

KIC 007901074

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})
007901074-01	OBS	No	368.936767	233.612835	1491.4	22.195	9.5	10.2	1.02	6273	7.40	1.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007901074-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

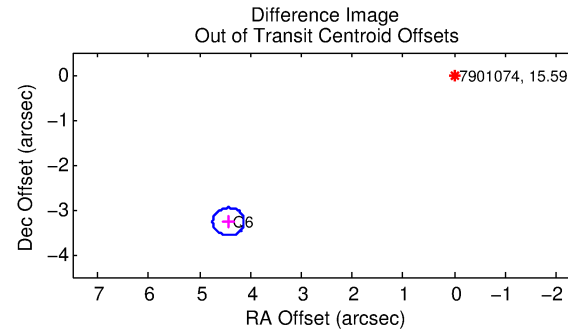
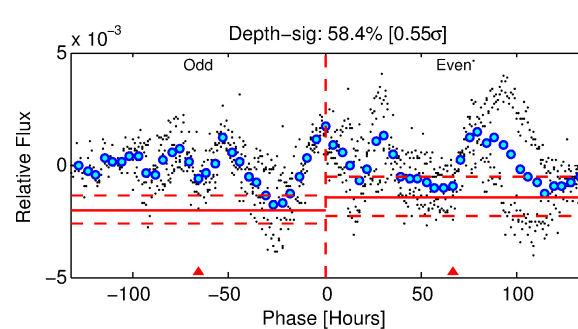
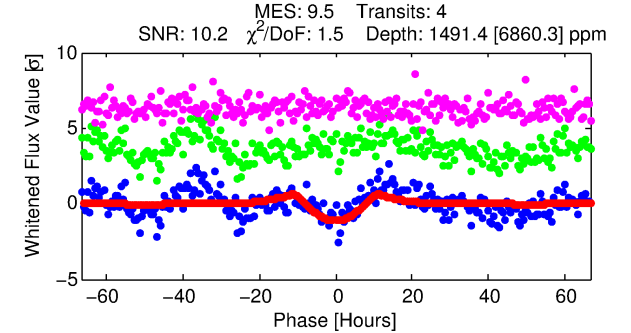
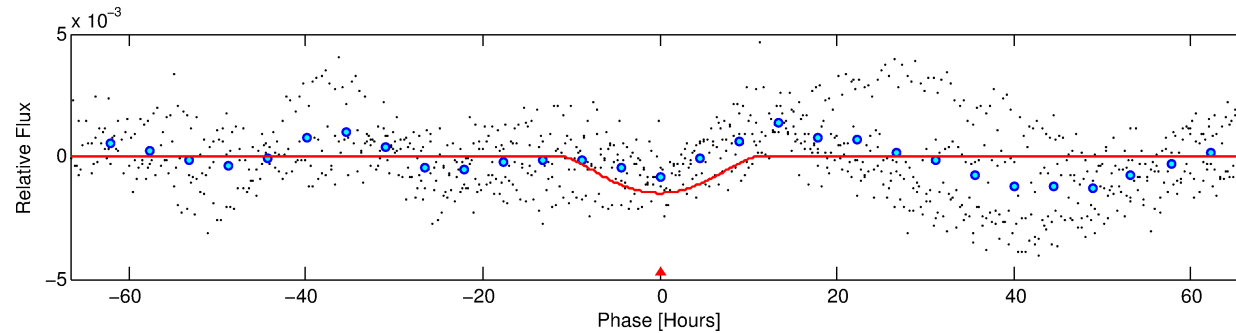
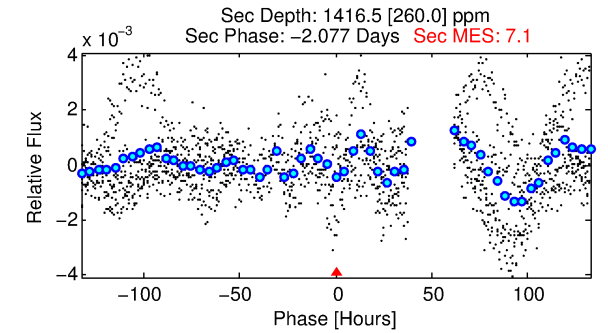
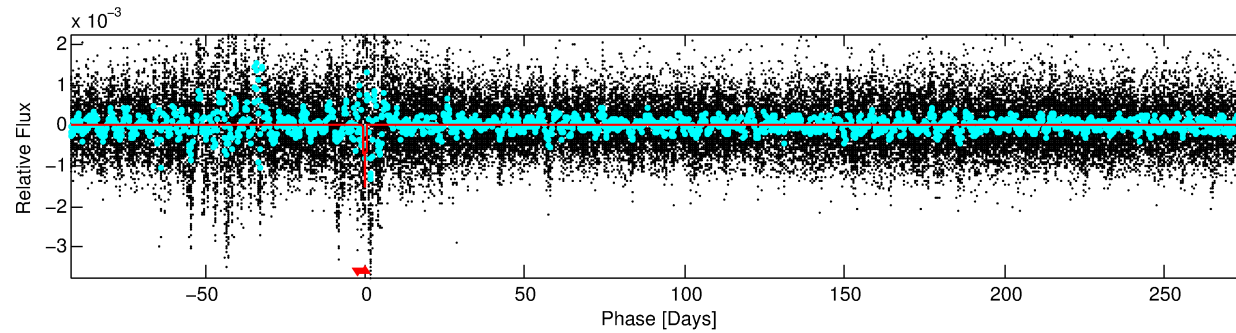
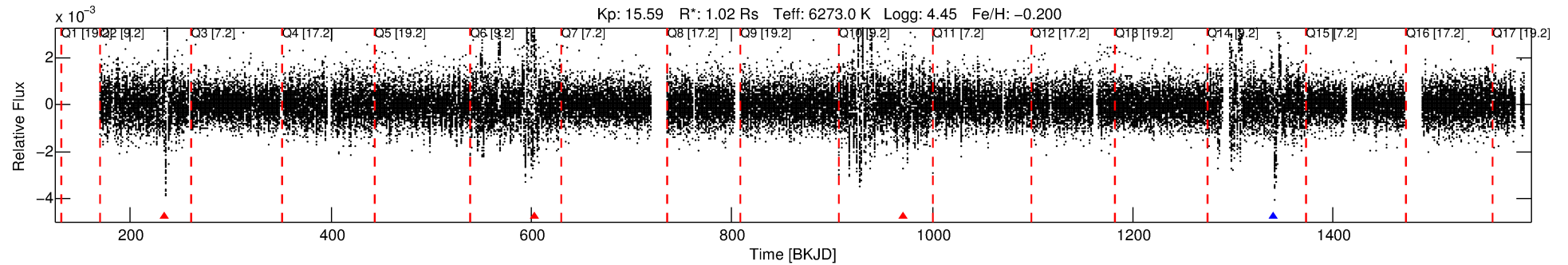
Ephemeris Match Information For 007901074-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007901074-01	7901074	007970427-01	7970427	1:1	557.6	-140	-4	15.24	15.59	0.46	Col-Anomaly	1	2.96	2.03

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7901074 Candidate: 1 of 1 Period: 368.937 d



DV Fit Results:

Period = 368.93677 [0.02039] d
Epoch = 233.6128 [0.0386] BKJD
Rp/R* = 0.0664 [0.1807]
a/R* = 47.07 [29.22]
b = 1.00 [0.05]
Seff = 1.35 [0.56]
Teq = 275 [29] K
Rp = 7.40 [20.27] Re
a = 1.0336 [0.2760] AU
Ag = 15191.86 [82865.30] [0.18σ]
Teff = 4721 [6424] K [0.69σ]

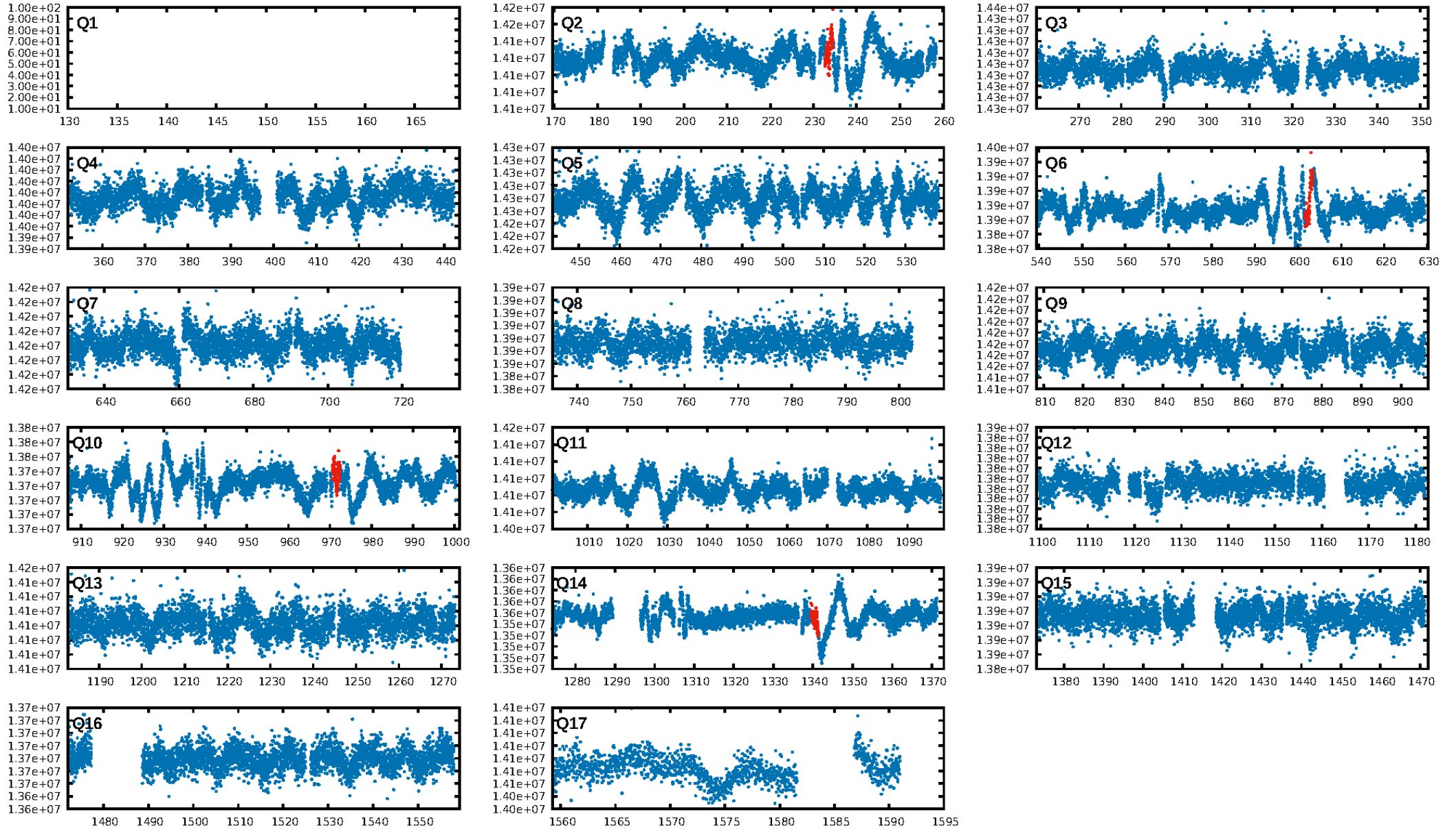
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.5%
ModelChiSquareGoF-sig: 49.8%
Bootstrap-pfa: 8.47e-12
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -0.009261
Centroid-sig: 0.0%
Centroid-so: 6.145 arcsec [2.99σ]
OotOffset-rm: 5.510 arcsec [53.17σ]
KicOffset-rm: 5.631 arcsec [54.16σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

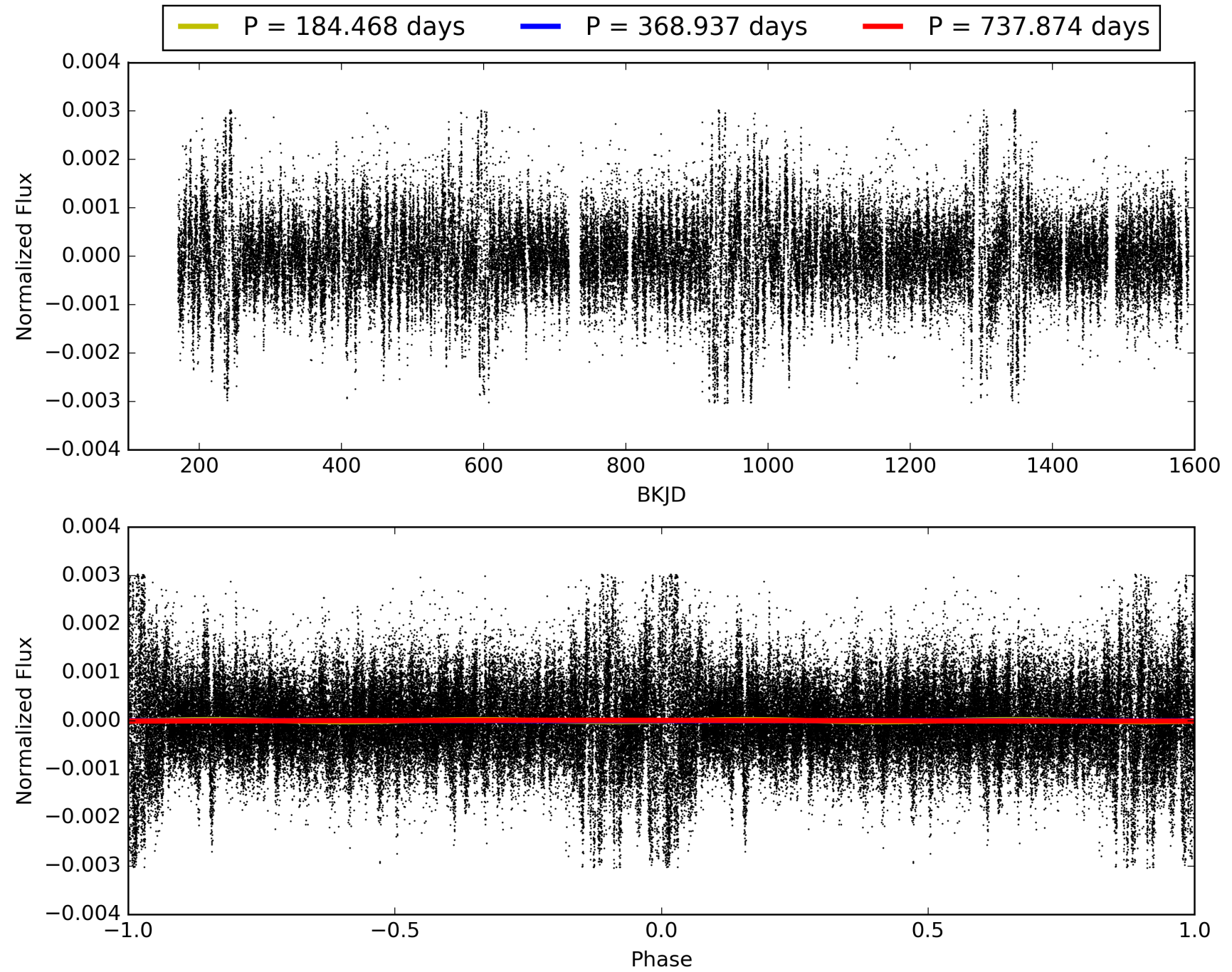
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:39:34 Z

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

TCE 007901074-01, PDC Light Curves

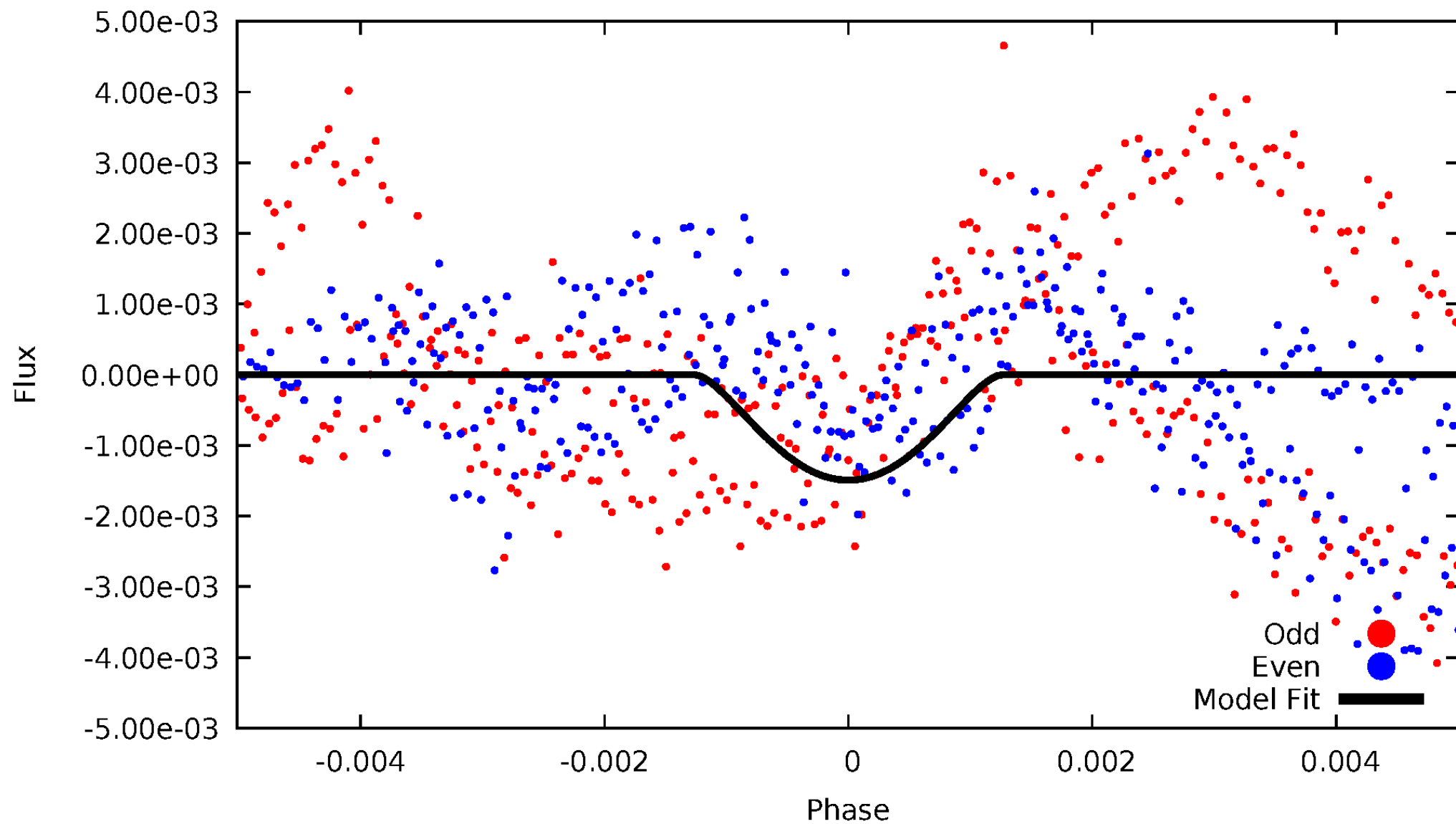


TCE 007901074-01



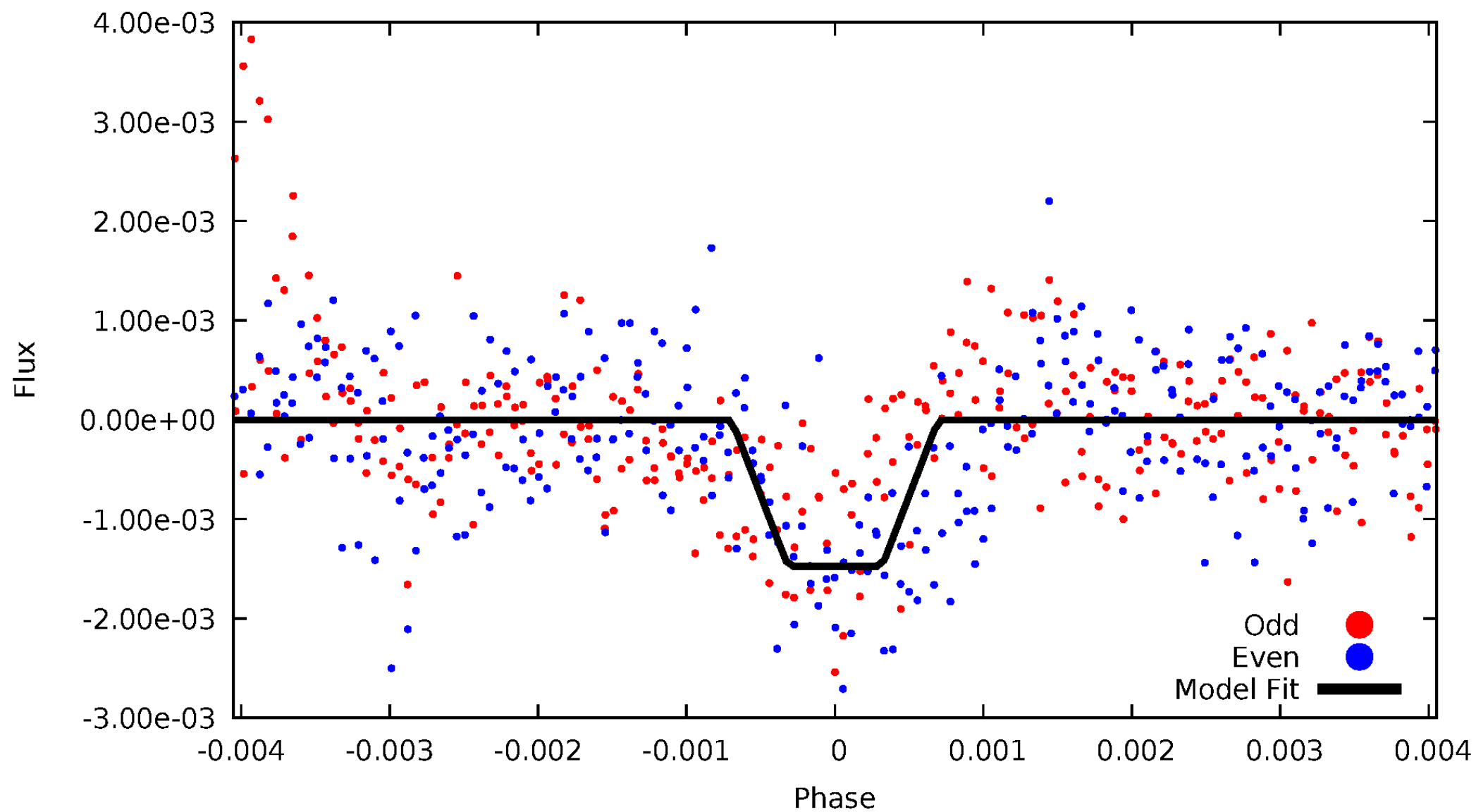
DV Odd/Even

TCE 007901074-01



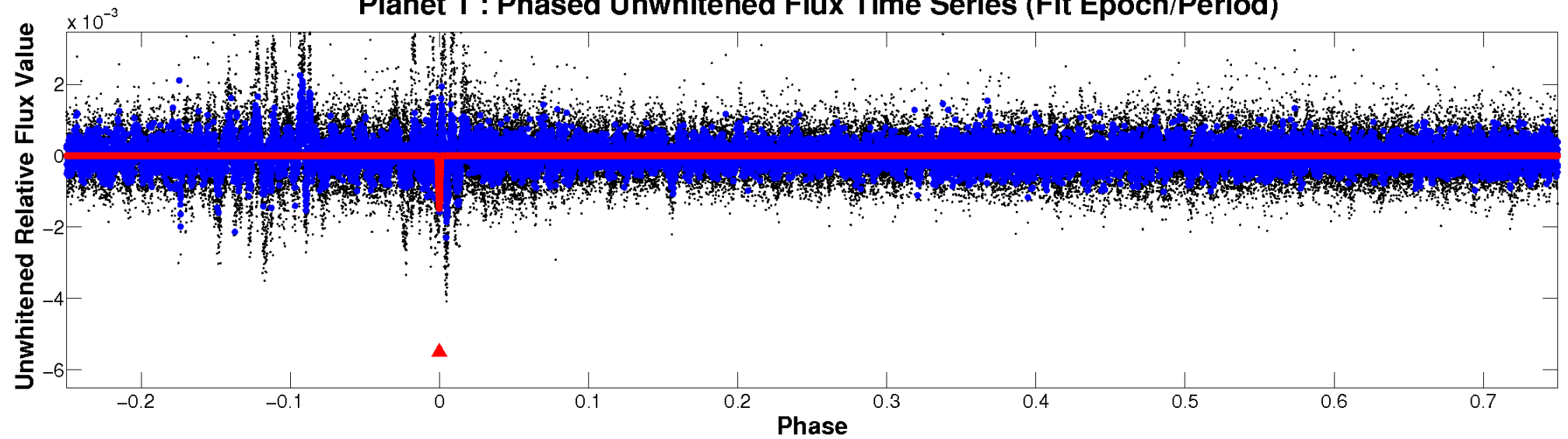
ALT Odd/Even

TCE 007901074-01

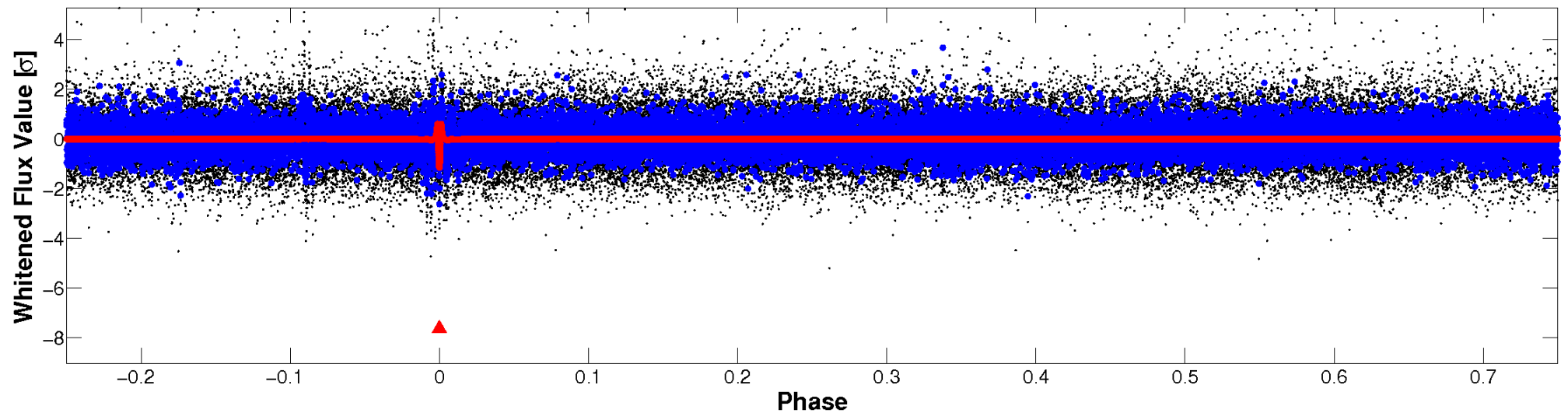


Non-Whitened Vs. Whitened Light Curve

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

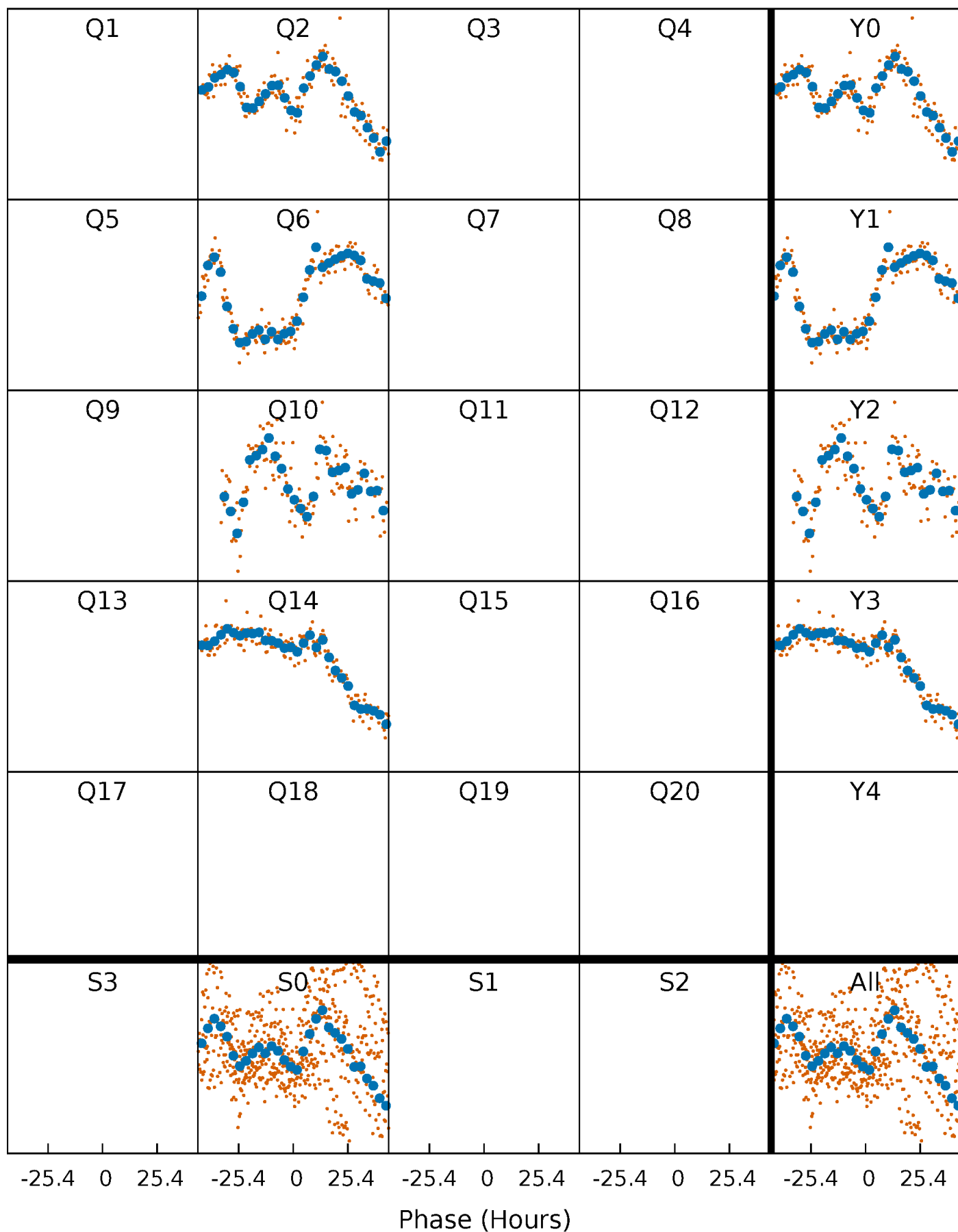


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



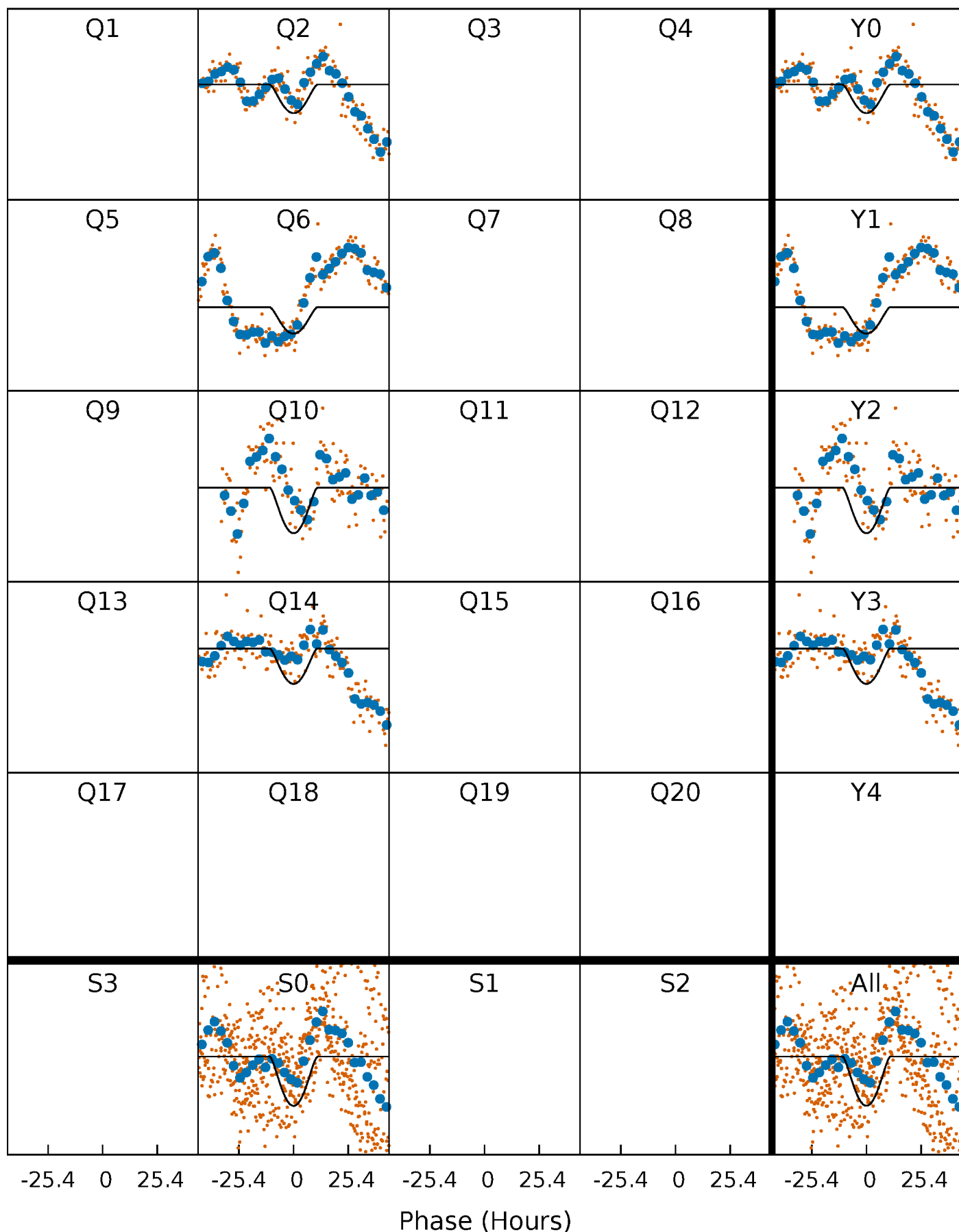
PDC Quarter-Phased Transit Curves

TCE 007901074-01 P=368.936767 Days $T_0=233.612835$ (BKJD)



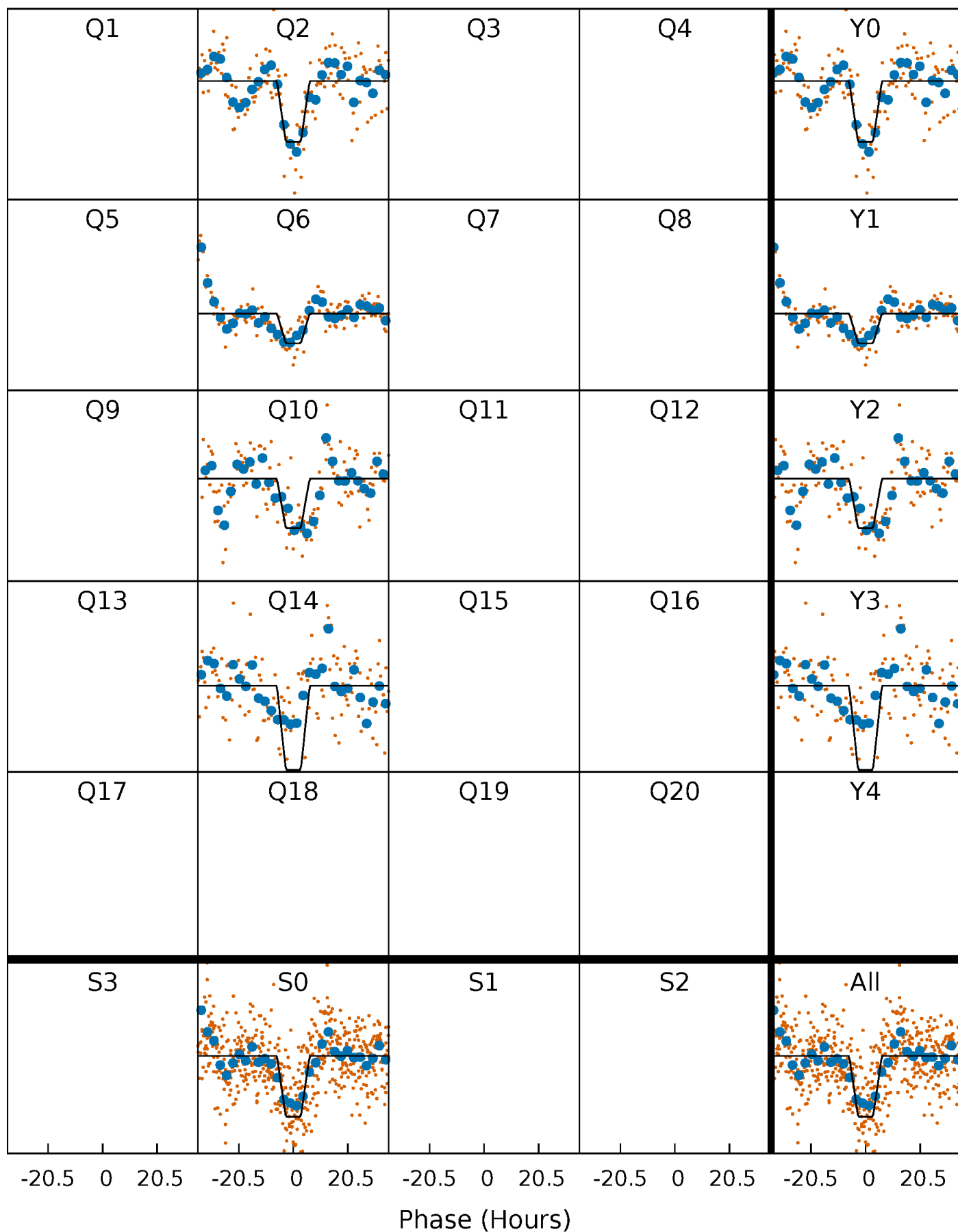
DV Quarter-Phased Transit Curves

TCE 007901074-01 P=368.936767 Days $T_0=233.612835$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

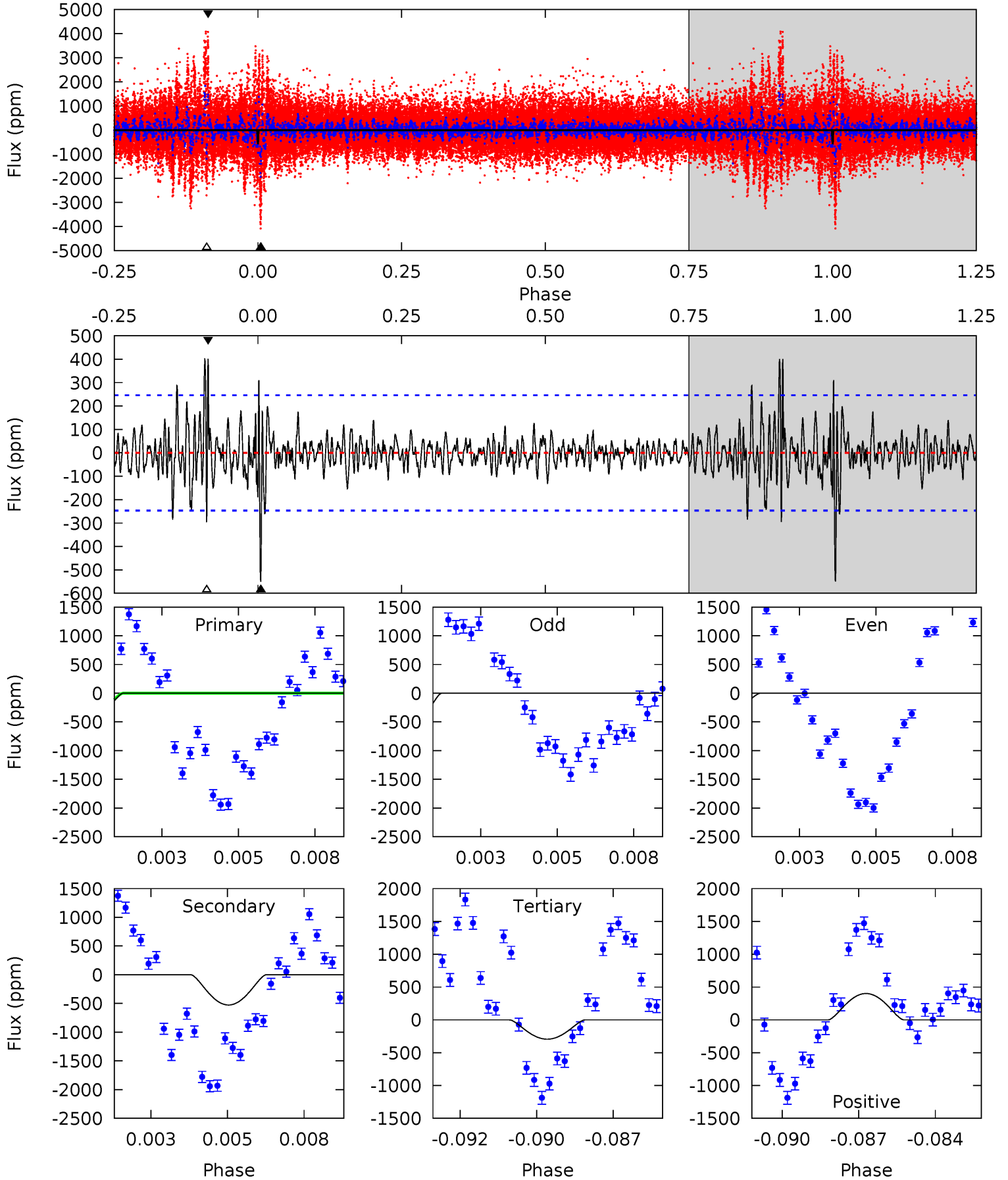
TCE 007901074-01 P=368.948359 Days $T_0=233.621509$ (BKJD)



DV Model-Shift Uniqueness Test

007901074-01, P = 368.936767 Days, E = 233.612835 Days

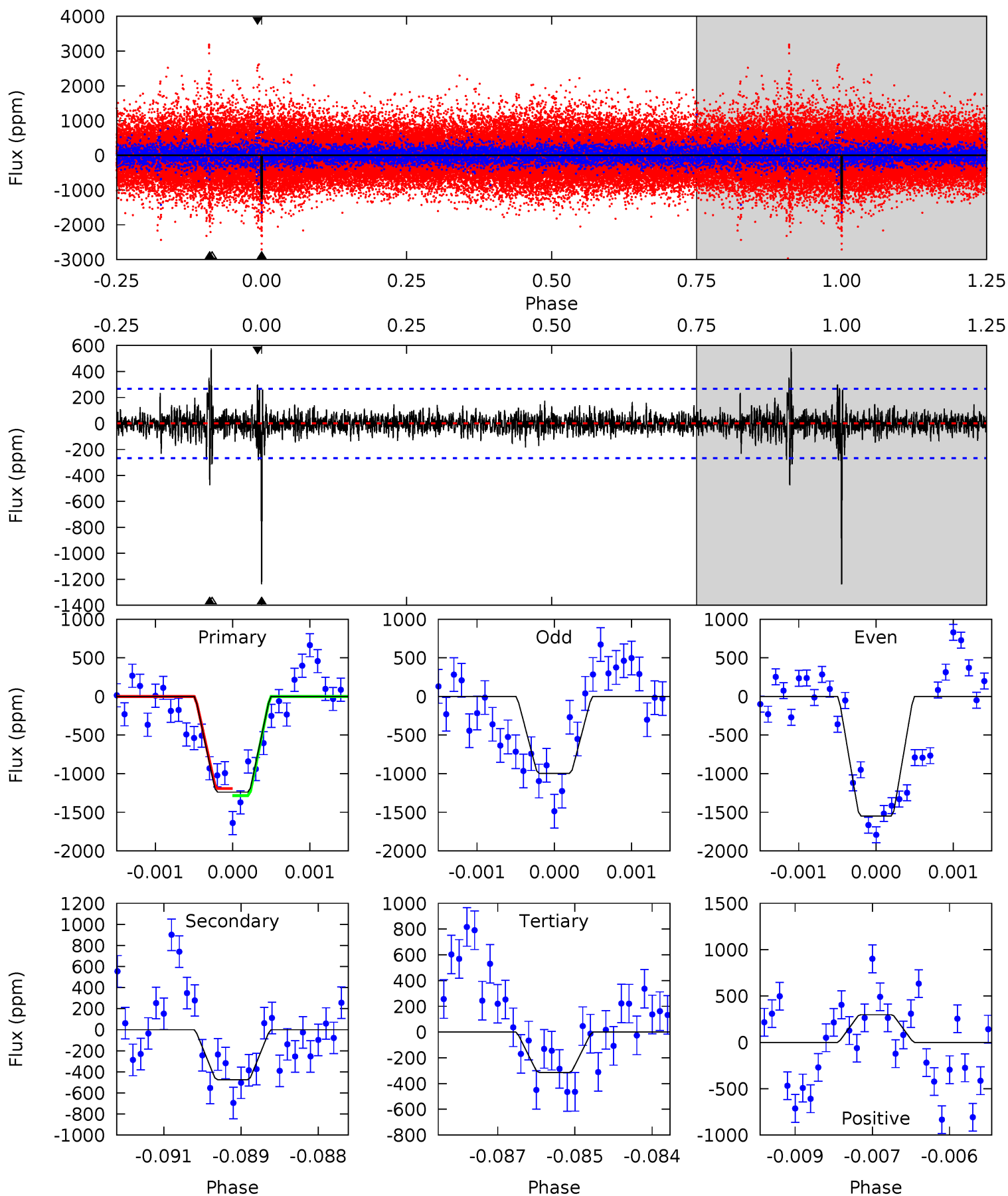
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	11.3	6.31	8.60	5.28	3.02	1.43	5.46	3.17	4.98	2.70	3.73	1.50	0.42	2.16



Alt Model-Shift Uniqueness Test

007901074-01, P = 368.948359 Days, E = 233.621509 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	9.57	6.34	6.03	5.39	3.19	1.17	18.7	19.0	3.23	3.54	5.54	0.90	0.32	0.91



Stellar Parameters For KIC 007901074

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6273^{+175}_{-241}	$4.454^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.350}$	$1.021^{+0.326}_{-0.116}$	$1.077^{+0.158}_{-0.144}$	$1.426^{+0.419}_{-0.765}$
	+3%/-4%	+1%/-5%	+125%/-175%	+32%/-11%	+15%/-13%	+29%/-54%
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 007901074-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-527 ± 47	$17.77^{+17.82}_{-12.16}$	392^{+28}_{-20}	3052^{+1406}_{-504}	977^{+8991}_{-746}
Alt.	-474 ± 50	$16.51^{+15.68}_{-11.60}$	391^{+30}_{-21}	3081^{+1536}_{-494}	995^{+10830}_{-734}

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 $A_{obs} \gg 1.0$

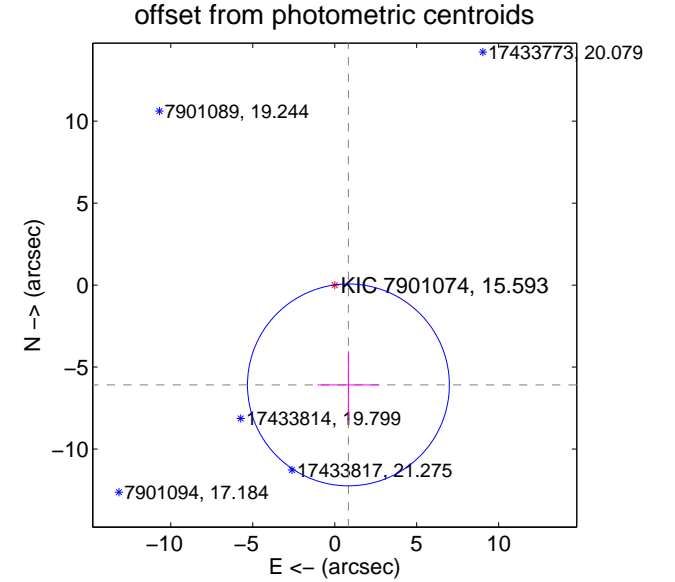
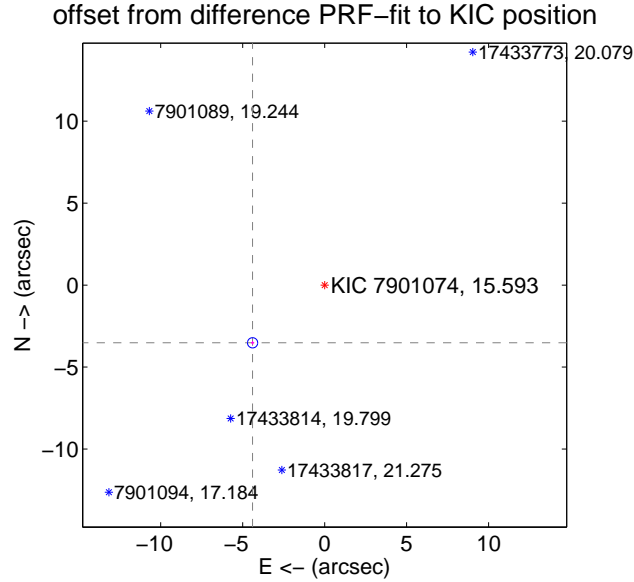
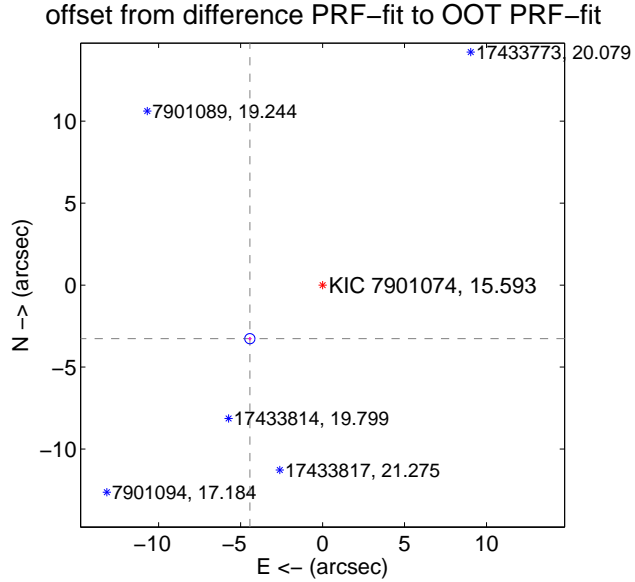
DV Centroid Data

Supplemental centroid analysis for 007901074-01. Kepler magnitude: 15.59. Transit SNR 10.22

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.510 ± 0.104	53.17	4.435 ± 0.100	-3.268 ± 0.109
PRF-fit source offset from KIC position	5.631 ± 0.104	54.16	4.395 ± 0.100	-3.520 ± 0.109
photometric centroid source offset	6.15 ± 2.05	2.99	-0.84 ± 1.89	-6.09 ± 2.05

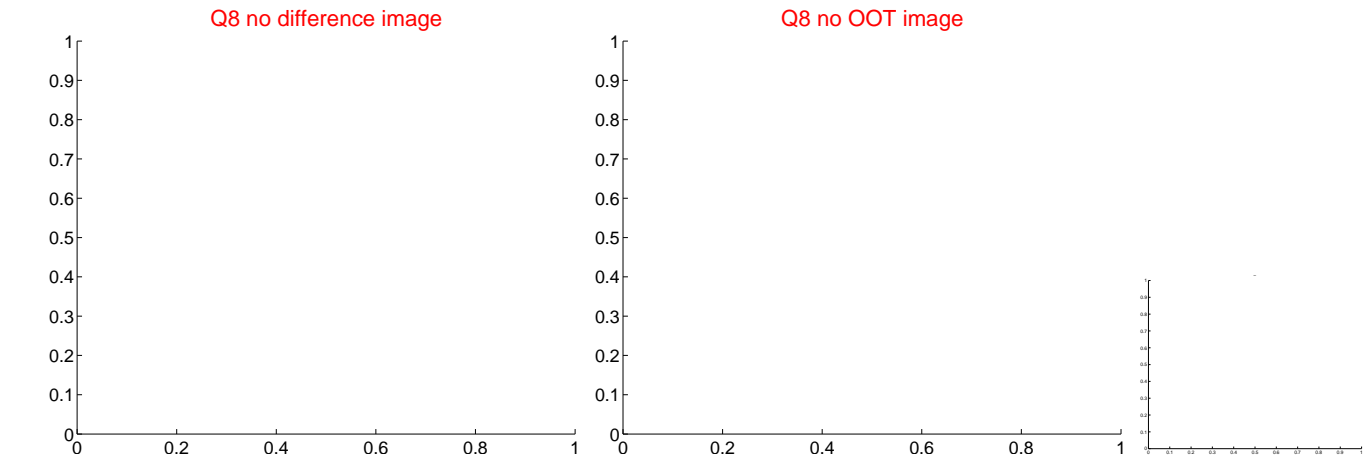
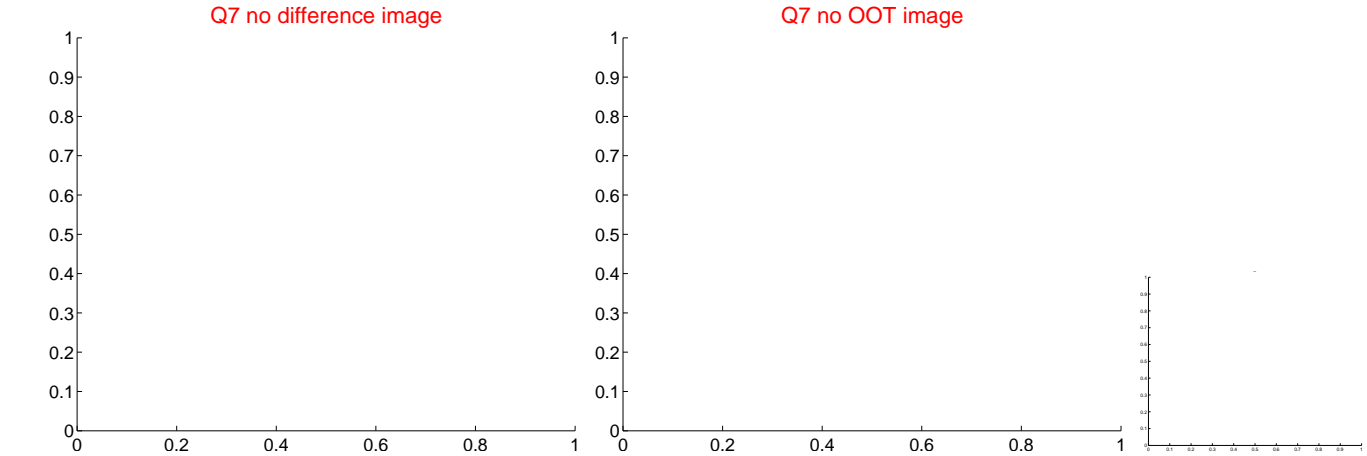
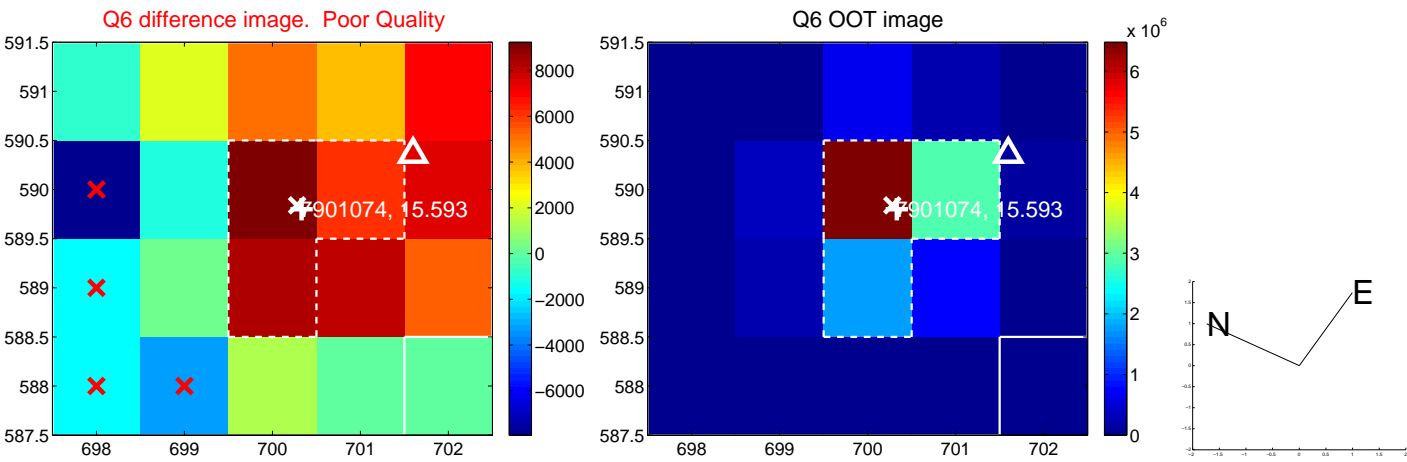
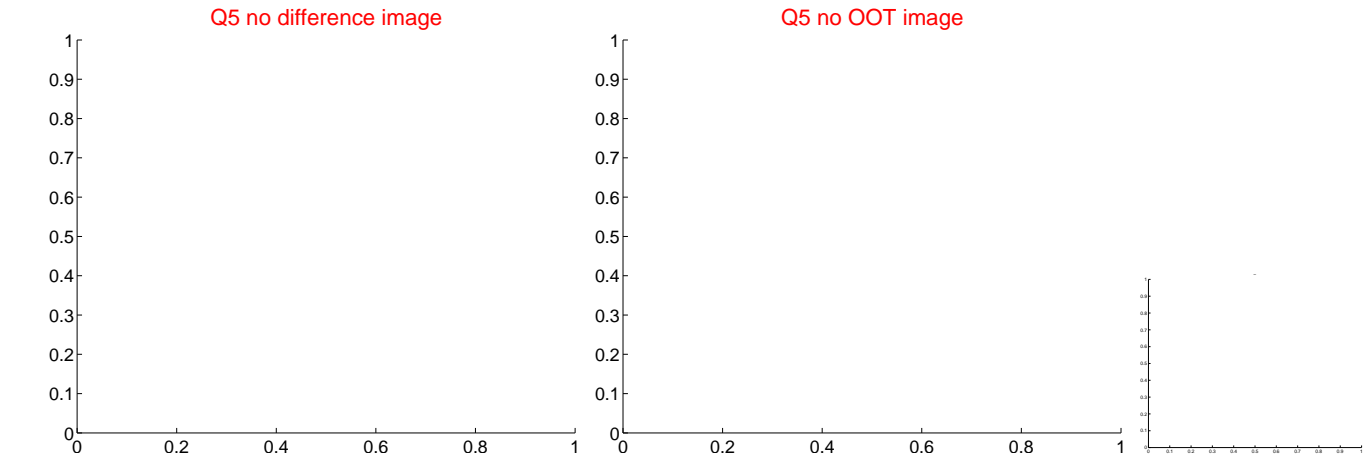


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



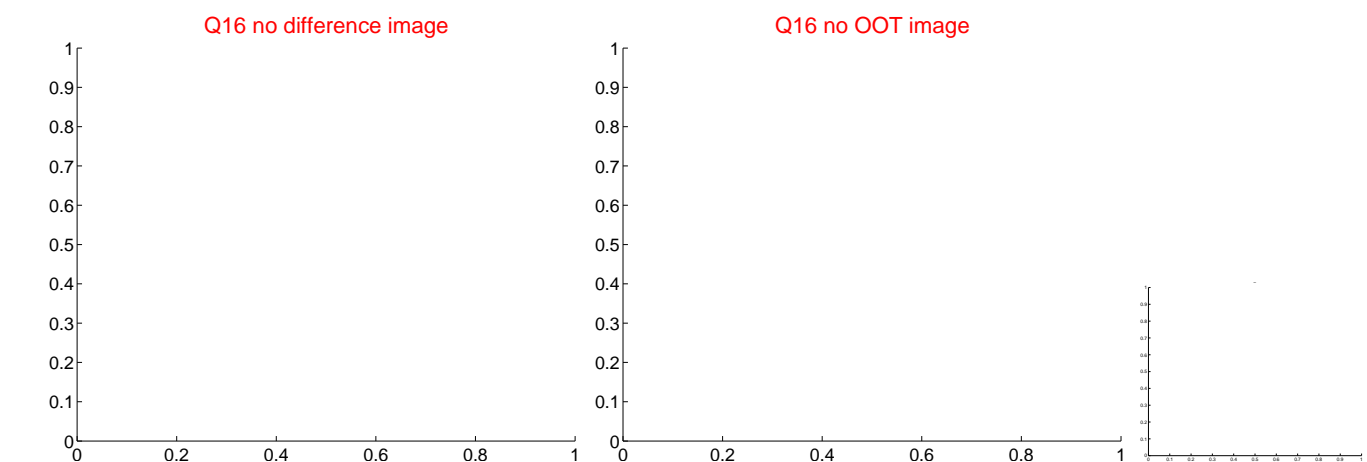
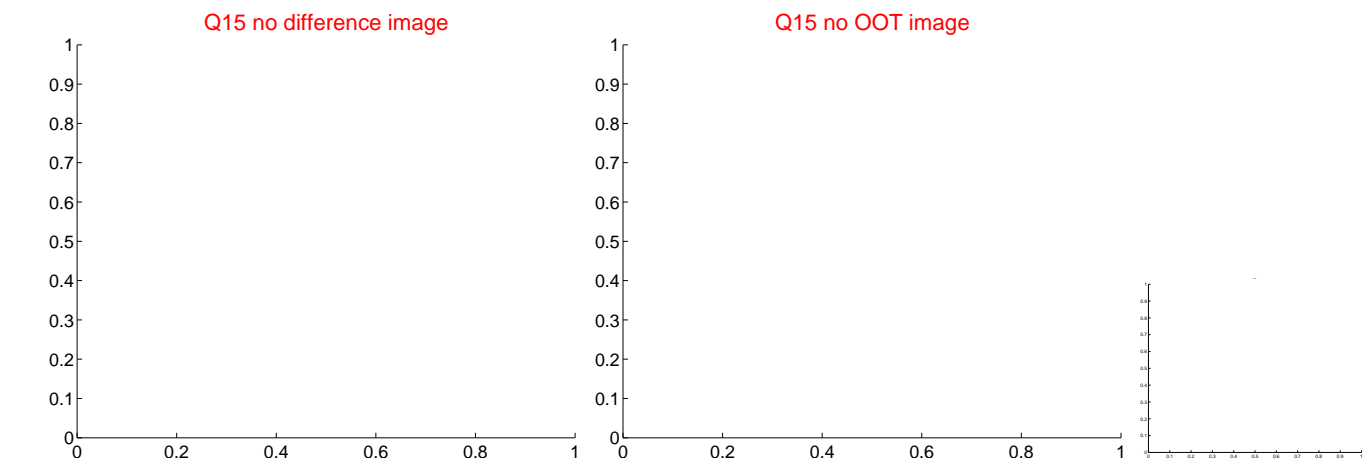
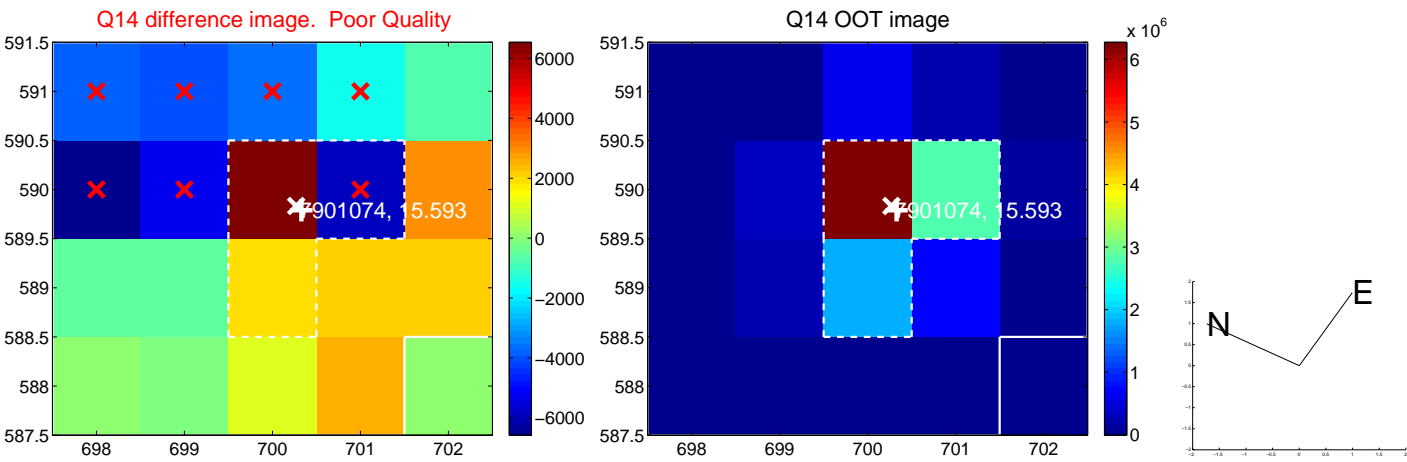
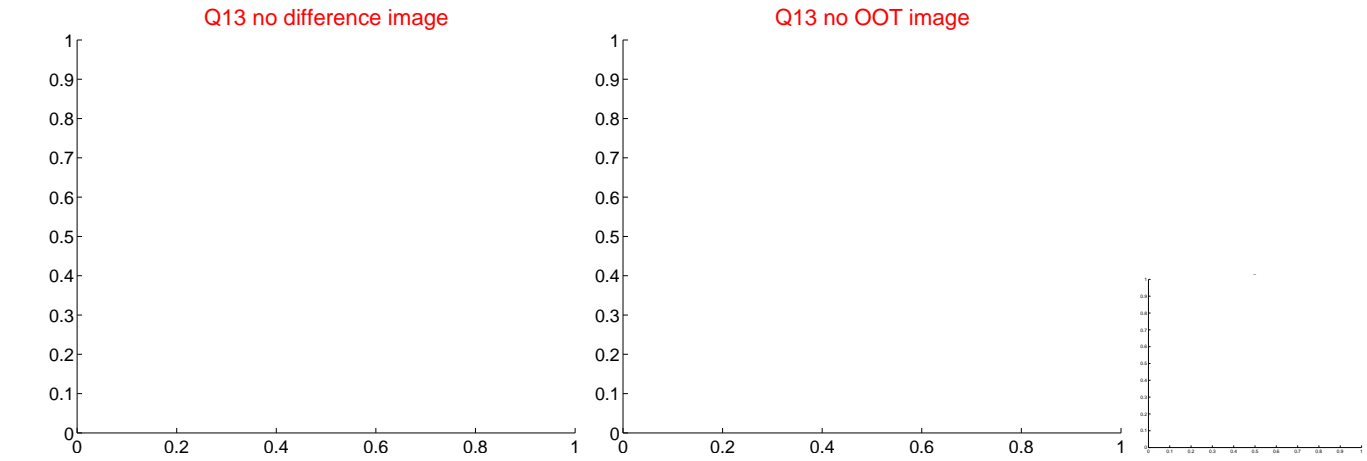
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



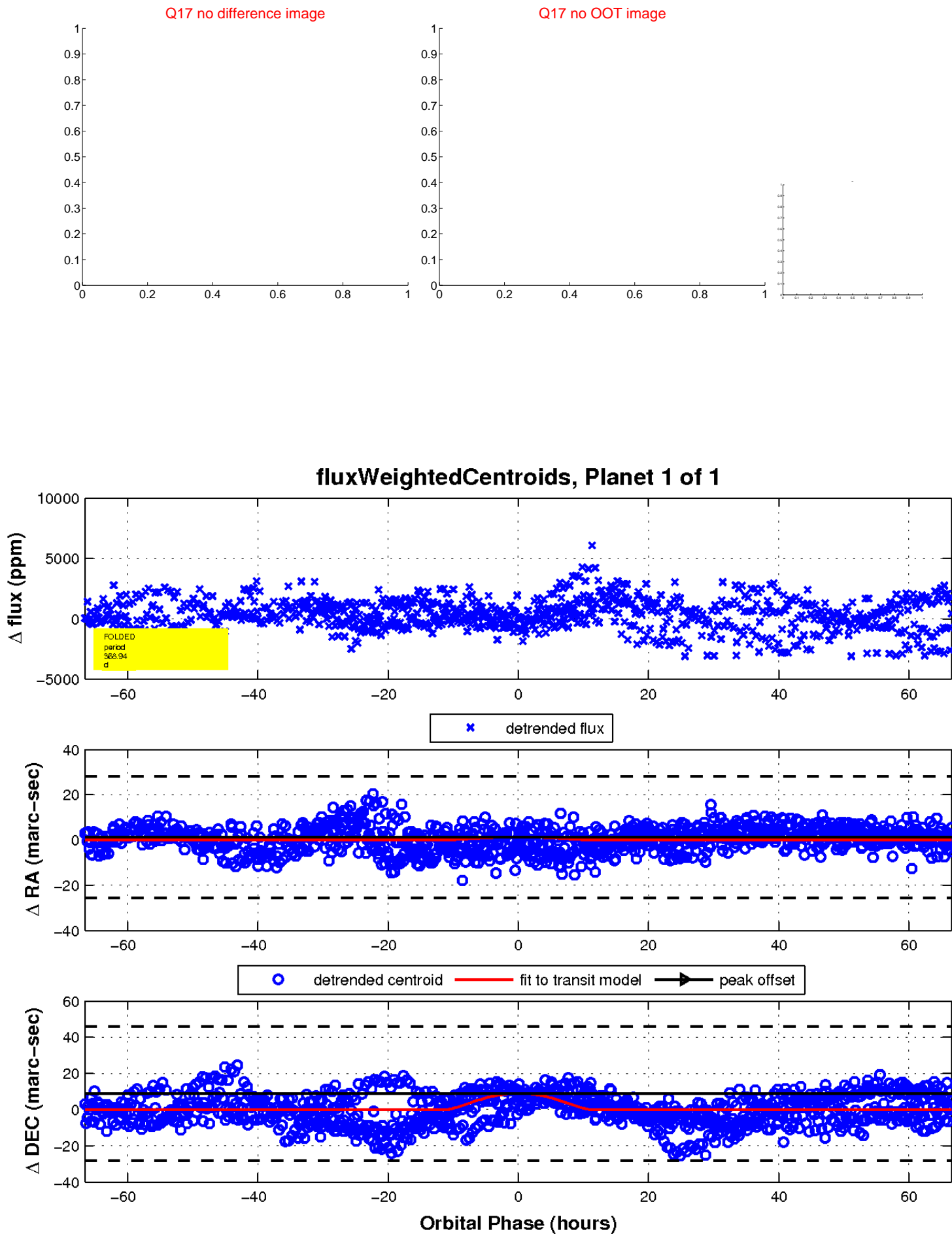
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



Declination