

# KIC 008197761

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008197761-01	OBS	6175.01	9.868673	138.997851	4337.6	2.793	107.6	133.3	1.72	7301	15.93	744.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197761-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—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.

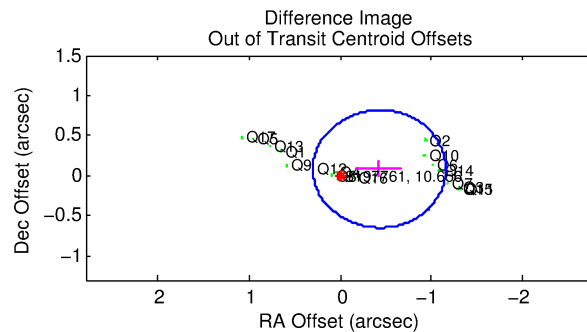
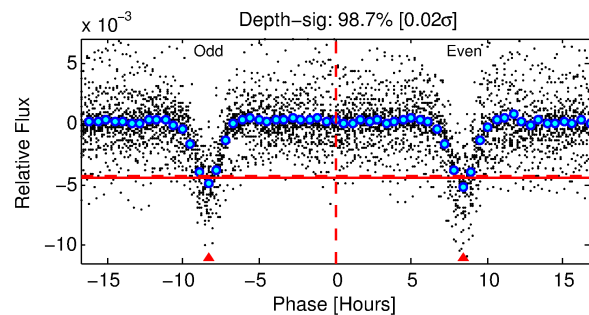
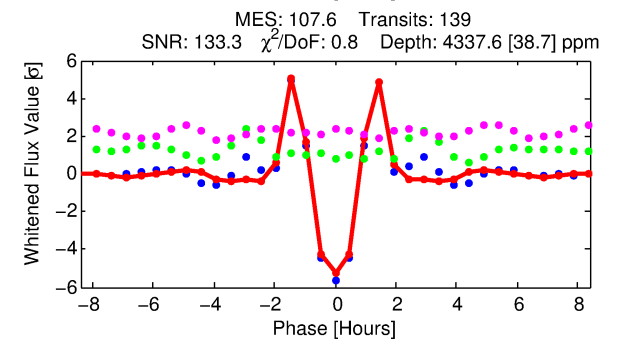
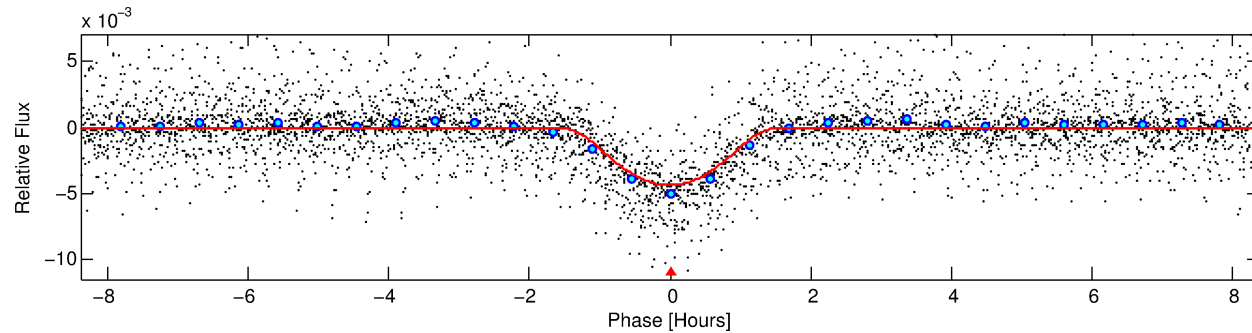
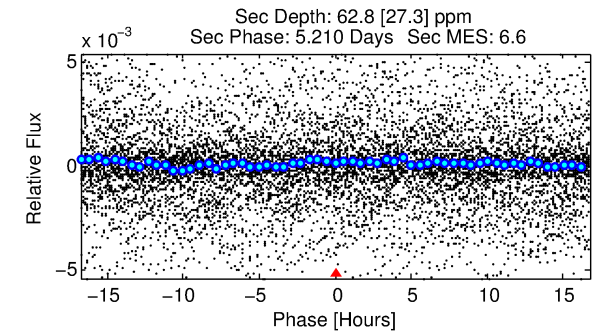
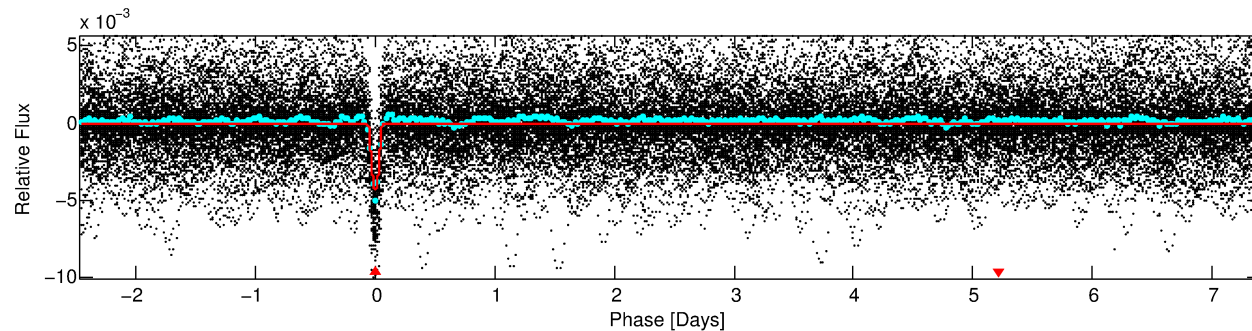
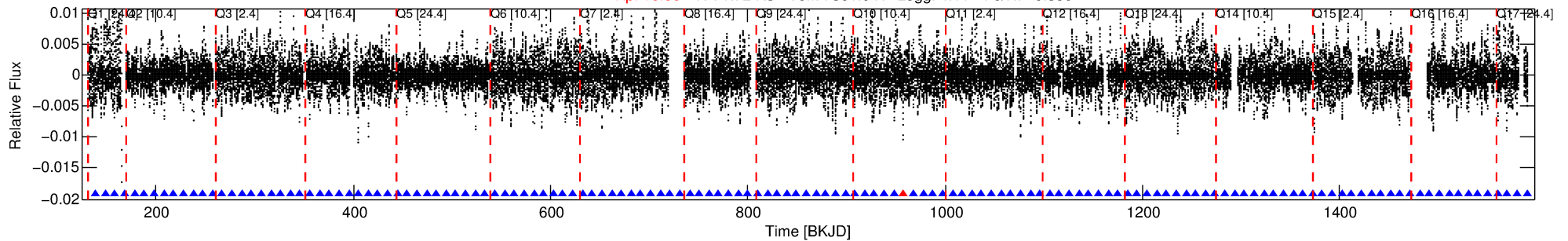
## Ephemeris Match Information For 008197761-01

No Significant Match Found

# DV One-Page Summary

KIC: 8197761 Candidate: 1 of 1 Period: 9.869 d  
KOI: K06175.01 Corr: 0.960

Kp: 10.66 R\*: 1.72 Rs Teff: 7301.0 K Logg: 4.11 Fe/H: -0.380



## DV Fit Results:

Period = 9.86867 [0.00000] d  
Epoch = 138.9979 [0.0002] BKJD  
Rp/R\* = 0.0850 [0.0020]  
a/R\* = 13.60 [0.11]  
b = 0.96 [0.00]  
Seff = 744.60 [302.00]  
Teq = 1332 [135] K  
Rp = 15.93 [4.68] Re  
a = 0.1004 [0.0251] AU  
Ag = 1.37 [0.79] [0.47σ]  
Teff = 2229 [261] K [3.05σ]

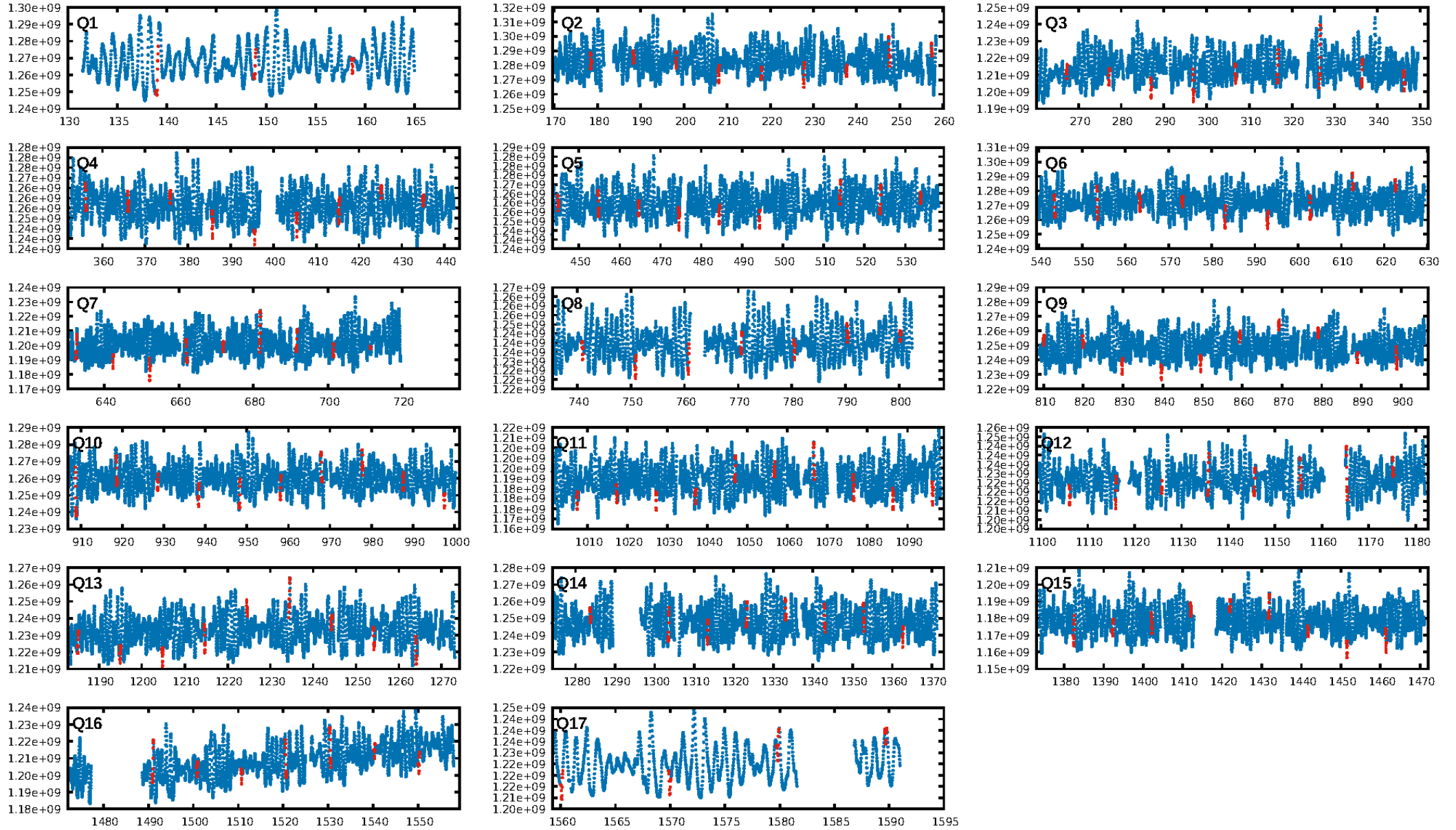
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [131/132]  
GhostDiagnostic-chr: N/A  
Centroid-sig: 0.0%  
Centroid-so: 0.336 arcsec [14.62σ]  
OotOffset-rm: 0.439 arcsec [1.80σ]  
KicOffset-rm: 0.642 arcsec [2.41σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.76 [13/17]  
DiffImageOverlap-fno: 1.00 [17/17]

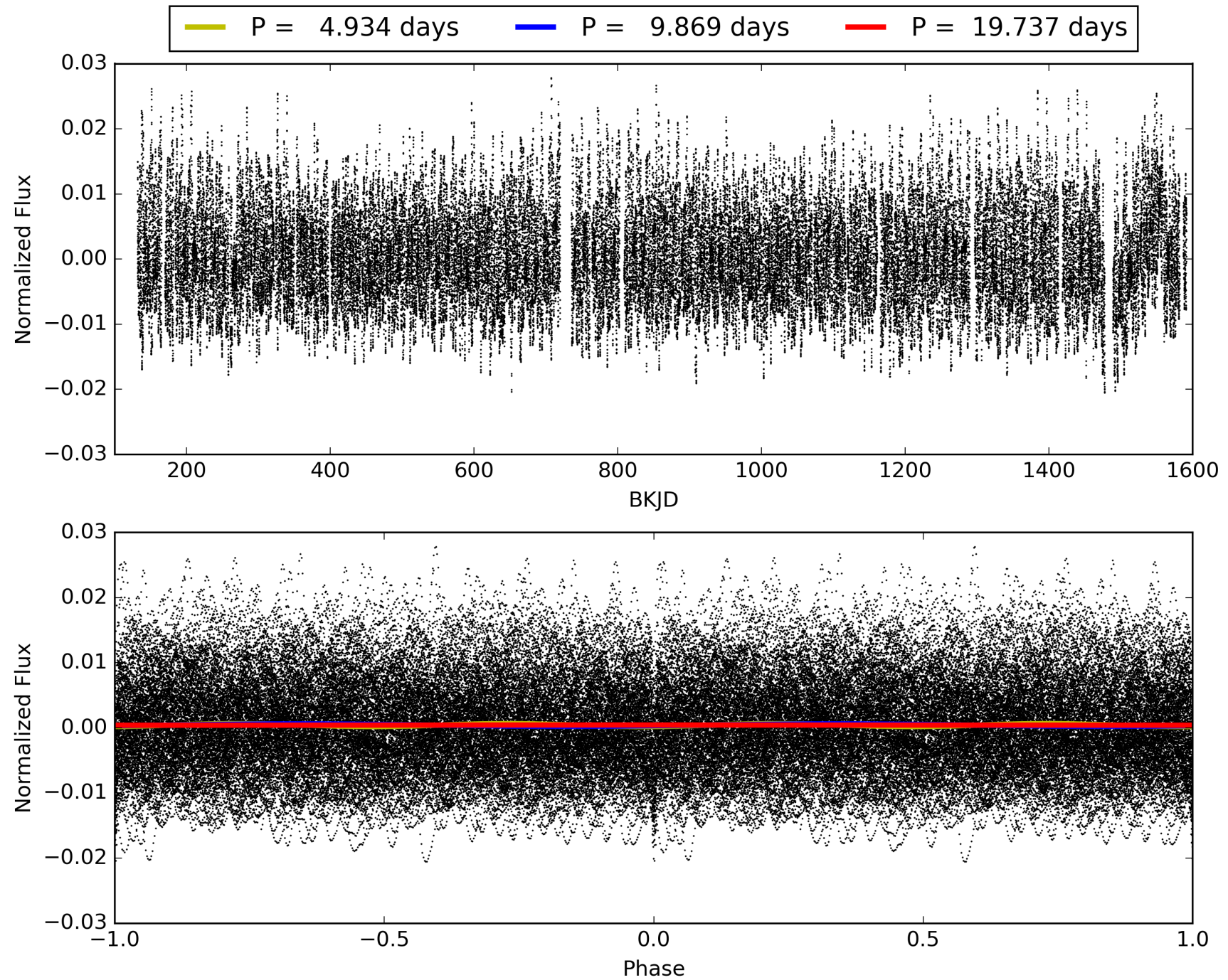
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:41:36 Z

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

# TCE 008197761-01, PDC Light Curves



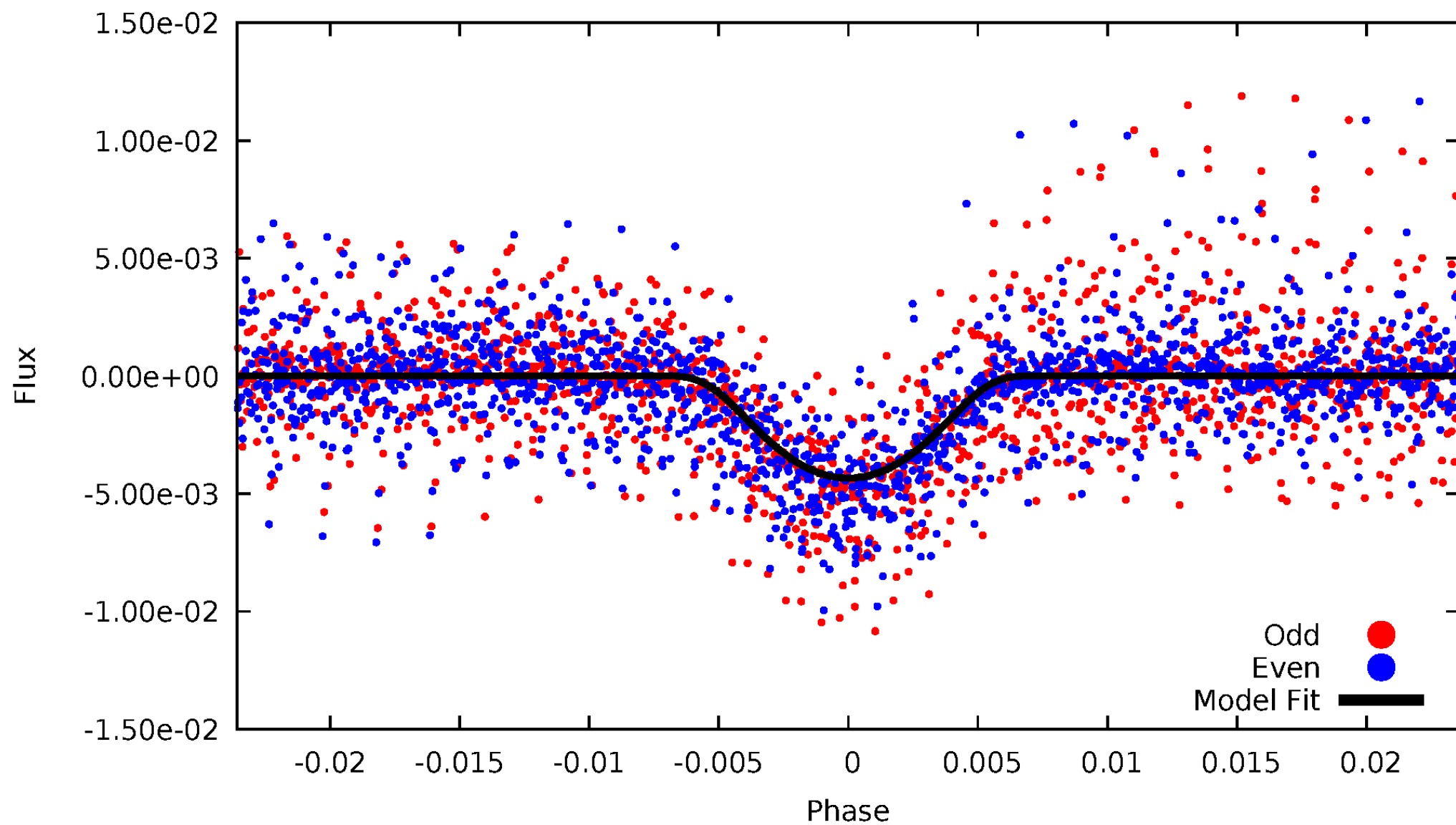
# TCE 008197761-01





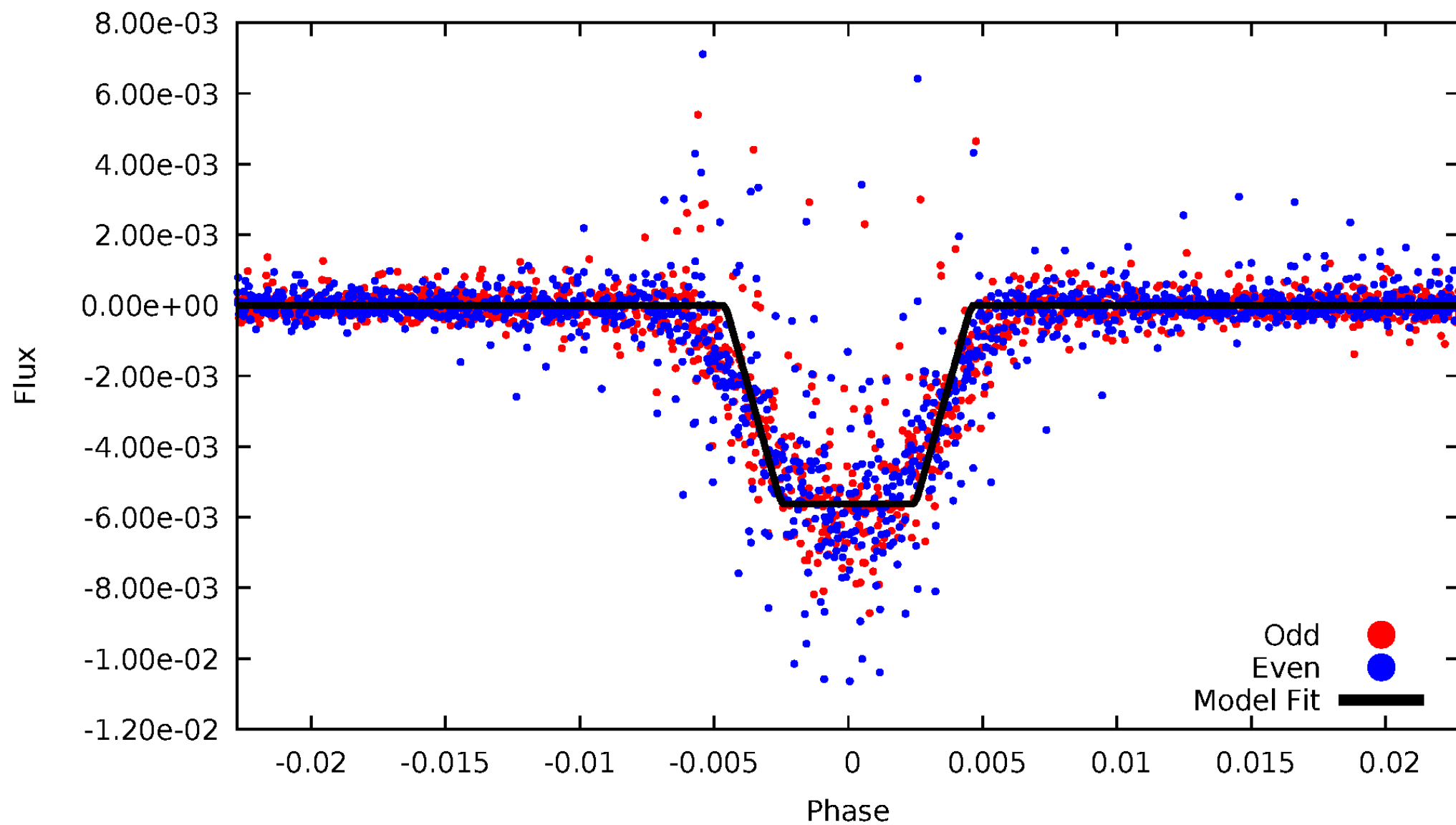
# DV Odd/Even

TCE 008197761-01



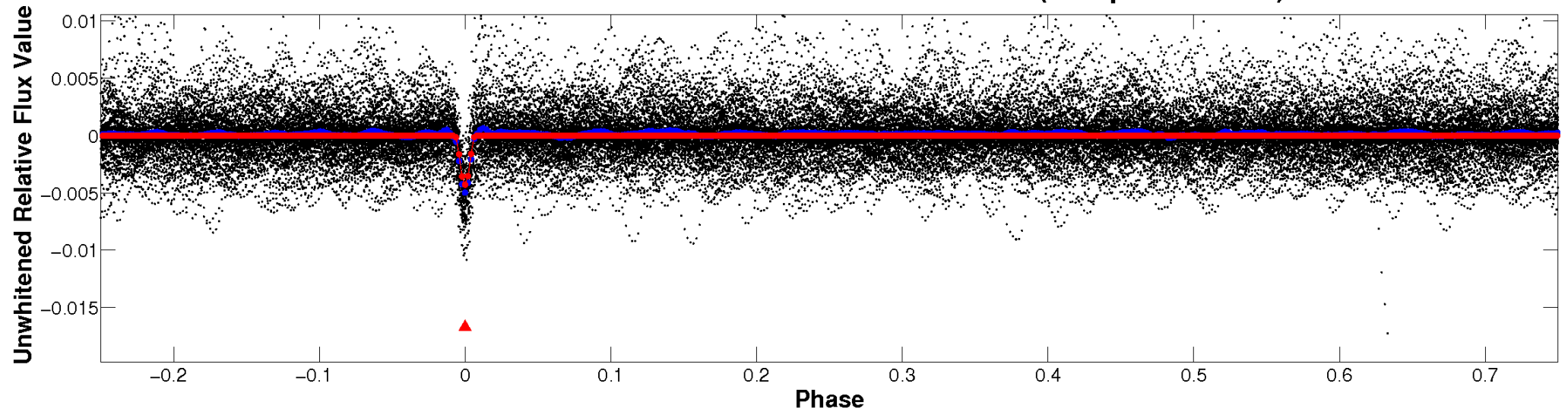
# ALT Odd/Even

TCE 008197761-01

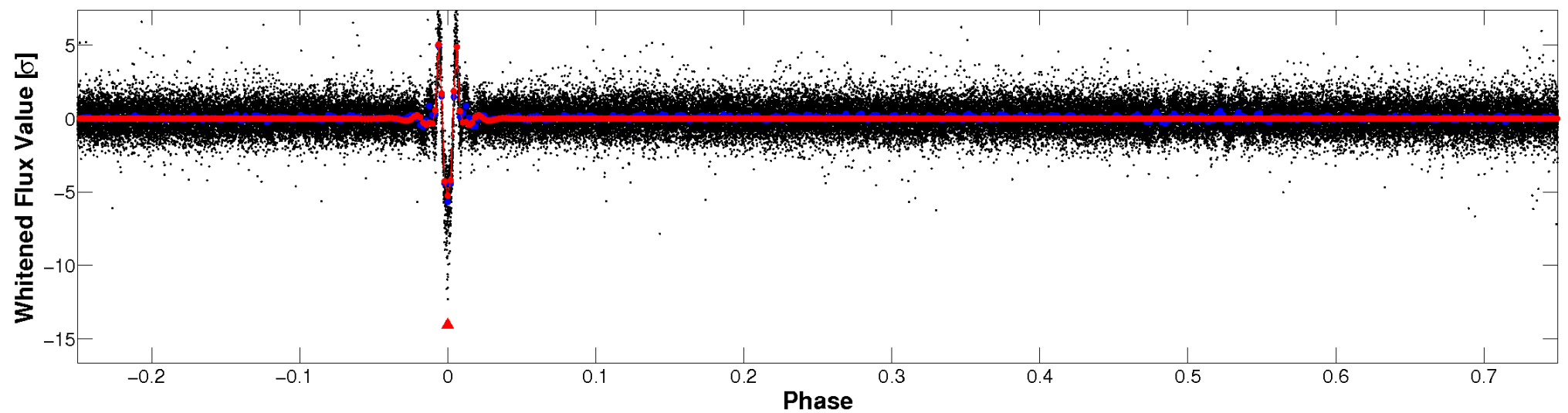


# Non-Whitened Vs. Whitened Light Curve

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

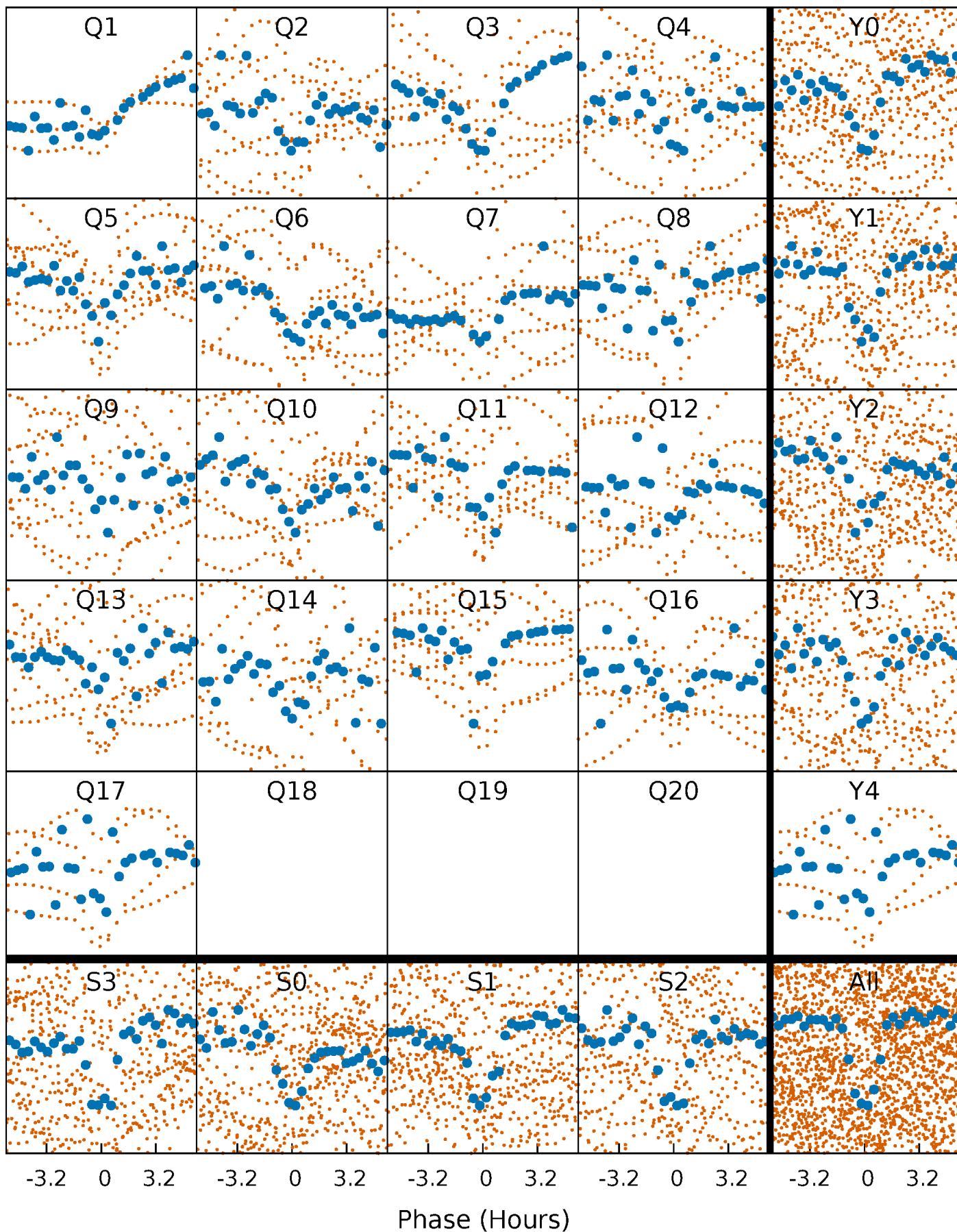


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

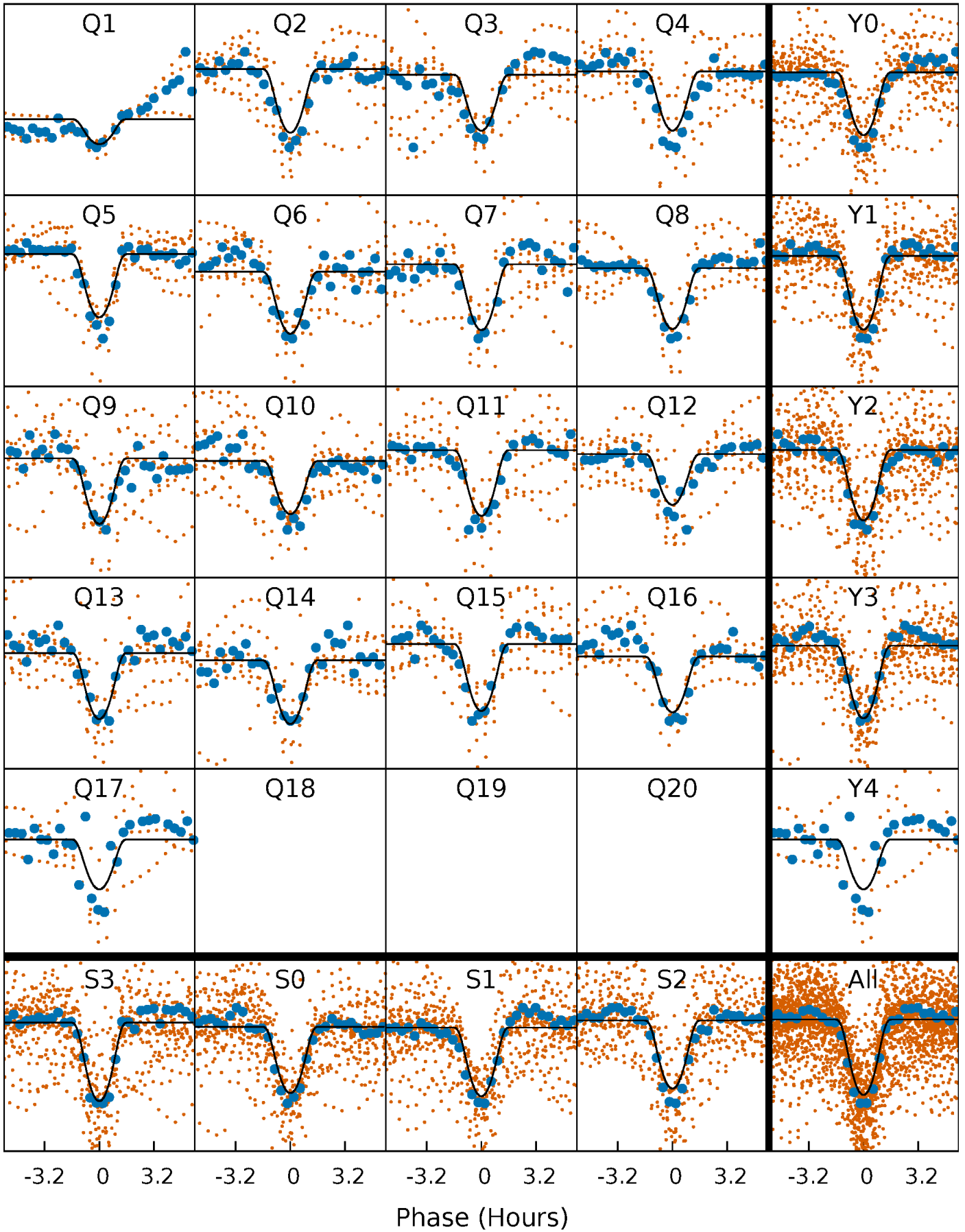
TCE 008197761-01 P= 9.868673 Days  $T_0=138.997851$  (BKJD)





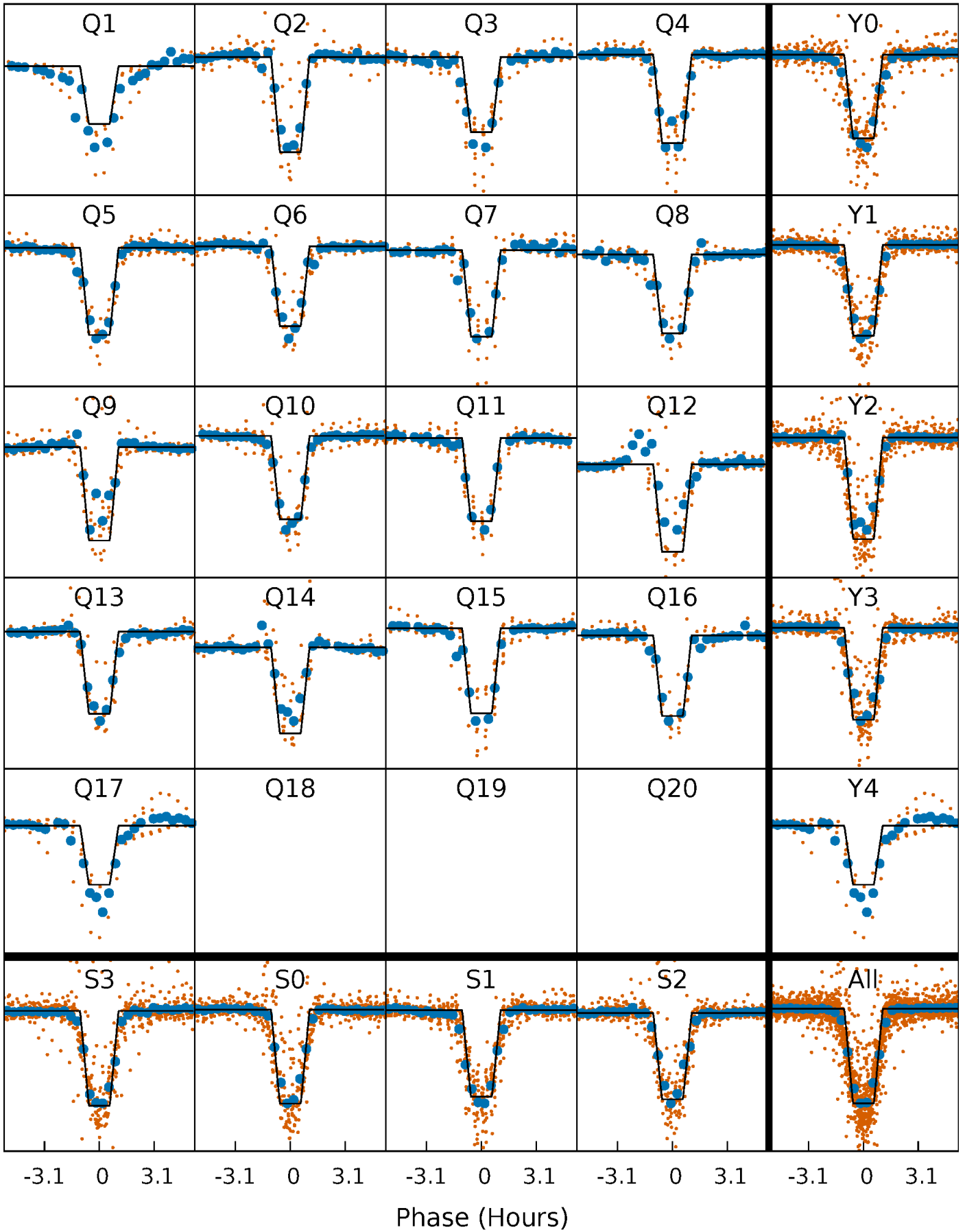
# DV Quarter-Phased Transit Curves

TCE 008197761-01 P= 9.868673 Days  $T_0=138.997851$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

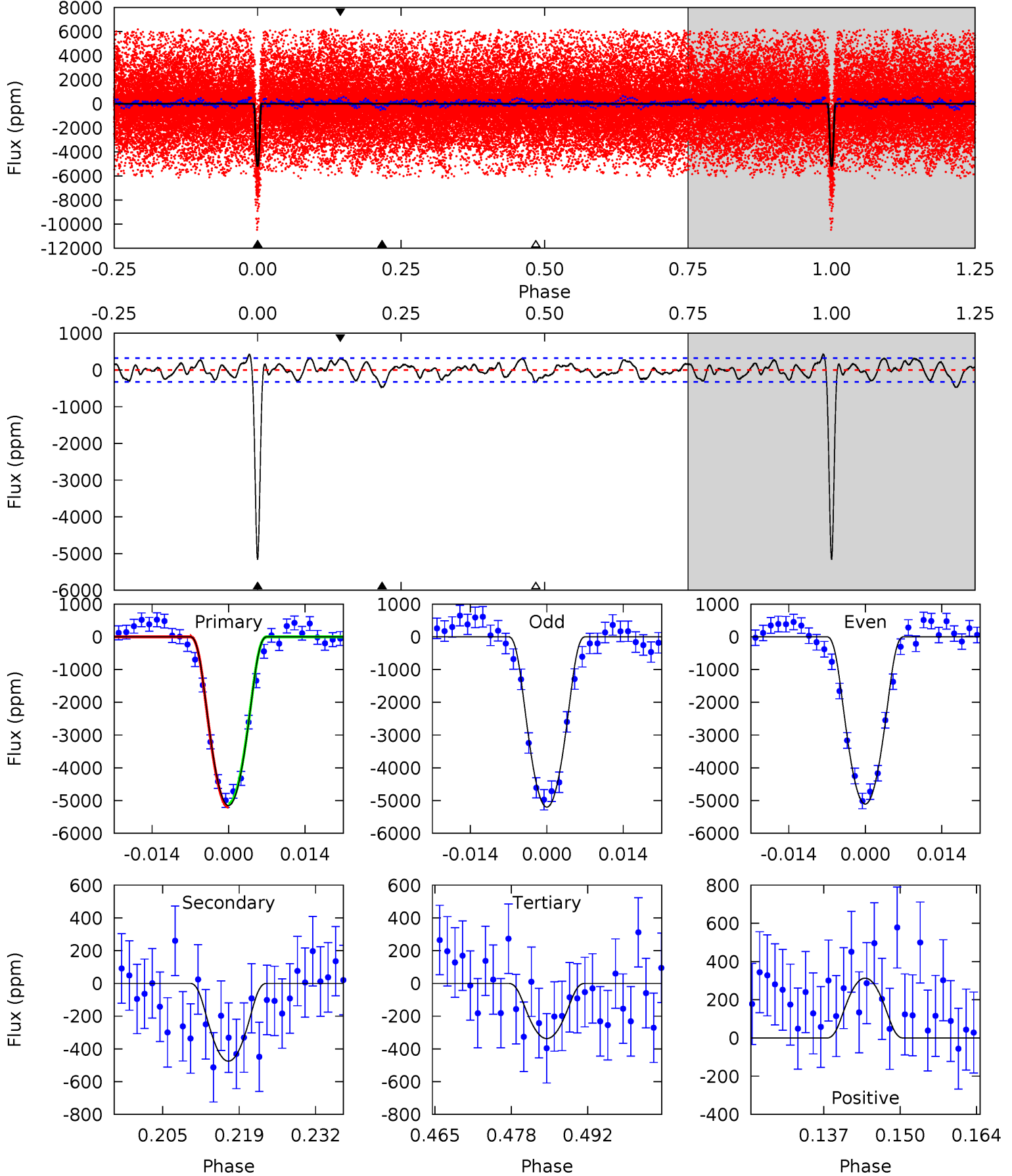
TCE 008197761-01 P= 9.868650 Days  $T_0=138.999621$  (BKJD)



# DV Model-Shift Uniqueness Test

008197761-01, P = 9.868673 Days, E = 129.129178 Days

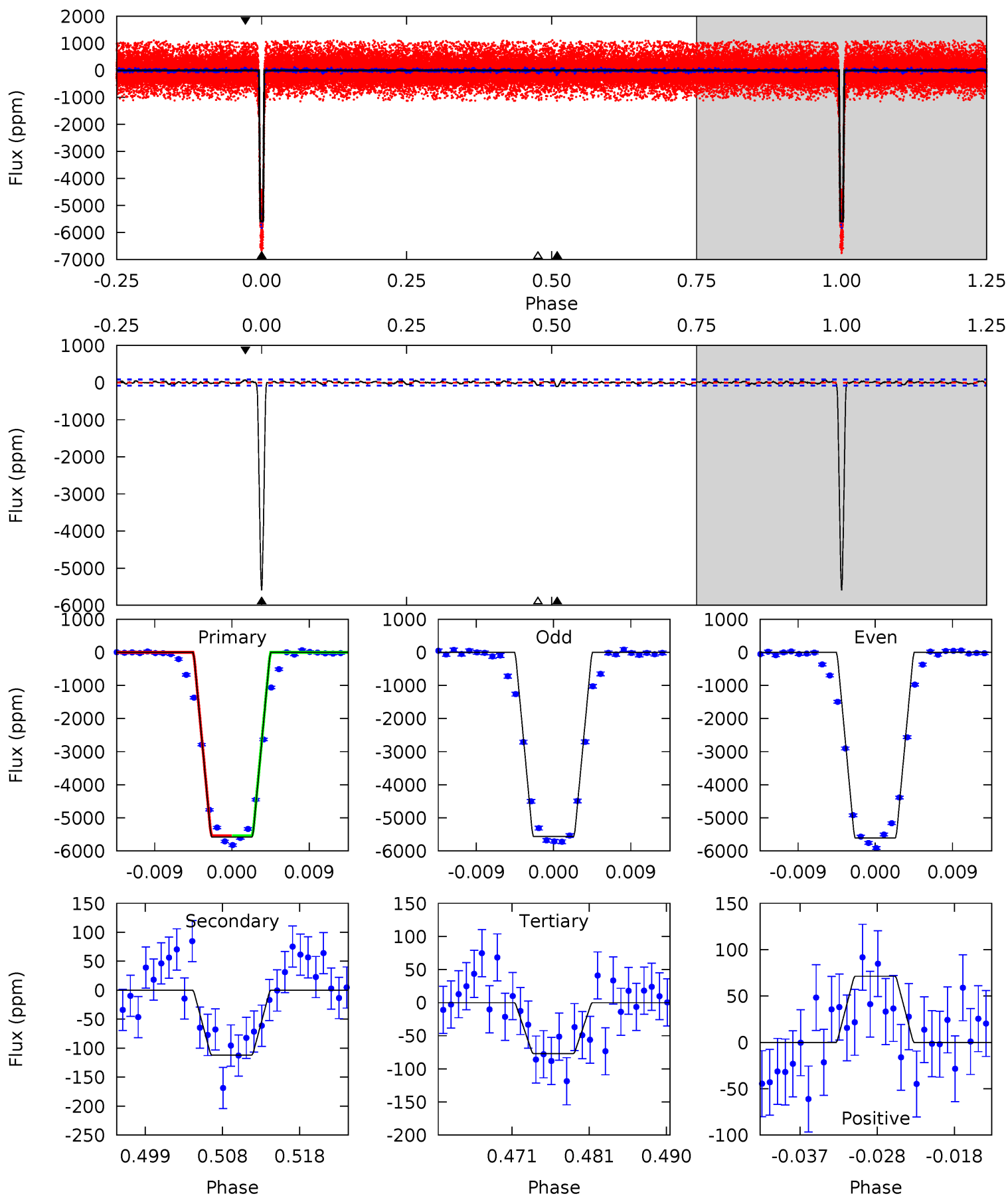
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.9	7.27	5.16	4.80	4.97	2.47	2.22	73.8	74.2	2.11	2.48	0.73	1.04	0.08	0.82



# Alt Model-Shift Uniqueness Test

008197761-01, P = 9.868650 Days, E = 129.130971 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
343.0	6.87	4.73	4.38	5.04	2.60	1.30	338.3	338.6	2.15	2.49	1.34	0.97	0.01	0.01



### Stellar Parameters For KIC 008197761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7301^{+230}_{-307}$	$4.110^{+0.204}_{-0.167}$	$-0.380^{+0.250}_{-0.300}$	$1.717^{+0.503}_{-0.457}$	$1.384^{+0.212}_{-0.234}$	$0.385^{+0.435}_{-0.175}$
	+3%/-4%	+5%/-4%	+66%/-79%	+29%/-27%	+15%/-17%	+113%/-45%
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 008197761-01 / KOI 6175.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-475 \pm 65$	$15.72^{+2.66}_{-2.29}$	$1849^{+141}_{-149}$	$3953^{+132}_{-133}$	$11^{+4}_{-3}$
Alt.	$-112 \pm 16$	$13.94^{+2.32}_{-1.87}$	$1847^{+151}_{-130}$	$3220^{+102}_{-113}$	$3.114^{+1.204}_{-0.854}$

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



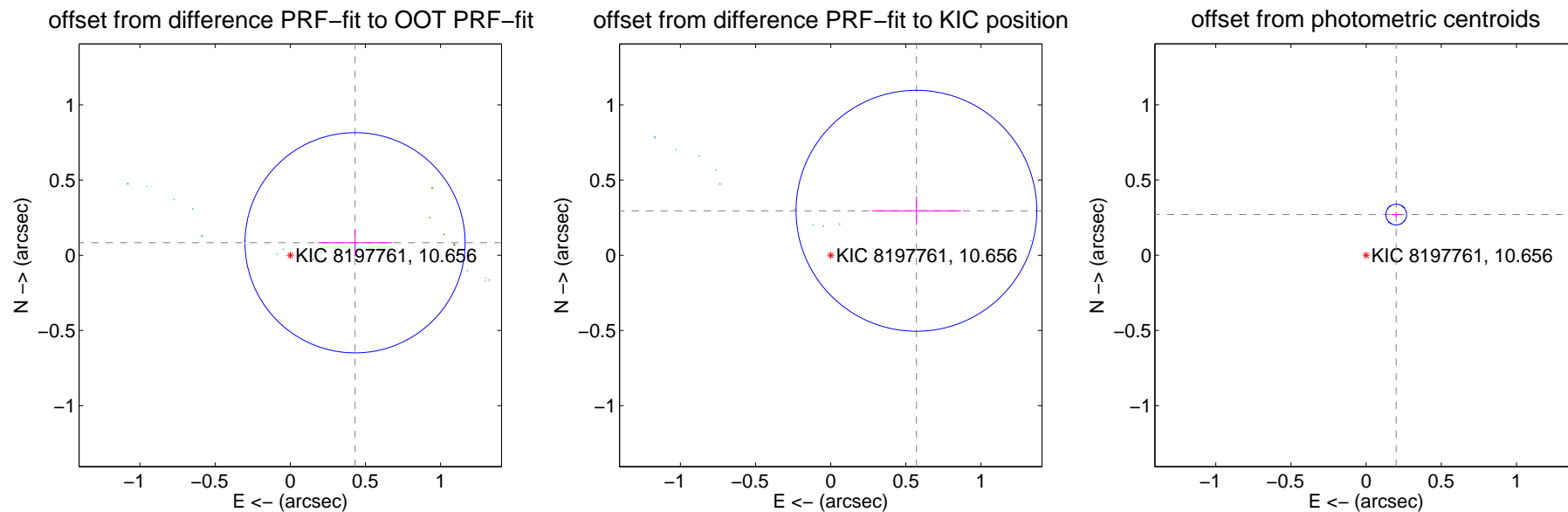
## DV Centroid Data

Supplemental centroid analysis for 008197761-01. **Kepler magnitude: 10.66.** Transit SNR 133.27

There are 13 quarters with good PRF difference image offsets

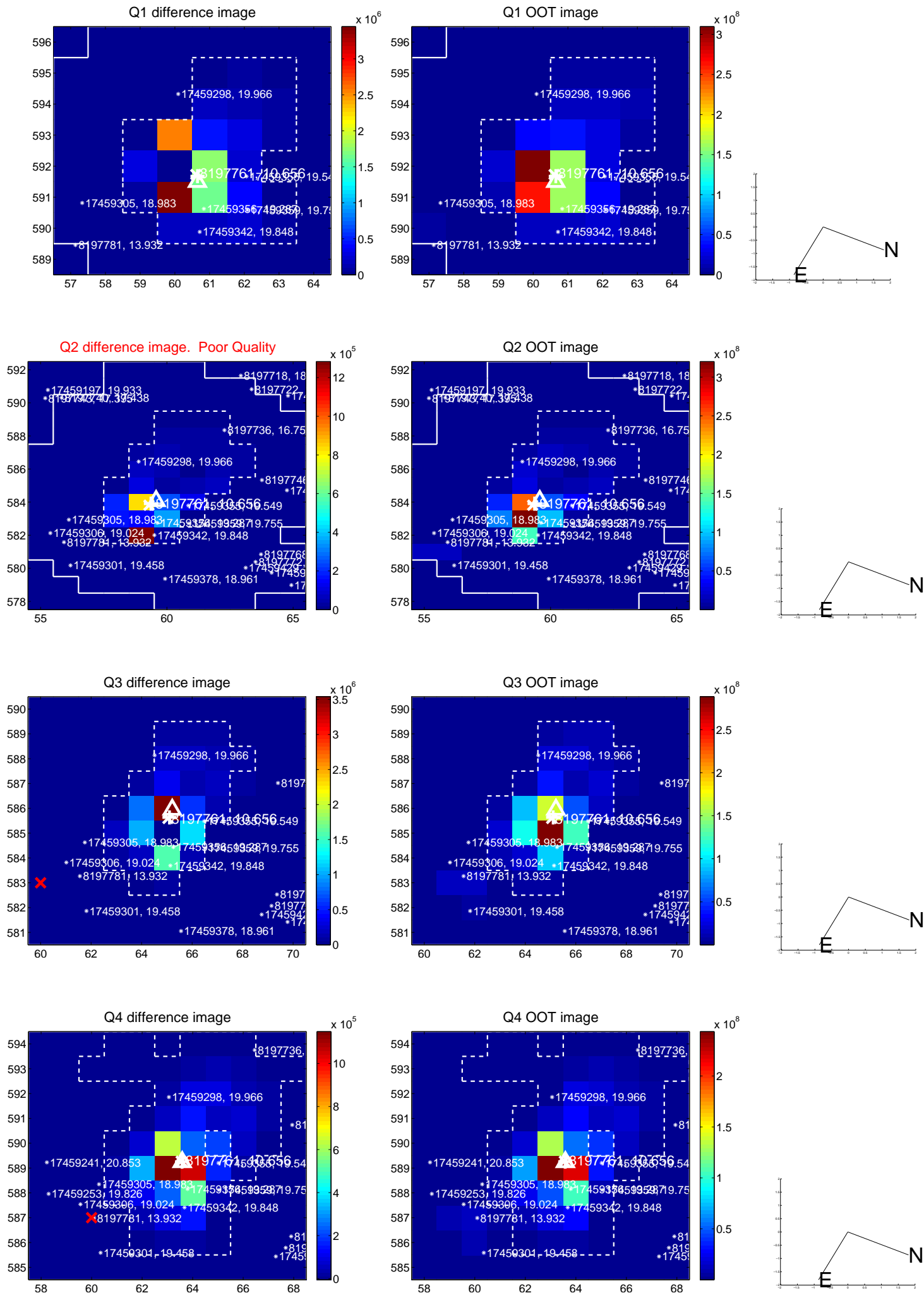
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.439 \pm 0.244$	1.80	$-0.431 \pm 0.248$	$0.083 \pm 0.090$
PRF-fit source offset from KIC position	$0.642 \pm 0.267$	2.41	$-0.570 \pm 0.297$	$0.296 \pm 0.096$
photometric centroid source offset	<b><math>0.34 \pm 0.02</math></b>	<b>14.62</b>	$-0.20 \pm 0.03$	$0.27 \pm 0.02$

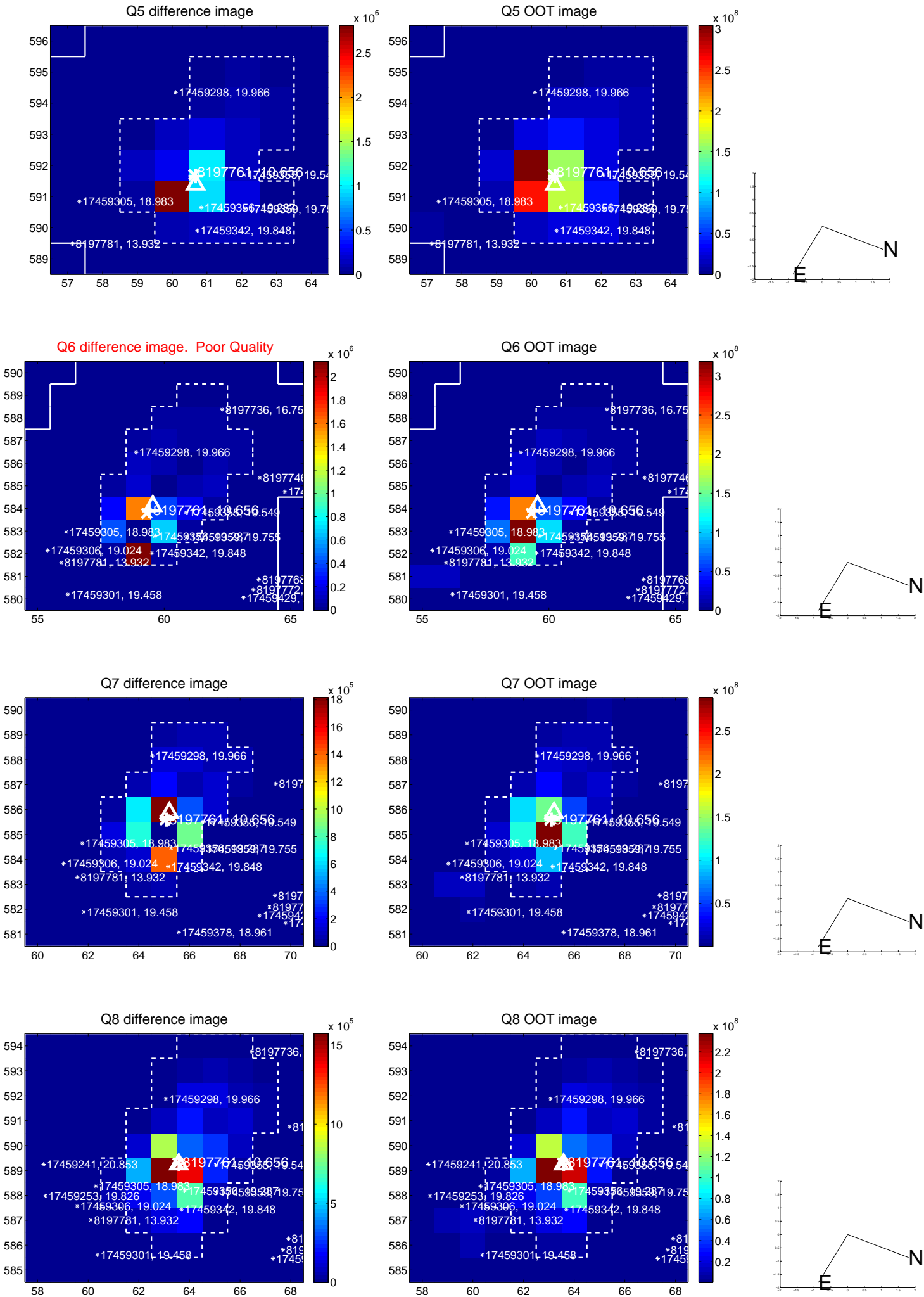


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

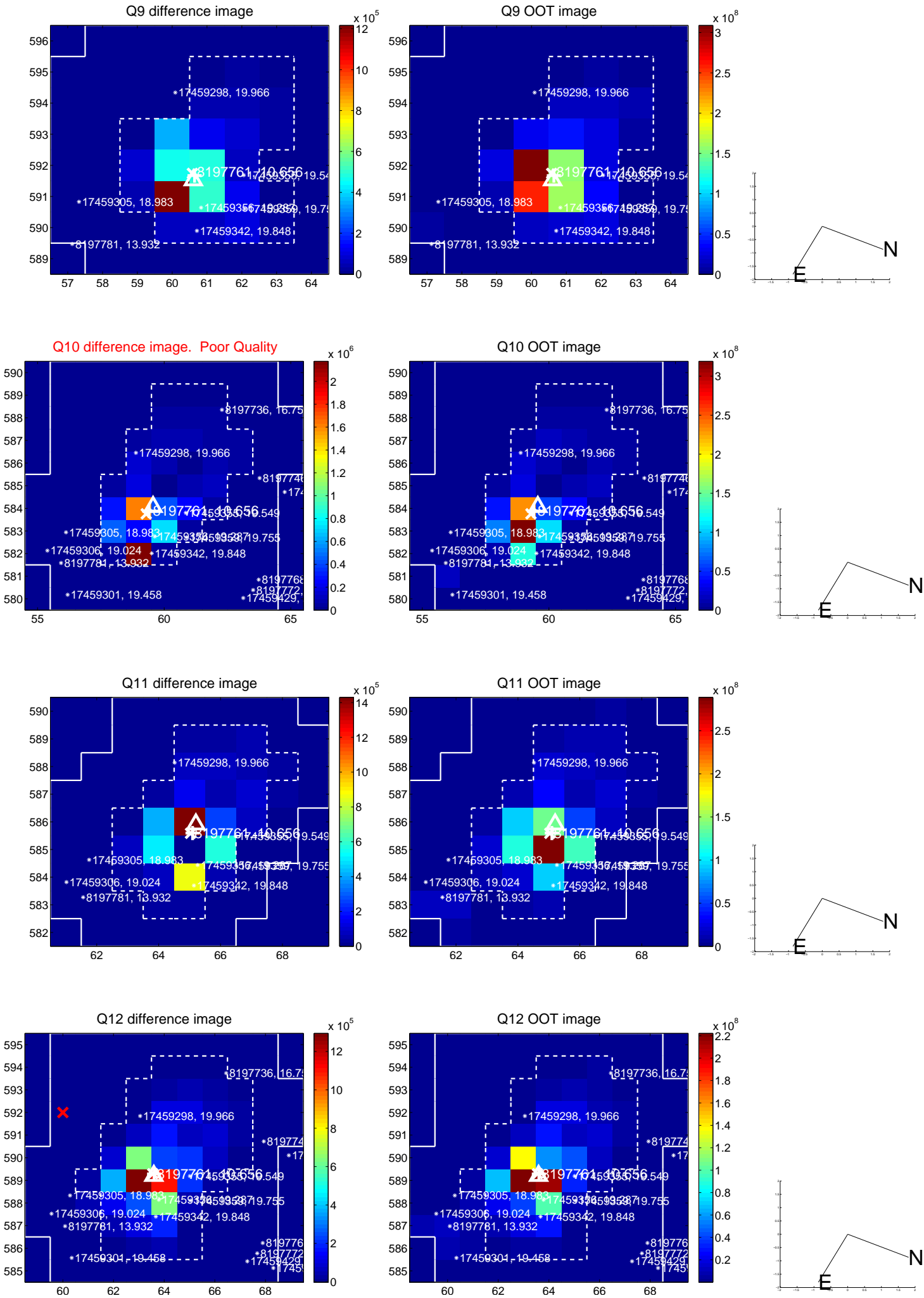
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



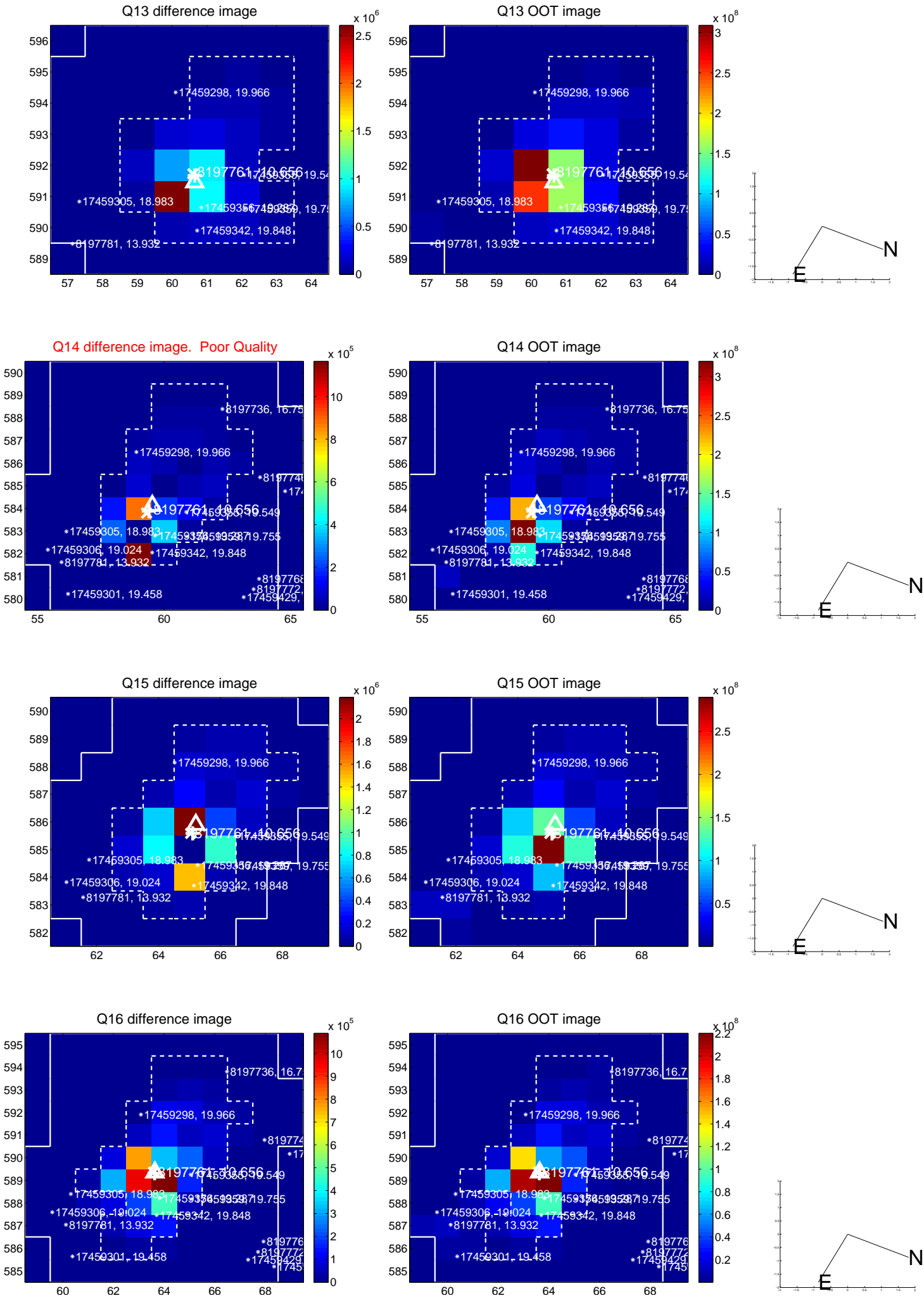
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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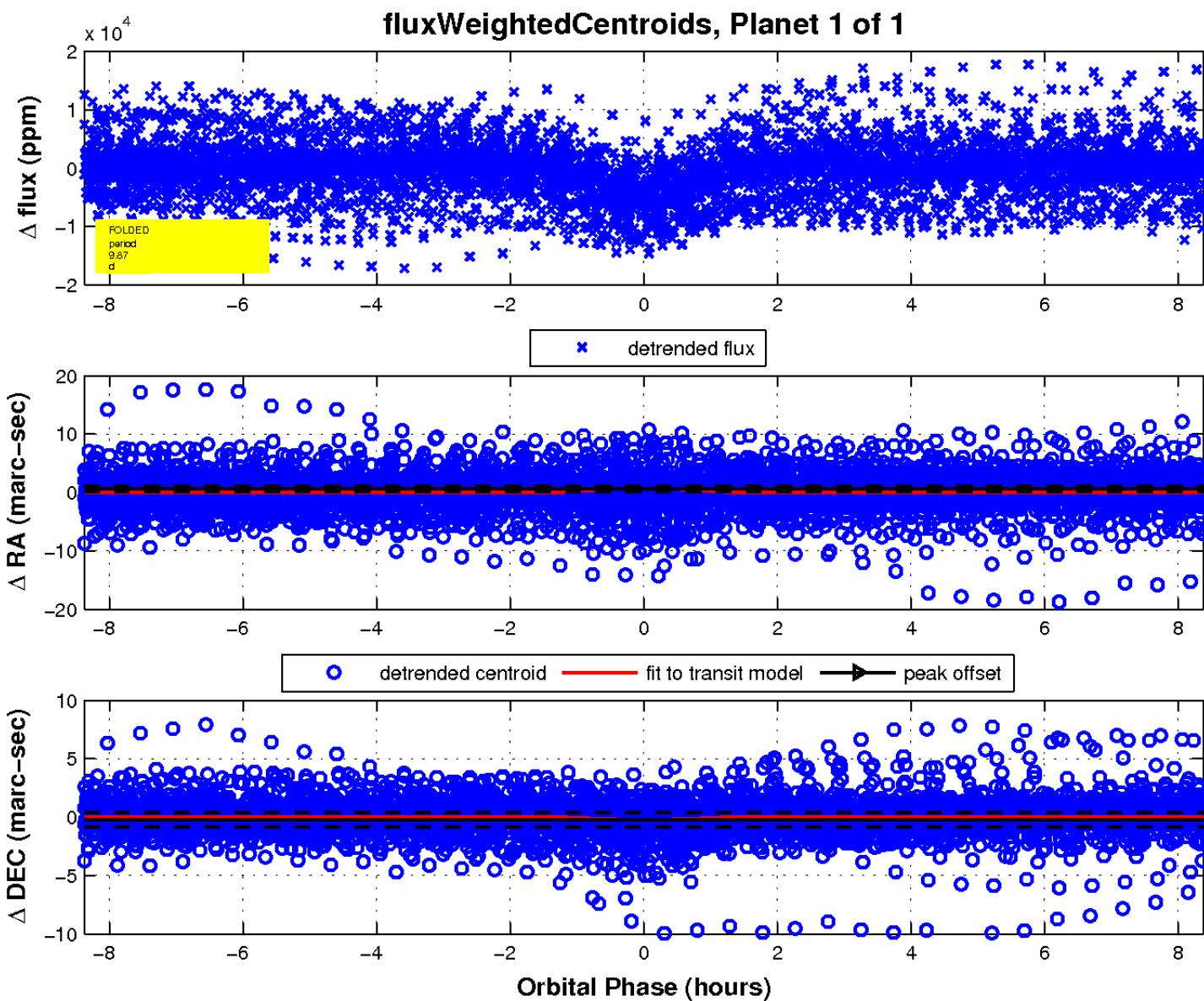
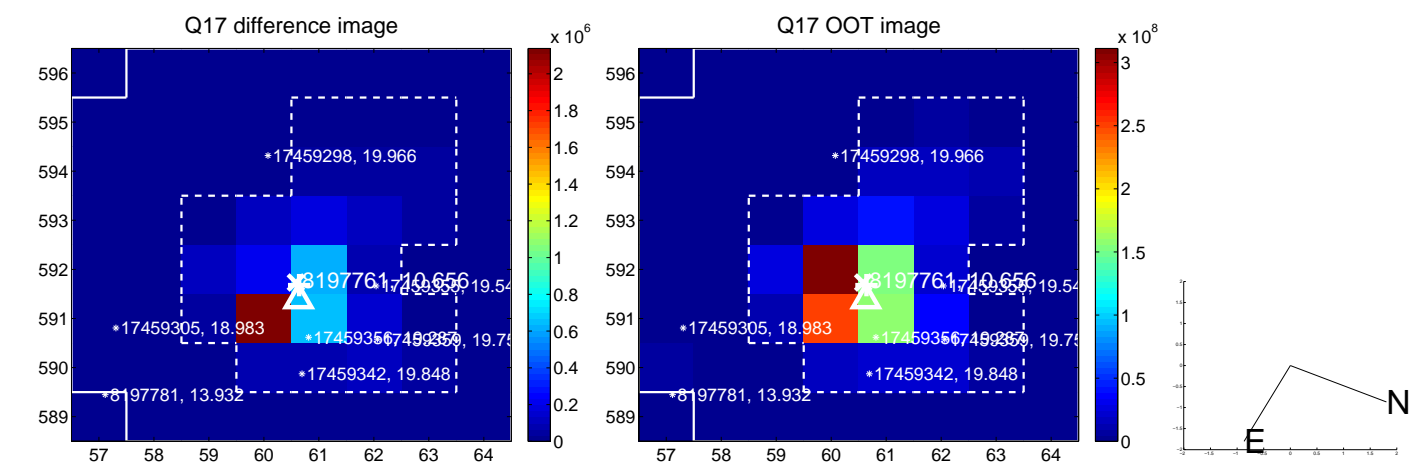


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

