

KIC 006945594

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})
006945594-01	OBS	No	464.107055	393.496987	152.6	14.627	8.2	7.7	0.76	4550	1.12	0.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006945594-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

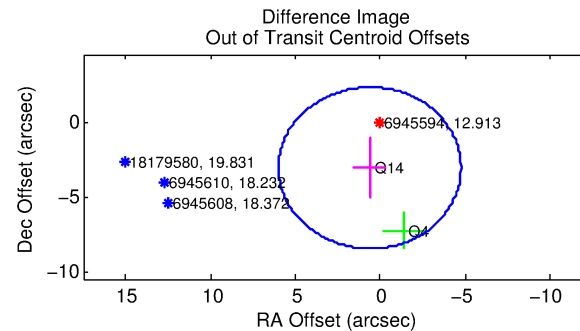
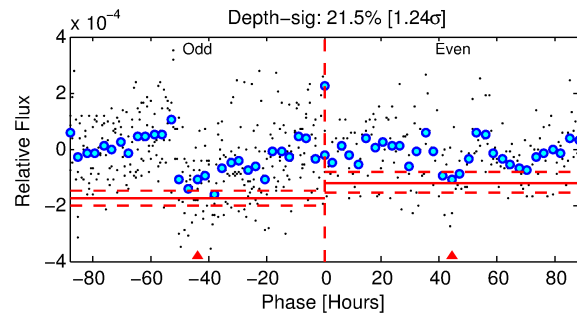
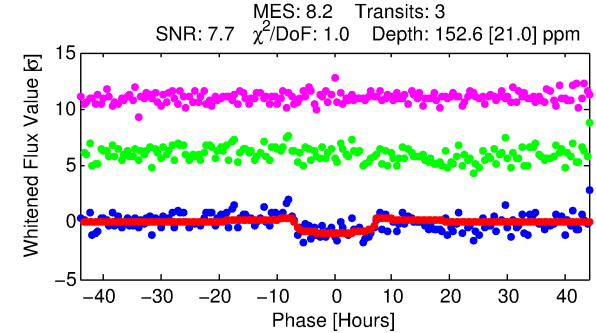
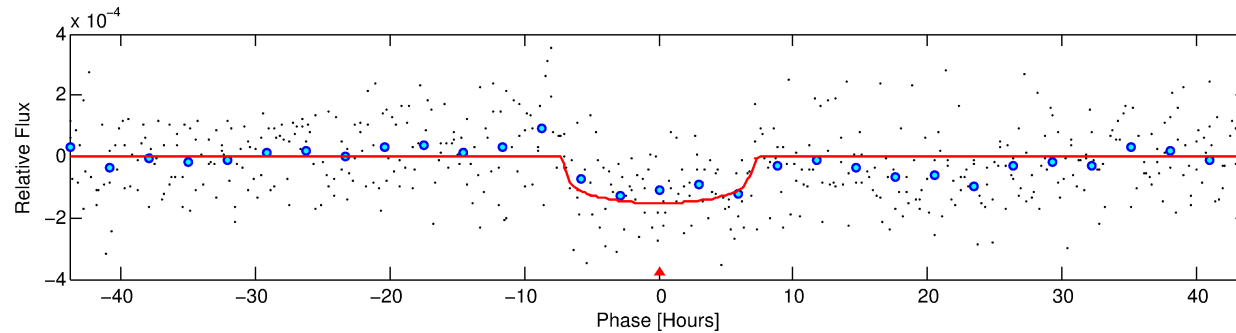
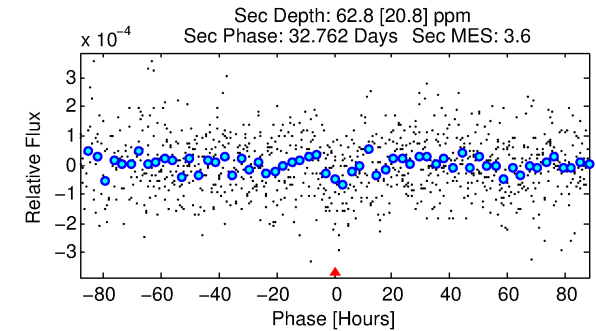
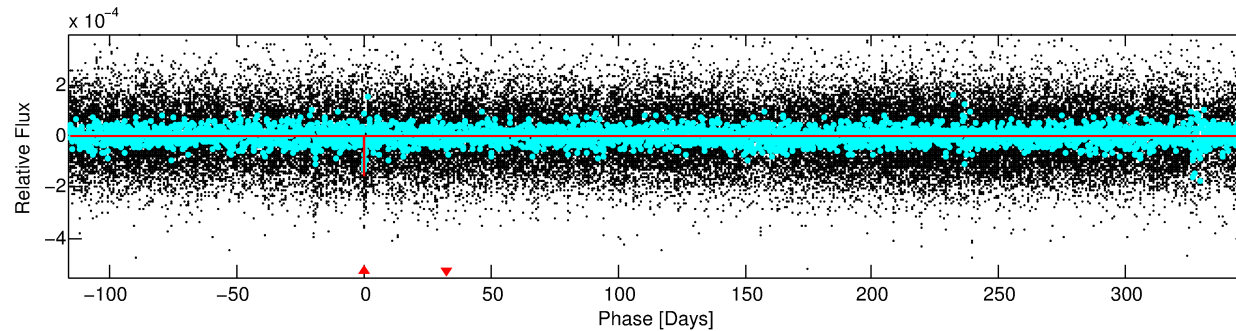
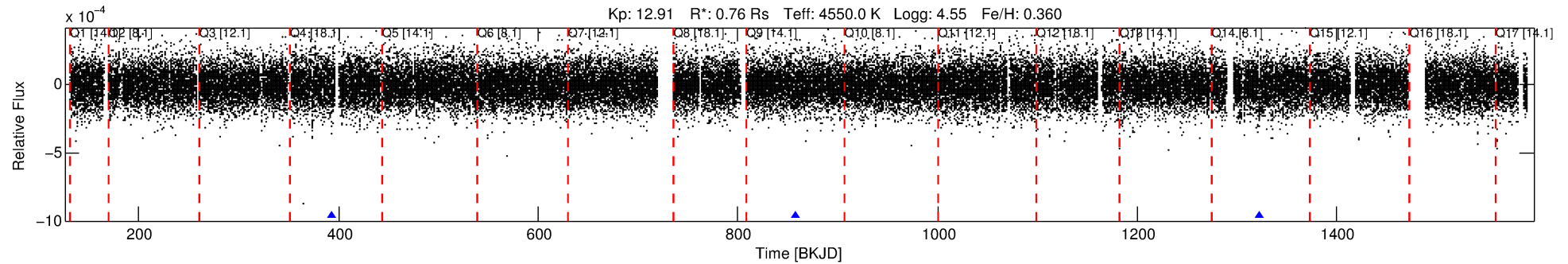
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006945594-01

No Significant Match Found

DV One-Page Summary

KIC: 6945594 Candidate: 1 of 1 Period: 464.107 d



DV Fit Results:

Period = 464.10705 [0.01659] d
Epoch = 393.4970 [0.0225] BKJD
Rp/R* = 0.0136 [0.0042]
a/R* = 125.47 [134.28]
b = 0.87 [0.30]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 1.12 [0.36] Re
a = 1.0656 [0.0810] AU
Ag = 31167.58 [22119.83] [1.41σ]
Teffp = 3480 [618] K [5.35σ]

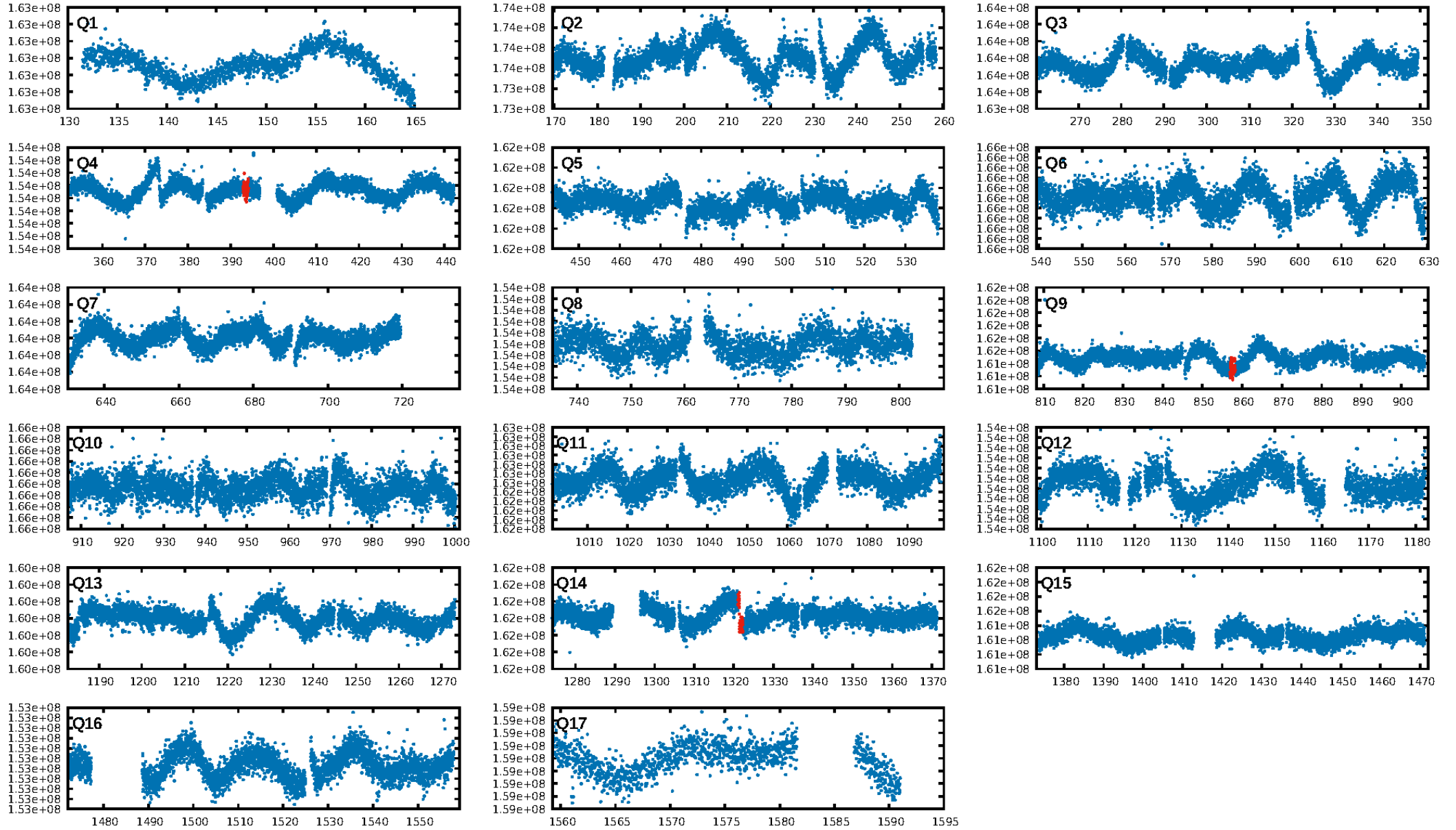
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.3%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 6.73e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.194
Centroid-sig: 0.3%
Centroid-so: 1.529 arcsec [1.39σ]
OotOffset-rm: 3.143 arcsec [1.75σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 2.596 arcsec [3.49σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

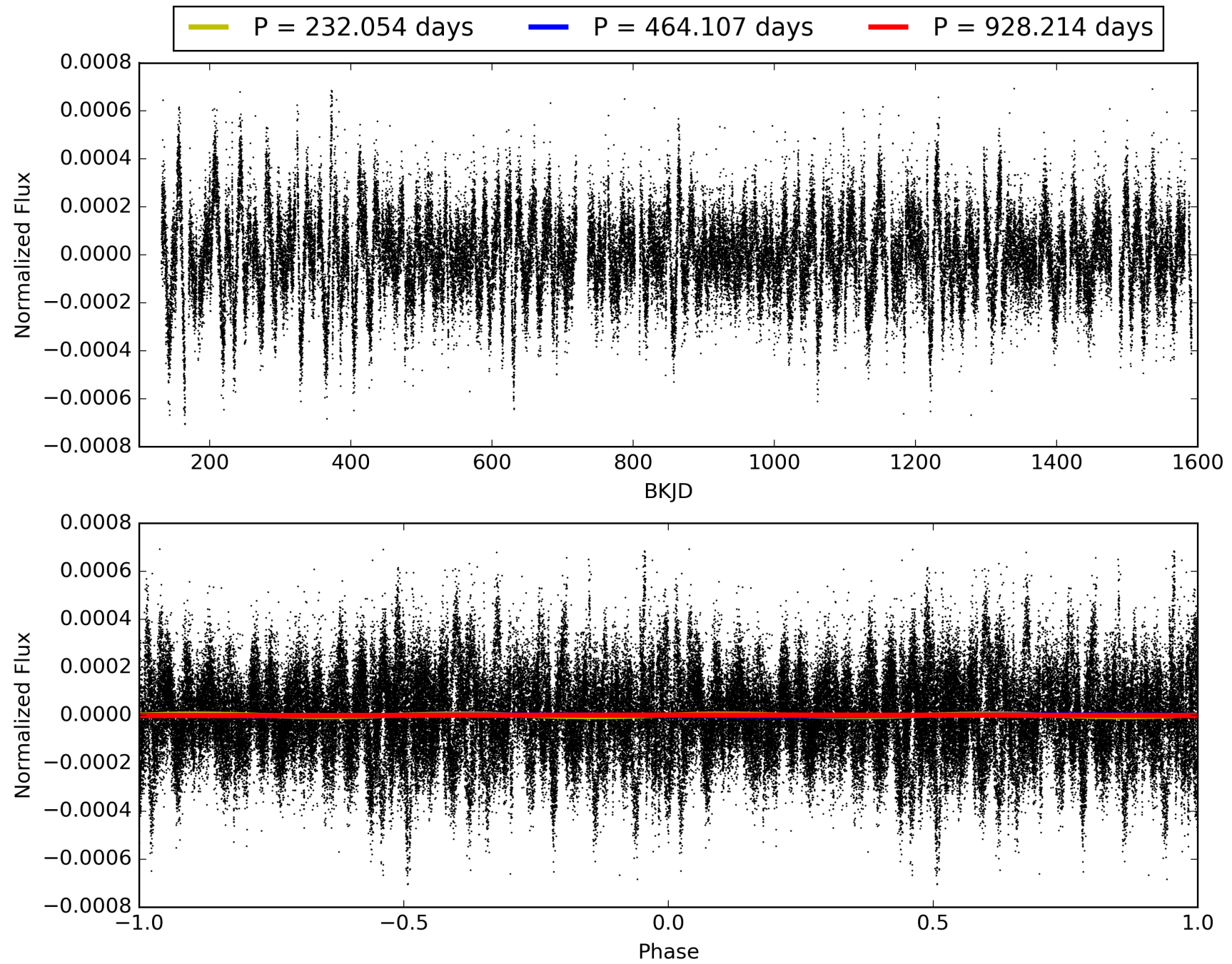
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:54:55 Z

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

TCE 006945594-01, PDC Light Curves

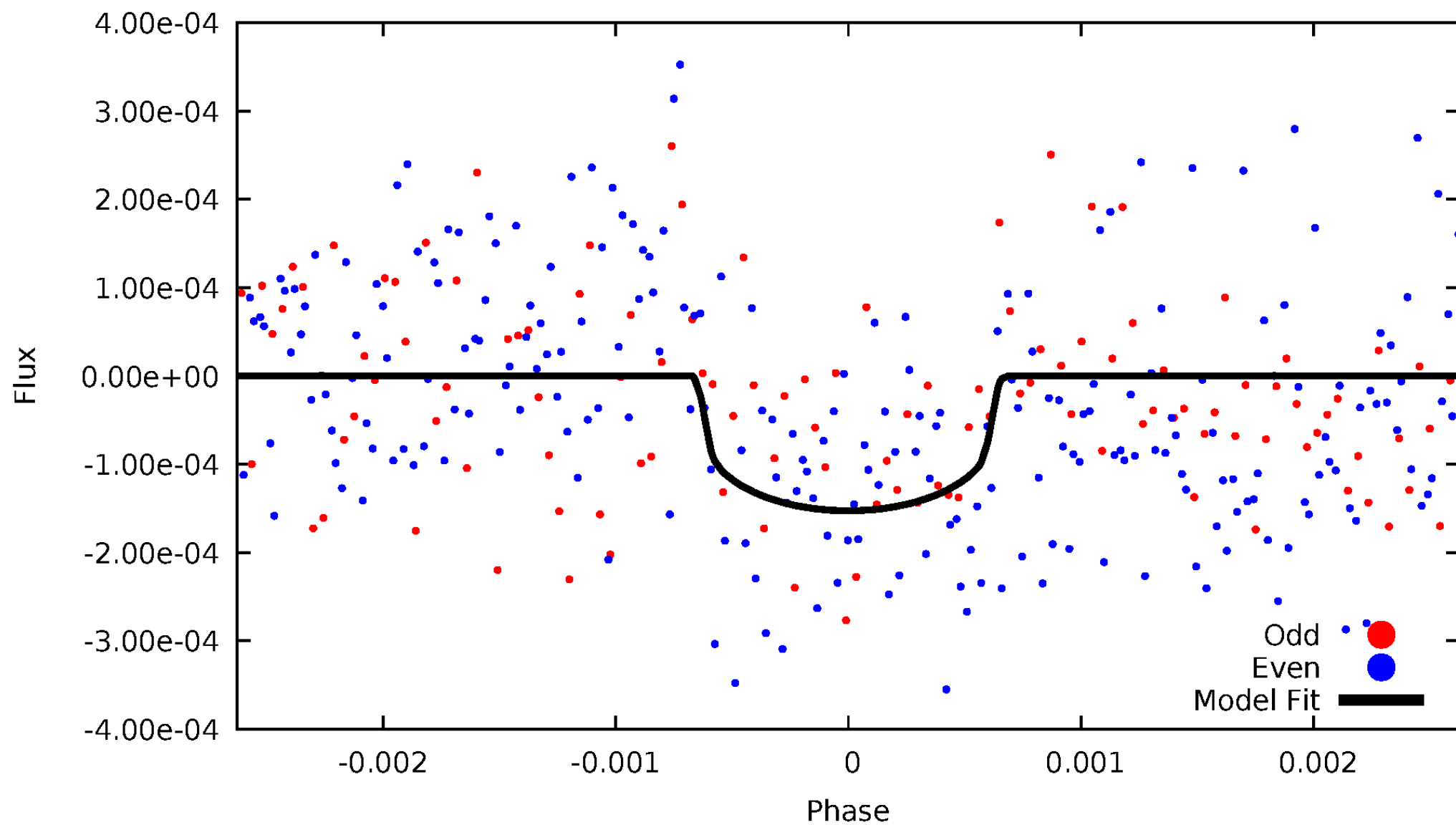


TCE 006945594-01



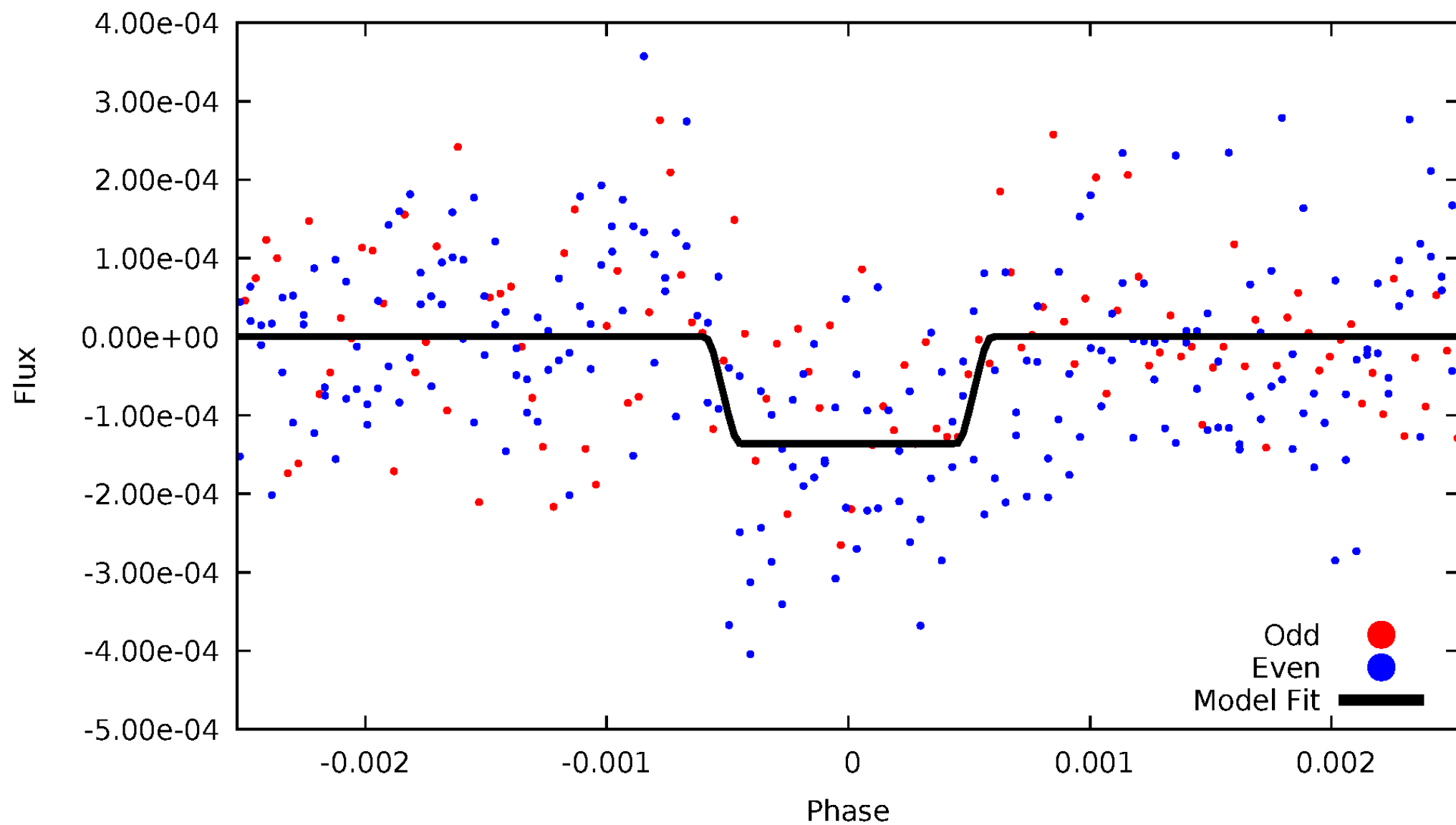
DV Odd/Even

TCE 006945594-01

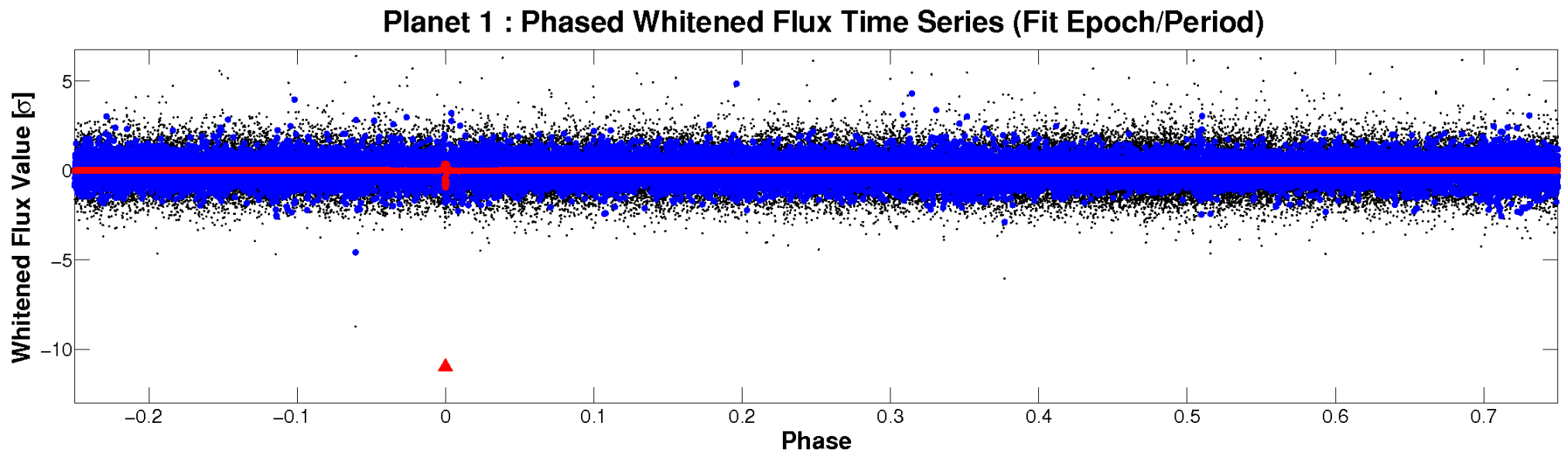
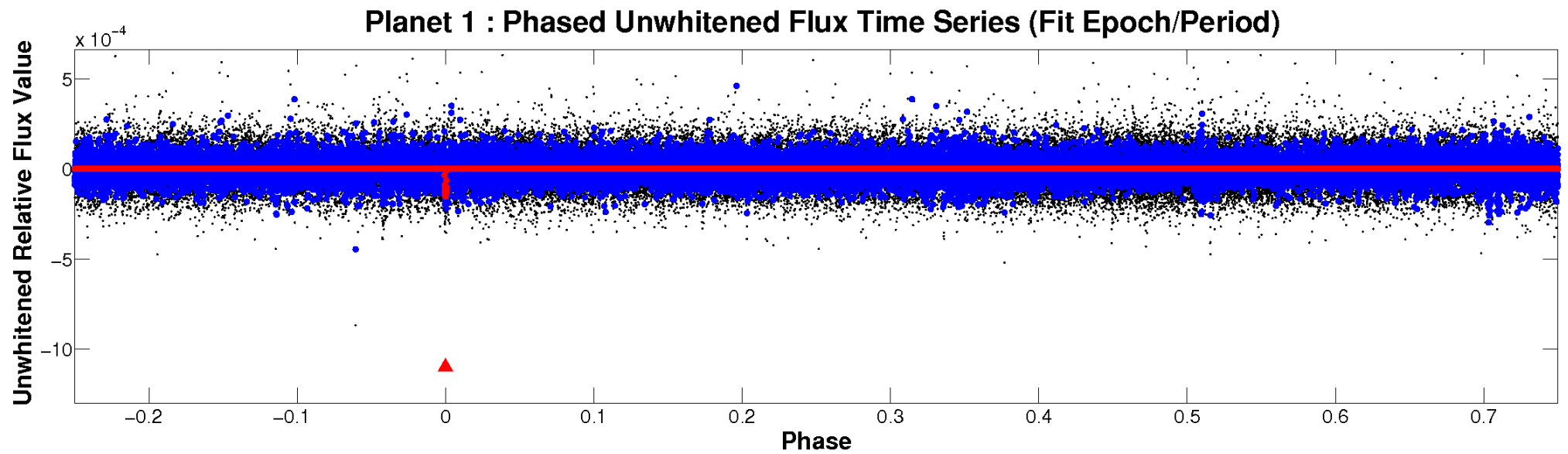


ALT Odd/Even

TCE 006945594-01



Non-Whitened Vs. Whitened Light Curve



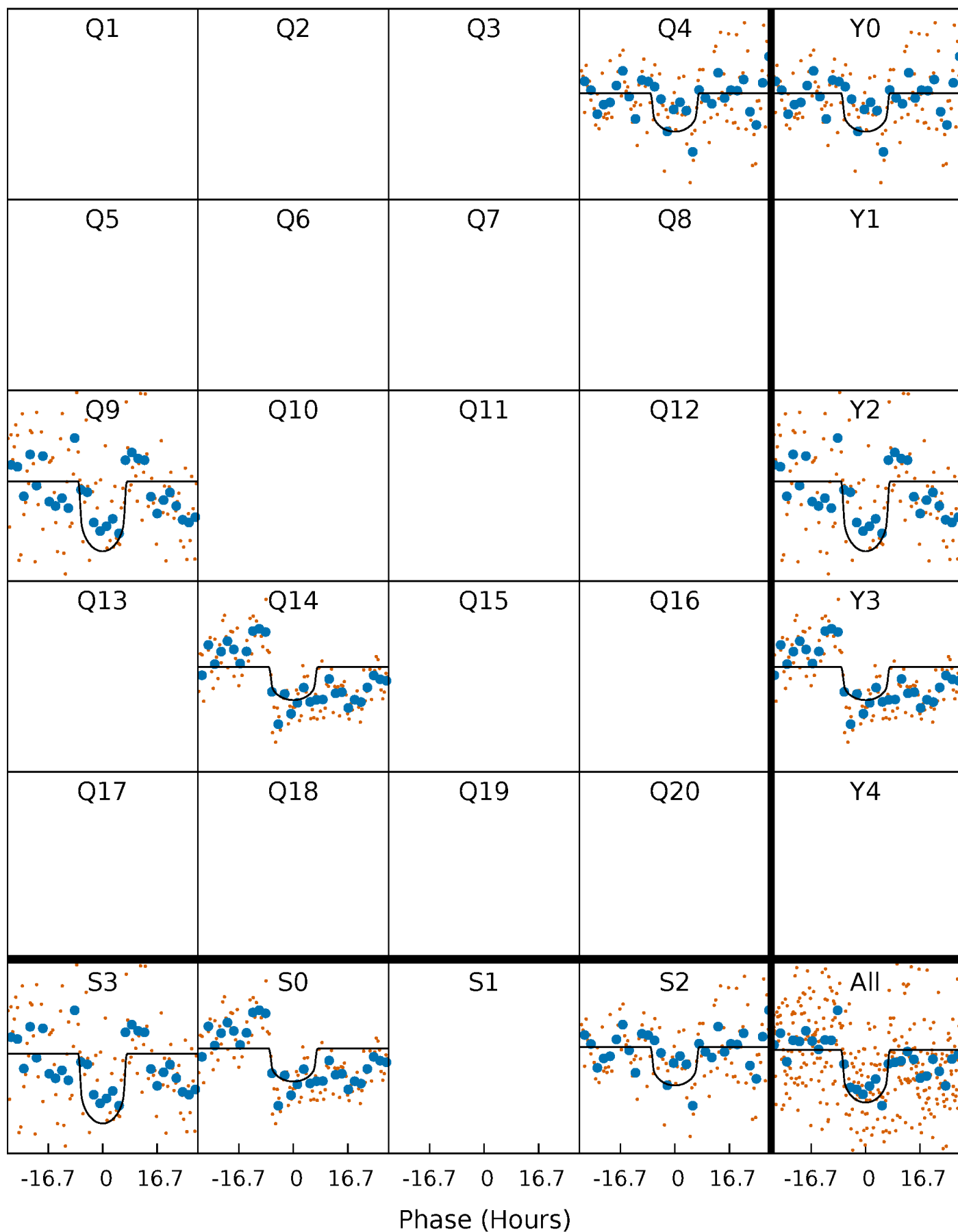
PDC Quarter-Phased Transit Curves

TCE 006945594-01 P=464.107055 Days $T_0=393.496987$ (BKJD)



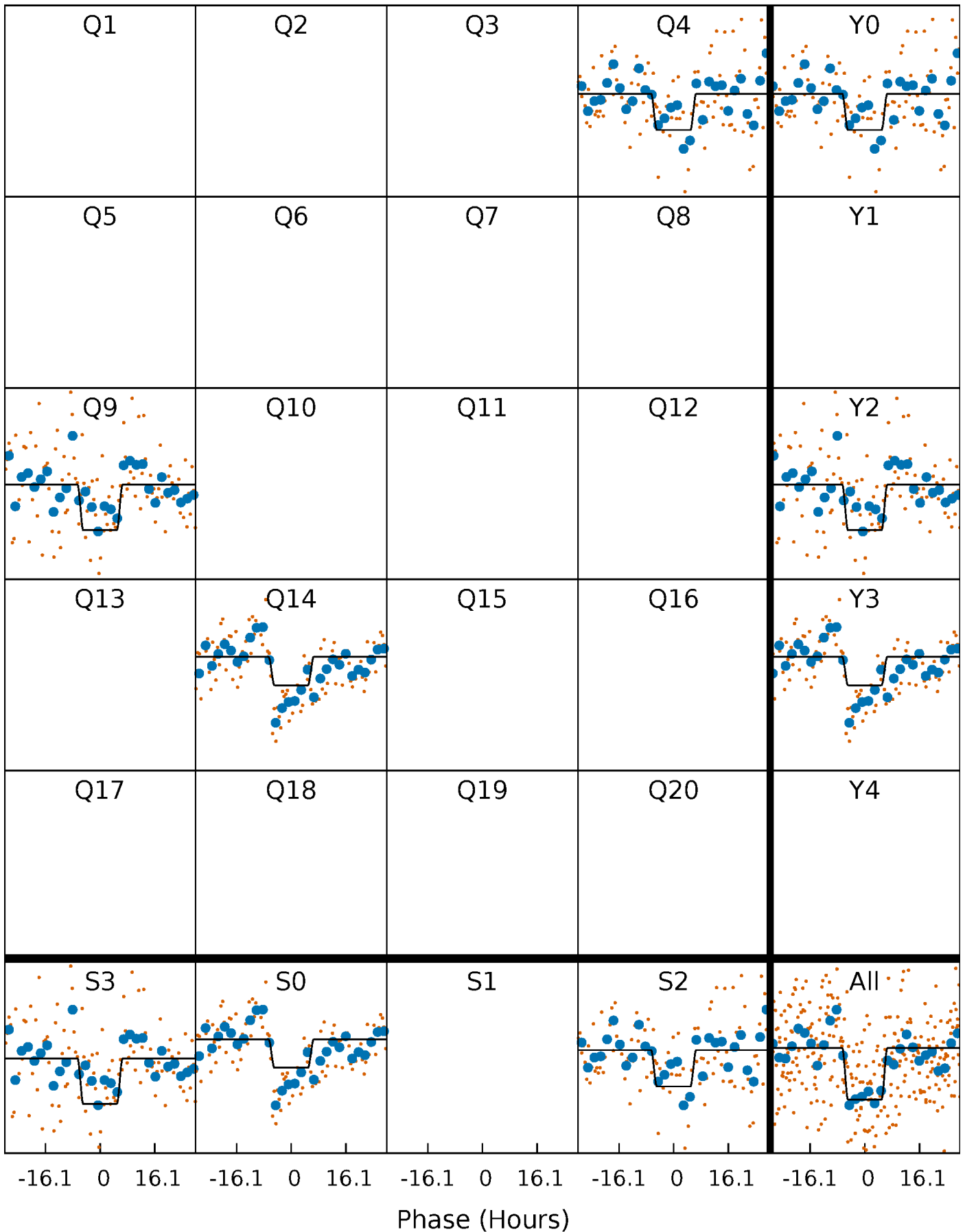
DV Quarter-Phased Transit Curves

TCE 006945594-01 P=464.107055 Days $T_0=393.496987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

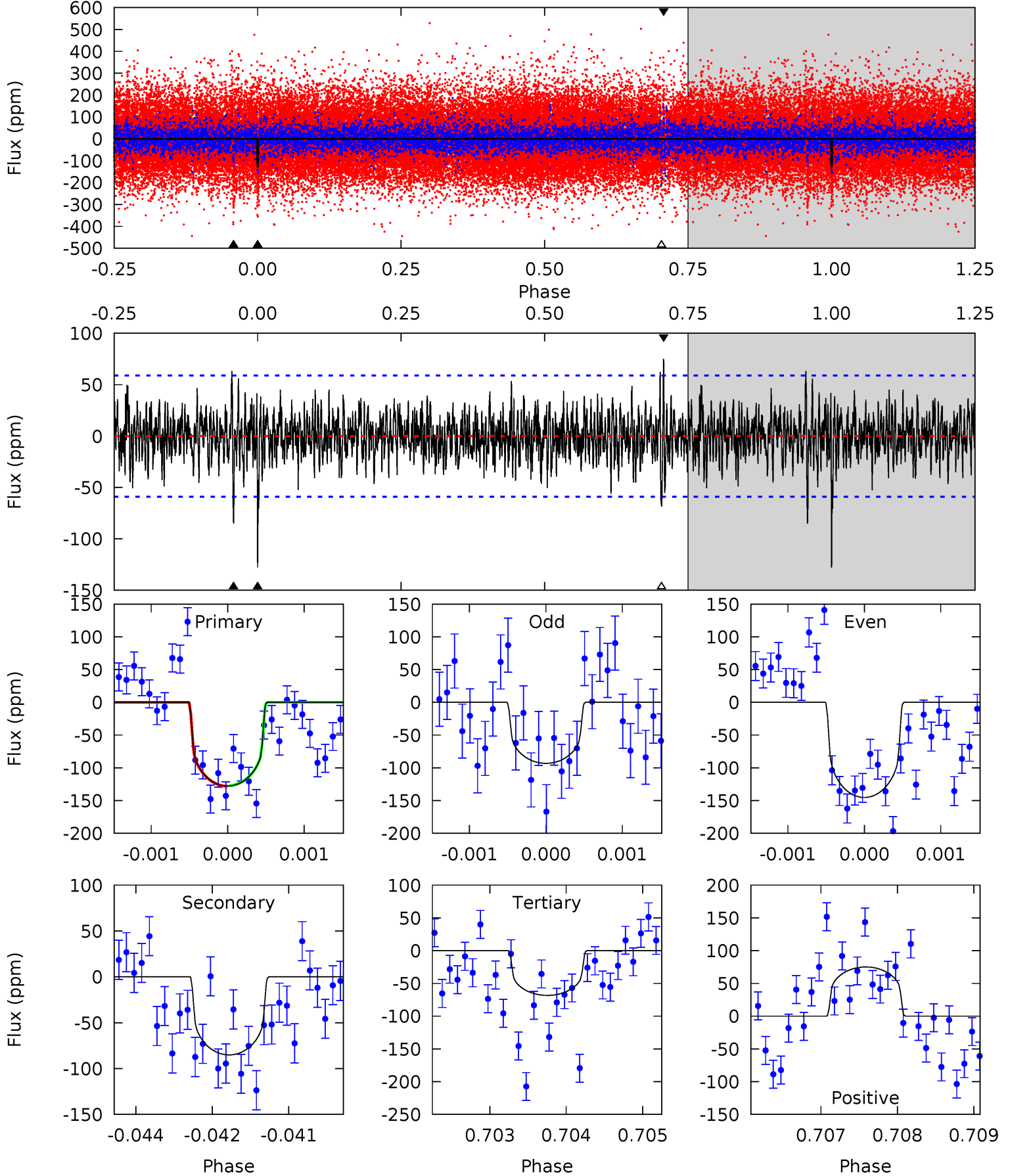
TCE 006945594-01 P=464.059770 Days $T_0=393.554171$ (BKJD)



DV Model-Shift Uniqueness Test

006945594-01, P = 464.107055 Days, E = 393.496987 Days

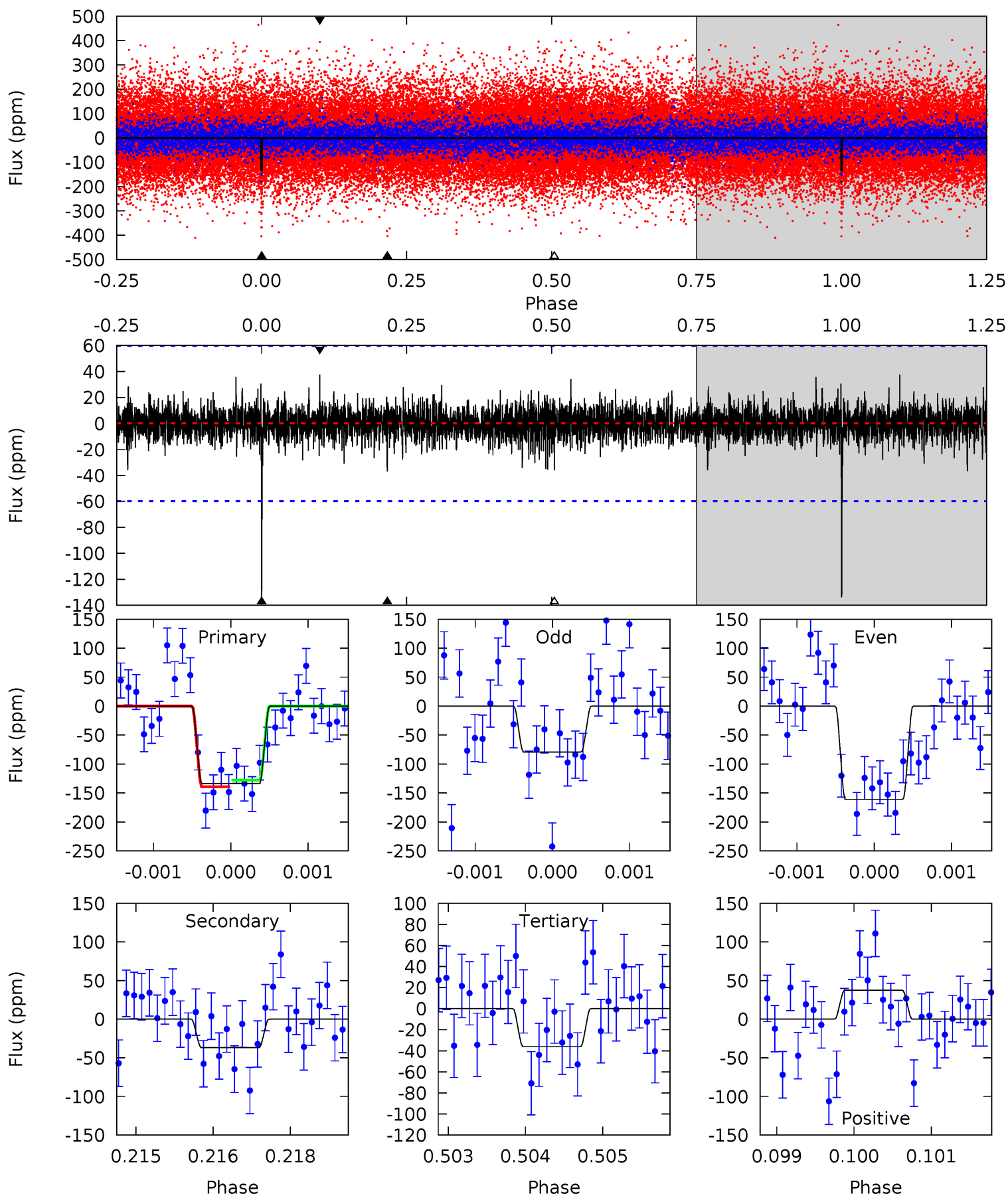
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	7.80	6.26	6.87	5.40	3.21	1.60	5.45	4.83	1.54	0.92	2.26	1.34	0.37	0.04



Alt Model-Shift Uniqueness Test

006945594-01, P = 464.059770 Days, E = 393.554171 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	3.34	3.26	3.40	5.42	3.24	0.79	8.87	8.73	0.07	-0.06	3.50	1.21	0.22	0.51



Stellar Parameters For KIC 006945594

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4550^{+137}_{-123}	$4.552^{+0.064}_{-0.020}$	$0.360^{+0.100}_{-0.300}$	$0.759^{+0.026}_{-0.066}$	$0.748^{+0.043}_{-0.048}$	$2.411^{+0.655}_{-0.186}$
	+3%/-3%	+1%/-0%	+28%/-83%	+3%/-9%	+6%/-6%	+27%/-8%
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 006945594-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-85 ± 11	$1.10^{+0.34}_{-0.31}$	235^{+8}_{-7}	3966^{+555}_{-385}	44764^{+44707}_{-20255}
Alt.	-37 ± 11	$0.98^{+0.33}_{-0.36}$	234^{+8}_{-7}	3567^{+651}_{-378}	23981^{+37662}_{-11839}

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

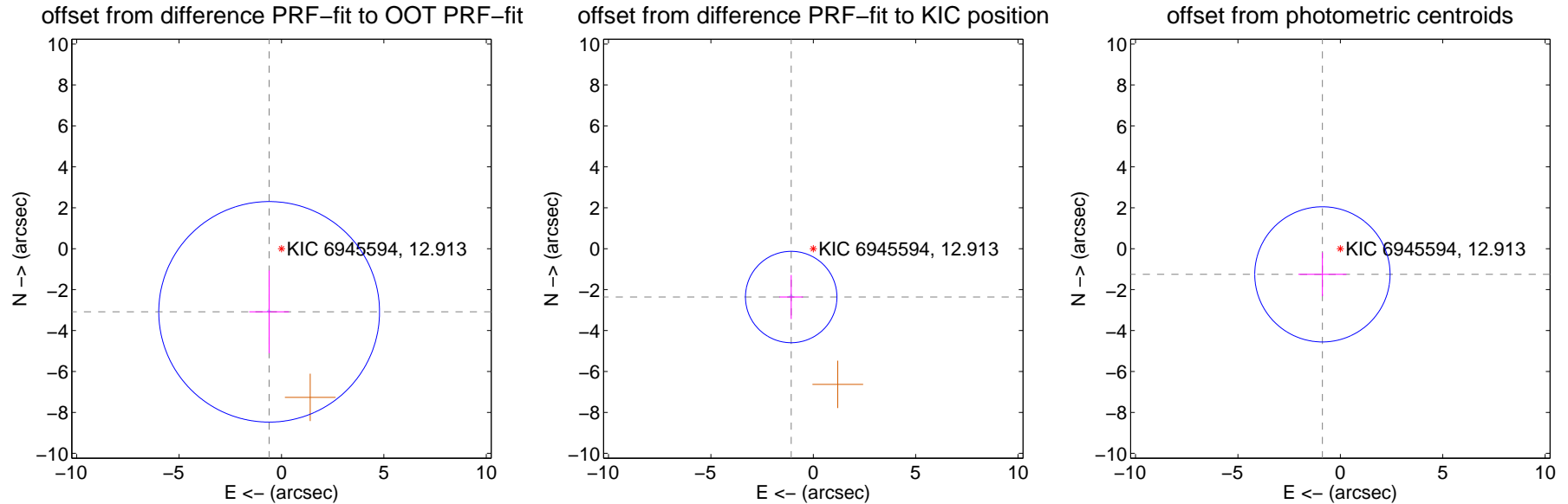
DV Centroid Data

Supplemental centroid analysis for 006945594-01. Kepler magnitude: 12.91. Transit SNR 7.74

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.143 ± 1.796	1.75	0.602 ± 0.969	-3.085 ± 2.018
PRF-fit source offset from KIC position	2.596 ± 0.744	3.49	1.078 ± 0.576	-2.362 ± 1.078
photometric centroid source offset	1.53 ± 1.10	1.39	0.87 ± 1.17	-1.25 ± 1.06



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



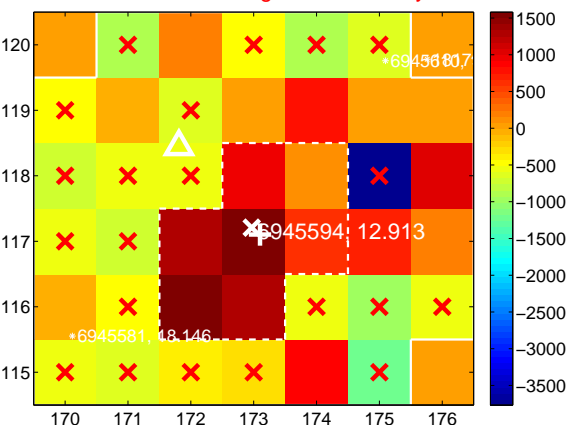
Q3 no difference image



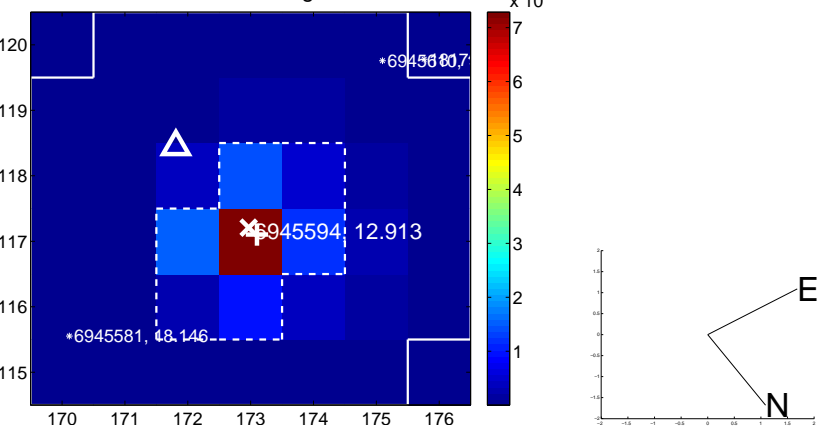
Q3 no OOT image



Q4 difference image. Poor Quality



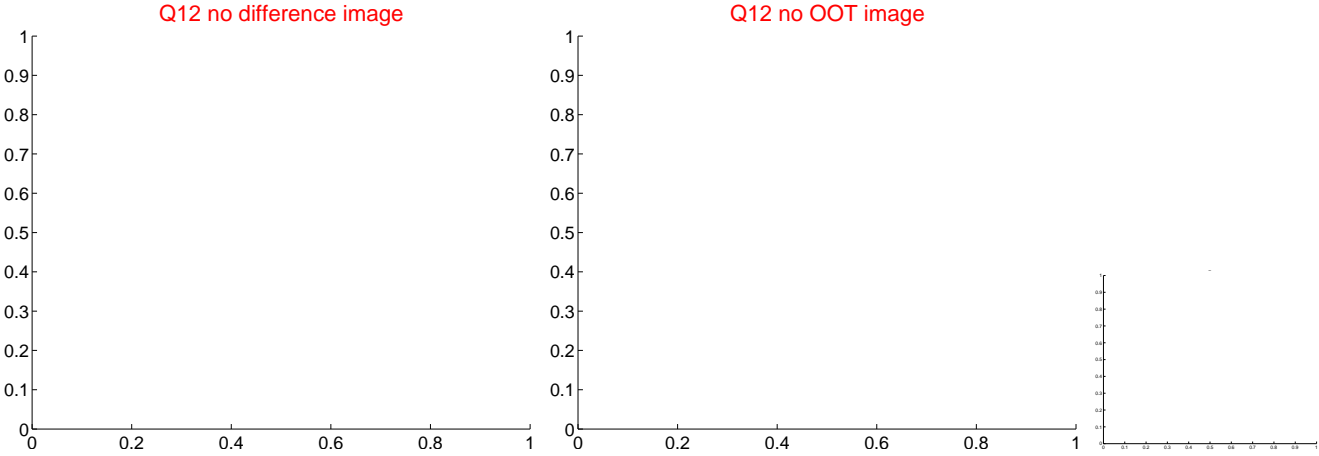
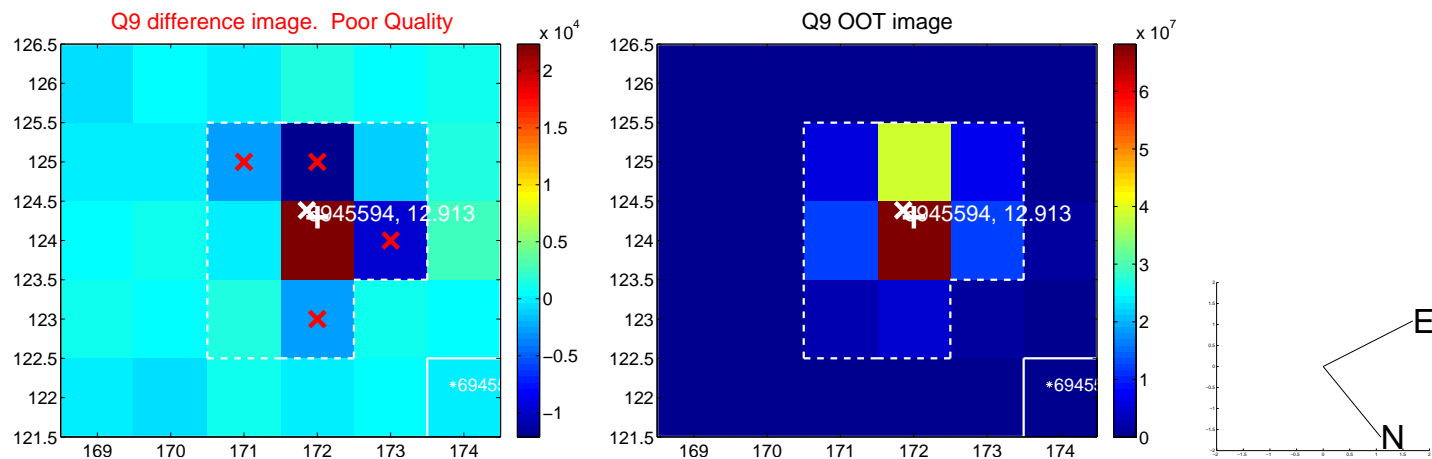
Q4 OOT image



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.



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

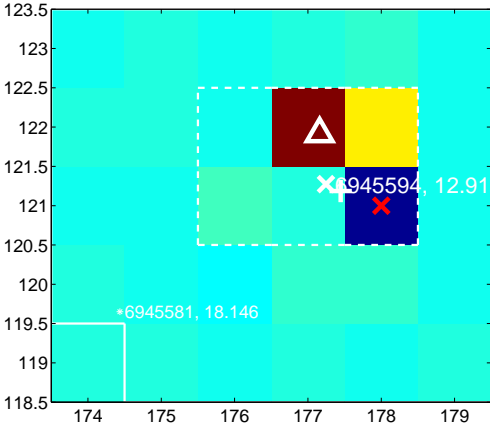
Q13 no difference image



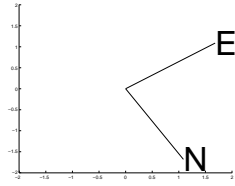
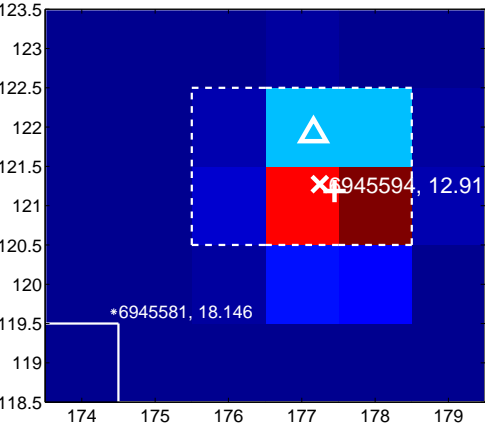
Q13 no OOT image



Q14 difference image



Q14 OOT image



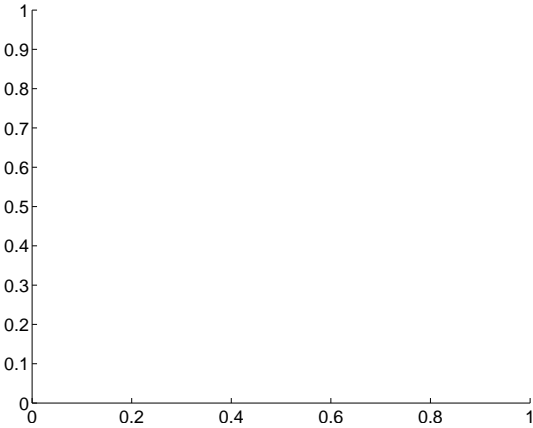
Q15 no difference image



Q15 no OOT image



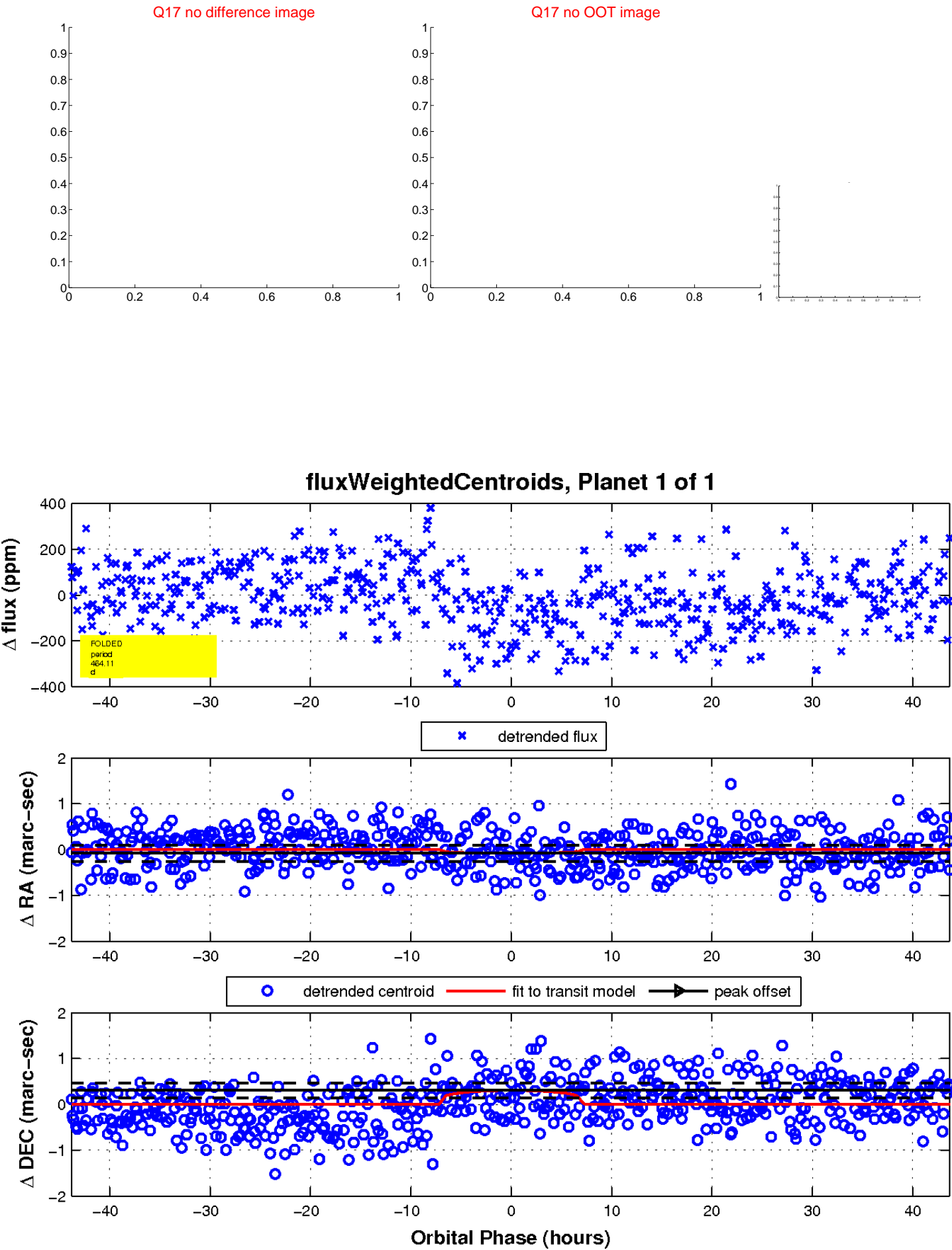
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

