

KIC 005871104

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})
005871104-01	OBS	No	366.197443	154.637146	1106.0	40.550	7.7	9.1	0.71	5236	4.68	0.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005871104-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

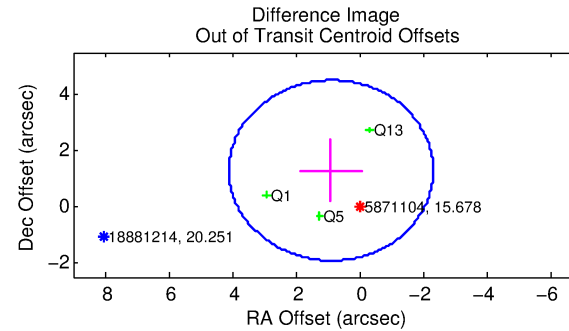
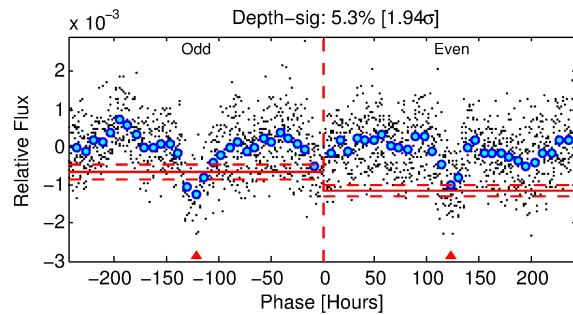
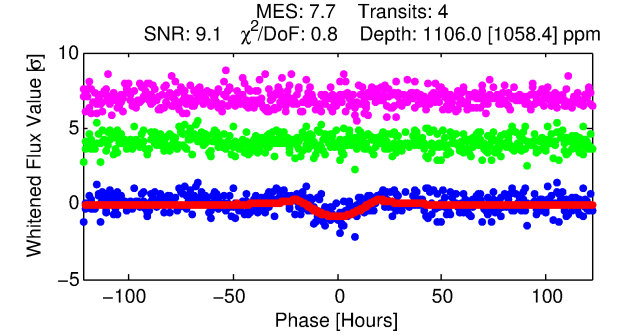
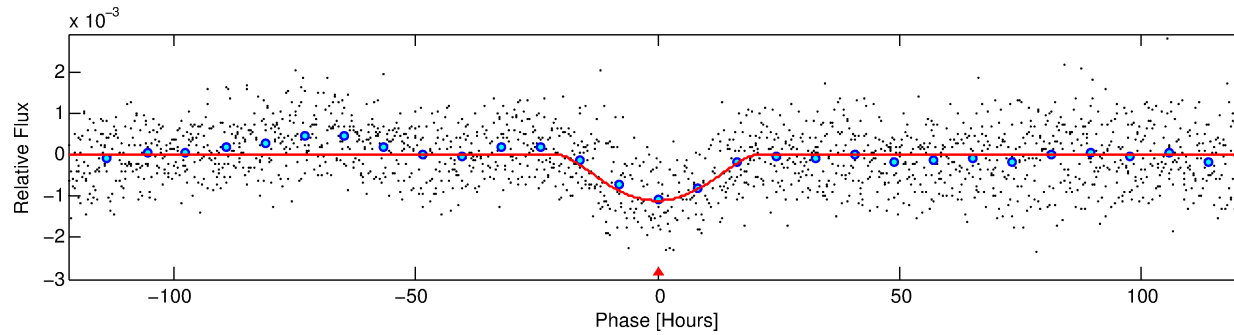
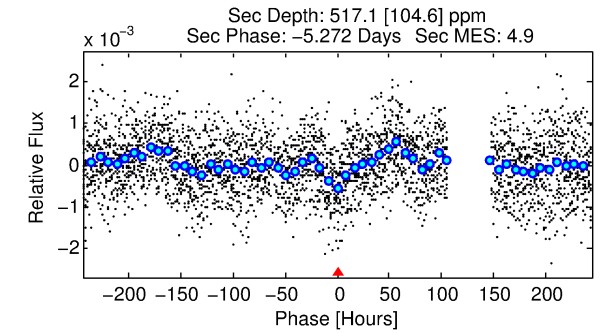
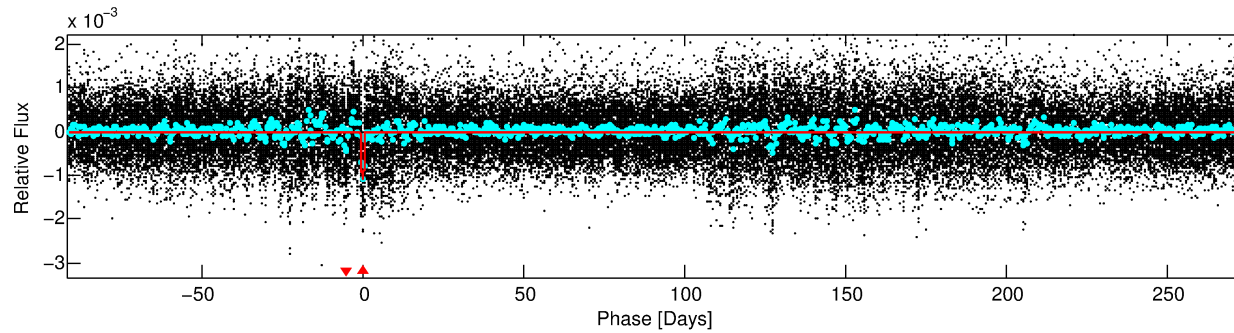
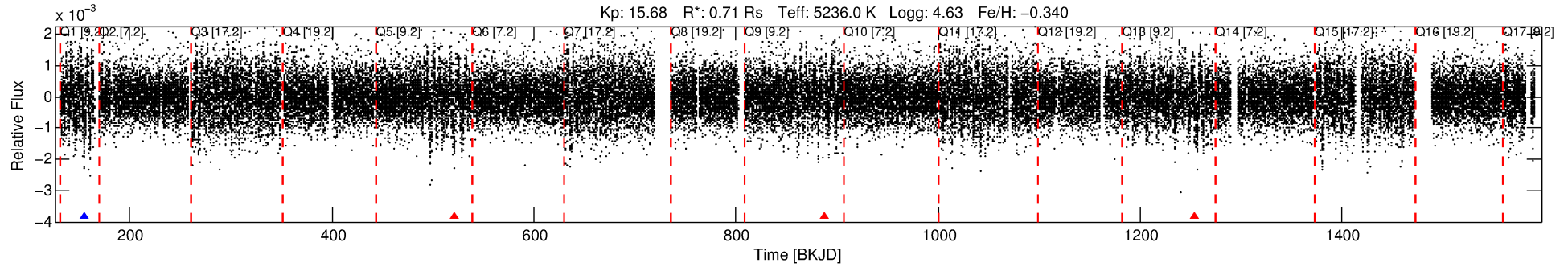
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005871104-01

No Significant Match Found

DV One-Page Summary

KIC: 5871104 Candidate: 1 of 1 Period: 366.197 d



DV Fit Results:

Period = 366.19744 [0.03691] d
Epoch = 154.6371 [0.0709] BKJD
Rp/R* = 0.0605 [0.1436]
a/R* = 24.39 [12.92]
b = 1.00 [0.17]
Seff = 0.40 [0.08]
Teq = 203 [10] K
Rp = 4.68 [11.13] Re
a = 0.9210 [0.1079] AU
Ag = 11005.32 [52299.60] [0.21σ]
Teffp = 3209 [3812] K [0.79σ]

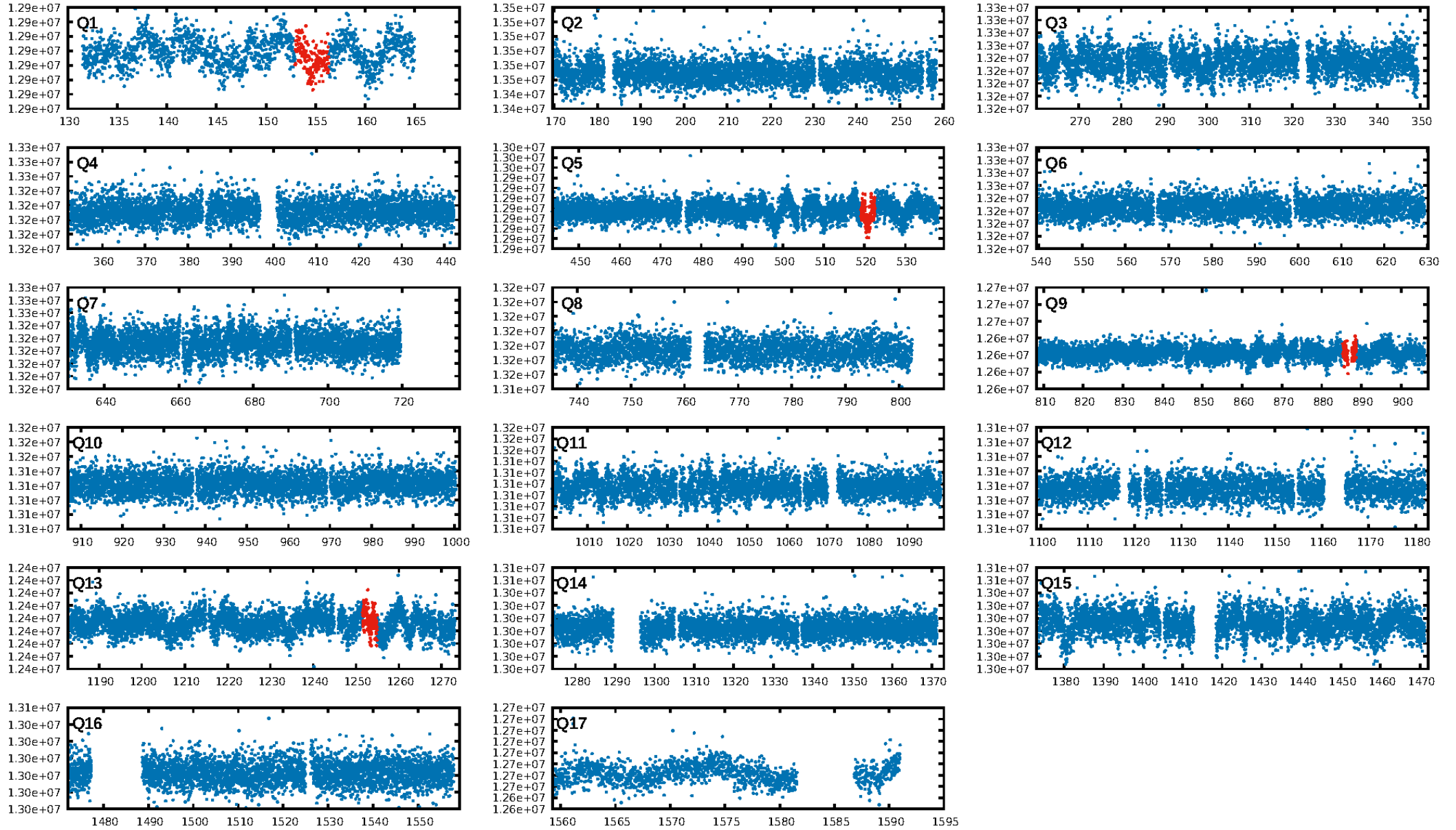
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.89e-11
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 1.778
Centroid-sig: 22.5%
Centroid-so: 2.022 arcsec [0.98σ]
OotOffset-rm: 1.569 arcsec [1.47σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 1.713 arcsec [1.57σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

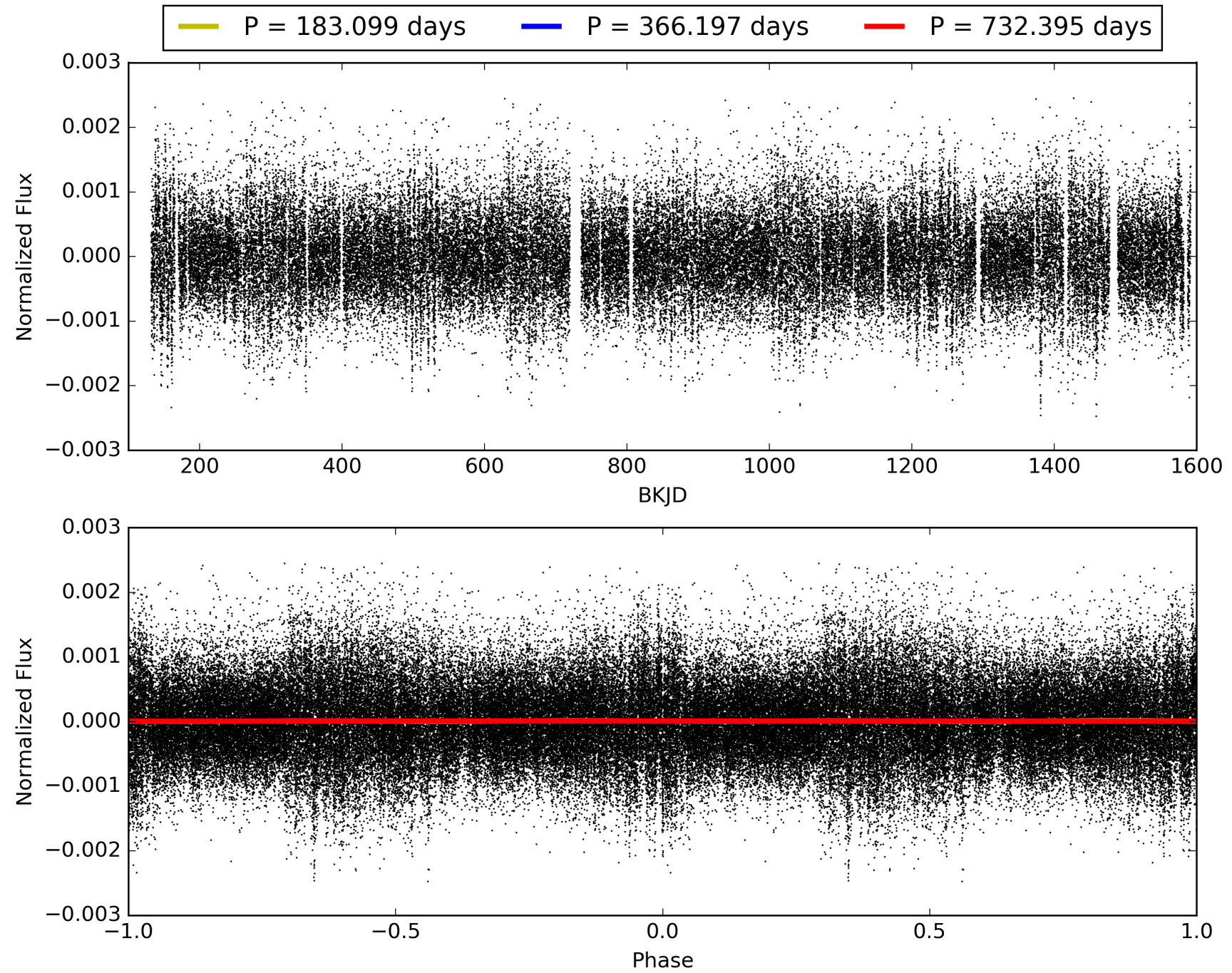
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:13:51 Z

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

TCE 005871104-01, PDC Light Curves

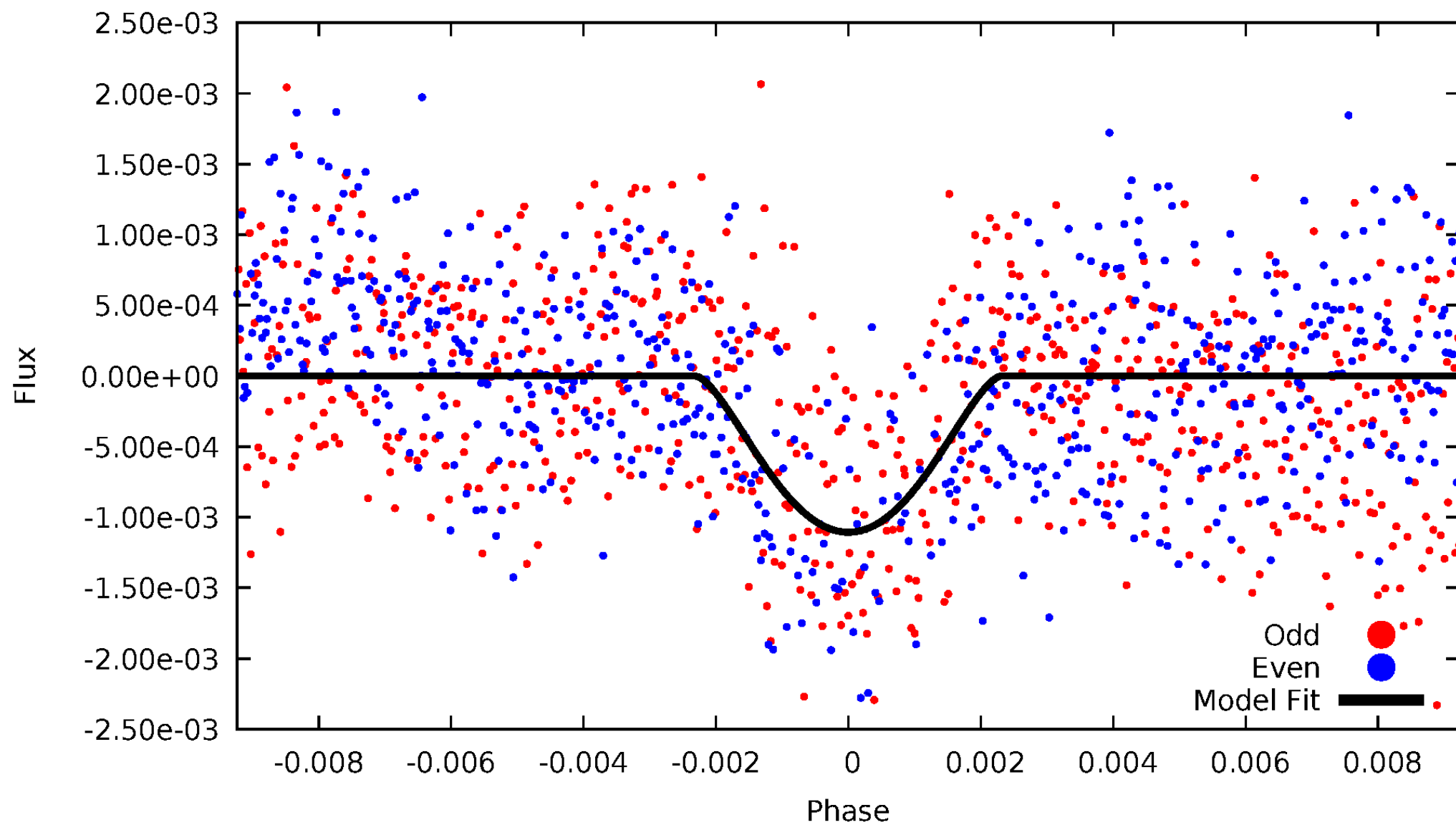


TCE 005871104-01



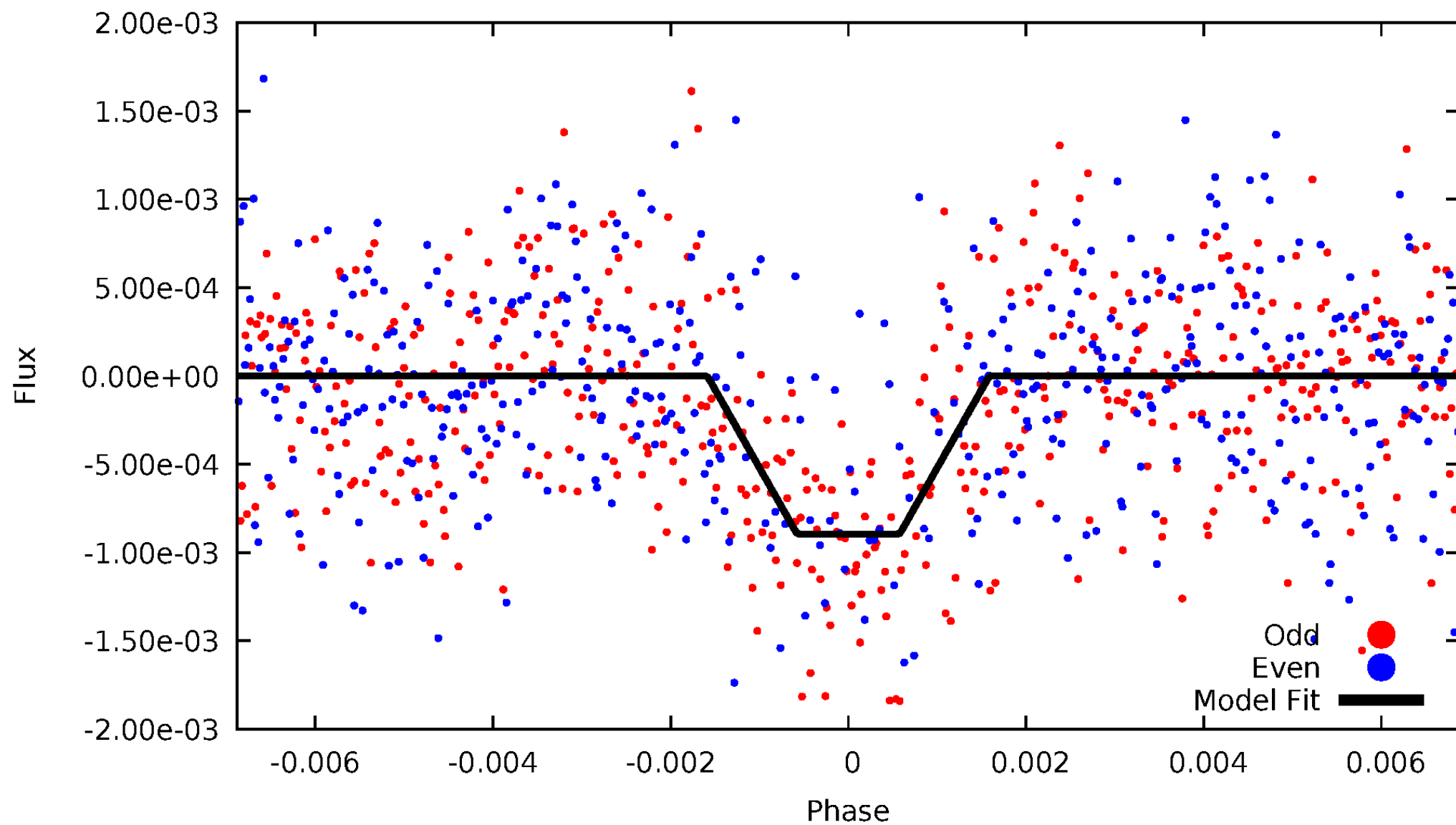
DV Odd/Even

TCE 005871104-01



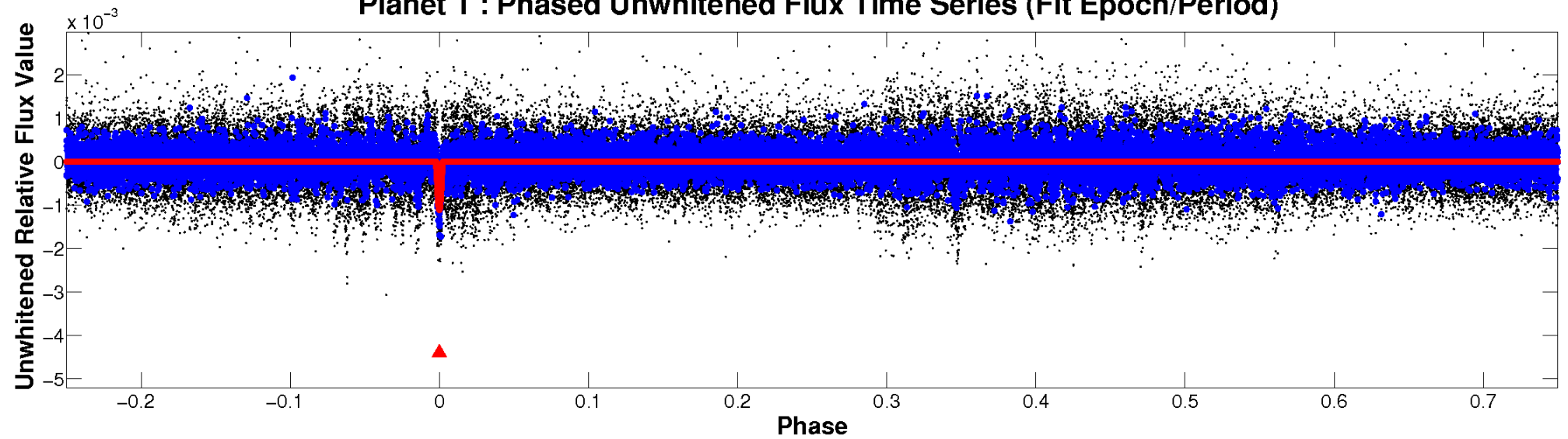
ALT Odd/Even

TCE 005871104-01

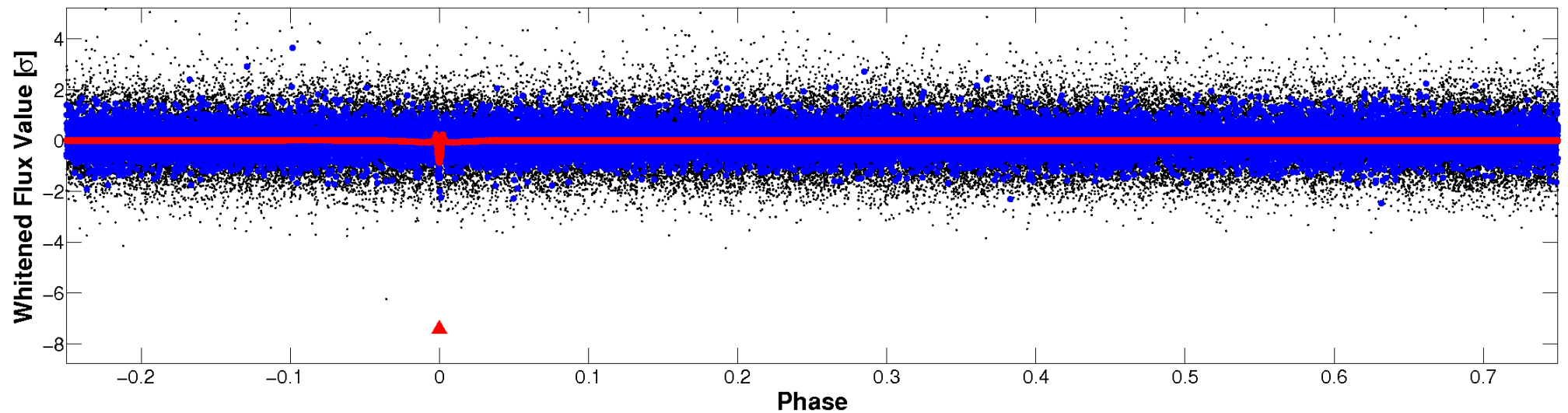


Non-Whitened Vs. Whitened Light Curve

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

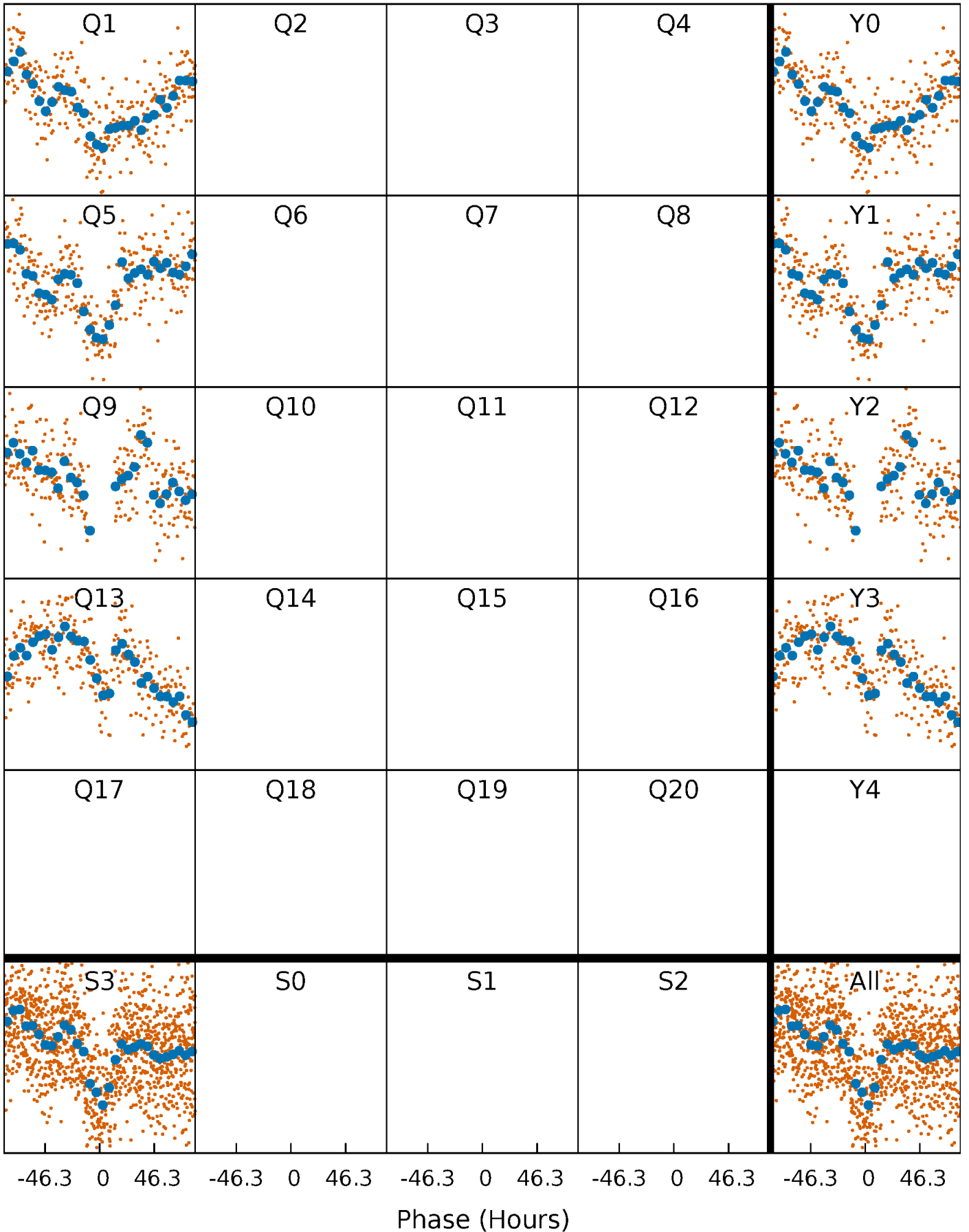


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



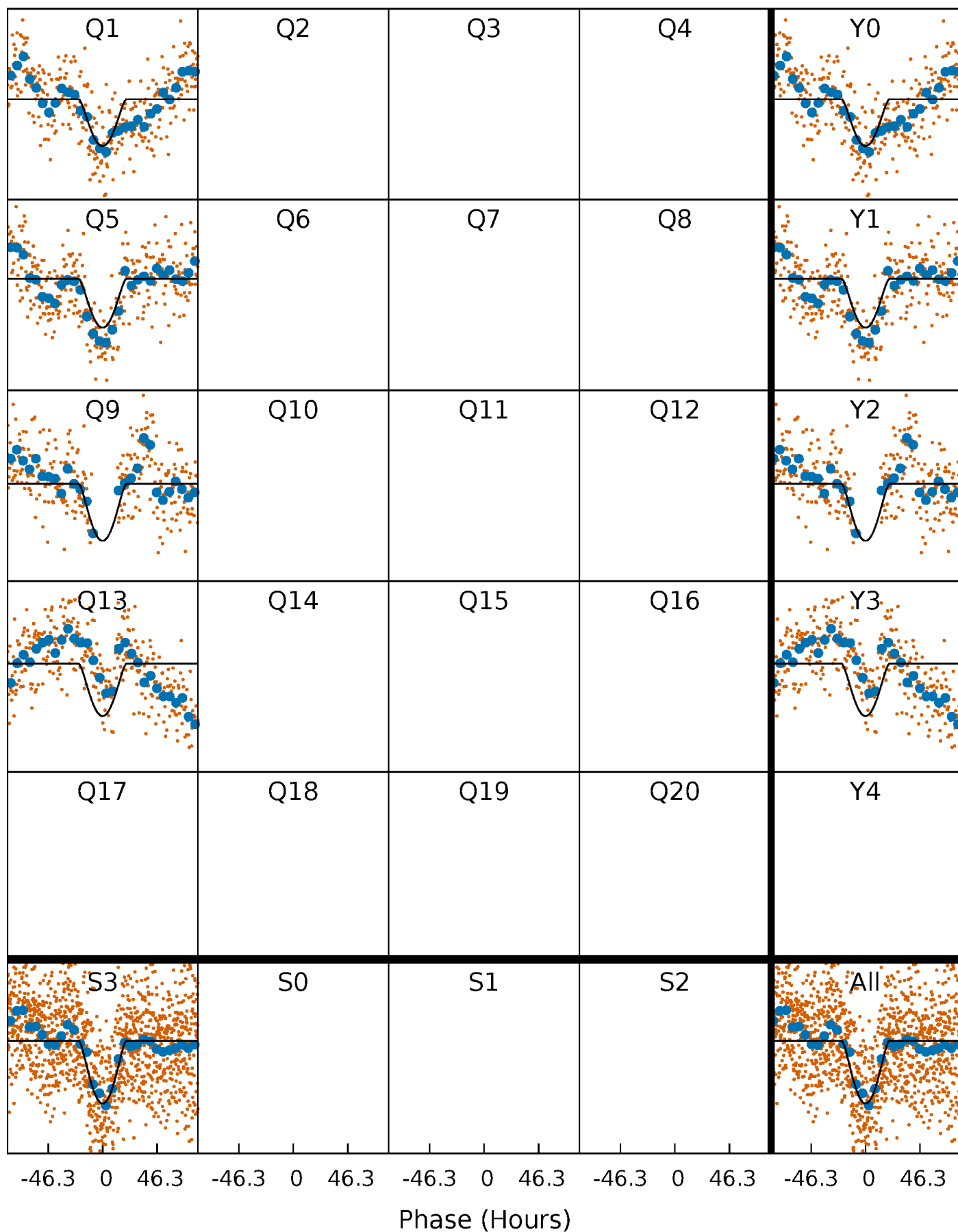
PDC Quarter-Phased Transit Curves

TCE 005871104-01 P=366.197443 Days $T_0=154.637146$ (BKJD)



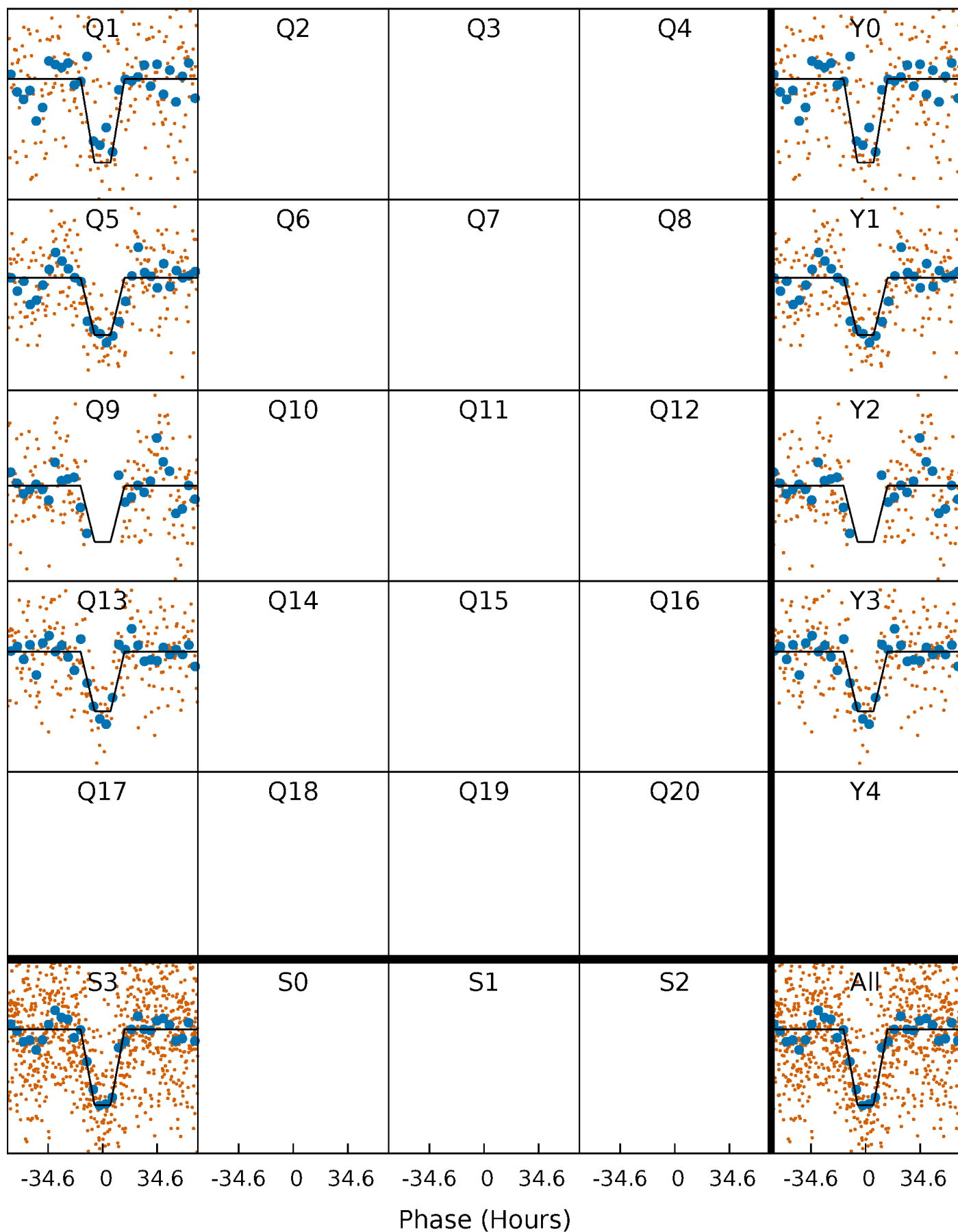
DV Quarter-Phased Transit Curves

TCE 005871104-01 P=366.197443 Days $T_0=154.637146$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

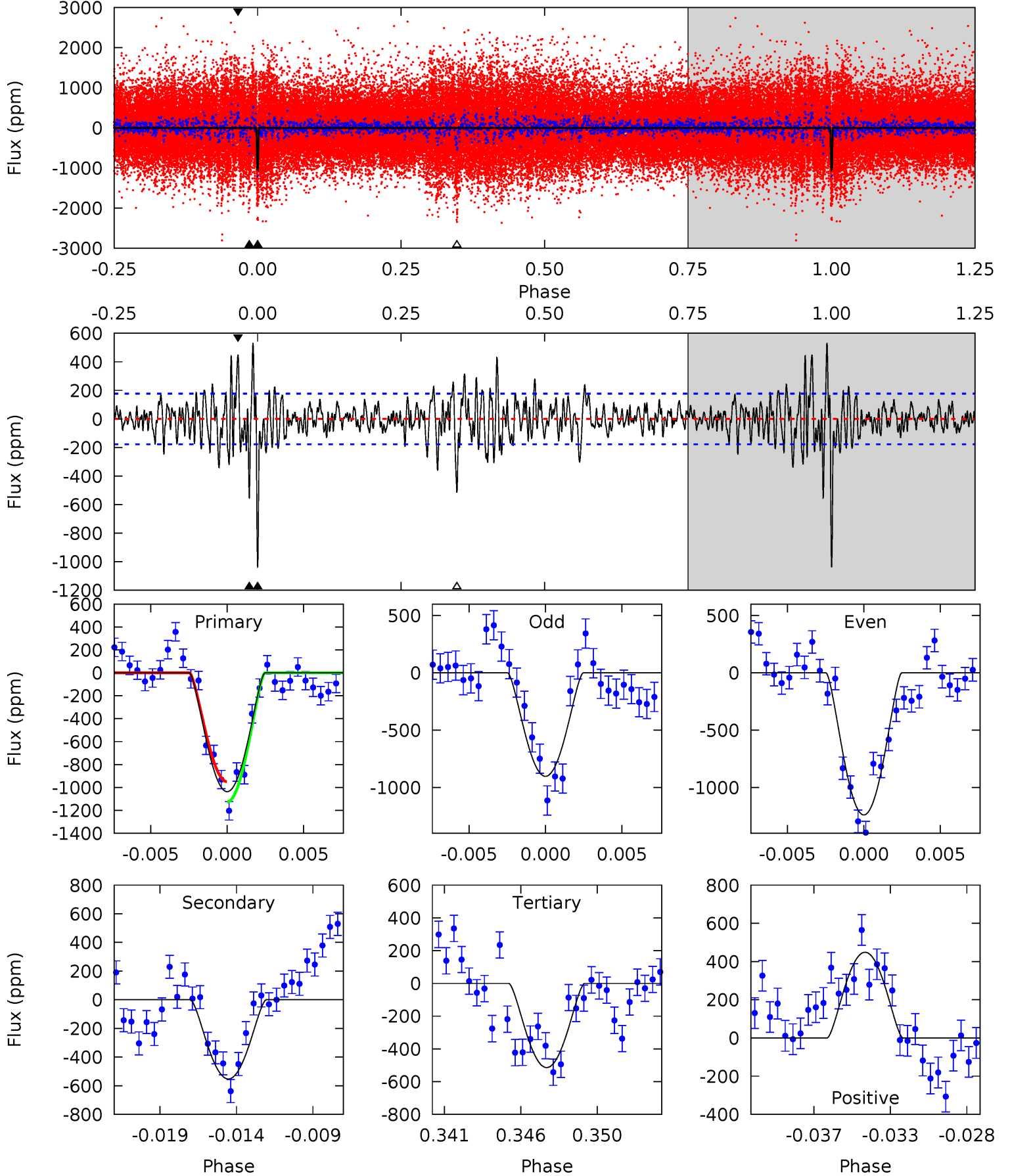
TCE 005871104-01 P=366.305619 Days $T_0=154.474950$ (BKJD)



DV Model-Shift Uniqueness Test

005871104-01, P = 366.197443 Days, E = 154.637146 Days

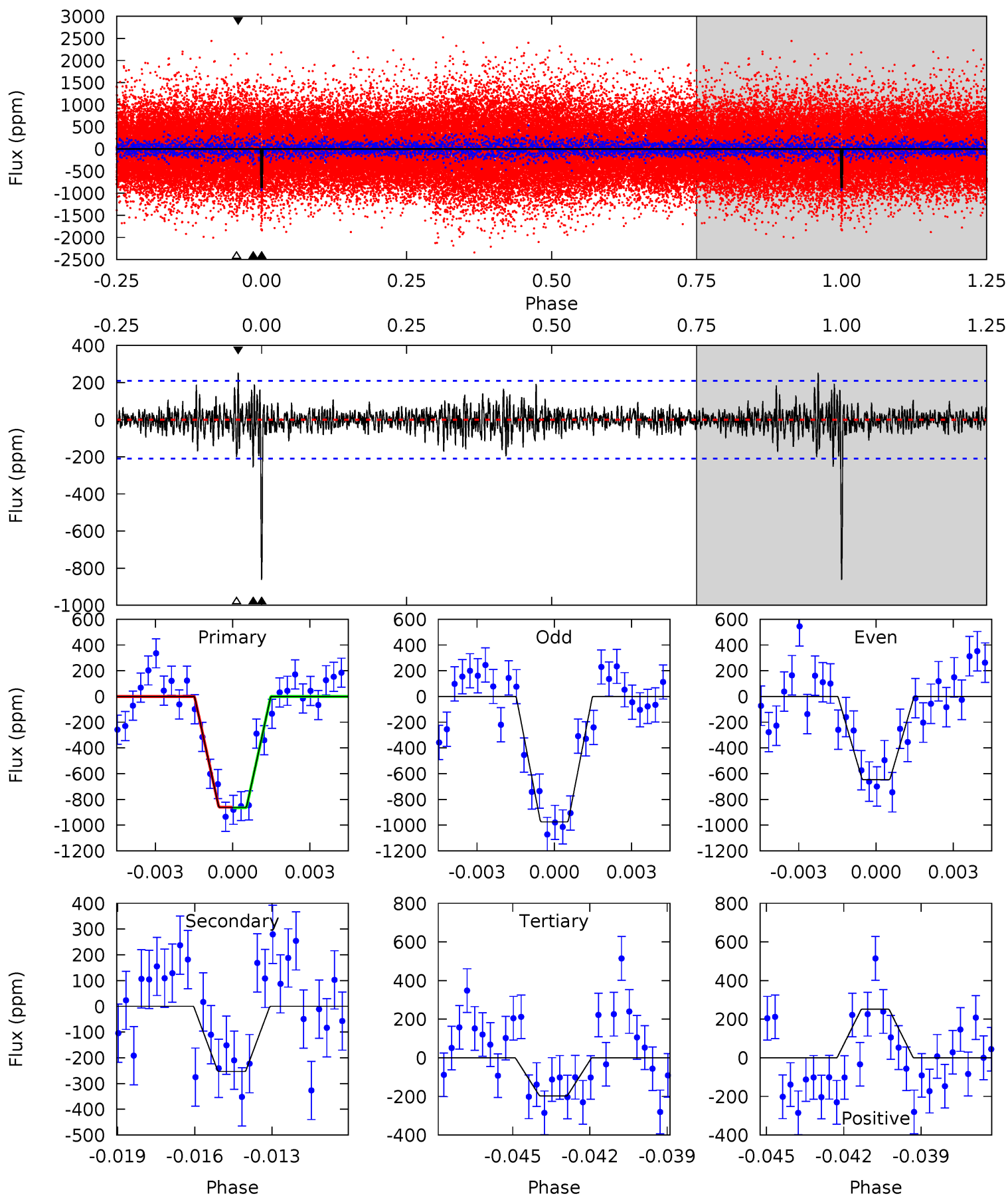
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.2	16.1	15.0	13.1	5.17	2.83	3.32	15.2	17.1	1.13	3.03	4.86	0.88	0.34	2.57



Alt Model-Shift Uniqueness Test

005871104-01, P = 366.305619 Days, E = 154.474950 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	6.32	4.93	6.30	5.24	2.95	1.20	16.6	15.2	1.39	0.02	3.98	1.30	0.23	0.06



Stellar Parameters For KIC 005871104

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5236^{+158}_{-142}	$4.627^{+0.036}_{-0.084}$	$-0.340^{+0.350}_{-0.300}$	$0.709^{+0.104}_{-0.056}$	$0.782^{+0.076}_{-0.084}$	$3.091^{+0.508}_{-0.869}$
	+3%/-3%	+1%/-2%	+103%/-88%	+15%/-8%	+10%/-11%	+16%/-28%
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 005871104-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-553 ± 34	$9.22^{+9.37}_{-6.27}$	286^{+11}_{-10}	2990^{+1332}_{-491}	2950^{+27450}_{-2184}
Alt.	-253 ± 40	$8.48^{+9.02}_{-6.06}$	286^{+11}_{-11}	2771^{+1245}_{-471}	1628^{+18588}_{-1253}

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

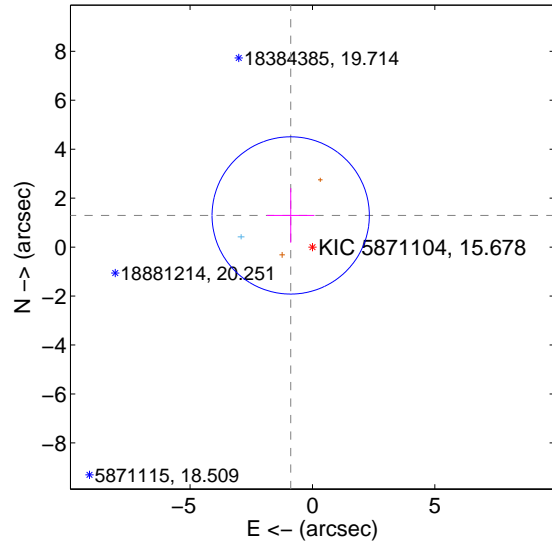
Supplemental centroid analysis for 005871104-01. Kepler magnitude: 15.68. Transit SNR 9.14

There are 1 quarters with good PRF difference image offsets

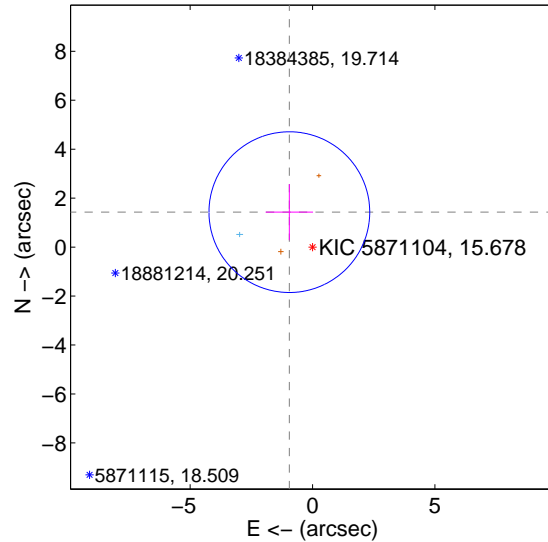
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.569 ± 1.071	1.47	0.888 ± 0.970	1.294 ± 1.115
PRF-fit source offset from KIC position	1.713 ± 1.094	1.57	0.947 ± 0.969	1.428 ± 1.145
photometric centroid source offset	2.02 ± 2.07	0.98	0.10 ± 1.93	2.02 ± 2.07

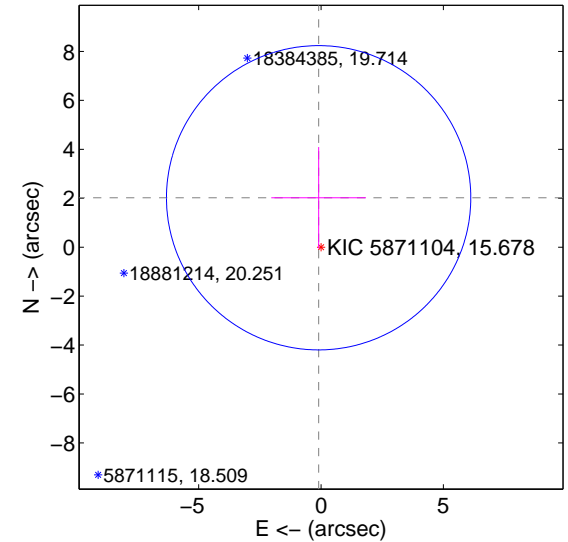
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

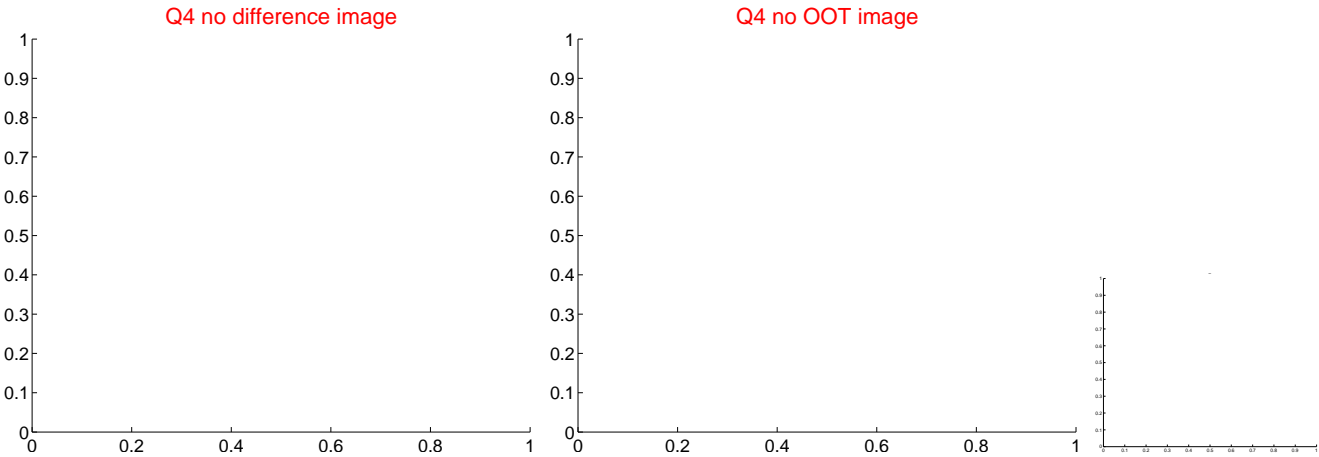
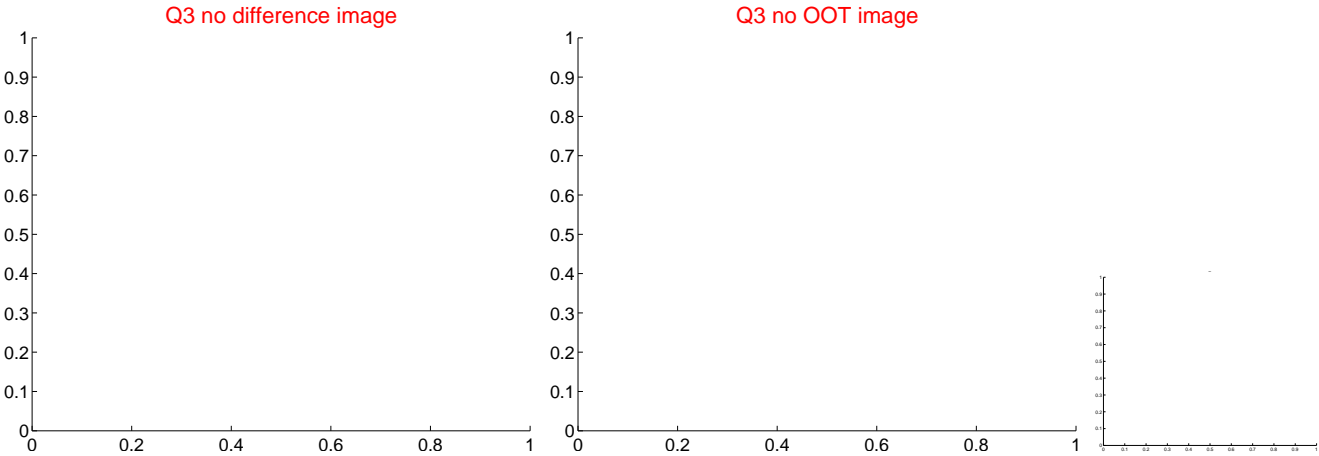
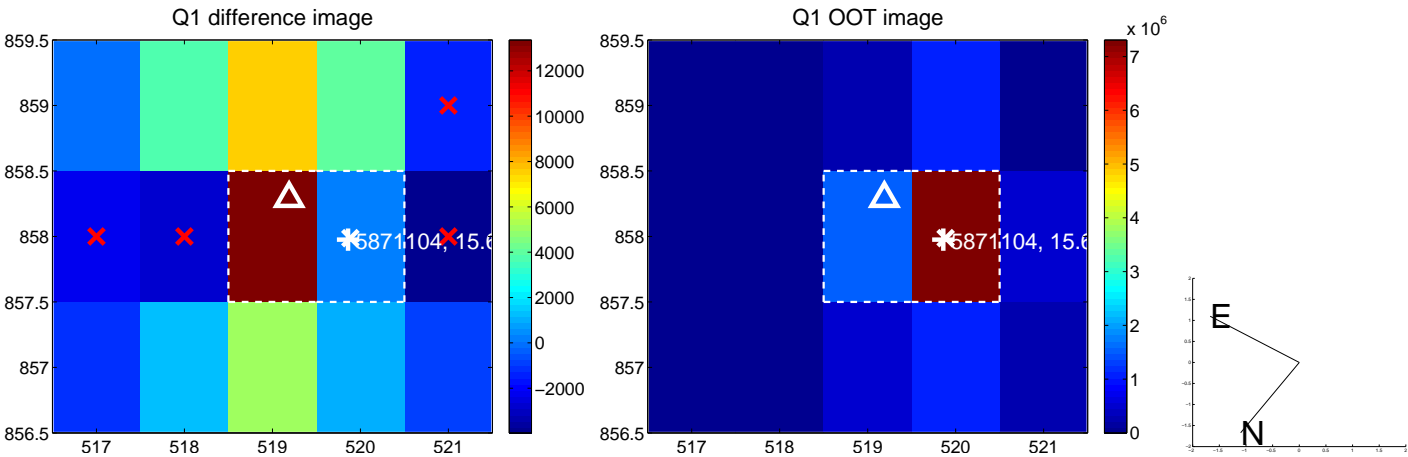


offset from photometric centroids

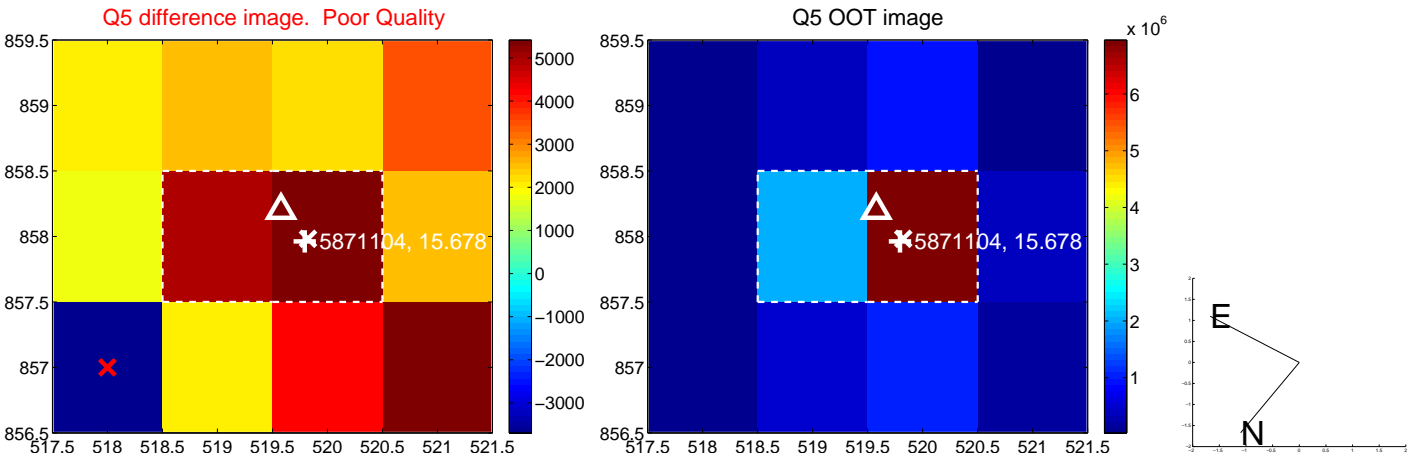


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



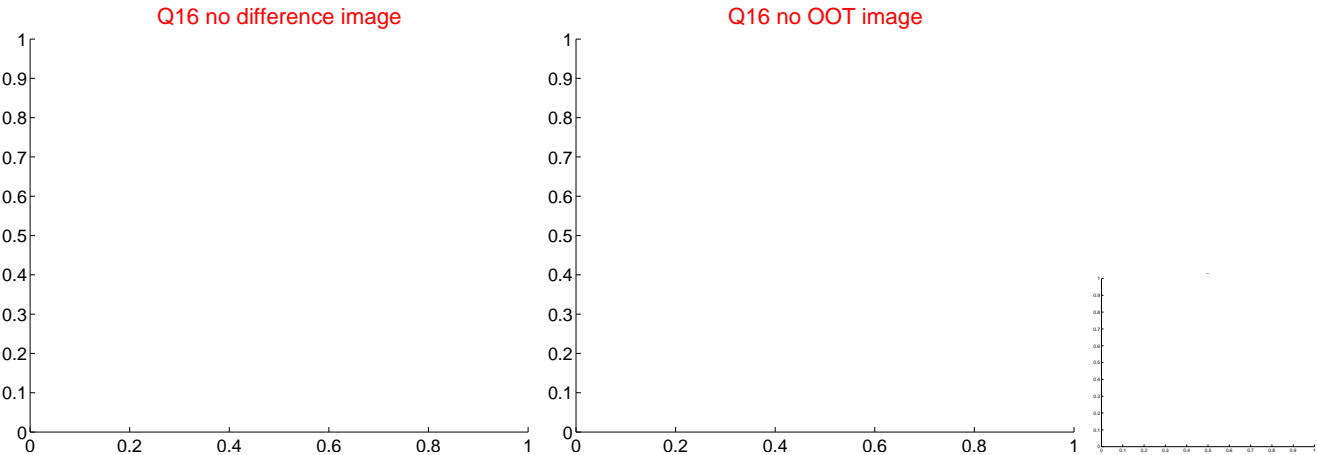
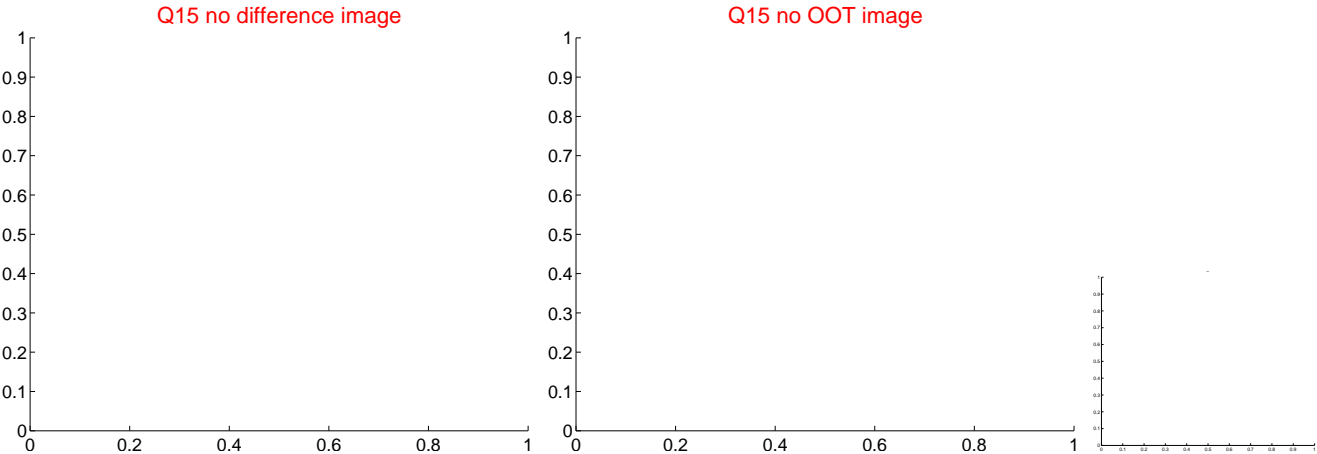
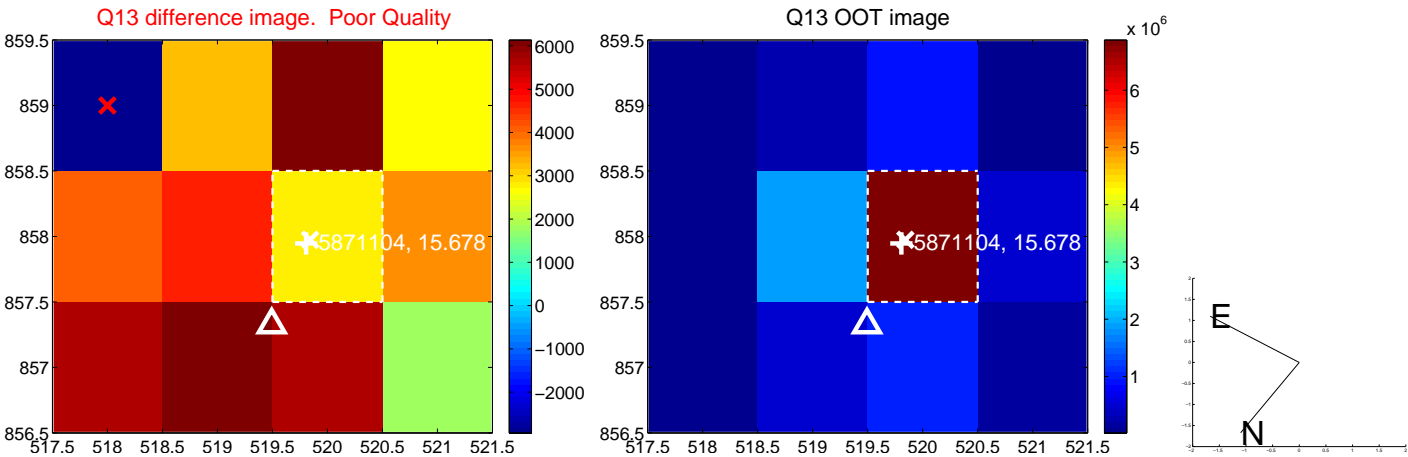
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



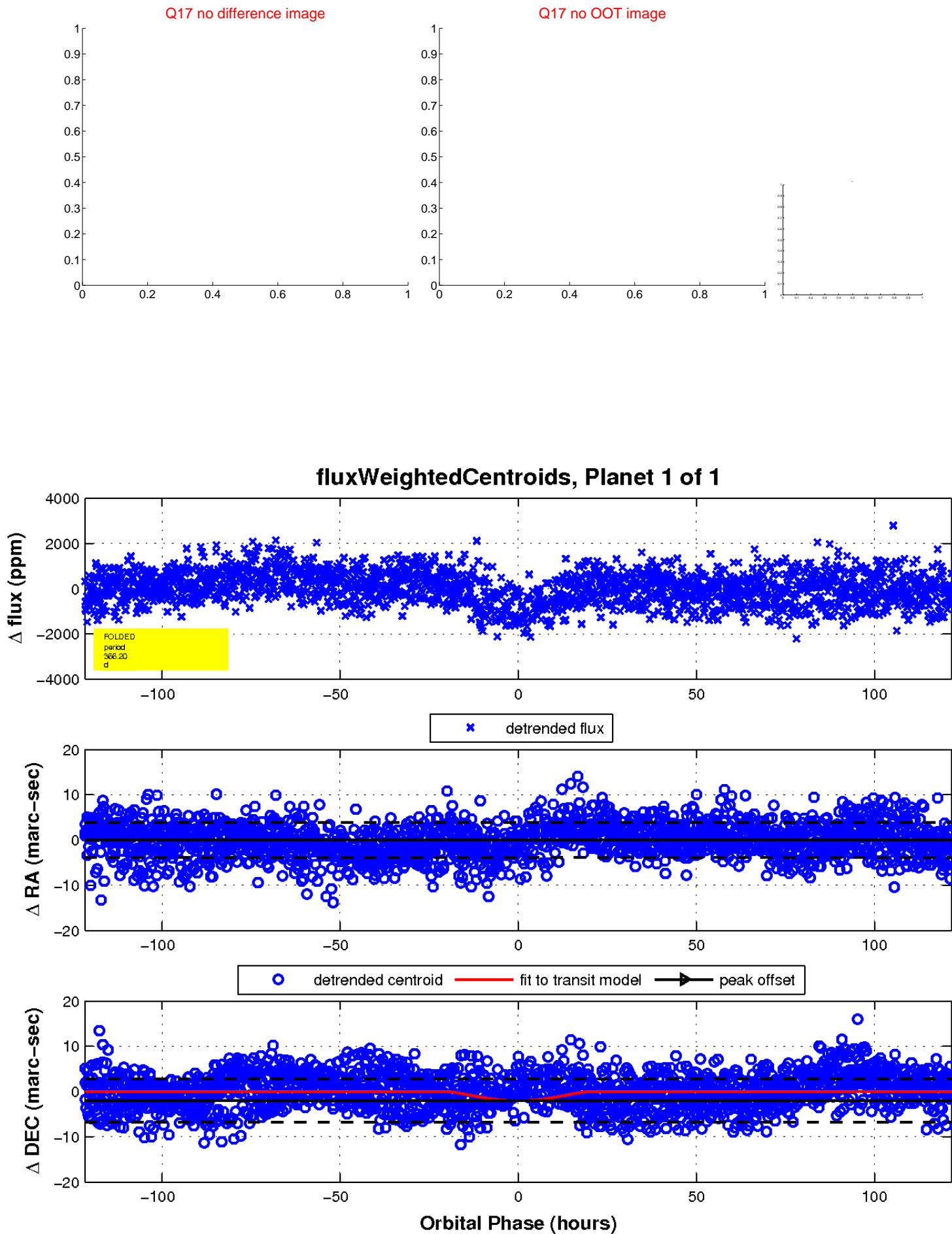
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

