

KIC 004054784

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})
004054784-01	OBS	7679.01	1.867982	133.236584	67.1	1.082	7.5	9.2	0.81	5487	0.81	658.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004054784-01	OBS	PC	1.00	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.

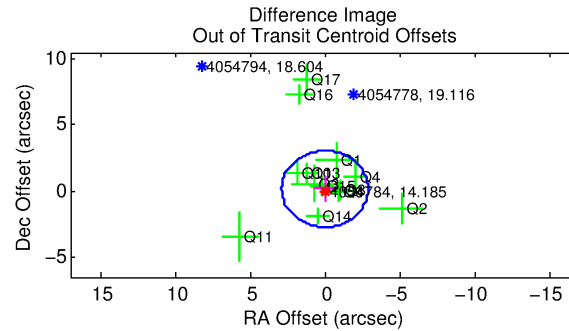
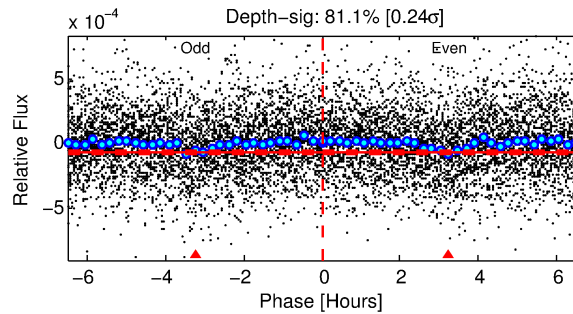
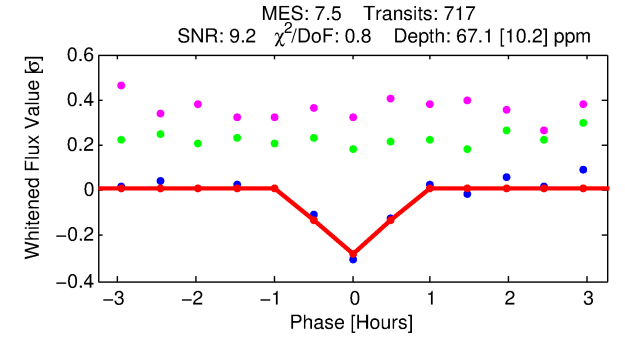
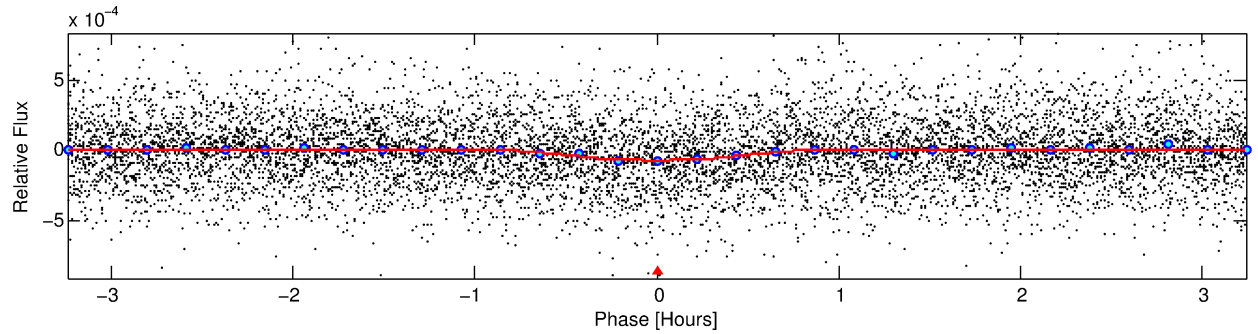
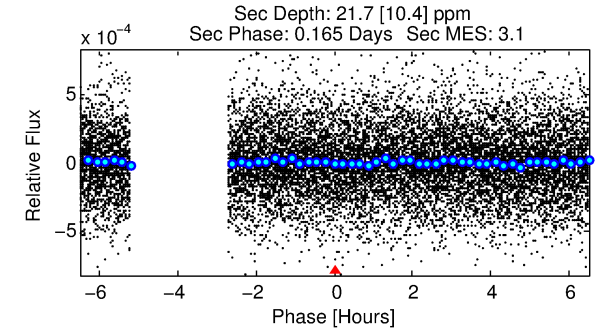
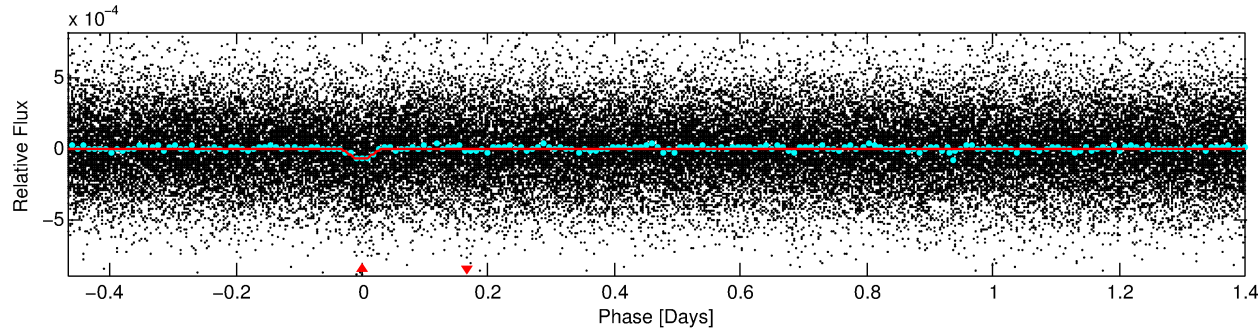
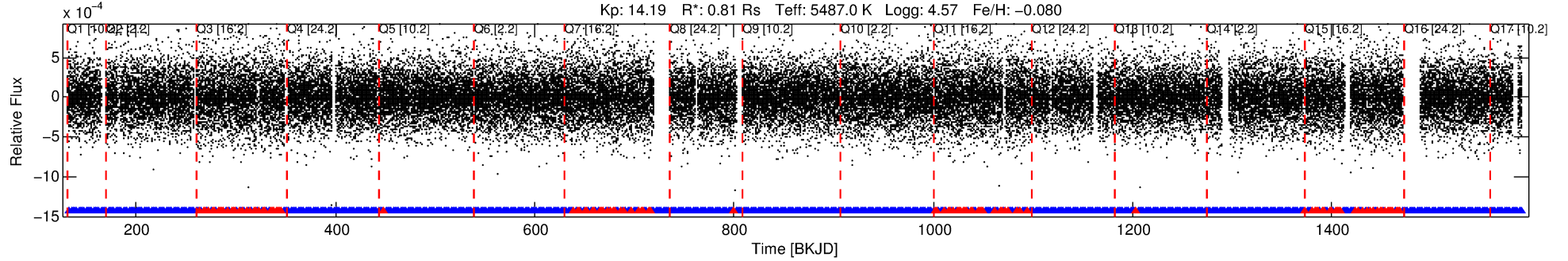
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004054784-01

No Significant Match Found

DV One-Page Summary

KIC: 4054784 Candidate: 1 of 1 Period: 1.868 d



DV Fit Results:

Period = 1.86798 [0.00001] d
Epoch = 133.2366 [0.0021] BKJD
Rp/R* = 0.0091 [0.0052]
a/R* = 6.09 [15.03]
b = 0.90 [0.55]
Seff = 658.43 [193.56]
Teff = 1292 [95] K
Rp = 0.81 [0.49] Re
a = 0.0286 [0.0053] AU
Ag = 15.03 [19.01] [0.74σ]
Teffp = 3932 [1218] K [2.16σ]

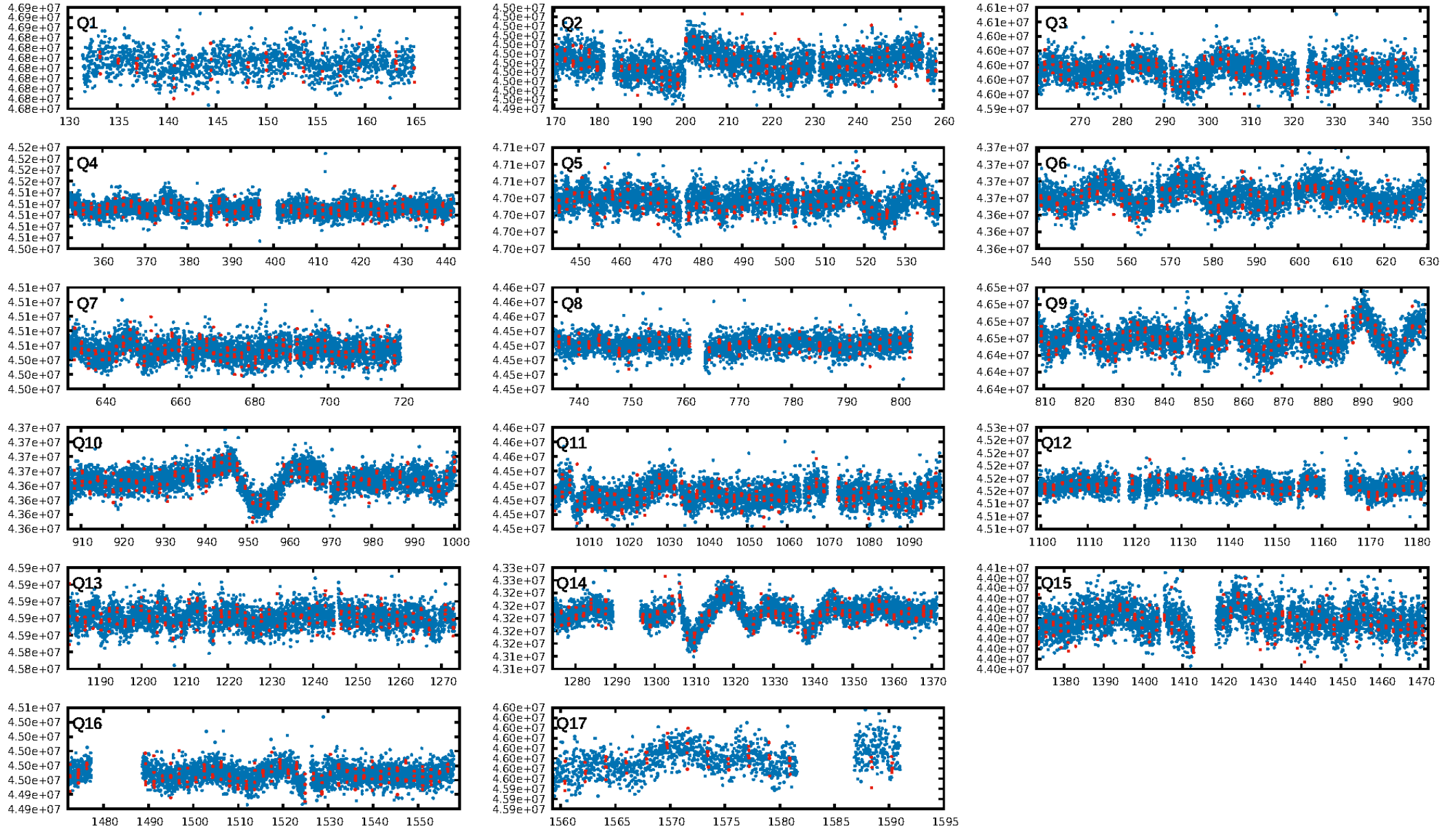
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.62e-13
RollingBand-fgt: 0.84 [574/685]
GhostDiagnostic-chr: 10.94
Centroid-sig: 10.4%
Centroid-so: 2.507 arcsec [1.70σ]
OotOffset-rm: 0.165 arcsec [0.17σ]
KicOffset-rm: 0.444 arcsec [0.72σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

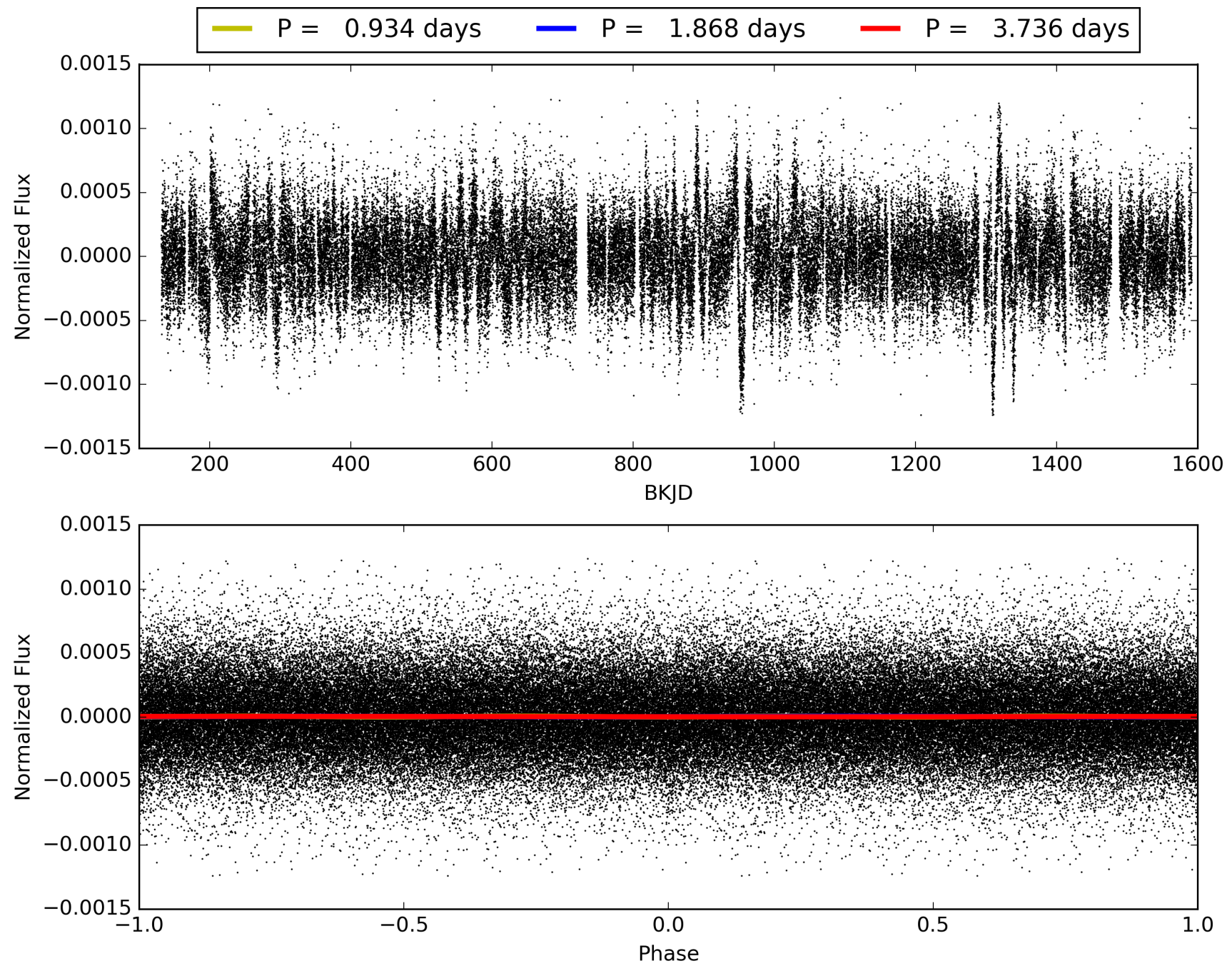
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:59:52 Z

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

TCE 004054784-01, PDC Light Curves

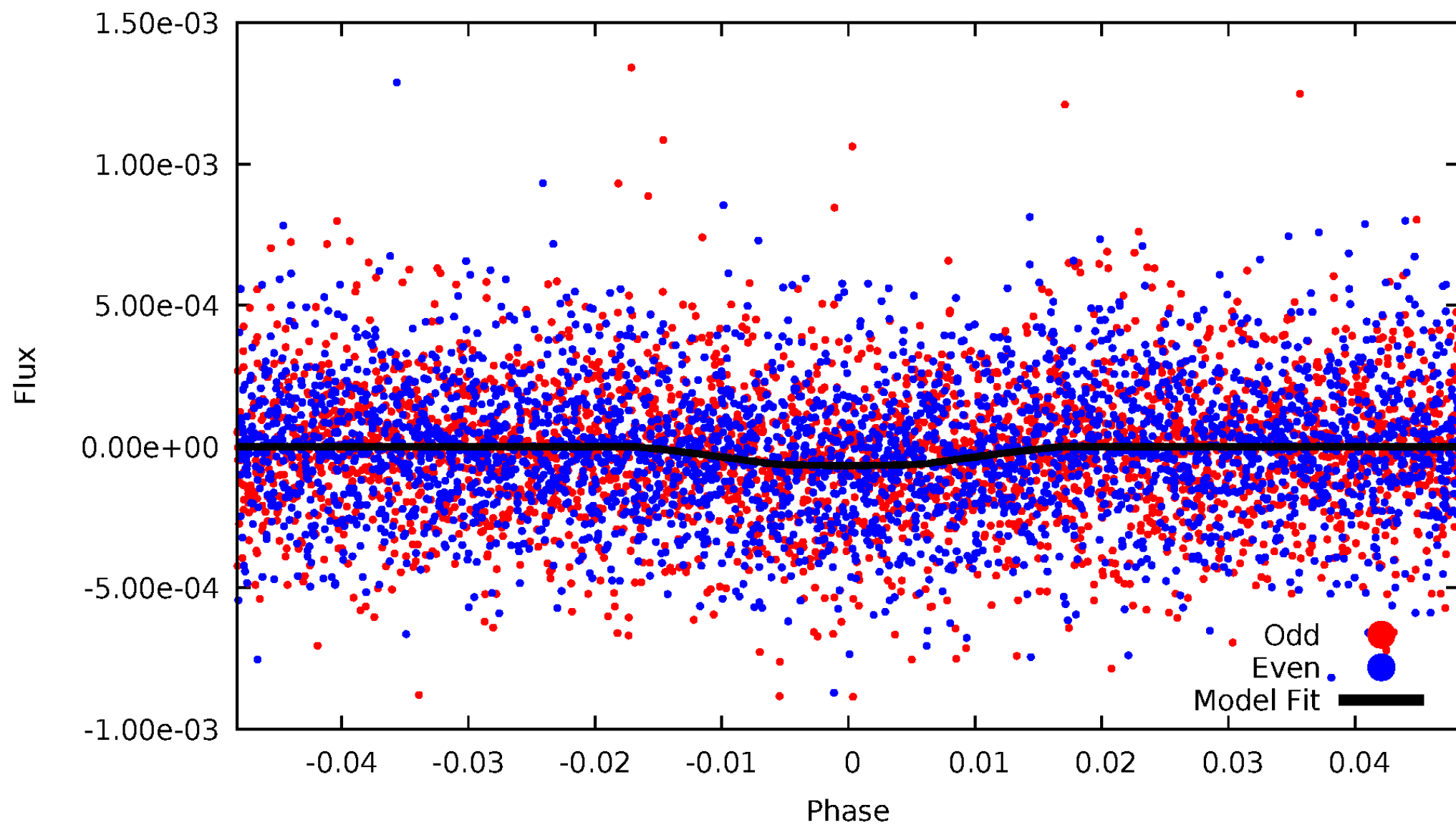


TCE 004054784-01



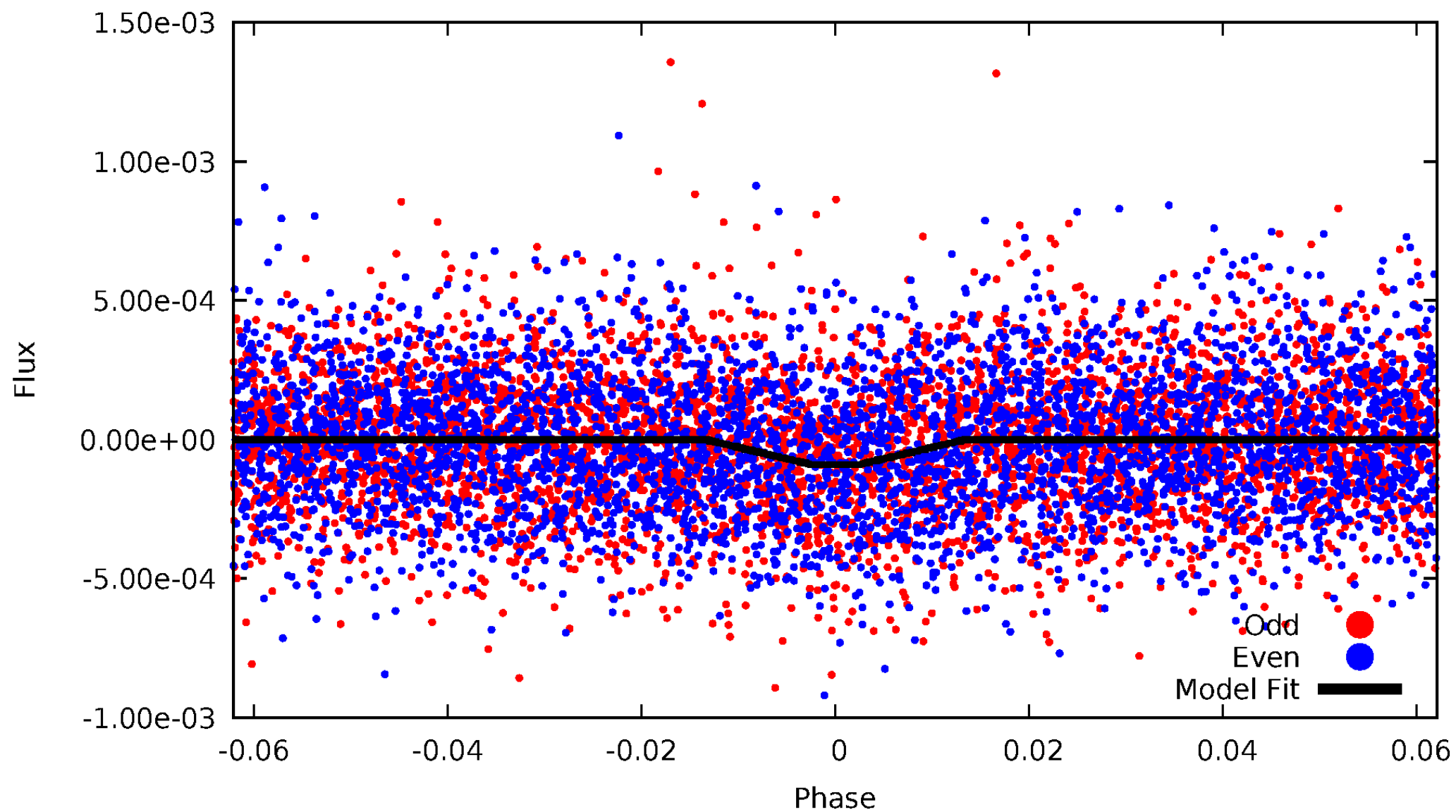
DV Odd/Even

TCE 004054784-01



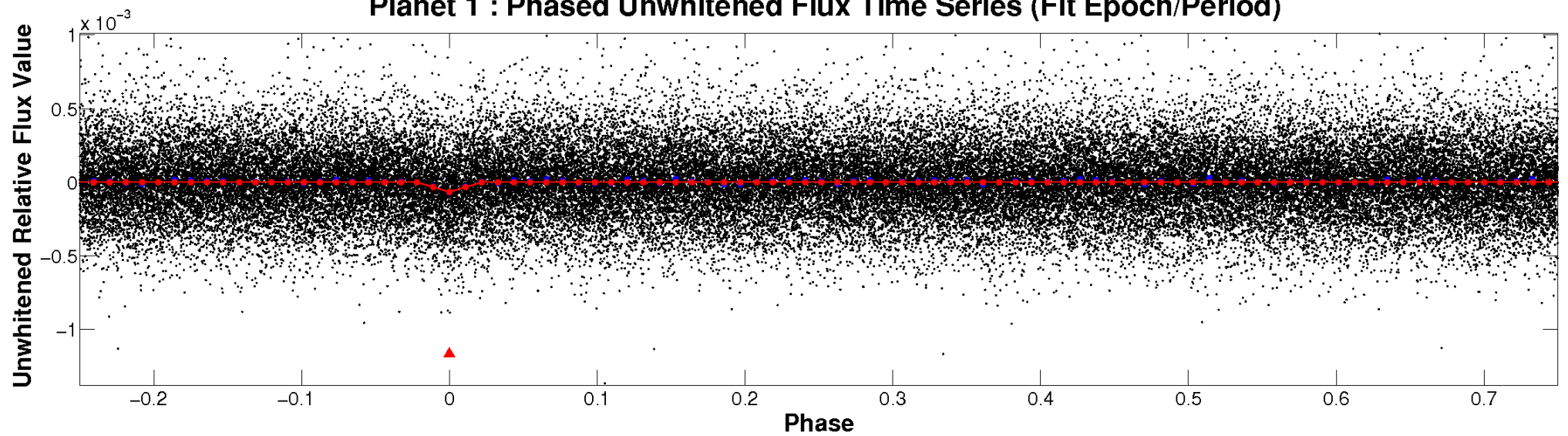
ALT Odd/Even

TCE 004054784-01

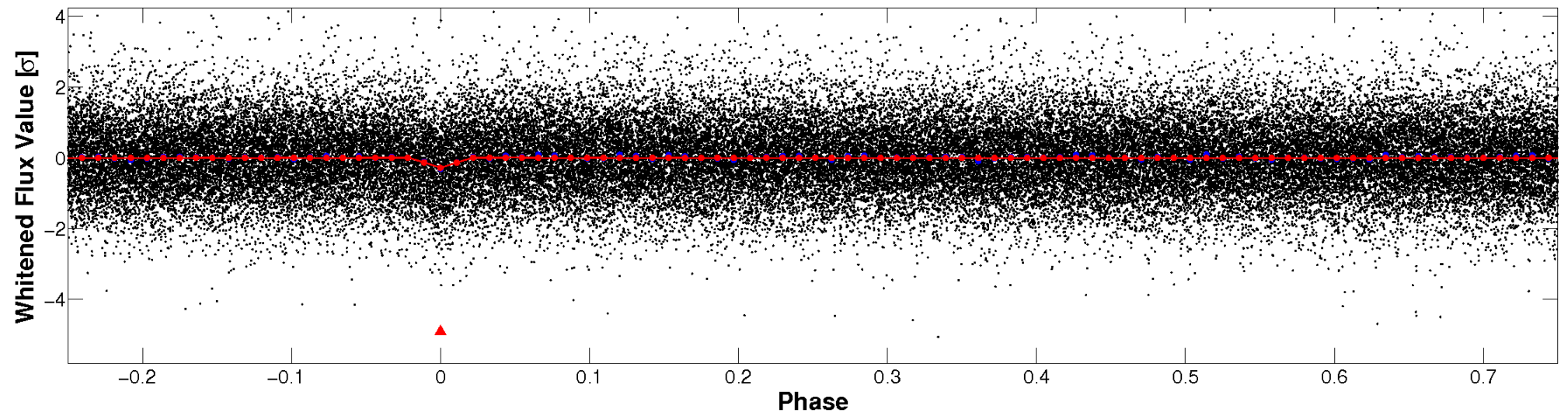


Non-Whitened Vs. Whitened Light Curve

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

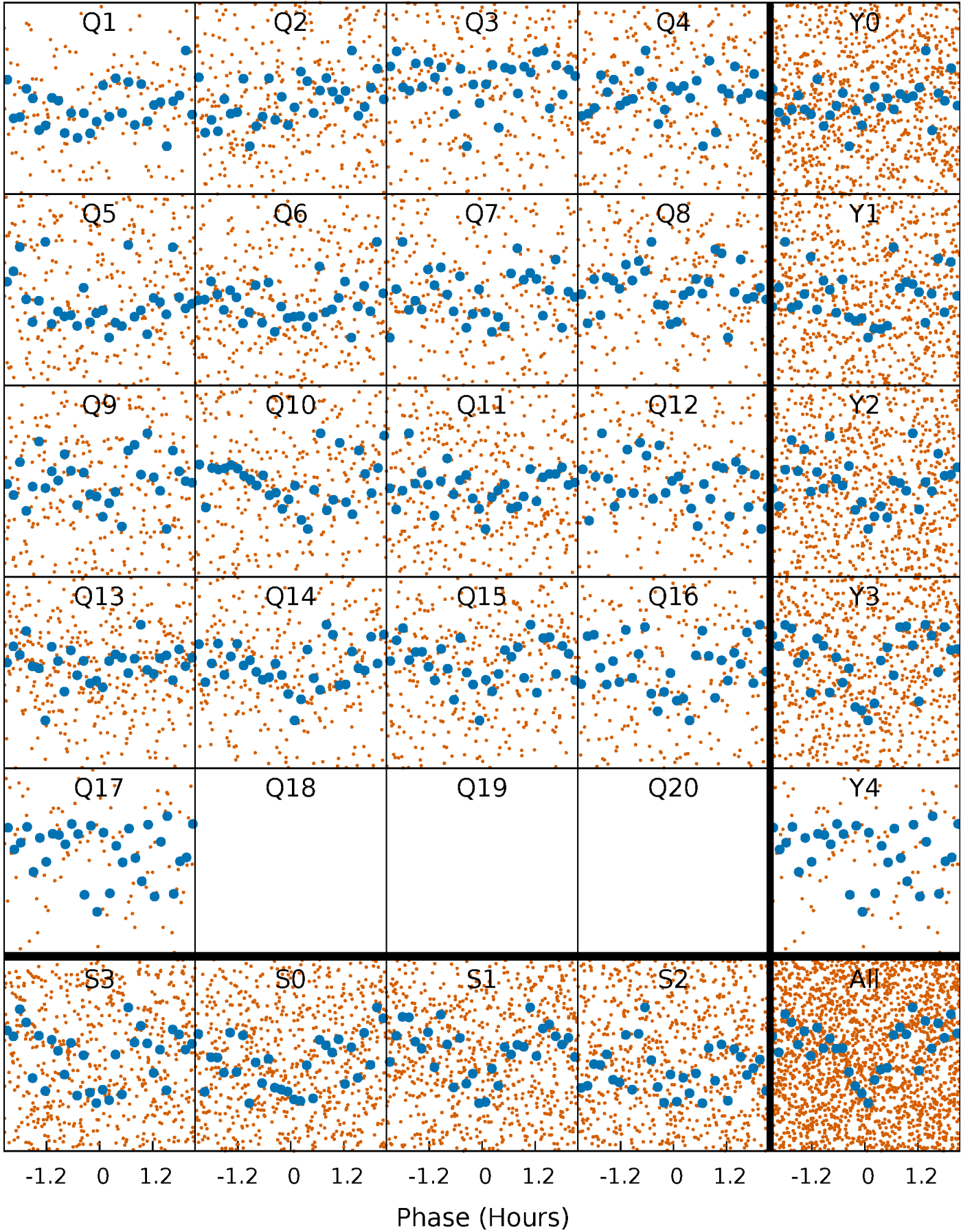


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



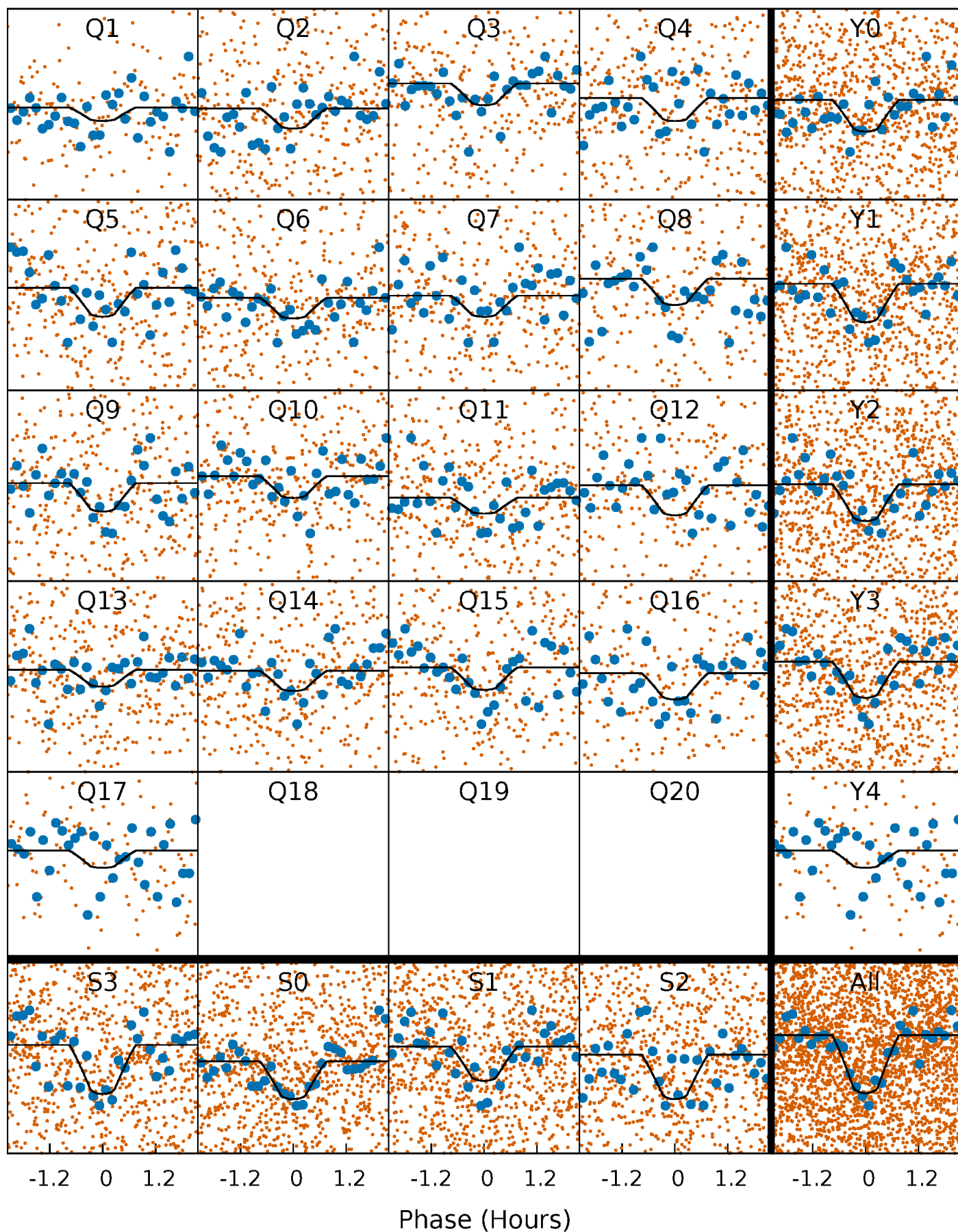
PDC Quarter-Phased Transit Curves

TCE 004054784-01 P= 1.867982 Days $T_0=133.236584$ (BKJD)



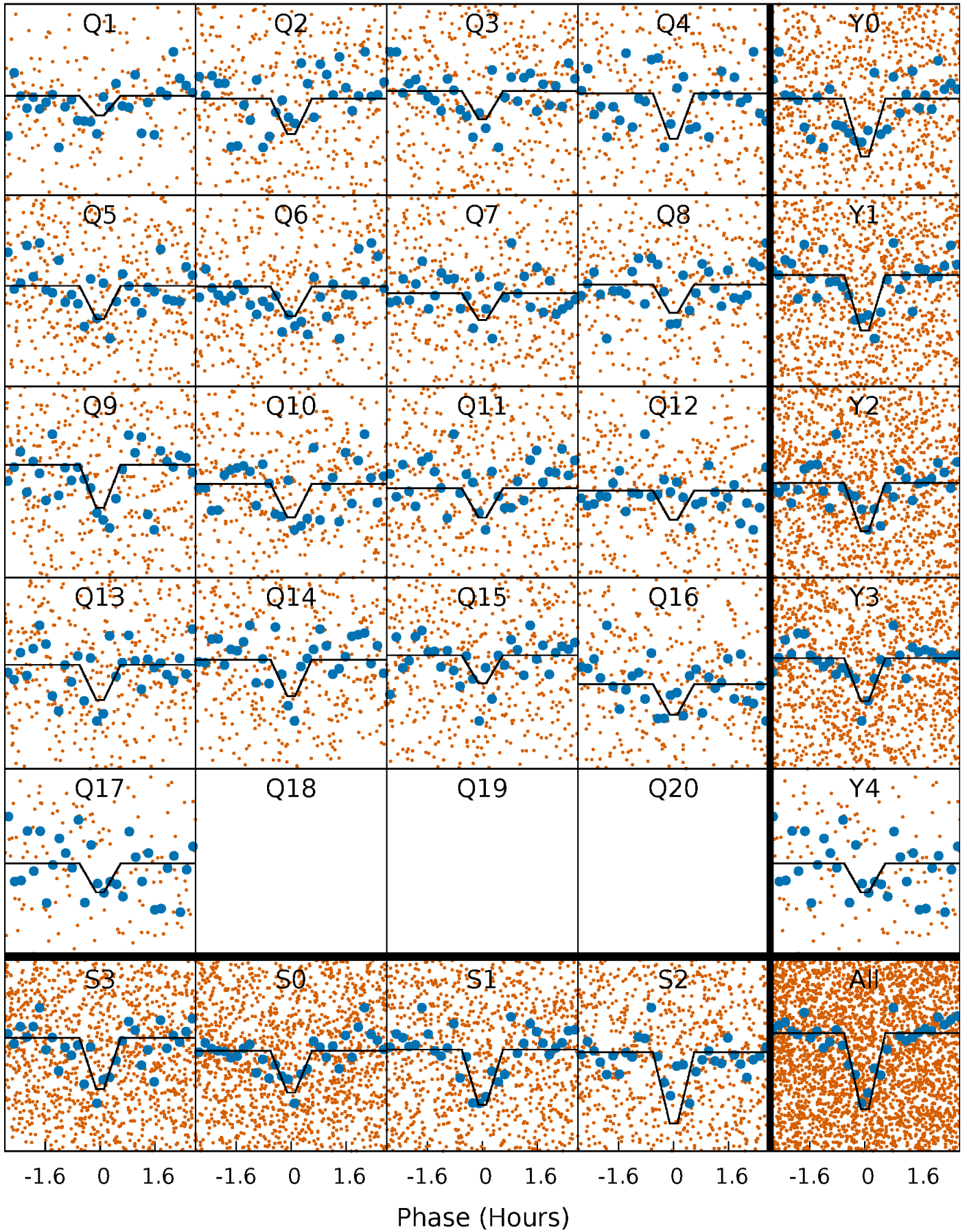
DV Quarter-Phased Transit Curves

TCE 004054784-01 P= 1.867982 Days $T_0=133.236584$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

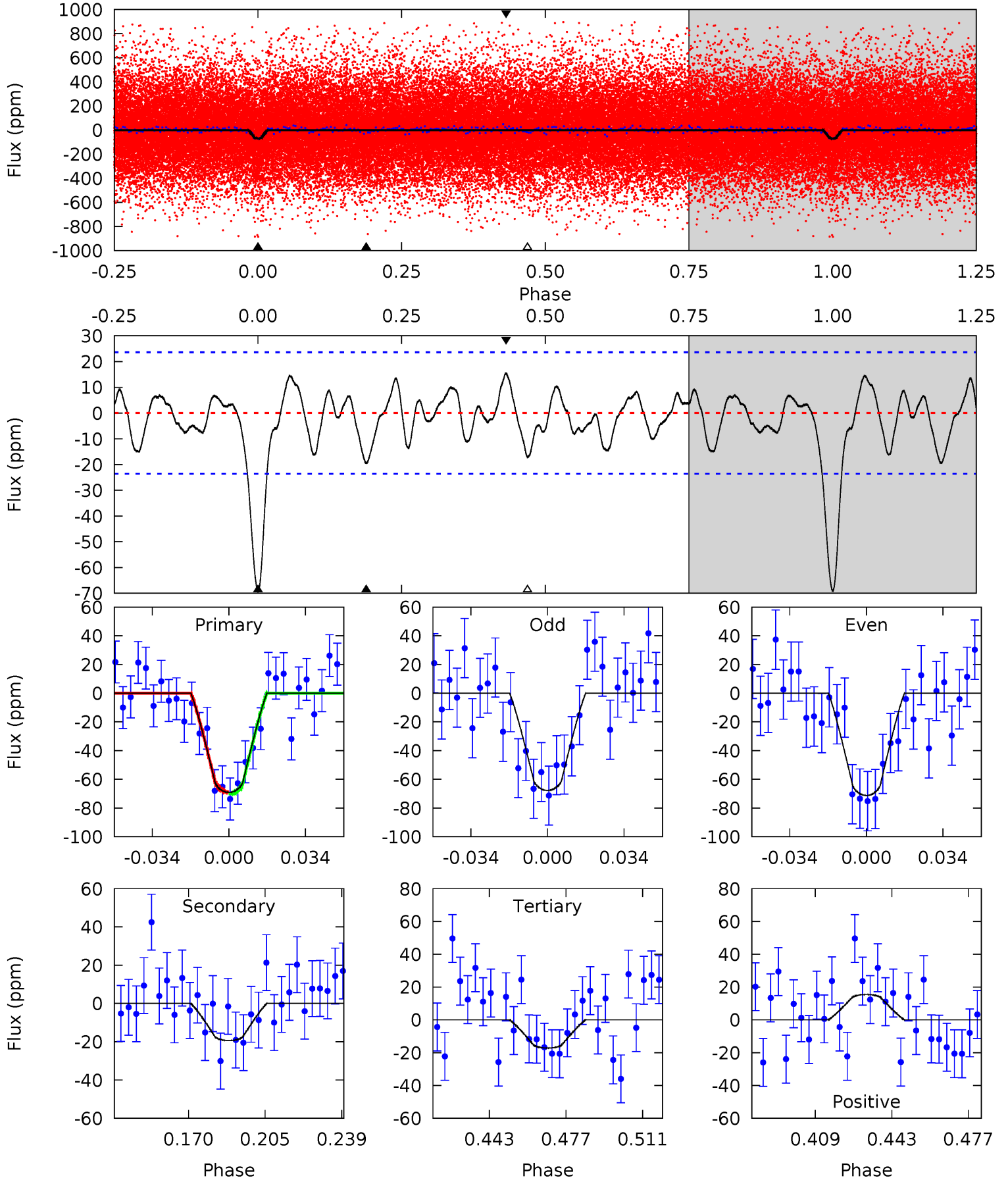
TCE 004054784-01 P= 1.867989 Days $T_0=133.232974$ (BKJD)



DV Model-Shift Uniqueness Test

004054784-01, P = 1.867982 Days, E = 131.368602 Days

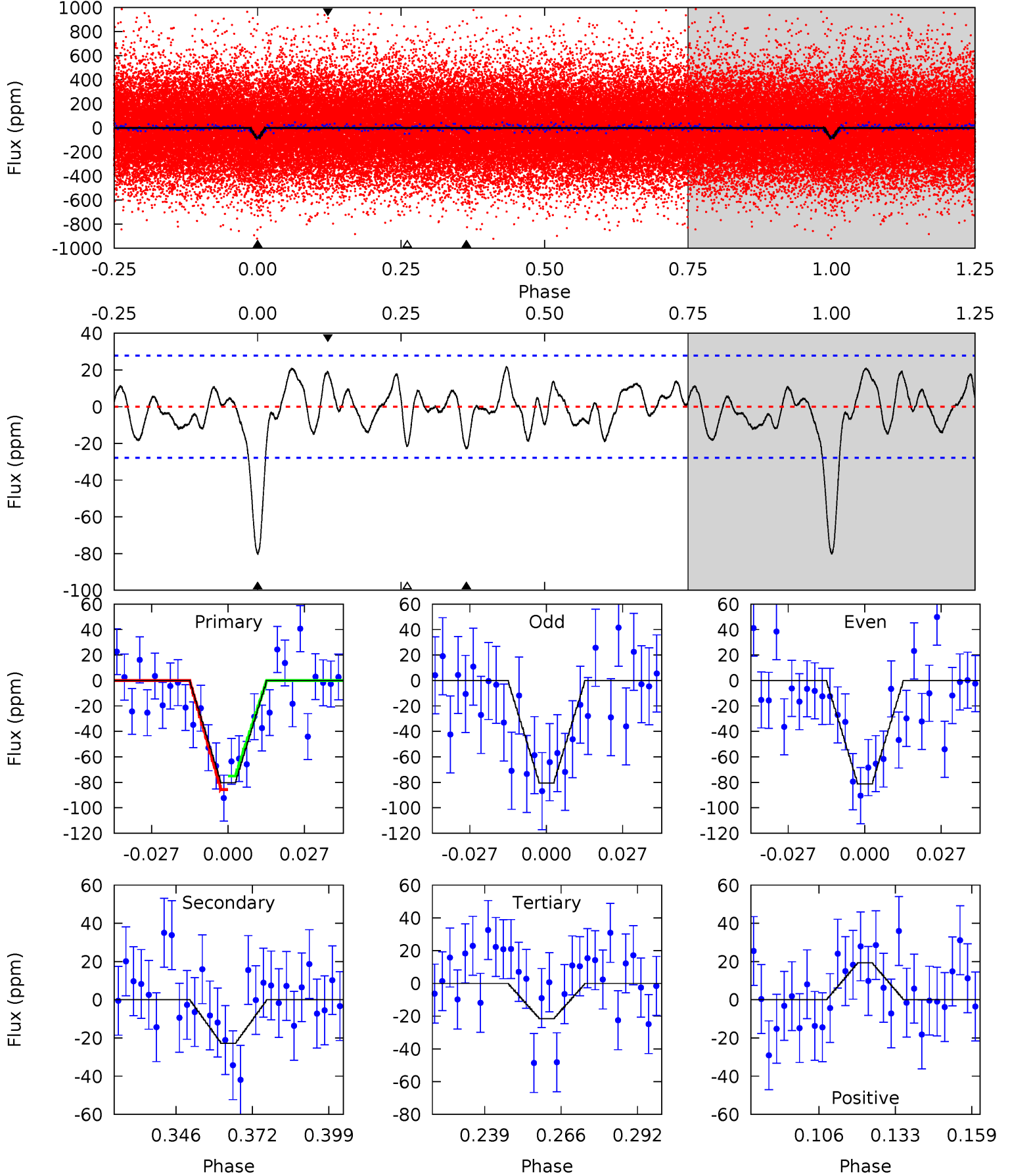
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	3.94	3.49	3.13	4.79	2.12	1.46	10.5	10.9	0.45	0.81	0.35	1.04	0.18	0.15



Alt Model-Shift Uniqueness Test

004054784-01, P = 1.867989 Days, E = 131.364985 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	3.96	3.75	3.35	4.84	2.22	1.55	10.2	10.6	0.21	0.61	0.07	1.03	0.21	0.92



Stellar Parameters For KIC 004054784

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5487^{+147}_{-147}	$4.568^{+0.038}_{-0.152}$	$-0.080^{+0.300}_{-0.300}$	$0.815^{+0.175}_{-0.075}$	$0.899^{+0.082}_{-0.101}$	$2.335^{+0.449}_{-0.953}$
	+3%/-3%	+1%/-3%	+375%/-375%	+21%/-9%	+9%/-11%	+19%/-41%
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 004054784-01 / KOI 7679.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 5	$0.86^{+0.51}_{-0.44}$	1837^{+90}_{-72}	4019^{+1387}_{-613}	11^{+38}_{-7}
Alt.	-23 ± 6	$0.91^{+0.50}_{-0.46}$	1837^{+95}_{-72}	4067^{+1375}_{-575}	12^{+40}_{-7}

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

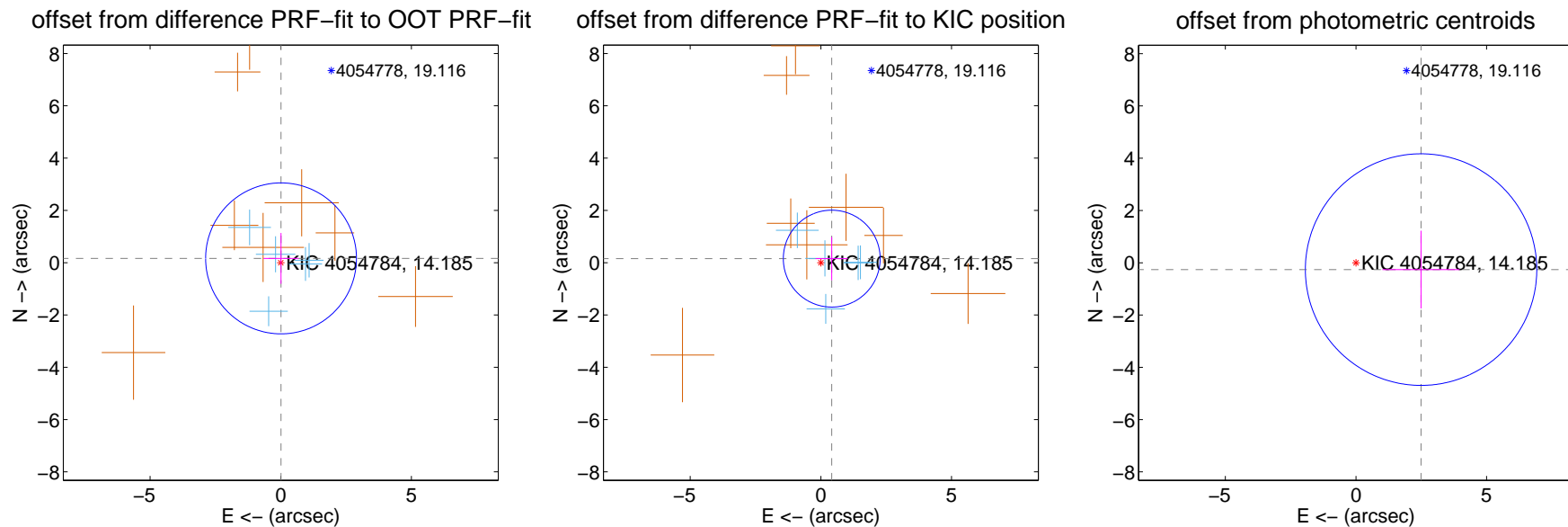
DV Centroid Data

Supplemental centroid analysis for 004054784-01. Kepler magnitude: 14.19. Transit SNR 9.16

There are 5 quarters with good PRF difference image offsets

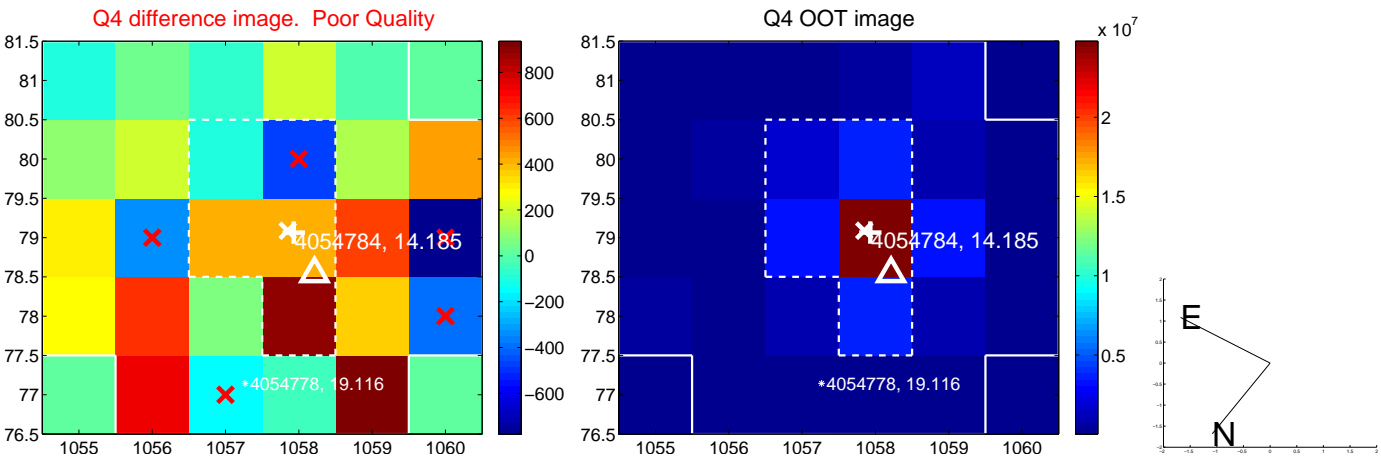
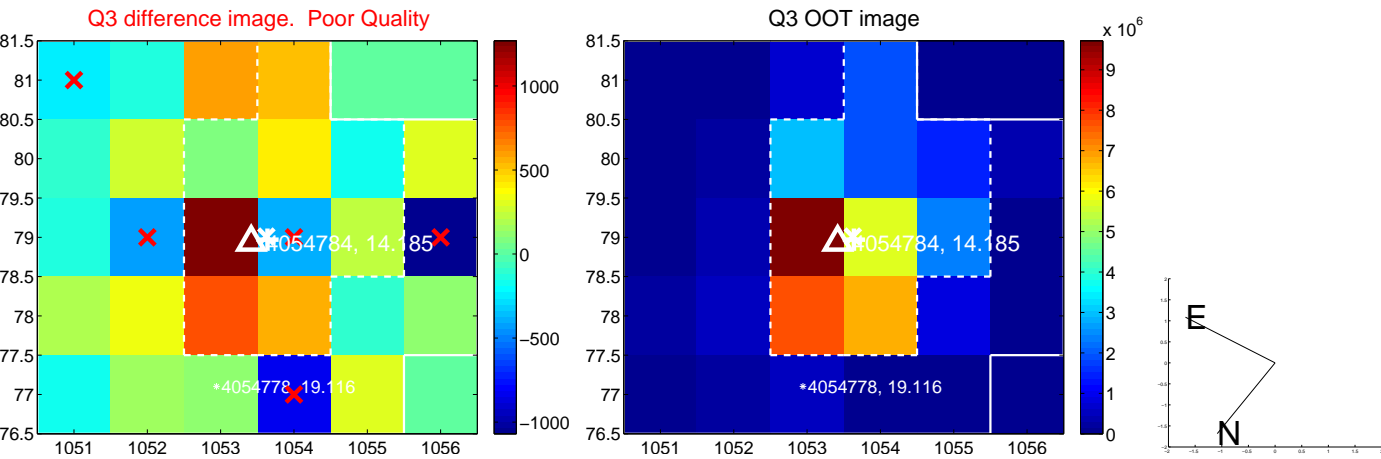
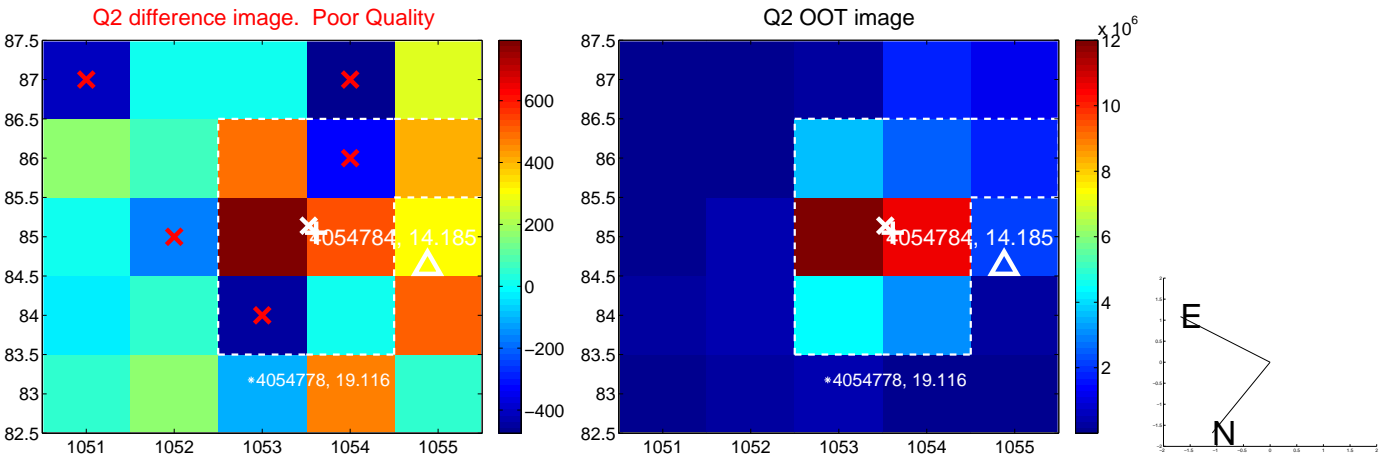
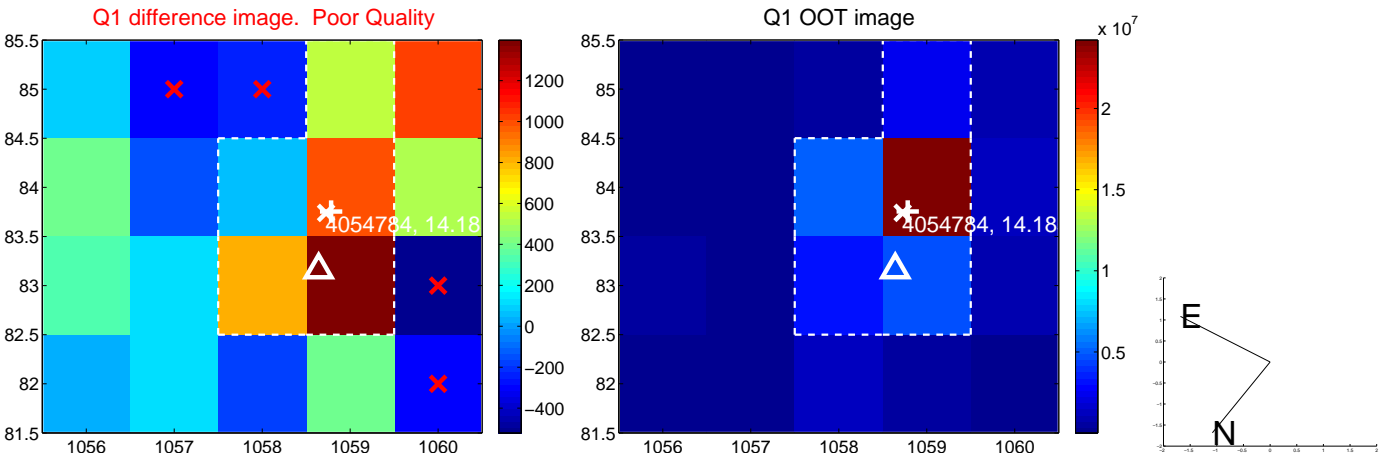
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.165 ± 0.962	0.17	-0.012 ± 0.677	0.165 ± 0.972
PRF-fit source offset from KIC position	0.444 ± 0.618	0.72	-0.416 ± 0.613	0.155 ± 0.828
photometric centroid source offset	2.51 ± 1.48	1.70	-2.49 ± 1.48	-0.26 ± 1.49

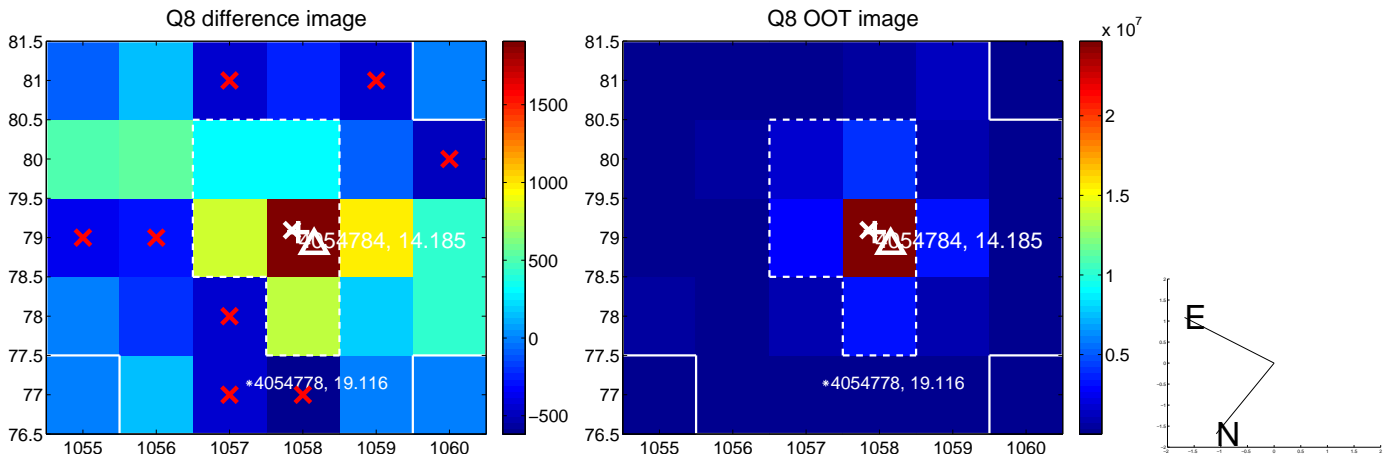
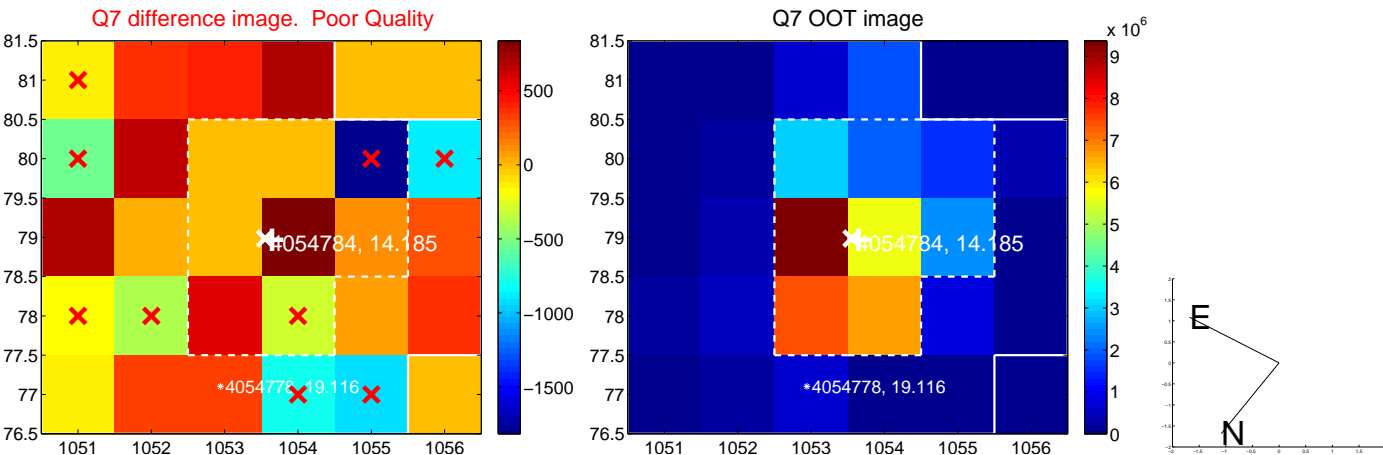
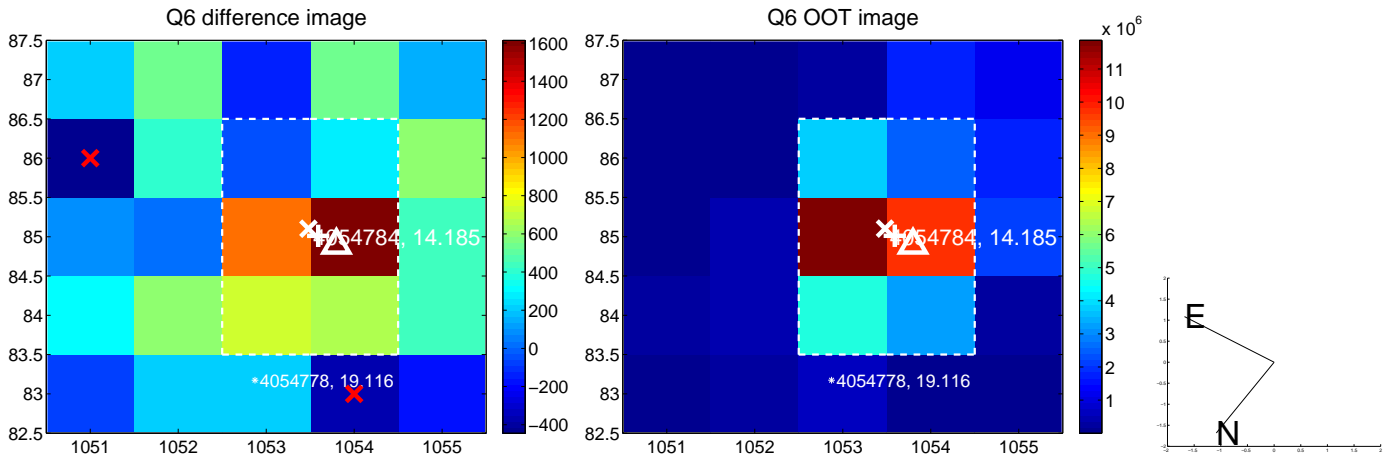
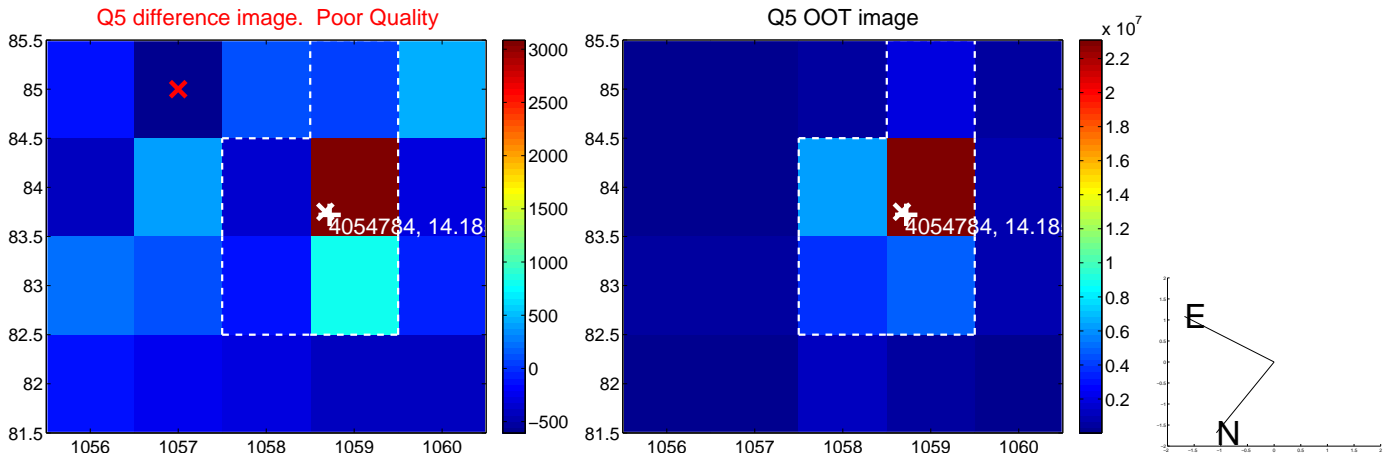


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

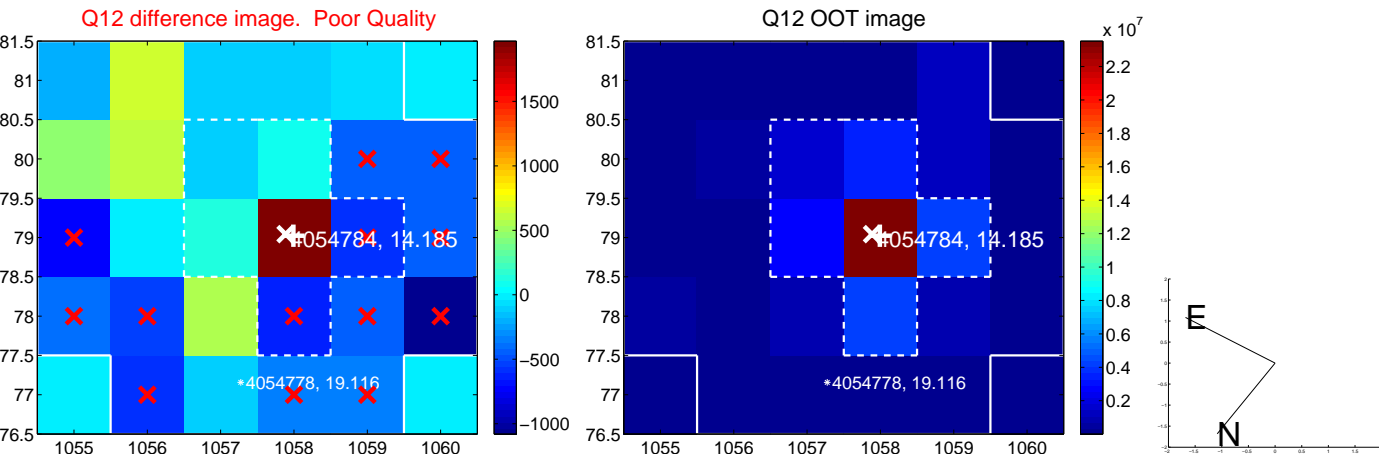
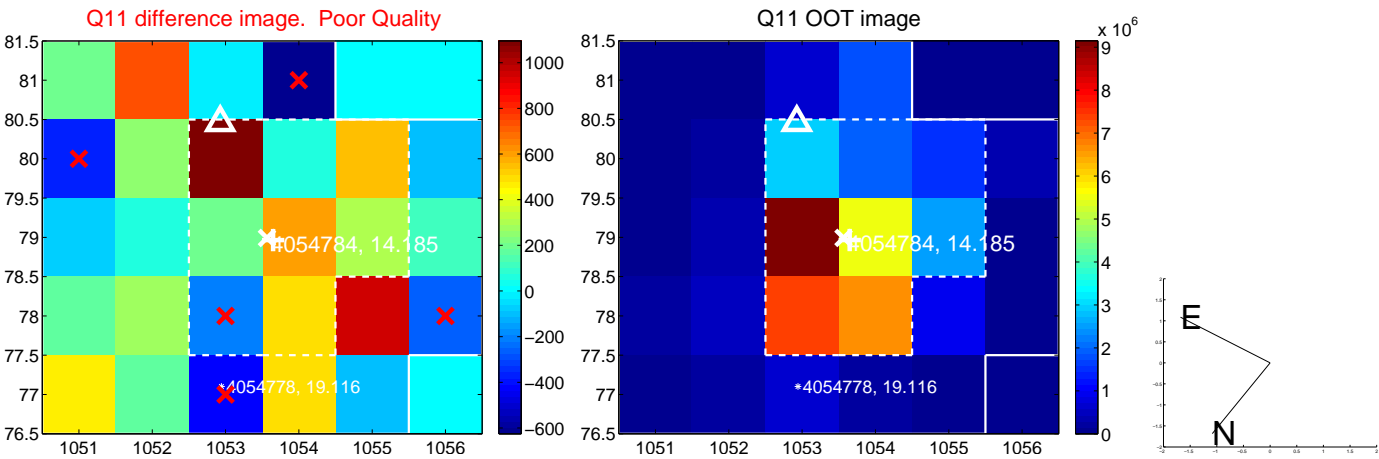
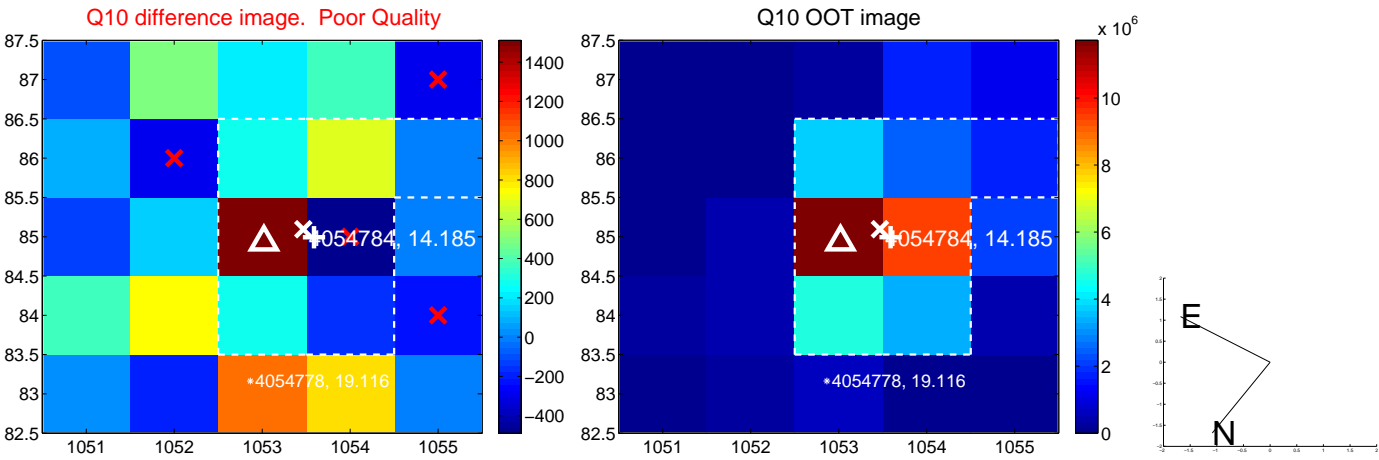
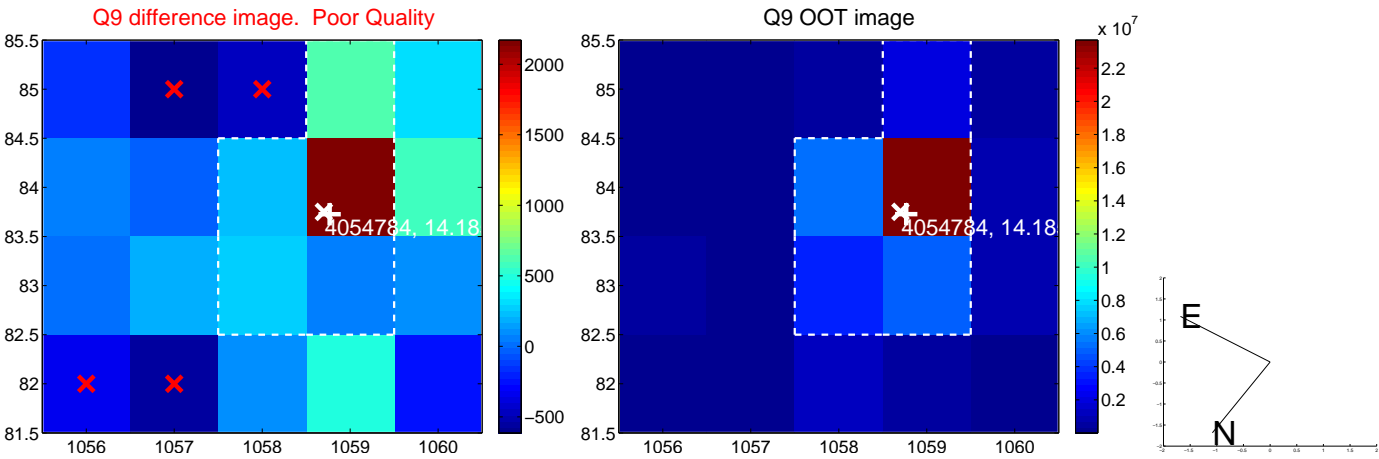
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



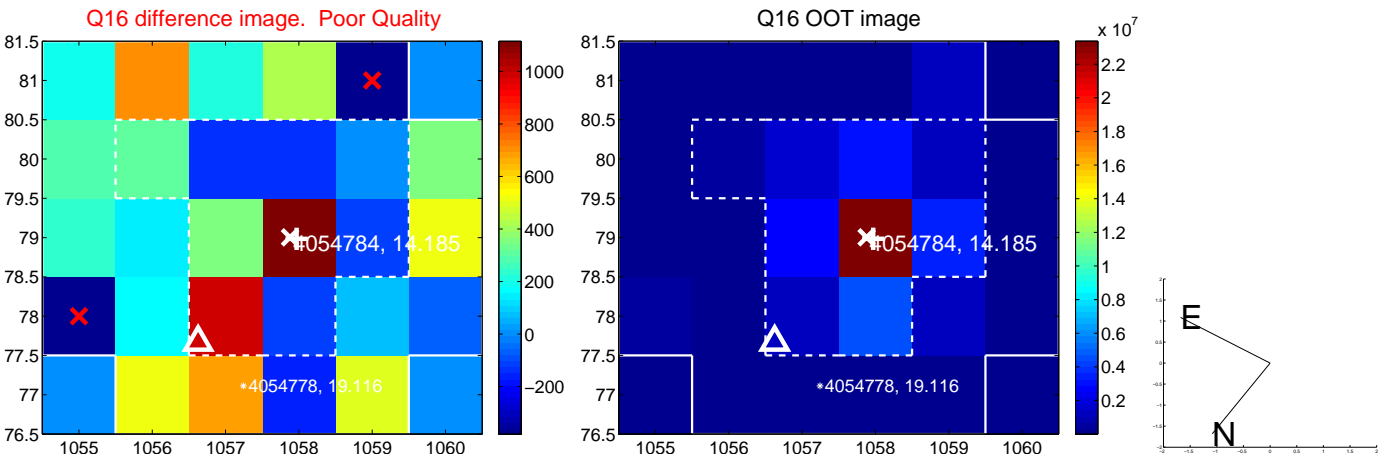
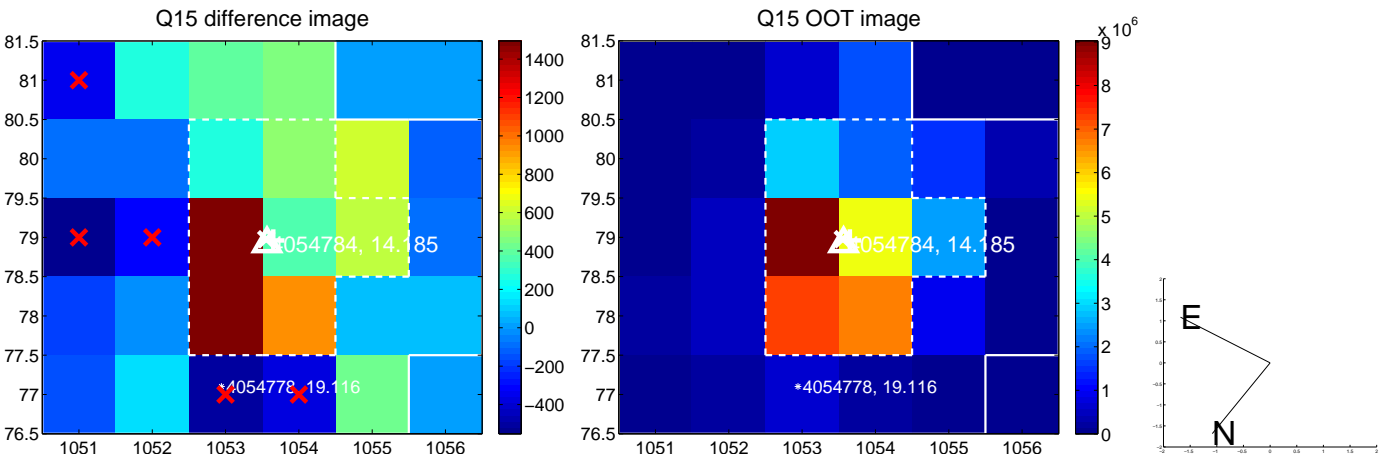
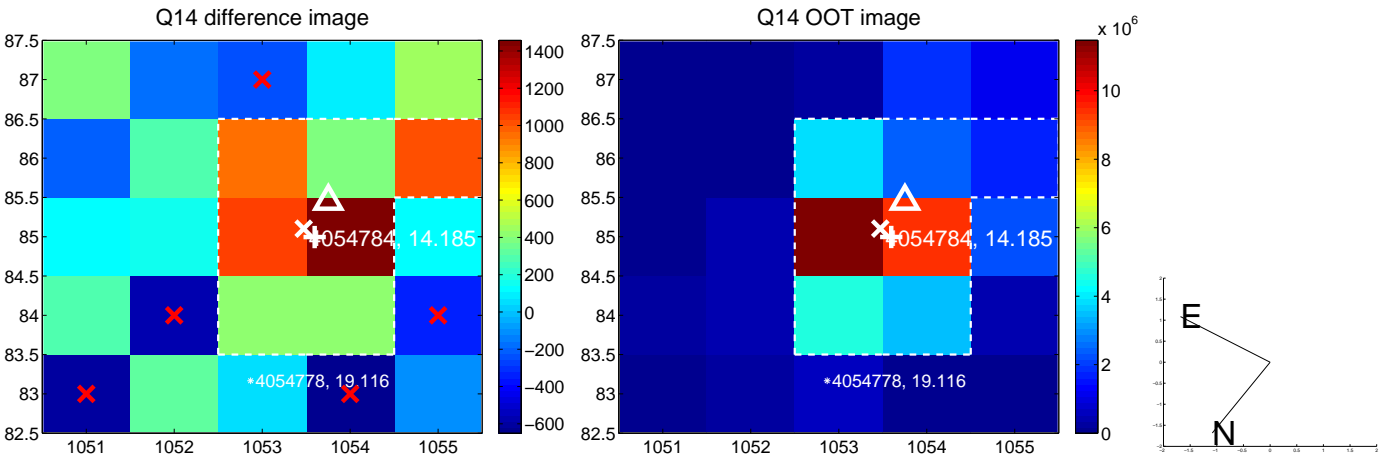
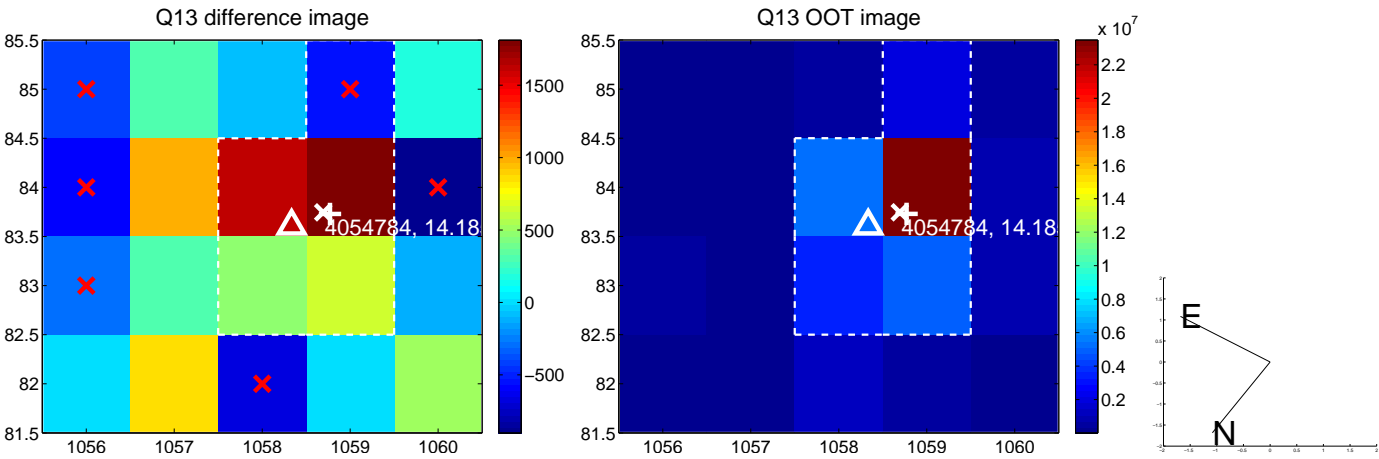
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



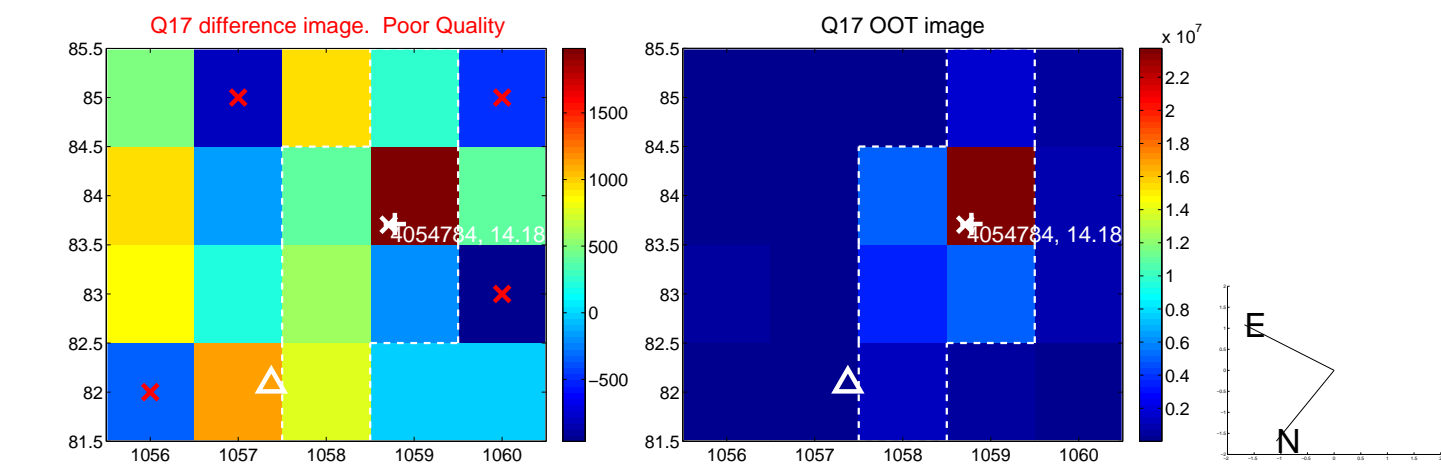
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



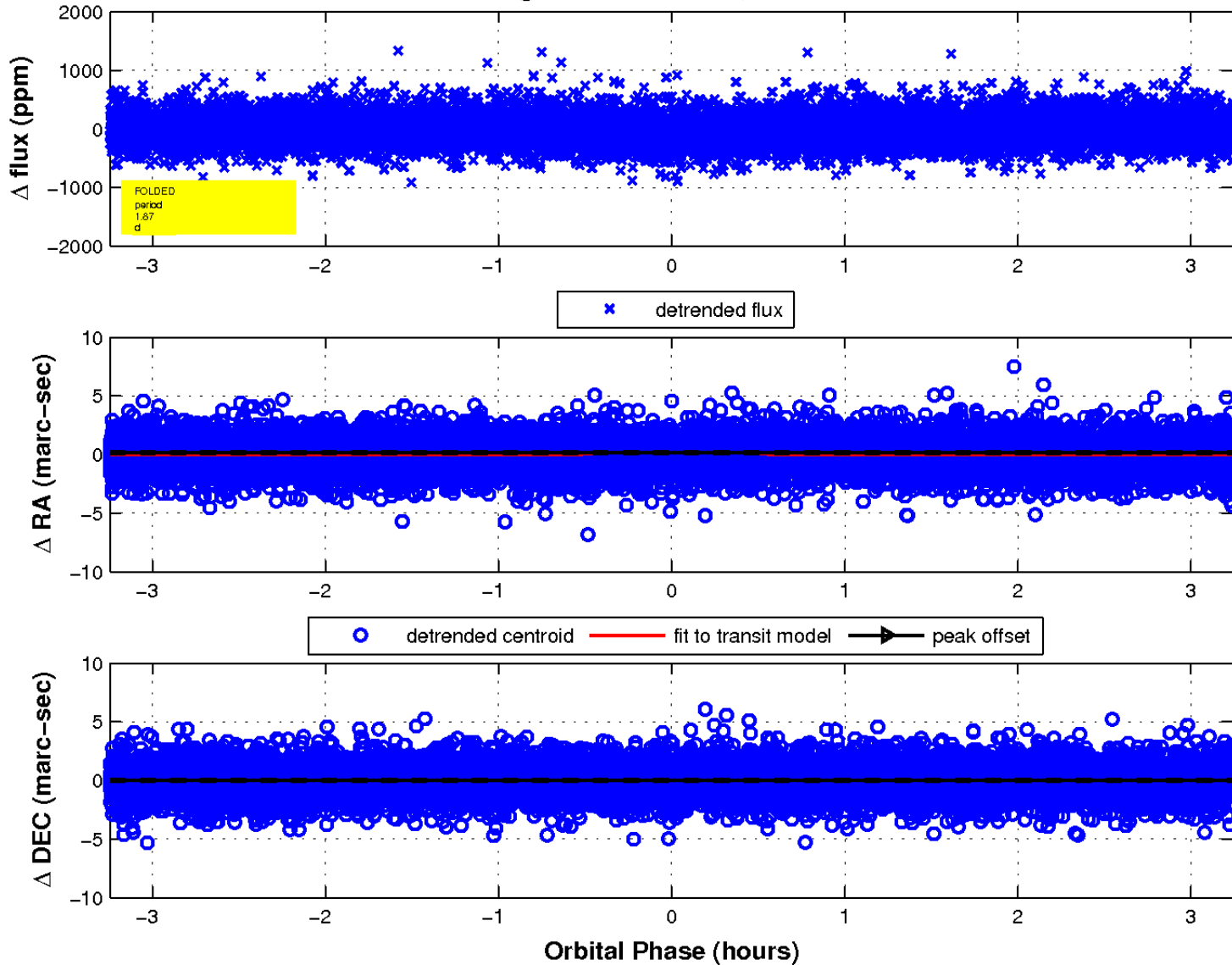
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

