

# KIC 003353050

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003353050-01	OBS	0384.01	5.080050	133.789677	210.8	5.410	40.3	44.4	2.52	6049	4.28	1853.84

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003353050-01	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.

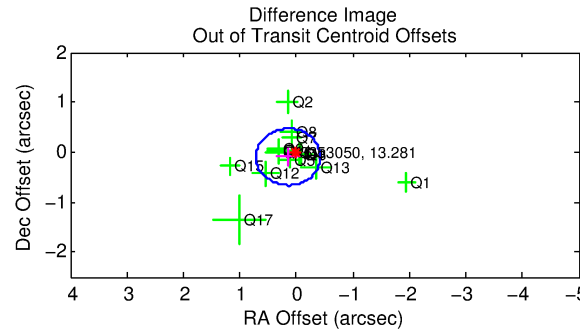
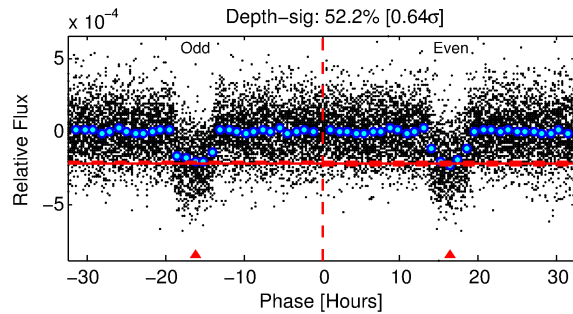
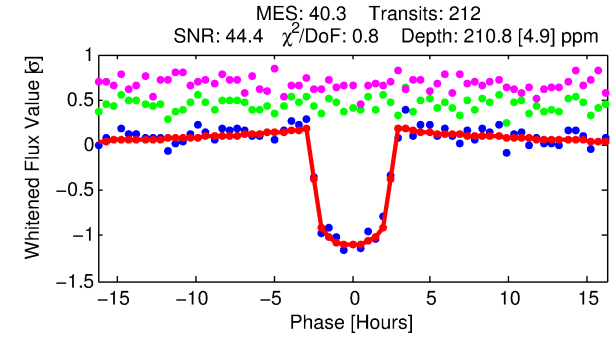
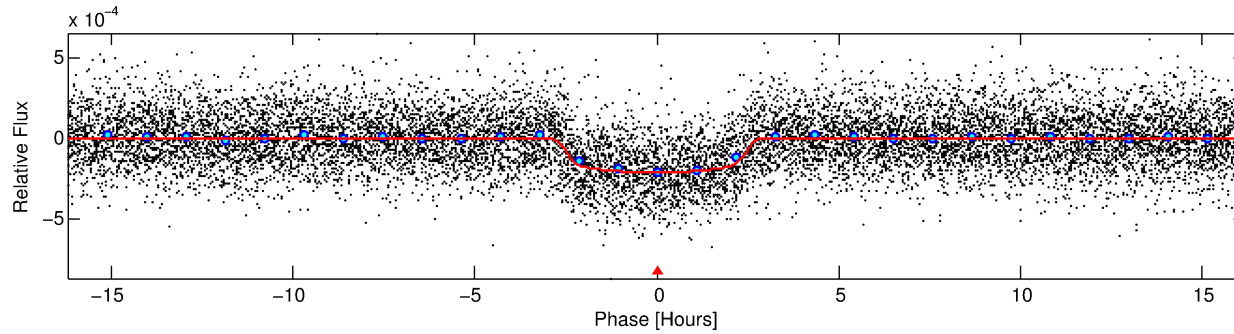
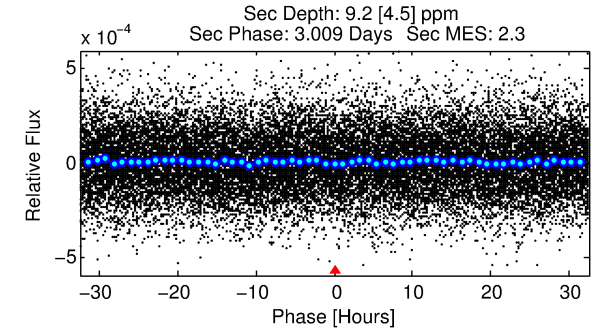
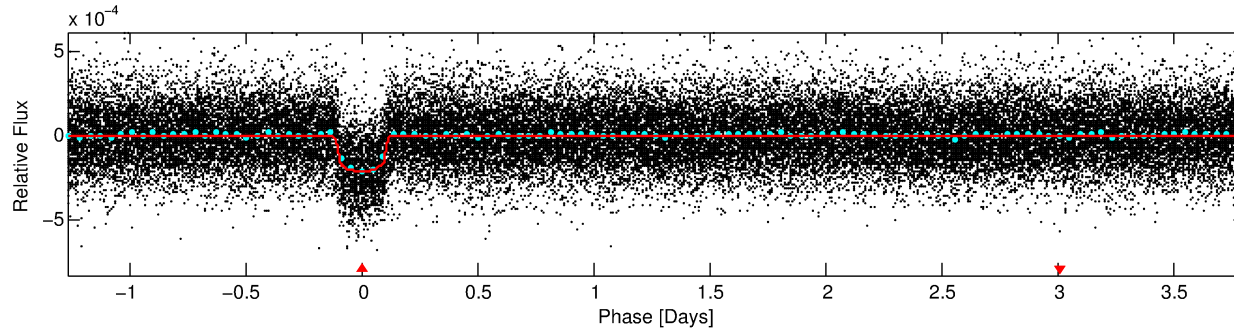
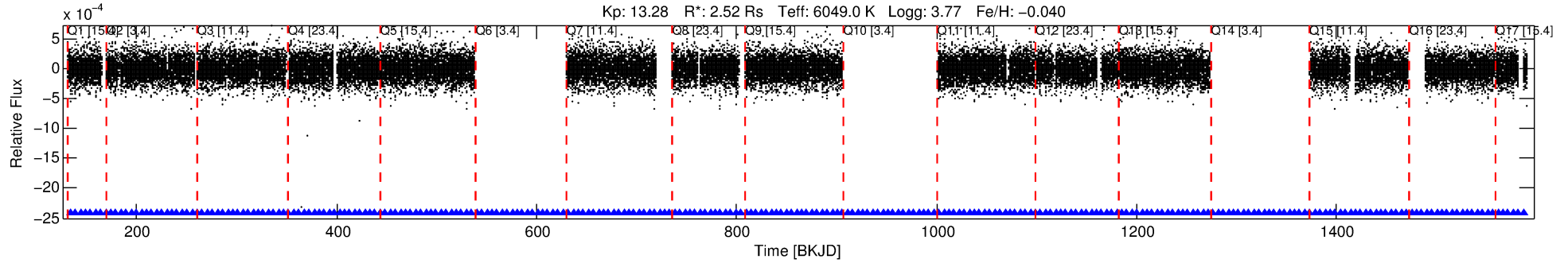
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003353050-01

No Significant Match Found

# DV One-Page Summary

KIC: 3353050 Candidate: 1 of 1 Period: 5.080 d  
KOI: K00384.01 Corr: 0.986



## DV Fit Results:

Period = 5.08005 [0.00001] d  
Epoch = 133.7897 [0.0016] BKJD  
Rp/R\* = 0.0156 [0.0010]  
a/R\* = 3.60 [1.07]  
b = 0.89 [0.07]  
Seff = 1853.84 [741.88]  
Teq = 1673 [167] K  
Rp = 4.28 [1.22] Re  
a = 0.0641 [0.0162] AU  
Ag = 1.13 [0.72] [0.19σ]  
Teffp = 2670 [342] K [2.62σ]

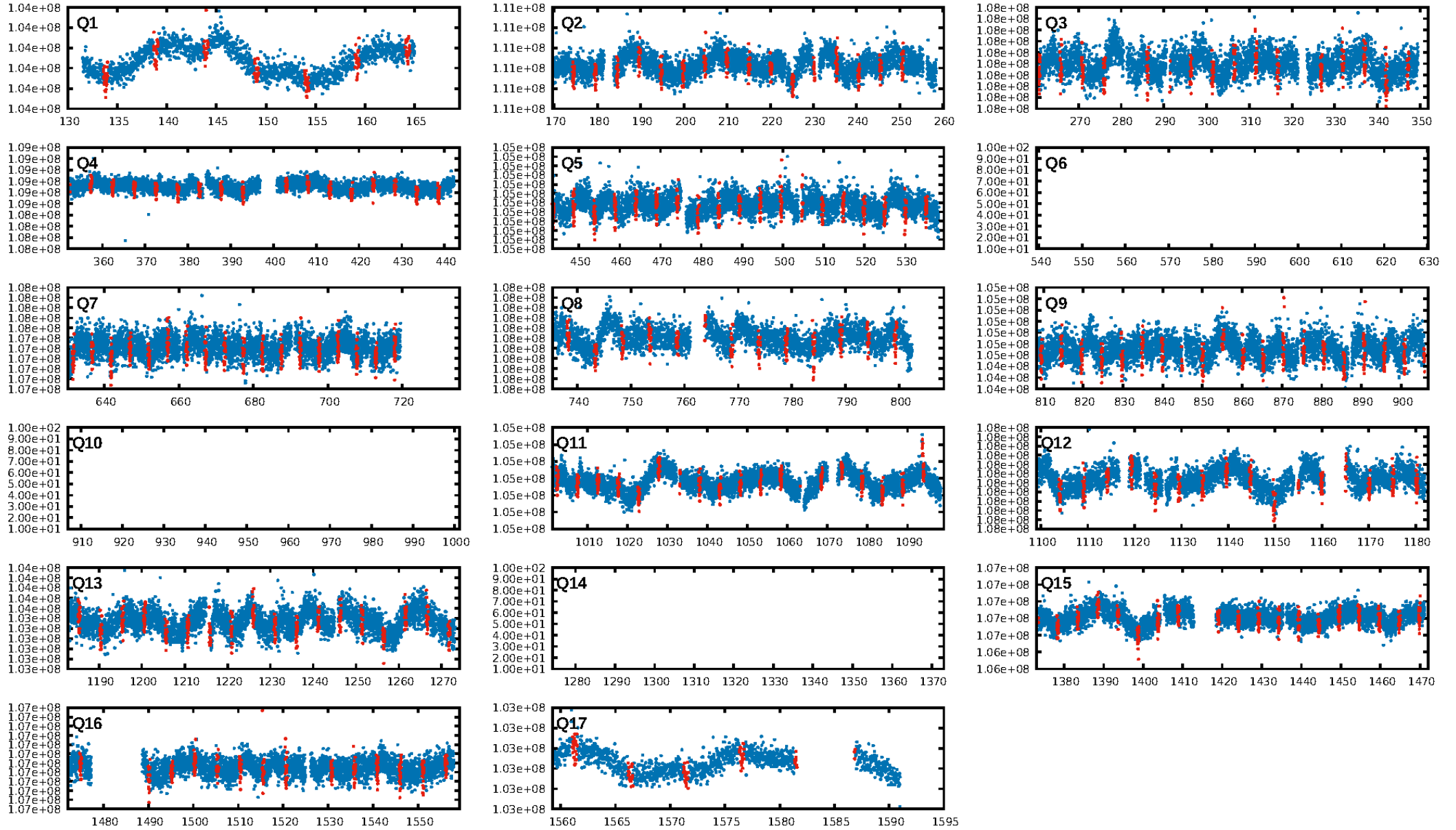
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [200/200]  
GhostDiagnostic-chr: 4.044  
Centroid-sig: 37.9%  
Centroid-so: 0.159 arcsec [0.60σ]  
OotOffset-rm: 0.177 arcsec [0.93σ]  
KicOffset-rm: 0.241 arcsec [1.47σ]  
OotOffset-st: 1/4/4/5 [14]  
KicOffset-st: 1/4/4/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

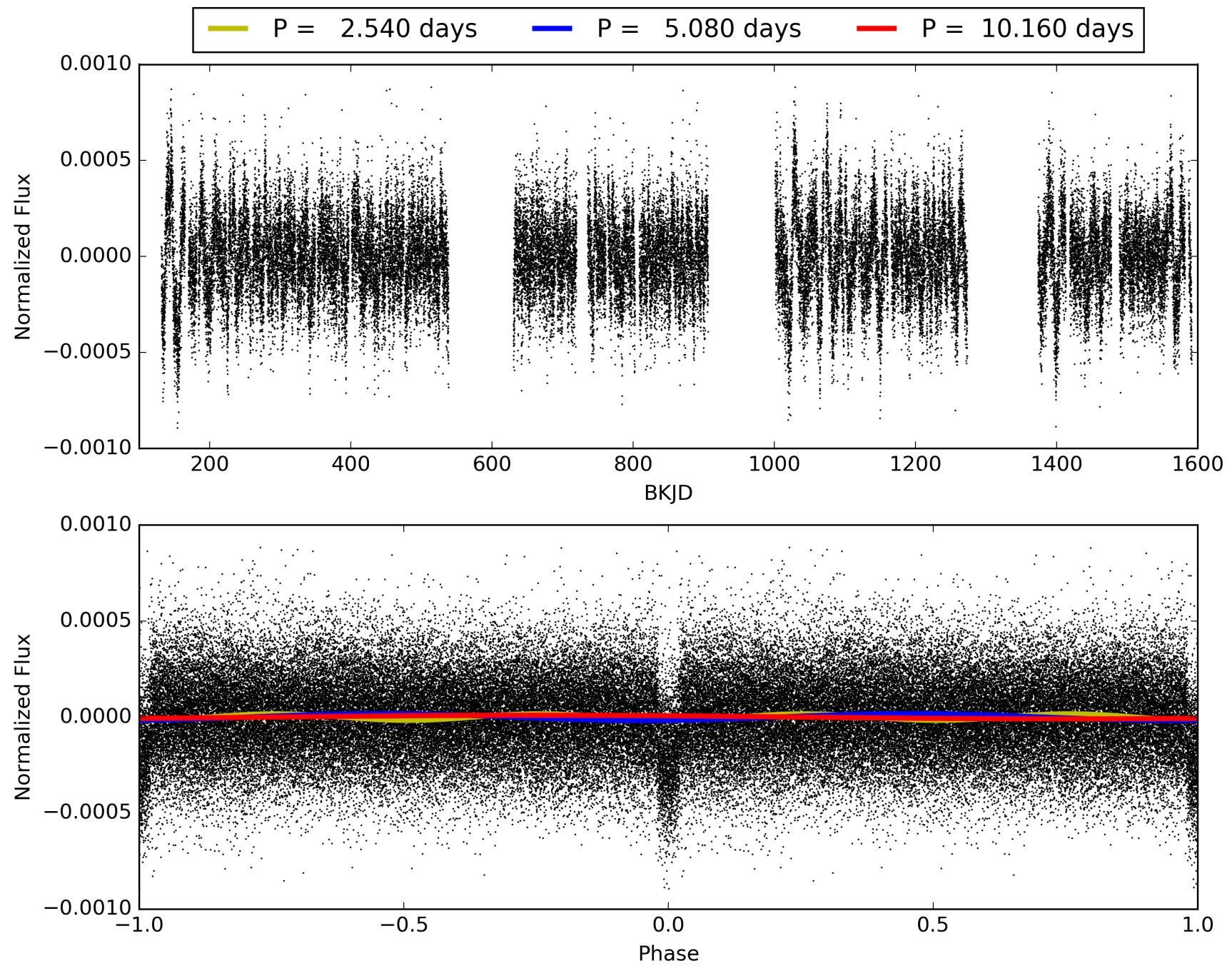
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:47:16 Z

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

# TCE 003353050-01, PDC Light Curves

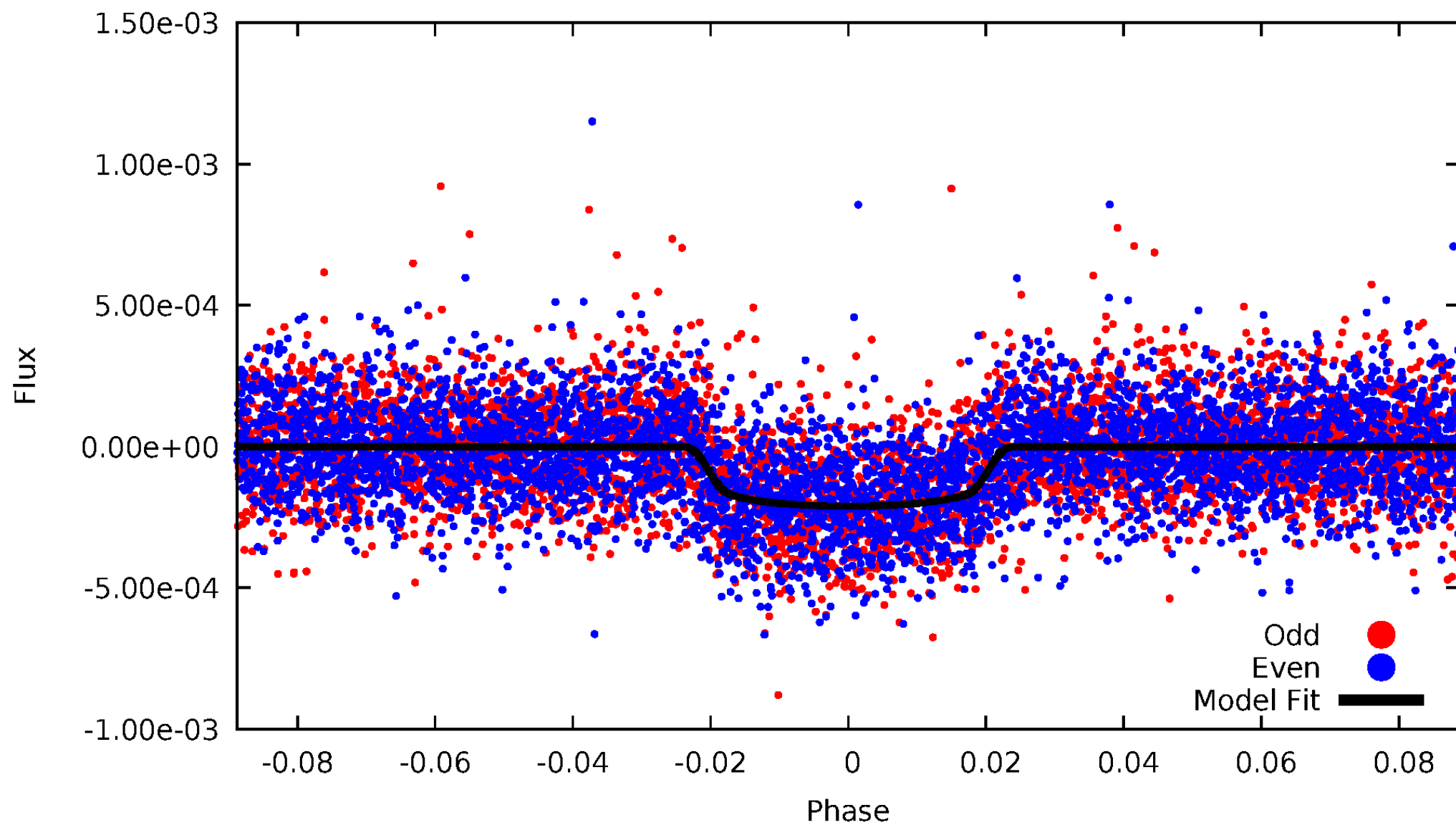


TCE 003353050-01



# DV Odd/Even

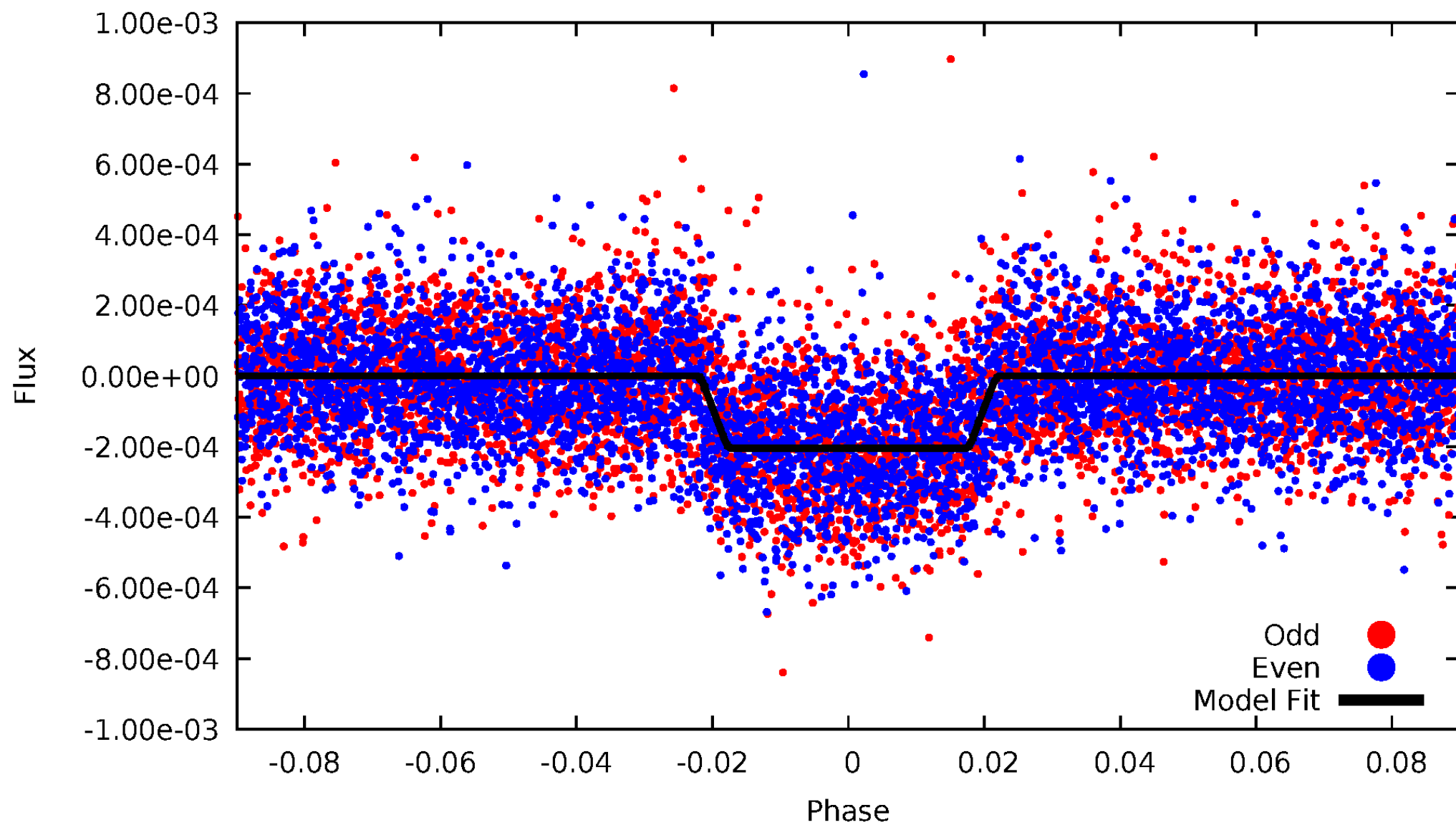
TCE 003353050-01





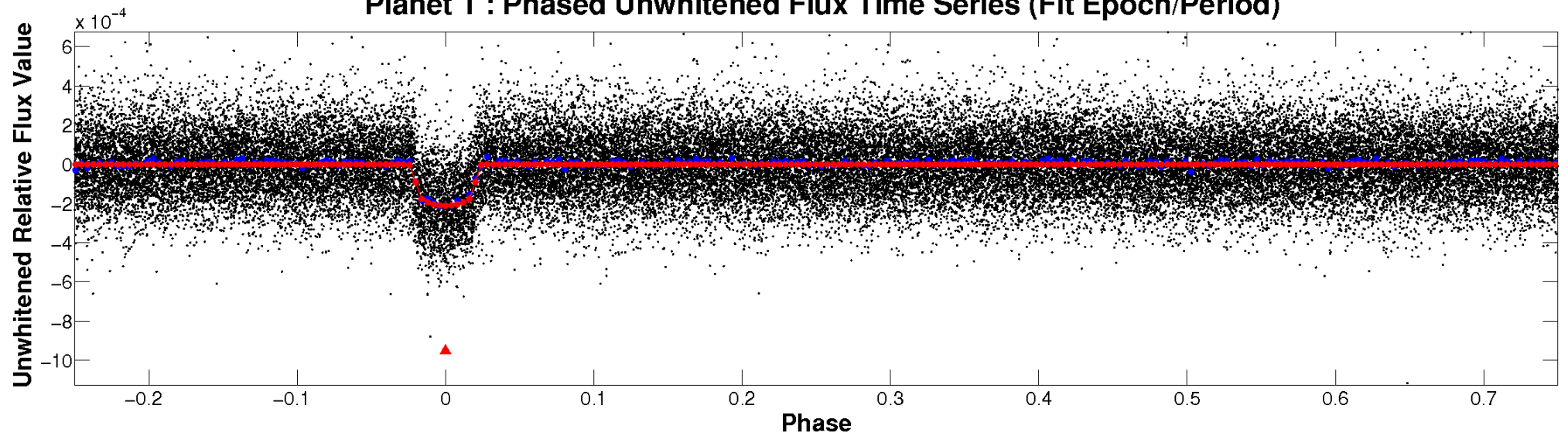
# ALT Odd/Even

TCE 003353050-01

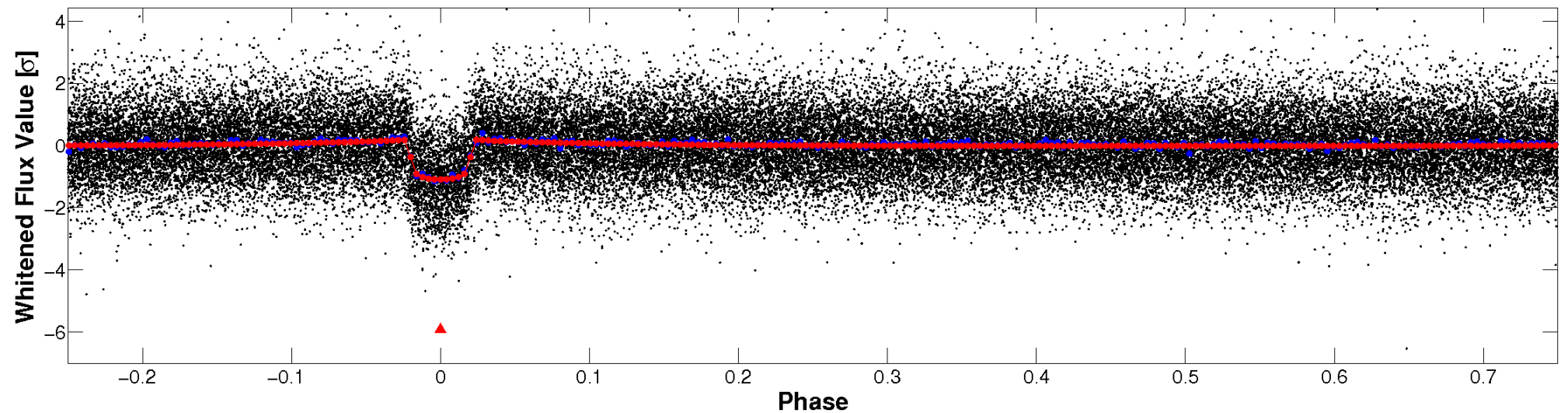


# Non-Whitened Vs. Whitened Light Curve

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

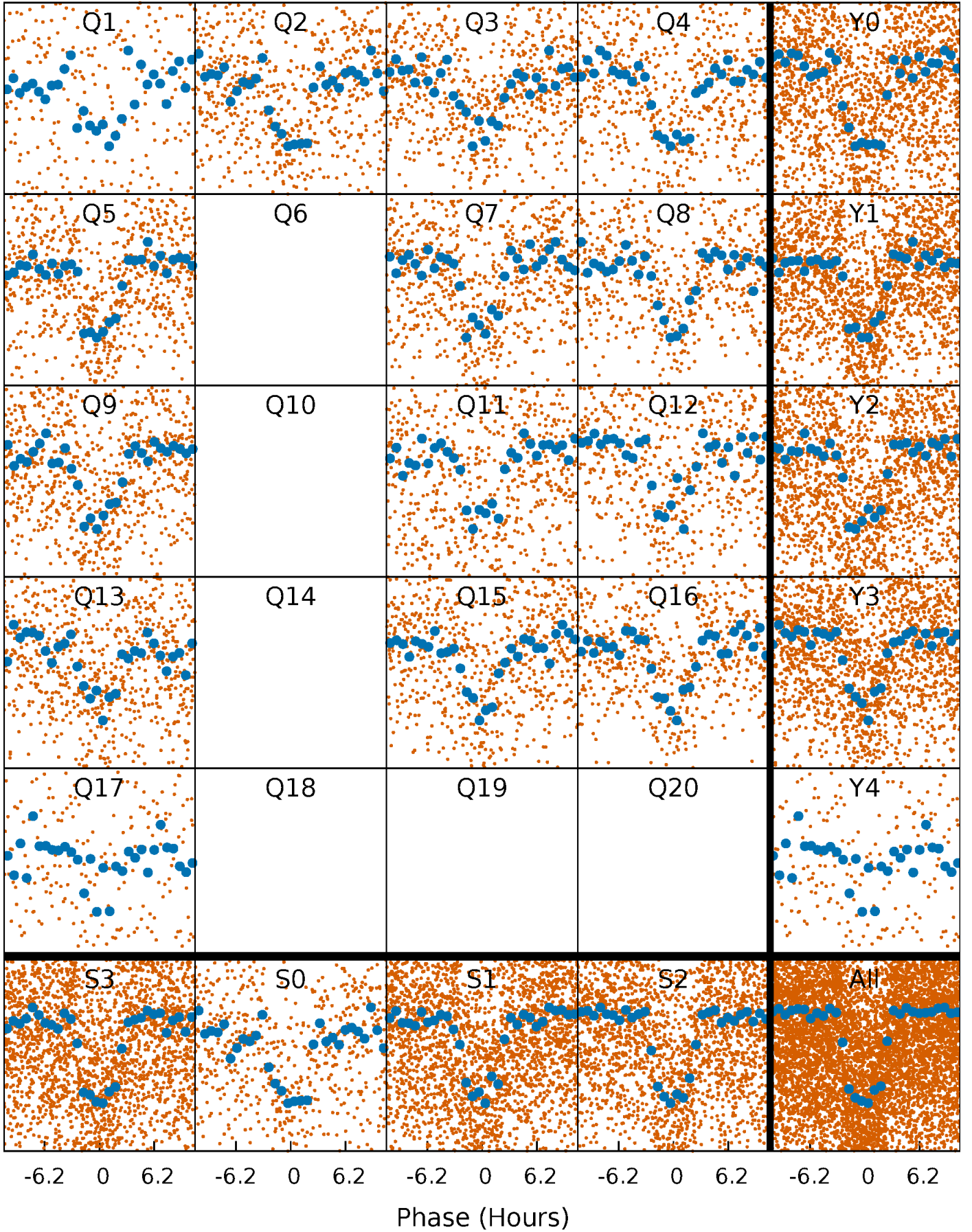


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

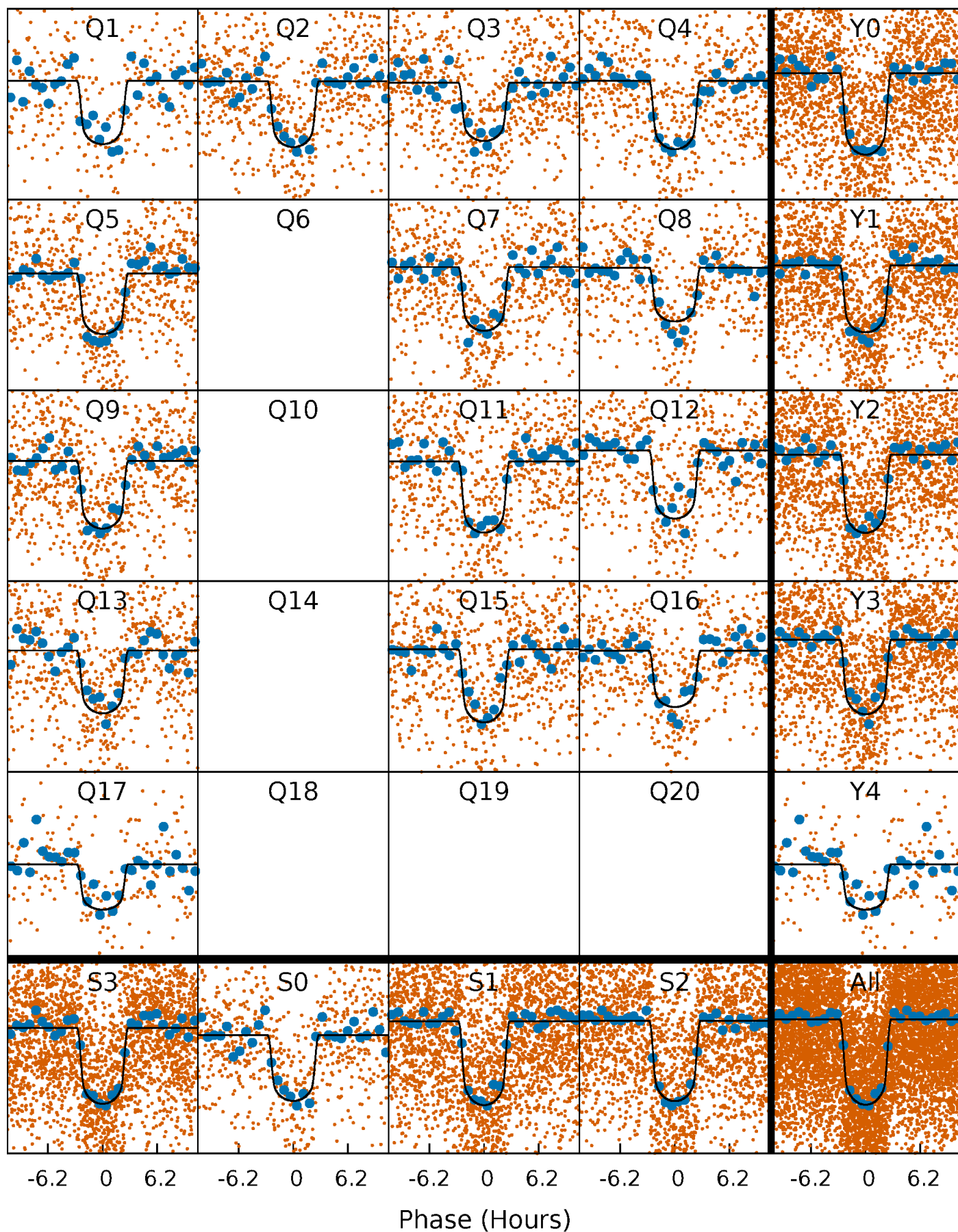
TCE 003353050-01    P= 5.080050 Days     $T_0=133.789677$  (BKJD)





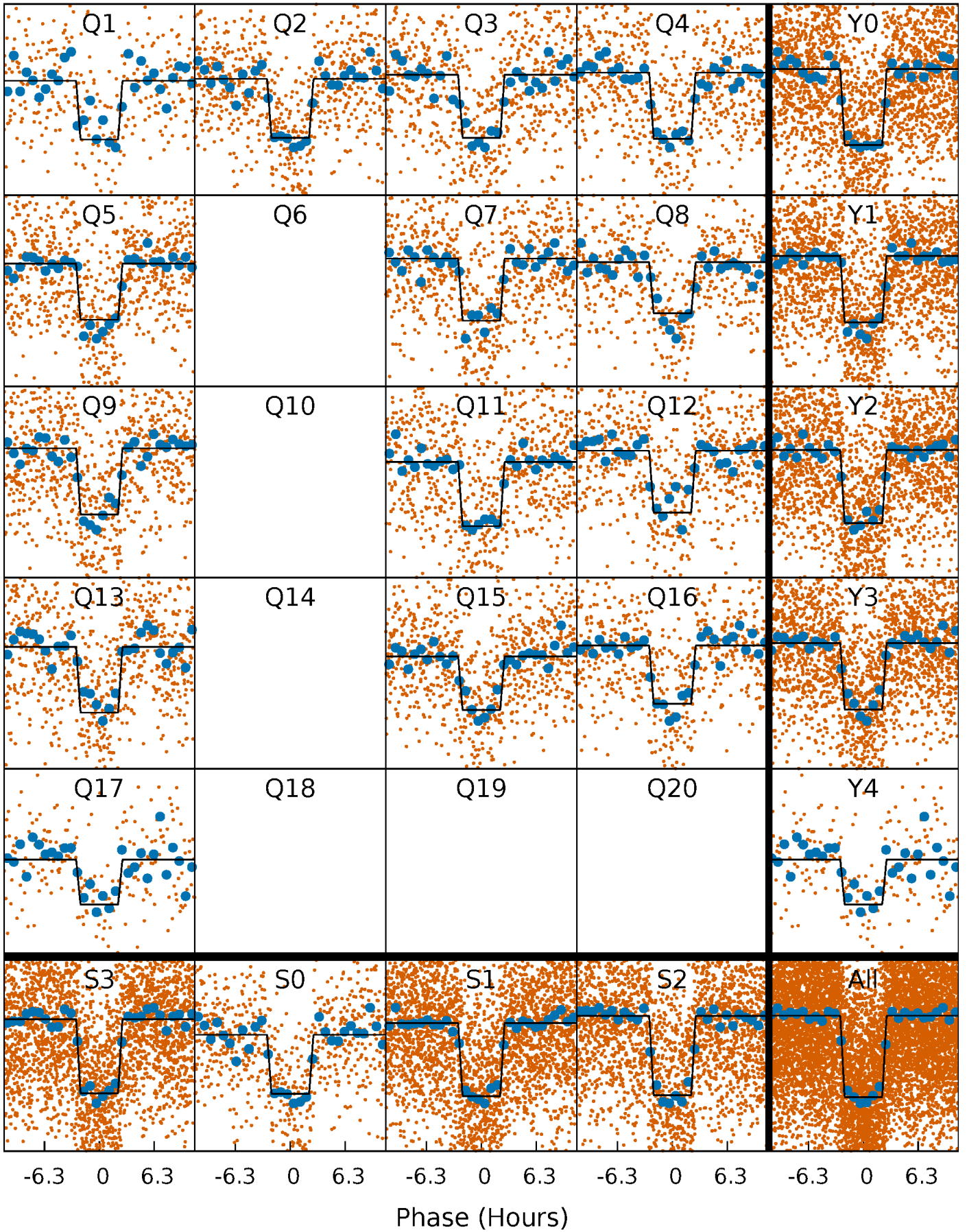
# DV Quarter-Phased Transit Curves

TCE 003353050-01 P= 5.080050 Days  $T_0=133.789677$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

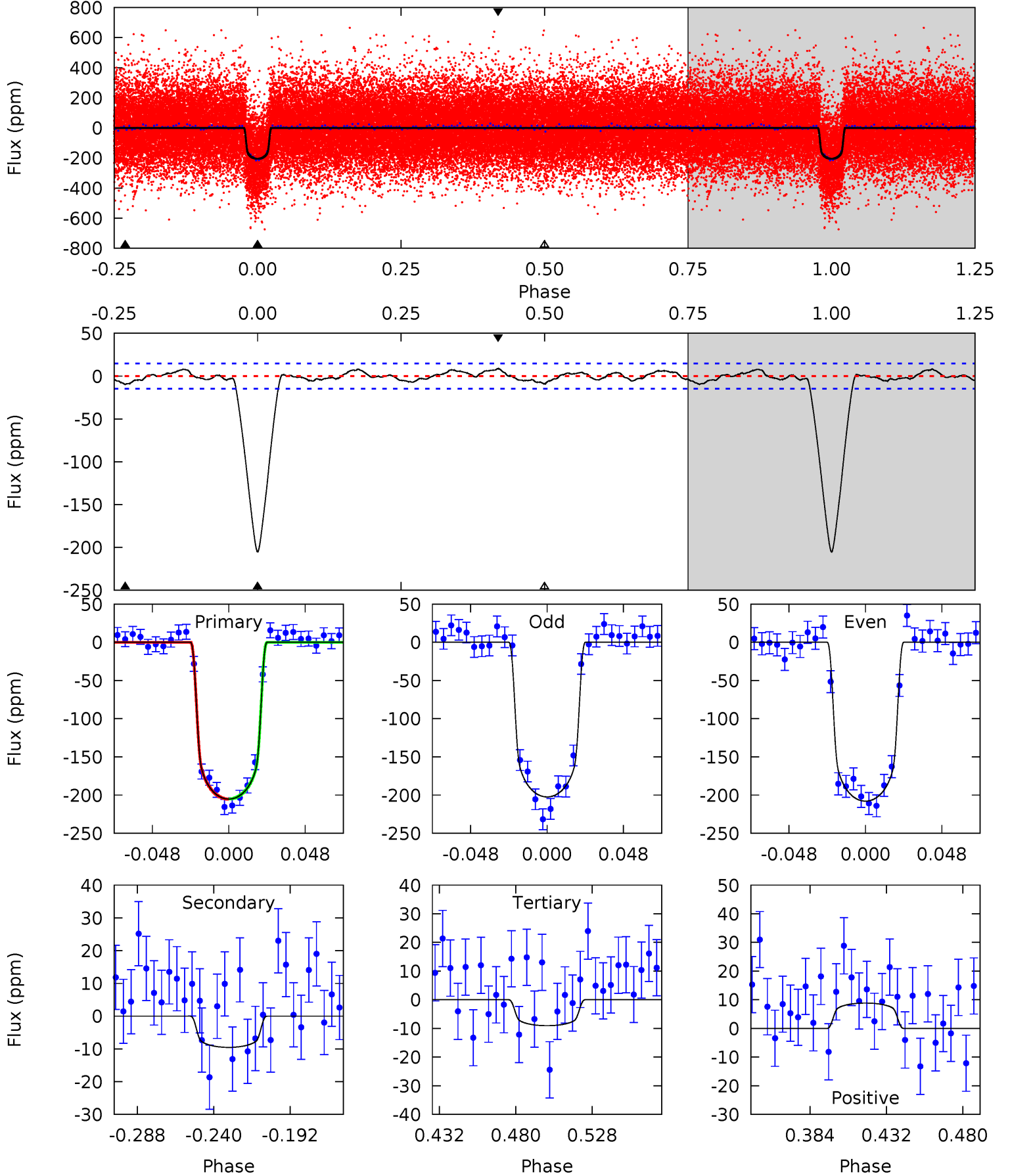
TCE 003353050-01   P= 5.080075 Days    $T_0=133.785495$  (BKJD)



# DV Model-Shift Uniqueness Test

003353050-01, P = 5.080050 Days, E = 128.709627 Days

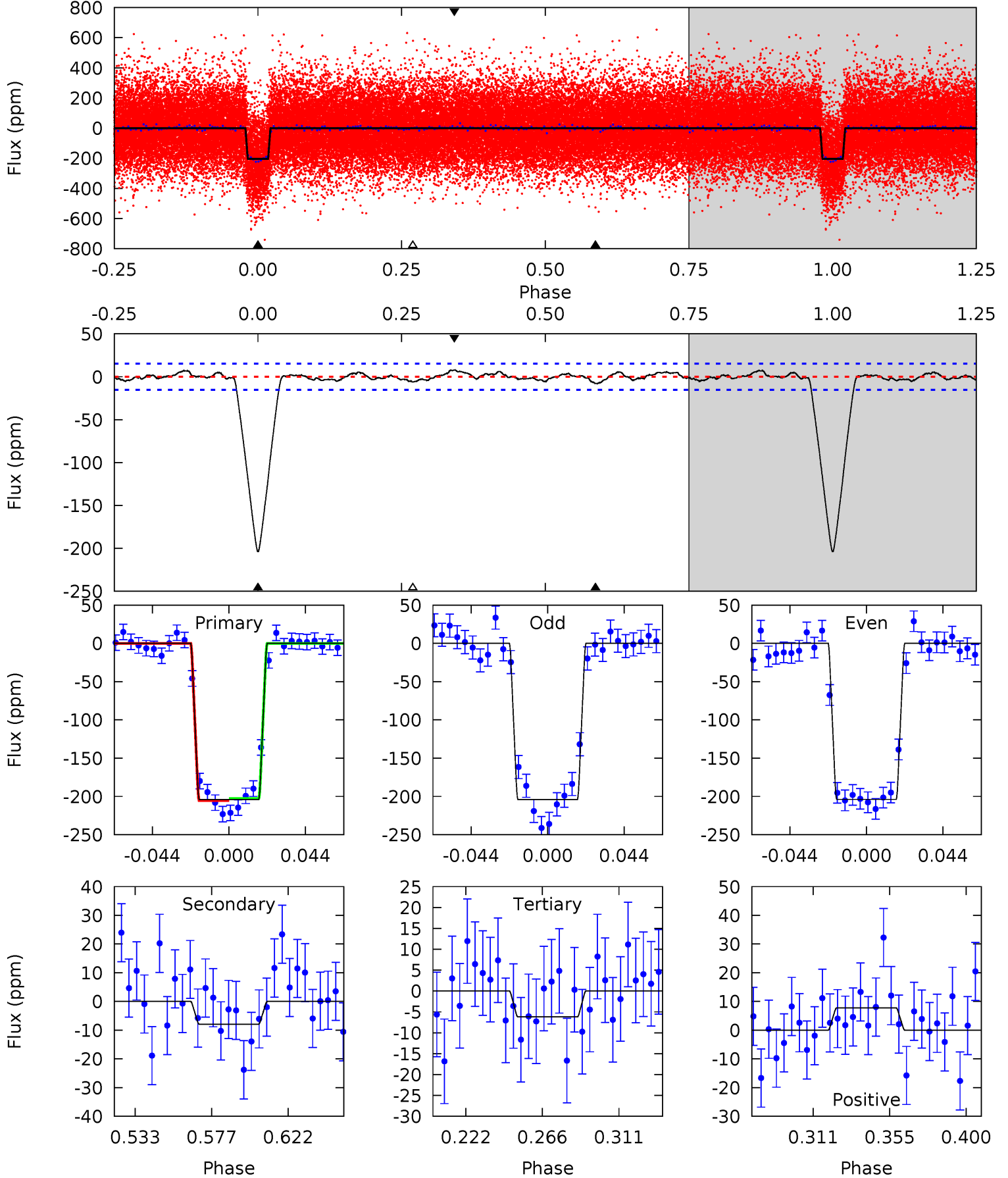
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.7	3.05	2.89	2.83	4.72	1.98	1.30	62.8	62.8	0.16	0.22	0.89	0.99	0.04	0.02



# Alt Model-Shift Uniqueness Test

003353050-01, P = 5.080075 Days, E = 128.705420 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
63.4	2.46	1.93	2.41	4.73	2.01	0.98	61.5	61.0	0.53	0.05	0.02	0.99	0.04	0.38





### Stellar Parameters For KIC 003353050

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6049^{+132}_{-120}$	$3.769^{+0.224}_{-0.096}$	$-0.040^{+0.150}_{-0.150}$	$2.520^{+0.377}_{-0.700}$	$1.359^{+0.143}_{-0.232}$	$0.120^{+0.158}_{-0.036}$
	+2%/-2%	+6%/-3%	+375%/-375%	+15%/-28%	+11%/-17%	+132%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

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

### Secondary Eclipse Parameters for KIC 003353050-01 / KOI 0384.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-10 \pm 3$	$4.20^{+0.54}_{-0.64}$	$2317^{+122}_{-154}$	$3125^{+192}_{-255}$	$1.200^{+0.558}_{-0.413}$
Alt.	$-8 \pm 3$	$3.80^{+0.51}_{-0.62}$	$2305^{+125}_{-156}$	$3123^{+236}_{-339}$	$1.222^{+0.748}_{-0.528}$

$T_{\text{max}}$  = 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  $A_{\text{obs}} \gg 1.0$

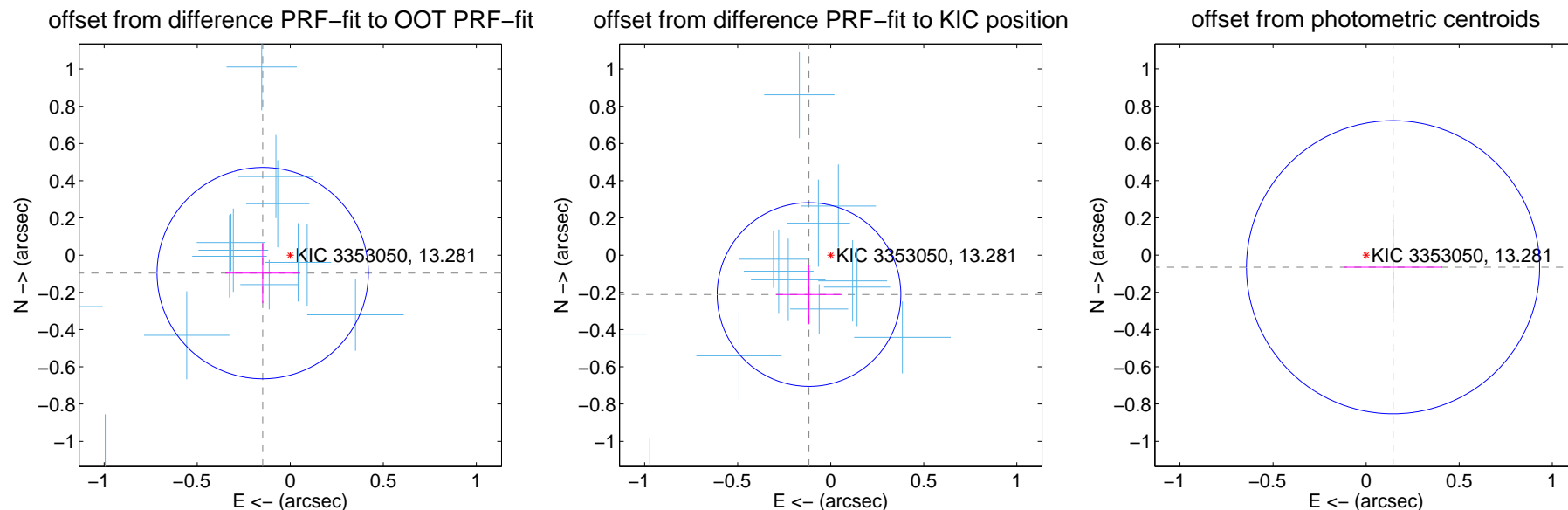
## DV Centroid Data

Supplemental centroid analysis for 003353050-01. Kepler magnitude: 13.28. Transit SNR 44.39

There are 14 quarters with good PRF difference image offsets

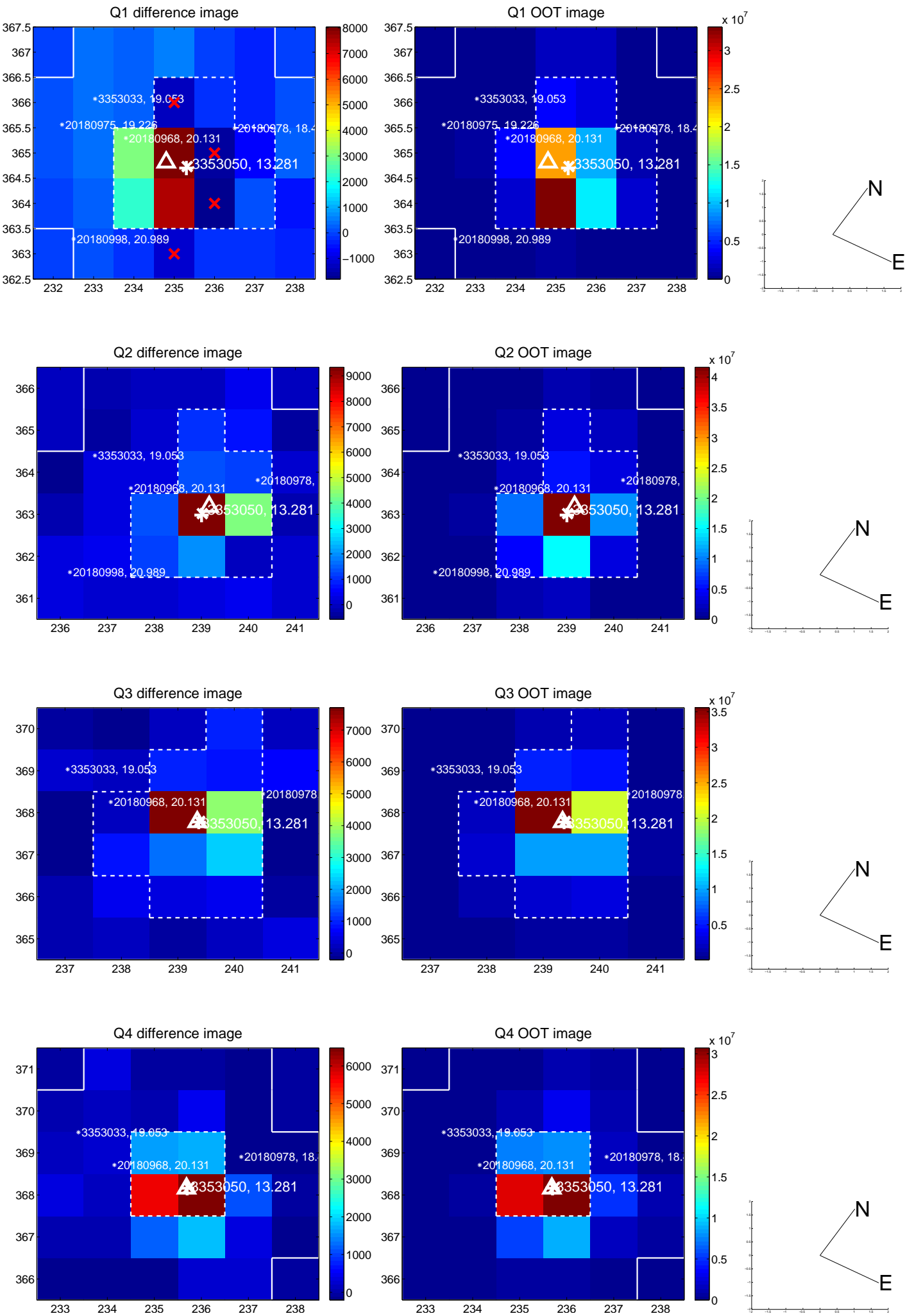
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.177 \pm 0.189$	0.93	$0.148 \pm 0.201$	$-0.096 \pm 0.162$
PRF-fit source offset from KIC position	$0.241 \pm 0.165$	1.47	$0.117 \pm 0.176$	$-0.211 \pm 0.160$
photometric centroid source offset	$0.16 \pm 0.26$	0.60	$-0.14 \pm 0.26$	$-0.07 \pm 0.25$

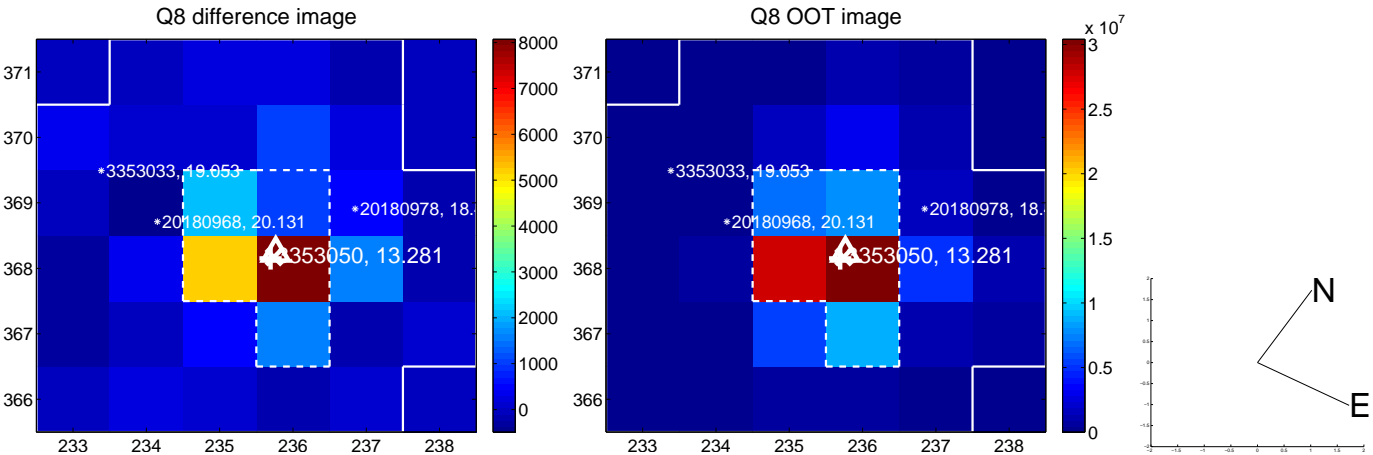
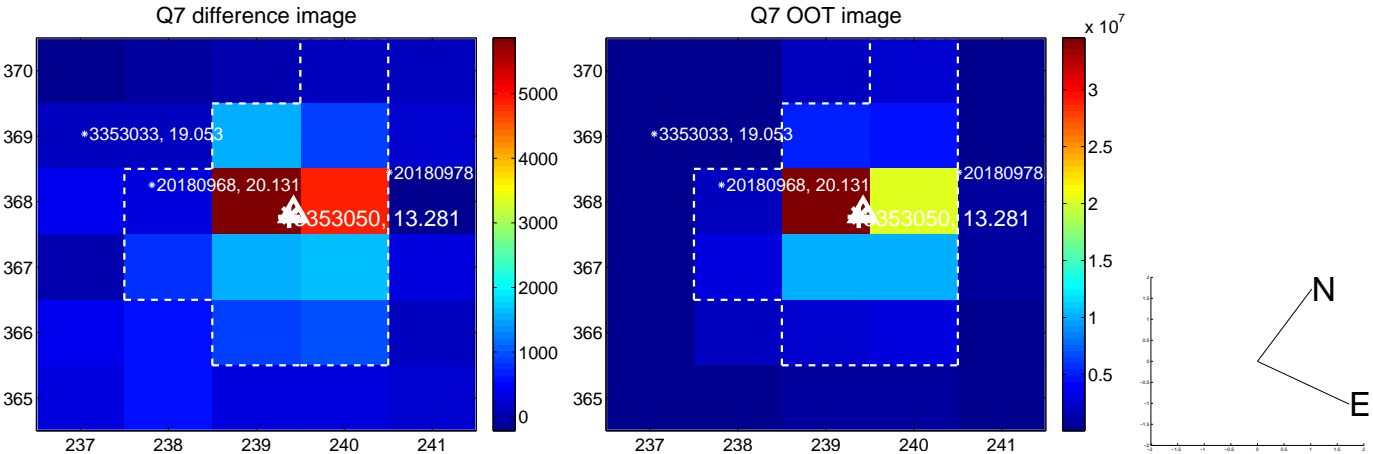
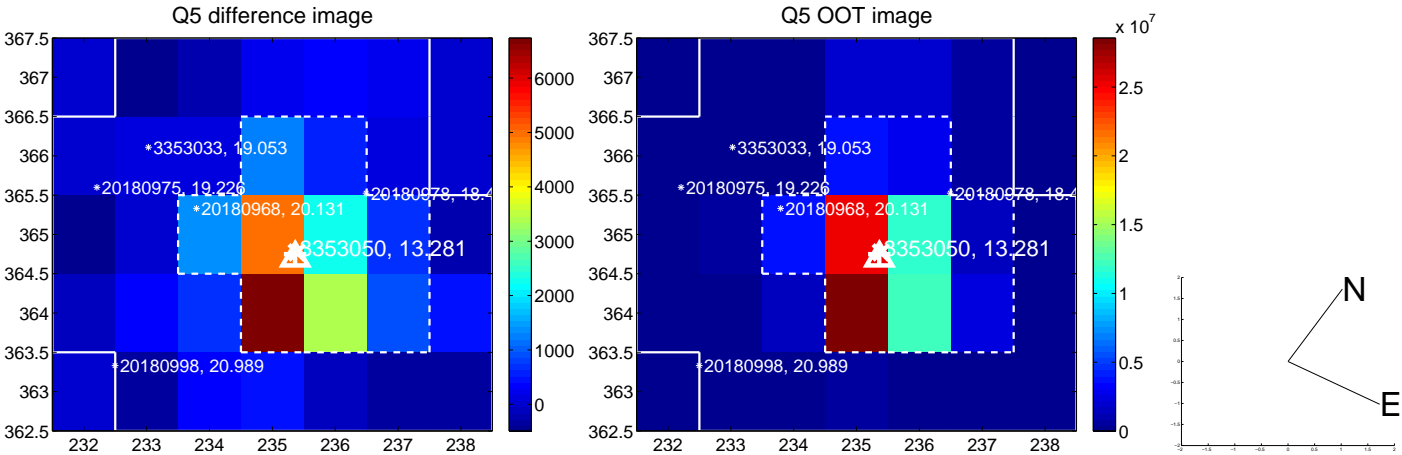


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

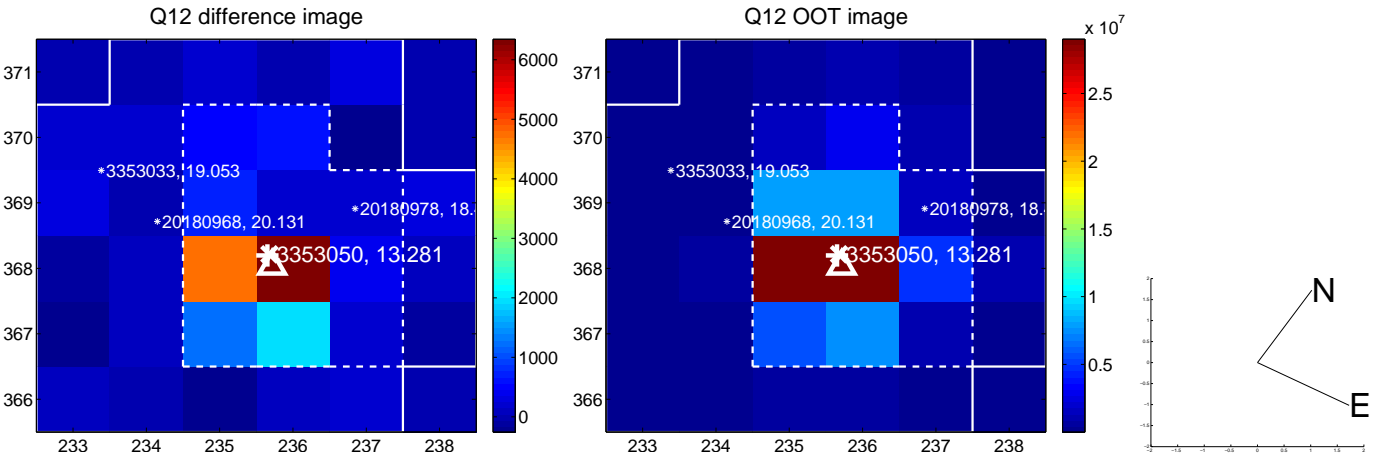
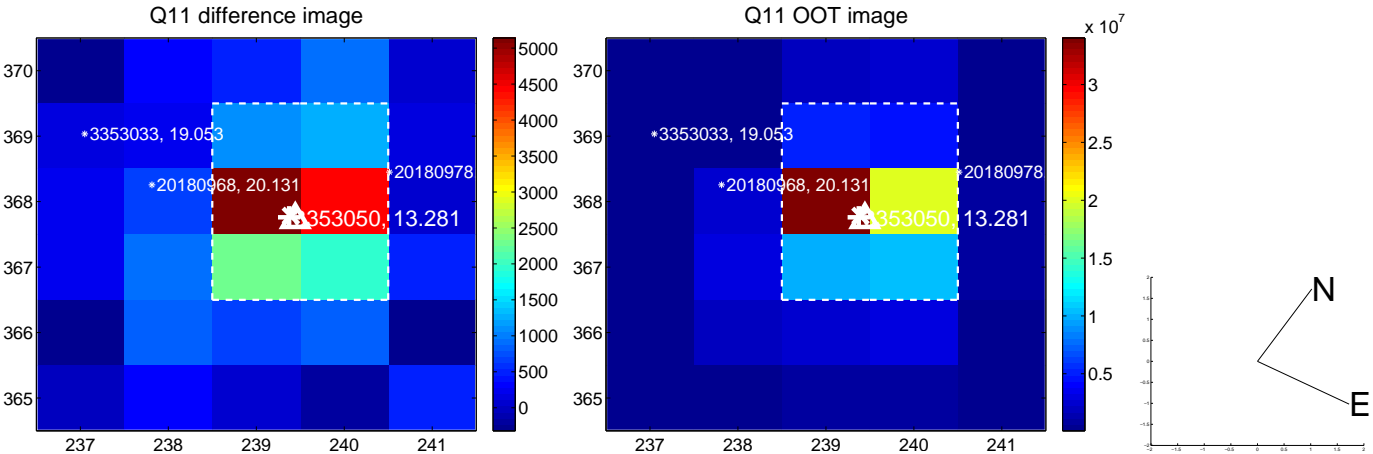
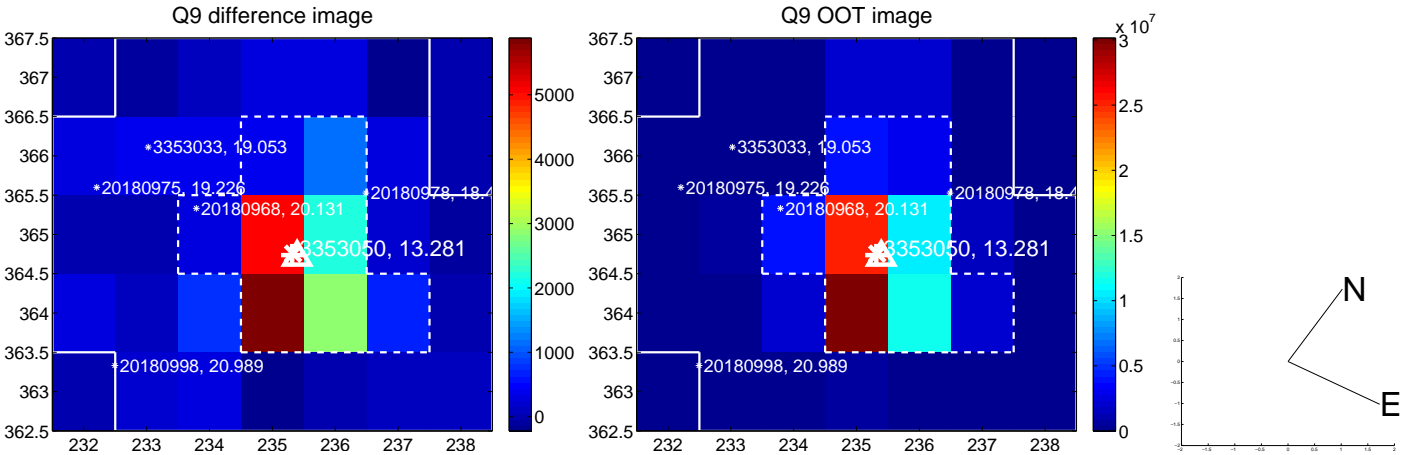


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

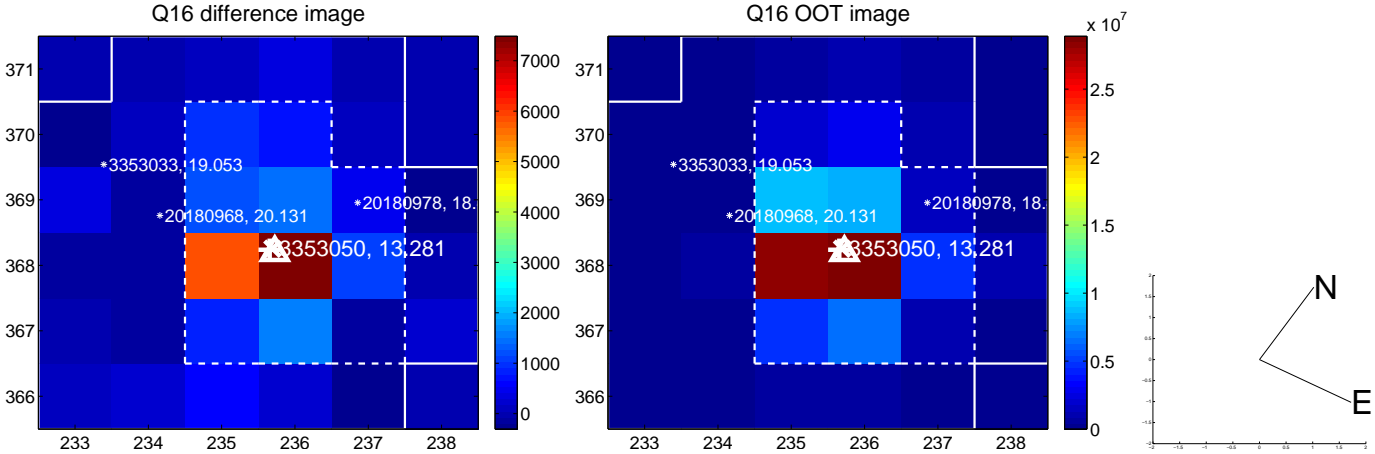
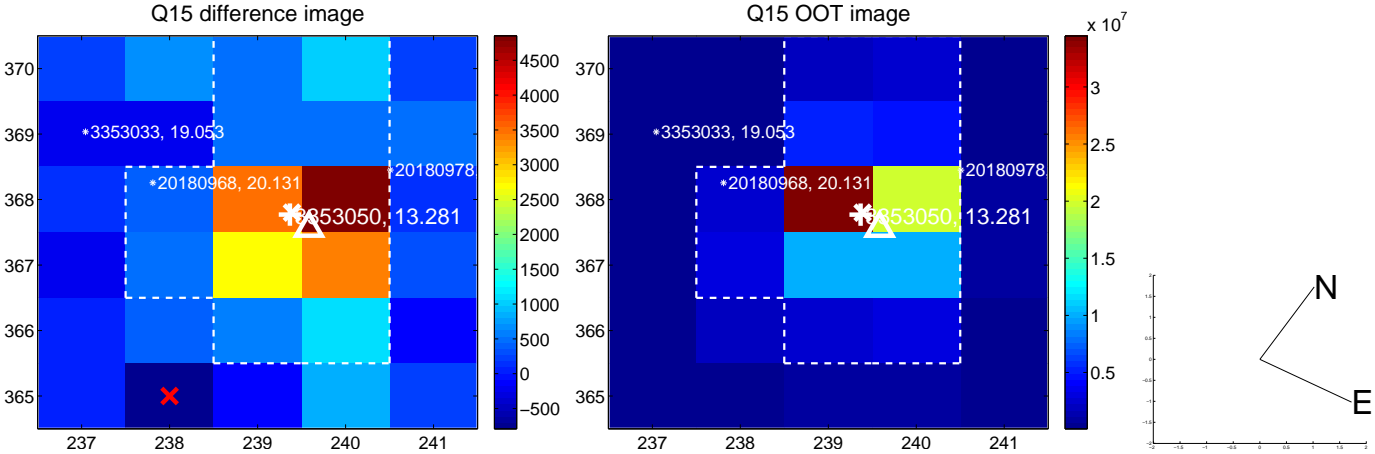
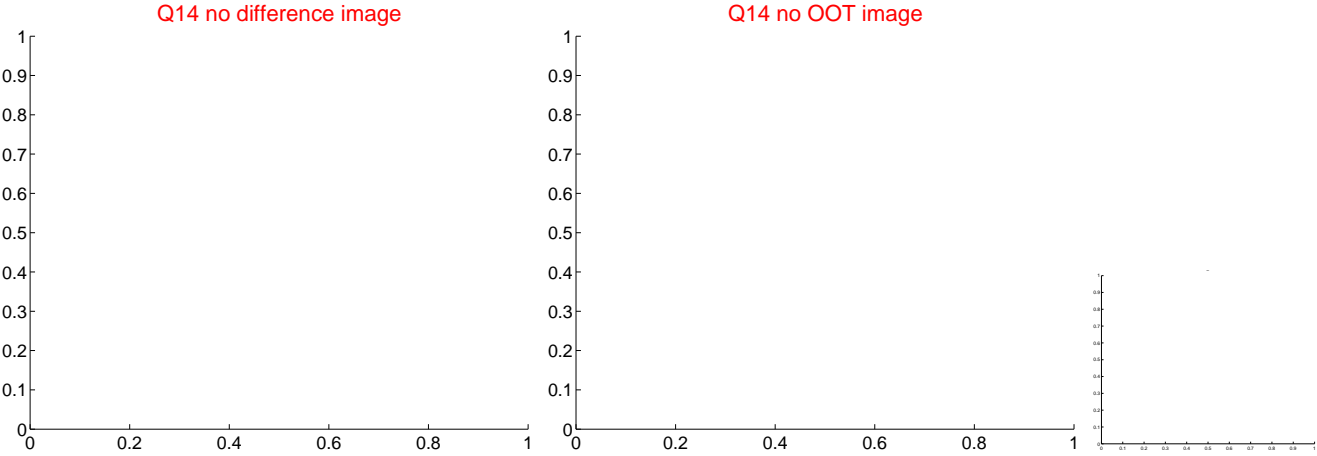
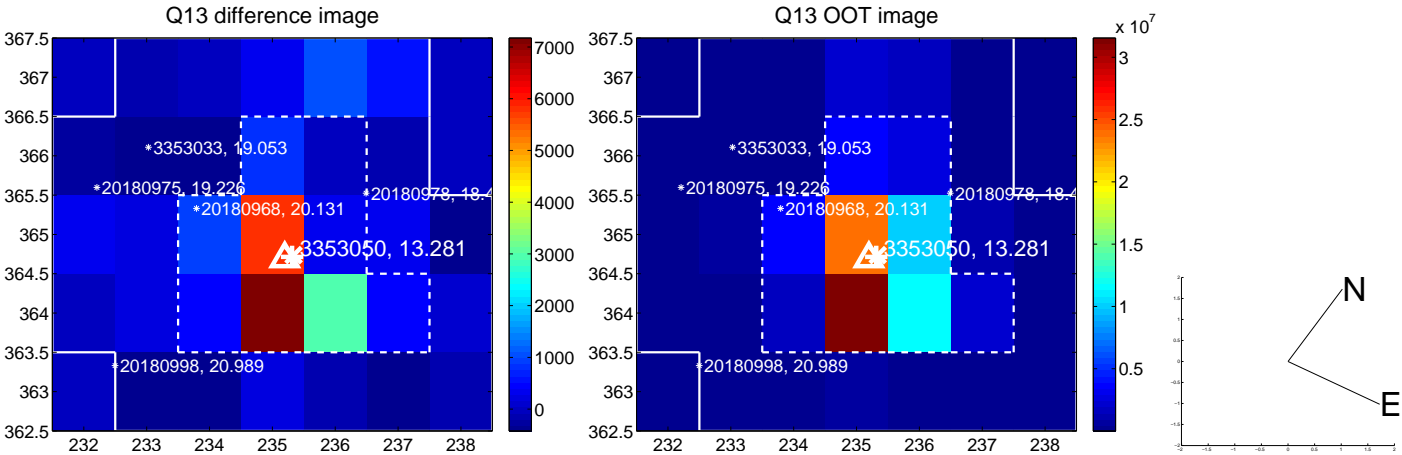




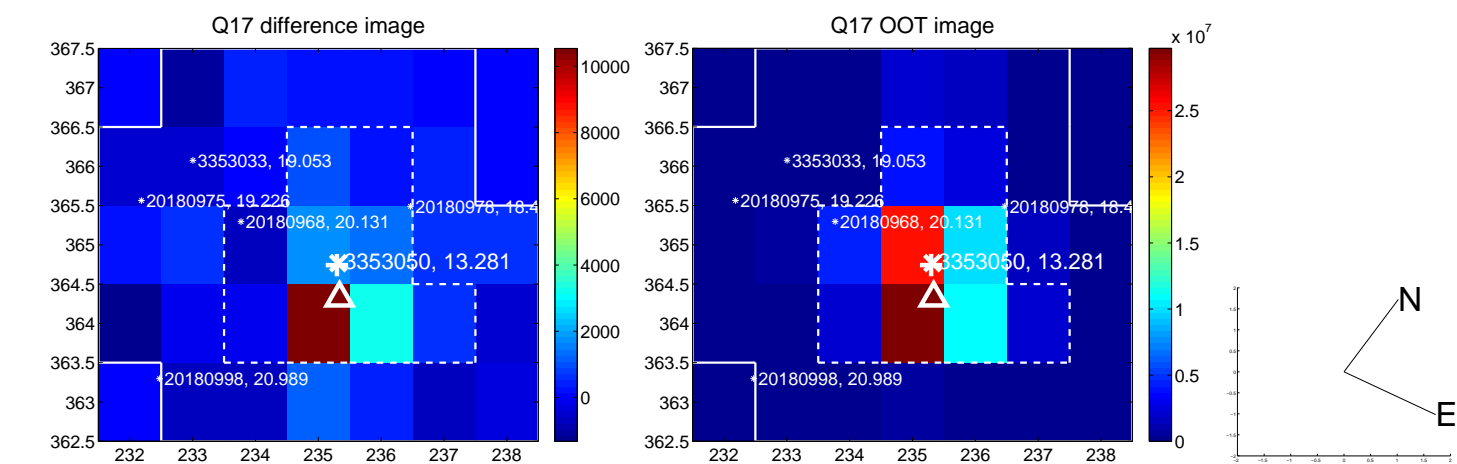
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



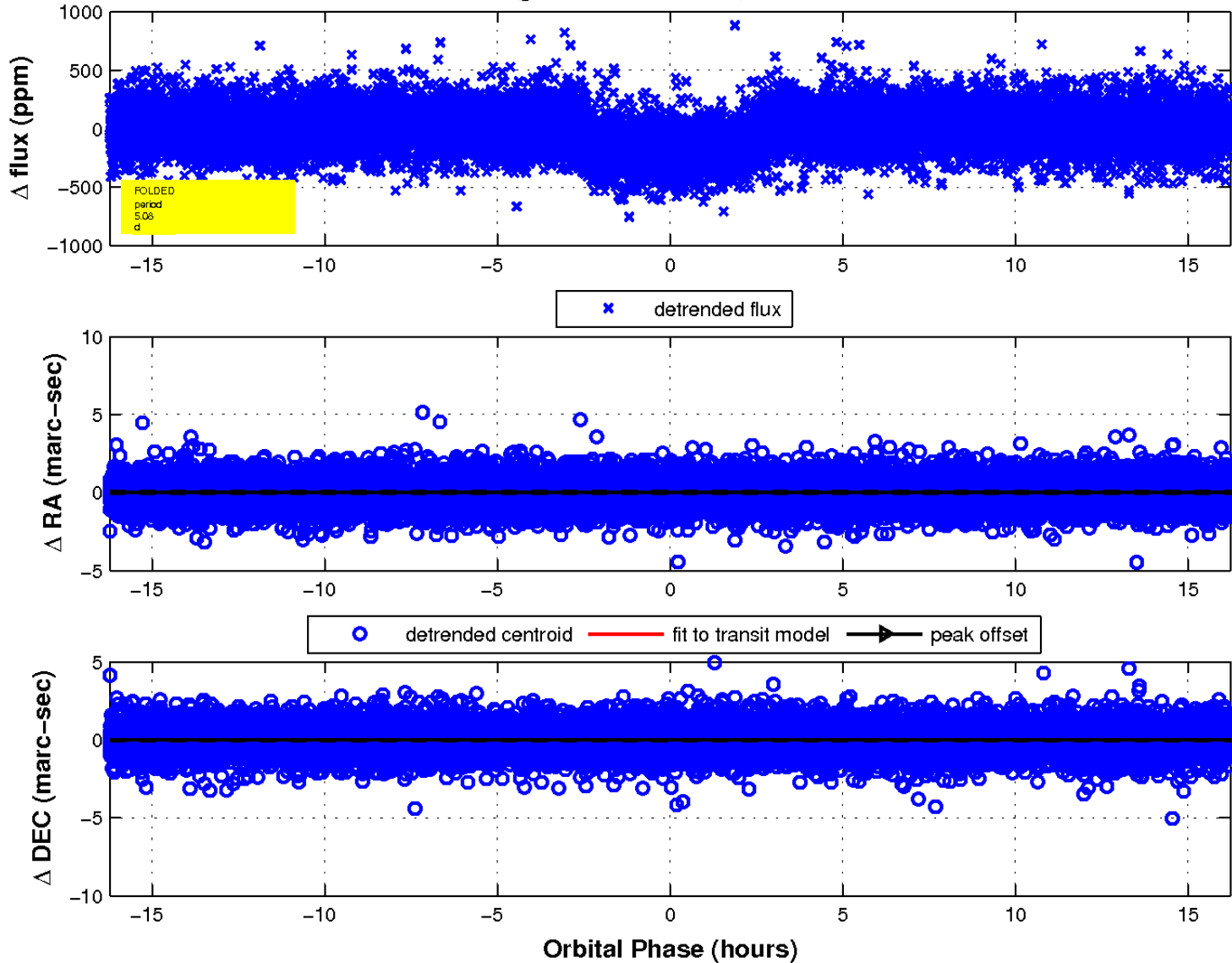
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

