

KIC 010161365

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})
010161365-01	OBS	No	314.220816	184.372969	10951.8	18.713	7.3	19.4	136.55	3299	2598.33	2254.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010161365-01	OBS	FP	0.00	1	0	0	0	LPP_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.

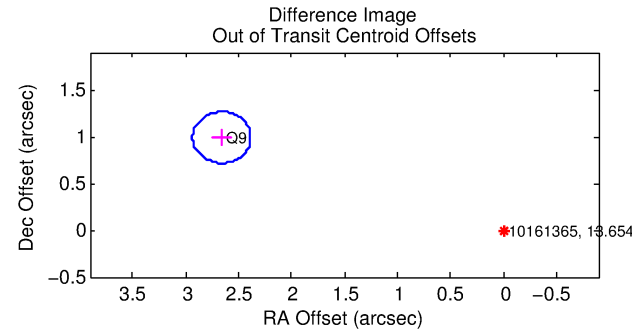
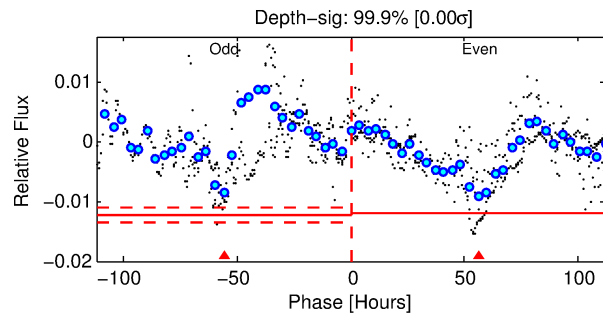
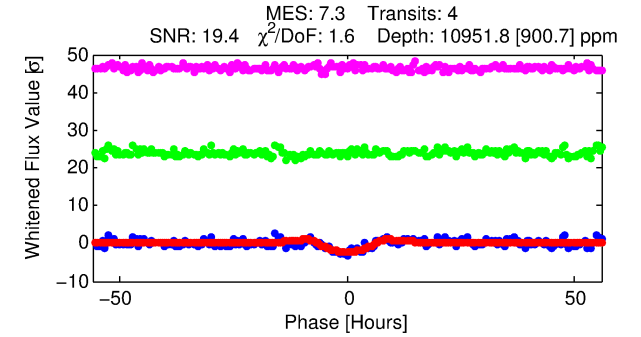
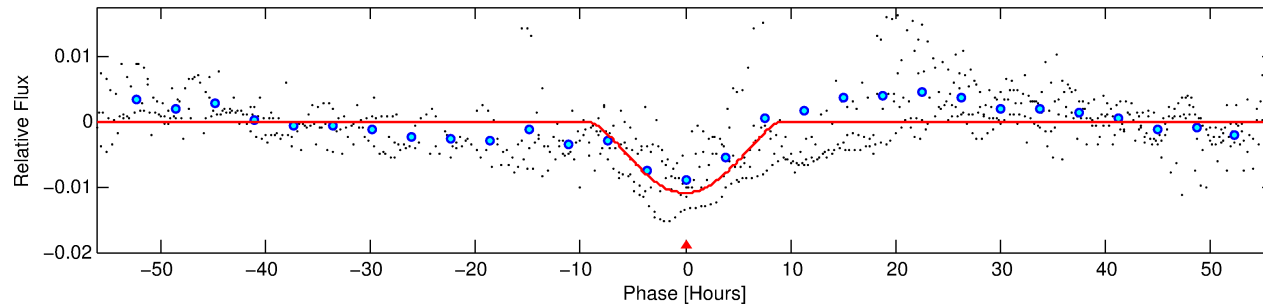
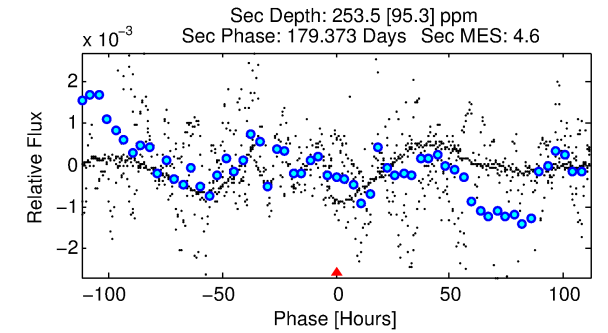
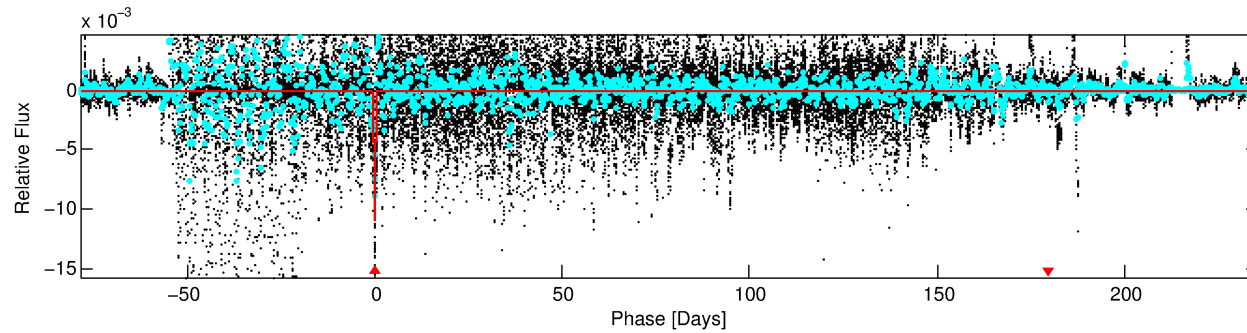
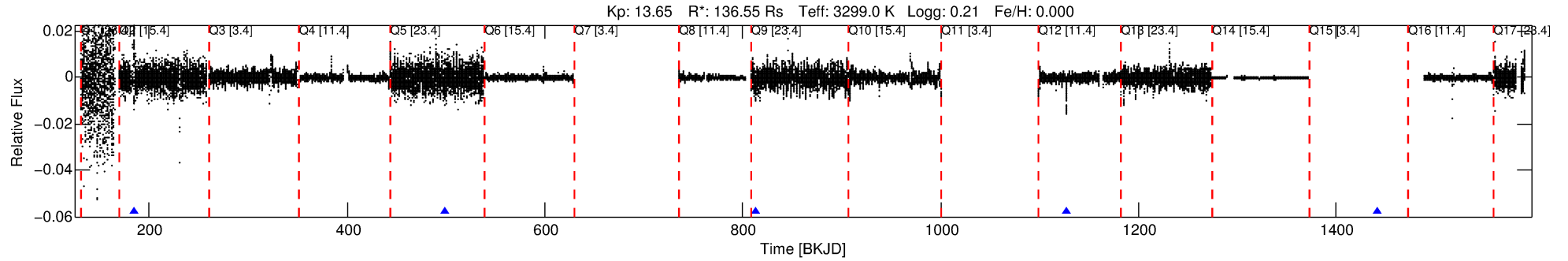
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010161365-01

No Significant Match Found

DV One-Page Summary

KIC: 10161365 Candidate: 1 of 1 Period: 314.221 d



DV Fit Results:

Period = 314.22082 [0.00841] d
Epoch = 184.3730 [0.0176] BKJD
Rp/R* = 0.1744 [0.3117]
a/R* = 82.85 [19.10]
b = 0.98 [0.45]
Seff = 2254.14 [953.78]
Teq = 1757 [186] K
Rp = 2598.33 [4684.13] Re
a = 0.9370 [0.2259] AU
Ag = 0.02 [0.07] [-14.97σ]
Teffp = 997 [897] K [-0.83σ]

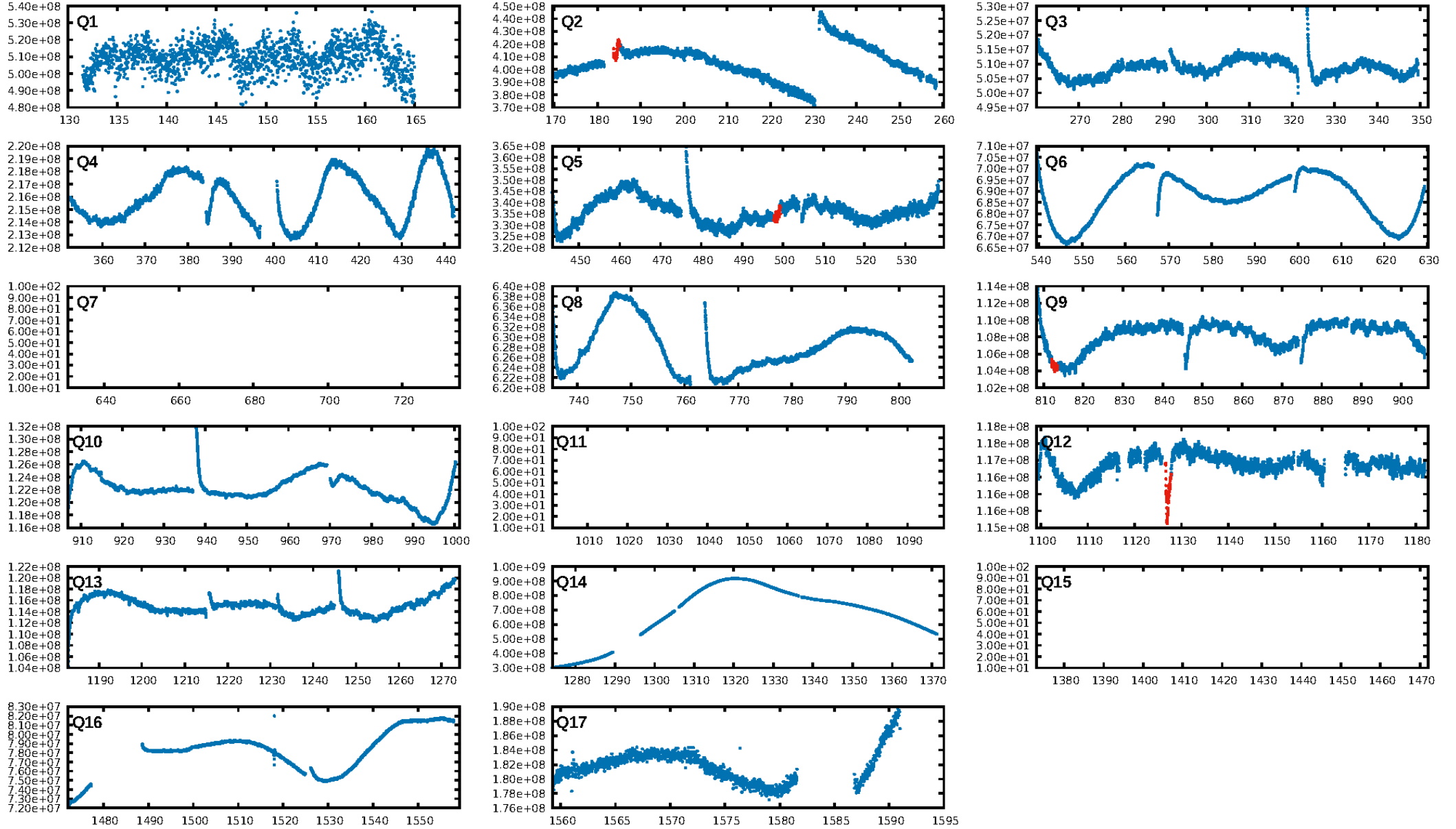
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.4%
Bootstrap-pfa: 5.18e-05
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.323
Centroid-sig: 34.6%
Centroid-so: 0.990 arcsec [14.65σ]
OotOffset-rm: 2.836 arcsec [31.01σ]
KicOffset-rm: 3.251 arcsec [35.47σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

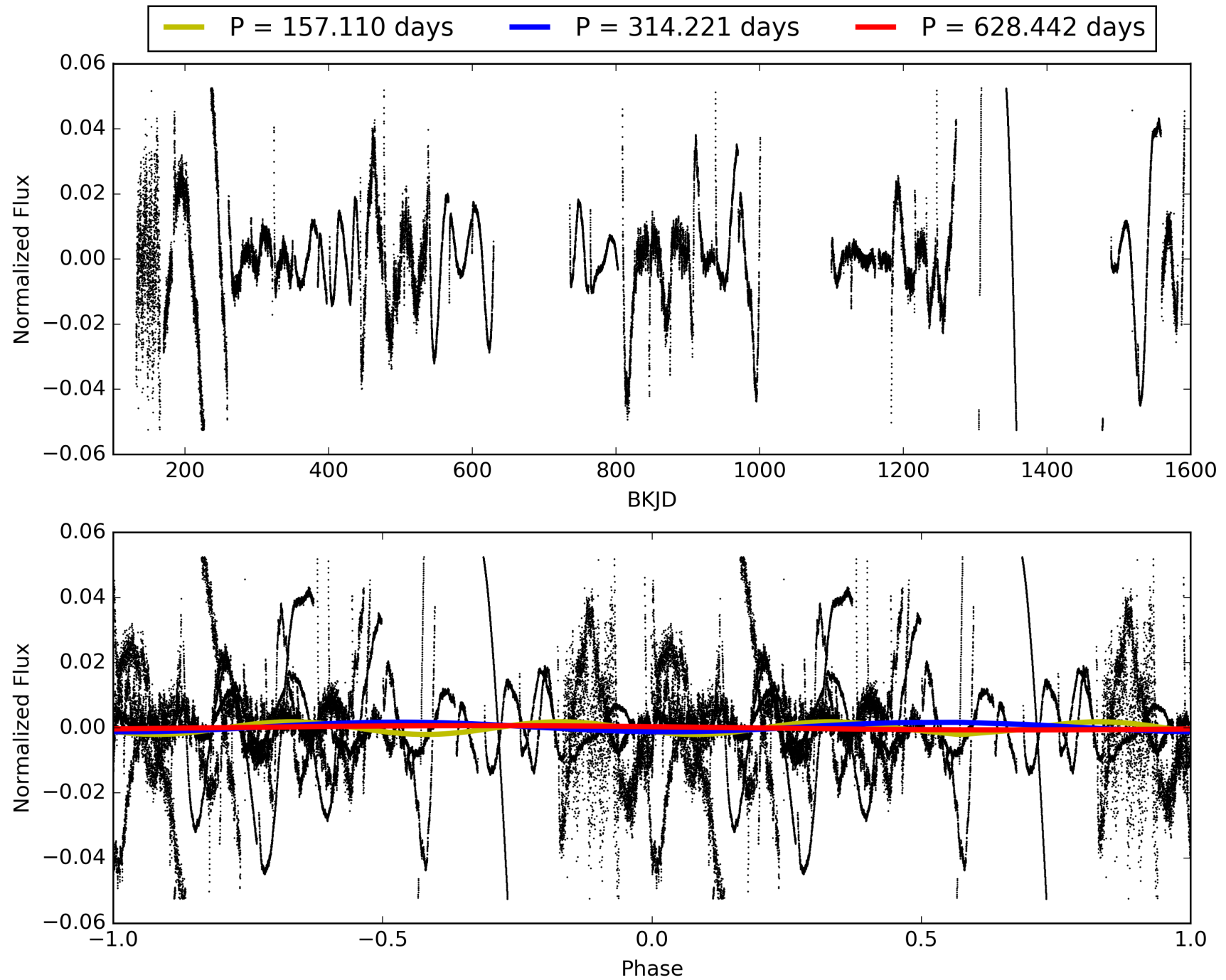
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:54:13 Z

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

TCE 010161365-01, PDC Light Curves

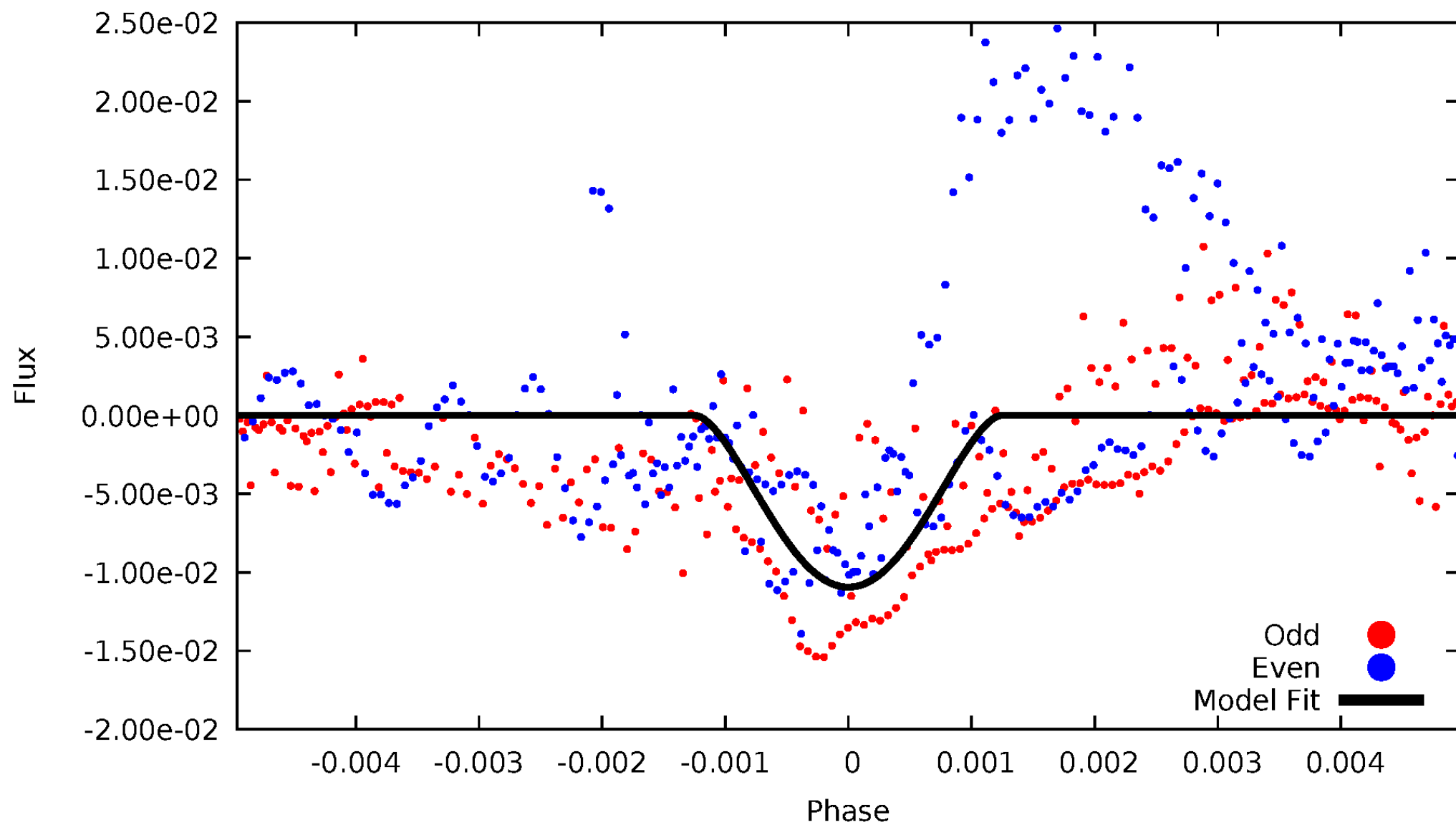


TCE 010161365-01



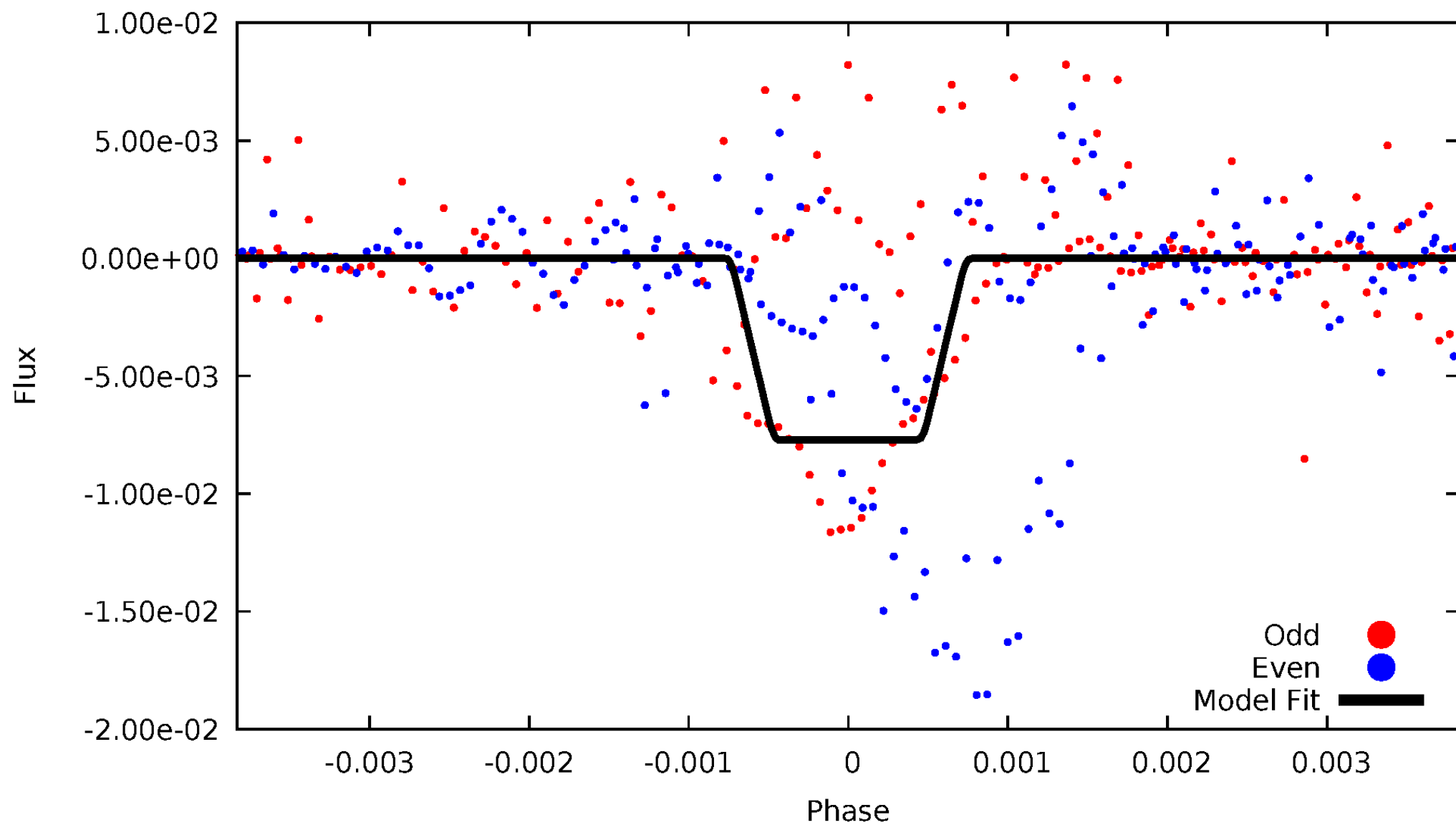
DV Odd/Even

TCE 010161365-01



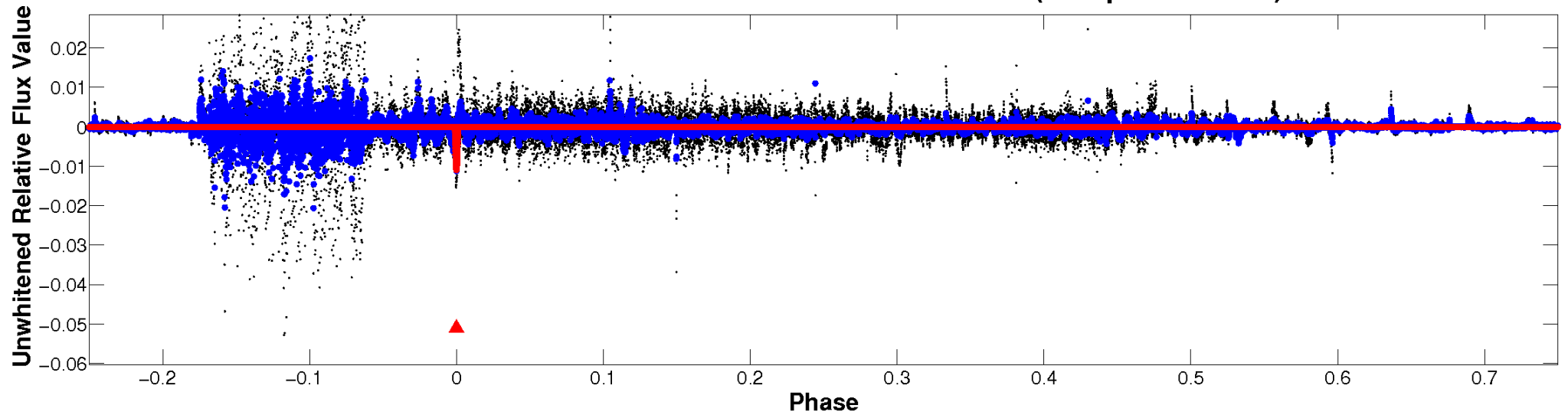
ALT Odd/Even

TCE 010161365-01

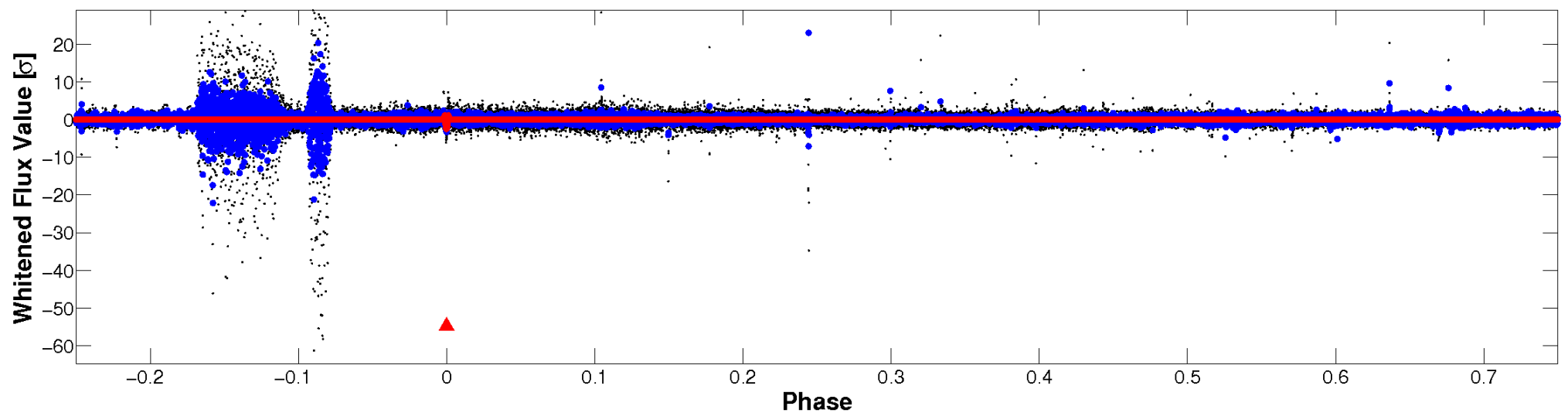


Non-Whitened Vs. Whitened Light Curve

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

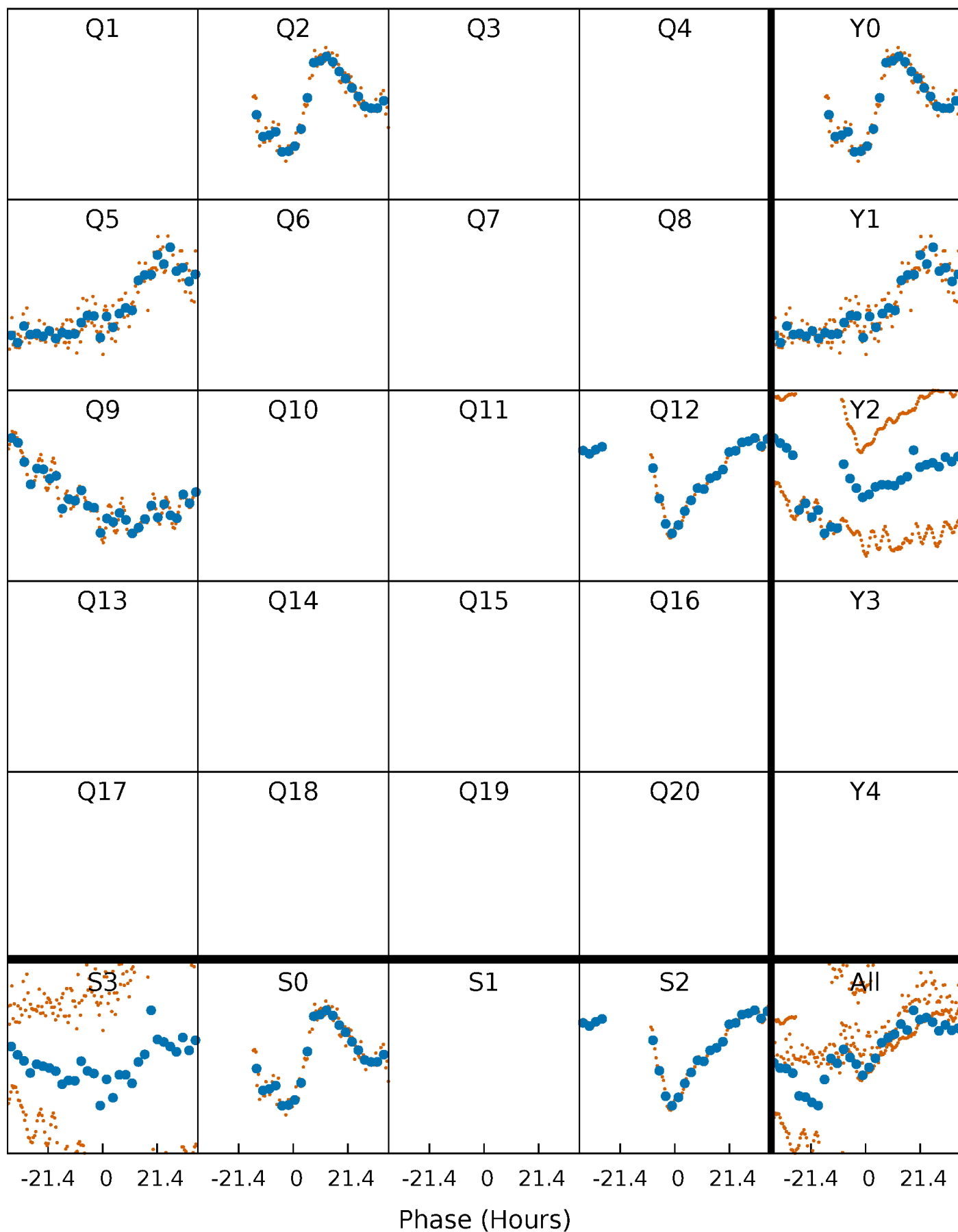


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



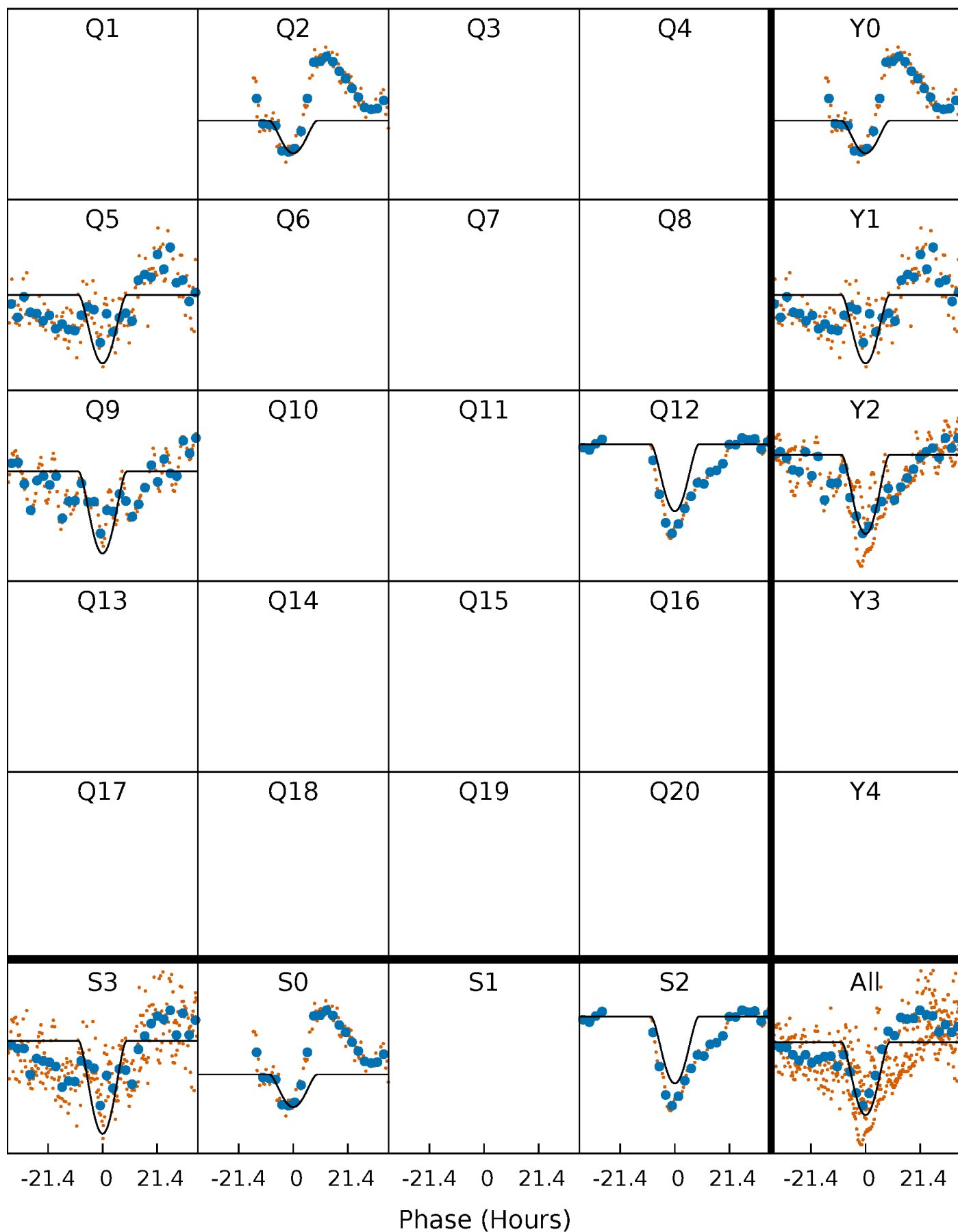
PDC Quarter-Phased Transit Curves

TCE 010161365-01 P=314.220816 Days $T_0=184.372970$ (BKJD)



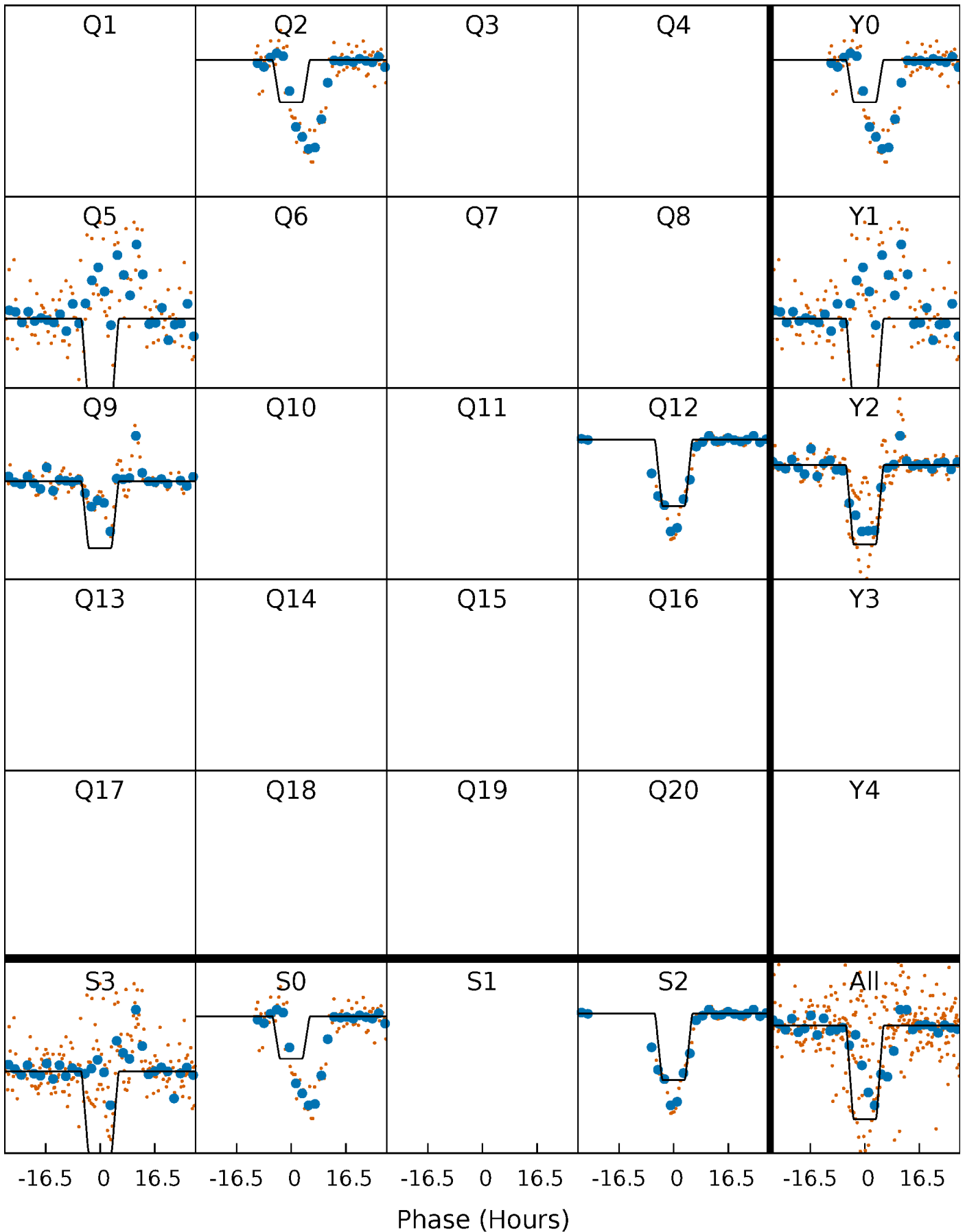
DV Quarter-Phased Transit Curves

TCE 010161365-01 P=314.220816 Days $T_0=184.372970$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

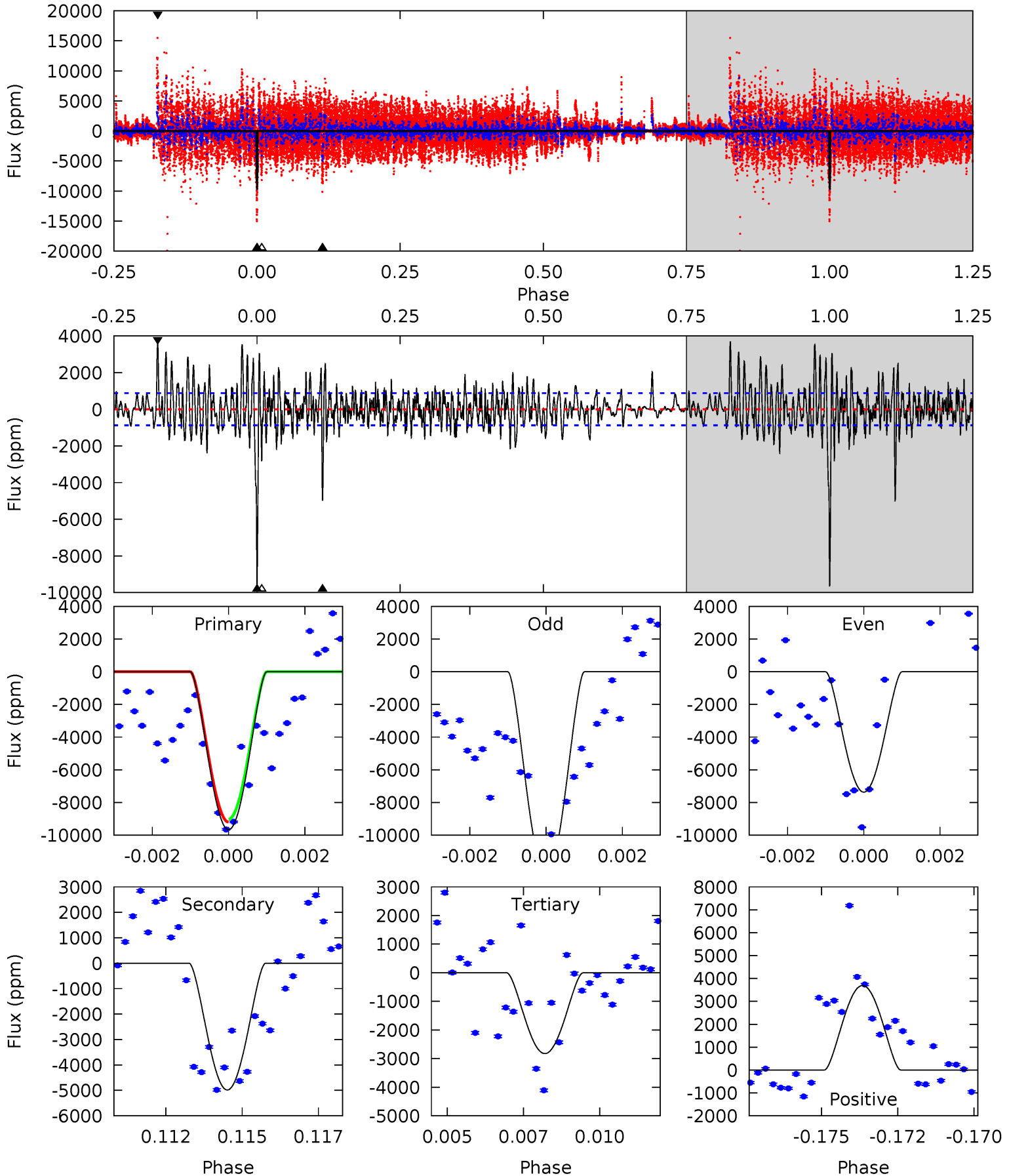
TCE 010161365-01 P=314.254530 Days $T_0=184.183696$ (BKJD)



DV Model-Shift Uniqueness Test

010161365-01, P = 314.220816 Days, E = 184.372970 Days

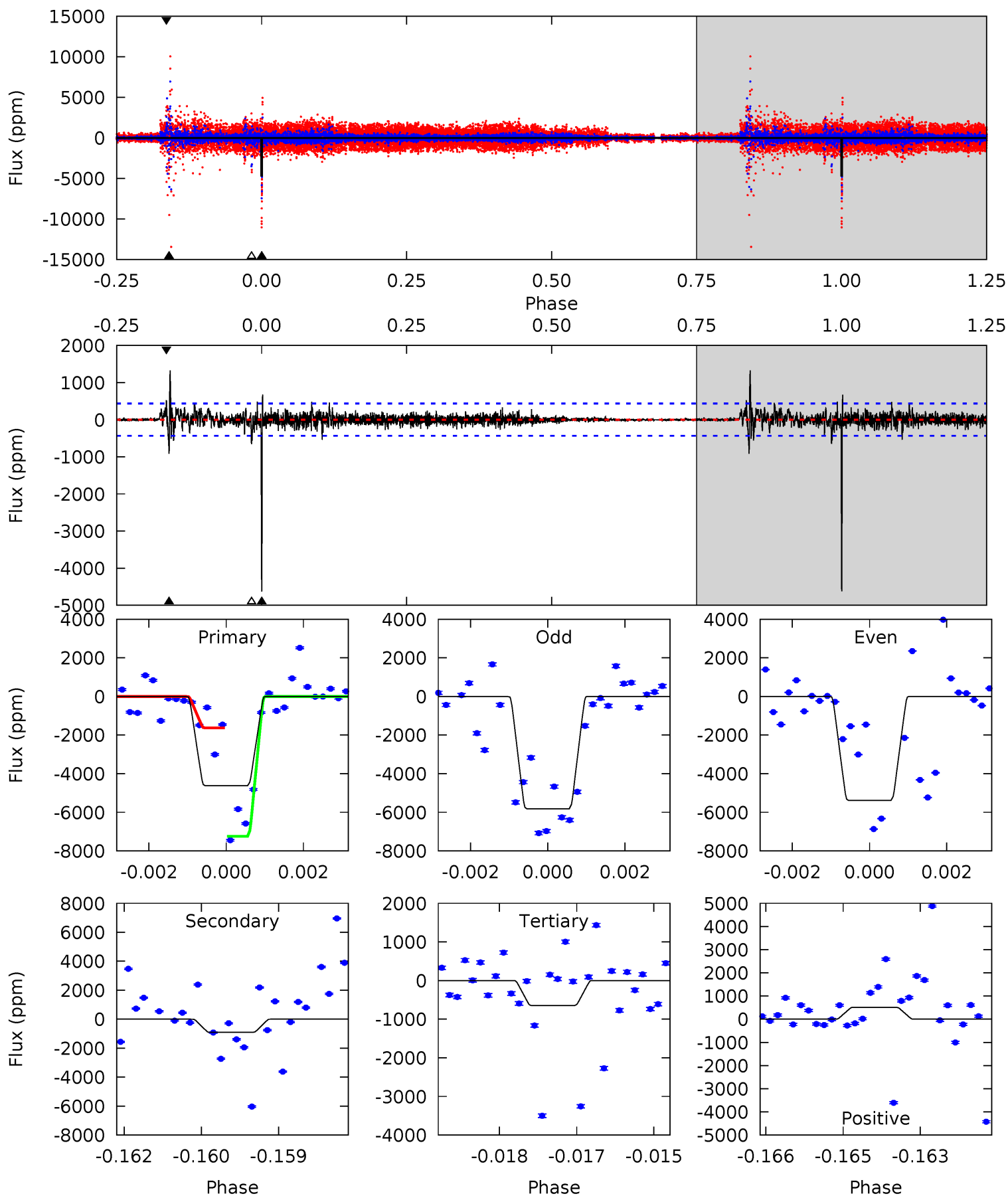
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.1	30.0	17.0	22.2	5.29	3.02	4.85	41.1	35.9	13.0	7.76	13.8	1.25	0.28	0.54



Alt Model-Shift Uniqueness Test

010161365-01, P = 314.254530 Days, E = 184.183696 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.2	11.3	8.02	6.35	5.37	3.17	1.11	49.2	50.8	3.27	4.94	2.46	0.80	0.22	0



Stellar Parameters For KIC 010161365

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3299^{+114}_{-91}	$0.213^{+0.240}_{-0.080}$	$0.000^{+0.250}_{-0.150}$	$136.554^{+17.158}_{-31.865}$	$1.110^{+0.239}_{-0.129}$	$0.000^{+0.000}_{-0.000}$
	+3%/-3%	+113%/-38%	+inf%/-inf%	+13%/-23%	+22%/-12%	+114%/-28%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010161365-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4984±166	$4227.70^{+3991.05}_{-2953.31}$	2421^{+134}_{-158}	-2286^{+5276}_{-193}	$0.141^{+1.272}_{-0.104}$
Alt.	-913±81	$3478.74^{+3499.50}_{-2403.48}$	2415^{+130}_{-162}	-2421^{+4574}_{-125}	$0.037^{+0.353}_{-0.028}$

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

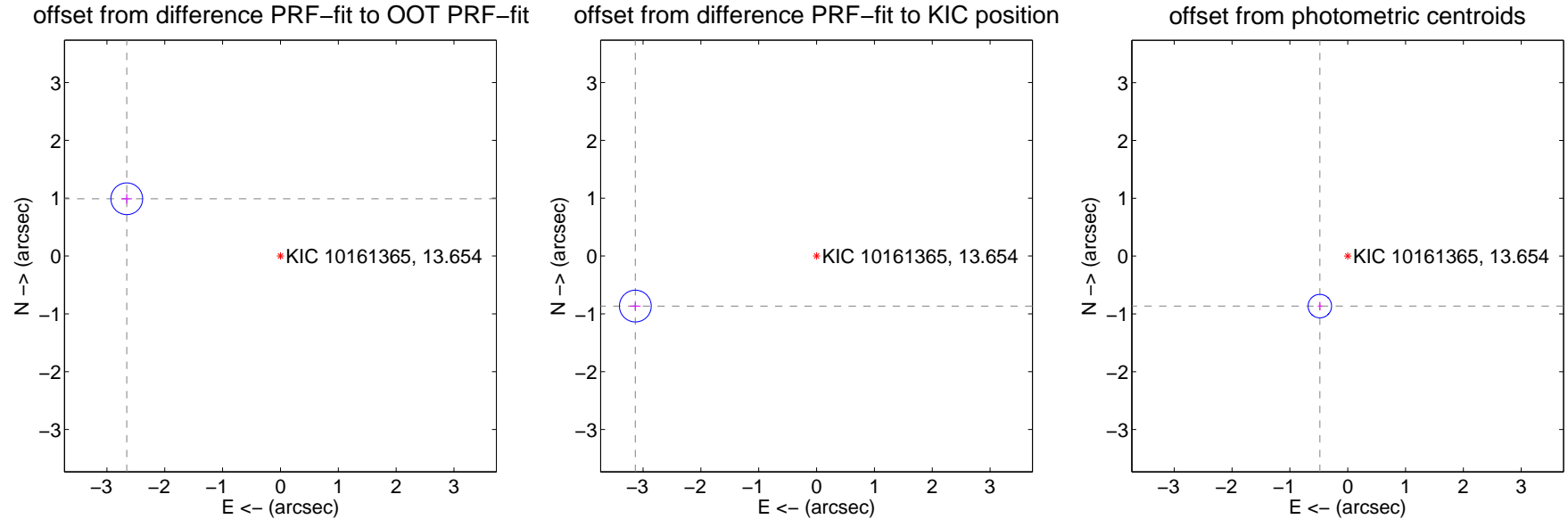
DV Centroid Data

Supplemental centroid analysis for 010161365-01. Kepler magnitude: 13.65. Transit SNR 19.39

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.92 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.836 ± 0.091	31.01	2.658 ± 0.092	0.990 ± 0.088
PRF-fit source offset from KIC position	3.251 ± 0.092	35.47	3.134 ± 0.092	-0.866 ± 0.088
photometric centroid source offset	0.99 ± 0.07	14.65	0.48 ± 0.04	-0.87 ± 0.07

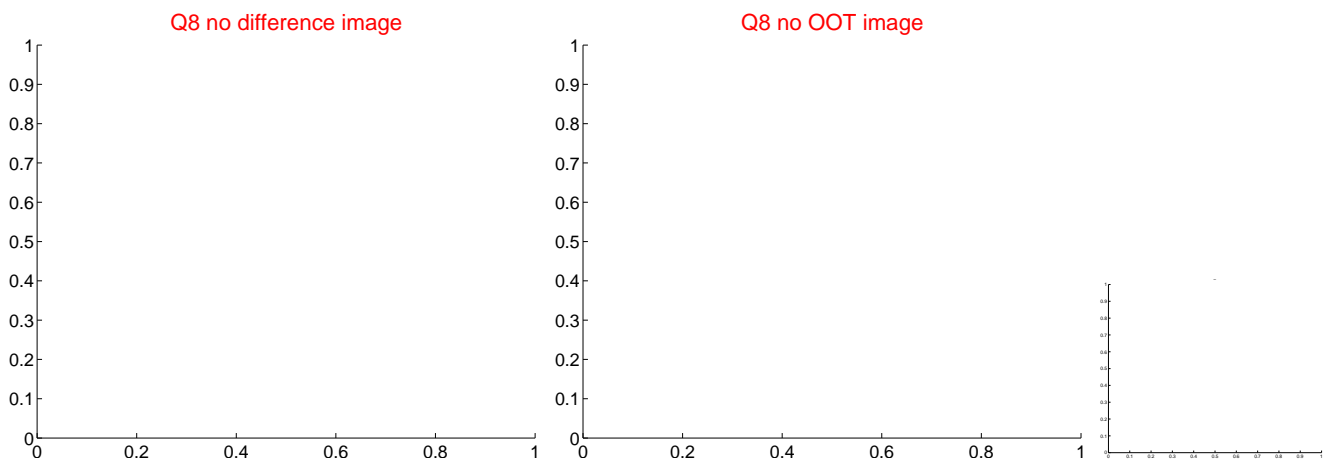
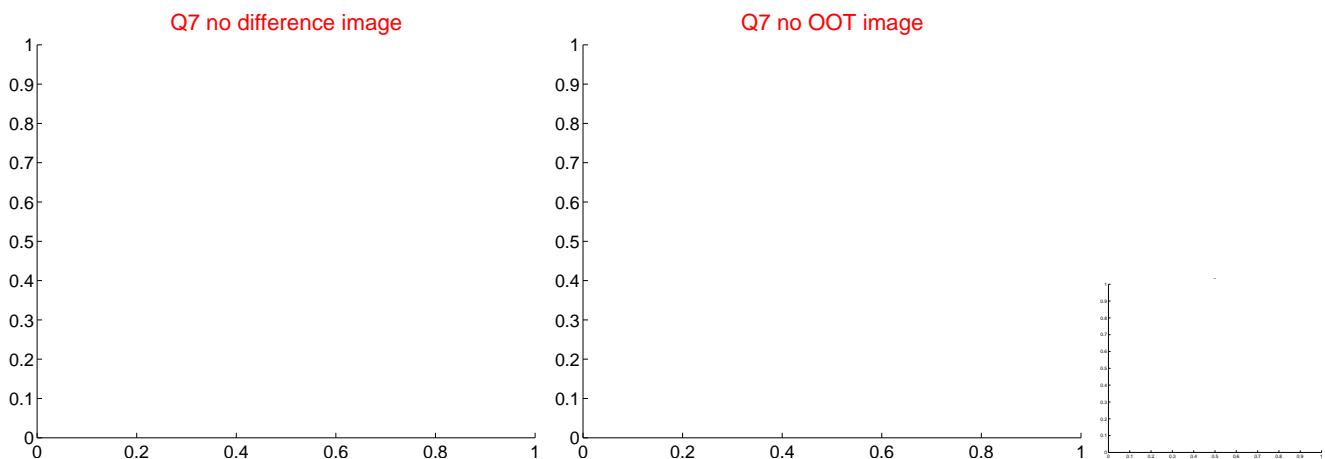
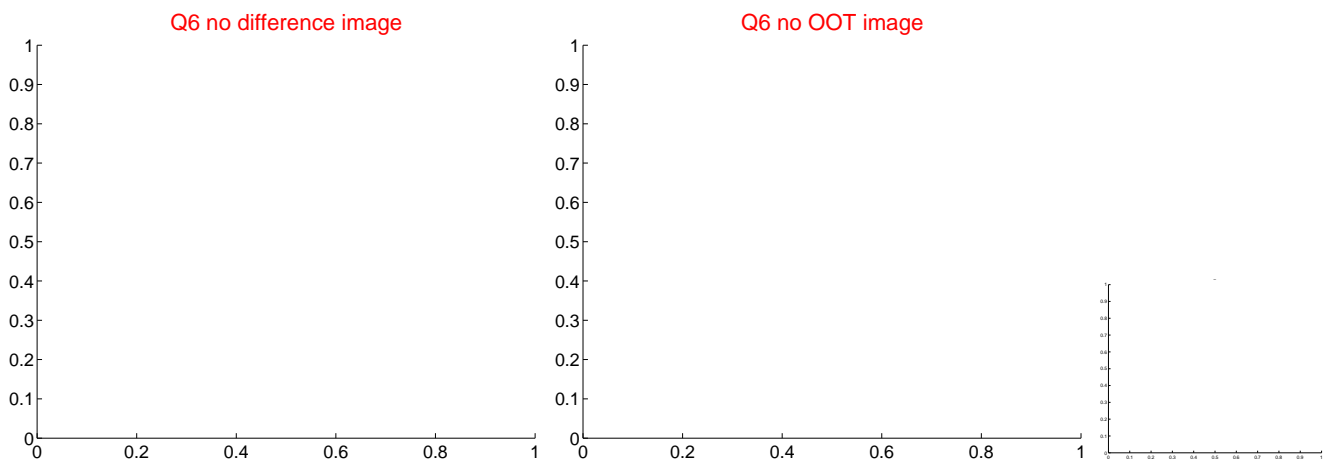
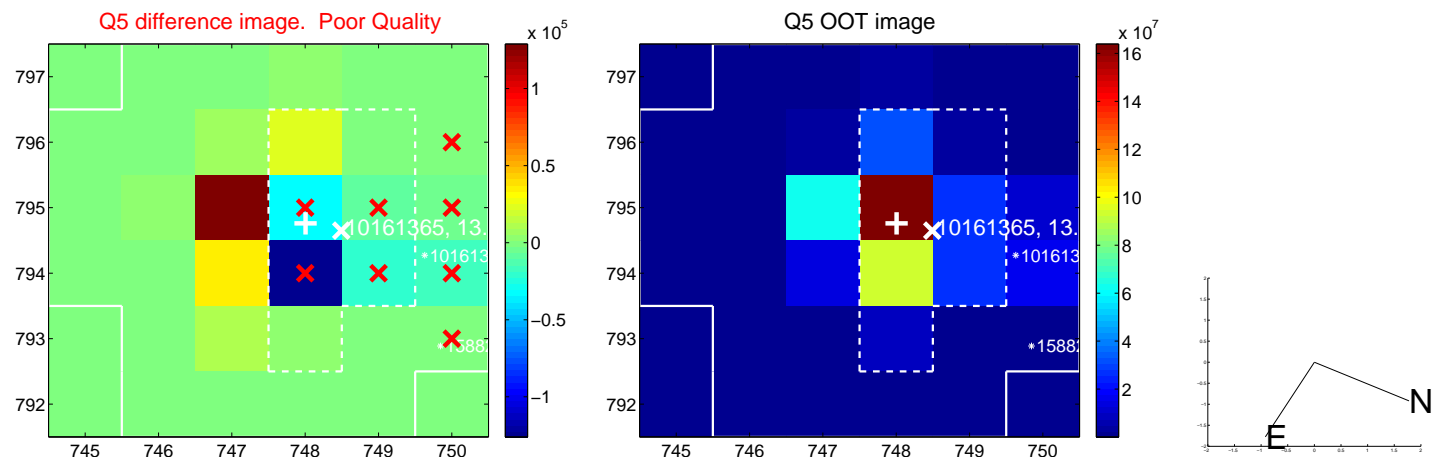


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

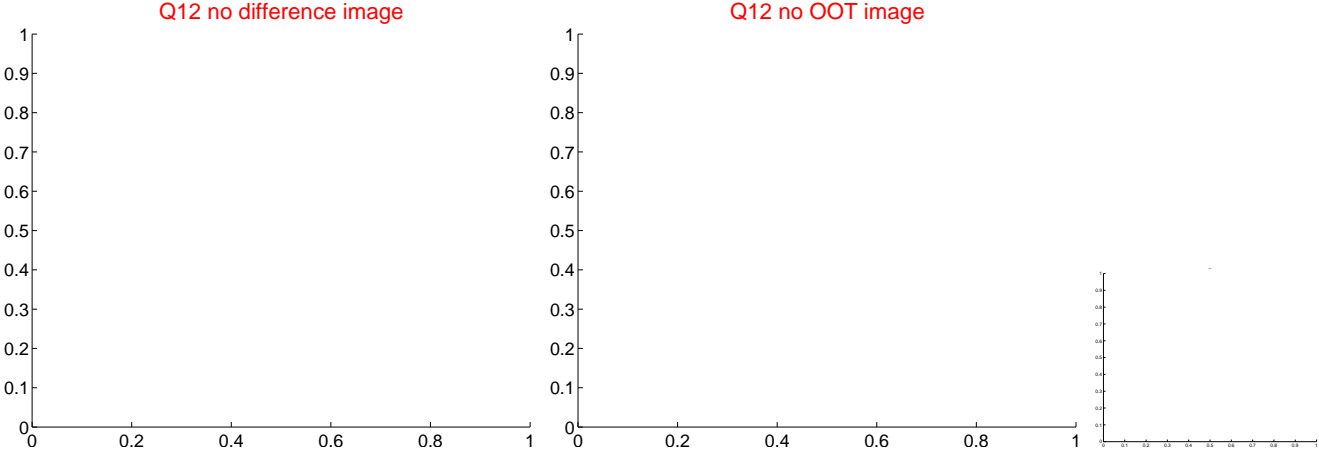
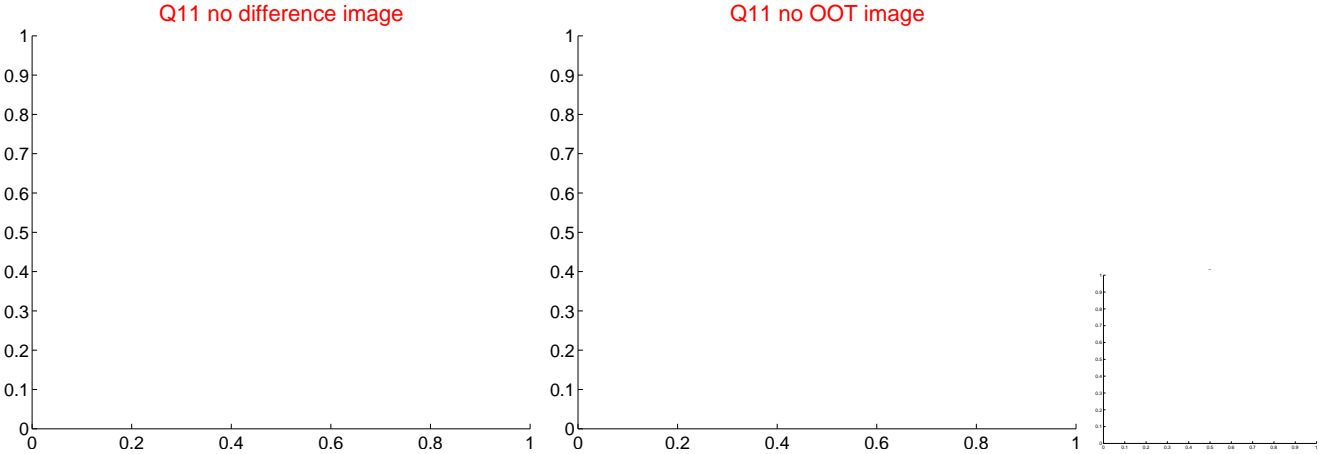
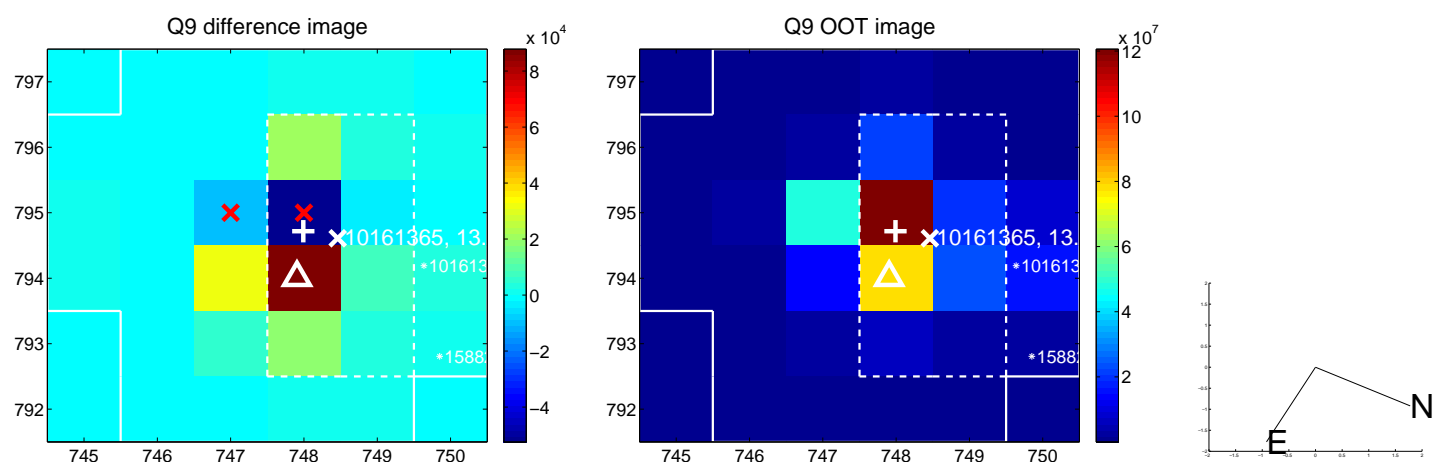
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



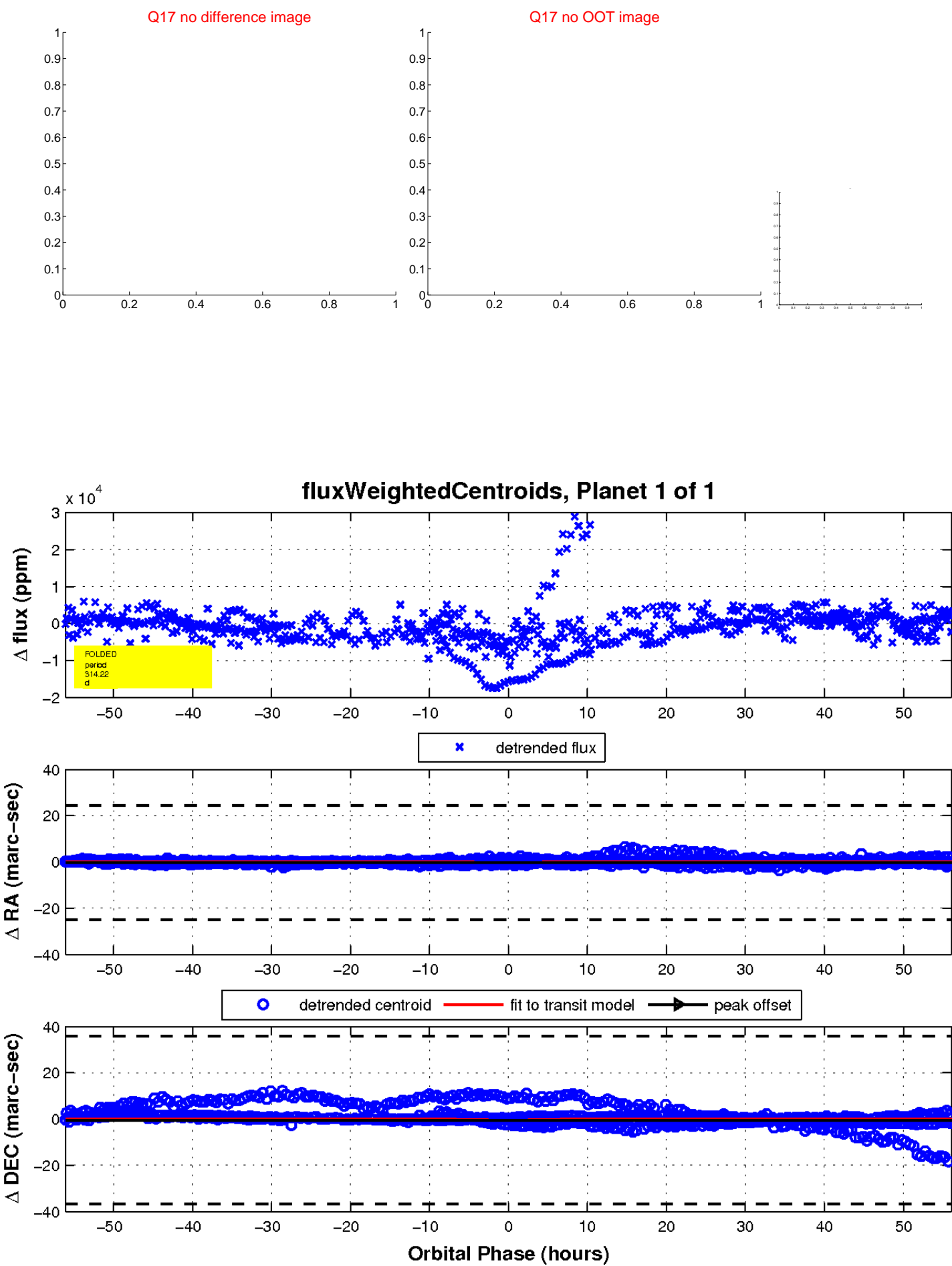
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



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

