

KIC 007978217

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})
007978217-01	OBS	No	303.100437	206.875464	1453.8	8.946	9.4	9.1	0.84	5462	3.32	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007978217-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

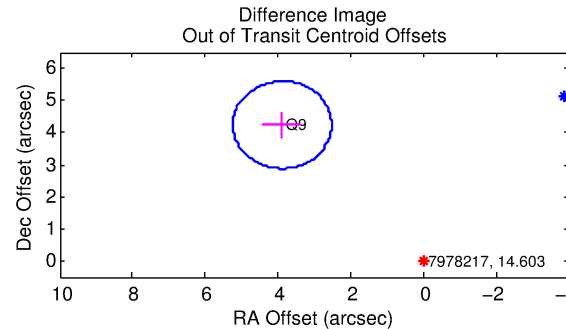
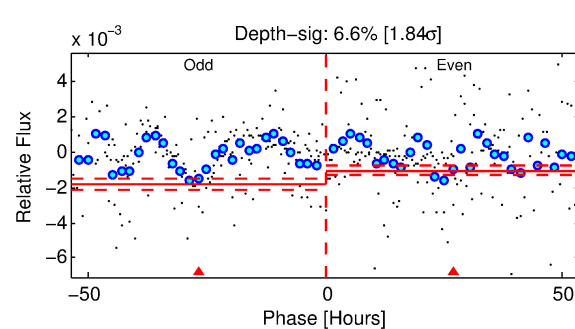
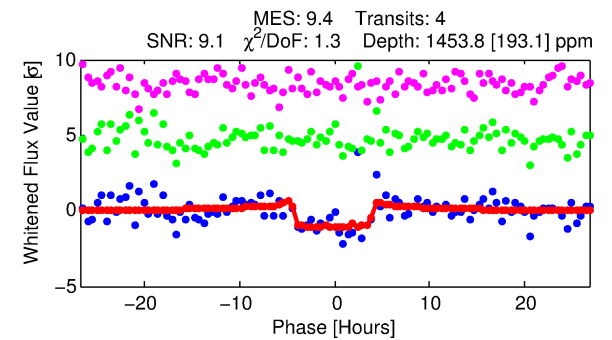
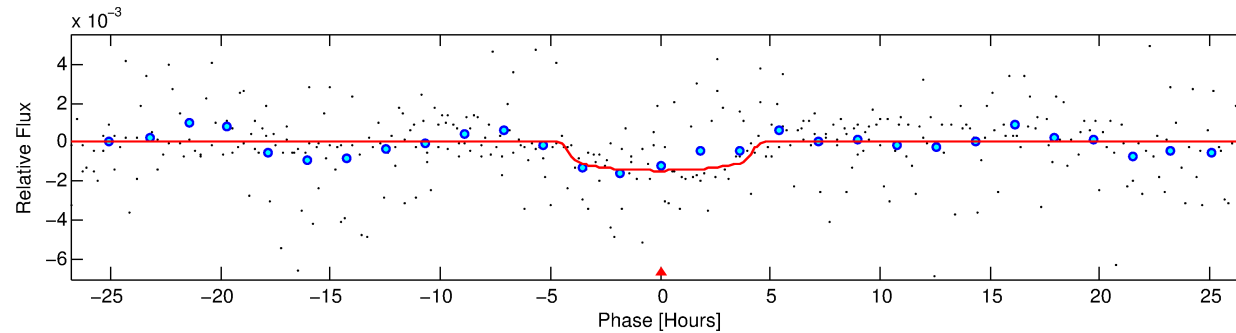
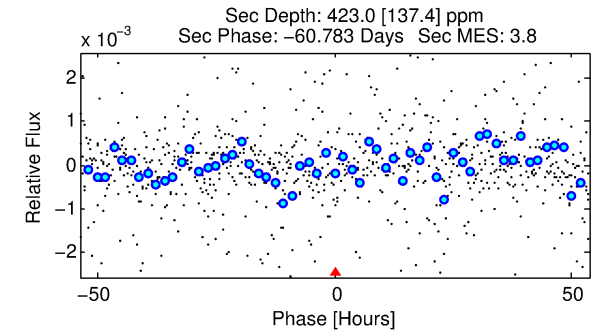
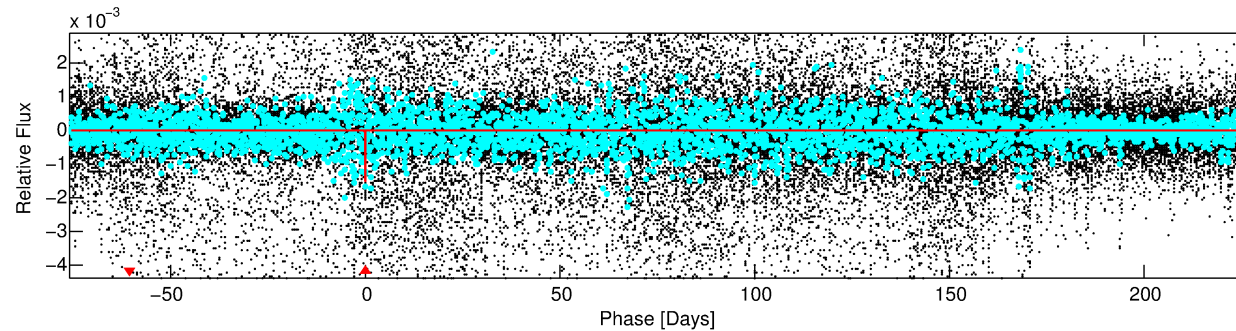
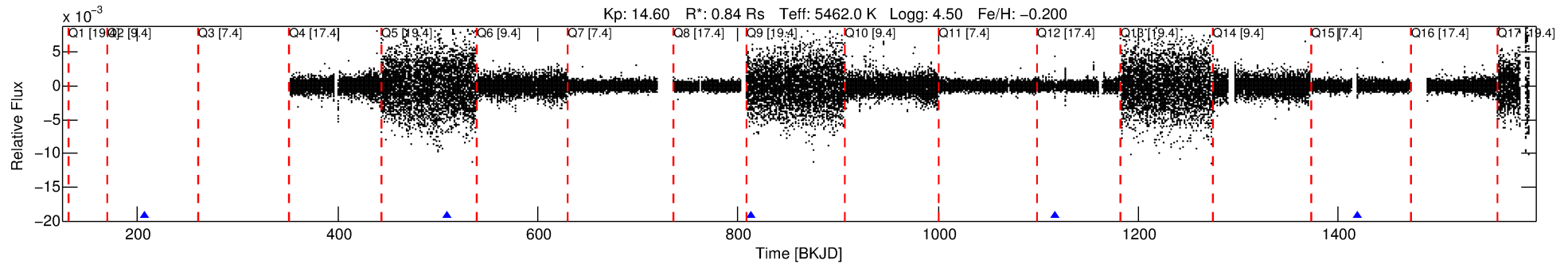
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007978217-01

No Significant Match Found

DV One-Page Summary

KIC: 7978217 Candidate: 1 of 1 Period: 303.100 d



DV Fit Results:

Period = 303.10044 [0.00979] d
Epoch = 206.8755 [0.0323] BKJD
Rp/R* = 0.0362 [0.0146]
a/R* = 220.97 [354.43]
b = 0.59 [1.80]
Seff = 0.83 [0.23]
Teq = 243 [17] K
Rp = 3.32 [1.51] Re
a = 0.8266 [0.1436] AU
Ag = 14439.21 [13029.23] [1.11σ]
Teffp = 4119 [905] K [4.28σ]

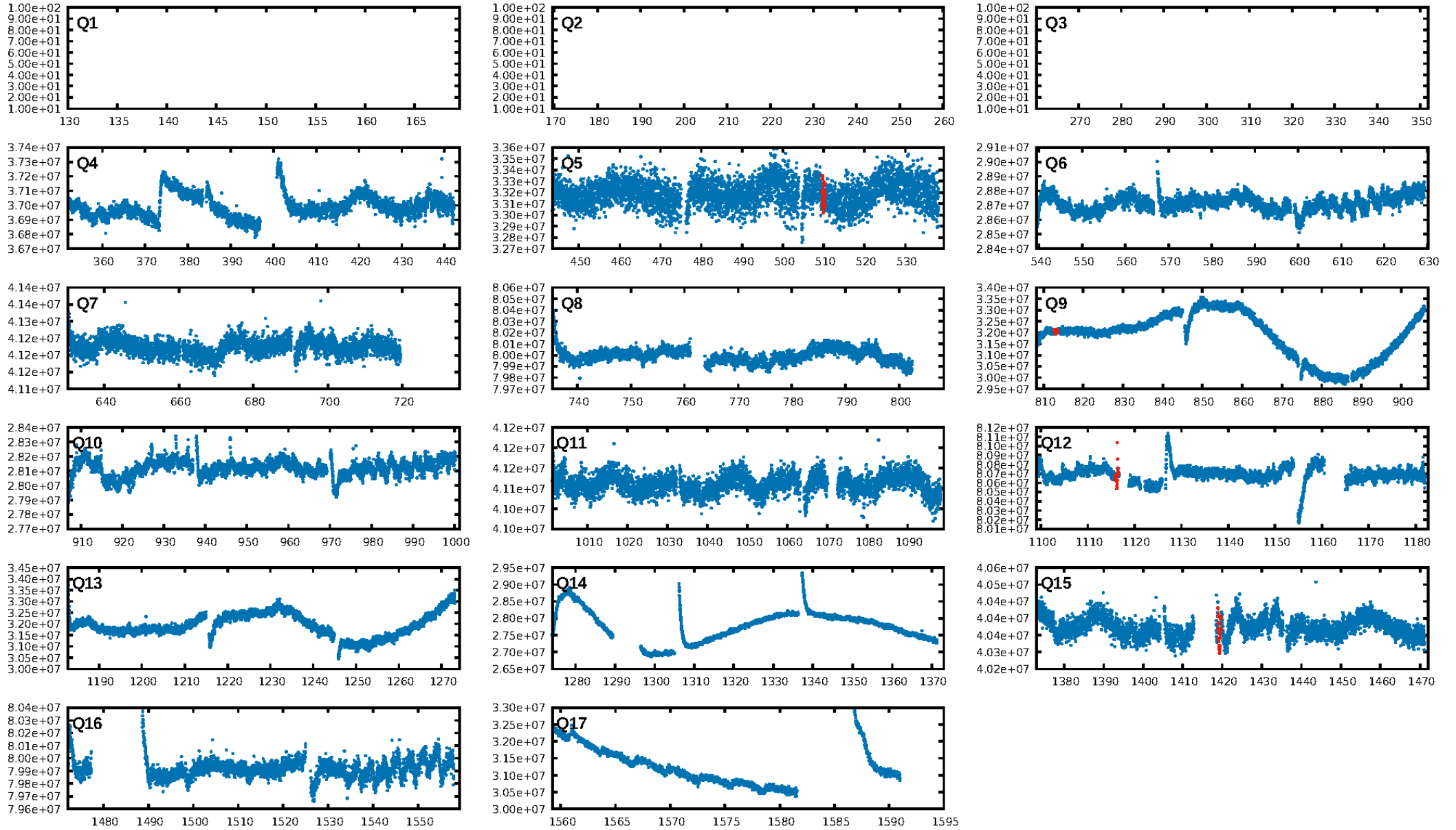
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 62.2%
ModelChiSquareGof-sig: 62.2%
Bootstrap-pfa: 2.83e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2431
Centroid-sig: 1.3%
Centroid-so: 2.795 arcsec [26.78σ]
OotOffset-rm: 5.750 arcsec [12.70σ]
KicOffset-rm: 5.754 arcsec [11.01σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

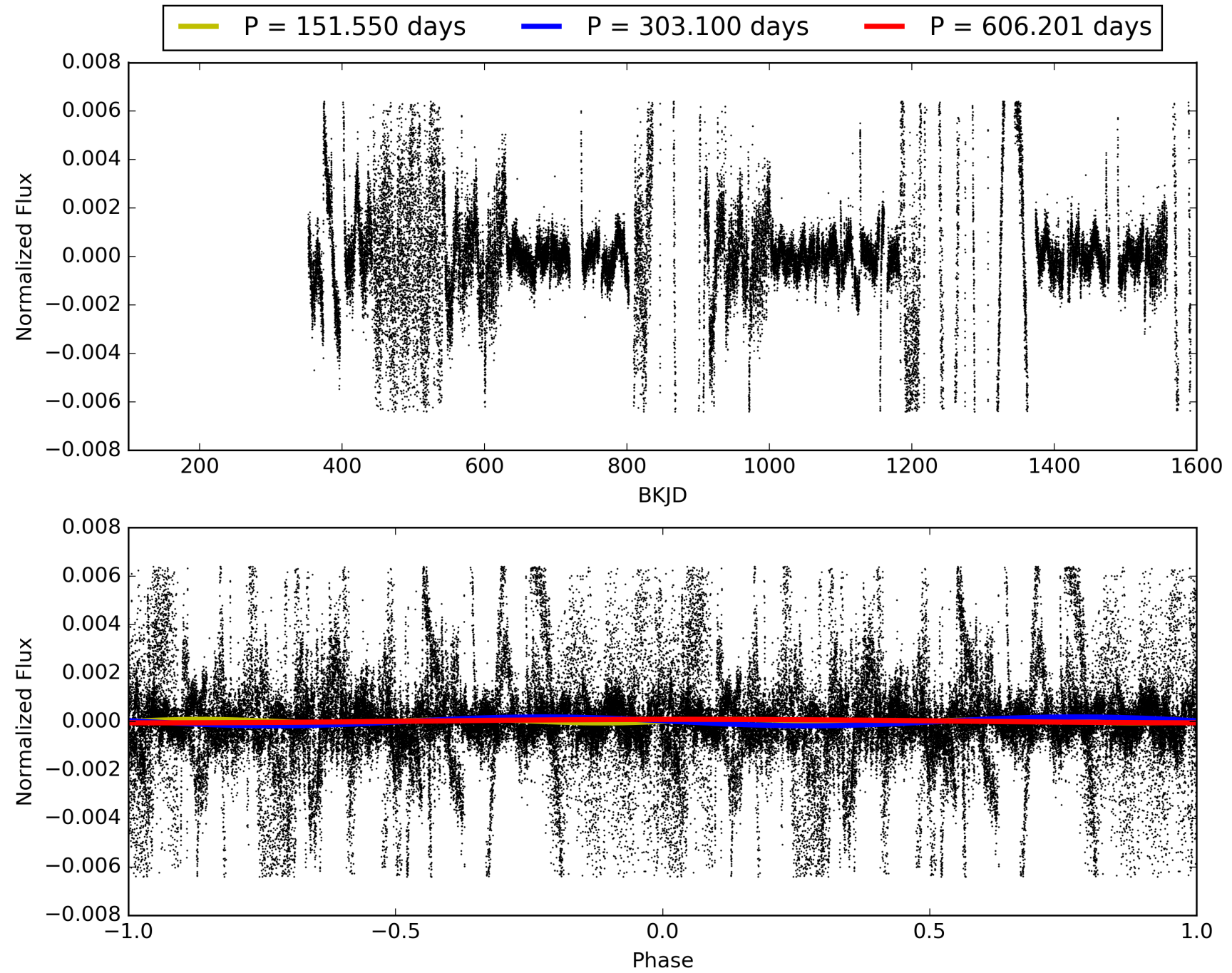
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:35:12 Z

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

TCE 007978217-01, PDC Light Curves

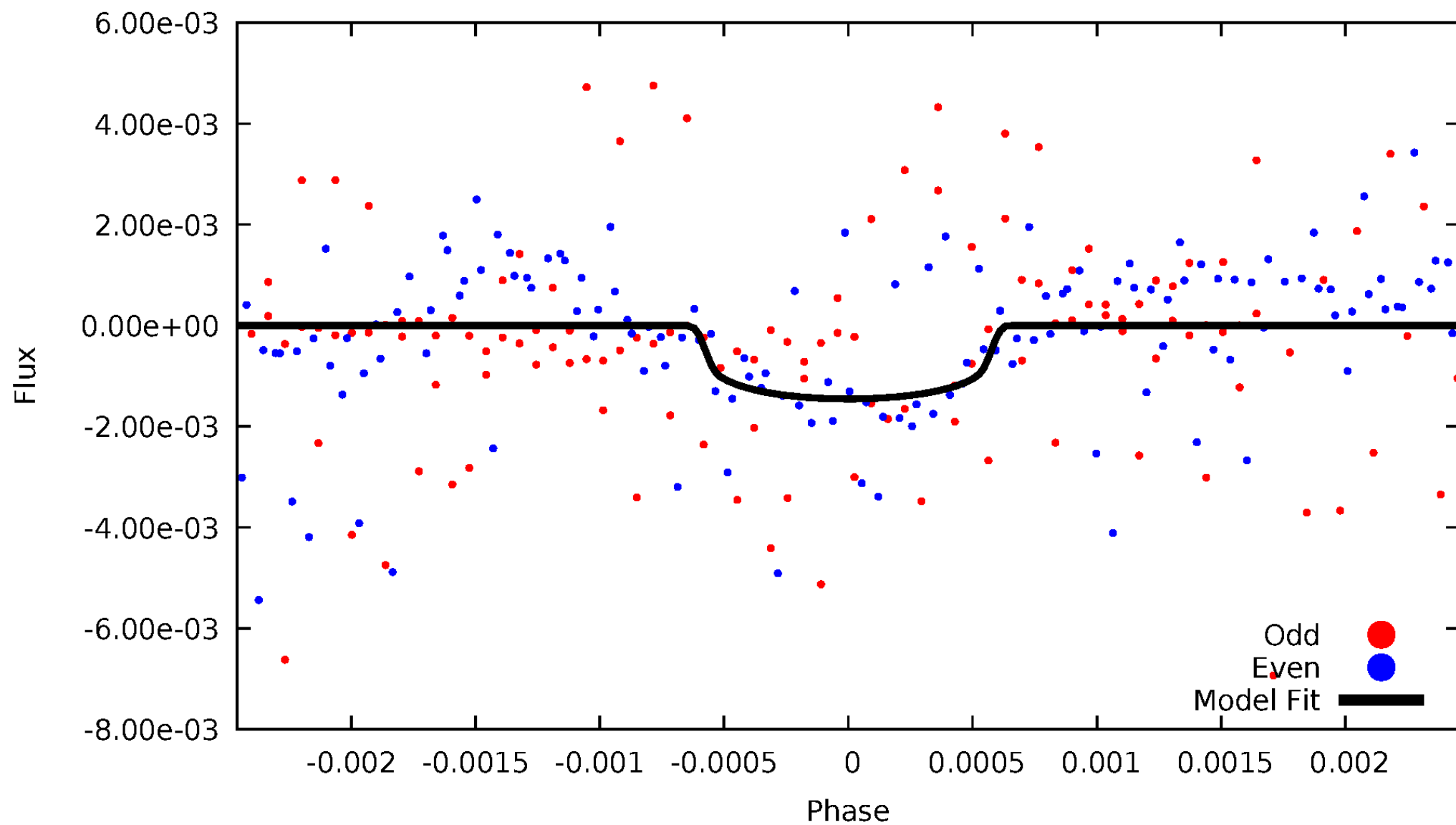


TCE 007978217-01



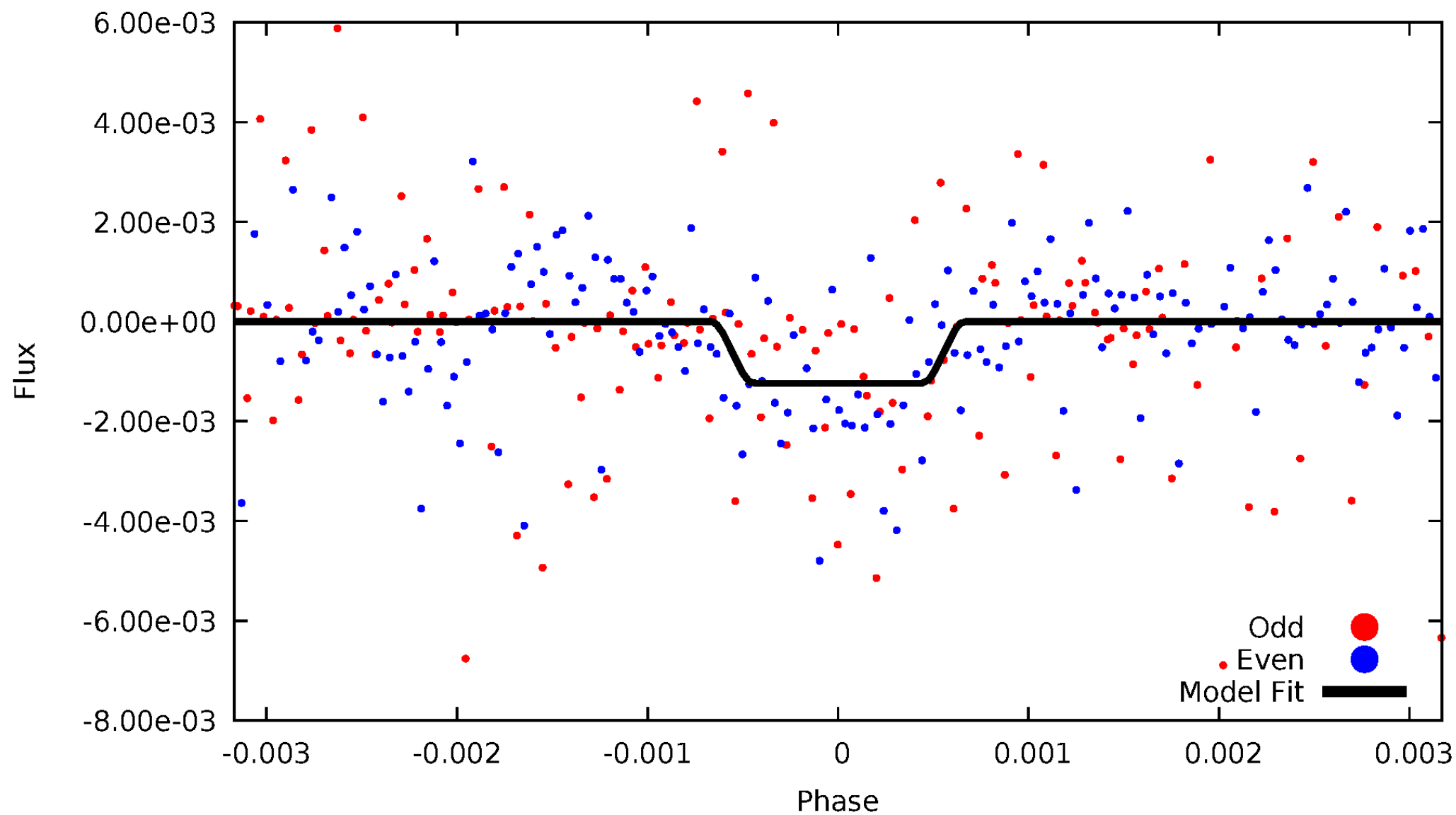
DV Odd/Even

TCE 007978217-01

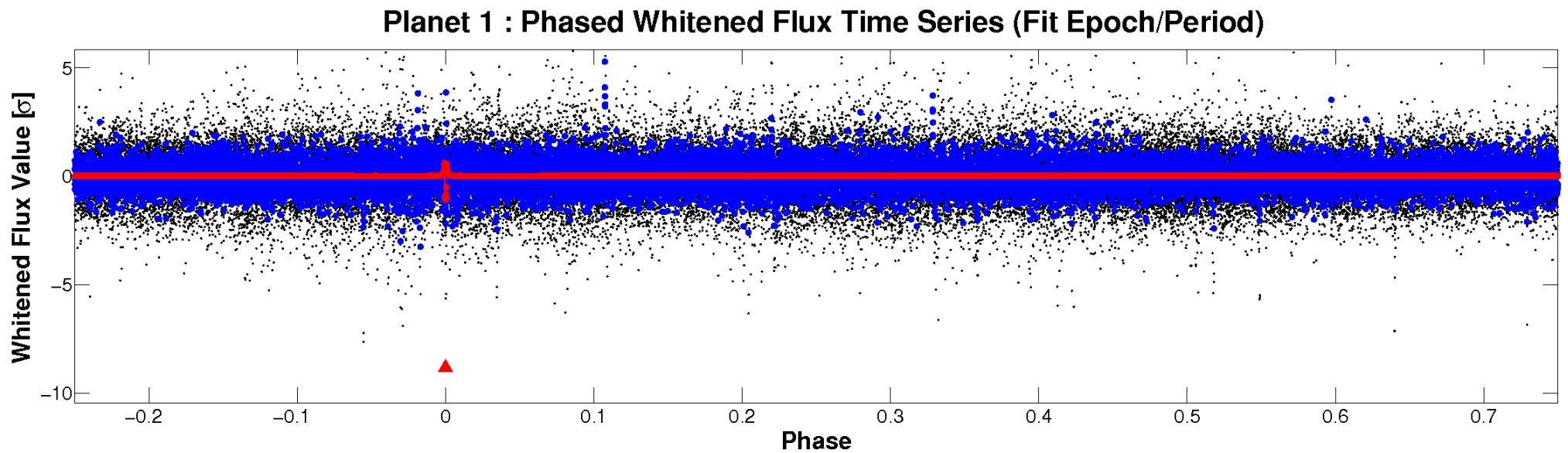
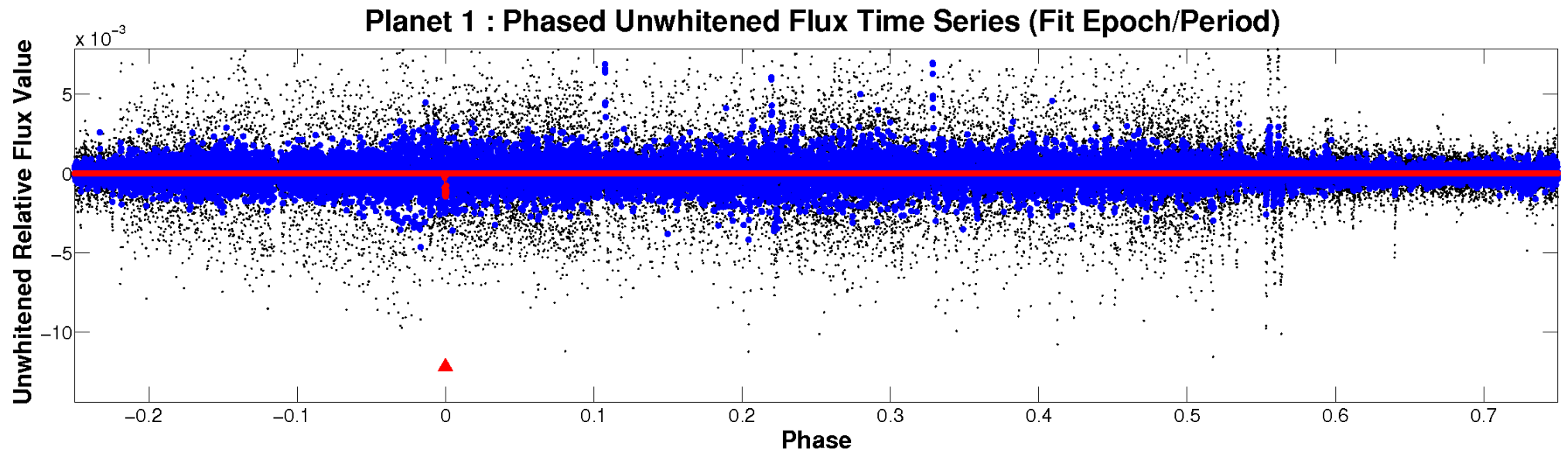


ALT Odd/Even

TCE 007978217-01

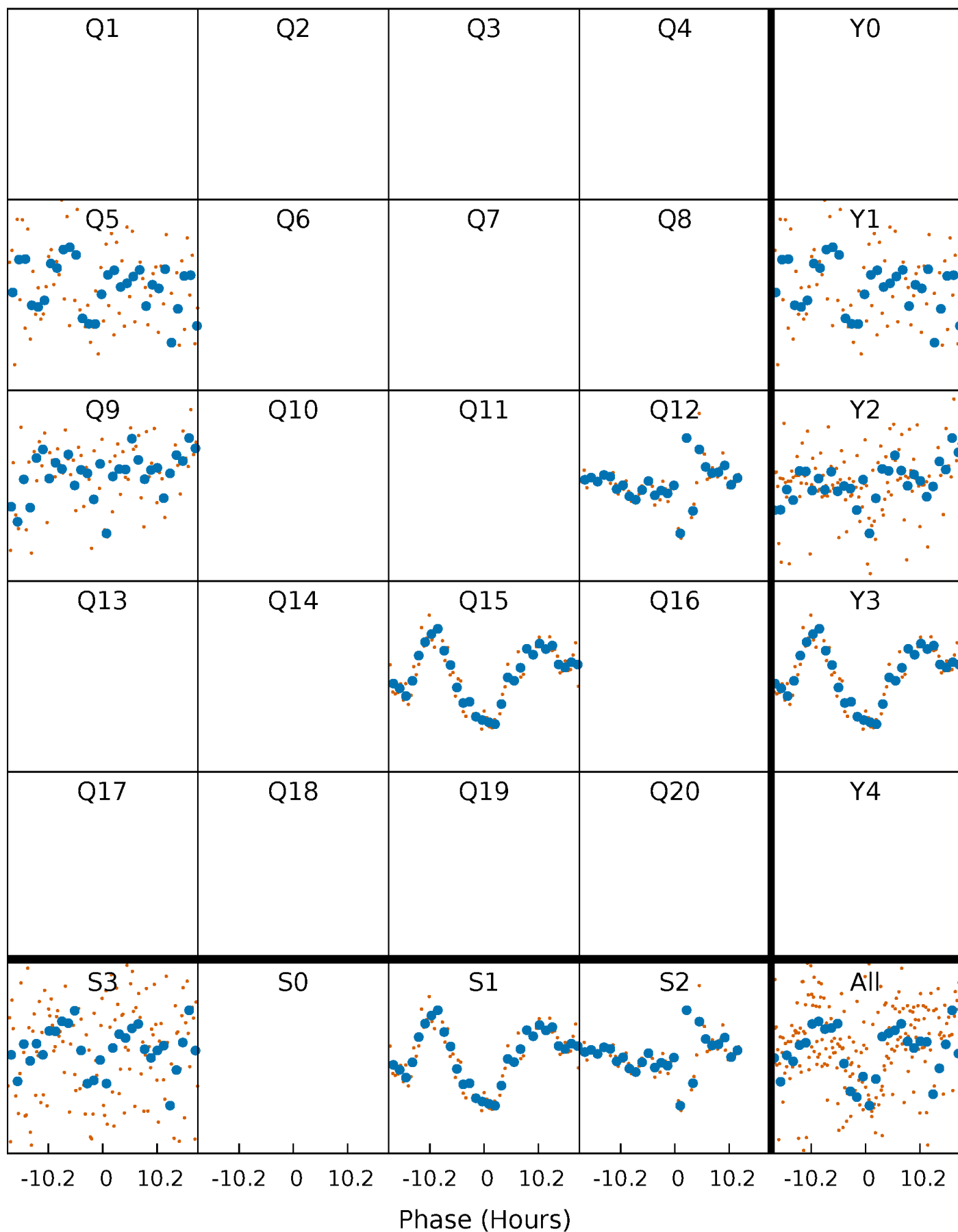


Non-Whitened Vs. Whitened Light Curve



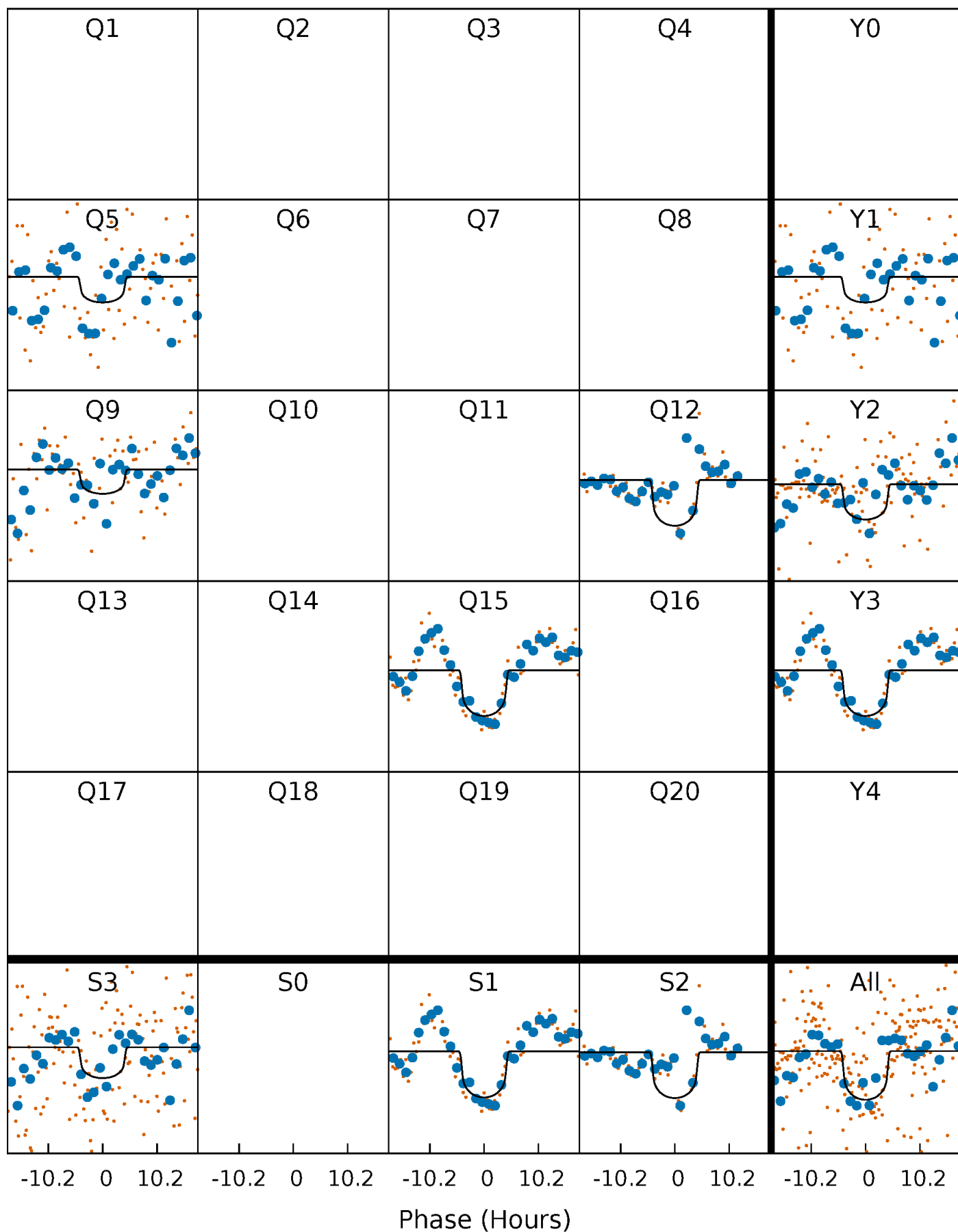
PDC Quarter-Phased Transit Curves

TCE 007978217-01 P=303.100437 Days $T_0=206.875464$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007978217-01 P=303.100437 Days $T_0=206.875464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

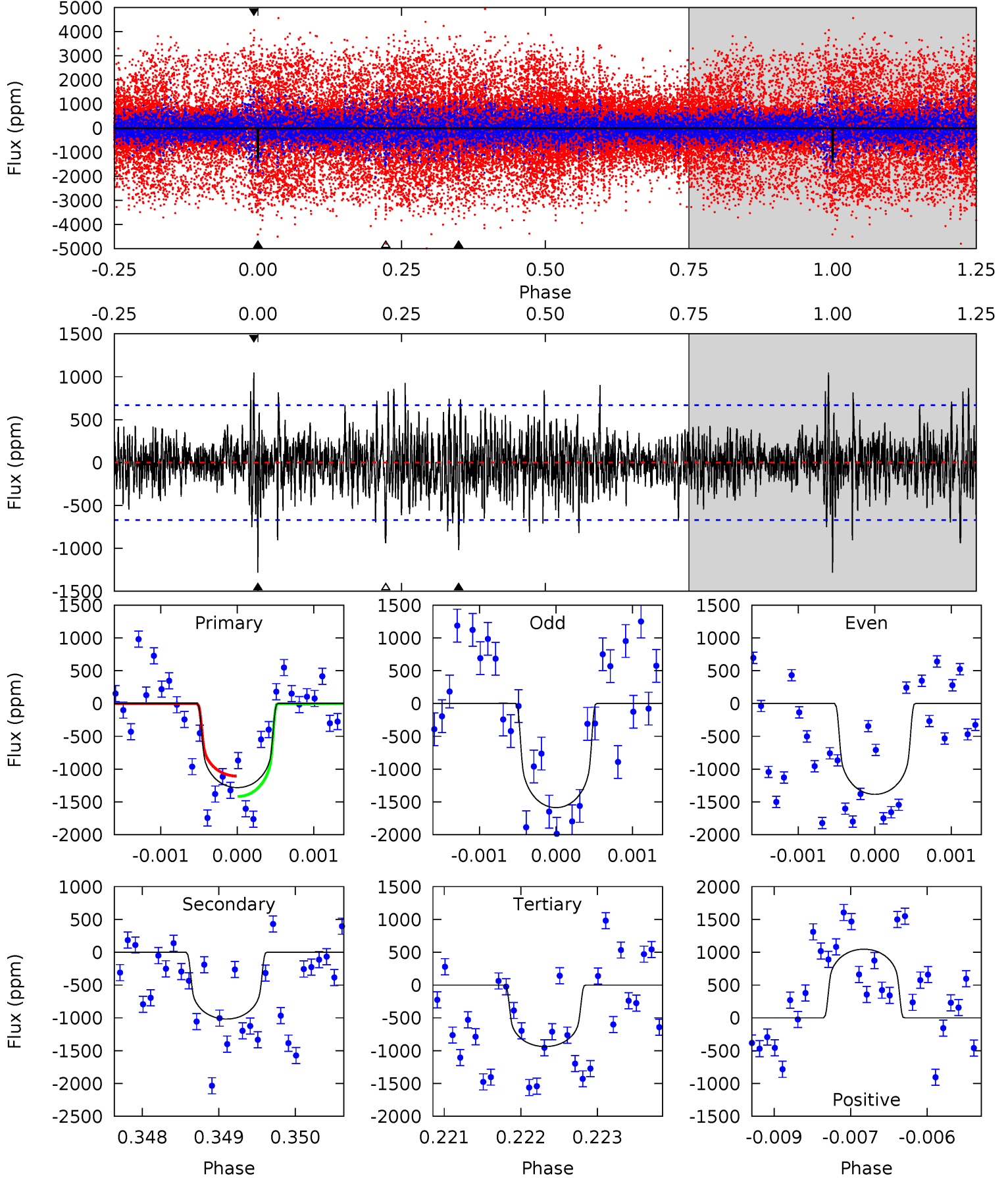
TCE 007978217-01 P=303.138674 Days $T_0=206.742697$ (BKJD)



DV Model-Shift Uniqueness Test

007978217-01, P = 303.100437 Days, E = 206.875464 Days

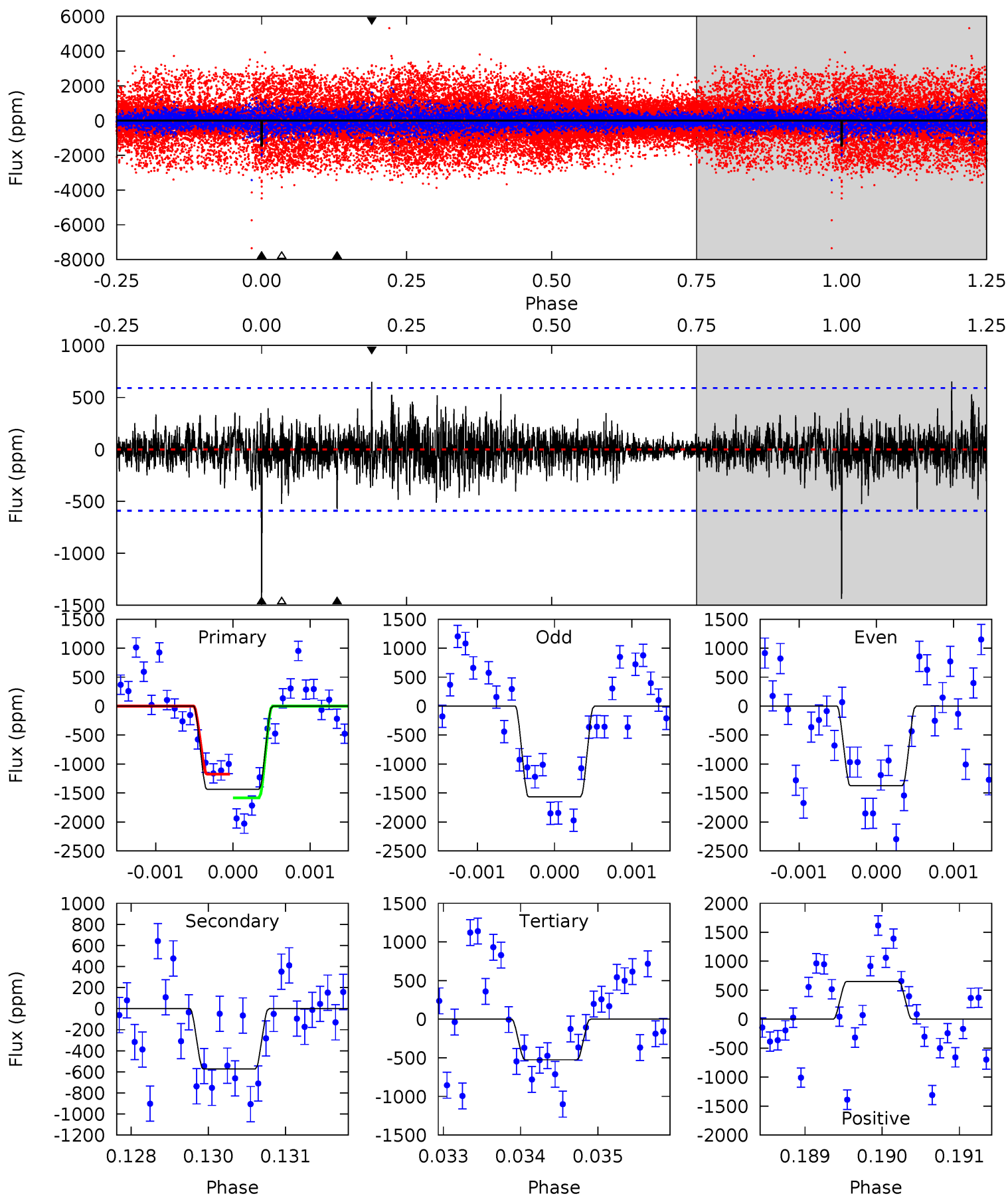
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	8.23	7.58	8.47	5.41	3.23	1.90	2.79	1.90	0.65	-0.23	0.72	0.89	0.45	1.21



Alt Model-Shift Uniqueness Test

007978217-01, P = 303.138674 Days, E = 206.742697 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	5.24	4.80	5.95	5.40	3.21	1.14	8.35	7.20	0.44	-0.71	0.82	0.94	0.31	0



Stellar Parameters For KIC 007978217

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5462^{+189}_{-189}	$4.502^{+0.077}_{-0.132}$	$-0.200^{+0.300}_{-0.300}$	$0.841^{+0.178}_{-0.096}$	$0.820^{+0.107}_{-0.071}$	$1.944^{+0.726}_{-0.732}$
	+3%/-3%	+2%/-3%	+150%/-150%	+21%/-11%	+13%/-9%	+37%/-38%
Source	KIC0	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 007978217-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1018 ± 124	$3.40^{+1.46}_{-1.29}$	343^{+20}_{-17}	5169^{+1259}_{-723}	33249^{+54765}_{-17640}
Alt.	-573 ± 109	$3.28^{+1.46}_{-1.43}$	343^{+19}_{-18}	4621^{+1386}_{-576}	19981^{+42139}_{-10778}

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

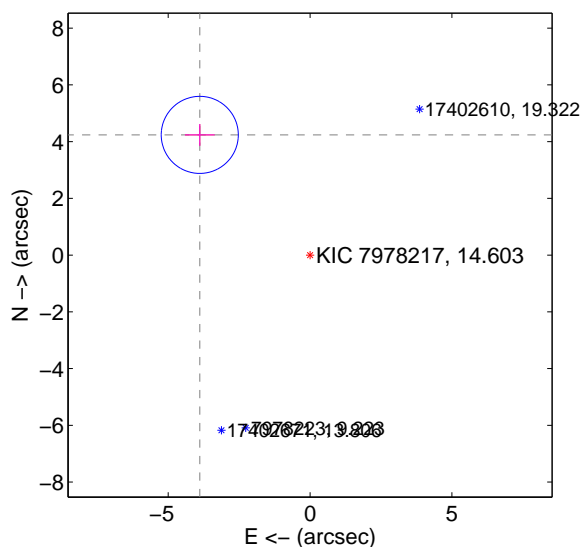
Supplemental centroid analysis for 007978217-01. Kepler magnitude: 14.60. Transit SNR 9.13

There are 0 quarters with good PRF difference image offsets

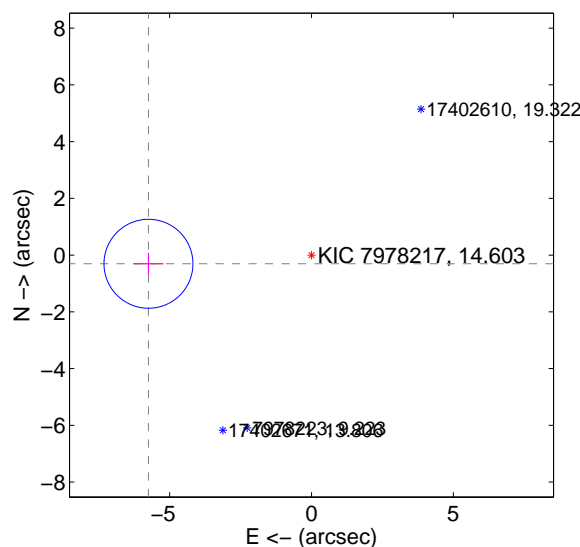
The OOT PRF centroid is offset from the target star catalog position by about 4.91 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.750 ± 0.453	12.70	3.887 ± 0.523	4.237 ± 0.384
PRF-fit source offset from KIC position	5.754 ± 0.522	11.01	5.746 ± 0.523	-0.306 ± 0.384
photometric centroid source offset	2.80 ± 0.10	26.78	0.92 ± 0.12	-2.64 ± 0.10

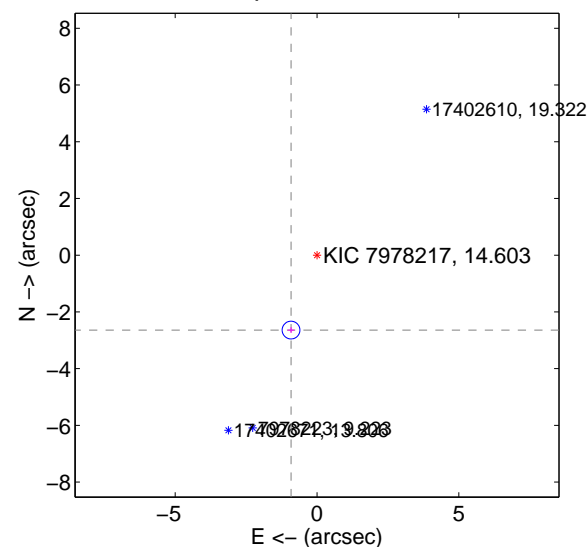
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

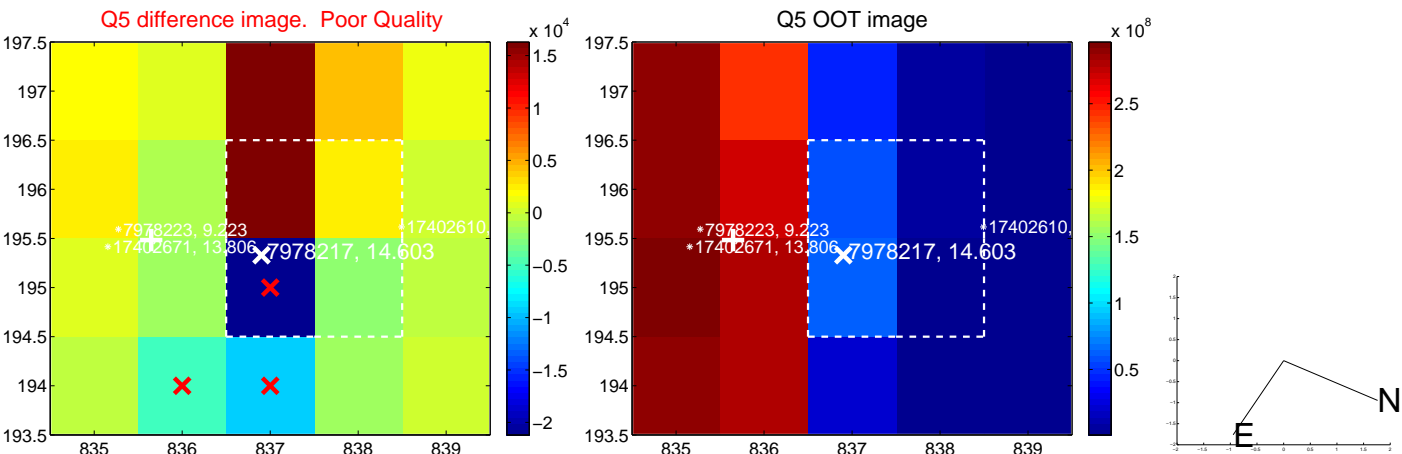


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

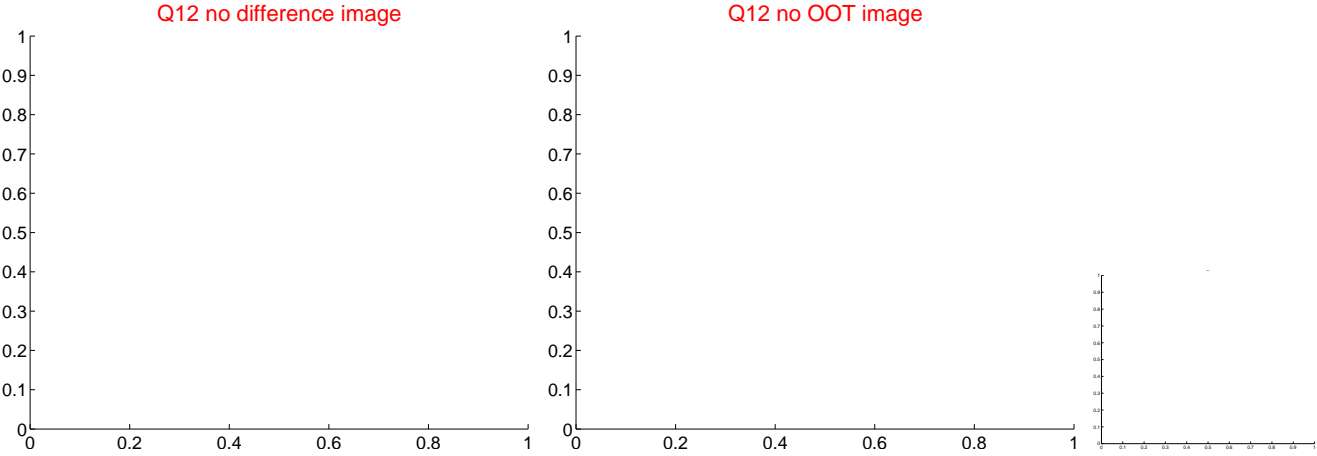
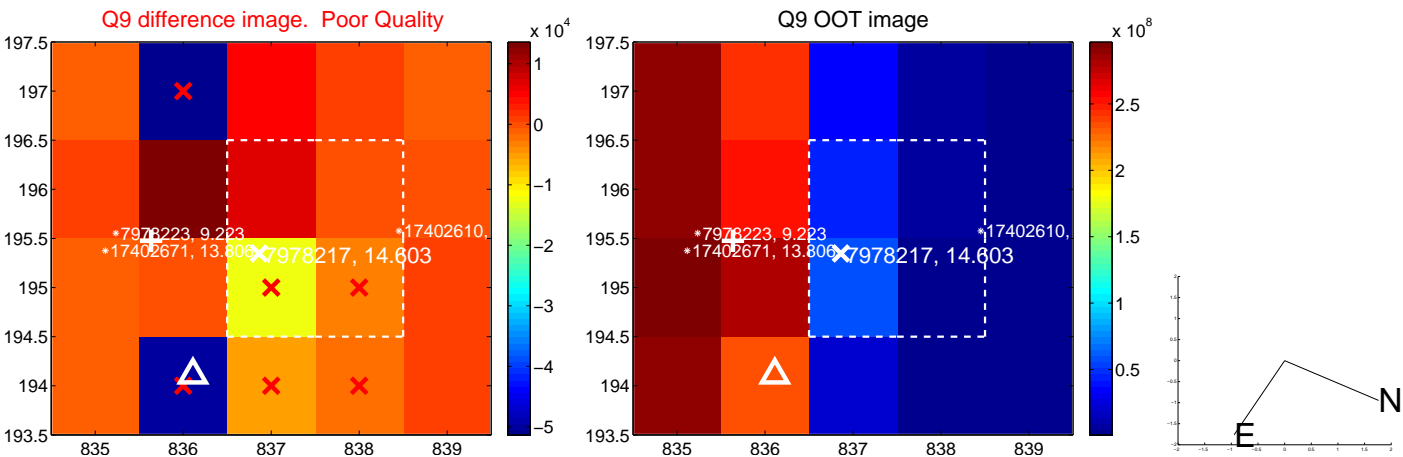
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



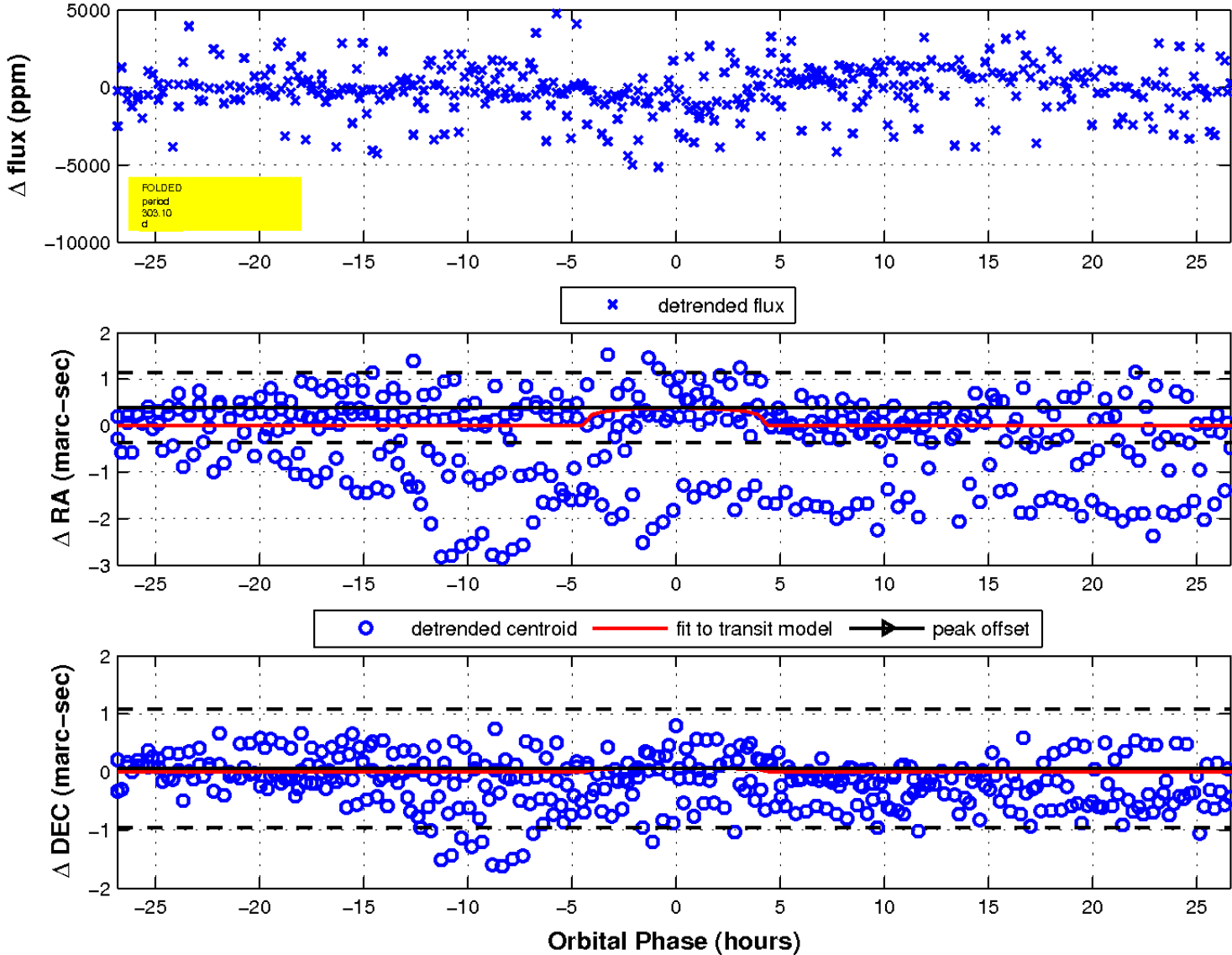
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

