

KIC 004474637

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})
004474637-01	OBS	3829.01	3.886775	135.001727	294183.1	9.000	2454.2	-1.0	1.00	5780	54.56	427.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004474637-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—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 004474637-01

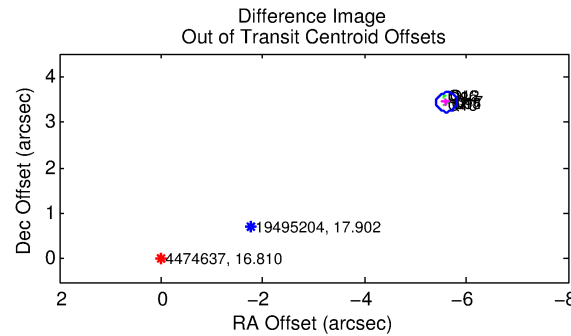
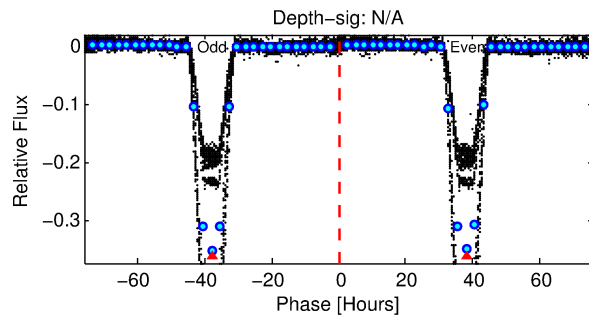
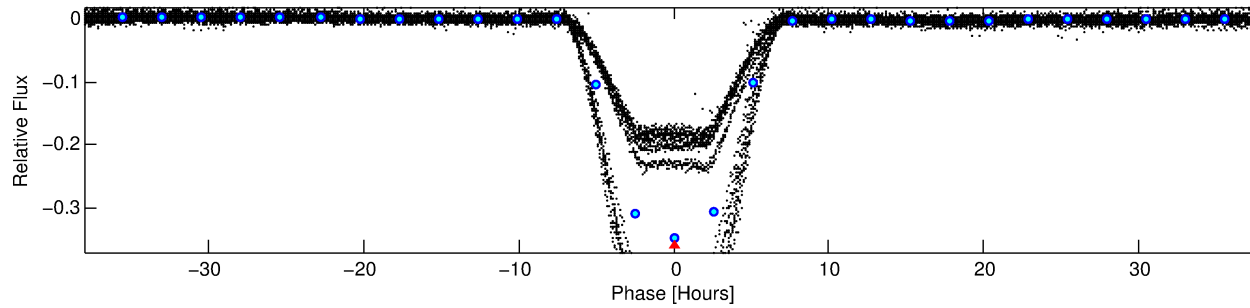
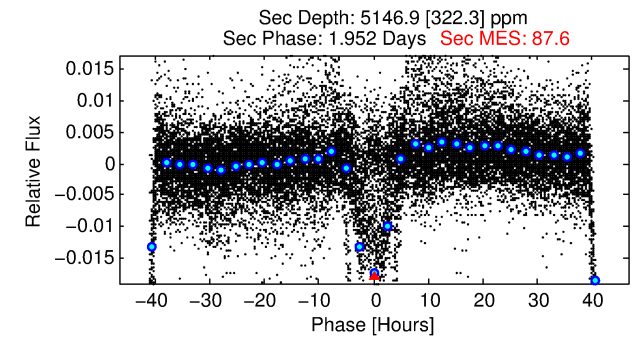
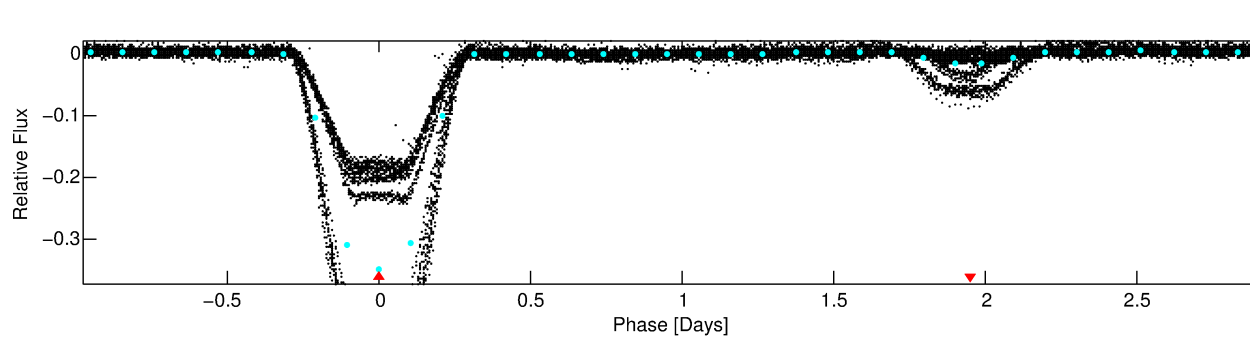
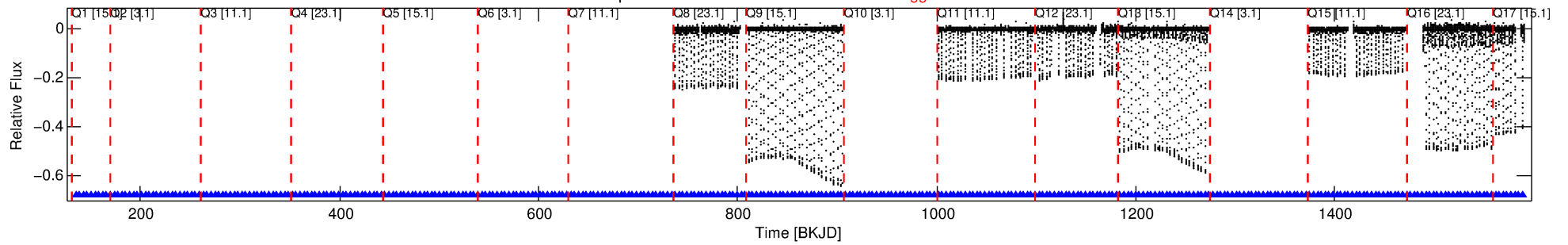
No Significant Match Found

DV One-Page Summary

KIC: 4474637 Candidate: 1 of 1 Period: 3.887 d

KOI: K03829.01 Corr: 0.778

Kp: 16.81 R^* : 1.00 R_s Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



TPS TCE Results:

Period = 3.88678 d
Epoch = 135.0017 BKJD

DV fit results are unavailable

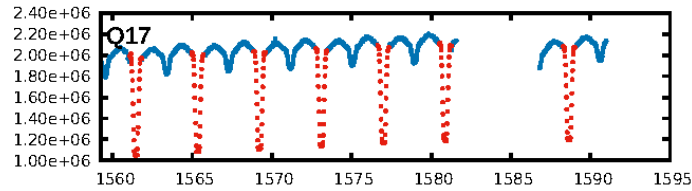
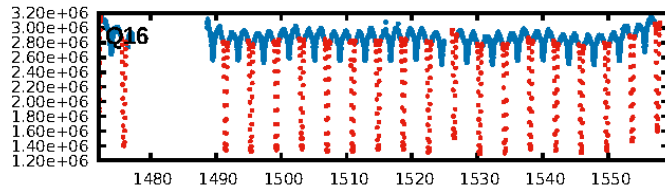
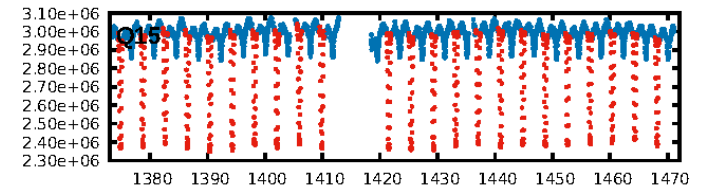
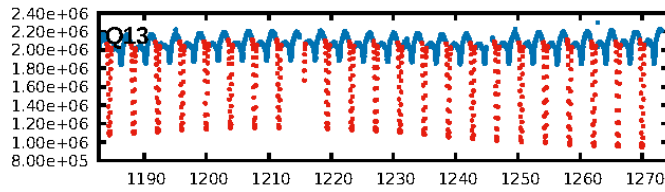
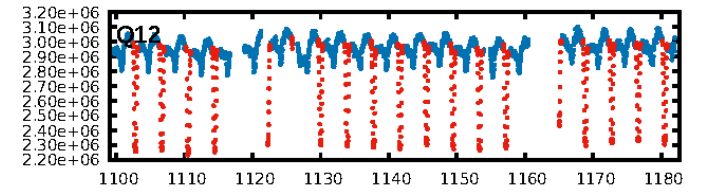
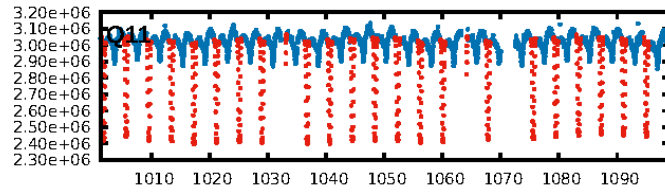
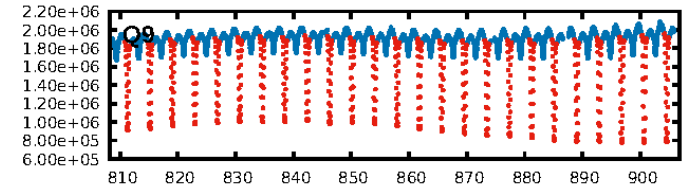
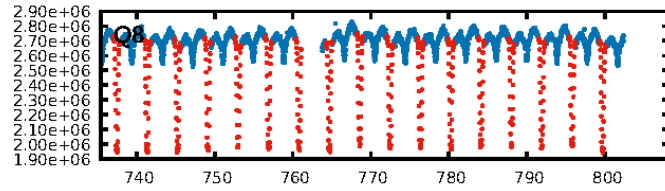
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [149/149]
GhostDiagnostic-chr: 0.6198
Centroid-sig: 0.0%
Centroid-so: 2.866 arcsec [3923.42σ]
OotOffset-rm: 6.573 arcsec [94.36σ]
KicOffset-rm: 2.072 arcsec [29.22σ]
OotOffset-st: 0/2/3/3 [8]
KicOffset-st: 0/2/3/3 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

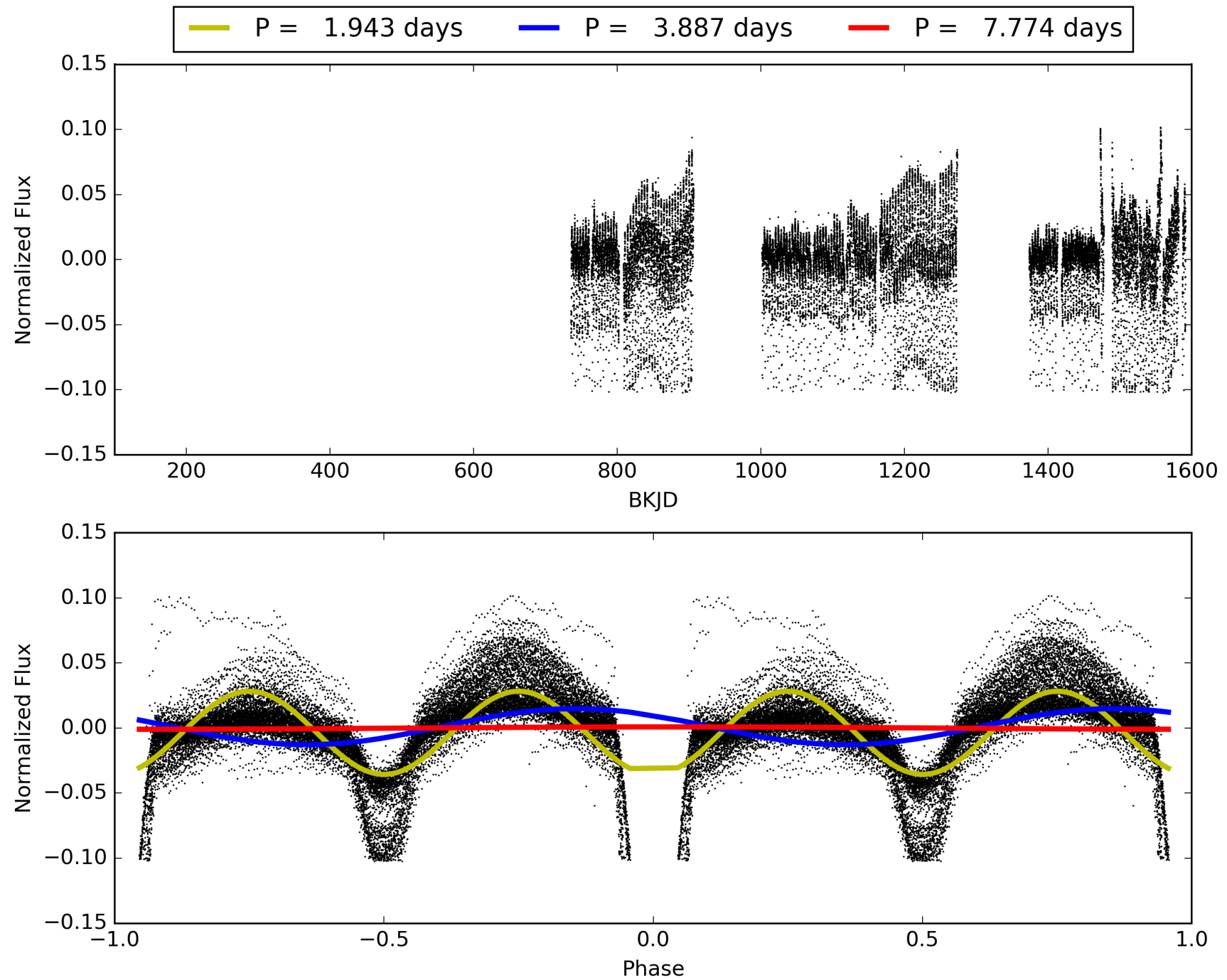
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:19:39 Z

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

TCE 004474637-01, PDC Light Curves

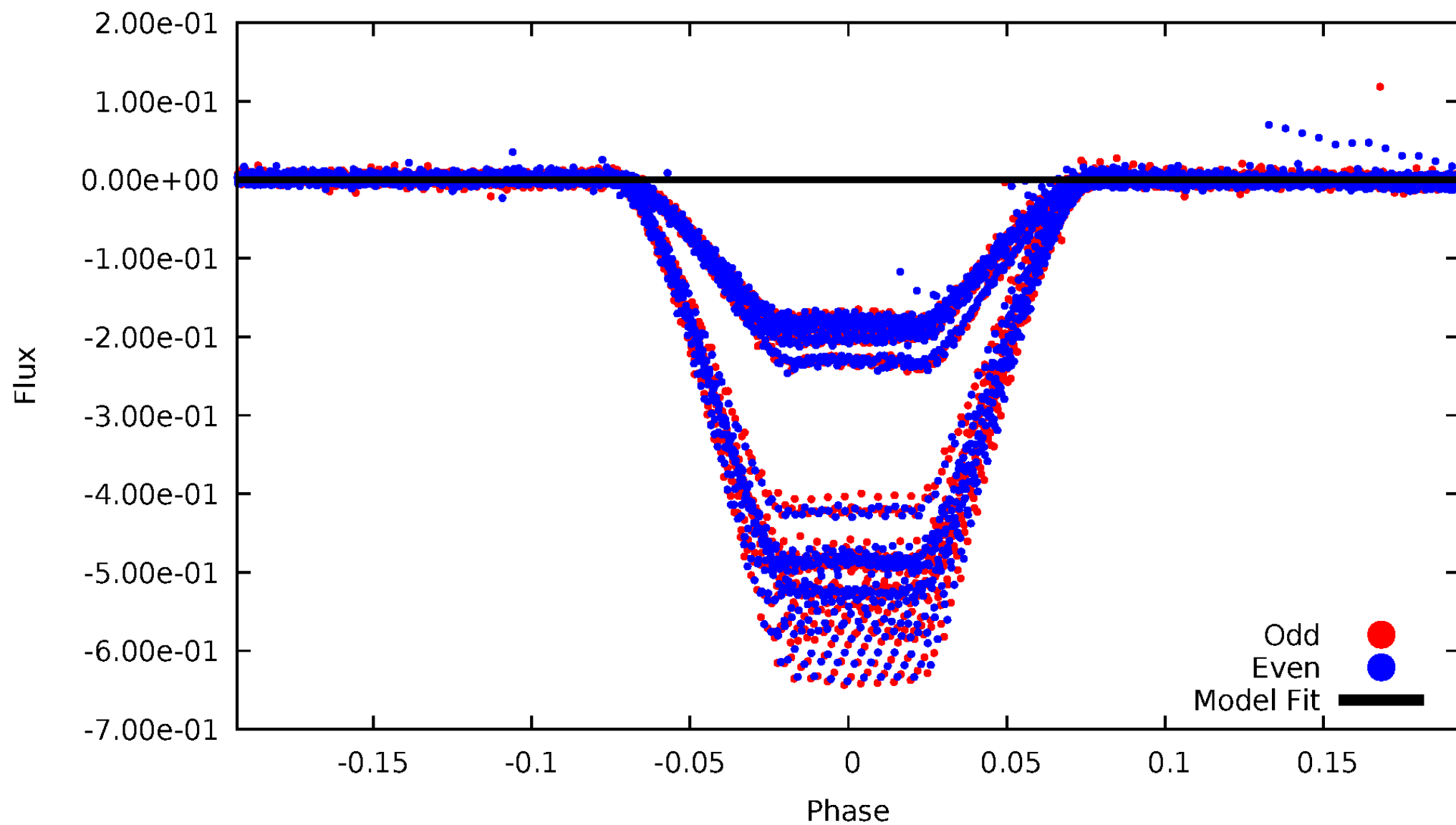


TCE 004474637-01



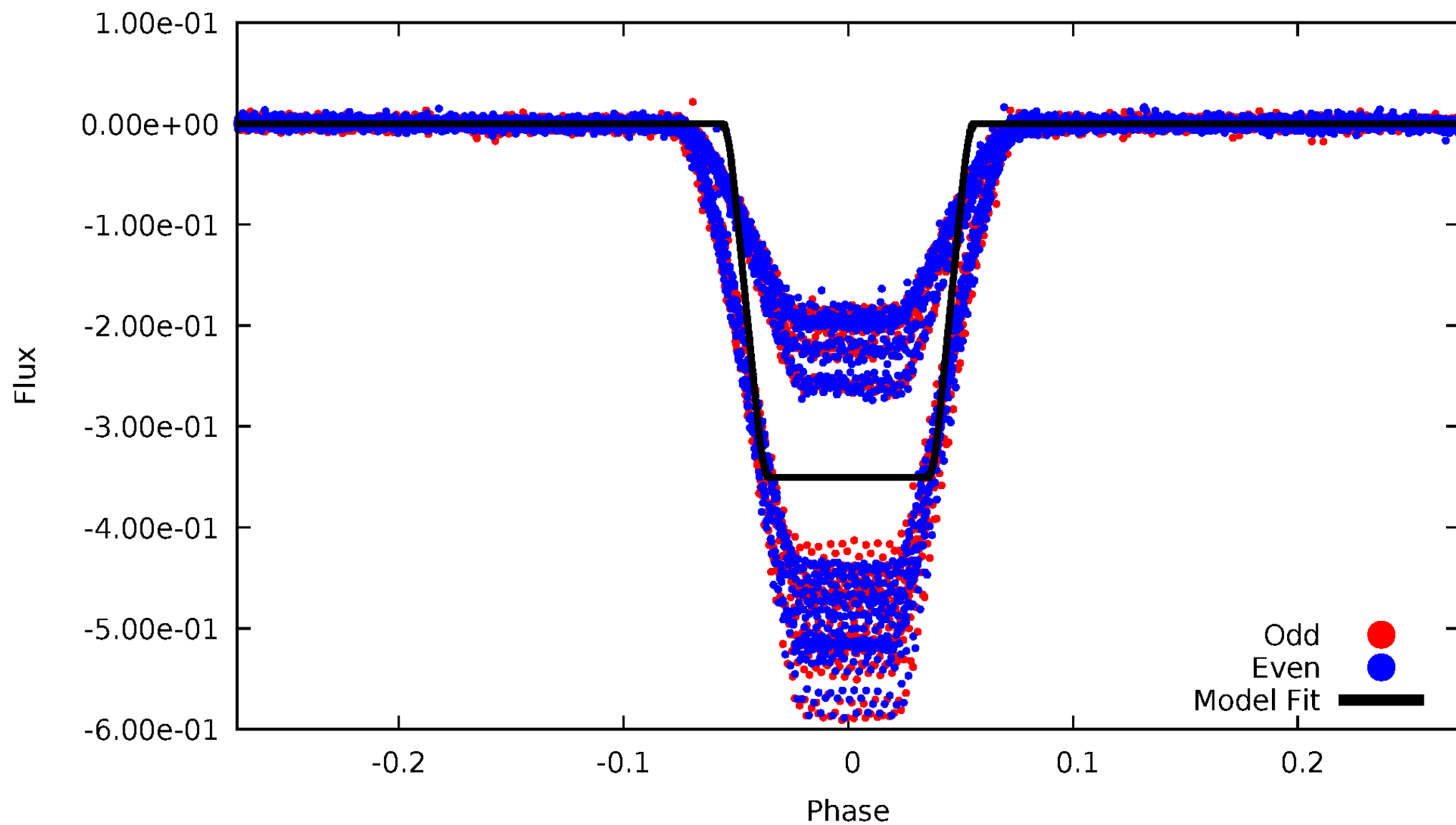
DV Odd/Even

TCE 004474637-01



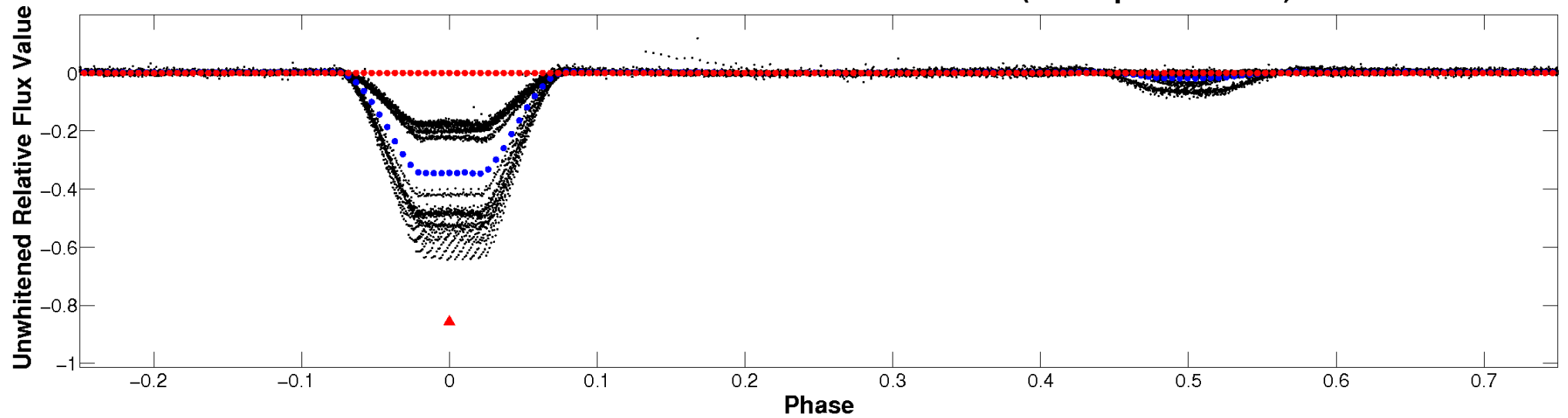
ALT Odd/Even

TCE 004474637-01



Non-Whitened Vs. Whitened Light Curve

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

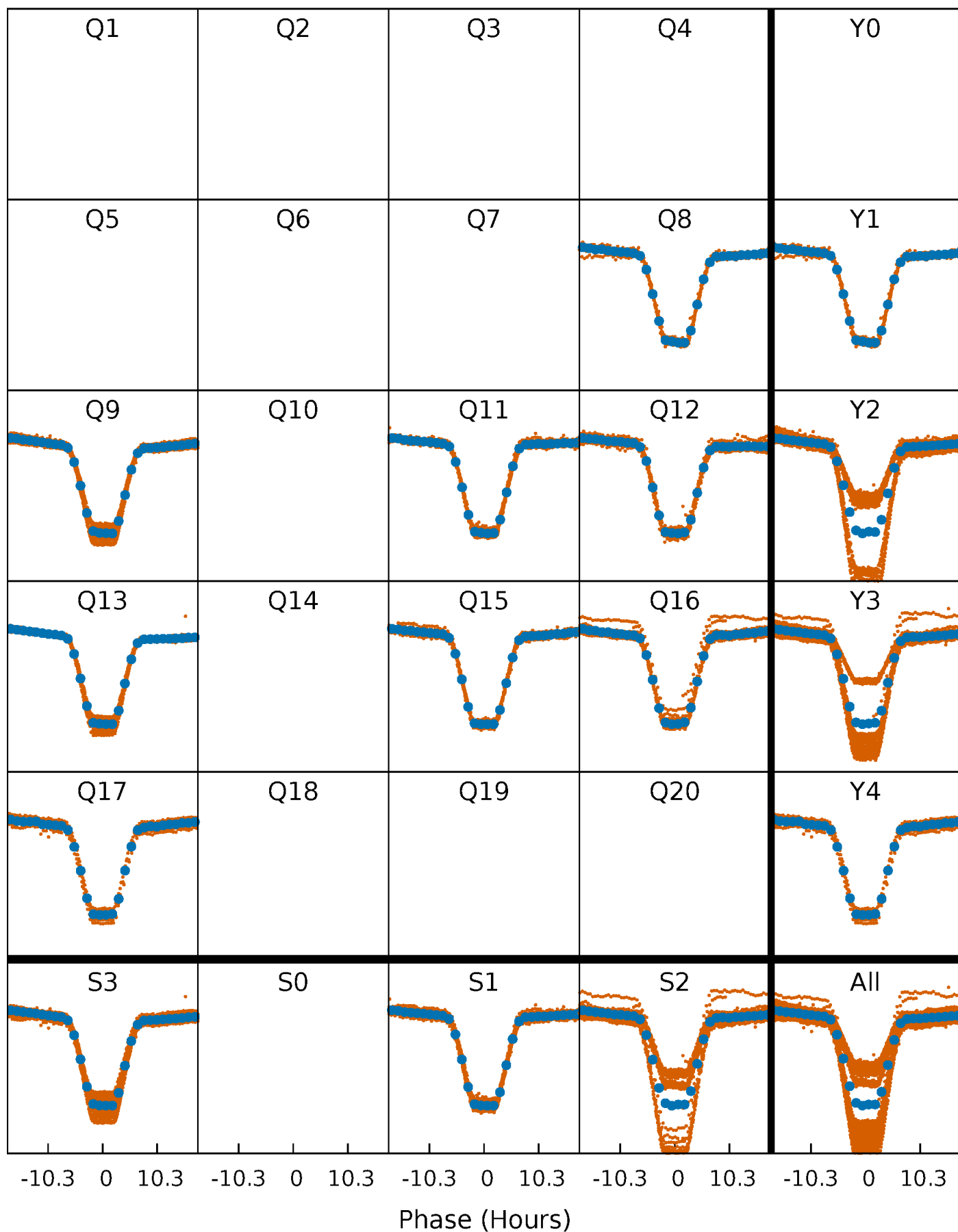


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



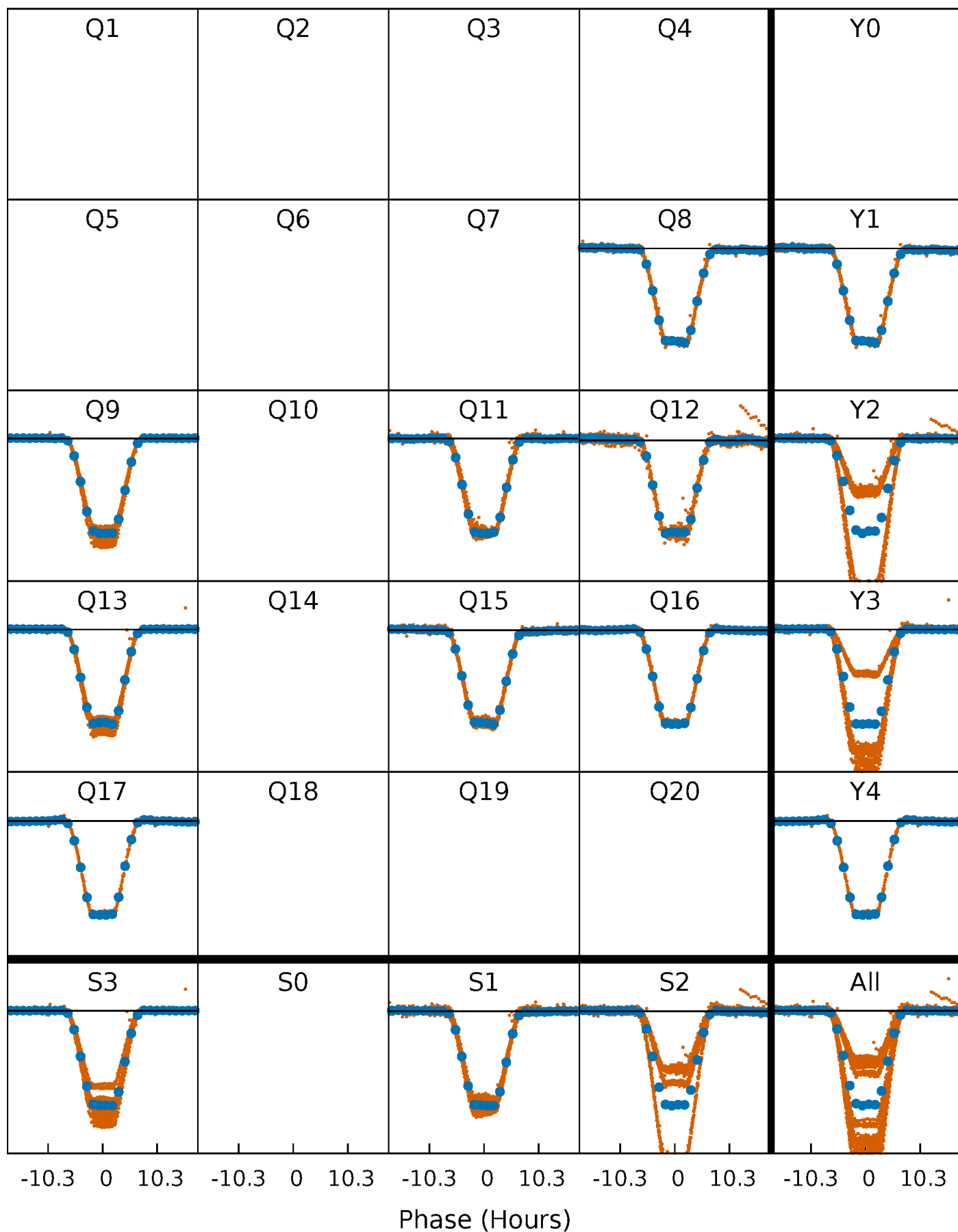
PDC Quarter-Phased Transit Curves

TCE 004474637-01 P= 3.886775 Days $T_0=135.001727$ (BKJD)



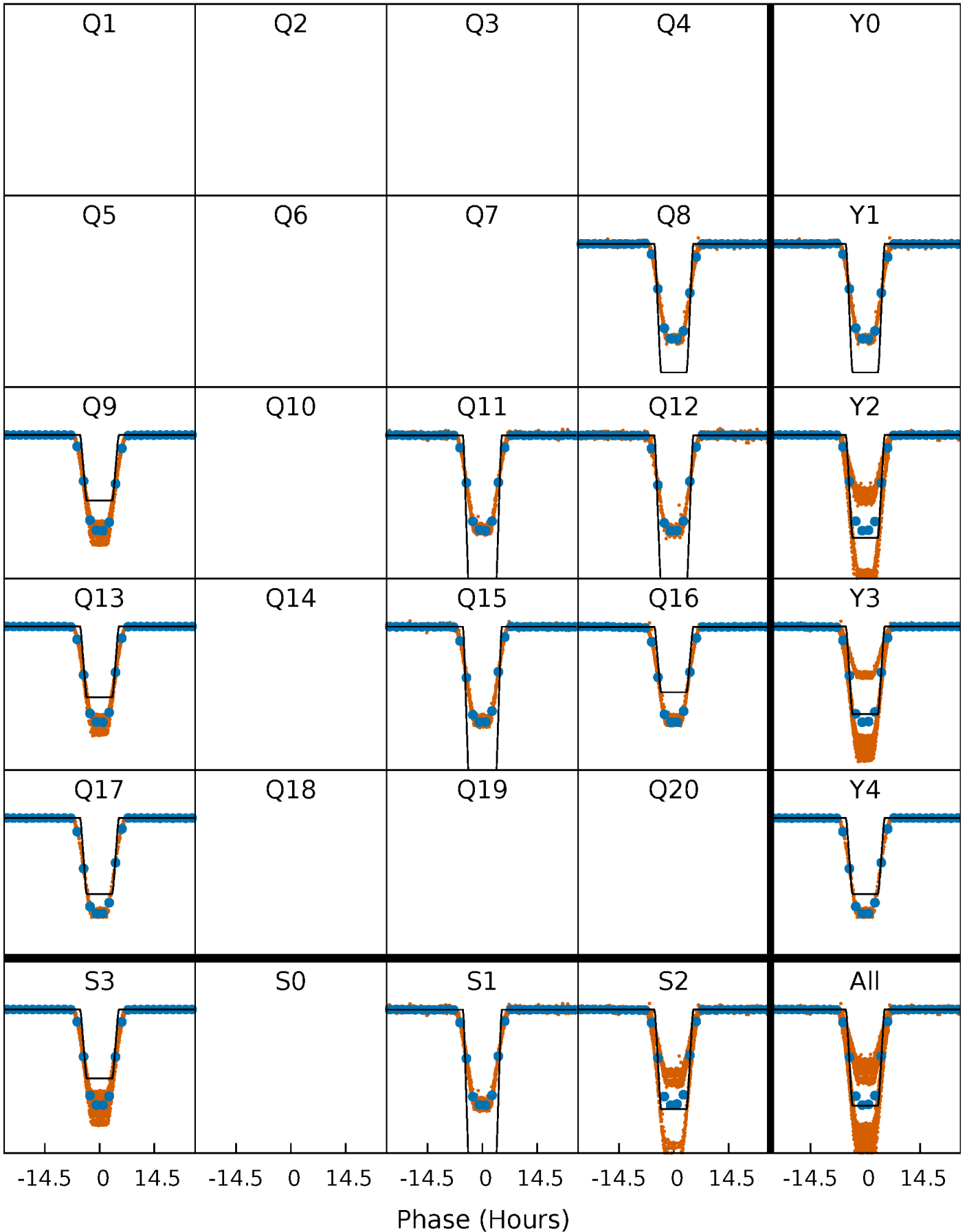
DV Quarter-Phased Transit Curves

TCE 004474637-01 P= 3.886775 Days $T_0=135.001727$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

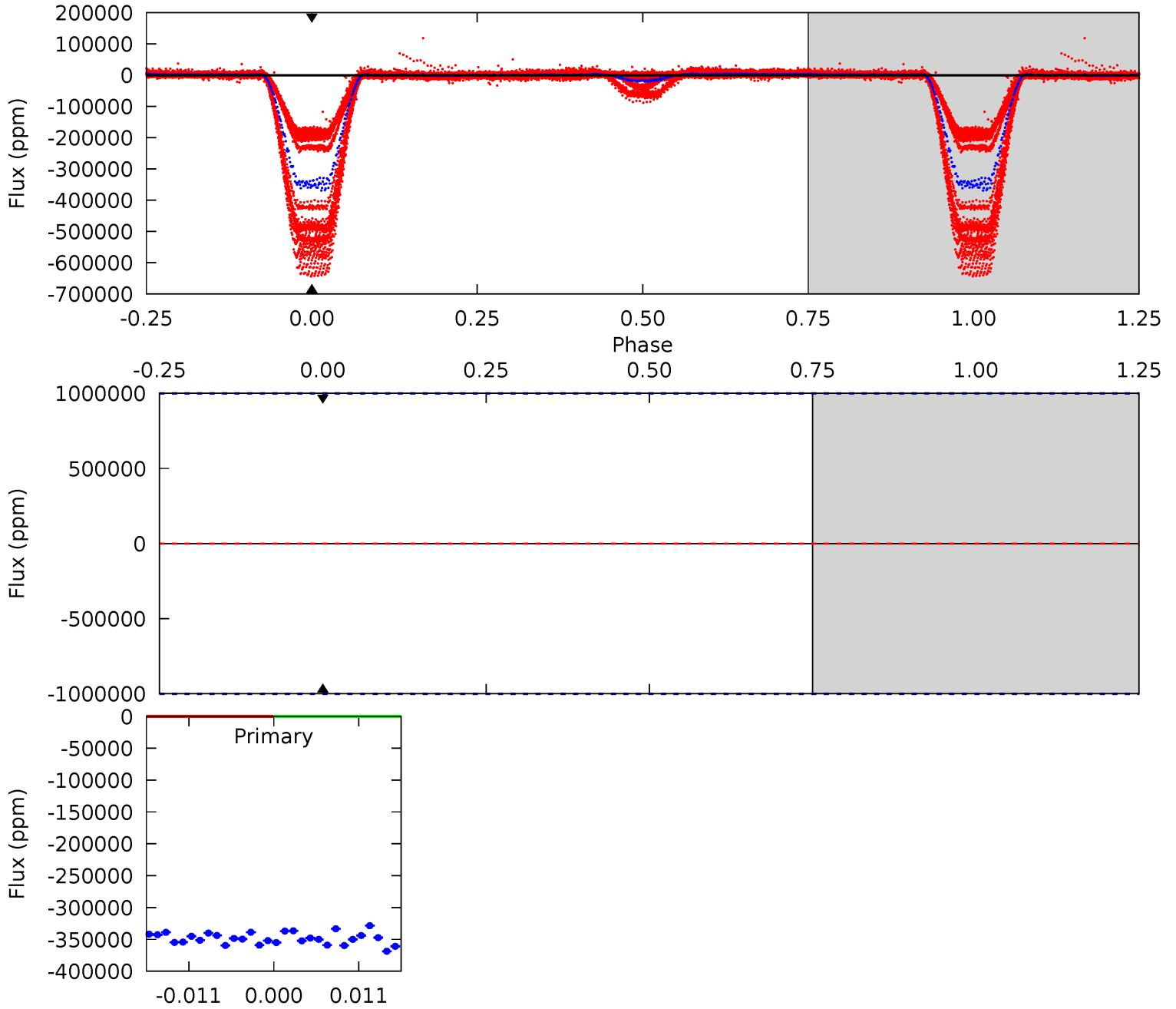
TCE 004474637-01 P= 3.886775 Days $T_0=135.007477$ (BKJD)



DV Model-Shift Uniqueness Test

004474637-01, P = 3.886775 Days, E = 135.001727 Days

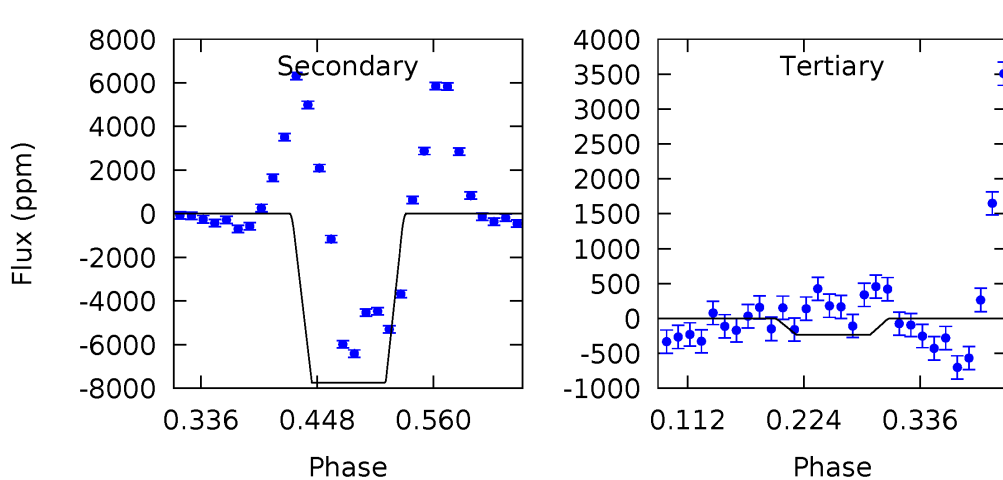
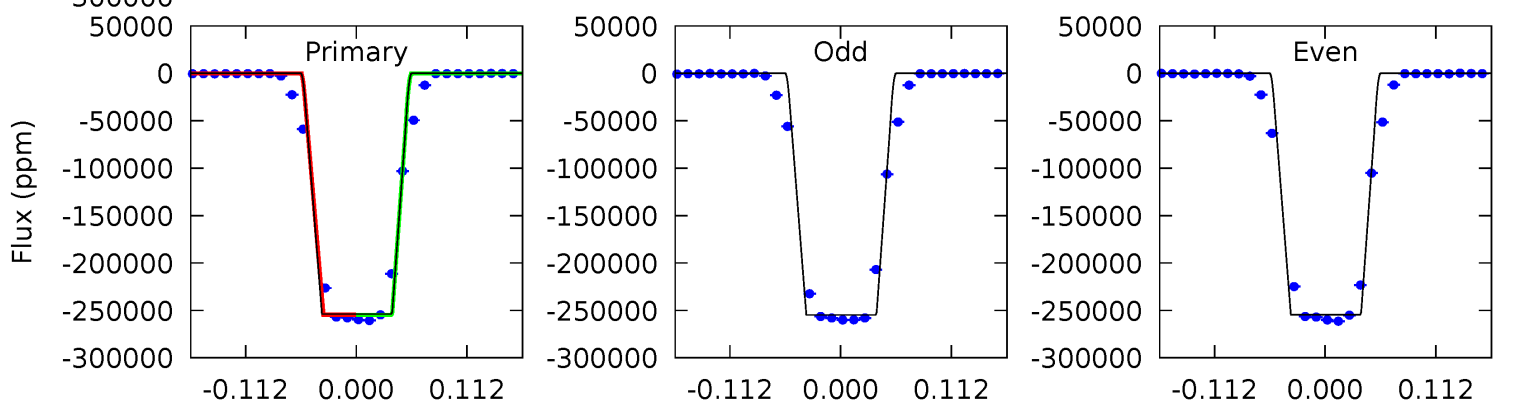
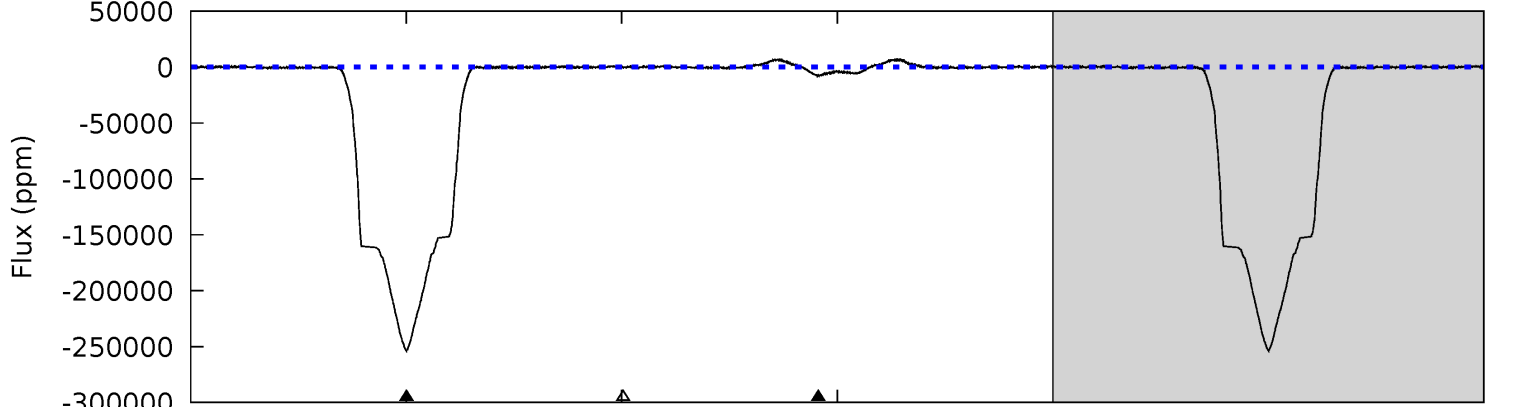
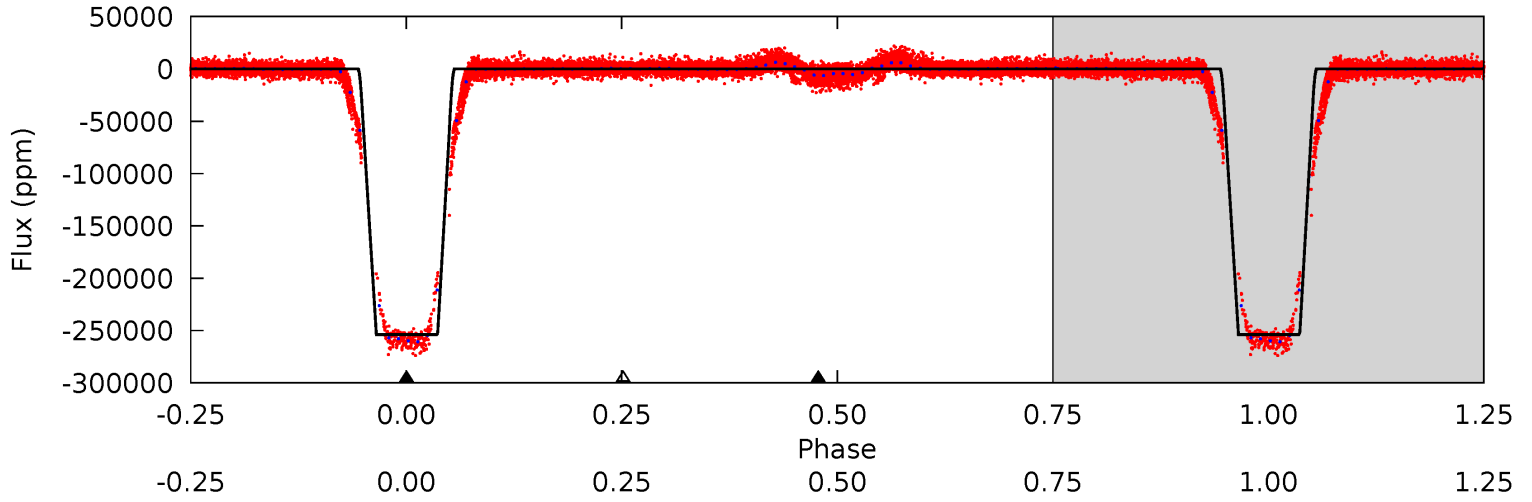
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004474637-01, P = 3.886775 Days, E = 135.007477 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1373	41.9	1.27	0	4.54	1.59	1.89	1372	1373	40.6	41.9	0.21	1.32	0.03	0



Stellar Parameters For KIC 004474637

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004474637-01 / KOI 3829.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$55.32^{+11.43}_{-11.66}$	1621^{+81}_{-71}	2806^{+1995}_{-7446}	$1.942^{+46.495}_{-42.005}$
Alt.	-7750 ± 185	$65.21^{+12.04}_{-11.56}$	1624^{+72}_{-76}	2862^{+187}_{-135}	$2.381^{+1.144}_{-0.672}$

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

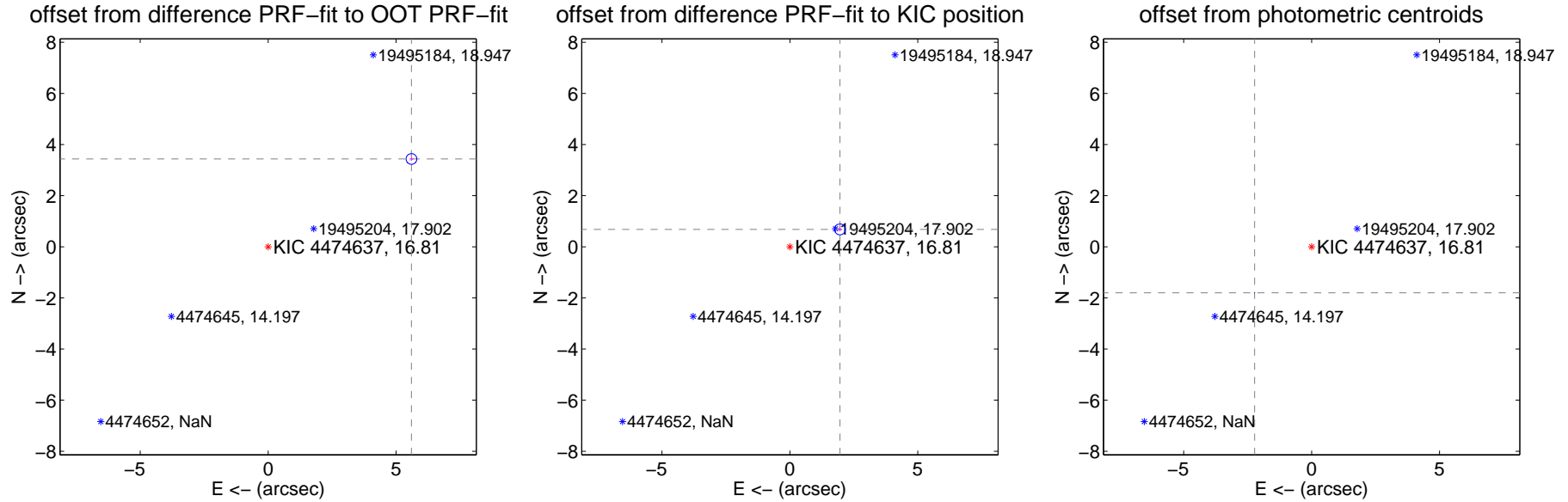
DV Centroid Data

Supplemental centroid analysis for 004474637-01. Kepler magnitude: 16.81. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.59 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.573 ± 0.070	94.36	-5.603 ± 0.069	3.436 ± 0.071
PRF-fit source offset from KIC position	2.072 ± 0.071	29.22	-1.957 ± 0.071	0.681 ± 0.070
photometric centroid source offset	2.87 ± 0.00	3923.42	2.23 ± 0.00	-1.80 ± 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.



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



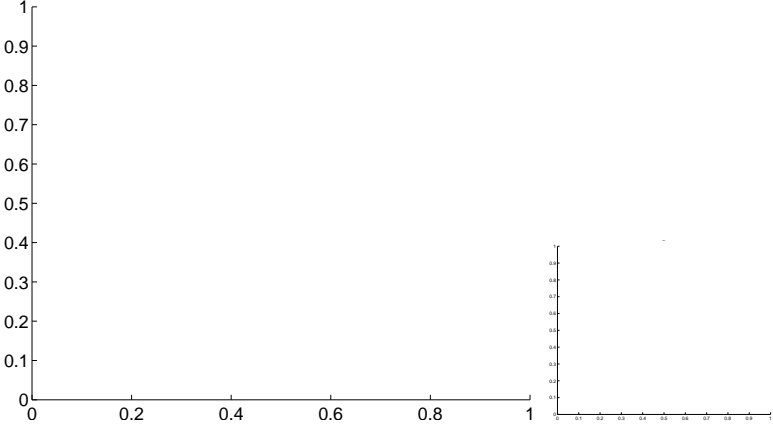
Q6 no OOT image



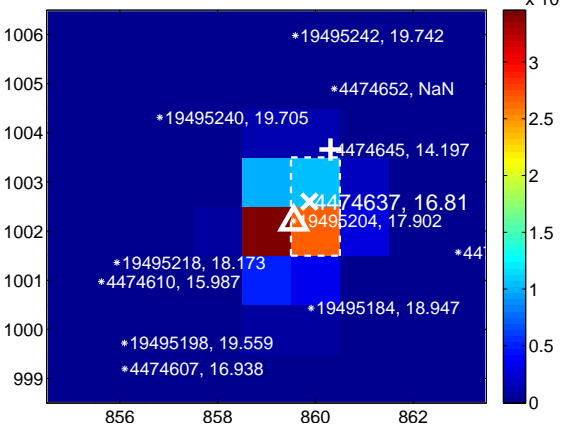
Q7 no difference image



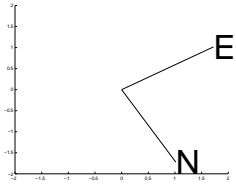
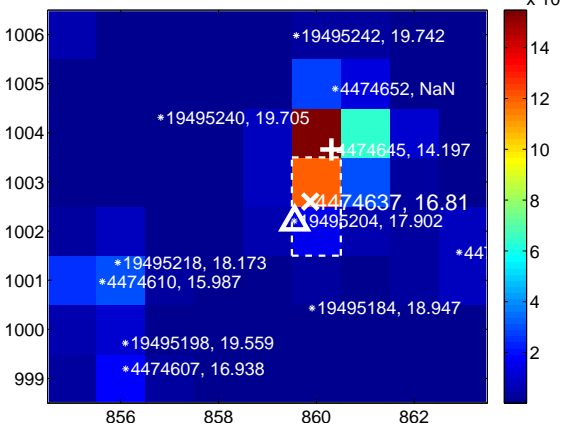
Q7 no OOT image



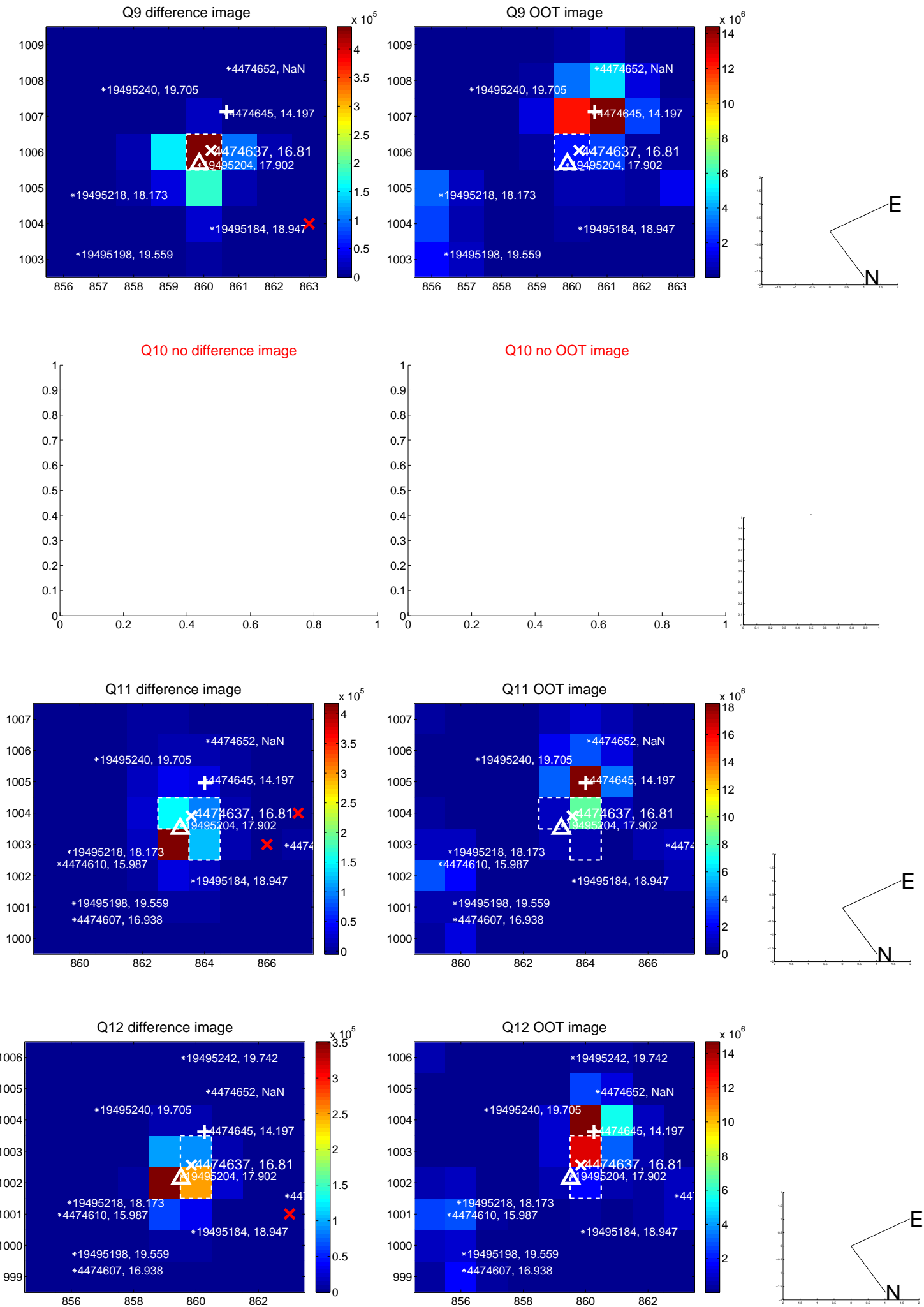
Q8 difference image



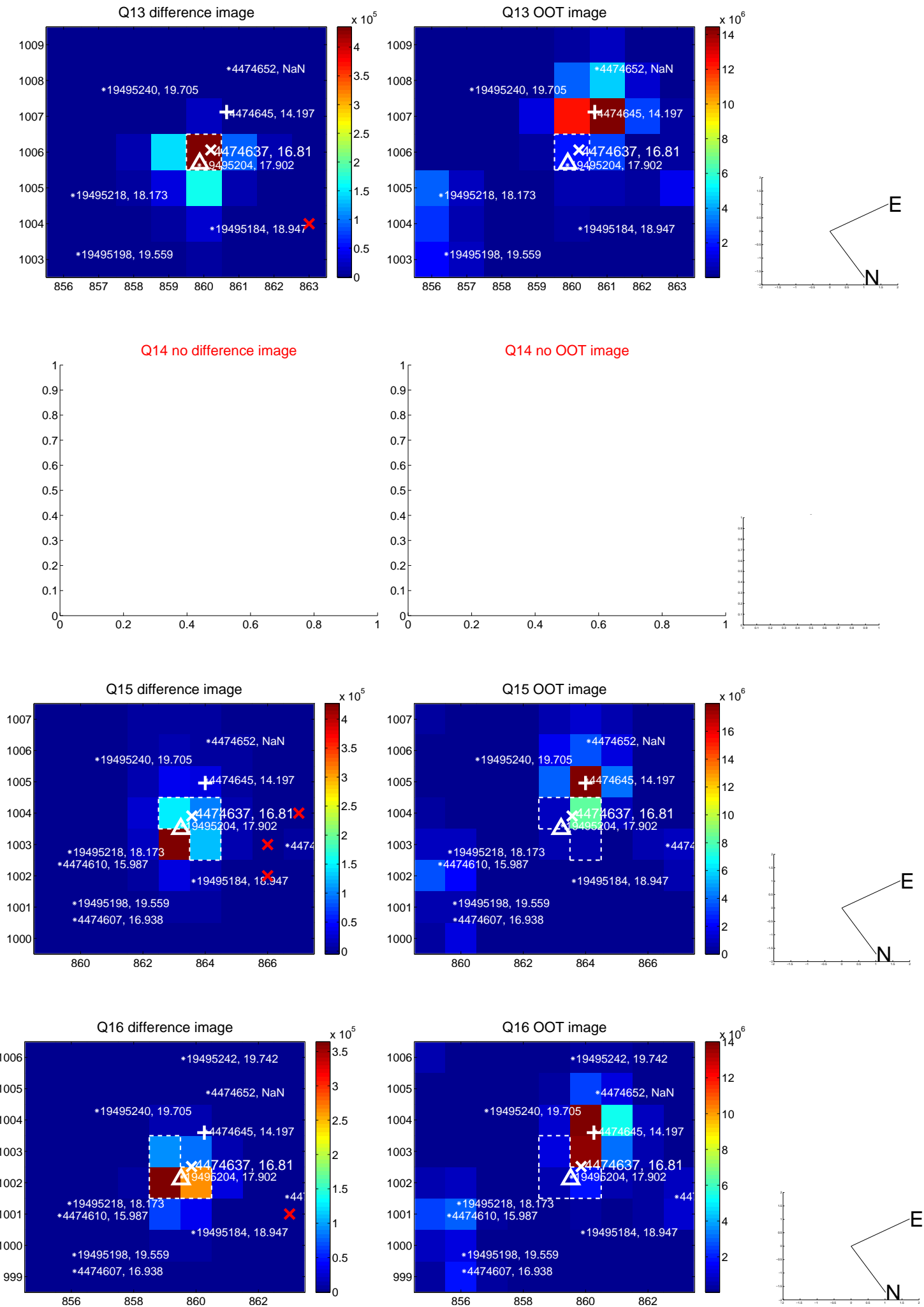
Q8 OOT image



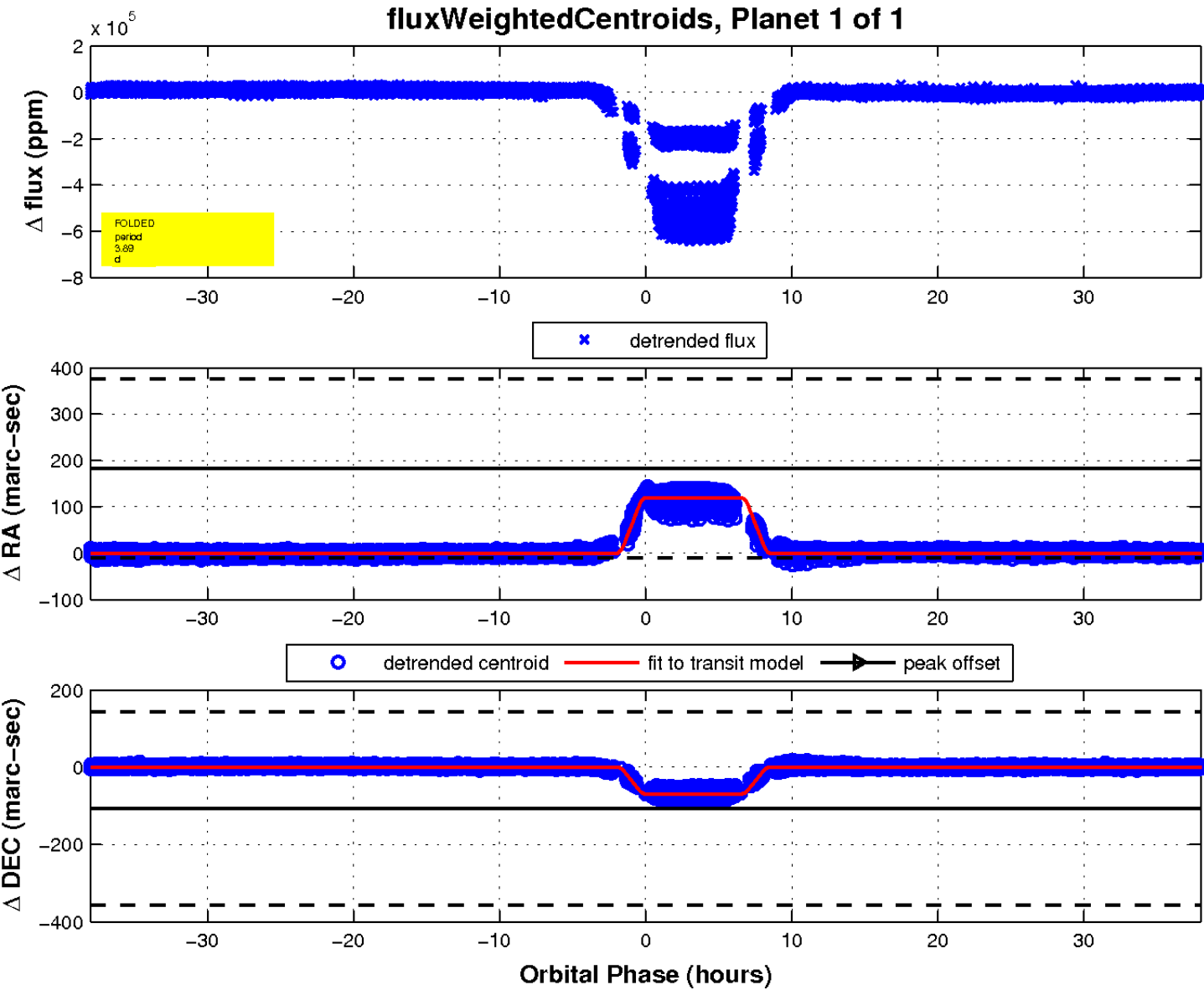
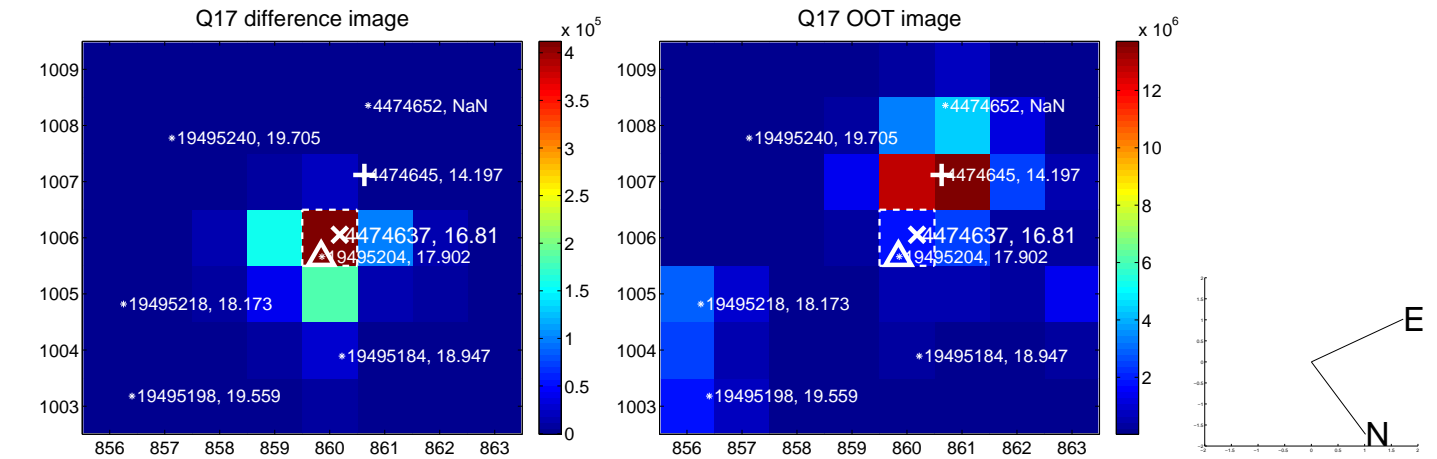
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

