

# KIC 003560871

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003560871-01	OBS	No	1.197178	131.866610	112.4	3.415	8.1	6.4	0.78	5389	0.99	1057.62

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560871-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

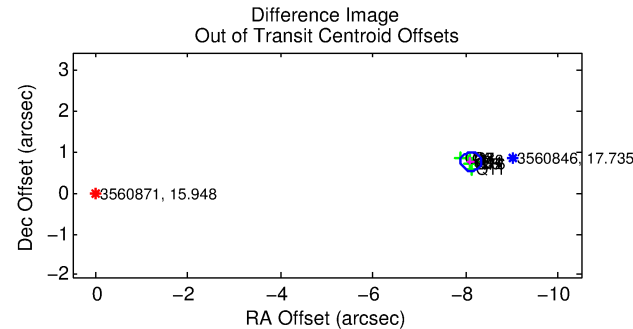
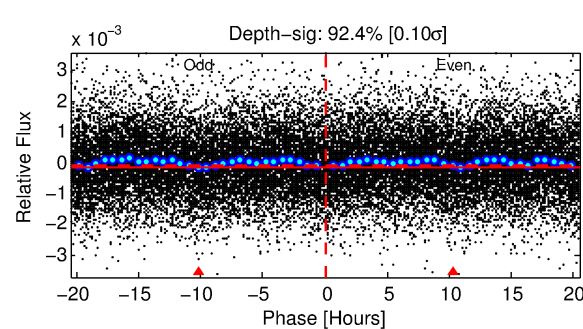
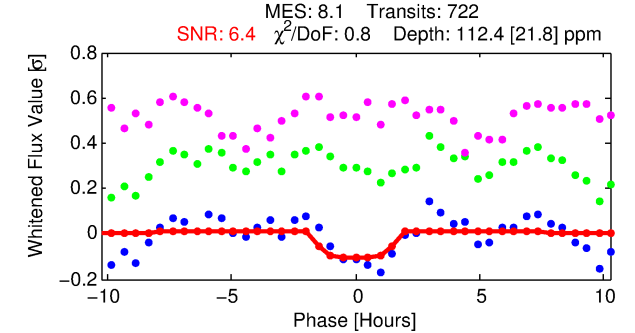
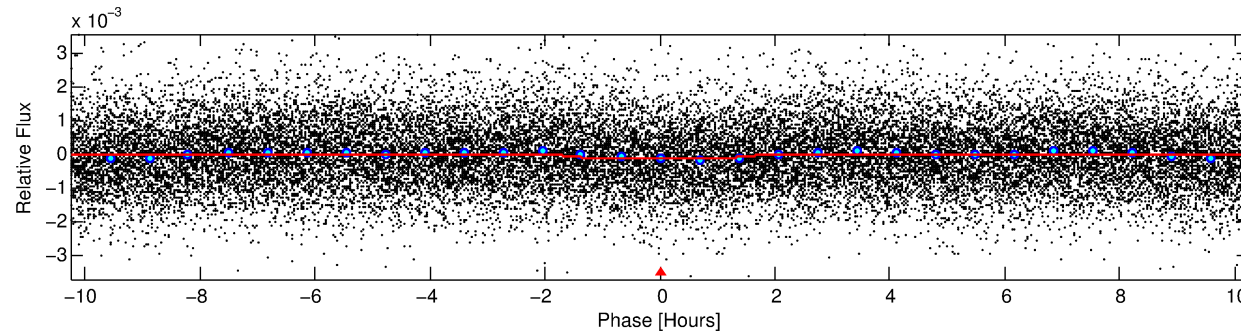
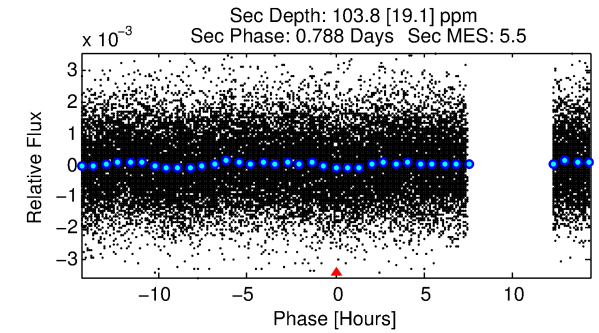
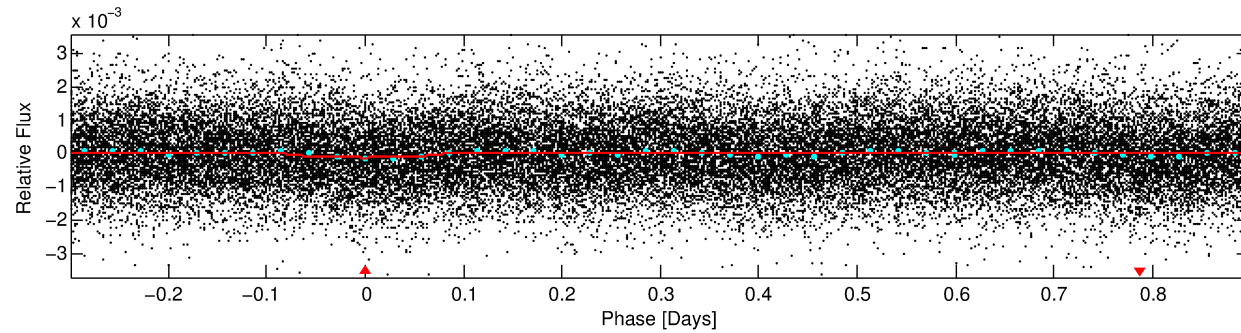
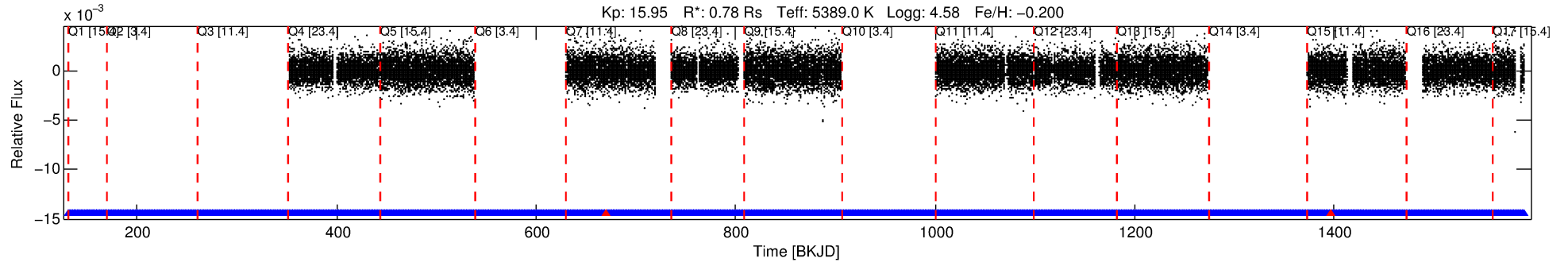
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003560871-01

No Significant Match Found

# DV One-Page Summary

KIC: 3560871 Candidate: 1 of 1 Period: 1.197 d



## DV Fit Results:

Period = 1.19718 [0.00002] d  
Epoch = 131.8666 [0.0066] BKJD  
Rp/R\* = 0.0117 [0.0116]  
a/R\* = 1.54 [3.97]  
b = 0.90 [0.93]  
Seff = 1057.62 [288.32]  
Teq = 1454 [99] K  
Rp = 0.99 [1.00] Re  
a = 0.0208 [0.0033] AU  
Ag = 25.05 [50.07] [0.48σ]  
Teff = 5030 [2505] K [1.43σ]

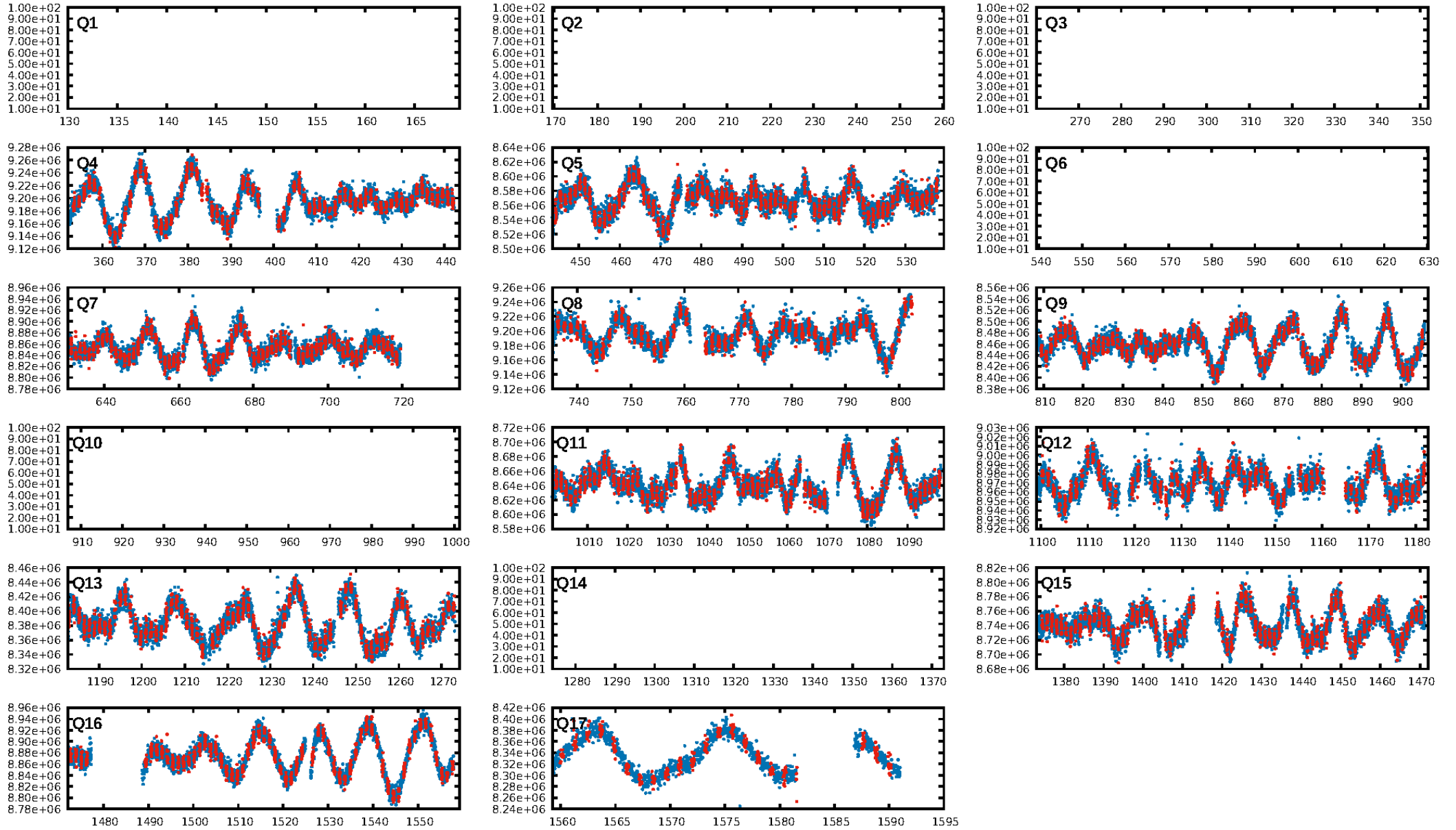
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGoF-sig: N/A  
Bootstrap-pfa: 2.12e-15  
RollingBand-fgt: 1.00 [698/700]  
GhostDiagnostic-chr: -3.354  
Centroid-sig: 0.2%  
Centroid-so: 2.175 arcsec [1.11σ]  
OotOffset-rm: 8.146 arcsec [107.45σ]  
KicOffset-rm: 8.197 arcsec [110.29σ]  
OotOffset-st: 0/1/4/4 [9]  
KicOffset-st: 0/1/4/4 [9]  
DiffImageQuality-fgm: 1.00 [9/9]  
DiffImageOverlap-fno: 1.00 [11/11]

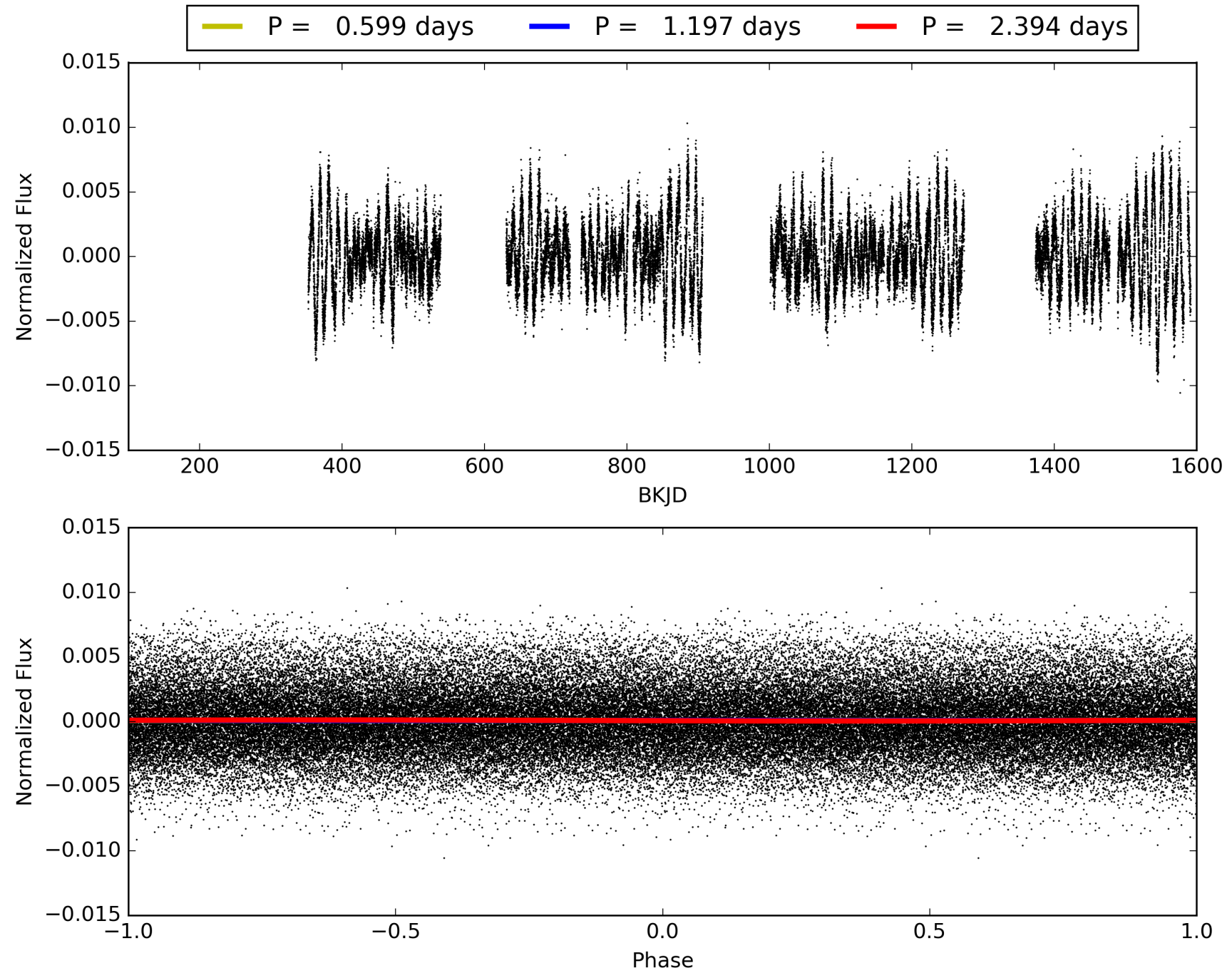
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:31:31 Z

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

# TCE 003560871-01, PDC Light Curves

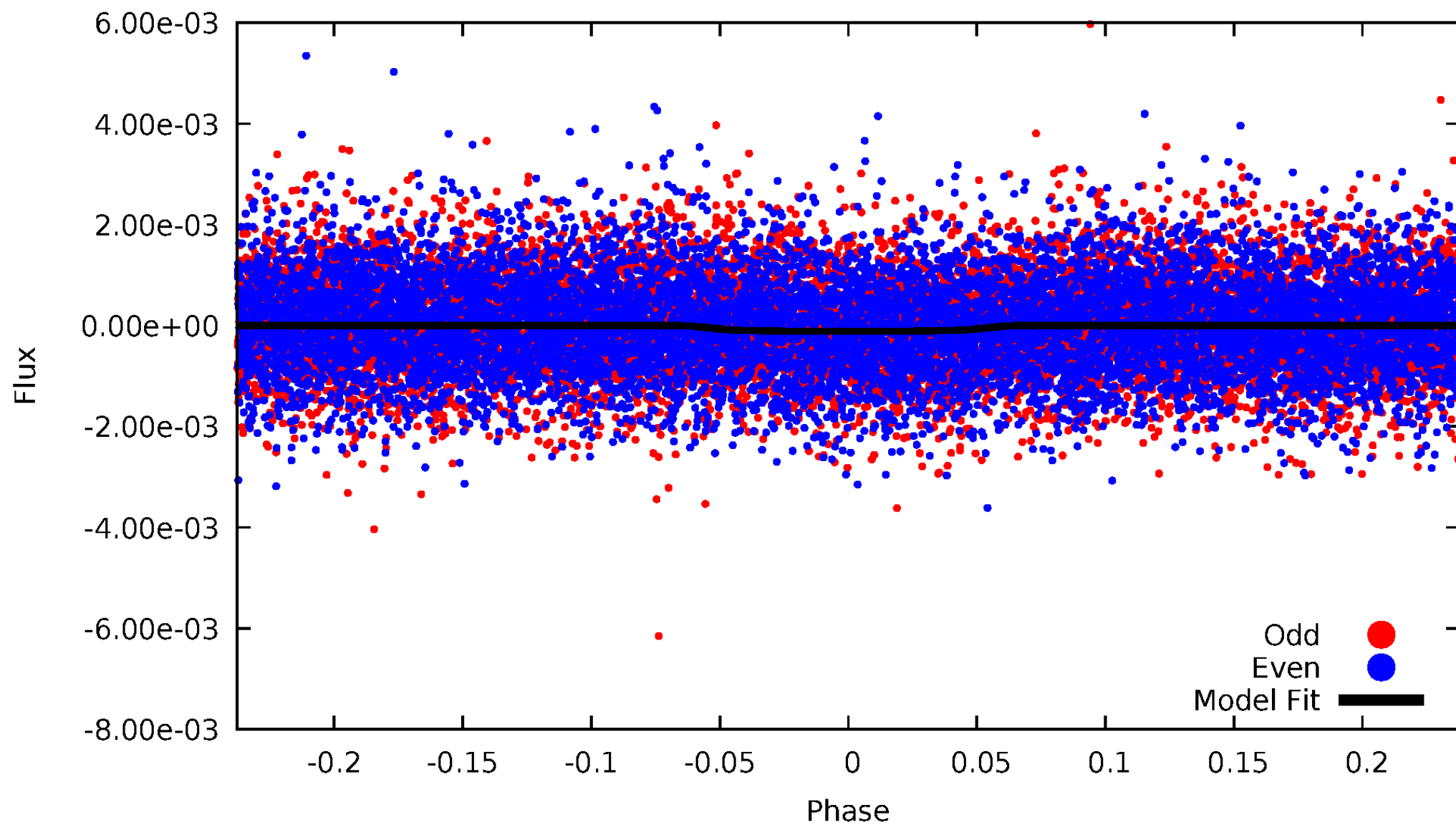


TCE 003560871-01



DV Odd/Even

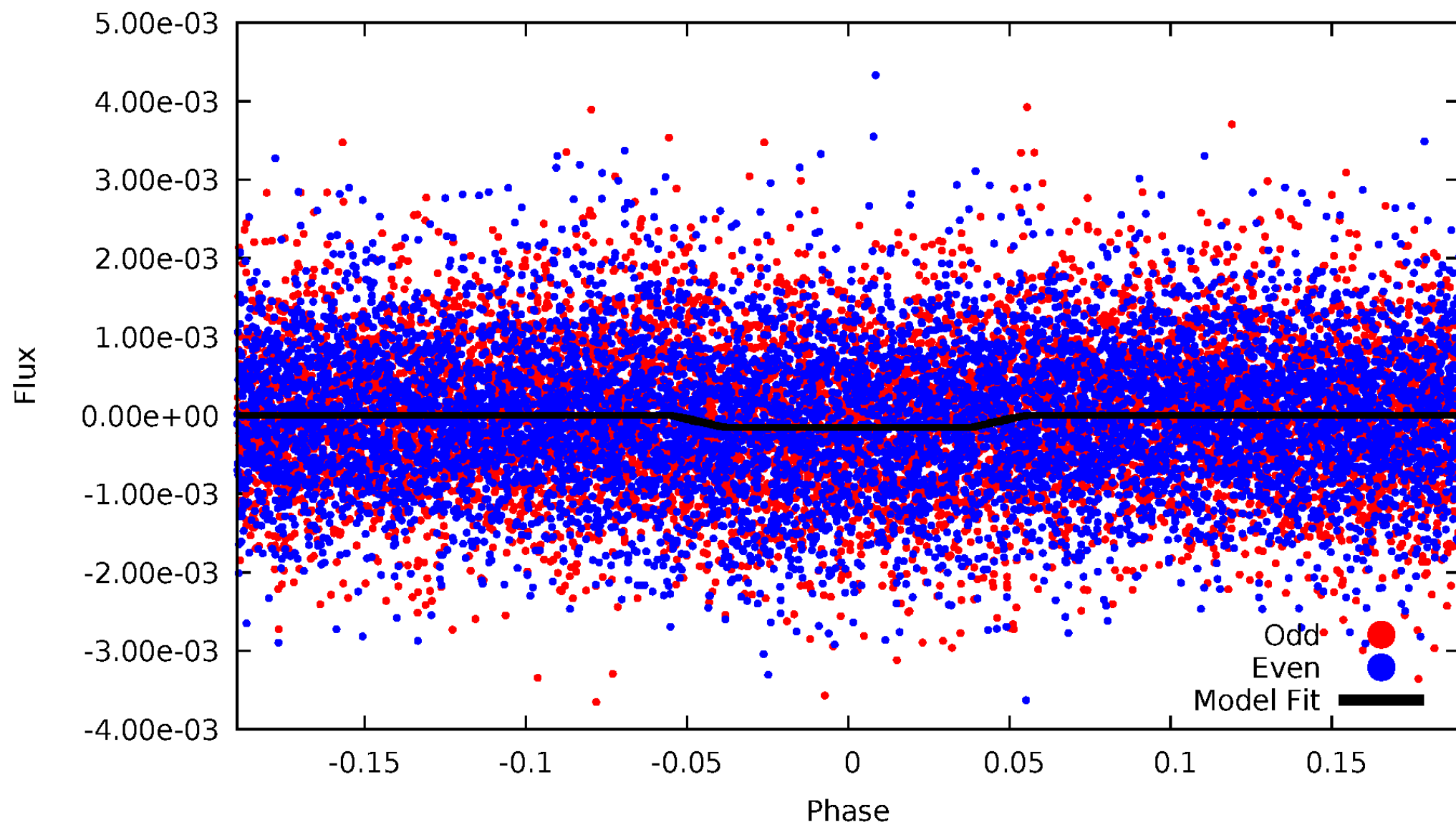
TCE 003560871-01



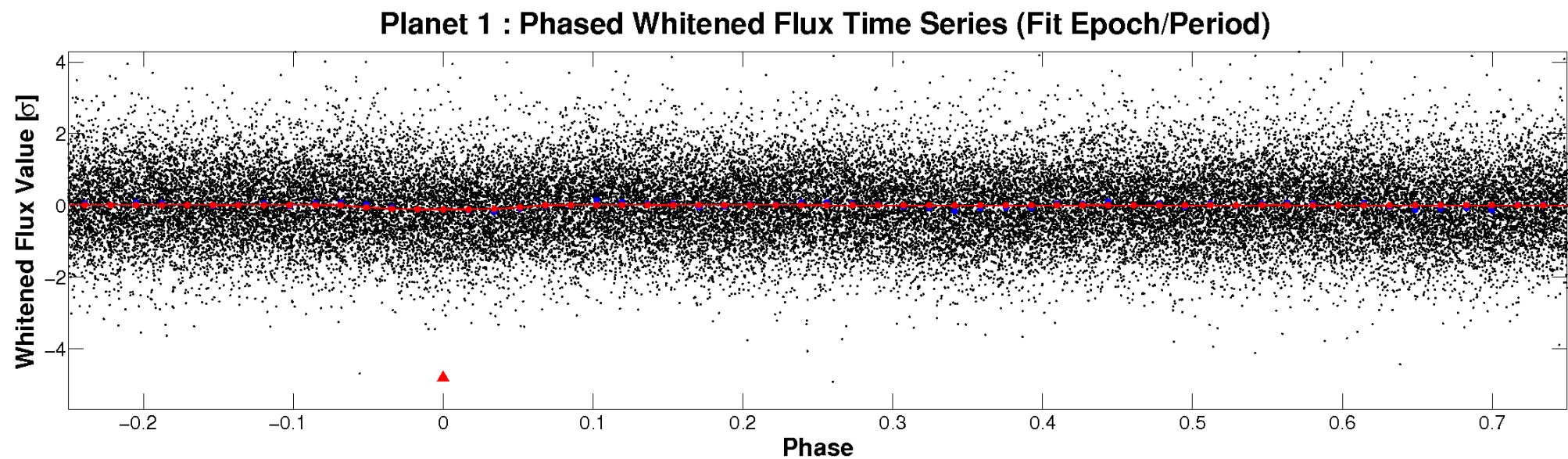
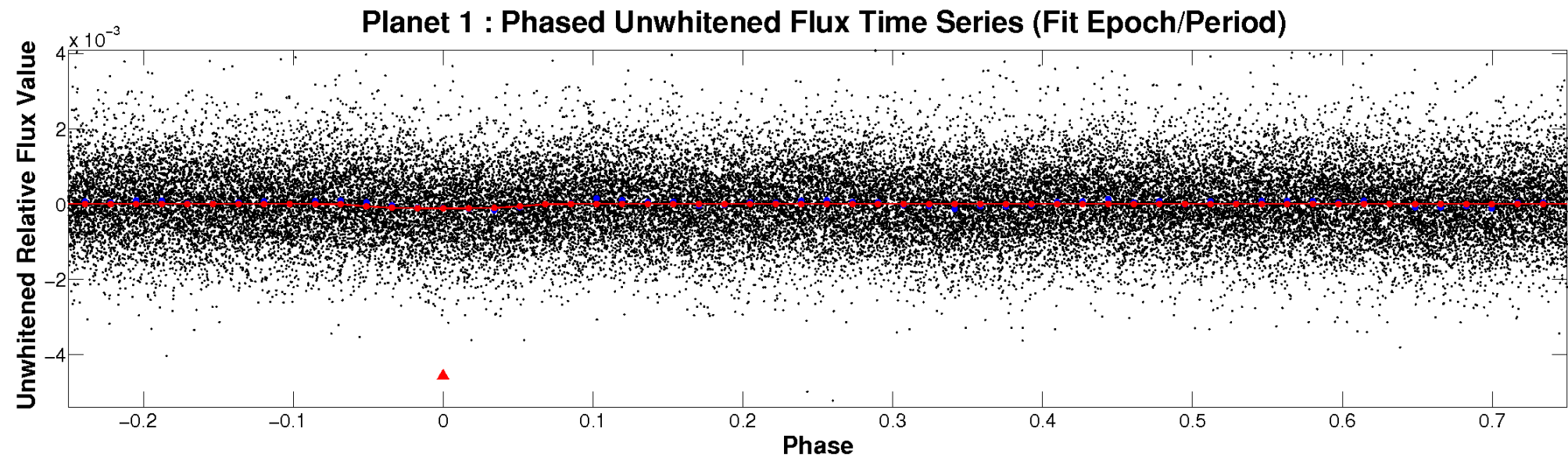


# ALT Odd/Even

TCE 003560871-01

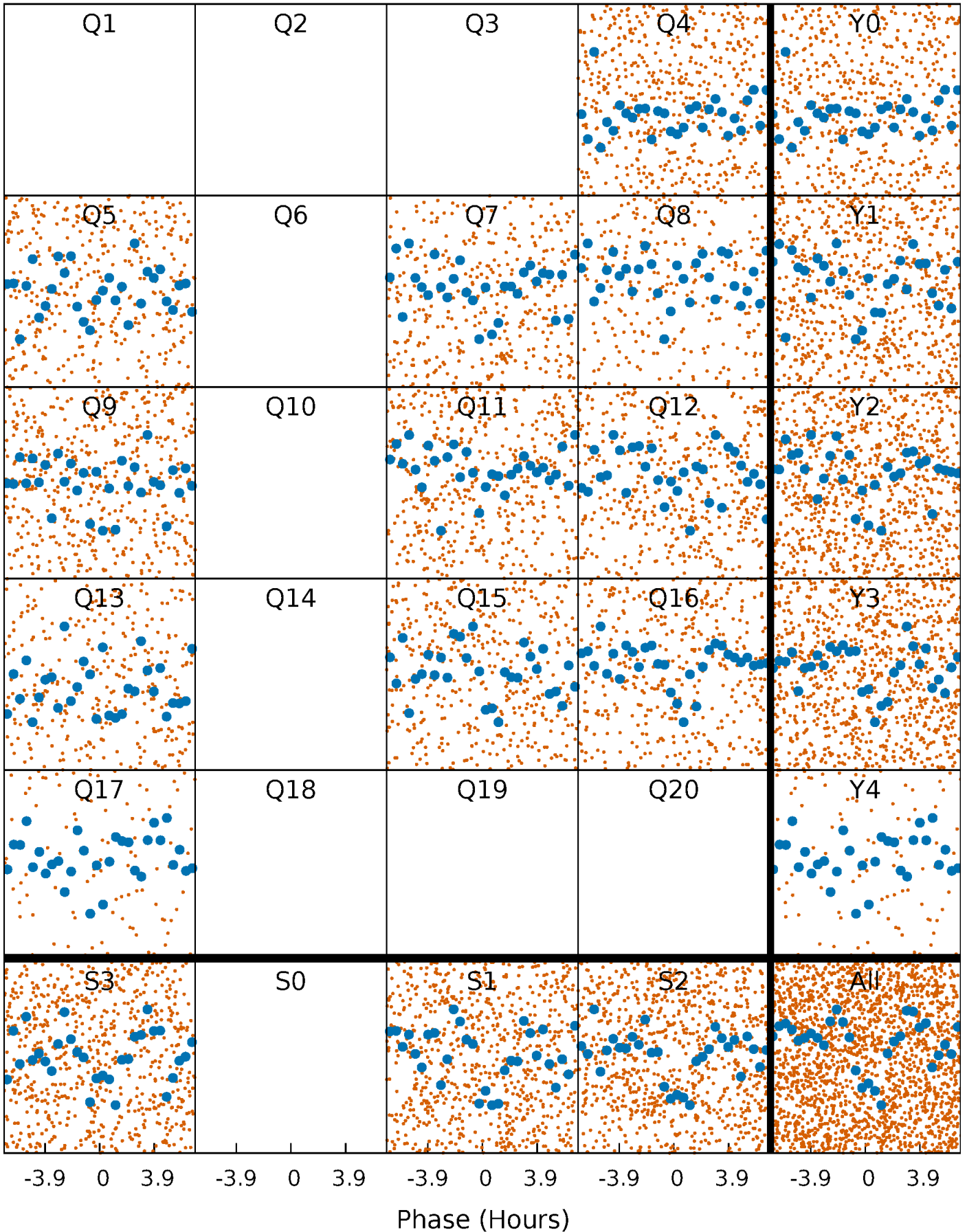


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

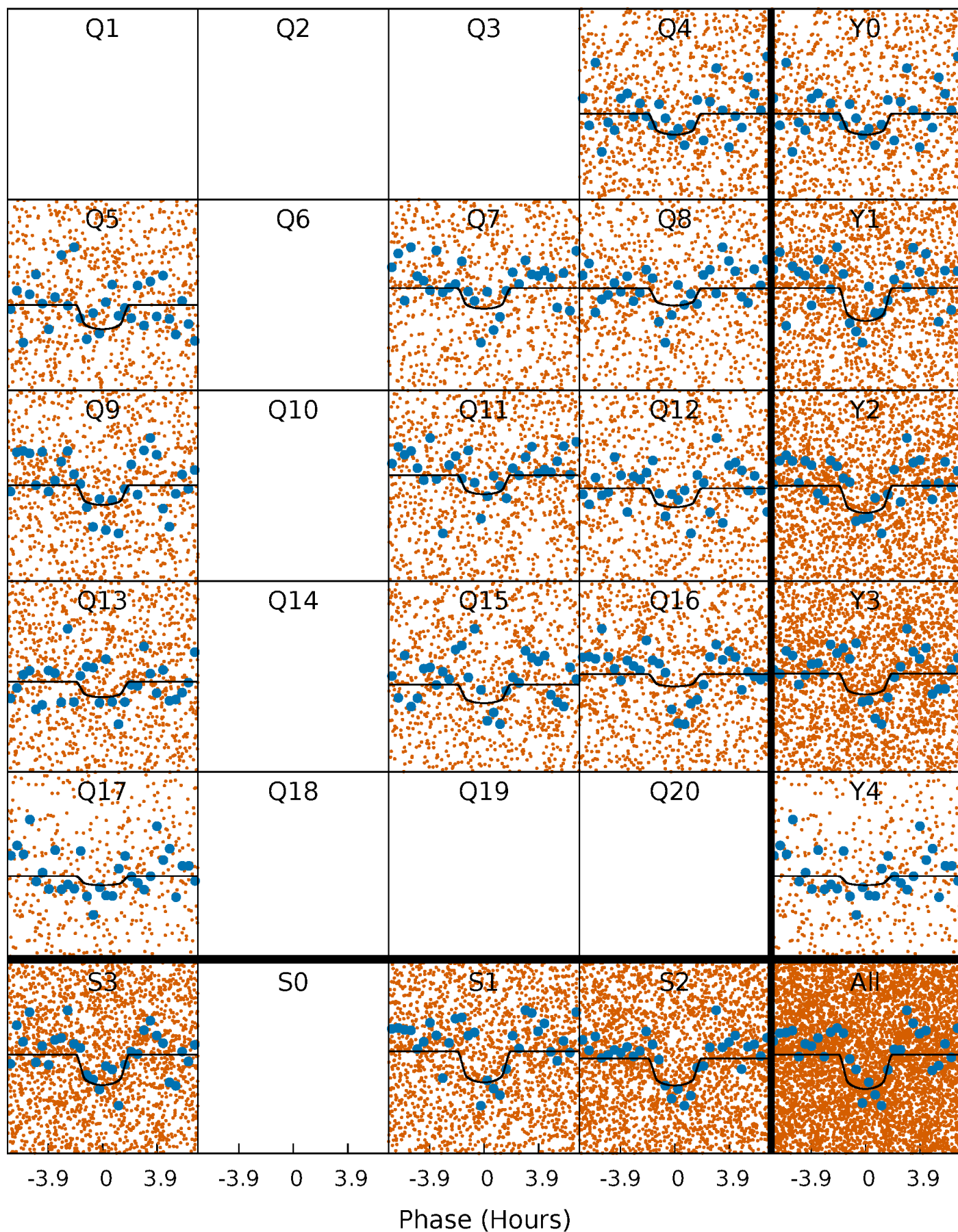
TCE 003560871-01 P= 1.197178 Days  $T_0=131.866610$  (BKJD)





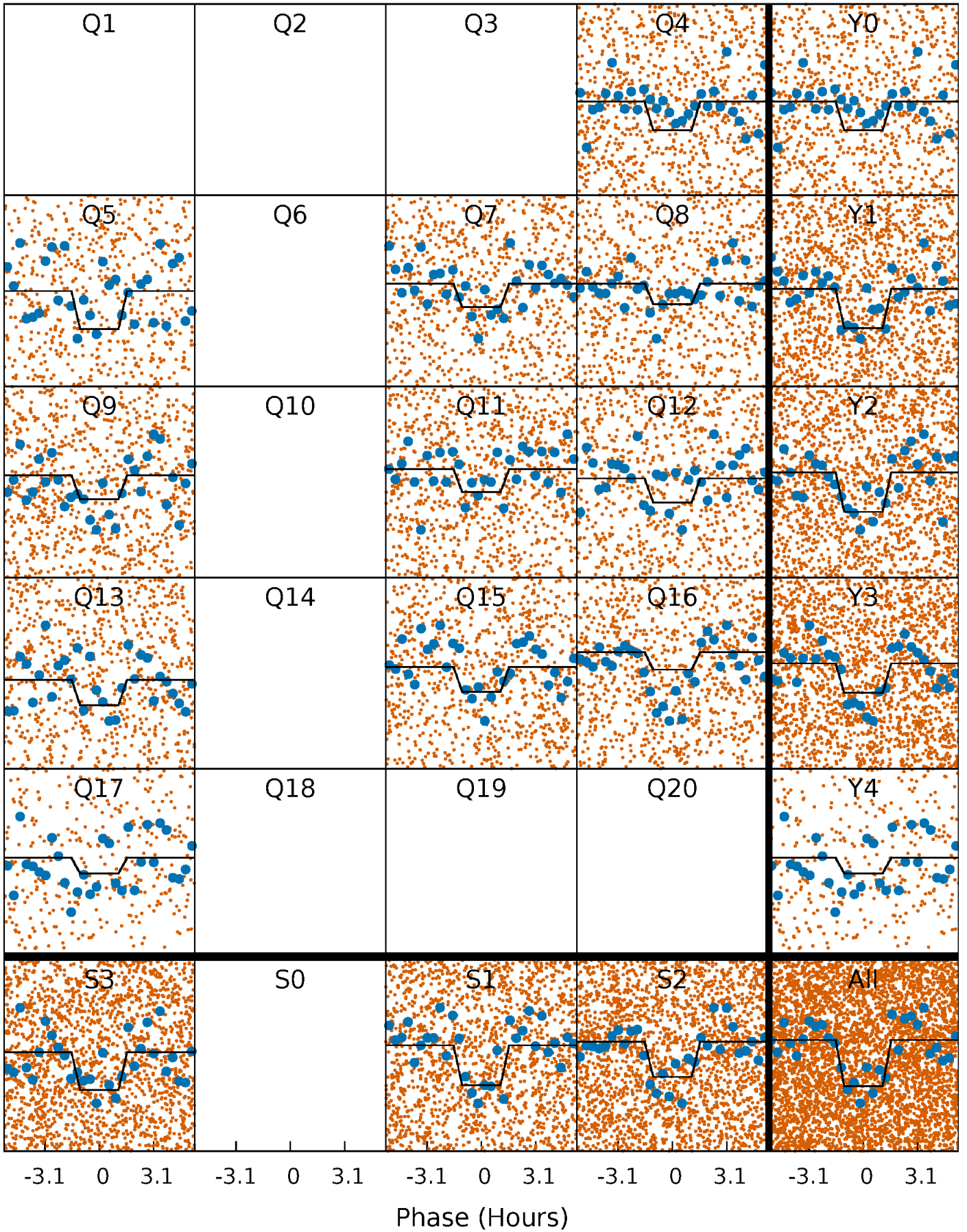
# DV Quarter-Phased Transit Curves

TCE 003560871-01 P= 1.197178 Days  $T_0=131.866610$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

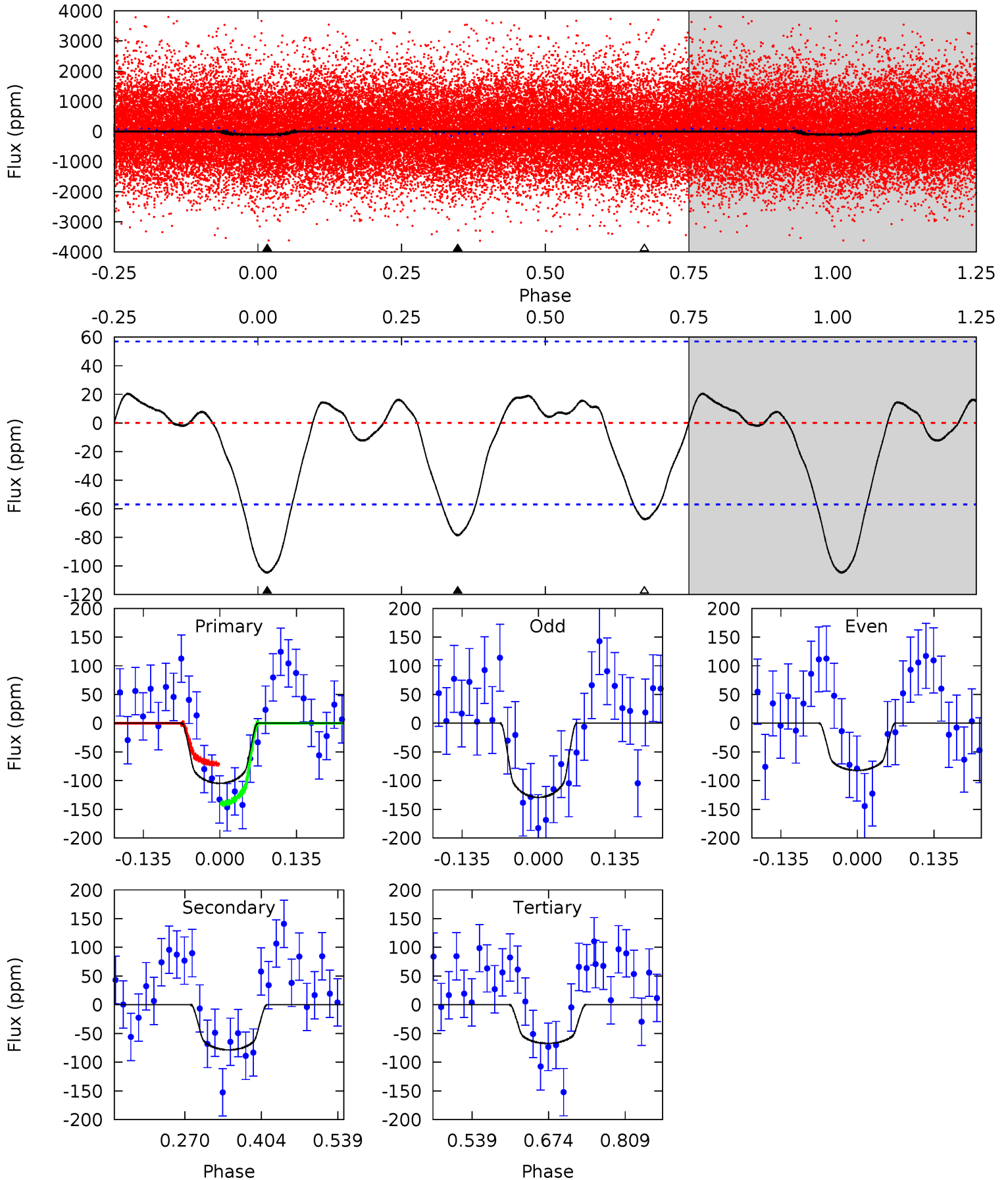
TCE 003560871-01 P= 1.197222 Days  $T_0=131.851597$  (BKJD)



# DV Model-Shift Uniqueness Test

003560871-01, P = 1.197178 Days, E = 131.866610 Days

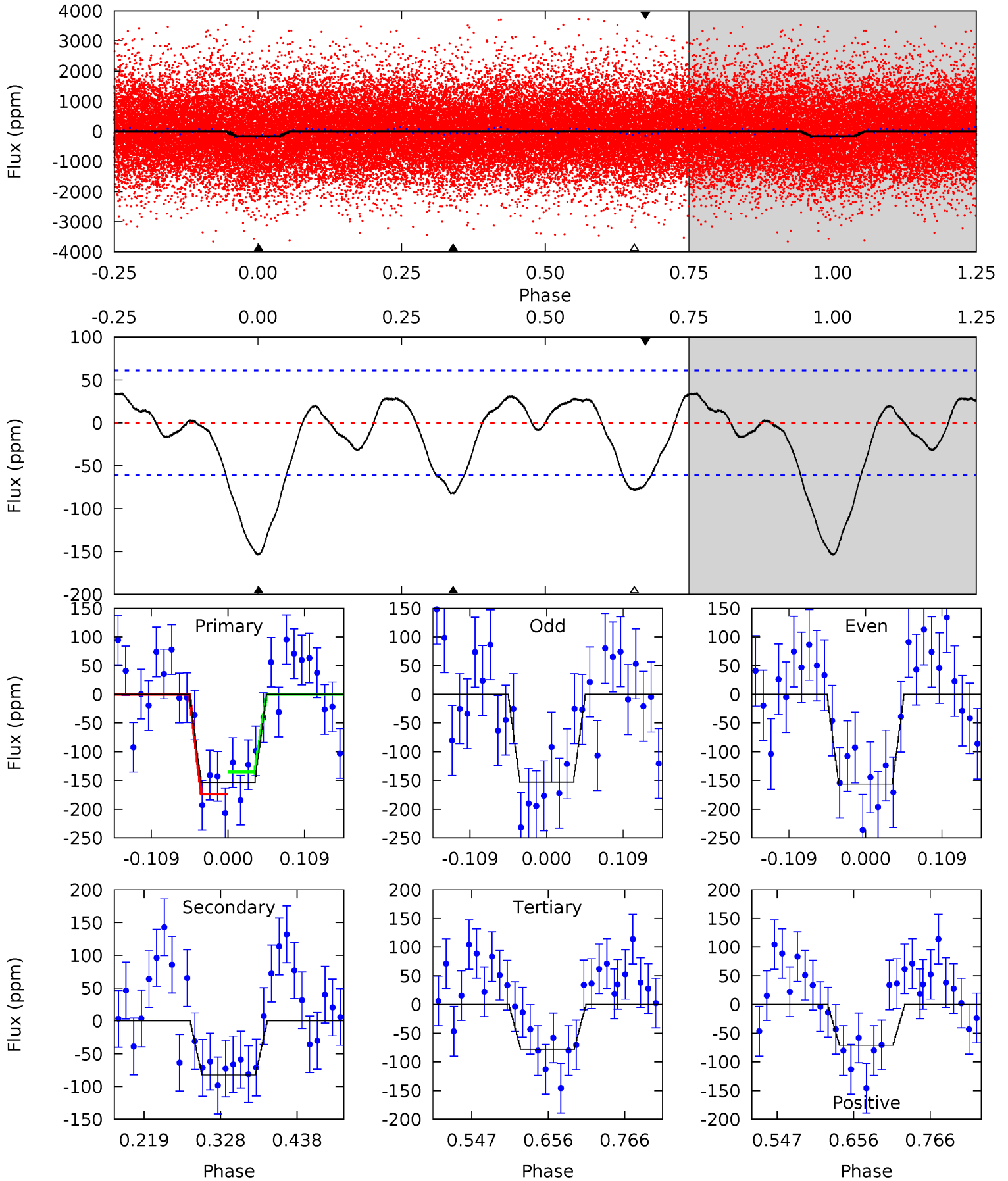
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	6.21	5.32	0	4.50	1.50	1.99	2.95	8.27	0.89	6.21	1.86	0.98	0.16	2.75



# Alt Model-Shift Uniqueness Test

003560871-01, P = 1.197222 Days, E = 131.851597 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
11.4	6.13	5.79	-5.28	4.55	1.60	2.21	5.62	16.7	0.34	11.4	0.13	0.98	0.18	1.45





### Stellar Parameters For KIC 003560871

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5389^{+204}_{-185}$	$4.578^{+0.040}_{-0.120}$	$-0.200^{+0.300}_{-0.300}$	$0.777^{+0.154}_{-0.066}$	$0.833^{+0.096}_{-0.087}$	$2.502^{+0.506}_{-0.870}$
	+4%/-3%	+1%/-3%	+150%/-150%	+20%/-8%	+12%/-10%	+20%/-35%
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 003560871-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-79 \pm 13$	$1.16^{+0.92}_{-0.73}$	$2067^{+107}_{-99}$	$4519^{+2864}_{-900}$	$13^{+90}_{-9}$
Alt.	$-83 \pm 13$	$1.24^{+0.88}_{-0.78}$	$2065^{+108}_{-95}$	$4477^{+2537}_{-838}$	$13^{+82}_{-8}$

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



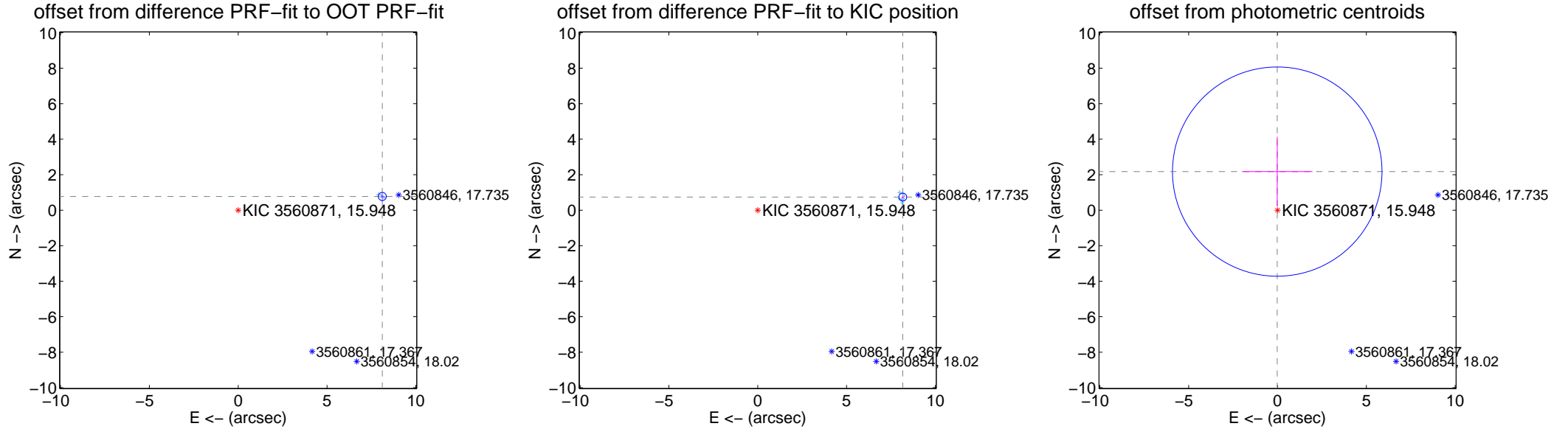
## DV Centroid Data

Supplemental centroid analysis for 003560871-01. Kepler magnitude: 15.95. Transit SNR 6.41

There are 9 quarters with good PRF difference image offsets

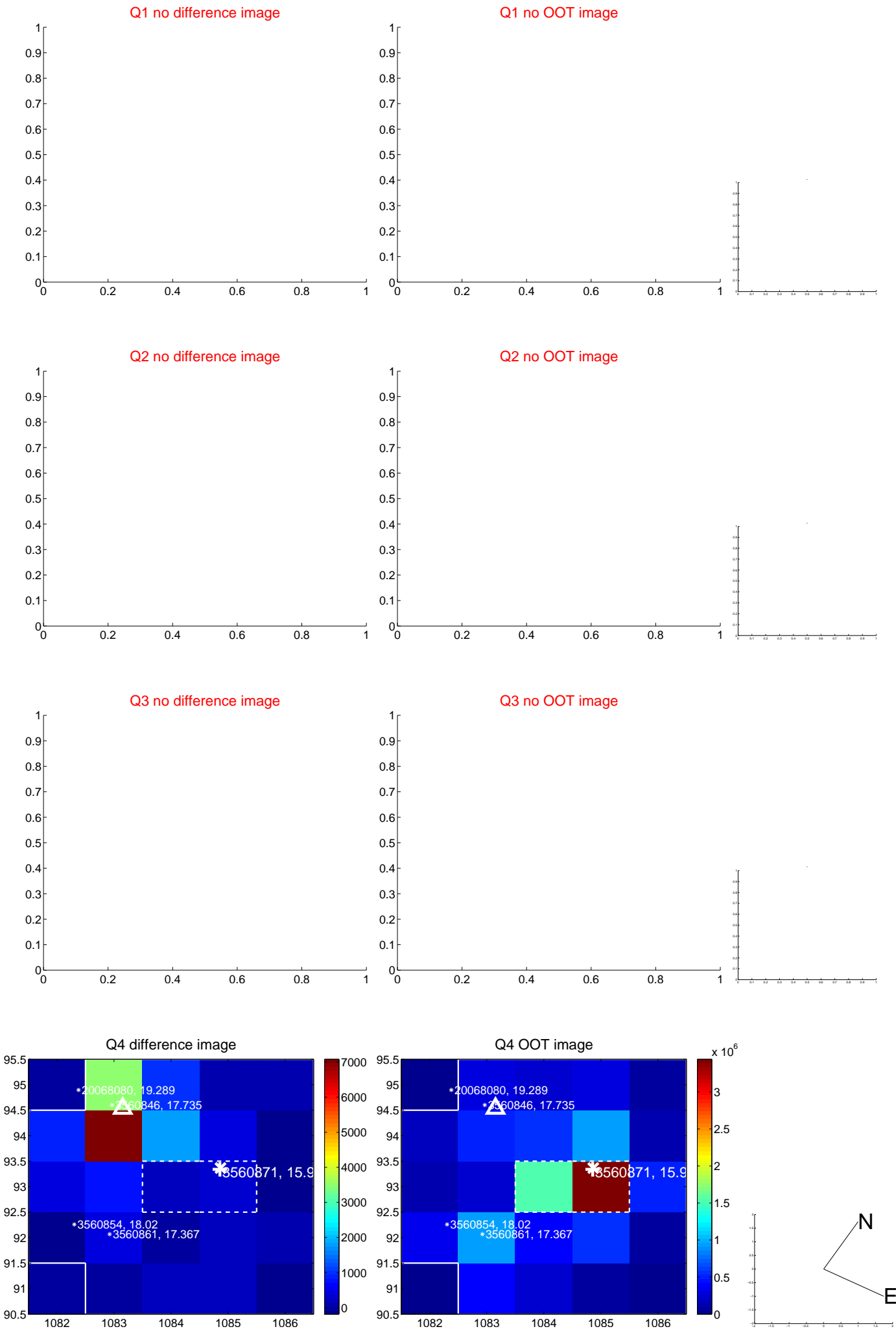
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	8.146 $\pm$ 0.076	107.45	-8.109 $\pm$ 0.076	0.774 $\pm$ 0.072
PRF-fit source offset from KIC position	8.197 $\pm$ 0.074	110.29	-8.164 $\pm$ 0.074	0.738 $\pm$ 0.086
photometric centroid source offset	2.18 $\pm$ 1.96	1.11	0.02 $\pm$ 1.98	2.18 $\pm$ 1.96

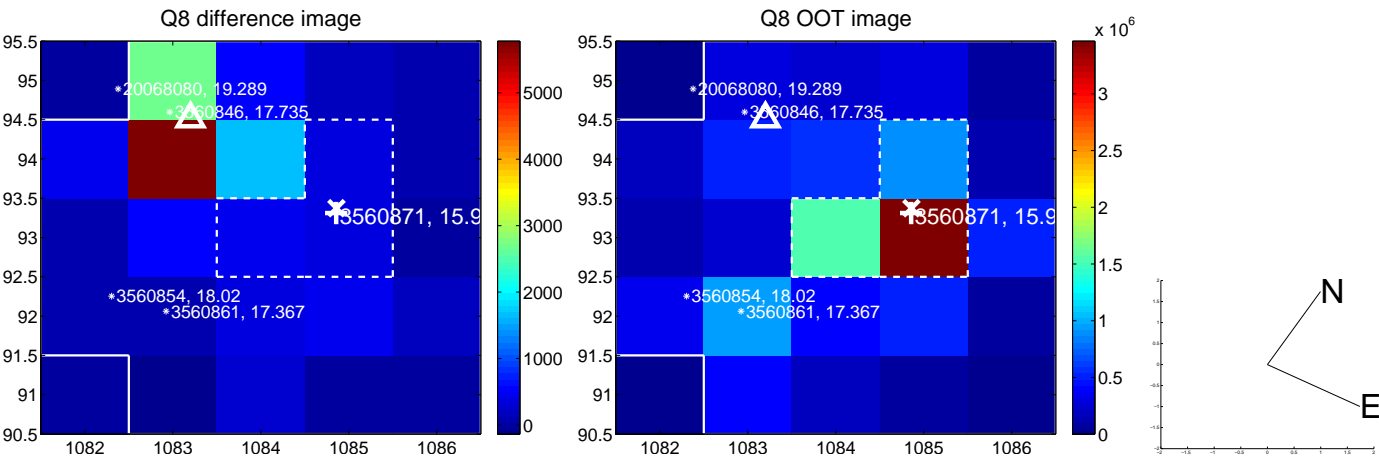
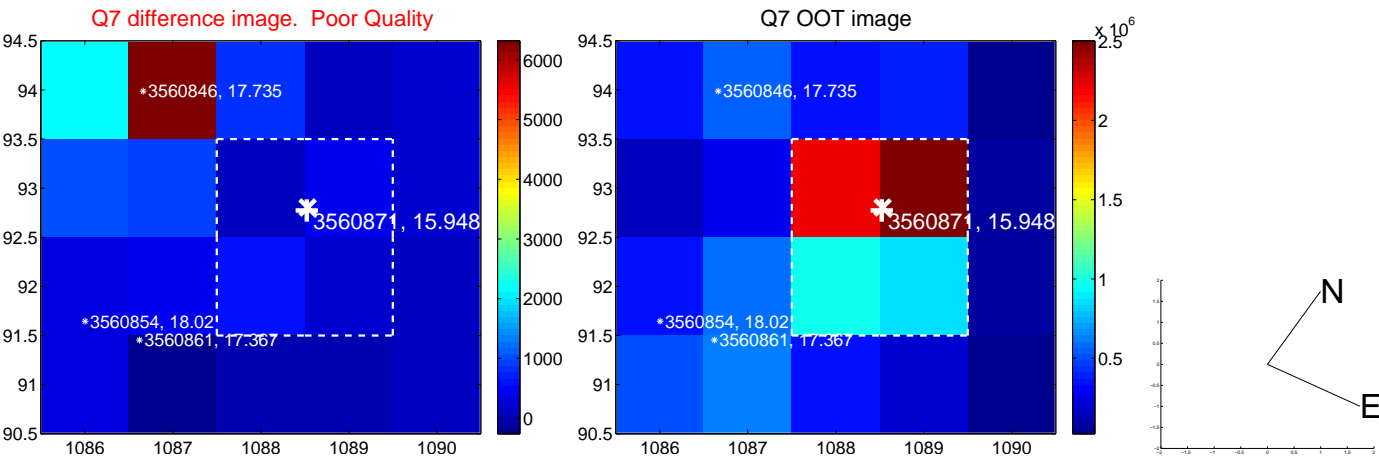
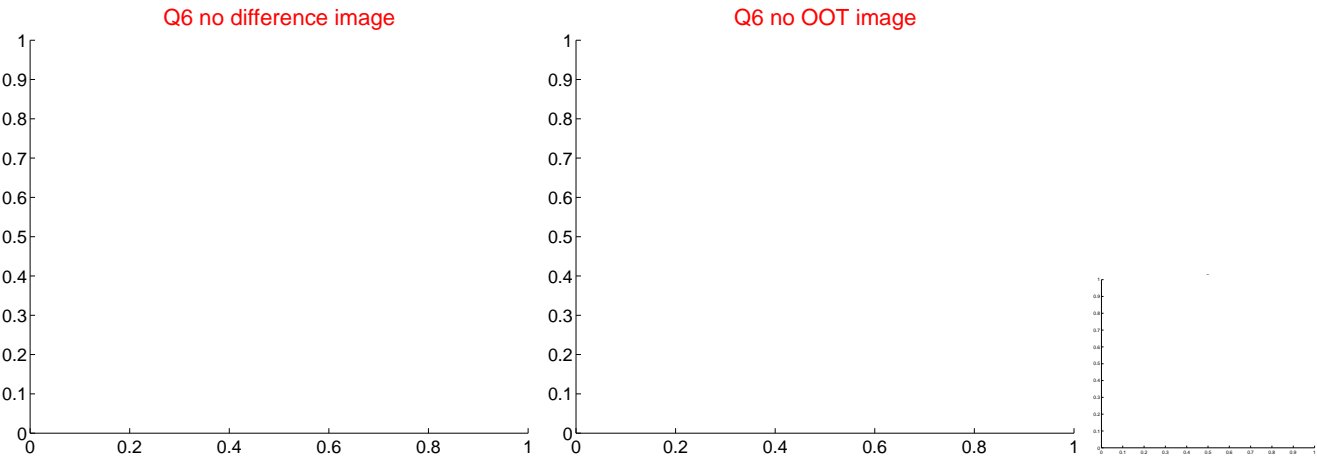
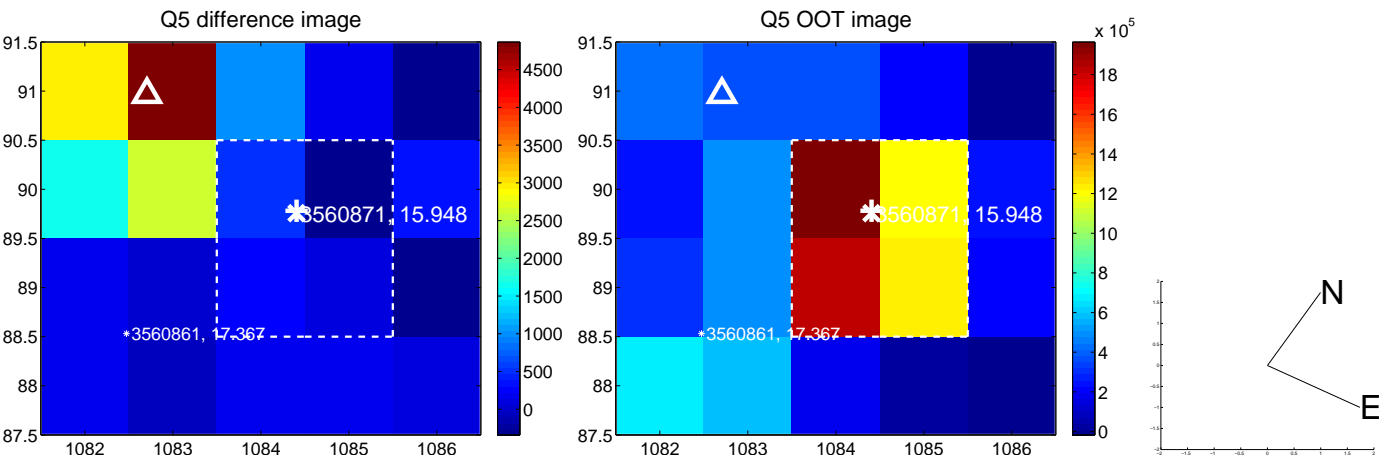


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

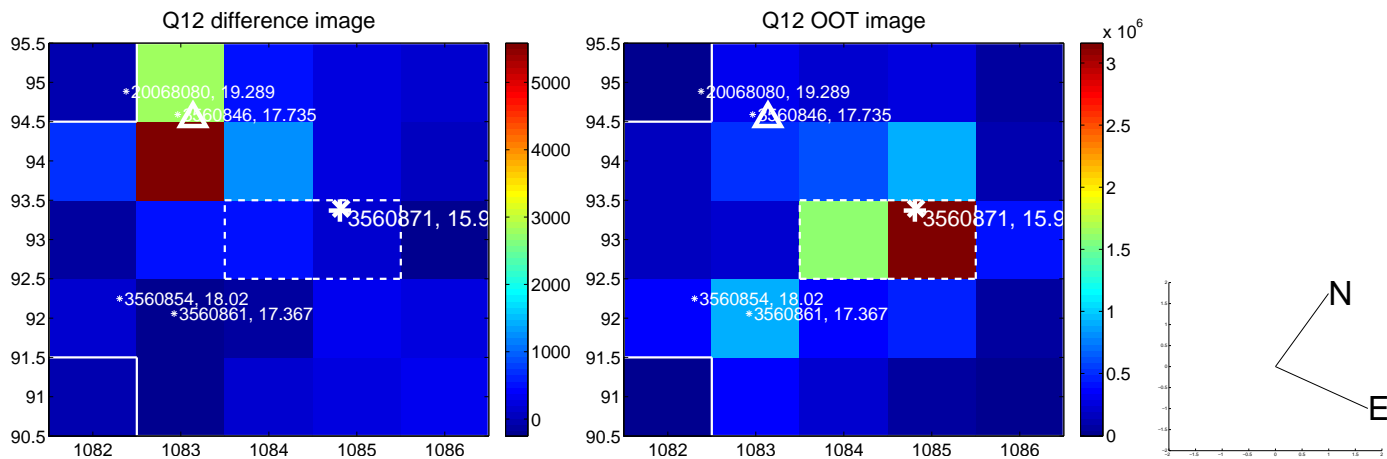
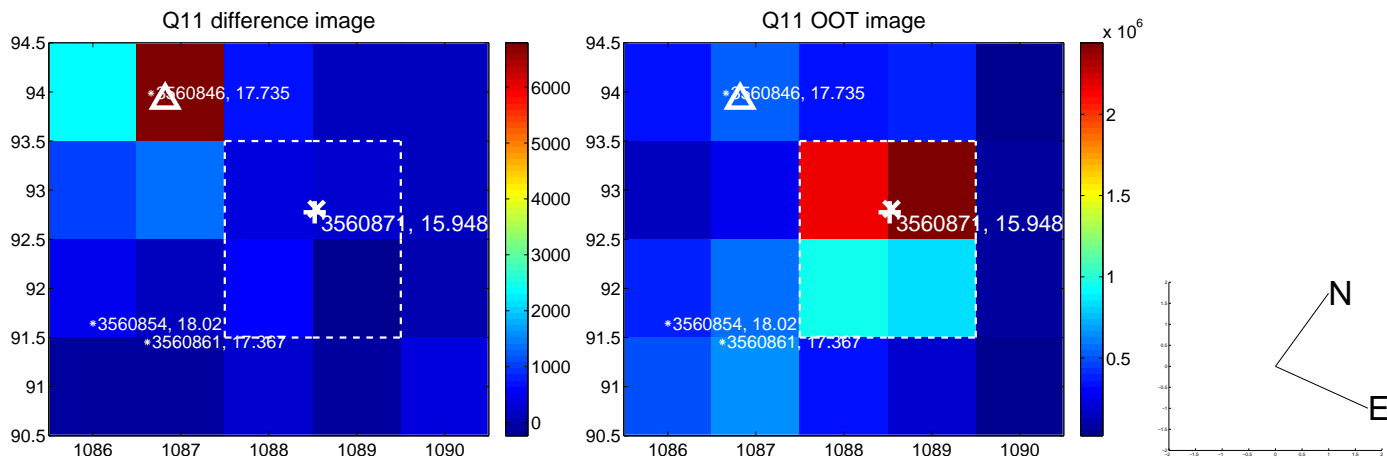
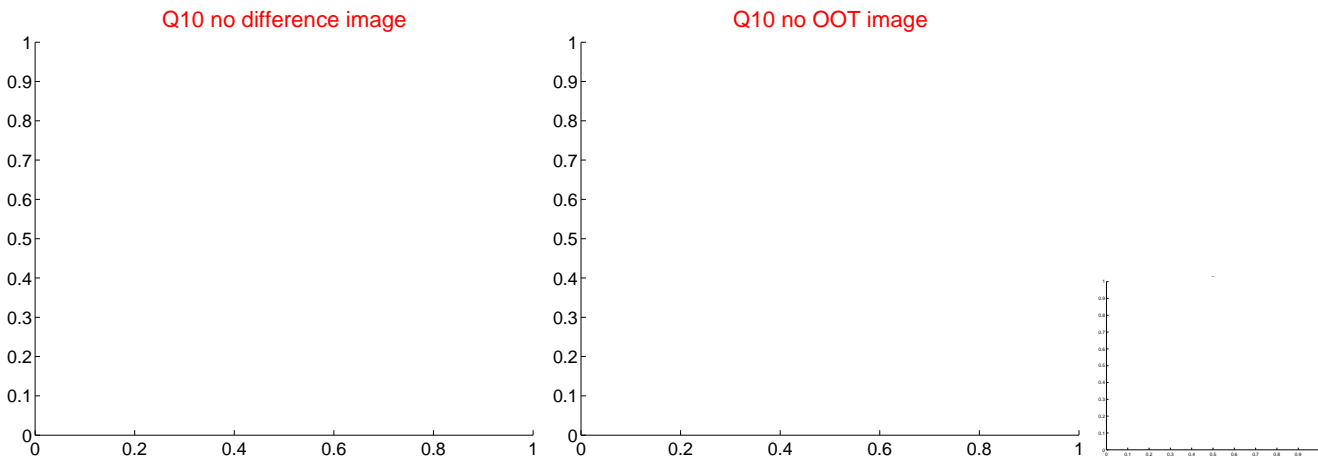
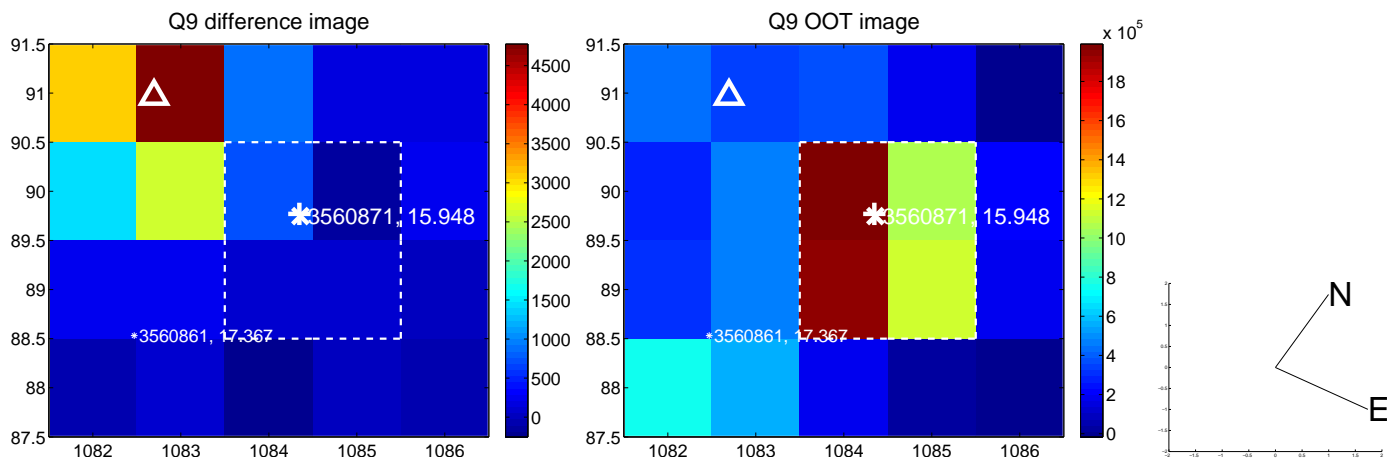
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



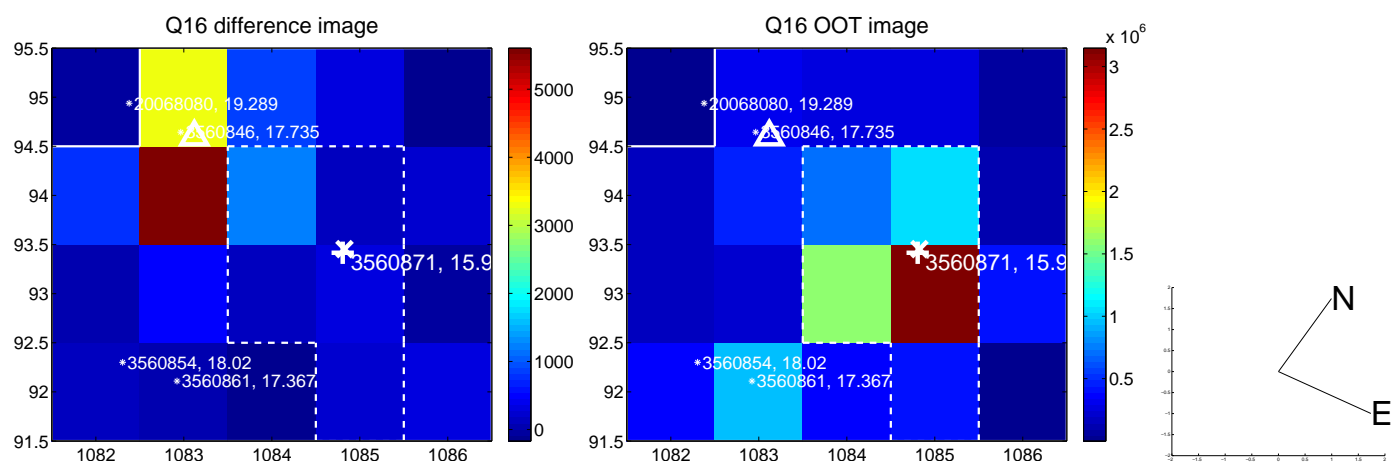
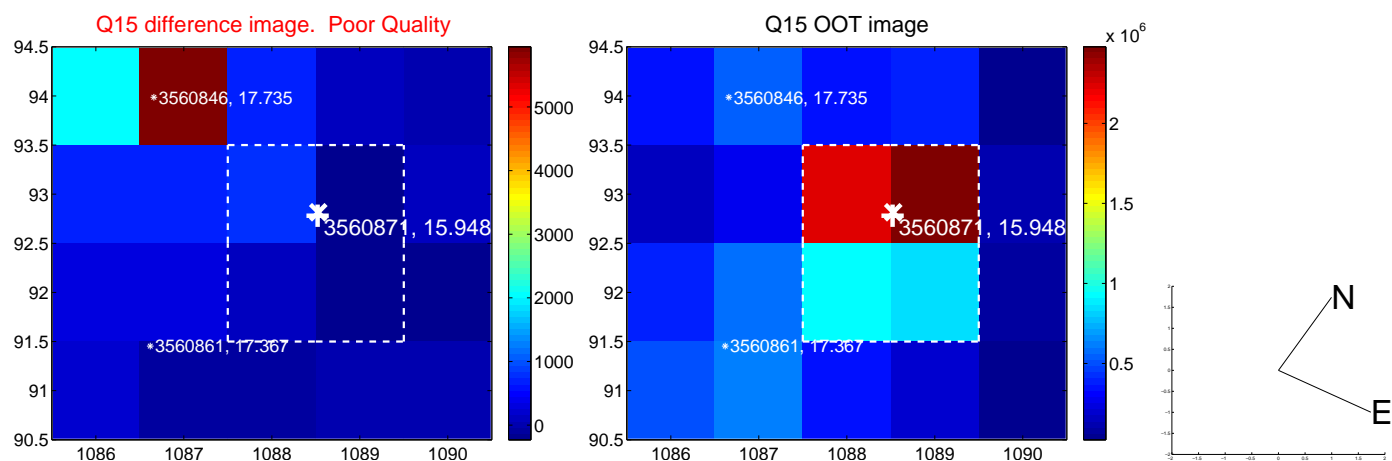
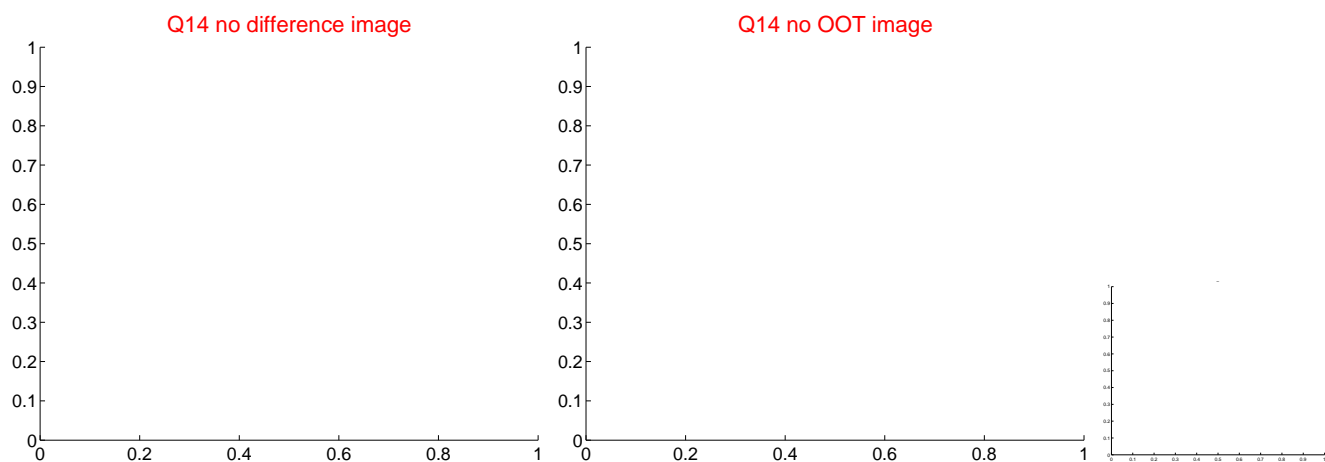
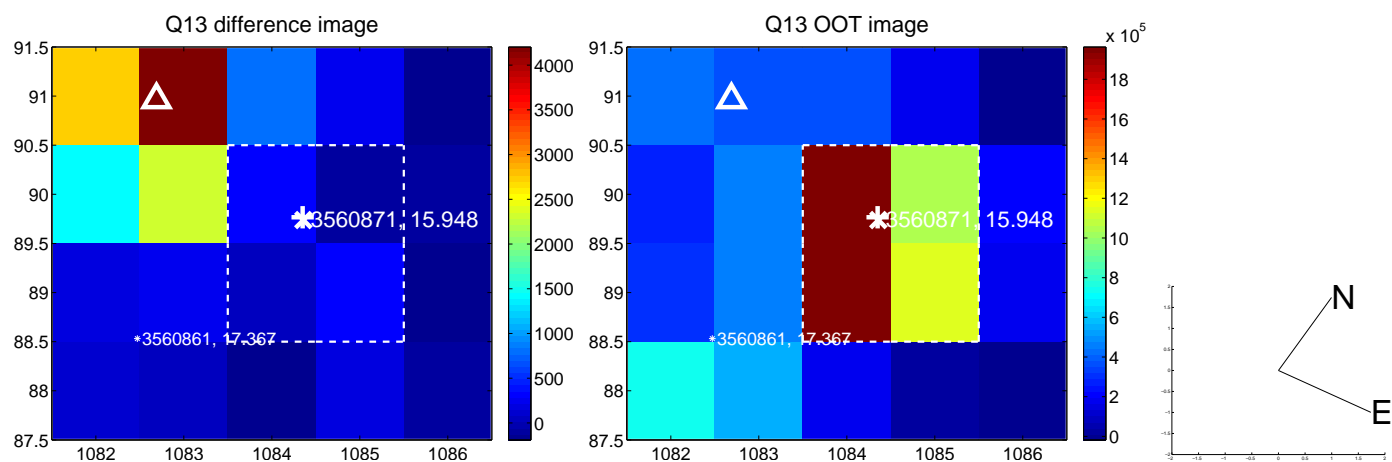
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

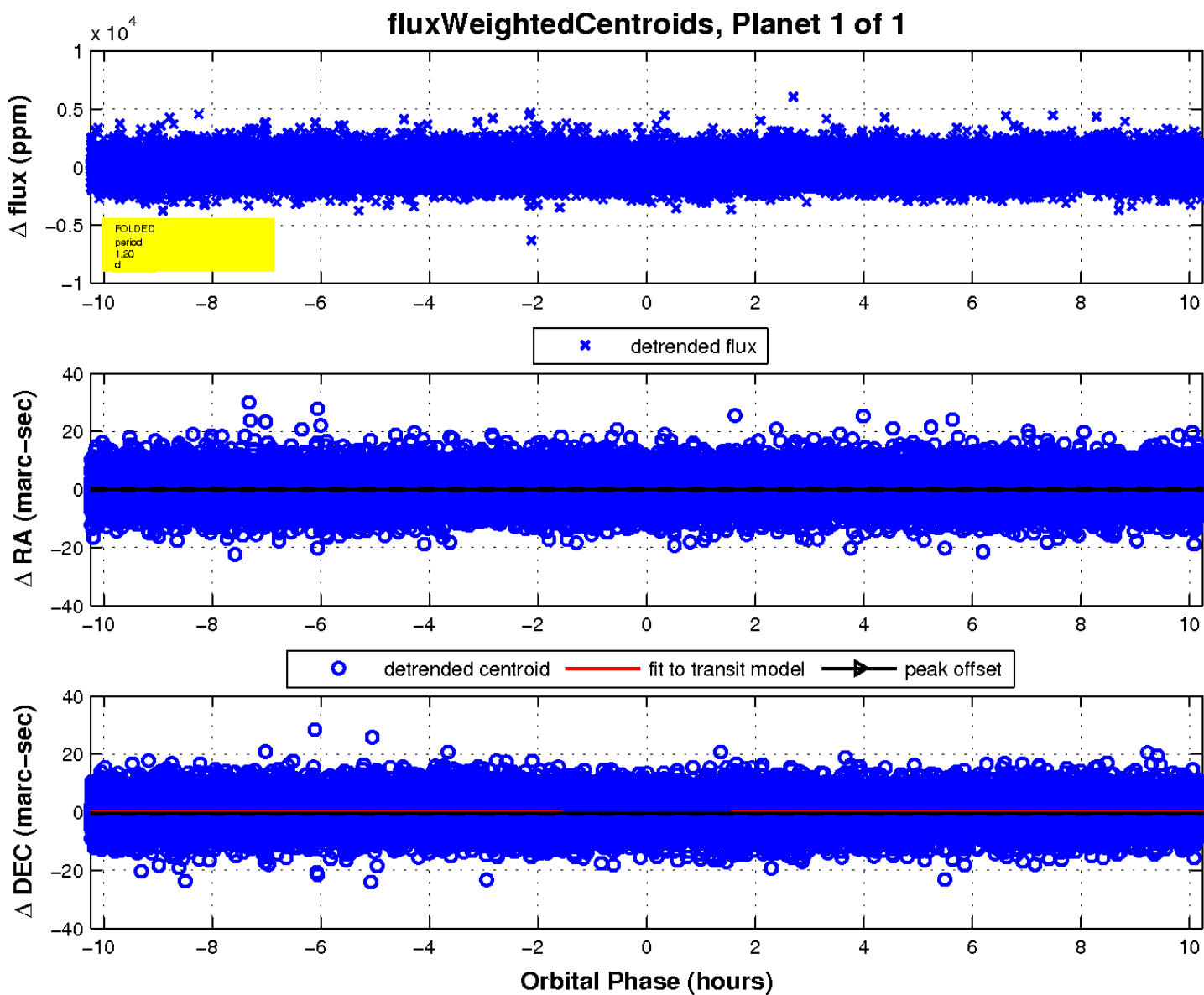
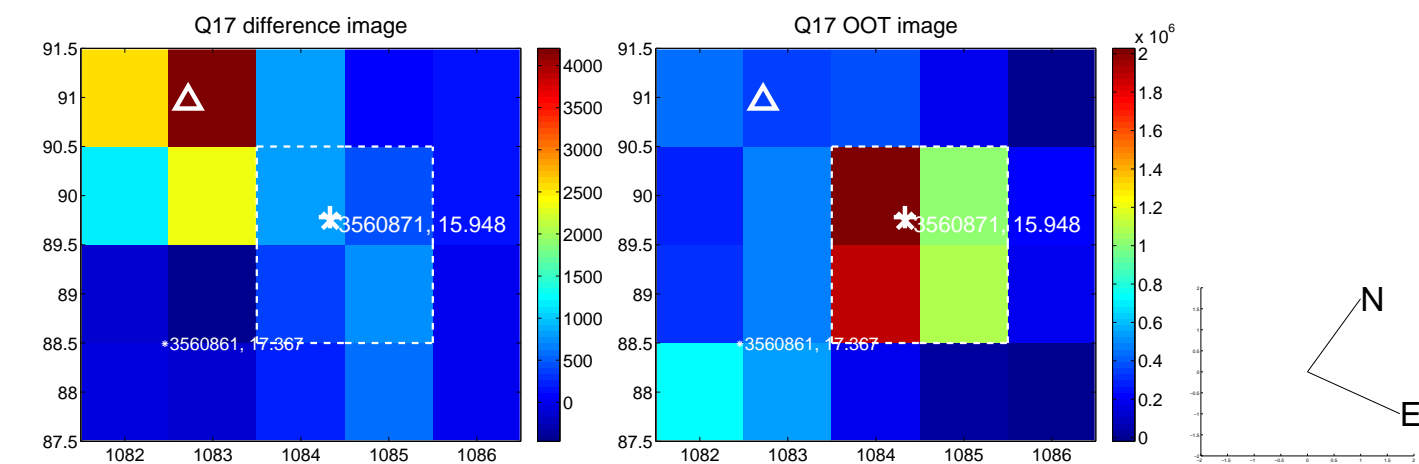


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value





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



UKIRT Image

Declination

