

KIC 010798521

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})
010798521-01	OBS	No	649.119816	239.313696	256.9	9.245	7.5	4.0	0.45	3610	0.78	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010798521-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_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.

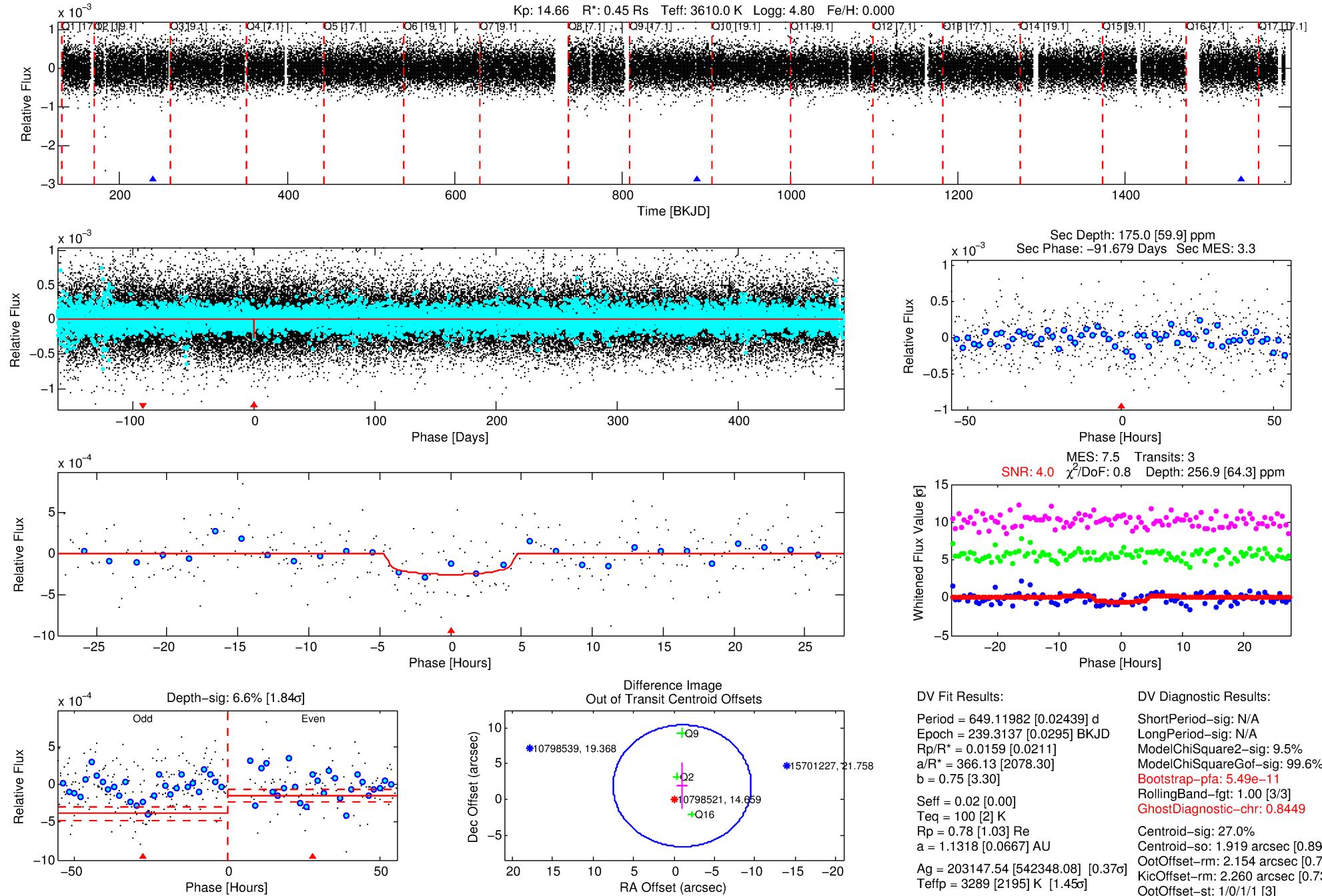
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010798521-01

No Significant Match Found

DV One-Page Summary

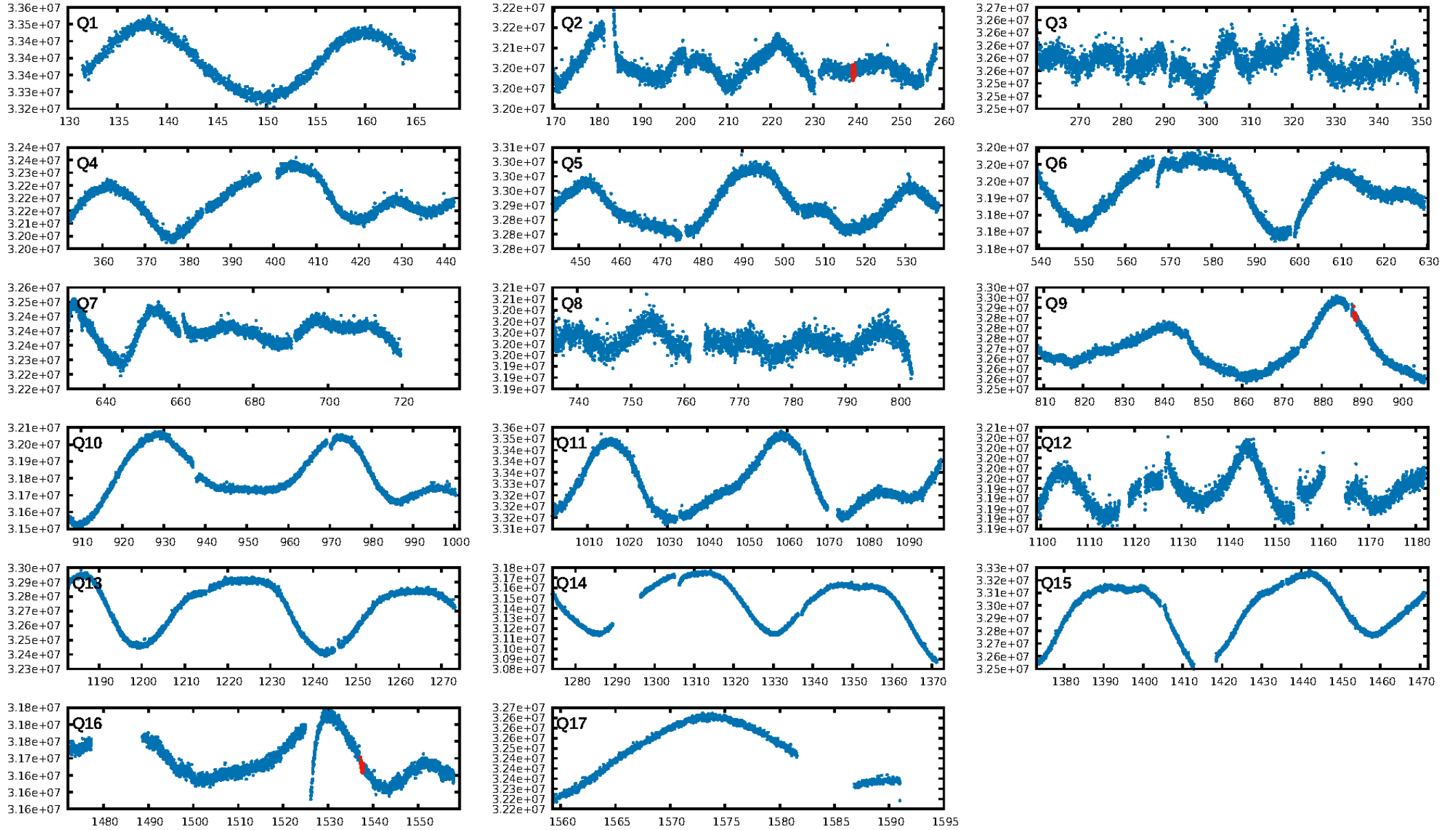
KIC: 10798521 Candidate: 1 of 1 Period: 649.120 d



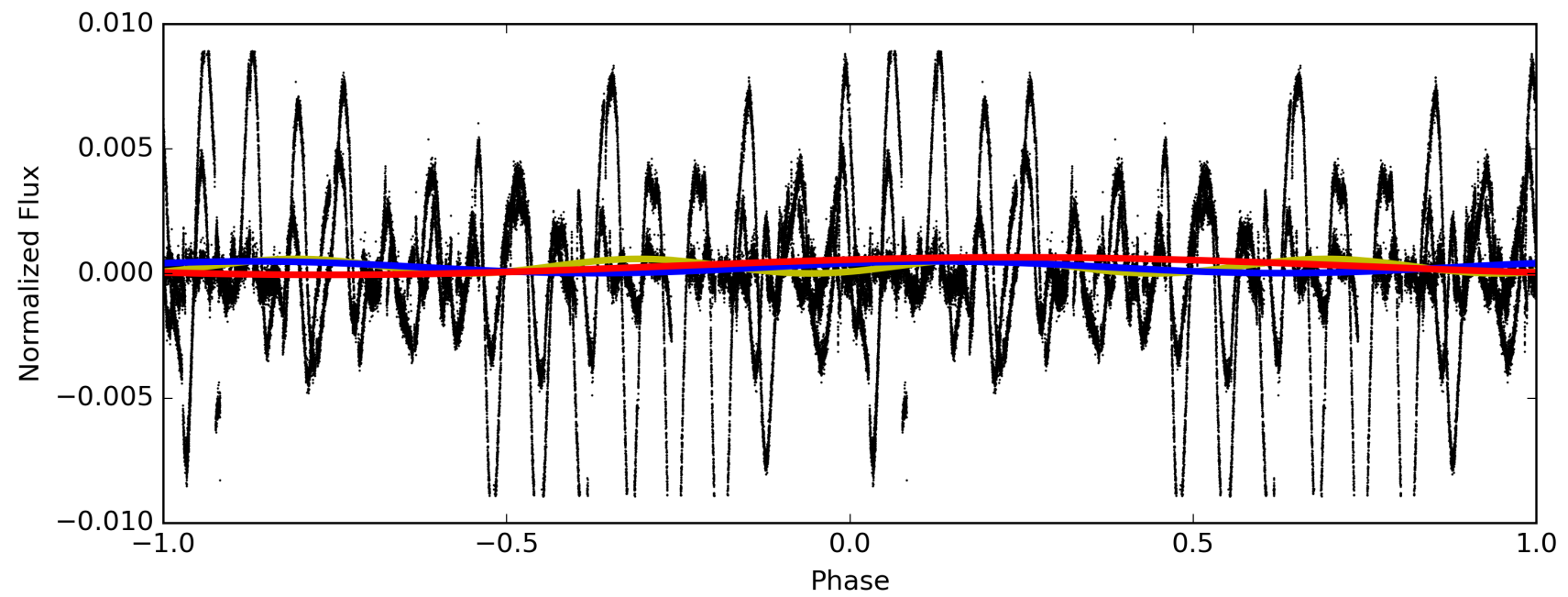
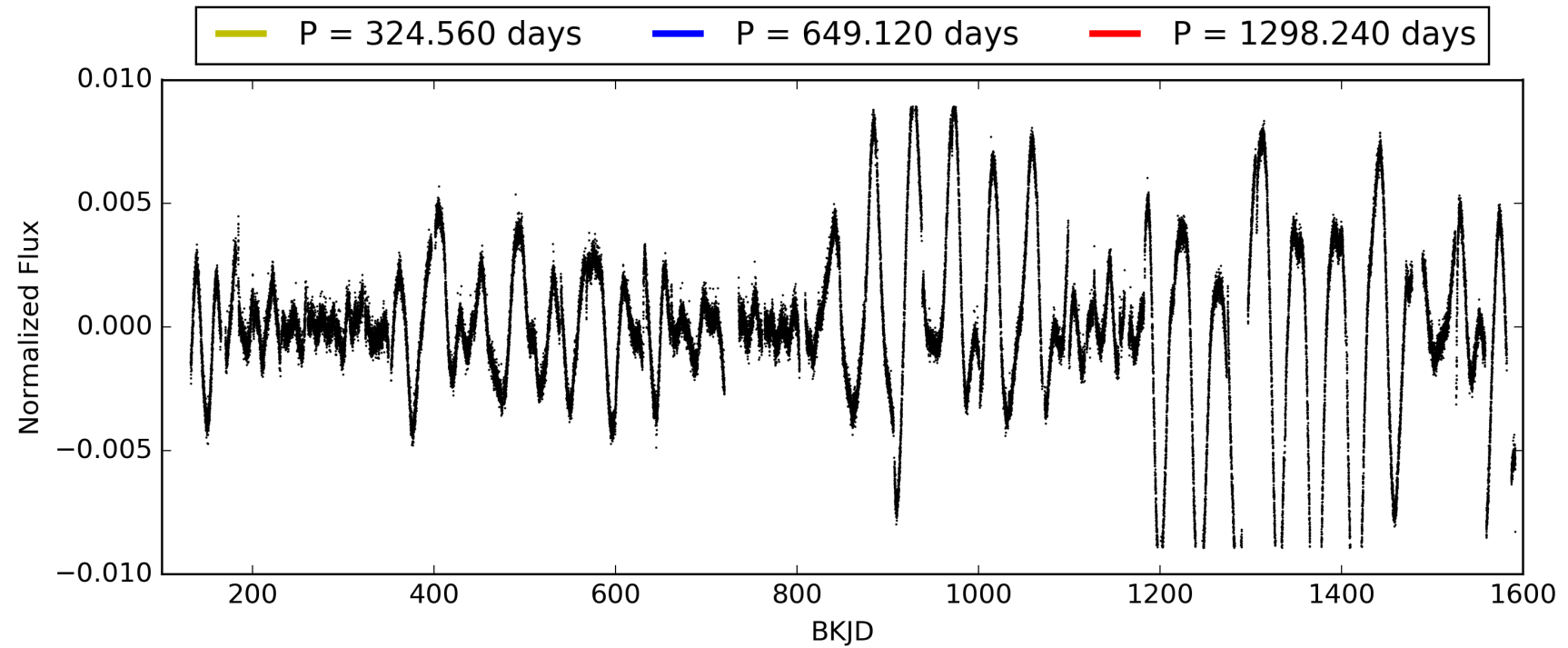
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:30:06 Z

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

TCE 010798521-01, PDC Light Curves

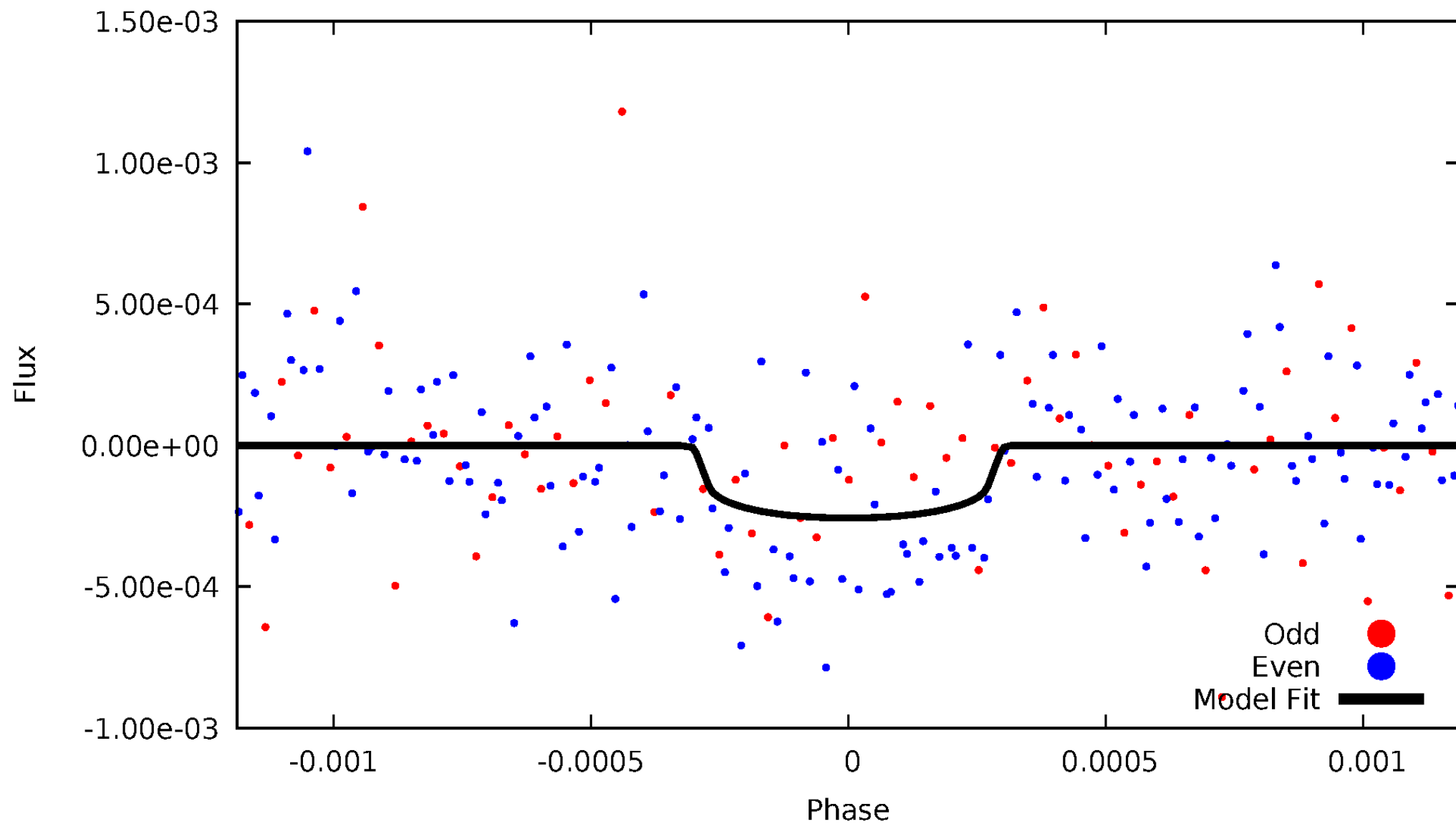


TCE 010798521-01



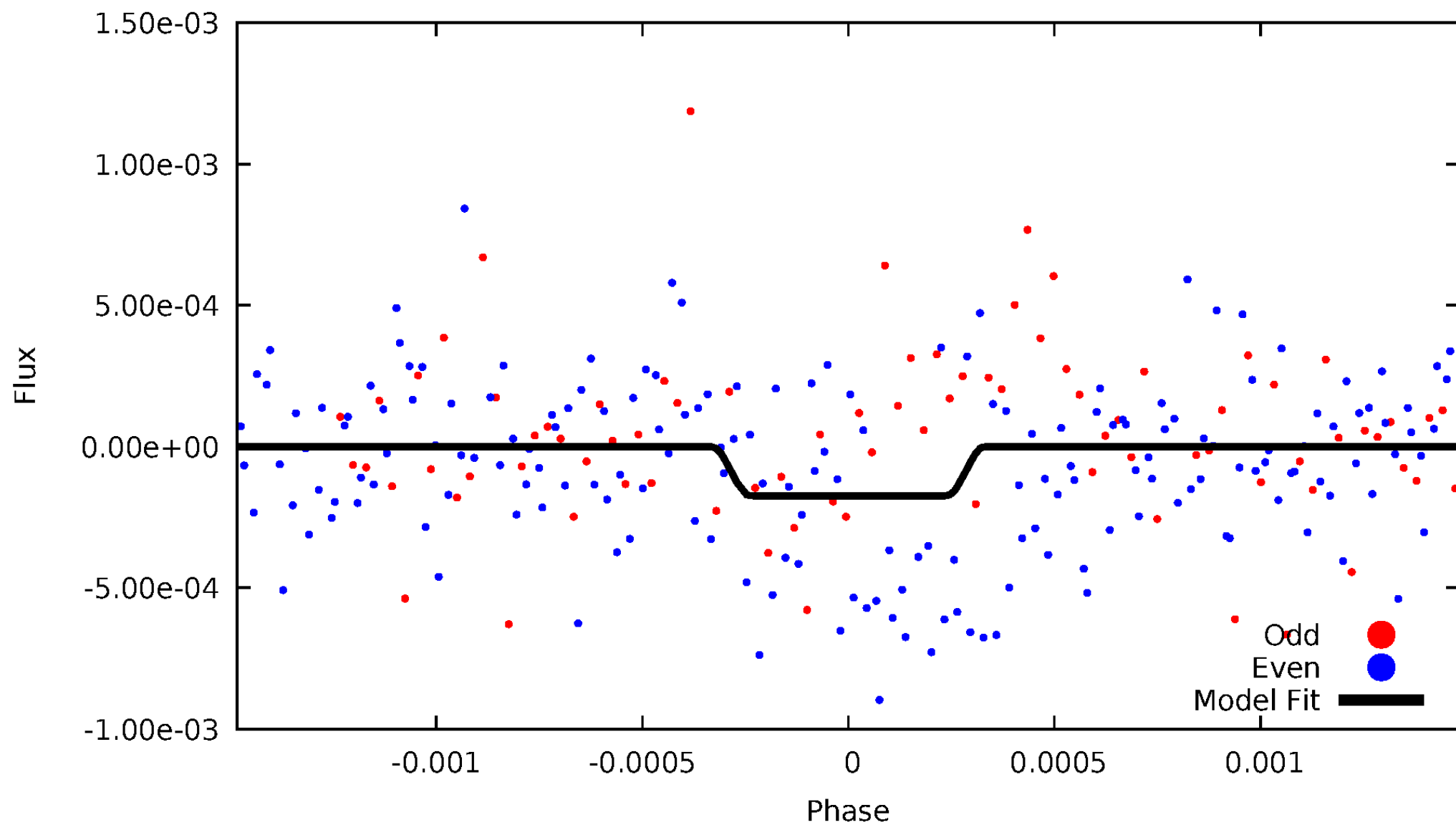
DV Odd/Even

TCE 010798521-01



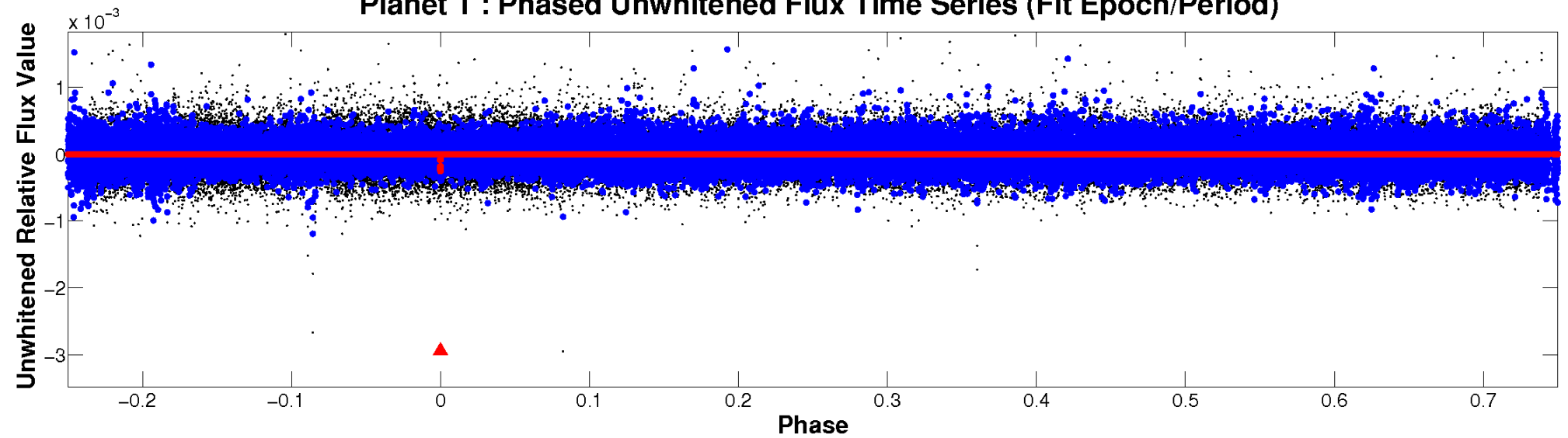
ALT Odd/Even

TCE 010798521-01

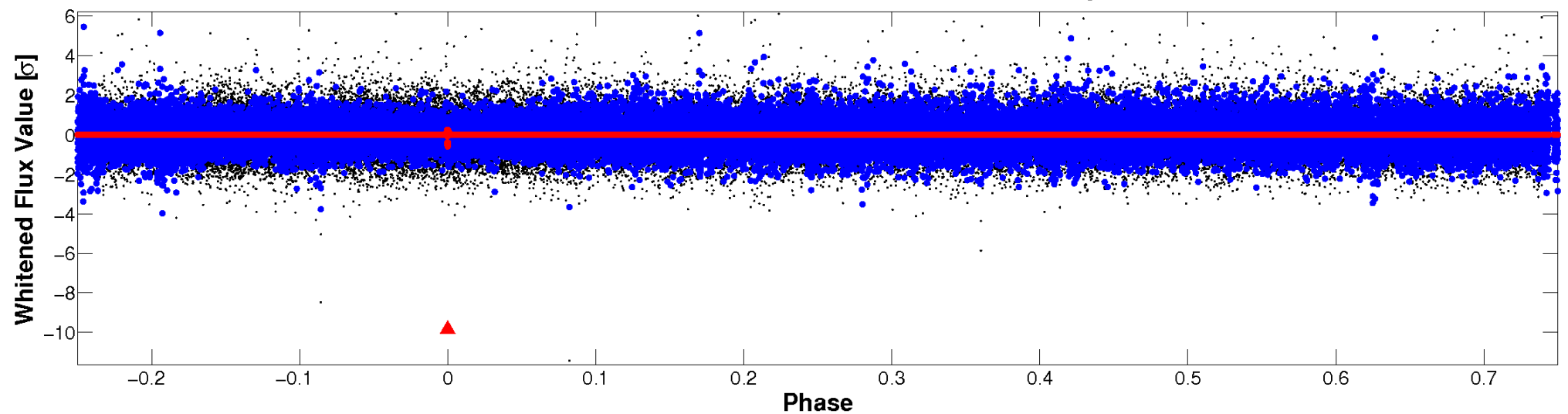


Non-Whitened Vs. Whitened Light Curve

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

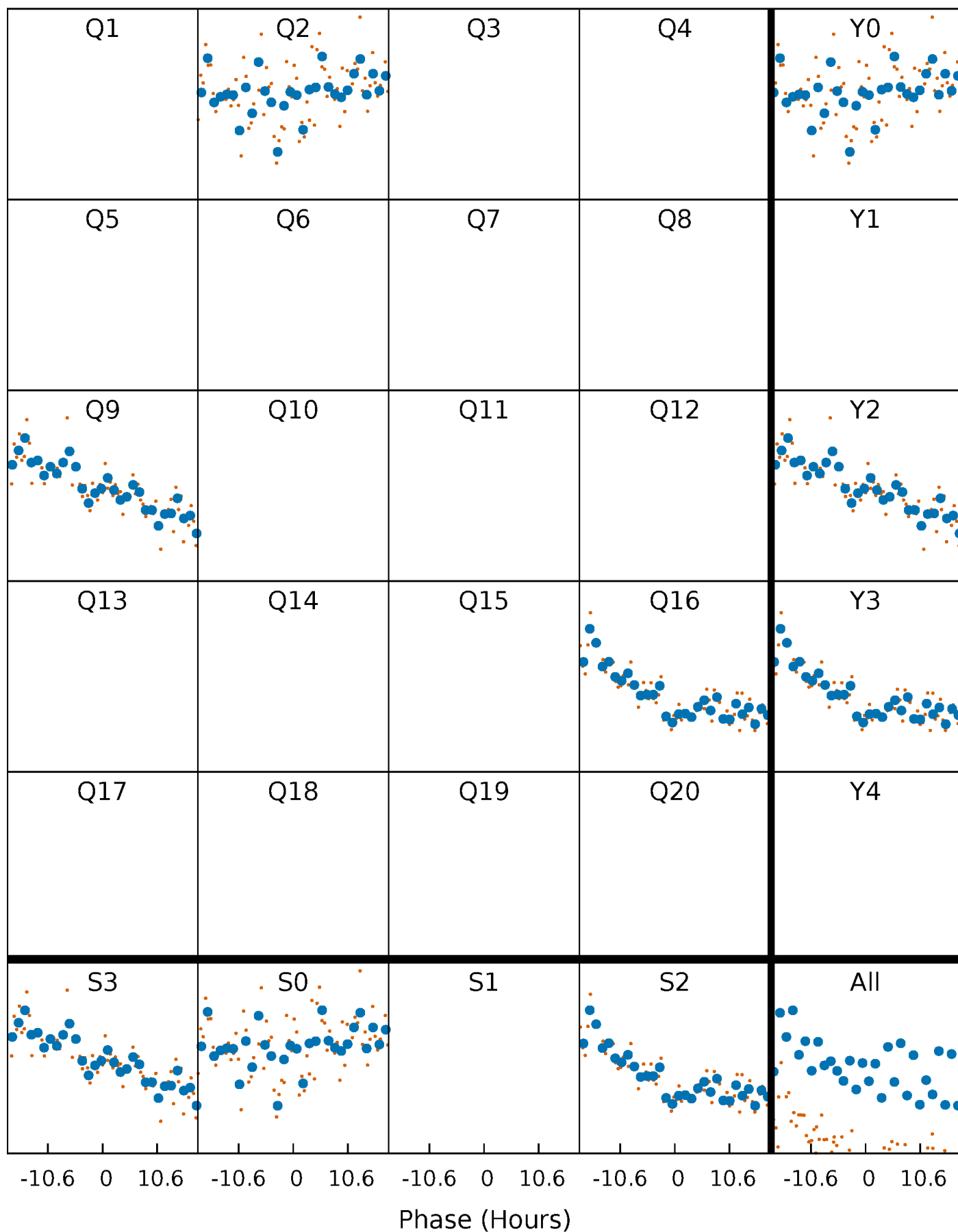


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



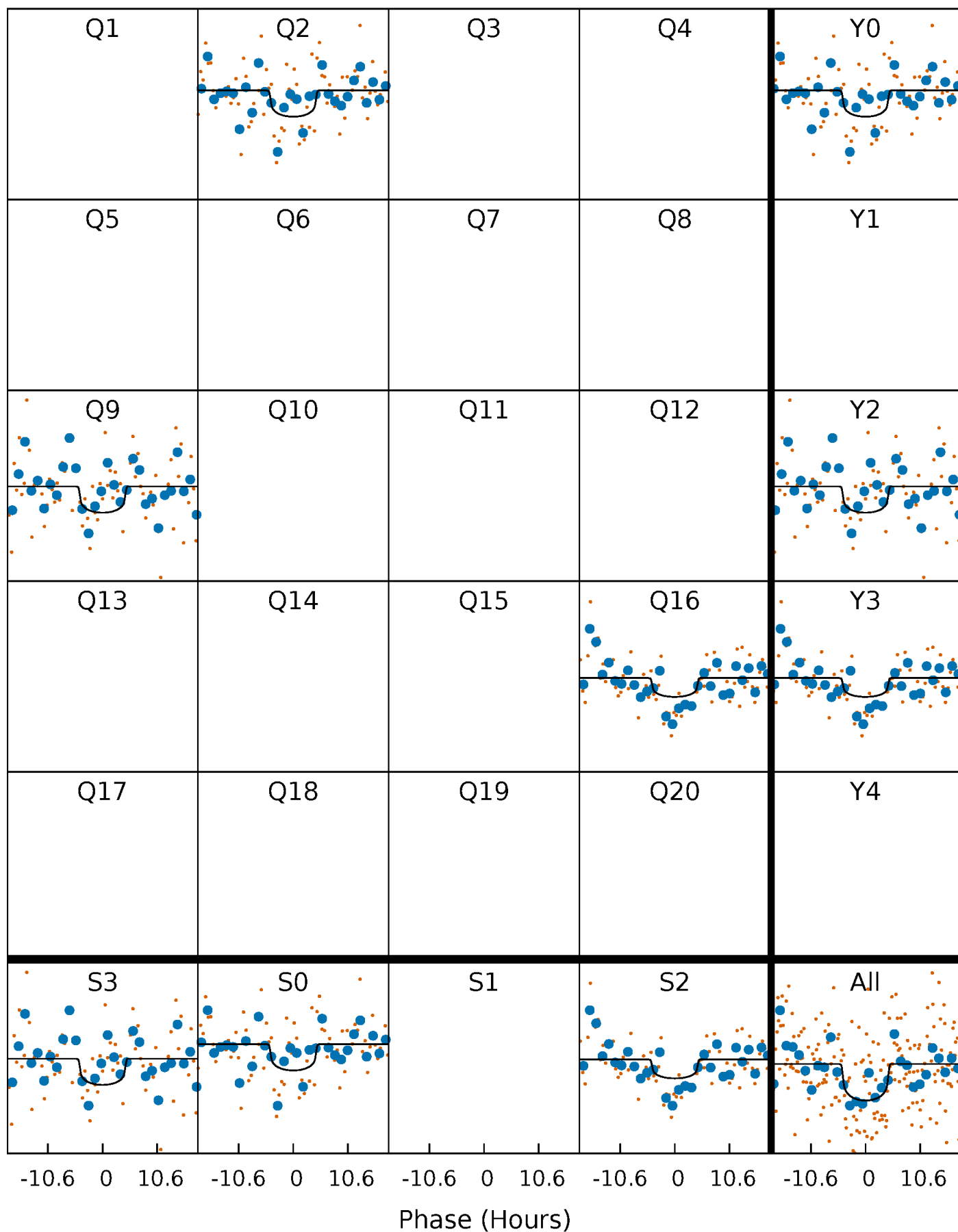
PDC Quarter-Phased Transit Curves

TCE 010798521-01 P=649.119816 Days $T_0=239.313696$ (BKJD)



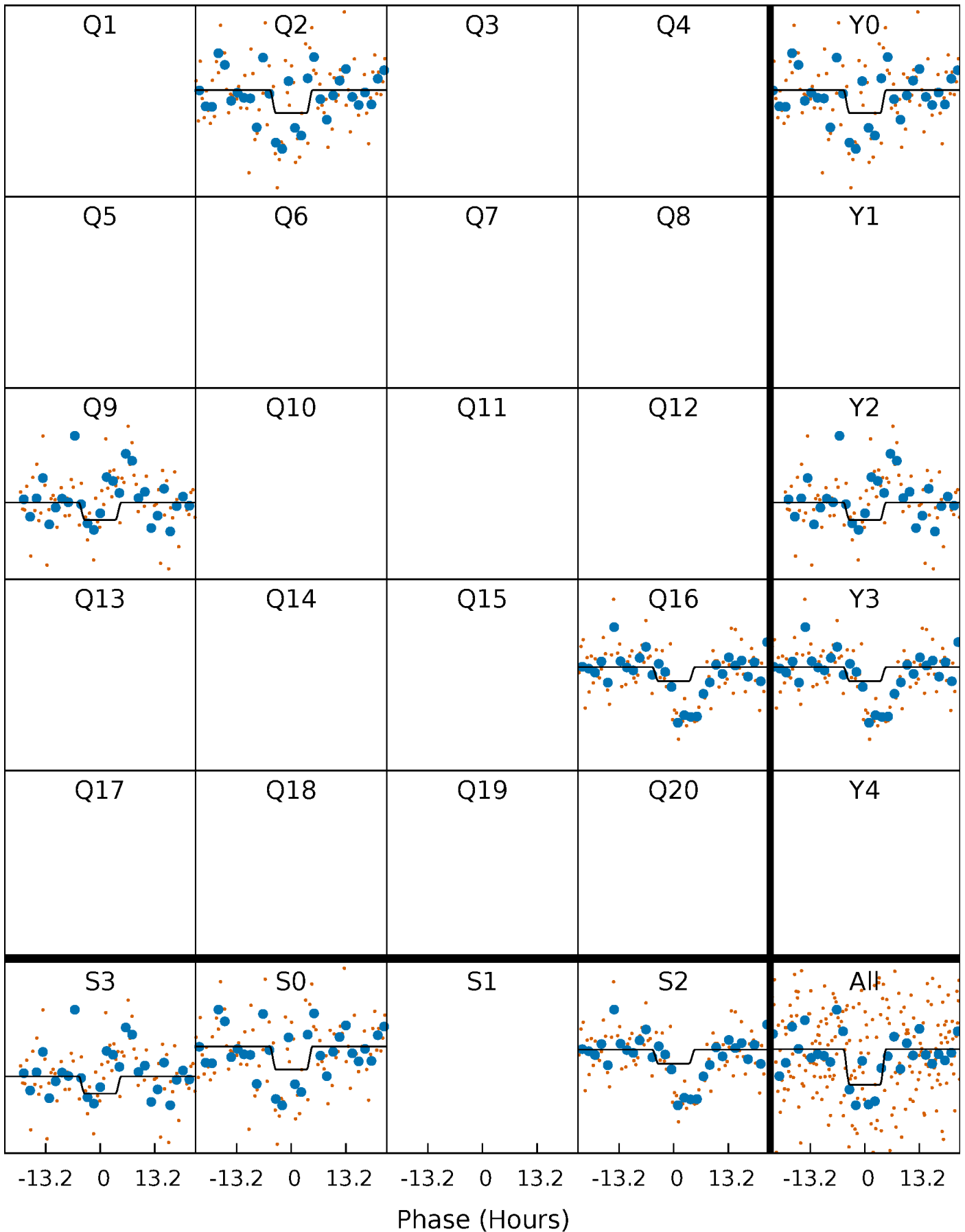
DV Quarter-Phased Transit Curves

TCE 010798521-01 P=649.119816 Days $T_0=239.313696$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

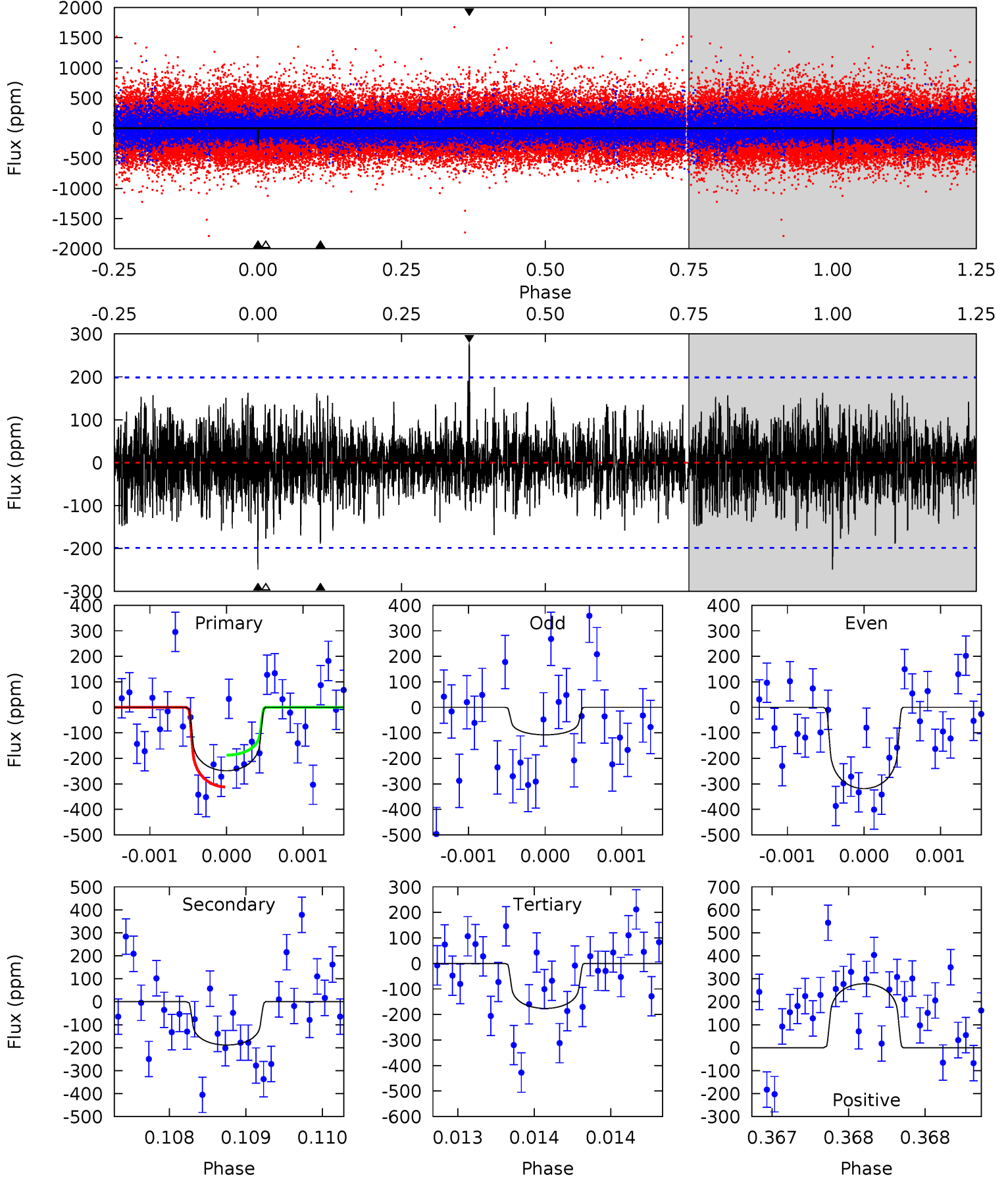
TCE 010798521-01 P=649.078845 Days $T_0=239.318323$ (BKJD)



DV Model-Shift Uniqueness Test

010798521-01, P = 649.119816 Days, E = 239.313696 Days

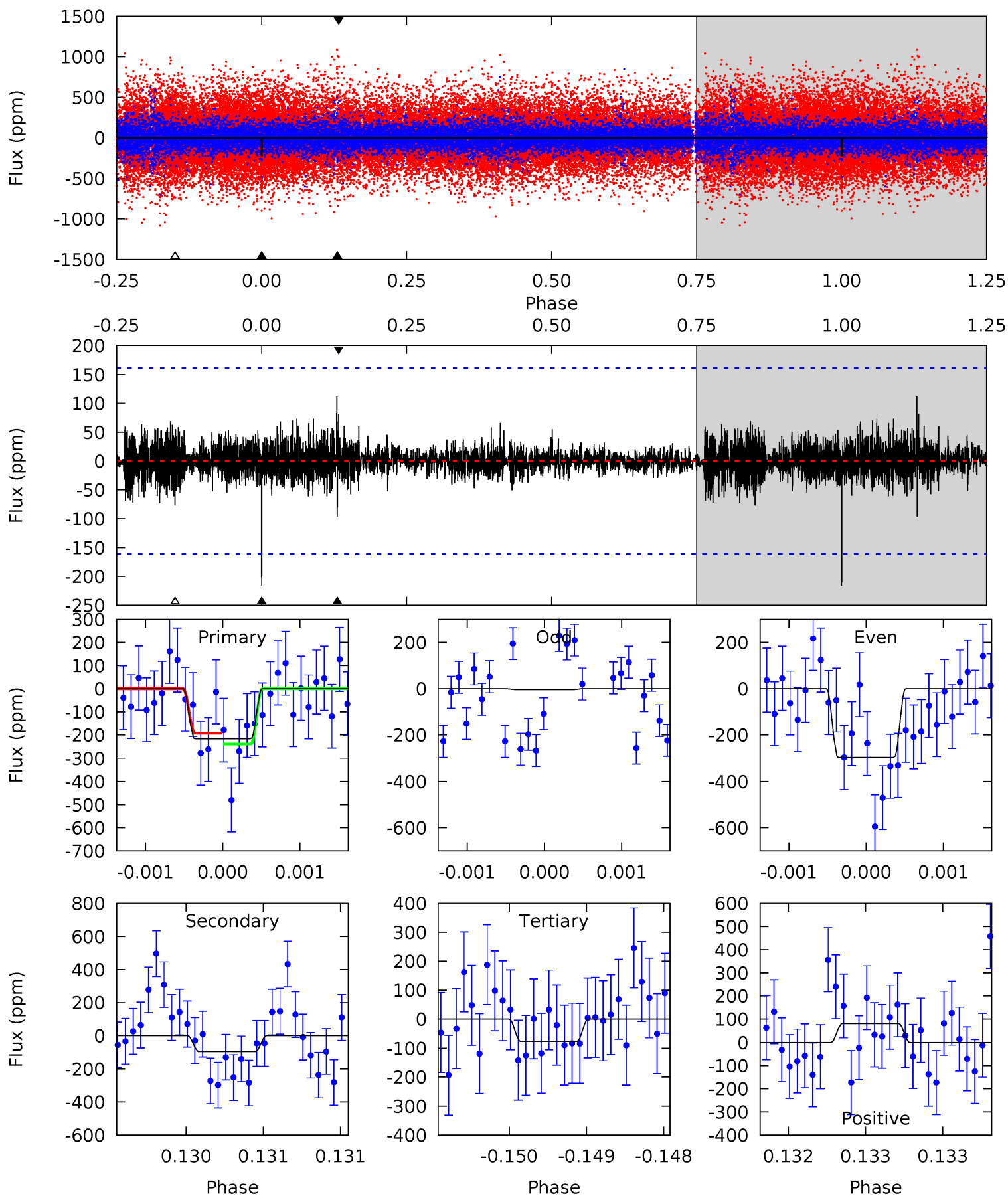
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.93	5.26	4.92	7.76	5.54	3.42	1.42	2.02	-0.83	0.34	-2.50	2.76	1.08	0.53	1.74



Alt Model-Shift Uniqueness Test

010798521-01, P = 649.078845 Days, E = 239.318323 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.41	3.30	2.63	2.79	5.53	3.41	0.58	4.77	4.61	0.66	0.50	4.69	0.85	0.34	0.81



Stellar Parameters For KIC 010798521

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3610^{+43}_{-48}	$4.797^{+0.036}_{-0.024}$	$0.000^{+0.100}_{-0.100}$	$0.448^{+0.025}_{-0.035}$	$0.460^{+0.029}_{-0.032}$	$7.186^{+1.288}_{-0.659}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+6%/-8%	+6%/-7%	+18%/-9%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010798521-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-189 ± 36	$1.09^{+0.89}_{-0.70}$	140^{+2}_{-3}	3104^{+1283}_{-480}	$112375^{+811775}_{-80656}$
Alt.	-96 ± 29	$1.02^{+0.83}_{-0.70}$	140^{+2}_{-2}	2872^{+1318}_{-429}	$63158^{+637323}_{-44995}$

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

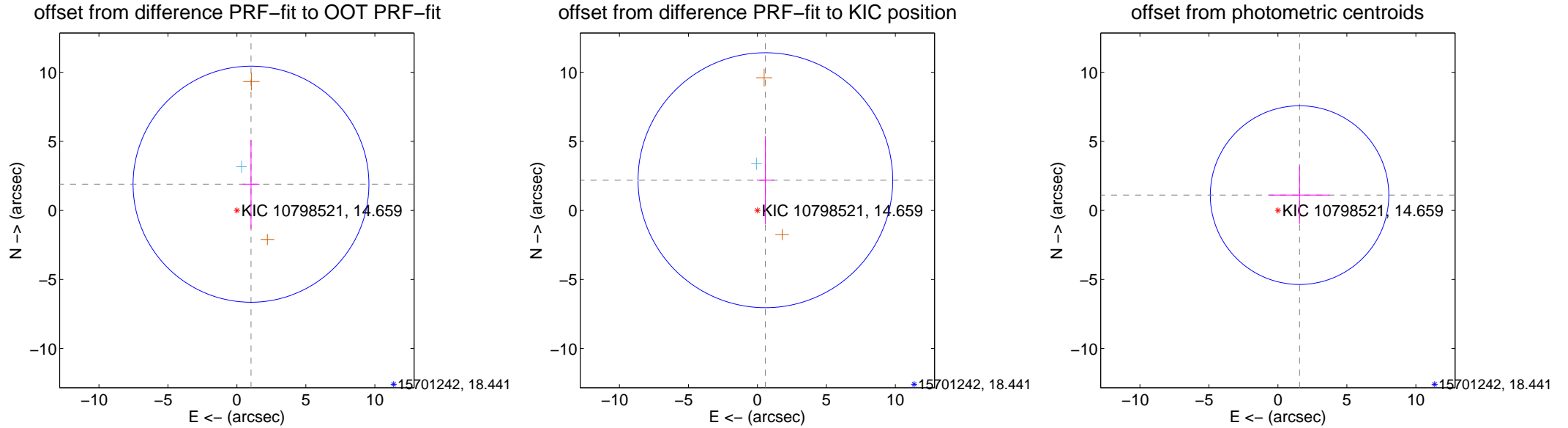
DV Centroid Data

Supplemental centroid analysis for 010798521-01. Kepler magnitude: 14.66. Transit SNR 3.98

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

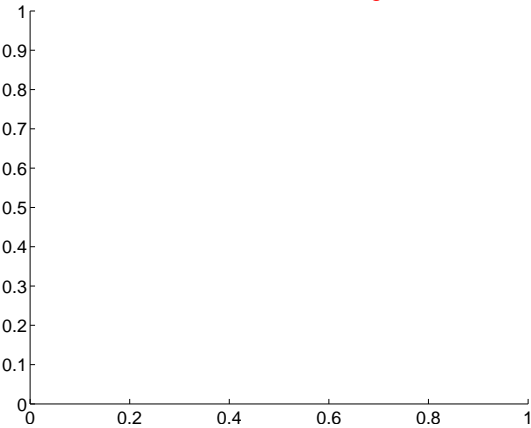
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.154 ± 2.848	0.76	-1.022 ± 0.619	1.896 ± 3.218
PRF-fit source offset from KIC position	2.260 ± 3.076	0.73	-0.579 ± 0.620	2.185 ± 3.177
photometric centroid source offset	1.92 ± 2.16	0.89	-1.57 ± 2.19	1.11 ± 2.08



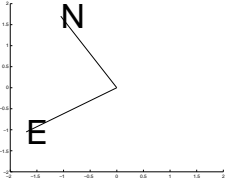
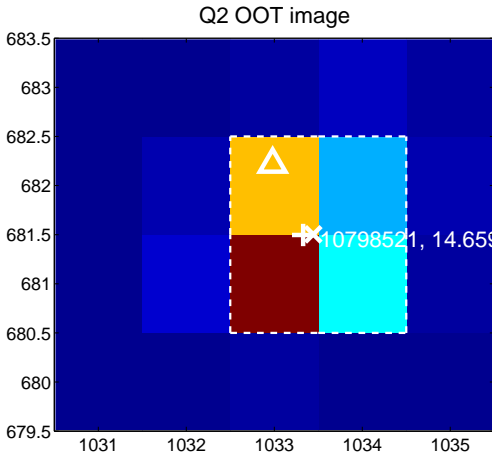
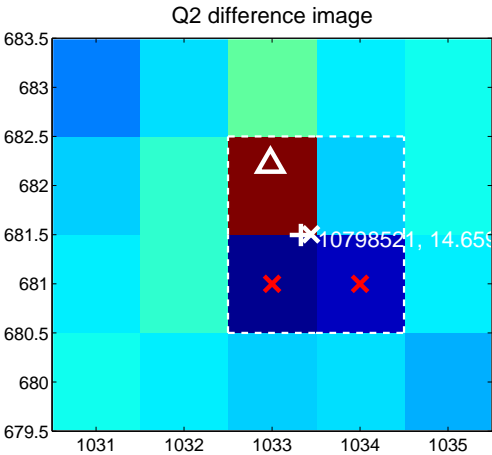
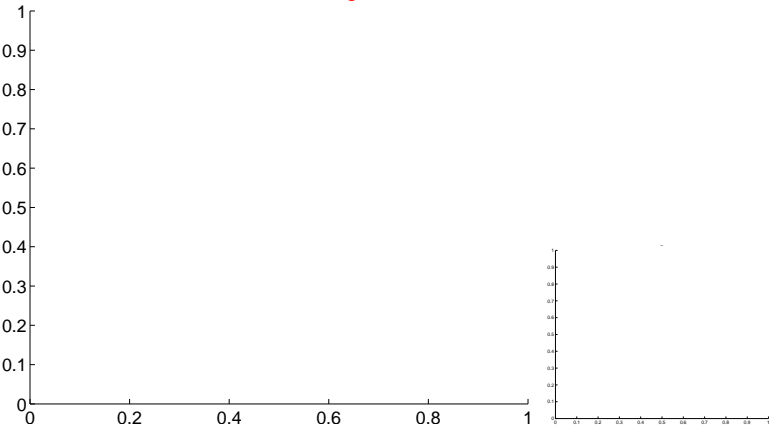
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

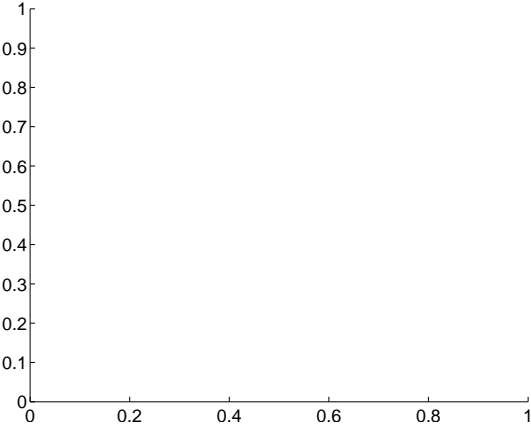
Q1 no difference image



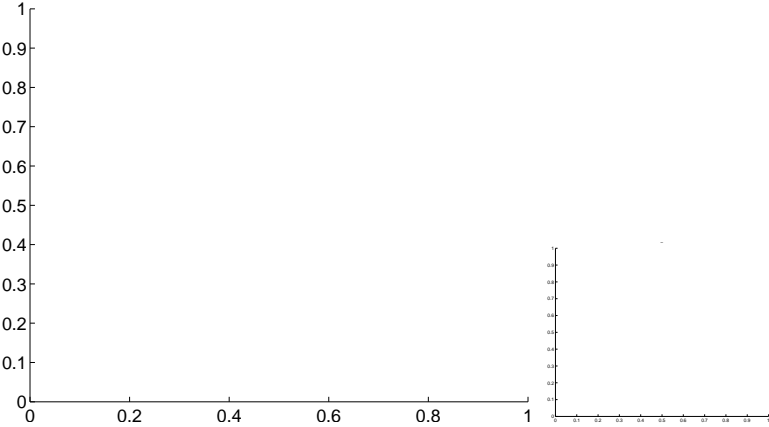
Q1 no OOT image



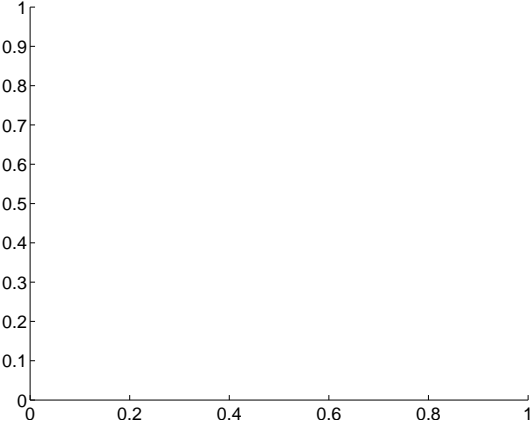
Q3 no difference image



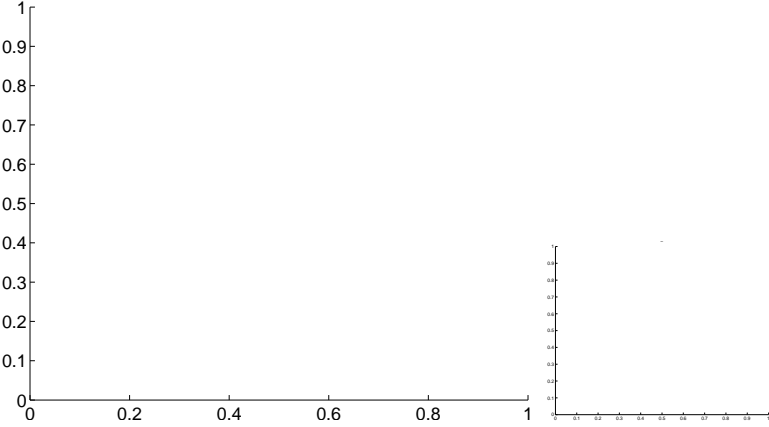
Q3 no OOT image



Q4 no difference image



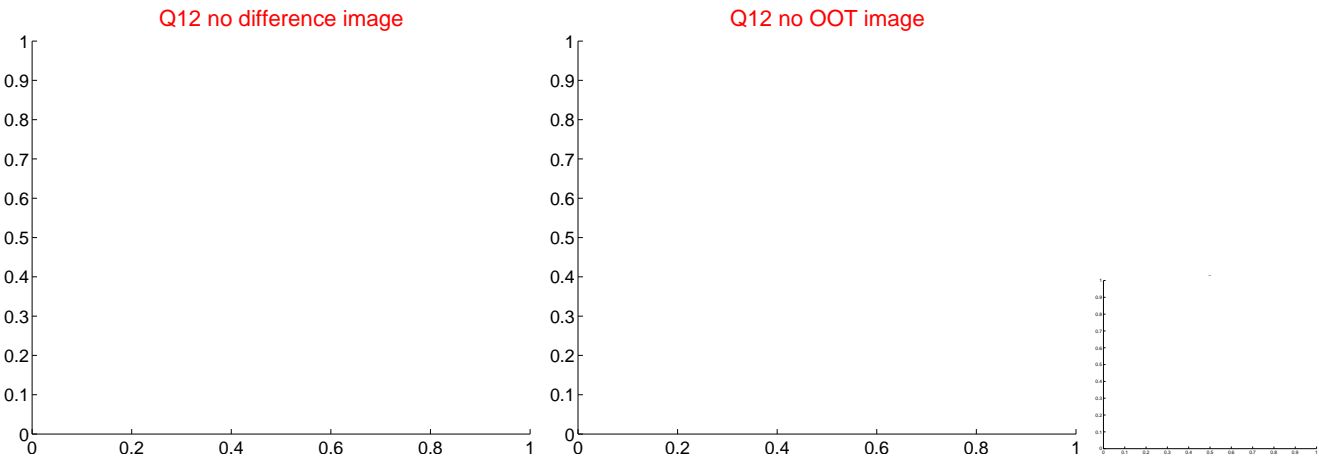
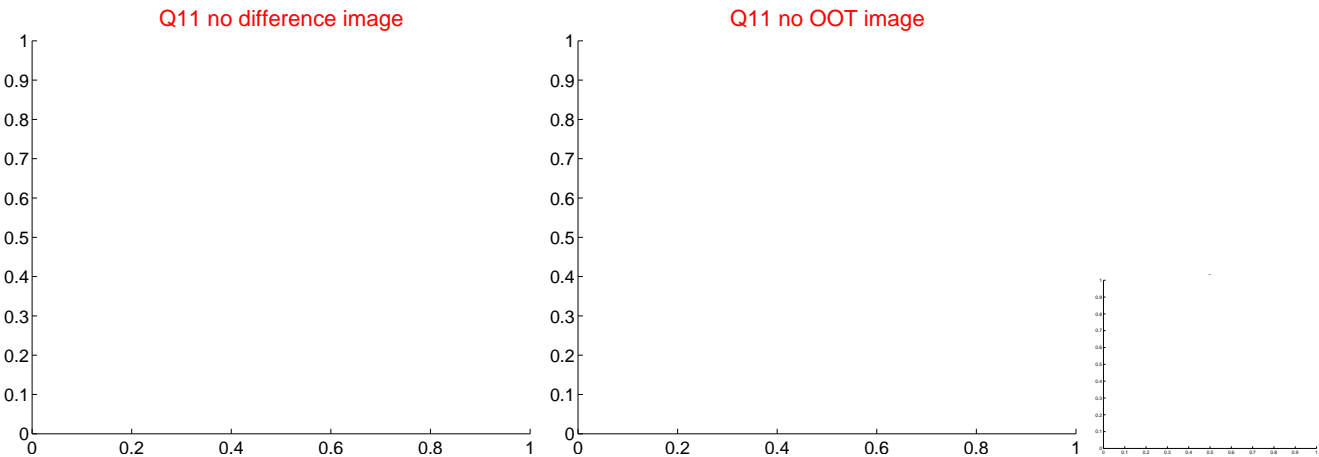
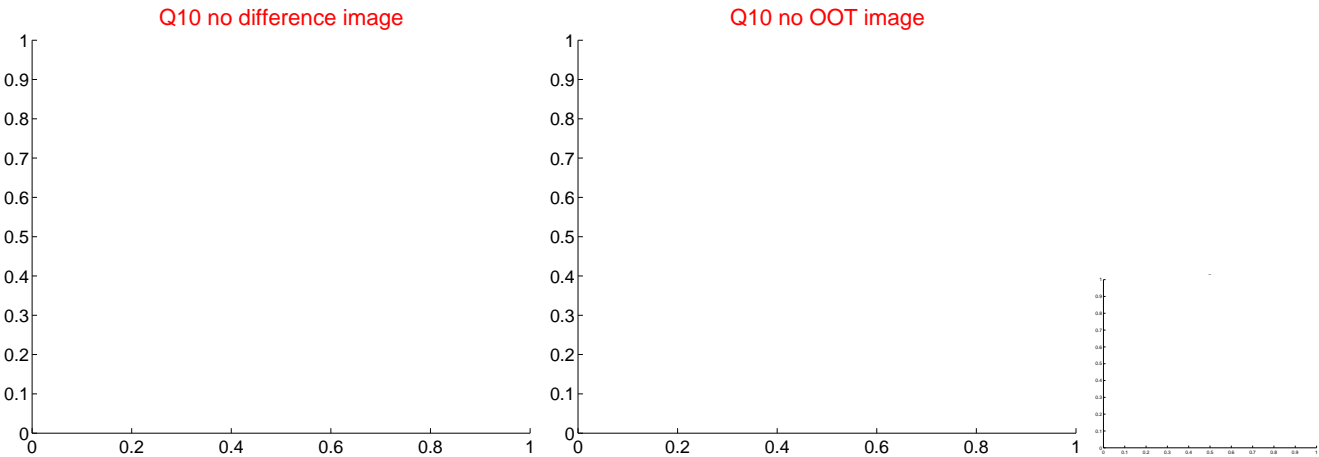
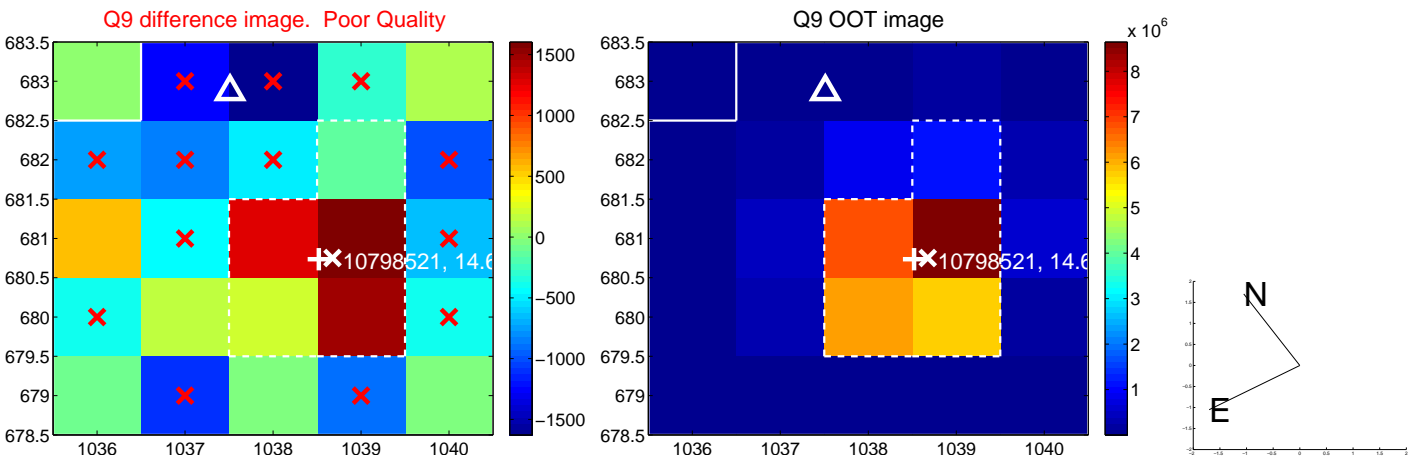
Q4 no OOT image



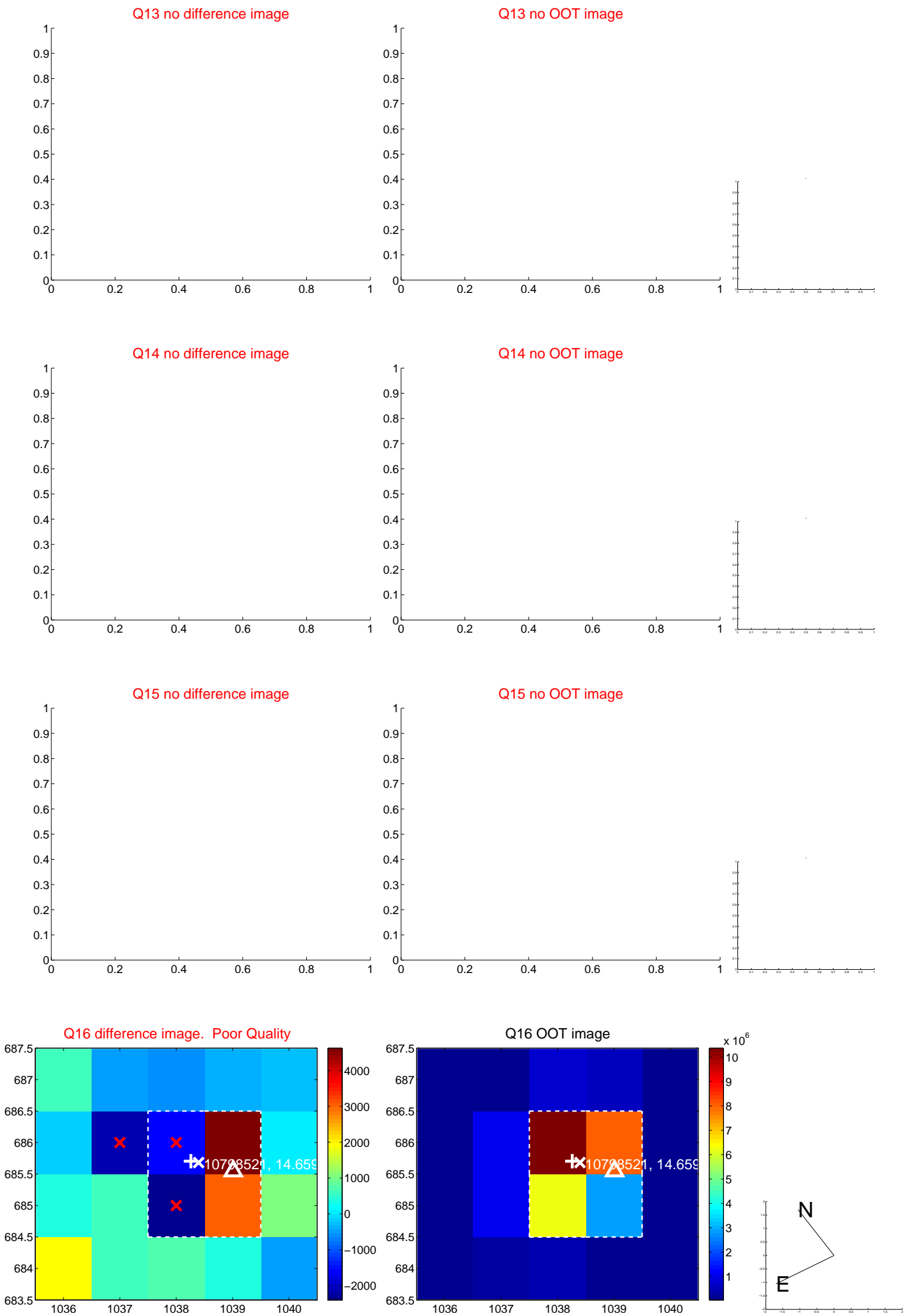
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



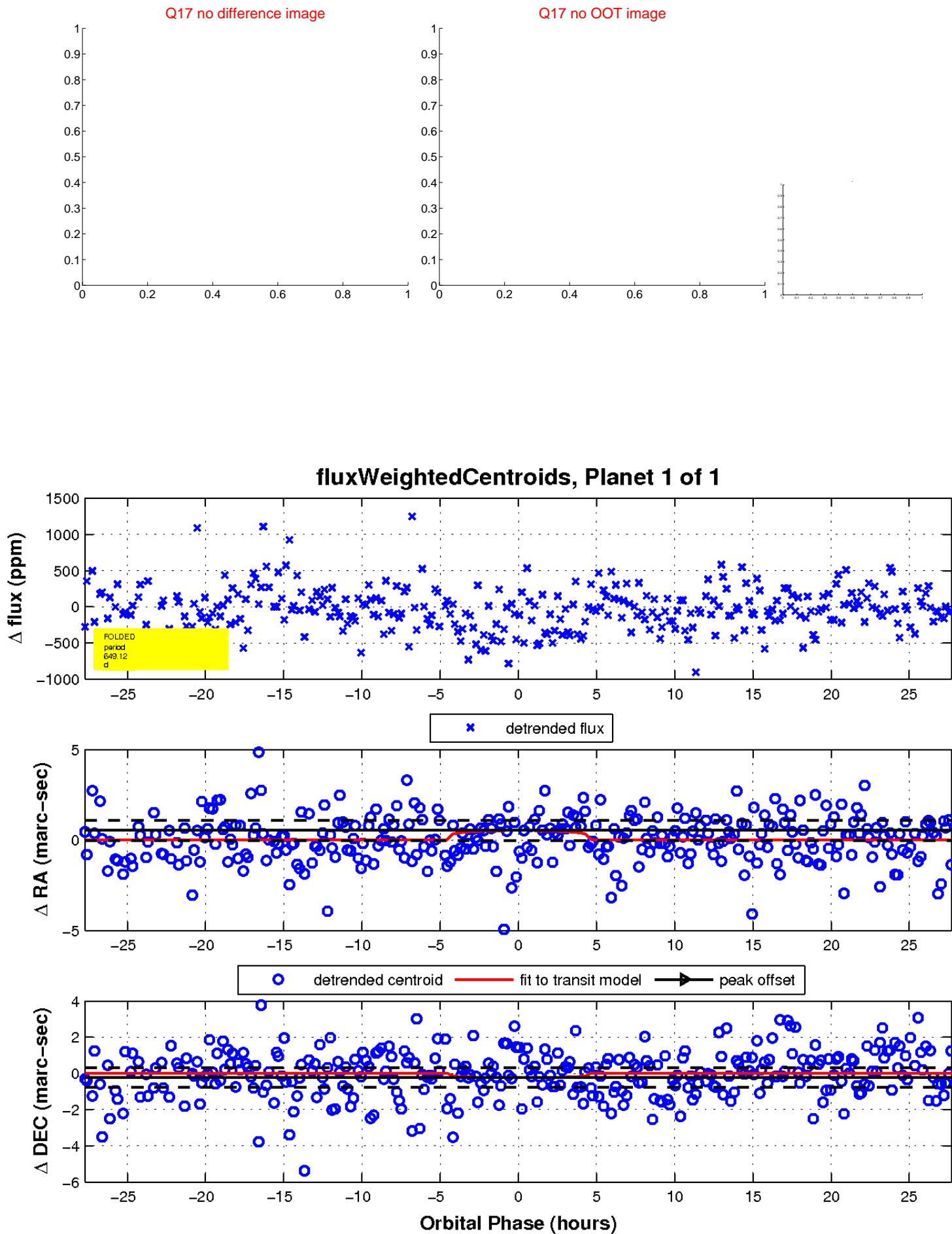
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

