

KIC 010848443

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})
010848443-01	OBS	No	449.626601	530.845912	728.2	6.291	8.6	6.0	0.84	5802	2.39	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010848443-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_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.

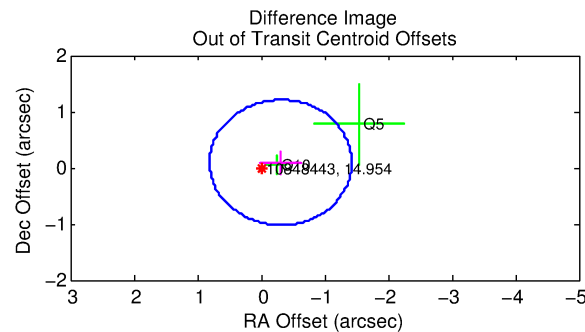
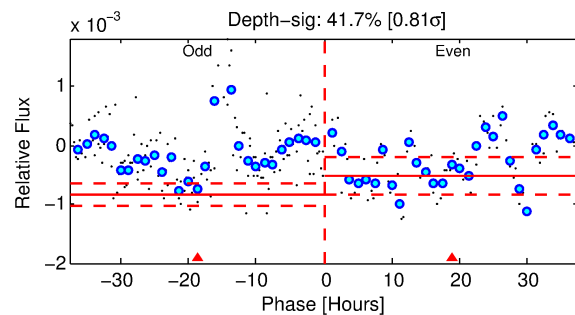
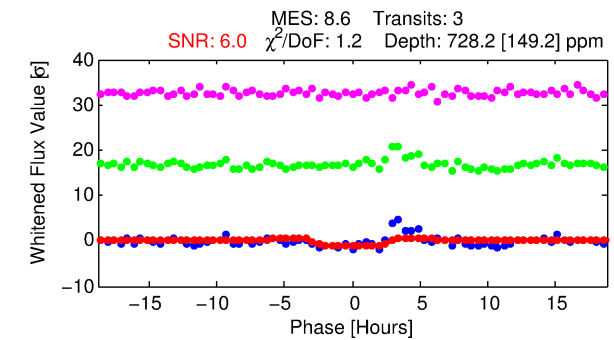
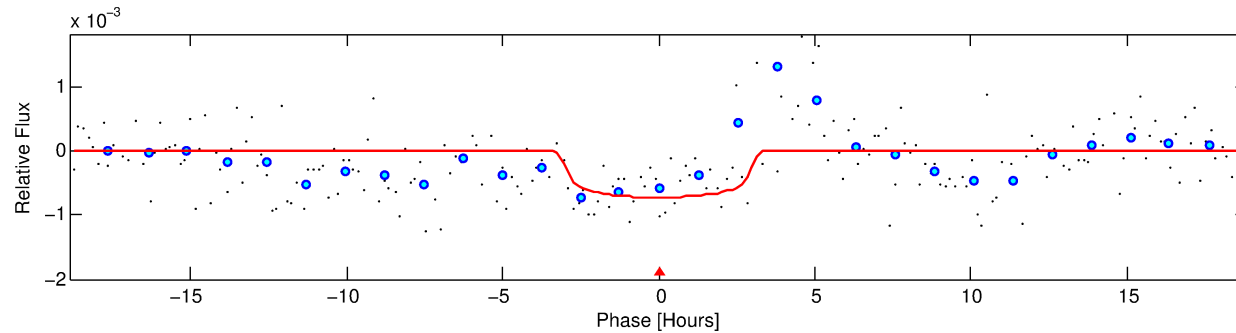
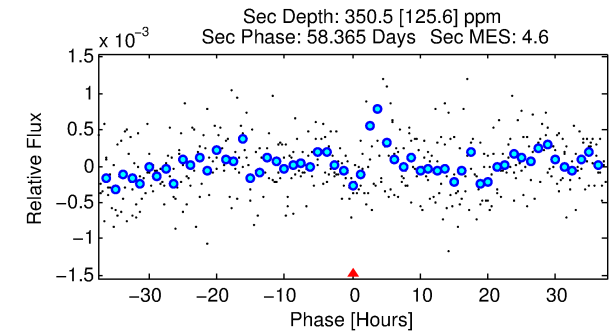
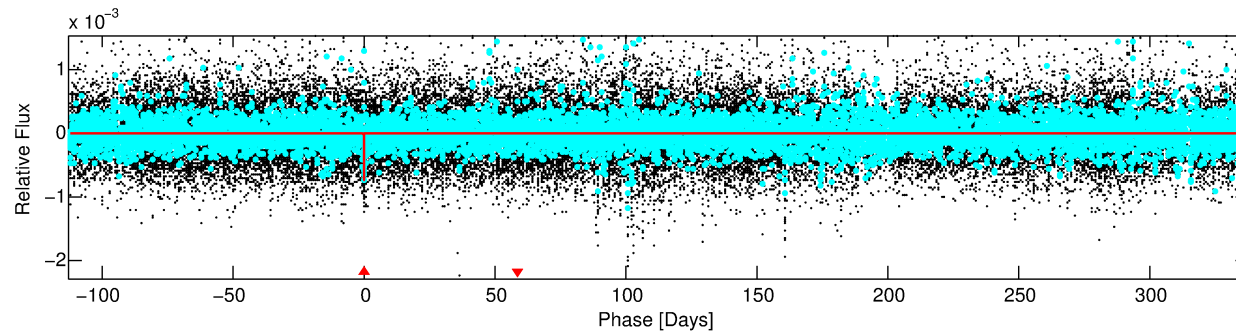
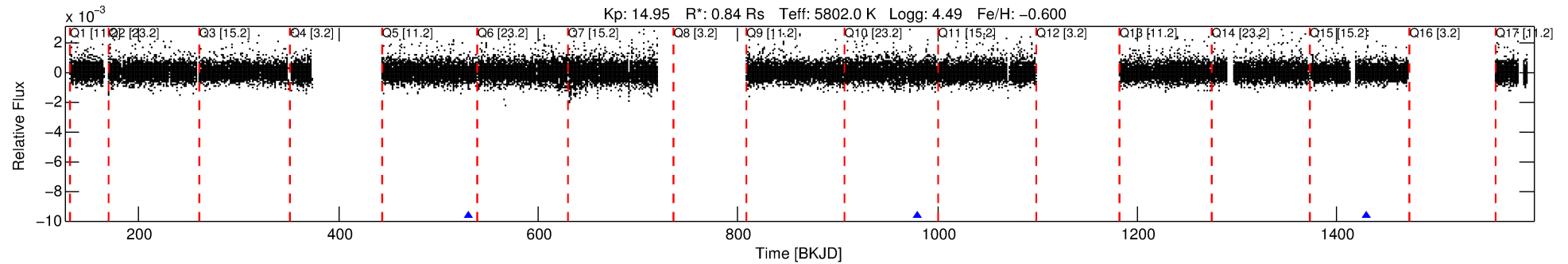
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010848443-01

No Significant Match Found

DV One-Page Summary

KIC: 10848443 Candidate: 1 of 1 Period: 449.627 d



DV Fit Results:

Period = 449.62660 [0.01032] d
Epoch = 530.8459 [0.0122] BKJD
Rp/R* = 0.0260 [0.0306]
a/R* = 438.73 [2492.09]
b = 0.64 [5.31]
Seff = 0.64 [0.19]
Teq = 228 [17] K
Rp = 2.39 [2.86] Re
a = 1.0612 [0.2039] AU
Ag = 38061.54 [91121.50] [0.42 σ]
Teffp = 4921 [2928] K [1.60 σ]

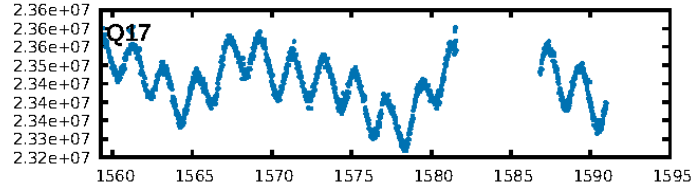
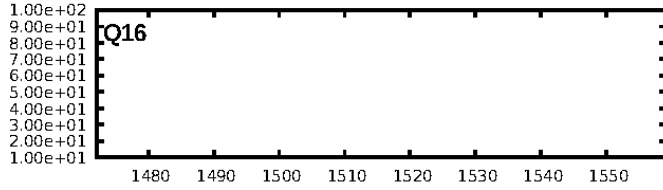
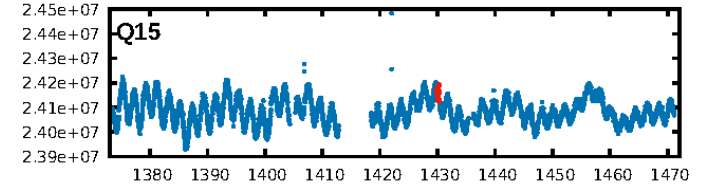
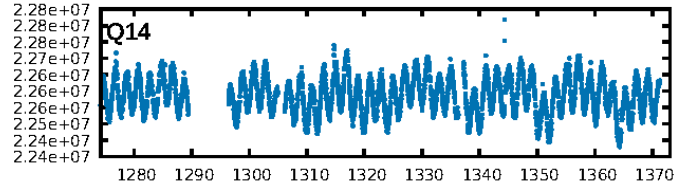
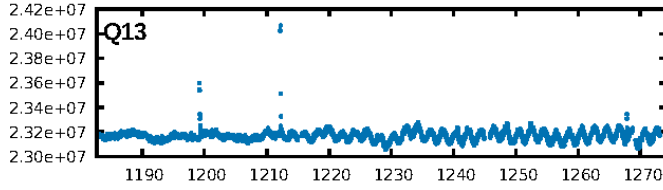
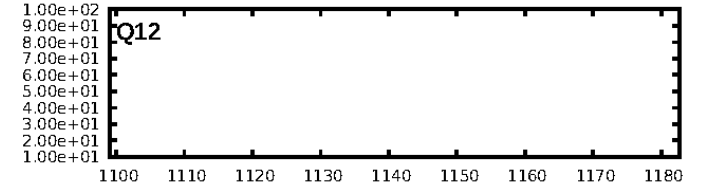
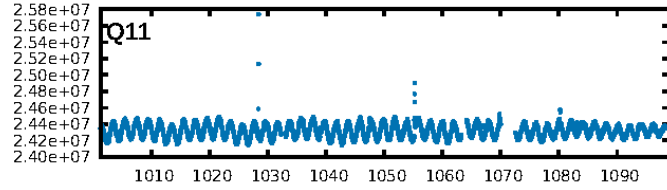
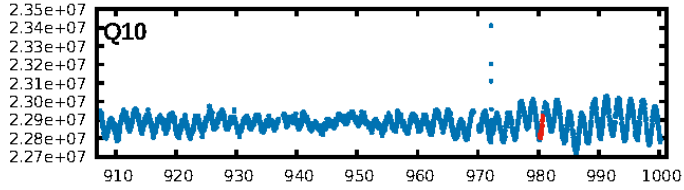
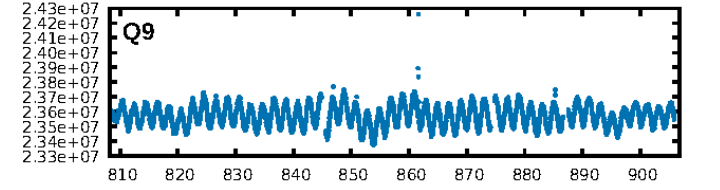
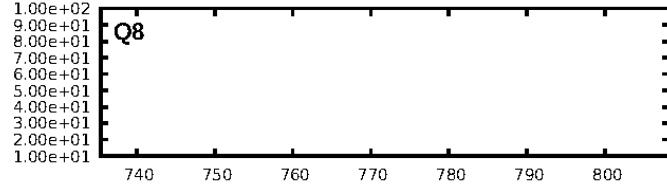
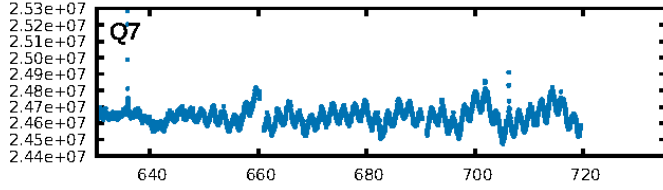
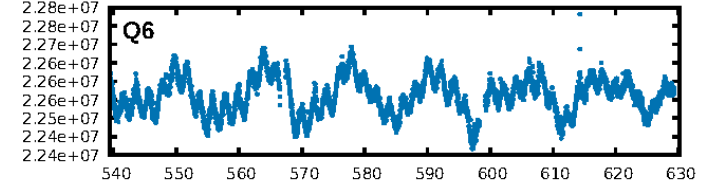
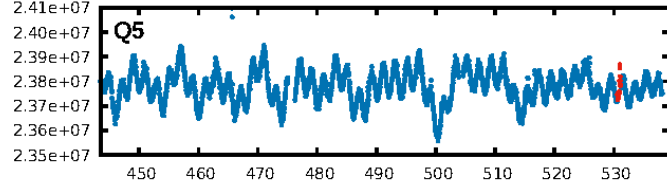
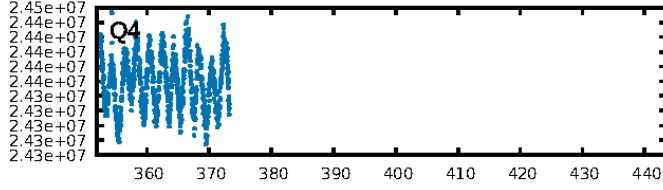
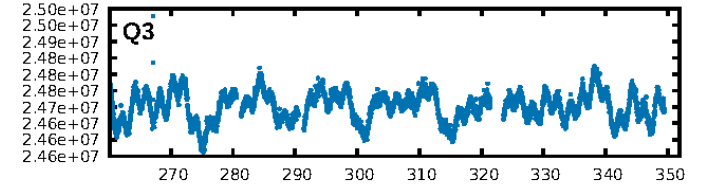
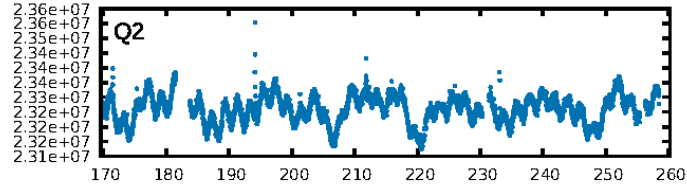
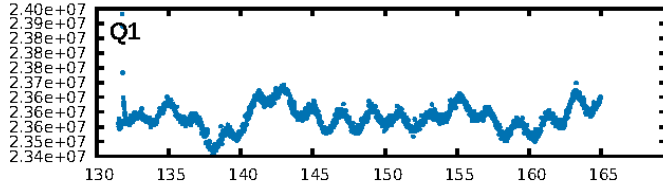
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.0%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 1.23e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.75
Centroid-sig: 75.9%
Centroid-so: 0.810 arcsec [0.69 σ]
OotOffset-rm: 0.321 arcsec [0.86 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.453 arcsec [1.23 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

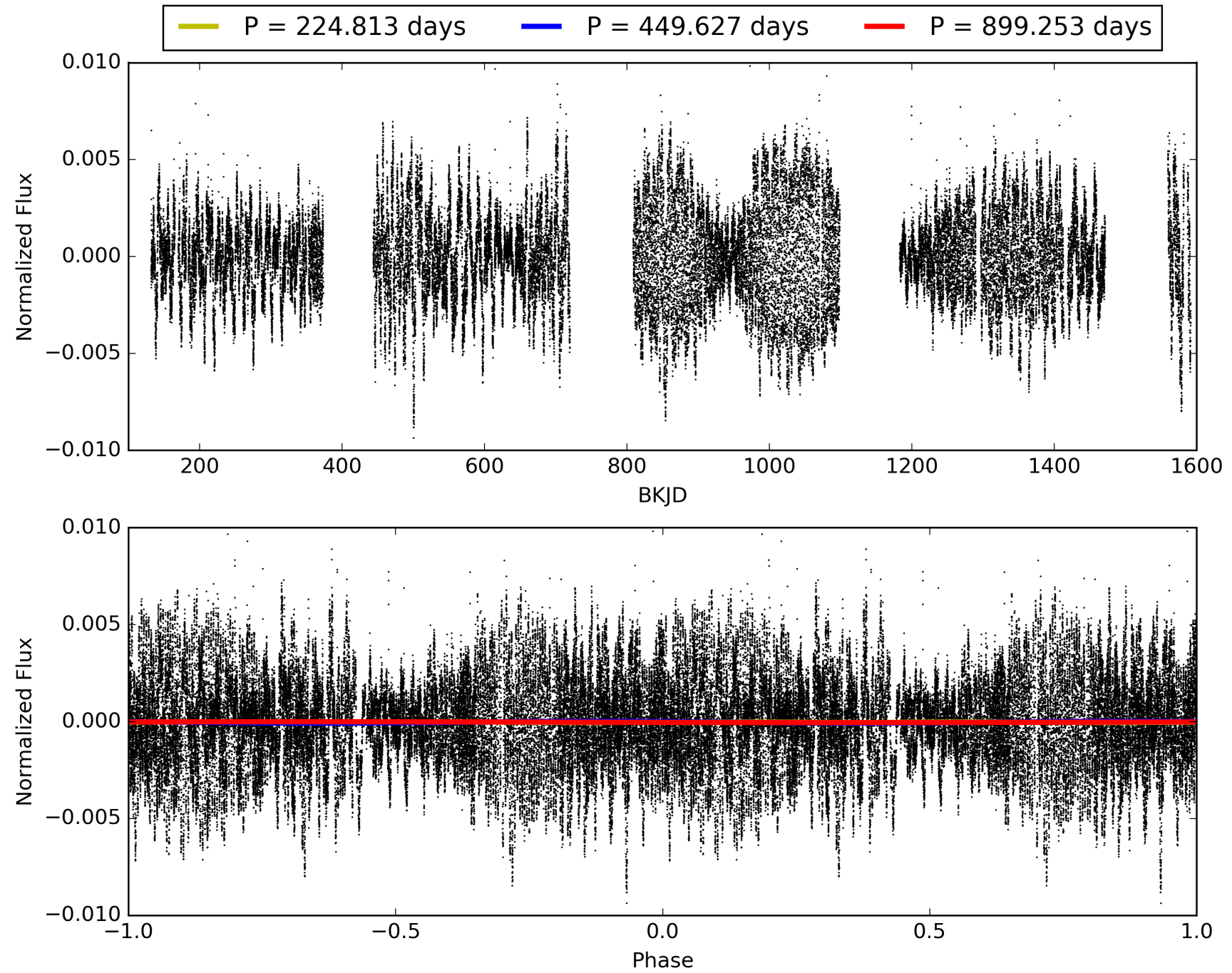
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:32:35 Z

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

TCE 010848443-01, PDC Light Curves

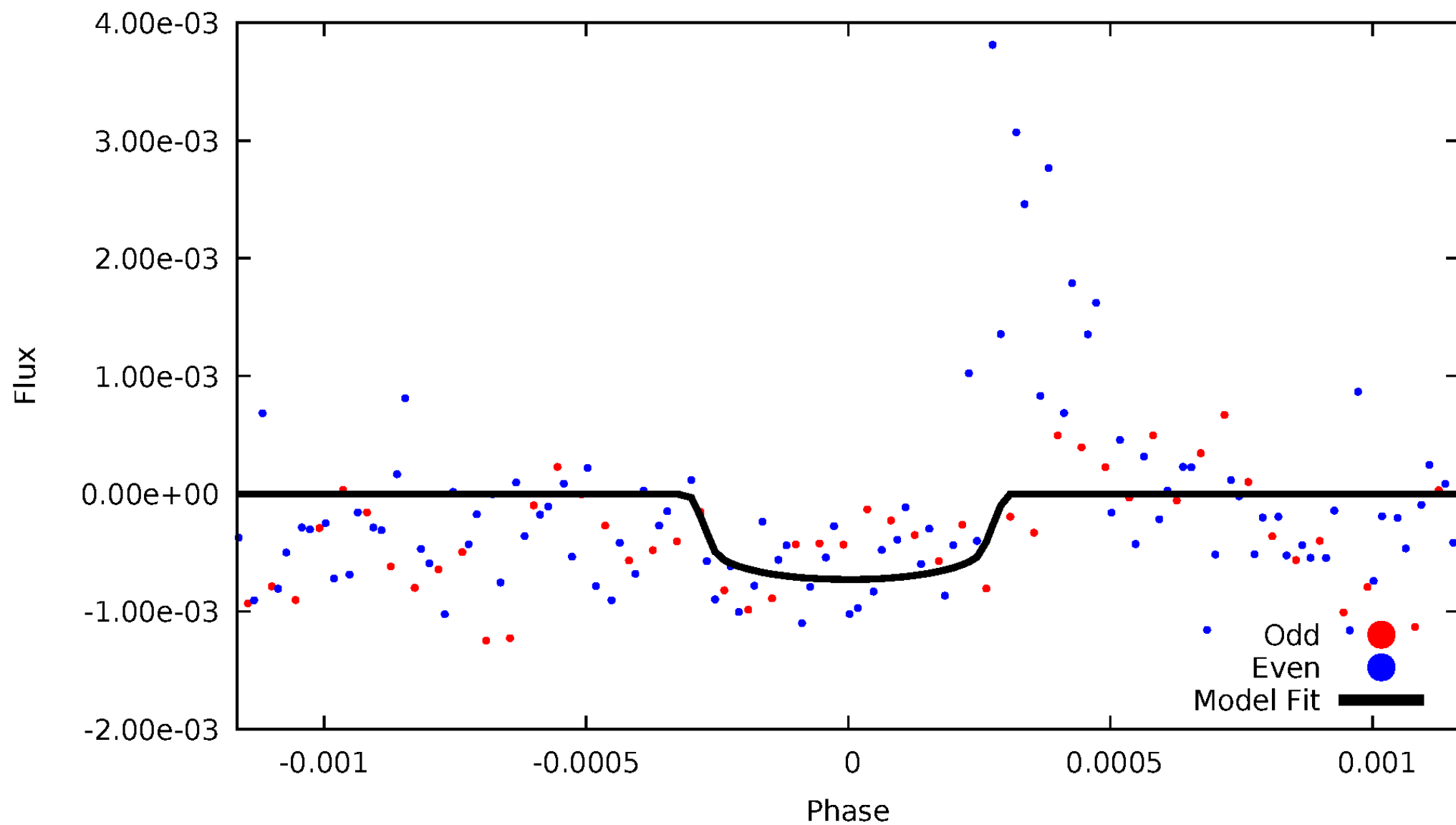


TCE 010848443-01



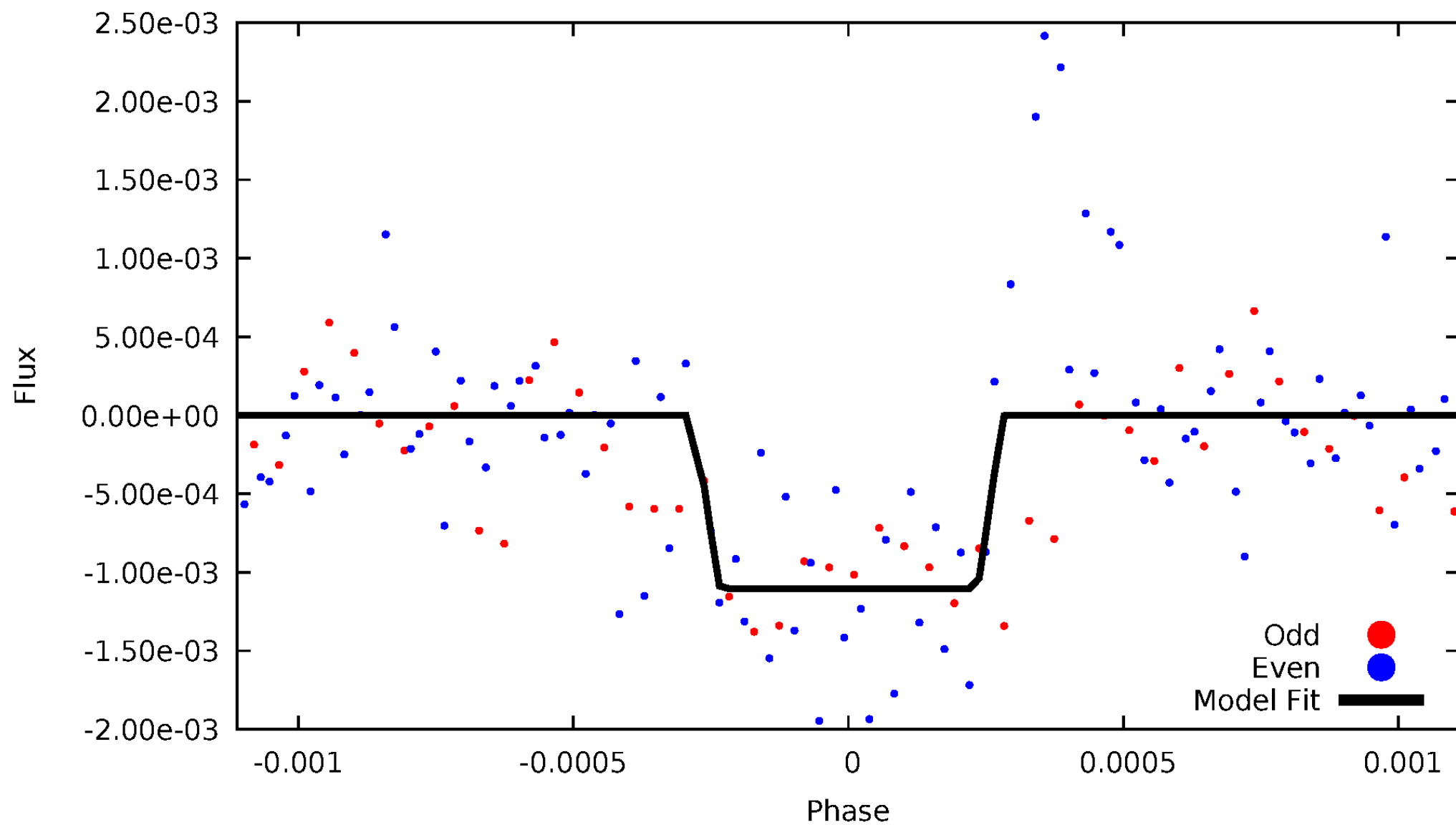
DV Odd/Even

TCE 010848443-01



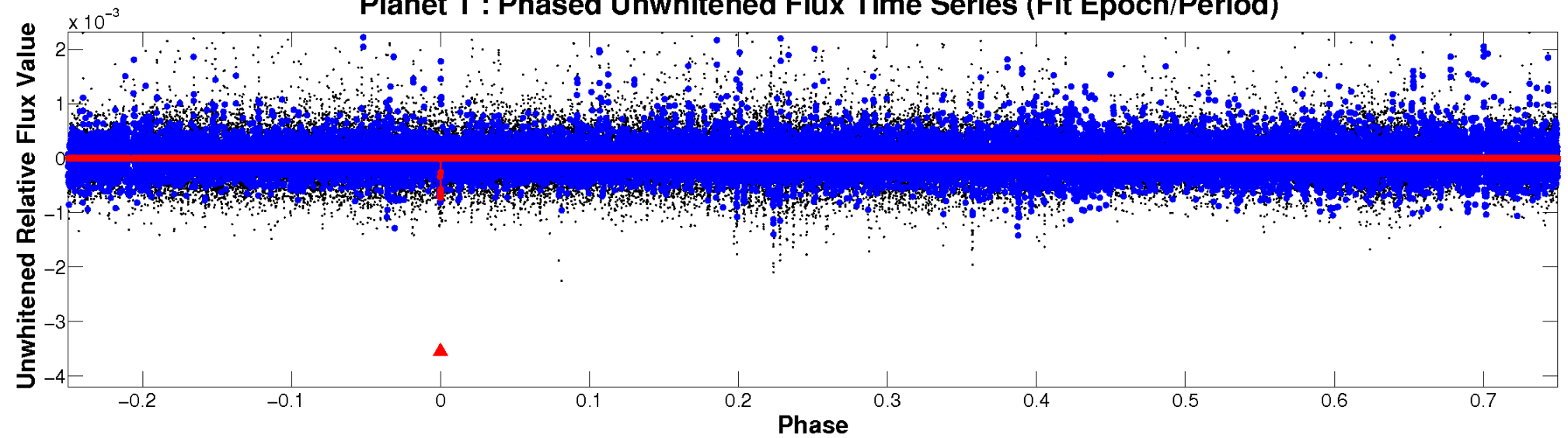
ALT Odd/Even

TCE 010848443-01

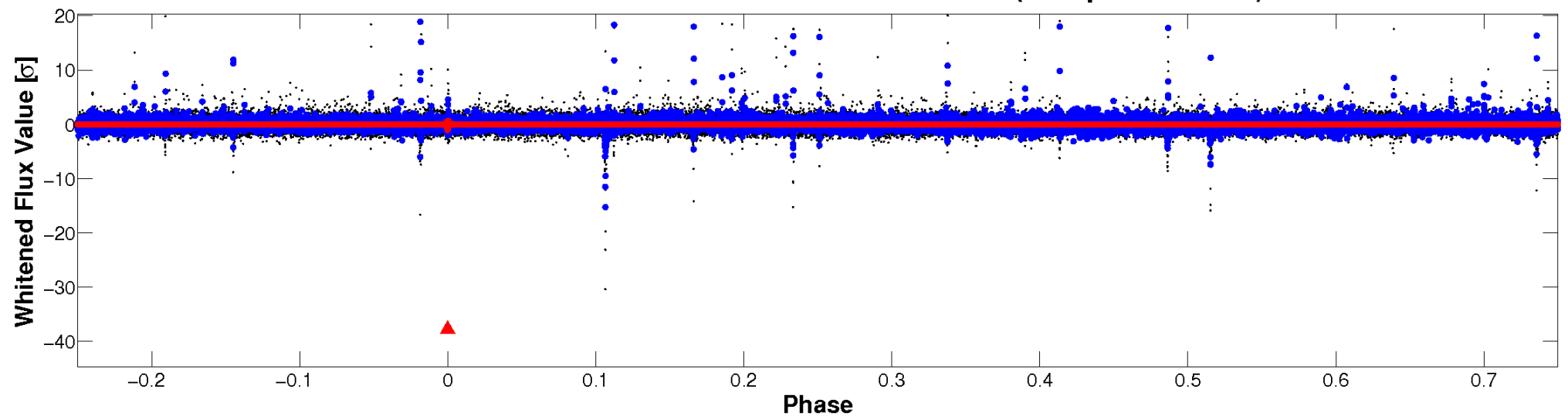


Non-Whitened Vs. Whitened Light Curve

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

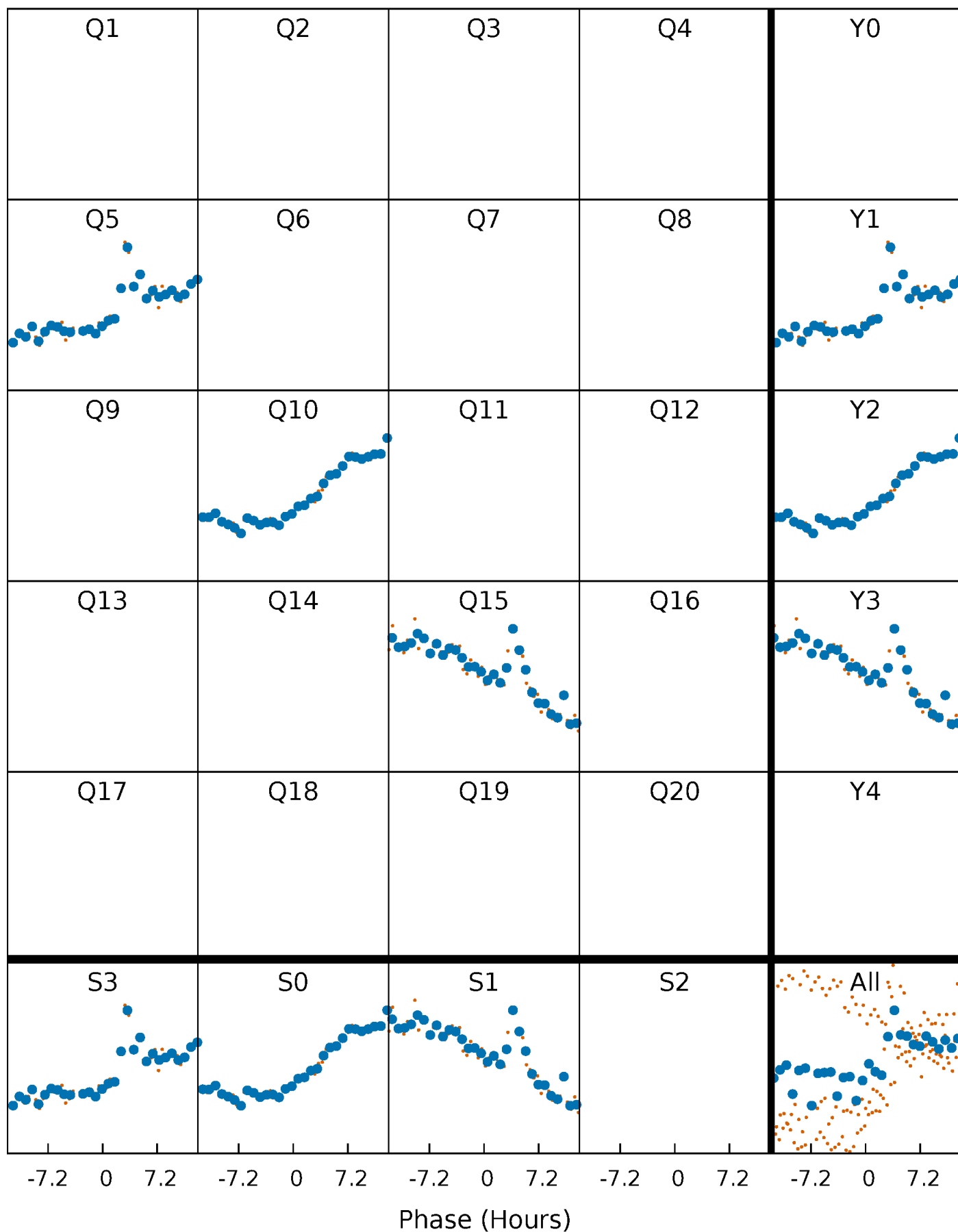


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



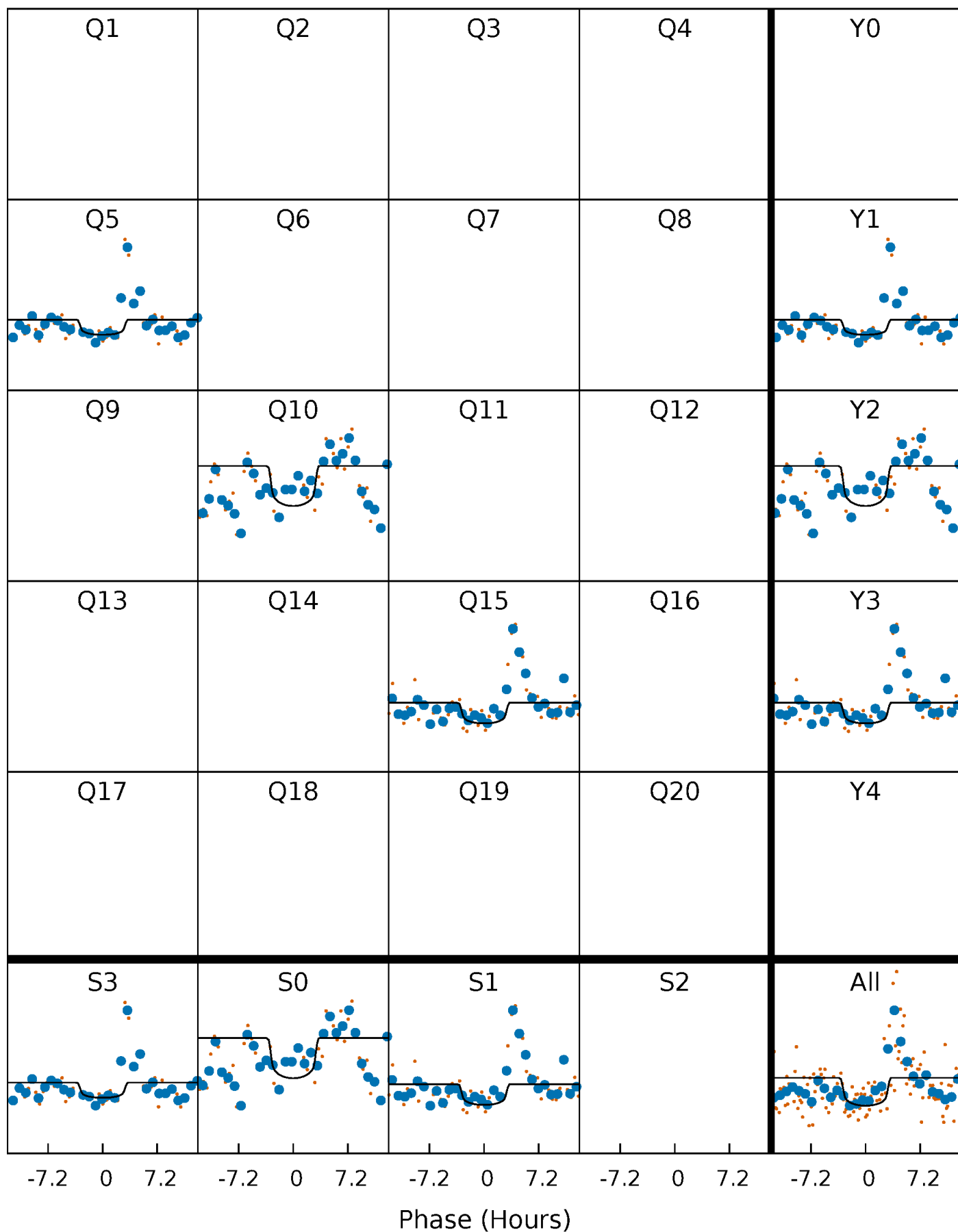
PDC Quarter-Phased Transit Curves

TCE 010848443-01 P=449.626601 Days $T_0=530.845912$ (BKJD)



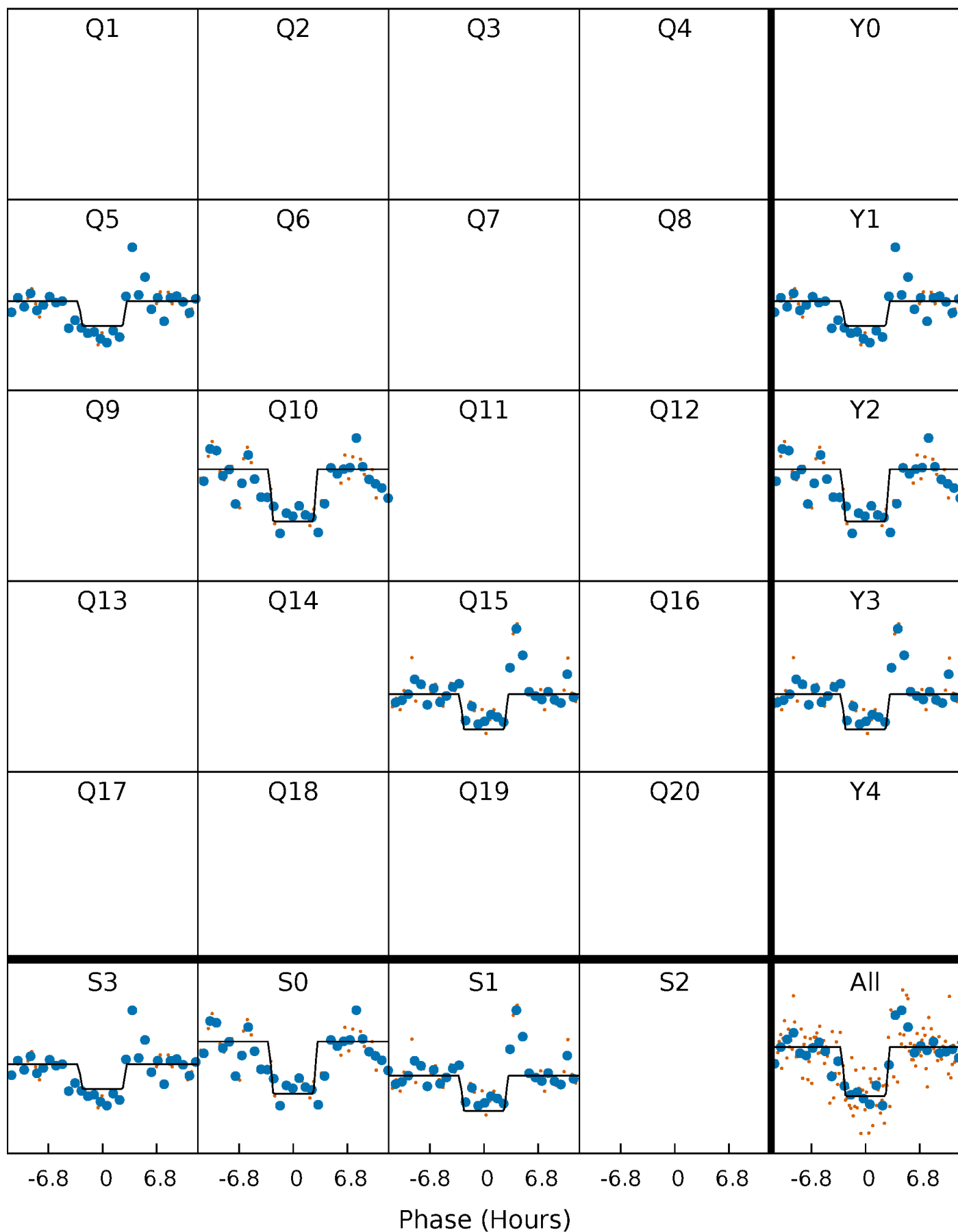
DV Quarter-Phased Transit Curves

TCE 010848443-01 P=449.626601 Days $T_0=530.845912$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

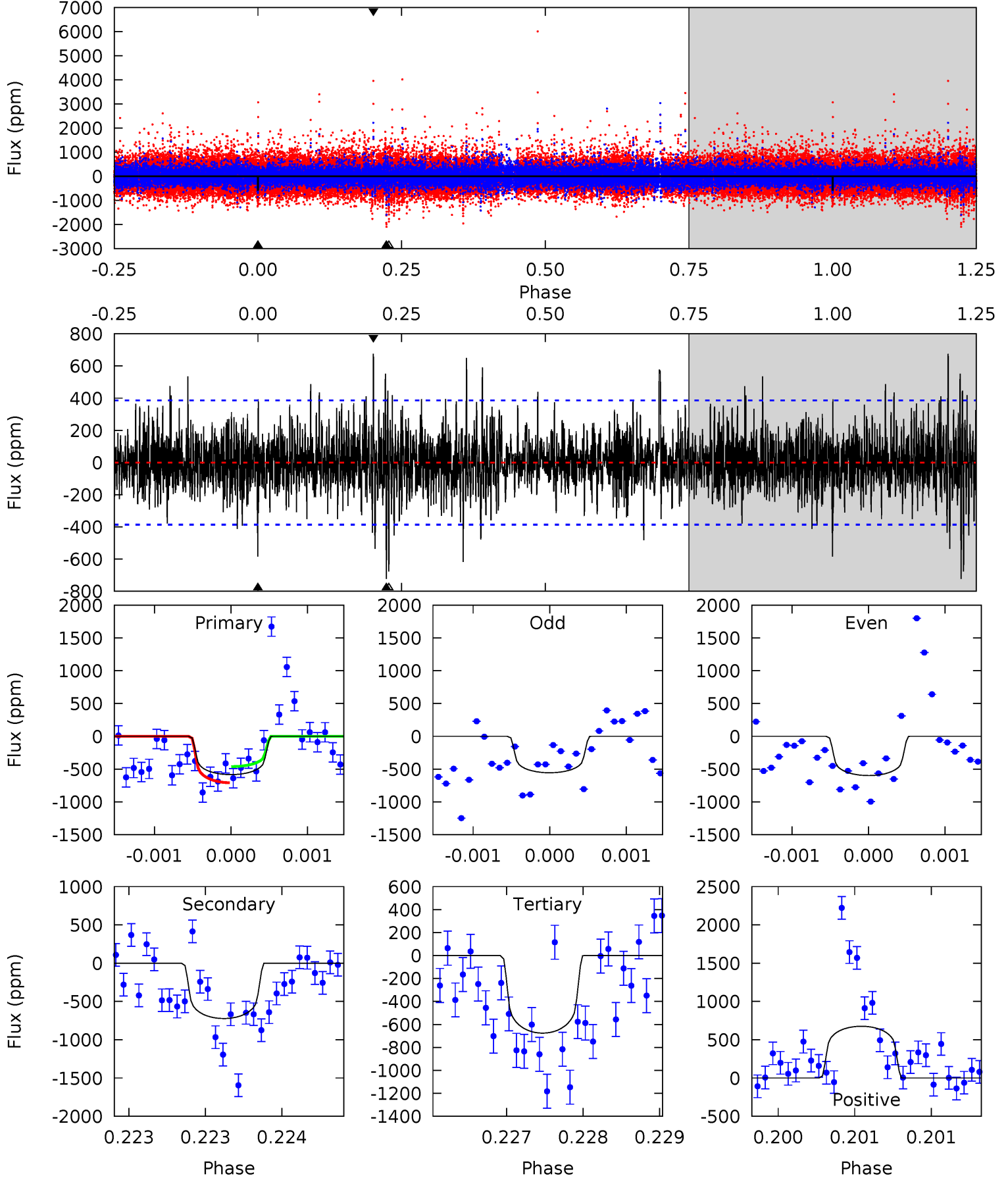
TCE 010848443-01 P=449.633677 Days $T_0=530.829823$ (BKJD)



DV Model-Shift Uniqueness Test

010848443-01, P = 449.626601 Days, E = 81.219311 Days

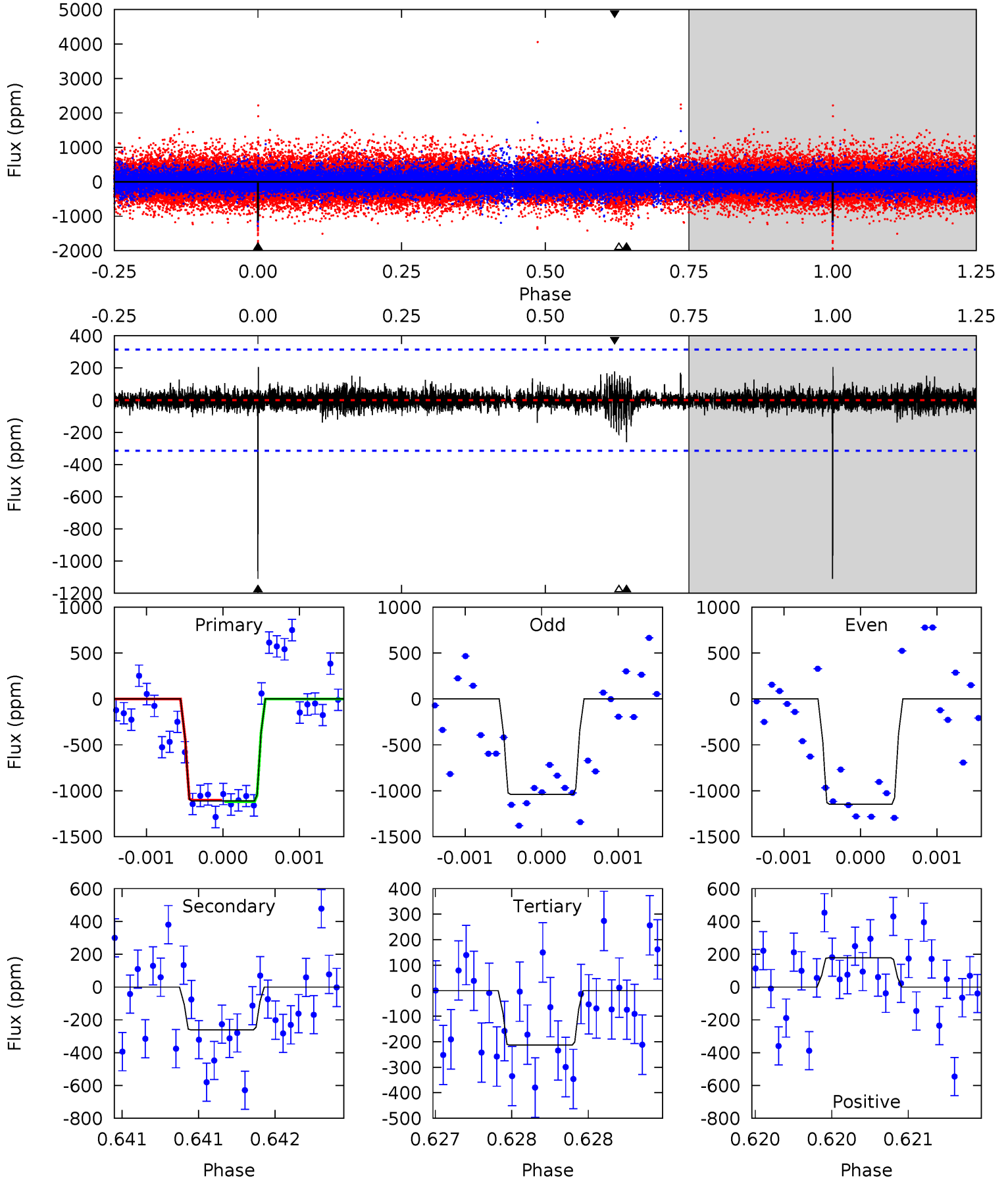
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	10.4	9.71	9.72	5.54	3.44	1.93	-1.32	-1.32	0.68	0.67	0.26	0.98	0.48	1.78



Alt Model-Shift Uniqueness Test

010848443-01, P = 449.633677 Days, E = 81.196146 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	4.61	3.77	3.14	5.56	3.46	0.60	15.8	16.5	0.84	1.46	0.89	1.07	0.16	0.13



Stellar Parameters For KIC 010848443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5802^{+157}_{-157}	$4.485^{+0.100}_{-0.150}$	$-0.600^{+0.300}_{-0.300}$	$0.841^{+0.194}_{-0.104}$	$0.787^{+0.100}_{-0.054}$	$1.865^{+0.816}_{-0.778}$
	+3%/-3%	+2%/-3%	+50%/-50%	+23%/-12%	+13%/-7%	+44%/-42%
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 010848443-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-723 ± 70	$3.19^{+2.73}_{-2.06}$	321^{+19}_{-16}	5253^{+3869}_{-1173}	$43318^{+311313}_{-30606}$
Alt.	-261 ± 57	$3.62^{+2.88}_{-2.18}$	321^{+20}_{-16}	4059^{+1824}_{-719}	12183^{+68517}_{-8394}

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

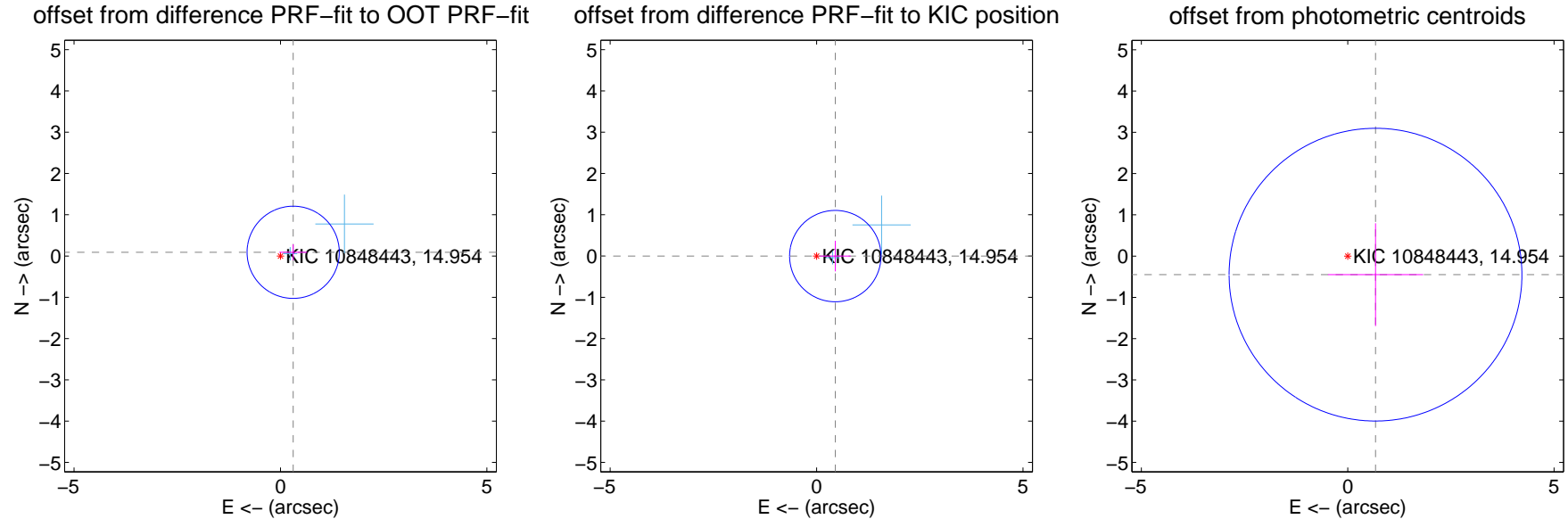
DV Centroid Data

Supplemental centroid analysis for 010848443-01. Kepler magnitude: 14.95. Transit SNR 5.99

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.372	0.86	-0.308 ± 0.336	0.090 ± 0.192
PRF-fit source offset from KIC position	0.453 ± 0.369	1.23	-0.453 ± 0.369	-0.002 ± 0.371
photometric centroid source offset	0.81 ± 1.18	0.69	-0.67 ± 1.15	-0.45 ± 1.25

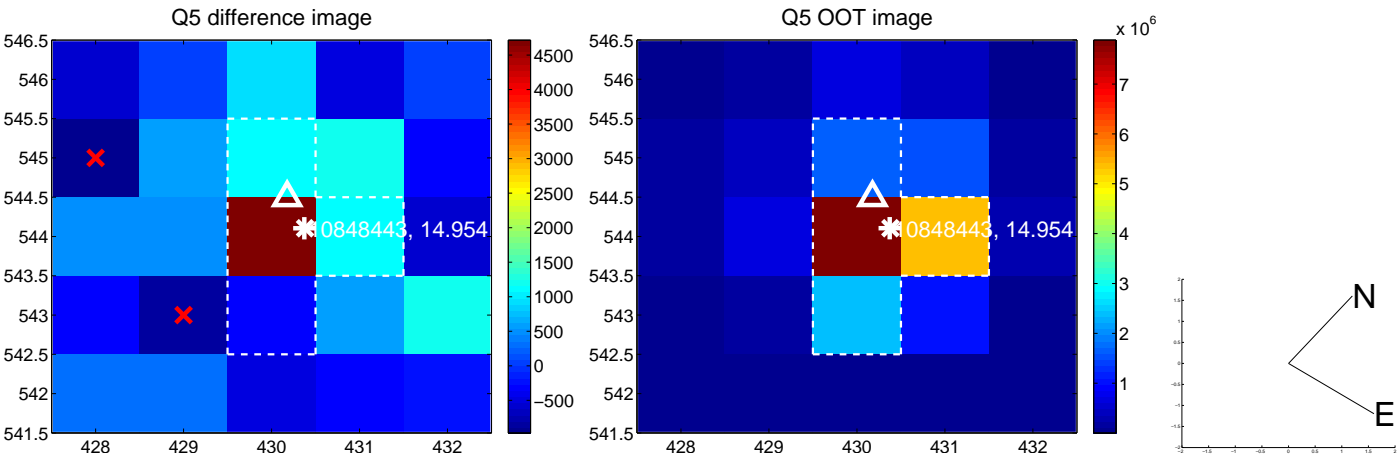


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

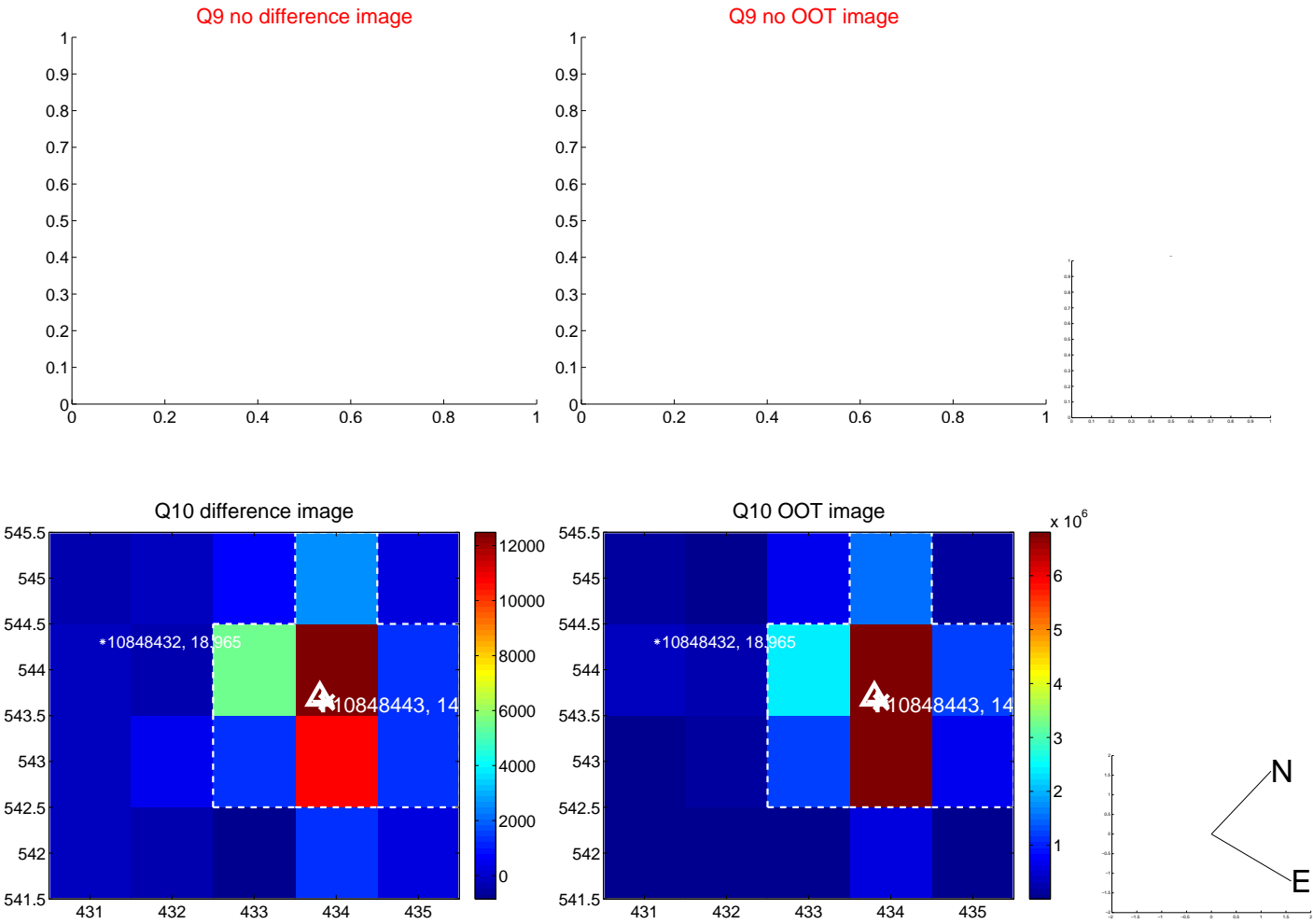
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



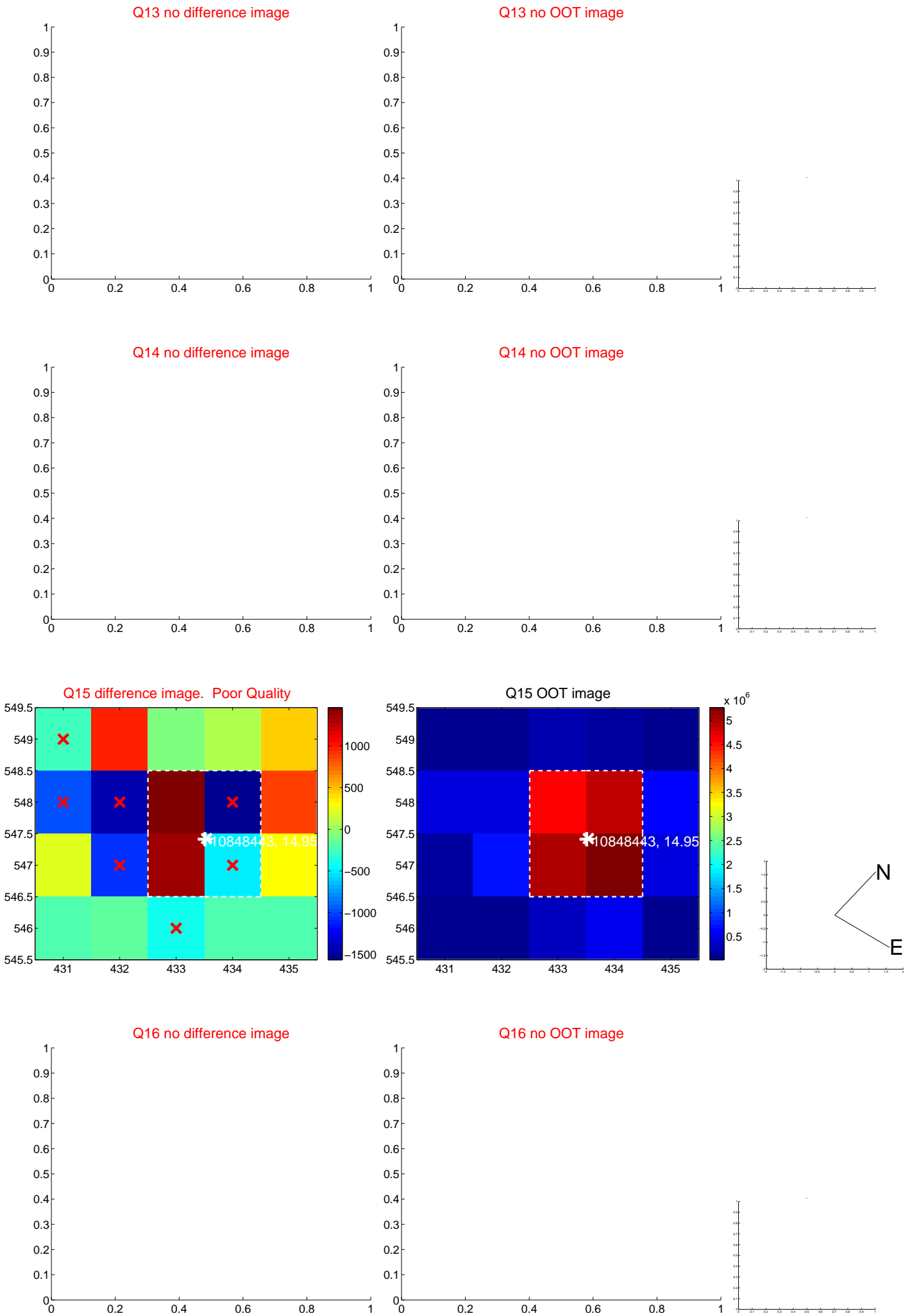
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



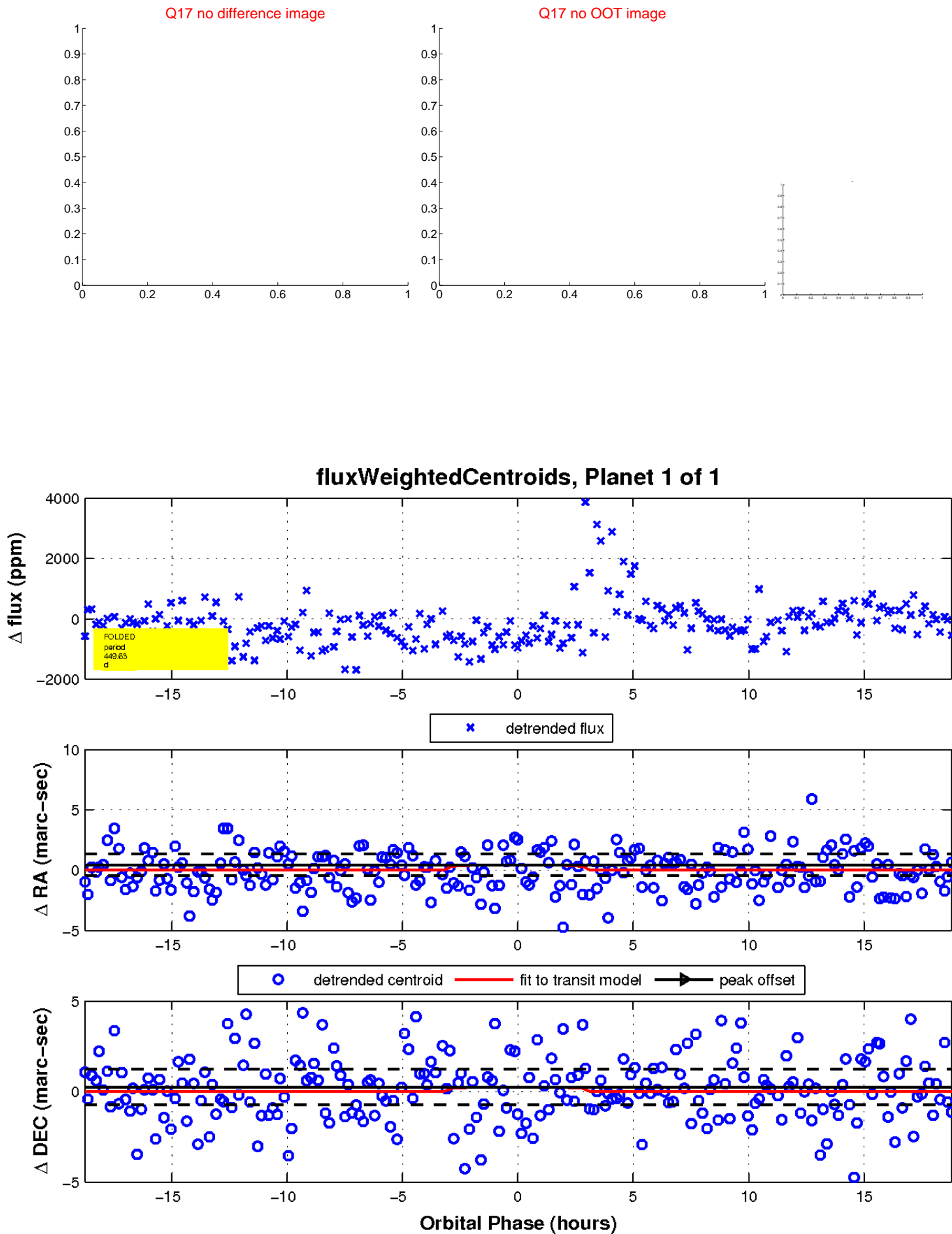
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

