

KIC 010614012

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})
010614012-01	OBS	1807.01	132.132179	149.185837	9334.3	26.224	65.1	110.7	8.12	5067	78.94	101.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010614012-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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

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

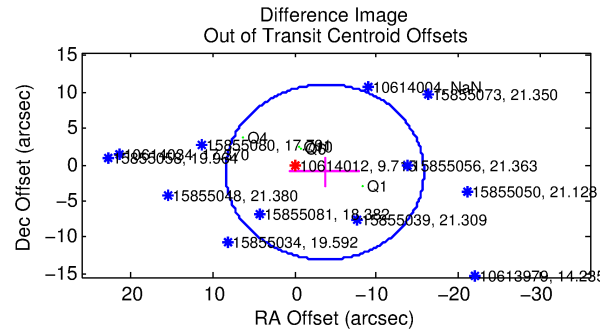
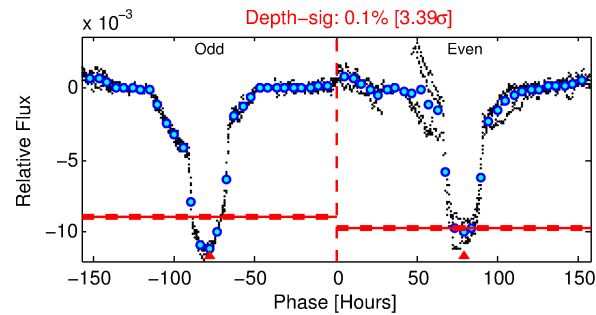
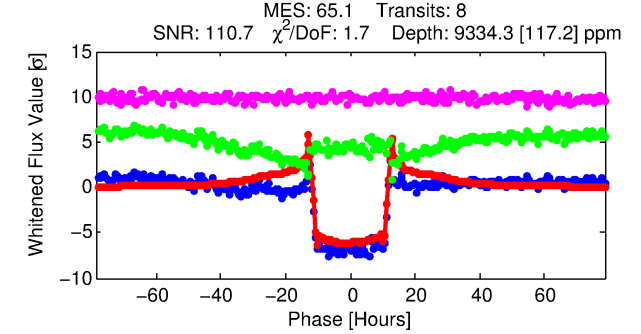
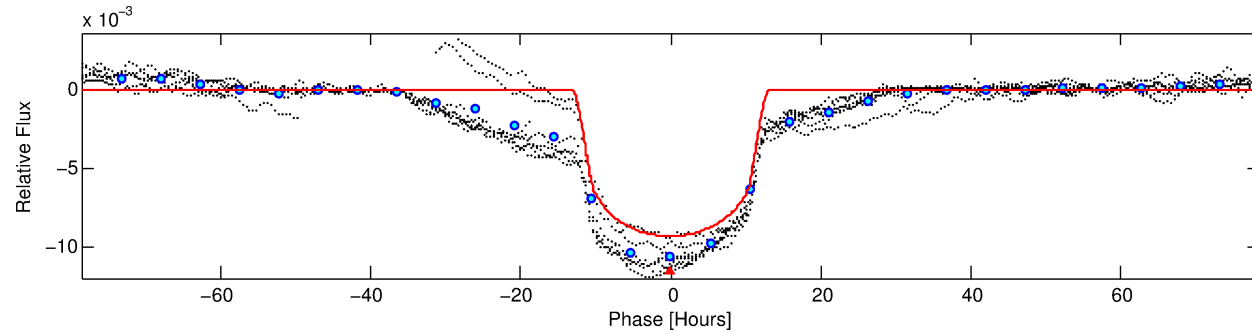
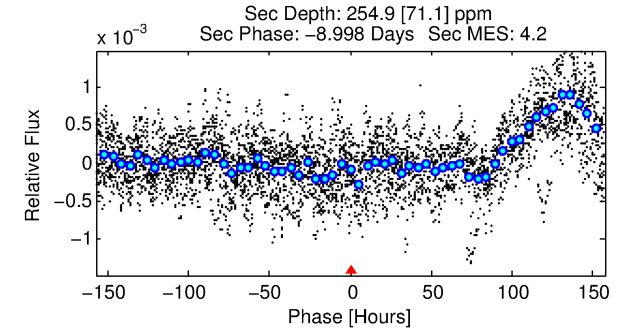
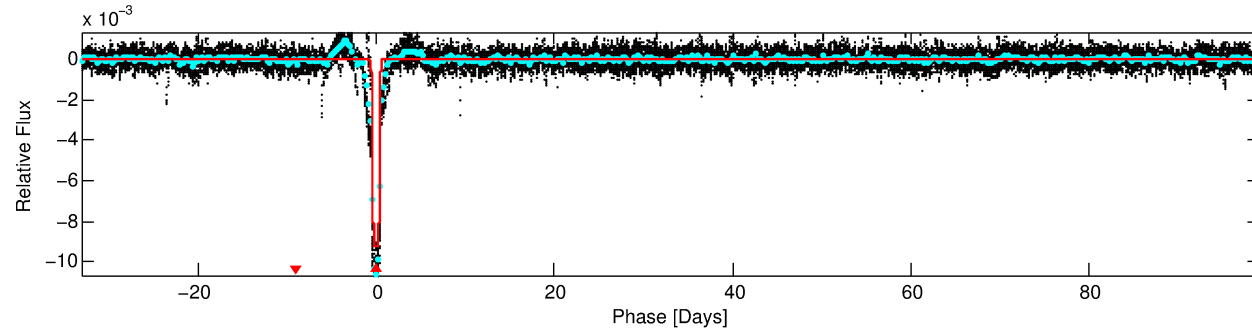
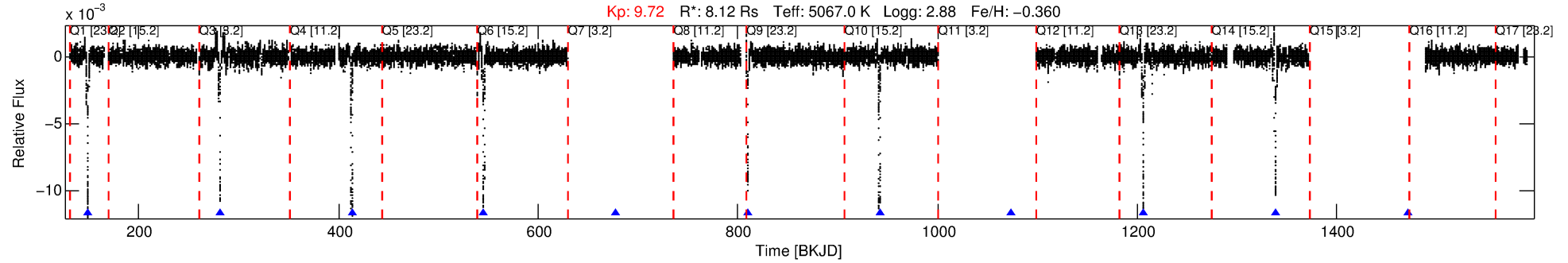
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010614012-01

No Significant Match Found

DV One-Page Summary

KIC: 10614012 Candidate: 1 of 1 Period: 132.132 d
KOI: K01807.01 Corr: 0.980



DV Fit Results:

Period = 132.13218 [0.00039] d
Epoch = 149.1858 [0.0021] BKJD
Rp/R* = 0.0891 [0.0006]
a/R* = 38.12 [0.48]
b = 0.45 [0.02]
Seff = 101.62 [34.96]
Teq = 810 [70] K
Rp = 78.94 [24.85] Re
a = 0.6191 [0.1525] AU
Ag = 8.63 [3.75] [2.04σ]
Teffp = 2145 [157] K [7.77σ]

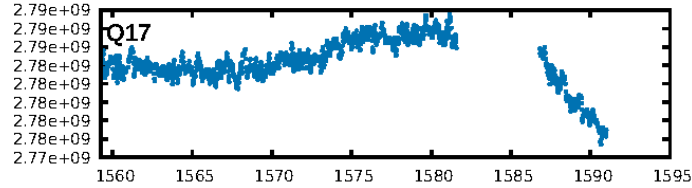
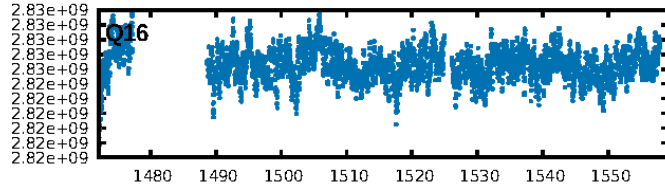
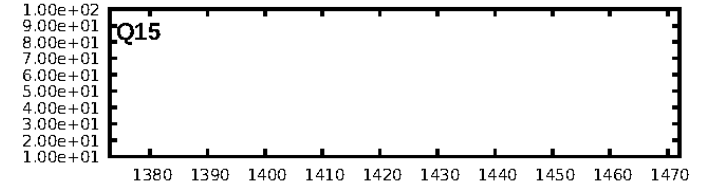
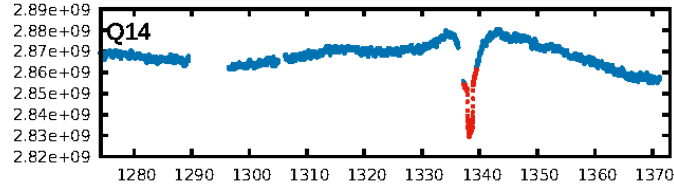
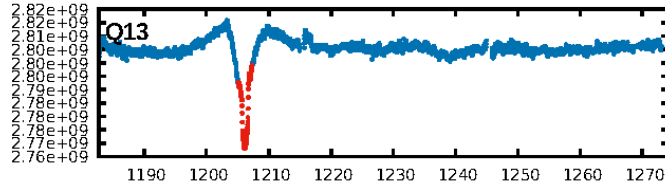
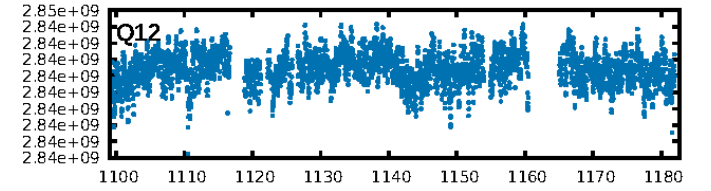
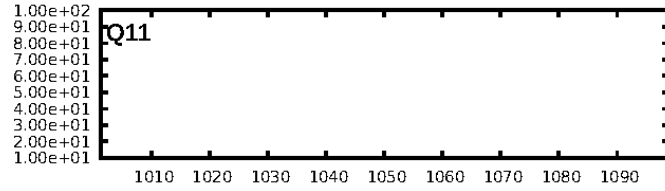
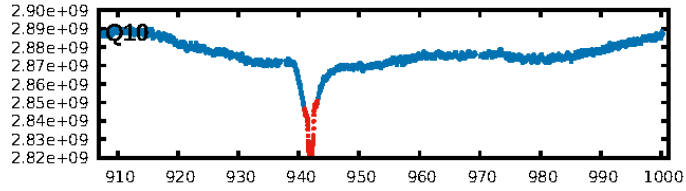
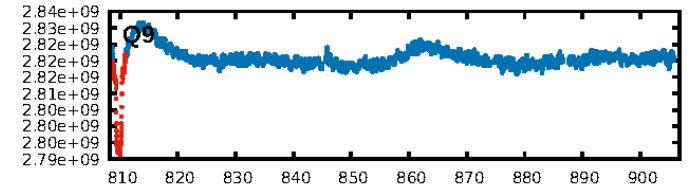
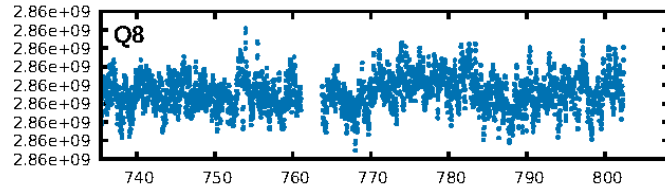
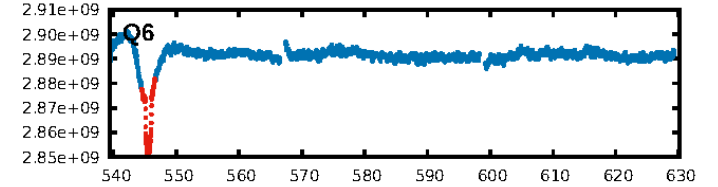
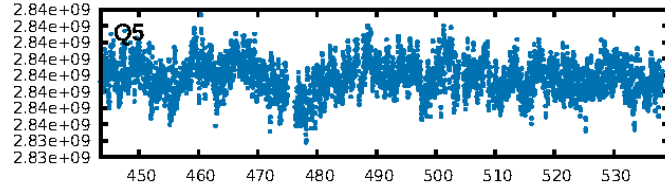
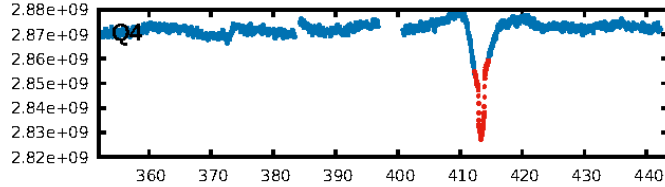
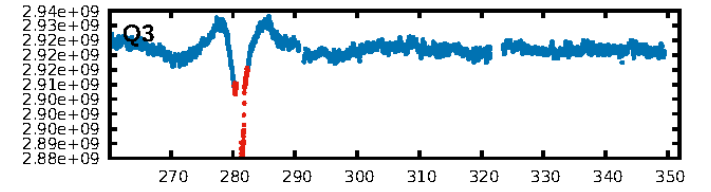
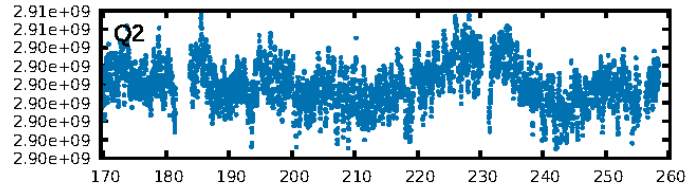
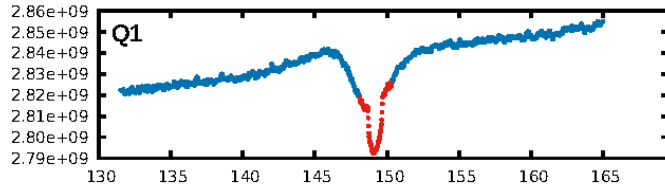
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 68.1%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: N/A
Centroid-sig: 9.6%
Centroid-so: 0.604 arcsec [27.28σ]
OotOffset-rm: 3.813 arcsec [0.95σ]
KicOffset-rm: 4.420 arcsec [1.07σ]
OotOffset-st: 2/0/1/1 [4]
KicOffset-st: 2/0/1/1 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [4/4]

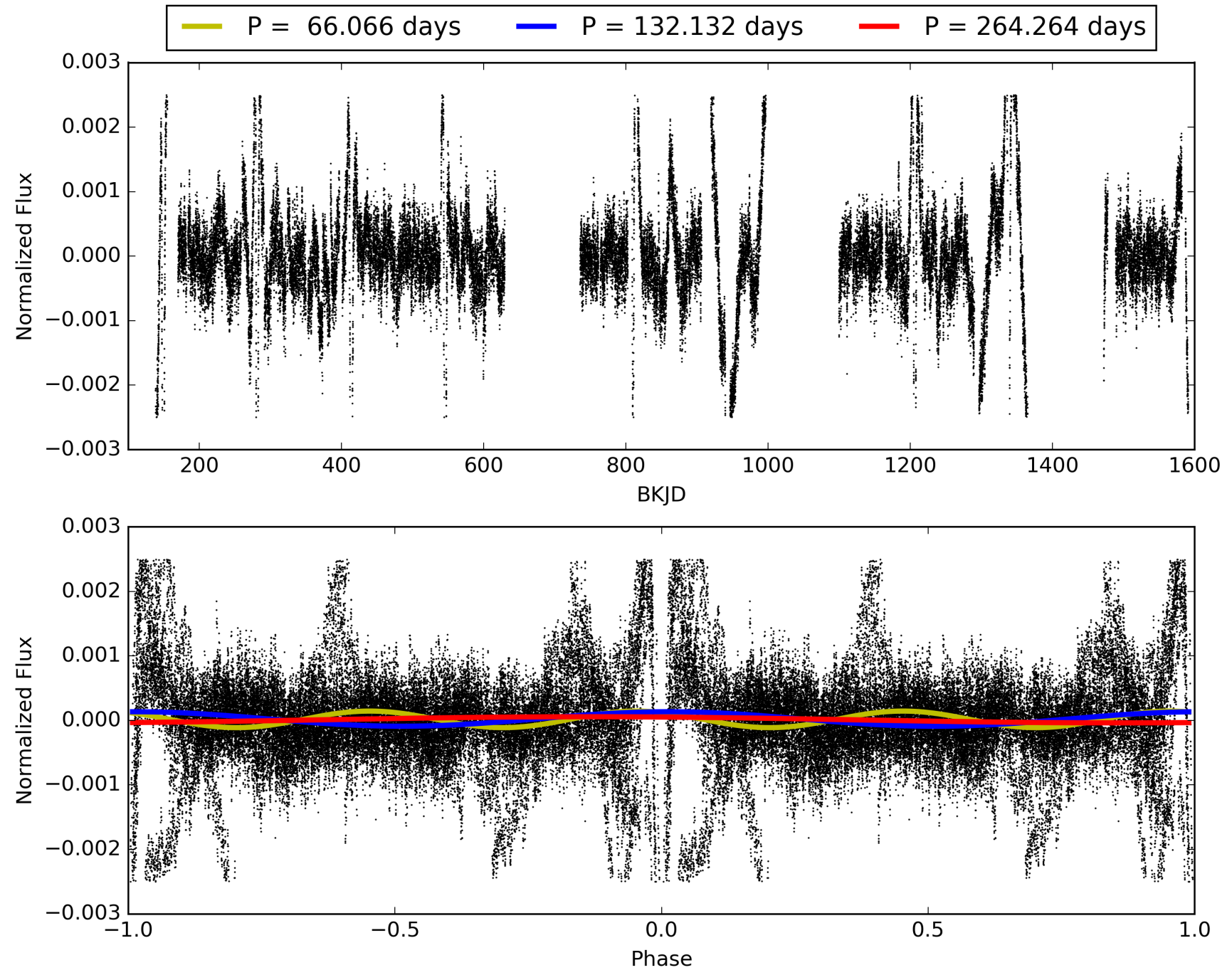
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:23:17 Z

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

TCE 010614012-01, PDC Light Curves

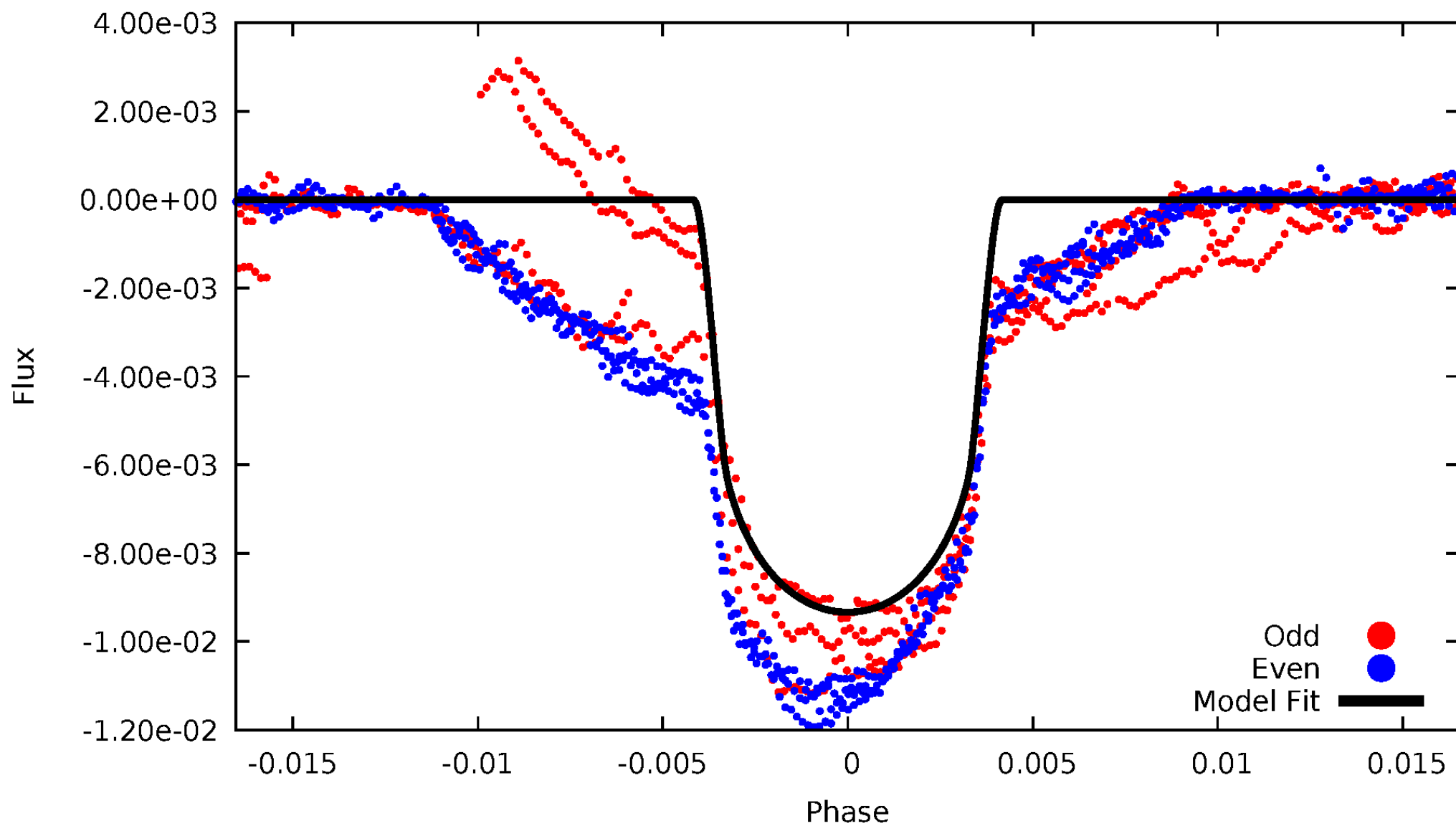


TCE 010614012-01



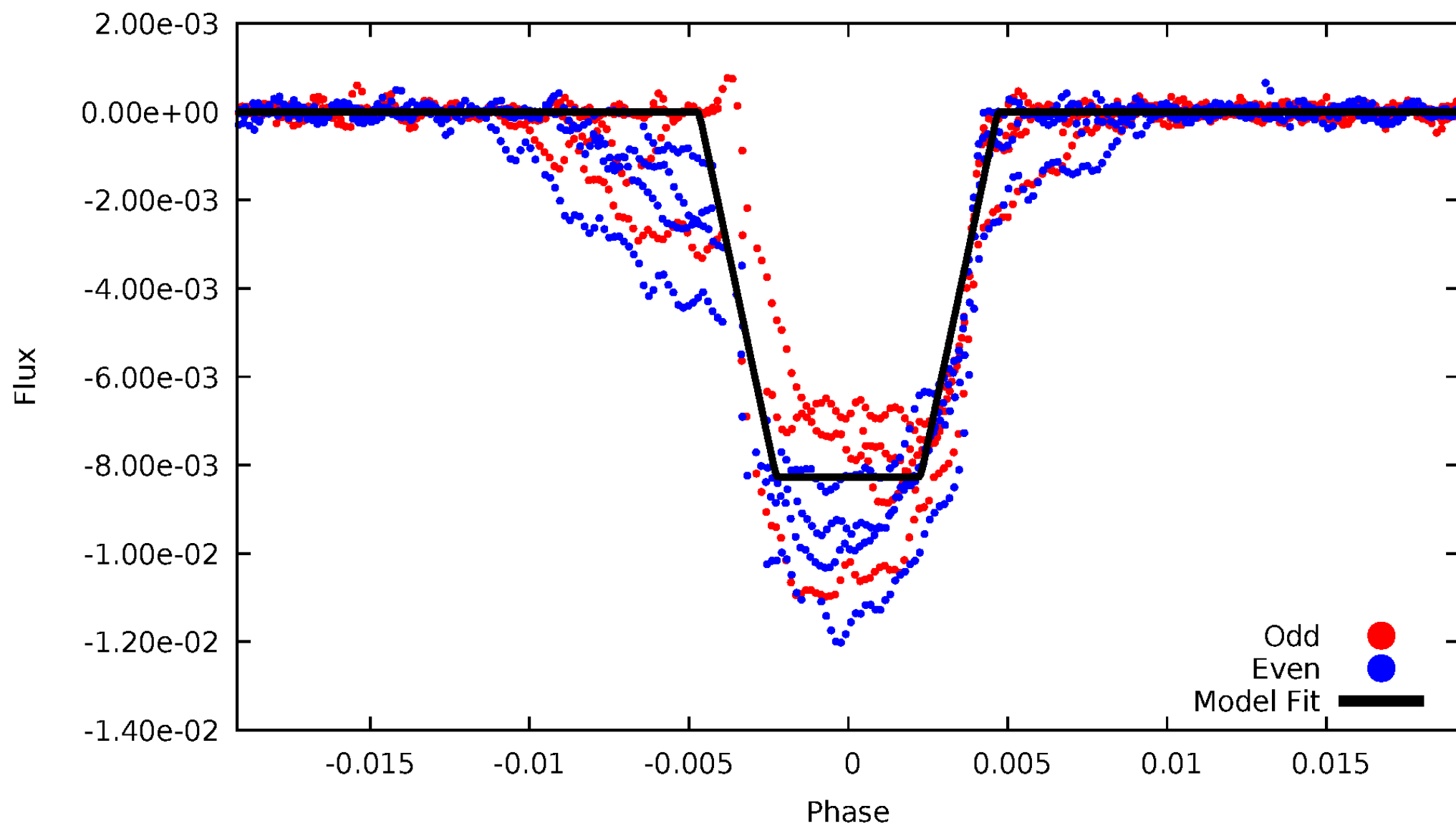
DV Odd/Even

TCE 010614012-01



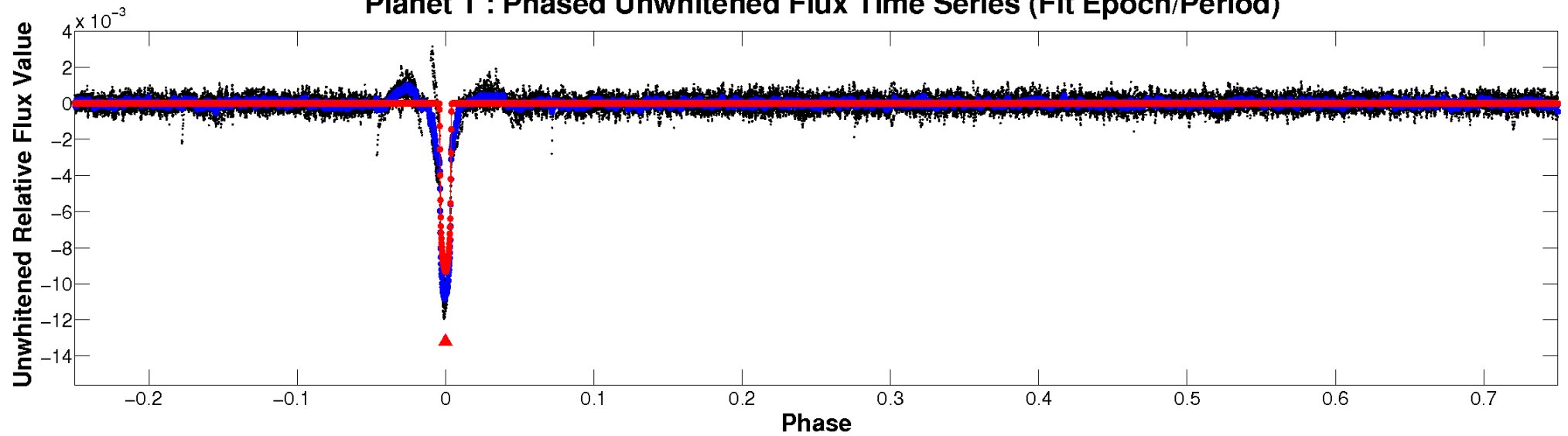
ALT Odd/Even

TCE 010614012-01

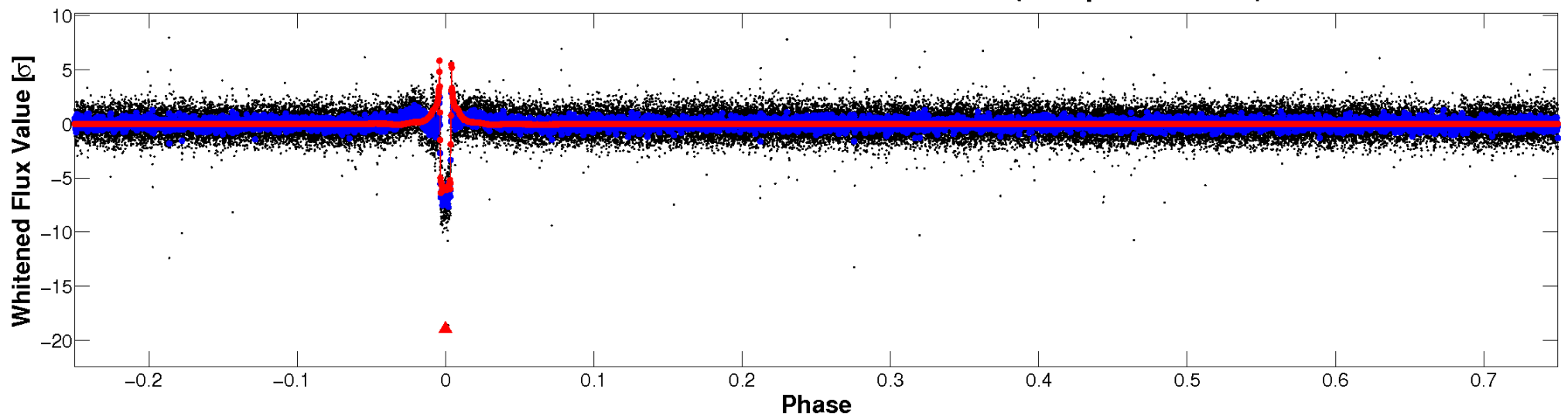


Non-Whitened Vs. Whitened Light Curve

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

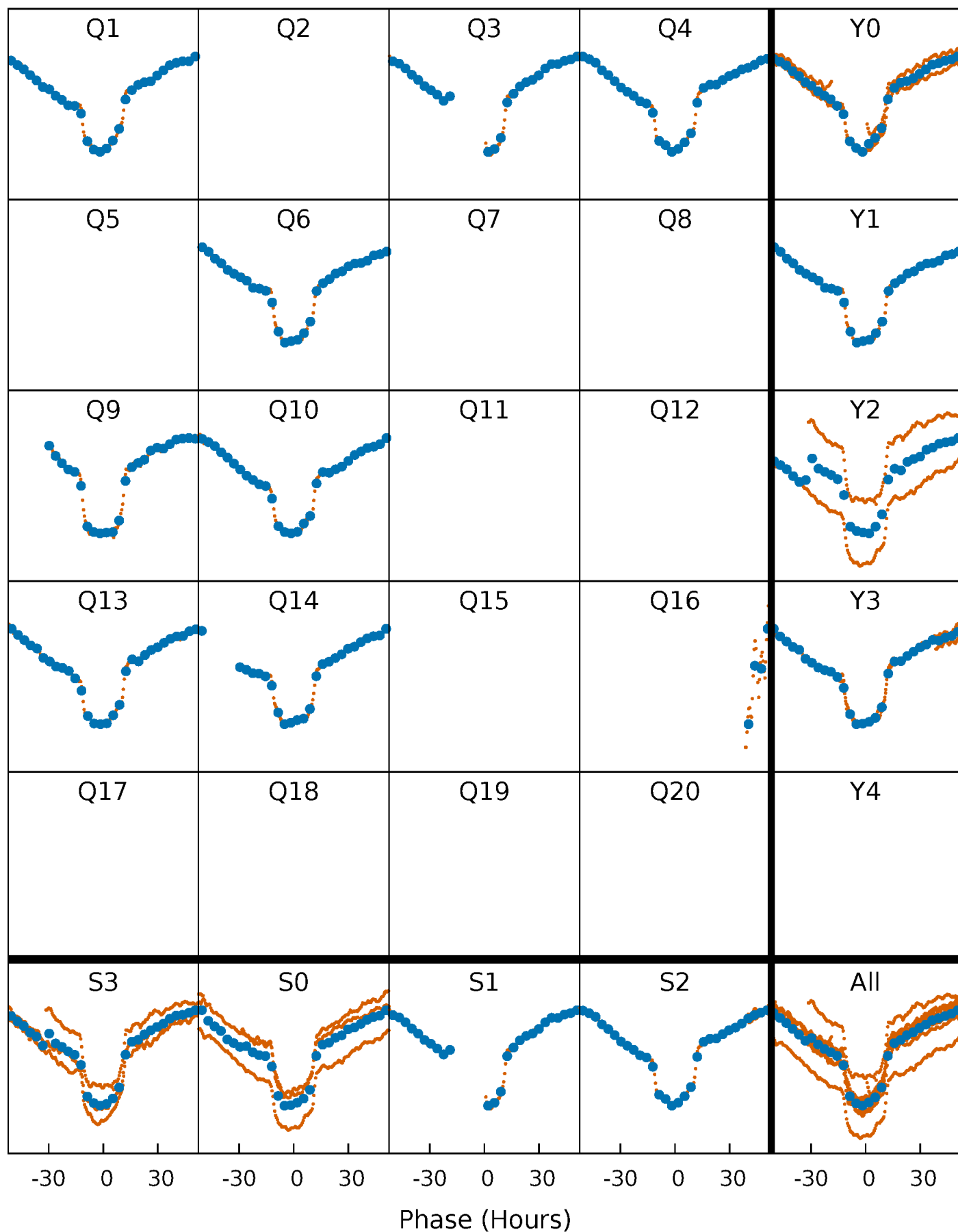


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



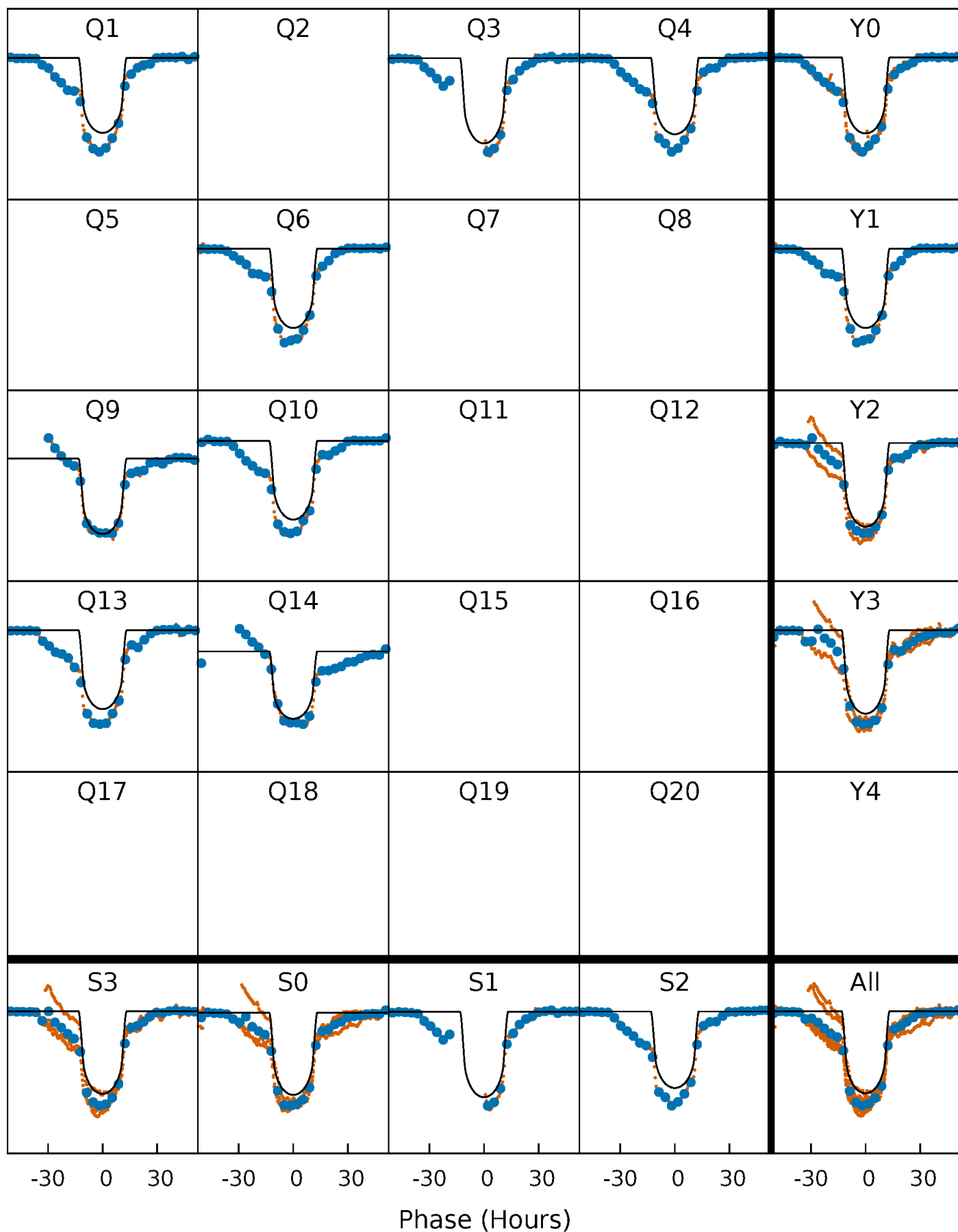
PDC Quarter-Phased Transit Curves

TCE 010614012-01 P=132.132179 Days $T_0=149.185837$ (BKJD)



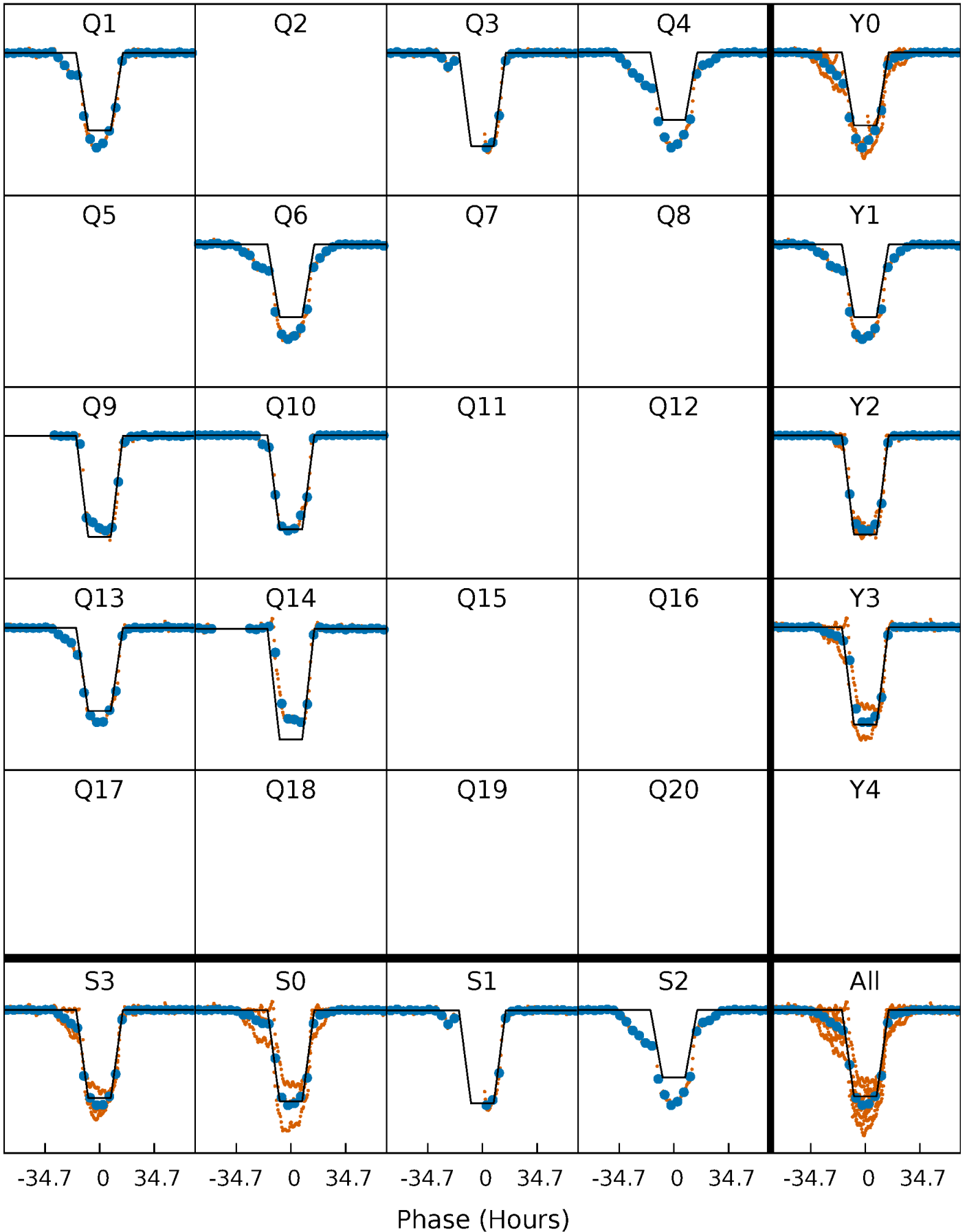
DV Quarter-Phased Transit Curves

TCE 010614012-01 P=132.132179 Days $T_0=149.185837$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

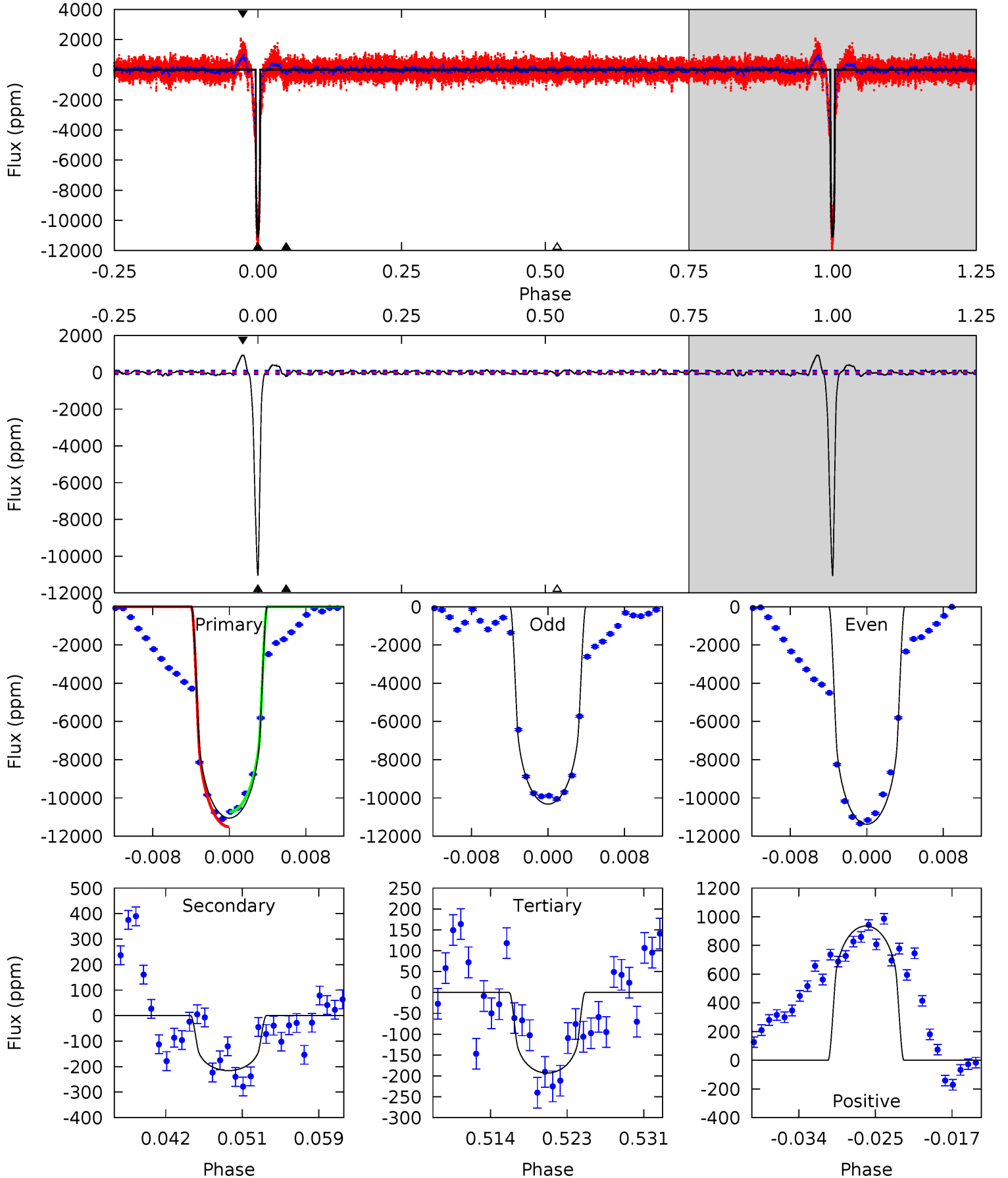
TCE 010614012-01 P=132.130210 Days $T_0=149.161135$ (BKJD)



DV Model-Shift Uniqueness Test

010614012-01, $P = 132.132179$ Days, $E = 17.053658$ Days

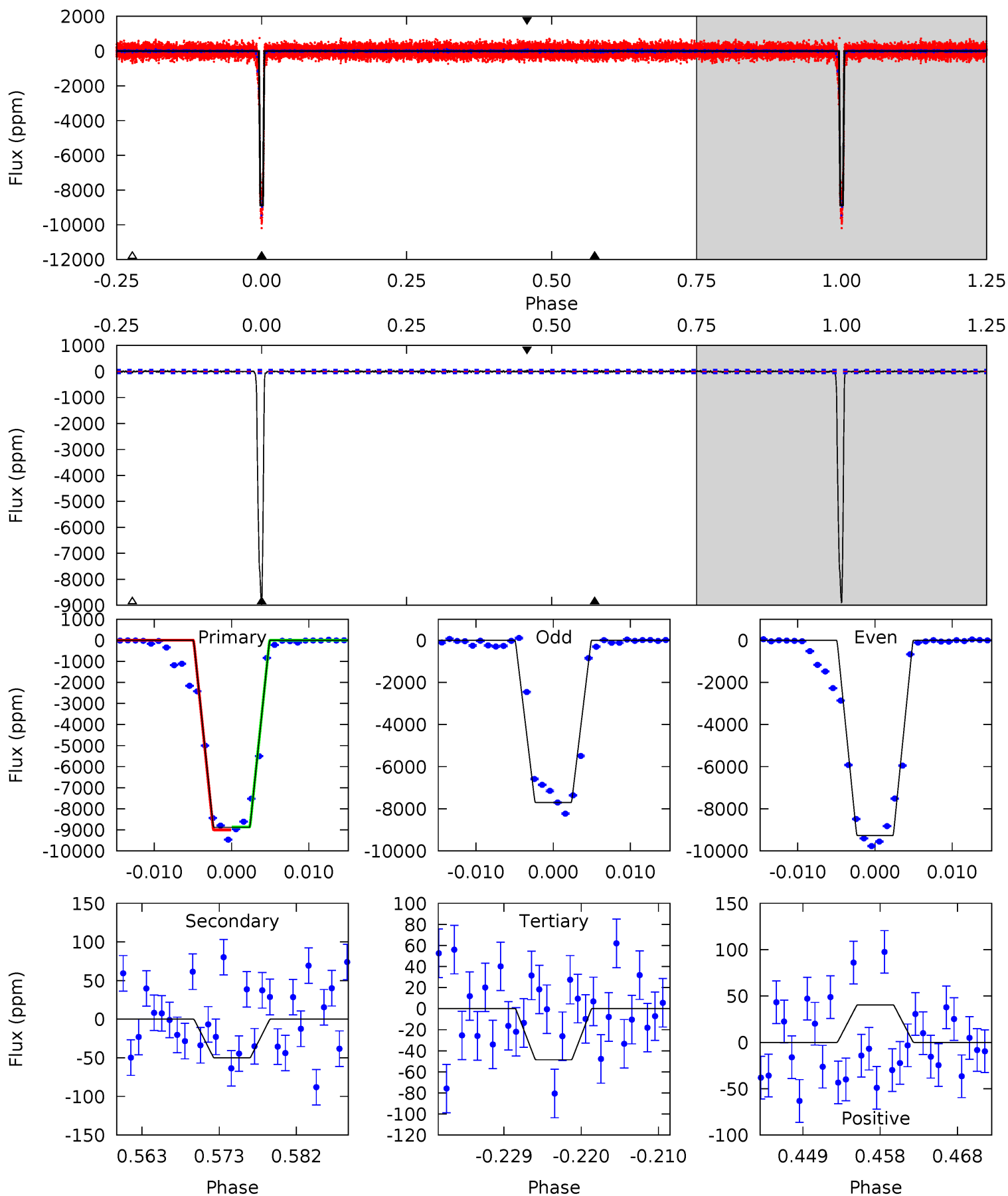
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
597.1	11.6	10.4	50.6	5.06	2.63	8.35	586.6	546.5	1.21	-38.9	29.4	0.98	0.08	20.4



Alt Model-Shift Uniqueness Test

010614012-01, P = 132.130210 Days, E = 17.030925 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
718.6	4.04	3.92	3.27	5.04	2.59	1.18	714.7	715.3	0.12	0.77	69.5	1.00	0.00	4.94



Stellar Parameters For KIC 010614012

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5067^{+52}_{-112}	$2.877^{+0.168}_{-0.112}$	$-0.360^{+0.100}_{-0.200}$	$8.121^{+1.096}_{-2.556}$	$1.812^{+0.168}_{-0.671}$	$0.005^{+0.006}_{-0.001}$
	+1%/-2%	+6%/-4%	+28%/-56%	+13%/-31%	+9%/-37%	+118%/-29%
Source	SPE18	SPE18	SPE18	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010614012-01 / KOI 1807.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-216 ± 19	$79.93^{+6.29}_{-12.37}$	1126^{+51}_{-64}	2757^{+42}_{-47}	$7.291^{+1.892}_{-1.300}$
Alt.	-50 ± 12	$81.57^{+6.41}_{-12.43}$	1128^{+48}_{-68}	2248^{+73}_{-88}	$1.607^{+0.610}_{-0.448}$

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 $A_{obs} \gg 1.0$

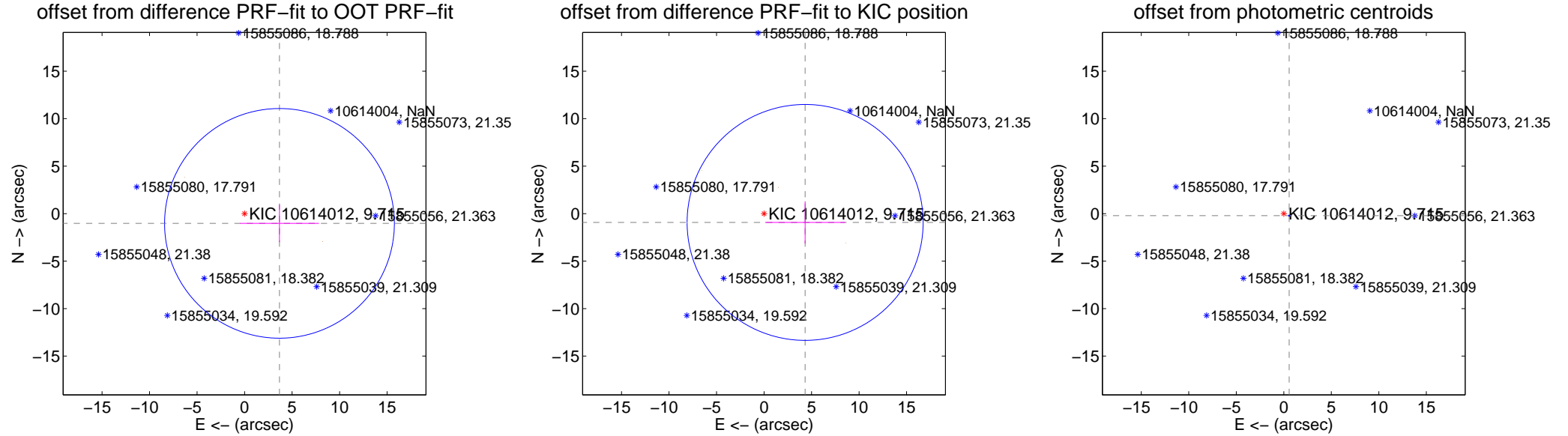
DV Centroid Data

Supplemental centroid analysis for 010614012-01. **Kepler magnitude: 9.71.** Transit SNR 110.71

There are 0 quarters with good PRF difference image offsets

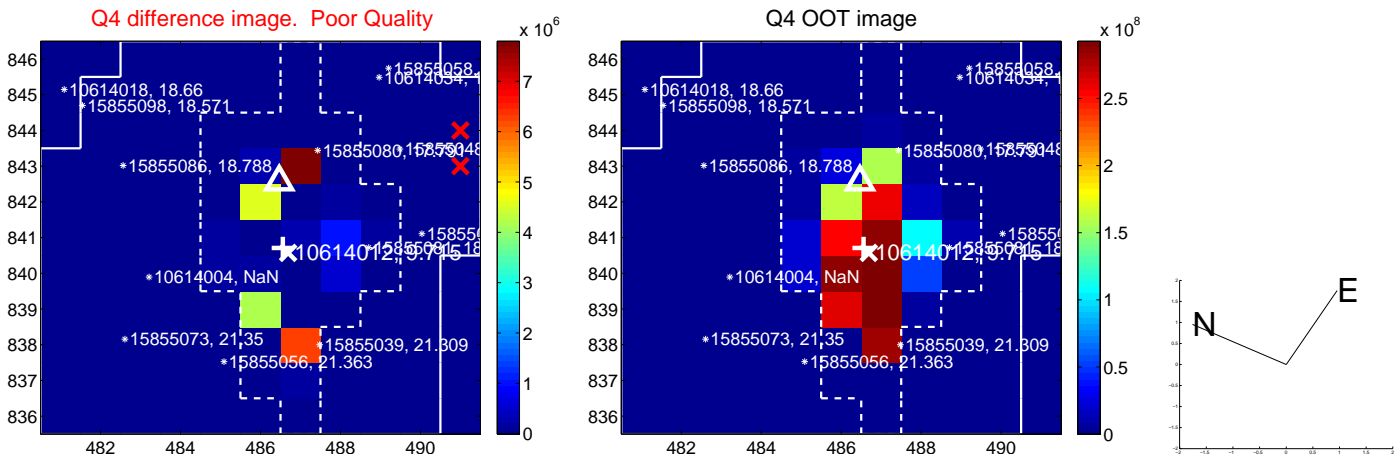
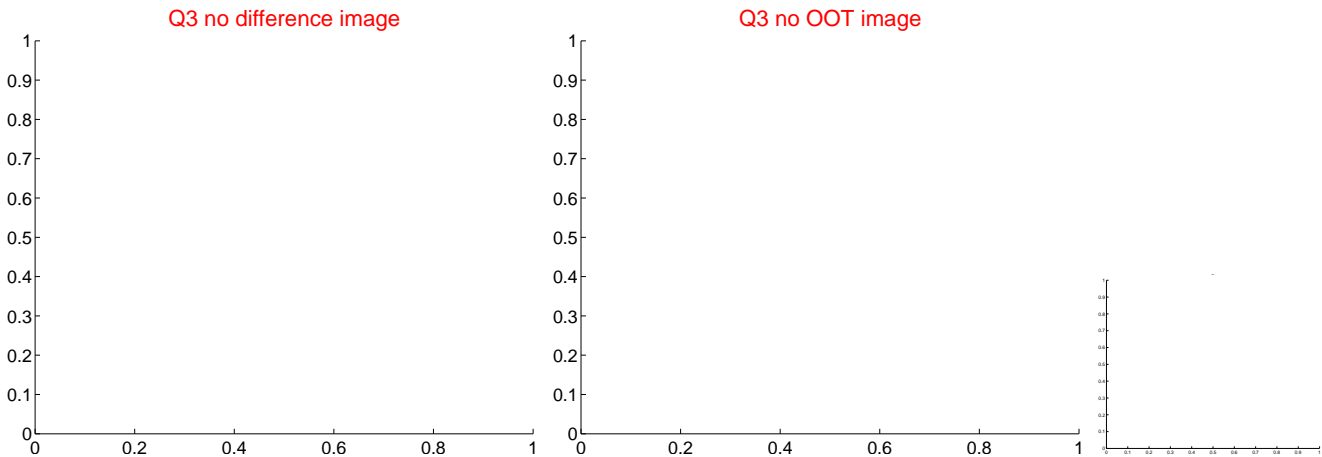
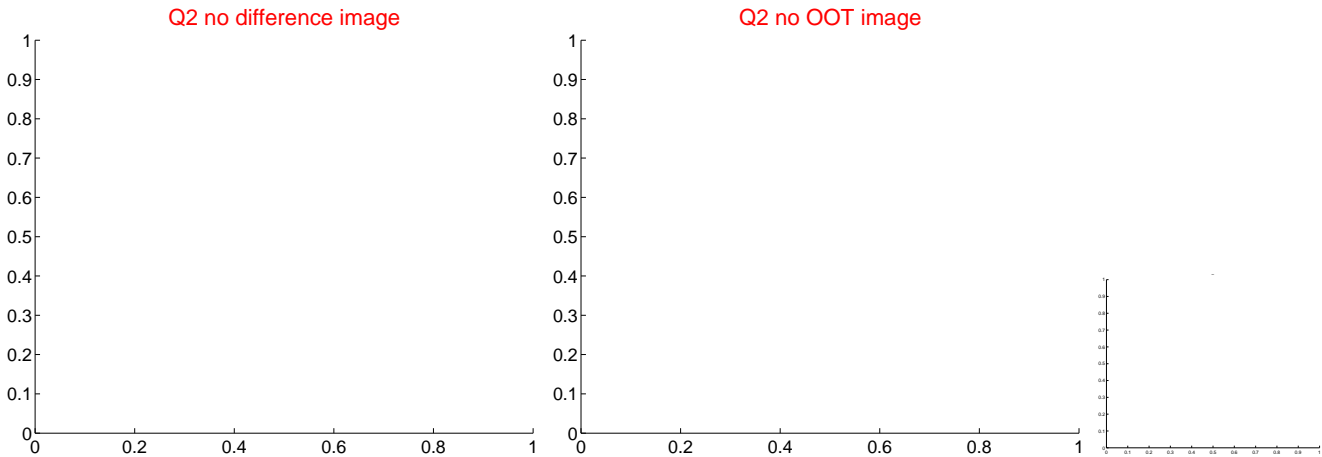
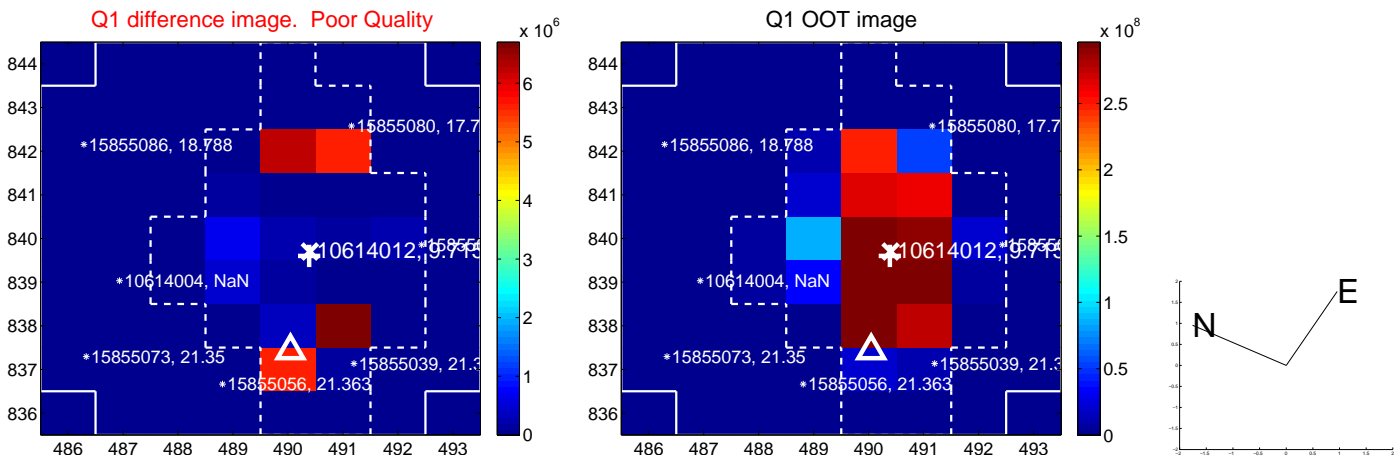
The direct PRF centroid is offset from the target star catalog position by about 0.90 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.813 ± 4.030	0.95	-3.672 ± 4.148	-1.025 ± 1.970
PRF-fit source offset from KIC position	4.420 ± 4.139	1.07	-4.322 ± 4.206	-0.926 ± 2.225
photometric centroid source offset	0.60 ± 0.02	27.28	-0.57 ± 0.02	-0.21 ± 0.01



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.

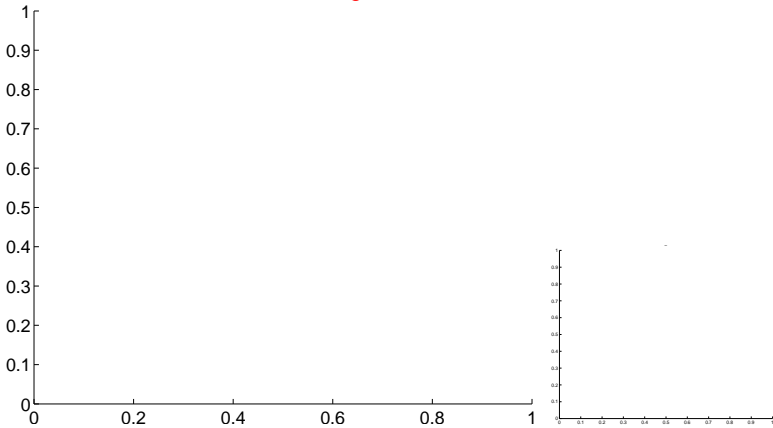


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

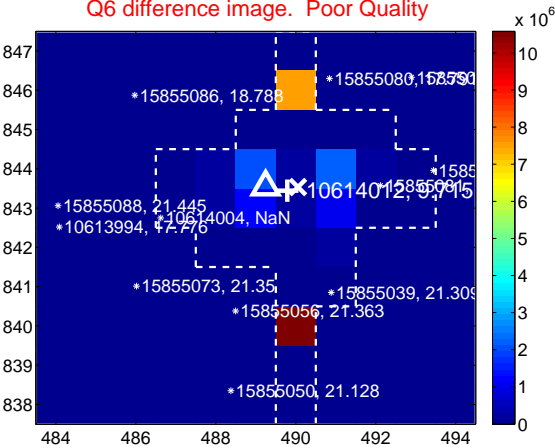
Q5 no difference image



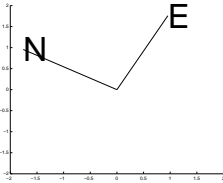
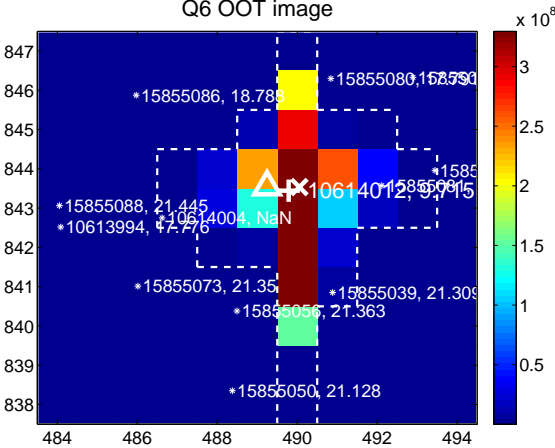
Q5 no OOT image



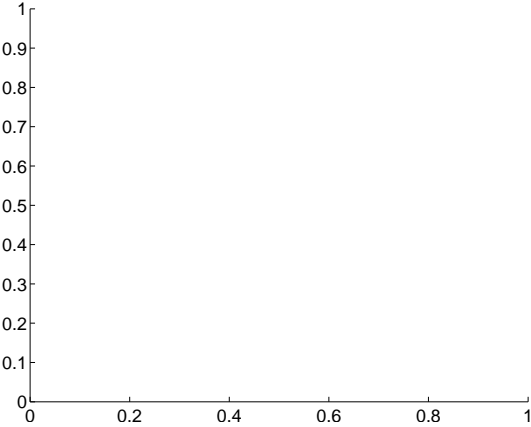
Q6 difference image. Poor Quality



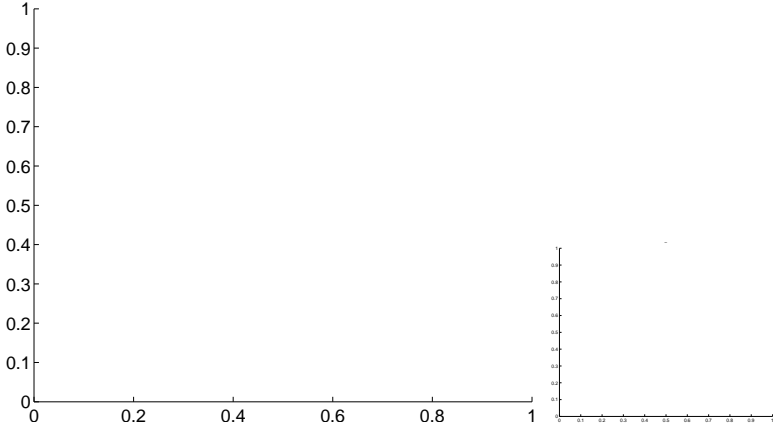
Q6 OOT image



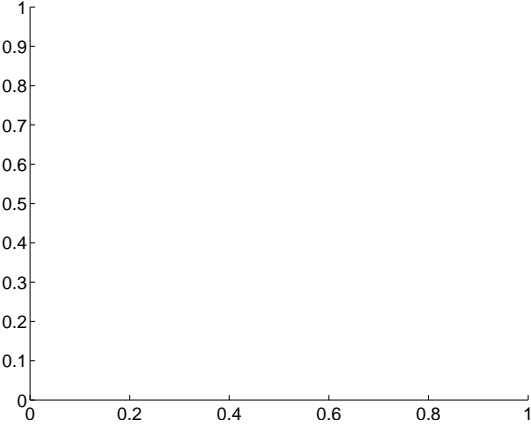
Q7 no difference image



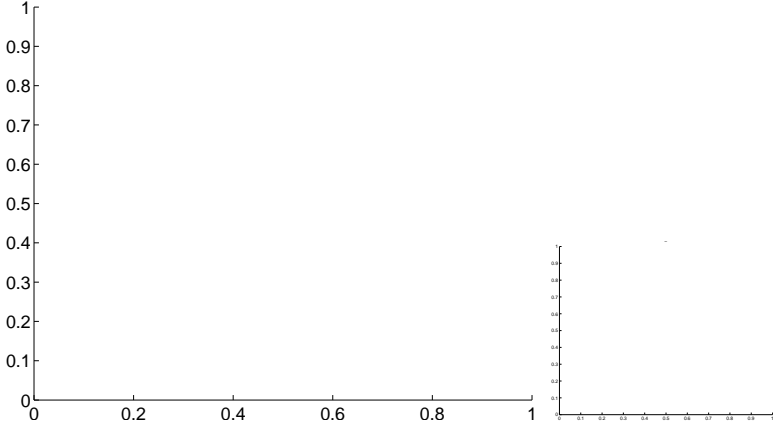
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

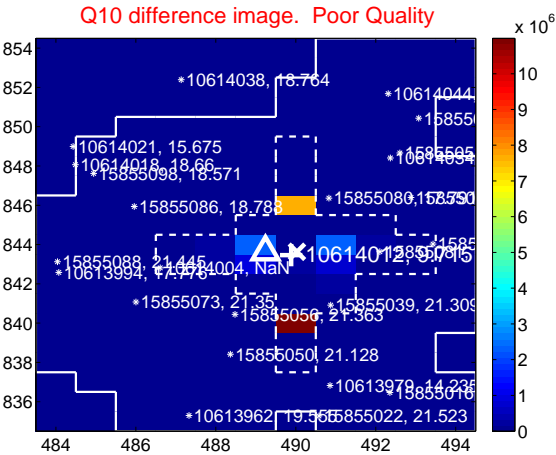
Q9 no difference image



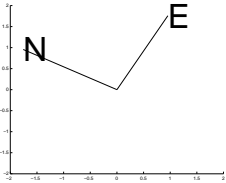
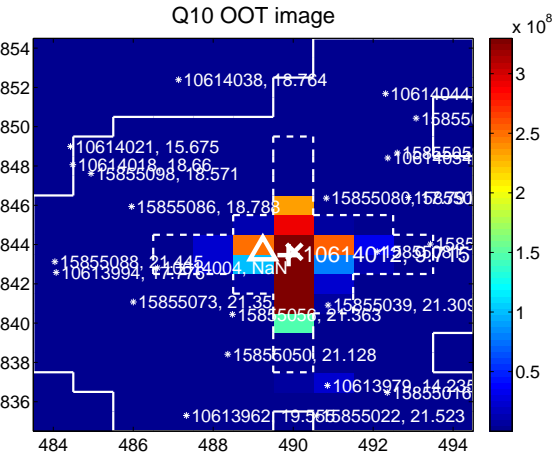
Q9 no OOT image



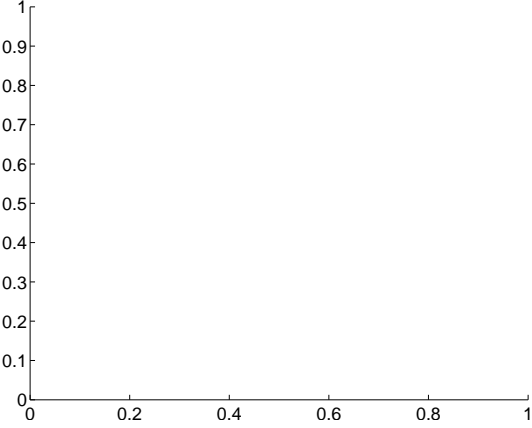
Q10 difference image. Poor Quality



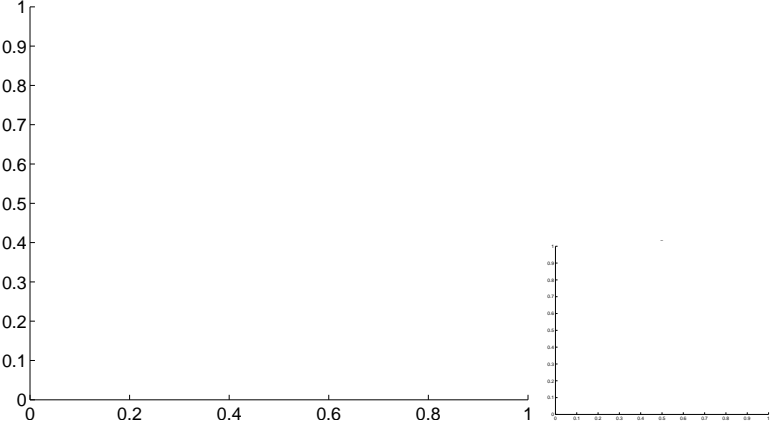
Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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



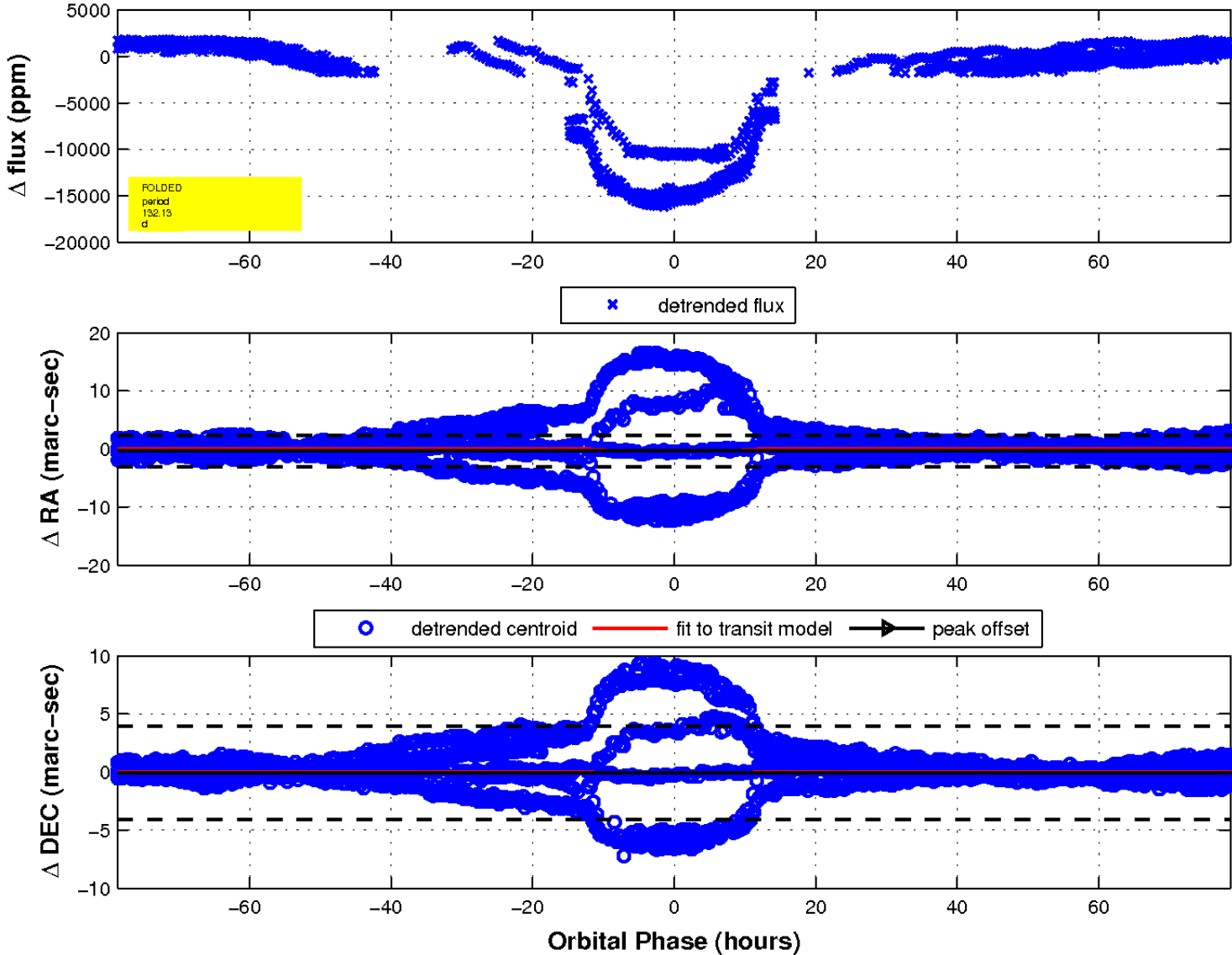
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

