

# KIC 006363900

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006363900-01	OBS	No	0.605893	131.792486	19.1	1.881	8.8	9.7	1.42	6366	0.73	13500.11

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006363900-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

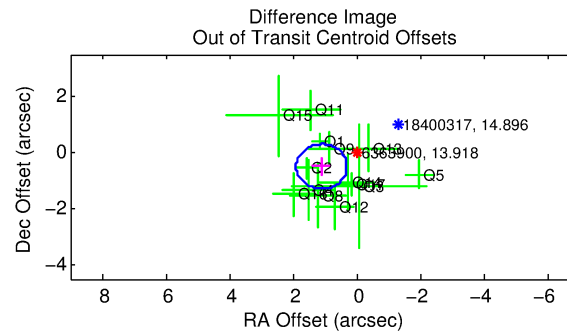
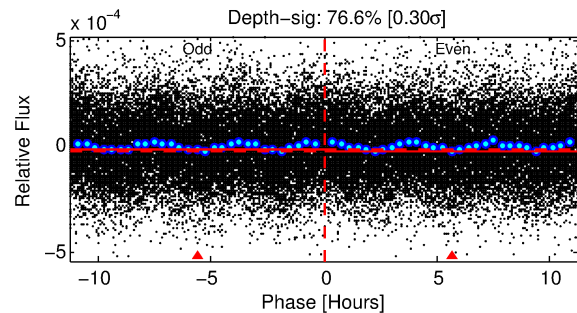
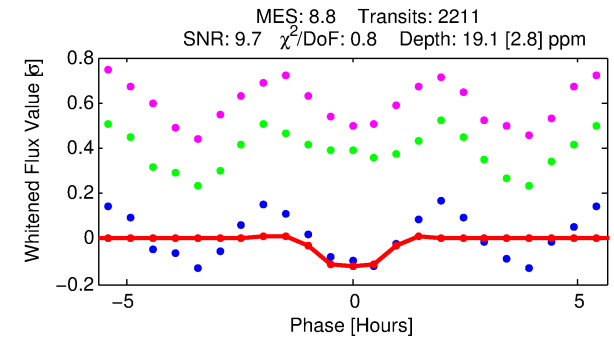
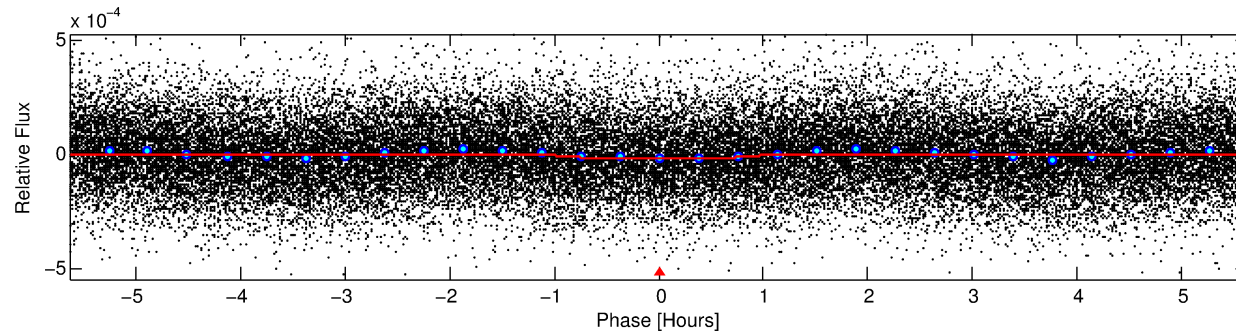
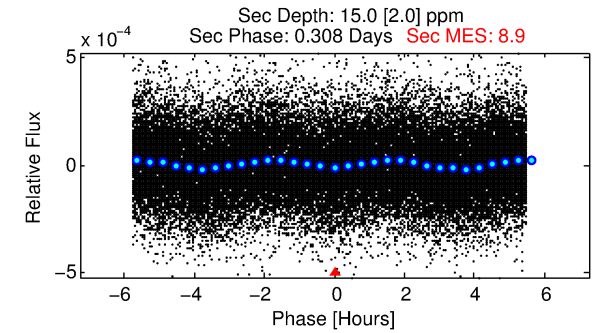
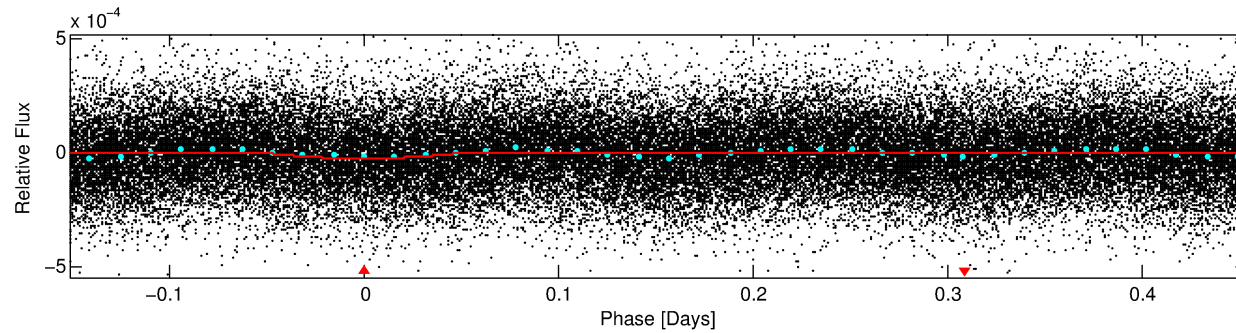
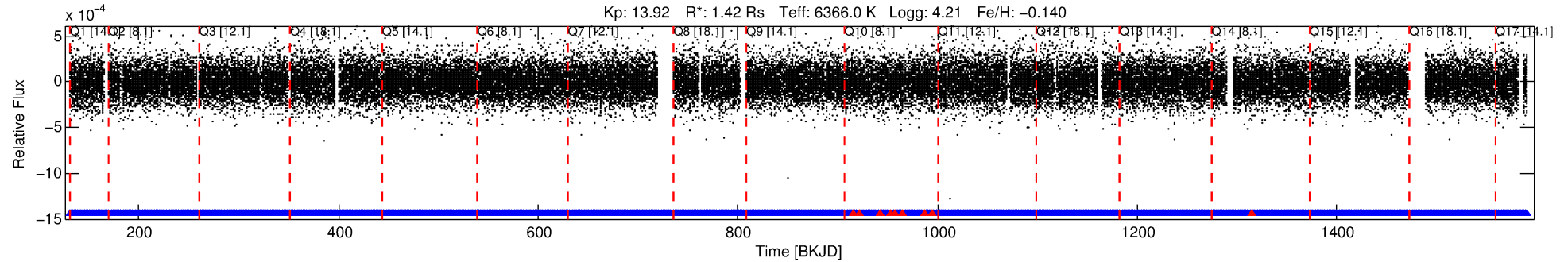
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006363900-01

No Significant Match Found

# DV One-Page Summary

KIC: 6363900 Candidate: 1 of 1 Period: 0.606 d



## DV Fit Results:

Period = 0.60589 [0.00001] d  
Epoch = 131.7925 [0.0026] BKJD  
Rp/R\* = 0.0048 [0.0021]  
a/R\* = 1.39 [1.67]  
b = 0.91 [0.45]  
Seff = 13500.11 [5061.25]  
Teff = 2749 [258] K  
Rp = 0.73 [0.39] Re  
a = 0.0148 [0.0036] AU  
Ag = 3.34 [3.14] [0.74σ]  
Teffp = 5746 [1280] K [2.30σ]

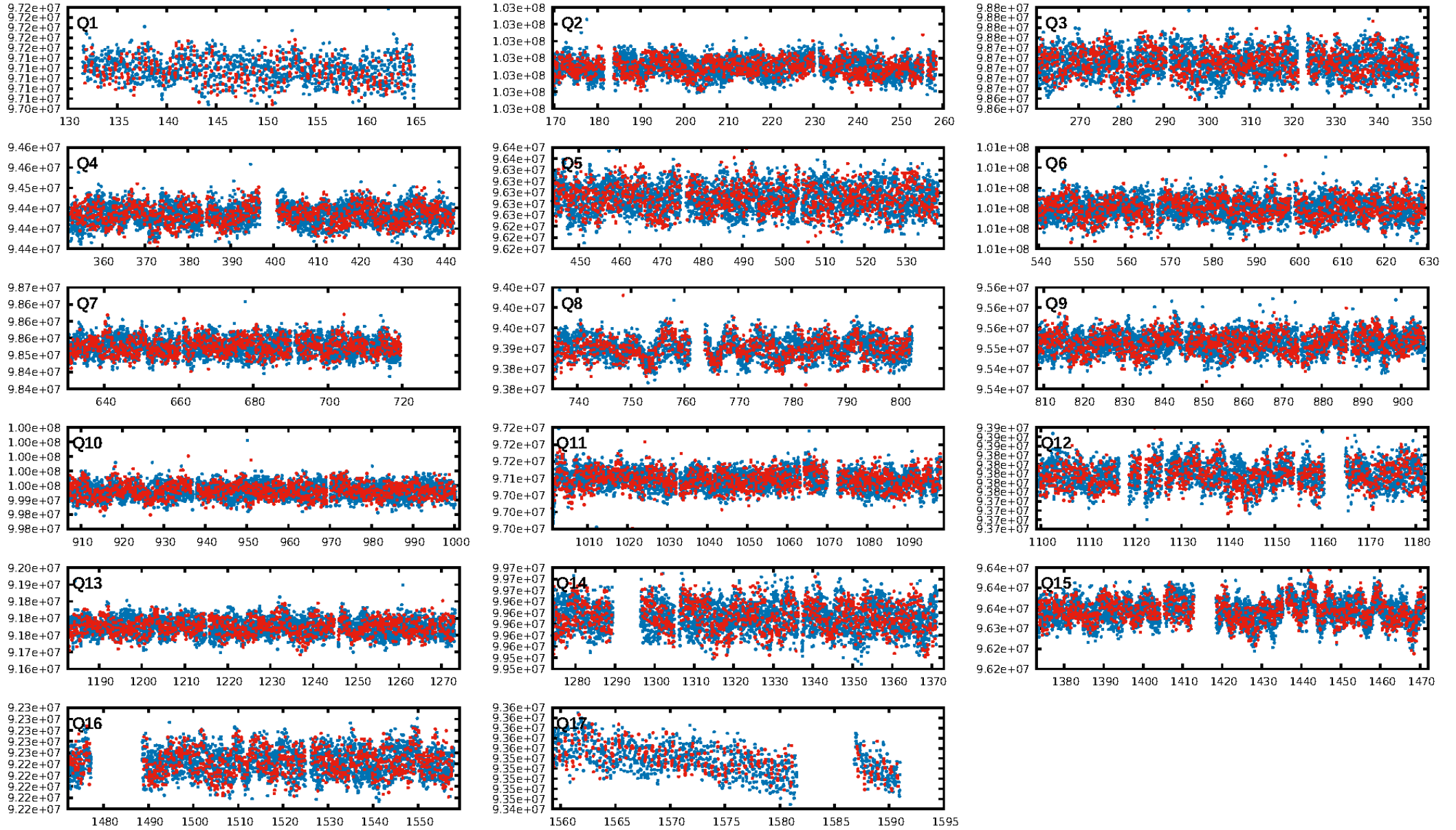
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGoF-sig: N/A  
Bootstrap-pfa: 8.72e-19  
RollingBand-fgt: 1.00 [2103/2112]  
GhostDiagnostic-chr: -9.433  
Centroid-sig: 50.4%  
Centroid-so: 1.597 arcsec [1.11σ]  
**OotOffset-rm: 1.207 arcsec [4.54σ]**  
**KicOffset-rm: 1.309 arcsec [4.89σ]**  
OotOffset-st: 2/3/4/5 [14]  
KicOffset-st: 2/3/4/5 [14]  
DiffImageQuality-fgm: 0.57 [8/14]  
DiffImageOverlap-fno: 1.00 [17/17]

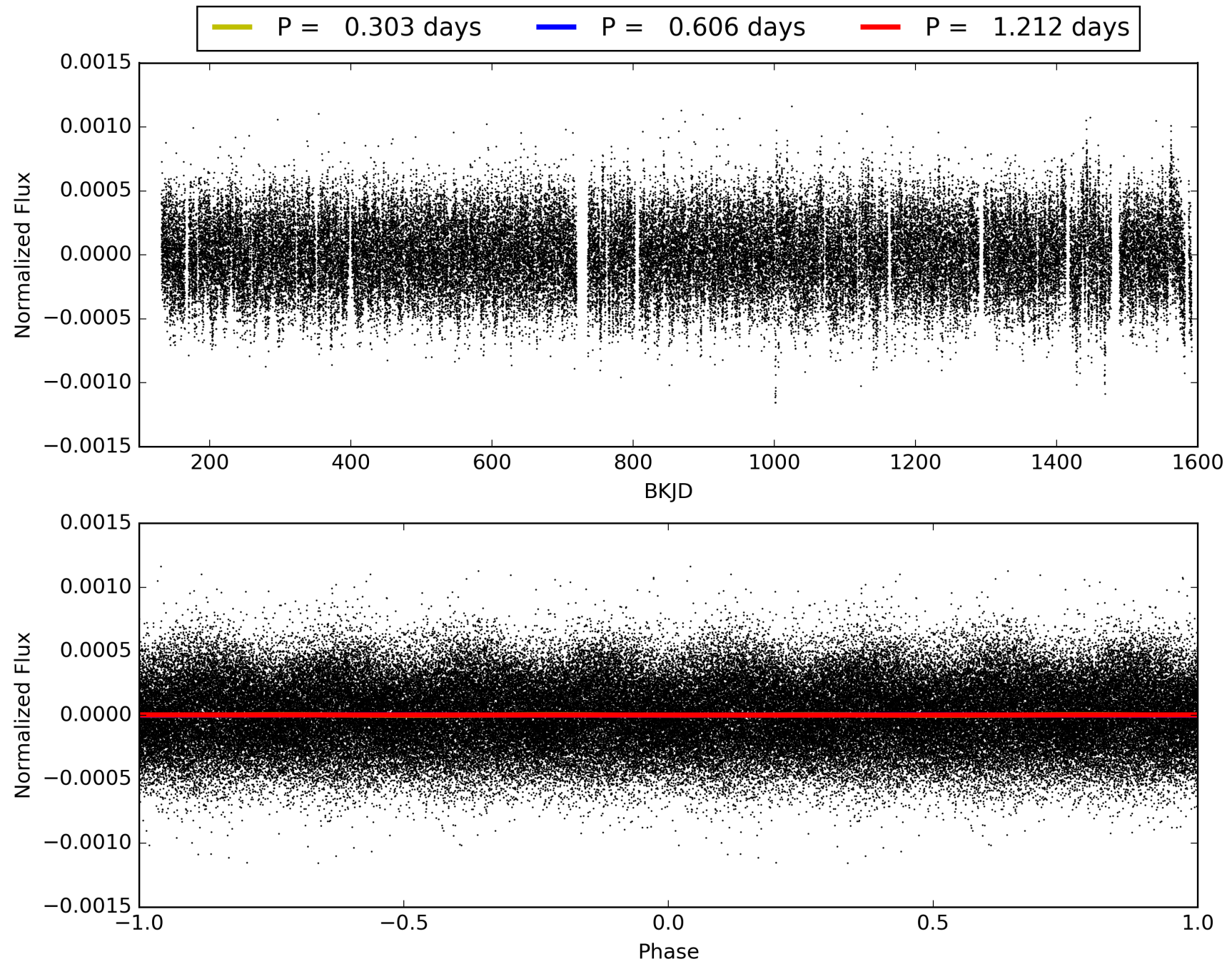
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:18:31 Z

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

# TCE 006363900-01, PDC Light Curves



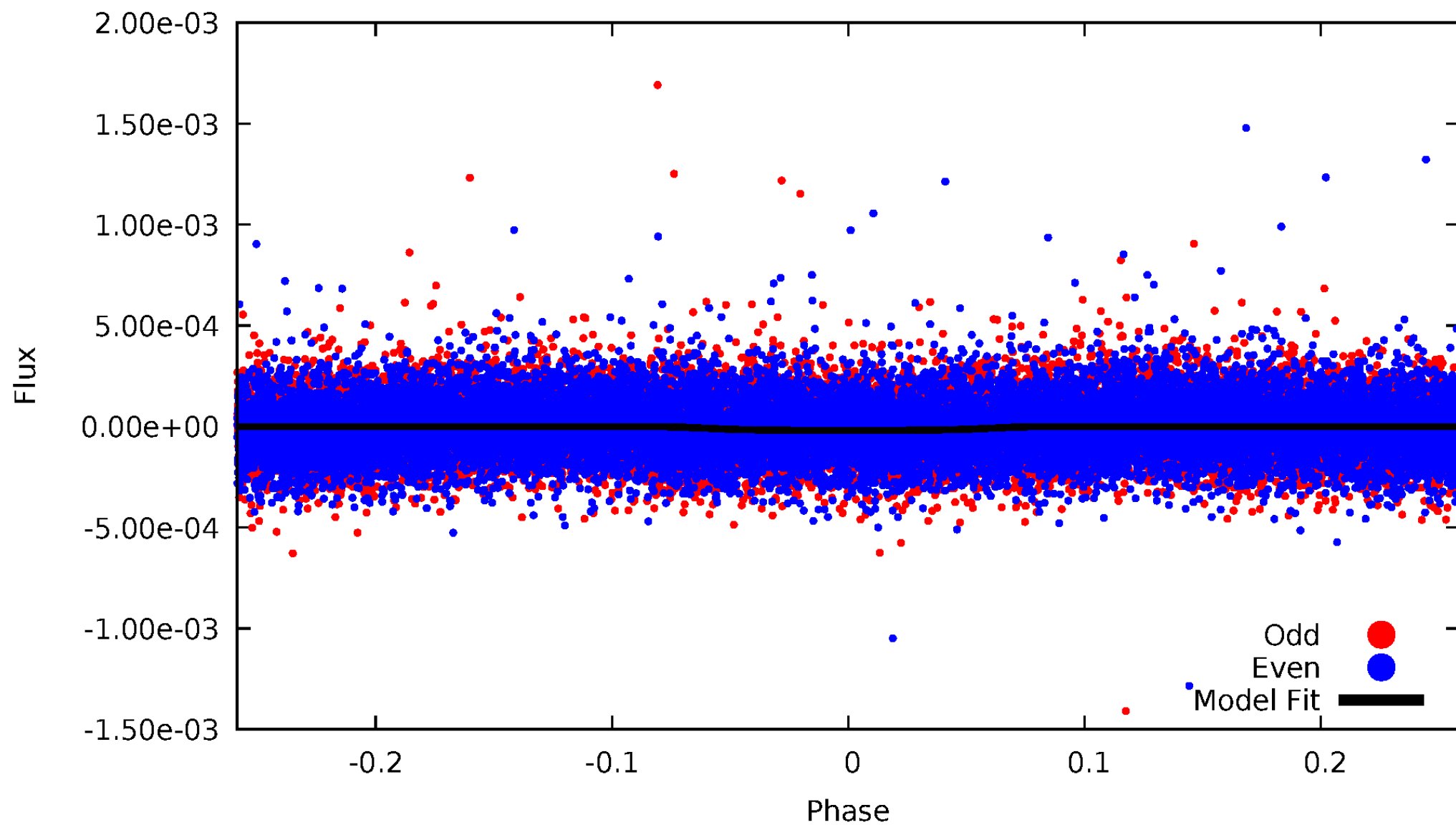
TCE 006363900-01





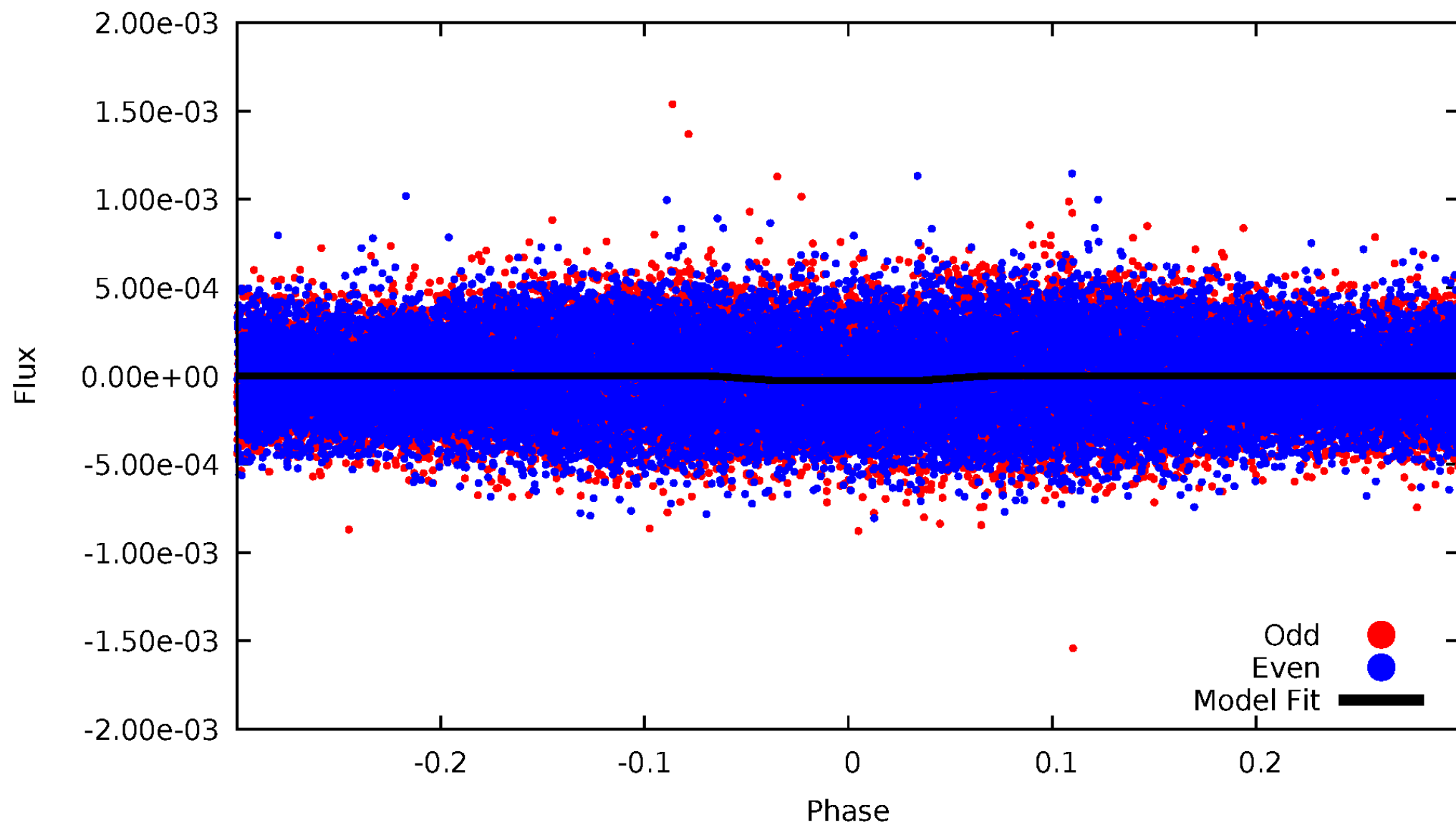
# DV Odd/Even

TCE 006363900-01



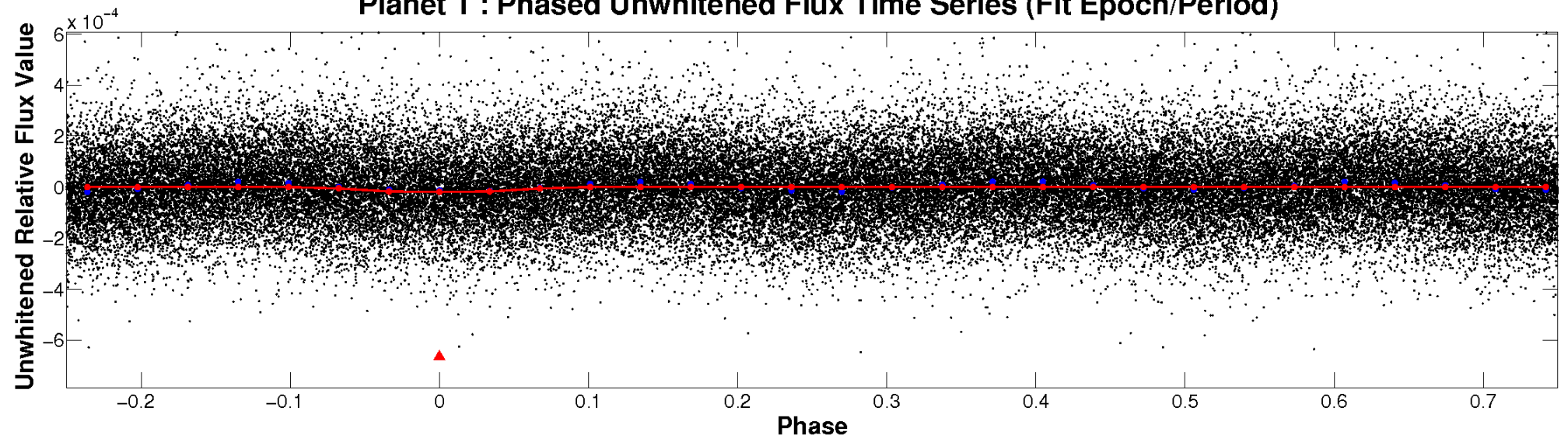
# ALT Odd/Even

TCE 006363900-01

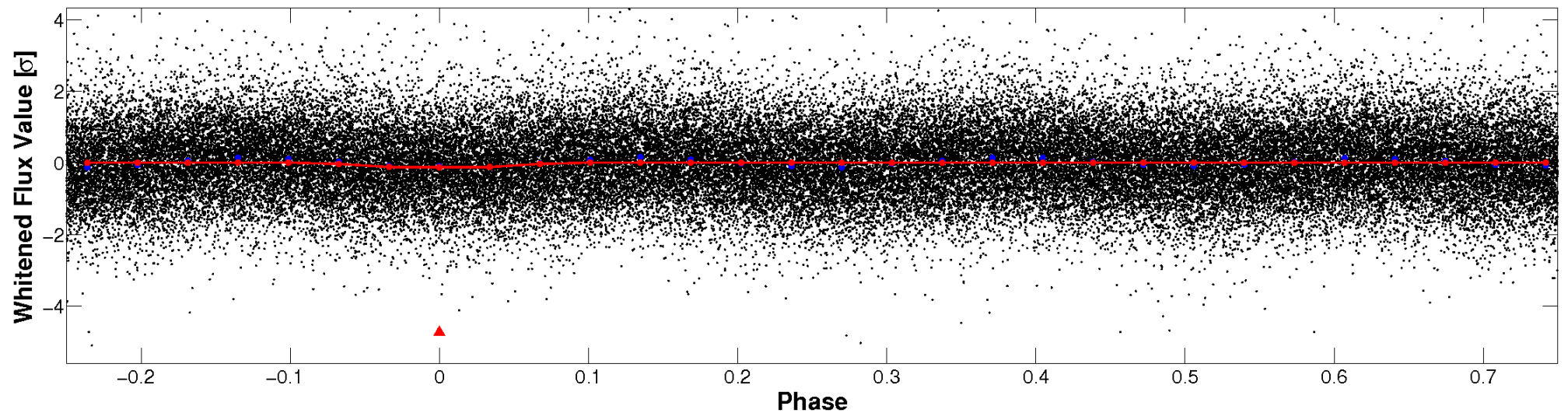


# Non-Whitened Vs. Whitened Light Curve

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

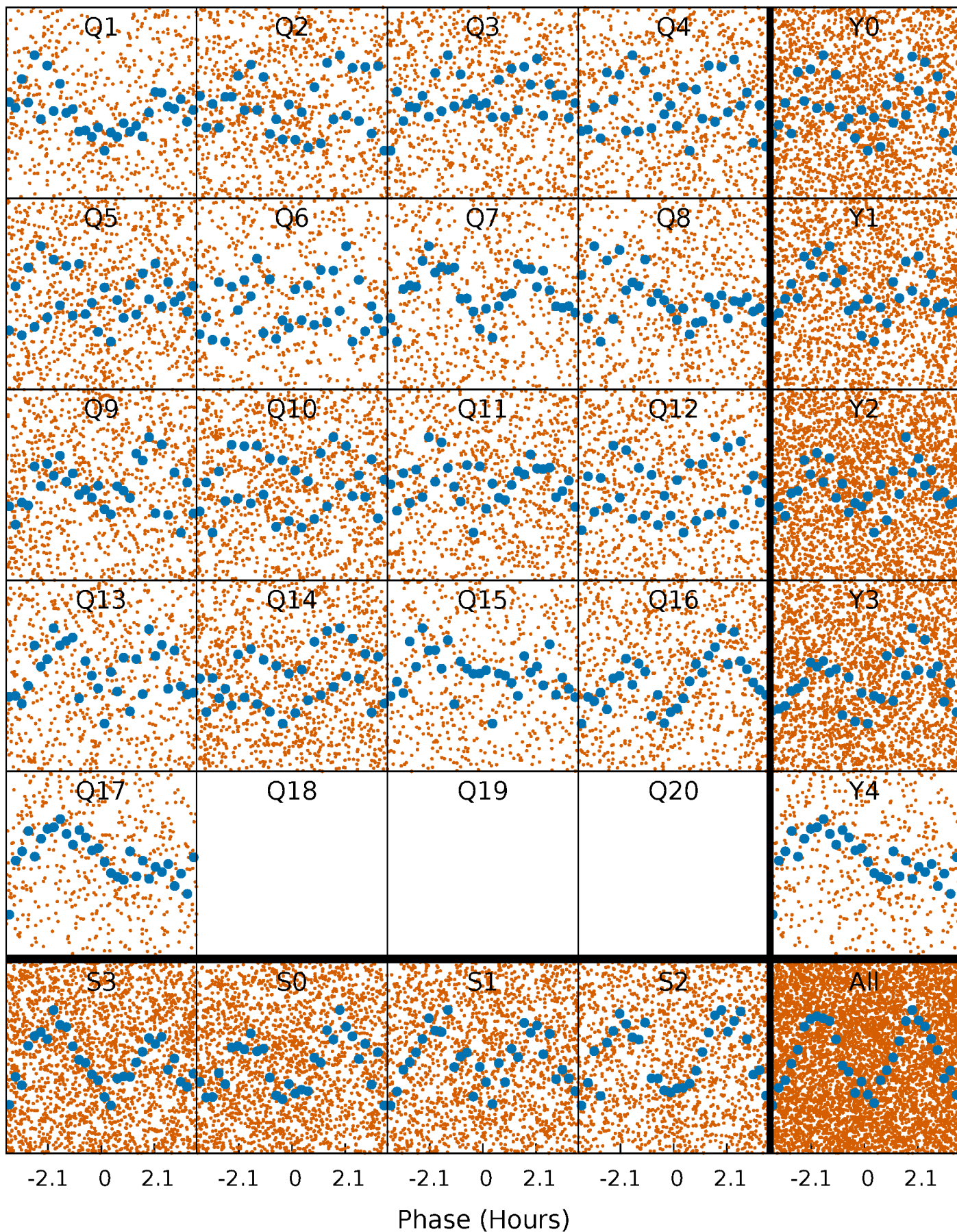


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

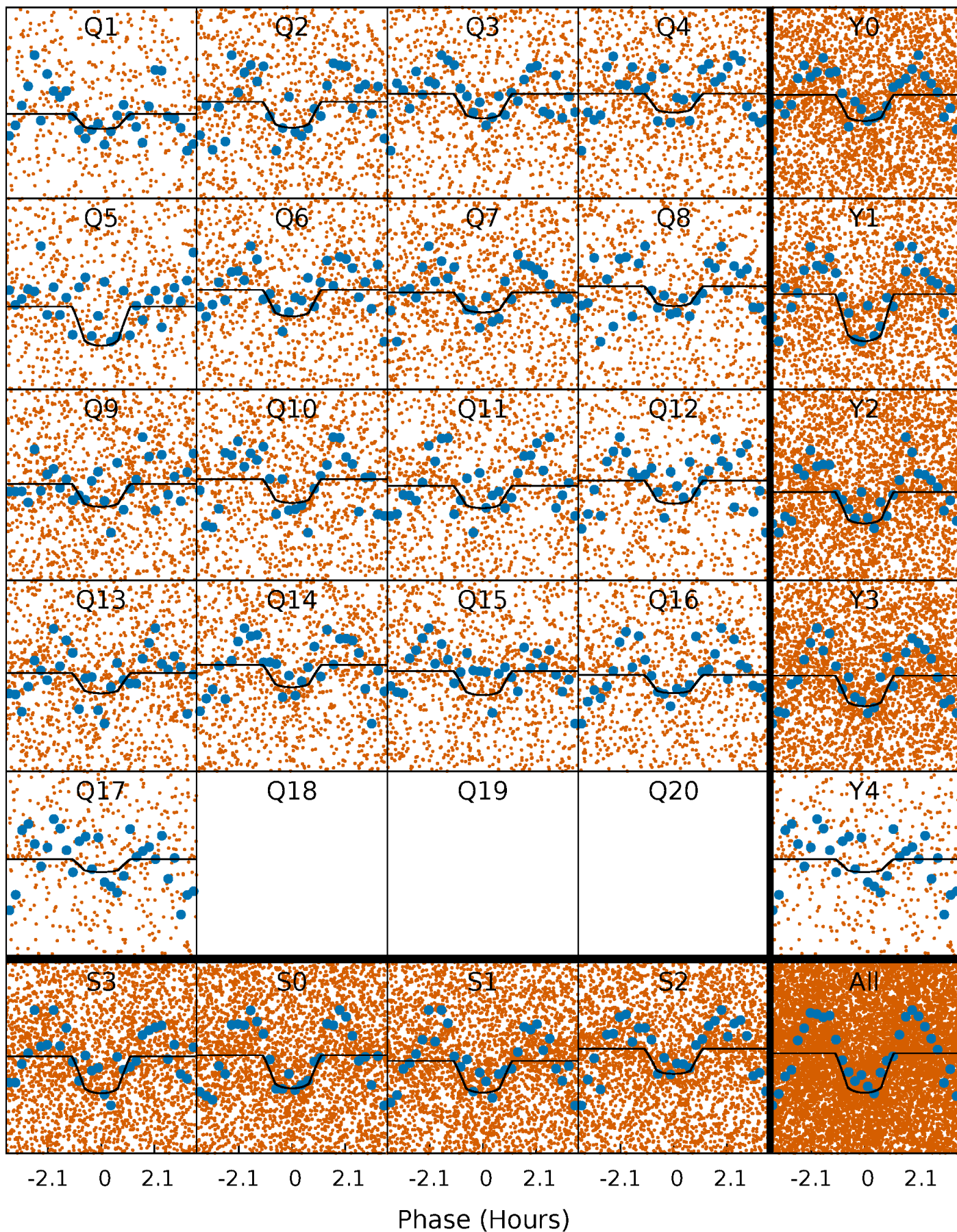
TCE 006363900-01 P= 0.605893 Days  $T_0=131.792486$  (BKJD)





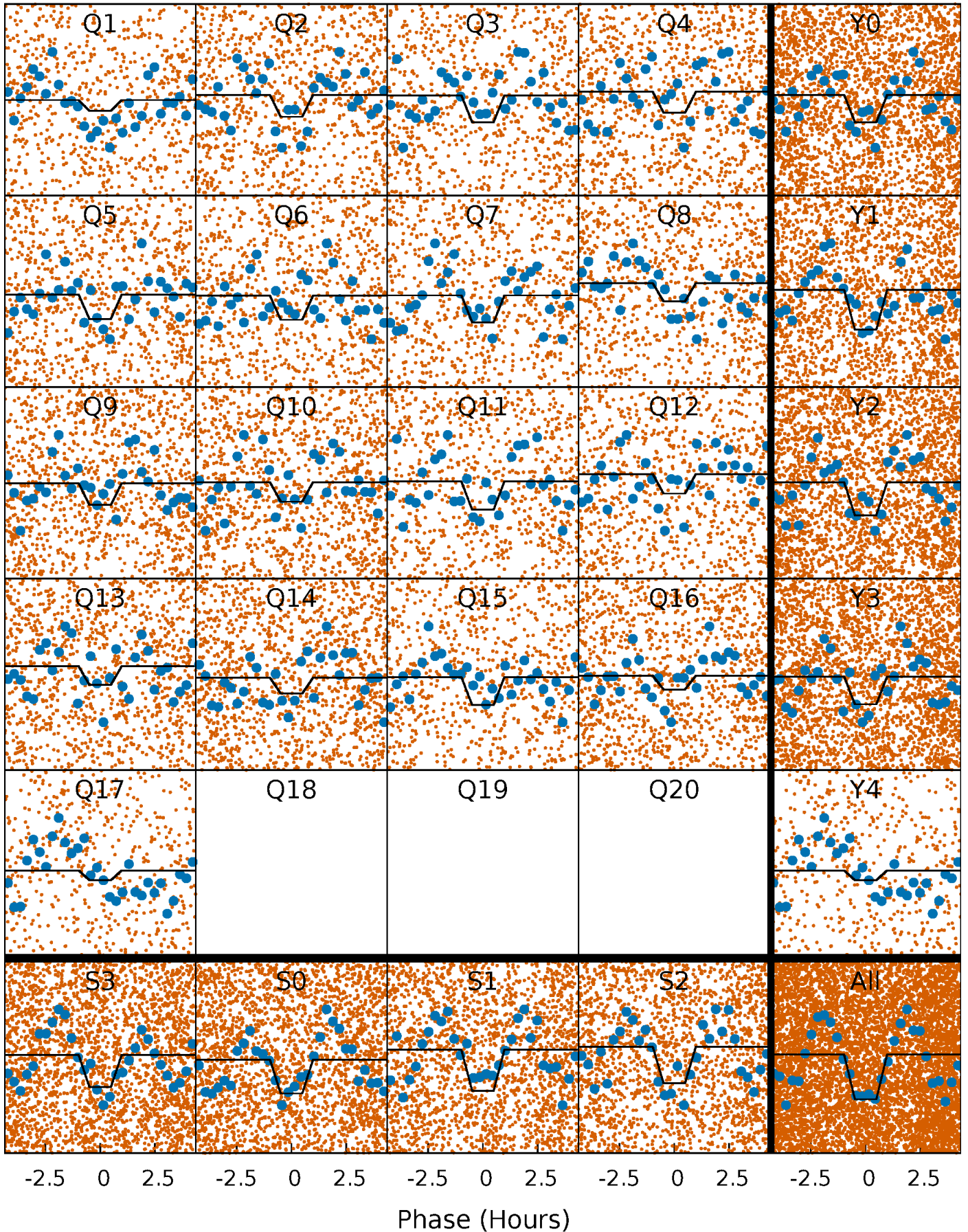
# DV Quarter-Phased Transit Curves

TCE 006363900-01 P= 0.605893 Days  $T_0=131.792486$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006363900-01 P= 0.605895 Days  $T_0=131.793666$  (BKJD)

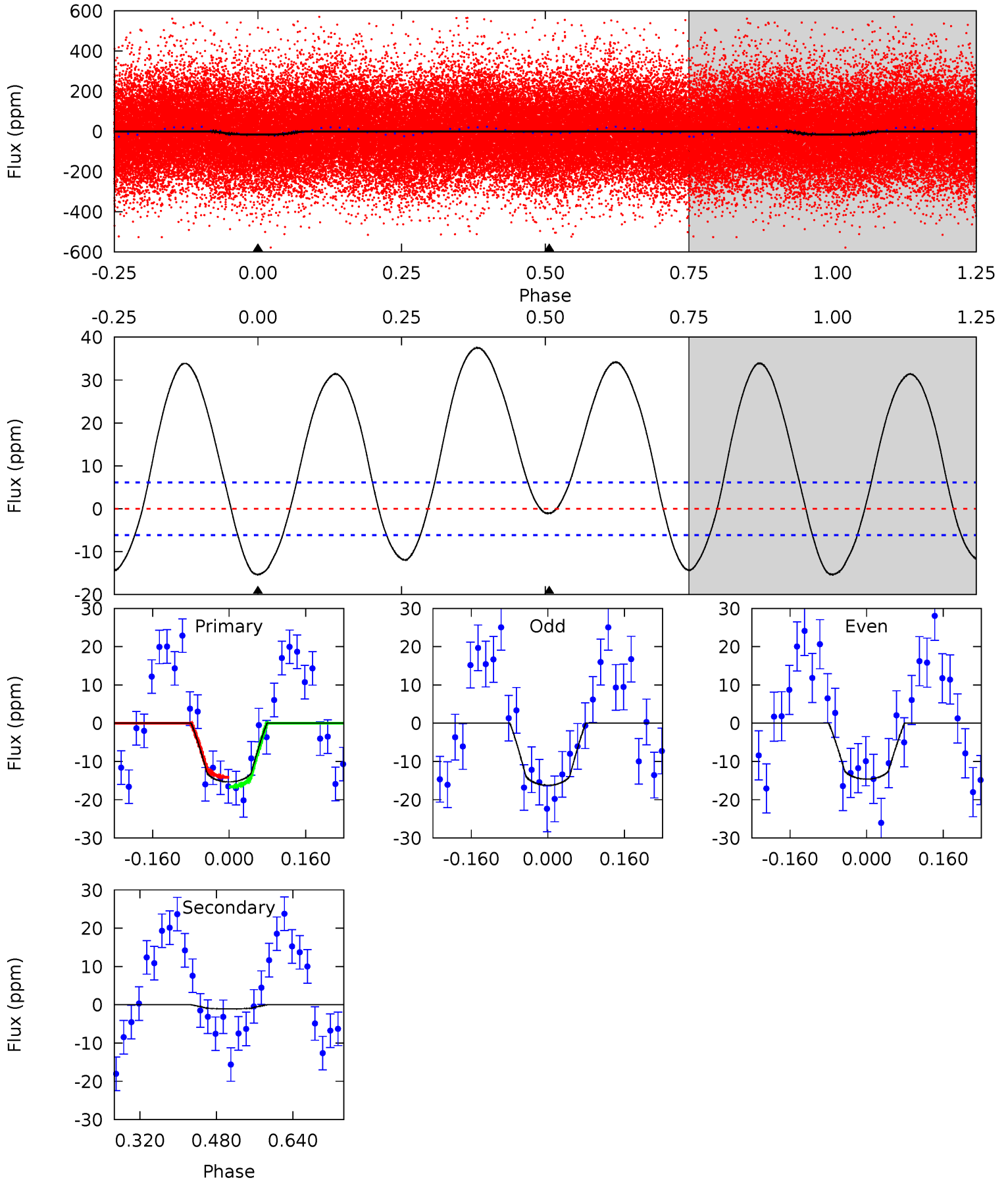




# DV Model-Shift Uniqueness Test

006363900-01, P = 0.605893 Days, E = 131.186593 Days

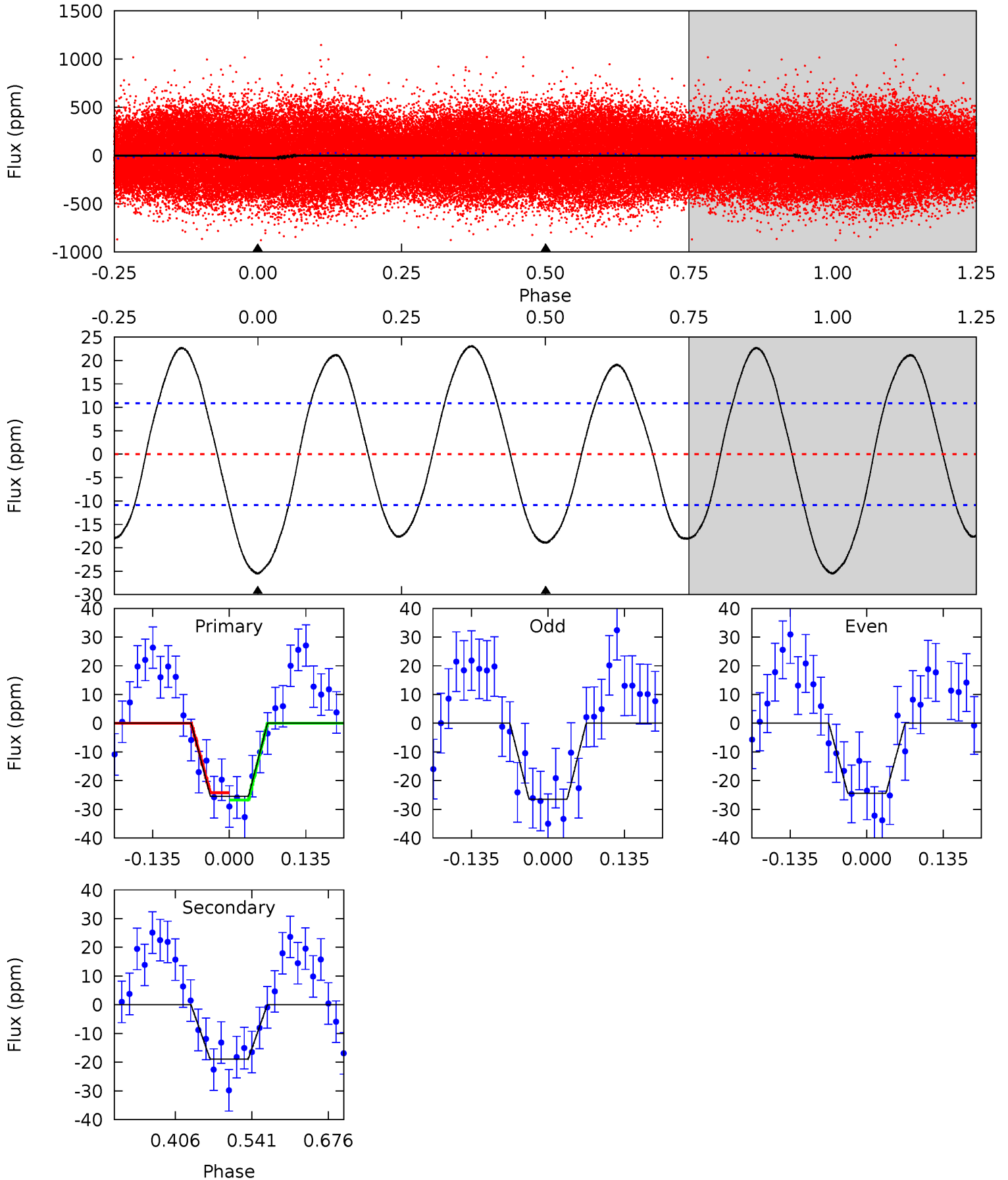
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	0.77	0	0	4.47	1.40	9.29	11.2	11.2	0.77	0.77	0.59	0.93	0.71	0.93



# Alt Model-Shift Uniqueness Test

006363900-01, P = 0.605895 Days, E = 131.187771 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
10.6	7.83	0	0	4.50	1.49	5.66	10.6	10.6	7.83	7.83	0.42	0.73	0.48	0.50





### Stellar Parameters For KIC 006363900

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6366^{+181}_{-250}$	$4.205^{+0.180}_{-0.180}$	$-0.140^{+0.250}_{-0.300}$	$1.415^{+0.422}_{-0.307}$	$1.170^{+0.188}_{-0.188}$	$0.582^{+0.562}_{-0.285}$
	+3%/-4%	+4%/-4%	+179%/-214%	+30%/-22%	+16%/-16%	+97%/-49%
Source	KIC0	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 006363900-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1\pm1$	$0.72^{+0.34}_{-0.30}$	$3840^{+277}_{-287}$	$-3061^{+6964}_{-721}$	$0.192^{+0.647}_{-0.254}$
Alt.	$-19\pm2$	$0.80^{+0.35}_{-0.32}$	$3842^{+298}_{-256}$	$5687^{+1777}_{-871}$	$3.501^{+6.727}_{-1.791}$

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

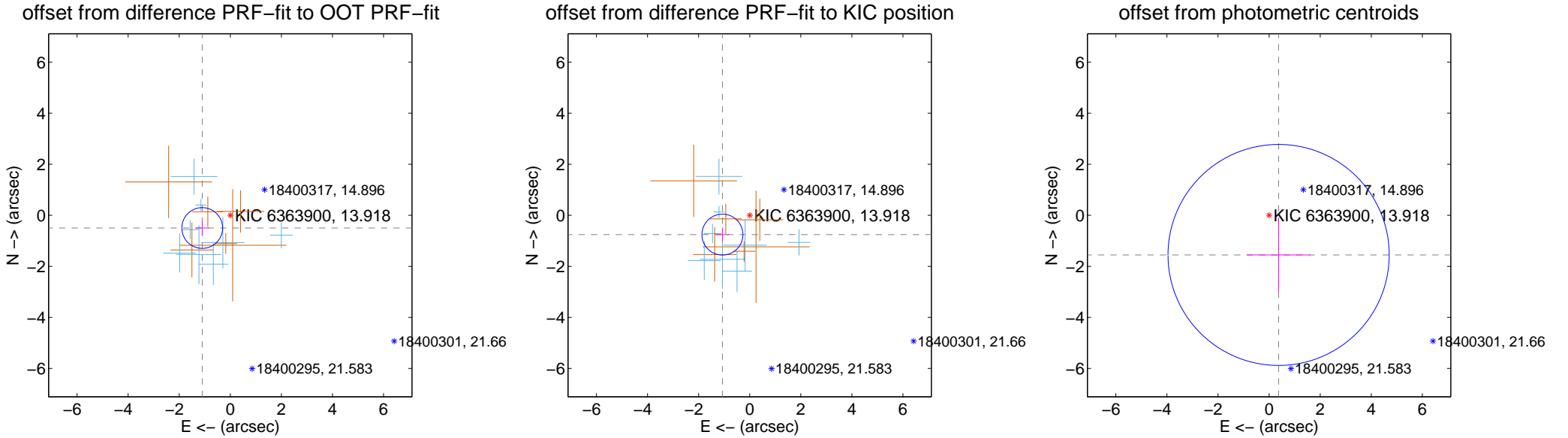
## DV Centroid Data

Supplemental centroid analysis for 006363900-01. Kepler magnitude: 13.92. Transit SNR 9.68

There are 8 quarters with good PRF difference image offsets

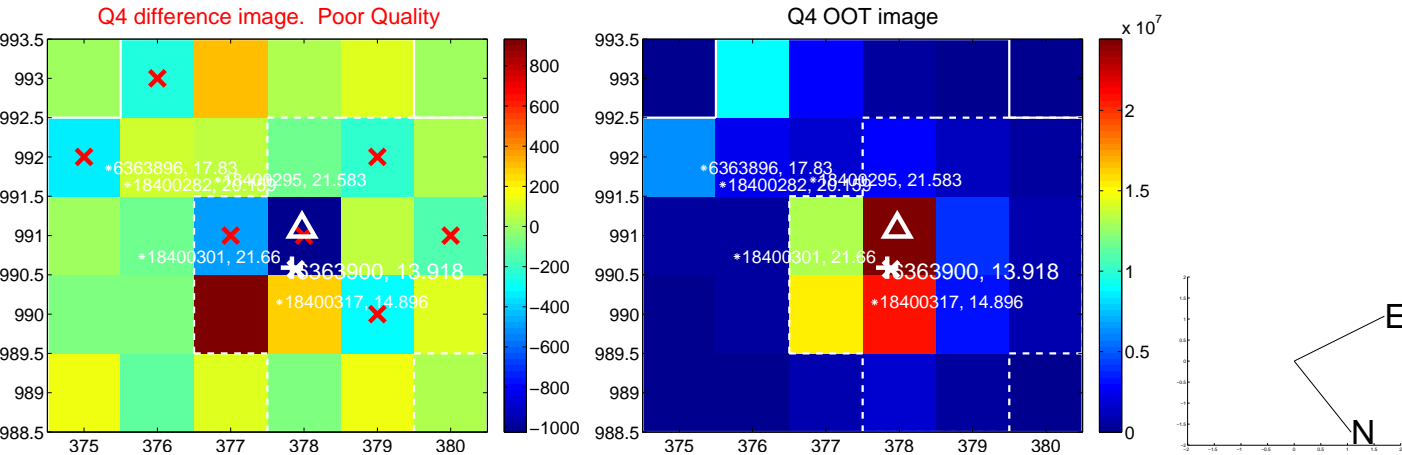
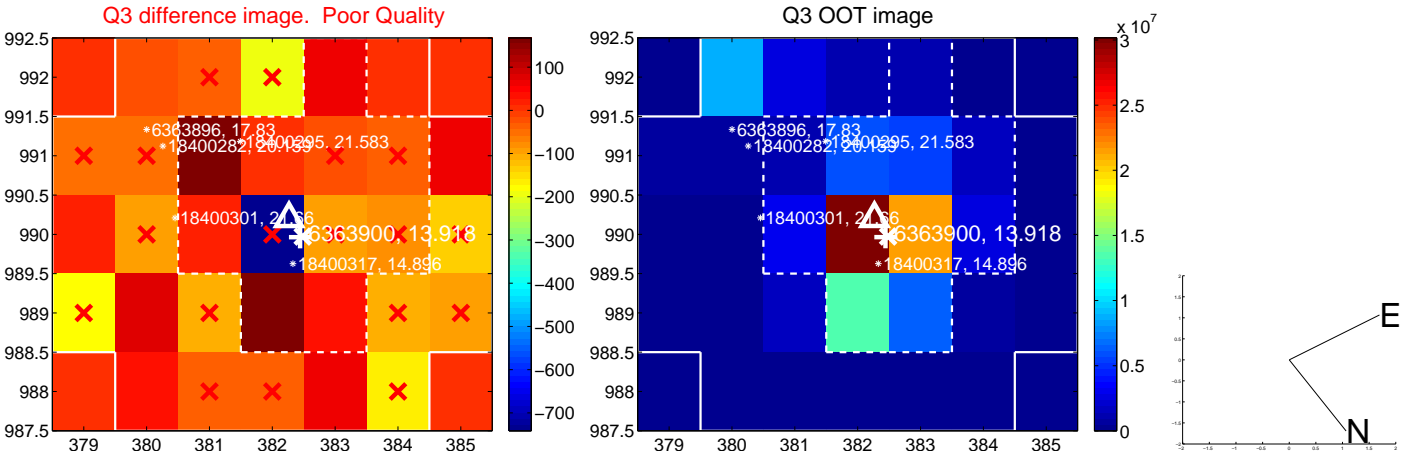
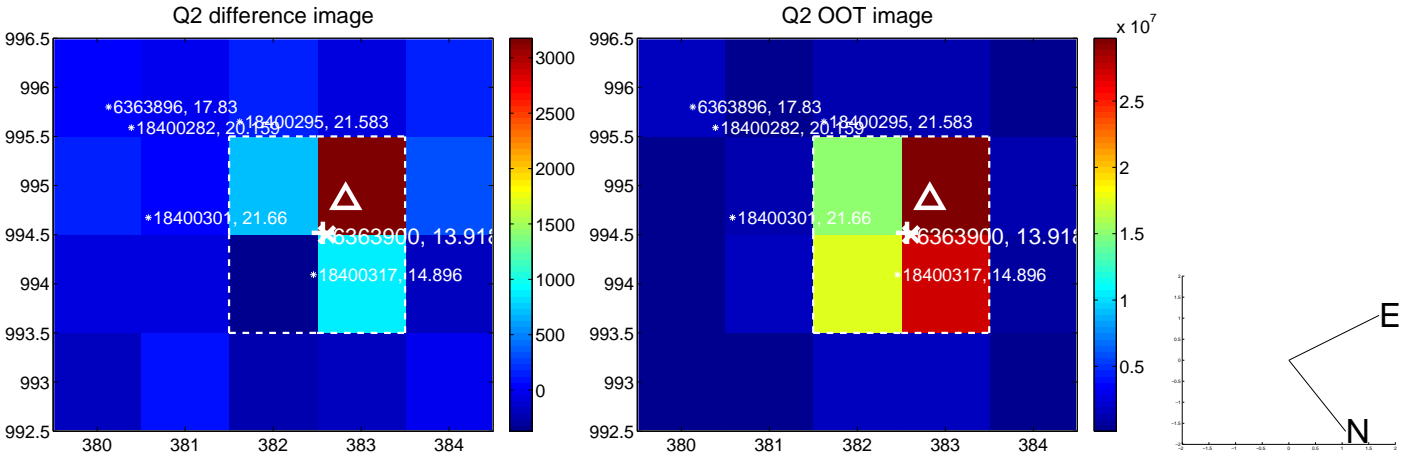
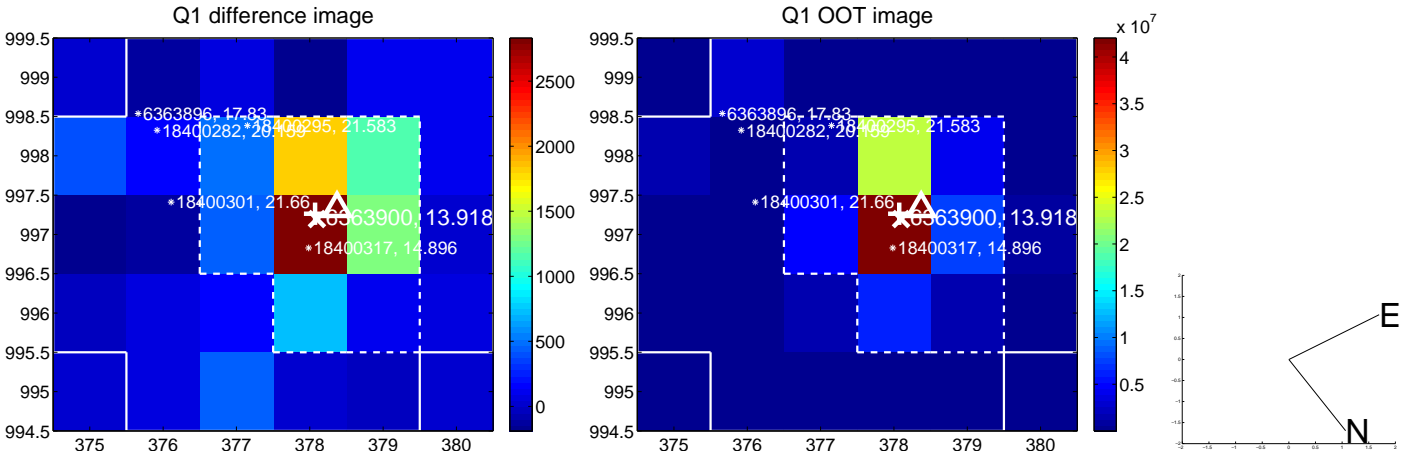
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.207 \pm 0.266$	4.54	$1.100 \pm 0.265$	$-0.497 \pm 0.273$
PRF-fit source offset from KIC position	$1.309 \pm 0.267$	4.89	$1.069 \pm 0.265$	$-0.755 \pm 0.273$
photometric centroid source offset	$1.60 \pm 1.44$	1.11	$-0.37 \pm 1.25$	$-1.55 \pm 1.45$

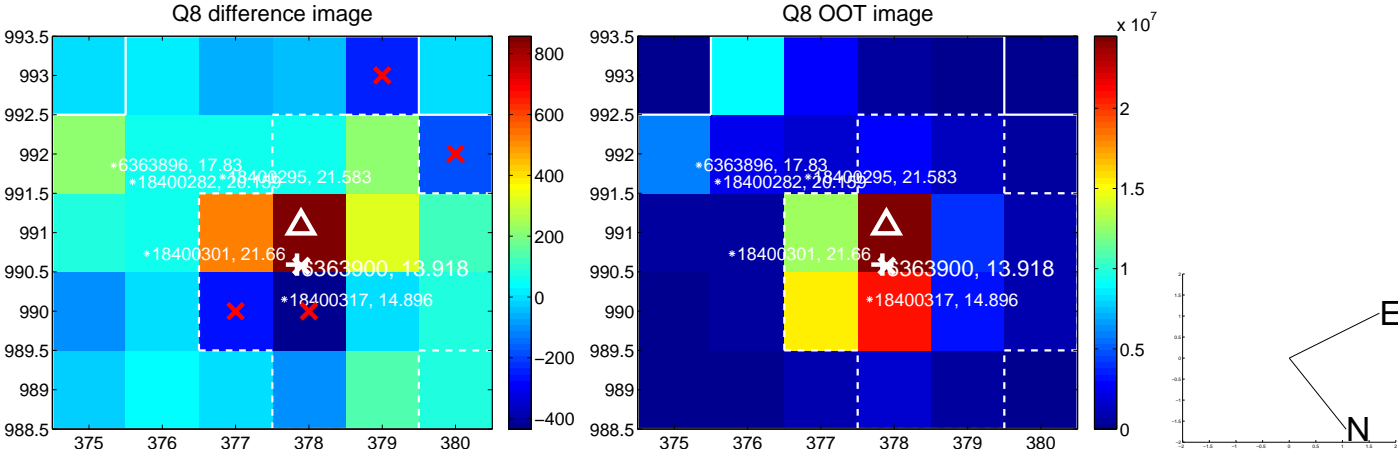
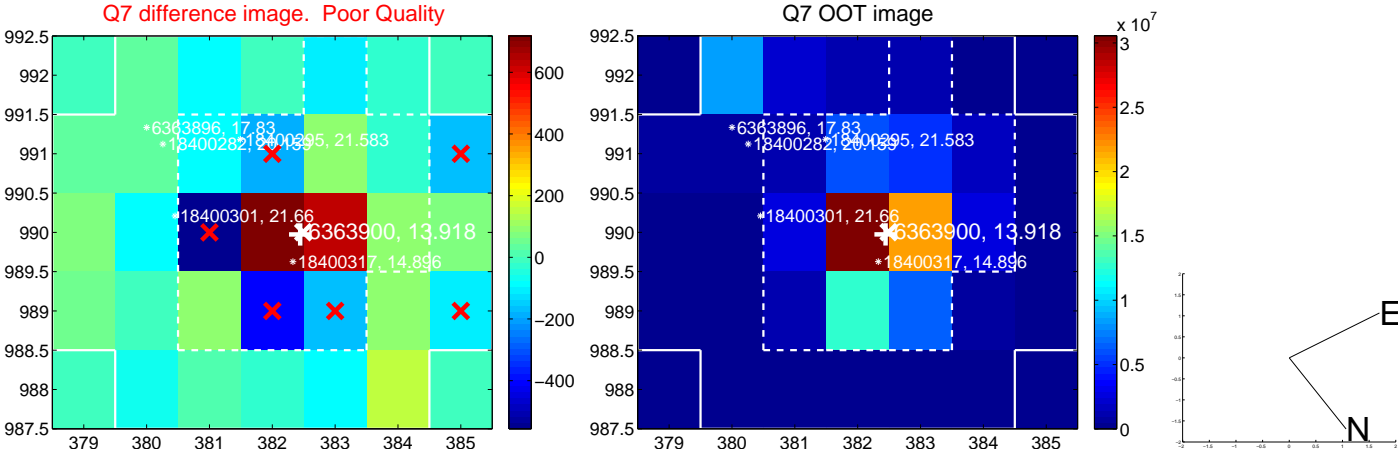
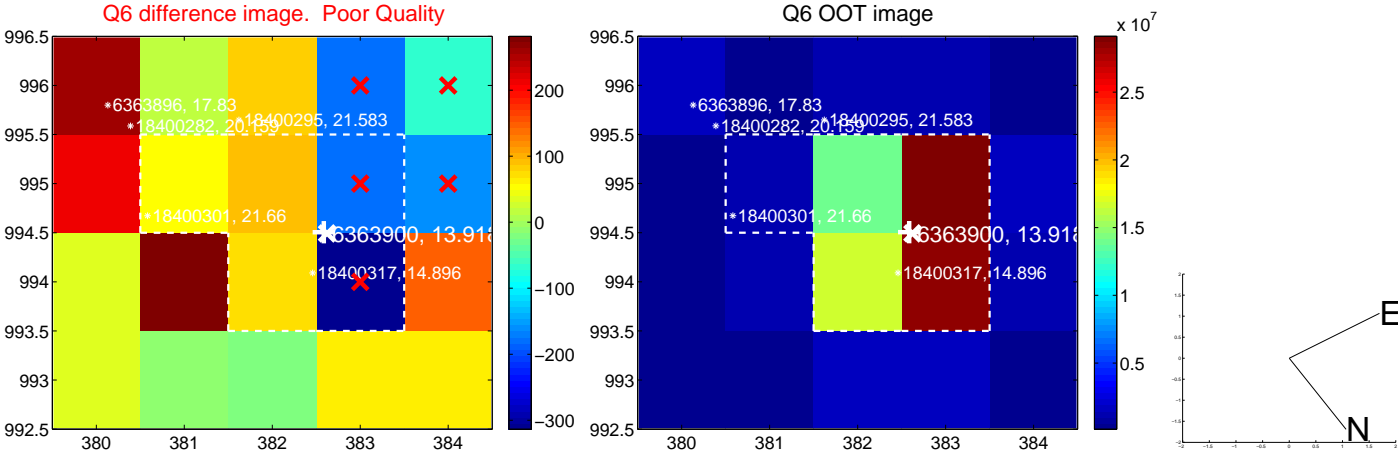
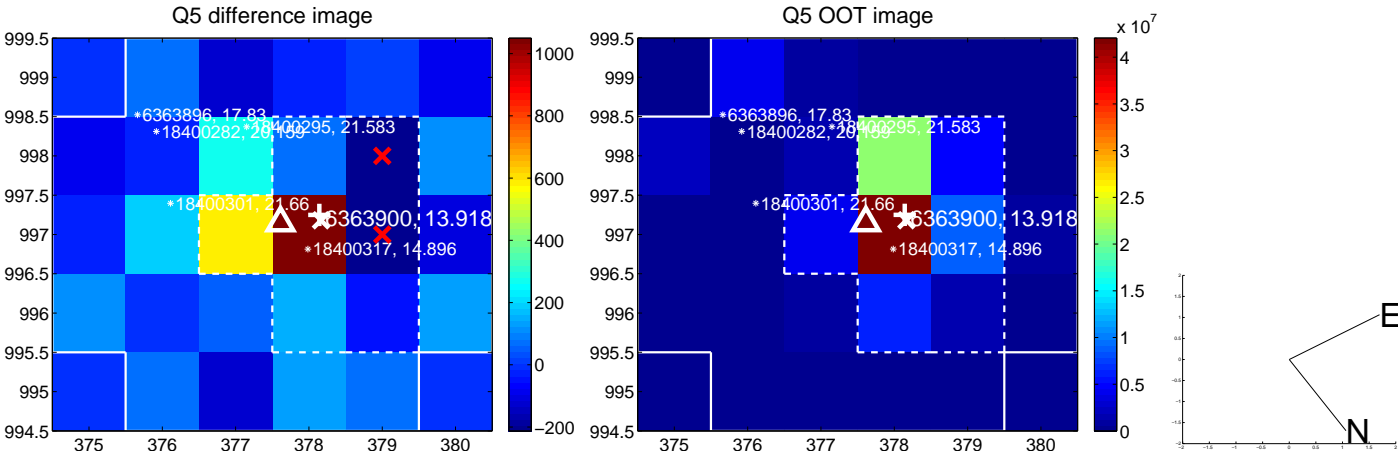


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

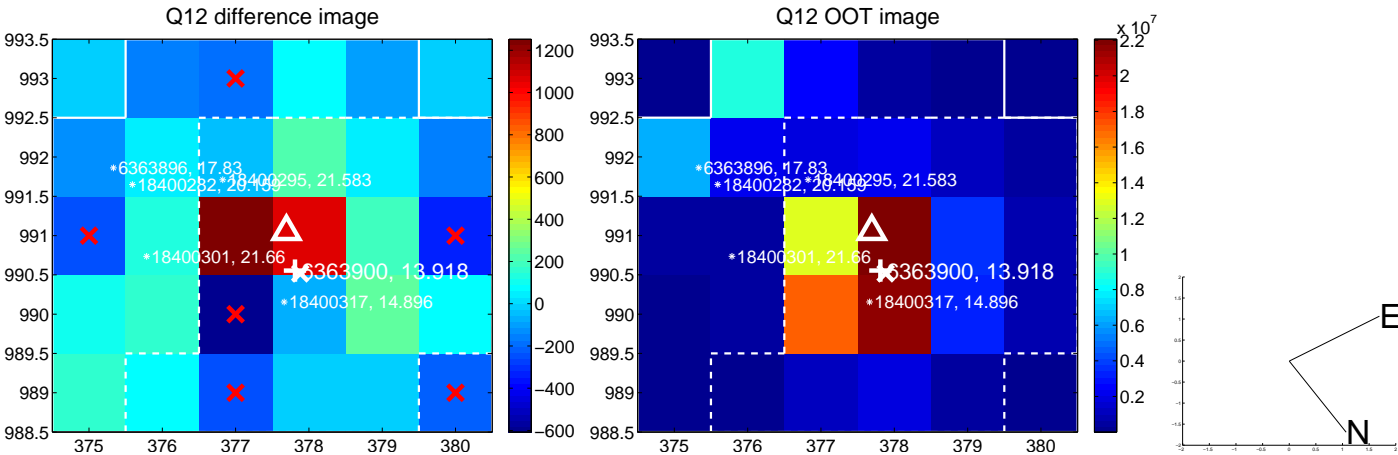
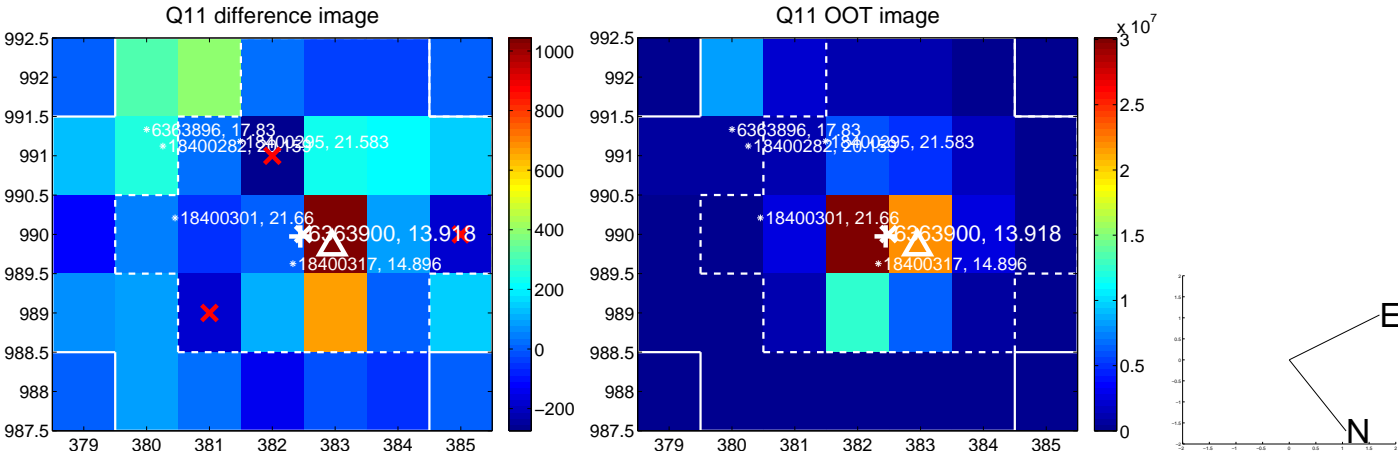
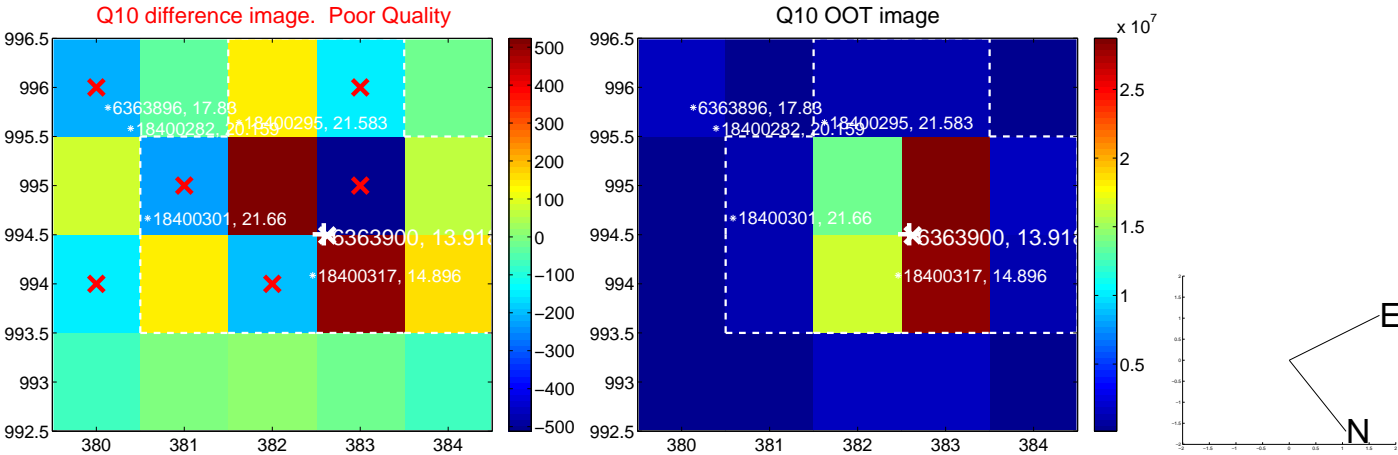
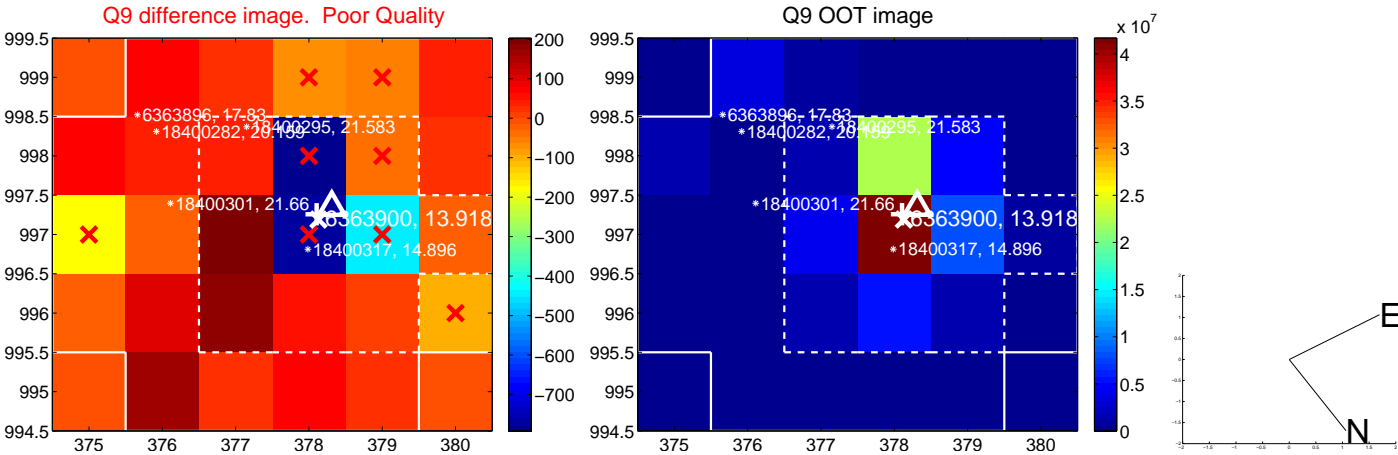


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

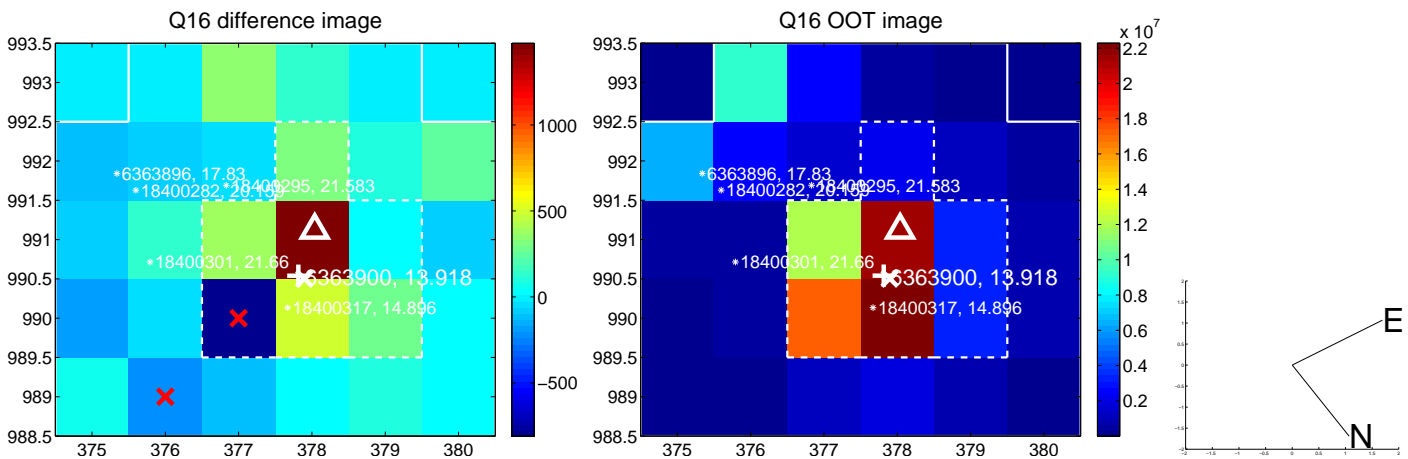
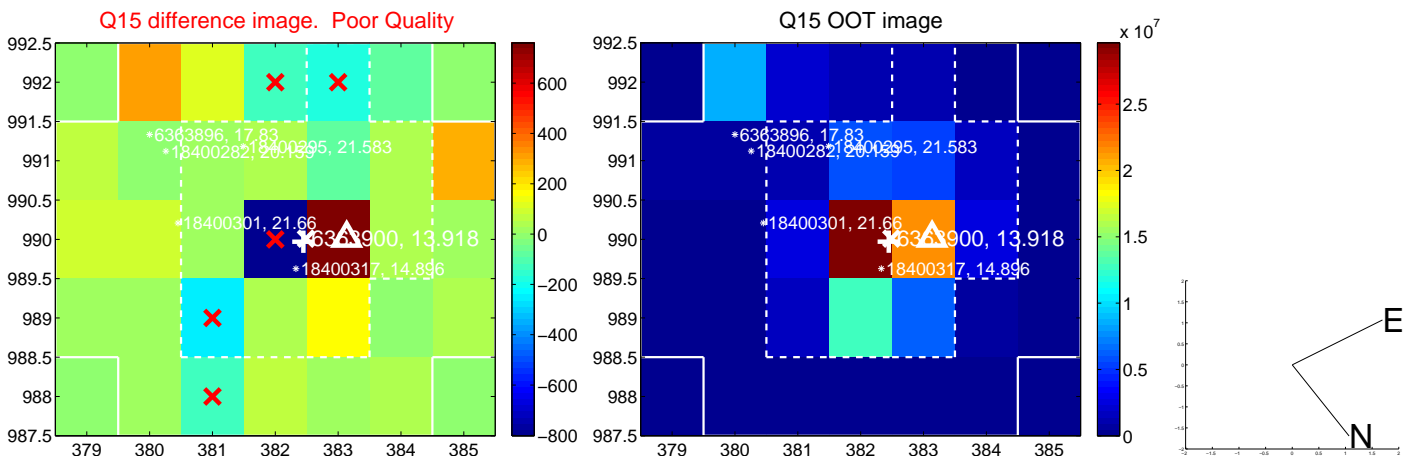
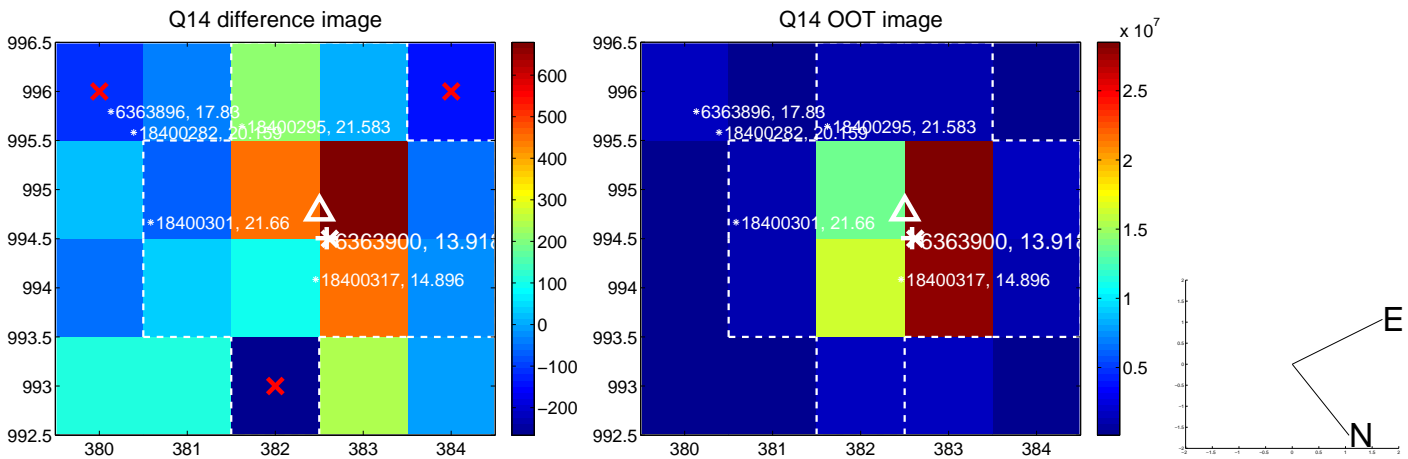
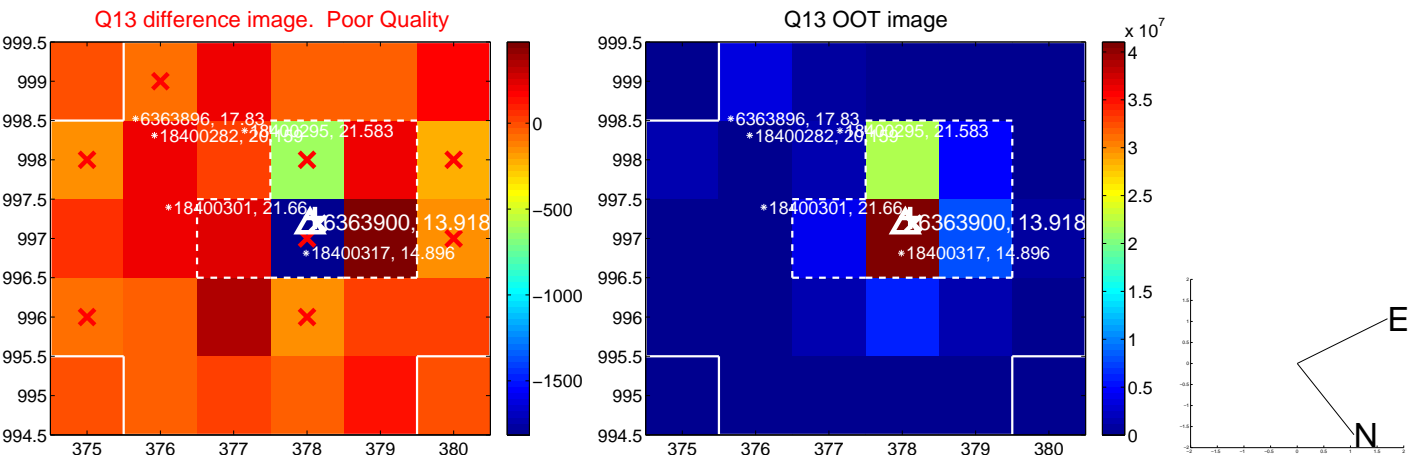




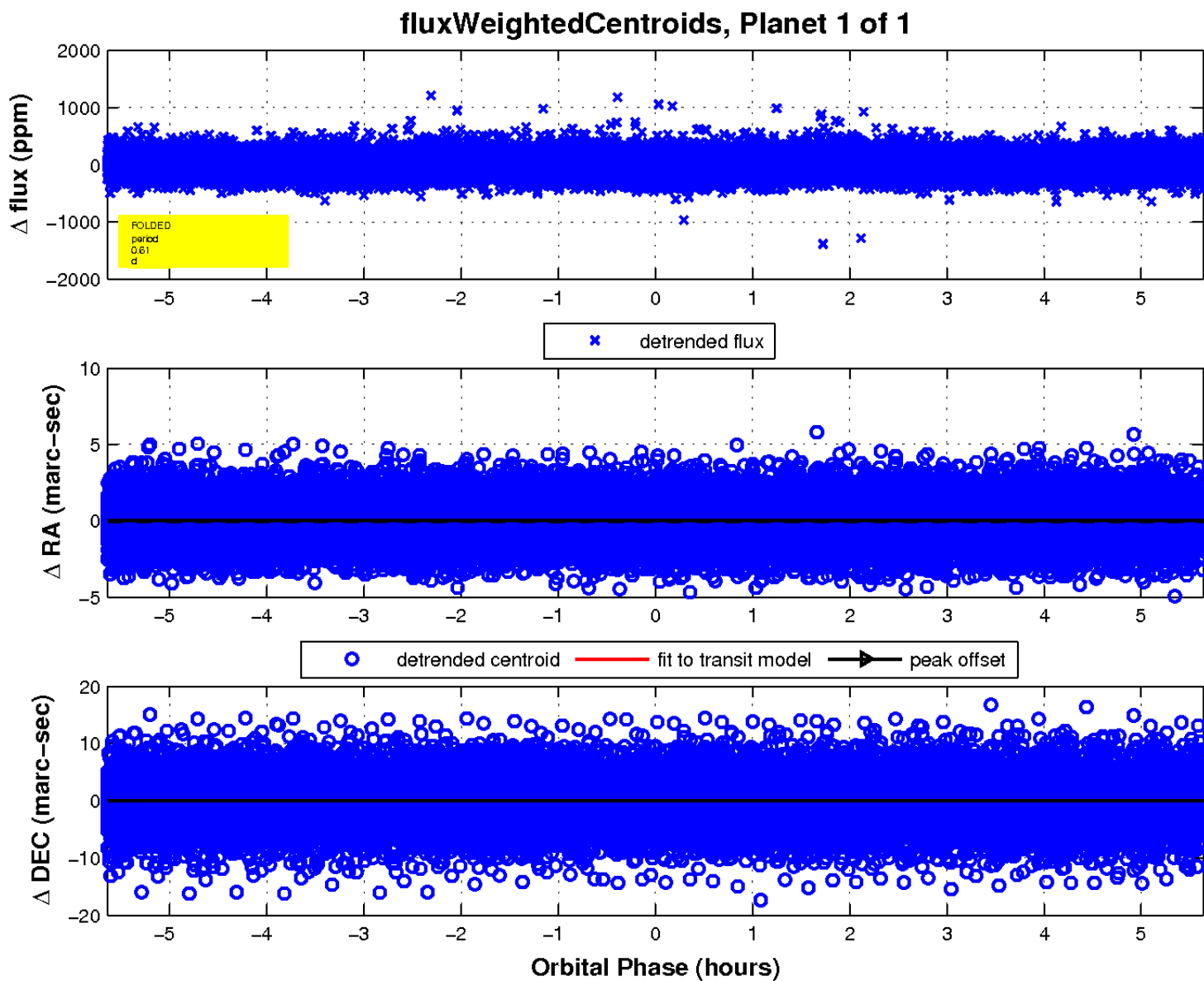
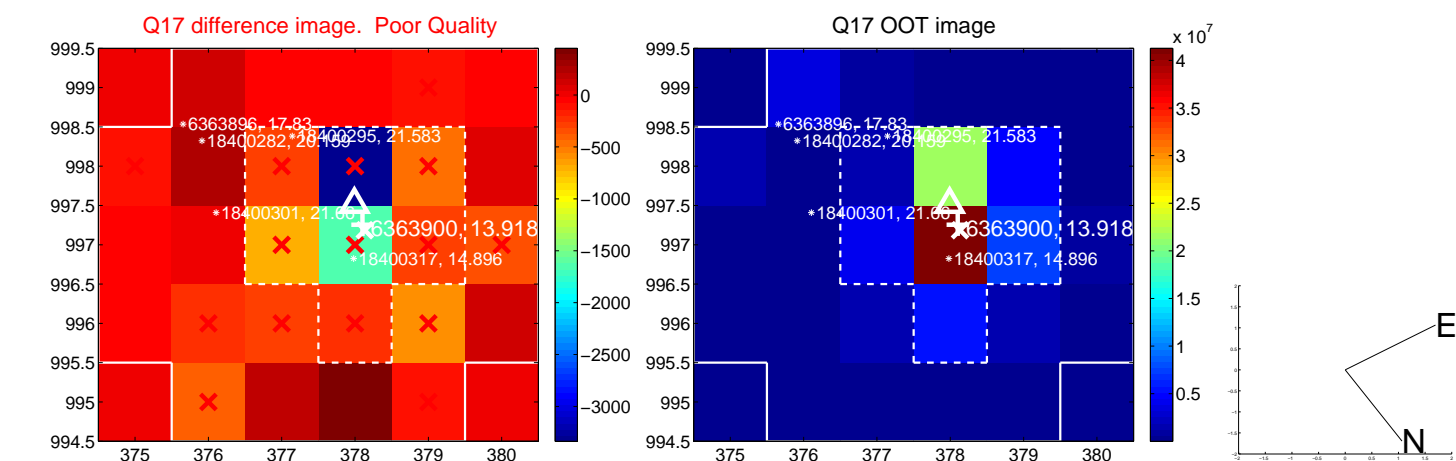
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

