

KIC 009011874

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})
009011874-01	OBS	No	367.231832	177.338874	1439.2	19.470	9.8	9.8	0.93	5207	4.49	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009011874-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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 009011874-01

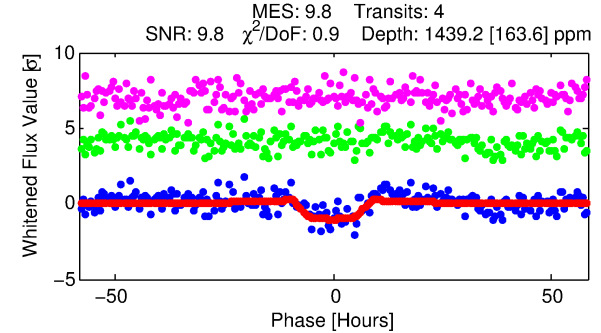
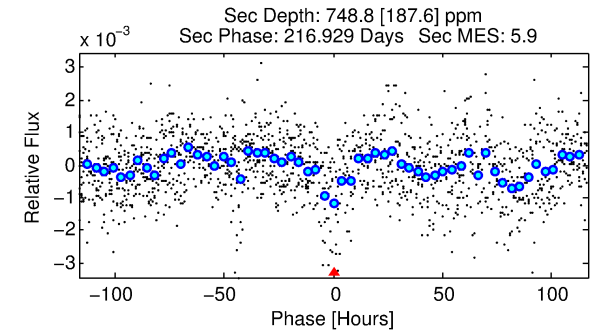
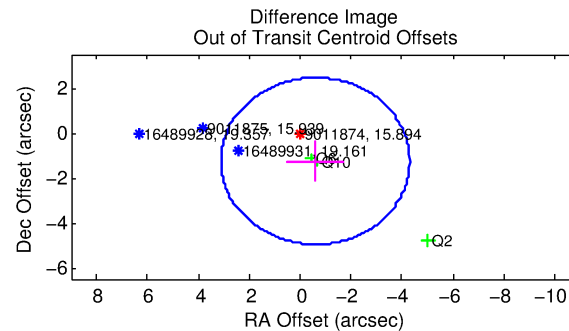
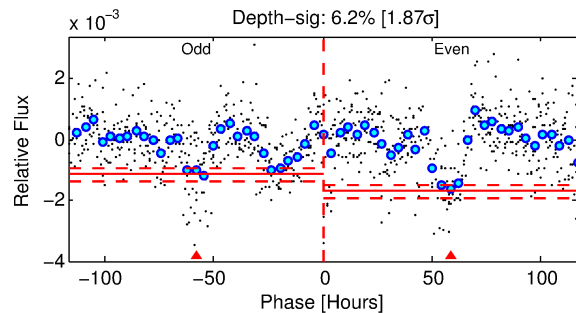
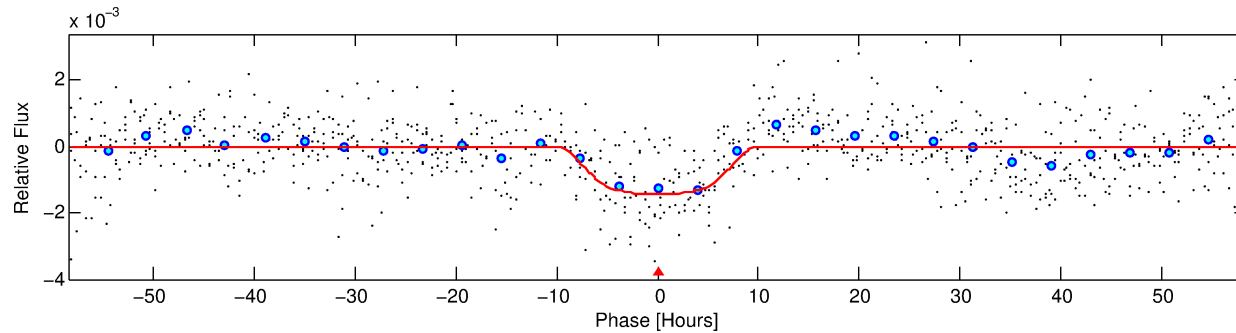
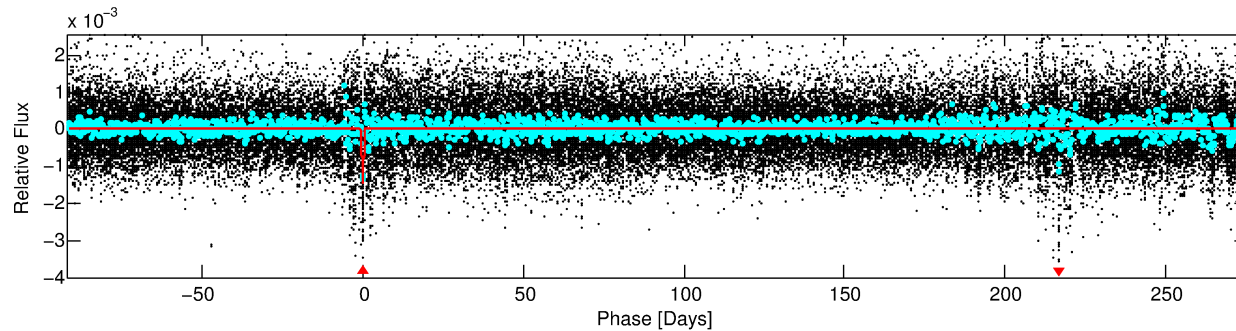
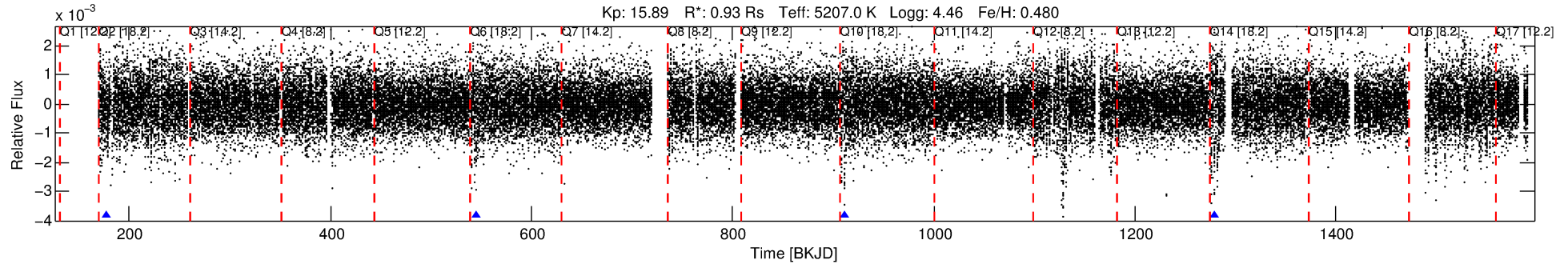
No Significant Match Found

DV One-Page Summary

KIC: 9011874 Candidate: 1 of 1 Period: 367.232 d

KOI: K04369 Corr: No Ephemeris Match

Kp: 15.89 R*: 0.93 Rs Teff: 5207.0 K Logg: 4.46 Fe/H: 0.480



DV Fit Results:

Period = 367.23183 [0.01855] d
Epoch = 177.3389 [0.0327] BKJD
Rp/R* = 0.0442 [0.0037]
a/R* = 68.24 [12.51]
b = 0.93 [0.03]
Seff = 0.60 [0.16]
Teq = 225 [15] K
Rp = 4.49 [0.95] Re
a = 0.9741 [0.1575] AU
Ag = 19351.83 [7375.03] [2.62σ]
Teff = 4095 [338] K [11.46σ]

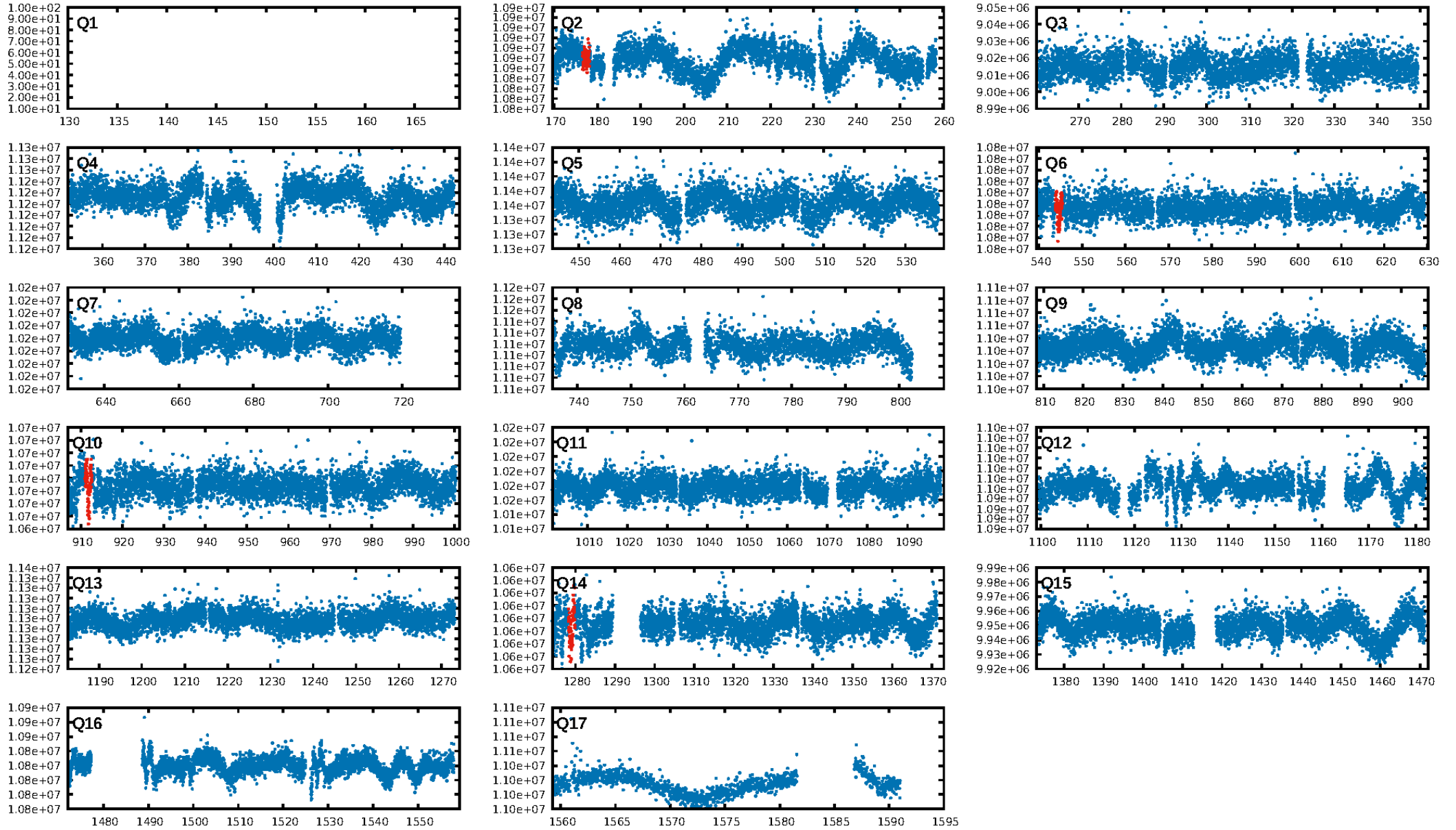
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.00e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.376
Centroid-sig: 0.3%
Centroid-so: 6.966 arcsec [2.74σ]
OotOffset-rm: 1.389 arcsec [1.12σ]
KicOffset-rm: 1.321 arcsec [0.91σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

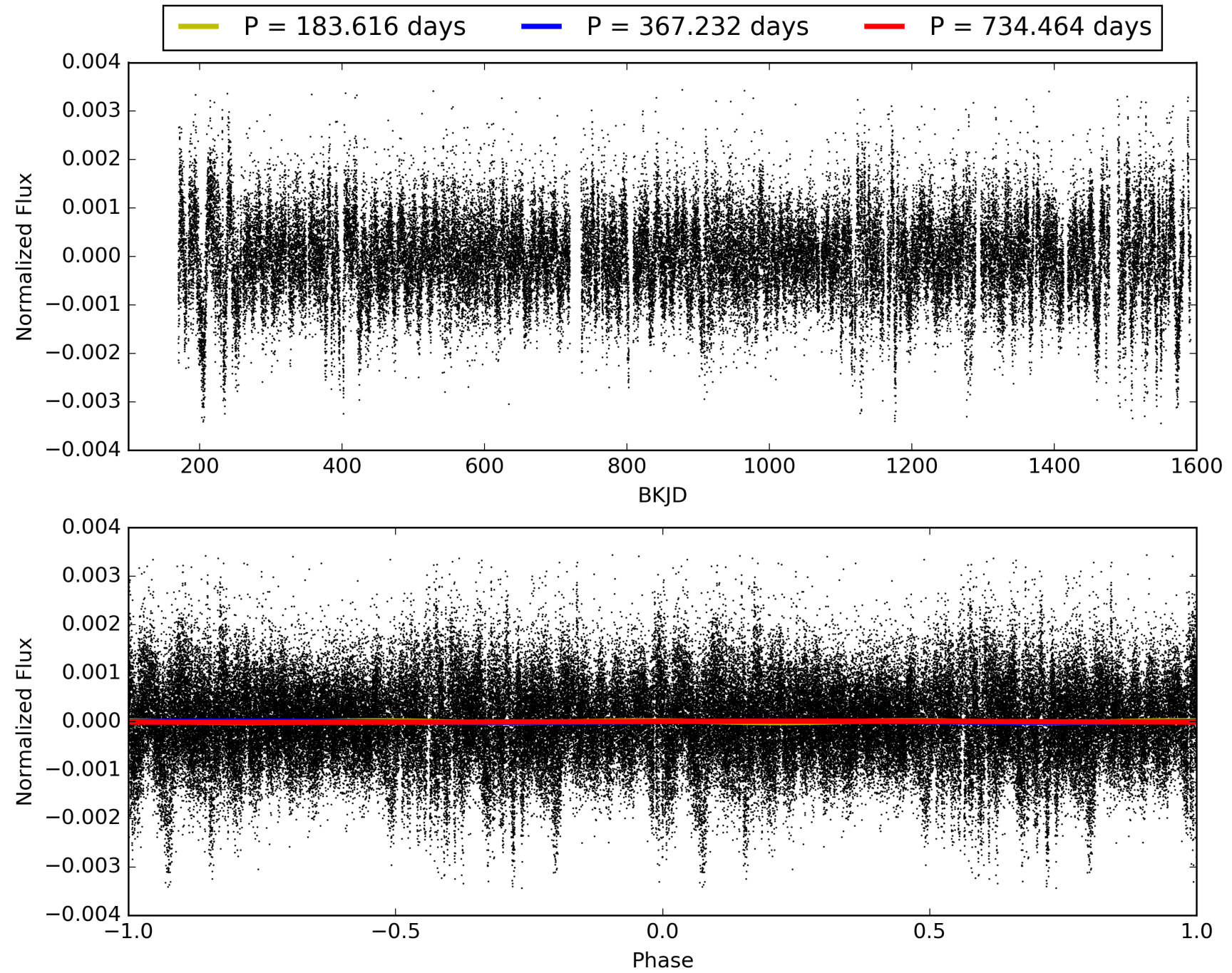
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:04:55 Z

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

TCE 009011874-01, PDC Light Curves

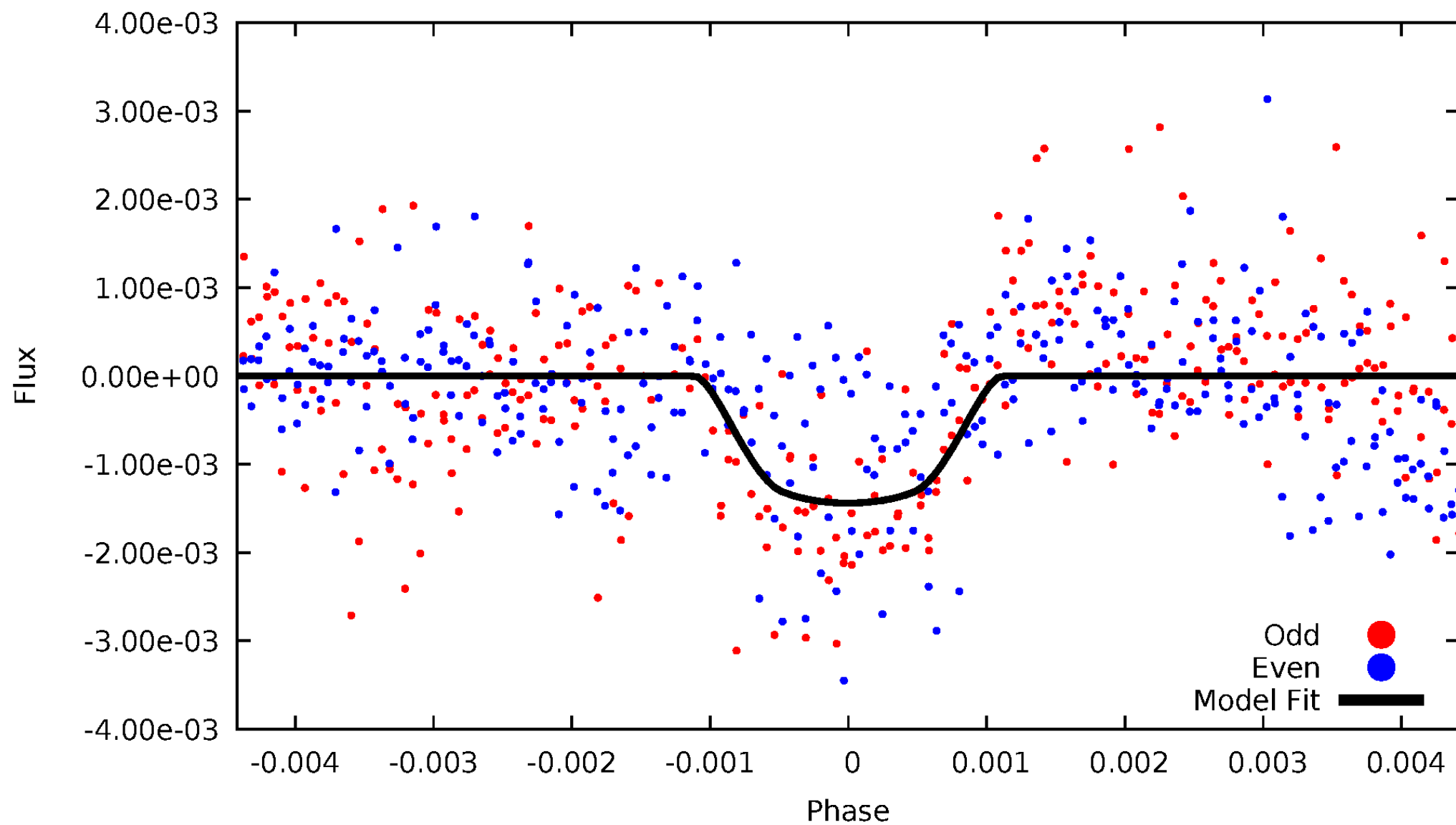


TCE 009011874-01



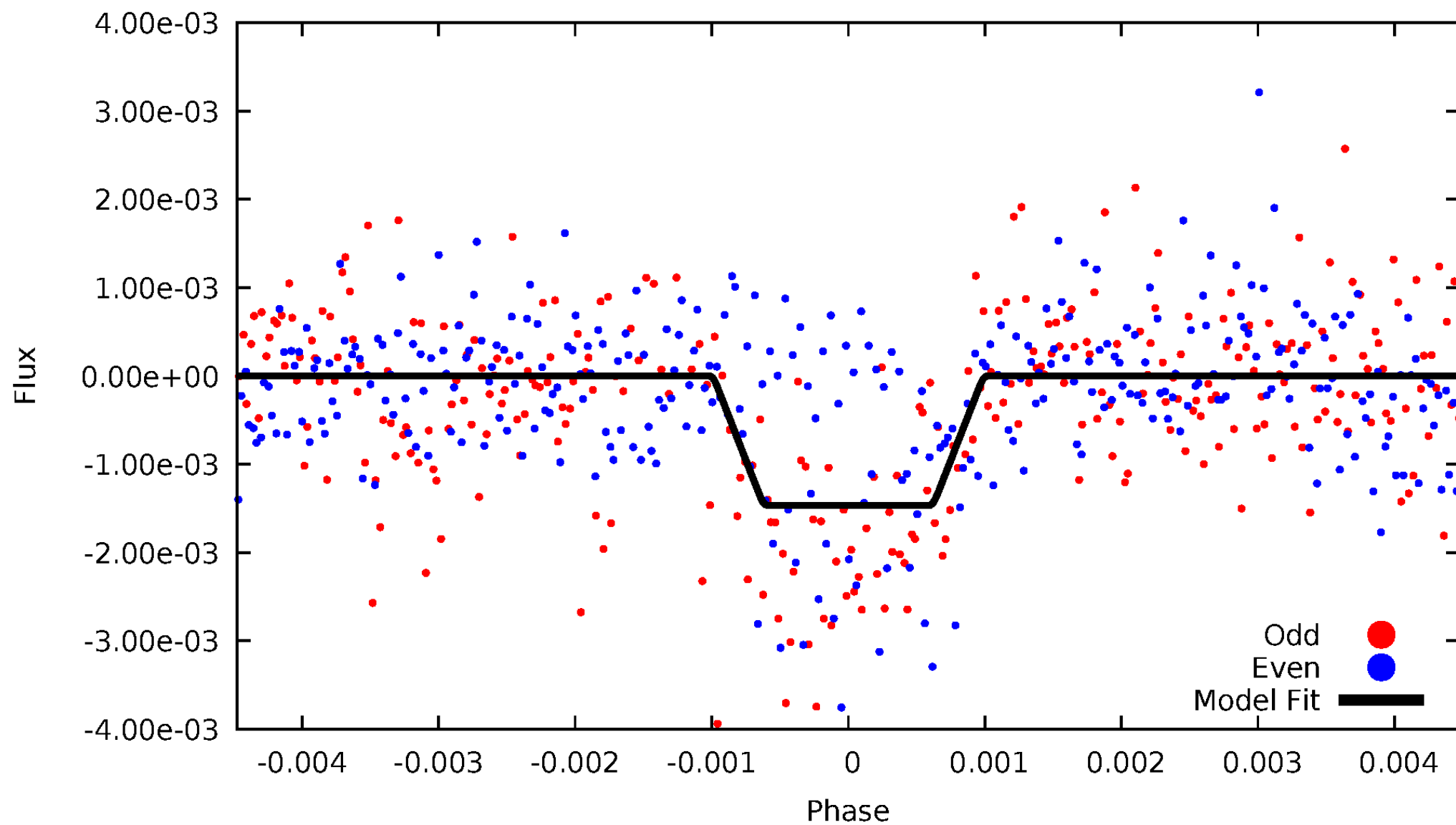
DV Odd/Even

TCE 009011874-01



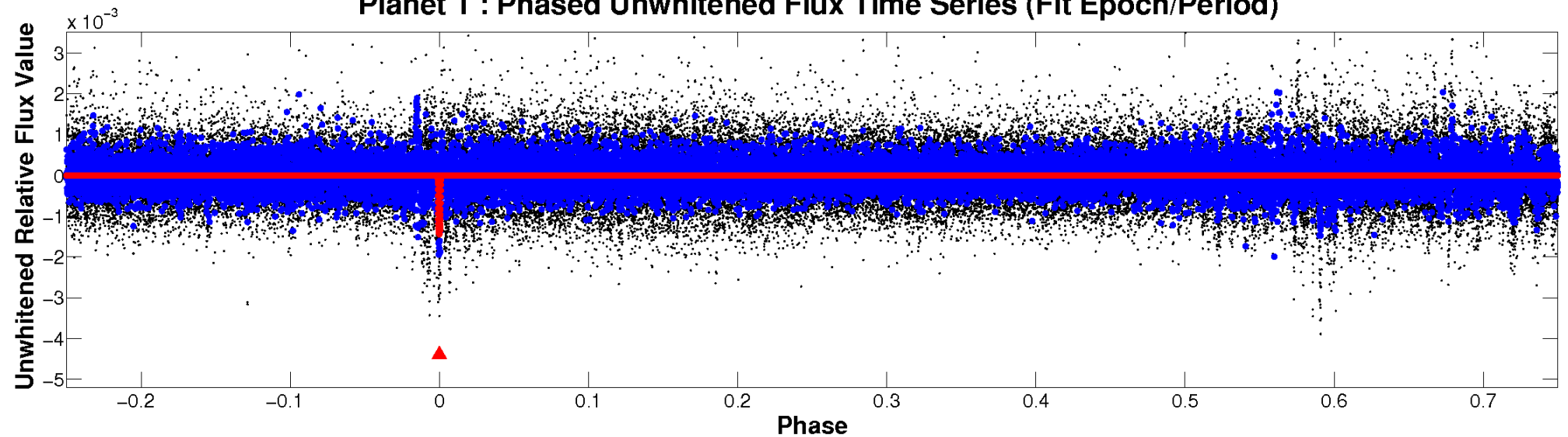
ALT Odd/Even

TCE 009011874-01

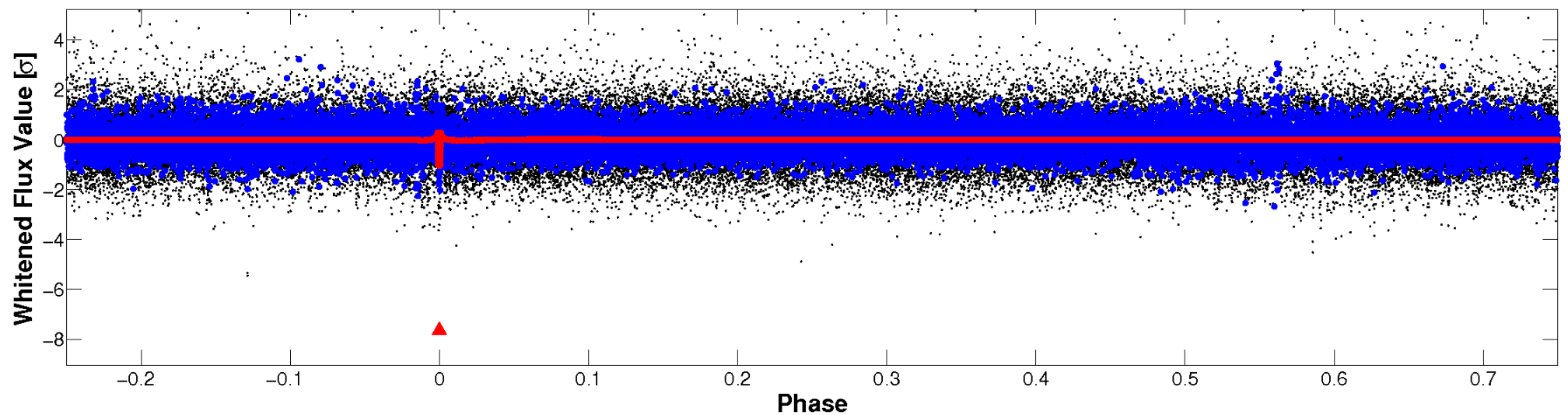


Non-Whitened Vs. Whitened Light Curve

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

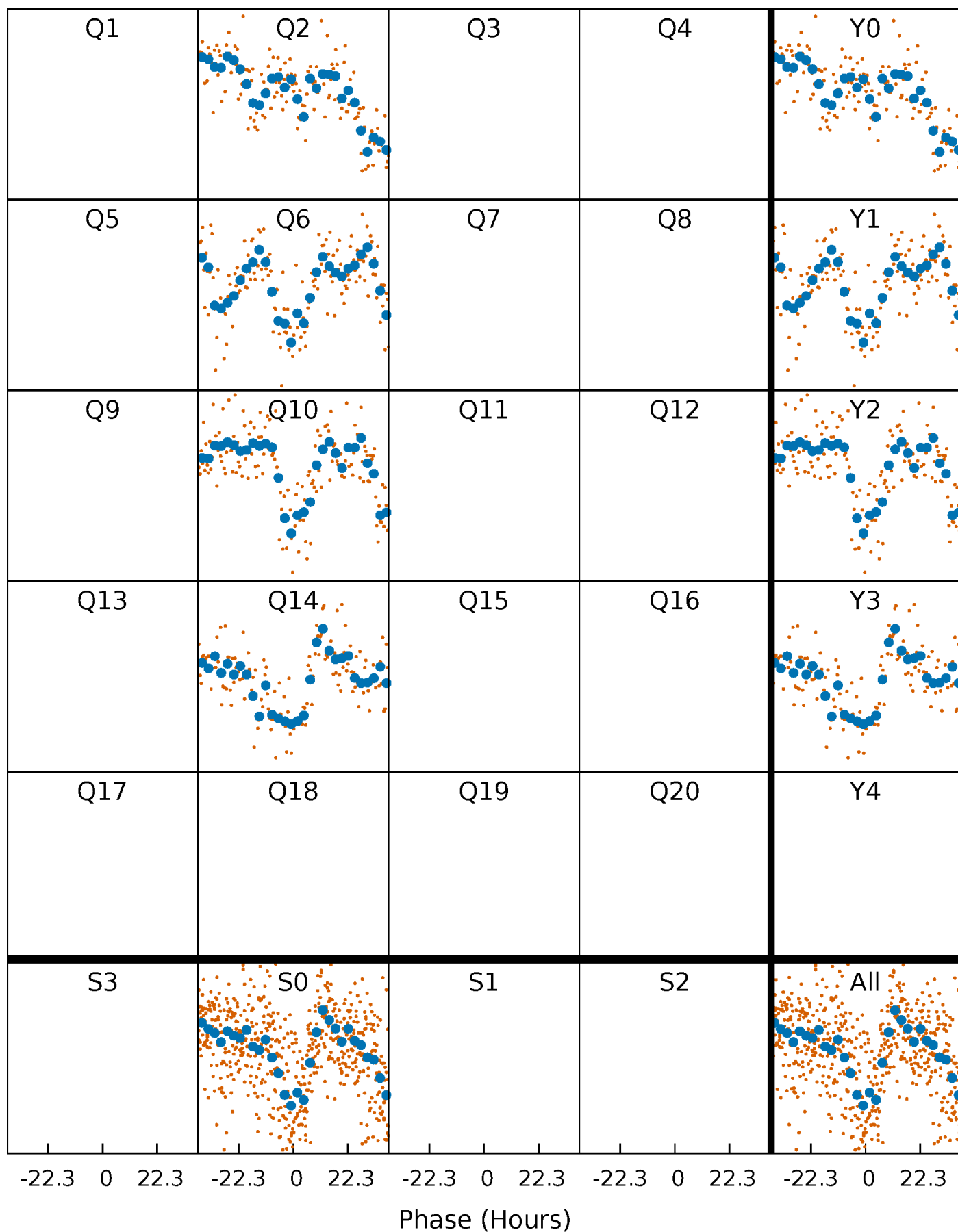


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



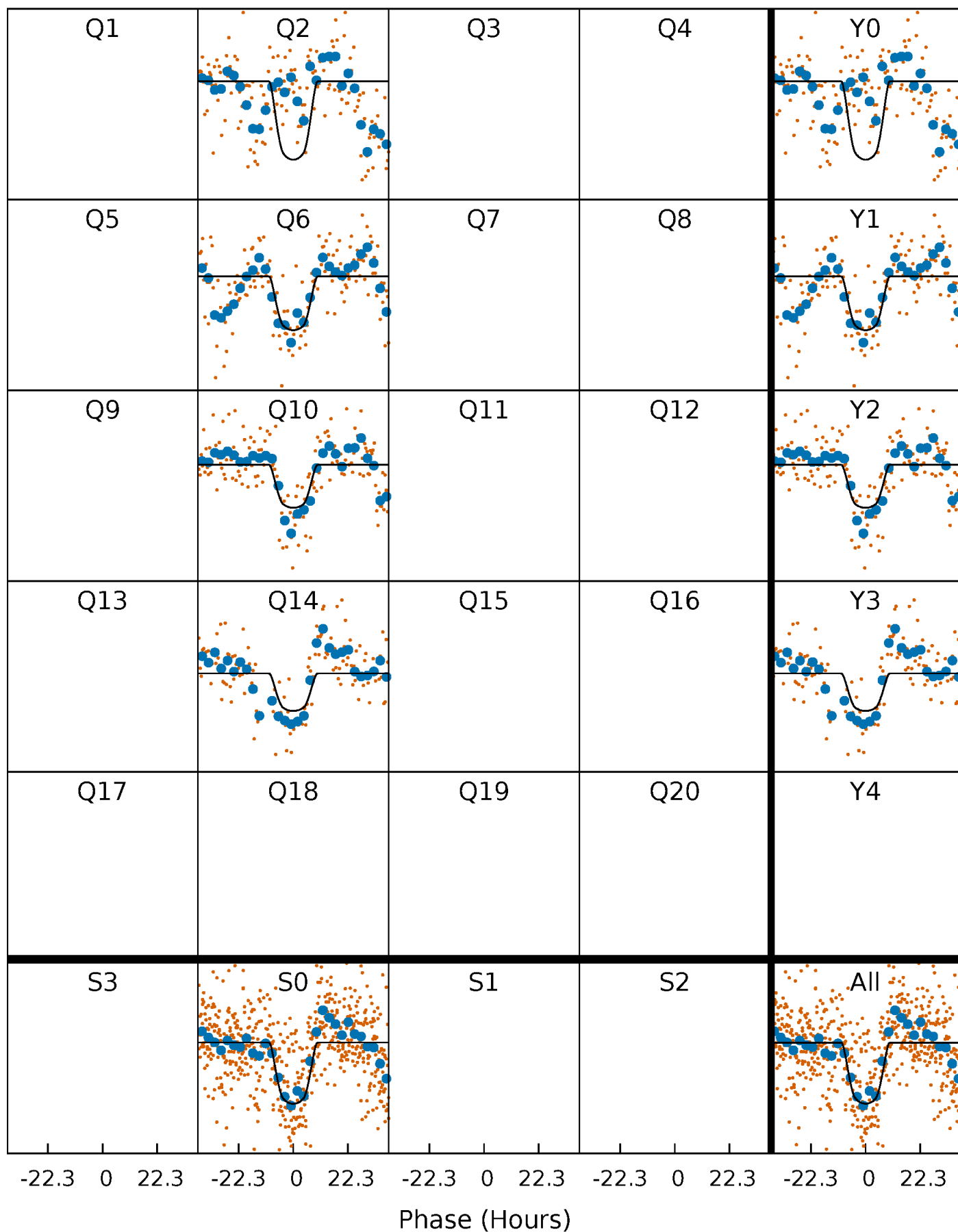
PDC Quarter-Phased Transit Curves

TCE 009011874-01 P=367.231832 Days $T_0=177.338874$ (BKJD)



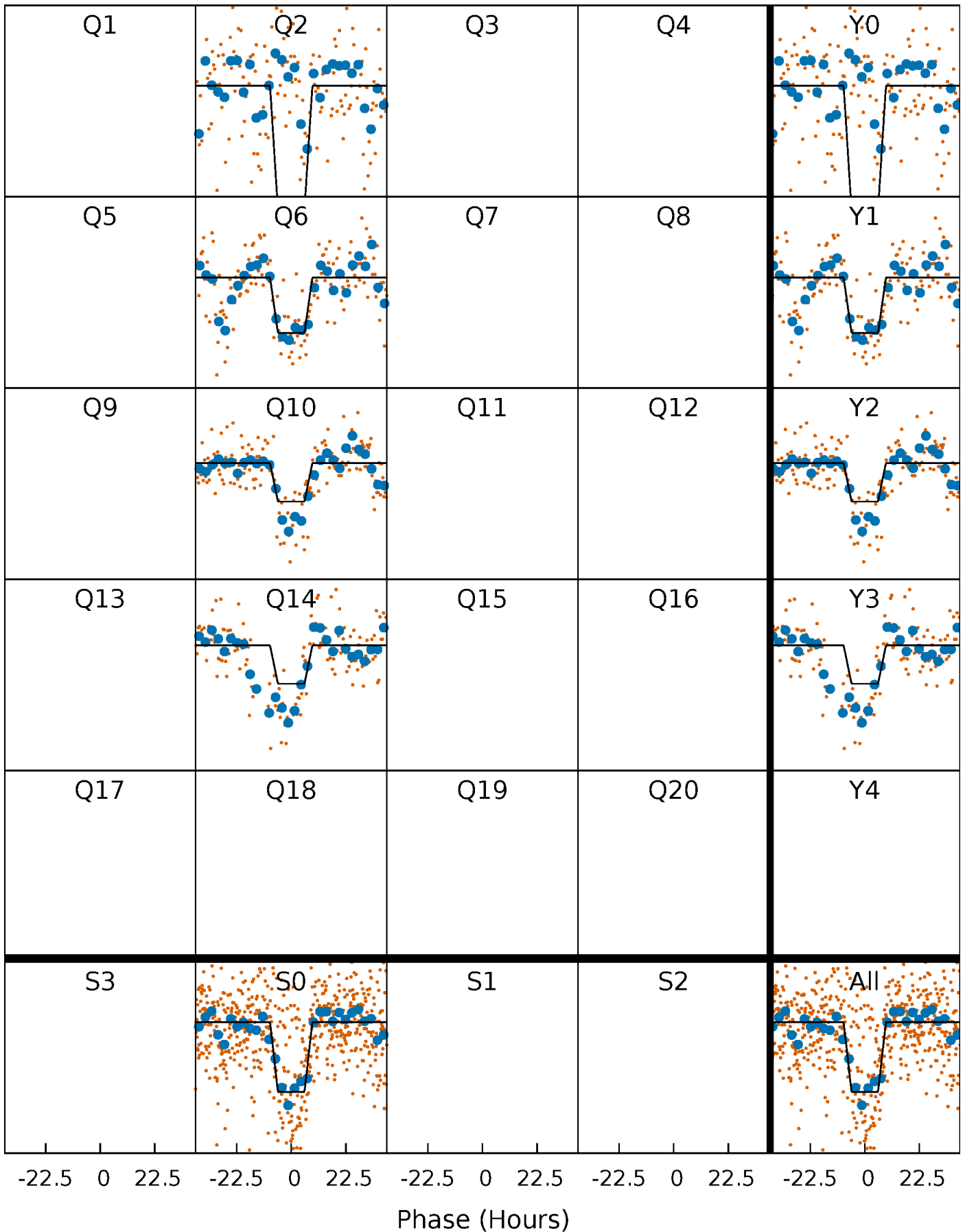
DV Quarter-Phased Transit Curves

TCE 009011874-01 P=367.231832 Days $T_0=177.338874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

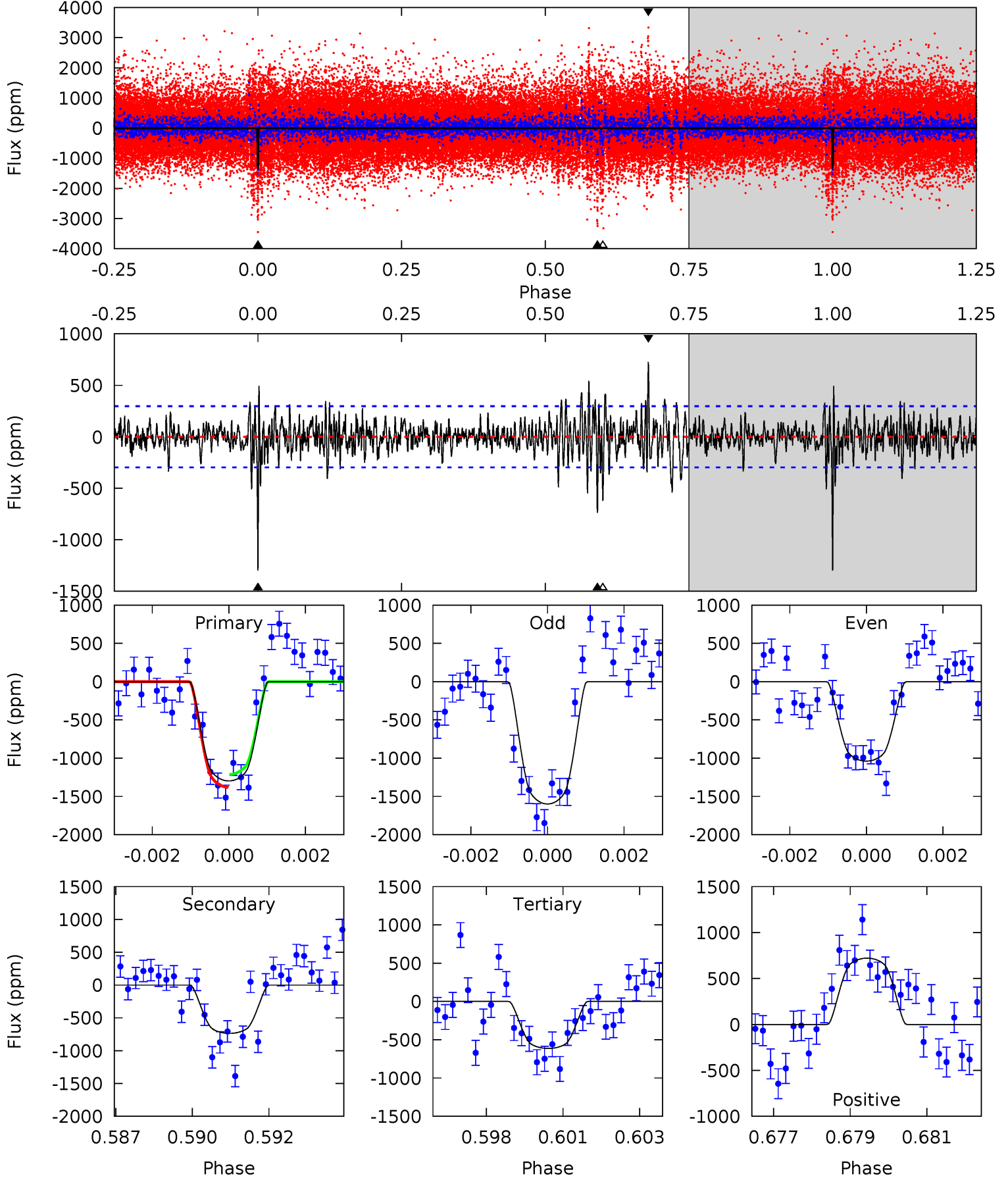
TCE 009011874-01 P=367.279619 Days $T_0=177.250503$ (BKJD)



DV Model-Shift Uniqueness Test

009011874-01, P = 367.231832 Days, E = 177.338874 Days

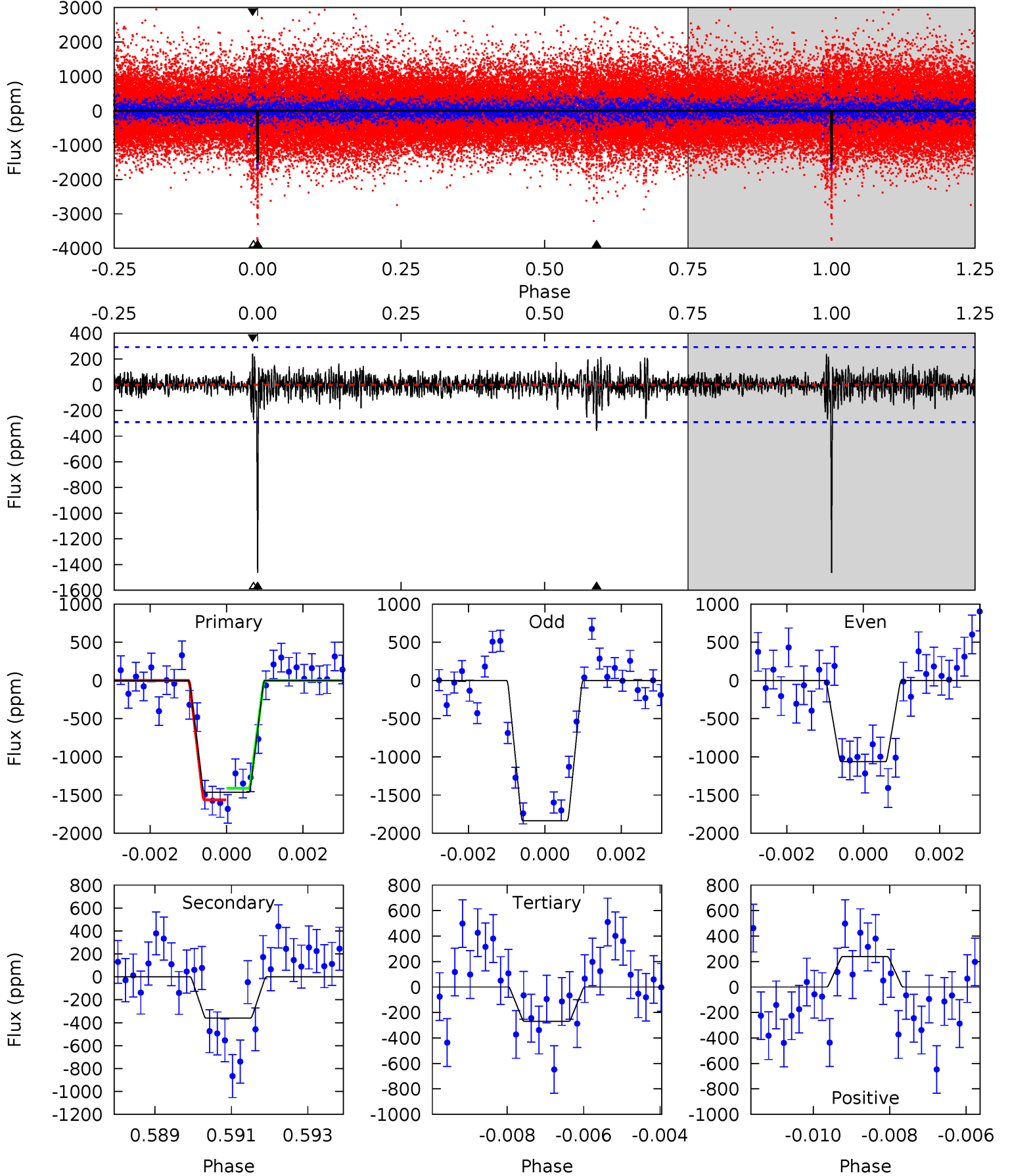
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	13.2	11.0	12.9	5.31	3.07	2.37	12.2	10.3	2.19	0.26	5.01	0.83	0.36	1.49



Alt Model-Shift Uniqueness Test

009011874-01, P = 367.279619 Days, E = 177.250503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	6.56	4.92	4.36	5.32	3.08	1.02	21.8	22.3	1.63	2.19	7.07	0.80	0.14	1.37



Stellar Parameters For KIC 009011874

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5207^{+173}_{-173}	$4.461^{+0.084}_{-0.126}$	$0.480^{+0.050}_{-0.250}$	$0.931^{+0.181}_{-0.097}$	$0.915^{+0.058}_{-0.064}$	$1.596^{+0.572}_{-0.589}$
	+3%/-3%	+2%/-3%	+10%/-52%	+19%/-10%	+6%/-7%	+36%/-37%
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 009011874-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-736 ± 56	$4.53^{+0.55}_{-0.52}$	314^{+18}_{-15}	4283^{+211}_{-206}	18674^{+5441}_{-4101}
Alt.	-360 ± 55	$3.95^{+0.54}_{-0.48}$	316^{+18}_{-15}	3945^{+228}_{-194}	11713^{+4180}_{-2927}

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

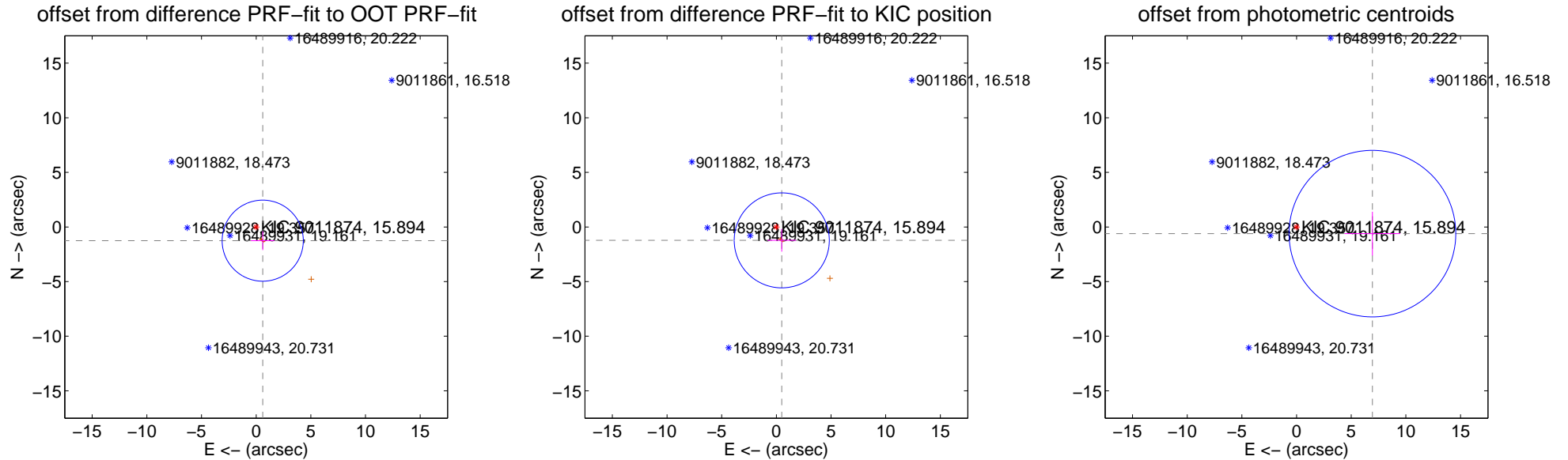
DV Centroid Data

Supplemental centroid analysis for 009011874-01. Kepler magnitude: 15.89. Transit SNR 9.78

There are 0 quarters with good PRF difference image offsets

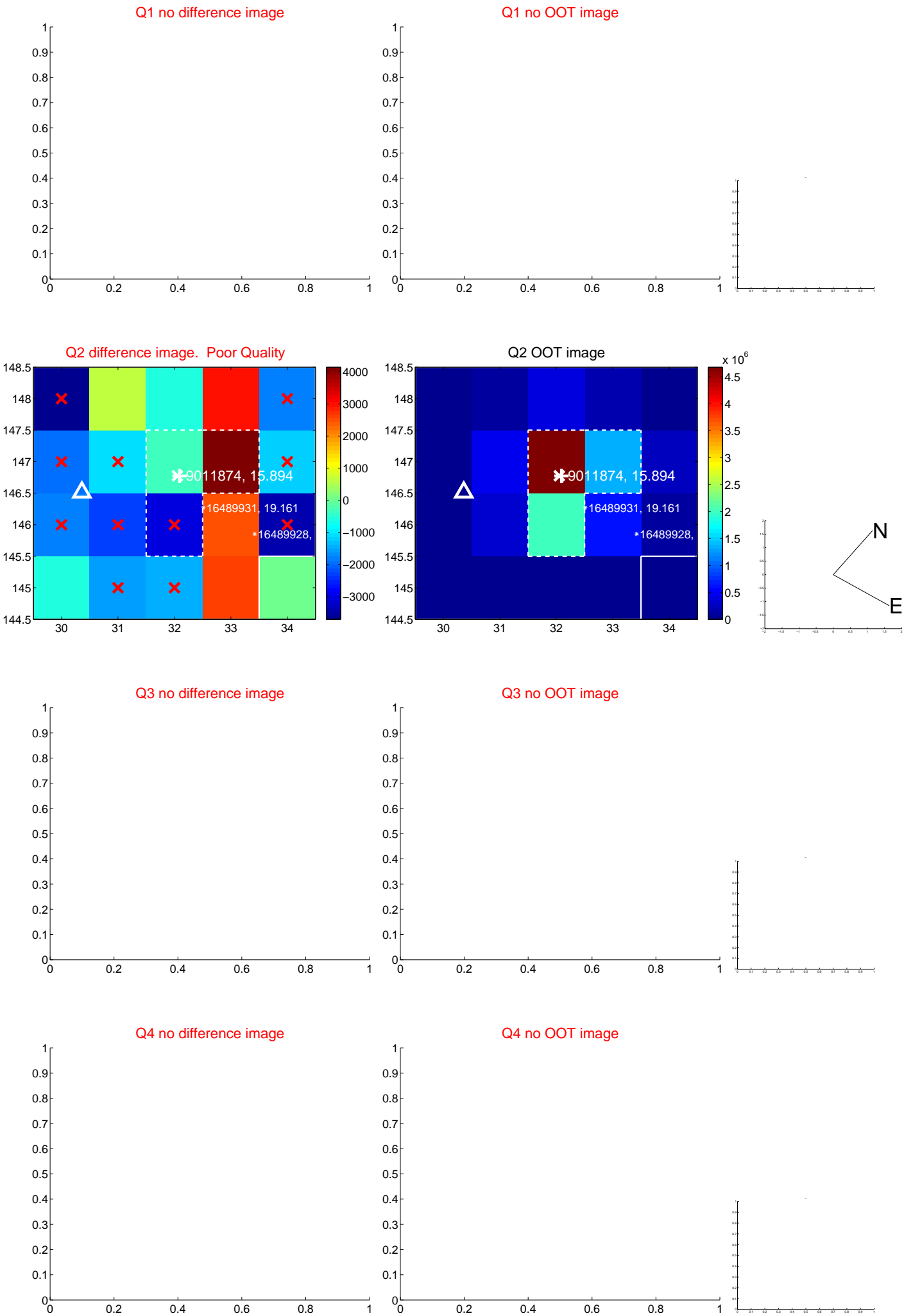
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.389 ± 1.237	1.12	-0.599 ± 1.072	-1.254 ± 0.861
PRF-fit source offset from KIC position	1.321 ± 1.449	0.91	-0.494 ± 1.309	-1.225 ± 1.036
photometric centroid source offset	6.97 ± 2.54	2.74	-6.94 ± 2.54	-0.61 ± 2.00

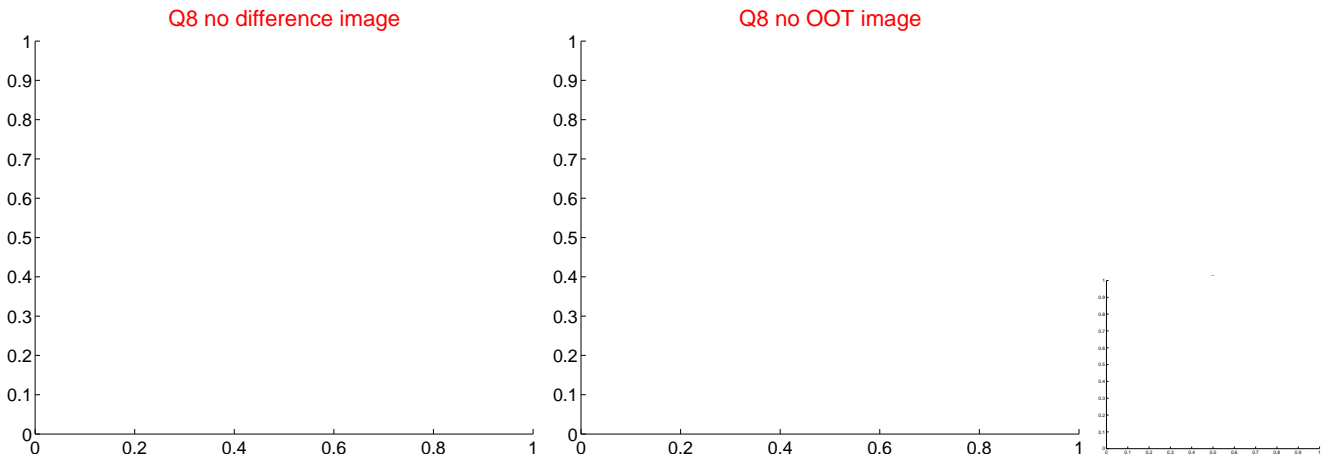
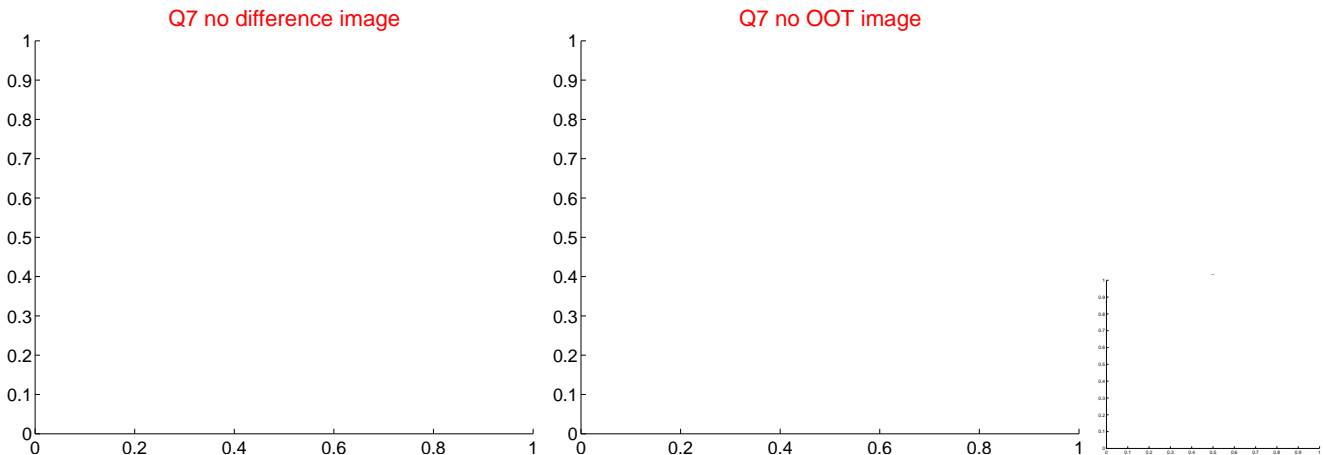
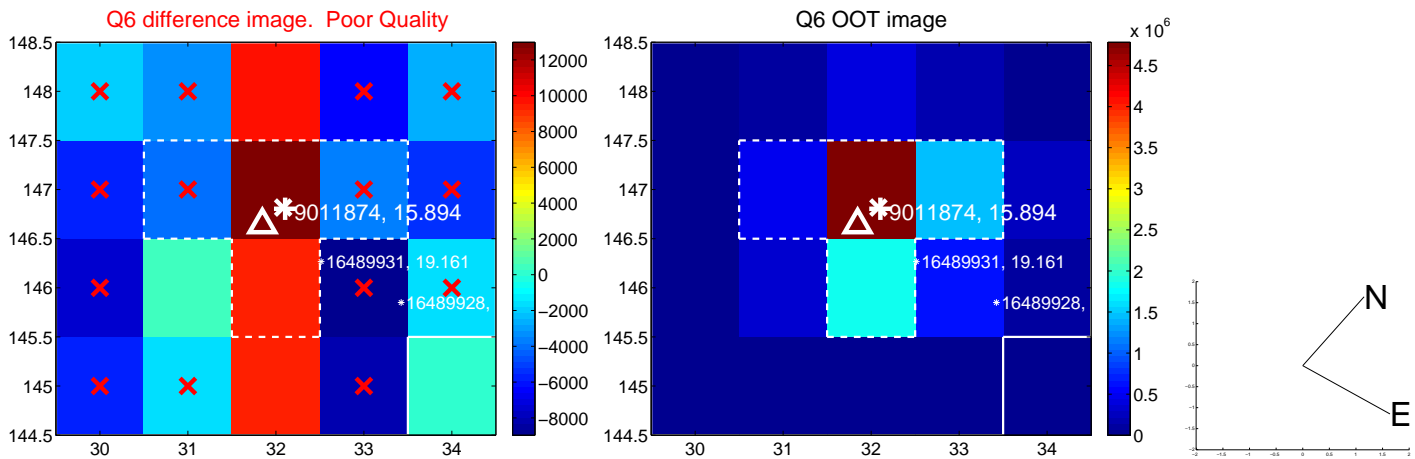
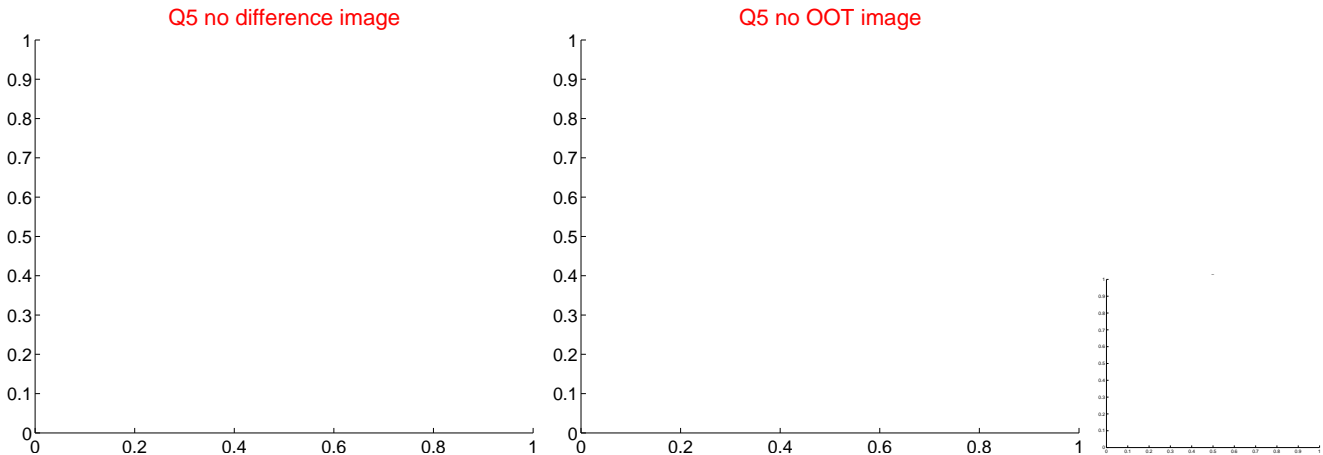


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

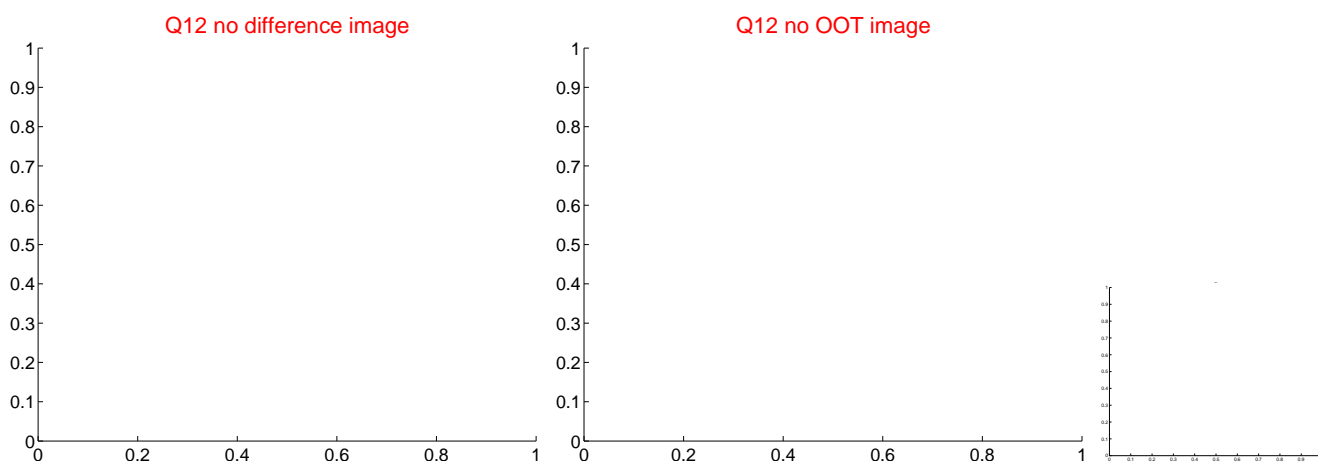
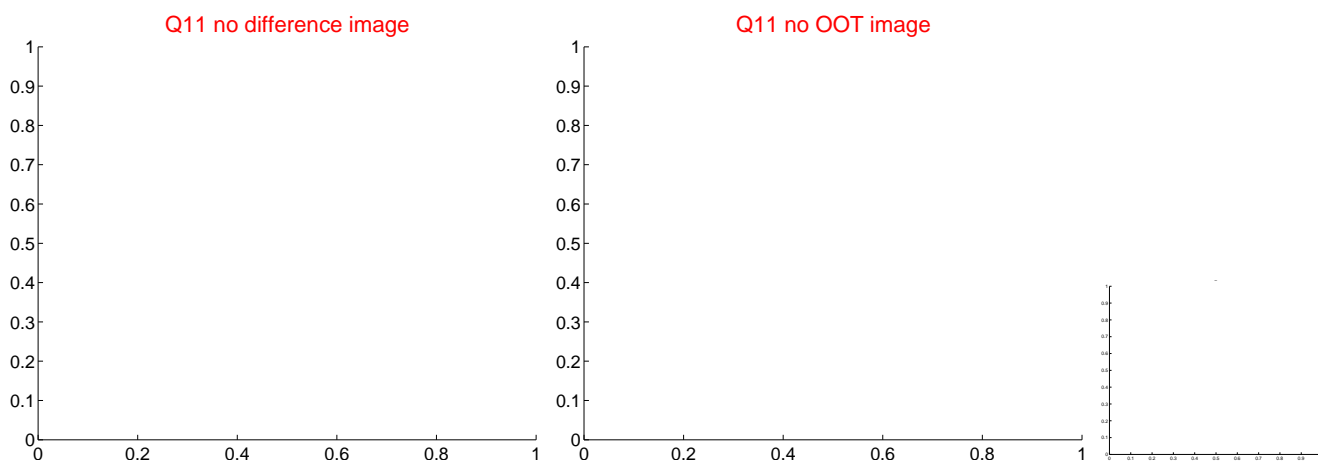
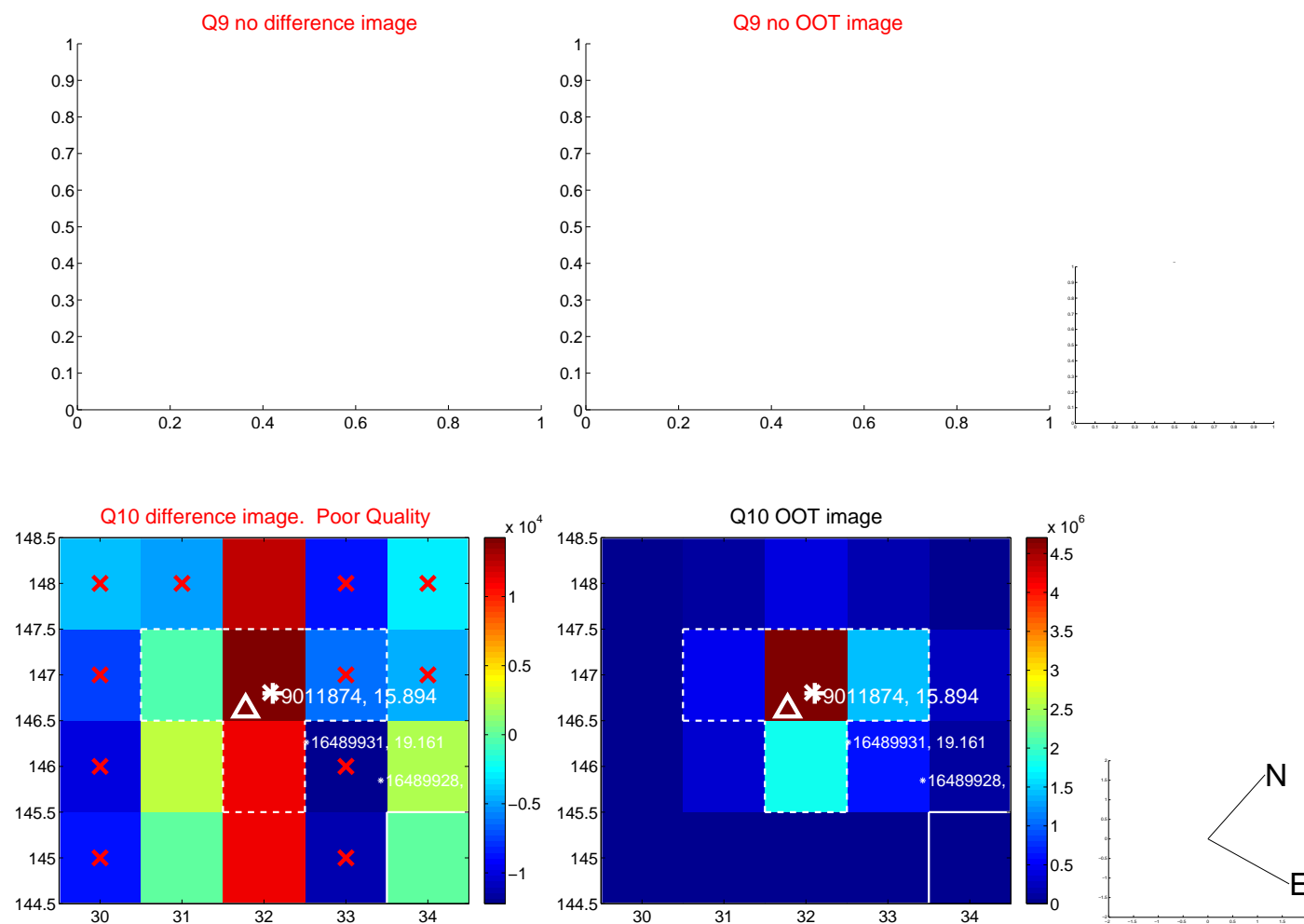
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



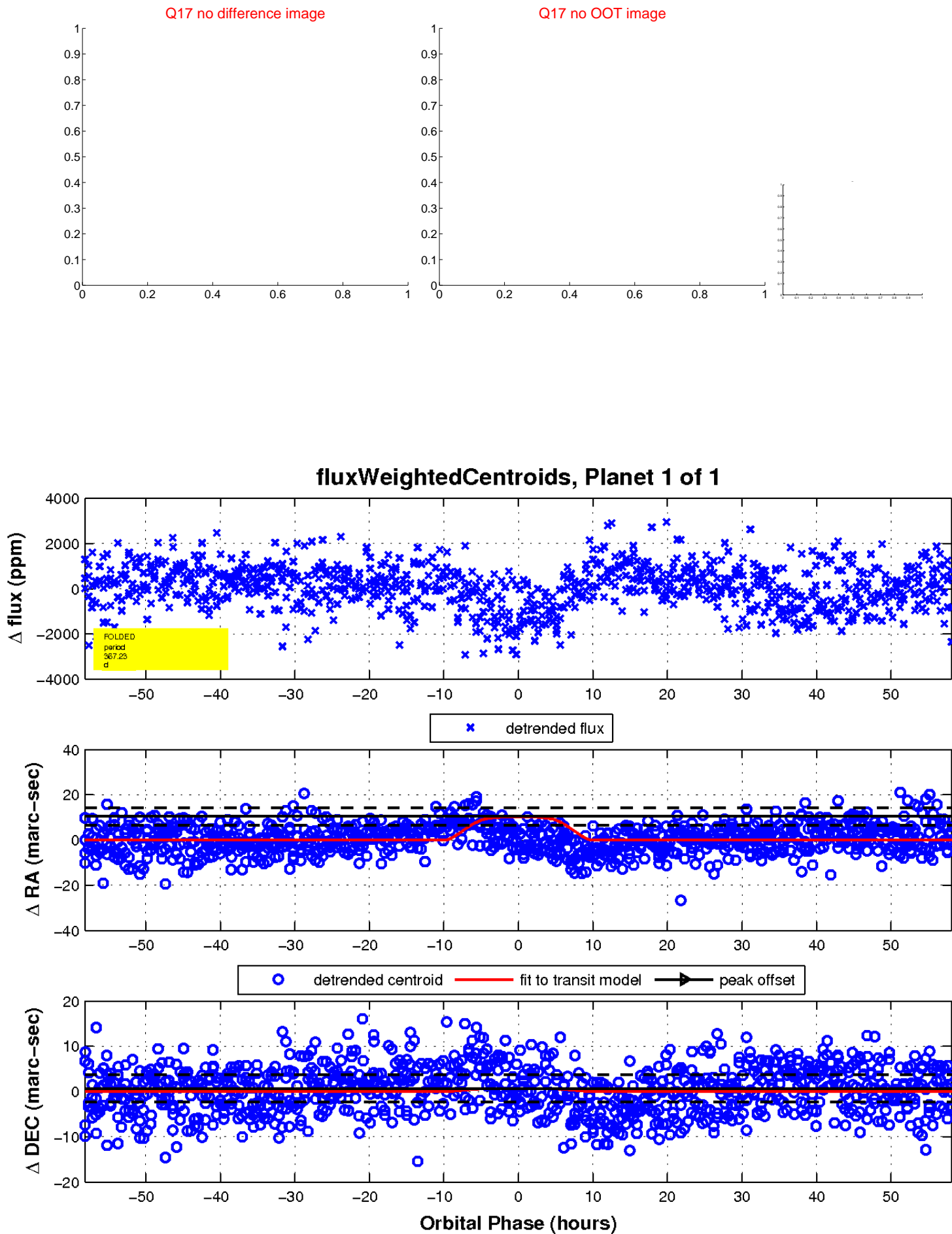
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

