

KIC 010337072

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})
010337072-01	OBS	No	355.917033	185.417314	1582.7	19.698	10.4	10.9	0.79	5383	5.38	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010337072-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

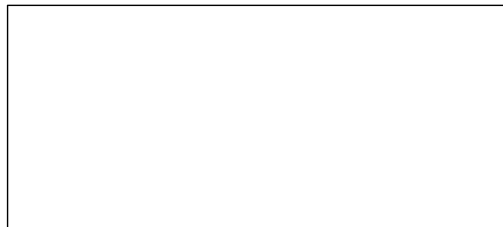
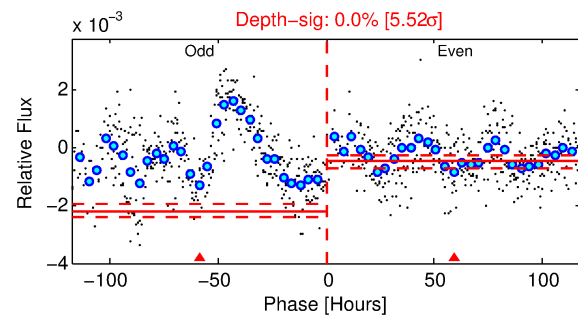
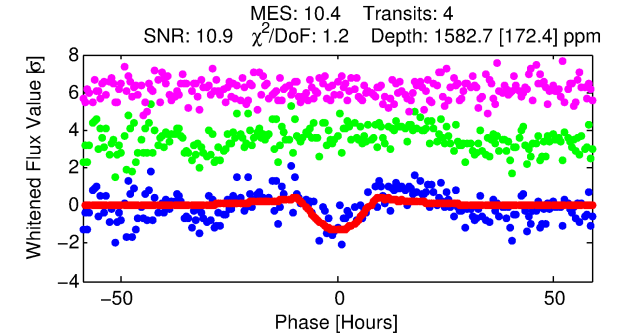
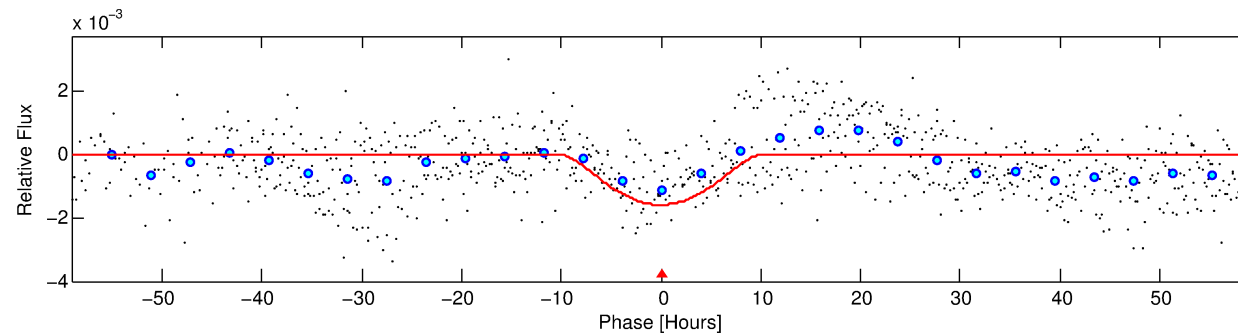
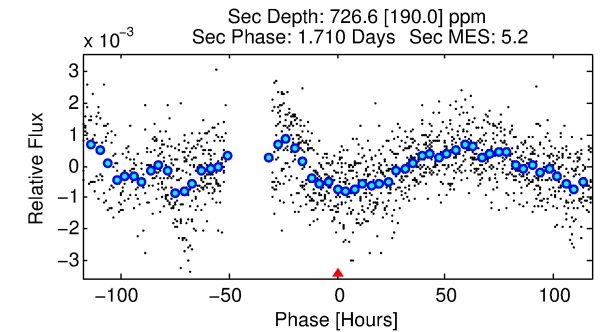
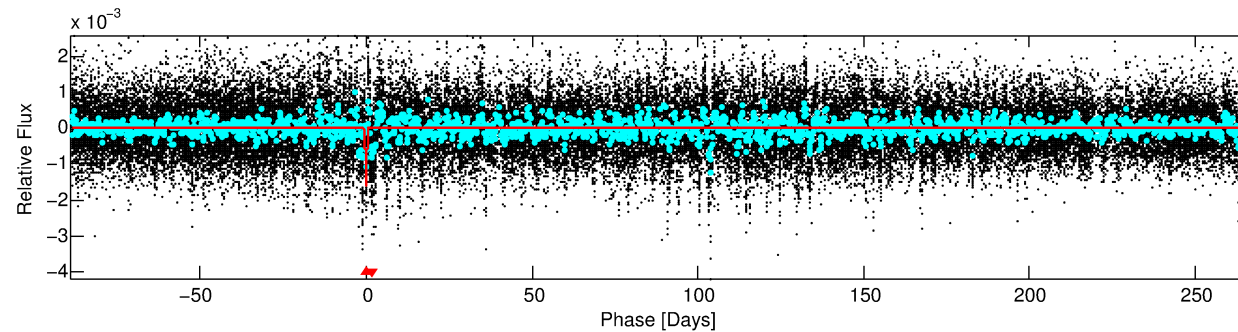
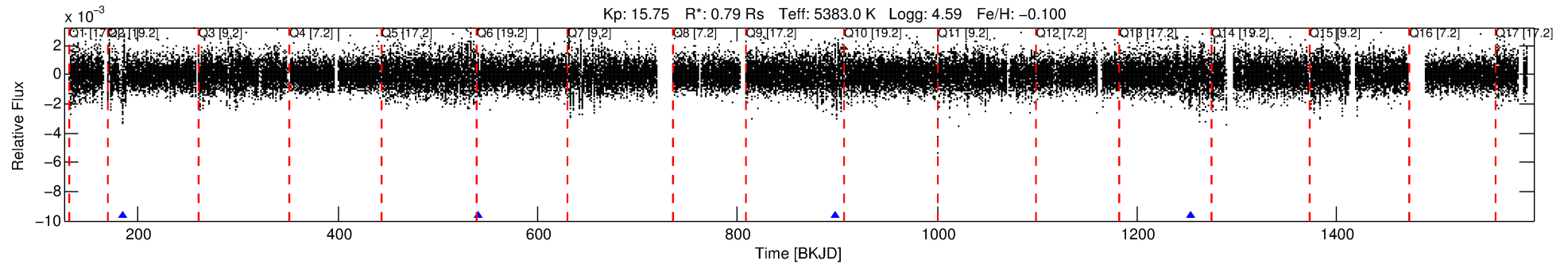
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010337072-01

No Significant Match Found

DV One-Page Summary

KIC: 10337072 Candidate: 1 of 1 Period: 355.917 d



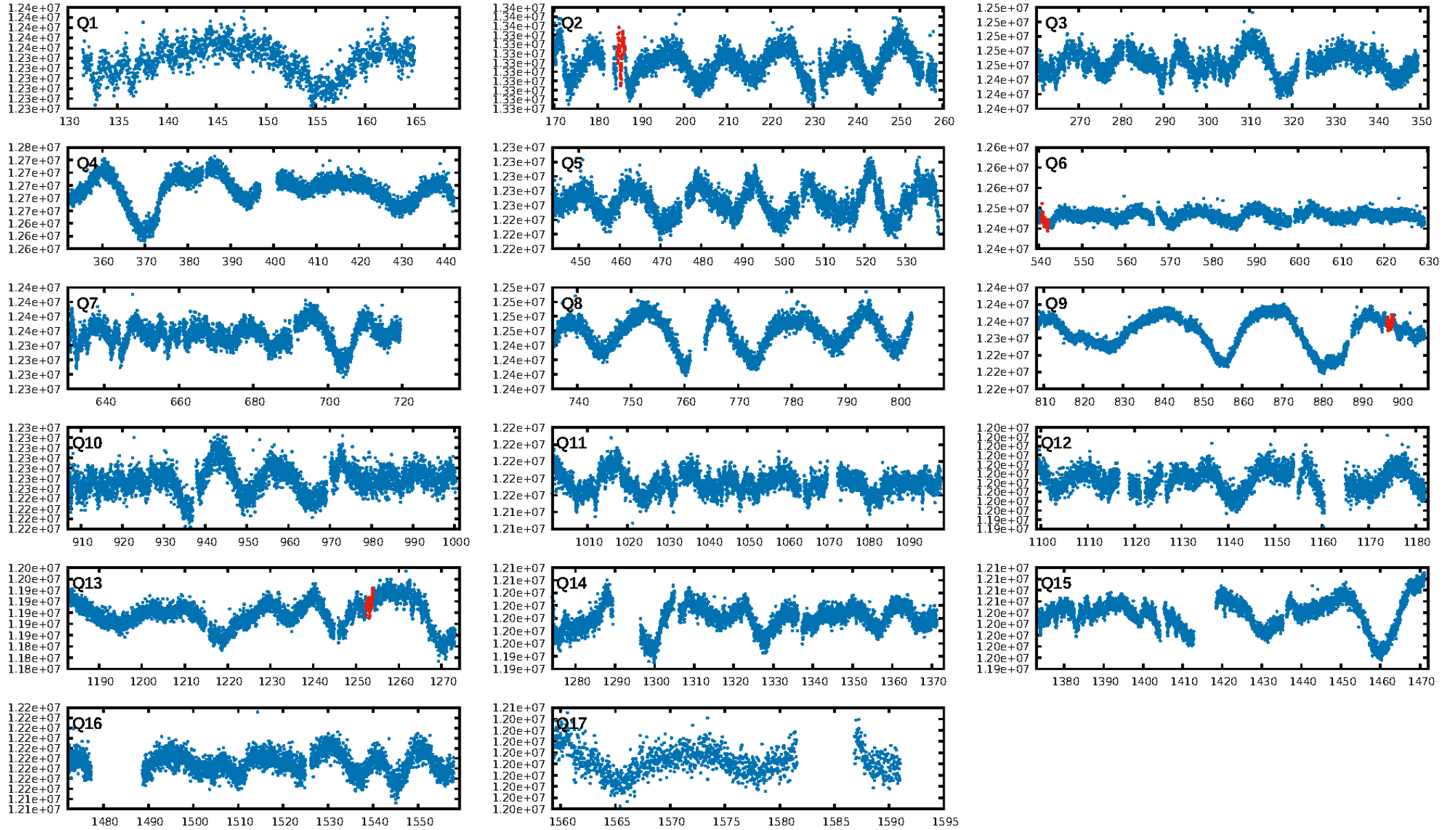
DV Fit Results:

Period = 355.91703 [0.01909] d
Epoch = 185.4173 [0.0285] BKJD
Rp/R* = 0.0625 [0.1044]
a/R* = 54.49 [25.09]
b = 0.99 [0.17]
Seff = 0.53 [0.13]
Teq = 217 [13] K
Rp = 5.38 [9.03] Re
a = 0.9411 [0.1325] AU
Ag = 12213.28 [40984.99] [0.30σ]
Teffp = 3534 [2961] K [1.12σ]

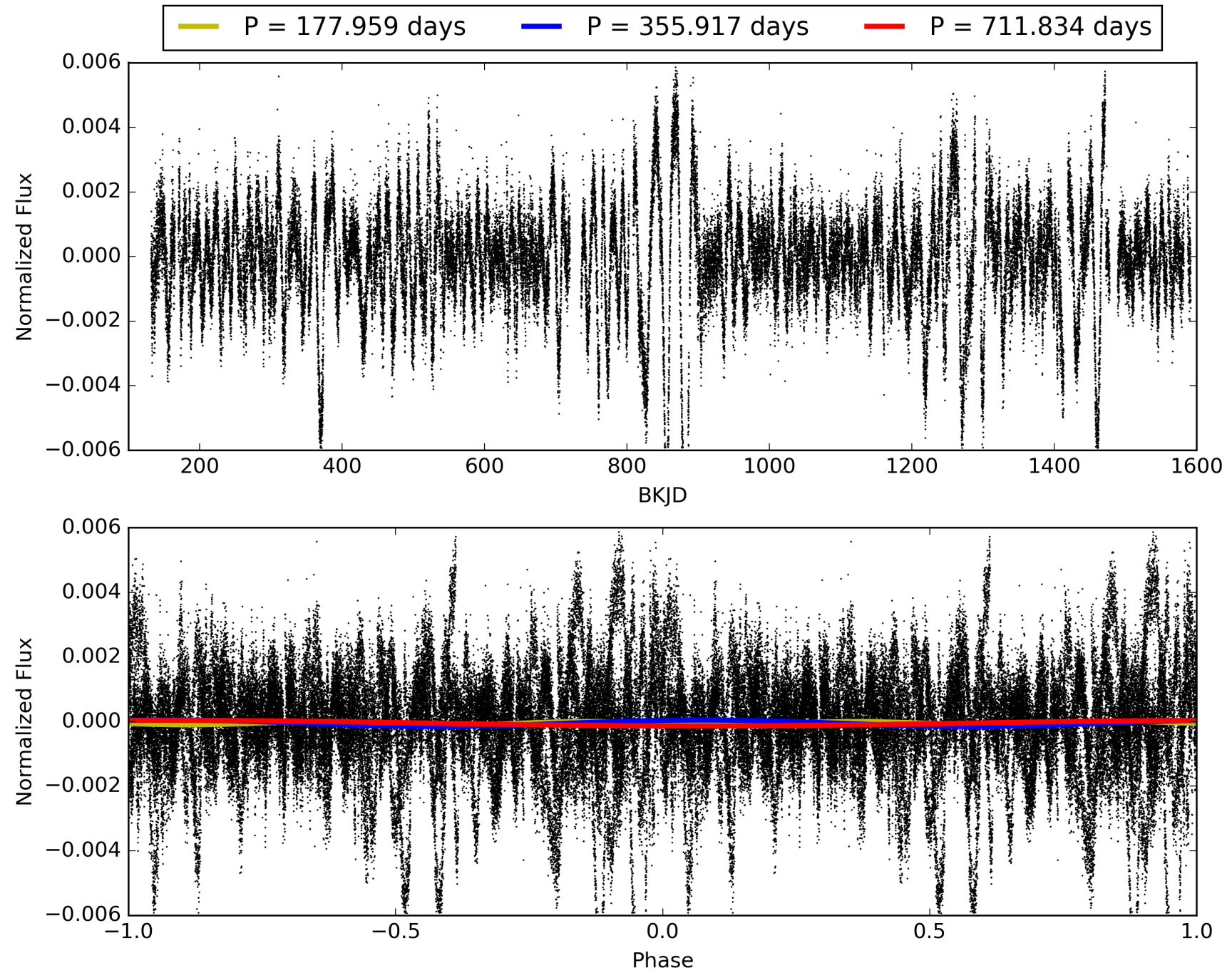
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 2.52e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.823
Centroid-sig: 4.5%
Centroid-so: 3.748 arcsec [2.56σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

TCE 010337072-01, PDC Light Curves

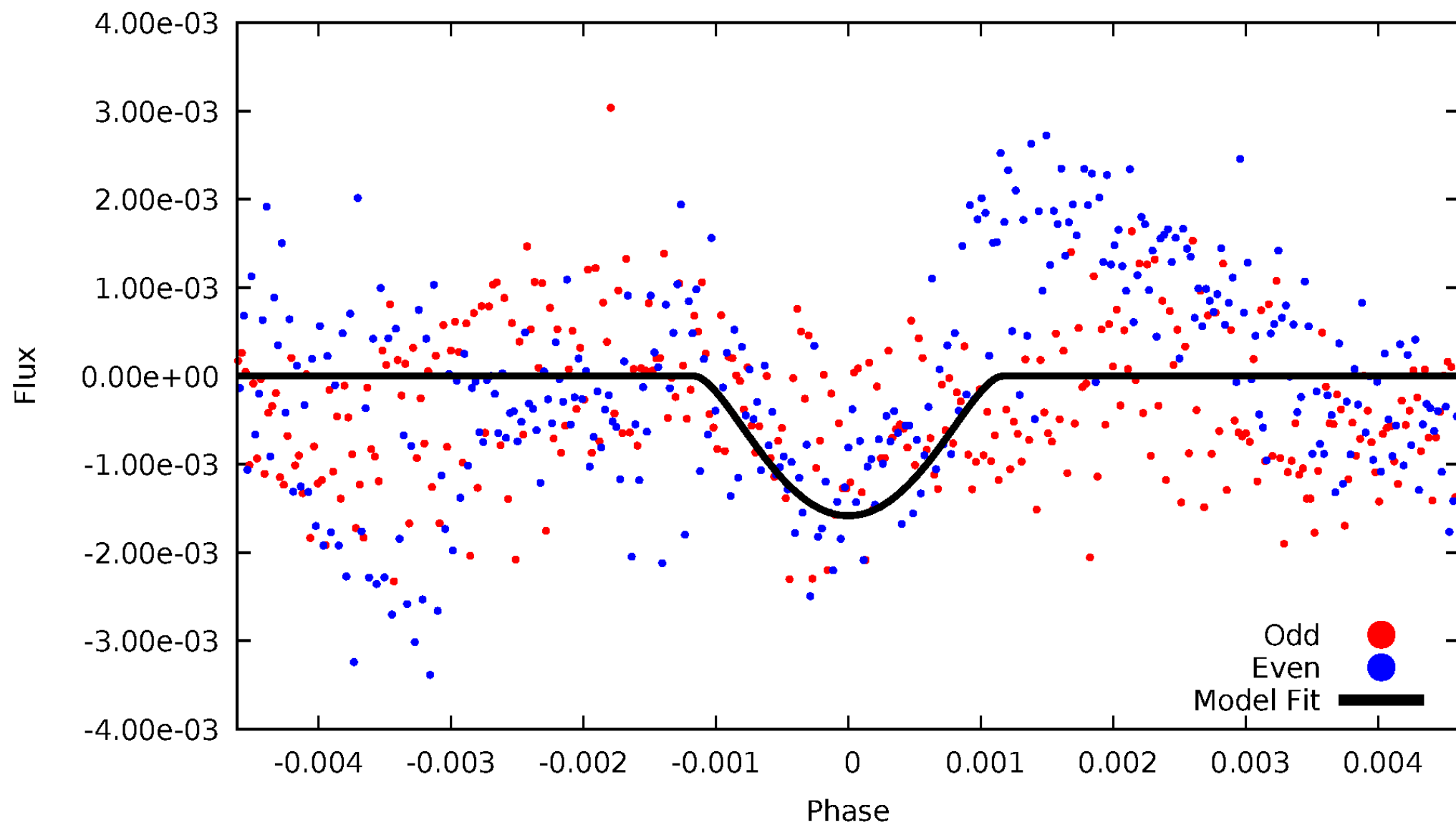


TCE 010337072-01



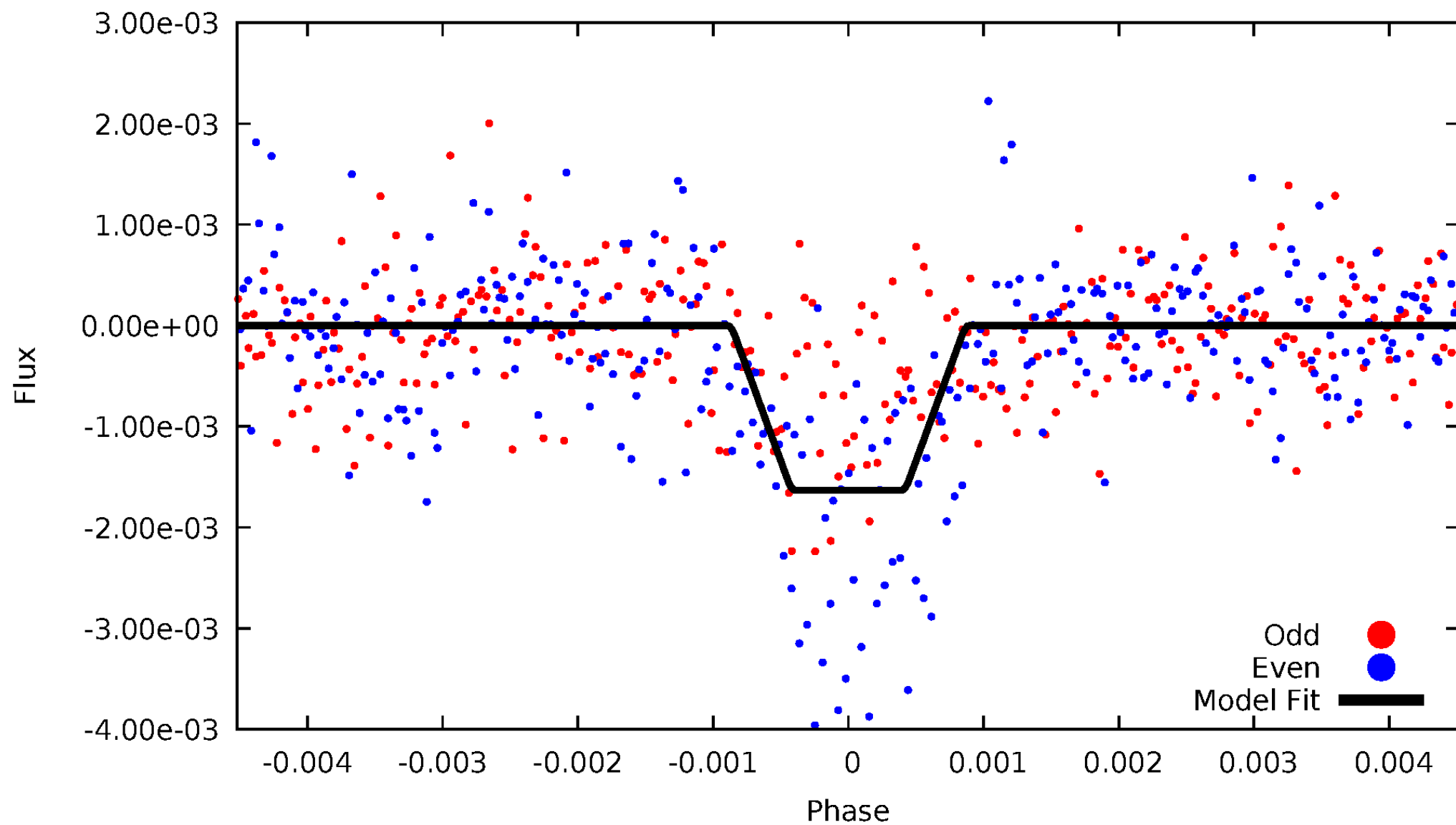
DV Odd/Even

TCE 010337072-01



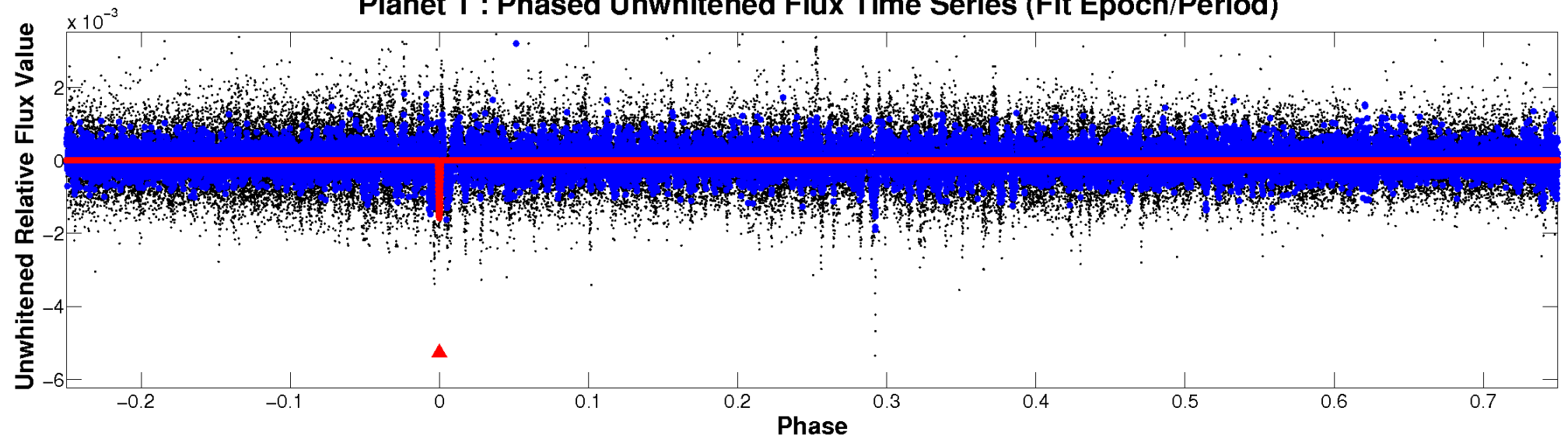
ALT Odd/Even

TCE 010337072-01

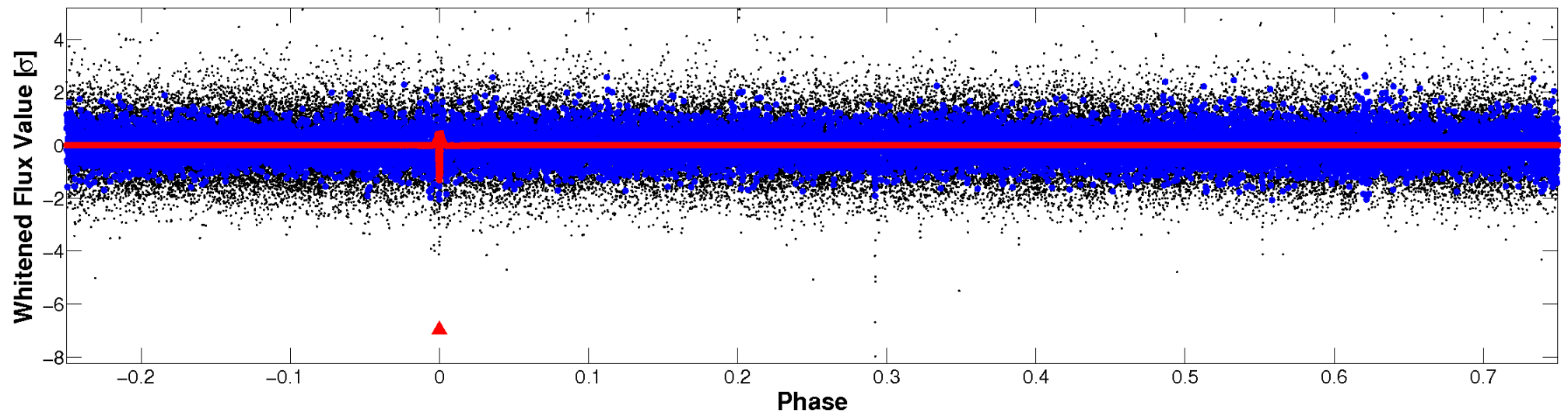


Non-Whitened Vs. Whitened Light Curve

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

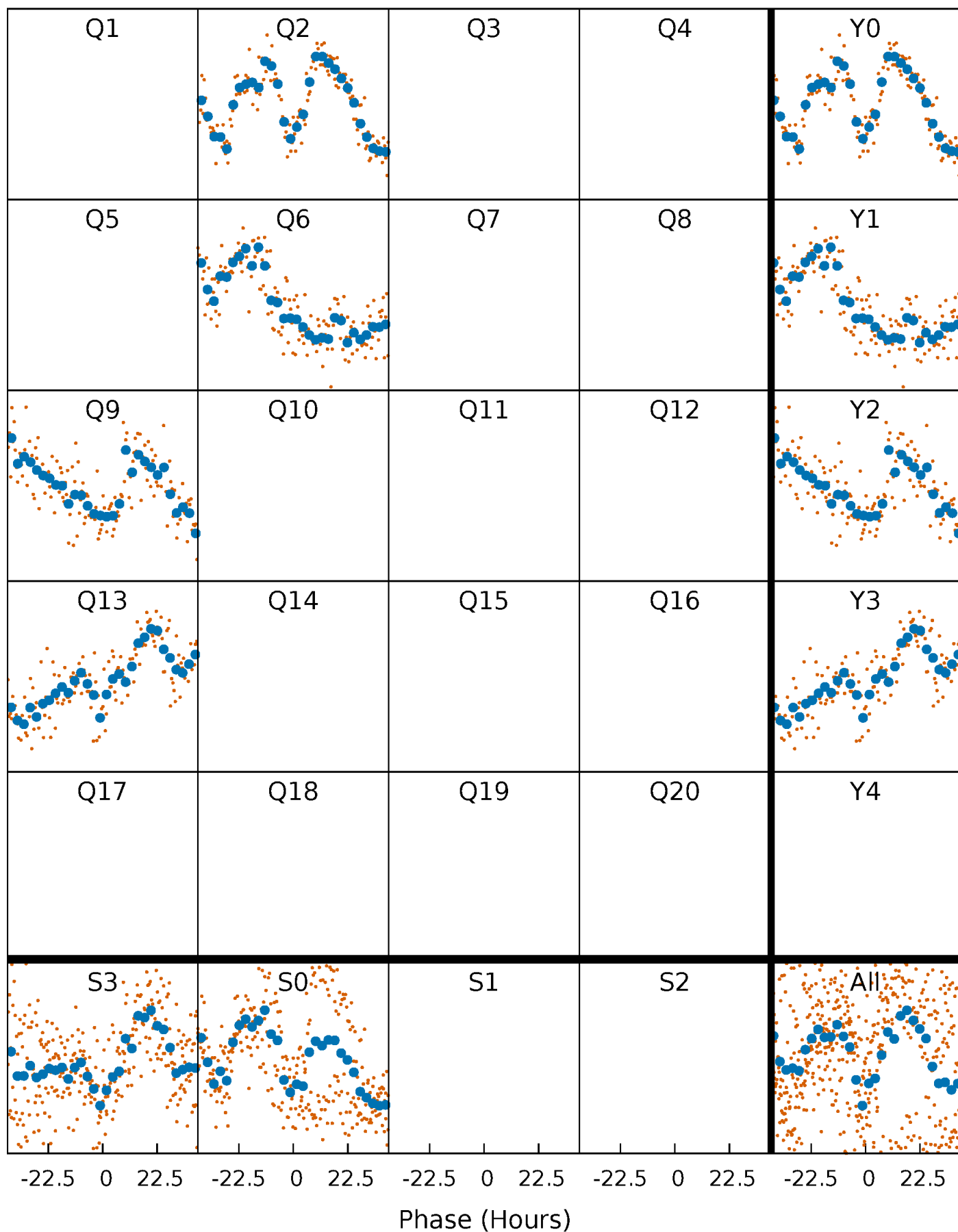


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010337072-01 P=355.917033 Days $T_0=185.417314$ (BKJD)



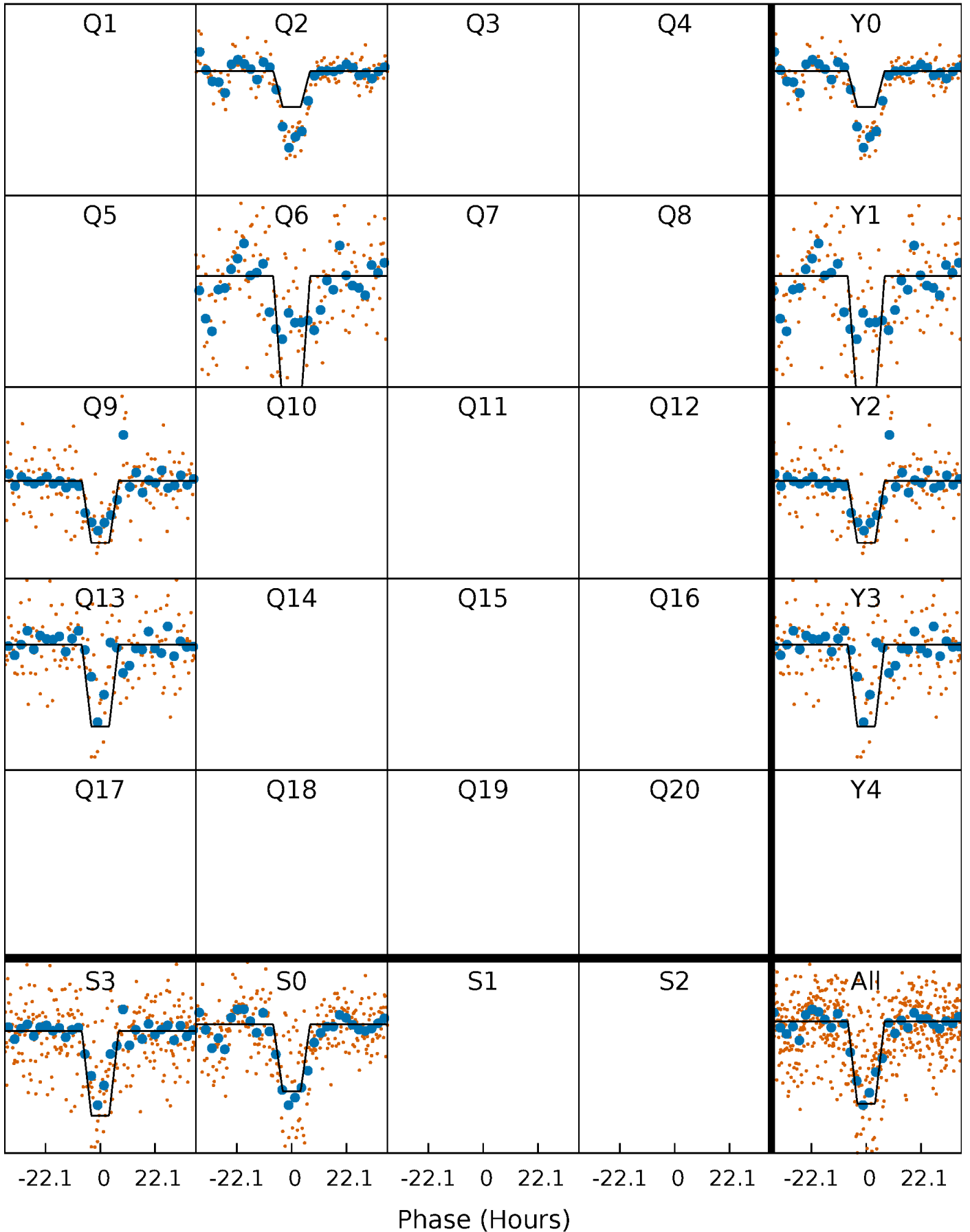
DV Quarter-Phased Transit Curves

TCE 010337072-01 P=355.917033 Days $T_0=185.417314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

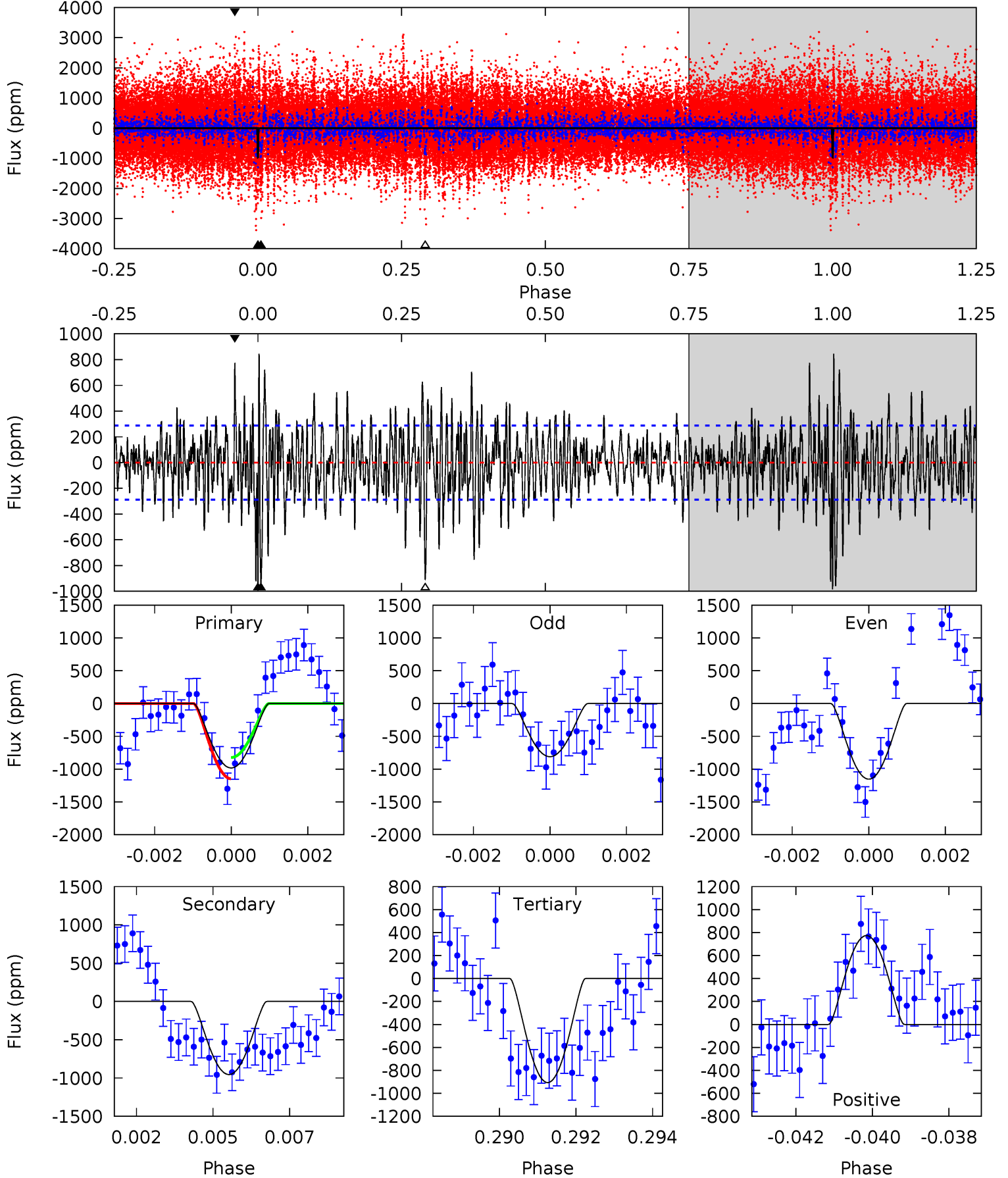
TCE 010337072-01 $P=355.918559$ Days $T_0=185.403458$ (BKJD)



DV Model-Shift Uniqueness Test

010337072-01, P = 355.917033 Days, E = 185.417314 Days

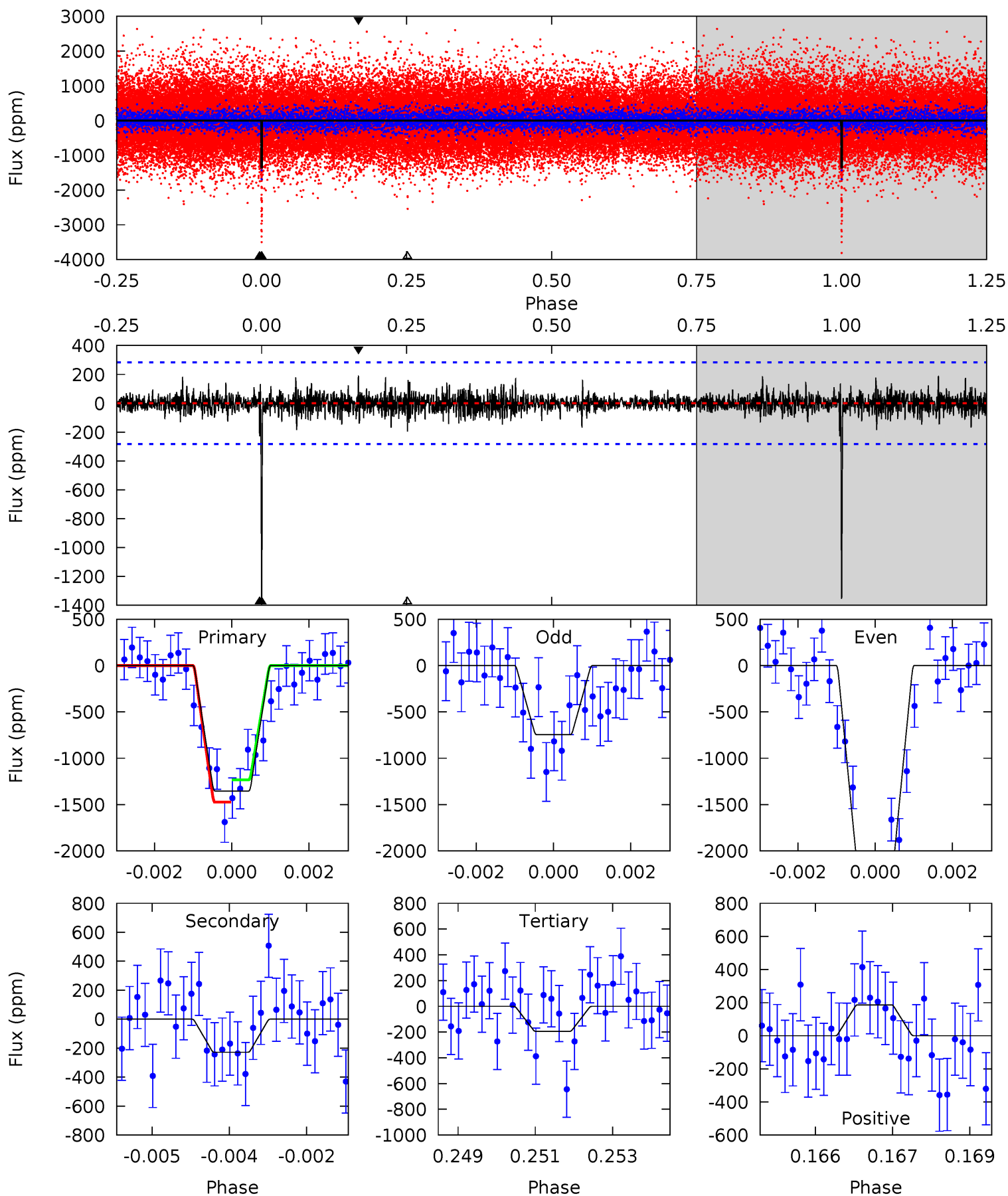
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	17.6	16.7	14.2	5.30	3.04	4.00	1.41	3.84	0.89	3.33	3.13	0.93	0.46	2.99



Alt Model-Shift Uniqueness Test

010337072-01, P = 355.918559 Days, E = 185.403458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.6	4.31	3.68	3.53	5.35	3.12	0.84	21.9	22.1	0.63	0.78	13.5	1.43	0.12	2.27



Stellar Parameters For KIC 010337072

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5383^{+159}_{-159}	$4.587^{+0.035}_{-0.112}$	$-0.100^{+0.300}_{-0.300}$	$0.789^{+0.132}_{-0.066}$	$0.885^{+0.070}_{-0.104}$	$2.537^{+0.395}_{-0.846}$
	+3%/-3%	+1%/-2%	+300%/-300%	+17%/-8%	+8%/-12%	+16%/-33%
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 010337072-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-955 ± 54	$8.73^{+7.75}_{-5.96}$	308^{+14}_{-13}	3480^{+1831}_{-581}	6024^{+52285}_{-4348}
Alt.	-228 ± 53	$7.46^{+7.52}_{-5.27}$	308^{+14}_{-12}	2959^{+1313}_{-512}	1996^{+18060}_{-1519}

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

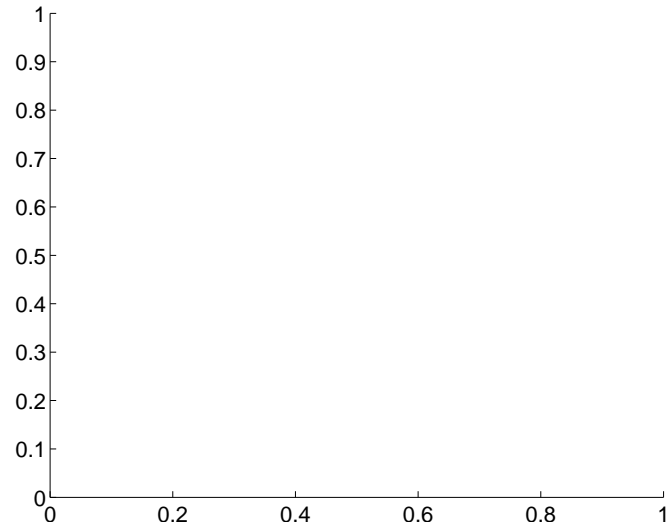
Supplemental centroid analysis for 010337072-01. Kepler magnitude: 15.75. Transit SNR 10.88

There are 0 quarters with good PRF difference image offsets

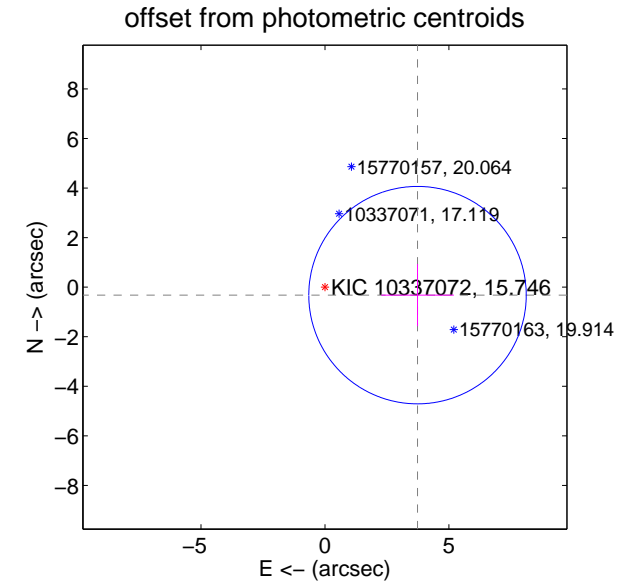
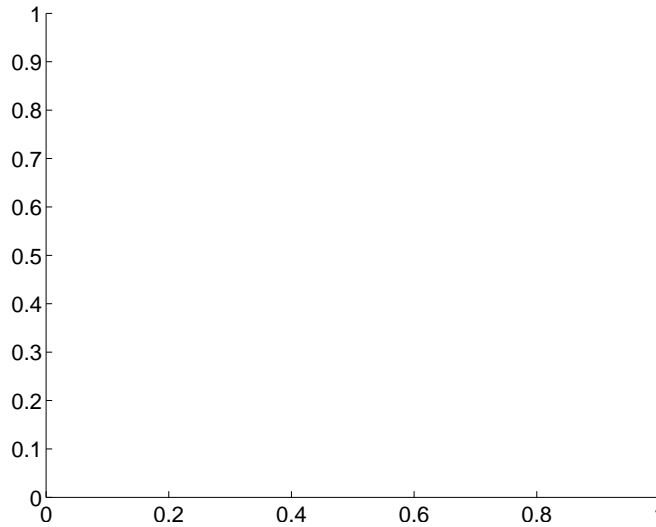
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.75 ± 1.46	2.56	-3.73 ± 1.46	-0.32 ± 1.25

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.

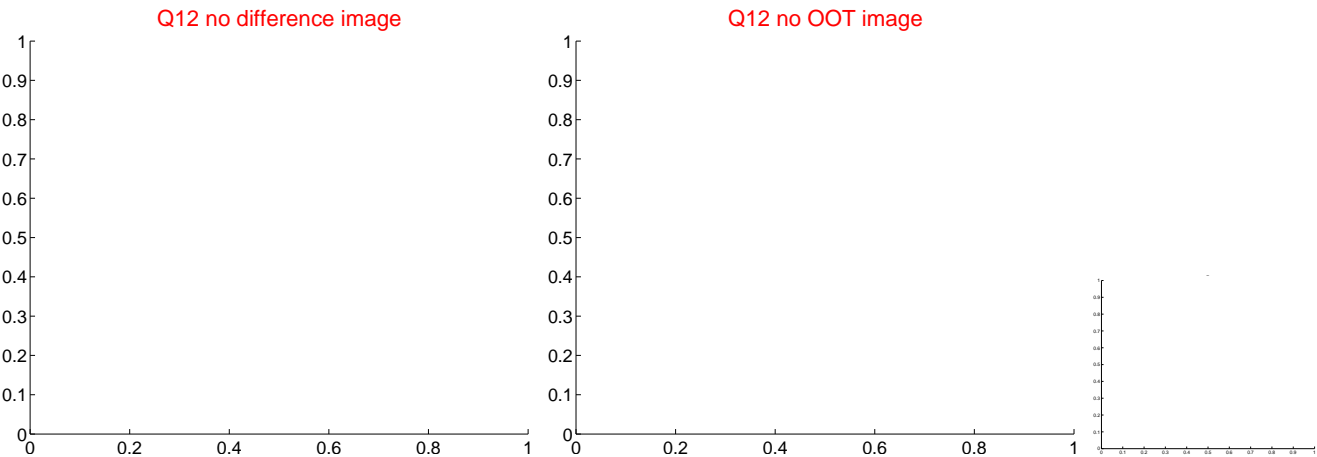
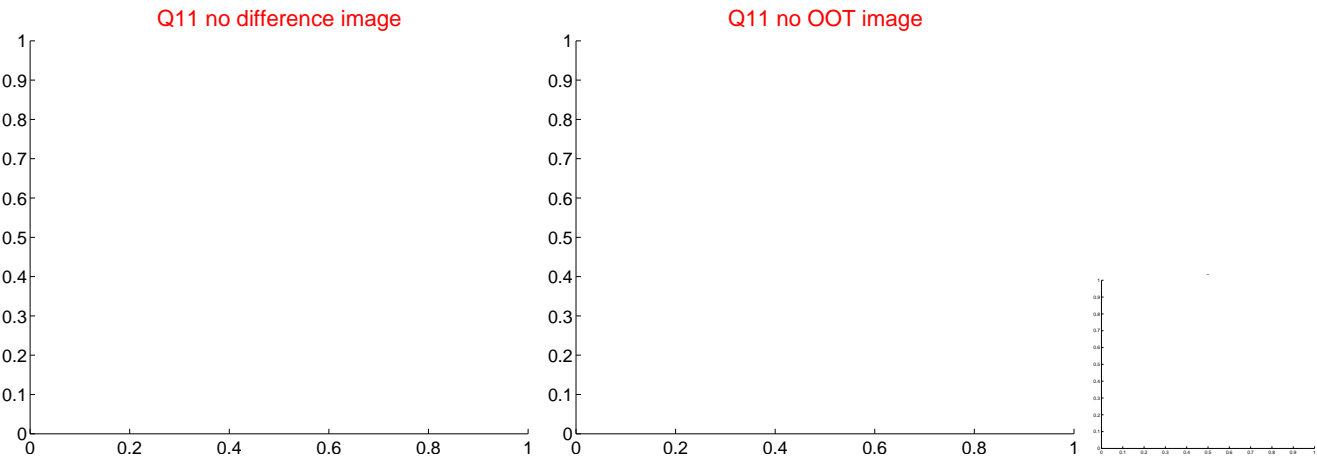
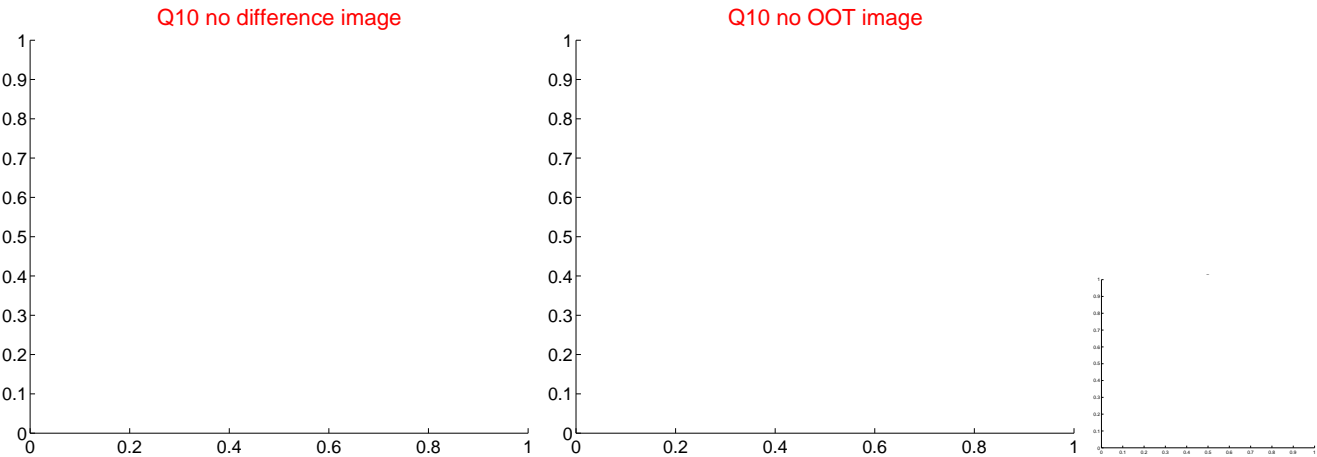
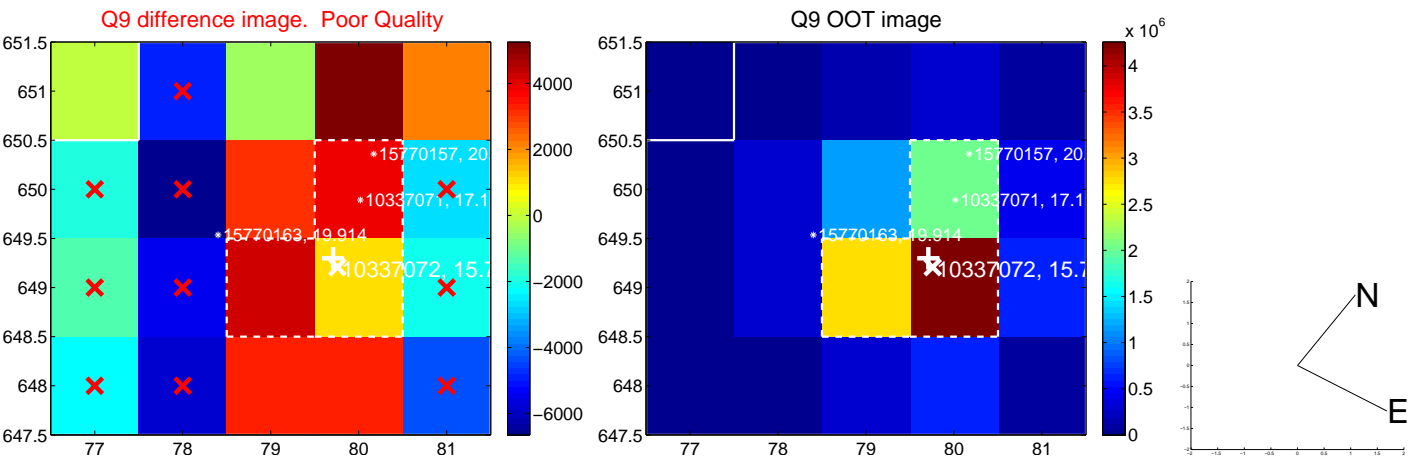
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



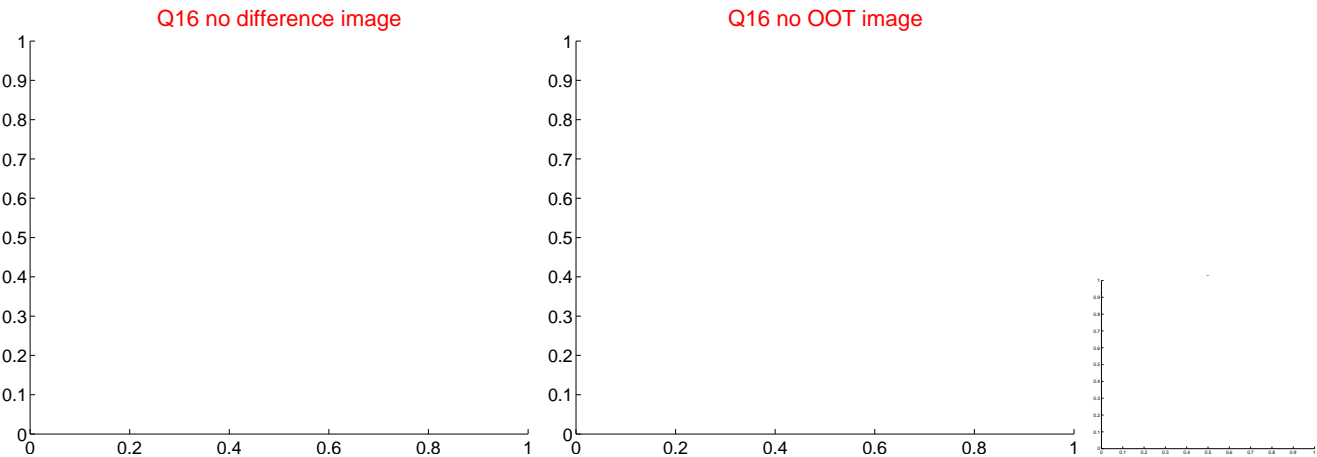
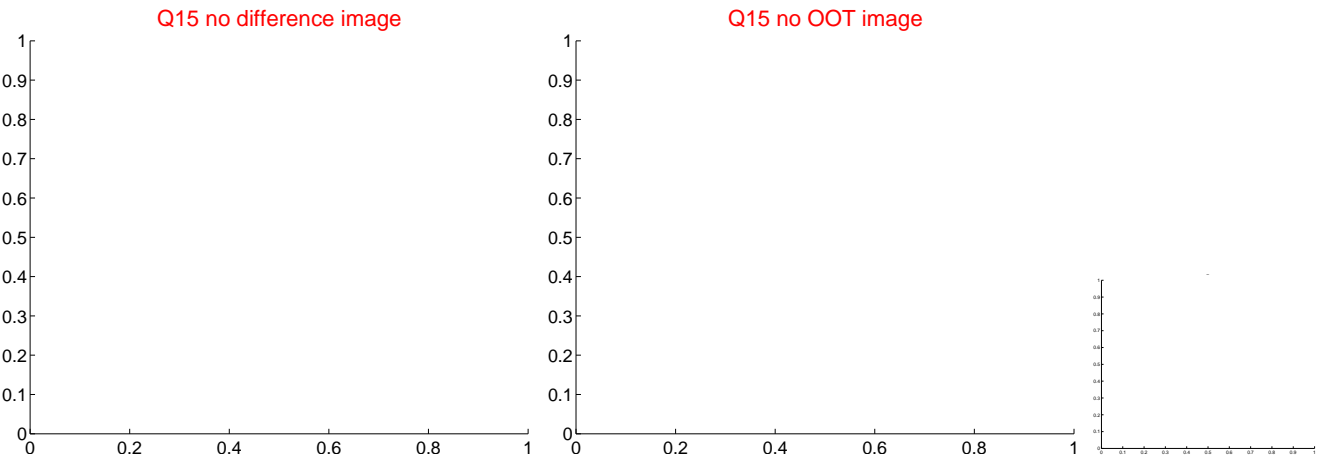
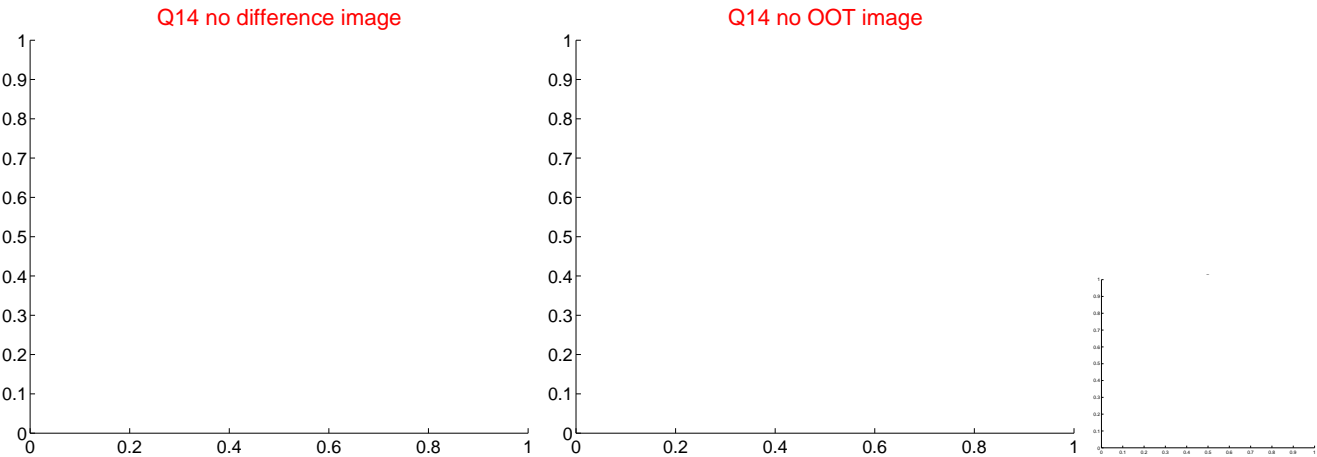
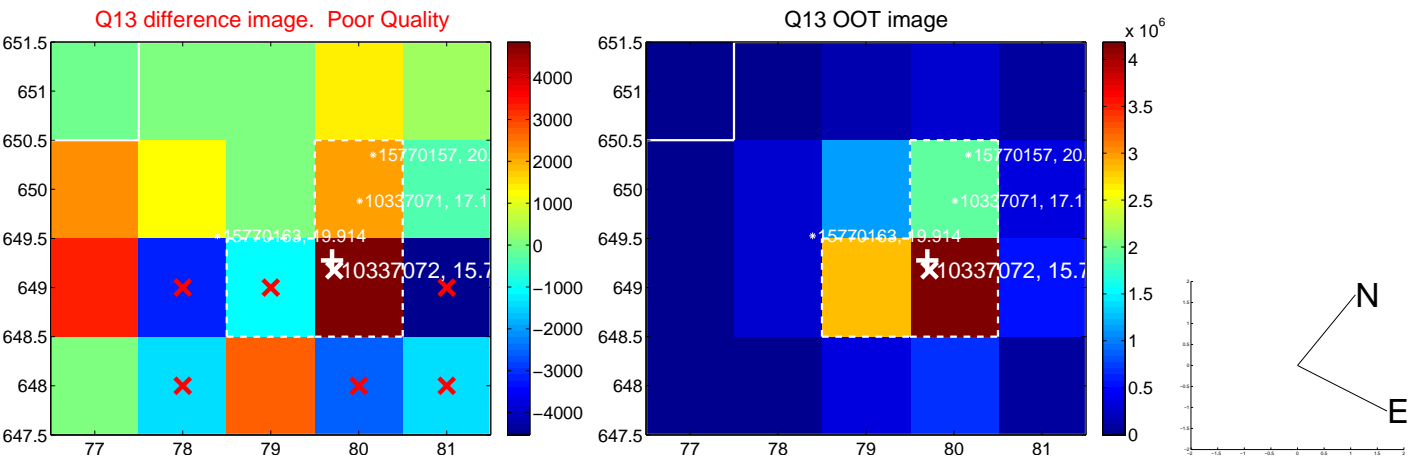
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



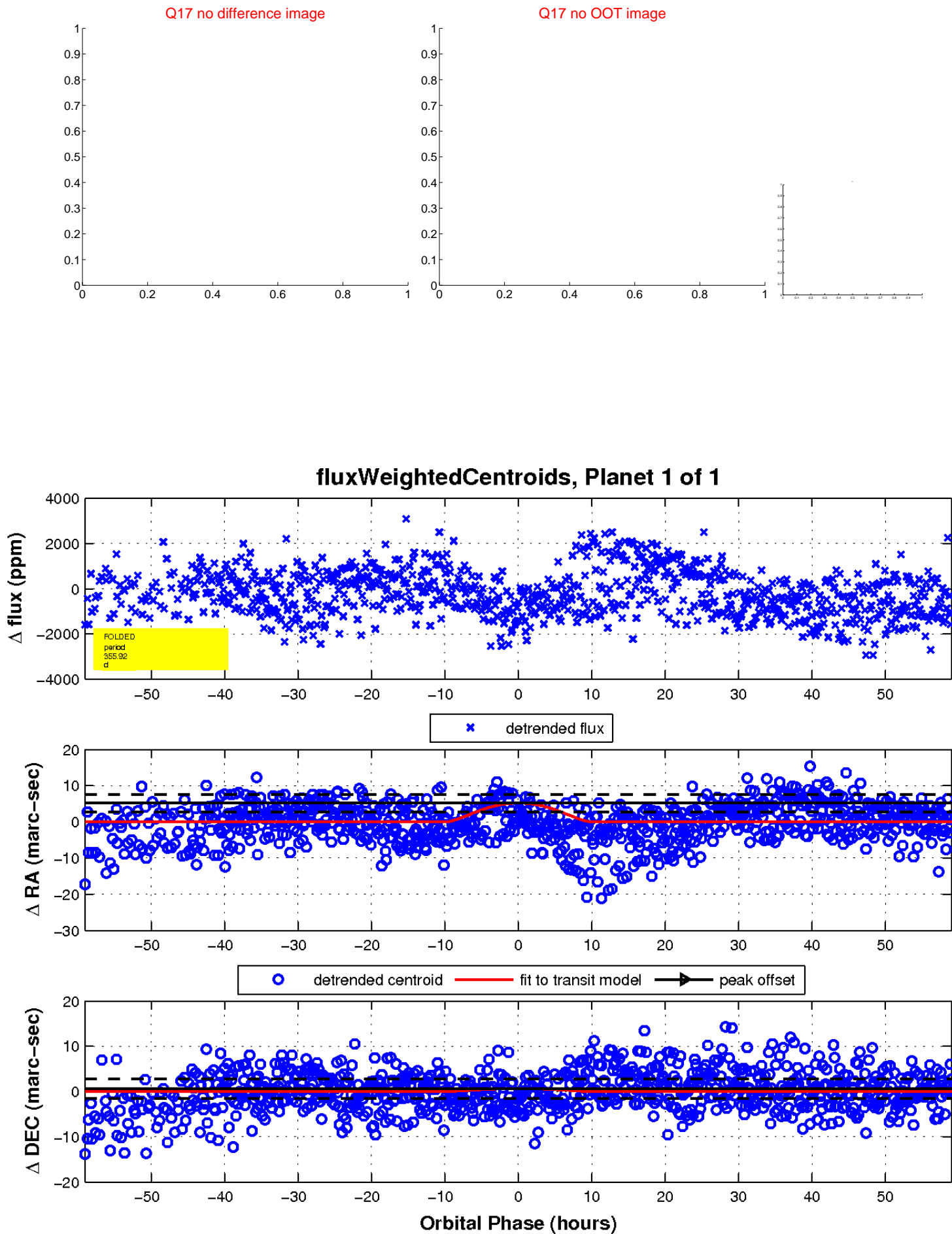
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

