

KIC 009710612

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})
009710612-01	OBS	No	369.361386	499.108519	1982.8	18.418	9.1	9.2	0.94	5880	5.28	0.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009710612-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

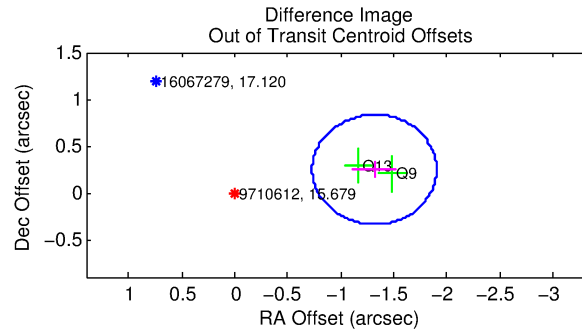
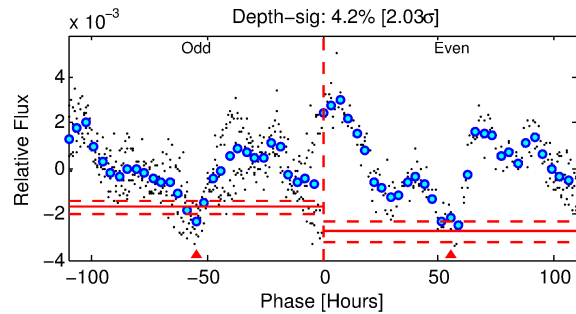
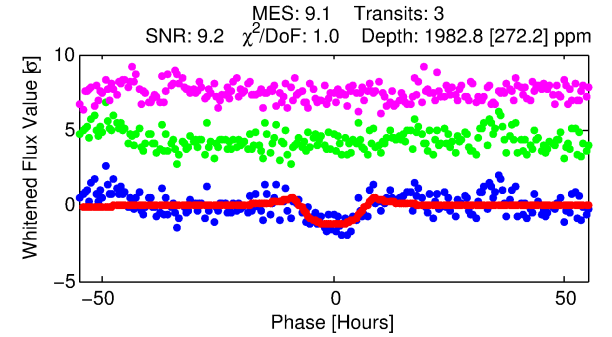
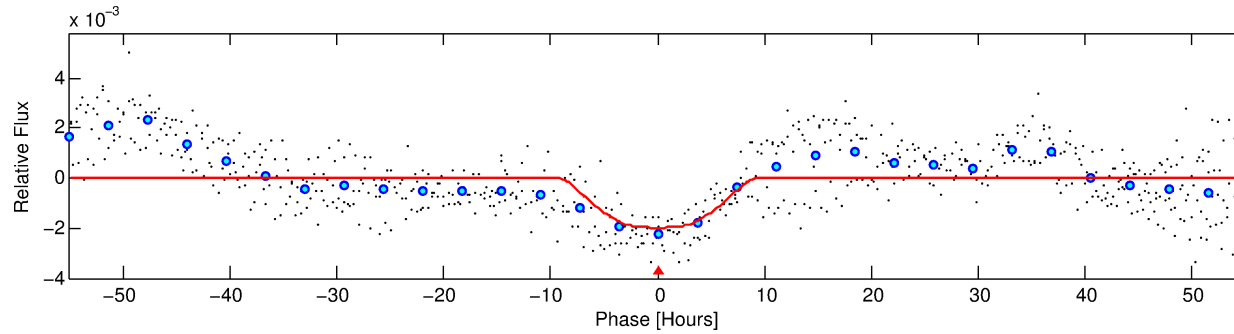
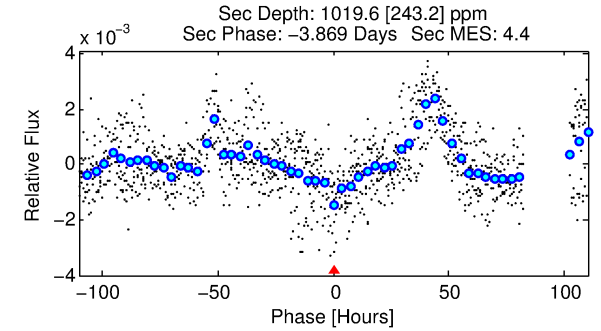
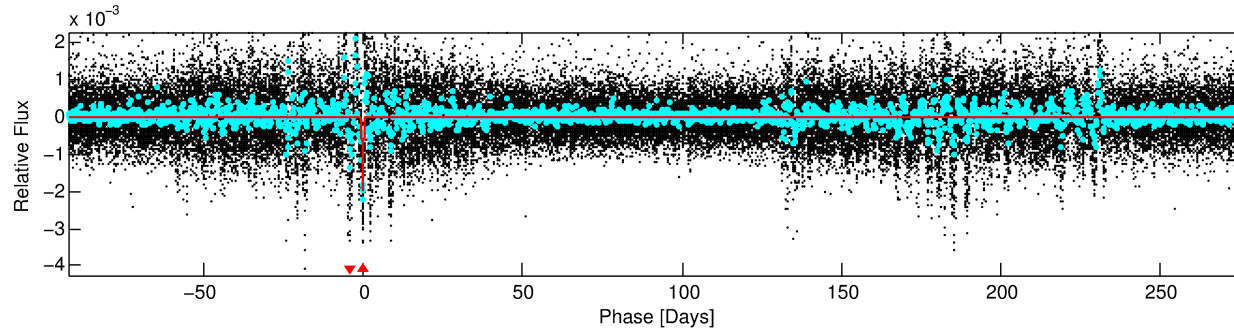
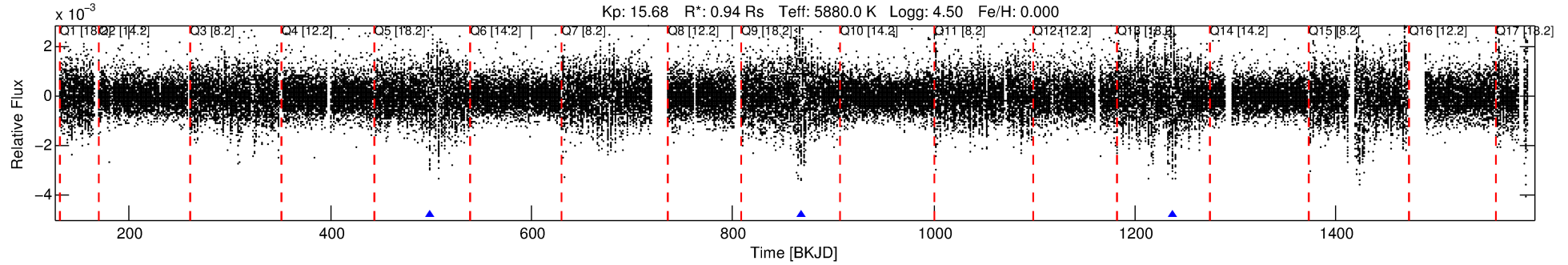
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009710612-01

No Significant Match Found

DV One-Page Summary

KIC: 9710612 Candidate: 1 of 1 Period: 369.361 d



DV Fit Results:

Period = 369.36139 [0.02099] d
Epoch = 499.1085 [0.0262] BKJD
Rp/R* = 0.0515 [0.0046]
a/R* = 70.99 [8.26]
b = 0.94 [0.02]
Seff = 0.92 [0.37]
Teq = 249 [25] K
Rp = 5.28 [1.73] Re
a = 1.0164 [0.2686] AU
Ag = 20793.70 [10073.01] [2.06σ]
Teffp = 4631 [376] K [11.62σ]

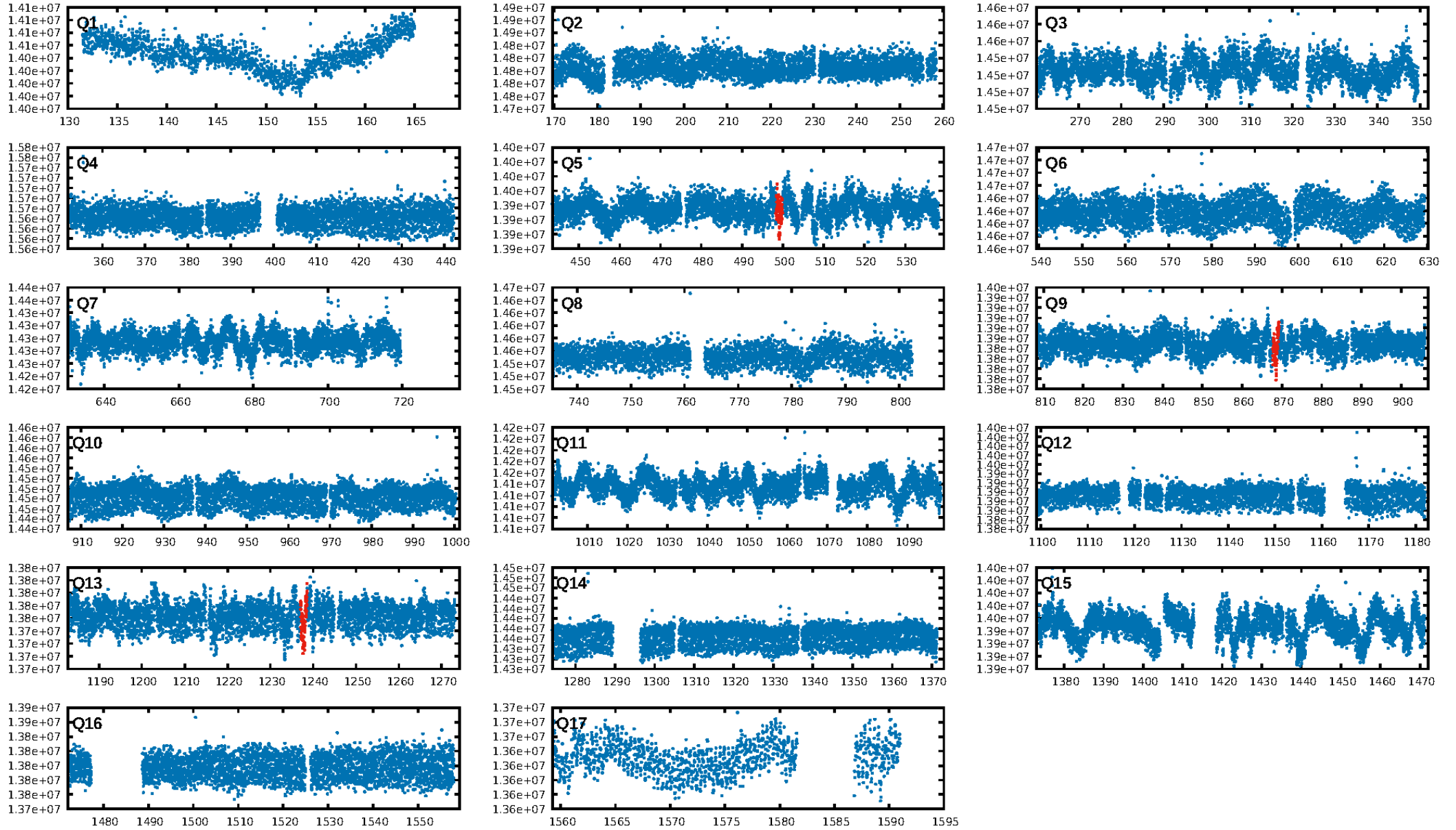
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 33.6%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.63e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.732
Centroid-sig: 6.1%
Centroid-so: 1.791 arcsec [1.29σ]
OotOffset-rm: 1.342 arcsec [6.87σ]
KicOffset-rm: 1.339 arcsec [6.12σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

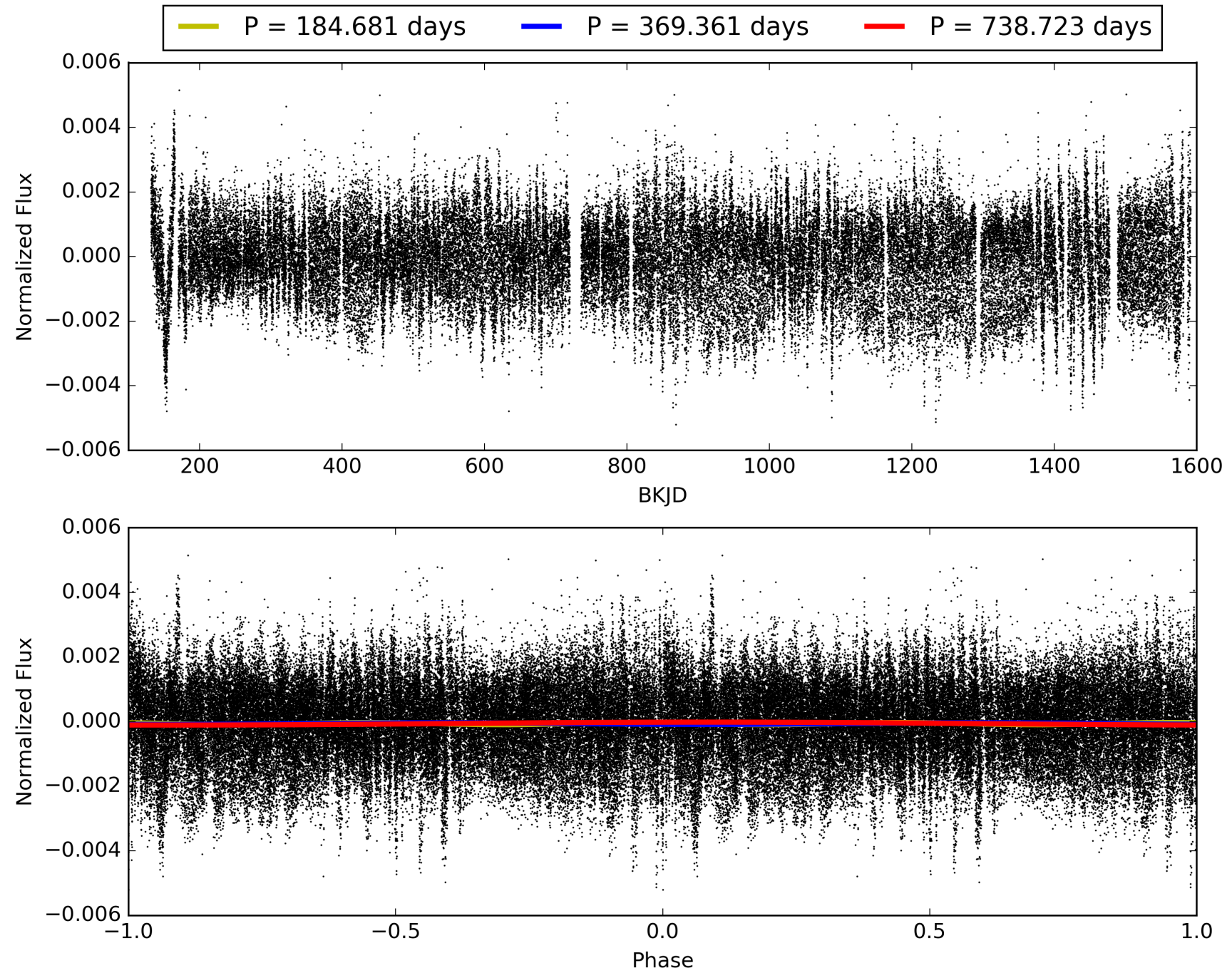
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:07:48 Z

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

TCE 009710612-01, PDC Light Curves

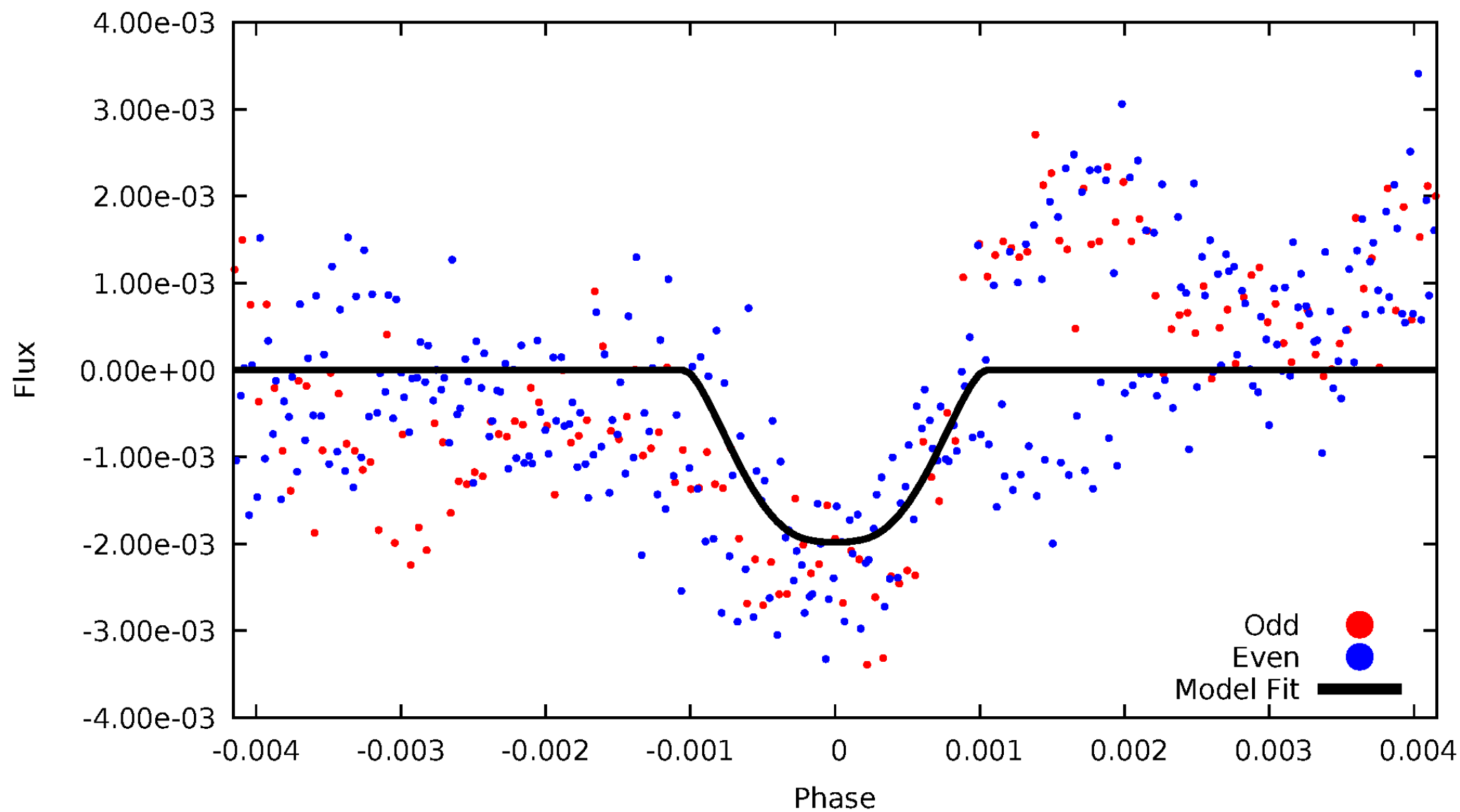


TCE 009710612-01



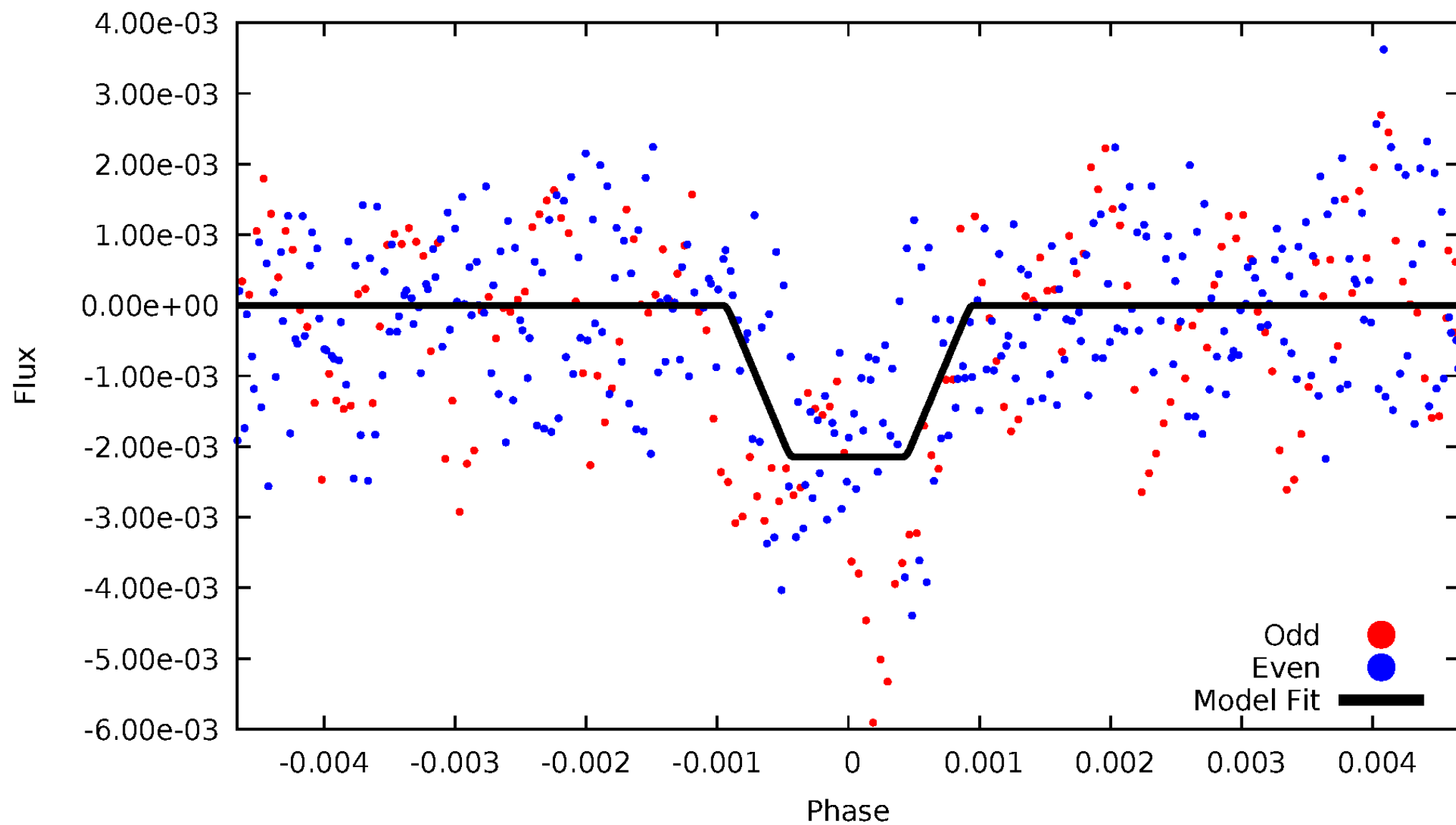
DV Odd/Even

TCE 009710612-01



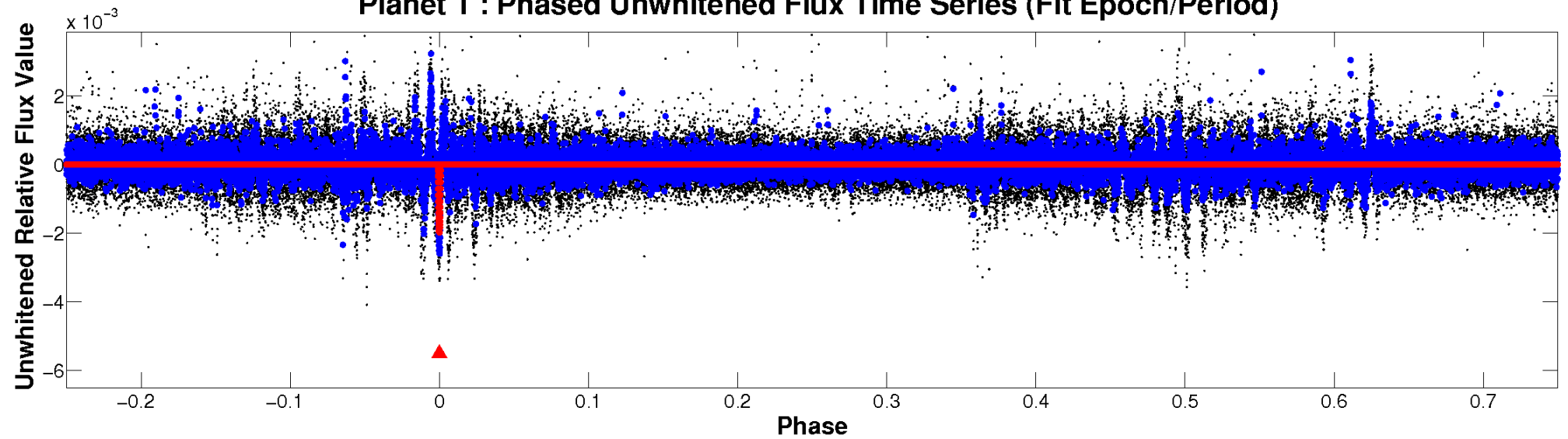
ALT Odd/Even

TCE 009710612-01

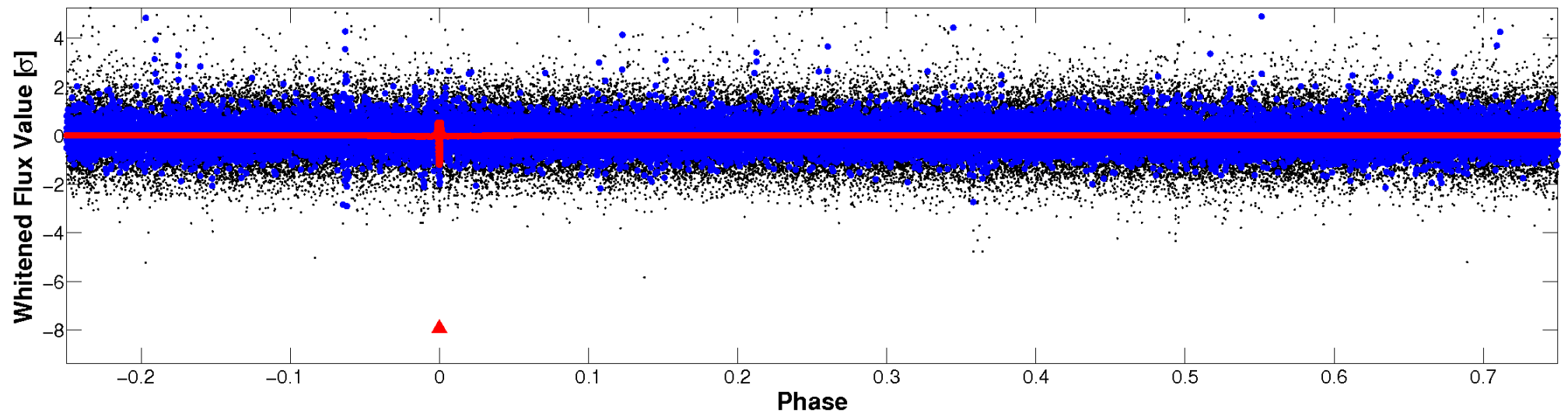


Non-Whitened Vs. Whitened Light Curve

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

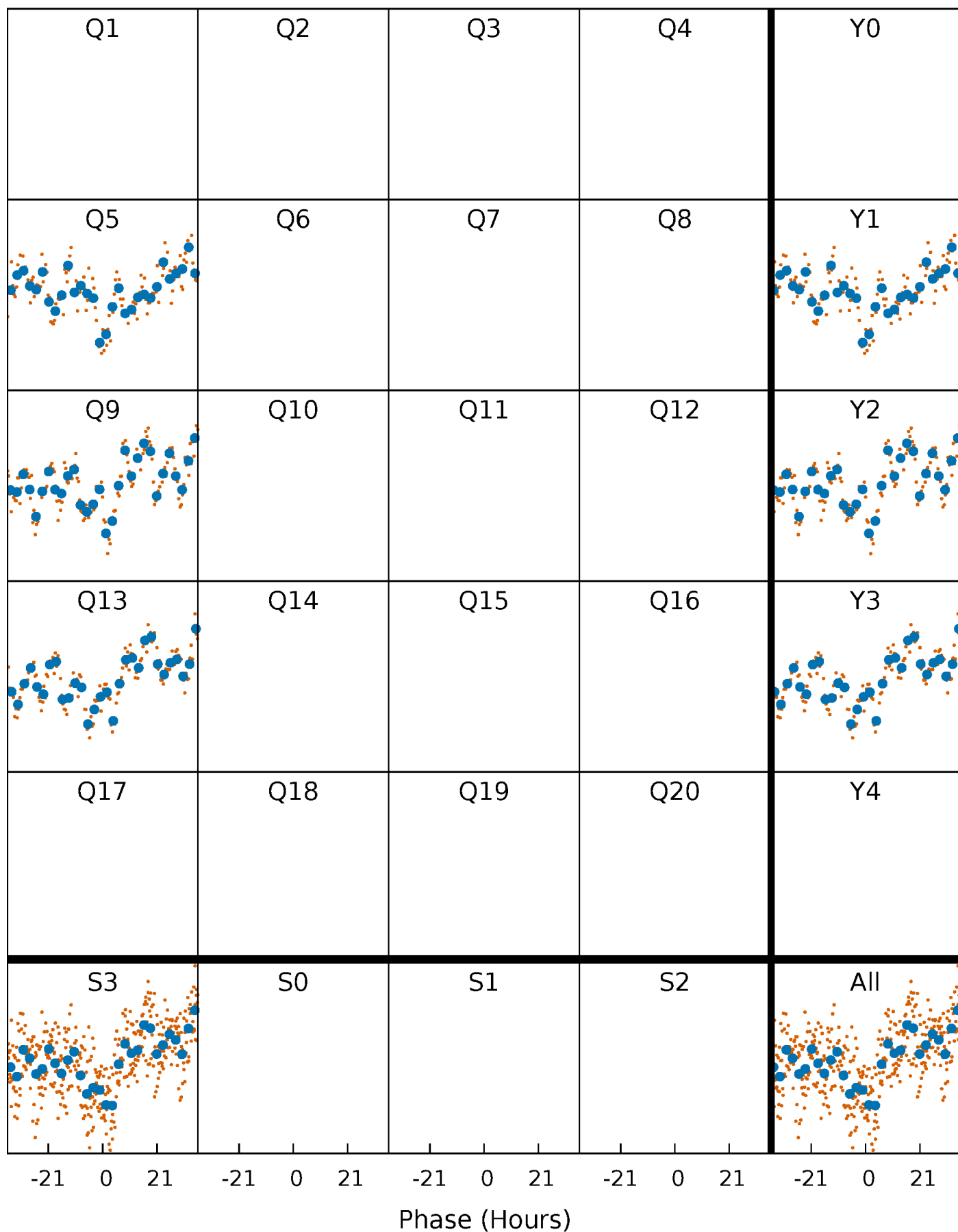


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



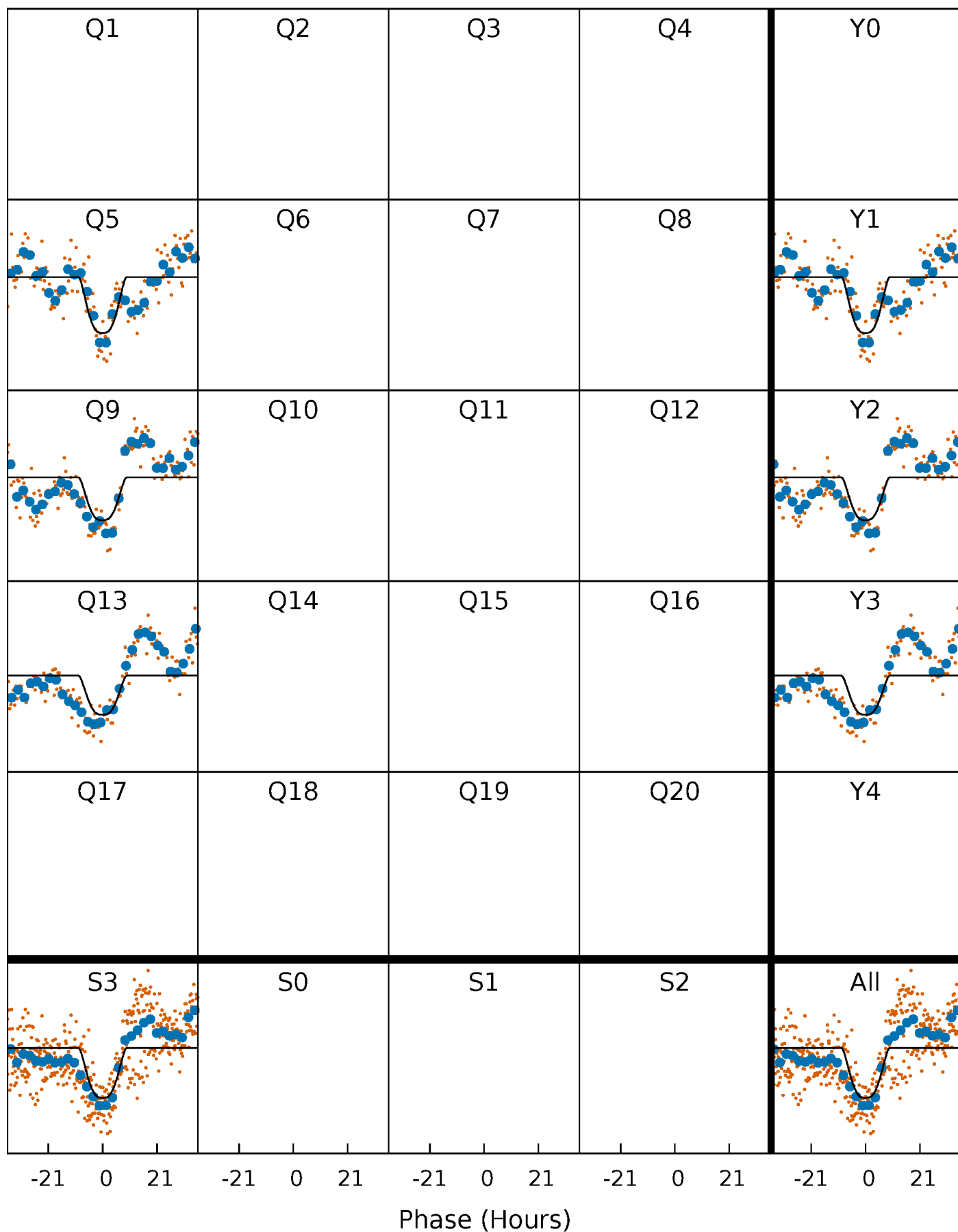
PDC Quarter-Phased Transit Curves

TCE 009710612-01 P=369.361386 Days $T_0=499.108519$ (BKJD)



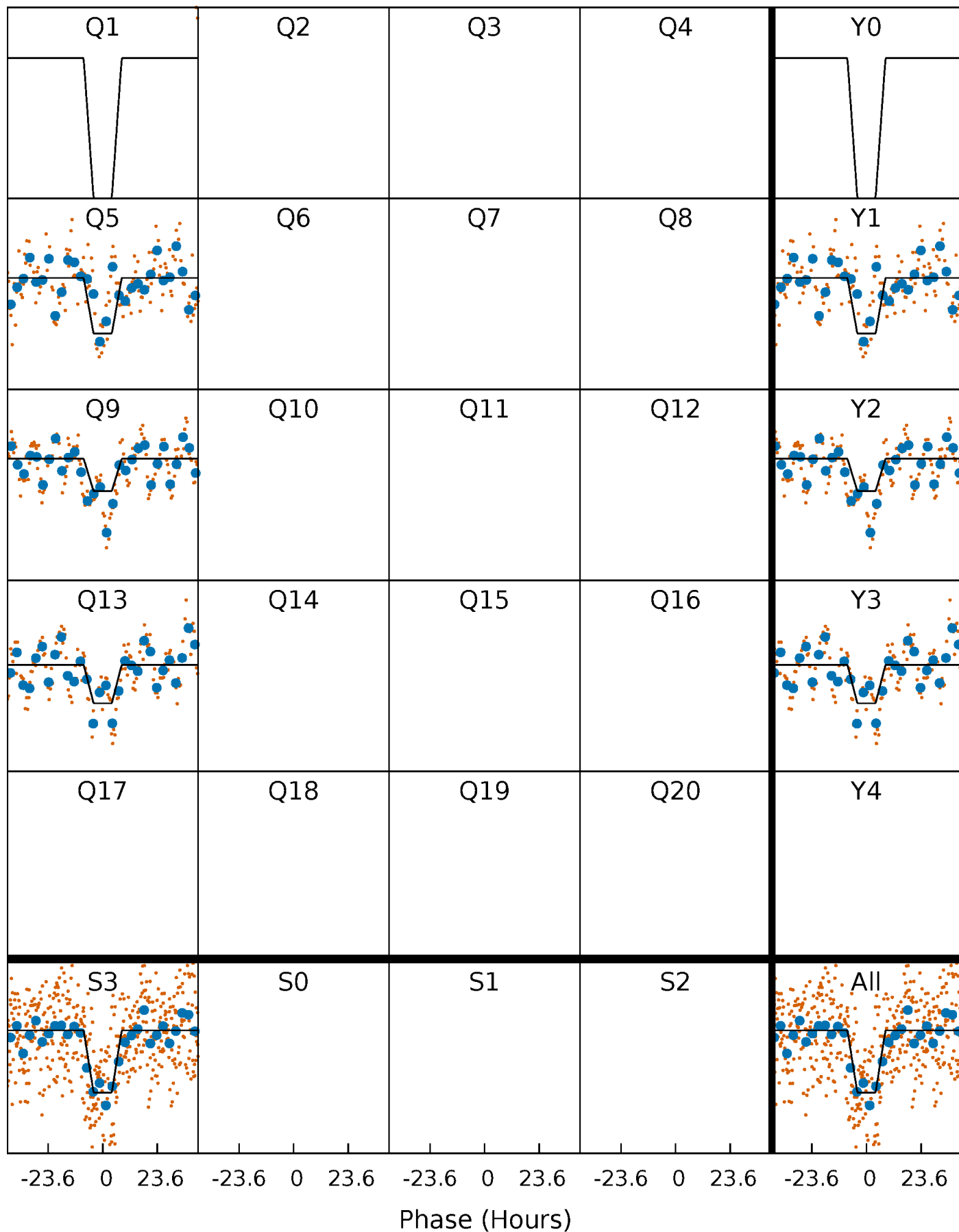
DV Quarter-Phased Transit Curves

TCE 009710612-01 P=369.361386 Days $T_0=499.108519$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

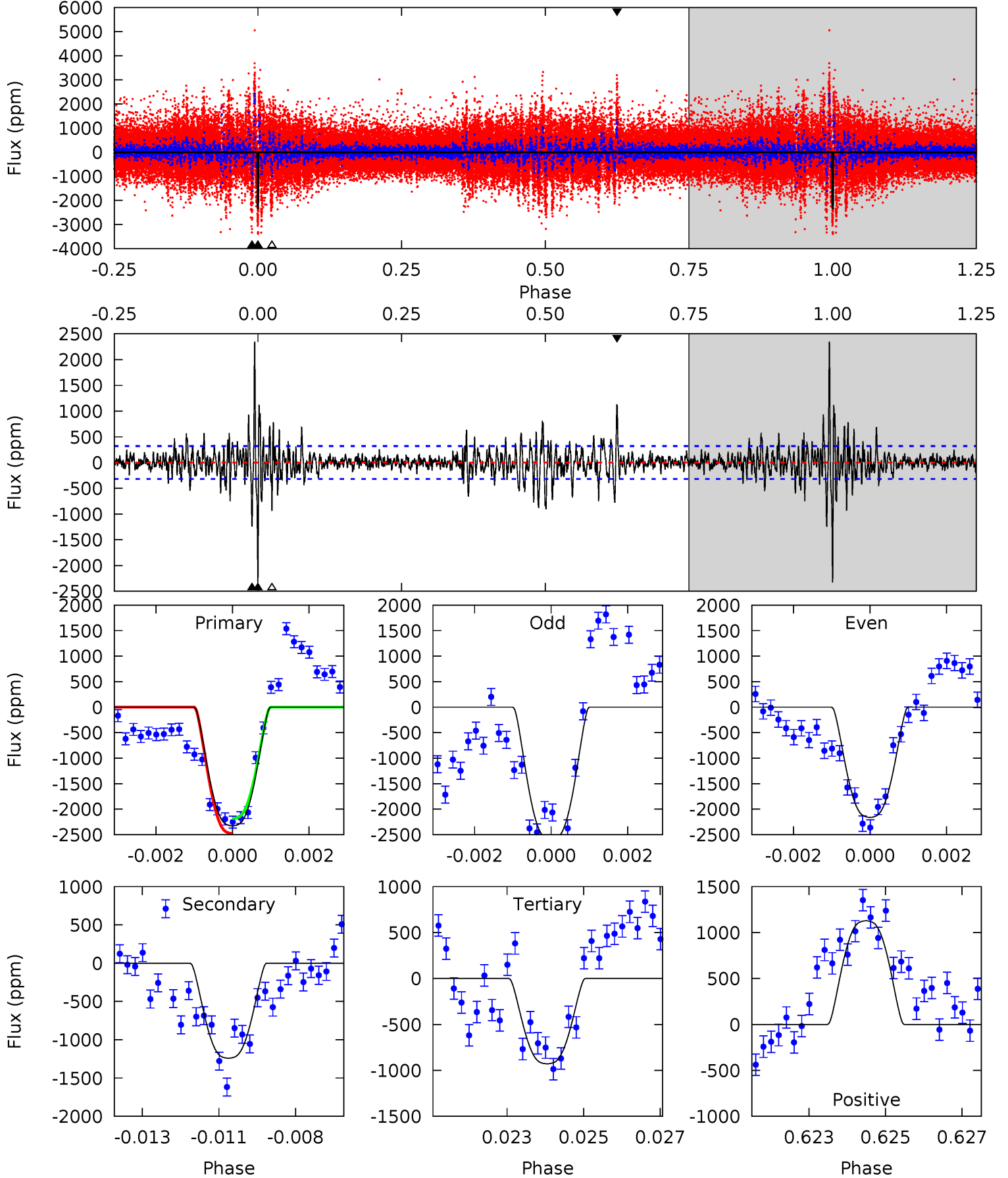
TCE 009710612-01 P=369.329786 Days $T_0=499.151905$ (BKJD)



DV Model-Shift Uniqueness Test

009710612-01, P = 369.361386 Days, E = 129.747133 Days

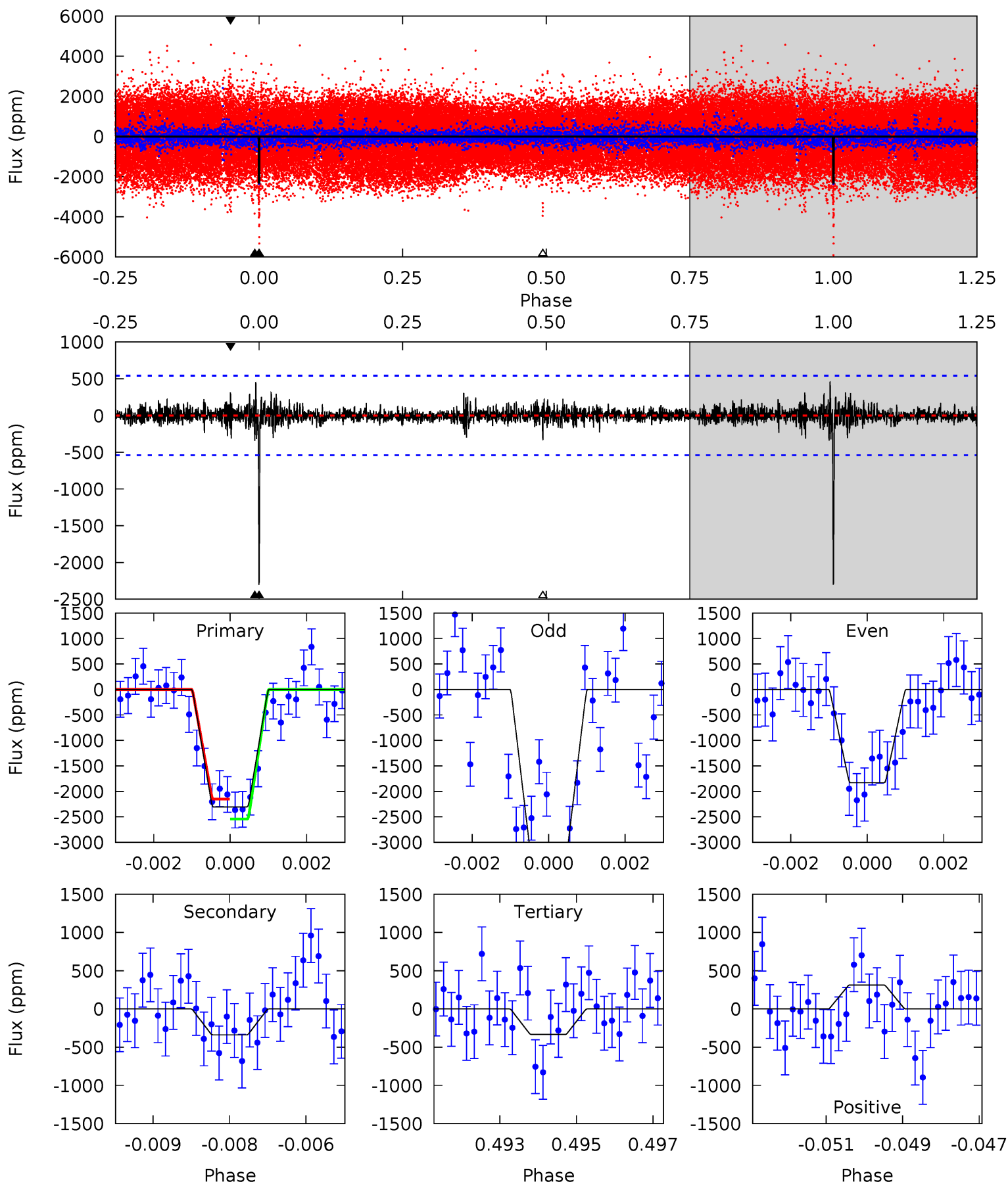
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.8	20.7	15.5	18.8	5.32	3.07	3.78	23.3	20.0	5.21	1.89	3.33	0.94	0.50	2.45



Alt Model-Shift Uniqueness Test

009710612-01, P = 369.329786 Days, E = 129.822119 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	3.35	3.29	3.09	5.34	3.11	0.65	19.4	19.6	0.05	0.25	6.65	0.92	0.16	1.92



Stellar Parameters For KIC 009710612

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5880^{+158}_{-193}	$4.503^{+0.052}_{-0.208}$	$0.000^{+0.250}_{-0.300}$	$0.940^{+0.297}_{-0.099}$	$1.027^{+0.115}_{-0.140}$	$1.740^{+0.375}_{-0.946}$
	+3%/-3%	+1%/-5%	+inf%/-inf%	+32%/-11%	+11%/-14%	+22%/-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 009710612-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1241 ± 60	$5.48^{+1.00}_{-0.69}$	358^{+24}_{-18}	4962^{+258}_{-241}	22641^{+6896}_{-5970}
Alt.	-339 ± 101	$4.93^{+0.95}_{-0.62}$	356^{+27}_{-18}	4023^{+252}_{-275}	7635^{+3559}_{-2852}

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 $A_{obs} \gg 1.0$

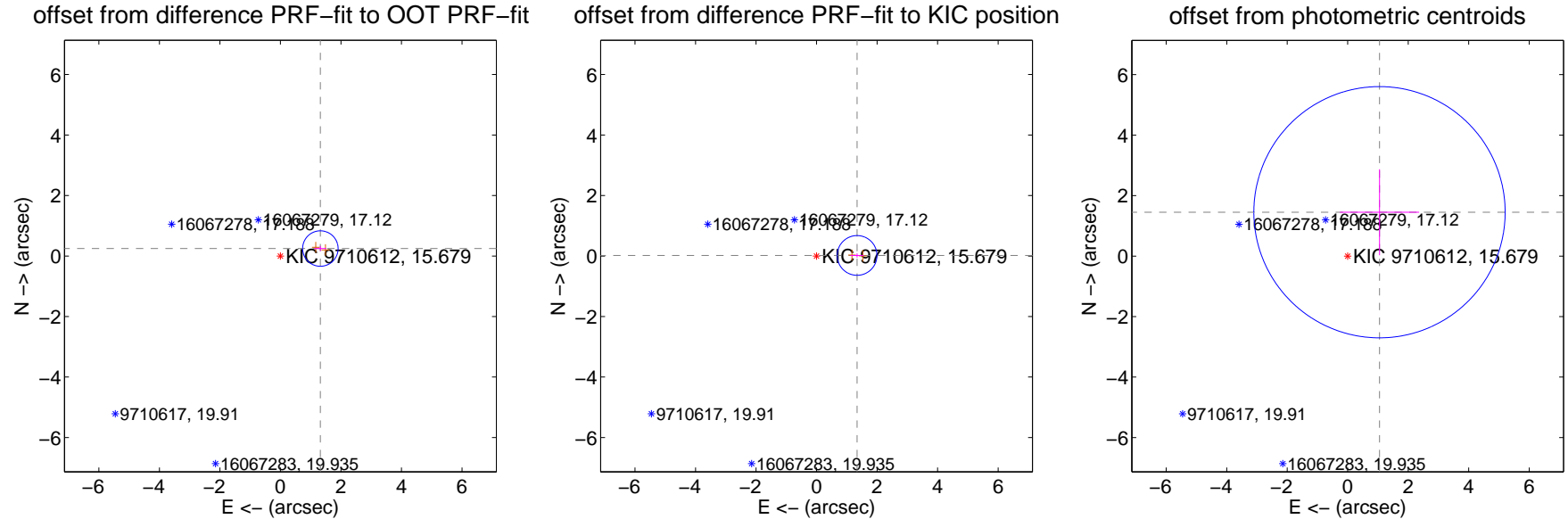
DV Centroid Data

Supplemental centroid analysis for 009710612-01. Kepler magnitude: 15.68. Transit SNR 9.25

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.342 ± 0.195	6.87	-1.319 ± 0.198	0.247 ± 0.084
PRF-fit source offset from KIC position	1.339 ± 0.219	6.12	-1.339 ± 0.219	0.019 ± 0.068
photometric centroid source offset	1.79 ± 1.38	1.29	-1.05 ± 1.31	1.45 ± 1.42

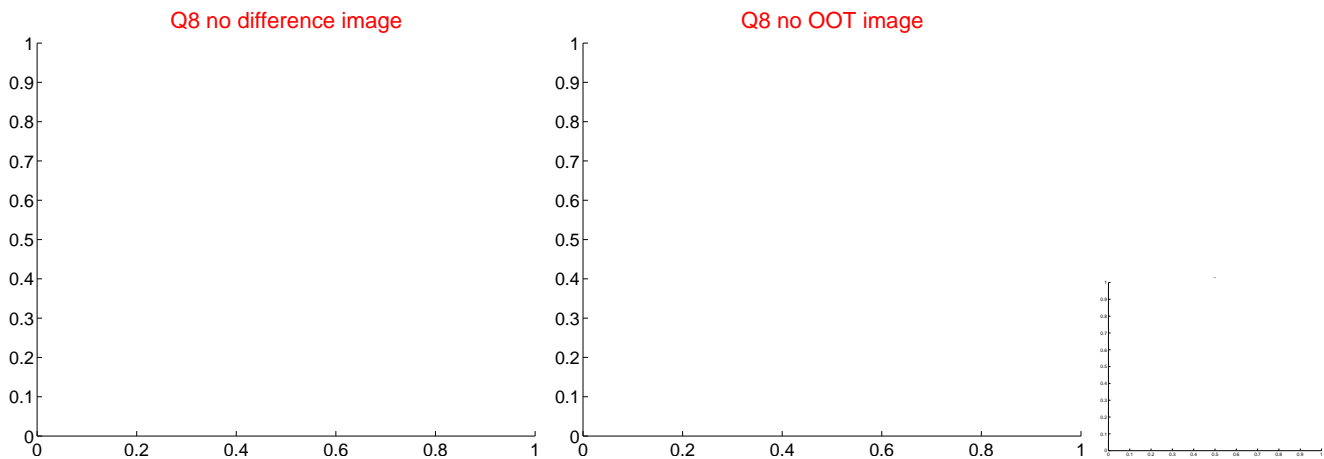
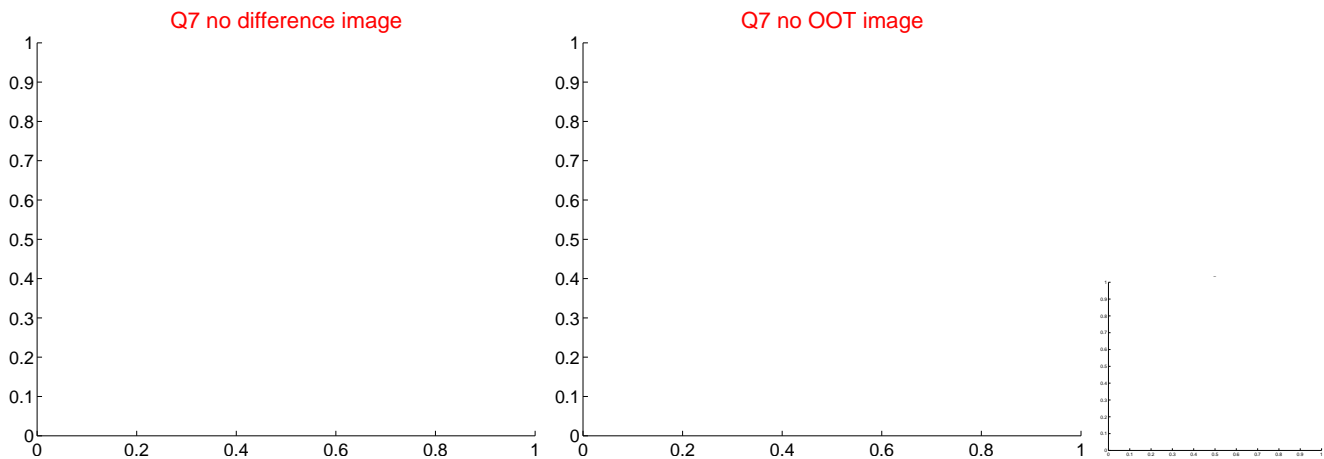
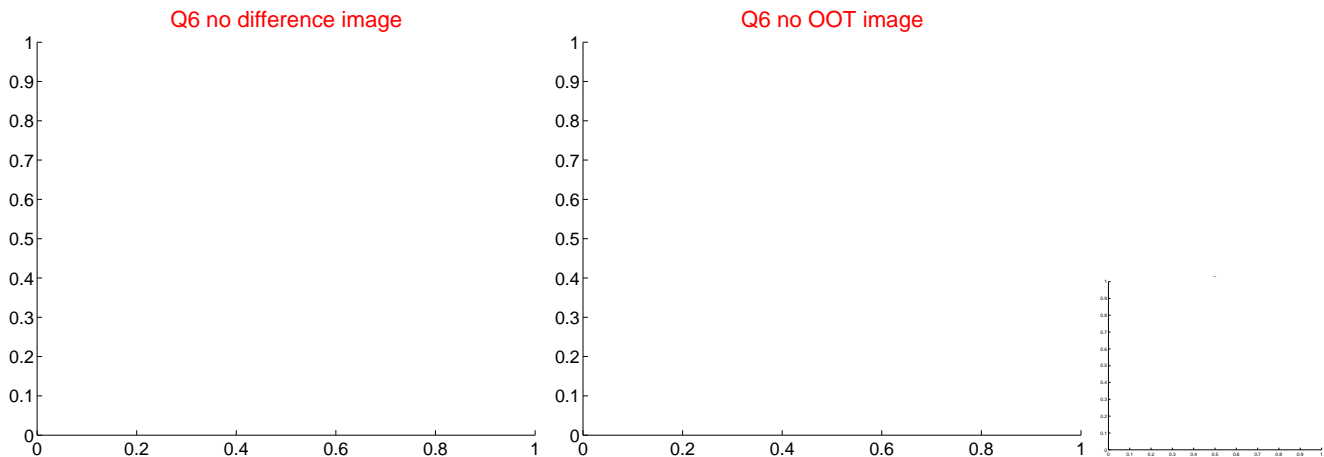
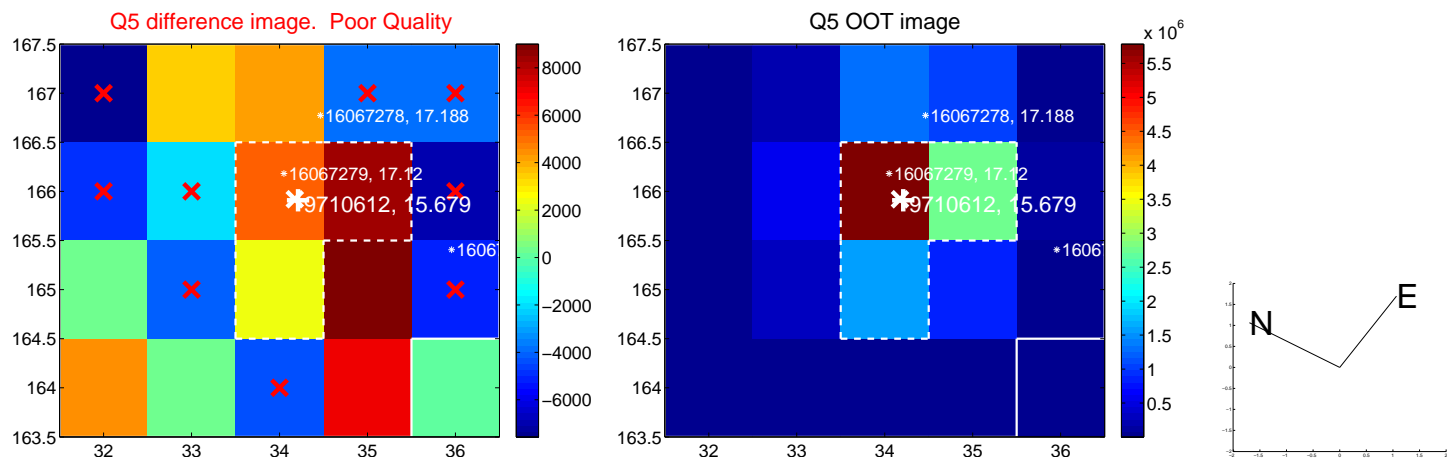


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

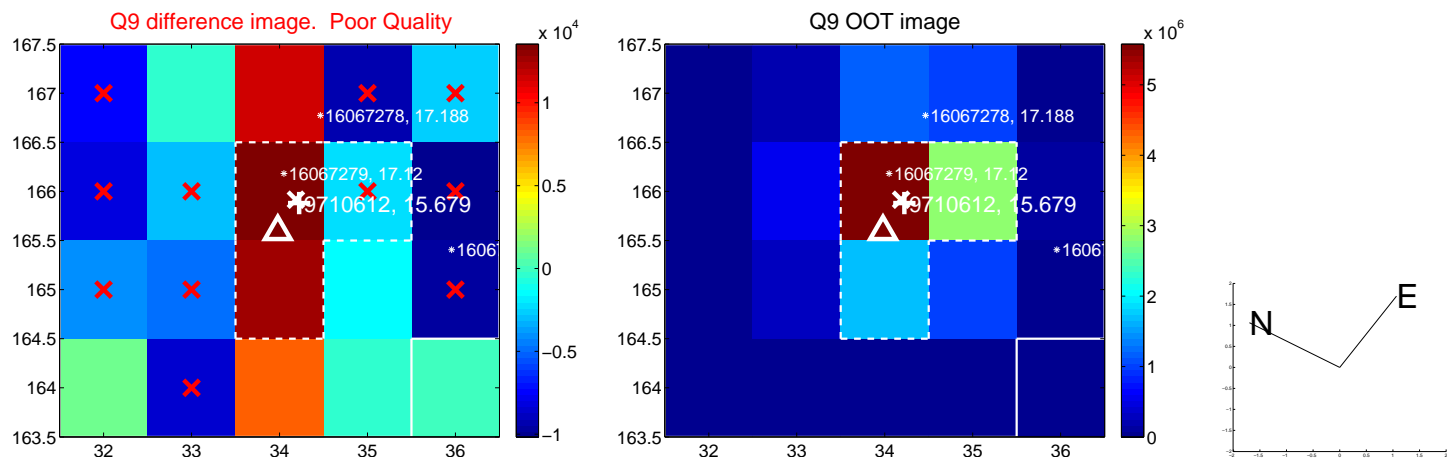
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



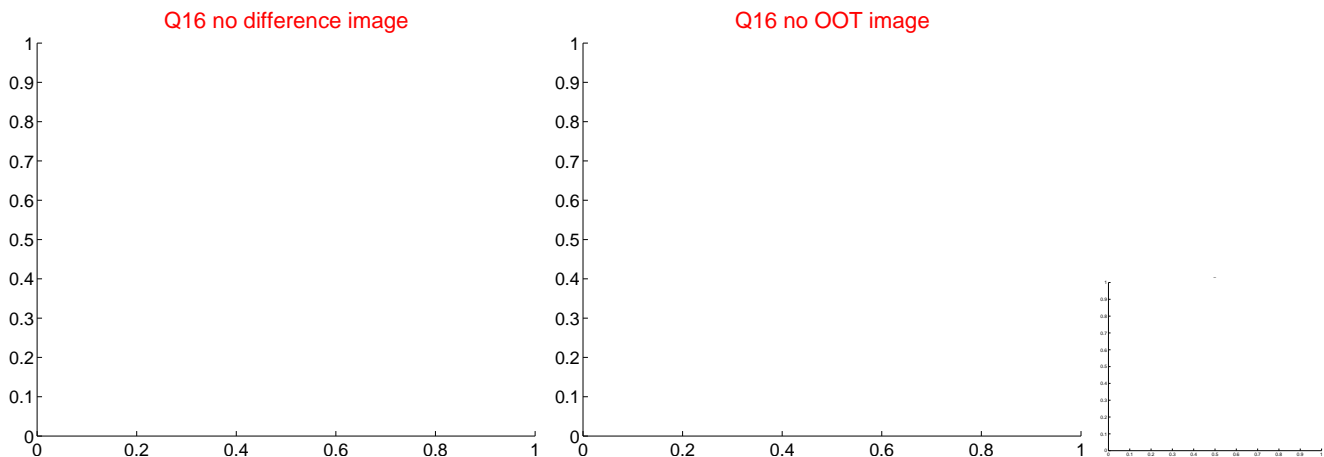
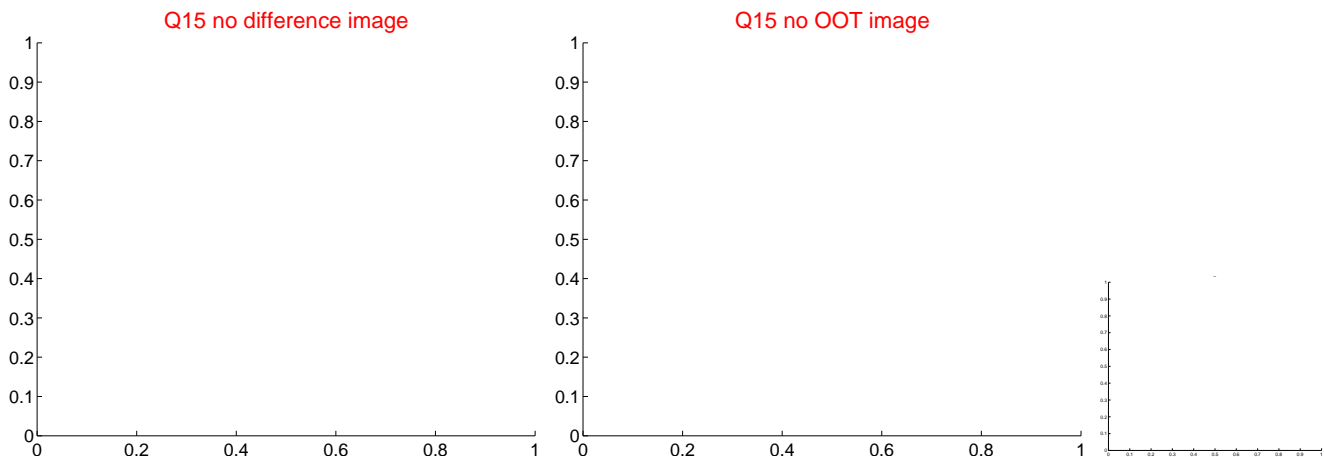
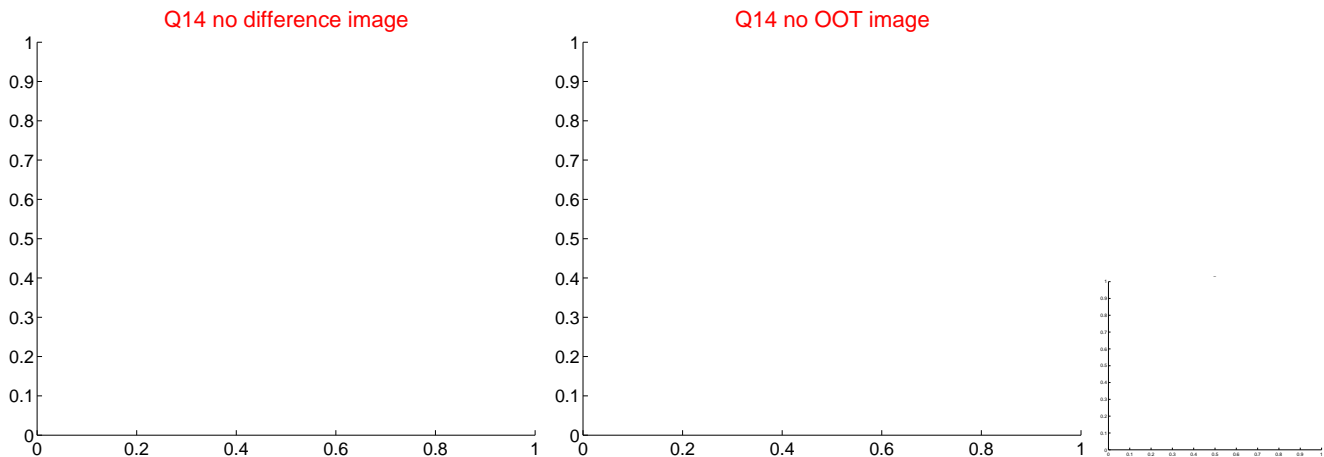
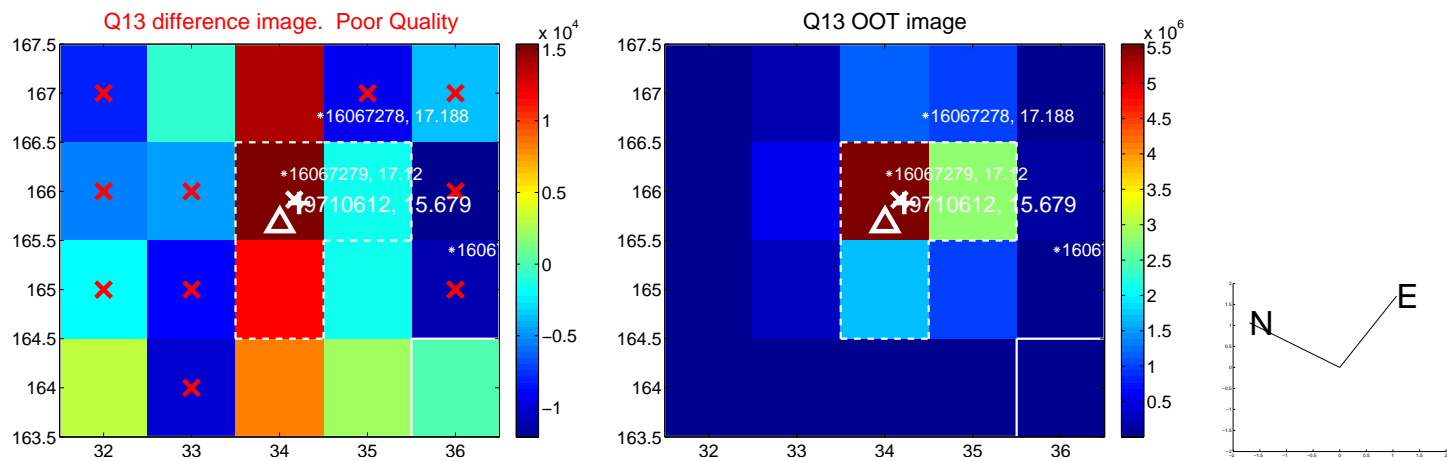
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



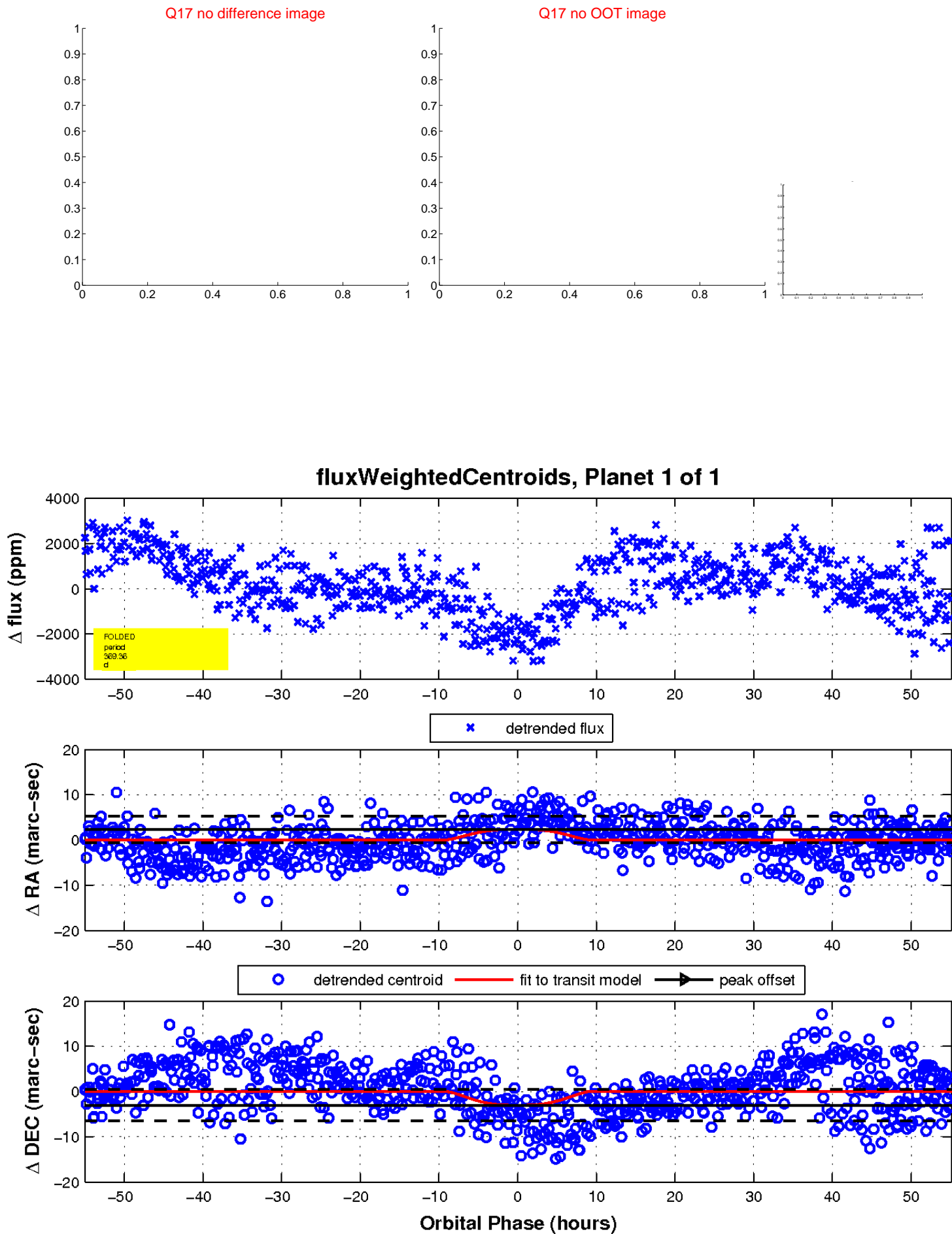
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

