

KIC 010933897

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})
010933897-01	OBS	No	193.538827	300.725547	253.6	21.364	8.2	7.8	0.69	5421	1.15	1.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010933897-01	OBS	FP	0.01	1	0	0	0	ALL_TRANS_CHASES—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.

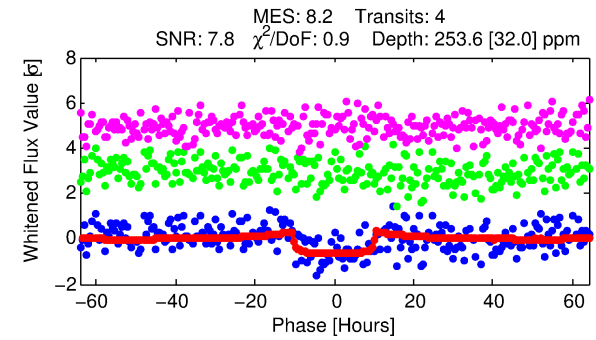
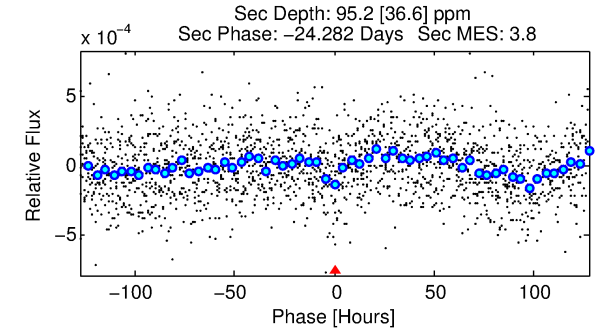
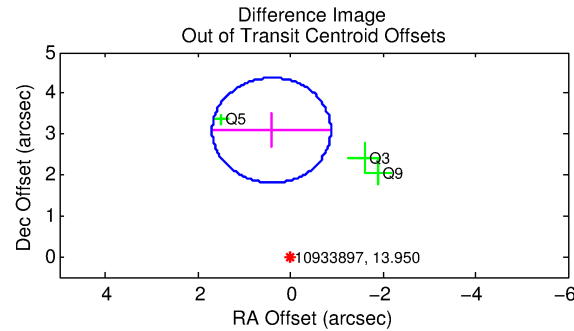
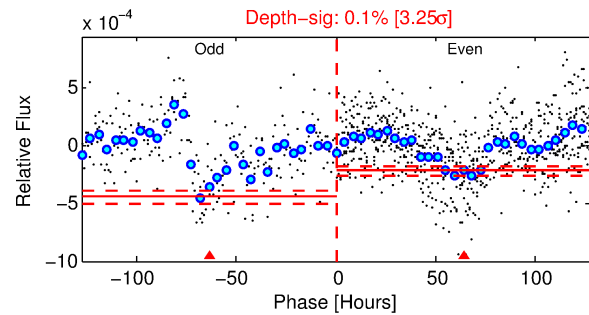
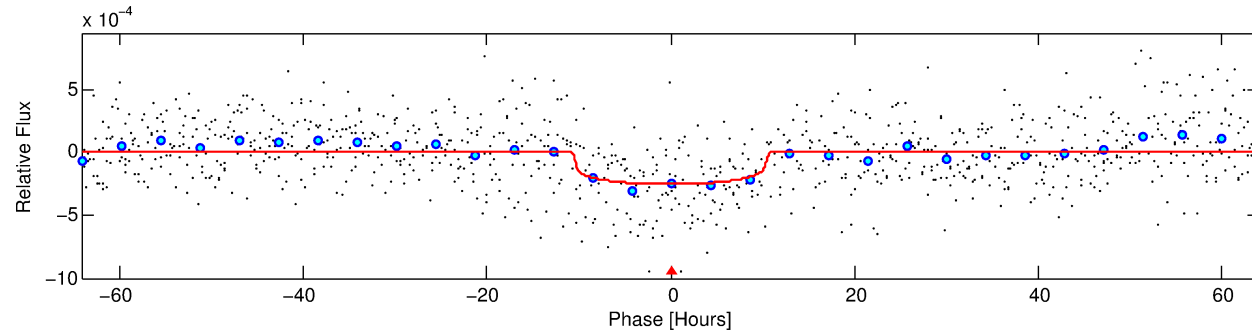
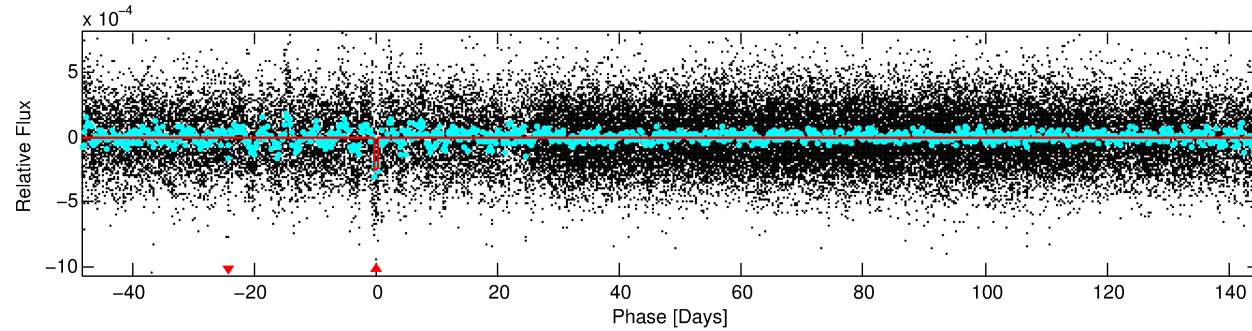
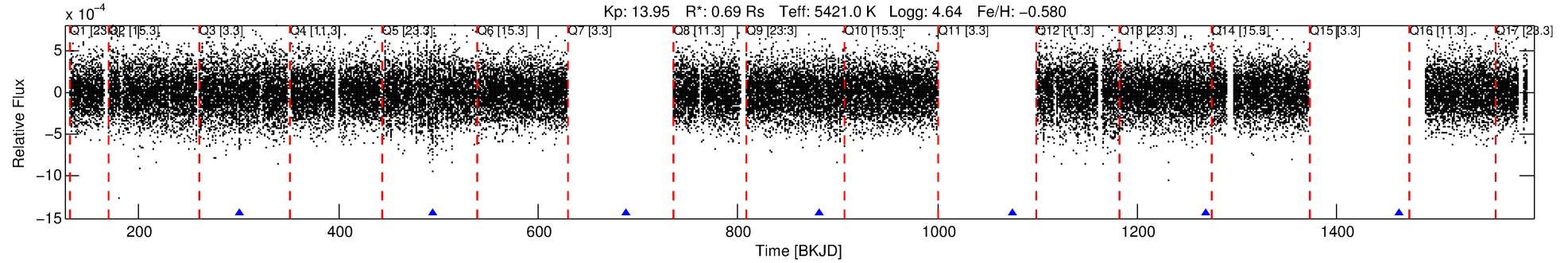
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010933897-01

No Significant Match Found

DV One-Page Summary

KIC: 10933897 Candidate: 1 of 1 Period: 193.539 d



DV Fit Results:

Period = 193.53883 [0.00760] d
Epoch = 300.7255 [0.0200] BKJD
Rp/R* = 0.0153 [0.0063]
a/R* = 55.05 [97.71]
b = 0.63 [1.69]
Seff = 1.03 [0.14]
Teq = 257 [8] K
Rp = 1.15 [0.48] Re
a = 0.5964 [0.0445] AU
Ag = 14201.76 [13001.41] [1.09 σ]
Teffp = 4332 [986] K [4.14 σ]

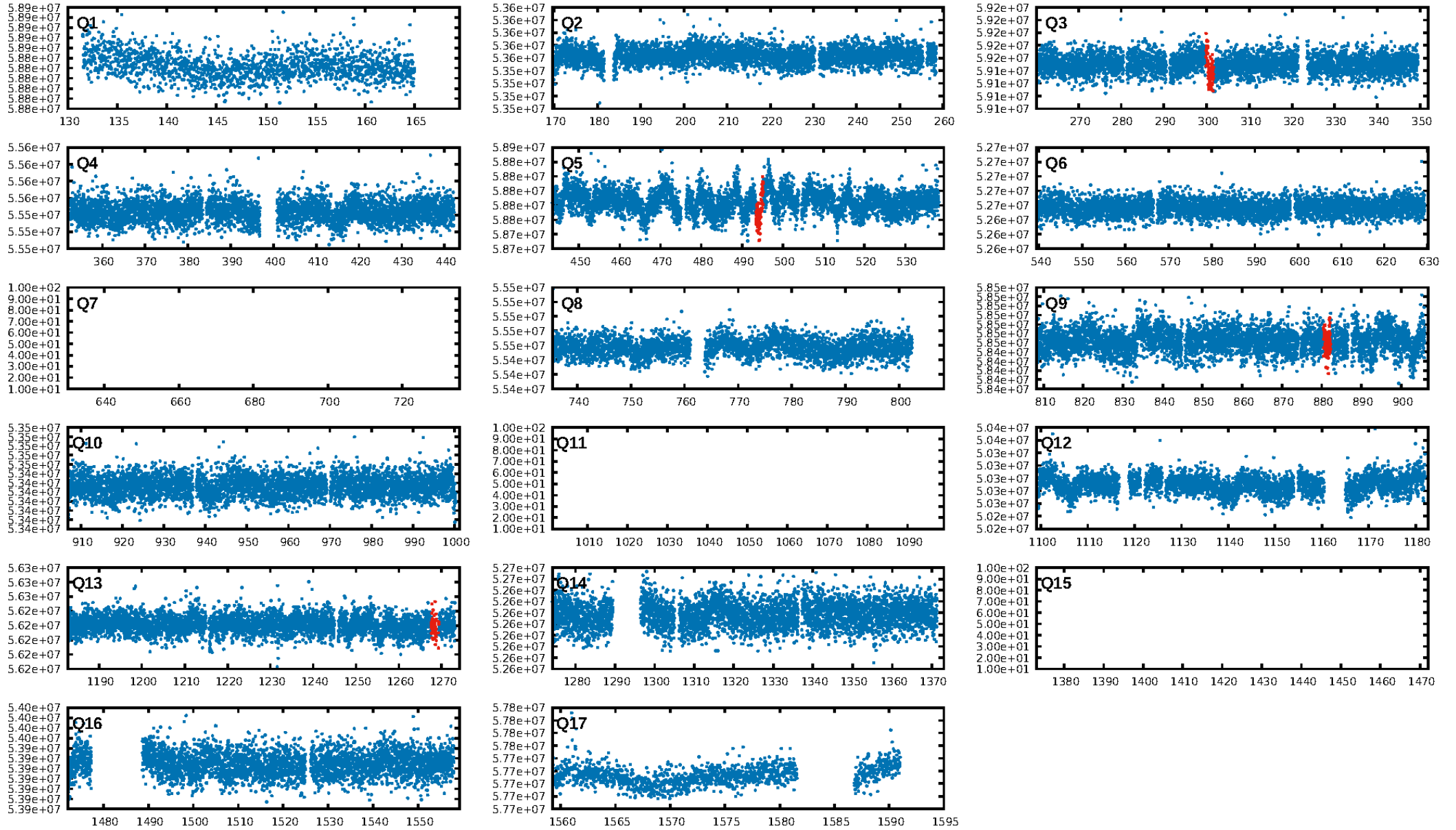
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.04e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.488
Centroid-sig: 0.1%
Centroid-so: 4.670 arcsec [2.61 σ]
OotOffset-rm: 3.117 arcsec [7.29 σ]
KicOffset-rm: 3.785 arcsec [7.04 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

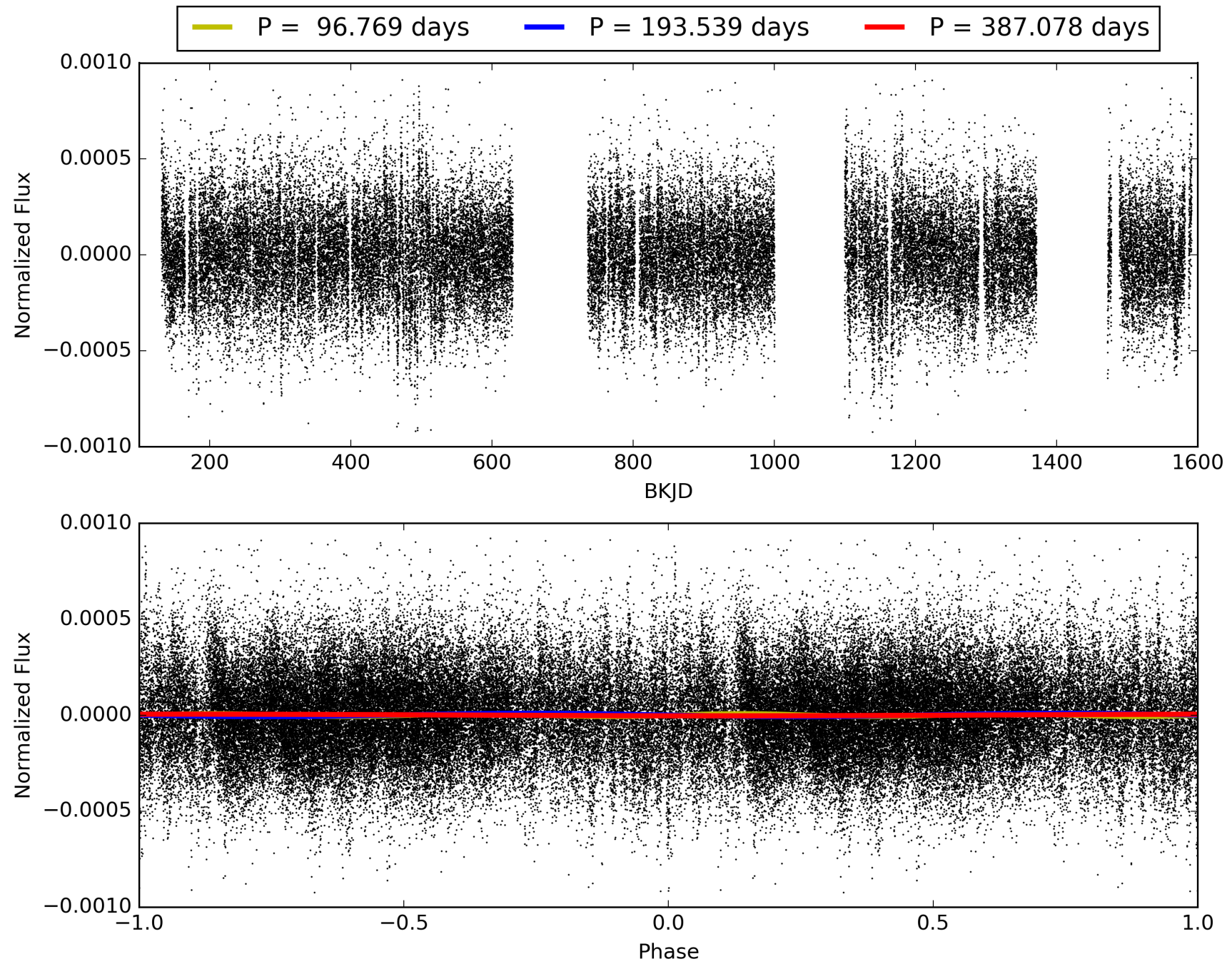
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:09:33 Z

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

TCE 010933897-01, PDC Light Curves

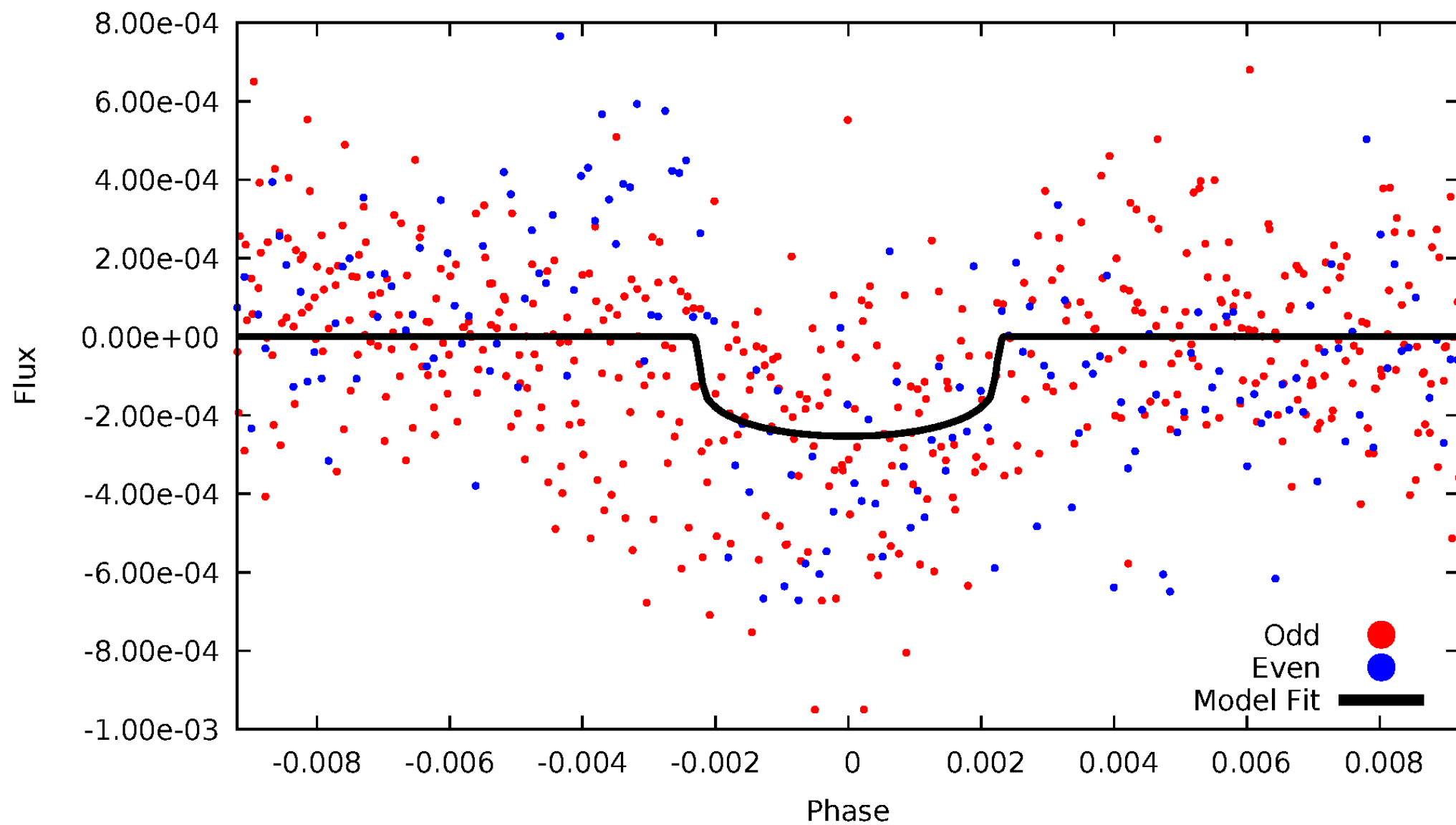


TCE 010933897-01



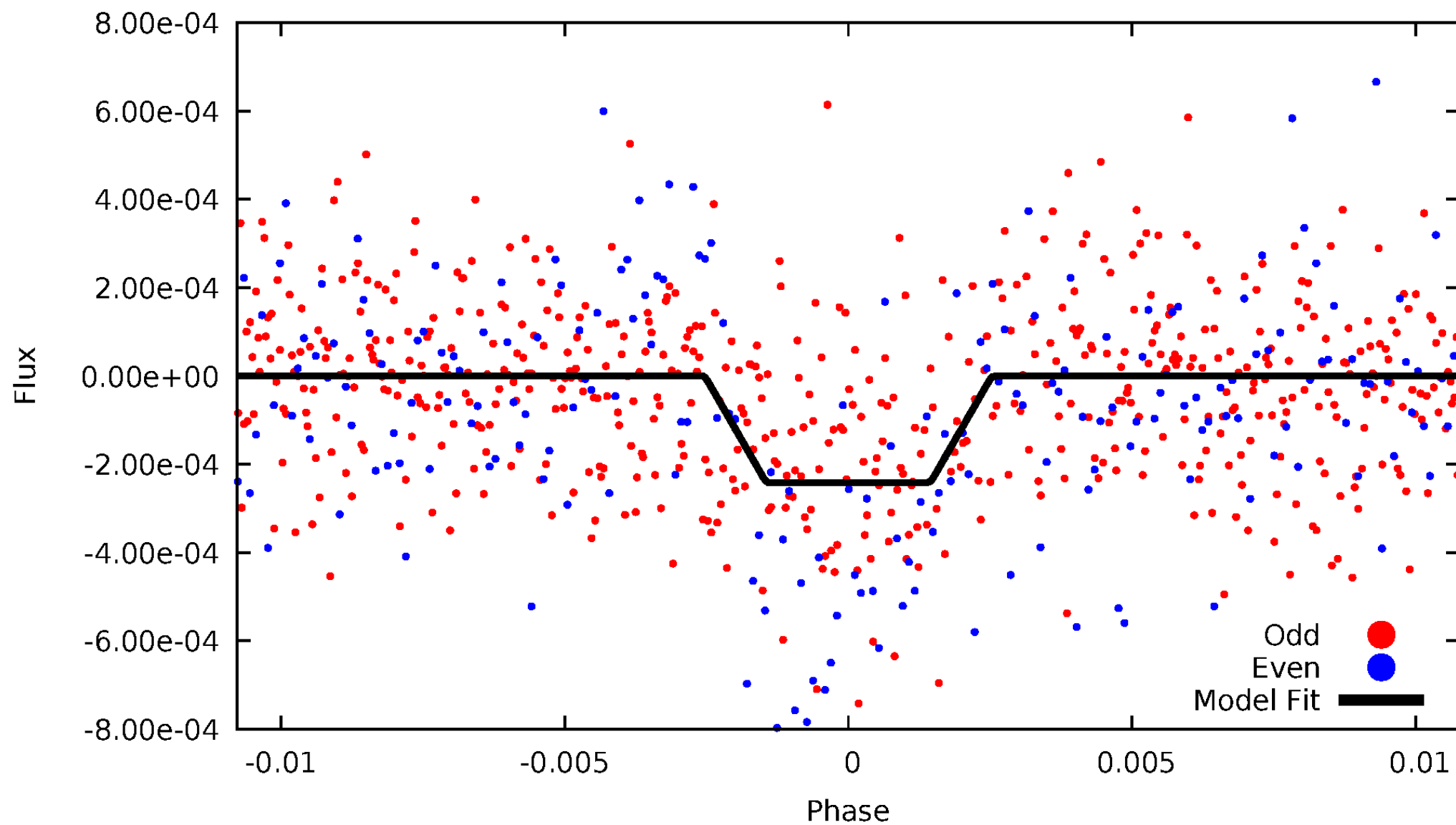
DV Odd/Even

TCE 010933897-01

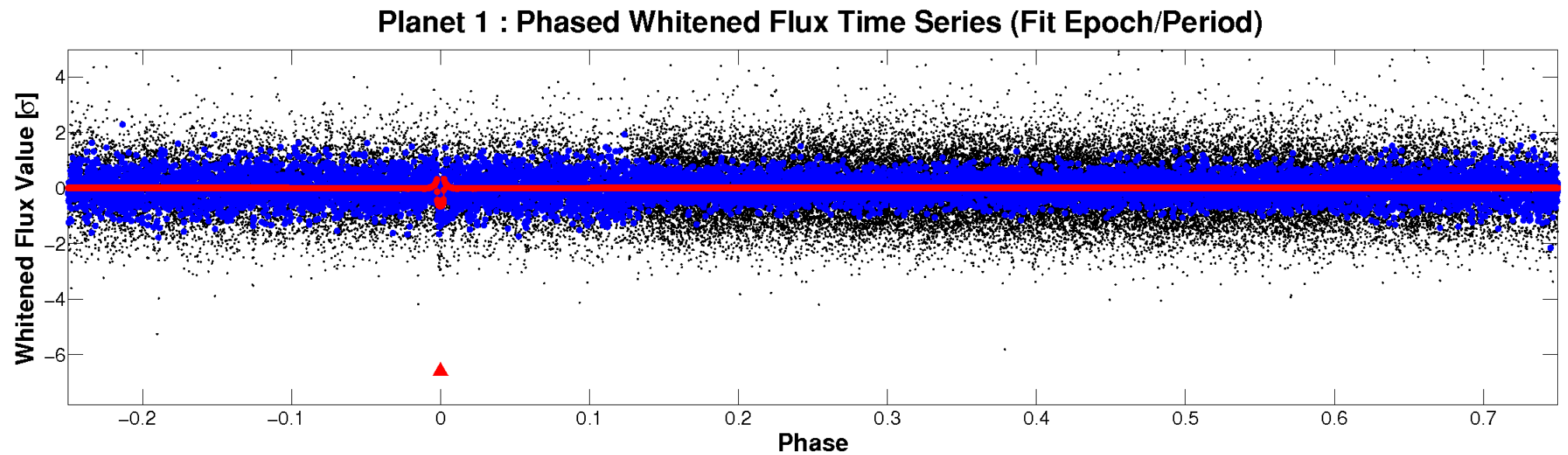
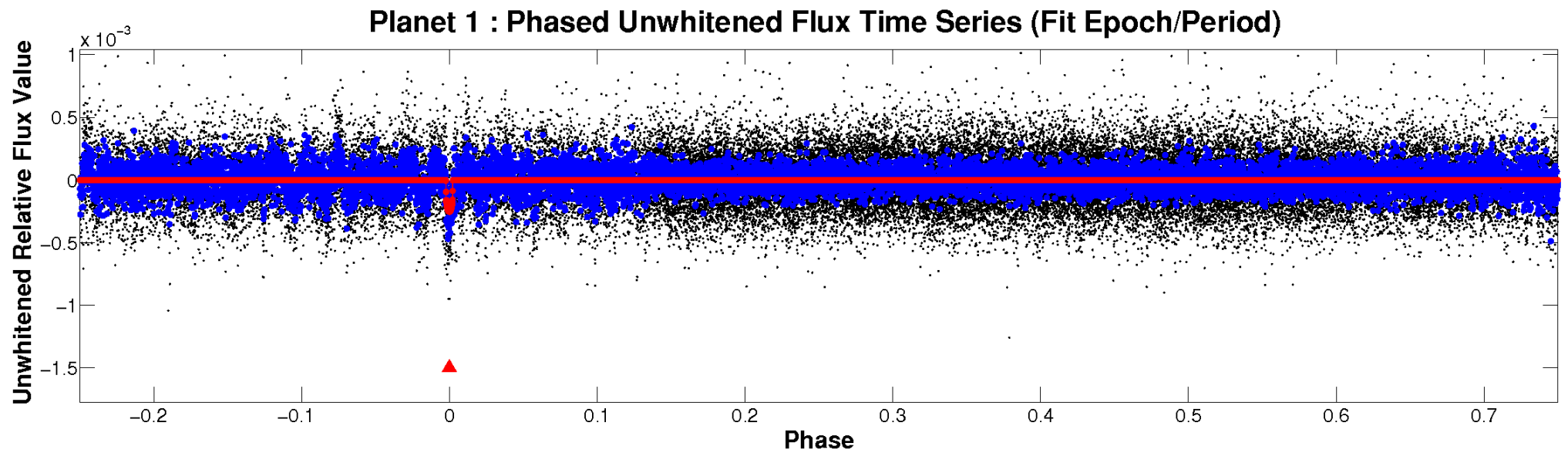


ALT Odd/Even

TCE 010933897-01

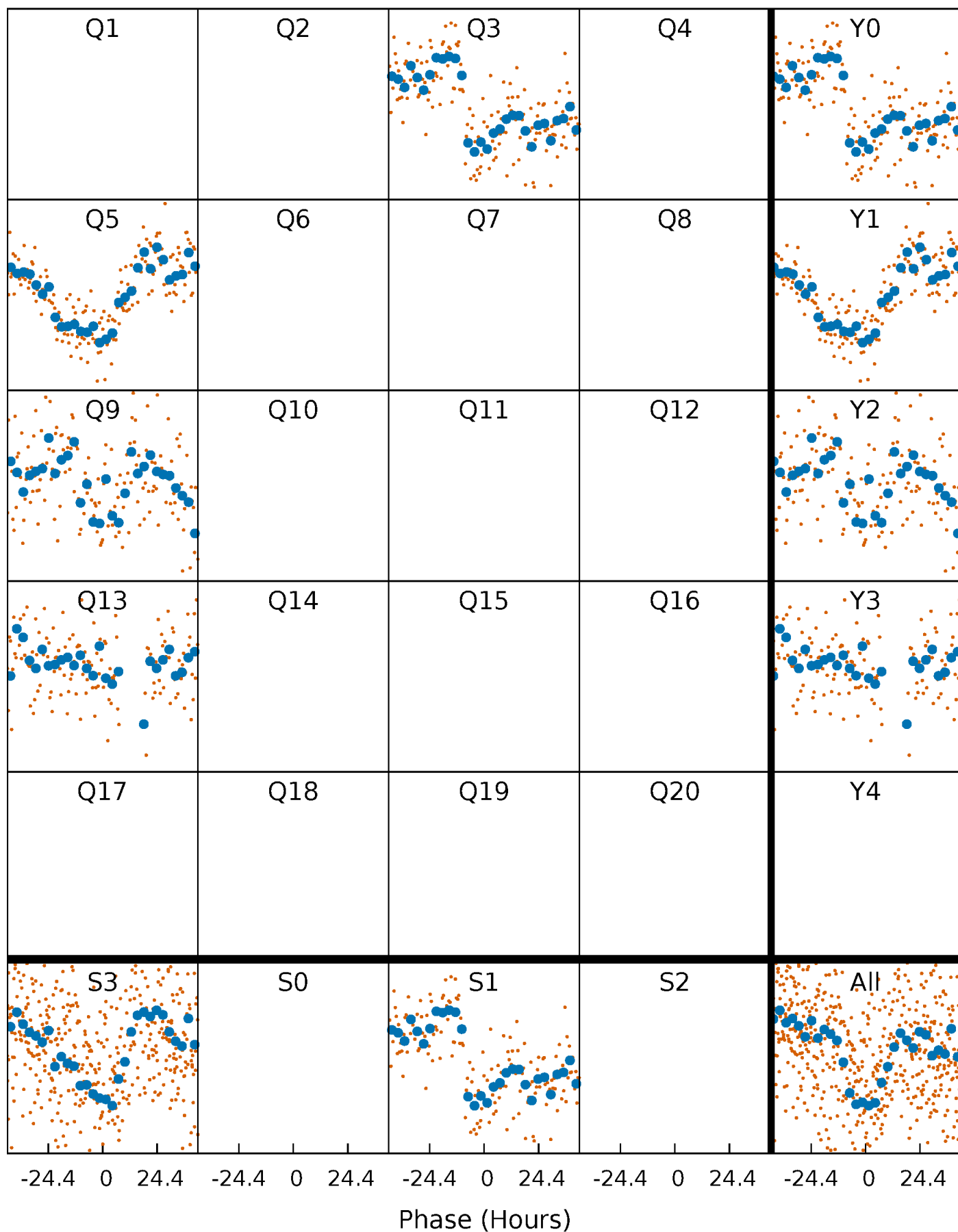


Non-Whitened Vs. Whitened Light Curve



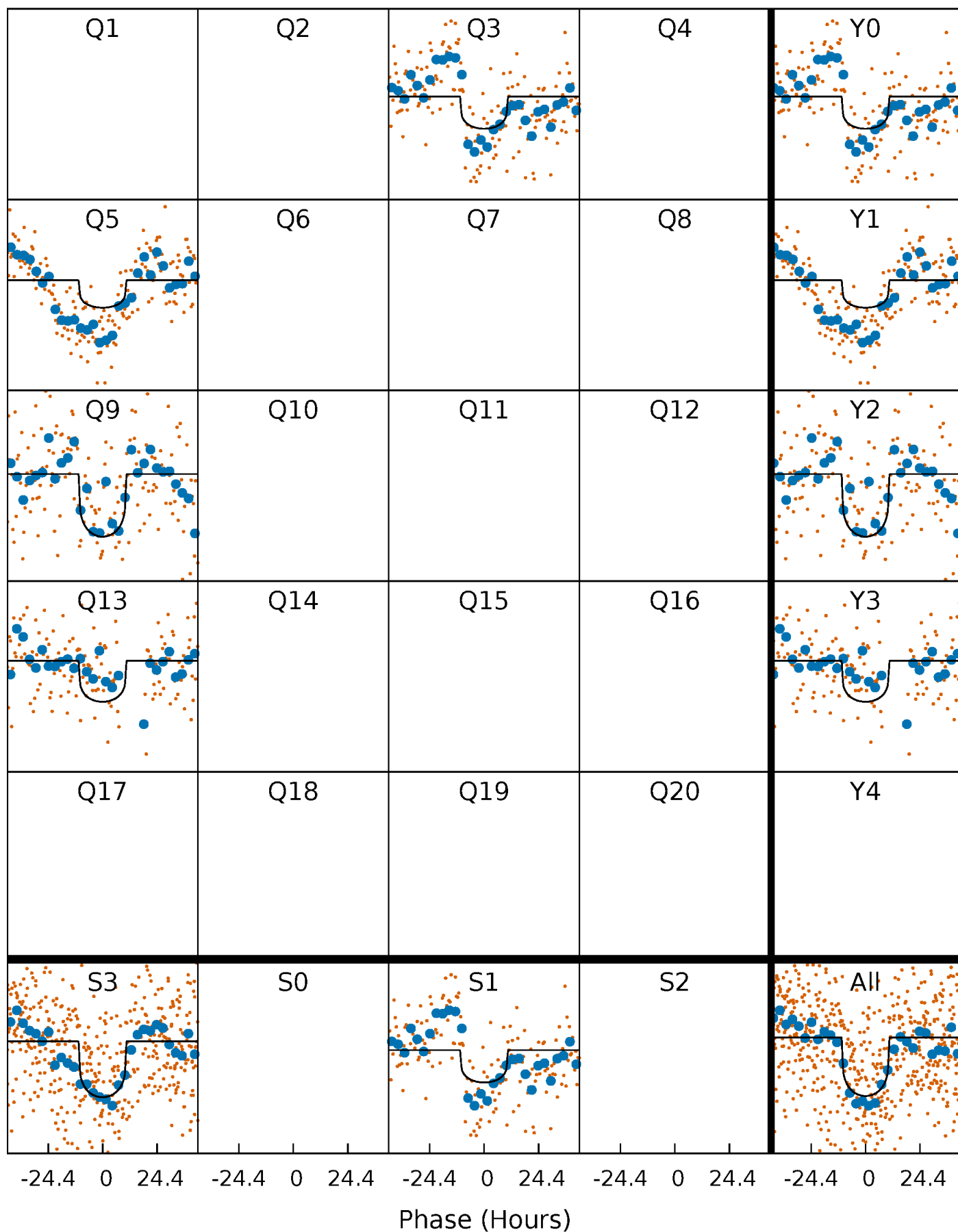
PDC Quarter-Phased Transit Curves

TCE 010933897-01 P=193.538827 Days $T_0=300.725547$ (BKJD)



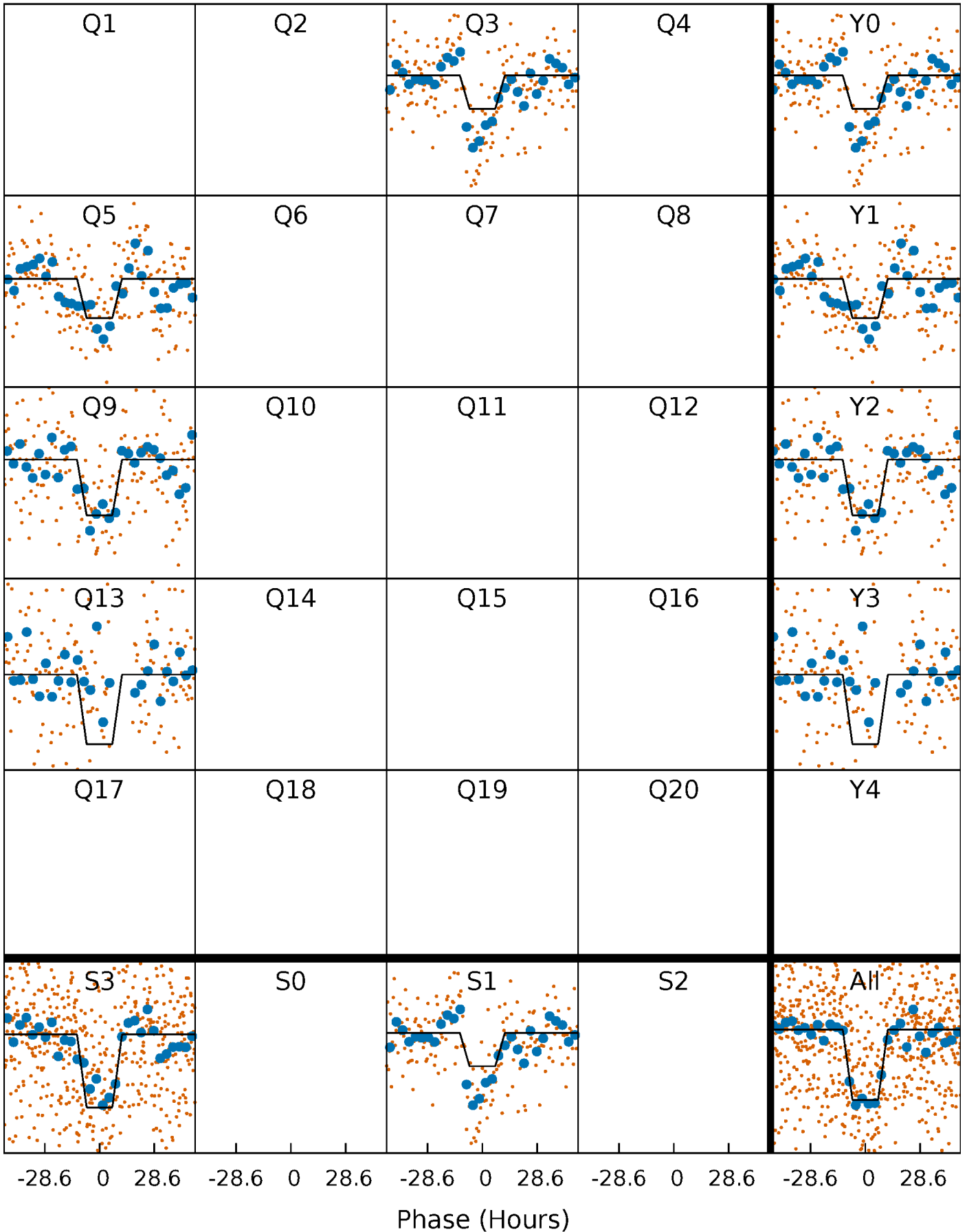
DV Quarter-Phased Transit Curves

TCE 010933897-01 P=193.538827 Days $T_0=300.725547$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

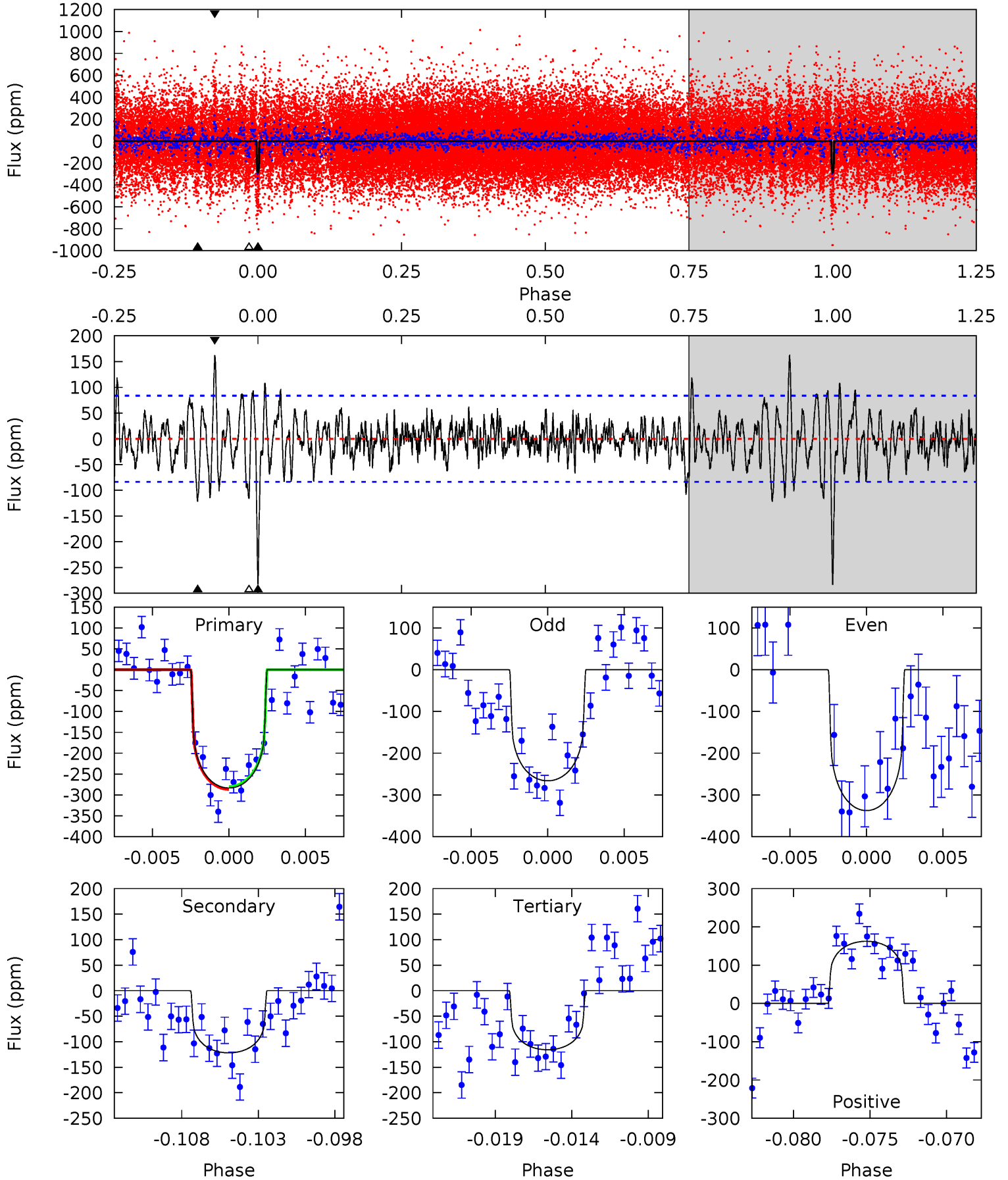
TCE 010933897-01 P=193.553492 Days $T_0=300.721168$ (BKJD)



DV Model-Shift Uniqueness Test

010933897-01, P = 193.538827 Days, E = 107.186720 Days

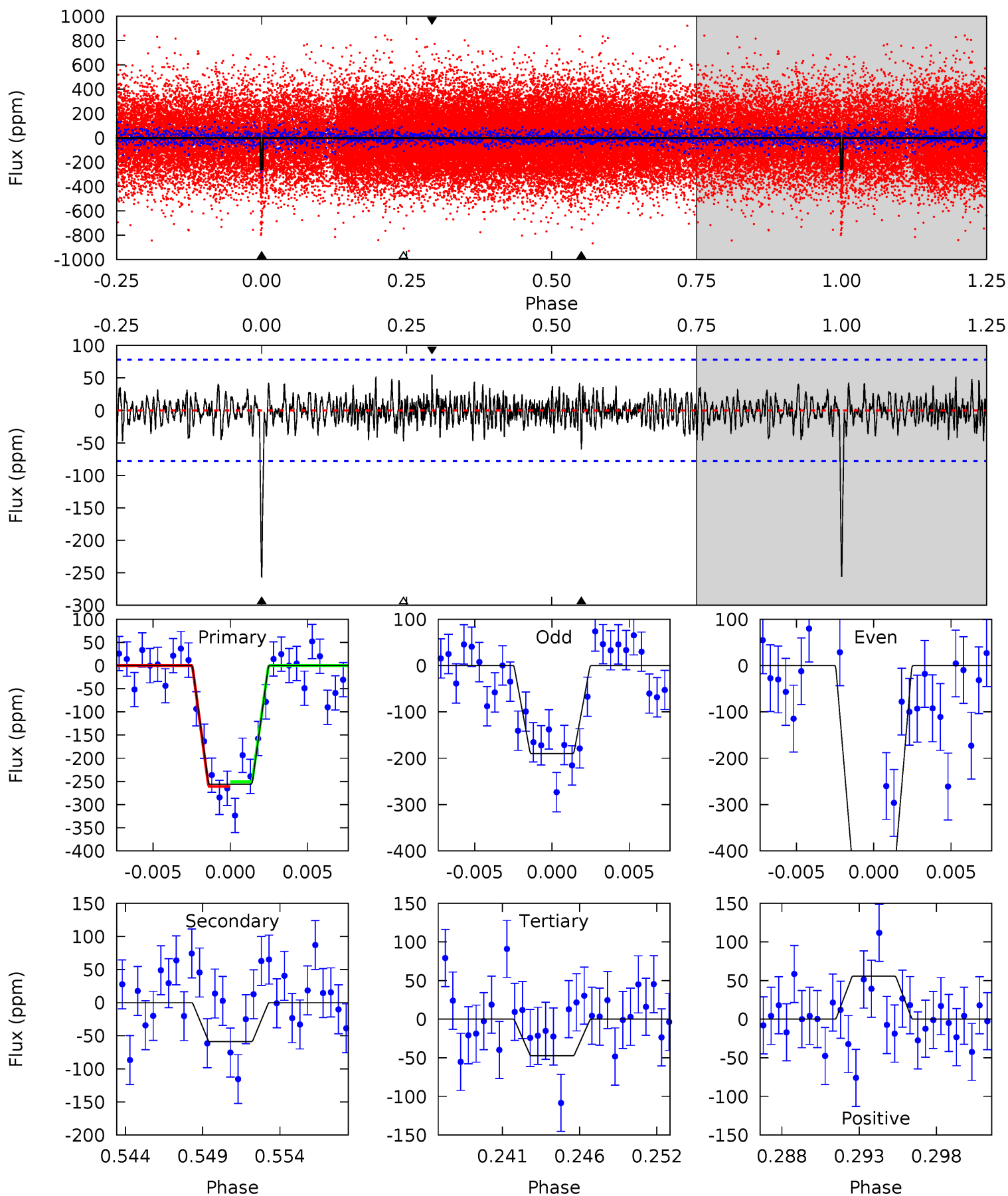
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	7.52	7.15	10.0	5.17	2.83	1.93	10.4	7.47	0.38	-2.51	1.92	1.05	0.36	0.20



Alt Model-Shift Uniqueness Test

010933897-01, $P = 193.553492$ Days, $E = 107.167676$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.90	3.12	3.67	5.15	2.80	1.04	13.8	13.2	0.77	0.23	6.56	0.92	0.18	0.34



Stellar Parameters For KIC 010933897

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5421^{+73}_{-81}	$4.642^{+0.016}_{-0.068}$	$-0.580^{+0.150}_{-0.150}$	$0.687^{+0.055}_{-0.026}$	$0.768^{+0.030}_{-0.056}$	$3.341^{+0.260}_{-0.712}$
	+1%/-1%	+0%/-1%	+26%/-26%	+8%/-4%	+4%/-7%	+8%/-21%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 010933897-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-122 ± 16	$1.19^{+0.50}_{-0.47}$	362^{+8}_{-7}	4696^{+1216}_{-596}	17098^{+32402}_{-8624}
Alt.	-59 ± 15	$1.20^{+0.48}_{-0.46}$	362^{+8}_{-7}	4085^{+760}_{-481}	8084^{+12000}_{-4198}

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

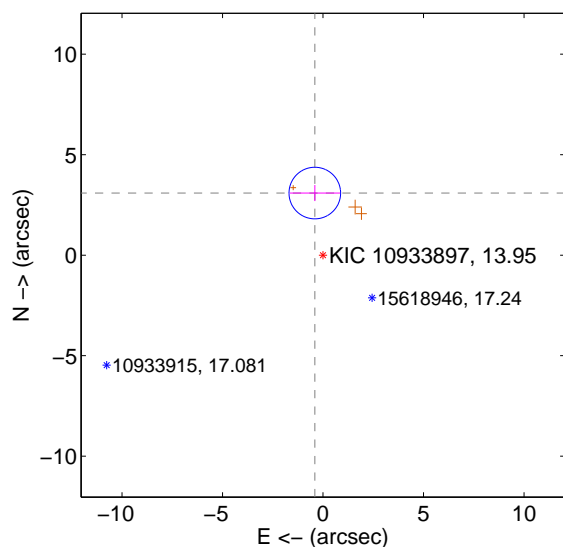
Supplemental centroid analysis for 010933897-01. Kepler magnitude: 13.95. Transit SNR 7.84

There are 0 quarters with good PRF difference image offsets

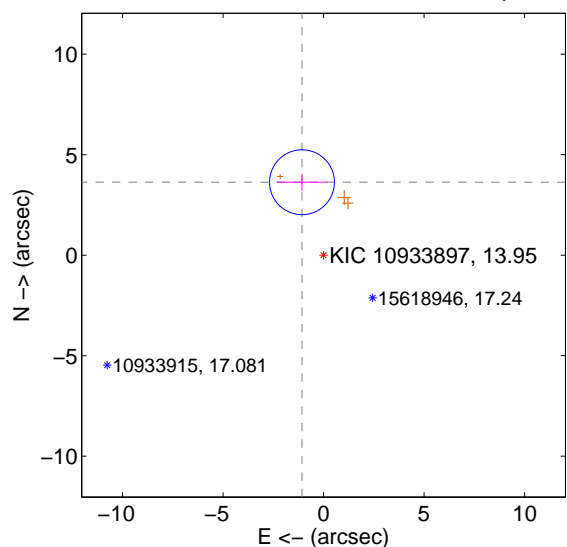
The direct PRF centroid is offset from the target star catalog position by about 0.88 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.117 ± 0.428	7.29	0.409 ± 1.253	3.090 ± 0.398
PRF-fit source offset from KIC position	3.785 ± 0.538	7.04	1.074 ± 1.272	3.629 ± 0.416
photometric centroid source offset	4.67 ± 1.79	2.61	-4.31 ± 1.79	1.81 ± 1.75

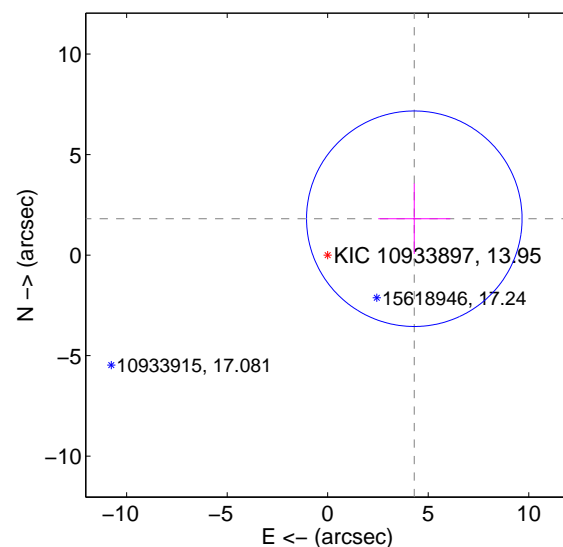
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

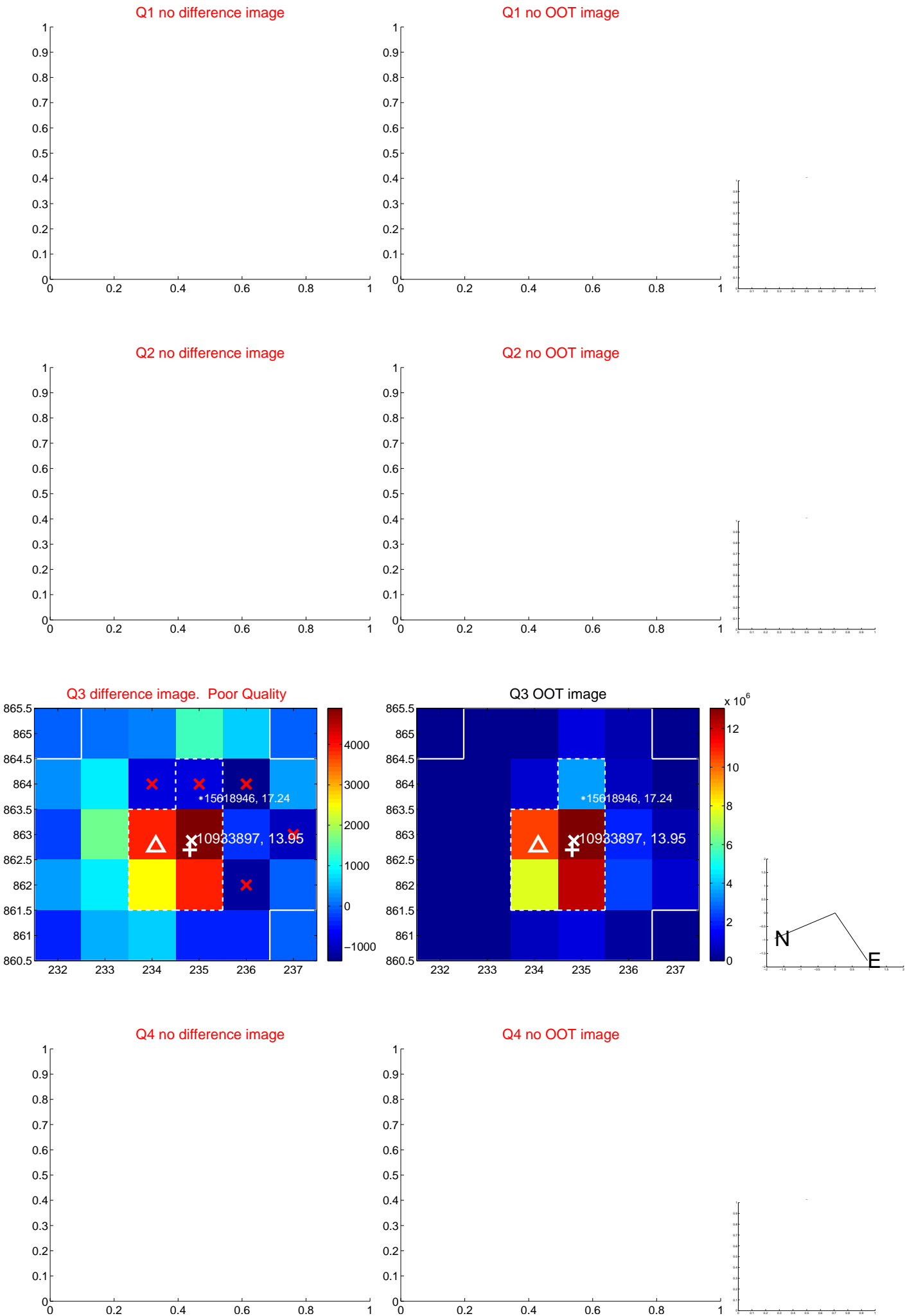


offset from photometric centroids

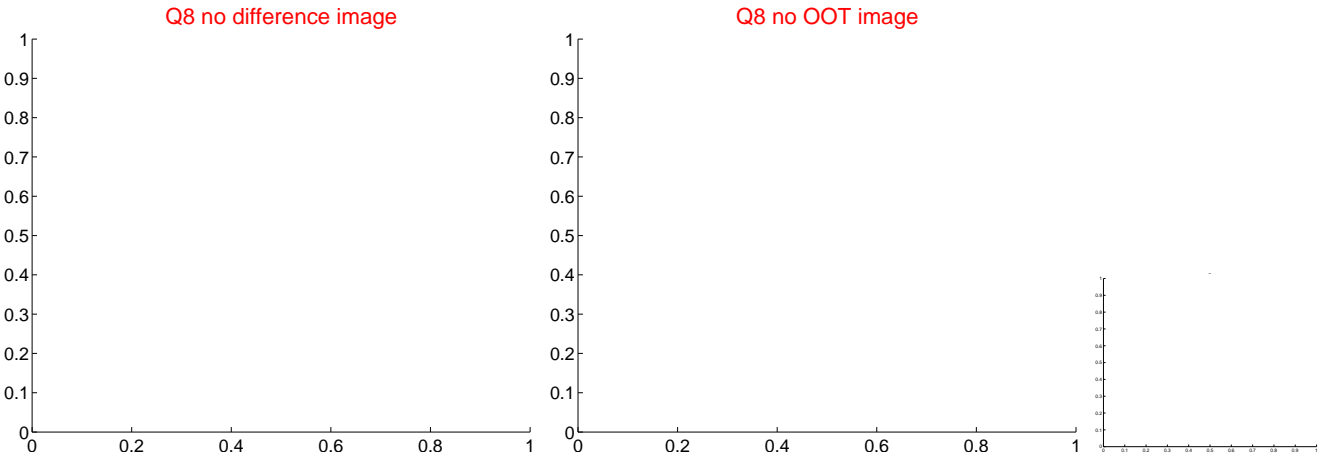
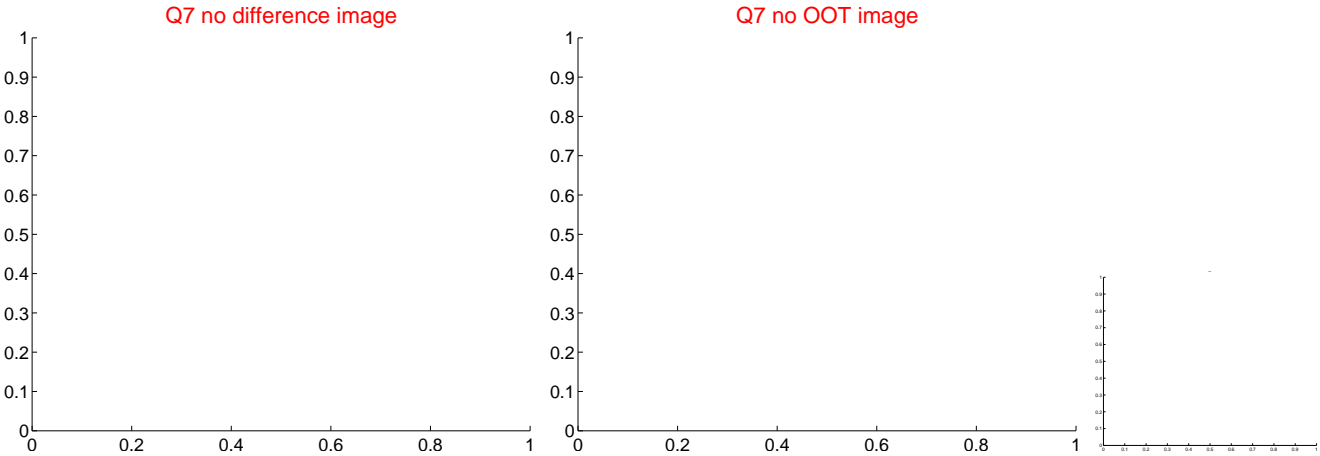
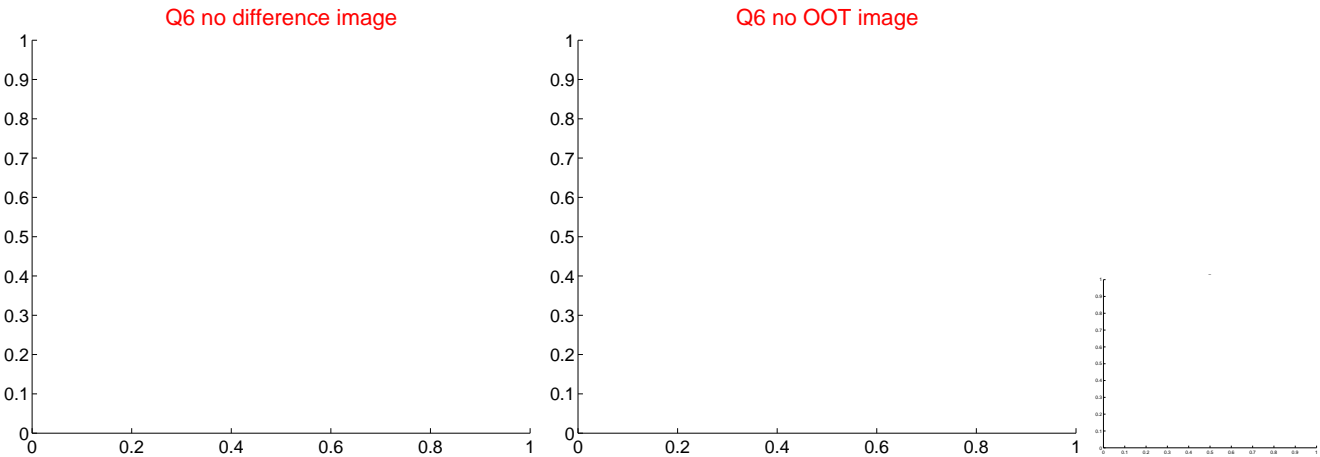
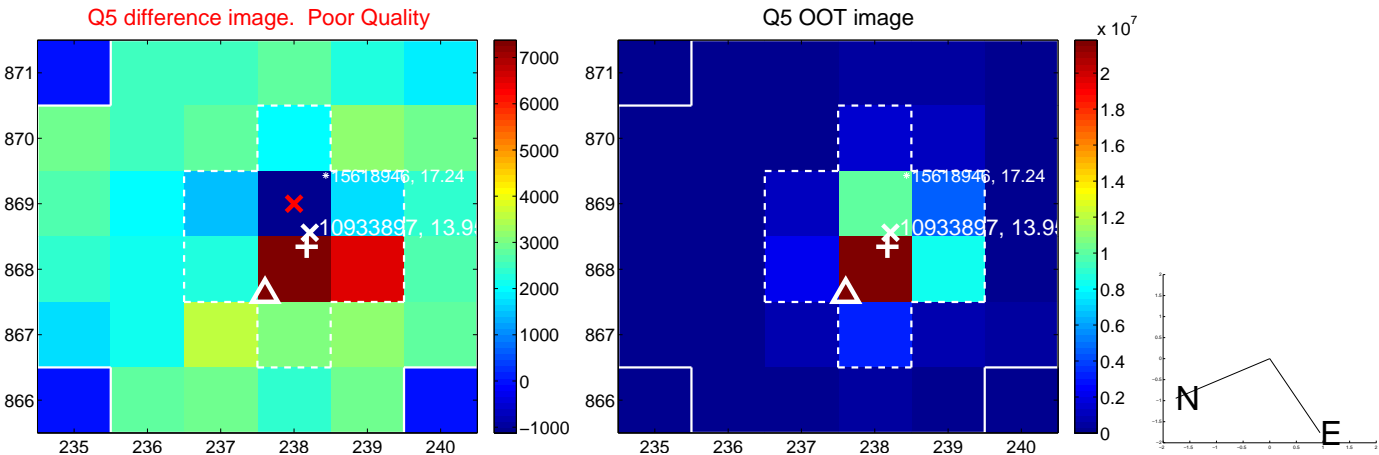


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

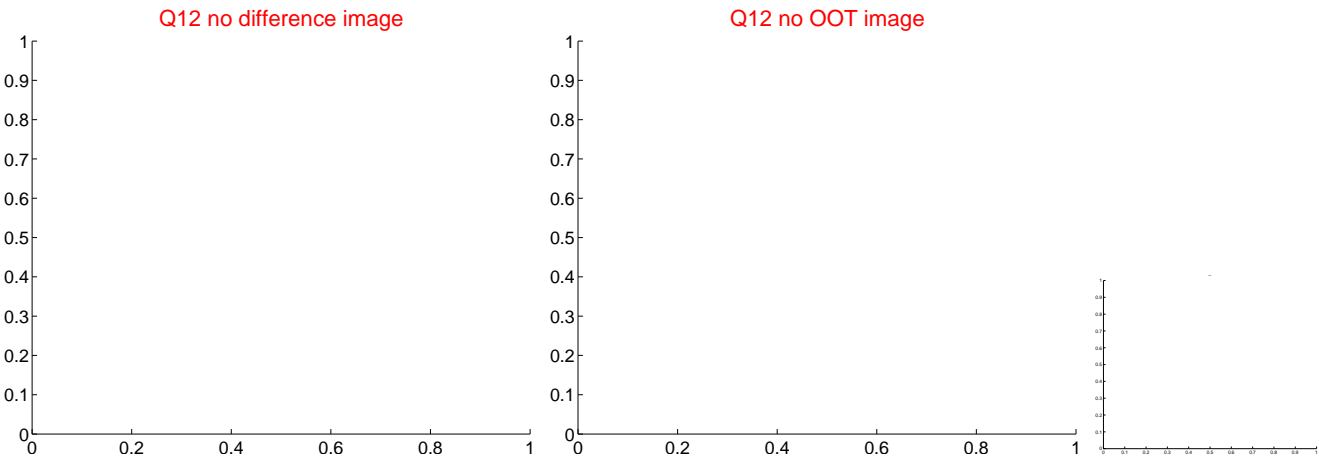
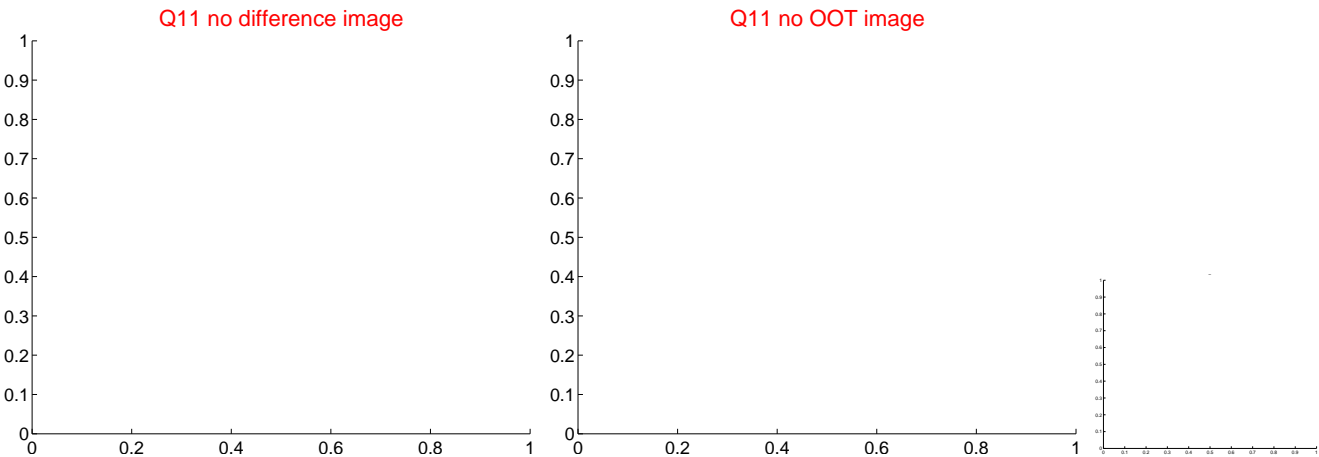
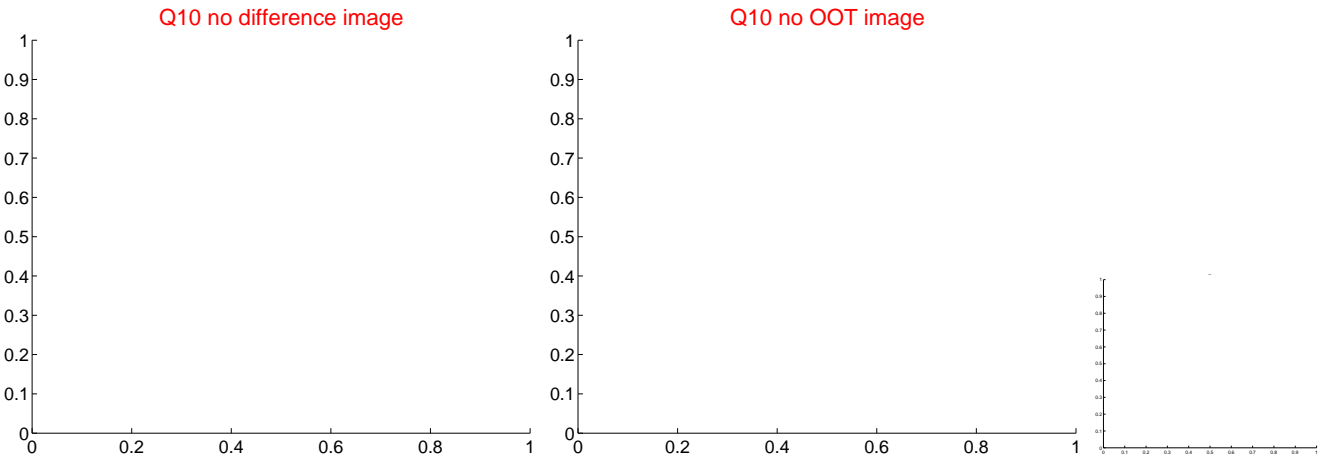
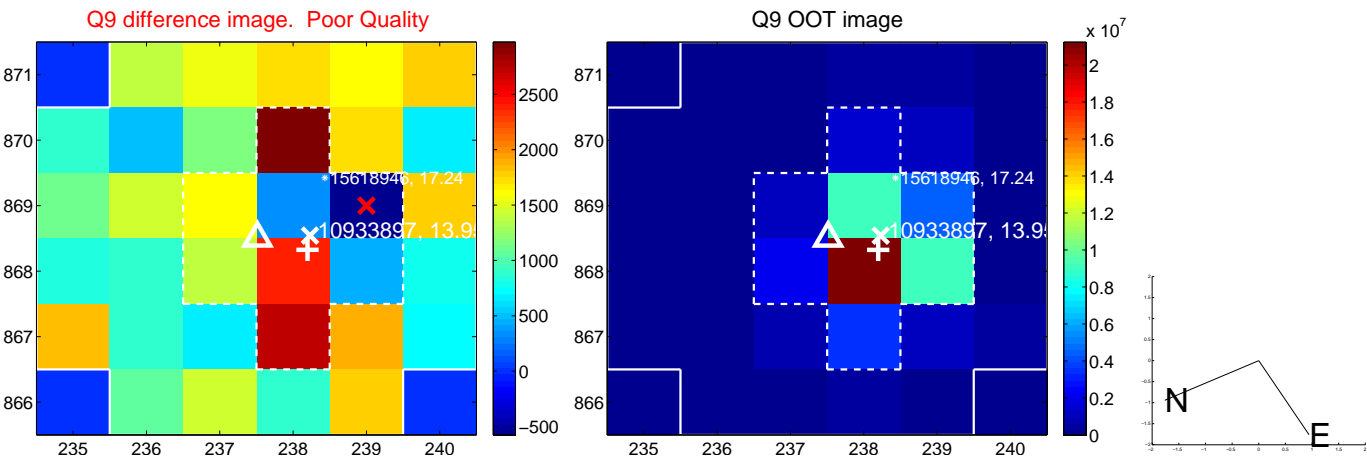
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



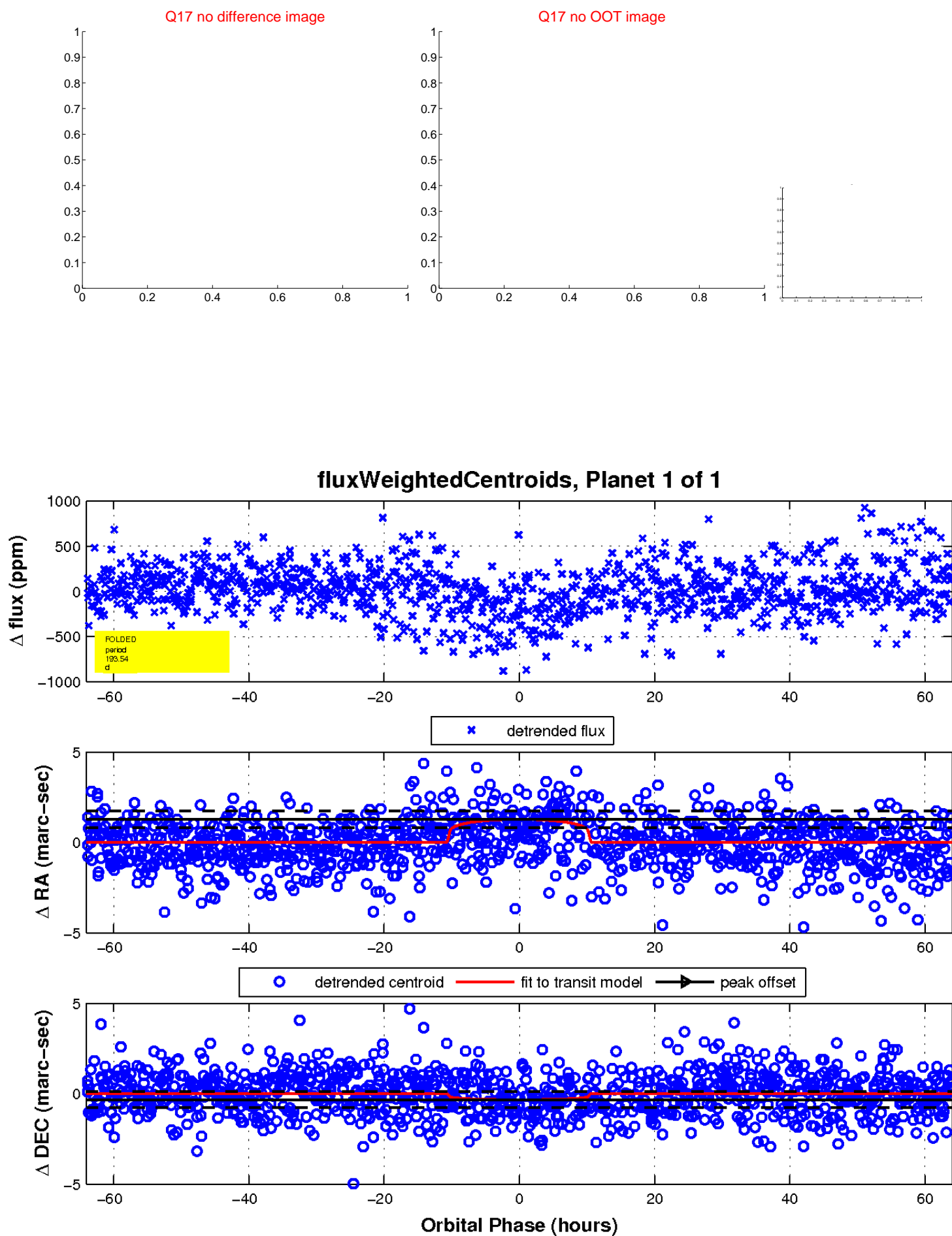
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

