

KIC 010744335

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})
010744335-01	OBS	1304.01	4.597268	131.879987	310.8	2.908	14.9	16.1	0.96	5999	1.85	353.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010744335-01	OBS	PC	0.98	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 010744335-01

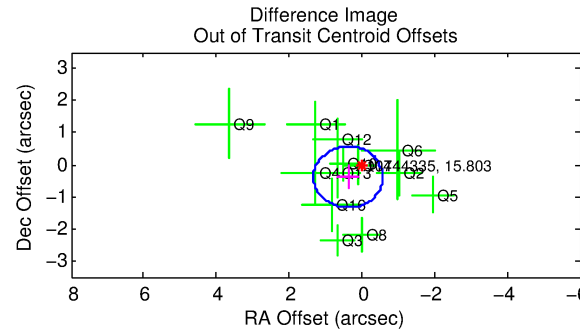
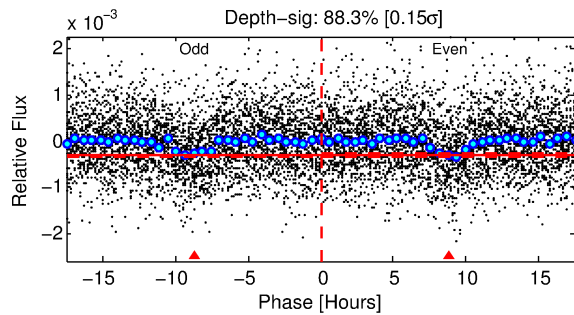
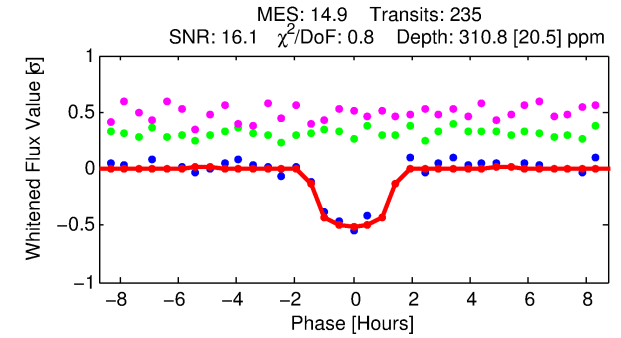
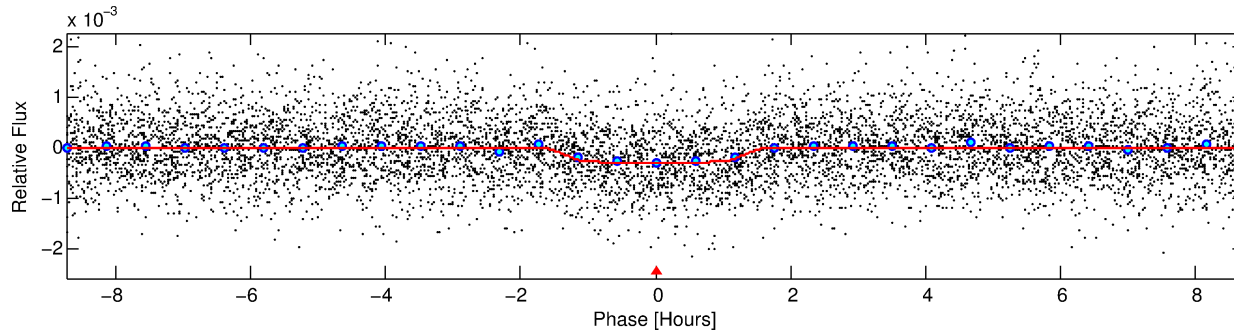
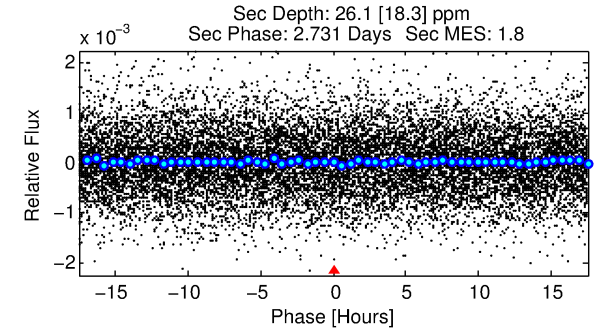
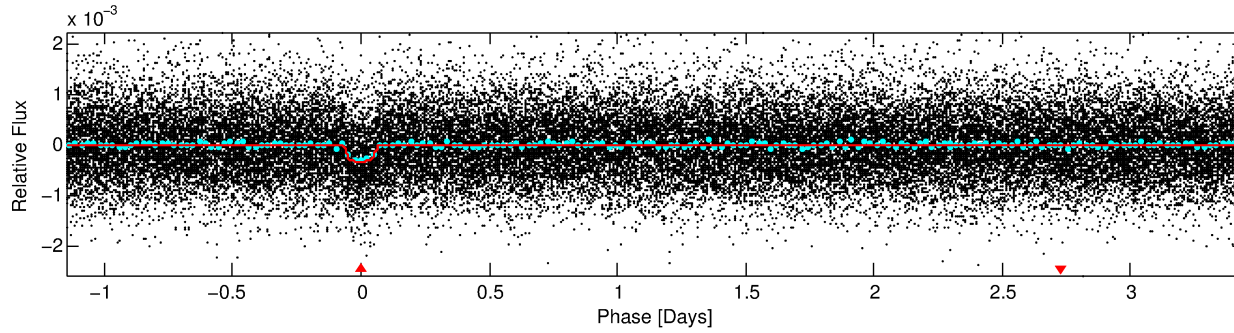
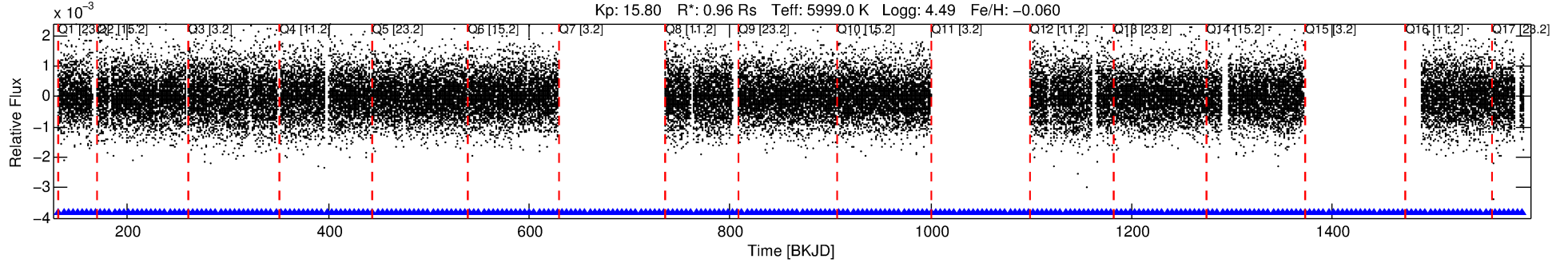
No Significant Match Found

DV One-Page Summary

KIC: 10744335 Candidate: 1 of 1 Period: 4.597 d

KOI: K01304.01 Corr: 0.983

Kp: 15.80 R*: 0.96 Rs Teff: 5999.0 K Logg: 4.49 Fe/H: -0.060



DV Fit Results:

Period = 4.59727 [0.00002] d
Epoch = 131.8800 [0.0032] BKJD
Rp/R* = 0.0177 [0.0113]
a/R* = 8.01 [24.22]
b = 0.77 [1.60]
Seff = 353.53 [143.62]
Teq = 1106 [112] K
Rp = 1.85 [1.32] Re
a = 0.0549 [0.0144] AU
Ag = 12.63 [18.99] [0.61σ]
Teffp = 3223 [1177] K [1.79σ]

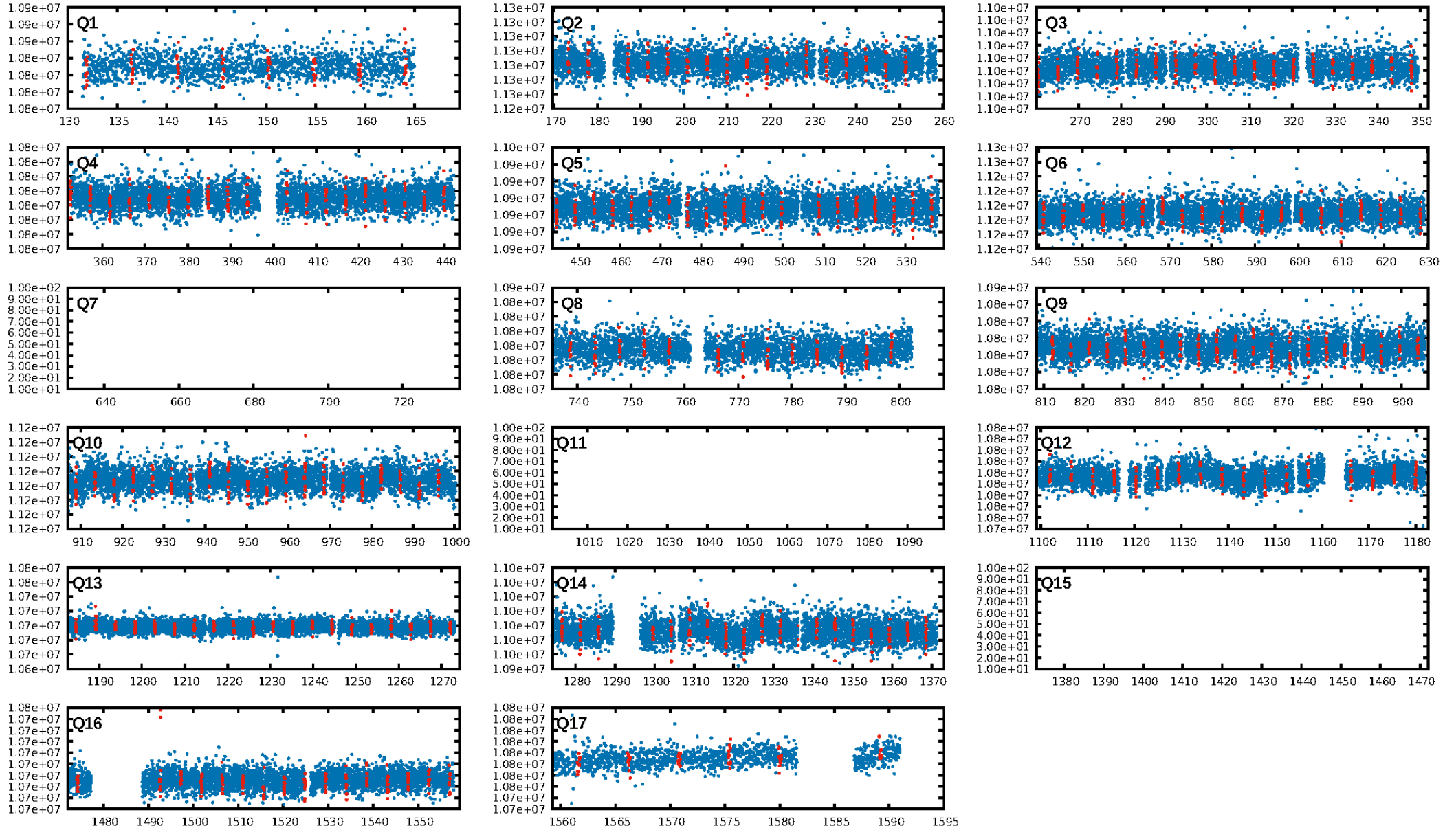
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.30e-49
RollingBand-fgt: 1.00 [221/221]
GhostDiagnostic-chr: 2.55
Centroid-sig: 2.1%
Centroid-so: 2.159 arcsec [2.37σ]
OotOffset-rm: 0.542 arcsec [1.71σ]
KicOffset-rm: 0.661 arcsec [2.04σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [14/14]

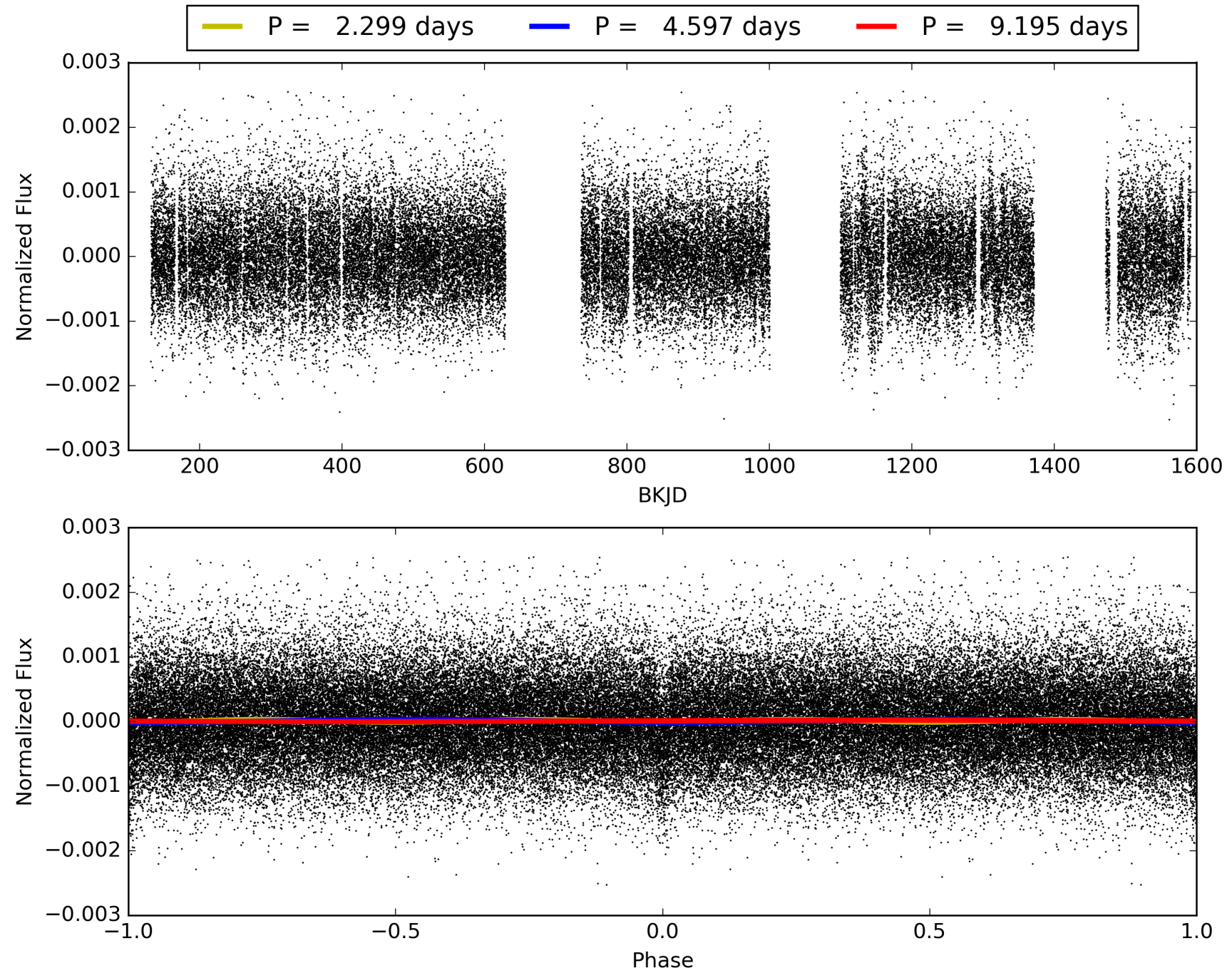
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:12:09 Z

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

TCE 010744335-01, PDC Light Curves

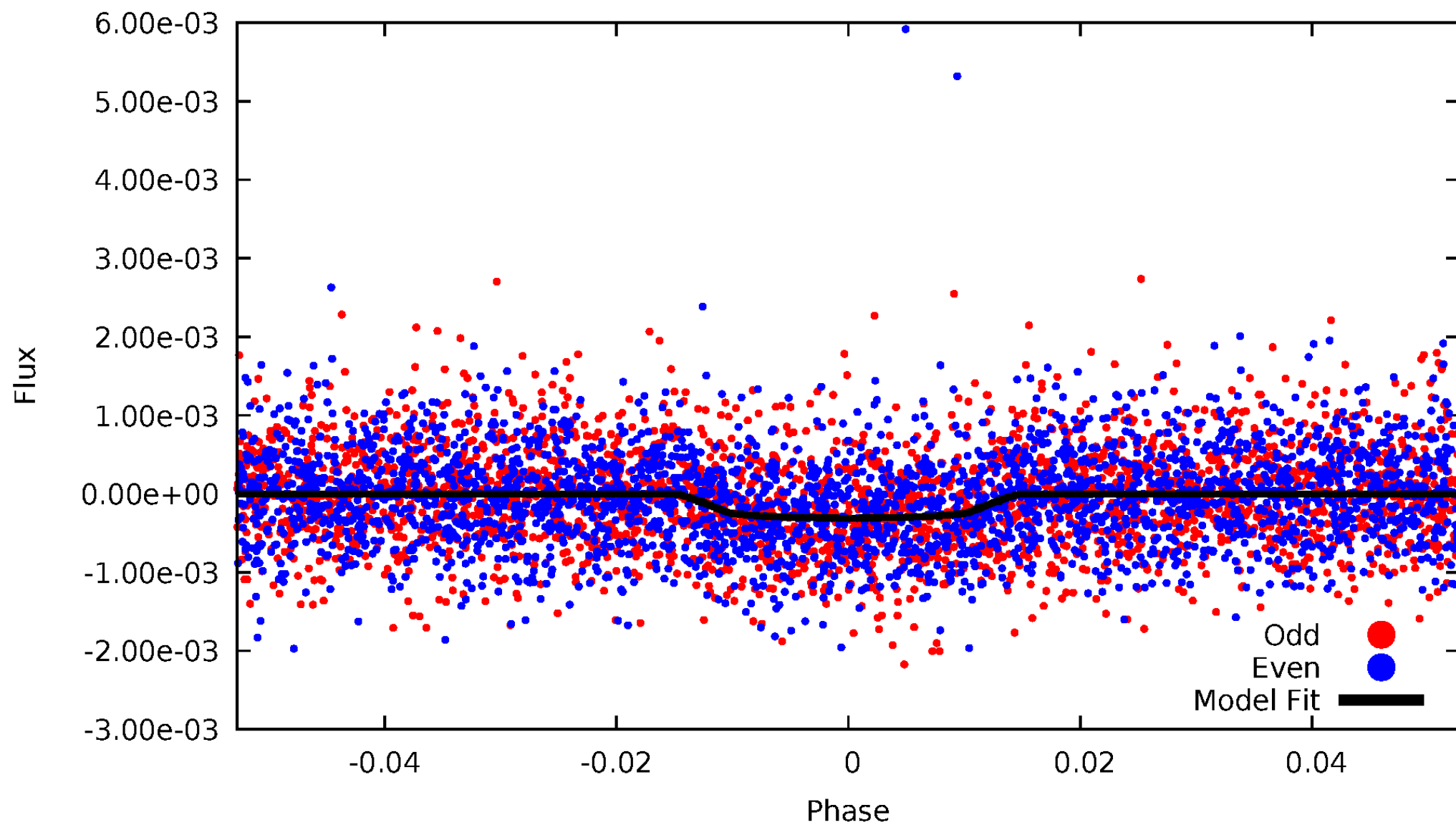


TCE 010744335-01



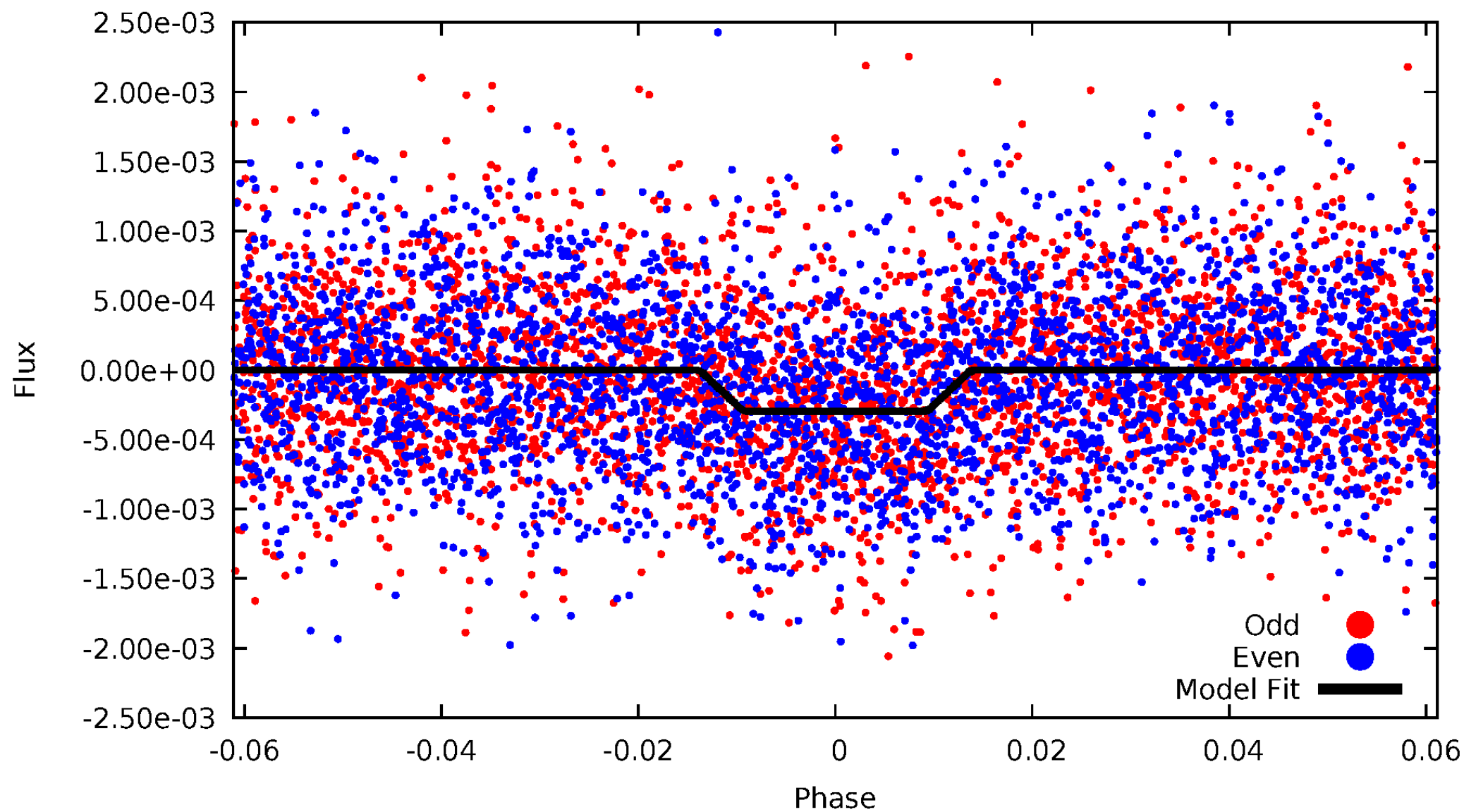
DV Odd/Even

TCE 010744335-01



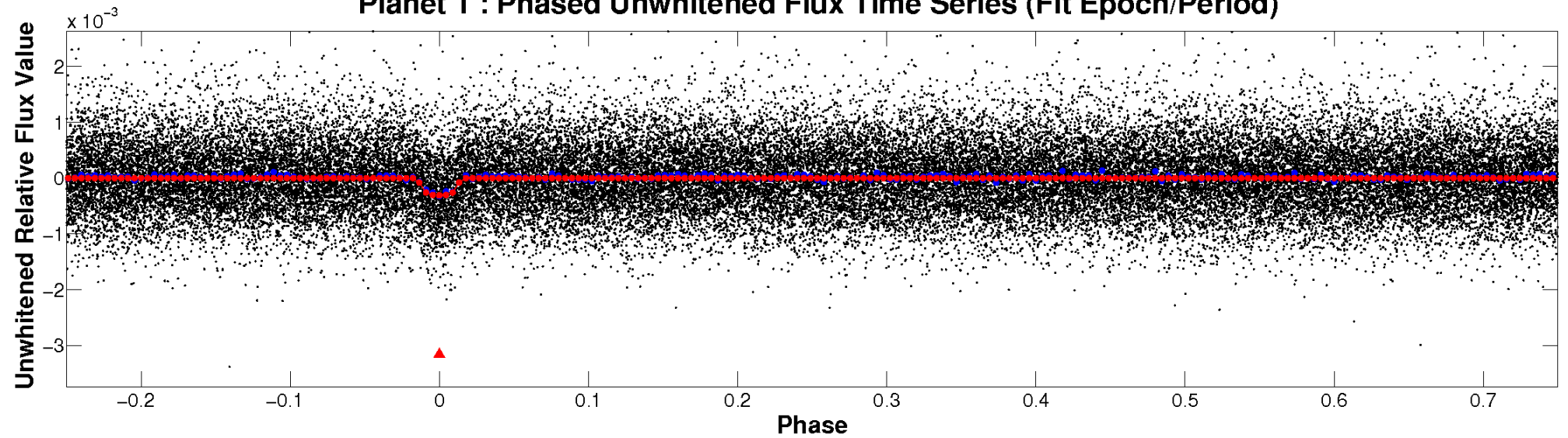
ALT Odd/Even

TCE 010744335-01

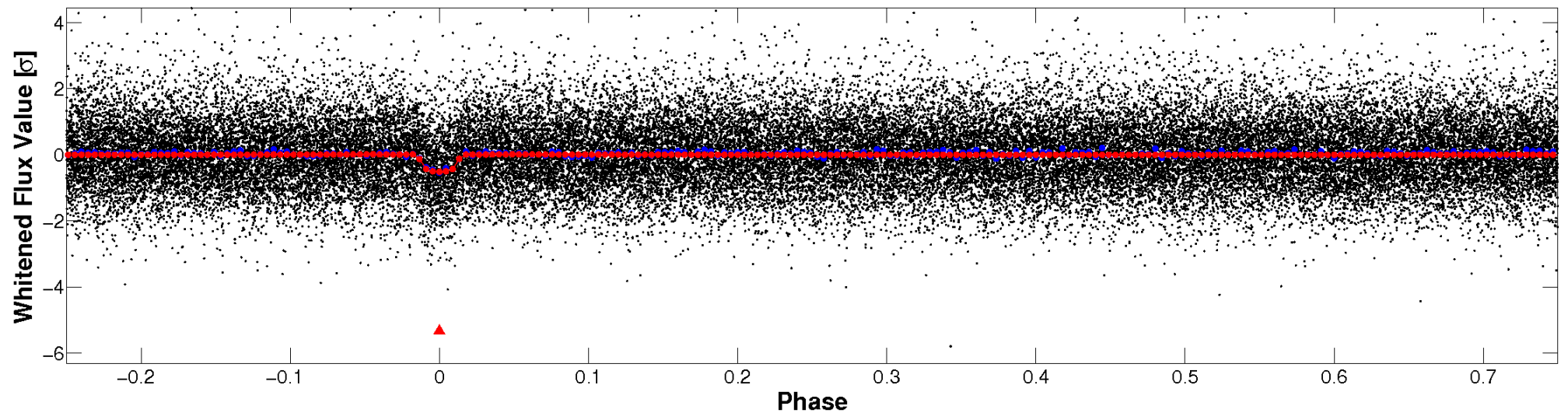


Non-Whitened Vs. Whitened Light Curve

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

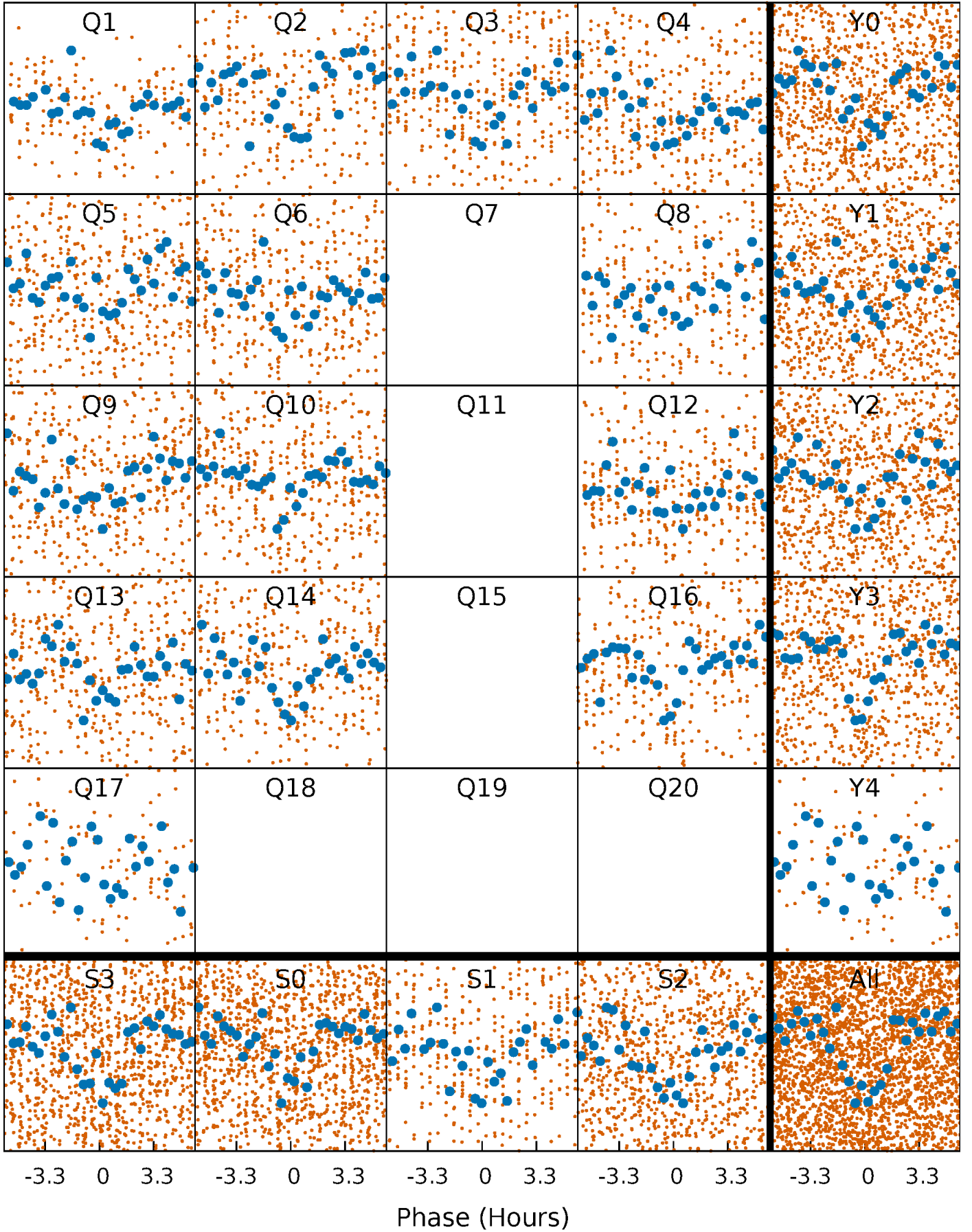


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



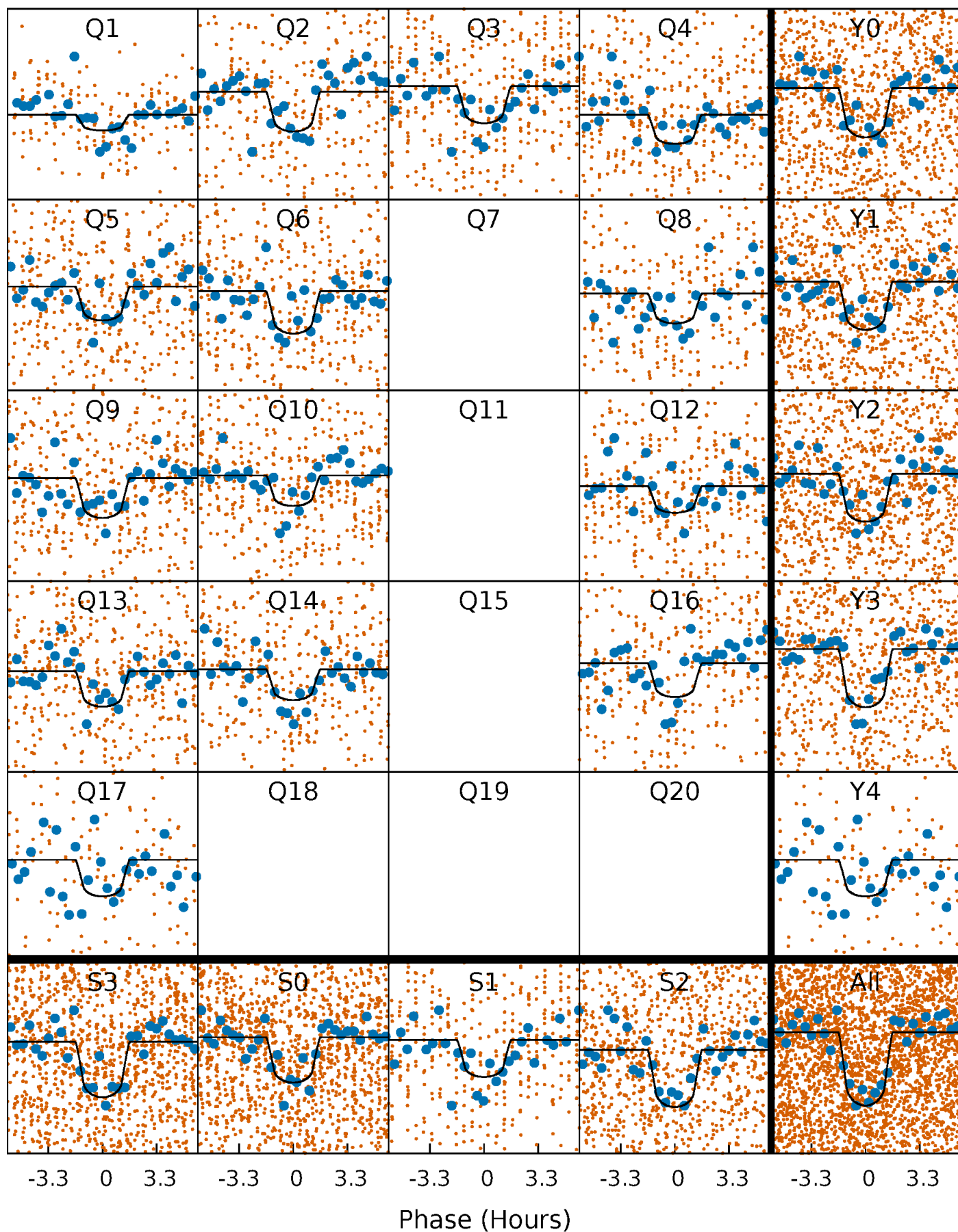
PDC Quarter-Phased Transit Curves

TCE 010744335-01 P= 4.597268 Days $T_0=131.879987$ (BKJD)



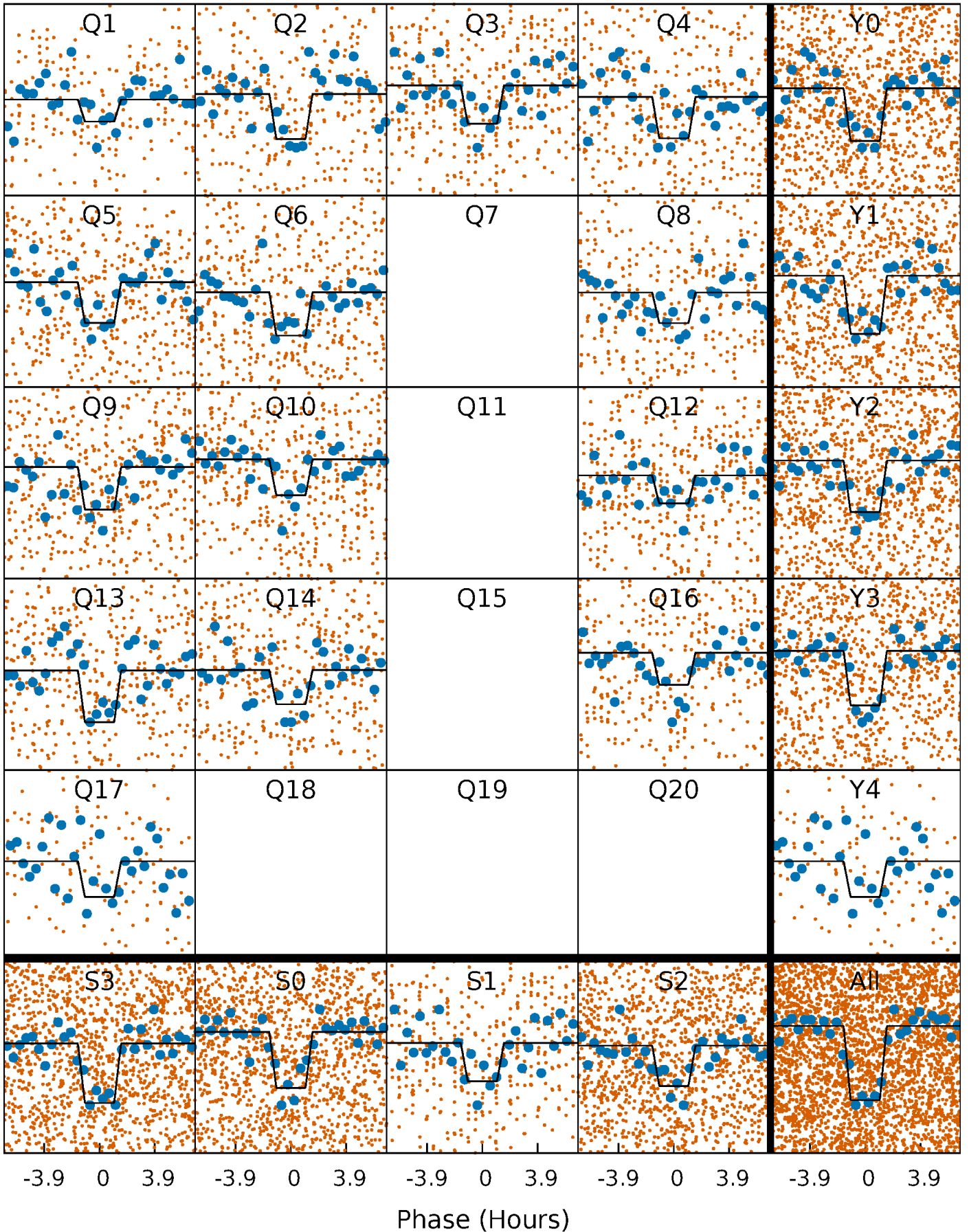
DV Quarter-Phased Transit Curves

TCE 010744335-01 P= 4.597268 Days $T_0=131.879987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

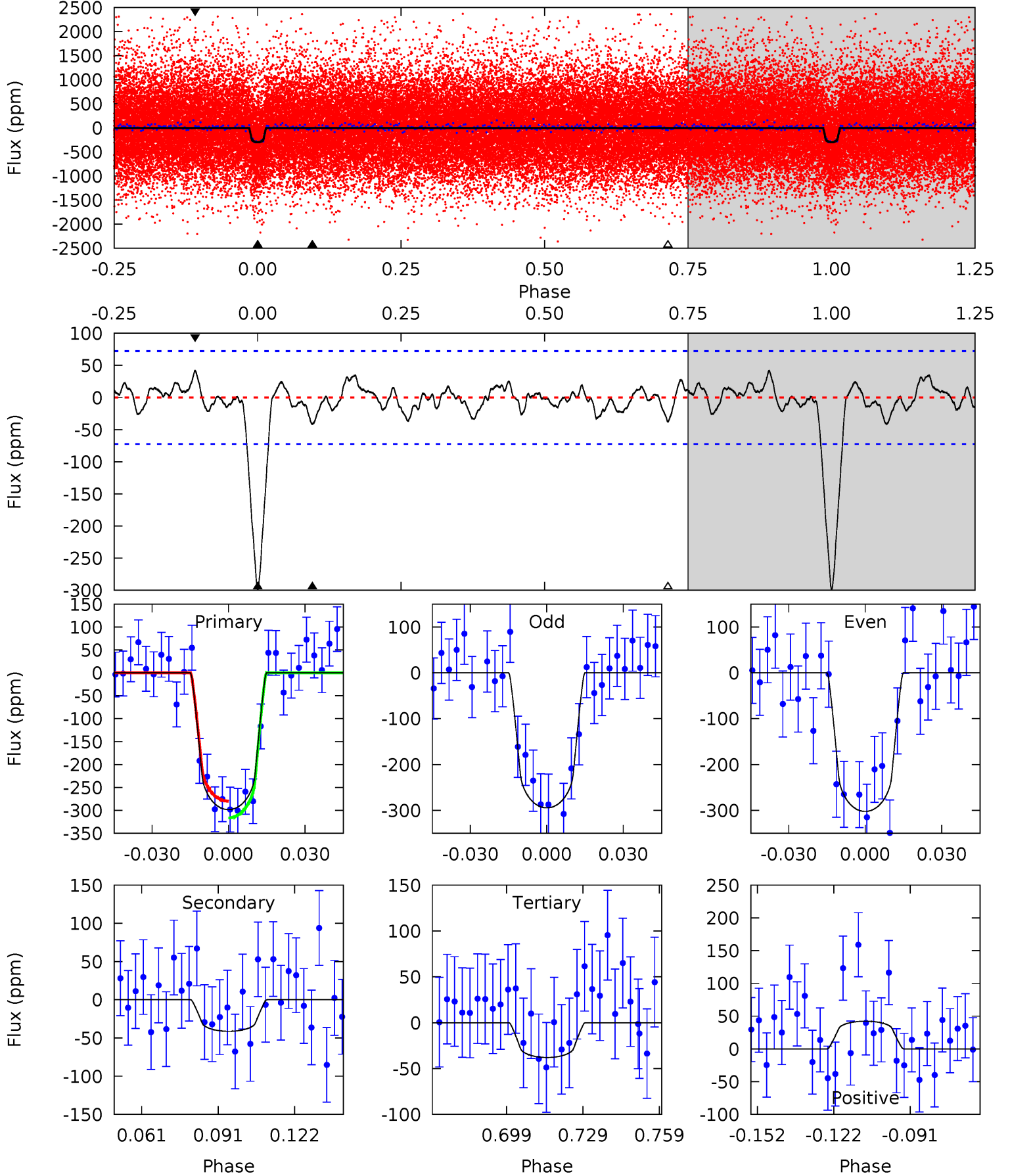
TCE 010744335-01 P= 4.597198 Days $T_0=131.893043$ (BKJD)



DV Model-Shift Uniqueness Test

010744335-01, P = 4.597268 Days, E = 127.282719 Days

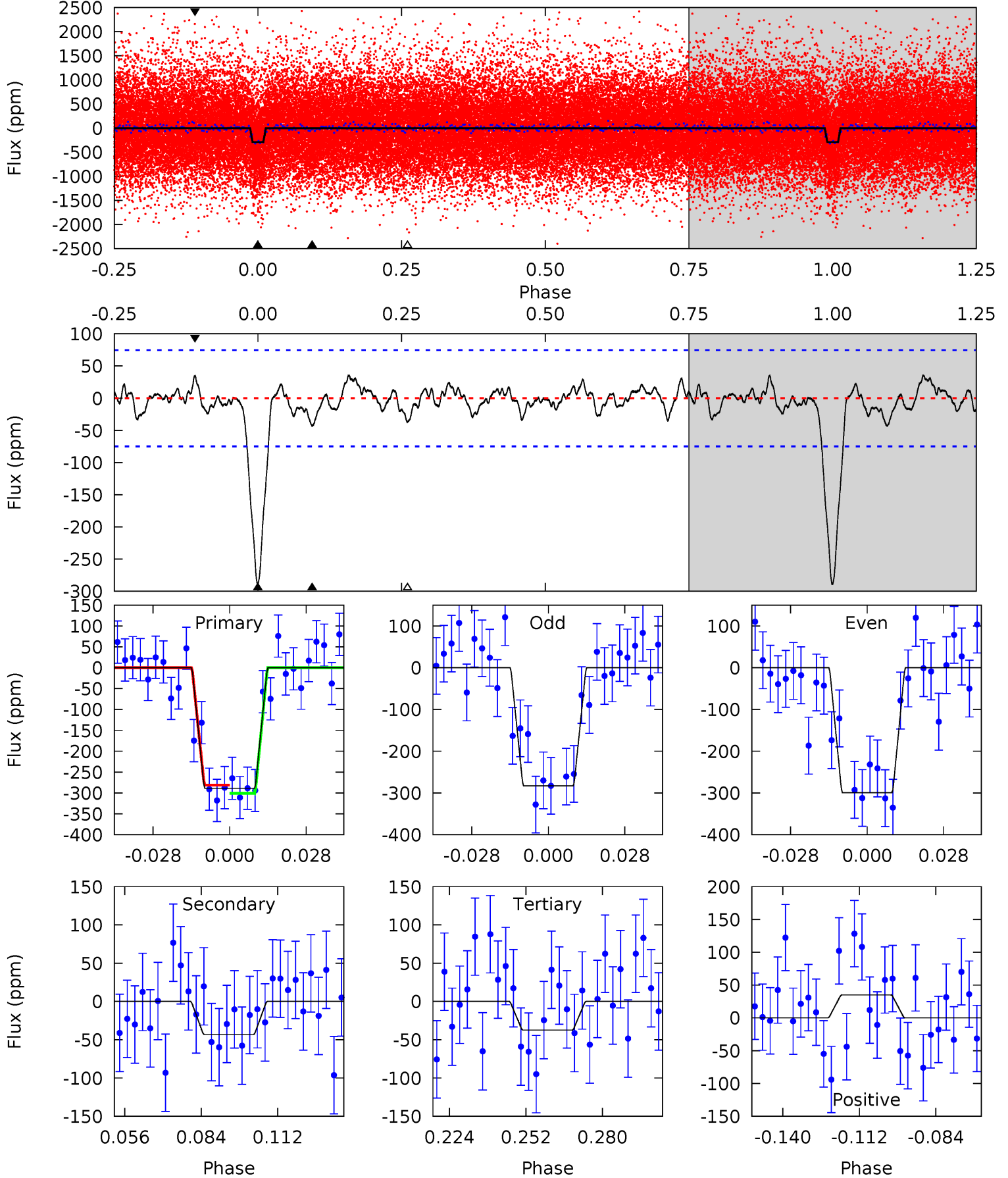
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	2.75	2.53	2.82	4.81	2.17	1.02	17.3	17.1	0.22	-0.07	0.26	0.99	0.12	1.22



Alt Model-Shift Uniqueness Test

010744335-01, P = 4.597198 Days, E = 127.295845 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	2.78	2.41	2.25	4.82	2.20	0.91	16.2	16.4	0.37	0.53	0.53	1.03	0.11	0.63



Stellar Parameters For KIC 010744335

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5999^{+189}_{-210}	$4.494^{+0.052}_{-0.208}$	$-0.060^{+0.300}_{-0.300}$	$0.959^{+0.300}_{-0.100}$	$1.045^{+0.129}_{-0.142}$	$1.670^{+0.444}_{-0.847}$
	+3%/-4%	+1%/-5%	+500%/-500%	+31%/-10%	+12%/-14%	+27%/-51%
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 010744335-01 / KOI 1304.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 15	$2.08^{+1.22}_{-1.19}$	1578^{+108}_{-79}	3804^{+1463}_{-587}	15^{+60}_{-10}
Alt.	-43 ± 16	$2.04^{+1.17}_{-1.13}$	1575^{+127}_{-80}	3831^{+1455}_{-560}	16^{+64}_{-10}

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 $A_{obs} \gg 1.0$

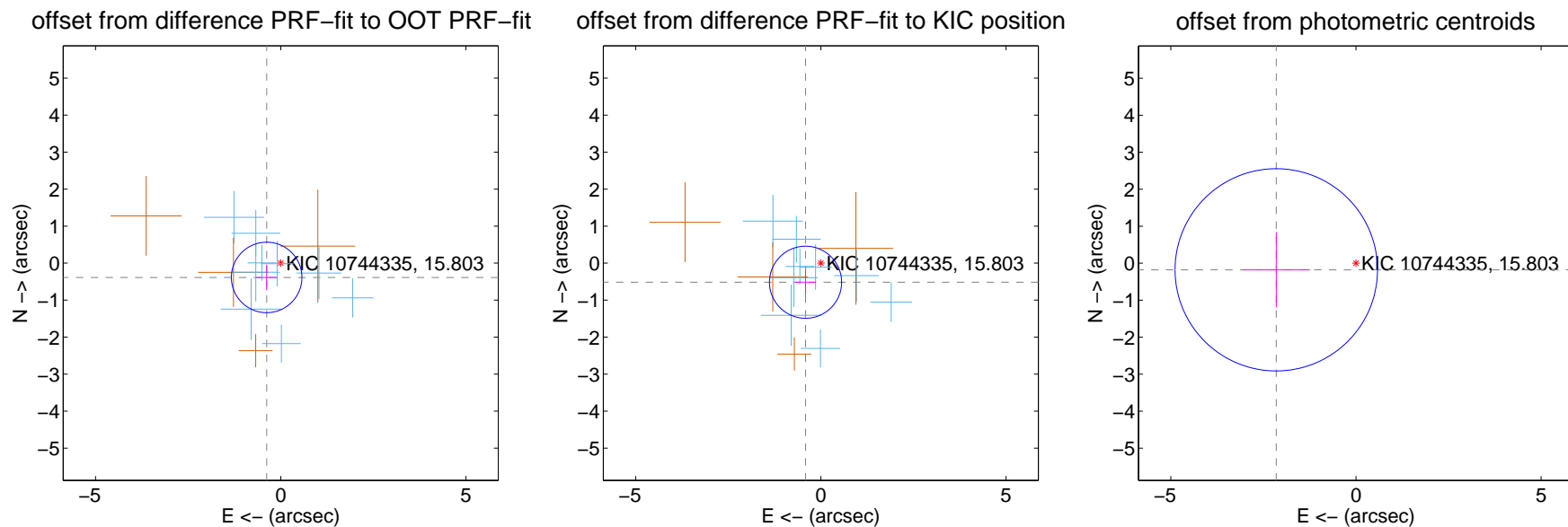
DV Centroid Data

Supplemental centroid analysis for 010744335-01. Kepler magnitude: 15.80. Transit SNR 16.14

There are 9 quarters with good PRF difference image offsets

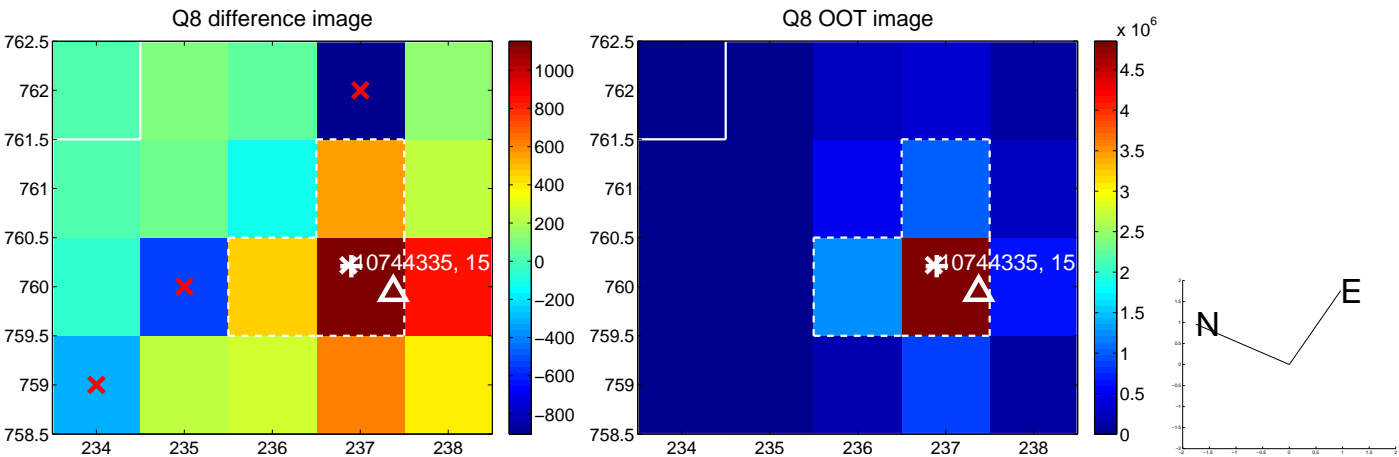
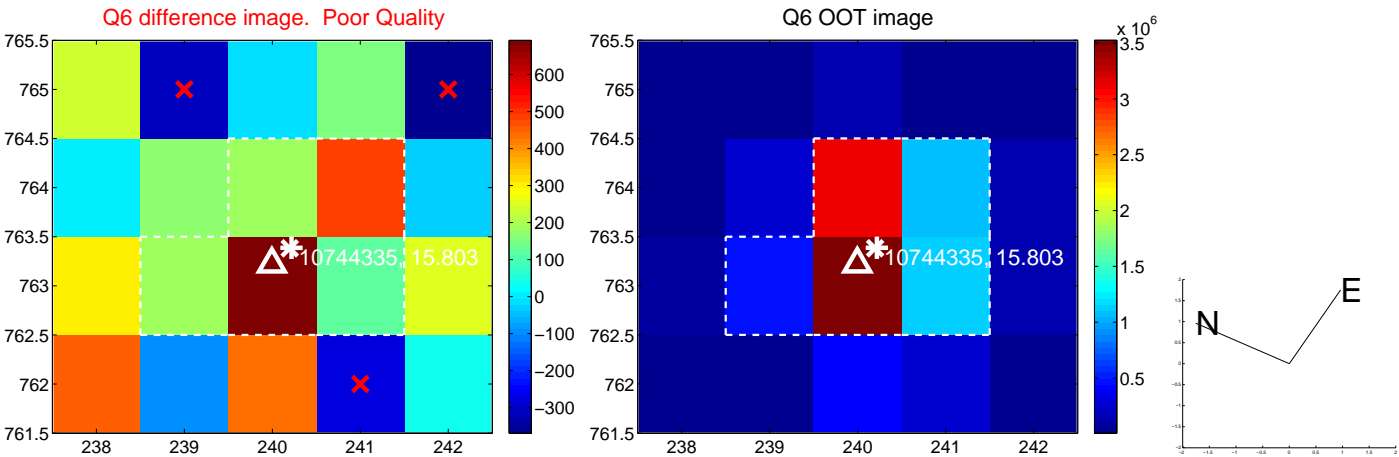
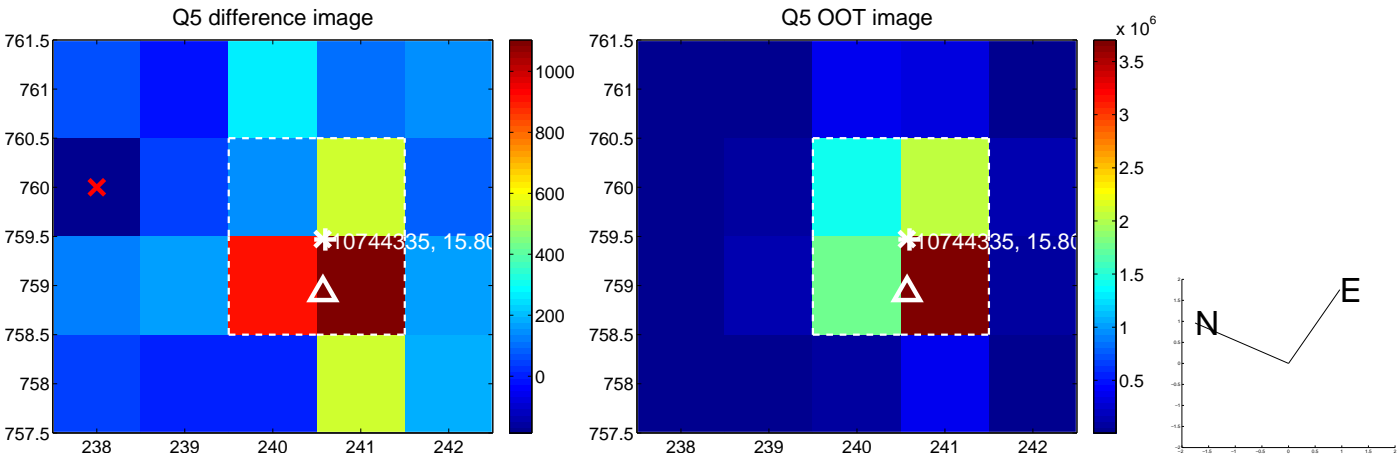
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.542 ± 0.317	1.71	0.380 ± 0.283	-0.386 ± 0.347
PRF-fit source offset from KIC position	0.661 ± 0.325	2.04	0.413 ± 0.281	-0.516 ± 0.350
photometric centroid source offset	2.16 ± 0.91	2.37	2.15 ± 0.91	-0.18 ± 1.02

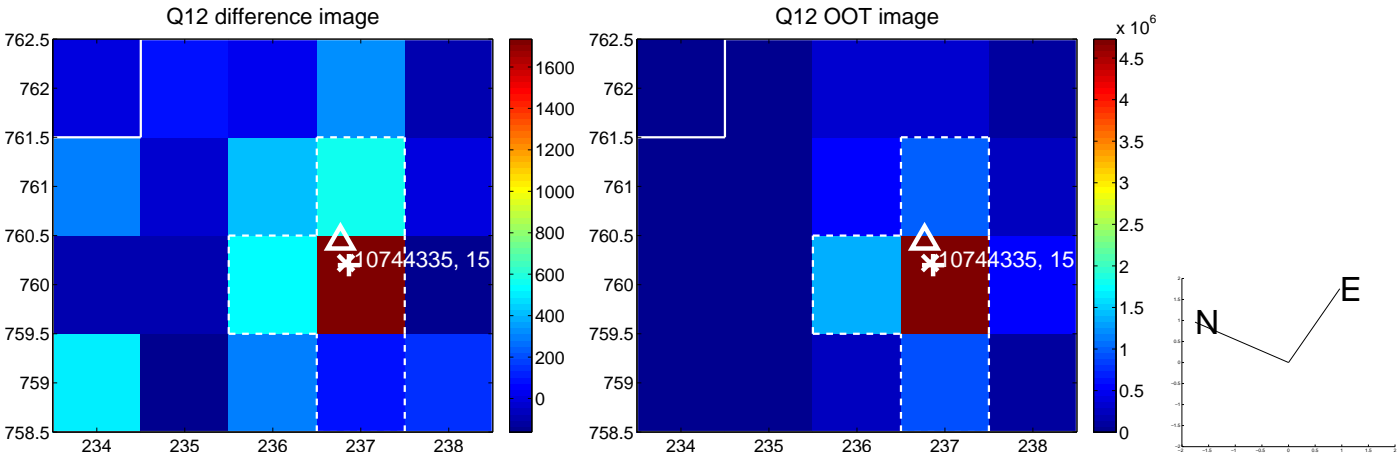
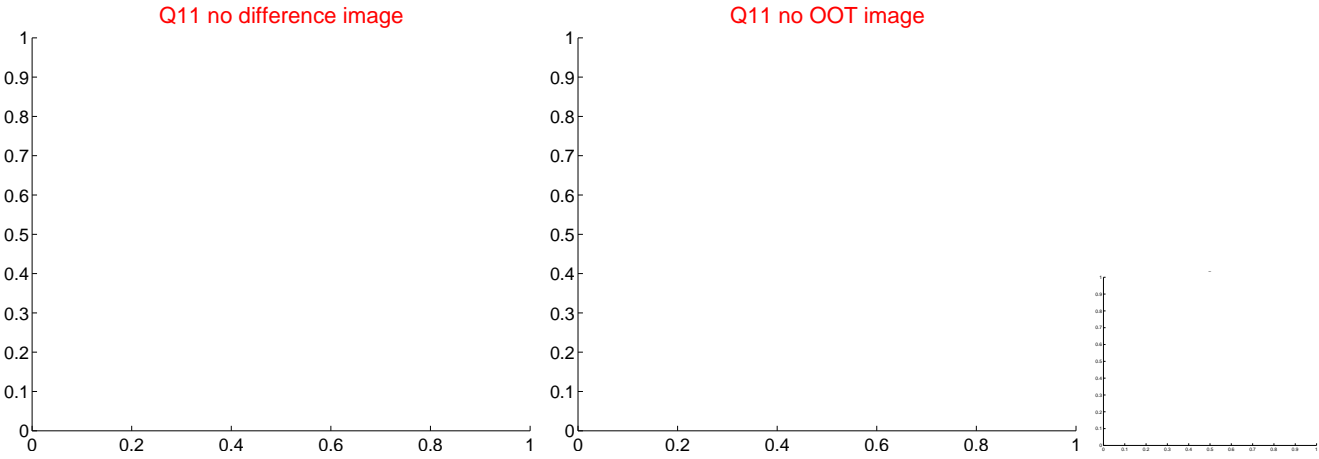
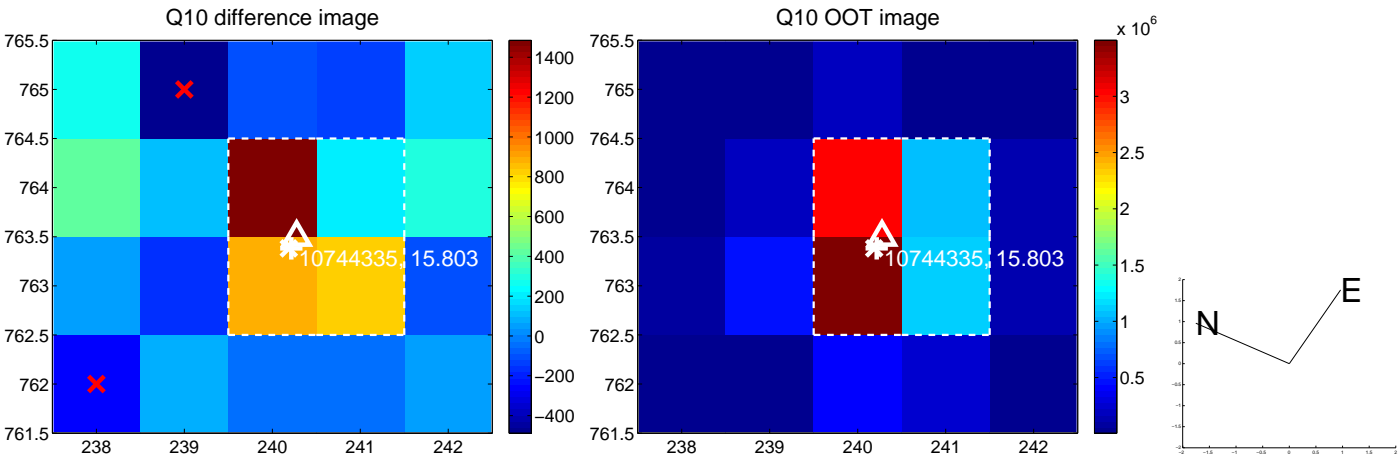
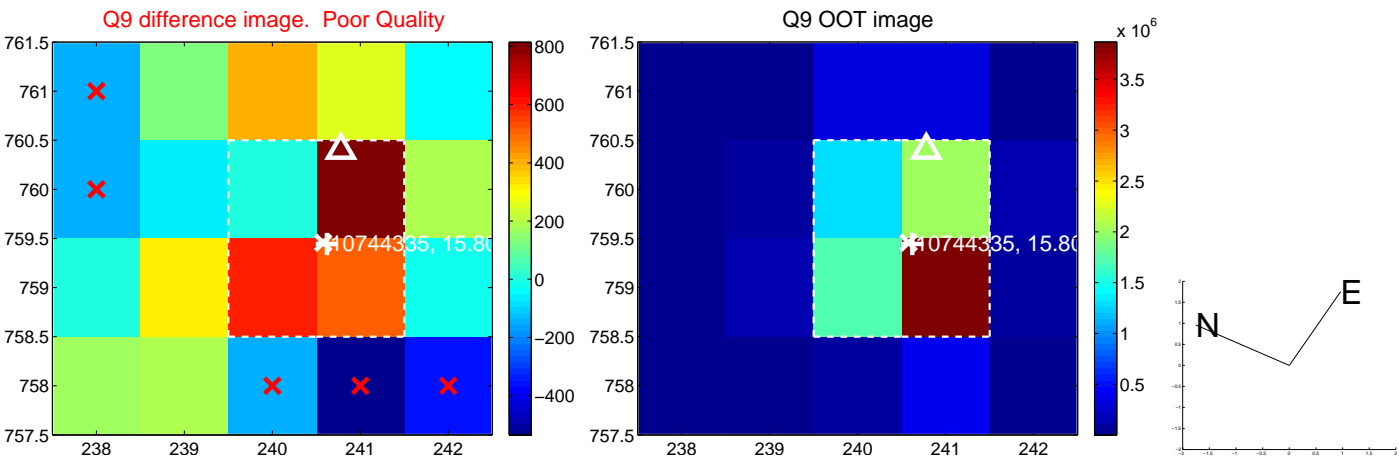


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

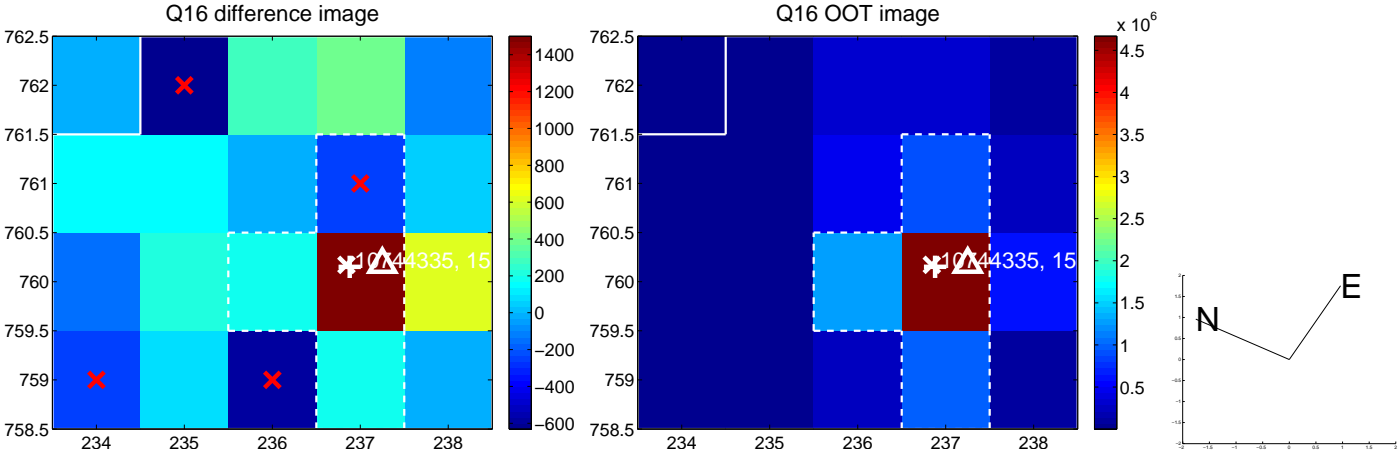
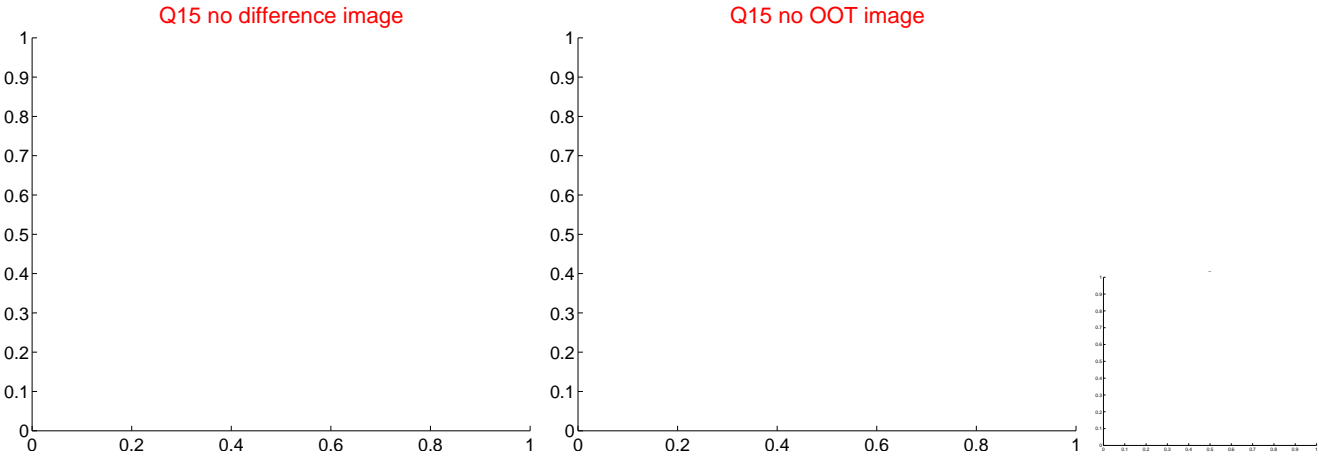
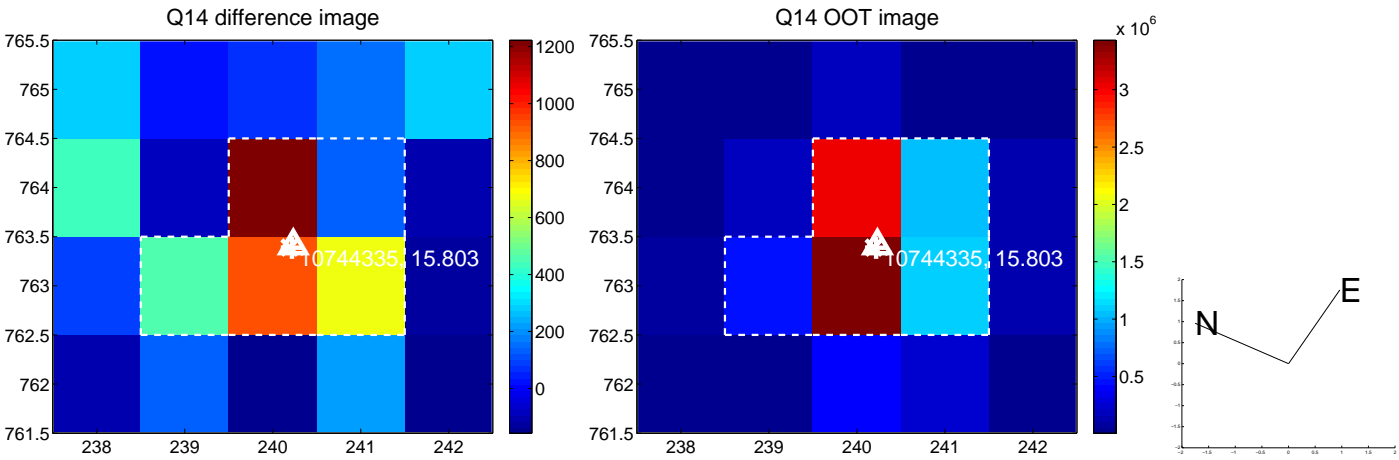
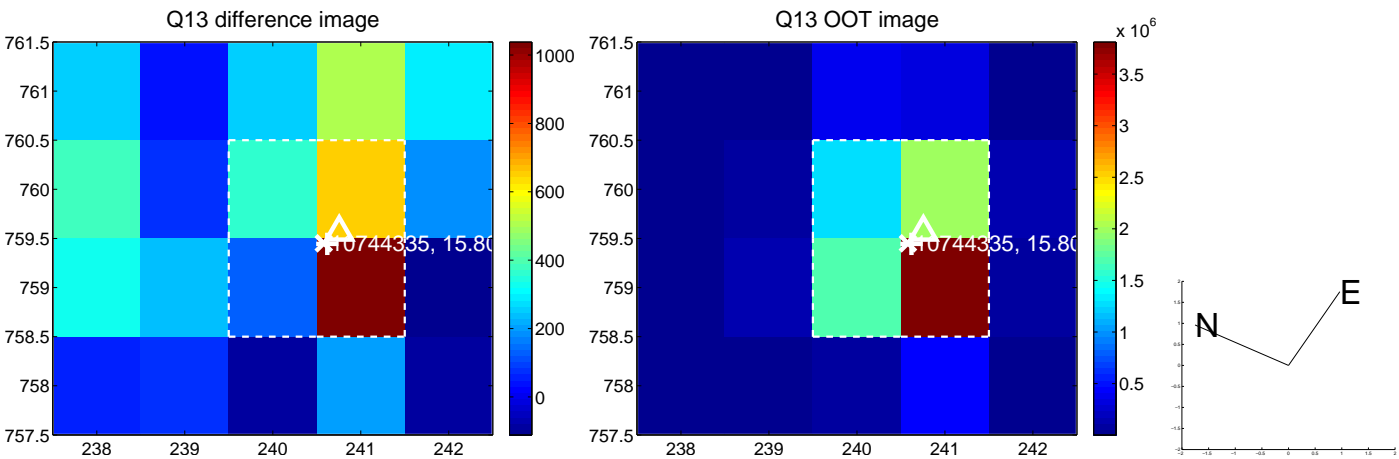
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



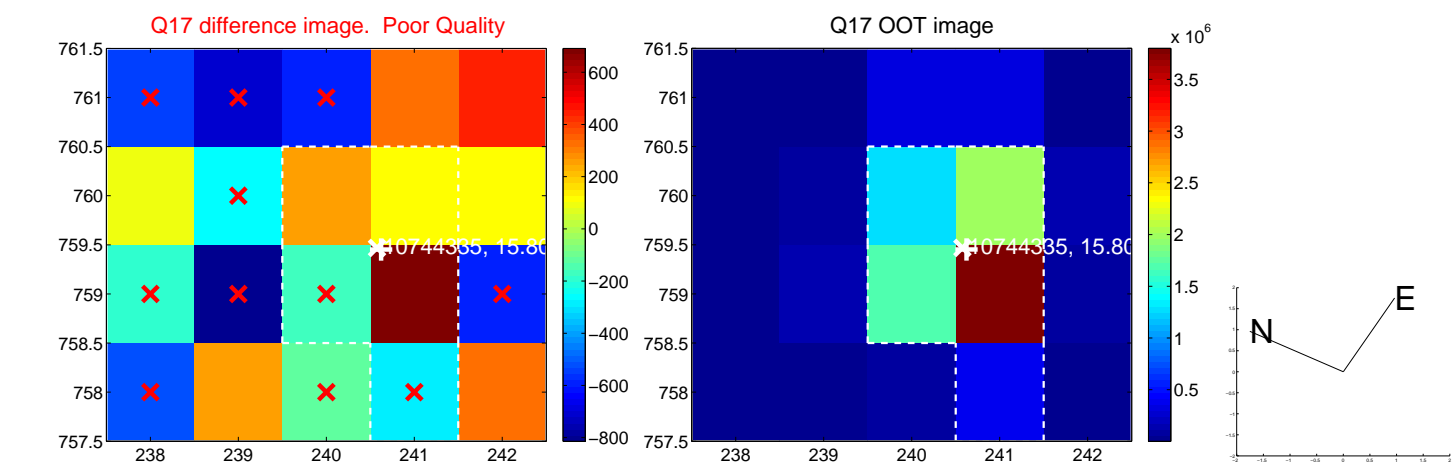
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



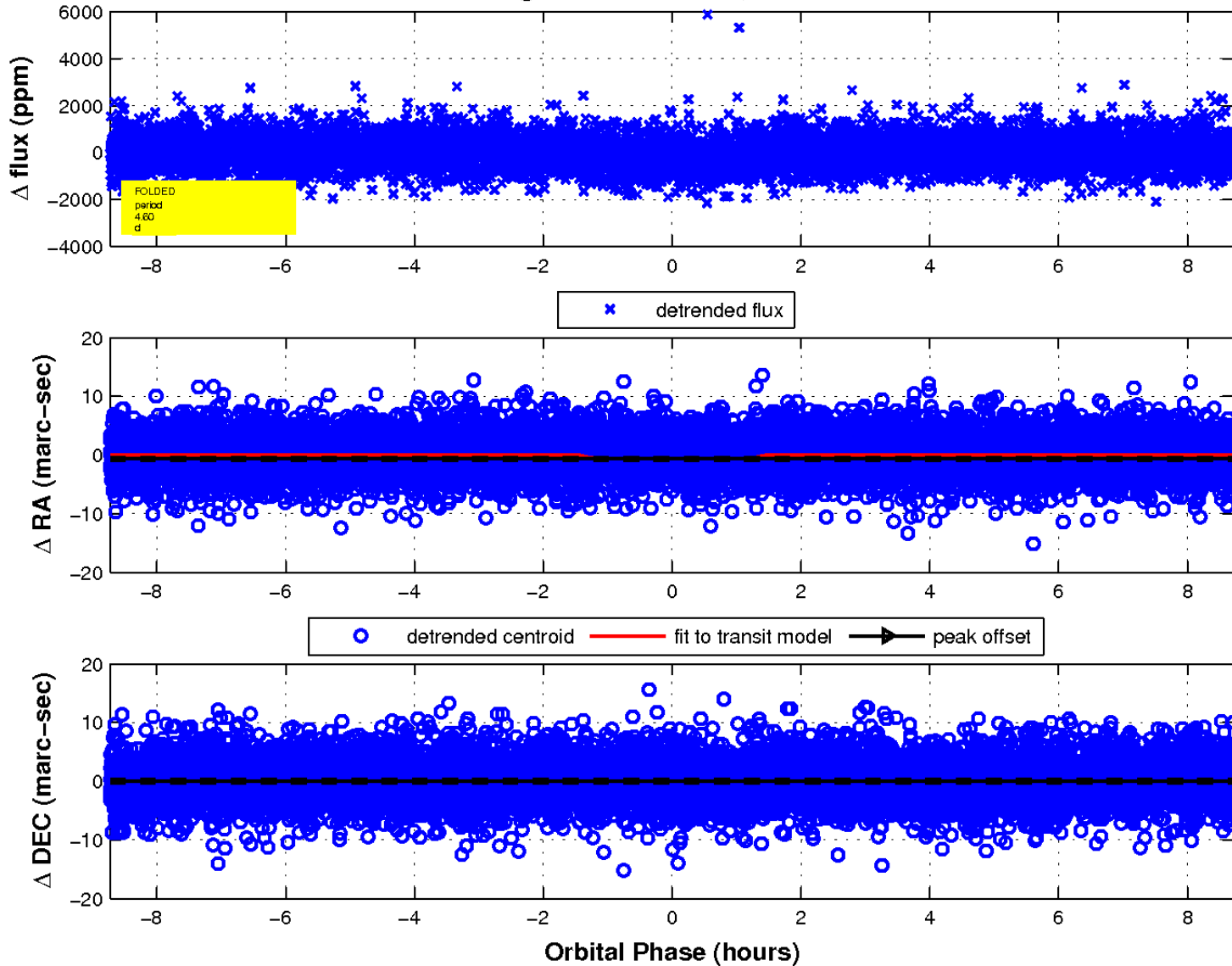
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

