

KIC 008424629

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})
008424629-01	OBS	No	370.305106	368.107614	79.3	7.713	9.5	4.1	2.47	5918	2.47	5.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008424629-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_SATURATED

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

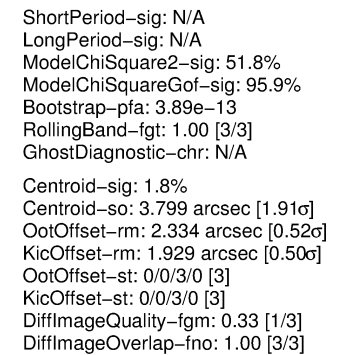
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

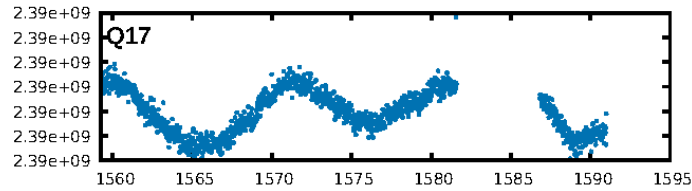
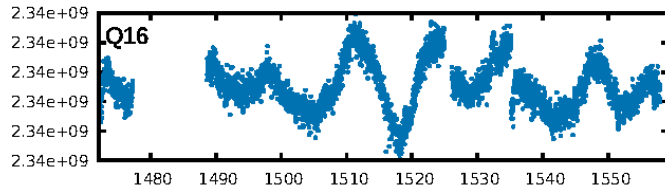
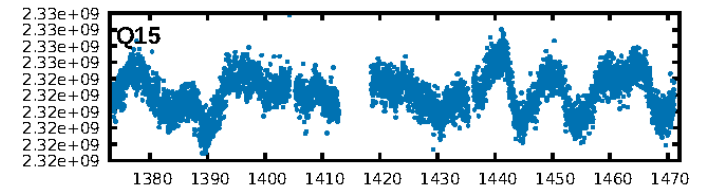
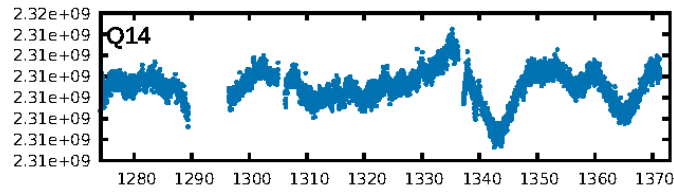
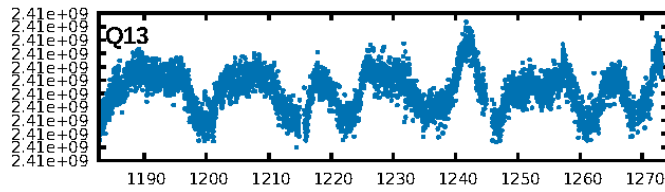
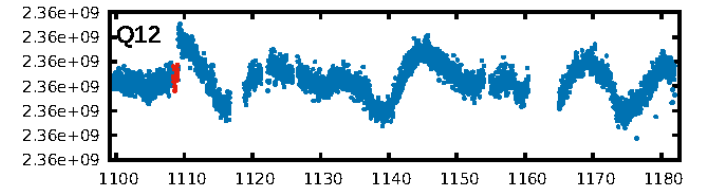
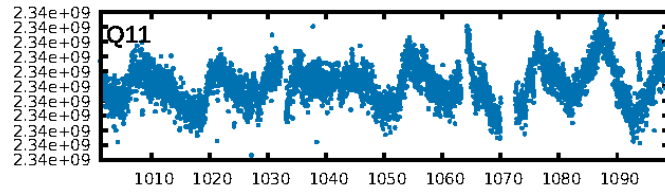
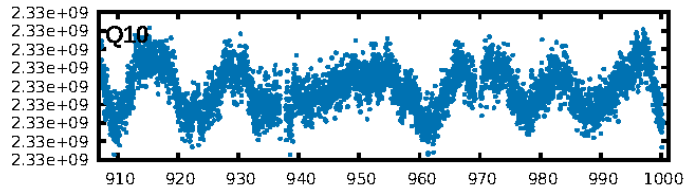
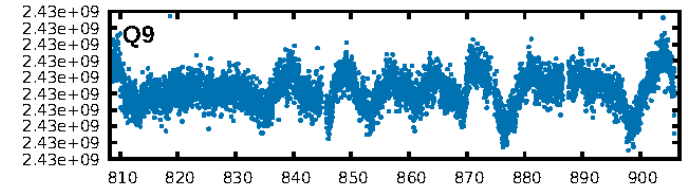
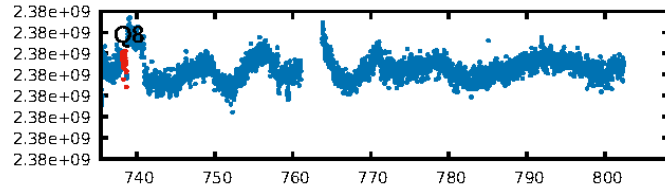
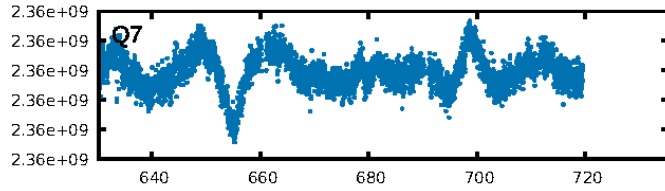
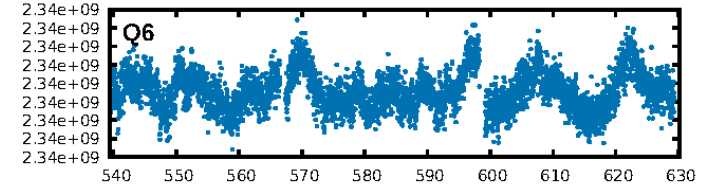
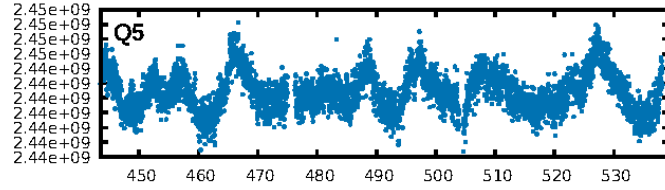
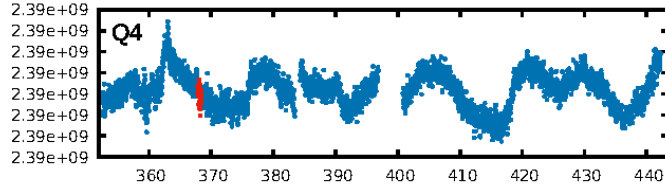
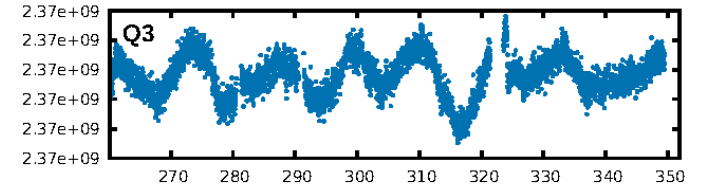
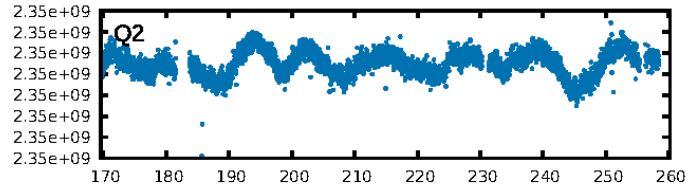
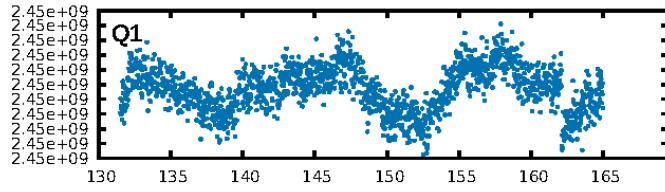
Ephemeris Match Information For 008424629-01

No Significant Match Found

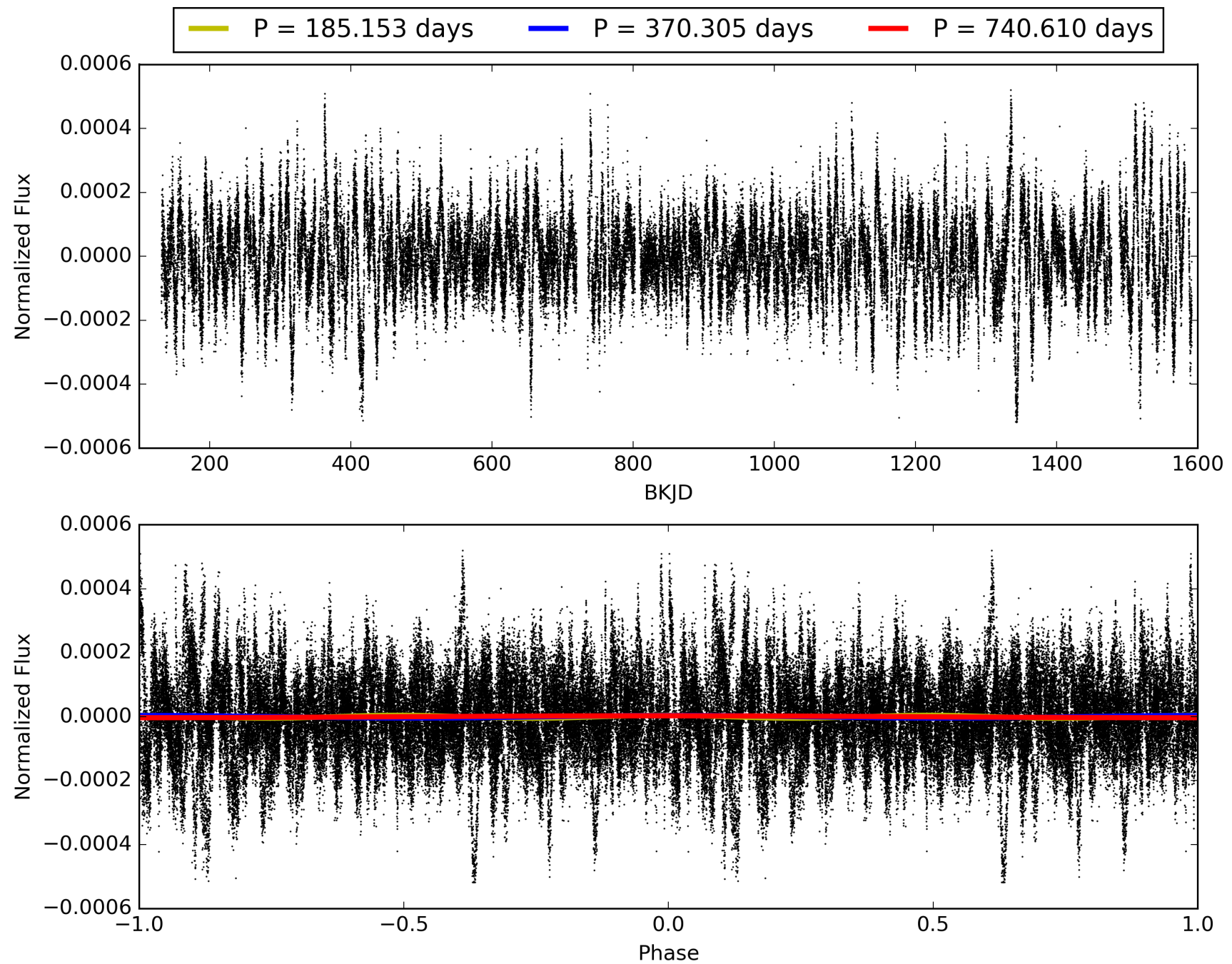
KIC: 8424629 Candidate: 1 of 1 Period: 370.305 d



TCE 008424629-01, PDC Light Curves

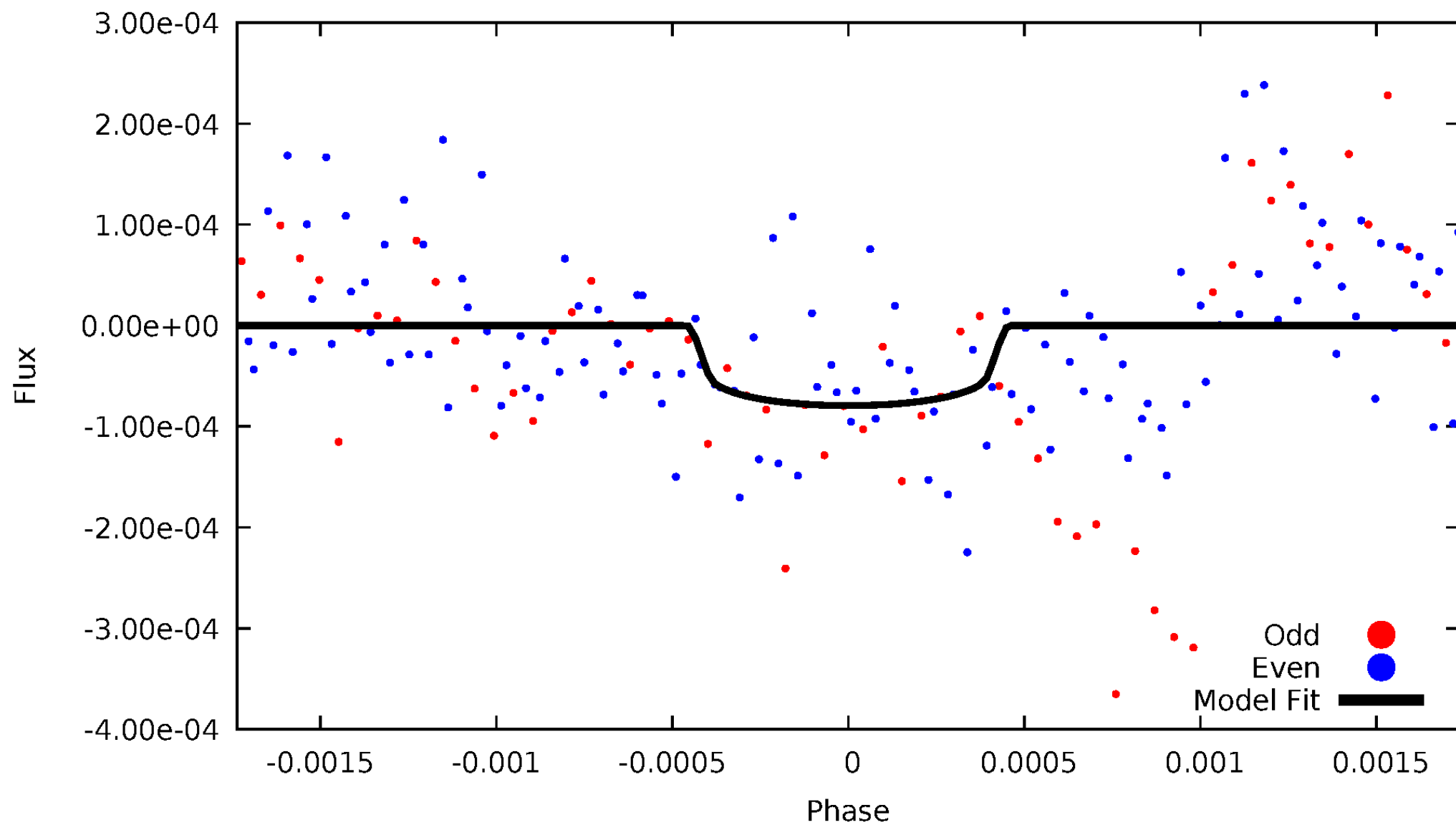


TCE 008424629-01



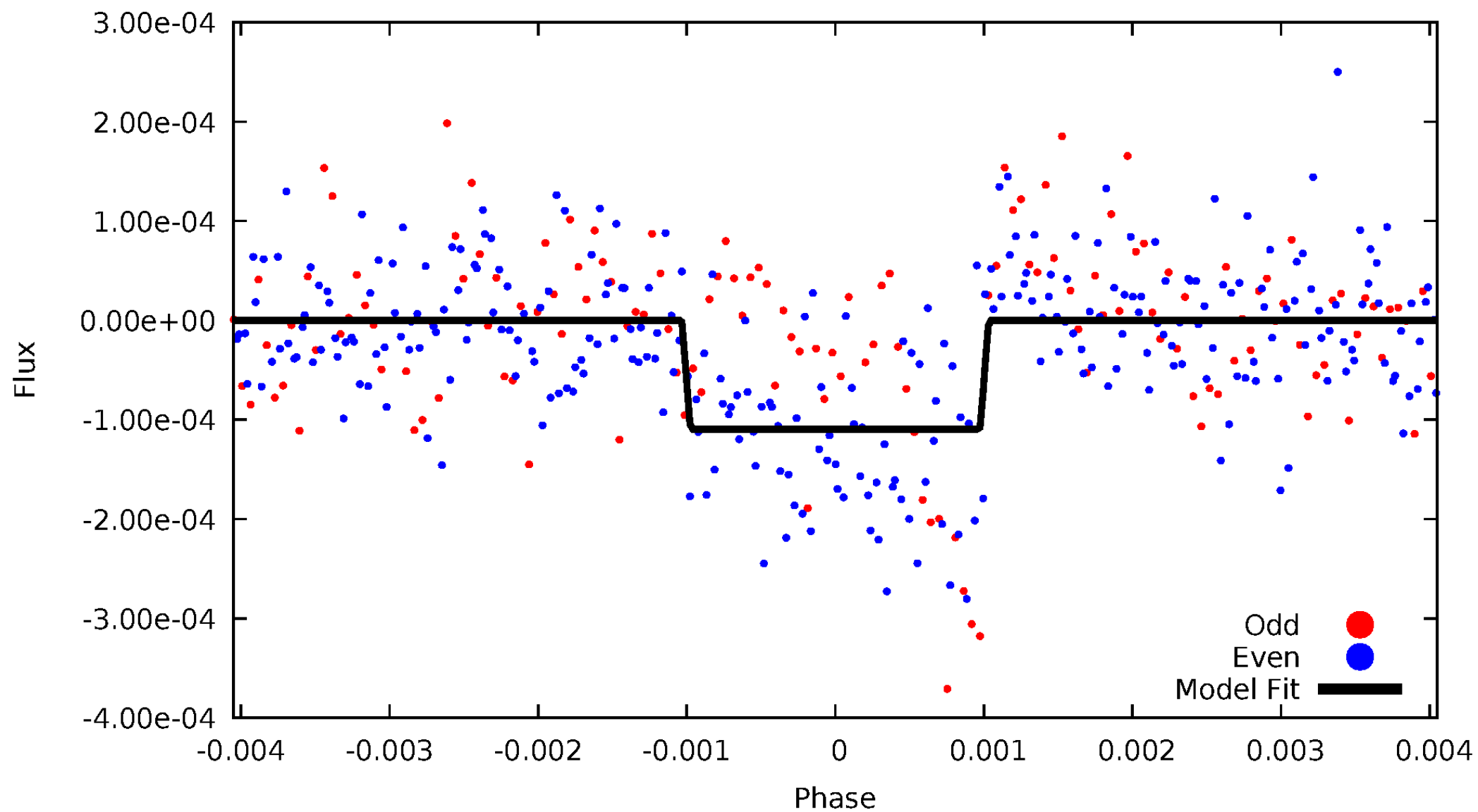
DV Odd/Even

TCE 008424629-01



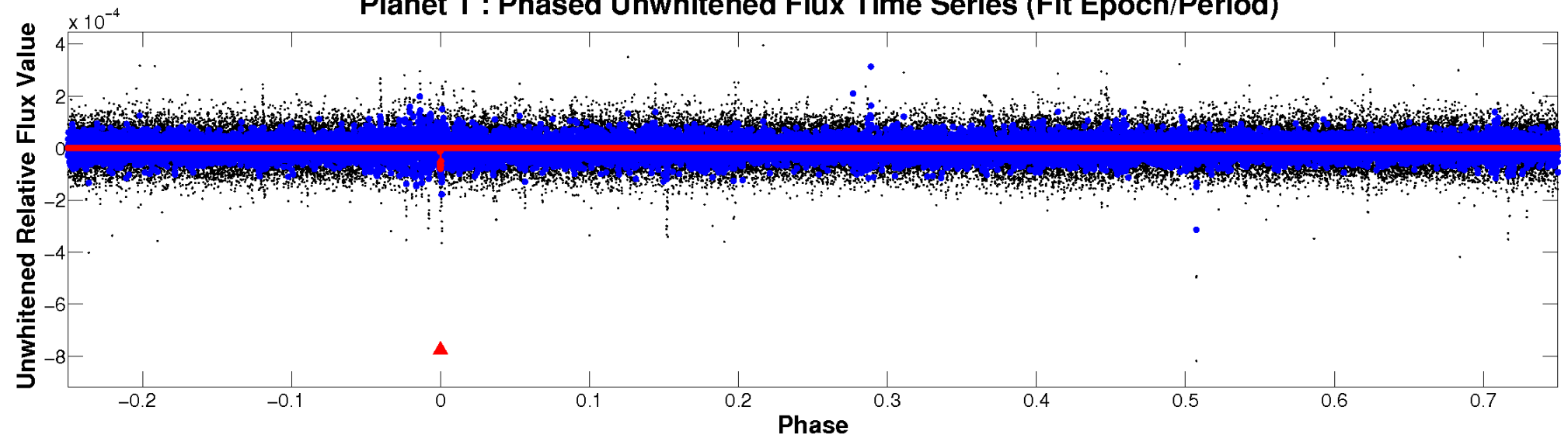
ALT Odd/Even

TCE 008424629-01

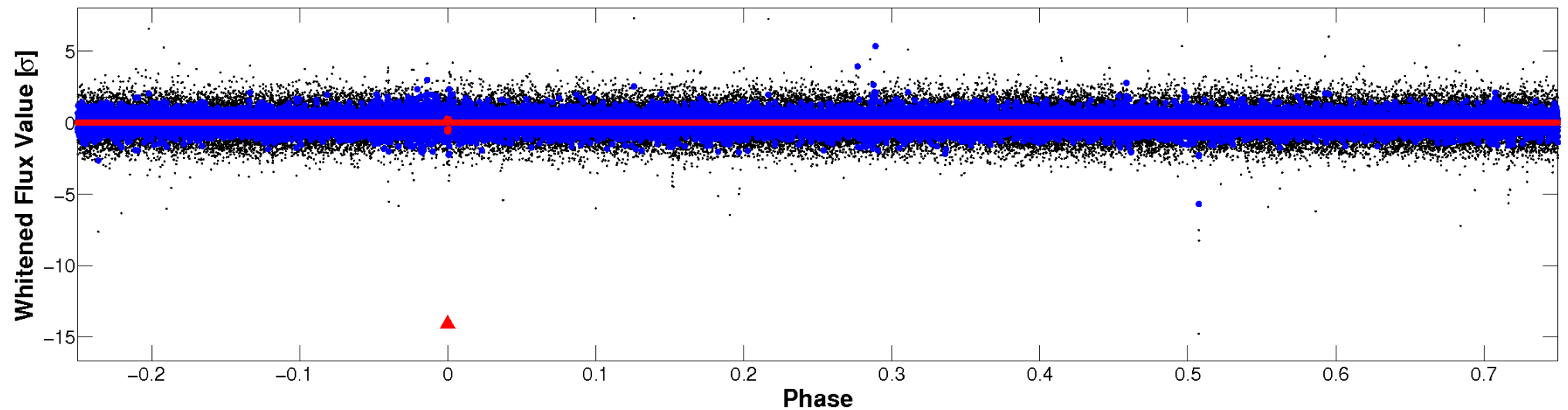


Non-Whitened Vs. Whitened Light Curve

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

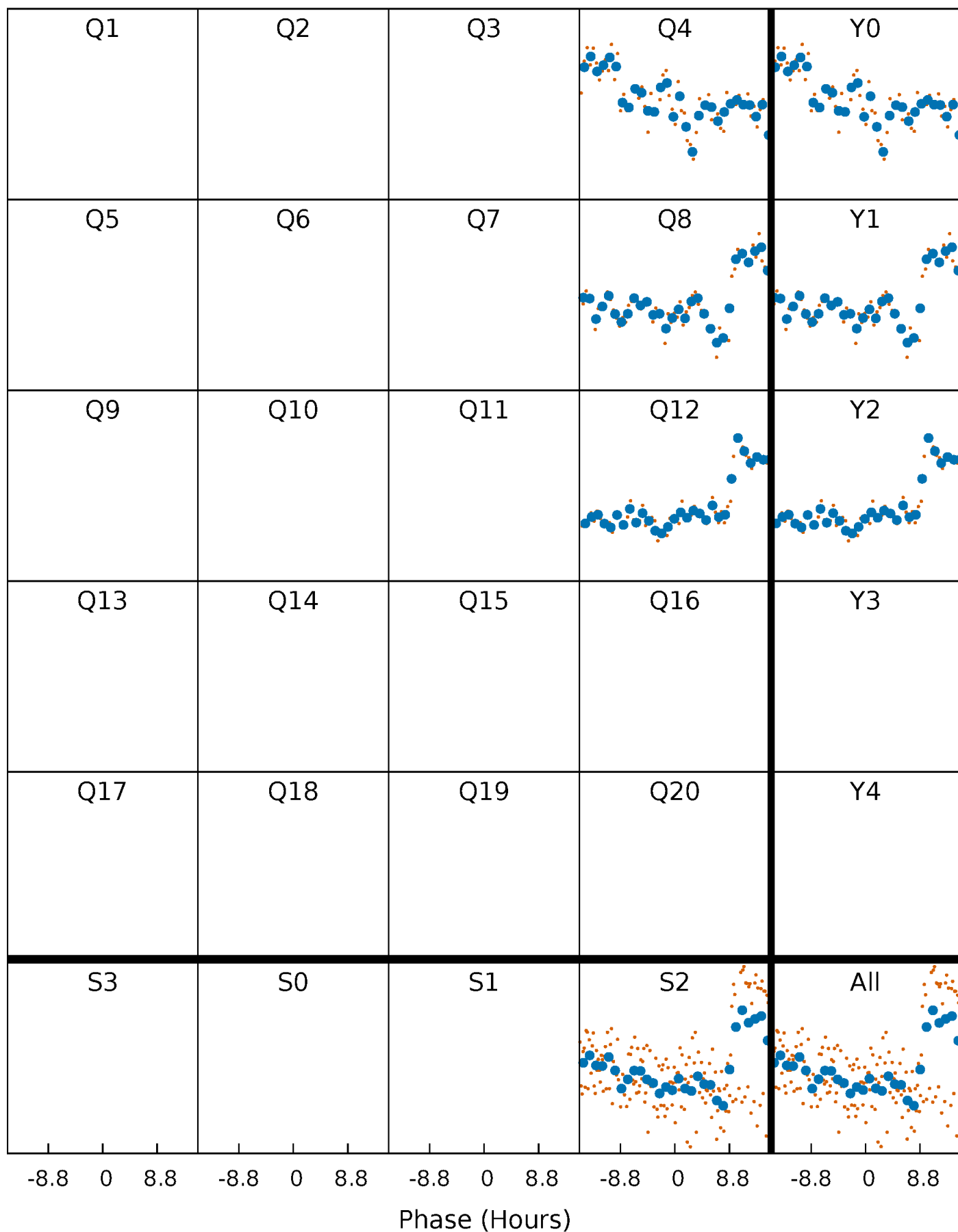


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



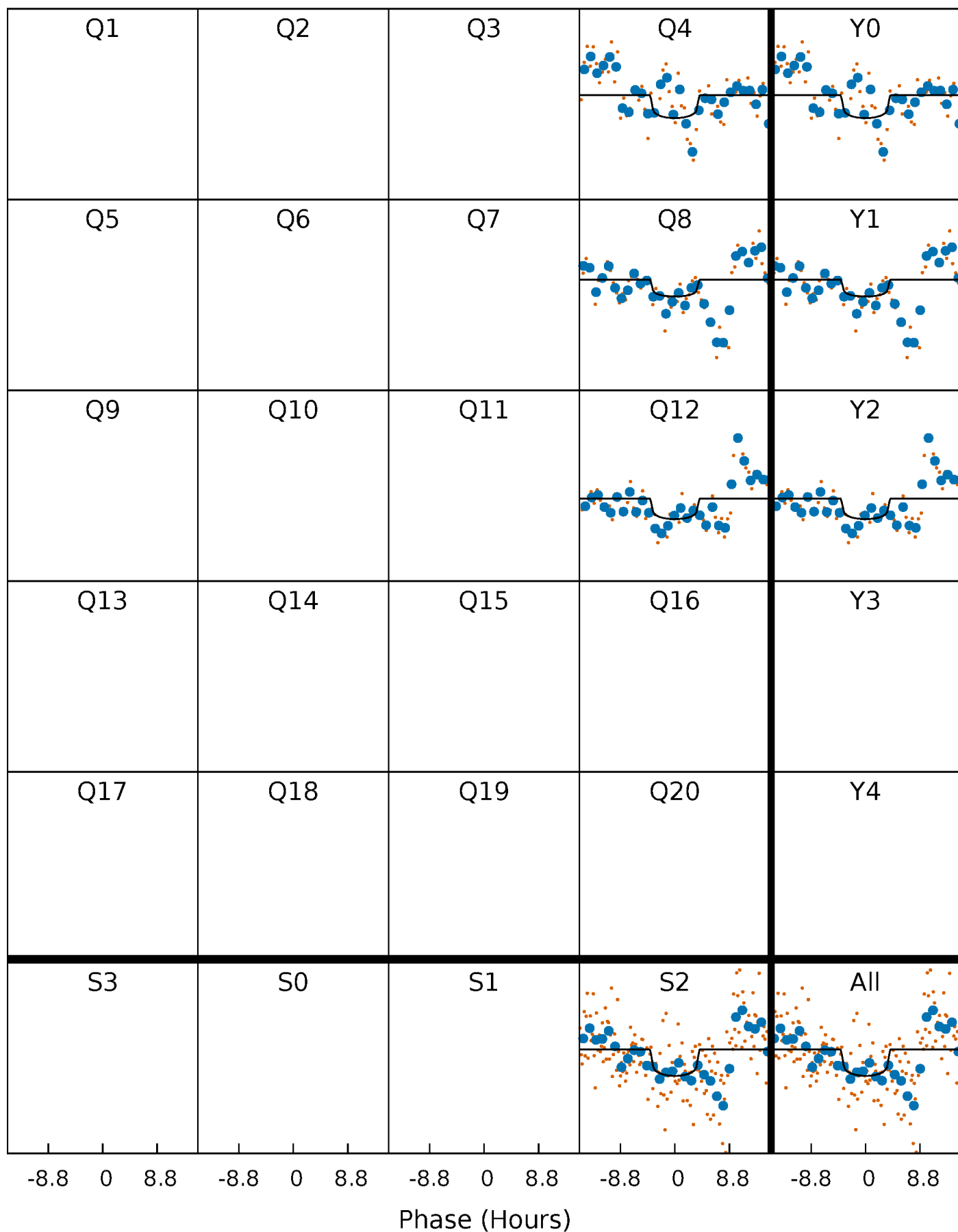
PDC Quarter-Phased Transit Curves

TCE 008424629-01 P=370.305106 Days $T_0=368.107614$ (BKJD)



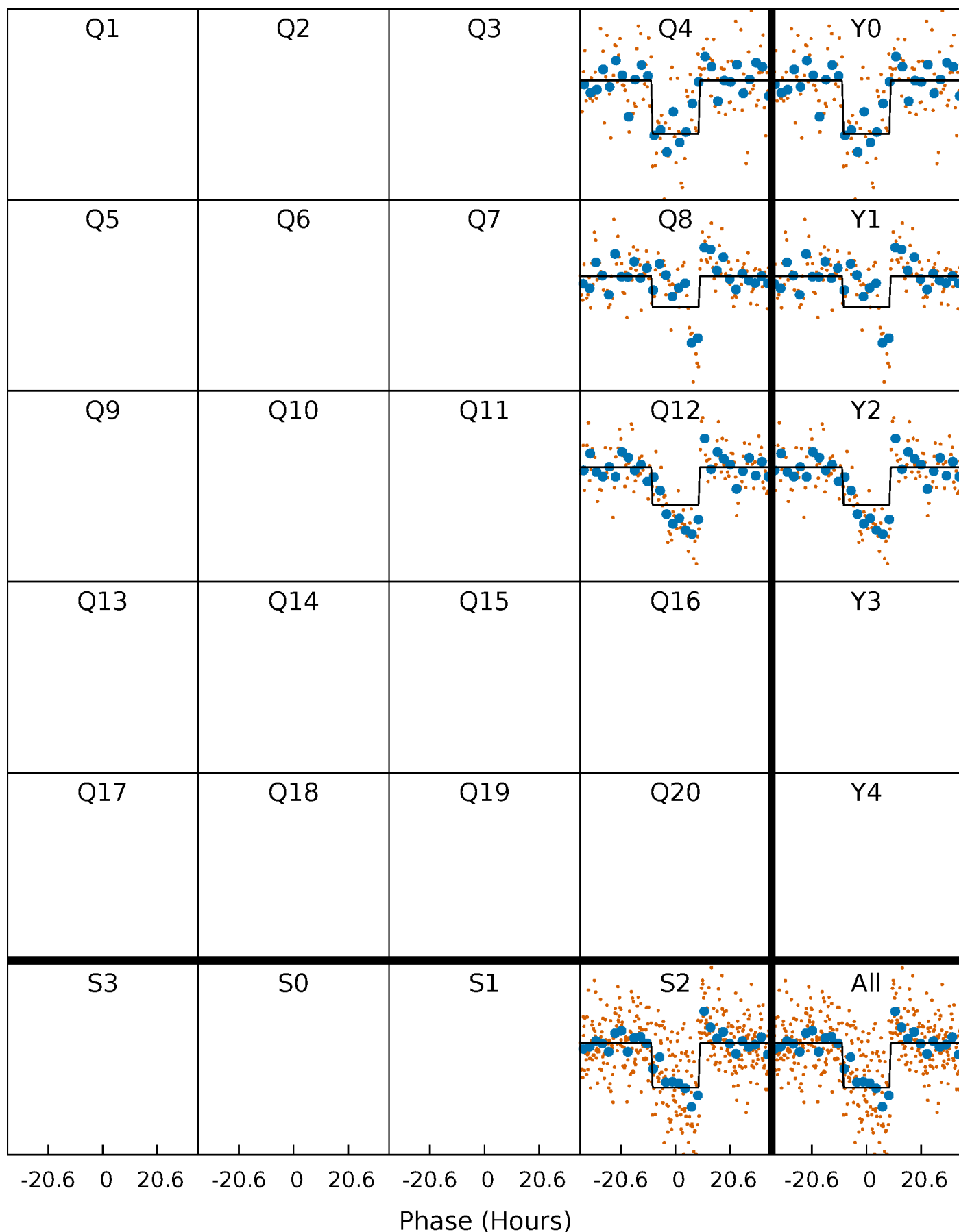
DV Quarter-Phased Transit Curves

TCE 008424629-01 P=370.305106 Days $T_0=368.107614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

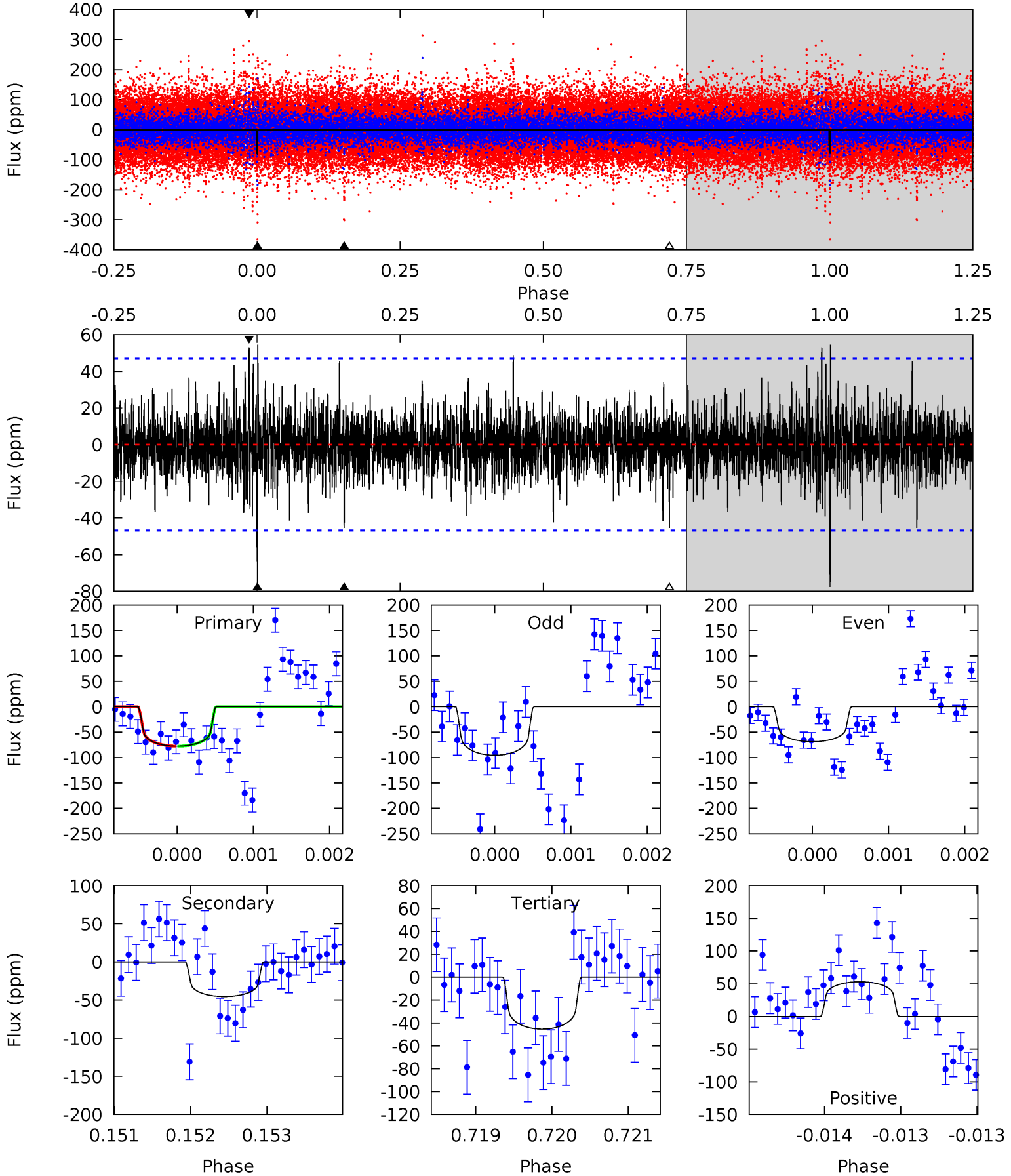
TCE 008424629-01 P=370.310597 Days $T_0=368.104414$ (BKJD)



DV Model-Shift Uniqueness Test

008424629-01, P = 370.305106 Days, E = 368.107614 Days

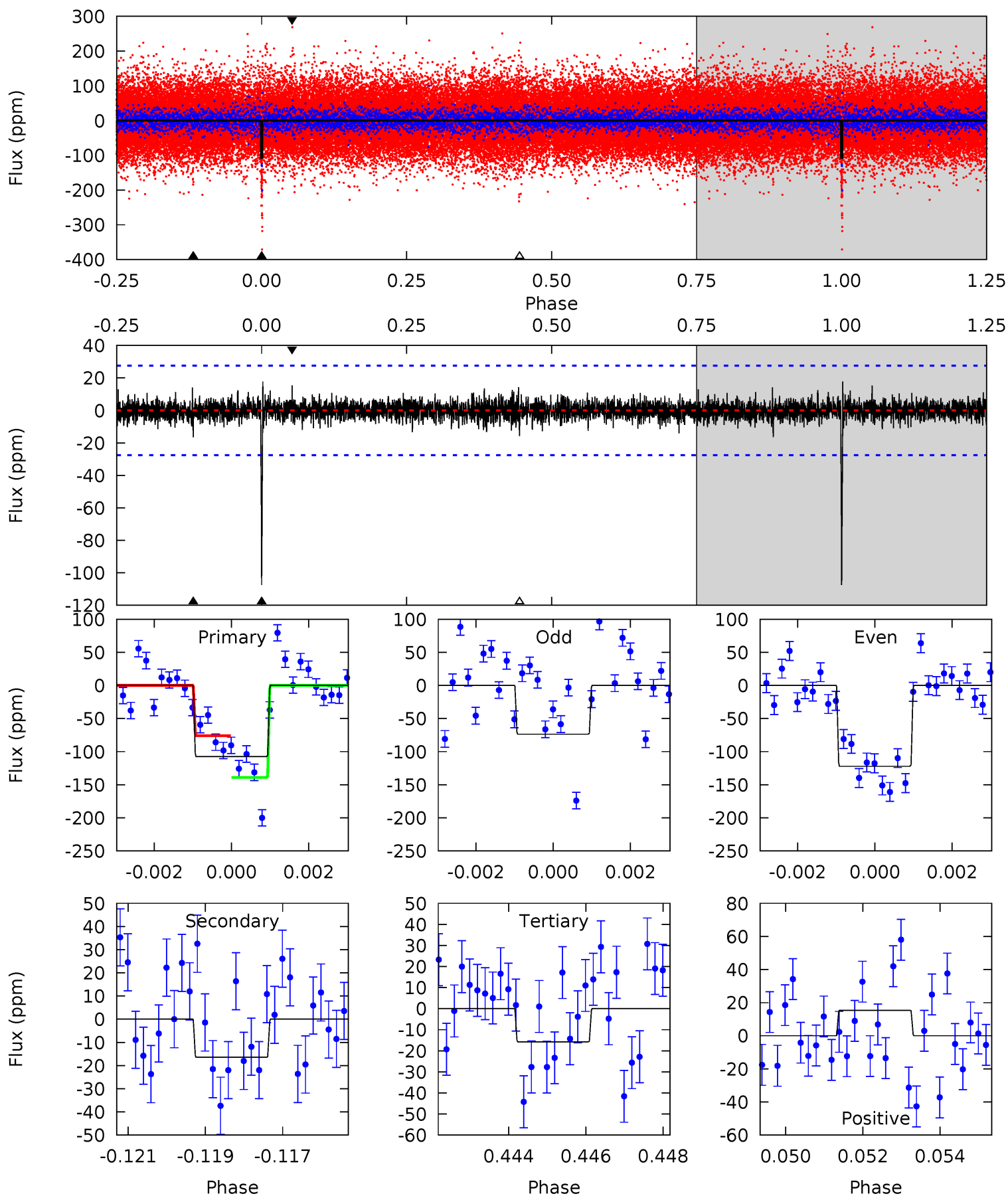
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.06	5.31	5.30	6.19	5.47	3.32	1.34	3.76	2.88	0.01	-0.88	1.47	0.87	0.41	0.01



Alt Model-Shift Uniqueness Test

008424629-01, P = 370.310597 Days, E = 368.104414 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.18	3.03	2.97	5.32	3.08	0.72	17.7	17.8	0.14	0.21	4.46	1.06	0.14	6.06



Stellar Parameters For KIC 008424629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5918^{+213}_{-192}	$3.774^{+0.595}_{-0.140}$	$-0.060^{+0.300}_{-0.300}$	$2.467^{+0.465}_{-1.396}$	$1.320^{+0.166}_{-0.360}$	$0.124^{+0.842}_{-0.049}$
	+4%/-3%	+16%/-4%	+500%/-500%	+19%/-57%	+13%/-27%	+680%/-40%
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 008424629-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-45 ± 9	$2.53^{+2.21}_{-1.68}$	537^{+43}_{-78}	4855^{+3432}_{-929}	4650^{+37242}_{-3245}
Alt.	-16 ± 5	$2.77^{+2.23}_{-1.65}$	532^{+45}_{-81}	3832^{+1577}_{-631}	1351^{+6823}_{-934}

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 $A_{obs} \gg 1.0$

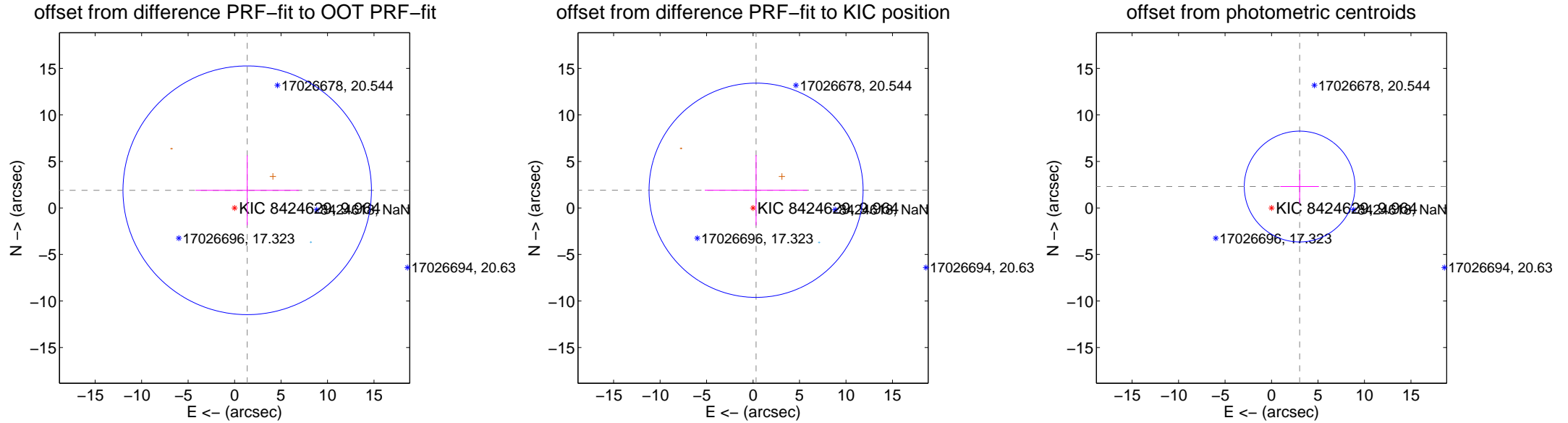
DV Centroid Data

Supplemental centroid analysis for 008424629-01. **Kepler magnitude: 9.96.** Transit SNR 4.06

There are 1 quarters with good PRF difference image offsets

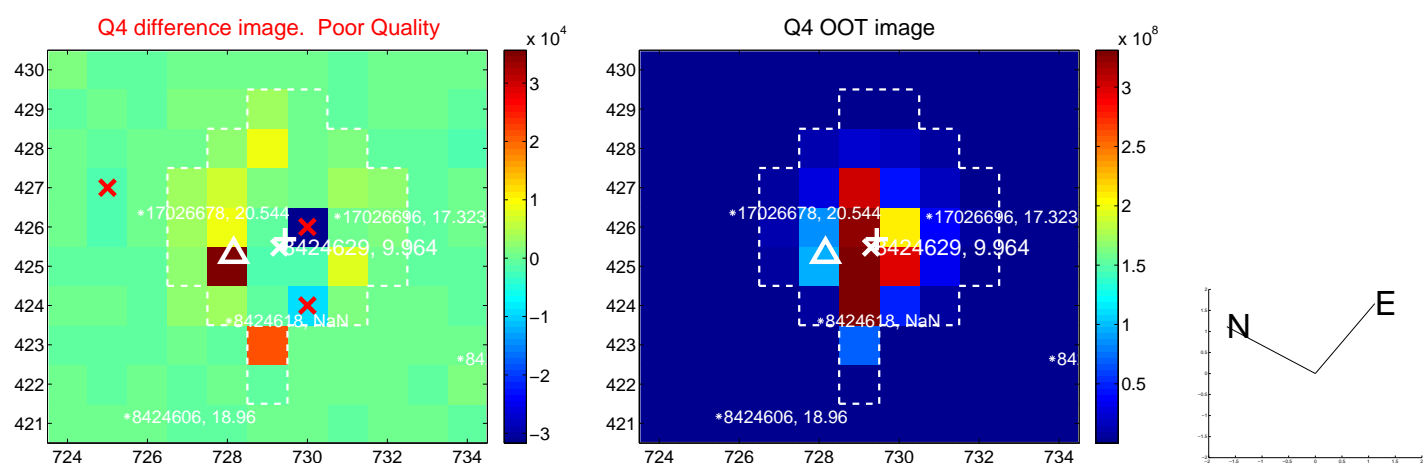
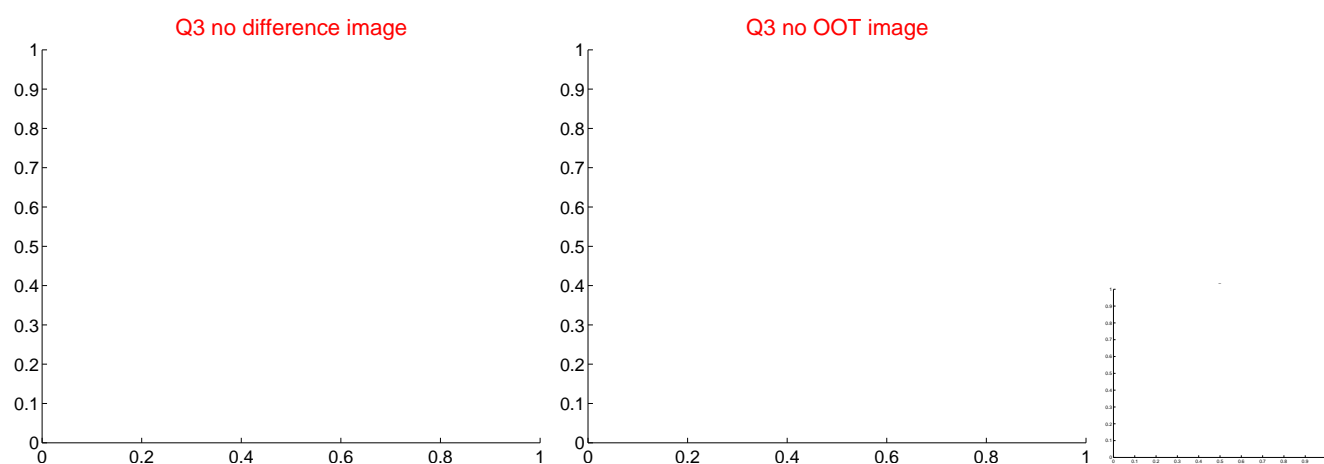
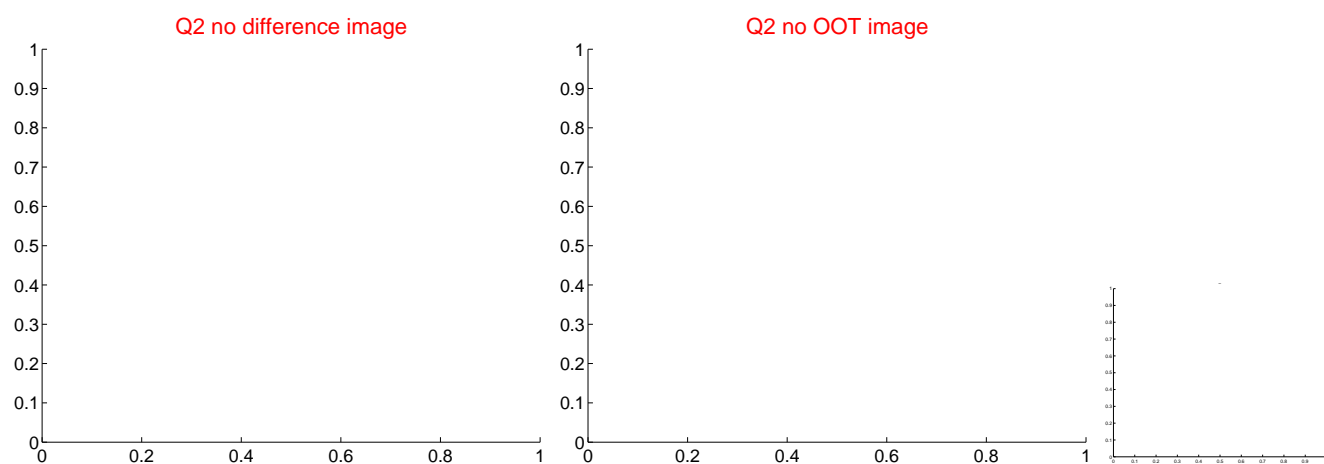
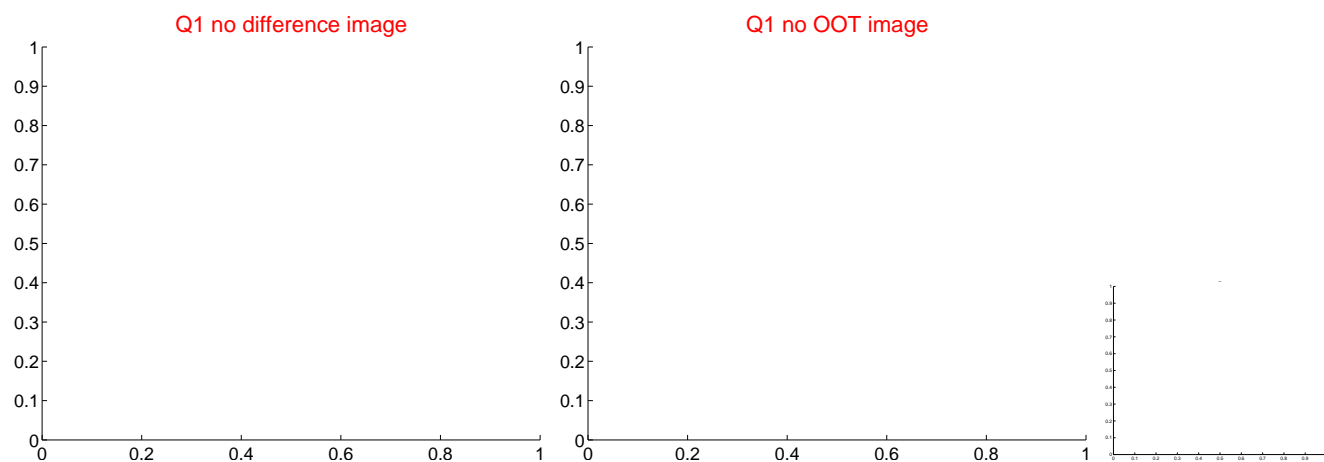
The direct PRF centroid is offset from the target star catalog position by about 1.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.334 ± 4.454	0.52	-1.359 ± 5.567	1.897 ± 3.757
PRF-fit source offset from KIC position	1.929 ± 3.837	0.50	-0.325 ± 5.518	1.902 ± 3.777
photometric centroid source offset	3.80 ± 1.98	1.91	-3.02 ± 2.07	2.30 ± 1.83

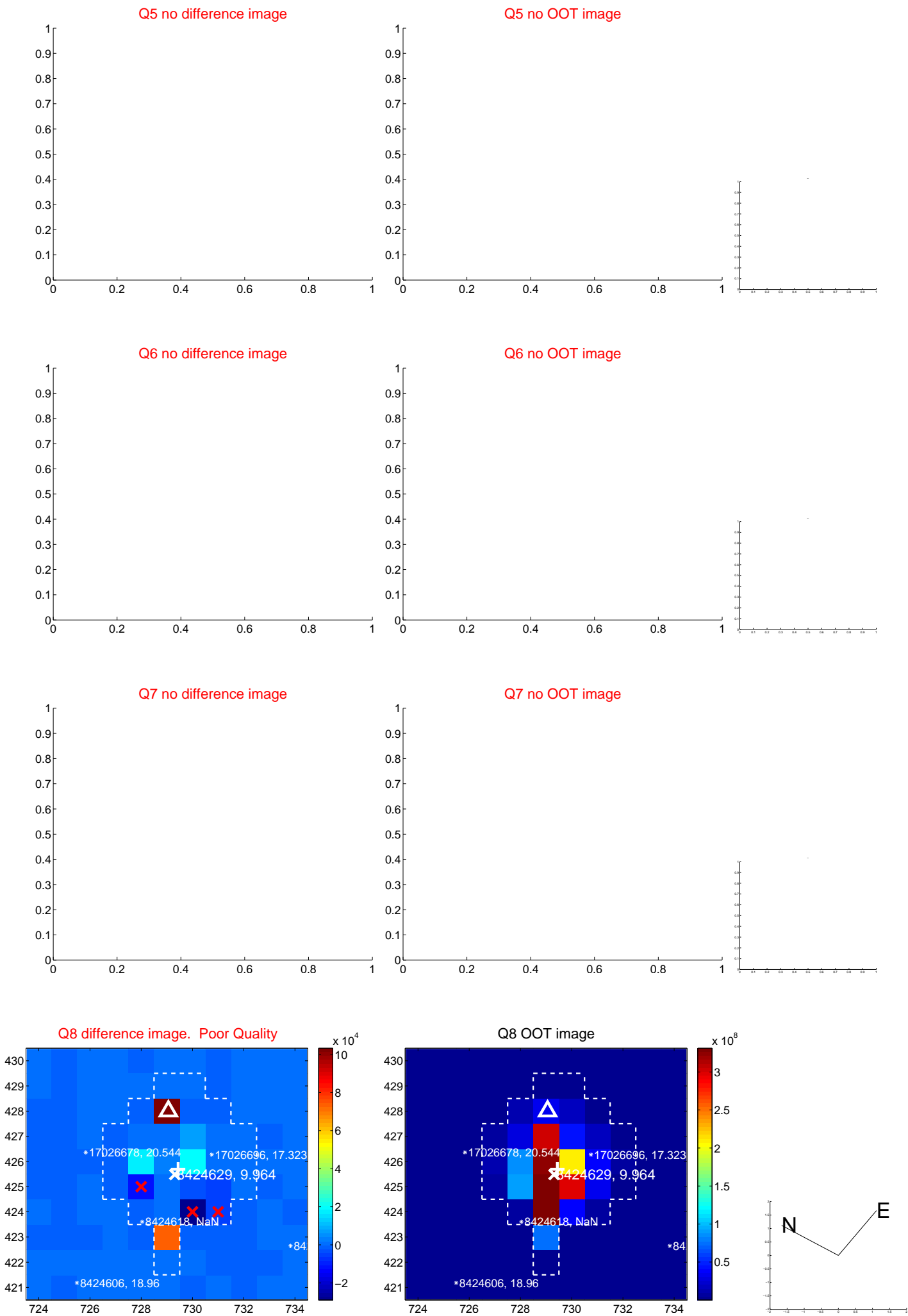


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

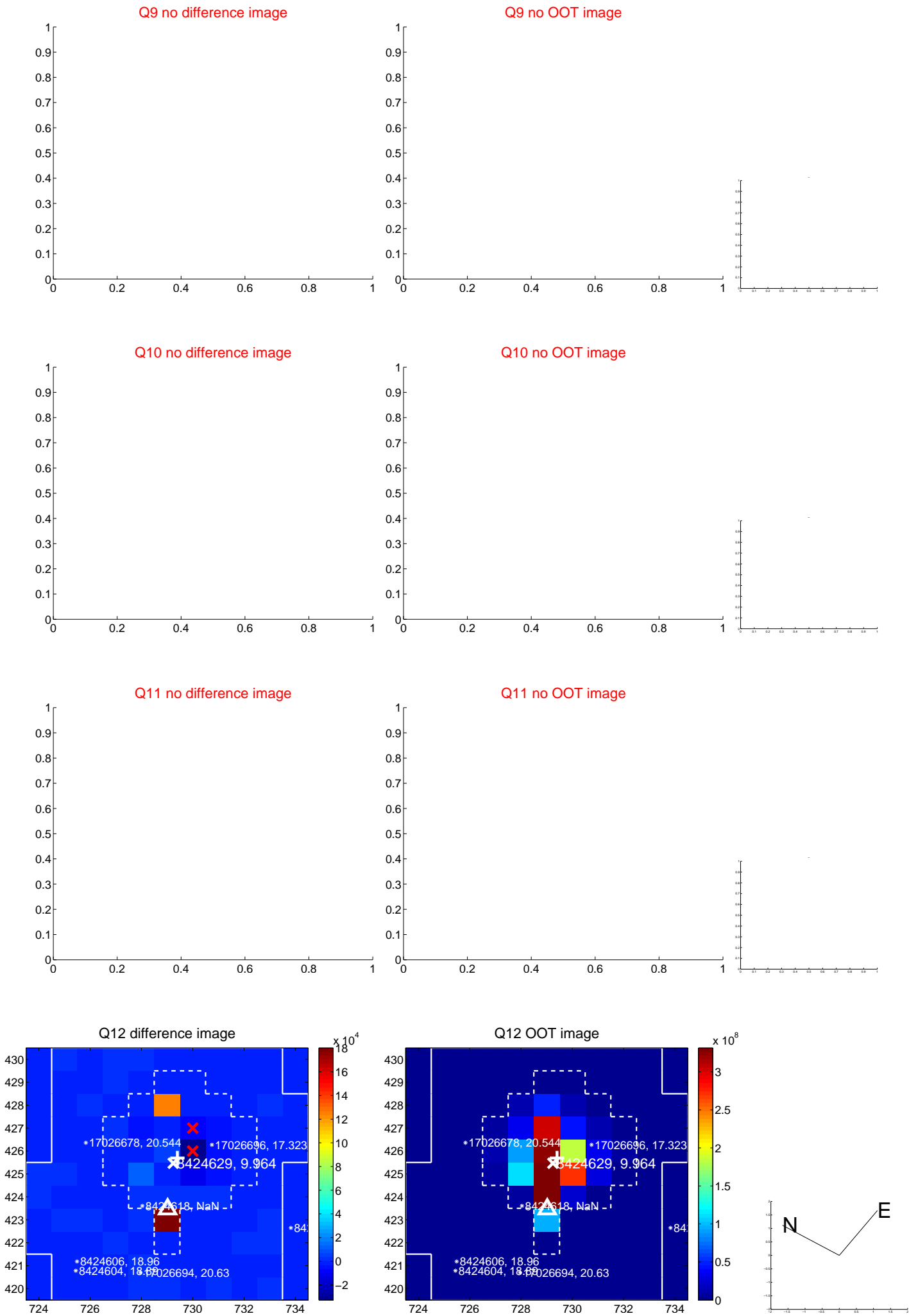
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



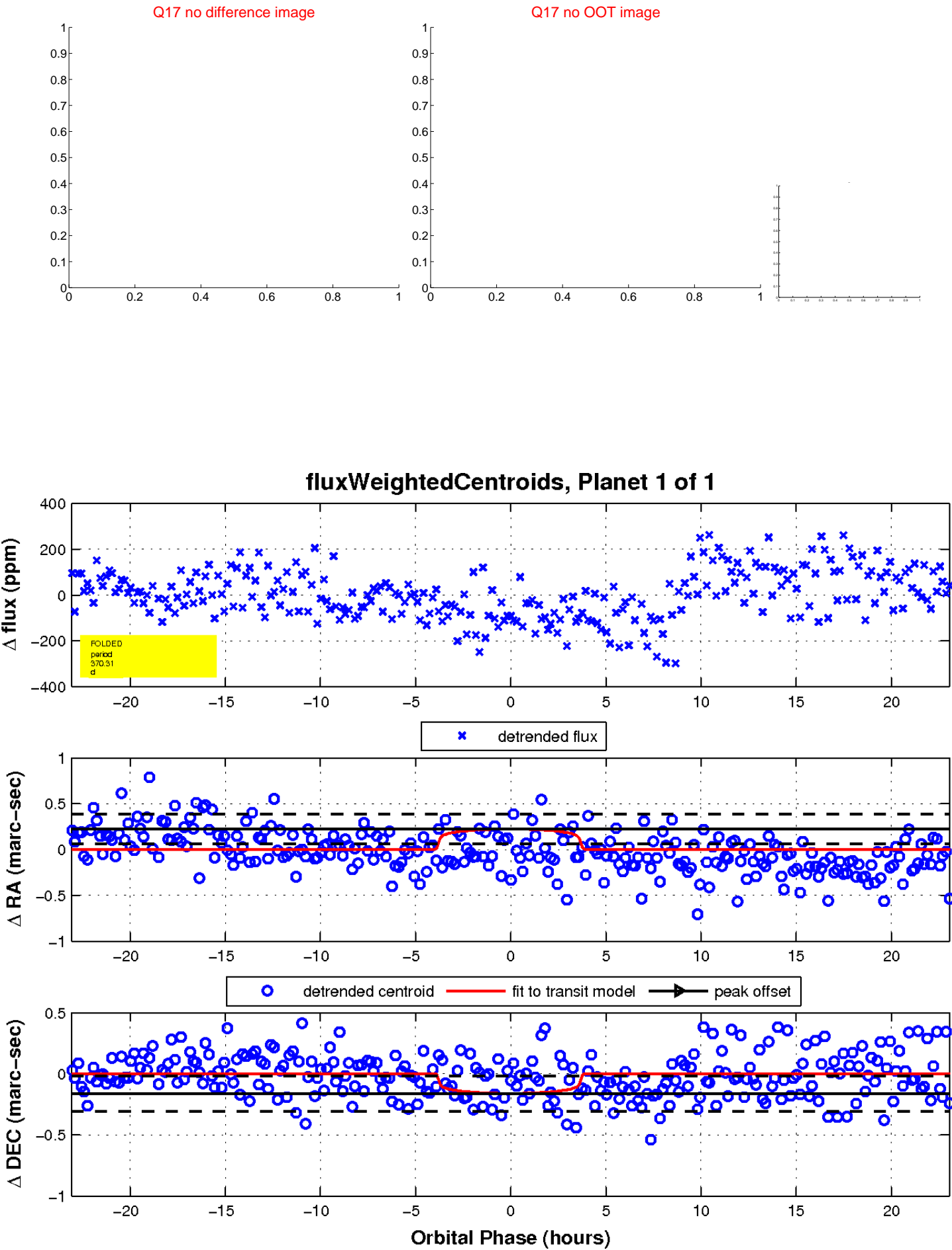
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

