

KIC 010336624

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})
010336624-01	OBS	No	518.613304	496.787960	263.3	3.912	11.7	6.6	0.38	3506	0.70	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010336624-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

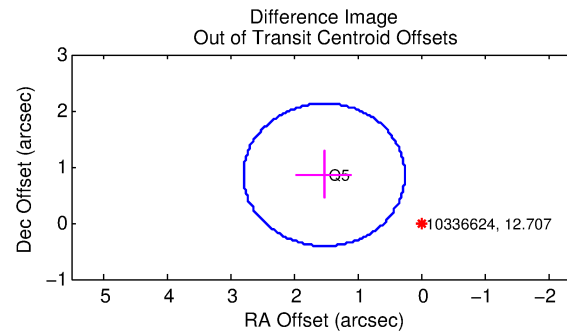
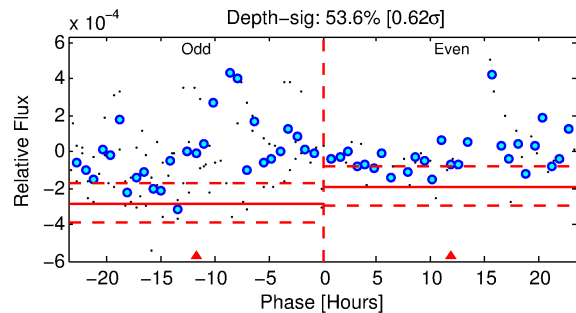
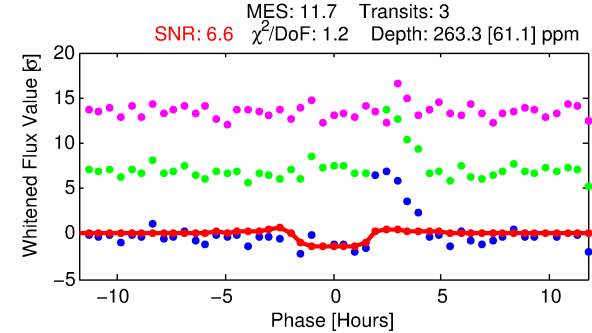
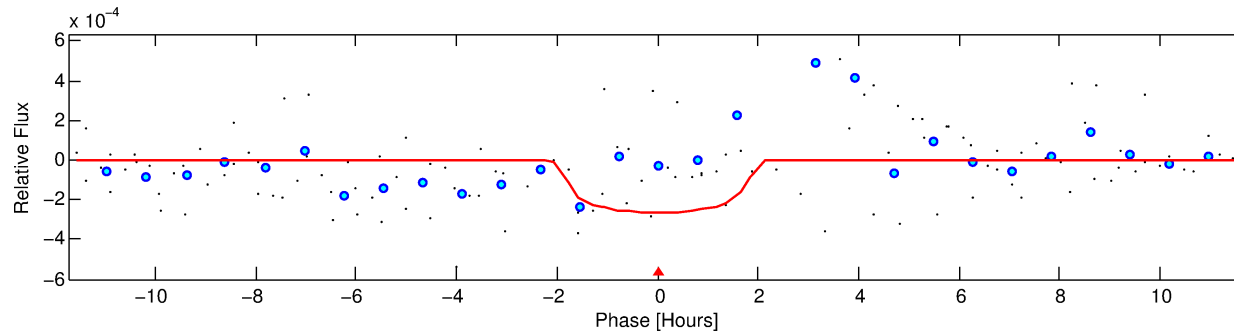
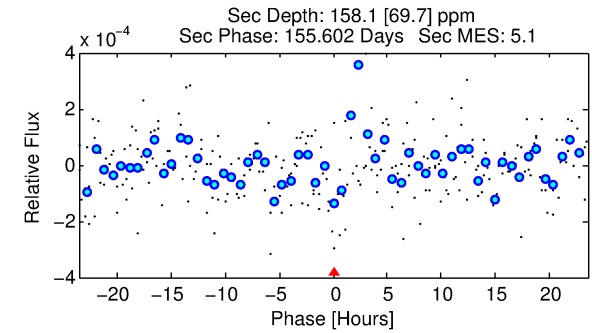
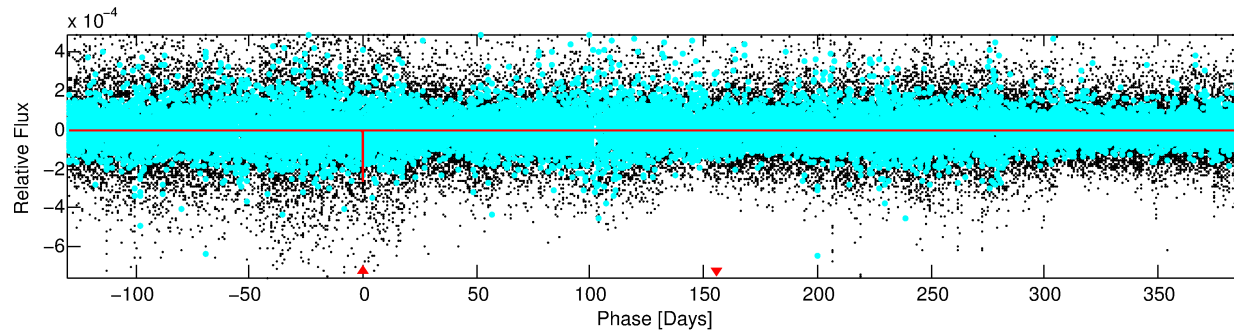
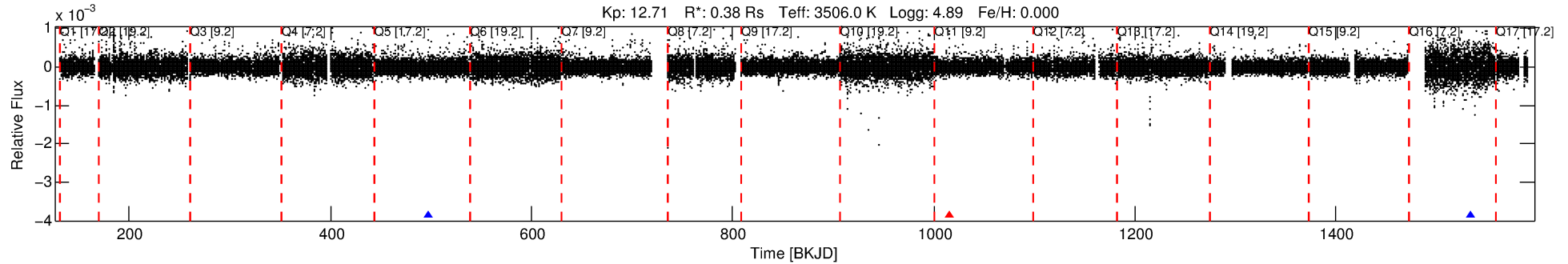
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010336624-01

No Significant Match Found

DV One-Page Summary

KIC: 10336624 Candidate: 1 of 1 Period: 518.613 d



DV Fit Results:

Period = 518.61330 [0.01334] d
Epoch = 496.7880 [0.0112] BKJD
Rp/R* = 0.0169 [0.0208]
a/R* = 574.34 [2976.37]
b = 0.84 [1.78]
Seff = 0.02 [0.00]
Teq = 98 [4] K
Rp = 0.70 [0.86] Re
a = 0.9314 [0.1095] AU
Ag = 155519.16 [389286.93] [0.40σ]
Teffp = 3021 [1889] K [1.55σ]

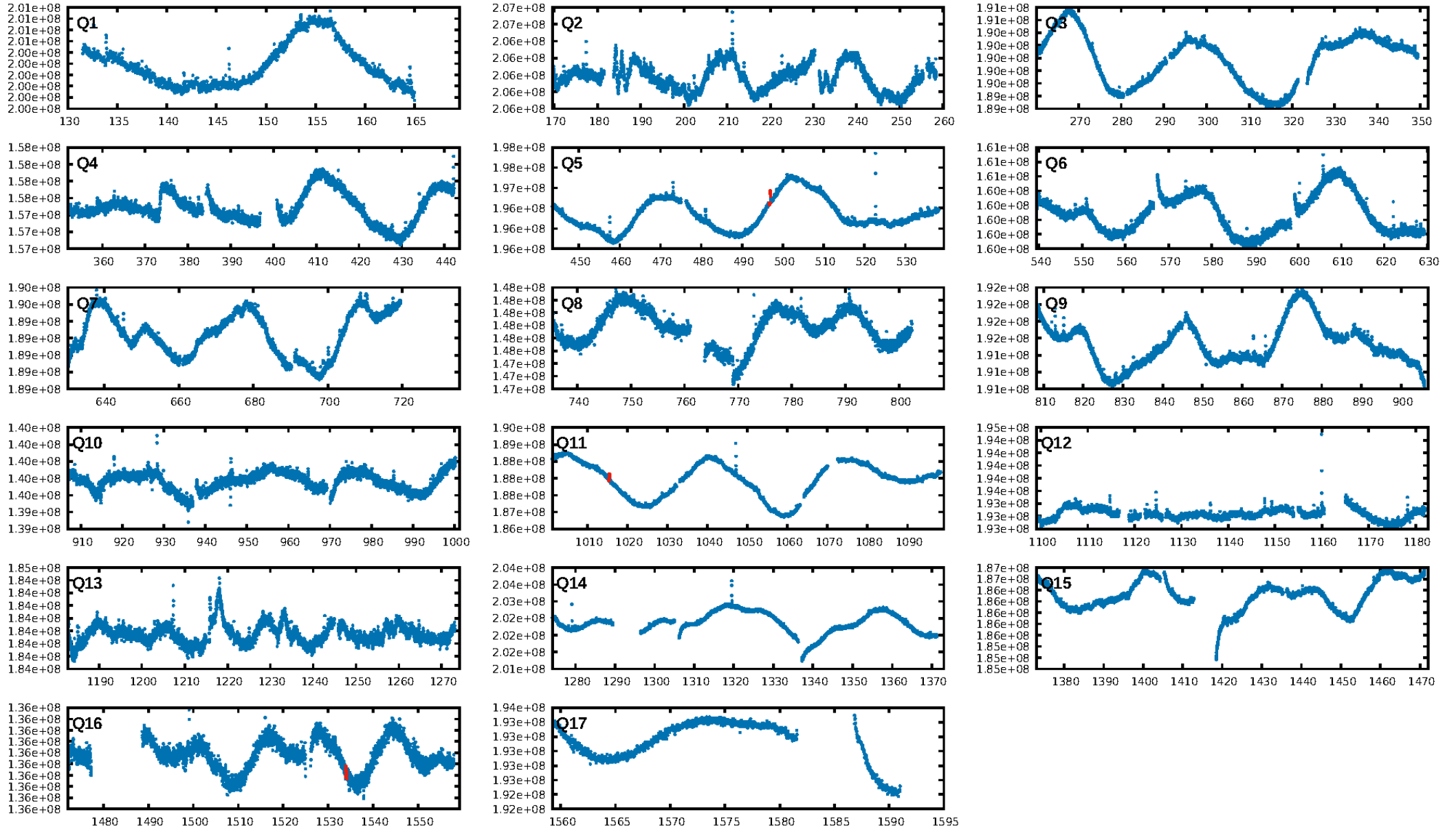
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 71.8%
Bootstrap-pfa: 1.77e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -3.568
Centroid-sig: 4.5%
Centroid-so: 2.547 arcsec [2.06σ]
OotOffset-rm: 1.746 arcsec [4.13σ]
KicOffset-rm: 2.355 arcsec [5.65σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

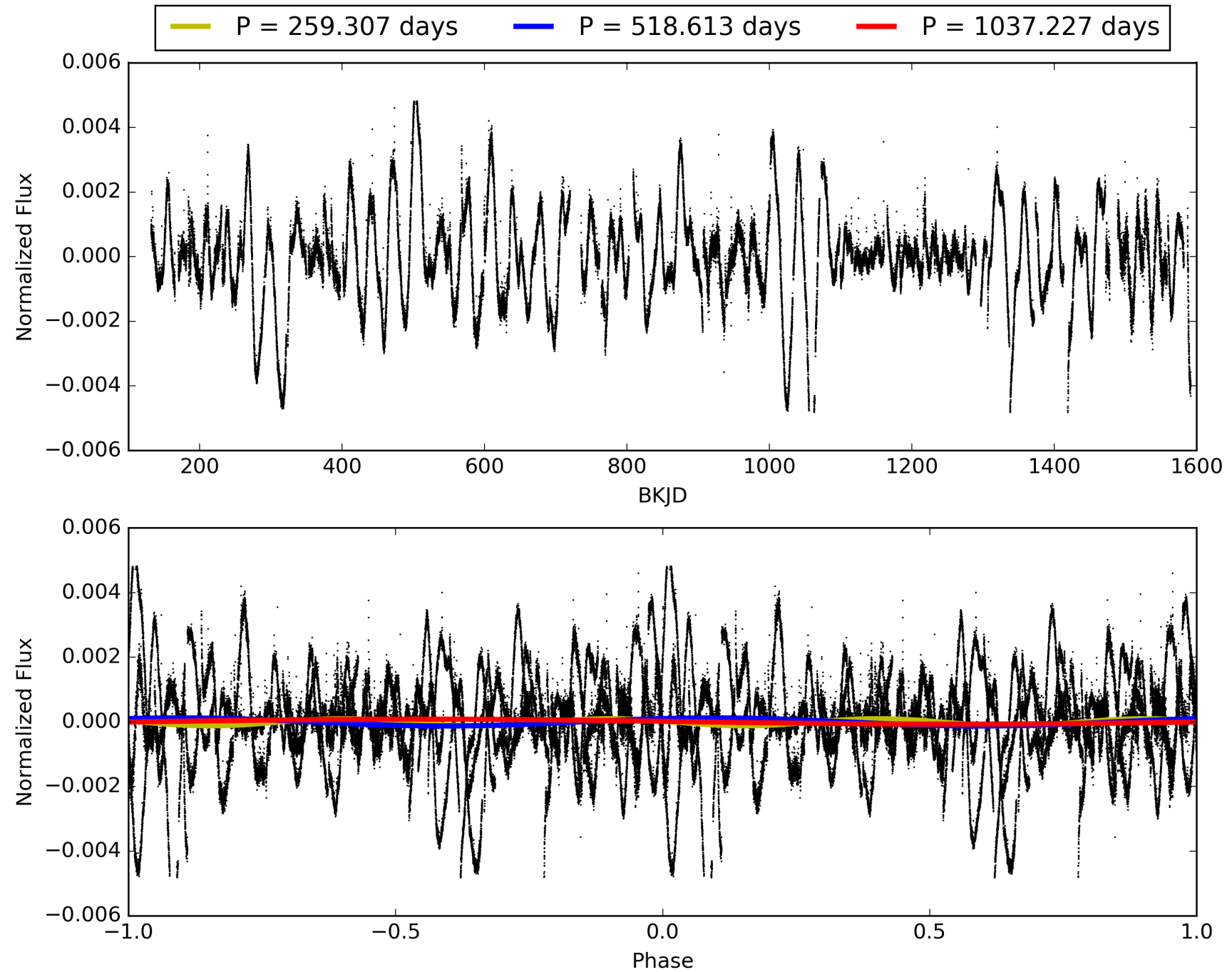
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:06:34 Z

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

TCE 010336624-01, PDC Light Curves

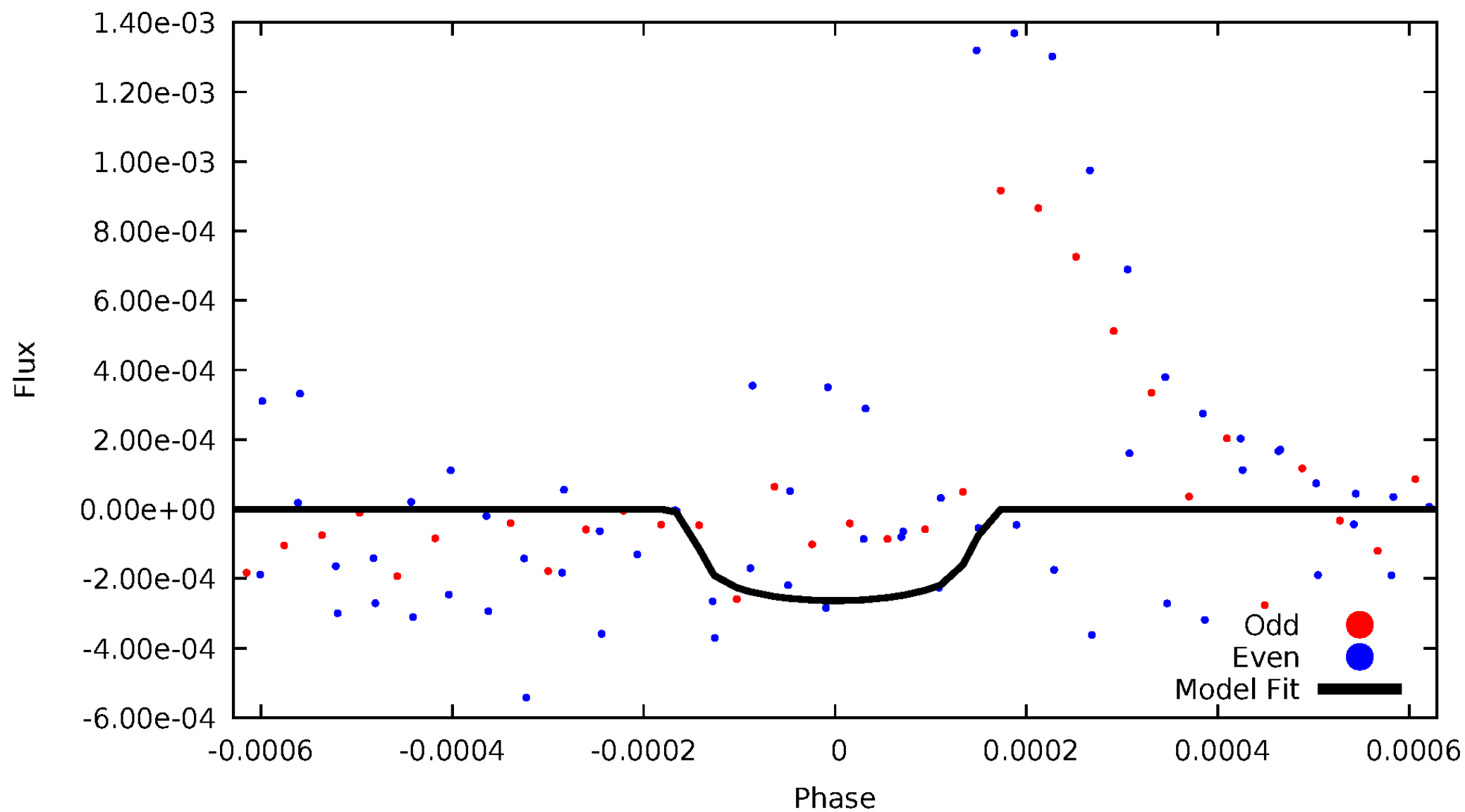


TCE 010336624-01



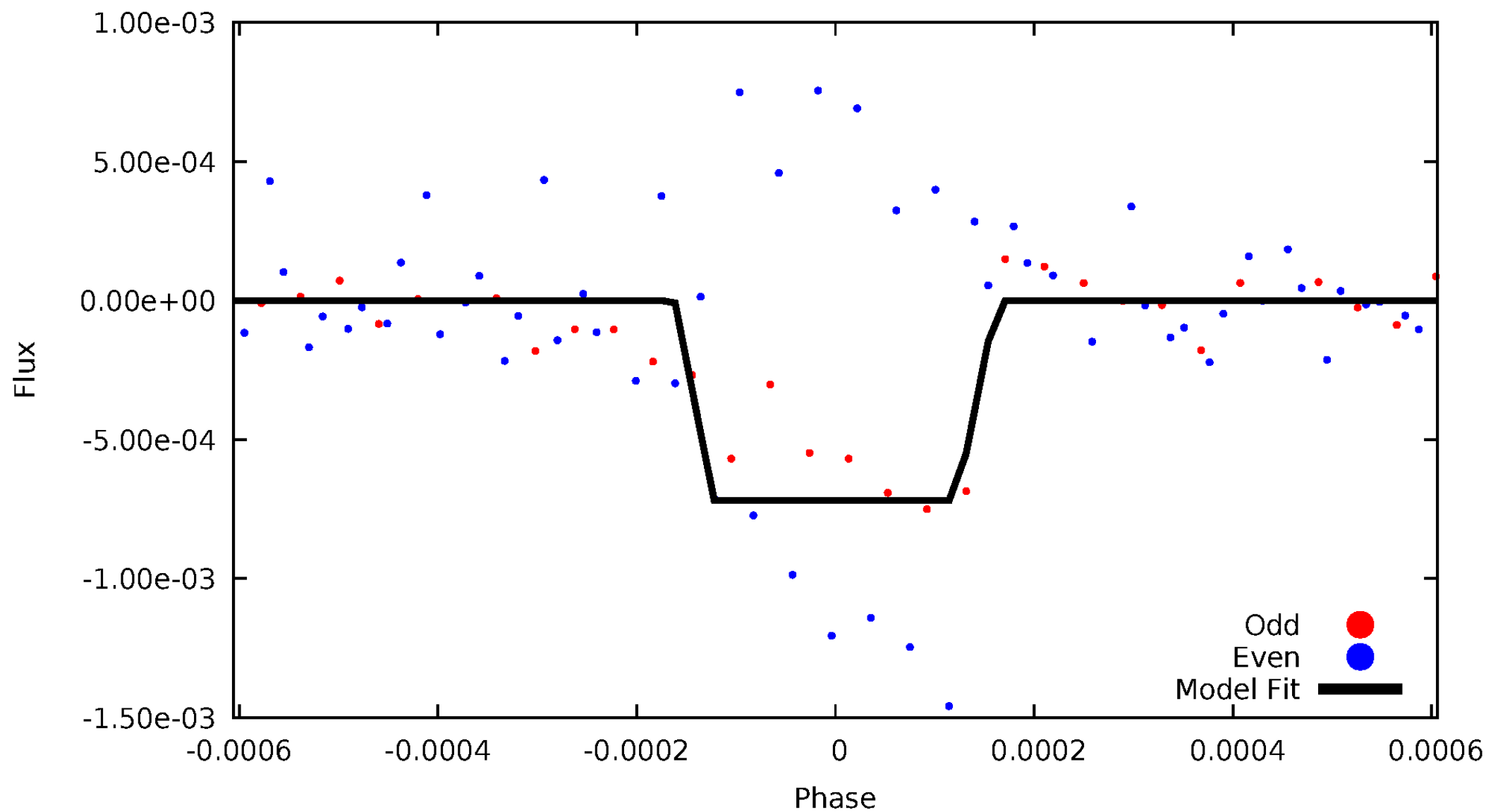
DV Odd/Even

TCE 010336624-01

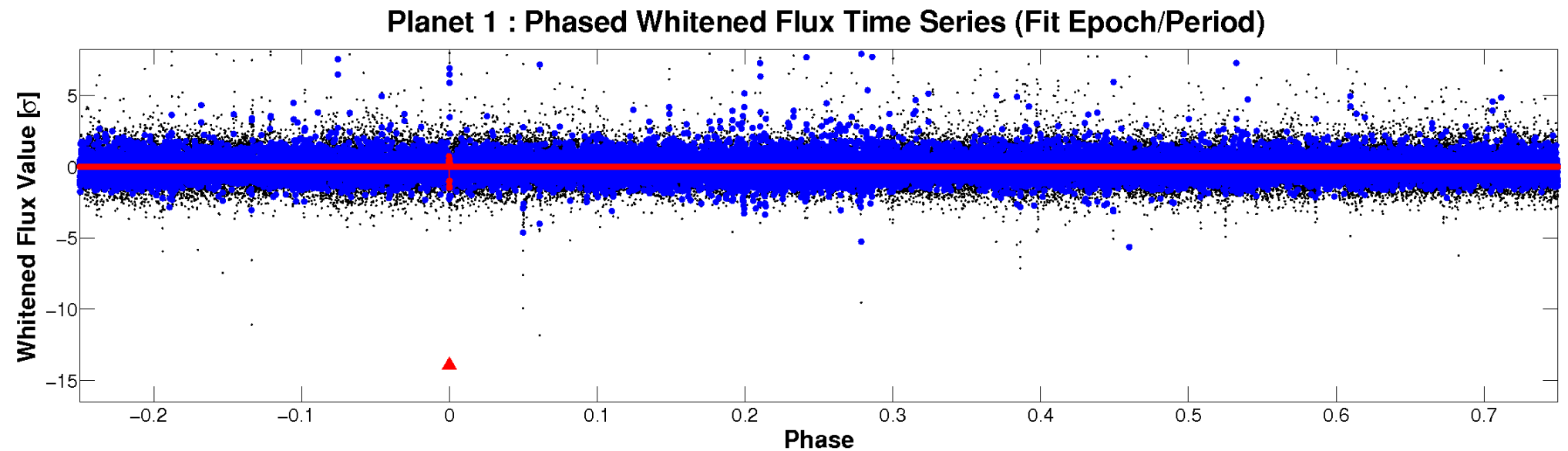
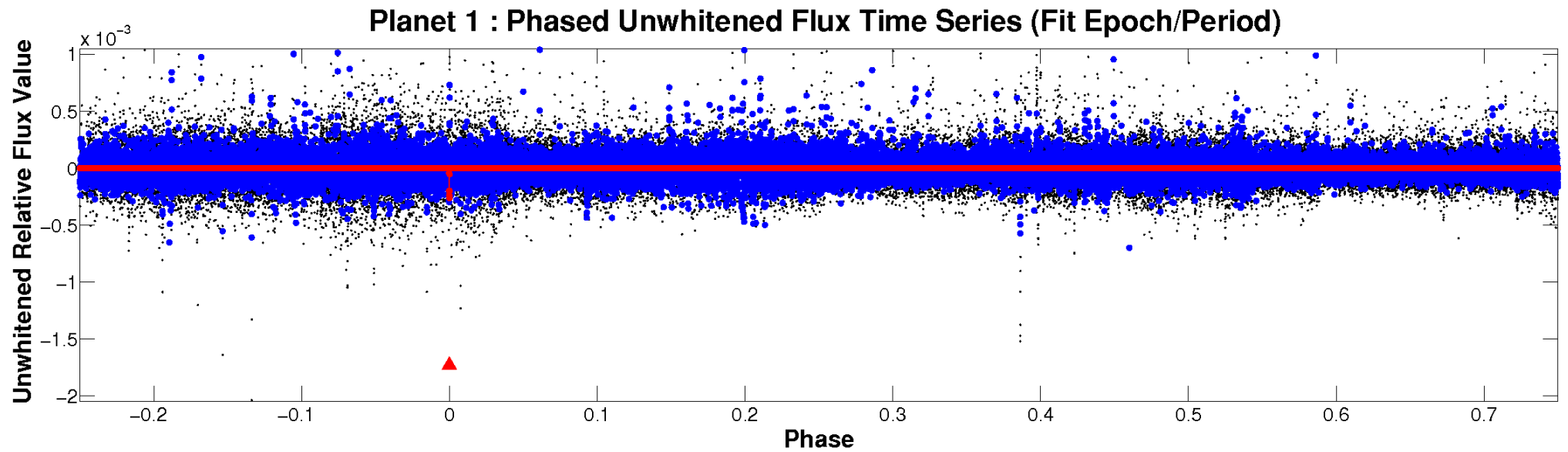


ALT Odd/Even

TCE 010336624-01

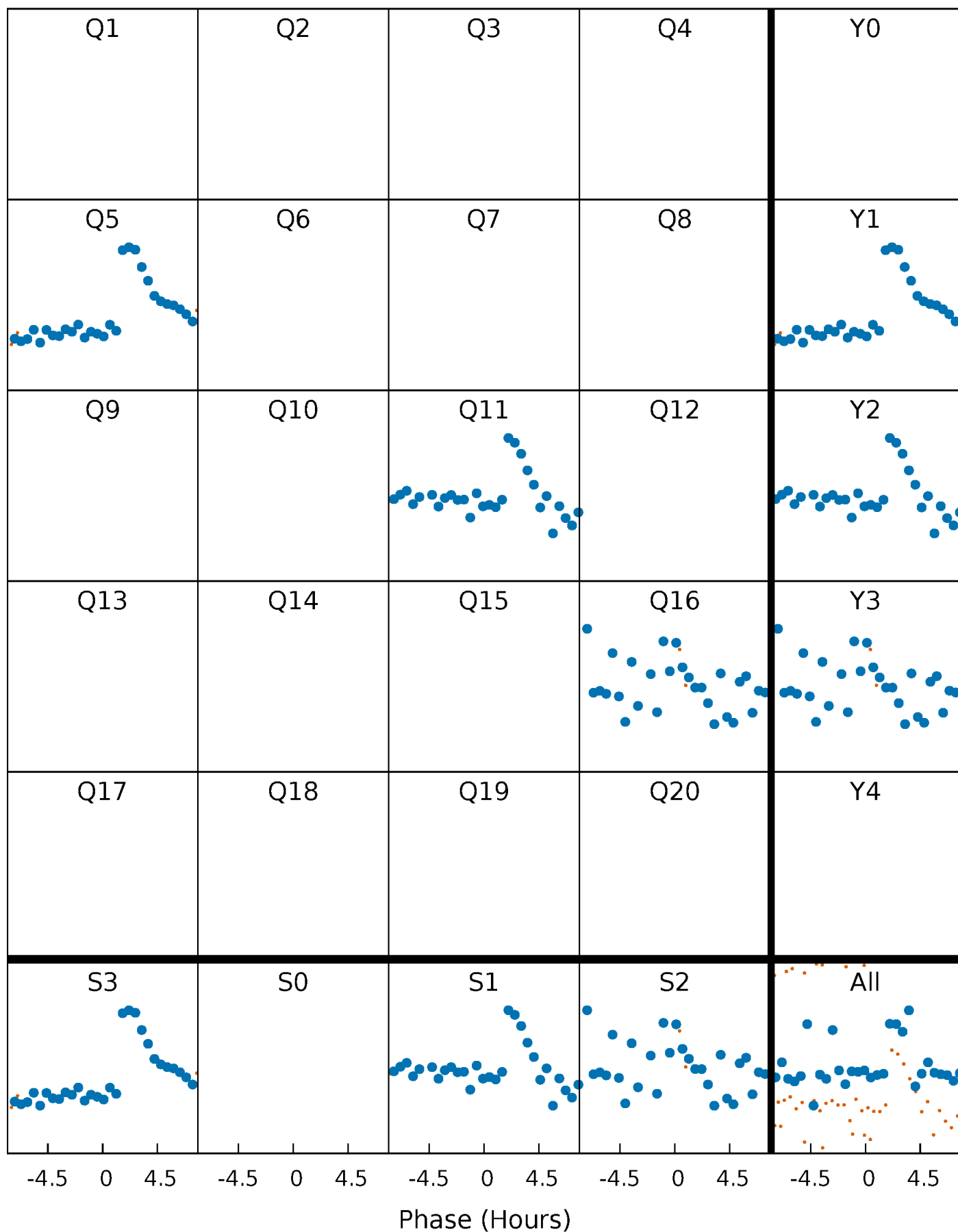


Non-Whitened Vs. Whitened Light Curve



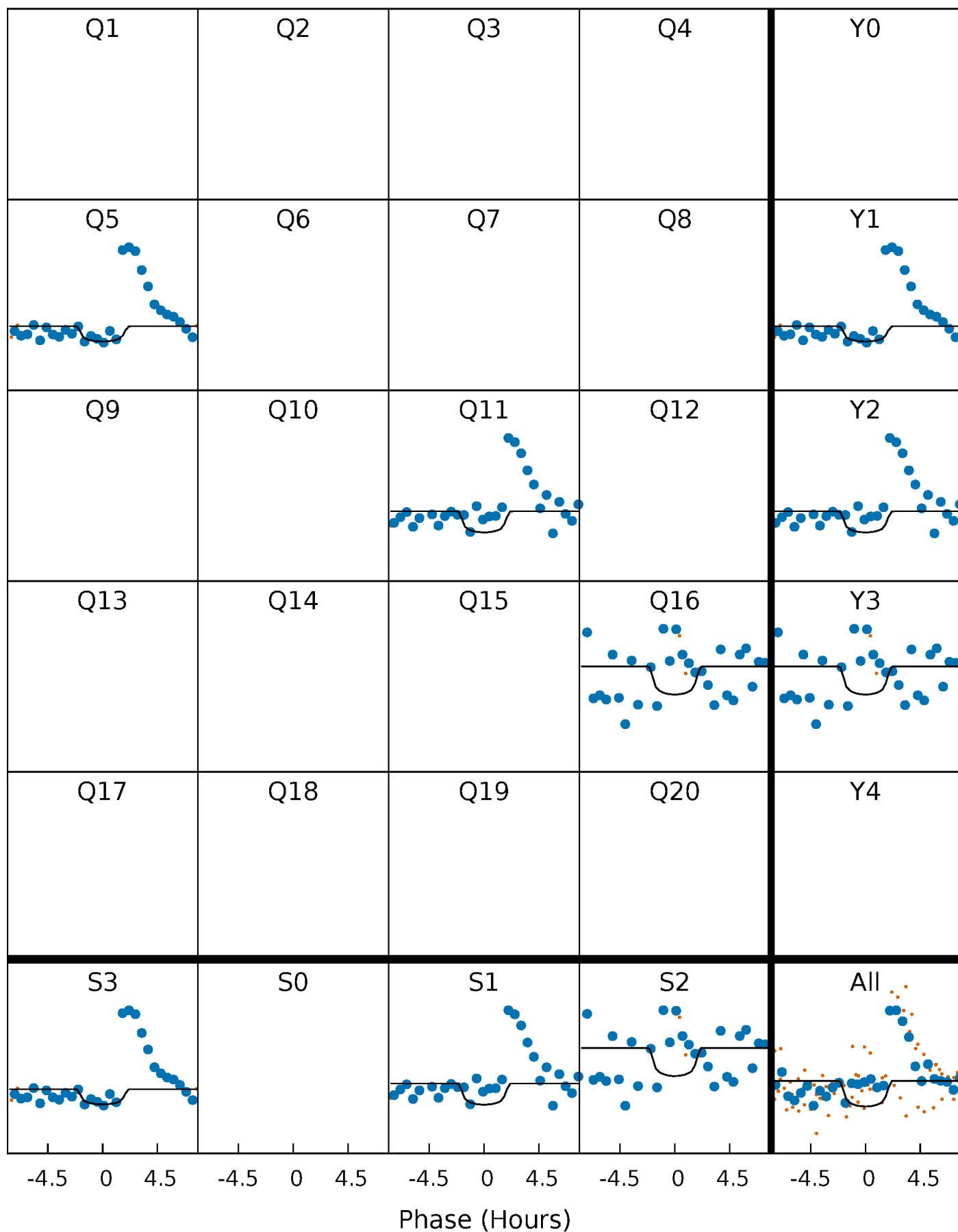
PDC Quarter-Phased Transit Curves

TCE 010336624-01 P=518.613304 Days $T_0=496.787960$ (BKJD)



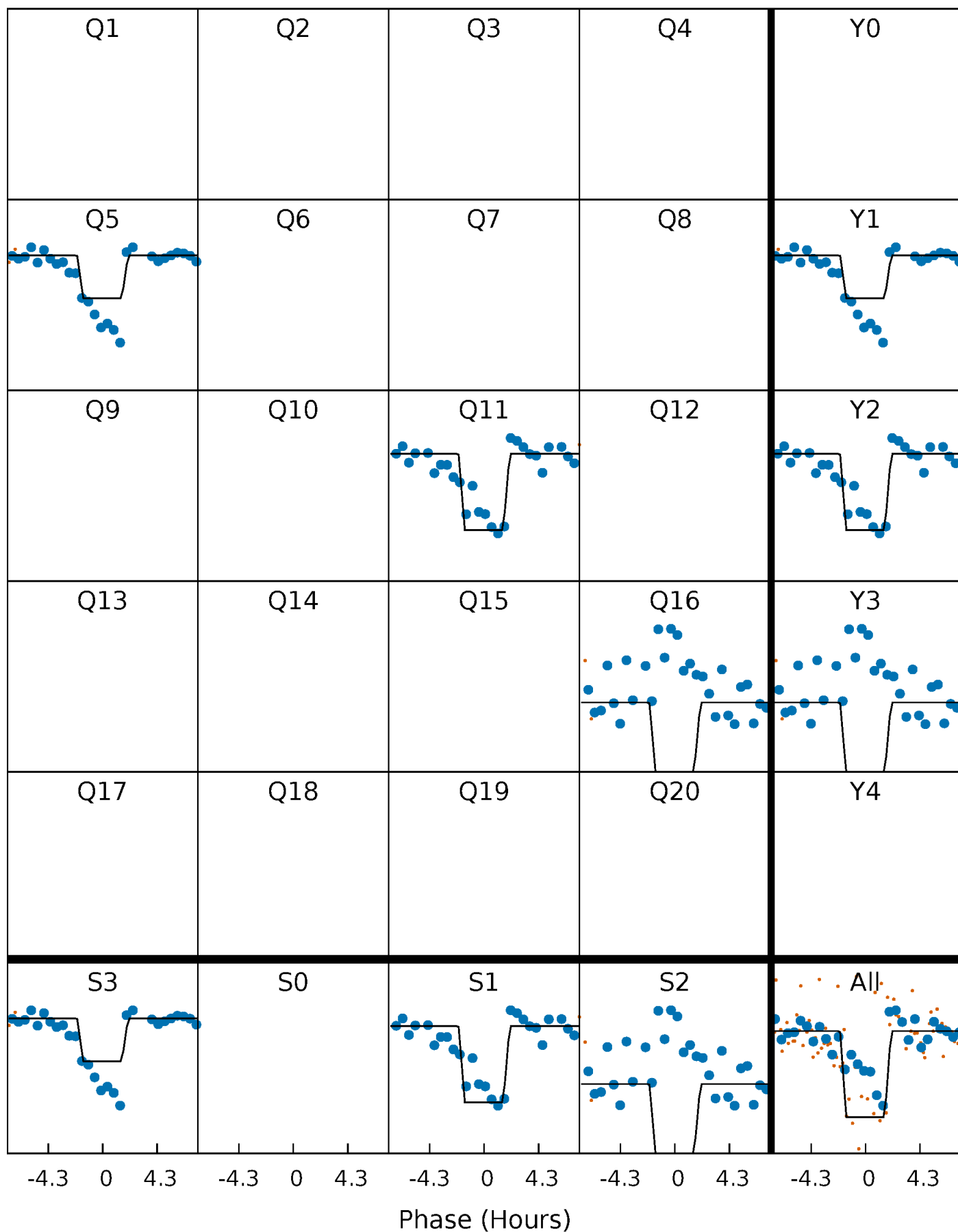
DV Quarter-Phased Transit Curves

TCE 010336624-01 P=518.613304 Days $T_0=496.787960$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

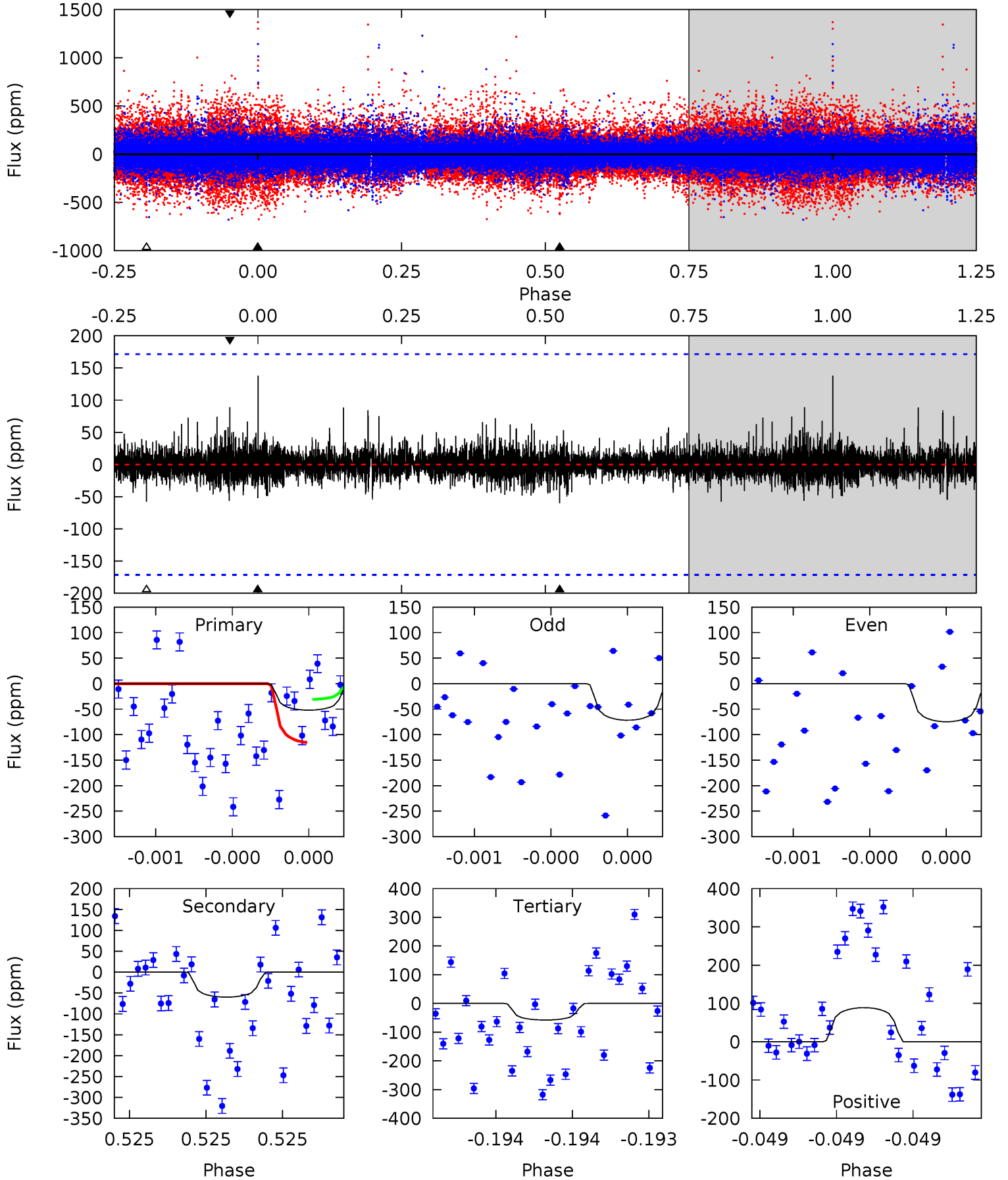
TCE 010336624-01 P=518.617375 Days $T_0=496.784942$ (BKJD)



DV Model-Shift Uniqueness Test

010336624-01, P = 518.613304 Days, E = 496.787960 Days

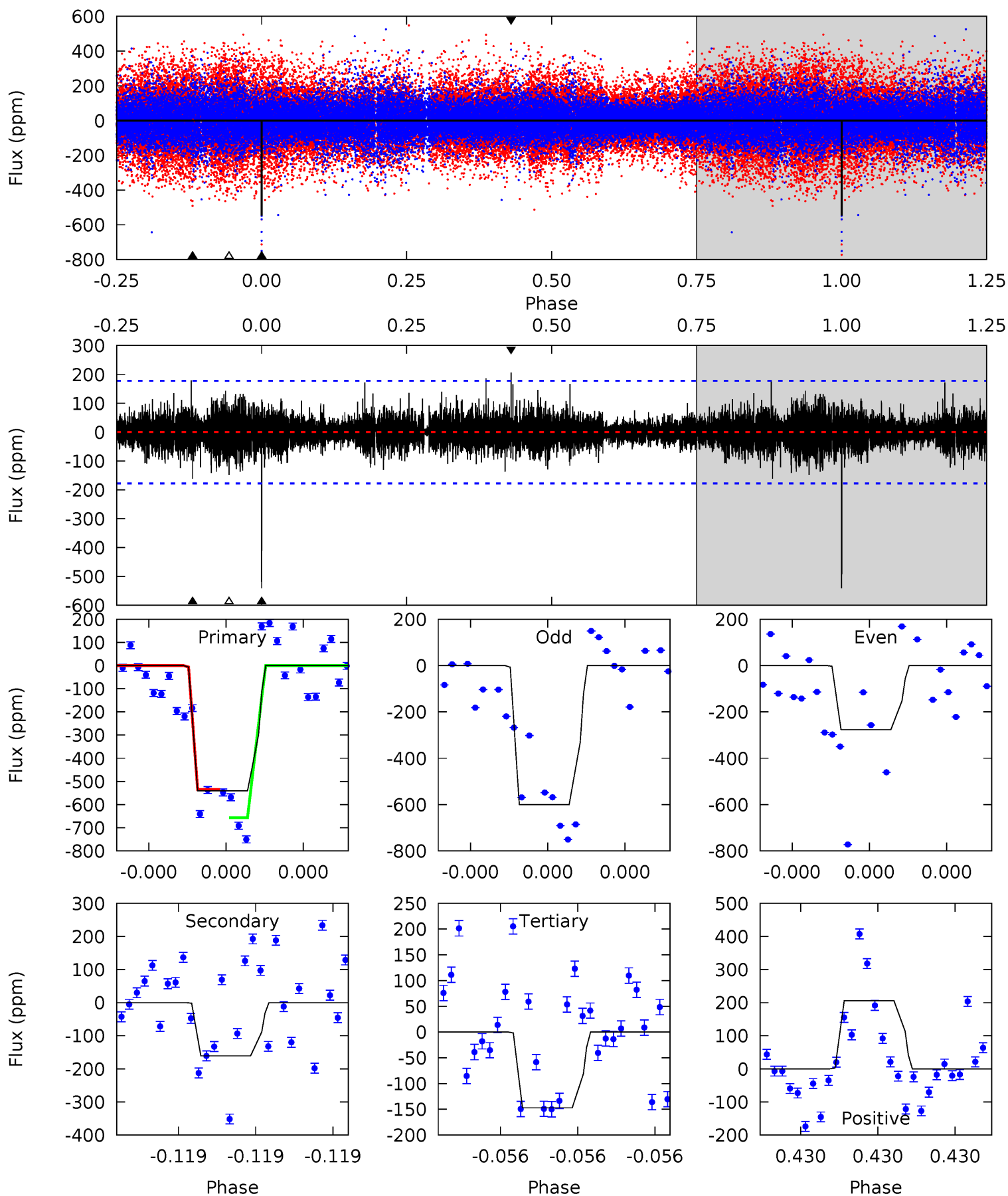
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.71	1.97	1.90	2.93	5.64	3.58	0.48	-0.19	-1.22	0.07	-0.96	0.04	0.39	0.70	1.37



Alt Model-Shift Uniqueness Test

010336624-01, P = 518.617375 Days, E = 496.784942 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	5.11	4.67	6.54	5.64	3.59	1.00	12.5	10.7	0.44	-1.43	6.63	0.63	0.28	0



Stellar Parameters For KIC 010336624

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3506^{+70}_{-84}	$4.888^{+0.060}_{-0.066}$	$0.000^{+0.150}_{-0.150}$	$0.377^{+0.054}_{-0.060}$	$0.403^{+0.051}_{-0.083}$	$10.570^{+3.798}_{-2.542}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+14%/-16%	+13%/-21%	+36%/-24%
Source	SPE14	PHO54	SPE15	DSEP		

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

Secondary Eclipse Parameters for KIC 010336624-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-60 ± 30	$0.91^{+0.80}_{-0.61}$	138^{+5}_{-5}	2558^{+974}_{-382}	$29617^{+257551}_{-22166}$
Alt.	-161 ± 31	$1.14^{+0.76}_{-0.68}$	138^{+5}_{-4}	2785^{+832}_{-354}	$57843^{+269551}_{-38423}$

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

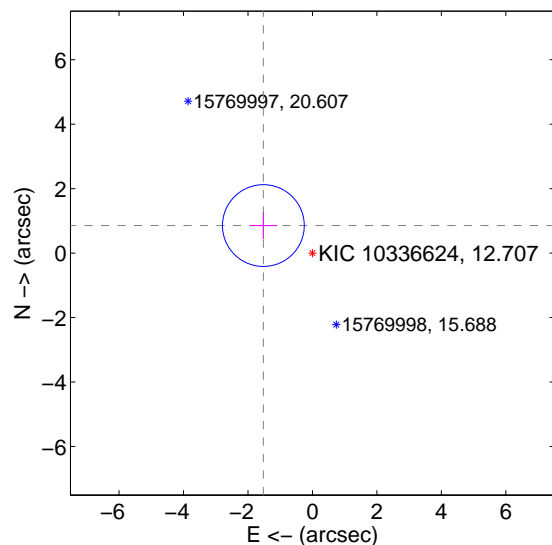
Supplemental centroid analysis for 010336624-01. Kepler magnitude: 12.71. Transit SNR 6.57

There are 1 quarters with good PRF difference image offsets

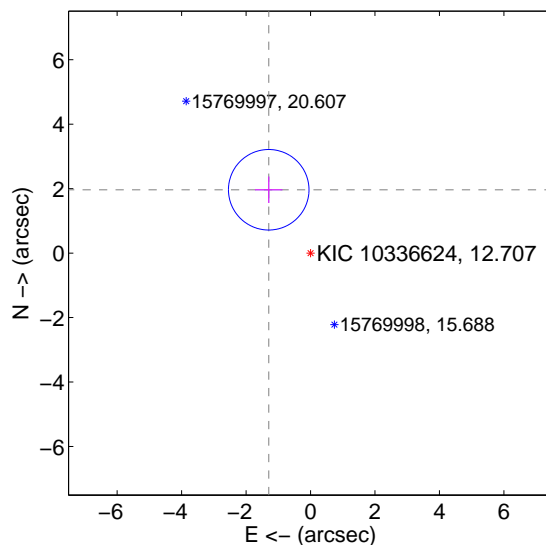
The direct PRF centroid is offset from the target star catalog position by about 1.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.746 \pm 0.423	4.13	1.523 \pm 0.426	0.855 \pm 0.412
PRF-fit source offset from KIC position	2.355 \pm 0.416	5.65	1.297 \pm 0.426	1.966 \pm 0.412
photometric centroid source offset	2.55 \pm 1.24	2.06	-0.29 \pm 1.14	2.53 \pm 1.24

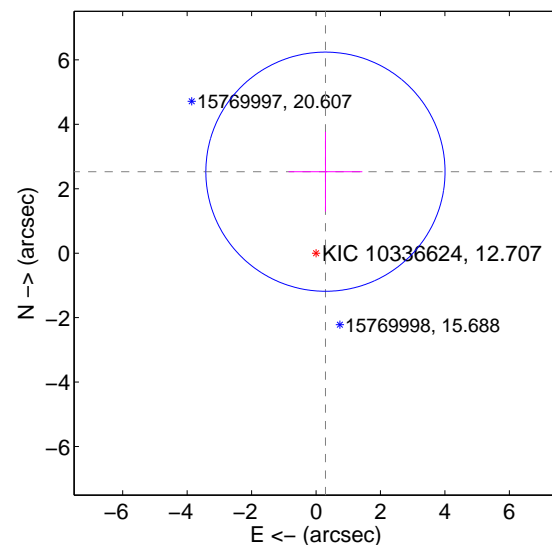
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

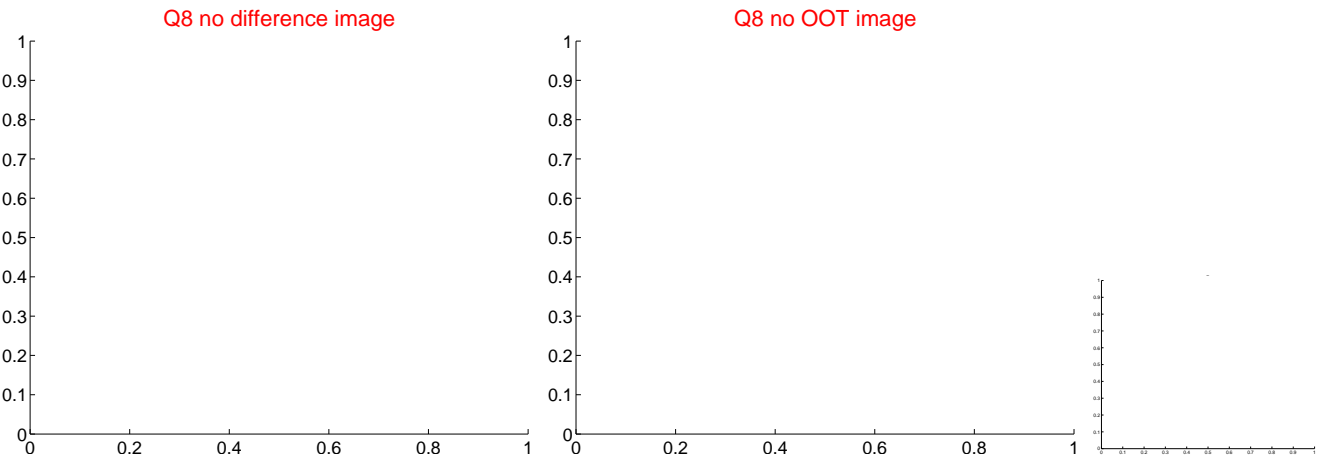
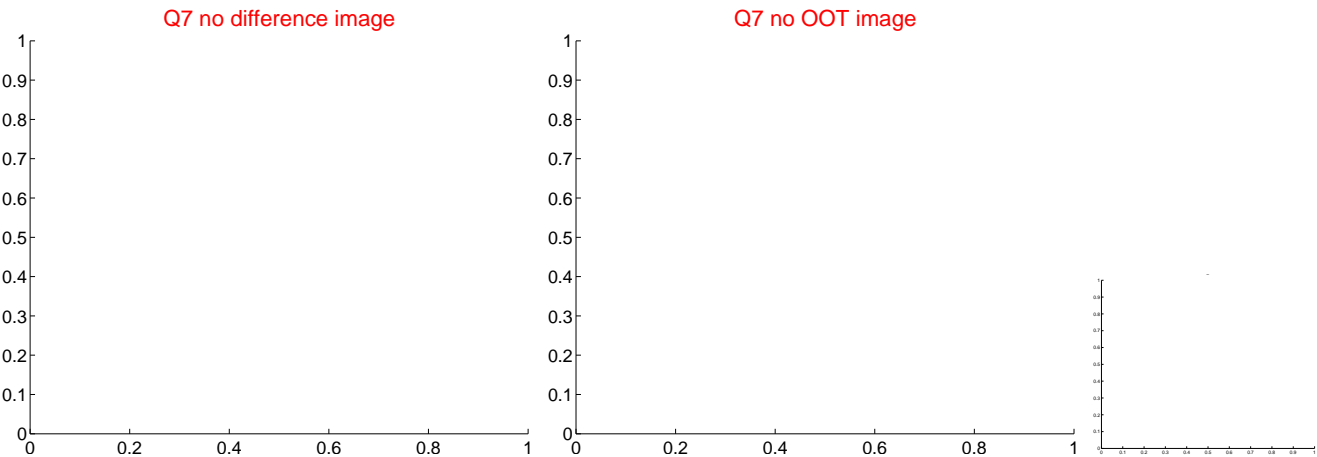
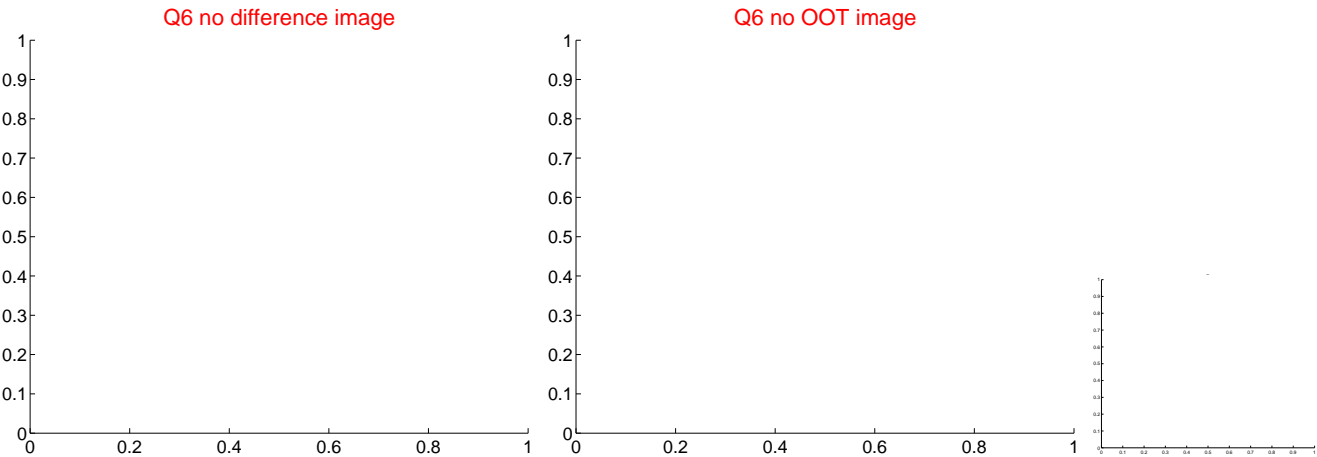
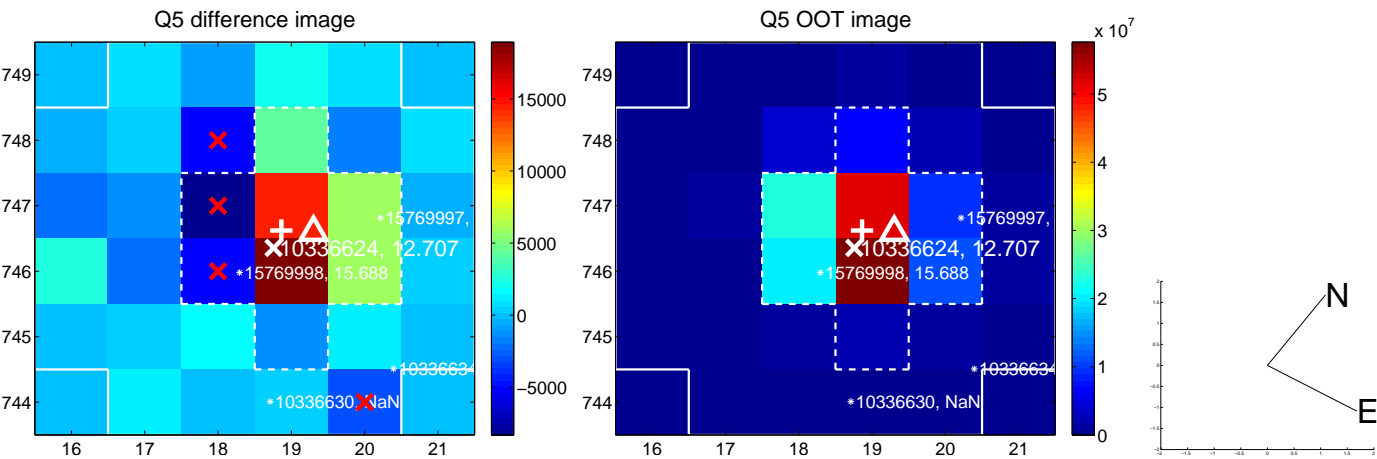


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

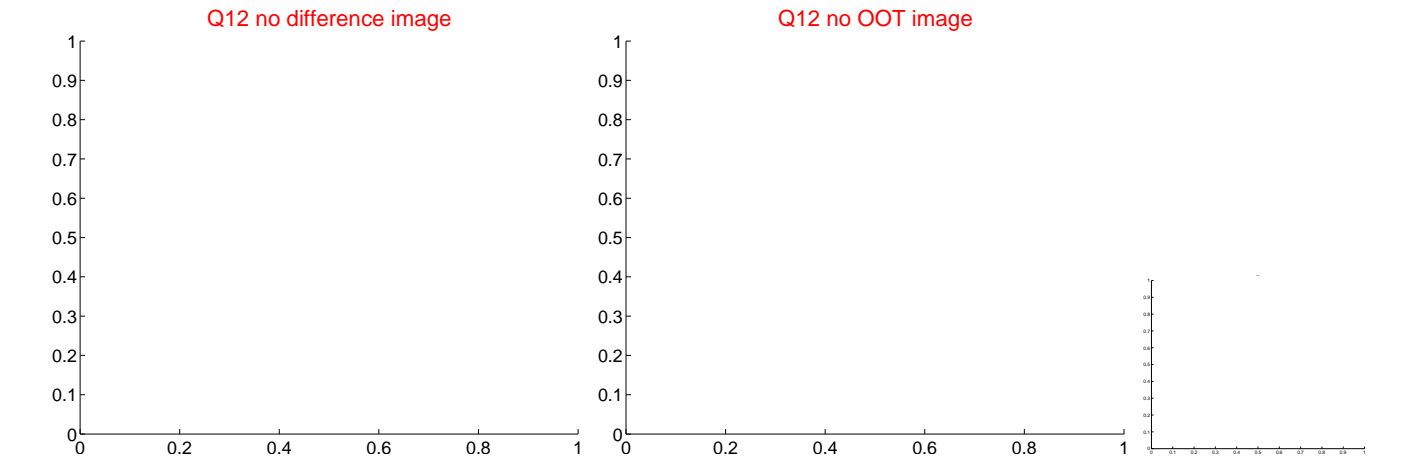
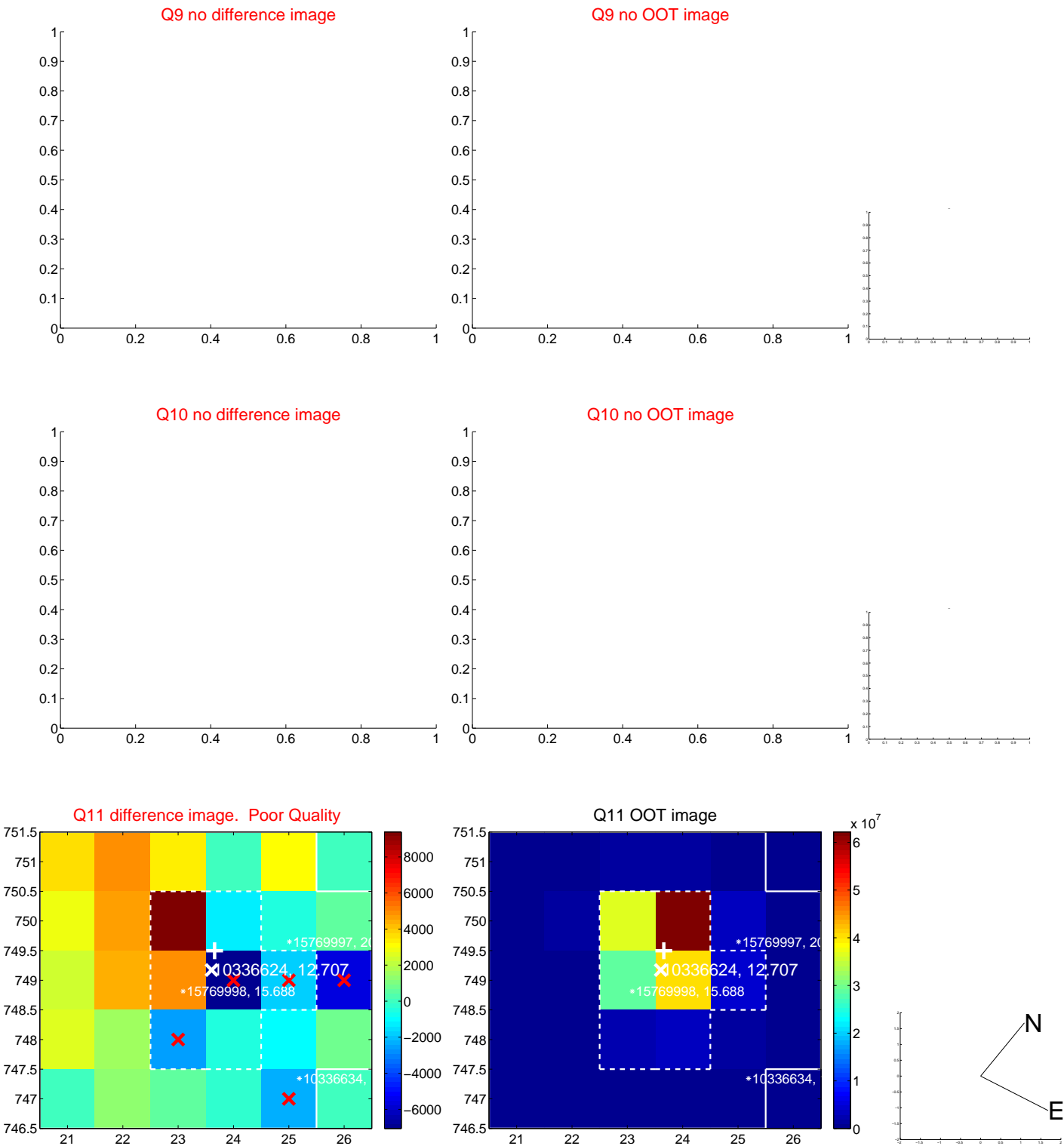
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



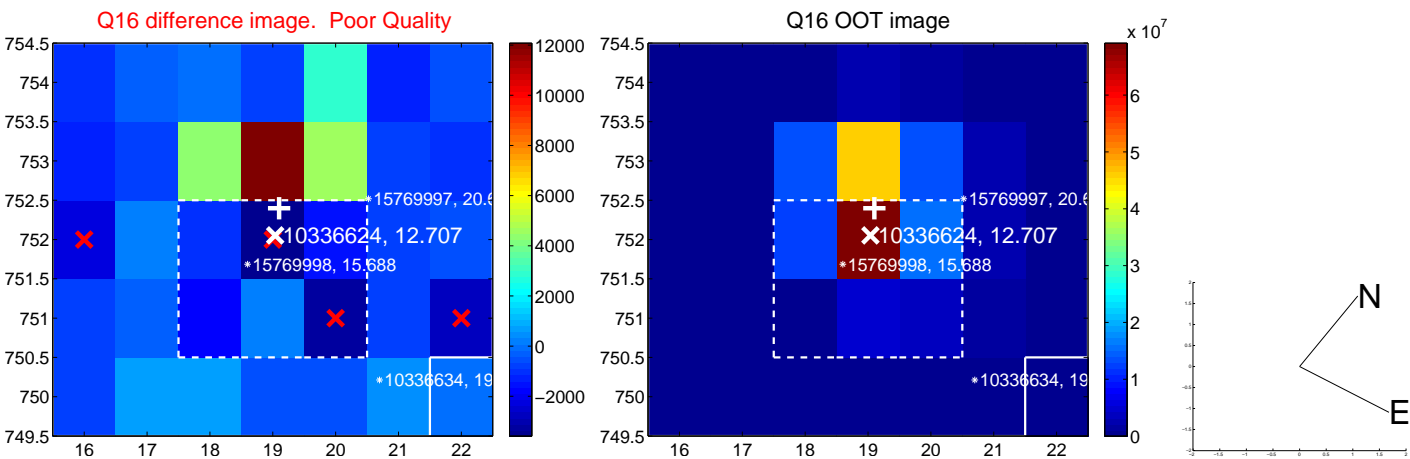
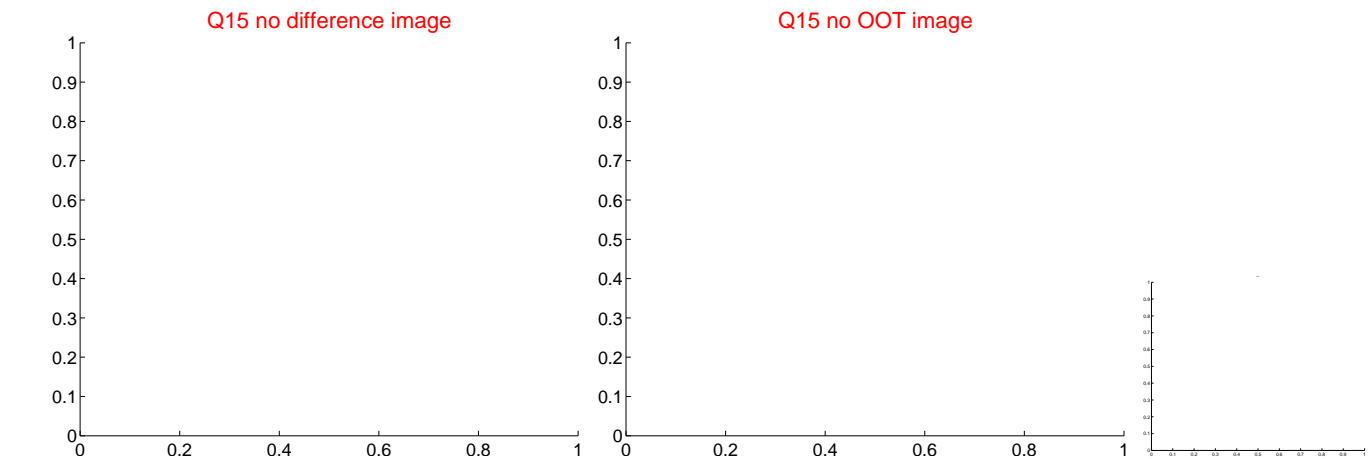
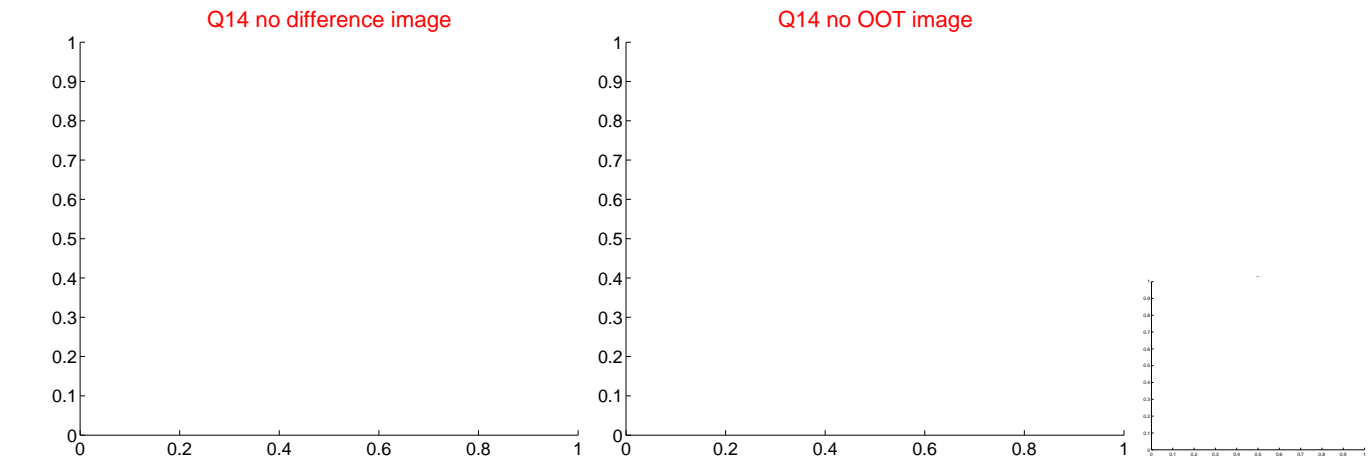
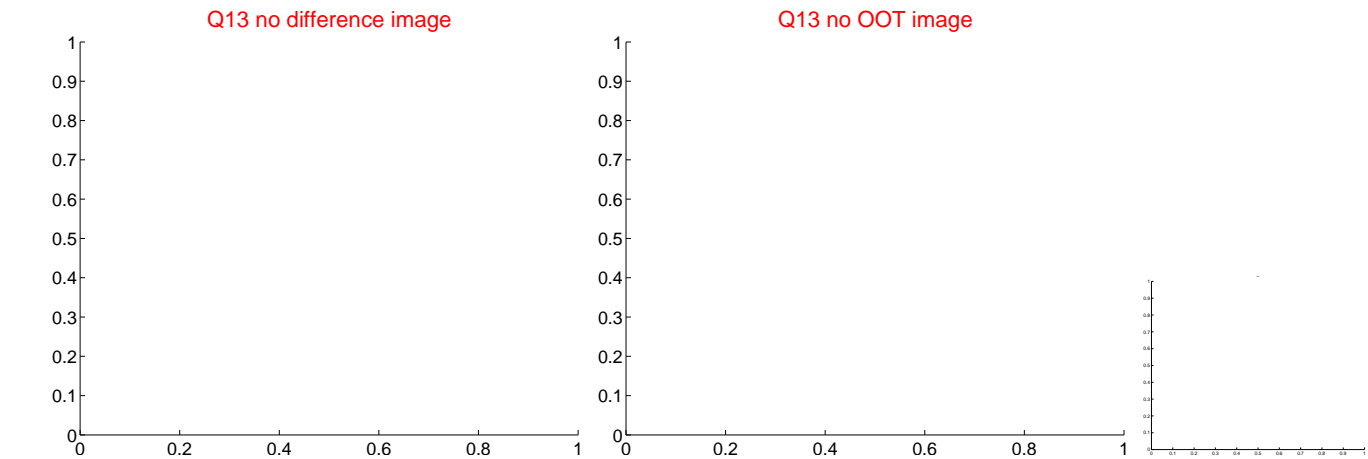
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



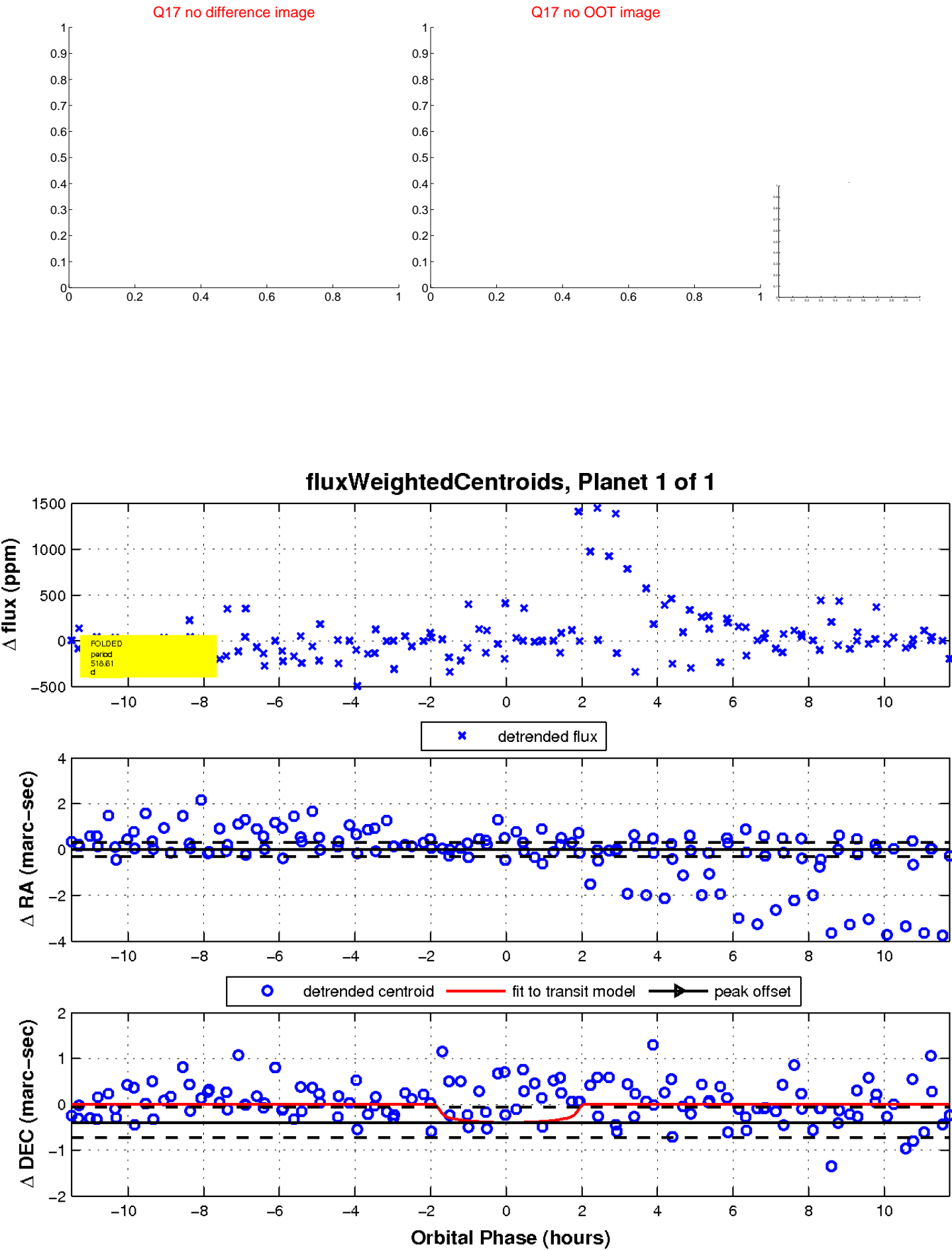
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



Declination