

# KIC 008361334

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008361334-01	OBS	No	380.779432	168.556205	2347.8	33.178	9.0	10.2	1.00	5780	5.74	0.95

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008361334-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—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.

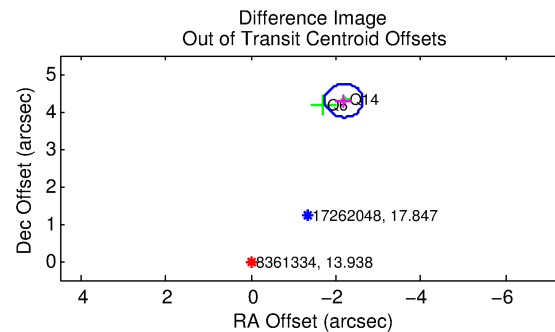
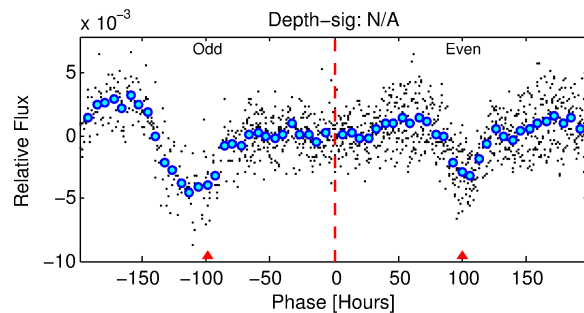
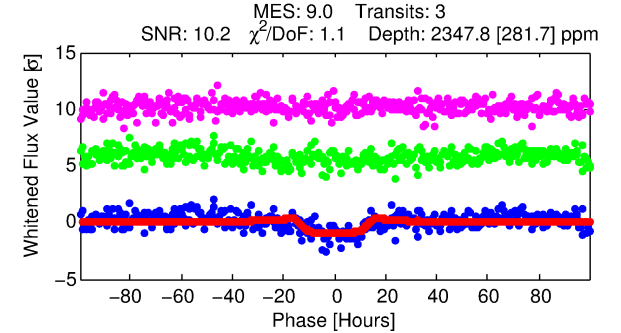
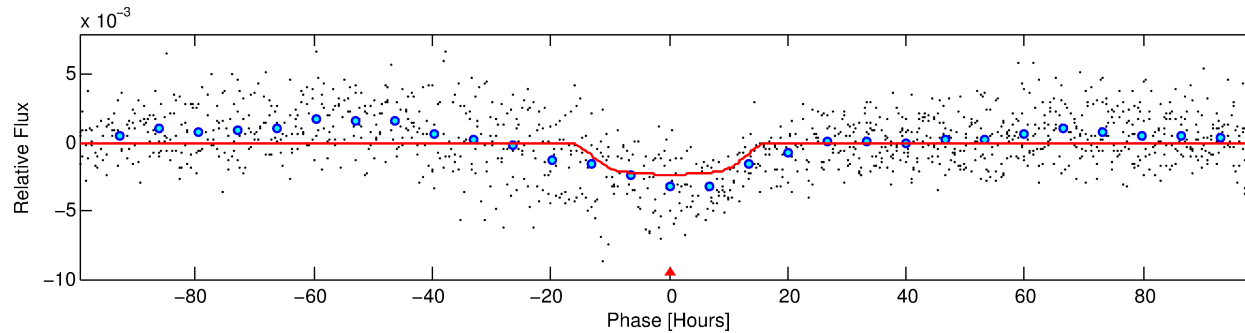
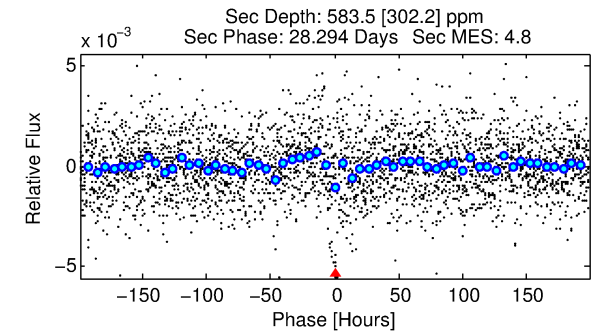
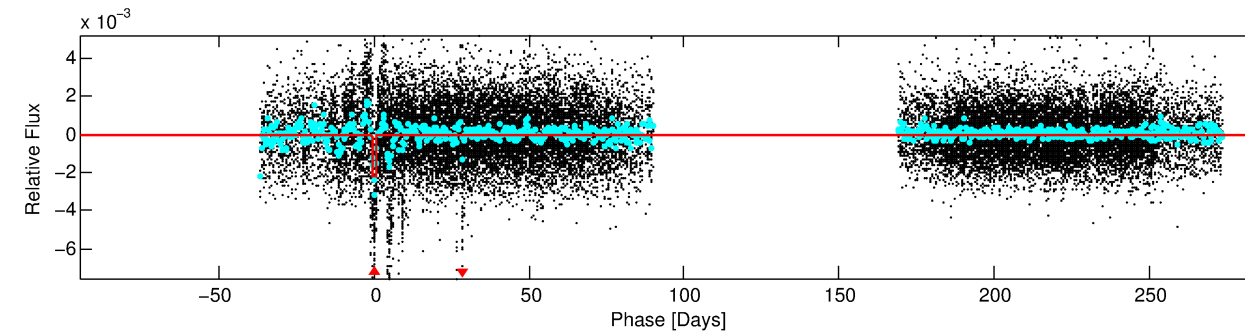
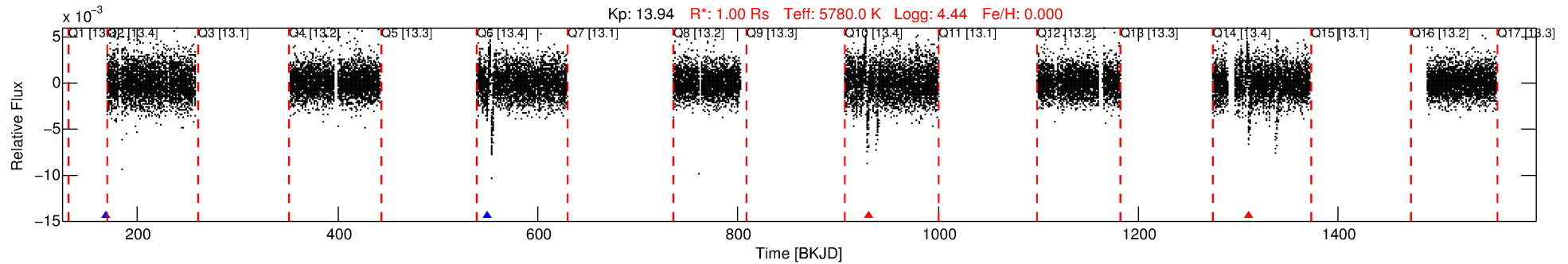
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008361334-01

No Significant Match Found

# DV One-Page Summary

KIC: 8361334 Candidate: 1 of 1 Period: 380.779 d



## DV Fit Results:

Period = 380.77943 [0.03524] d  
Epoch = 168.5562 [0.0763] BKJD  
Rp/R\* = 0.0526 [0.0046]  
a/R\* = 48.63 [10.67]  
b = 0.89 [0.05]  
Seff = 0.95 [0.00]  
Teq = 251 [0] K  
Rp = 5.74 [0.50] Re  
a = 1.0284 [0.0001] AU  
Ag = 10292.79 [5622.12] [1.83σ]  
Teffp = 3916 [535] K [6.85σ]

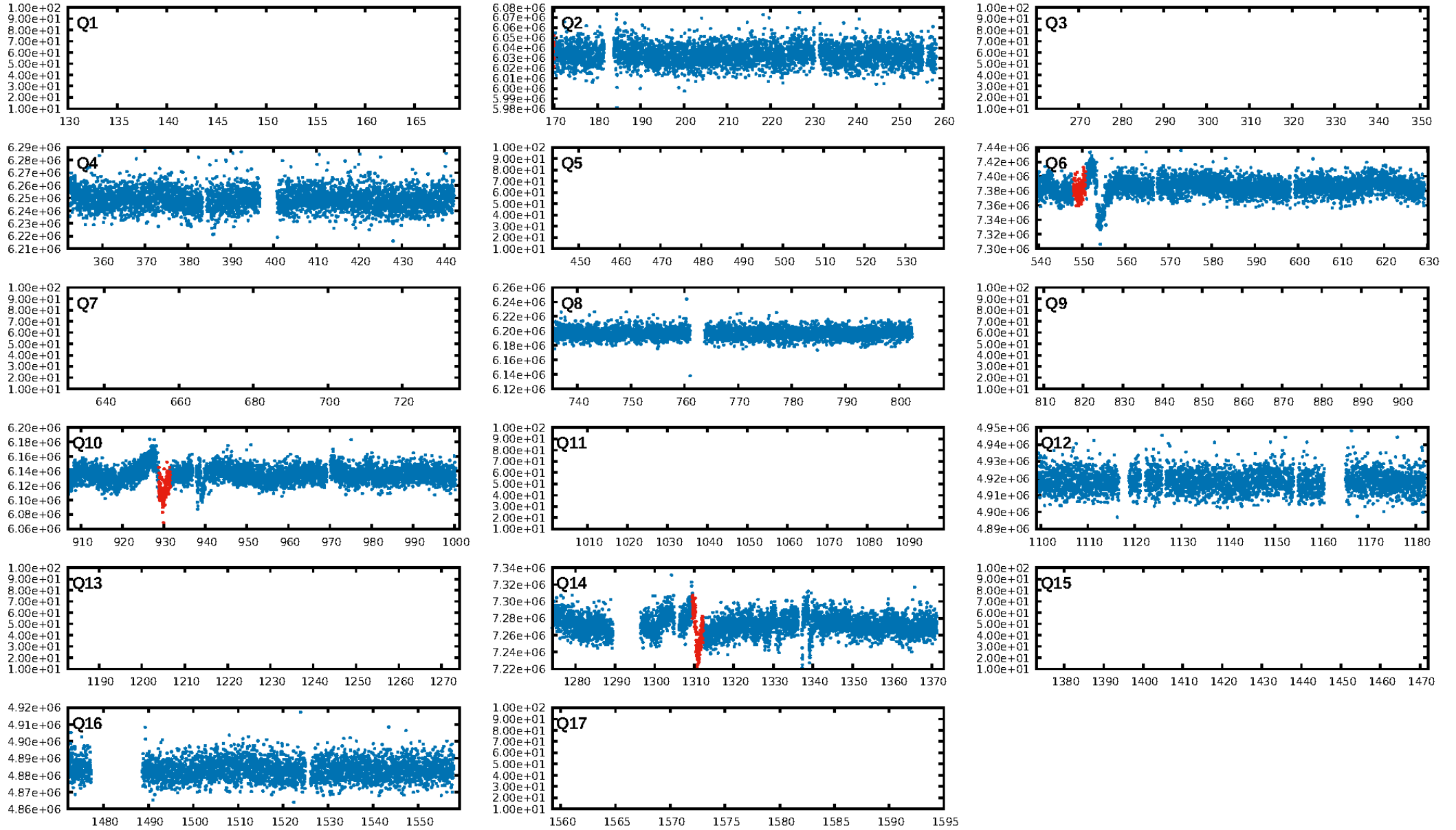
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 99.4%  
Bootstrap-pfa: 8.19e-10  
RollingBand-fgt: 0.33 [1/3]  
GhostDiagnostic-chr: 0.2719  
Centroid-sig: 71.8%  
Centroid-so: 1.213 arcsec [0.92σ]  
OotOffset-rm: 4.823 arcsec [32.34σ]  
KicOffset-rm: 2.454 arcsec [16.78σ]  
OotOffset-st: 2/0/0/0 [2]  
KicOffset-st: 2/0/0/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [2/2]

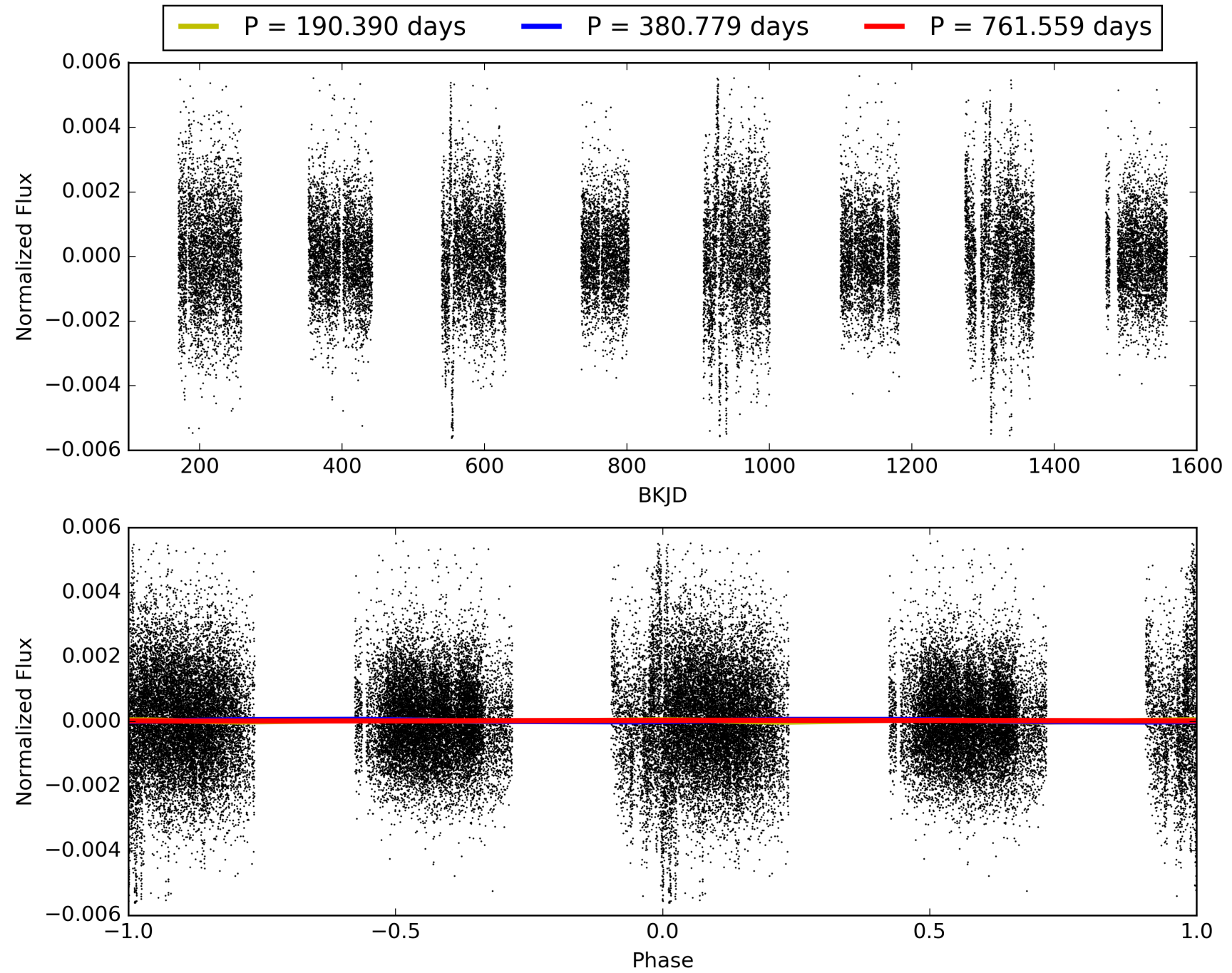
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:37:42 Z

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

# TCE 008361334-01, PDC Light Curves

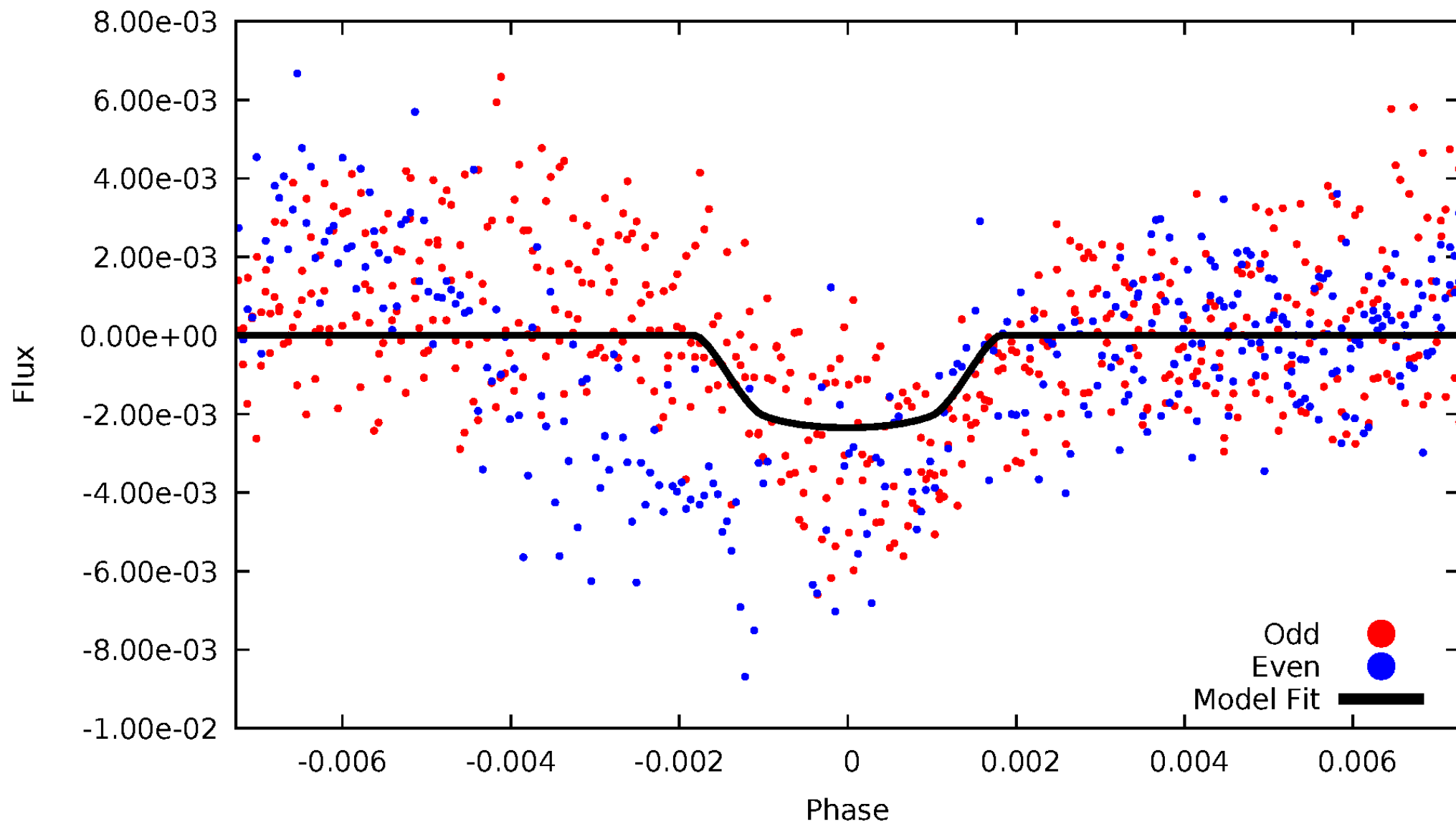


TCE 008361334-01



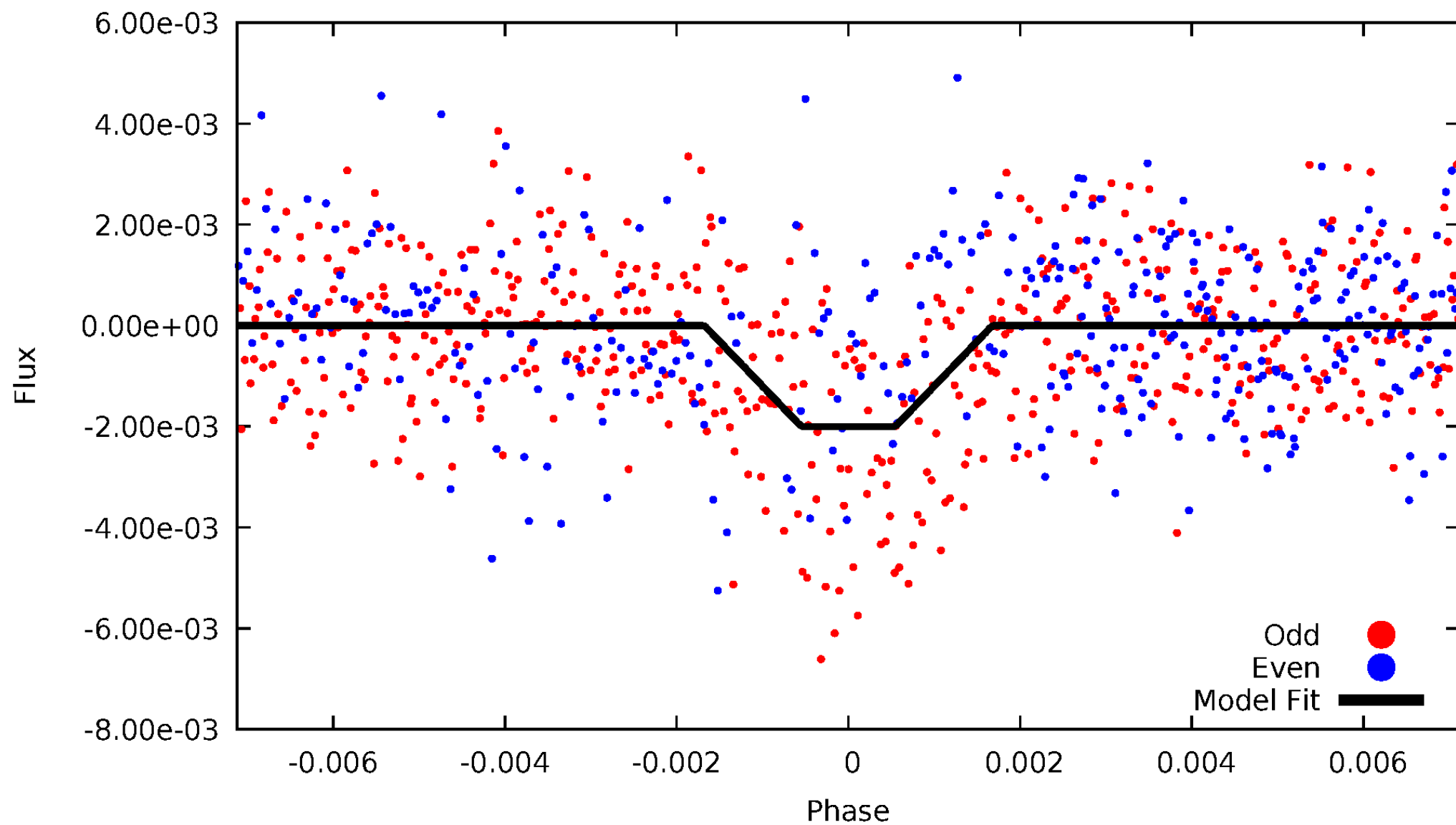
# DV Odd/Even

TCE 008361334-01

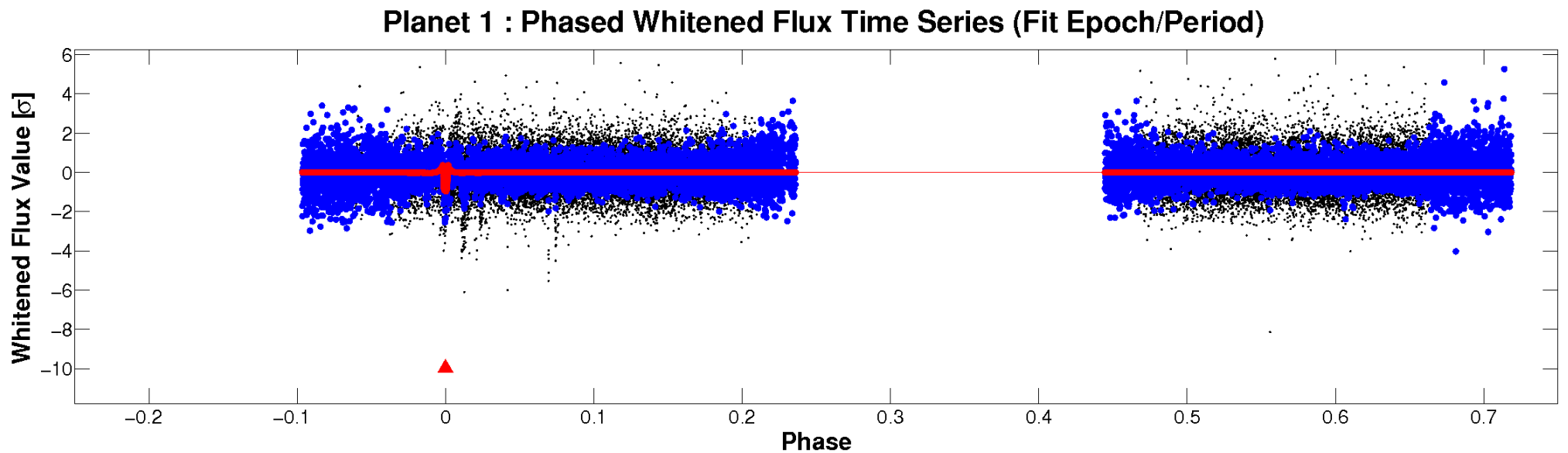
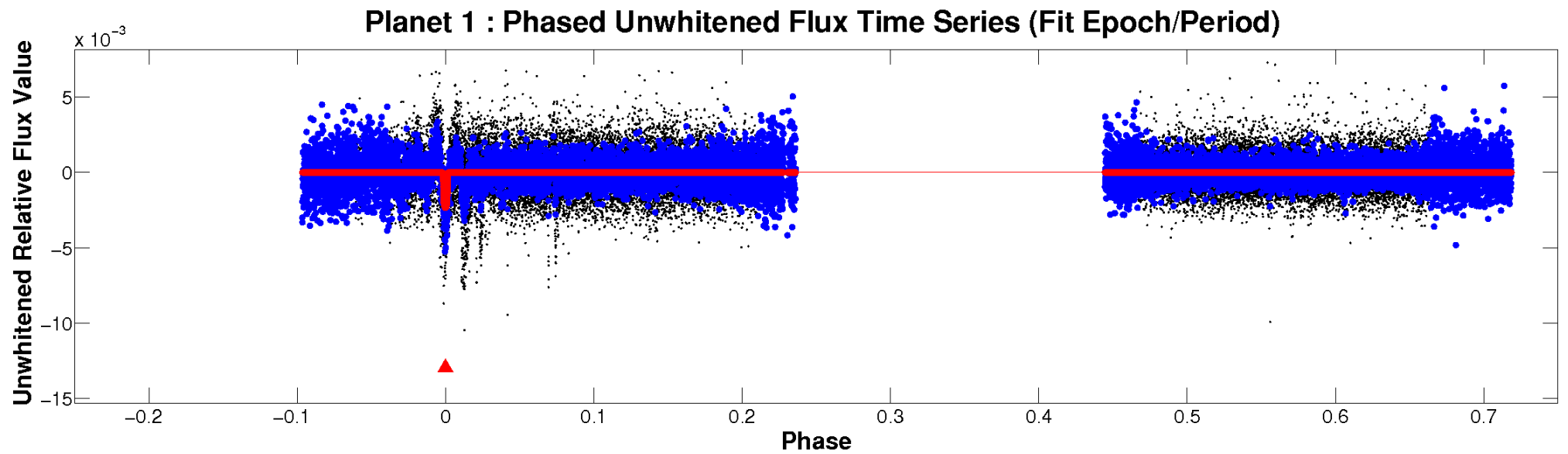


# ALT Odd/Even

TCE 008361334-01

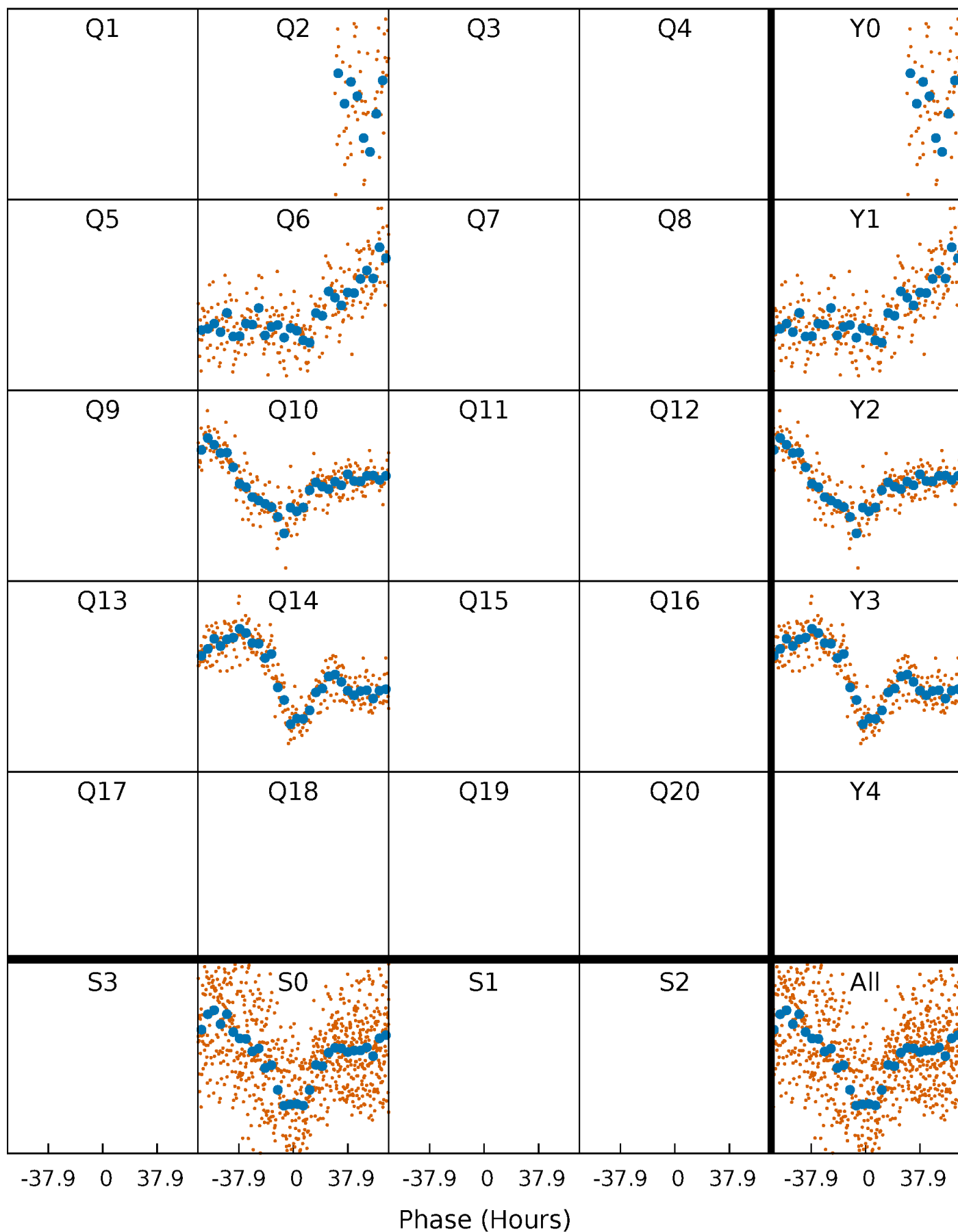


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

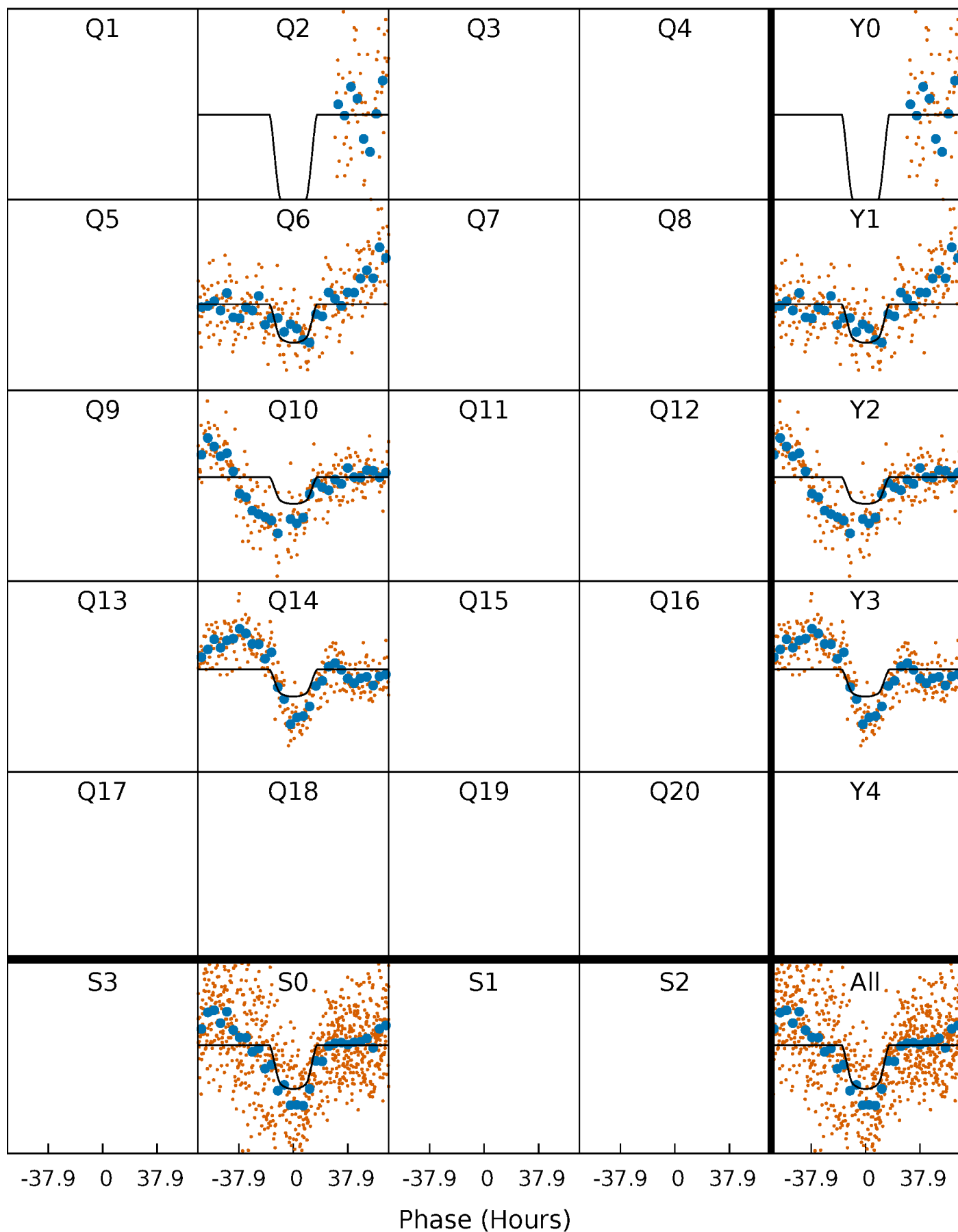
TCE 008361334-01 P=380.779432 Days  $T_0=168.556205$  (BKJD)





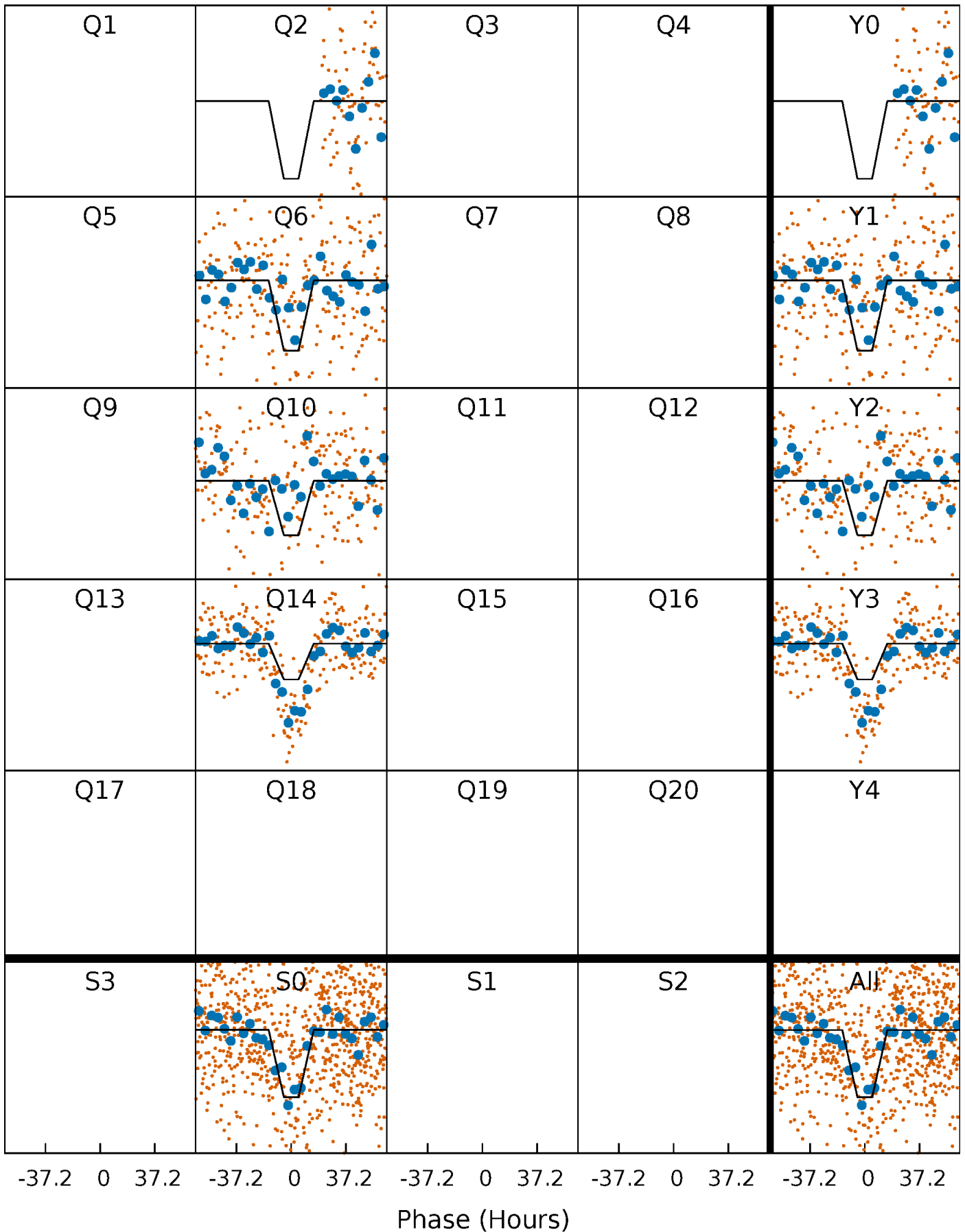
# DV Quarter-Phased Transit Curves

TCE 008361334-01 P=380.779432 Days  $T_0=168.556205$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

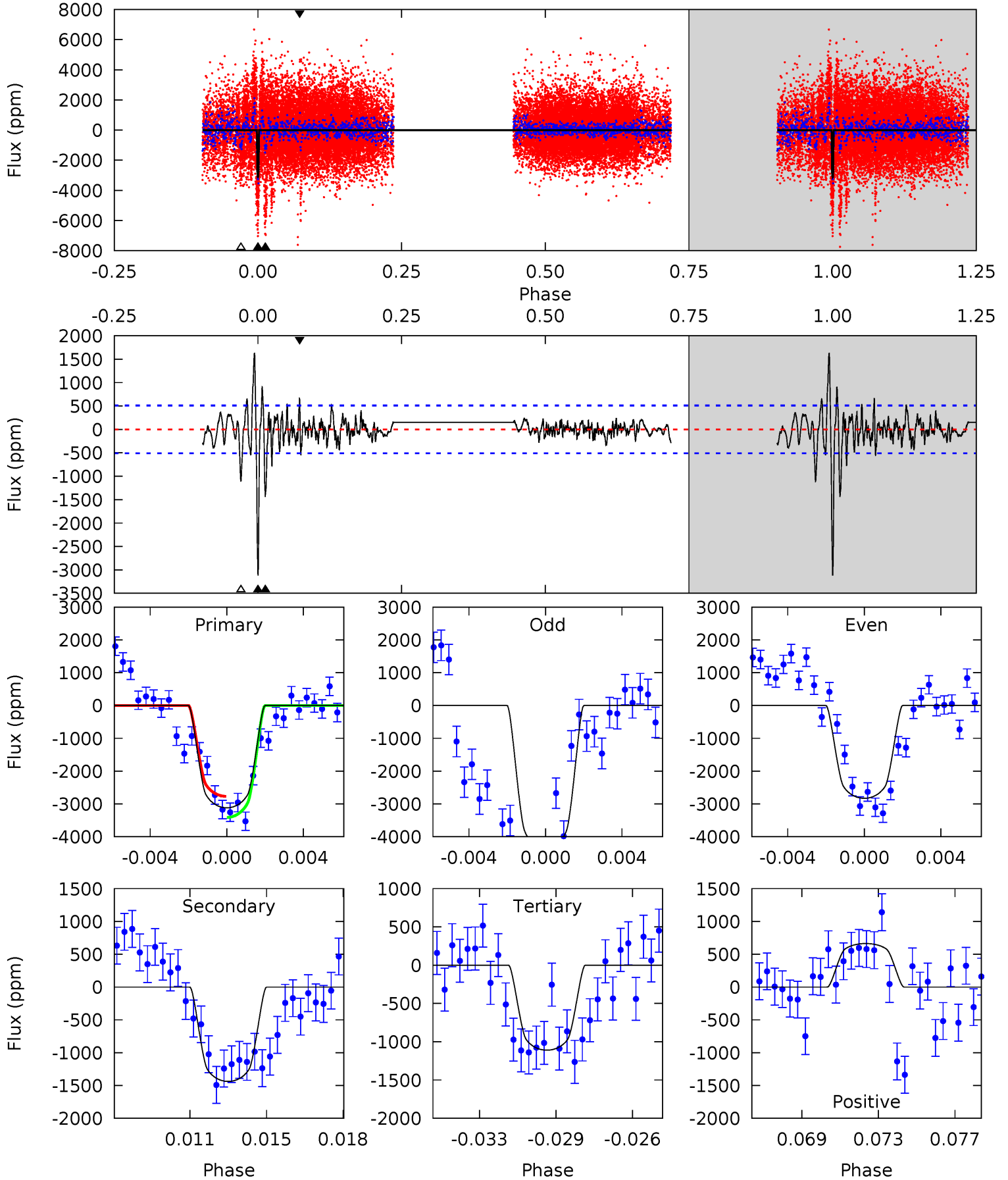
TCE 008361334-01 P=380.649978 Days  $T_0=168.929118$  (BKJD)



# DV Model-Shift Uniqueness Test

008361334-01, P = 380.779432 Days, E = 168.556205 Days

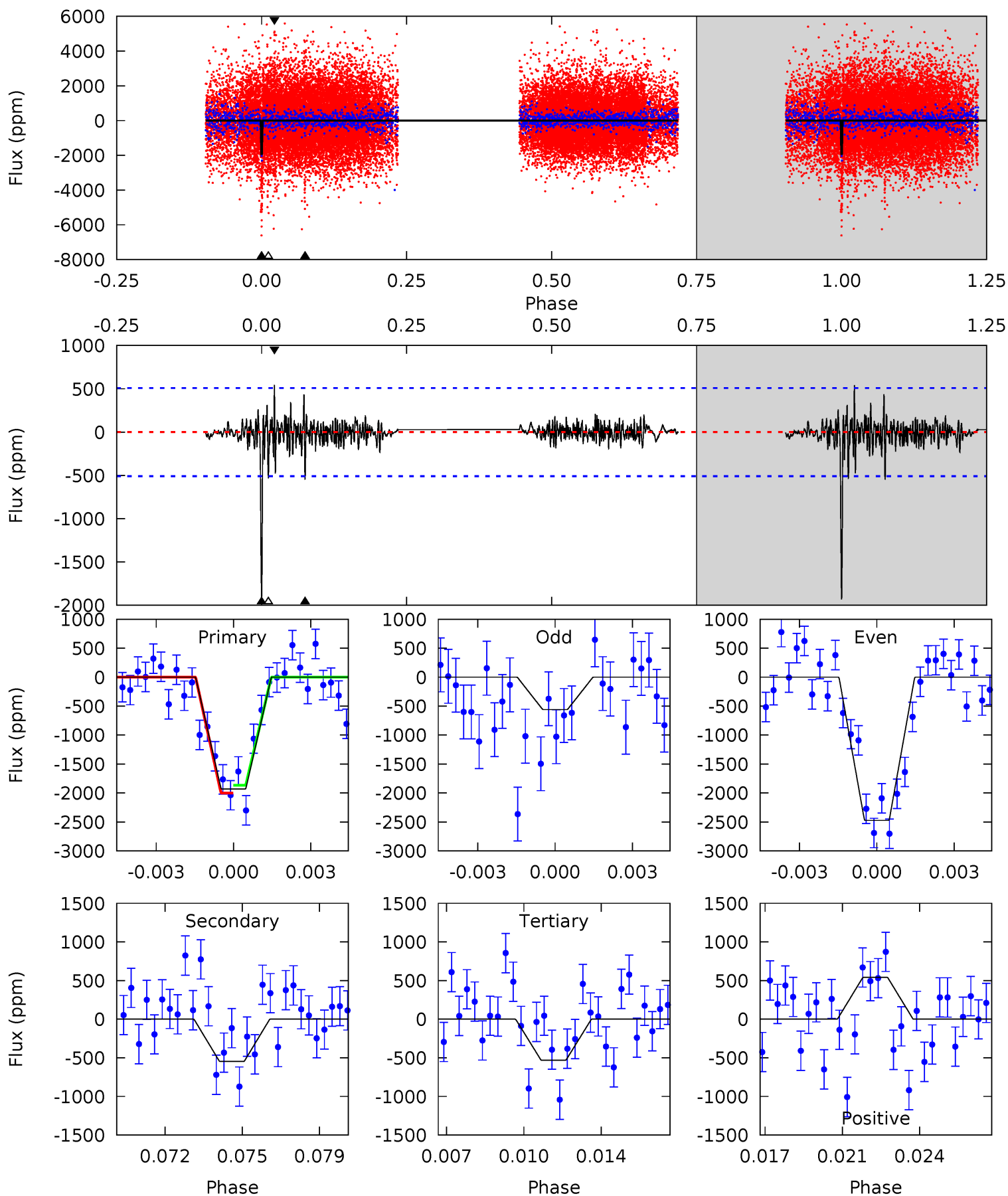
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	14.7	11.4	6.79	5.22	2.91	2.37	20.6	25.2	3.36	7.94	7.30	0.86	0.34	3.23



# Alt Model-Shift Uniqueness Test

008361334-01, P = 380.649978 Days, E = 168.929118 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
19.8	5.62	5.47	5.56	5.23	2.93	0.99	14.4	14.3	0.15	0.06	8.80	2.00	0.22	0.71



### Stellar Parameters For KIC 008361334

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 008361334-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1438 \pm 98$	$5.76^{+0.64}_{-0.68}$	$352^{+16}_{-17}$	$4997^{+261}_{-219}$	$25267^{+6971}_{-4994}$
Alt.	$-547 \pm 97$	$4.91^{+0.60}_{-0.58}$	$352^{+16}_{-15}$	$4380^{+269}_{-245}$	$13139^{+4775}_{-3337}$

$T_{\text{max}}$  = 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

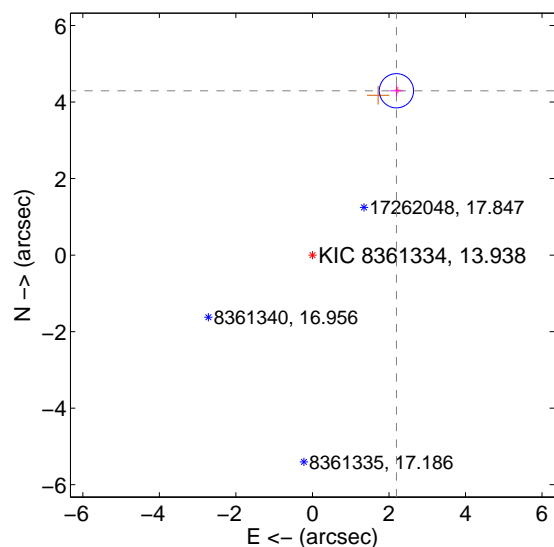
Supplemental centroid analysis for 008361334-01. Kepler magnitude: 13.94. Transit SNR 10.19

There are 0 quarters with good PRF difference image offsets

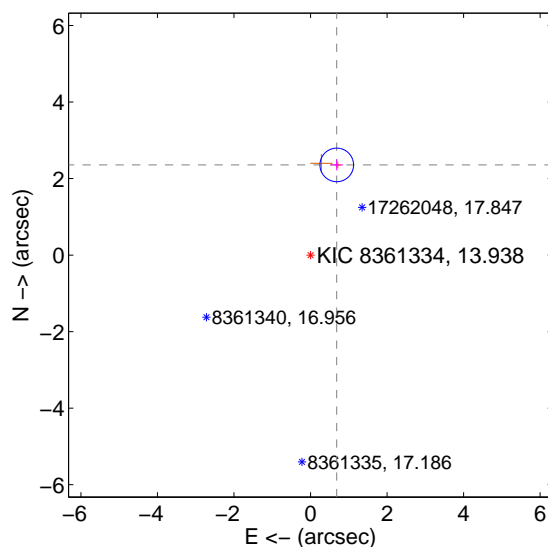
The OOT PRF centroid is offset from the target star catalog position by about 2.47 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.823 \pm 0.149$	<b>32.34</b>	$-2.194 \pm 0.166$	$4.294 \pm 0.145$
PRF-fit source offset from KIC position	$2.454 \pm 0.146$	<b>16.78</b>	$-0.685 \pm 0.166$	$2.357 \pm 0.145$
photometric centroid source offset	$1.21 \pm 1.32$	0.92	$-0.31 \pm 1.02$	$-1.17 \pm 1.34$

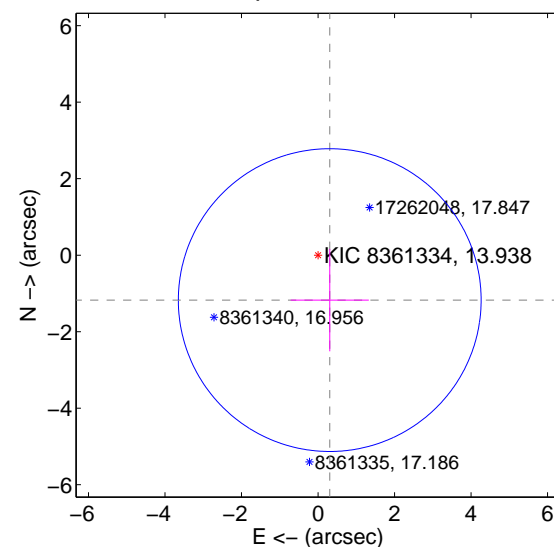
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

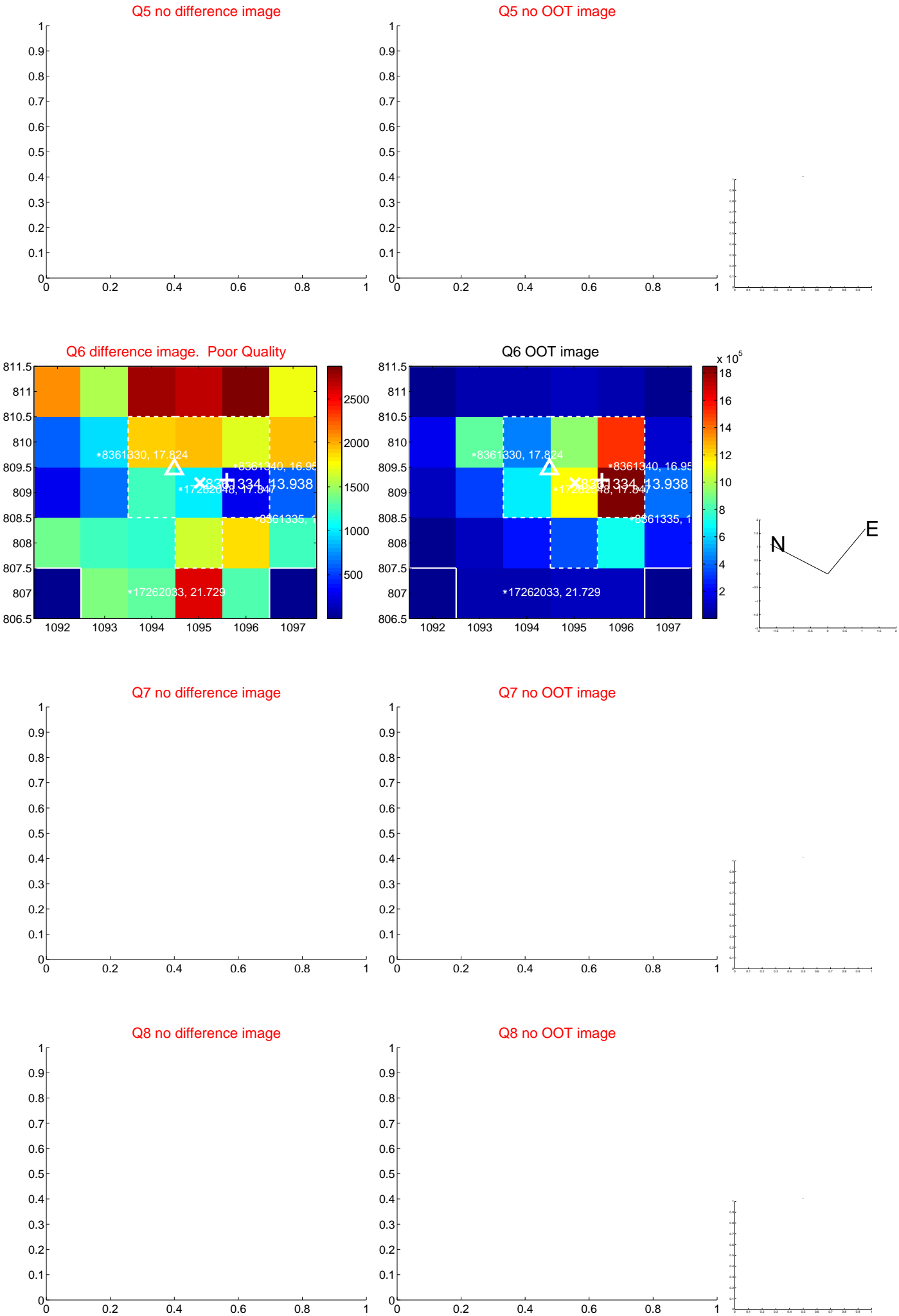


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

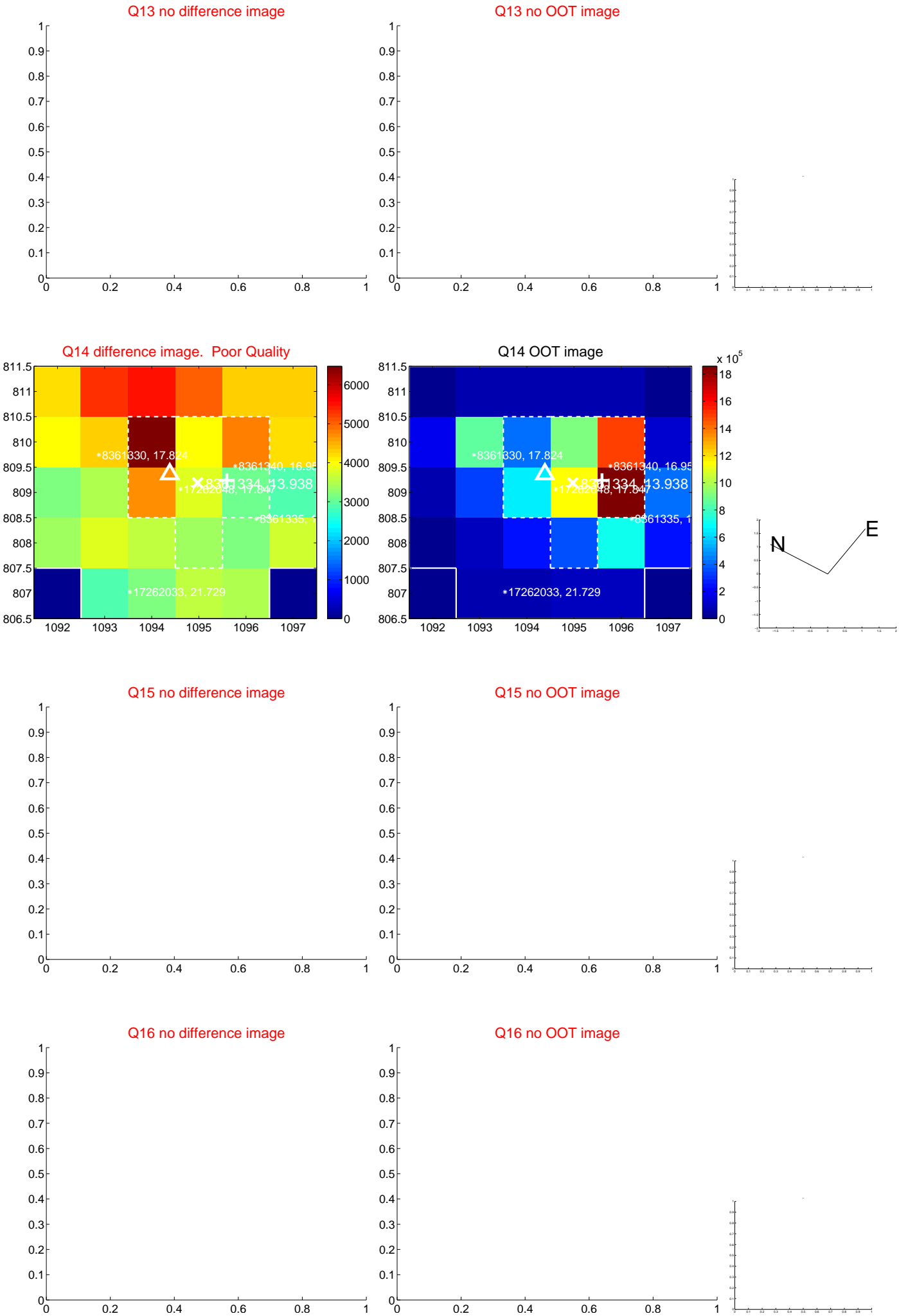




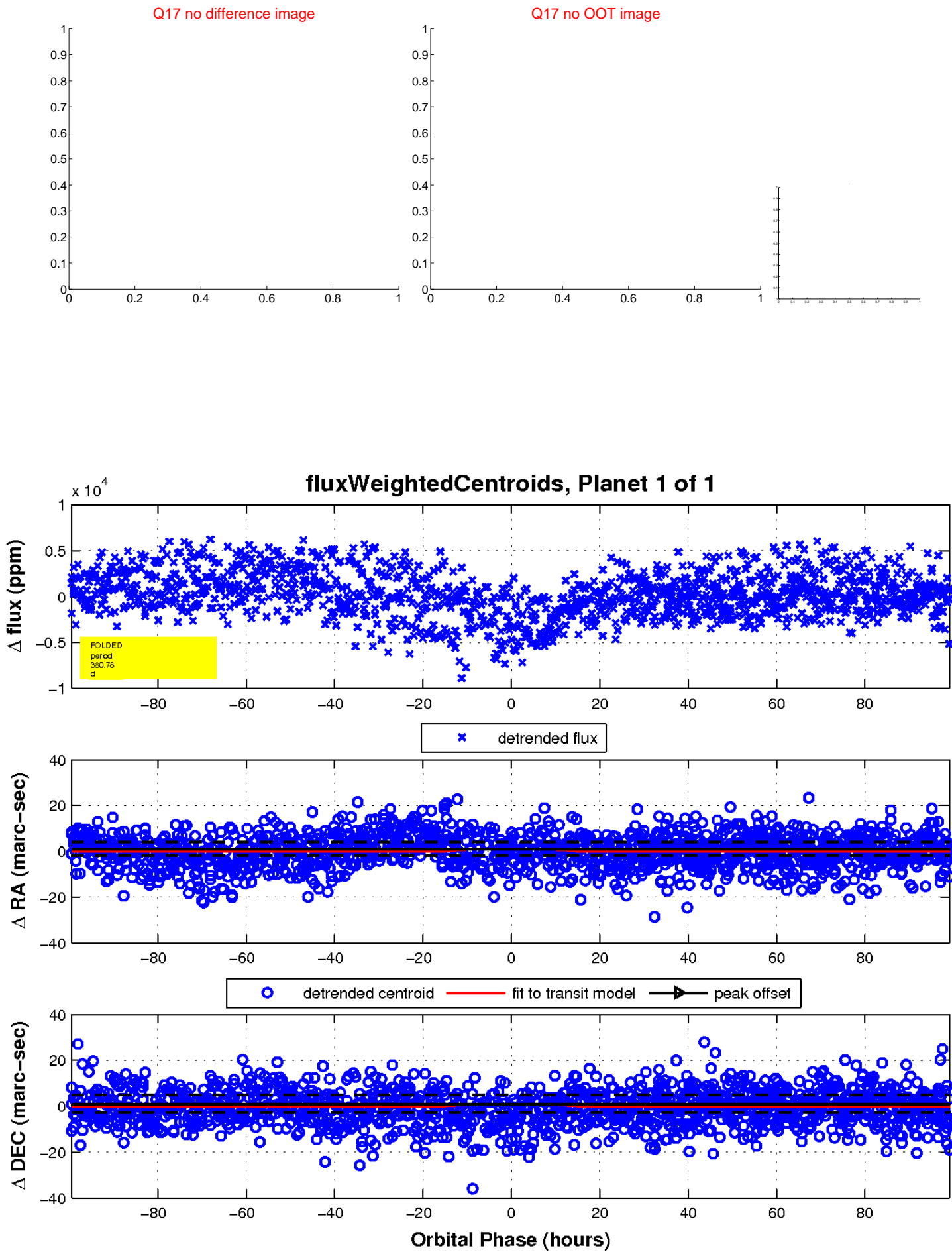
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

