

# KIC 005801675

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005801675-01	OBS	No	1.305500	132.107112	13.1	5.118	7.4	5.6	2.68	6528	1.13	15952.70

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005801675-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

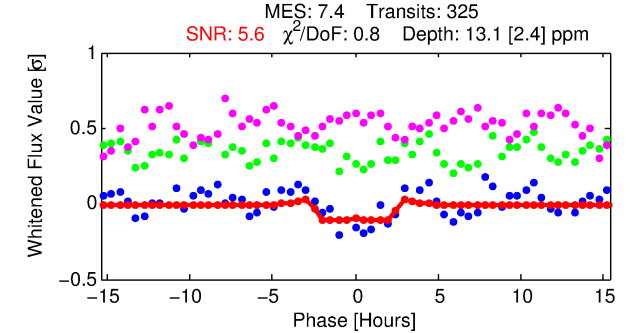
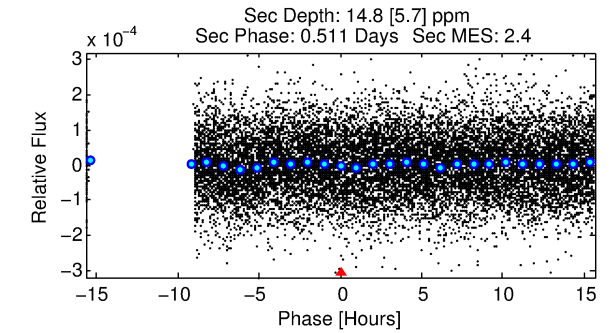
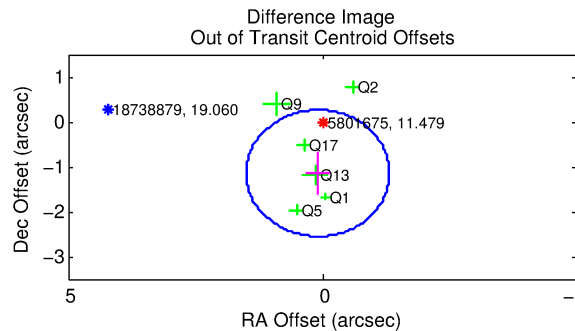
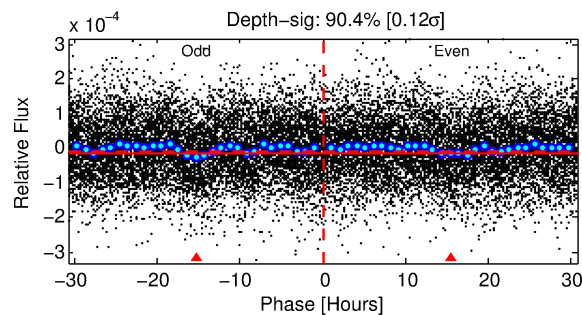
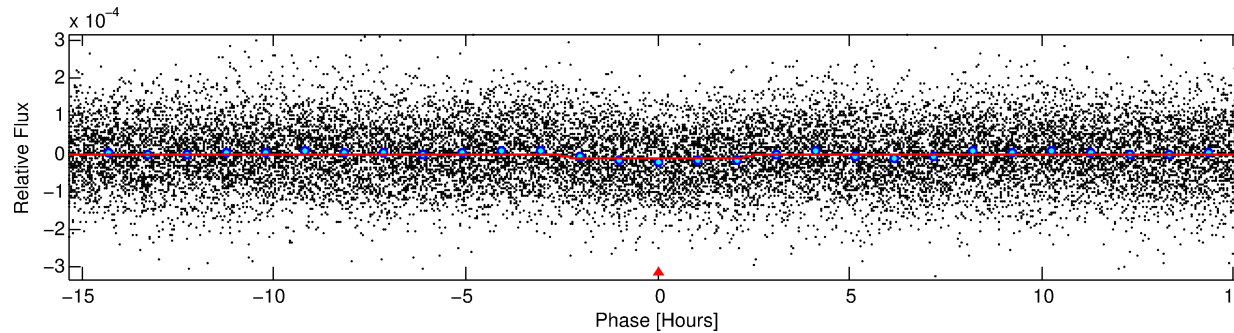
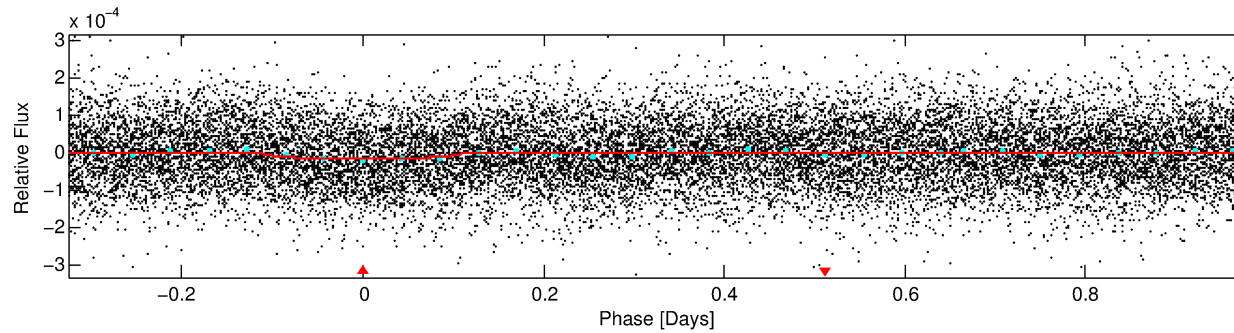
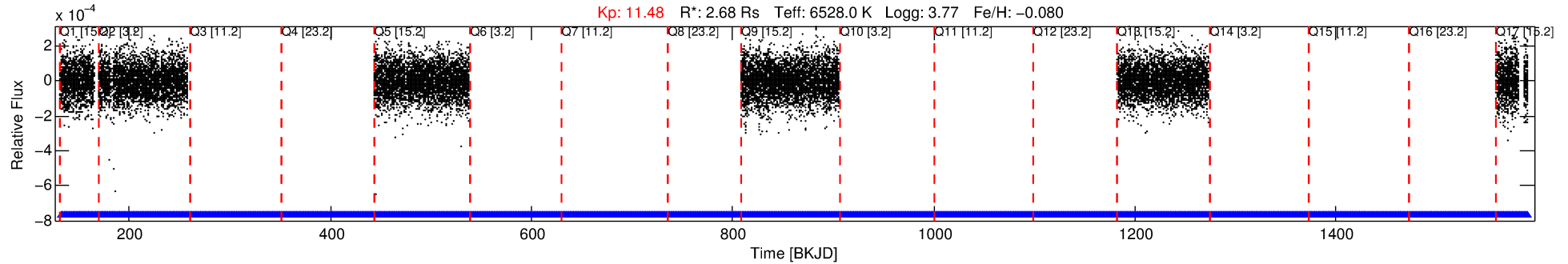
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005801675-01

No Significant Match Found

# DV One-Page Summary

KIC: 5801675 Candidate: 1 of 1 Period: 1.305 d



## DV Fit Results:

Period = 1.30550 [0.00003] d  
Epoch = 132.1071 [0.0067] BKJD  
Rp/R\* = 0.0039 [0.0017]  
a/R\* = 1.28 [1.23]  
b = 0.90 [0.53]  
Seff = 15952.70 [8911.89]  
Teq = 2866 [400] K  
Rp = 1.13 [0.65] Re  
a = 0.0271 [0.0094] AU  
Ag = 4.65 [5.07] [0.72 $\sigma$ ]  
Teffp = 6507 [1554] K [2.27 $\sigma$ ]

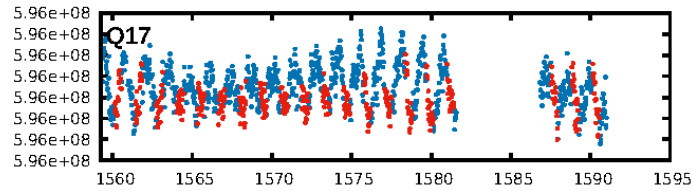
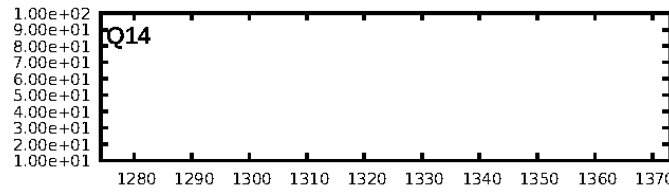
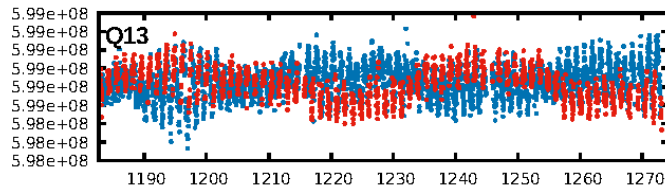
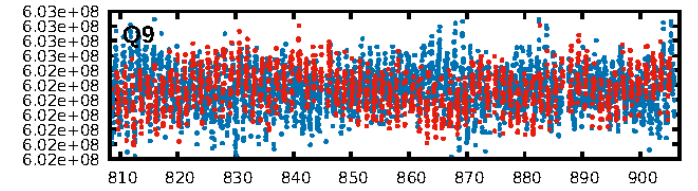
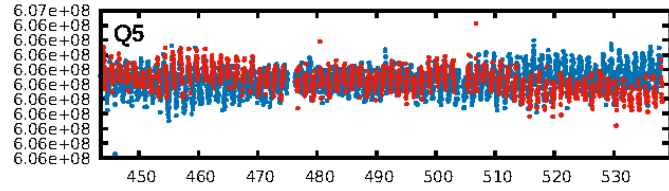
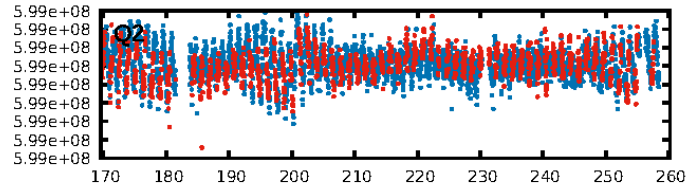
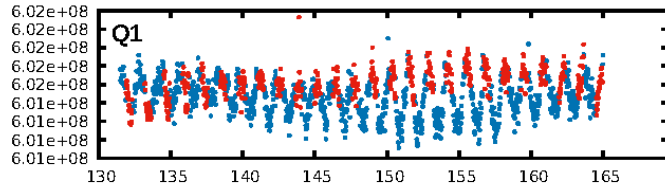
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.77e-10  
RollingBand-fgt: 1.00 [279/279]  
GhostDiagnostic-chr: 5.492  
Centroid-sig: N/A  
Centroid-so: 0.502 arcsec [0.47 $\sigma$ ]  
OotOffset-rm: 1.149 arcsec [2.45 $\sigma$ ]  
KicOffset-rm: 1.201 arcsec [2.47 $\sigma$ ]  
OotOffset-st: 1/0/0/5 [6]  
KicOffset-st: 1/0/0/5 [6]  
DiffImageQuality-fgm: 0.83 [5/6]  
DiffImageOverlap-fno: 1.00 [6/6]

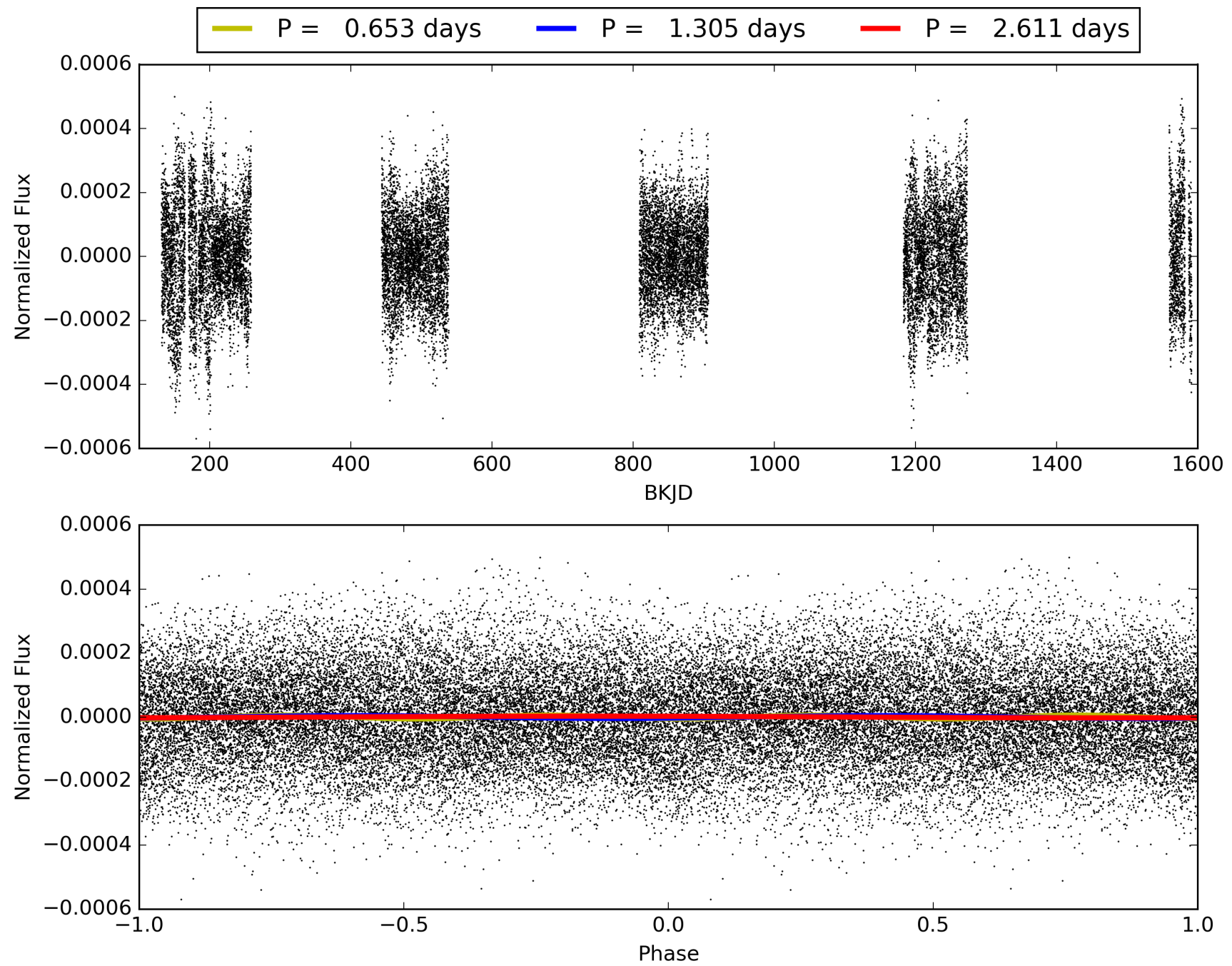
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:07:16 Z

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

# TCE 005801675-01, PDC Light Curves

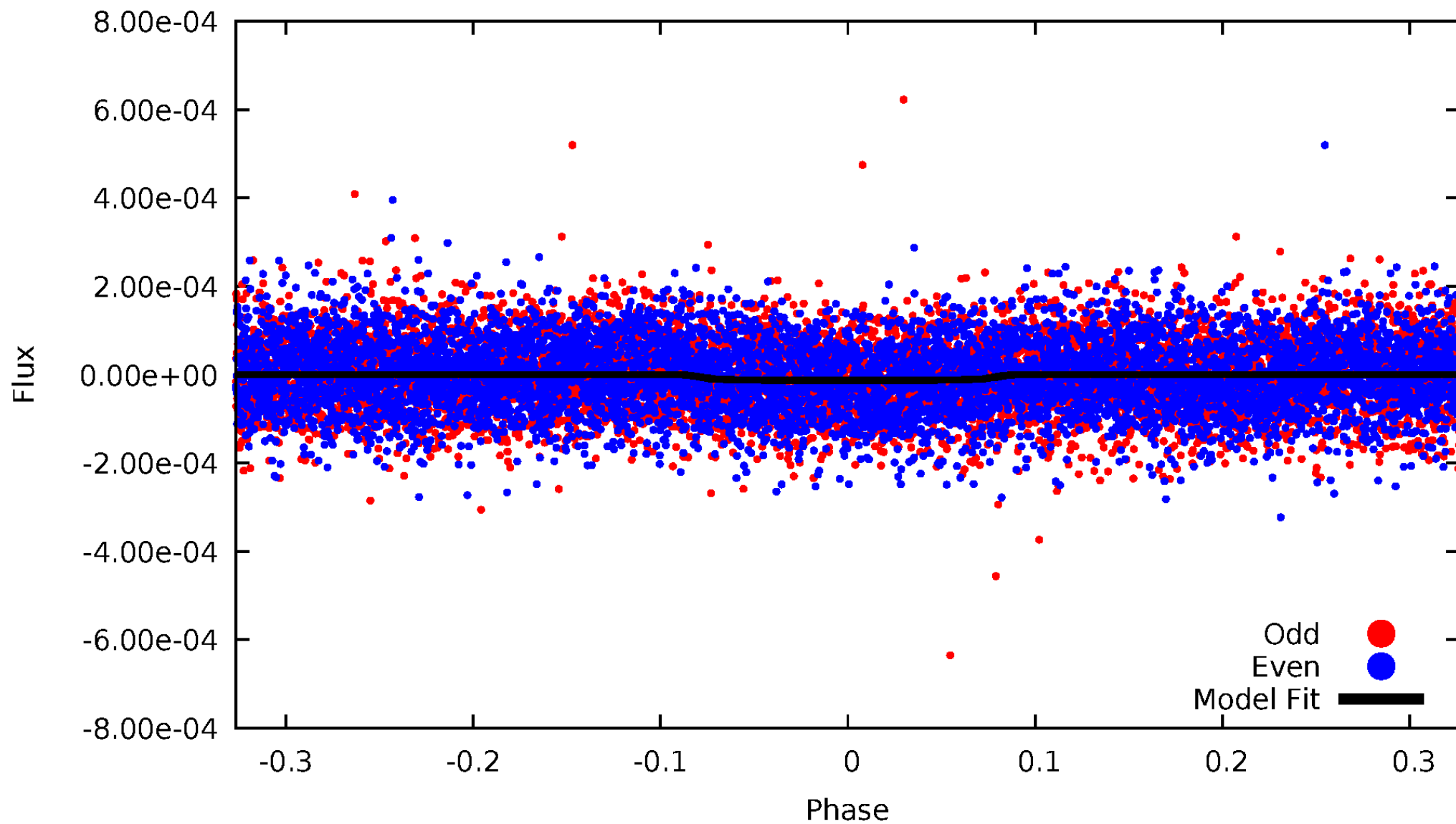


TCE 005801675-01



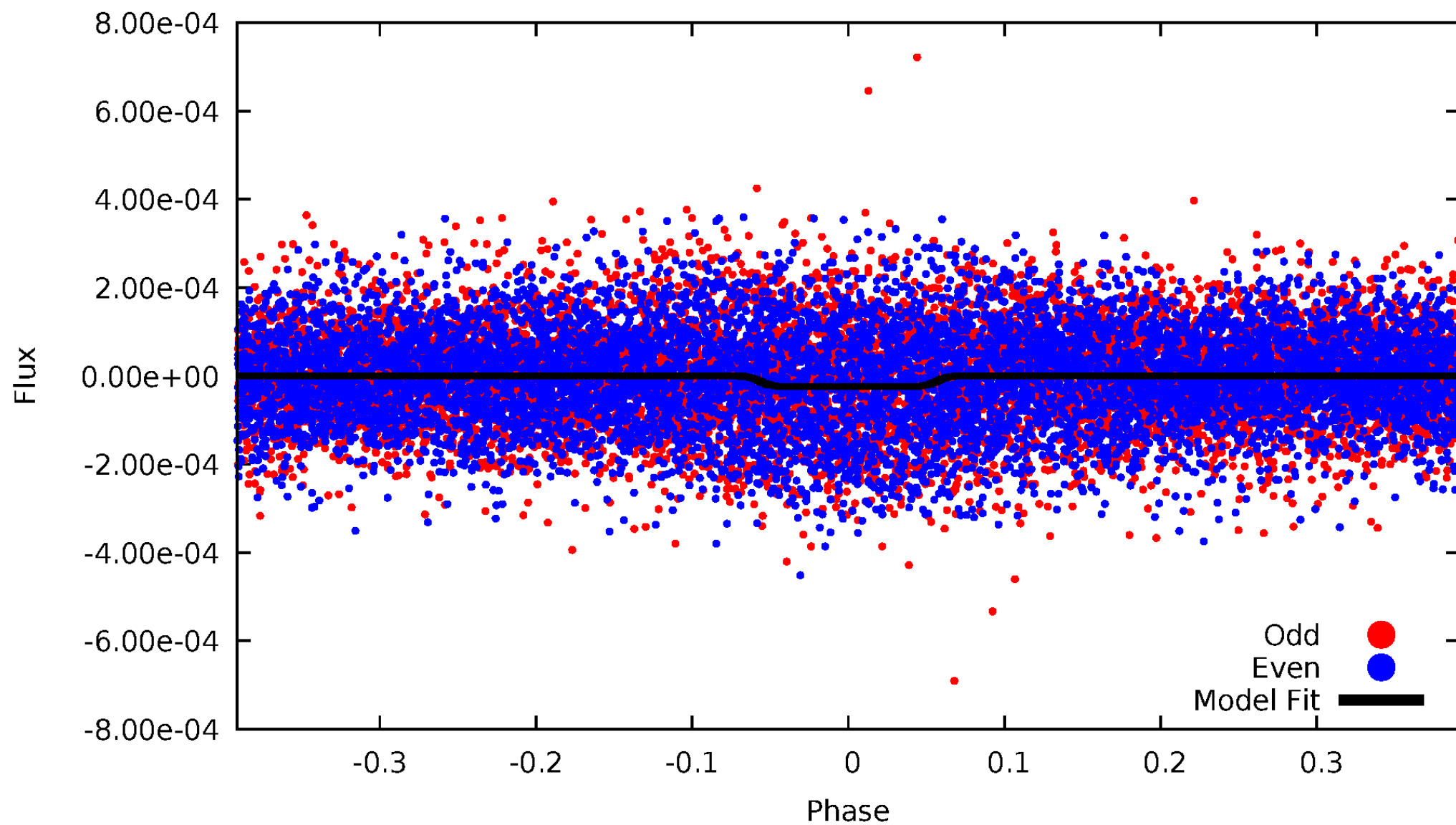
# DV Odd/Even

TCE 005801675-01



# ALT Odd/Even

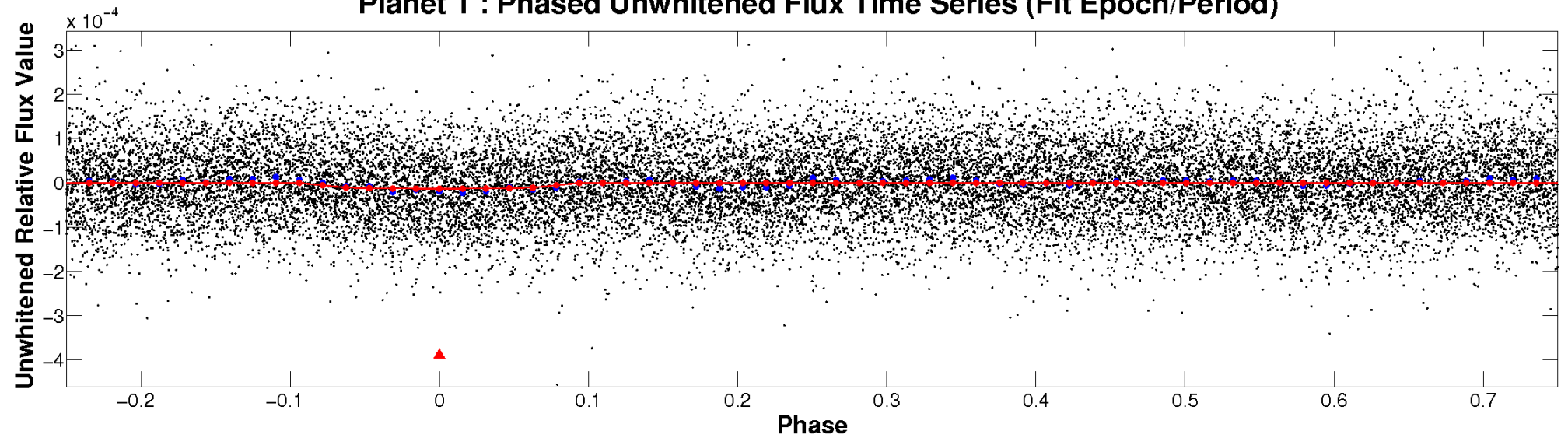
TCE 005801675-01



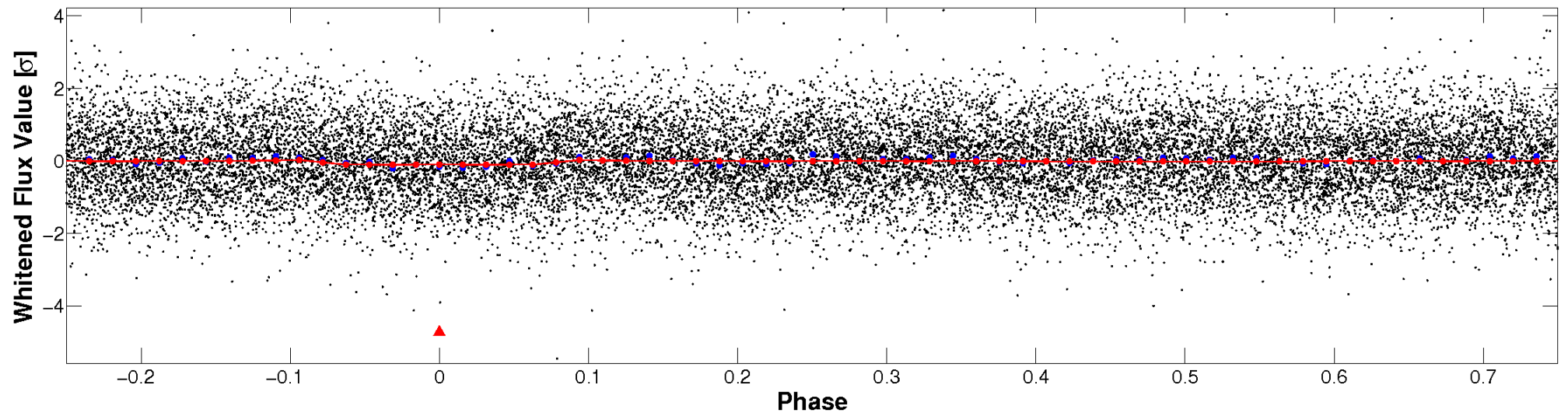


# Non-Whitened Vs. Whitened Light Curve

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

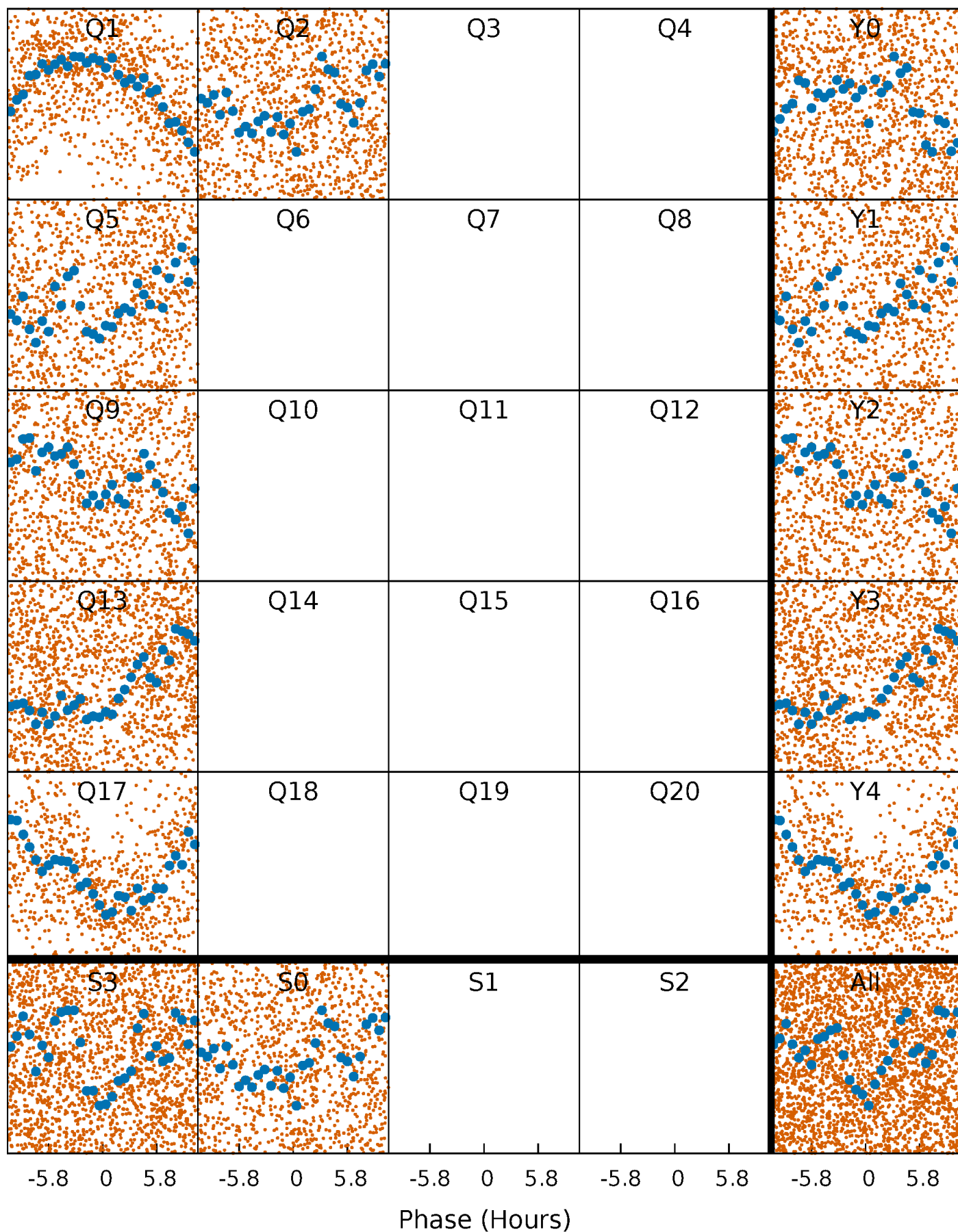


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

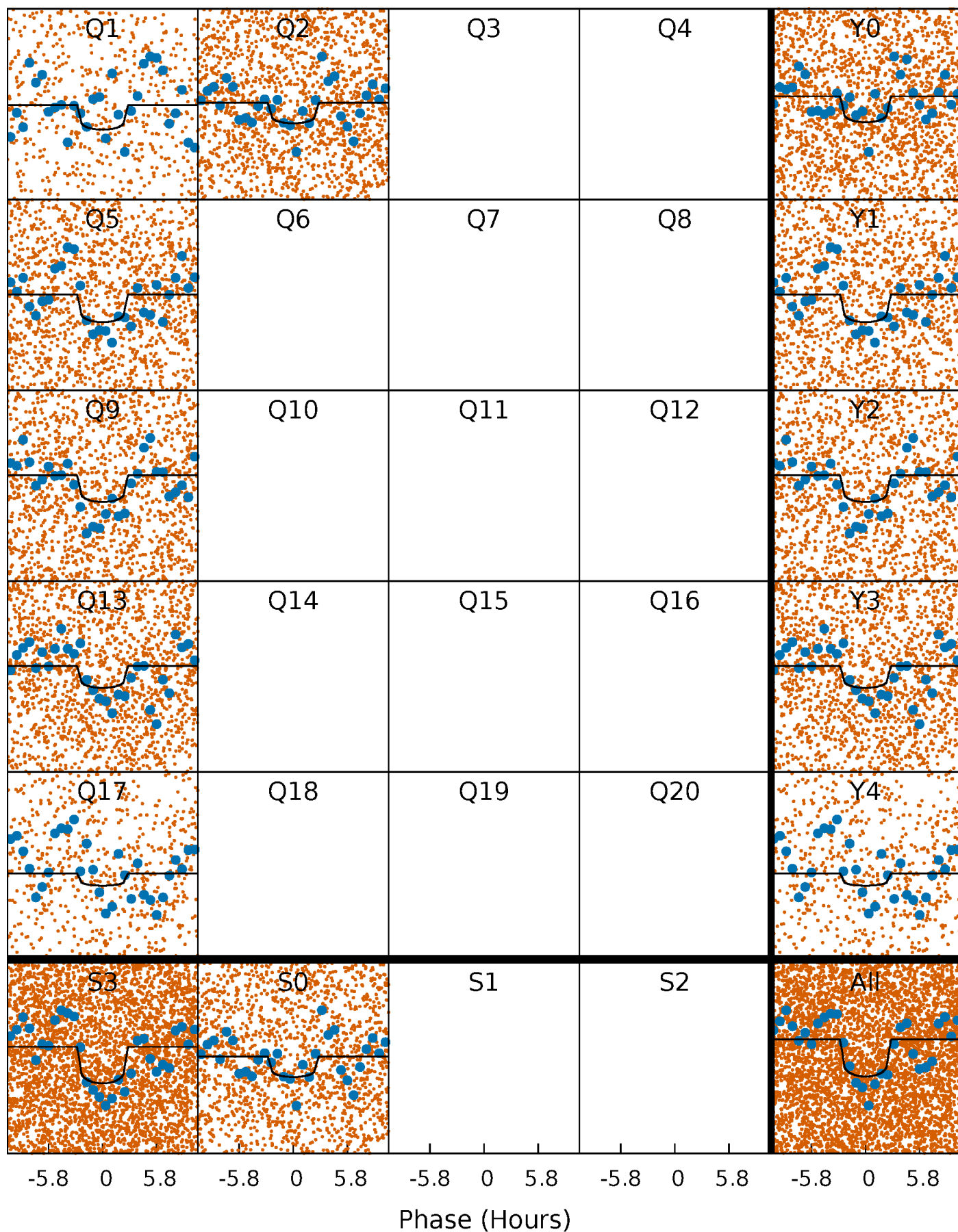
TCE 005801675-01 P= 1.305500 Days  $T_0=132.107112$  (BKJD)





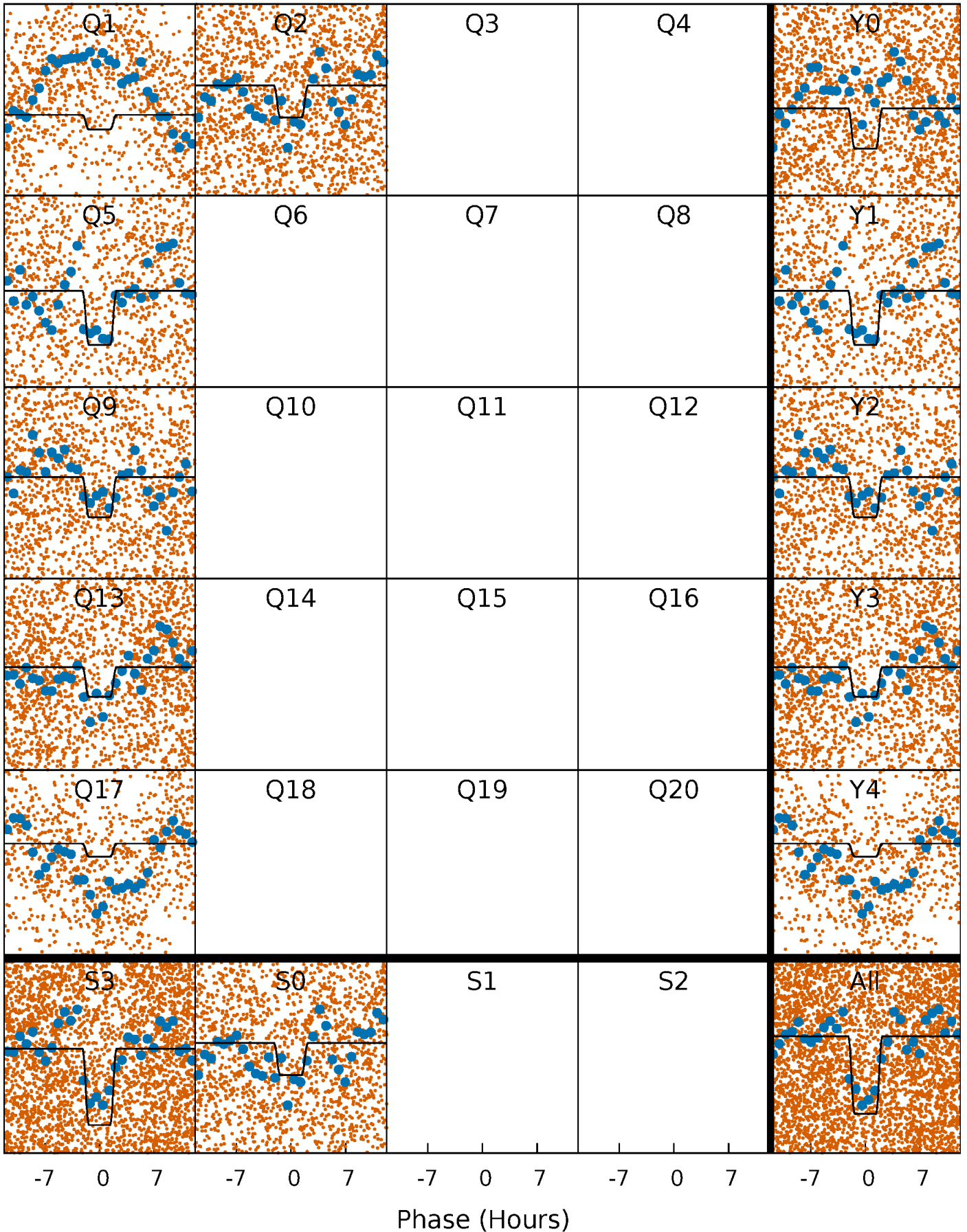
# DV Quarter-Phased Transit Curves

TCE 005801675-01 P= 1.305500 Days  $T_0=132.107112$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

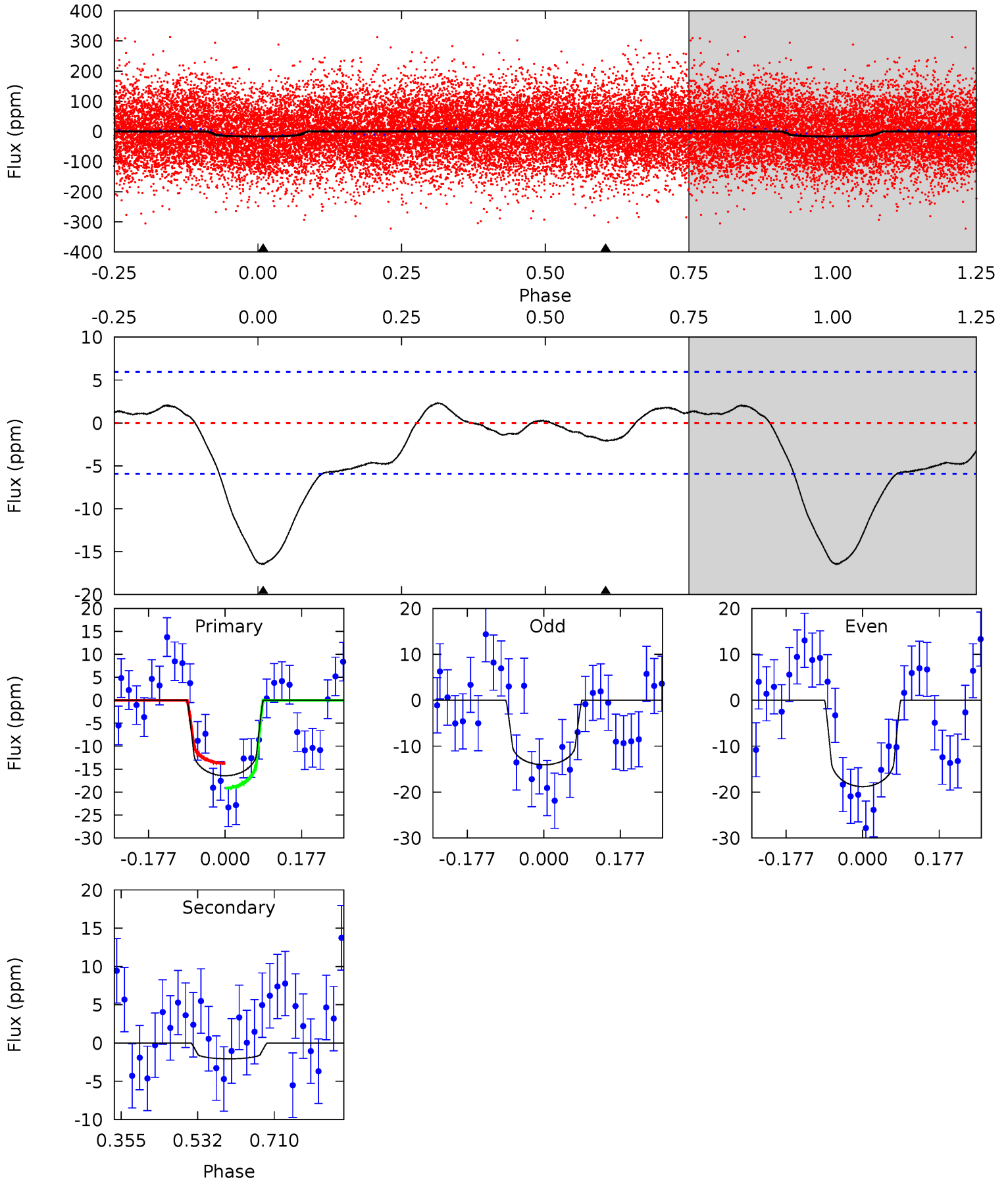
TCE 005801675-01 P= 1.305543 Days  $T_0=132.088174$  (BKJD)



# DV Model-Shift Uniqueness Test

005801675-01, P = 1.305500 Days, E = 130.801612 Days

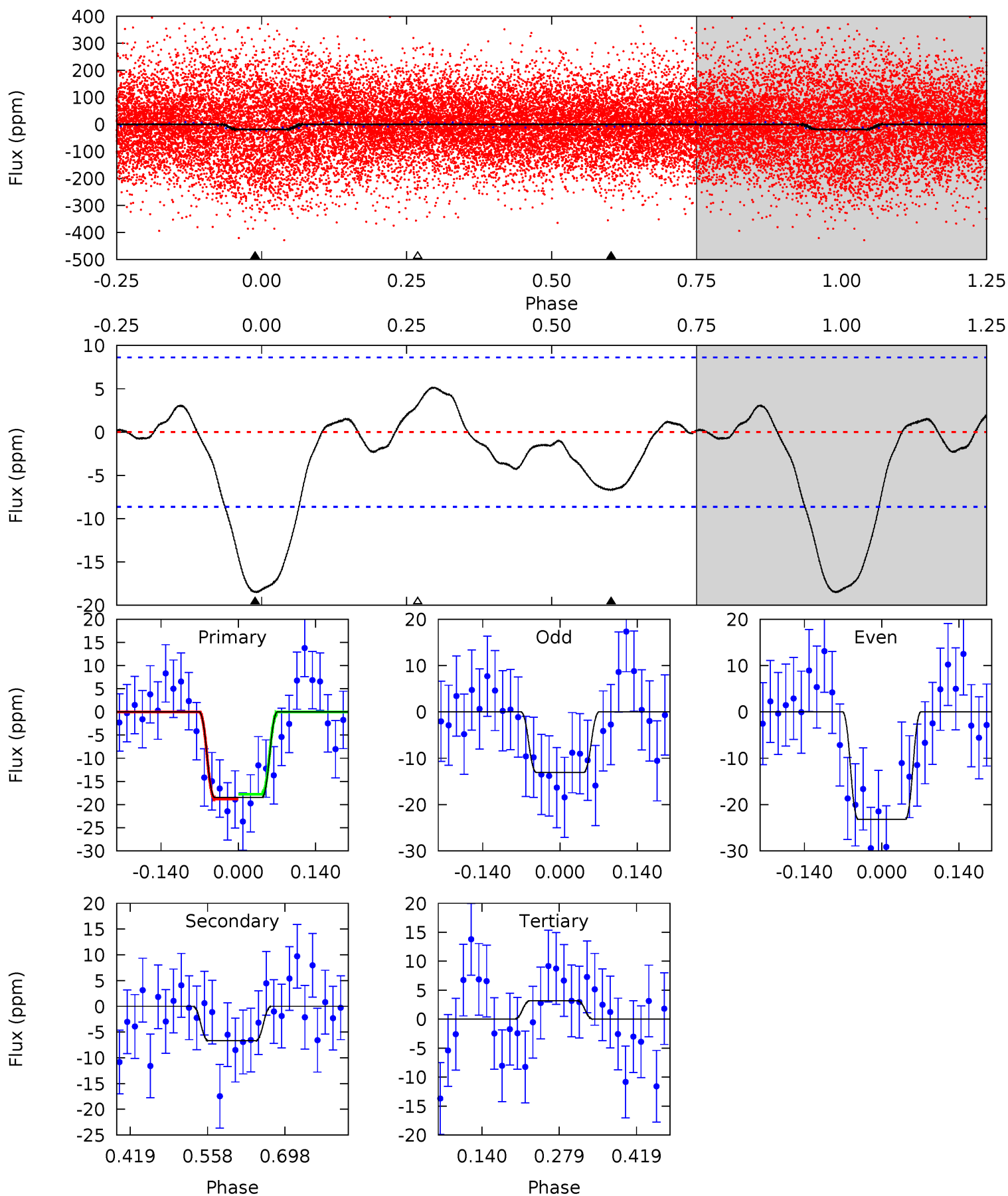
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	1.54	0	0	4.44	1.35	1.75	12.3	12.3	1.54	1.54	1.78	1.03	0.12	2.00



# Alt Model-Shift Uniqueness Test

005801675-01, P = 1.305543 Days, E = 130.782631 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
9.64	3.49	-1.67	0	4.49	1.48	1.30	11.3	9.64	5.16	3.49	2.64	1.15	0.22	0.25



### Stellar Parameters For KIC 005801675

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6528^{+205}_{-228}$	$3.773^{+0.312}_{-0.097}$	$-0.080^{+0.300}_{-0.250}$	$2.684^{+0.434}_{-1.012}$	$1.558^{+0.209}_{-0.339}$	$0.113^{+0.236}_{-0.035}$
	+3%/-3%	+8%/-3%	+375%/-312%	+16%/-38%	+13%/-22%	+208%/-31%
Source	KIC0	FLK73	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 005801675-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2 \pm 1$	$1.07^{+0.50}_{-0.47}$	$3908^{+253}_{-342}$	$3648^{+1369}_{-6913}$	$0.633^{+1.411}_{-0.472}$
Alt.	$-7 \pm 2$	$1.33^{+0.54}_{-0.51}$	$3916^{+262}_{-354}$	$4629^{+1259}_{-811}$	$1.518^{+2.712}_{-0.812}$

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



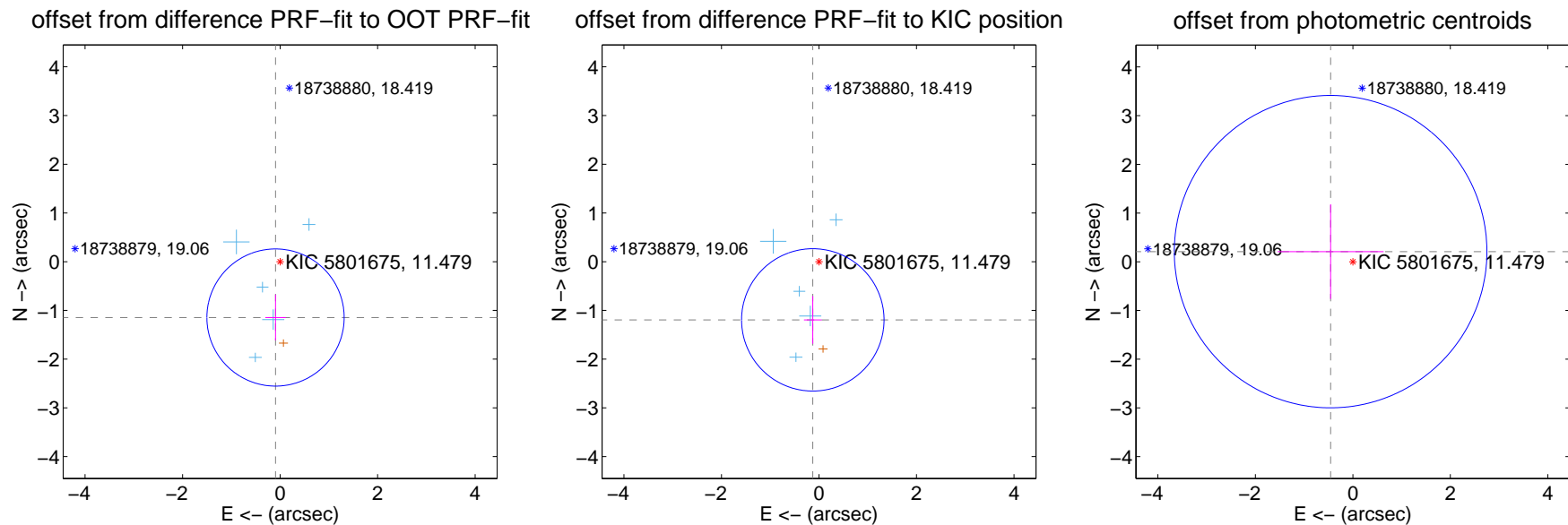
## DV Centroid Data

Supplemental centroid analysis for 005801675-01. **Kepler magnitude: 11.48.** Transit SNR 5.64

There are 5 quarters with good PRF difference image offsets

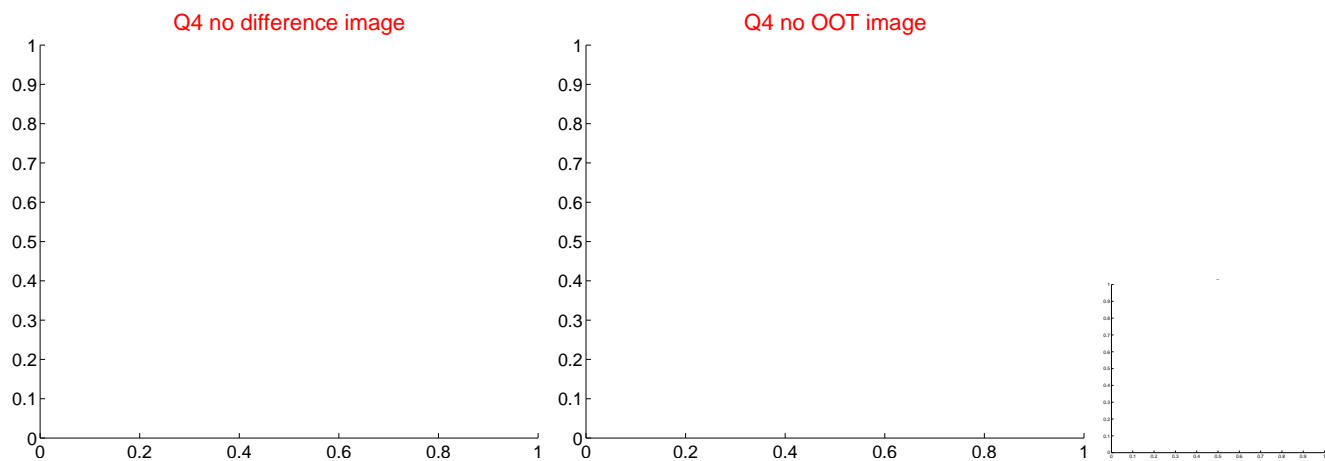
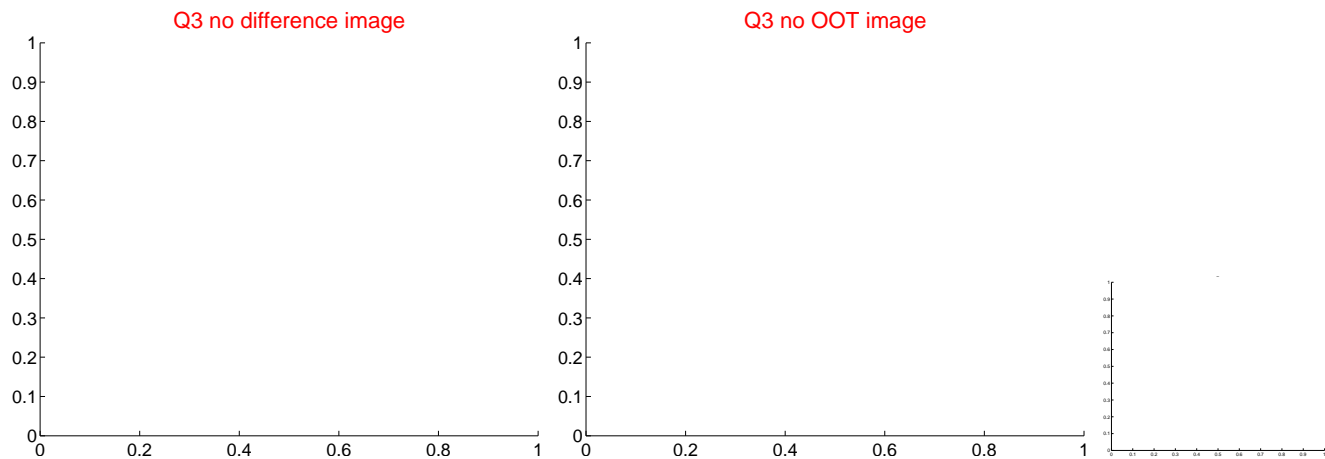
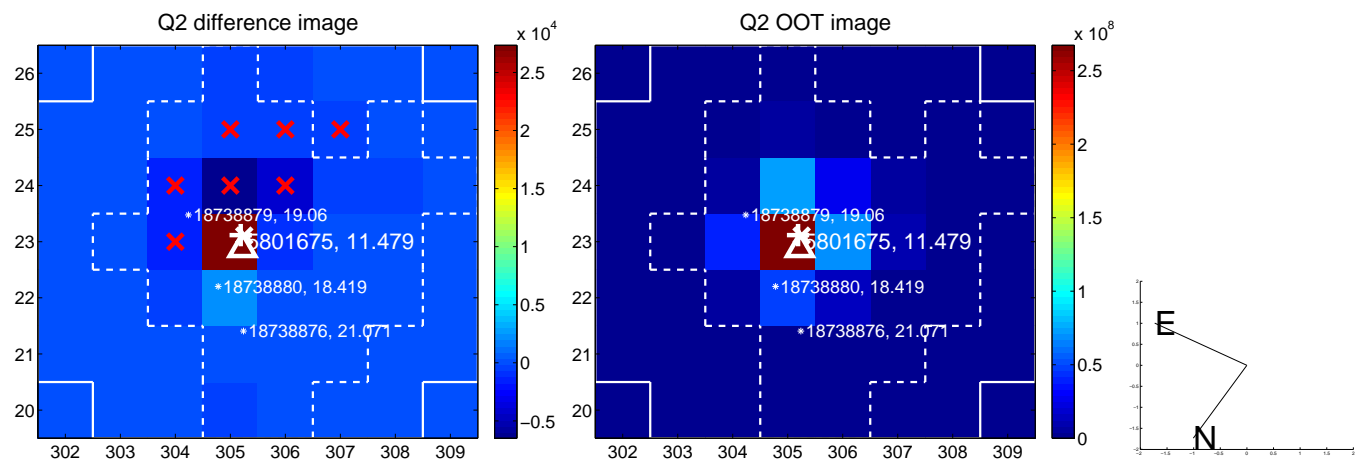
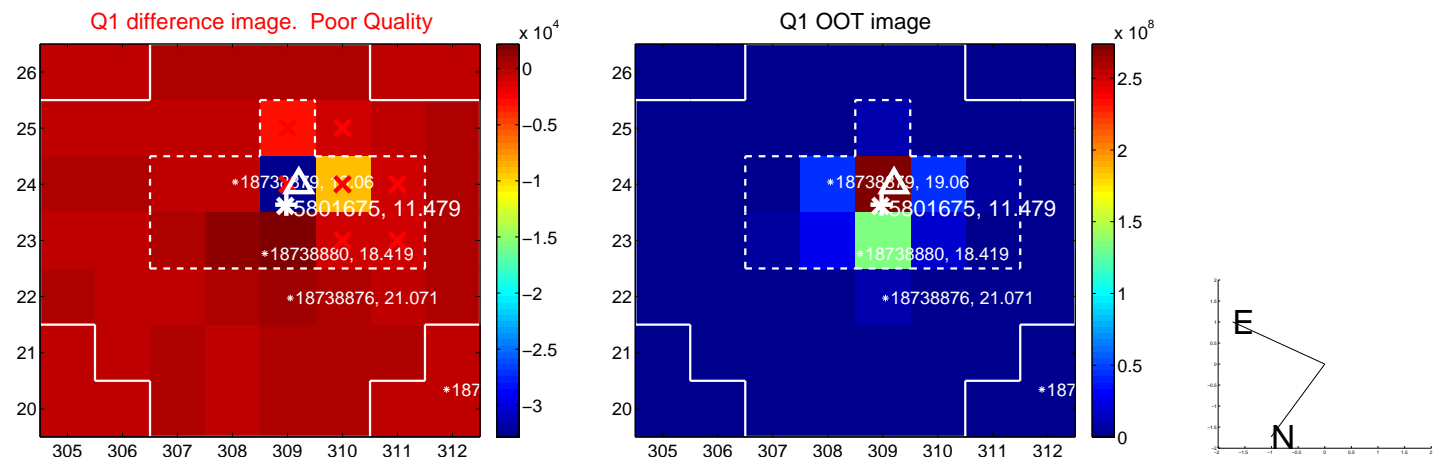
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.149 \pm 0.469$	2.45	$0.094 \pm 0.210$	$-1.146 \pm 0.470$
PRF-fit source offset from KIC position	$1.201 \pm 0.487$	2.47	$0.127 \pm 0.182$	$-1.194 \pm 0.489$
photometric centroid source offset	$0.50 \pm 1.07$	0.47	$0.46 \pm 1.09$	$0.21 \pm 0.97$

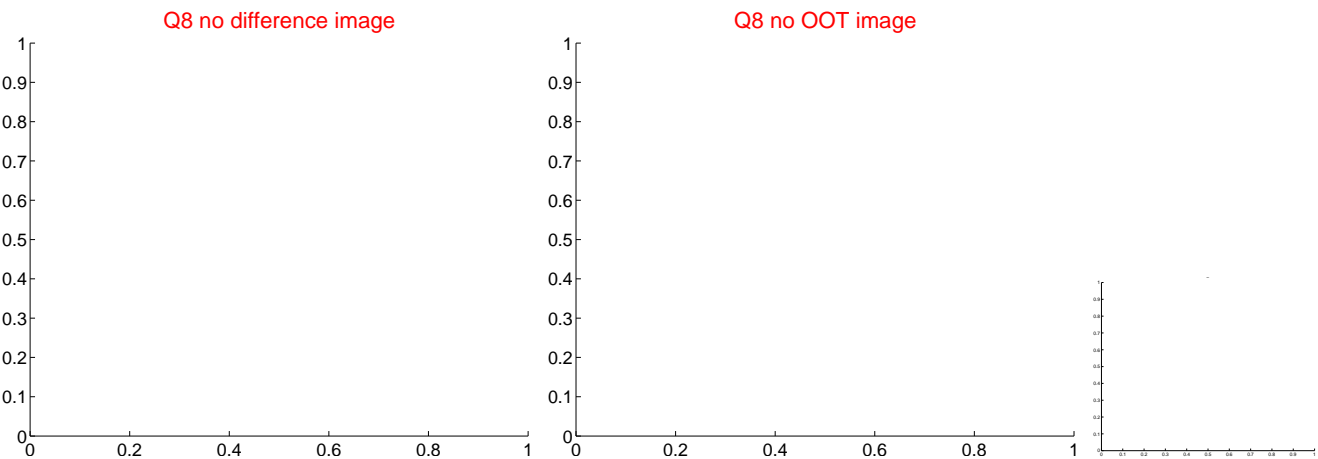
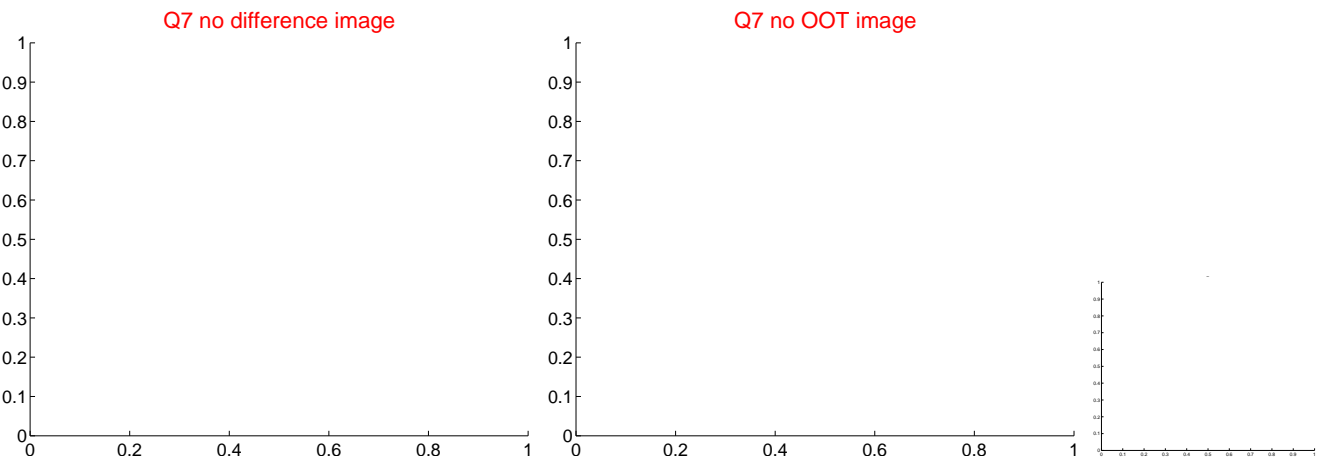
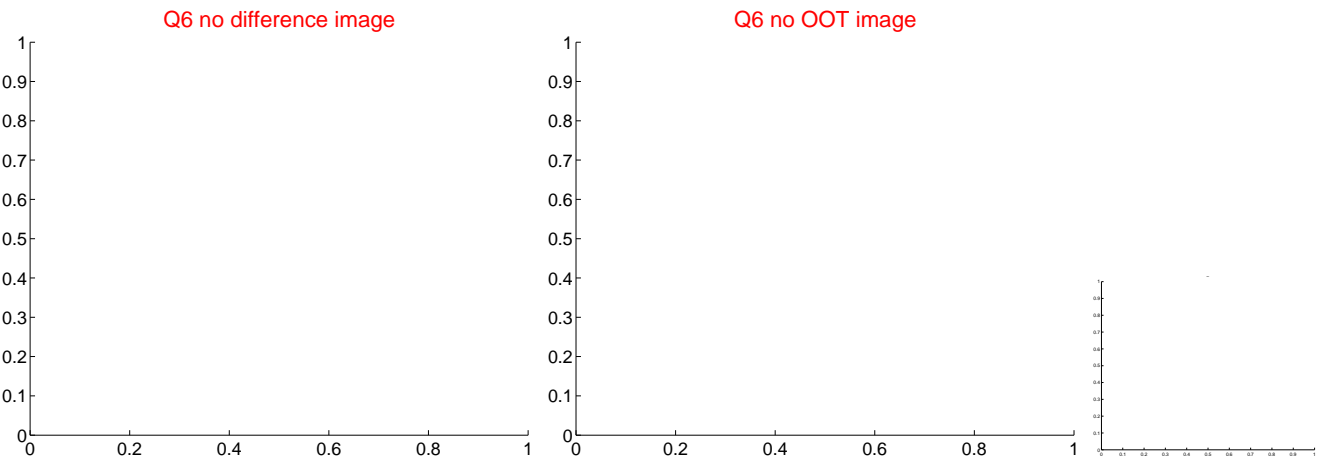
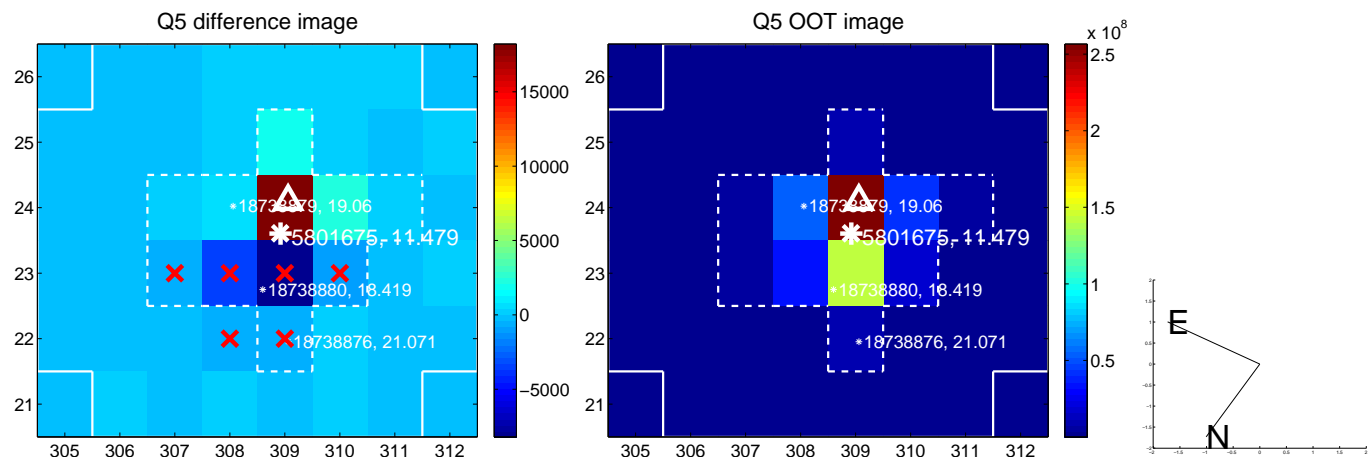


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

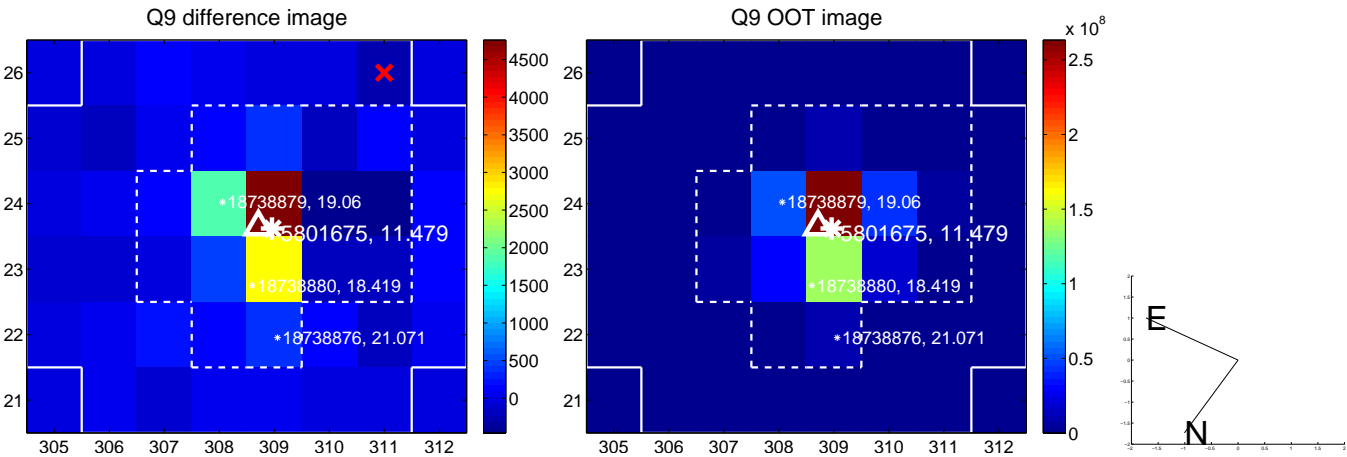
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



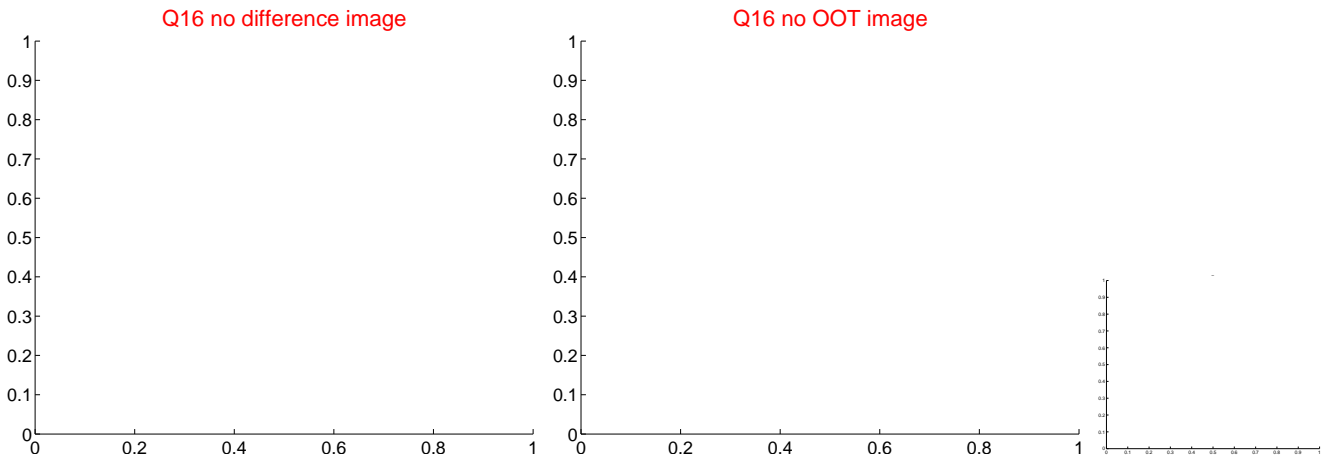
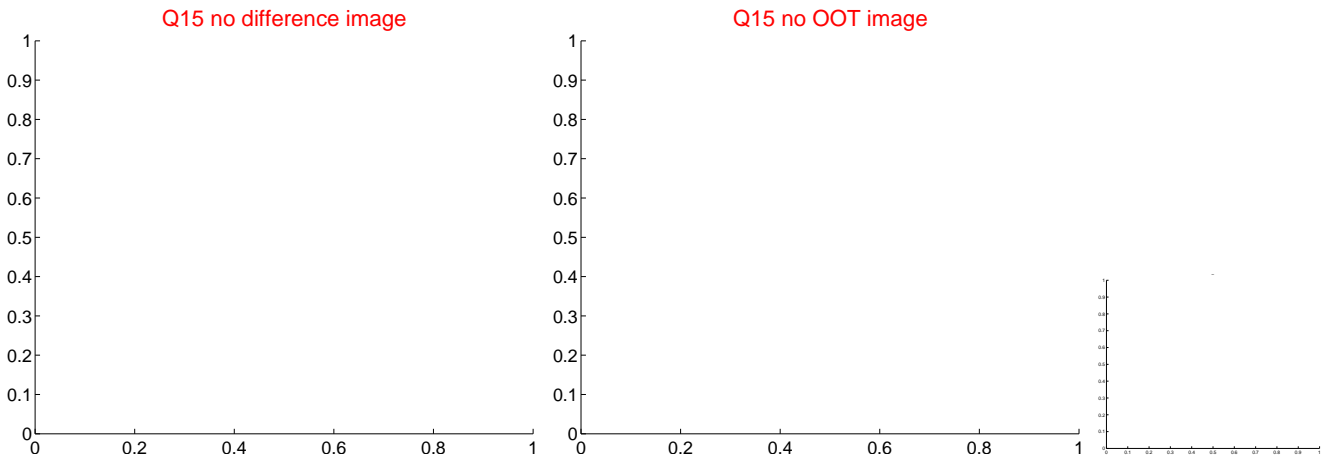
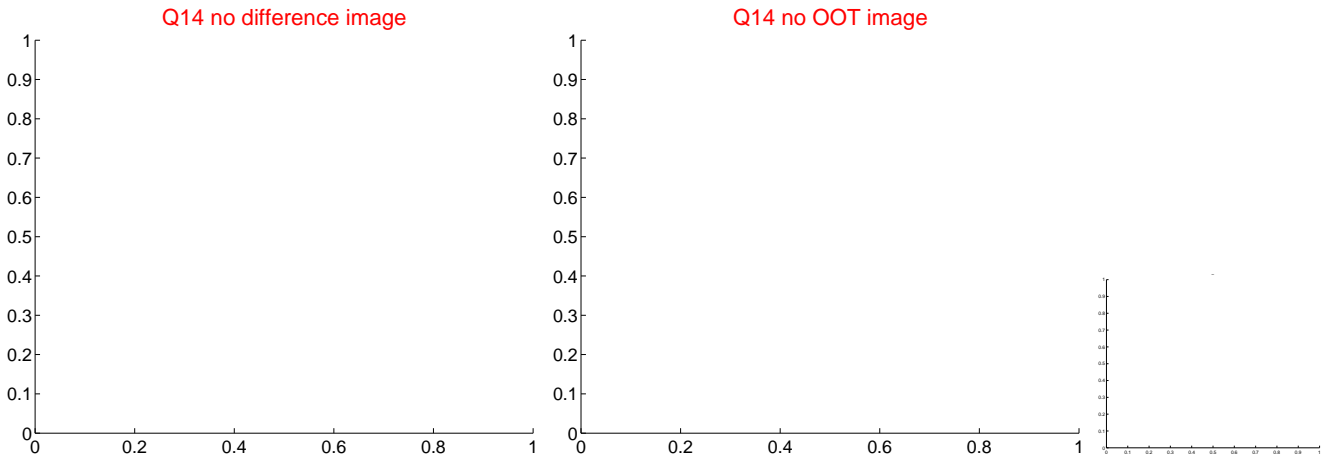
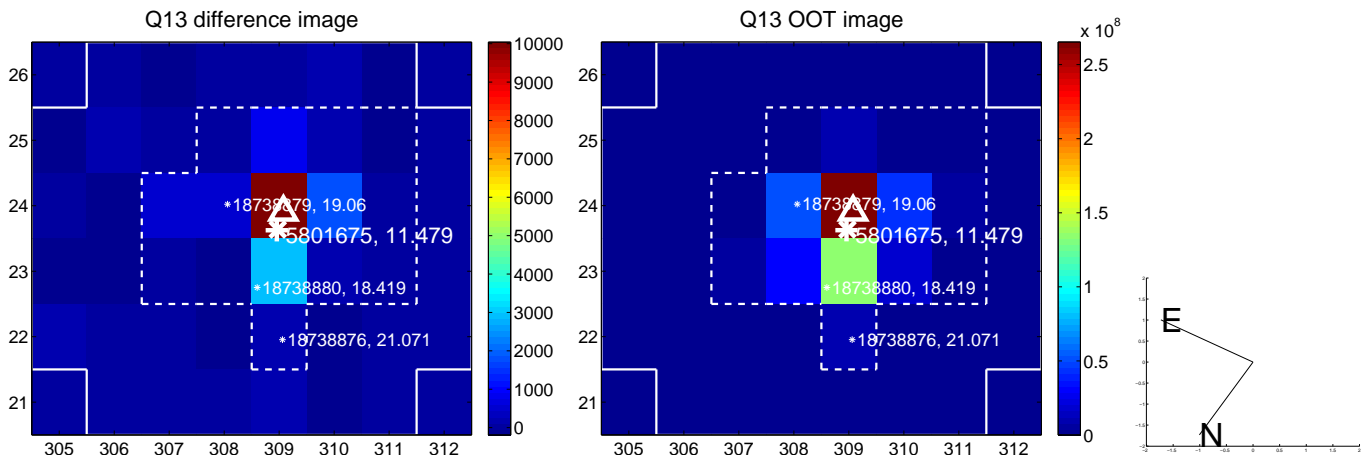
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

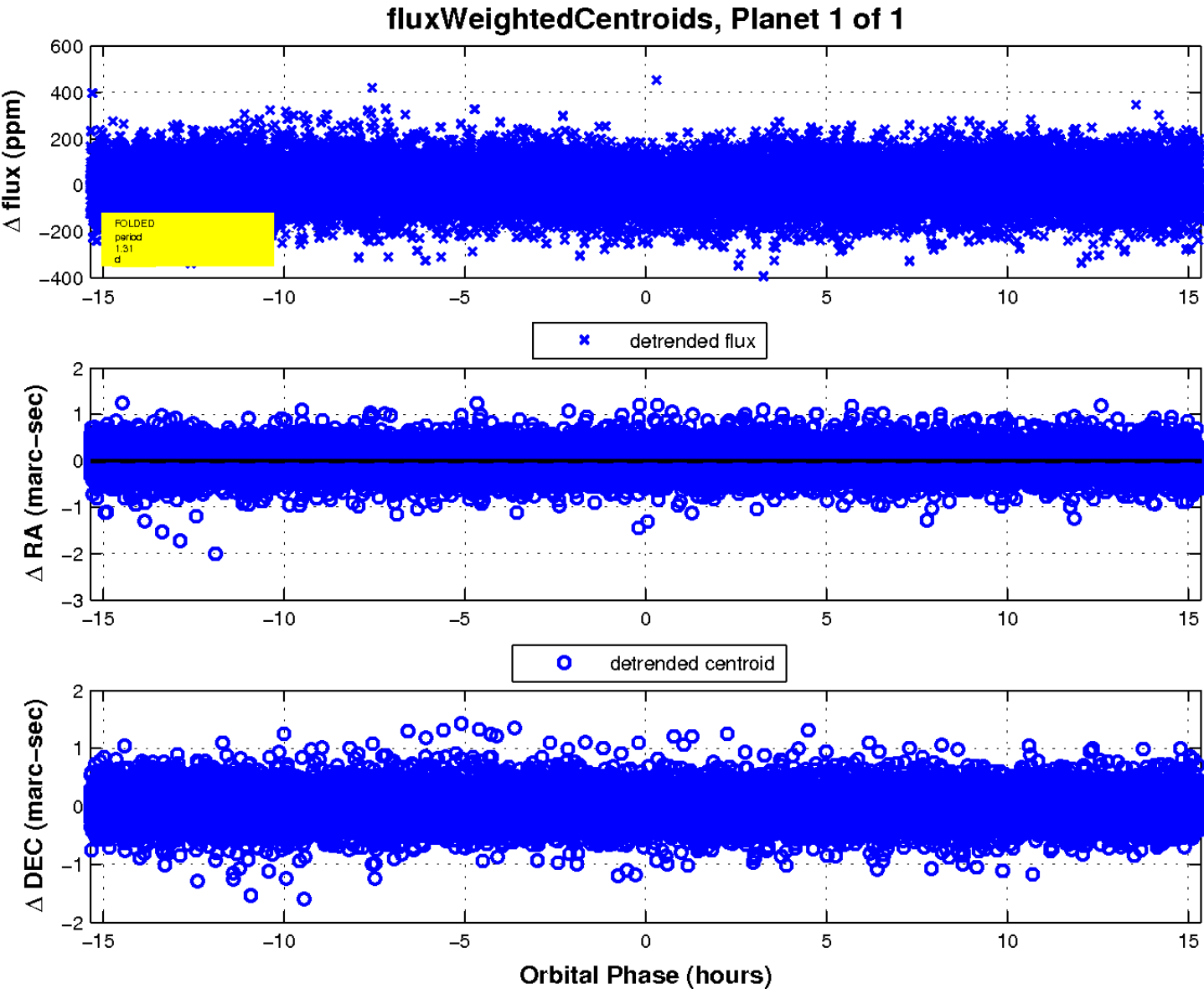
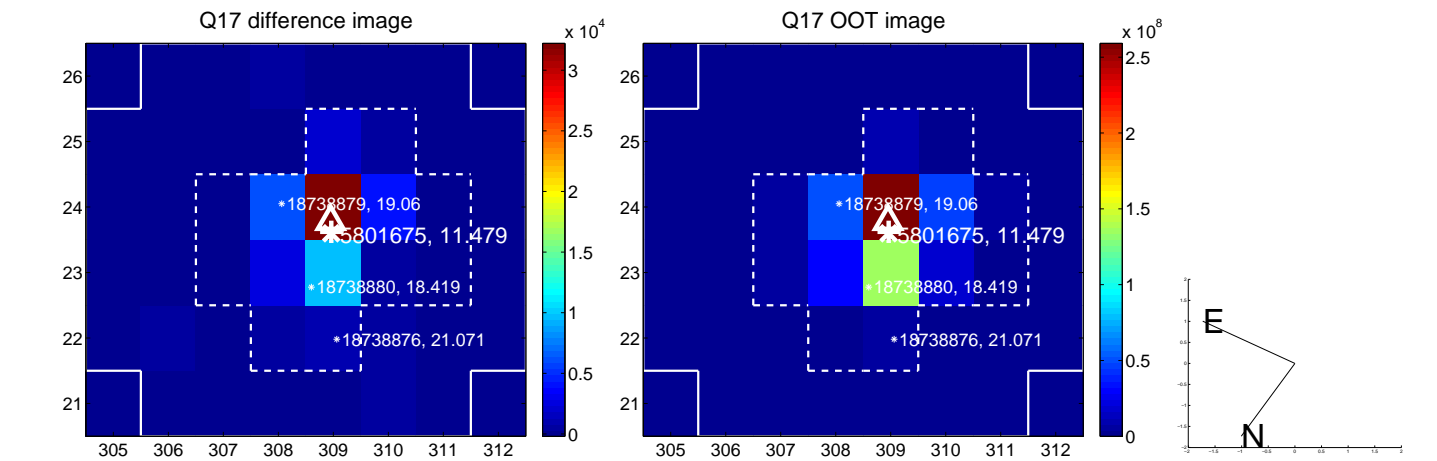


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

