

KIC 007686445

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})
007686445-01	OBS	No	483.868630	373.935611	580.4	4.766	7.4	7.3	1.17	6418	3.05	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007686445-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQU_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

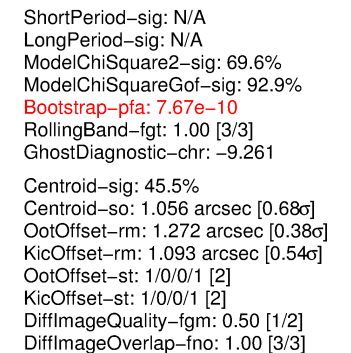
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

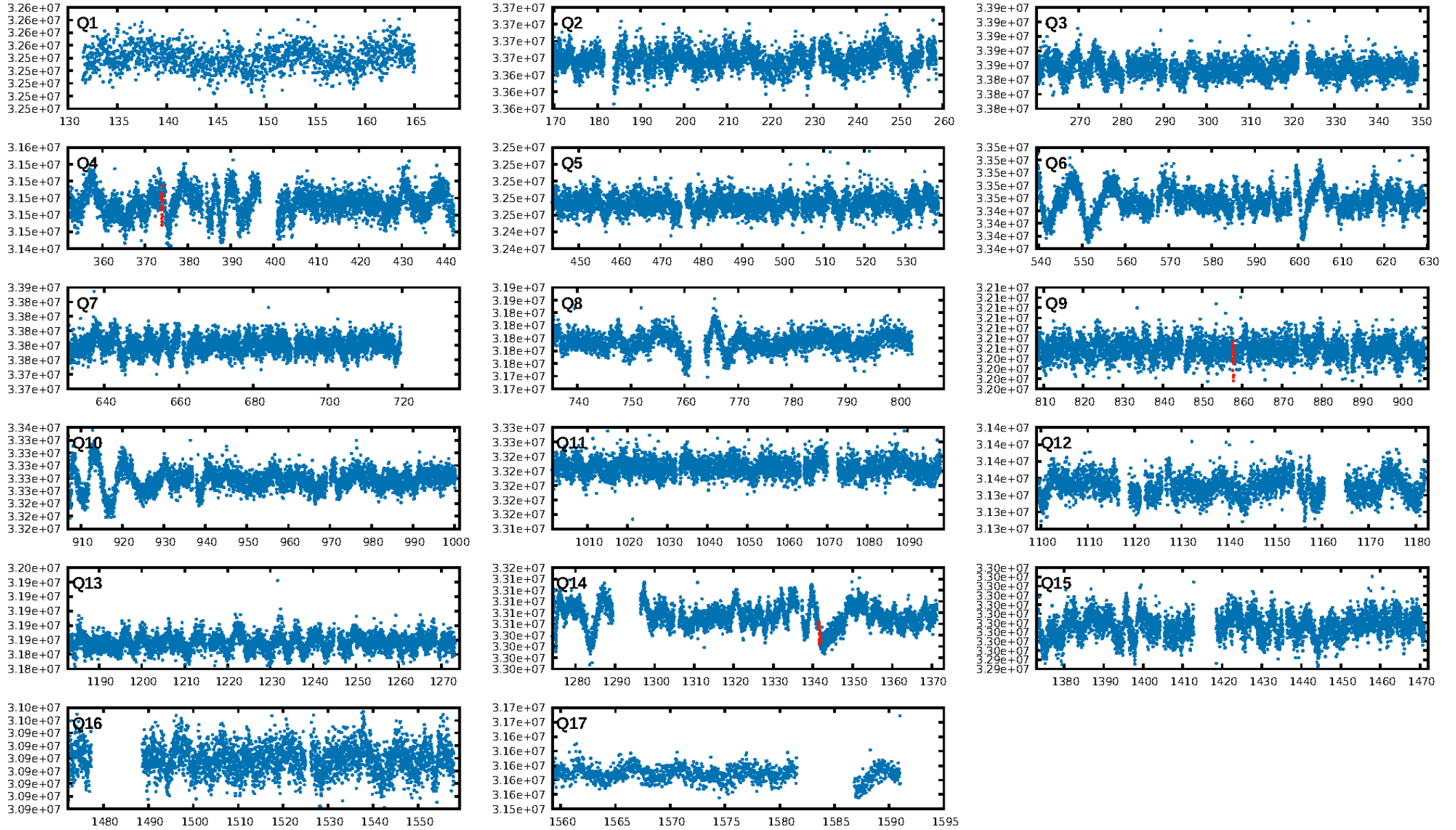
Ephemeris Match Information For 007686445-01

No Significant Match Found

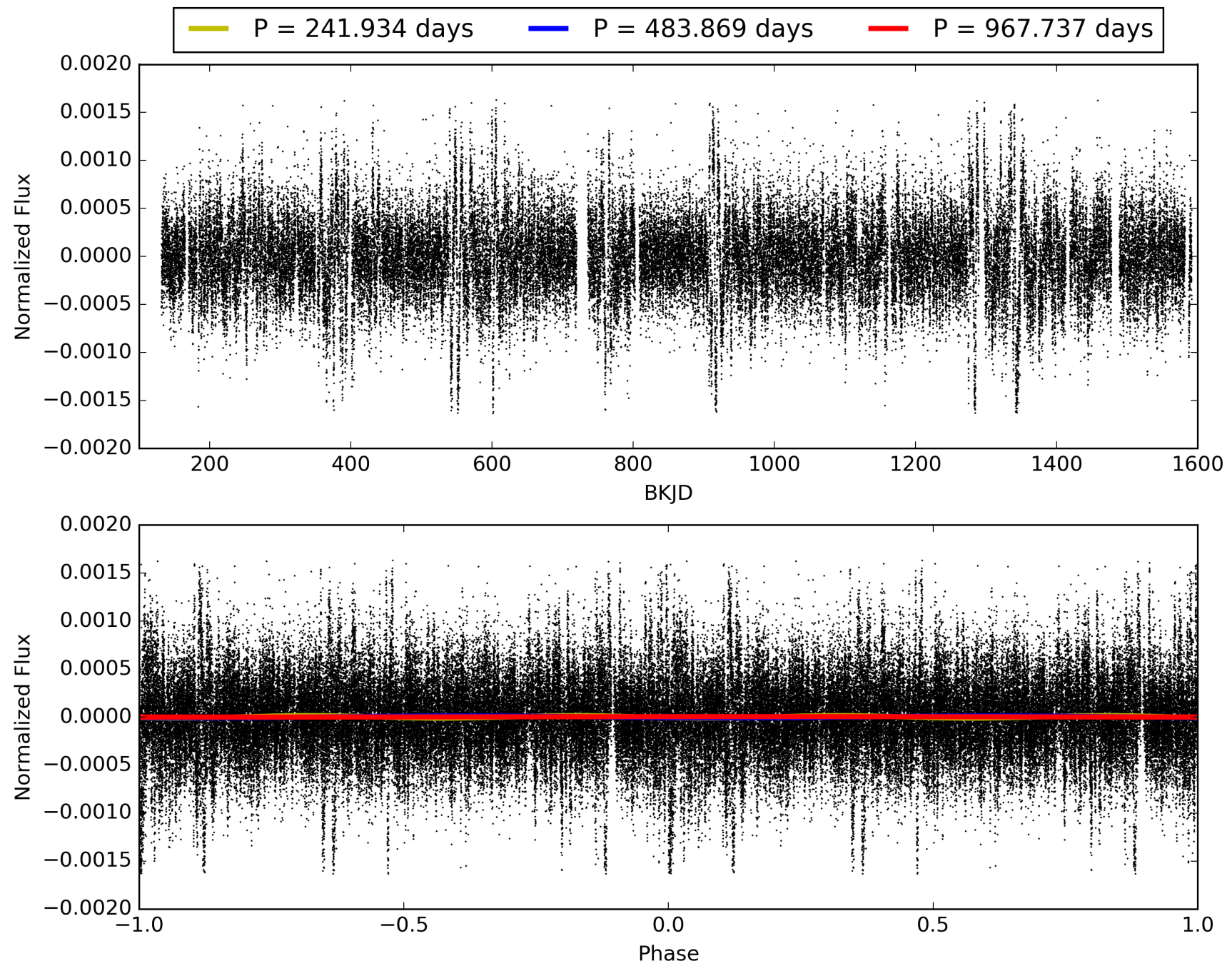
KIC: 7686445 Candidate: 1 of 1 Period: 483.869 d



TCE 007686445-01, PDC Light Curves

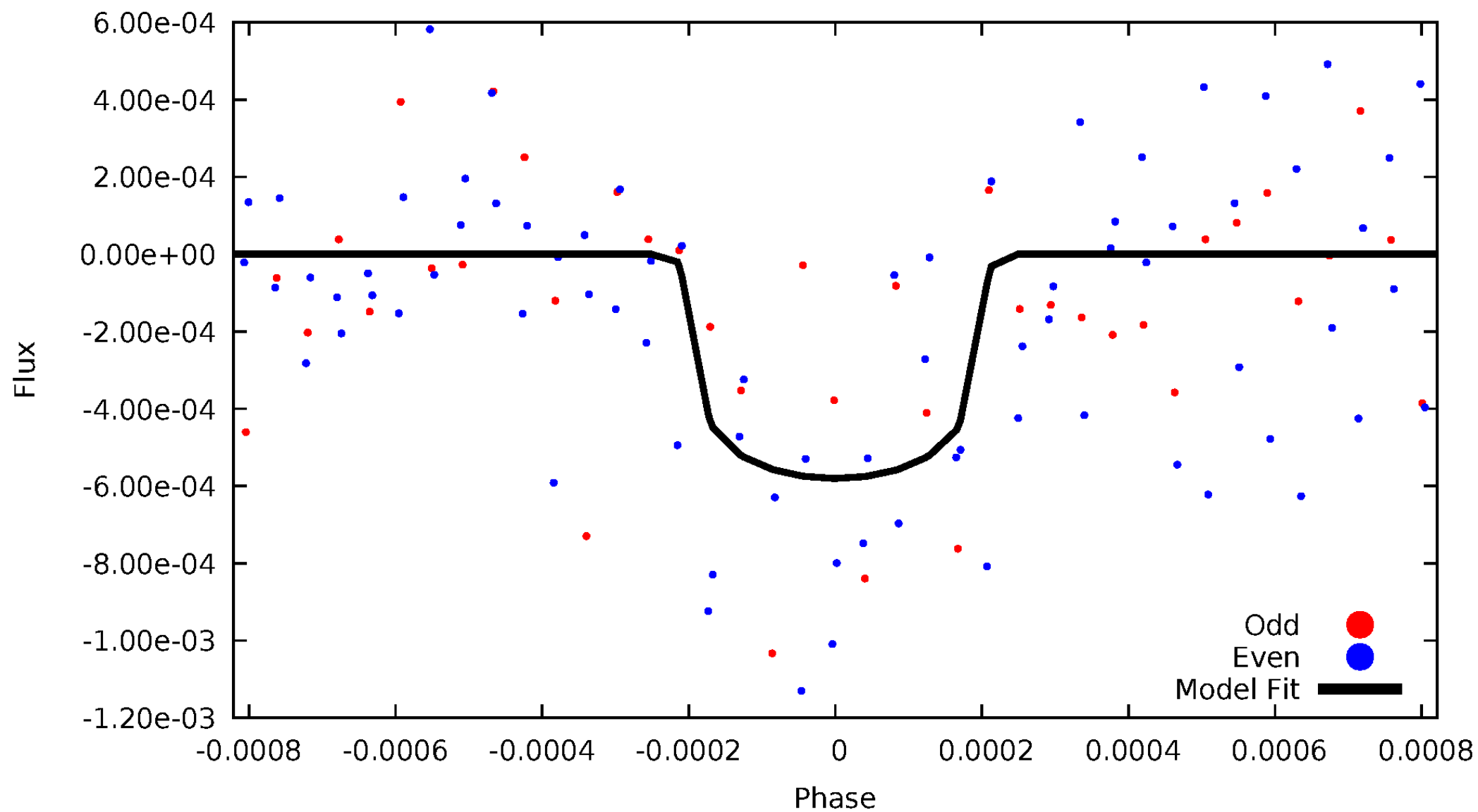


TCE 007686445-01



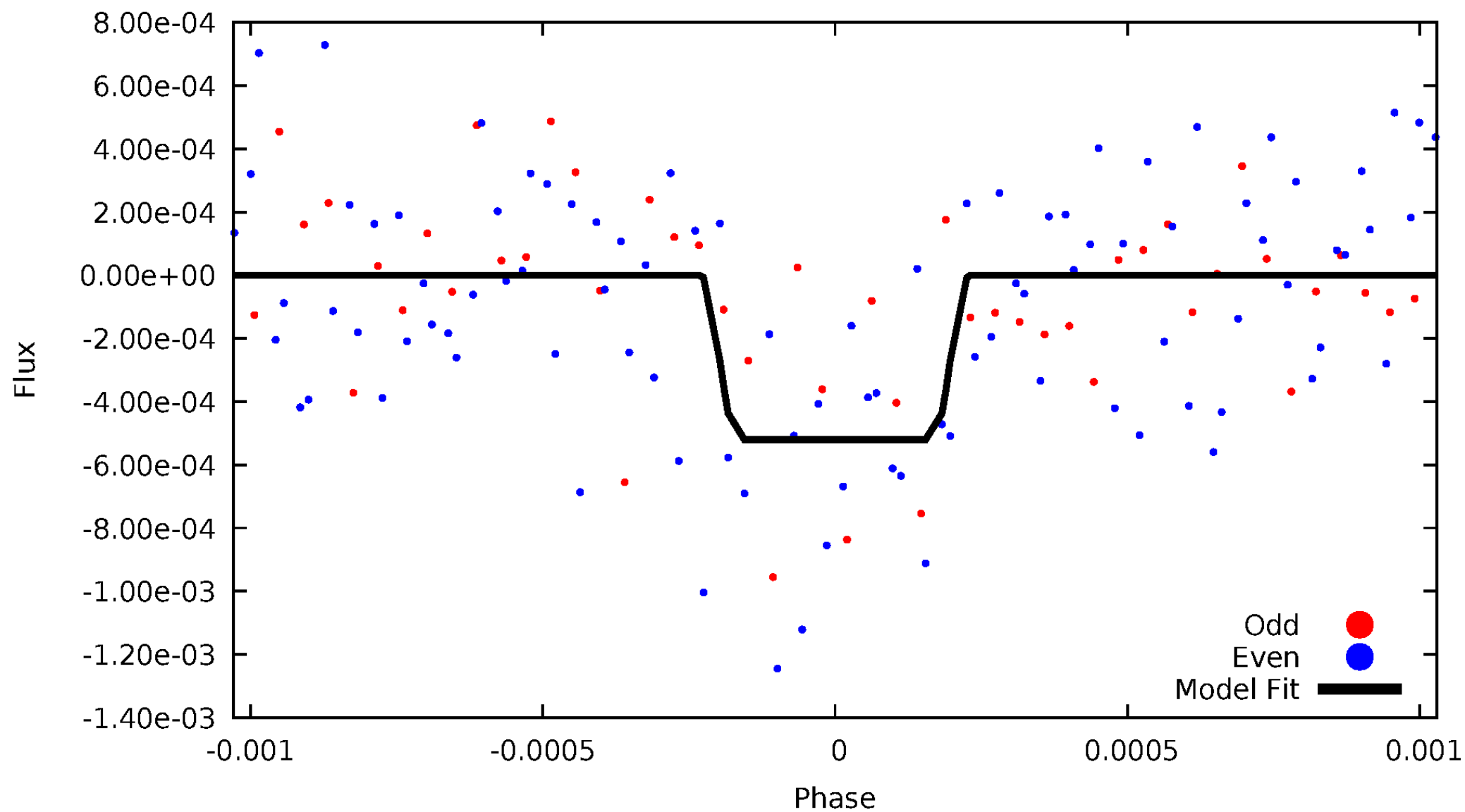
DV Odd/Even

TCE 007686445-01



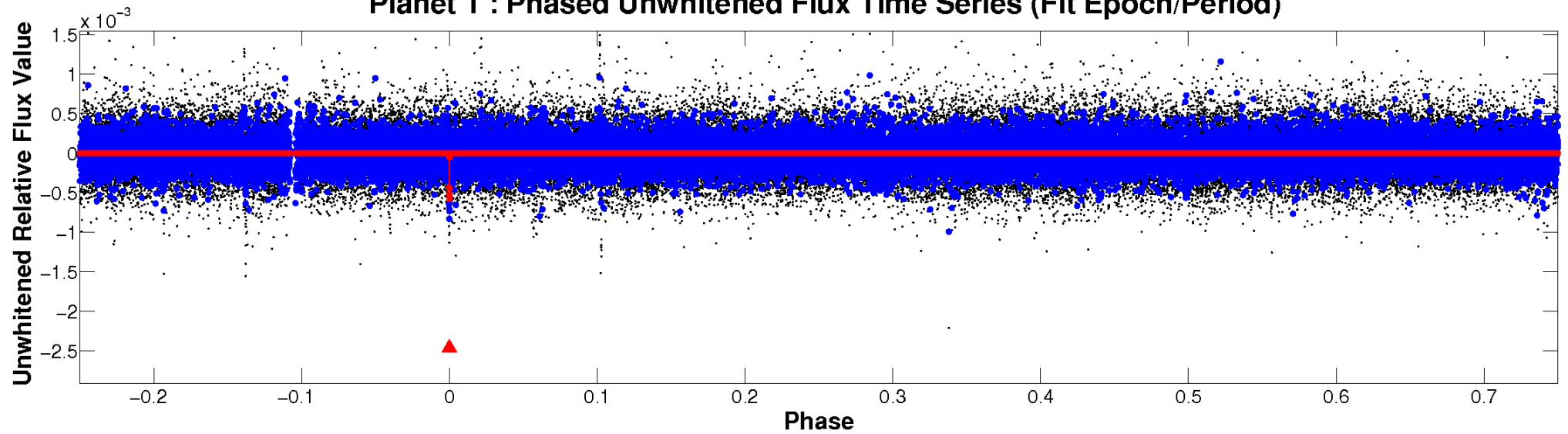
ALT Odd/Even

TCE 007686445-01

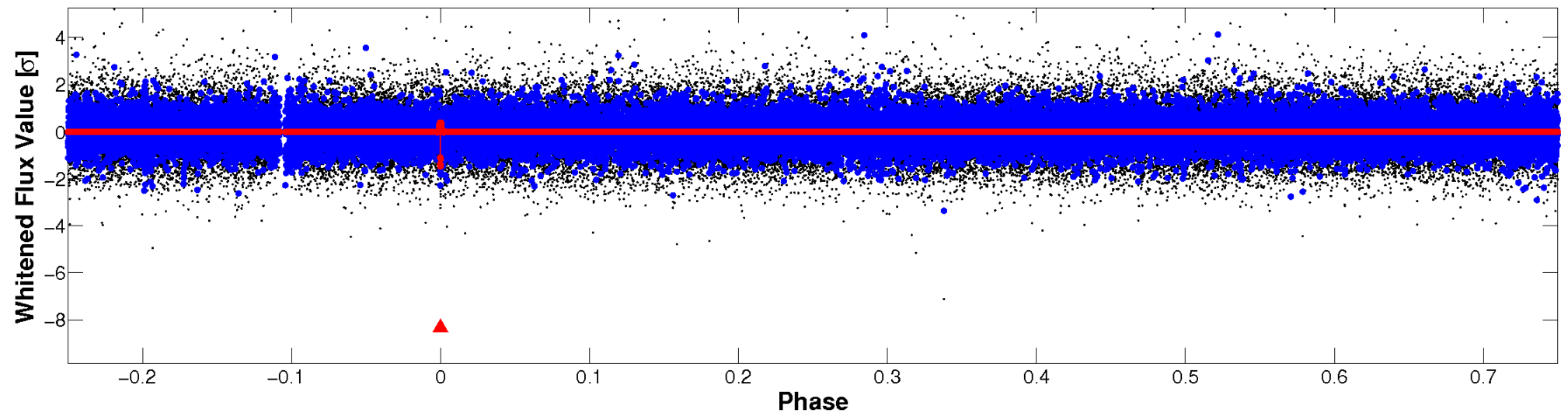


Non-Whitened Vs. Whitened Light Curve

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

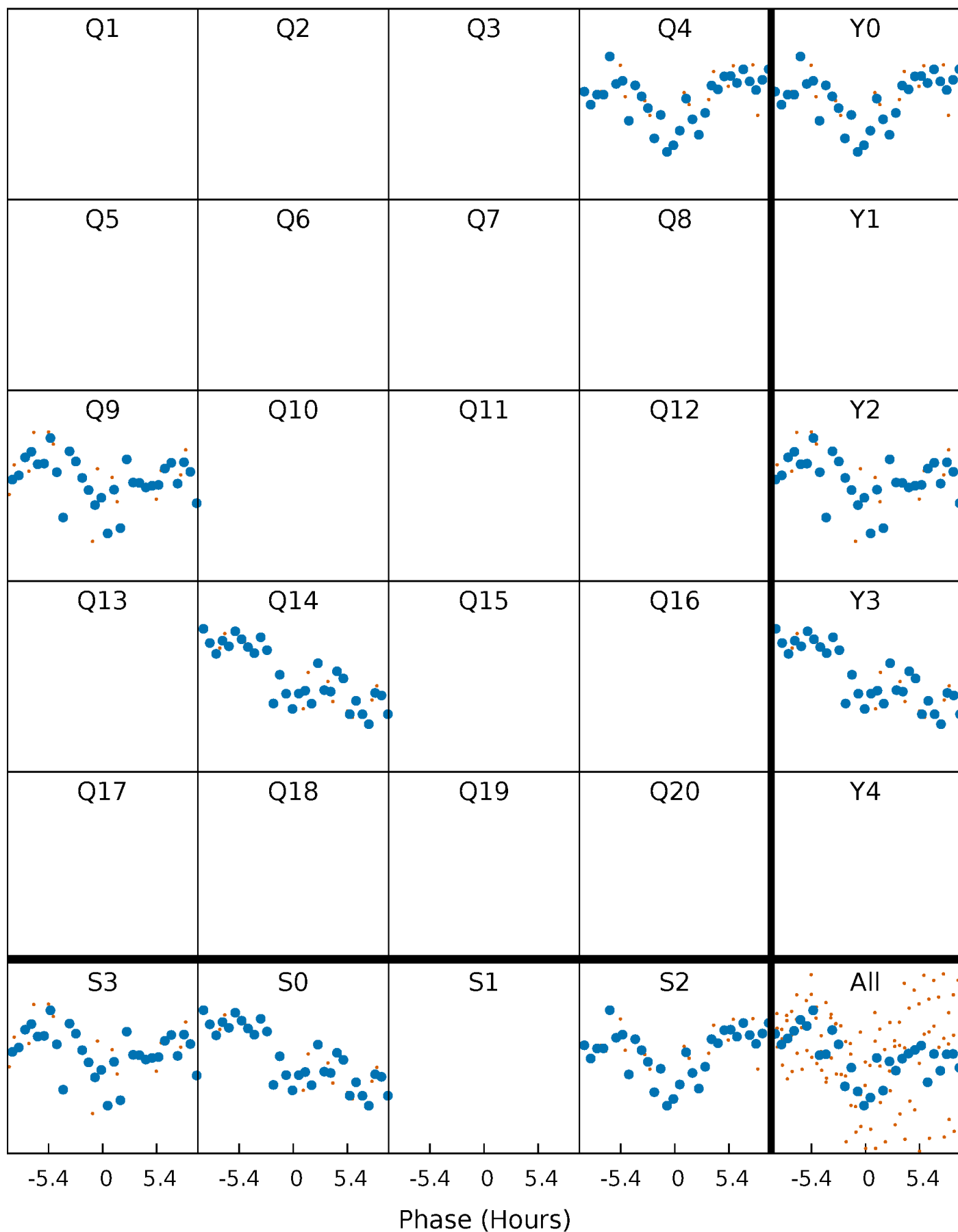


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



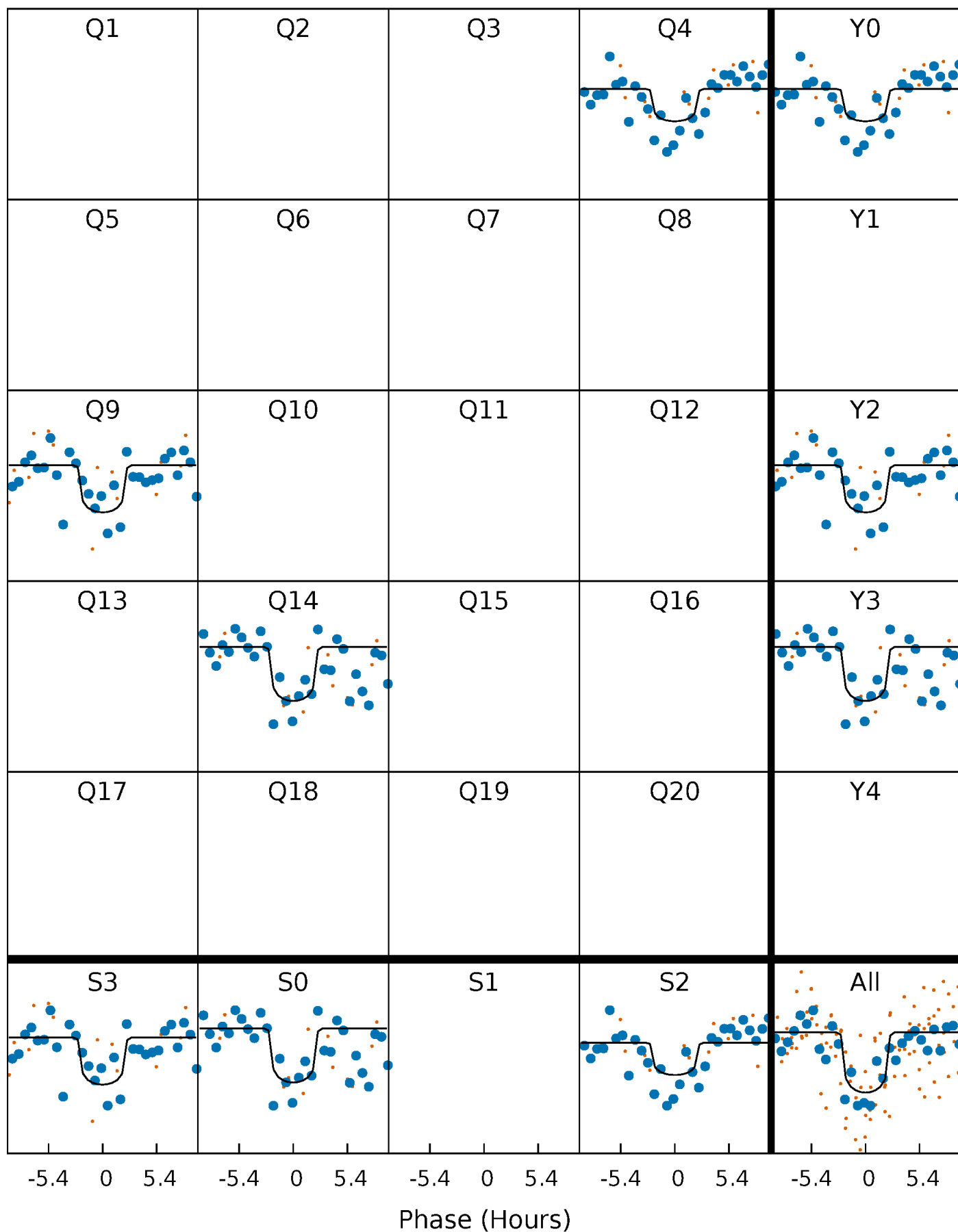
PDC Quarter-Phased Transit Curves

TCE 007686445-01 P=483.868630 Days $T_0=373.935611$ (BKJD)



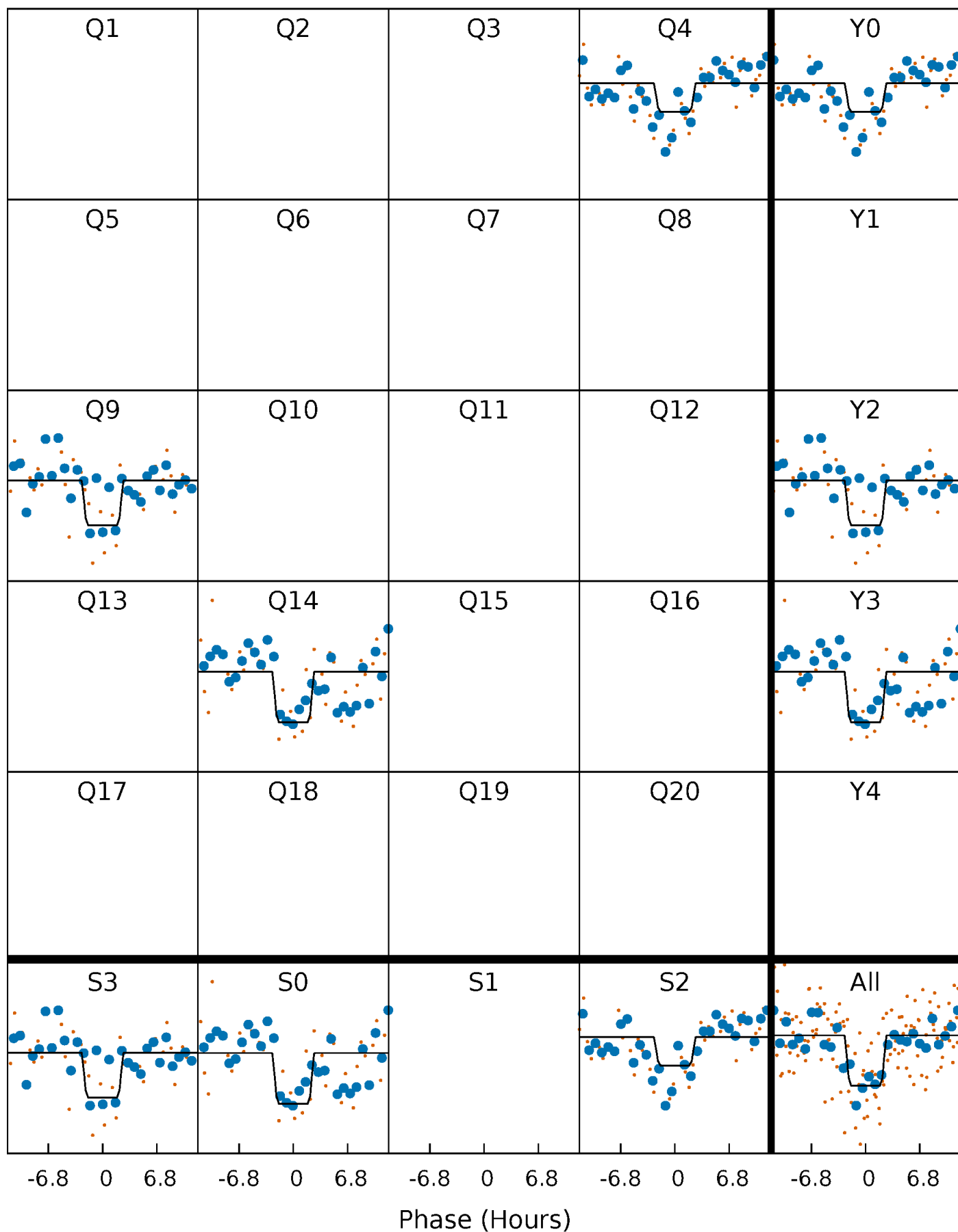
DV Quarter-Phased Transit Curves

TCE 007686445-01 P=483.868630 Days $T_0=373.935611$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

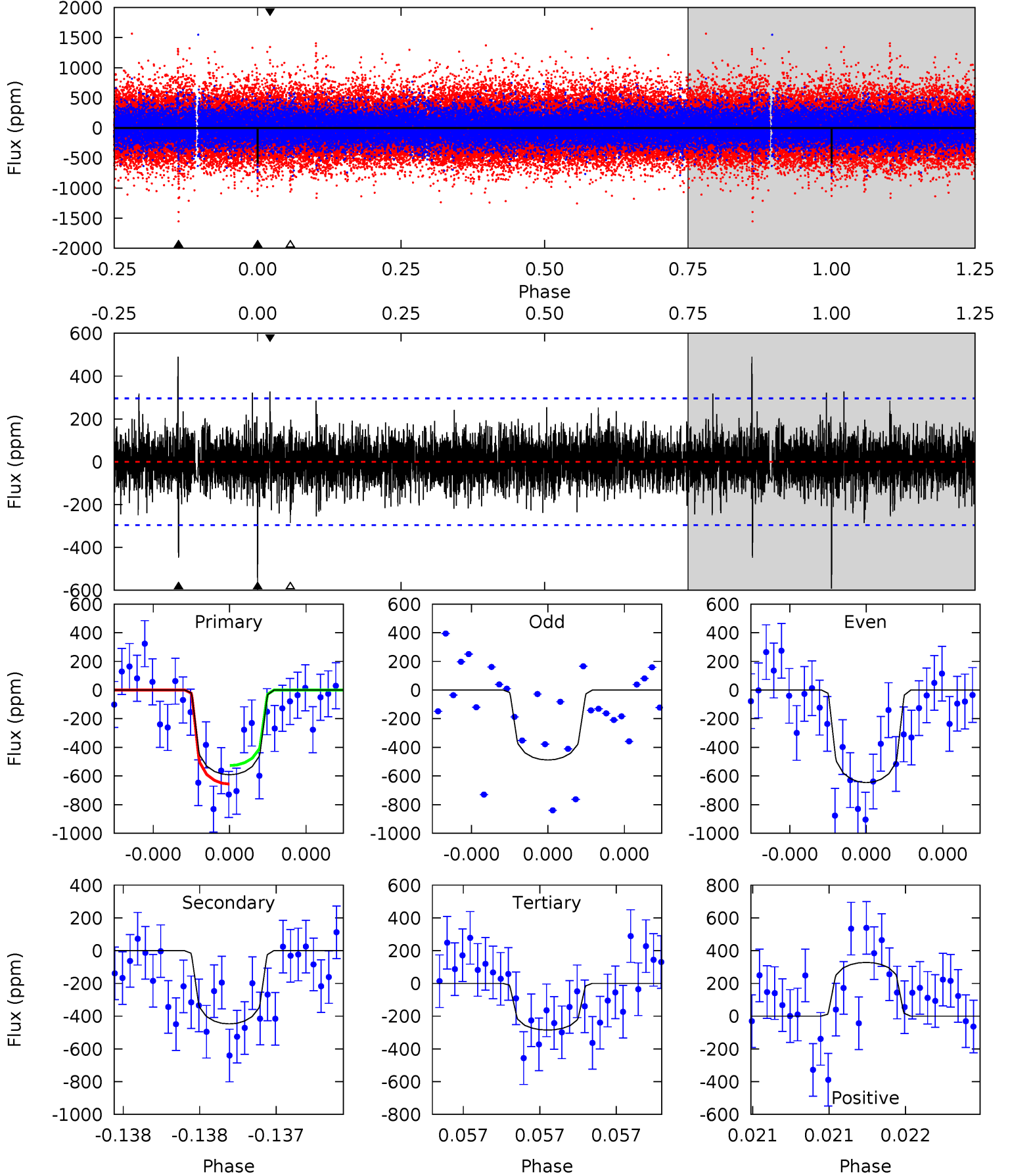
TCE 007686445-01 P=483.853078 Days $T_0=373.960896$ (BKJD)



DV Model-Shift Uniqueness Test

007686445-01, P = 483.868630 Days, E = 373.935611 Days

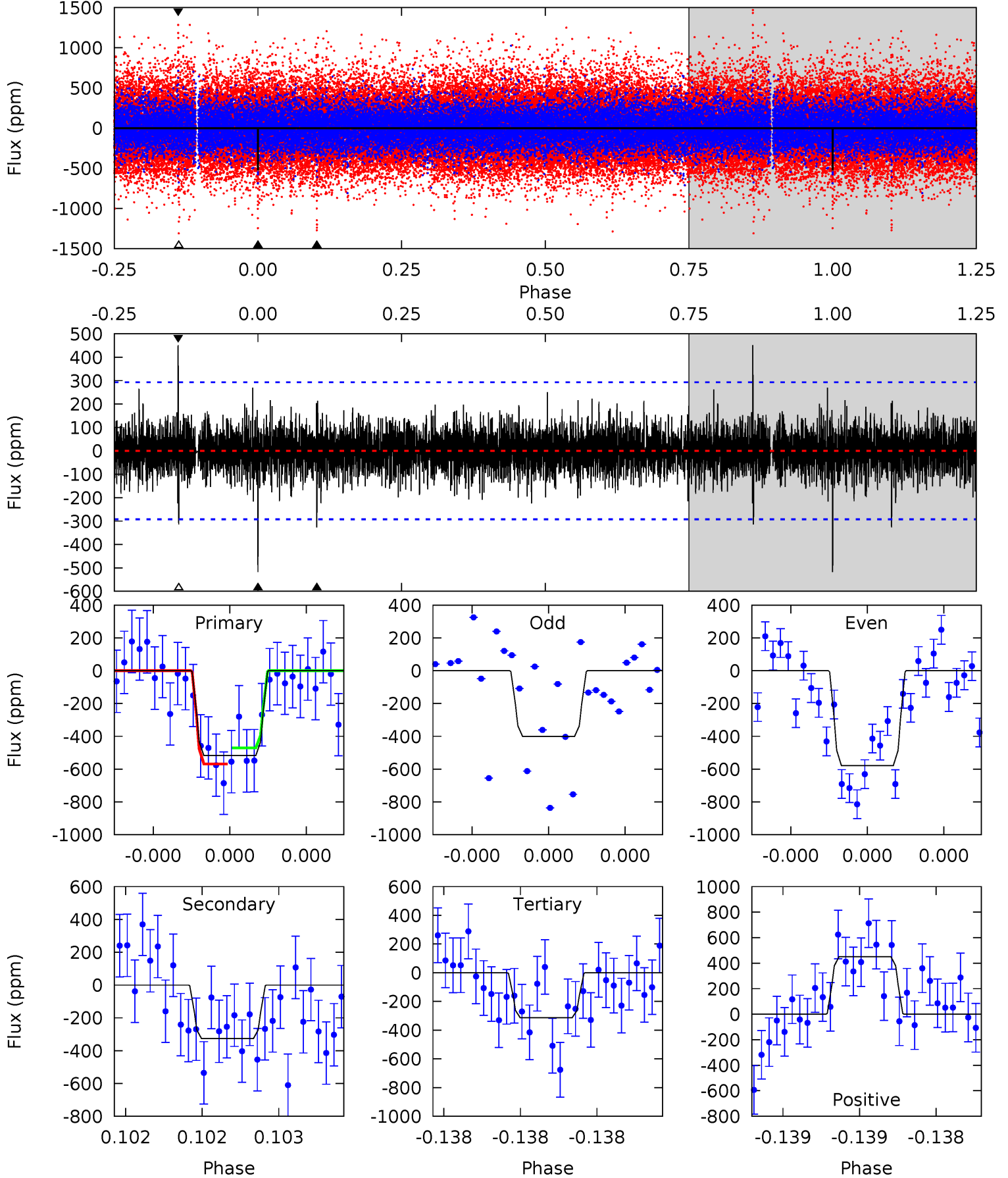
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	8.48	5.40	6.22	5.60	3.52	1.36	5.81	5.00	3.08	2.26	1.44	1.02	0.45	1.22



Alt Model-Shift Uniqueness Test

007686445-01, P = 483.853078 Days, E = 373.960896 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.87	6.23	5.98	8.62	5.59	3.50	1.23	3.89	1.26	0.24	-2.39	1.61	1.26	0.47	0.94



Stellar Parameters For KIC 007686445

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6418^{+153}_{-192}	$4.395^{+0.058}_{-0.173}$	$0.070^{+0.200}_{-0.350}$	$1.171^{+0.309}_{-0.132}$	$1.241^{+0.135}_{-0.185}$	$1.090^{+0.325}_{-0.496}$
	+2%/-3%	+1%/-4%	+286%/-500%	+26%/-11%	+11%/-15%	+30%/-46%
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 007686445-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-447 ± 53	$3.35^{+1.99}_{-1.87}$	382^{+23}_{-18}	5810^{+3456}_{-1070}	$36142^{+151565}_{-22320}$
Alt.	-326 ± 52	$3.21^{+2.07}_{-1.87}$	382^{+25}_{-17}	5516^{+3439}_{-1055}	$28093^{+127194}_{-17817}$

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

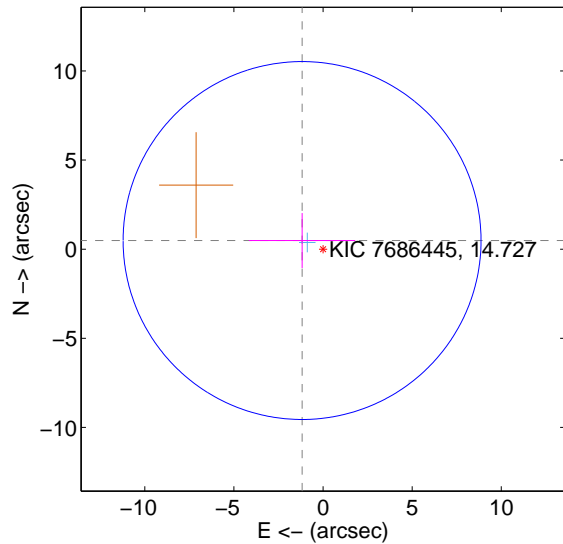
Supplemental centroid analysis for 007686445-01. Kepler magnitude: 14.73. Transit SNR 7.26

There are 1 quarters with good PRF difference image offsets

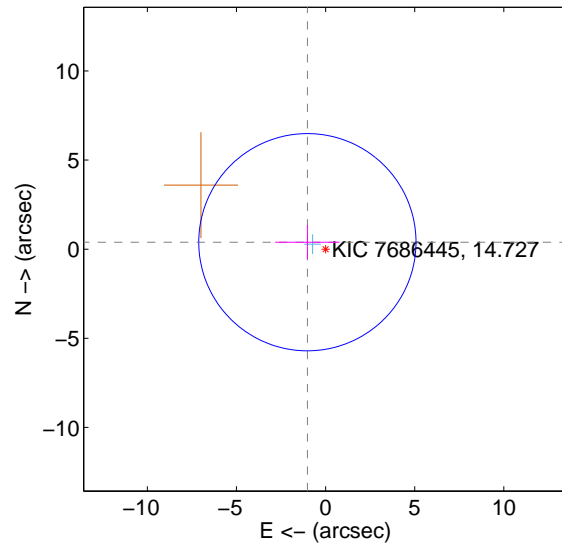
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.272 ± 3.347	0.38	1.176 ± 2.986	0.485 ± 1.541
PRF-fit source offset from KIC position	1.093 ± 2.031	0.54	1.021 ± 1.809	0.391 ± 0.958
photometric centroid source offset	1.06 ± 1.56	0.68	0.02 ± 1.60	-1.06 ± 1.56

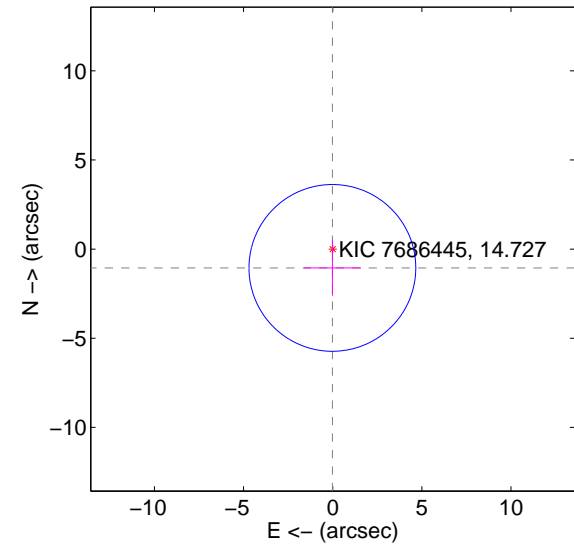
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

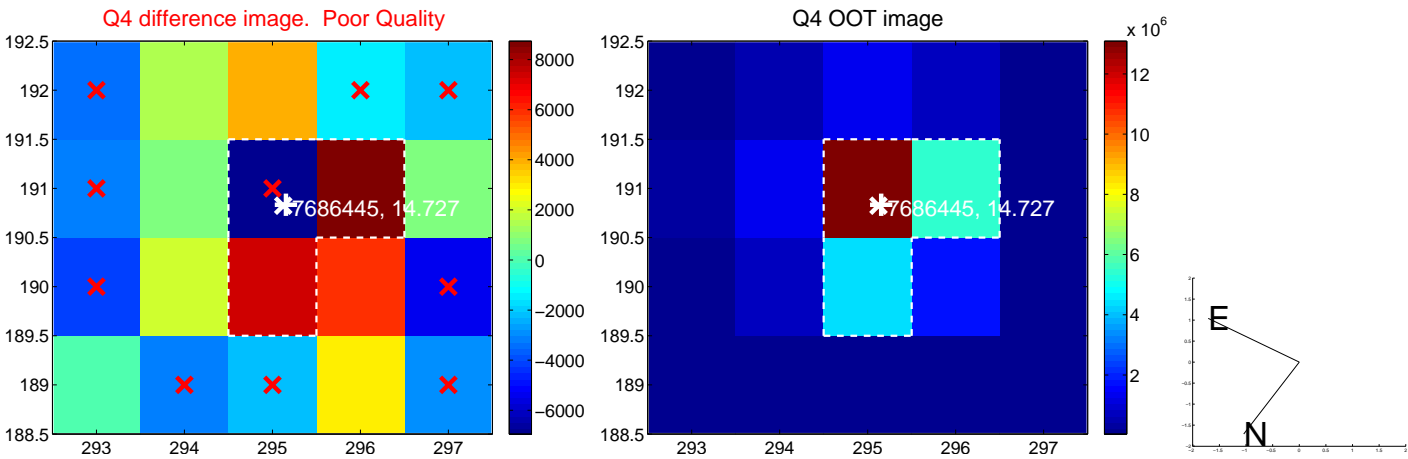
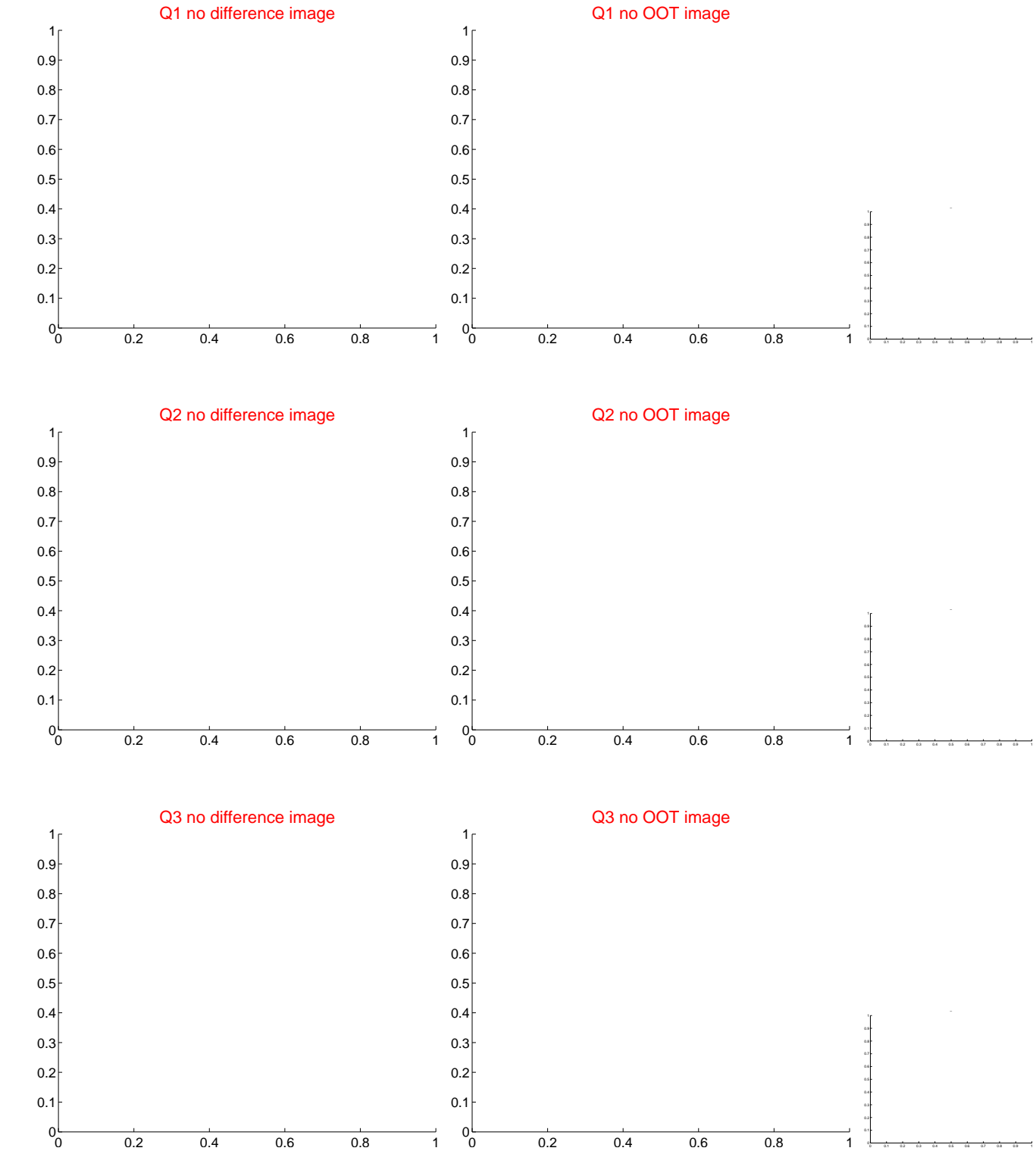


offset from photometric centroids



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.

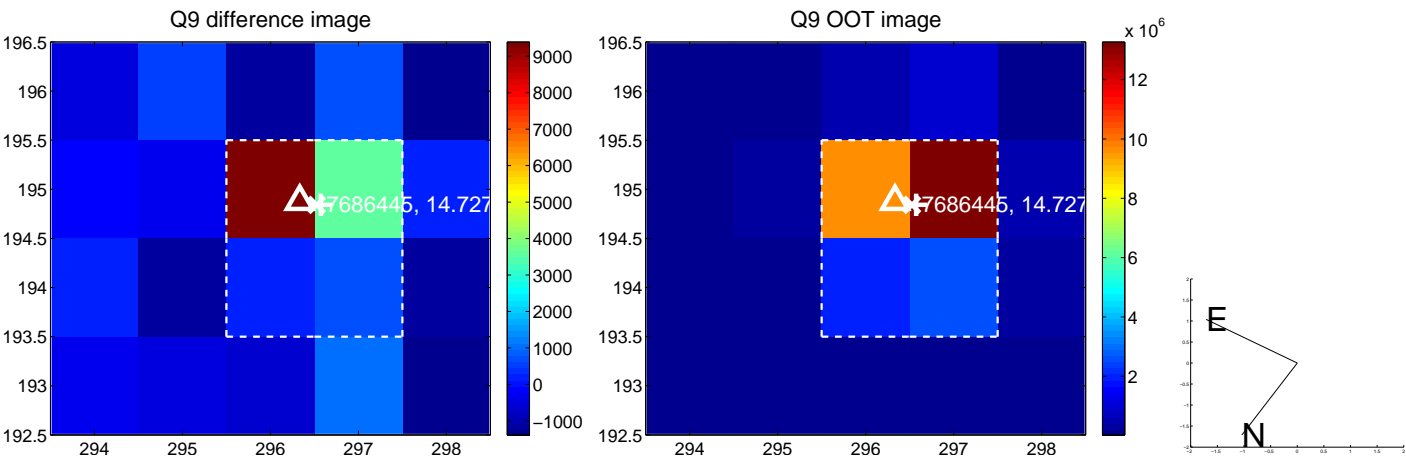
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



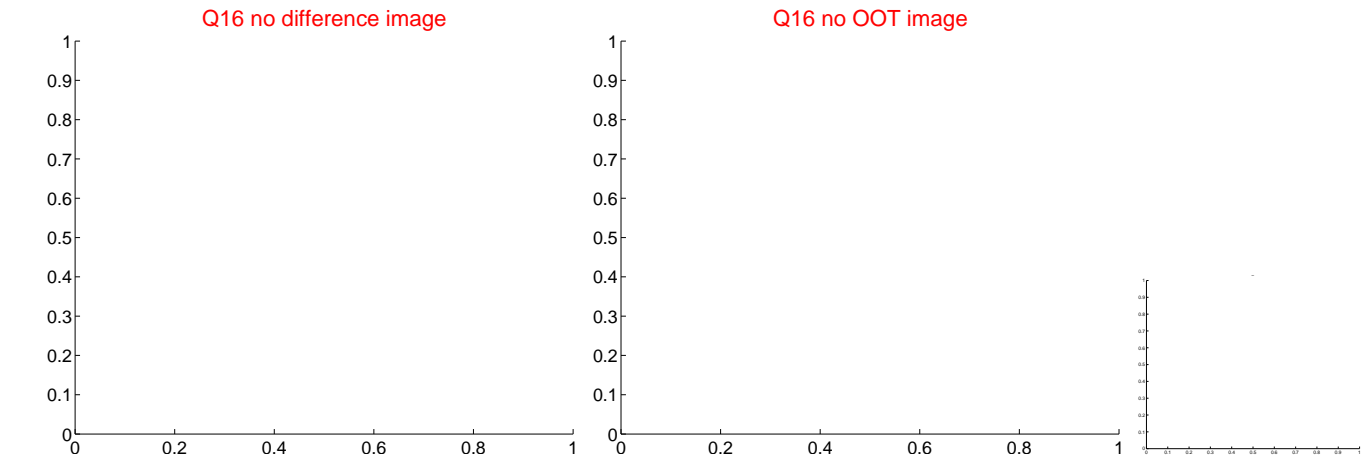
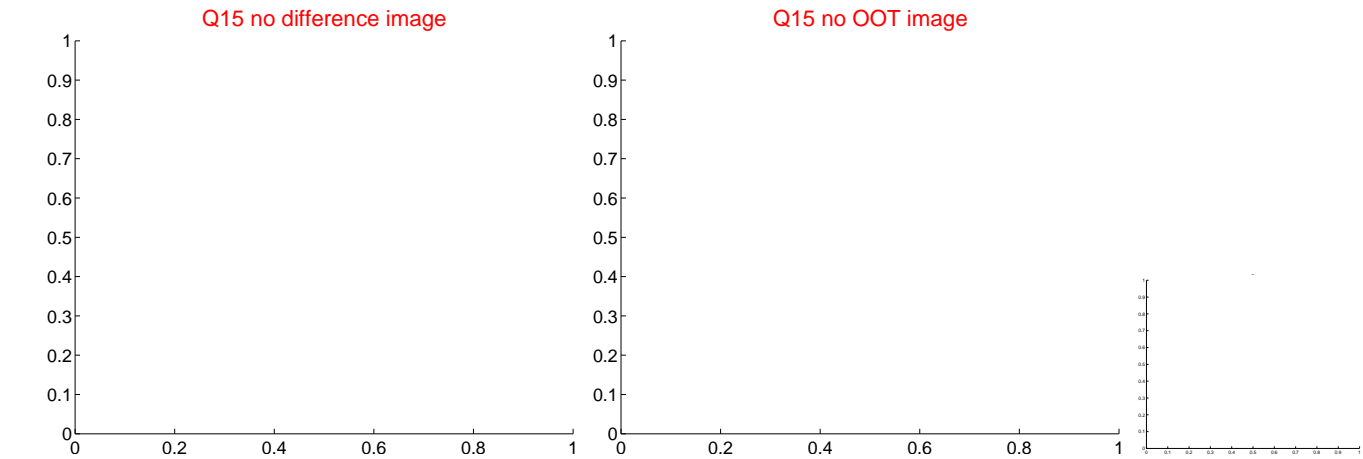
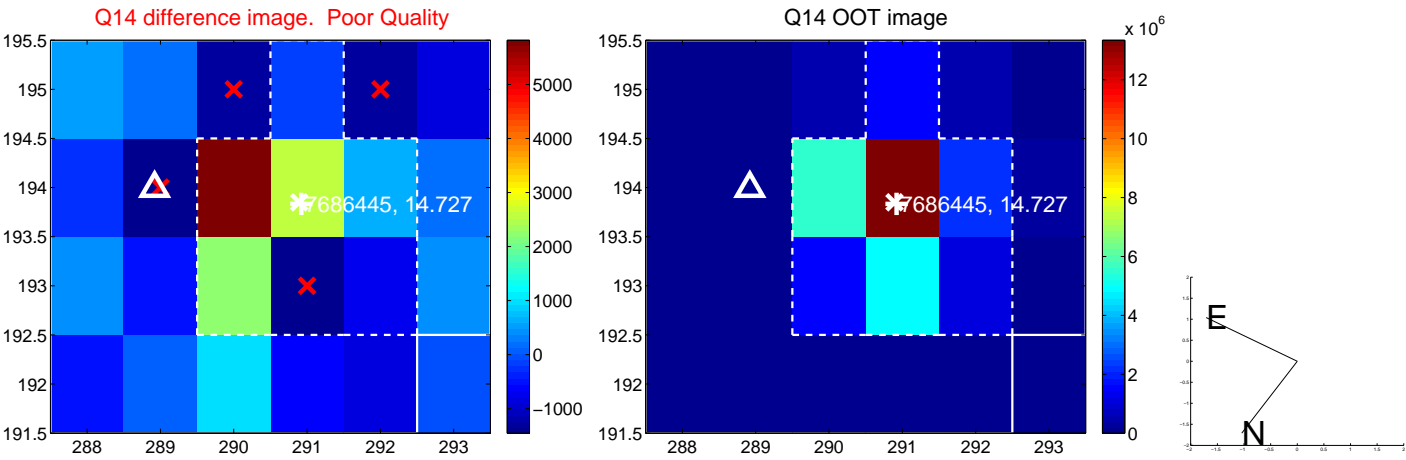
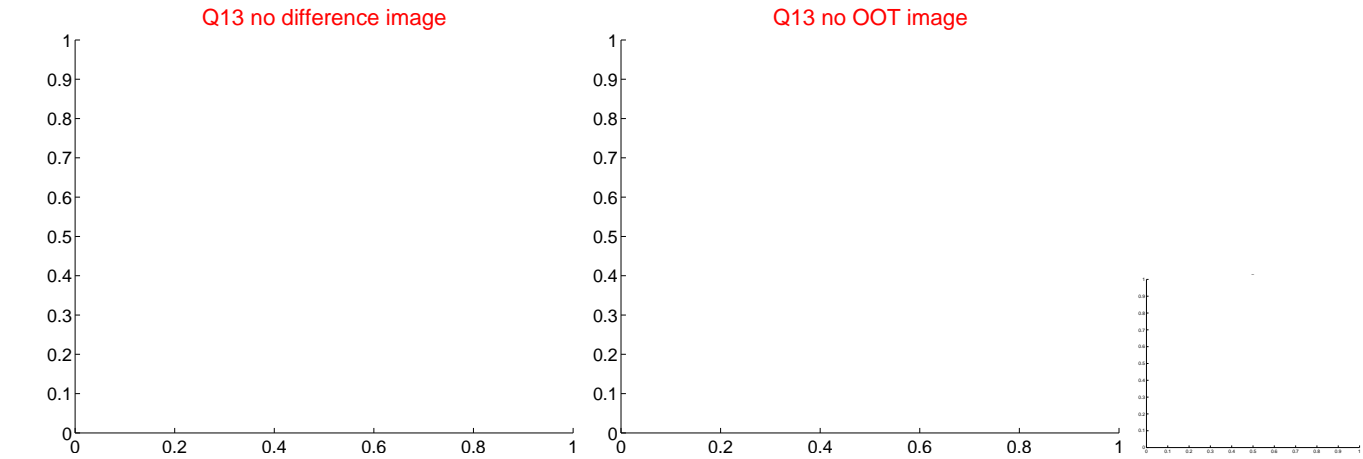
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



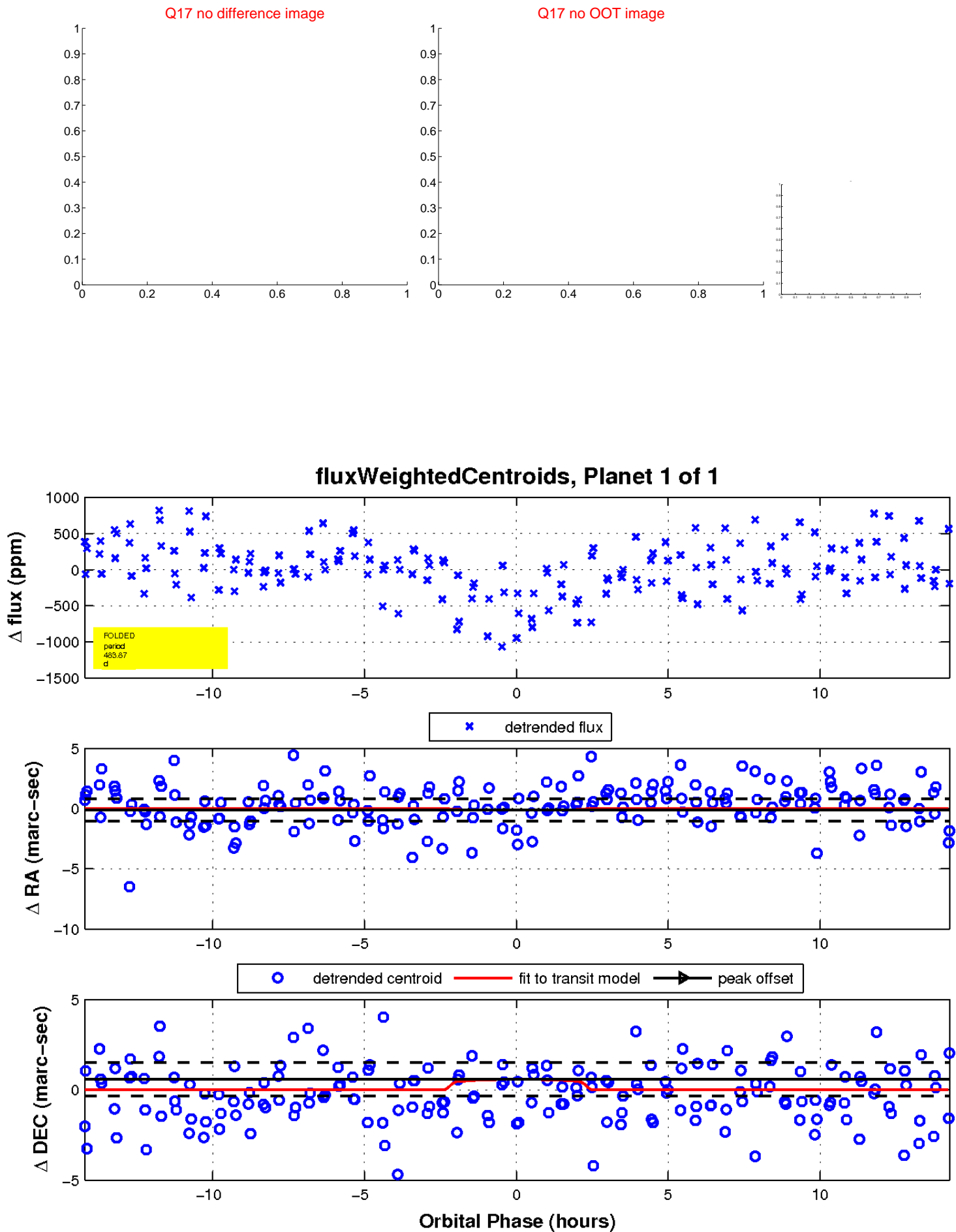
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

