

KIC 006029302

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})
006029302-01	OBS	No	160.991897	275.402829	382.6	3.752	7.1	7.5	8.67	5016	19.40	68.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006029302-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—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.

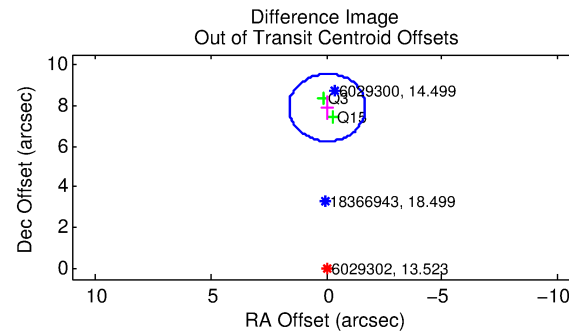
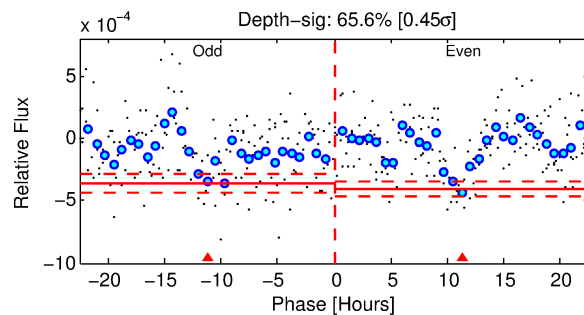
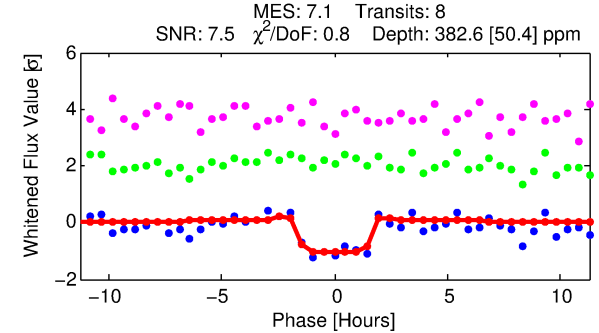
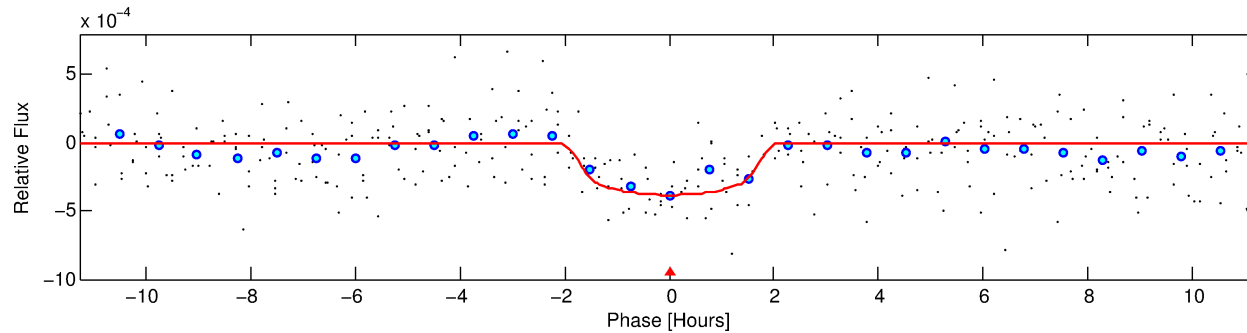
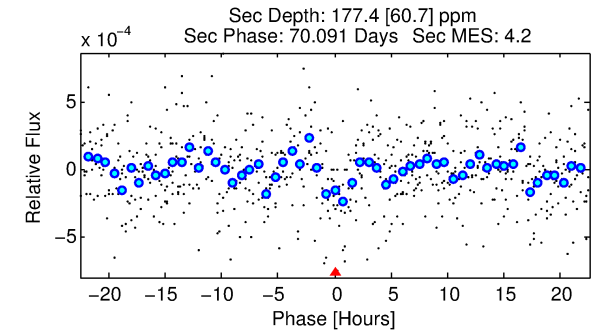
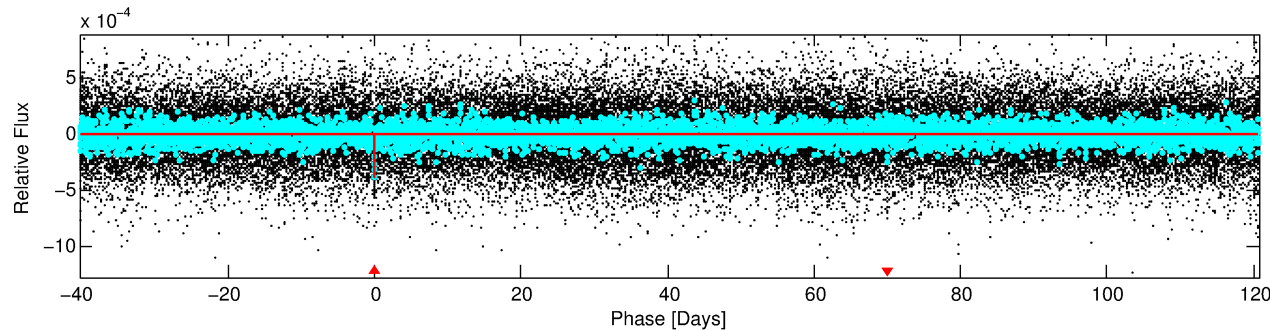
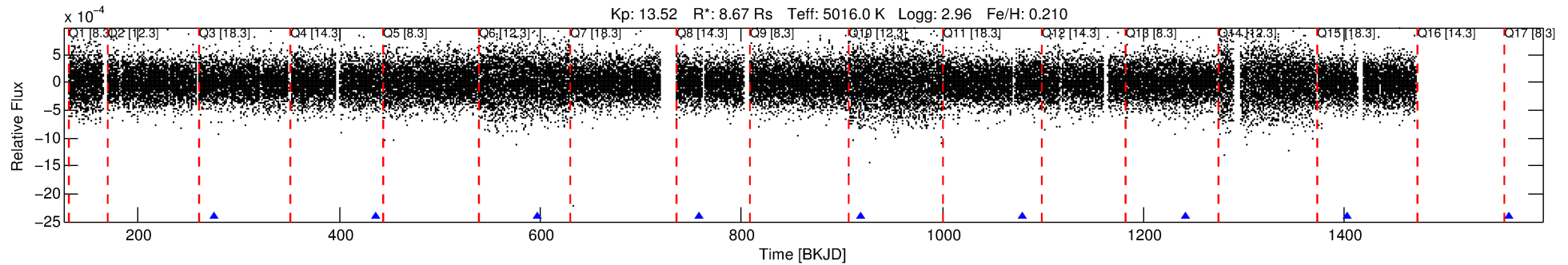
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006029302-01

No Significant Match Found

DV One-Page Summary

KIC: 6029302 Candidate: 1 of 1 Period: 160.992 d



DV Fit Results:

Period = 160.99190 [0.00170] d
Epoch = 275.4028 [0.0079] BKJD
Rp/R* = 0.0205 [0.0147]
a/R* = 194.03 [516.63]
b = 0.83 [1.01]
Seff = 68.96 [62.90]
Teq = 735 [168] K
Rp = 19.40 [18.17] Re
a = 0.7863 [0.4483] AU
Ag = 160.35 [276.53] [0.58σ]
Teffp = 4043 [1493] K [2.20σ]

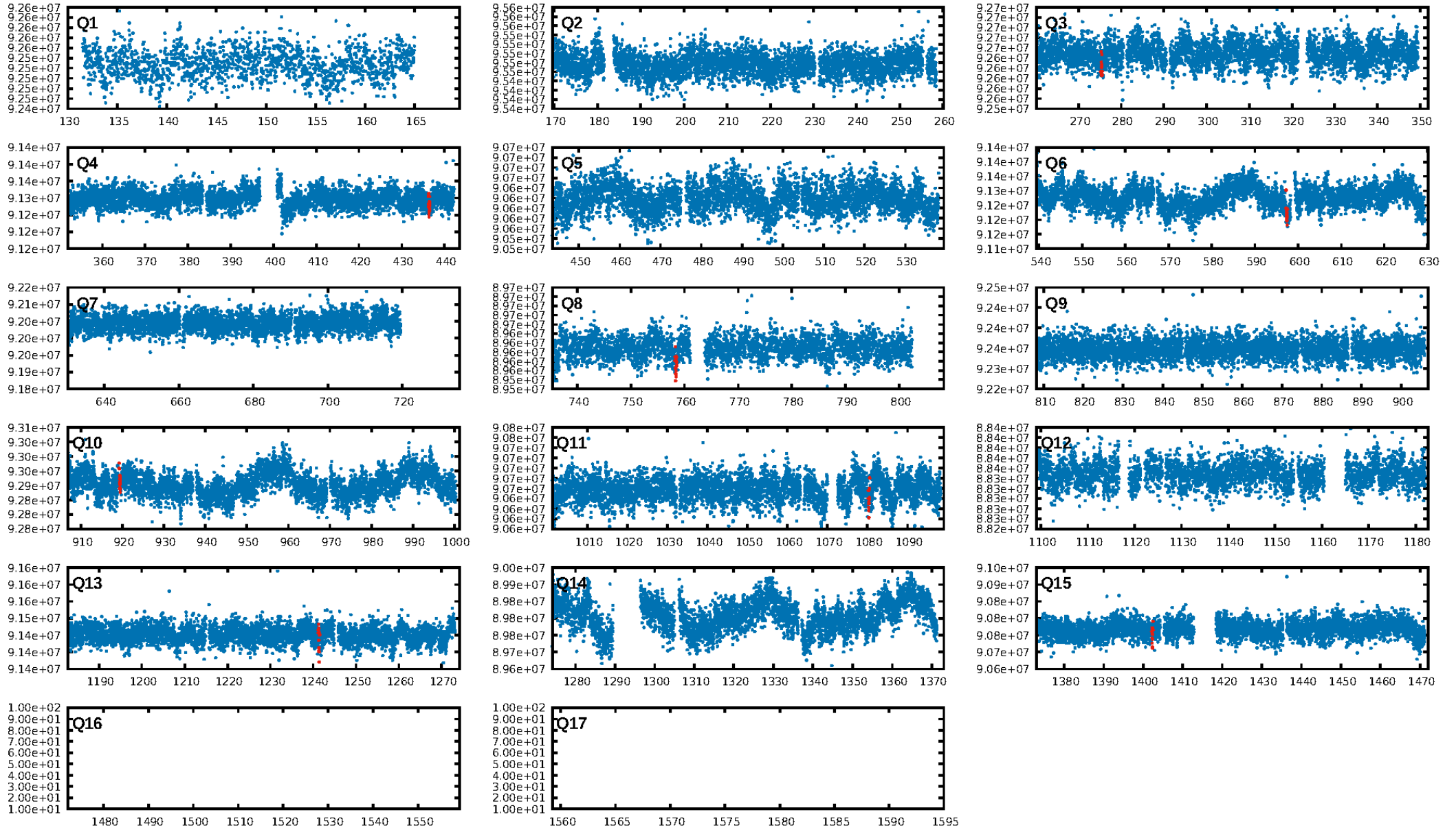
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.95e-12
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 2.517
Centroid-sig: 23.0%
Centroid-so: 1.197 arcsec [0.87σ]
OotOffset-rm: 7.895 arcsec [14.33σ]
KicOffset-rm: 8.062 arcsec [17.04σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [6/6]

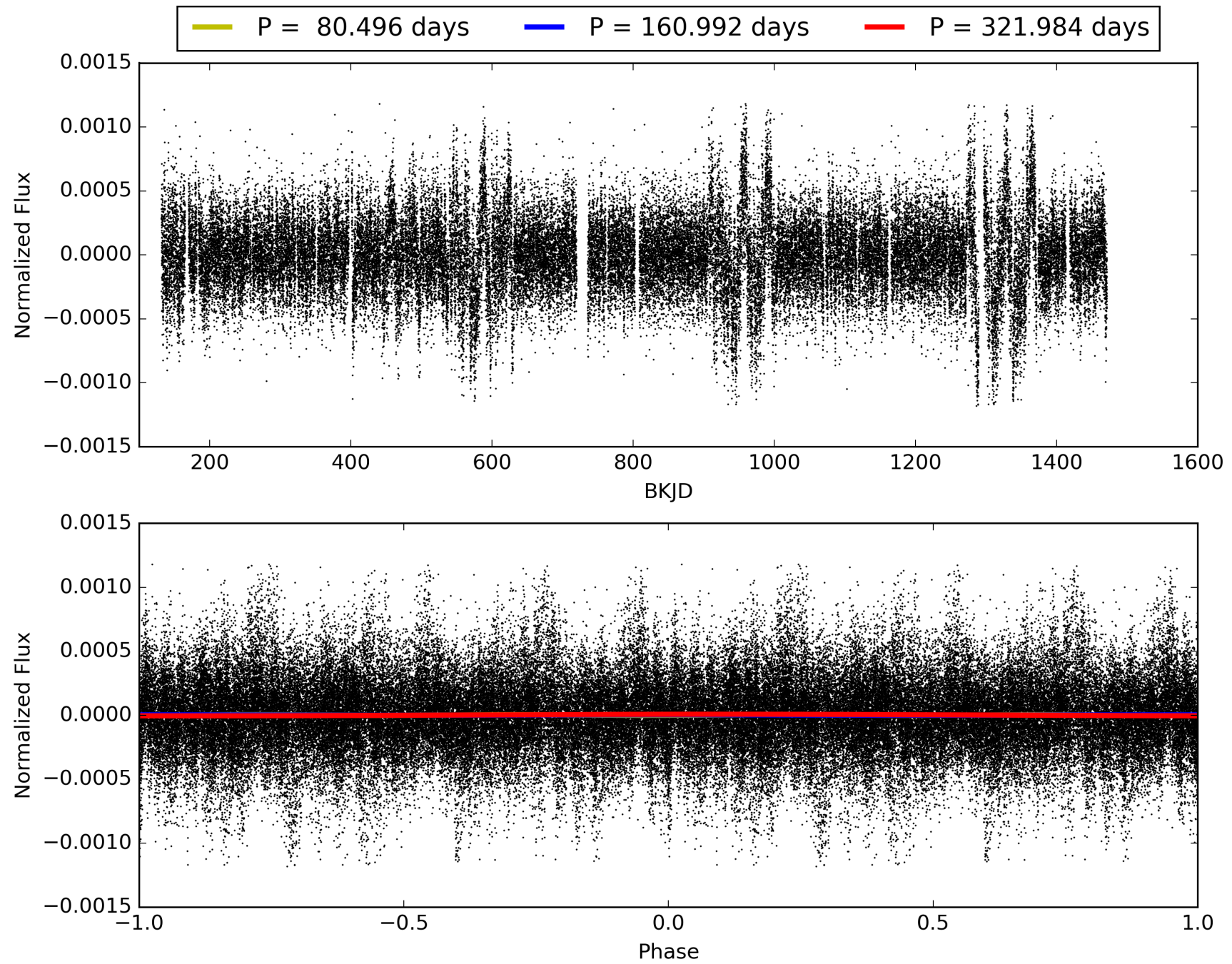
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:19:22 Z

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

TCE 006029302-01, PDC Light Curves

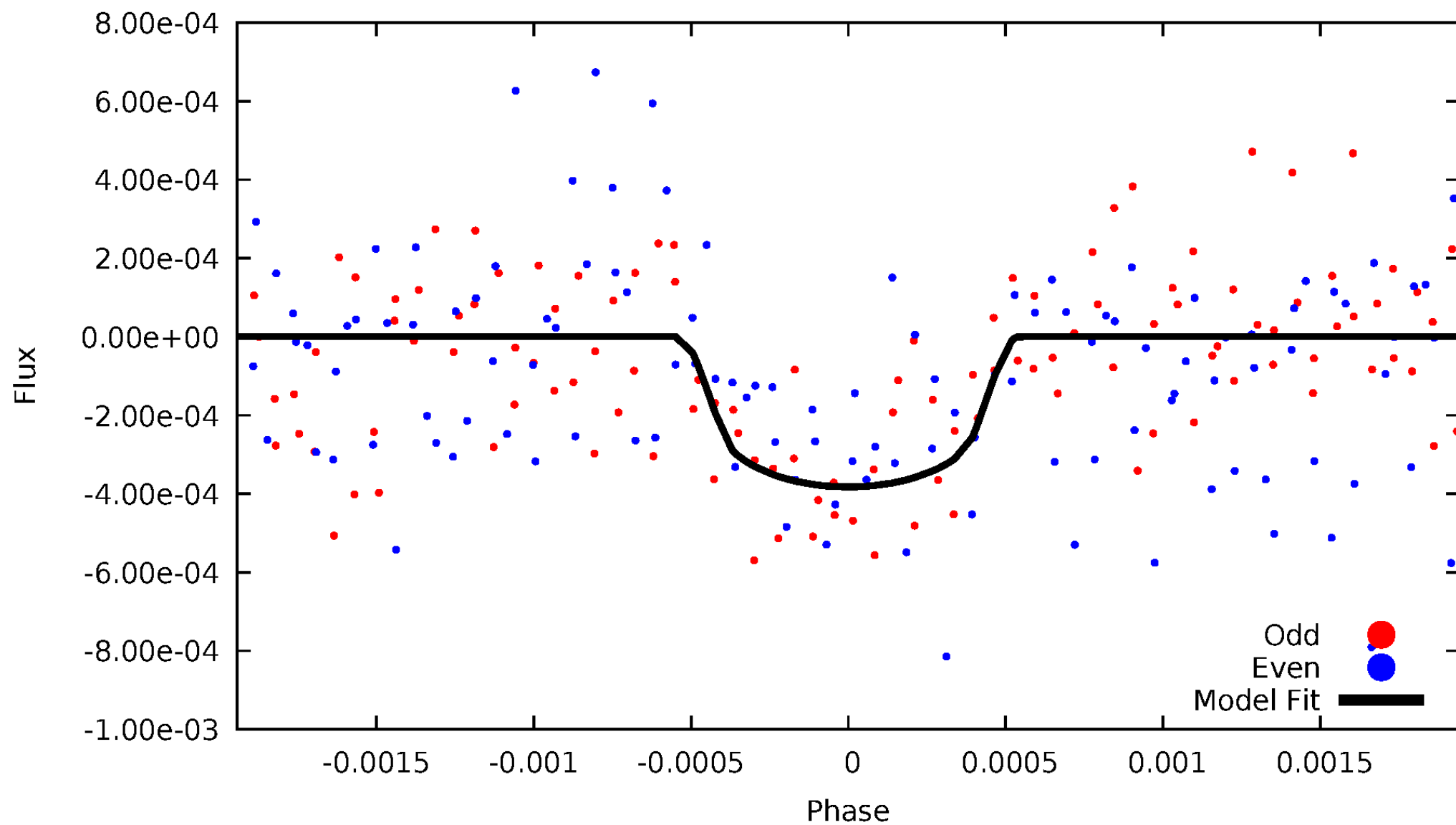


TCE 006029302-01



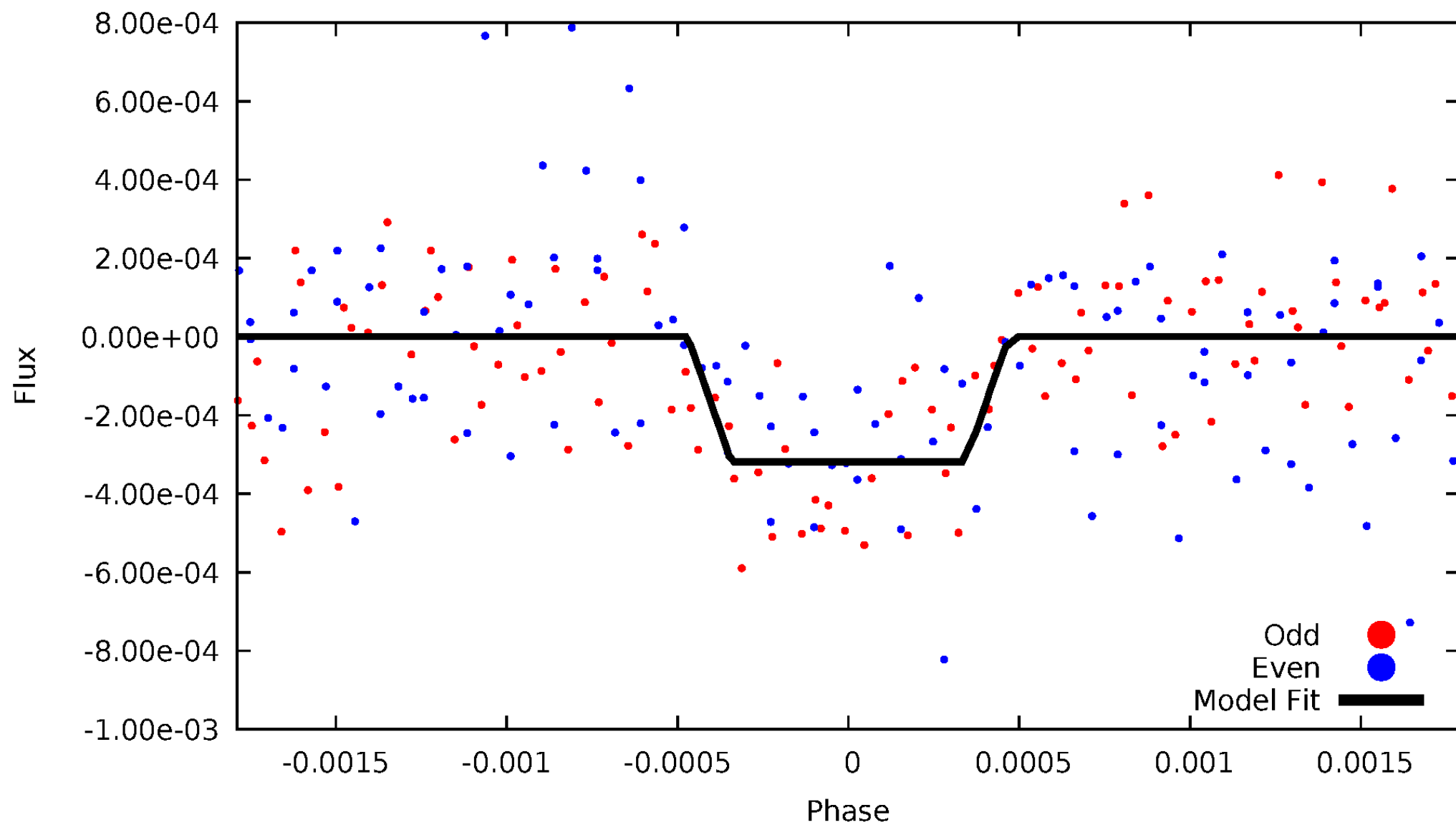
DV Odd/Even

TCE 006029302-01



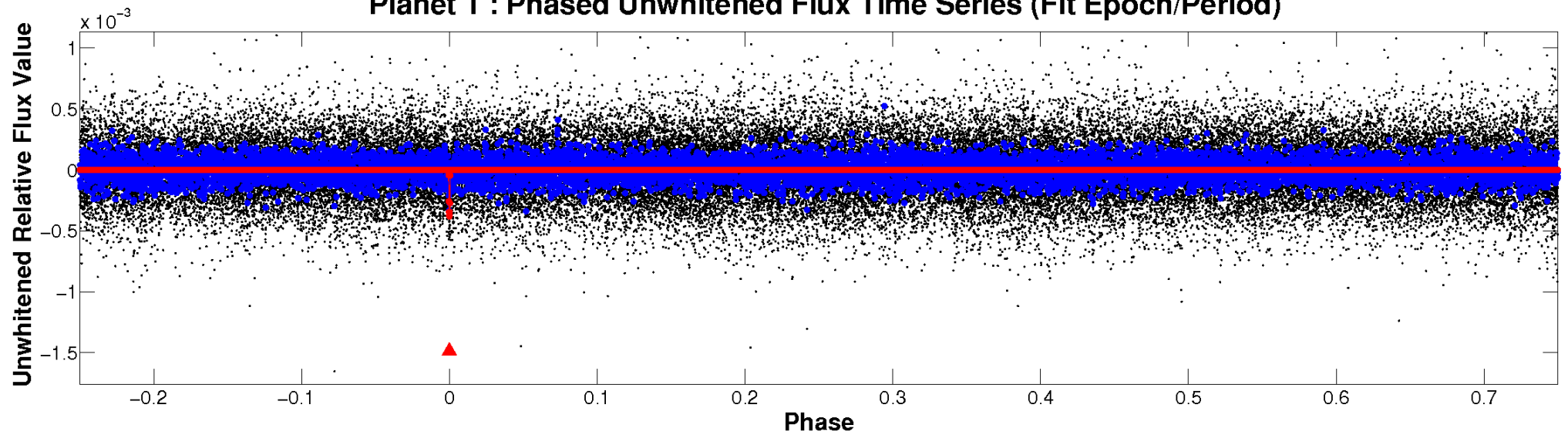
ALT Odd/Even

TCE 006029302-01

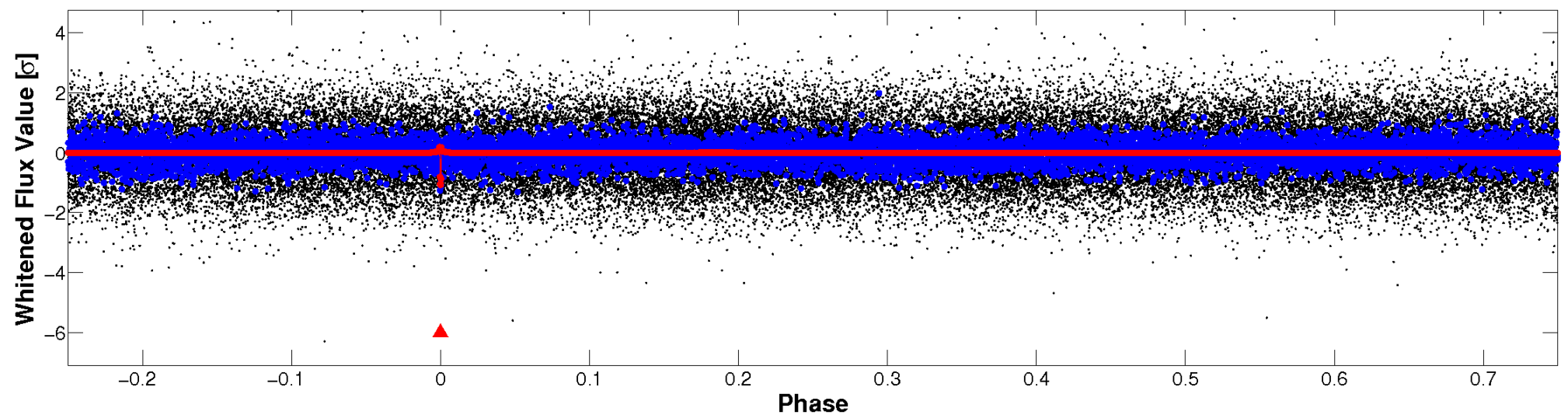


Non-Whitened Vs. Whitened Light Curve

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

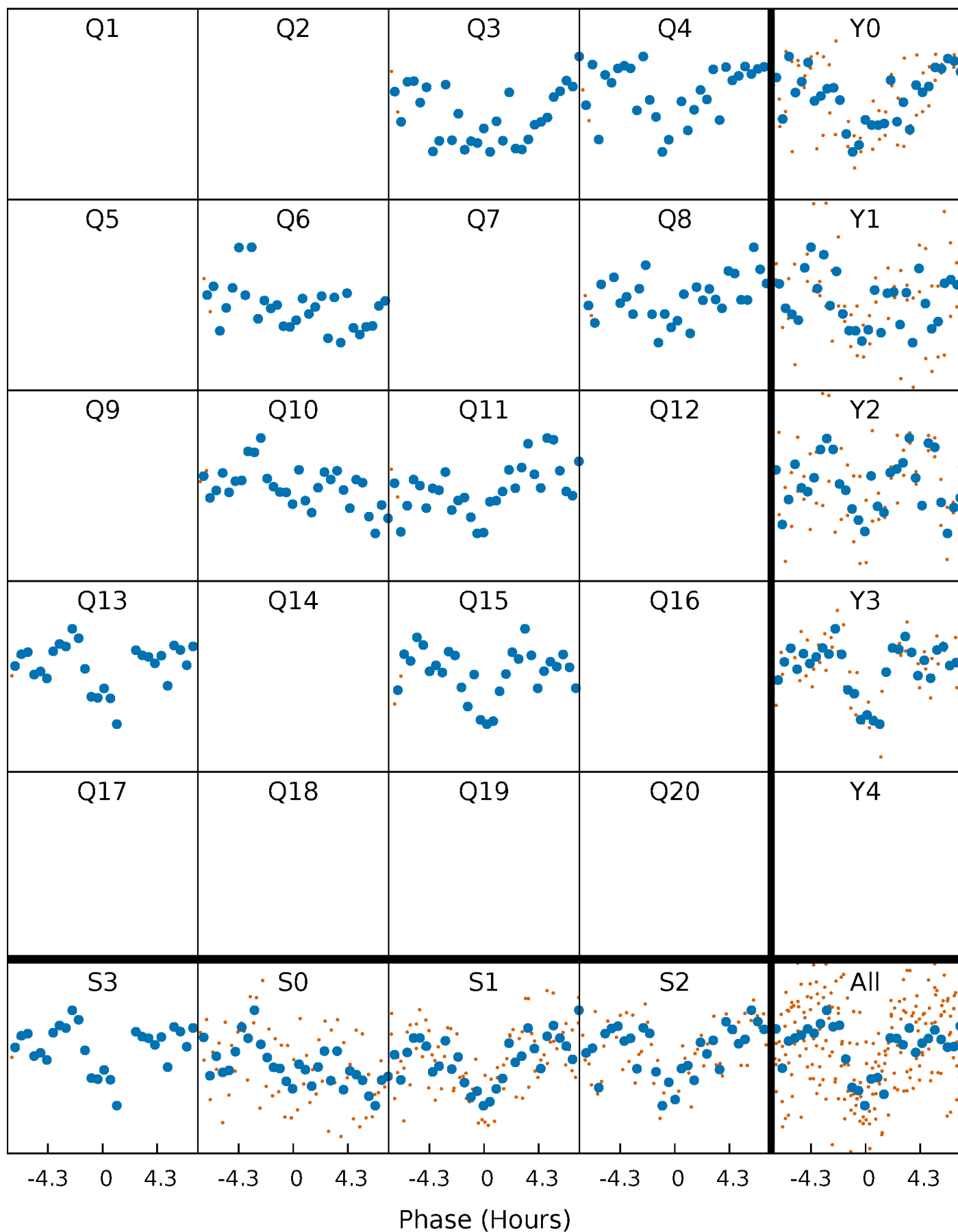


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



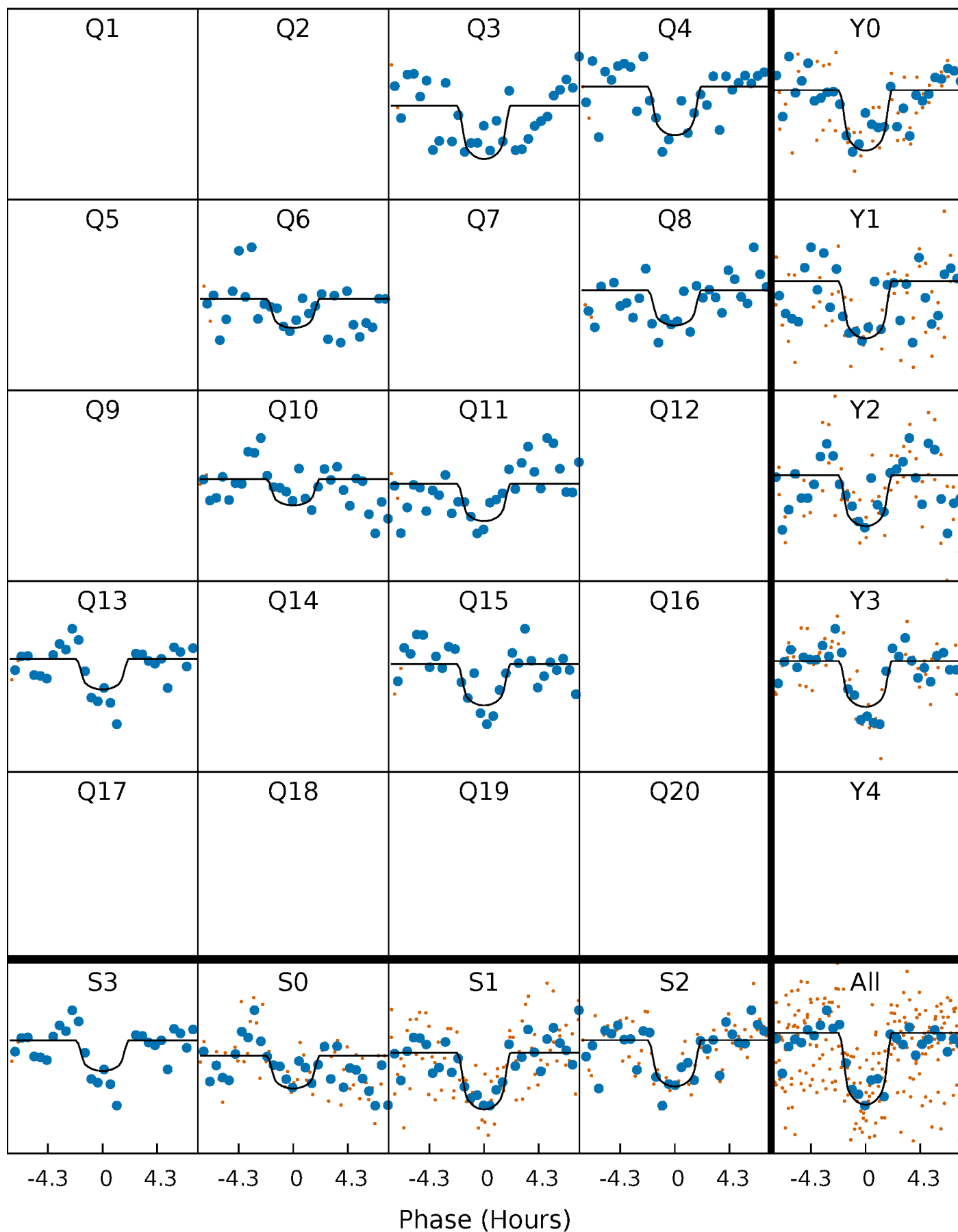
PDC Quarter-Phased Transit Curves

TCE 006029302-01 P=160.991897 Days $T_0=275.402829$ (BKJD)



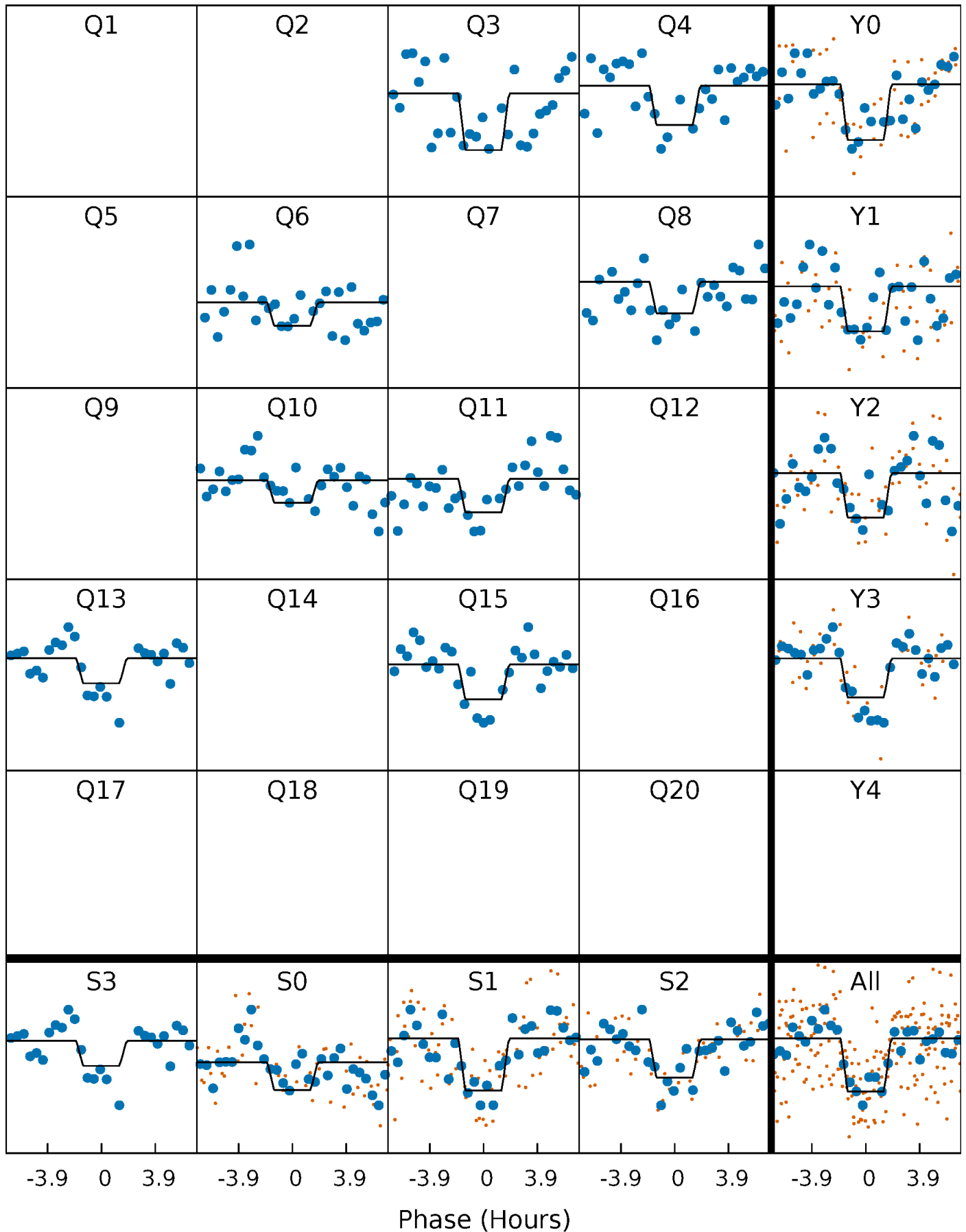
DV Quarter-Phased Transit Curves

TCE 006029302-01 P=160.991897 Days $T_0=275.402829$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

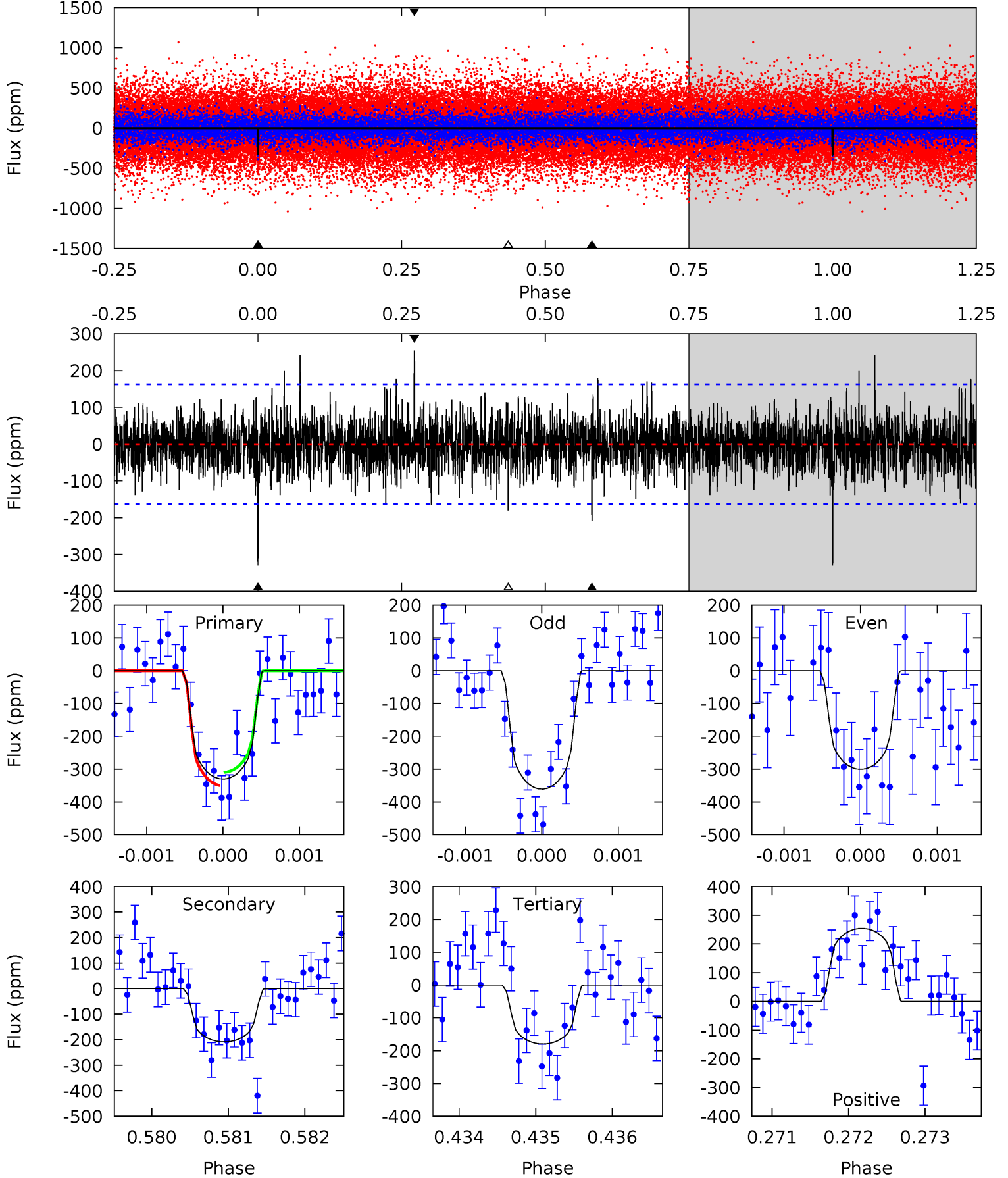
TCE 006029302-01 P=160.992886 Days $T_0=275.401848$ (BKJD)



DV Model-Shift Uniqueness Test

006029302-01, P = 160.991897 Days, E = 114.410932 Days

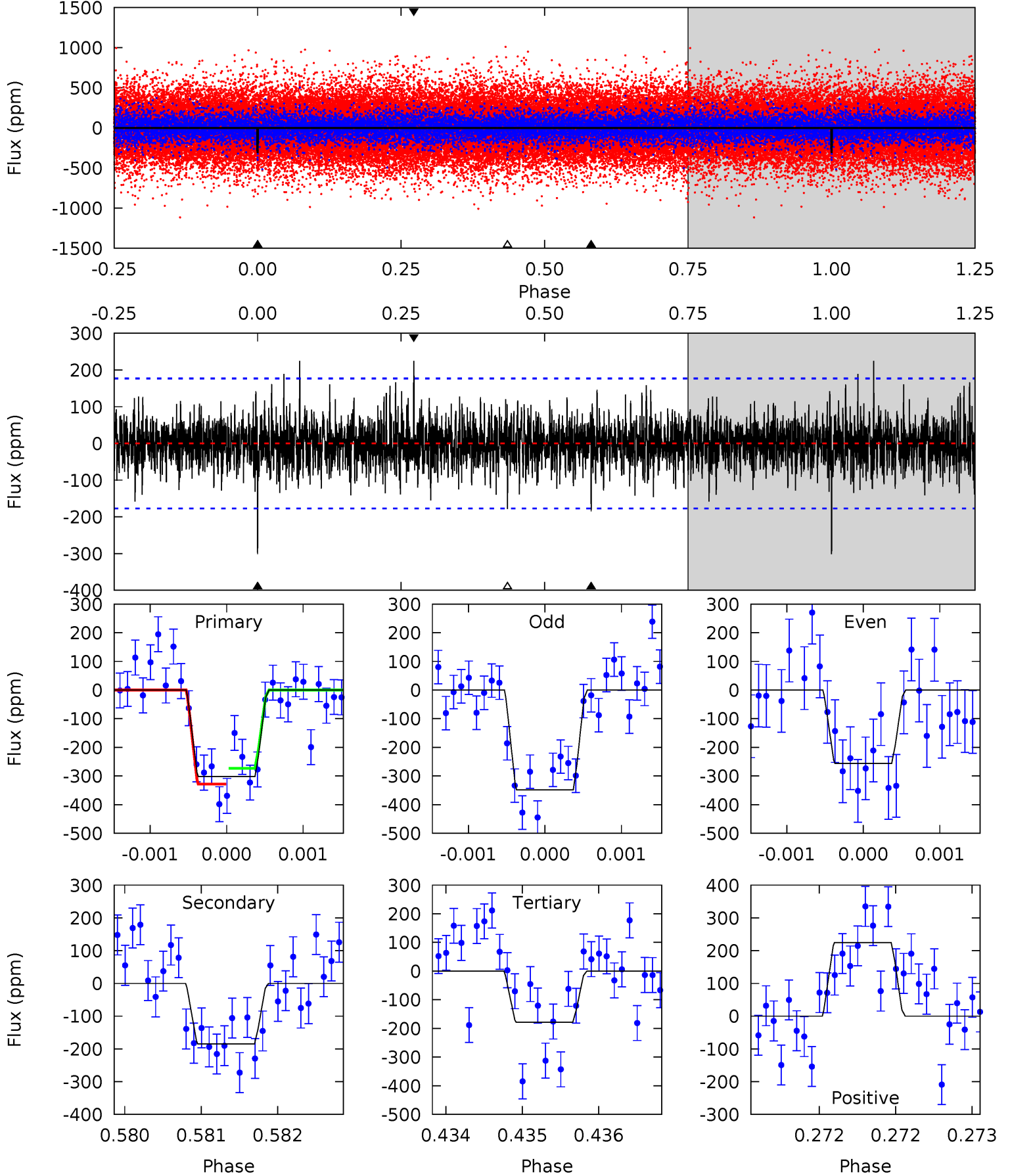
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.97	6.01	8.53	5.45	3.28	1.69	5.04	2.52	0.96	-1.55	1.01	0.96	0.44	0.67



Alt Model-Shift Uniqueness Test

006029302-01, P = 160.992886 Days, E = 114.408962 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	5.71	5.51	6.94	5.47	3.32	1.46	3.81	2.38	0.20	-1.23	1.42	0.94	0.43	0.85



Stellar Parameters For KIC 006029302

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5016^{+103}_{-176}	$2.960^{+0.525}_{-0.225}$	$0.210^{+0.150}_{-0.400}$	$8.670^{+3.497}_{-5.245}$	$2.499^{+0.466}_{-1.399}$	$0.005^{+0.044}_{-0.003}$
	+2%/-4%	+18%/-8%	+71%/-190%	+40%/-60%	+19%/-56%	+809%/-51%
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 006029302-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-208 ± 30	$18.78^{+15.50}_{-11.35}$	1008^{+110}_{-146}	4210^{+1593}_{-659}	188^{+1004}_{-125}
Alt.	-185 ± 32	$17.01^{+15.14}_{-10.46}$	1011^{+109}_{-160}	4282^{+2035}_{-759}	214^{+1170}_{-155}

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

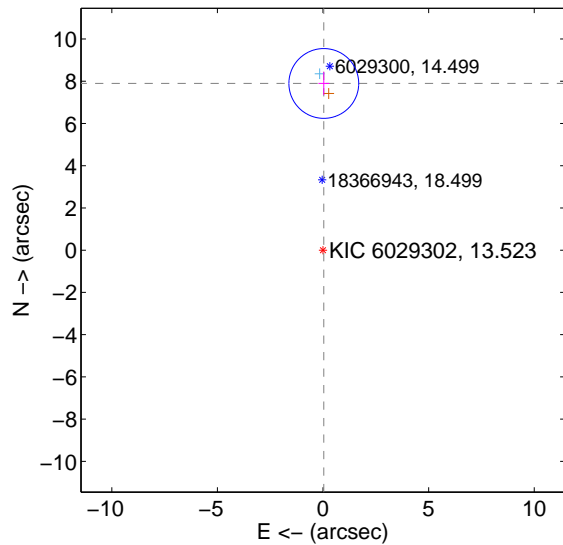
Supplemental centroid analysis for 006029302-01. Kepler magnitude: 13.52. Transit SNR 7.47

There are 1 quarters with good PRF difference image offsets

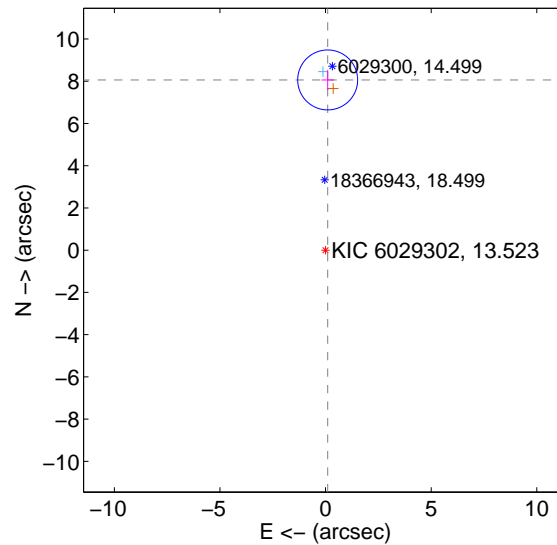
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.895 ± 0.551	14.33	-0.036 ± 0.258	7.895 ± 0.551
PRF-fit source offset from KIC position	8.062 ± 0.473	17.04	-0.099 ± 0.286	8.062 ± 0.473
photometric centroid source offset	1.20 ± 1.38	0.87	0.55 ± 0.55	1.06 ± 1.53

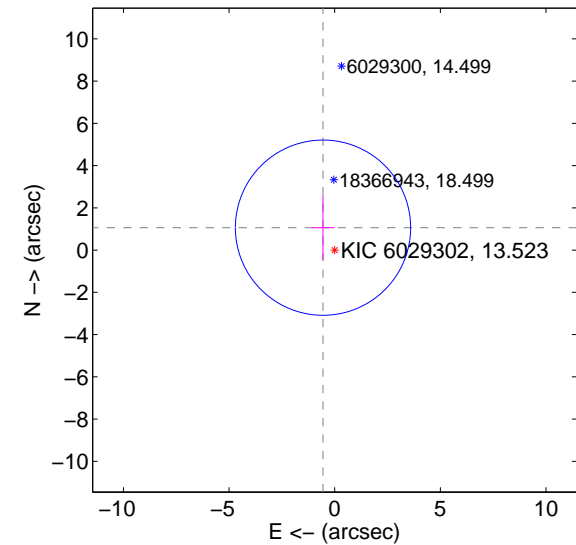
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



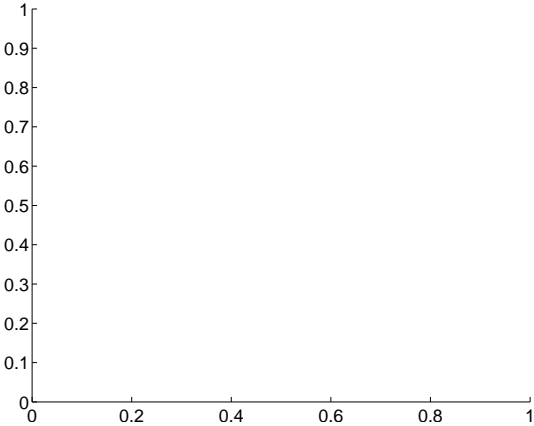
offset from photometric centroids



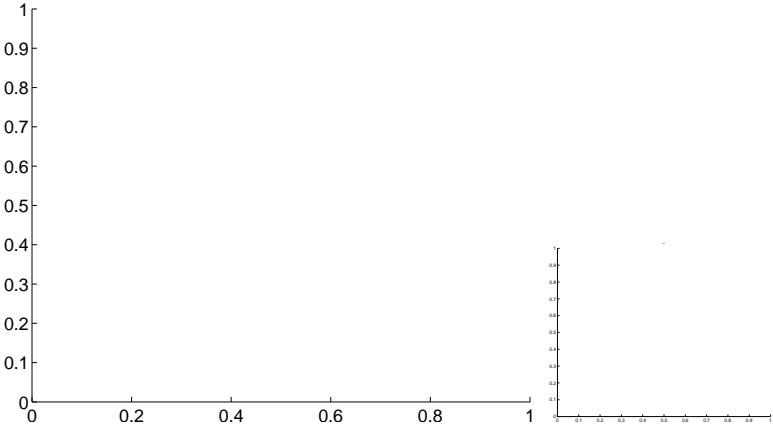
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

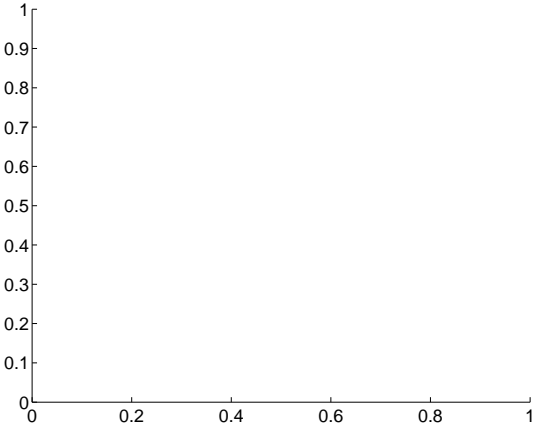
Q1 no difference image



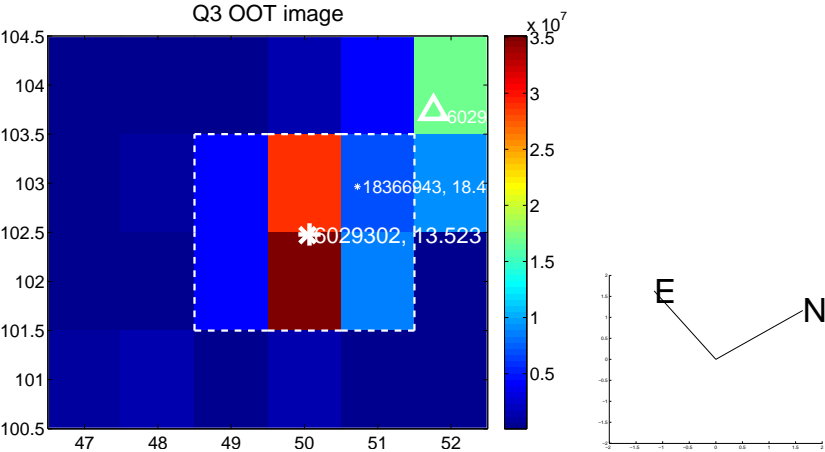
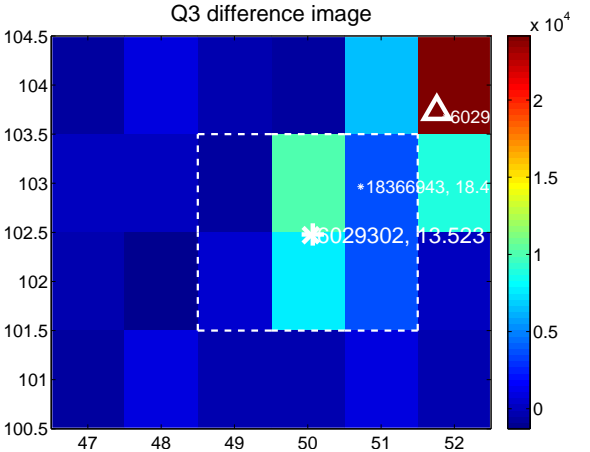
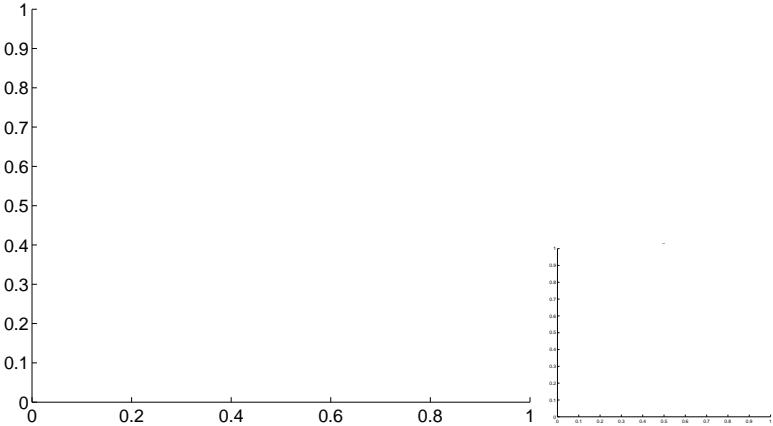
Q1 no OOT image



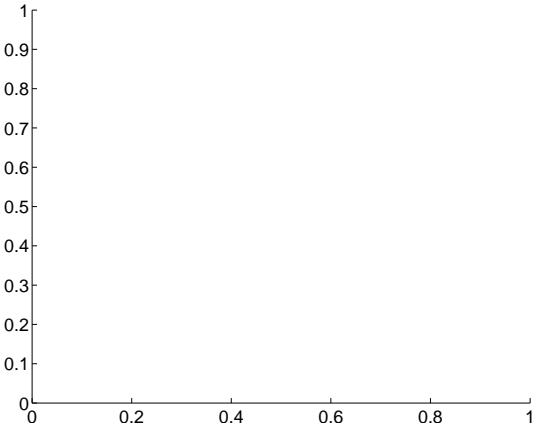
Q2 no difference image



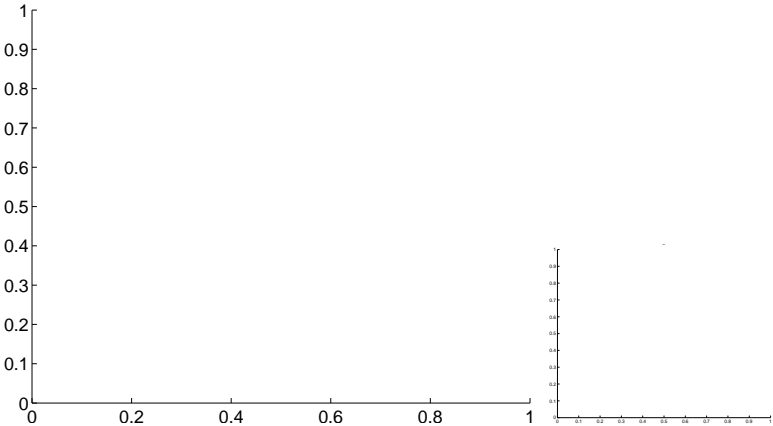
Q2 no OOT image



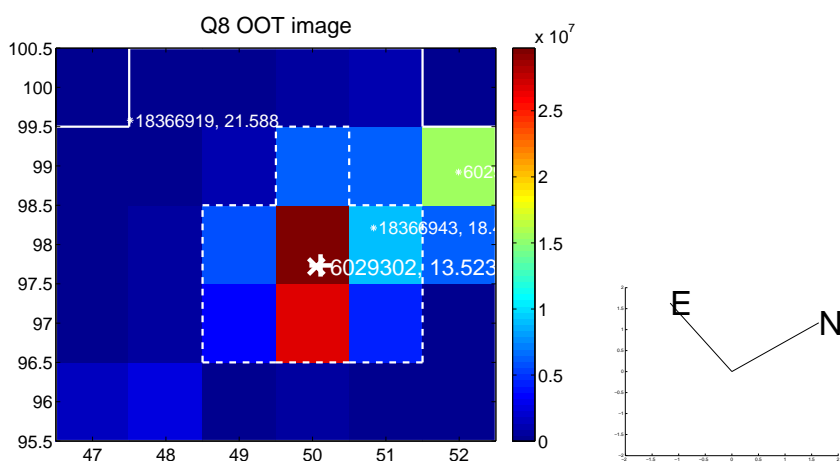
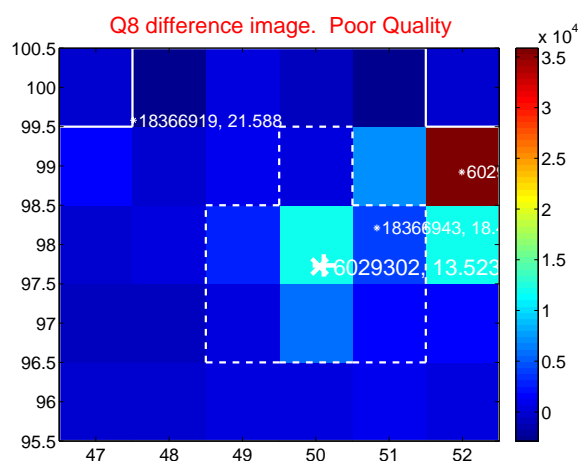
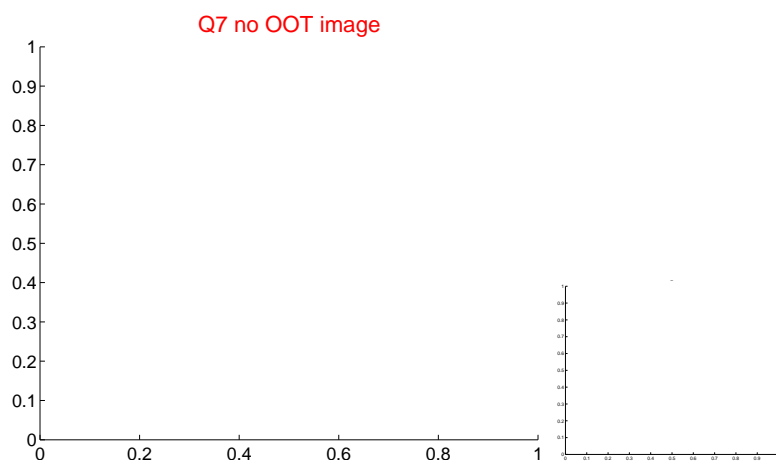
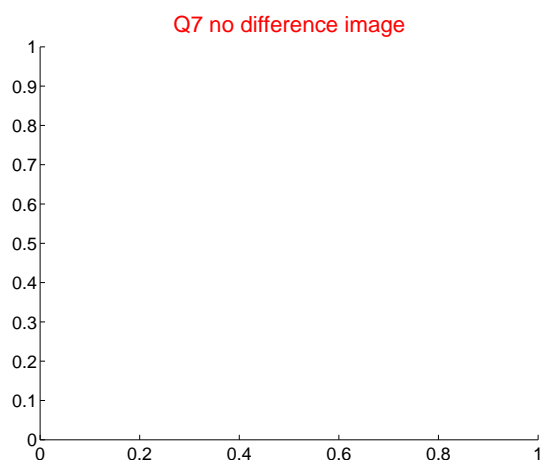
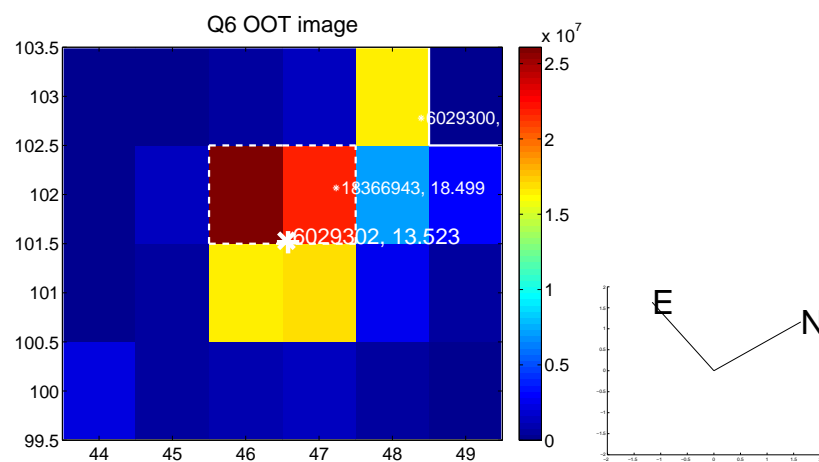
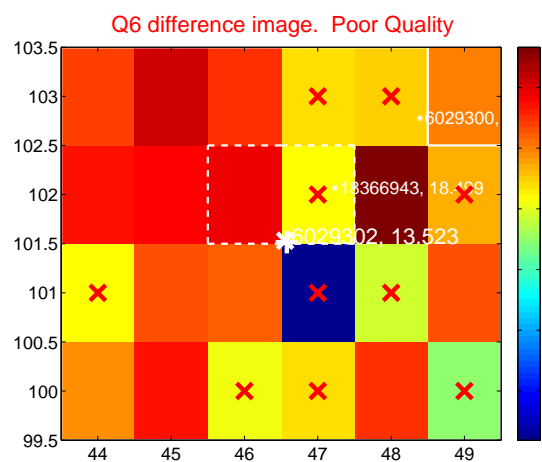
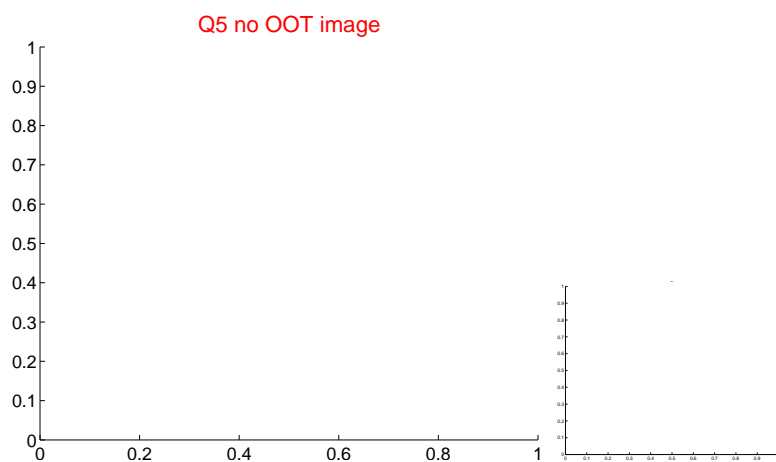
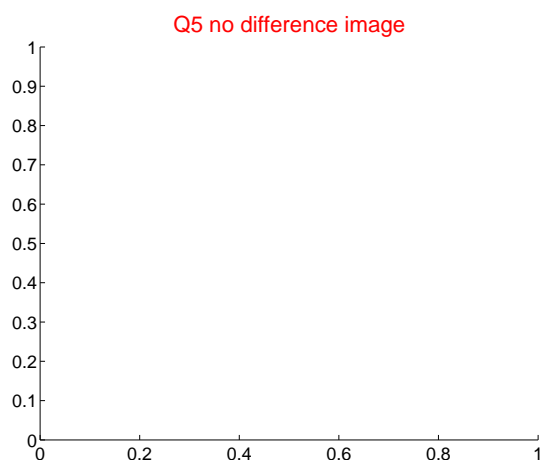
Q4 no difference image



Q4 no OOT image



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

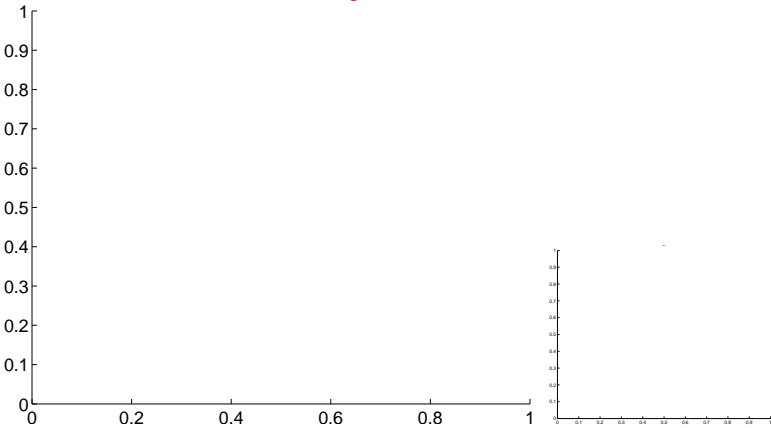


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

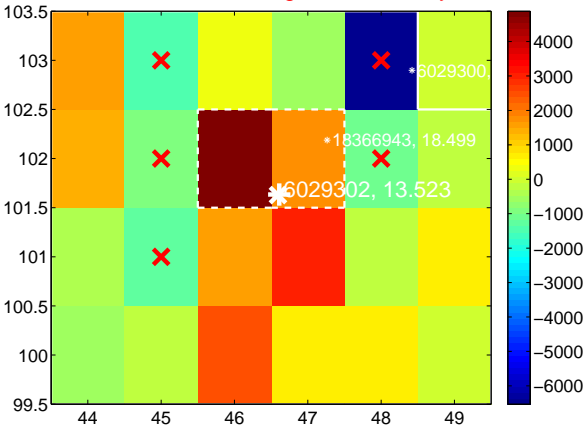
Q9 no difference image



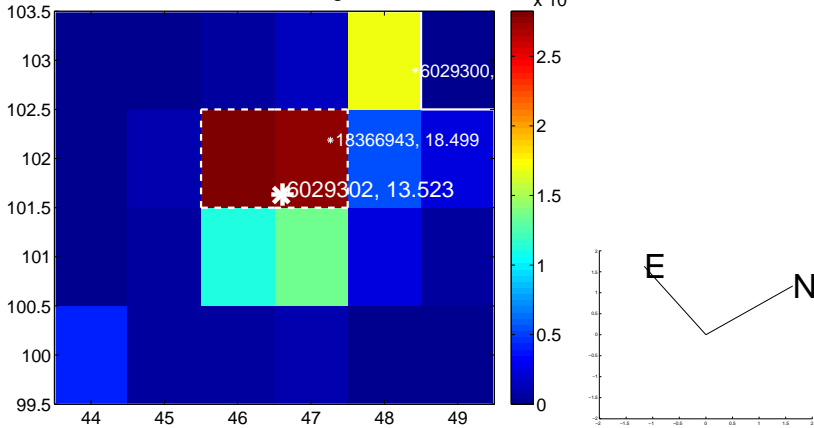
Q9 no OOT image



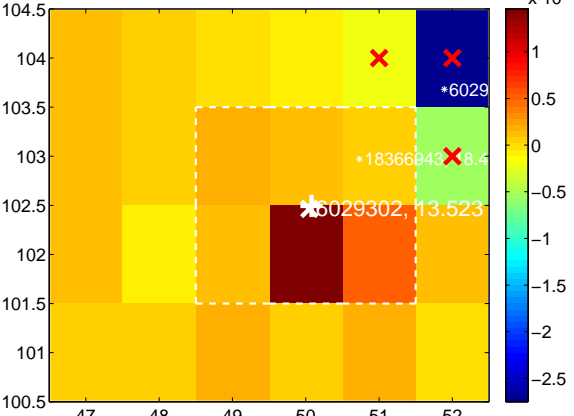
Q10 difference image. Poor Quality



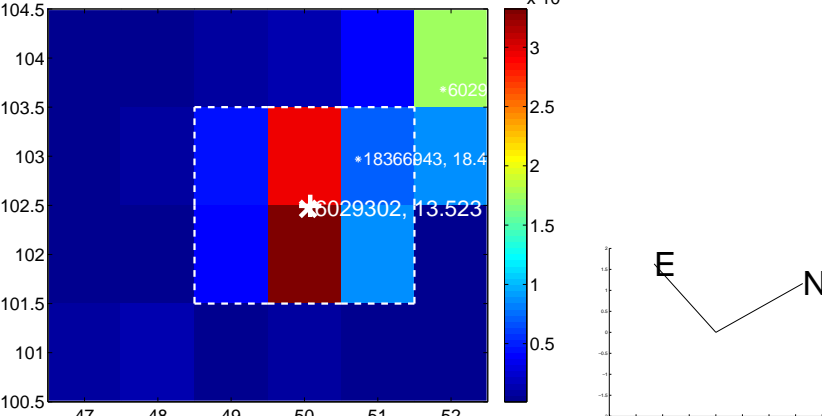
Q10 OOT image



Q11 difference image. Poor Quality



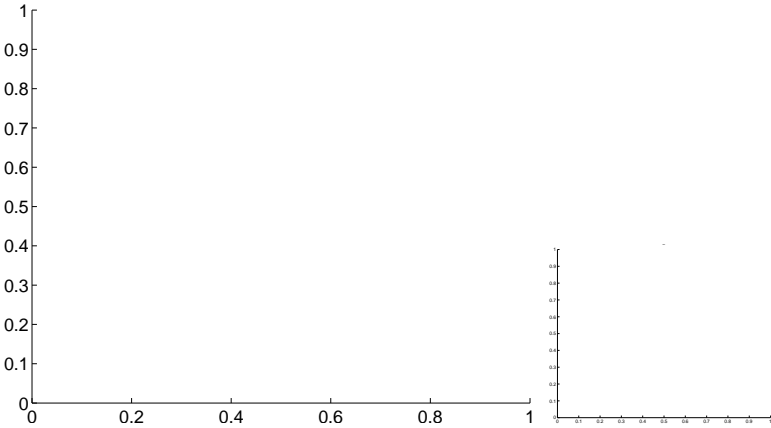
Q11 OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



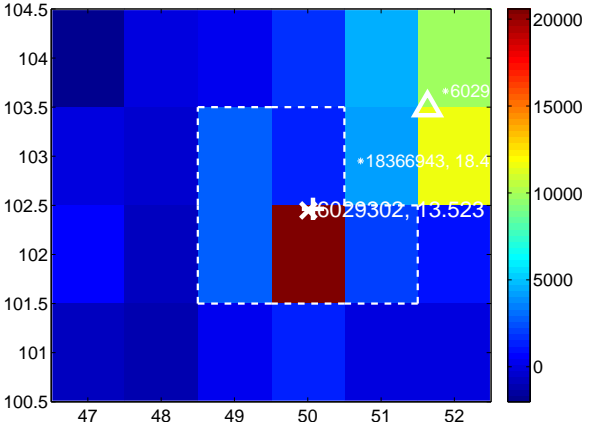
Q14 no difference image



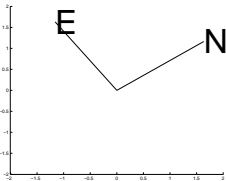
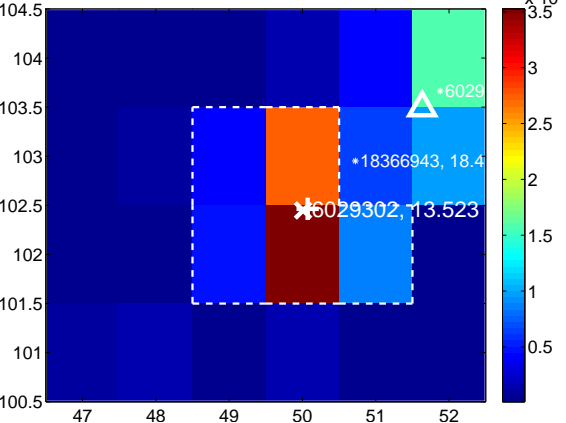
Q14 no OOT image



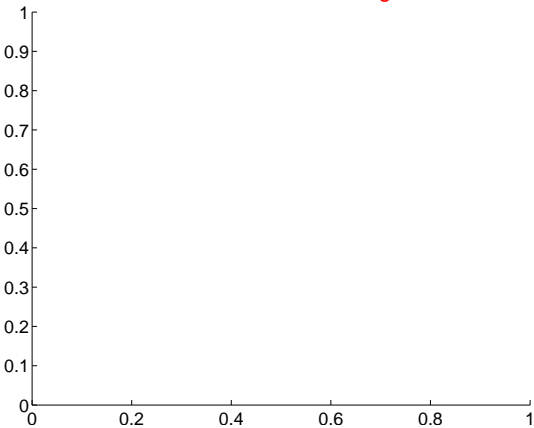
Q15 difference image. Poor Quality



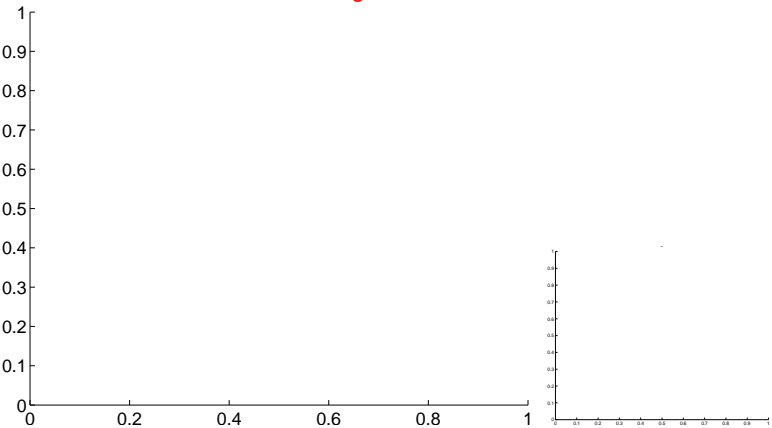
Q15 OOT image



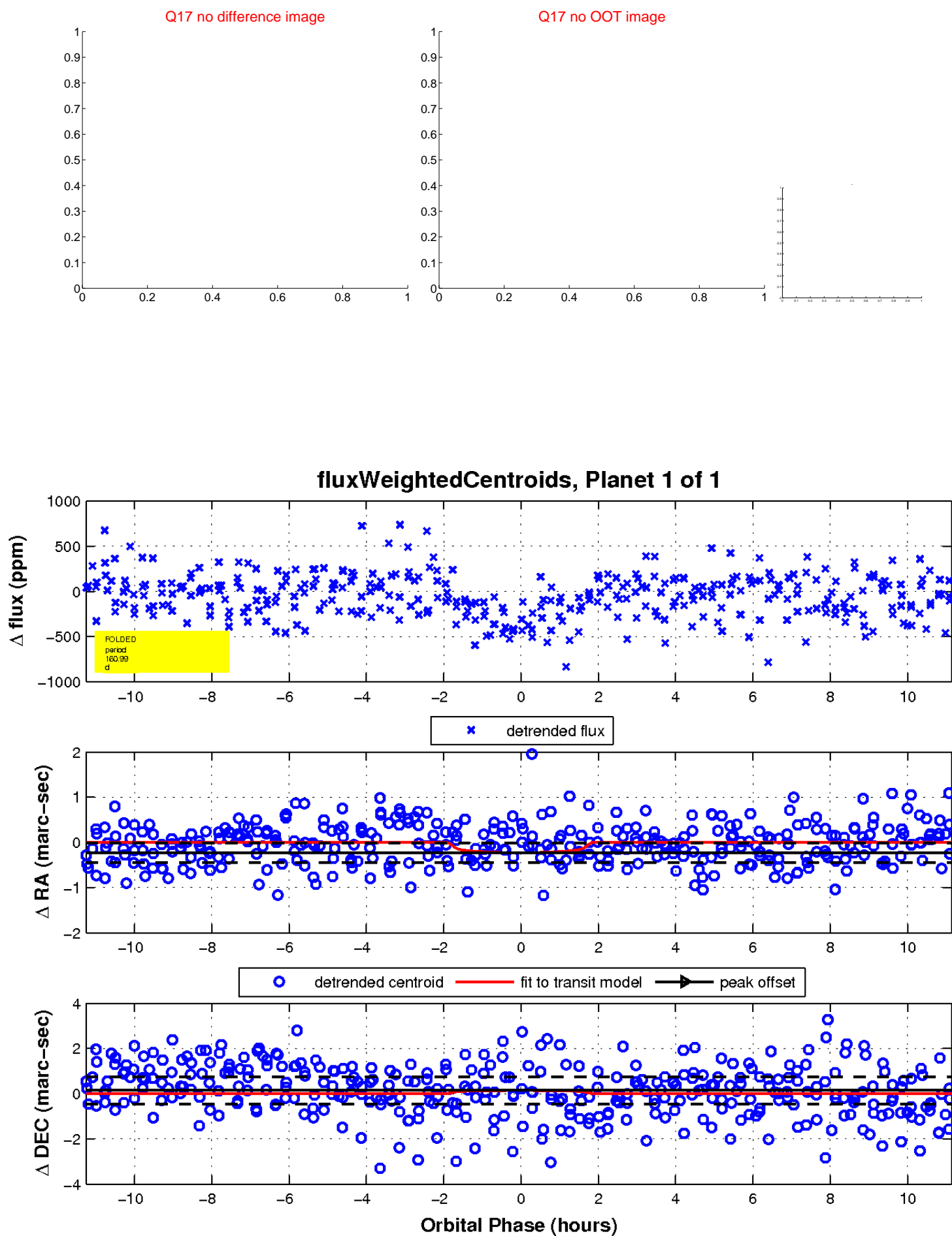
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

