

KIC 004473933

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})
004473933-01	OBS	No	103.598149	132.505427	330.5	15.000	63.6	-1.0	0.63	4505	1.10	1.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004473933-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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.

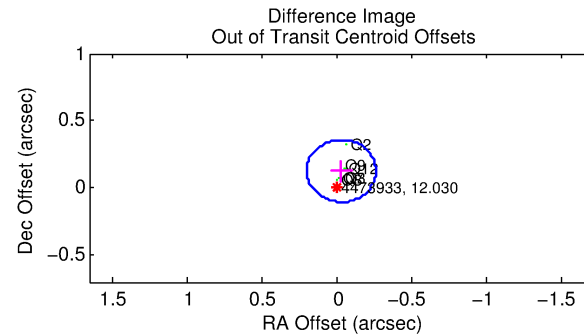
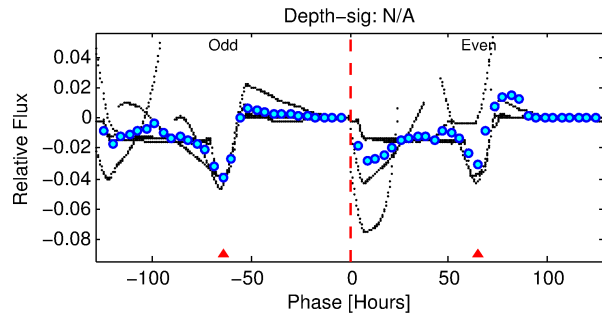
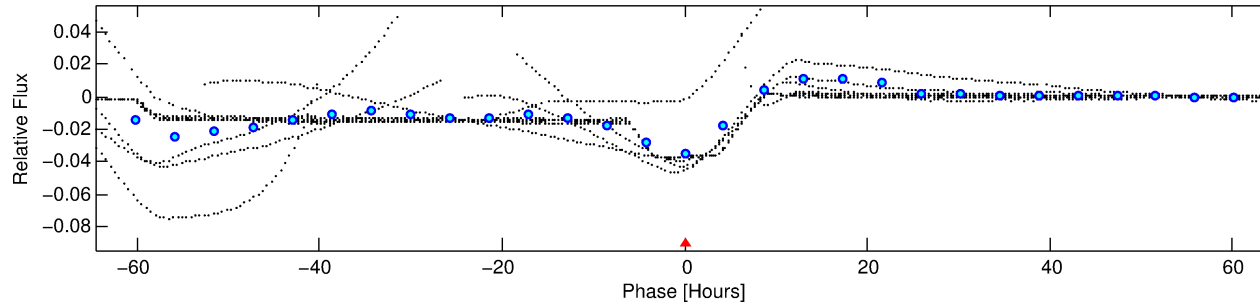
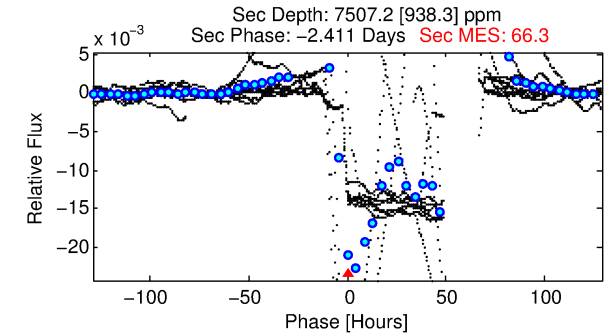
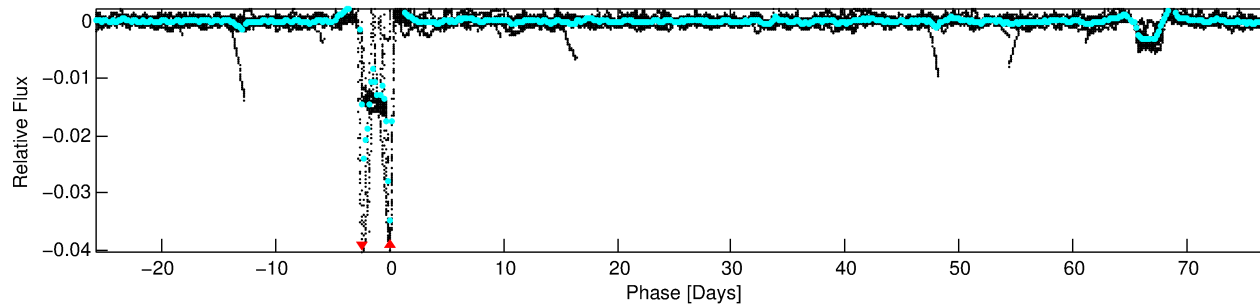
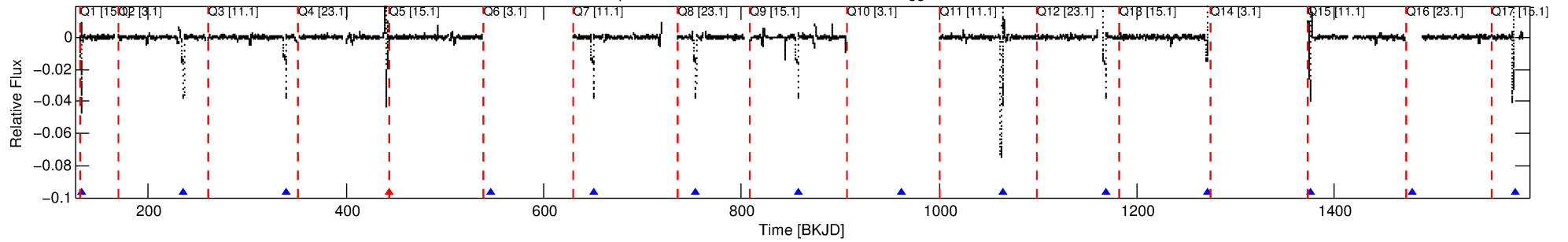
Ephemeris Match Information For 004473933-01

No Significant Match Found

DV One-Page Summary

KIC: 4473933 Candidate: 1 of 1 Period: 103.598 d

Kp: 12.03 R*: 0.63 Rs Teff: 4505.0 K Logg: 4.64 Fe/H: -0.280



TPS TCE Results:

Period = 103.59815 d
Epoch = 132.5054 BKJD

DV fit results are unavailable

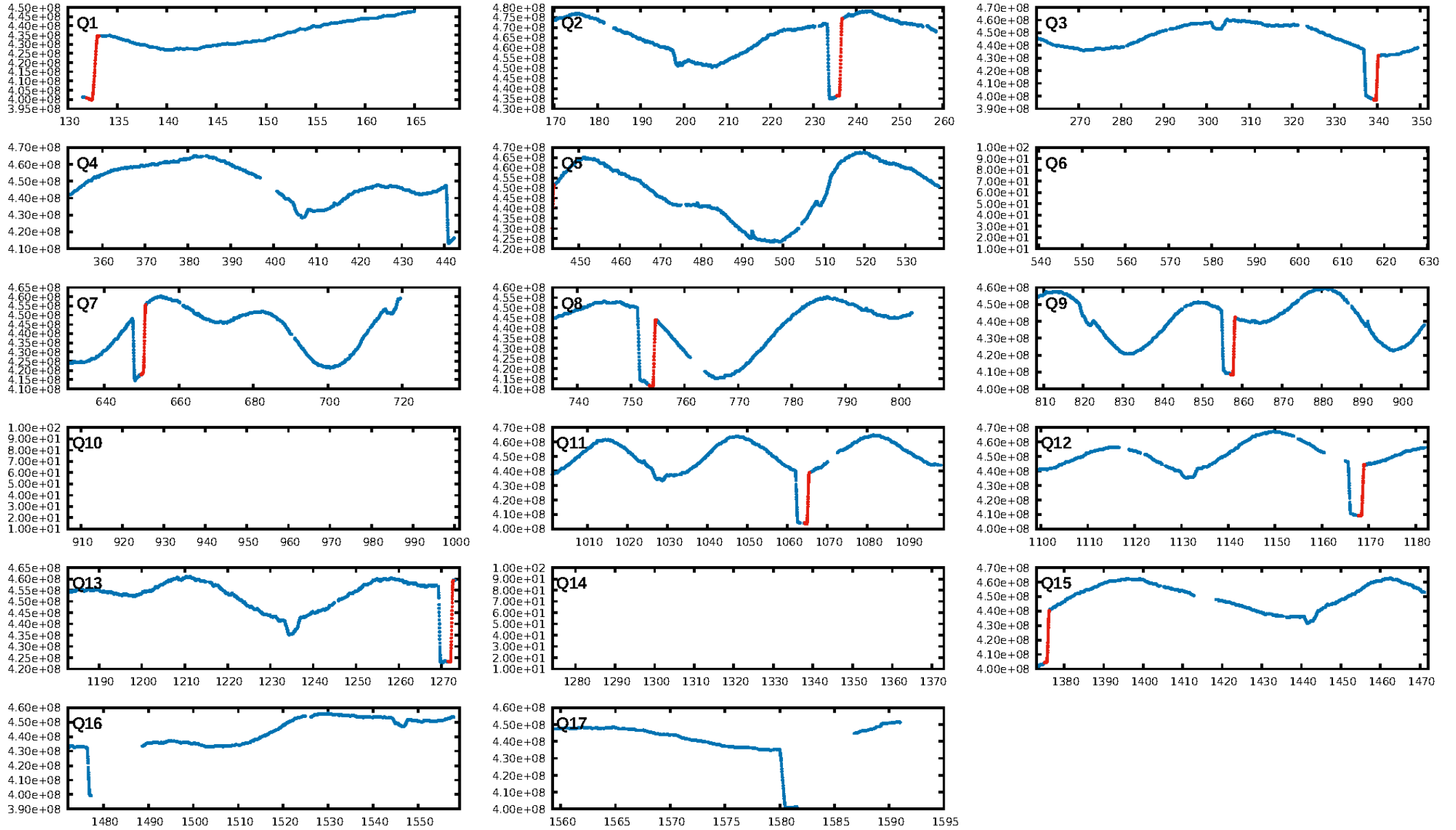
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.65e-90
RollingBand-fgt: 0.90 [9/10]
GhostDiagnostic-chr: 0.916
Centroid-sig: 0.0%
Centroid-so: 0.021 arcsec [5.70σ]
OotOffset-rm: 0.131 arcsec [1.69σ]
KicOffset-rm: 0.099 arcsec [1.28σ]
OotOffset-st: 1/2/2/1 [6]
KicOffset-st: 1/2/2/1 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

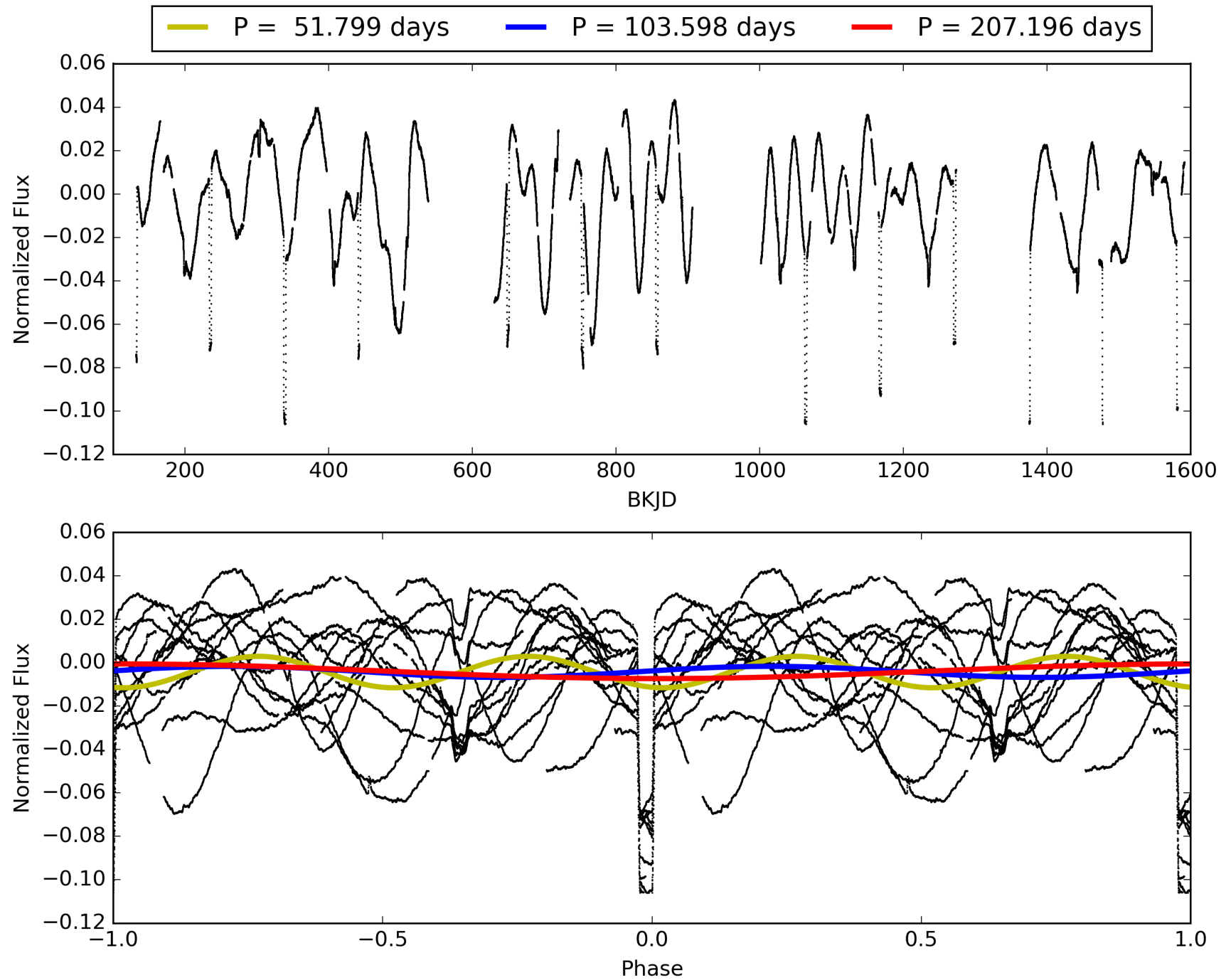
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:22:45 Z

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

TCE 004473933-01, PDC Light Curves

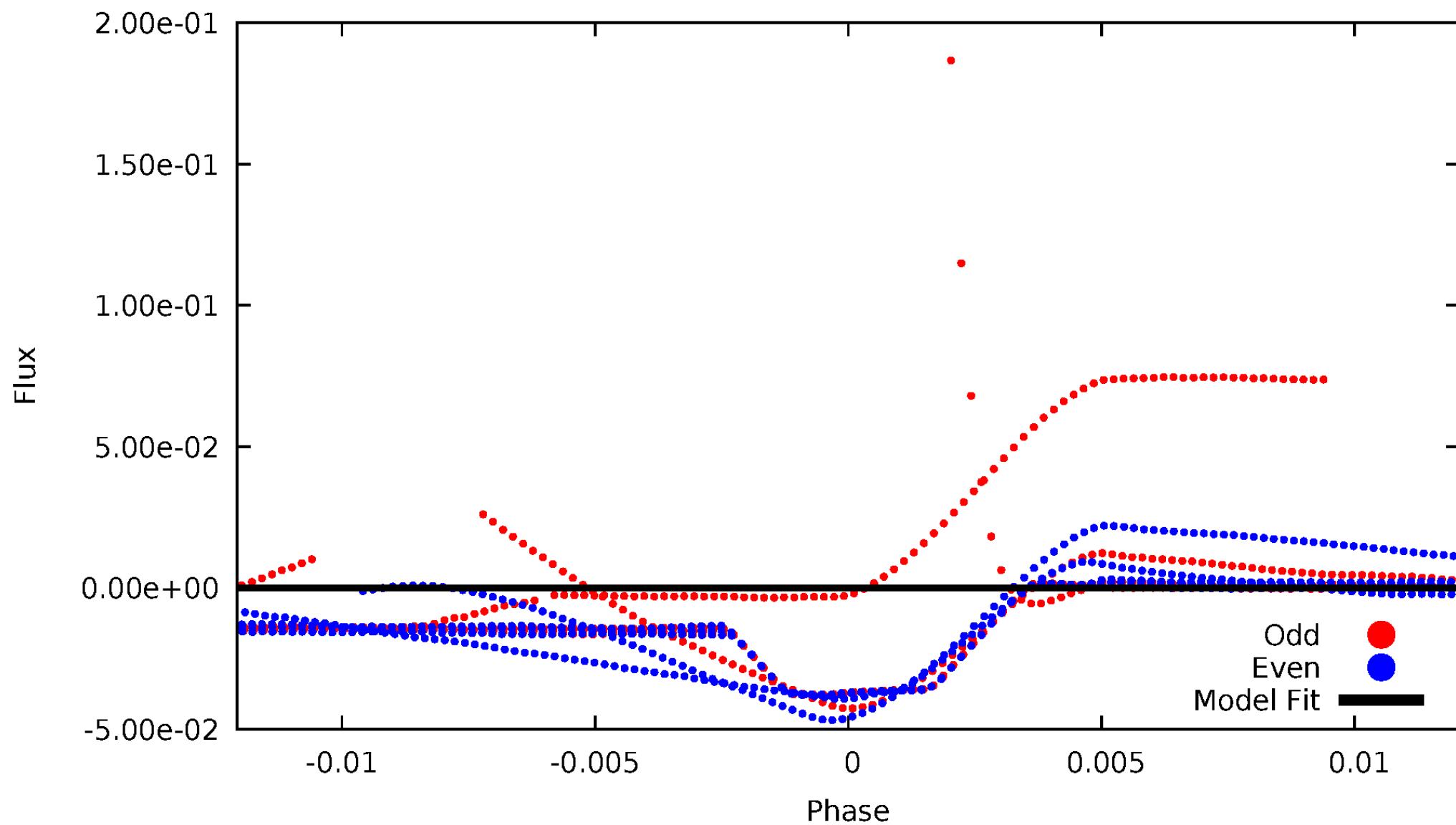


TCE 004473933-01



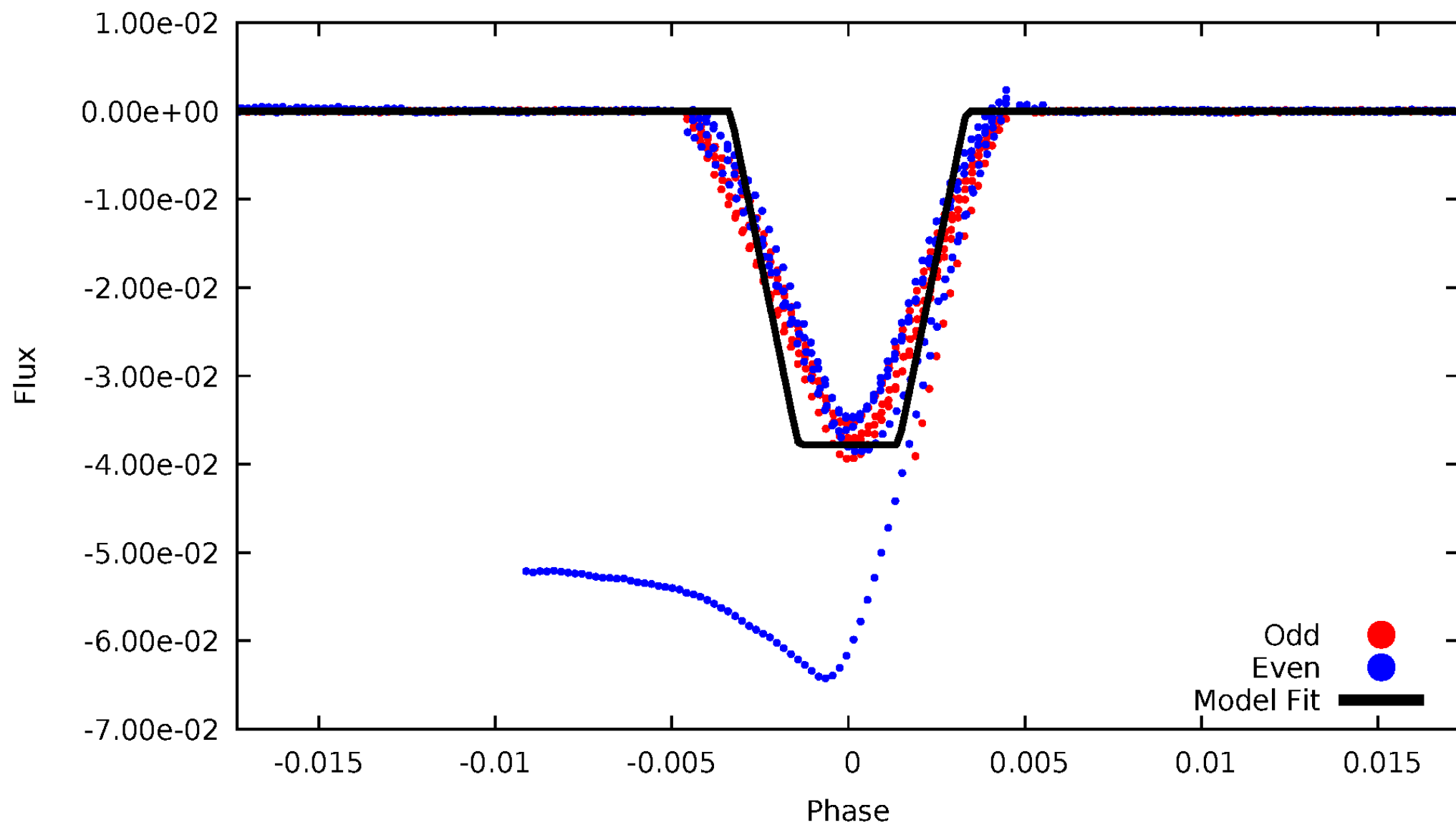
DV Odd/Even

TCE 004473933-01



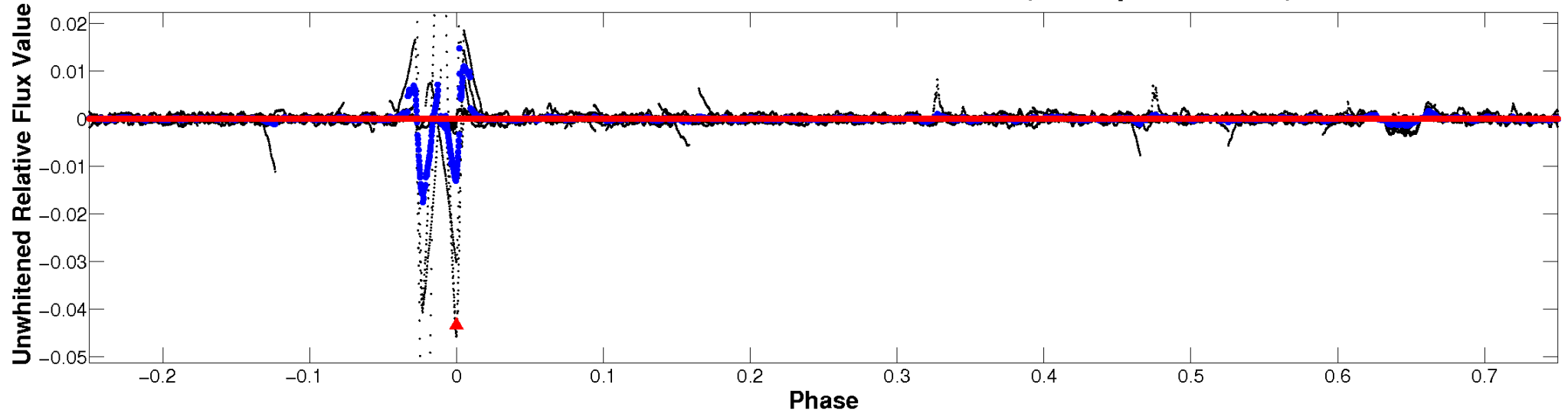
ALT Odd/Even

TCE 004473933-01

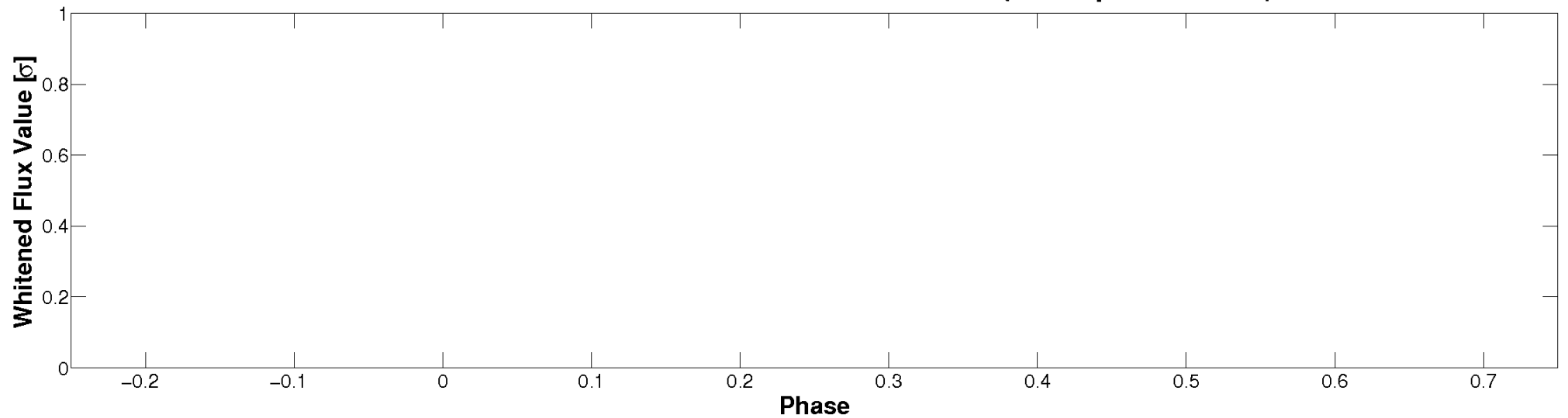


Non-Whitened Vs. Whitened Light Curve

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

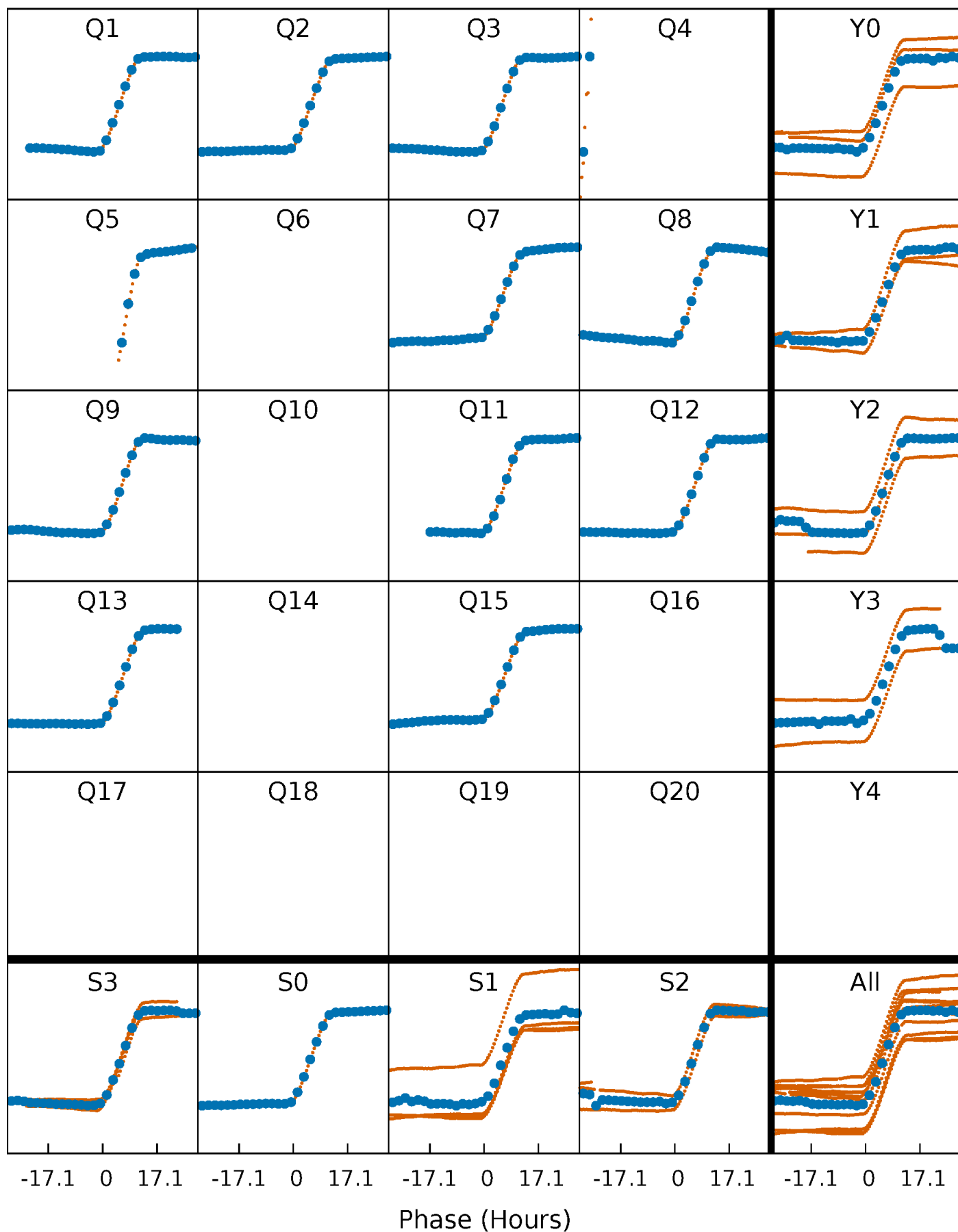


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



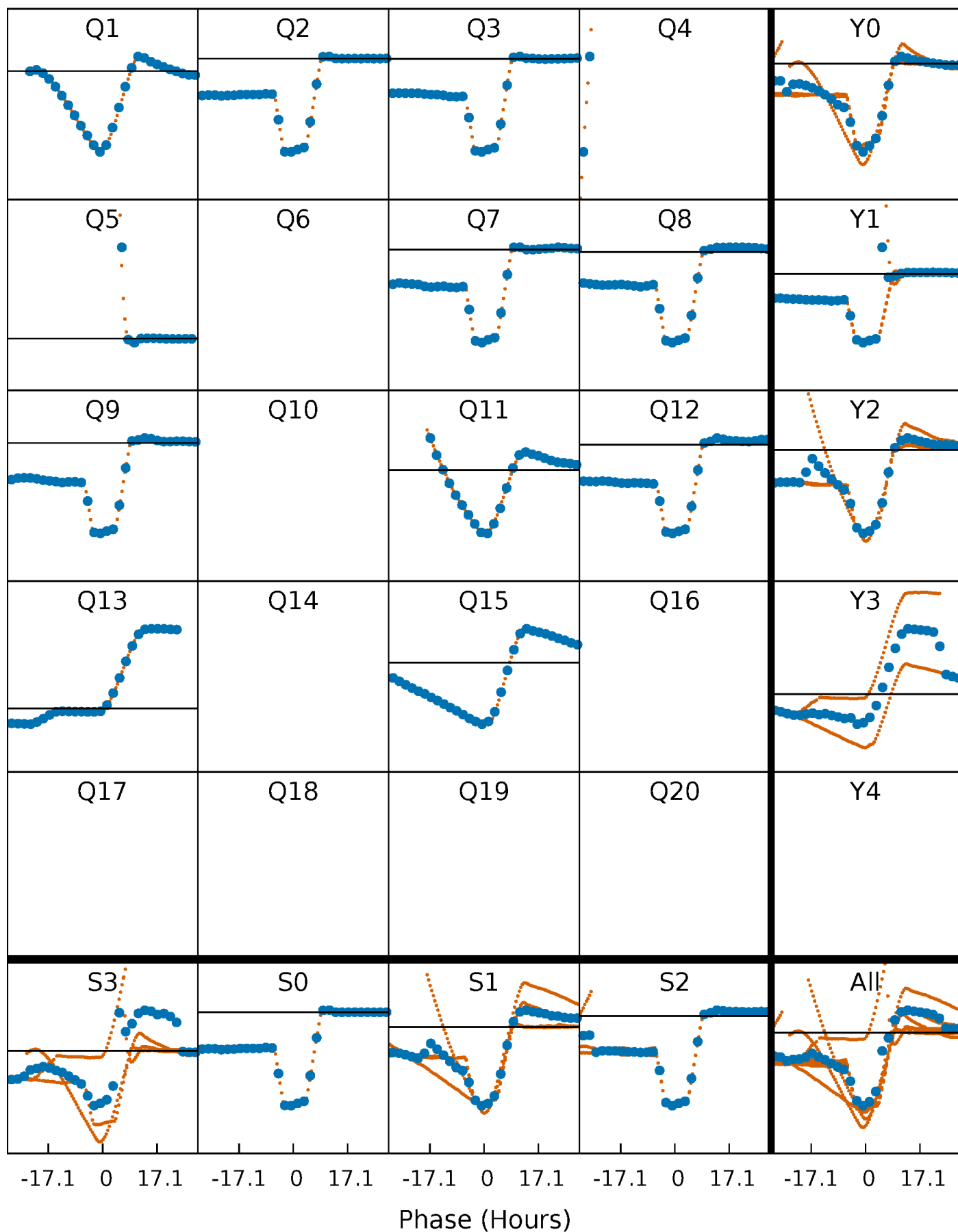
PDC Quarter-Phased Transit Curves

TCE 004473933-01 P=103.598149 Days $T_0=132.505427$ (BKJD)



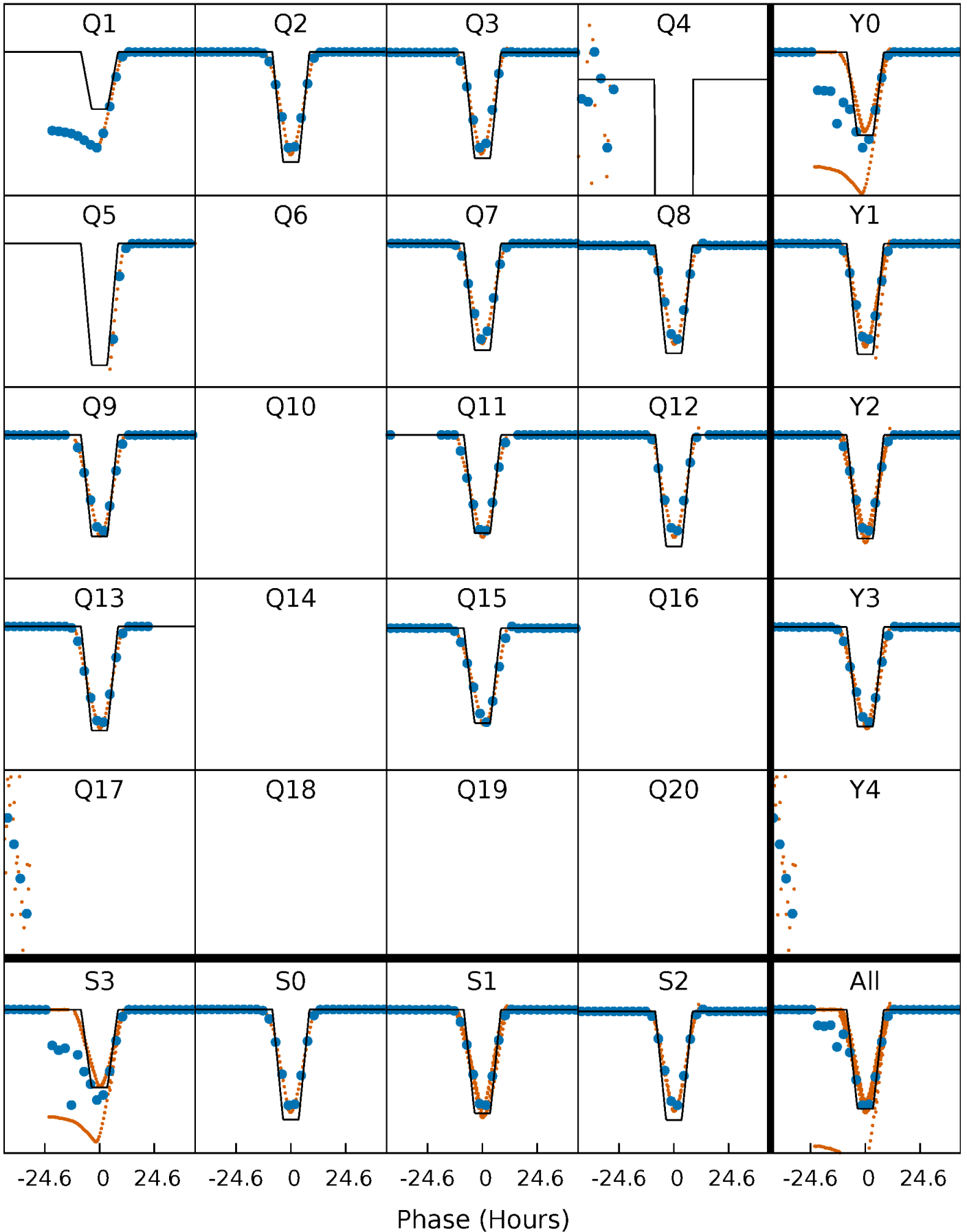
DV Quarter-Phased Transit Curves

TCE 004473933-01 P=103.598149 Days $T_0=132.505427$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

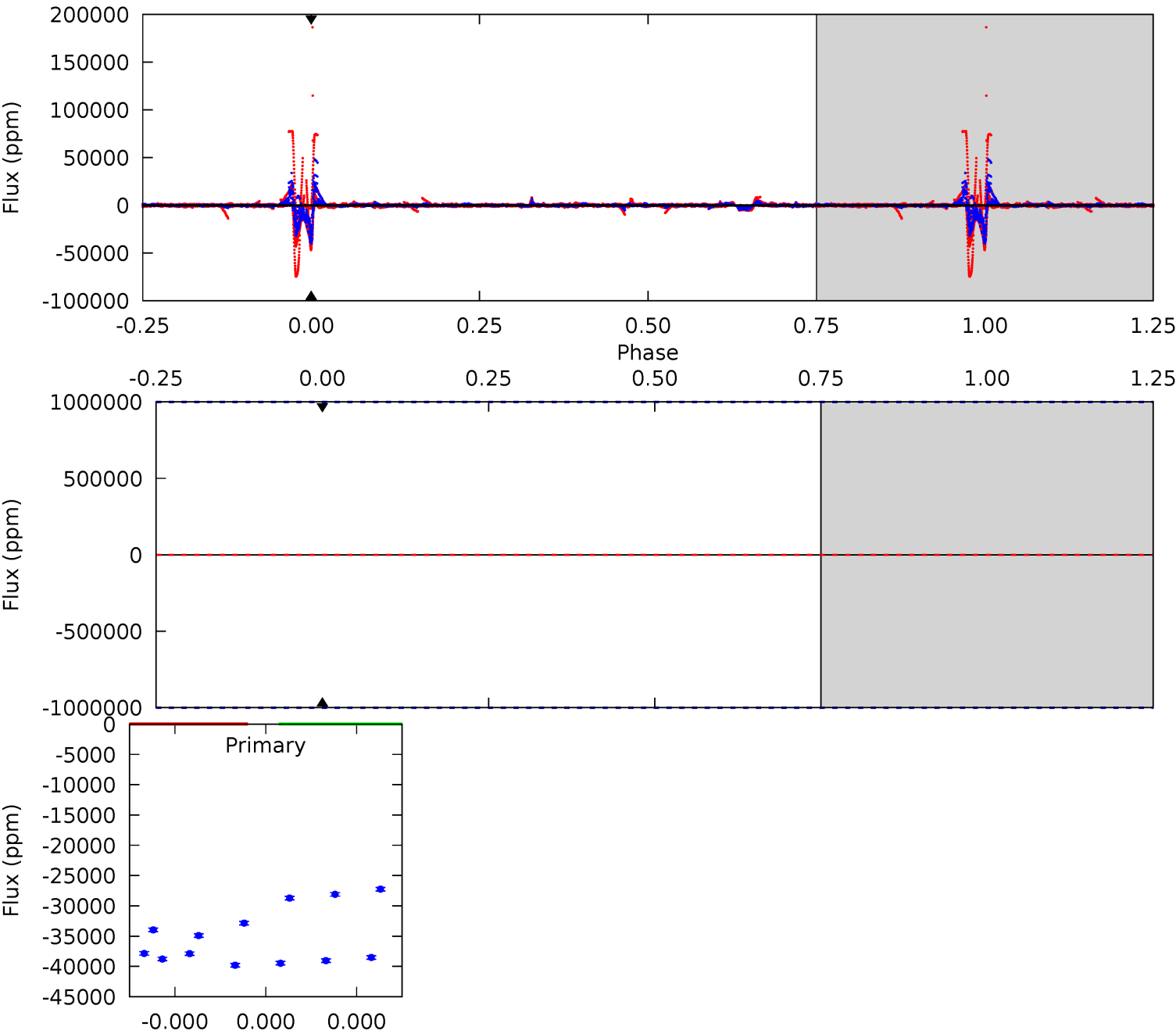
TCE 004473933-01 P=103.598149 Days $T_0=132.518917$ (BKJD)



DV Model-Shift Uniqueness Test

004473933-01, P = 103.598149 Days, E = 28.907278 Days

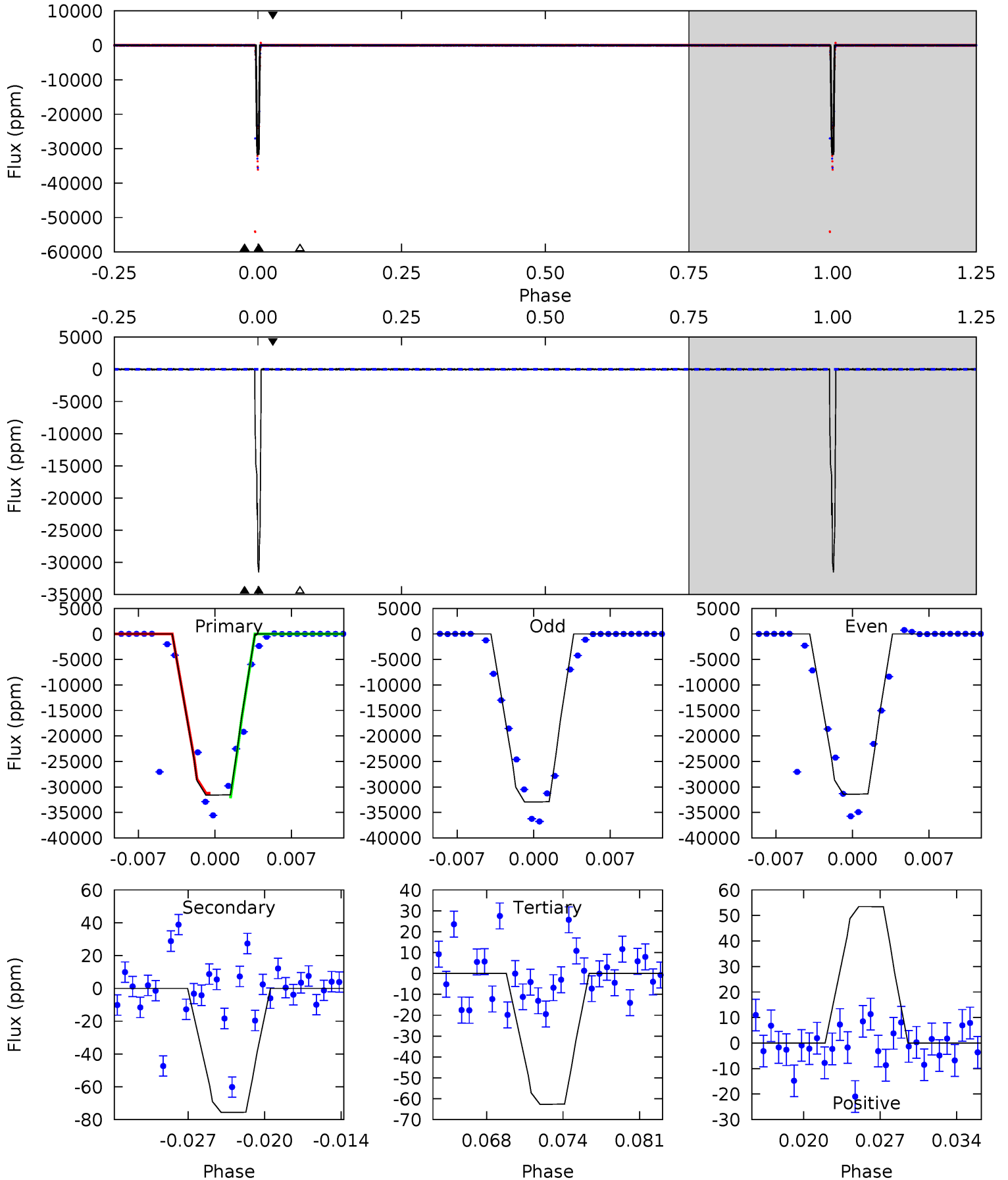
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004473933-01, P = 103.598149 Days, E = 28.920768 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2723	6.52	5.40	4.61	5.10	2.71	1.17	2718	2719	1.12	1.91	110.2	1.11	0.00	0



Stellar Parameters For KIC 004473933

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4505^{+161}_{-161}	$4.644^{+0.040}_{-0.036}$	$-0.280^{+0.300}_{-0.300}$	$0.633^{+0.056}_{-0.051}$	$0.644^{+0.063}_{-0.057}$	$3.580^{+0.673}_{-0.514}$
	+4%/-4%	+1%/-1%	+107%/-107%	+9%/-8%	+10%/-9%	+19%/-14%
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 004473933-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$4.82^{+5.48}_{-3.18}$	360^{+16}_{-14}	3916^{+10012}_{-14678}	$6658^{+719289}_{-438775}$
Alt.	-75 ± 12	$13.63^{+7.03}_{-6.55}$	361^{+14}_{-14}	1920^{+275}_{-154}	31^{+85}_{-18}

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 $A_{obs} \gg 1.0$

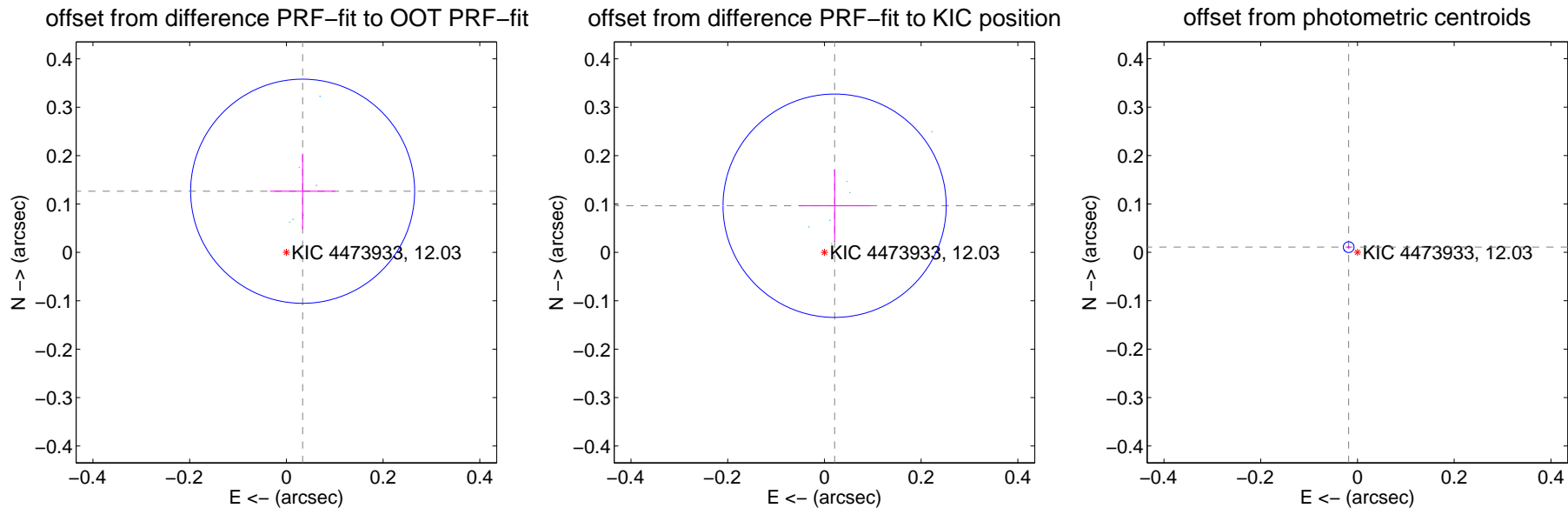
DV Centroid Data

Supplemental centroid analysis for 004473933-01. Kepler magnitude: 12.03. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.131 ± 0.077	1.69	-0.034 ± 0.068	0.126 ± 0.078
PRF-fit source offset from KIC position	0.099 ± 0.077	1.28	-0.021 ± 0.074	0.096 ± 0.074
photometric centroid source offset	0.02 ± 0.00	5.70	0.02 ± 0.00	0.01 ± 0.00



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.

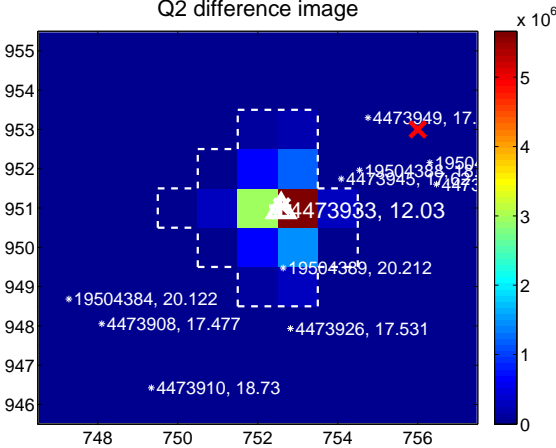
Q1 no difference image



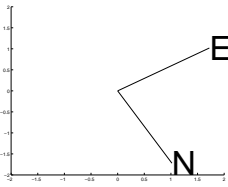
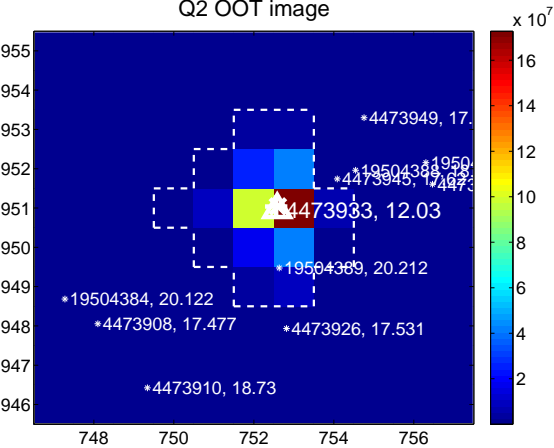
Q1 no OOT image



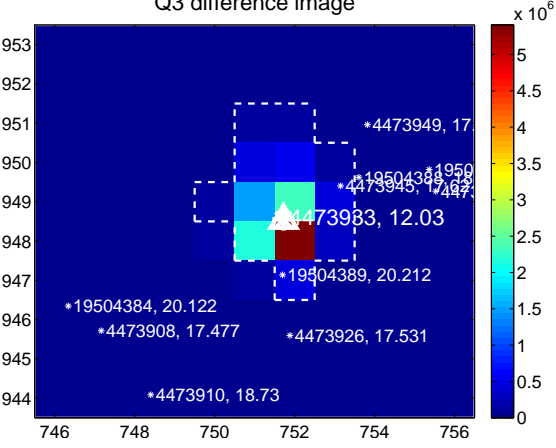
Q2 difference image



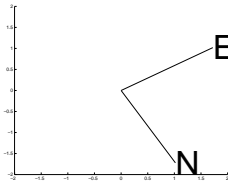
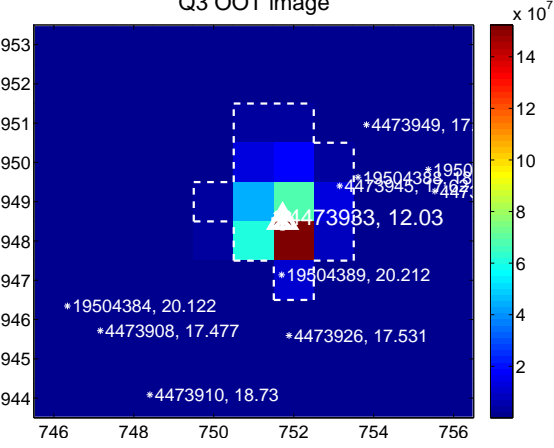
Q2 OOT image



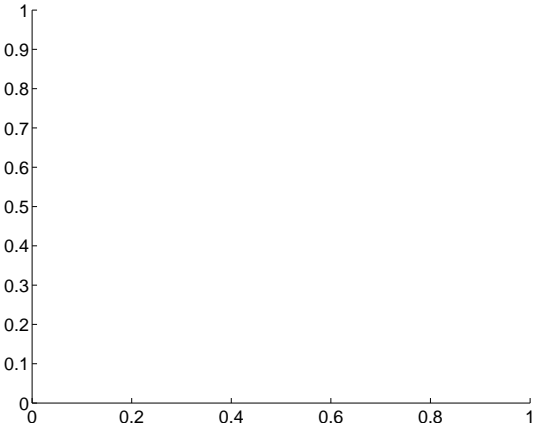
Q3 difference image



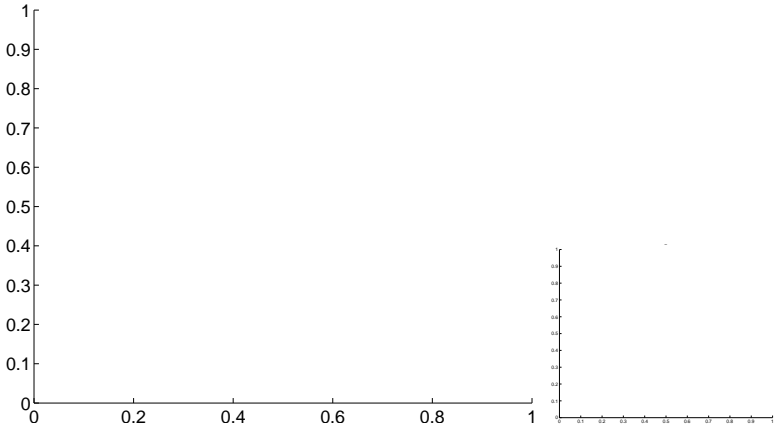
Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

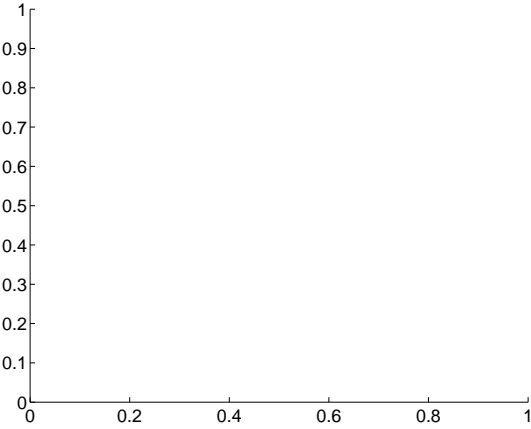
Q5 no difference image



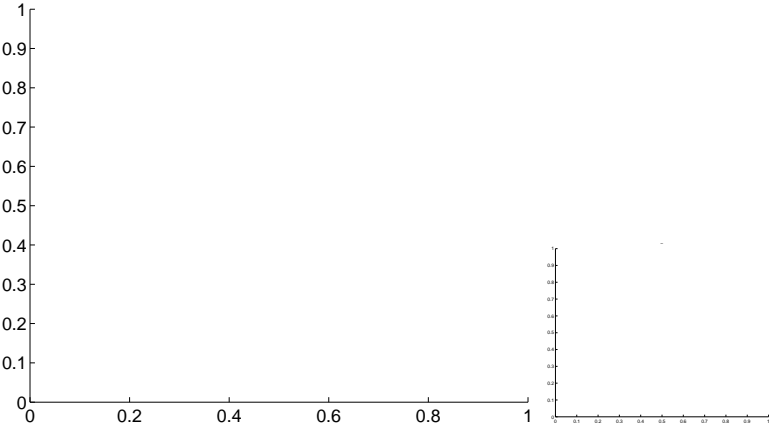
Q5 no OOT image



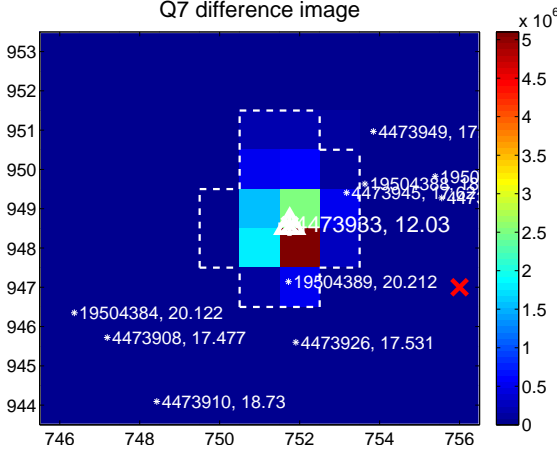
Q6 no difference image



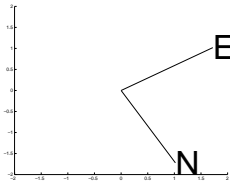
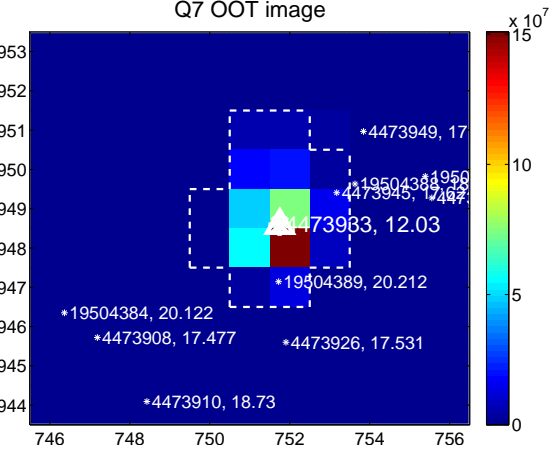
Q6 no OOT image



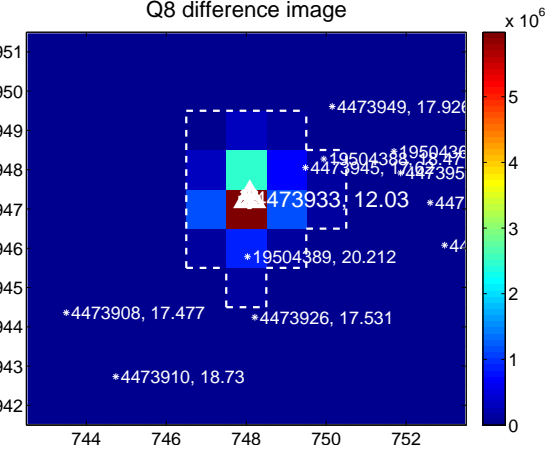
Q7 difference image



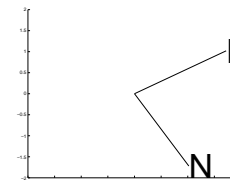
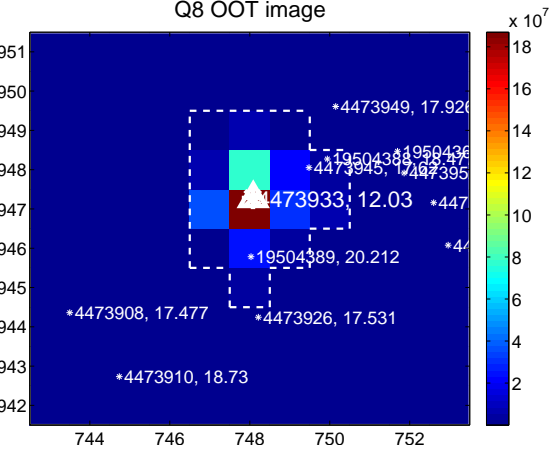
Q7 OOT image



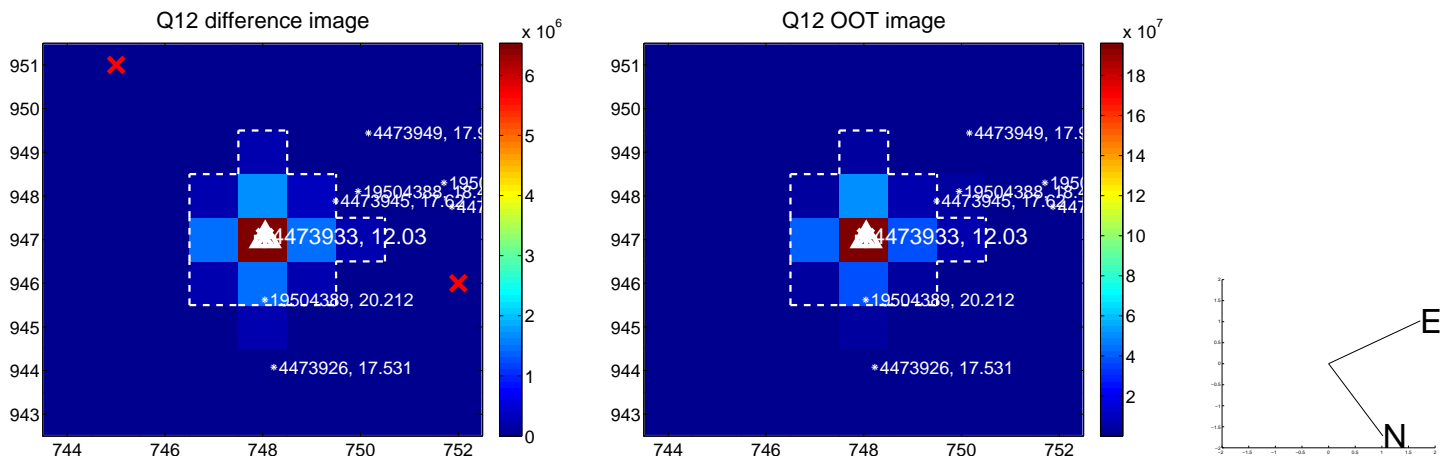
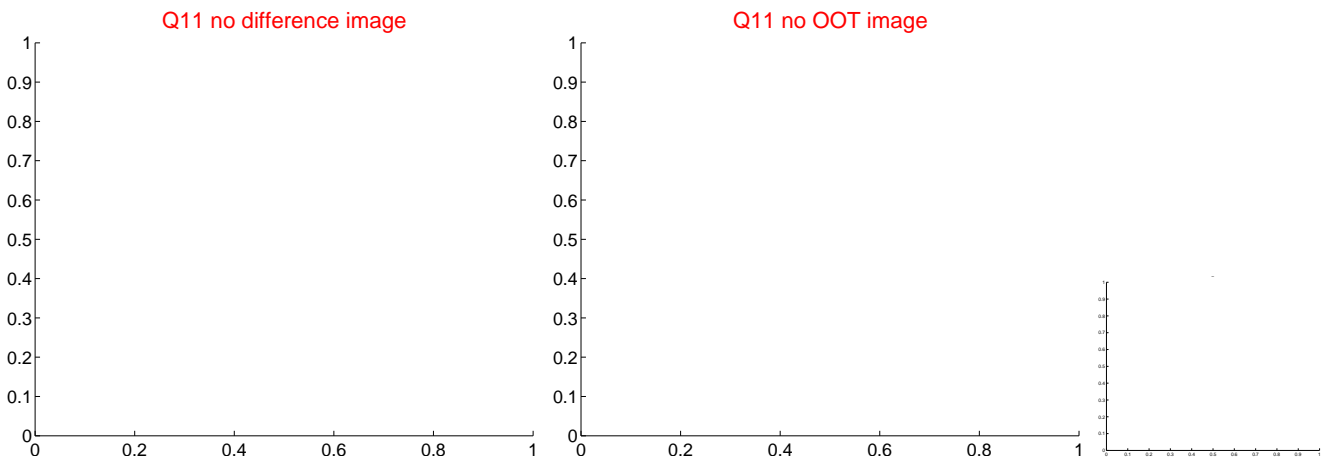
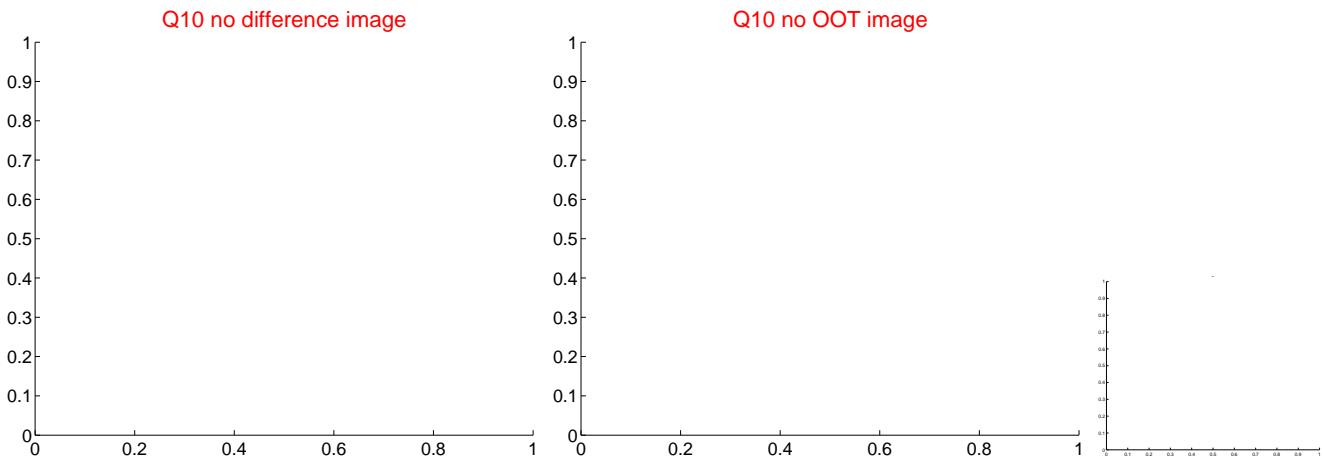
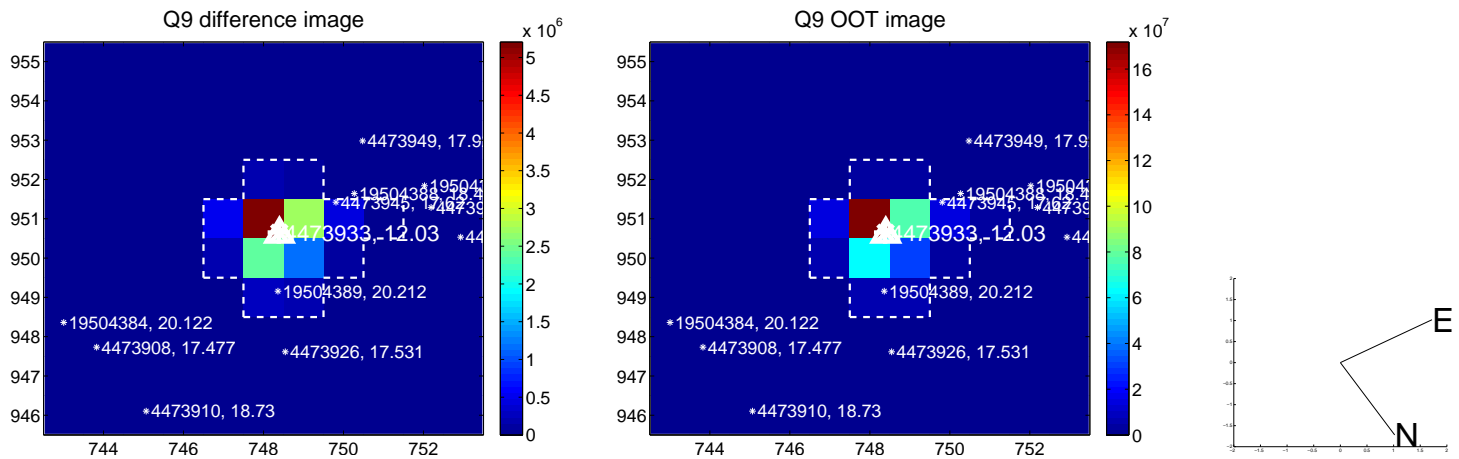
Q8 difference image



Q8 OOT image



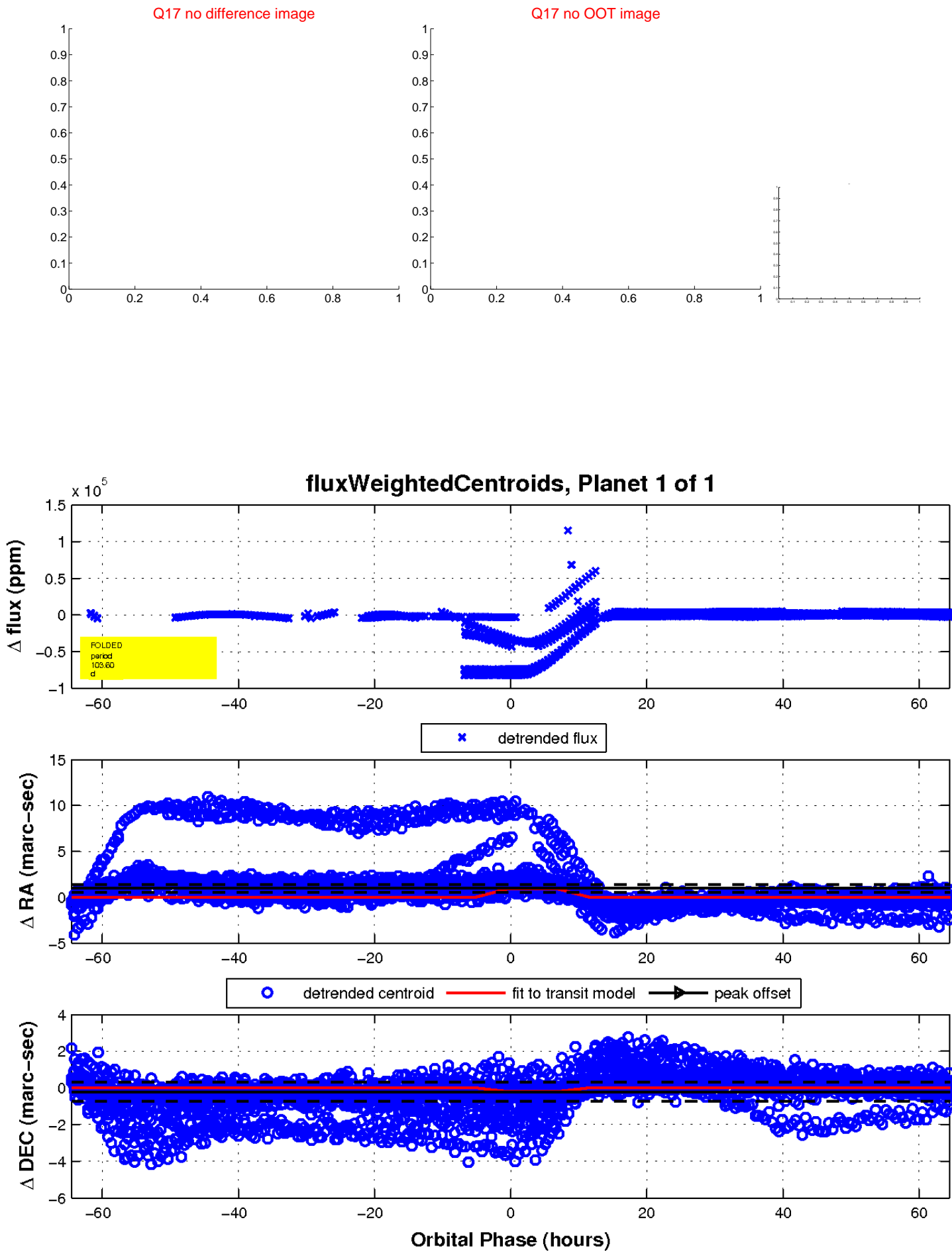
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

