

KIC 008636434

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})
008636434-01	OBS	3946.01	308.547139	296.064739	600.0	18.552	25.6	28.9	1.35	6325	3.31	2.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008636434-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

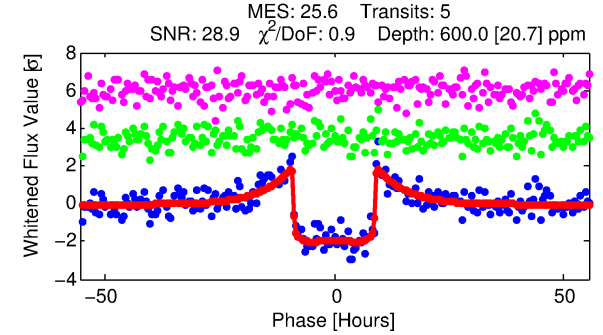
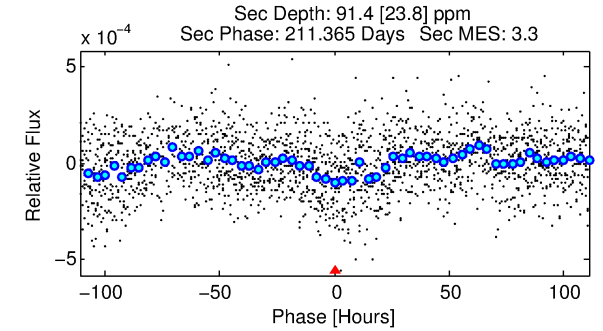
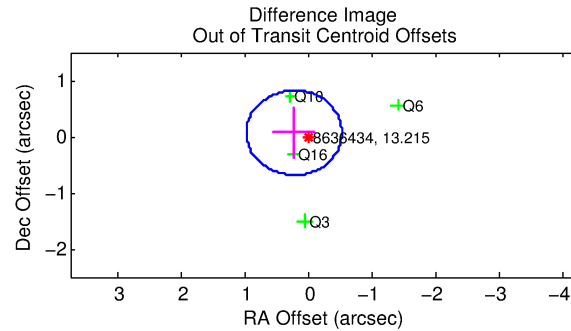
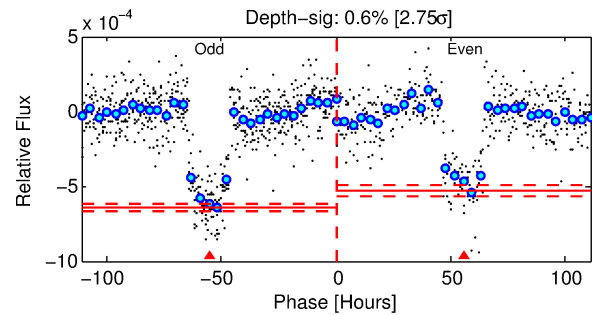
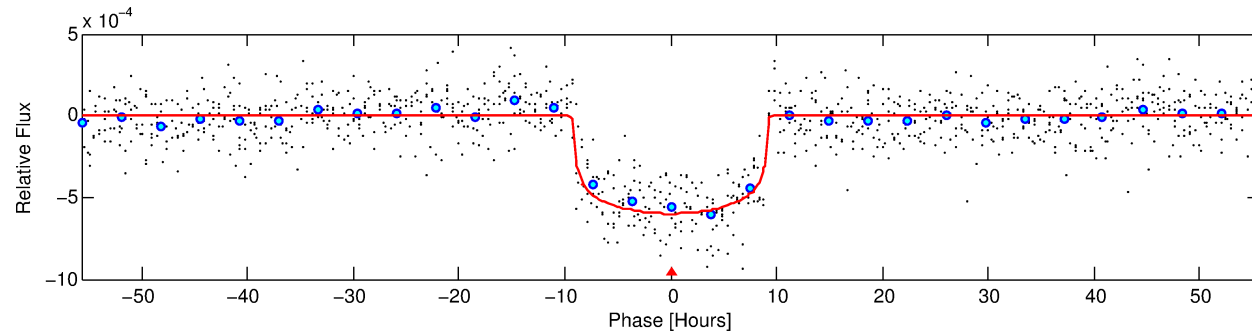
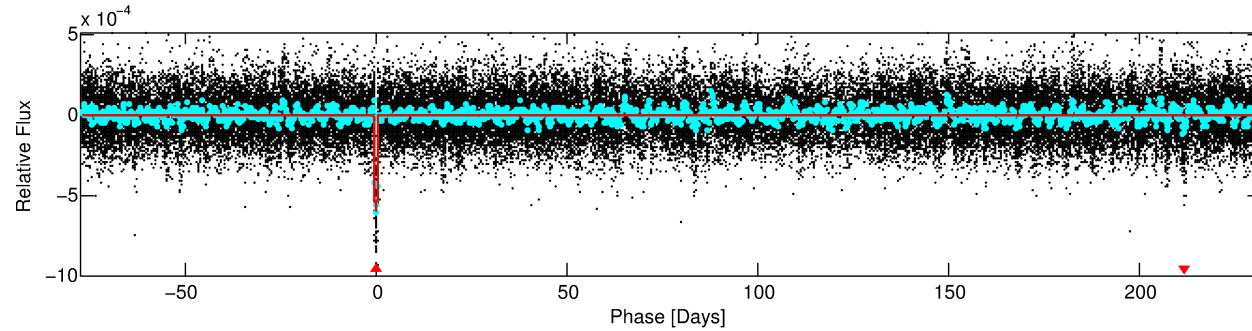
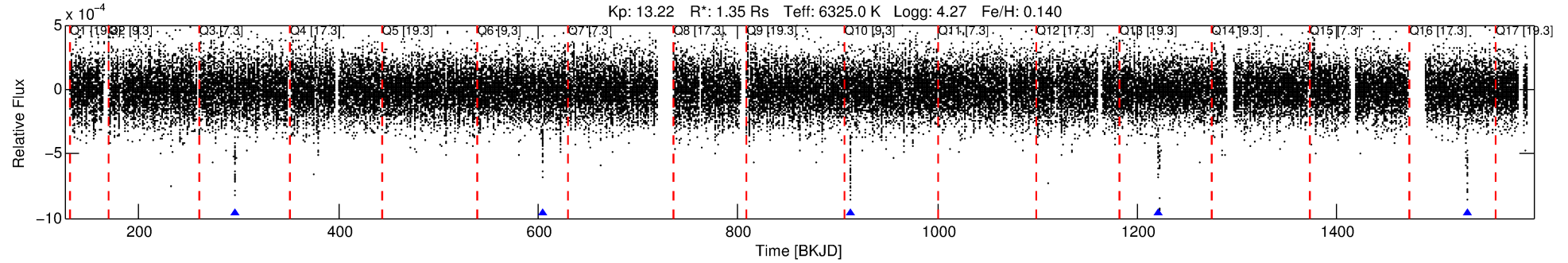
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008636434-01

No Significant Match Found

DV One-Page Summary

KIC: 8636434 Candidate: 1 of 1 Period: 308.547 d
KOI: K03946.01 Corr: 0.994



DV Fit Results:

Period = 308.54714 [0.00210] d
Epoch = 296.0647 [0.0056] BKJD
Rp/R* = 0.0225 [0.0030]
a/R* = 128.65 [85.06]
b = 0.14 [4.56]
Seff = 2.82 [0.80]
Teq = 330 [23] K
Rp = 3.31 [0.88] Re
a = 0.9622 [0.1848] AU
Ag = 4250.53 [1981.90] [2.14σ]
Teffp = 4125 [391] K [9.68σ]

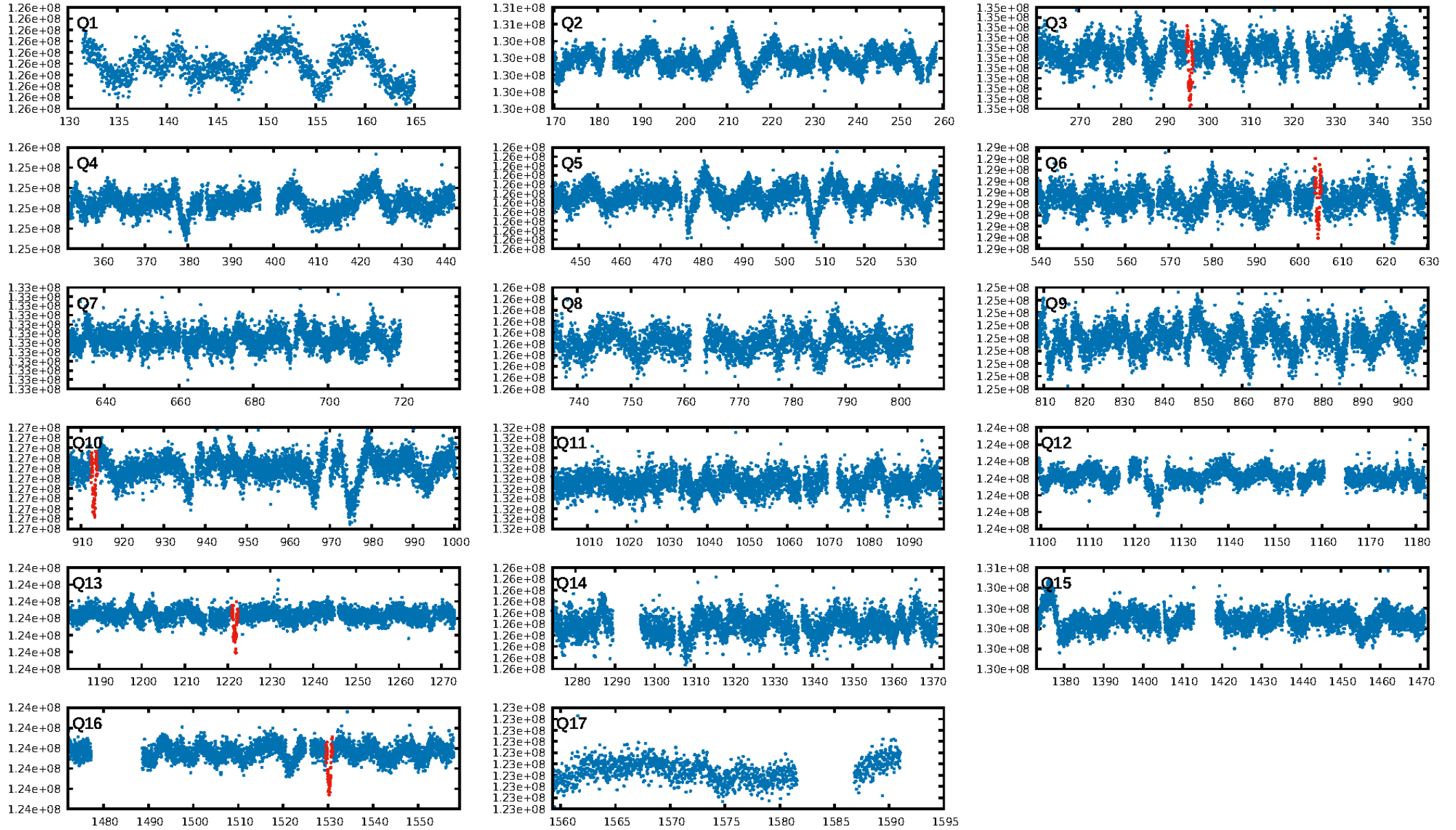
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.92e-104
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.619
Centroid-sig: 75.1%
Centroid-so: 0.083 arcsec [0.36σ]
OotOffset-rm: 0.240 arcsec [0.96σ]
KicOffset-rm: 0.239 arcsec [0.62σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

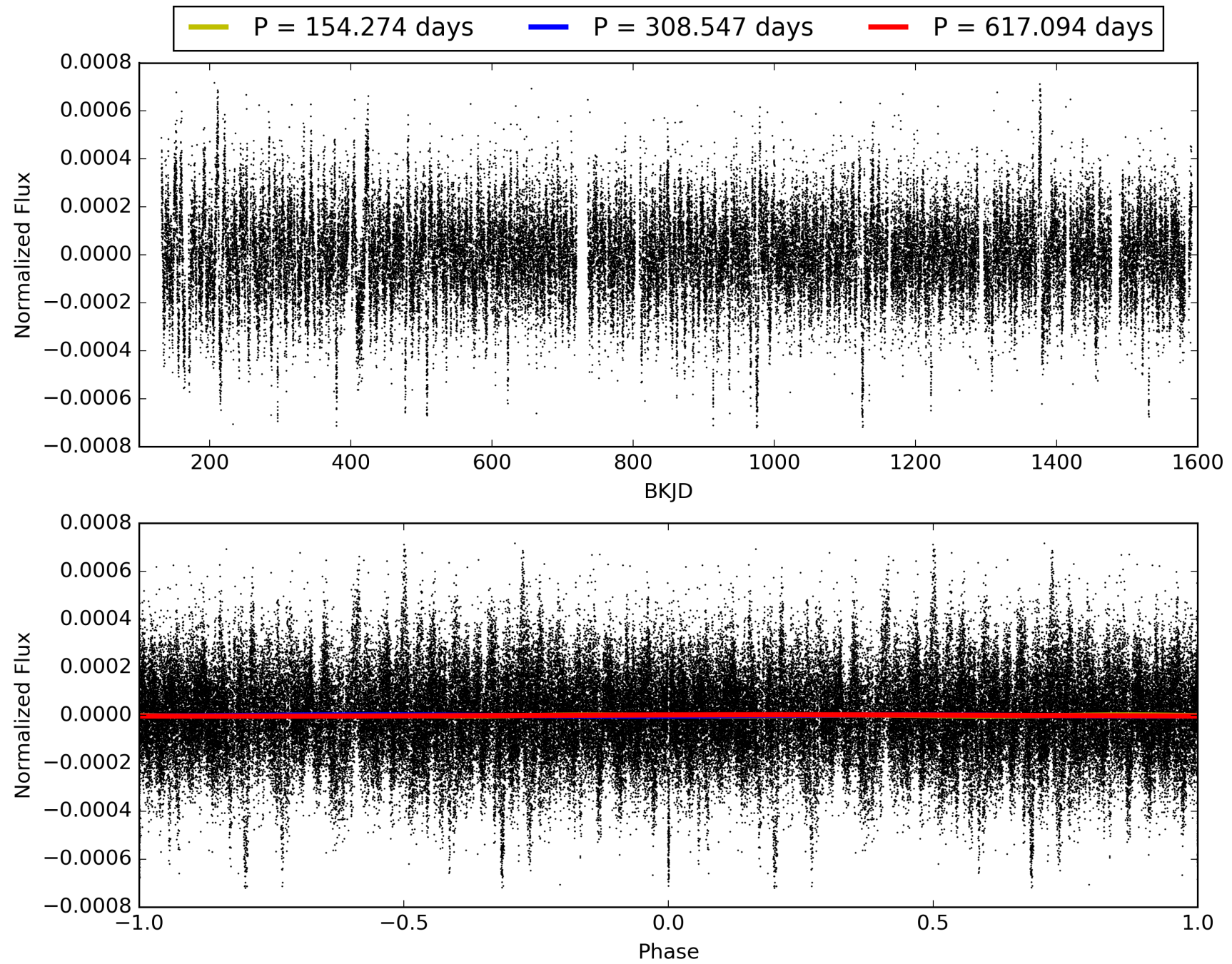
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:29:32 Z

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

TCE 008636434-01, PDC Light Curves

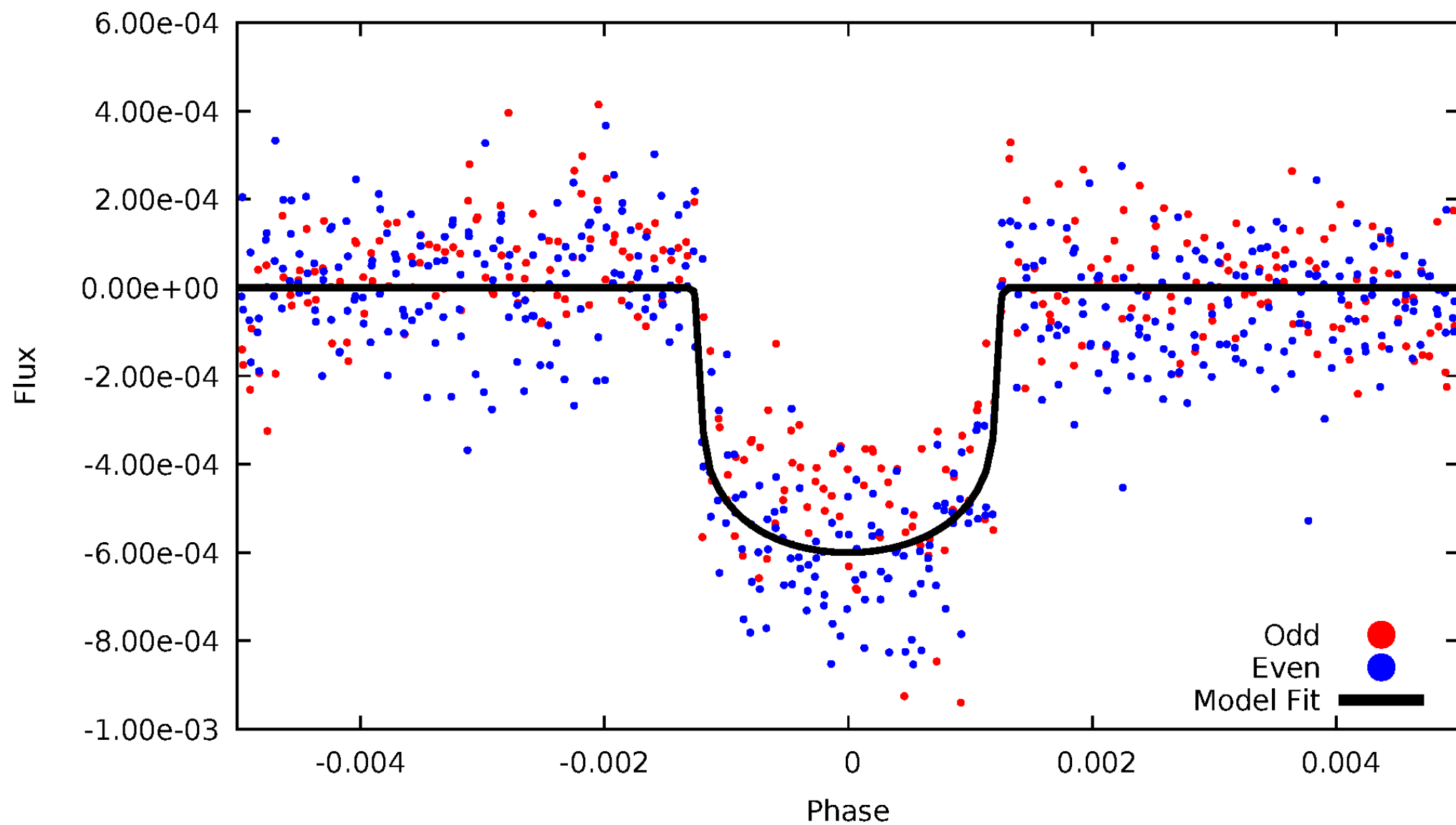


TCE 008636434-01



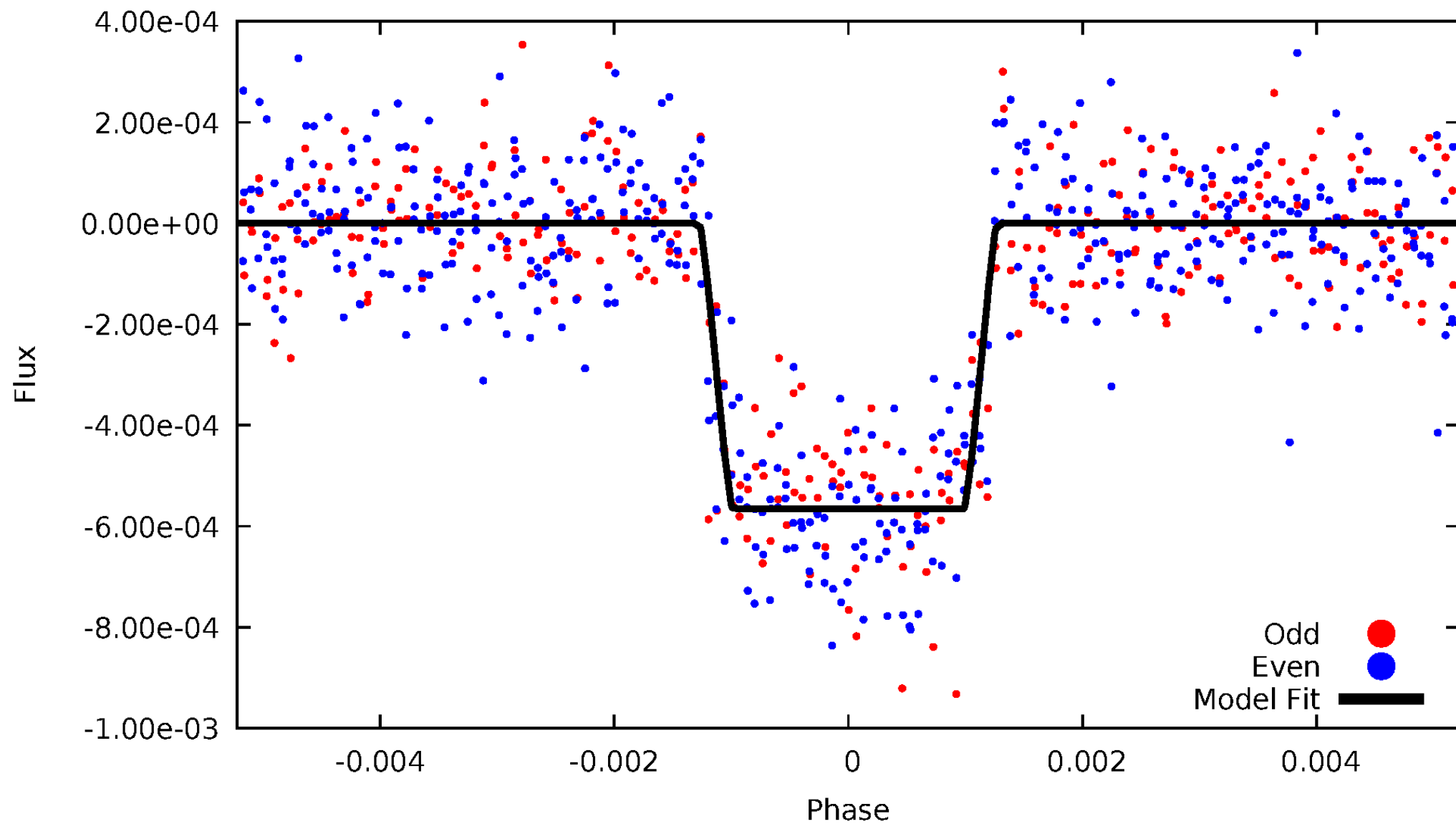
DV Odd/Even

TCE 008636434-01

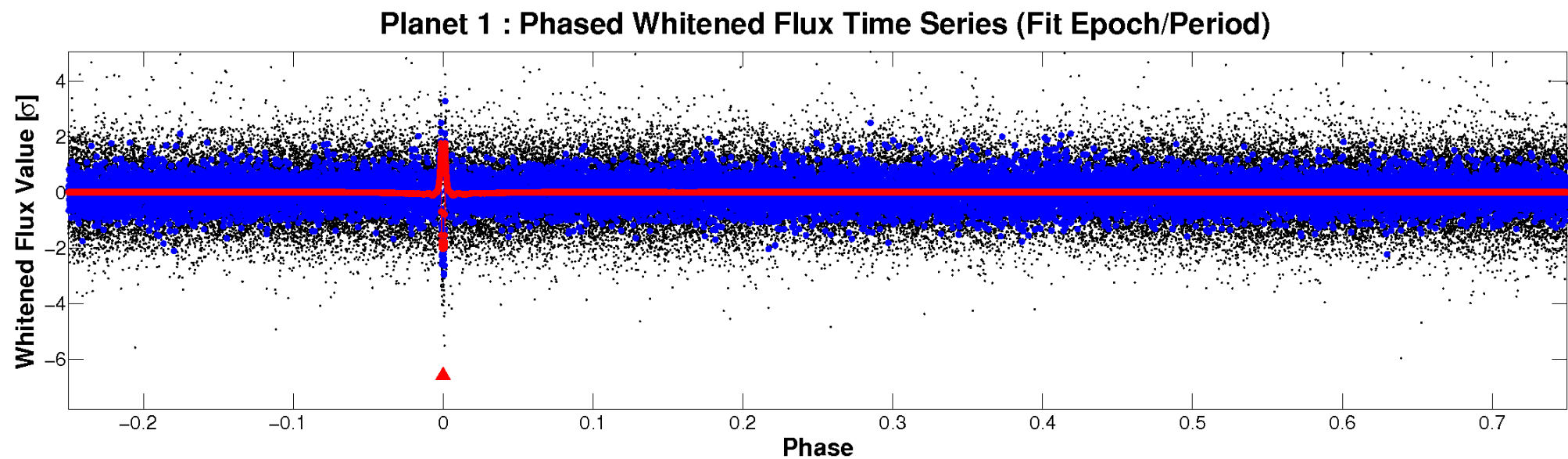
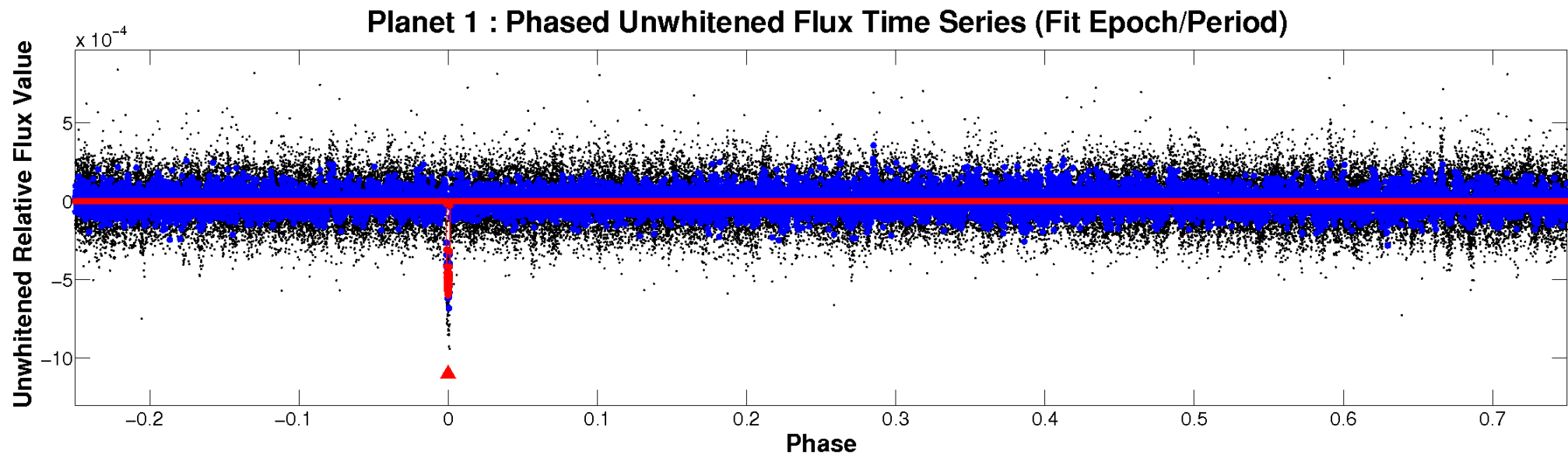


ALT Odd/Even

TCE 008636434-01

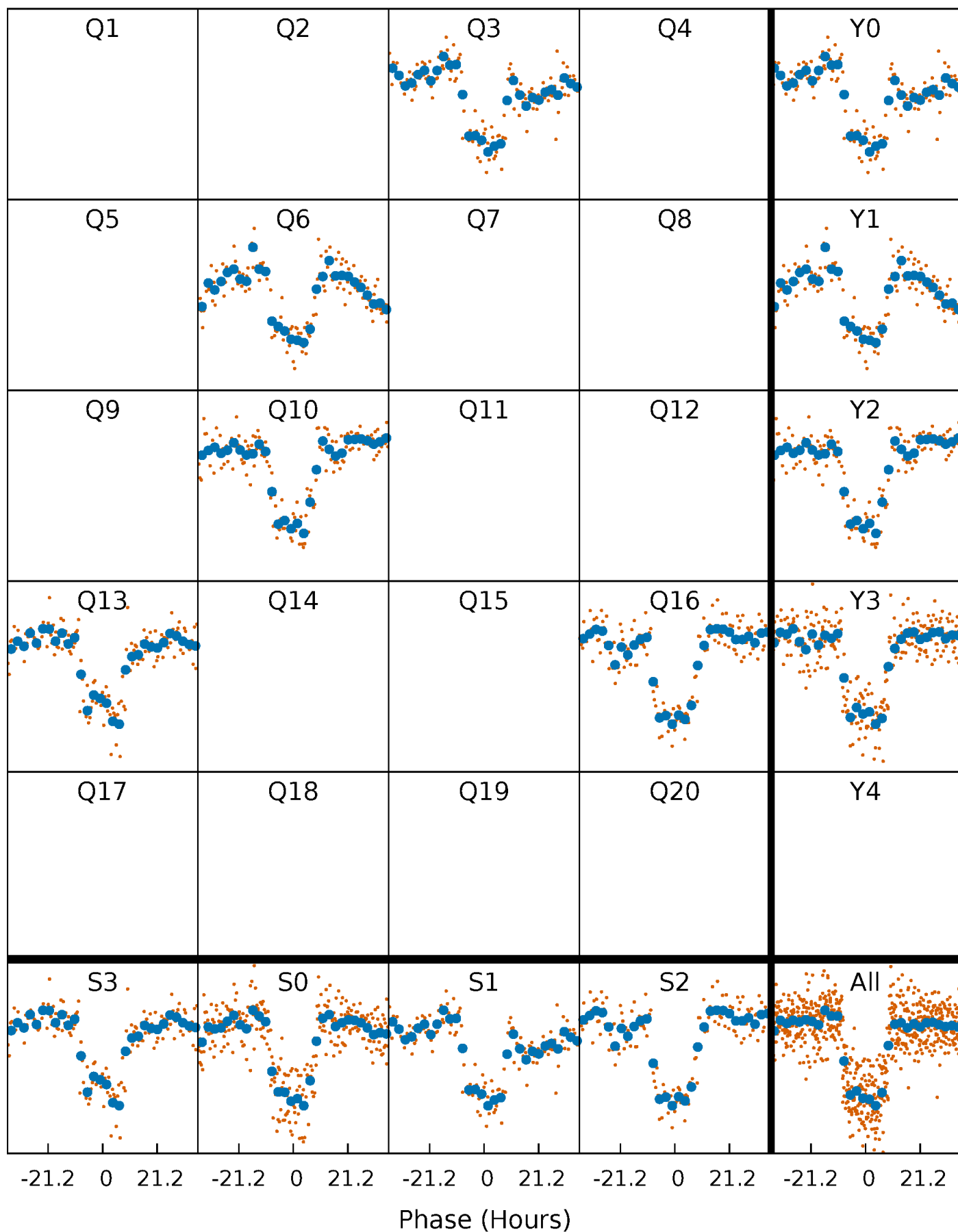


Non-Whitened Vs. Whitened Light Curve



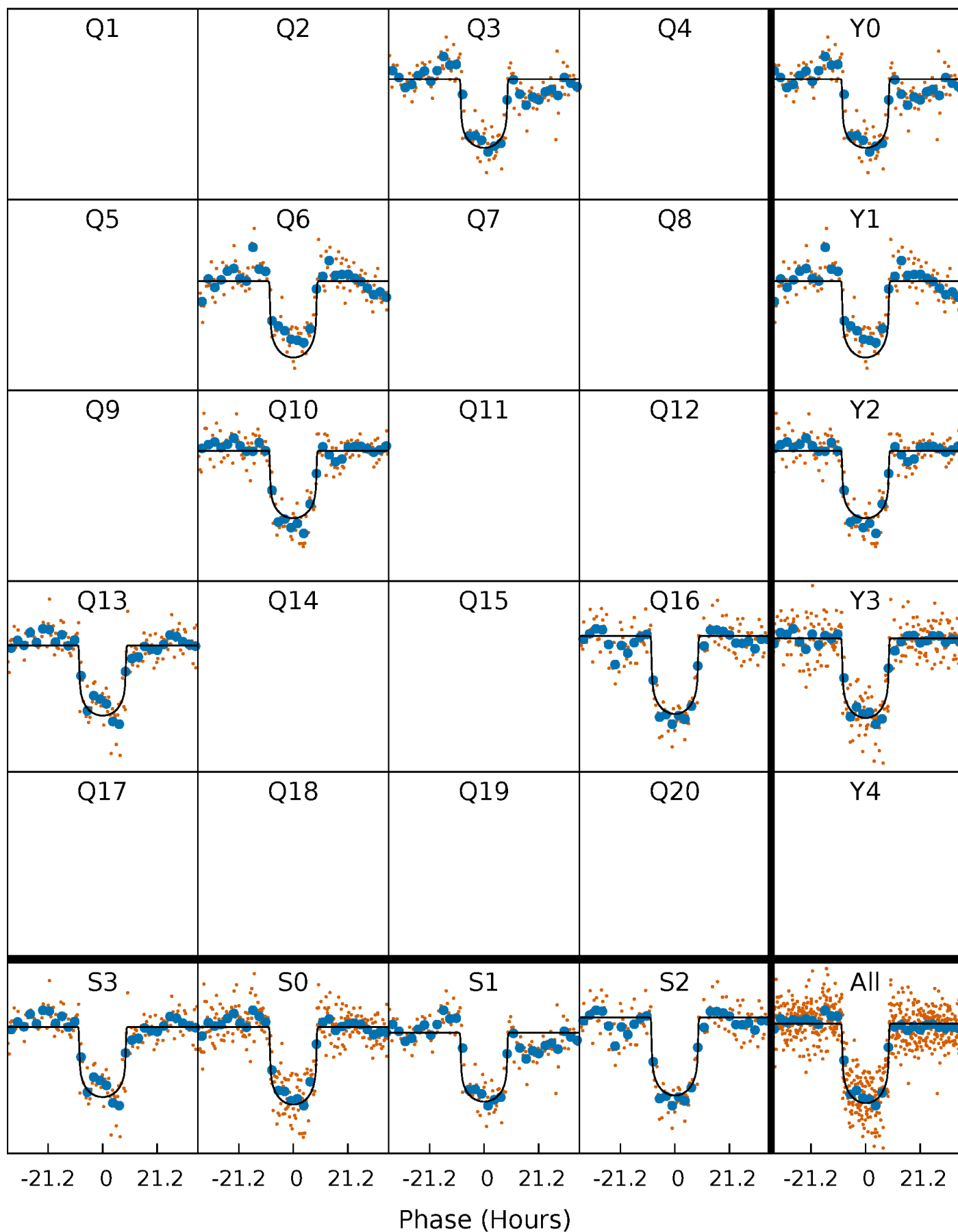
PDC Quarter-Phased Transit Curves

TCE 008636434-01 P=308.547139 Days $T_0=296.064739$ (BKJD)



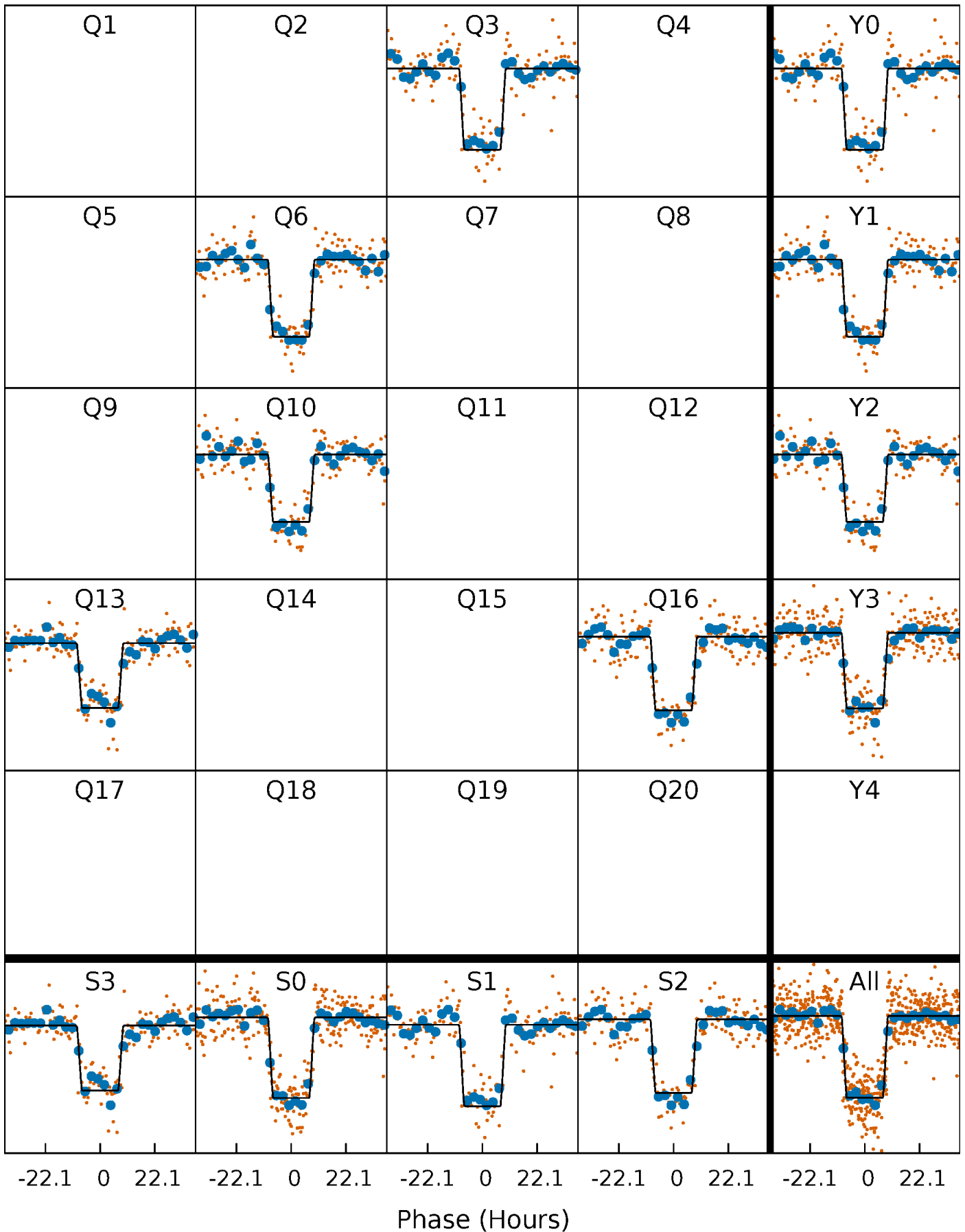
DV Quarter-Phased Transit Curves

TCE 008636434-01 P=308.547139 Days $T_0=296.064739$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

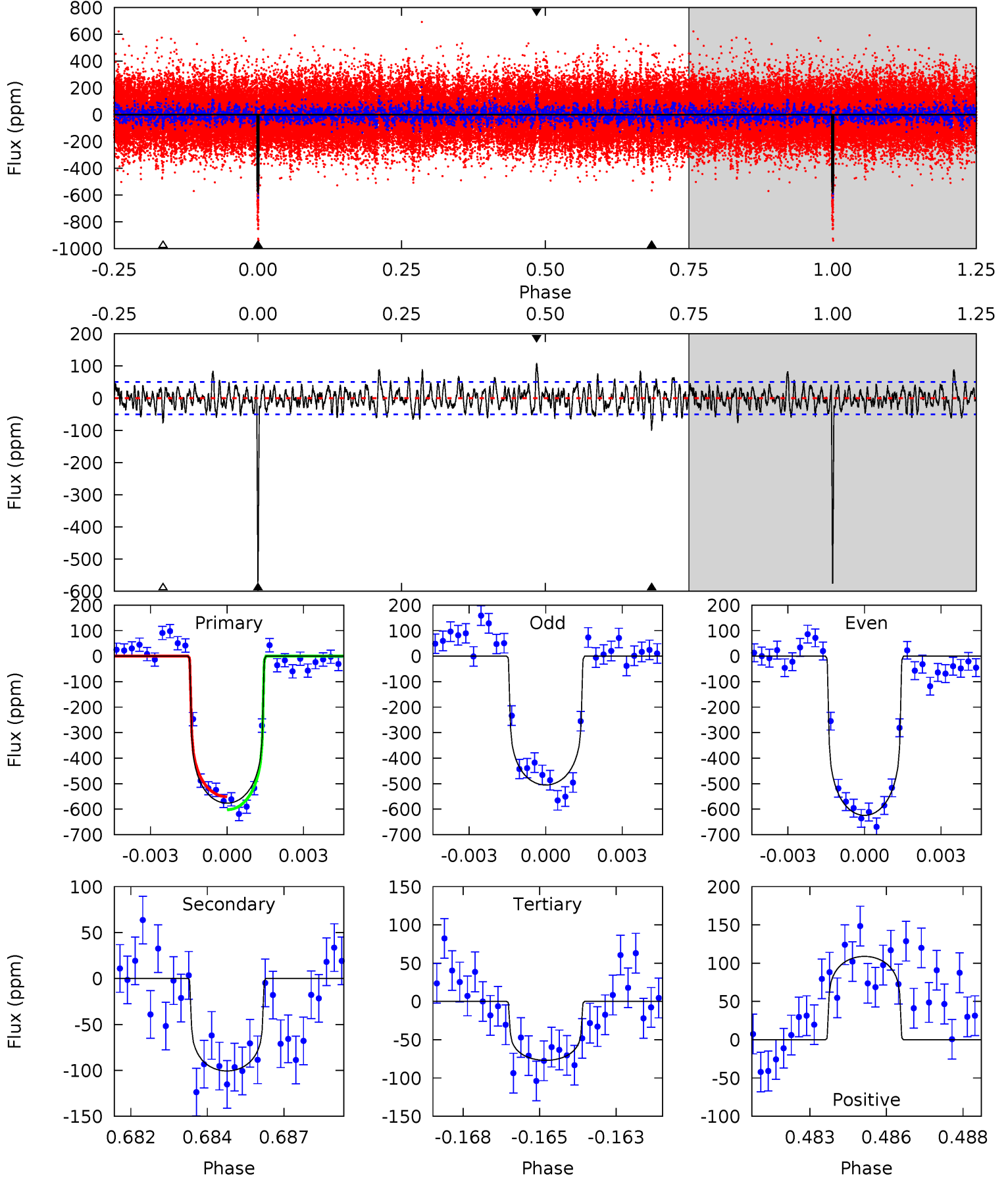
TCE 008636434-01 P=308.546756 Days $T_0=296.065505$ (BKJD)



DV Model-Shift Uniqueness Test

008636434-01, P = 308.547139 Days, E = 296.064739 Days

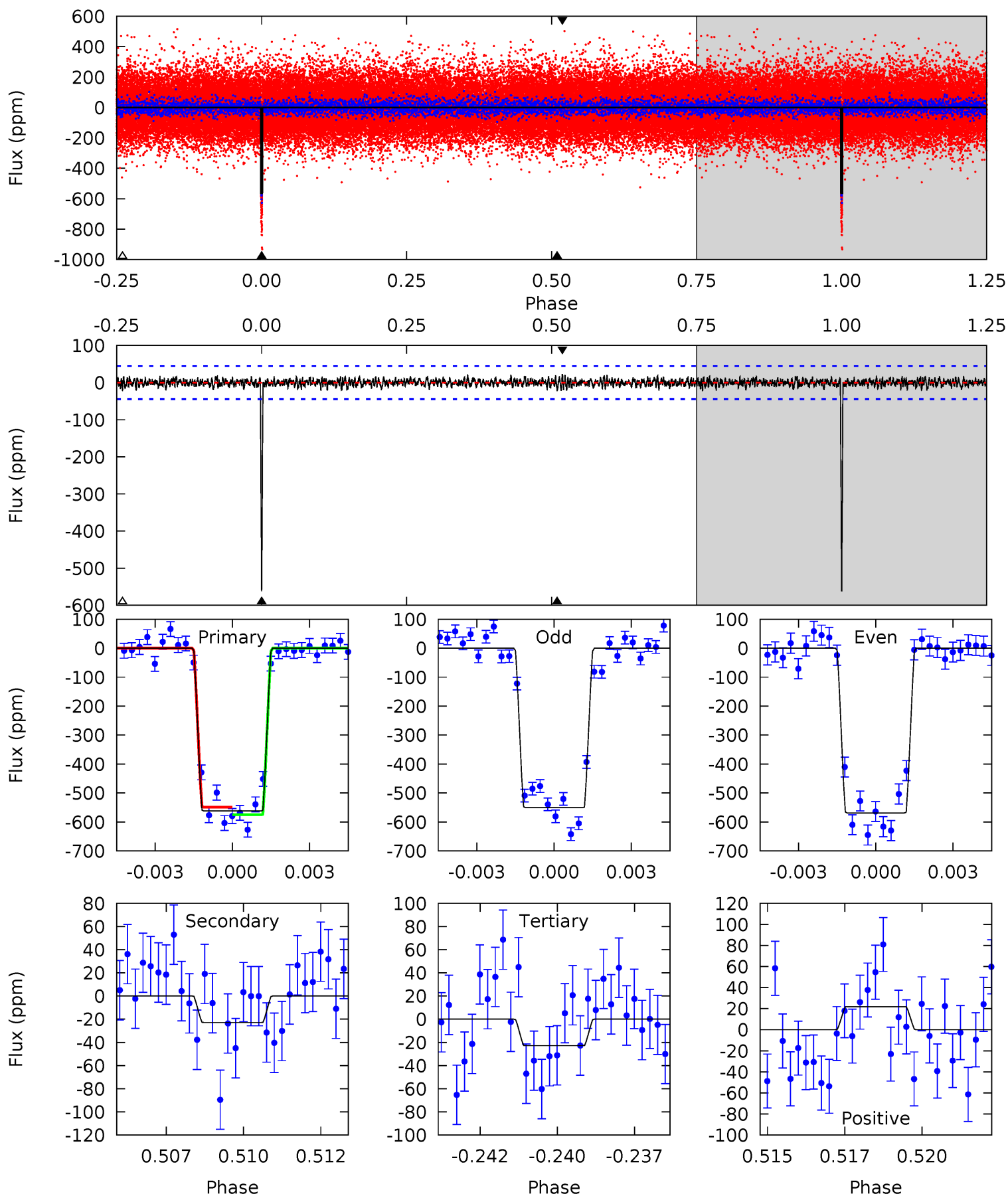
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.4	10.5	8.06	11.4	5.28	3.01	2.89	52.4	49.0	2.49	-0.86	6.15	1.01	0.16	2.68



Alt Model-Shift Uniqueness Test

008636434-01, P = 308.546756 Days, E = 296.065505 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.9	2.72	2.72	2.60	5.28	3.02	0.83	64.2	64.3	0.00	0.12	1.05	1.01	0.04	1.55



Stellar Parameters For KIC 008636434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6325^{+69}_{-88}	$4.274^{+0.081}_{-0.150}$	$0.140^{+0.150}_{-0.200}$	$1.349^{+0.311}_{-0.156}$	$1.252^{+0.101}_{-0.111}$	$0.718^{+0.254}_{-0.311}$
	+1%/-1%	+2%/-4%	+107%/-143%	+23%/-12%	+8%/-9%	+35%/-43%
Source	SPE90	FLK73	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008636434-01 / KOI 3946.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-101 ± 10	$3.39^{+0.60}_{-0.53}$	465^{+26}_{-17}	4427^{+264}_{-217}	4485^{+1789}_{-1250}
Alt.	-23 ± 8	$3.56^{+0.63}_{-0.49}$	465^{+27}_{-18}	3365^{+220}_{-241}	883^{+506}_{-354}

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

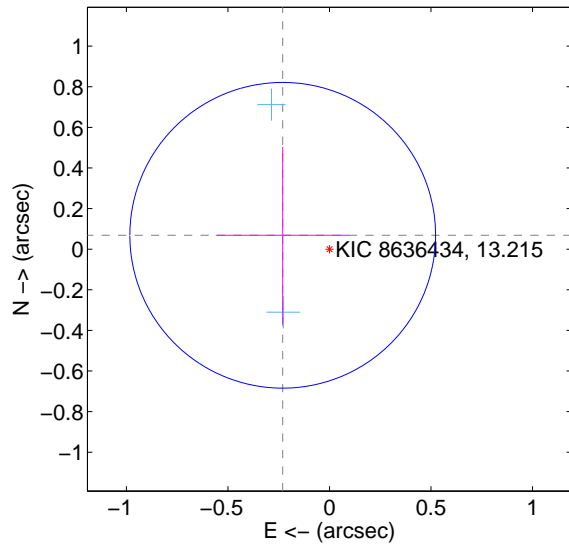
Supplemental centroid analysis for 008636434-01. Kepler magnitude: 13.21. Transit SNR 28.85

There are 4 quarters with good PRF difference image offsets

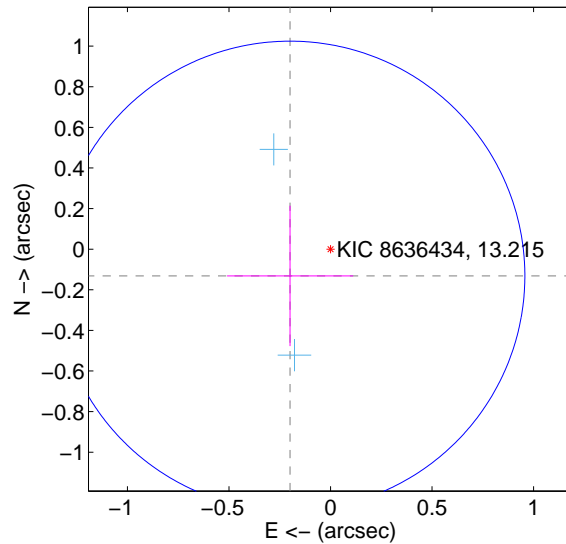
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.240 ± 0.251	0.96	0.230 ± 0.328	0.068 ± 0.436
PRF-fit source offset from KIC position	0.239 ± 0.385	0.62	0.199 ± 0.310	-0.132 ± 0.346
photometric centroid source offset	0.08 ± 0.23	0.36	0.02 ± 0.25	-0.08 ± 0.23

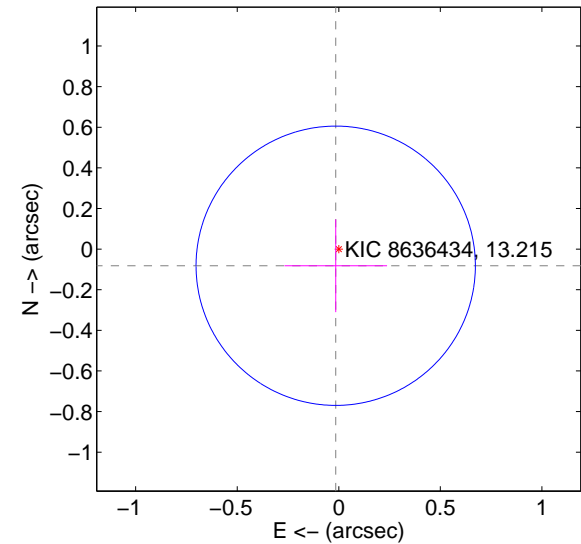
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



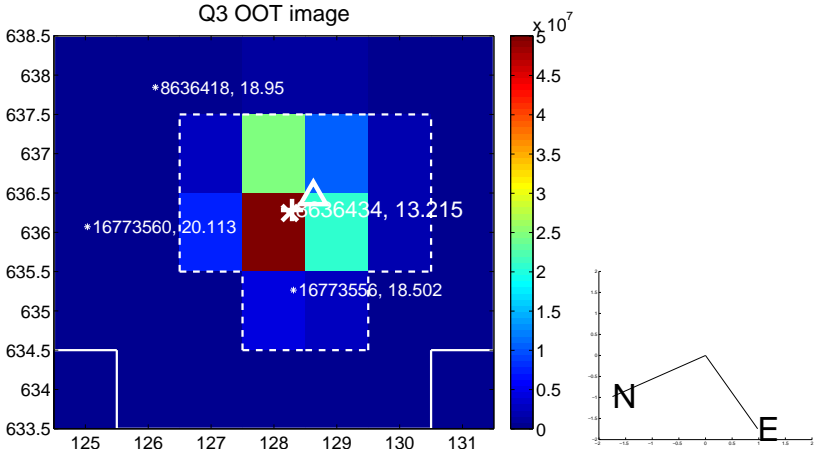
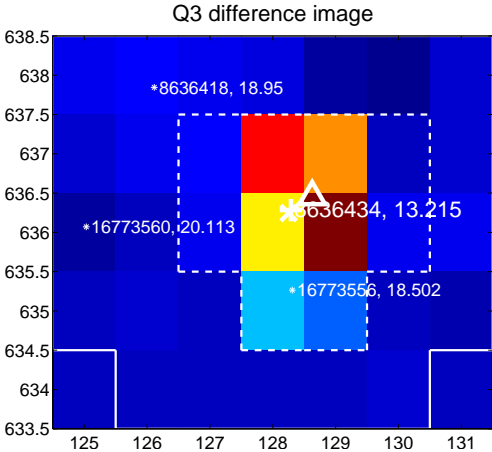
Q1 no OOT image



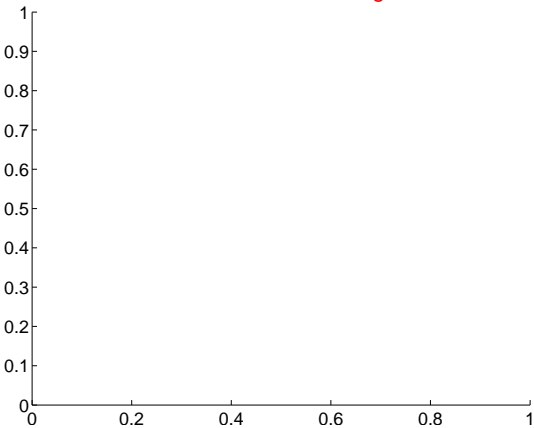
Q2 no difference image



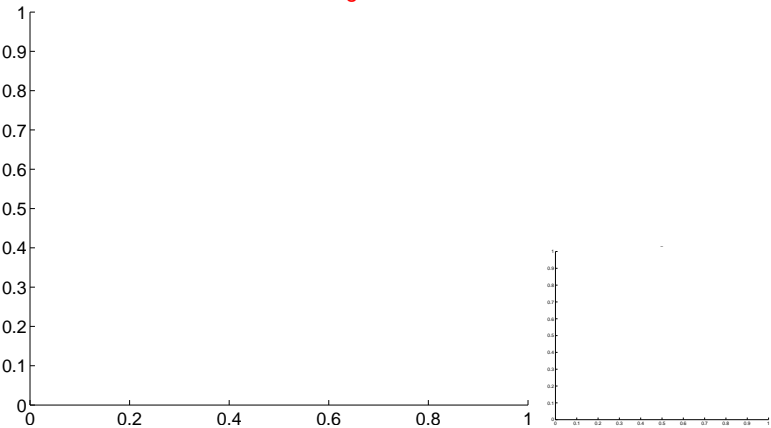
Q2 no OOT image



Q4 no difference image



Q4 no OOT image



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

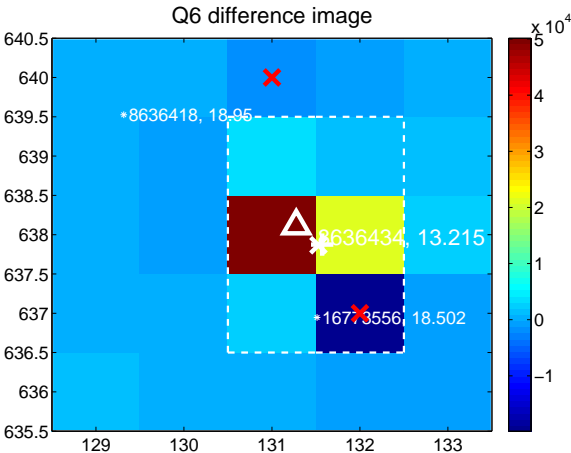
Q5 no difference image



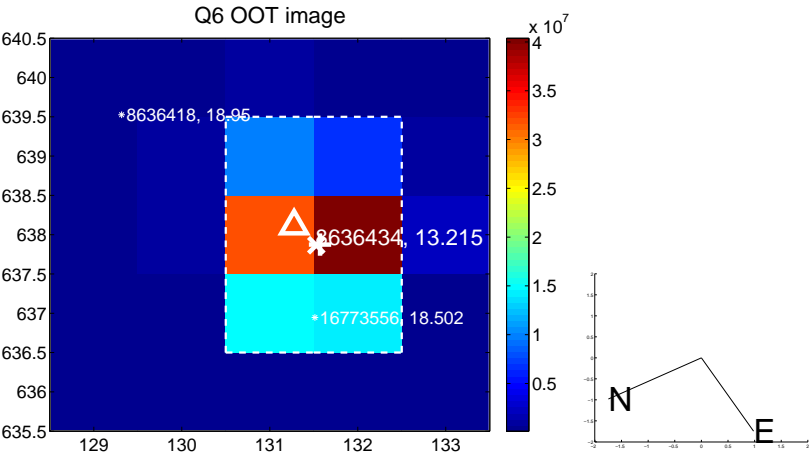
Q5 no OOT image



Q6 difference image



Q6 OOT image



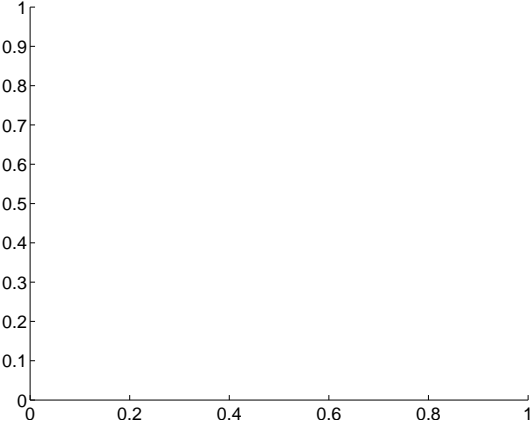
Q7 no difference image



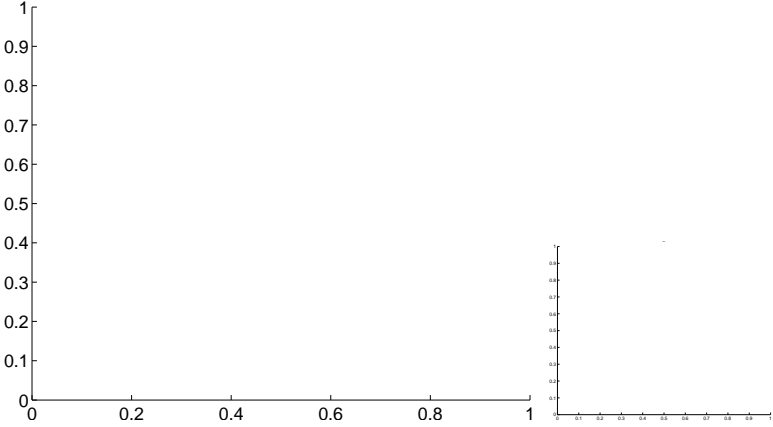
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

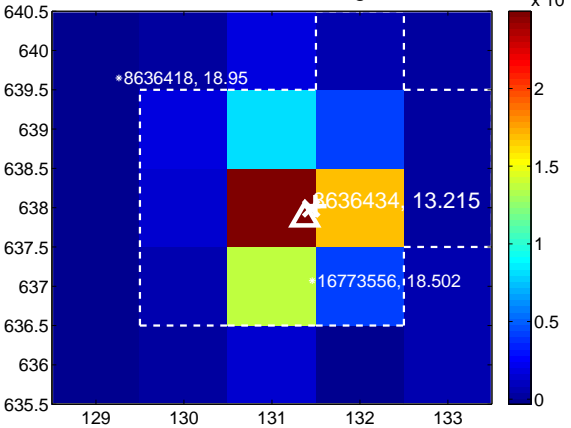
Q9 no difference image



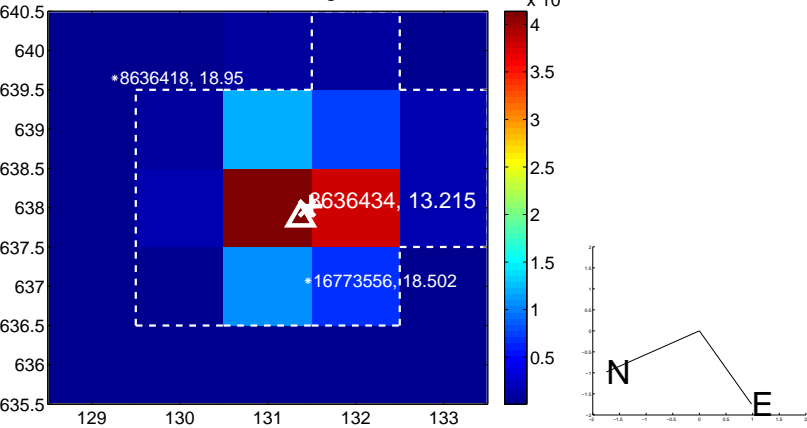
Q9 no OOT image



Q10 difference image



Q10 OOT image



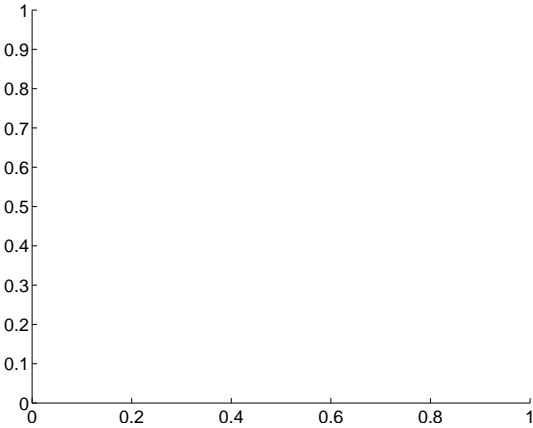
Q11 no difference image



Q11 no OOT image



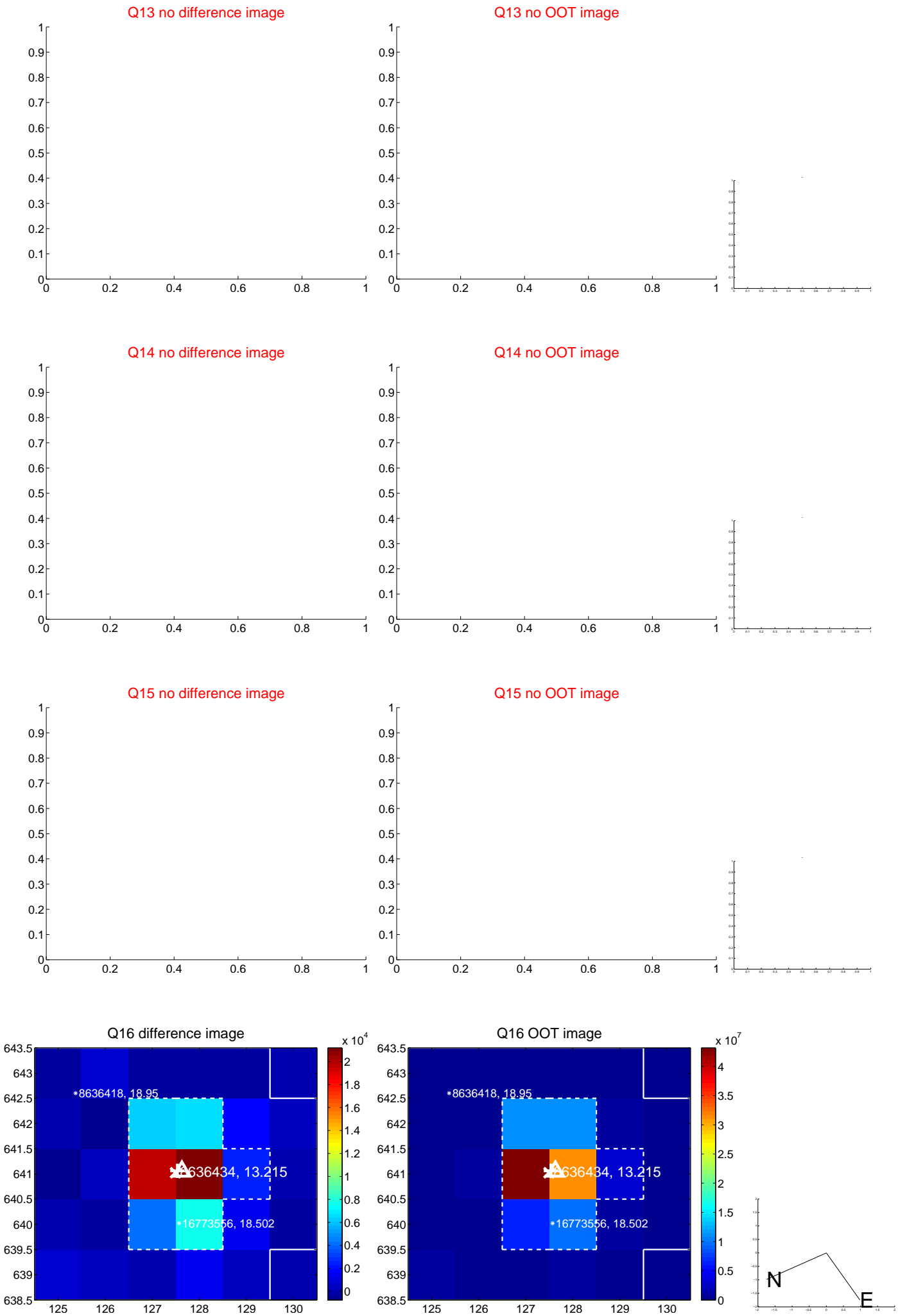
Q12 no difference image



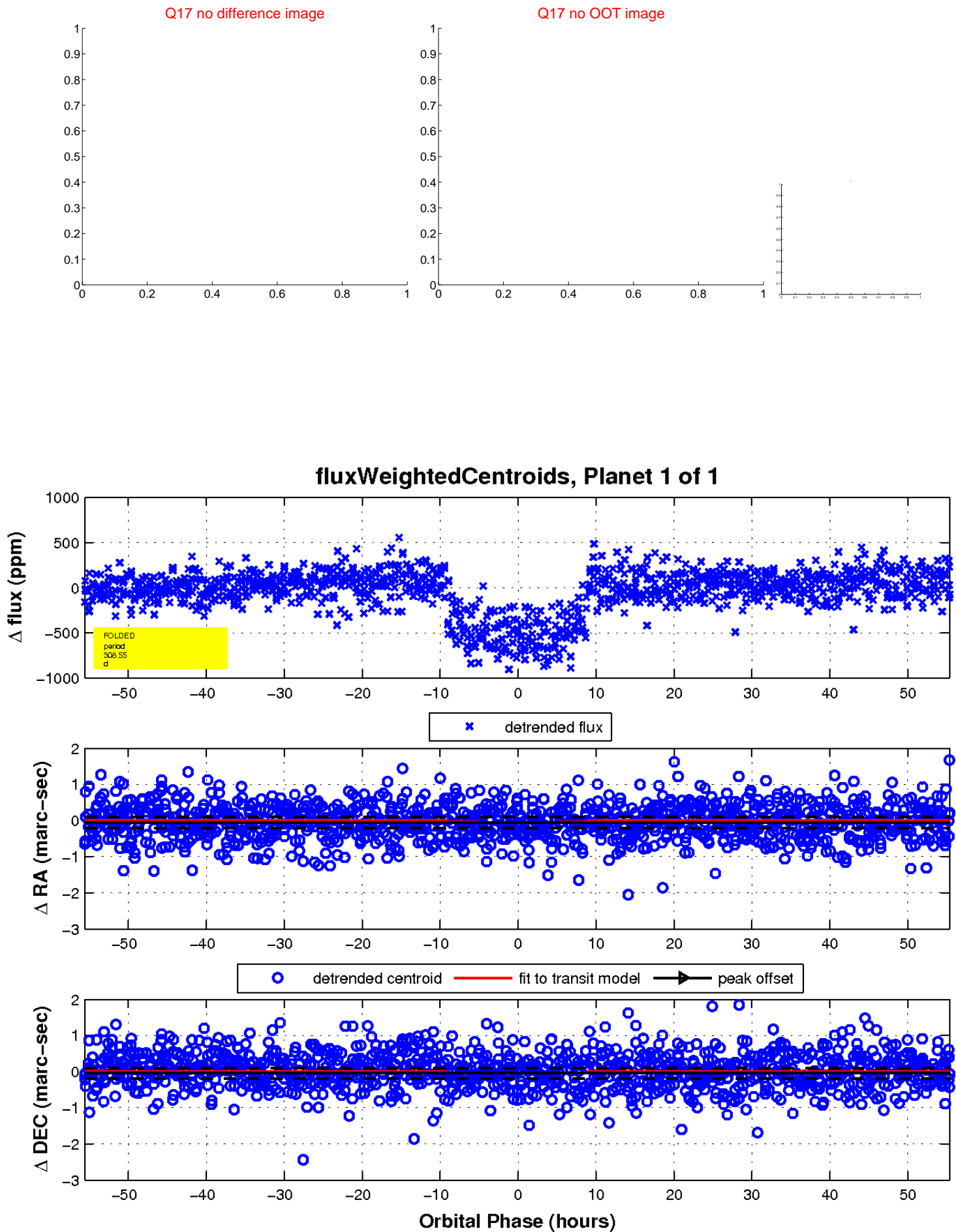
Q12 no OOT image



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

