

# KIC 007463623

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007463623-01	OBS	No	2.095583	133.250075	60.7	21.041	13.9	21.5	1.28	6578	1.01	2310.24

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007463623-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

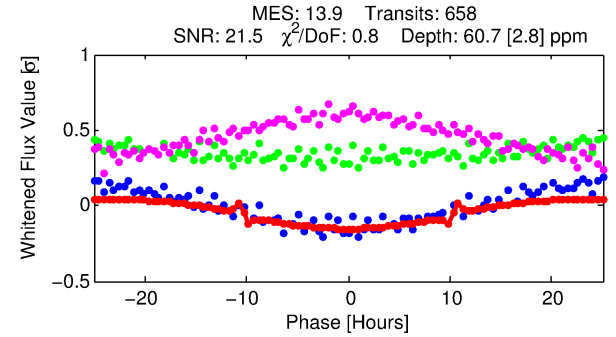
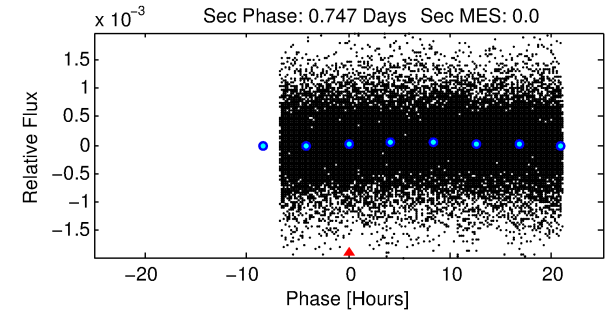
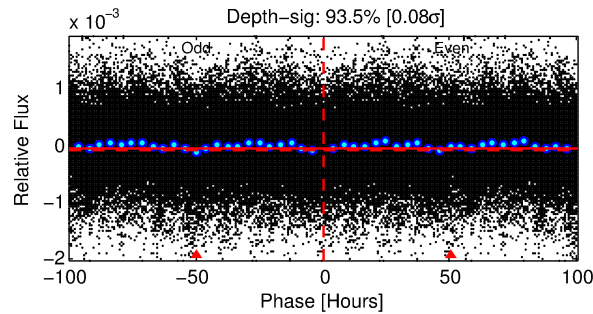
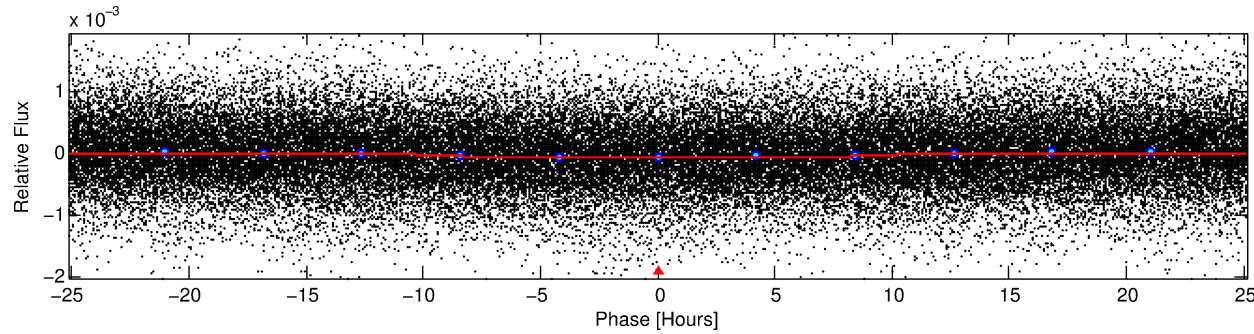
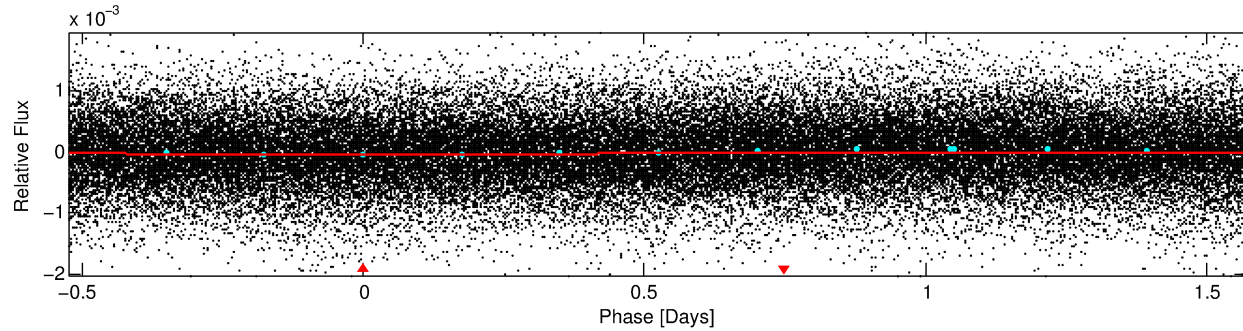
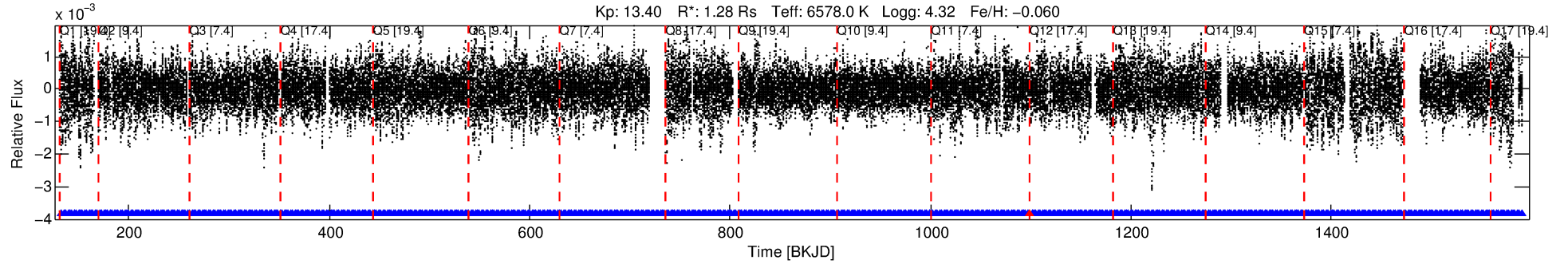
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007463623-01

No Significant Match Found

# DV One-Page Summary

KIC: 7463623 Candidate: 1 of 1 Period: 2.096 d



## DV Fit Results:

Period = 2.09558 [0.00002] d  
Epoch = 133.2501 [0.0041] BKJD  
Rp/R\* = 0.0072 [0.0013]  
a/R\* = 1.04 [0.07]  
b = 0.28 [3.23]  
Seff = 2310.24 [939.96]  
Teq = 1768 [180] K  
Rp = 1.01 [0.39] Re  
a = 0.0344 [0.0094] AU  
Ag = N/A  
Teffp = N/A

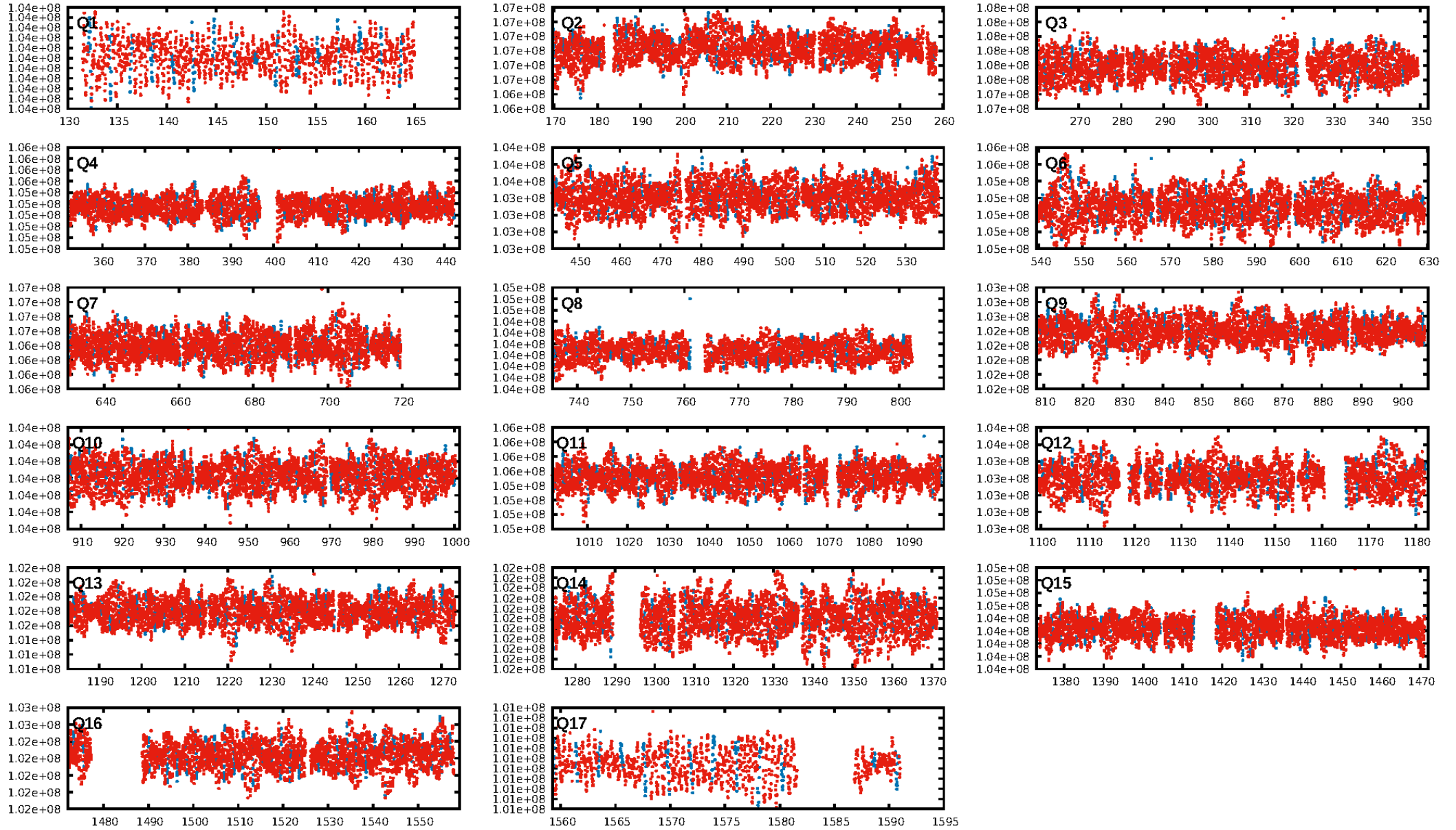
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [627/628]  
GhostDiagnostic-chr: 1.903  
Centroid-sig: 18.9%  
Centroid-so: 0.185 arcsec [0.91 $\sigma$ ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

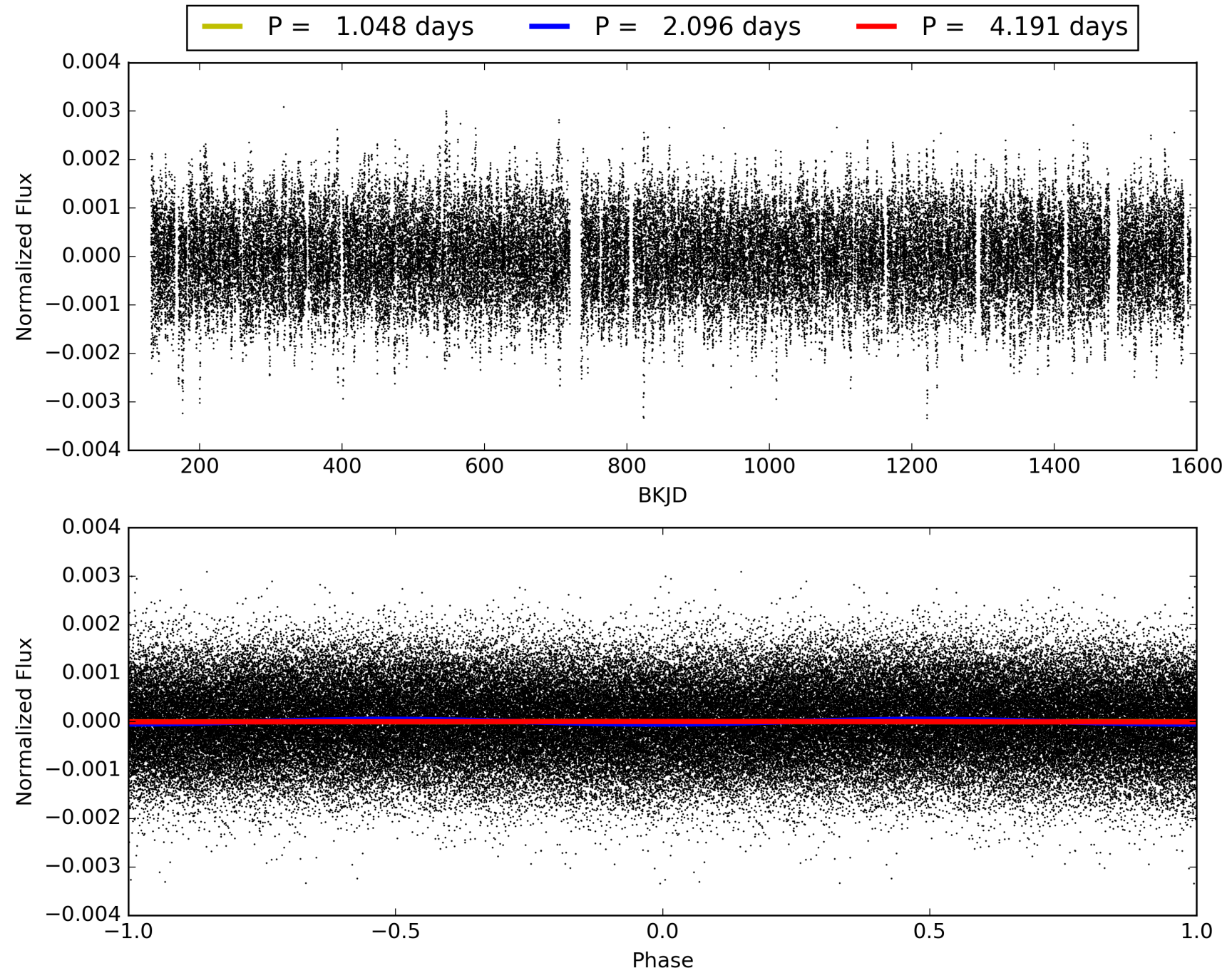
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:01:05 Z

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

# TCE 007463623-01, PDC Light Curves



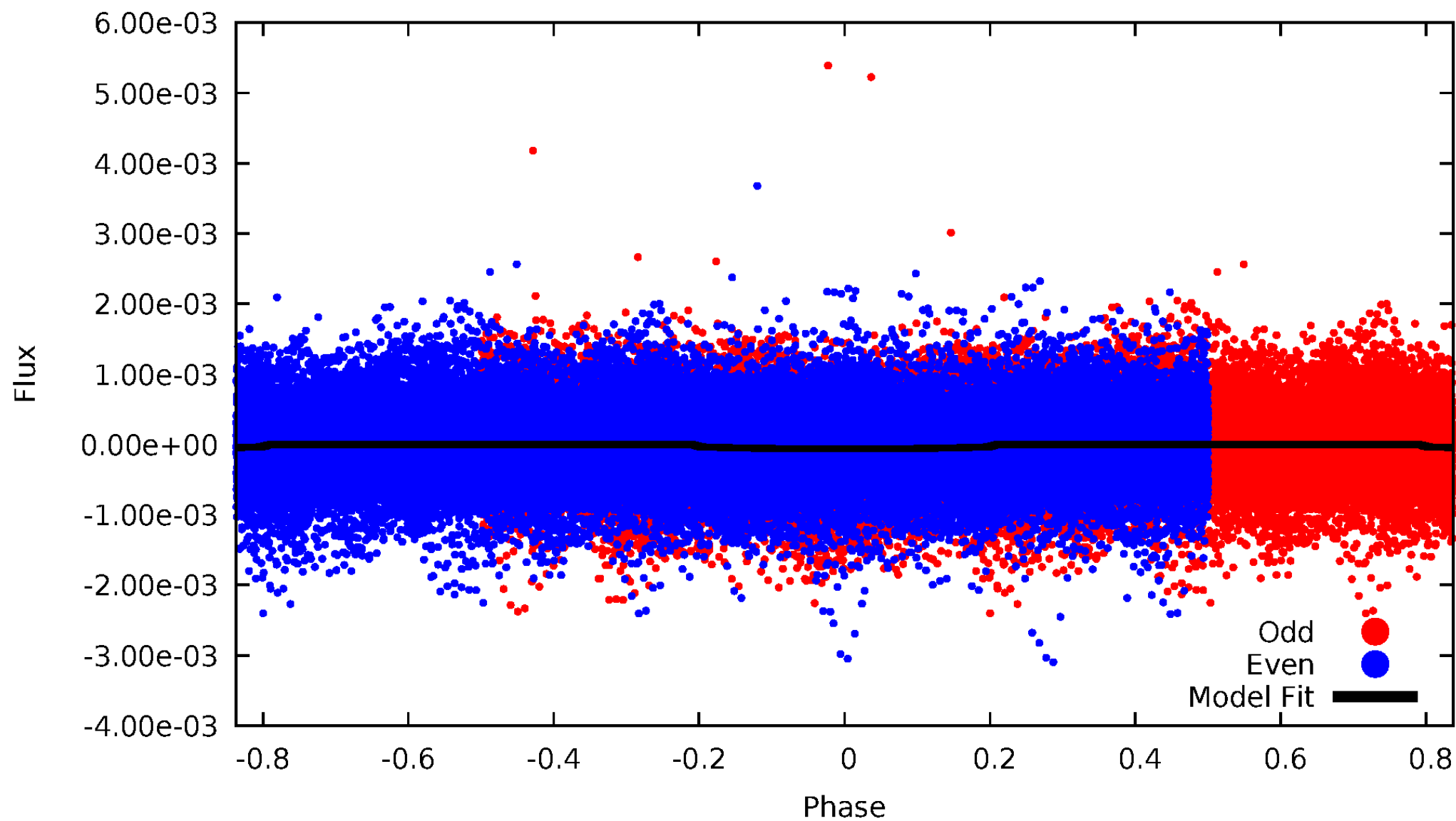
TCE 007463623-01





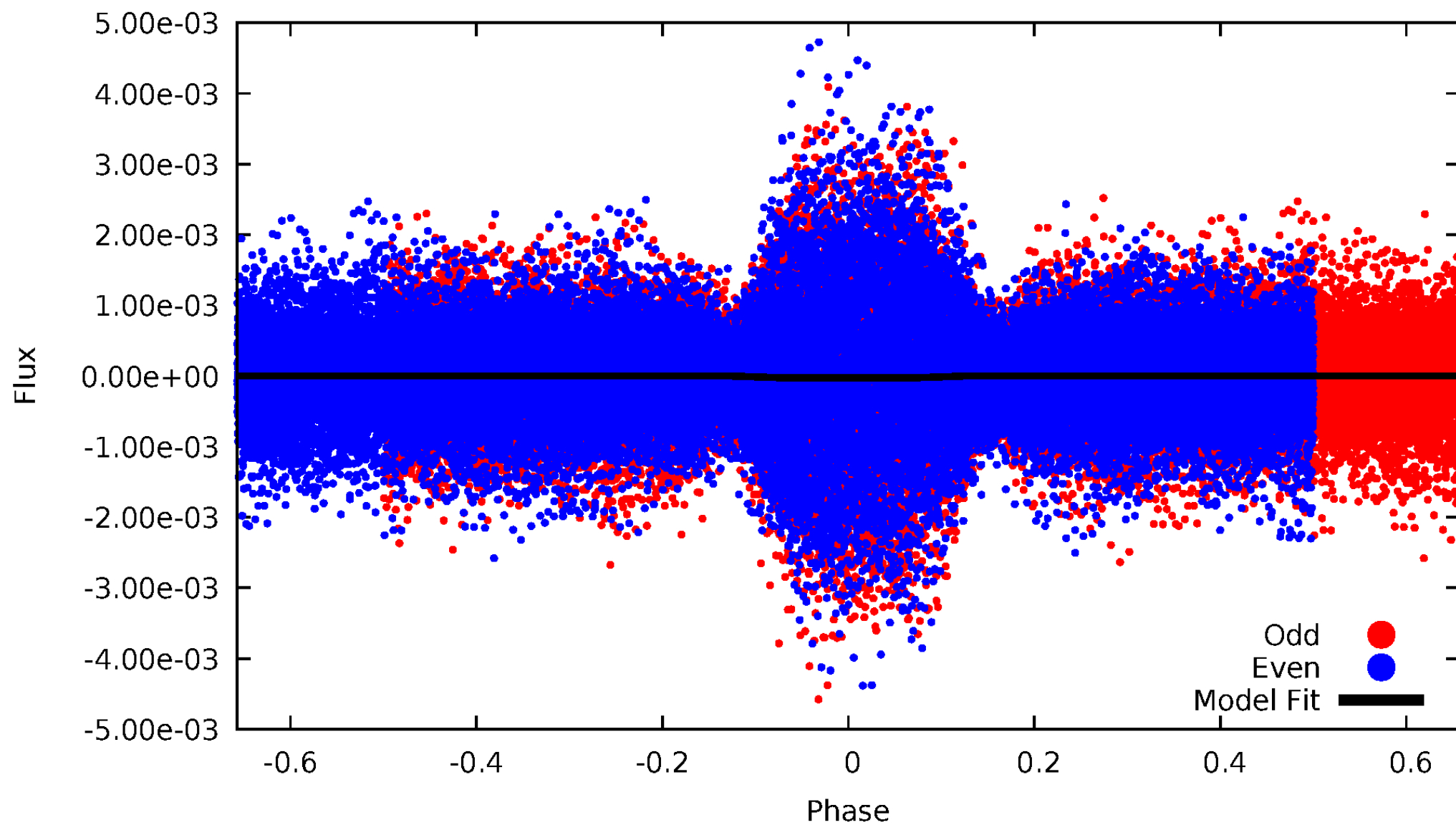
# DV Odd/Even

TCE 007463623-01



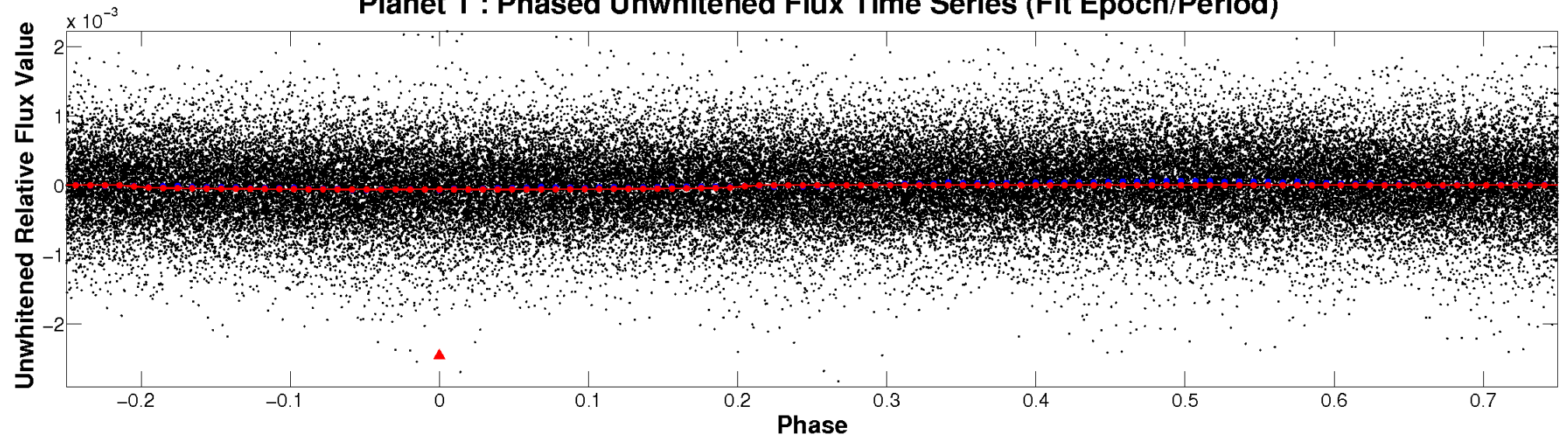
# ALT Odd/Even

TCE 007463623-01

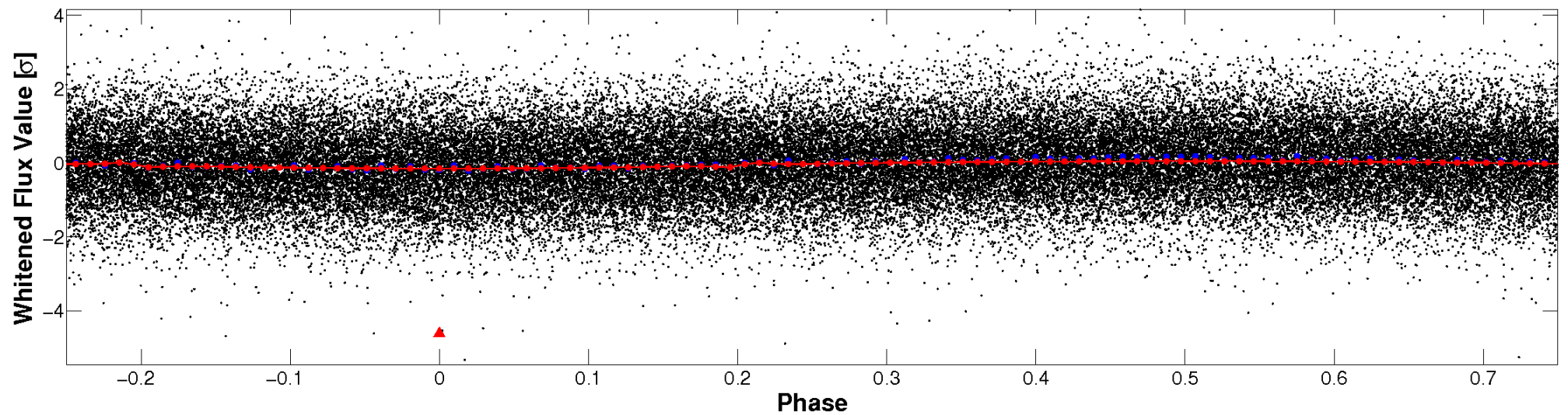


# Non-Whitened Vs. Whitened Light Curve

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

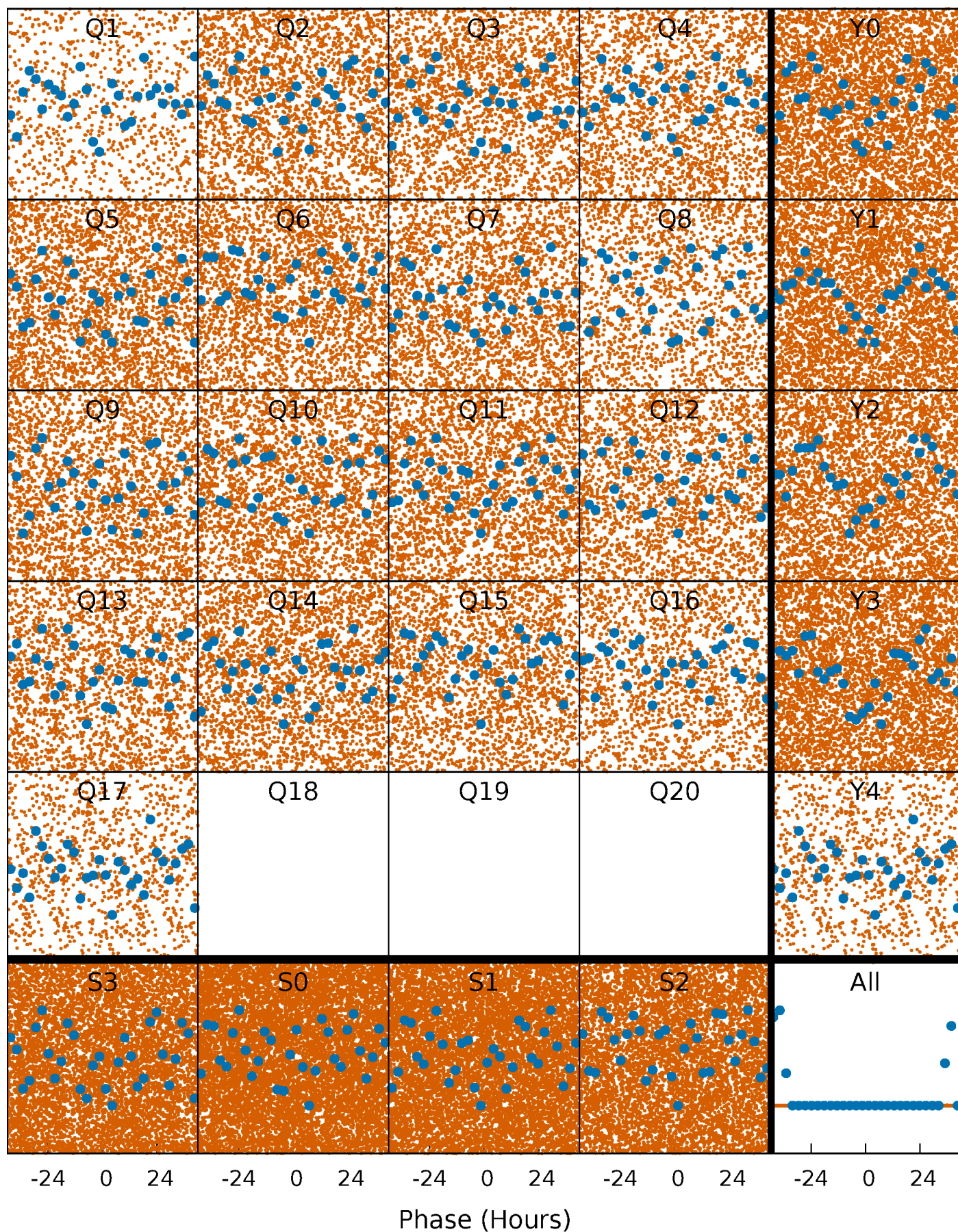


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

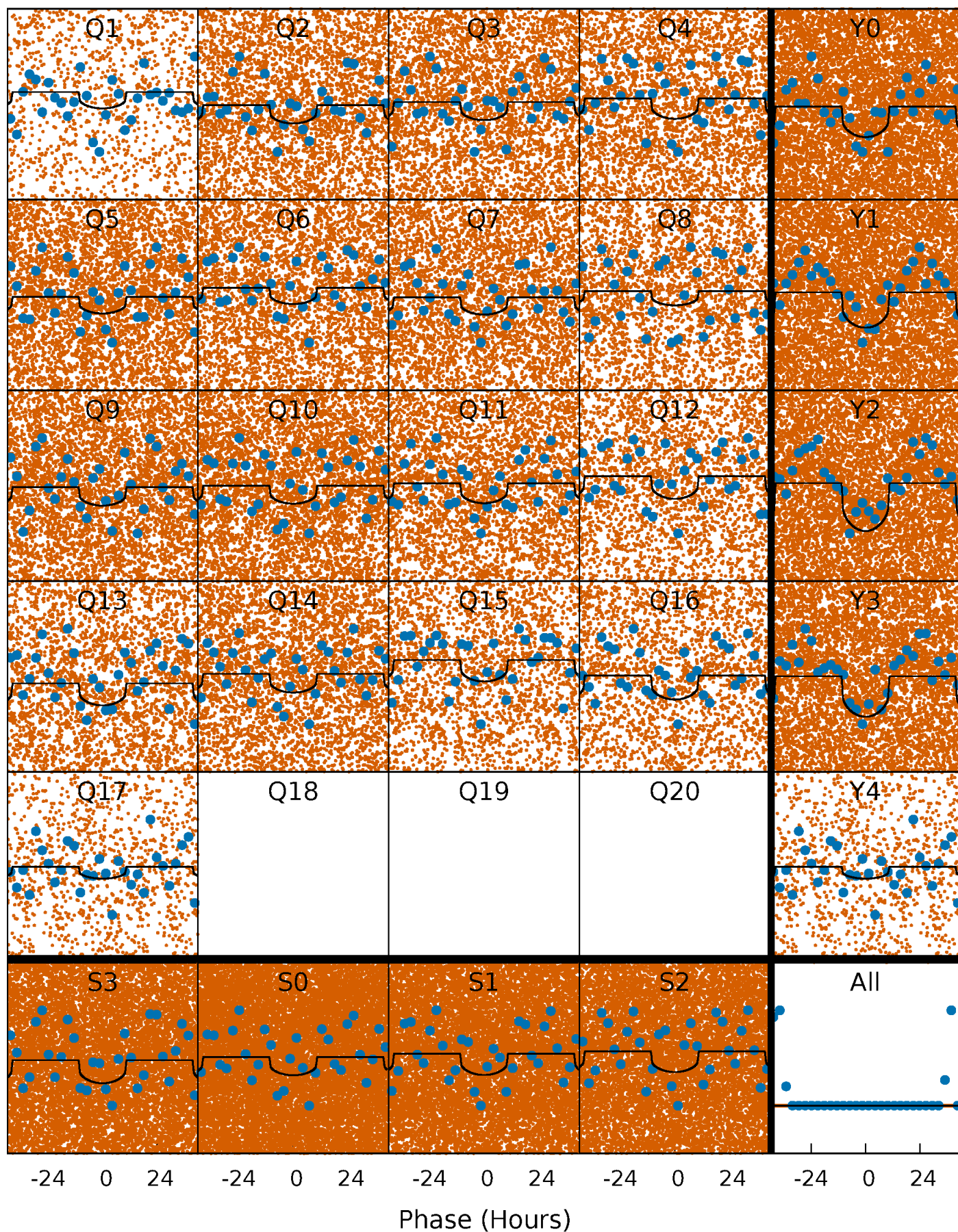
TCE 007463623-01 P= 2.095583 Days  $T_0=133.250075$  (BKJD)





# DV Quarter-Phased Transit Curves

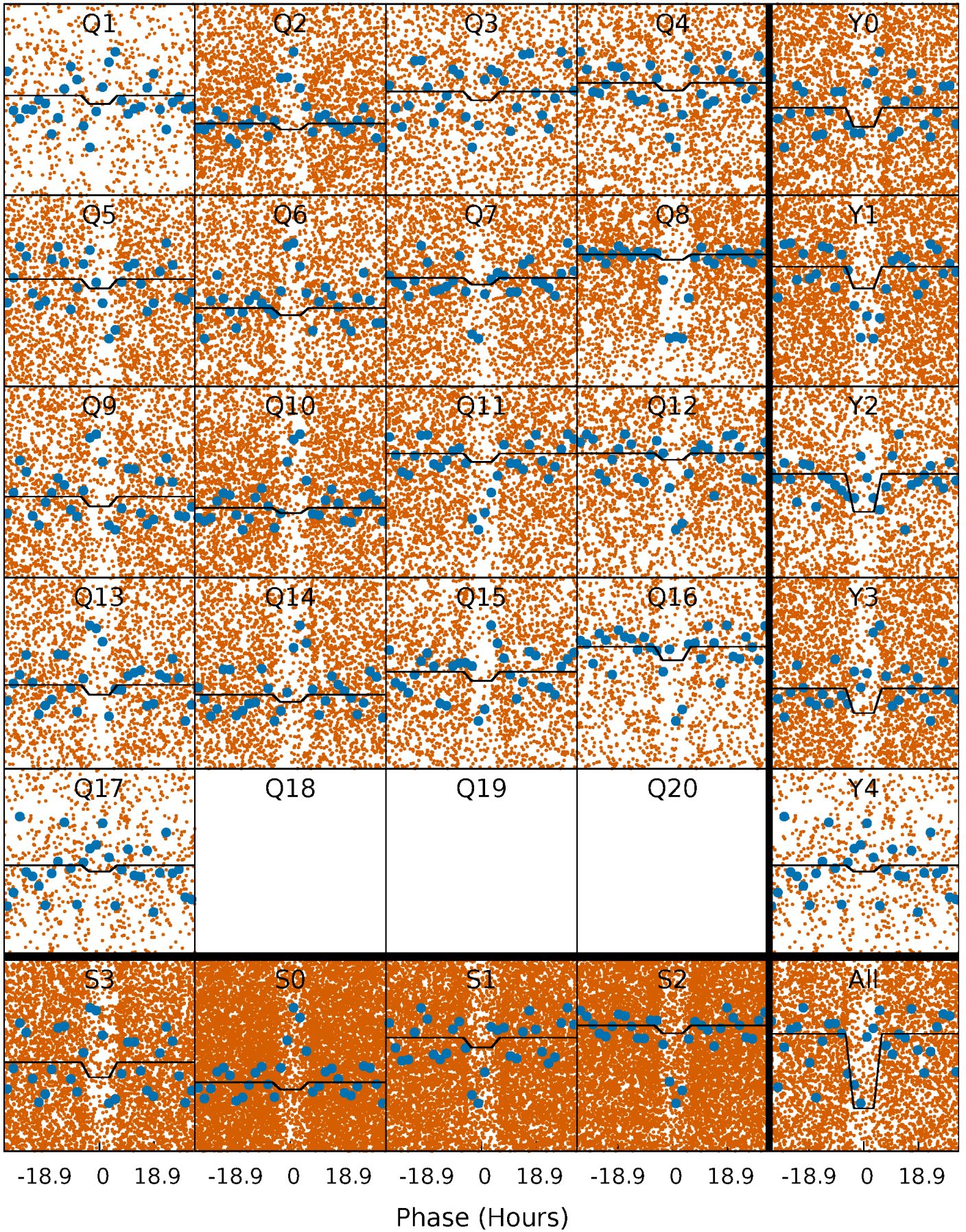
TCE 007463623-01 P= 2.095583 Days  $T_0=133.250075$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

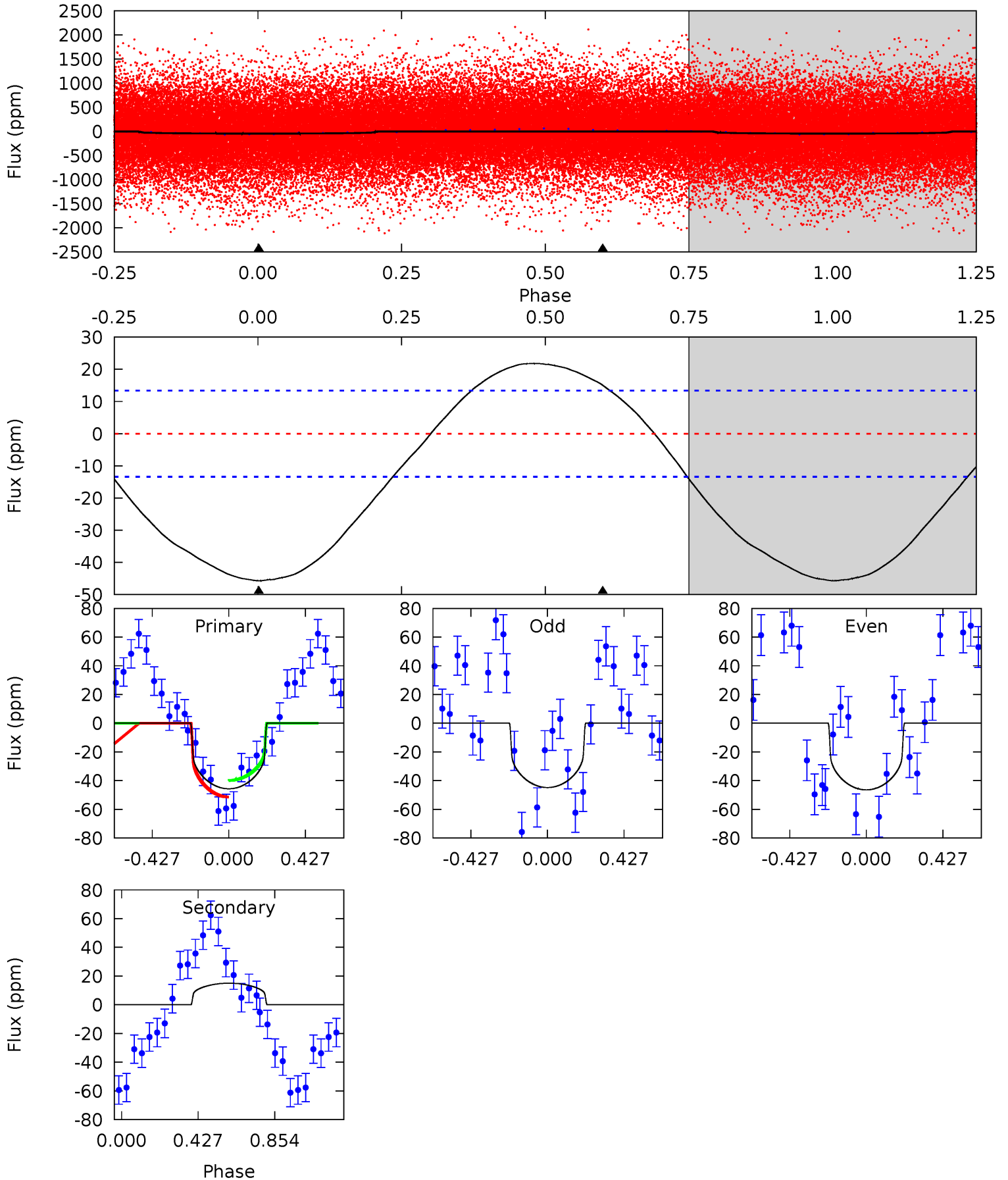
TCE 007463623-01 P= 2.095476 Days  $T_0=133.261454$  (BKJD)



# DV Model-Shift Uniqueness Test

007463623-01, P = 2.095583 Days, E = 131.154492 Days

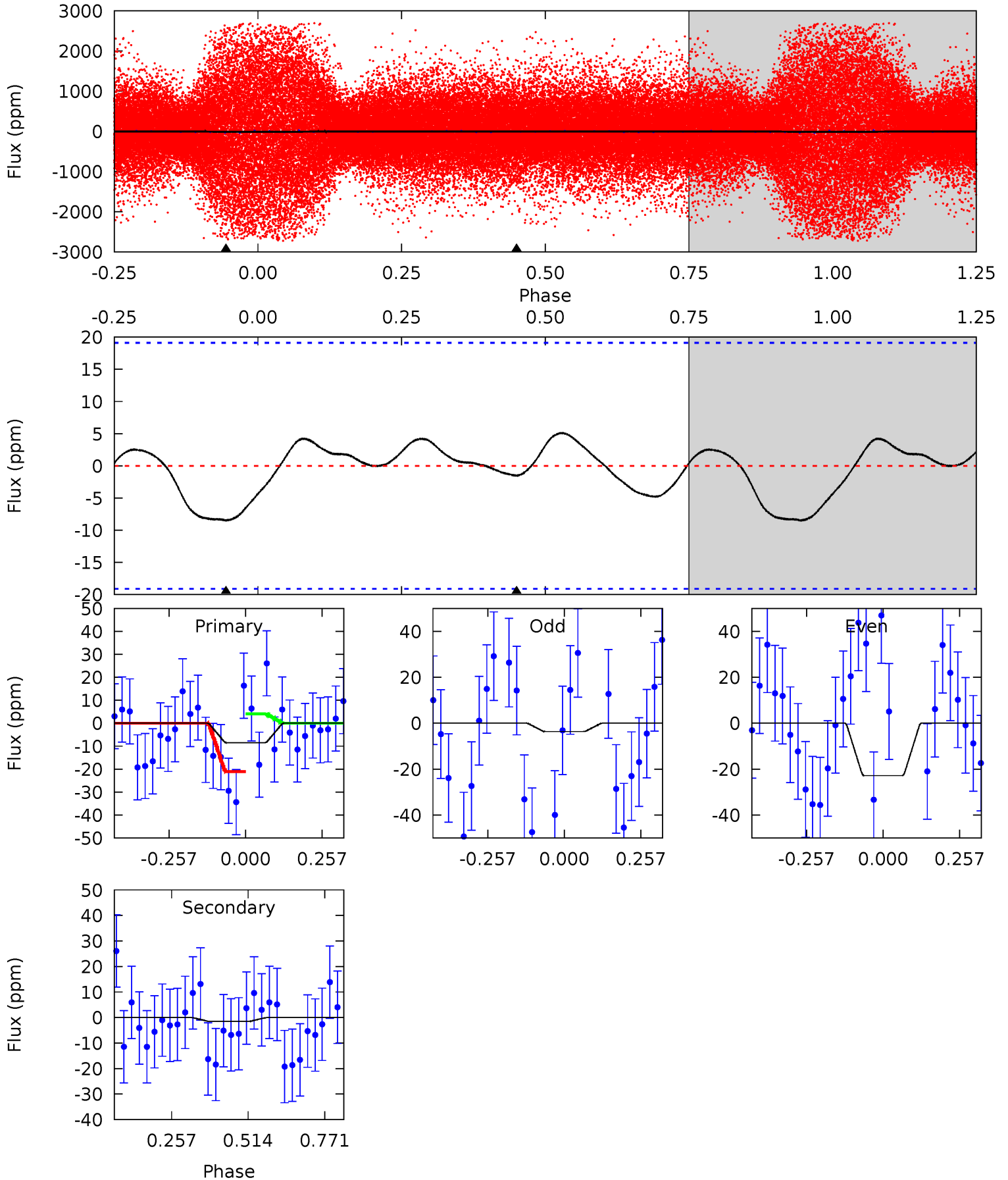
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	-4.78	0	0	4.25	0.79	1.91	14.5	14.5	-4.78	-4.78	0.25	0.99	0.32	1.81



# Alt Model-Shift Uniqueness Test

007463623-01, P = 2.095476 Days, E = 131.165978 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
1.94	0.35	0	0	4.36	1.13	0.54	1.94	1.94	0.35	0.35	2.03	-2.27	0.38	1.12





### Stellar Parameters For KIC 007463623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6578^{+167}_{-218}$	$4.318^{+0.072}_{-0.203}$	$-0.060^{+0.250}_{-0.300}$	$1.277^{+0.432}_{-0.185}$	$1.242^{+0.191}_{-0.174}$	$0.840^{+0.320}_{-0.443}$
	+3%/-3%	+2%/-5%	+417%/-500%	+34%/-14%	+15%/-14%	+38%/-53%
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 007463623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$15 \pm 3$	$1.06^{+0.26}_{-0.21}$	$2516^{+202}_{-143}$	$-4915^{+374}_{-503}$	$-8.477^{+3.018}_{-5.077}$
Alt.	$-2 \pm 4$	$0.78^{+0.21}_{-0.21}$	$2508^{+184}_{-128}$	$3532^{+1109}_{-7575}$	$1.730^{+5.473}_{-4.719}$

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

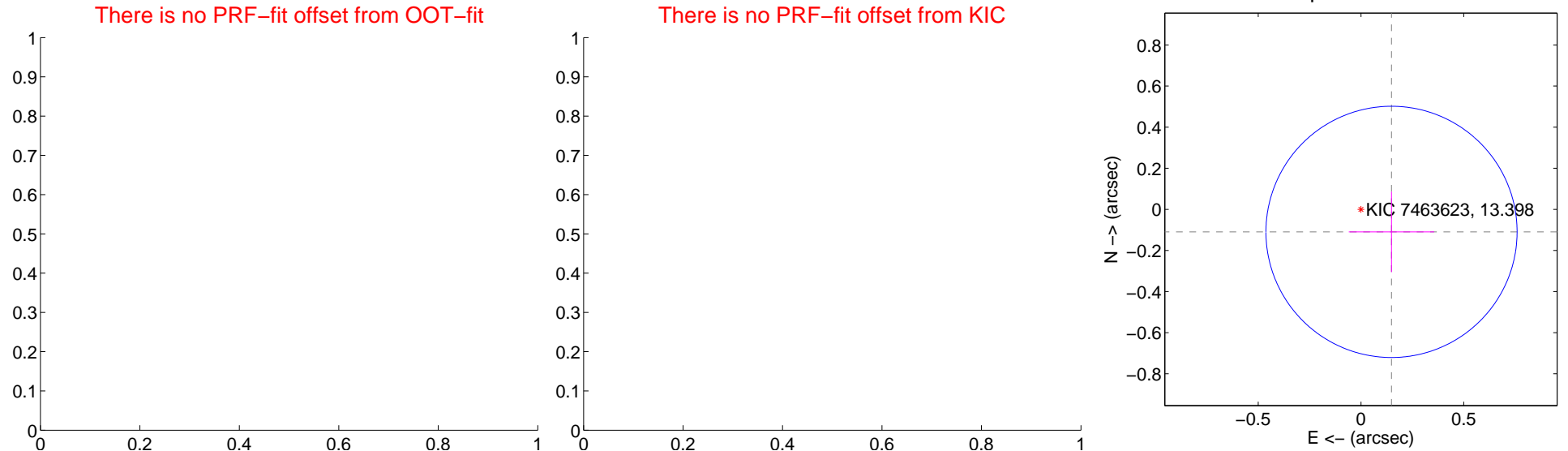
## DV Centroid Data

Supplemental centroid analysis for 007463623-01. Kepler magnitude: 13.40. Transit SNR 21.51

There are 0 quarters with good PRF difference image offsets

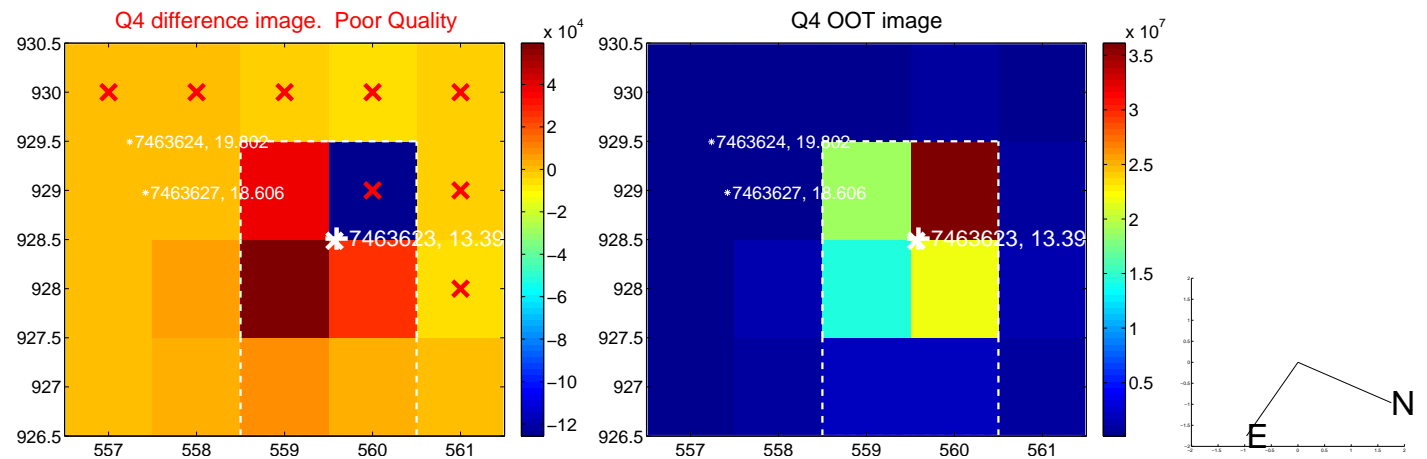
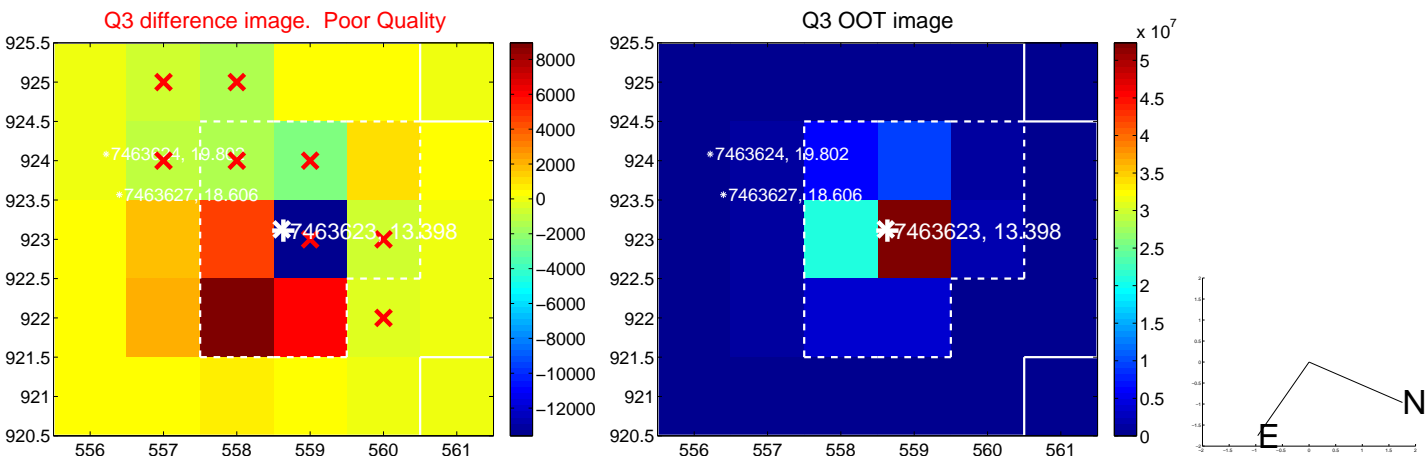
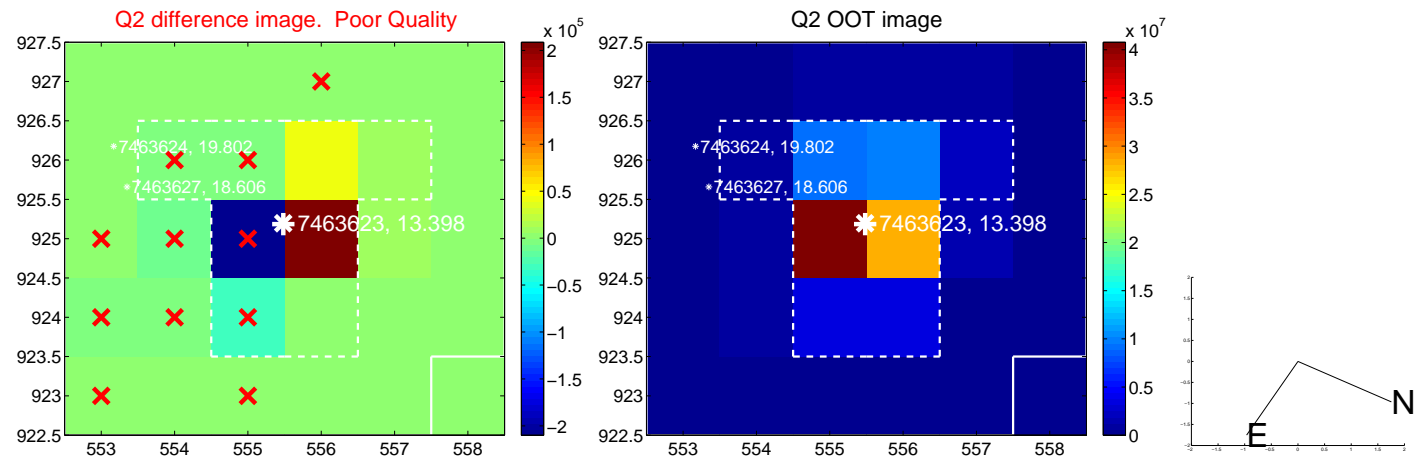
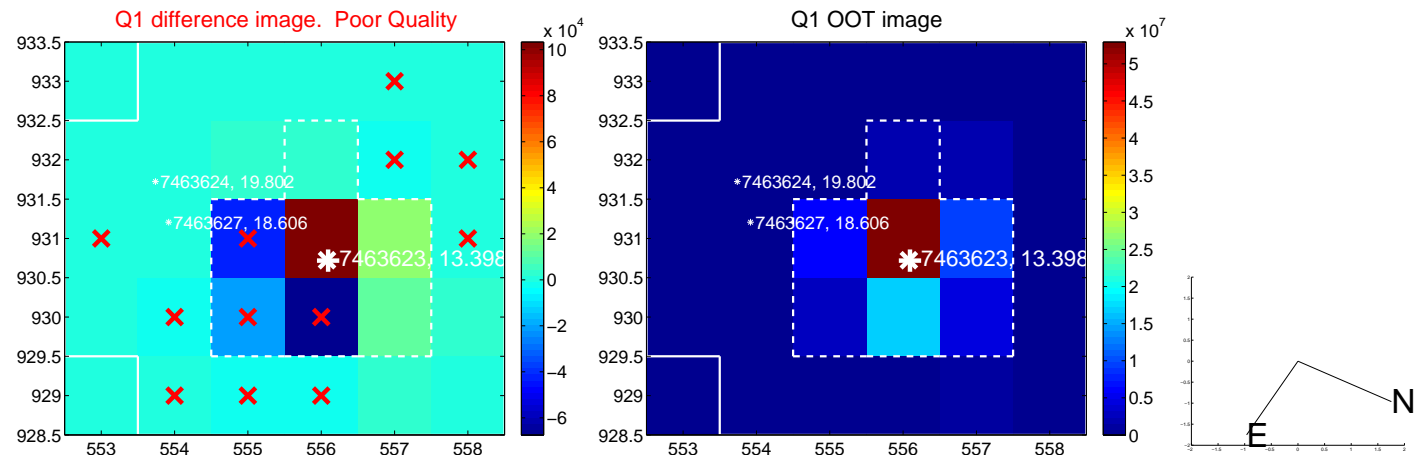
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$0.18 \pm 0.20$	0.91	$-0.15 \pm 0.21$	$-0.11 \pm 0.20$

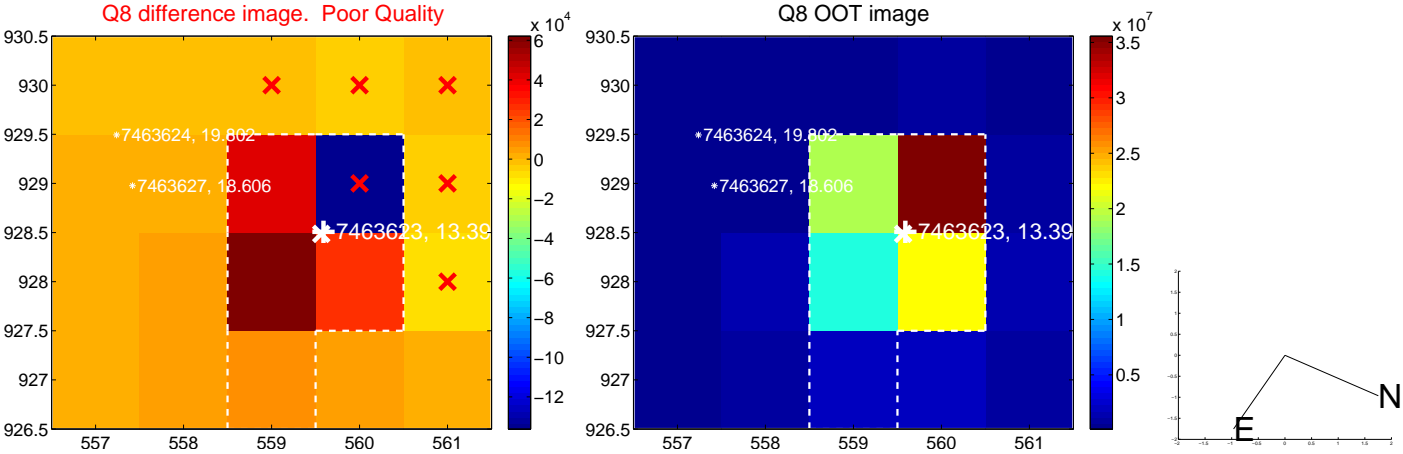
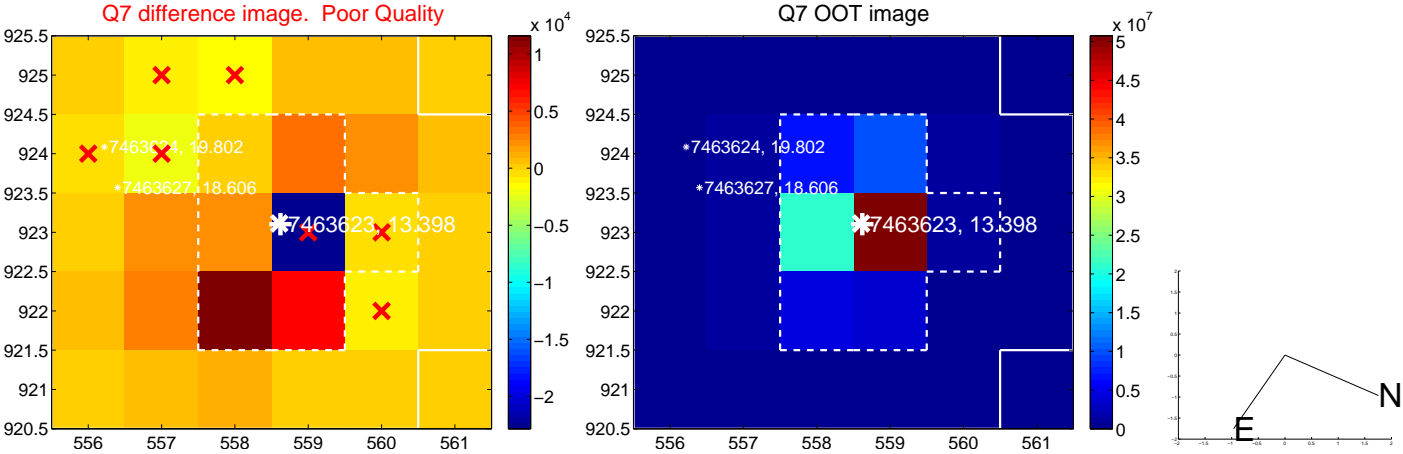
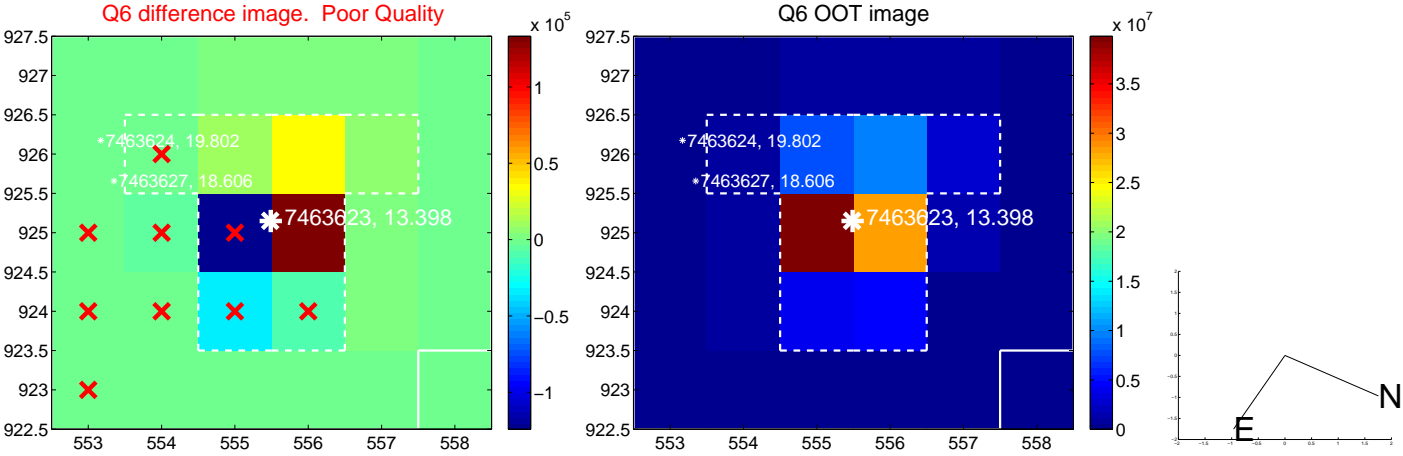
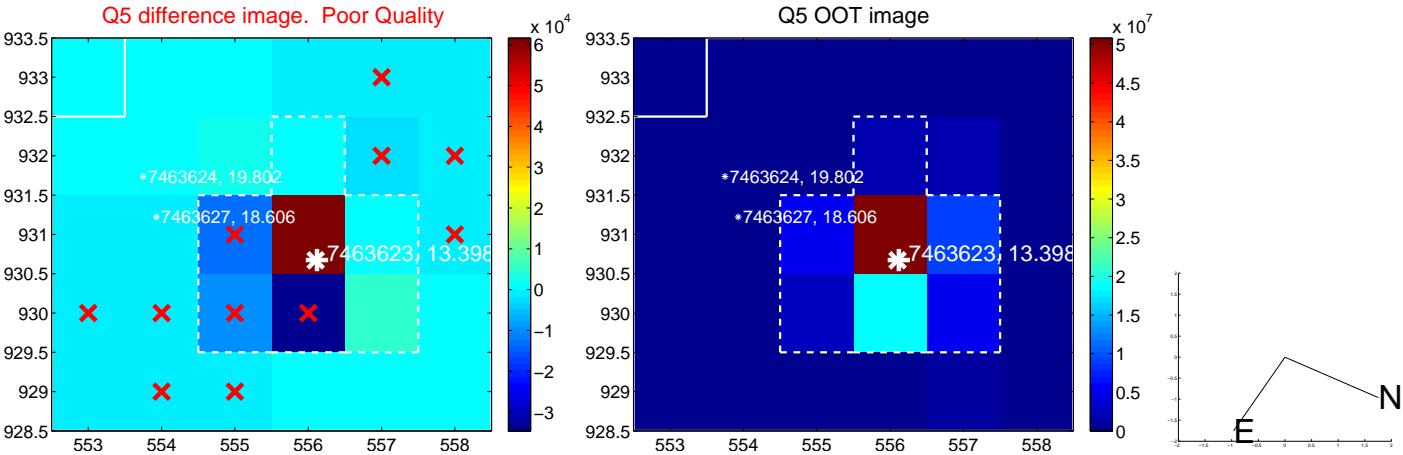


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

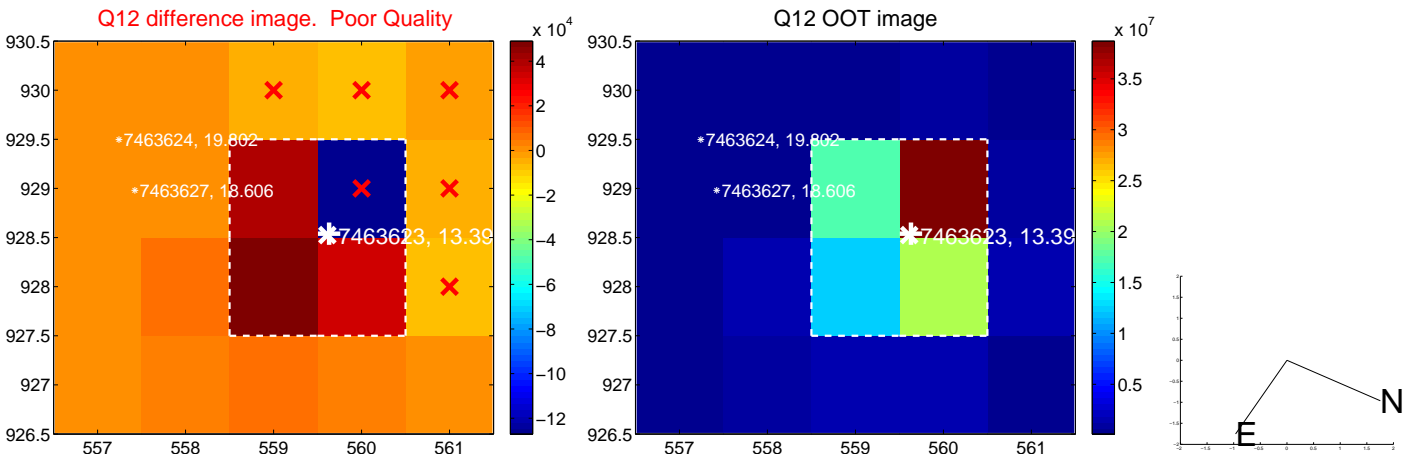
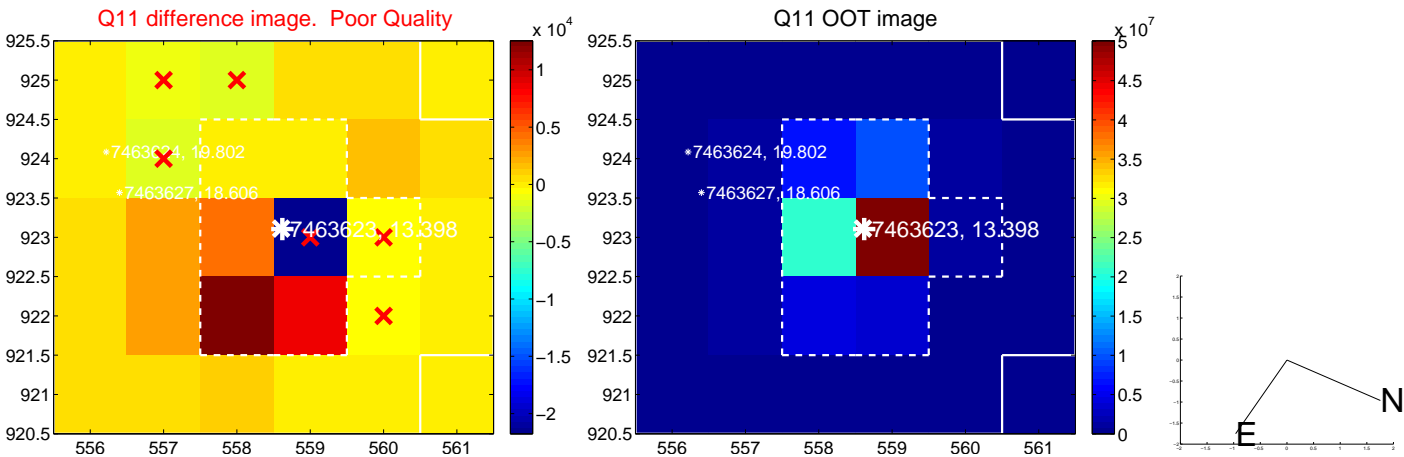
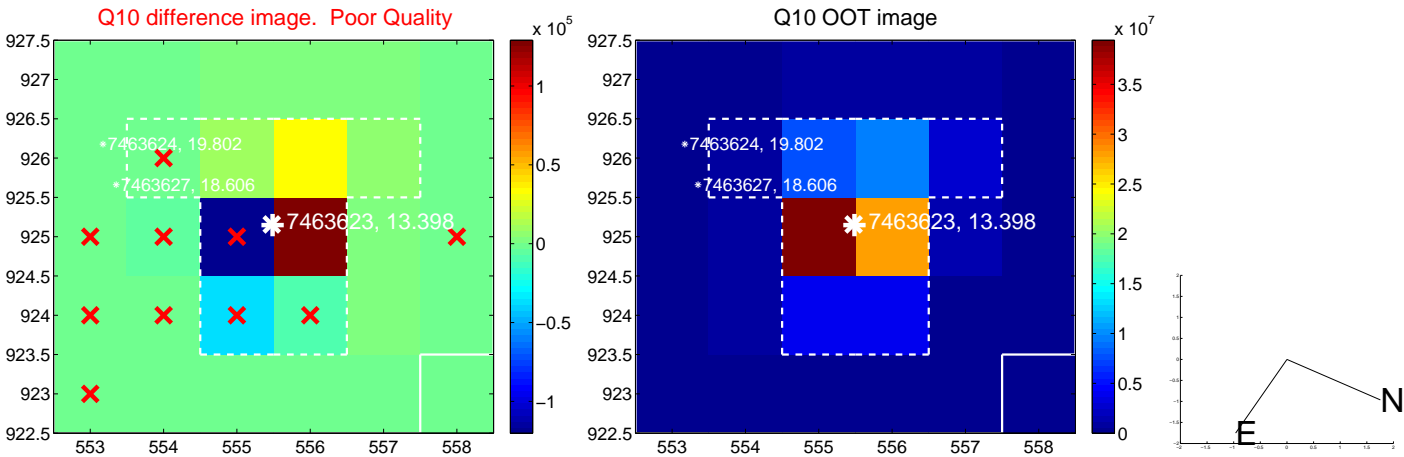
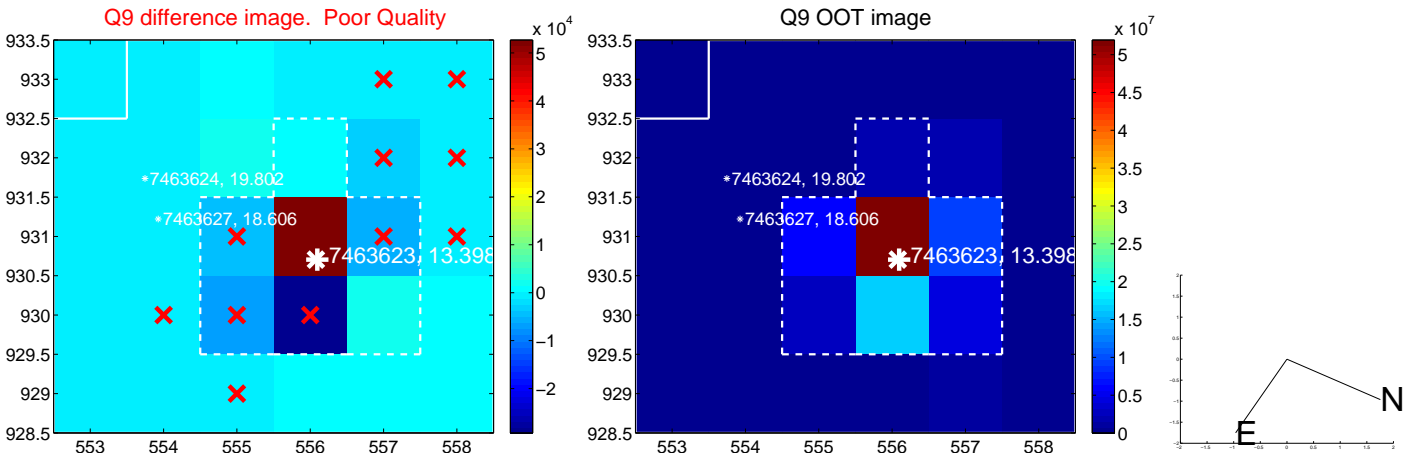


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

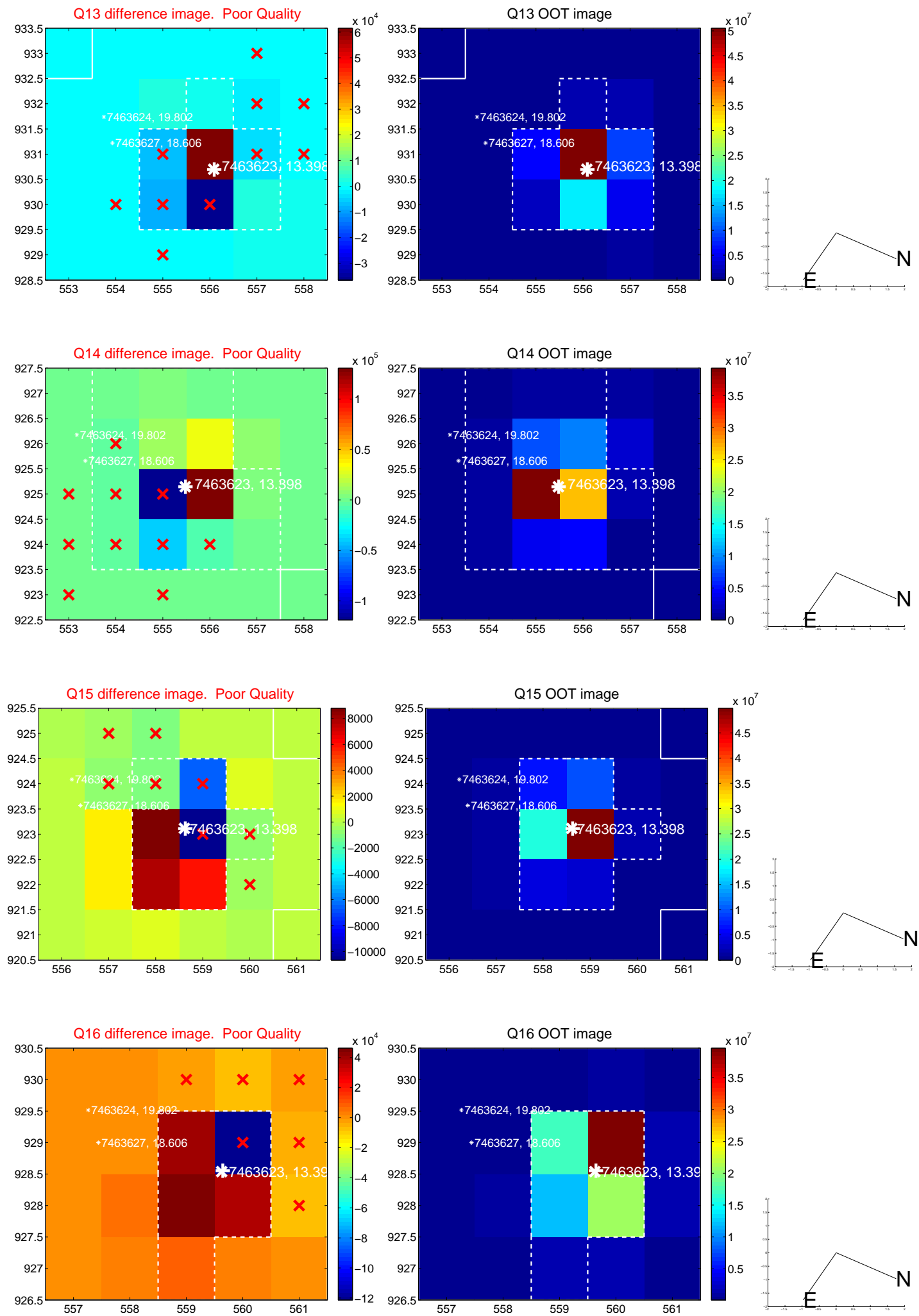




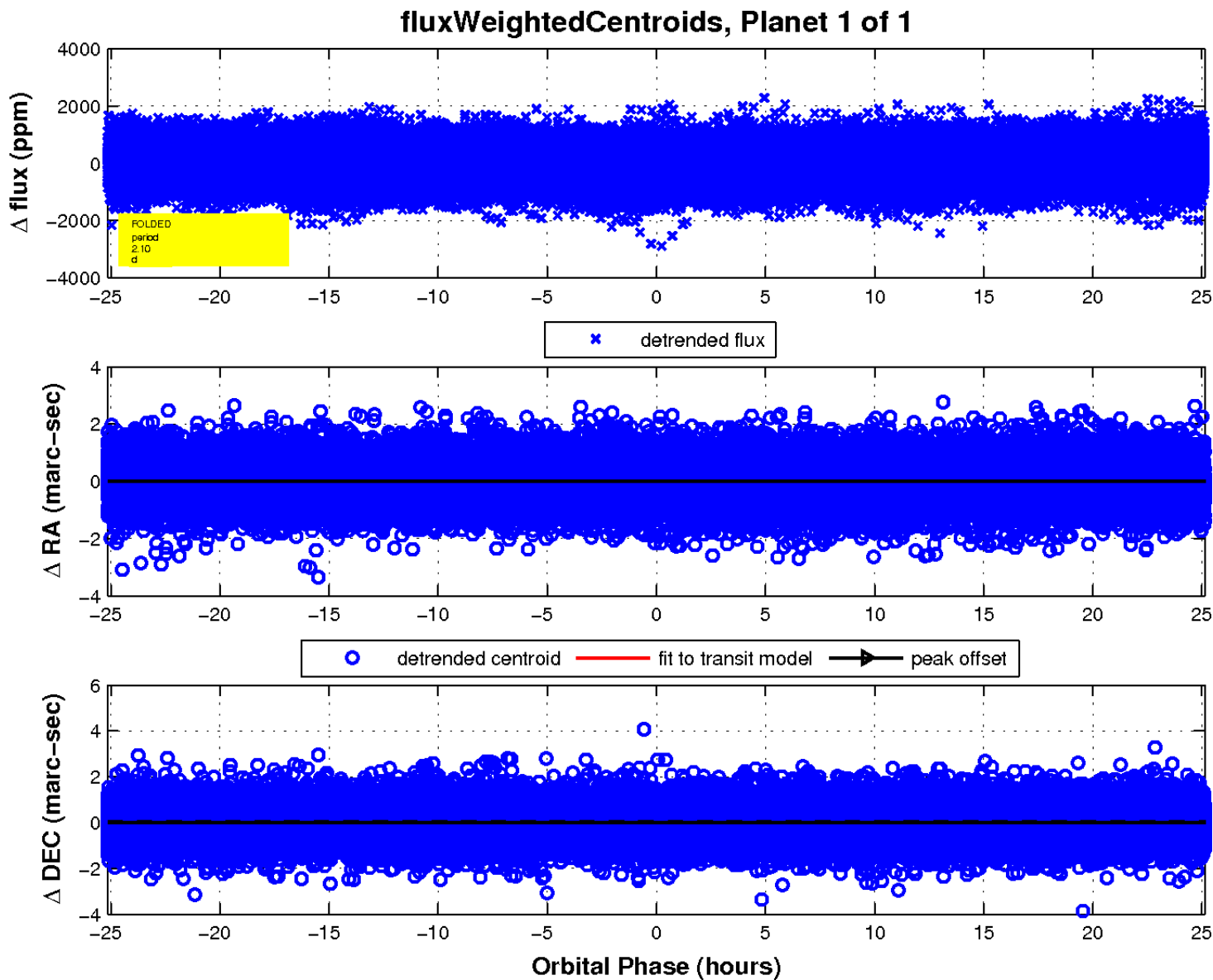
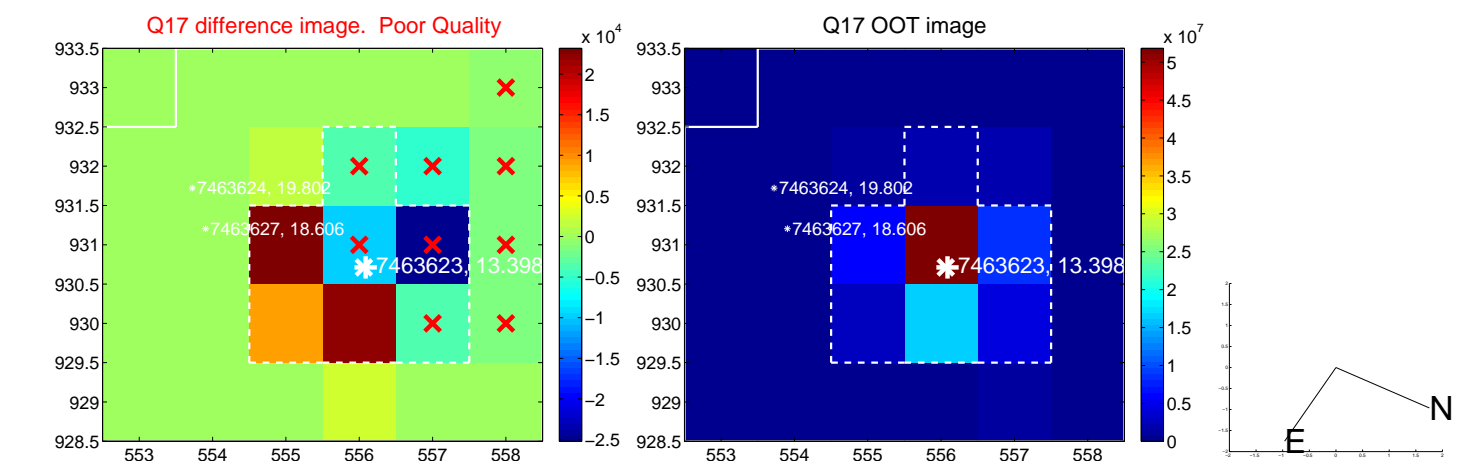
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

