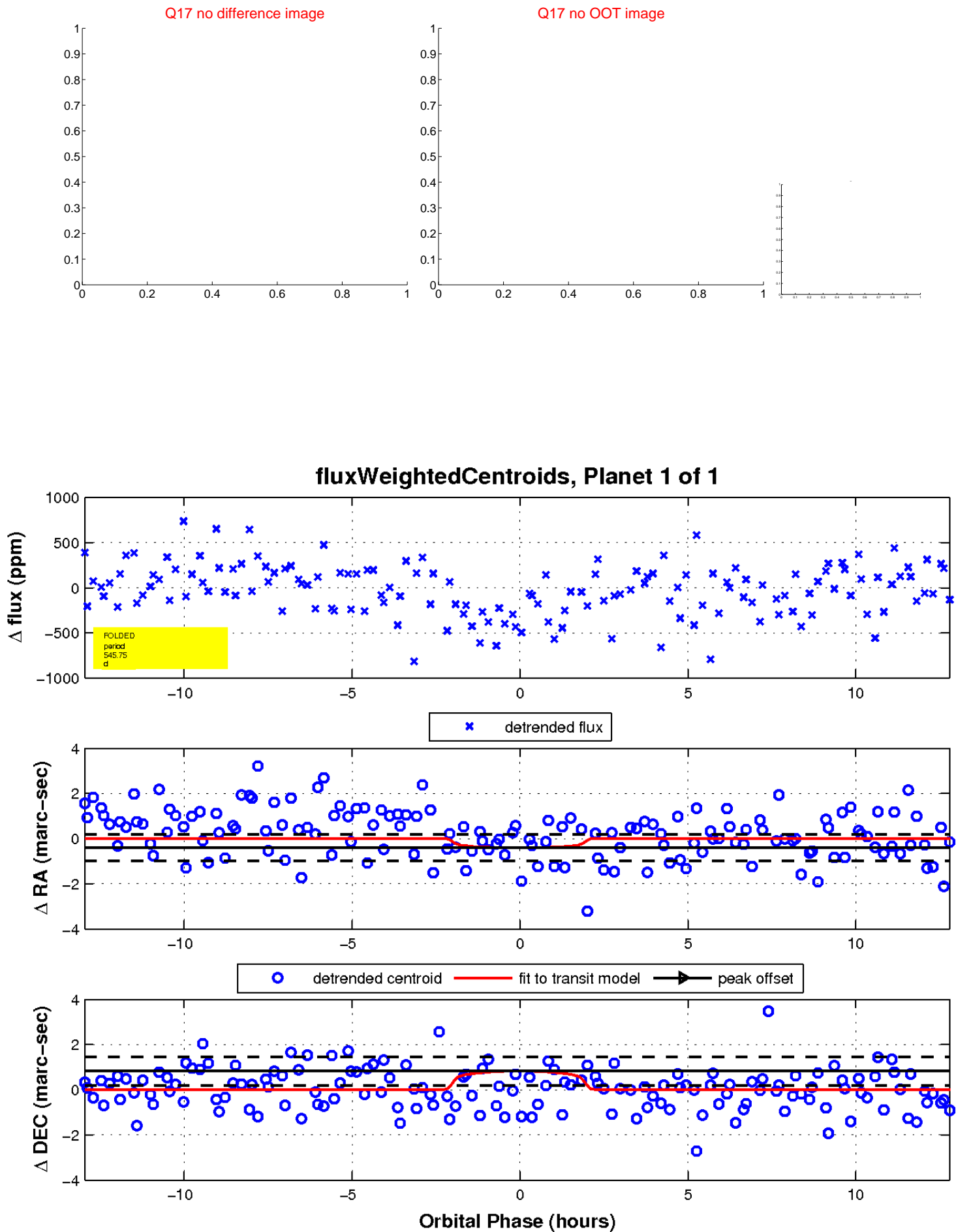
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

