

KIC 010354997

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})
010354997-01	OBS	No	359.537430	460.040650	96.3	6.726	8.5	6.8	2.44	8761	2.72	19.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010354997-01	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

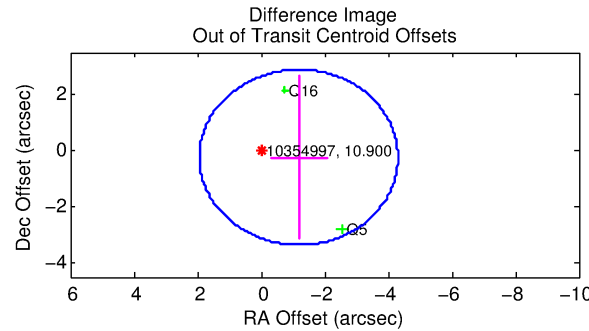
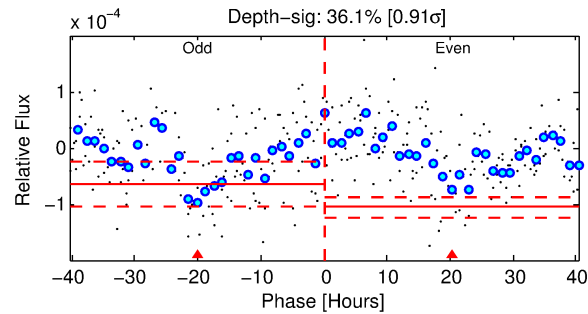
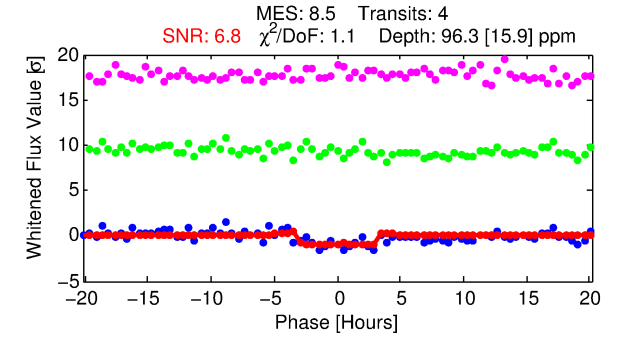
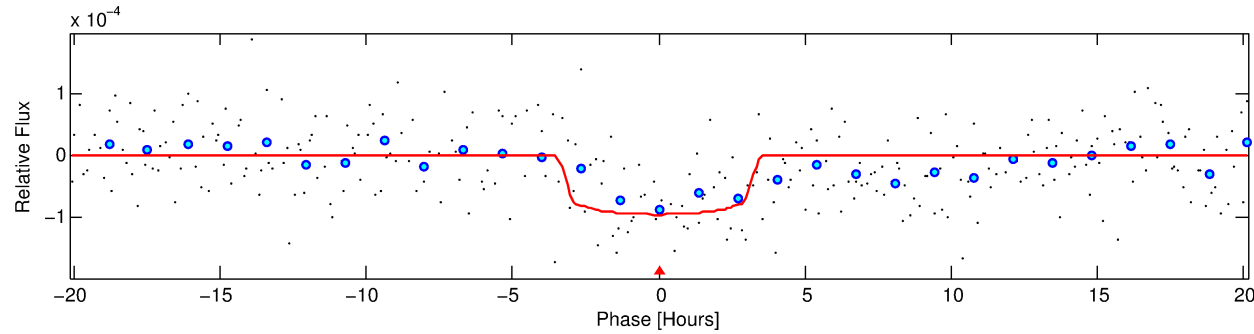
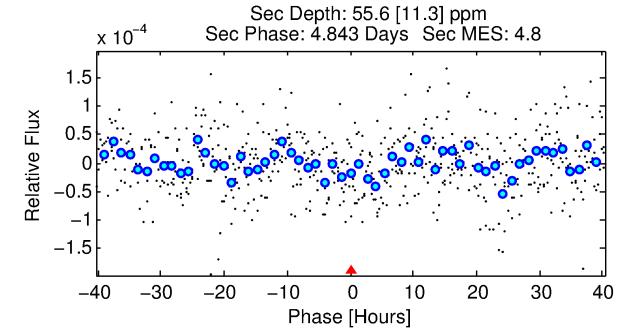
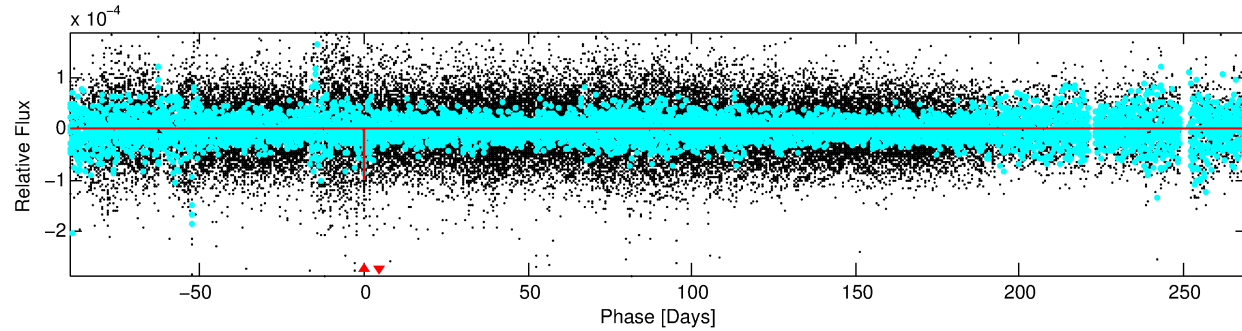
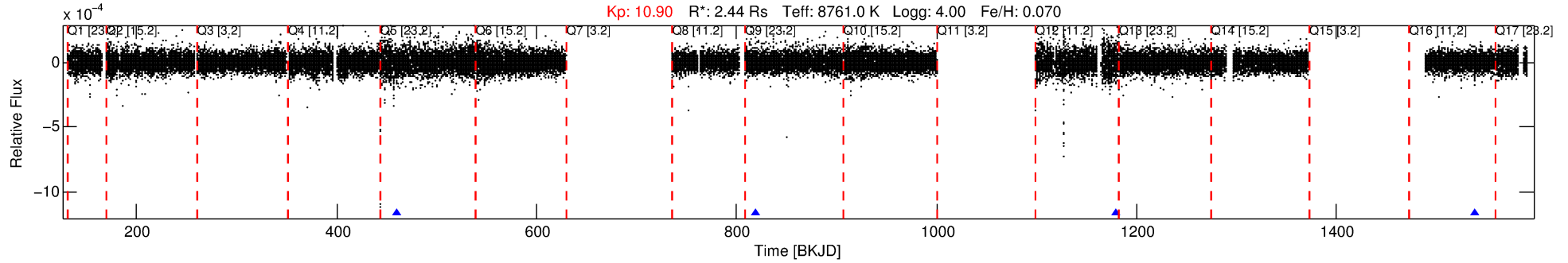
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010354997-01

No Significant Match Found

DV One-Page Summary

KIC: 10354997 Candidate: 1 of 1 Period: 359.537 d



DV Fit Results:

Period = 359.53743 [0.00574] d
Epoch = 460.0407 [0.0121] BKJD
Rp/R* = 0.0102 [0.0025]
a/R* = 207.51 [316.64]
b = 0.87 [0.42]
Seff = 19.09 [7.96]
Teff = 533 [56] K
Rp = 2.72 [1.10] Re
a = 1.2820 [0.3372] AU
Ag = 6796.15 [4384.14] [1.55σ]
Teffp = 7482 [1047] K [6.63σ]

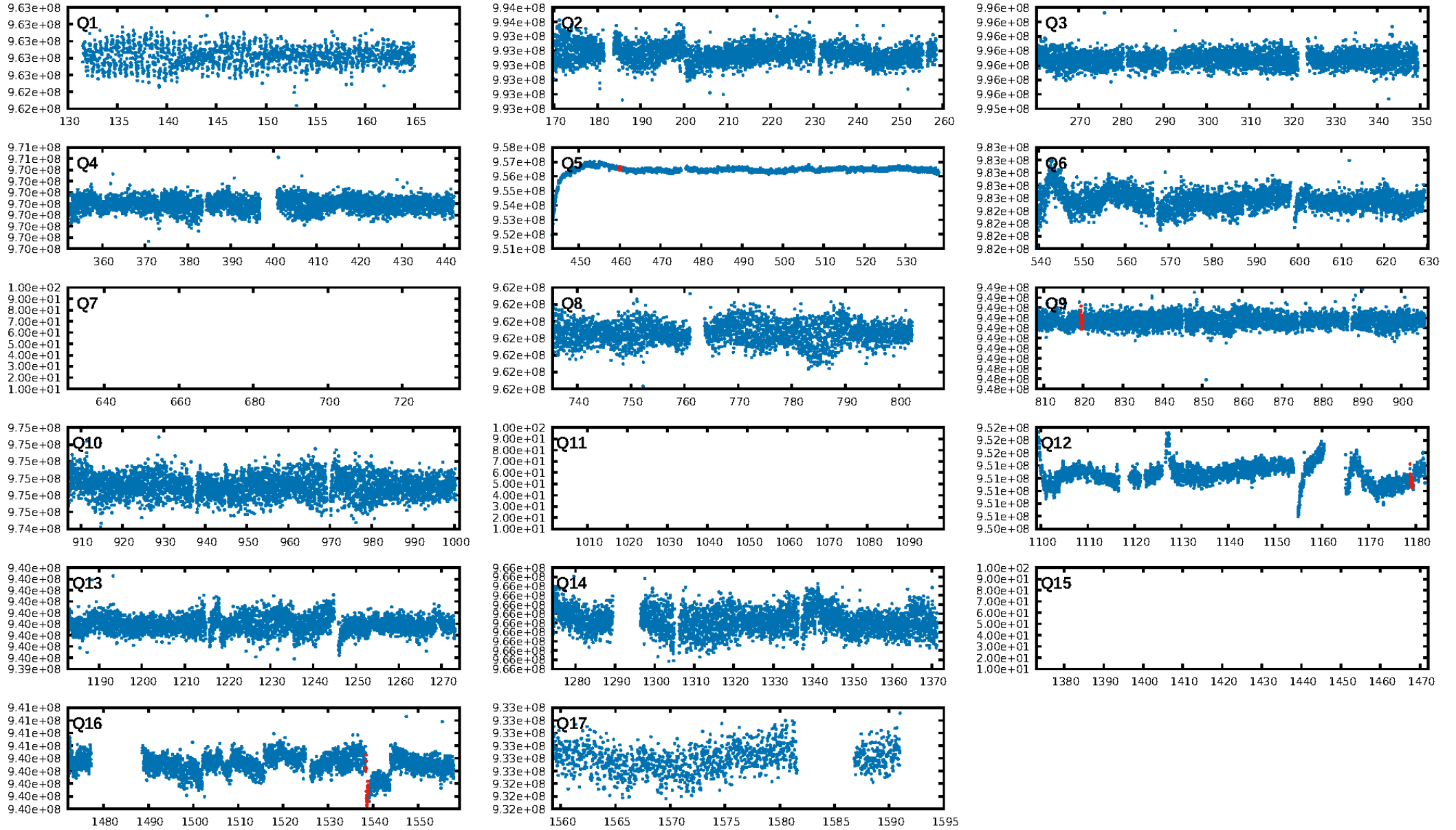
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 86.8%
Bootstrap-pfa: 5.13e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.736
Centroid-sig: 78.1%
Centroid-so: 1.228 arcsec [0.54σ]
OotOffset-rm: 1.207 arcsec [1.16σ]
KicOffset-rm: 2.064 arcsec [1.73σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

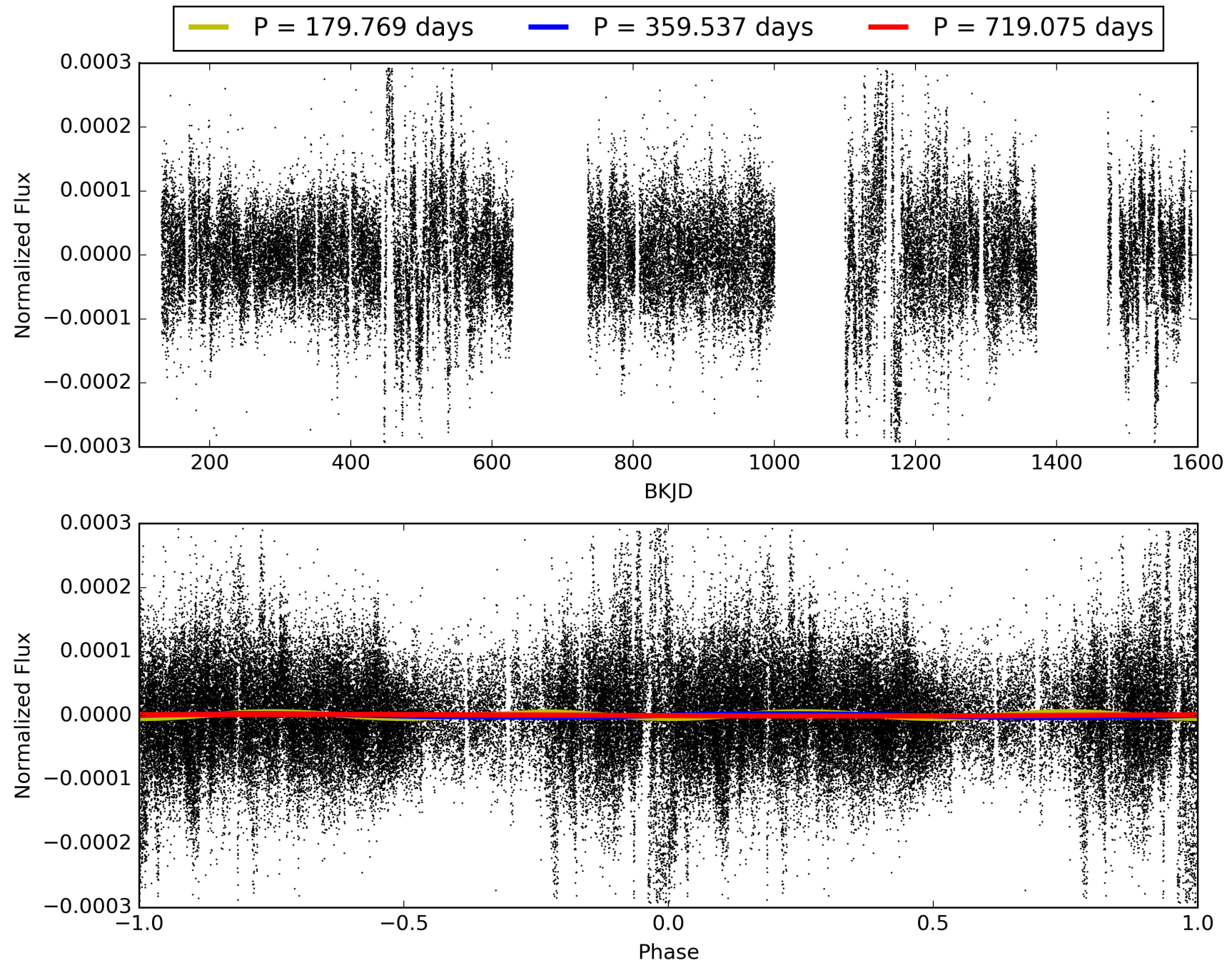
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:22:52 Z

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

TCE 010354997-01, PDC Light Curves

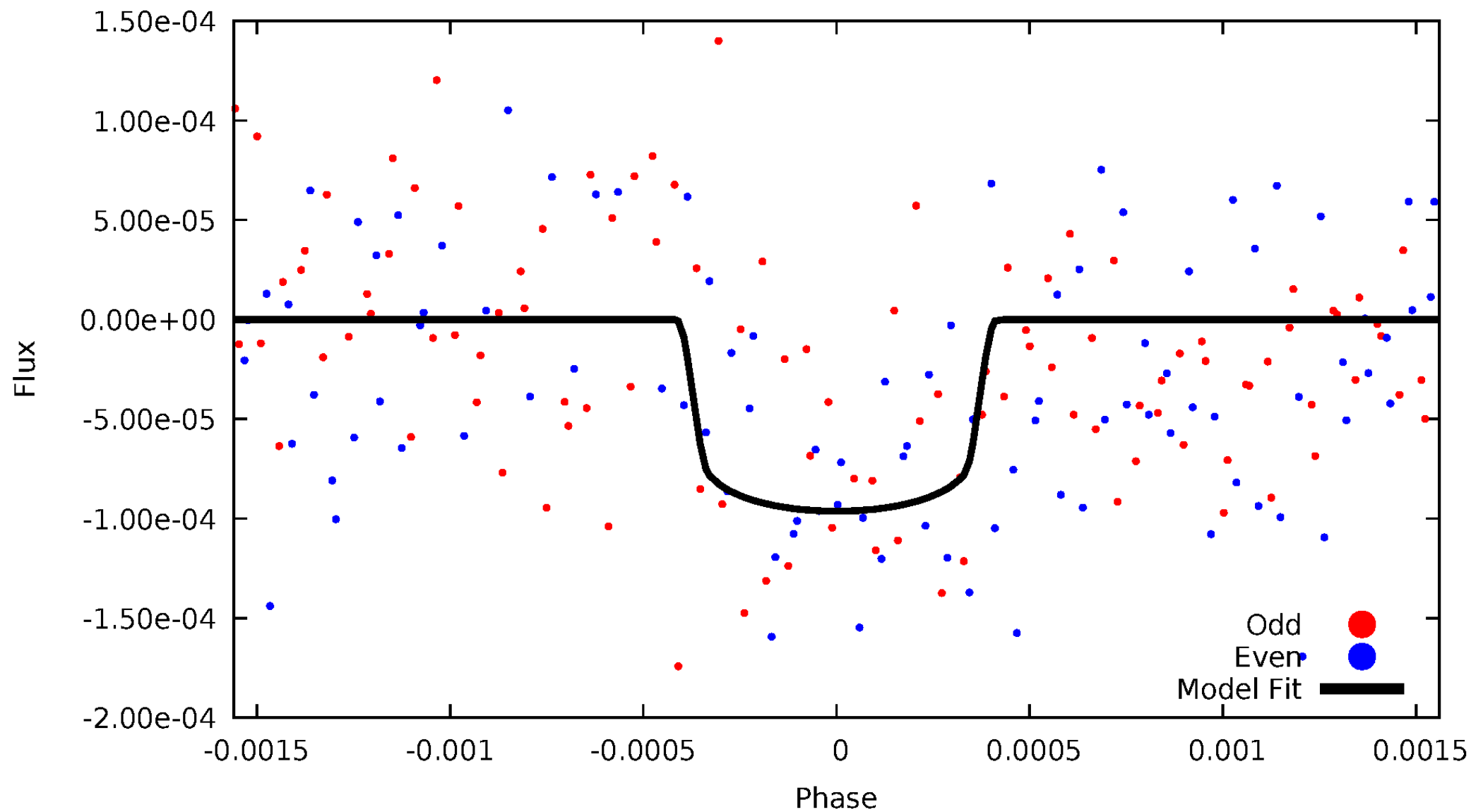


TCE 010354997-01



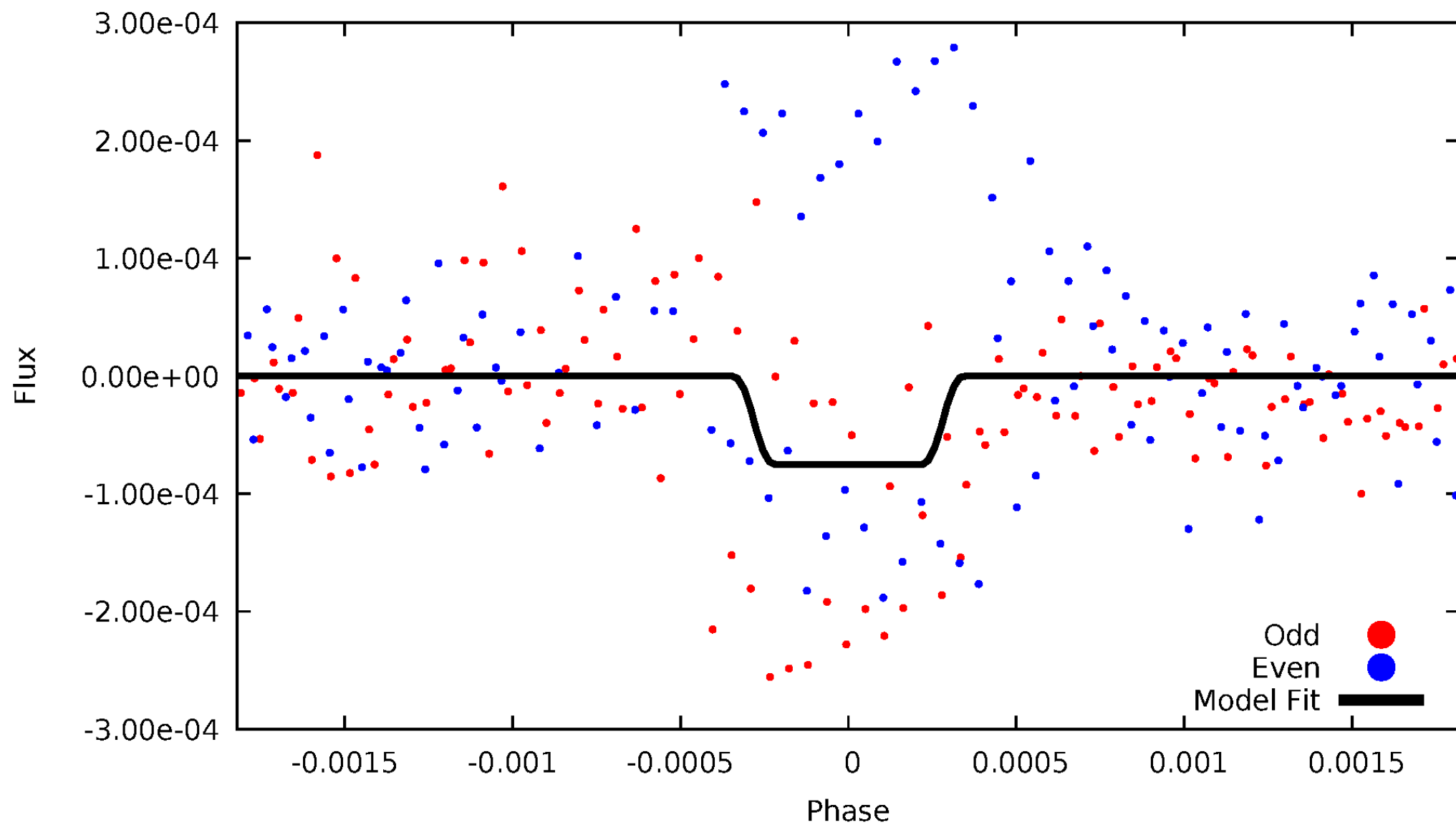
DV Odd/Even

TCE 010354997-01

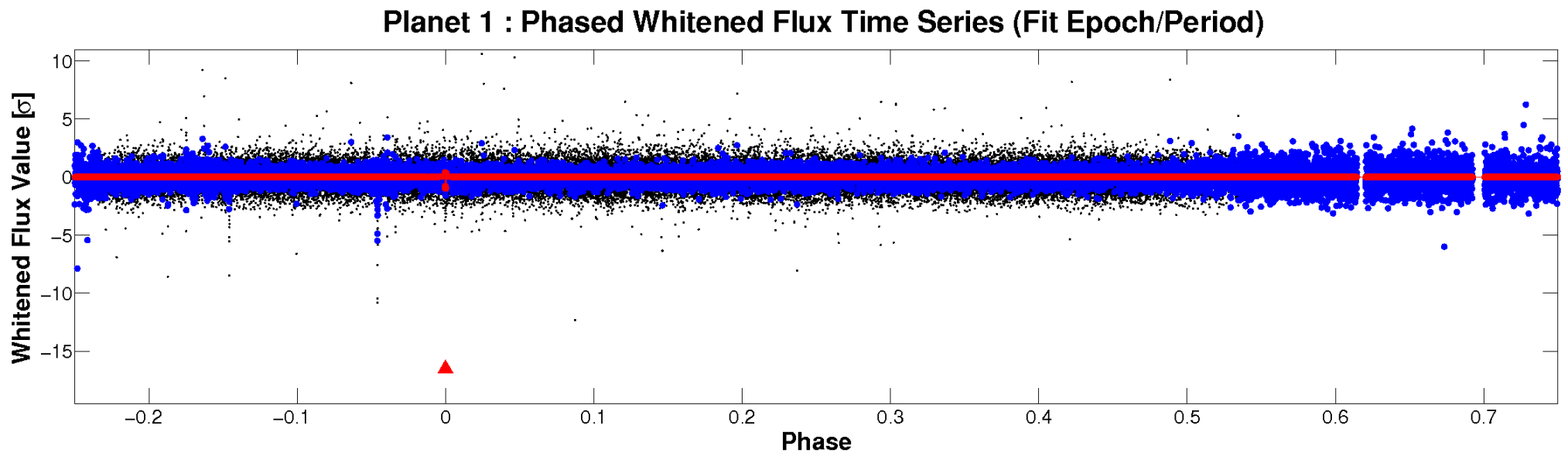
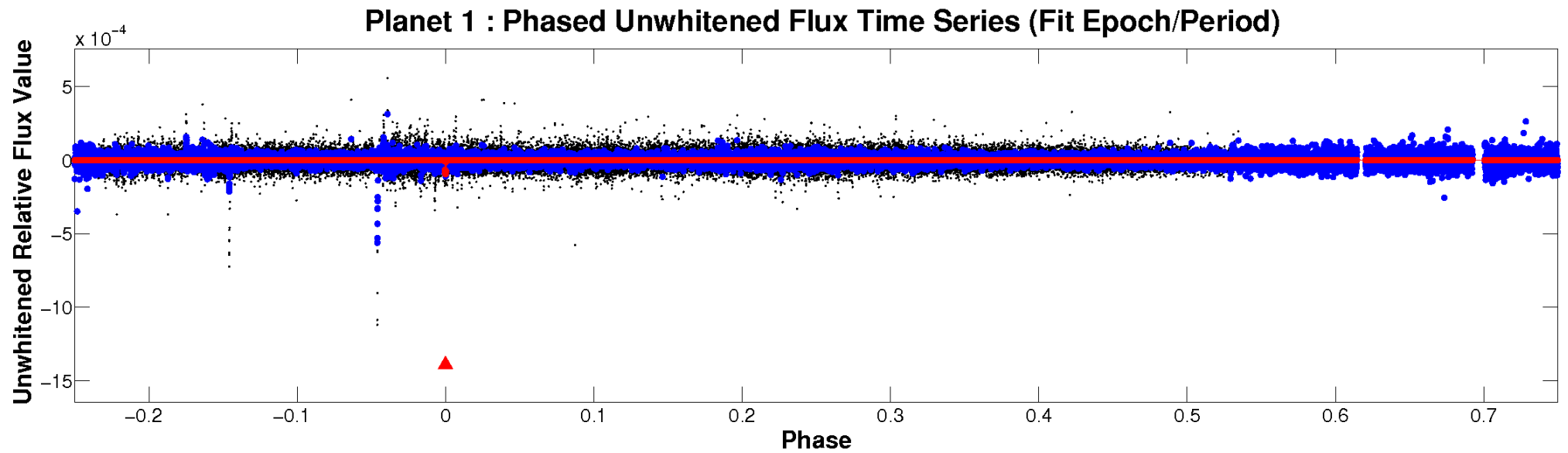


ALT Odd/Even

TCE 010354997-01

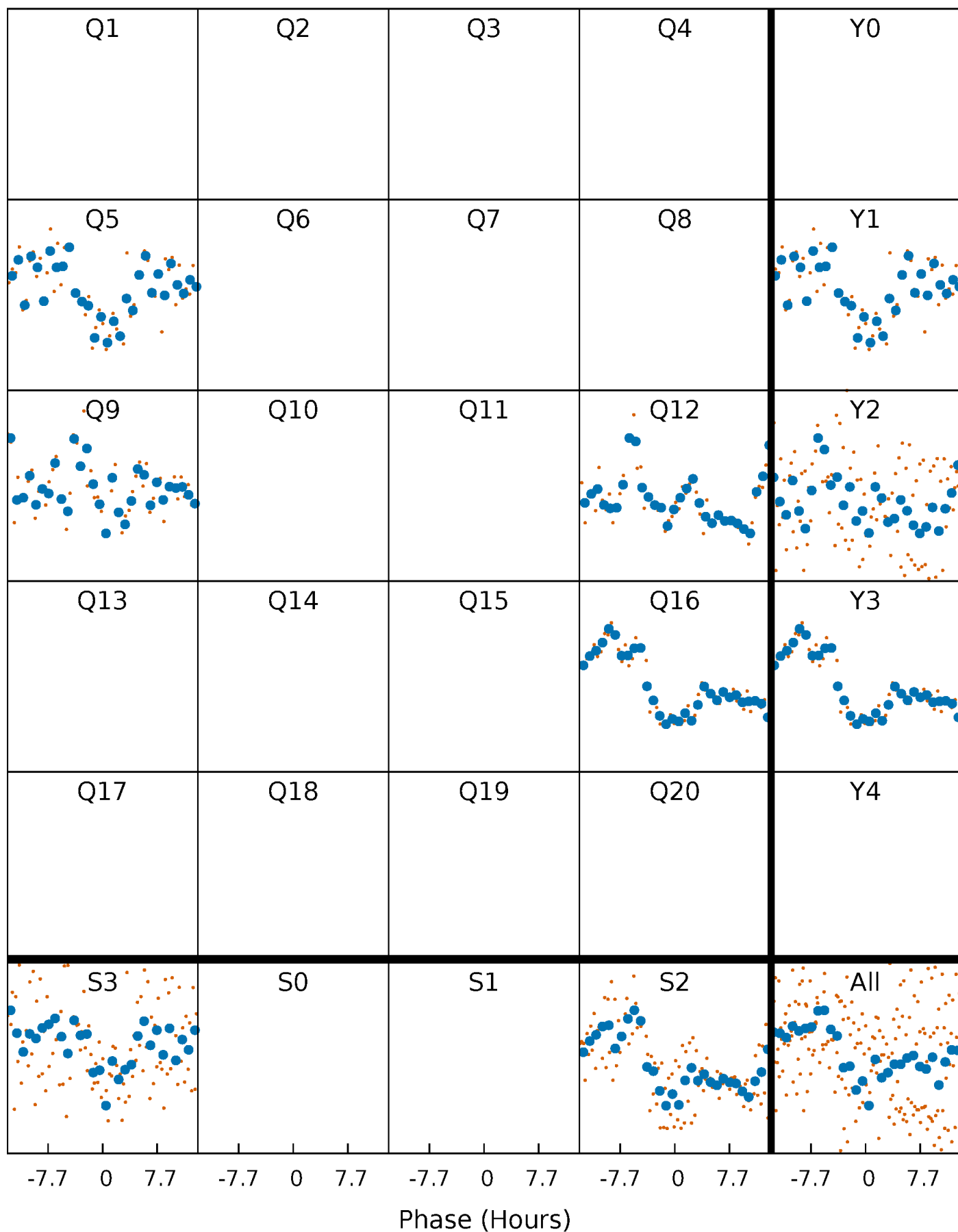


Non-Whitened Vs. Whitened Light Curve



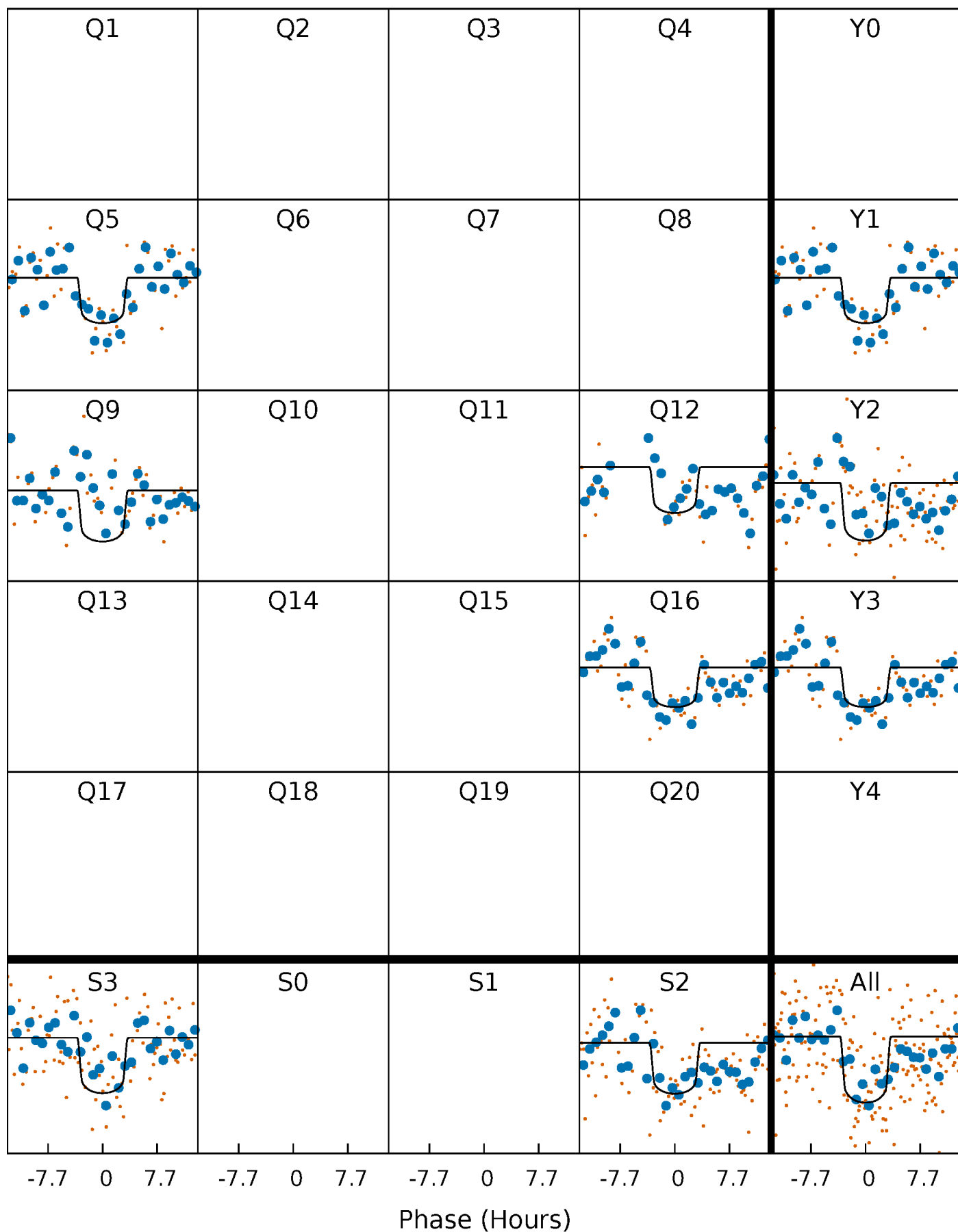
PDC Quarter-Phased Transit Curves

TCE 010354997-01 P=359.537430 Days $T_0=460.040650$ (BKJD)



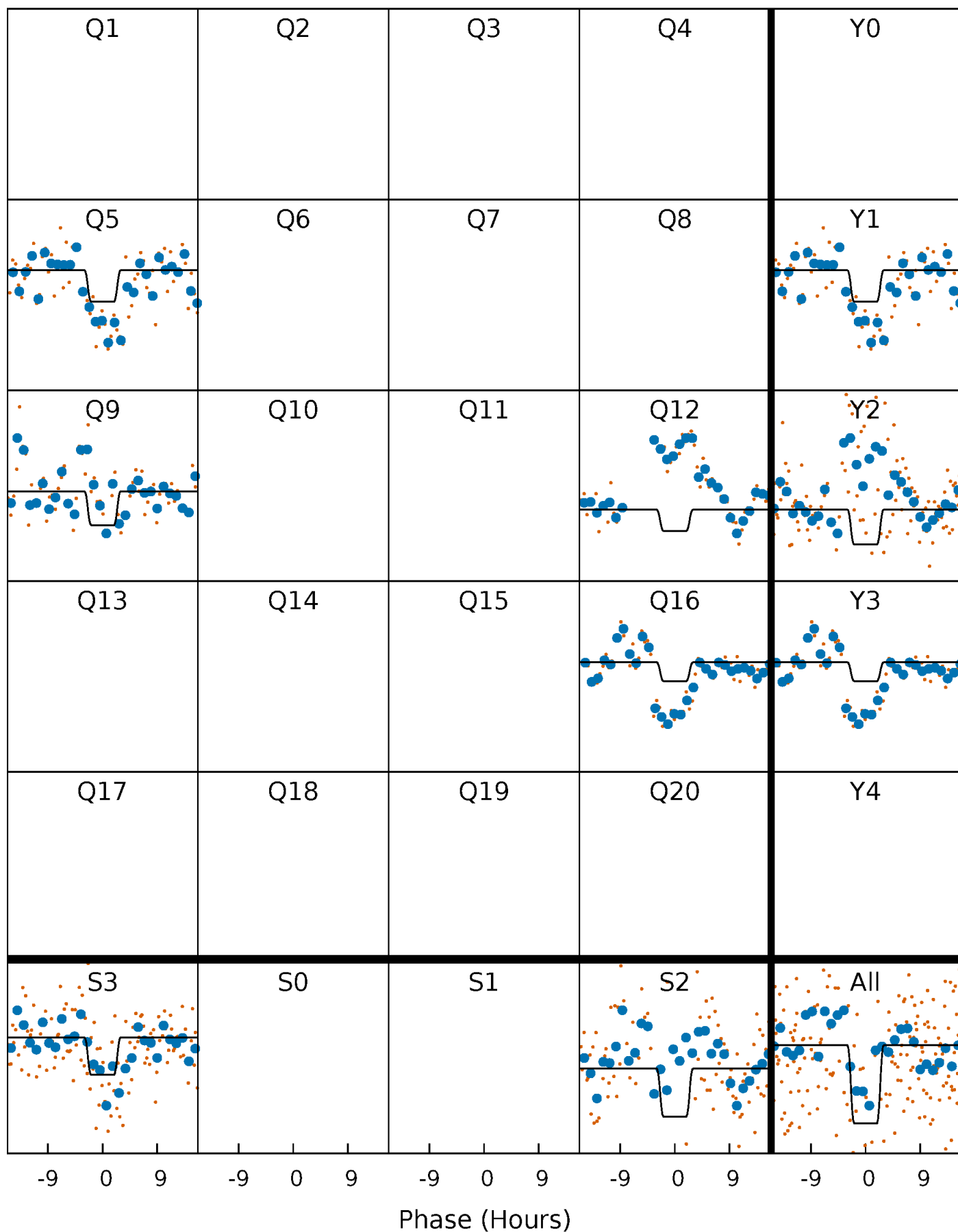
DV Quarter-Phased Transit Curves

TCE 010354997-01 $P=359.537430$ Days $T_0=460.040650$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

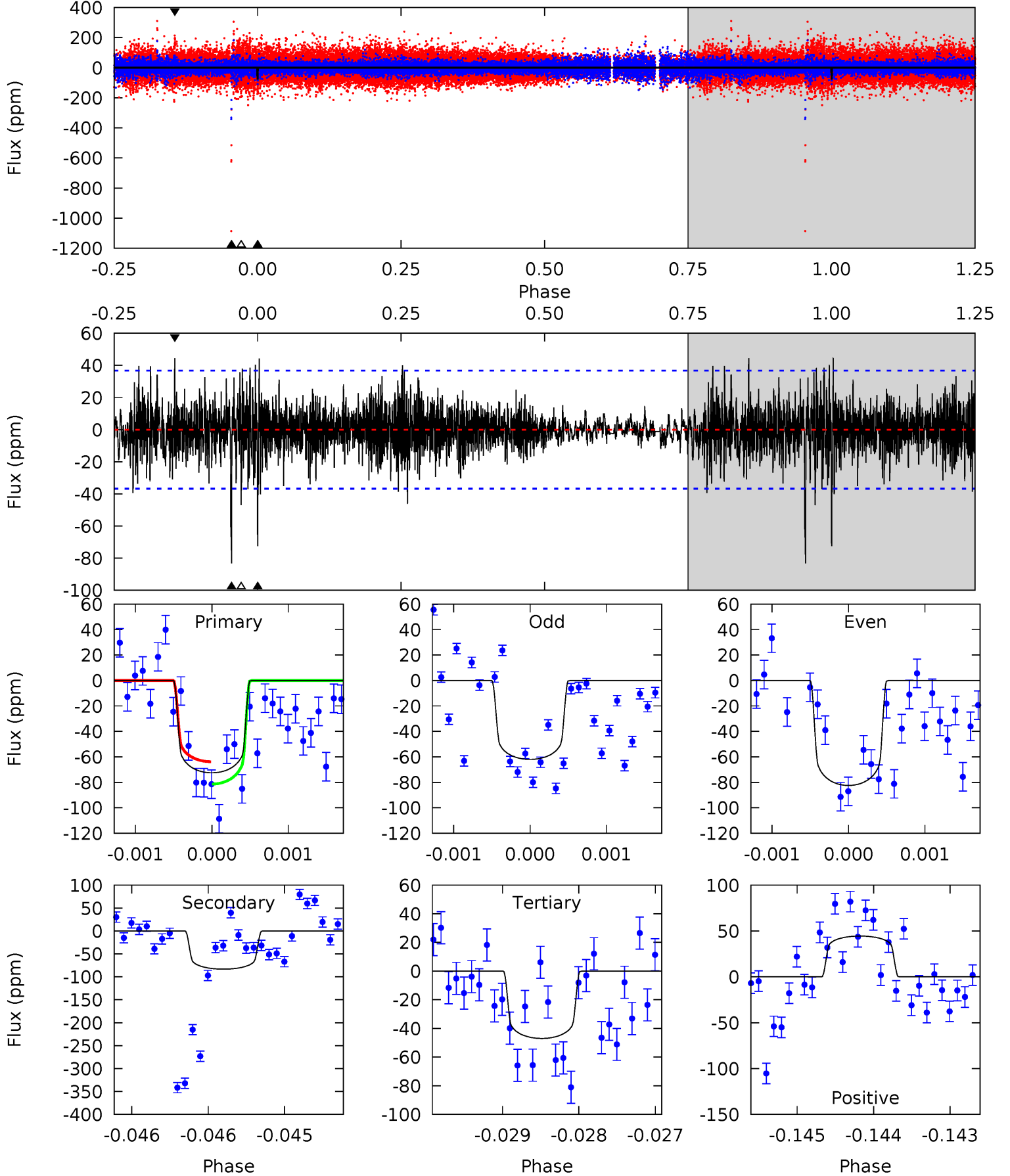
TCE 010354997-01 $P=359.542111$ Days $T_0=460.024757$ (BKJD)



DV Model-Shift Uniqueness Test

010354997-01, $P = 359.537430$ Days, $E = 100.503220$ Days

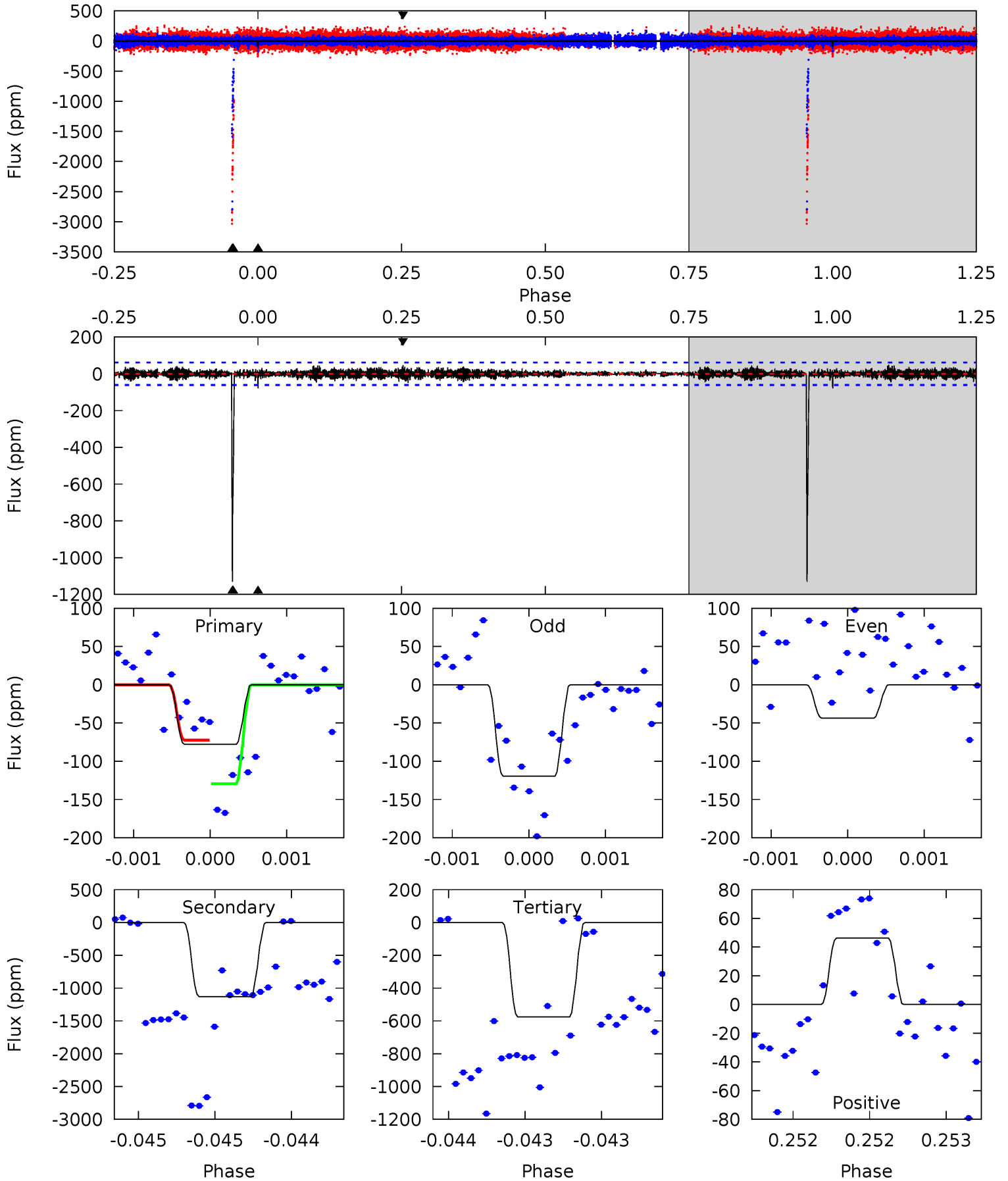
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	12.4	7.02	6.64	5.48	3.34	1.63	3.81	4.19	5.41	5.79	1.52	0.86	0.35	1.30



Alt Model-Shift Uniqueness Test

010354997-01, P = 359.542111 Days, E = 100.482646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.06	102.5	52.2	4.20	5.53	3.41	2.15	-45.2	2.87	50.2	98.3	2.92	0.49	0.04	2.43



Stellar Parameters For KIC 010354997

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8761^{+240}_{-412}	$4.001^{+0.198}_{-0.144}$	$0.070^{+0.250}_{-0.600}$	$2.438^{+0.714}_{-0.785}$	$2.172^{+0.321}_{-0.596}$	$0.211^{+0.279}_{-0.090}$
	+3%/-5%	+5%/-4%	+357%/-857%	+29%/-32%	+15%/-27%	+132%/-42%
Source	KIC0	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 010354997-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-83 ± 7	$2.59^{+0.87}_{-0.71}$	735^{+55}_{-60}	8108^{+1921}_{-1129}	10943^{+10006}_{-4619}
Alt.	-1130 ± 11	$2.16^{+0.83}_{-0.64}$	732^{+54}_{-58}	33305^{+20771}_{-10133}	$210731^{+218140}_{-99420}$

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

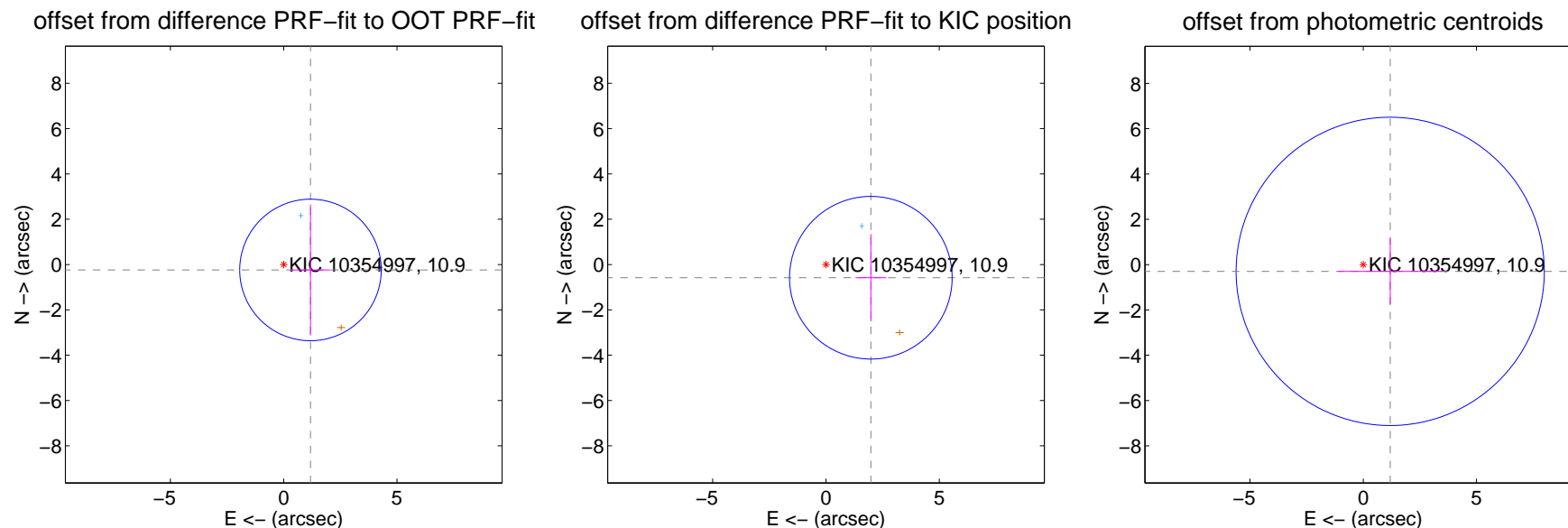
DV Centroid Data

Supplemental centroid analysis for 010354997-01. **Kepler magnitude: 10.90.** Transit SNR 6.79

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.94 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.207 ± 1.041	1.16	-1.183 ± 0.888	-0.239 ± 2.886
PRF-fit source offset from KIC position	2.064 ± 1.196	1.73	-1.981 ± 0.683	-0.582 ± 1.924
photometric centroid source offset	1.23 ± 2.27	0.54	-1.19 ± 2.31	-0.30 ± 1.48

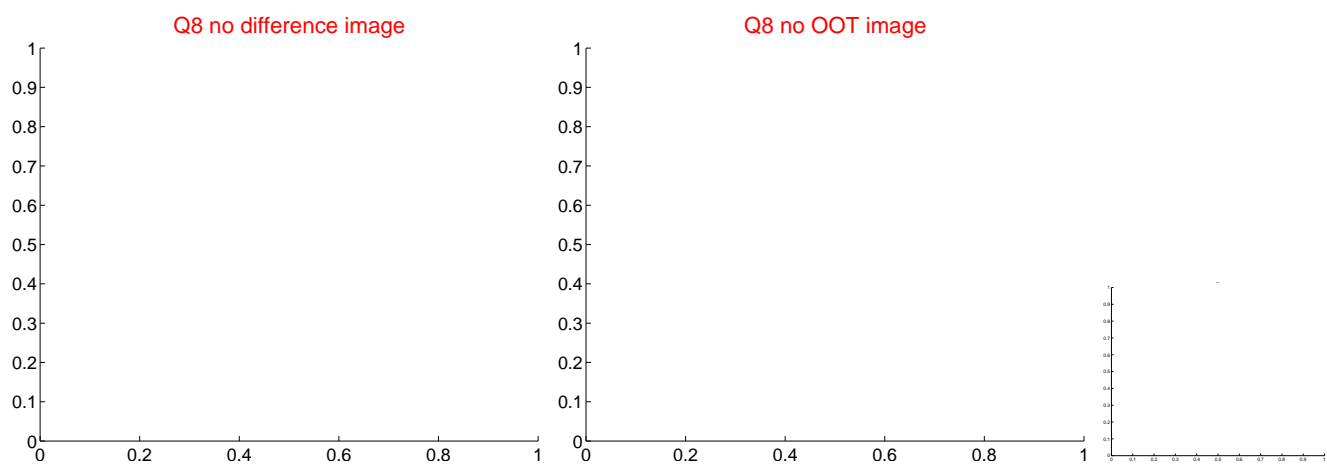
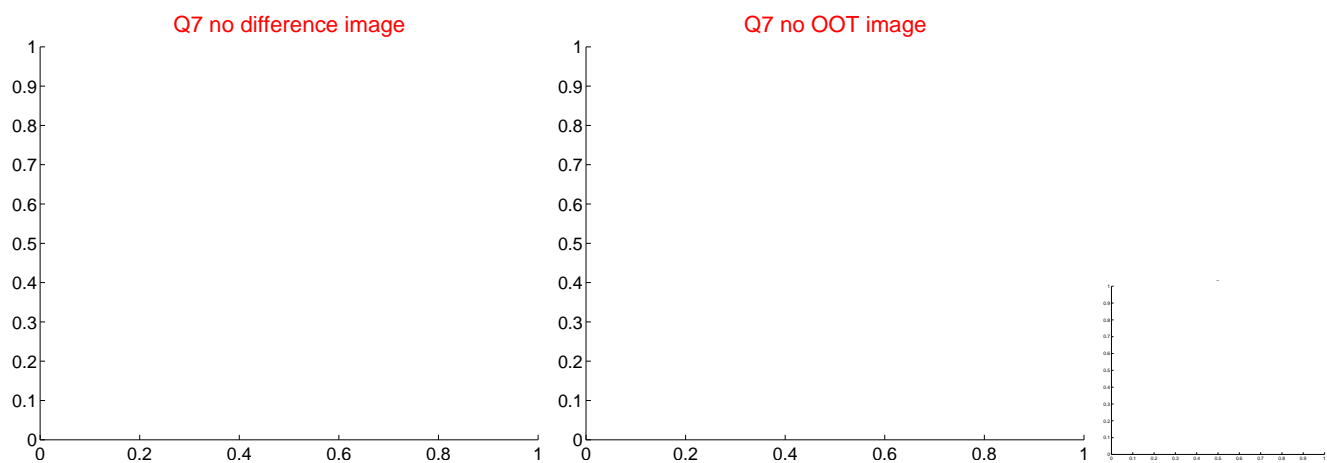
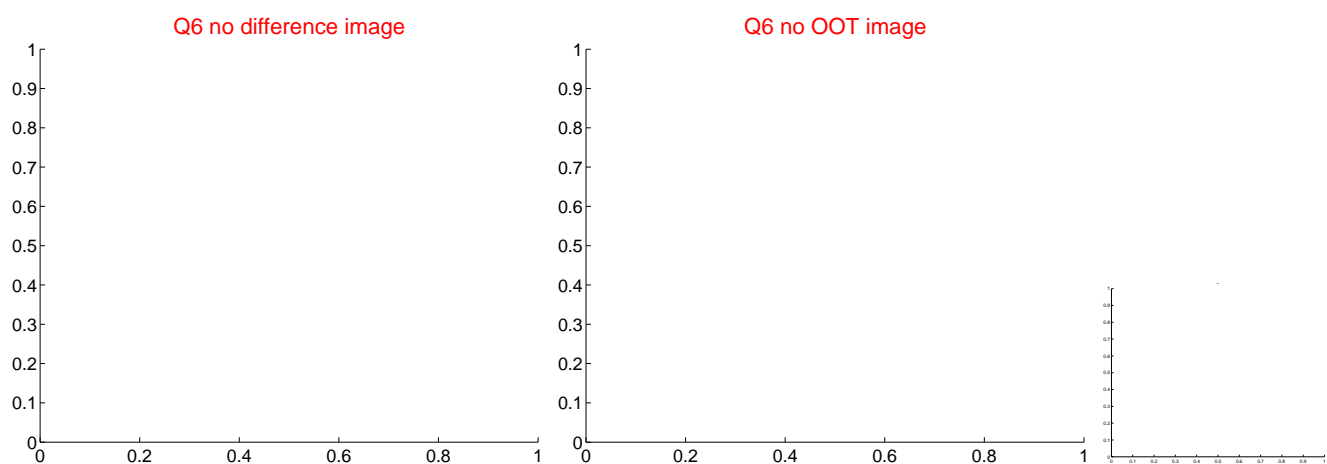
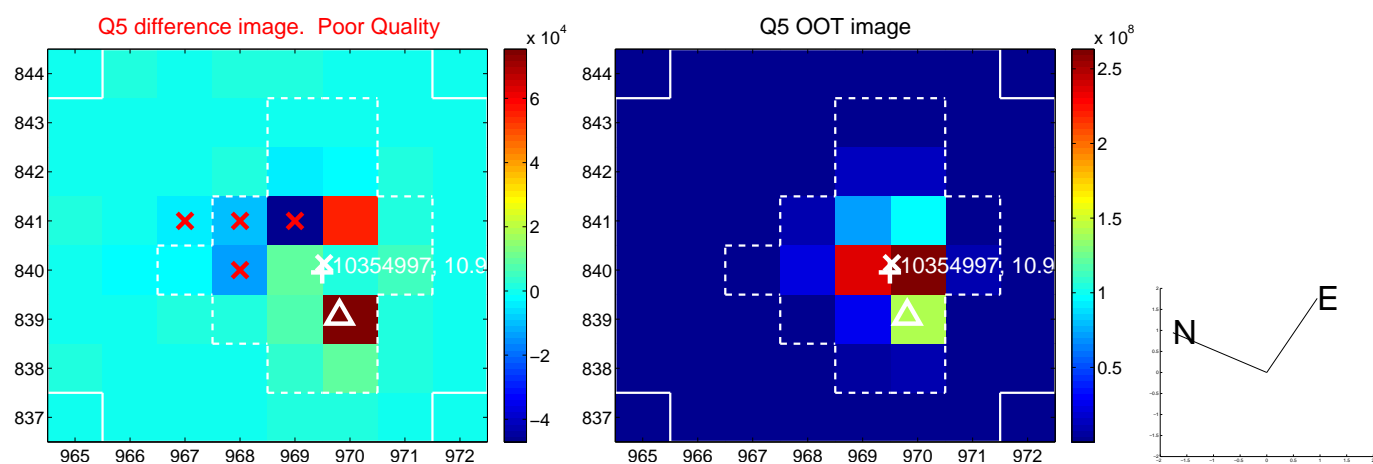


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

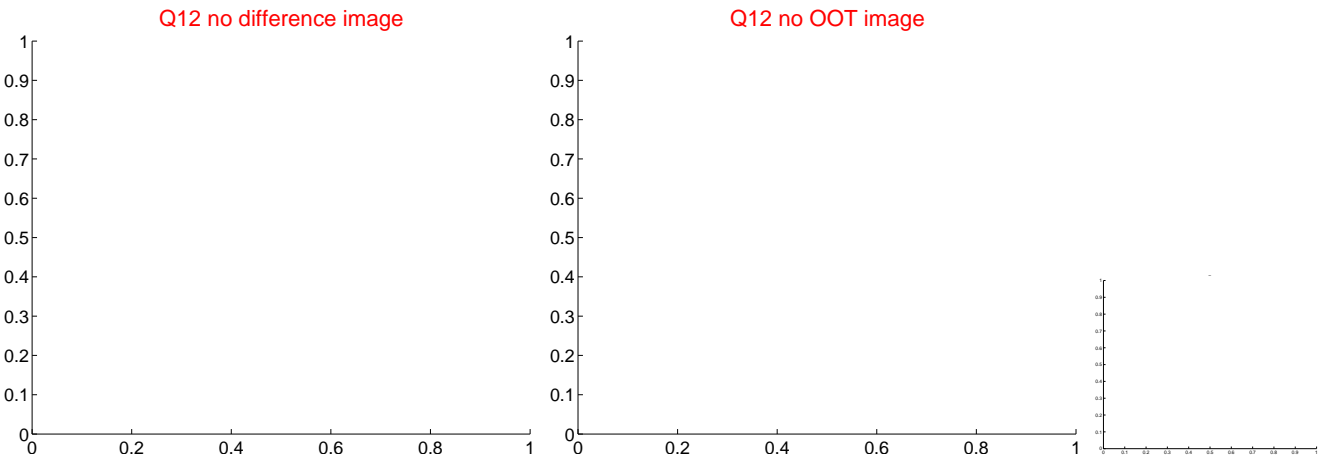
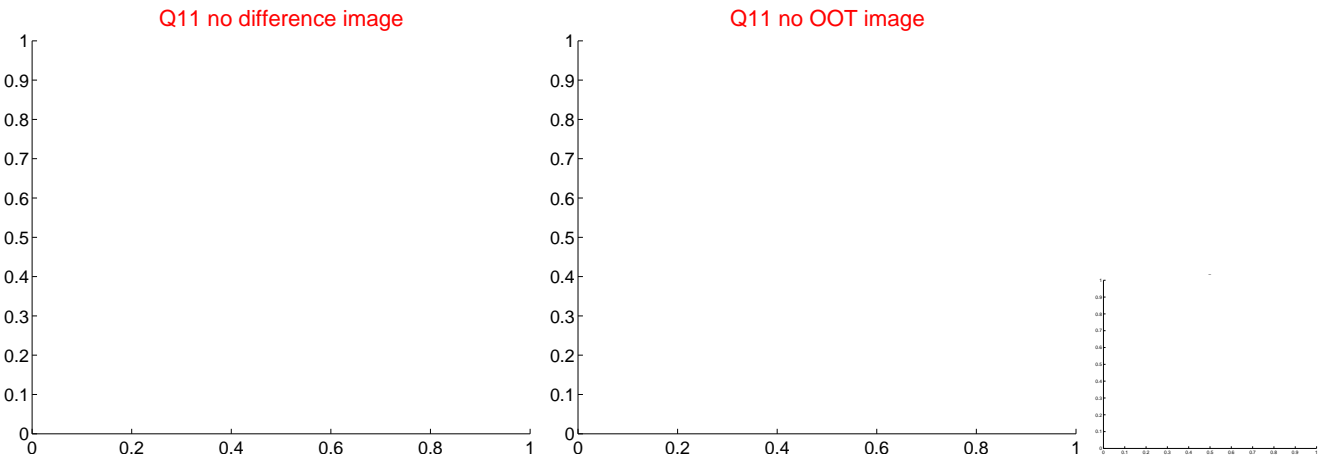
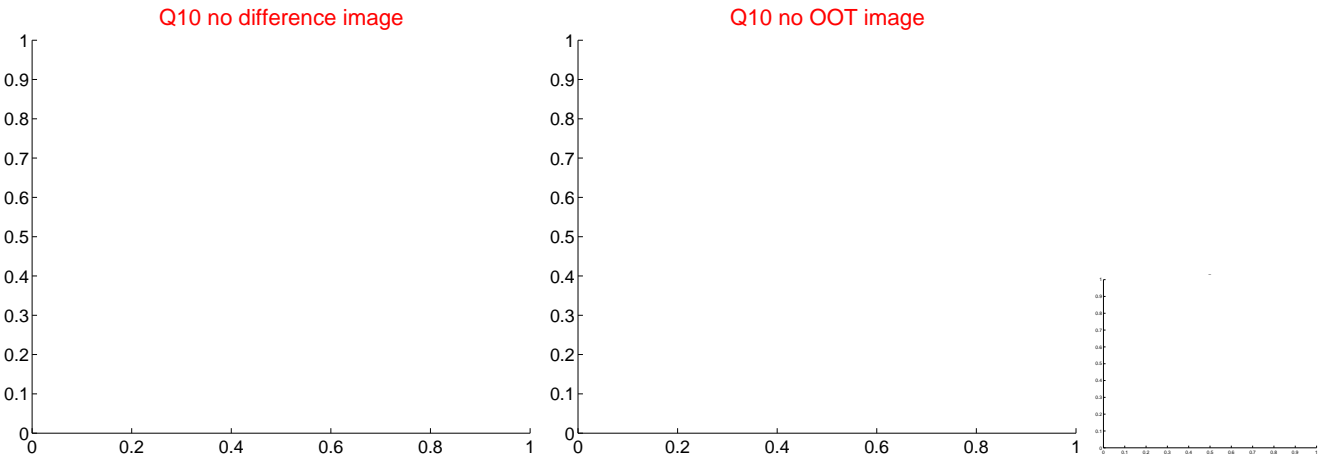
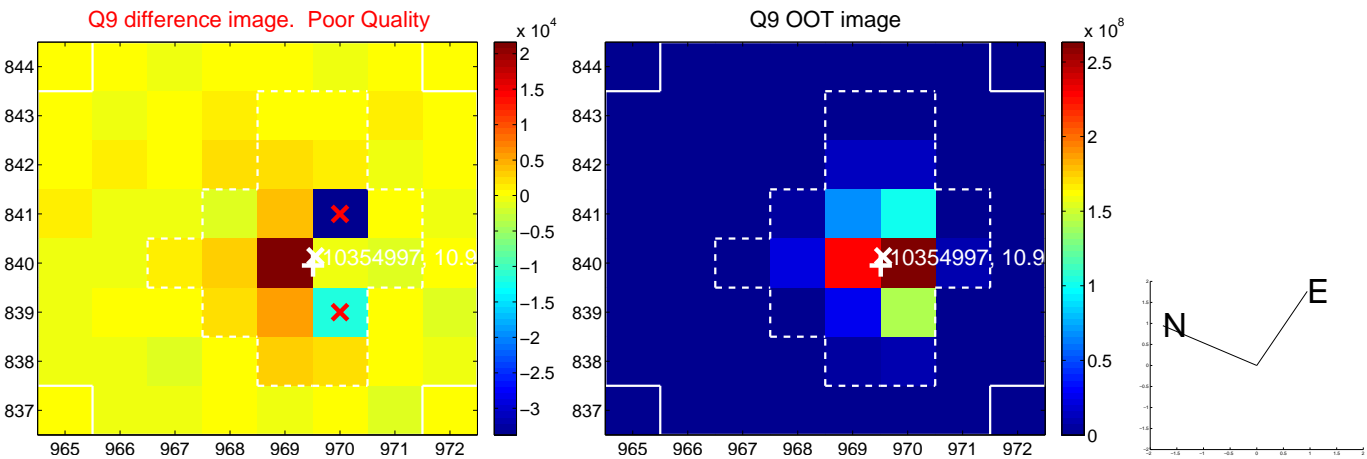
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



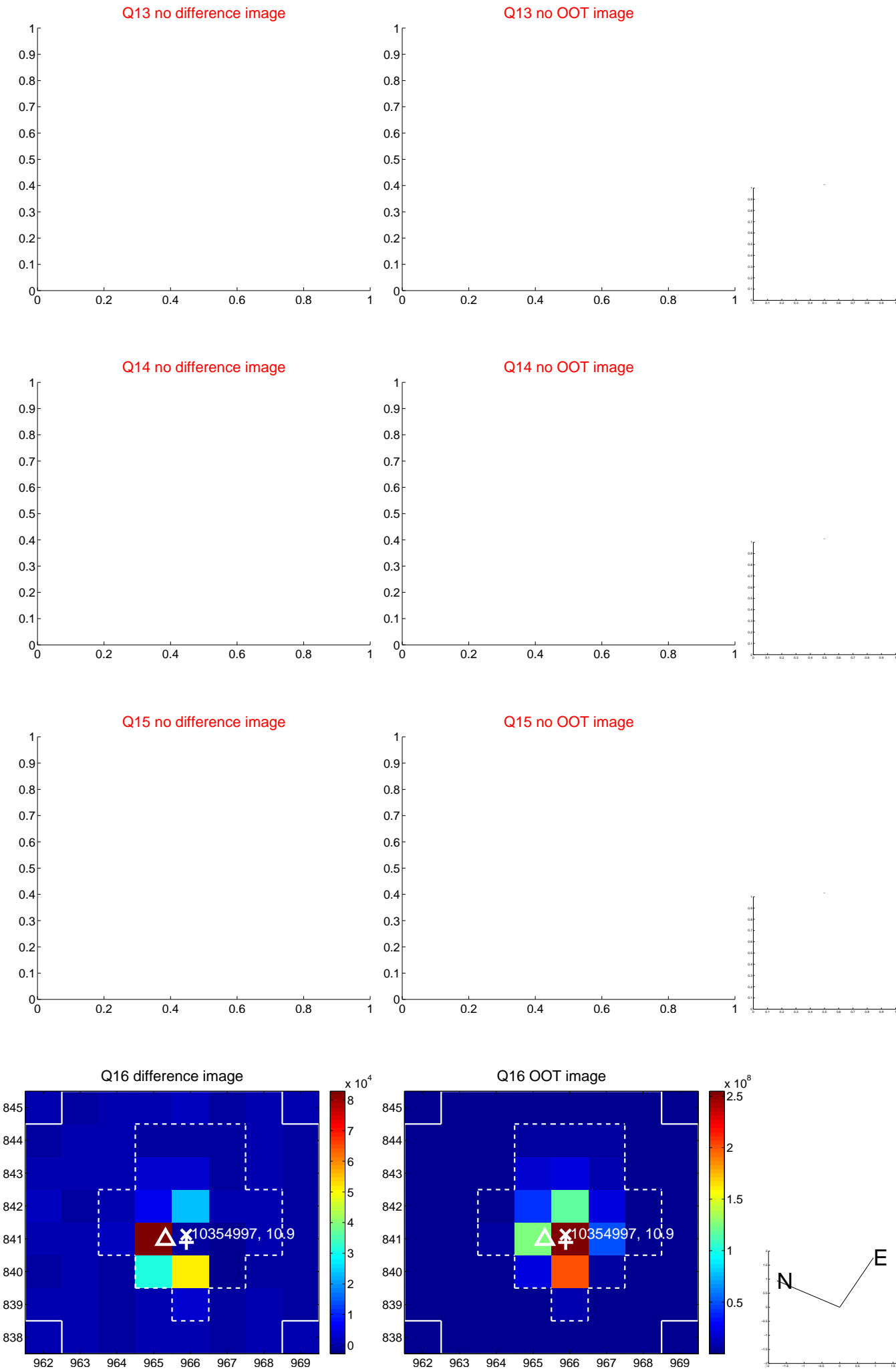
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



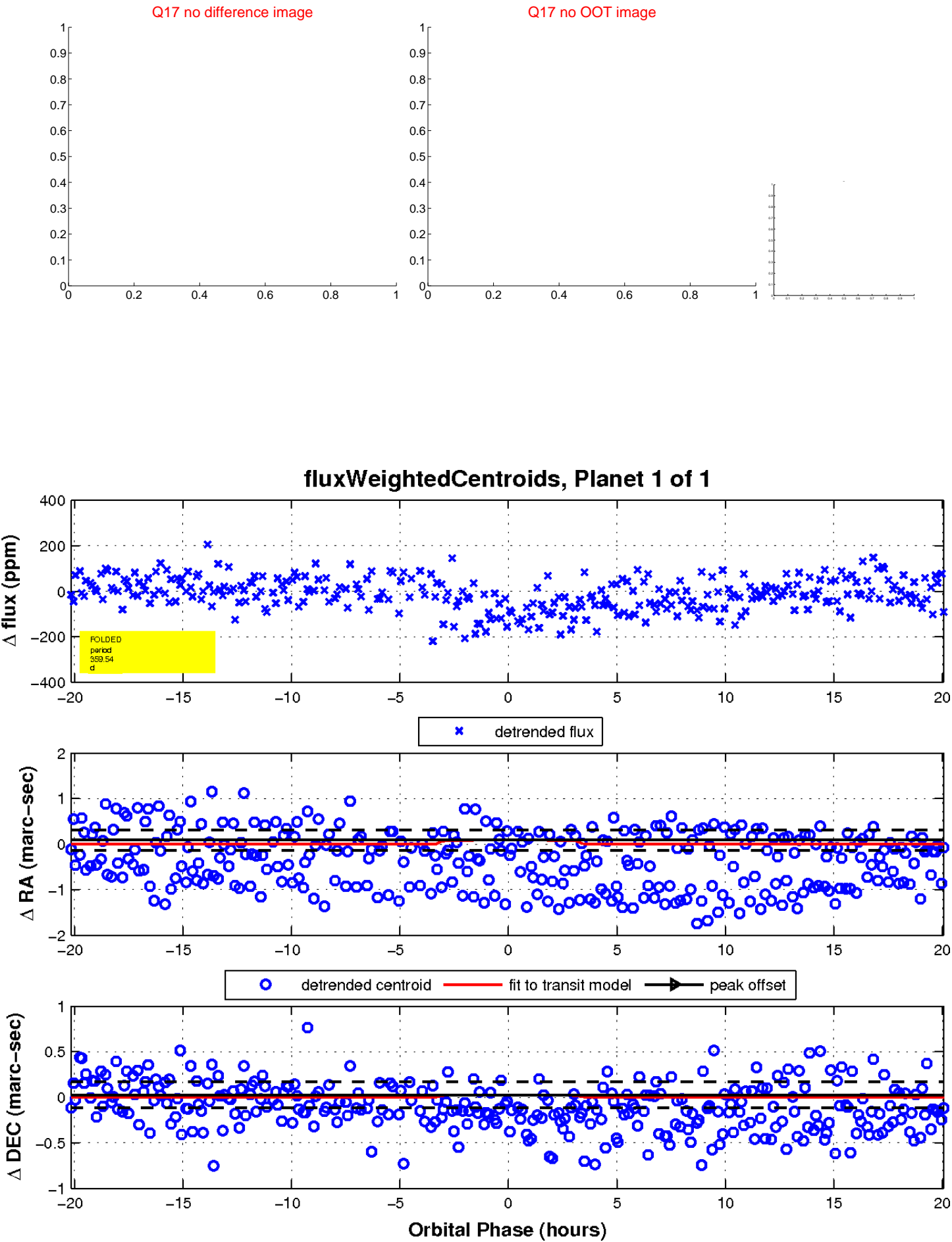
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

