

KIC 008841307

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})
008841307-01	OBS	No	483.363240	572.326601	638.3	2.649	11.6	6.5	2.99	5133	7.84	3.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008841307-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—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.

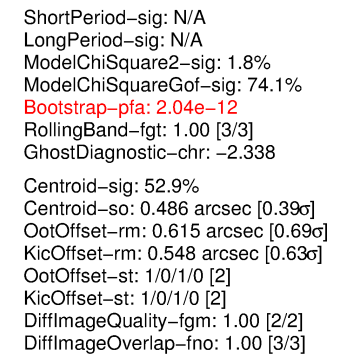
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

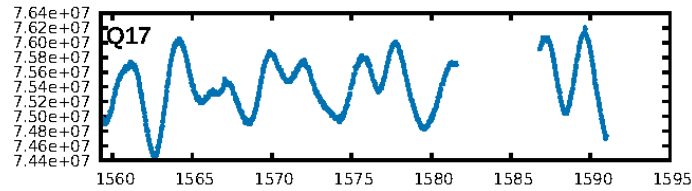
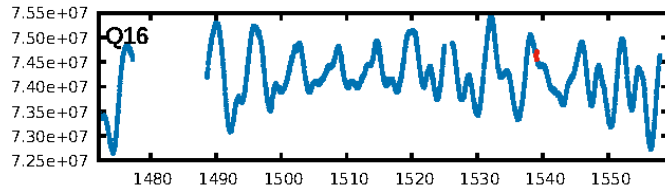
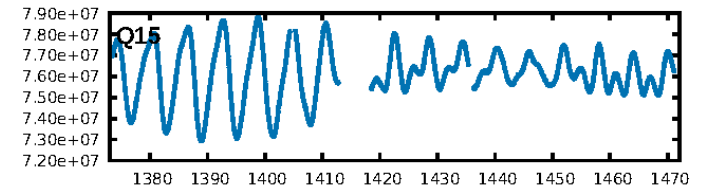
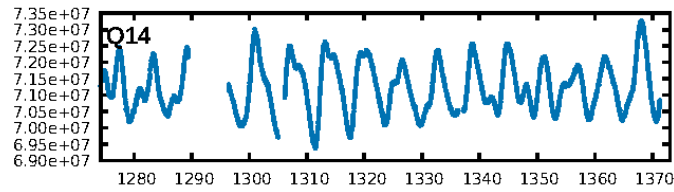
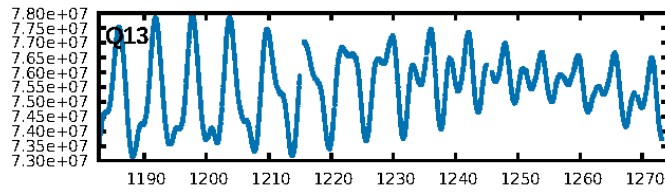
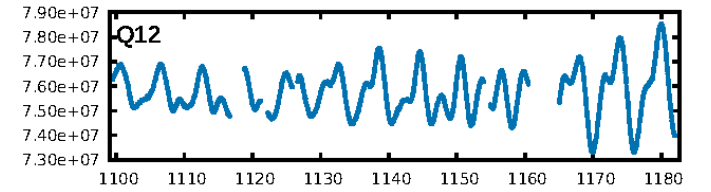
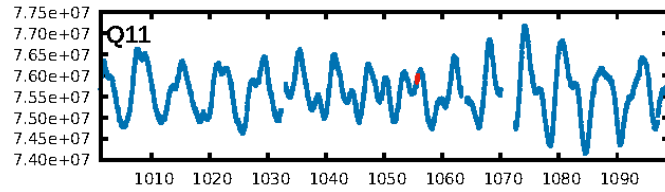
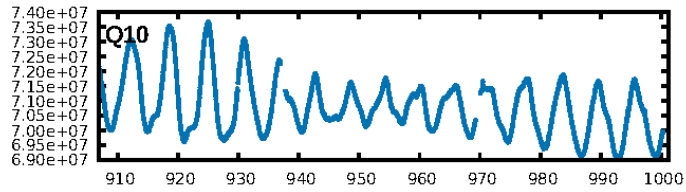
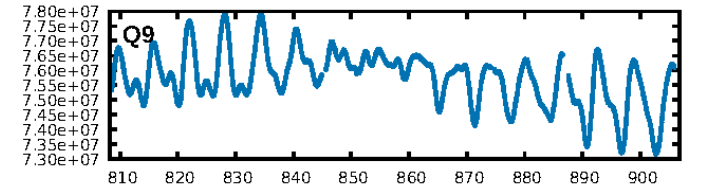
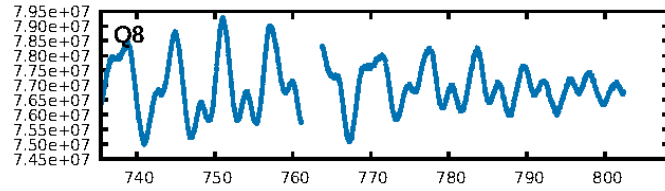
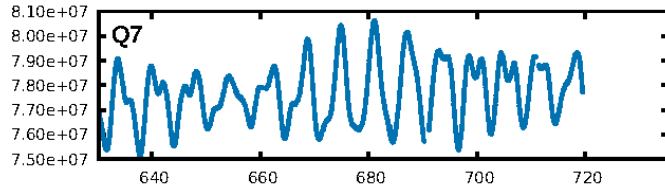
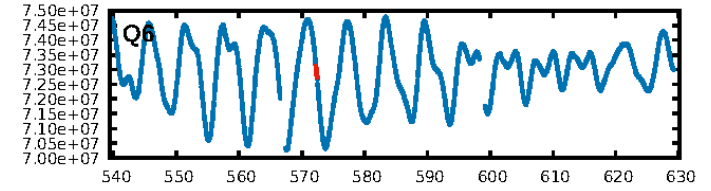
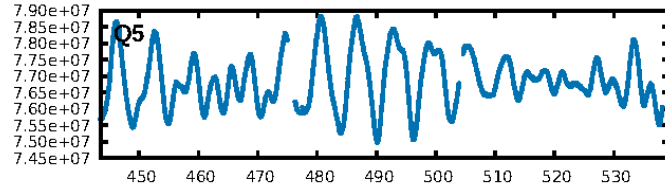
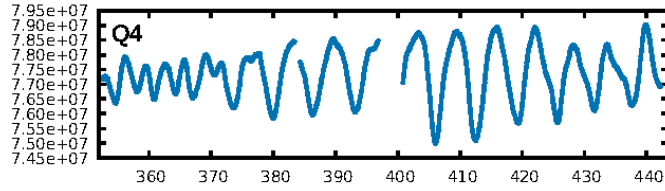
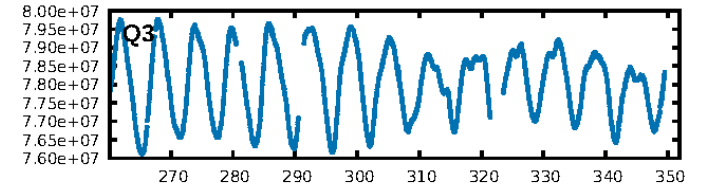
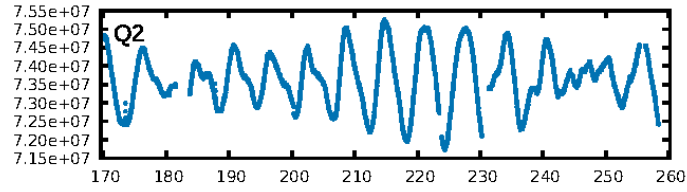
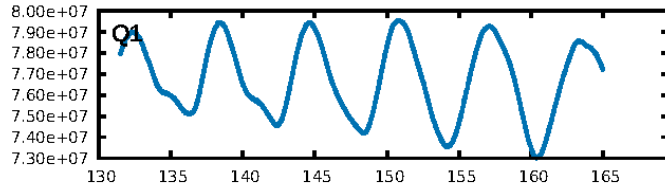
Ephemeris Match Information For 008841307-01

No Significant Match Found

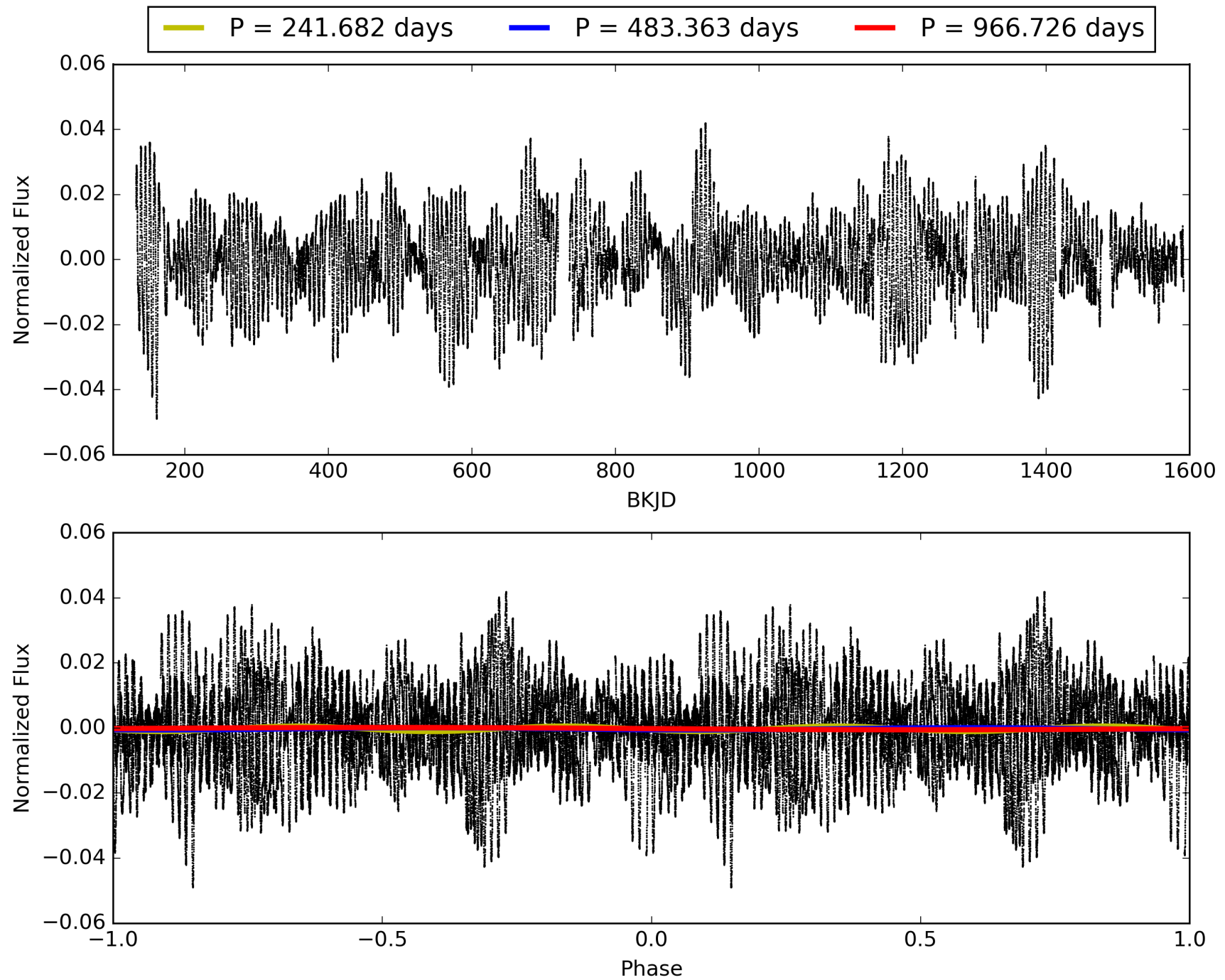
KIC: 8841307 Candidate: 1 of 1 Period: 483.363 d



TCE 008841307-01, PDC Light Curves

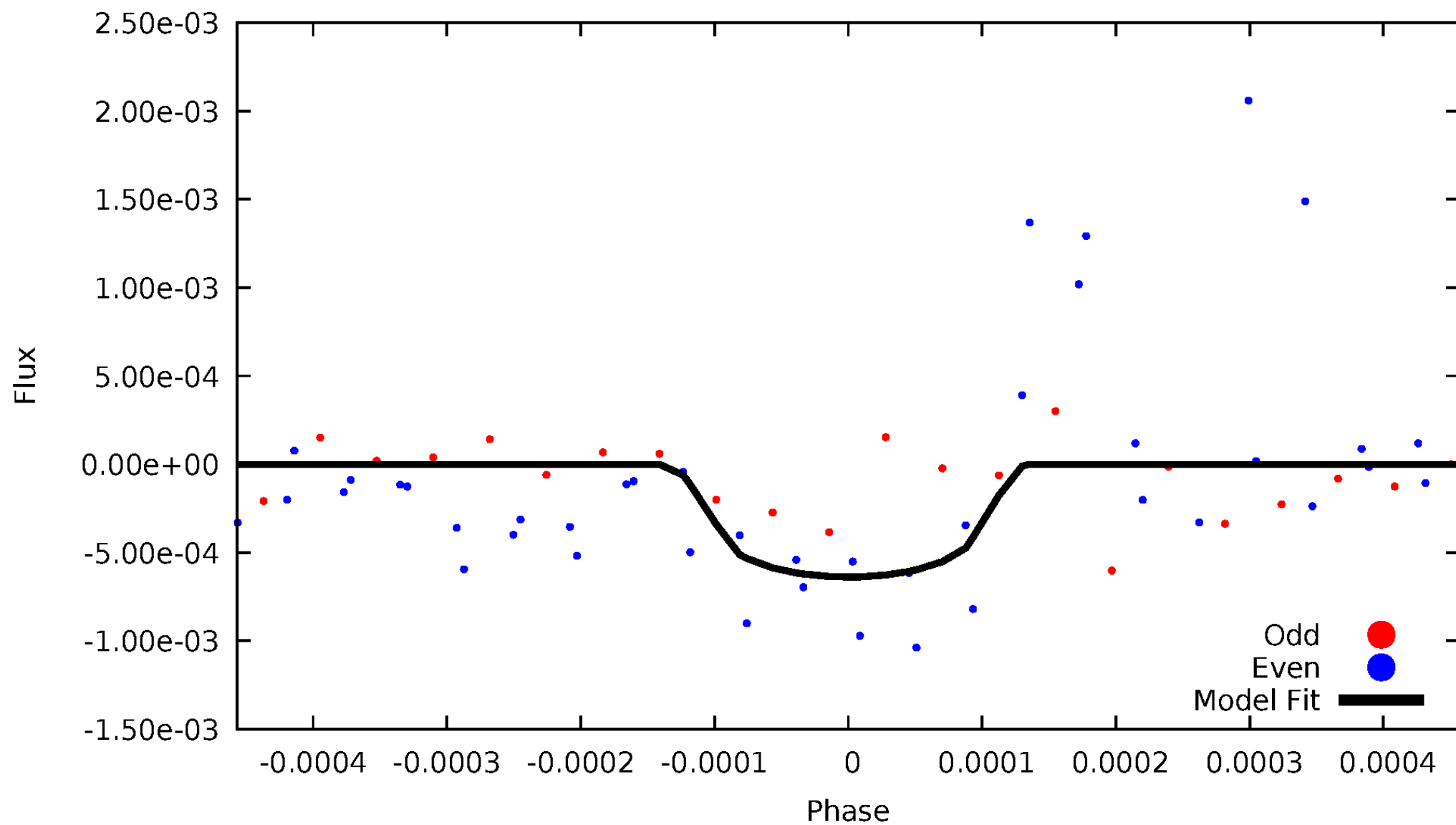


TCE 008841307-01



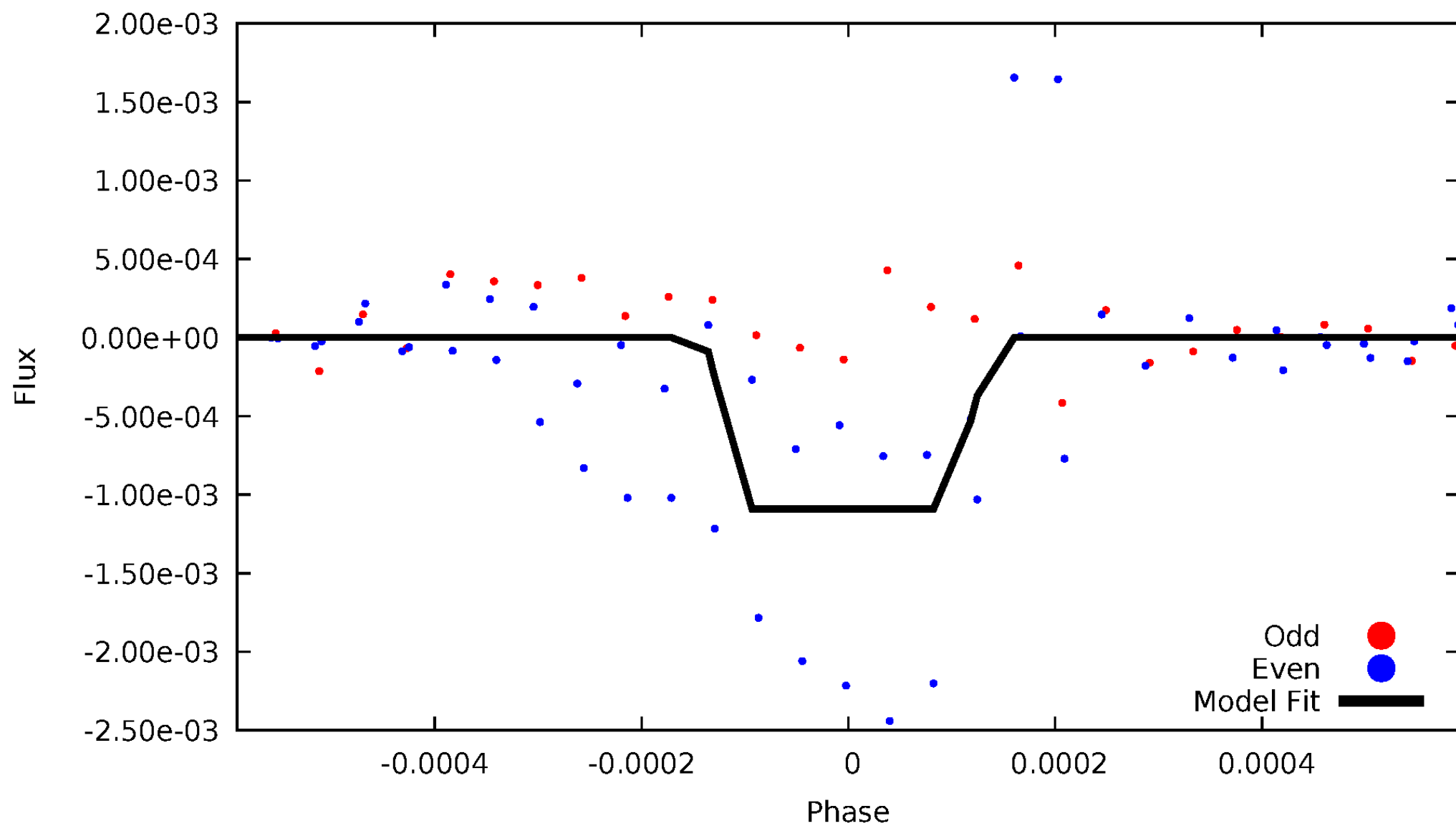
DV Odd/Even

TCE 008841307-01



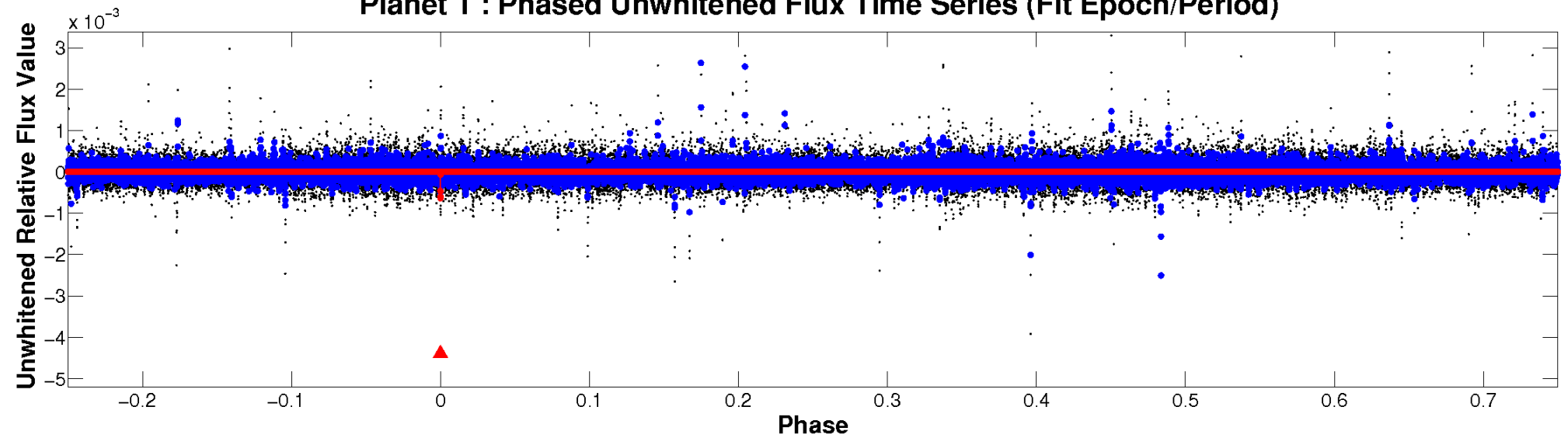
ALT Odd/Even

TCE 008841307-01

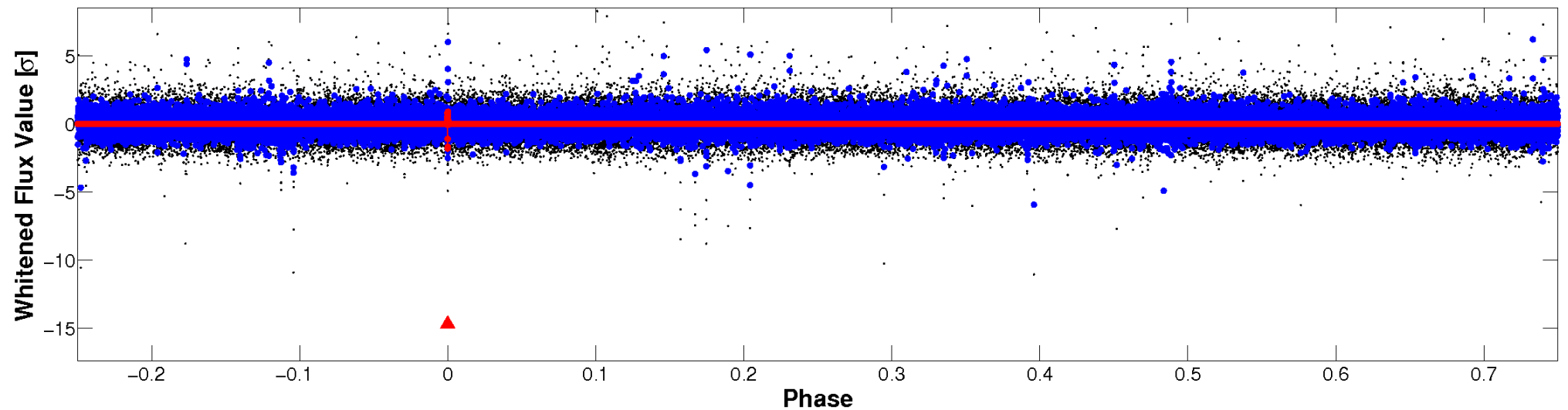


Non-Whitened Vs. Whitened Light Curve

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

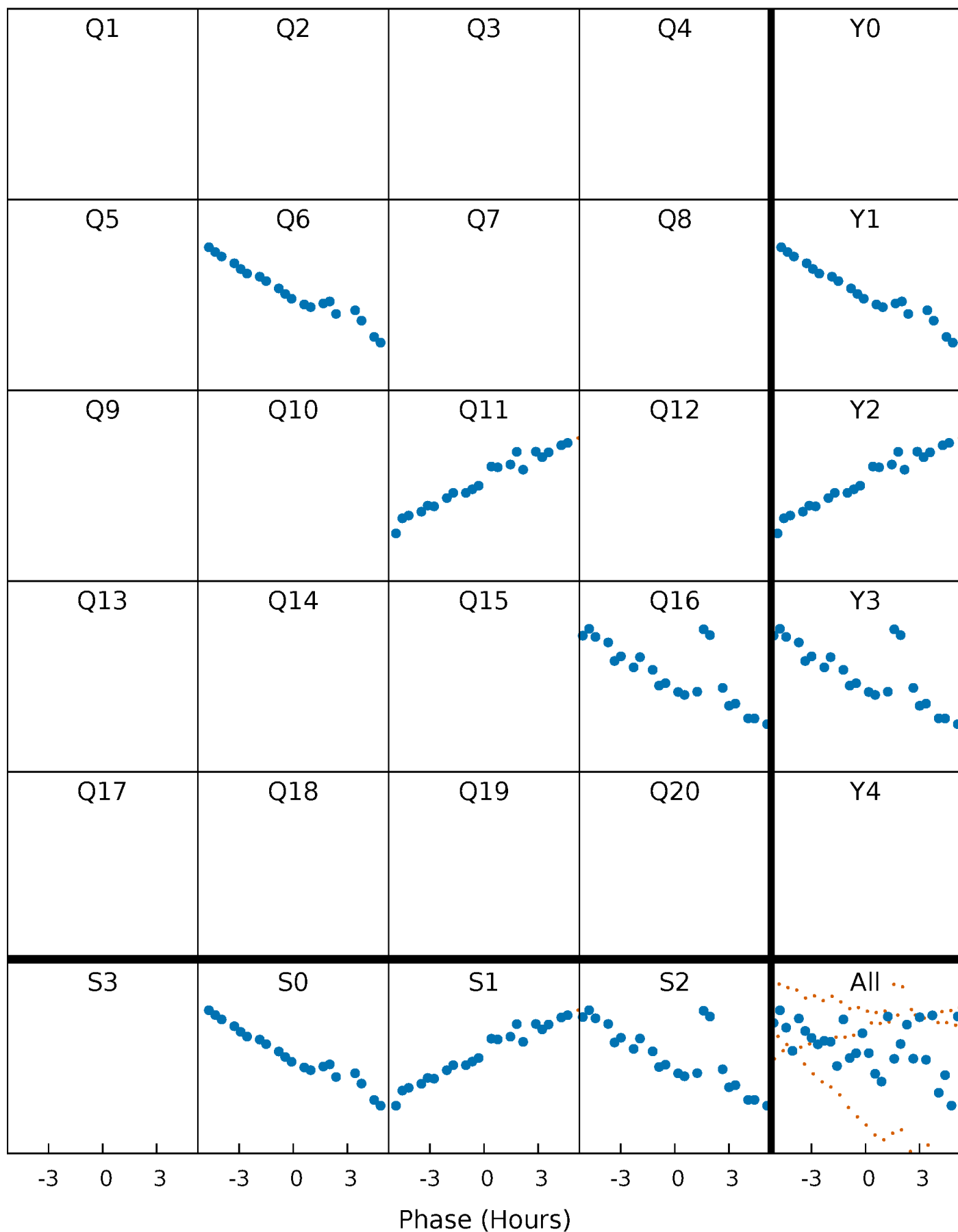


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



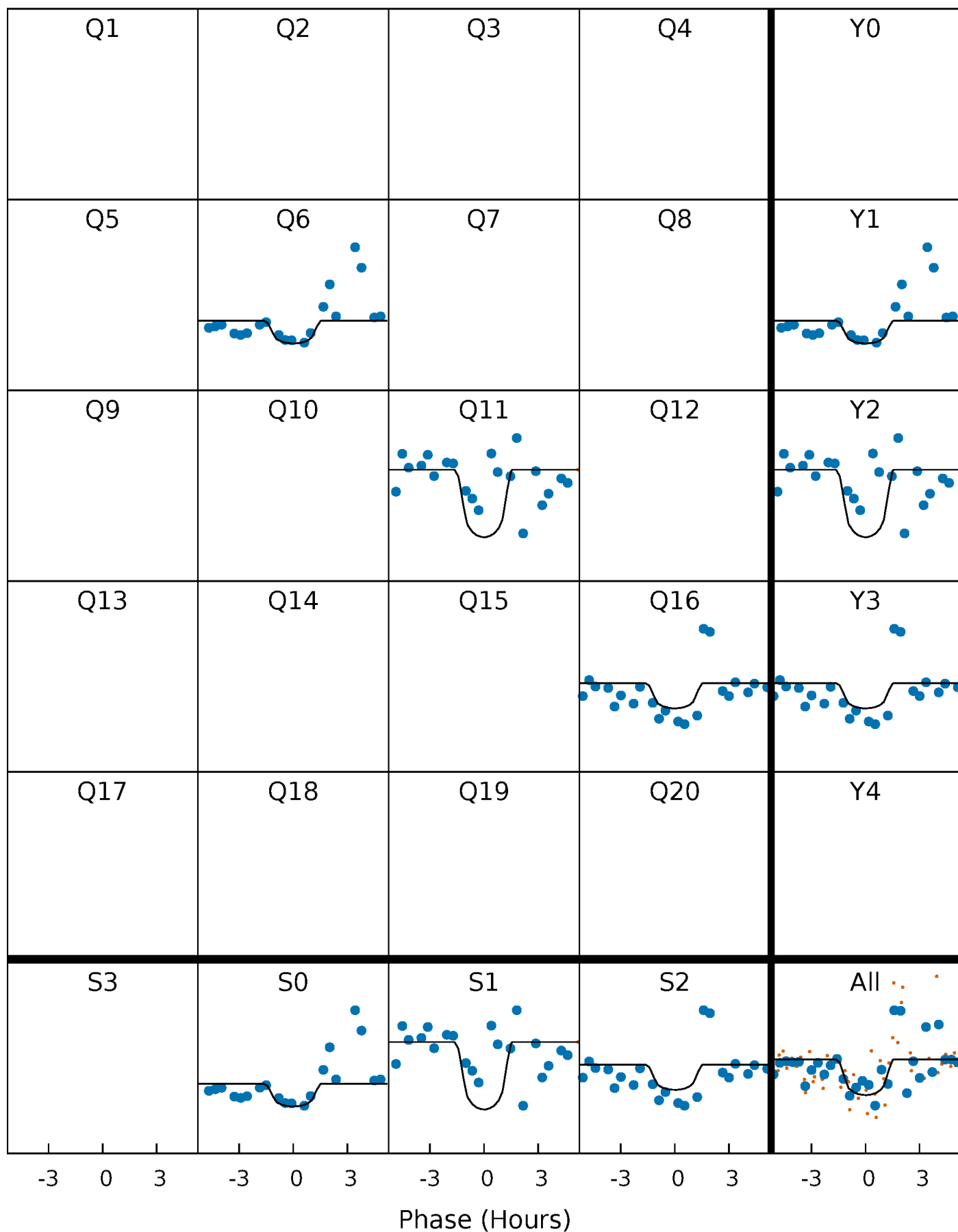
PDC Quarter-Phased Transit Curves

TCE 008841307-01 P=483.363240 Days $T_0=572.326602$ (BKJD)



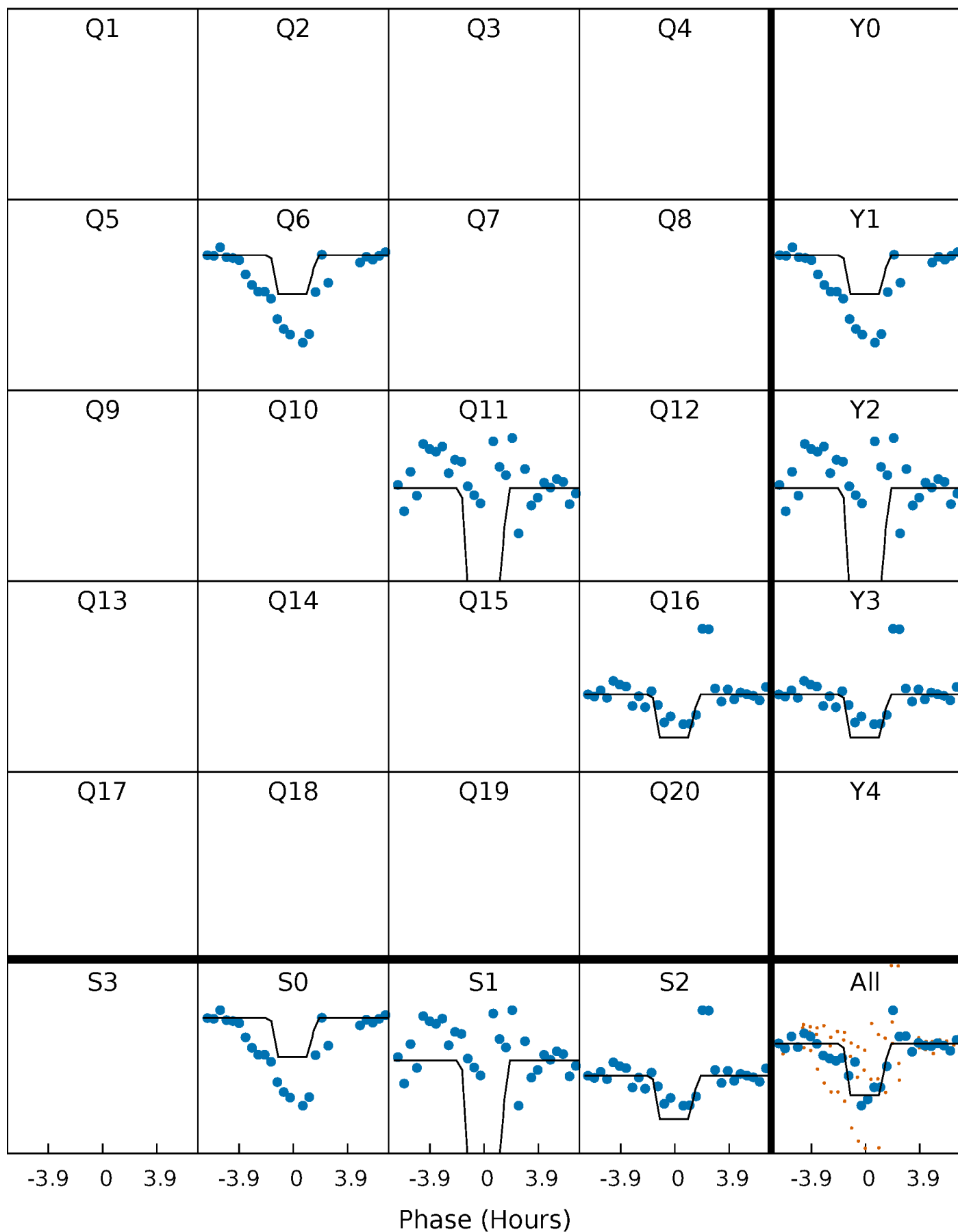
DV Quarter-Phased Transit Curves

TCE 008841307-01 P=483.363240 Days $T_0=572.326602$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

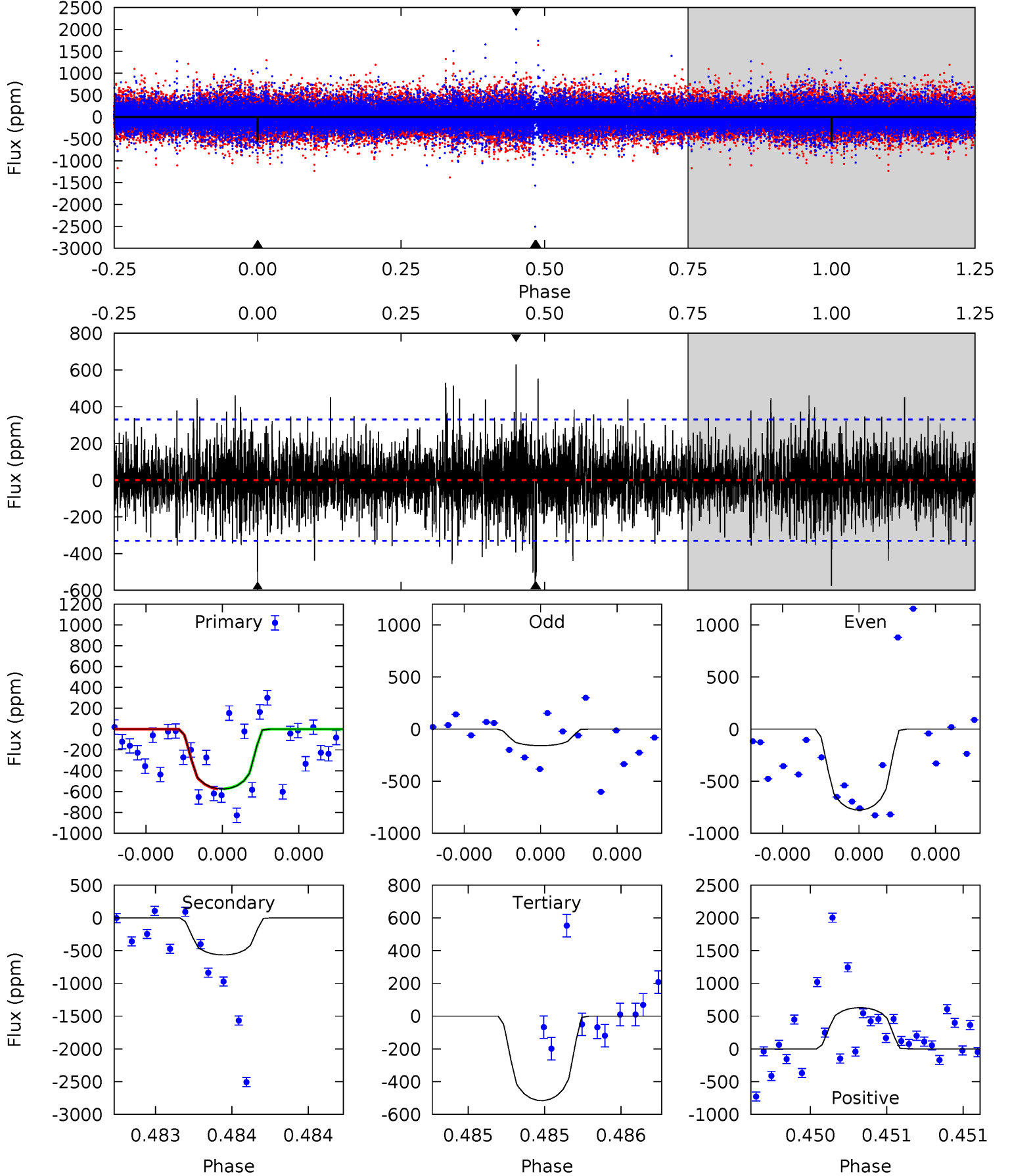
TCE 008841307-01 P=483.355862 Days $T_0=572.329240$ (BKJD)



DV Model-Shift Uniqueness Test

008841307-01, P = 483.363240 Days, E = 88.963362 Days

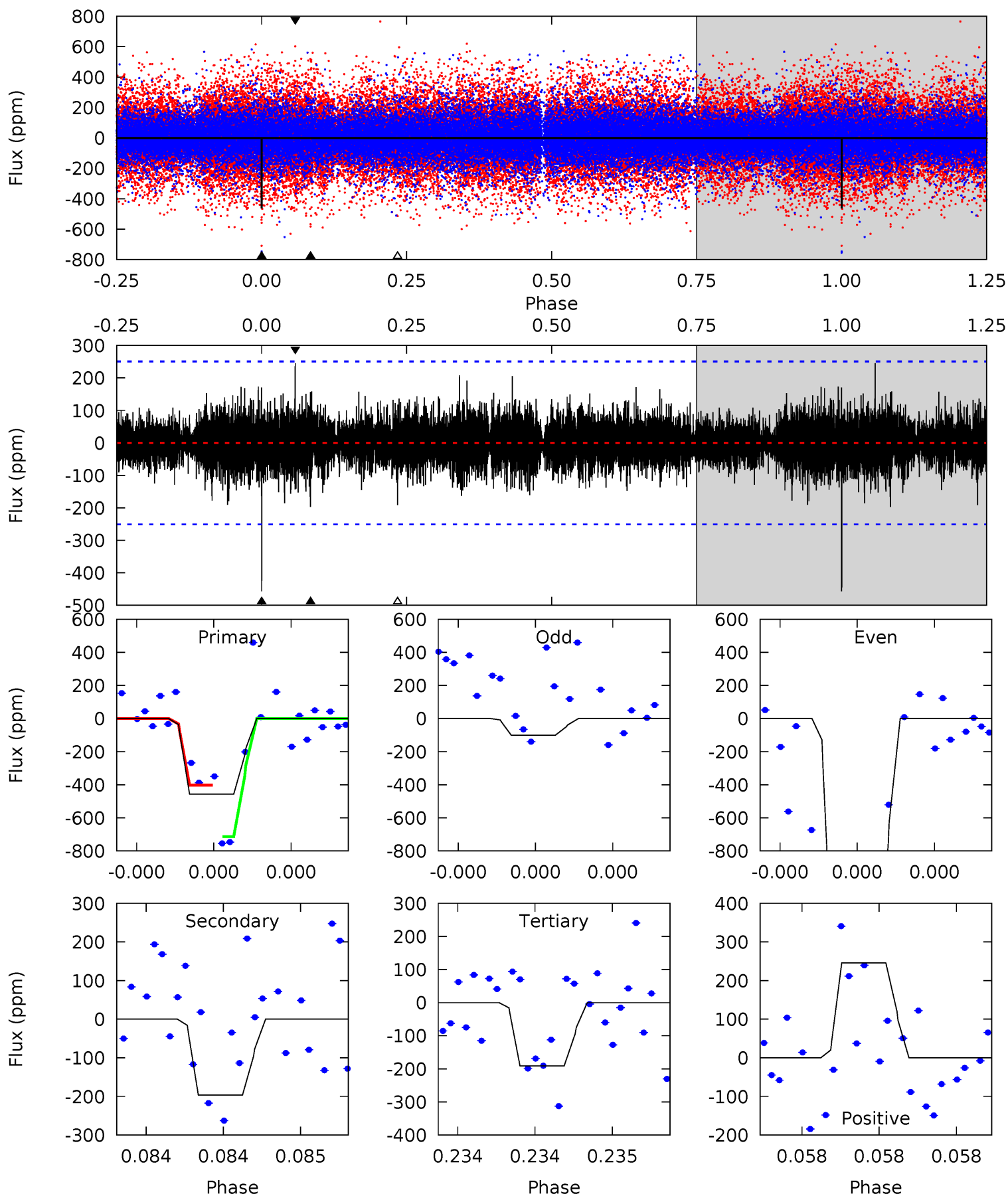
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.90	9.75	8.88	10.8	5.69	3.66	1.76	1.02	-0.94	0.86	-1.10	4.93	1.03	0.52	0.02



Alt Model-Shift Uniqueness Test

008841307-01, P = 483.355862 Days, E = 88.973378 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	4.44	4.32	5.55	5.66	3.62	0.89	6.00	4.78	0.12	-1.11	20.9	1.45	0.35	0



Stellar Parameters For KIC 008841307

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5133^{+155}_{-139}	$3.576^{+0.968}_{-0.242}$	$-0.200^{+0.300}_{-0.250}$	$2.989^{+1.127}_{-2.093}$	$1.226^{+0.179}_{-0.357}$	$0.065^{+1.796}_{-0.042}$
	+3%/-3%	+27%/-7%	+150%/-125%	+38%/-70%	+15%/-29%	+2777%/-64%
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 008841307-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-566 ± 58	$18.73^{+23.88}_{-12.94}$	471^{+56}_{-94}	3497^{+1783}_{-674}	1545^{+12738}_{-1259}
Alt.	-196 ± 44	$19.39^{+23.62}_{-14.02}$	467^{+58}_{-84}	2933^{+1260}_{-480}	464^{+4894}_{-372}

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 $A_{obs} \gg 1.0$

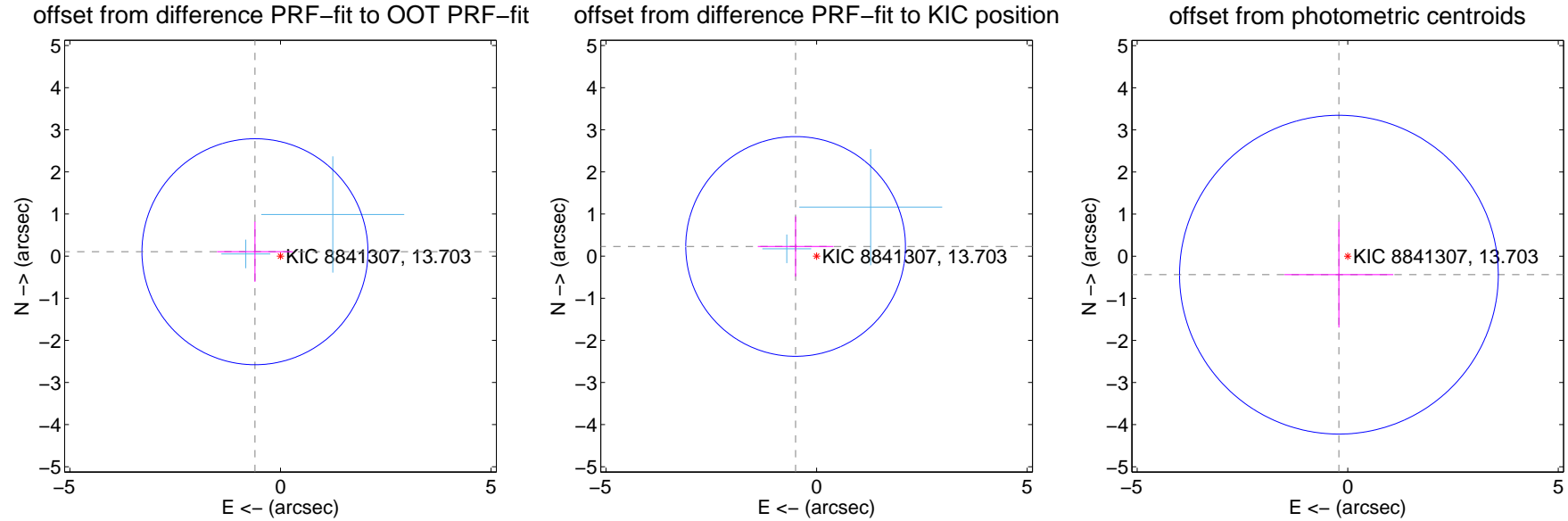
DV Centroid Data

Supplemental centroid analysis for 008841307-01. Kepler magnitude: 13.70. Transit SNR 6.48

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	0.615 ± 0.894	0.69	0.606 ± 0.899	0.105 ± 0.714
PRF-fit source offset from KIC position	0.548 ± 0.869	0.63	0.498 ± 0.899	0.230 ± 0.714
photometric centroid source offset	0.49 ± 1.26	0.39	0.21 ± 1.29	-0.44 ± 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.

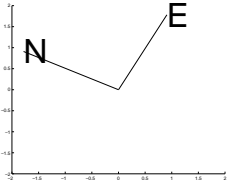
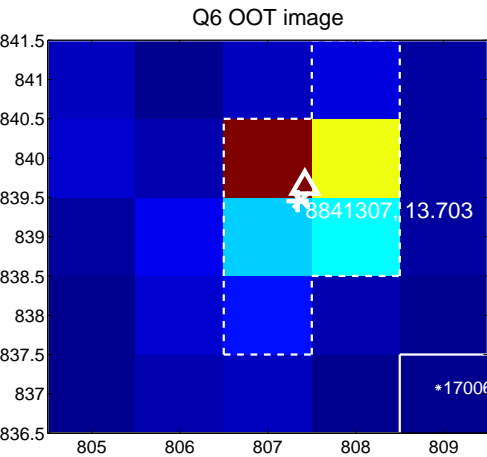
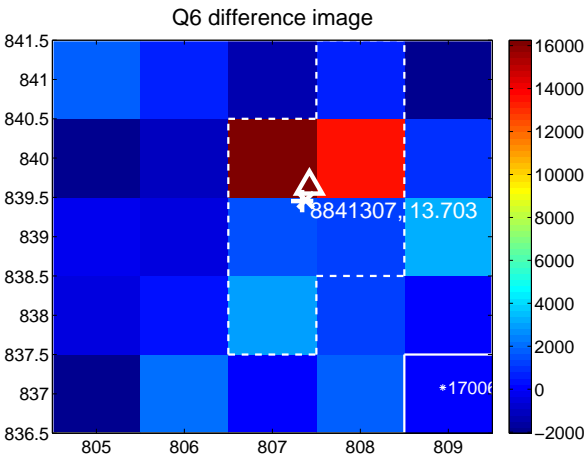


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

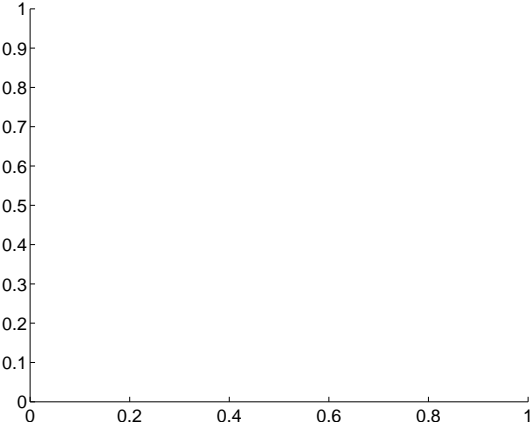
Q5 no difference image



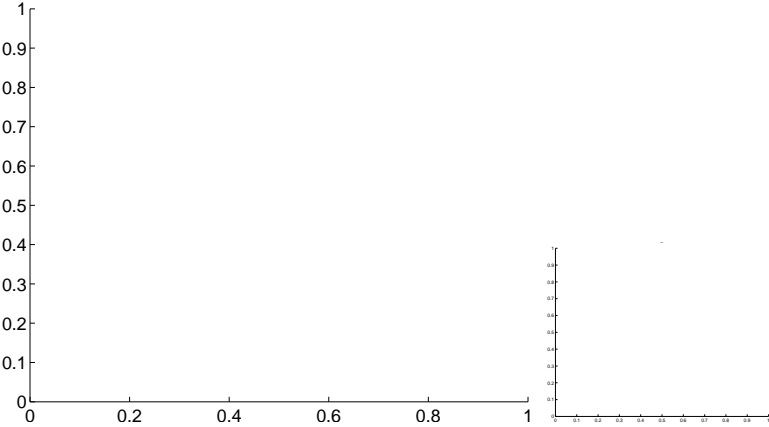
Q5 no OOT image



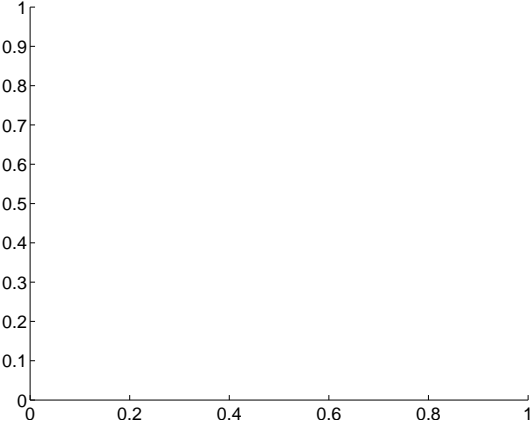
Q7 no difference image



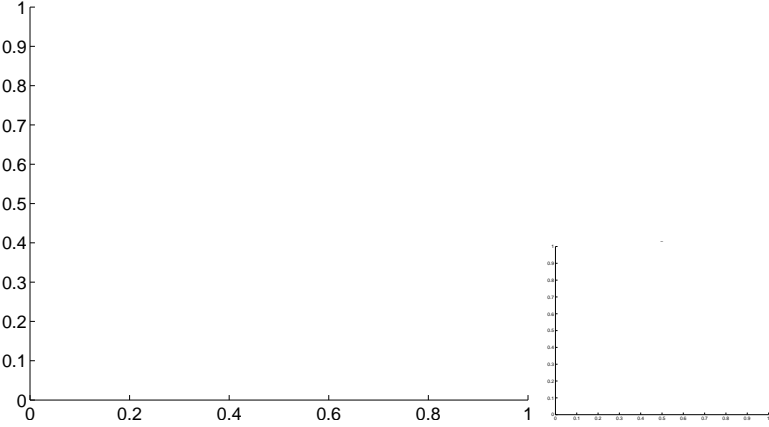
Q7 no OOT image



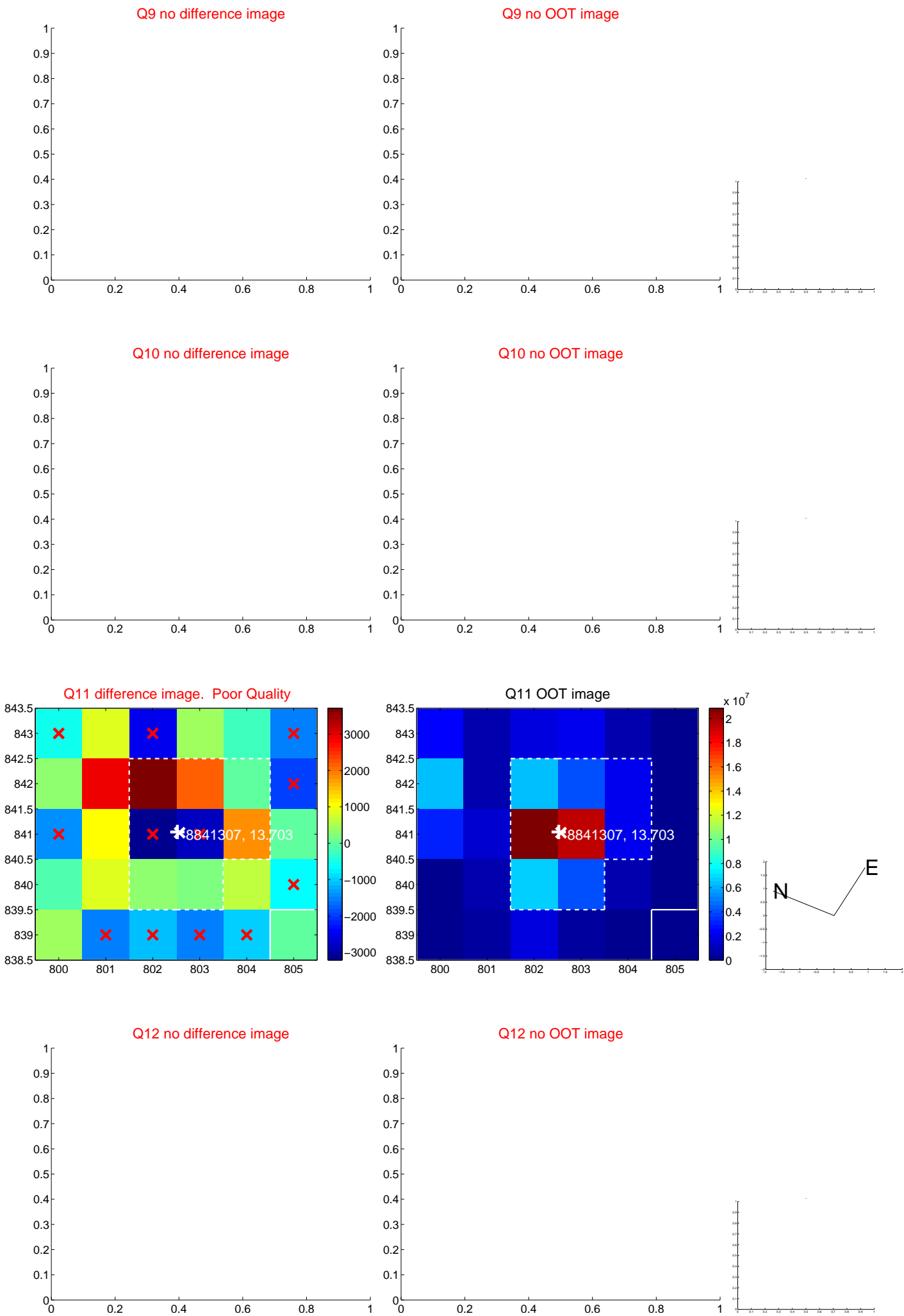
Q8 no difference image



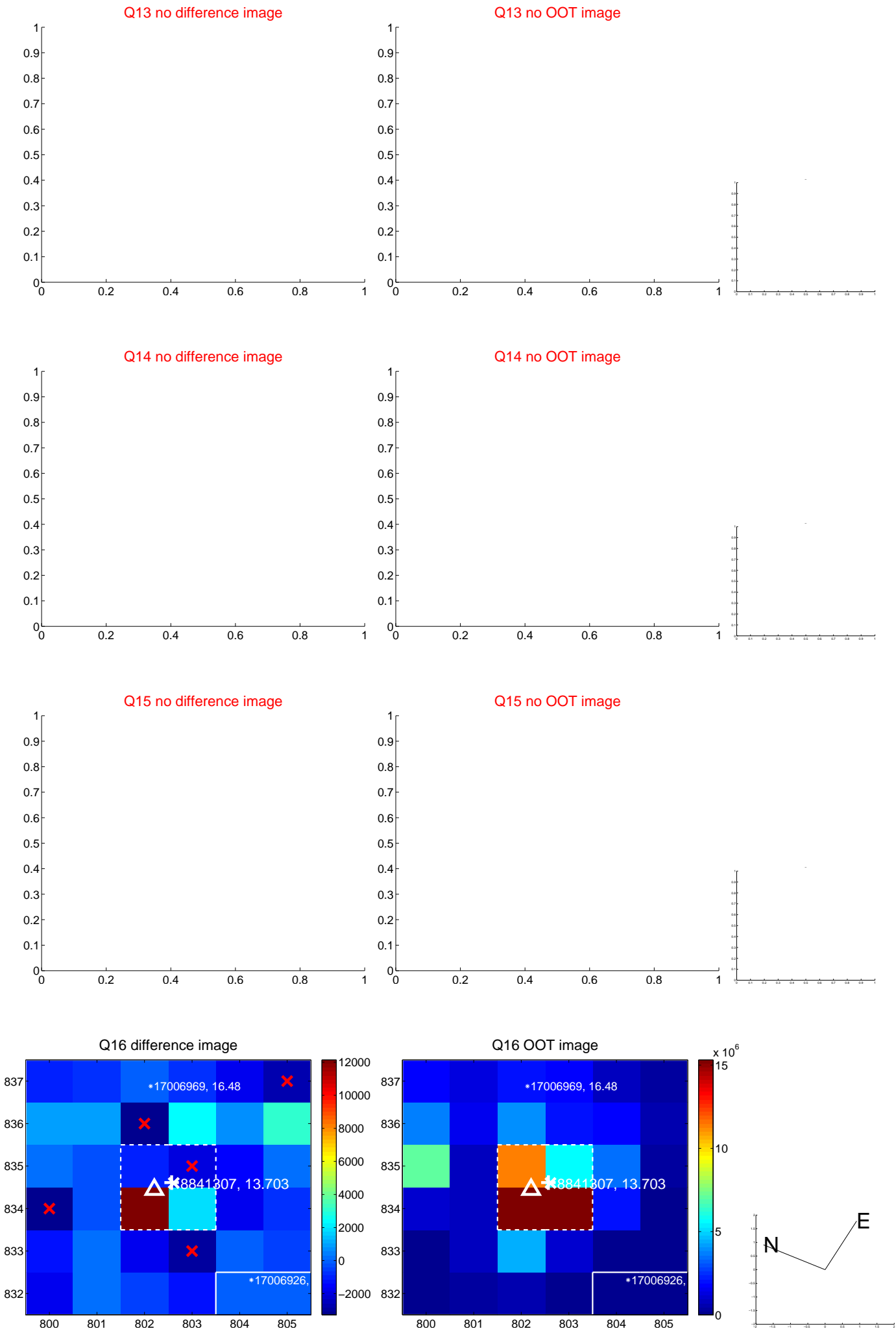
Q8 no OOT image



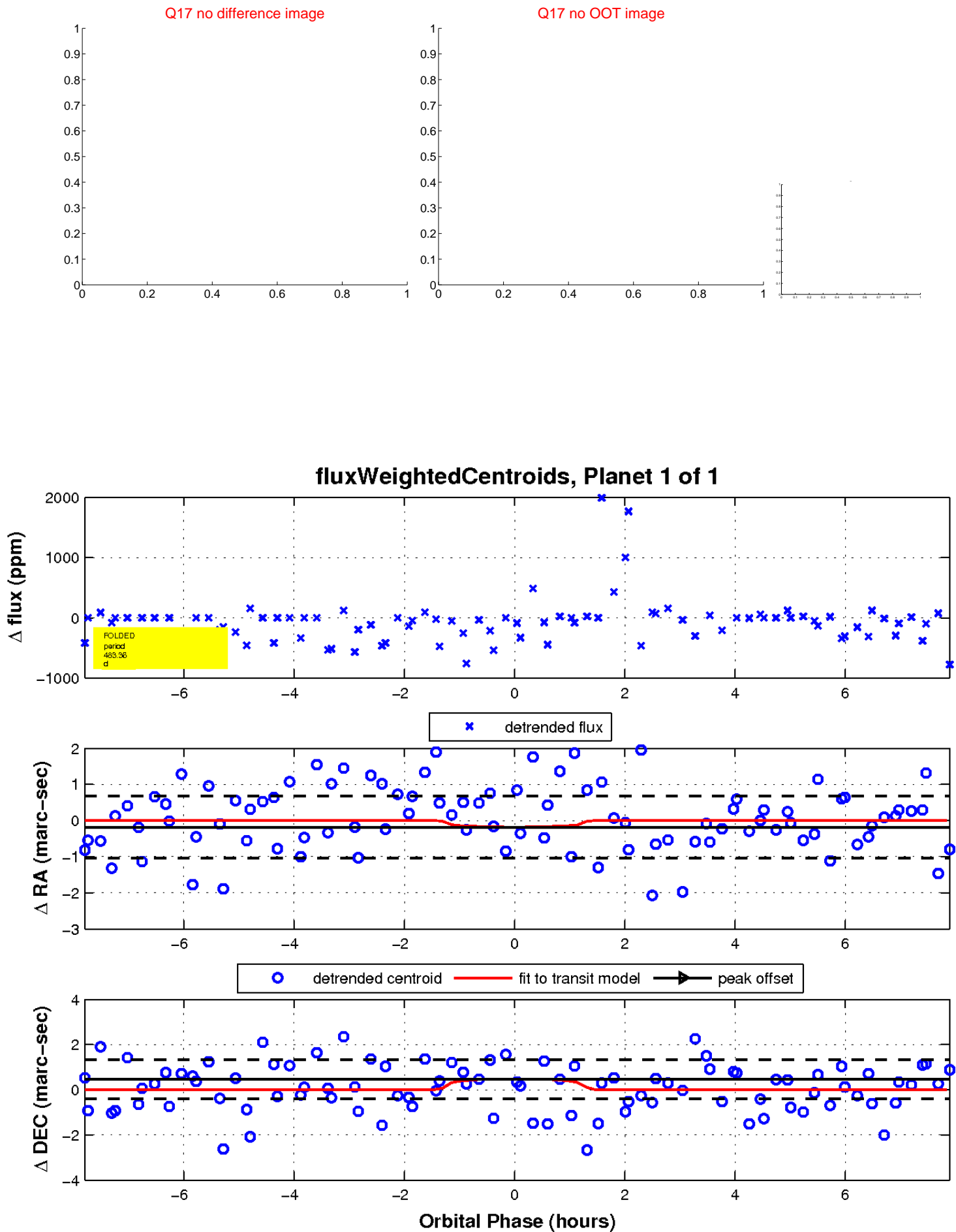
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

