

# KIC 006061584

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006061584-01	OBS	No	0.661820	131.818872	28.9	4.725	12.6	5.4	2.60	7318	1.43	53376.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006061584-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

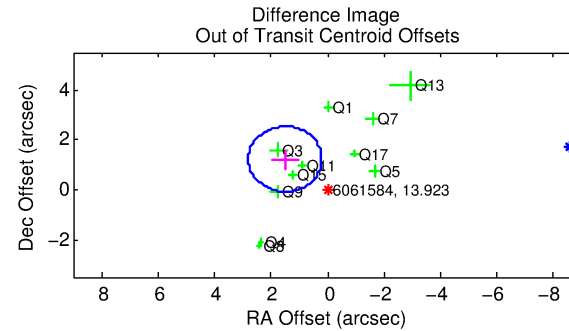
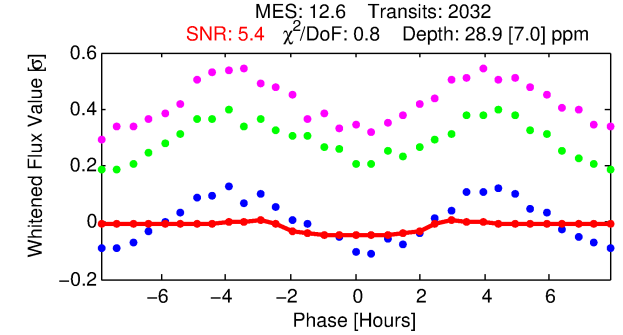
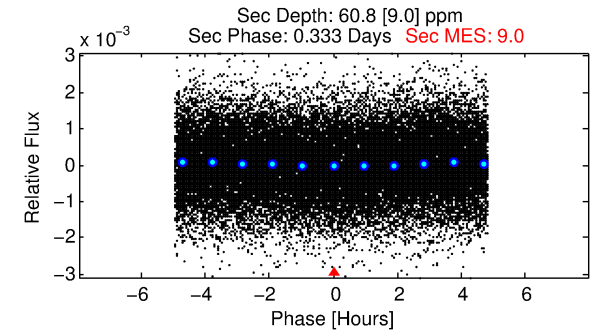
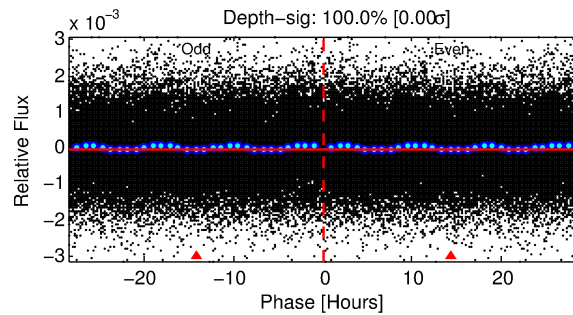
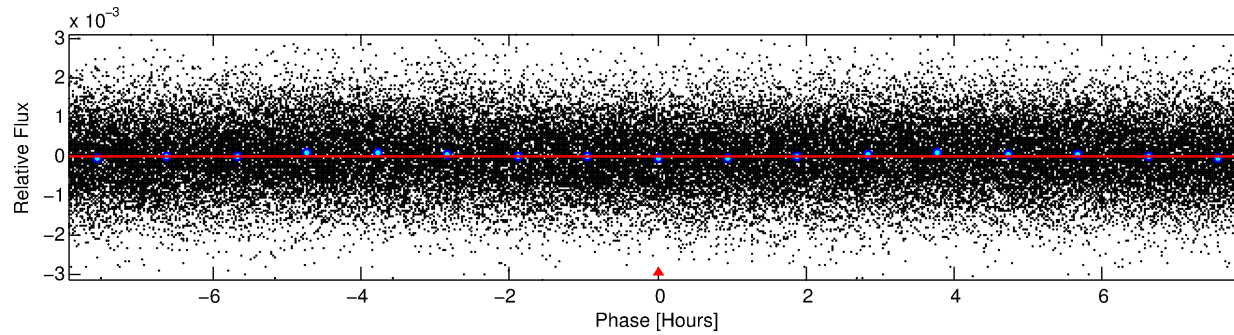
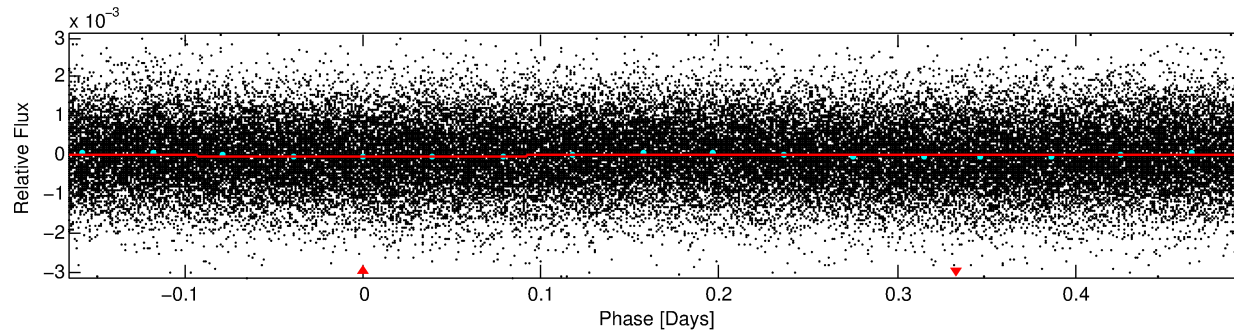
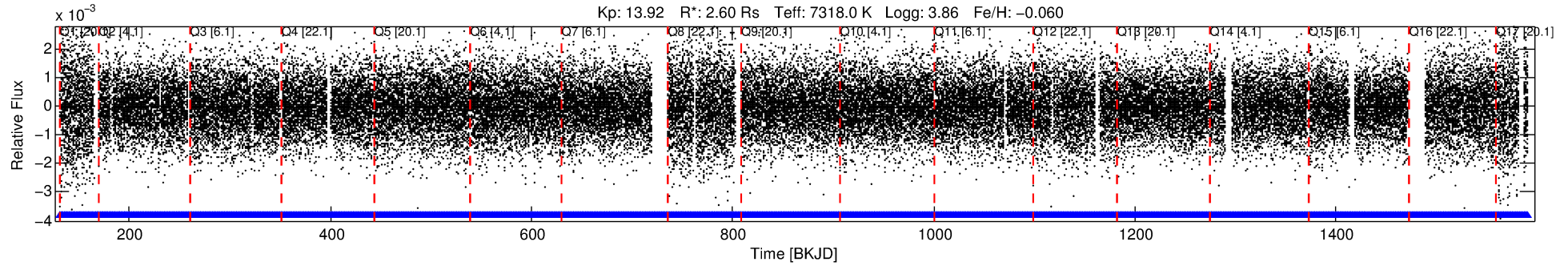
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006061584-01

No Significant Match Found

# DV One-Page Summary

KIC: 6061584 Candidate: 1 of 1 Period: 0.662 d



## DV Fit Results:

Period = 0.66182 [0.00002] d  
Epoch = 131.8189 [0.0097] BKJD  
Rp/R\* = 0.0050 [0.0086]  
a/R\* = 1.23 [4.22]  
b = 0.30 [31.13]  
Seff = 53376.44 [30319.96]  
Teq = 3876 [550] K  
Rp = 1.43 [2.52] Re  
a = 0.0181 [0.0065] AU  
Ag = 5.35 [18.59] [0.23σ]  
Teffp = 9114 [7829] K [0.67σ]

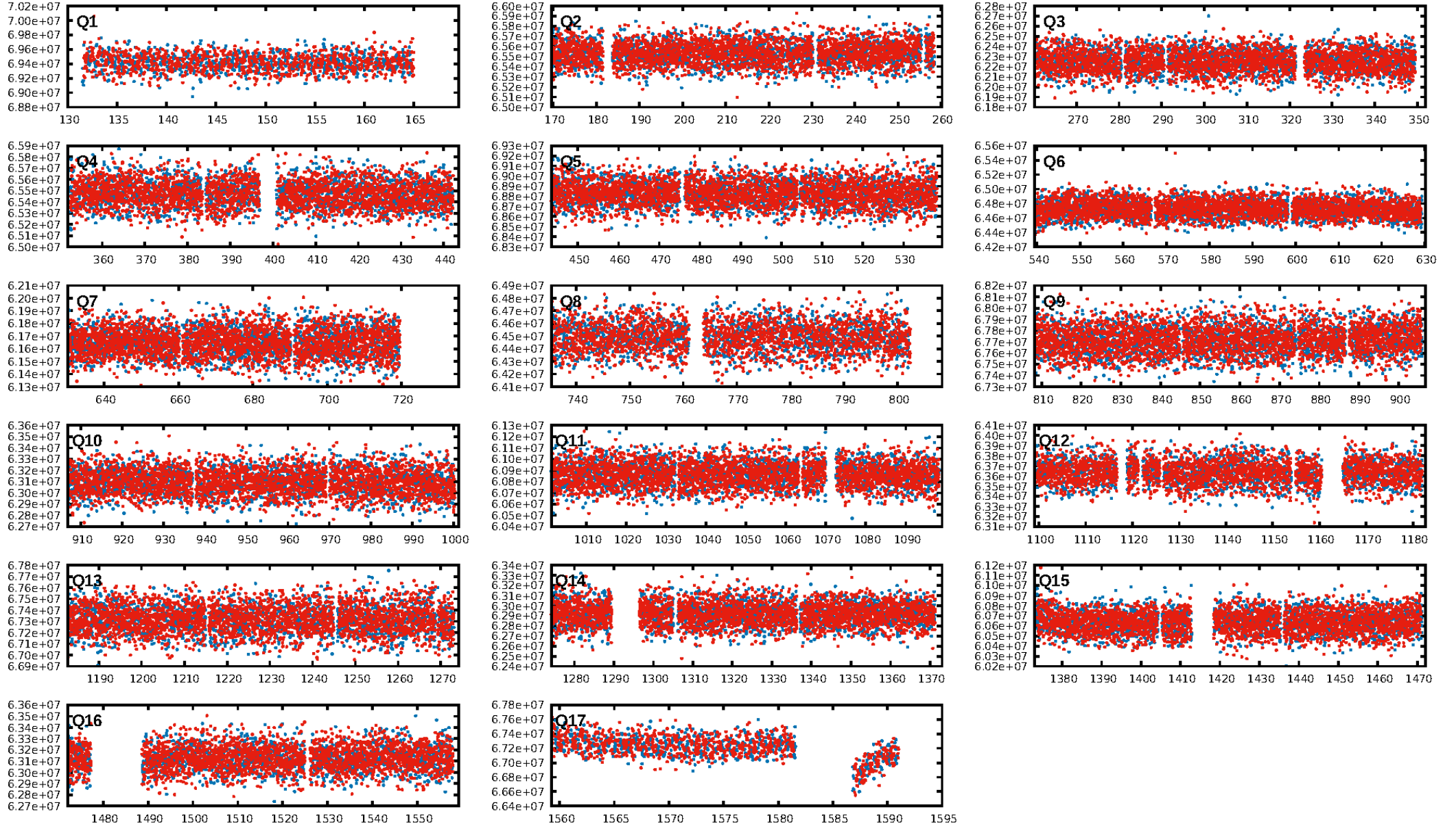
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.33e-20  
RollingBand-fgt: 1.00 [1941/1941]  
GhostDiagnostic-chr: 1.01  
Centroid-sig: 53.3%  
Centroid-so: 0.741 arcsec [0.94σ]  
**OotOffset-rm: 1.941 arcsec [4.47σ]**  
**KicOffset-rm: 1.949 arcsec [4.50σ]**  
OotOffset-st: 0/4/2/5 [11]  
KicOffset-st: 0/4/2/5 [11]  
DiffImageQuality-fgm: 0.55 [6/11]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:19:44 Z

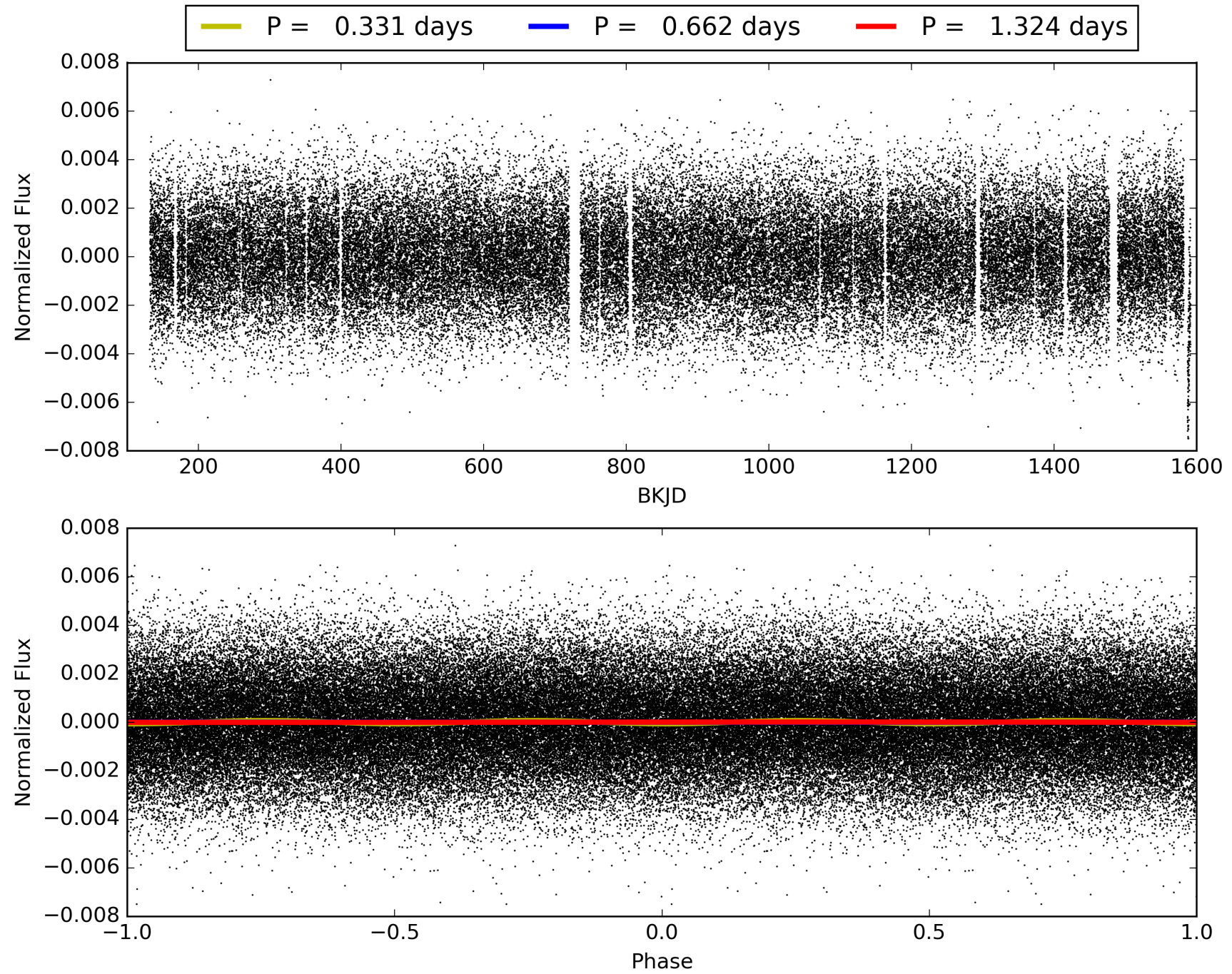
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006061584-01, PDC Light Curves



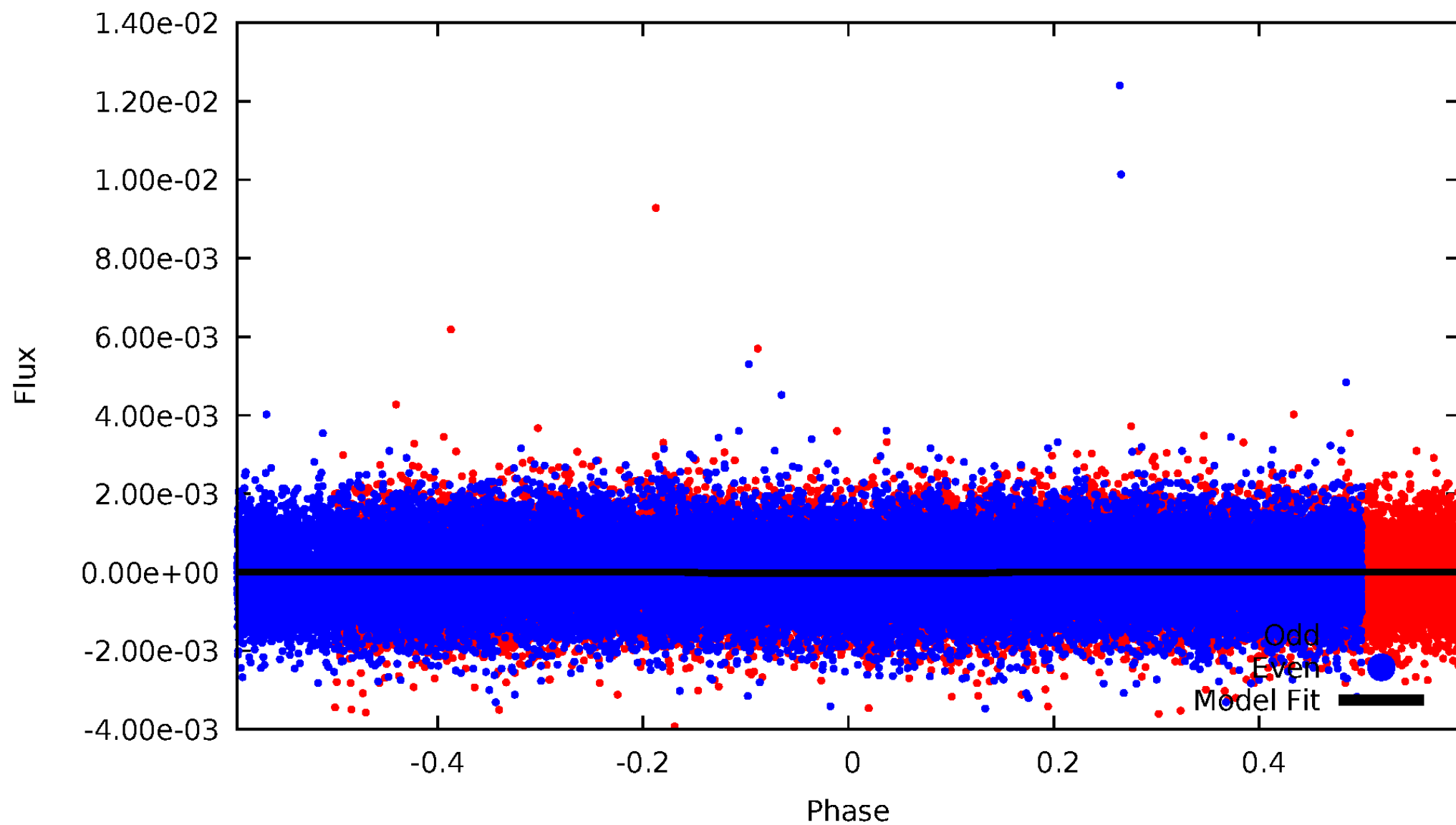


TCE 006061584-01



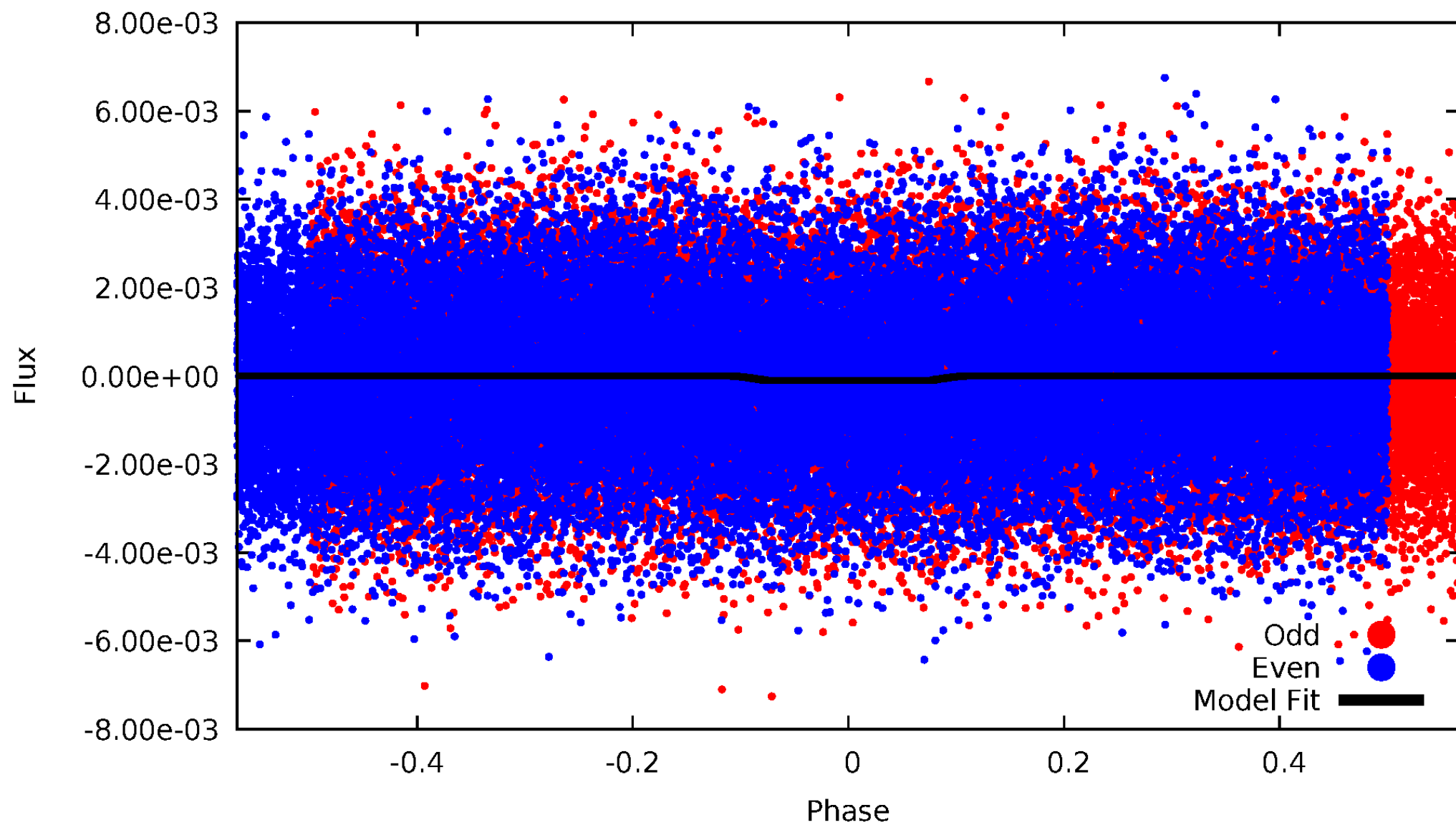
DV Odd/Even

TCE 006061584-01



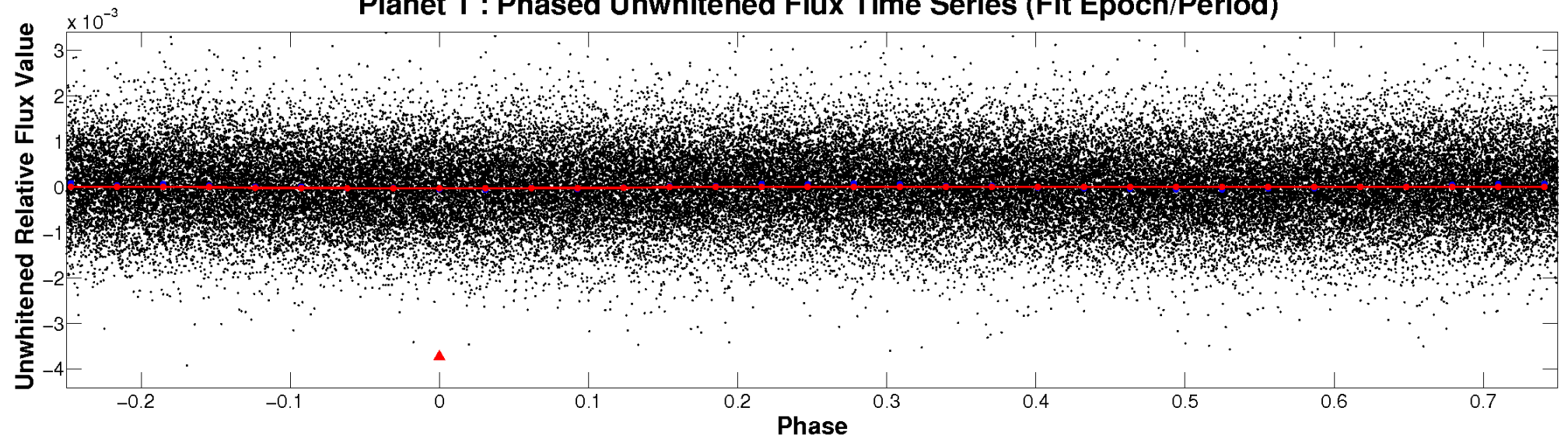
# ALT Odd/Even

TCE 006061584-01

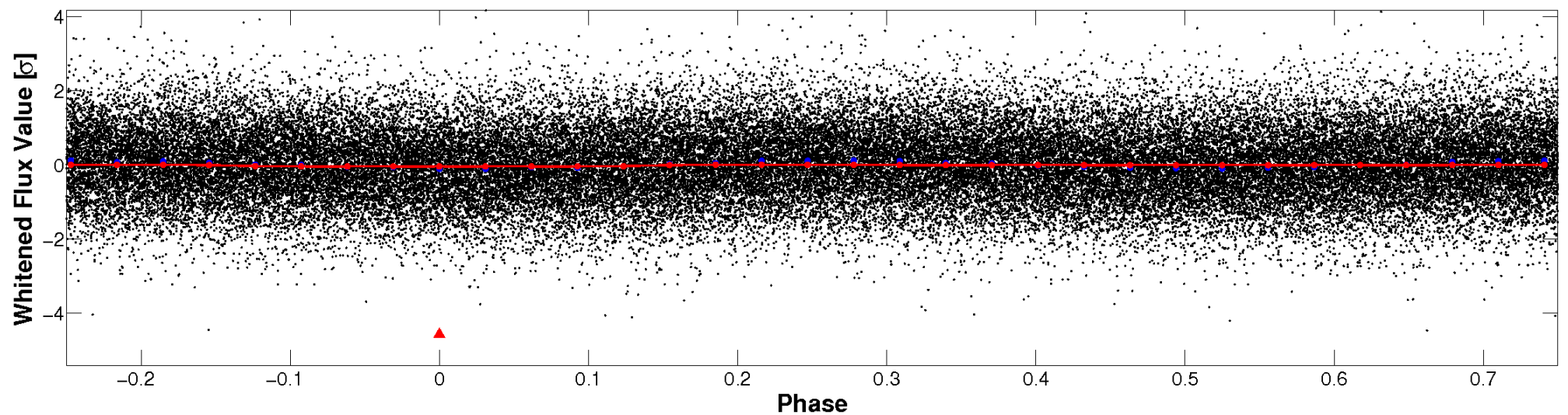


# Non-Whitened Vs. Whitened Light Curve

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



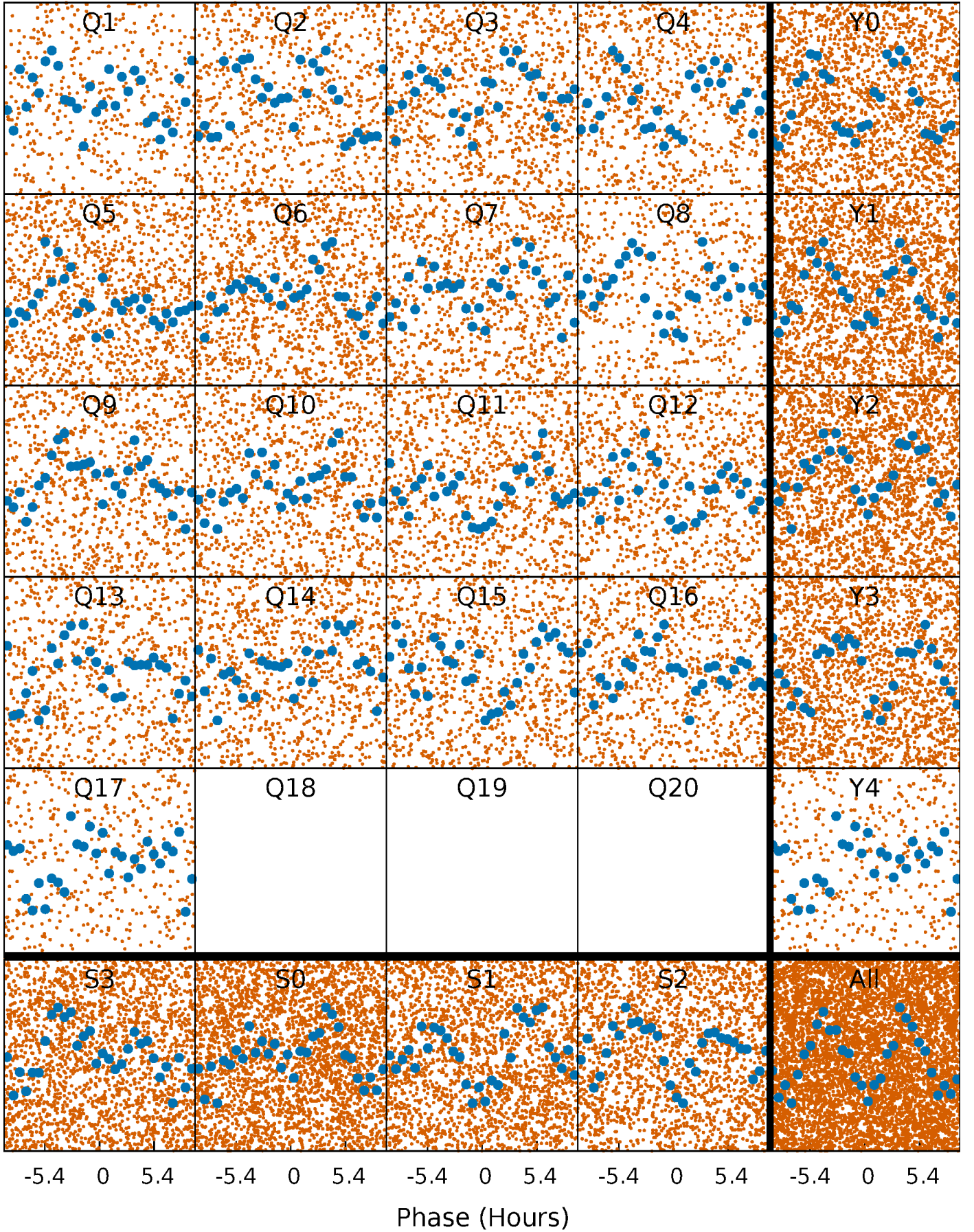
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

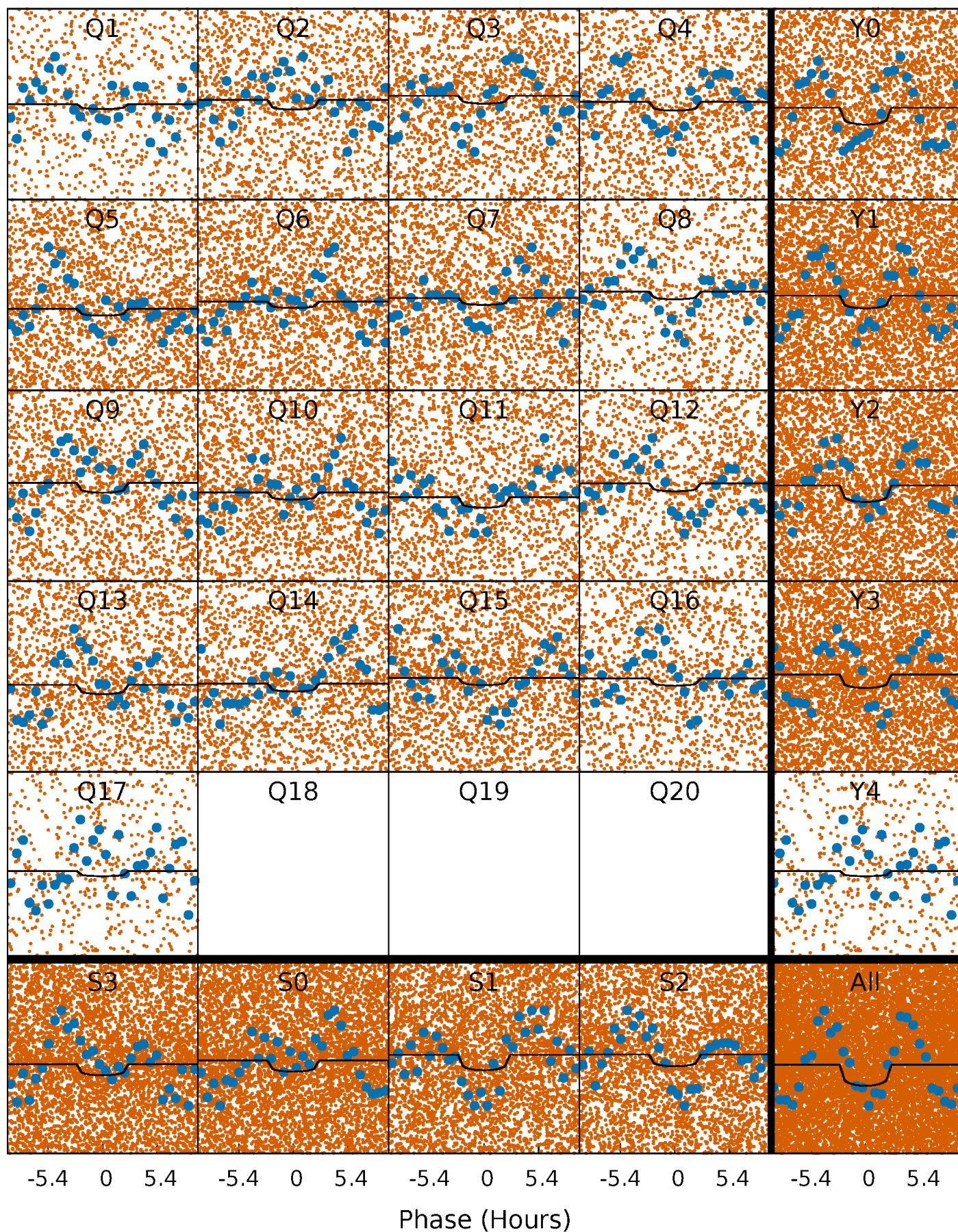
TCE 006061584-01 P= 0.661820 Days  $T_0=131.818872$  (BKJD)





# DV Quarter-Phased Transit Curves

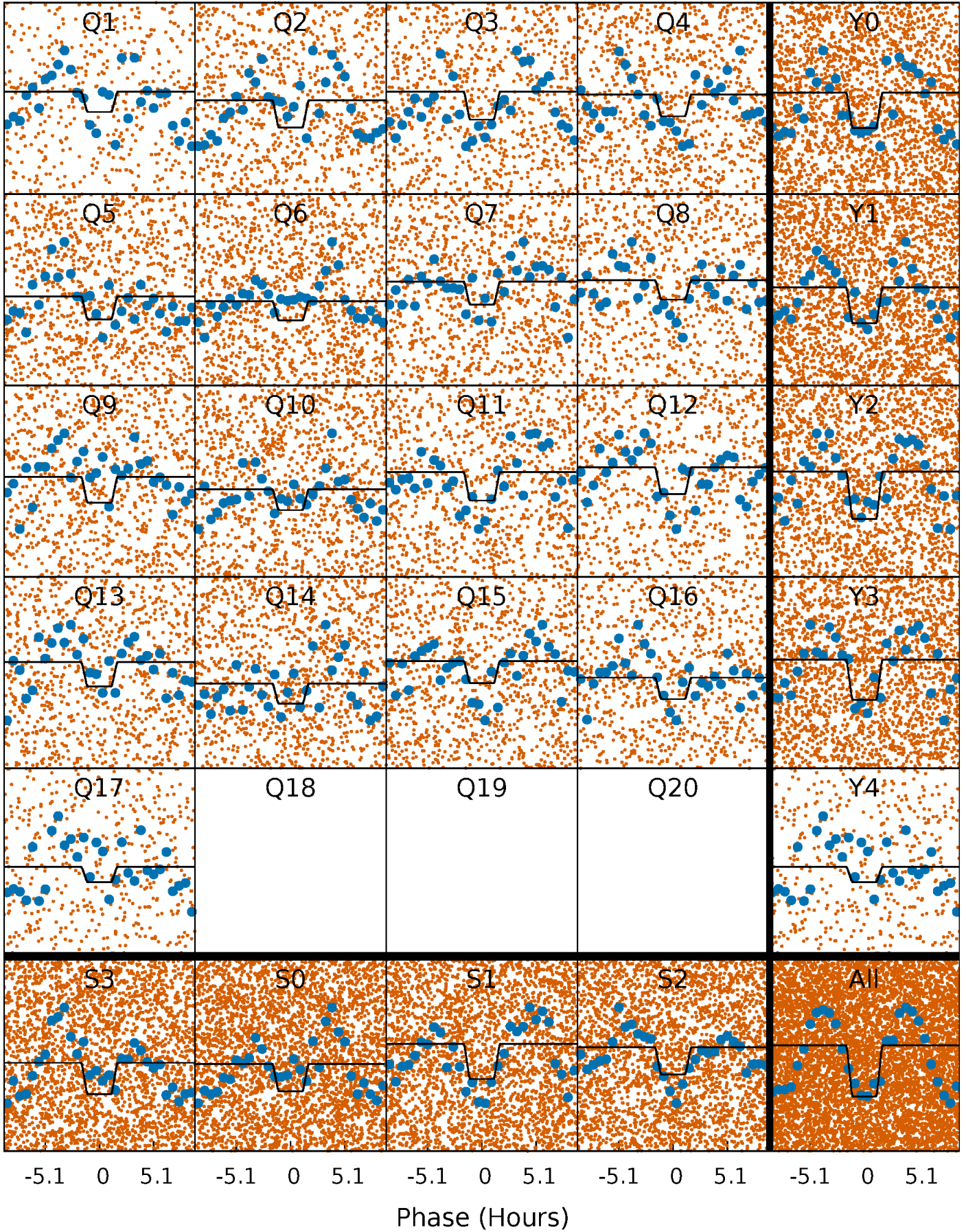
TCE 006061584-01 P= 0.661820 Days  $T_0=131.818872$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

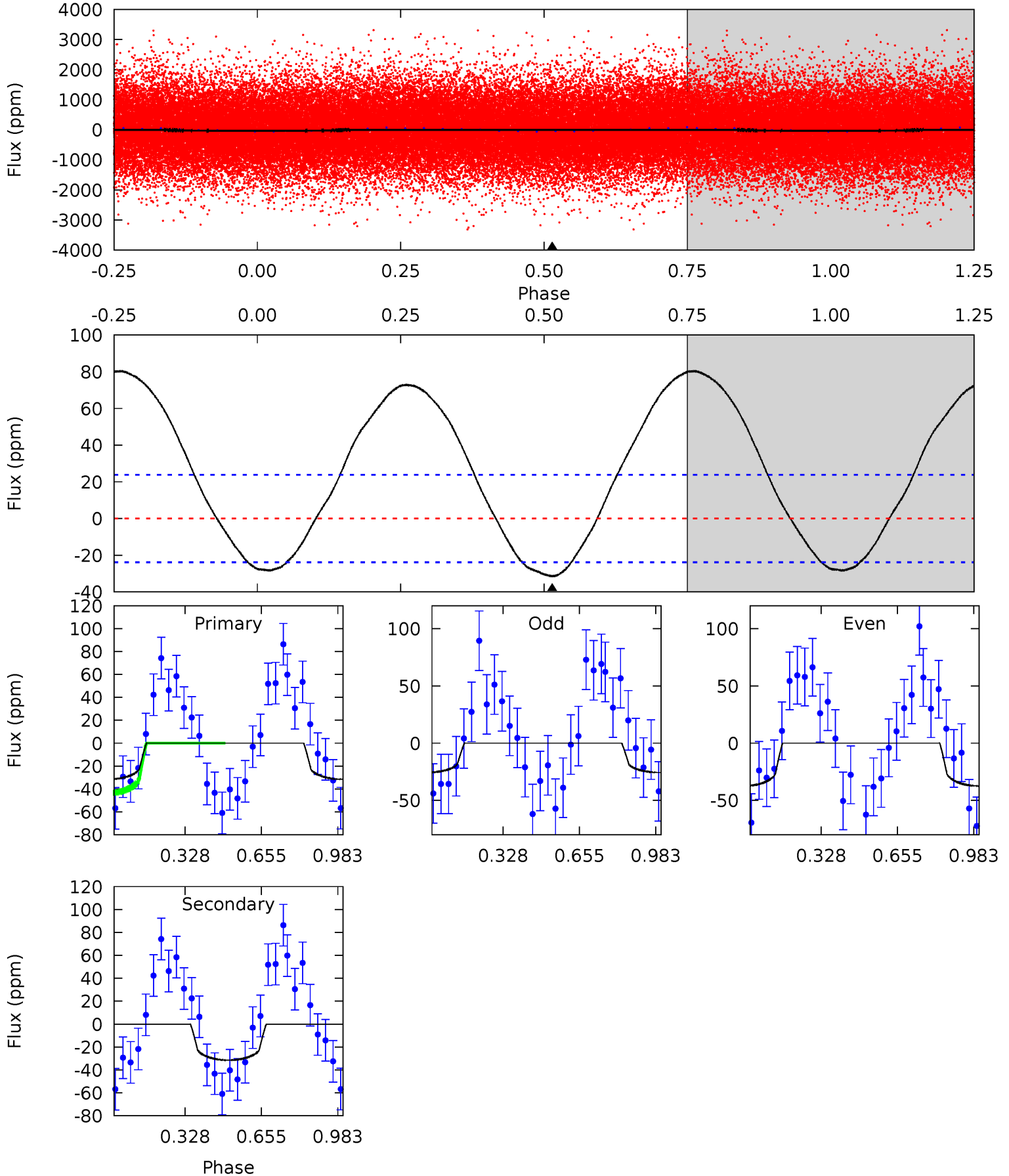
TCE 006061584-01 P= 0.661881 Days  $T_0=131.759525$  (BKJD)



# DV Model-Shift Uniqueness Test

006061584-01, P = 0.661820 Days, E = 131.157052 Days

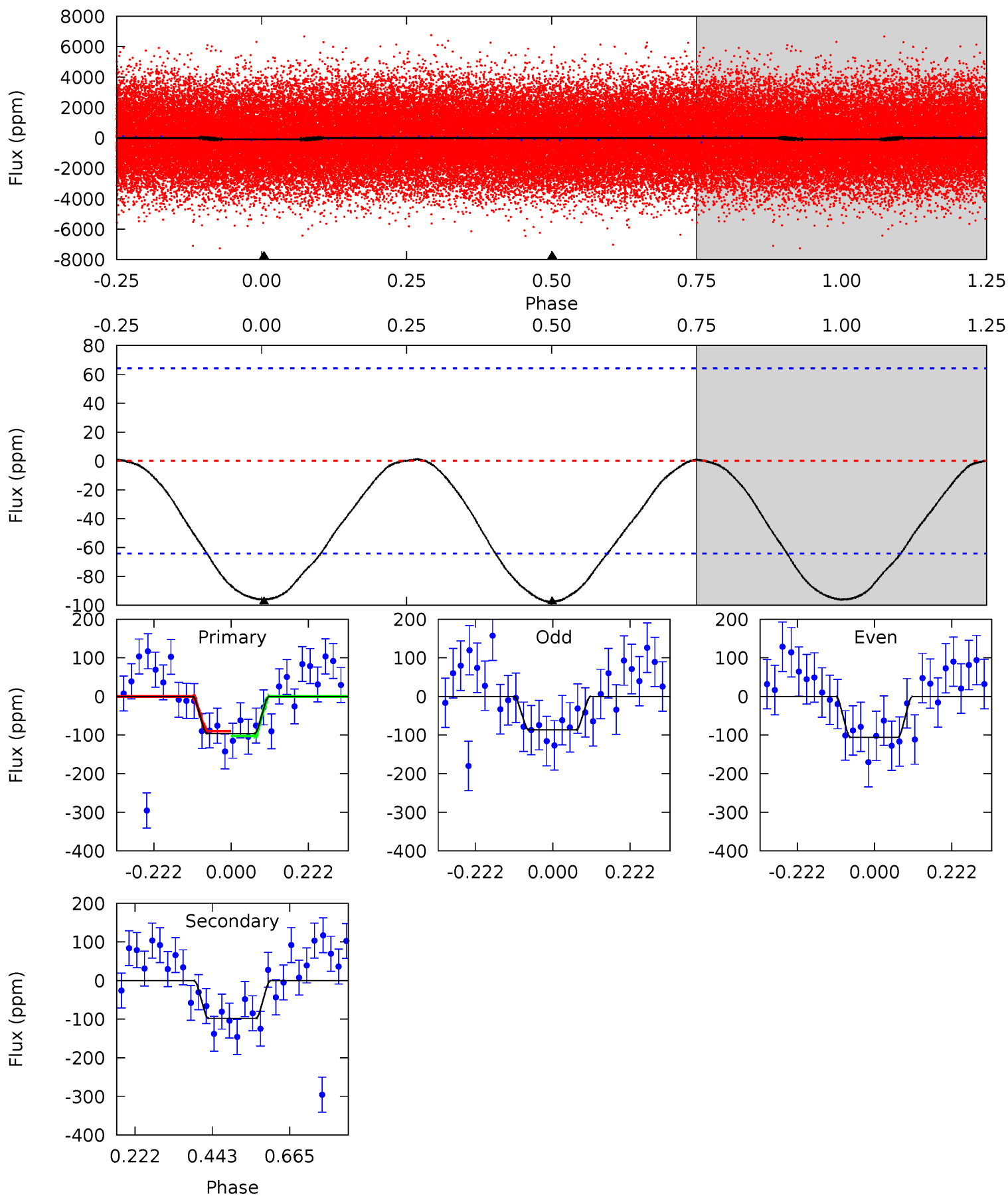
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.69	5.69	0	0	4.31	0.98	4.68	5.69	5.69	5.69	5.69	1.06	0.80	0.72	2.19



# Alt Model-Shift Uniqueness Test

006061584-01, P = 0.661881 Days, E = 131.097644 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
6.59	6.71	0	0	4.39	1.22	0.07	6.59	6.59	6.71	6.71	0.67	1.10	0.01	0.41





### Stellar Parameters For KIC 006061584

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7318^{+228}_{-304}$	$3.861^{+0.308}_{-0.132}$	$-0.060^{+0.250}_{-0.350}$	$2.605^{+0.523}_{-1.045}$	$1.795^{+0.175}_{-0.409}$	$0.143^{+0.347}_{-0.047}$
	+3%/-4%	+8%/-3%	+417%/-583%	+20%/-40%	+10%/-23%	+243%/-33%
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 006061584-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-32 \pm 6$	$2.11^{+2.13}_{-1.45}$	$5317^{+412}_{-516}$	$5614^{+6487}_{-3090}$	$1.273^{+10.529}_{-0.965}$
Alt.	$-98 \pm 15$	$3.10^{+2.27}_{-1.86}$	$5321^{+403}_{-499}$	$6356^{+5617}_{-1986}$	$1.763^{+10.167}_{-1.198}$

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

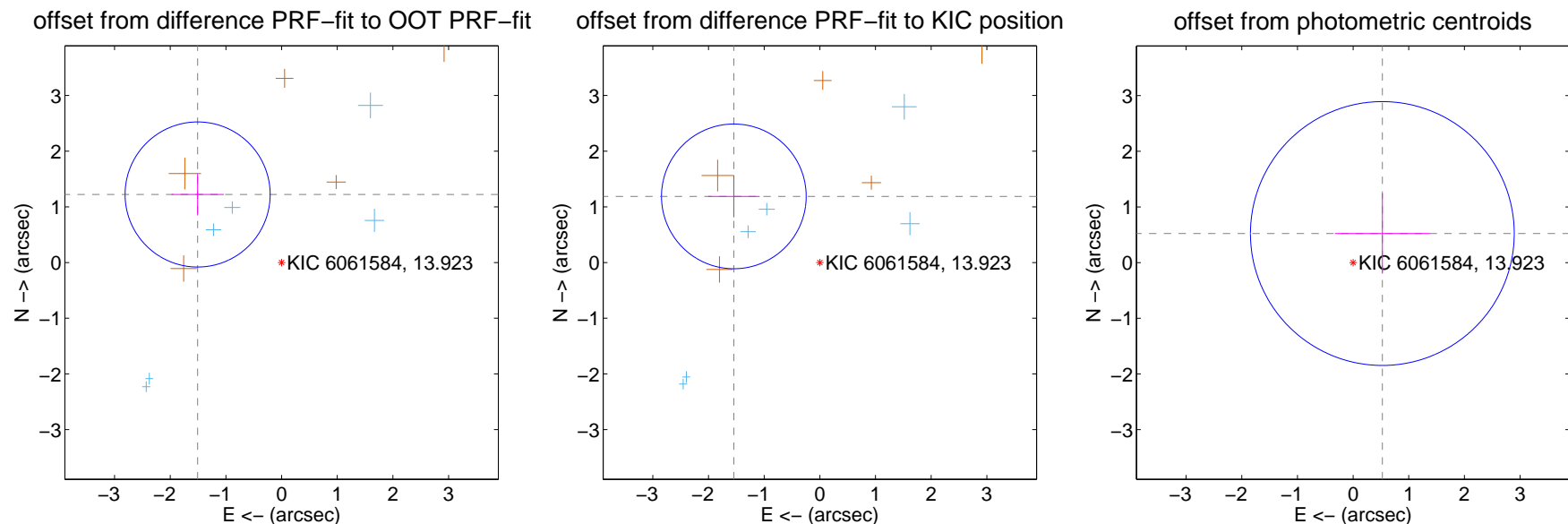
## DV Centroid Data

Supplemental centroid analysis for 006061584-01. Kepler magnitude: 13.92. Transit SNR 5.43

There are 6 quarters with good PRF difference image offsets

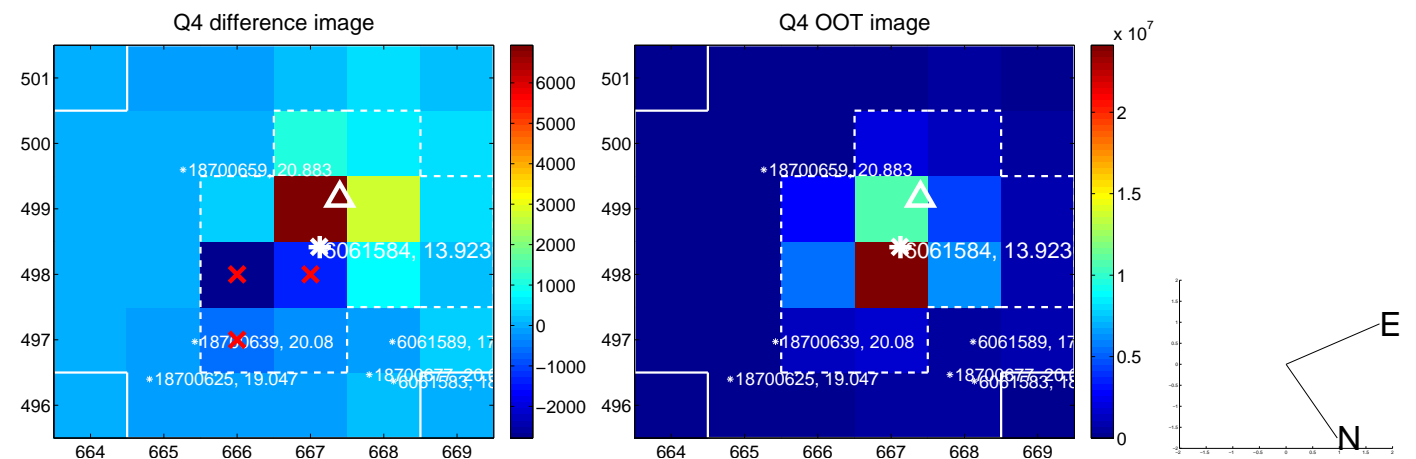
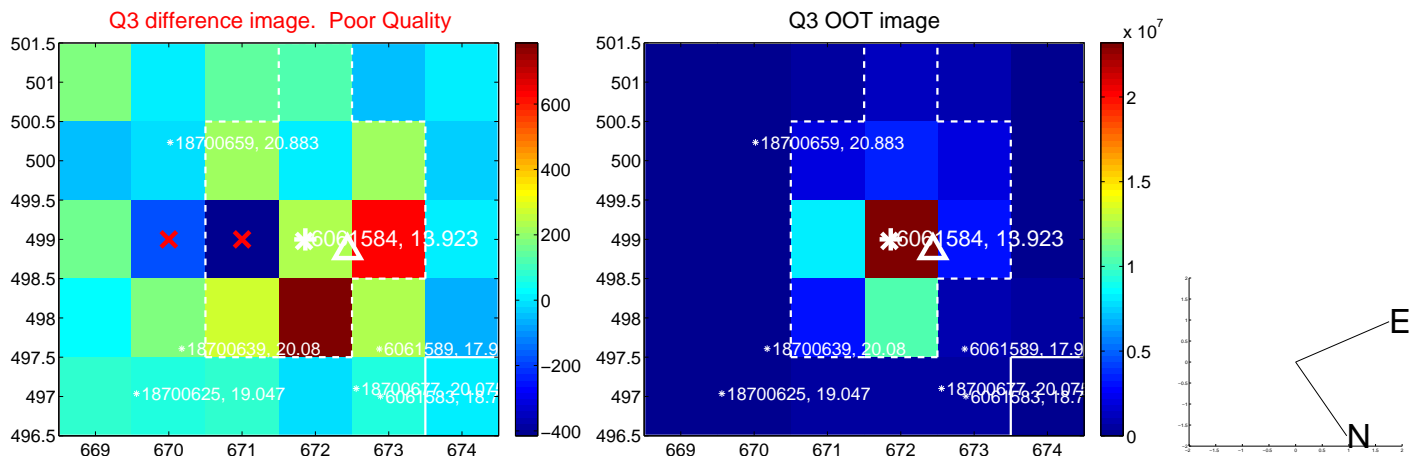
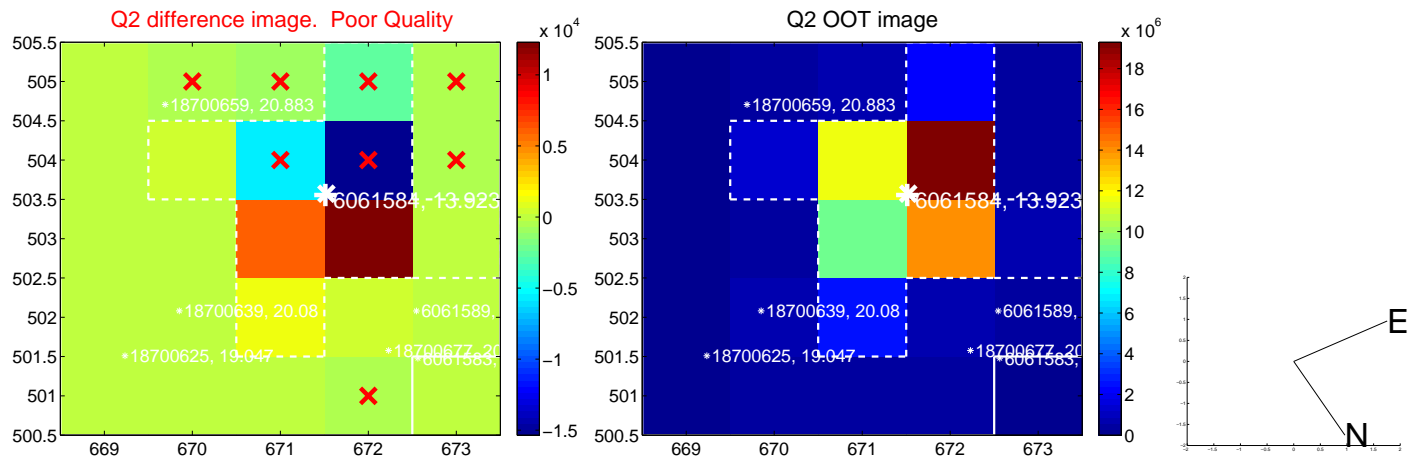
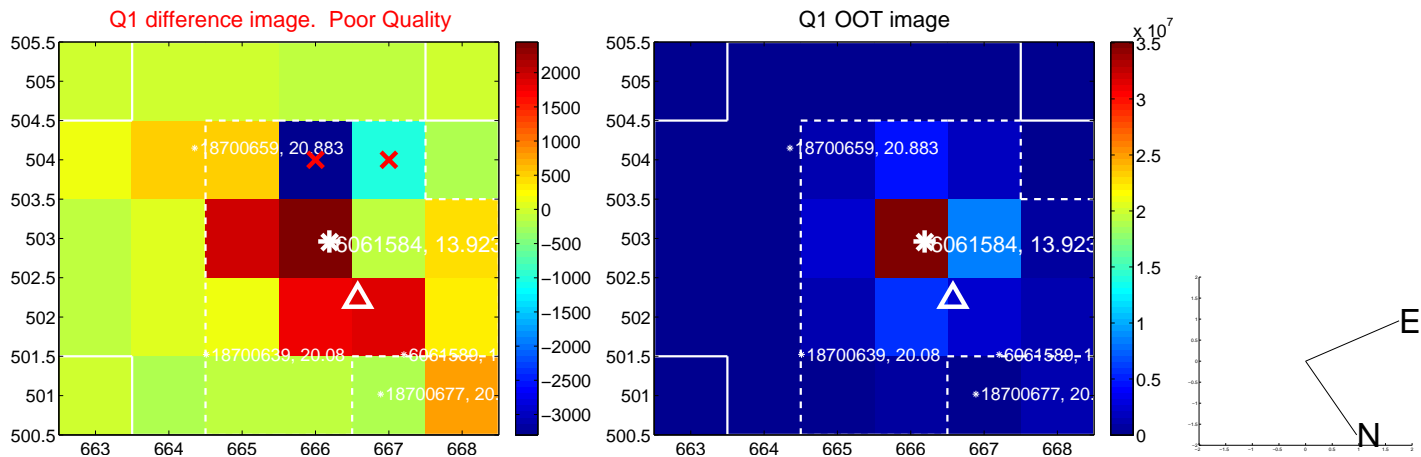
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.941 \pm 0.434$	4.47	$1.508 \pm 0.469$	$1.222 \pm 0.375$
PRF-fit source offset from KIC position	$1.949 \pm 0.433$	4.50	$1.545 \pm 0.463$	$1.188 \pm 0.377$
photometric centroid source offset	$0.74 \pm 0.79$	0.94	$-0.53 \pm 0.85$	$0.52 \pm 0.72$

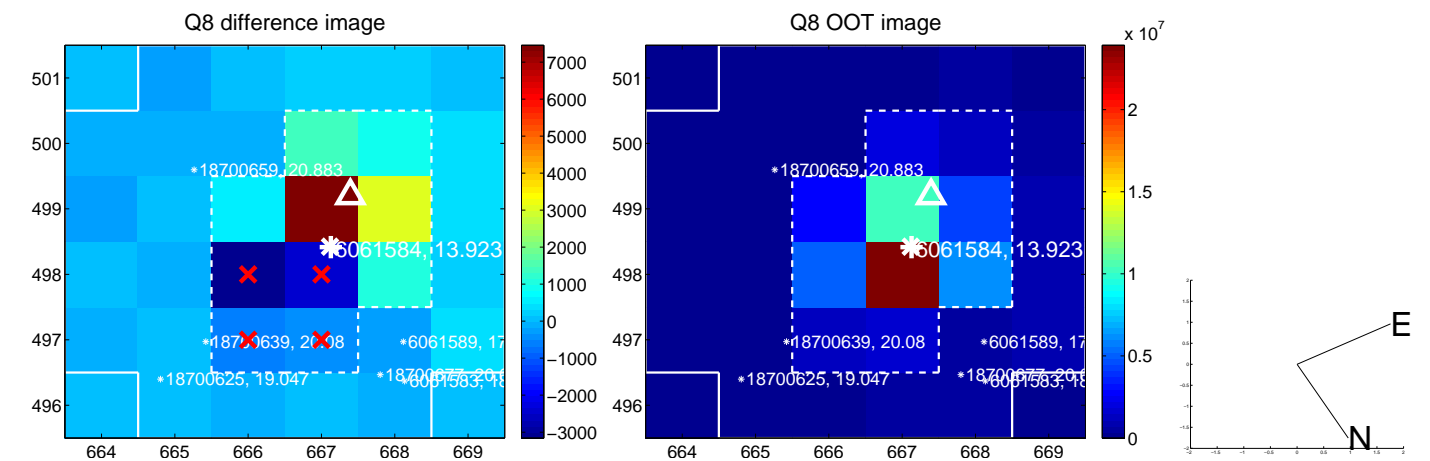
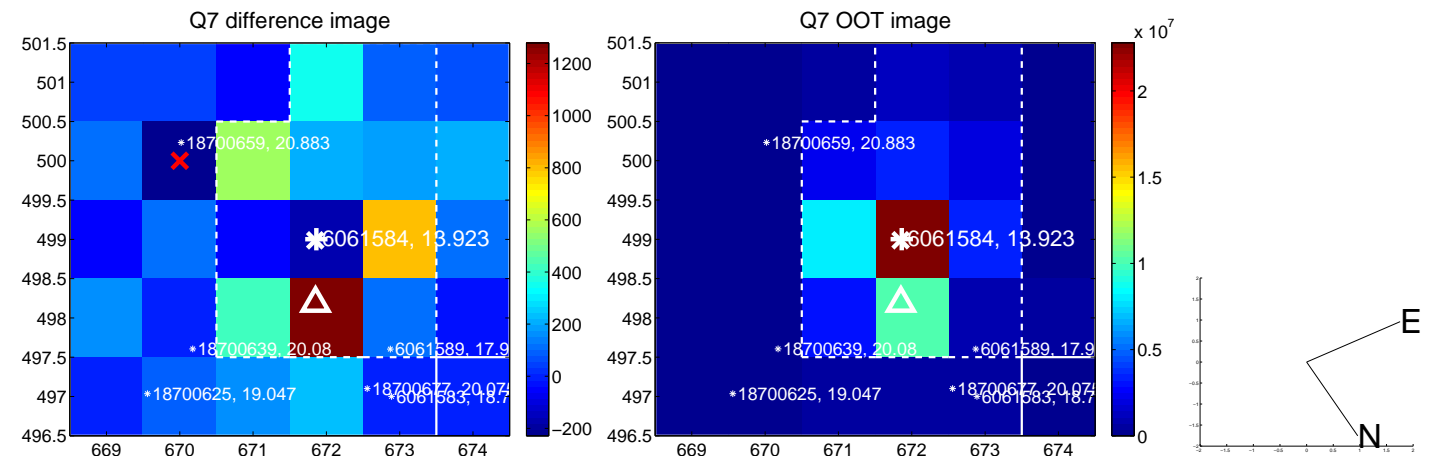
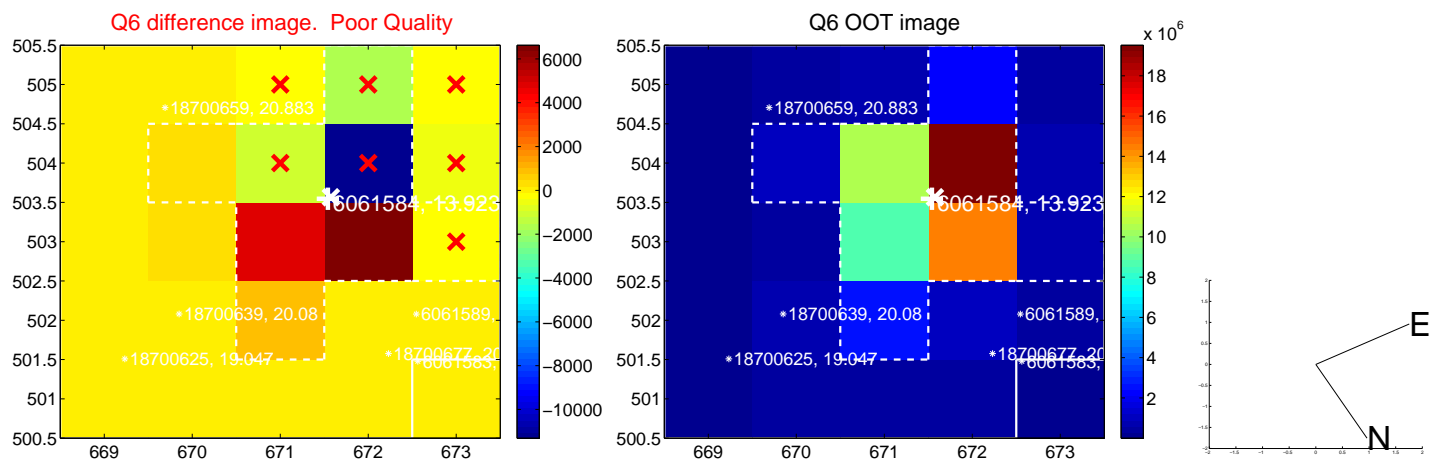
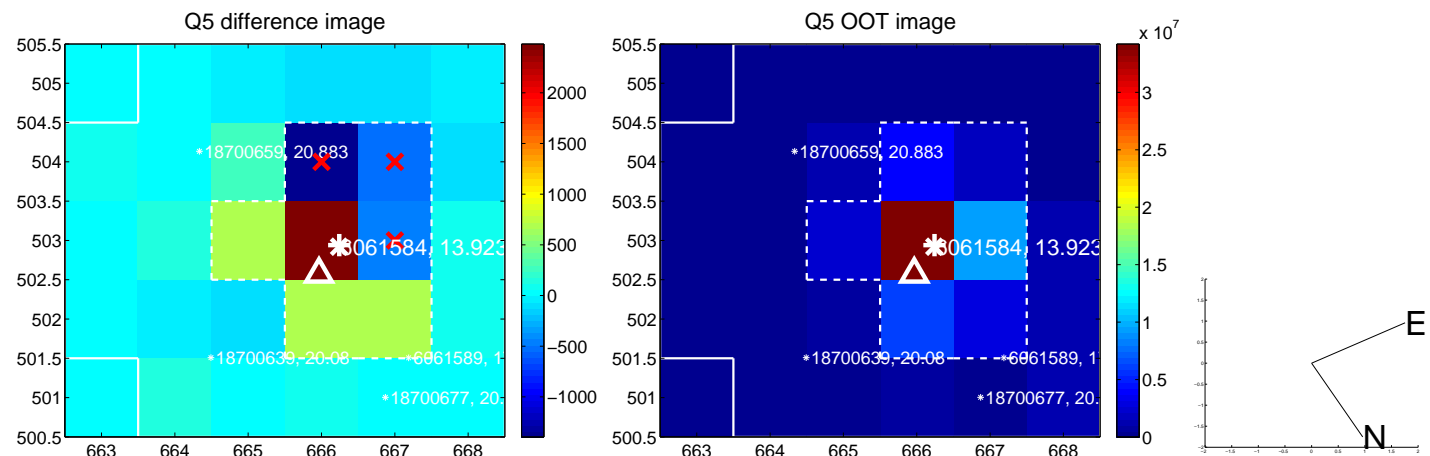


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

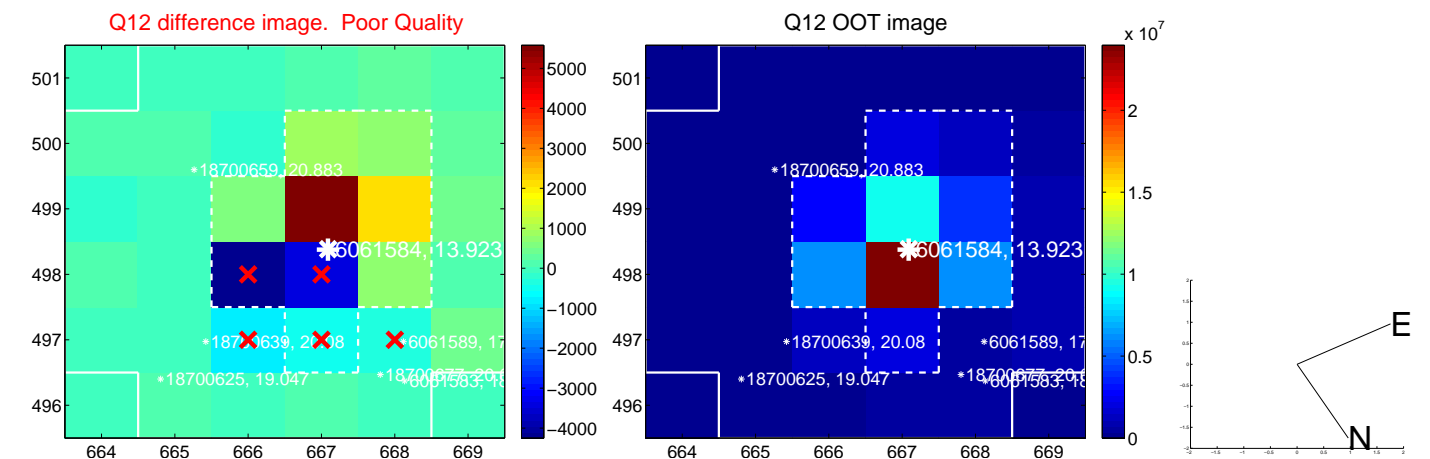
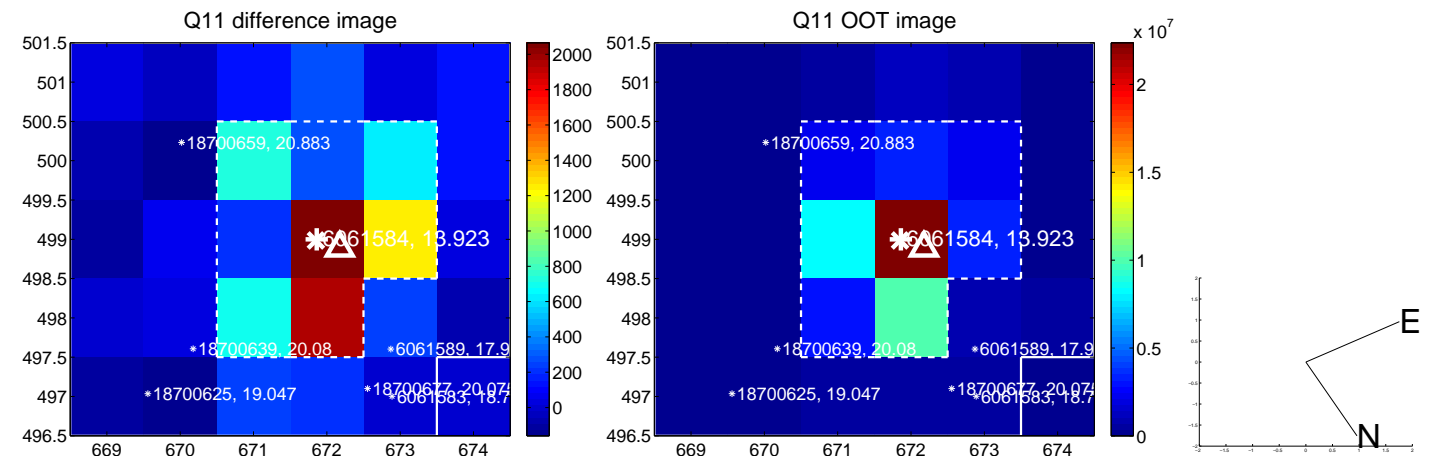
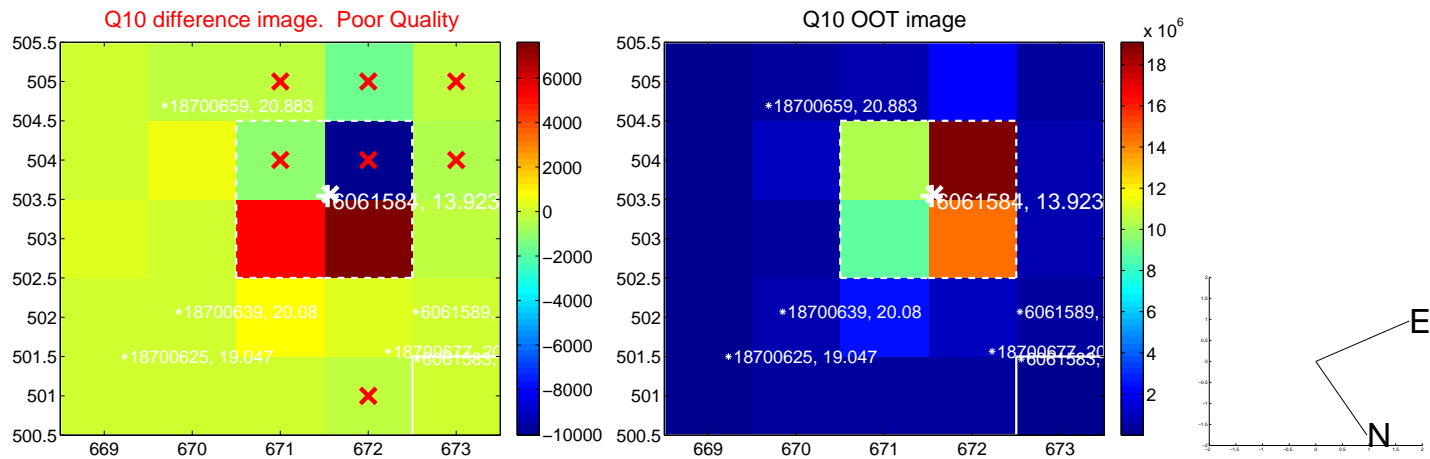
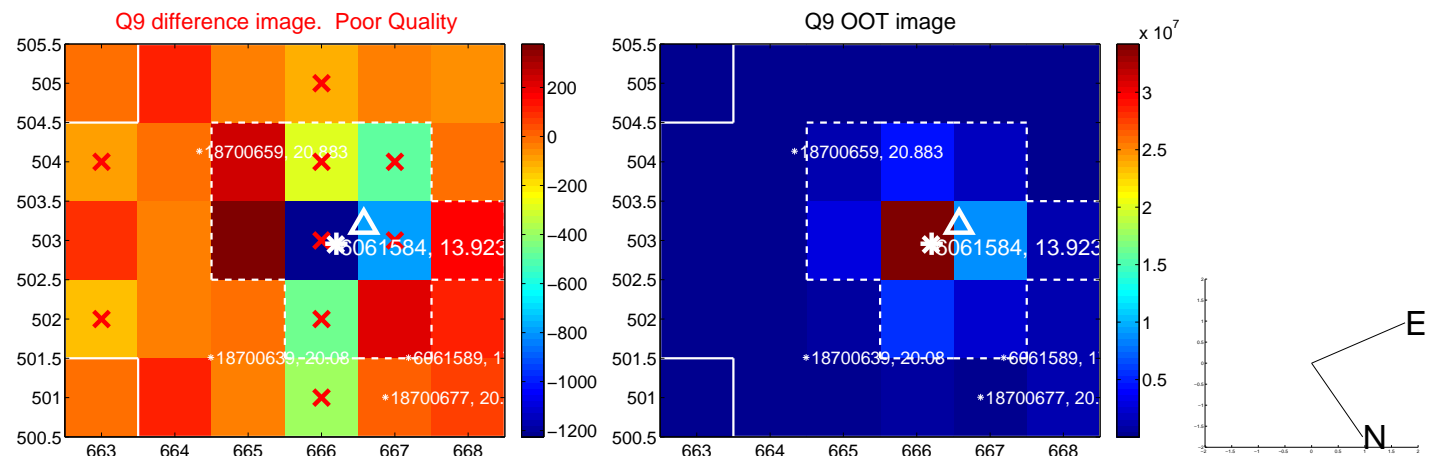


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

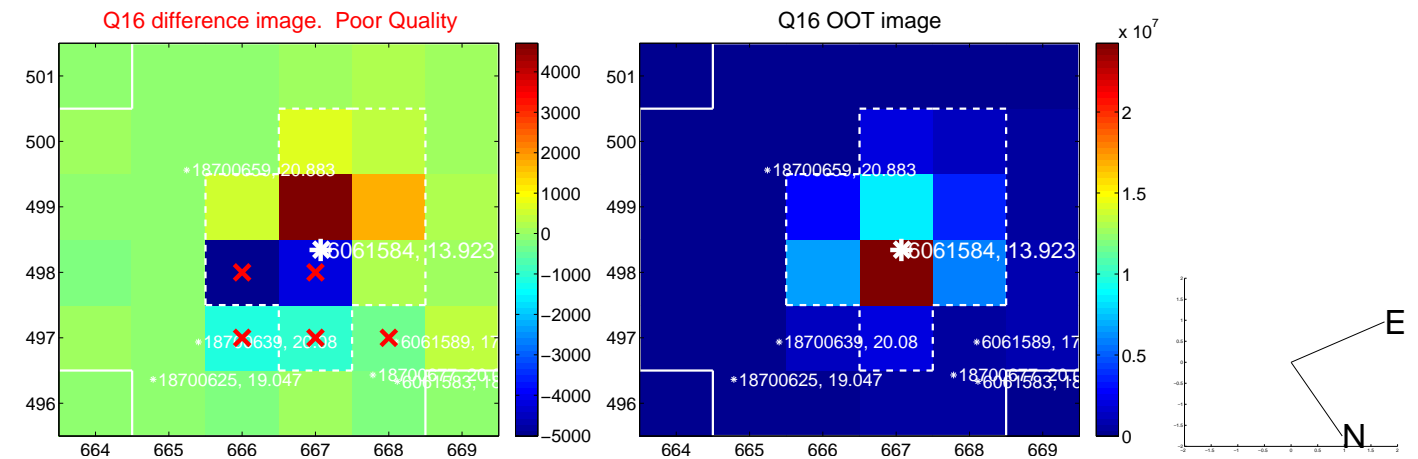
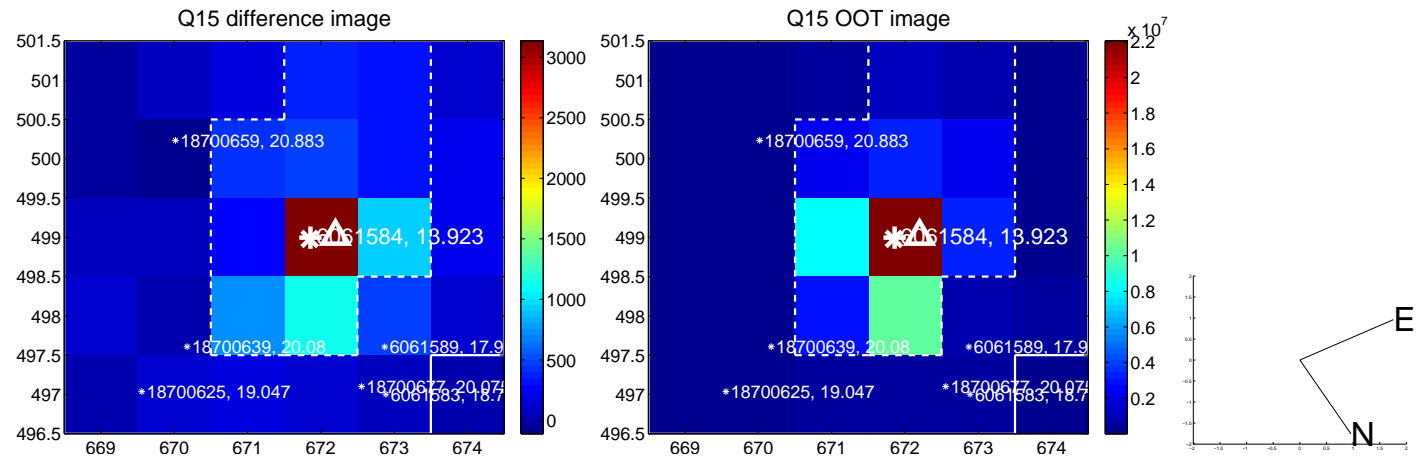
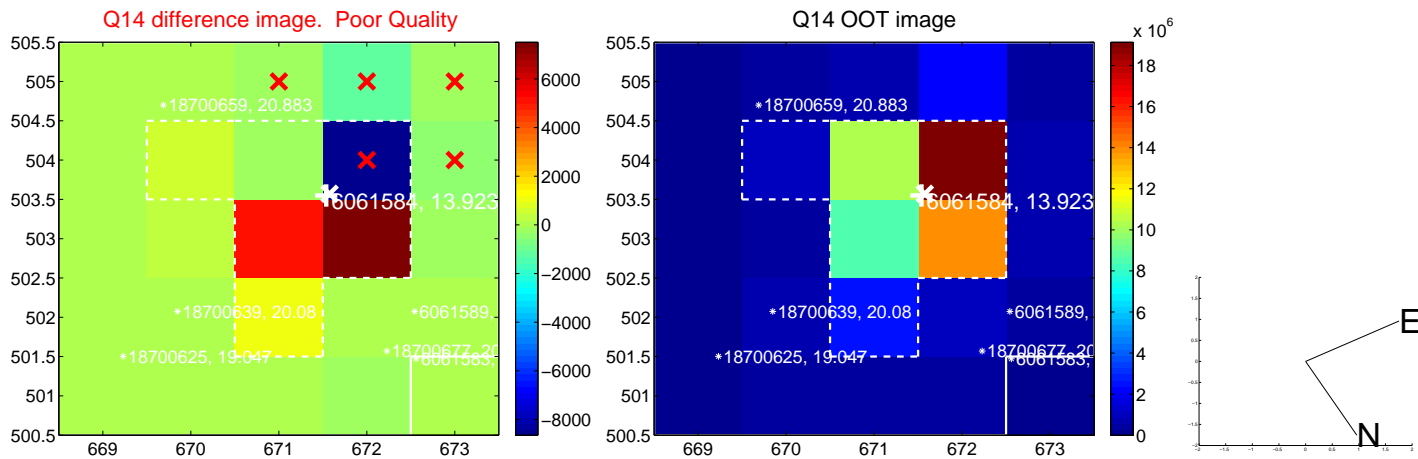
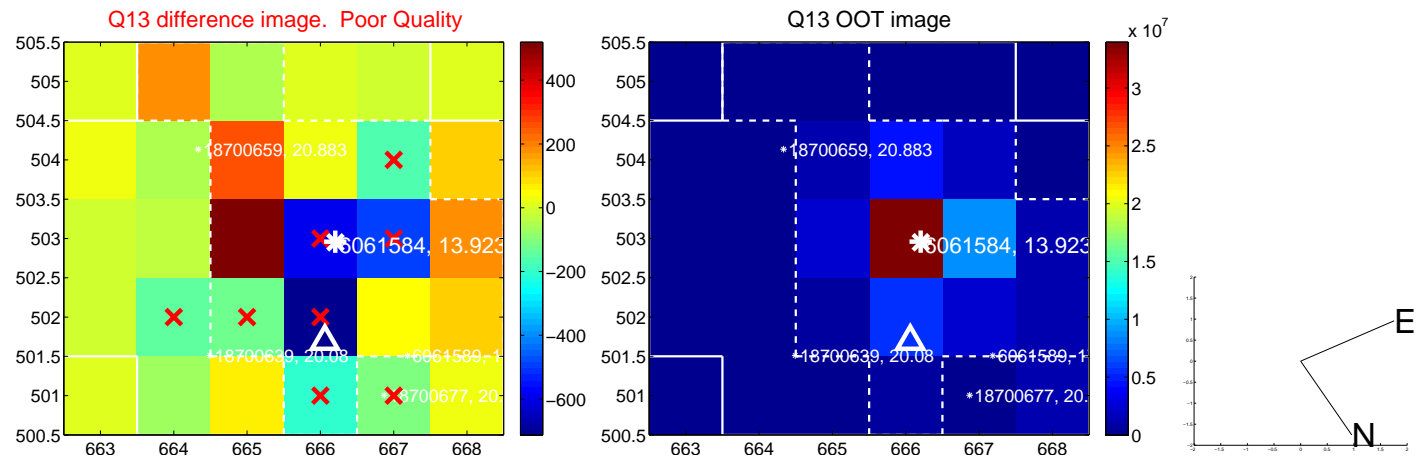




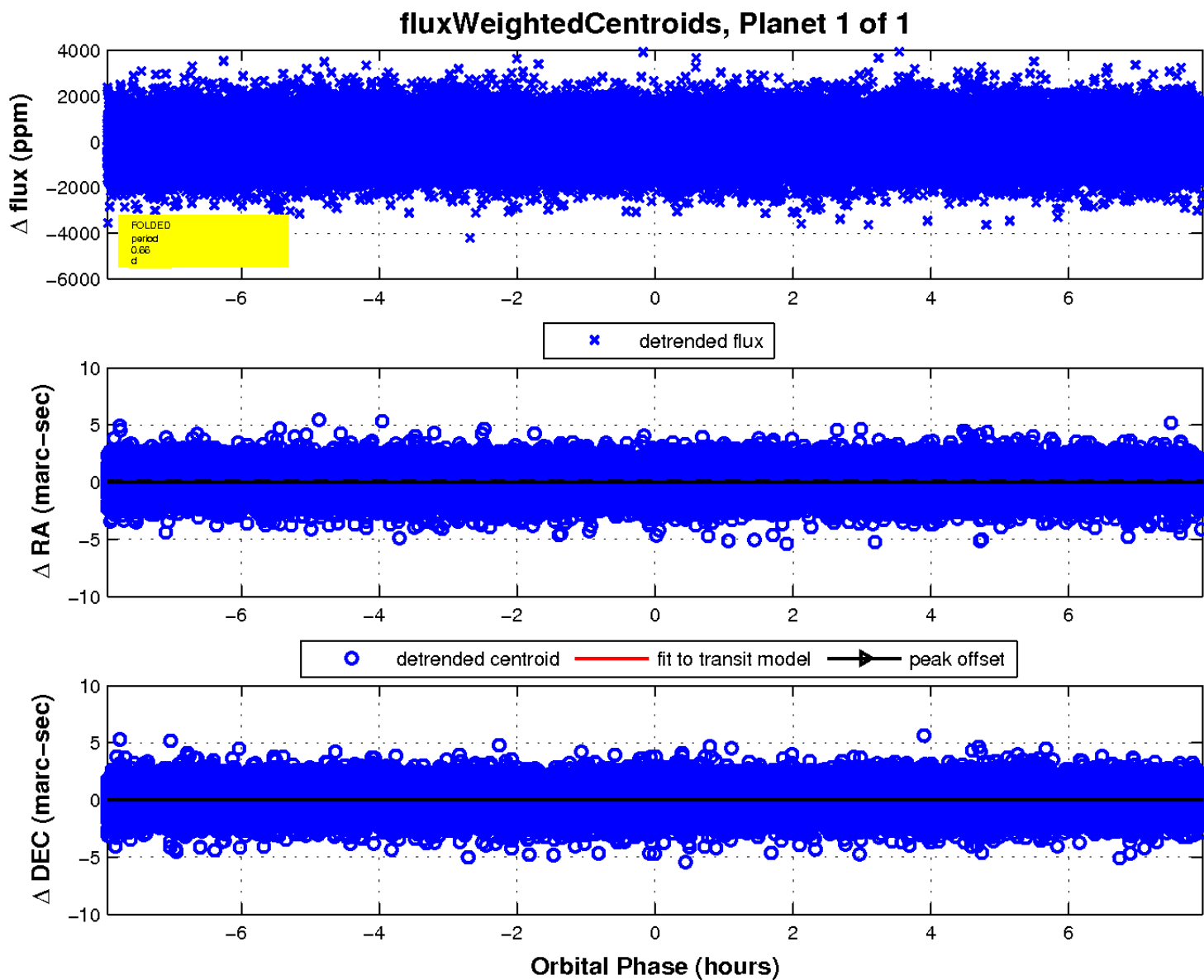
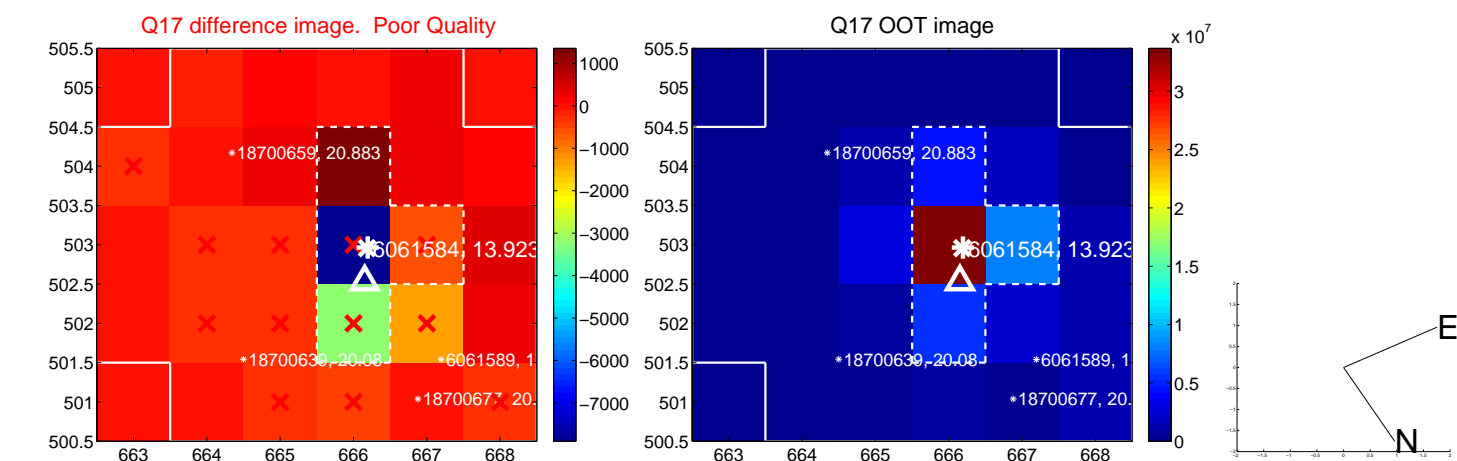
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



# UKIRT Image

Declination

