

KIC 008307676

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})
008307676-01	OBS	No	368.985959	236.069049	2050.7	28.529	8.8	9.2	0.73	5531	6.23	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008307676-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

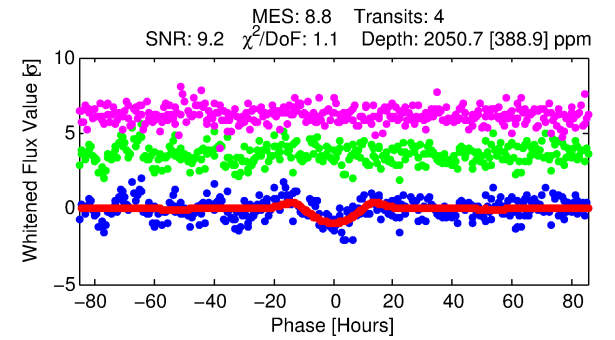
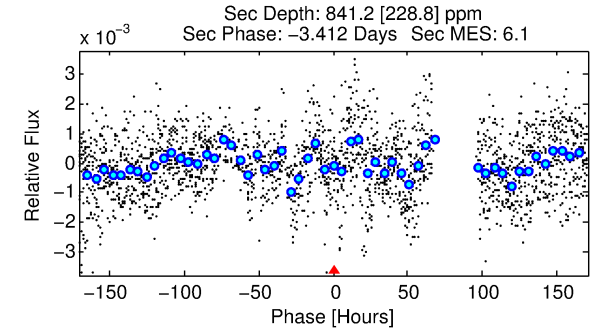
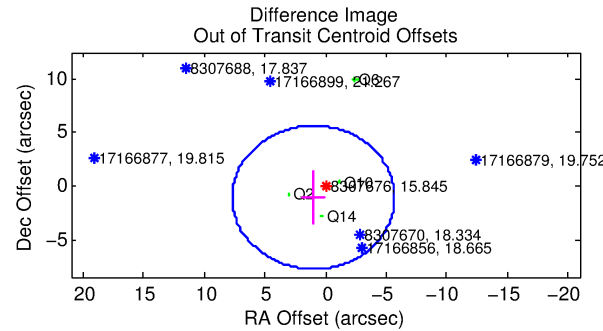
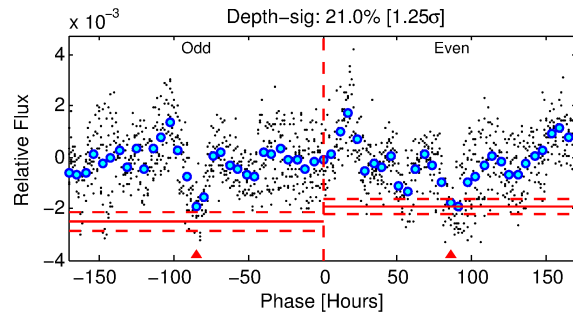
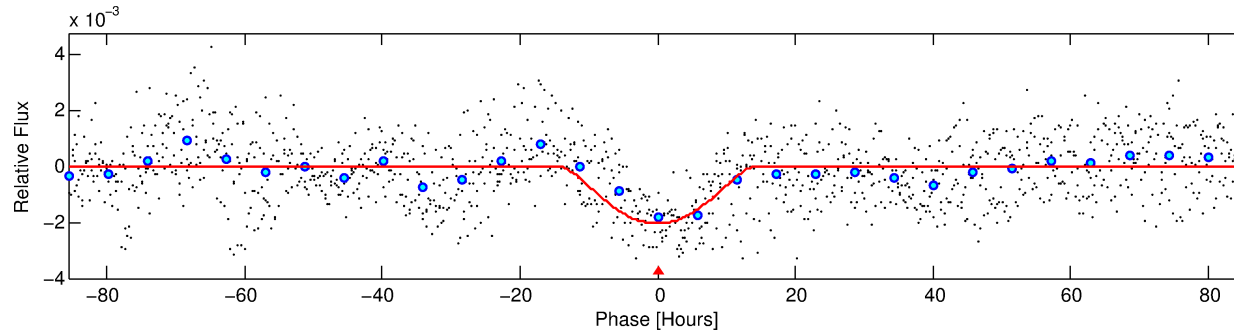
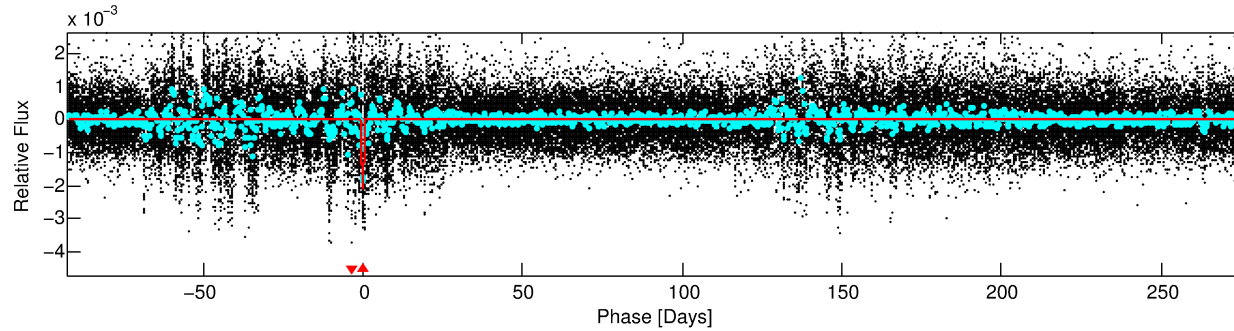
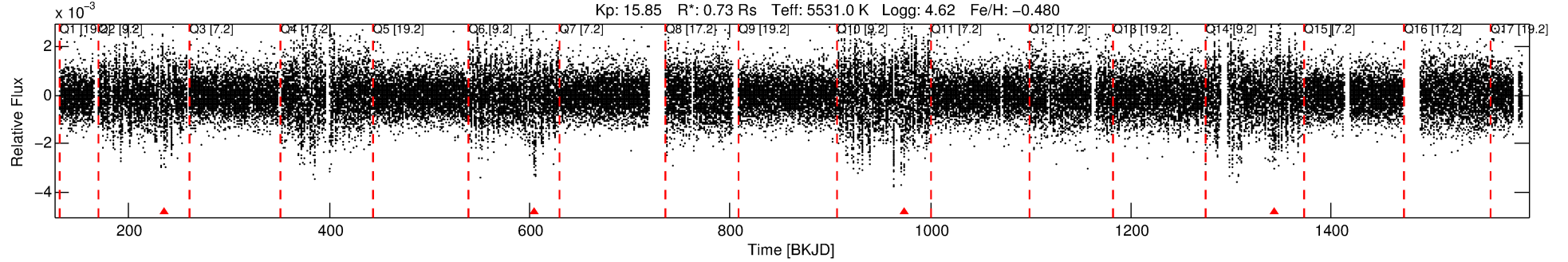
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008307676-01

No Significant Match Found

DV One-Page Summary

KIC: 8307676 Candidate: 1 of 1 Period: 368.986 d



DV Fit Results:

Period = 368.98596 [0.02446] d
Epoch = 236.0690 [0.0422] BKJD
Rp/R* = 0.0786 [0.1686]
a/R* = 40.12 [18.39]
b = 1.00 [0.25]
Seff = 0.51 [0.12]
Teq = 215 [13] K
Rp = 6.23 [13.41] Re
a = 0.9325 [0.1414] AU
Ag = 10374.66 [44637.39] [0.23 σ]
Teffp = 3359 [3611] K [0.87 σ]

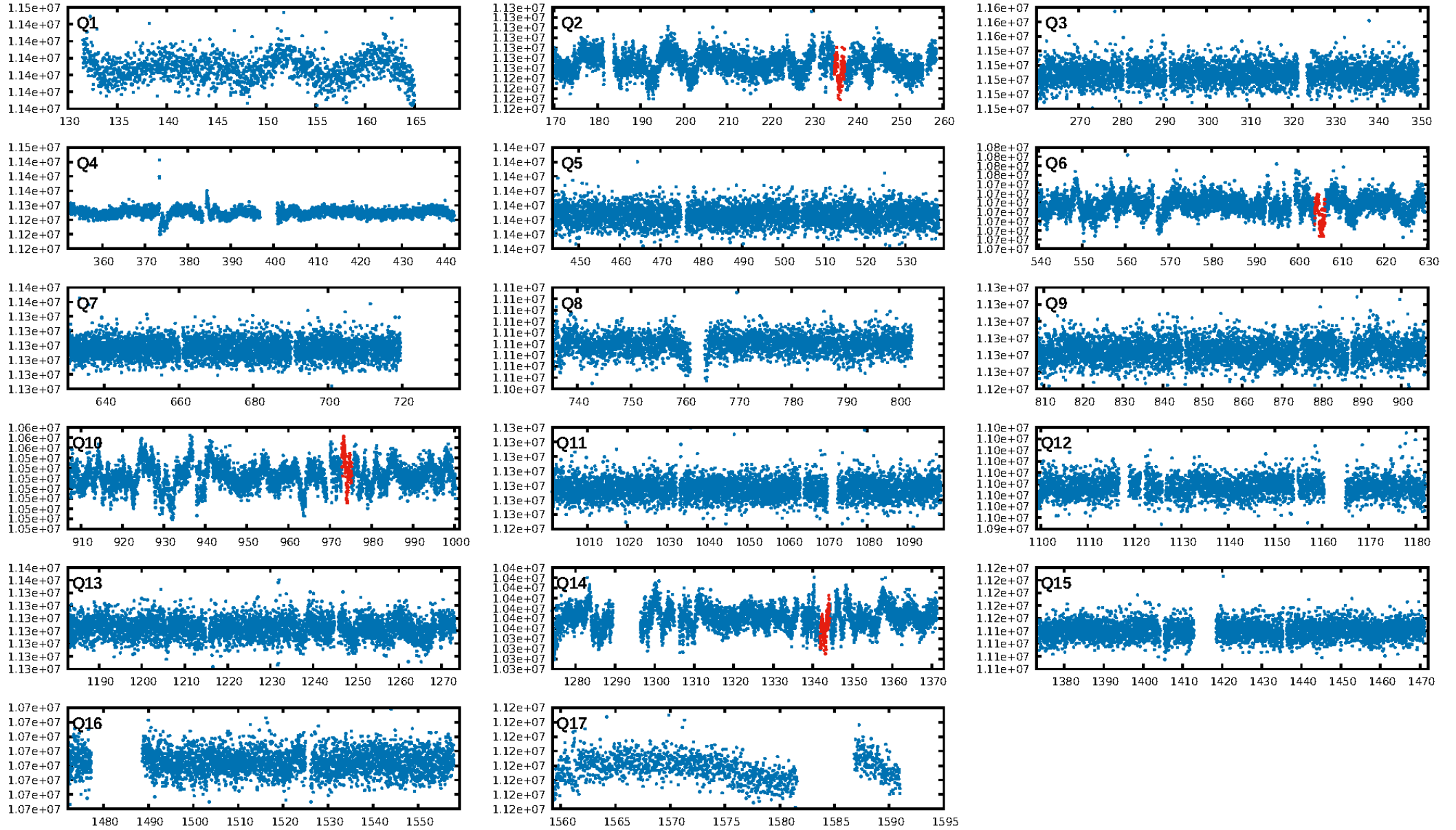
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.6%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 5.20e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 2.512
Centroid-sig: 0.0%
Centroid-so: 8.269 arcsec [4.35 σ]
OotOffset-rm: 1.472 arcsec [0.66 σ]
KicOffset-rm: 1.543 arcsec [0.65 σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

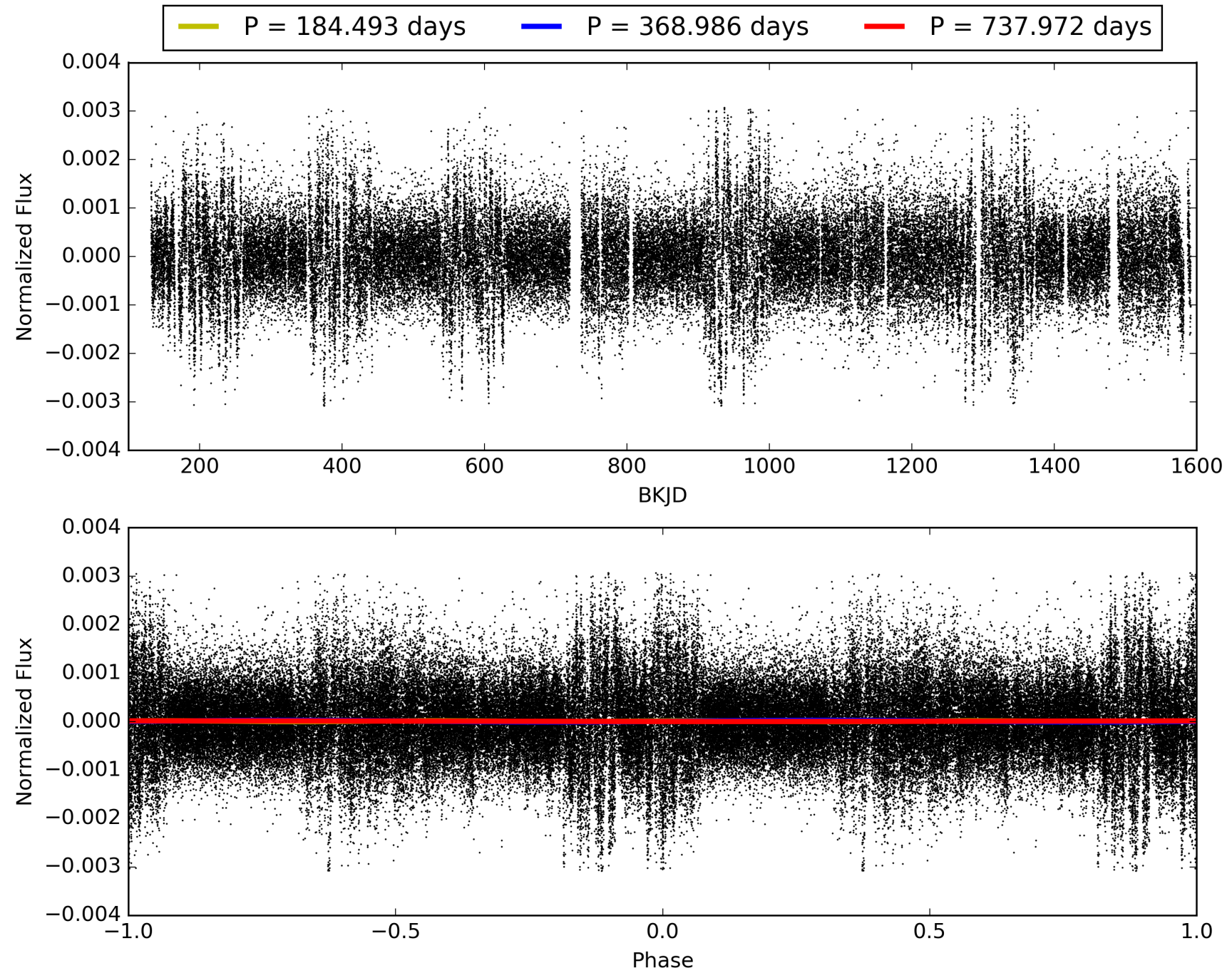
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:43:55 Z

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

TCE 008307676-01, PDC Light Curves

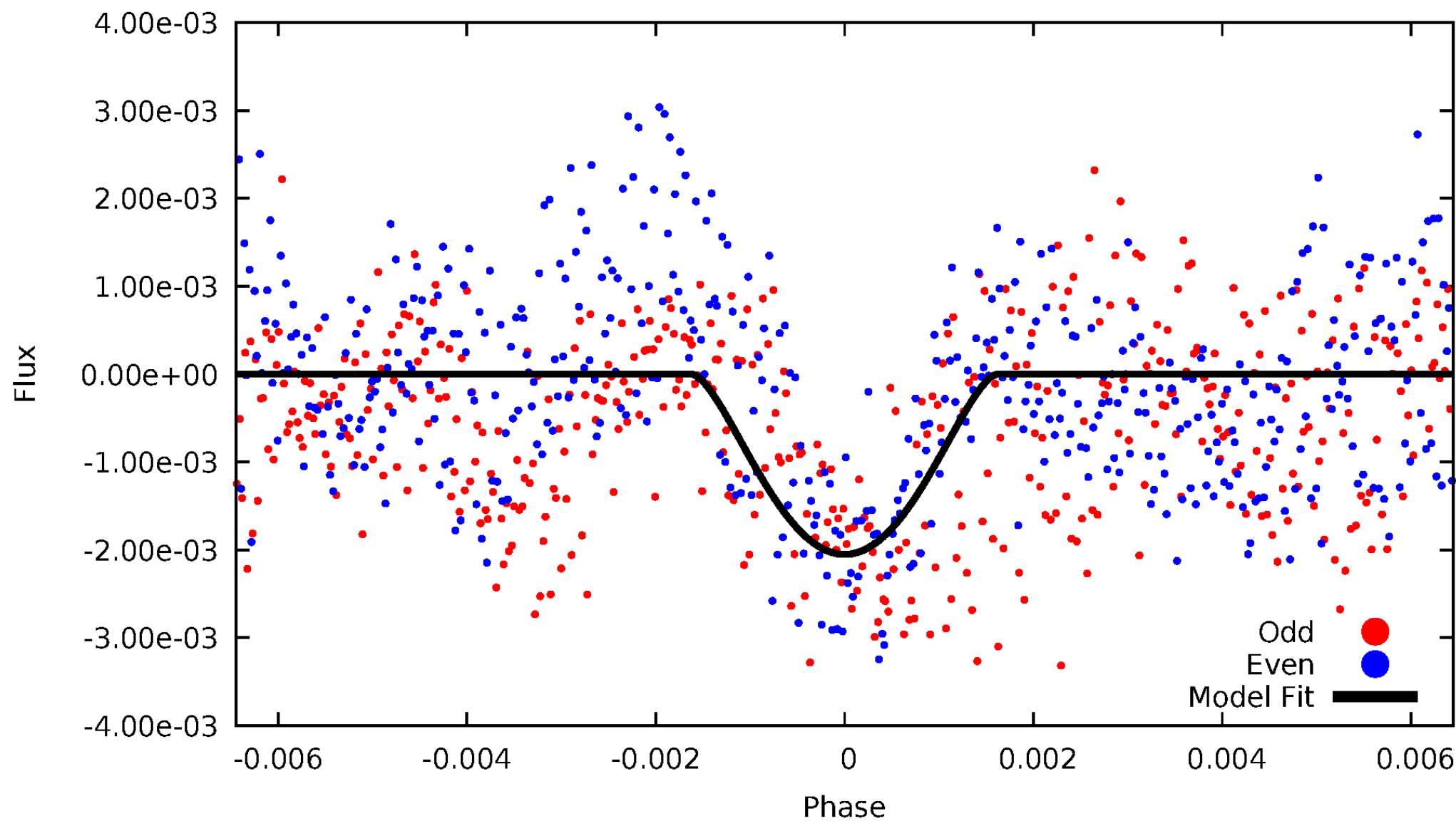


TCE 008307676-01



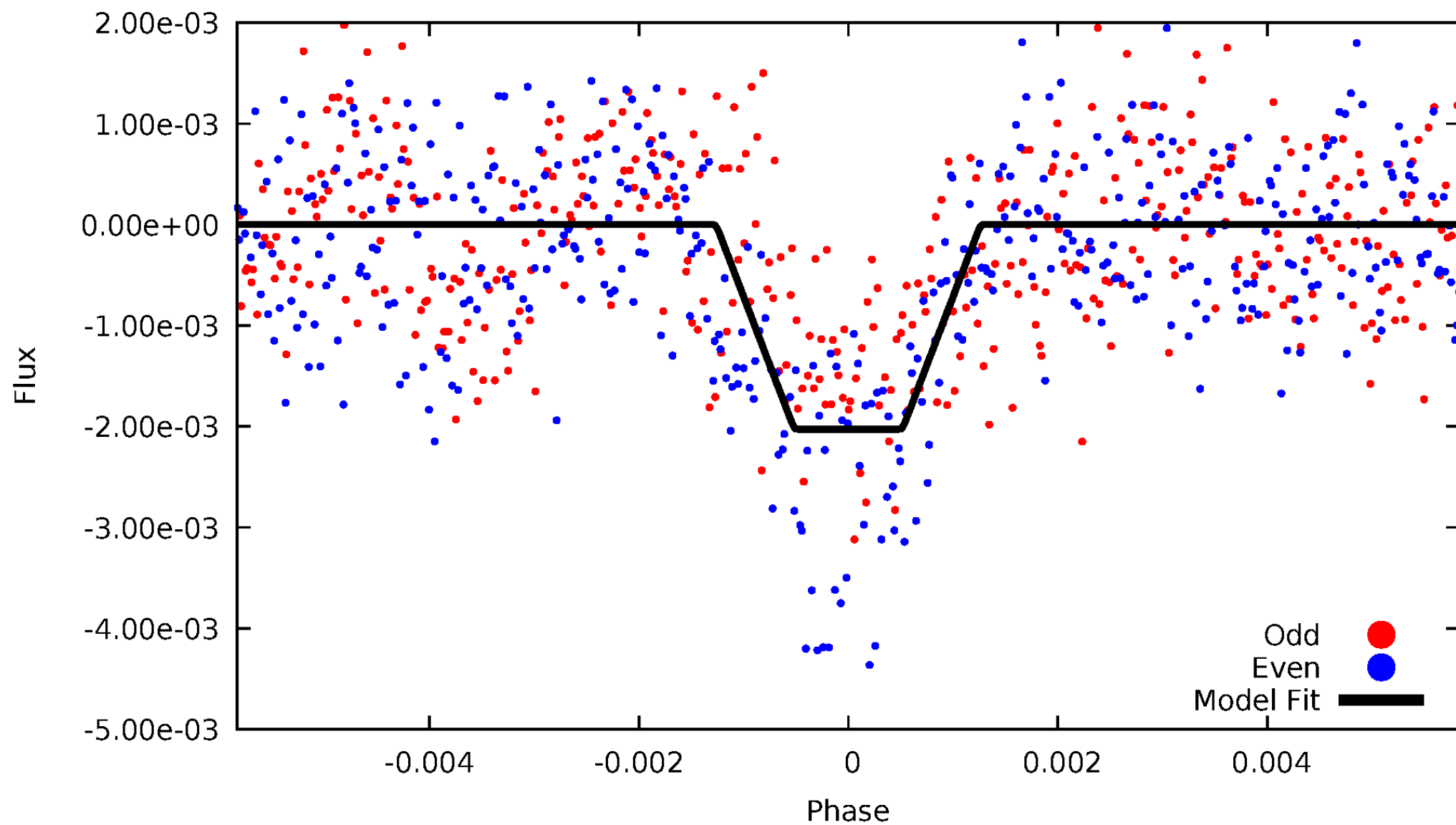
DV Odd/Even

TCE 008307676-01



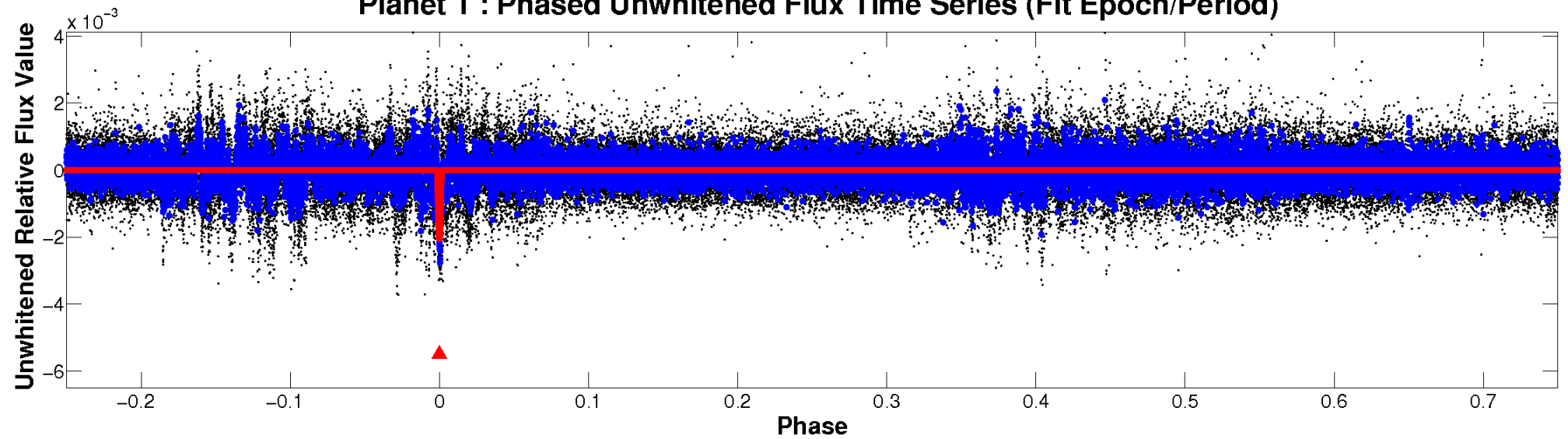
ALT Odd/Even

TCE 008307676-01

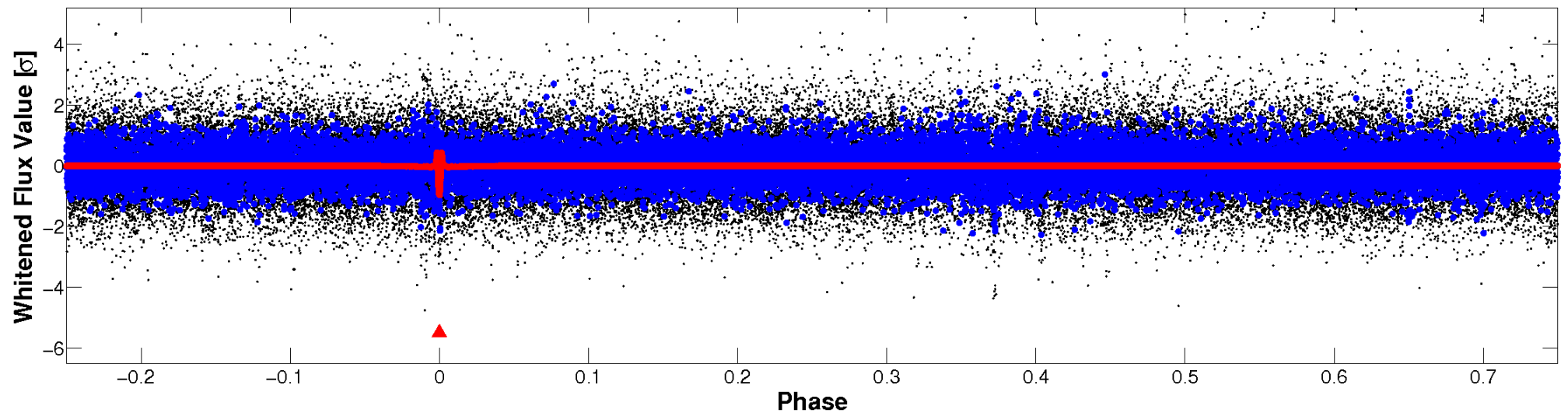


Non-Whitened Vs. Whitened Light Curve

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

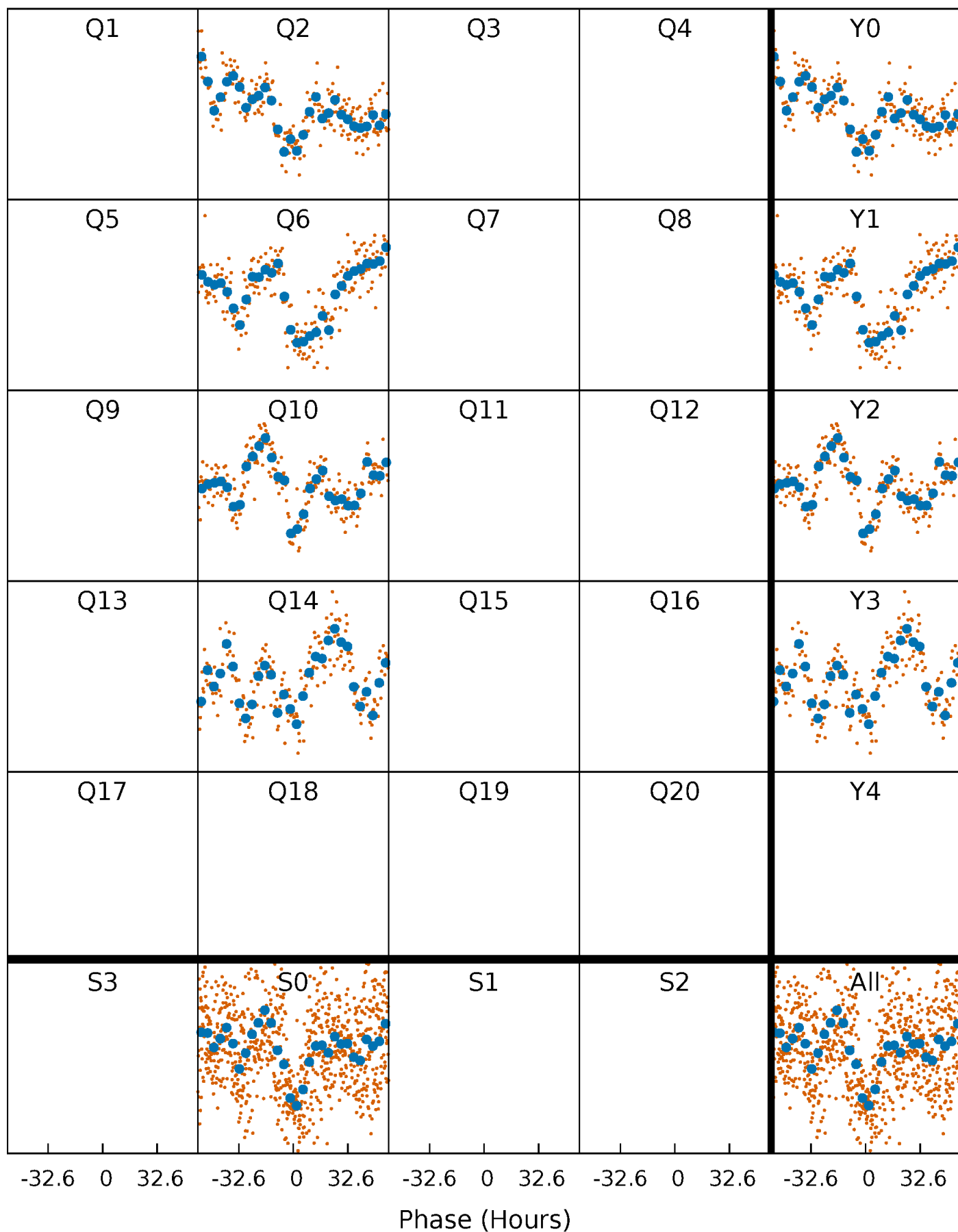


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



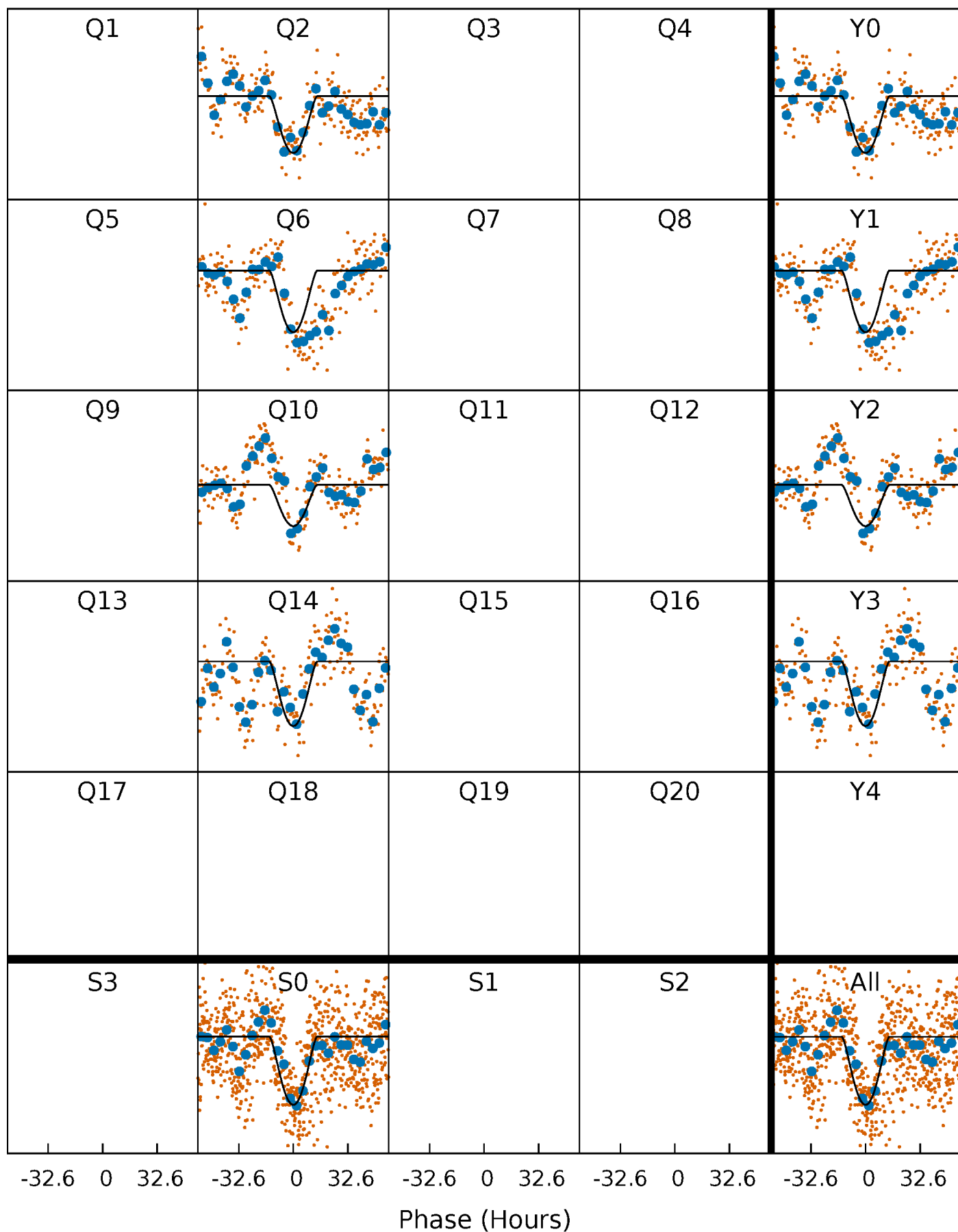
PDC Quarter-Phased Transit Curves

TCE 008307676-01 P=368.985959 Days $T_0=236.069049$ (BKJD)



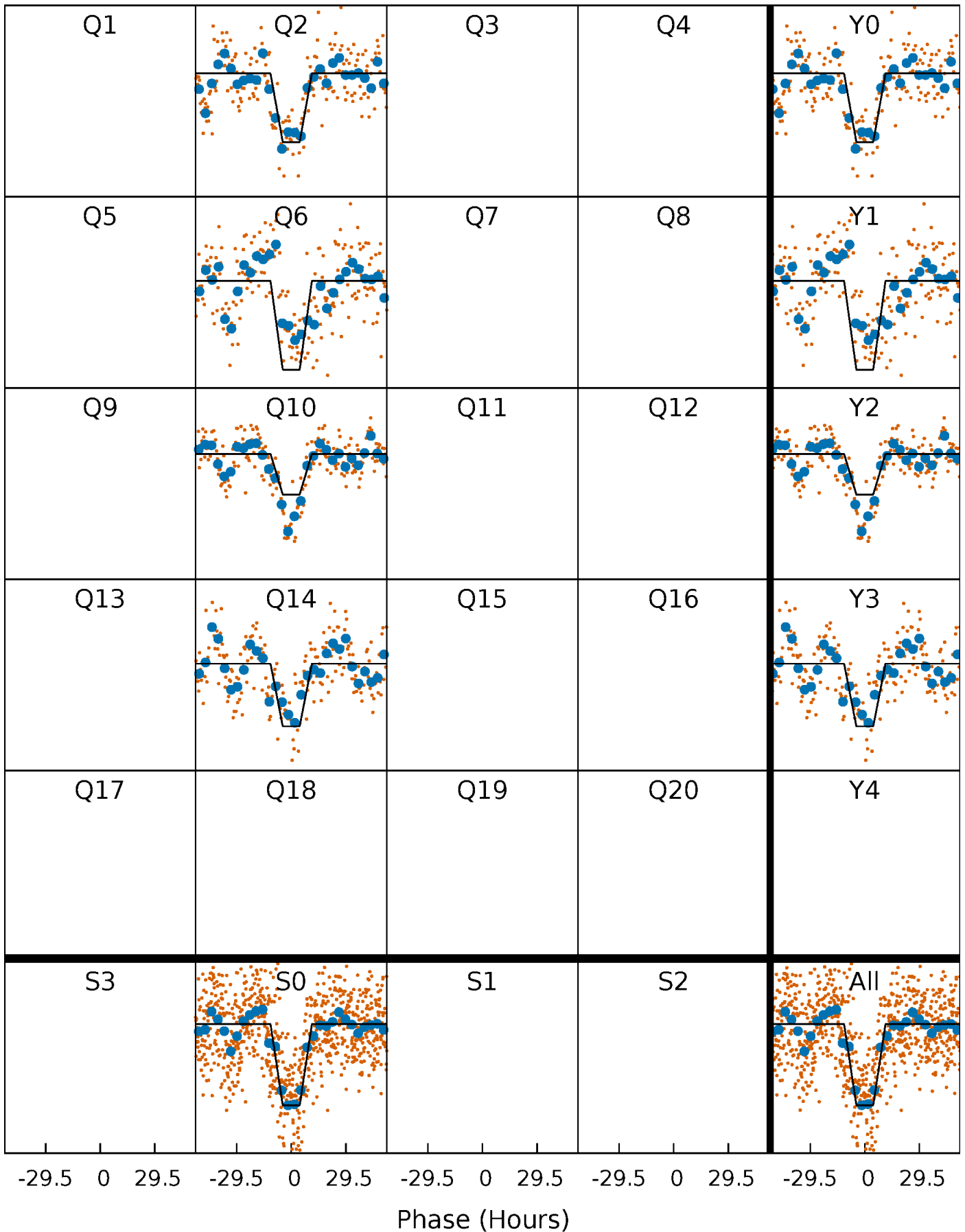
DV Quarter-Phased Transit Curves

TCE 008307676-01 P=368.985959 Days $T_0=236.069049$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

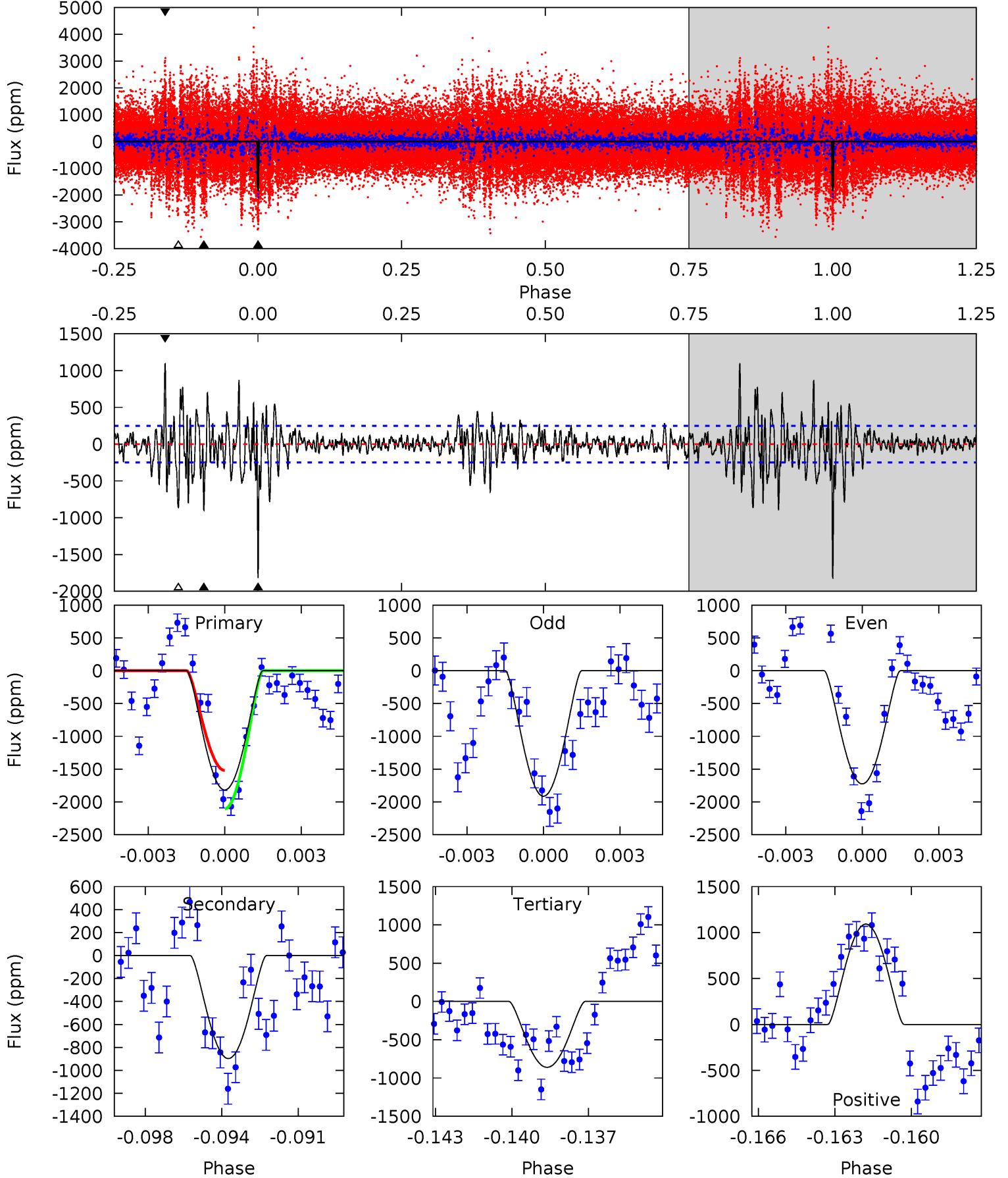
TCE 008307676-01 P=369.023282 Days $T_0=236.053726$ (BKJD)



DV Model-Shift Uniqueness Test

008307676-01, P = 368.985959 Days, E = 236.069049 Days

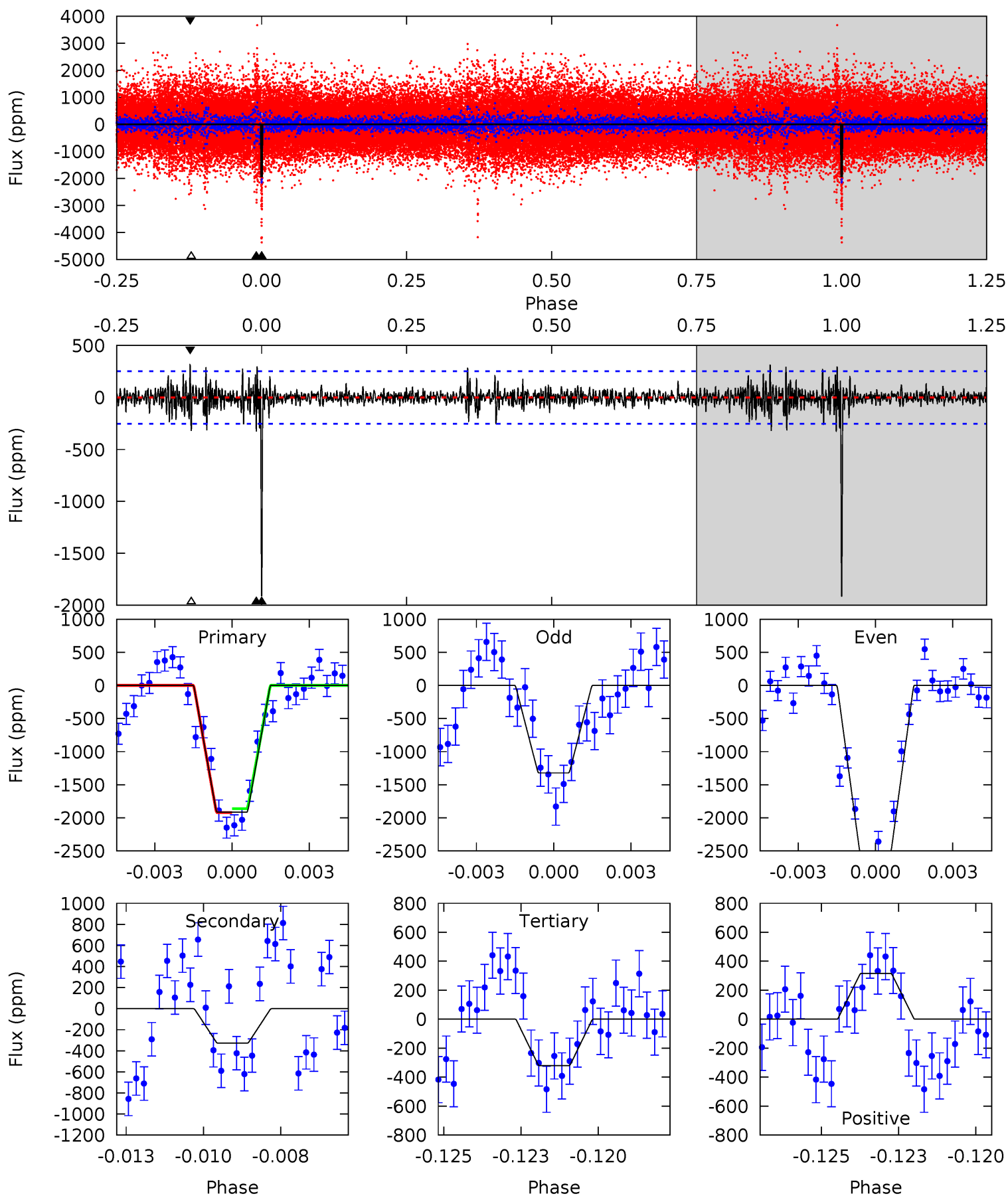
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.2	18.8	18.1	22.9	5.24	2.94	4.05	20.1	15.2	0.78	-4.09	1.98	1.02	0.38	6.13



Alt Model-Shift Uniqueness Test

008307676-01, P = 369.023282 Days, E = 236.053726 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.0	6.84	6.71	6.60	5.28	3.02	1.24	33.3	33.4	0.13	0.24	12.6	1.09	0.14	0.60



Stellar Parameters For KIC 008307676

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5531^{+165}_{-165}	$4.616^{+0.037}_{-0.112}$	$-0.480^{+0.300}_{-0.300}$	$0.726^{+0.136}_{-0.049}$	$0.812^{+0.078}_{-0.086}$	$2.987^{+0.456}_{-1.034}$
	+3%/-3%	+1%/-2%	+62%/-62%	+19%/-7%	+10%/-11%	+15%/-35%
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 008307676-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-897 ± 48	$11.72^{+11.04}_{-7.96}$	305^{+16}_{-11}	3155^{+1422}_{-547}	3102^{+25860}_{-2278}
Alt.	-327 ± 48	$10.62^{+11.03}_{-7.21}$	305^{+14}_{-12}	2800^{+1179}_{-461}	1339^{+12710}_{-1026}

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

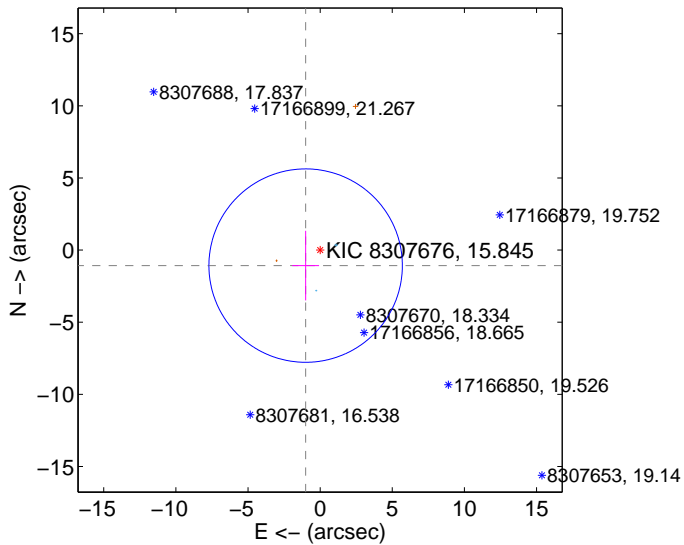
Supplemental centroid analysis for 008307676-01. Kepler magnitude: 15.85. Transit SNR 9.17

There are 2 quarters with good PRF difference image offsets

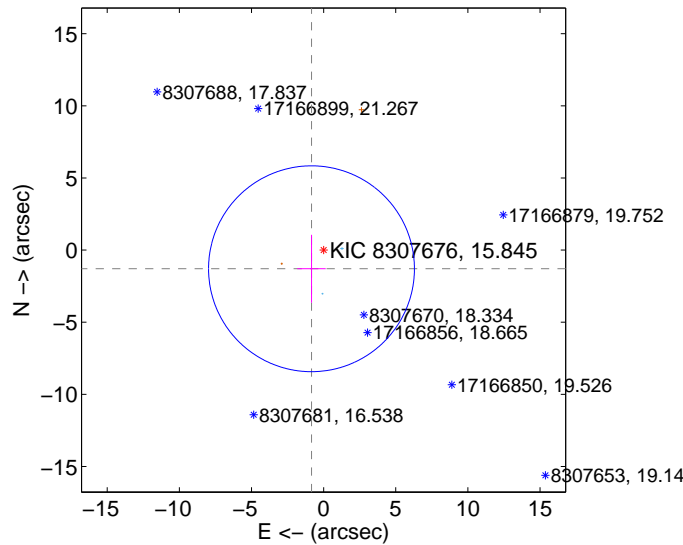
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.472 ± 2.234	0.66	1.006 ± 0.928	-1.074 ± 2.414
PRF-fit source offset from KIC position	1.543 ± 2.378	0.65	0.841 ± 0.985	-1.294 ± 2.356
photometric centroid source offset	8.27 ± 1.90	4.35	5.28 ± 1.75	-6.36 ± 2.00

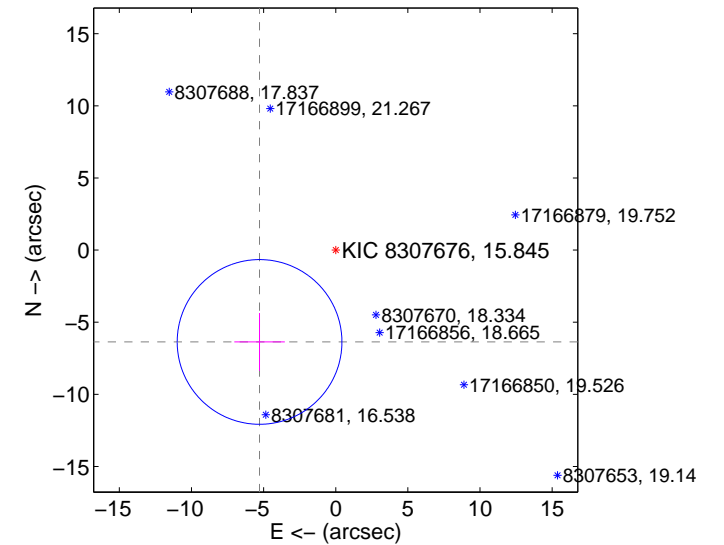
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

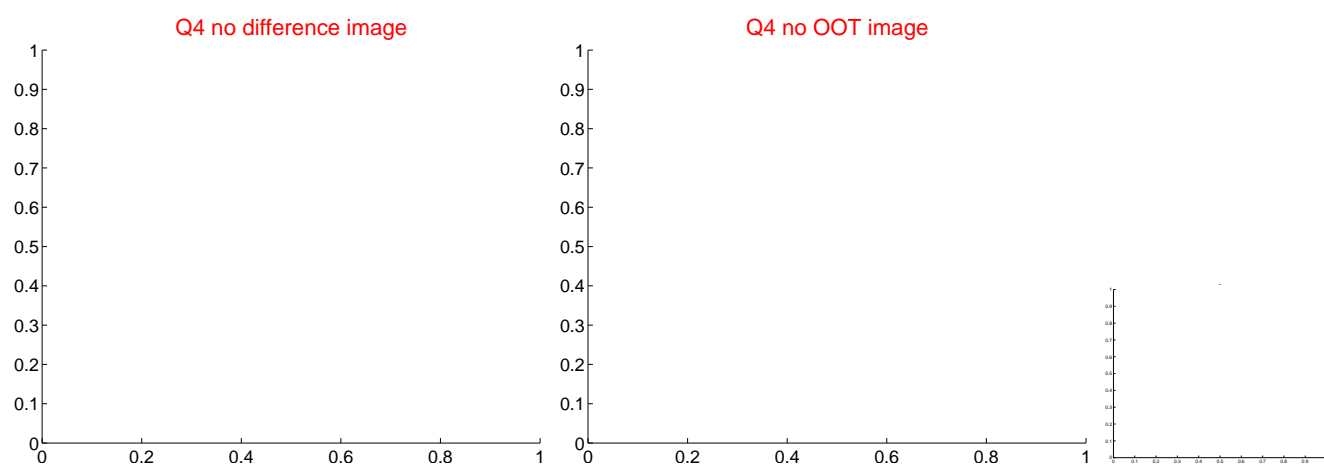
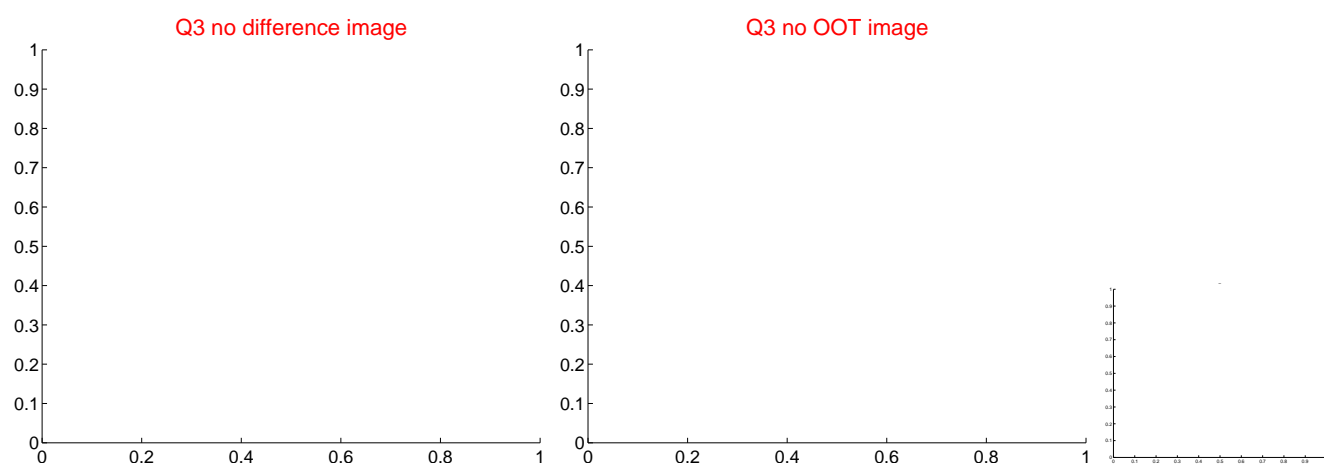
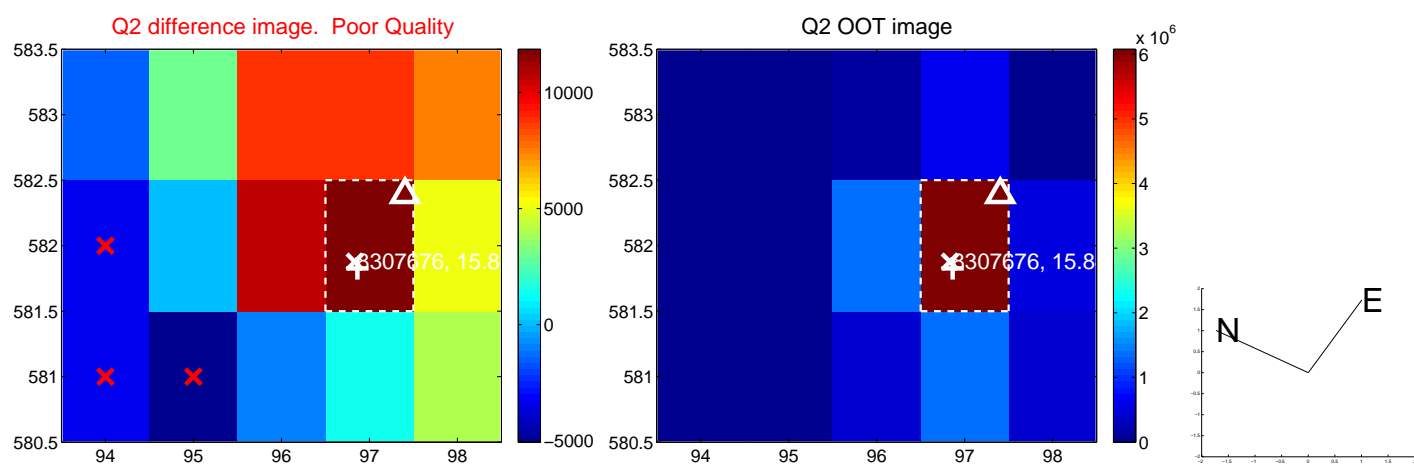
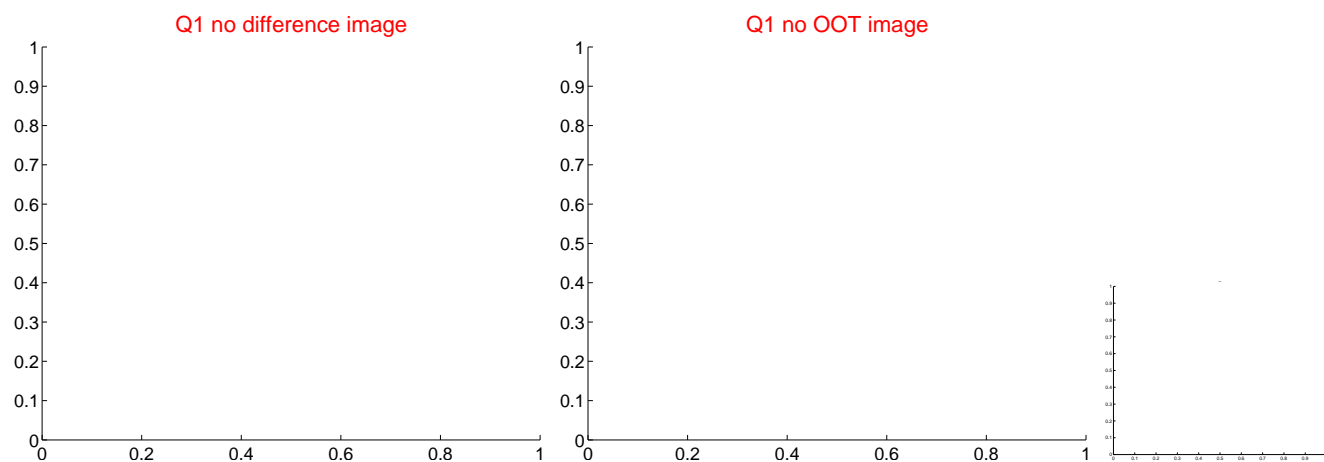


offset from photometric centroids

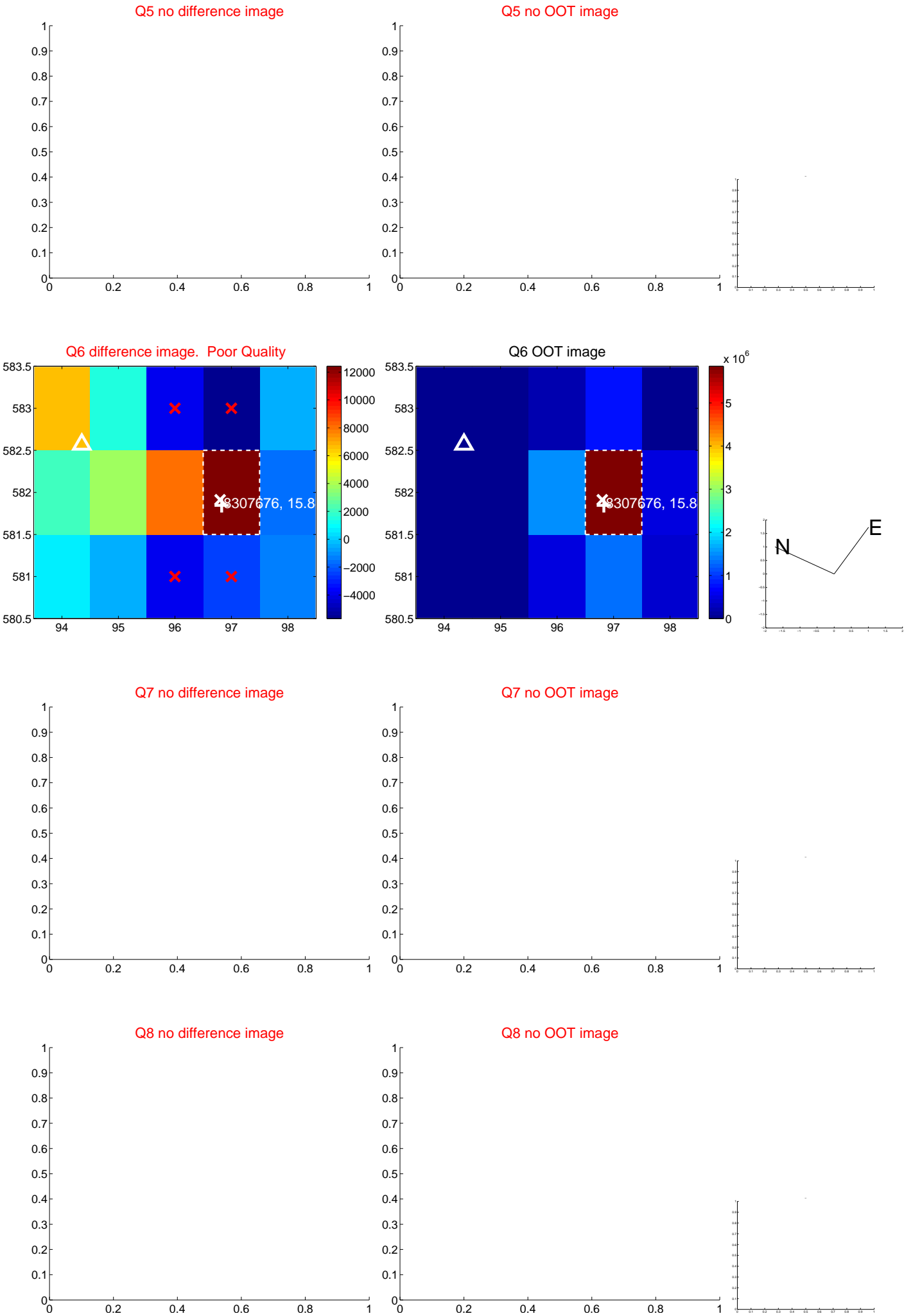


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

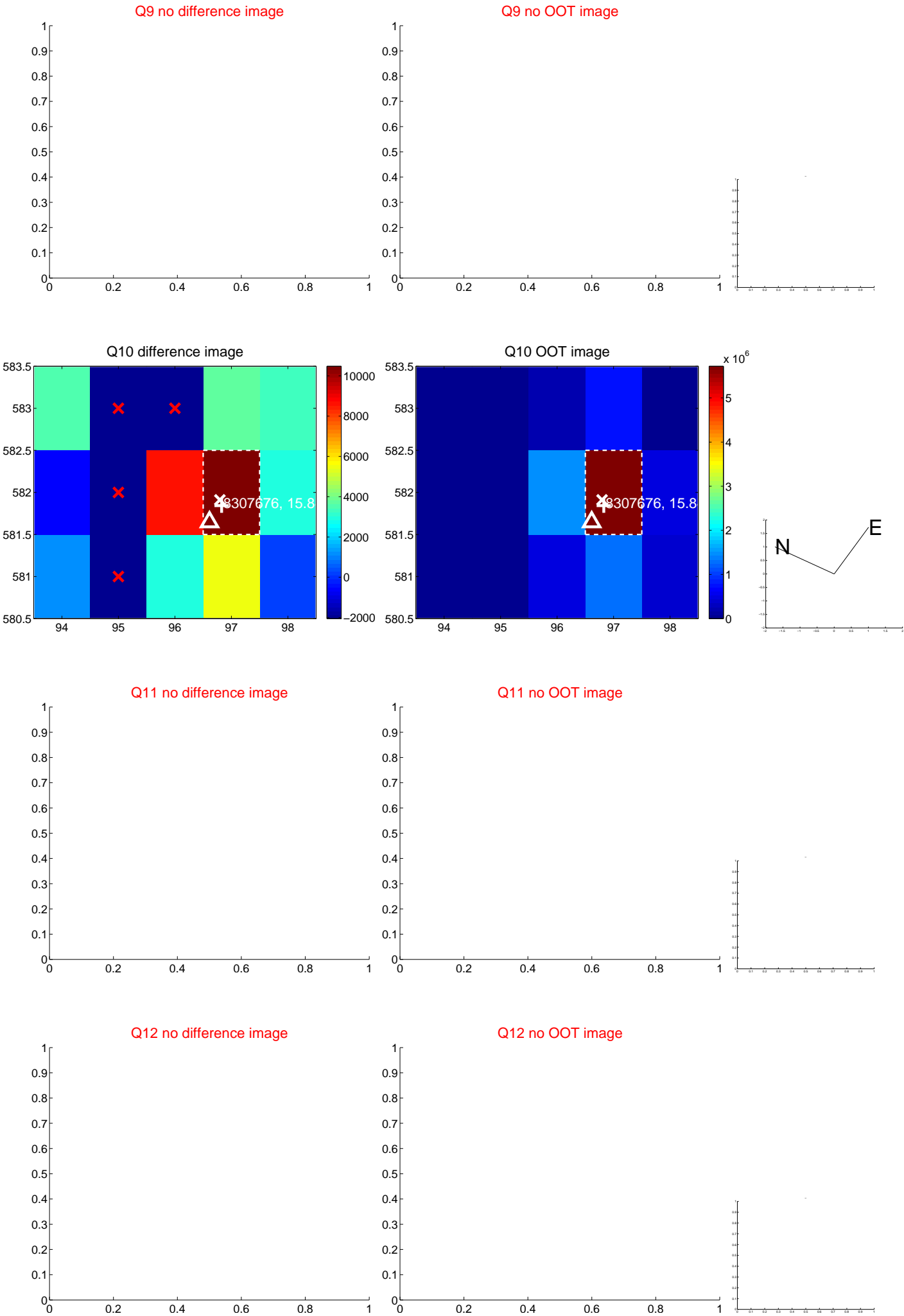
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



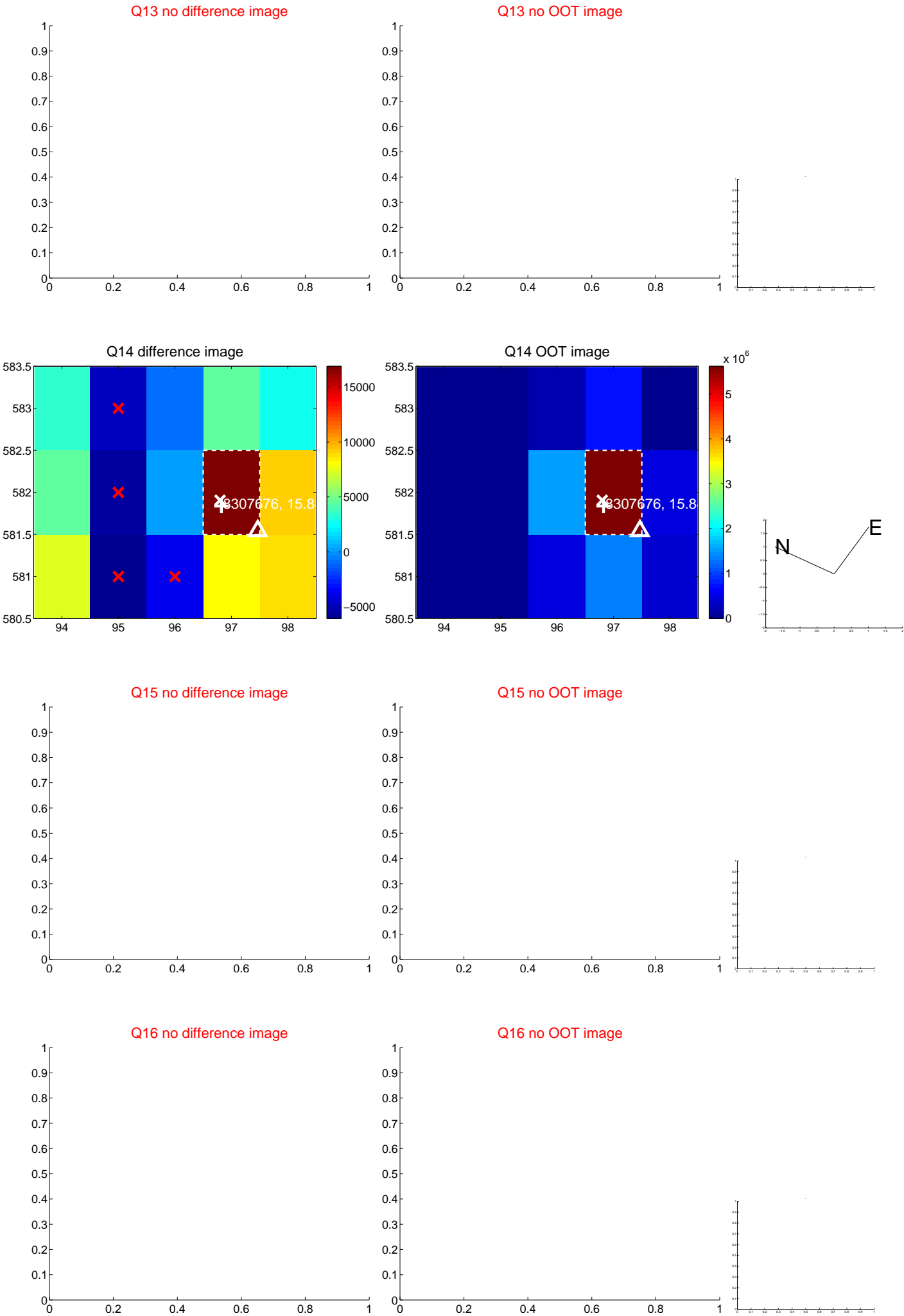
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



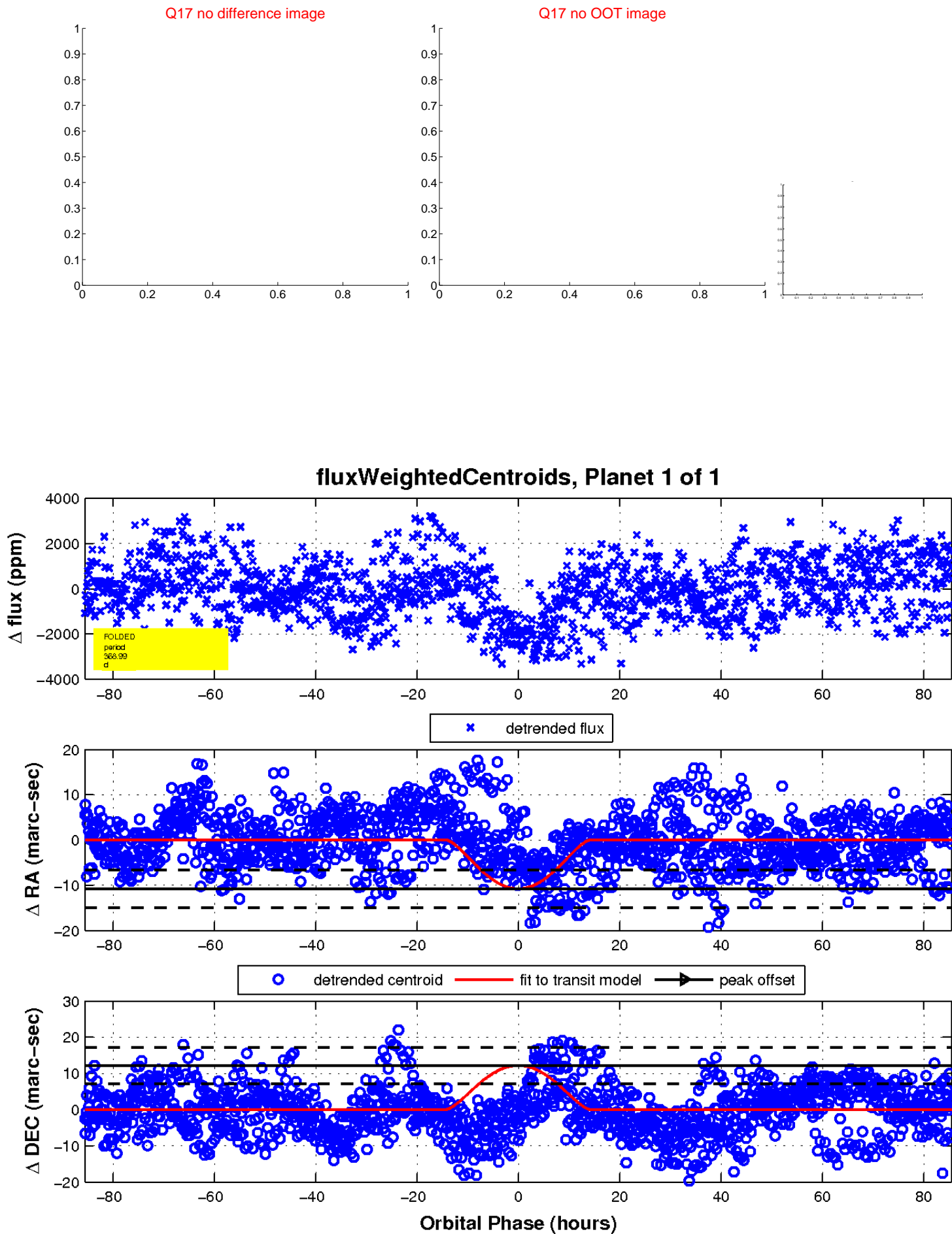
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

