

KIC 006876443

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})
006876443-01	OBS	No	433.253763	482.130141	746.9	5.701	7.2	7.5	0.96	6029	2.69	0.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006876443-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

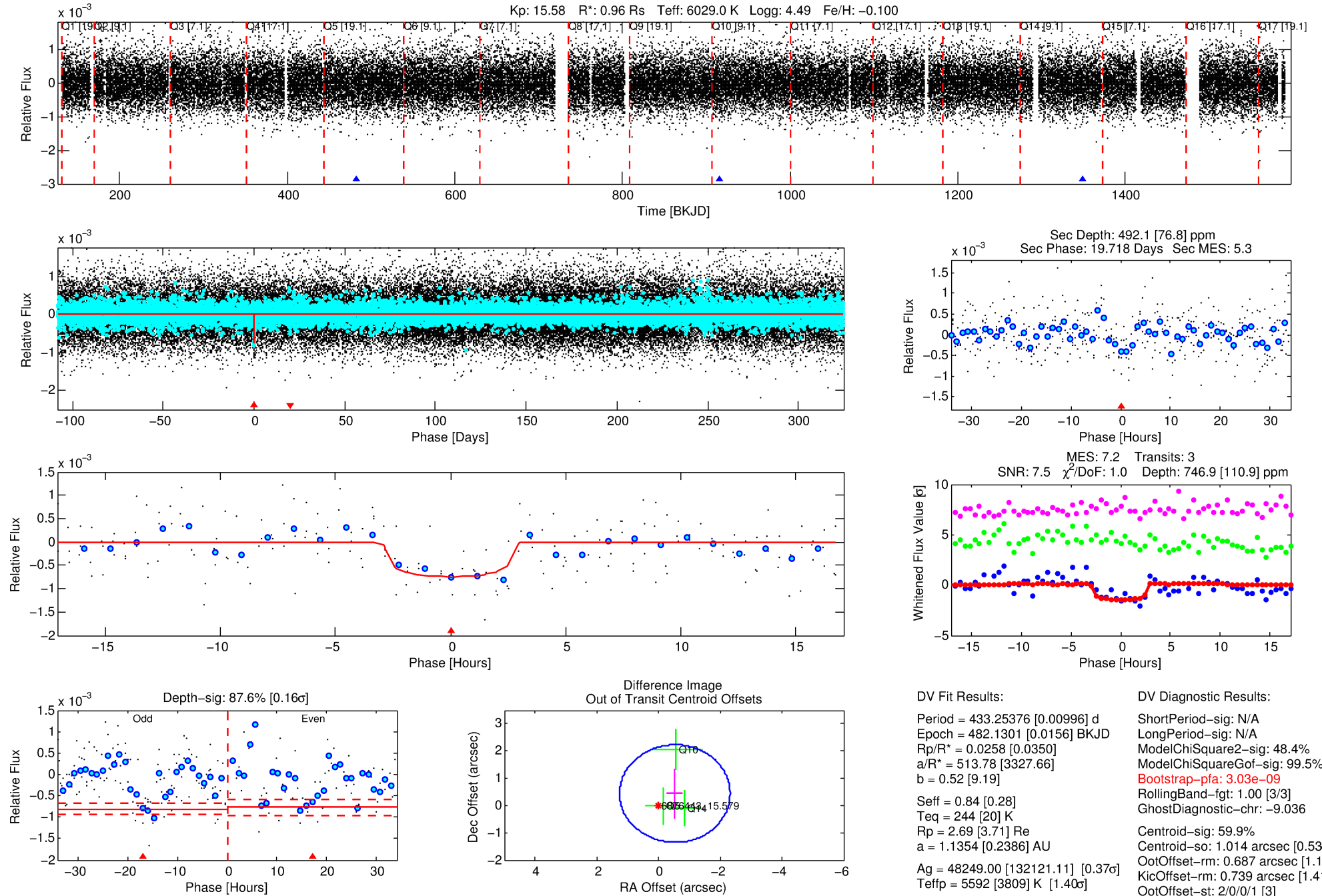
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006876443-01

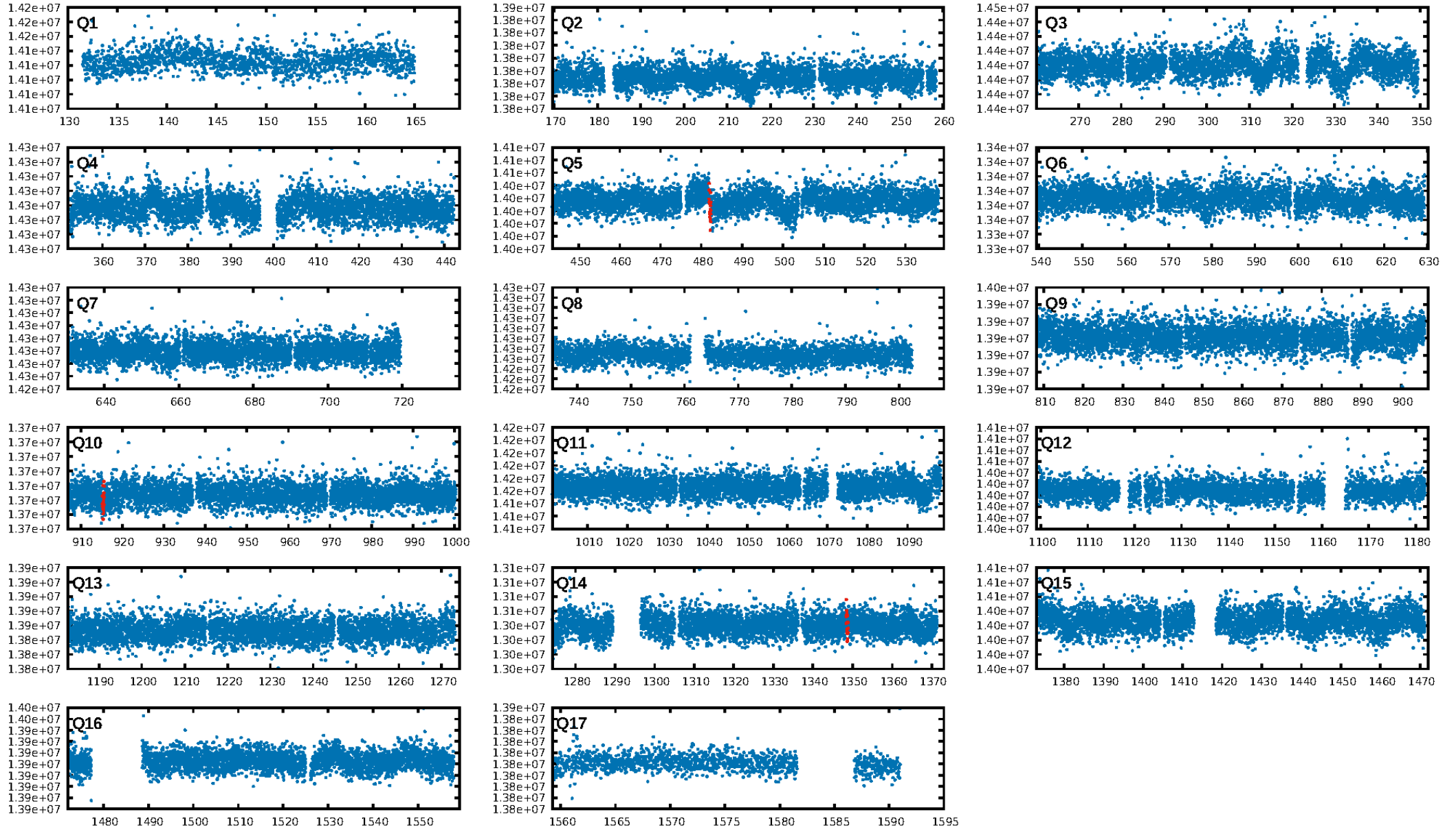
No Significant Match Found

DV One-Page Summary

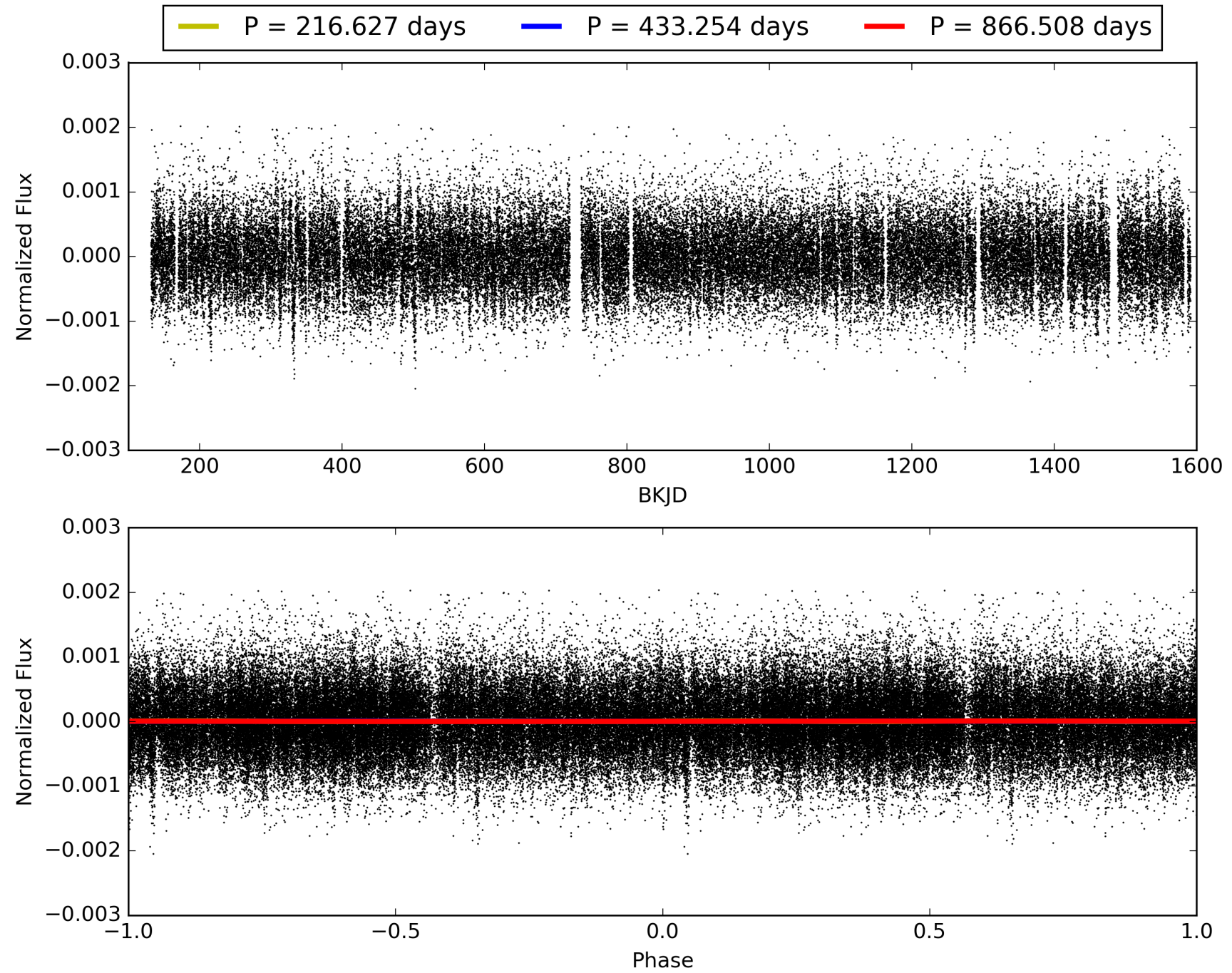
KIC: 6876443 Candidate: 1 of 1 Period: 433.254 d



TCE 006876443-01, PDC Light Curves

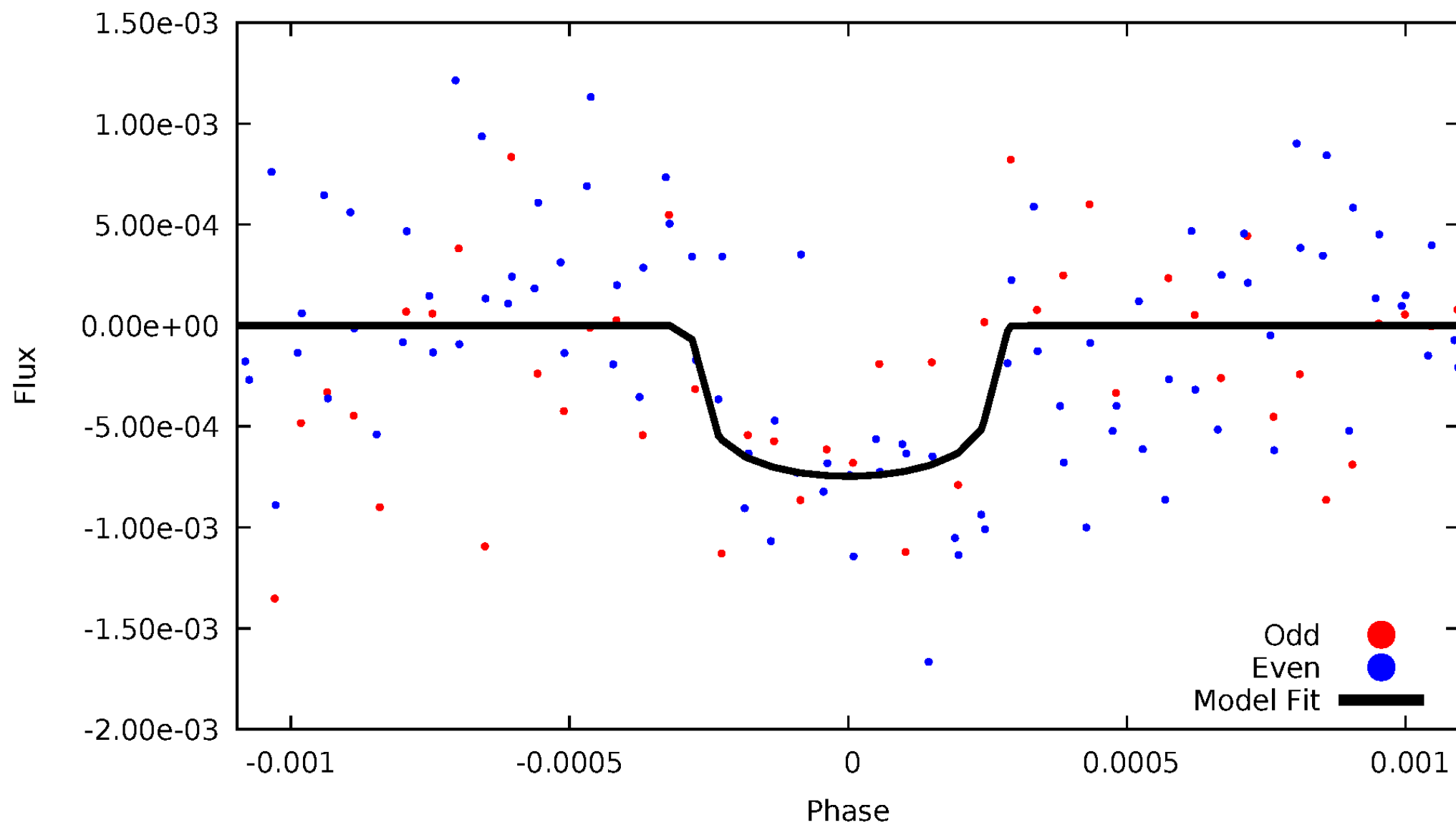


TCE 006876443-01



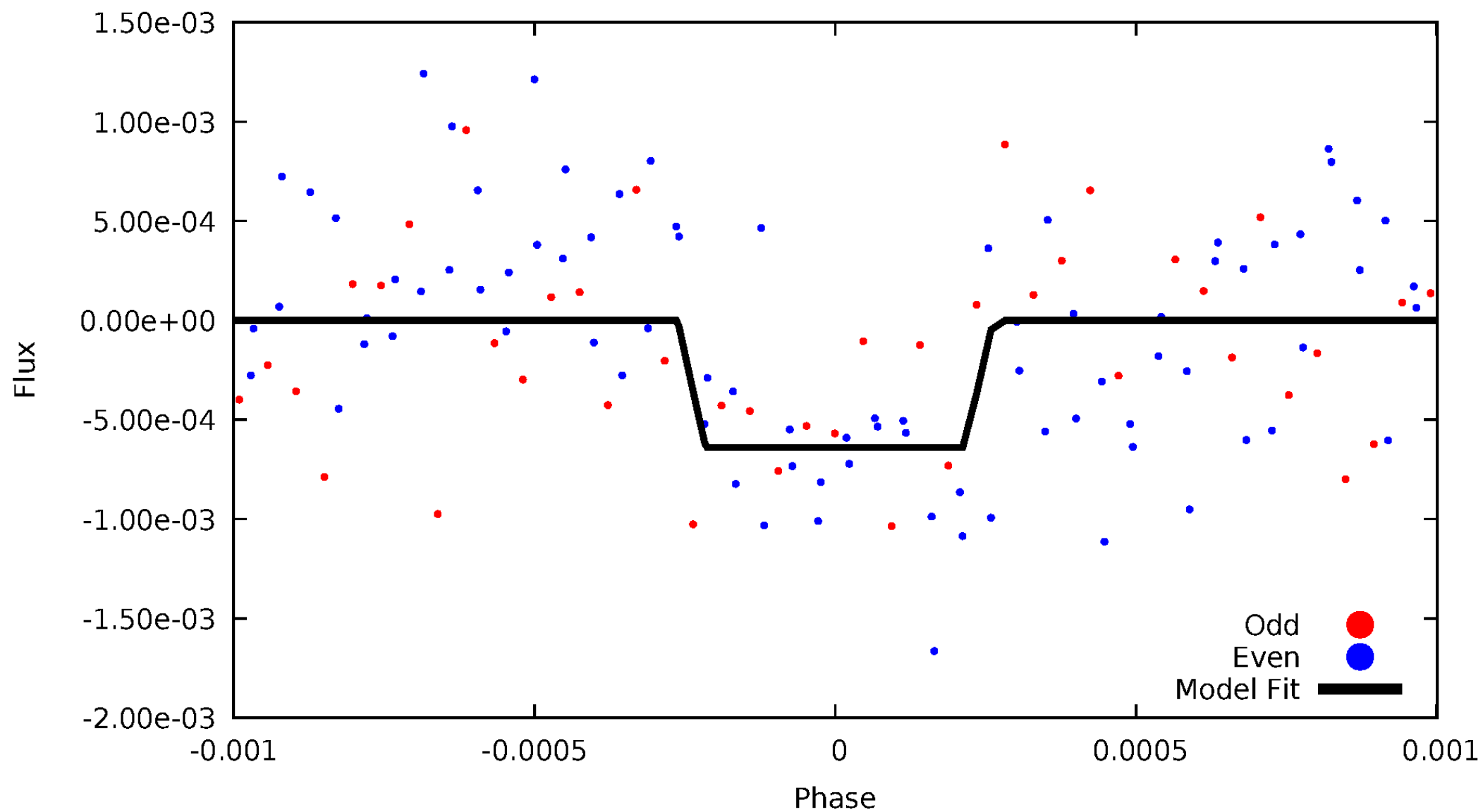
DV Odd/Even

TCE 006876443-01



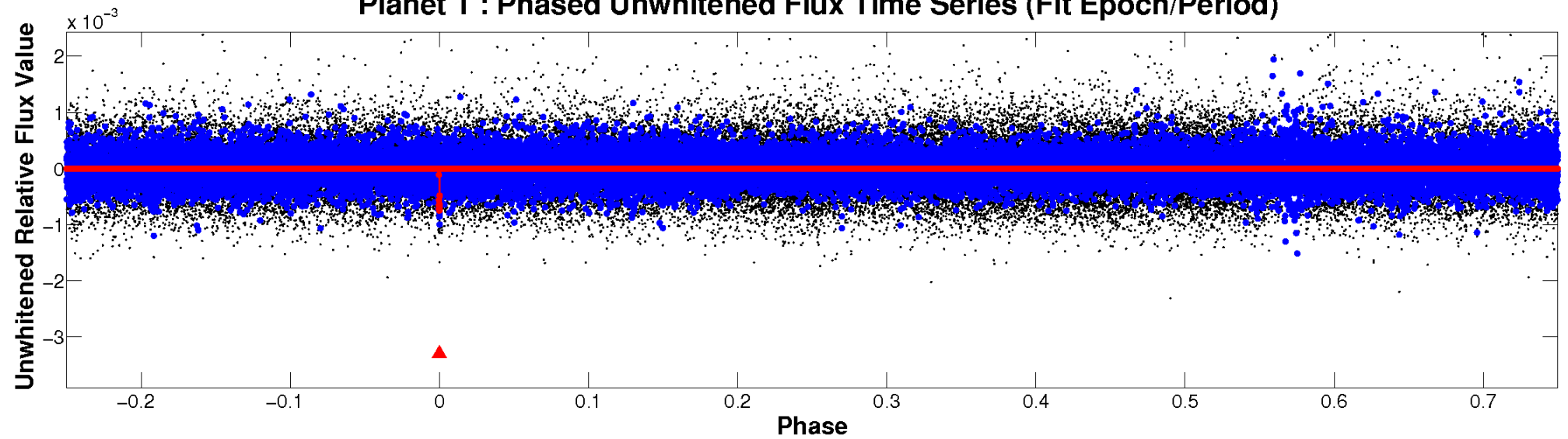
ALT Odd/Even

TCE 006876443-01

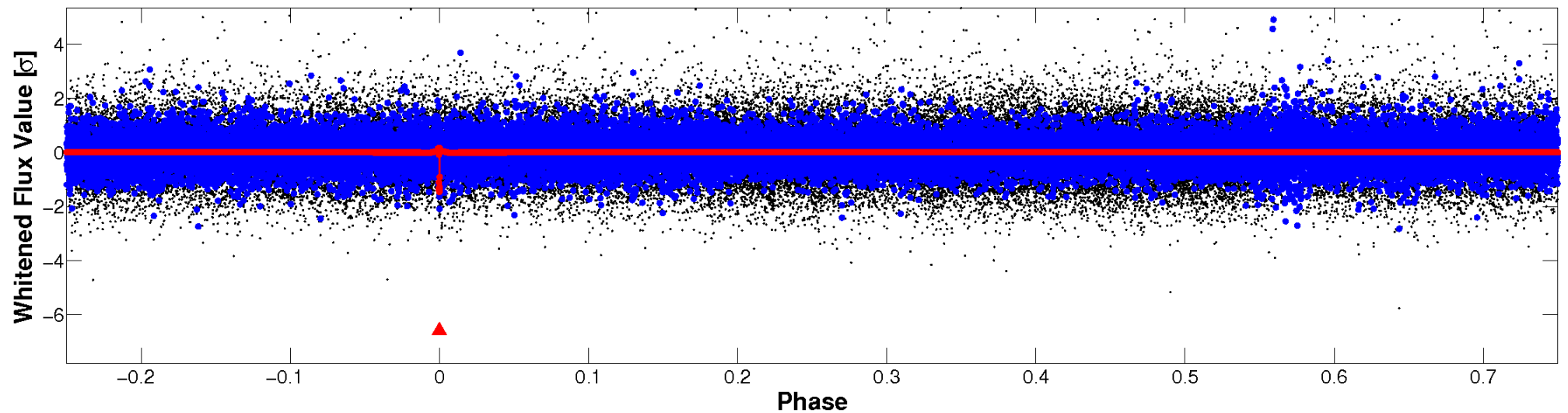


Non-Whitened Vs. Whitened Light Curve

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

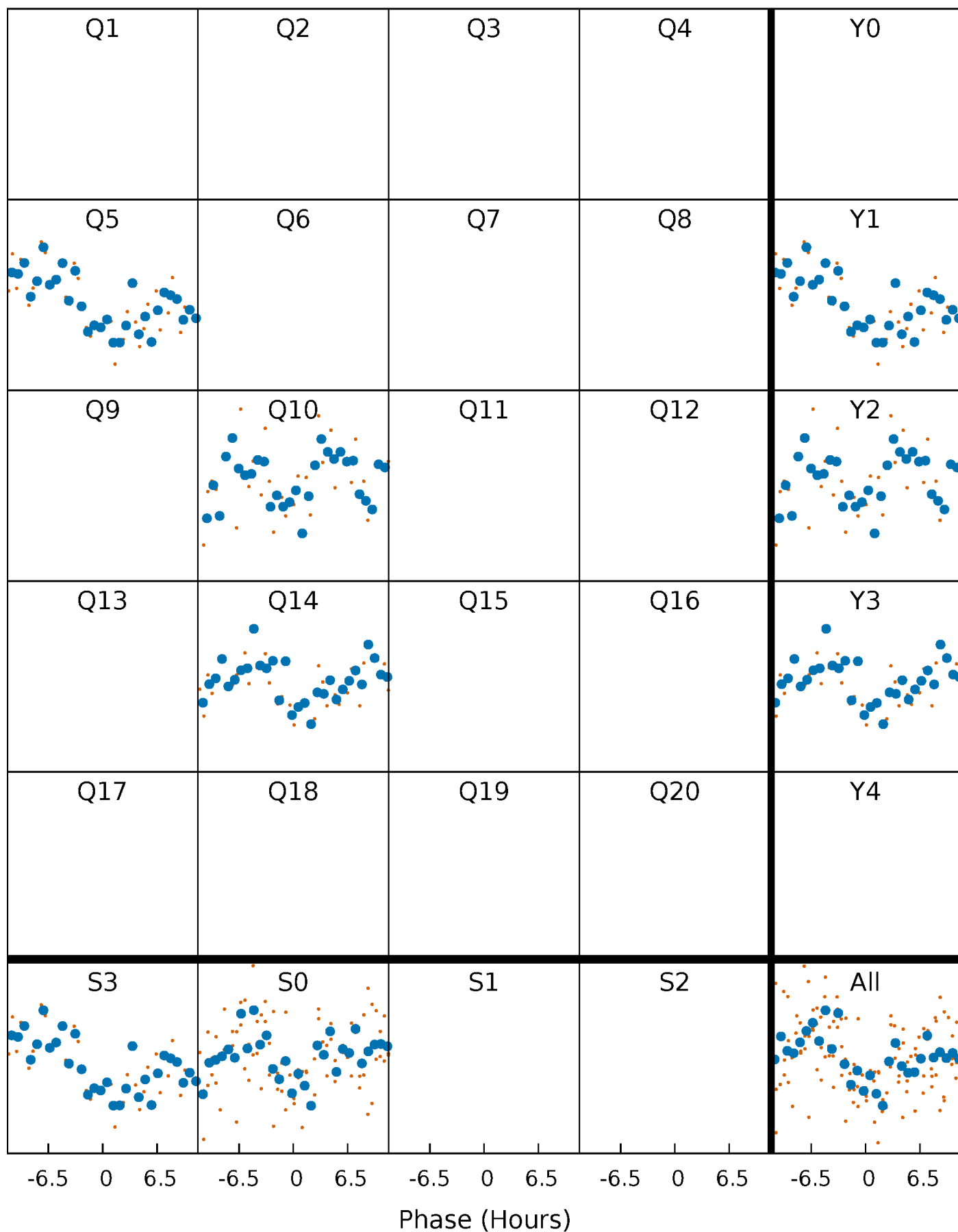


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



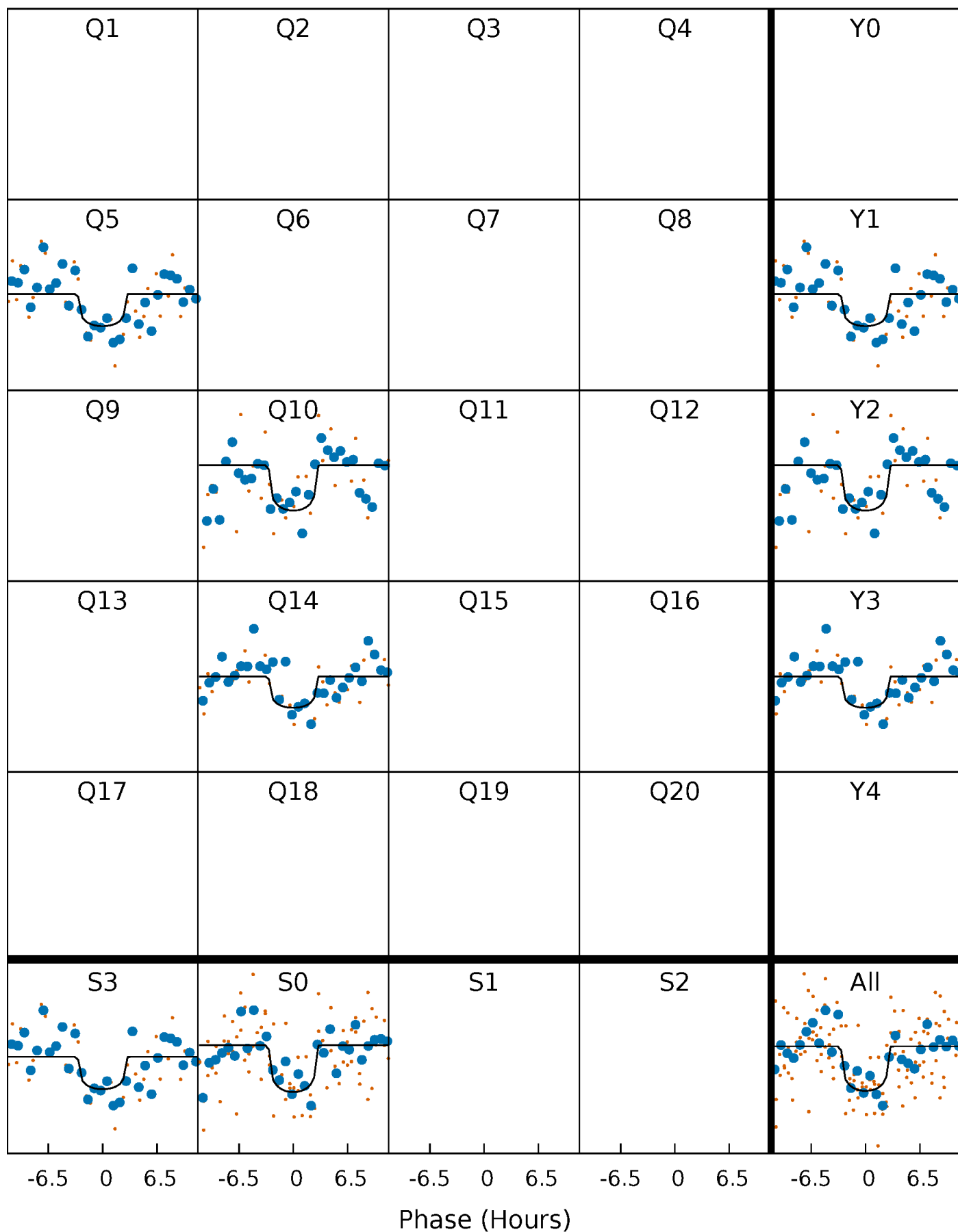
PDC Quarter-Phased Transit Curves

TCE 006876443-01 P=433.253763 Days $T_0=482.130141$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006876443-01 P=433.253763 Days $T_0=482.130141$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

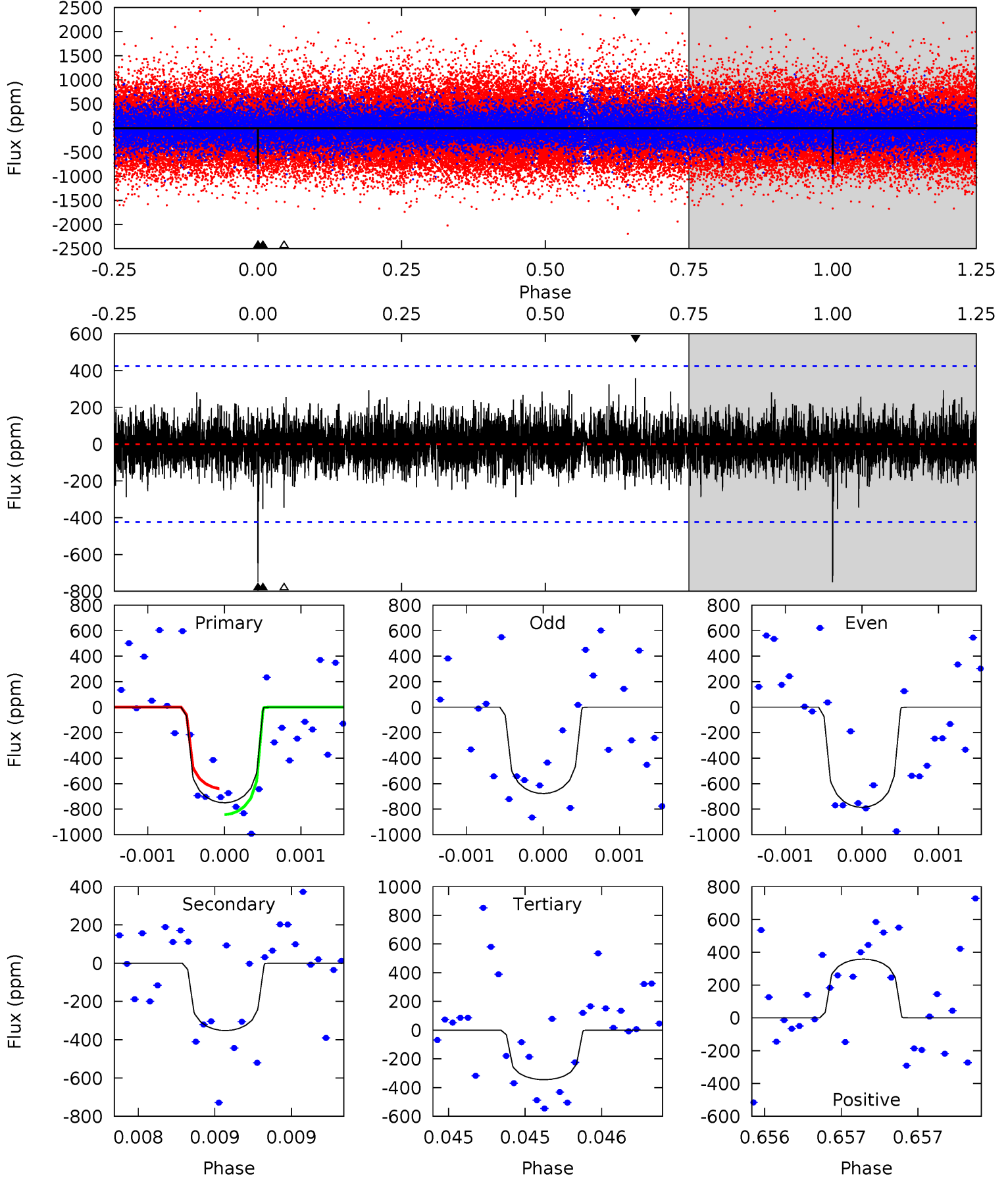
TCE 006876443-01 P=433.266395 Days $T_0=482.121323$ (BKJD)



DV Model-Shift Uniqueness Test

006876443-01, P = 433.253763 Days, E = 48.876378 Days

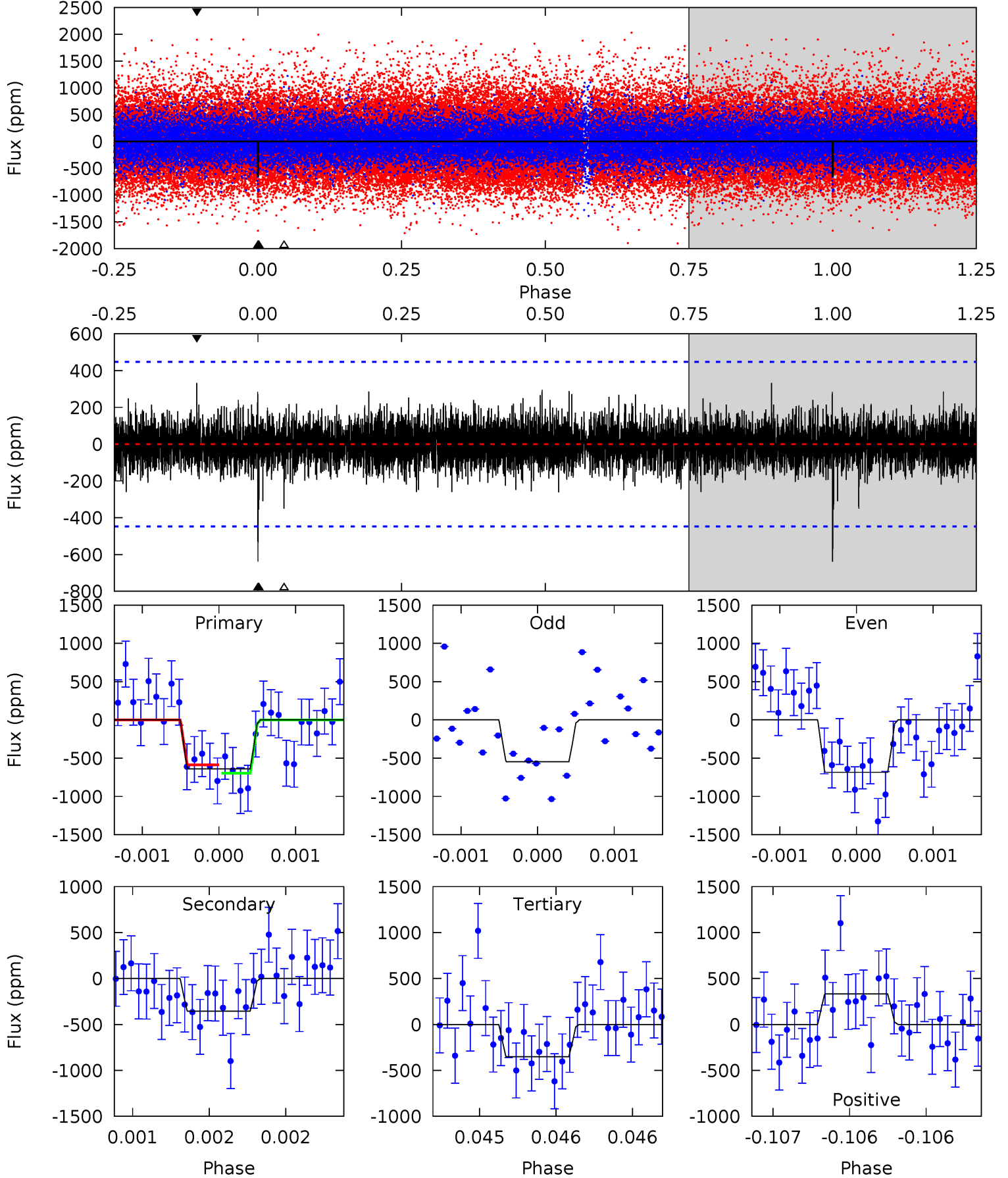
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.81	4.61	4.51	4.69	5.55	3.45	1.07	5.29	5.12	0.09	-0.08	0.67	1.11	0.32	1.32



Alt Model-Shift Uniqueness Test

006876443-01, $P = 433.266395$ Days, $E = 48.854928$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	4.43	4.36	4.13	5.57	3.47	0.94	3.60	3.82	0.07	0.29	0.80	1.17	0.34	0.67



Stellar Parameters For KIC 006876443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6029^{+180}_{-198}	$4.494^{+0.052}_{-0.168}$	$-0.100^{+0.300}_{-0.300}$	$0.956^{+0.238}_{-0.102}$	$1.040^{+0.118}_{-0.130}$	$1.675^{+0.369}_{-0.713}$
	+3%/-3%	+1%/-4%	+300%/-300%	+25%/-11%	+11%/-12%	+22%/-43%
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 006876443-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-352 ± 76	$4.02^{+3.22}_{-2.70}$	347^{+22}_{-17}	4473^{+3082}_{-862}	$14926^{+118019}_{-10506}$
Alt.	-356 ± 80	$3.85^{+3.46}_{-2.46}$	346^{+21}_{-16}	4494^{+2790}_{-883}	$16195^{+103790}_{-11731}$

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

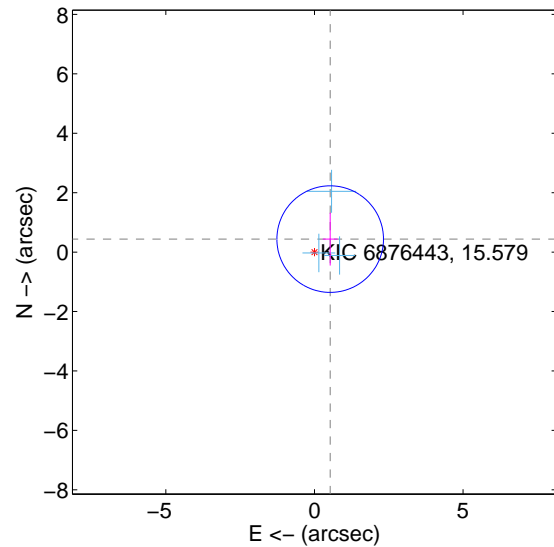
Supplemental centroid analysis for 006876443-01. Kepler magnitude: 15.58. Transit SNR 7.49

There are 3 quarters with good PRF difference image offsets

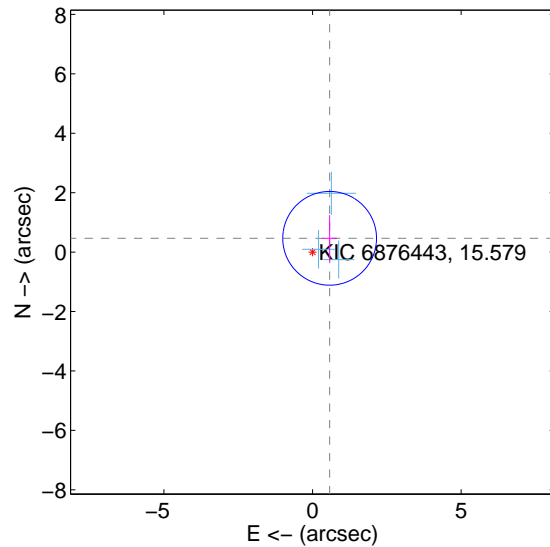
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.687 ± 0.598	1.15	-0.530 ± 0.252	0.437 ± 0.888
PRF-fit source offset from KIC position	0.739 ± 0.526	1.41	-0.576 ± 0.246	0.464 ± 0.780
photometric centroid source offset	1.01 ± 1.92	0.53	-0.43 ± 2.02	-0.92 ± 1.90

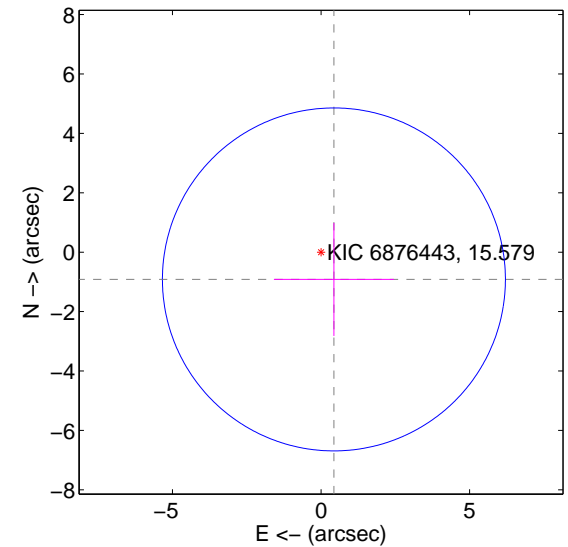
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

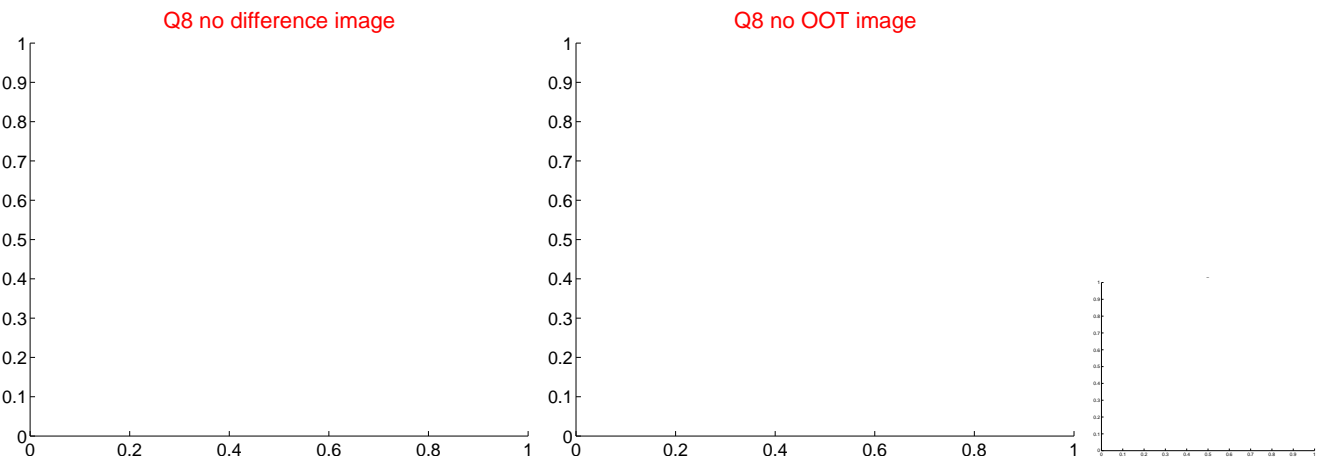
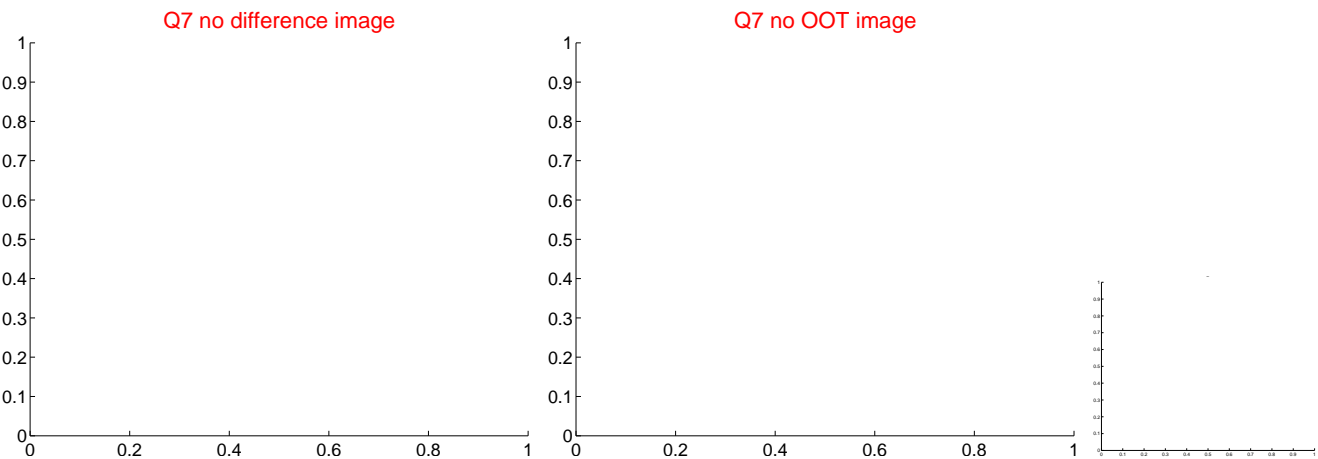
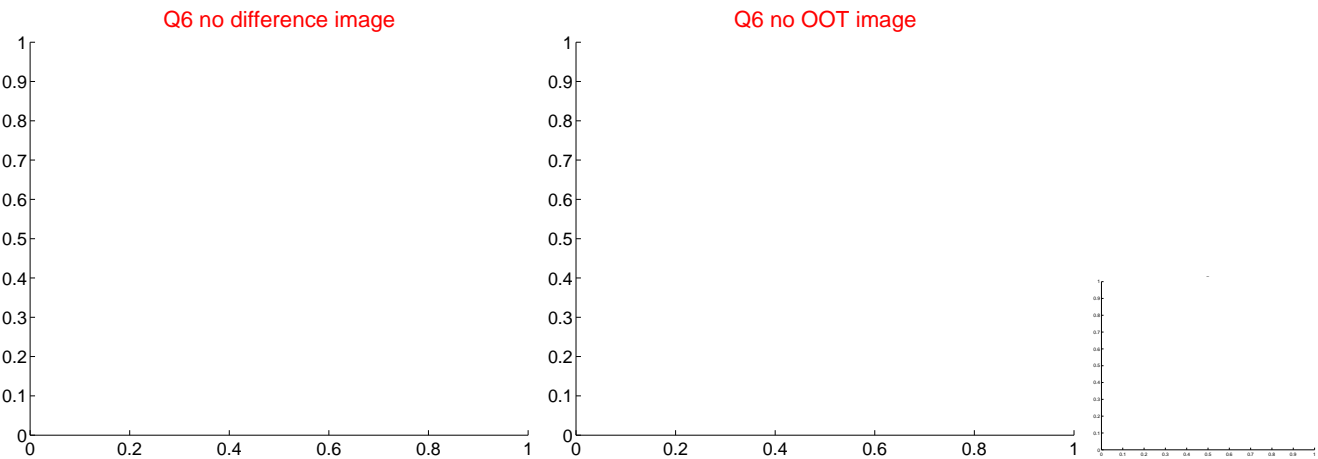
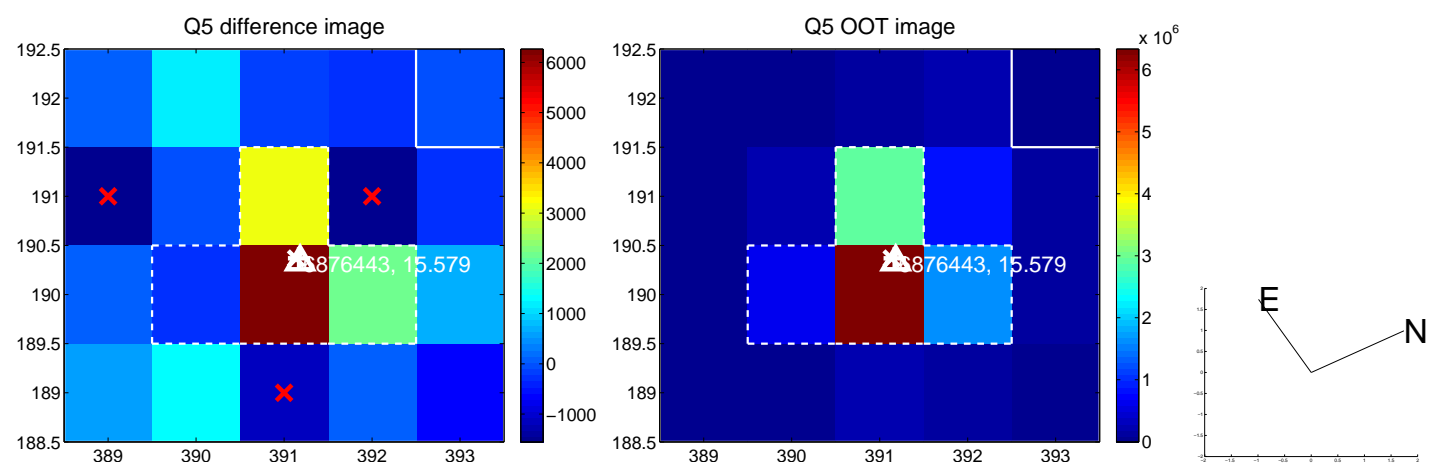


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

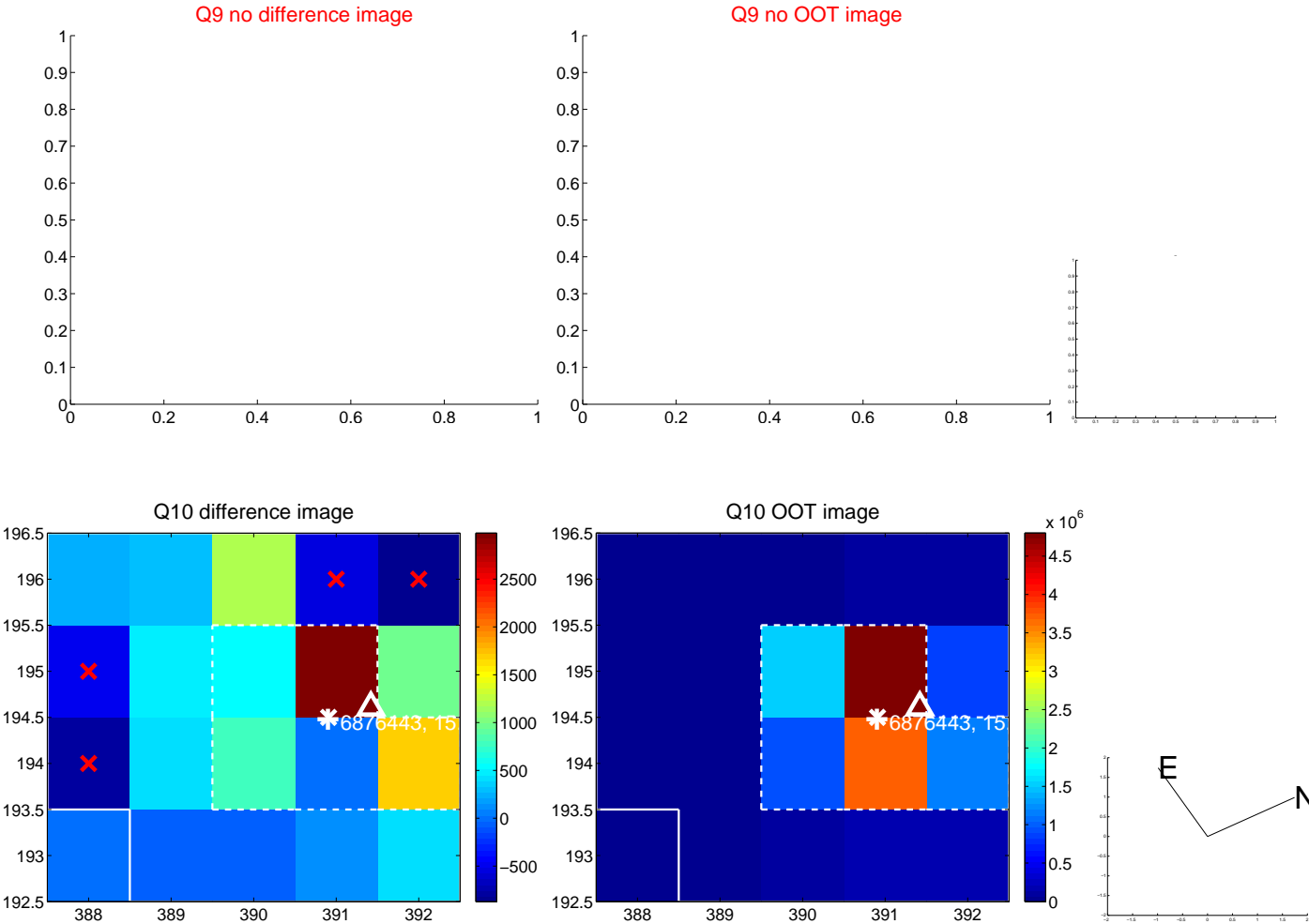
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: 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.

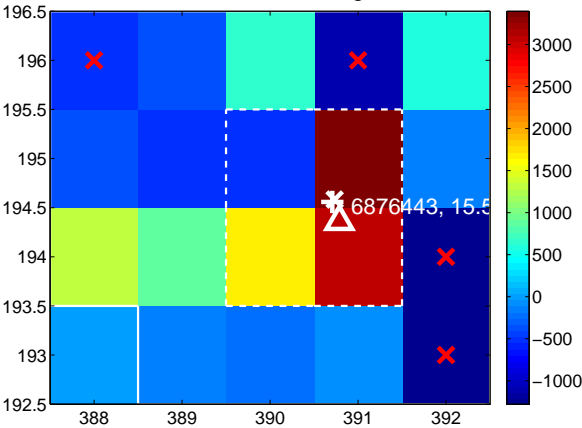
Q13 no difference image



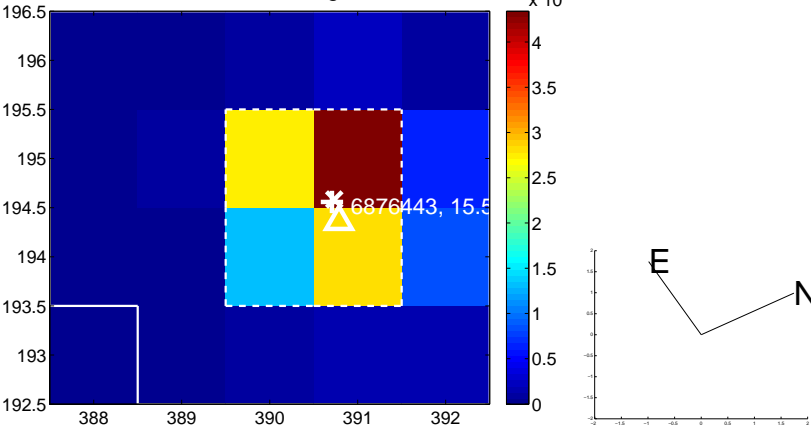
Q13 no OOT image



Q14 difference image



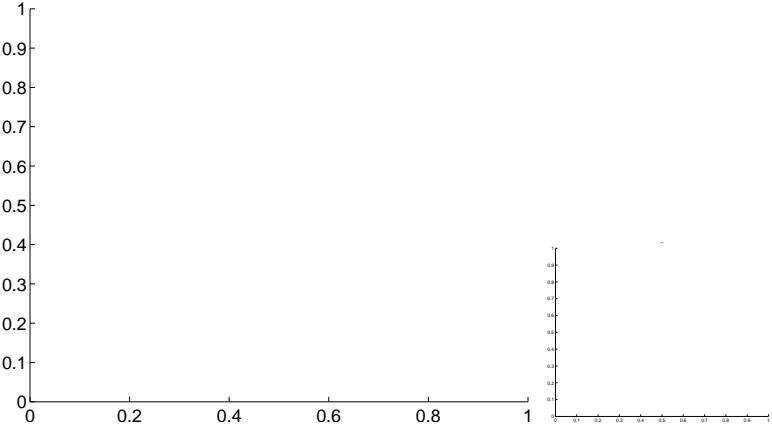
Q14 OOT image



Q15 no difference image



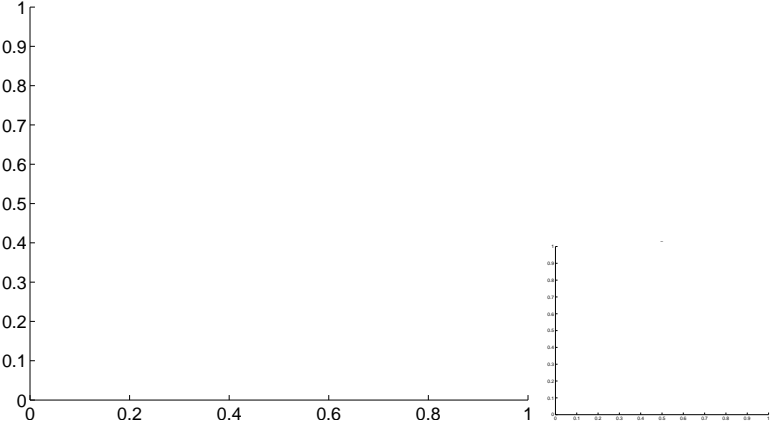
Q15 no OOT image



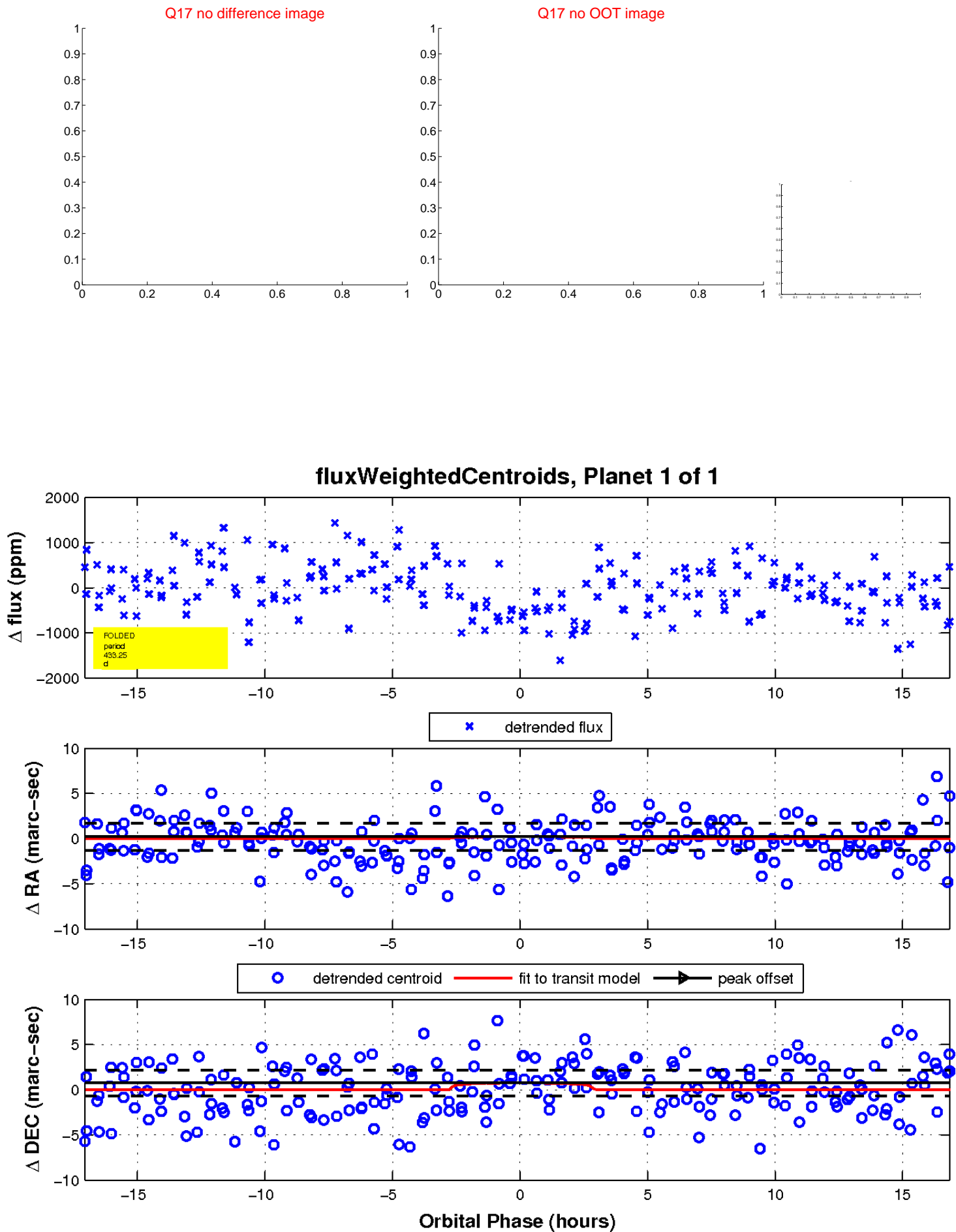
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

