

KIC 003663173

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})
003663173-01	OBS	2750.01	174.636611	184.522885	2469.3	15.774	26.5	25.3	2.23	5974	11.31	12.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003663173-01	OBS	PC	0.61	0	0	0	0	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.

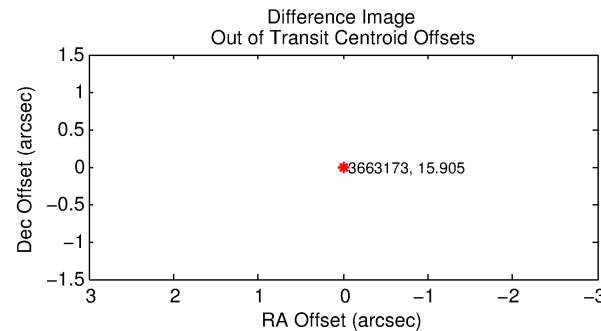
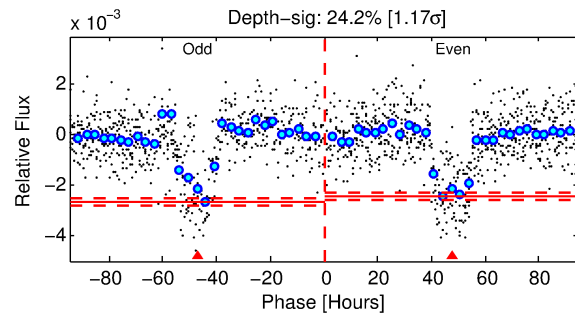
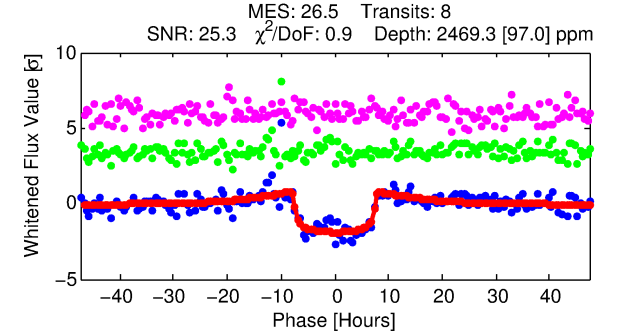
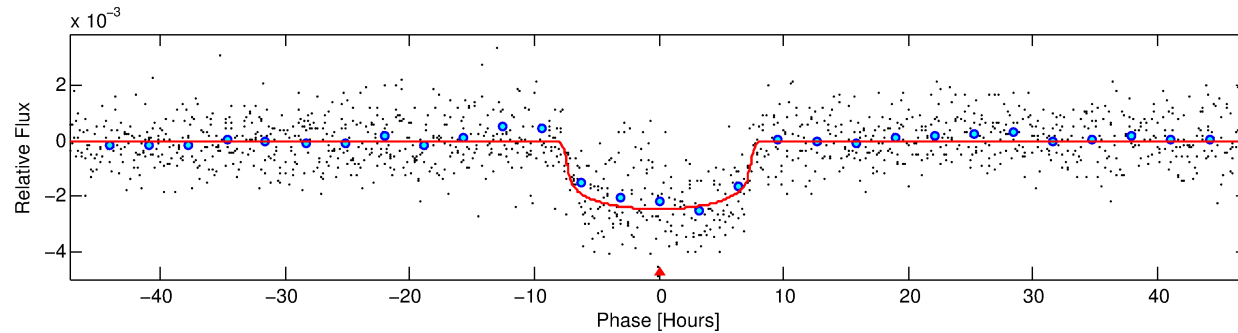
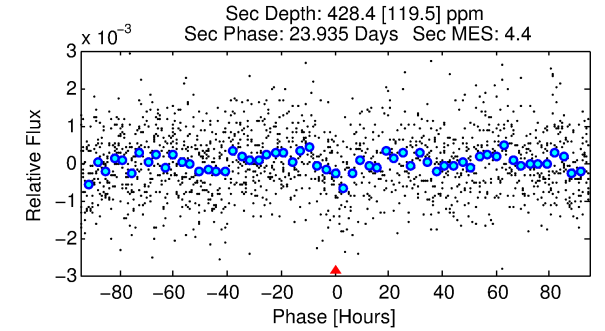
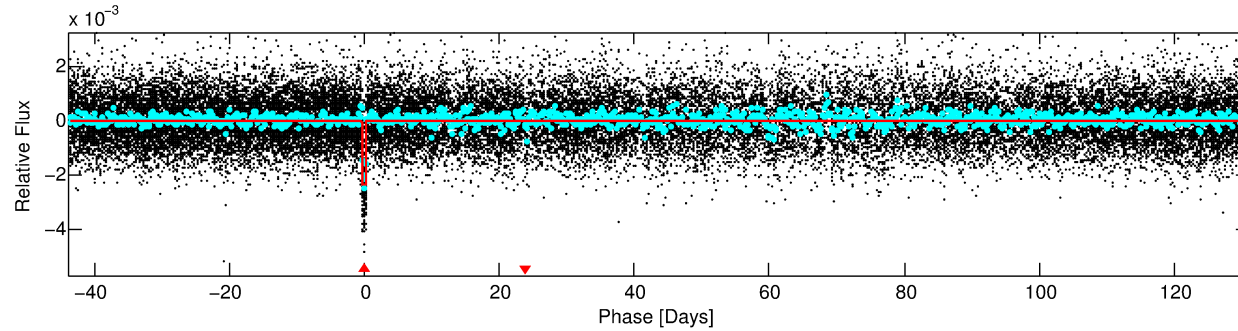
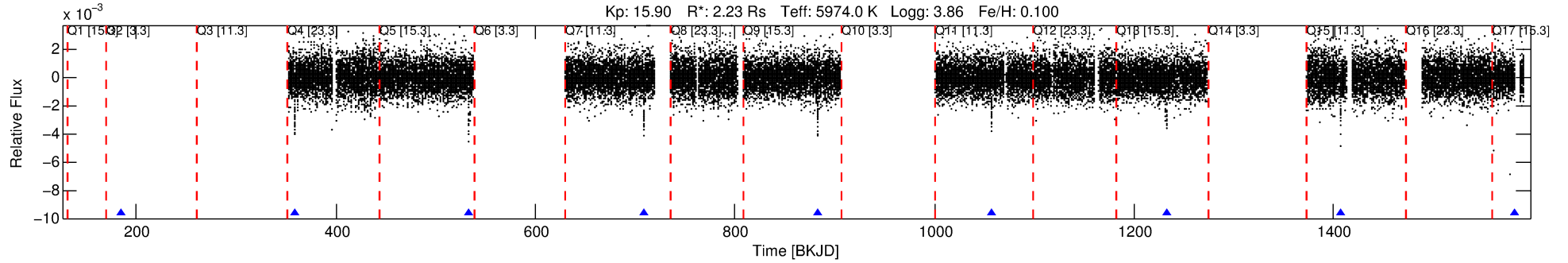
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003663173-01

No Significant Match Found

DV One-Page Summary

KIC: 3663173 Candidate: 1 of 1 Period: 174.637 d
KOI: K02750.01 Corr: 0.986



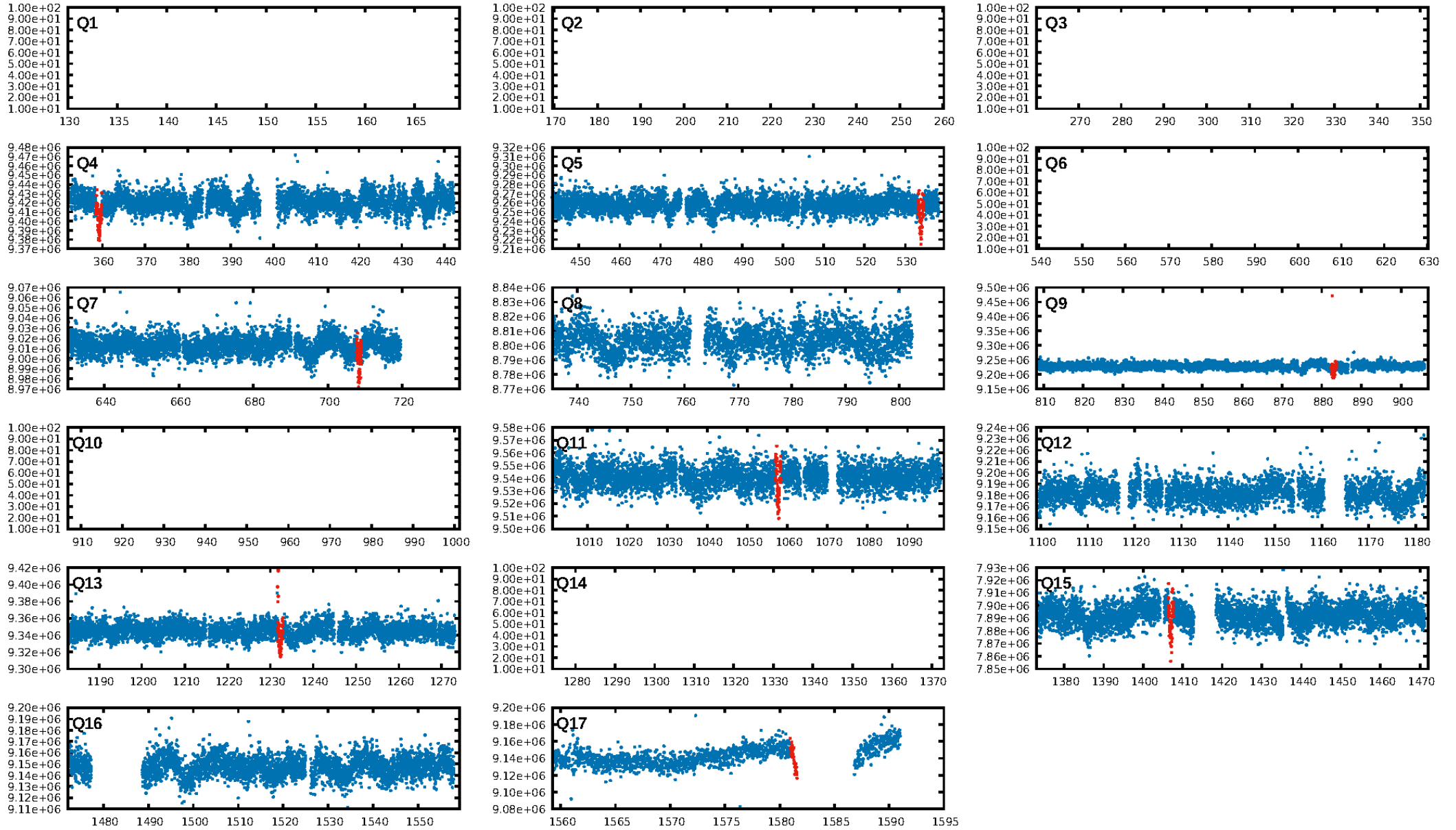
DV Fit Results:

Period = 174.63661 [0.00182] d
Epoch = 184.5229 [0.0086] BKJD
Rp/R* = 0.0464 [0.0037]
a/R* = 79.34 [27.67]
b = 0.46 [0.59]
Seff = 12.67 [4.42]
Teq = 481 [42] K
Rp = 11.31 [2.95] Re
a = 0.6698 [0.1498] AU
Ag = 826.14 [388.73] [2.12σ]
Teffp = 3988 [326] K [10.66σ]

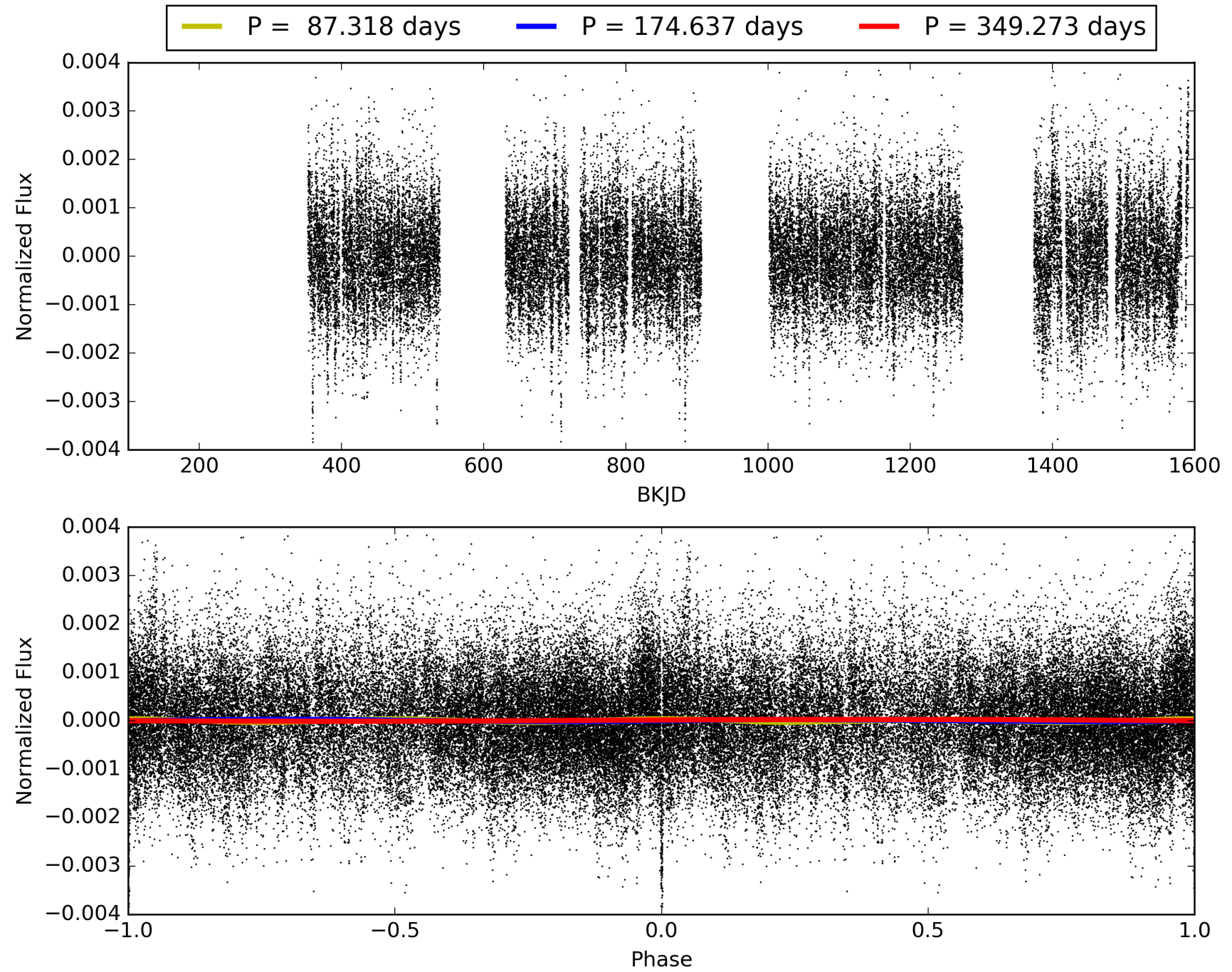
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.11e-154
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 4.518
Centroid-sig: 0.1%
Centroid-so: 1.758 arcsec [5.87σ]
OotOffset-rm: N/A
KicOffset-rm: 0.491 arcsec [1.54σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [5/5]

TCE 003663173-01, PDC Light Curves

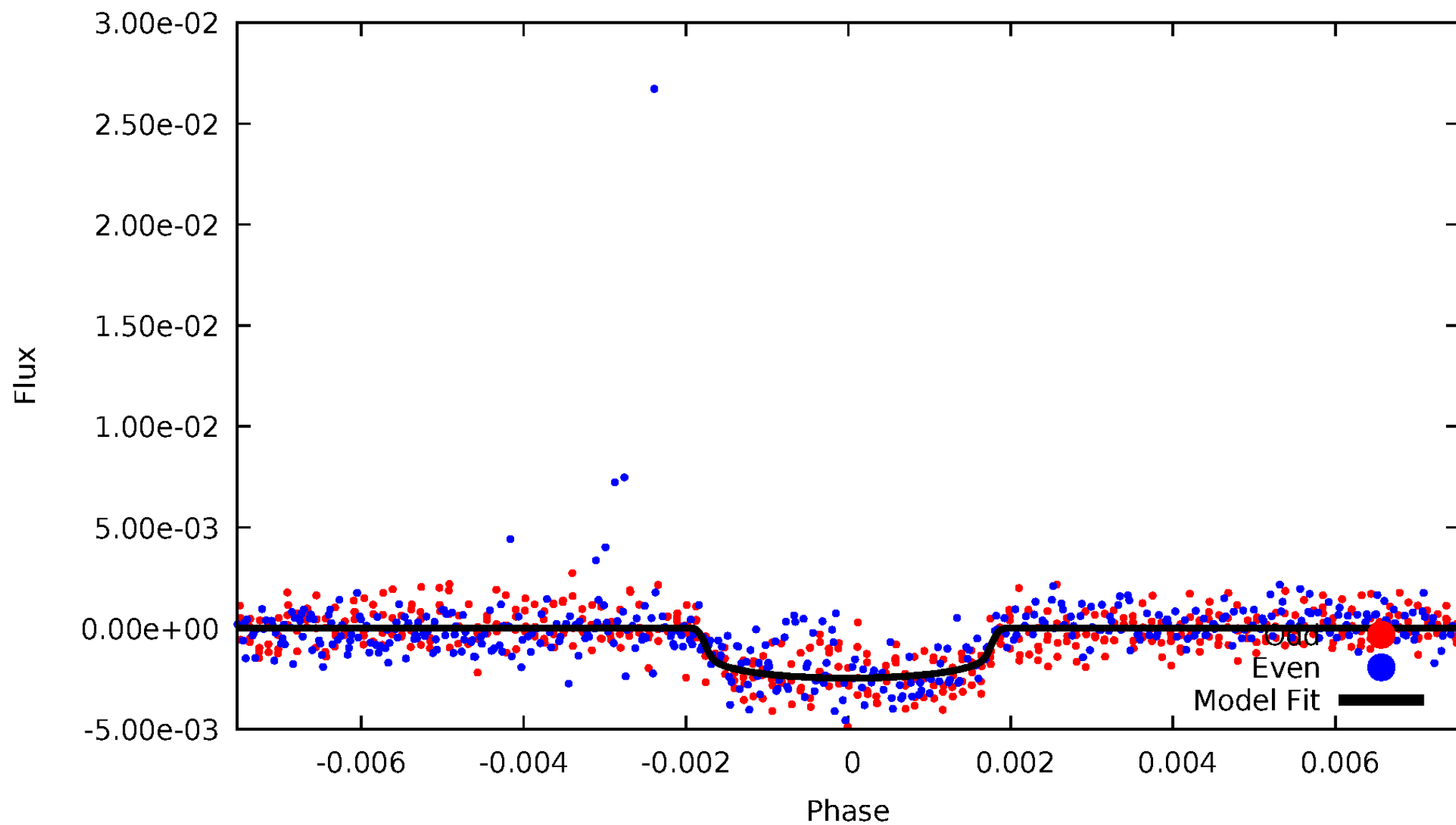


TCE 003663173-01



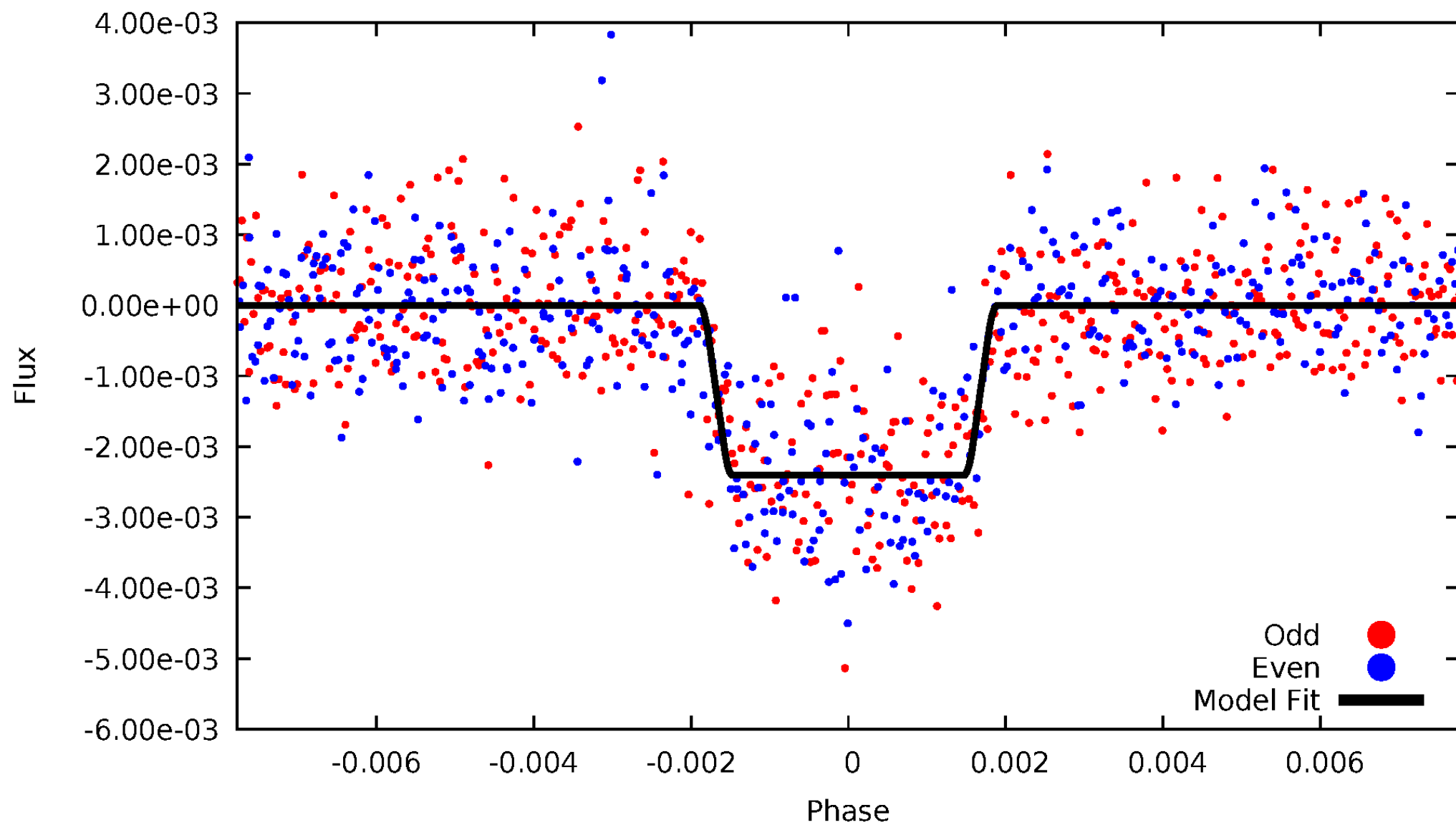
DV Odd/Even

TCE 003663173-01



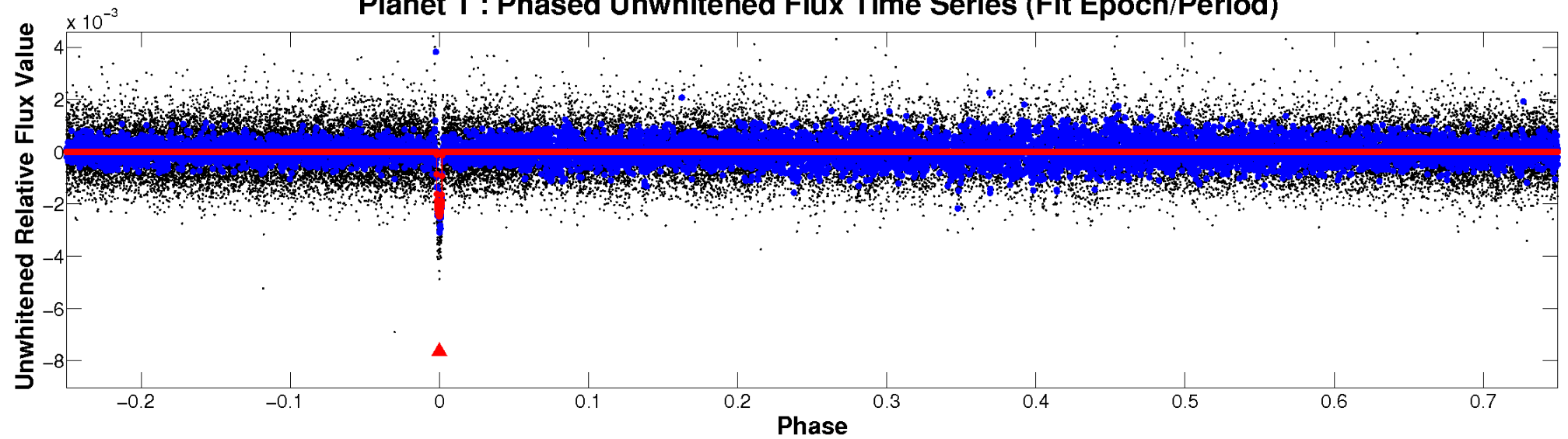
ALT Odd/Even

TCE 003663173-01

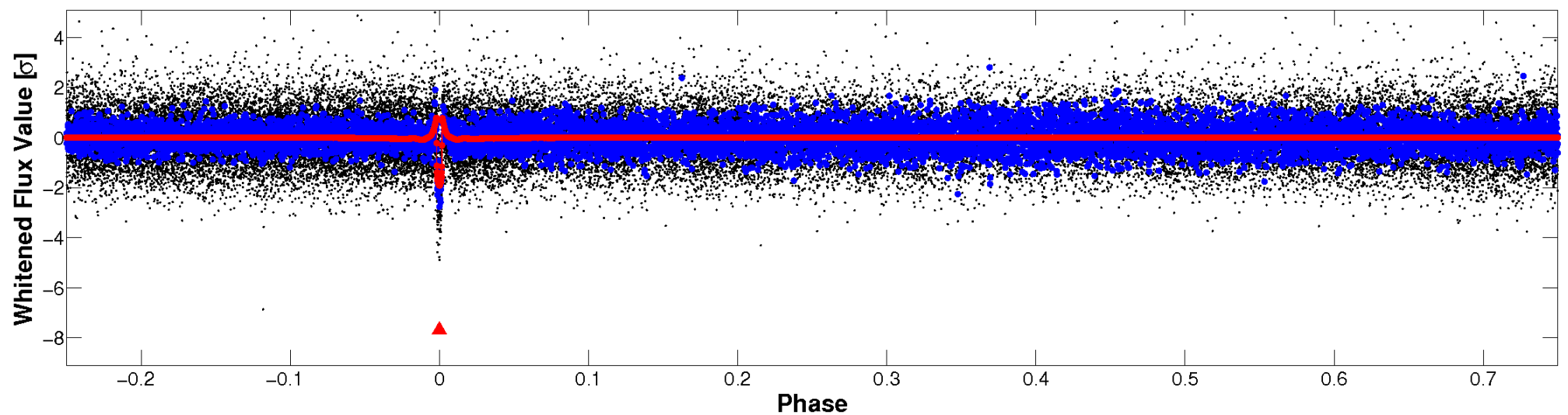


Non-Whitened Vs. Whitened Light Curve

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

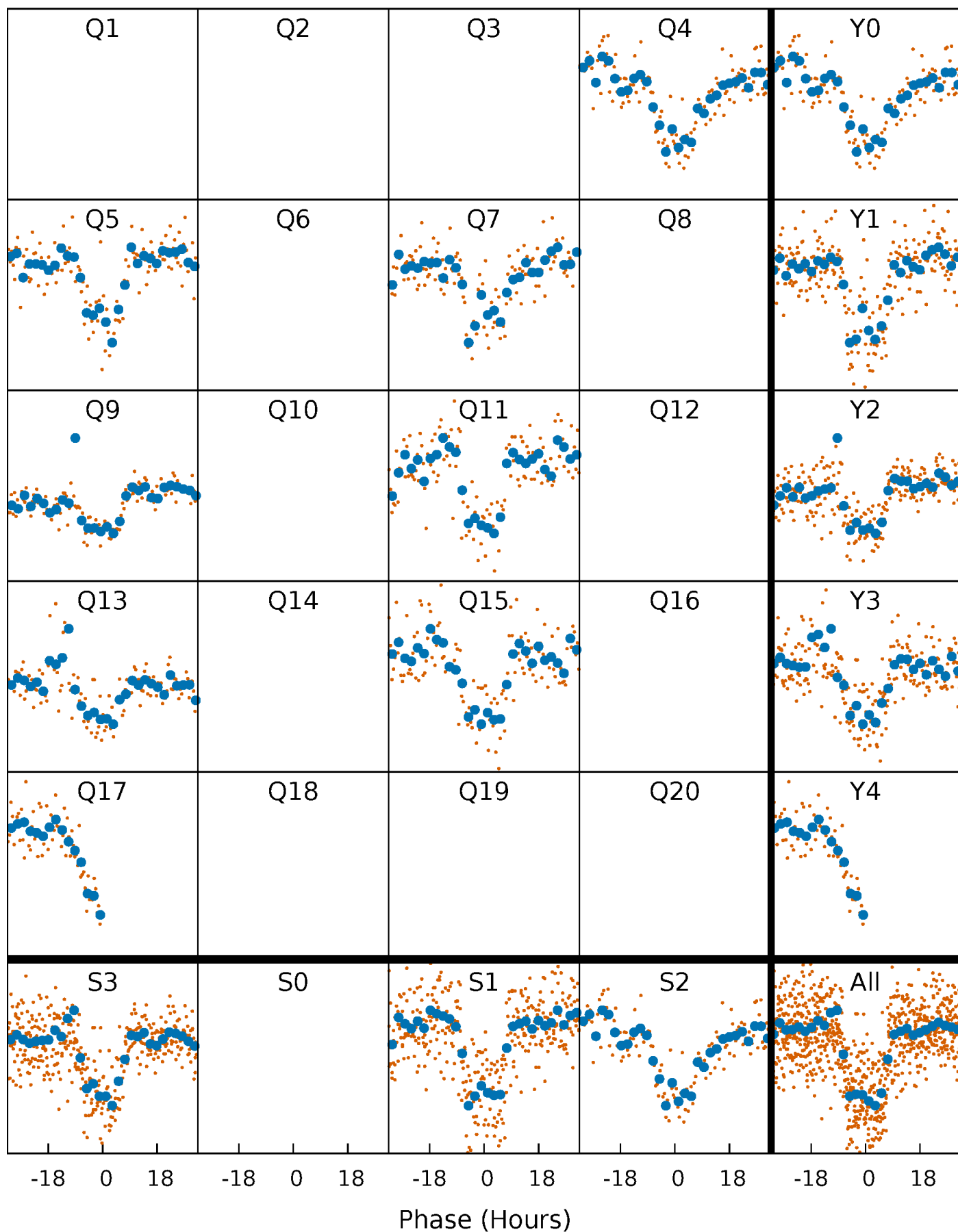


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



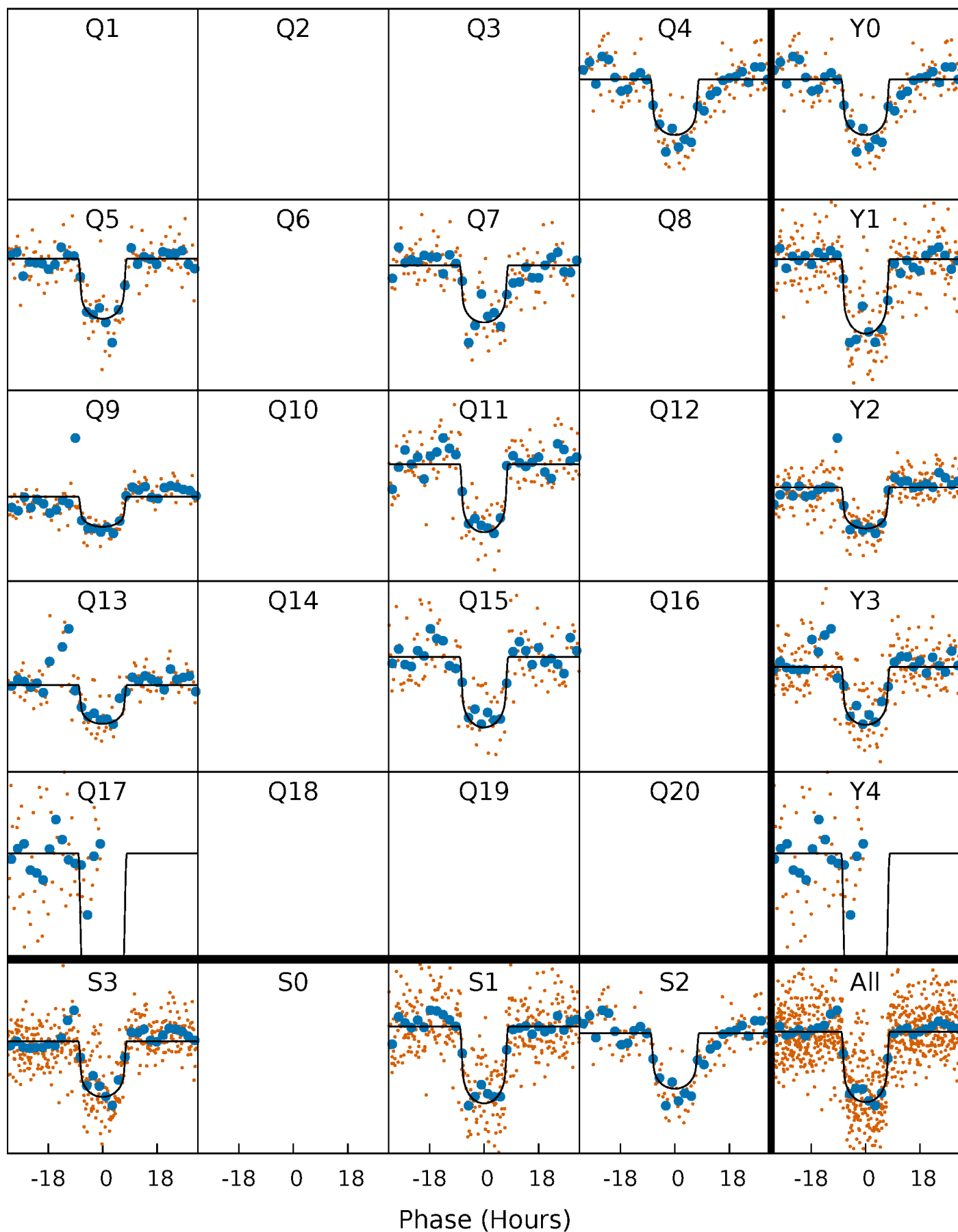
PDC Quarter-Phased Transit Curves

TCE 003663173-01 P=174.636611 Days $T_0=184.522885$ (BKJD)



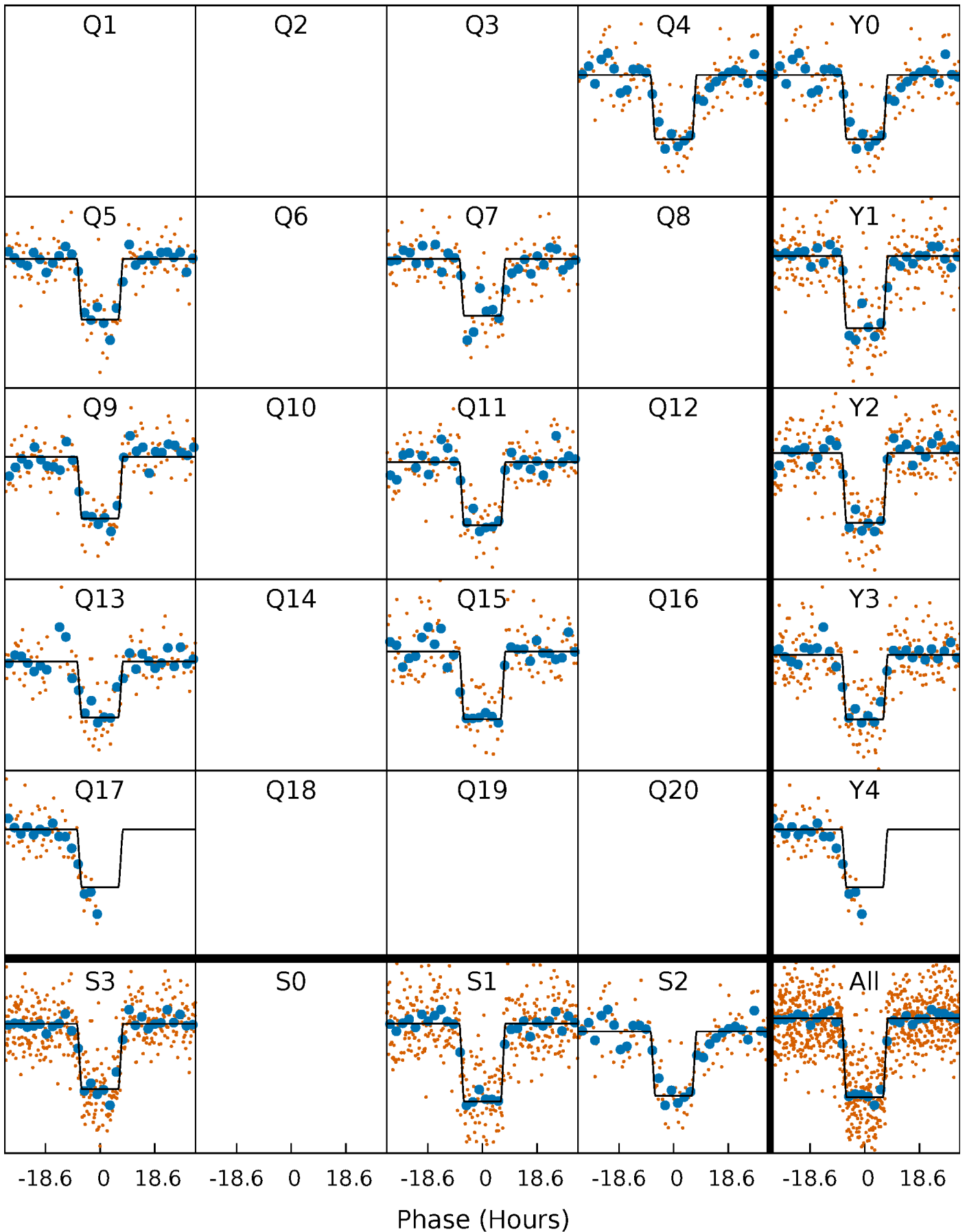
DV Quarter-Phased Transit Curves

TCE 003663173-01 P=174.636611 Days $T_0=184.522885$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

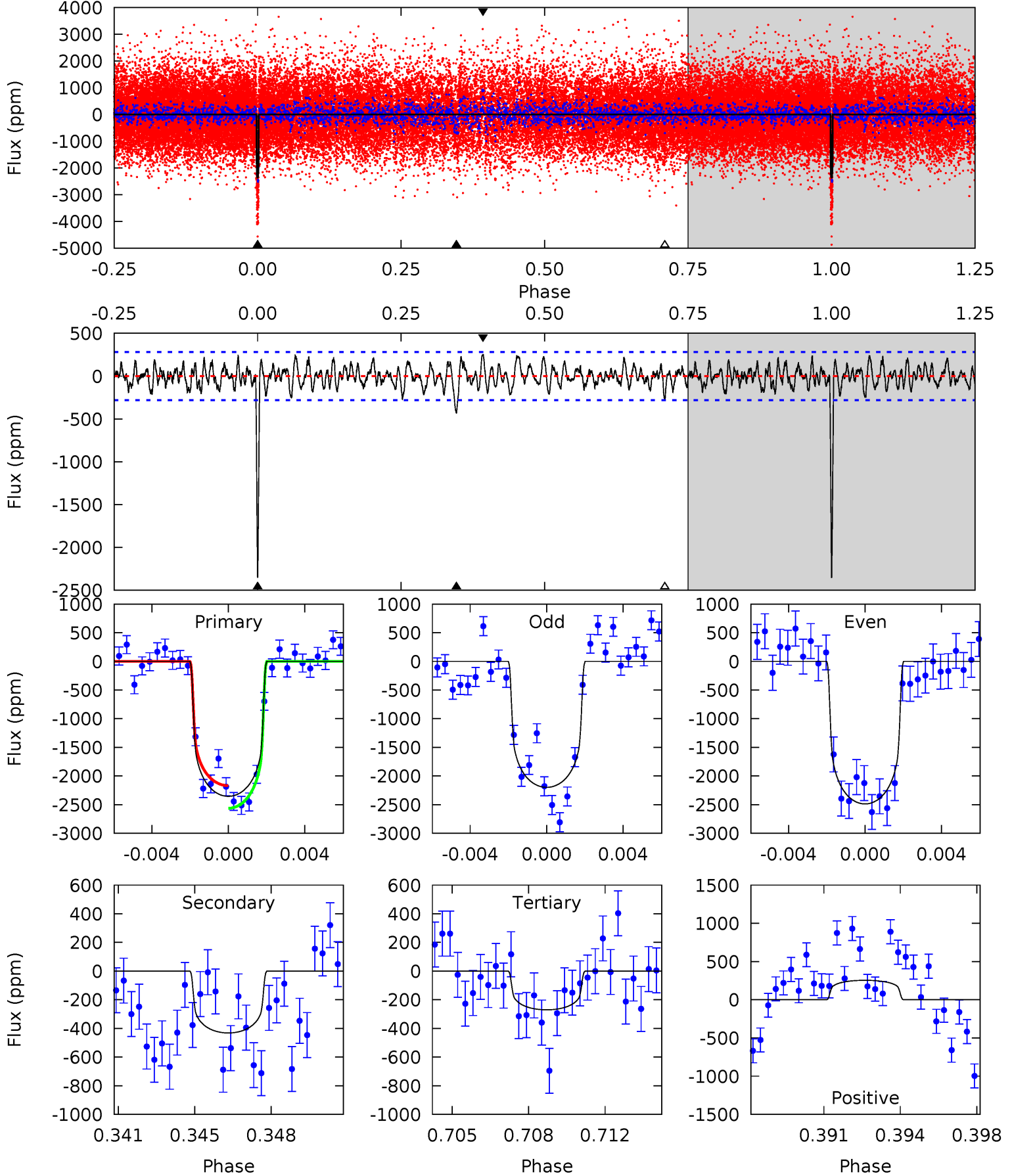
TCE 003663173-01 P=174.638826 Days $T_0=184.513604$ (BKJD)



DV Model-Shift Uniqueness Test

003663173-01, P = 174.636611 Days, E = 184.522885 Days

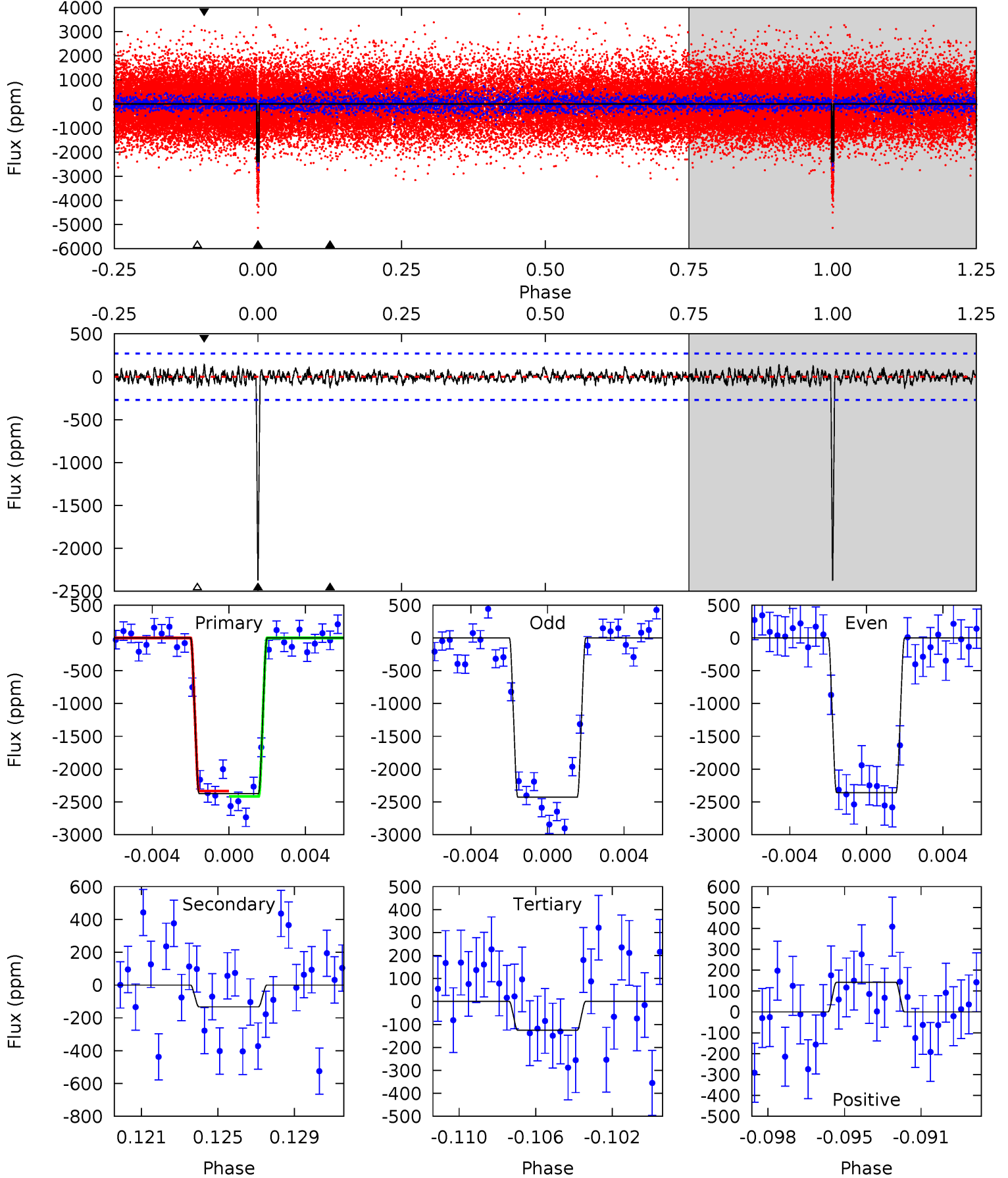
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.8	8.03	5.03	4.74	5.21	2.89	1.78	38.8	39.1	3.00	3.29	2.70	0.92	0.10	3.64



Alt Model-Shift Uniqueness Test

003663173-01, P = 174.638826 Days, E = 184.513604 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.8	2.56	2.42	2.73	5.21	2.90	0.83	43.4	43.1	0.14	-0.17	0.68	1.02	0.06	0.79



Stellar Parameters For KIC 003663173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5974^{+89}_{-80}	$3.859^{+0.196}_{-0.084}$	$0.100^{+0.150}_{-0.150}$	$2.232^{+0.298}_{-0.554}$	$1.313^{+0.143}_{-0.175}$	$0.166^{+0.184}_{-0.046}$
	+1%/-1%	+5%/-2%	+150%/-150%	+13%/-25%	+11%/-13%	+111%/-27%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003663173-01 / KOI 2750.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-432 ± 54	$10.96^{+1.48}_{-1.59}$	666^{+29}_{-41}	4245^{+193}_{-162}	880^{+316}_{-211}
Alt.	-133 ± 52	$11.72^{+1.48}_{-1.65}$	666^{+29}_{-39}	3424^{+218}_{-245}	248^{+139}_{-102}

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 $A_{obs} \gg 1.0$

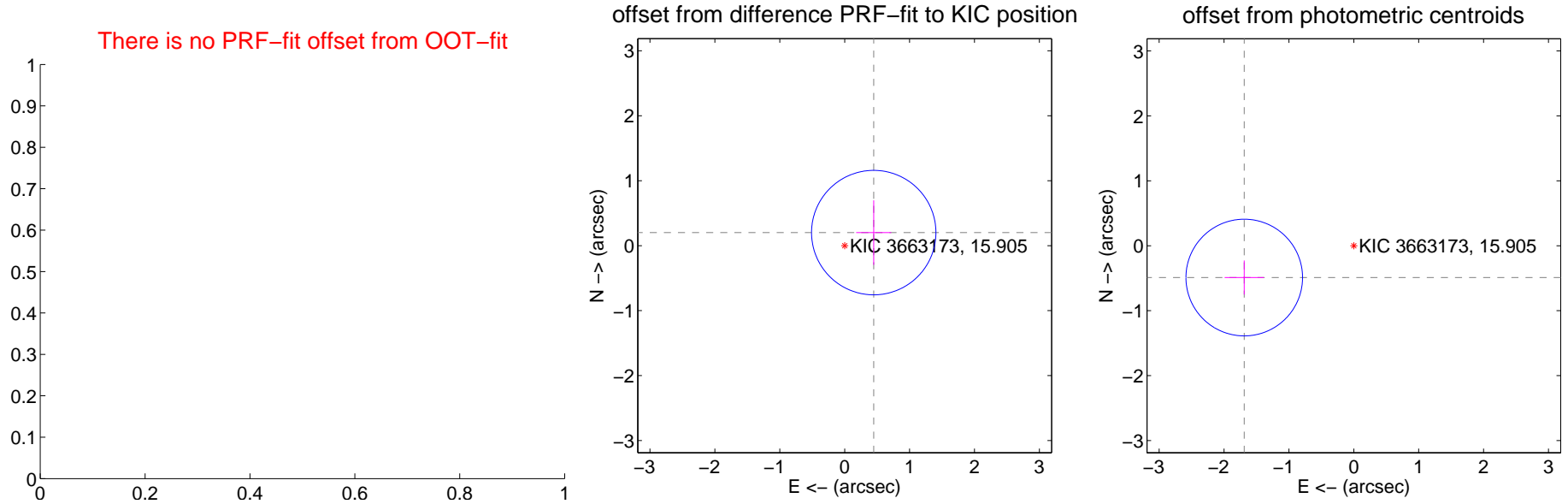
DV Centroid Data

Supplemental centroid analysis for 003663173-01. Kepler magnitude: 15.90. Transit SNR 25.34

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.491 ± 0.319	1.54	-0.448 ± 0.270	0.201 ± 0.496
photometric centroid source offset	1.76 ± 0.30	5.87	1.69 ± 0.30	-0.49 ± 0.26



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



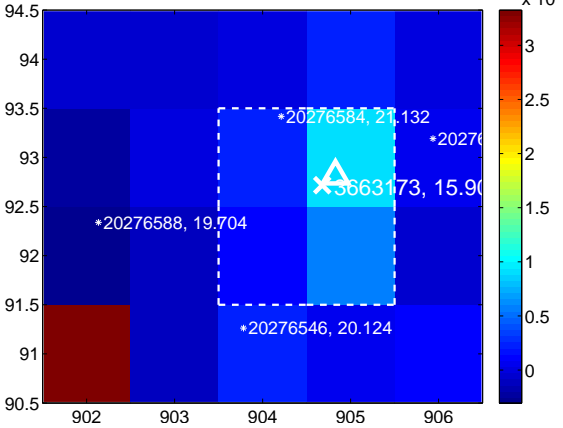
Q3 no difference image



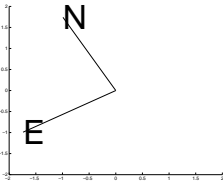
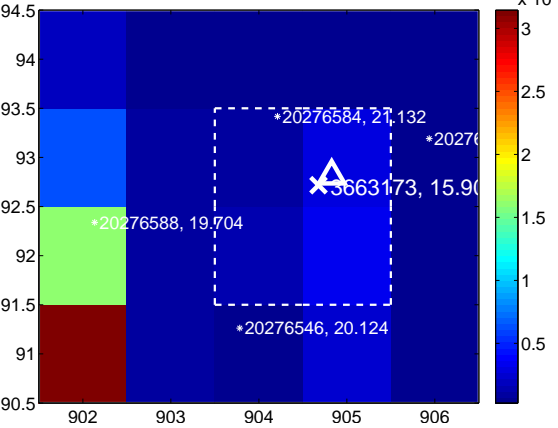
Q3 no OOT image



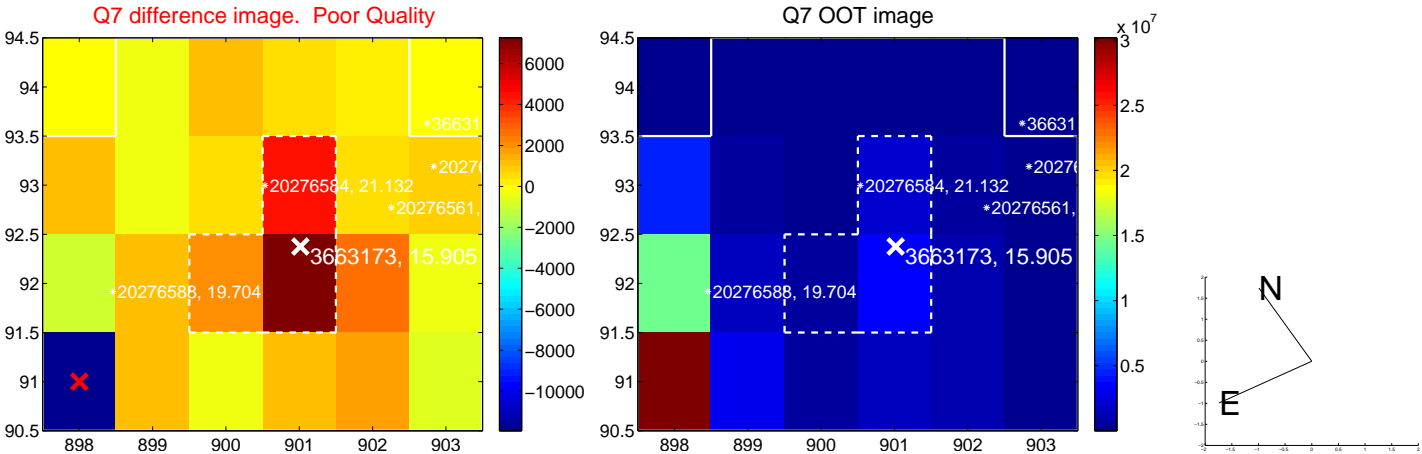
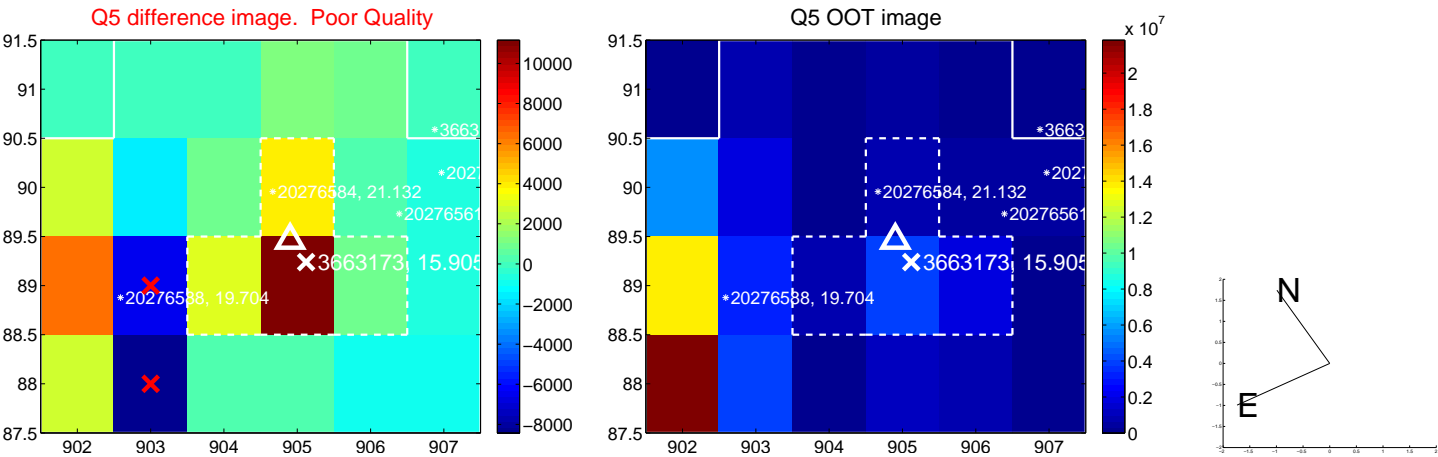
Q4 difference image. Poor Quality



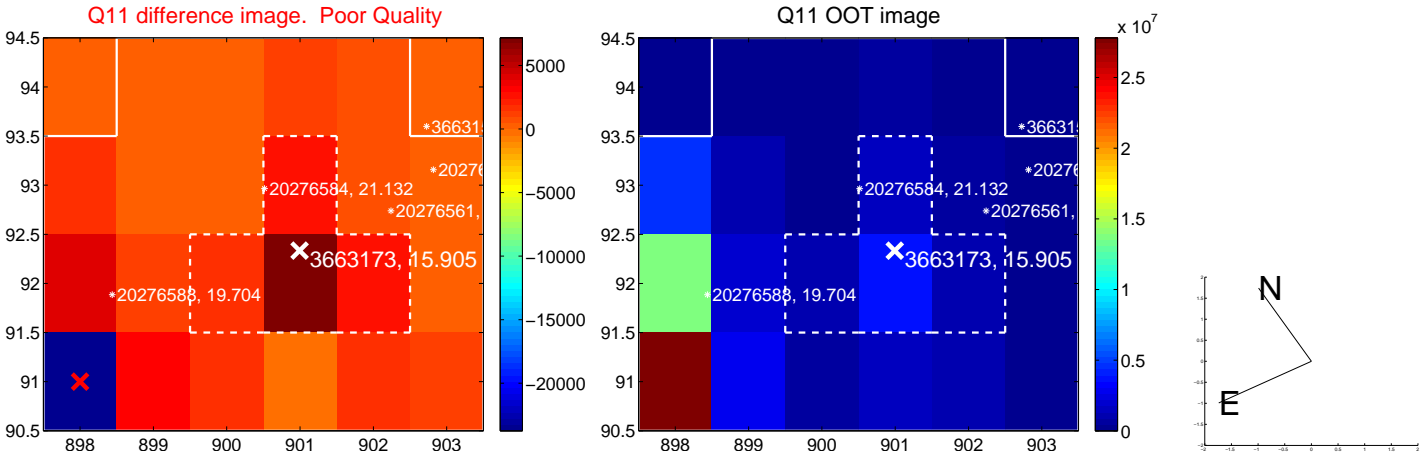
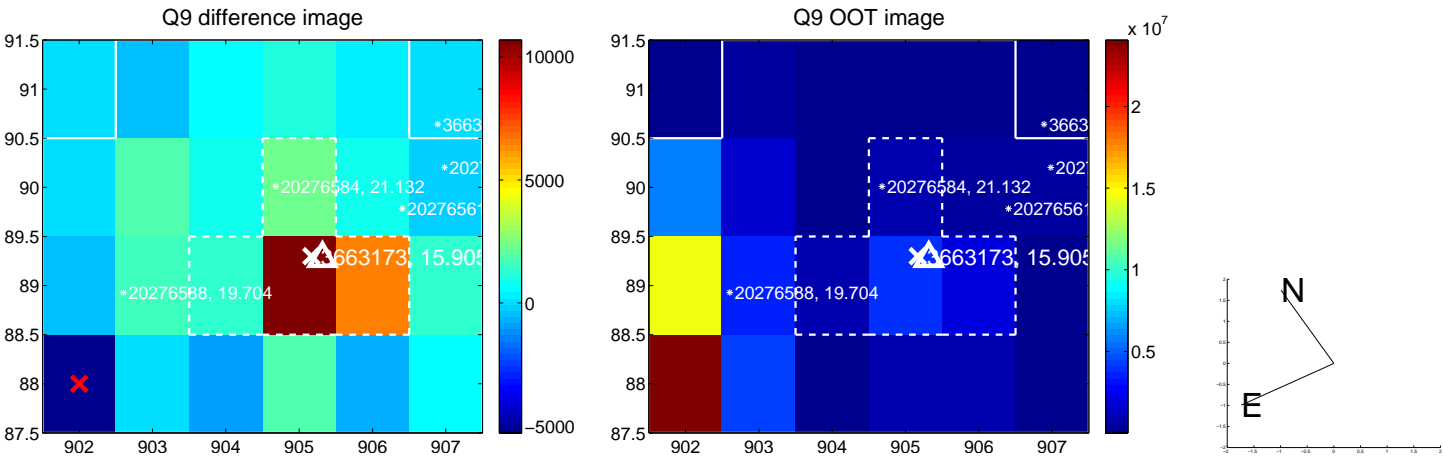
Q4 OOT image



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



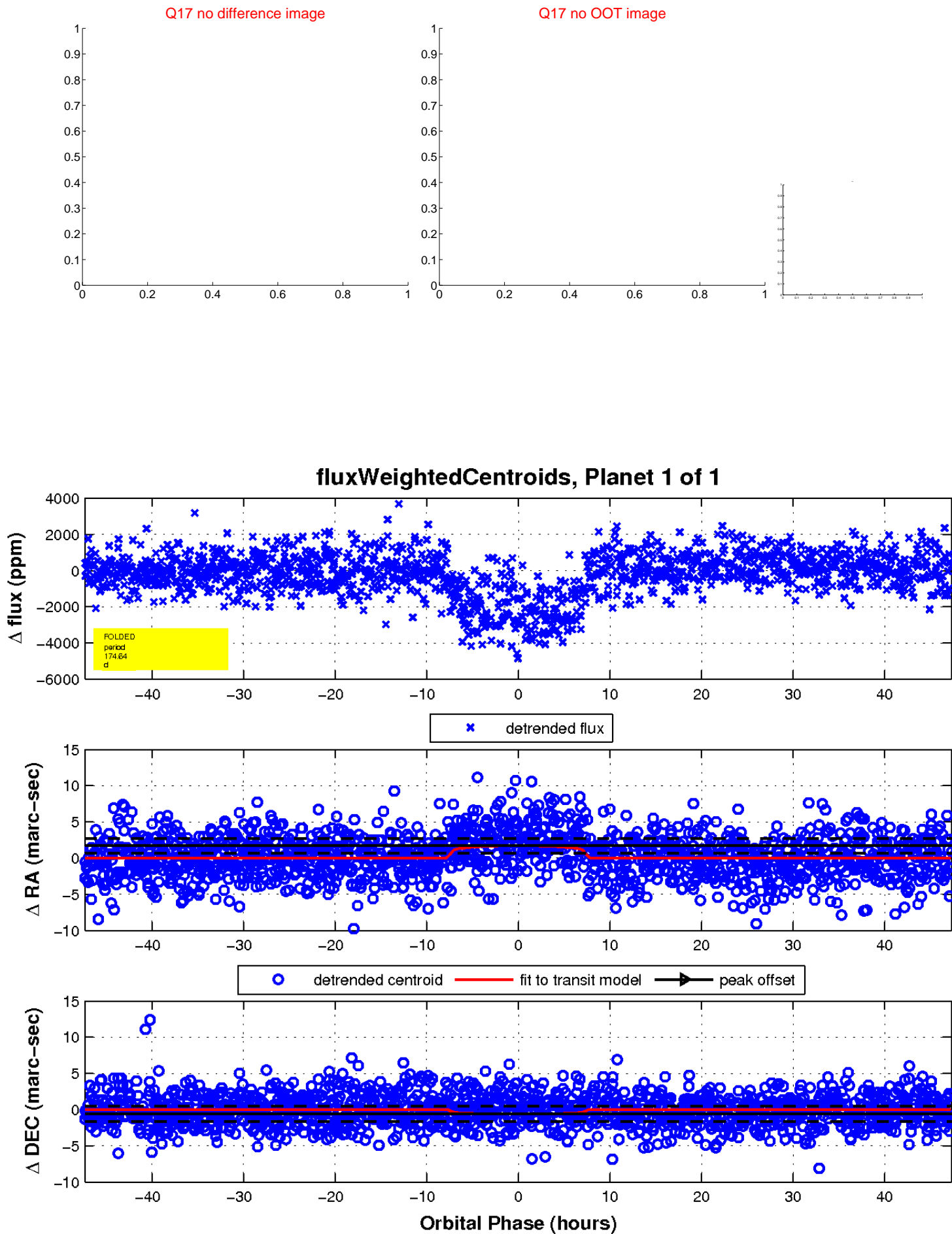
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

