

KIC 008644545

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})
008644545-01	OBS	5552.01	295.958144	138.926494	421.4	4.420	13.1	14.0	0.99	5505	2.38	1.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008644545-01	OBS	PC	0.91	0	0	0	0	CENT_KIC_POS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

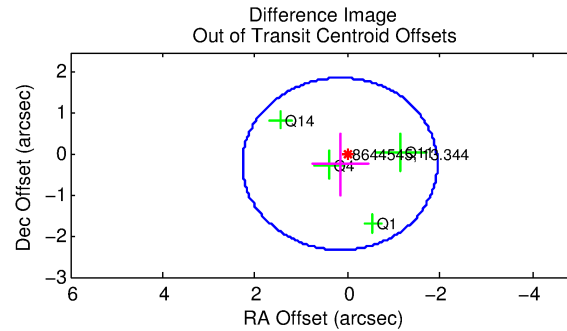
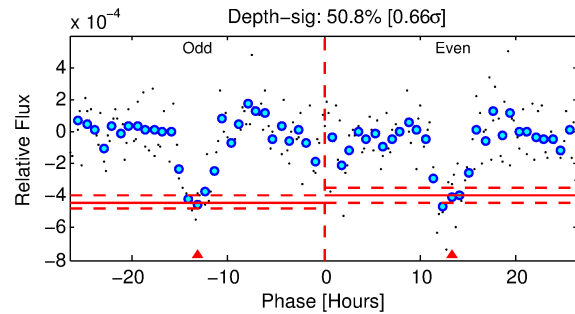
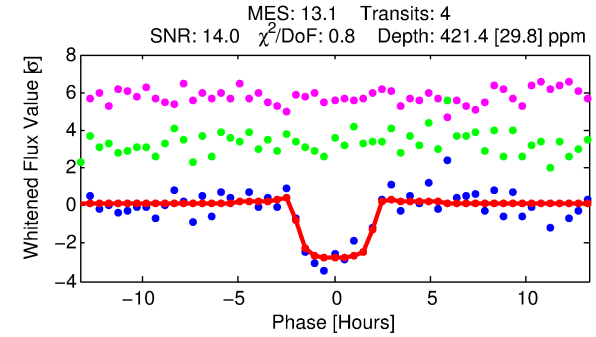
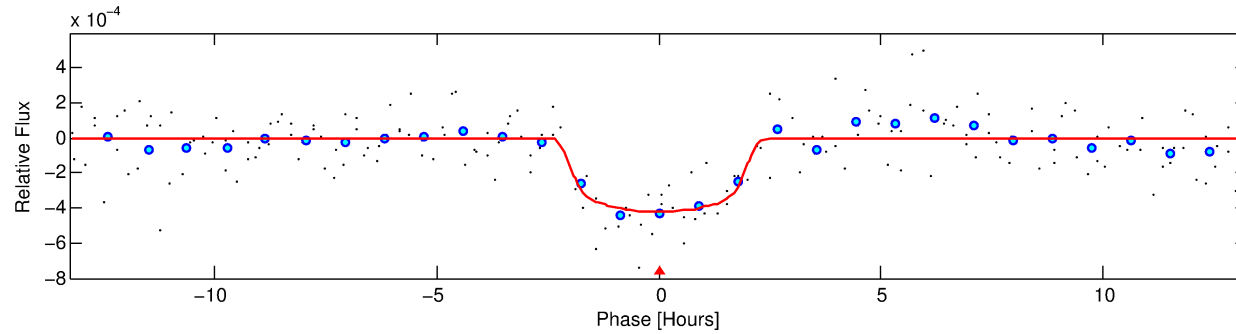
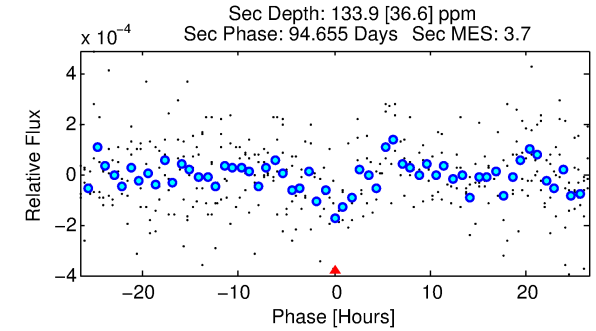
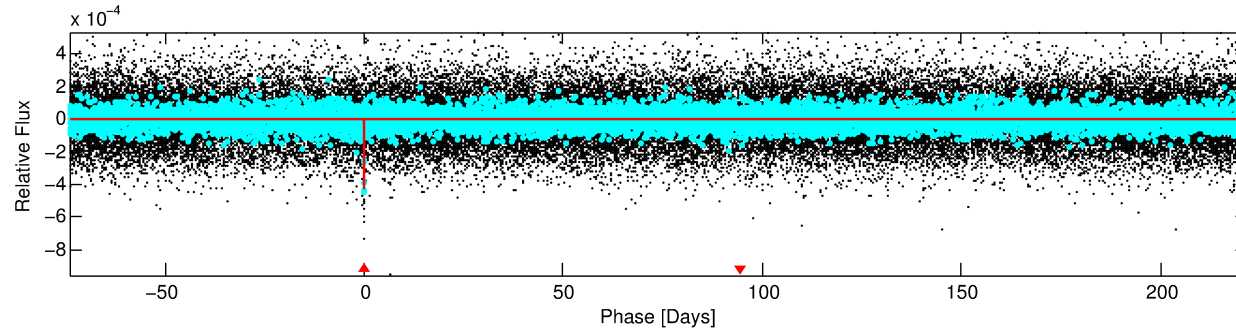
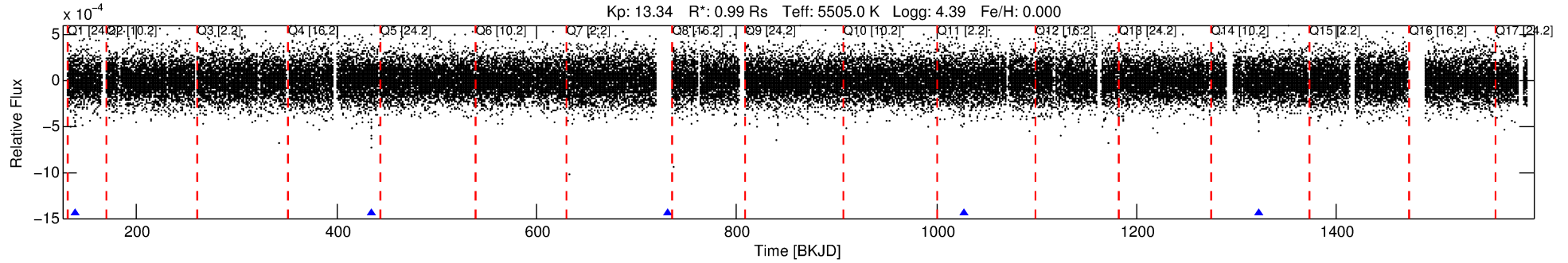
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008644545-01

No Significant Match Found

DV One-Page Summary

KIC: 8644545 Candidate: 1 of 1 Period: 295.958 d
KOI: K05552.01 Corr: 0.991



DV Fit Results:

Period = 295.95814 [0.00202] d
Epoch = 138.9265 [0.0045] BKJD
Rp/R* = 0.0220 [0.0069]
a/R* = 270.18 [365.94]
b = 0.87 [0.37]
Seff = 1.17 [0.26]
Teq = 265 [15] K
Rp = 2.38 [0.81] Re
a = 0.8309 [0.1064] AU
Ag = 8948.25 [6423.45] [1.39σ]
Teffp = 3990 [689] K [5.40σ]

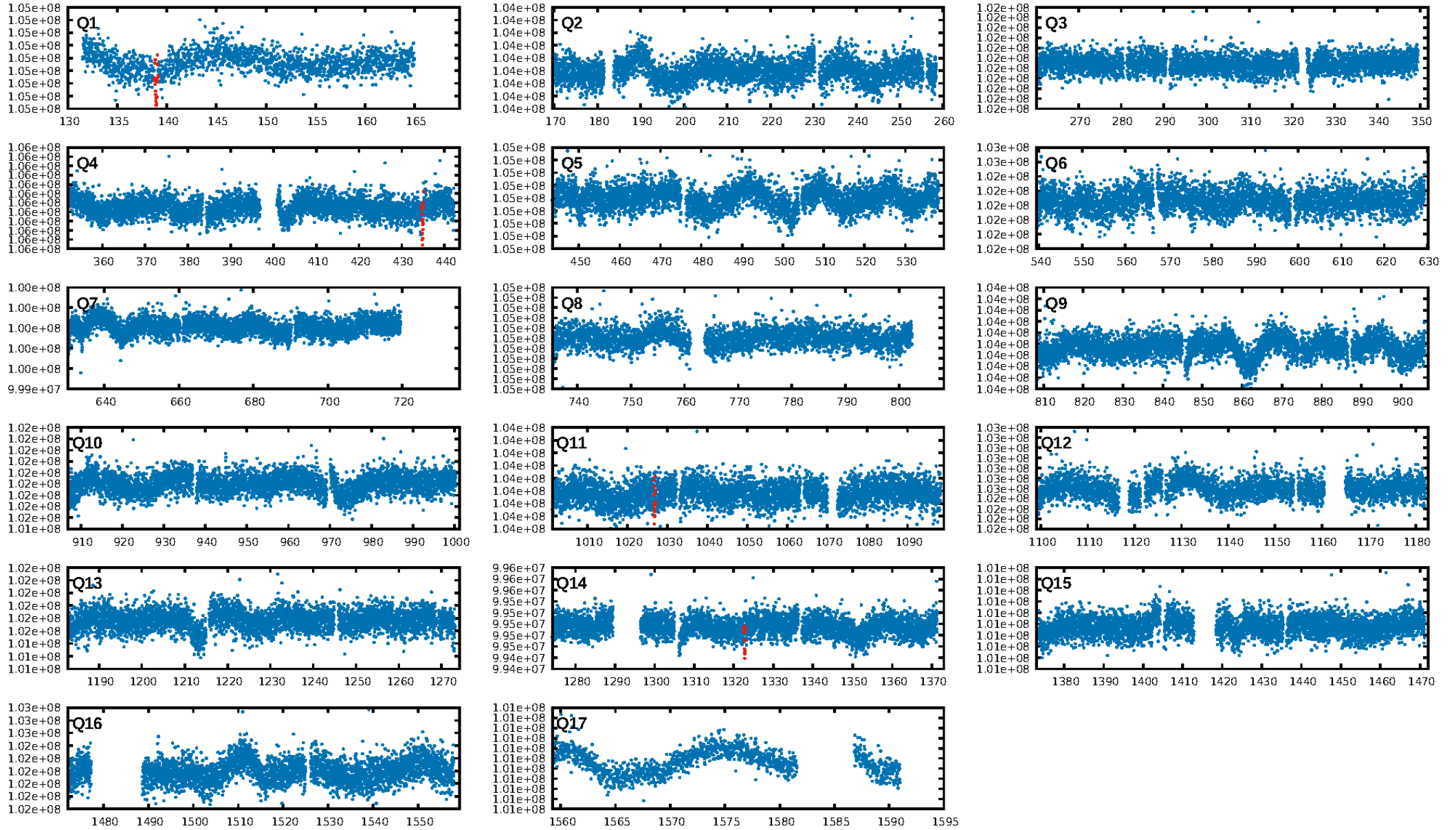
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.71e-38
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -19
Centroid-sig: 0.2%
Centroid-so: 1.879 arcsec [1.88σ]
OotOffset-rm: 0.288 arcsec [0.41σ]
KicOffset-rm: 0.380 arcsec [0.47σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

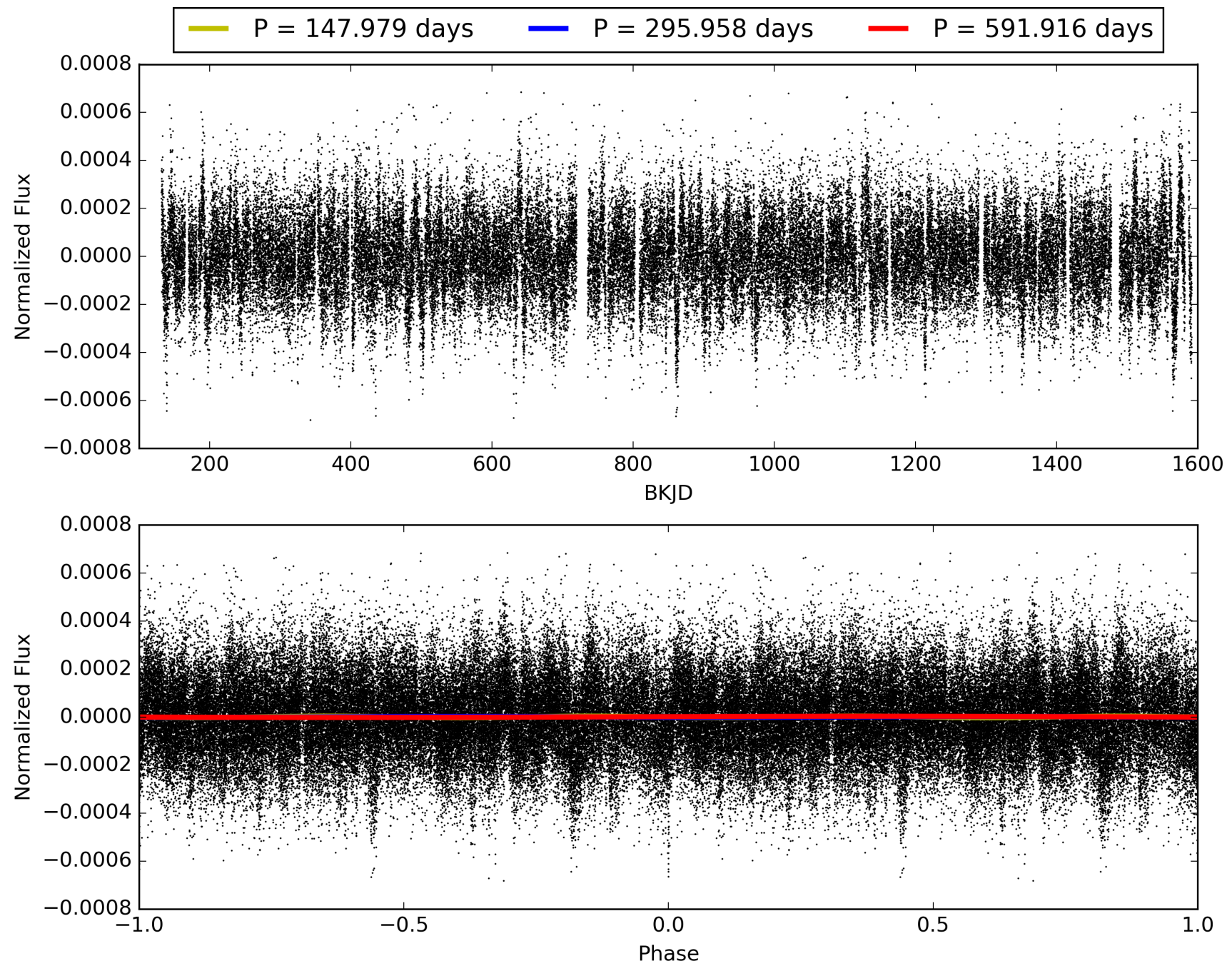
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:16:53 Z

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

TCE 008644545-01, PDC Light Curves

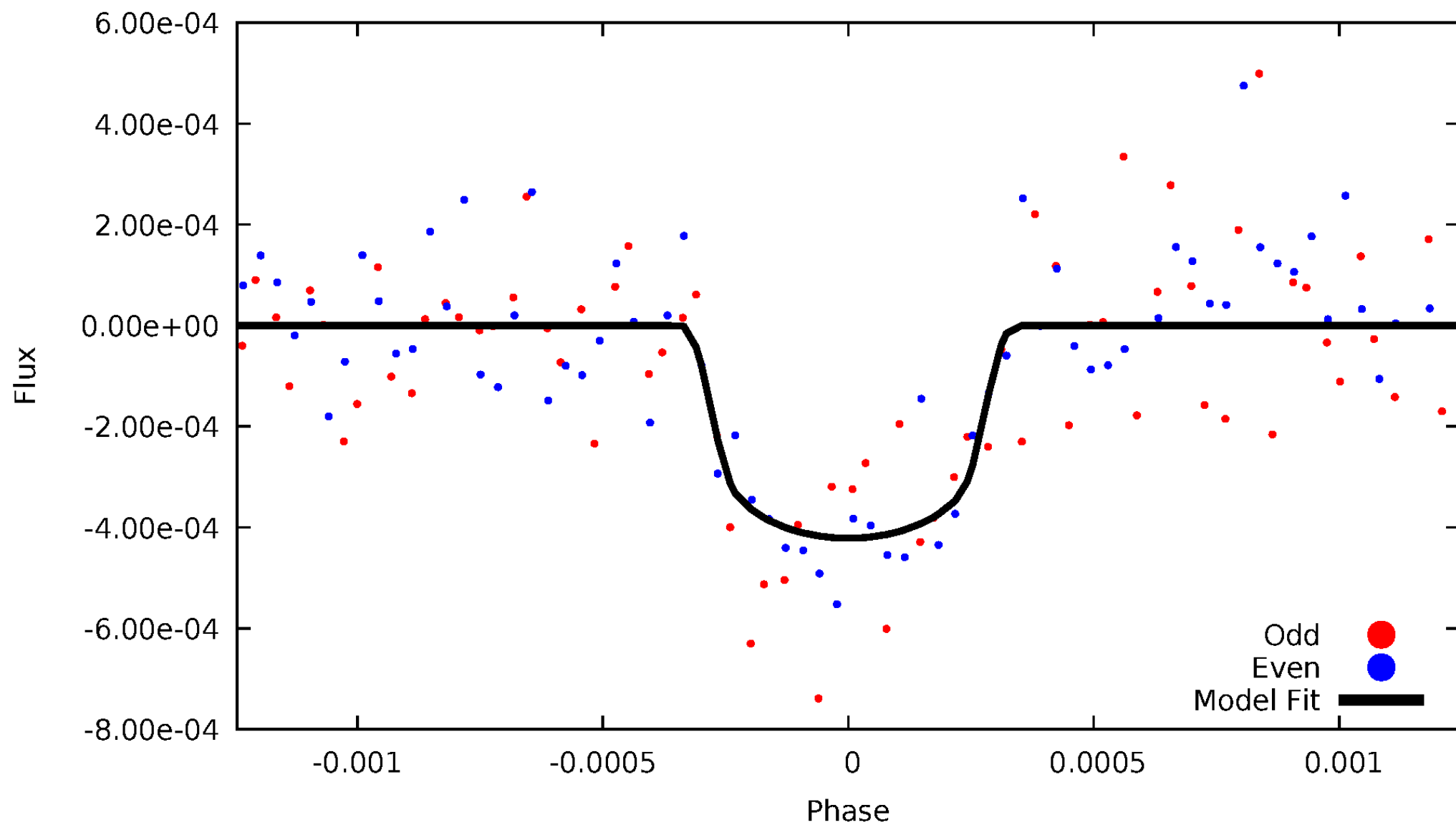


TCE 008644545-01



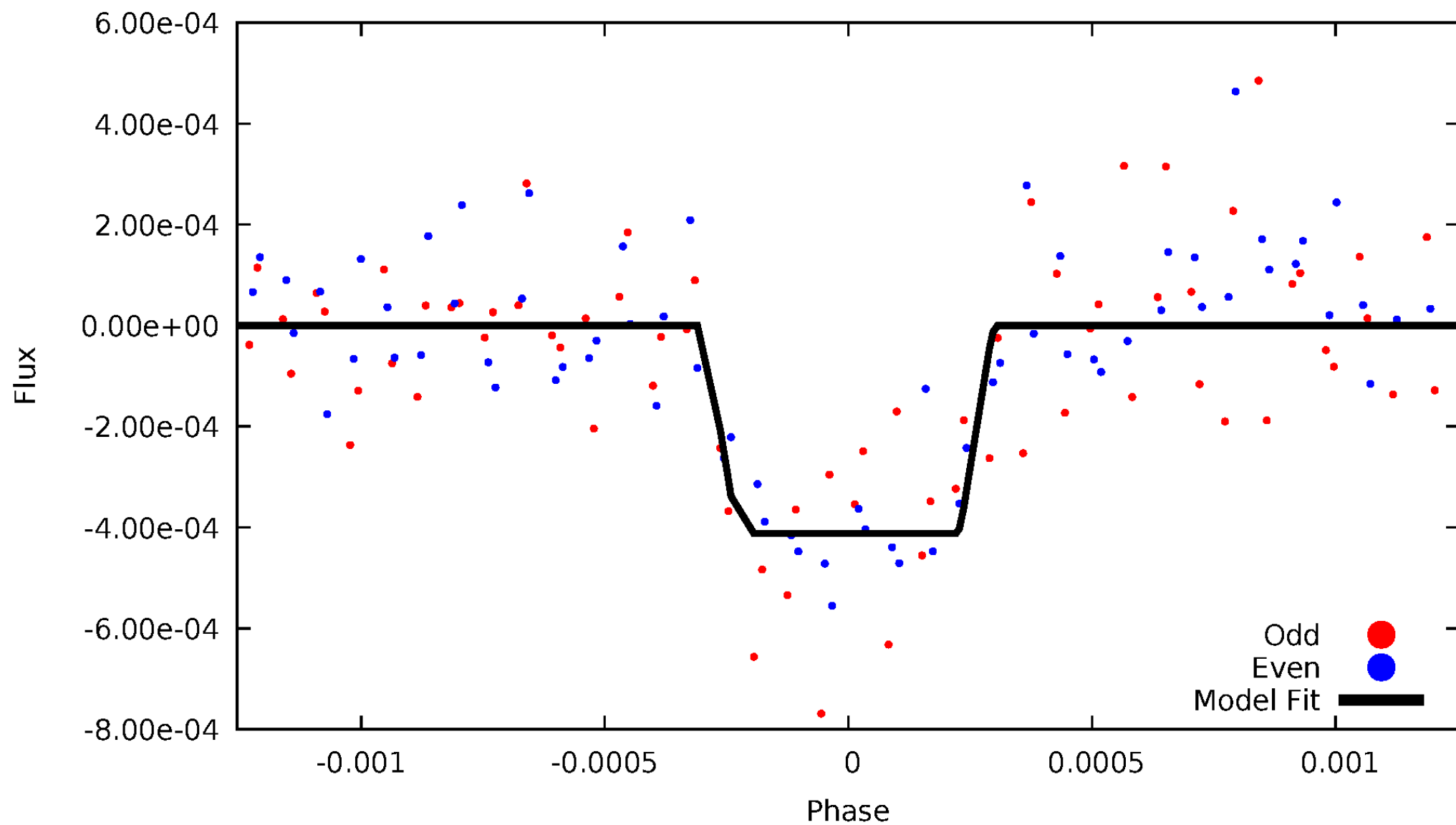
DV Odd/Even

TCE 008644545-01

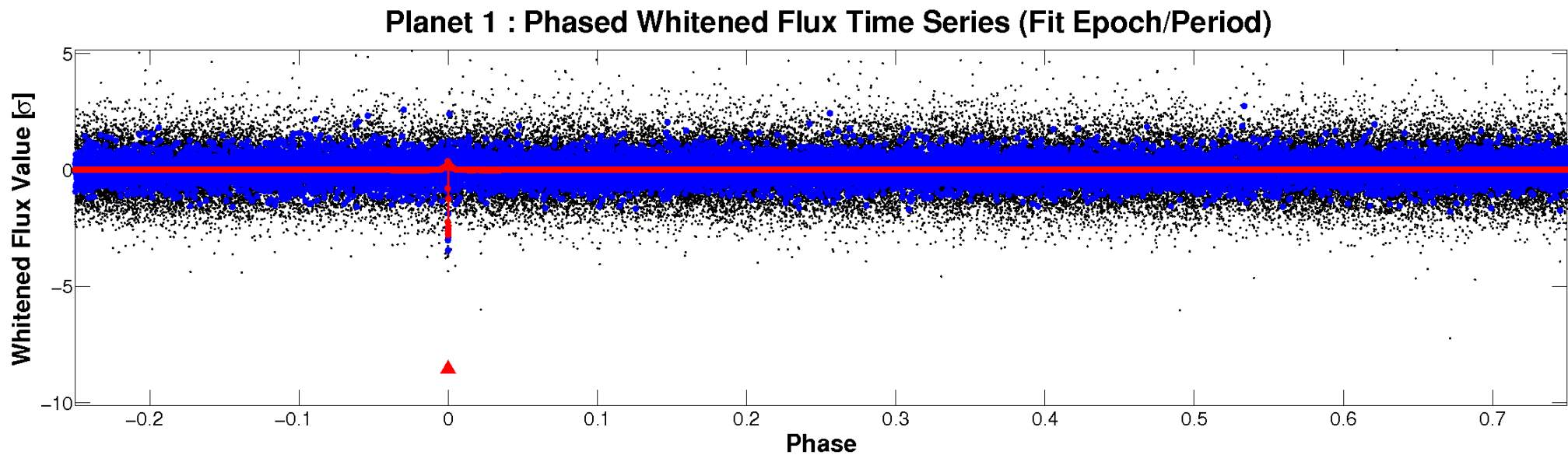
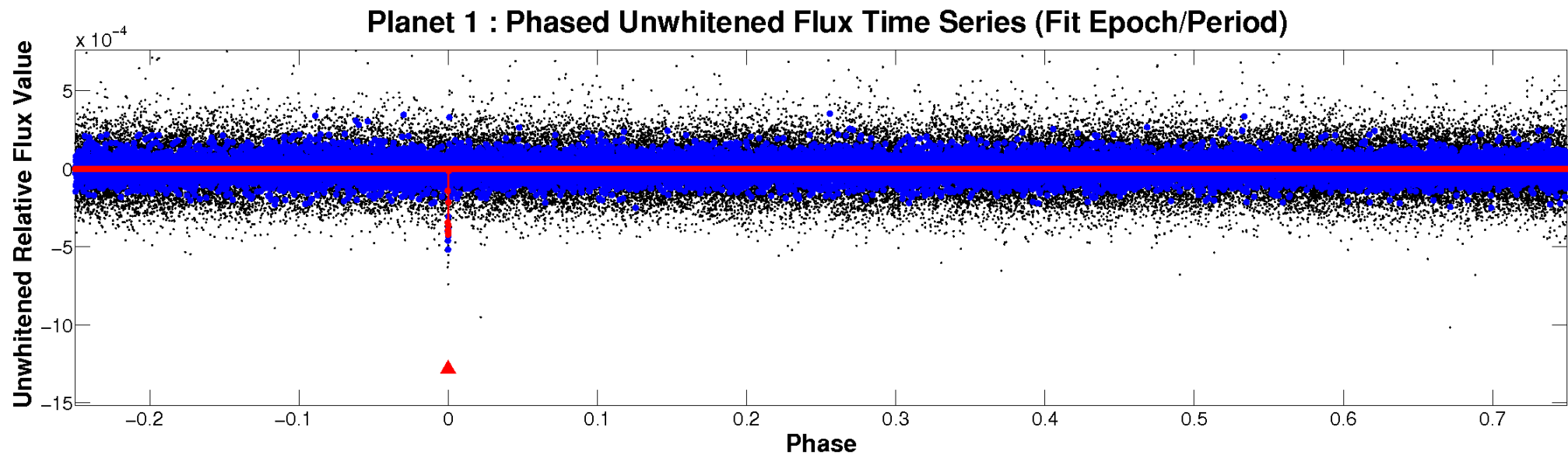


ALT Odd/Even

TCE 008644545-01

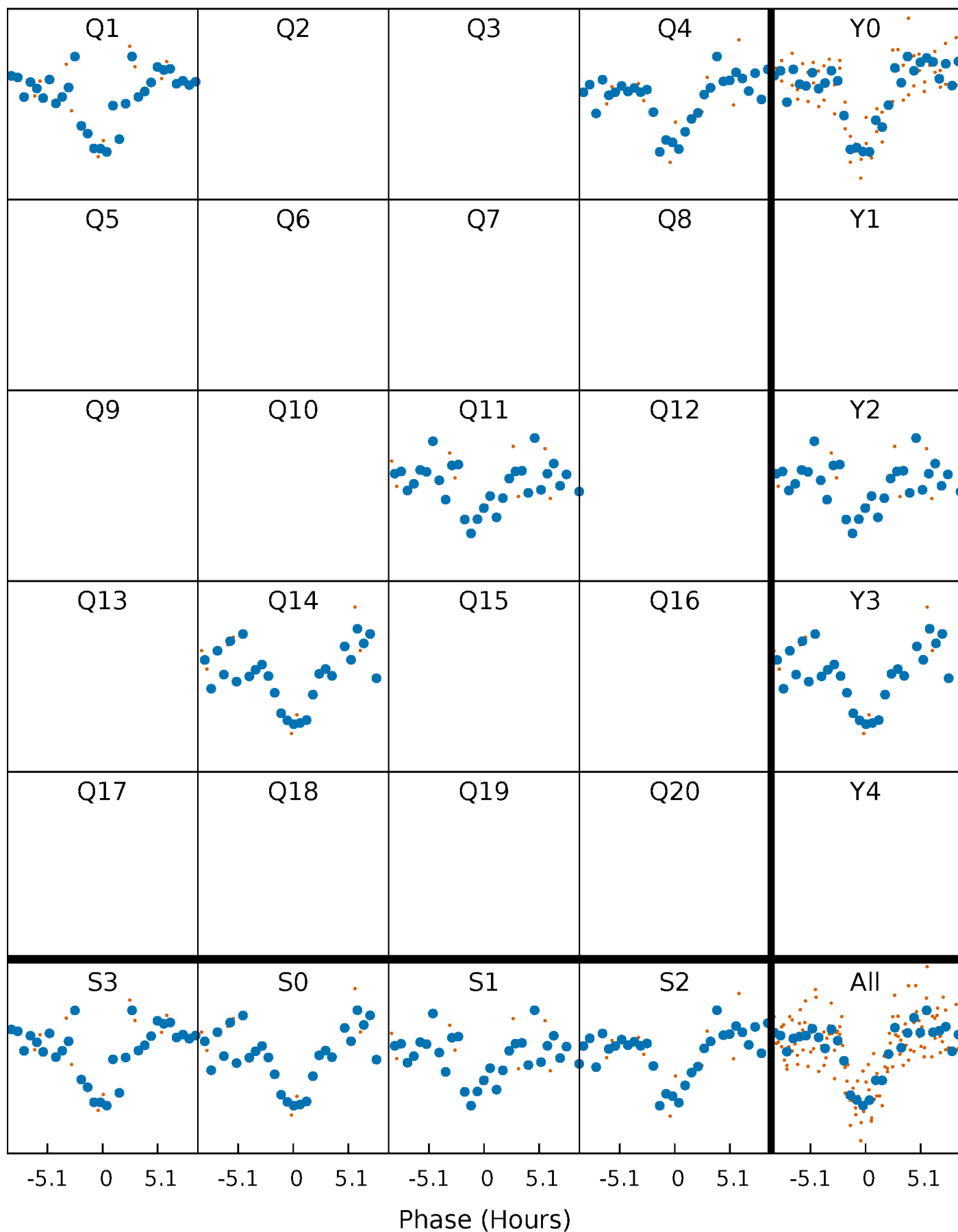


Non-Whitened Vs. Whitened Light Curve



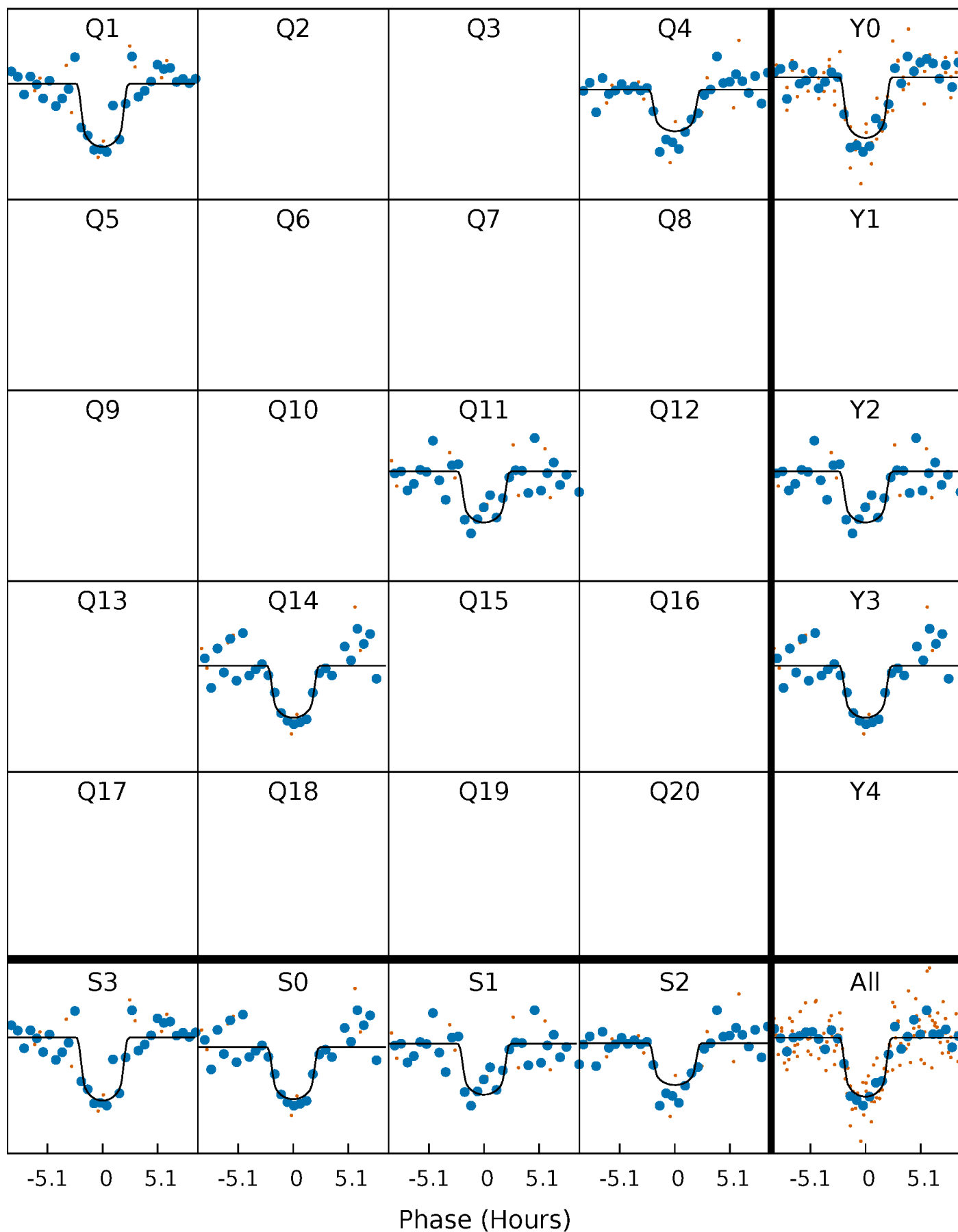
PDC Quarter-Phased Transit Curves

TCE 008644545-01 P=295.958145 Days $T_0=138.926494$ (BKJD)



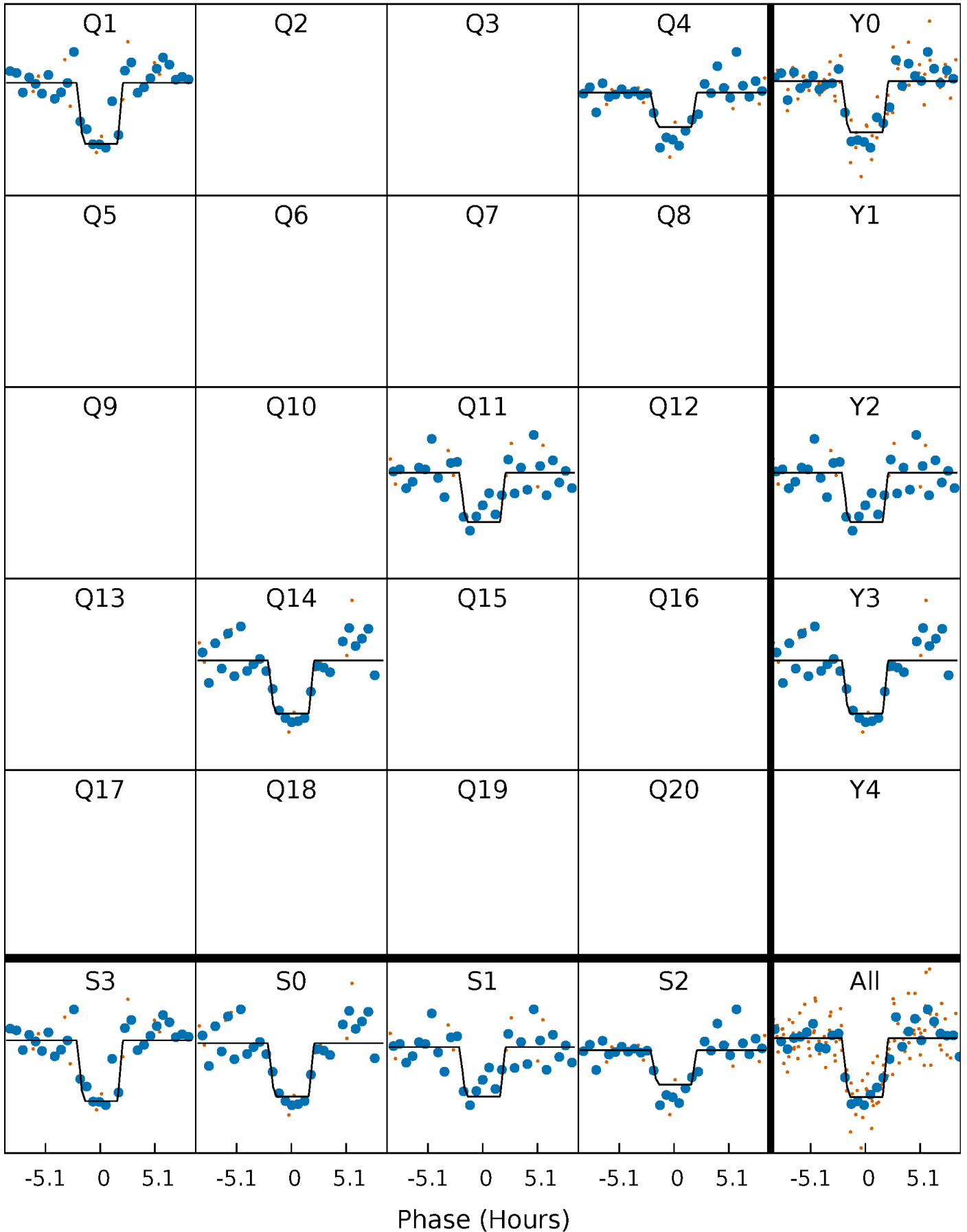
DV Quarter-Phased Transit Curves

TCE 008644545-01 P=295.958145 Days $T_0=138.926494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

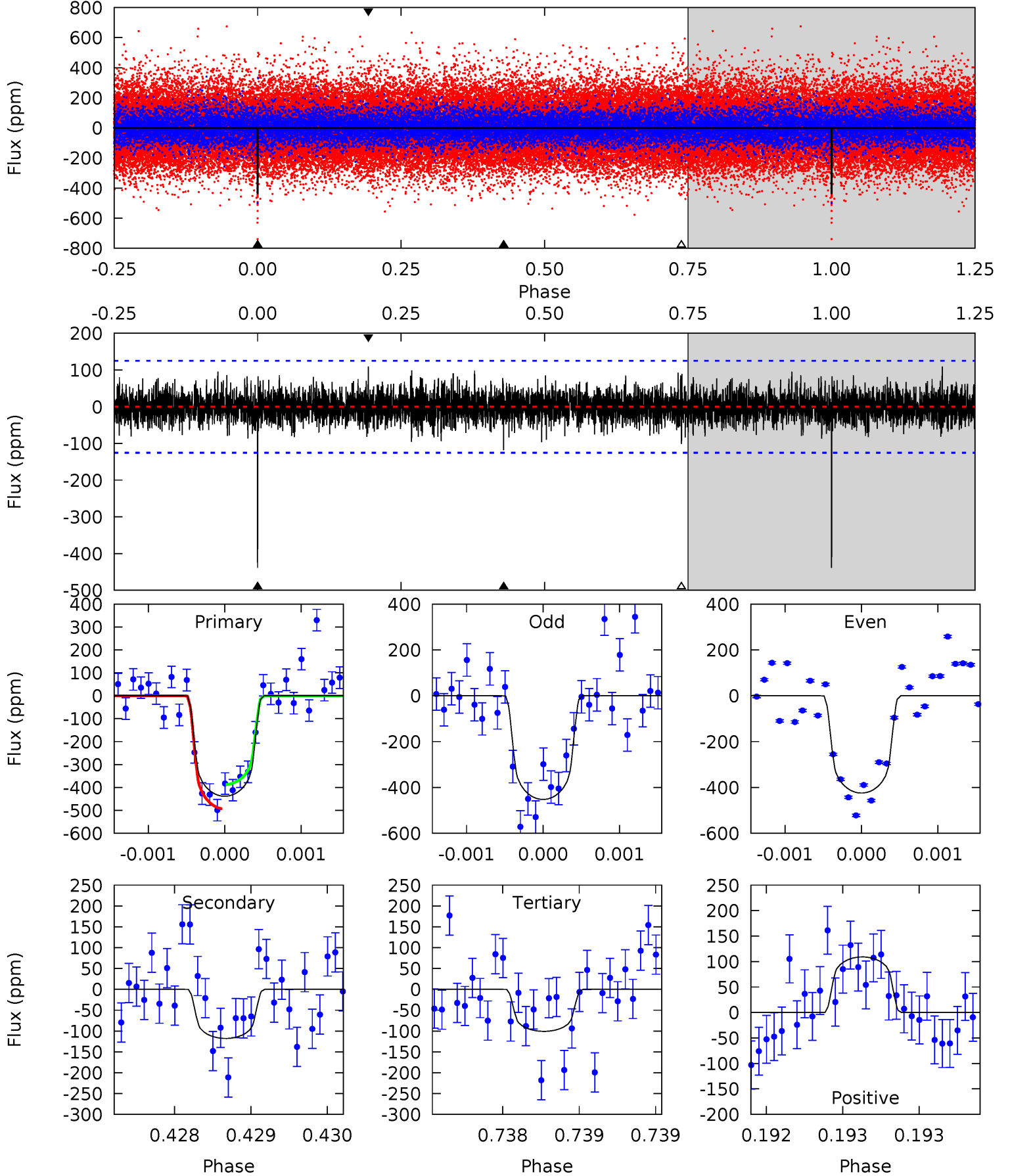
TCE 008644545-01 P=295.959683 Days $T_0=138.923425$ (BKJD)



DV Model-Shift Uniqueness Test

008644545-01, P = 295.958145 Days, E = 138.926494 Days

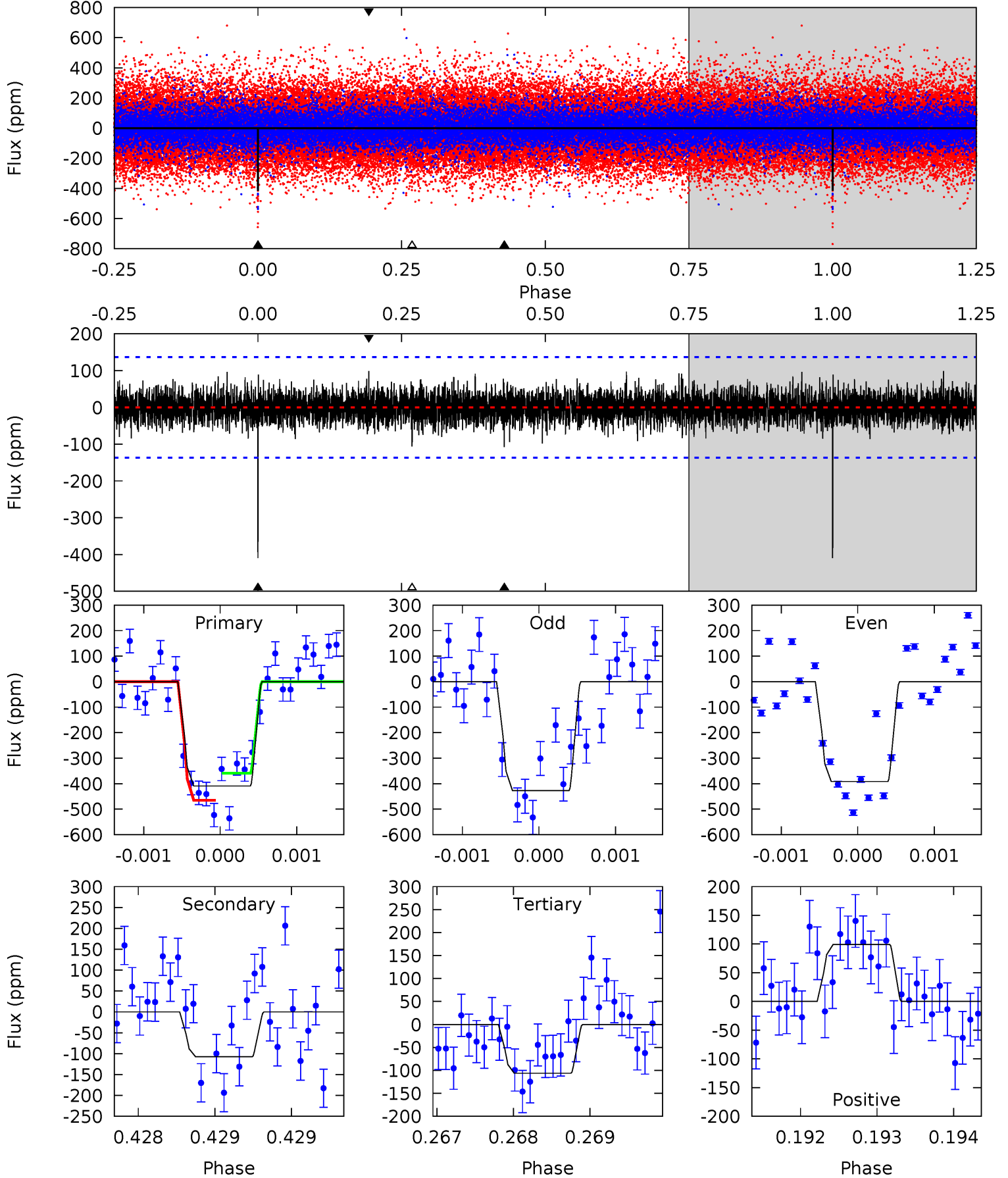
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	5.20	4.44	4.81	5.52	3.39	1.20	14.9	14.5	0.75	0.39	0.62	1.03	0.20	2.33



Alt Model-Shift Uniqueness Test

008644545-01, P = 295.959683 Days, E = 138.923425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	4.37	4.32	4.03	5.55	3.45	1.05	12.3	12.6	0.05	0.34	0.73	1.05	0.19	2.14



Stellar Parameters For KIC 008644545

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5505^{+109}_{-98}	$4.386^{+0.126}_{-0.094}$	$0.000^{+0.150}_{-0.150}$	$0.992^{+0.125}_{-0.125}$	$0.871^{+0.071}_{-0.038}$	$1.258^{+0.624}_{-0.352}$
	+2%/-2%	+3%/-2%	+inf%/-inf%	+13%/-13%	+8%/-4%	+50%/-28%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 008644545-01 / KOI 5552.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 23	$2.37^{+0.82}_{-0.78}$	370^{+13}_{-16}	4133^{+699}_{-420}	8040^{+10186}_{-3682}
Alt.	-107 ± 25	$2.19^{+0.79}_{-0.76}$	369^{+15}_{-14}	4185^{+729}_{-472}	8768^{+11442}_{-4439}

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 $A_{obs} \gg 1.0$

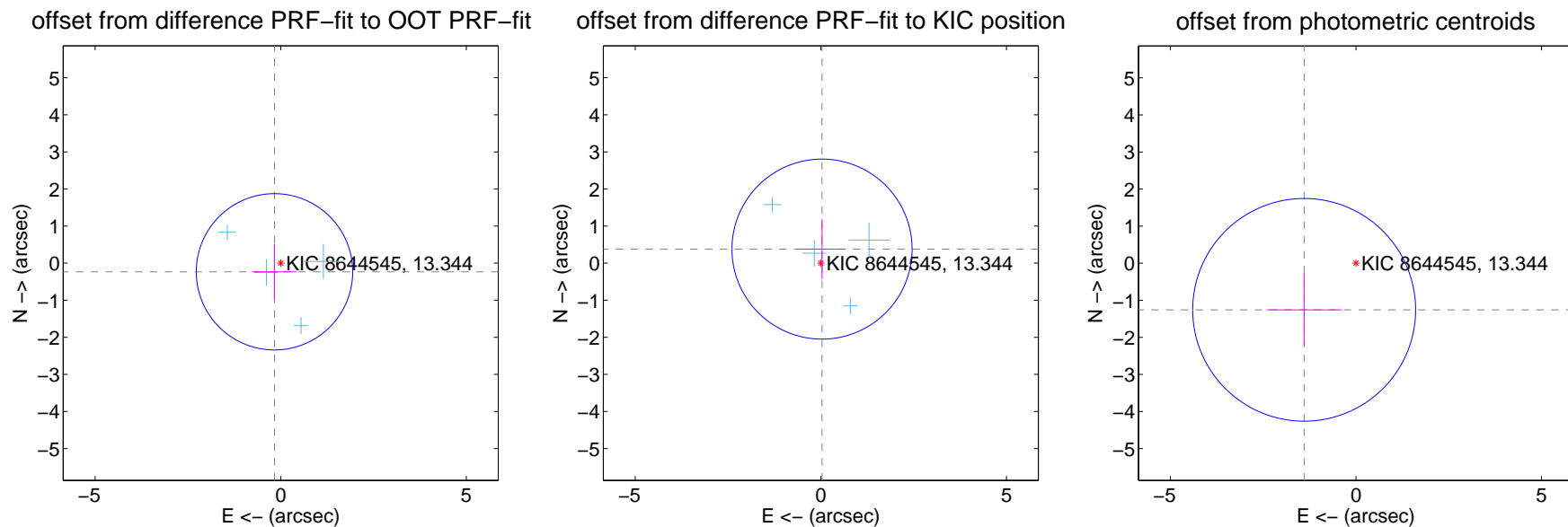
DV Centroid Data

Supplemental centroid analysis for 008644545-01. Kepler magnitude: 13.34. Transit SNR 14.03

There are 4 quarters with good PRF difference image offsets

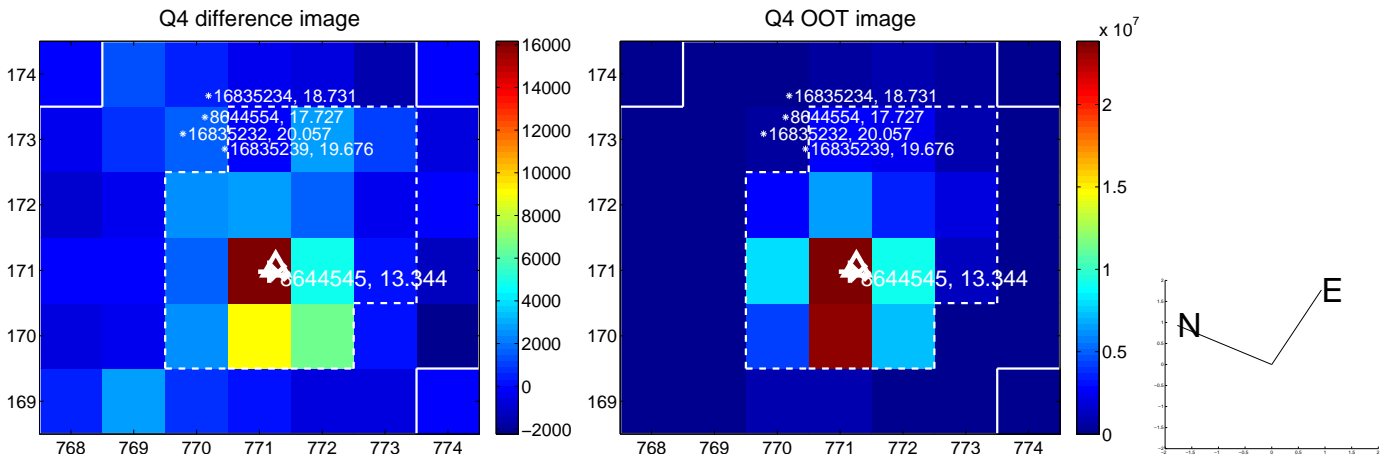
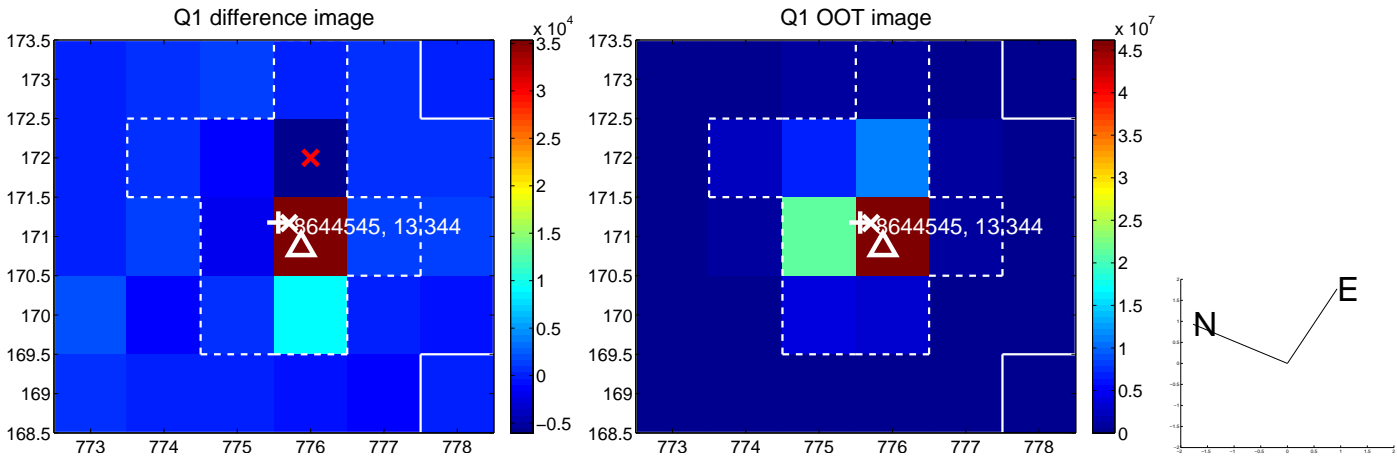
The direct PRF centroid is offset from the target star catalog position by about 0.76 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.288 ± 0.702	0.41	0.169 ± 0.601	-0.234 ± 0.750
PRF-fit source offset from KIC position	0.380 ± 0.809	0.47	-0.031 ± 0.629	0.378 ± 0.810
photometric centroid source offset	1.88 ± 1.00	1.88	1.40 ± 1.01	-1.26 ± 0.99



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.

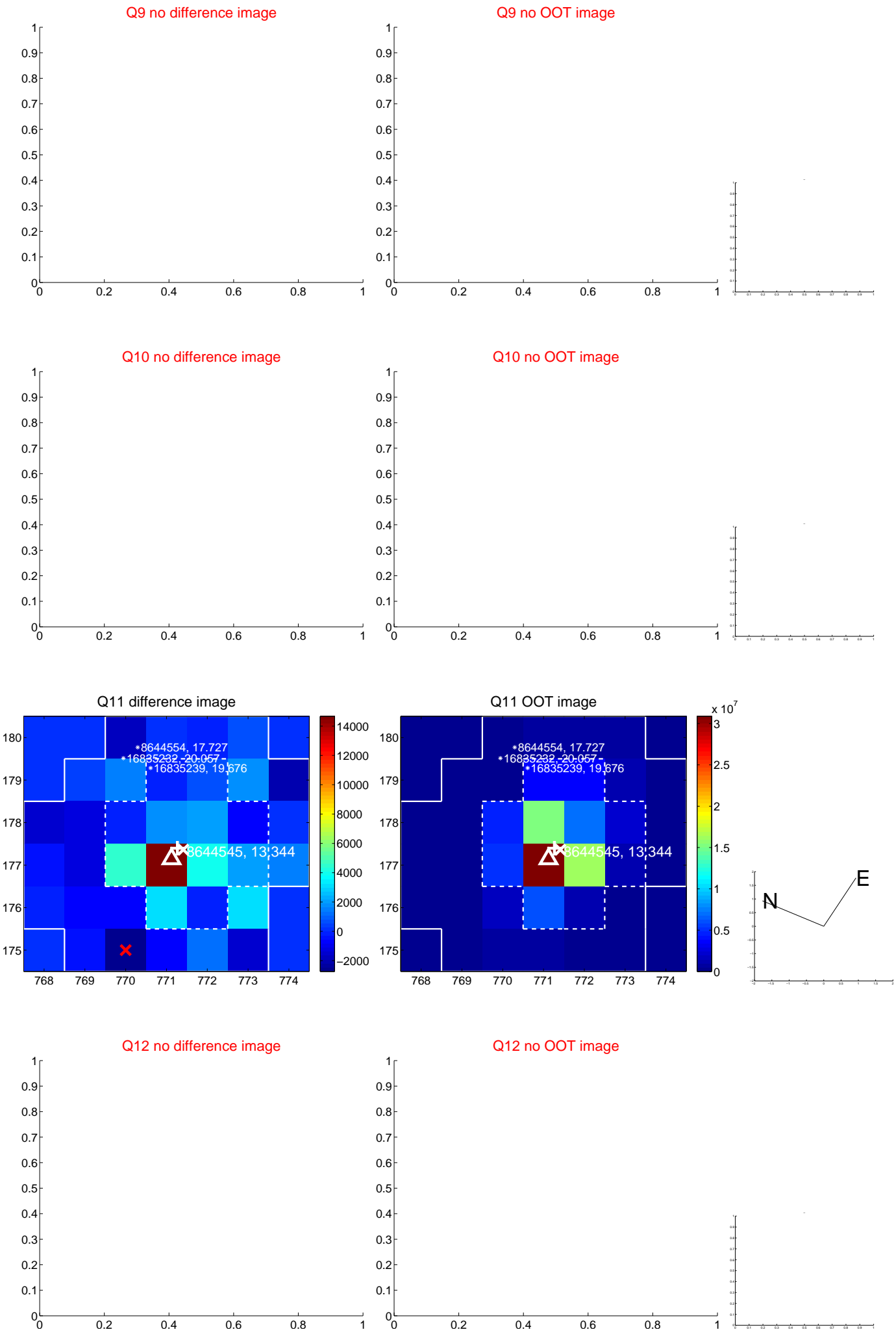
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



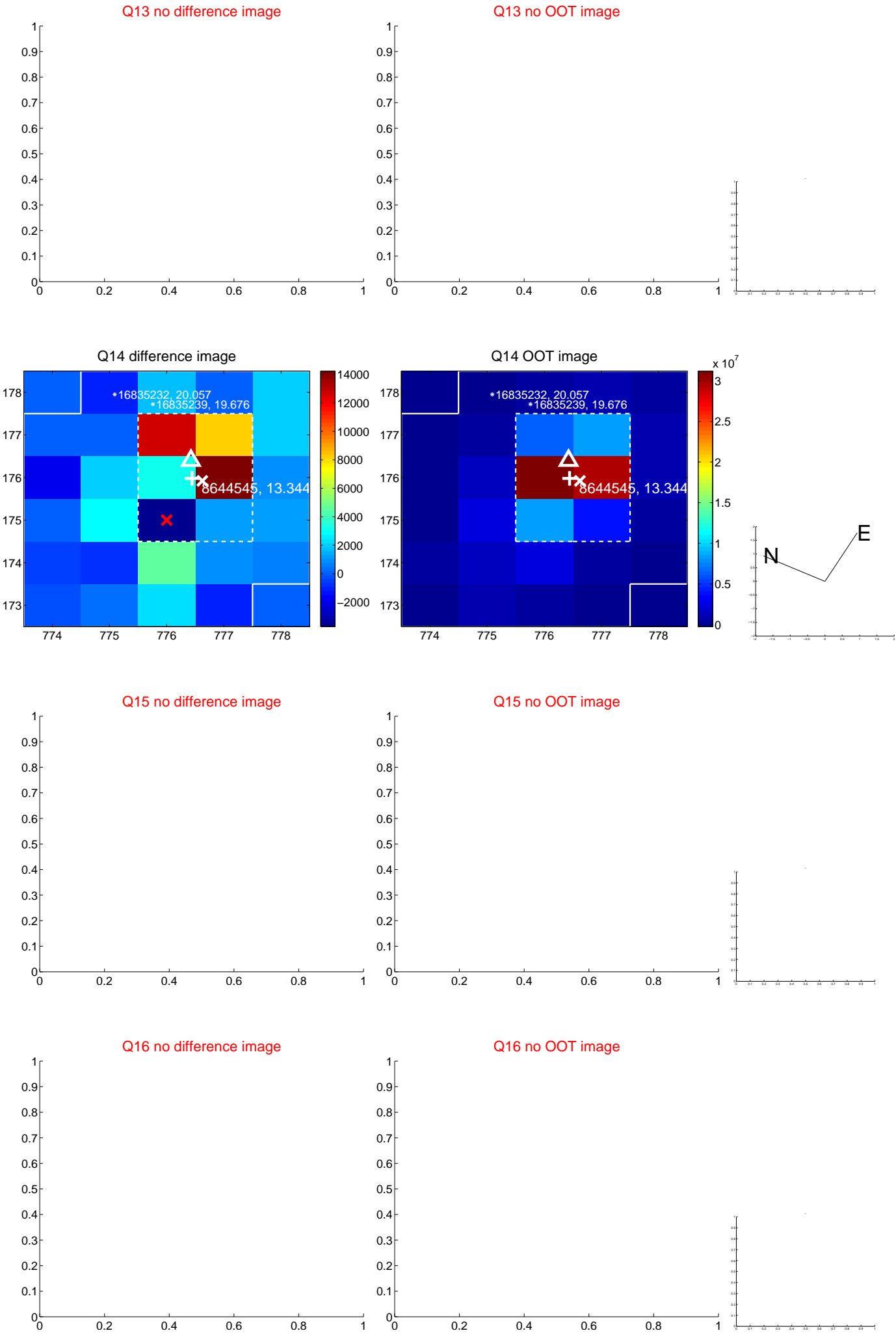
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



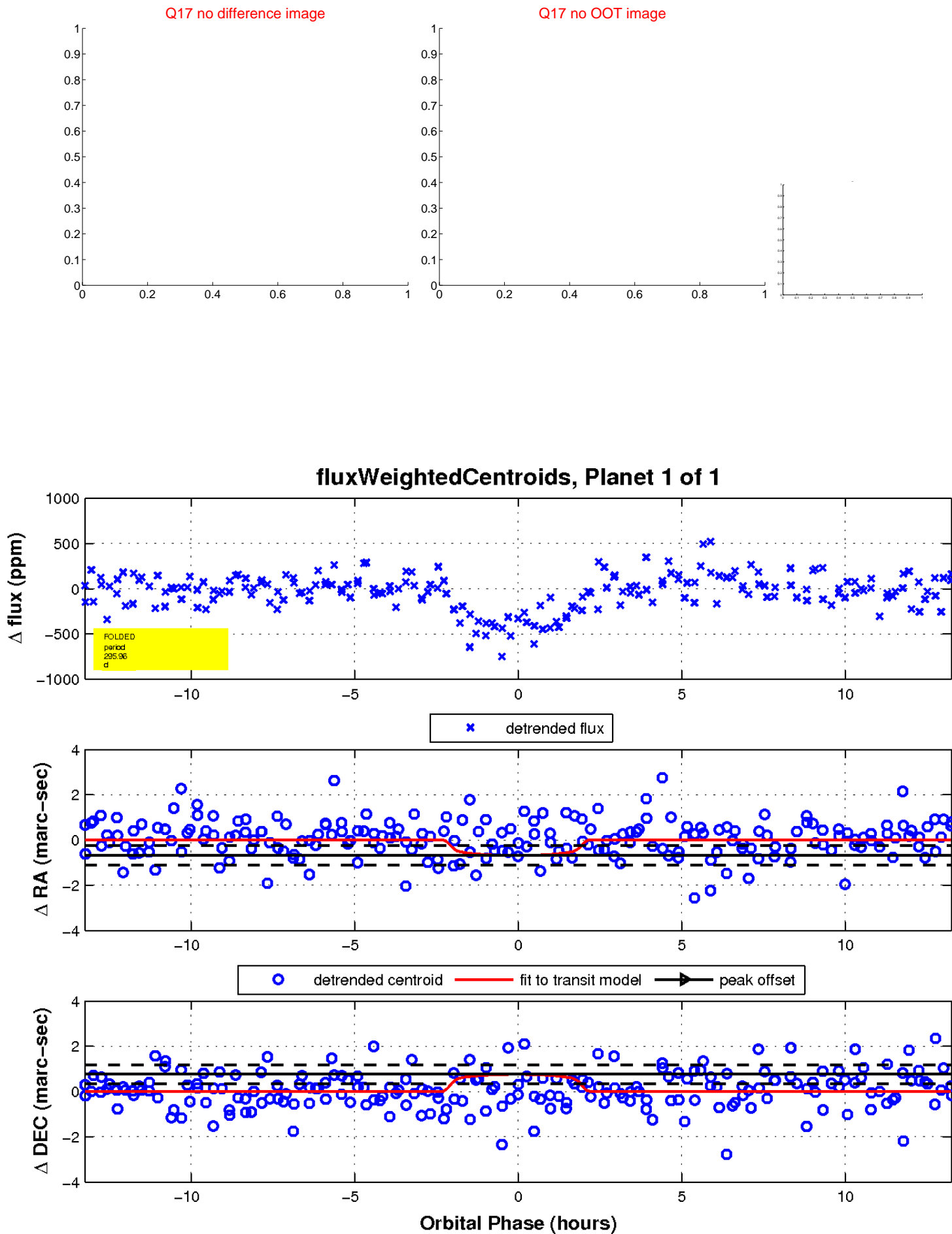
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

