

# KIC 008264657

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264657-01	OBS	No	1.063785	132.096475	111.5	3.511	8.0	7.9	1.84	6308	2.27	10424.66

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264657-01	OBS	FP	0.00	1	0	1	0	LPP_DV—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.

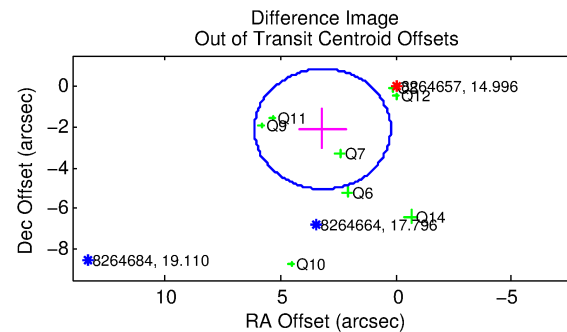
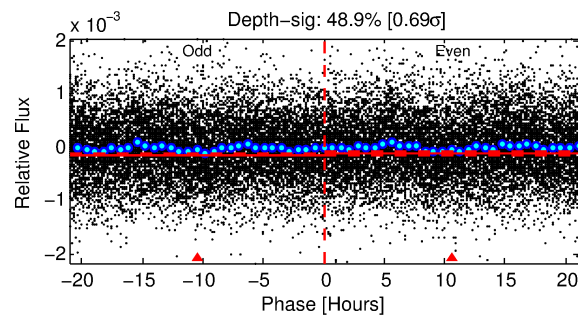
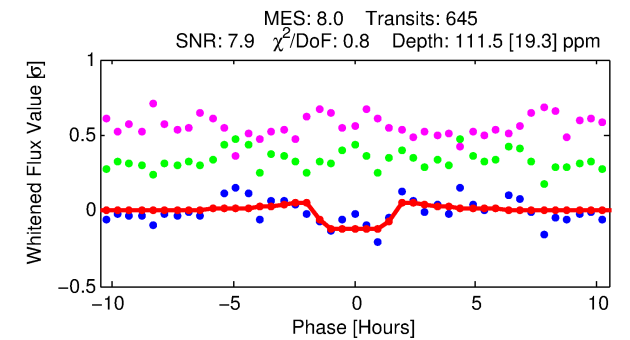
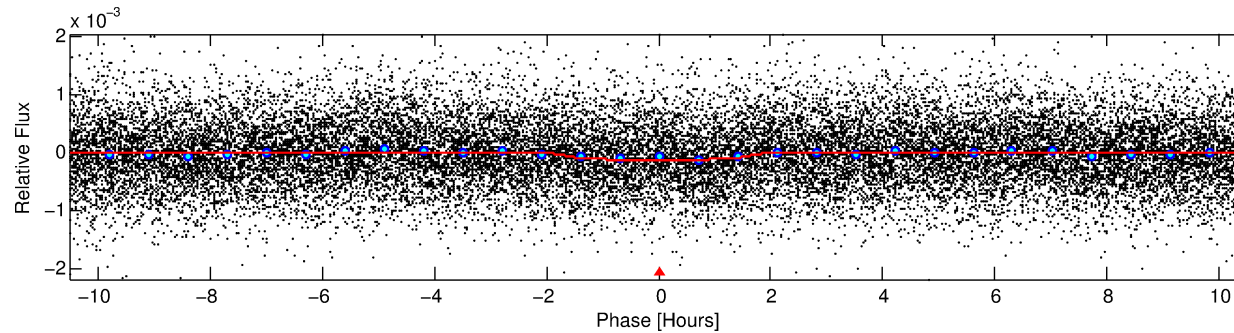
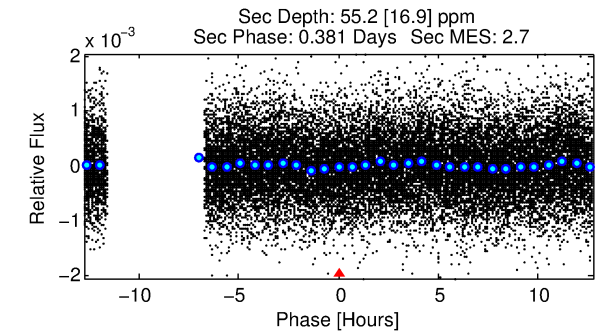
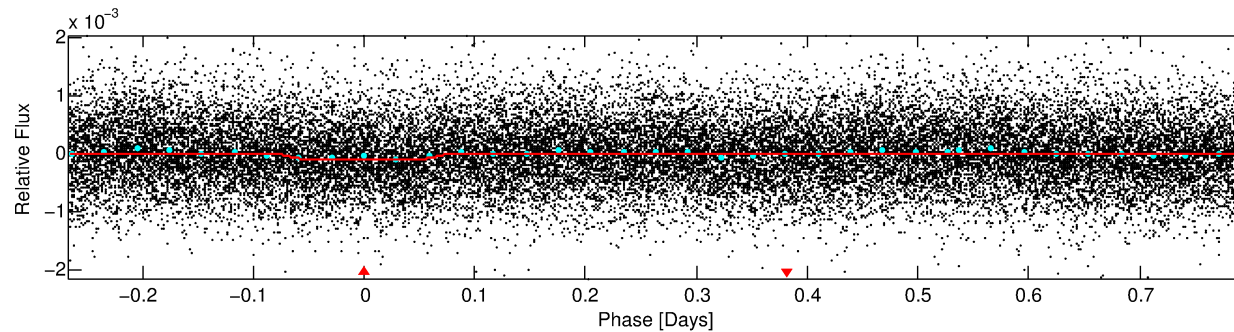
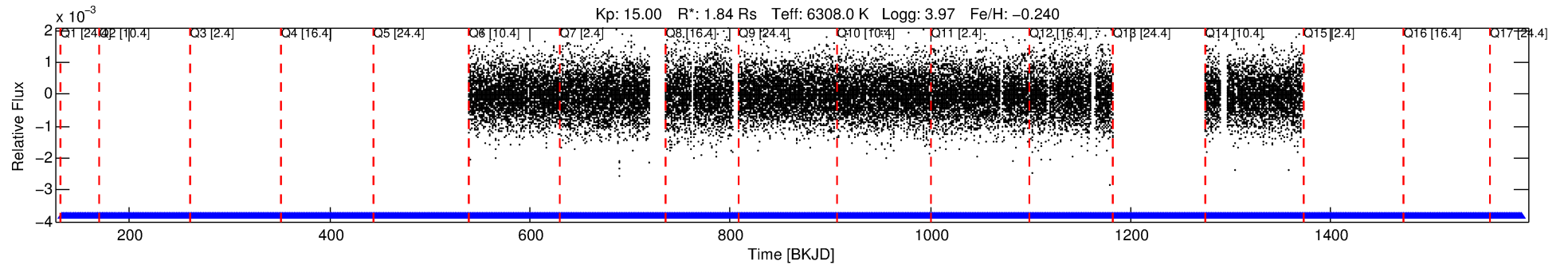
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264657-01

No Significant Match Found

# DV One-Page Summary

KIC: 8264657 Candidate: 1 of 1 Period: 1.064 d



## DV Fit Results:

Period = 1.06379 [0.00001] d  
Epoch = 132.0965 [0.0036] BKJD  
Rp/R\* = 0.0113 [0.0047]  
a/R\* = 1.42 [1.62]  
b = 0.90 [0.48]  
Seff = 10424.66 [6980.97]  
Teq = 2577 [431] K  
Rp = 2.27 [1.29] Re  
a = 0.0214 [0.0084] AU  
Ag = 2.70 [2.97] [0.57σ]  
Teff = 5105 [1153] K [2.05σ]

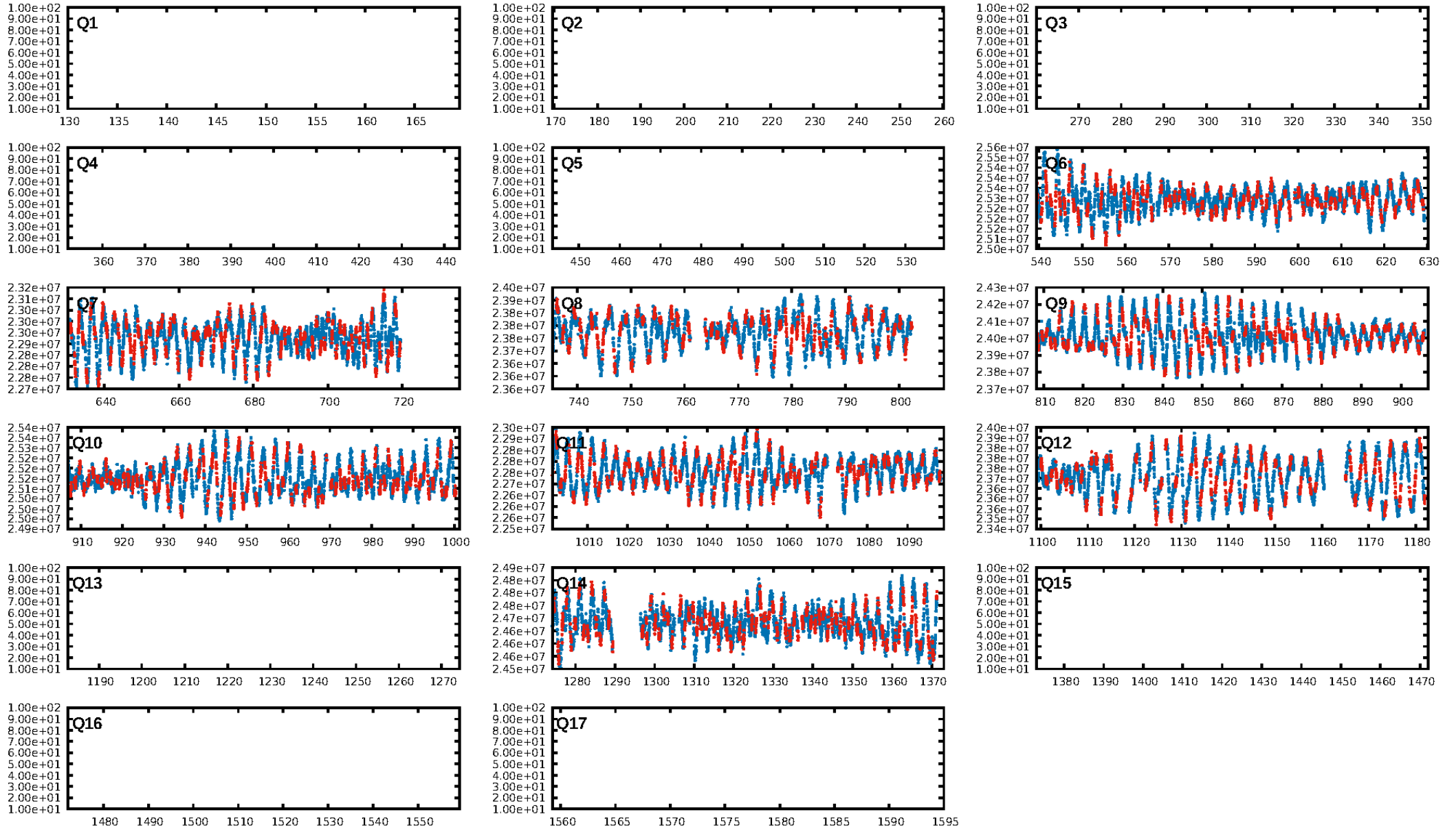
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.44e-13  
RollingBand-fgt: 1.00 [645/645]  
GhostDiagnostic-chr: -0.3996  
Centroid-sig: N/A  
Centroid-so: 3.965 arcsec [4.21σ]  
OotOffset-rm: 3.811 arcsec [3.89σ]  
KicOffset-rm: 12.726 arcsec [15.77σ]  
OotOffset-st: 3/2/2/1 [8]  
KicOffset-st: 3/2/2/1 [8]  
DiffImageQuality-fgm: 0.12 [1/8]  
DiffImageOverlap-fno: 1.00 [8/8]

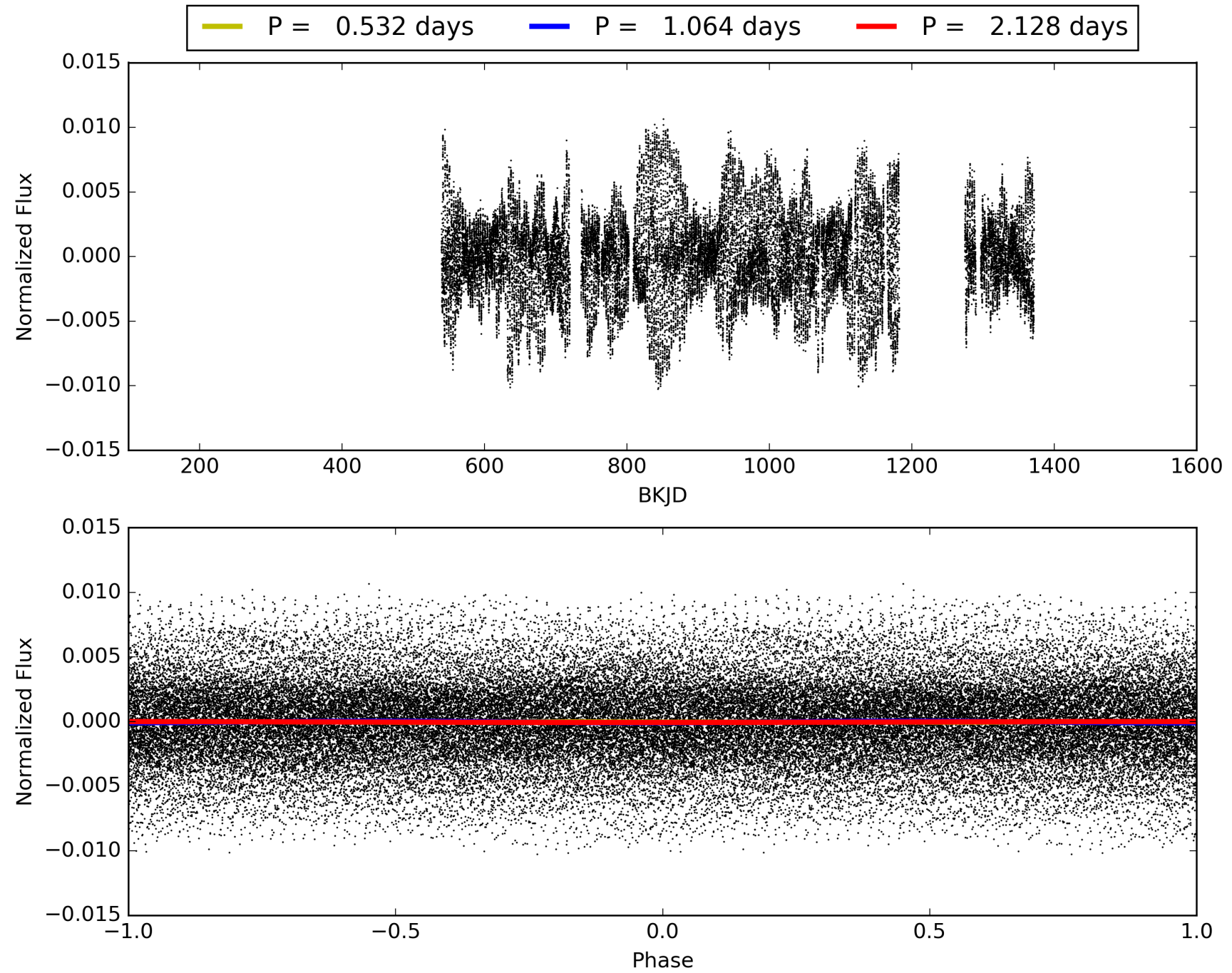
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:51:30 Z

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

# TCE 008264657-01, PDC Light Curves

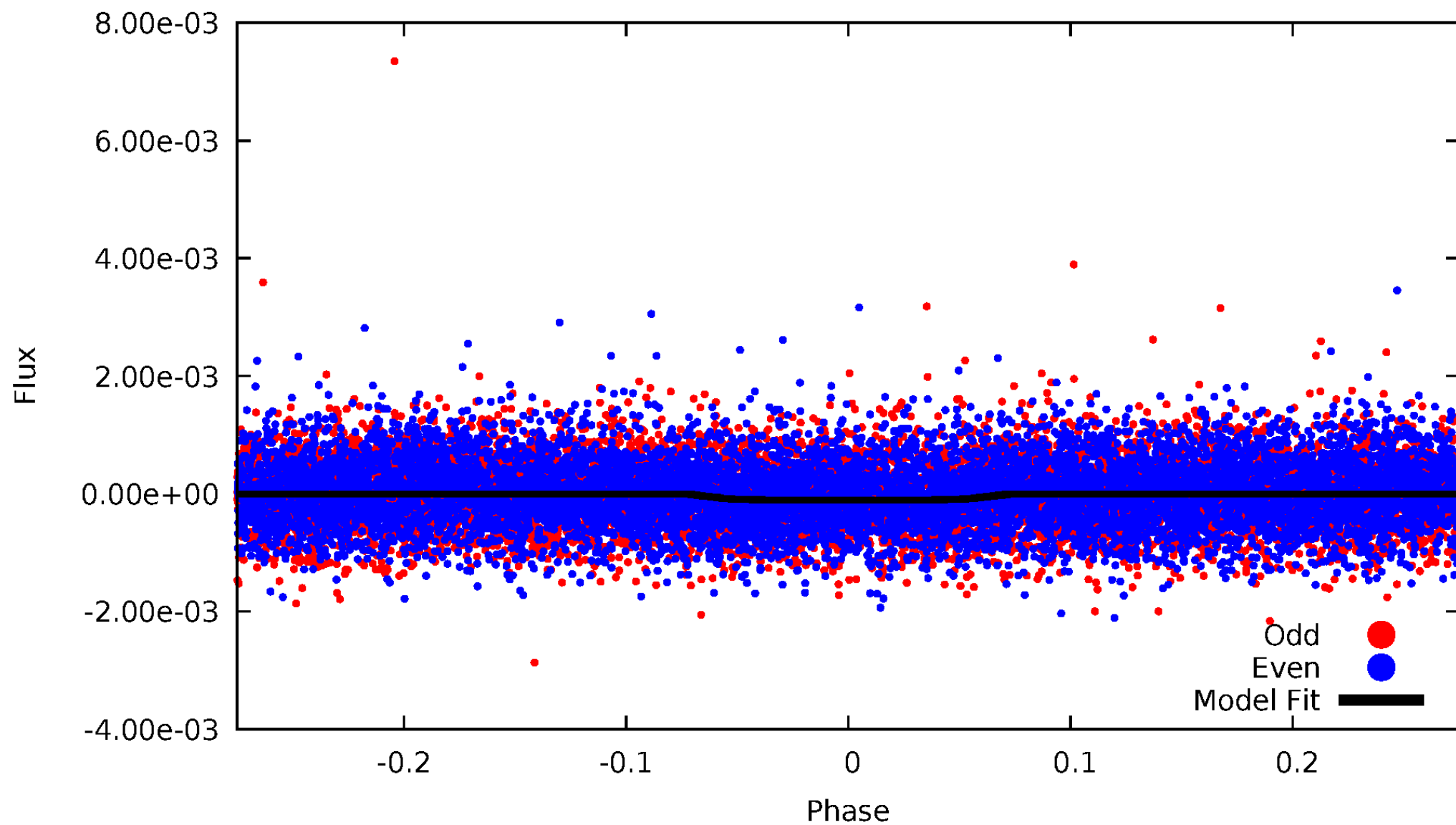


TCE 008264657-01



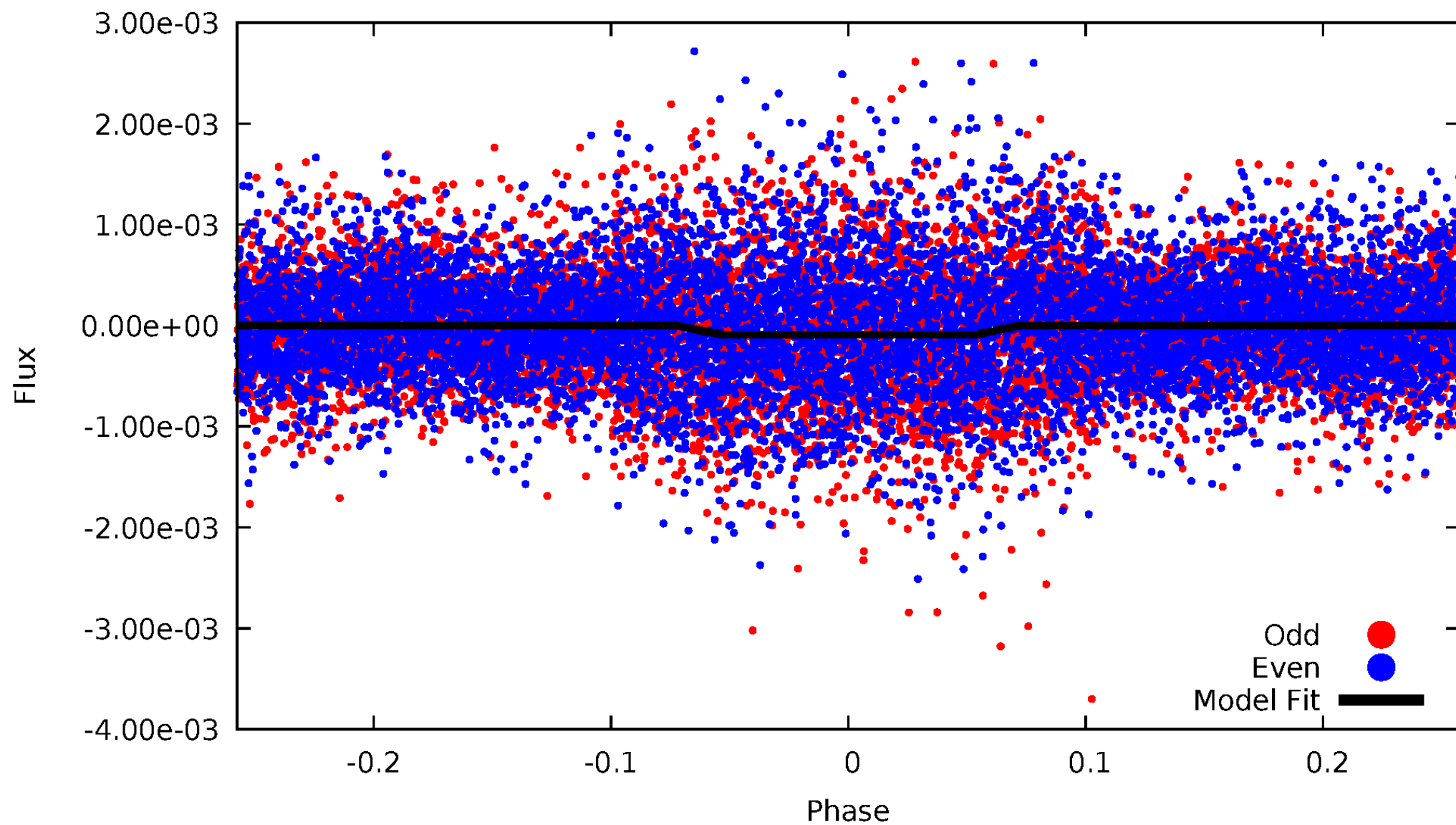
# DV Odd/Even

TCE 008264657-01



# ALT Odd/Even

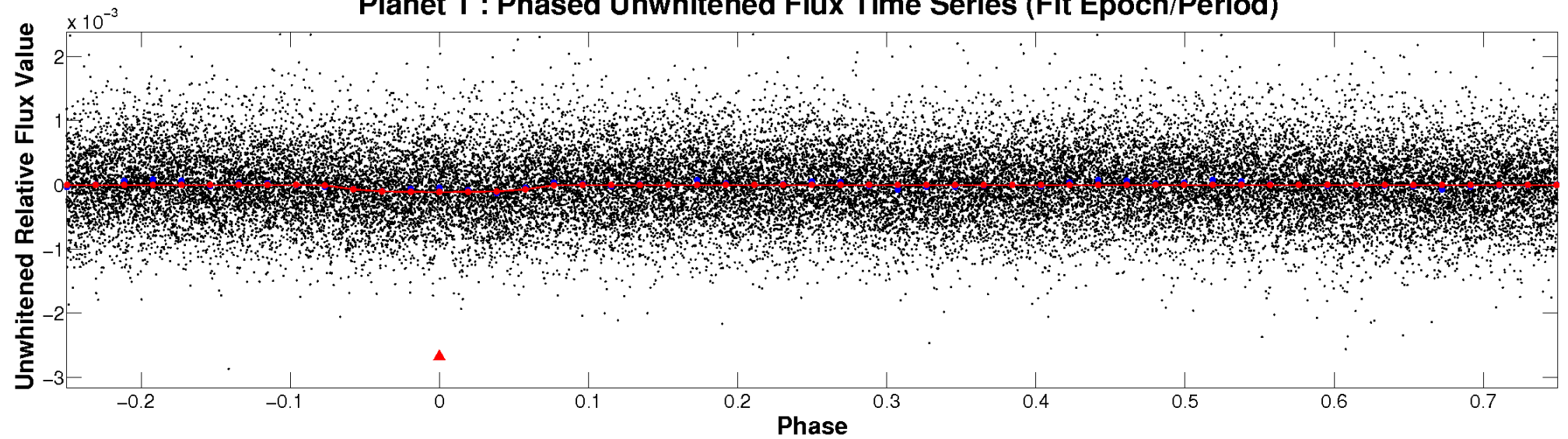
TCE 008264657-01



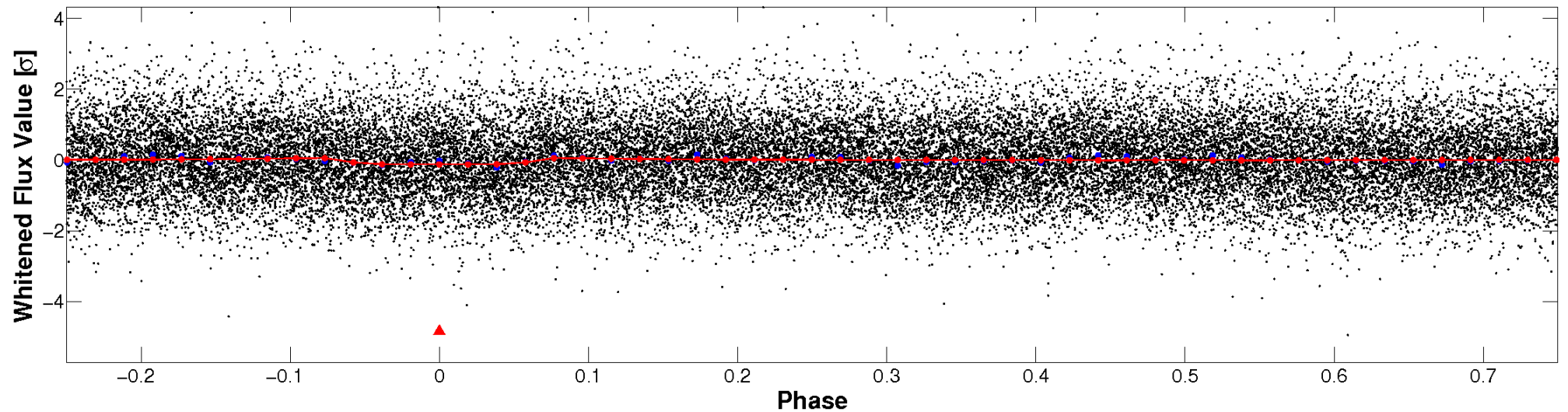


# Non-Whitened Vs. Whitened Light Curve

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

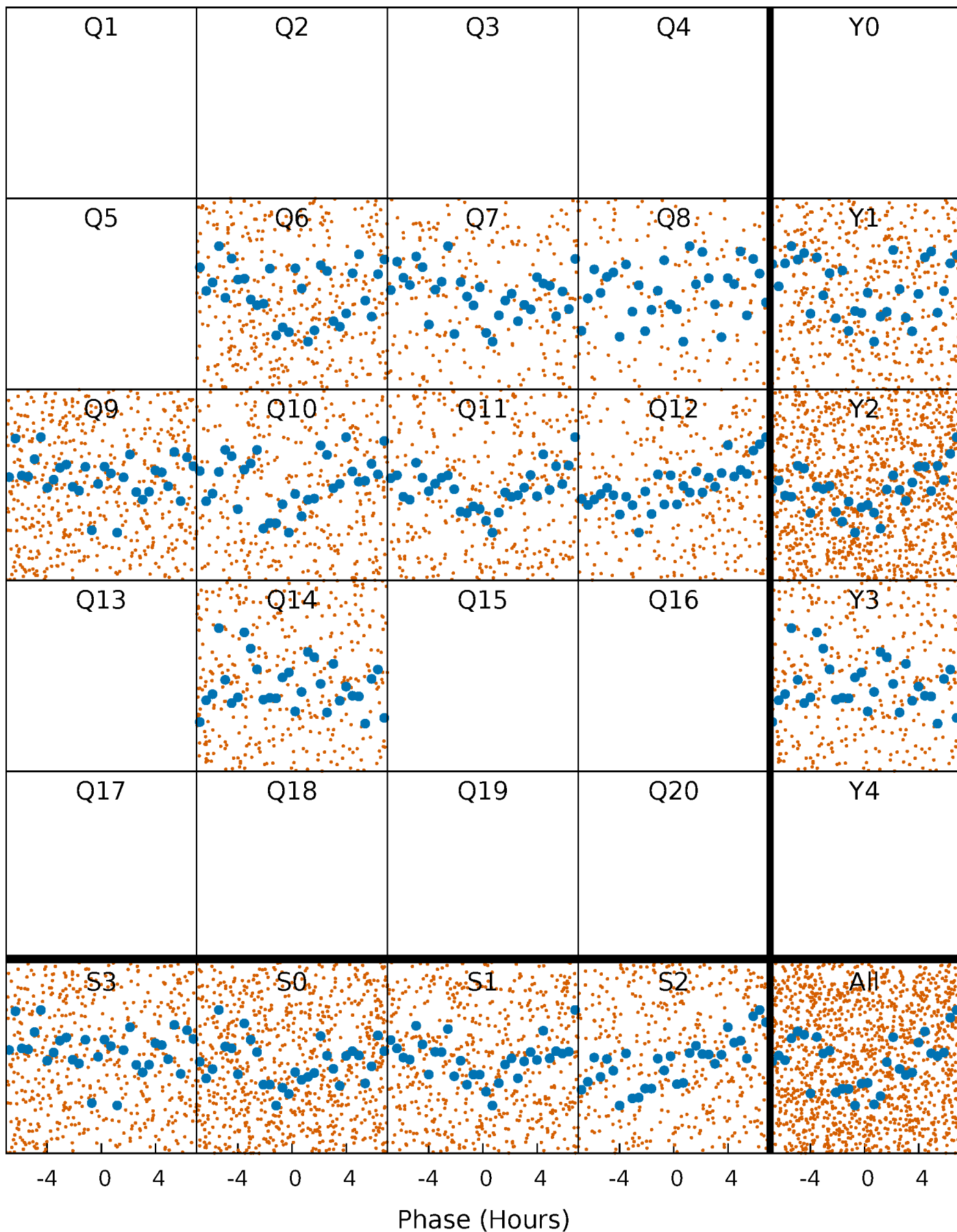


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

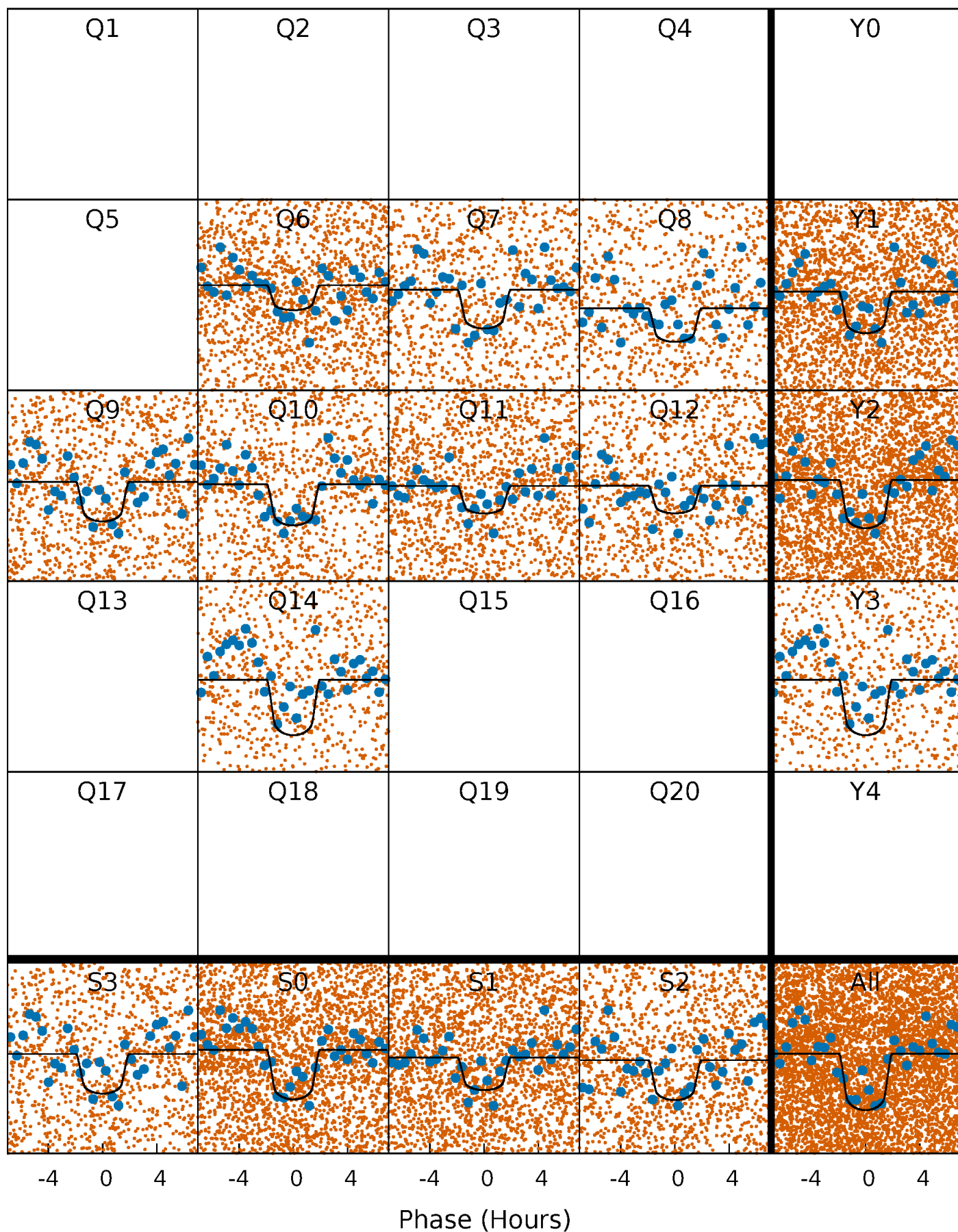
TCE 008264657-01   P= 1.063785 Days    $T_0=132.096475$  (BKJD)





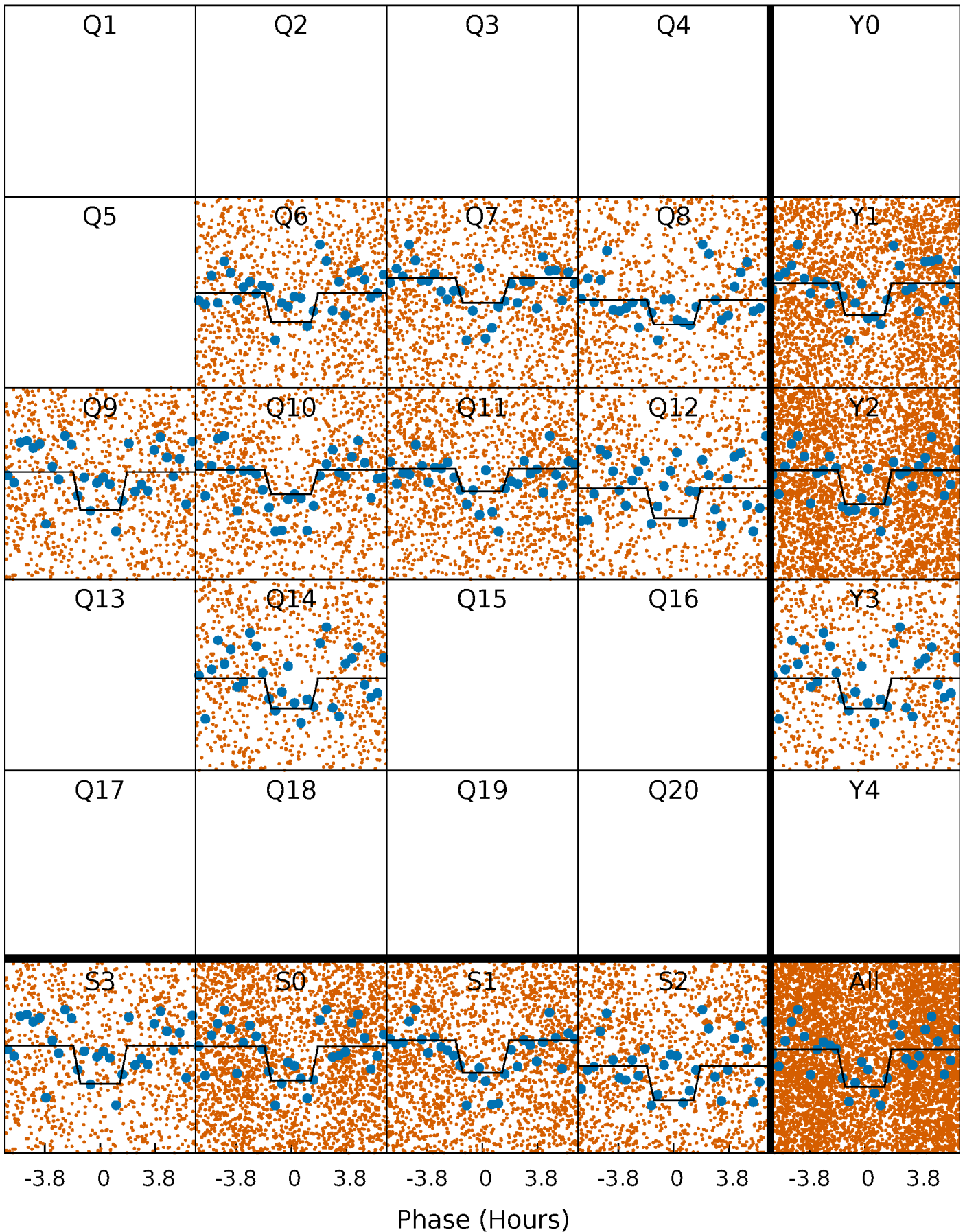
# DV Quarter-Phased Transit Curves

TCE 008264657-01   P= 1.063785 Days    $T_0=132.096475$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

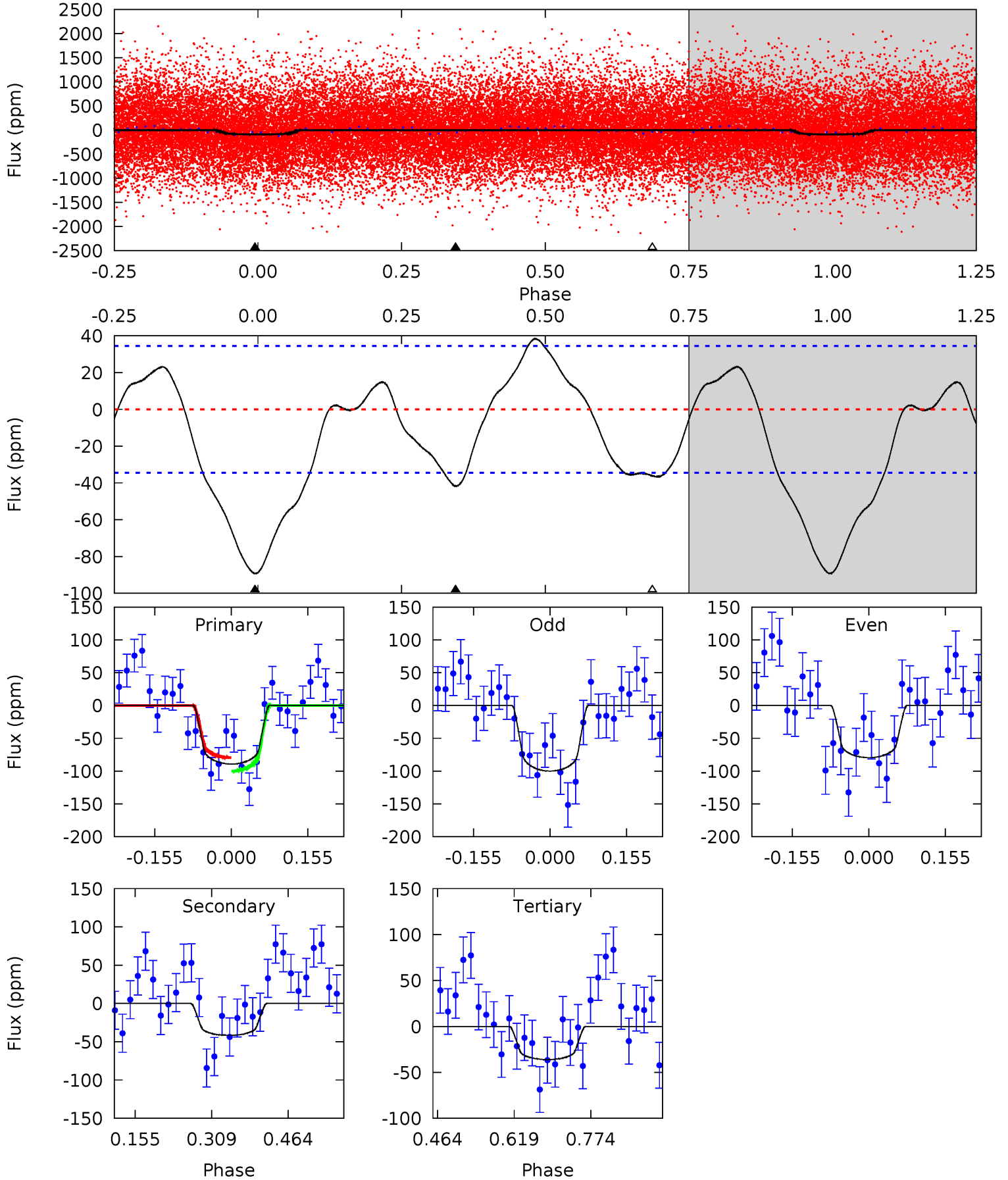
TCE 008264657-01 P= 1.063741 Days  $T_0=132.121107$  (BKJD)



# DV Model-Shift Uniqueness Test

008264657-01, P = 1.063785 Days, E = 132.096475 Days

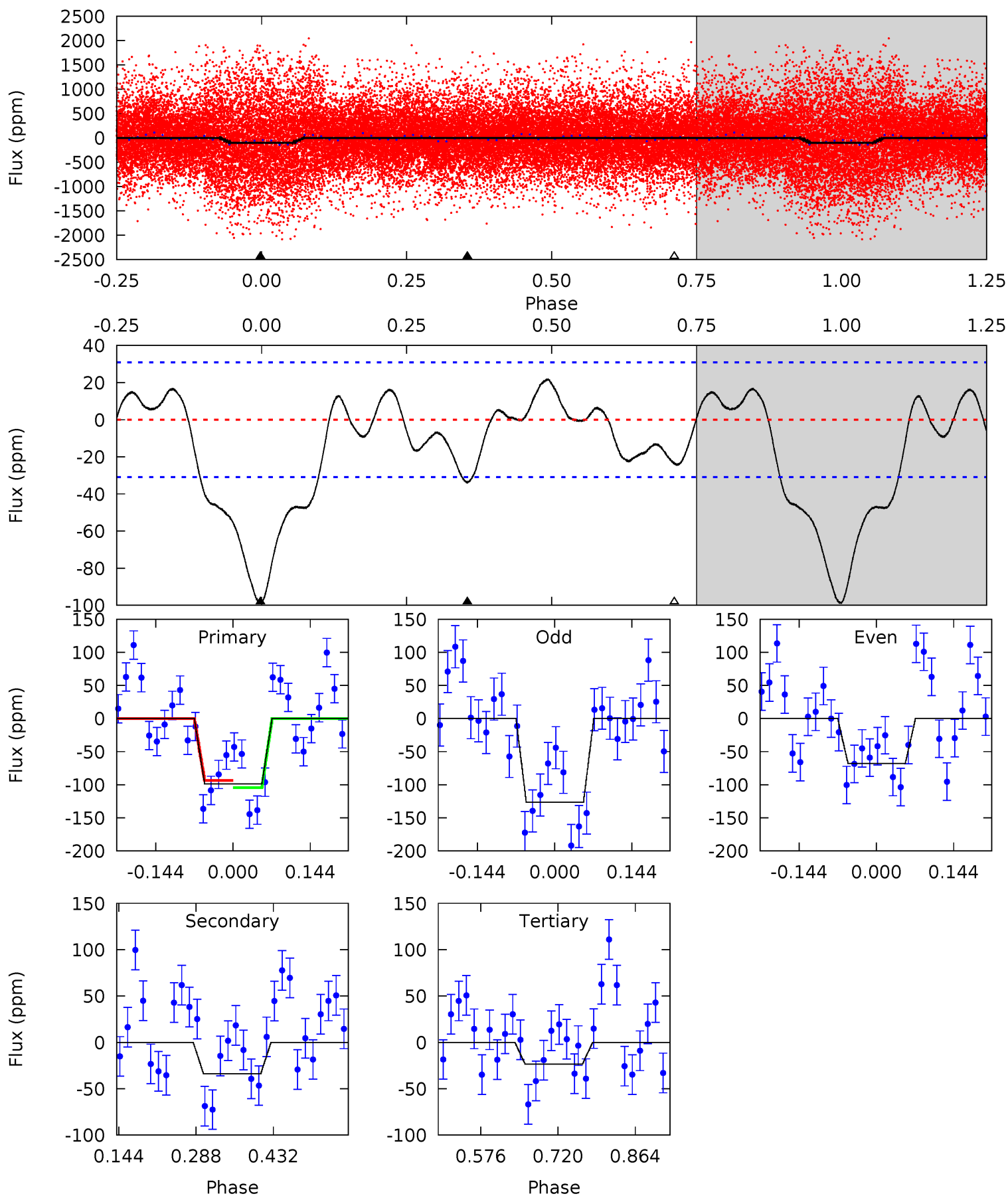
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.41	4.68	0	4.47	1.42	2.87	6.89	11.6	0.73	5.41	1.33	0.87	0.30	1.36



# Alt Model-Shift Uniqueness Test

008264657-01, P = 1.063741 Days, E = 132.121107 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
14.3	4.93	3.42	0	4.49	1.46	1.81	10.9	14.3	1.51	4.93	4.30	1.00	0.18	0.80



### Stellar Parameters For KIC 008264657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$\rho_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6308^{+181}_{-250}$	$3.974^{+0.390}_{-0.130}$	$-0.240^{+0.250}_{-0.300}$	$1.837^{+0.468}_{-0.702}$	$1.160^{+0.188}_{-0.206}$	$0.264^{+0.778}_{-0.119}$
	+3%/-4%	+10%/-3%	+104%/-125%	+25%/-38%	+16%/-18%	+295%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 008264657-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-42 \pm 8$	$2.12^{+1.05}_{-0.95}$	$3511^{+283}_{-393}$	$4615^{+1523}_{-695}$	$2.286^{+5.506}_{-1.283}$
Alt.	$-34 \pm 7$	$1.78^{+1.13}_{-0.80}$	$3516^{+269}_{-386}$	$4805^{+1751}_{-900}$	$2.693^{+6.738}_{-1.704}$

$T_{\text{max}}$  = 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

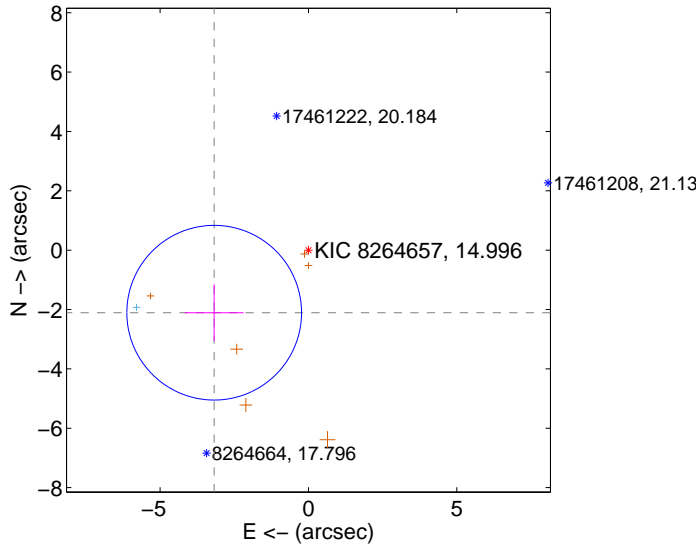
Supplemental centroid analysis for 008264657-01. Kepler magnitude: 15.00. Transit SNR 7.91

There are 1 quarters with good PRF difference image offsets

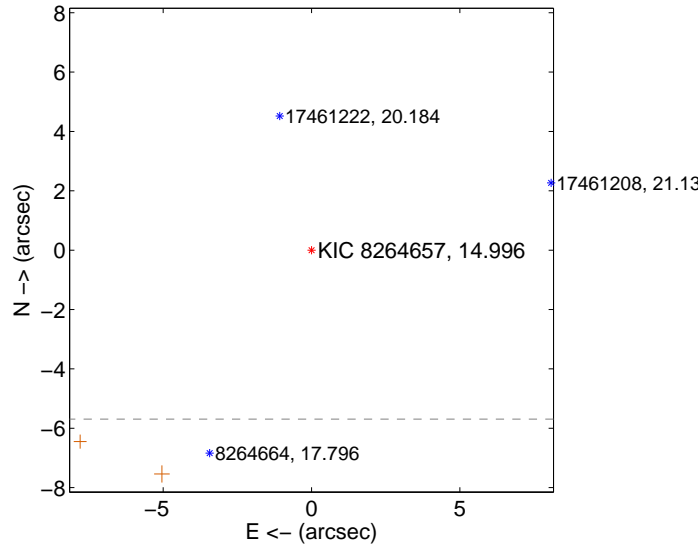
The OOT PRF centroid is offset from the target star catalog position by about 5.80 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.811 \pm 0.981$	3.89	$3.175 \pm 0.994$	$-2.107 \pm 0.951$
PRF-fit source offset from KIC position	$12.726 \pm 0.807$	15.77	$11.383 \pm 0.861$	$-5.691 \pm 0.536$
photometric centroid source offset	$3.96 \pm 0.94$	4.21	$3.84 \pm 0.95$	$-0.97 \pm 0.83$

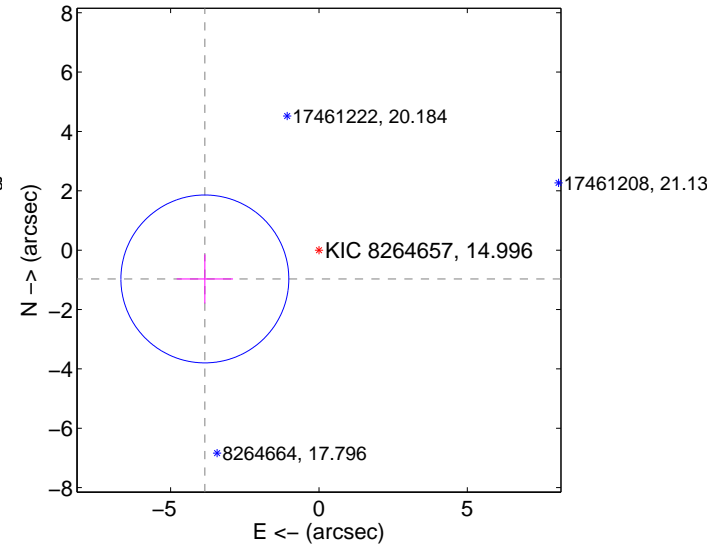
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

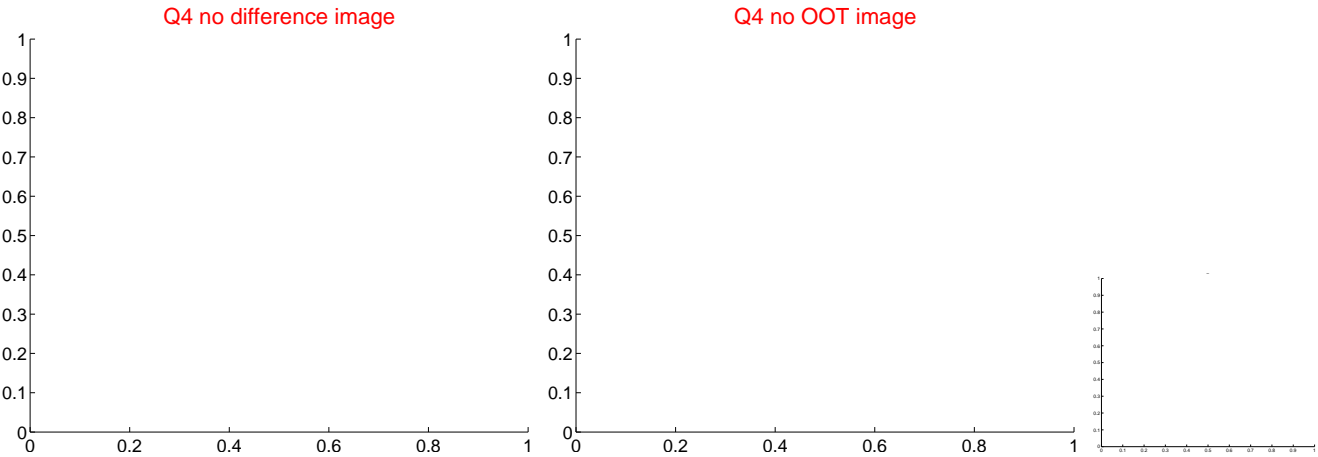
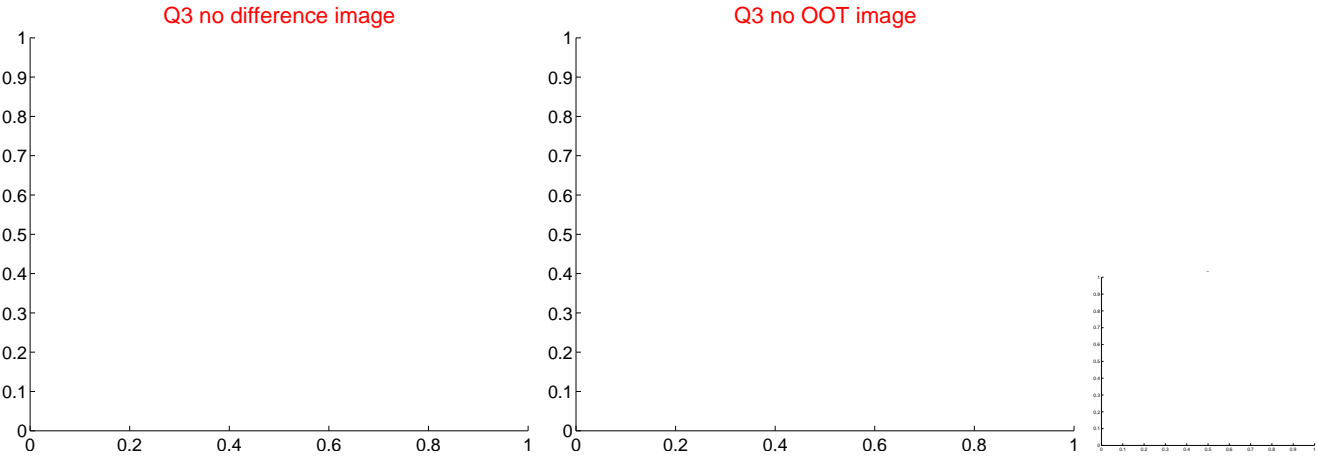
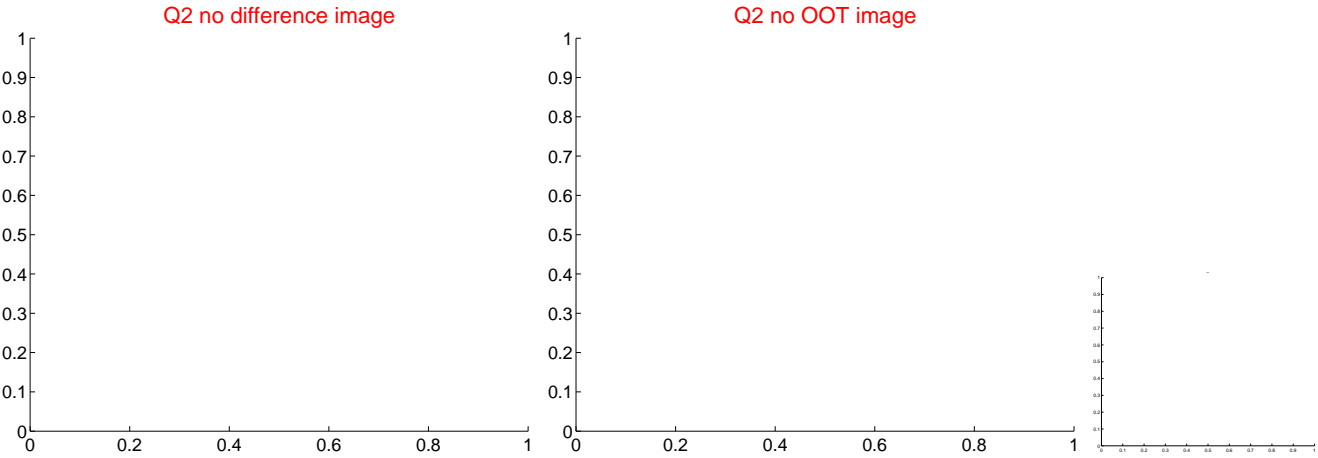
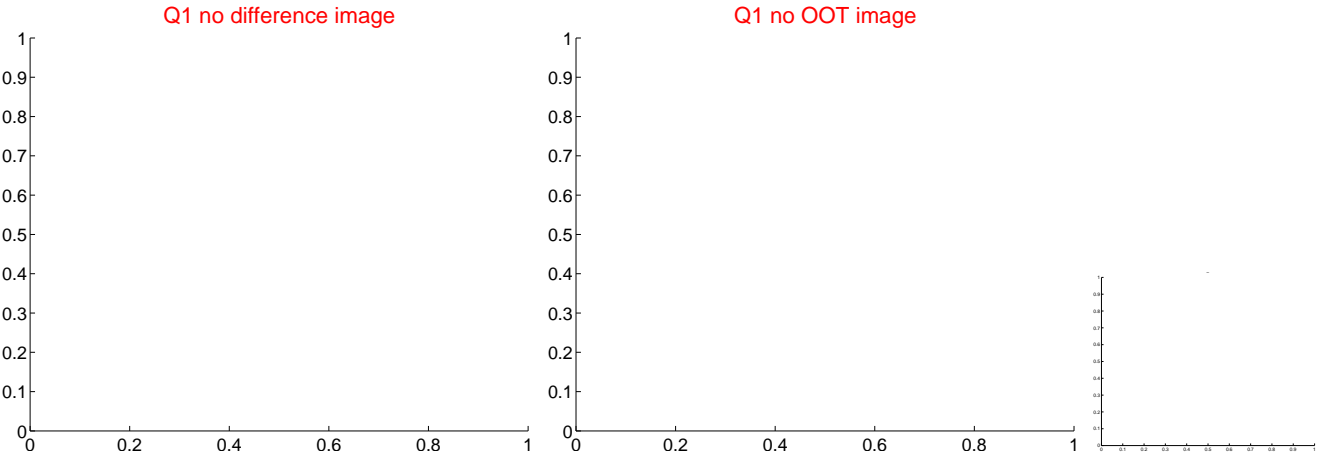


offset from photometric centroids

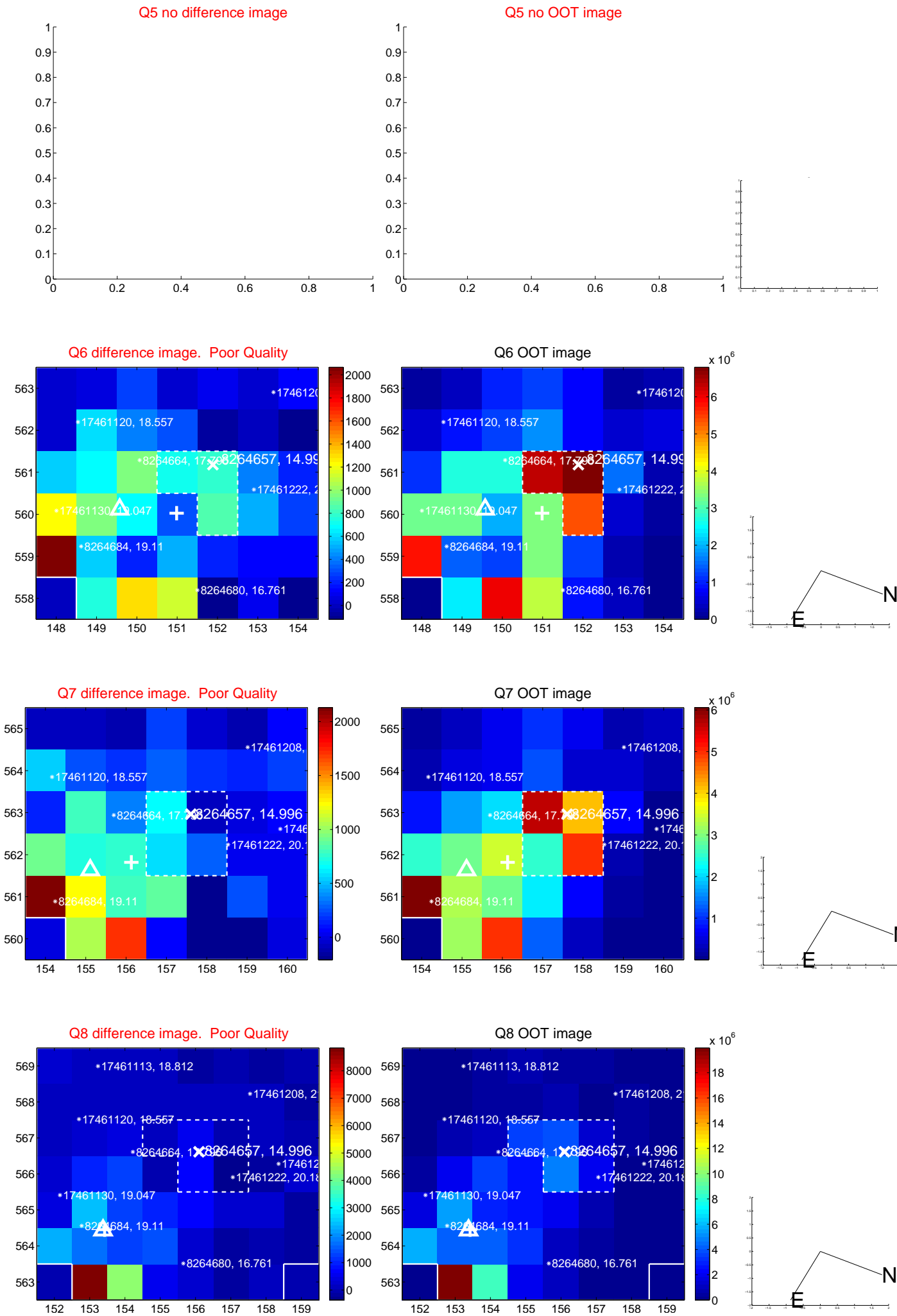


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

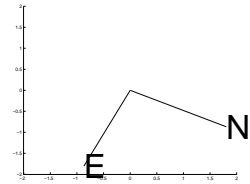
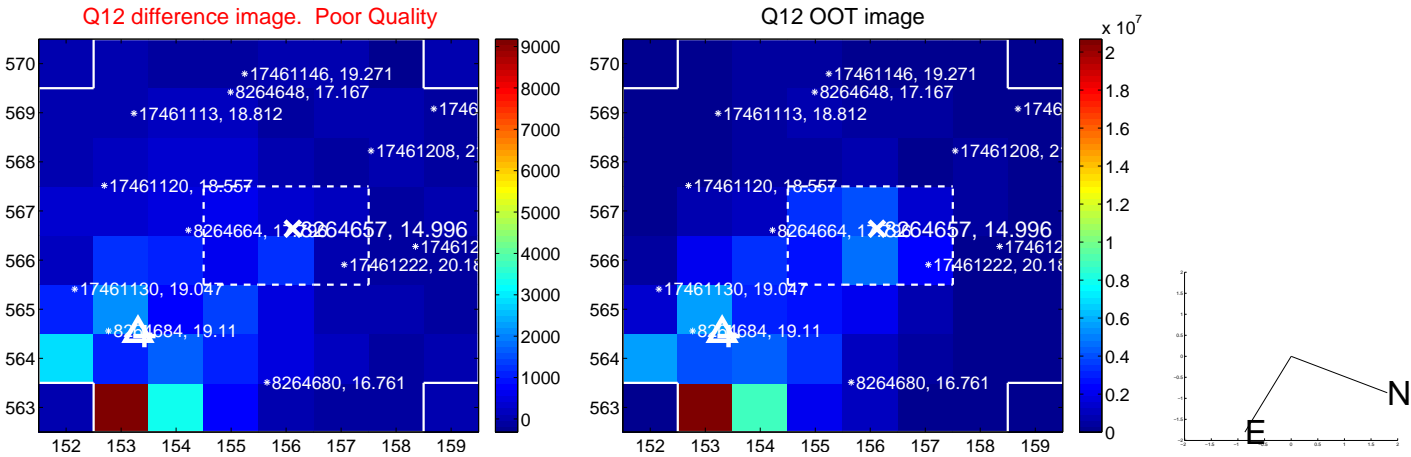
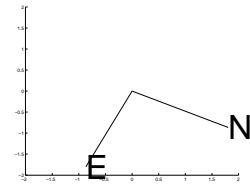
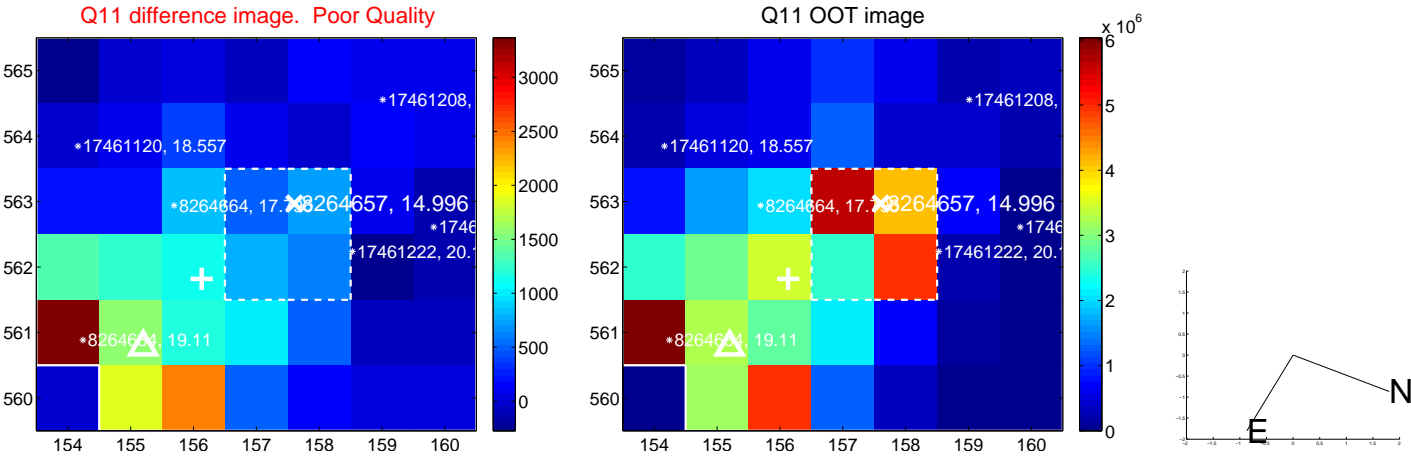
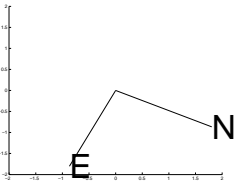
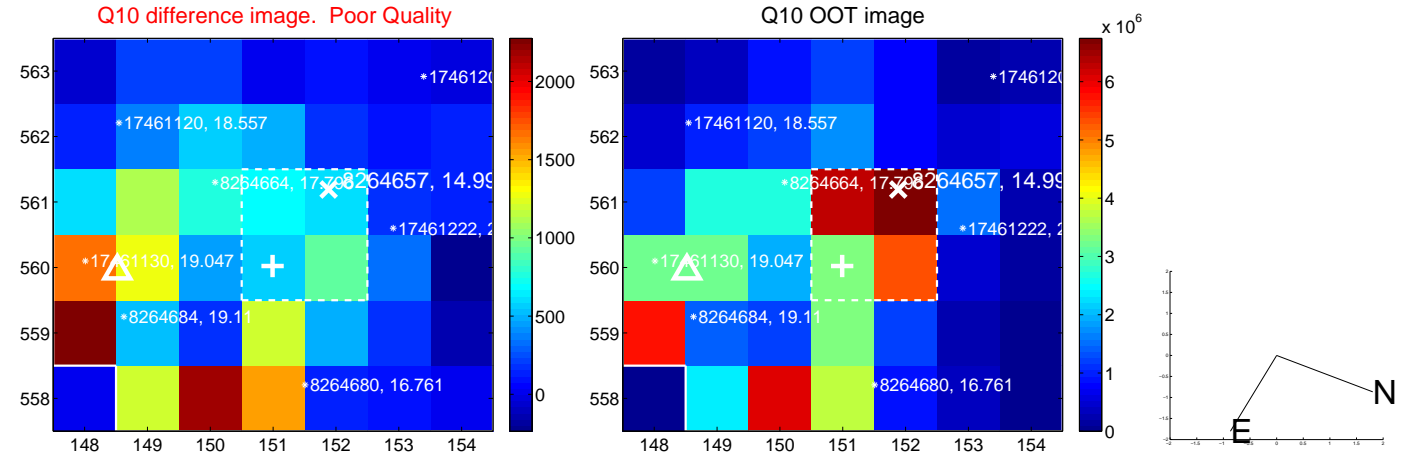
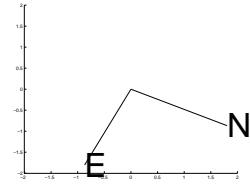
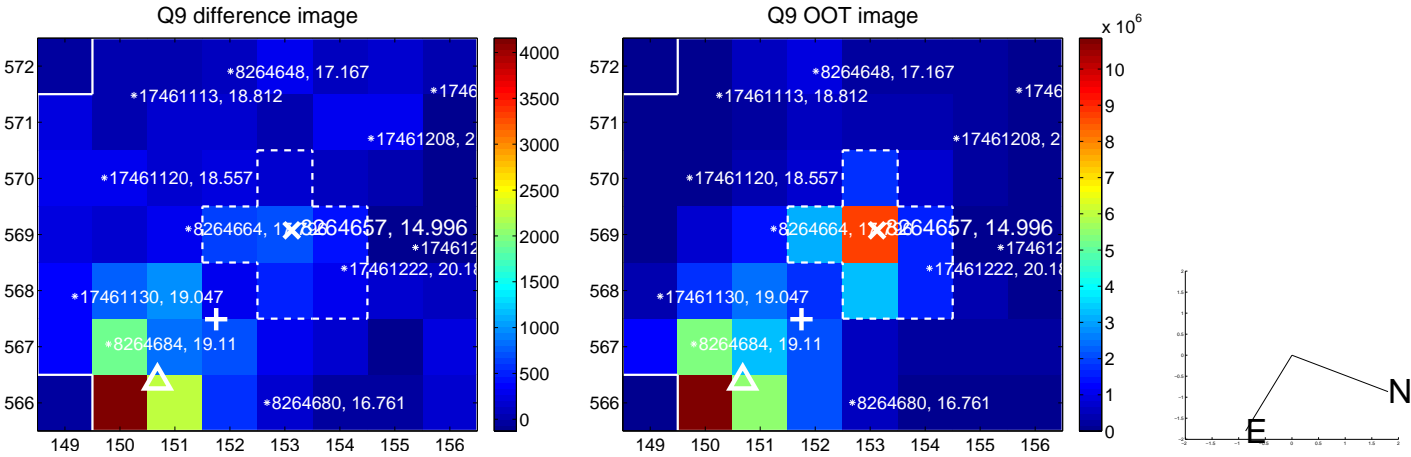
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

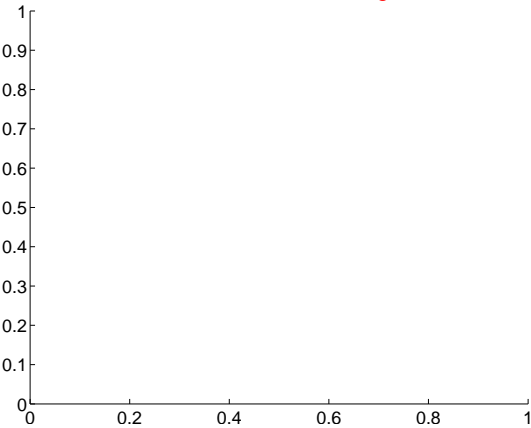


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

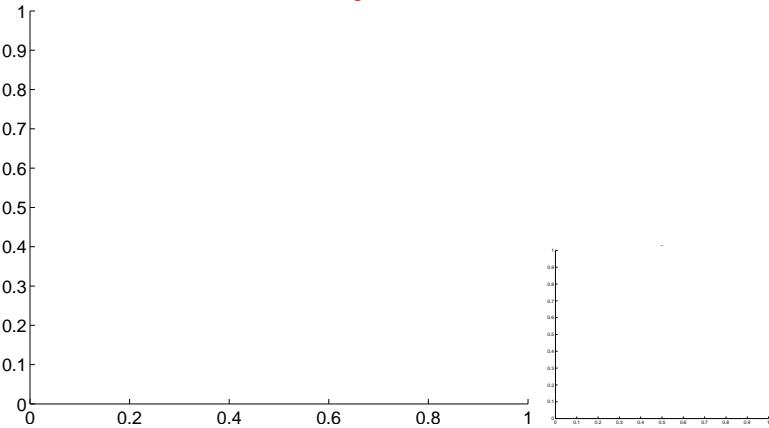


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

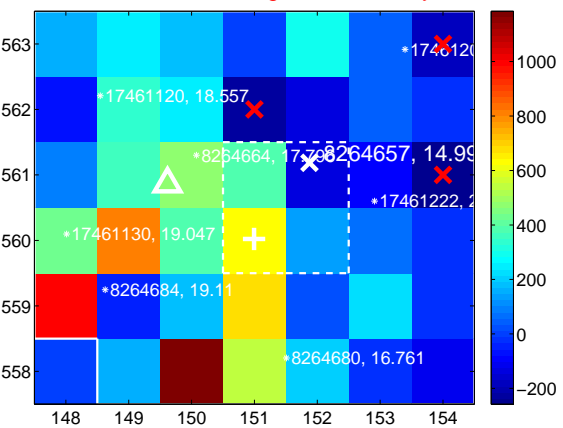
Q13 no difference image



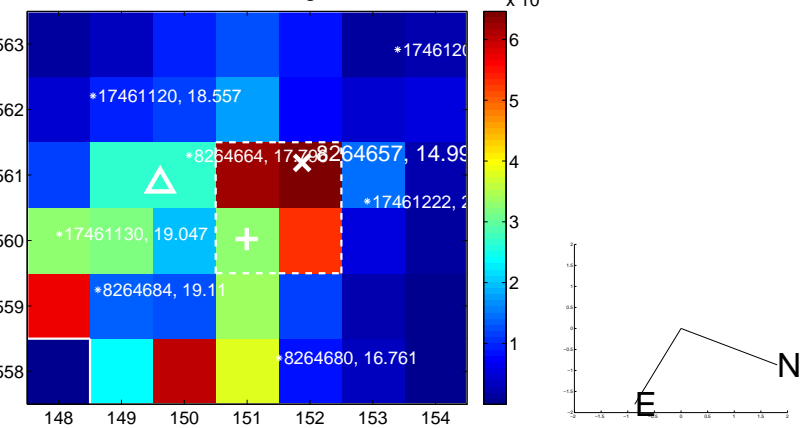
Q13 no OOT image



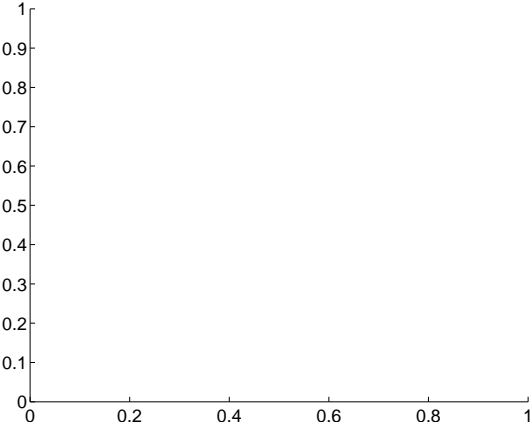
Q14 difference image. Poor Quality



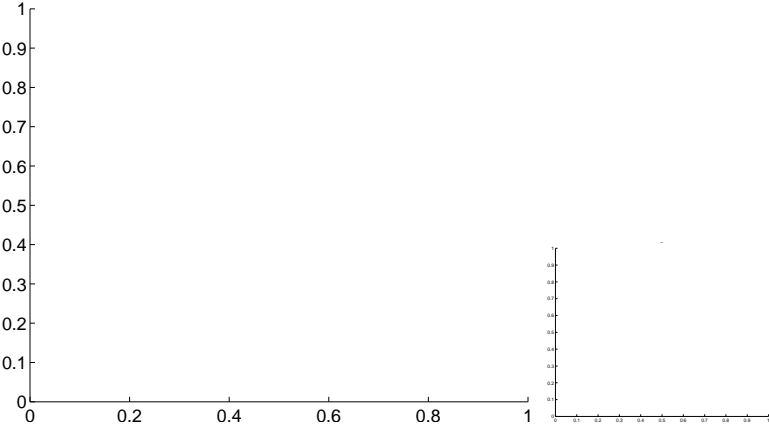
Q14 OOT image



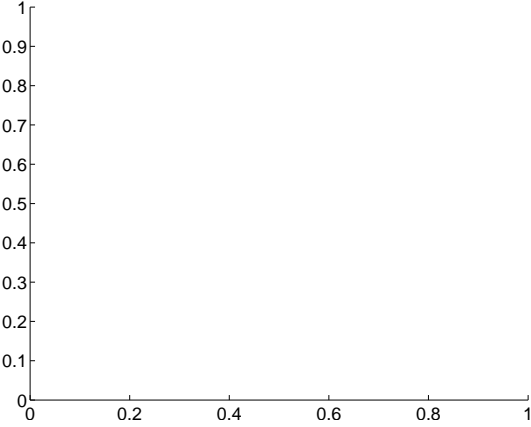
Q15 no difference image



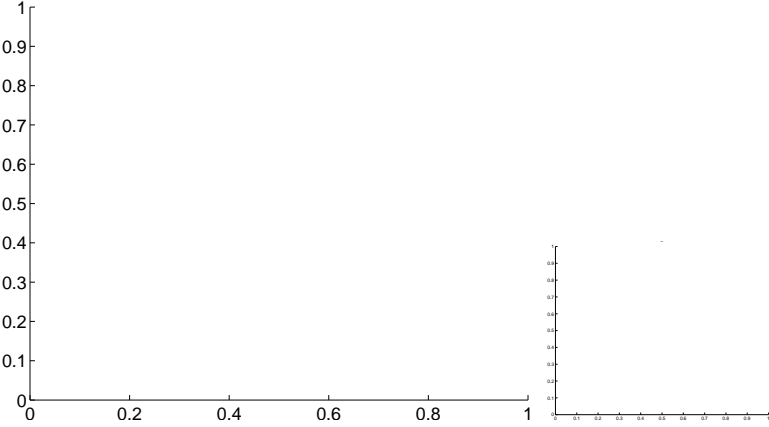
Q15 no OOT image



Q16 no difference image

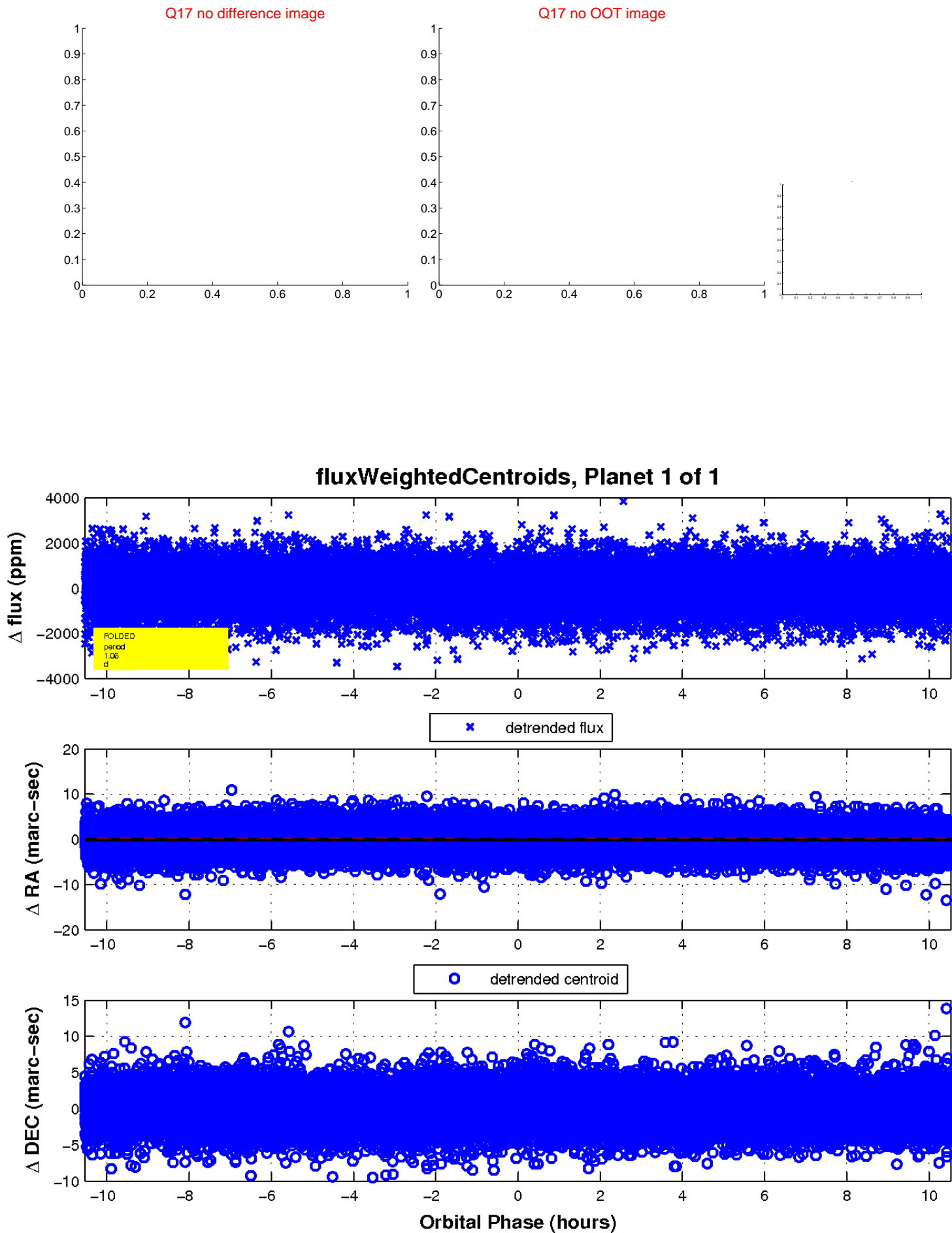


Q16 no OOT image





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



UKIRT Image

Declination

