

# KIC 006113793

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006113793-01	OBS	No	377.223261	172.601410	379.1	2.381	9.2	8.0	1.32	5967	3.05	1.67

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006113793-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

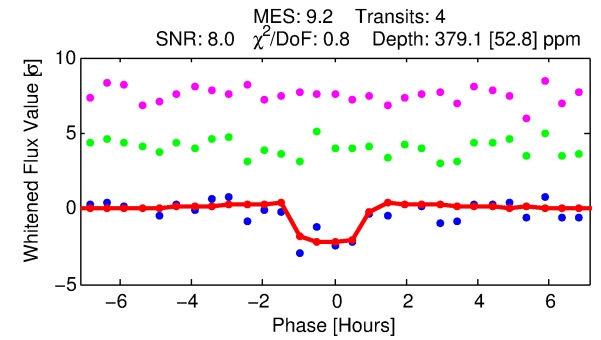
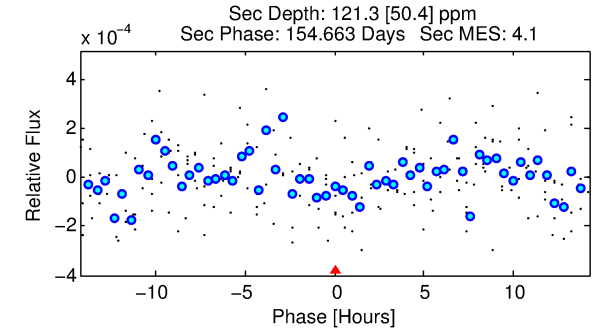
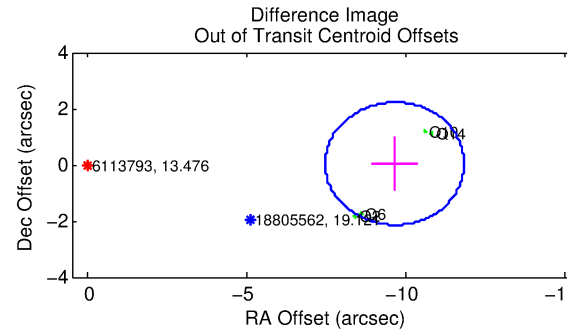
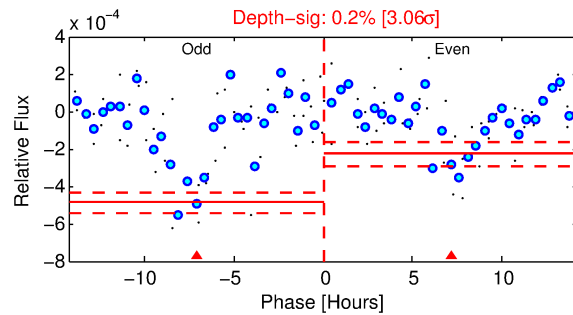
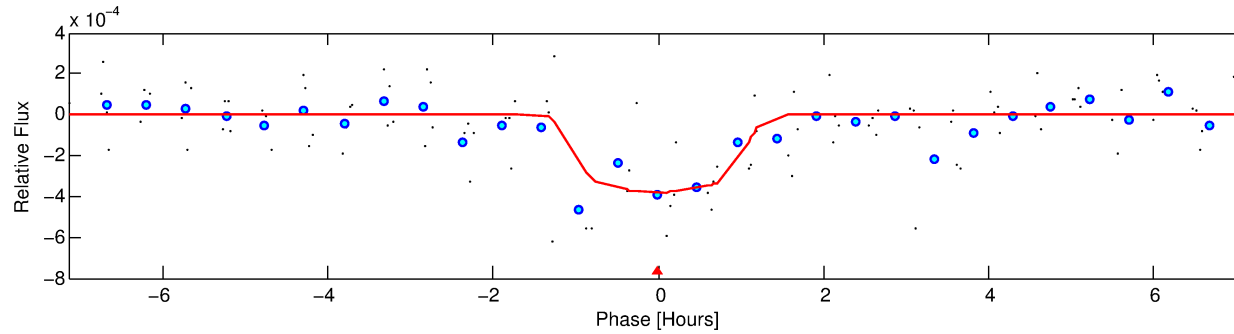
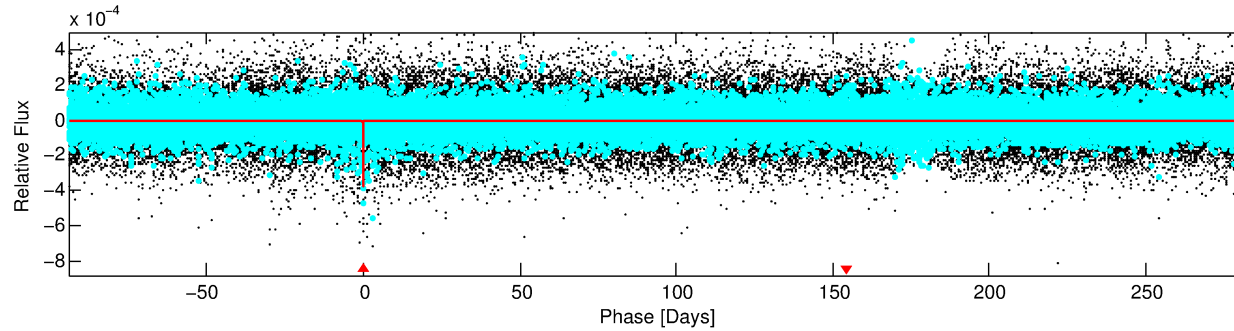
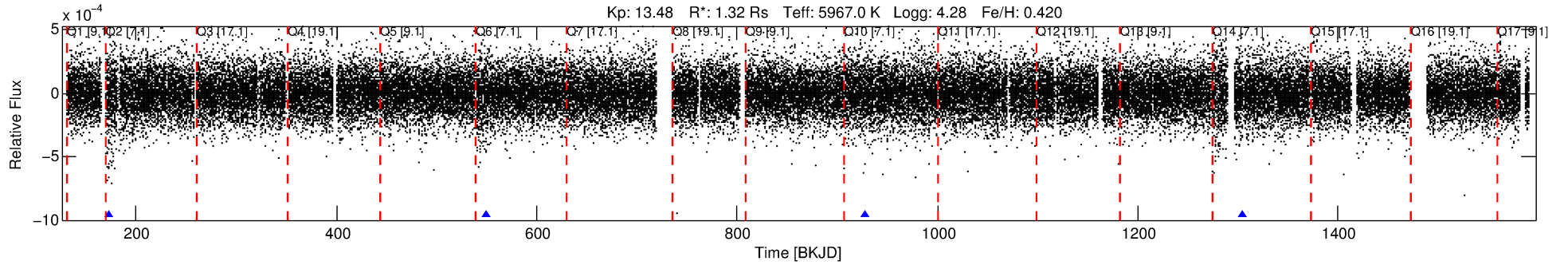
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006113793-01

No Significant Match Found

# DV One-Page Summary

KIC: 6113793 Candidate: 1 of 1 Period: 377.223 d



## DV Fit Results:

Period = 377.22326 [0.00343] d  
Epoch = 172.6014 [0.0060] BKJD  
Rp/R\* = 0.0212 [0.0104]  
a/R\* = 594.23 [1335.95]  
b = 0.90 [0.51]  
Seff = 1.67 [0.64]  
Teq = 290 [28] K  
Rp = 3.05 [1.75] Re  
a = 1.0879 [0.2722] AU  
Ag = 8499.86 [9526.12] [0.89 $\sigma$ ]  
Teffp = 4303 [1153] K [3.48 $\sigma$ ]

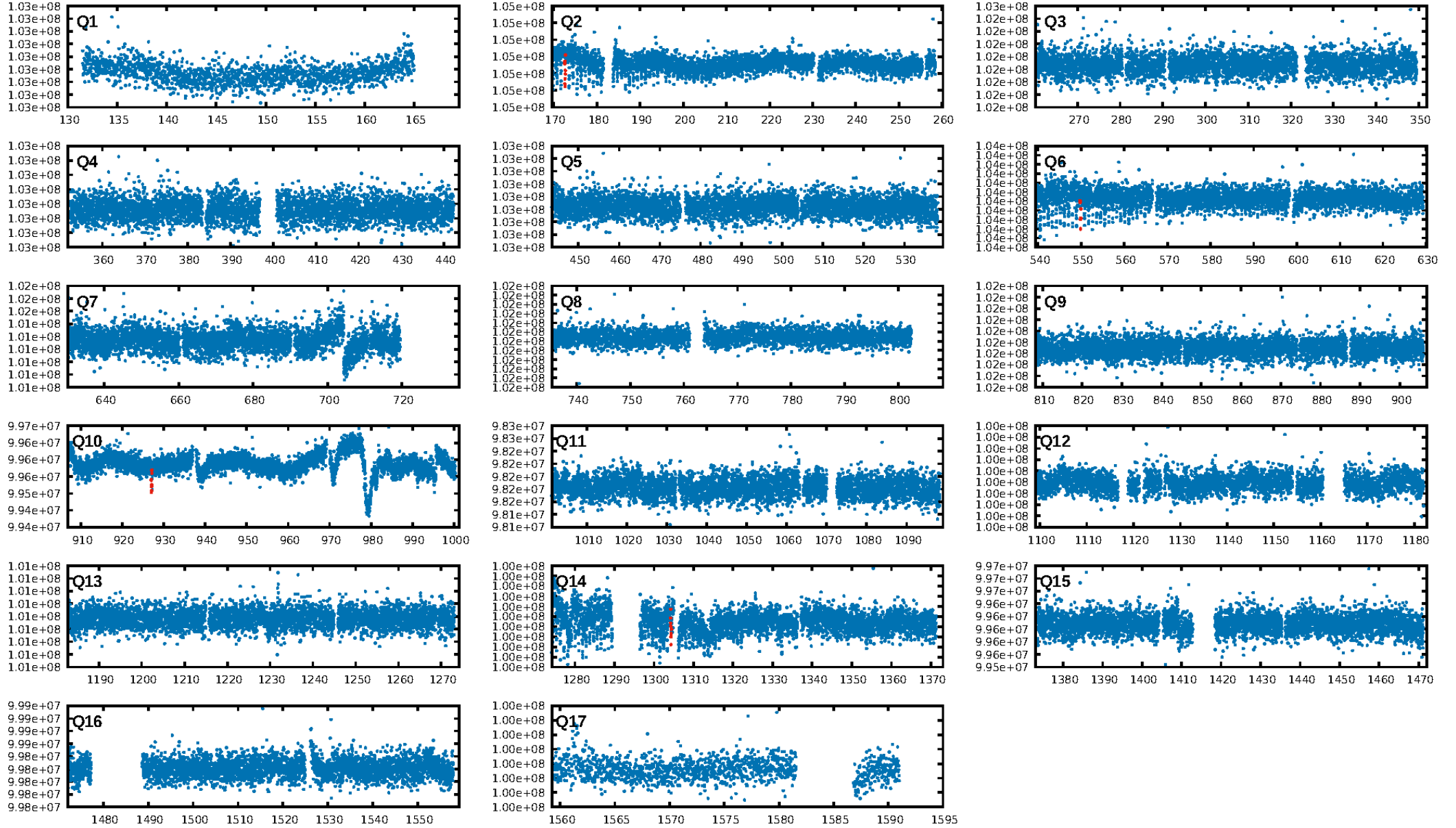
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 31.7%  
ModelChiSquareGof-sig: 98.9%  
Bootstrap-pfa: 7.32e-15  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 0.06388  
Centroid-sig: 0.0%  
Centroid-so: 19.586 arcsec [10.78 $\sigma$ ]  
OotOffset-rm: 9.644 arcsec [13.25 $\sigma$ ]  
KicOffset-rm: 9.575 arcsec [14.02 $\sigma$ ]  
OotOffset-st: 4/0/0/0 [4]  
KicOffset-st: 4/0/0/0 [4]  
DiffImageQuality-fgm: 0.00 [0/4]  
DiffImageOverlap-fno: 1.00 [4/4]

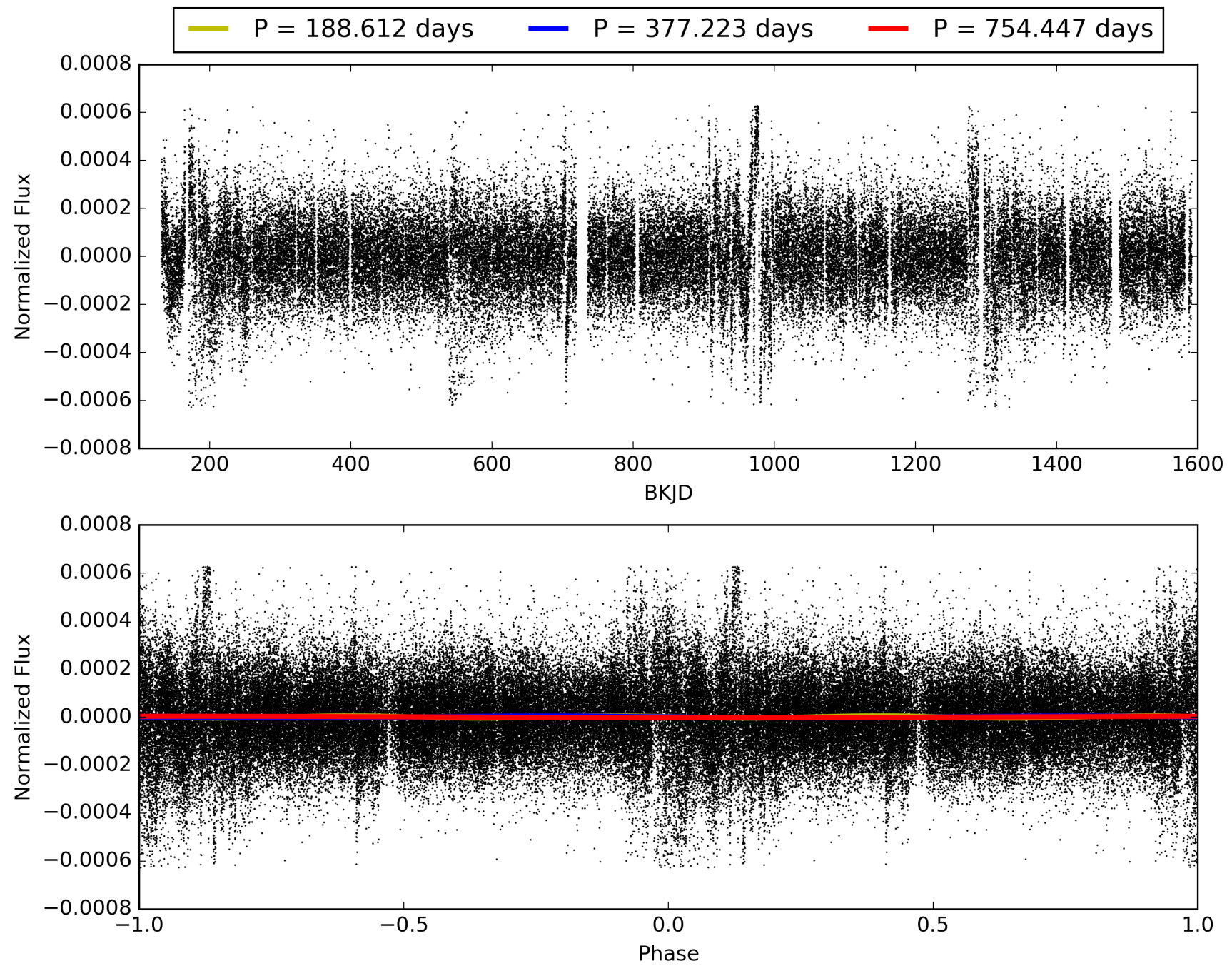
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:01:59 Z

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

# TCE 006113793-01, PDC Light Curves

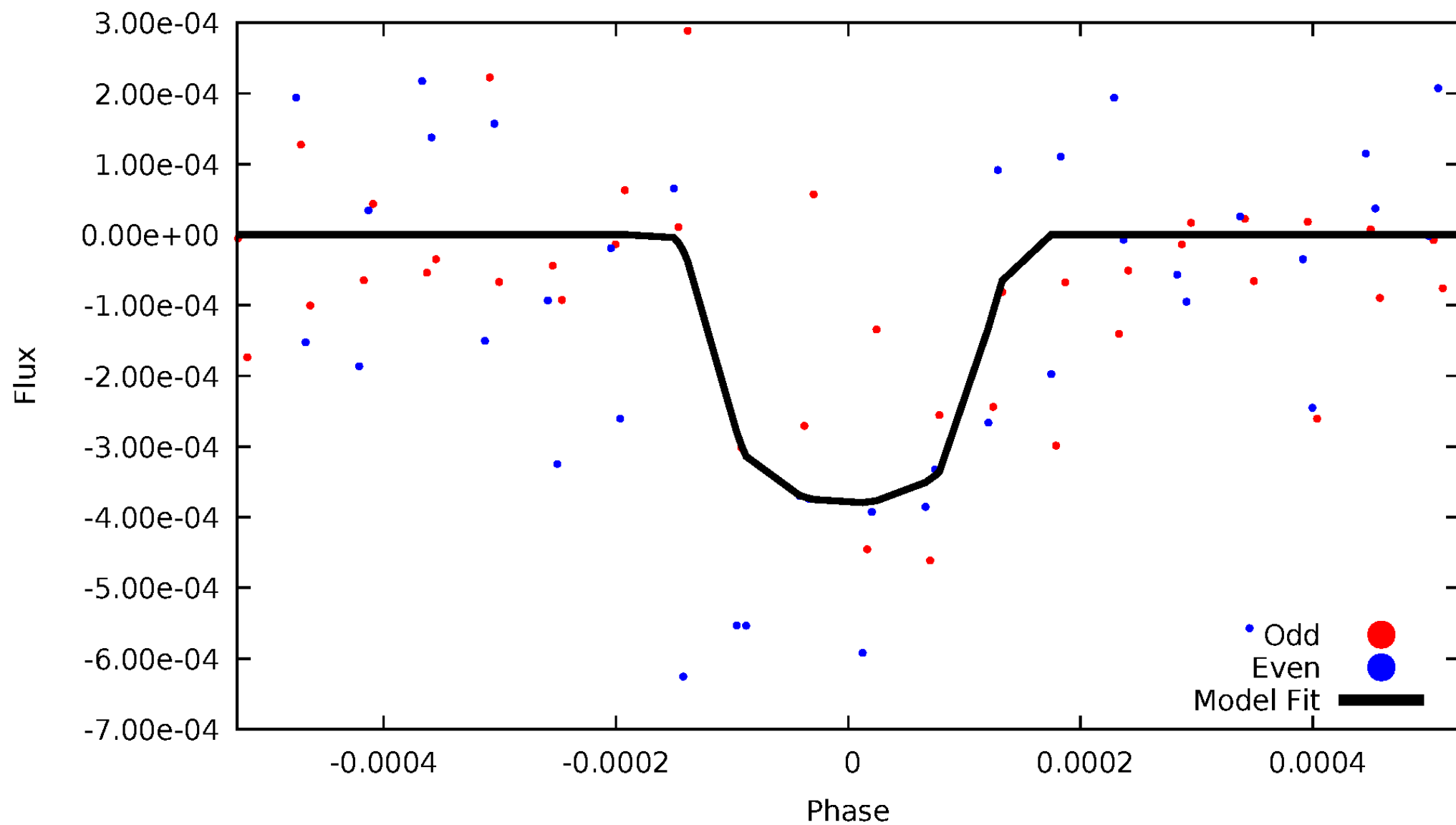


# TCE 006113793-01



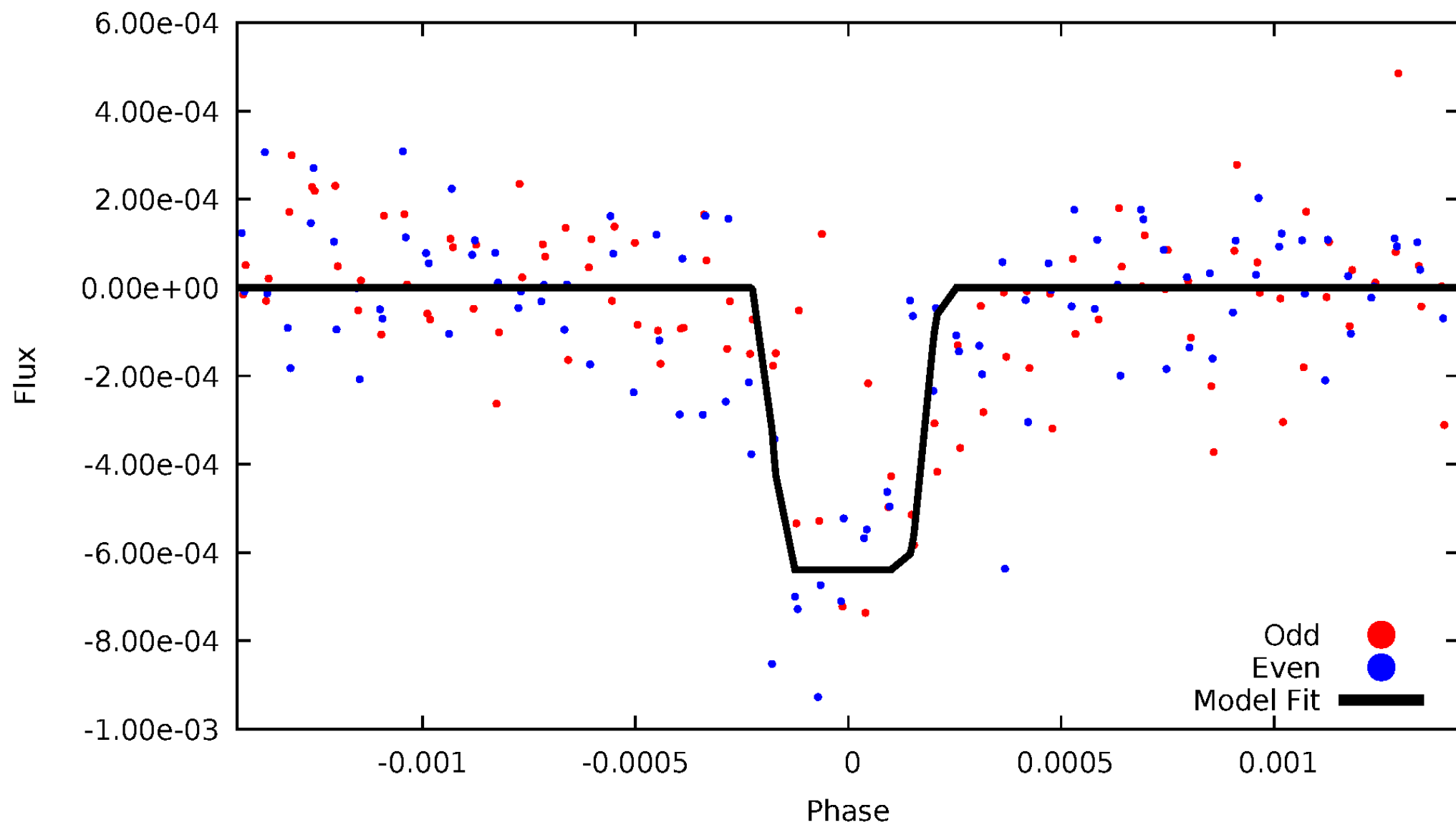
# DV Odd/Even

TCE 006113793-01



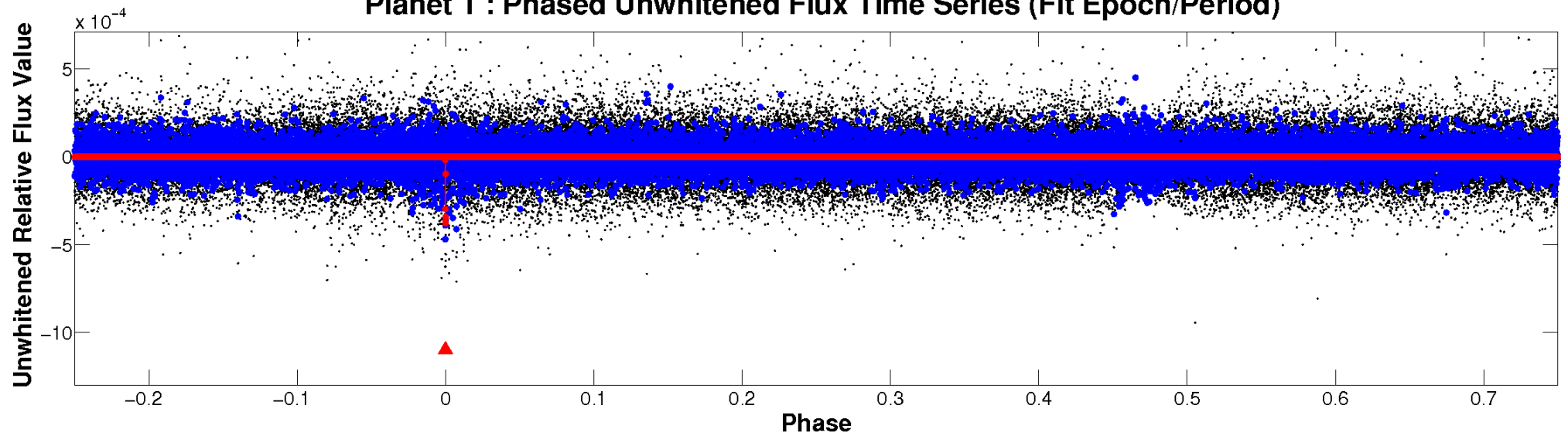
# ALT Odd/Even

TCE 006113793-01

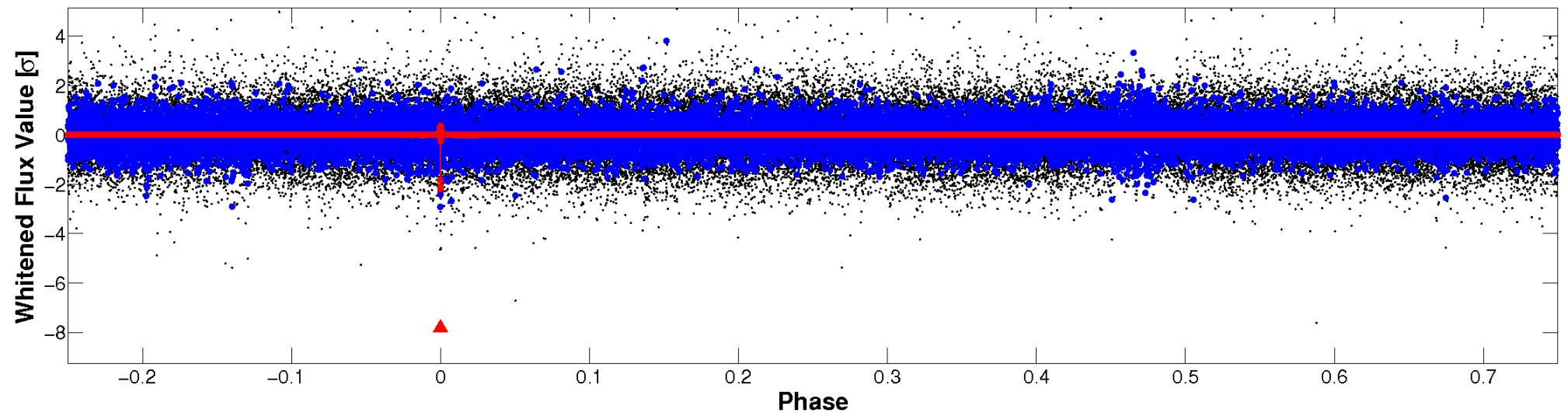


# Non-Whitened Vs. Whitened Light Curve

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



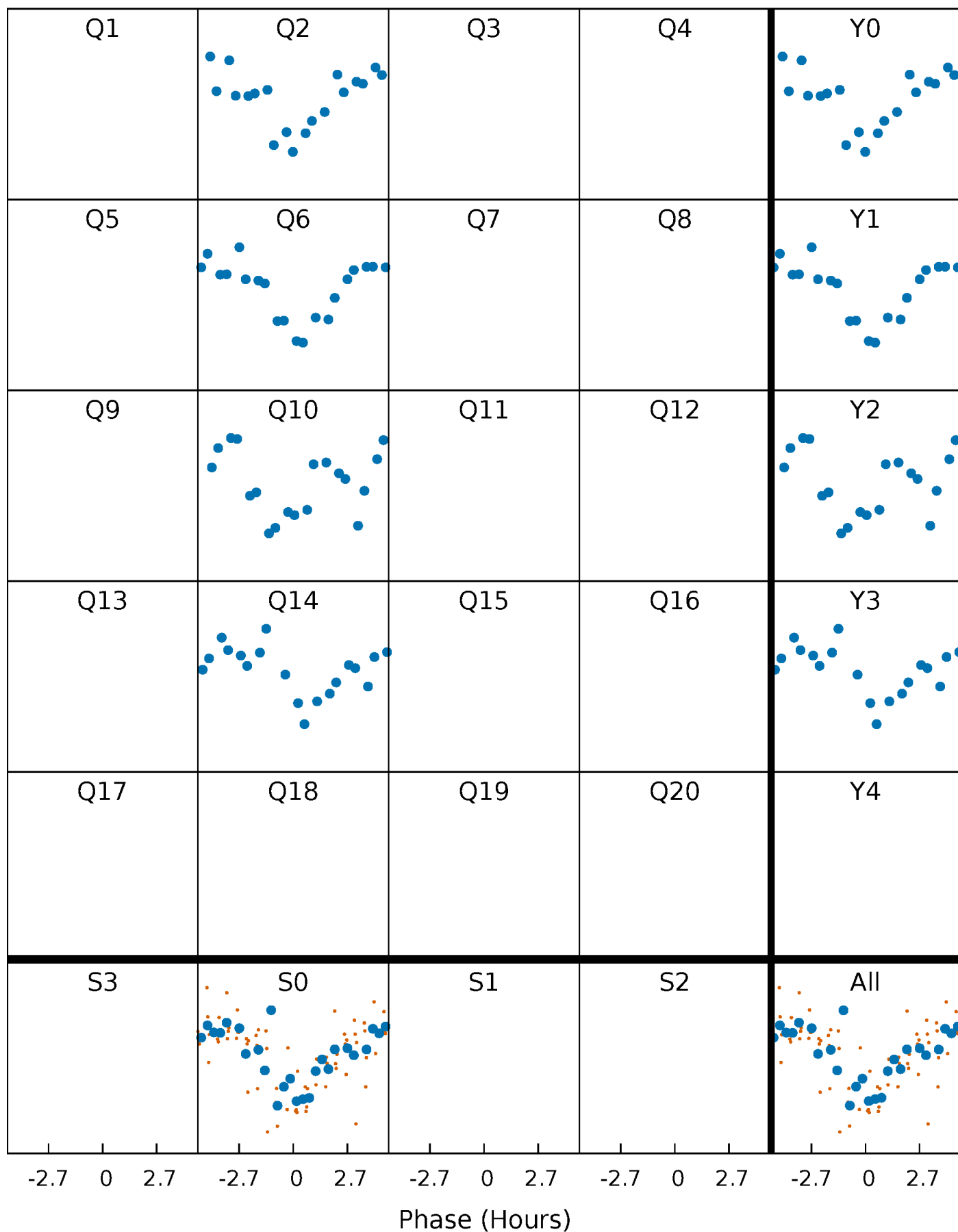
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

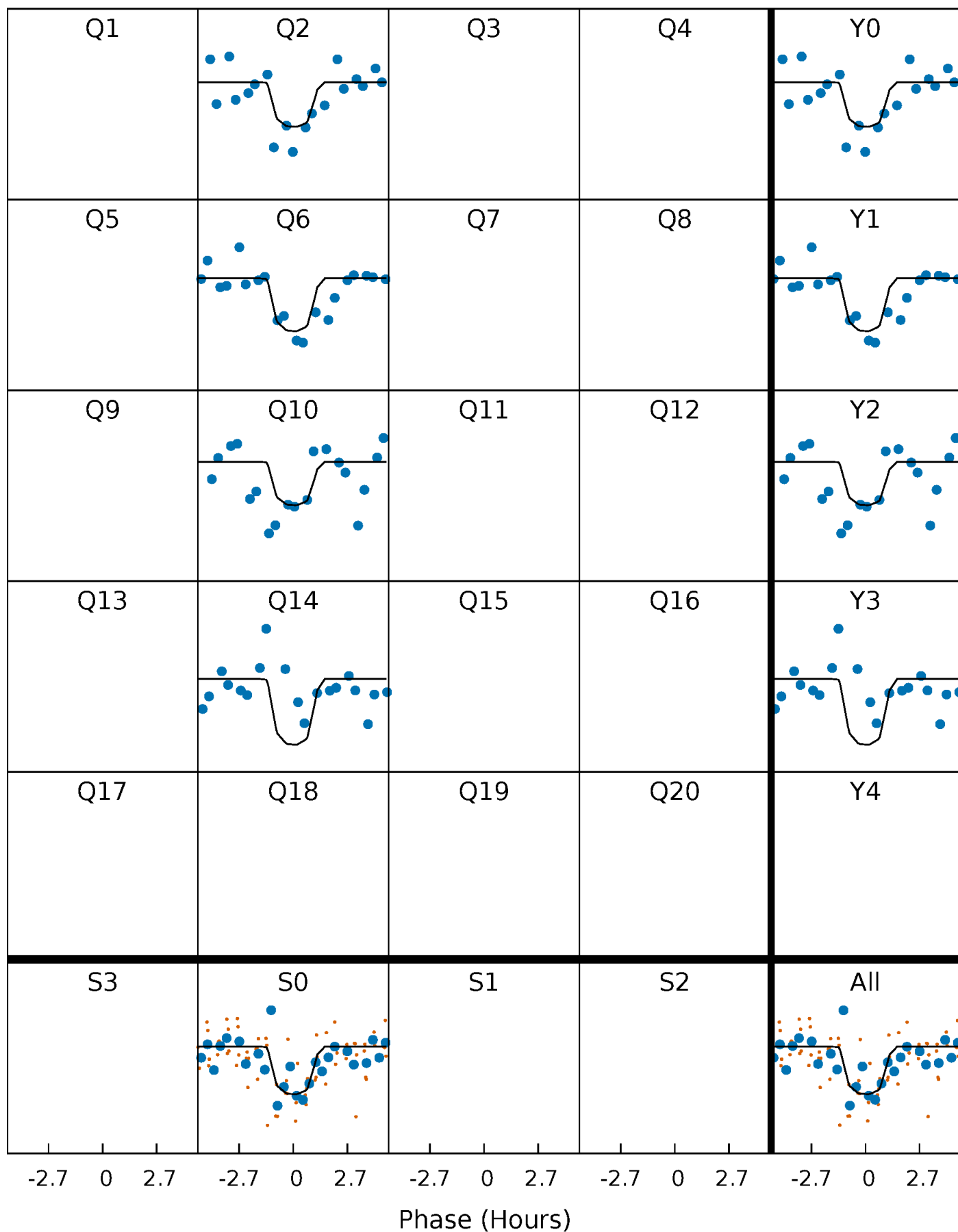
TCE 006113793-01 P=377.223261 Days  $T_0=172.601409$  (BKJD)





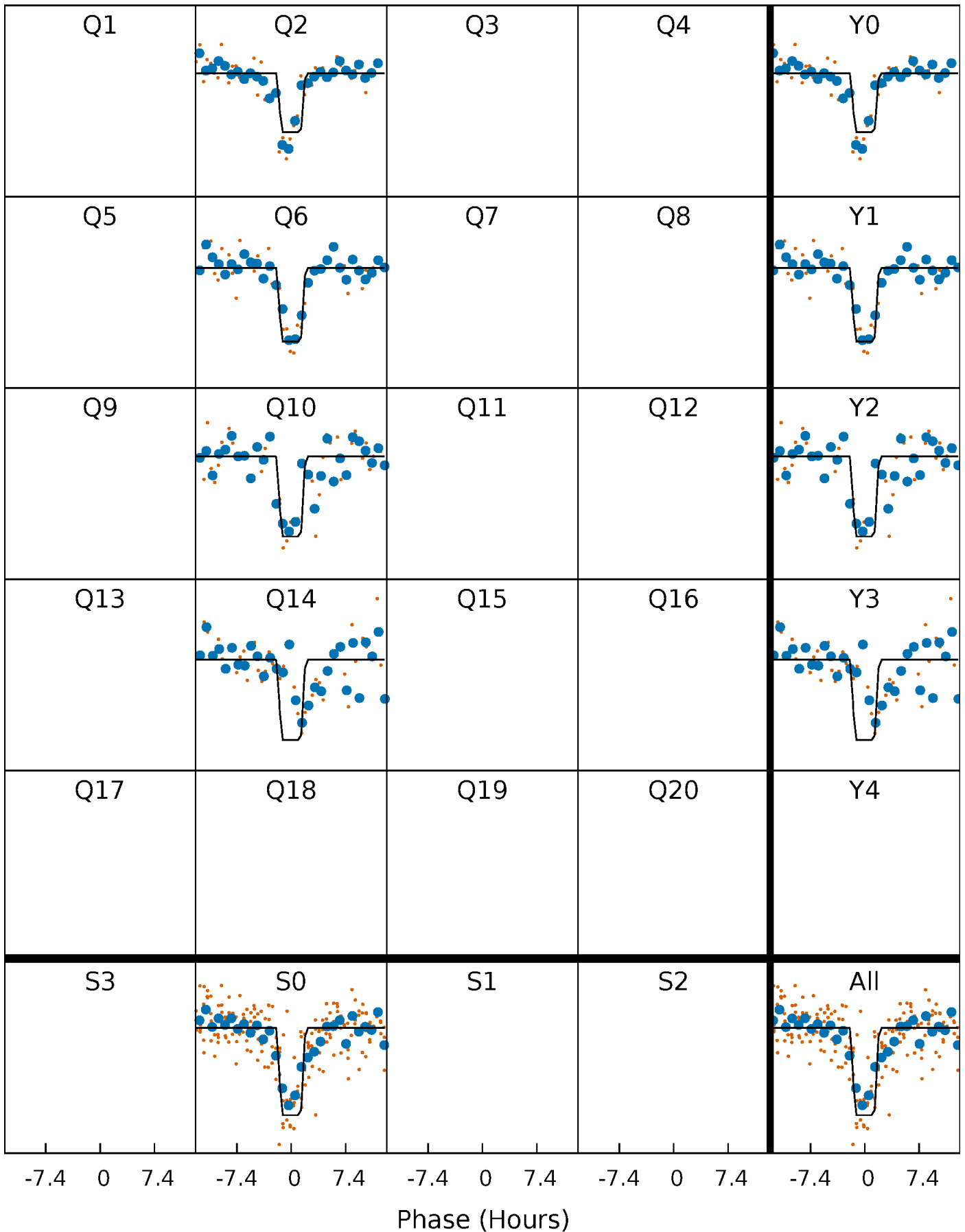
# DV Quarter-Phased Transit Curves

TCE 006113793-01 P=377.223261 Days  $T_0=172.601409$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

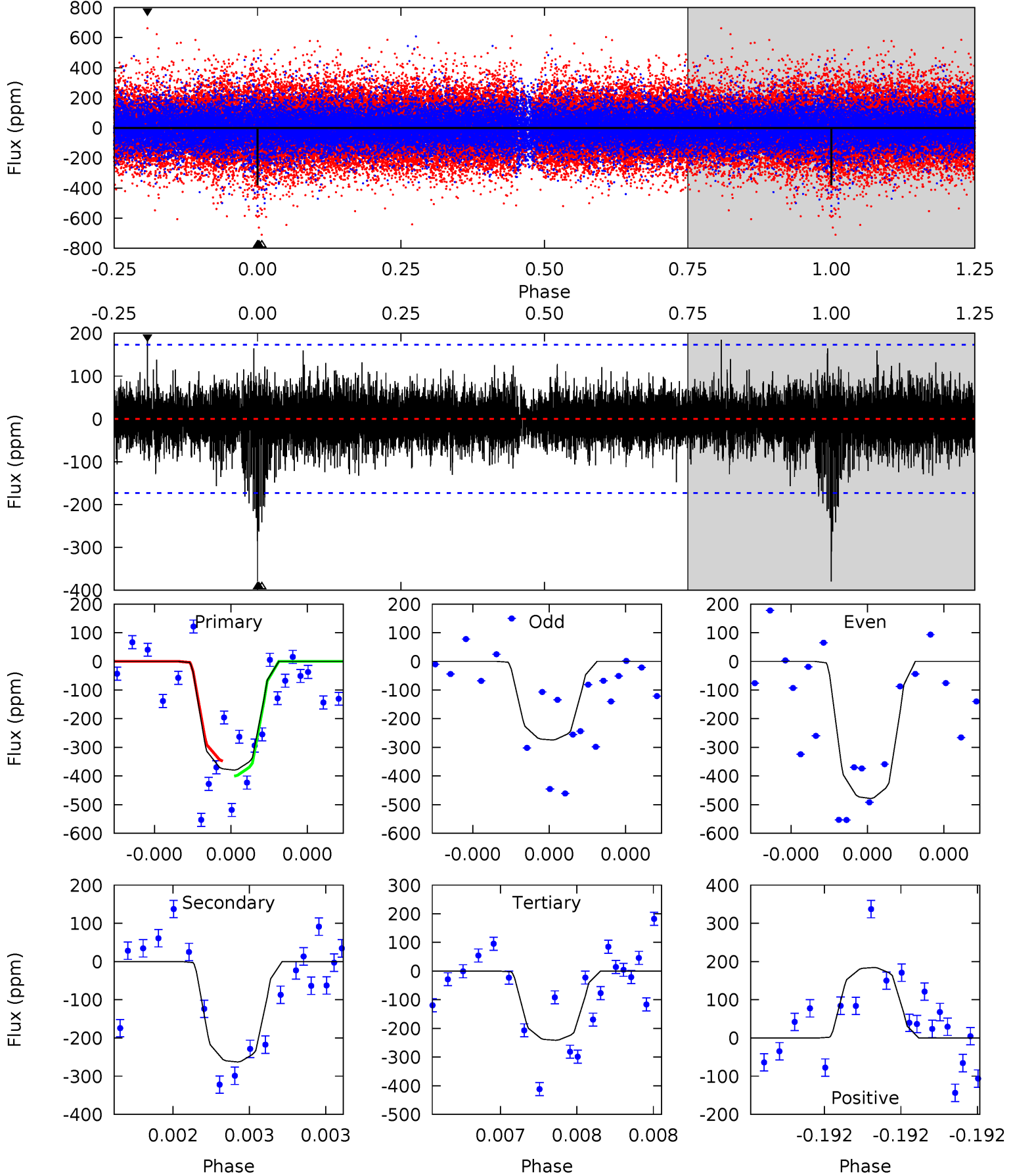
TCE 006113793-01 P=377.203190 Days  $T_0=172.632885$  (BKJD)



# DV Model-Shift Uniqueness Test

006113793-01, P = 377.223261 Days, E = 172.601409 Days

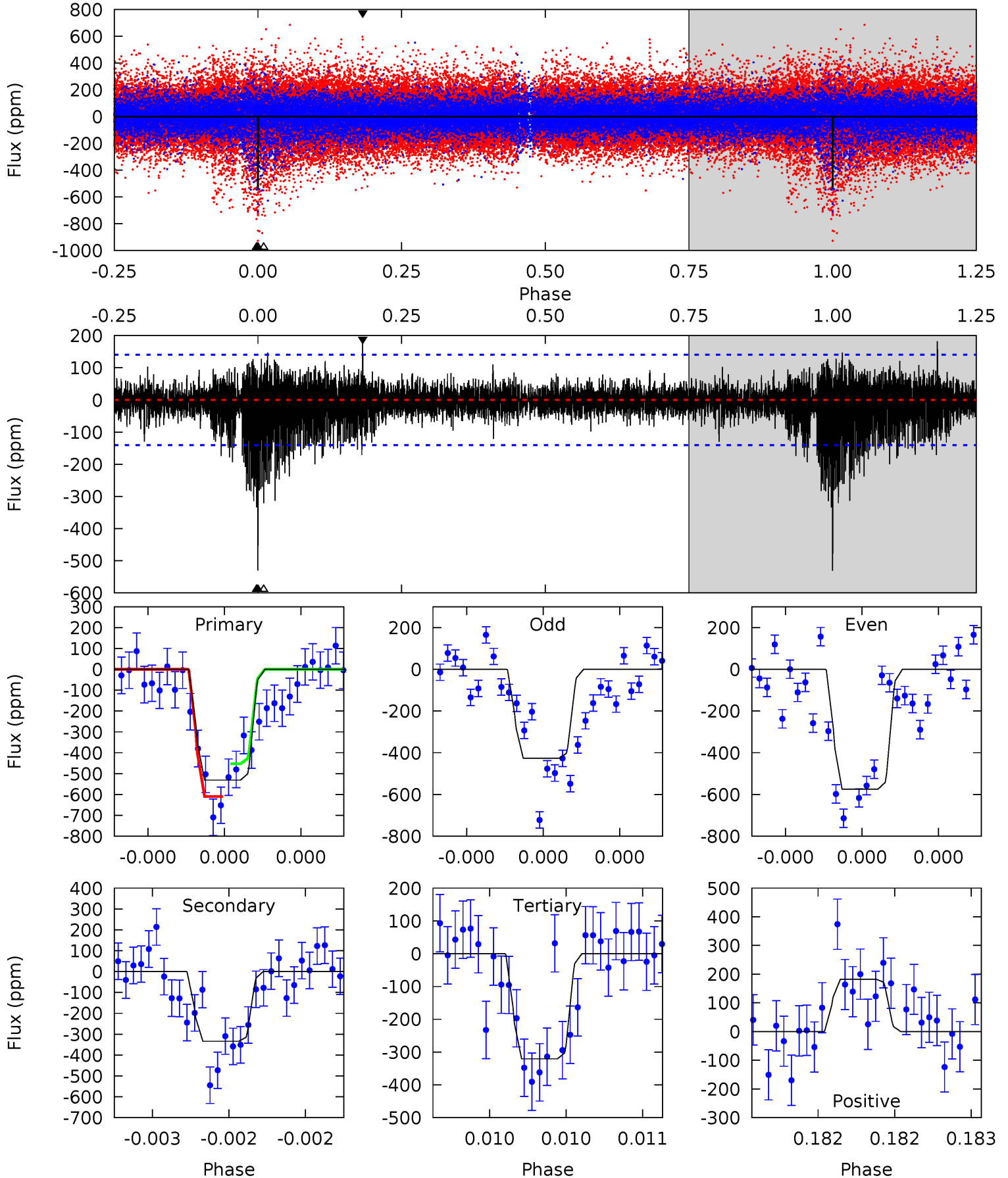
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	8.62	7.92	6.05	5.67	3.63	1.24	4.53	6.40	0.71	2.57	3.43	0.87	0.33	0.85



# Alt Model-Shift Uniqueness Test

006113793-01,  $P = 377.203190$  Days,  $E = 172.632885$  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
21.1	13.2	12.7	7.23	5.58	3.49	1.75	8.34	13.8	0.53	6.02	2.98	0.89	0.26	3.11



### Stellar Parameters For KIC 006113793

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5967^{+169}_{-211}$	$4.279^{+0.128}_{-0.192}$	$0.420^{+0.050}_{-0.300}$	$1.319^{+0.400}_{-0.234}$	$1.207^{+0.136}_{-0.151}$	$0.741^{+0.469}_{-0.387}$
	+3%/-4%	+3%/-4%	+12%/-71%	+30%/-18%	+11%/-13%	+63%/-52%
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 006113793-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-263 \pm 30$	$3.14^{+1.58}_{-1.49}$	$408^{+32}_{-26}$	$5226^{+1903}_{-751}$	$16973^{+45163}_{-9548}$
Alt.	$-334 \pm 25$	$3.84^{+1.69}_{-1.53}$	$410^{+31}_{-27}$	$5099^{+1346}_{-702}$	$14905^{+25586}_{-7816}$

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

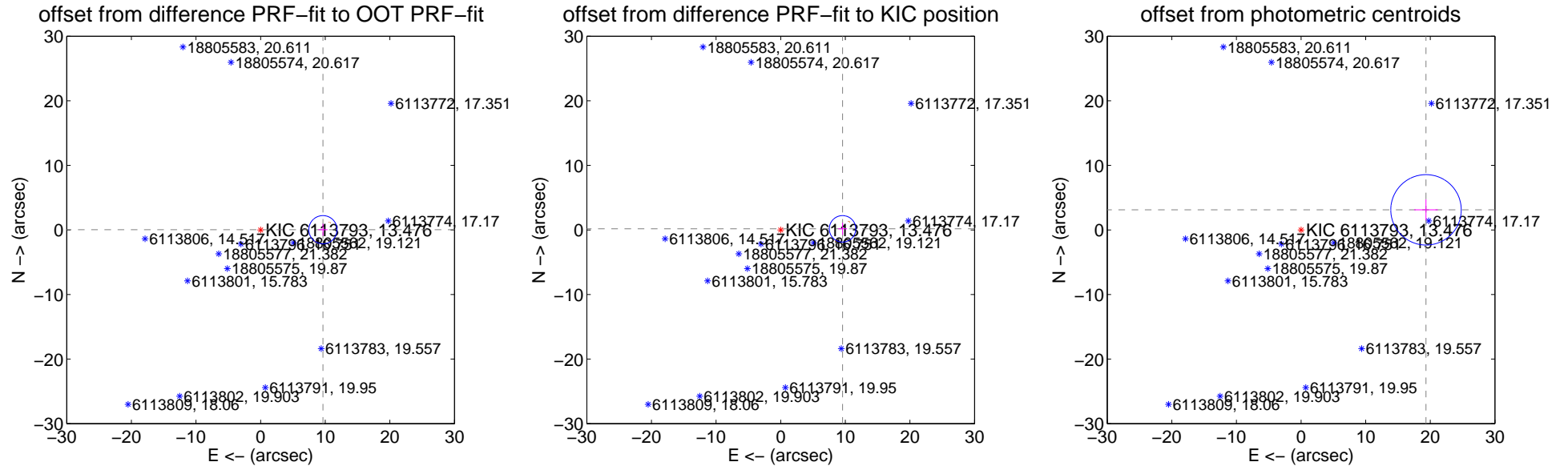
## DV Centroid Data

Supplemental centroid analysis for 006113793-01. Kepler magnitude: 13.48. Transit SNR 7.97

There are 0 quarters with good PRF difference image offsets

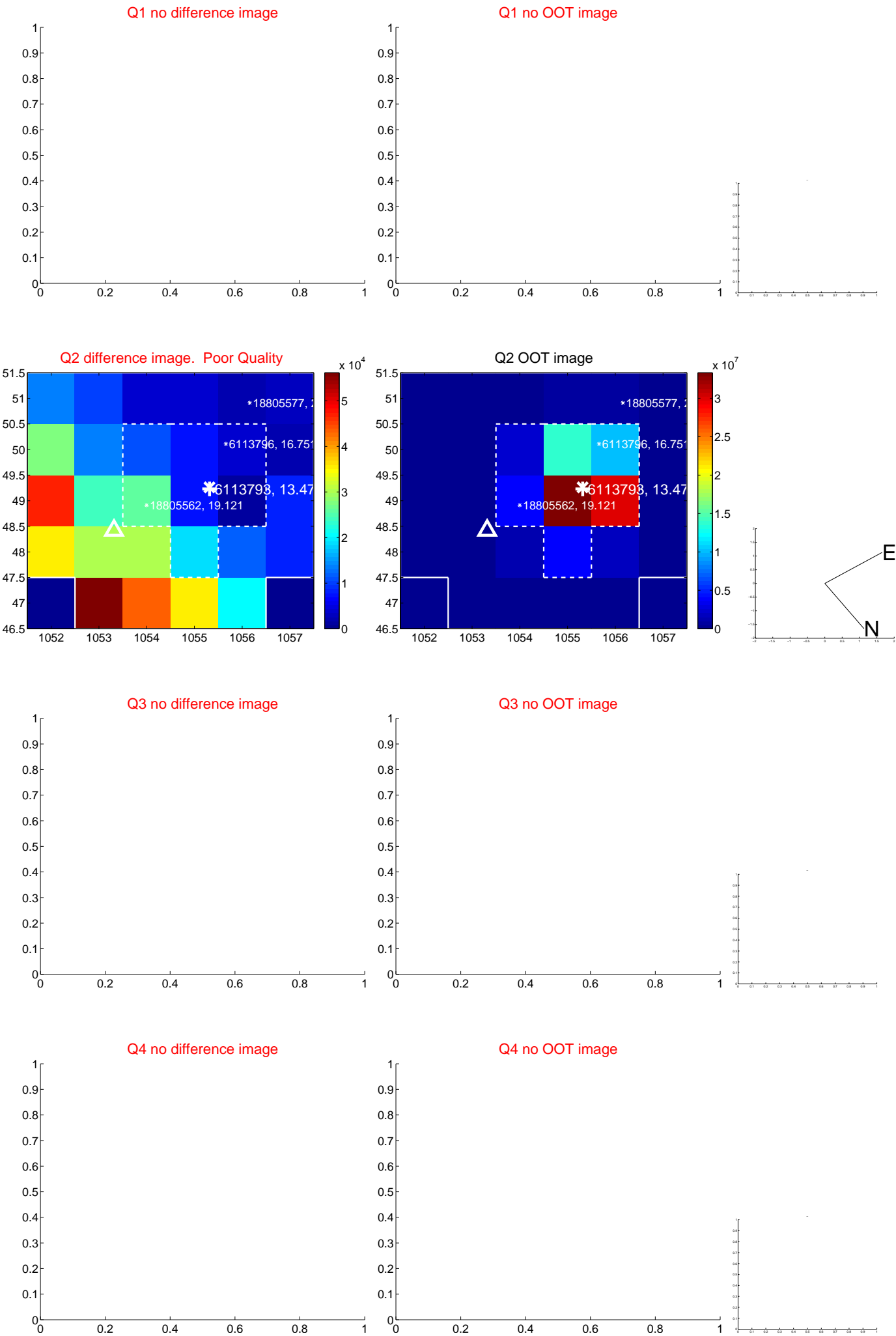
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	9.644 $\pm$ 0.728	13.25	-9.644 $\pm$ 0.728	0.037 $\pm$ 0.928
PRF-fit source offset from KIC position	9.575 $\pm$ 0.683	14.02	-9.573 $\pm$ 0.683	0.171 $\pm$ 0.929
photometric centroid source offset	19.59 $\pm$ 1.82	10.78	-19.34 $\pm$ 1.82	3.11 $\pm$ 1.63



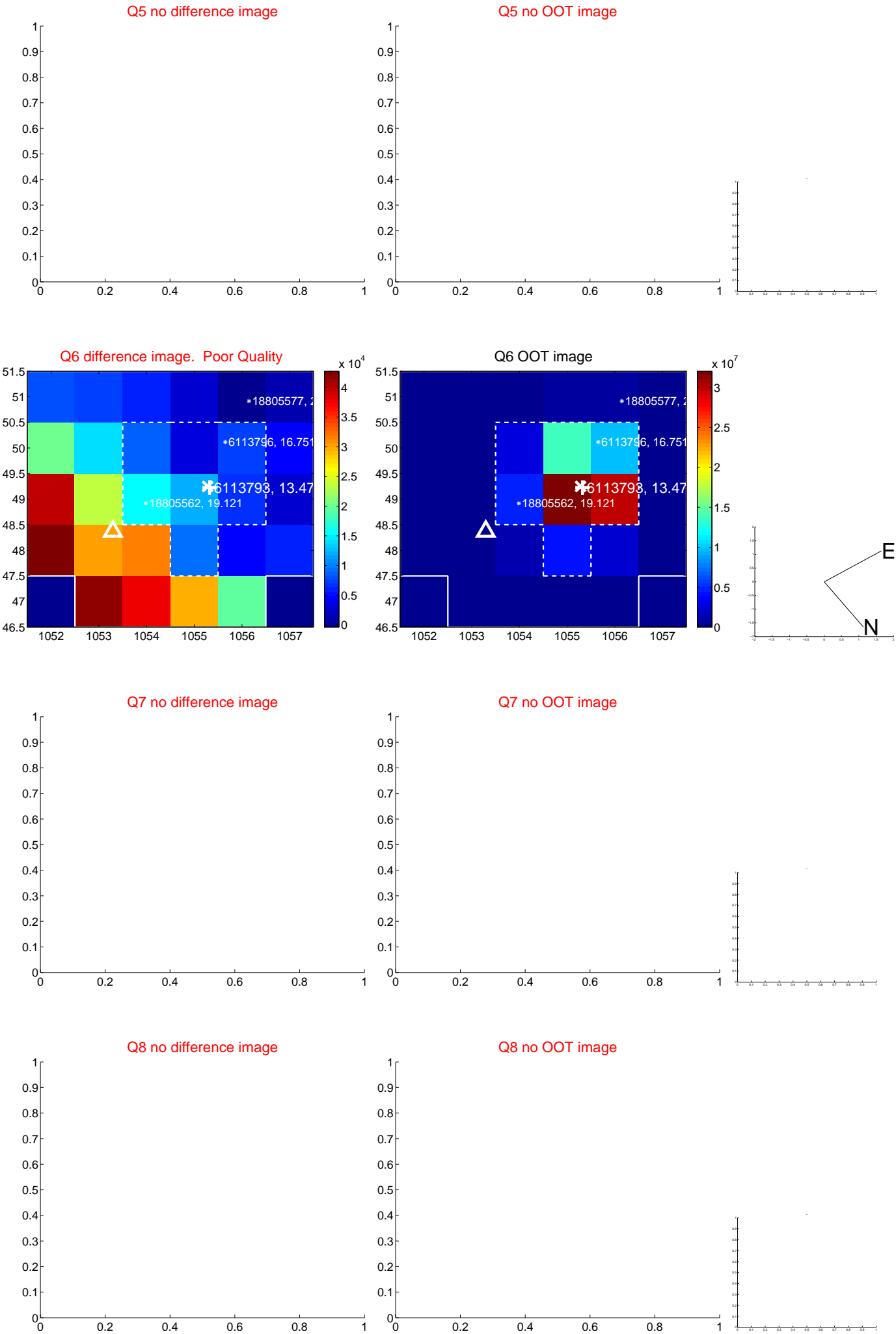
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

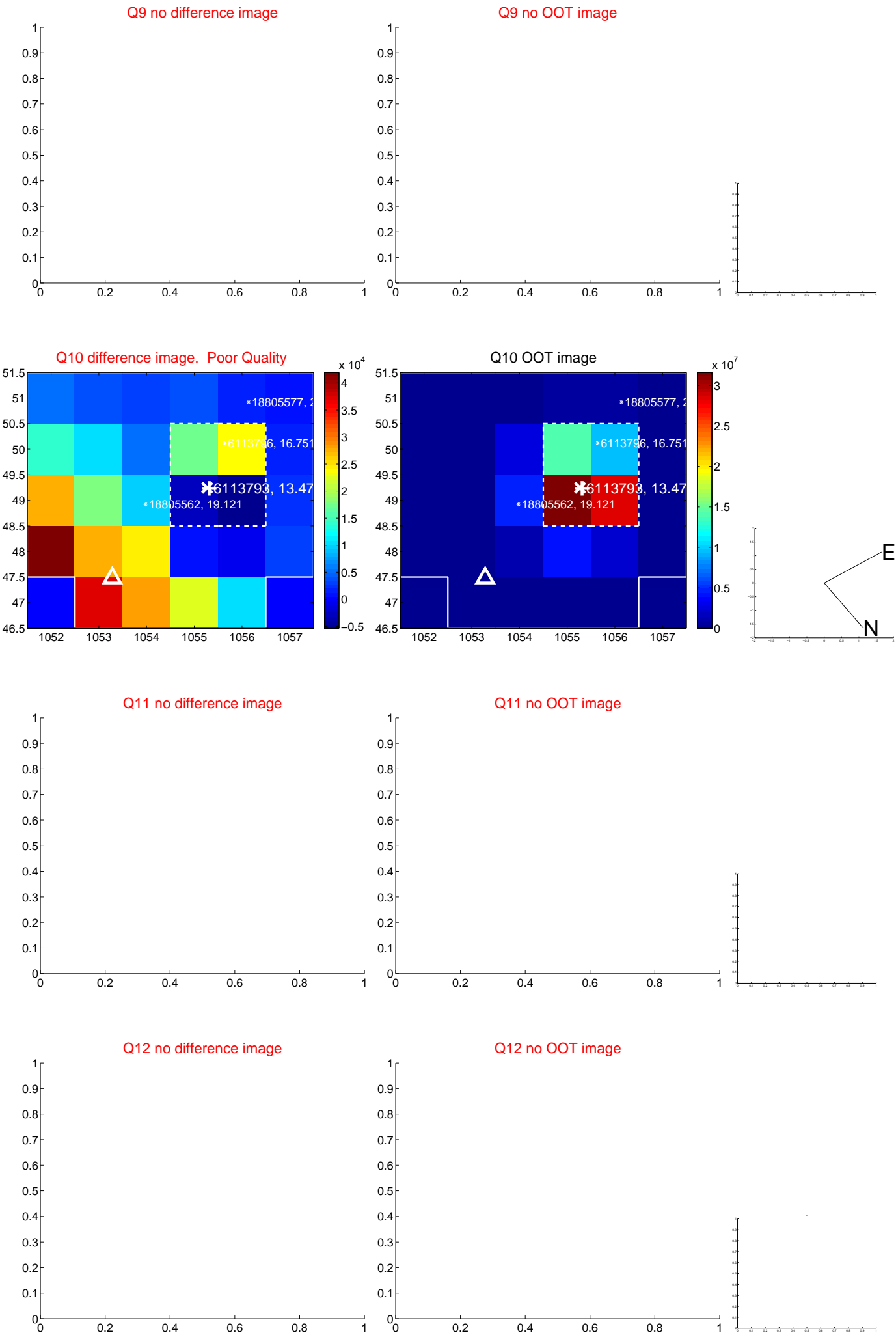




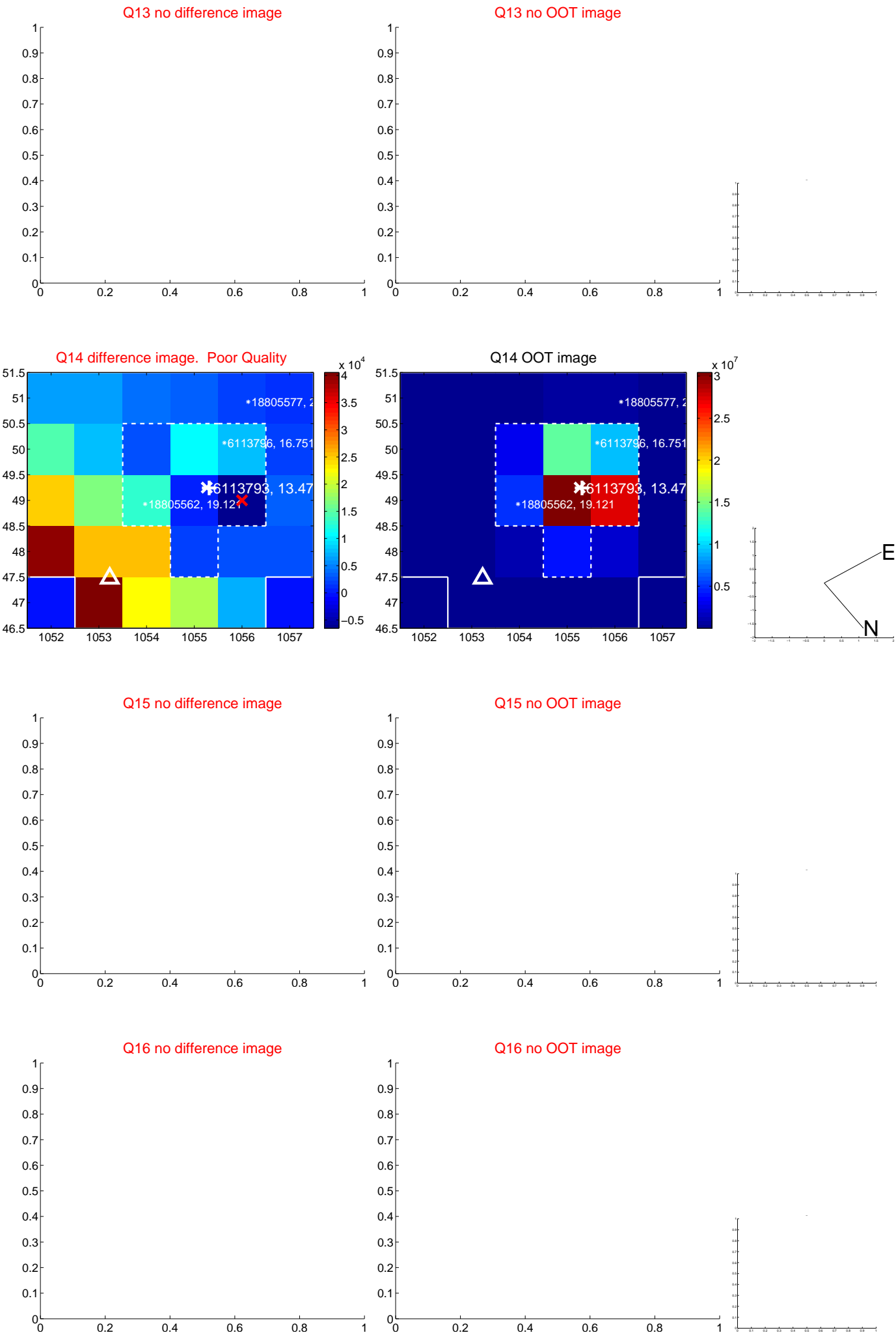
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



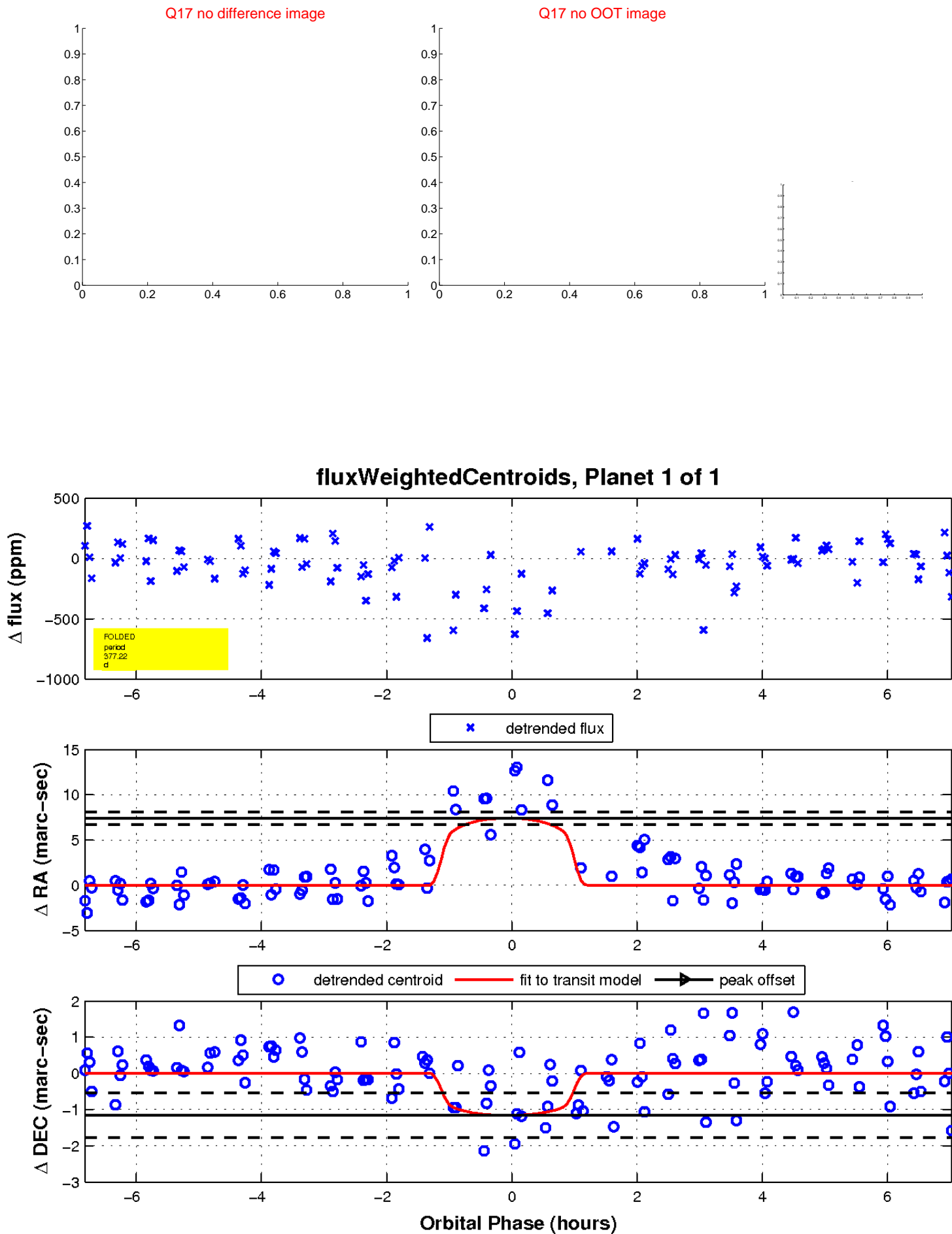
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

