

# KIC 006805414

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006805414-01	OBS	5329.01	200.233297	305.451488	11019.0	23.493	73.1	108.0	1.00	6108	11.10	2.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006805414-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

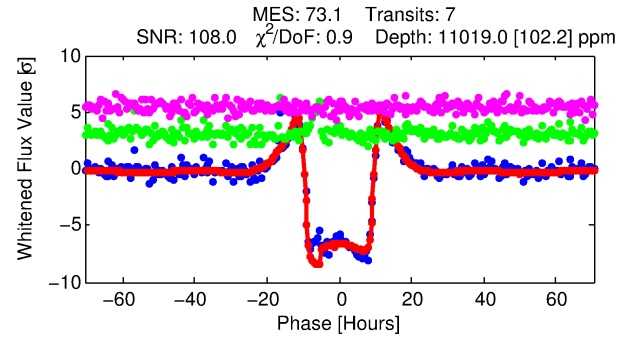
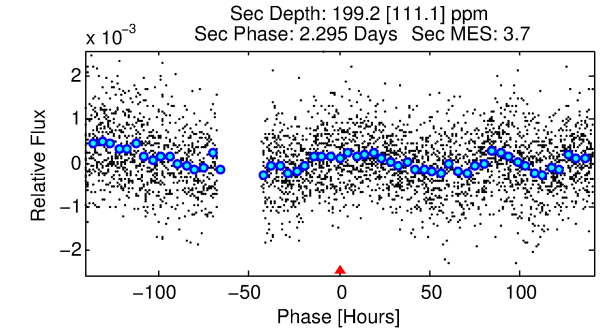
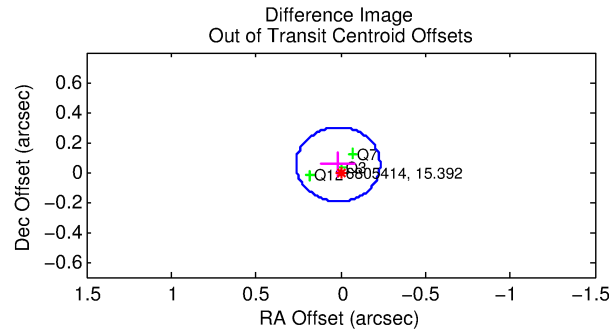
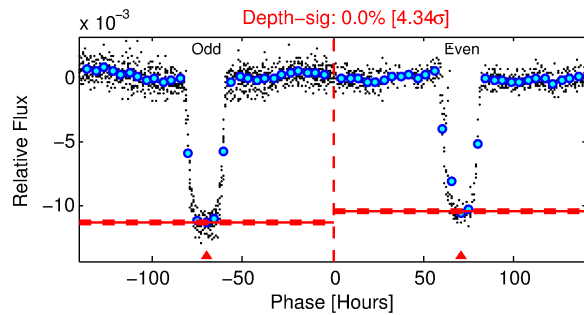
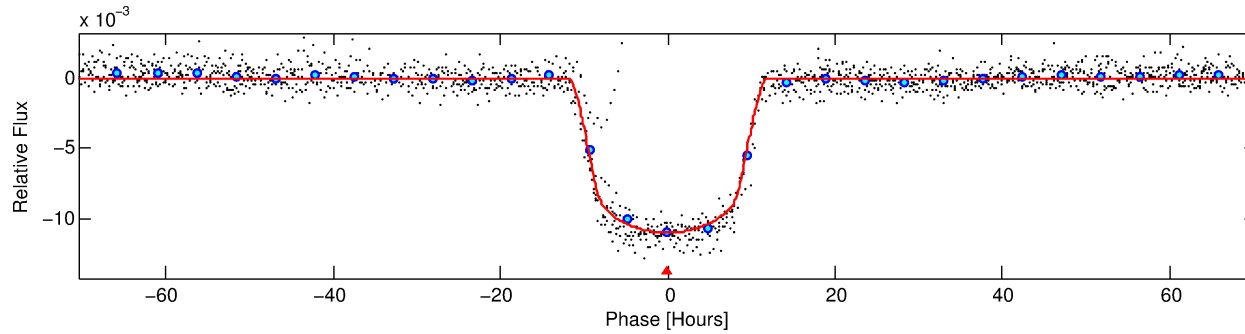
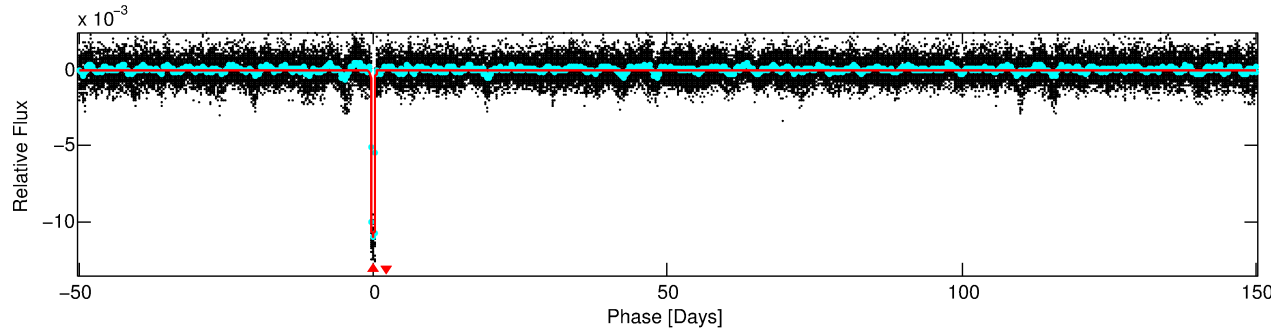
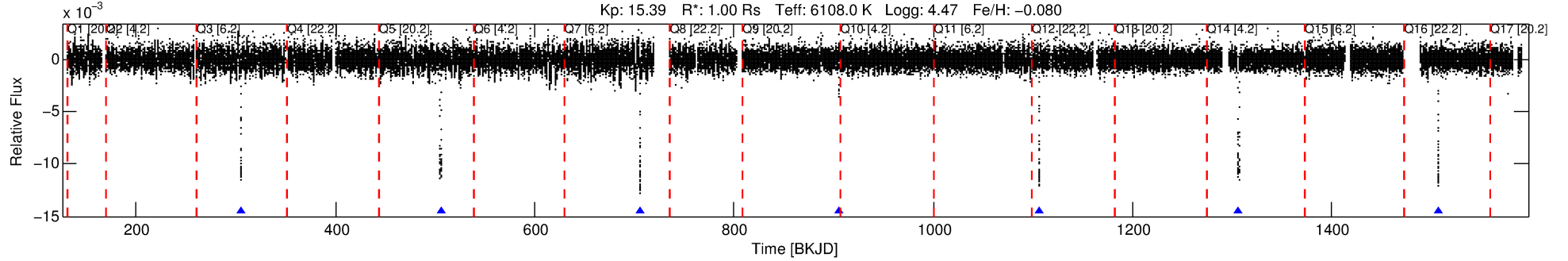
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006805414-01

No Significant Match Found

# DV One-Page Summary

KIC: 6805414 Candidate: 1 of 1 Period: 200.233 d  
KOI: K05329.01 Corr: 0.992



## DV Fit Results:

Period = 200.23330 [0.00059] d  
Epoch = 305.4515 [0.0022] BKJD  
Rp/R\* = 0.1021 [0.0006]  
a/R\* = 57.13 [0.94]  
b = 0.67 [0.01]  
Seff = 2.64 [1.10]  
Teq = 325 [34] K  
Rp = 11.10 [3.43] Re  
a = 0.6858 [0.1813] AU  
Ag = 417.99 [284.53] [1.47 $\sigma$ ]  
Teffp = 2271 [328] K [5.90 $\sigma$ ]

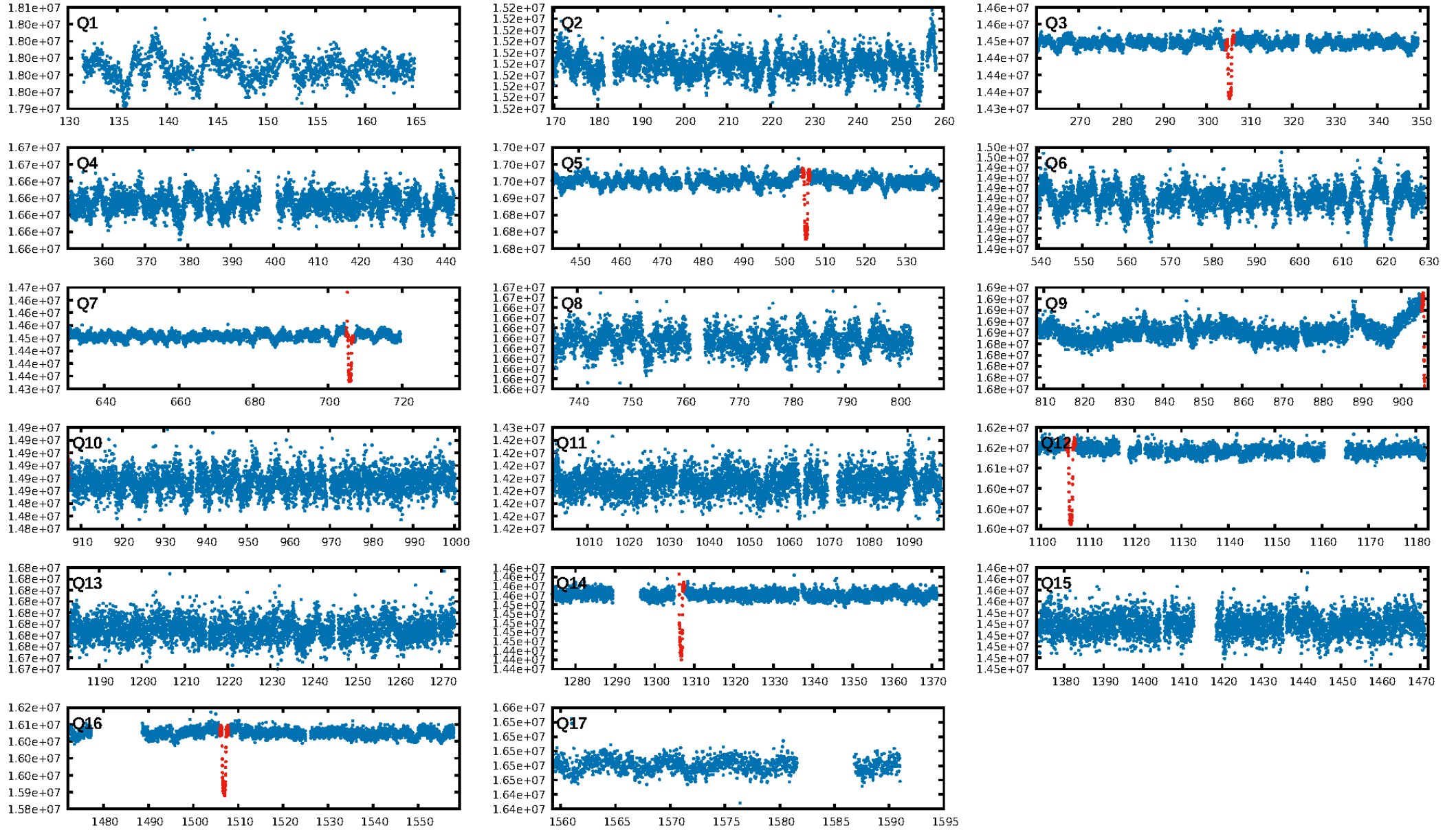
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.3%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [7/7]  
GhostDiagnostic-chr: 2.095  
Centroid-sig: 0.1%  
Centroid-so: 0.096 arcsec [1.79 $\sigma$ ]  
OotOffset-rm: 0.054 arcsec [0.65 $\sigma$ ]  
KicOffset-rm: 0.074 arcsec [0.69 $\sigma$ ]  
OotOffset-st: 0/2/1/0 [3]  
KicOffset-st: 0/2/1/0 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

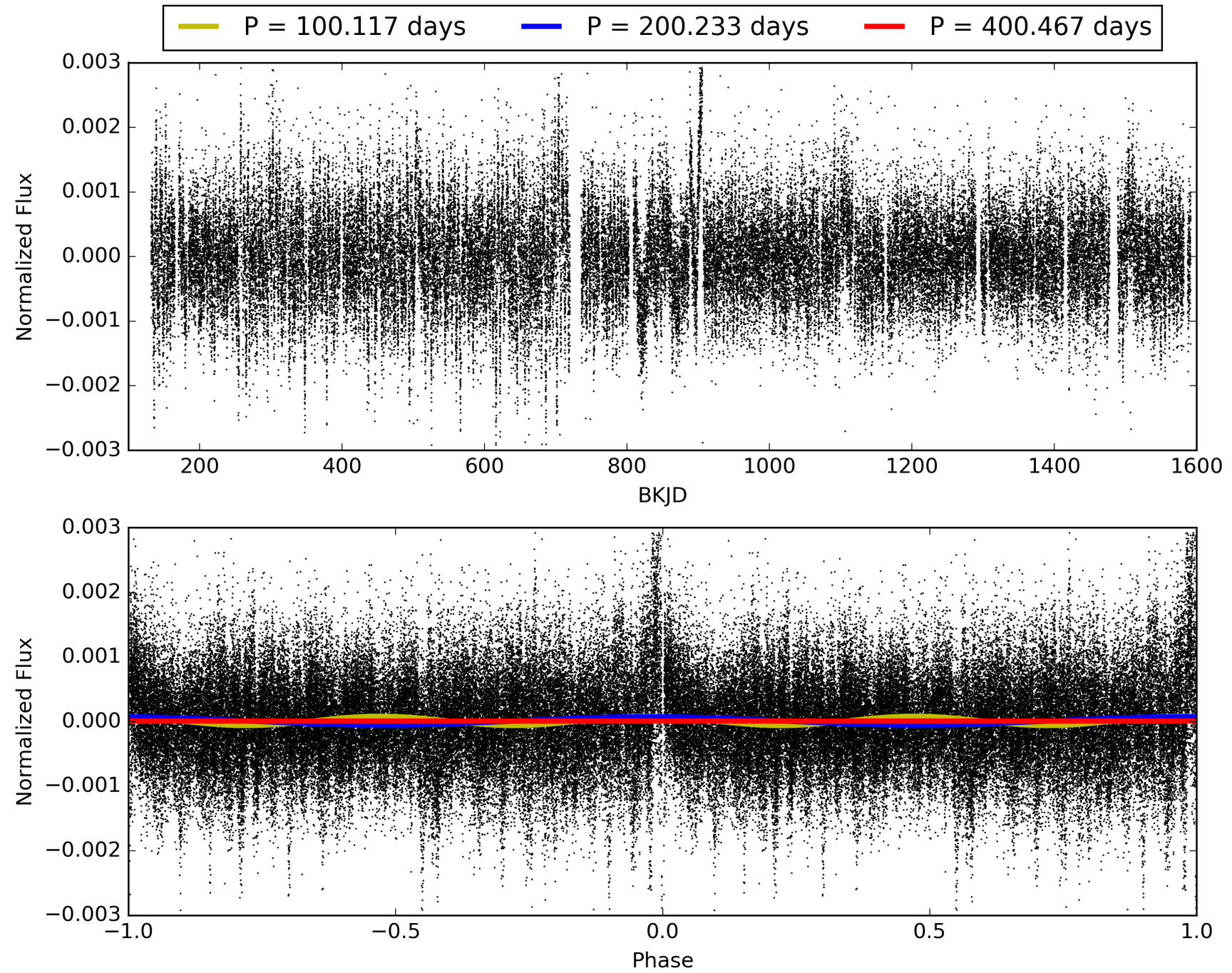
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:32:47 Z

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

# TCE 006805414-01, PDC Light Curves

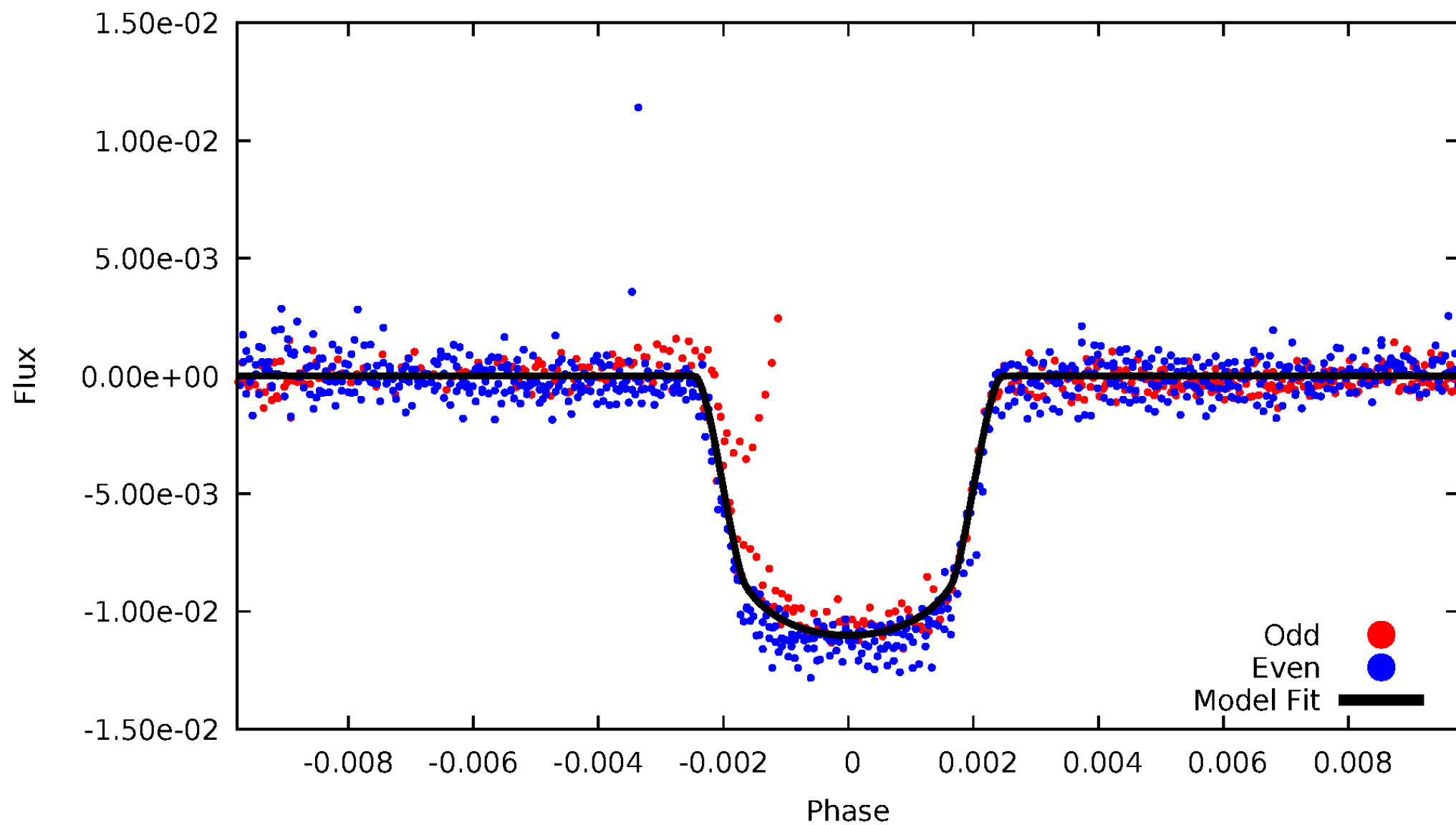


TCE 006805414-01



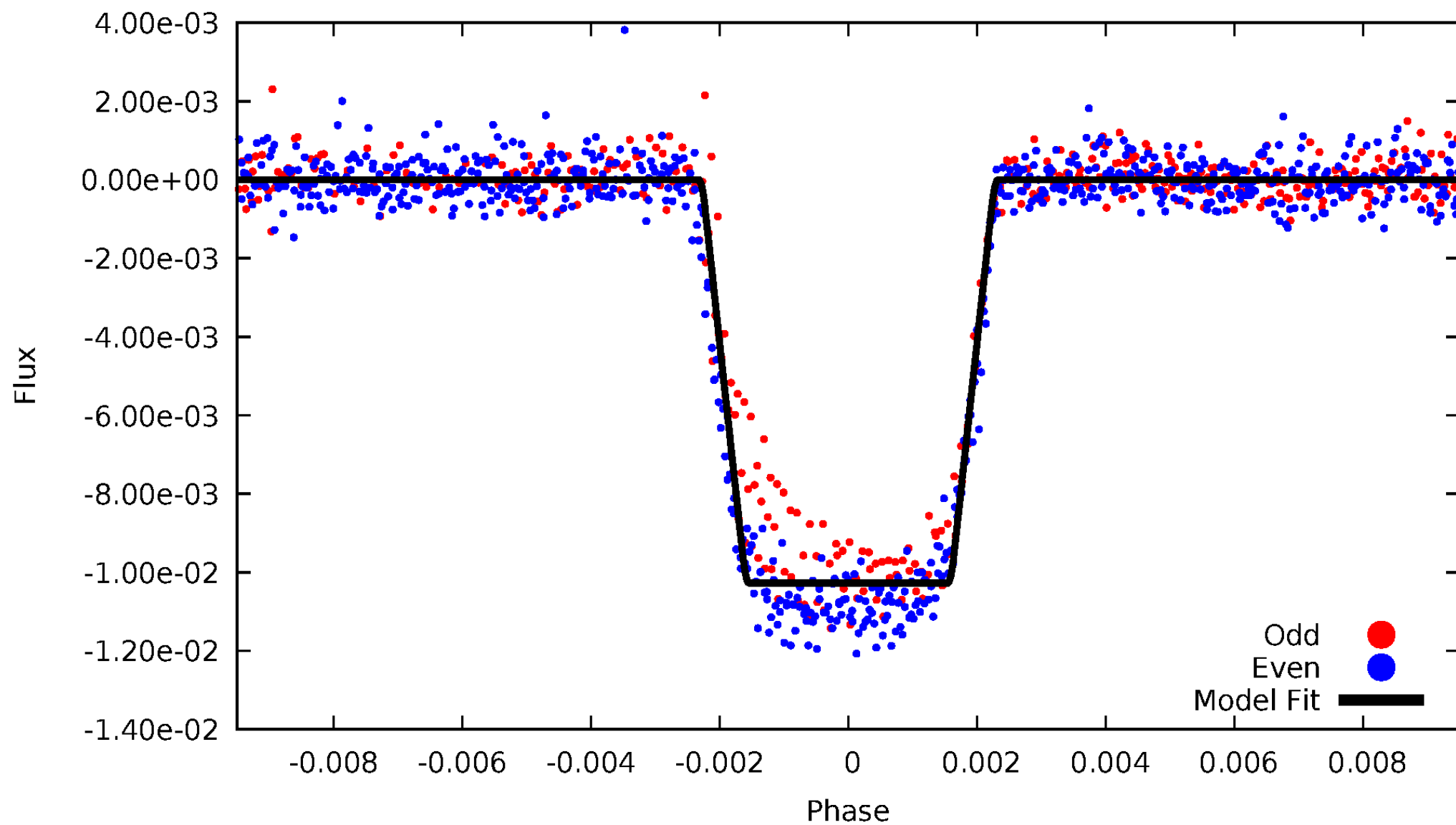
# DV Odd/Even

TCE 006805414-01



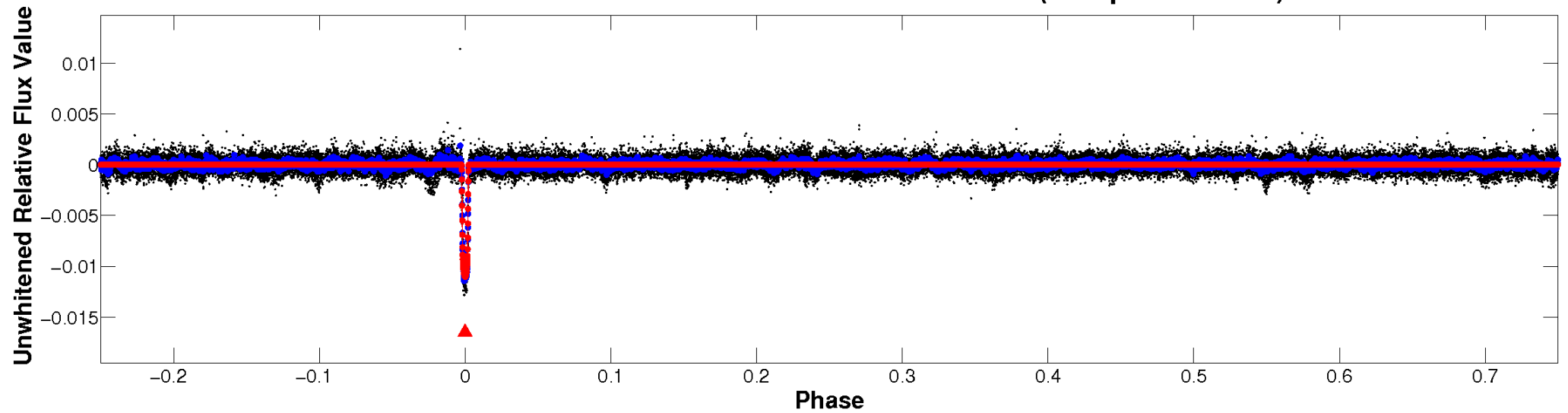
# ALT Odd/Even

TCE 006805414-01

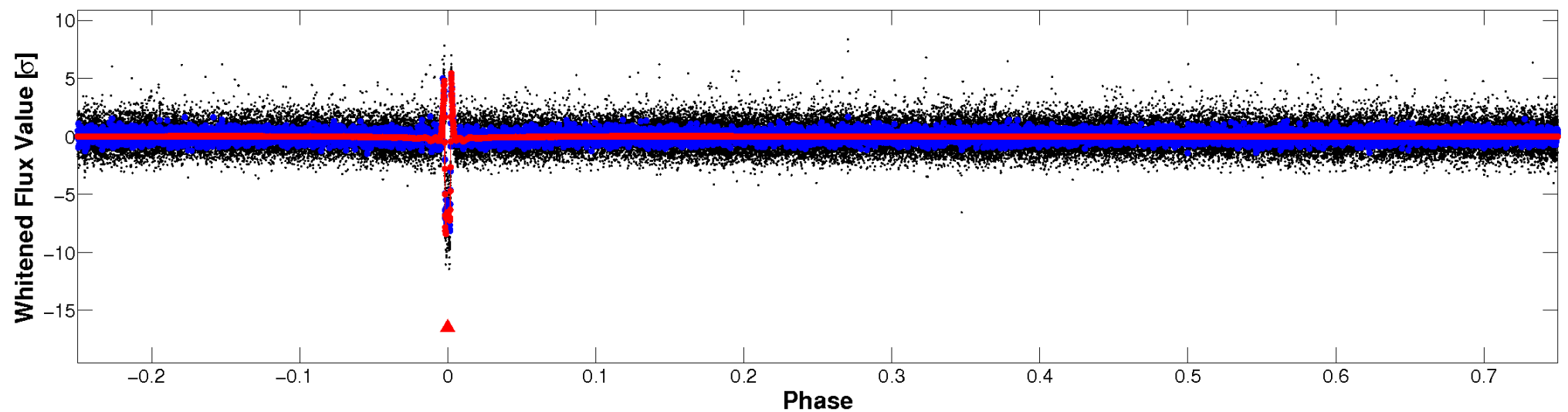


# Non-Whitened Vs. Whitened Light Curve

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



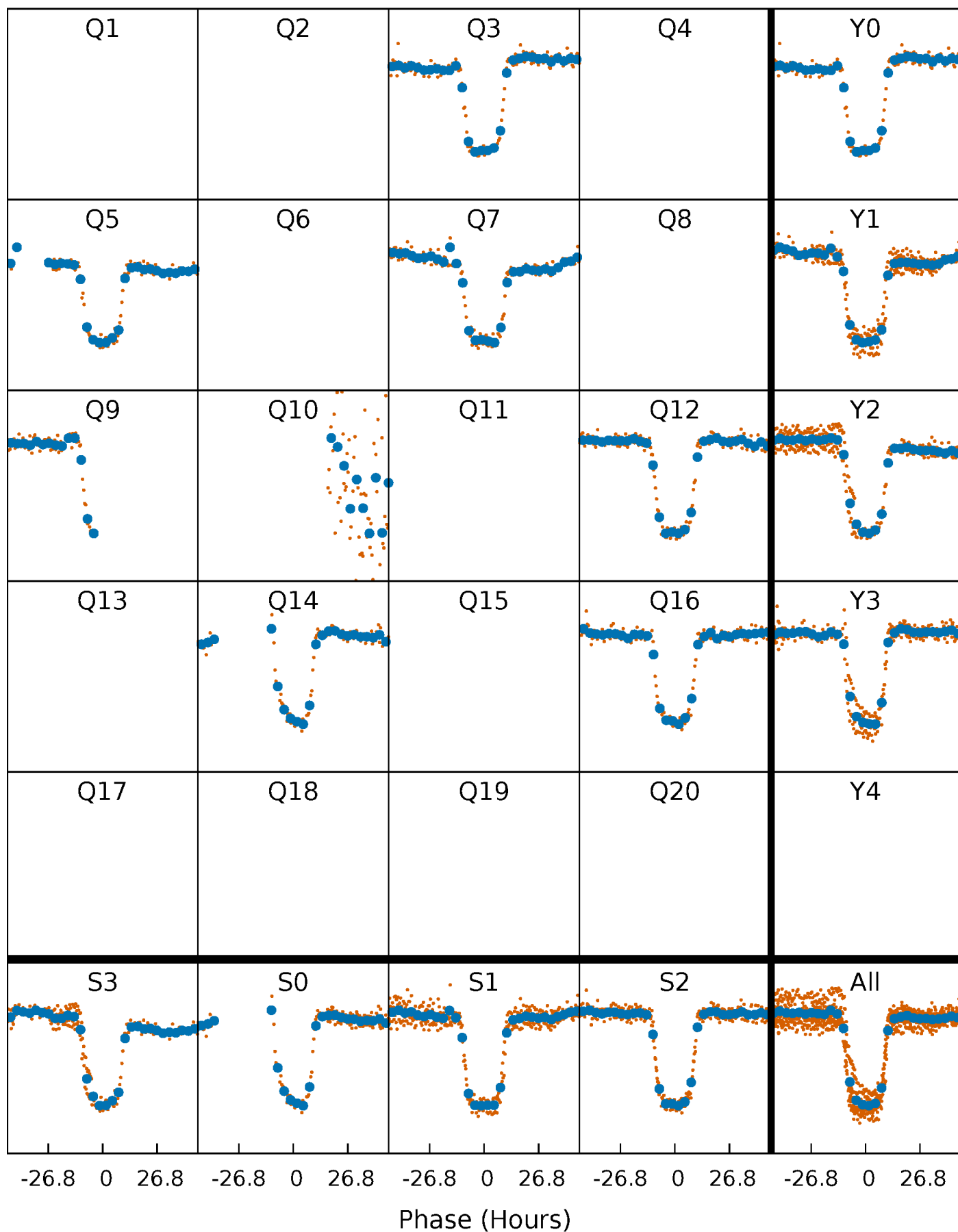
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

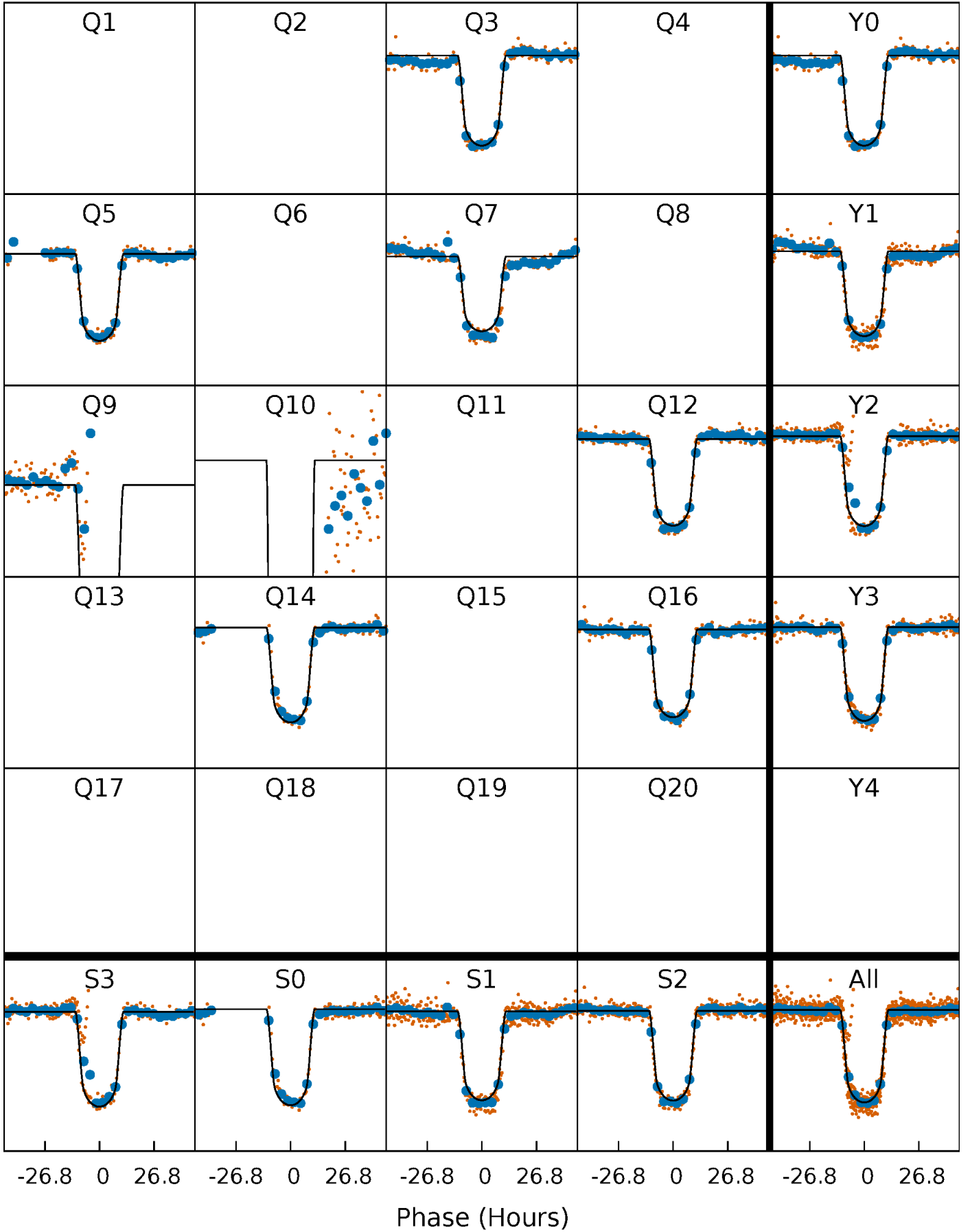
TCE 006805414-01 P=200.233297 Days  $T_0=305.451488$  (BKJD)





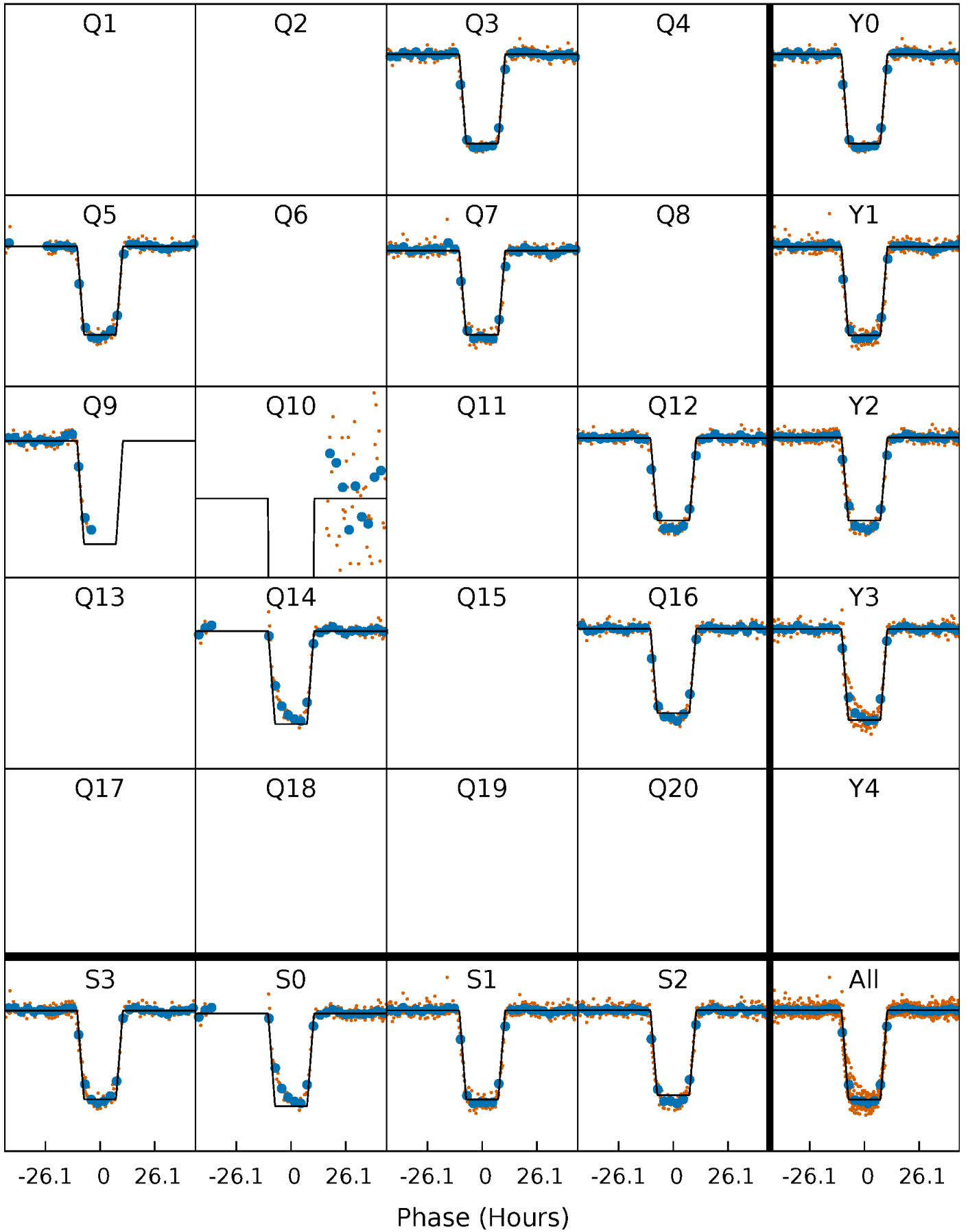
# DV Quarter-Phased Transit Curves

TCE 006805414-01 P=200.233297 Days  $T_0=305.451488$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

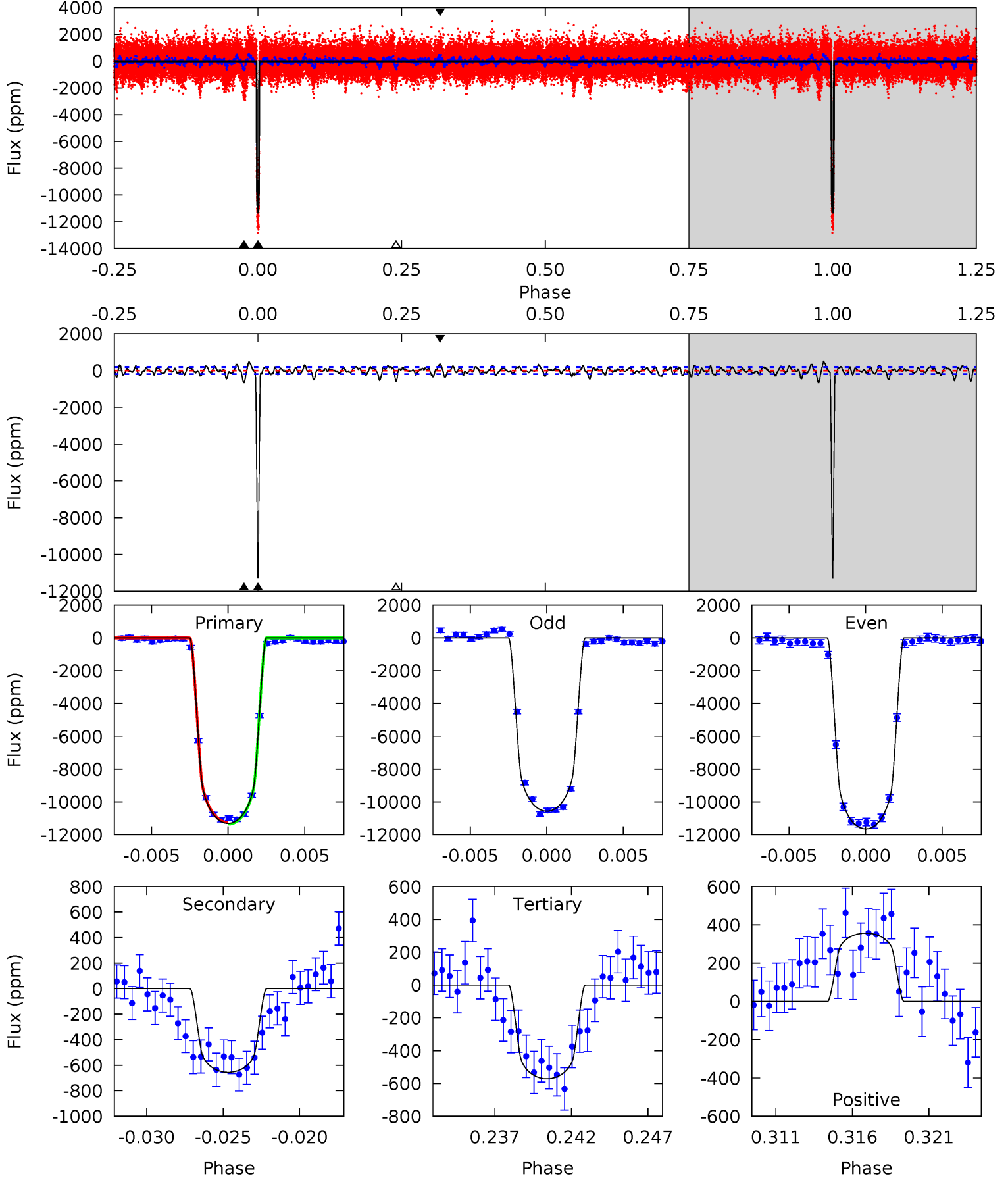
TCE 006805414-01 P=200.235266 Days  $T_0=305.450687$  (BKJD)



# DV Model-Shift Uniqueness Test

006805414-01, P = 200.233297 Days, E = 105.218191 Days

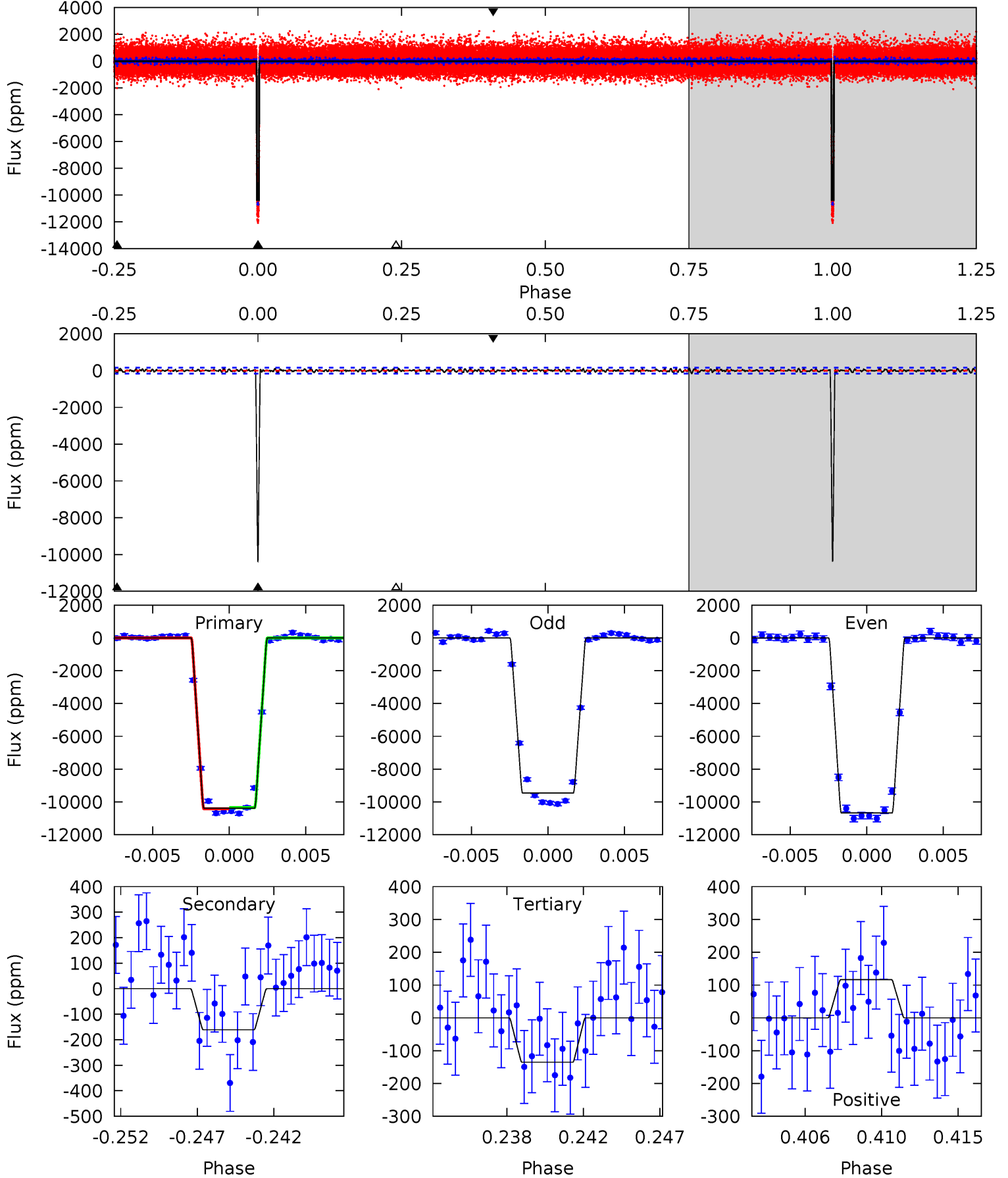
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
299.3	17.4	15.1	9.45	5.16	2.81	3.98	284.2	289.9	2.22	7.91	13.9	0.88	0.04	1.39



# Alt Model-Shift Uniqueness Test

006805414-01, P = 200.235266 Days, E = 105.215421 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
328.9	5.10	4.29	3.70	5.17	2.83	1.25	324.6	325.2	0.81	1.40	19.1	0.95	0.01	1.16



### Stellar Parameters For KIC 006805414

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6108^{+189}_{-232}$	$4.471^{+0.054}_{-0.216}$	$-0.080^{+0.250}_{-0.300}$	$0.997^{+0.308}_{-0.110}$	$1.072^{+0.139}_{-0.153}$	$1.525^{+0.437}_{-0.806}$
	+3%/-4%	+1%/-5%	+312%/-375%	+31%/-11%	+13%/-14%	+29%/-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 006805414-01 / KOI 5329.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-655 \pm 38$	$11.45^{+2.04}_{-0.95}$	$464^{+36}_{-25}$	$3533^{+74}_{-88}$	$1260^{+221}_{-308}$
Alt.	$-161 \pm 32$	$11.36^{+1.92}_{-0.99}$	$465^{+34}_{-27}$	$2874^{+88}_{-100}$	$302^{+95}_{-81}$

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

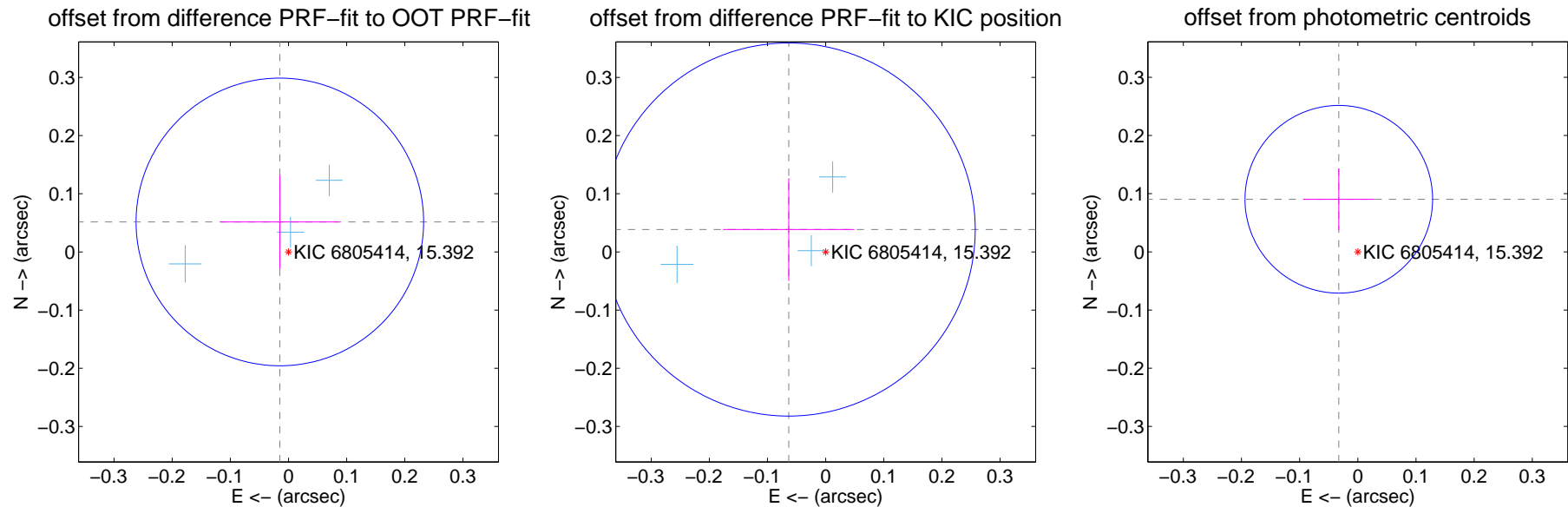
## DV Centroid Data

Supplemental centroid analysis for 006805414-01. Kepler magnitude: 15.39. Transit SNR 108.00

There are 3 quarters with good PRF difference image offsets

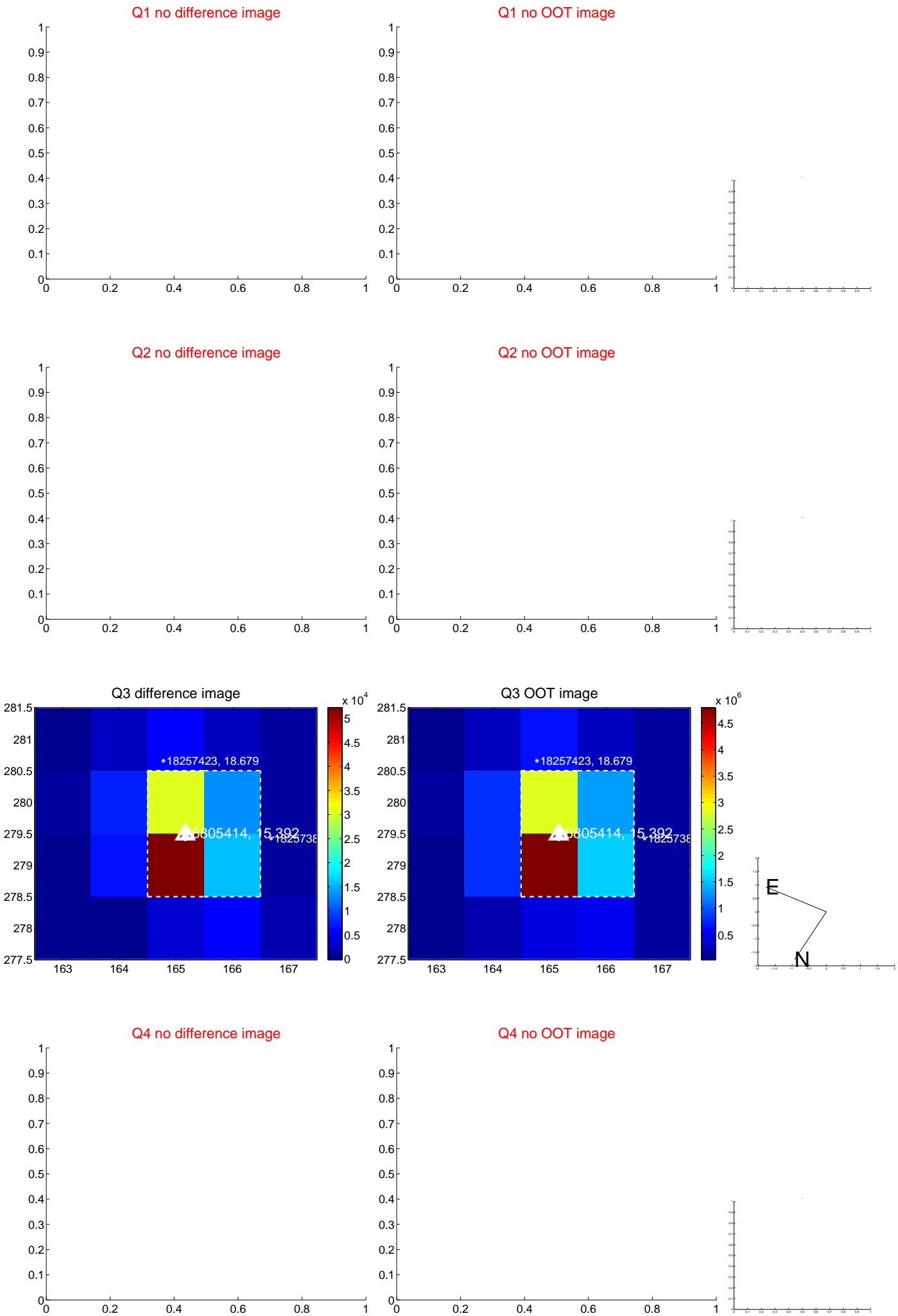
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.054 \pm 0.082$	0.65	$0.015 \pm 0.102$	$0.052 \pm 0.081$
PRF-fit source offset from KIC position	$0.074 \pm 0.107$	0.69	$0.063 \pm 0.113$	$0.038 \pm 0.088$
photometric centroid source offset	$0.10 \pm 0.05$	1.79	$0.03 \pm 0.06$	$0.09 \pm 0.05$



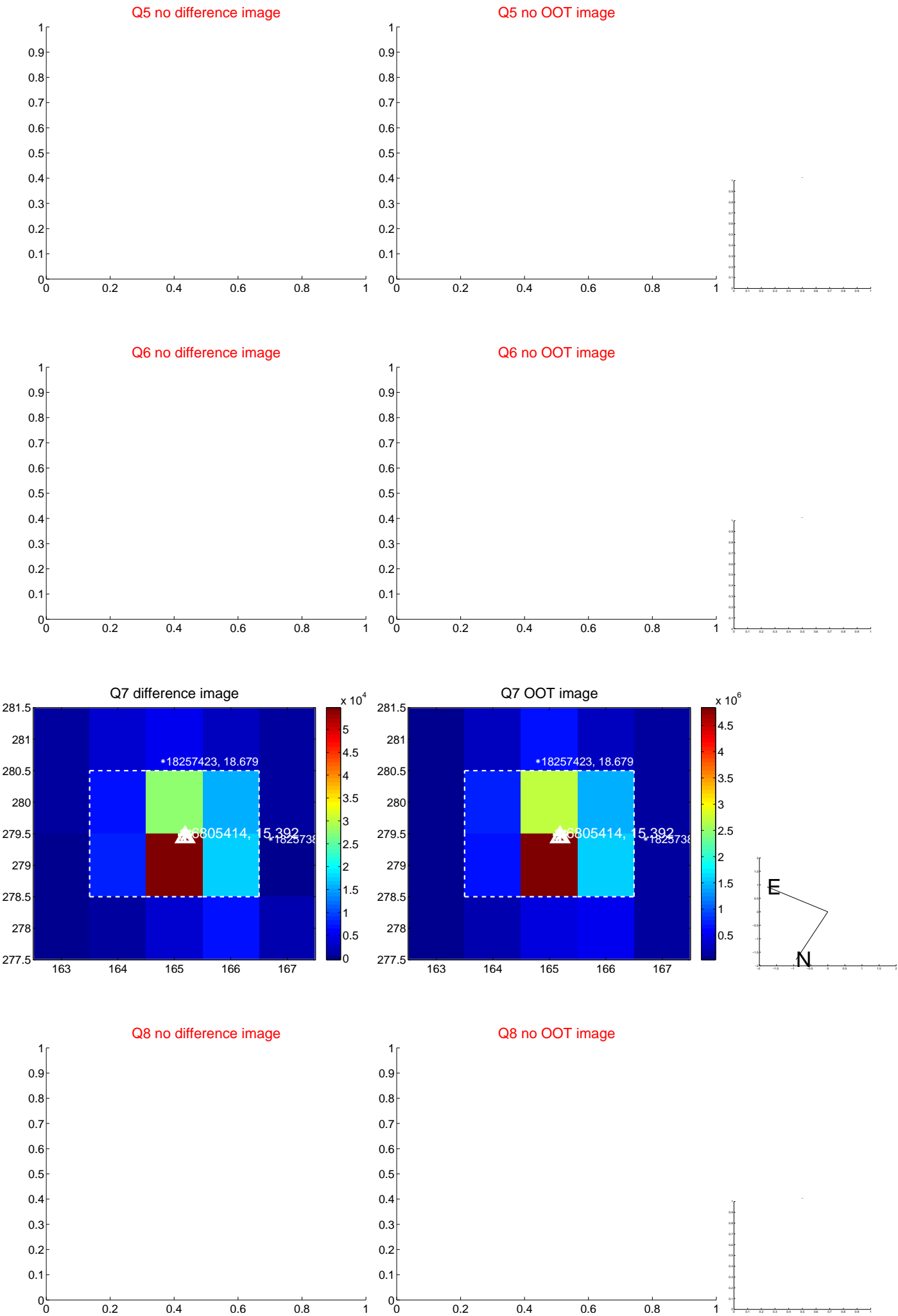
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q9 no difference image



Q9 no OOT image



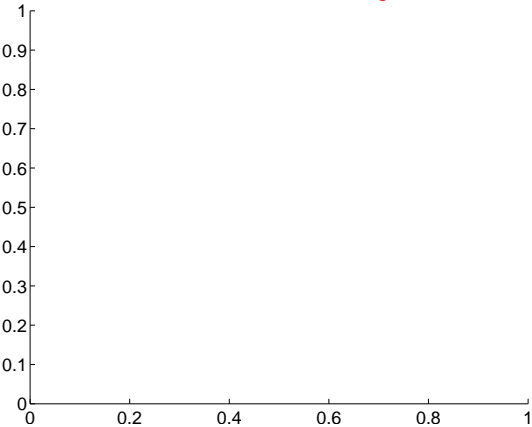
Q10 no difference image



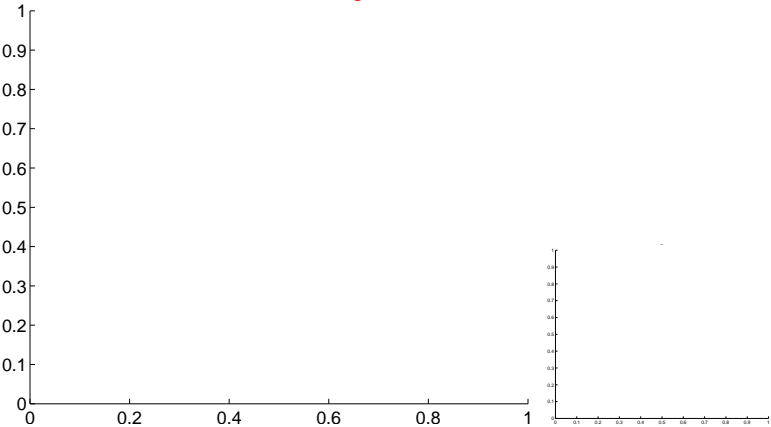
Q10 no OOT image



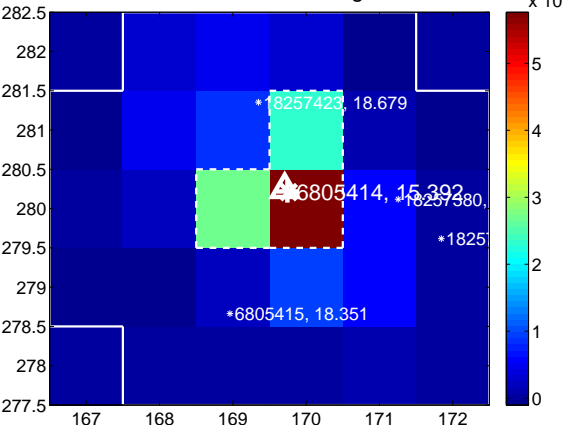
Q11 no difference image



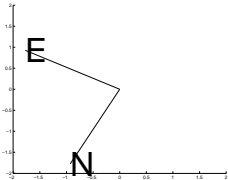
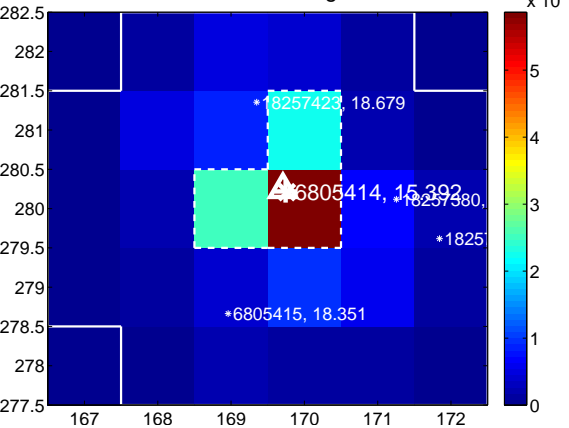
Q11 no OOT image



Q12 difference image



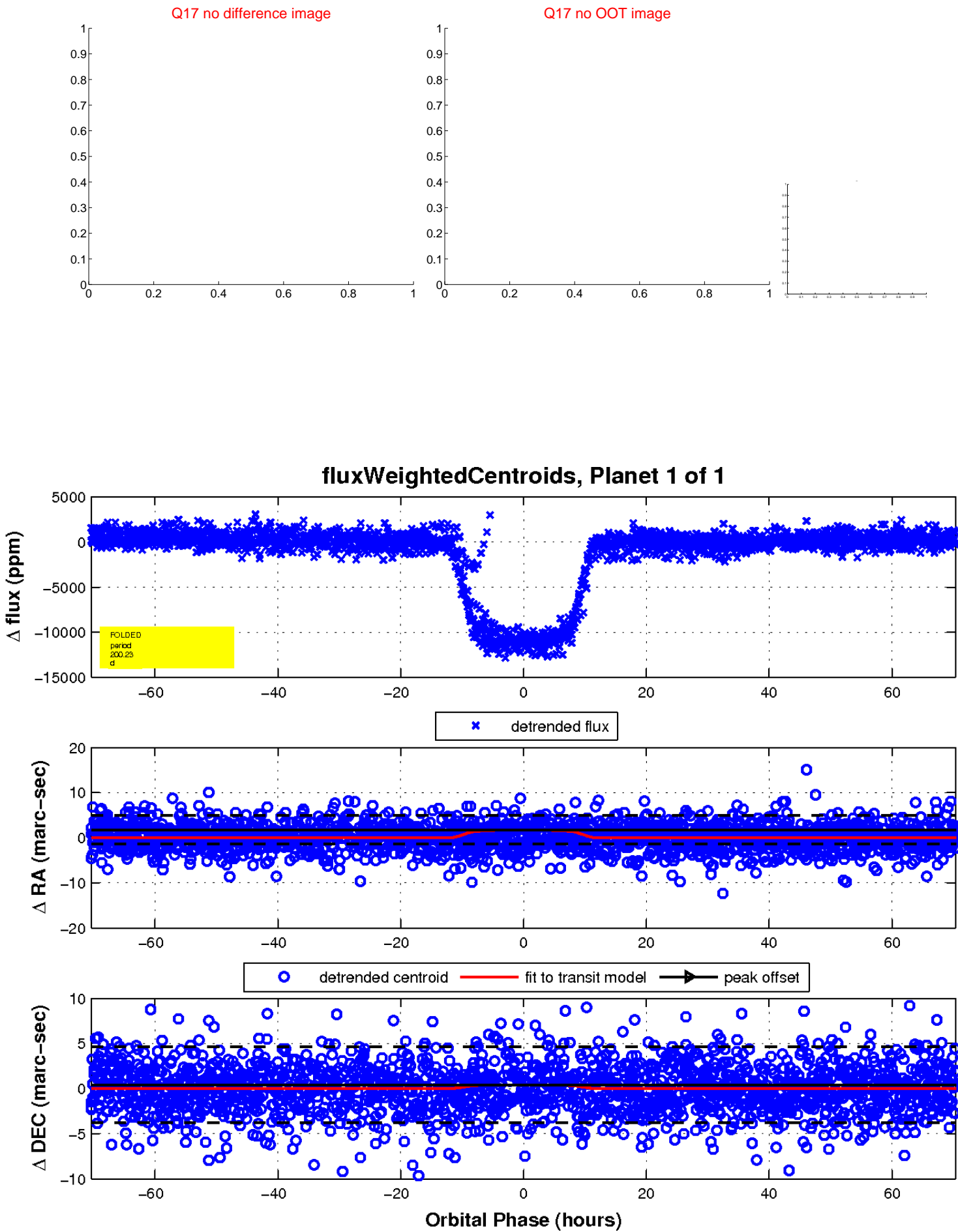
Q12 OOT image



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

