

# KIC 008092488

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008092488-01	OBS	No	374.223495	263.660780	772.3	57.406	9.2	13.2	1.10	6268	4.50	1.48

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008092488-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—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.

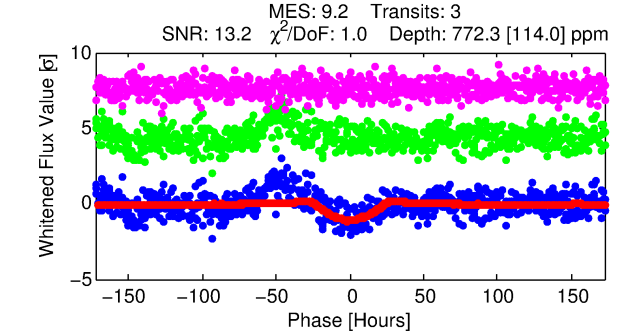
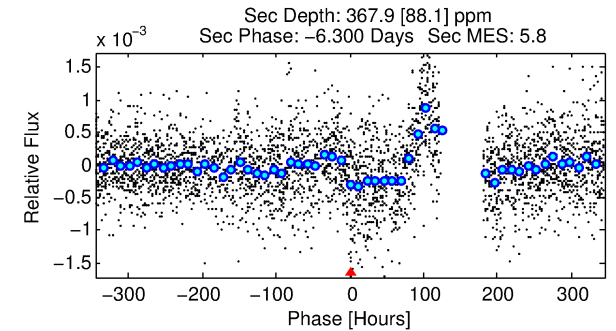
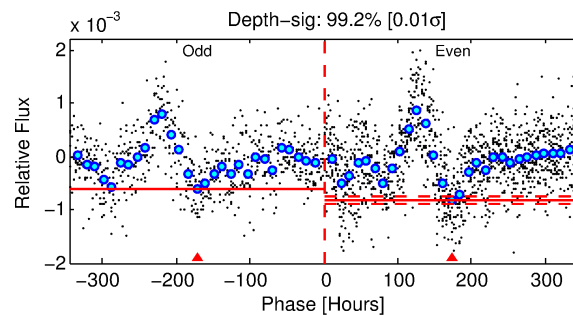
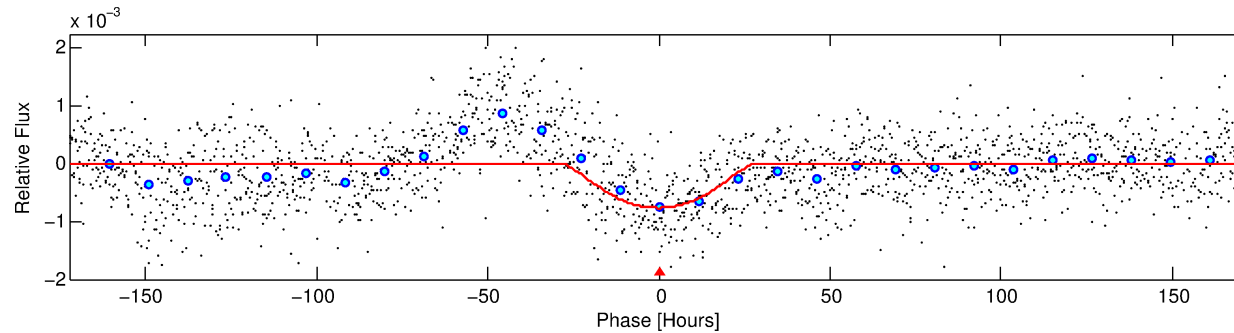
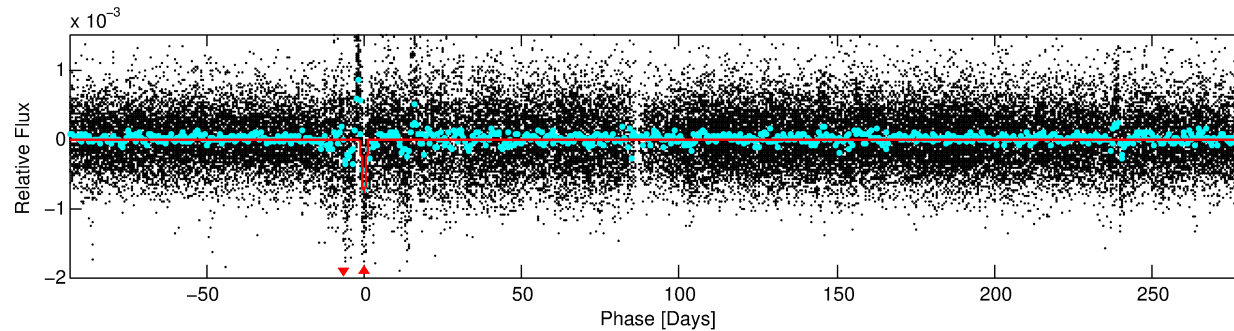
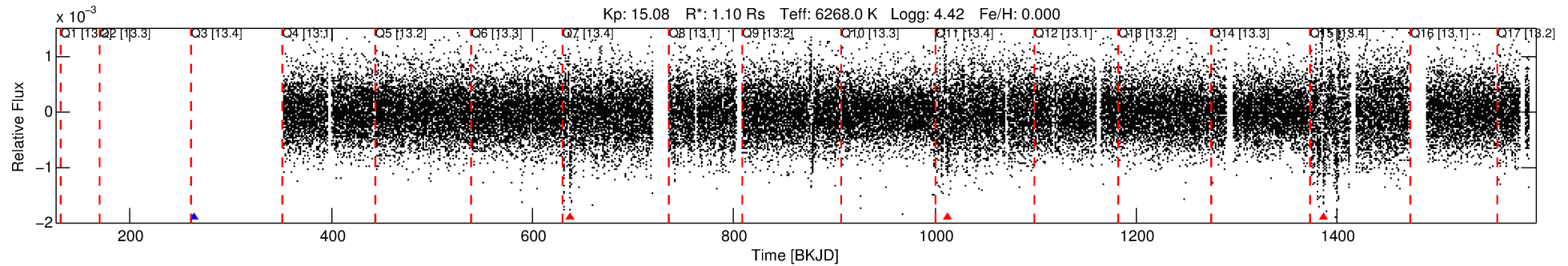
## Ephemeris Match Information For 008092488-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ( $''$ )	$\Delta$ Row	$\Delta$ Col	$m_2$	$m_1$	$D_2/D_1$	Mechanism	Flag	$\sigma_P$	$\sigma_T$
008092488-01	8092488	008160817-01	8160817	1:1	74.1	-16	-10	14.41	15.08	0.34	Direct-PRF	1	1.12	1.57

**Notes:**  $P_1:P_2$  is the period ratio. Dist is the distance in arcseconds.  $\Delta$ Row and  $\Delta$ Col are the number of pixels apart in row and column.  $m_2$  and  $m_1$  are the magnitudes of the parent and child.  $D_2/D_1$  is the parent's transit depth divided by the child's.  $\sigma_P$  and  $\sigma_T$  are the significance of the match in period and epoch. For a match to be considered significant  $\sigma_P < 5.0$  and  $\sigma_T < 5.0$ . Matches which have  $\sigma_P$  and  $\sigma_T$  very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

KIC: 8092488 Candidate: 1 of 1 Period: 374.223 d



## DV Fit Results:

Period = 374.22350 [0.06056] d  
Epoch = 263.6608 [0.1234] BKJD  
Rp/R\* = 0.0374 [0.0237]  
a/R\* = 16.96 [4.75]  
b = 0.98 [0.05]  
Seff = 1.48 [0.66]  
Teq = 281 [32] K  
Rp = 4.50 [3.26] Re  
a = 1.0655 [0.3100] AU  
Ag = 11336.83 [15352.24] [0.74σ]  
Teffp = 4486 [1457] K [2.88σ]

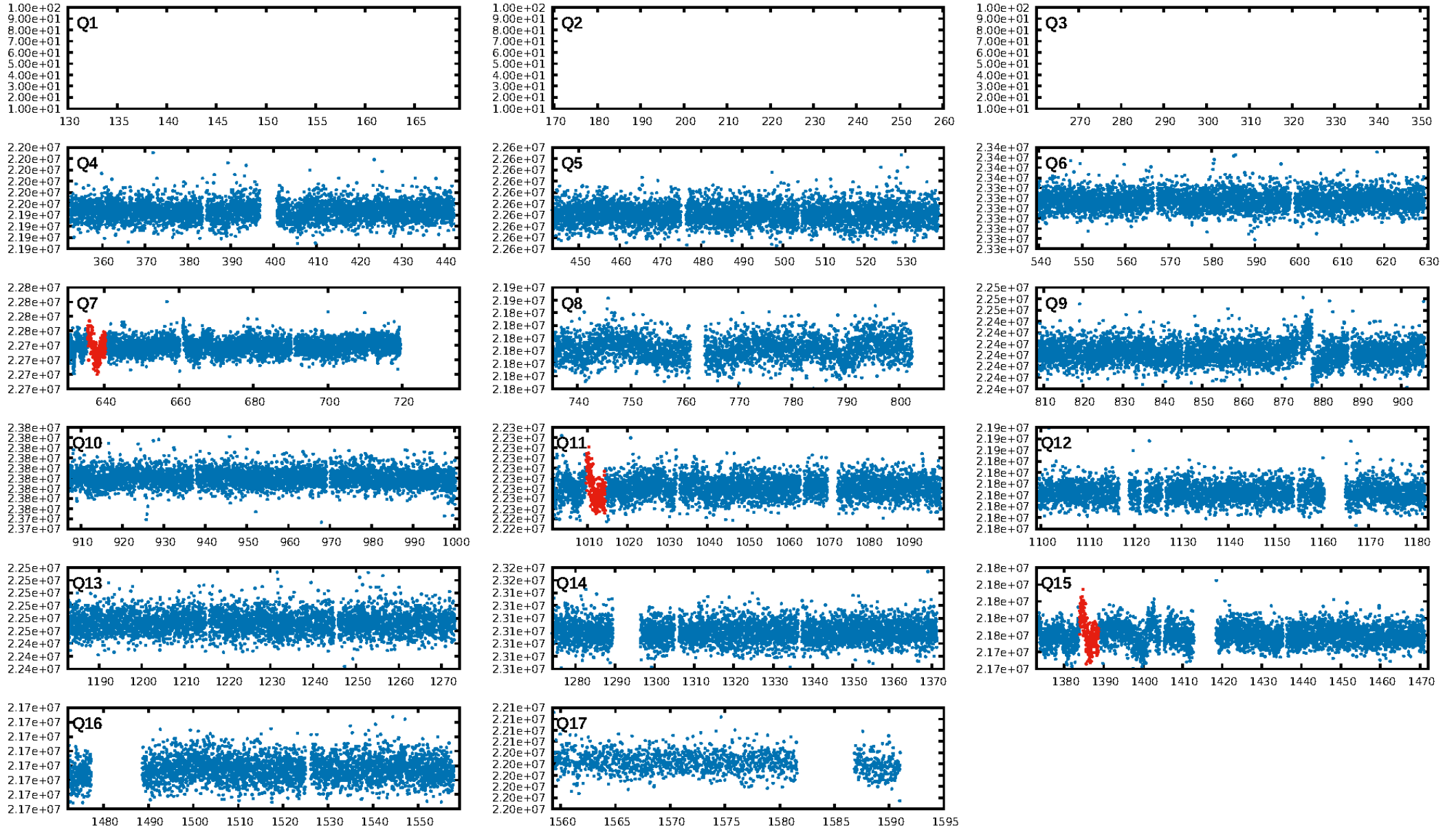
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 5.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 5.96e-13  
RollingBand-fgt: 0.00 [0/3]  
GhostDiagnostic-chr: 1.172  
Centroid-sig: 0.0%  
Centroid-so: 20.835 arcsec [7.52σ]  
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 [1/1]

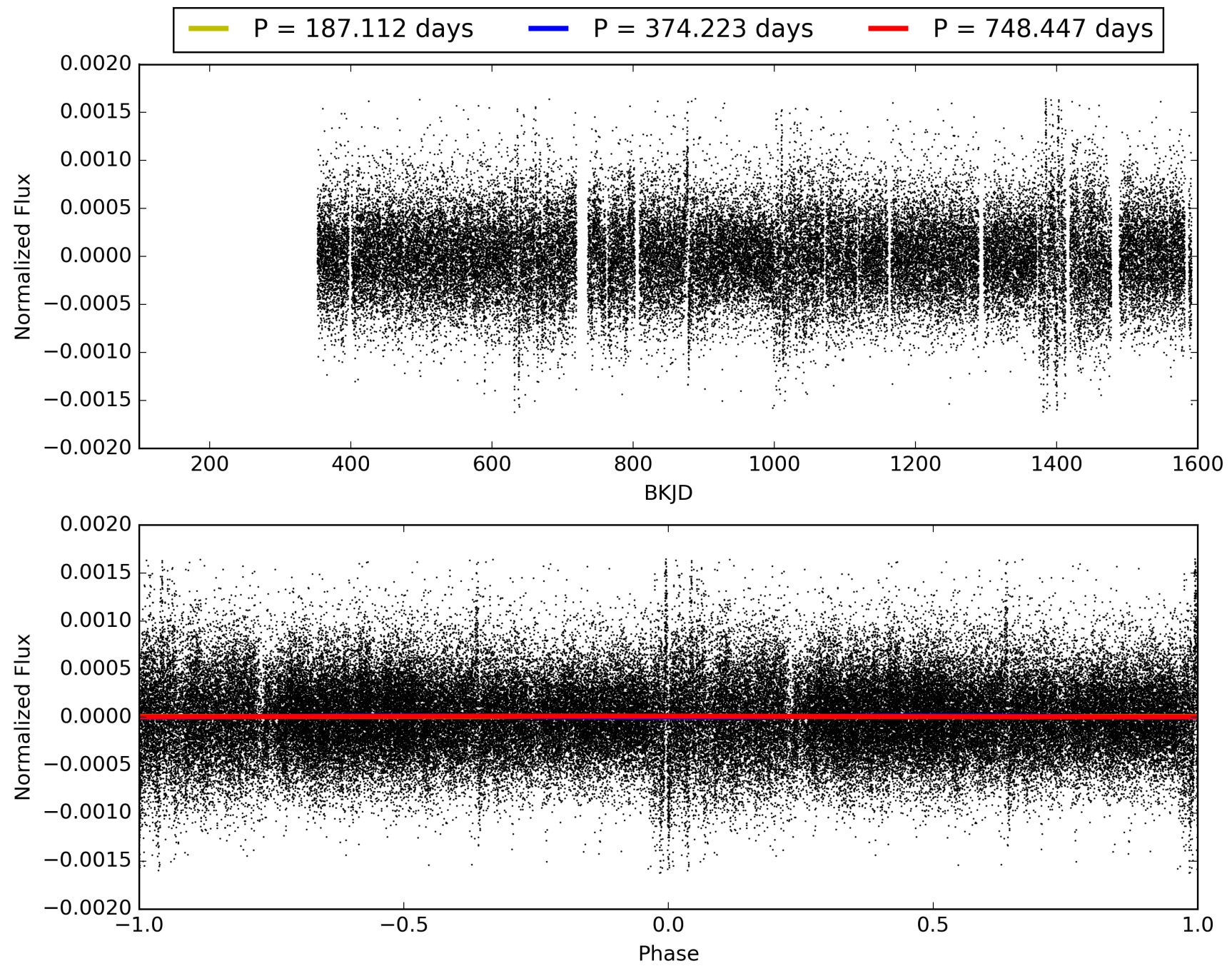
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:28:50 Z

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

# TCE 008092488-01, PDC Light Curves

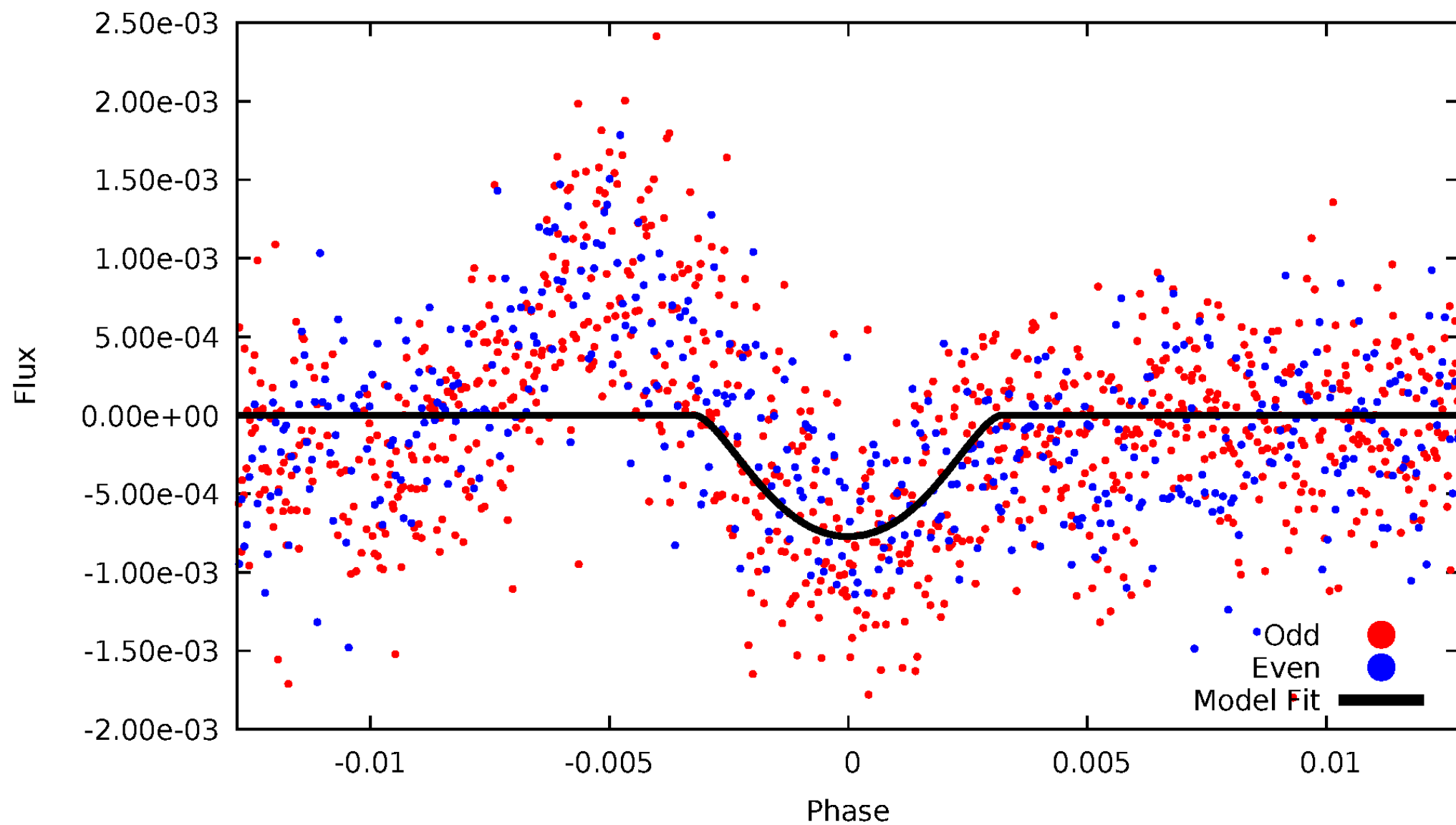


TCE 008092488-01



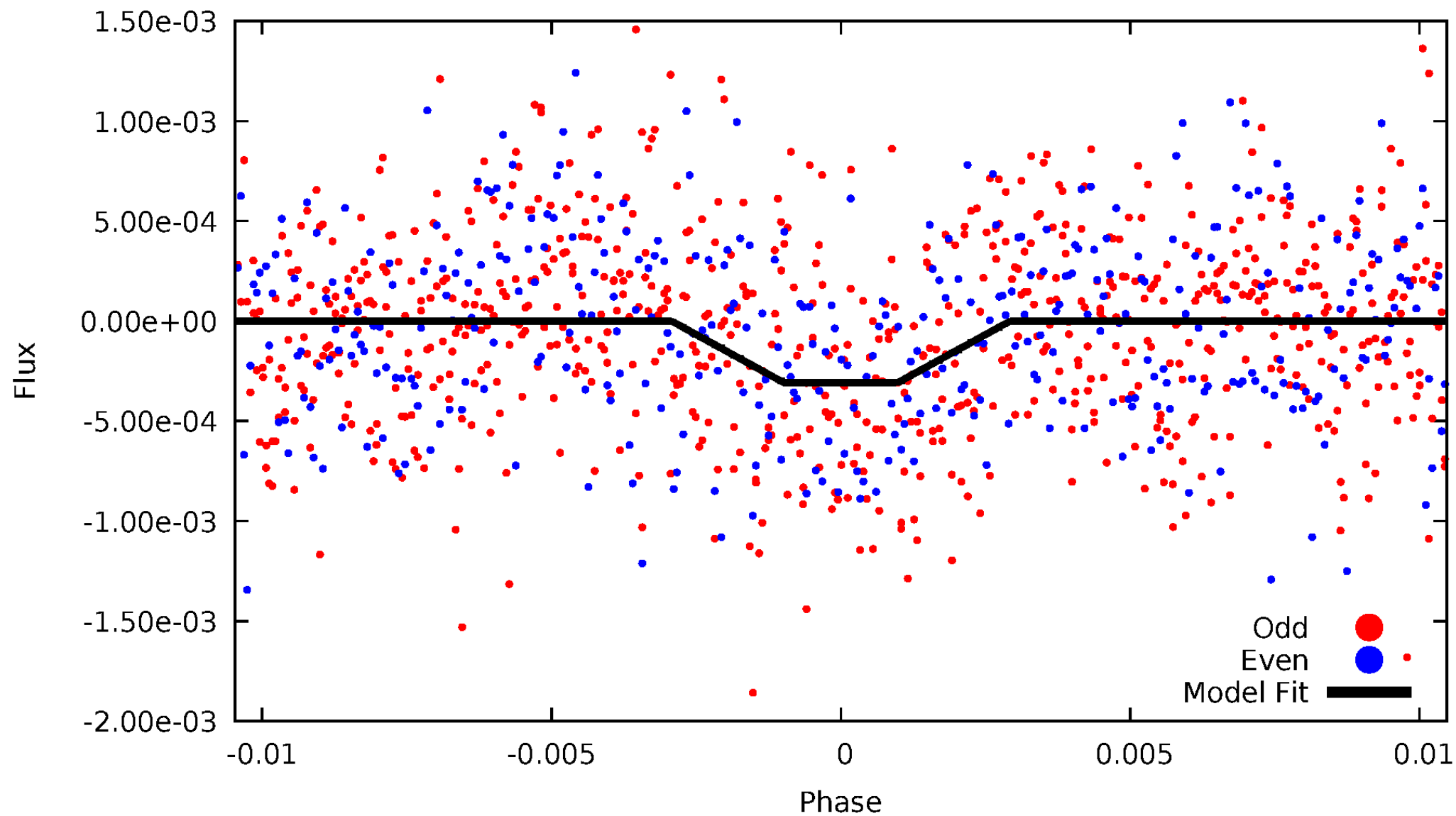
# DV Odd/Even

TCE 008092488-01



# ALT Odd/Even

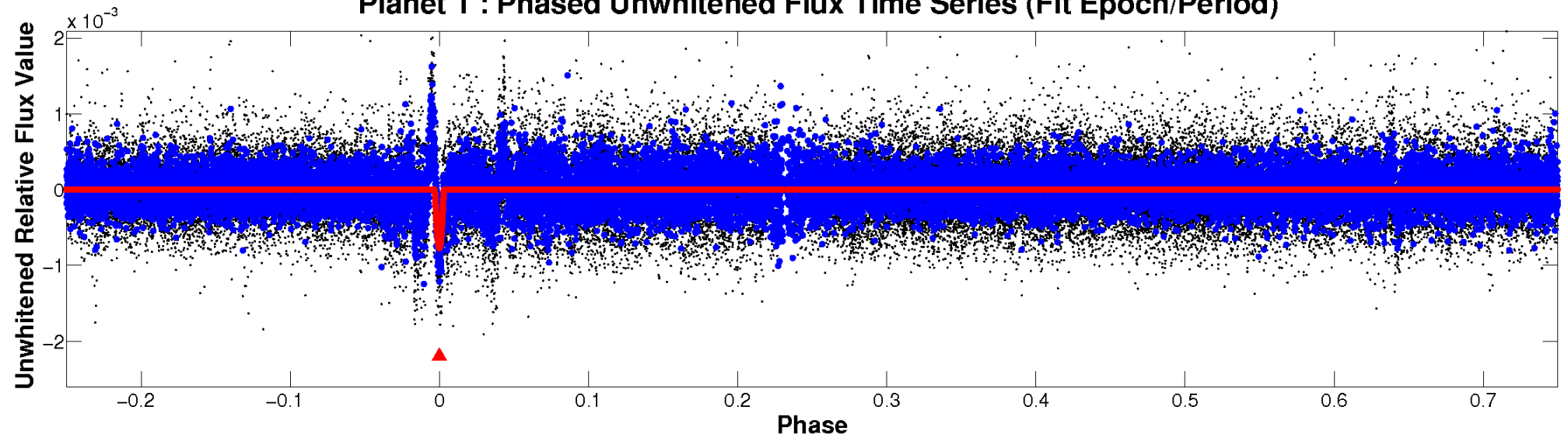
TCE 008092488-01



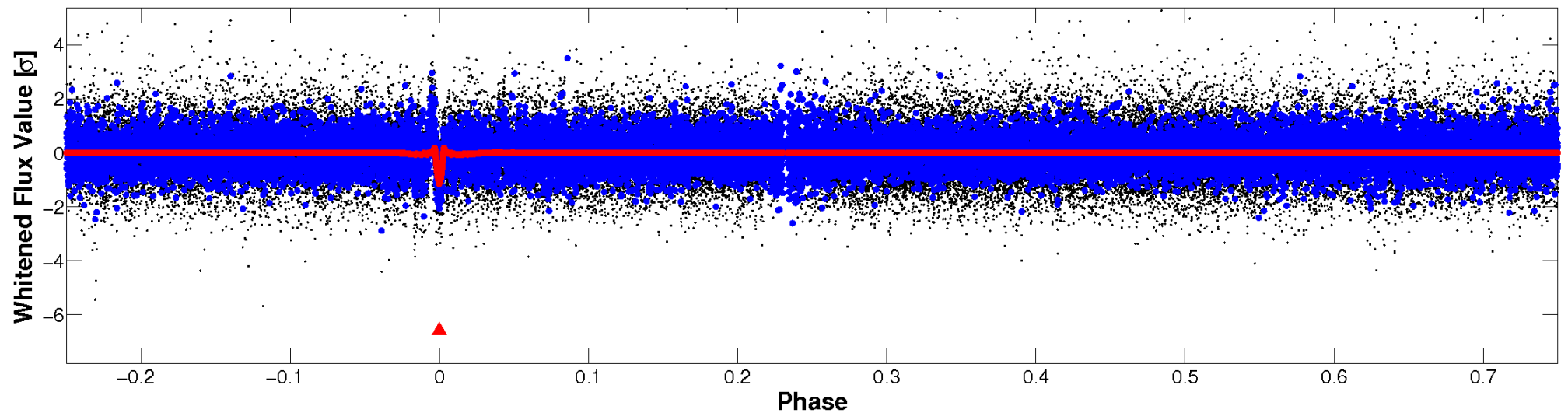


# Non-Whitened Vs. Whitened Light Curve

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

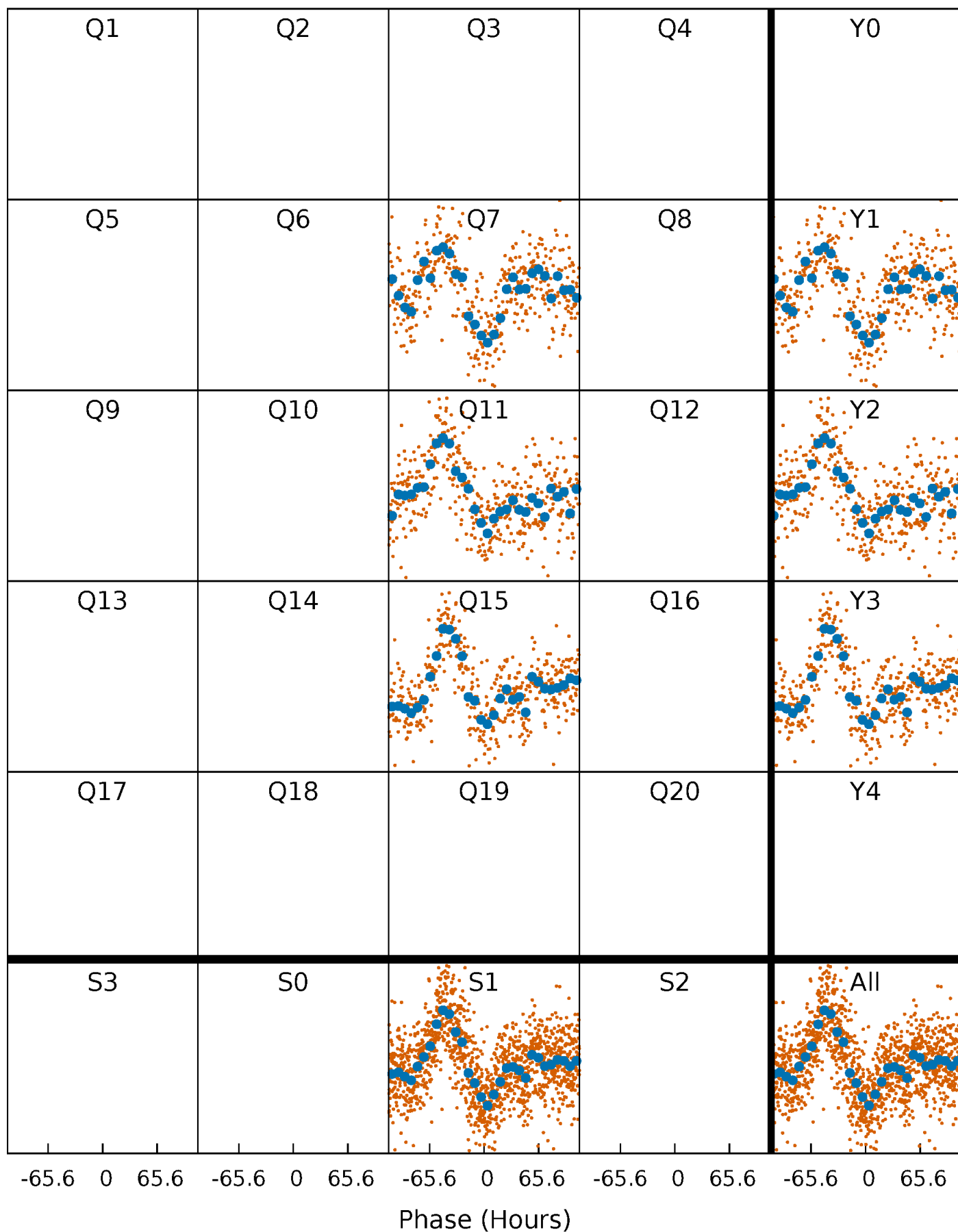


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

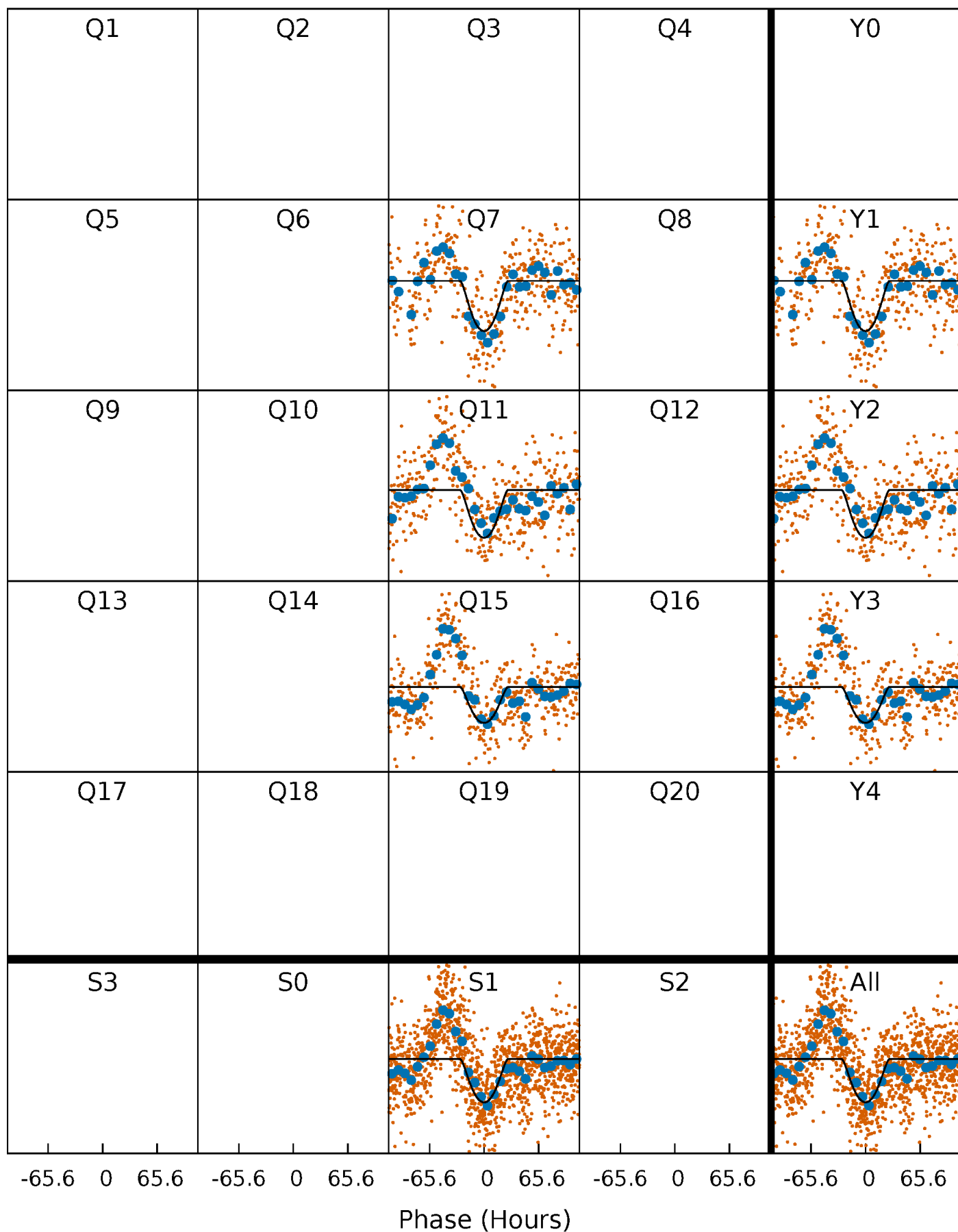
TCE 008092488-01   P=374.223495 Days    $T_0=263.660780$  (BKJD)





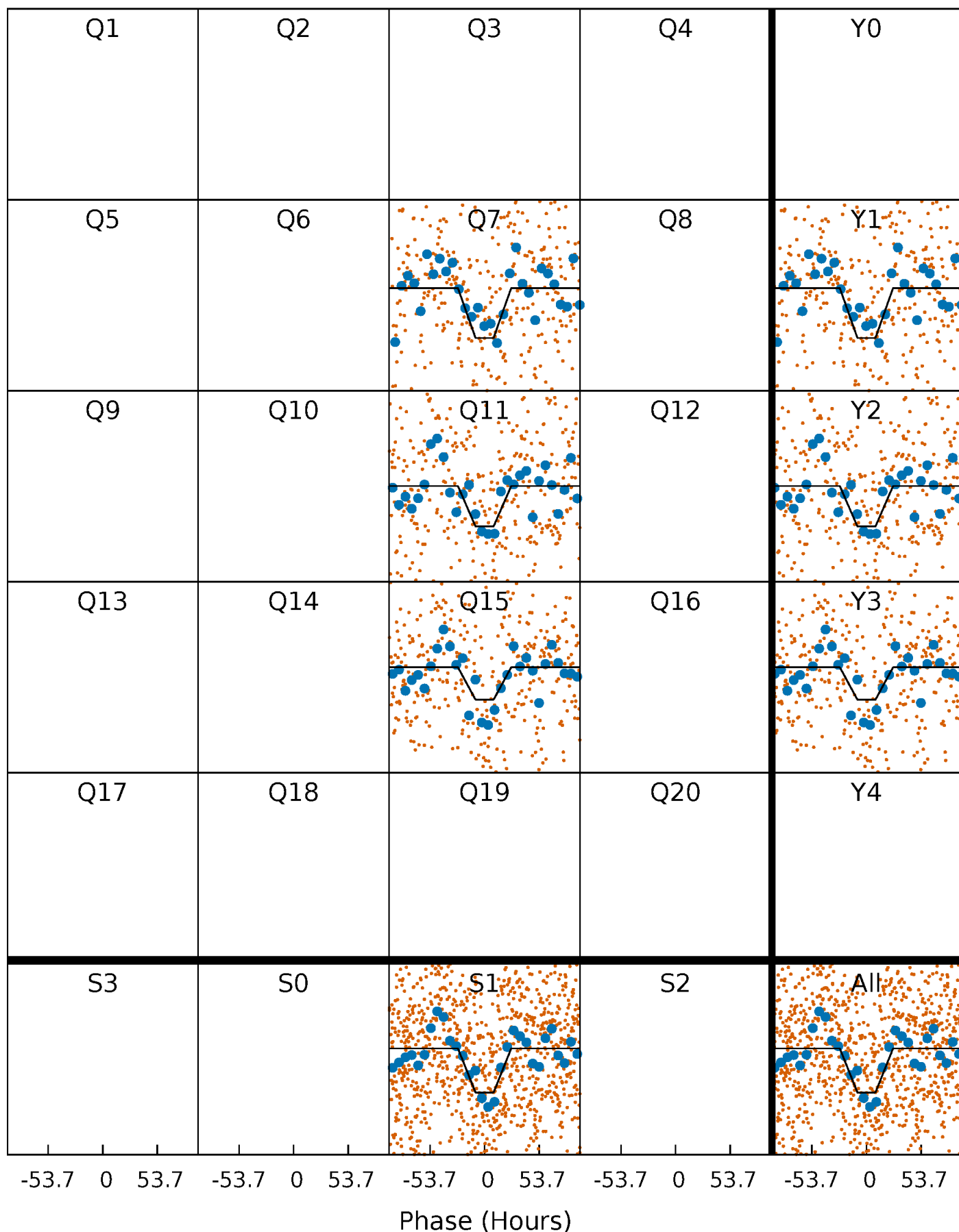
# DV Quarter-Phased Transit Curves

TCE 008092488-01 P=374.223495 Days  $T_0=263.660780$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

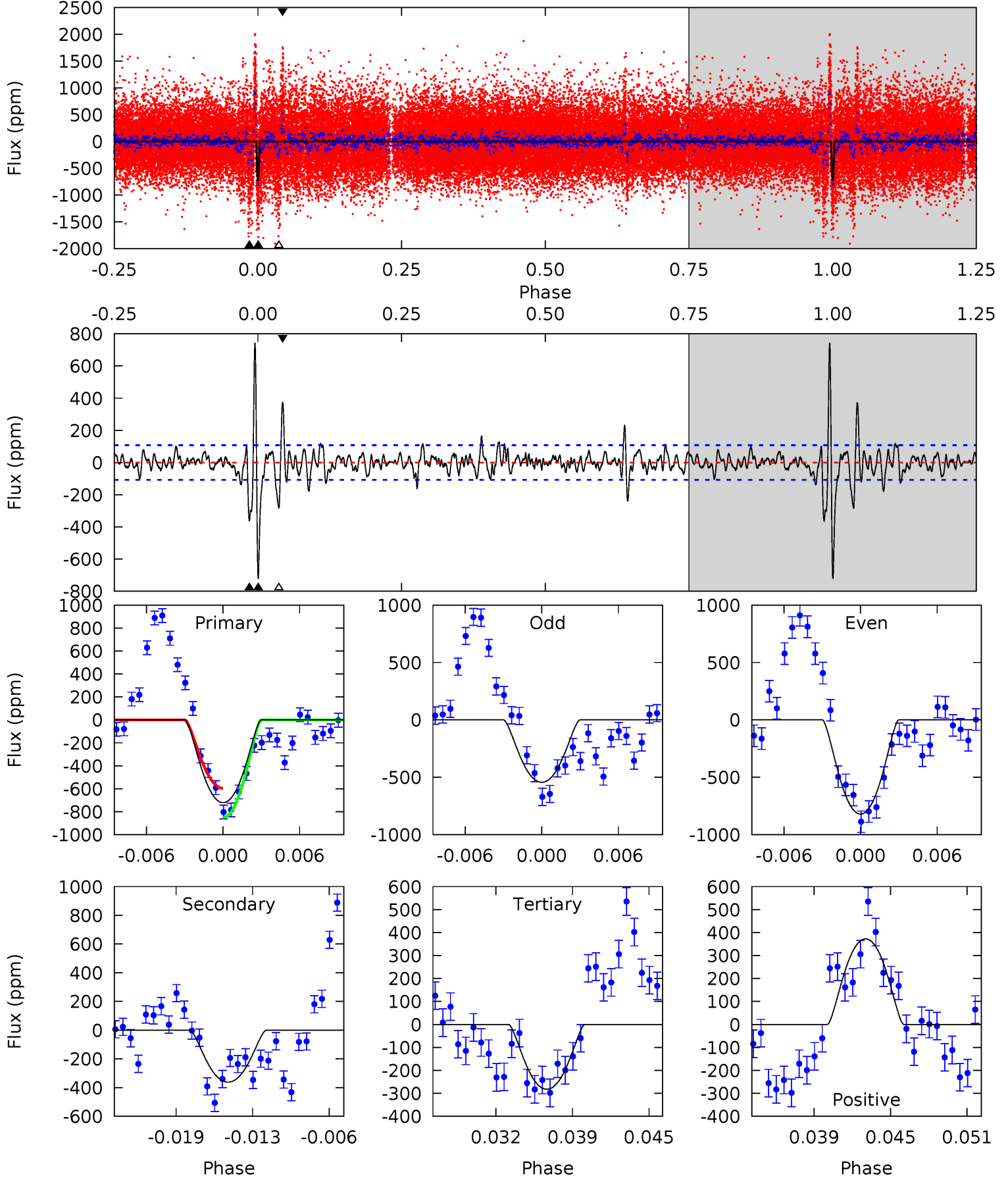
TCE 008092488-01 P=374.118050 Days  $T_0=263.799422$  (BKJD)



# DV Model-Shift Uniqueness Test

008092488-01, P = 374.223495 Days, E = 263.660780 Days

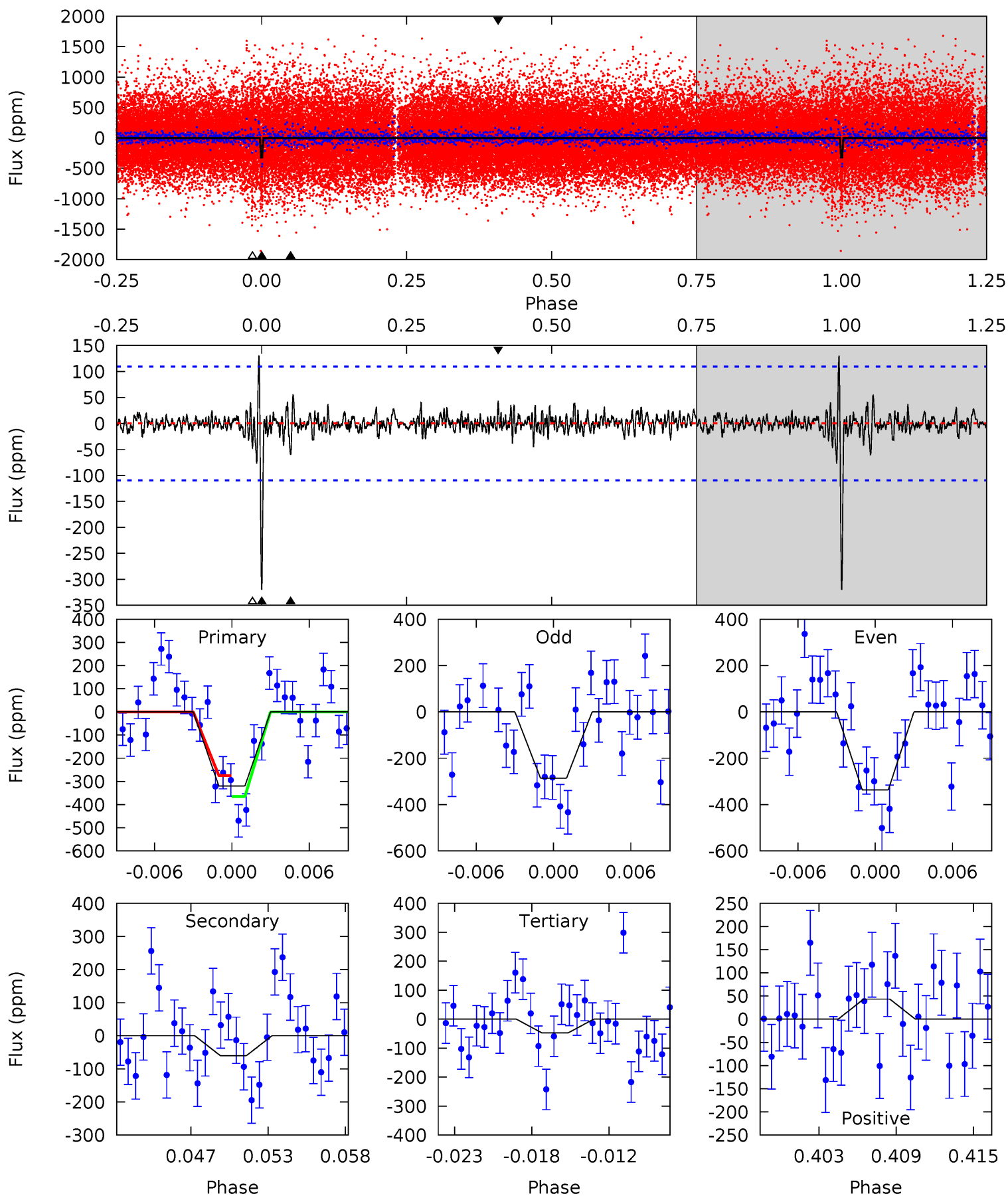
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	17.1	13.3	17.6	5.11	2.72	2.85	20.8	16.5	3.79	-0.48	6.28	1.08	0.51	5.98



# Alt Model-Shift Uniqueness Test

008092488-01, P = 374.118050 Days, E = 263.799422 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
15.0	2.81	2.22	2.03	5.13	2.76	0.60	12.7	12.9	0.59	0.78	1.13	1.12	0.29	2.11



### Stellar Parameters For KIC 008092488

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6268^{+196}_{-261}$	$4.415^{+0.070}_{-0.224}$	$0.000^{+0.250}_{-0.300}$	$1.102^{+0.388}_{-0.129}$	$1.153^{+0.169}_{-0.152}$	$1.212^{+0.374}_{-0.669}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-12%	+15%/-13%	+31%/-55%
Source	KIC0	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 008092488-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-362 \pm 21$	$4.96^{+2.93}_{-2.55}$	$400^{+31}_{-22}$	$4534^{+1804}_{-678}$	$9038^{+29654}_{-5388}$
Alt.	$-60 \pm 21$	$2.99^{+2.68}_{-1.83}$	$400^{+34}_{-20}$	$3906^{+2002}_{-740}$	$4129^{+25545}_{-3104}$

$T_{max}$  = 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

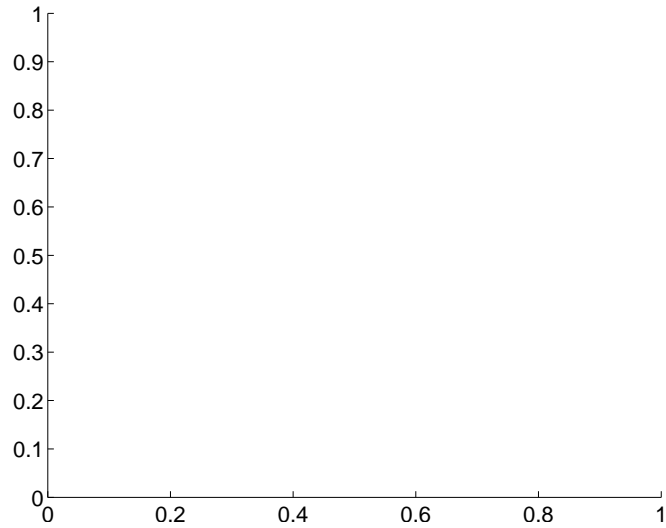
Supplemental centroid analysis for 008092488-01. Kepler magnitude: 15.08. Transit SNR 13.18

There are 0 quarters with good PRF difference image offsets

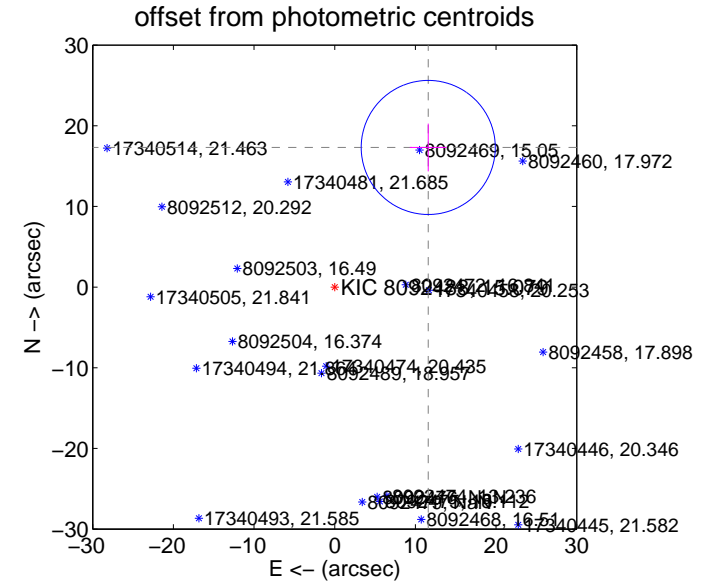
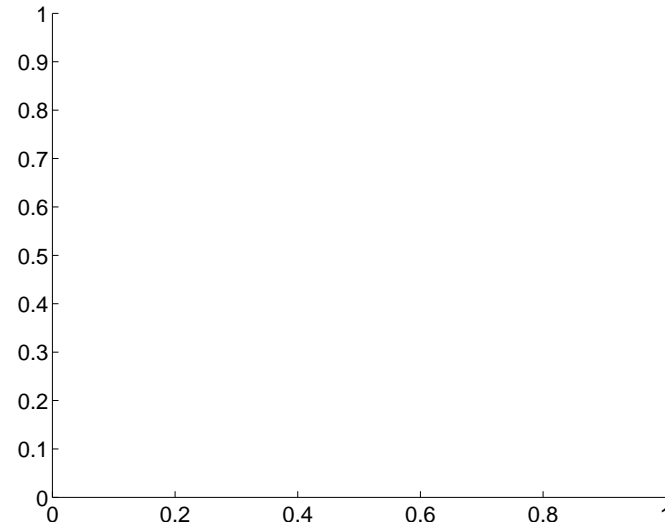
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$20.83 \pm 2.77$	$7.52$	$-11.59 \pm 2.29$	$17.31 \pm 2.96$

There is no PRF-fit offset from OOT-fit

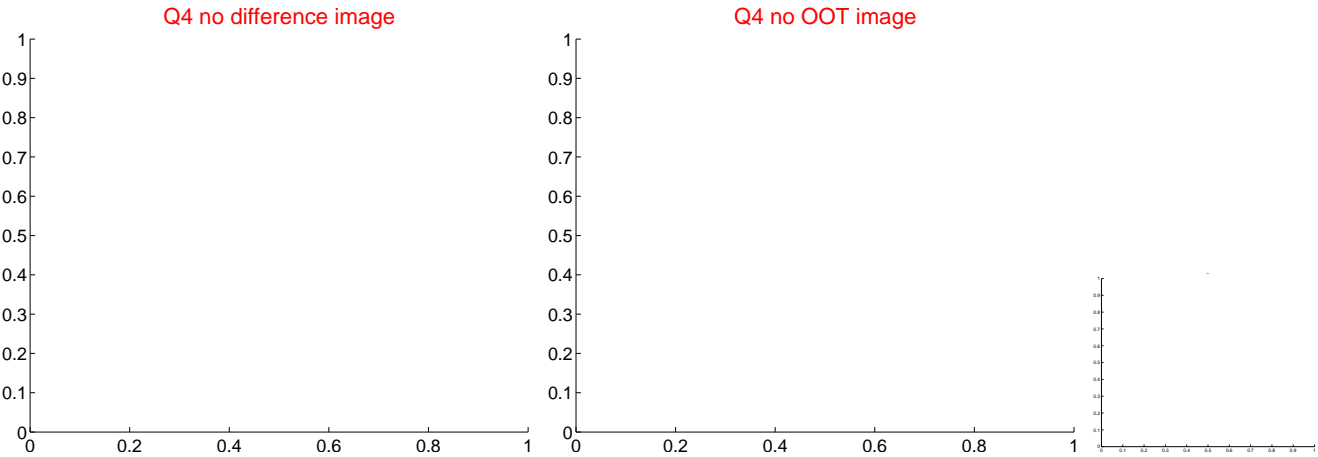
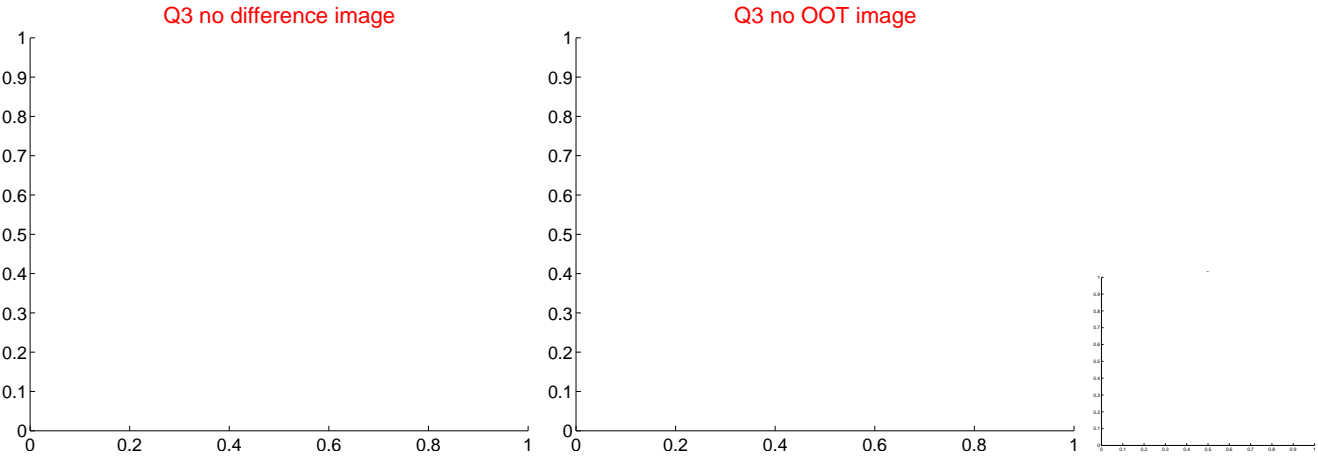
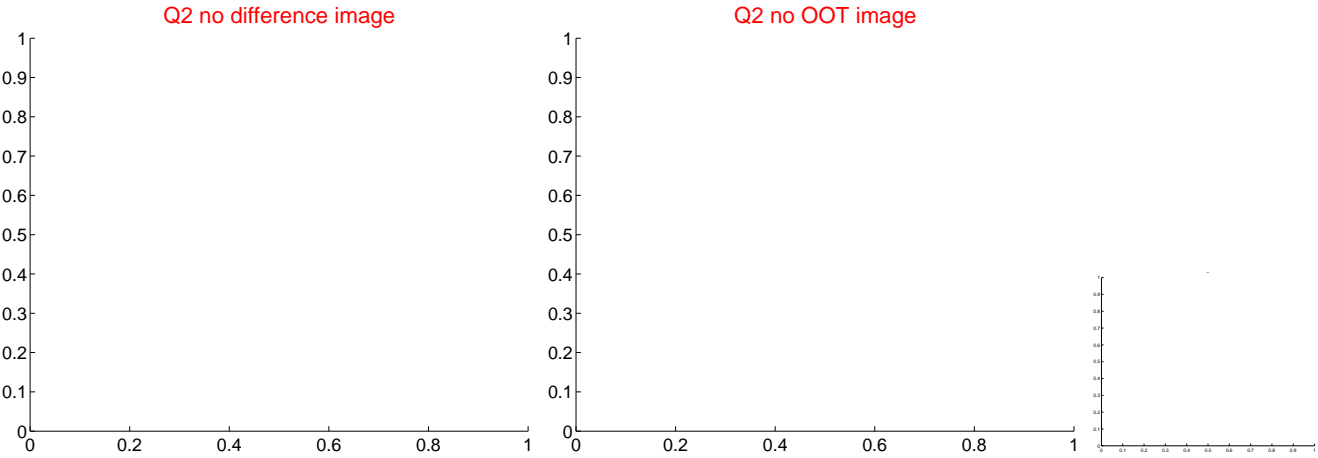
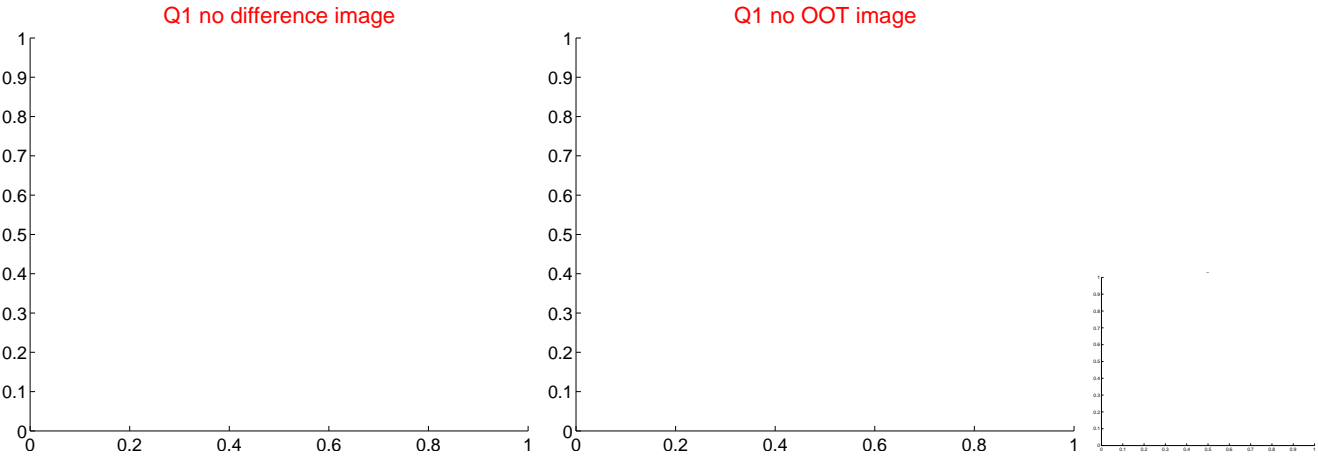


There is no PRF-fit offset from KIC

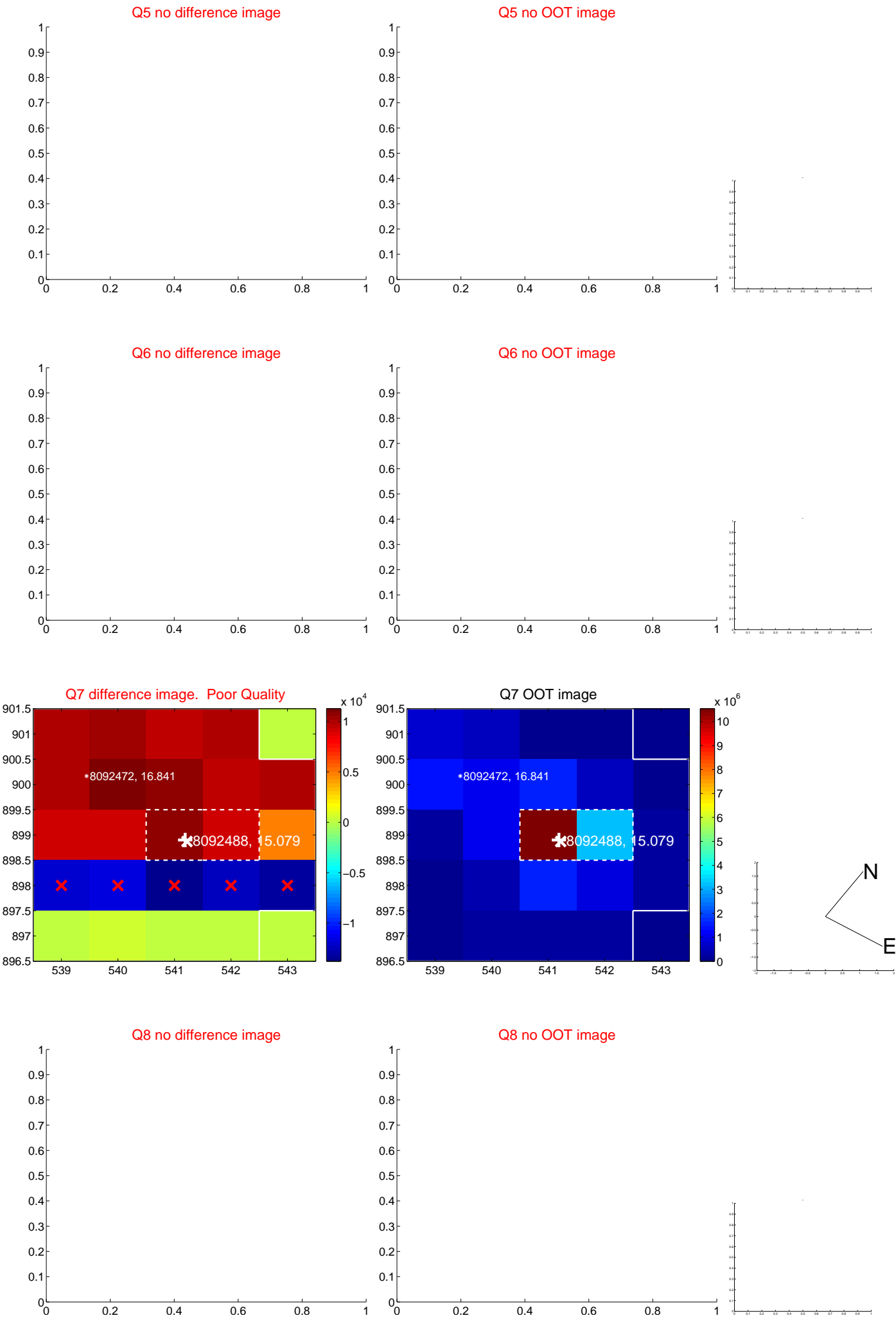




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



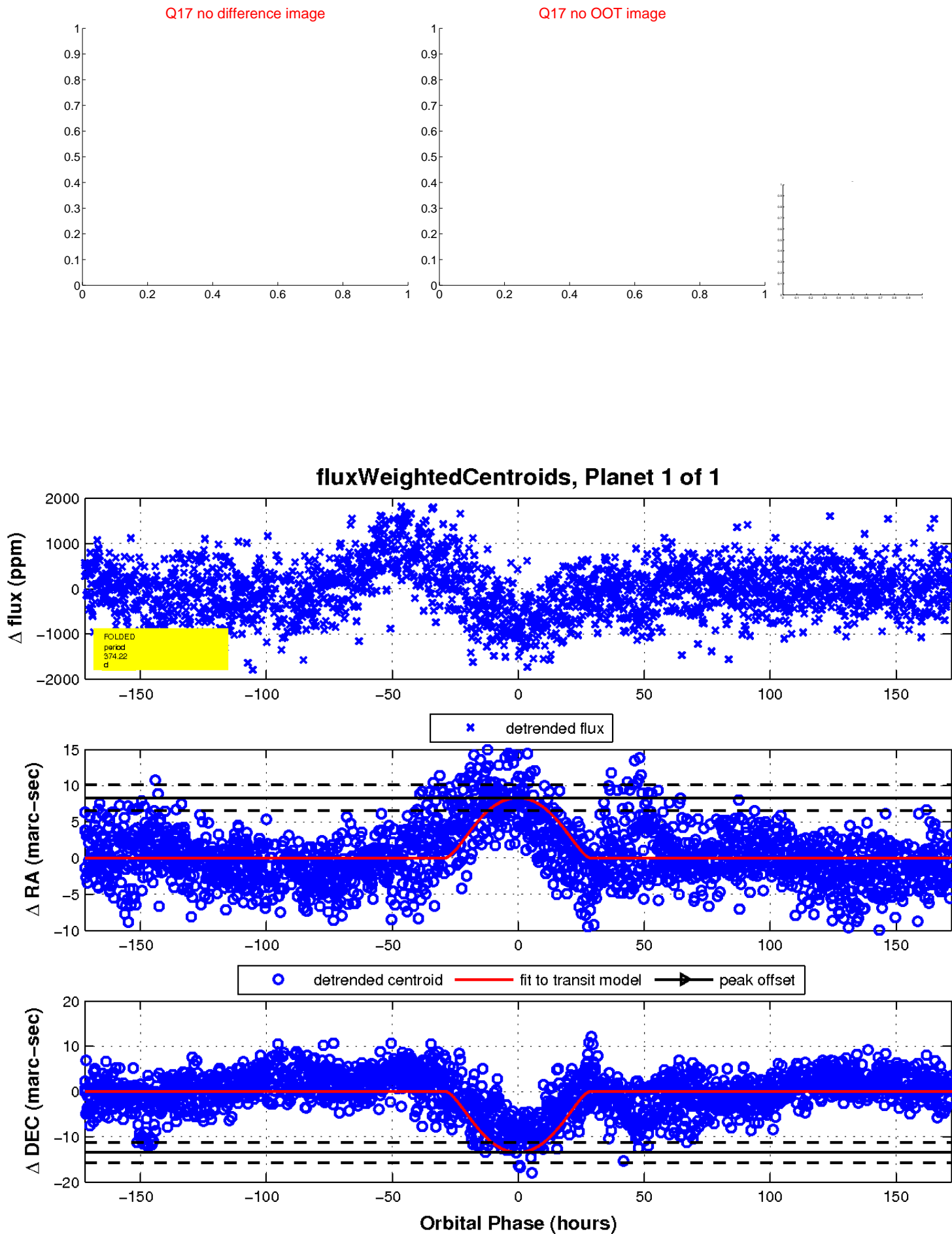
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

