

KIC 005978777

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})
005978777-01	OBS	No	695.166106	172.177134	195.5	7.447	8.2	2.5	0.83	5760	1.34	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005978777-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

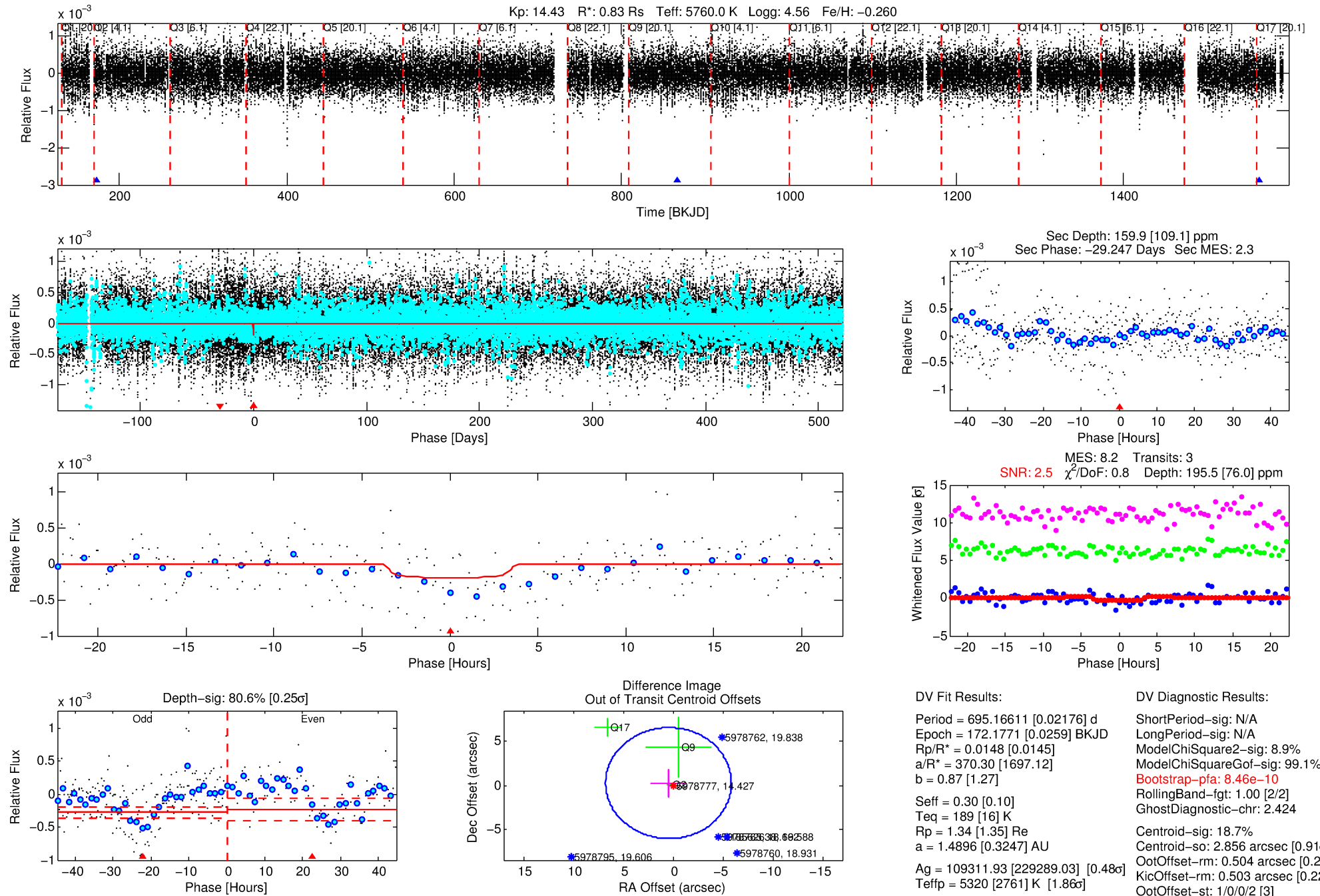
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005978777-01

No Significant Match Found

DV One-Page Summary

KIC: 5978777 Candidate: 1 of 1 Period: 695.166 d



DV Fit Results:

Period = 695.16611 [0.02176] d
Epoch = 172.1771 [0.0259] BKJD
Rp/R* = 0.0148 [0.0145]
a/R* = 370.30 [1697.12]
b = 0.87 [1.27]
Seff = 0.30 [0.10]
Teq = 189 [16] K
Rp = 1.34 [1.35] Re
a = 1.4896 [0.3247] AU
Ag = 109311.93 [229289.03] [0.48 σ]
Teff = 5320 [2761] K [1.86 σ]

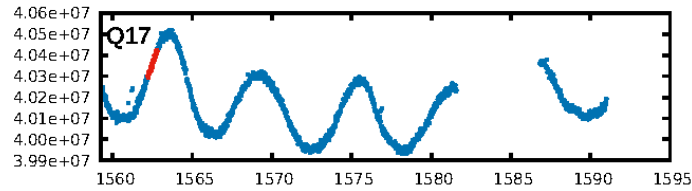
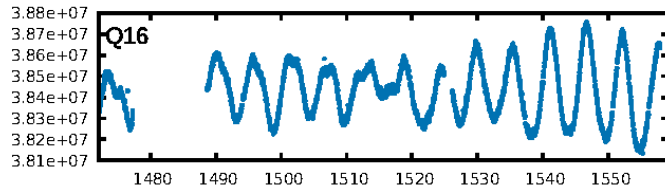
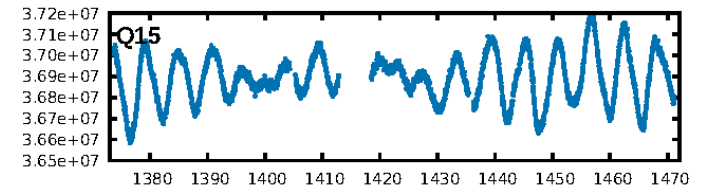
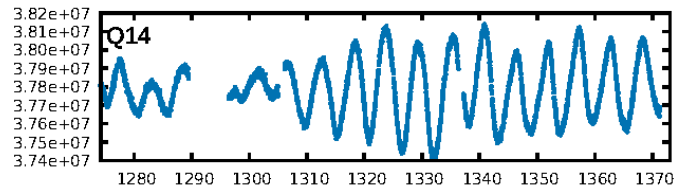
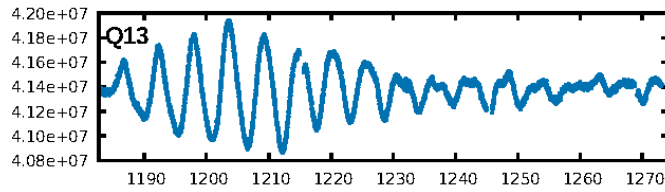
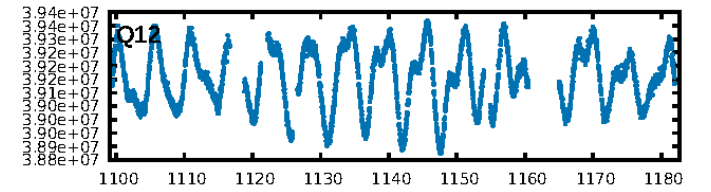
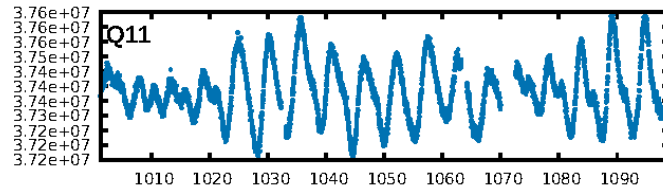
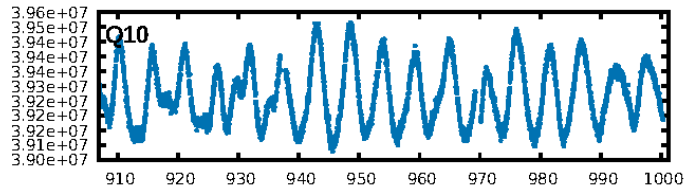
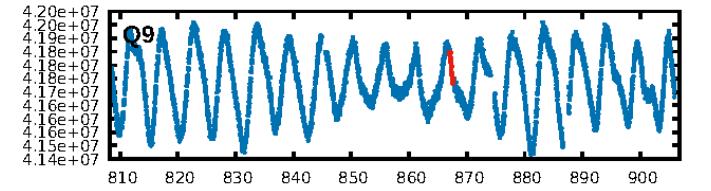
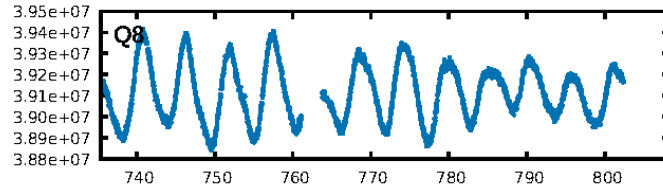
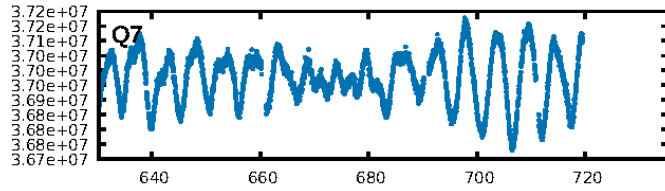
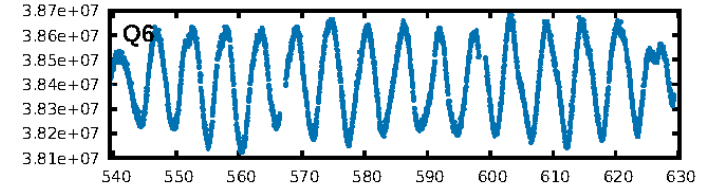
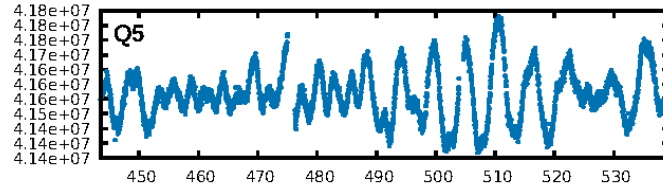
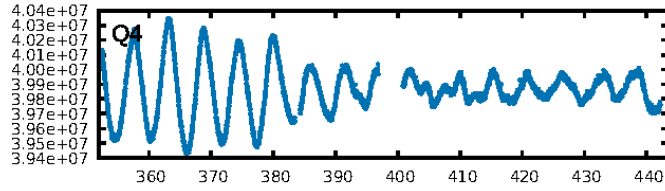
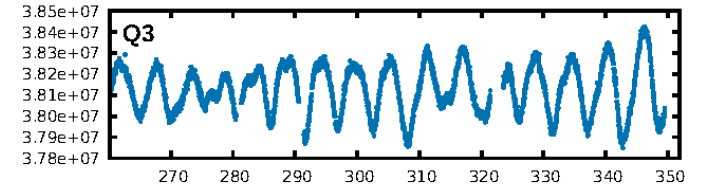
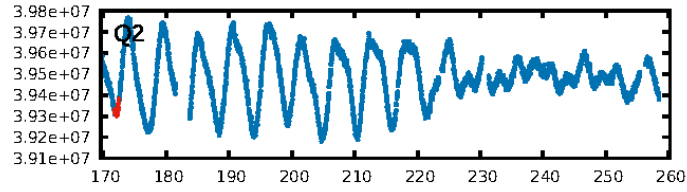
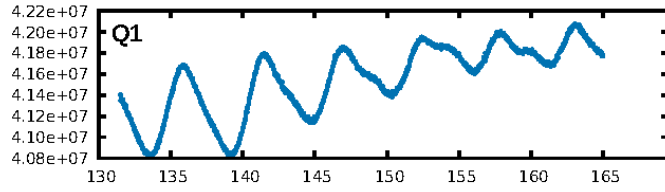
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.9%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 8.46e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 2.424
Centroid-sig: 18.7%
Centroid-so: 2.856 arcsec [0.91 σ]
OotOffset-rm: 0.504 arcsec [0.24 σ]
KicOffset-rm: 0.503 arcsec [0.22 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

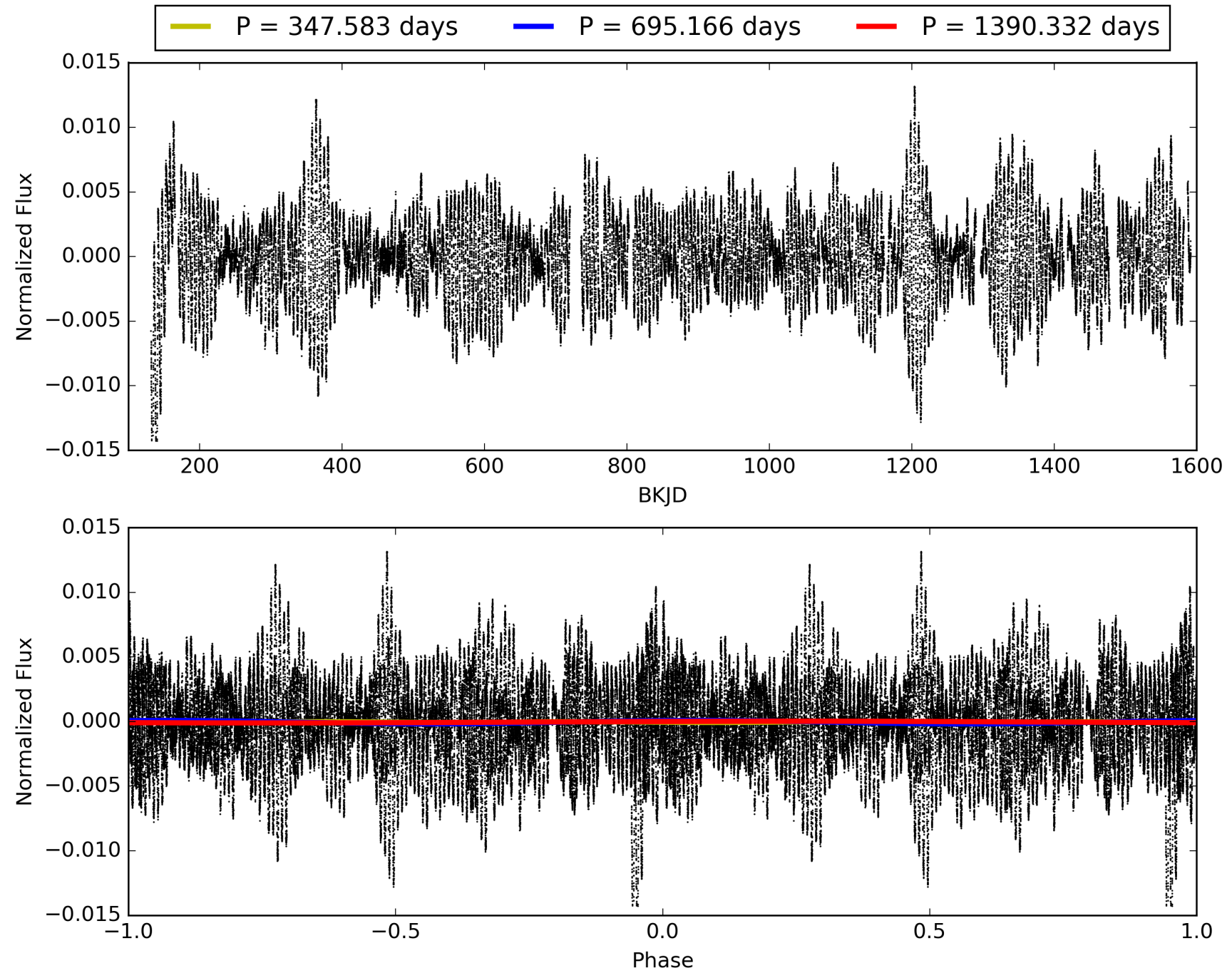
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:06:01 Z

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

TCE 005978777-01, PDC Light Curves

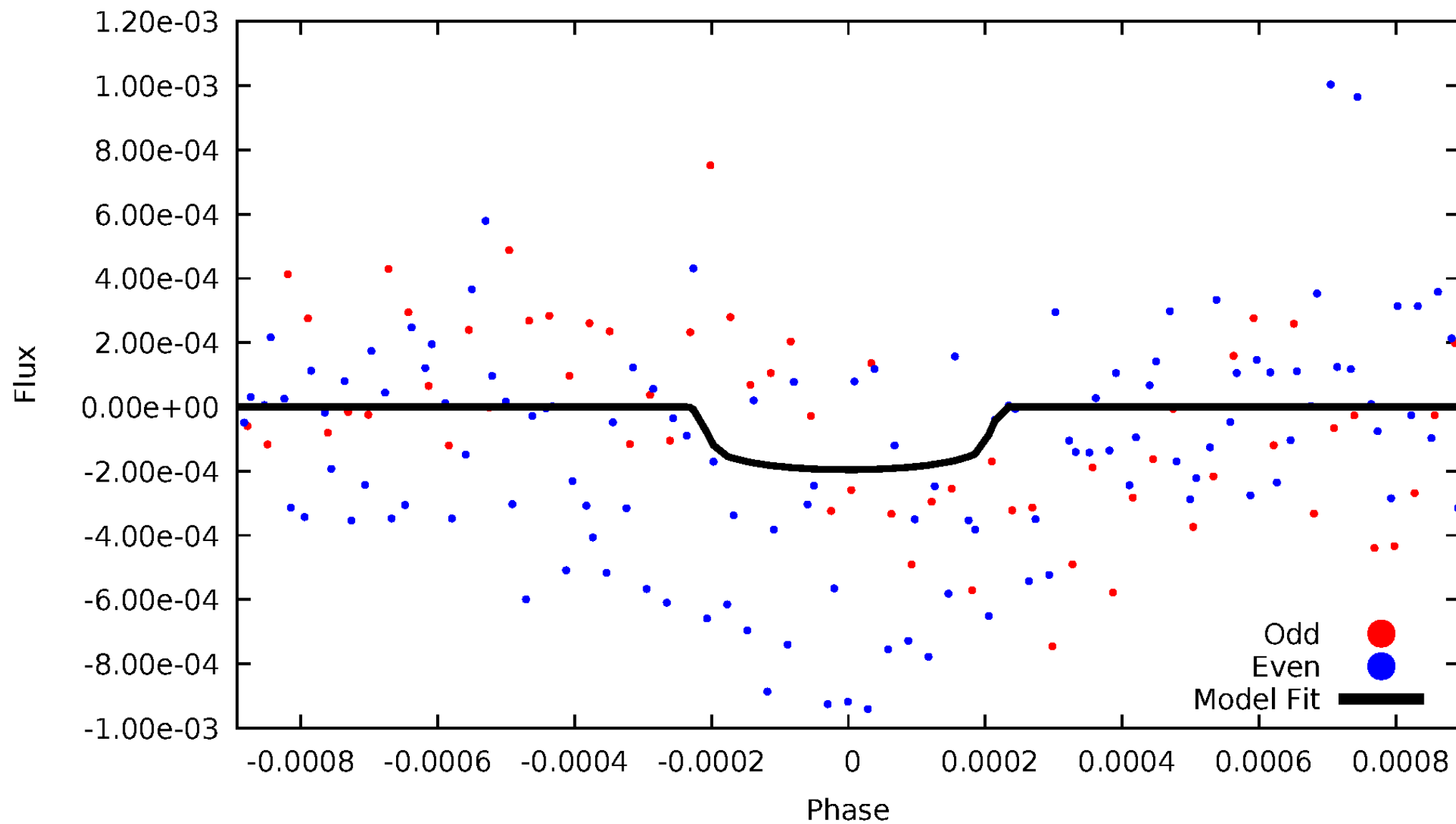


TCE 005978777-01



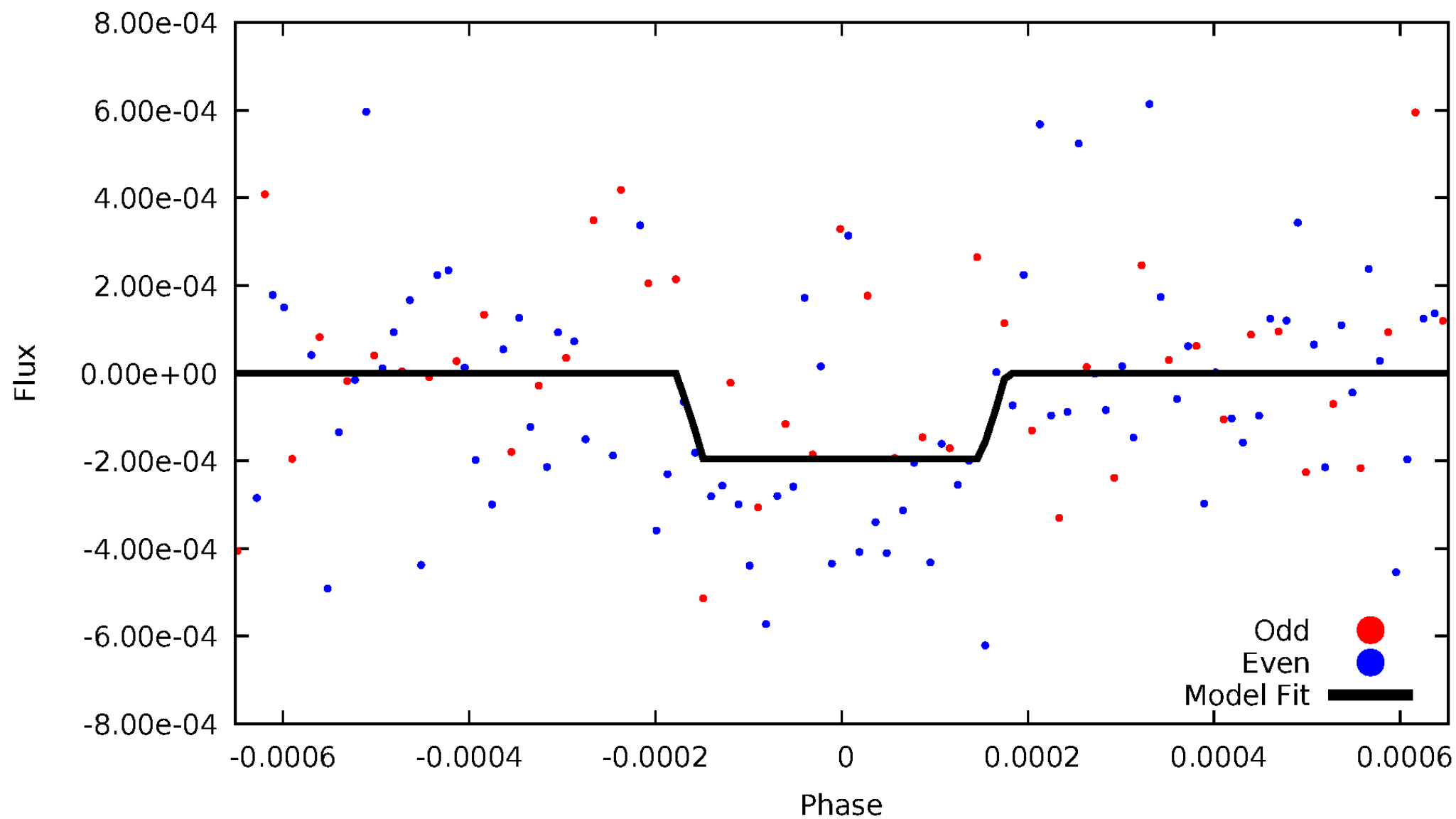
DV Odd/Even

TCE 005978777-01



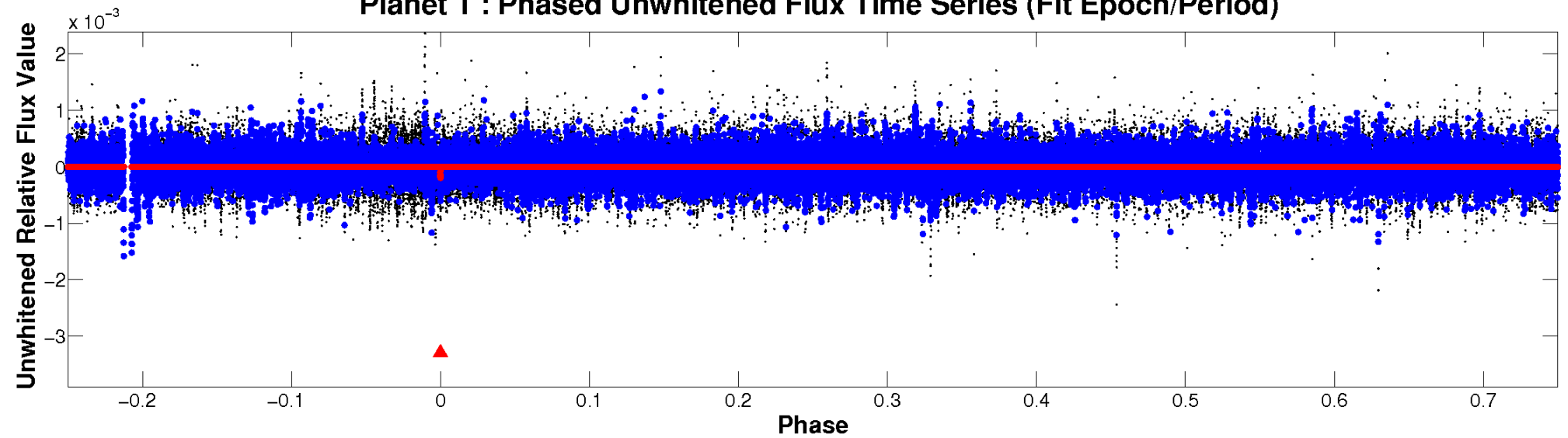
ALT Odd/Even

TCE 005978777-01

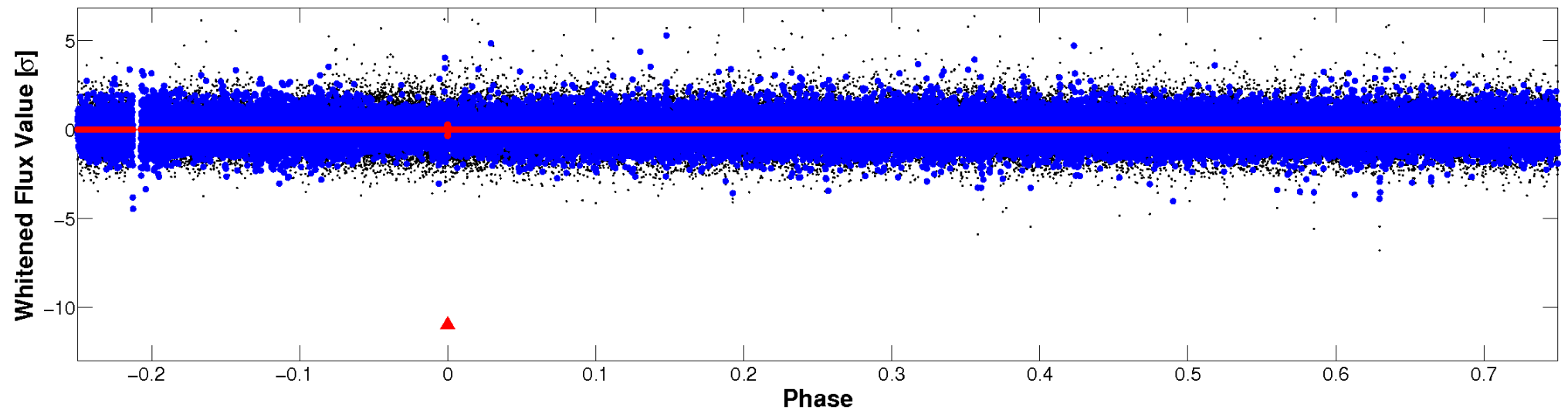


Non-Whitened Vs. Whitened Light Curve

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

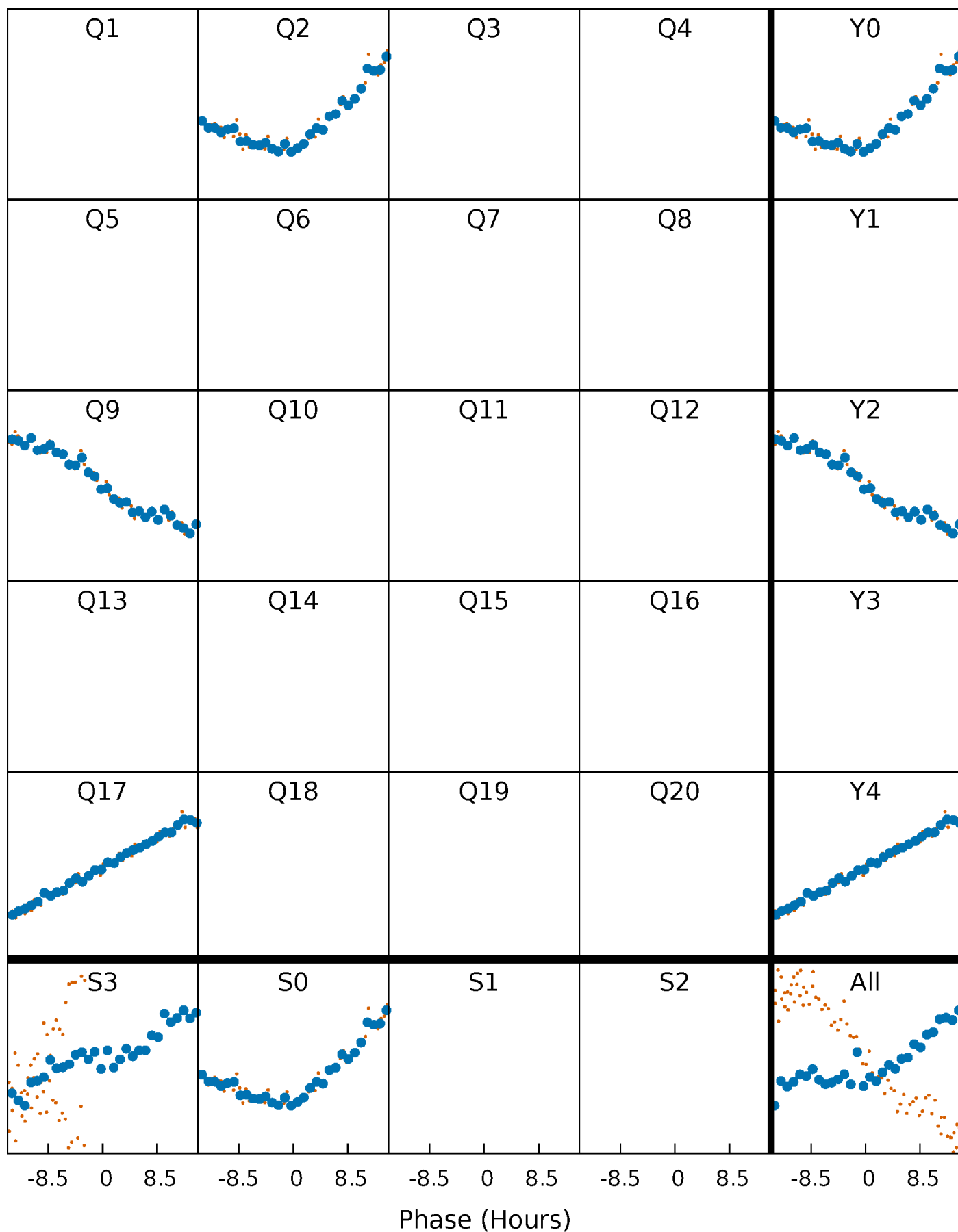


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



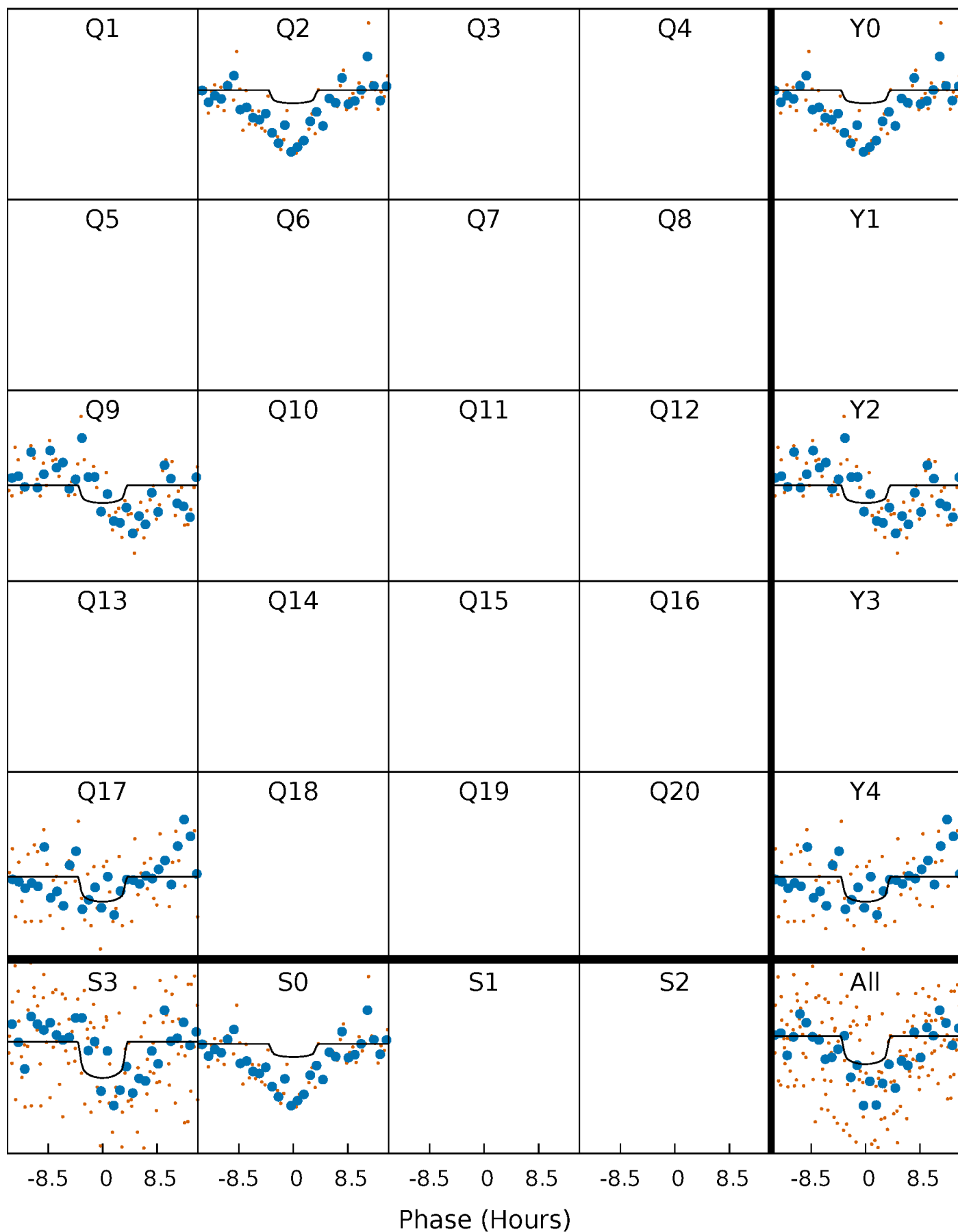
PDC Quarter-Phased Transit Curves

TCE 005978777-01 P=695.166106 Days $T_0=172.177134$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005978777-01 P=695.166106 Days $T_0=172.177134$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

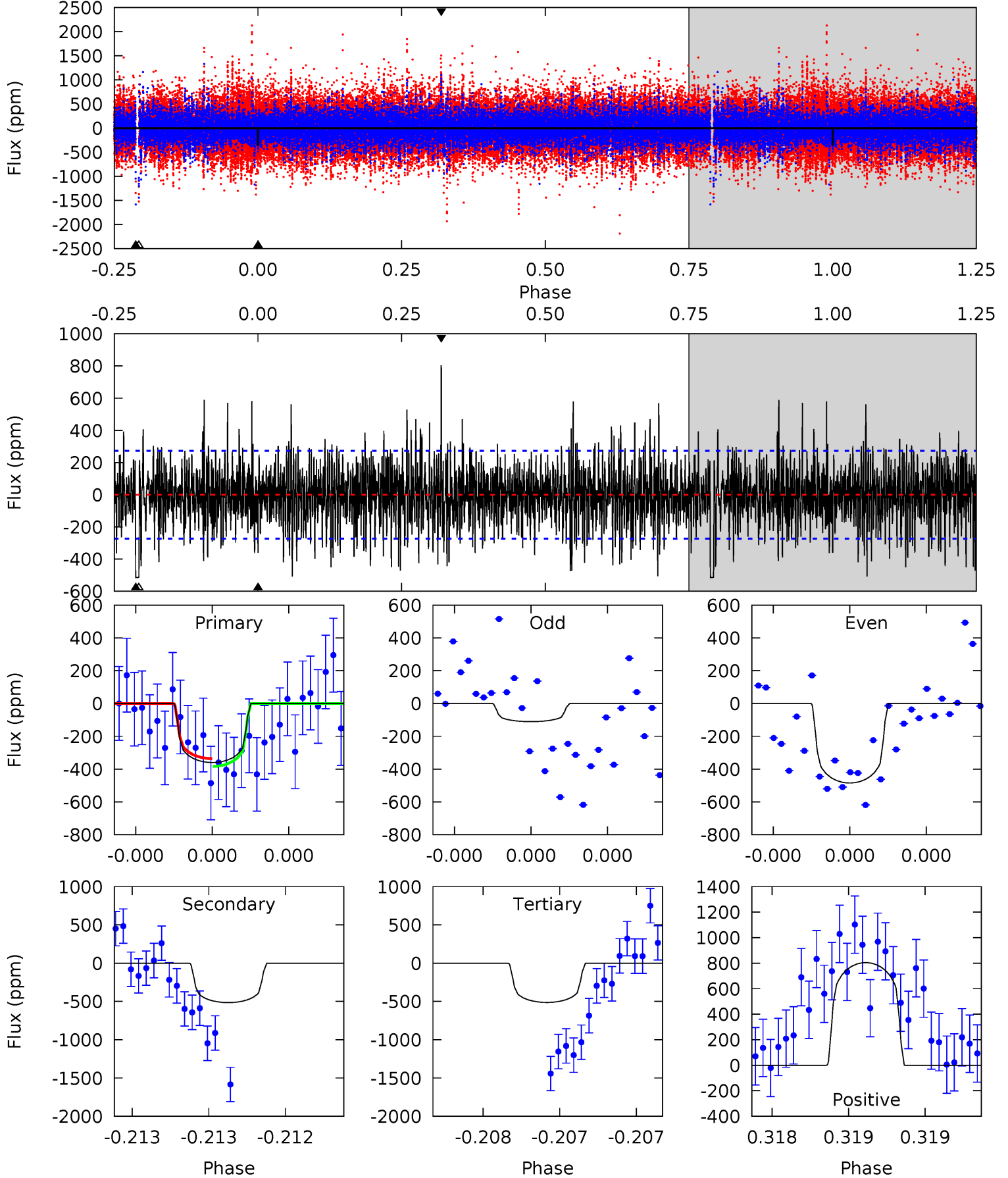
TCE 005978777-01 P=694.611627 Days $T_0=172.163486$ (BKJD)



DV Model-Shift Uniqueness Test

005978777-01, P = 695.166106 Days, E = 172.177134 Days

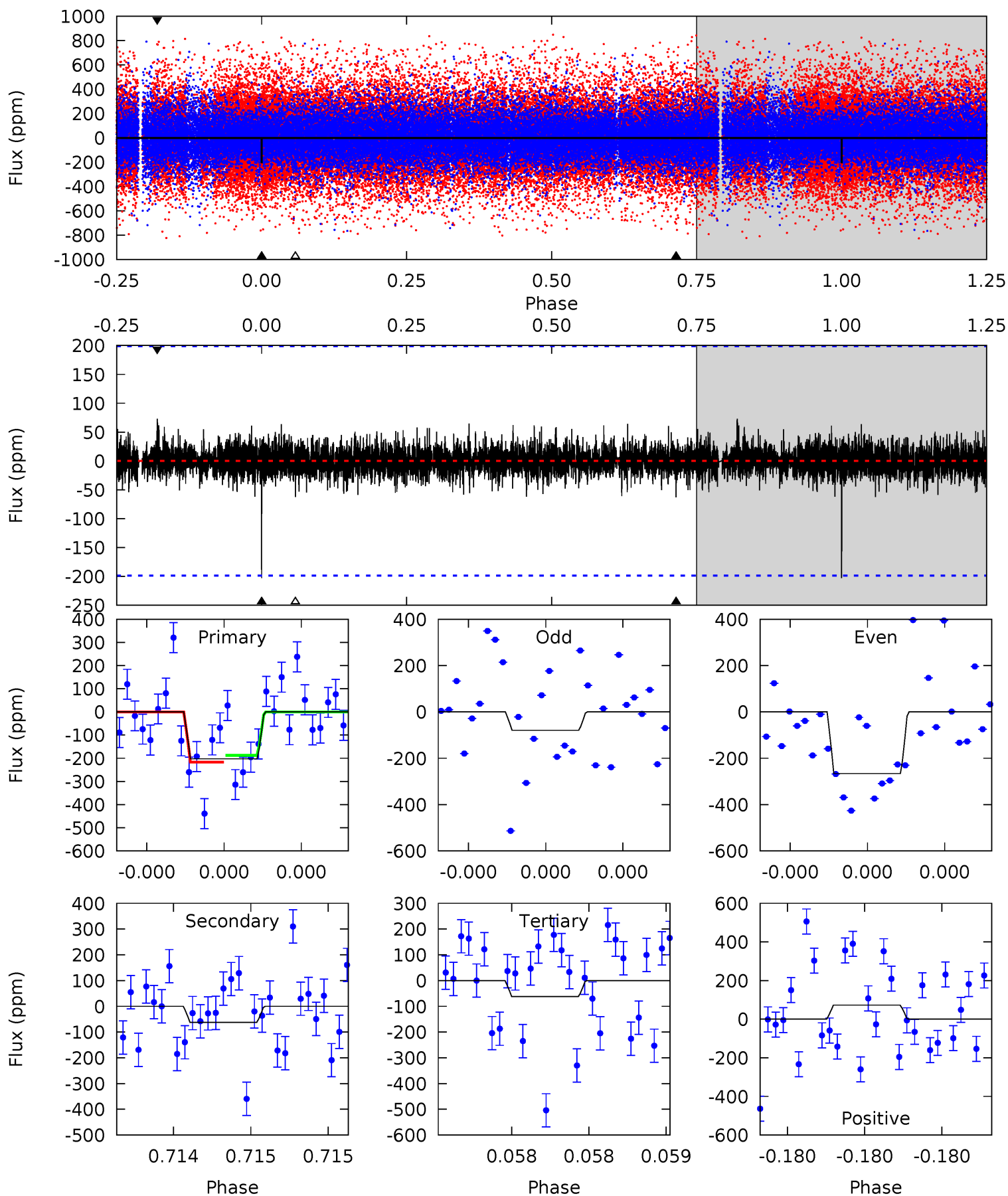
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.38	10.6	10.5	16.5	5.59	3.50	3.03	-3.13	-9.10	0.05	-5.92	3.61	2.02	0.61	0.49



Alt Model-Shift Uniqueness Test

005978777-01, P = 694.611627 Days, E = 172.163486 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	1.77	1.77	2.07	5.64	3.58	0.43	3.99	3.68	0.01	-0.30	2.55	0.79	0.26	0.42



Stellar Parameters For KIC 005978777

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5760^{+138}_{-155}	$4.564^{+0.033}_{-0.176}$	$-0.260^{+0.300}_{-0.300}$	$0.826^{+0.212}_{-0.071}$	$0.919^{+0.100}_{-0.110}$	$2.295^{+0.406}_{-1.104}$
	+2%/-3%	+1%/-4%	+115%/-115%	+26%/-9%	+11%/-12%	+18%/-48%
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 005978777-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-515 ± 49	$1.68^{+1.35}_{-1.01}$	270^{+16}_{-11}	6541^{+4978}_{-1587}	$224175^{+1167070}_{-157953}$
Alt.	-63 ± 35	$1.69^{+1.22}_{-1.07}$	271^{+16}_{-11}	4091^{+2267}_{-874}	$24385^{+174532}_{-18277}$

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 $A_{obs} \gg 1.0$

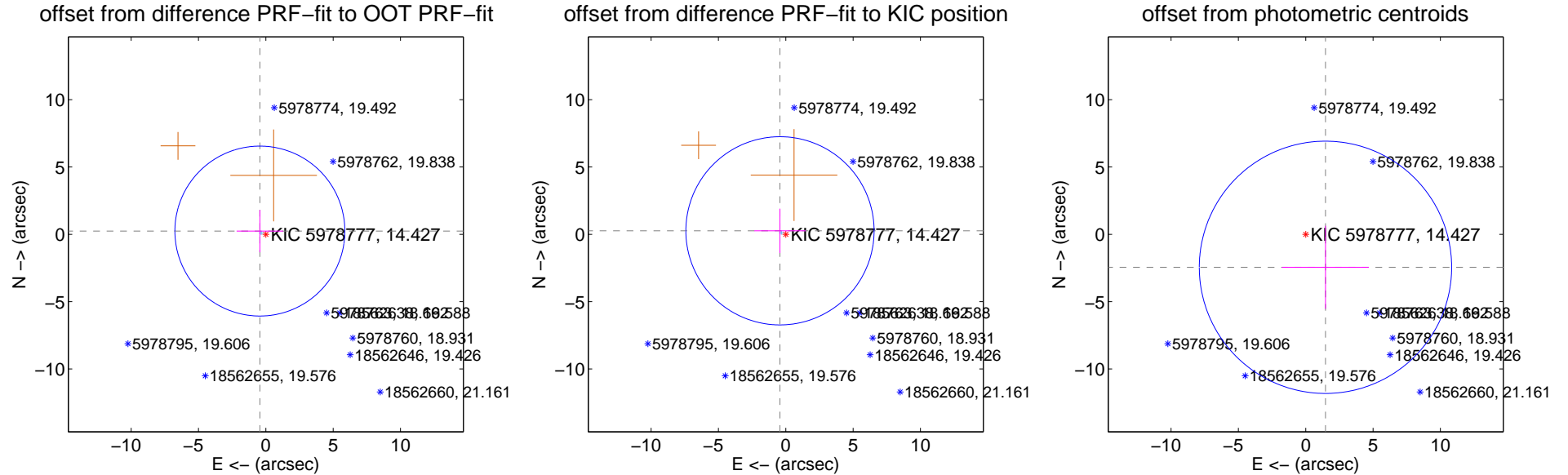
DV Centroid Data

Supplemental centroid analysis for 005978777-01. Kepler magnitude: 14.43. Transit SNR 2.46

There are 1 quarters with good PRF difference image offsets

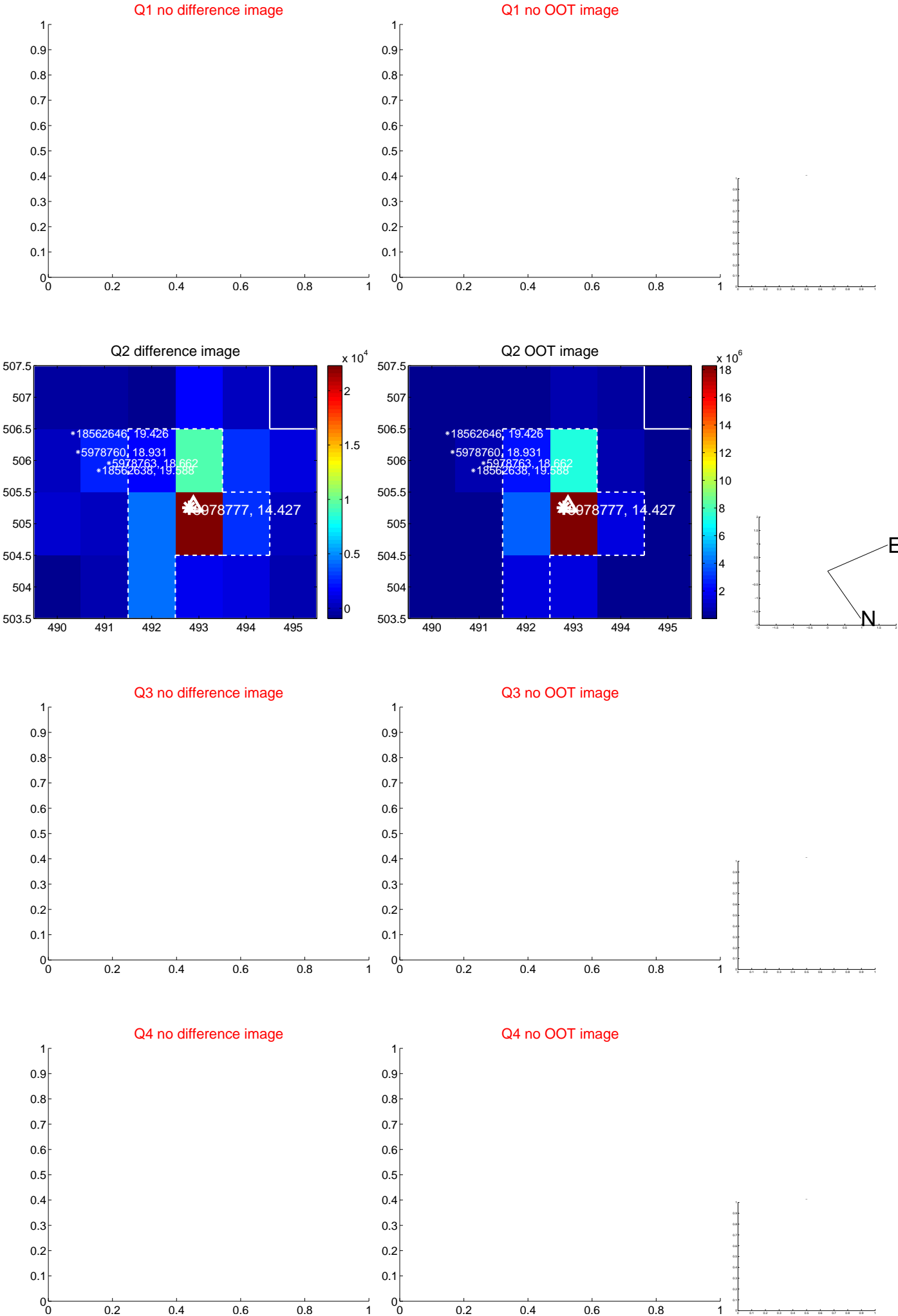
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.504 ± 2.104	0.24	0.443 ± 1.730	0.241 ± 1.571
PRF-fit source offset from KIC position	0.503 ± 2.330	0.22	0.431 ± 1.908	0.260 ± 1.646
photometric centroid source offset	2.86 ± 3.12	0.91	-1.47 ± 3.22	-2.45 ± 3.09



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.

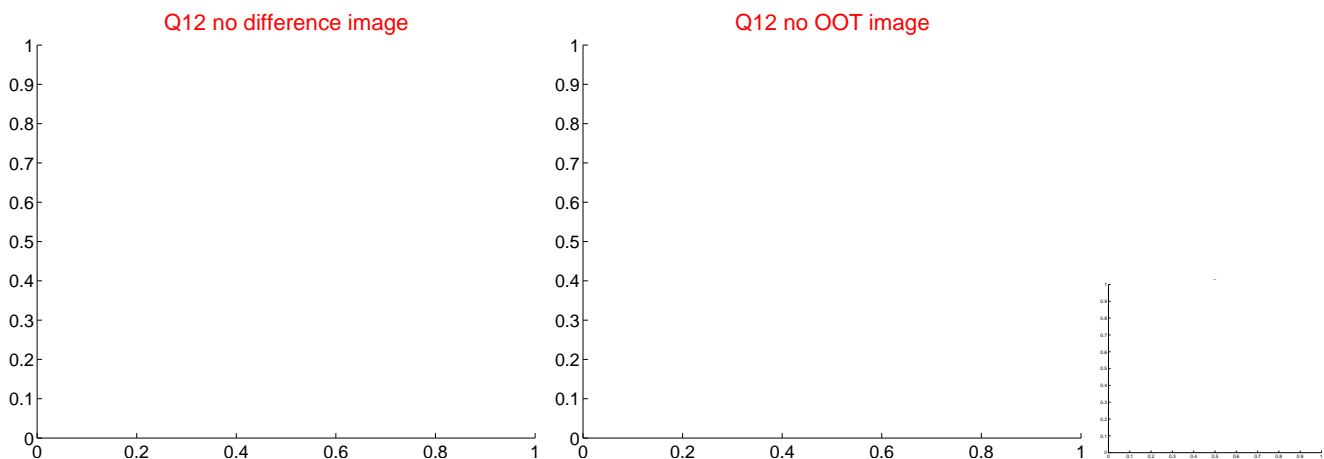
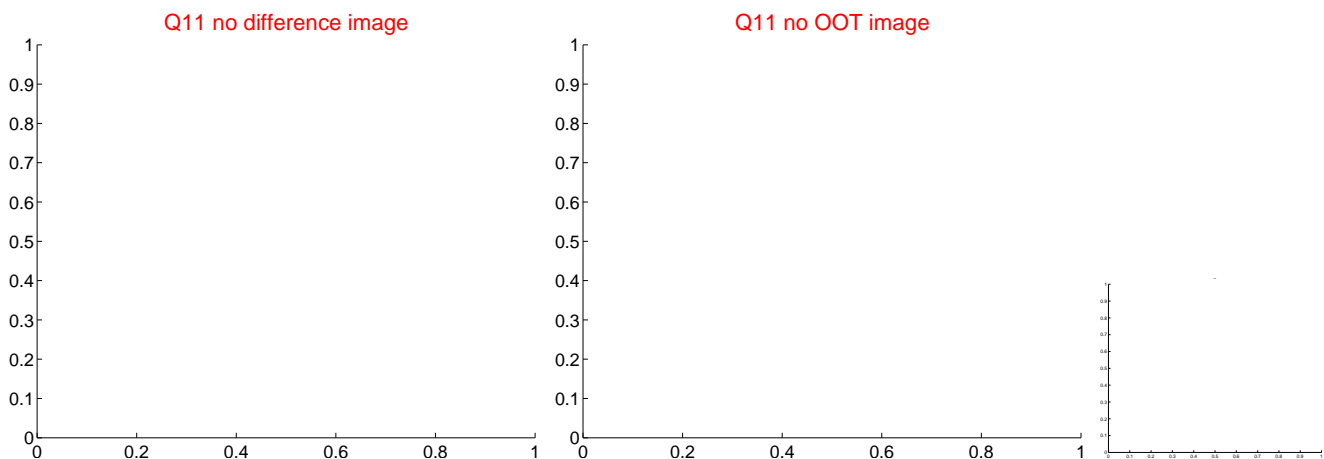
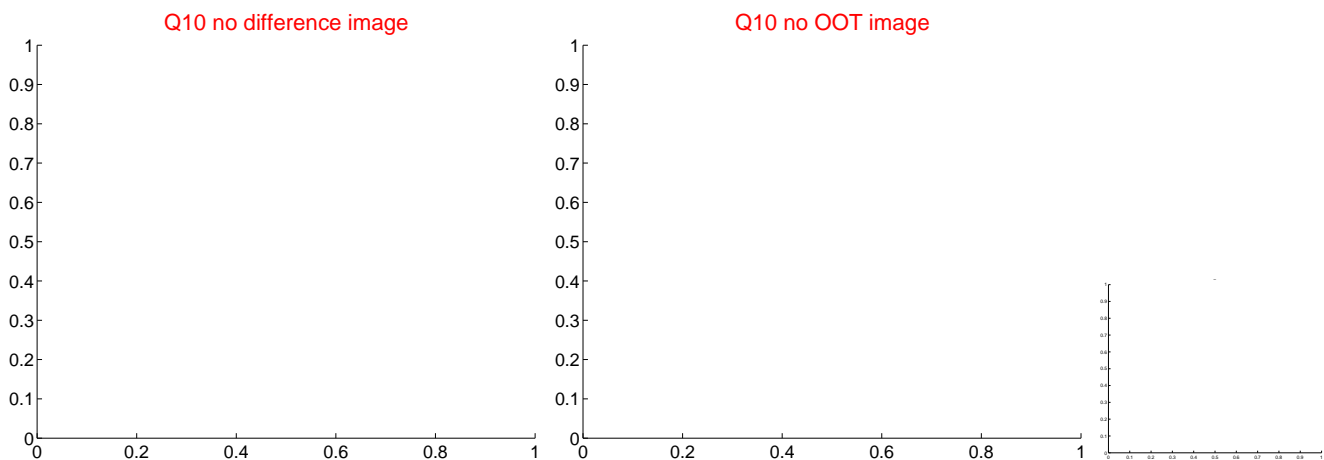
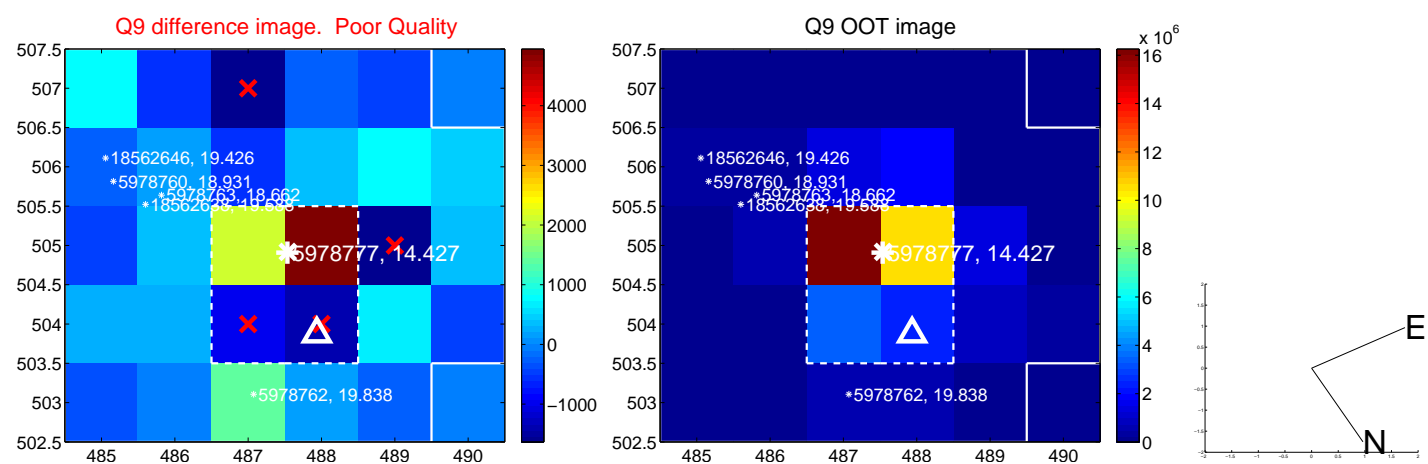
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



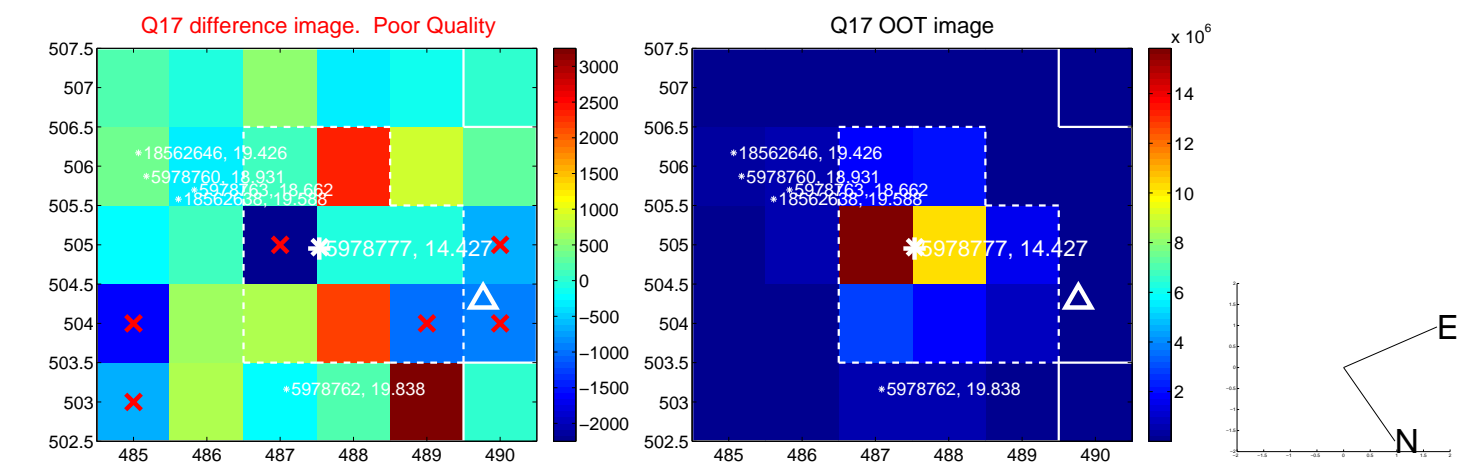
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



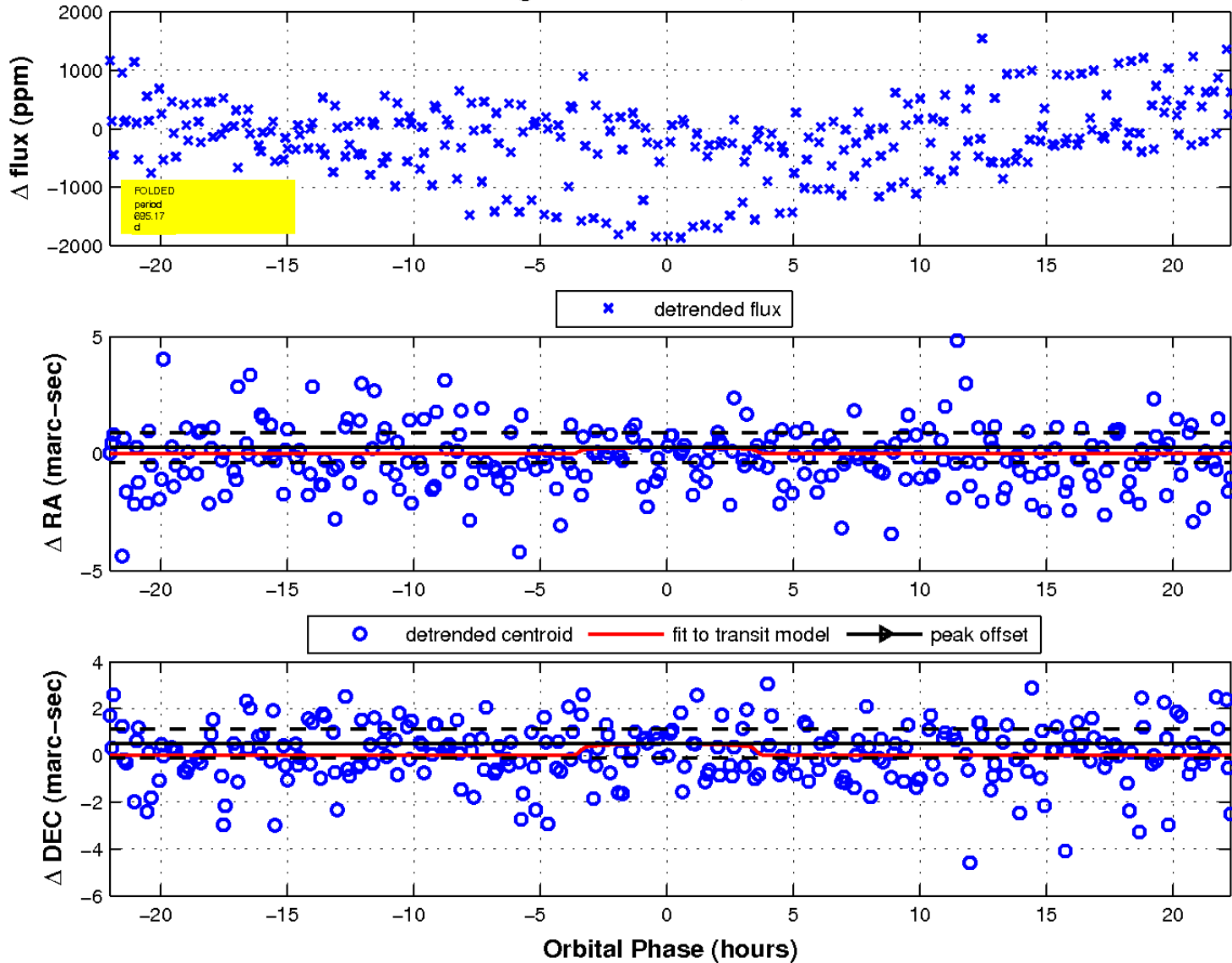
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

