

# KIC 007362632

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R <sub>★</sub> (R <sub>☉</sub> )	T <sub>★</sub> (K)	R <sub>p</sub> (R <sub>⊕</sub> )	S <sub>p</sub> (S <sub>⊕</sub> )
007362632-01	OBS	6865.01	0.566693	131.987228	0.5	3.108	11.4	0.1	0.94	6165	0.06	6549.33

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007362632-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH

**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.

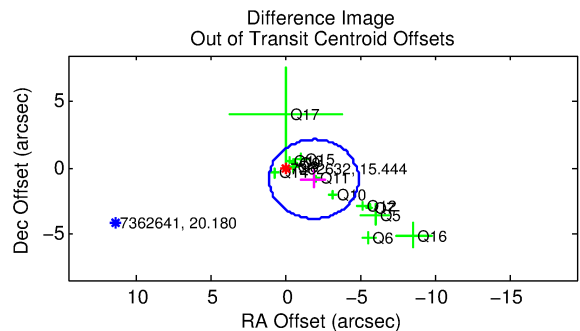
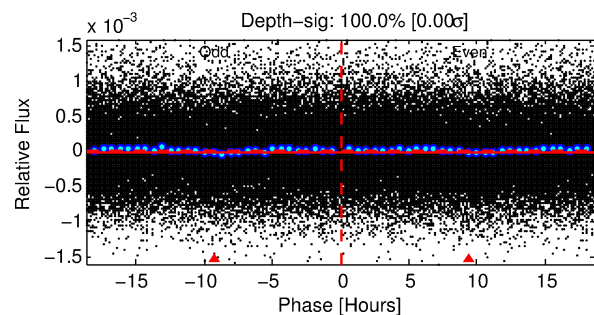
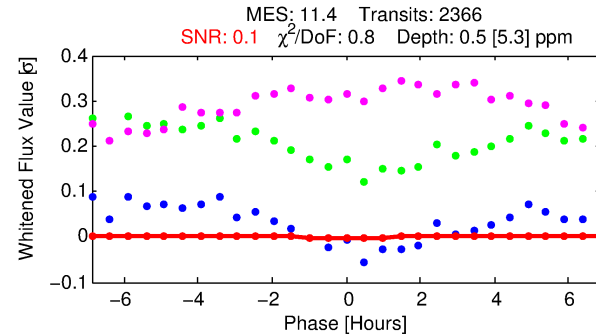
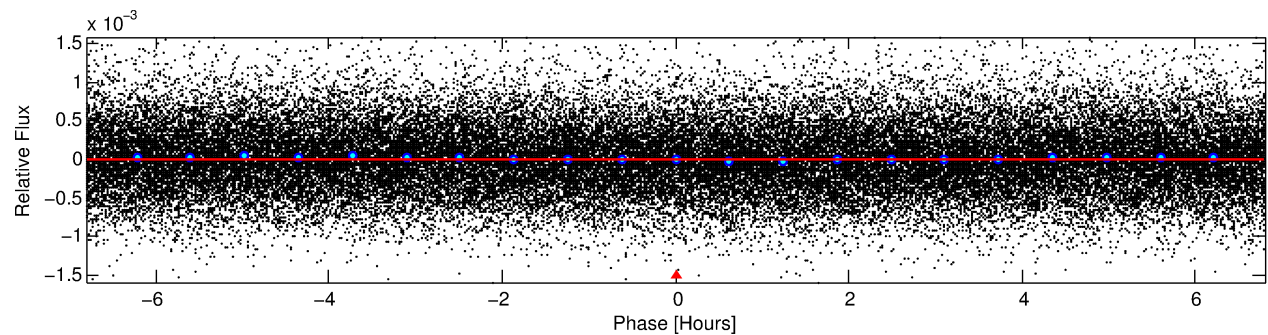
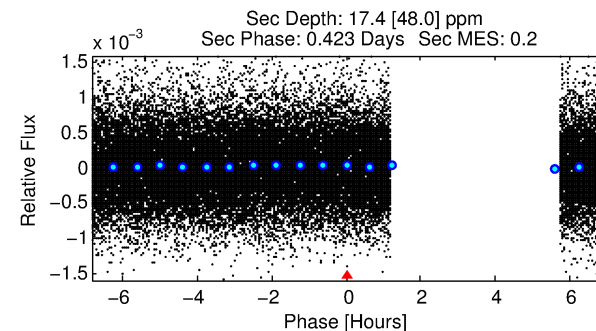
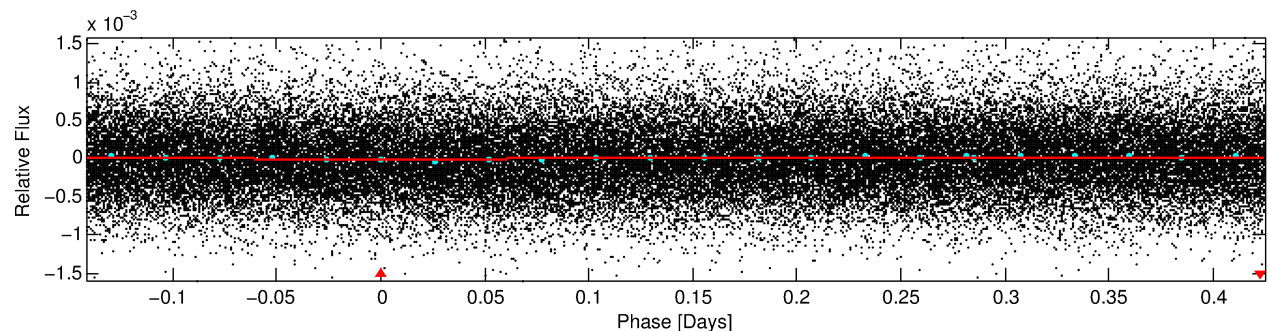
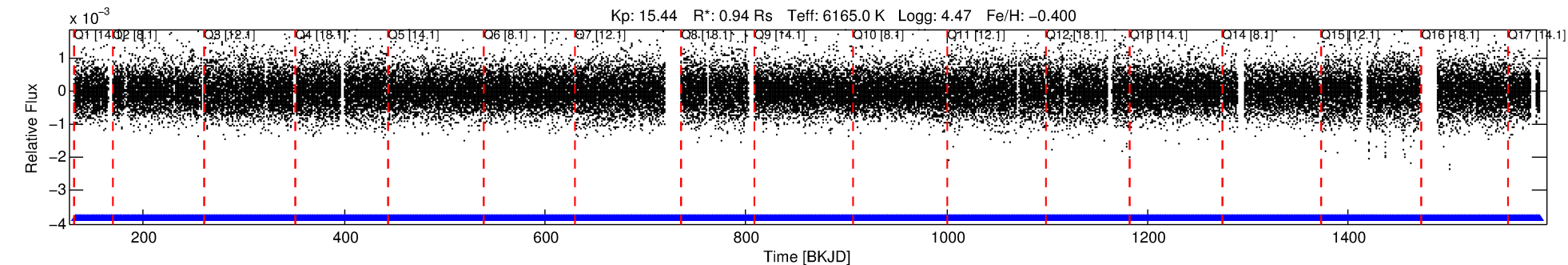
## Ephemeris Match Information For 007362632-01

TCE (1)	KIC	Parent (2)	Parent KIC	P <sub>1</sub> :P <sub>2</sub>	Dist (″)	ΔRow	ΔCol	m <sub>2</sub>	m <sub>1</sub>	D <sub>2</sub> /D <sub>1</sub>	Mechanism	Flag	σ <sub>P</sub>	σ <sub>T</sub>
007362632-01	7362632	RR-Lyr-pri	7198959	1:1	1172.3	0	294	7.86	15.44	623300.00	Direct-PRF	0	0.99	1.69

**Notes:** P<sub>1</sub>:P<sub>2</sub> is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m<sub>2</sub> and m<sub>1</sub> are the magnitudes of the parent and child. D<sub>2</sub>/D<sub>1</sub> is the parent's transit depth divided by the child's. σ<sub>P</sub> and σ<sub>T</sub> are the significance of the match in period and epoch. For a match to be considered significant σ<sub>P</sub> < 5.0 and σ<sub>T</sub> < 5.0. Matches which have σ<sub>P</sub> and σ<sub>T</sub> very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

KIC: 7362632 Candidate: 1 of 1 Period: 0.567 d  
KOI: K06865 Corr: No Ephemeris Match



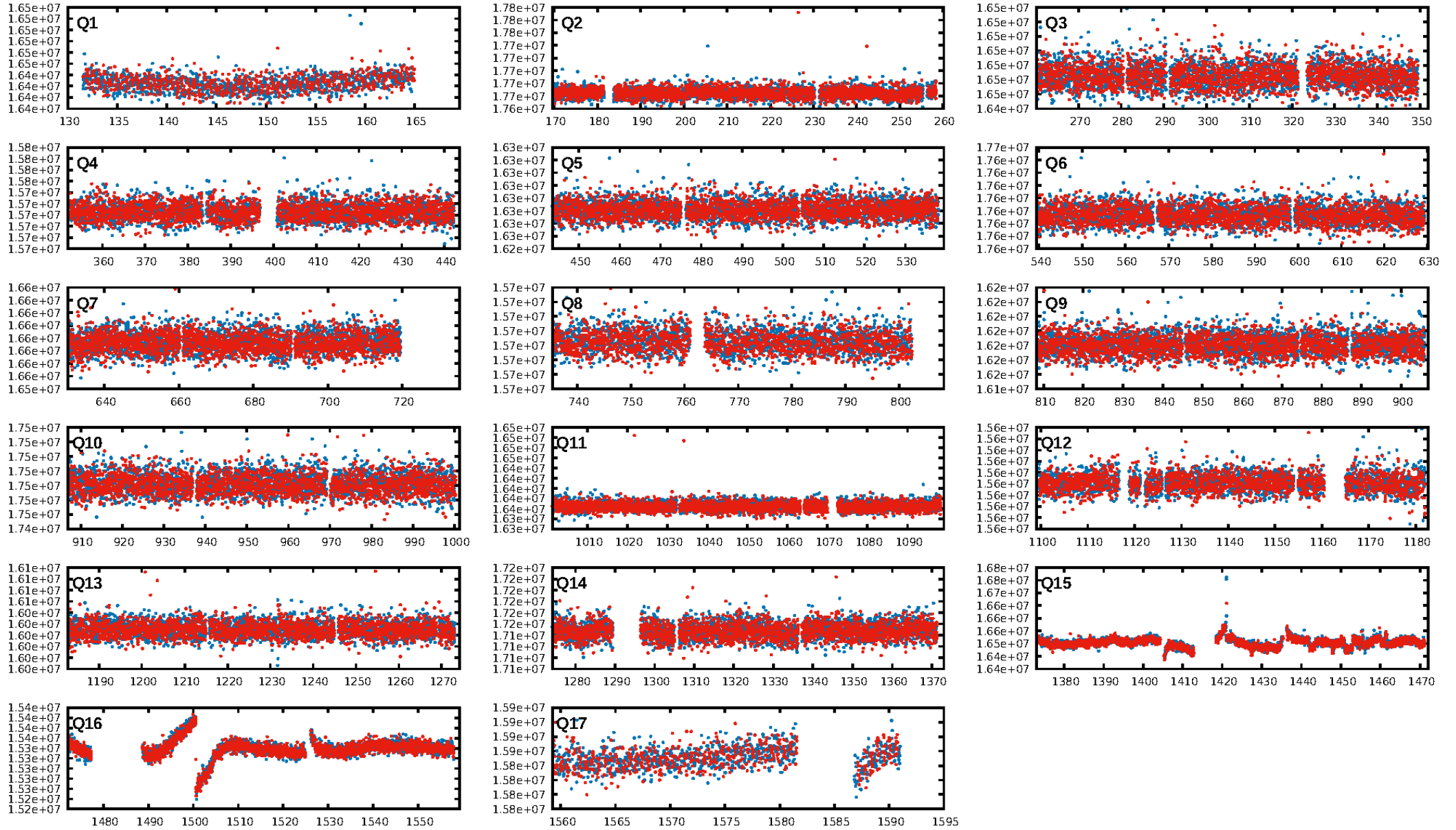
## DV Fit Results:

Period = 0.56669 [0.00090] d  
Epoch = 131.9872 [0.3446] BKJD  
Rp/R\* = 0.0006 [0.0456]  
a/R\* = 1.52 [325.85]  
b = 0.10 [3765.78]  
Seff = 6549.33 [2680.92]  
Teq = 2294 [235] K  
Rp = 0.06 [4.69] Re  
a = 0.0132 [0.0035] AU  
Ag = 410.39 [60302.97] [0.01σ]  
Teff = 15963 [586397] K [0.02σ]

## DV Diagnostic Results:

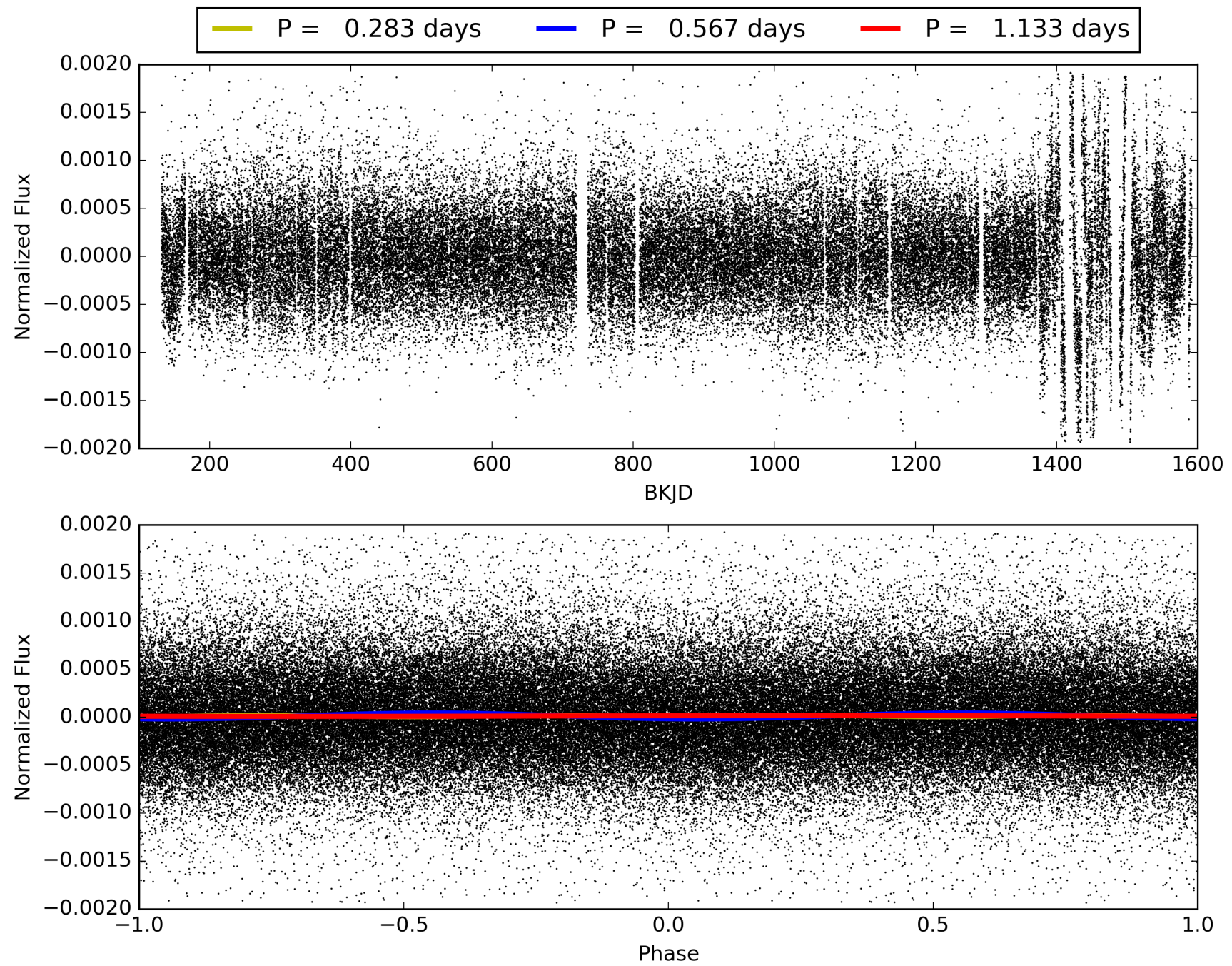
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.45e-22  
RollingBand-fgt: 1.00 [2260/2260]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.104 arcsec [2.11σ]  
KicOffset-rm: 2.005 arcsec [1.96σ]  
OotOffset-st: 3/3/3/4 [13]  
KicOffset-st: 3/3/3/4 [13]  
DiffImageQuality-fgm: 0.15 [2/13]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 007362632-01, PDC Light Curves



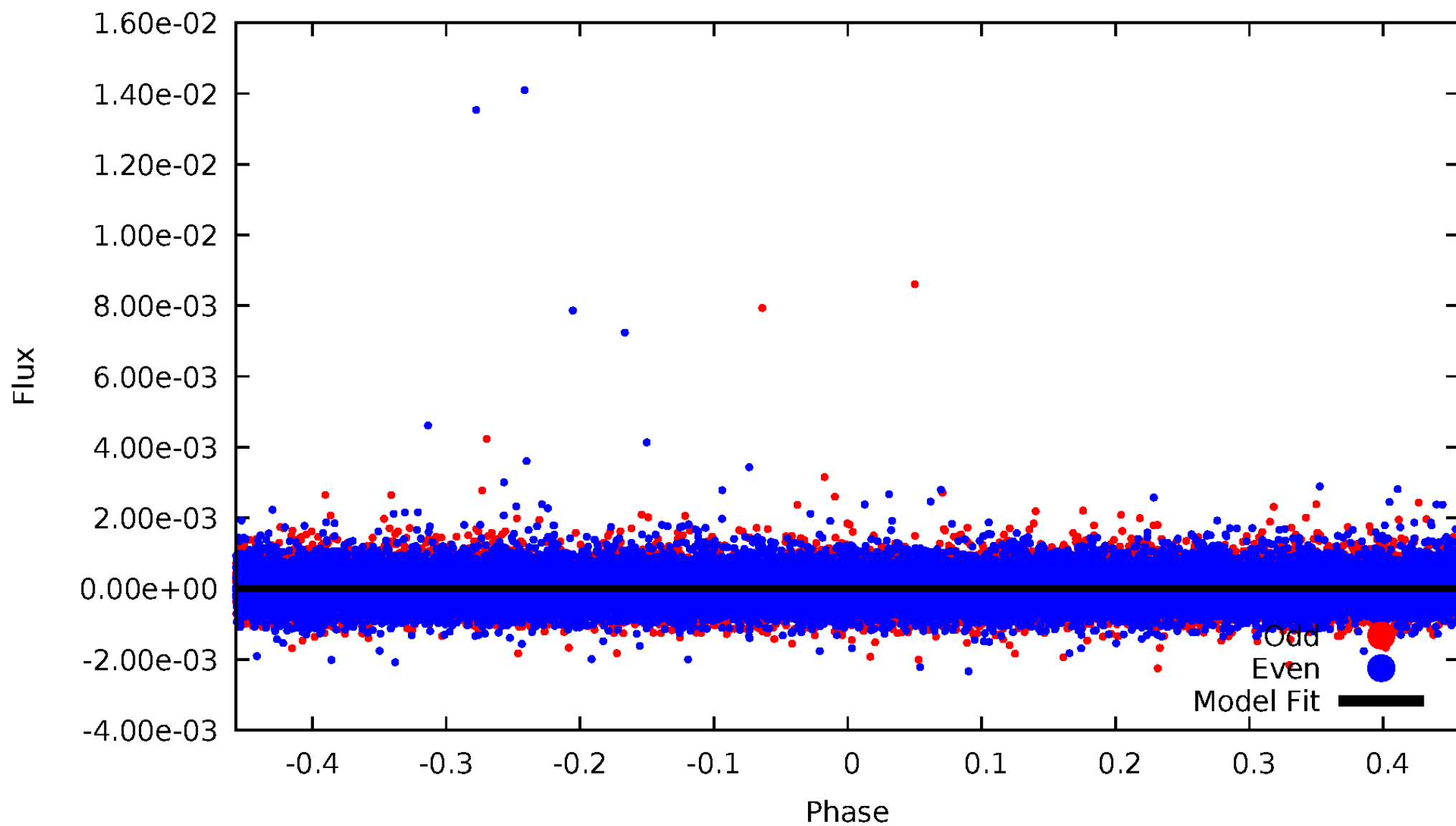


TCE 007362632-01



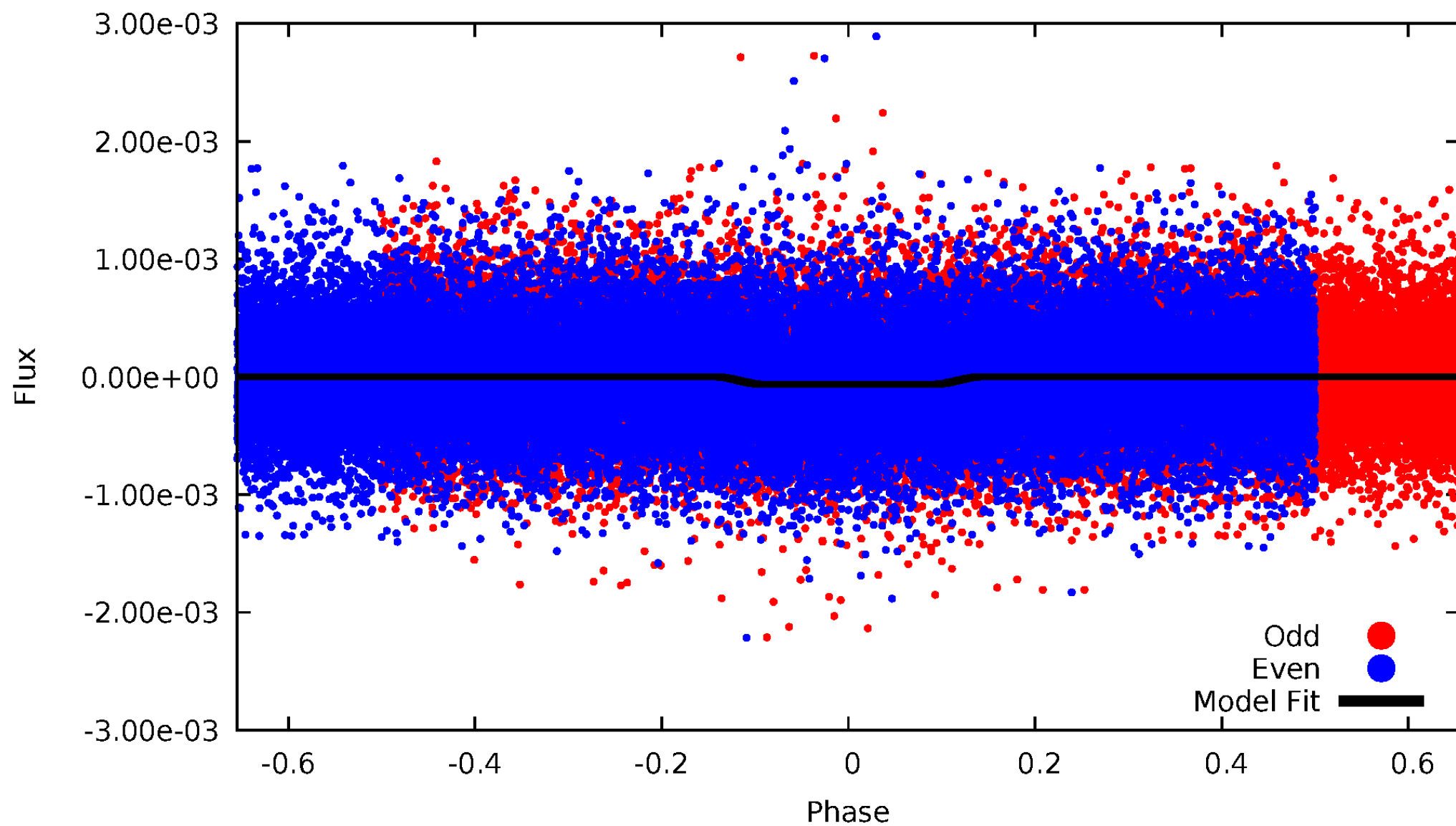
# DV Odd/Even

TCE 007362632-01



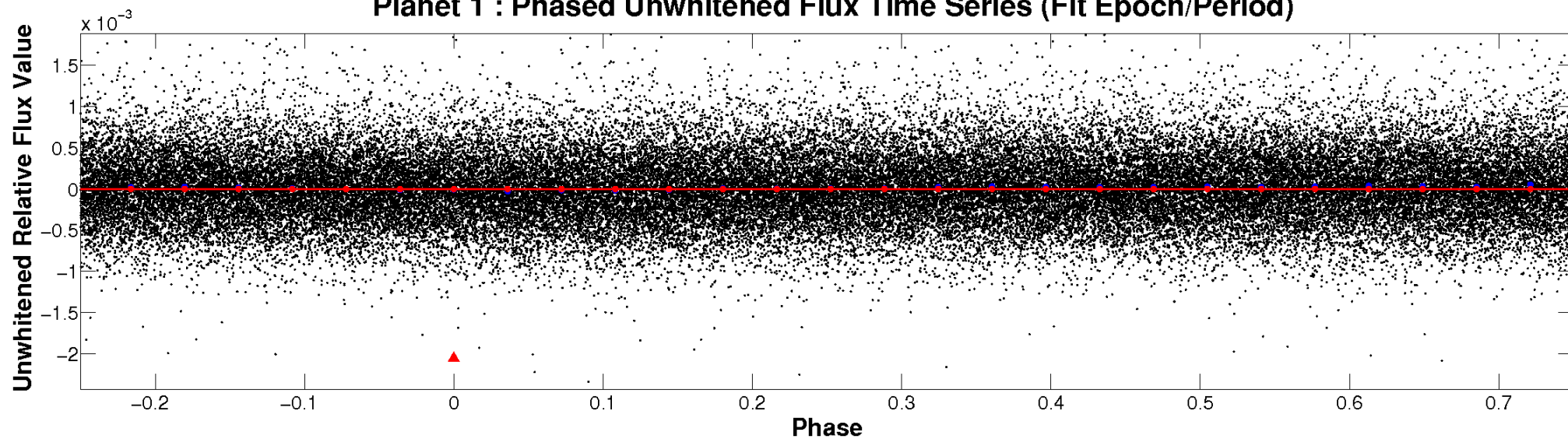
# ALT Odd/Even

TCE 007362632-01

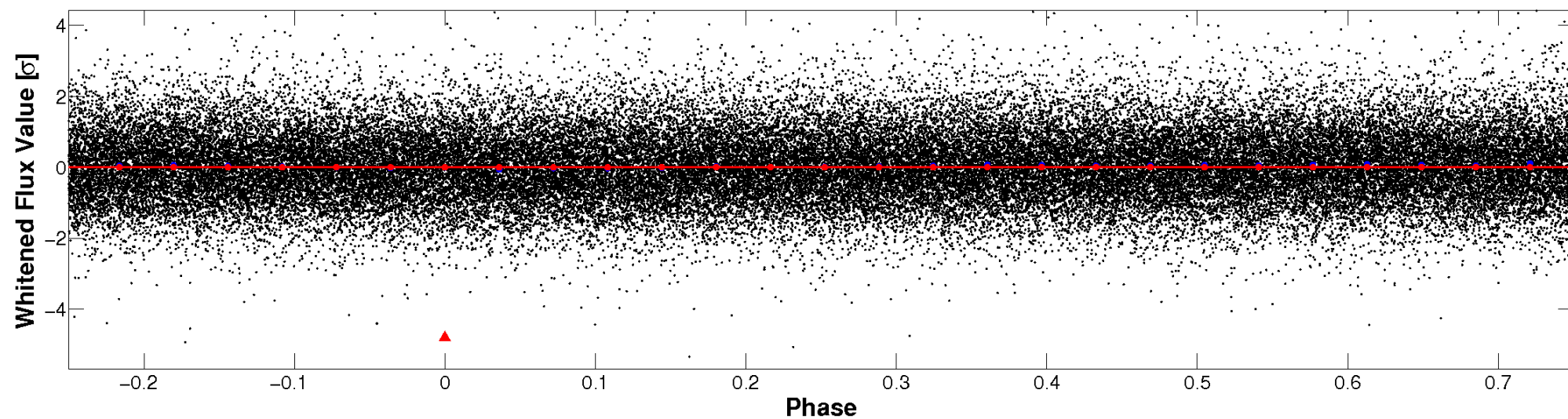


# Non-Whitened Vs. Whitened Light Curve

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



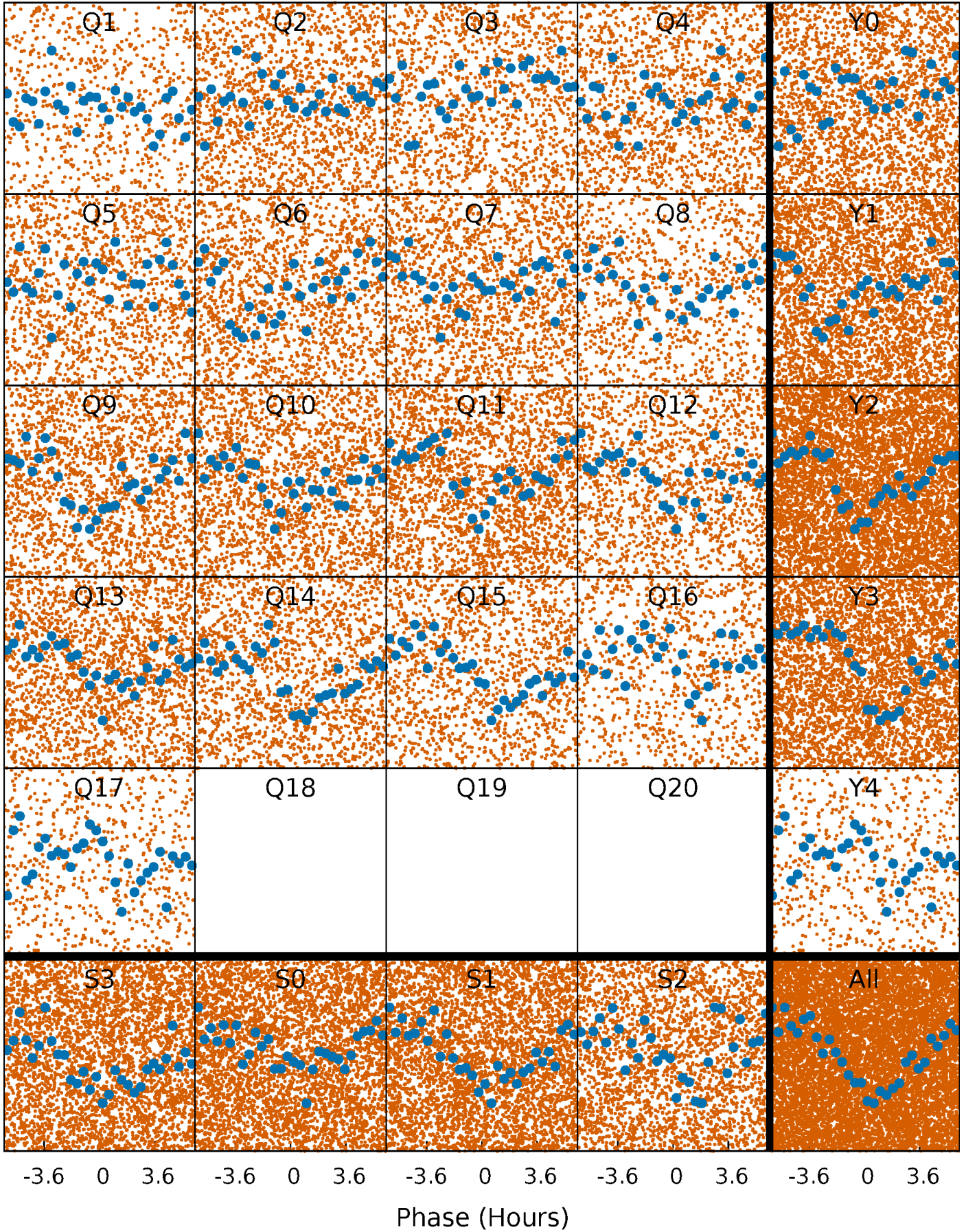
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

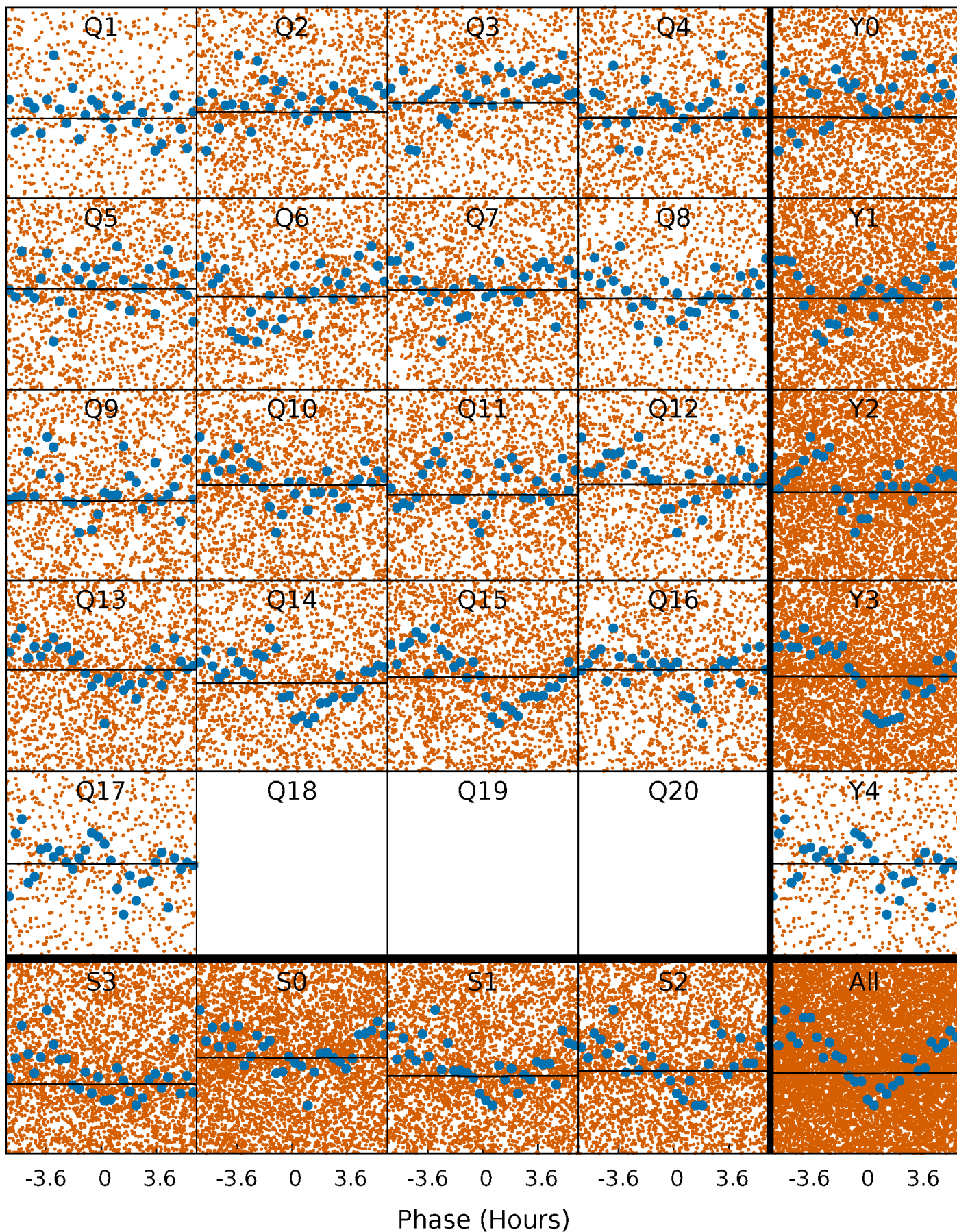
TCE 007362632-01 P= 0.566693 Days  $T_0=131.987228$  (BKJD)





# DV Quarter-Phased Transit Curves

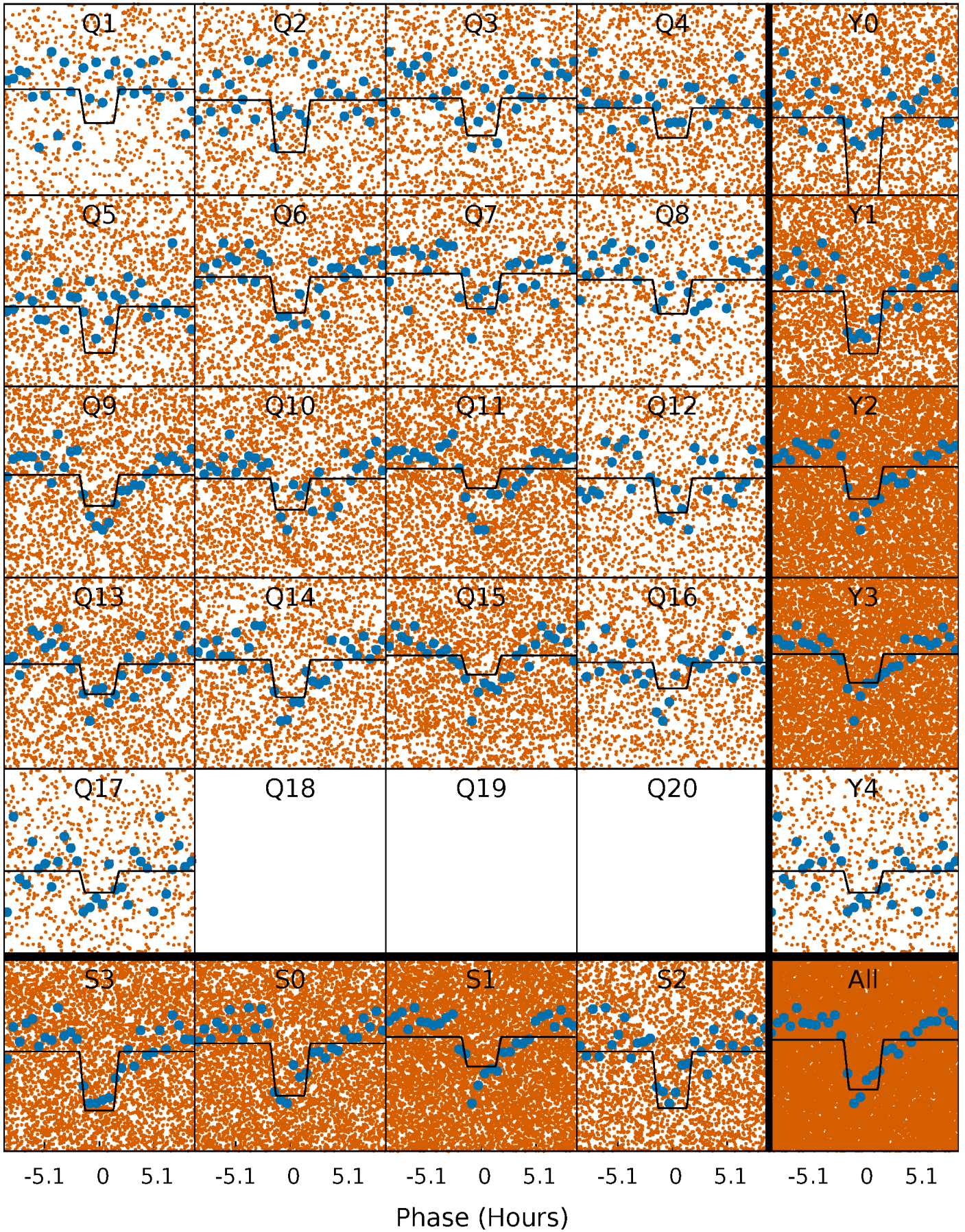
TCE 007362632-01 P= 0.566693 Days  $T_0=131.987228$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

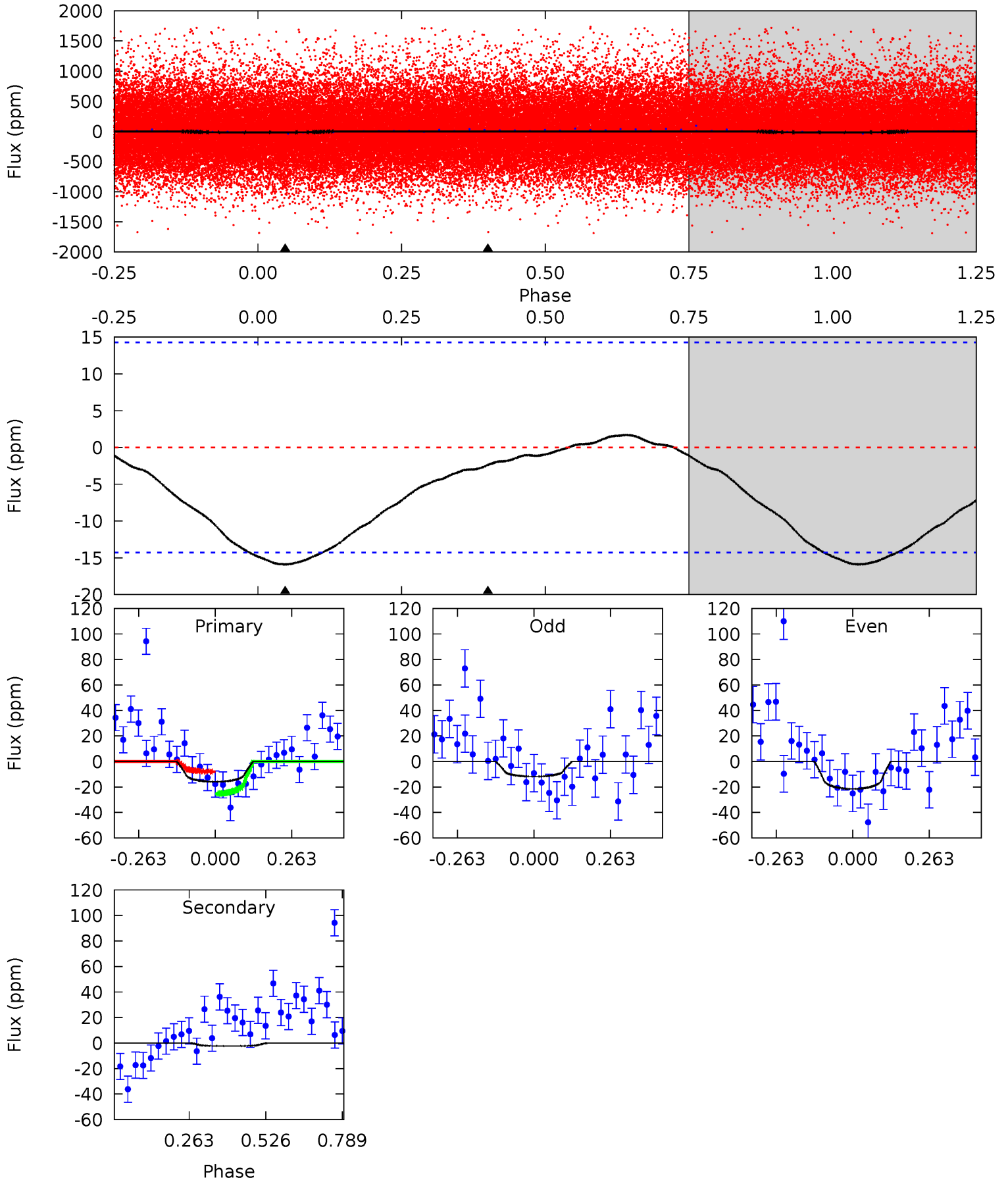
TCE 007362632-01 P= 0.566808 Days  $T_0=131.800890$  (BKJD)



# DV Model-Shift Uniqueness Test

007362632-01, P = 0.566693 Days, E = 131.420535 Days

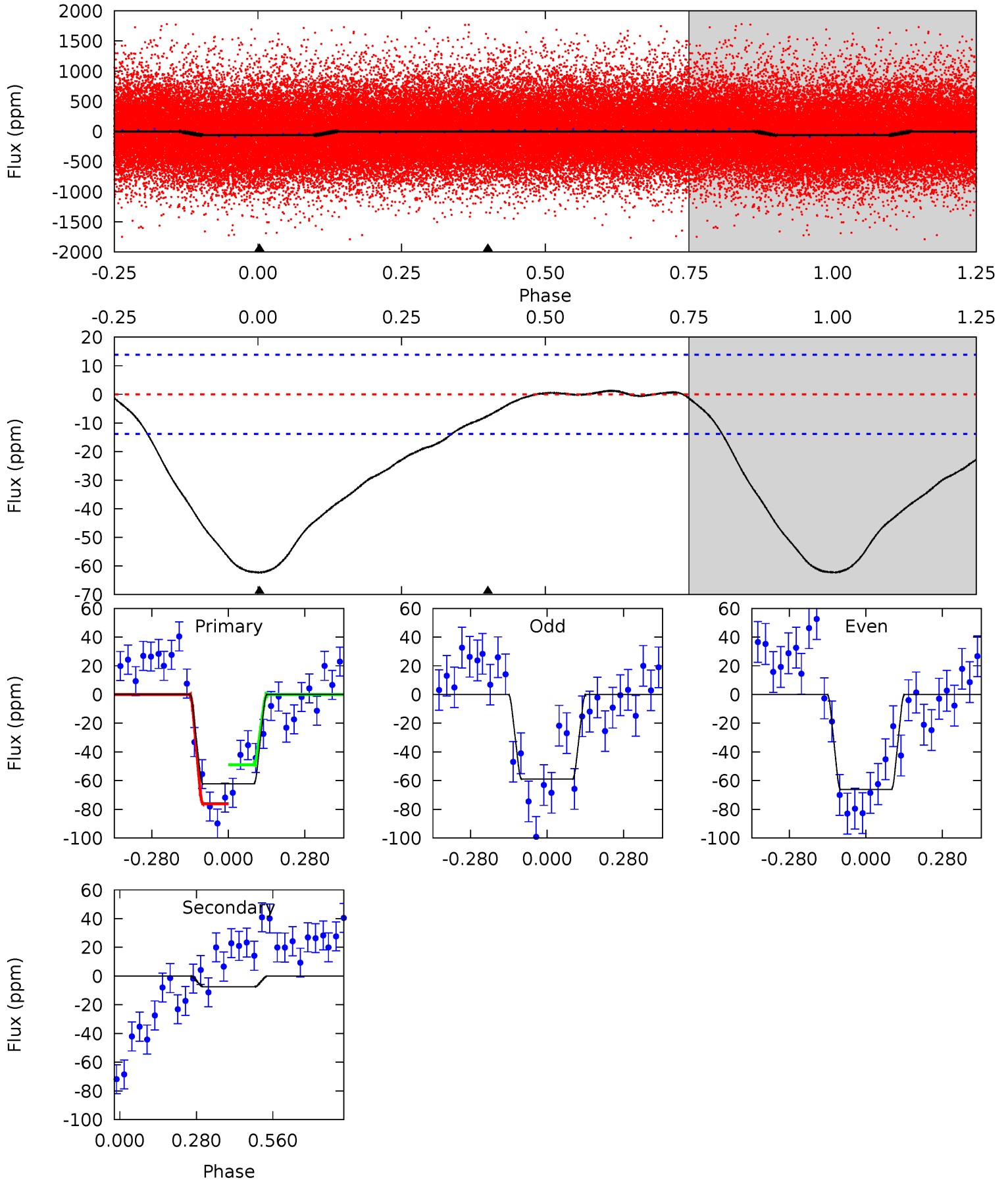
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	0.73	0	0	4.36	1.12	0.35	4.86	4.86	0.73	0.73	1.49	0.91	0.10	2.59



# Alt Model-Shift Uniqueness Test

007362632-01, P = 0.566808 Days, E = 131.234082 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
19.6	2.36	0	0	4.34	1.08	0.17	19.6	19.6	2.36	2.36	1.13	1.00	0.02	4.32





### Stellar Parameters For KIC 007362632

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6165^{+194}_{-215}$	$4.474^{+0.070}_{-0.210}$	$-0.400^{+0.300}_{-0.300}$	$0.942^{+0.297}_{-0.099}$	$0.965^{+0.126}_{-0.113}$	$1.624^{+0.472}_{-0.873}$
	+3%/-3%	+2%/-5%	+75%/-75%	+32%/-11%	+13%/-12%	+29%/-54%
Source	PHO1	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 007362632-01 / KOI 6865.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-2 \pm 3$	$3.23^{+3.78}_{-2.29}$	$3256^{+225}_{-161}$	$-3196^{+439}_{-180}$	$0.014^{+0.197}_{-0.018}$
Alt.	$-8 \pm 3$	$3.59^{+4.13}_{-2.45}$	$3256^{+231}_{-179}$	$-3109^{+6194}_{-188}$	$0.050^{+0.470}_{-0.040}$

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

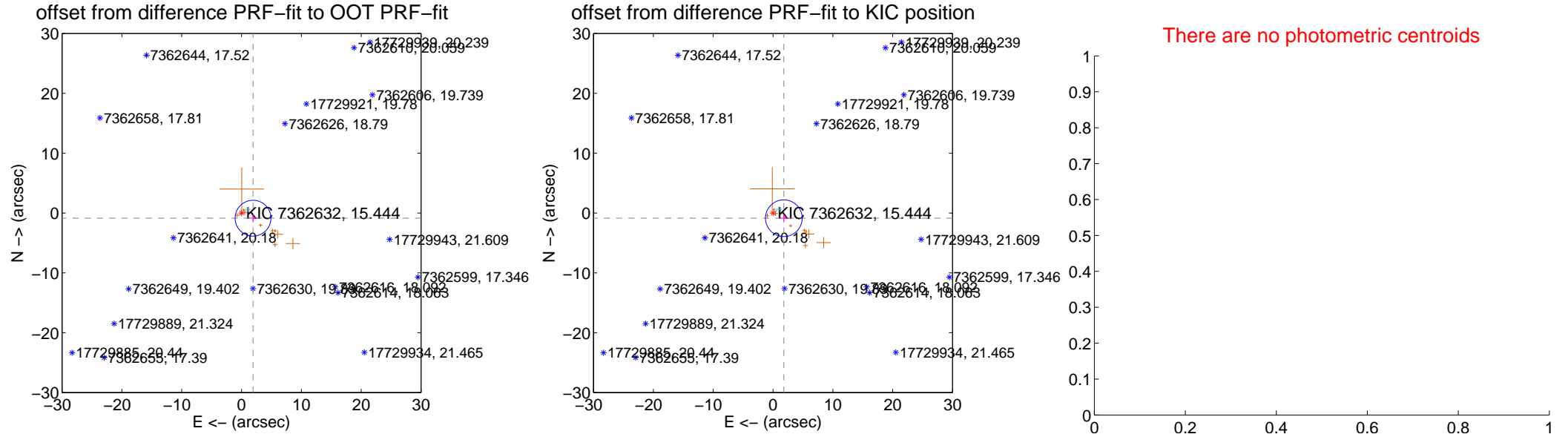
## DV Centroid Data

Supplemental centroid analysis for 007362632-01. Kepler magnitude: 15.44. Transit SNR 0.11

There are 2 quarters with good PRF difference image offsets

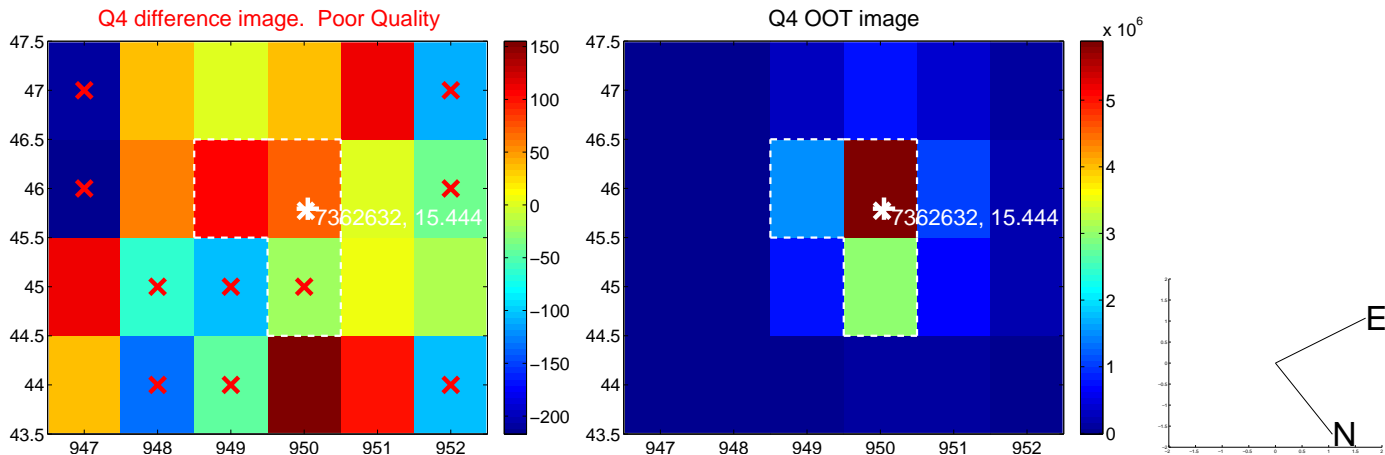
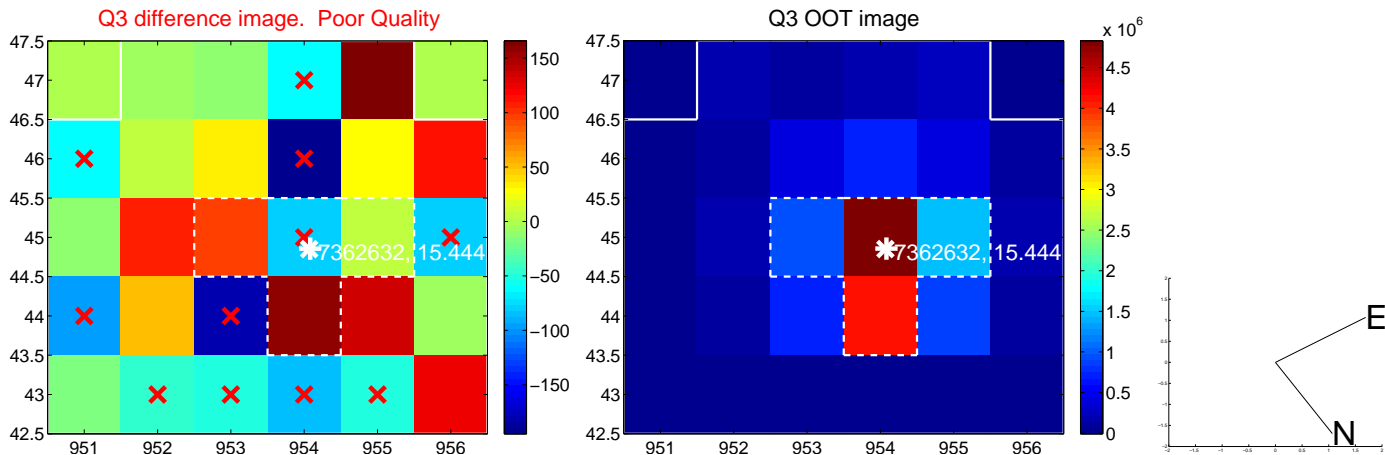
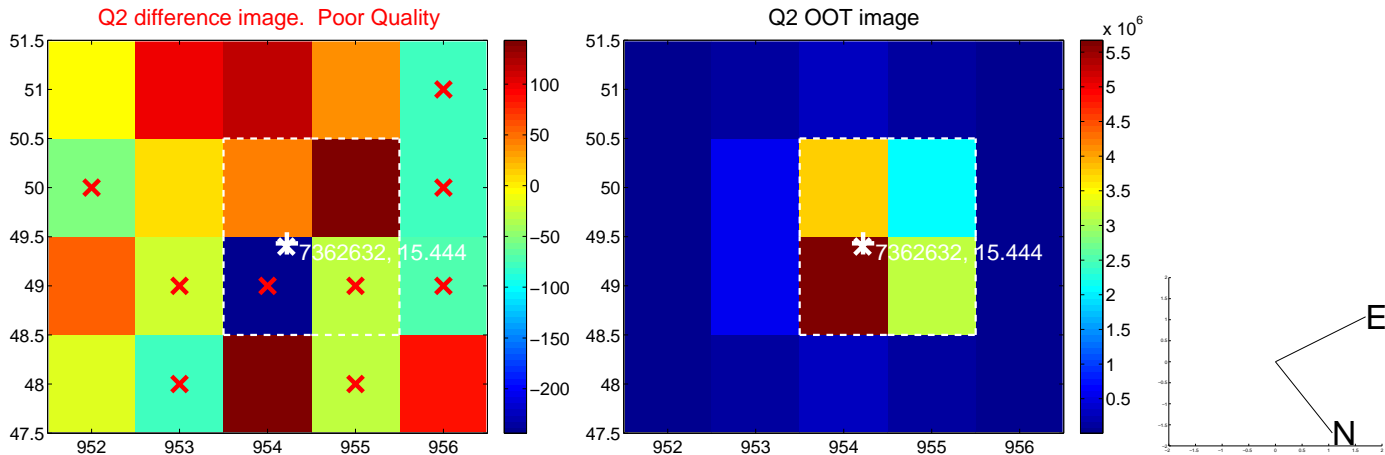
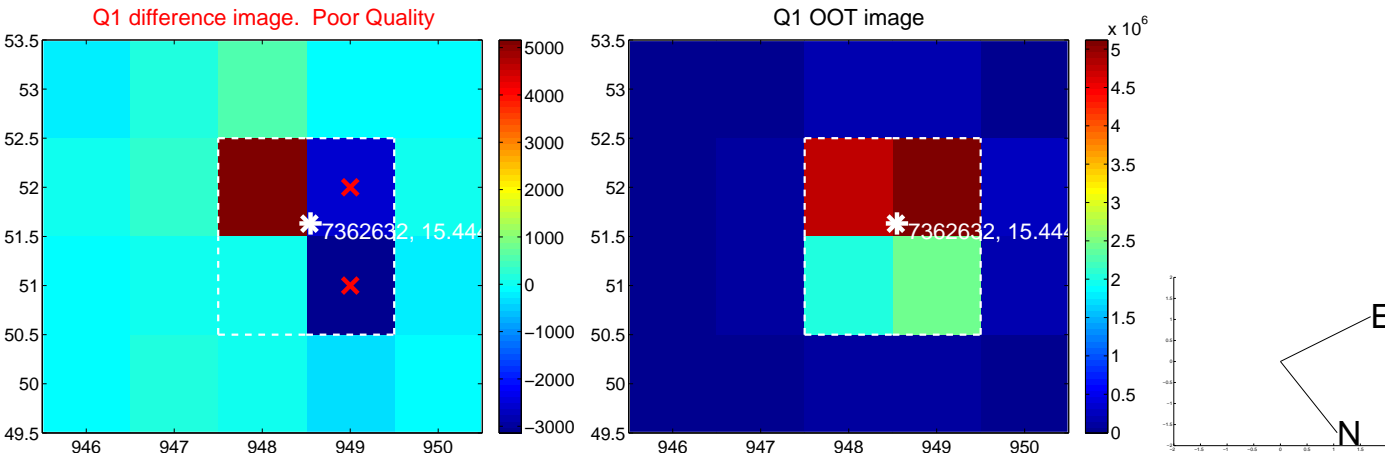
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.104 \pm 0.997$	2.11	$-1.919 \pm 0.814$	$-0.863 \pm 0.687$
PRF-fit source offset from KIC position	$2.005 \pm 1.022$	1.96	$-1.808 \pm 0.828$	$-0.865 \pm 0.703$
photometric centroid source offset	—	—	—	—

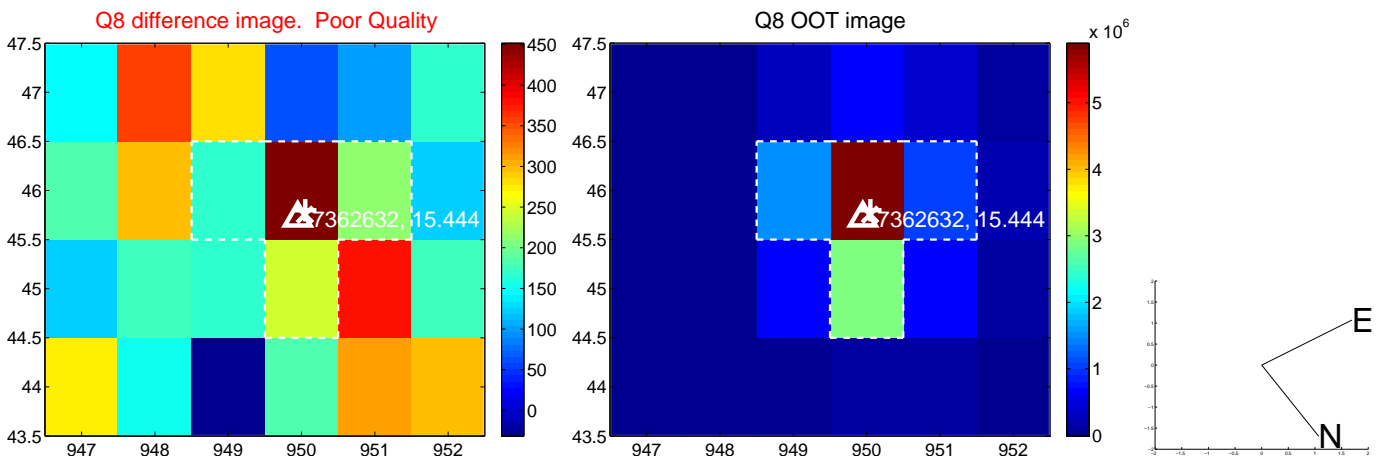
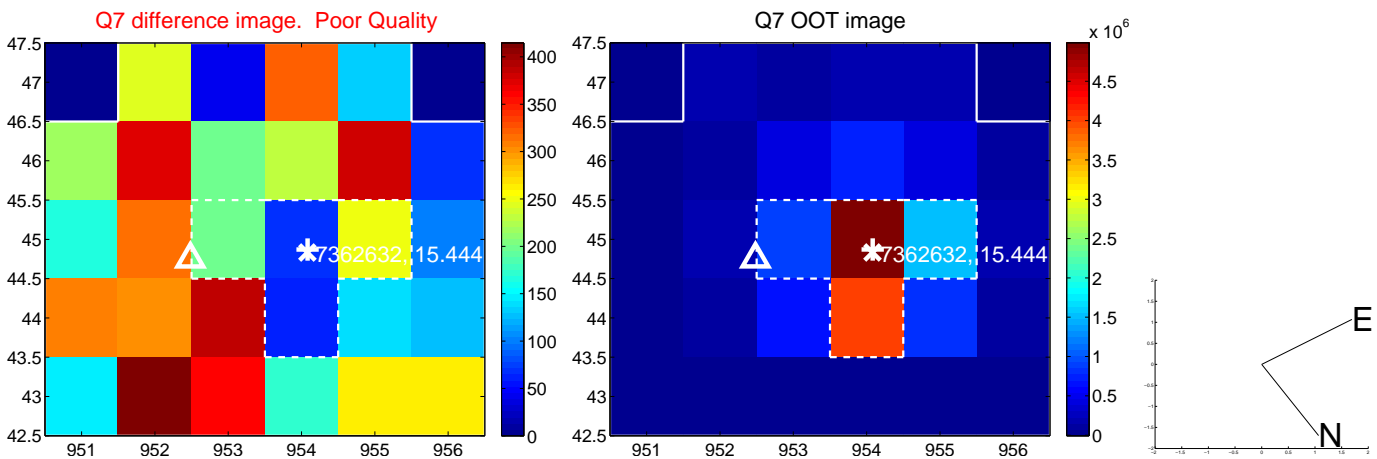
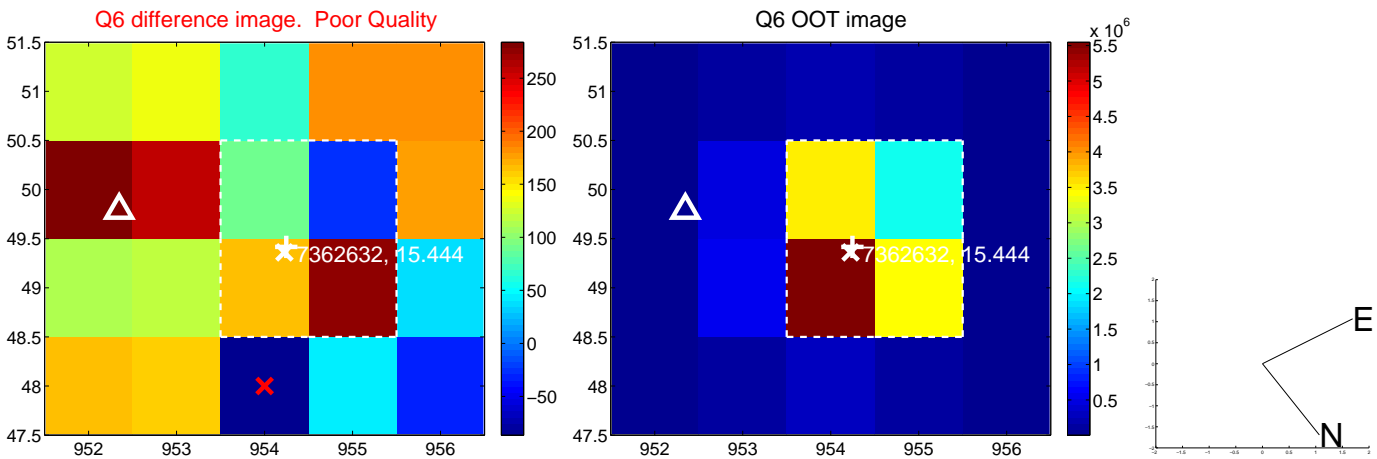
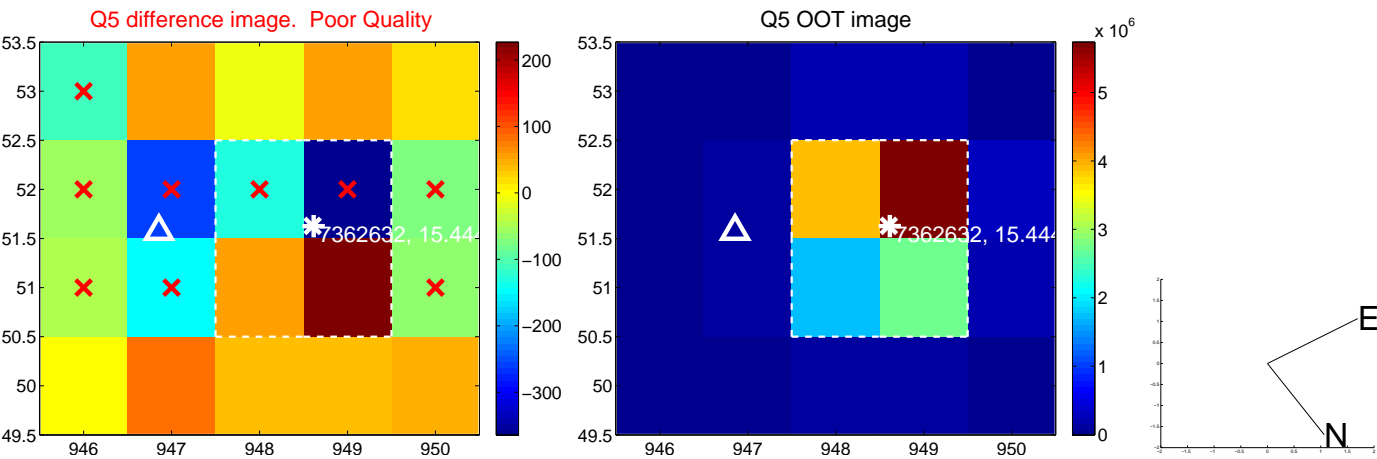


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

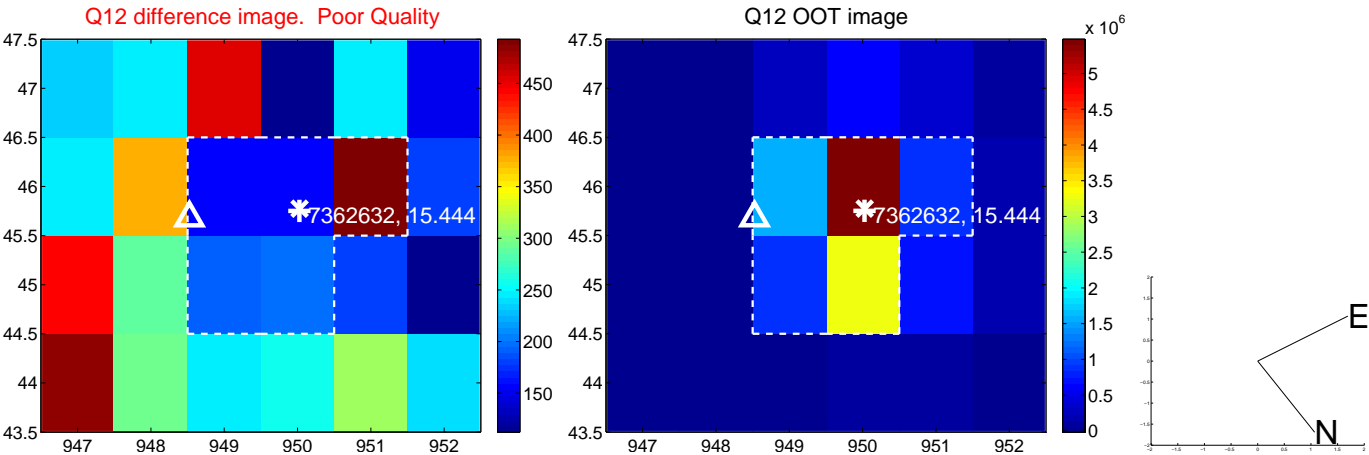
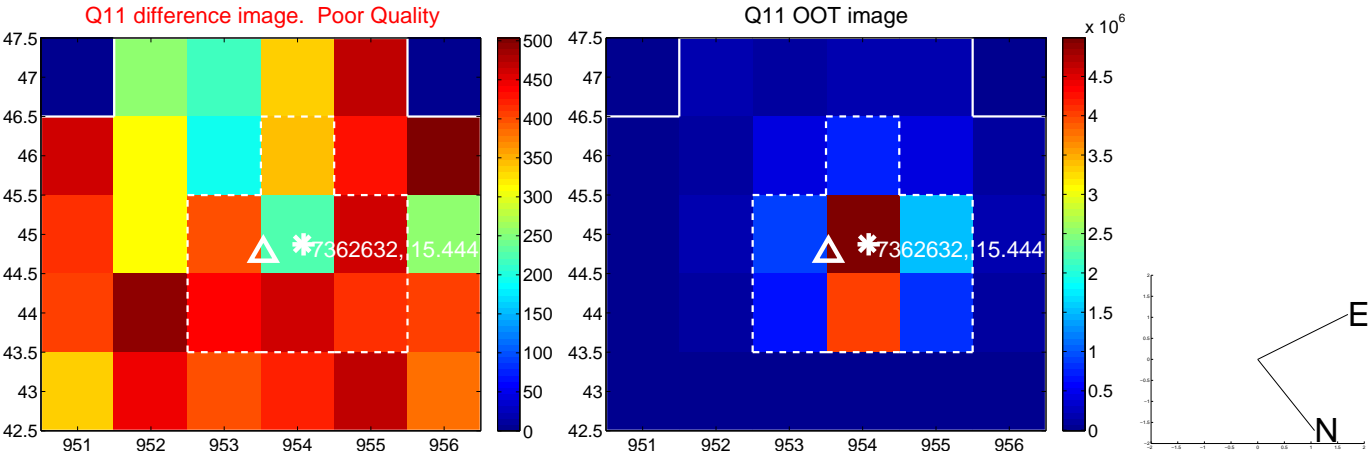
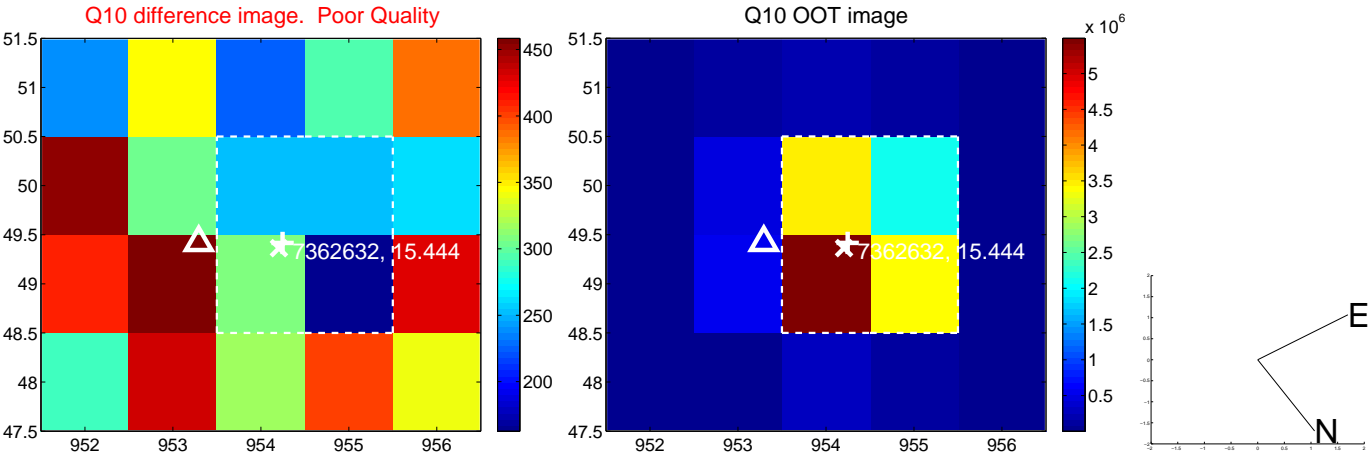
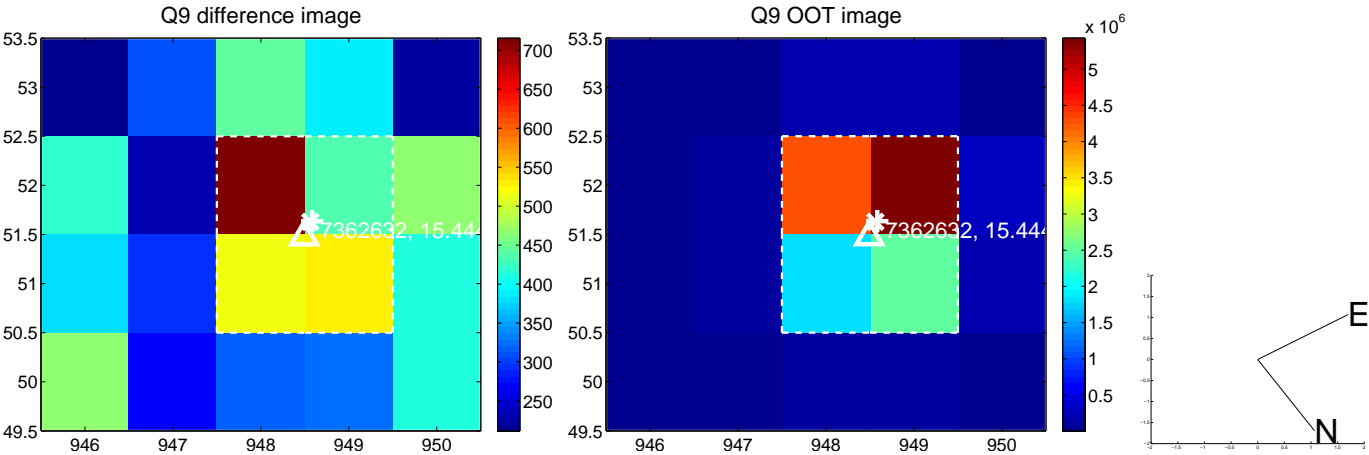


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

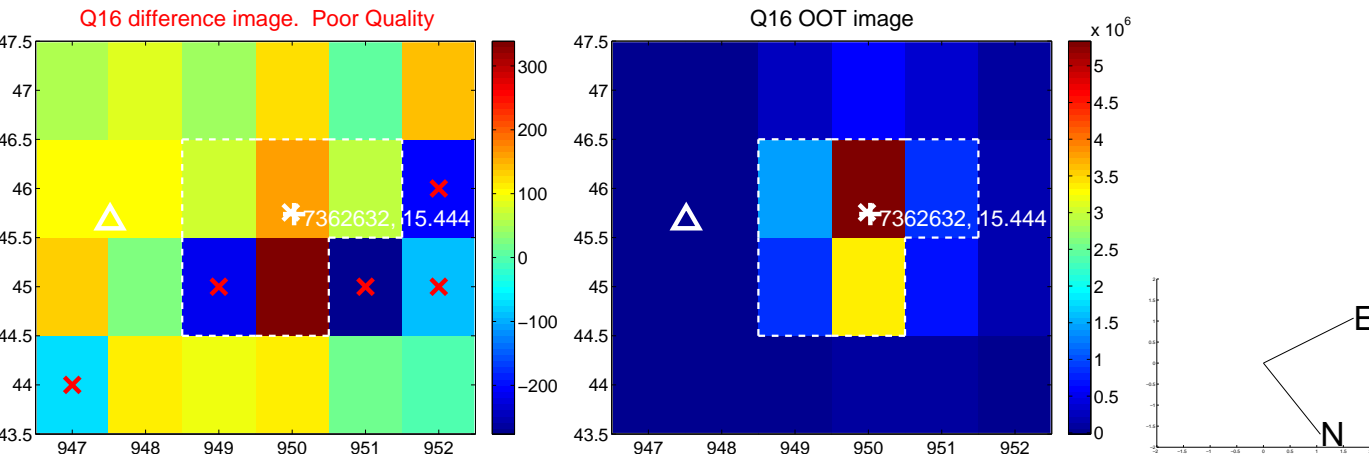
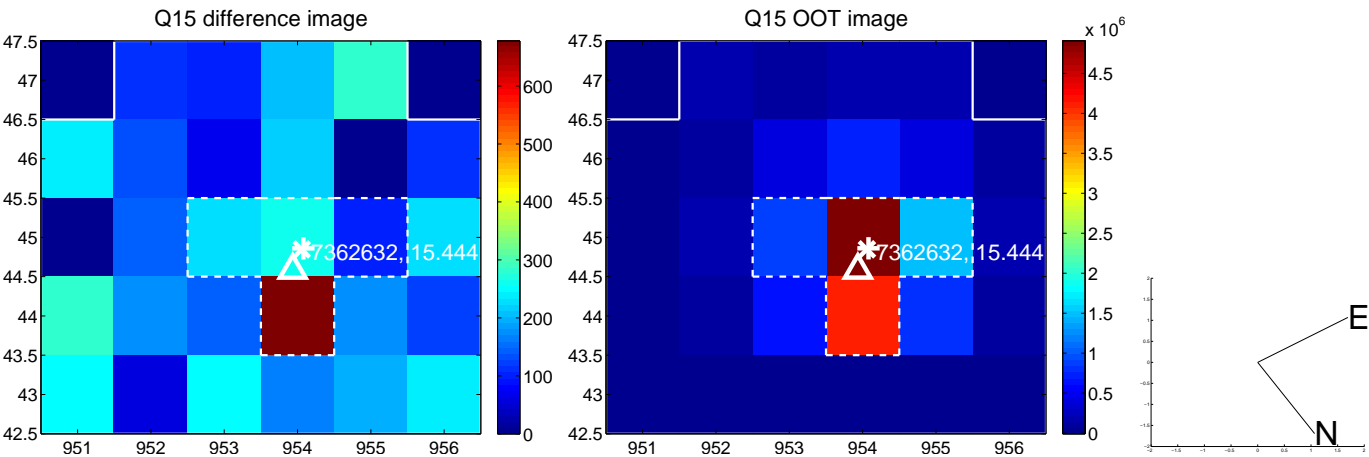
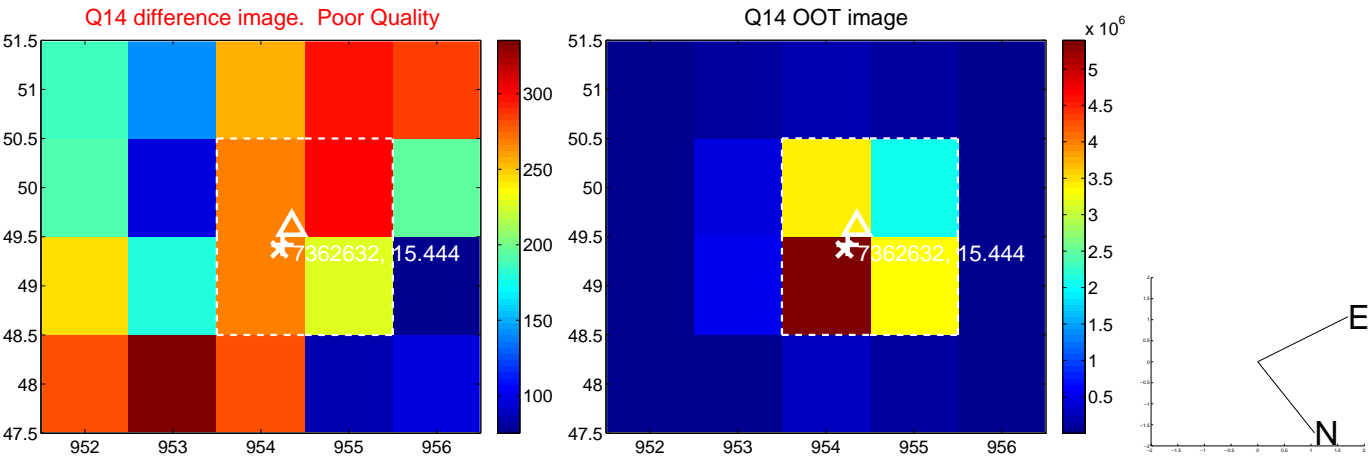
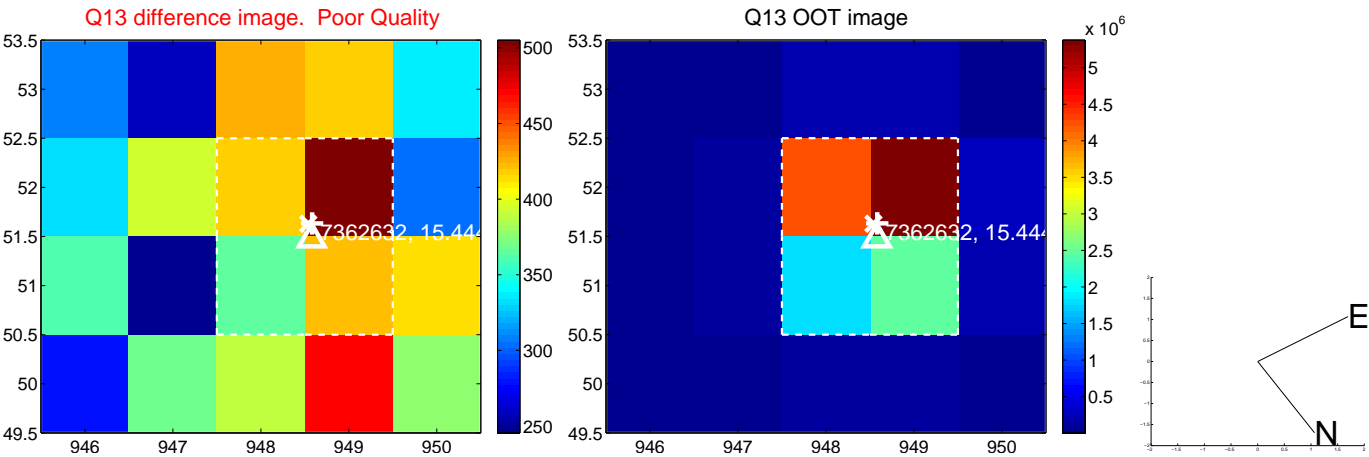




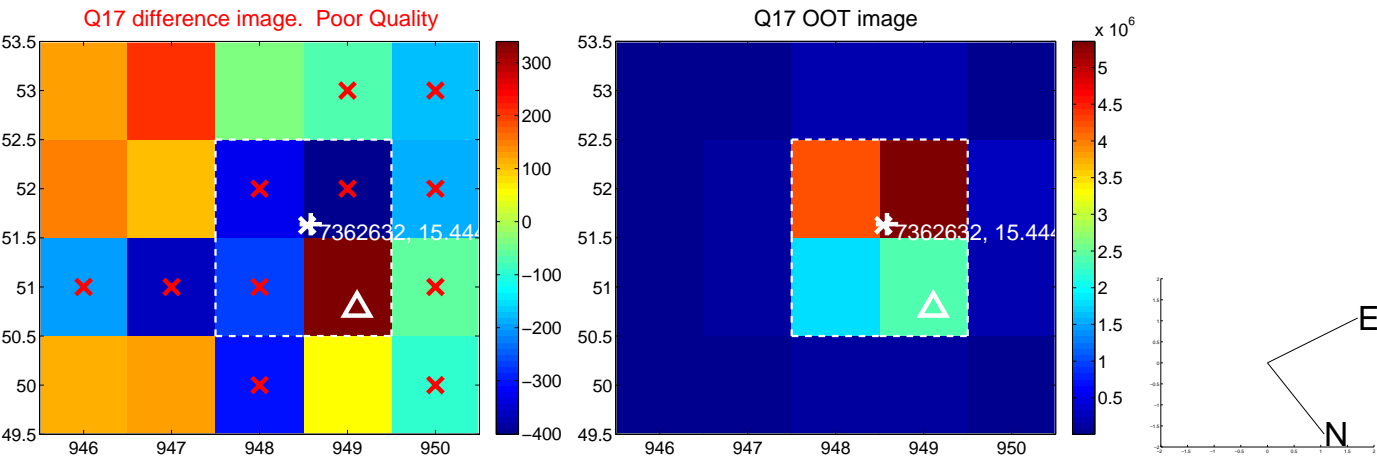
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

