

# KIC 007046804

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007046804-01	OBS	0205.01	11.720124	142.173979	9747.5	3.091	749.7	702.6	0.77	5215	8.15	44.98

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007046804-01	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.

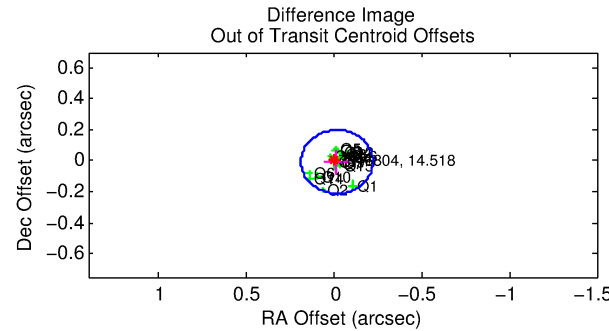
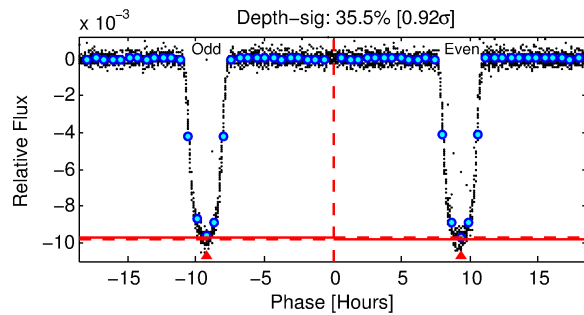
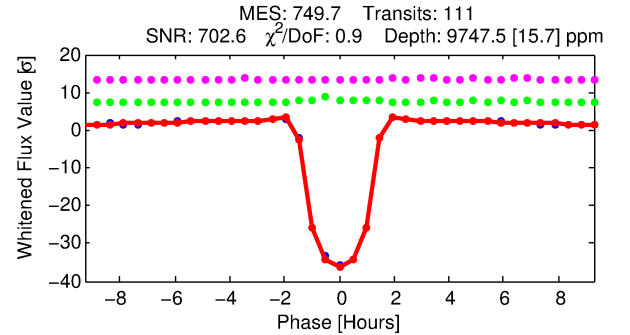
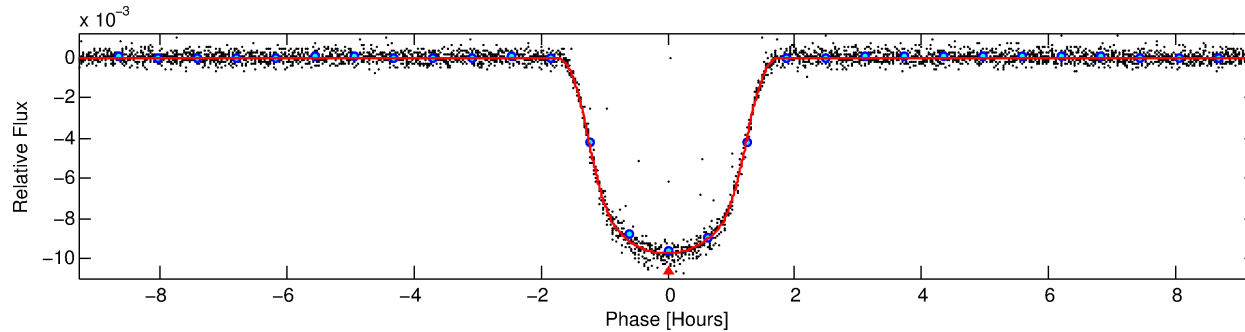
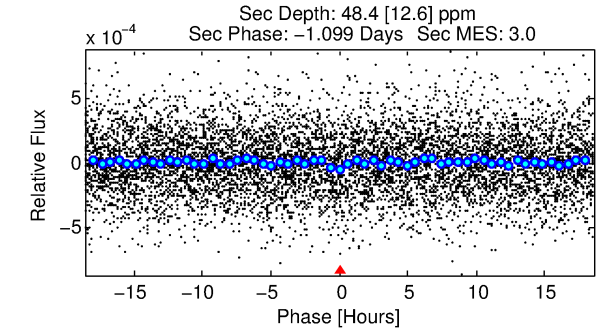
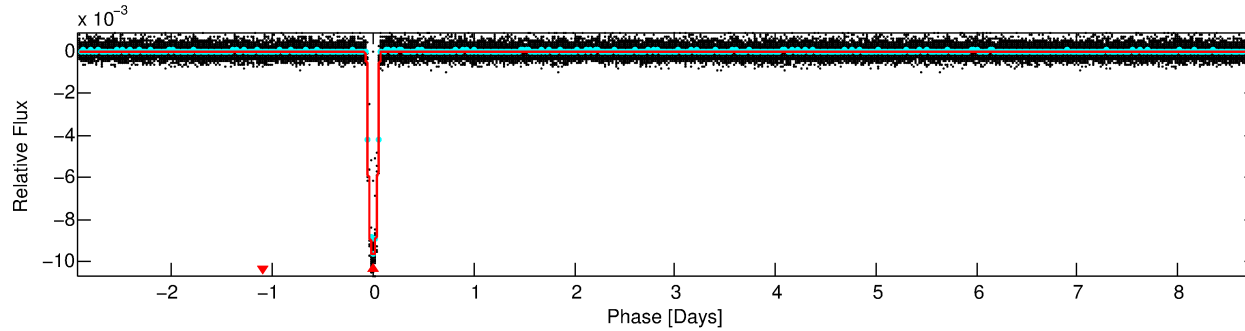
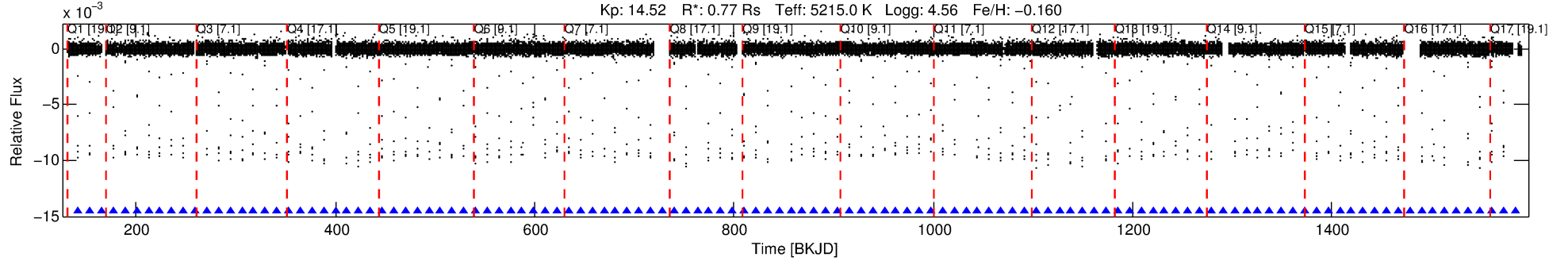
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007046804-01

No Significant Match Found

# DV One-Page Summary

KIC: 7046804 Candidate: 1 of 1 Period: 11.720 d  
KOI: K00205.01 Corr: 0.984



## DV Fit Results:

Period = 11.72012 [0.00000] d  
Epoch = 142.1740 [0.0001] BKJD  
Rp/R\* = 0.0971 [0.0003]  
a/R\* = 24.31 [0.28]  
b = 0.71 [0.01]  
Seff = 44.98 [8.65]  
Teq = 660 [32] K  
Rp = 8.16 [1.09] Re  
a = 0.0935 [0.0100] AU  
Ag = 3.49 [1.05] [2.37 $\sigma$ ]  
Teffp = 1396 [101] K [6.98 $\sigma$ ]

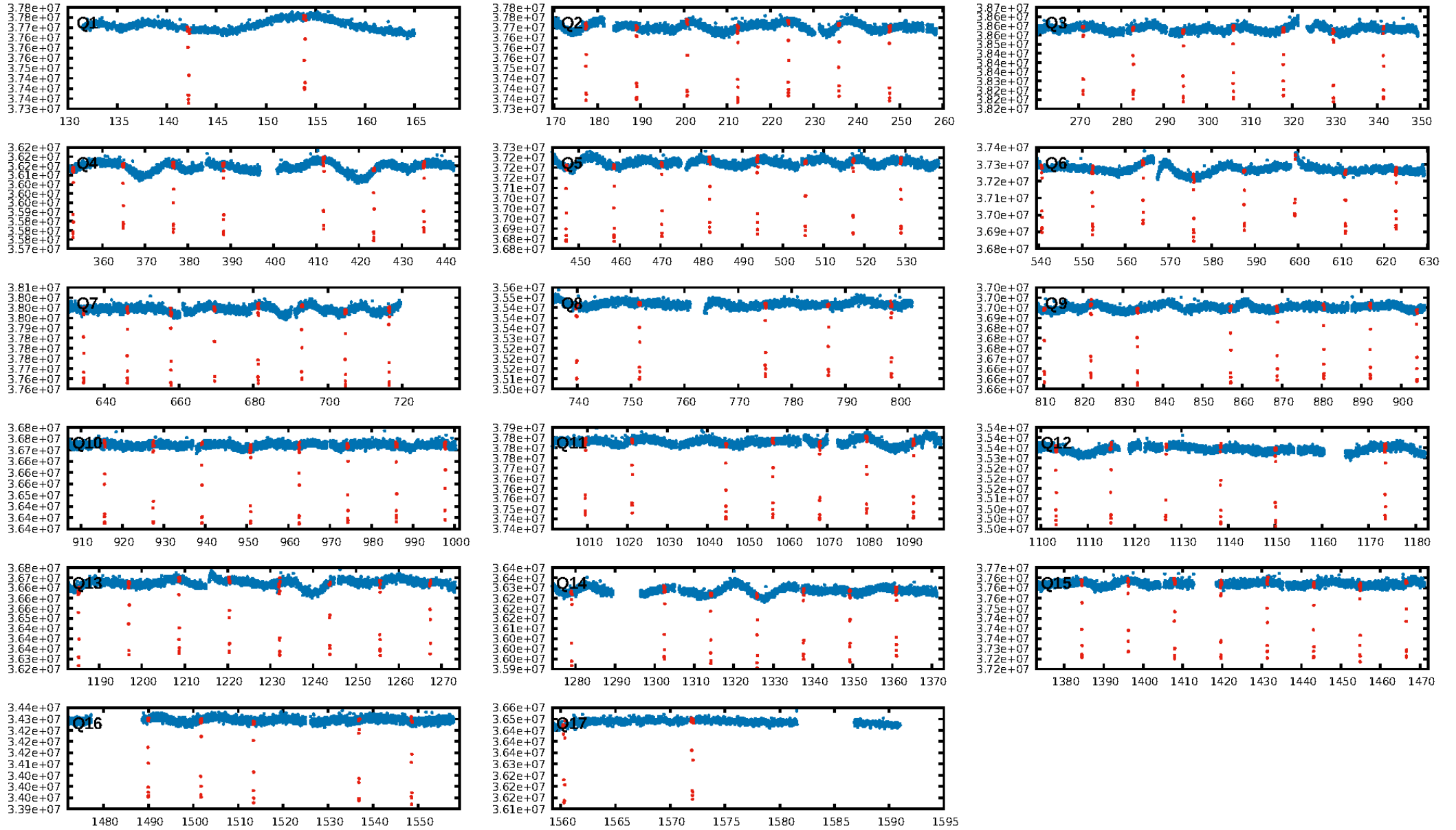
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [107/107]  
GhostDiagnostic-chr: 6.746  
Centroid-sig: 0.0%  
Centroid-so: 0.221 arcsec [13.98 $\sigma$ ]  
OotOffset-rm: 0.018 arcsec [0.27 $\sigma$ ]  
KicOffset-rm: 0.182 arcsec [2.63 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

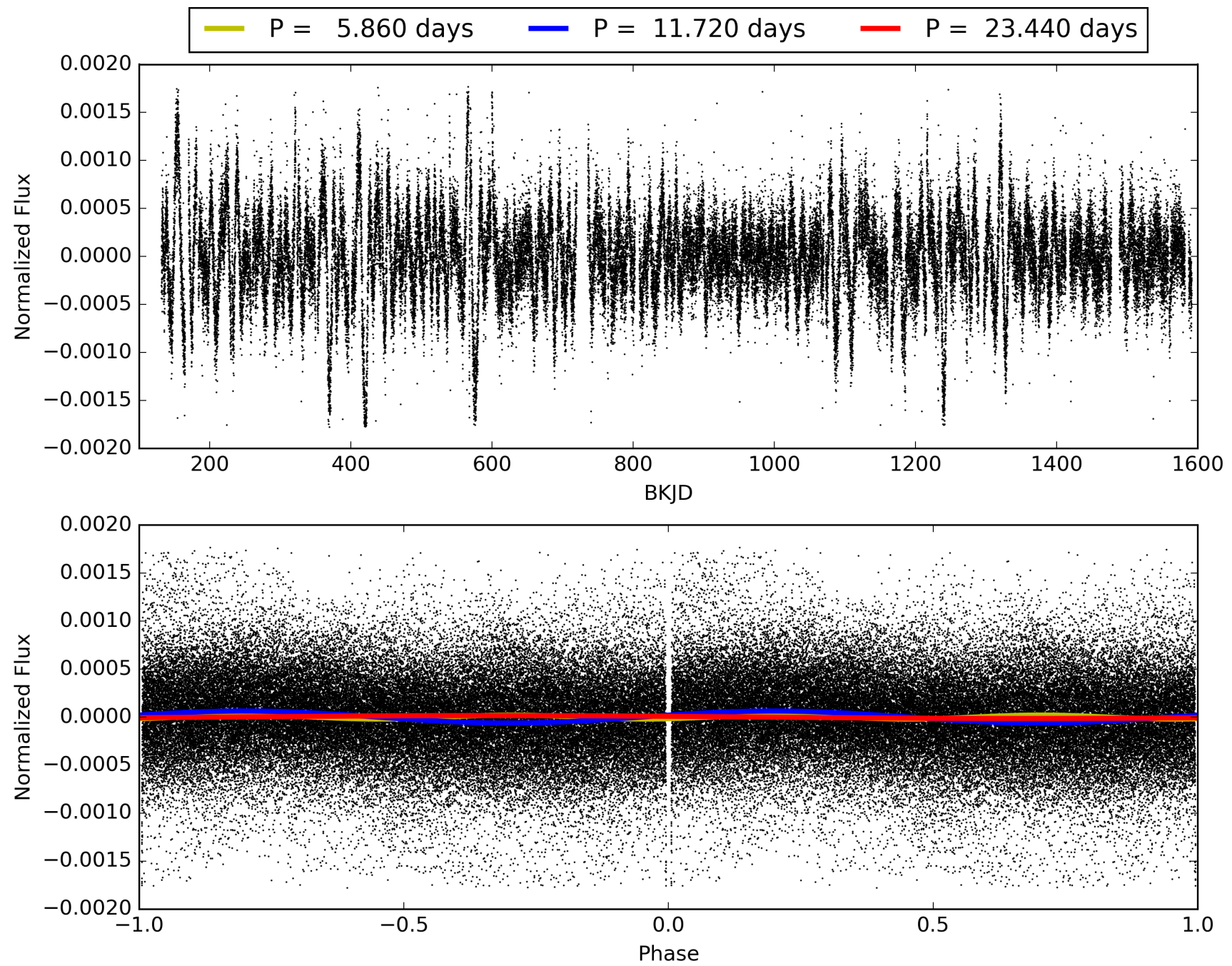
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:26:54 Z

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

# TCE 007046804-01, PDC Light Curves

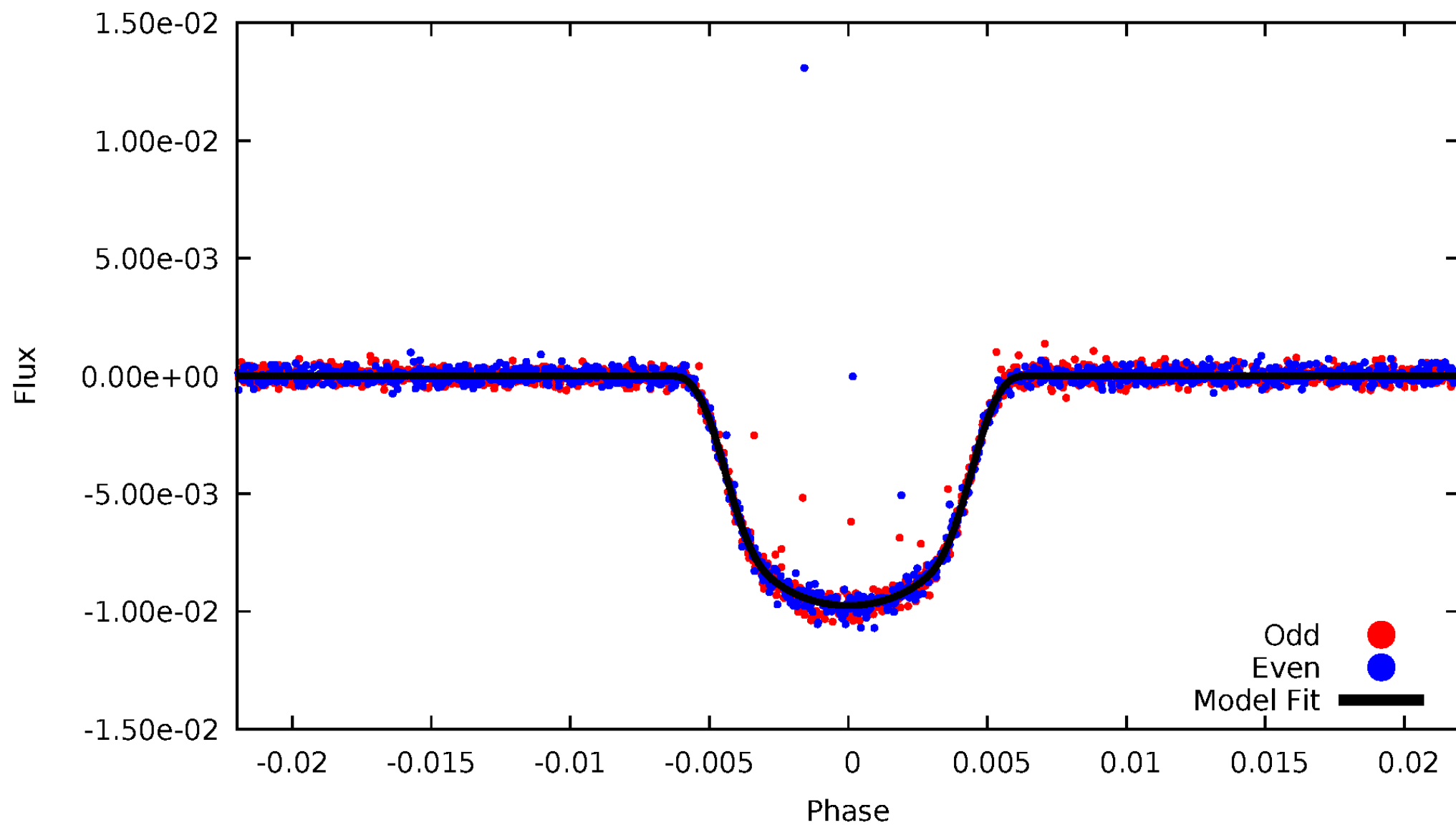


TCE 007046804-01



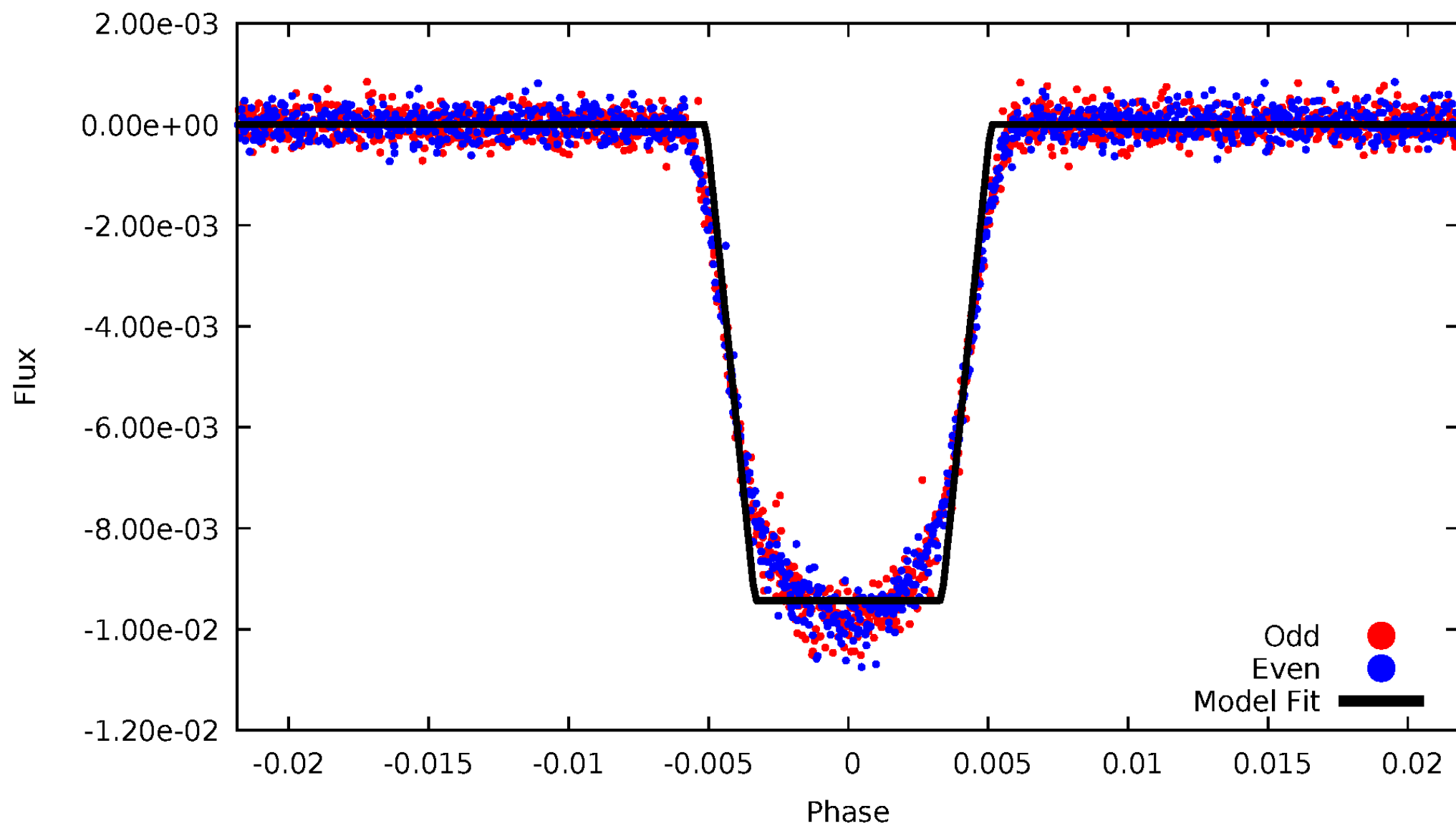
# DV Odd/Even

TCE 007046804-01



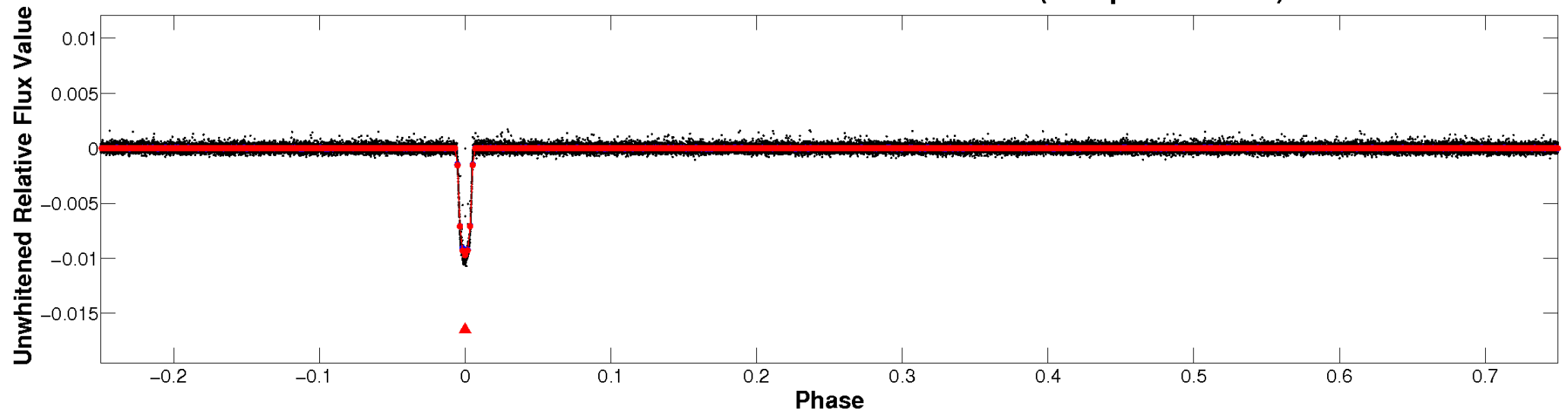
# ALT Odd/Even

TCE 007046804-01

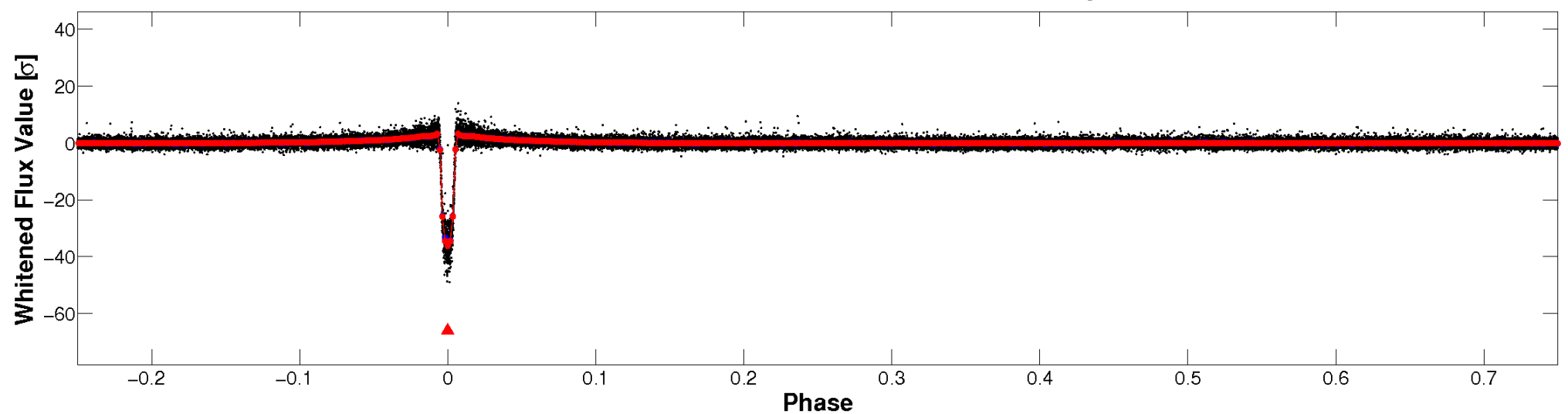


# Non-Whitened Vs. Whitened Light Curve

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

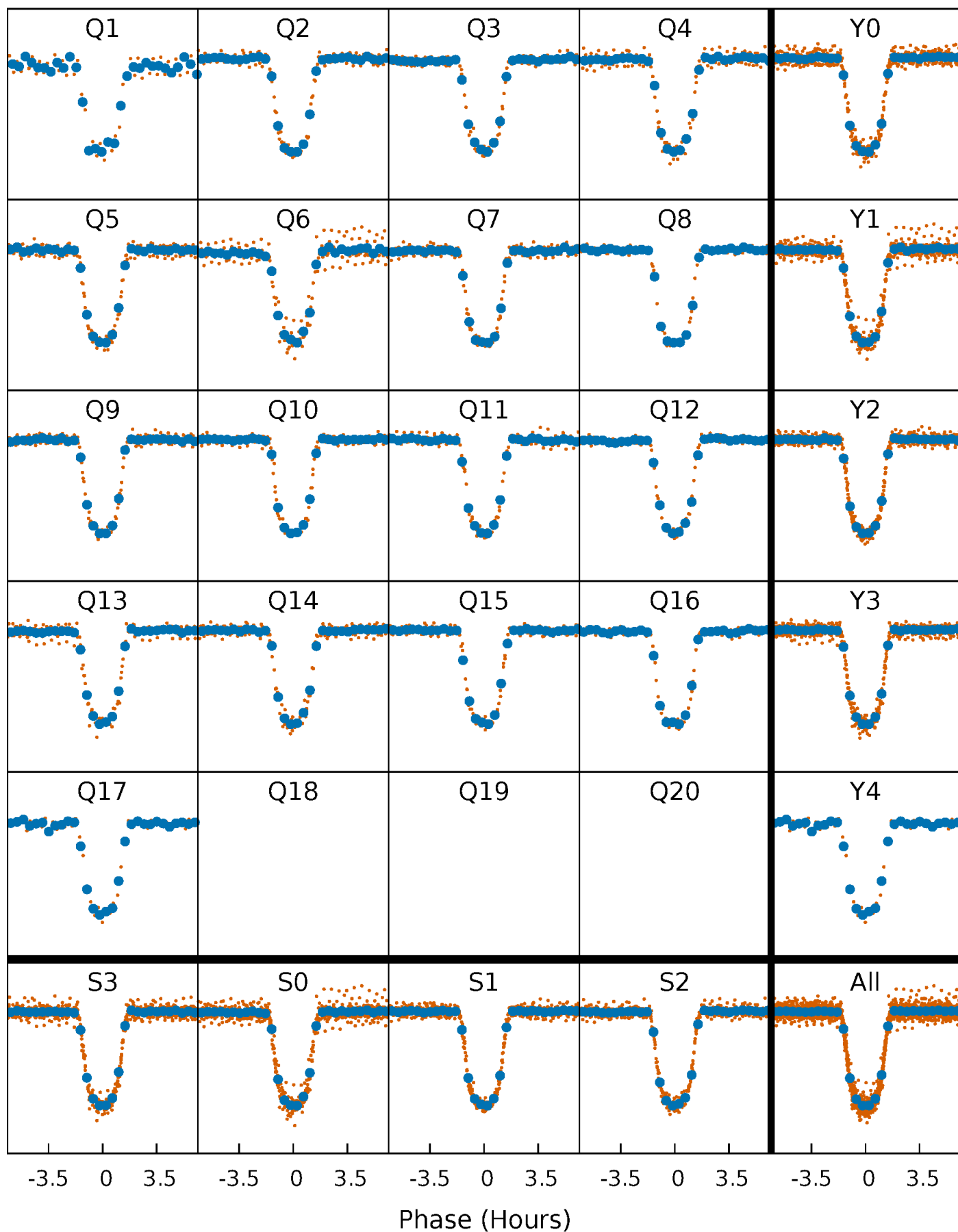


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

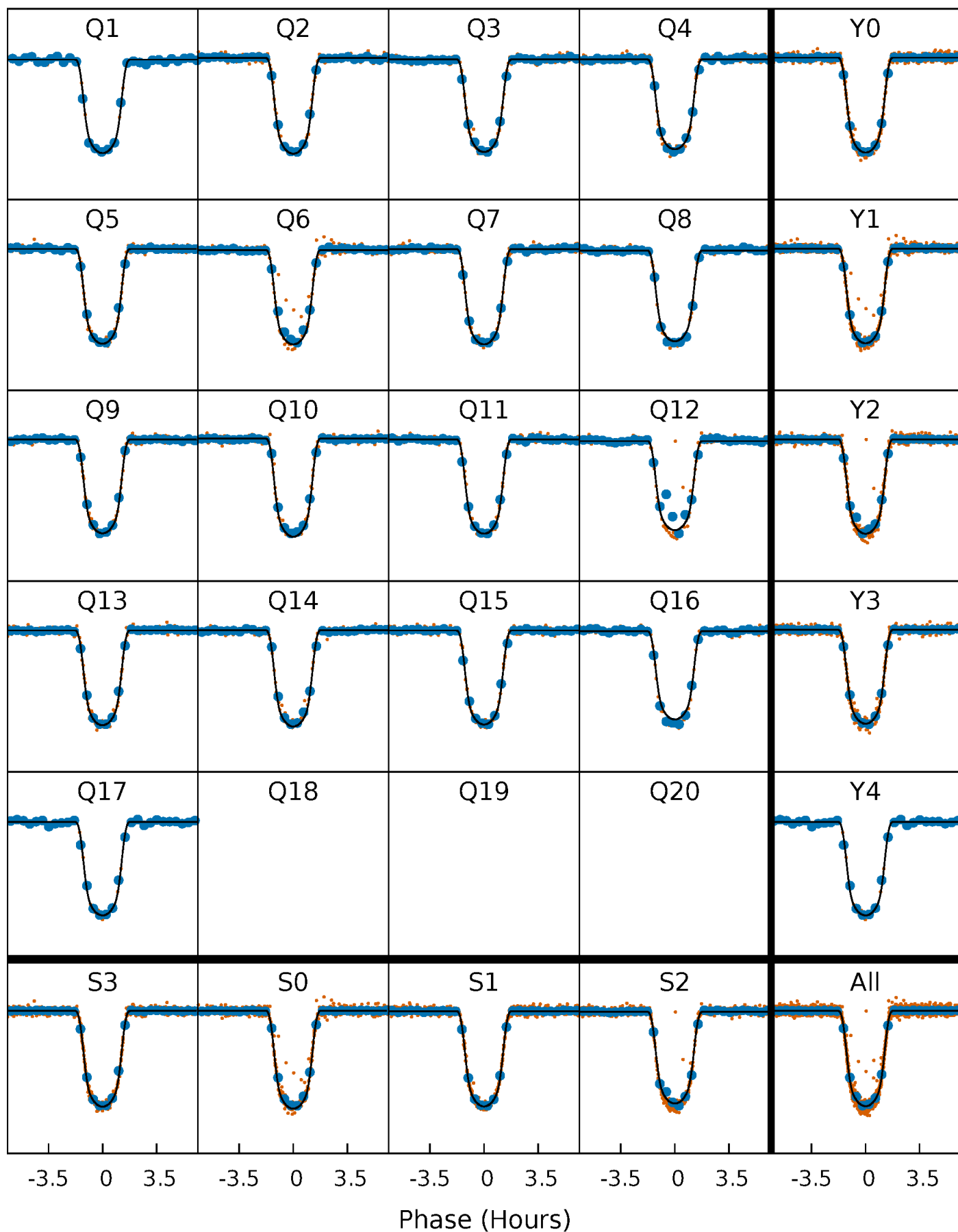
TCE 007046804-01 P= 11.720124 Days  $T_0=142.173979$  (BKJD)





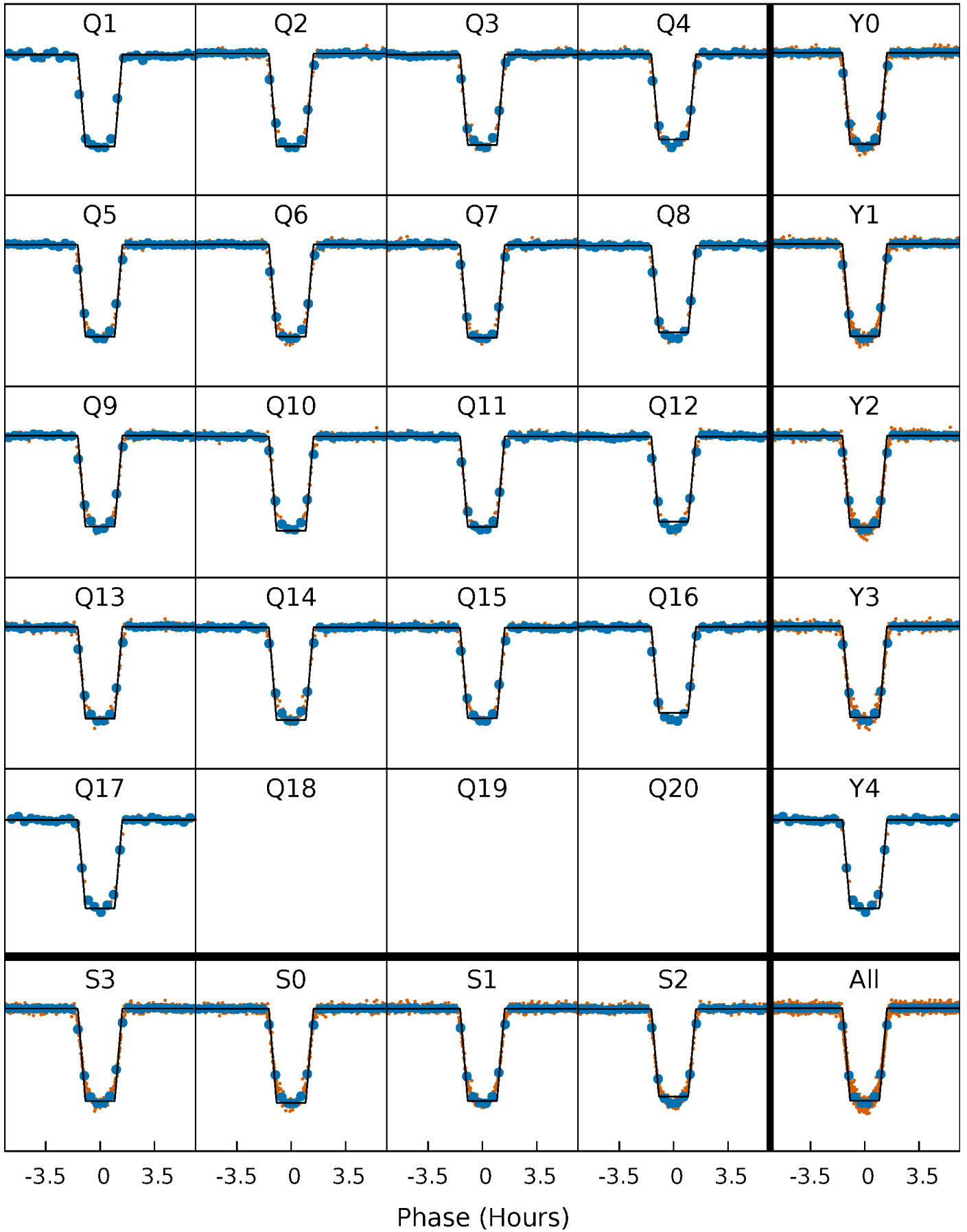
# DV Quarter-Phased Transit Curves

TCE 007046804-01 P= 11.720124 Days  $T_0=142.173979$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

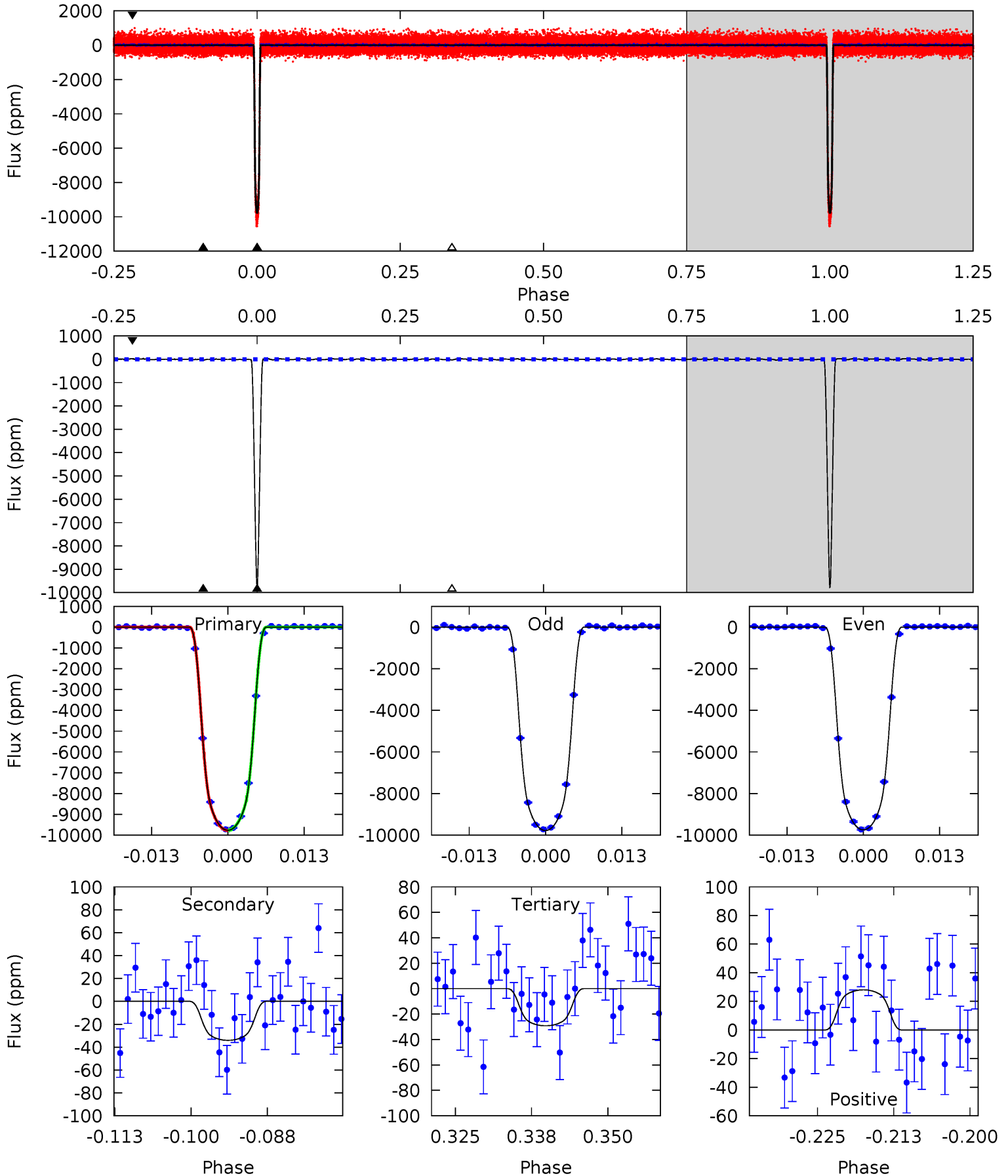
TCE 007046804-01 P= 11.720115 Days  $T_0=142.174584$  (BKJD)



# DV Model-Shift Uniqueness Test

007046804-01, P = 11.720124 Days, E = 130.453855 Days

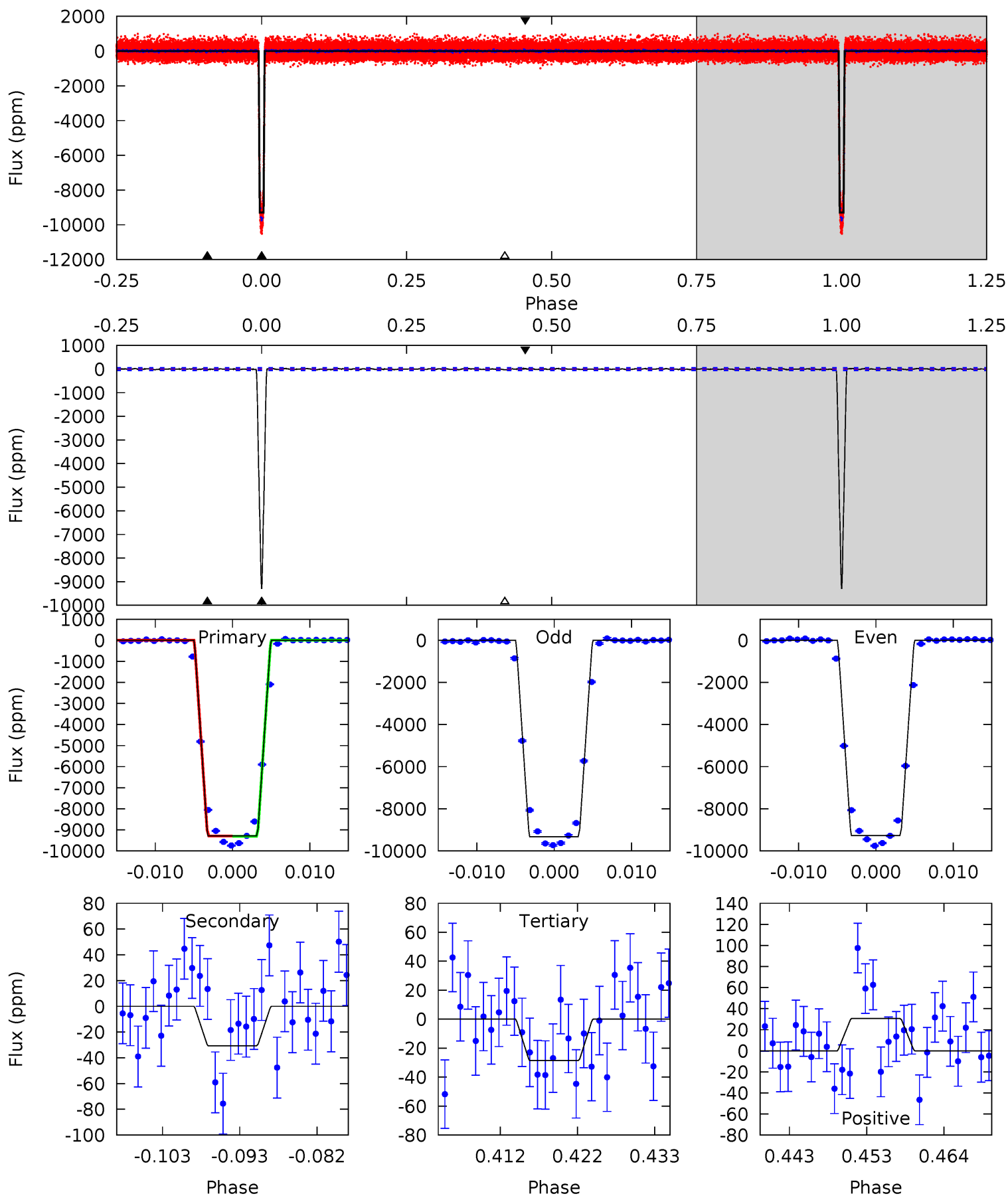
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1135	3.95	3.39	3.26	4.98	2.50	1.26	1131	1132	0.56	0.70	1.81	0.99	0.00	1.42



# Alt Model-Shift Uniqueness Test

007046804-01, P = 11.720115 Days, E = 130.454469 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
922.4	3.04	2.83	3.04	5.02	2.57	1.06	919.5	919.3	0.20	-0.01	2.46	1.00	0.00	0.28



### Stellar Parameters For KIC 007046804

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5215^{+158}_{-142}$	$4.564^{+0.052}_{-0.078}$	$-0.160^{+0.300}_{-0.300}$	$0.770^{+0.103}_{-0.069}$	$0.792^{+0.085}_{-0.070}$	$2.448^{+0.549}_{-0.595}$
	+3%/-3%	+1%/-2%	+188%/-188%	+13%/-9%	+11%/-9%	+22%/-24%
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 007046804-01 / KOI 0205.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-34 \pm 9$	$8.19^{+0.59}_{-0.38}$	$929^{+38}_{-33}$	$2187^{+68}_{-84}$	$2.408^{+0.733}_{-0.608}$
Alt.	$-31 \pm 10$	$8.18^{+0.60}_{-0.45}$	$925^{+38}_{-35}$	$2148^{+79}_{-114}$	$2.133^{+0.772}_{-0.730}$

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

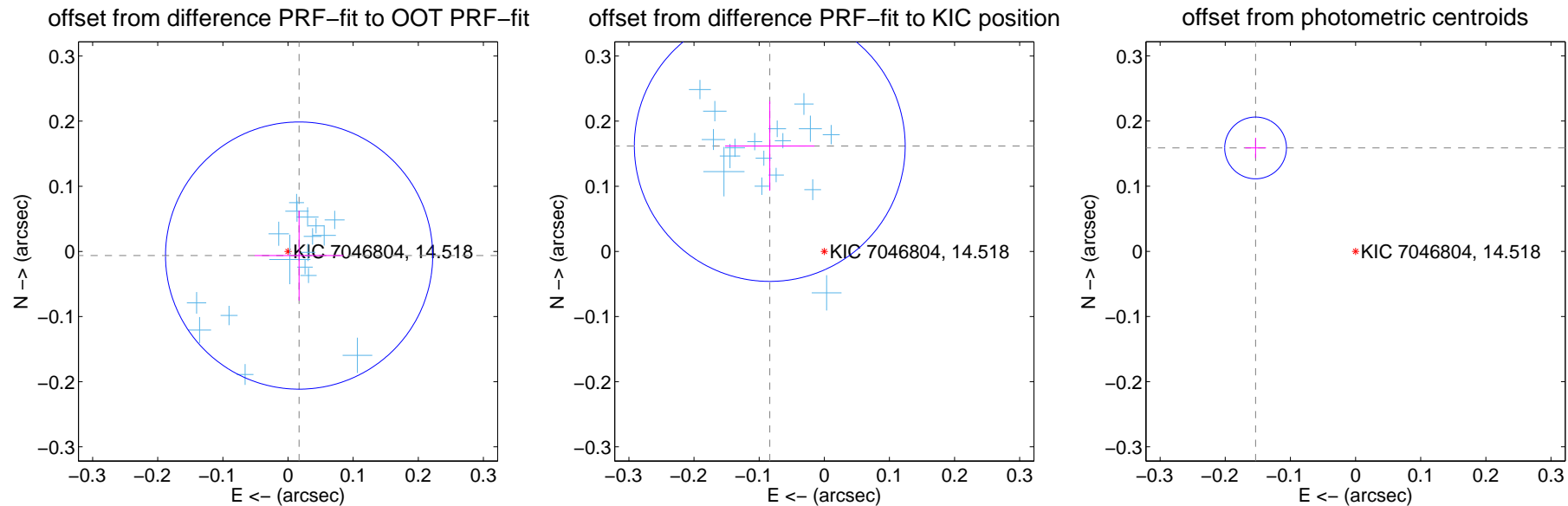
## DV Centroid Data

Supplemental centroid analysis for 007046804-01. Kepler magnitude: 14.52. Transit SNR 702.61

There are 17 quarters with good PRF difference image offsets

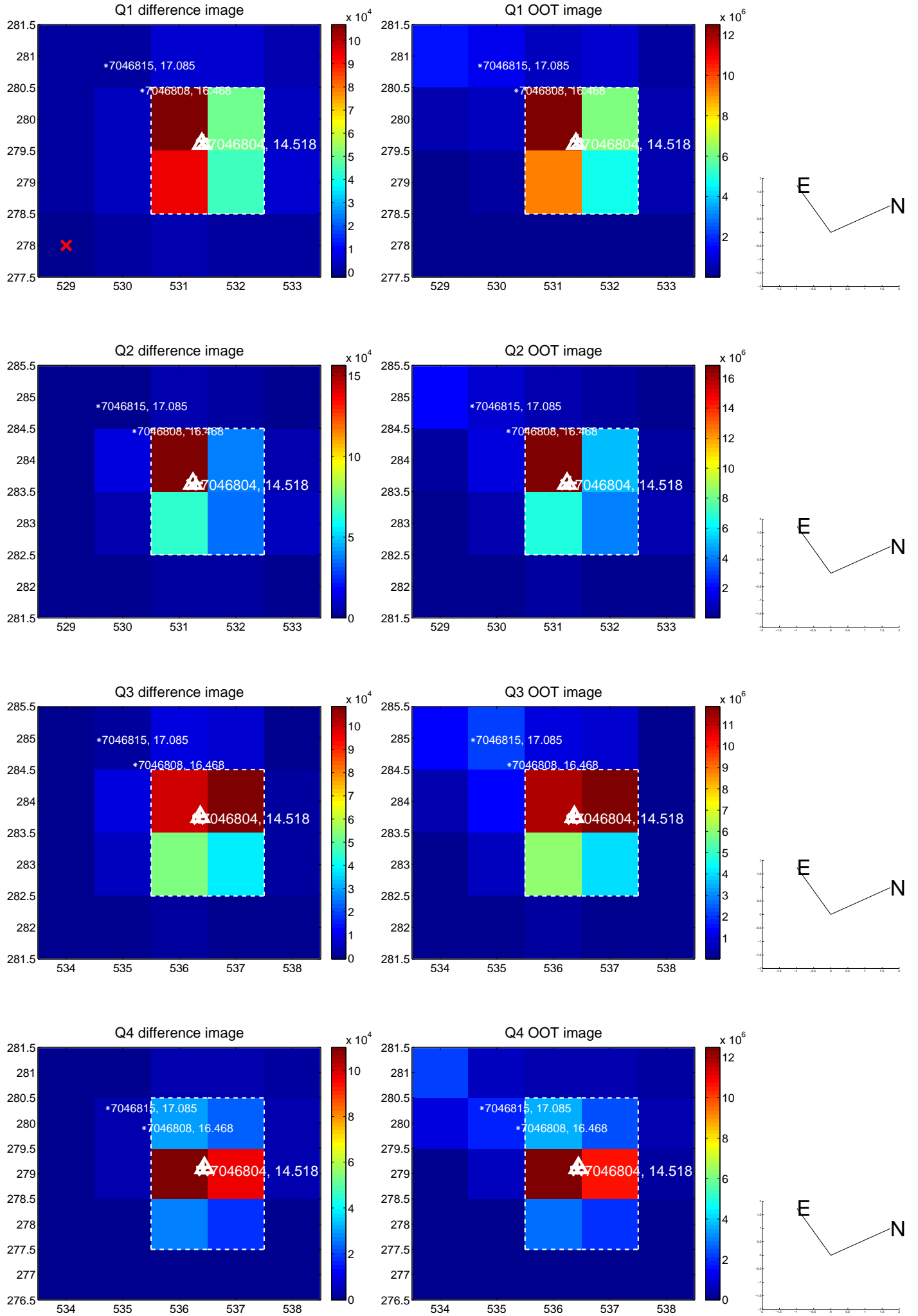
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.018 \pm 0.068$	0.27	$-0.017 \pm 0.068$	$-0.006 \pm 0.069$
PRF-fit source offset from KIC position	$0.182 \pm 0.069$	2.63	$0.084 \pm 0.069$	$0.162 \pm 0.069$
photometric centroid source offset	$0.22 \pm 0.02$	13.98	$0.15 \pm 0.02$	$0.16 \pm 0.02$

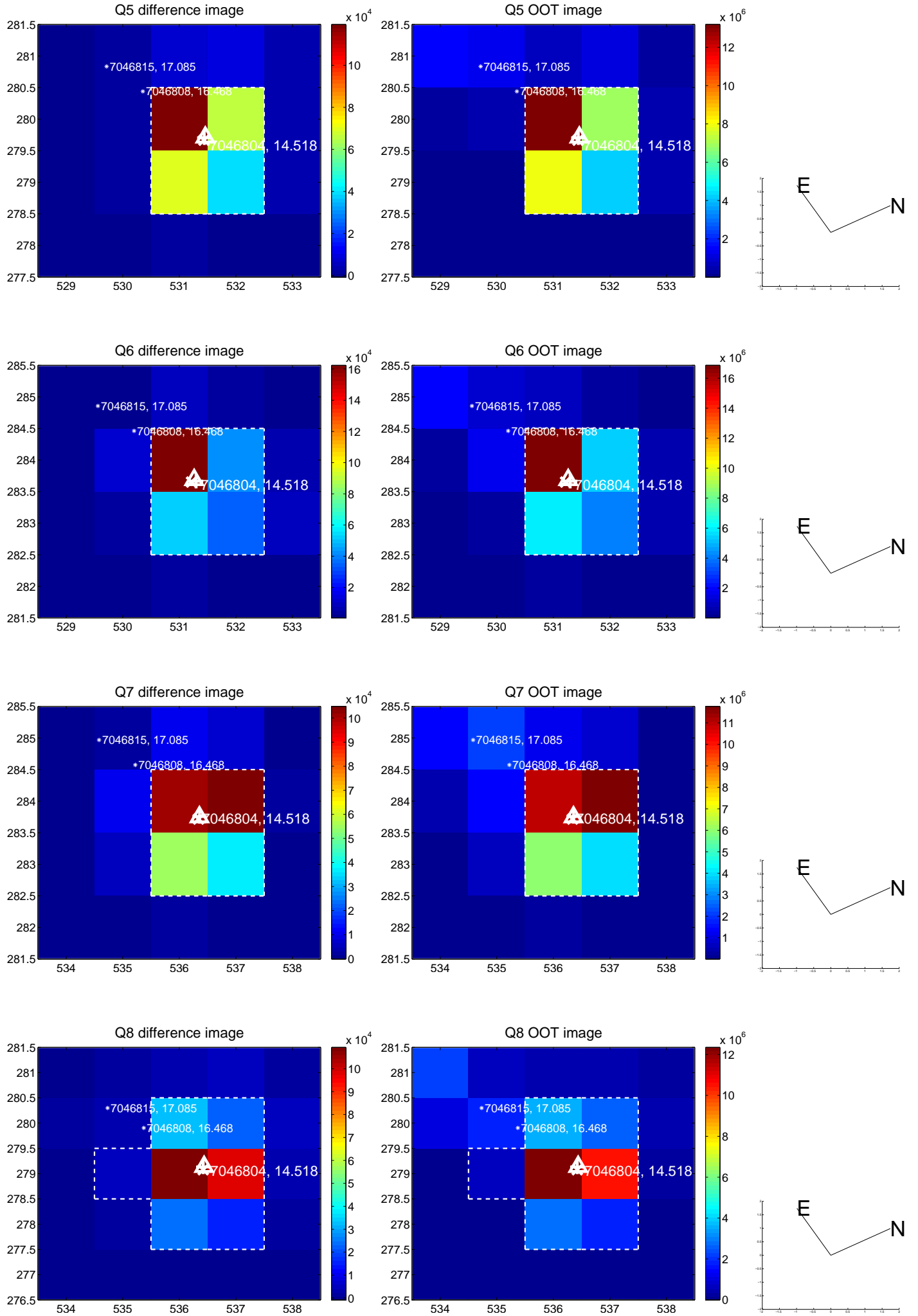


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

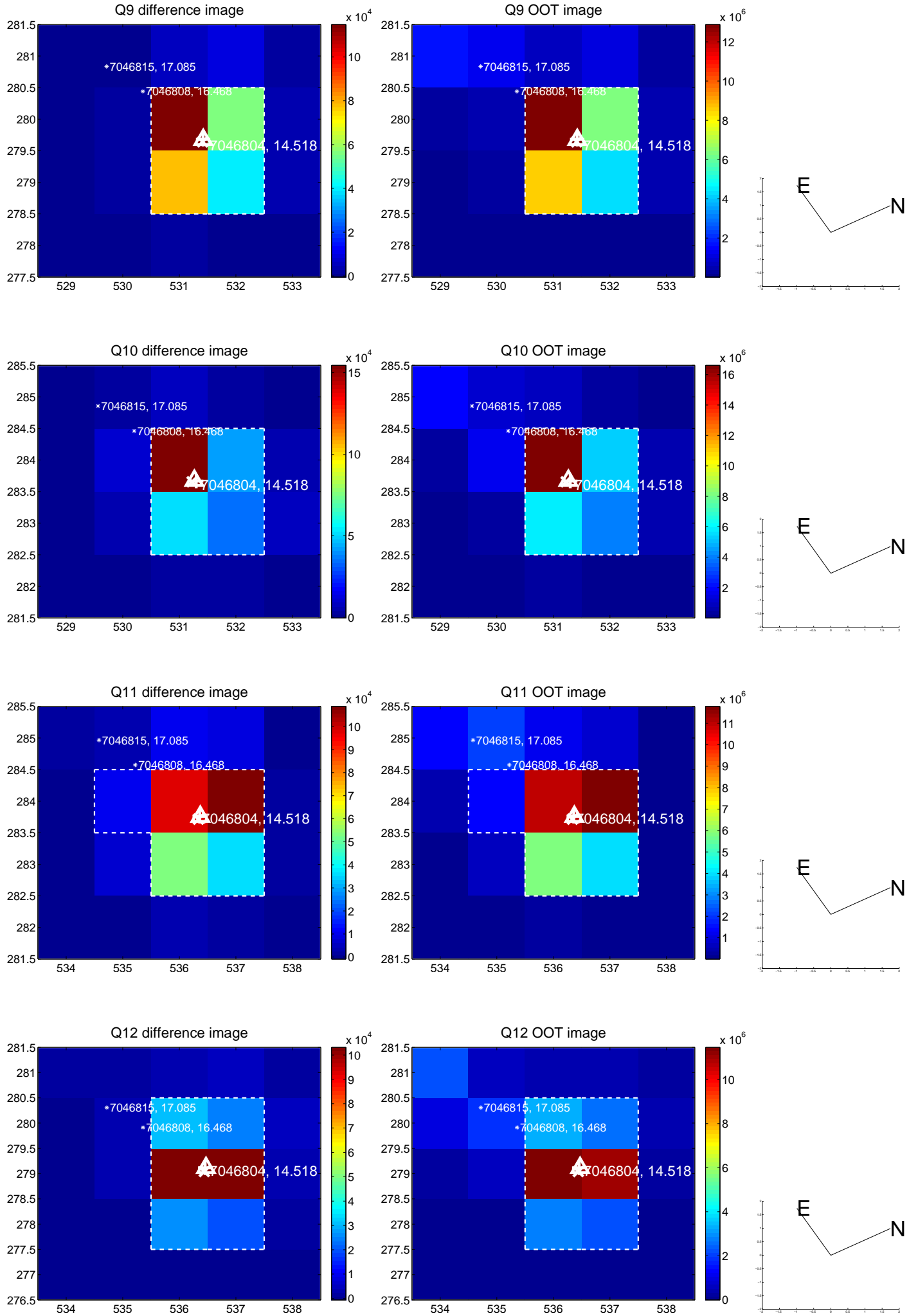


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

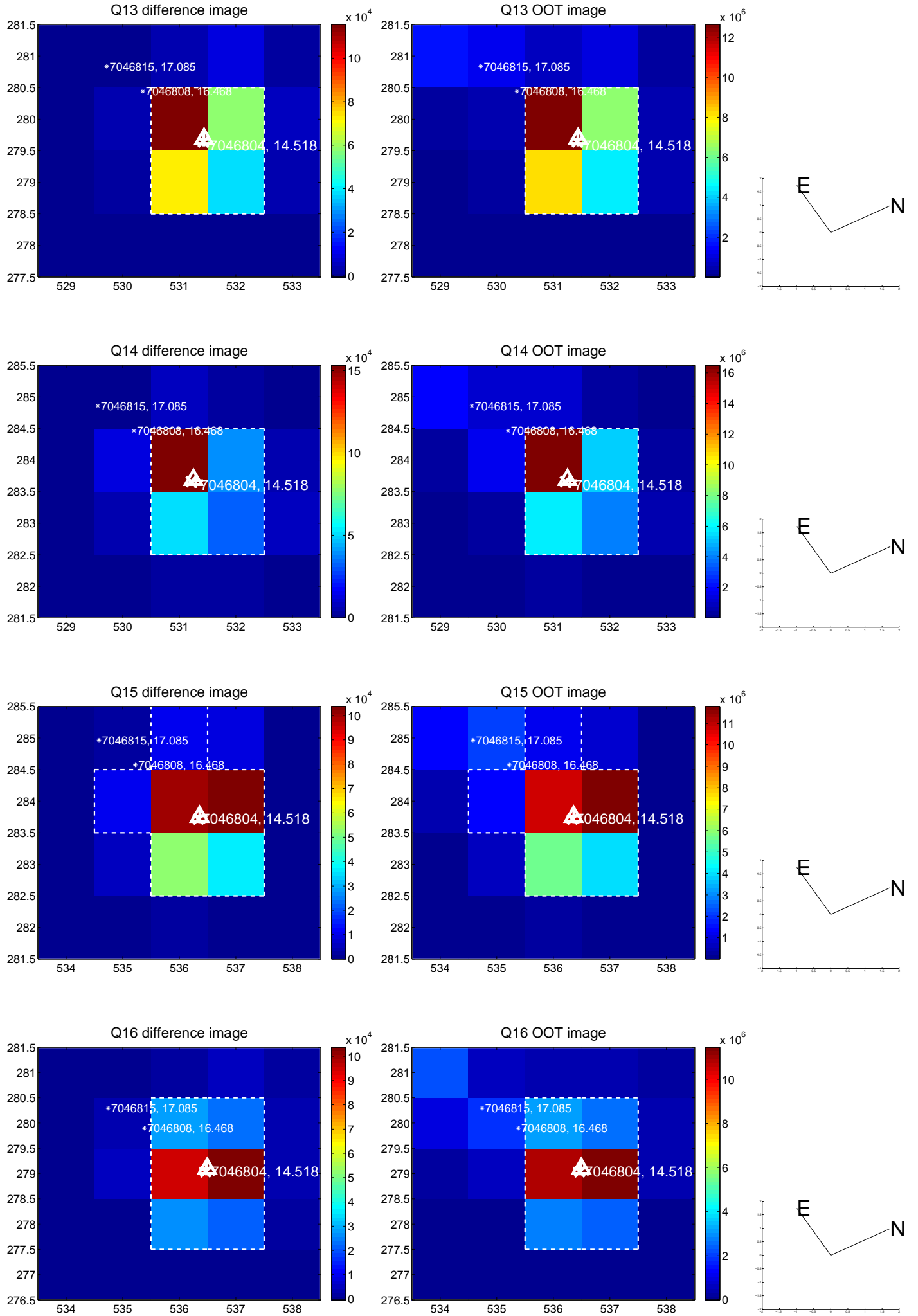




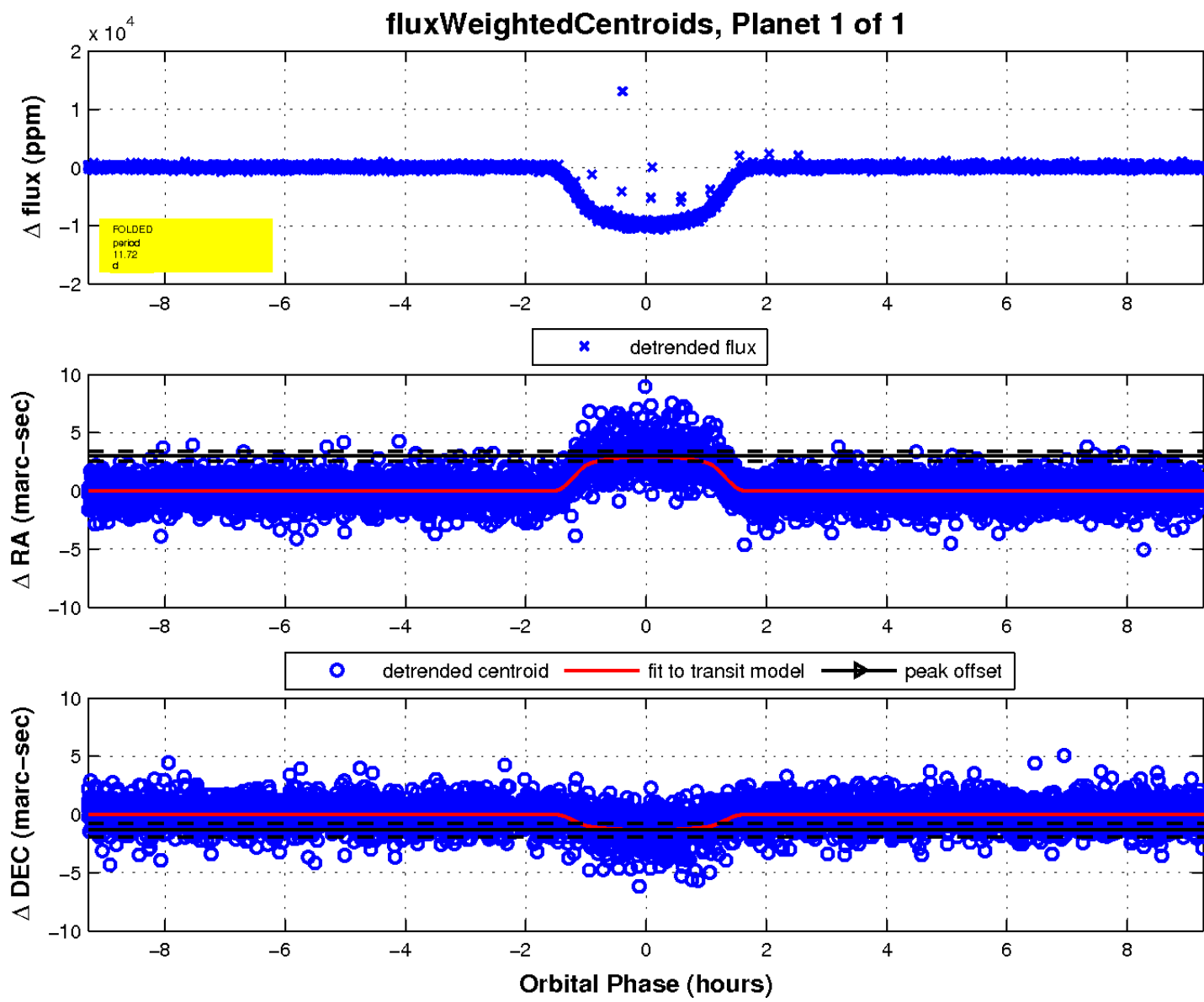
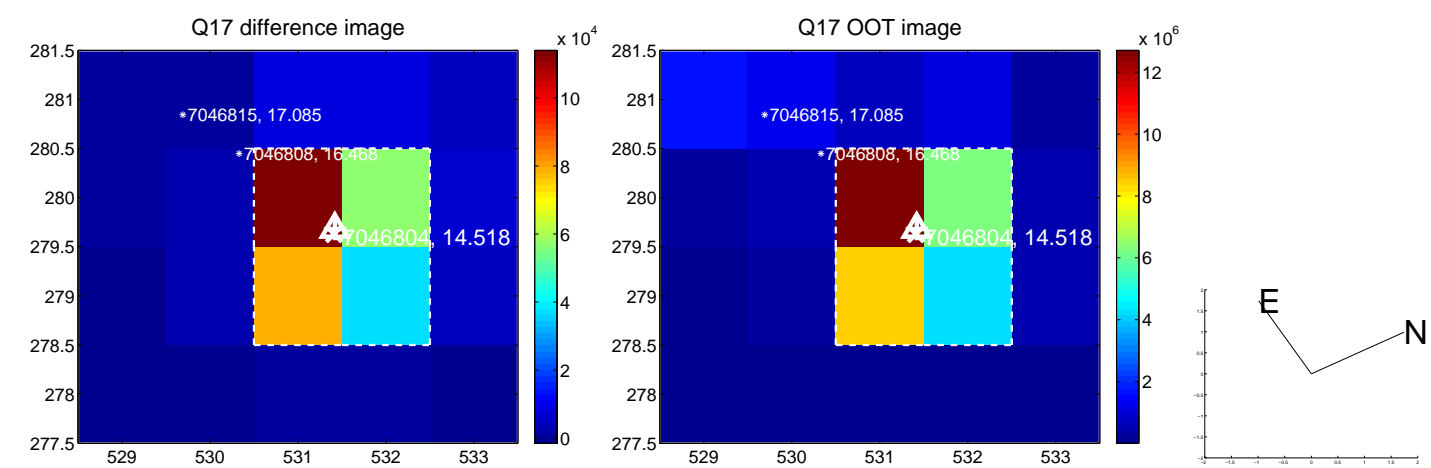
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

