

KIC 004847602

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})
004847602-01	OBS	No	108.674028	198.549343	26.6	22.423	15.7	1.0	300.75	3287	162.18	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004847602-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

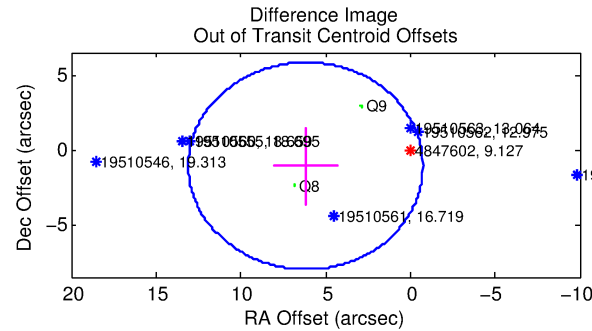
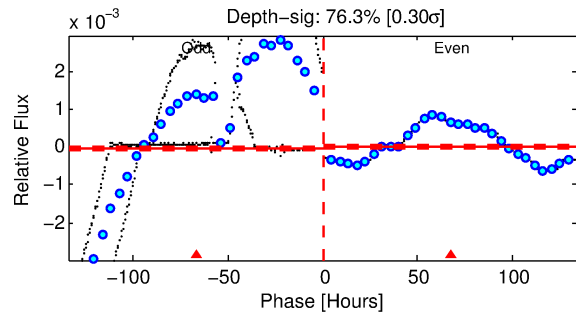
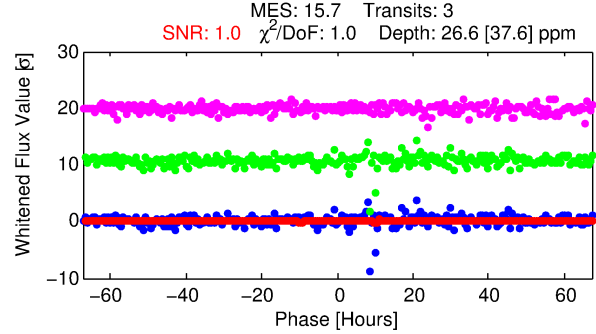
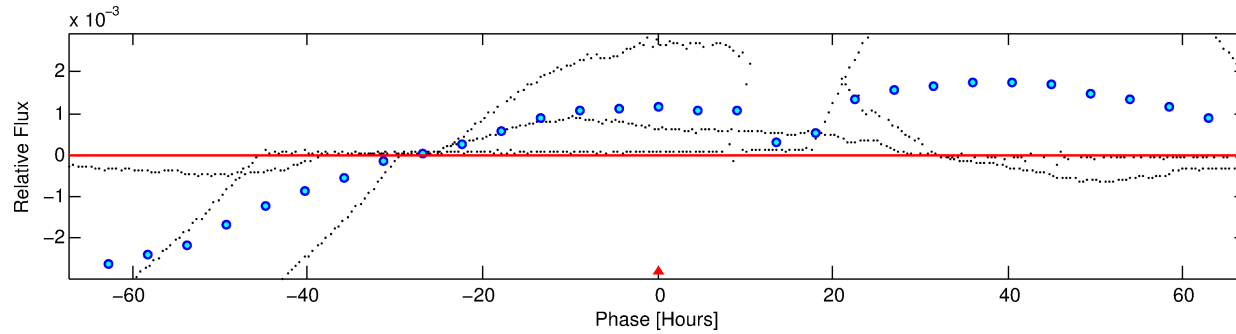
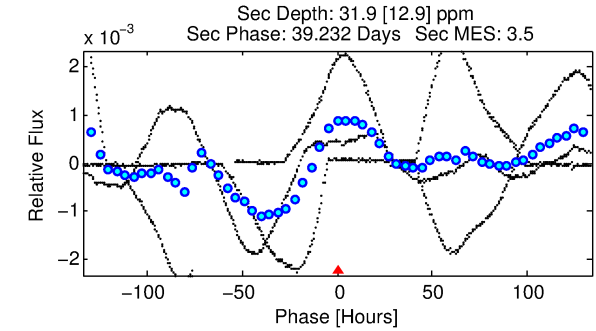
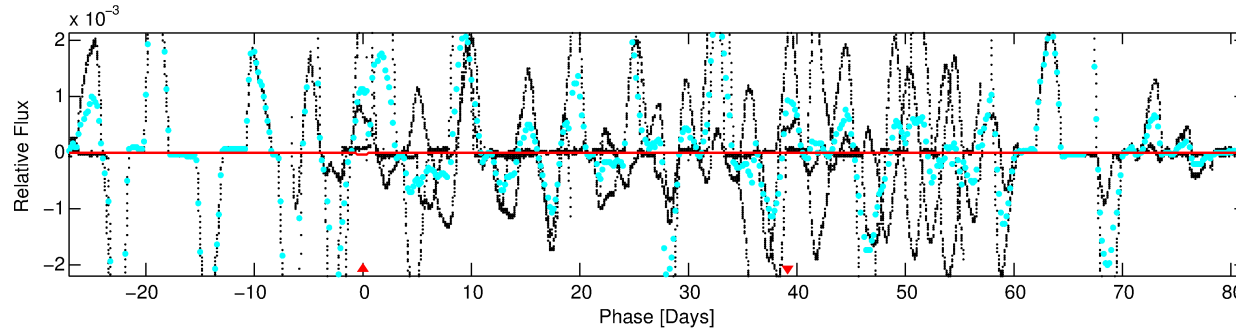
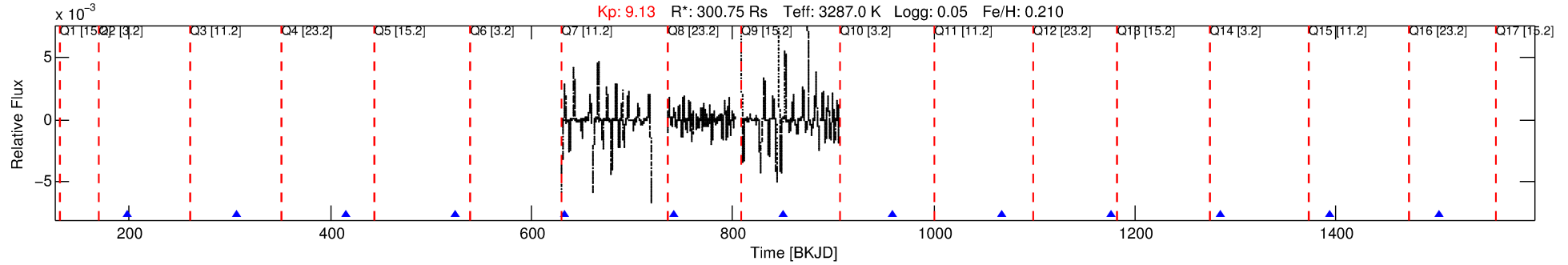
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004847602-01

No Significant Match Found

DV One-Page Summary

KIC: 4847602 Candidate: 1 of 1 Period: 108.674 d



DV Fit Results:

Period = 108.67403 [0.02773] d
Epoch = 198.5493 [0.1626] BKJD
Rp/R* = 0.0049 [0.0046]
a/R* = 28.09 [65.17]
b = 0.66 [2.03]
Seff = N/A
Teq = N/A
Rp = 162.18 [178.64] Re
a = N/A
Ag = N/A
Teffp = N/A

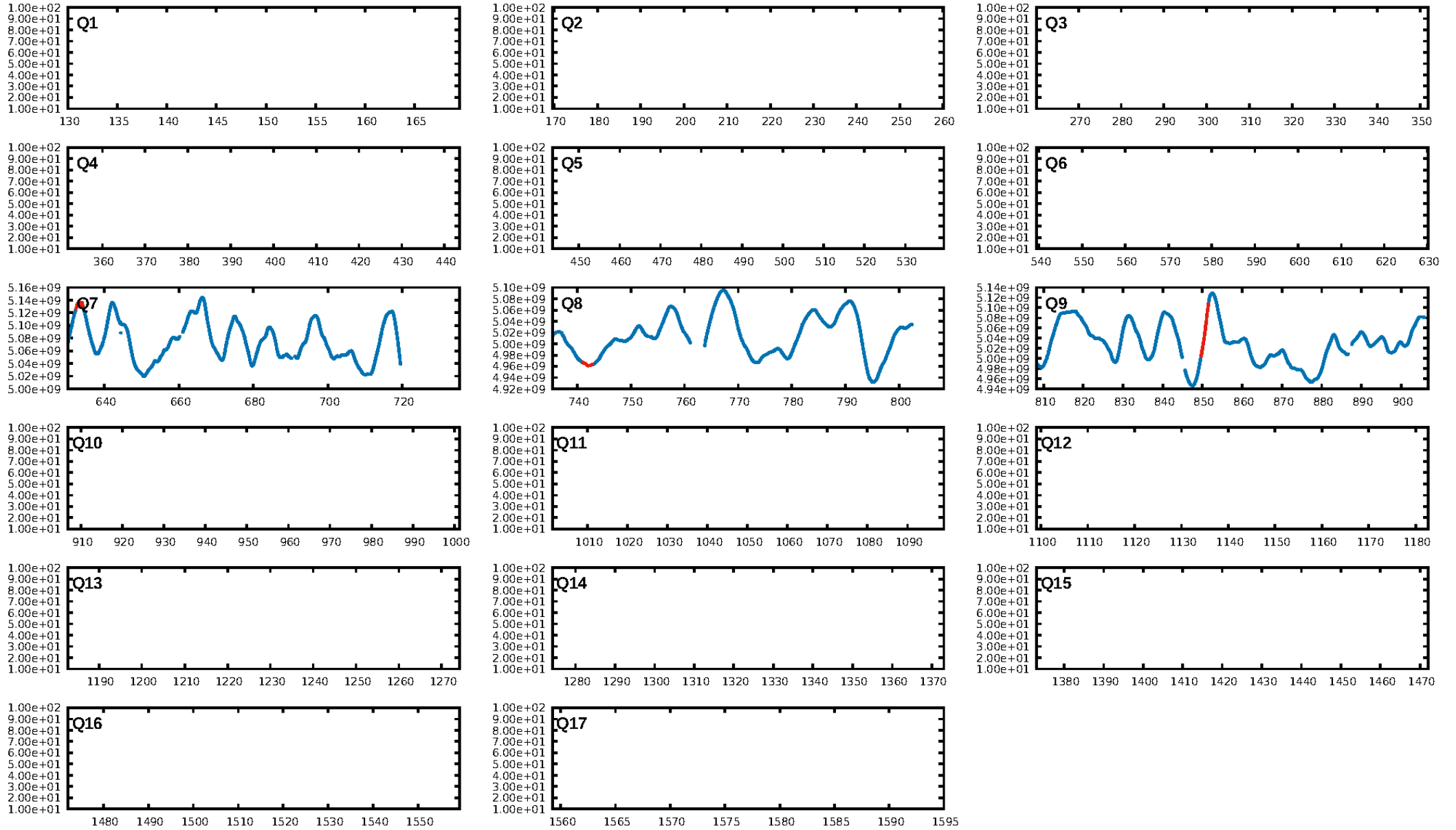
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.5%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 7.05e-33
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 90.188 arcsec [1.92σ]
OotOffset-rm: 6.262 arcsec [2.72σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 5.294 arcsec [6.38σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

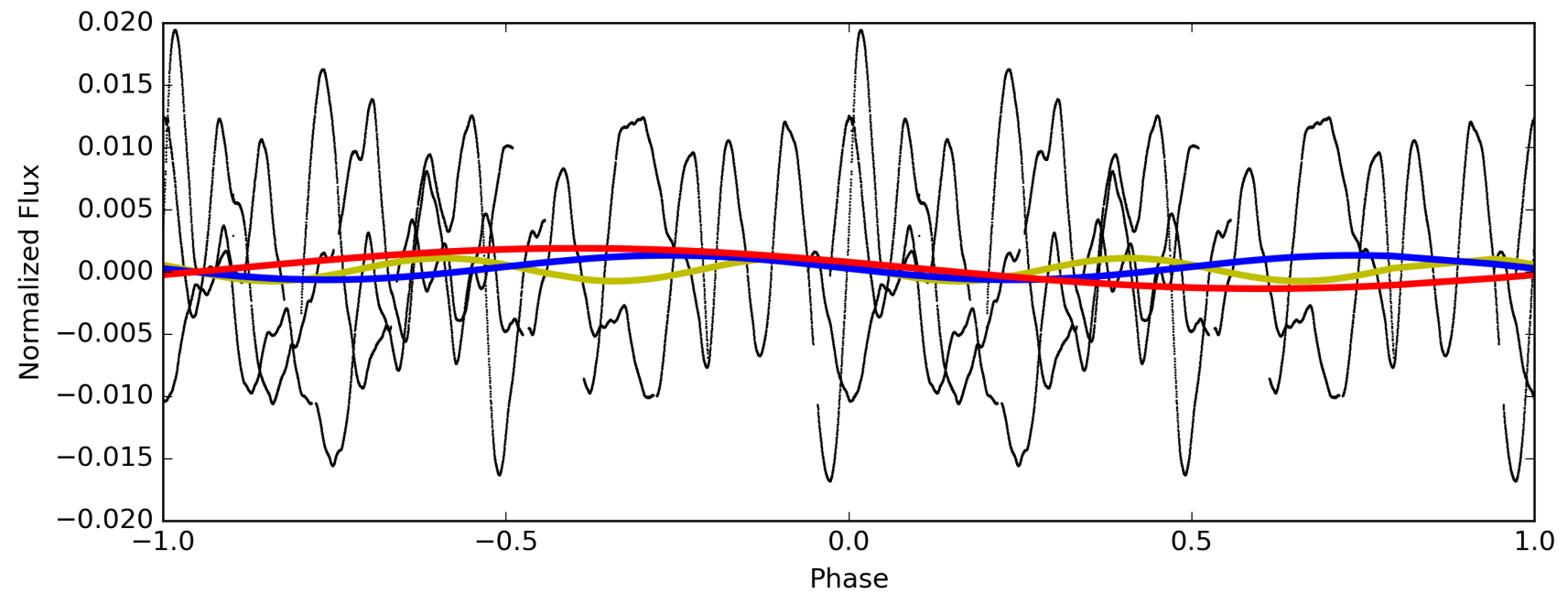
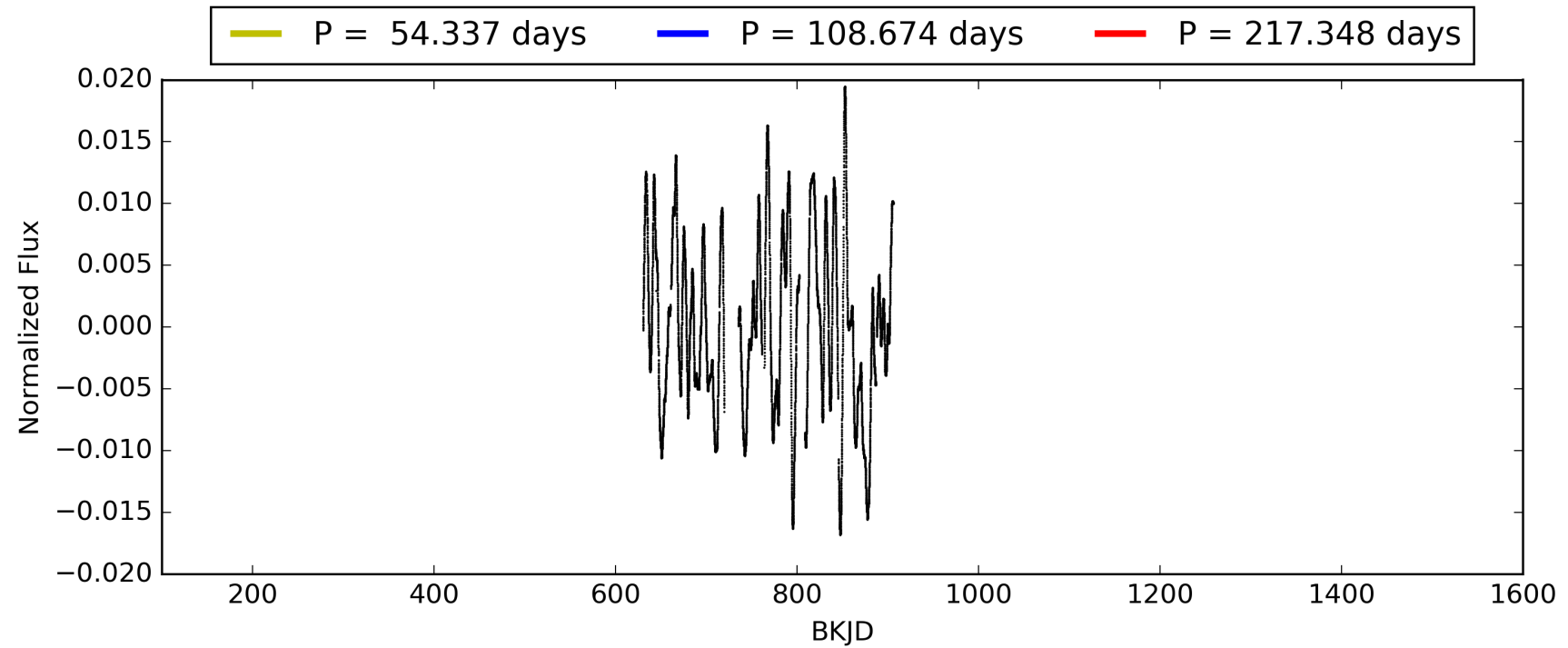
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:57:45 Z

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

TCE 004847602-01, PDC Light Curves

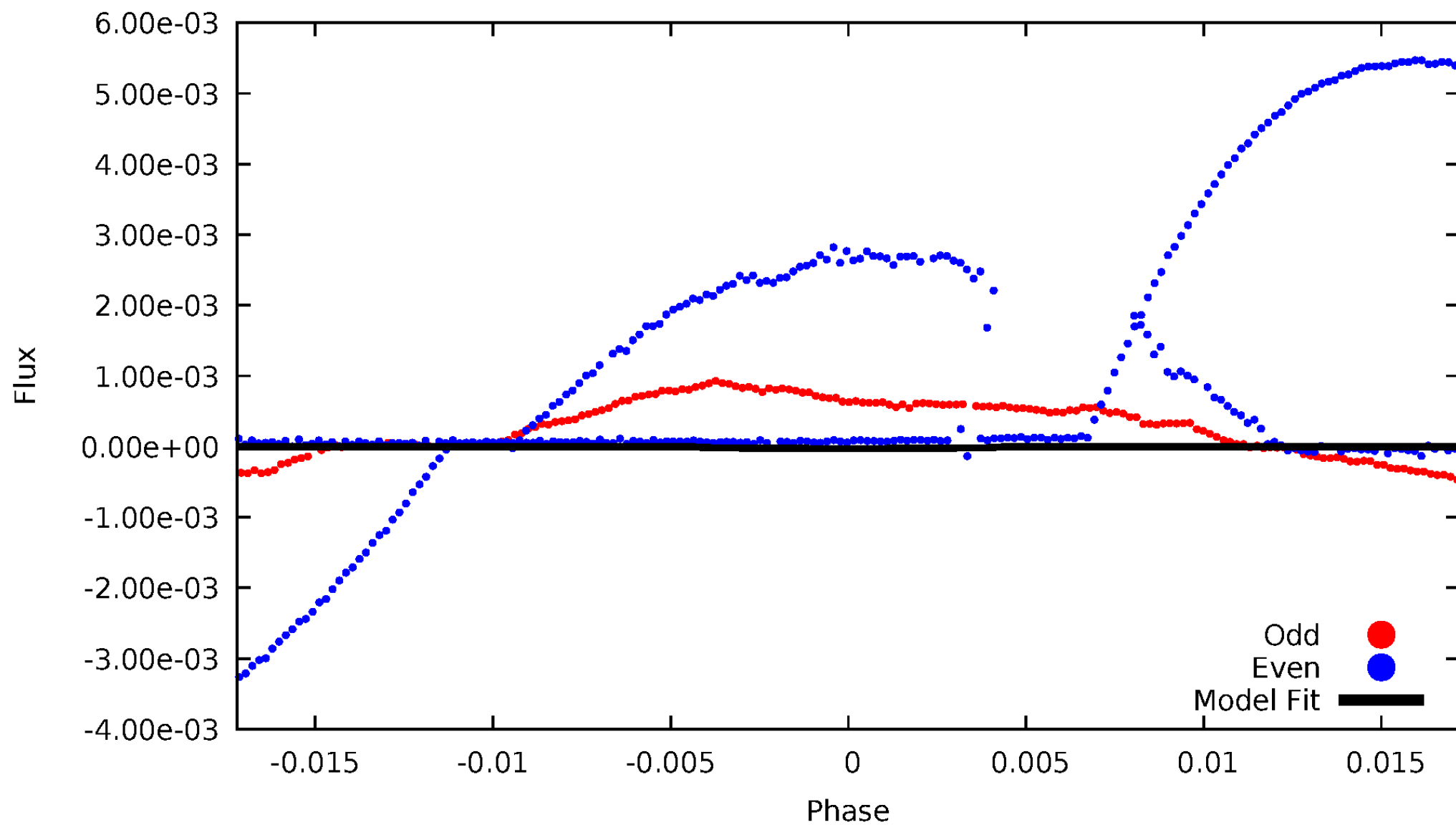


TCE 004847602-01



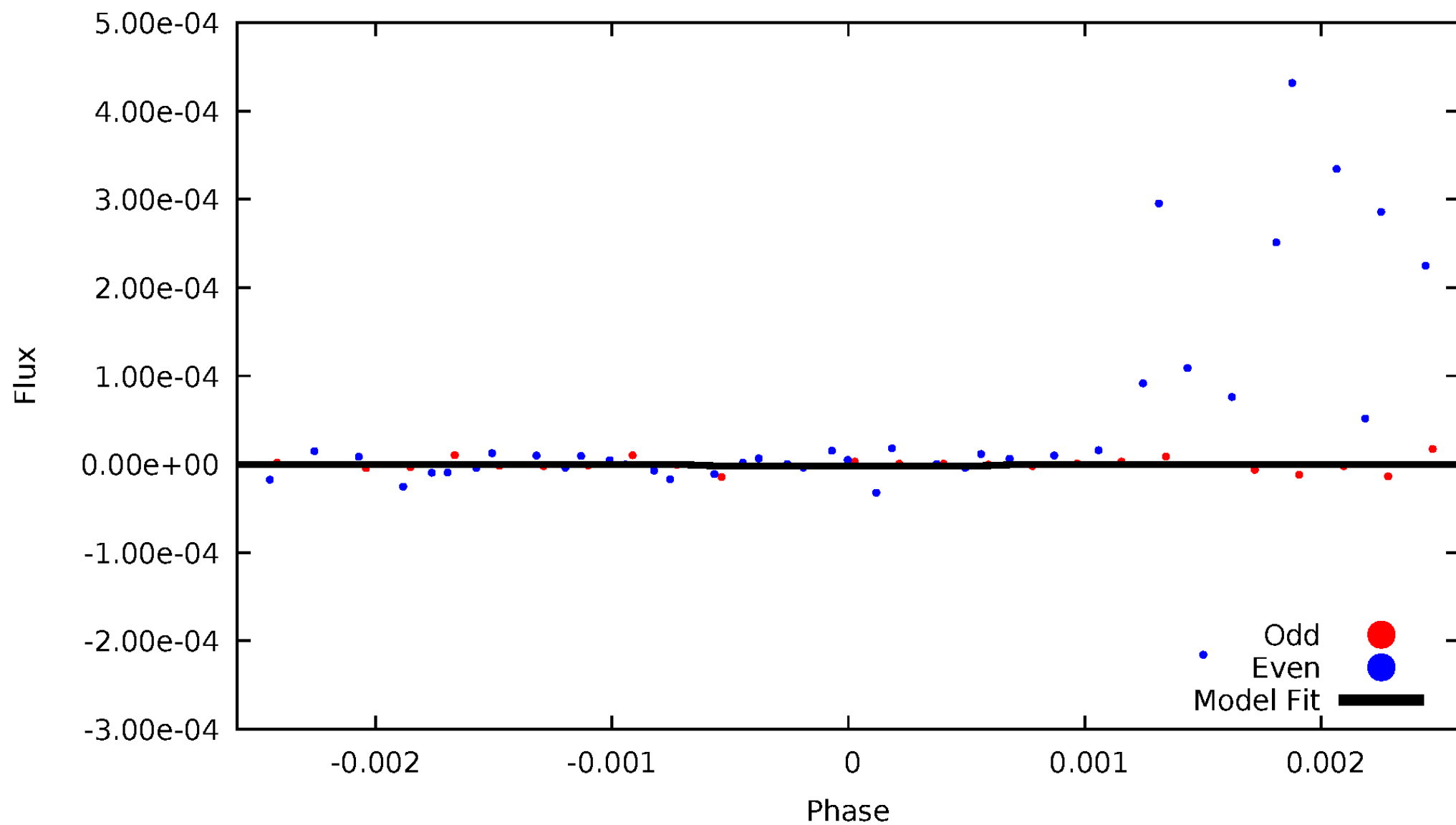
DV Odd/Even

TCE 004847602-01



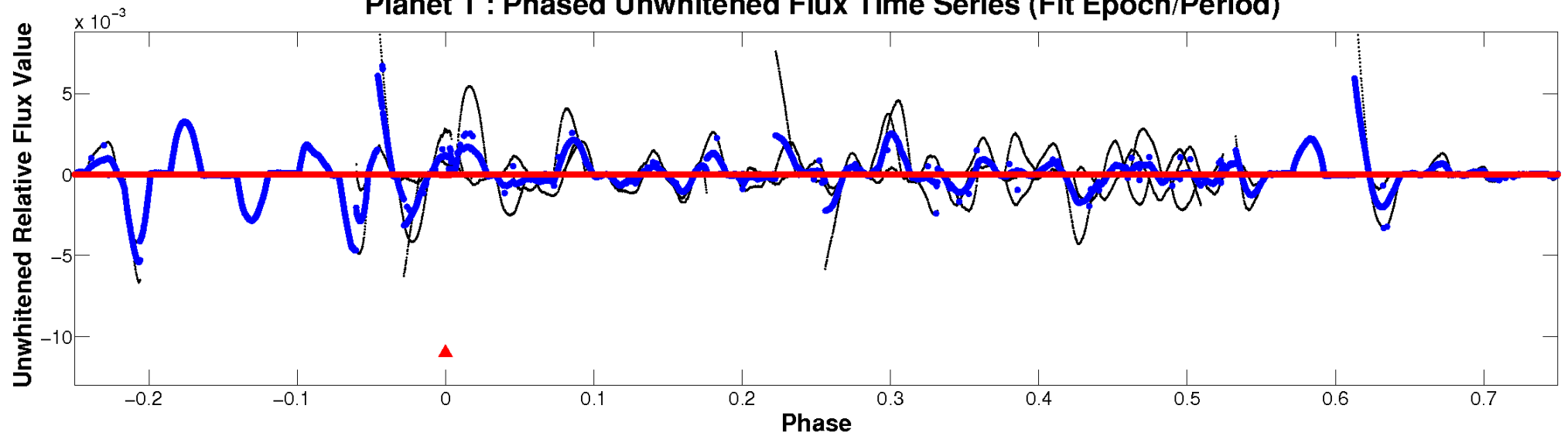
ALT Odd/Even

TCE 004847602-01

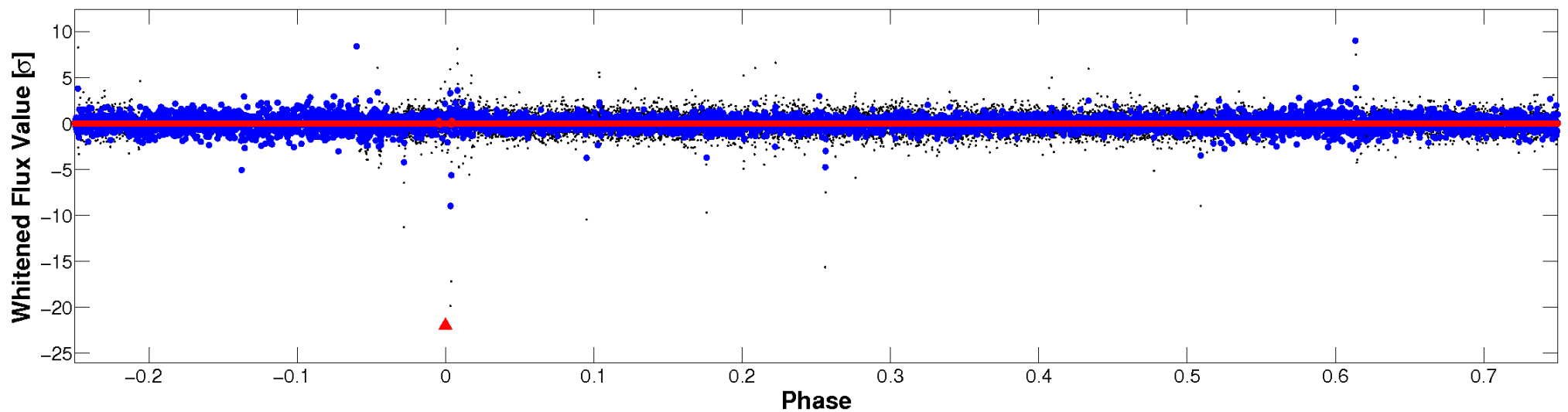


Non-Whitened Vs. Whitened Light Curve

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

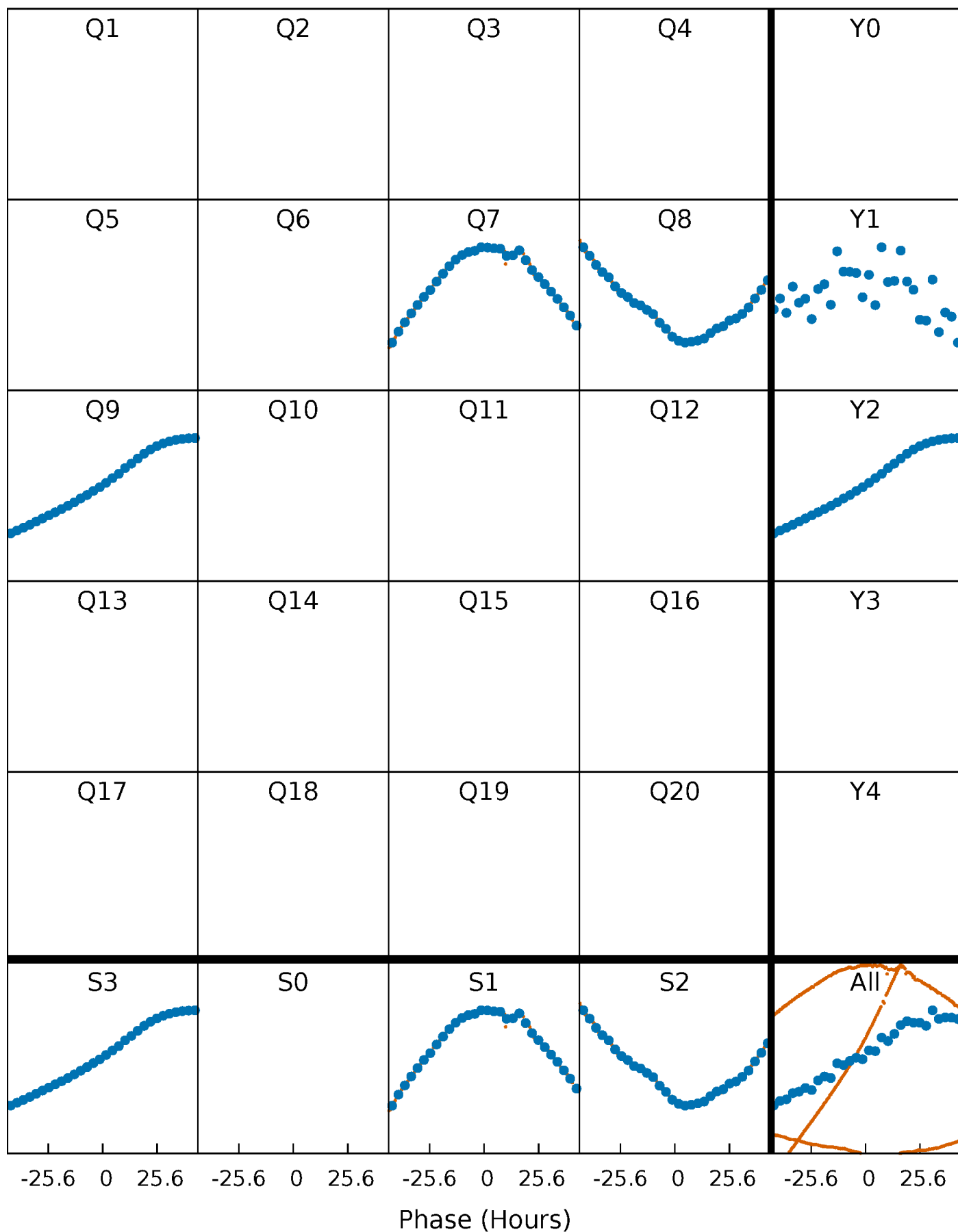


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



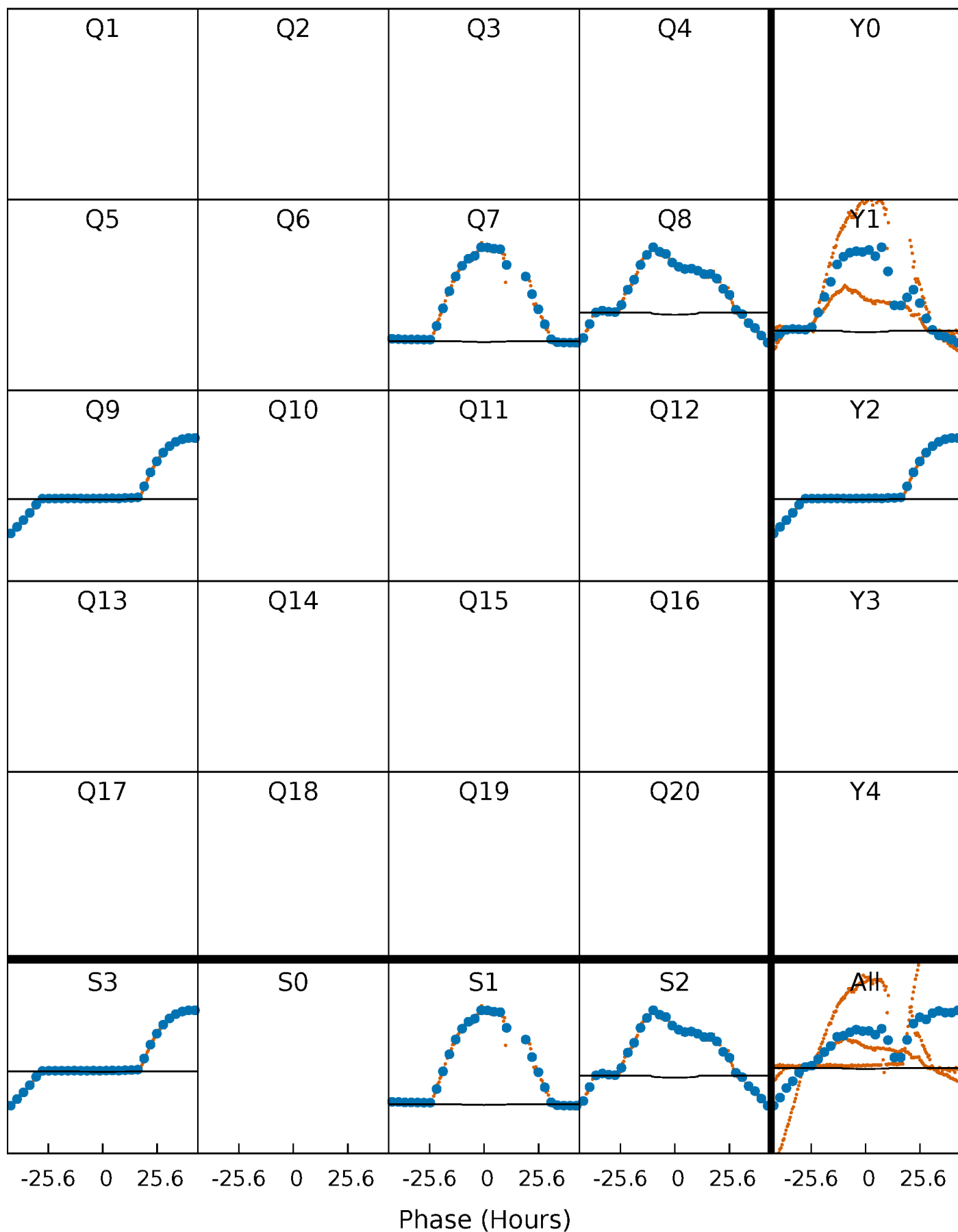
PDC Quarter-Phased Transit Curves

TCE 004847602-01 P=108.674028 Days $T_0=198.549343$ (BKJD)



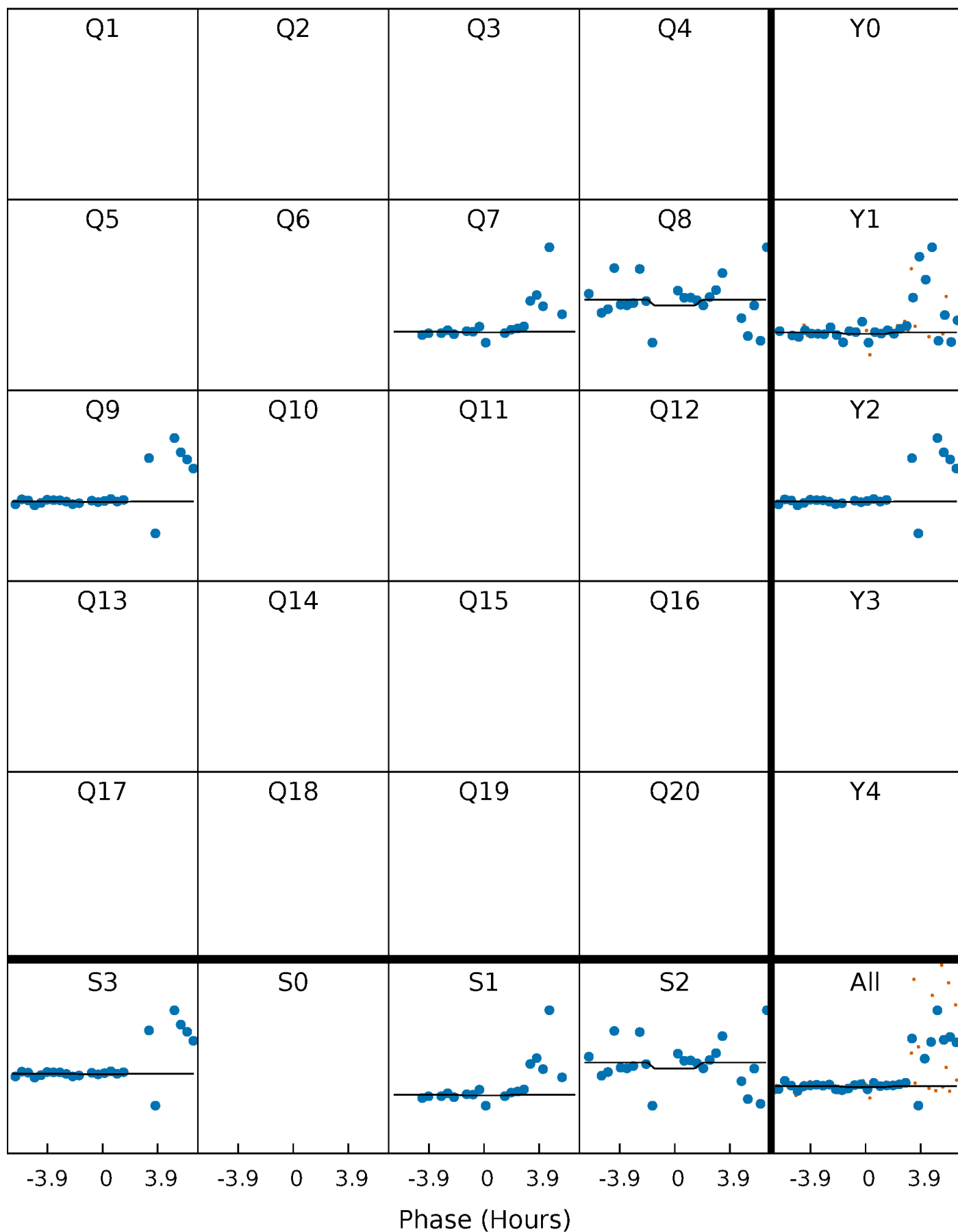
DV Quarter-Phased Transit Curves

TCE 004847602-01 P=108.674028 Days $T_0=198.549343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

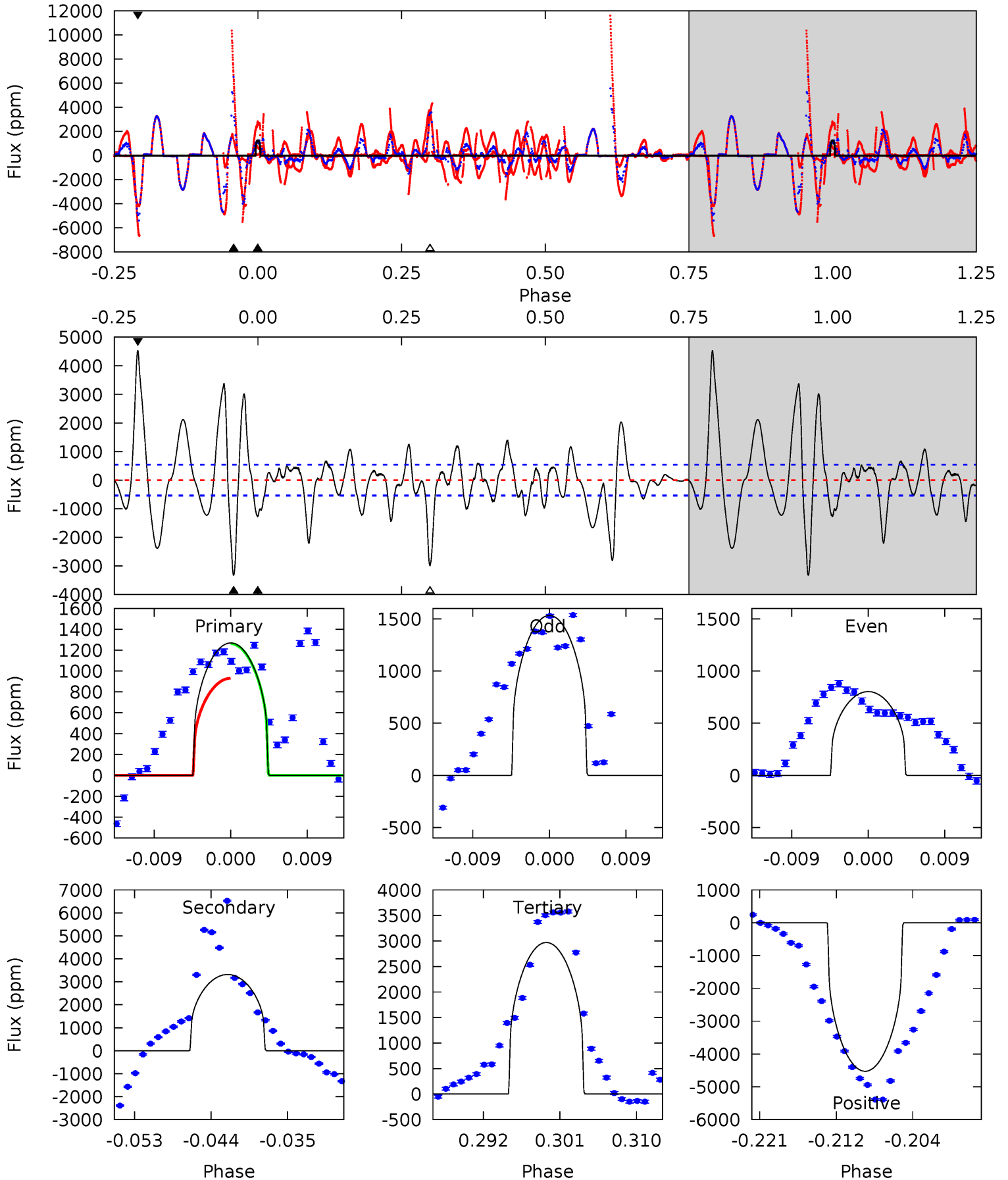
TCE 004847602-01 P=108.671075 Days $T_0=198.768108$ (BKJD)



DV Model-Shift Uniqueness Test

004847602-01, P = 108.674028 Days, E = 198.549343 Days

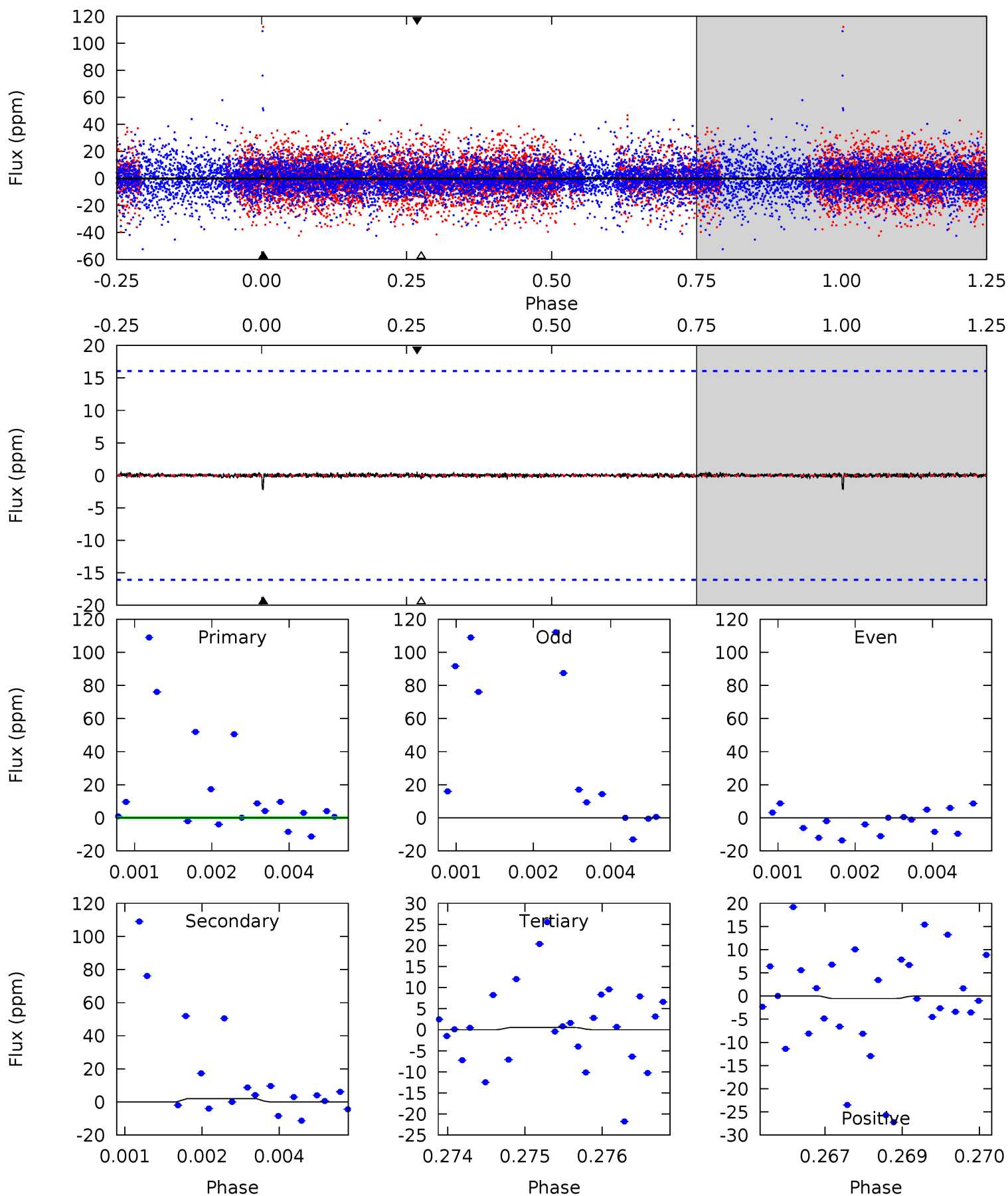
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	31.2	27.9	42.5	5.05	2.62	8.91	-16.0	-30.6	3.27	-11.4	3.41	1.59	0.58	1.40



Alt Model-Shift Uniqueness Test

004847602-01, P = 108.671075 Days, E = 198.768108 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.70	0.69	0.17	0.18	5.41	3.23	0.04	0.53	0.52	0.51	0.51	0.26	0.23	0.20	0.00



Stellar Parameters For KIC 004847602

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3287^{+114}_{-91}	$0.052^{+0.323}_{-0.057}$	$0.210^{+0.200}_{-0.250}$	$300.749^{+31.712}_{-179.702}$	$3.722^{+0.074}_{-2.501}$	$0.000^{+0.000}_{-0.000}$
	+3%/-3%	+621%/-110%	+95%/-119%	+11%/-60%	+2%/-67%	+434%/-9%
Source	KIC0	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 004847602-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3318 ± 106	$164.05^{+140.68}_{-102.69}$	4131^{+241}_{-447}	9208^{+12142}_{-2708}	30^{+172}_{-21}
Alt.	-2 ± 3	$107.58^{+105.99}_{-74.88}$	4151^{+221}_{-477}	-3236^{+5650}_{-260}	$0.027^{+0.320}_{-0.048}$

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 $A_{obs} \gg 1.0$

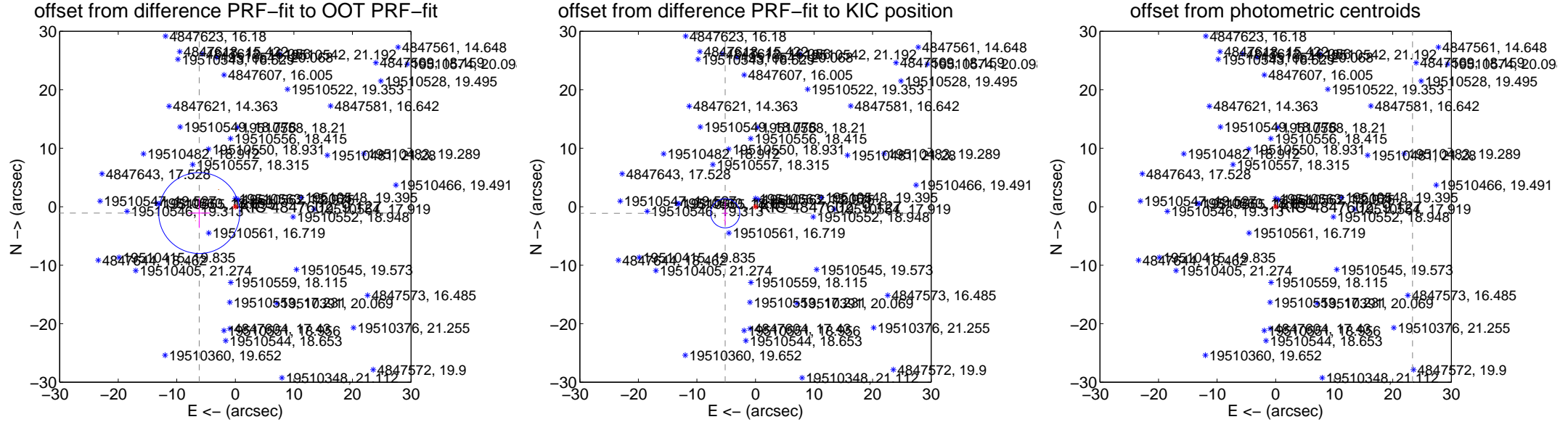
DV Centroid Data

Supplemental centroid analysis for 004847602-01. **Kepler magnitude: 9.13.** Transit SNR 1.01

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.262 ± 2.305	2.72	6.168 ± 1.894	-1.084 ± 2.545
PRF-fit source offset from KIC position	5.294 ± 0.830	6.38	5.173 ± 0.417	-1.125 ± 2.001
photometric centroid source offset	90.19 ± 47.06	1.92	-23.38 ± 31.36	-87.11 ± 48.00

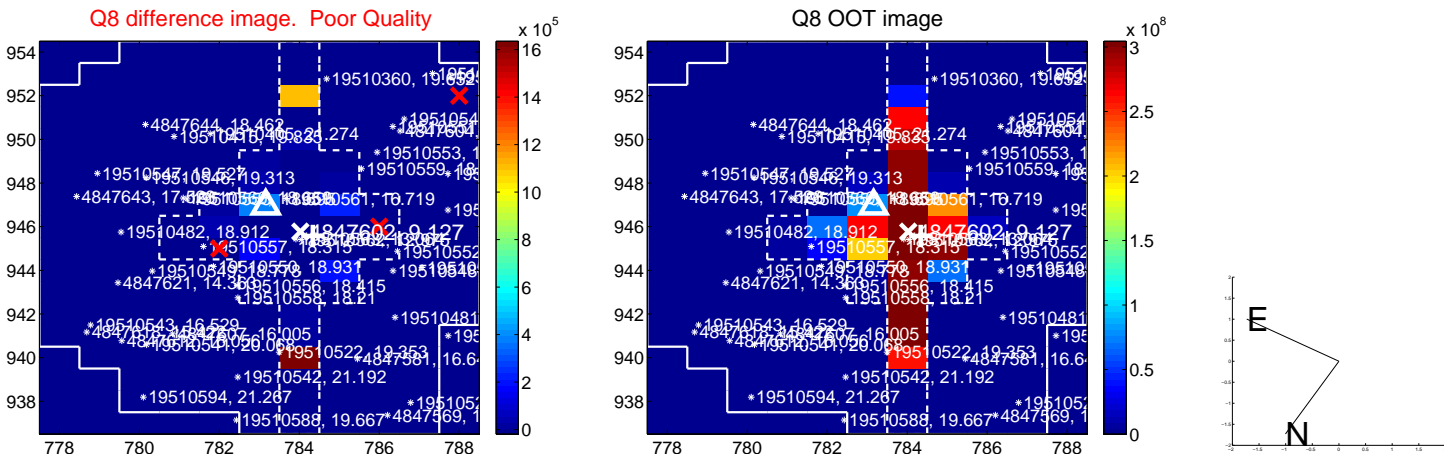
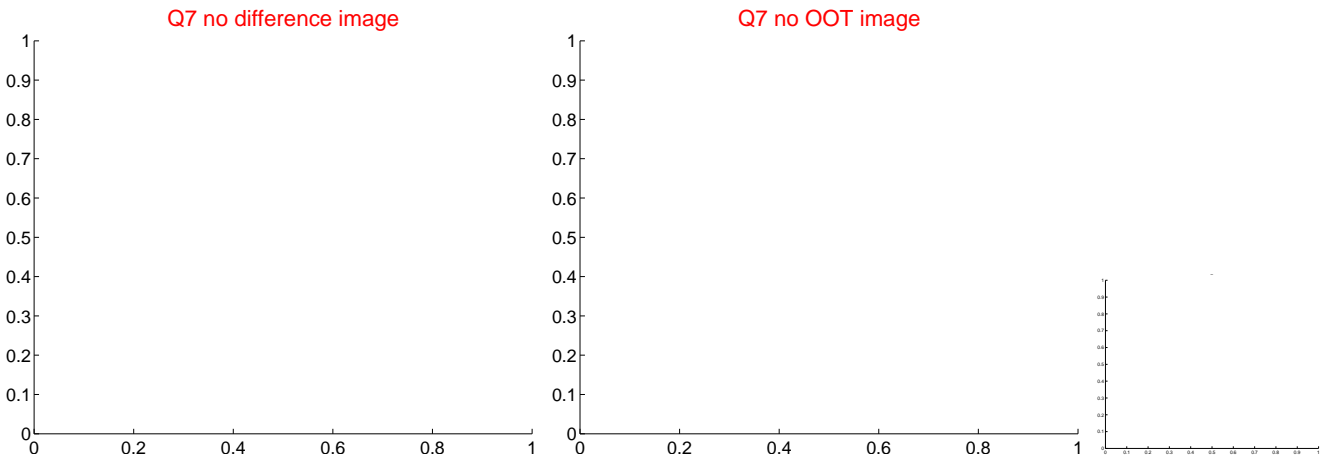
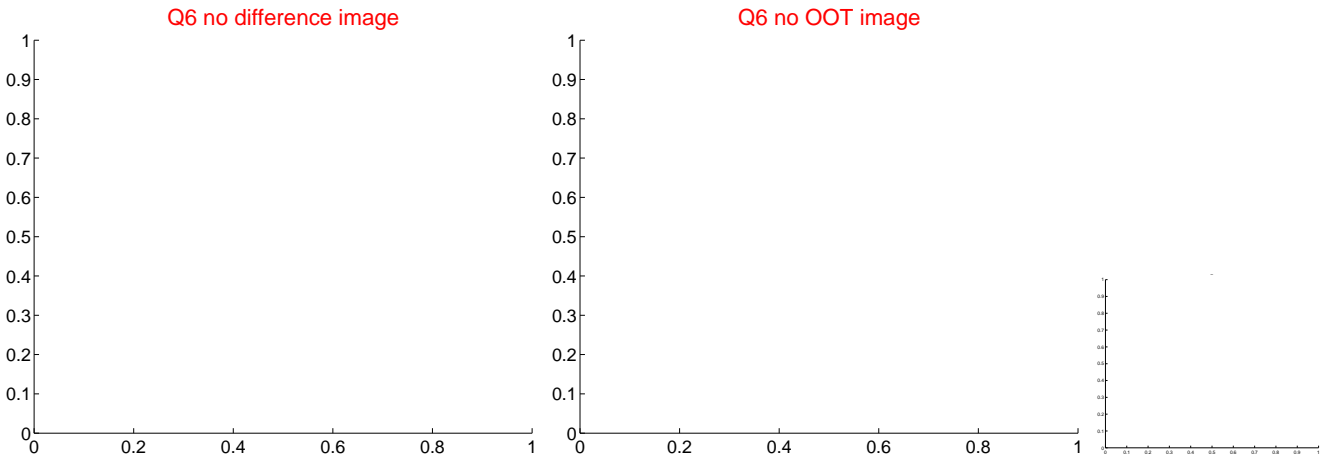
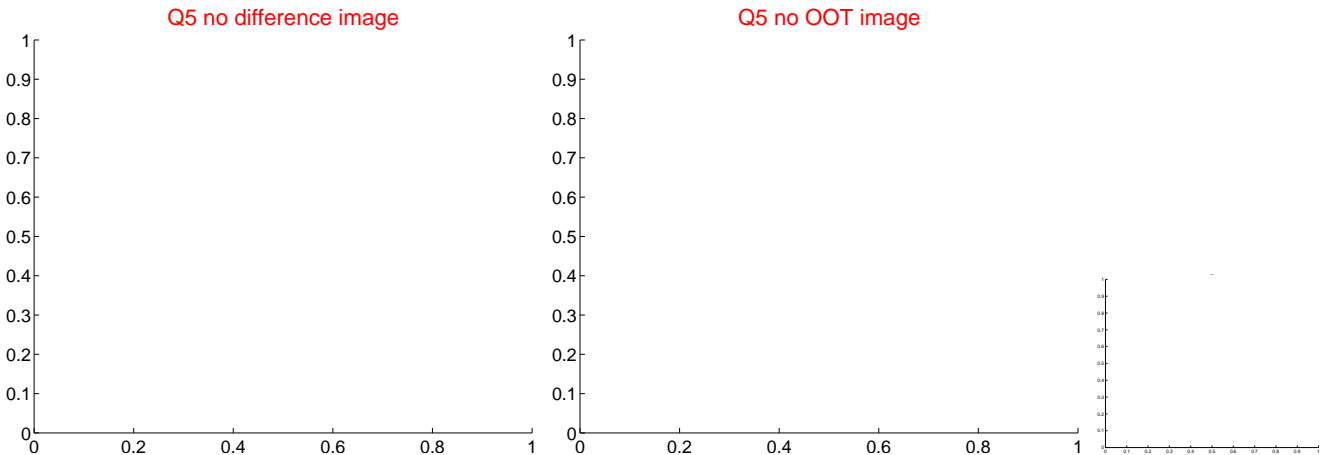


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

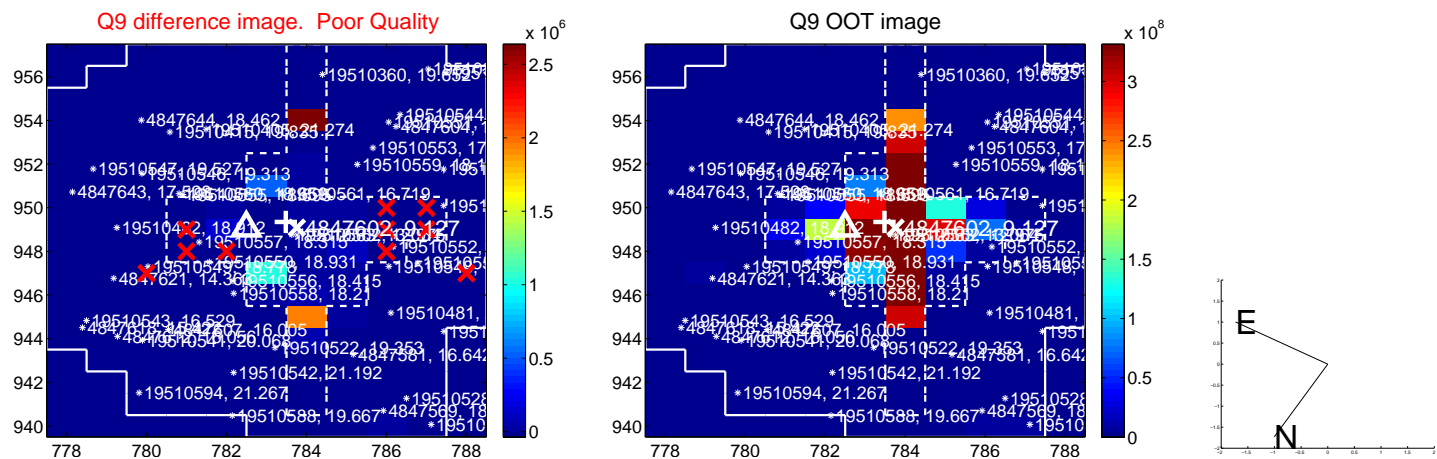
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



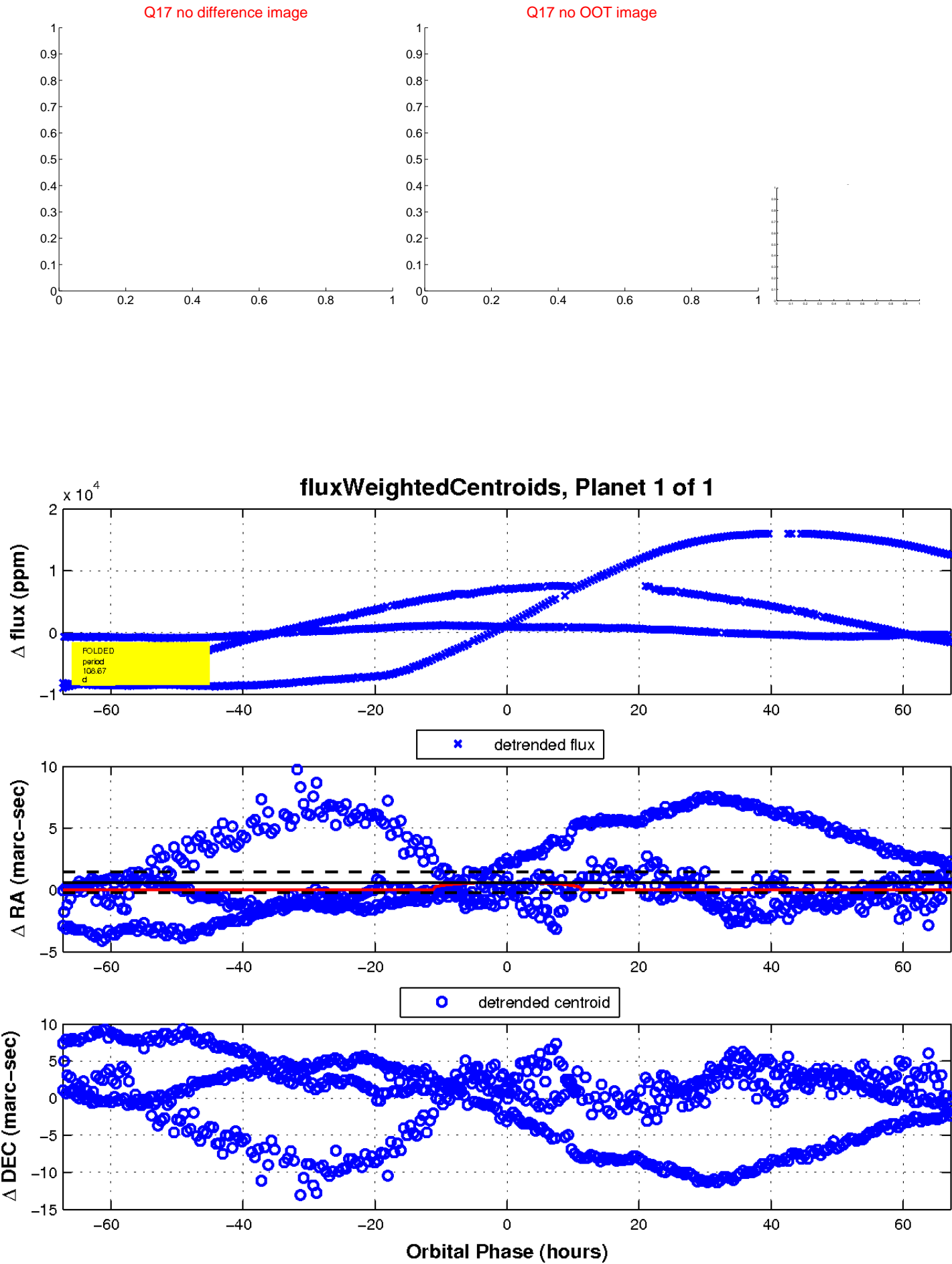
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

