

# KIC 006752002

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006752002-01	OBS	4184.01	6.080043	136.882965	170.5	1.196	14.5	16.8	0.80	4991	1.29	100.76

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006752002-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

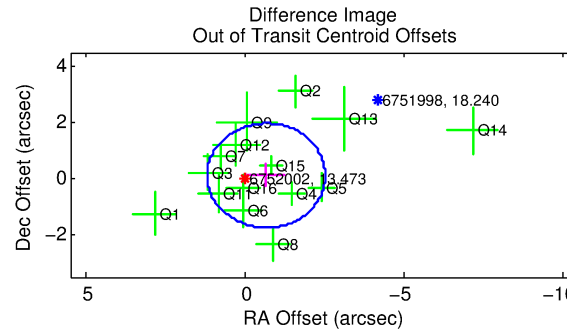
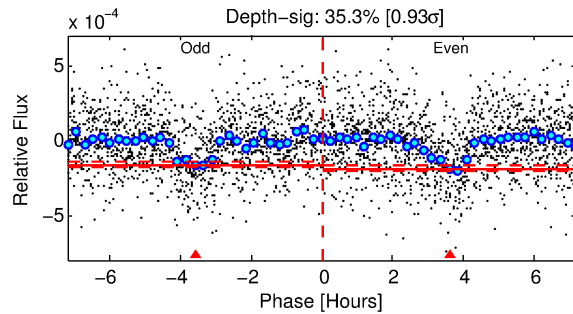
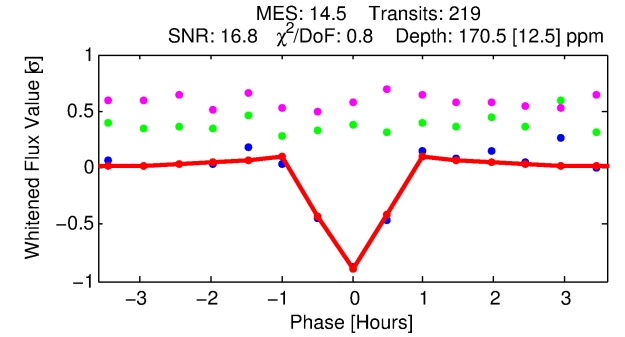
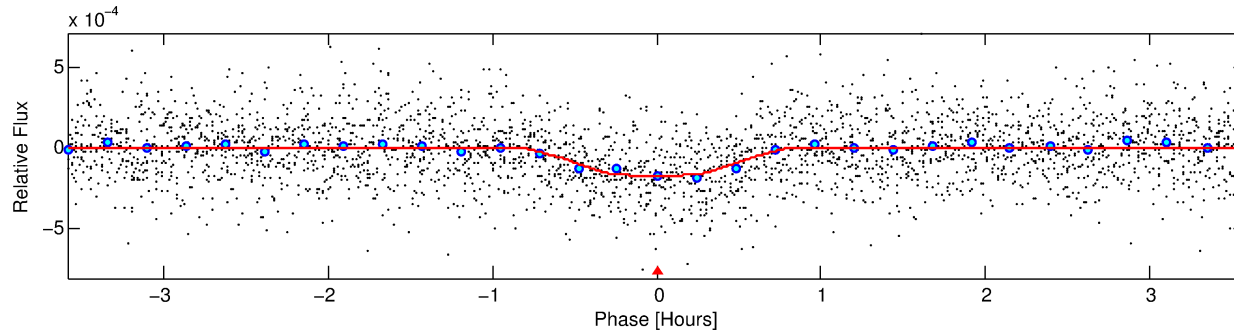
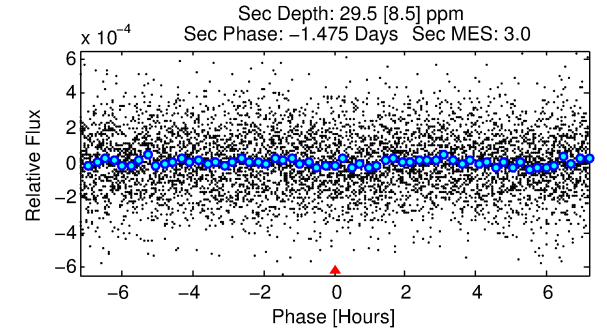
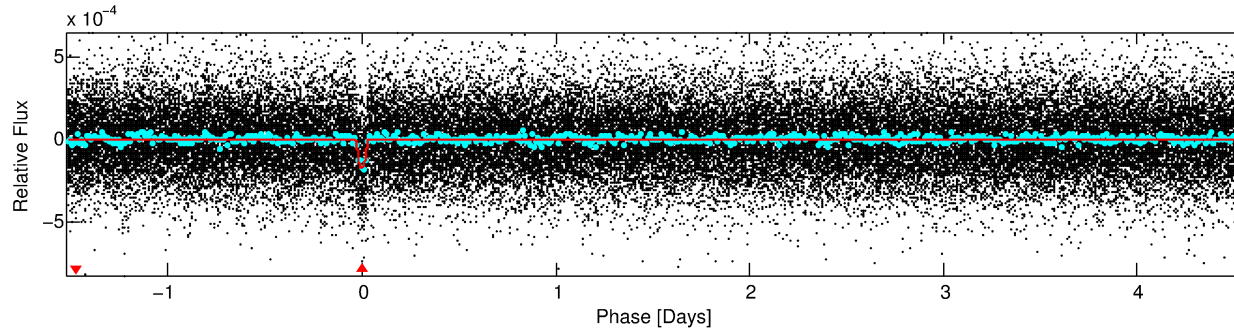
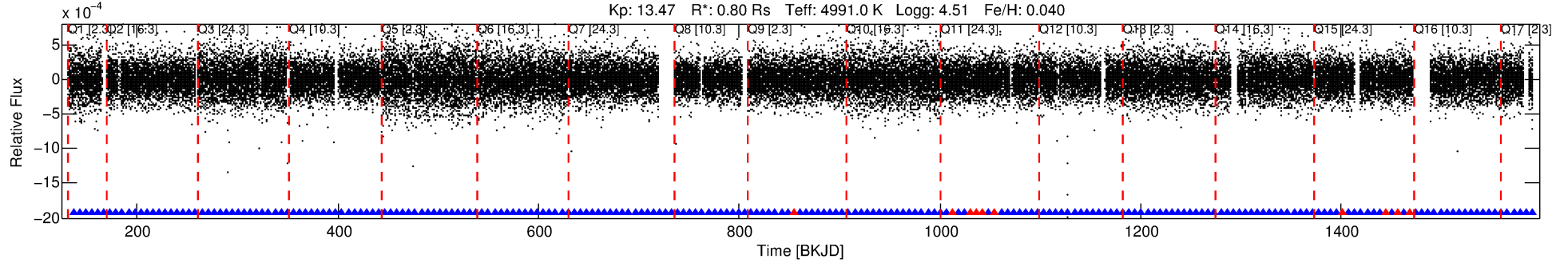
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006752002-01

No Significant Match Found

# DV One-Page Summary

KIC: 6752002 Candidate: 1 of 1 Period: 6.080 d  
KOI: K04184.01 Corr: 0.958



## DV Fit Results:

Period = 6.08004 [0.00001] d  
Epoch = 136.8830 [0.0016] BKJD  
Rp/R\* = 0.0147 [0.0070]  
a/R\* = 18.23 [34.22]  
b = 0.90 [0.41]  
Seff = 100.76 [19.00]  
Teff = 808 [38] K  
Rp = 1.29 [0.63] Re  
a = 0.0597 [0.0058] AU  
Ag = 34.88 [35.21] [0.96σ]  
Teffp = 3036 [763] K [2.91σ]

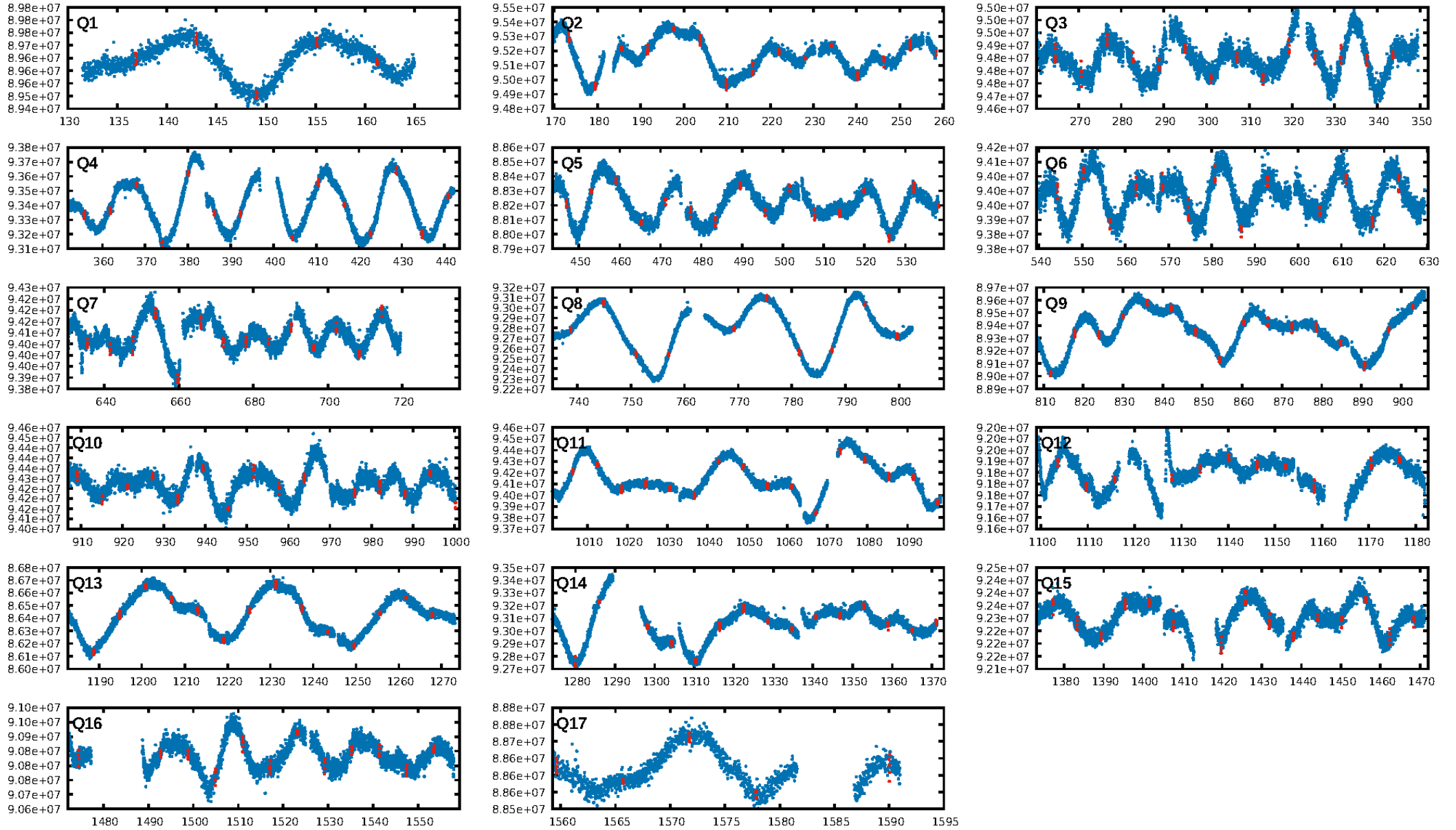
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.05e-45  
RollingBand-fgt: 0.95 [199/209]  
GhostDiagnostic-chr: 10.37  
Centroid-sig: 84.0%  
Centroid-so: 0.854 arcsec [1.17σ]  
OotOffset-rm: 0.668 arcsec [1.08σ]  
KicOffset-rm: 0.773 arcsec [1.28σ]  
OotOffset-st: 3/4/4/4 [15]  
KicOffset-st: 3/4/4/4 [15]  
DiffImageQuality-fgm: 0.73 [11/15]  
DiffImageOverlap-fno: 1.00 [17/17]

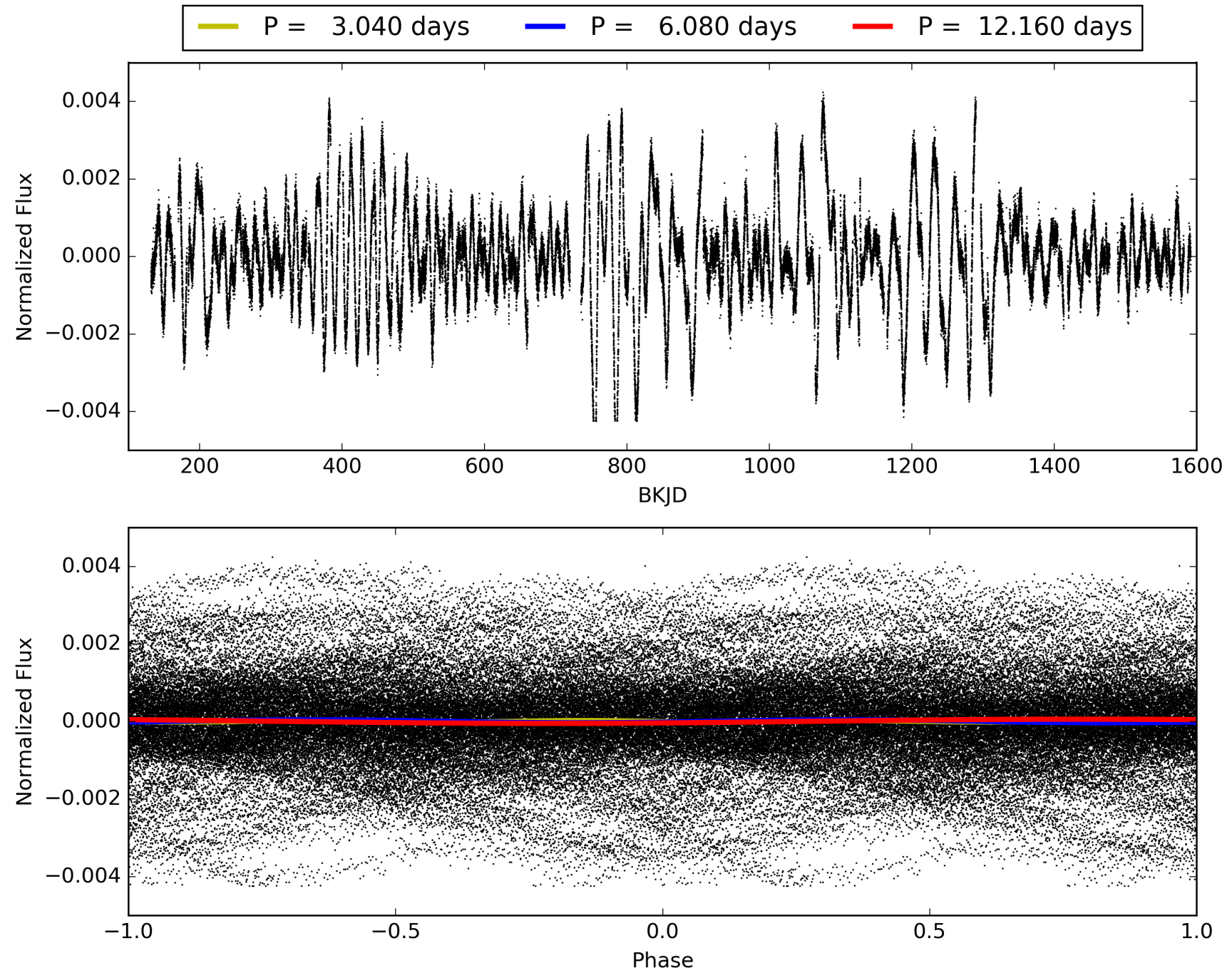
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:10:57 Z

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

# TCE 006752002-01, PDC Light Curves

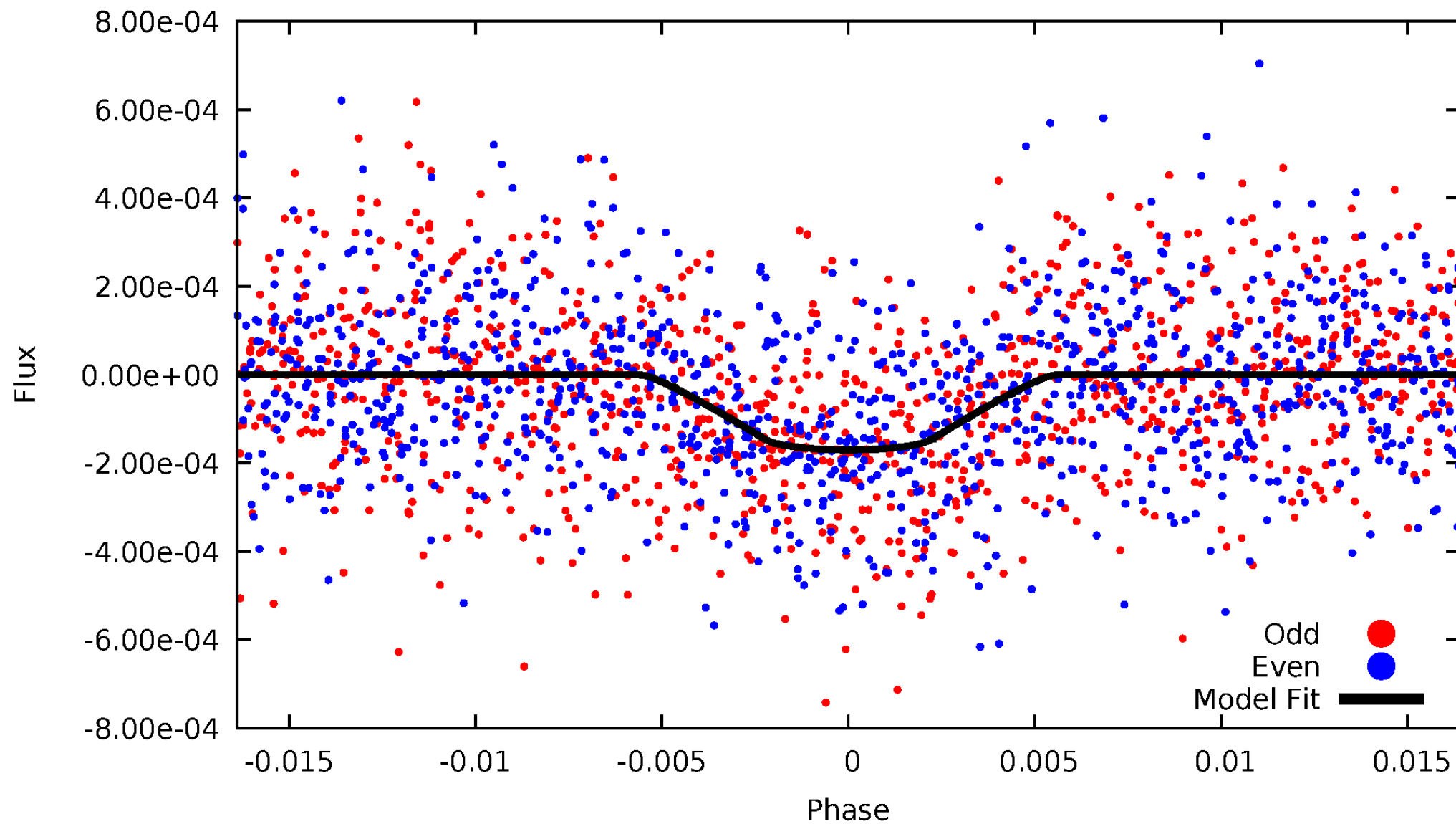


TCE 006752002-01



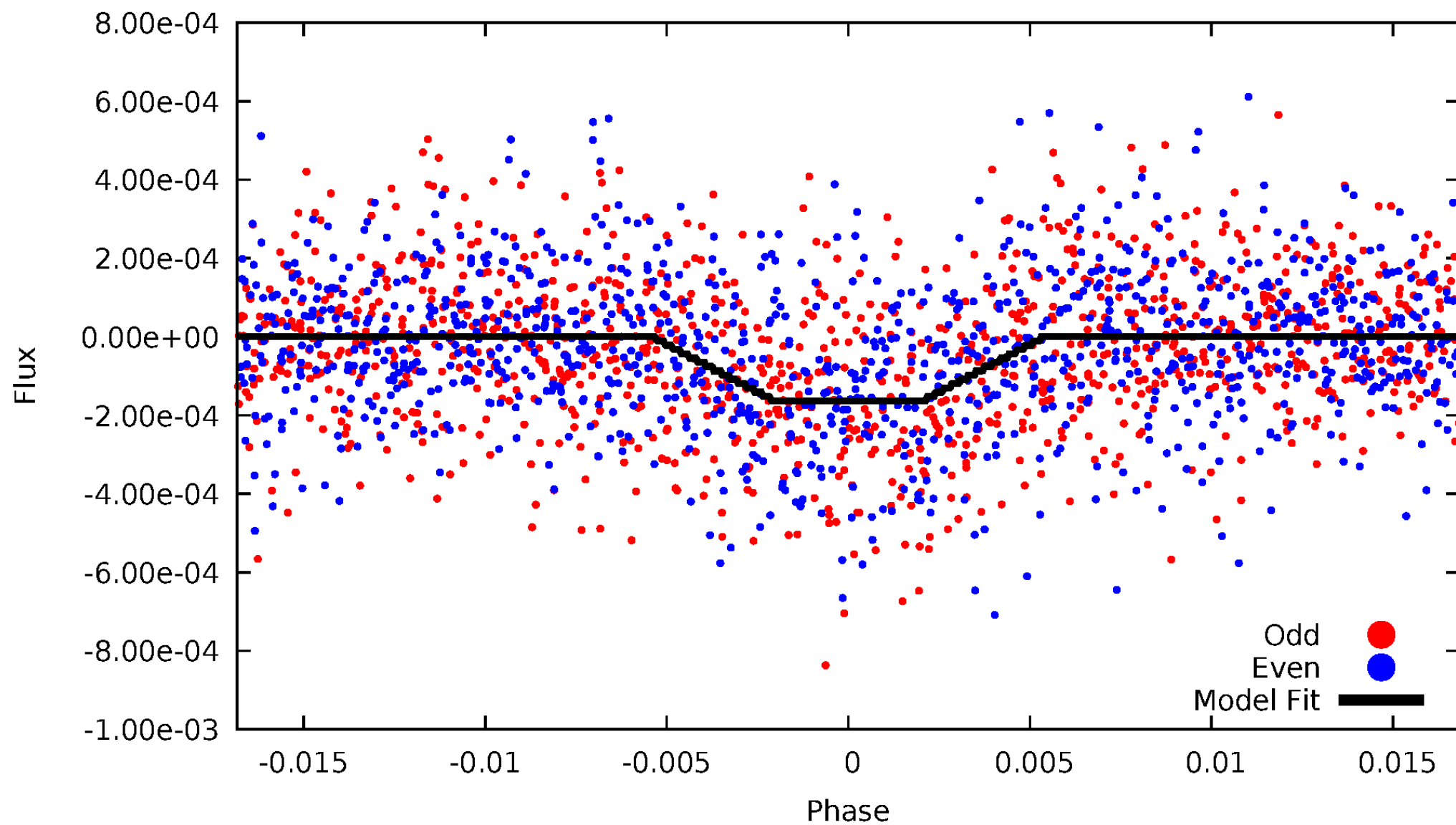
# DV Odd/Even

TCE 006752002-01



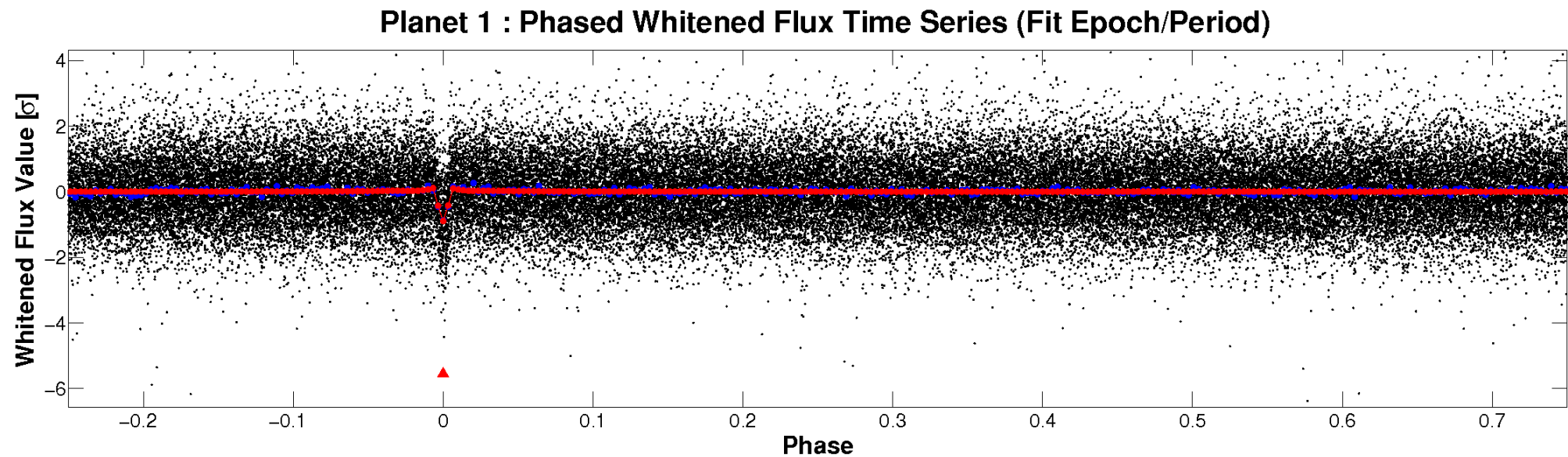
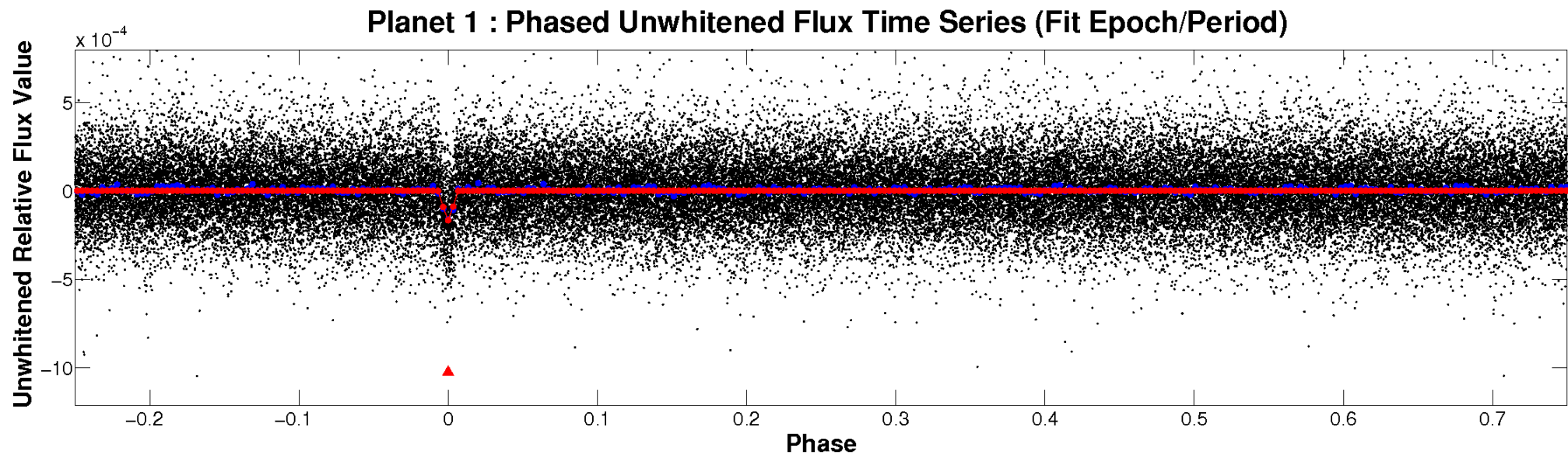
# ALT Odd/Even

TCE 006752002-01



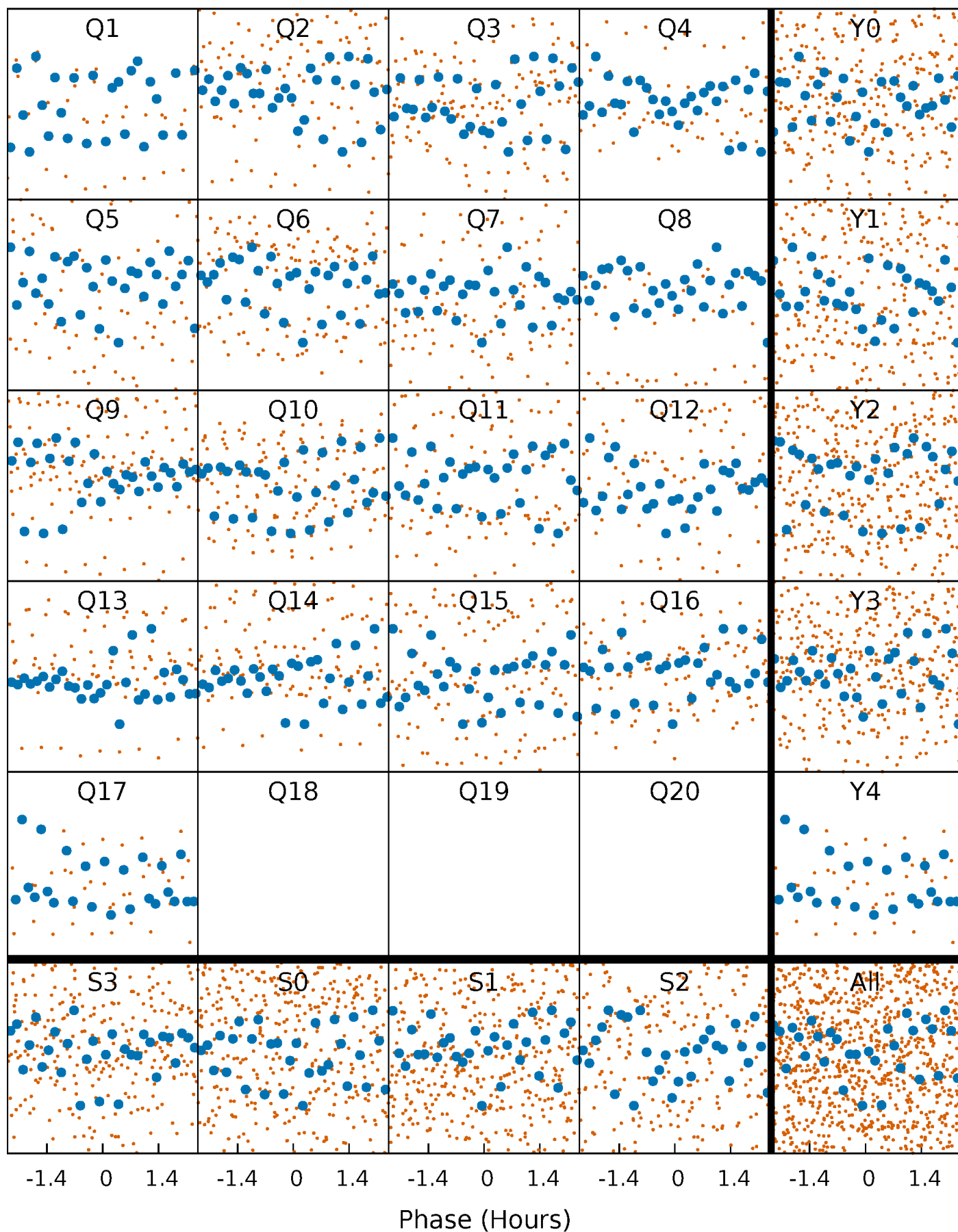


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

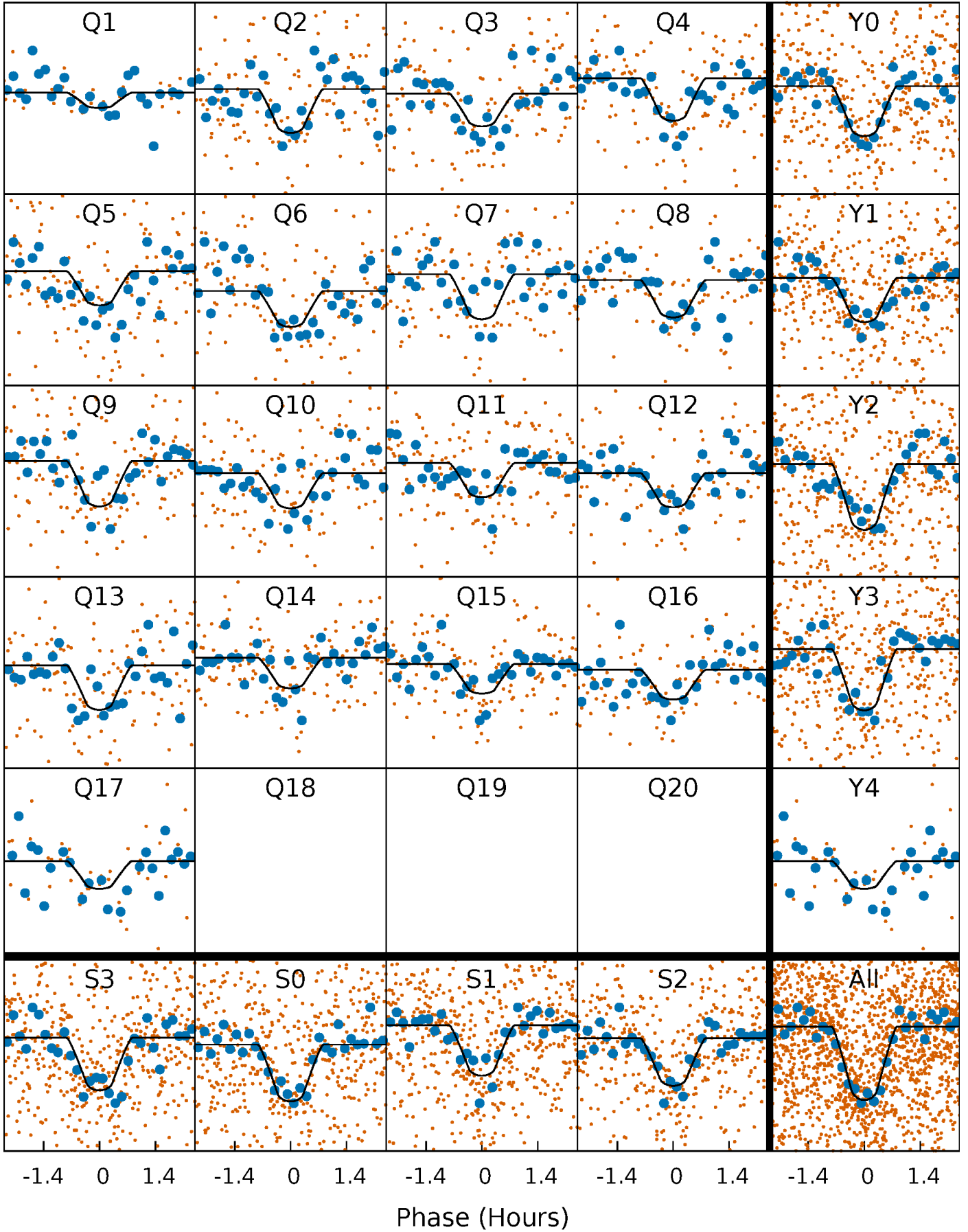
TCE 006752002-01 P= 6.080043 Days  $T_0=136.882965$  (BKJD)





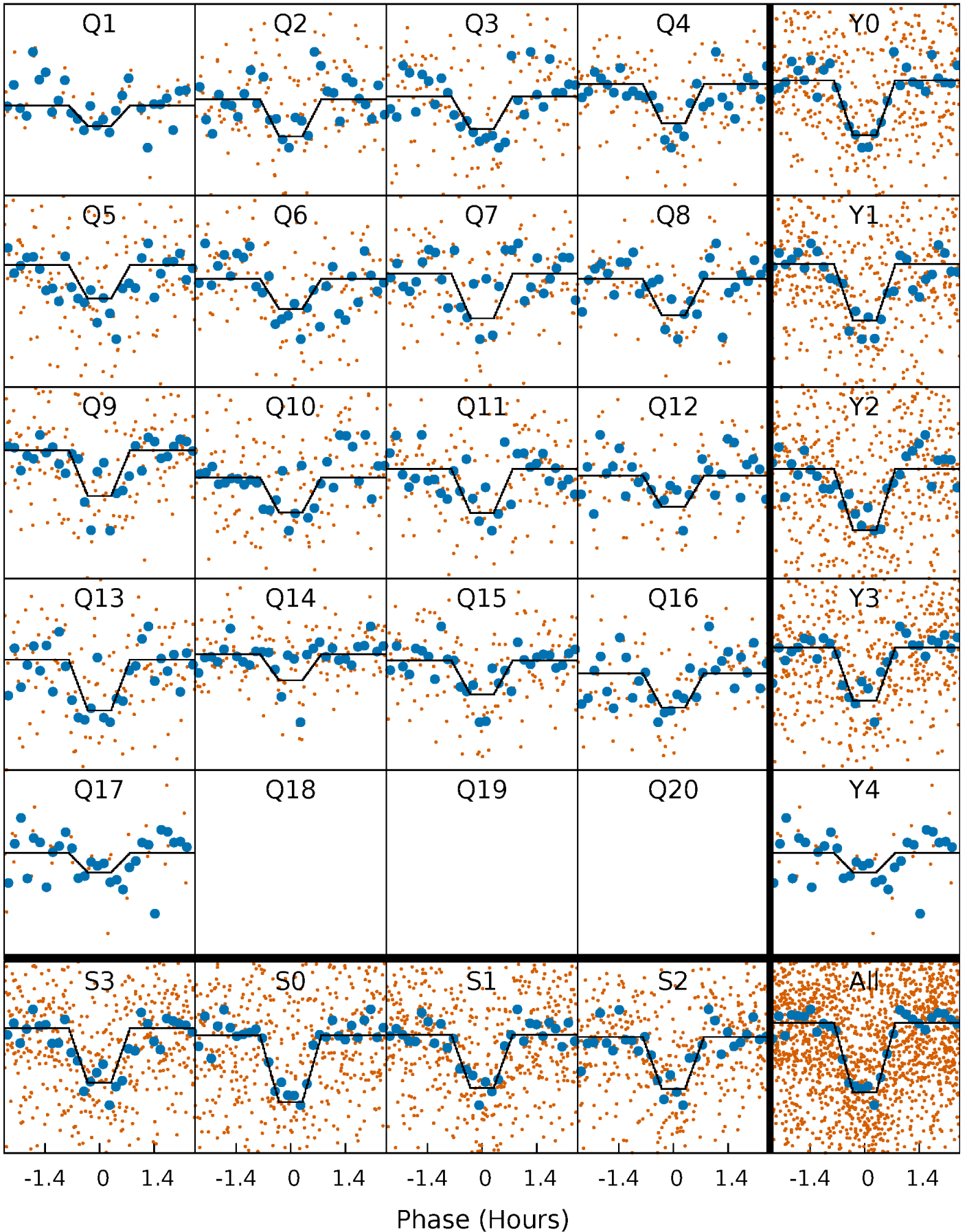
# DV Quarter-Phased Transit Curves

TCE 006752002-01 P= 6.080043 Days  $T_0=136.882965$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

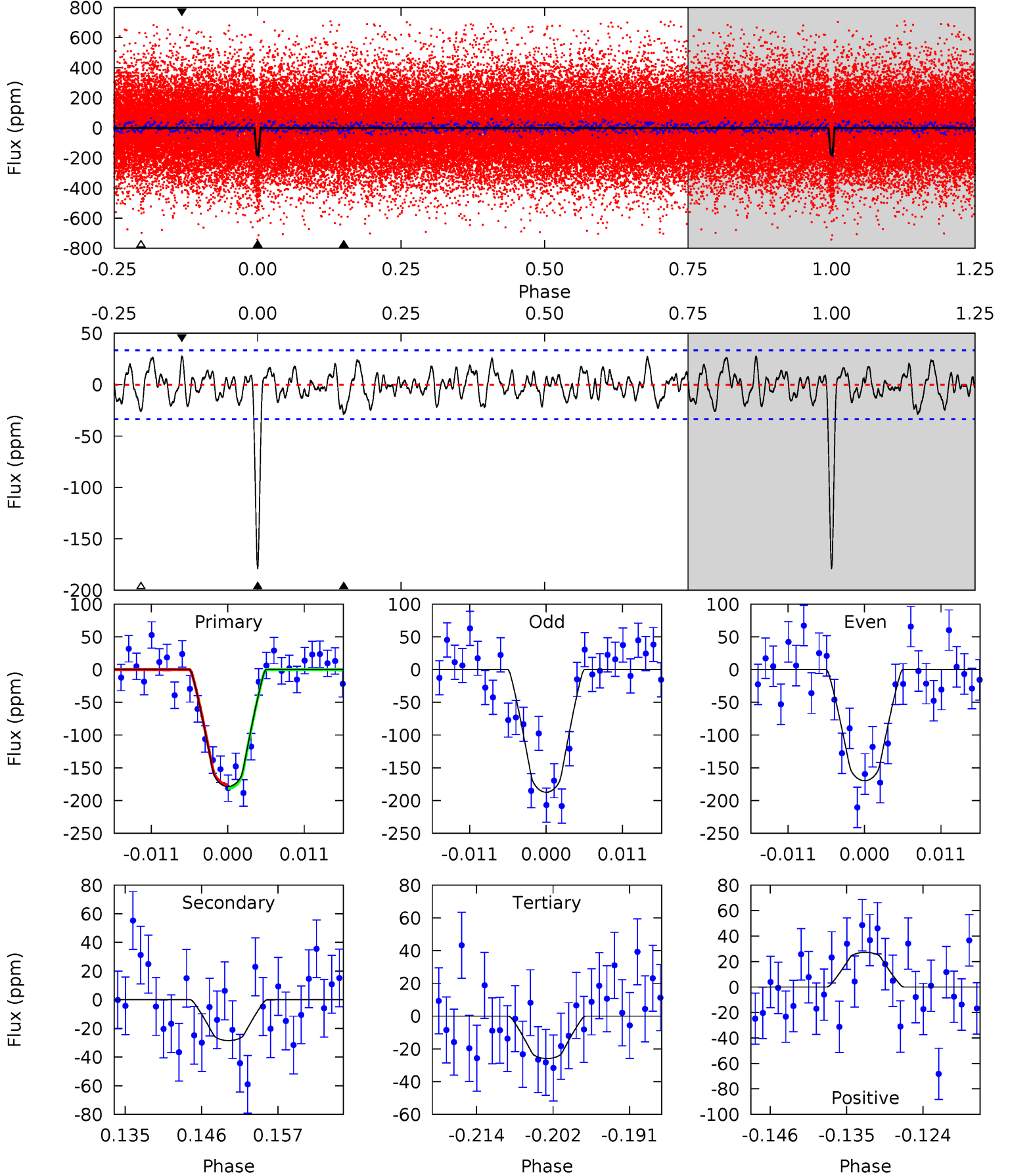
TCE 006752002-01 P= 6.080037 Days  $T_0=136.883443$  (BKJD)



# DV Model-Shift Uniqueness Test

006752002-01, P = 6.080043 Days, E = 130.802922 Days

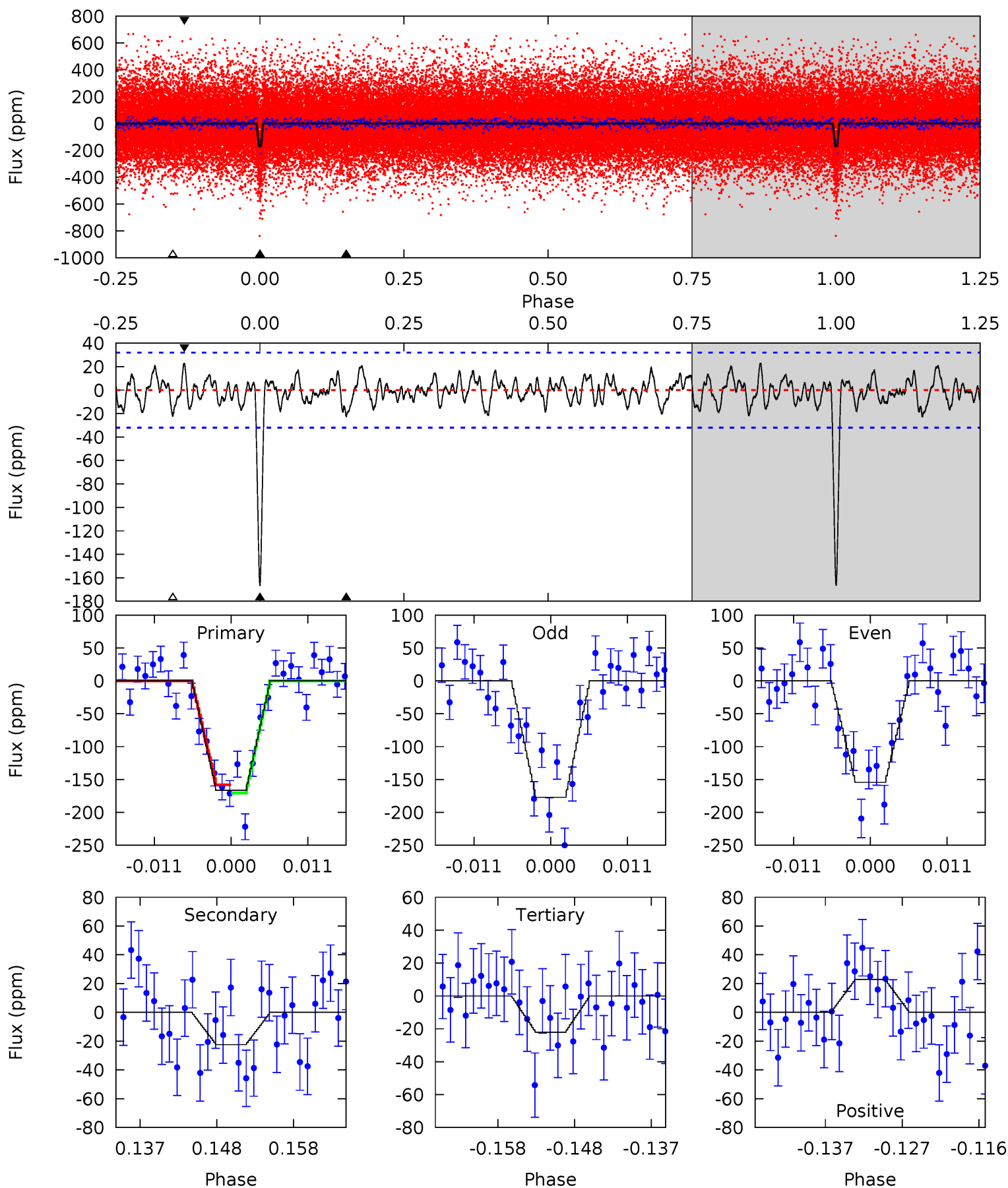
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	4.26	3.87	4.07	5.00	2.54	1.57	22.8	22.6	0.39	0.19	1.32	1.02	0.13	0.44



# Alt Model-Shift Uniqueness Test

006752002-01, P = 6.080037 Days, E = 130.803406 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	3.51	3.46	3.60	5.02	2.56	1.35	22.7	22.5	0.06	-0.09	1.78	0.96	0.12	0.97



### Stellar Parameters For KIC 006752002

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4991^{+149}_{-134}$	$4.513^{+0.082}_{-0.060}$	$0.040^{+0.250}_{-0.300}$	$0.804^{+0.069}_{-0.089}$	$0.767^{+0.087}_{-0.060}$	$2.081^{+0.731}_{-0.377}$
	+3%/-3%	+2%/-1%	+625%/-750%	+9%/-11%	+11%/-8%	+35%/-18%
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 006752002-01 / KOI 4184.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-29 \pm 7$	$1.31^{+0.61}_{-0.60}$	$1127^{+43}_{-45}$	$3434^{+764}_{-418}$	$33^{+76}_{-19}$
Alt.	$-22 \pm 6$	$1.11^{+0.67}_{-0.60}$	$1128^{+39}_{-44}$	$3463^{+1123}_{-490}$	$34^{+138}_{-21}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$



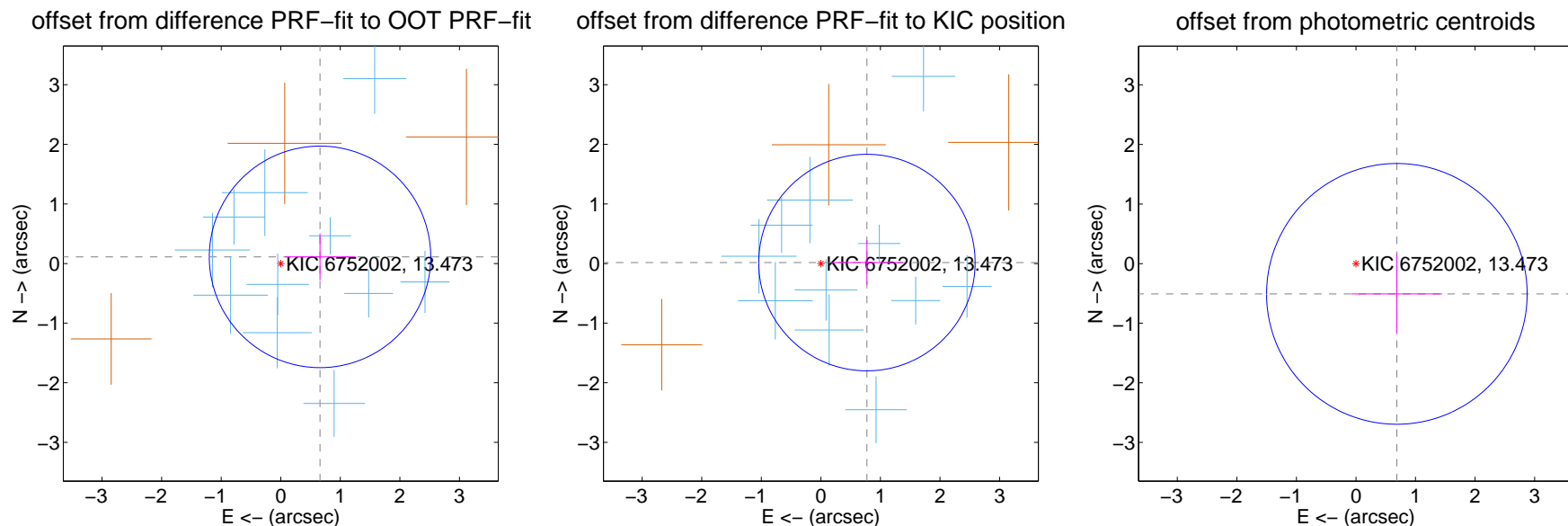
## DV Centroid Data

Supplemental centroid analysis for 006752002-01. Kepler magnitude: 13.47. Transit SNR 16.77

There are 11 quarters with good PRF difference image offsets

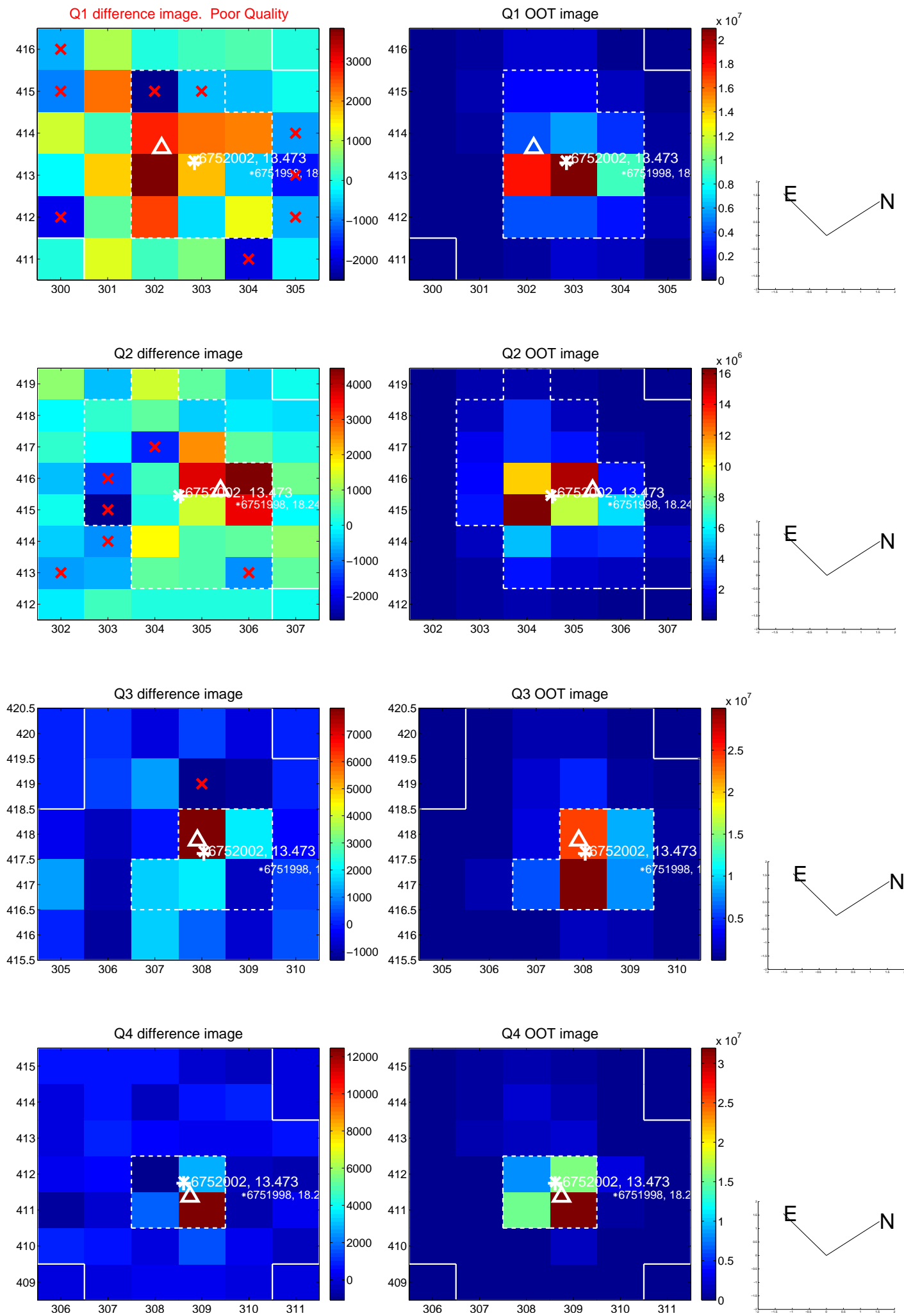
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.668 \pm 0.620$	1.08	$-0.659 \pm 0.593$	$0.112 \pm 0.390$
PRF-fit source offset from KIC position	$0.773 \pm 0.606$	1.28	$-0.773 \pm 0.603$	$0.016 \pm 0.374$
photometric centroid source offset	$0.85 \pm 0.73$	1.17	$-0.69 \pm 0.76$	$-0.51 \pm 0.67$

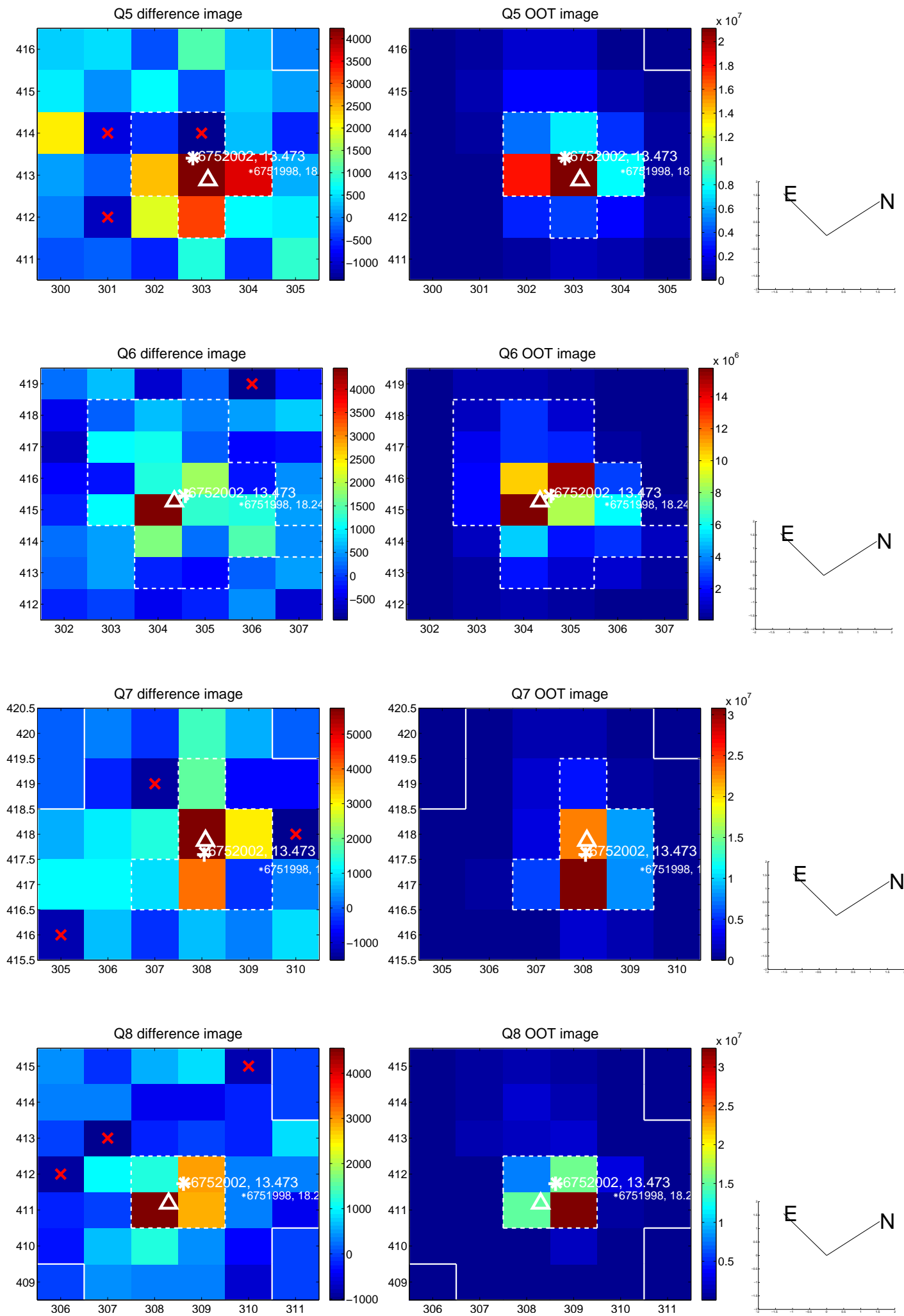


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

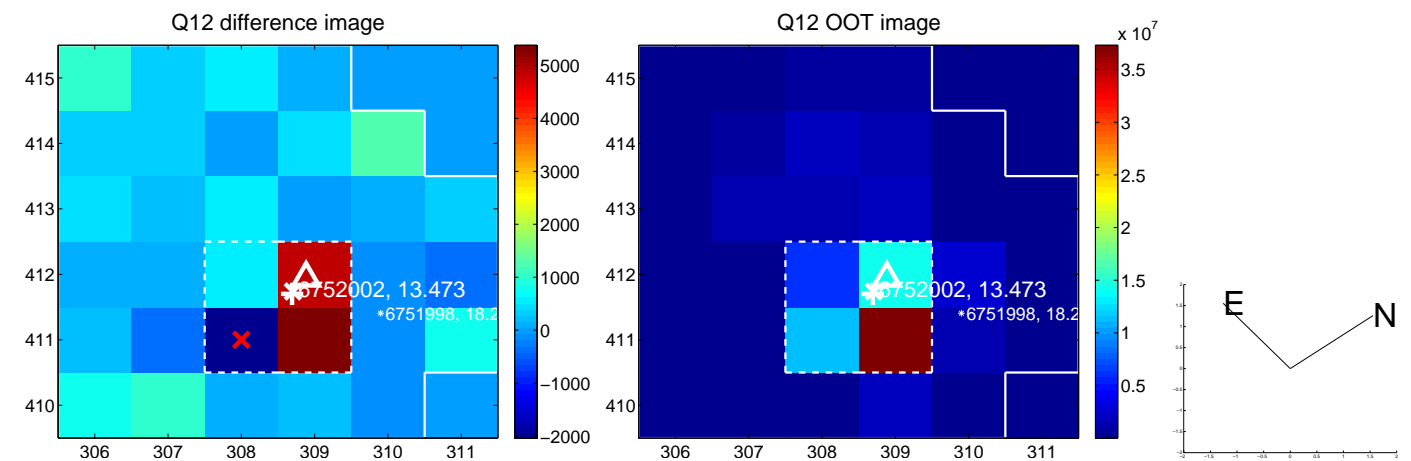
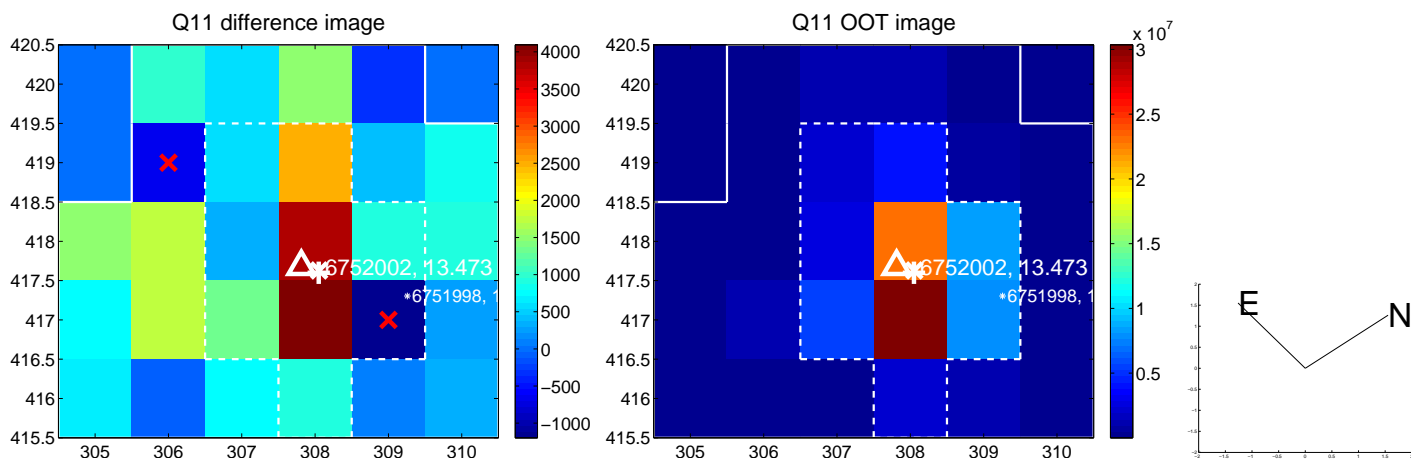
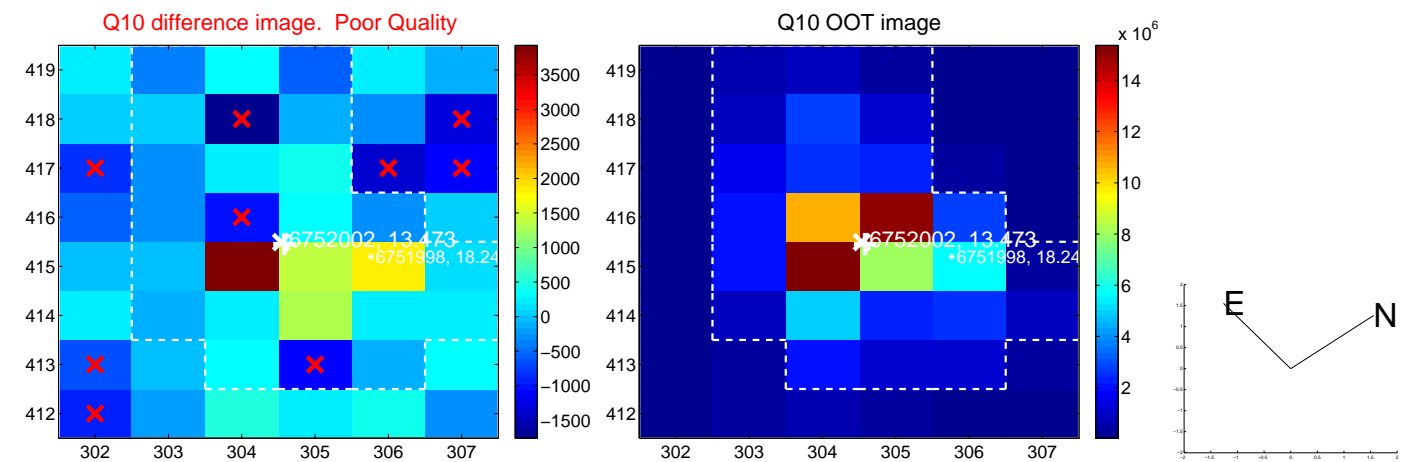
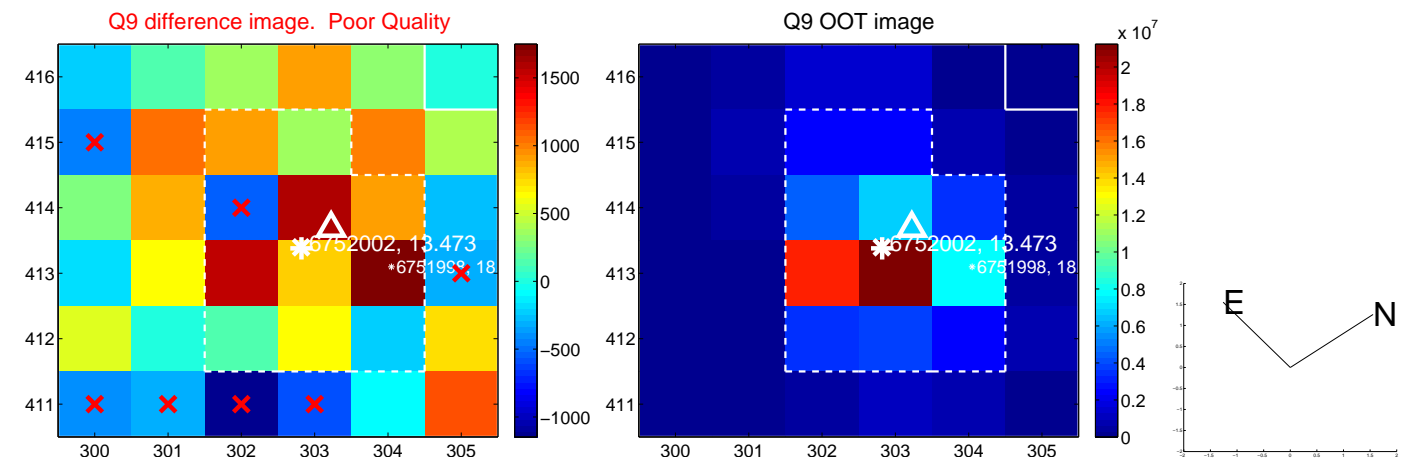
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



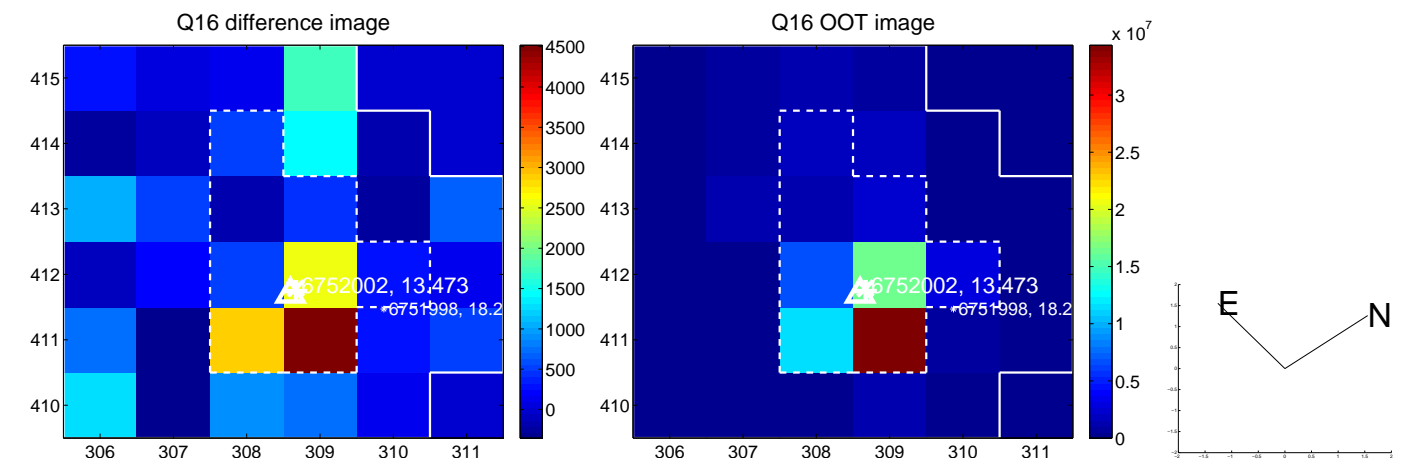
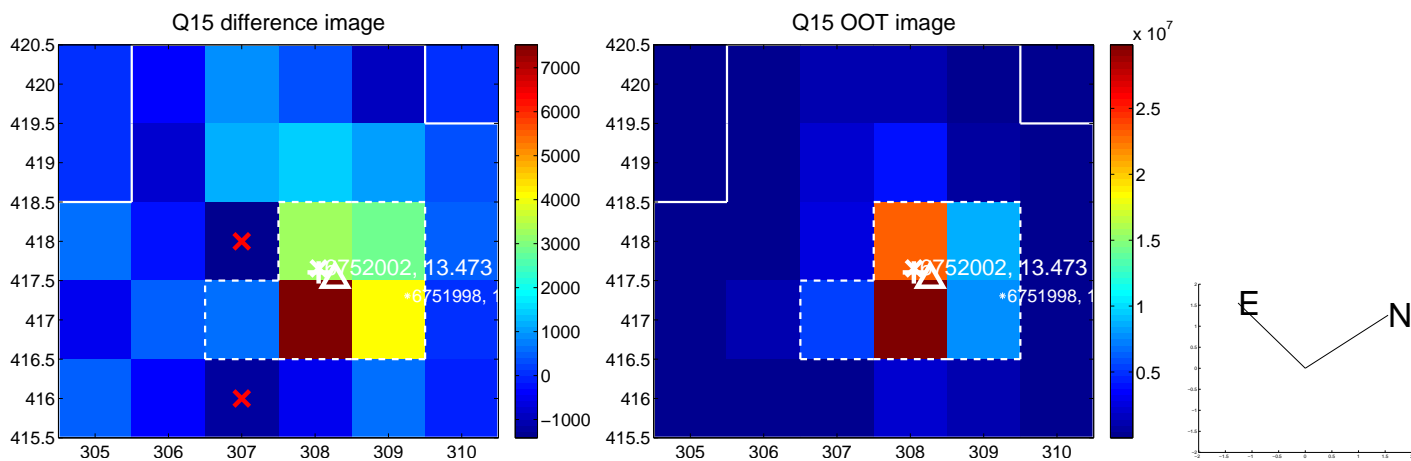
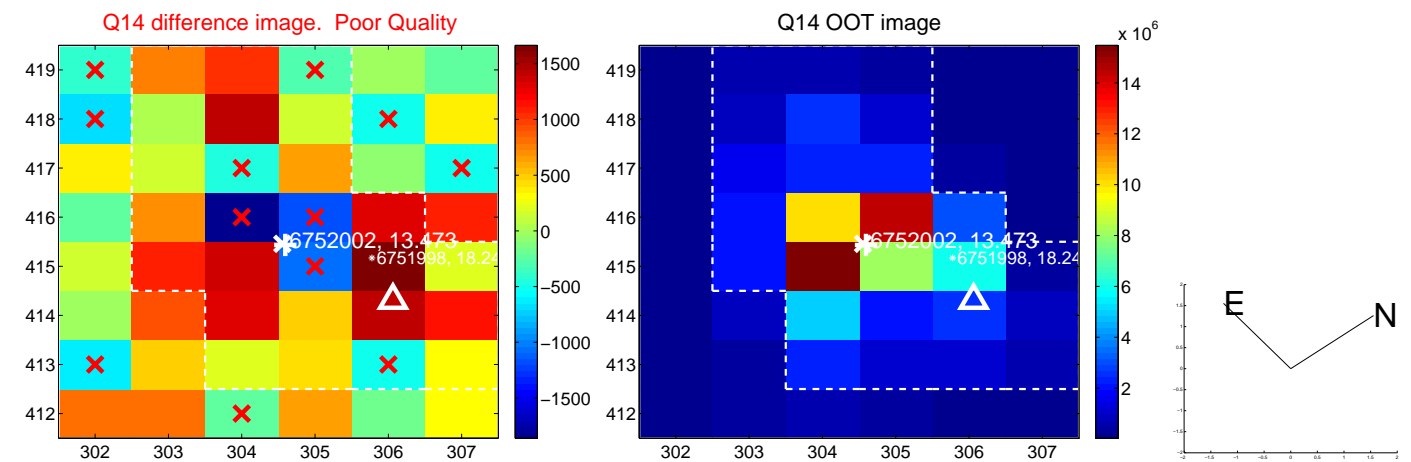
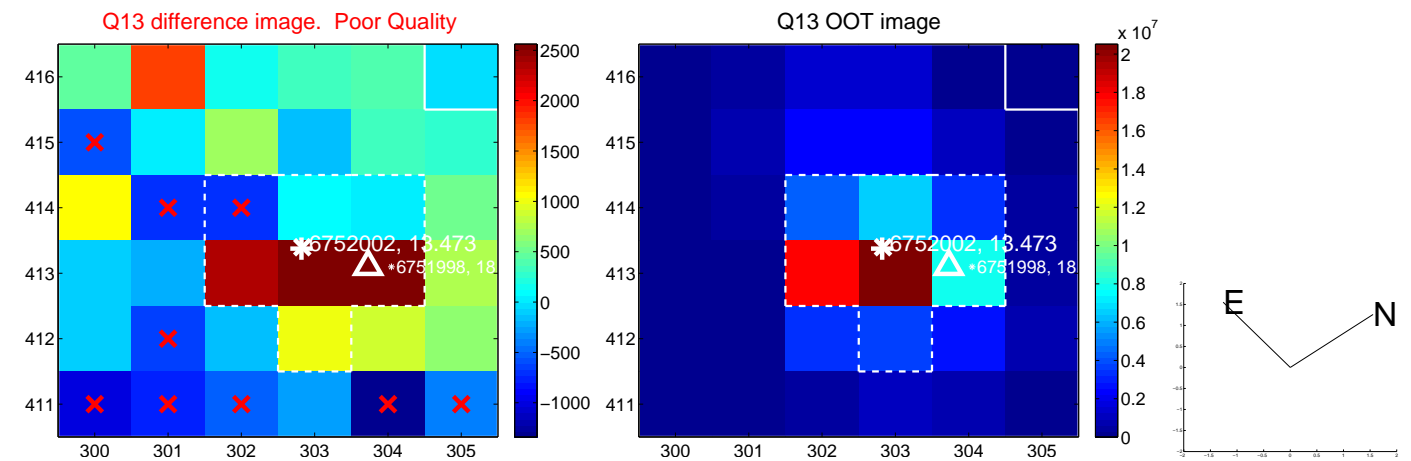
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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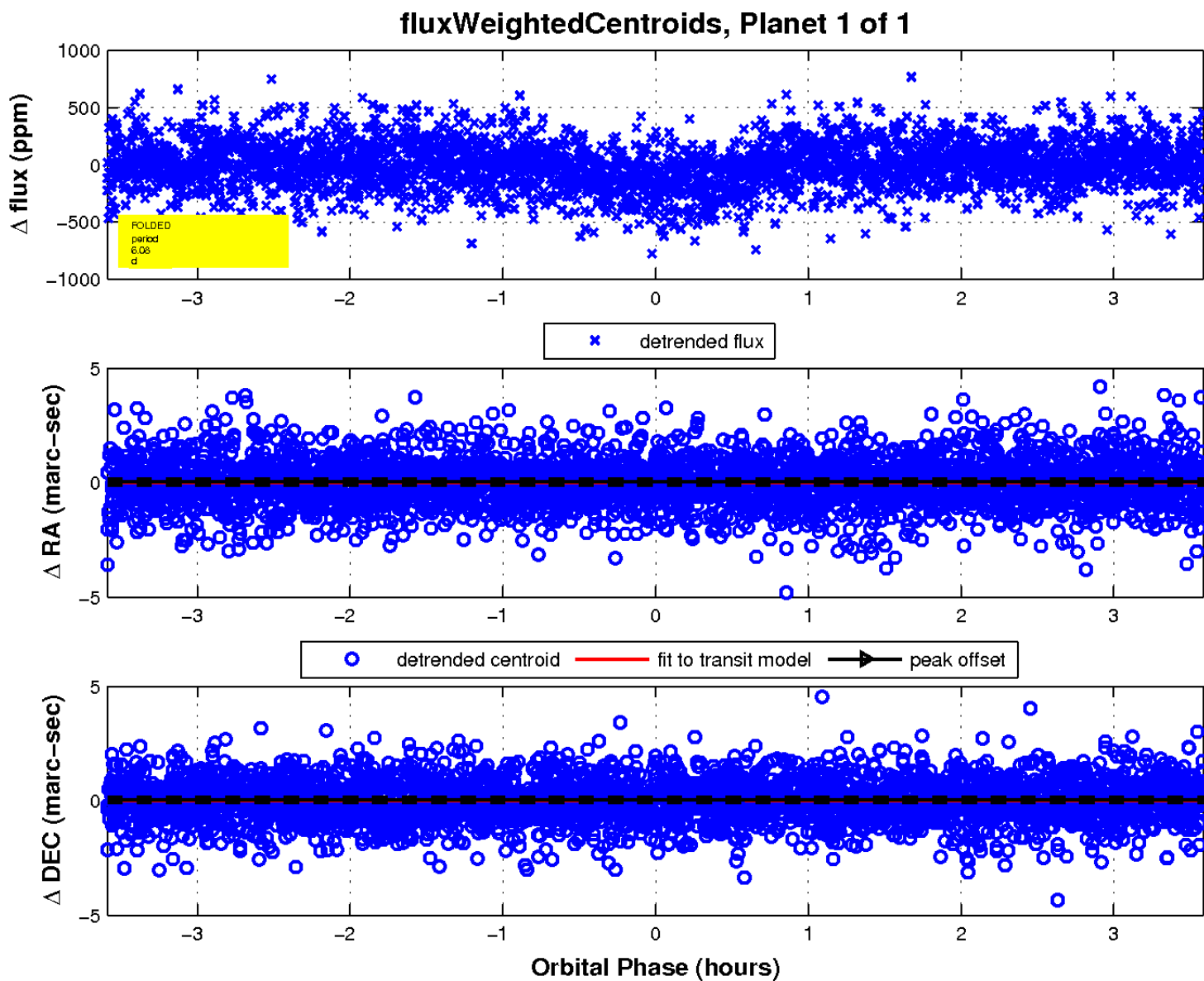
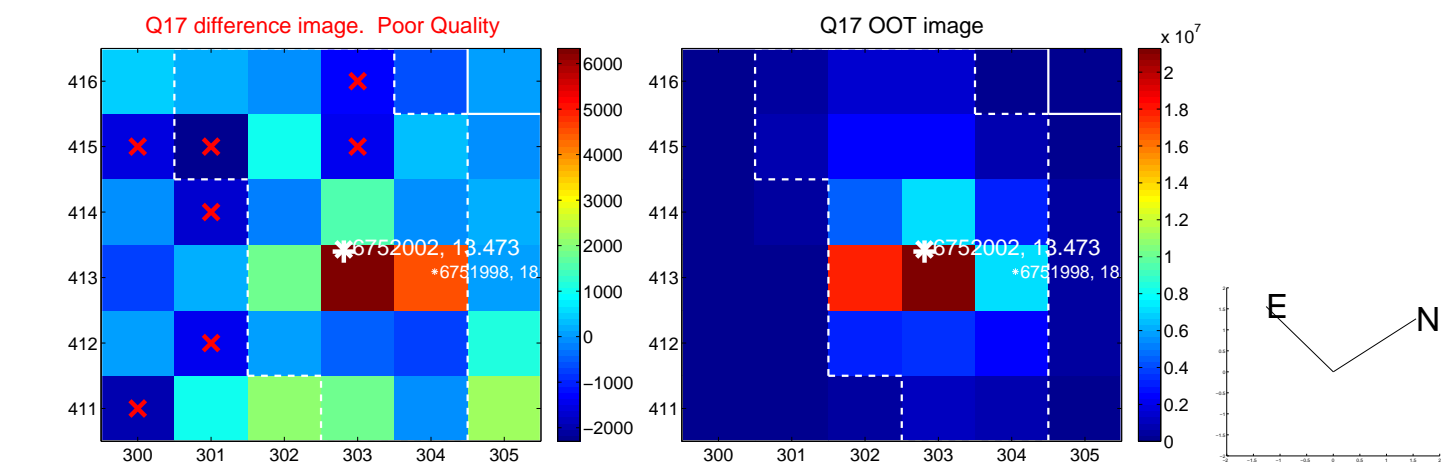


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

