

# KIC 007466832

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007466832-01	OBS	No	3.549099	133.797339	6.1	22.897	7.8	3.3	1.84	6946	0.48	2755.39

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007466832-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

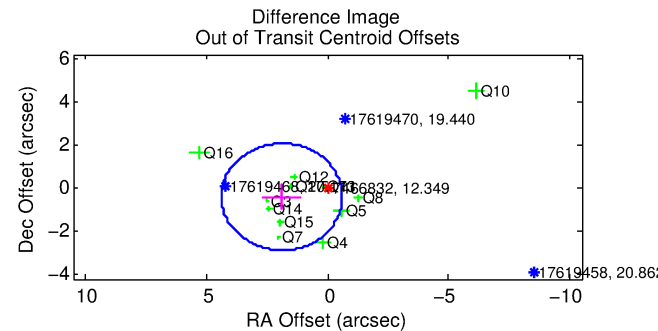
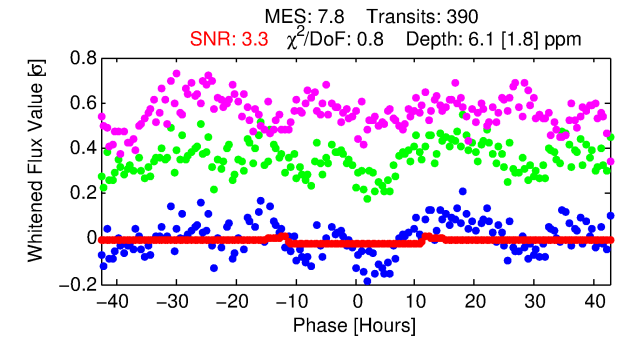
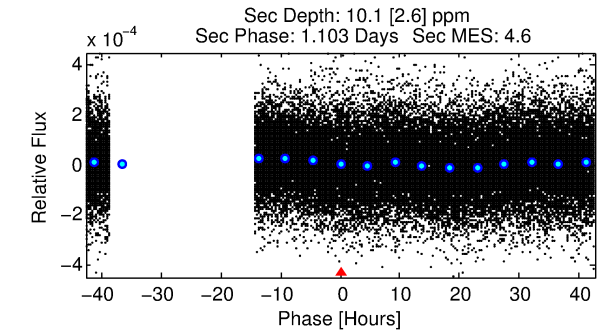
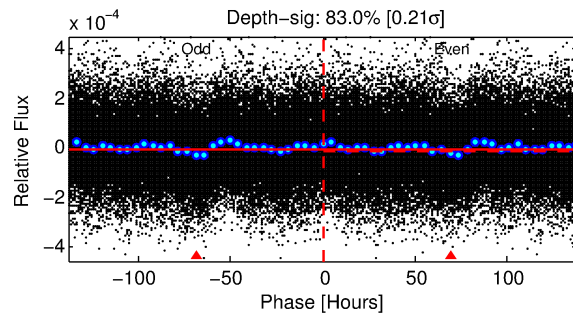
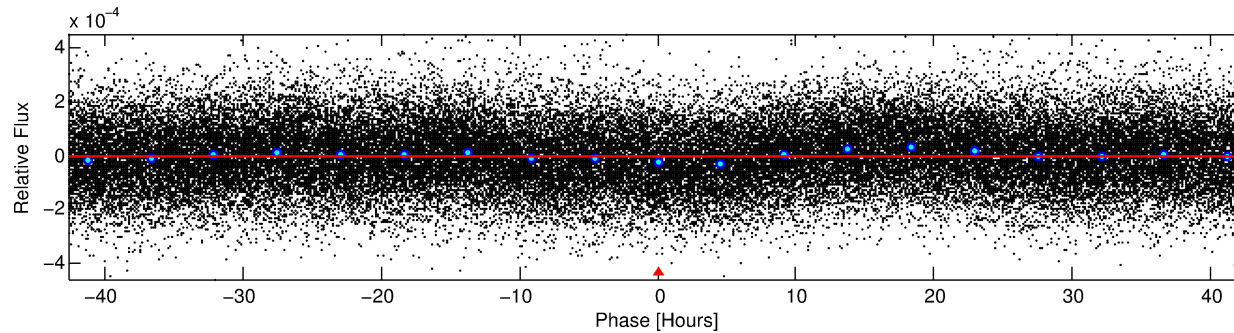
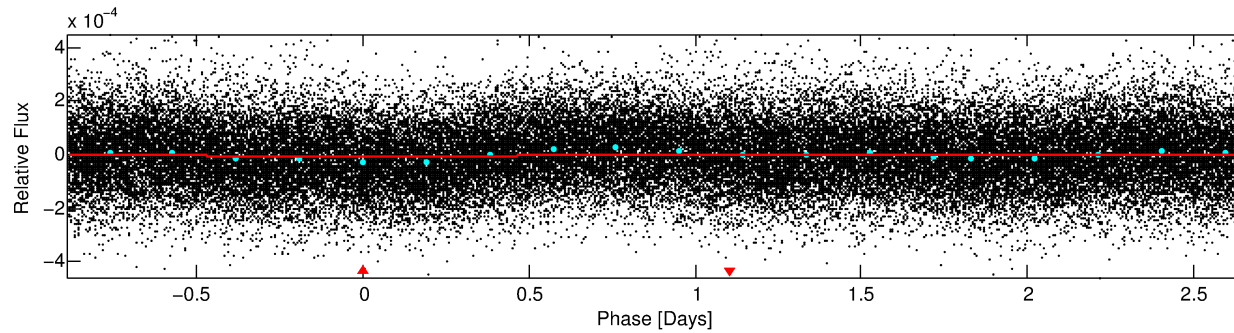
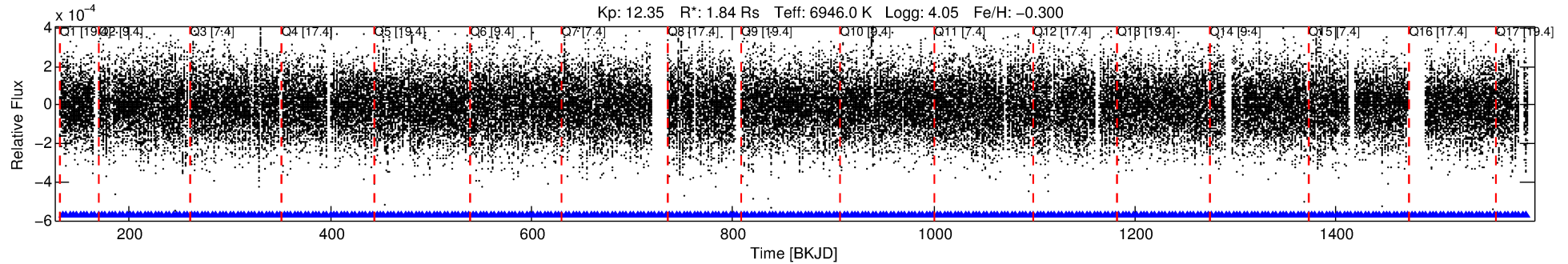
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007466832-01

No Significant Match Found

# DV One-Page Summary

KIC: 7466832 Candidate: 1 of 1 Period: 3.549 d



## DV Fit Results:

Period = 3.54910 [0.00014] d  
Epoch = 133.7973 [0.0245] BKJD  
Rp/R\* = 0.0024 [0.0013]  
a/R\* = 1.22 [1.21]  
b = 0.63 [2.89]  
Seff = 2755.39 [1022.04]  
Teq = 1847 [171] K  
Rp = 0.48 [0.28] Re  
a = 0.0507 [0.0115] AU  
Ag = 62.15 [70.77] [0.86 $\sigma$ ]  
Teff = 8020 [2198] K [2.80 $\sigma$ ]

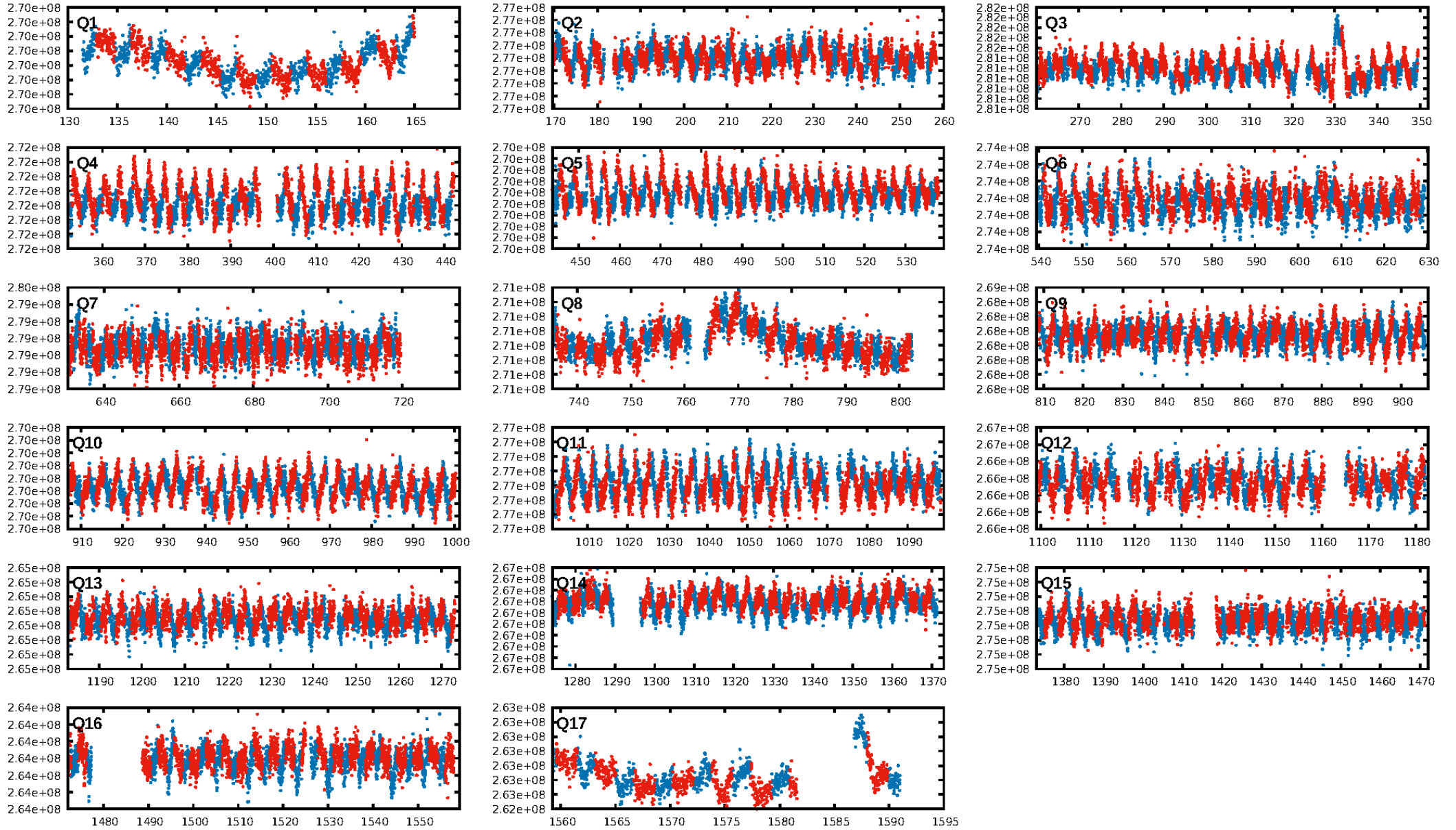
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [373/373]  
**GhostDiagnostic-chr: 0.6509**  
Centroid-sig: 2.6%  
Centroid-so: 2.538 arcsec [1.46 $\sigma$ ]  
OotOffset-rm: 1.930 arcsec [2.32 $\sigma$ ]  
KicOffset-rm: 1.857 arcsec [2.34 $\sigma$ ]  
OotOffset-st: 2/4/4/2 [12]  
KicOffset-st: 2/4/4/2 [12]  
DiffImageQuality-fgm: 0.33 [4/12]  
DiffImageOverlap-fno: 1.00 [17/17]

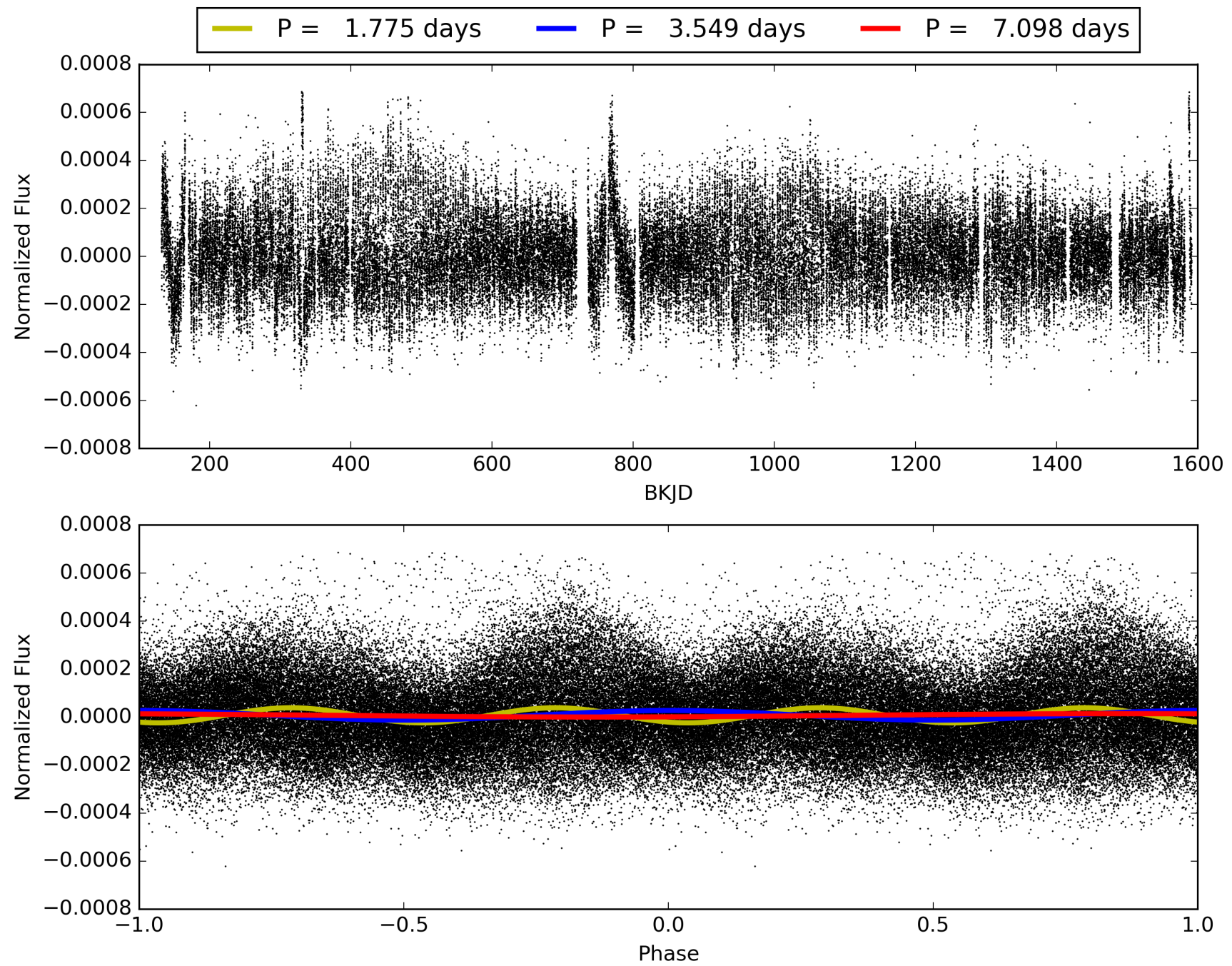
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:20:18 Z

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

# TCE 007466832-01, PDC Light Curves



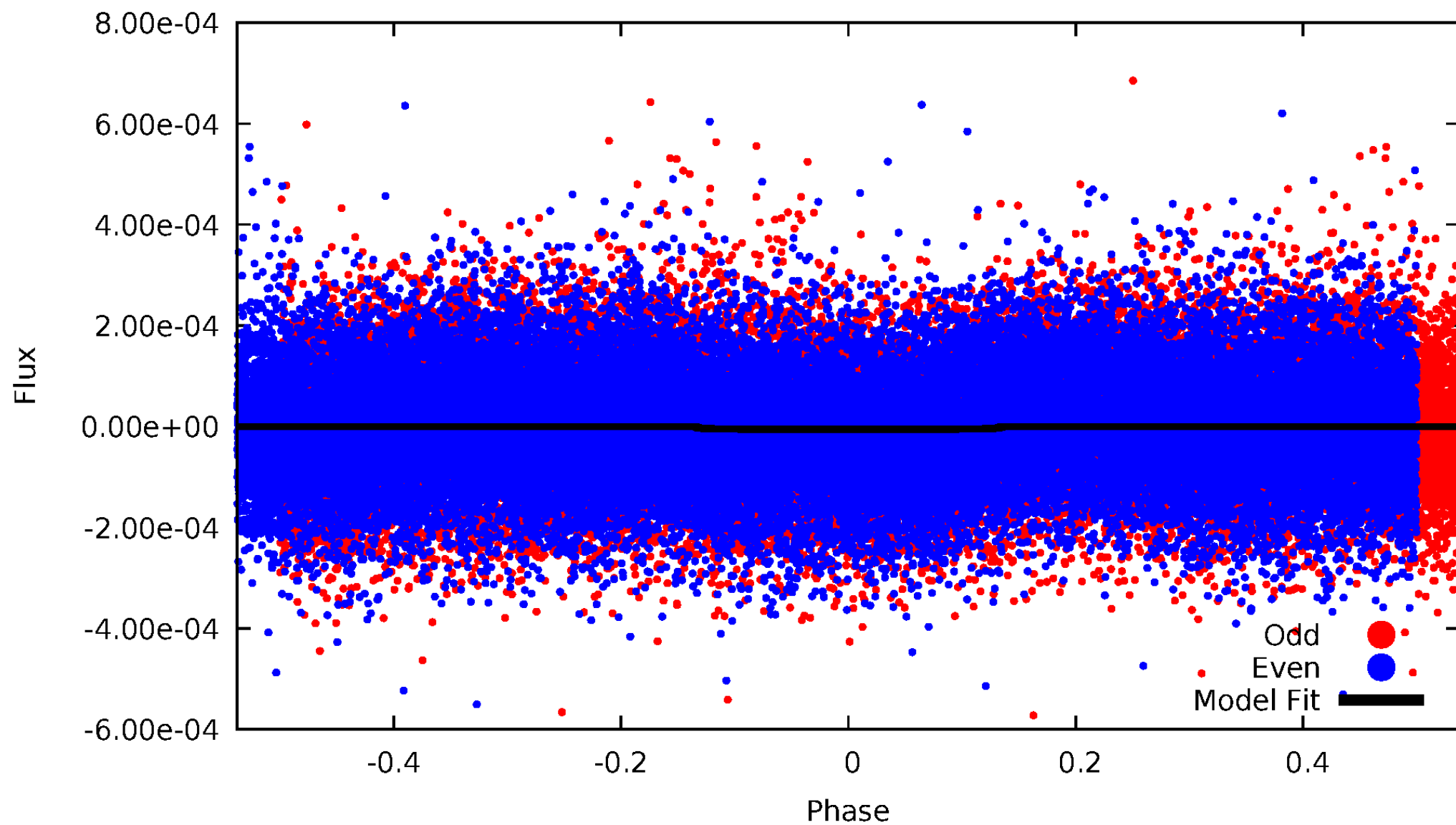
TCE 007466832-01





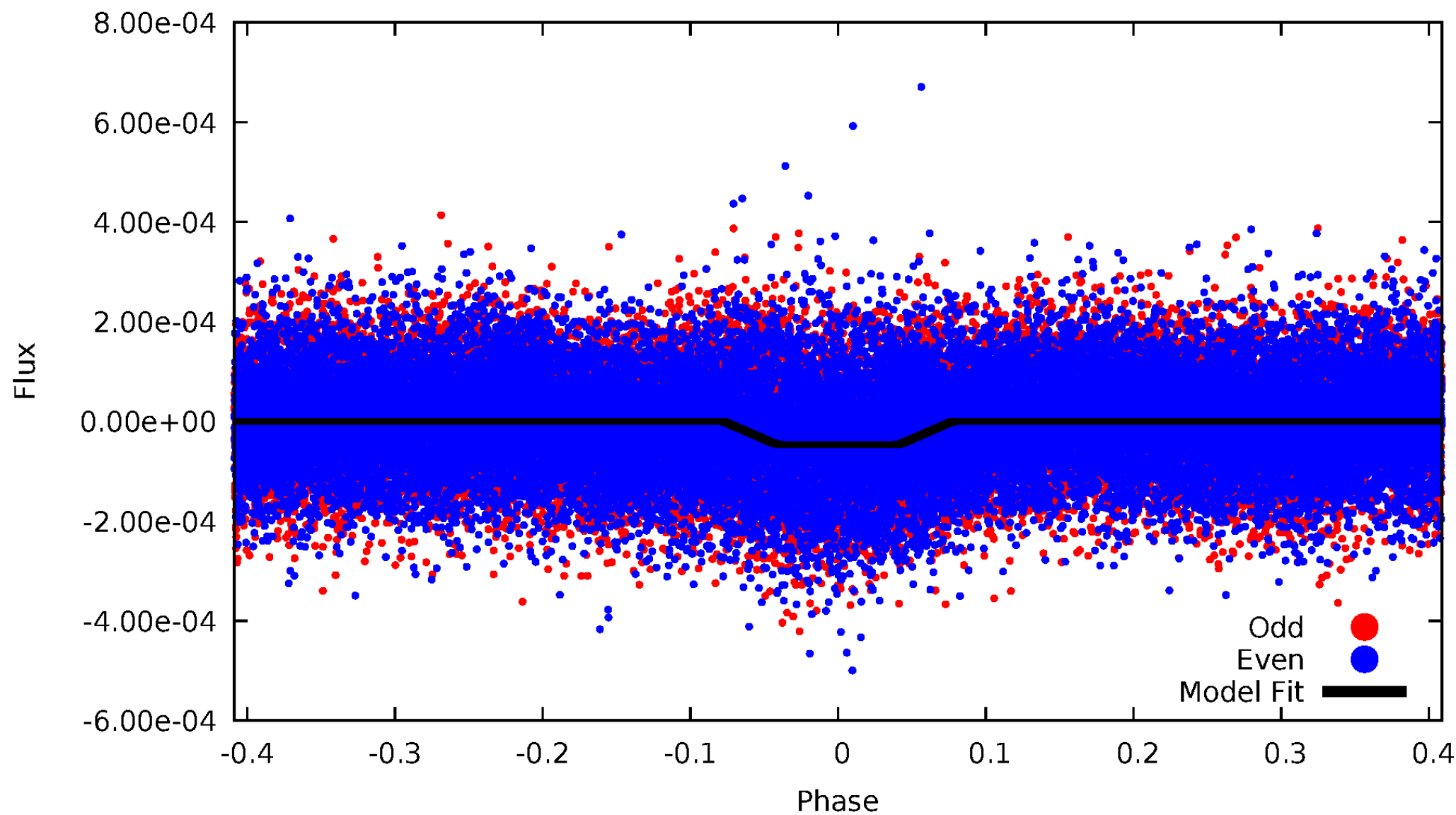
# DV Odd/Even

TCE 007466832-01



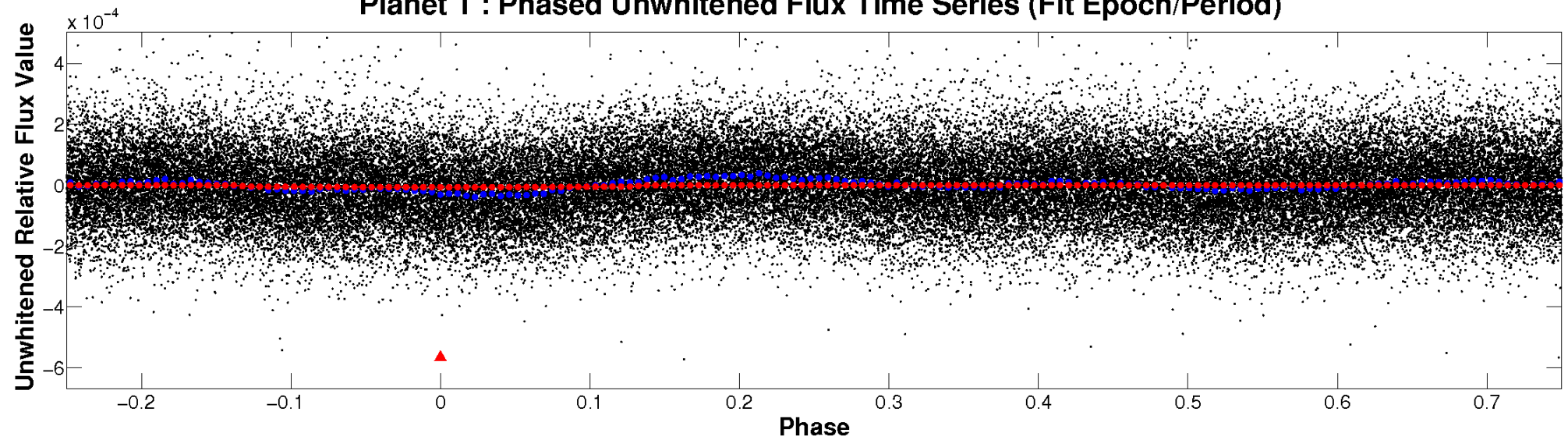
# ALT Odd/Even

TCE 007466832-01

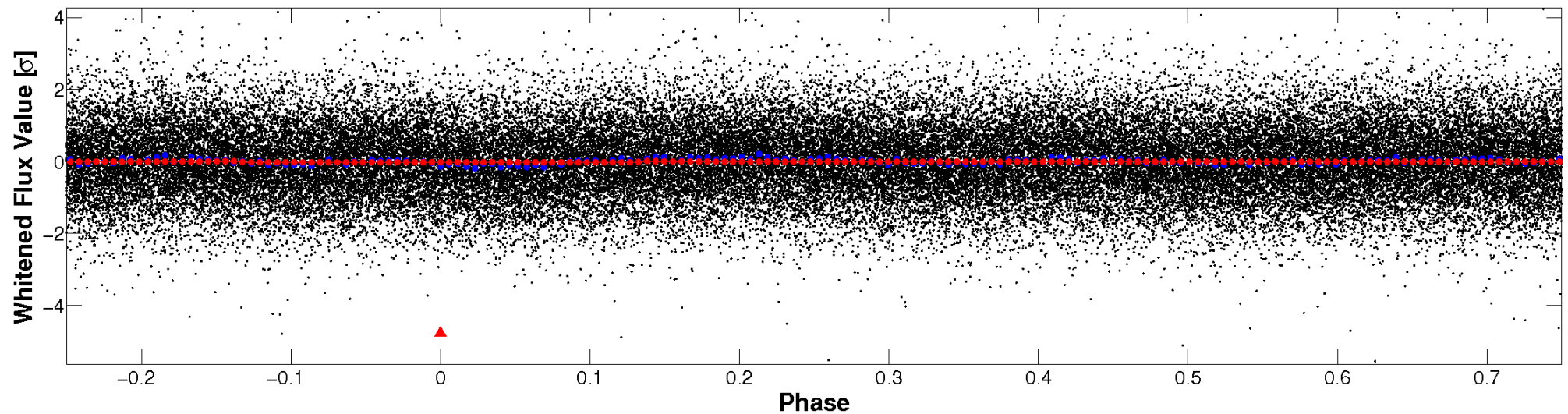


# Non-Whitened Vs. Whitened Light Curve

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

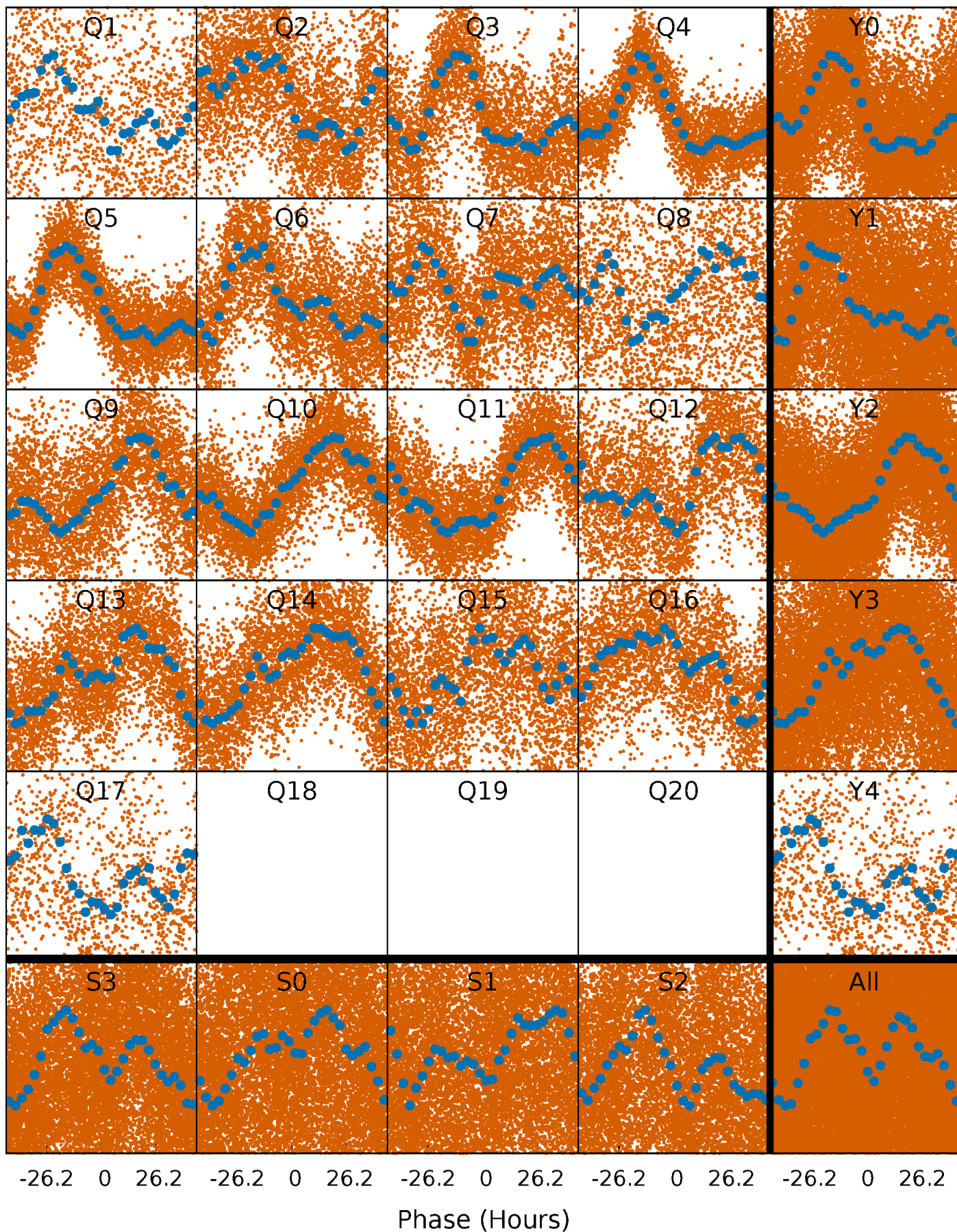


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

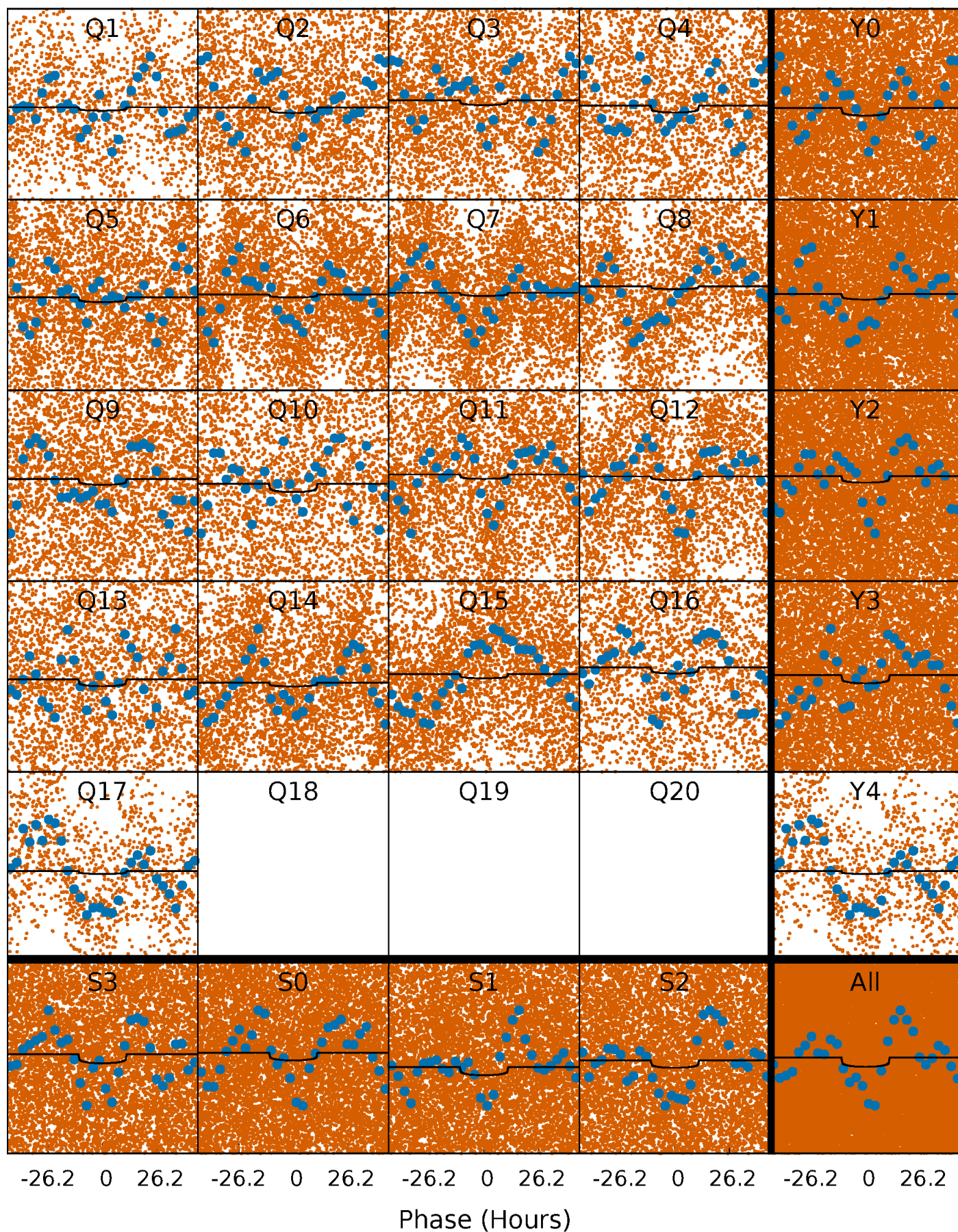
TCE 007466832-01 P= 3.549099 Days  $T_0=133.797339$  (BKJD)





# DV Quarter-Phased Transit Curves

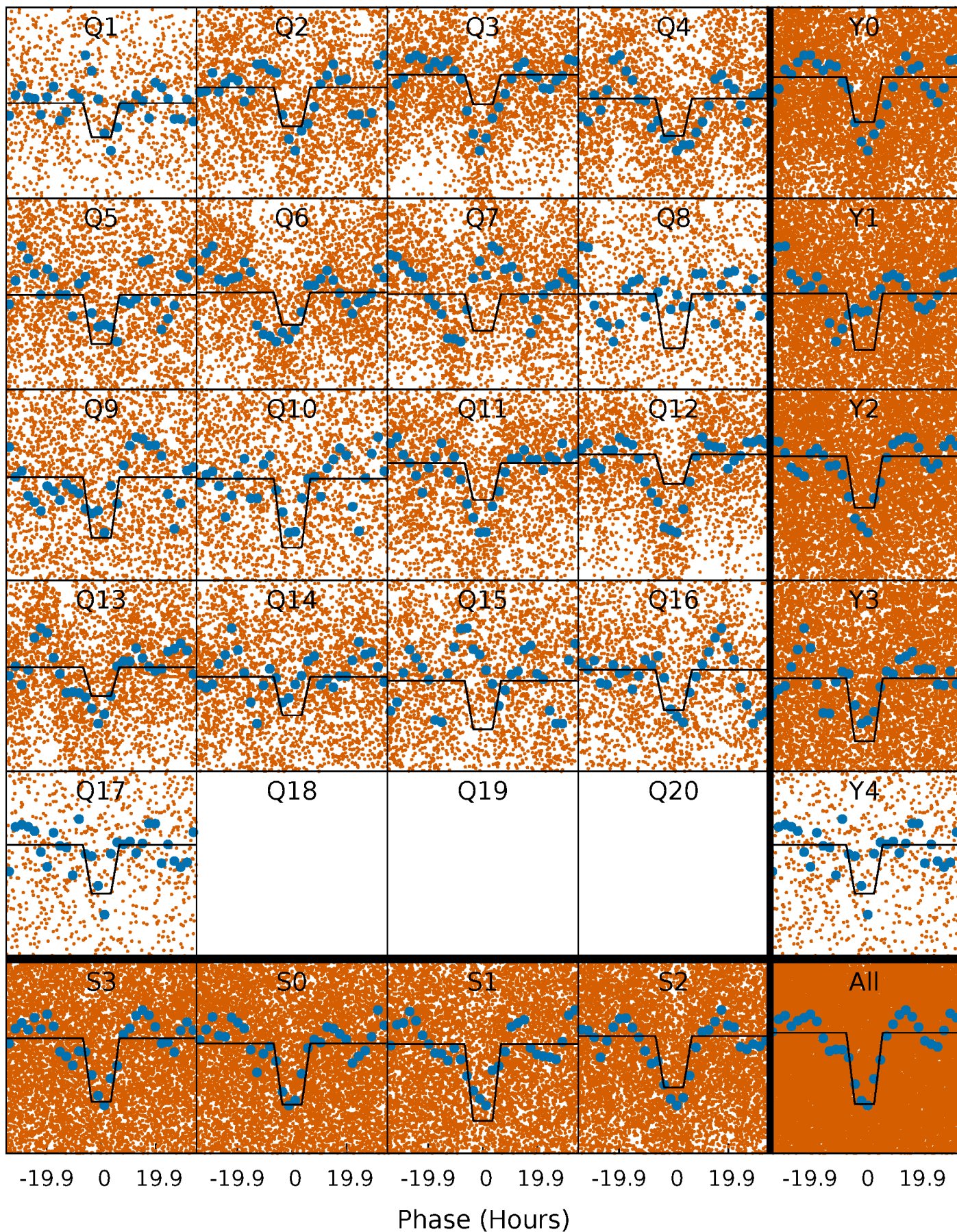
TCE 007466832-01 P= 3.549099 Days  $T_0=133.797339$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

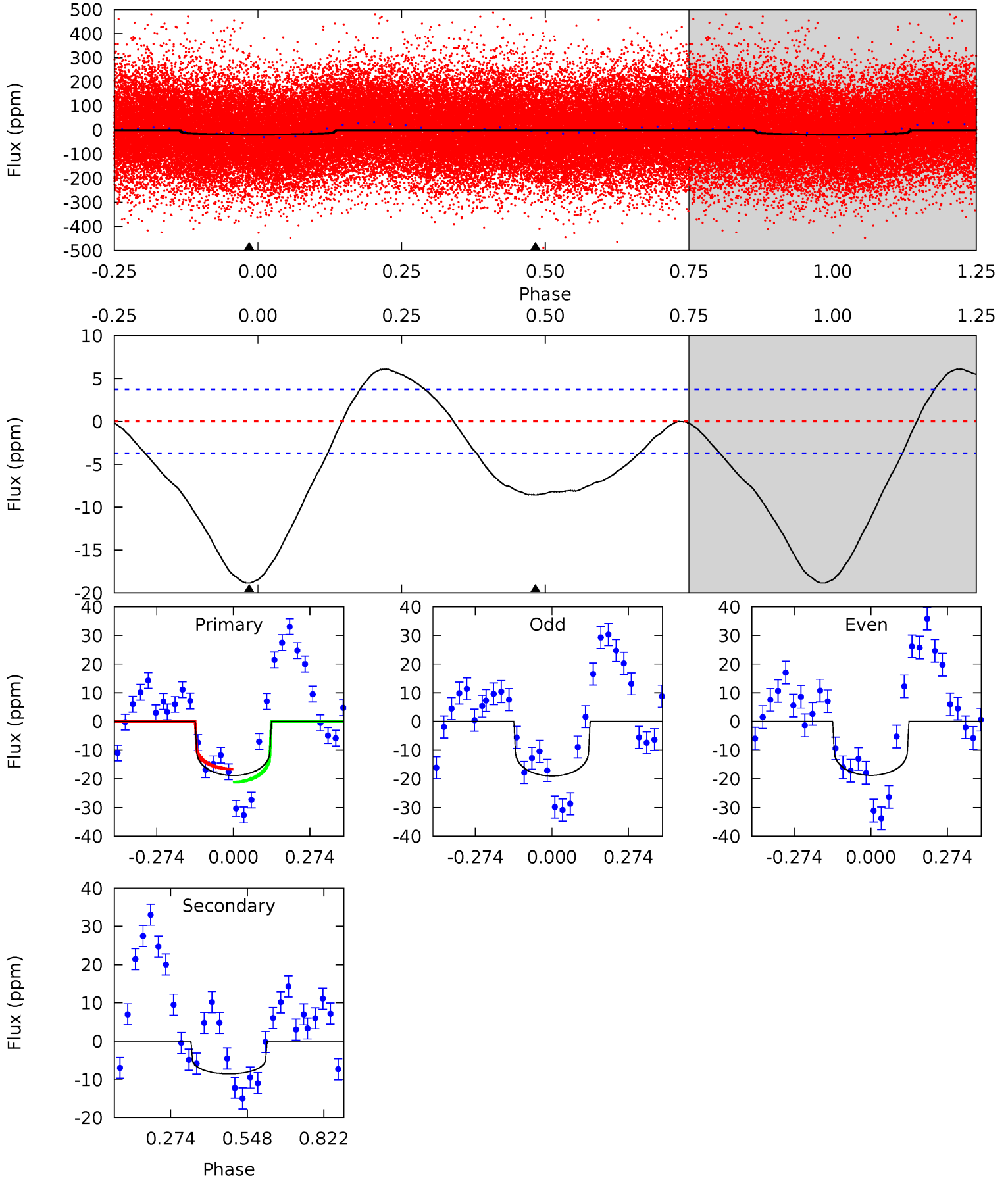
TCE 007466832-01 P= 3.549271 Days  $T_0=133.928292$  (BKJD)



# DV Model-Shift Uniqueness Test

007466832-01, P = 3.549099 Days, E = 130.248240 Days

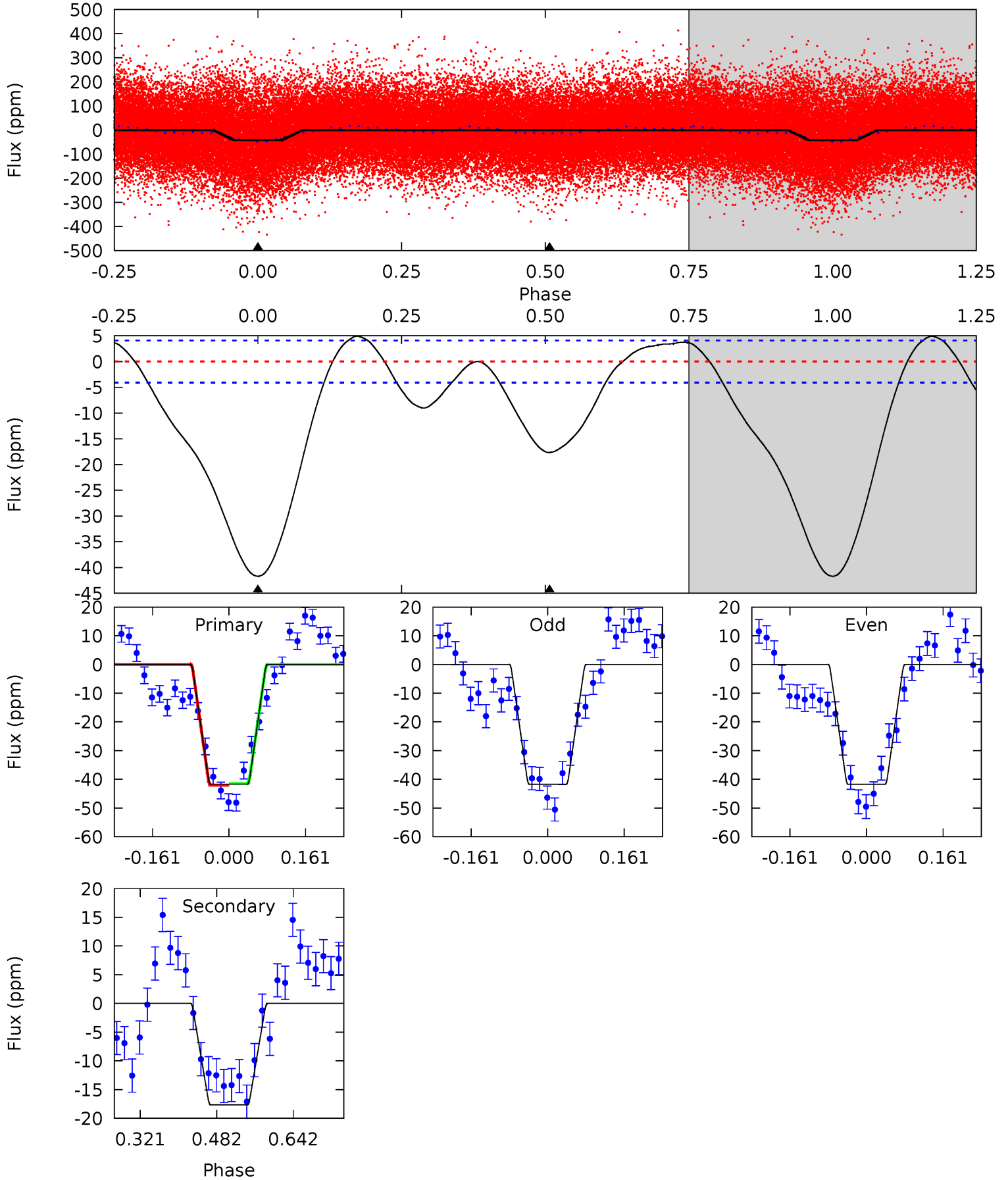
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	10.0	0	0	4.35	1.09	3.56	22.0	22.0	10.0	10.0	0.14	0.83	0.24	2.66



# Alt Model-Shift Uniqueness Test

007466832-01, P = 3.549271 Days, E = 130.379021 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
45.4	19.3	0	0	4.46	1.40	5.30	45.4	45.4	19.3	19.3	0.02	0.95	0.11	0.37





### Stellar Parameters For KIC 007466832

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6946^{+211}_{-253}$	$4.047^{+0.192}_{-0.128}$	$-0.300^{+0.300}_{-0.250}$	$1.844^{+0.432}_{-0.475}$	$1.383^{+0.182}_{-0.223}$	$0.311^{+0.329}_{-0.118}$
	$+3\%/-4\%$	$+5\%/-3\%$	$+100\%/-83\%$	$+23\%/-26\%$	$+13\%/-16\%$	$+106\%/-38\%$
Source	PHO1	FLK73	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 007466832-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-9\pm 1$	$0.45^{+0.26}_{-0.23}$	$2554^{+155}_{-180}$	$7880^{+5501}_{-1769}$	$59^{+162}_{-36}$
Alt.	$-18\pm 1$	$1.35^{+0.32}_{-0.29}$	$2564^{+162}_{-189}$	$5416^{+563}_{-417}$	$14^{+8}_{-5}$

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

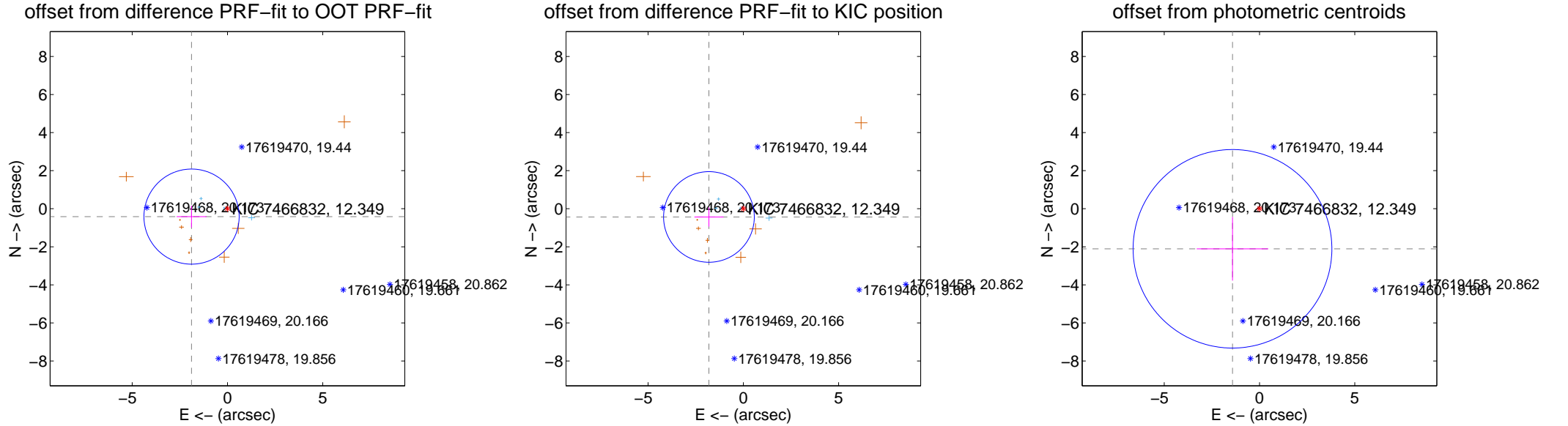
## DV Centroid Data

Supplemental centroid analysis for 007466832-01. Kepler magnitude: 12.35. Transit SNR 3.28

There are 4 quarters with good PRF difference image offsets

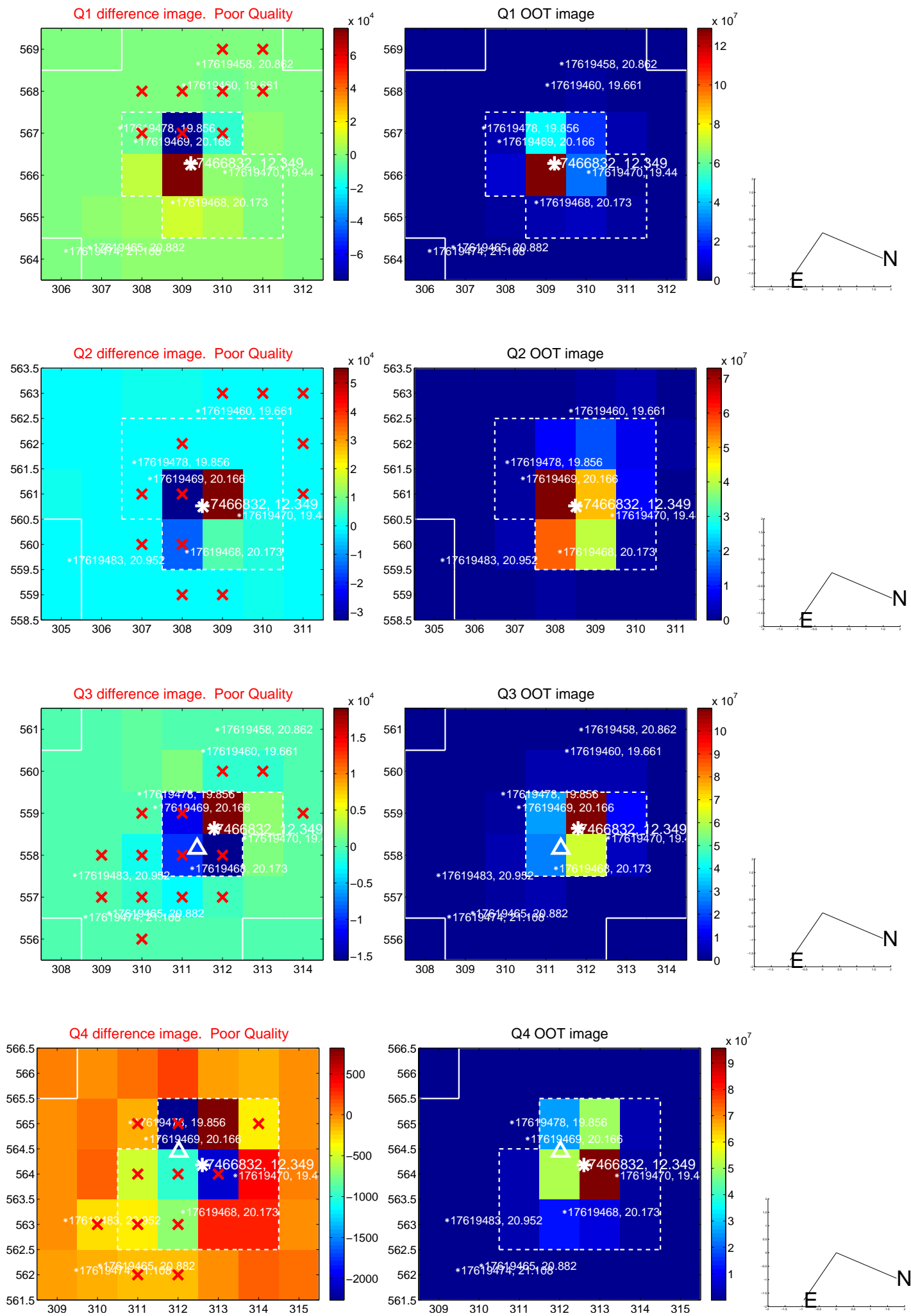
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.930 \pm 0.833$	2.32	$1.885 \pm 0.782$	$-0.414 \pm 0.571$
PRF-fit source offset from KIC position	$1.857 \pm 0.793$	2.34	$1.806 \pm 0.764$	$-0.432 \pm 0.504$
photometric centroid source offset	$2.54 \pm 1.74$	1.46	$1.42 \pm 1.88$	$-2.11 \pm 1.67$

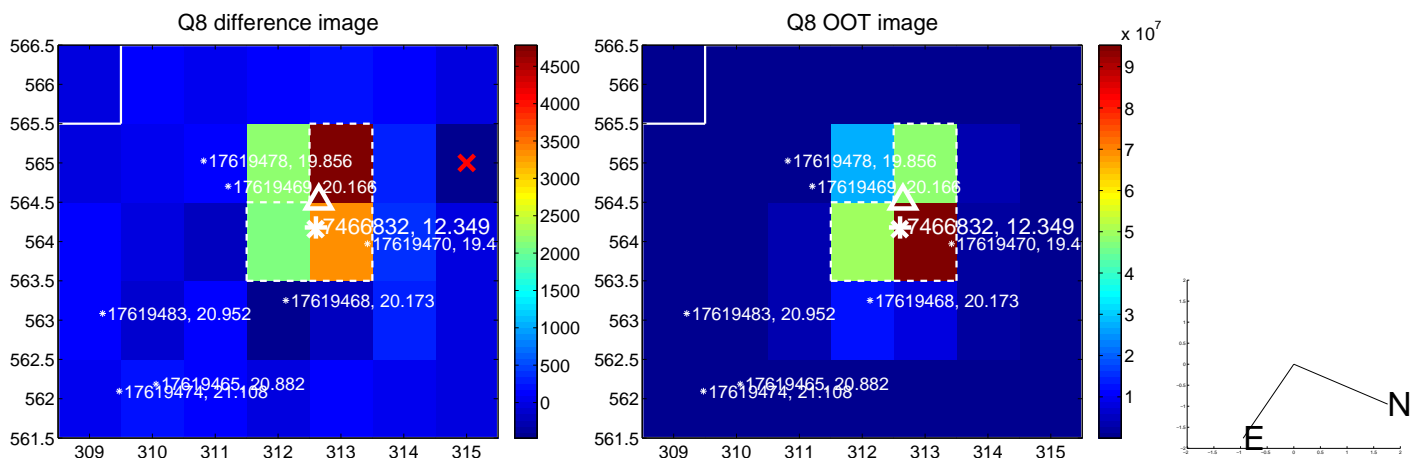
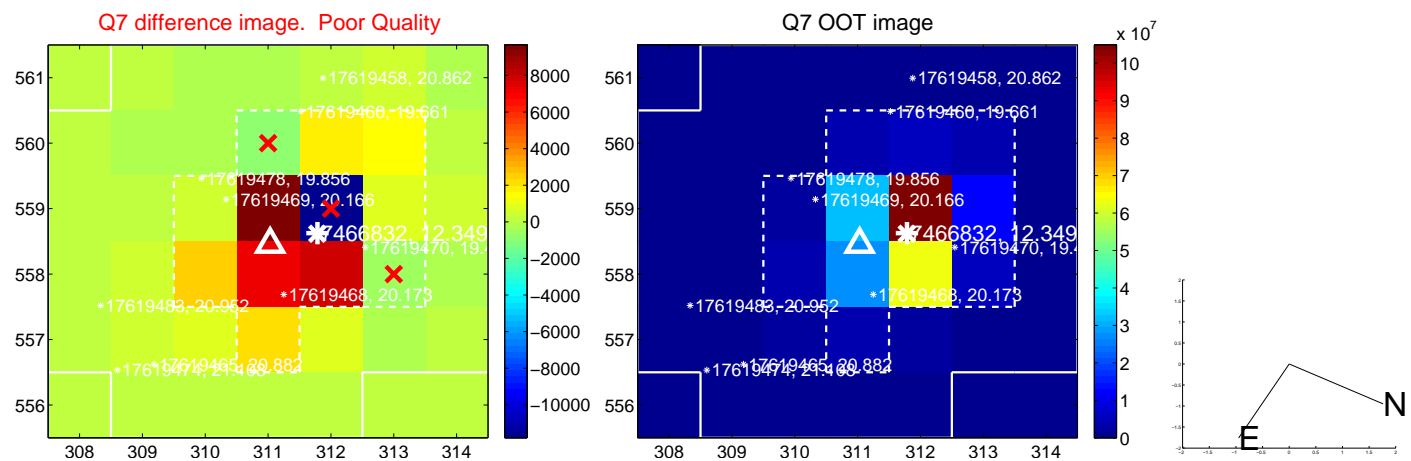
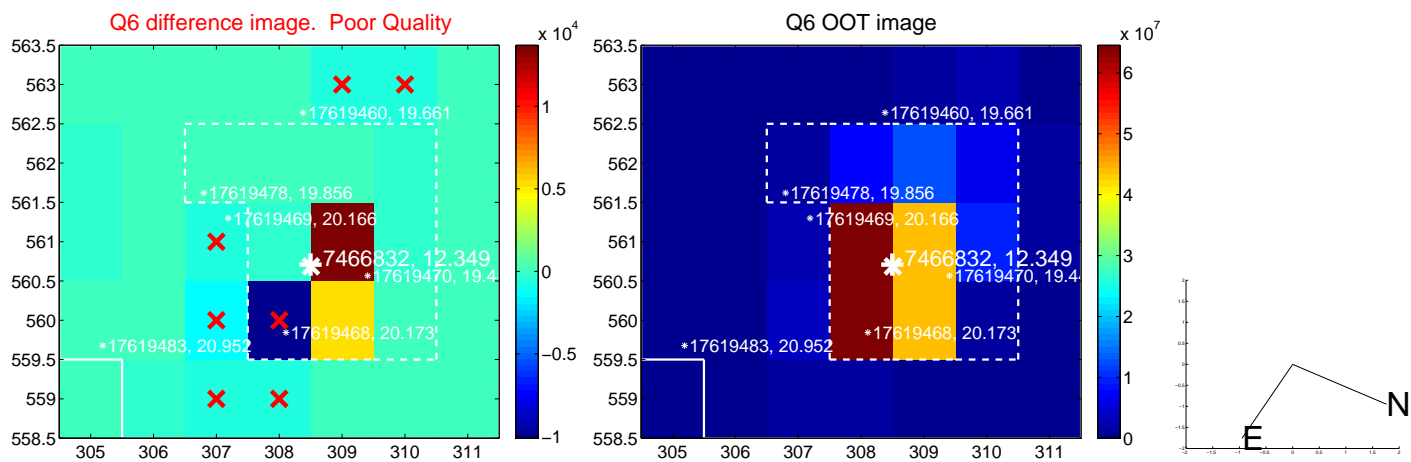
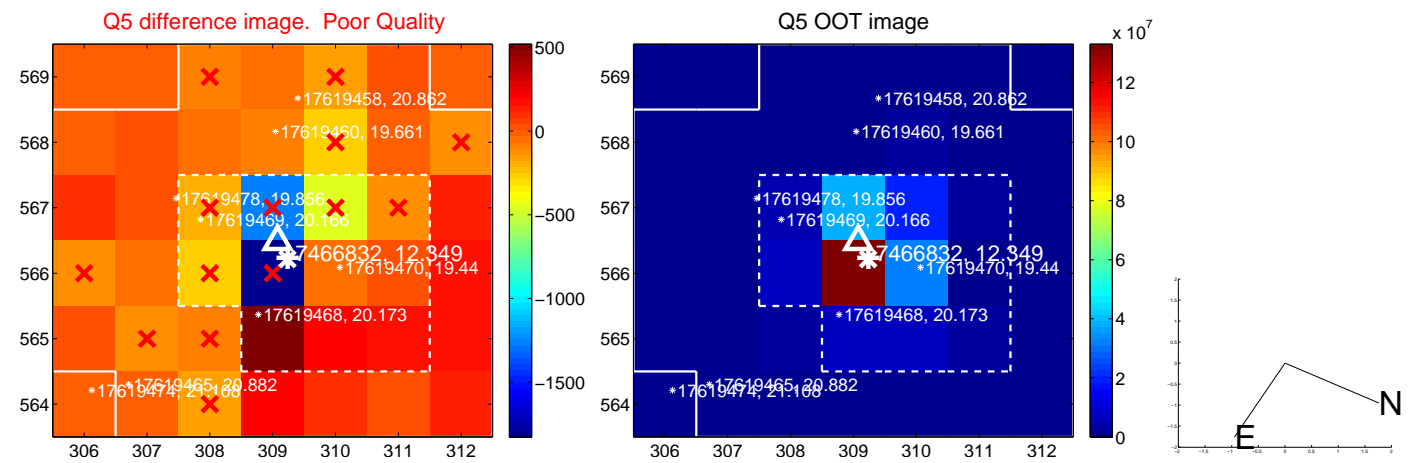


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

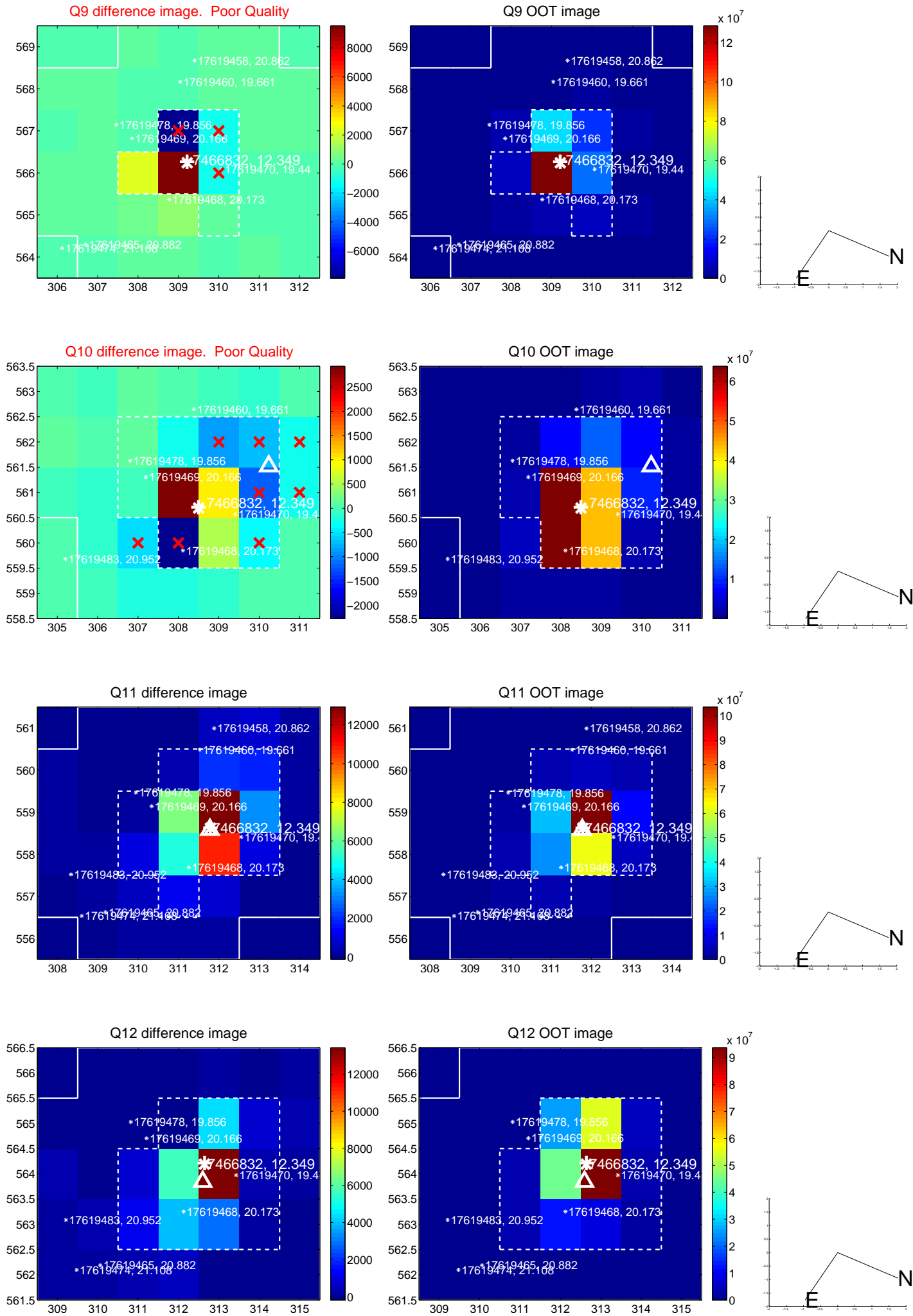


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

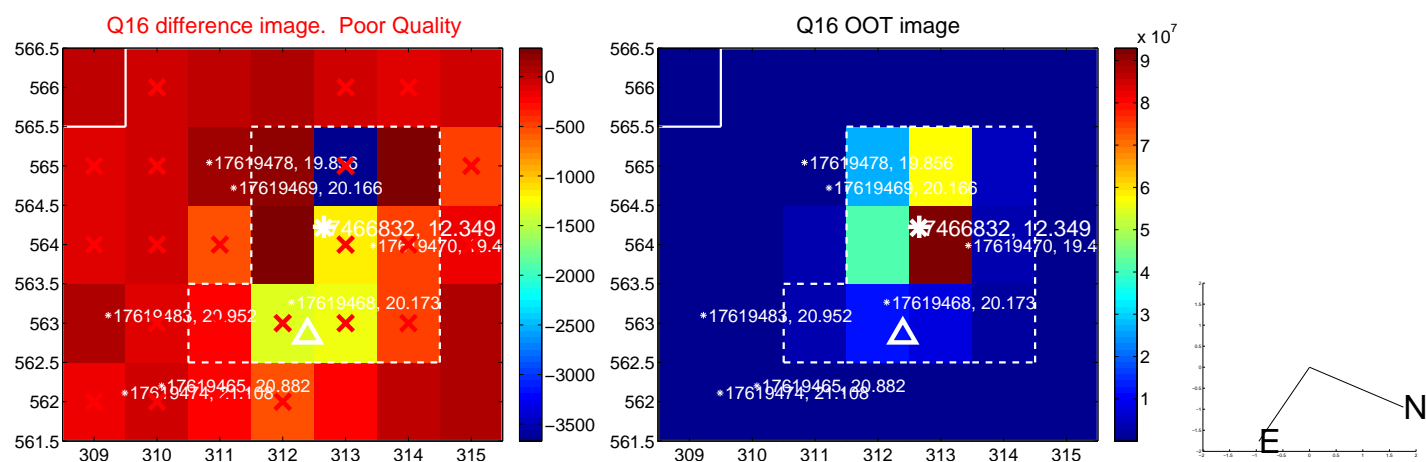
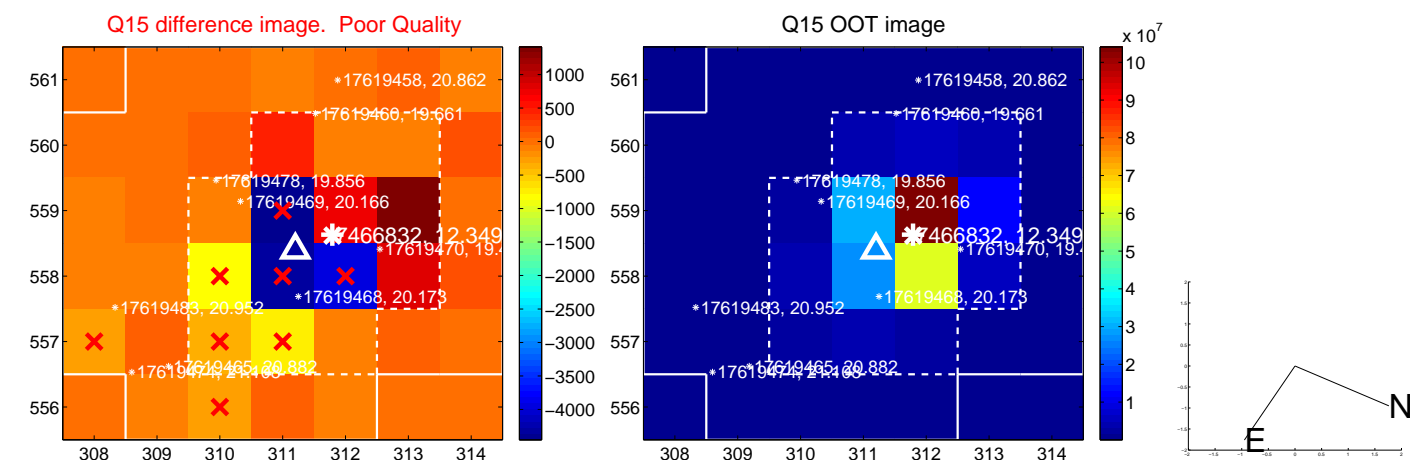
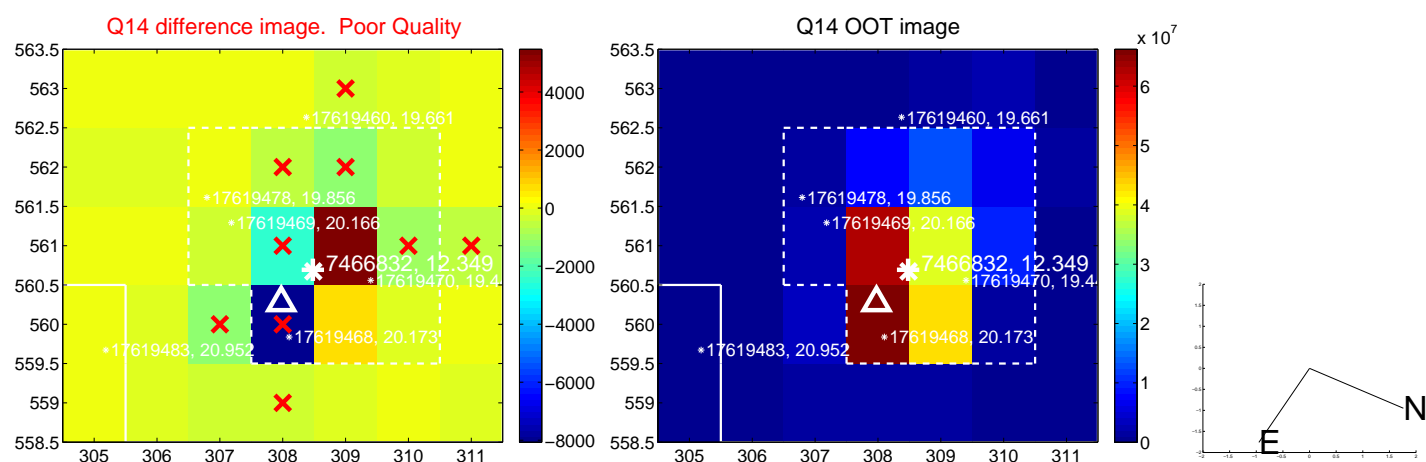
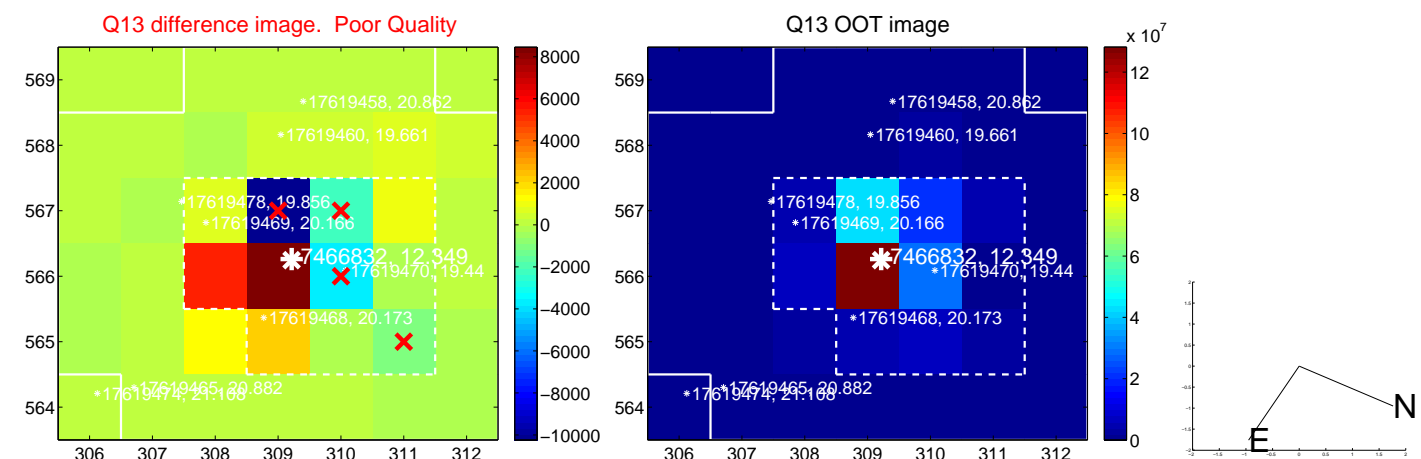




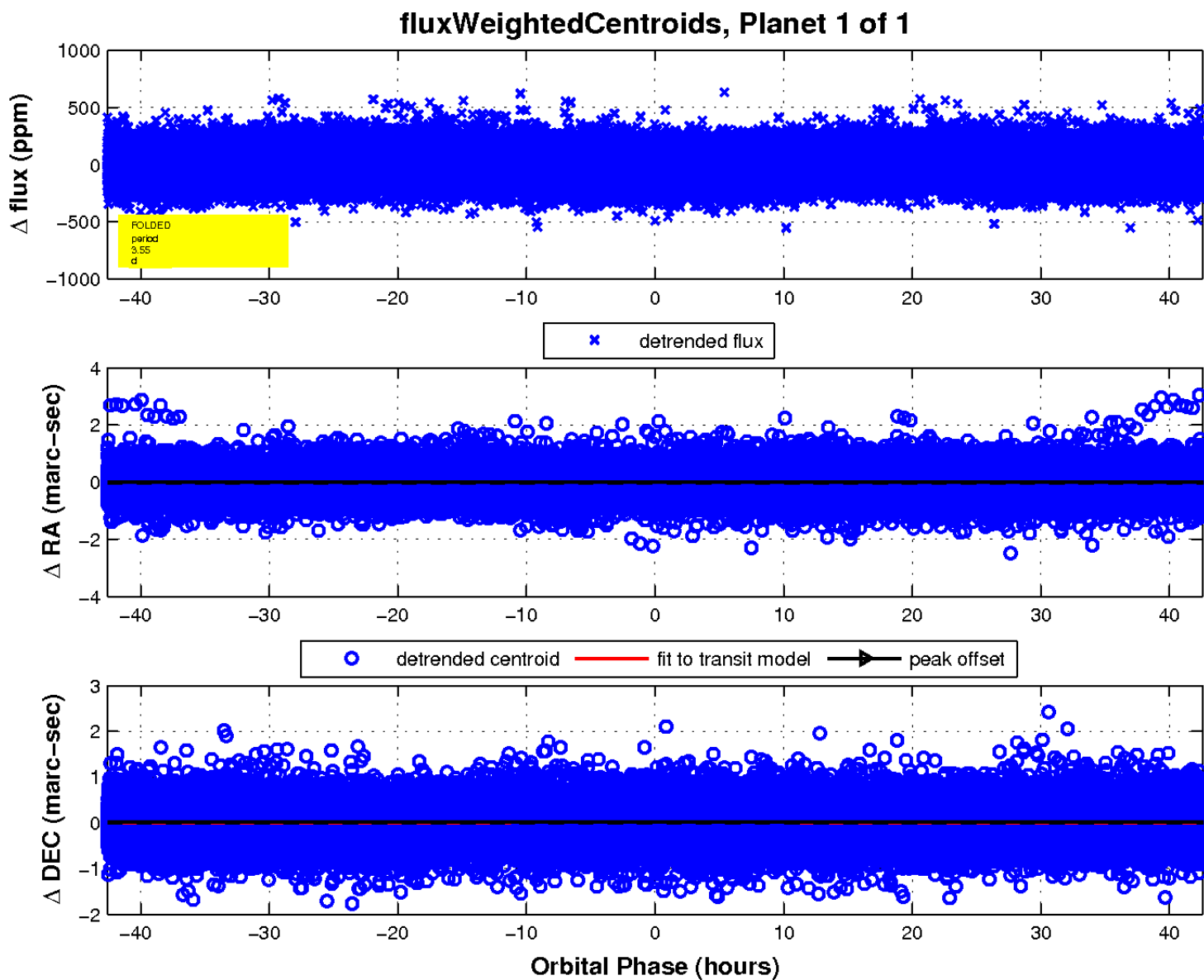
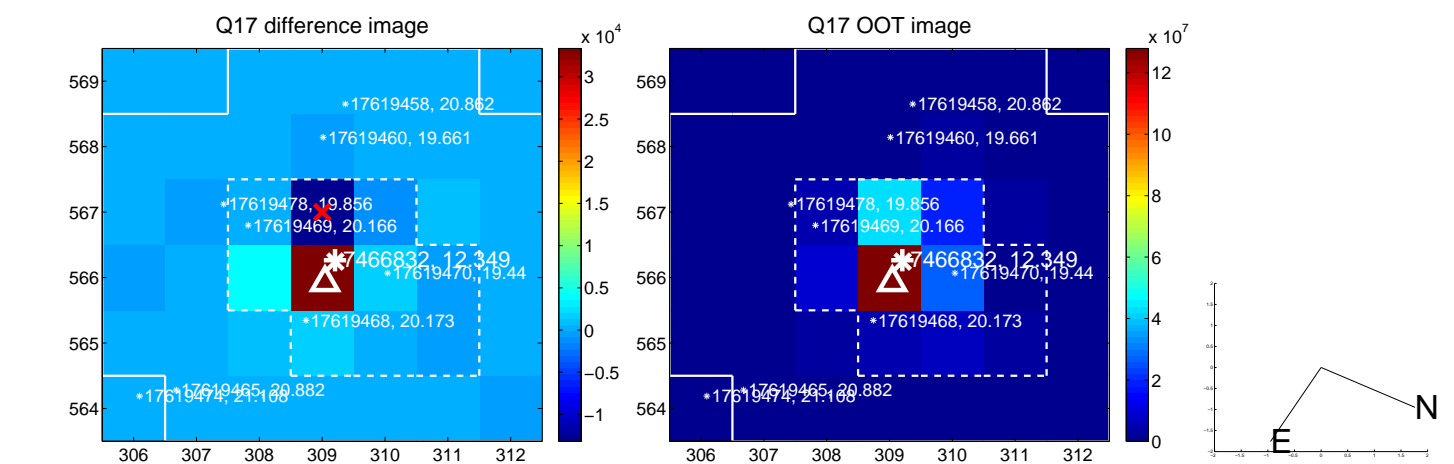
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

