

KIC 011871874

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})
011871874-01	OBS	No	396.417742	459.325851	484.9	2.917	12.0	7.1	1.85	4984	4.87	1.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011871874-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_MEAS

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

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

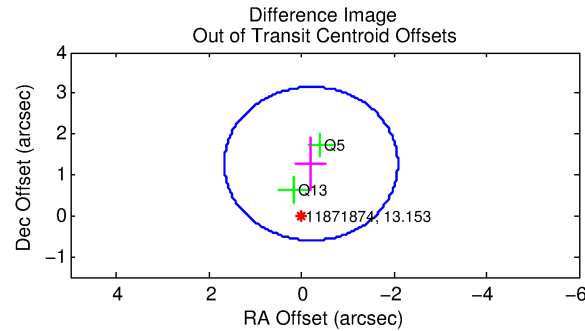
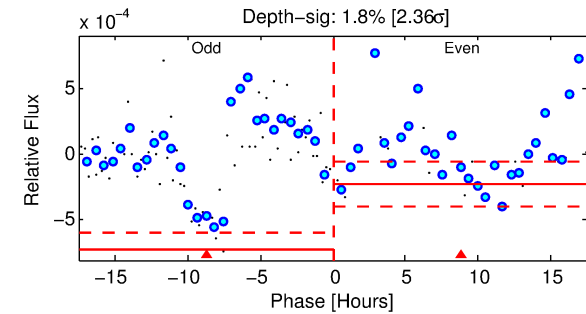
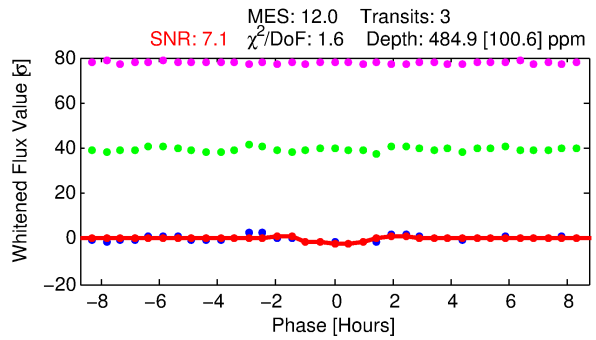
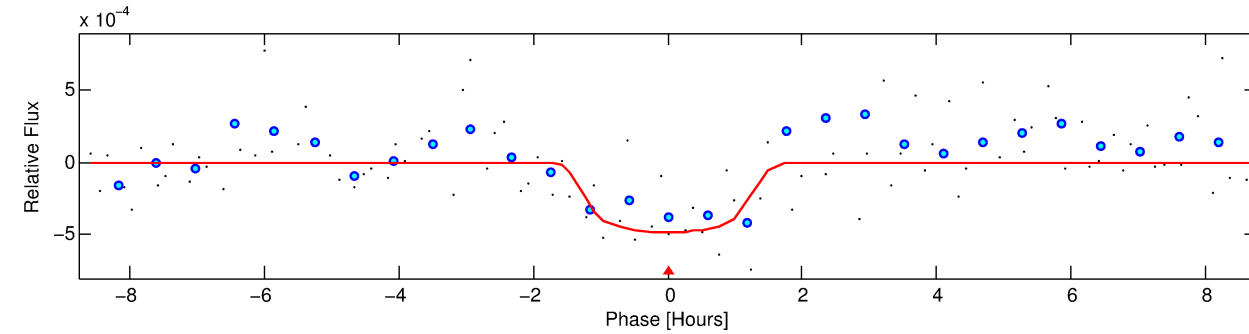
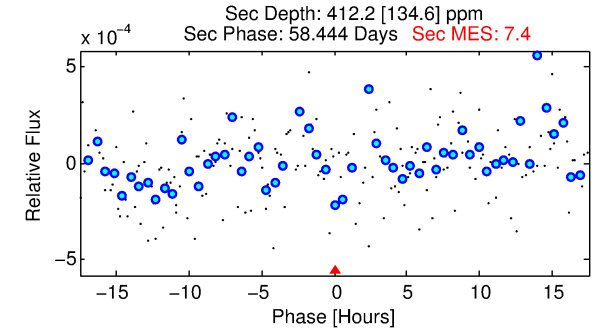
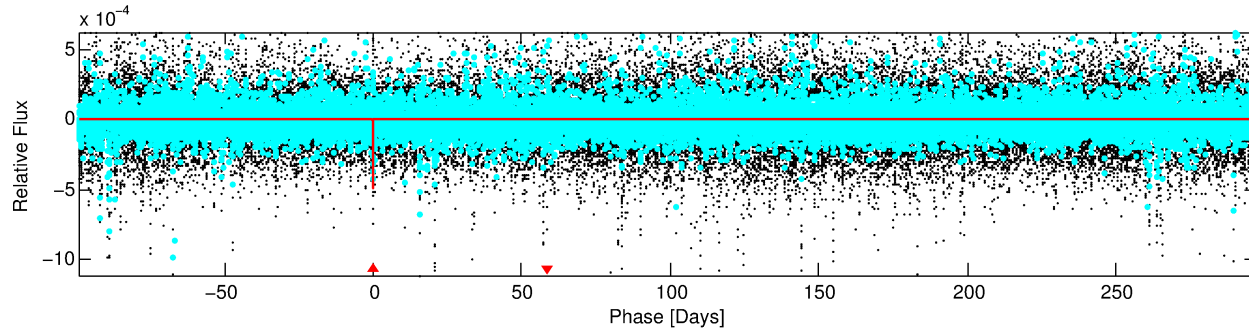
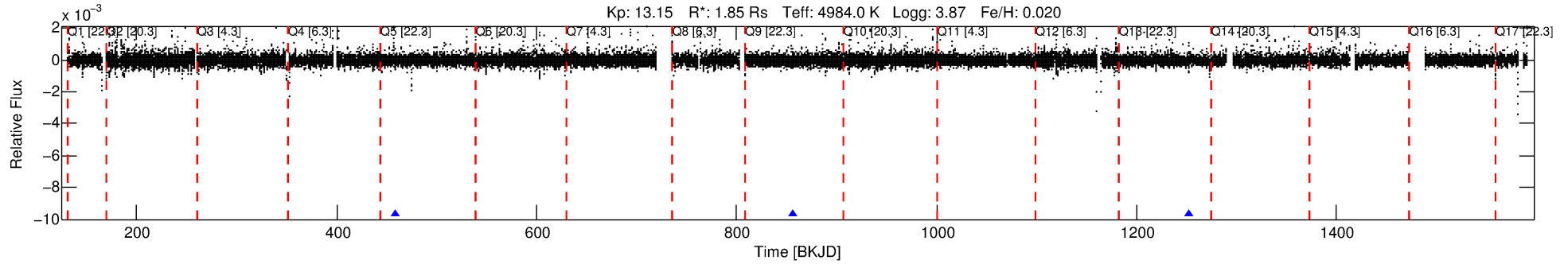
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011871874-01

No Significant Match Found

DV One-Page Summary

KIC: 11871874 Candidate: 1 of 1 Period: 396.418 d



DV Fit Results:

Period = 396.41774 [0.00620] d
Epoch = 459.3259 [0.0087] BKJD
Rp/R* = 0.0241 [0.0242]
a/R* = 541.41 [2019.87]
b = 0.88 [0.98]
Seff = 1.79 [2.14]
Teq = 295 [88] K
Rp = 4.87 [5.79] Re
a = 1.0274 [0.7162] AU
Ag = 10089.61 [23775.37] [0.42 σ]
Teffp = 4573 [2333] K [1.83 σ]

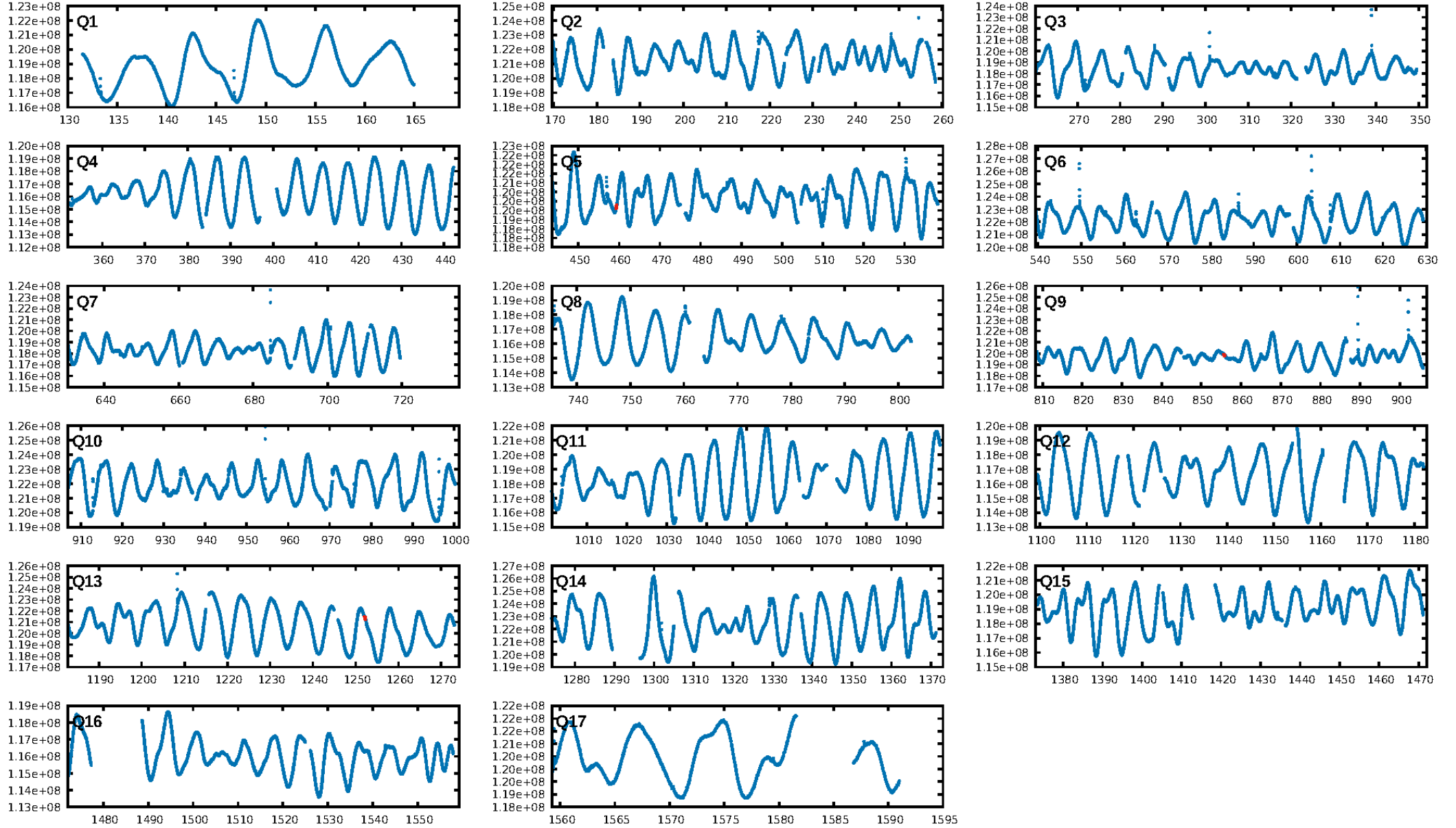
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 80.1%
Bootstrap-pfa: 1.12e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 11.65
Centroid-sig: 15.6%
Centroid-so: 1.590 arcsec [1.07 σ]
OotOffset-rm: 1.290 arcsec [2.06 σ]
KicOffset-rm: 1.258 arcsec [2.14 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

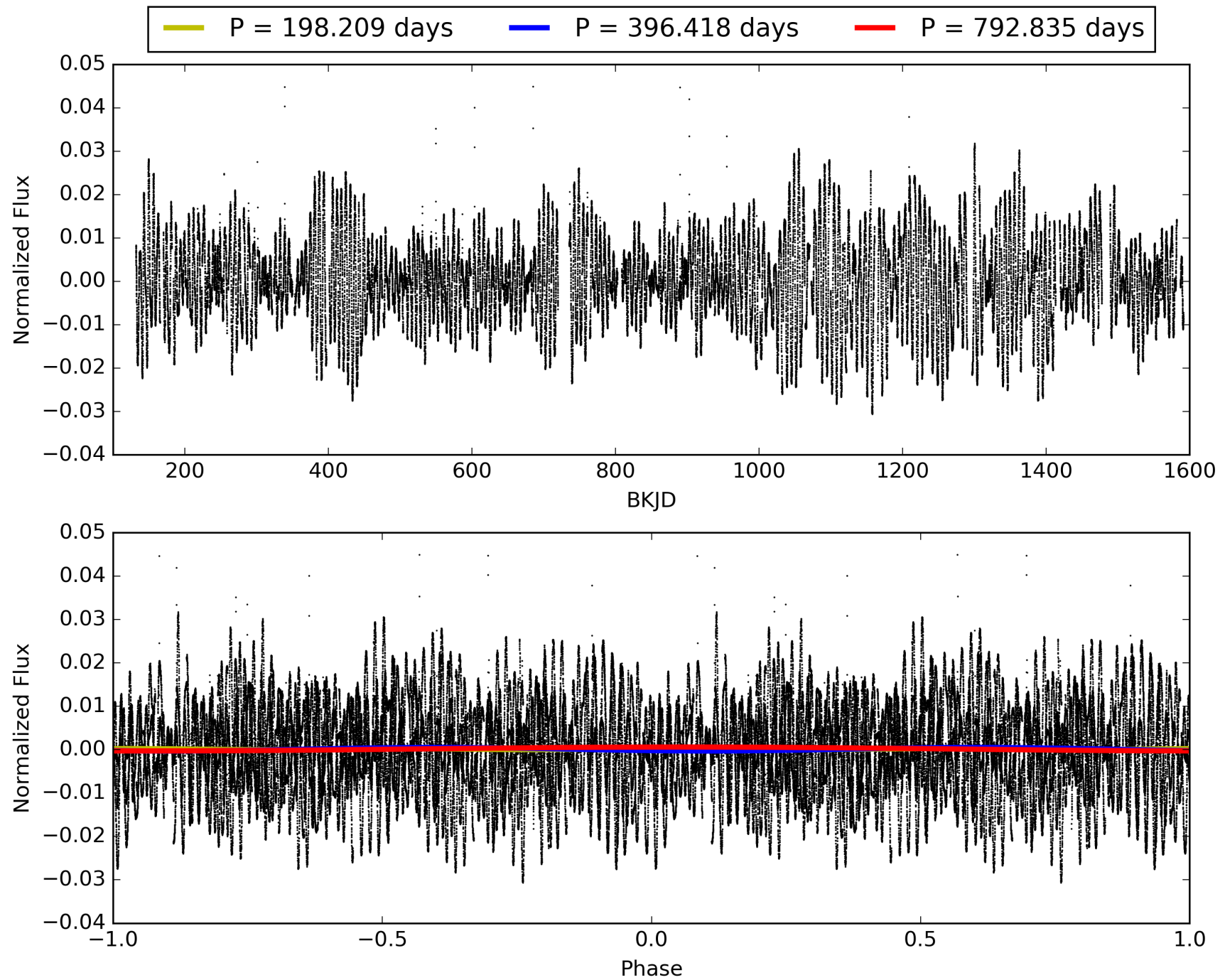
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:10:50 Z

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

TCE 011871874-01, PDC Light Curves

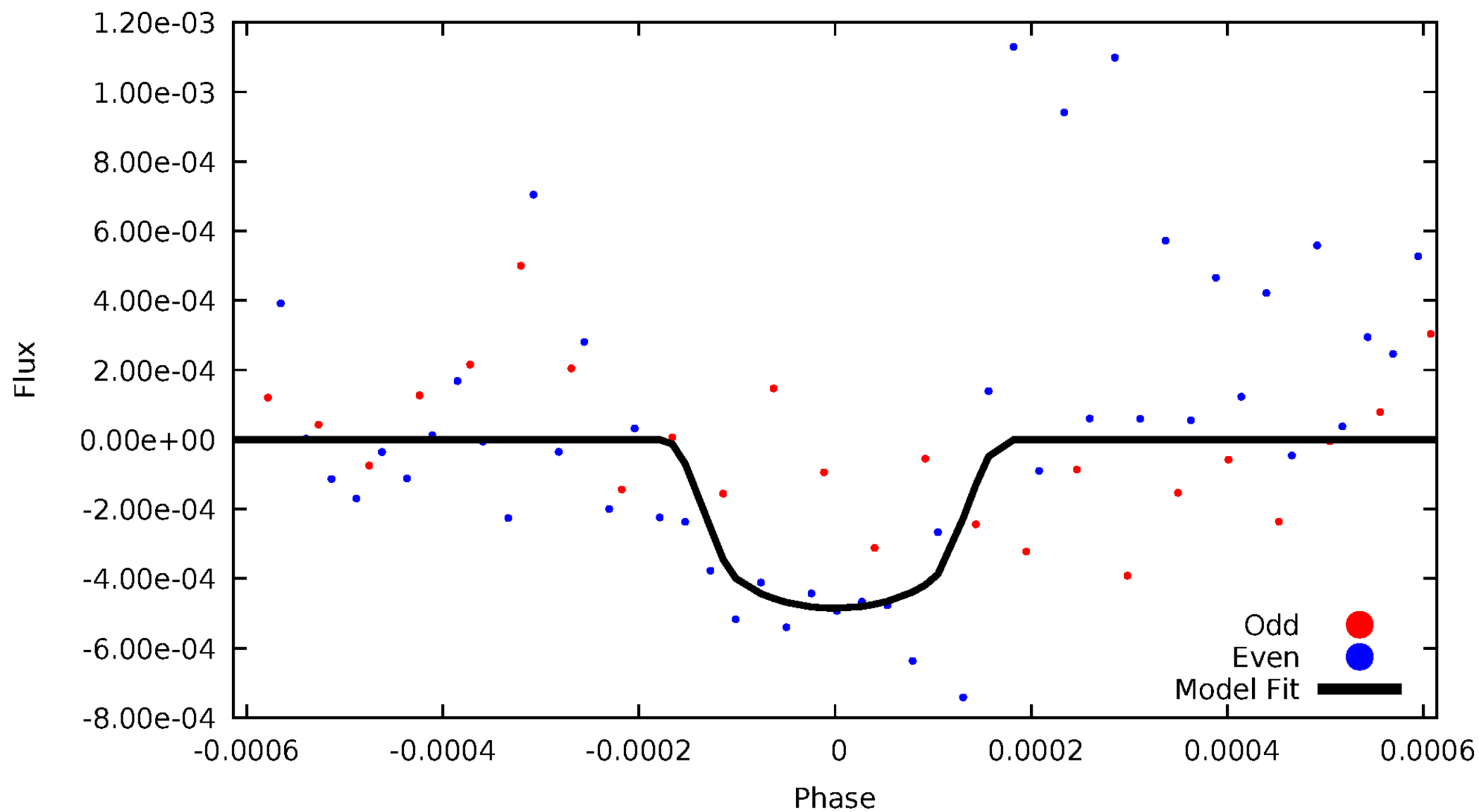


TCE 011871874-01



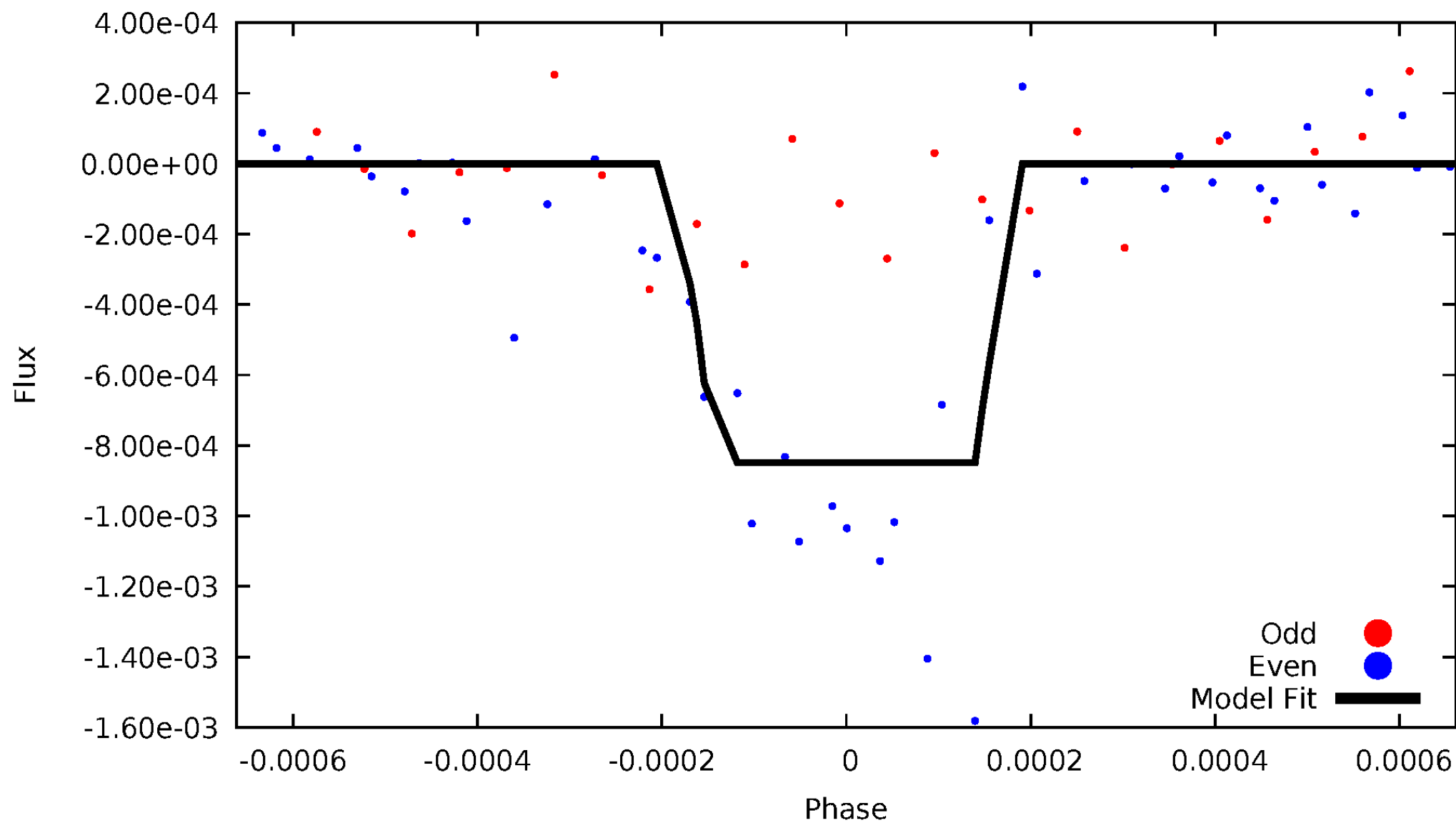
DV Odd/Even

TCE 011871874-01

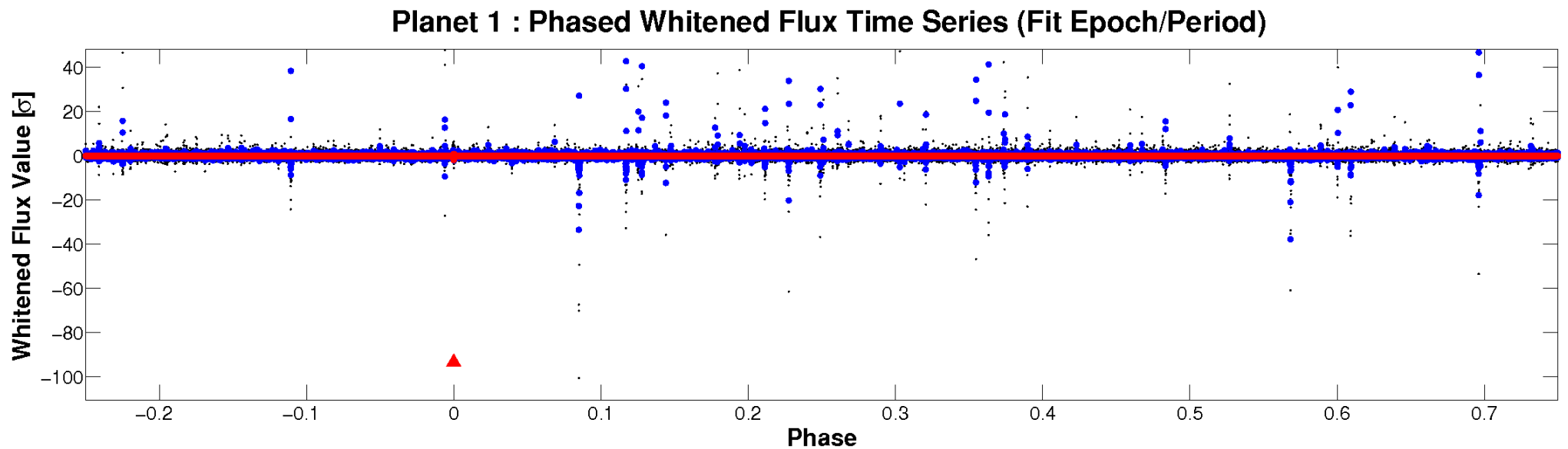
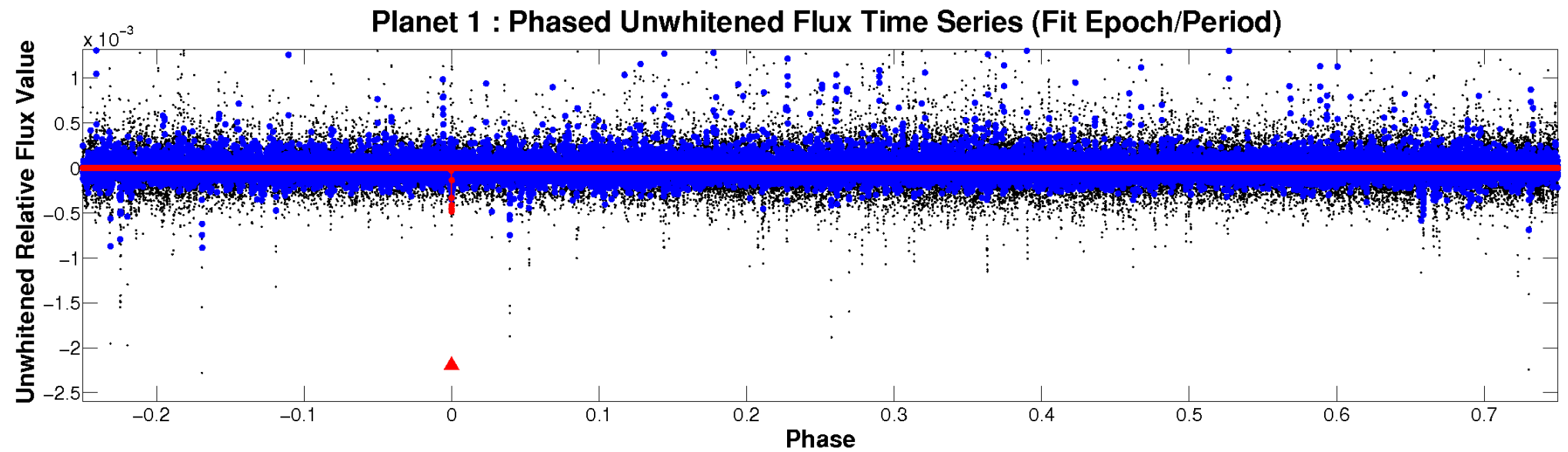


ALT Odd/Even

TCE 011871874-01

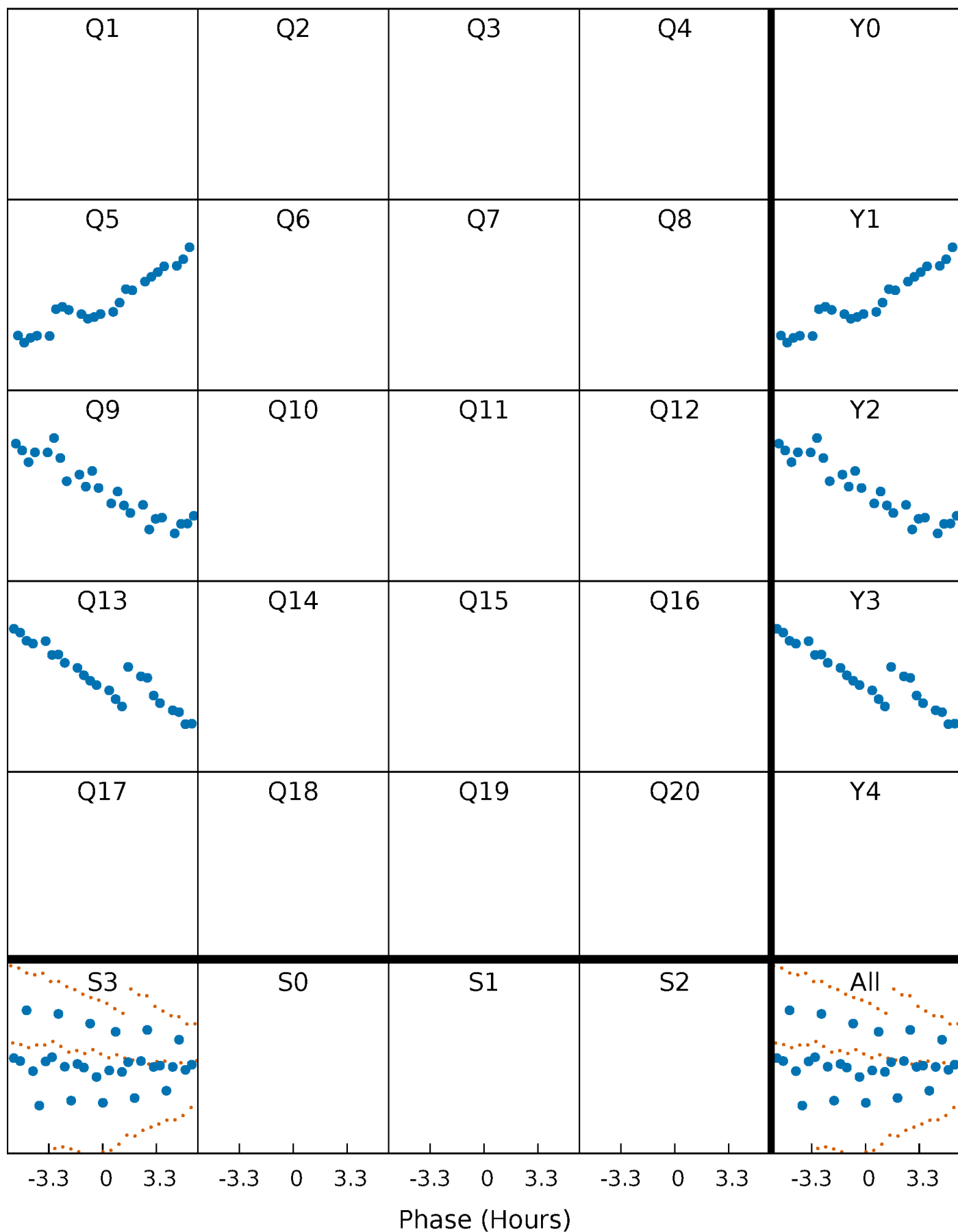


Non-Whitened Vs. Whitened Light Curve



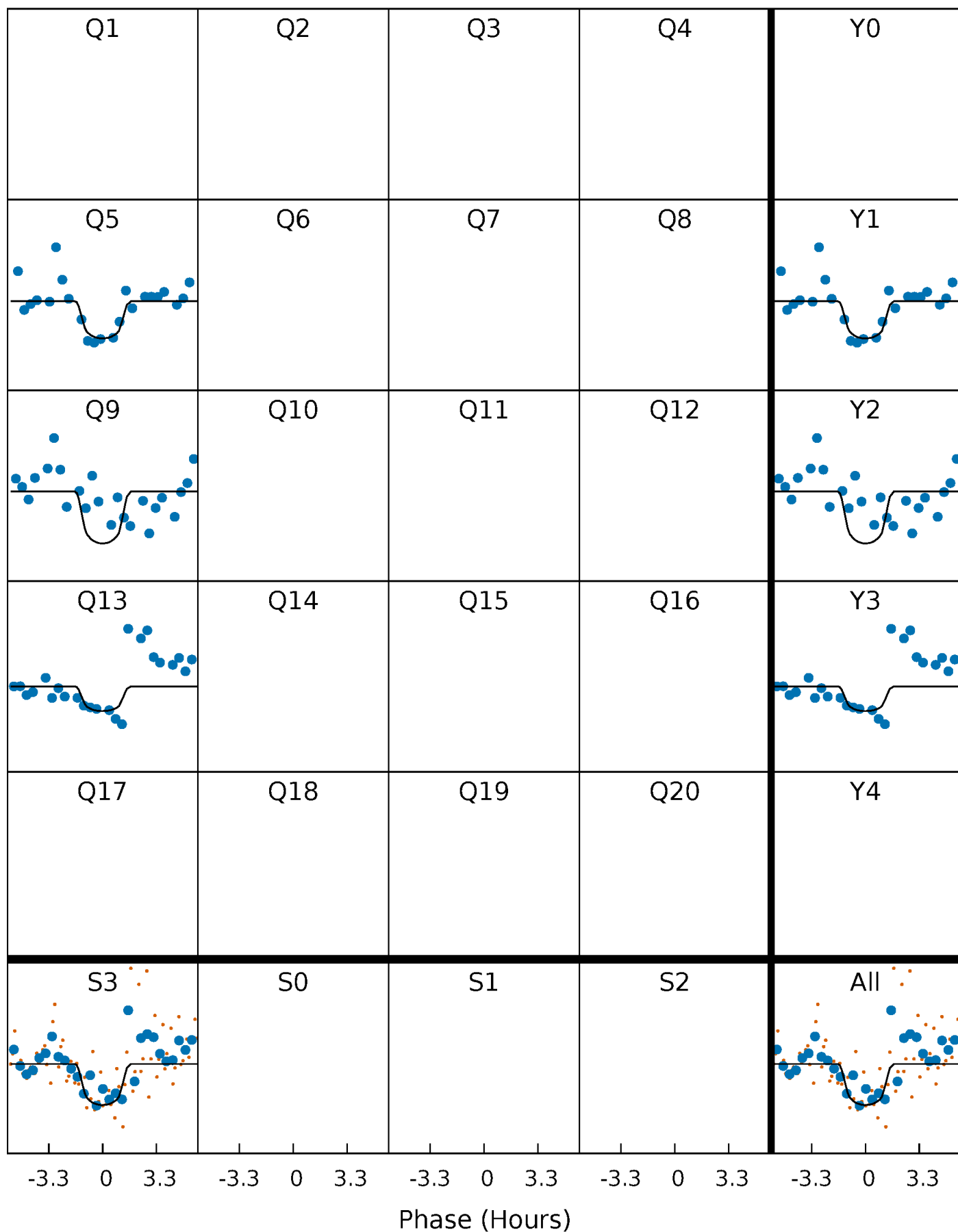
PDC Quarter-Phased Transit Curves

TCE 011871874-01 P=396.417742 Days $T_0=459.325851$ (BKJD)



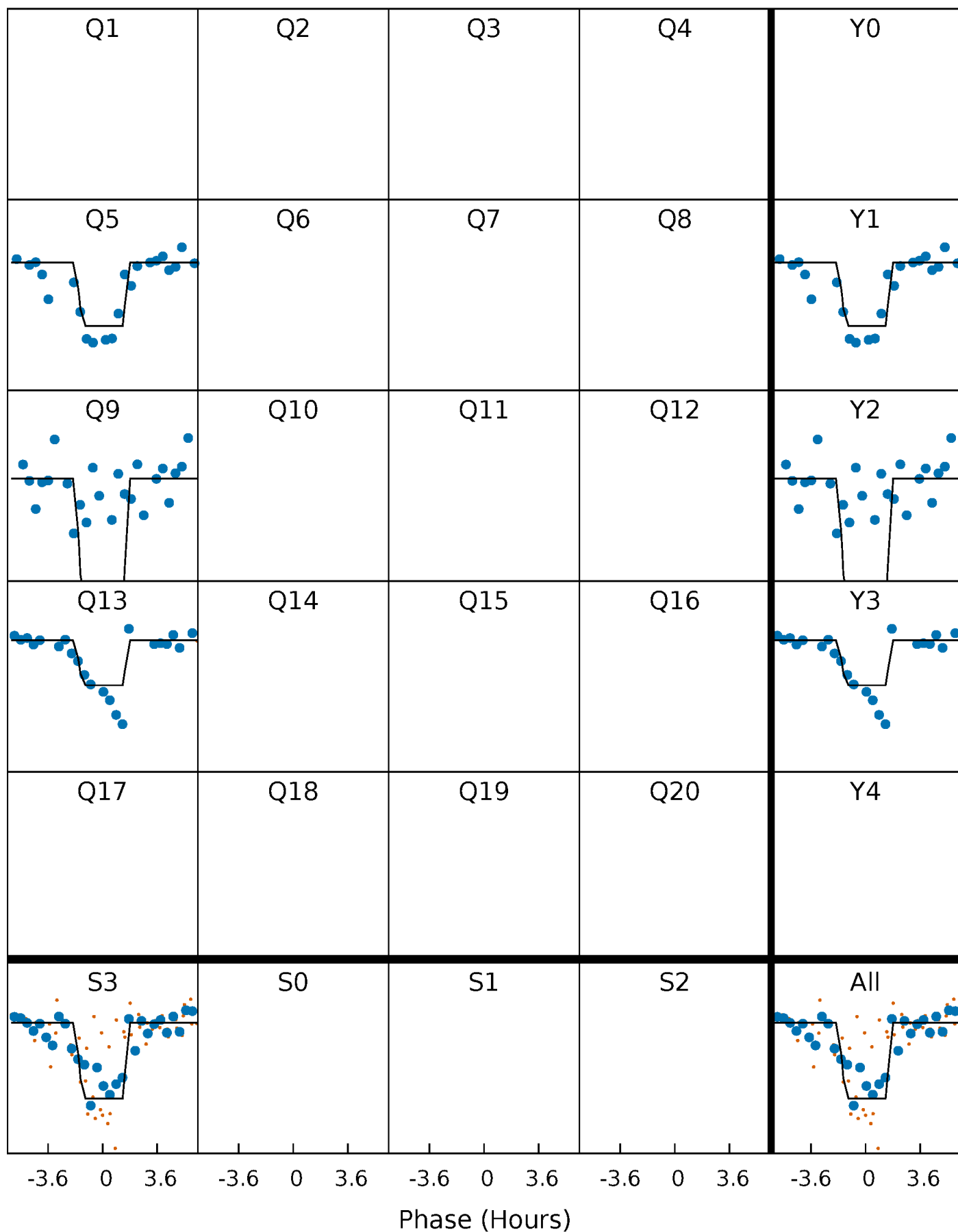
DV Quarter-Phased Transit Curves

TCE 011871874-01 P=396.417742 Days $T_0=459.325851$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

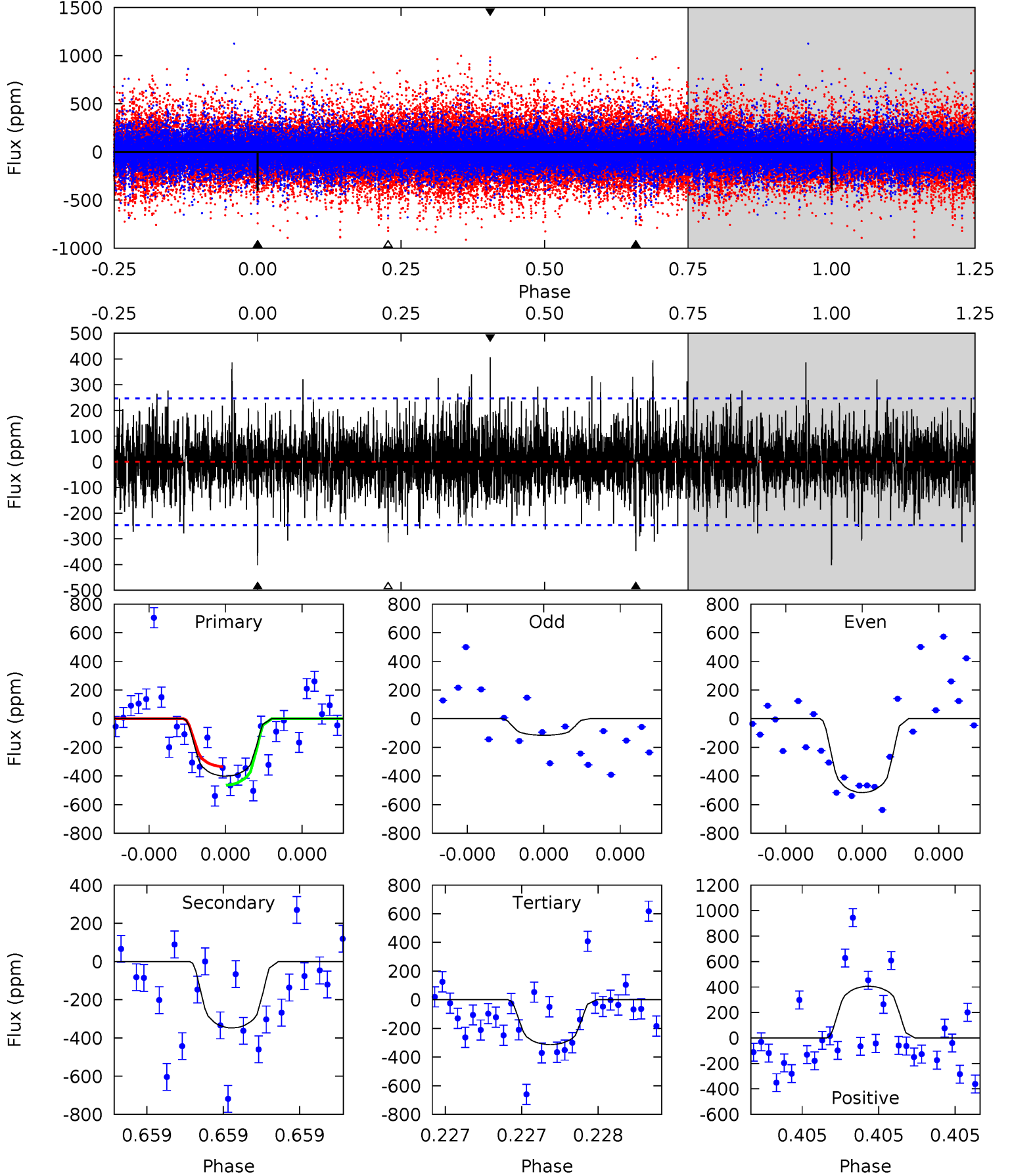
TCE 011871874-01 P=396.415694 Days $T_0=459.326359$ (BKJD)



DV Model-Shift Uniqueness Test

011871874-01, $P = 396.417742$ Days, $E = 62.908109$ Days

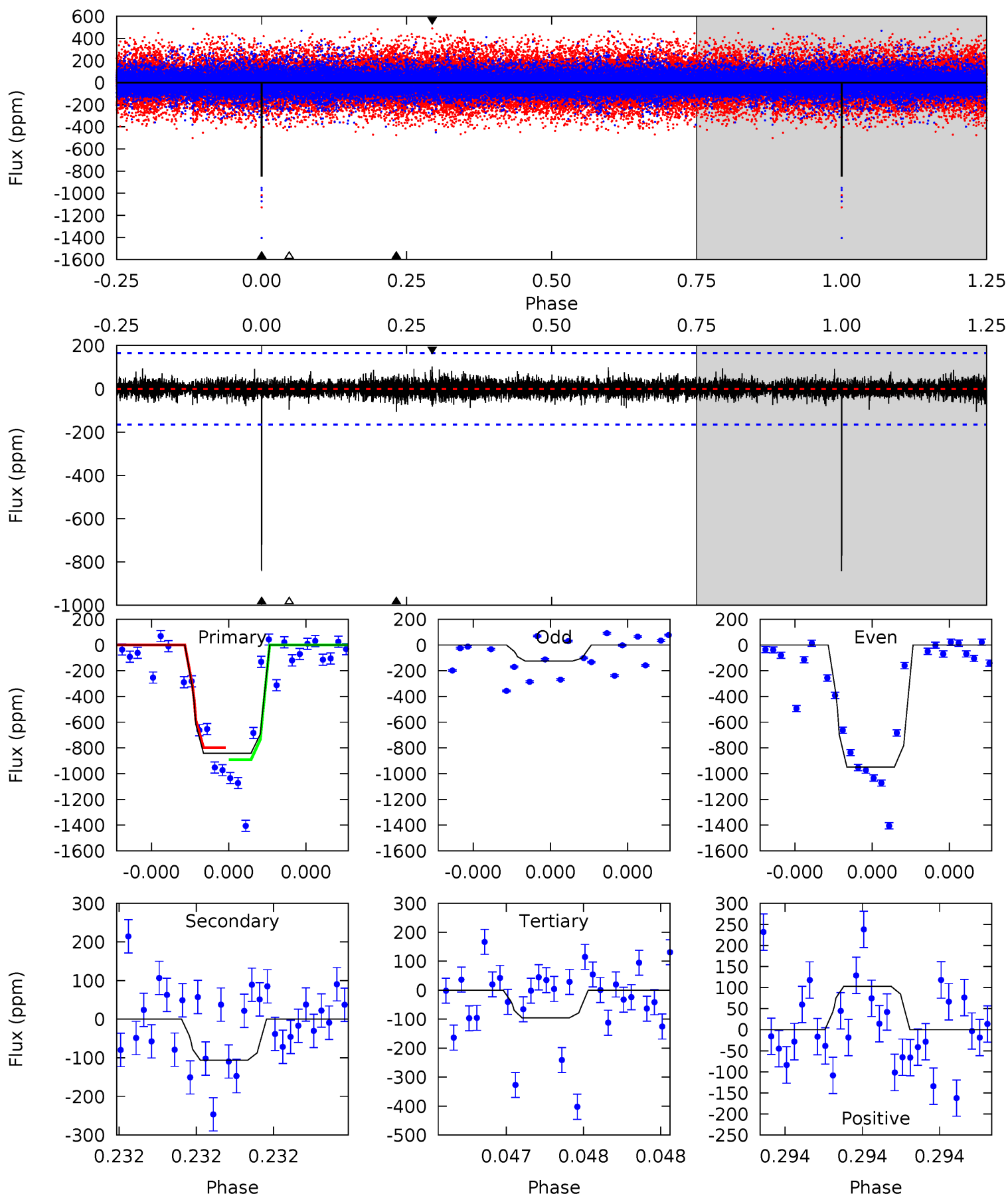
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	7.95	7.16	9.29	5.65	3.60	1.71	2.02	-0.10	0.79	-1.33	1.94	0.79	0.50	1.47



Alt Model-Shift Uniqueness Test

011871874-01, P = 396.415694 Days, E = 62.910665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	3.61	3.23	3.50	5.63	3.57	0.67	25.4	25.1	0.38	0.11	15.1	0.78	0.11	0



Stellar Parameters For KIC 011871874

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4984^{+149}_{-134}	$3.867^{+0.721}_{-0.309}$	$0.020^{+0.300}_{-0.250}$	$1.851^{+1.070}_{-1.177}$	$0.918^{+0.211}_{-0.154}$	$0.204^{+2.673}_{-0.143}$
	+3%/-3%	+19%/-8%	+1500%/-1250%	+58%/-64%	+23%/-17%	+1310%/-70%
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 011871874-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-348 ± 44	$5.18^{+5.43}_{-3.50}$	407^{+57}_{-74}	4271^{+2513}_{-861}	7847^{+67162}_{-6088}
Alt.	-106 ± 29	$6.25^{+5.49}_{-3.93}$	408^{+63}_{-78}	3245^{+1114}_{-449}	1572^{+9673}_{-1137}

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

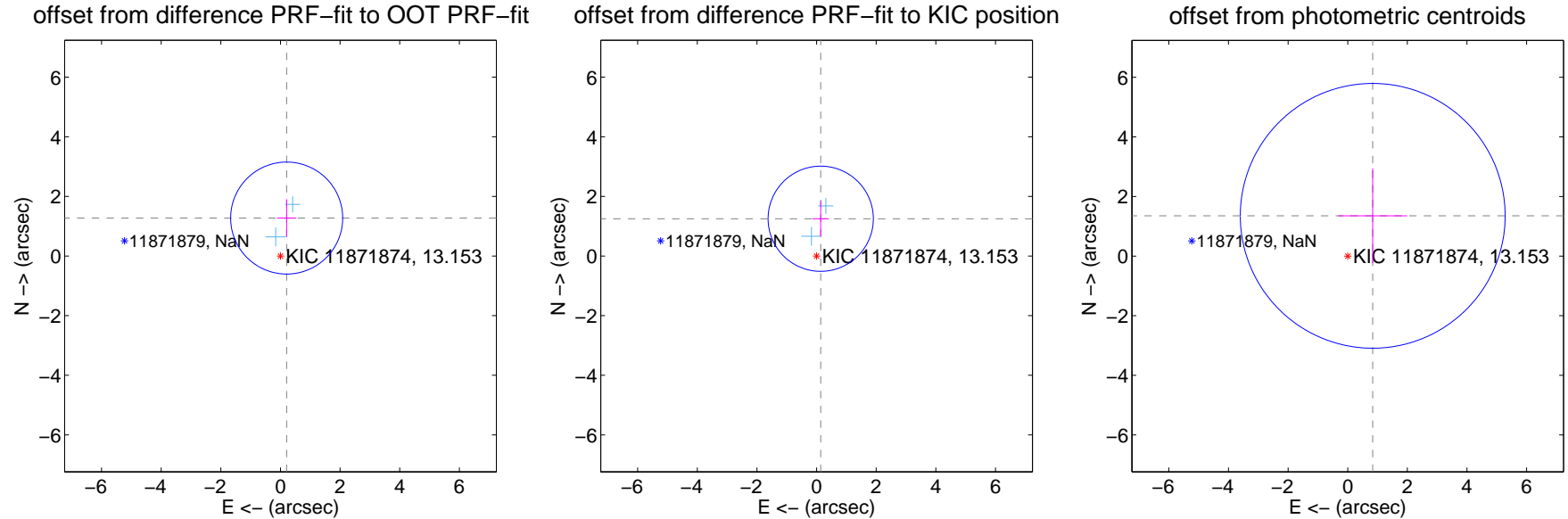
DV Centroid Data

Supplemental centroid analysis for 011871874-01. Kepler magnitude: 13.15. Transit SNR 7.10

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.290 ± 0.626	2.06	-0.208 ± 0.325	1.273 ± 0.632
PRF-fit source offset from KIC position	1.258 ± 0.588	2.14	-0.139 ± 0.277	1.250 ± 0.591
photometric centroid source offset	1.59 ± 1.48	1.07	-0.84 ± 1.16	1.35 ± 1.59

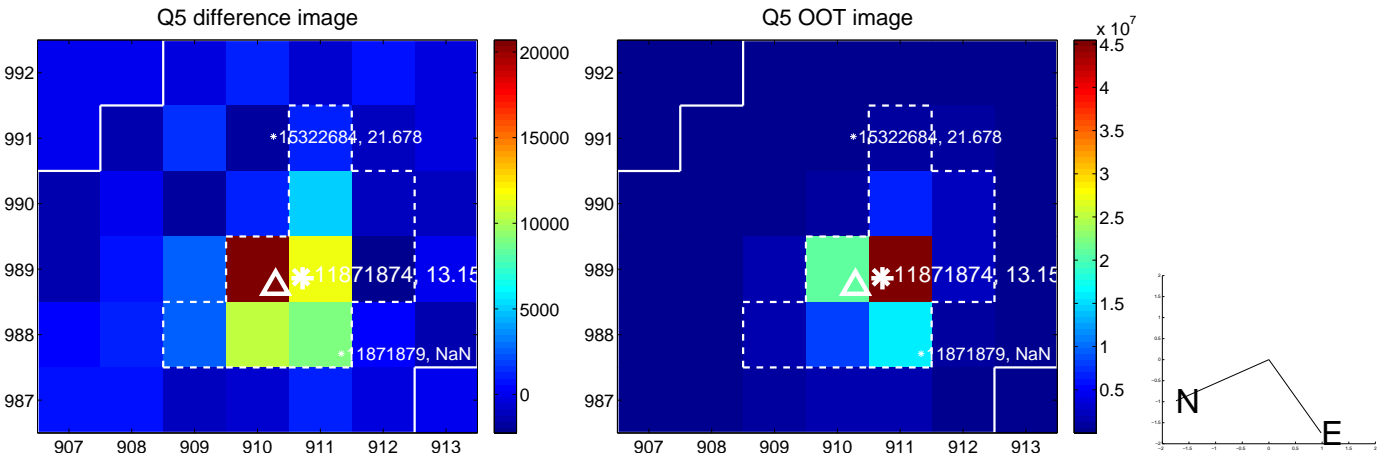


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

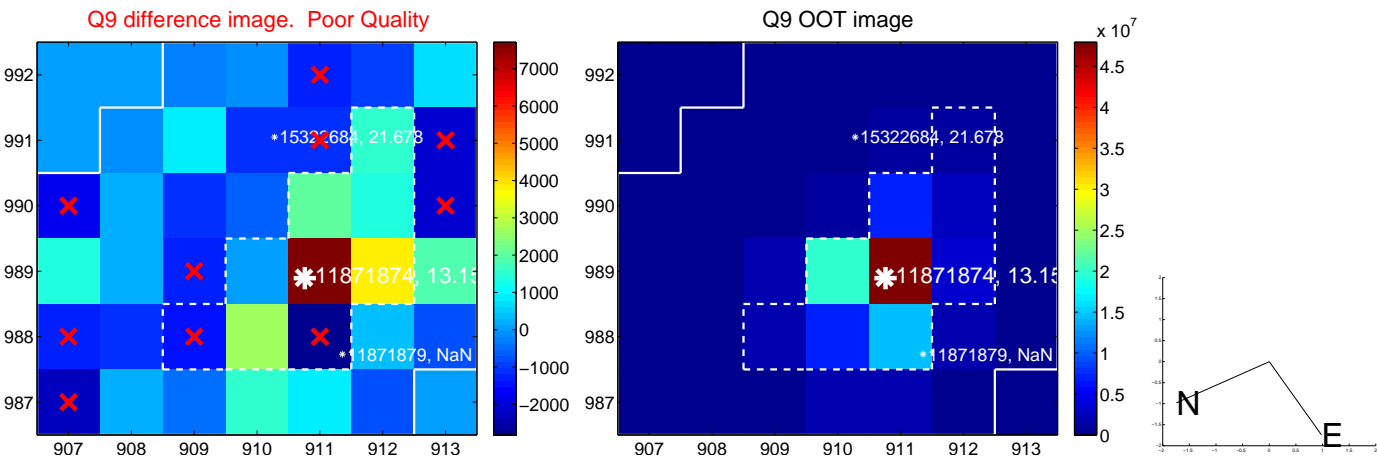
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



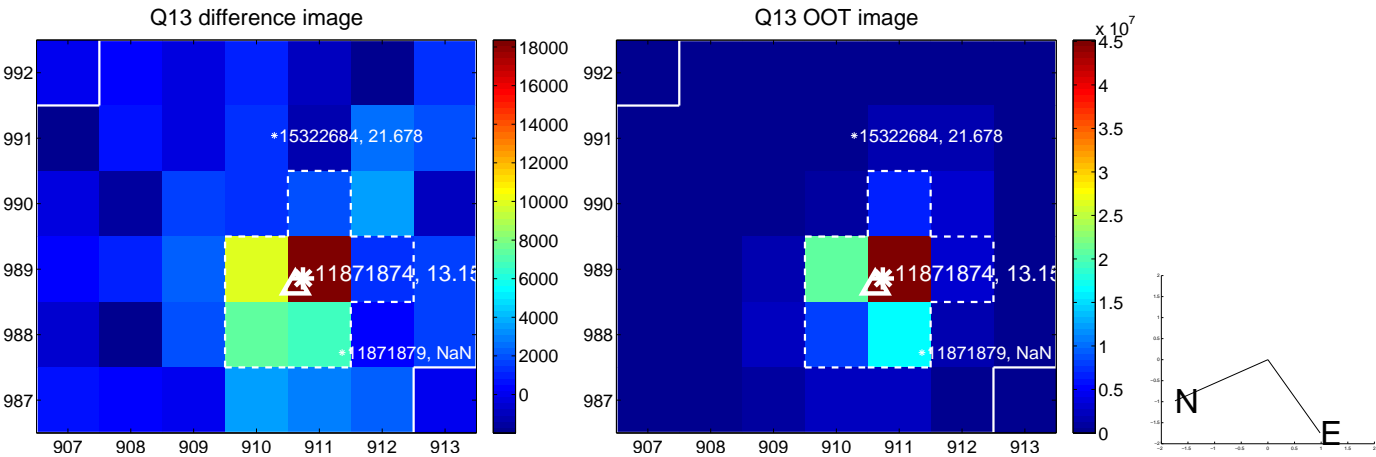
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



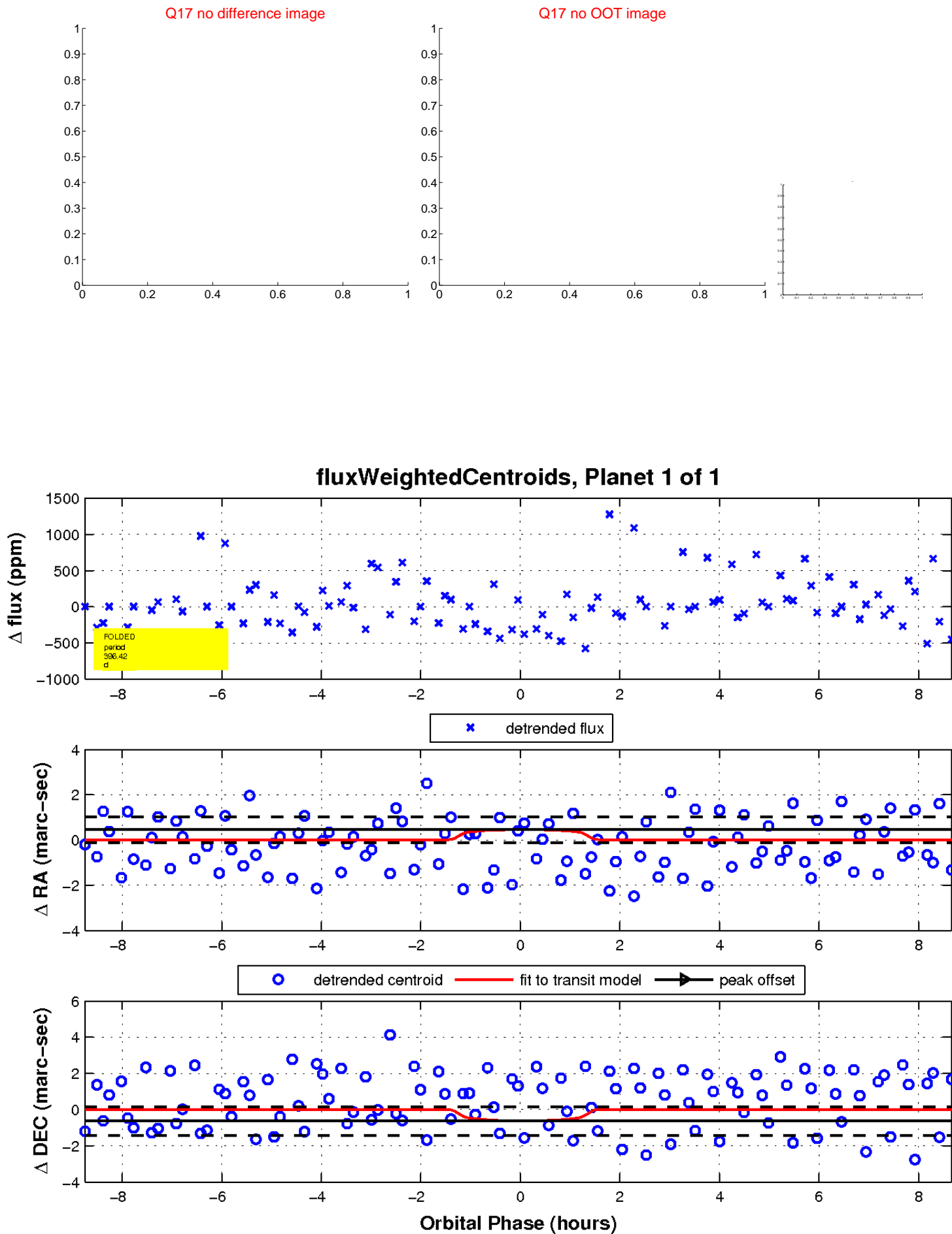
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: 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

