

# KIC 008036461

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008036461-01	OBS	No	369.717030	232.100843	837.9	19.176	7.8	8.4	1.16	6612	3.91	2.02

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008036461-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—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.

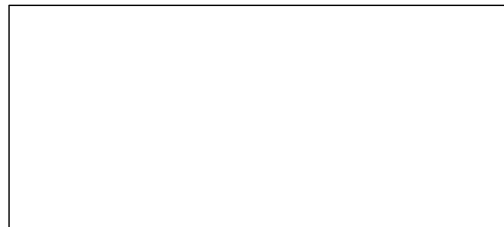
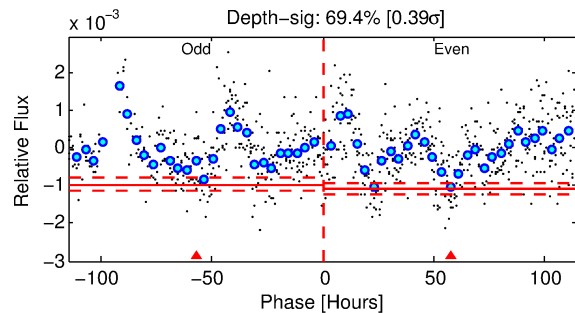
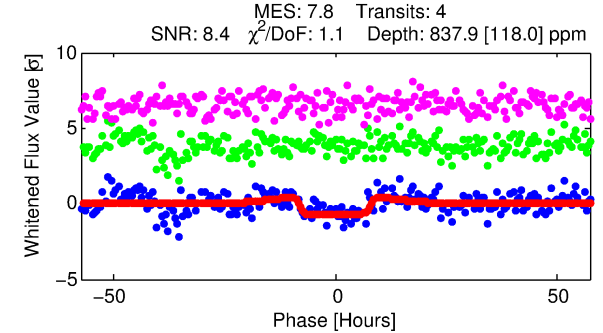
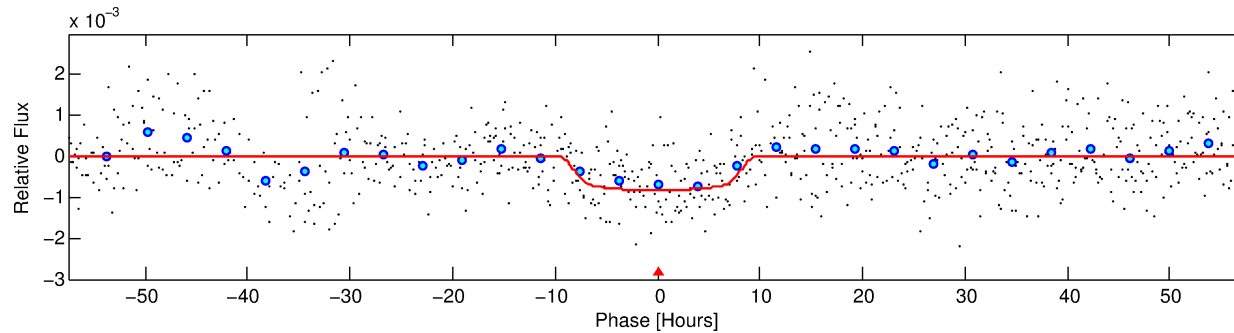
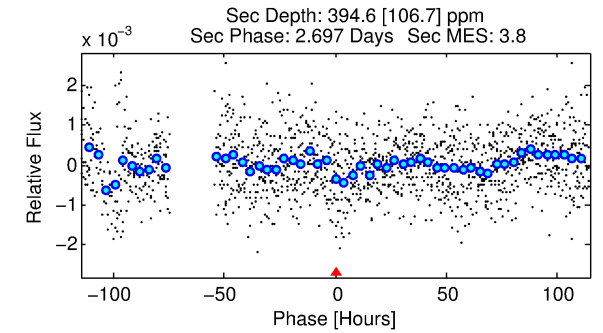
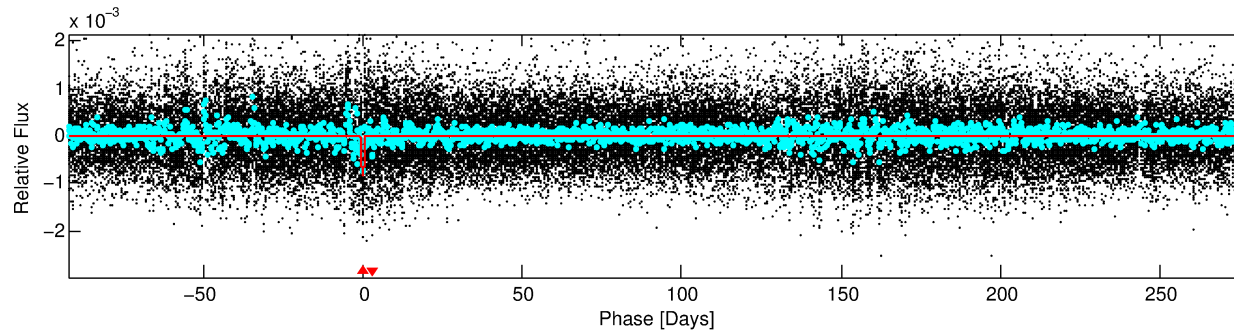
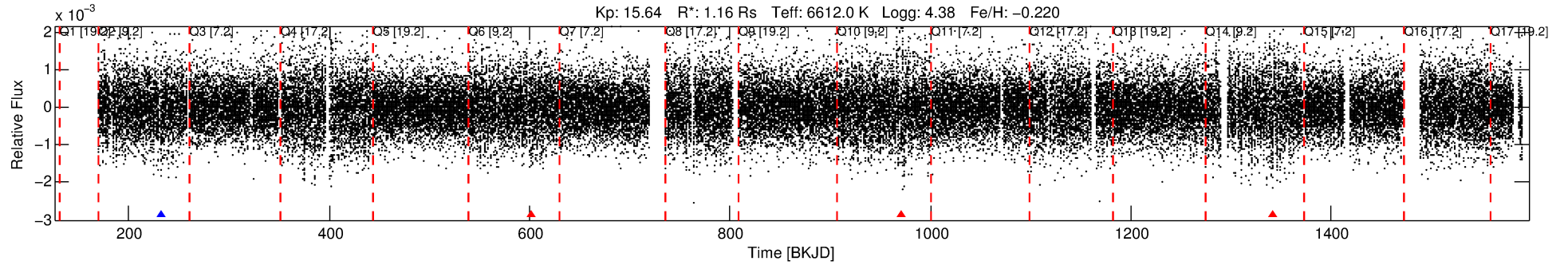
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008036461-01

No Significant Match Found

# DV One-Page Summary

KIC: 8036461 Candidate: 1 of 1 Period: 369.717 d



## DV Fit Results:

Period = 369.71703 [0.01548] d  
Epoch = 232.1008 [0.0289] BKJD  
Rp/R\* = 0.0310 [0.0031]  
a/R\* = 73.37 [24.66]  
b = 0.90 [0.07]  
Seff = 2.02 [0.71]  
Teq = 304 [27] K  
Rp = 3.91 [1.14] Re  
a = 1.0641 [0.2415] AU  
Ag = 16084.23 [7510.73] [2.14σ]  
Teffp = 5291 [480] K [10.36σ]

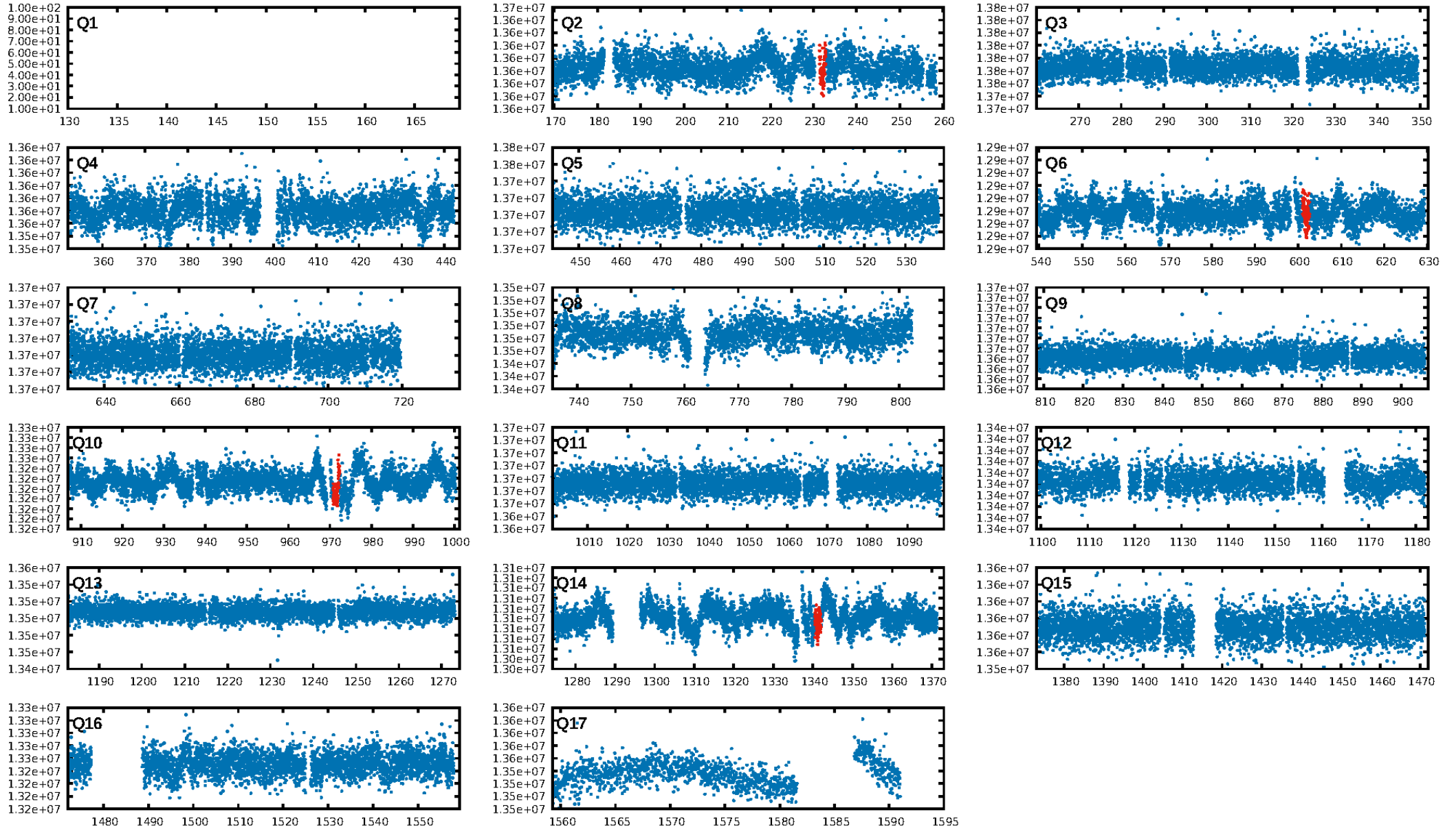
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 93.8%  
ModelChiSquareGof-sig: 99.6%  
**Bootstrap-pfa: 2.56e-09**  
**RollingBand-fgt: 0.25 [1/4]**  
**GhostDiagnostic-chr: 0.9266**  
Centroid-sig: 36.1%  
Centroid-so: 1.758 arcsec [0.90σ]  
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 [2/2]

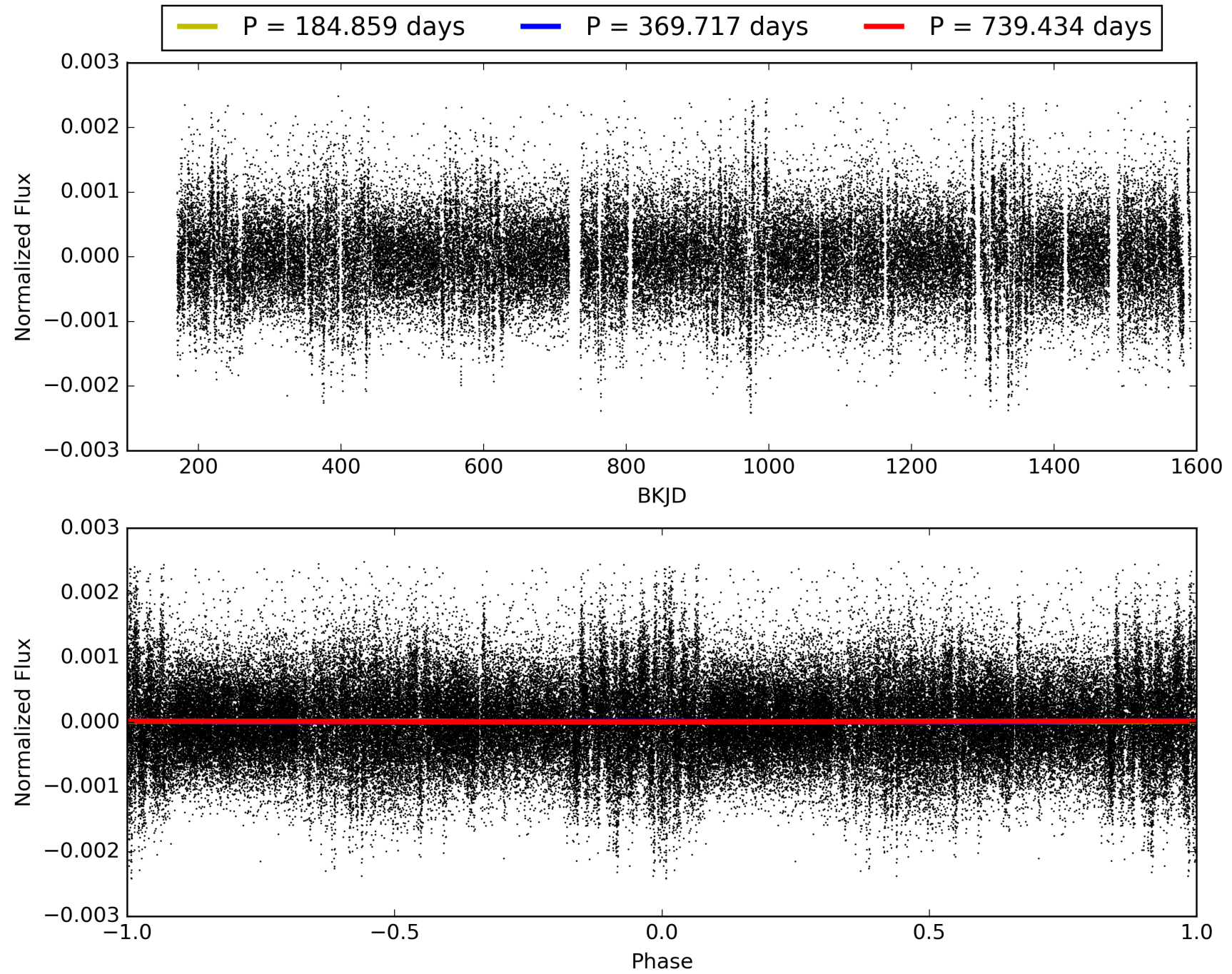
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:33:20 Z

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

# TCE 008036461-01, PDC Light Curves

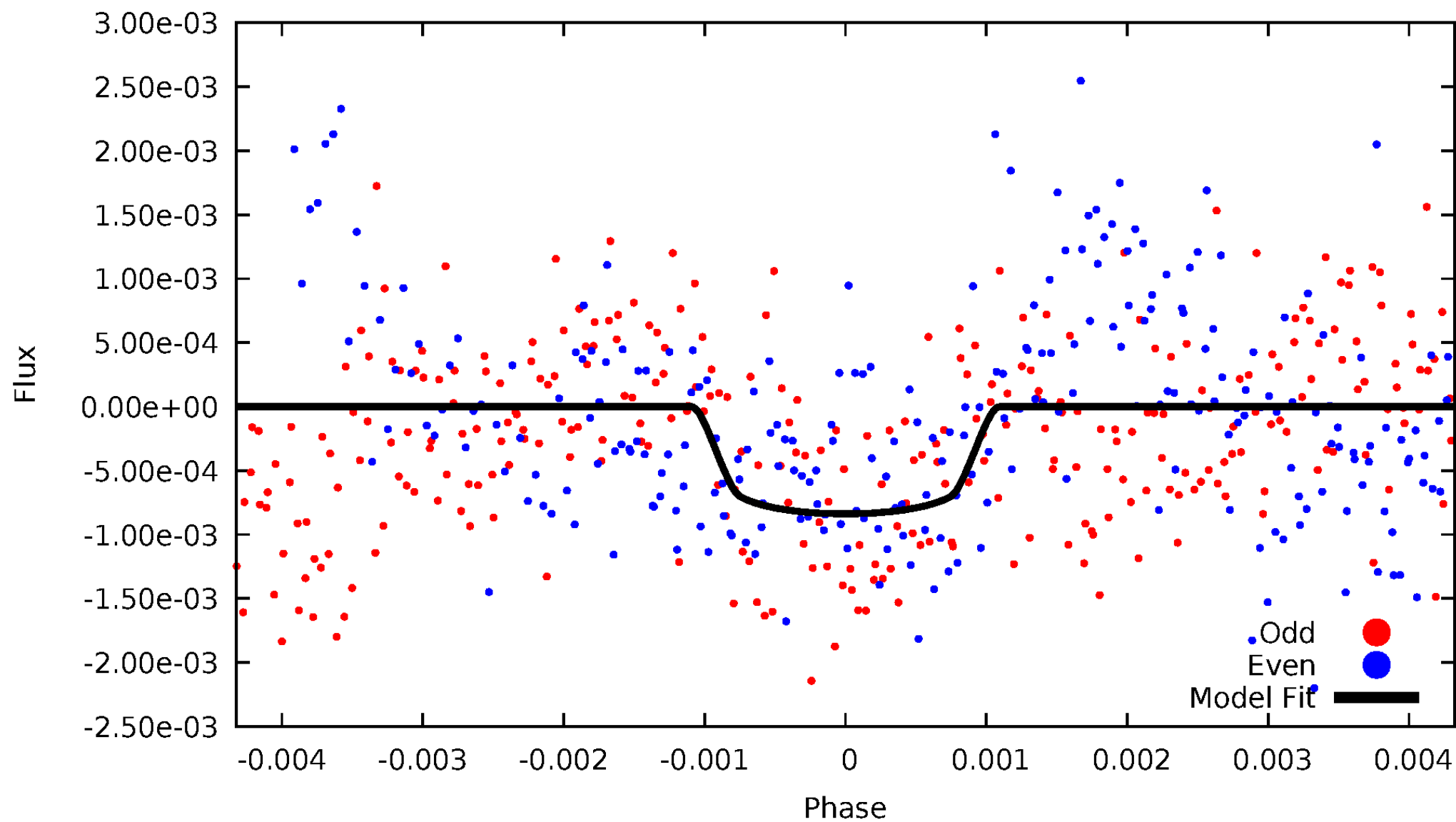


TCE 008036461-01



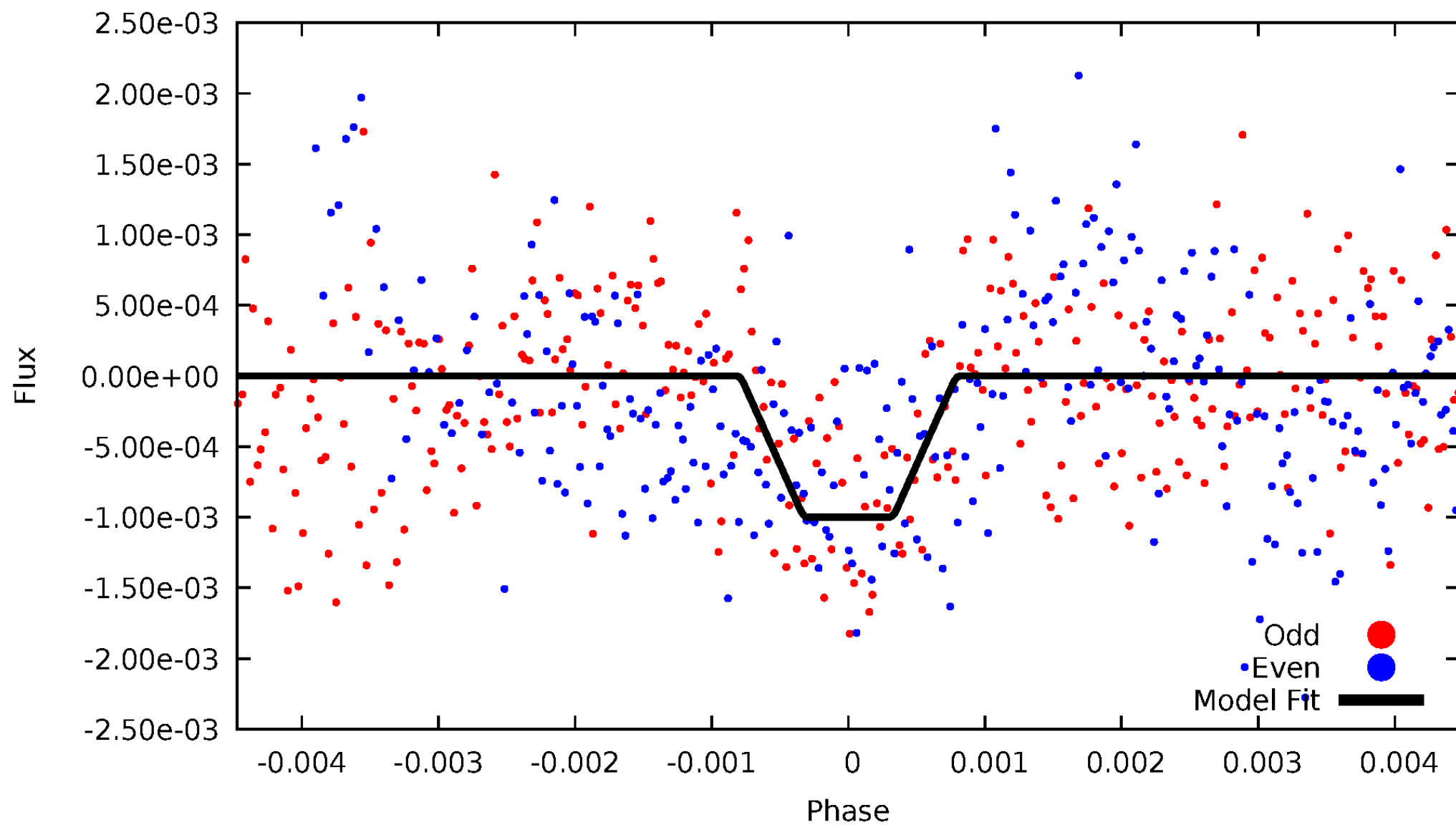
# DV Odd/Even

TCE 008036461-01



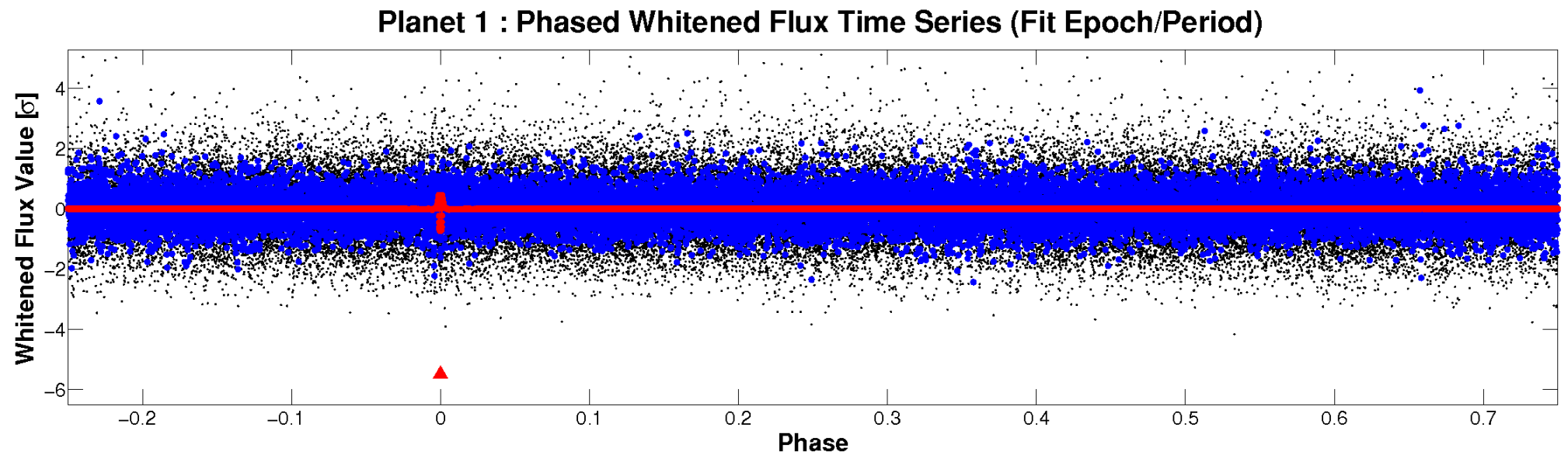
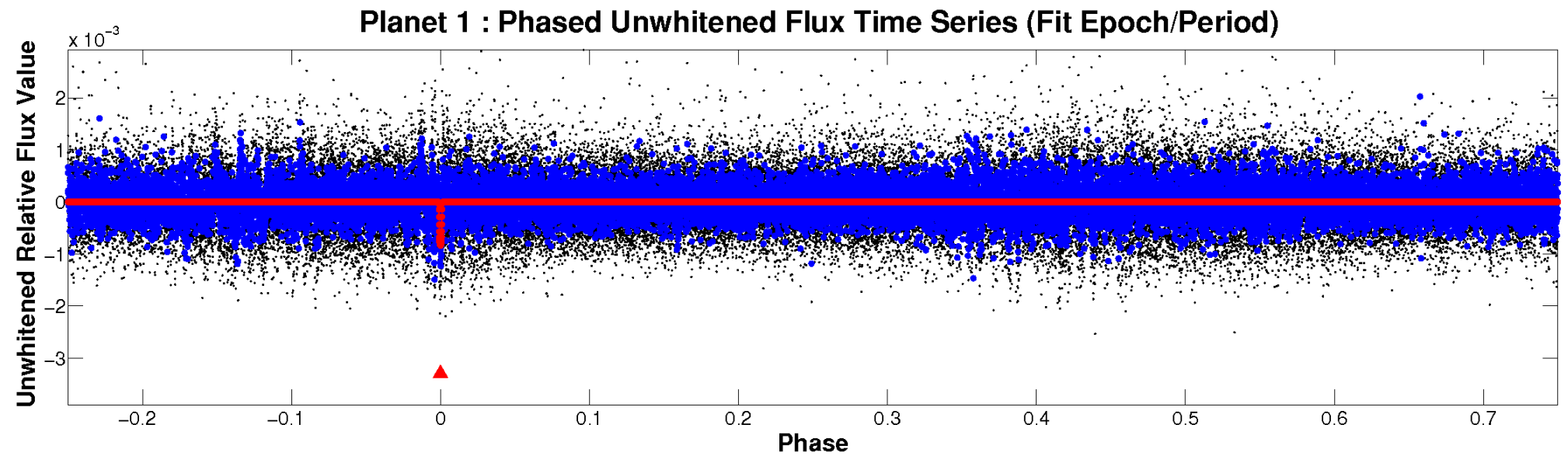
# ALT Odd/Even

TCE 008036461-01



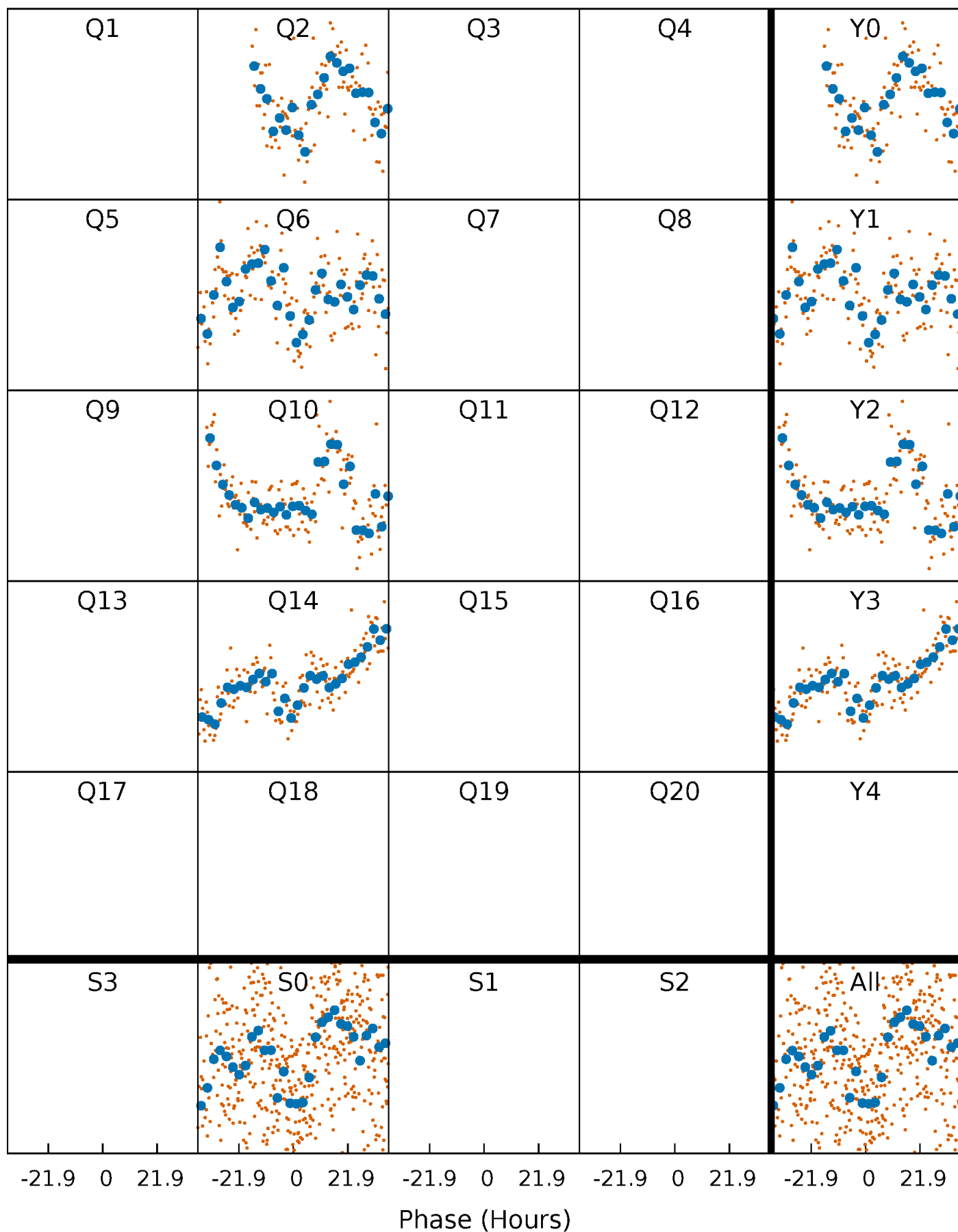


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

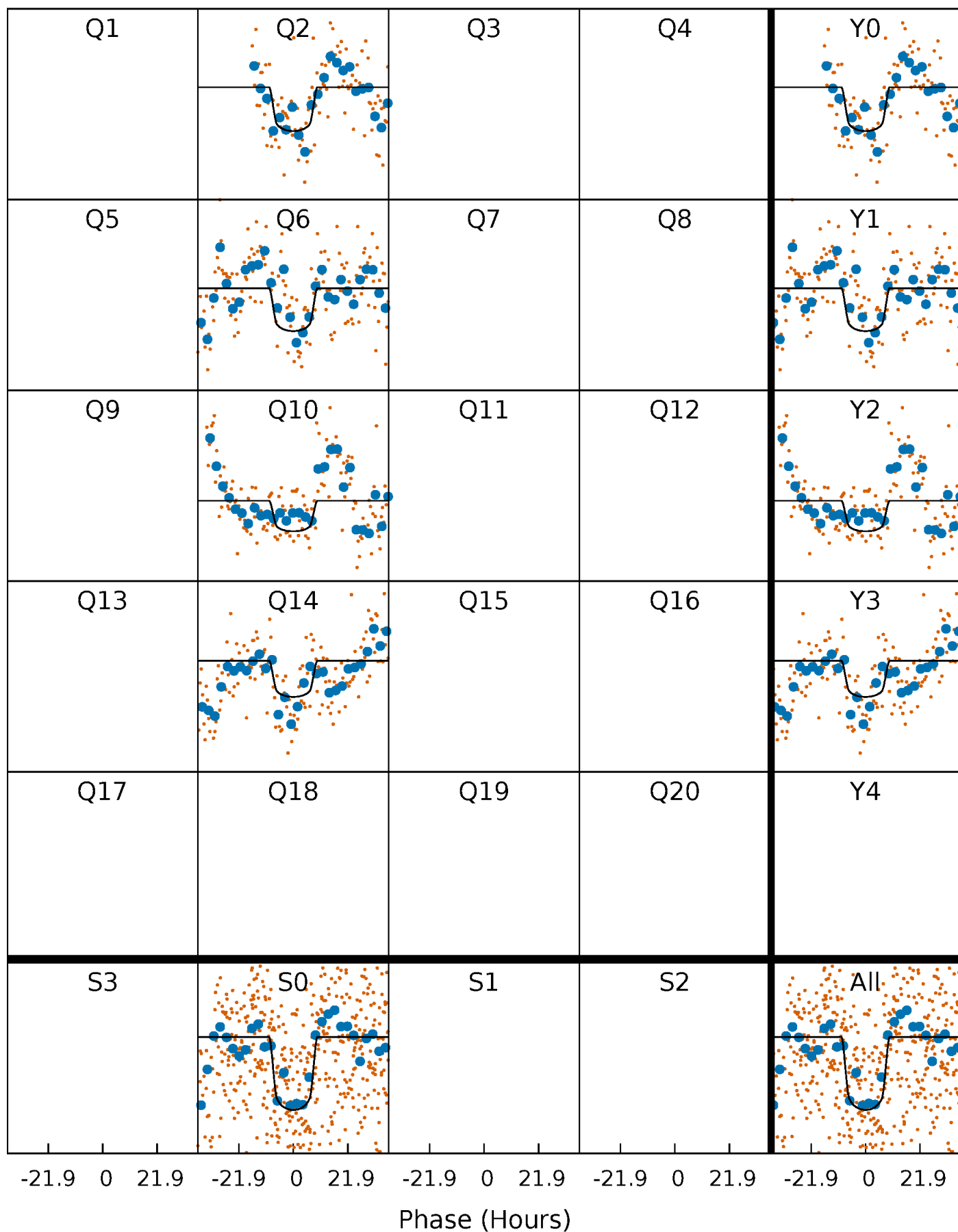
TCE 008036461-01 P=369.717030 Days  $T_0=232.100843$  (BKJD)





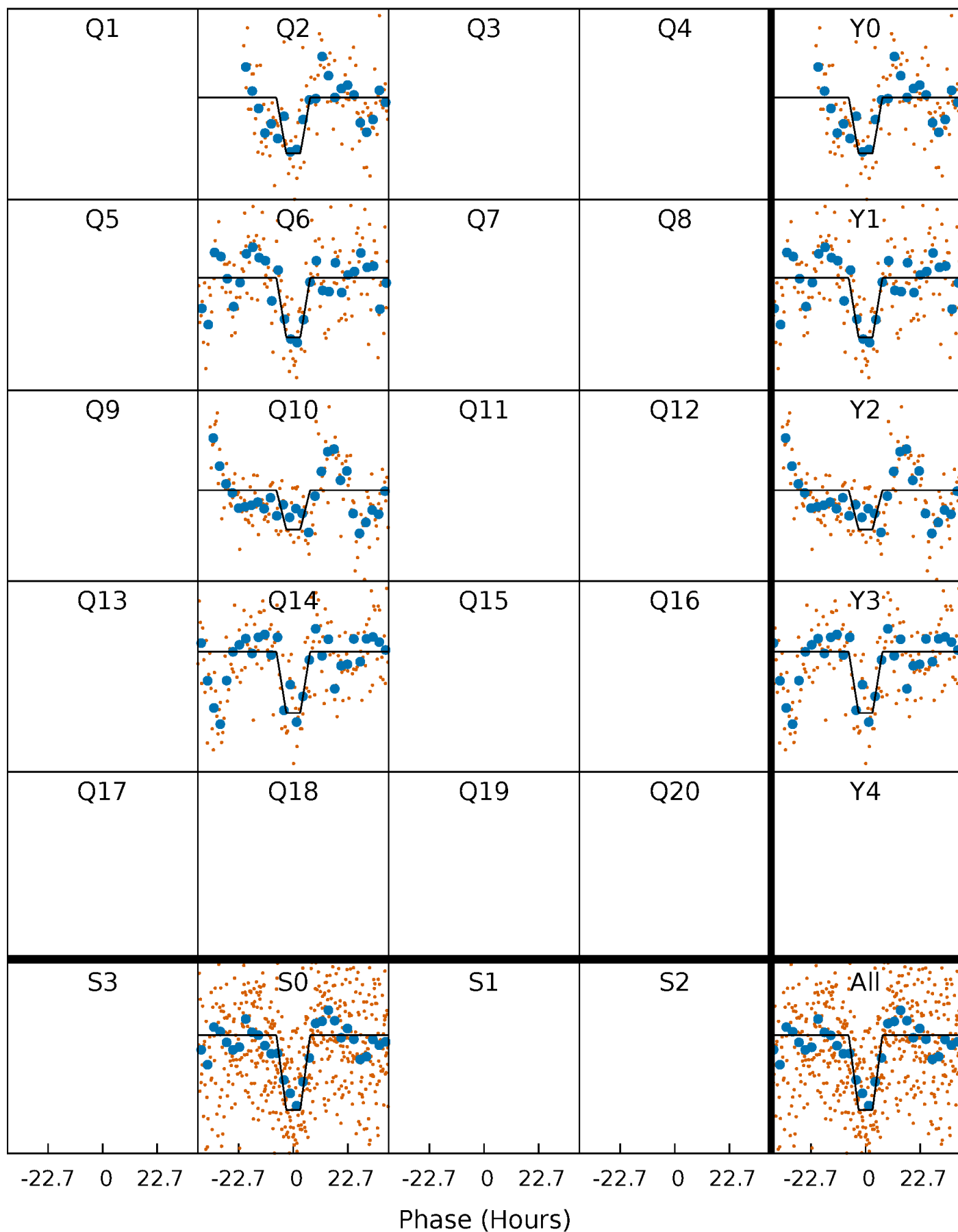
# DV Quarter-Phased Transit Curves

TCE 008036461-01 P=369.717030 Days  $T_0=232.100843$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

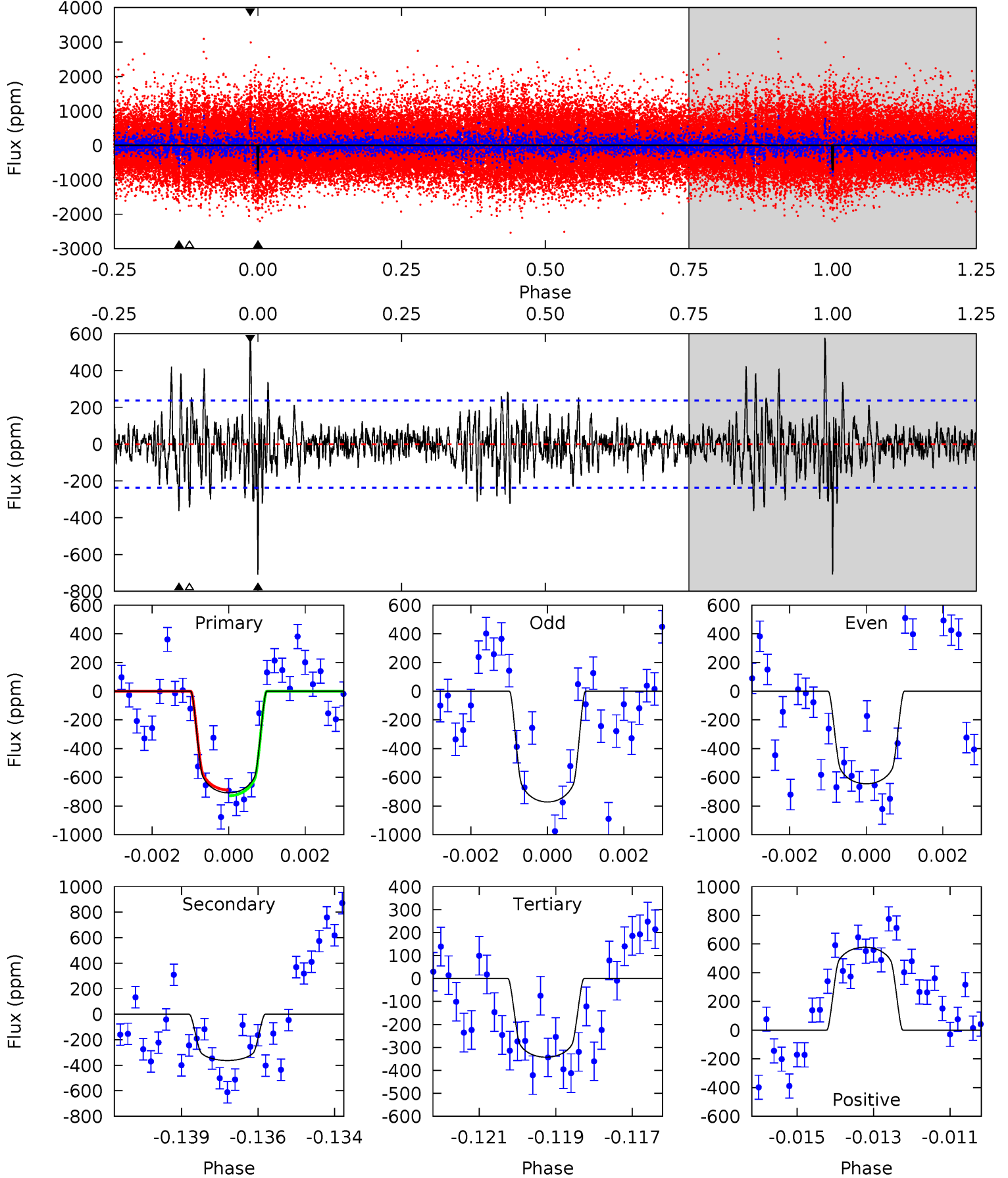
TCE 008036461-01 P=369.629478 Days  $T_0=232.270666$  (BKJD)



# DV Model-Shift Uniqueness Test

008036461-01, P = 369.717030 Days, E = 232.100843 Days

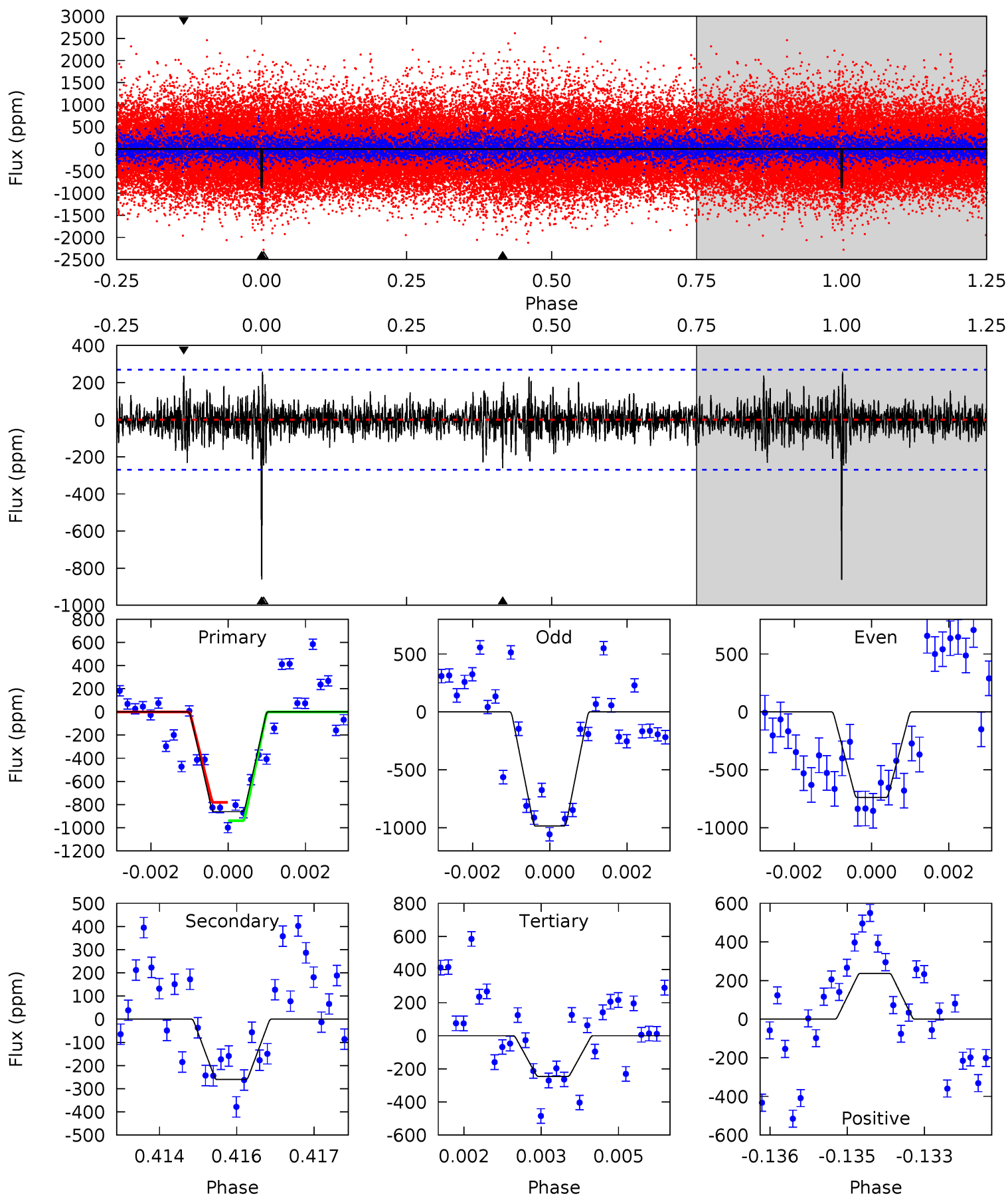
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	8.11	7.67	12.9	5.31	3.06	2.11	8.19	2.93	0.45	-4.81	1.43	1.04	0.45	0.45



# Alt Model-Shift Uniqueness Test

008036461-01, P = 369.629478 Days, E = 232.270666 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
17.2	5.19	4.91	4.72	5.37	3.16	1.18	12.3	12.4	0.28	0.47	2.44	0.97	0.23	1.57



### Stellar Parameters For KIC 008036461

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6612^{+185}_{-231}$	$4.383^{+0.062}_{-0.175}$	$-0.220^{+0.250}_{-0.350}$	$1.155^{+0.317}_{-0.136}$	$1.177^{+0.162}_{-0.162}$	$1.077^{+0.345}_{-0.515}$
	+3%/-3%	+1%/-4%	+114%/-159%	+27%/-12%	+14%/-14%	+32%/-48%
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 008036461-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-363 \pm 45$	$4.05^{+0.67}_{-0.56}$	$431^{+30}_{-21}$	$5212^{+299}_{-290}$	$13350^{+4708}_{-3410}$
Alt.	$-260 \pm 50$	$4.09^{+0.69}_{-0.54}$	$430^{+28}_{-21}$	$4821^{+291}_{-306}$	$9369^{+3711}_{-2957}$

$T_{max}$  = Theoretical Maximum Planetary Temperature  
 $T_{obs}$  = Observed Planetary Temperature (Assuming A=0.3)  
 $A_{obs}$  = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$

## DV Centroid Data

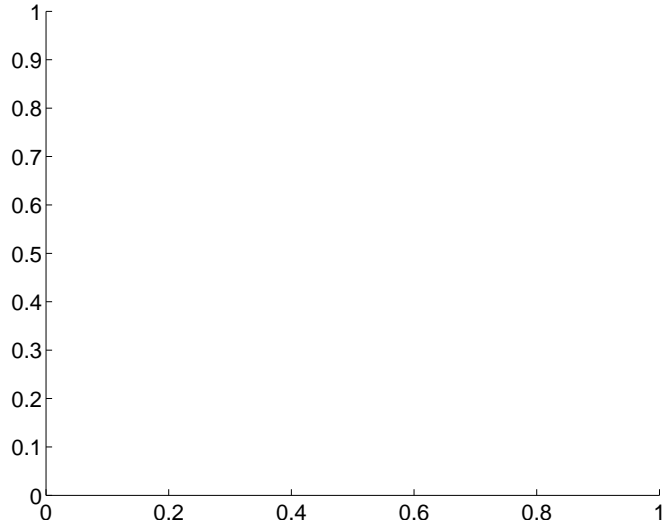
Supplemental centroid analysis for 008036461-01. Kepler magnitude: 15.64. Transit SNR 8.40

There are 0 quarters with good PRF difference image offsets

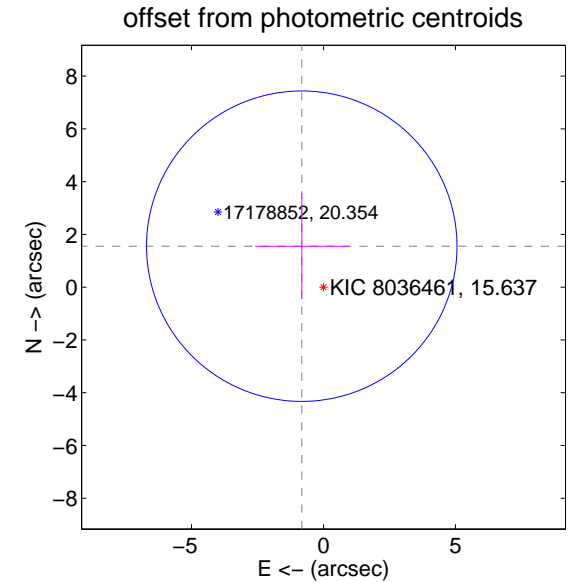
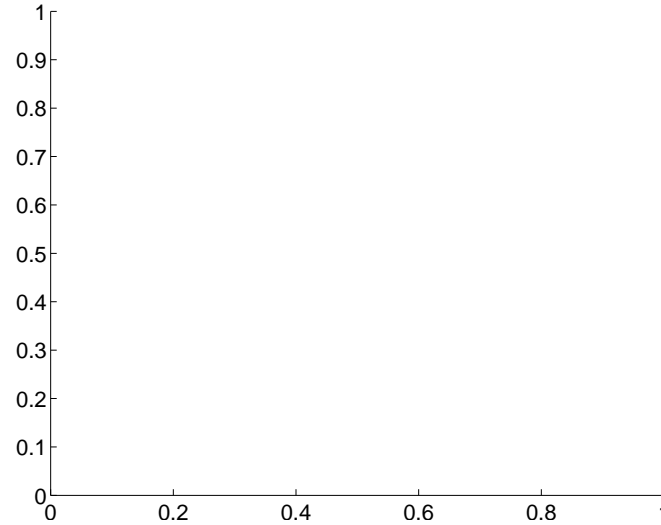
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$1.76 \pm 1.96$	0.90	$0.82 \pm 1.77$	$1.55 \pm 2.01$

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



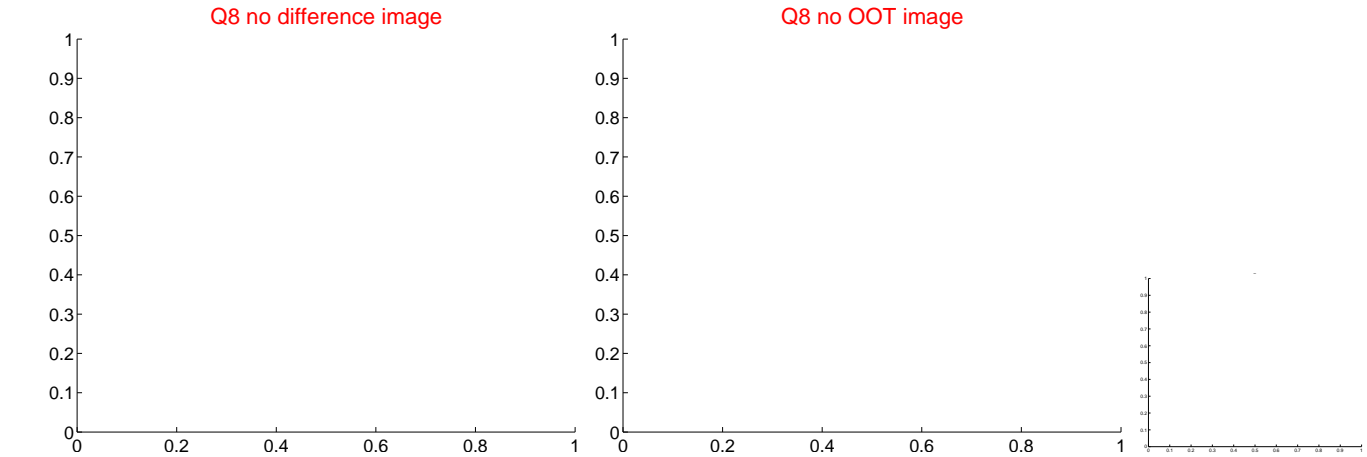
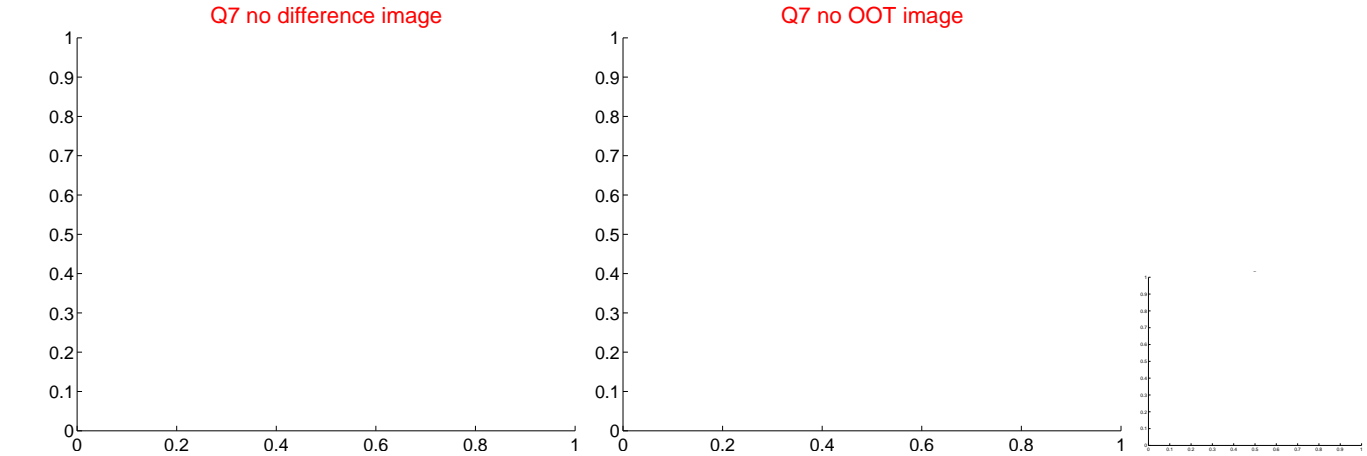
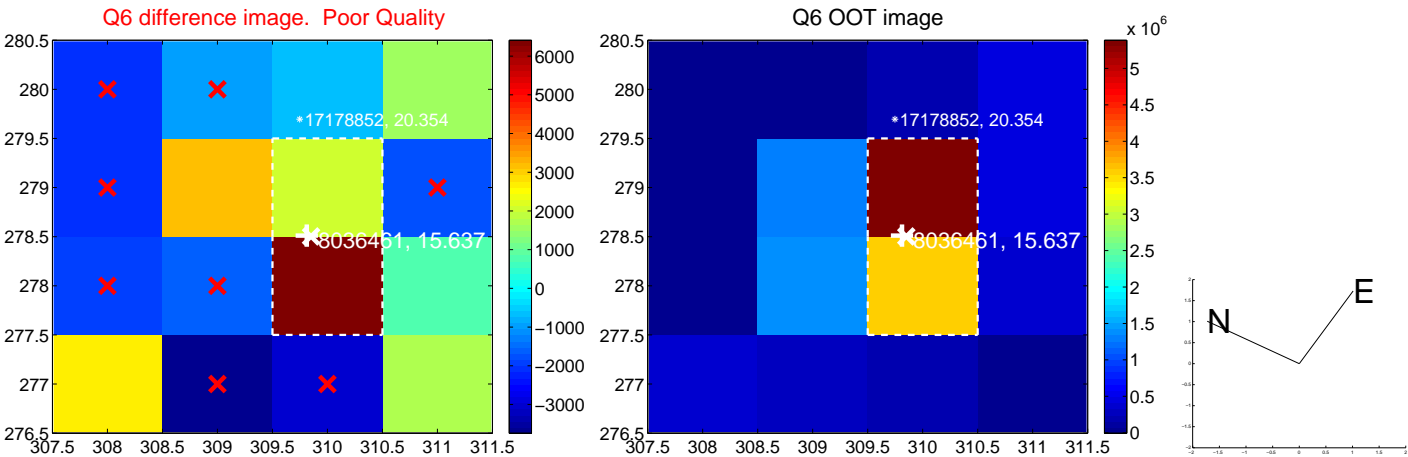
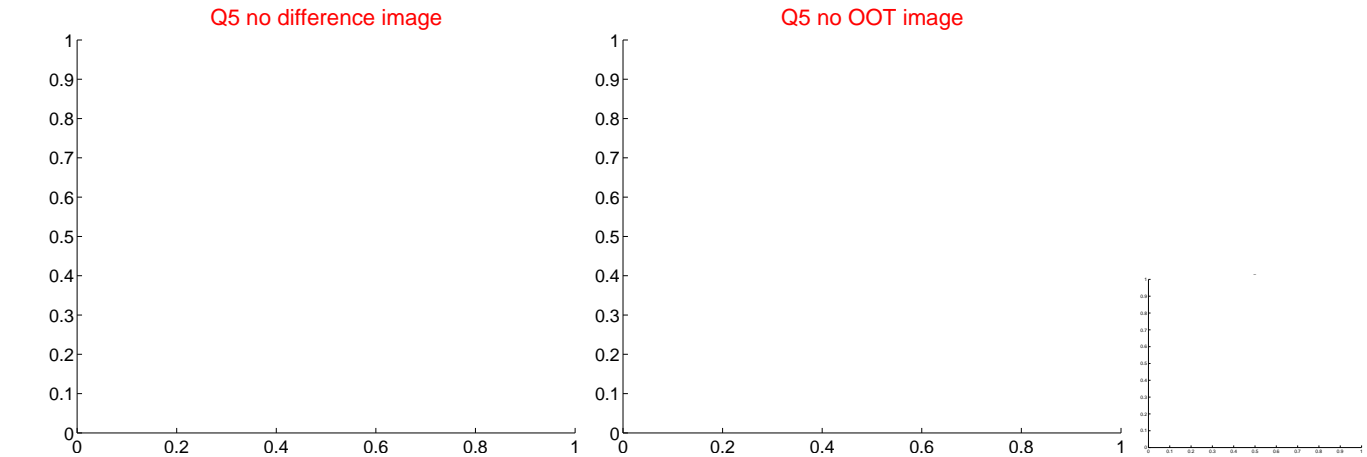
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



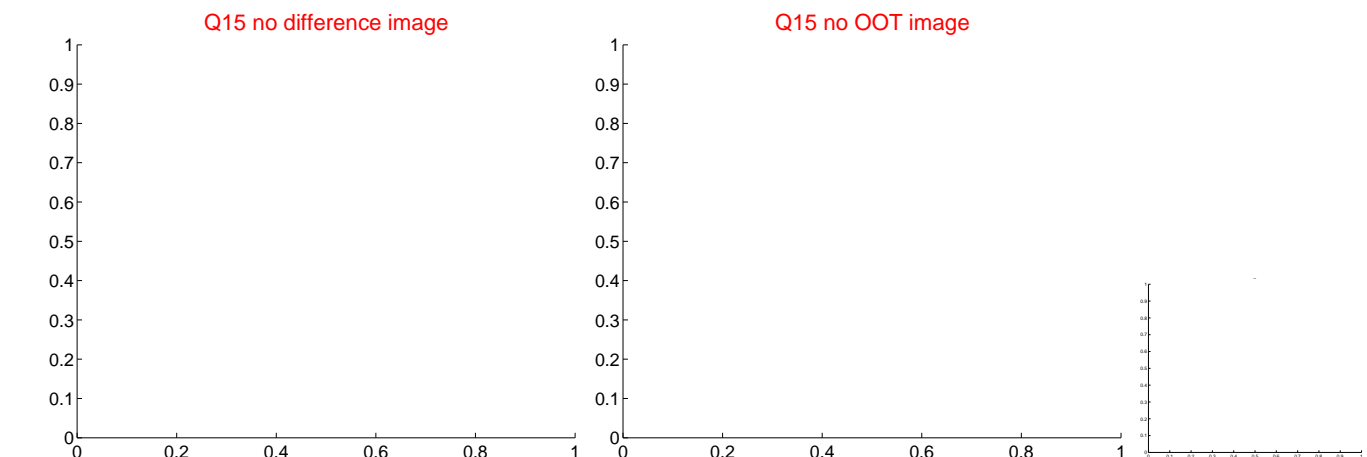
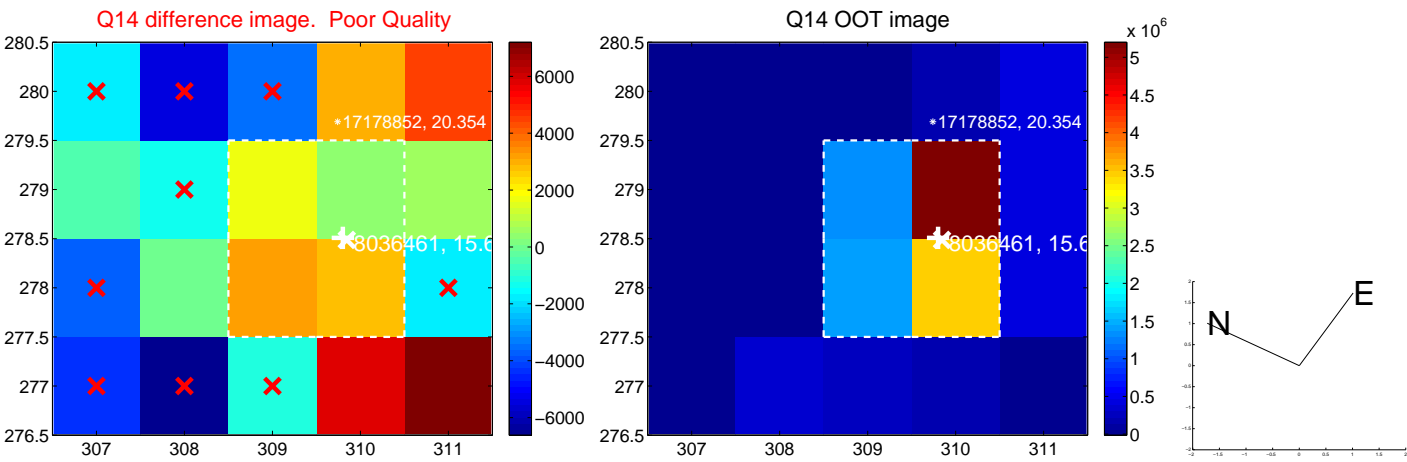
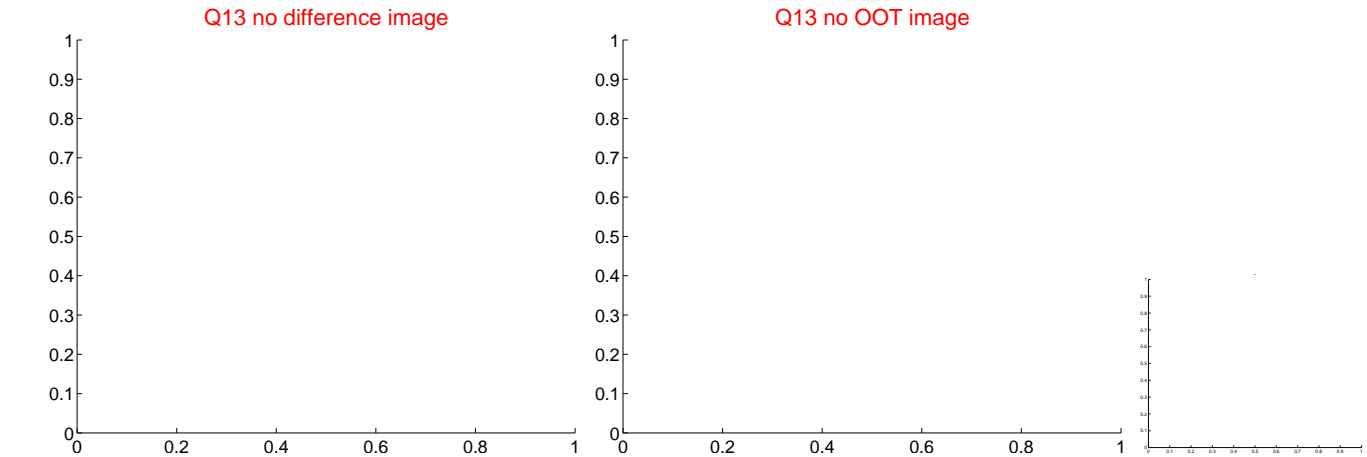
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



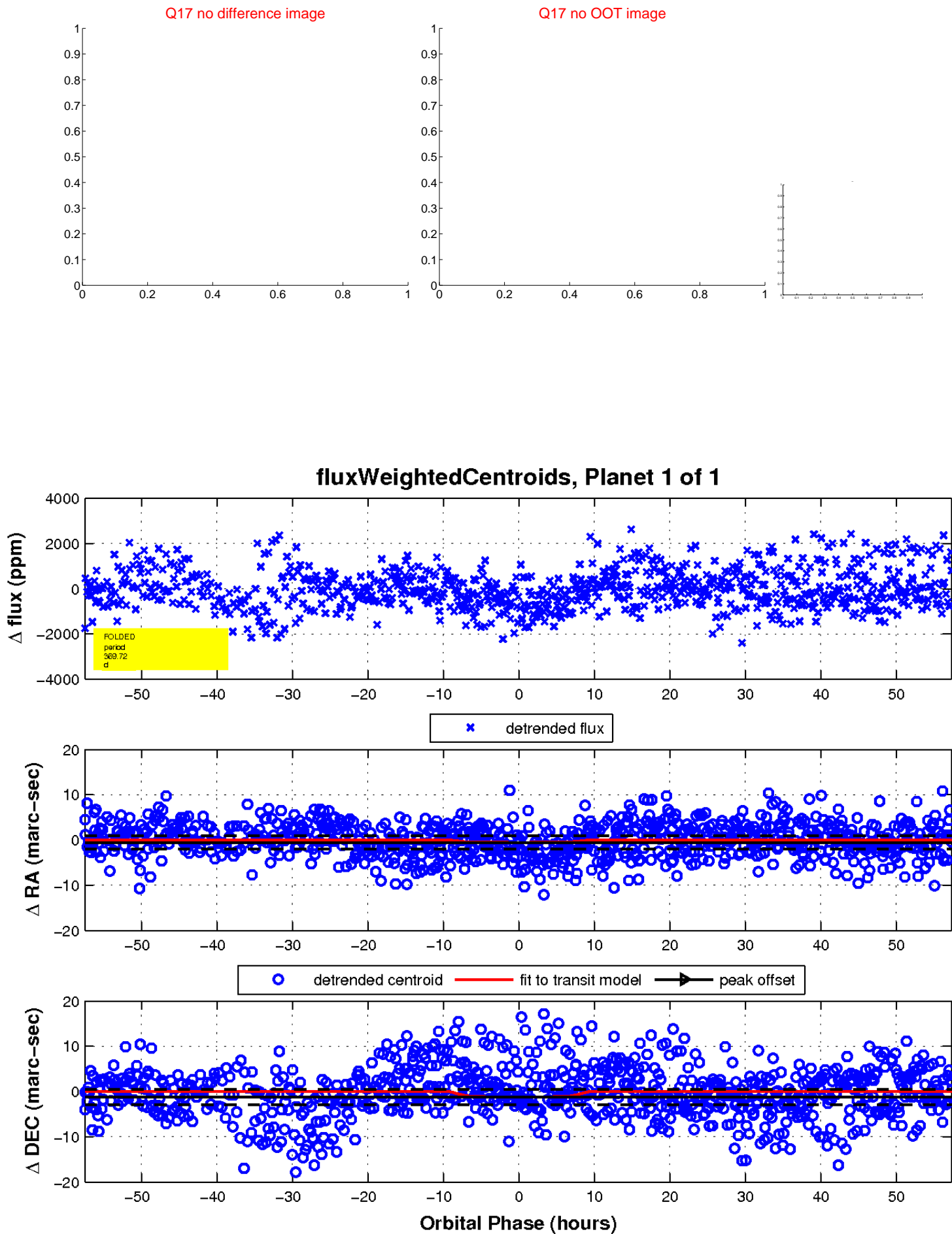
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

