

# KIC 011763910

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011763910-01	OBS	7477.01	0.612870	131.954116	21.1	4.804	12.1	9.1	1.37	6720	0.63	14474.53

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011763910-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

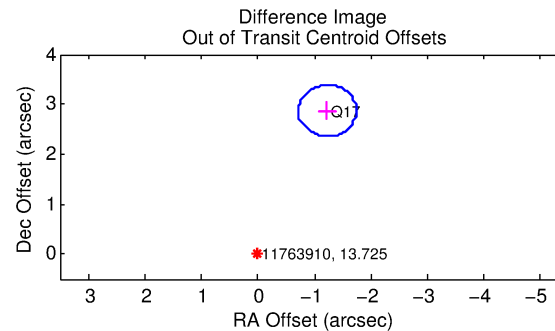
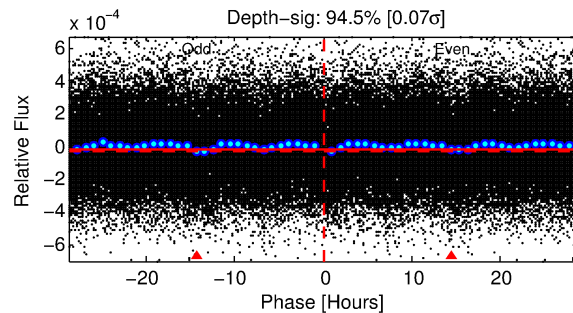
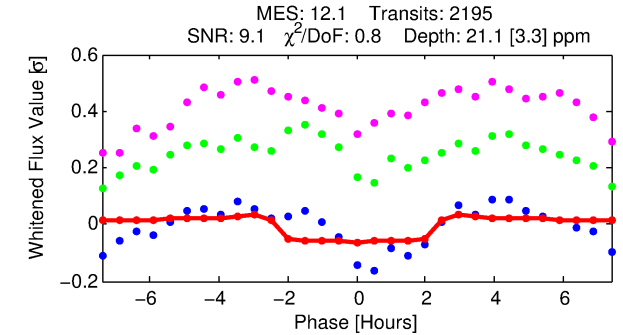
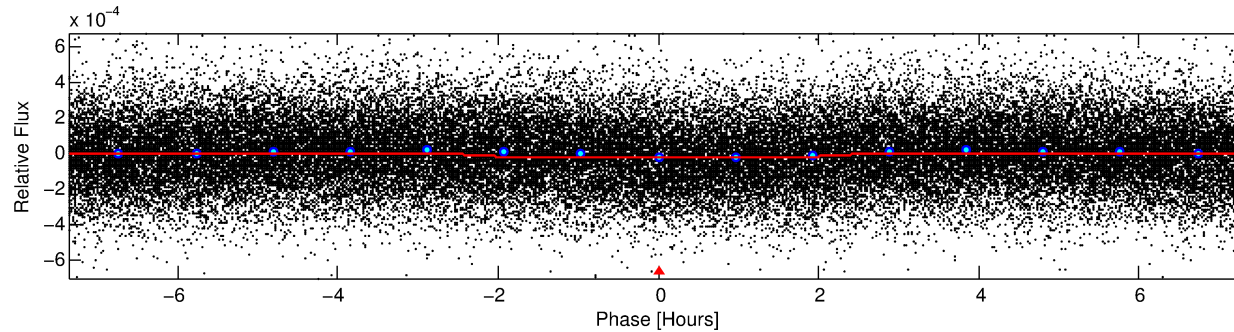
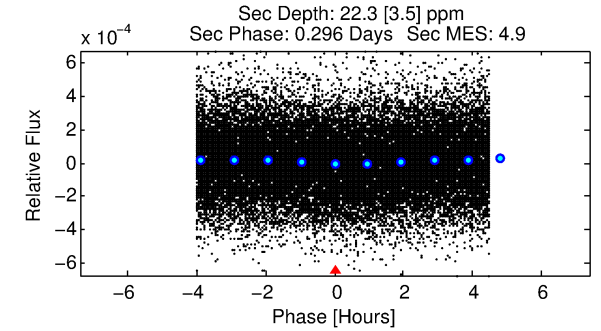
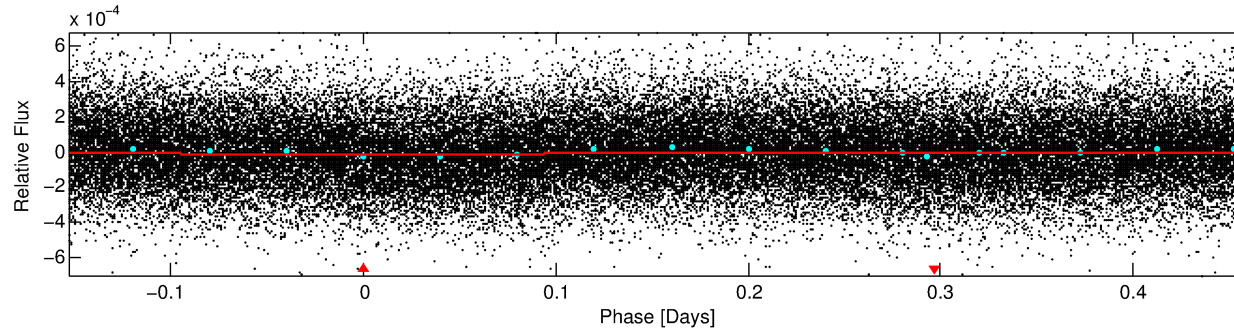
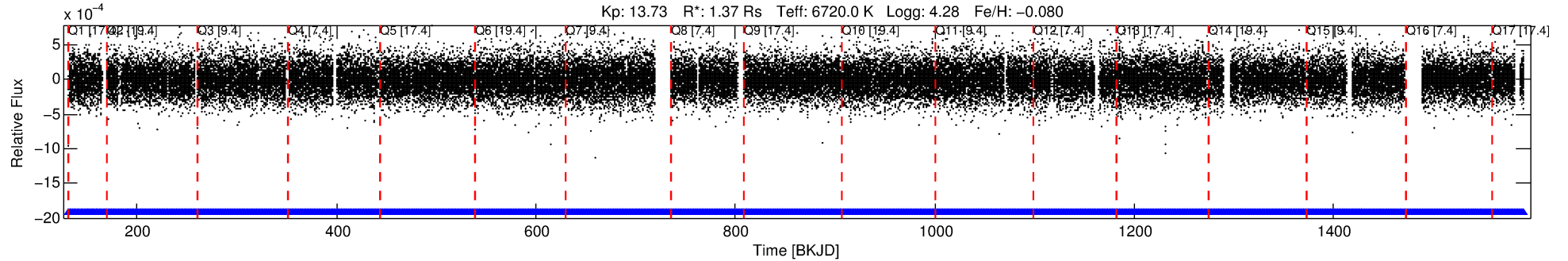
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011763910-01

No Significant Match Found

# DV One-Page Summary

KIC: 11763910 Candidate: 1 of 1 Period: 0.613 d  
KOI: K07477.01 Corr: 0.756



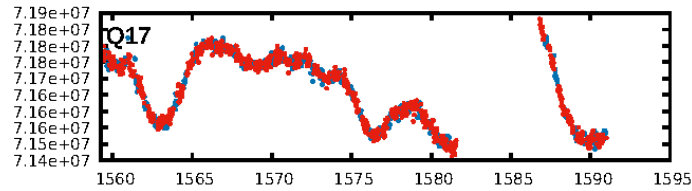
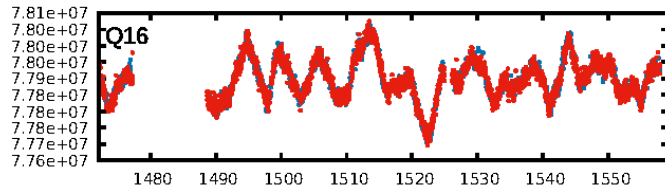
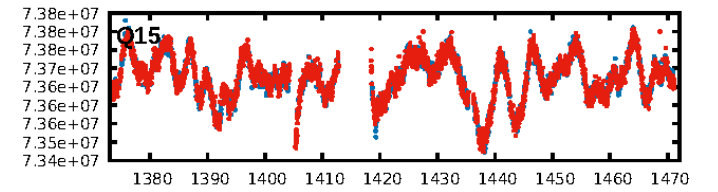
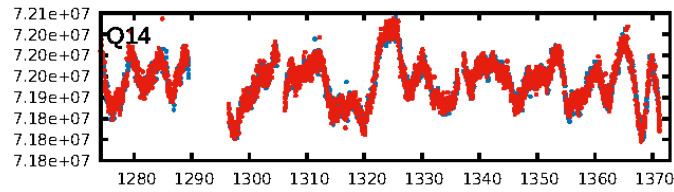
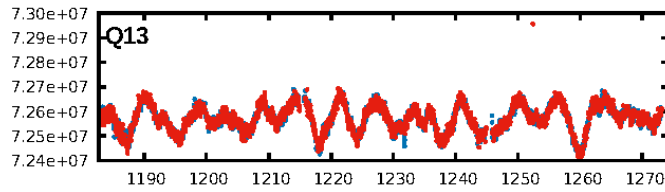
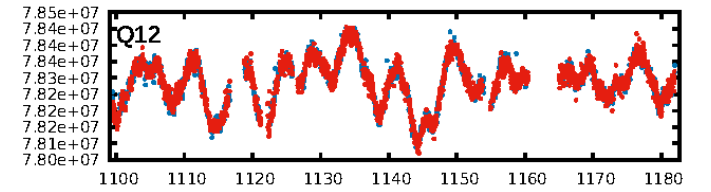
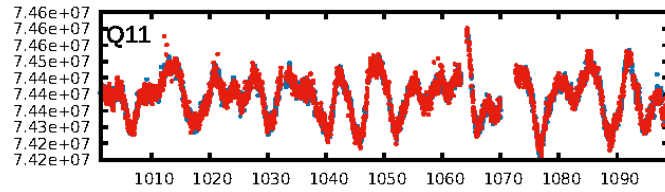
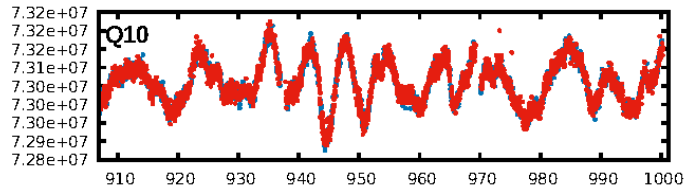
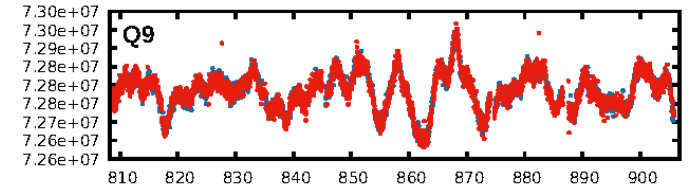
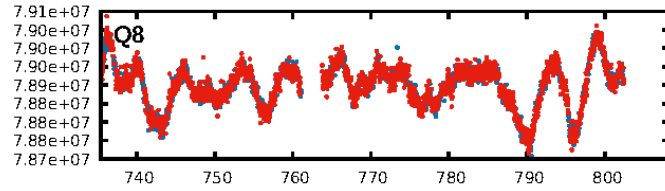
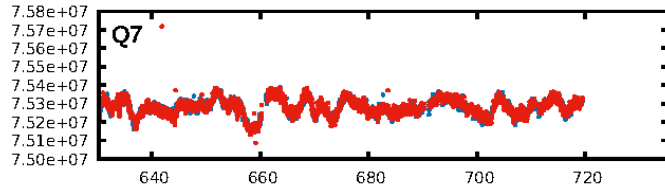
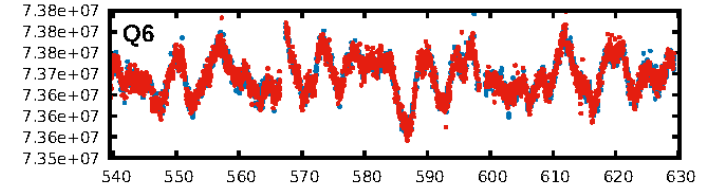
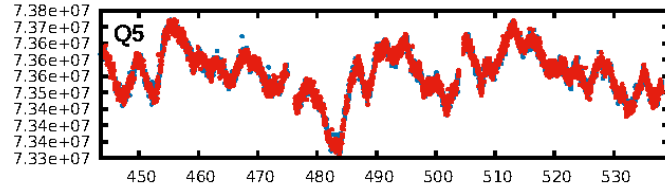
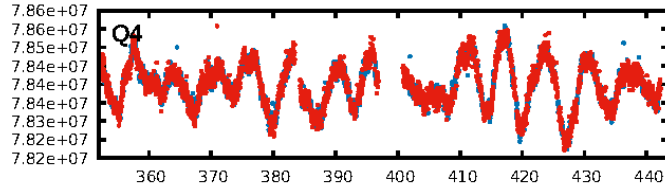
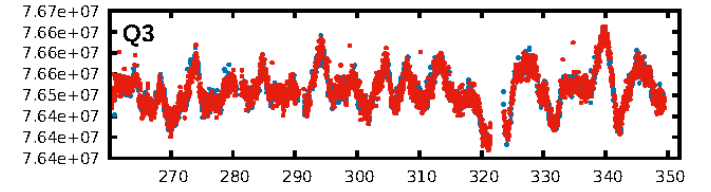
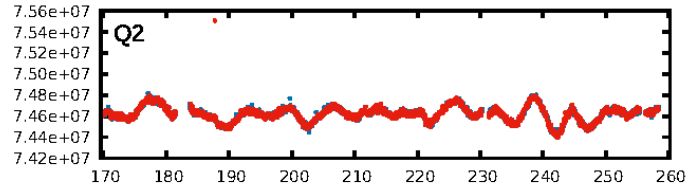
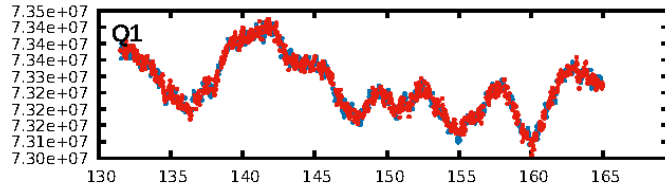
## DV Fit Results:

Period = 0.61287 [0.00001] d  
Epoch = 131.9541 [0.0038] BKJD  
Rp/R\* = 0.0042 [0.0034]  
a/R\* = 1.17 [1.39]  
b = 0.10 [42.53]  
Seff = 14474.53 [5967.58]  
Teq = 2797 [288] K  
Rp = 0.63 [0.55] Re  
a = 0.0154 [0.0042] AU  
Ag = 7.24 [11.95] [0.52σ]  
Teffp = 7093 [2861] K [1.49σ]

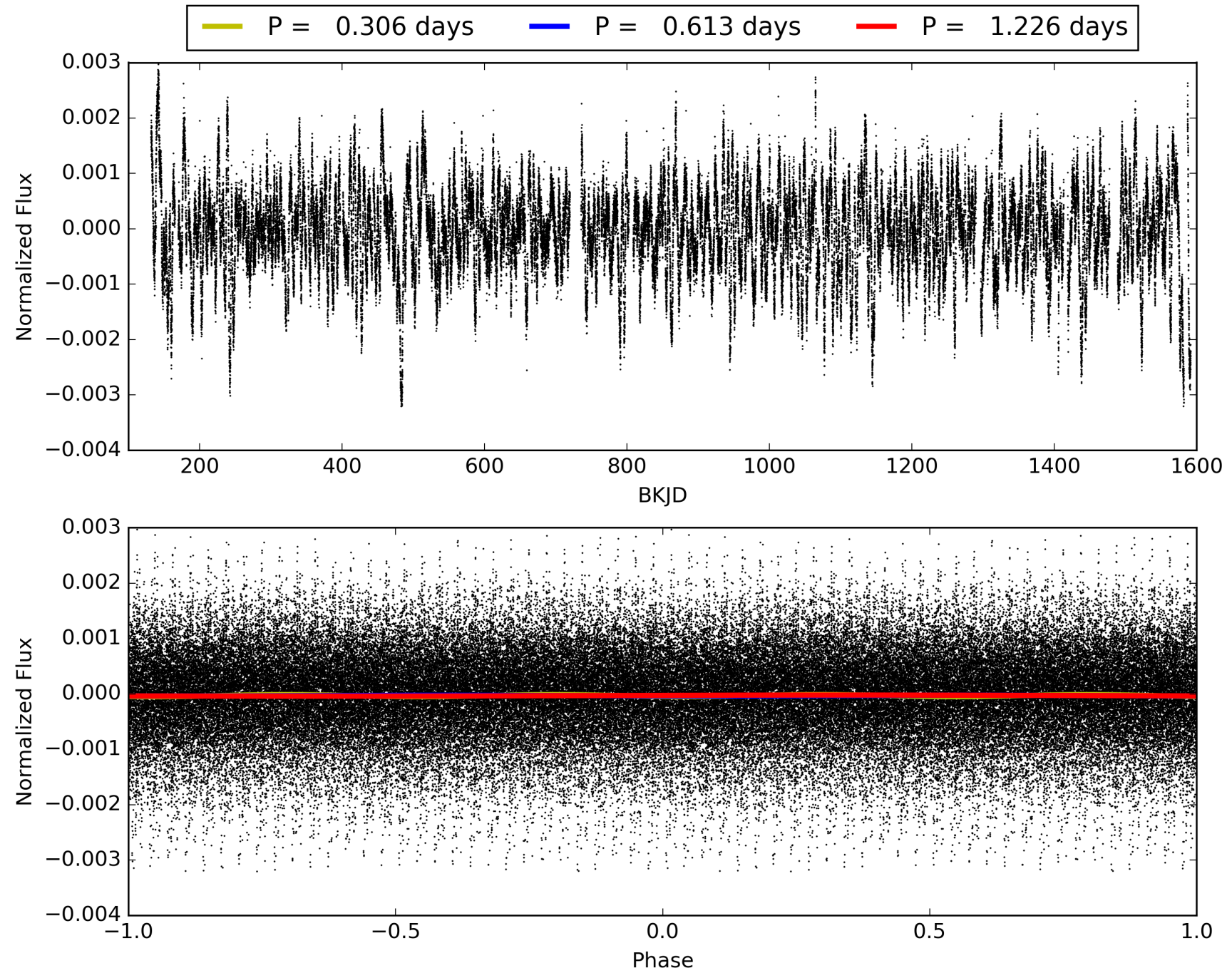
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2096/2096]  
GhostDiagnostic-chr: -1.726  
Centroid-sig: 0.0%  
Centroid-so: 3.978 arcsec [3.80σ]  
OotOffset-rm: 3.122 arcsec [18.20σ]  
KicOffset-rm: 3.037 arcsec [17.87σ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 011763910-01, PDC Light Curves

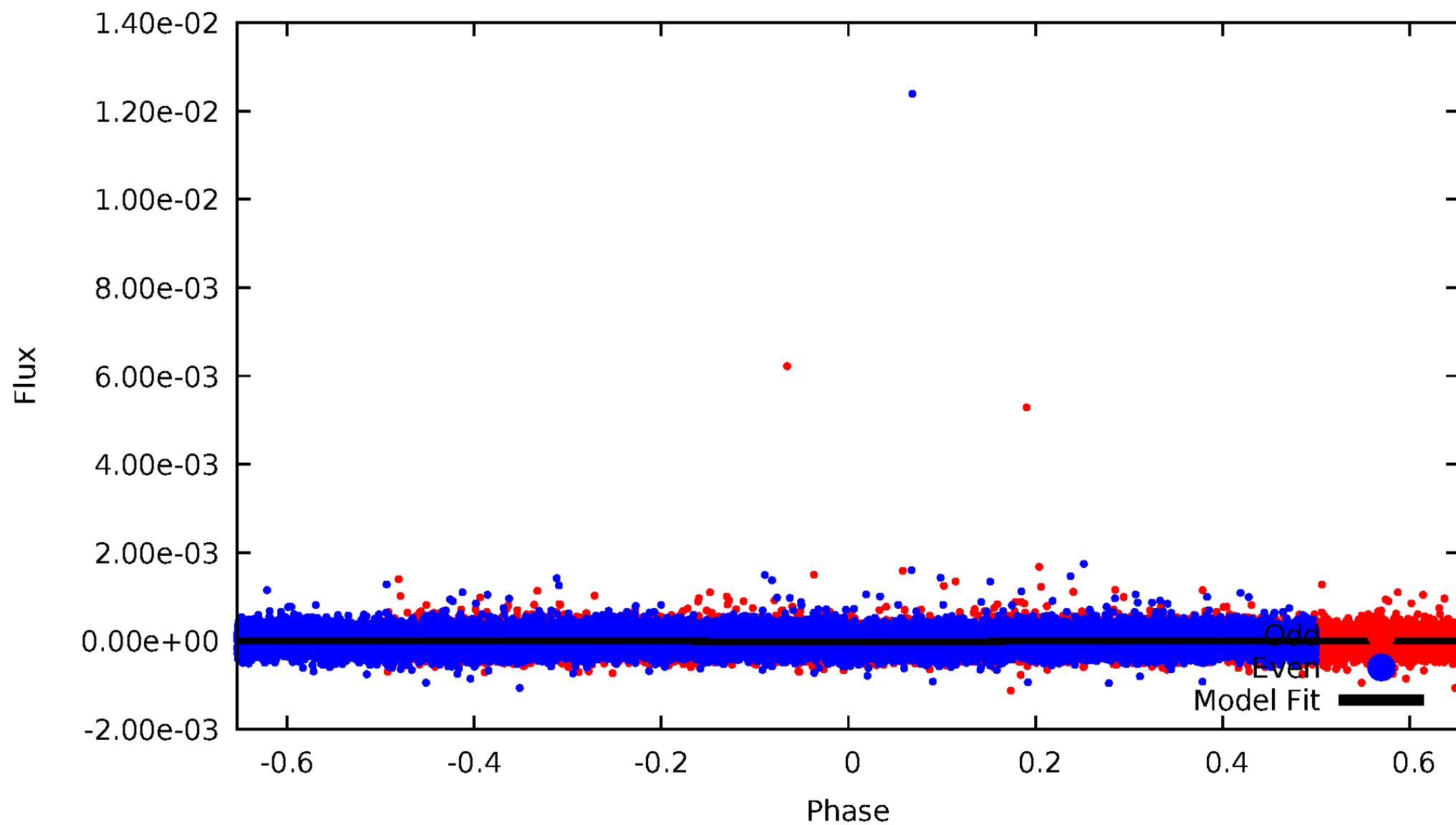


# TCE 011763910-01



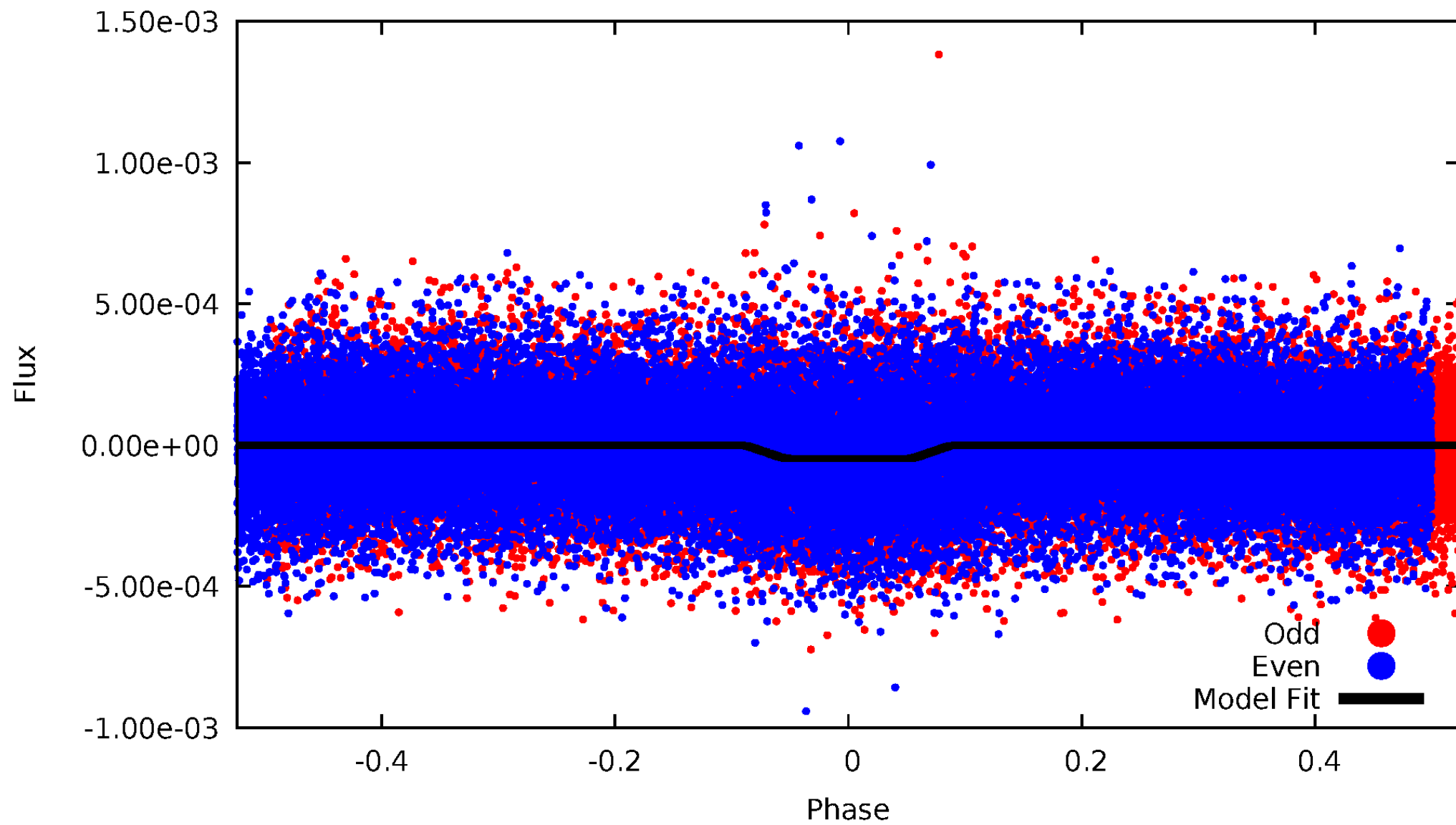
# DV Odd/Even

TCE 011763910-01



# ALT Odd/Even

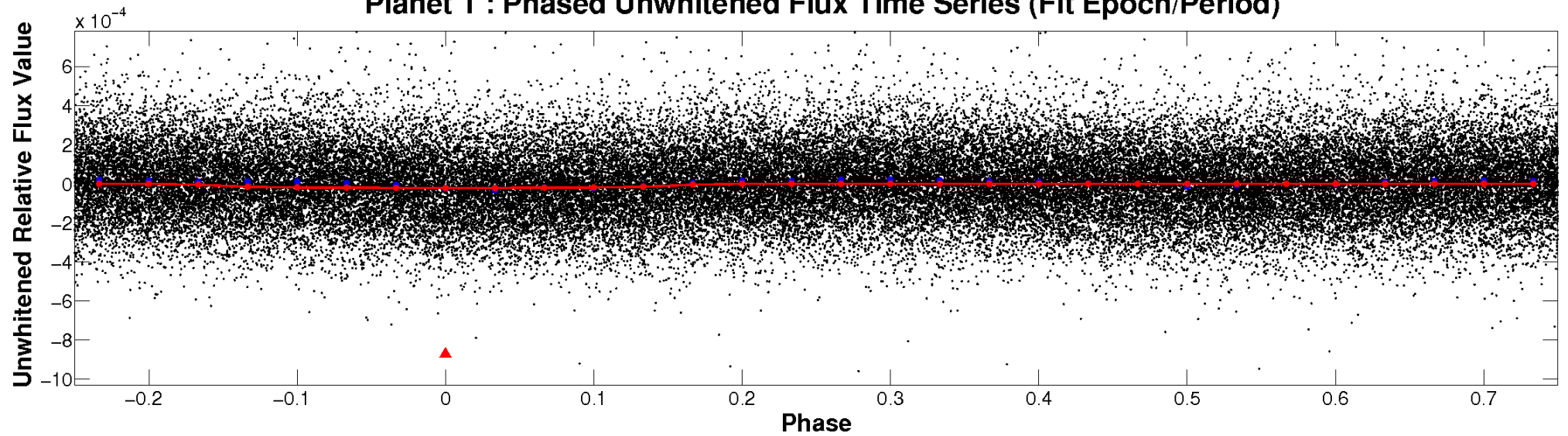
TCE 011763910-01



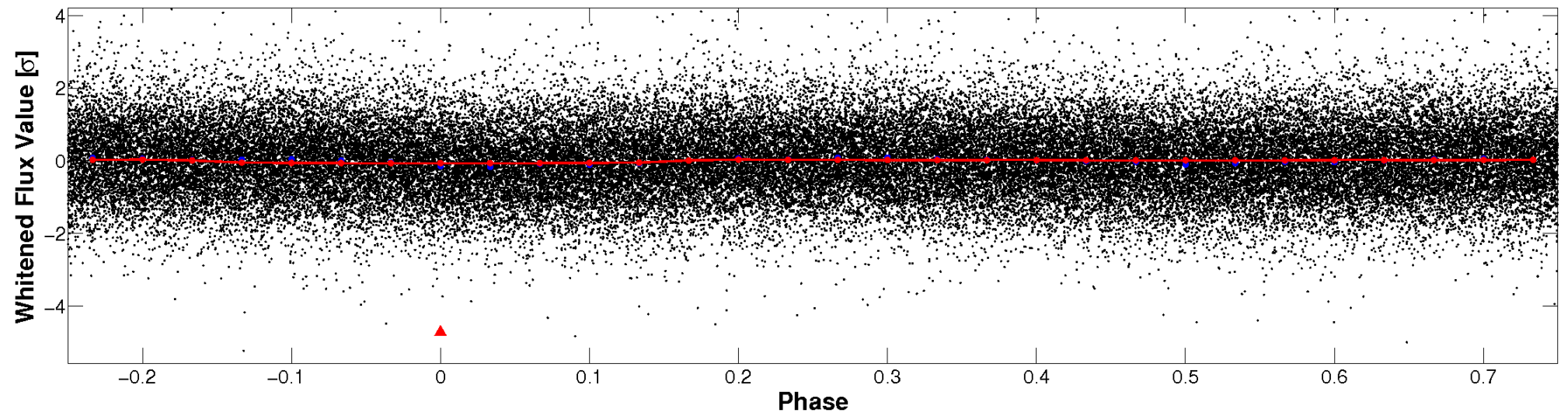


# Non-Whitened Vs. Whitened Light Curve

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

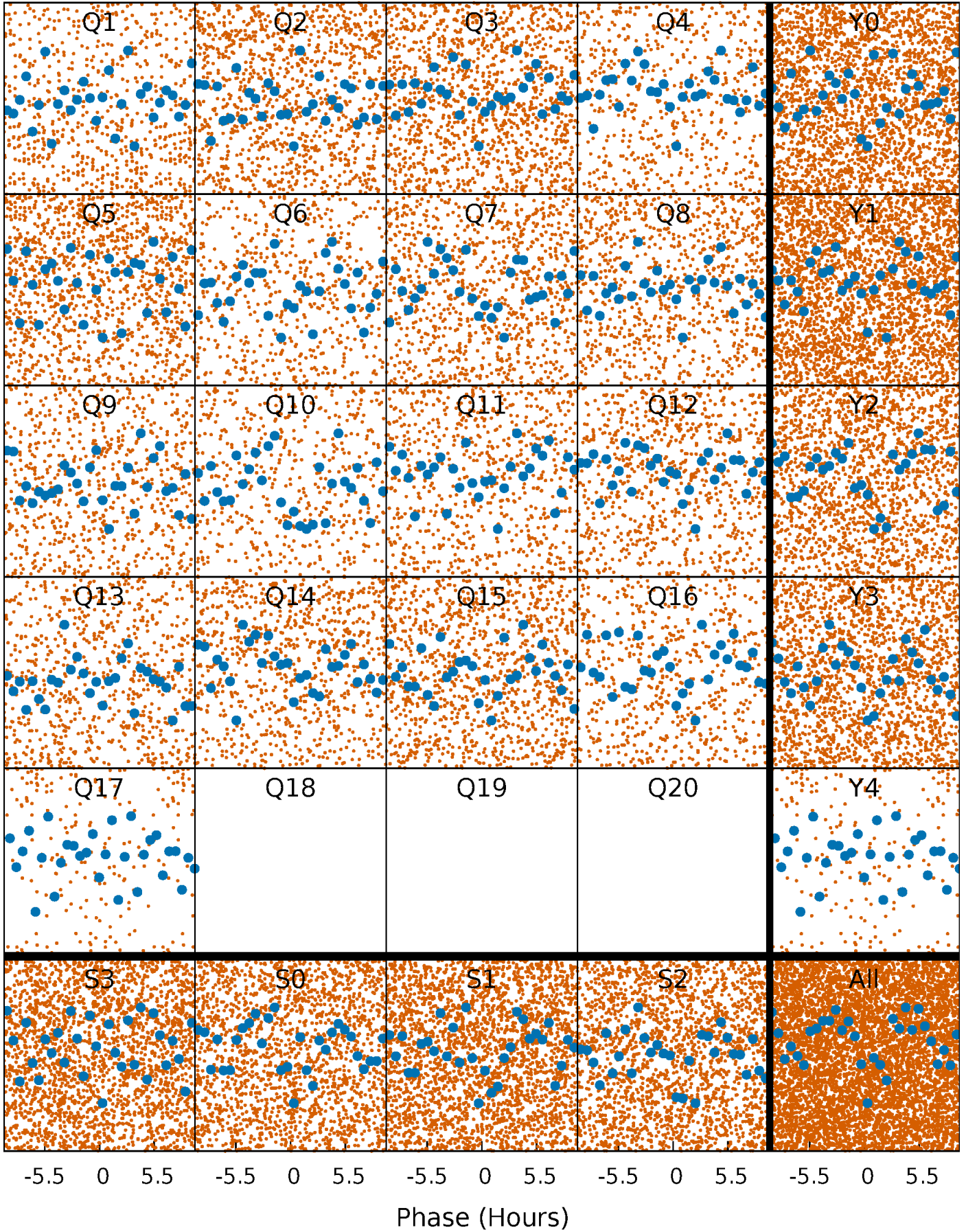


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

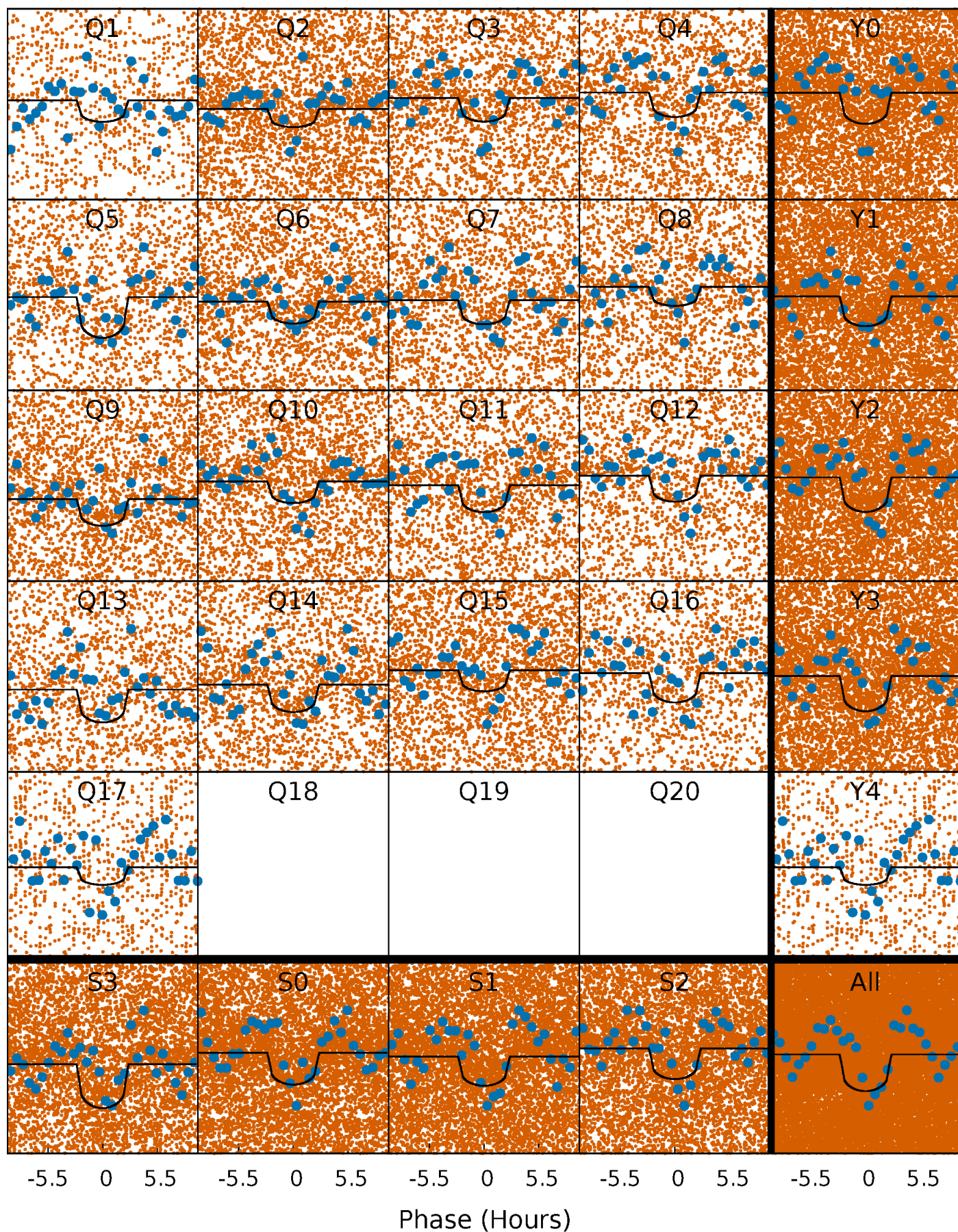
TCE 011763910-01 P= 0.612870 Days  $T_0=131.954116$  (BKJD)





# DV Quarter-Phased Transit Curves

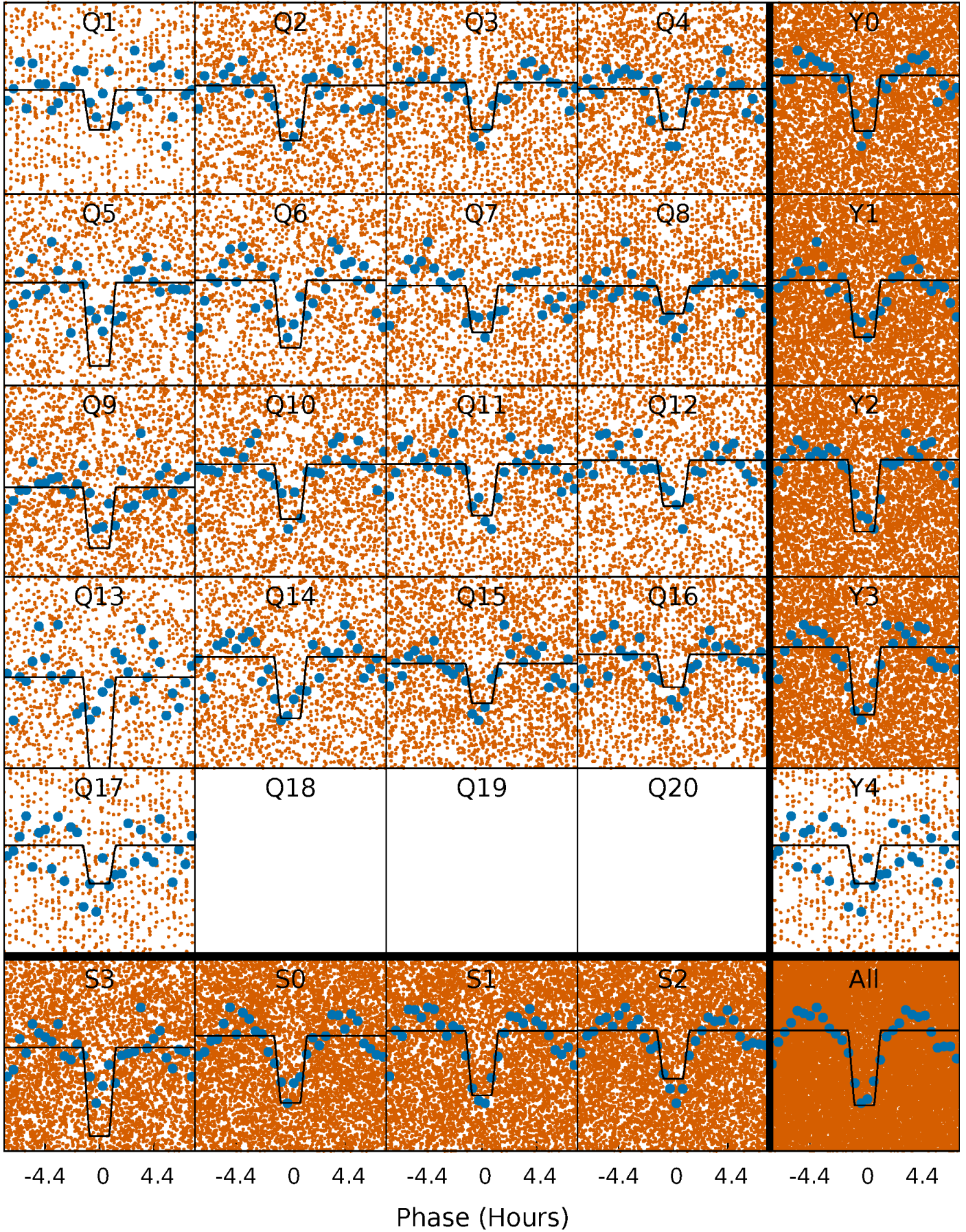
TCE 011763910-01 P= 0.612870 Days  $T_0=131.954116$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

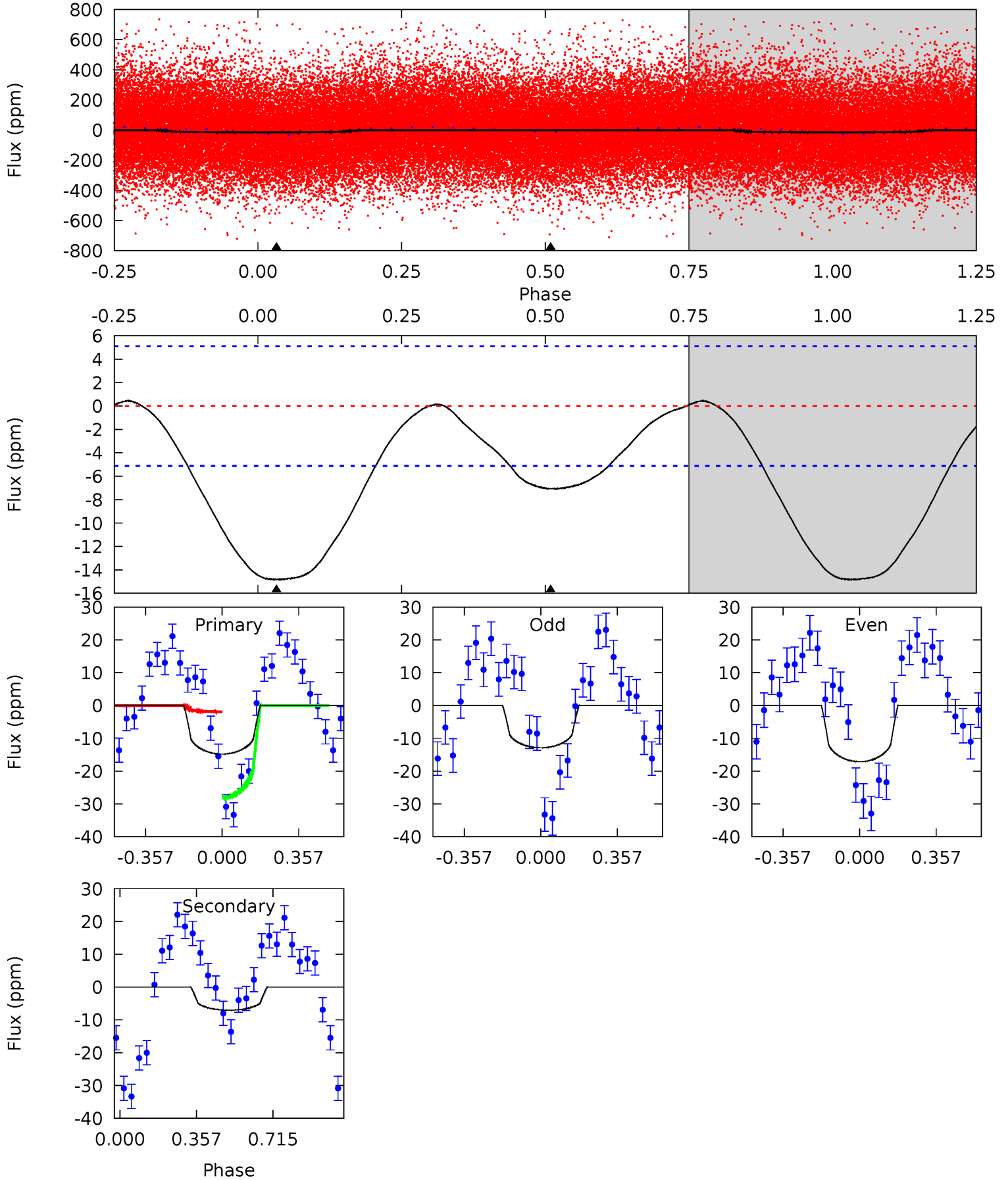
TCE 011763910-01 P= 0.612894 Days  $T_0=131.954993$  (BKJD)



# DV Model-Shift Uniqueness Test

011763910-01,  $P = 0.612870$  Days,  $E = 131.341246$  Days

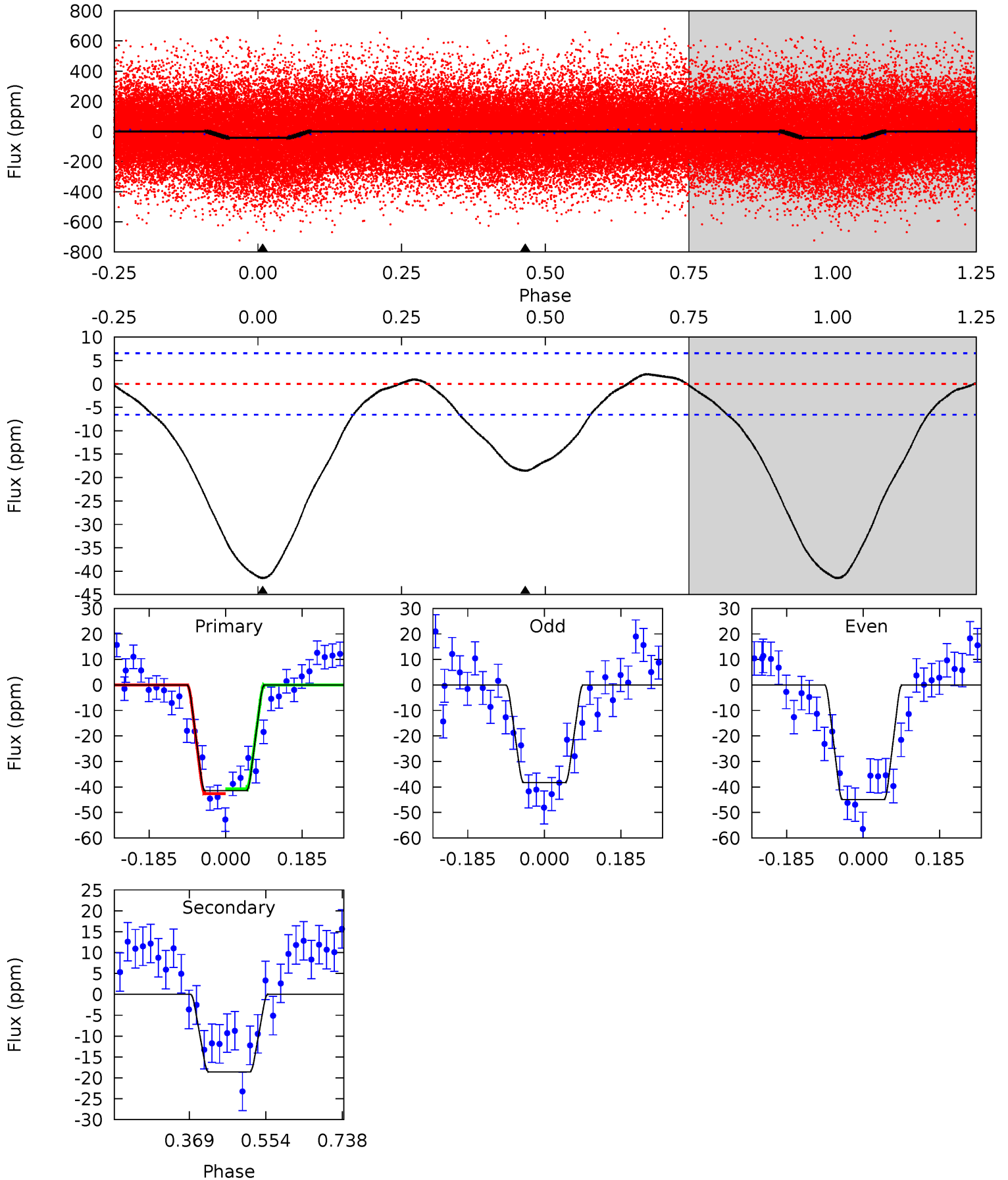
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	5.93	0	0	4.29	0.92	0.43	12.4	12.4	5.93	5.93	1.79	0.80	0.03	11.2



# Alt Model-Shift Uniqueness Test

011763910-01, P = 0.612894 Days, E = 131.342099 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
28.0	12.5	0	0	4.43	1.33	1.61	28.0	28.0	12.5	12.5	2.24	0.93	0.05	0.66





### Stellar Parameters For KIC 011763910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6720^{+161}_{-261}$	$4.276^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.350}$	$1.368^{+0.453}_{-0.226}$	$1.294^{+0.200}_{-0.200}$	$0.713^{+0.342}_{-0.390}$
	+2%/-4%	+2%/-5%	+312%/-438%	+33%/-17%	+15%/-15%	+48%/-55%
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 011763910-01 / KOI 7477.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-7 \pm 1$	$0.73^{+0.49}_{-0.41}$	$3977^{+315}_{-254}$	$4884^{+2895}_{-1190}$	$1.687^{+7.655}_{-1.088}$
Alt.	$-19 \pm 1$	$1.09^{+0.52}_{-0.48}$	$3963^{+304}_{-229}$	$5106^{+1782}_{-930}$	$1.992^{+4.563}_{-1.075}$

$T_{max}$  = 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

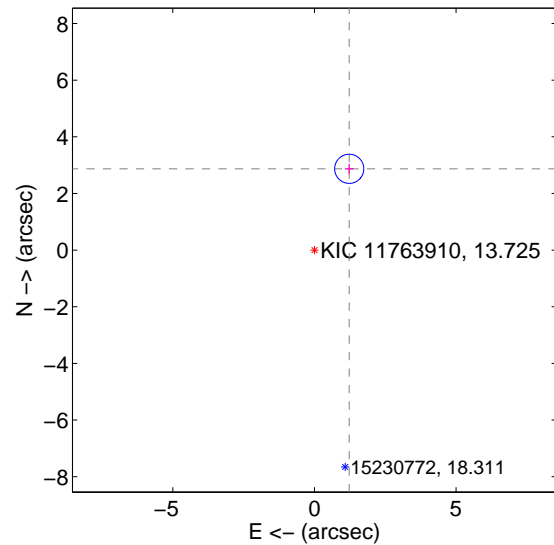
Supplemental centroid analysis for 011763910-01. Kepler magnitude: 13.72. Transit SNR 9.08

There are 0 quarters with good PRF difference image offsets

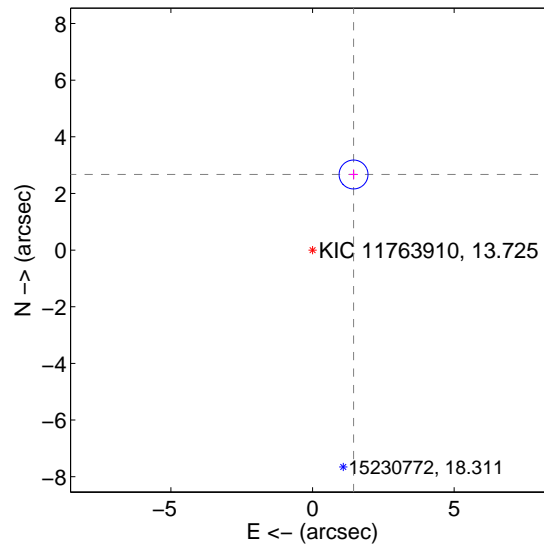
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.122 \pm 0.172$	18.20	$-1.228 \pm 0.152$	$2.870 \pm 0.175$
PRF-fit source offset from KIC position	$3.037 \pm 0.170$	17.87	$-1.448 \pm 0.152$	$2.669 \pm 0.175$
photometric centroid source offset	$3.98 \pm 1.05$	3.80	$-2.23 \pm 0.81$	$3.30 \pm 1.14$

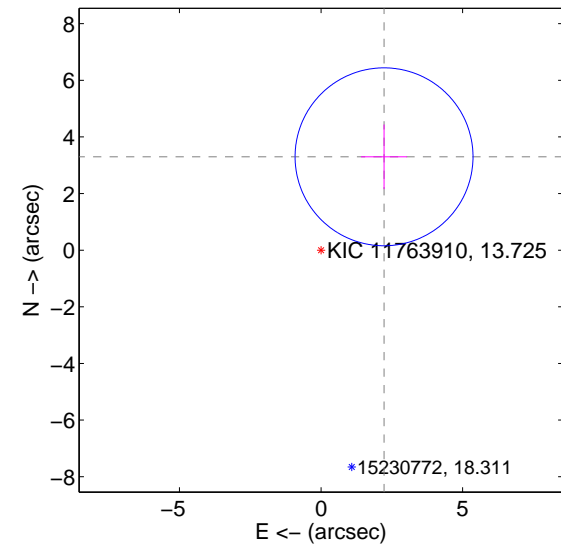
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

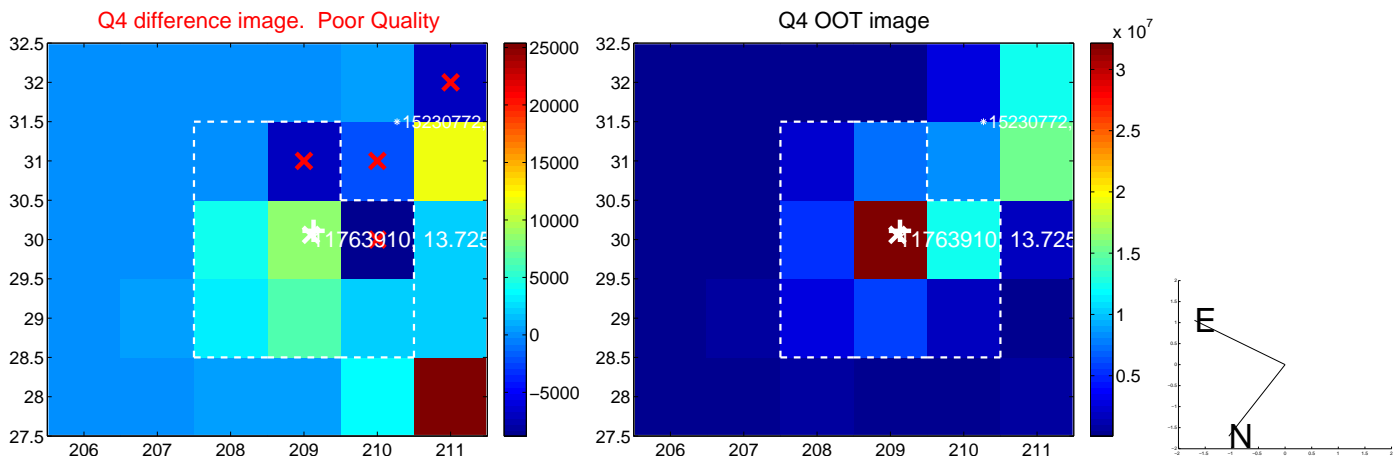
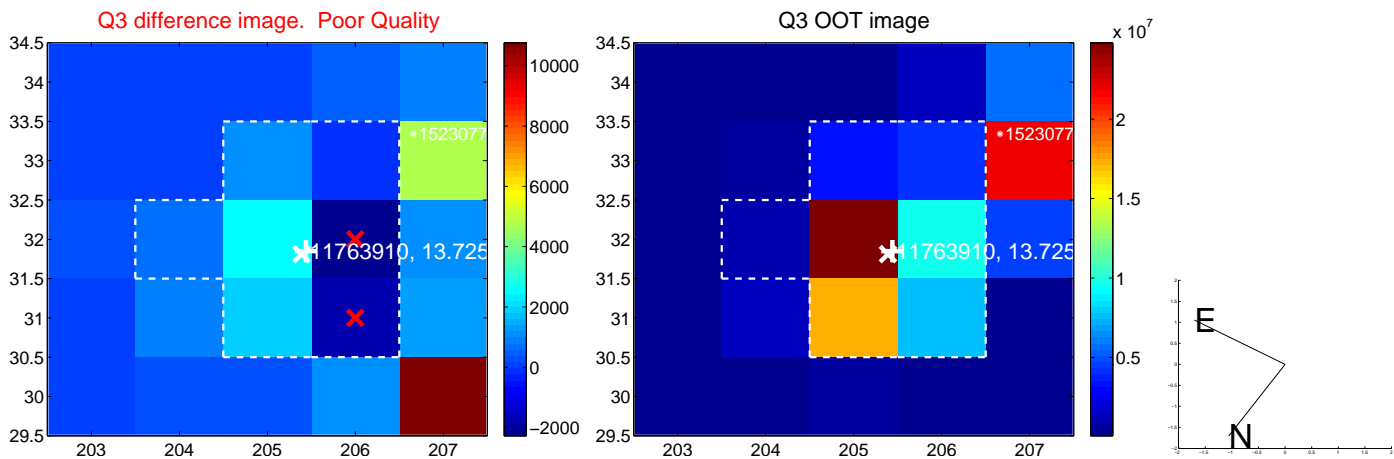
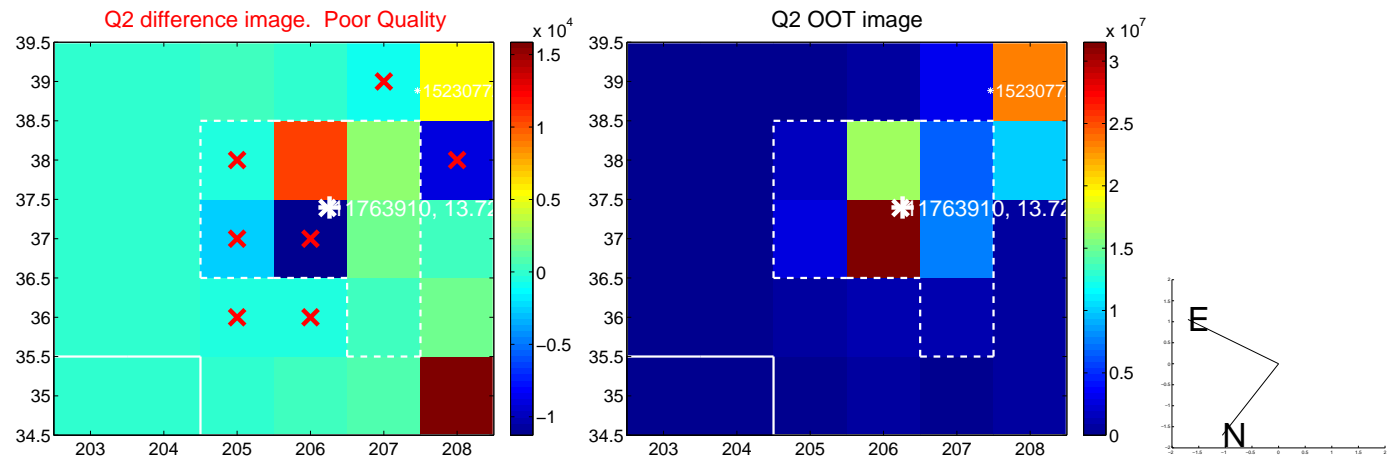
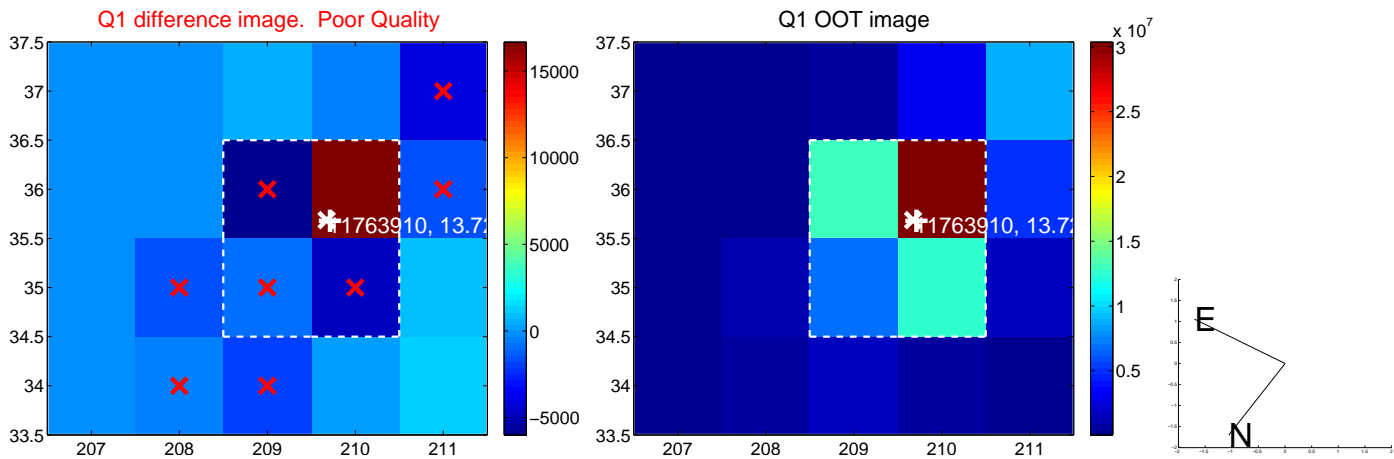


offset from photometric centroids

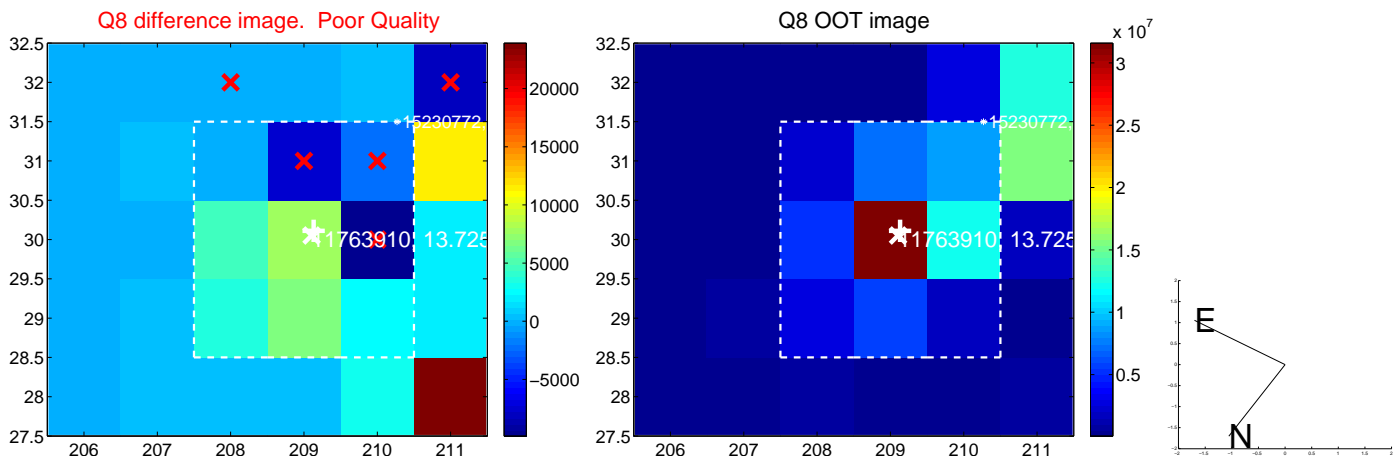
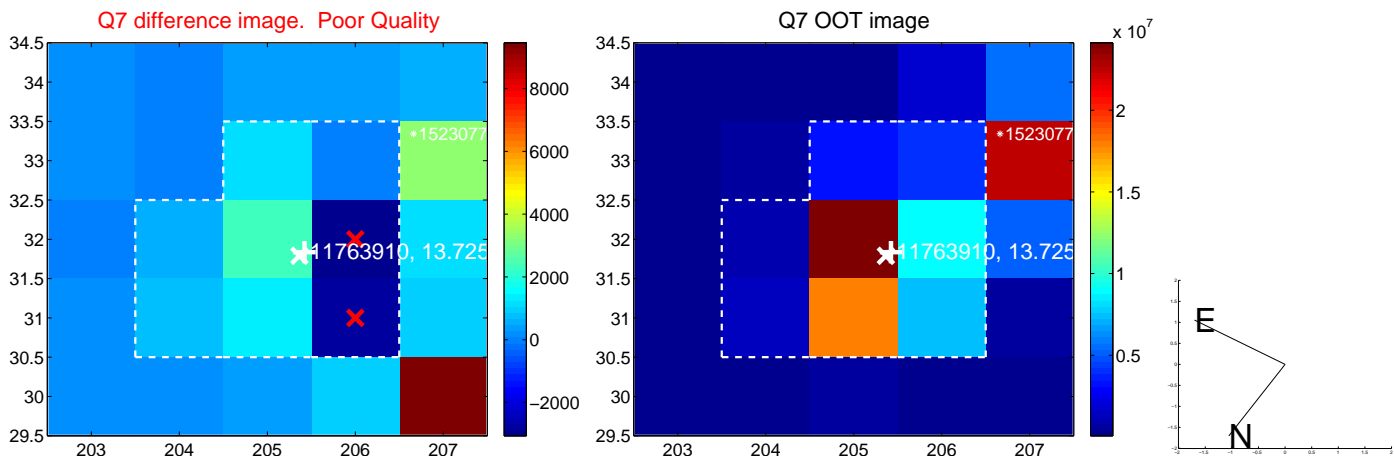
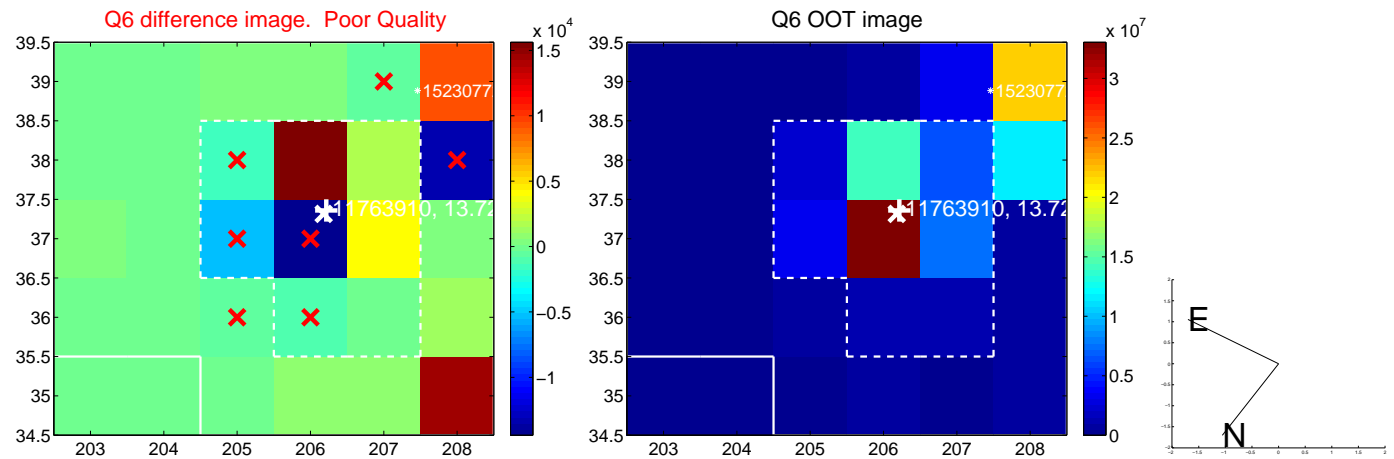
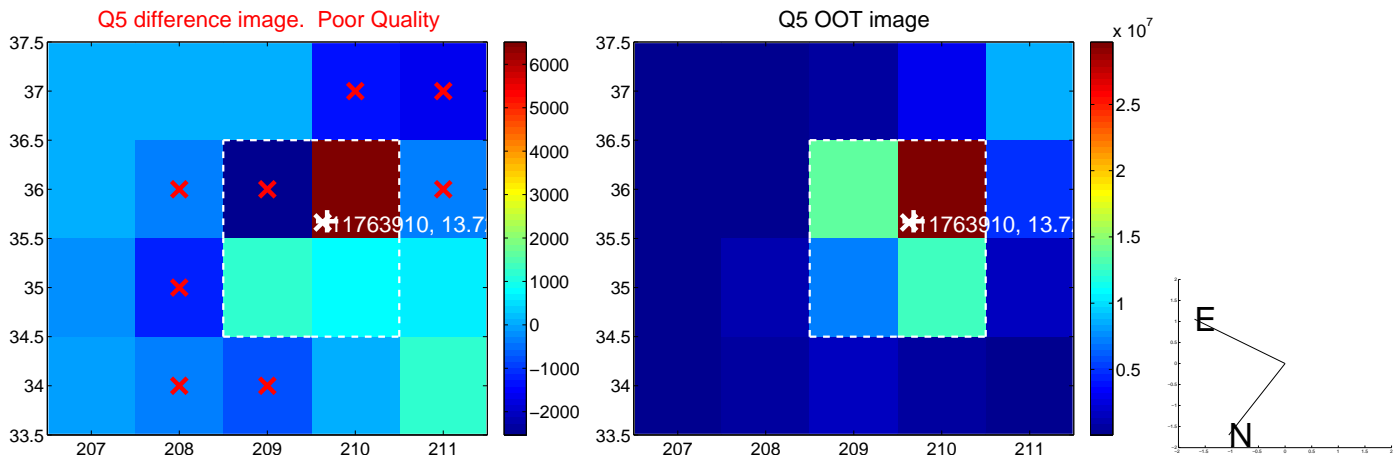


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



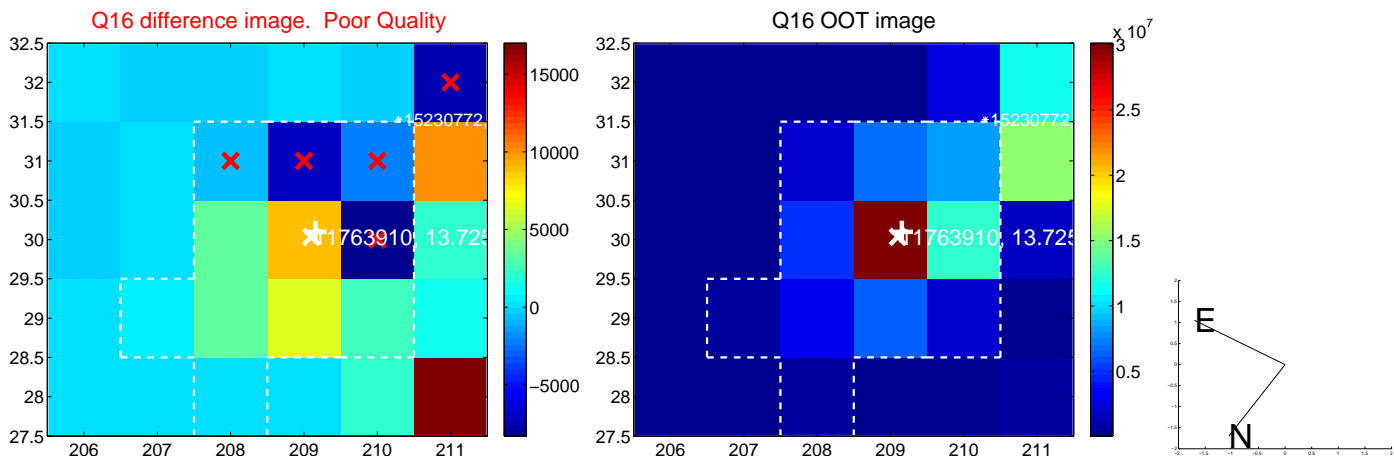
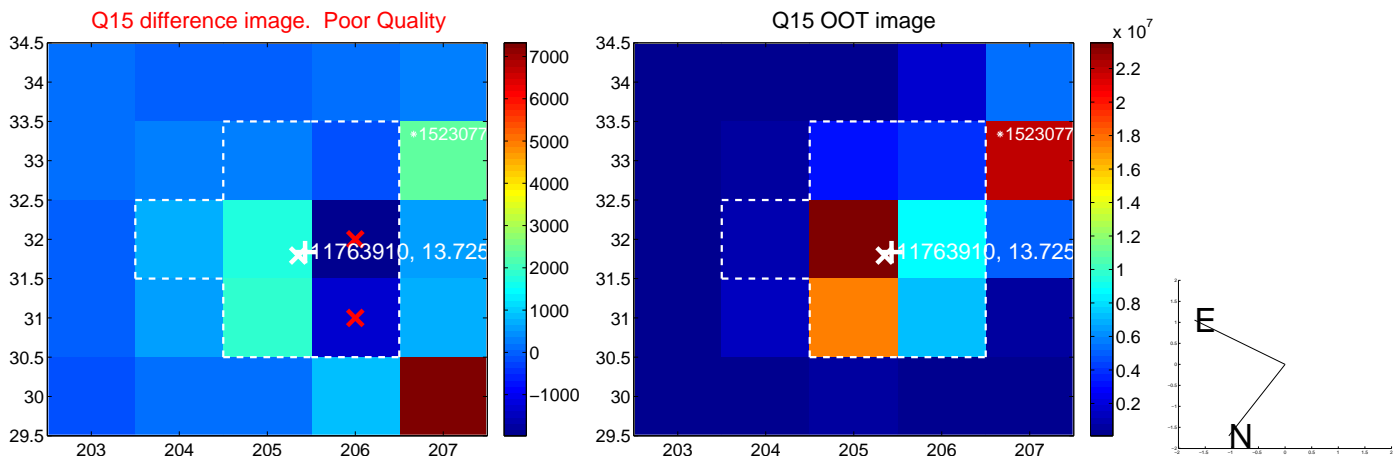
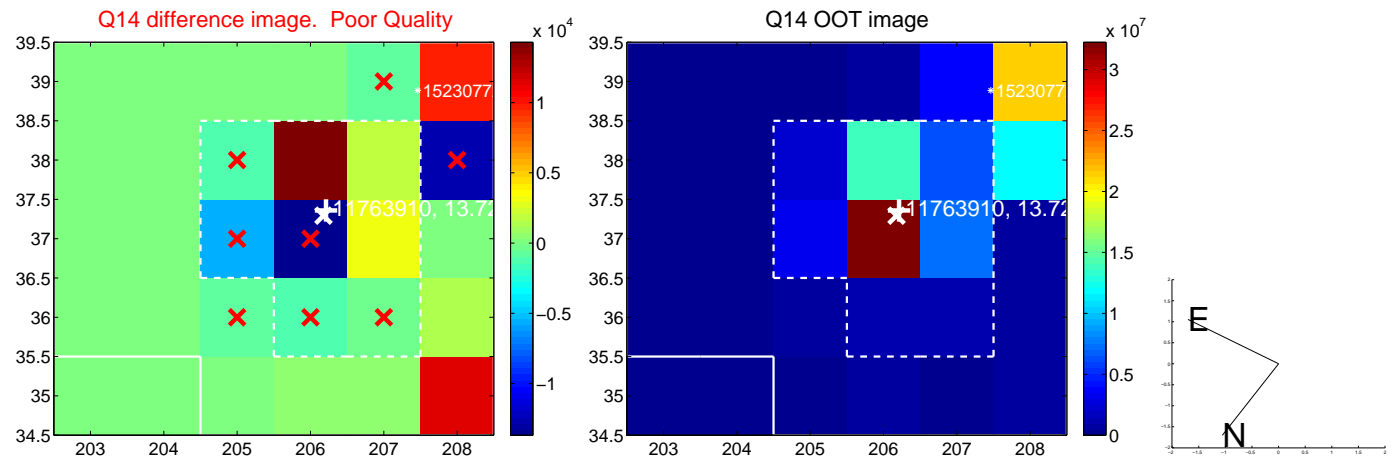
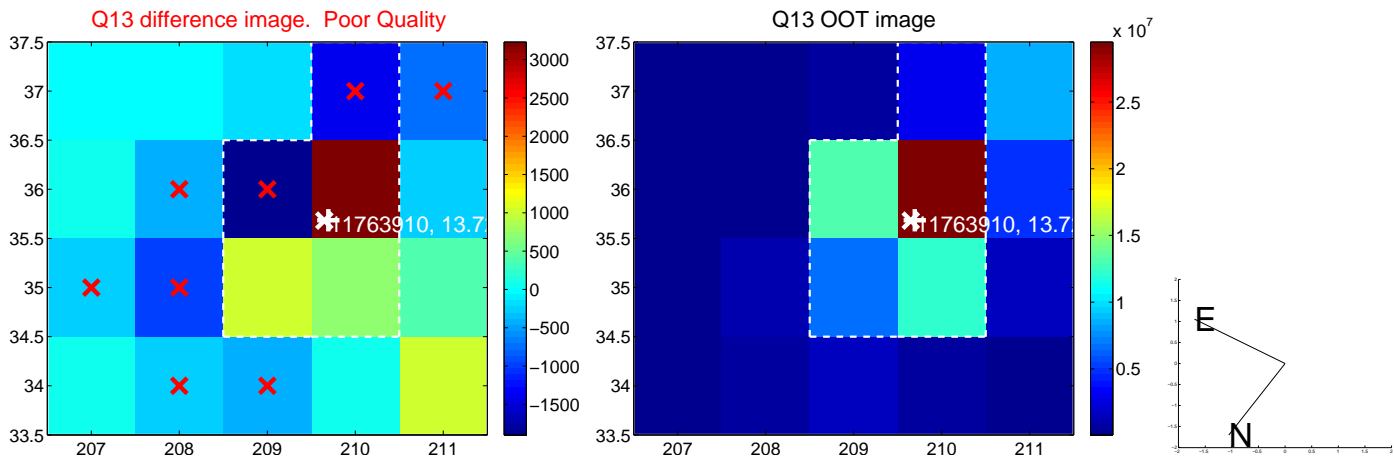
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



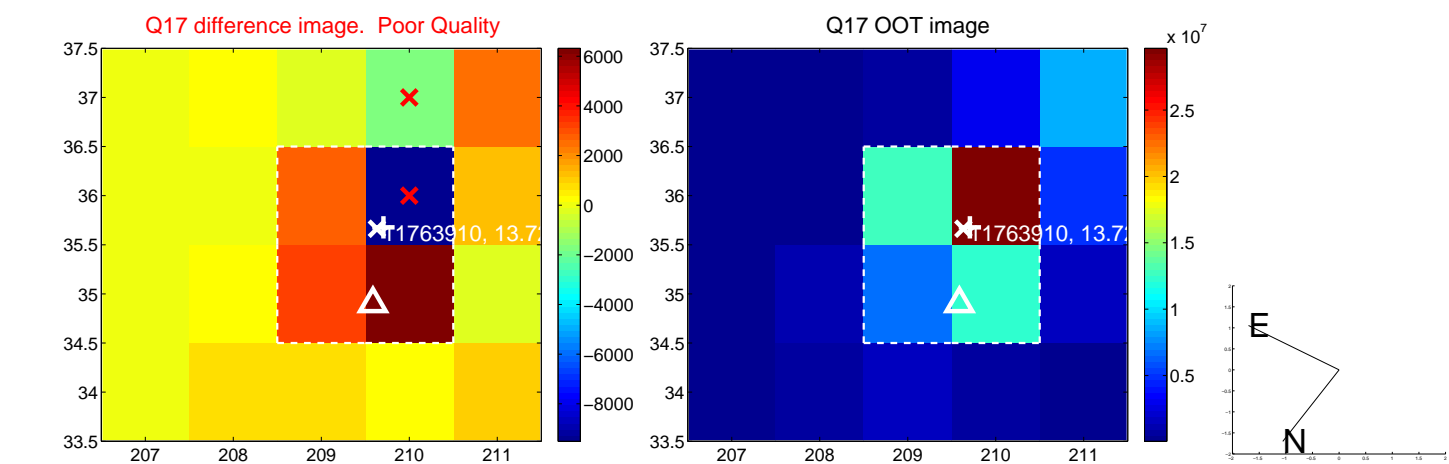




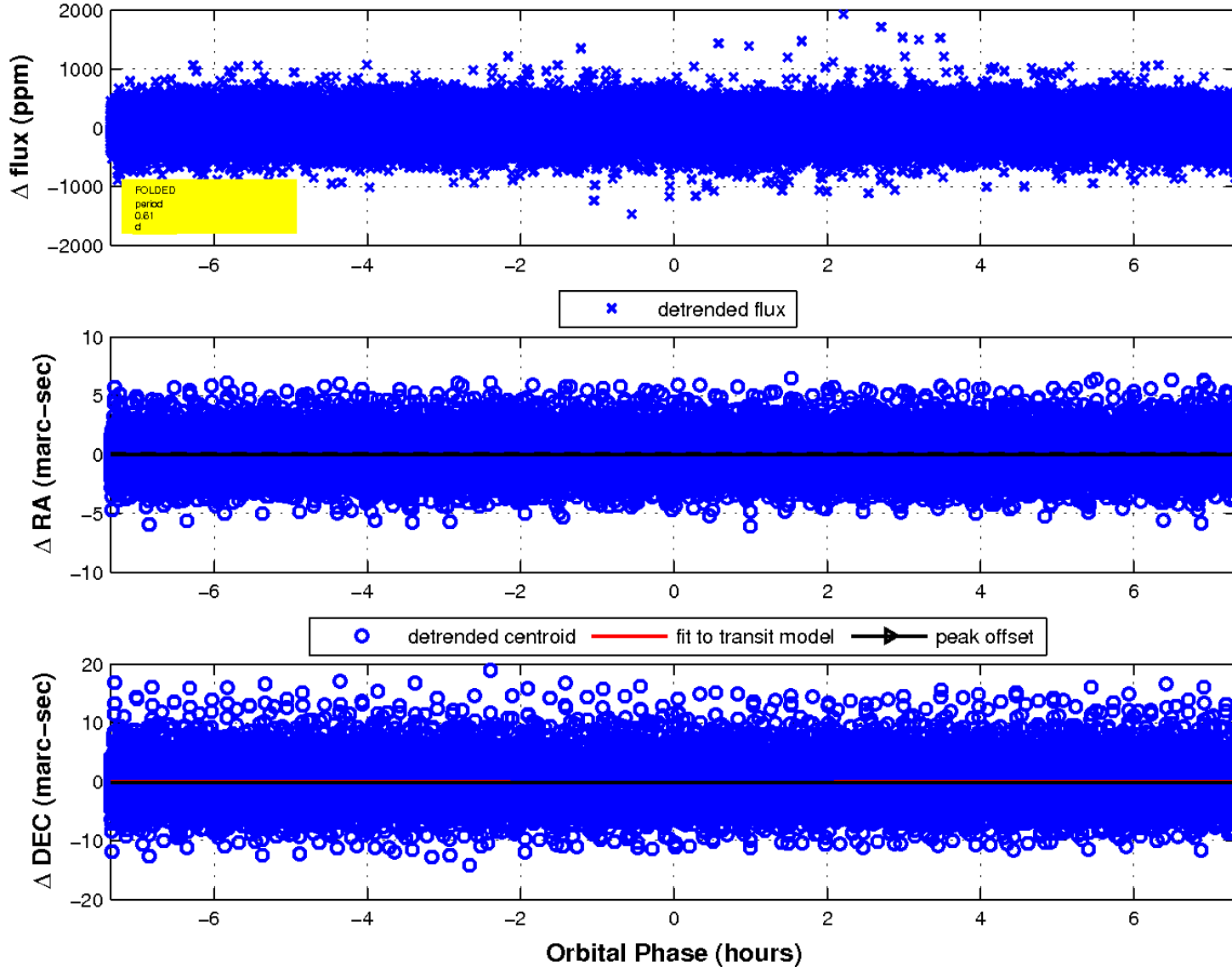
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

