

KIC 007363422

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})
007363422-01	OBS	No	367.292351	199.246851	196.4	13.386	9.6	9.4	1.34	6382	2.05	2.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007363422-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

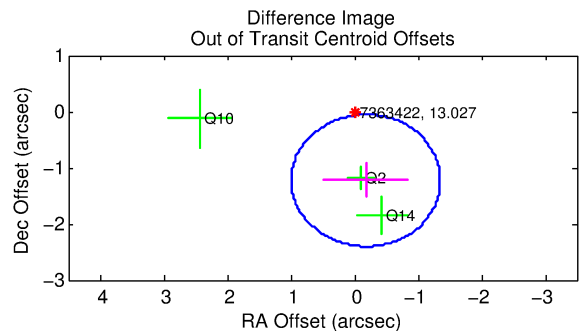
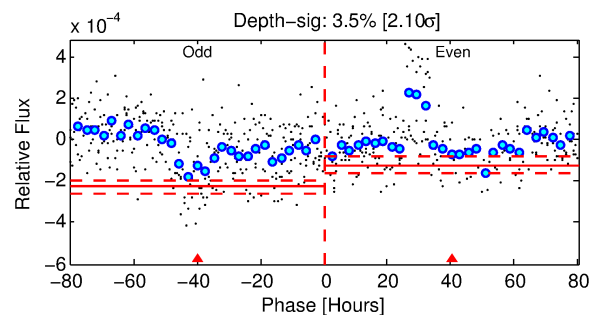
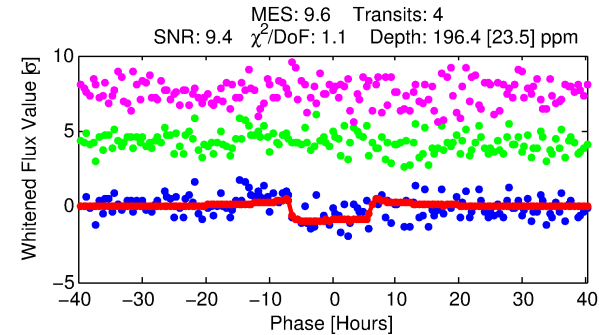
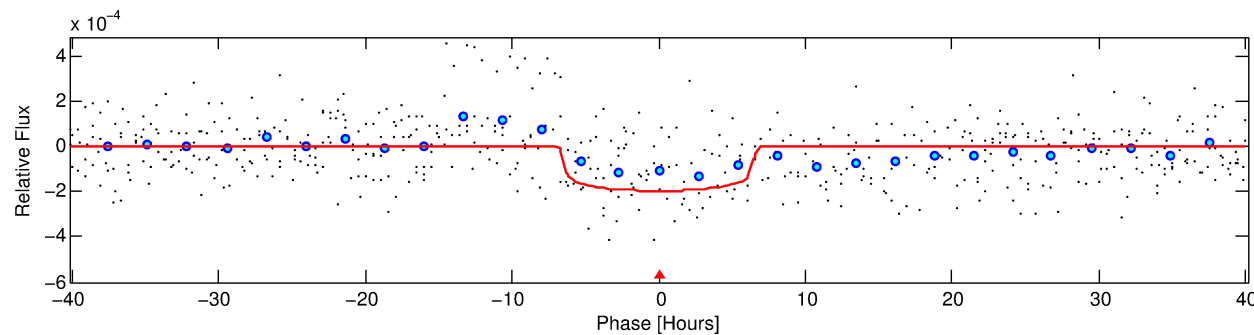
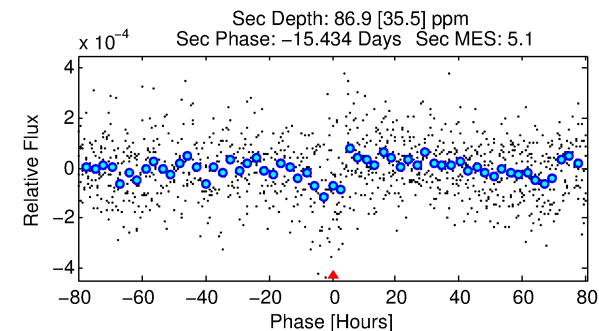
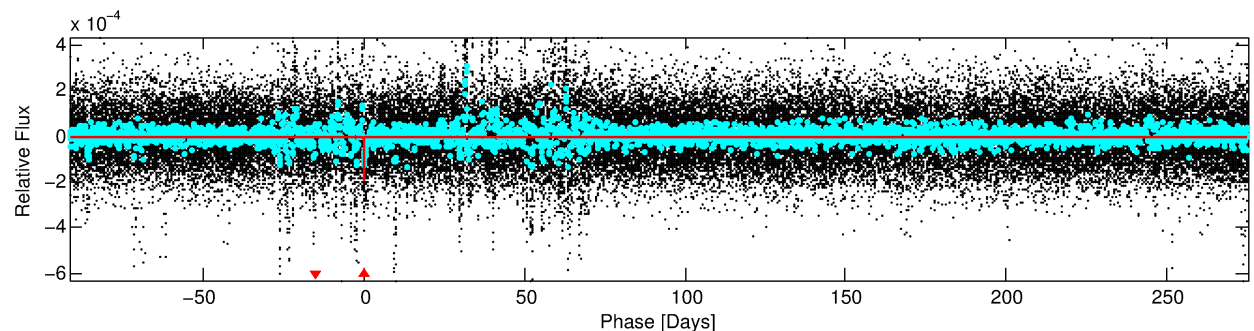
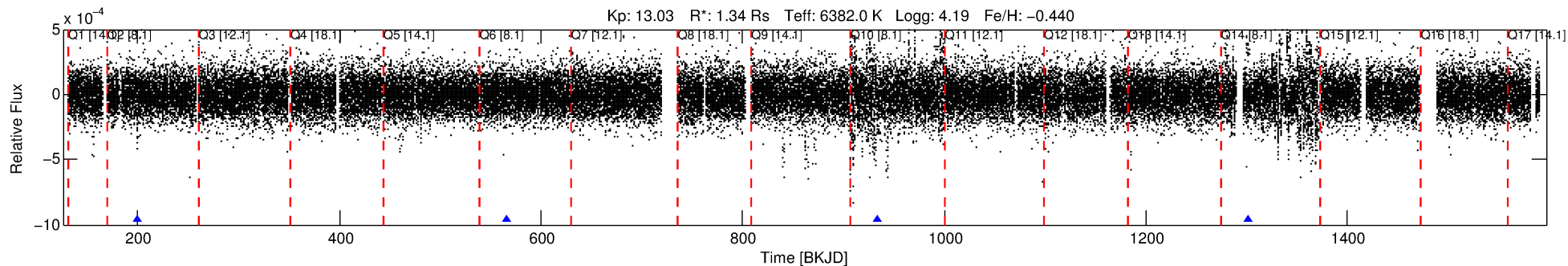
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007363422-01

No Significant Match Found

DV One-Page Summary

KIC: 7363422 Candidate: 1 of 1 Period: 367.292 d



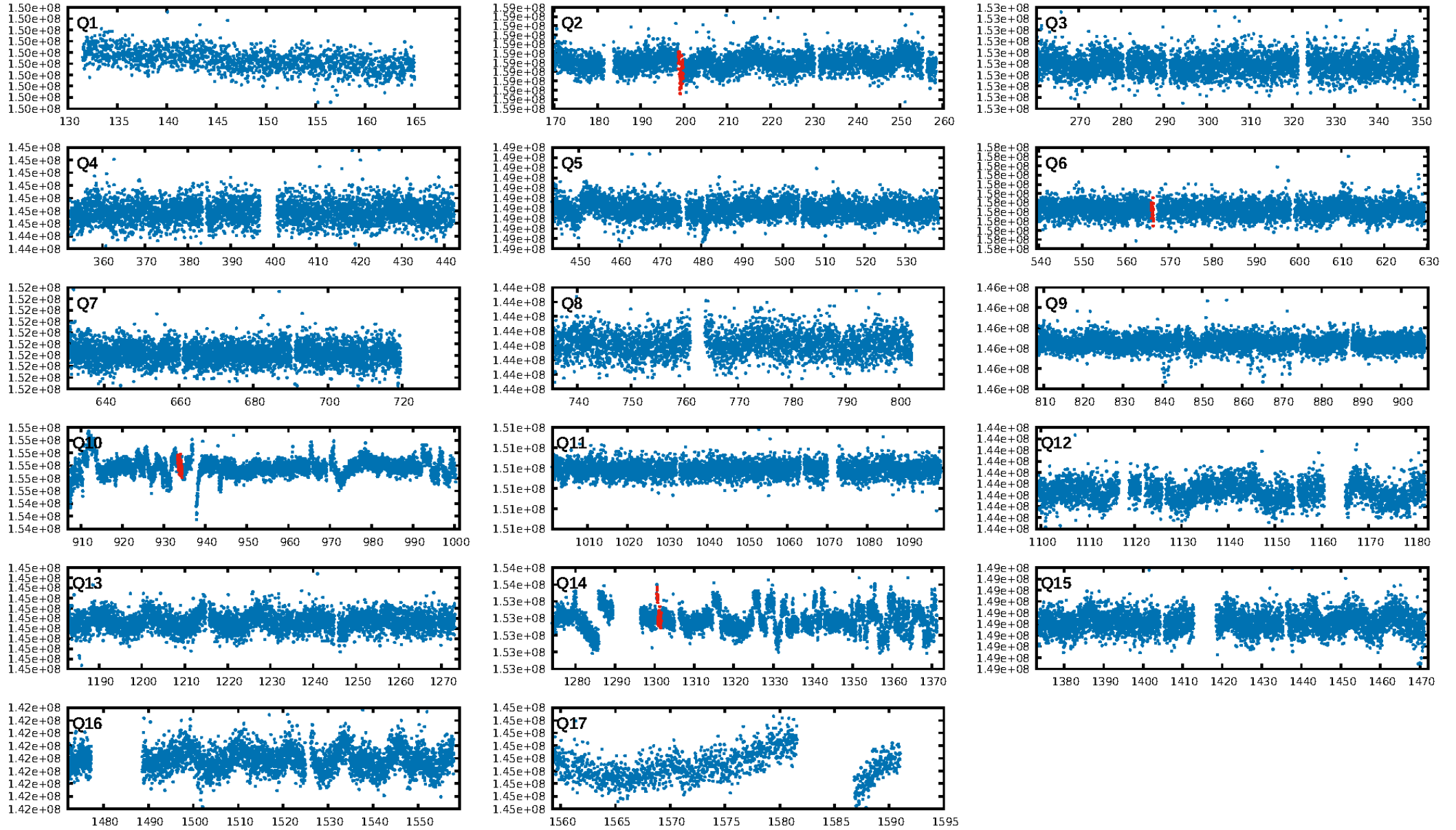
DV Fit Results:

Period = 367.29235 [0.00710] d
Epoch = 199.2469 [0.0132] BKJD
Rp/R* = 0.0140 [0.0029]
a/R* = 139.98 [150.67]
b = 0.76 [0.59]
Seff = 2.62 [0.87]
Teq = 325 [27] K
Rp = 2.05 [0.62] Re
a = 1.0087 [0.2031] AU
Ag = 11621.77 [7704.70] [1.51 σ]
Teffp = 5209 [774] K [6.31 σ]

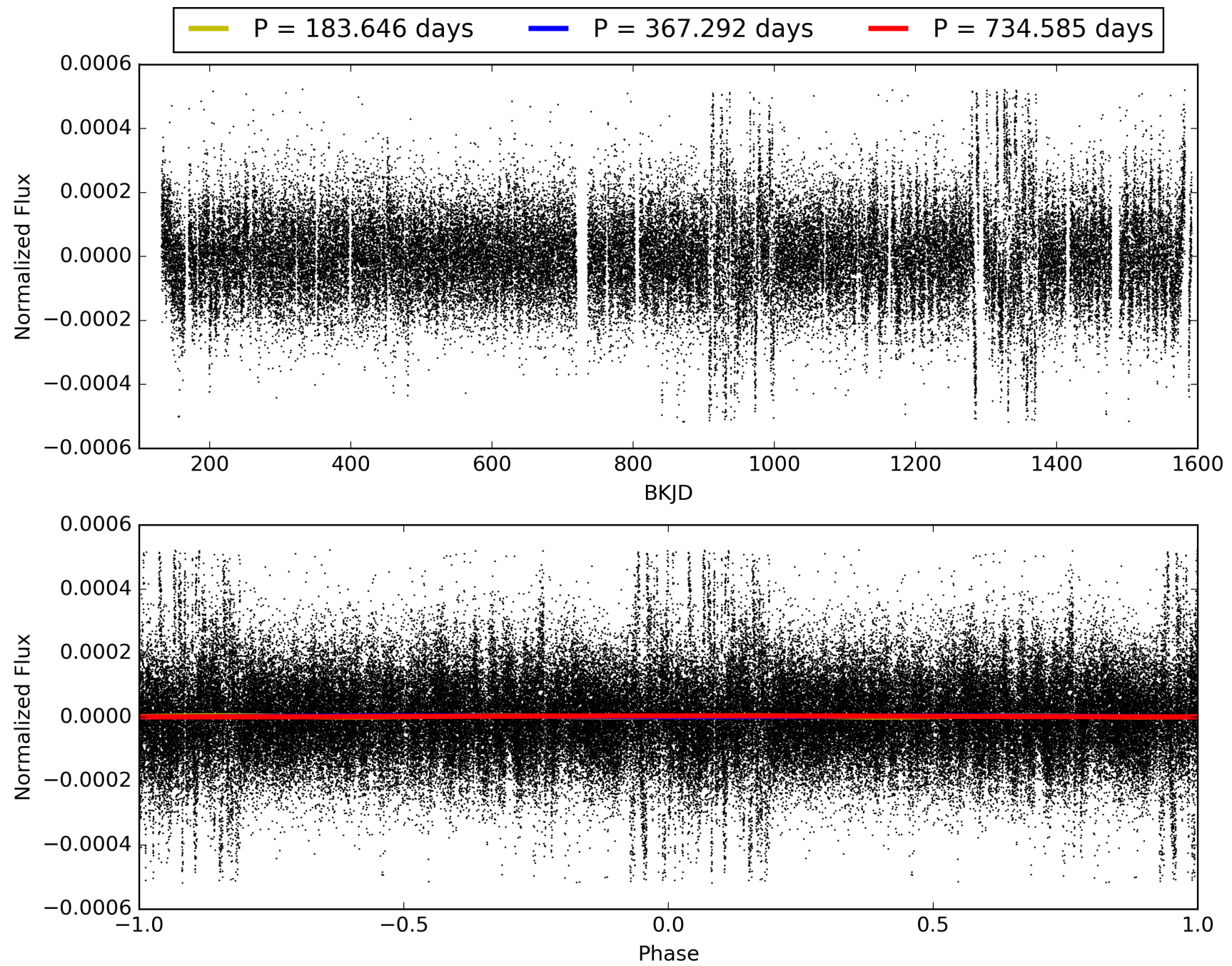
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 4.81e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.784
Centroid-sig: 0.1%
Centroid-so: 2.392 arcsec [2.84 σ]
OotOffset-rm: 1.242 arcsec [3.17 σ]
KicOffset-rm: 1.057 arcsec [2.64 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007363422-01, PDC Light Curves

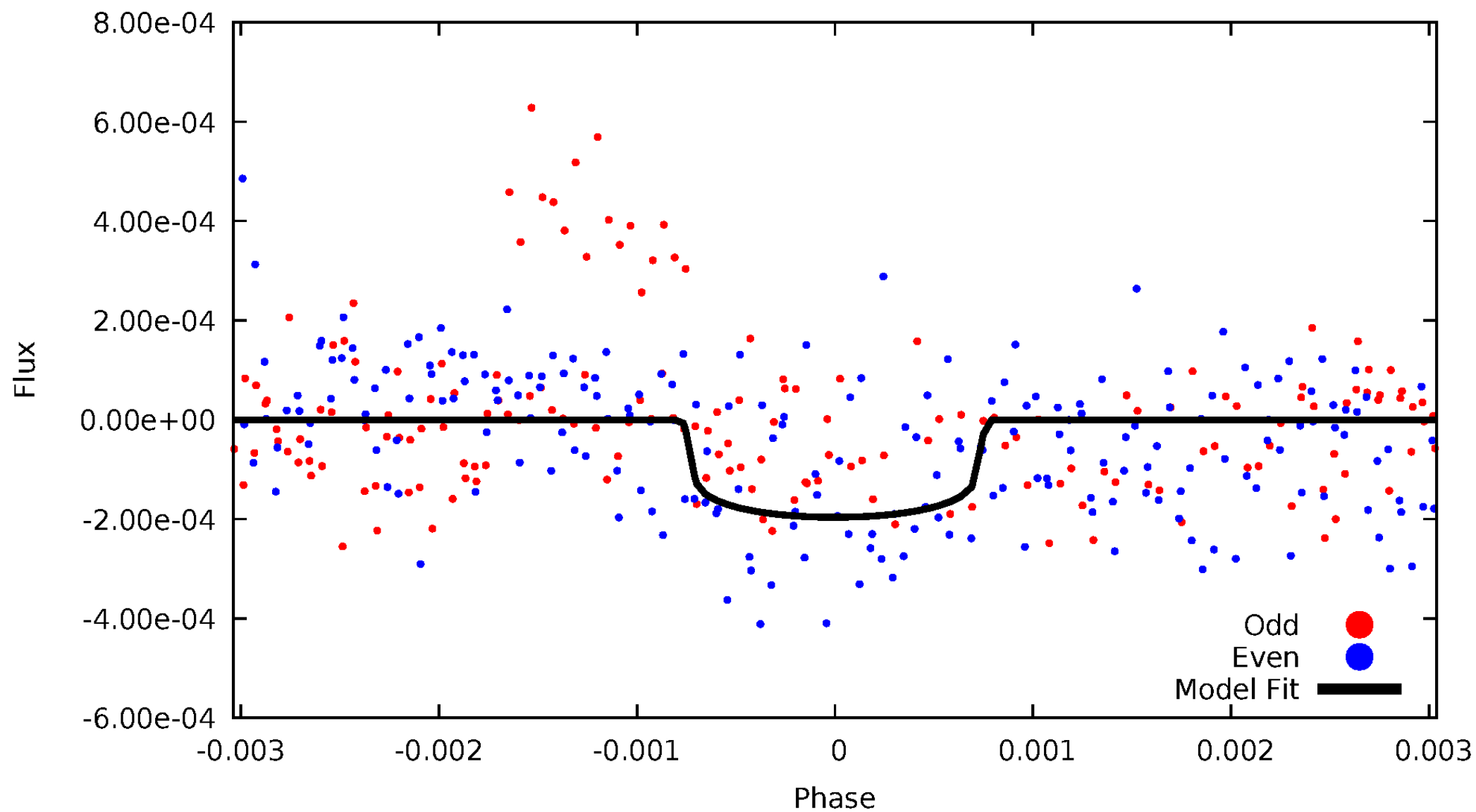


TCE 007363422-01



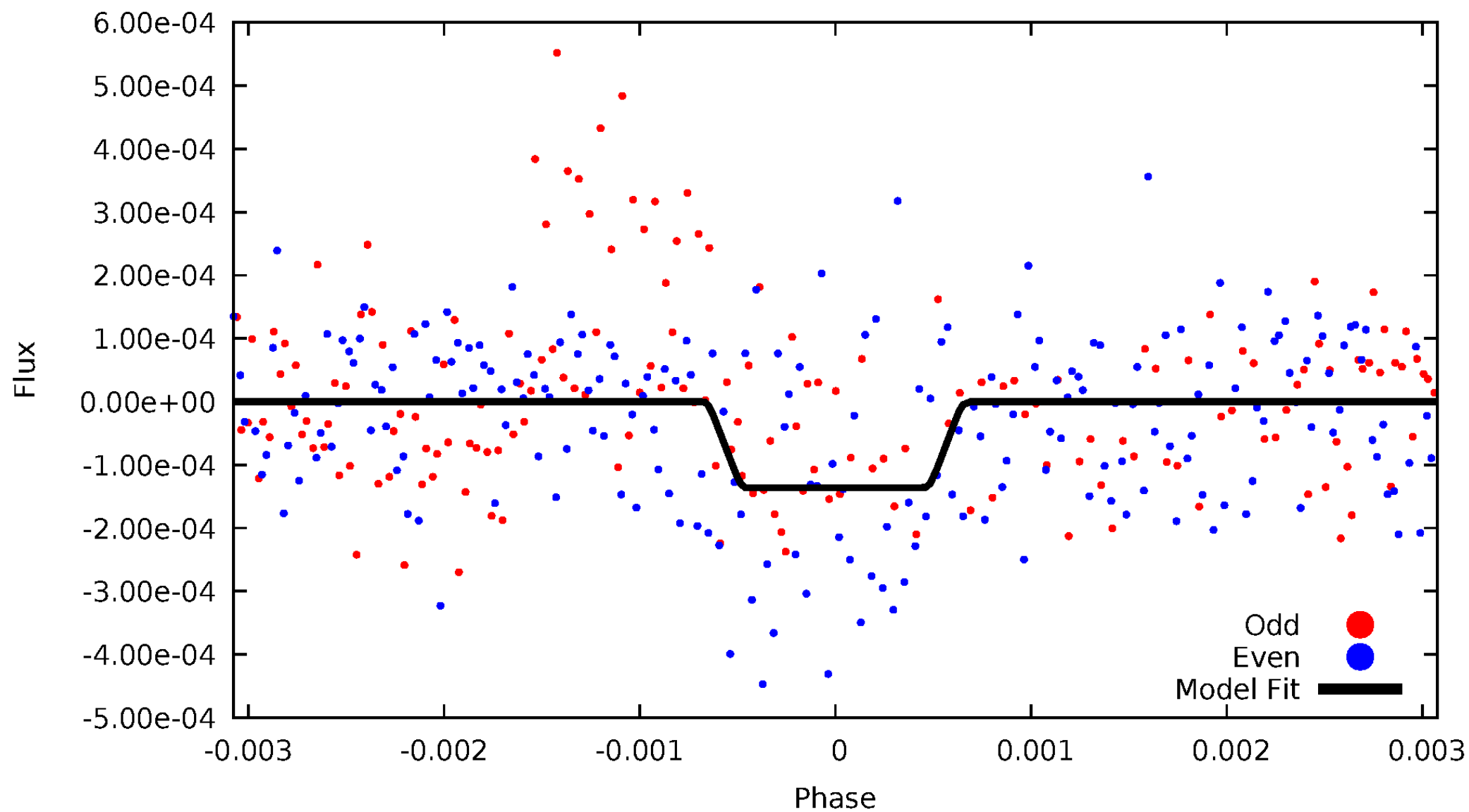
DV Odd/Even

TCE 007363422-01



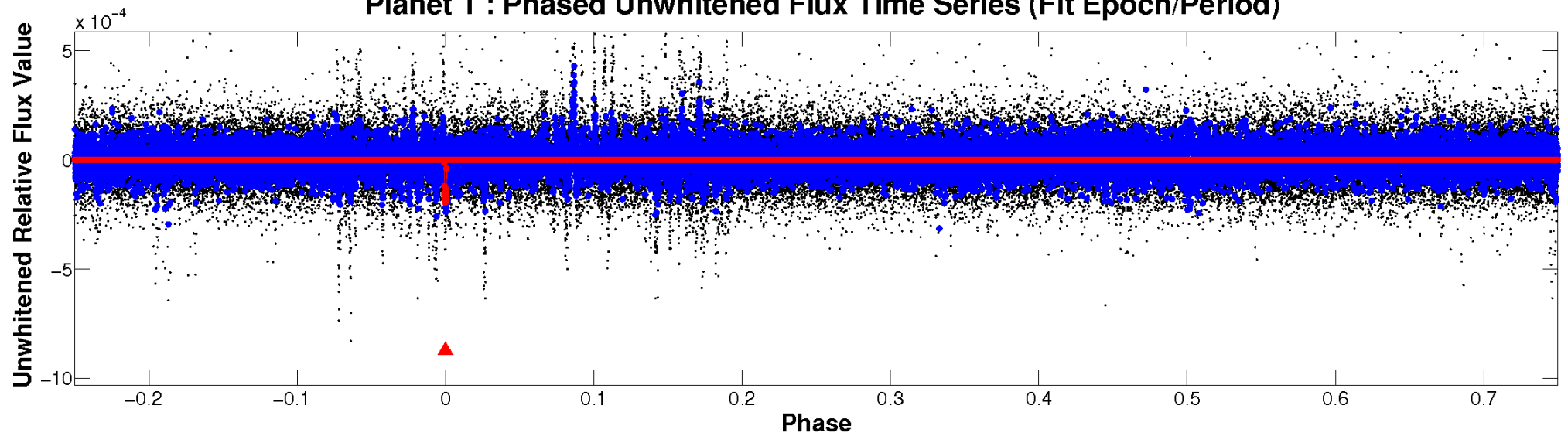
ALT Odd/Even

TCE 007363422-01

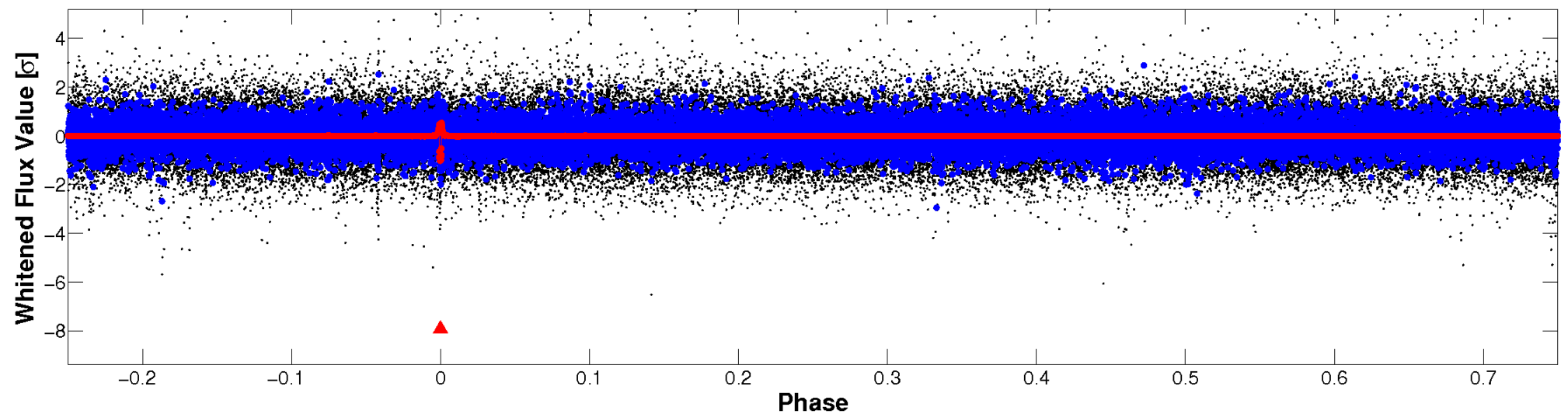


Non-Whitened Vs. Whitened Light Curve

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



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



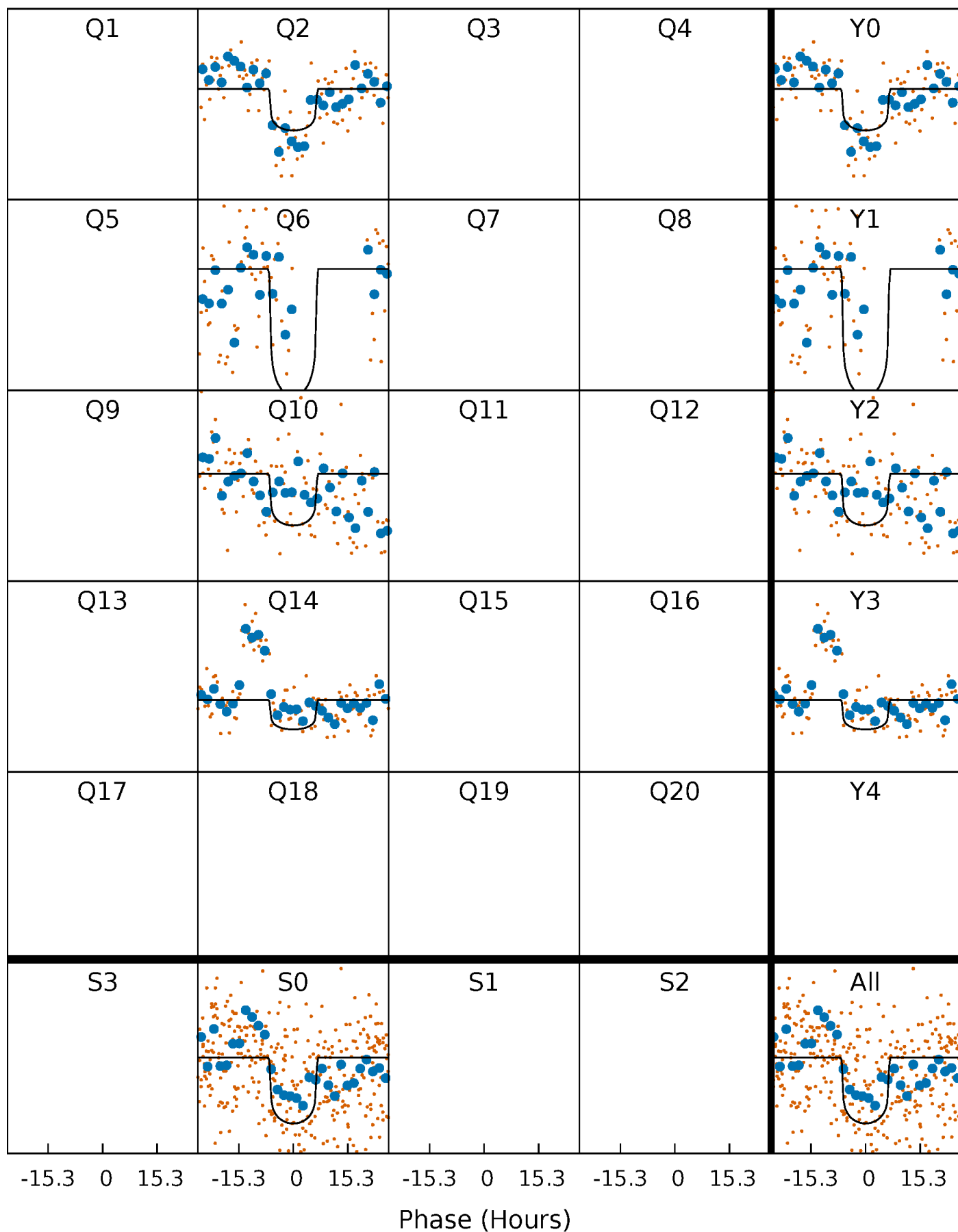
PDC Quarter-Phased Transit Curves

TCE 007363422-01 P=367.292351 Days $T_0=199.246851$ (BKJD)



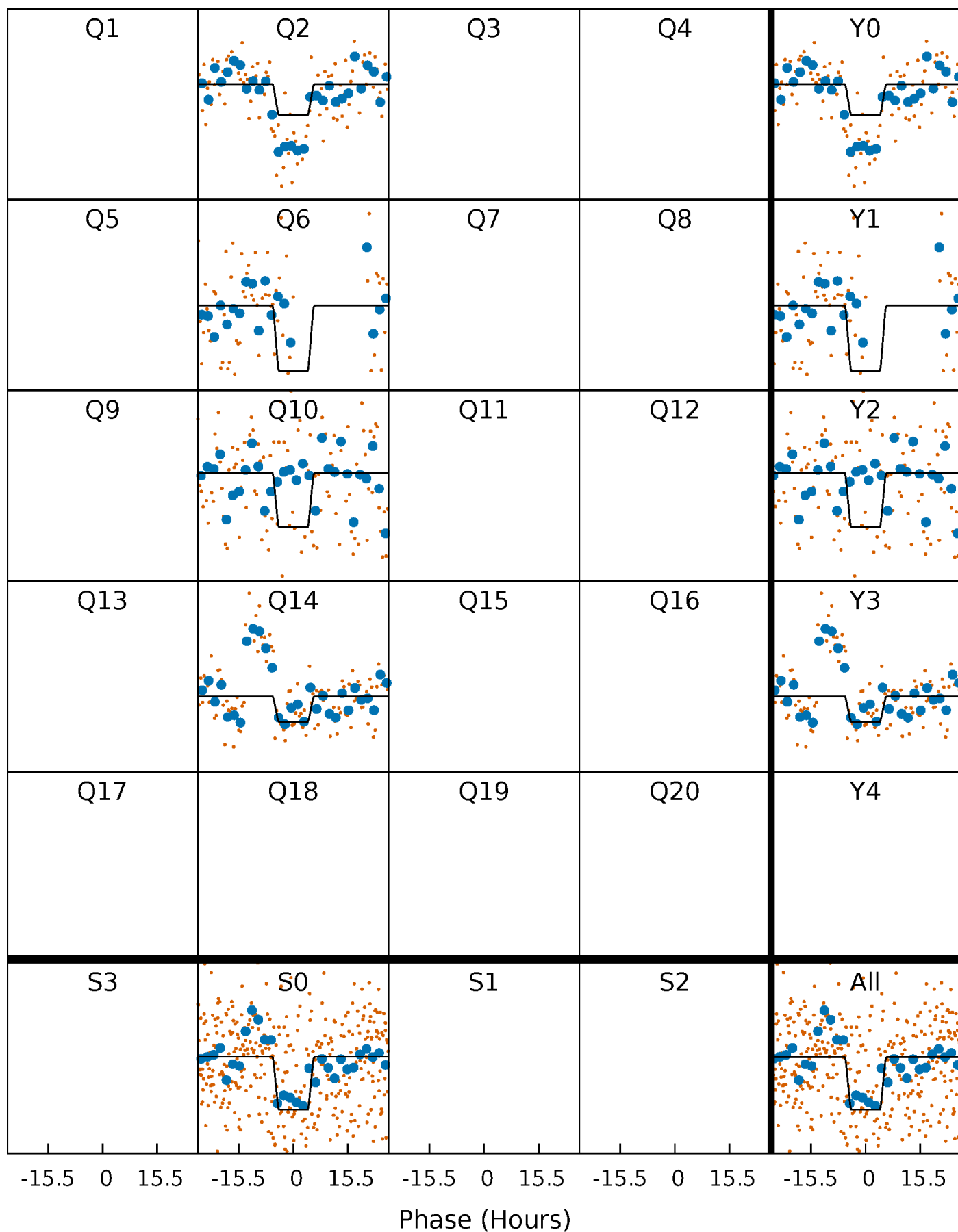
DV Quarter-Phased Transit Curves

TCE 007363422-01 P=367.292351 Days $T_0=199.246851$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

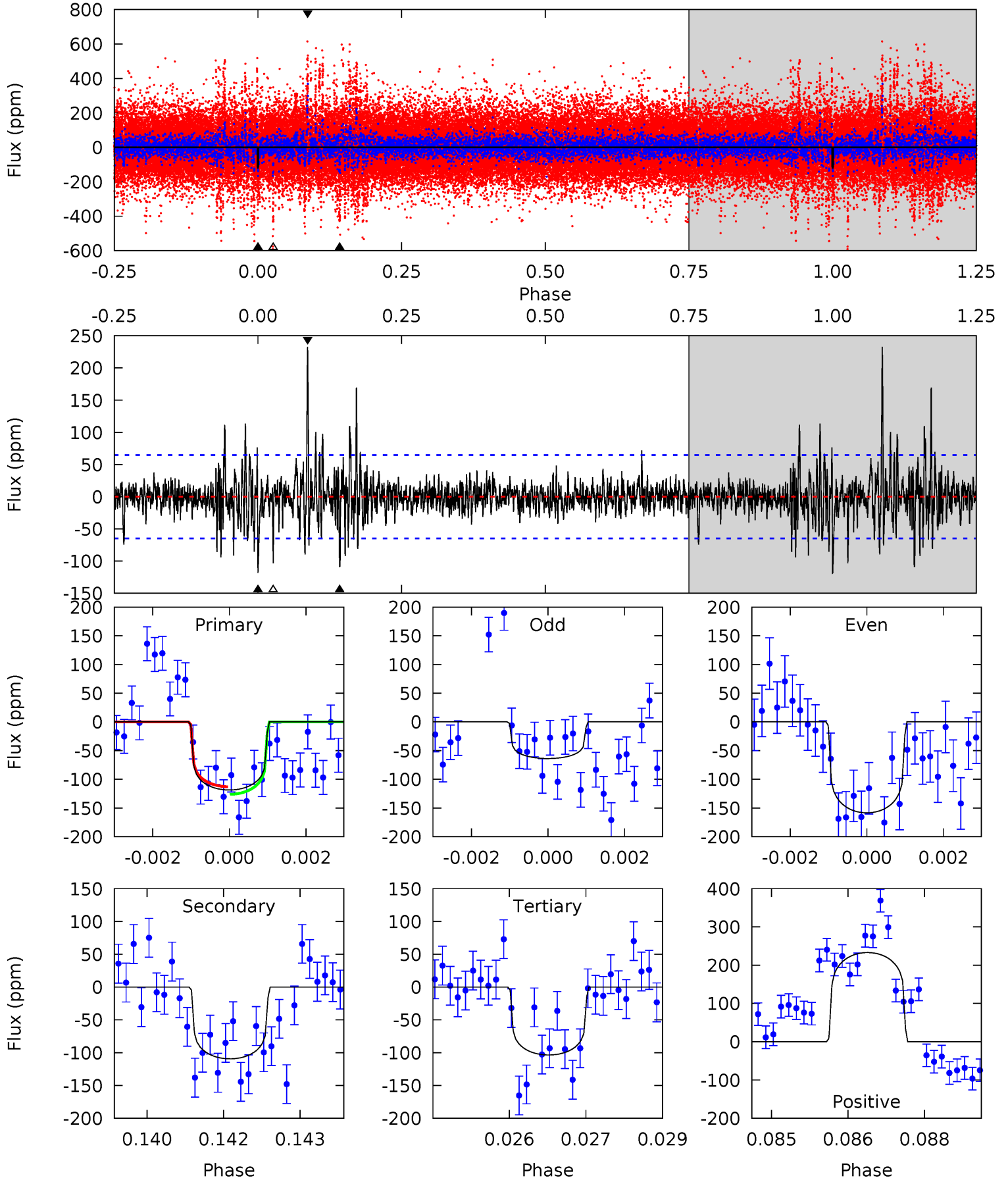
TCE 007363422-01 P=367.279619 Days $T_0=199.244881$ (BKJD)



DV Model-Shift Uniqueness Test

007363422-01, P = 367.292351 Days, E = 199.246851 Days

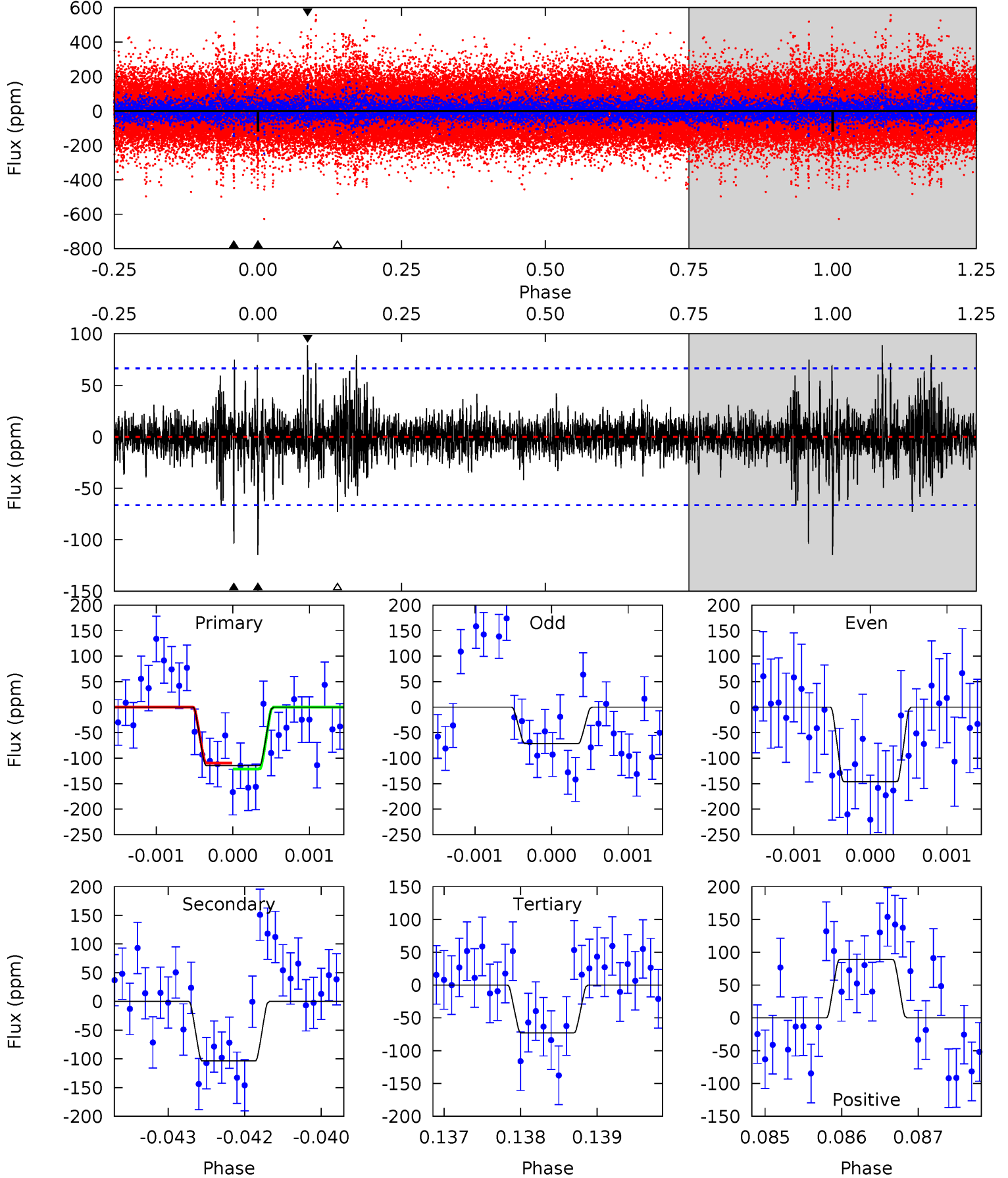
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.86	9.09	8.60	19.4	5.38	3.17	1.95	1.26	-9.50	0.49	-10.3	3.85	1.53	0.66	0.53



Alt Model-Shift Uniqueness Test

007363422-01, P = 367.279619 Days, E = 199.244881 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	8.43	5.94	7.25	5.40	3.22	1.18	3.38	2.07	2.50	1.19	3.01	1.64	0.44	0.46



Stellar Parameters For KIC 007363422

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6382^{+155}_{-175}	$4.190^{+0.181}_{-0.132}$	$-0.440^{+0.300}_{-0.300}$	$1.340^{+0.293}_{-0.293}$	$1.013^{+0.147}_{-0.121}$	$0.593^{+0.593}_{-0.217}$
	+2%/-3%	+4%/-3%	+68%/-68%	+22%/-22%	+15%/-12%	+100%/-37%
Source	PHO1	FLK73	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 007363422-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-109±12	$2.01^{+0.56}_{-0.48}$	451^{+28}_{-29}	5551^{+675}_{-515}	15135^{+10658}_{-5923}
Alt.	-104±12	$1.66^{+0.51}_{-0.46}$	450^{+29}_{-31}	5971^{+1044}_{-659}	20919^{+18388}_{-8965}

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

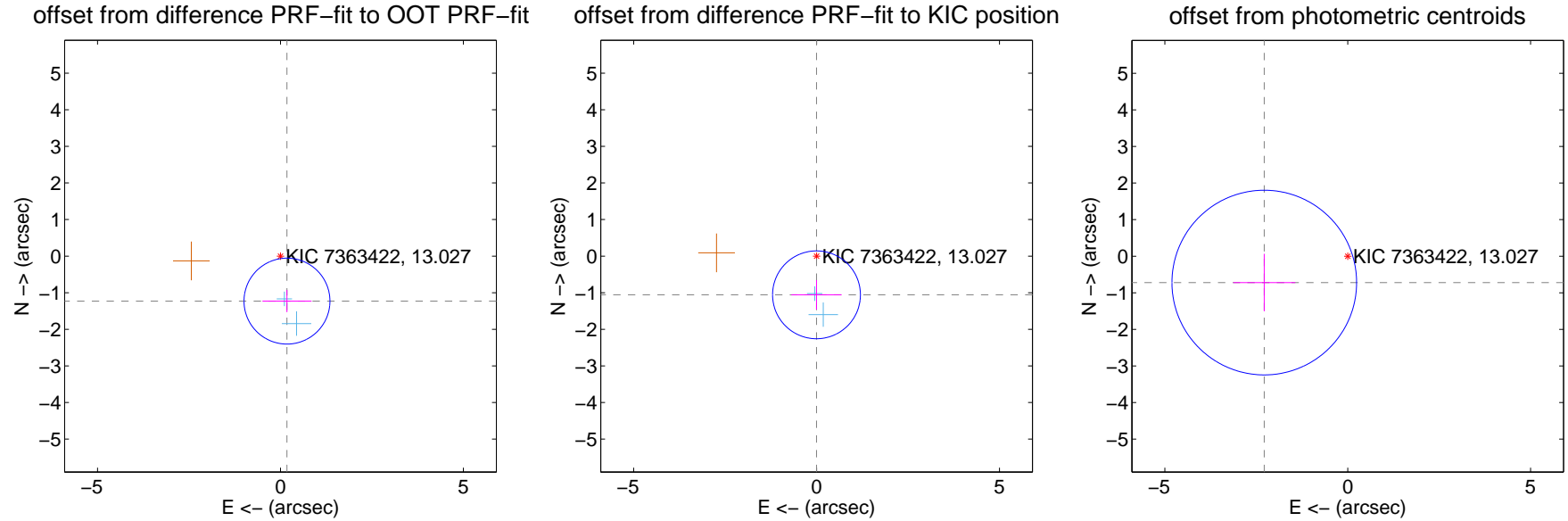
DV Centroid Data

Supplemental centroid analysis for 007363422-01. Kepler magnitude: 13.03. Transit SNR 9.36

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.242 ± 0.391	3.17	-0.178 ± 0.672	-1.229 ± 0.303
PRF-fit source offset from KIC position	1.057 ± 0.400	2.64	0.002 ± 0.684	-1.057 ± 0.401
photometric centroid source offset	2.39 ± 0.84	2.84	2.28 ± 0.85	-0.72 ± 0.79



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.

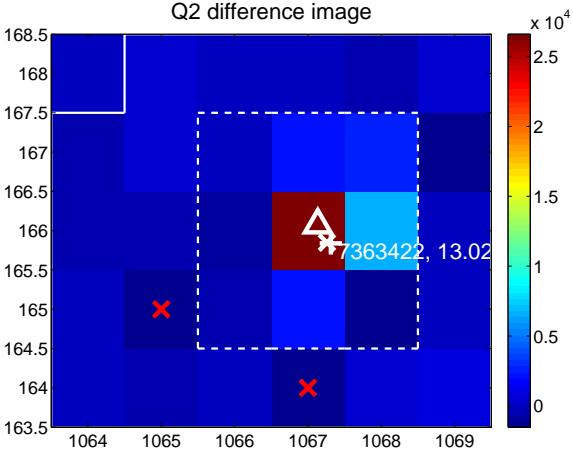
Q1 no difference image



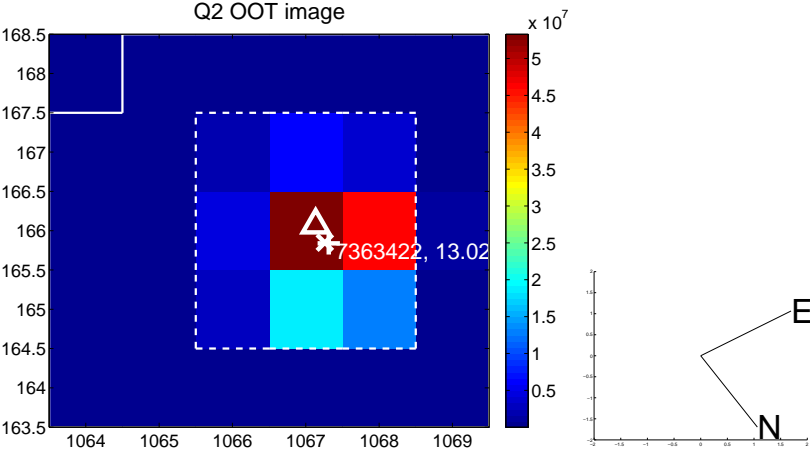
Q1 no OOT image



Q2 difference image



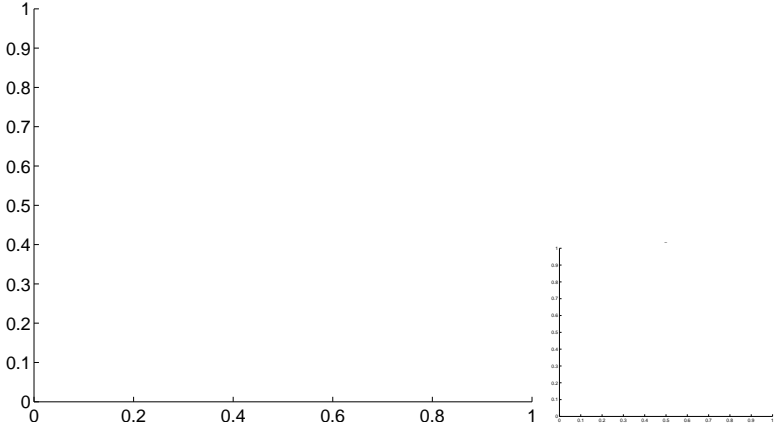
Q2 OOT image



Q3 no difference image



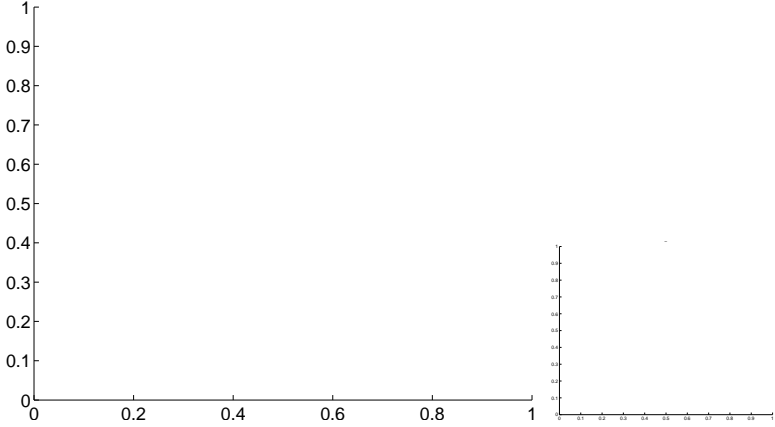
Q3 no OOT image



Q4 no difference image



Q4 no 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.

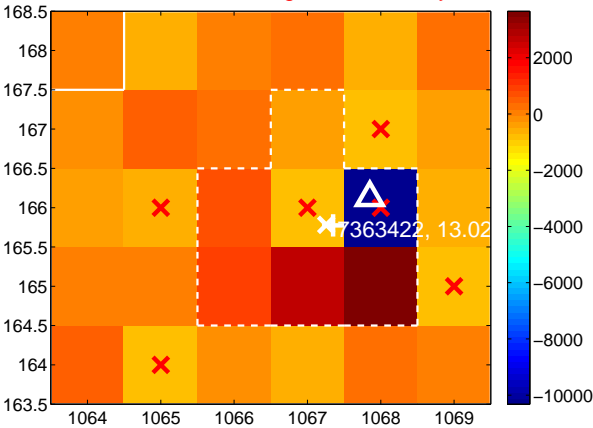
Q9 no difference image



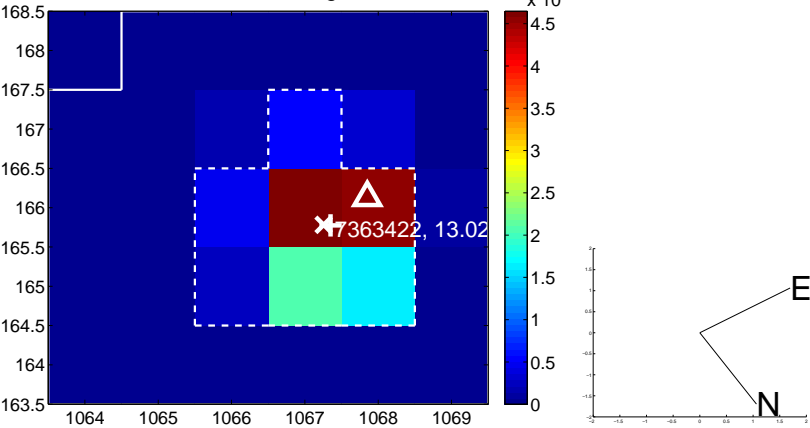
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image

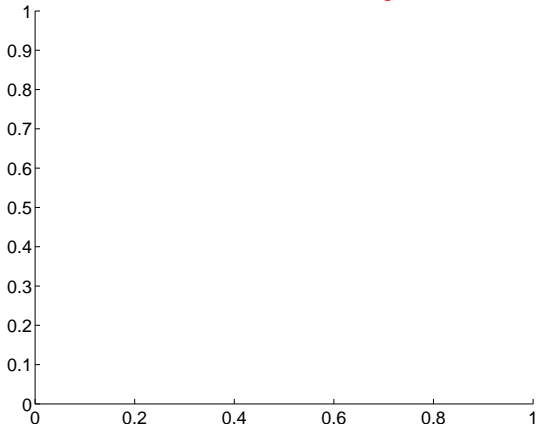


Q12 no OOT image



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

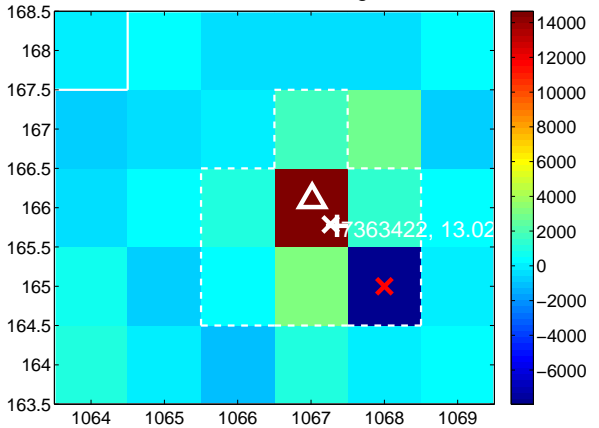
Q13 no difference image



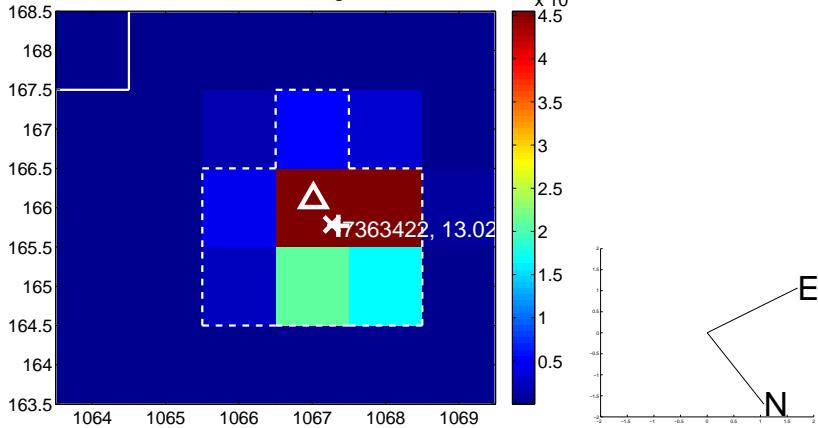
Q13 no OOT image



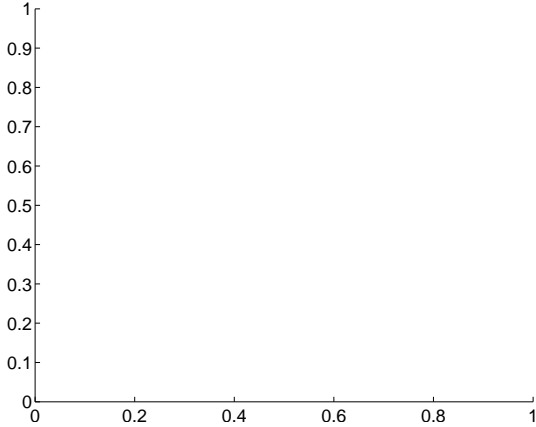
Q14 difference image



Q14 OOT image



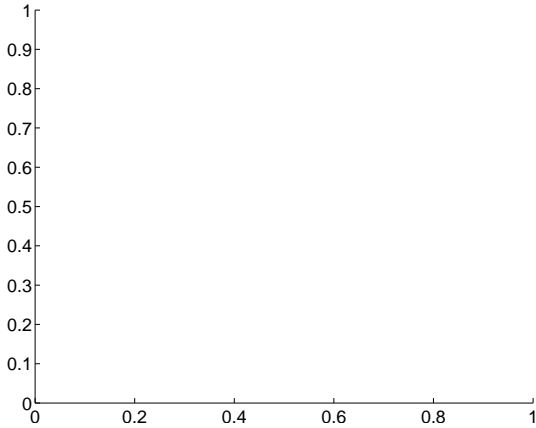
Q15 no difference image



Q15 no OOT image



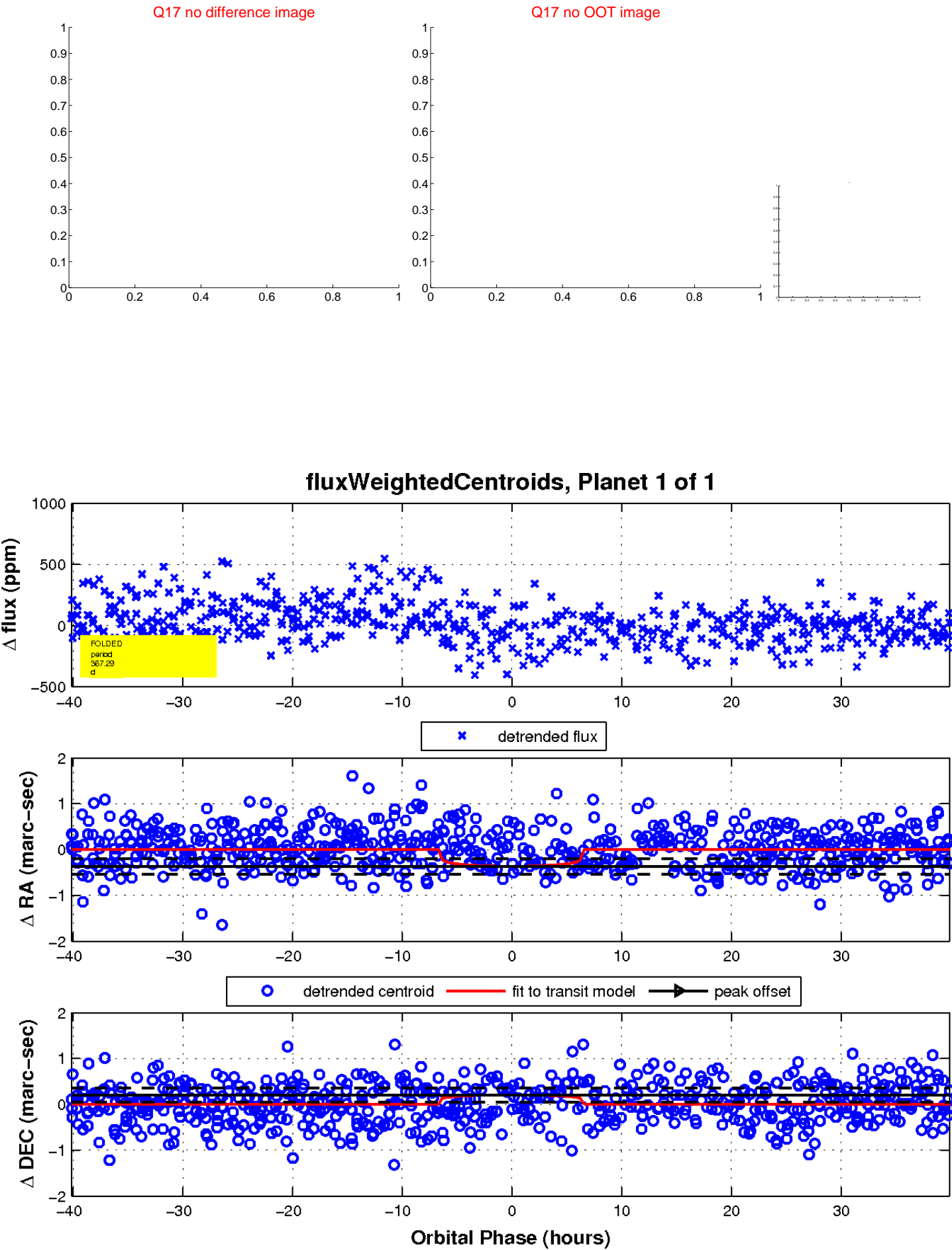
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

