

# KIC 008175925

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008175925-01	OBS	No	367.141599	186.686581	1093.3	12.789	9.5	8.8	1.00	5817	3.26	1.01

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008175925-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

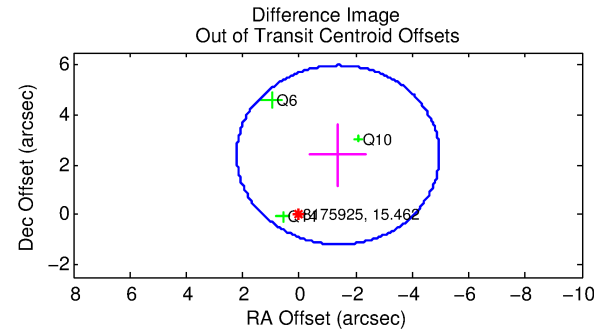
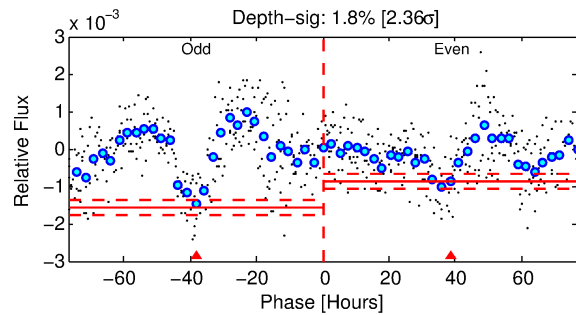
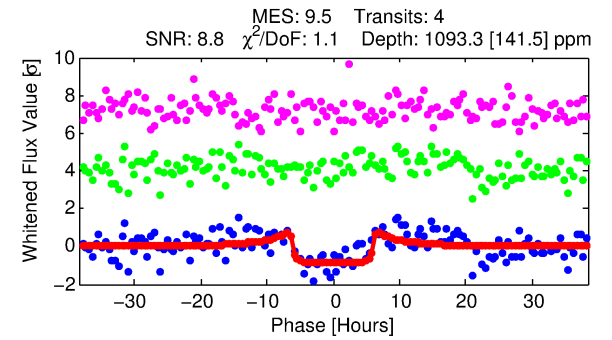
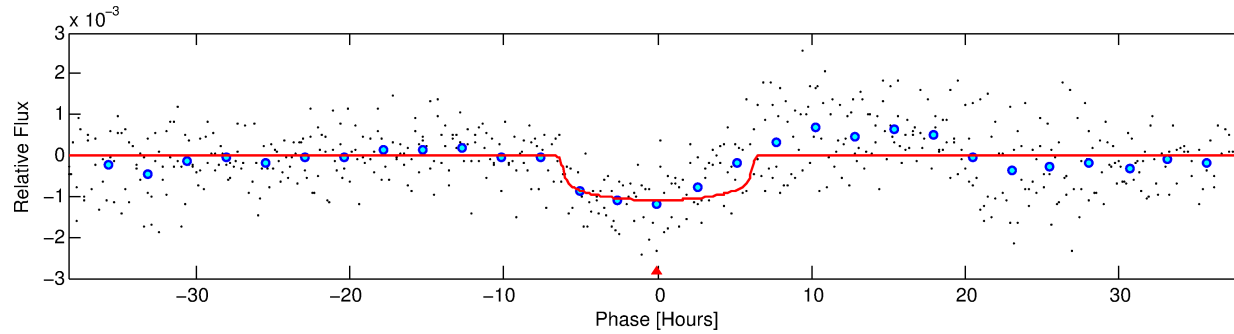
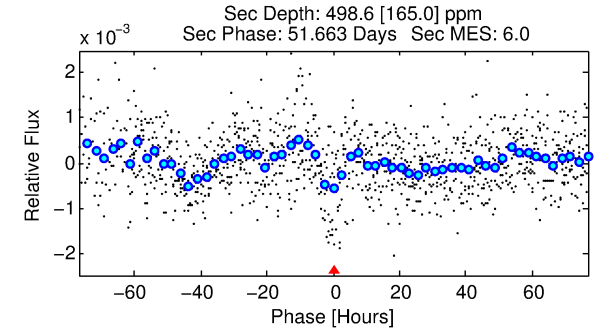
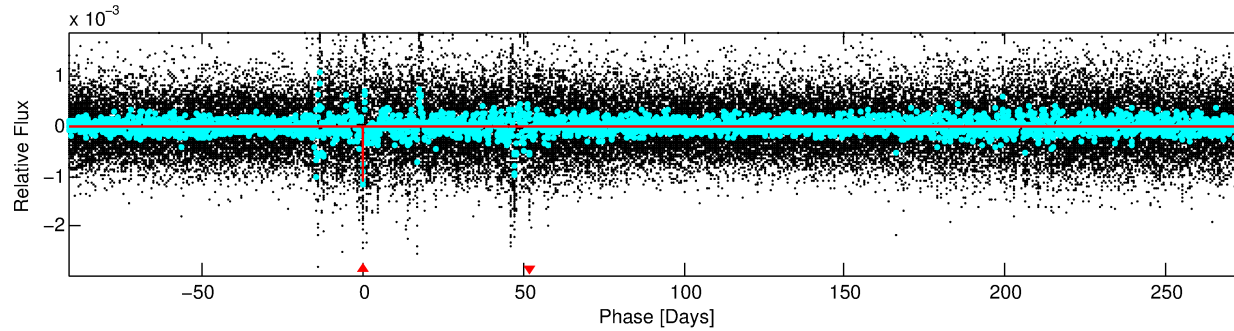
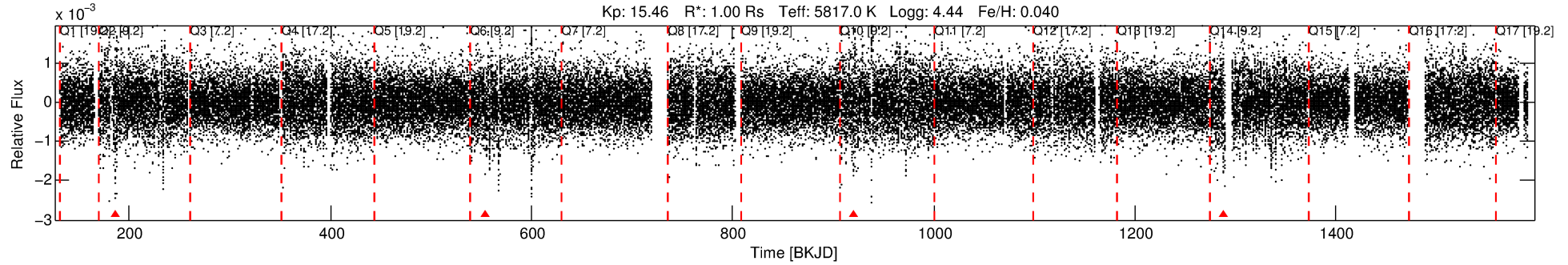
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008175925-01

No Significant Match Found

# DV One-Page Summary

KIC: 8175925 Candidate: 1 of 1 Period: 367.142 d



## DV Fit Results:

Period = 367.14160 [0.00655] d  
Epoch = 186.6866 [0.0124] BKJD  
Rp/R\* = 0.0300 [0.0195]  
a/R\* = 225.67 [638.74]  
b = 0.05 [62.08]  
Seff = 1.01 [0.39]  
Teq = 256 [25] K  
Rp = 3.26 [2.33] Re  
a = 1.0041 [0.2531] AU  
Ag = 26033.95 [36280.80] [0.72σ]  
Teffp = 5020 [1695] K [2.81σ]

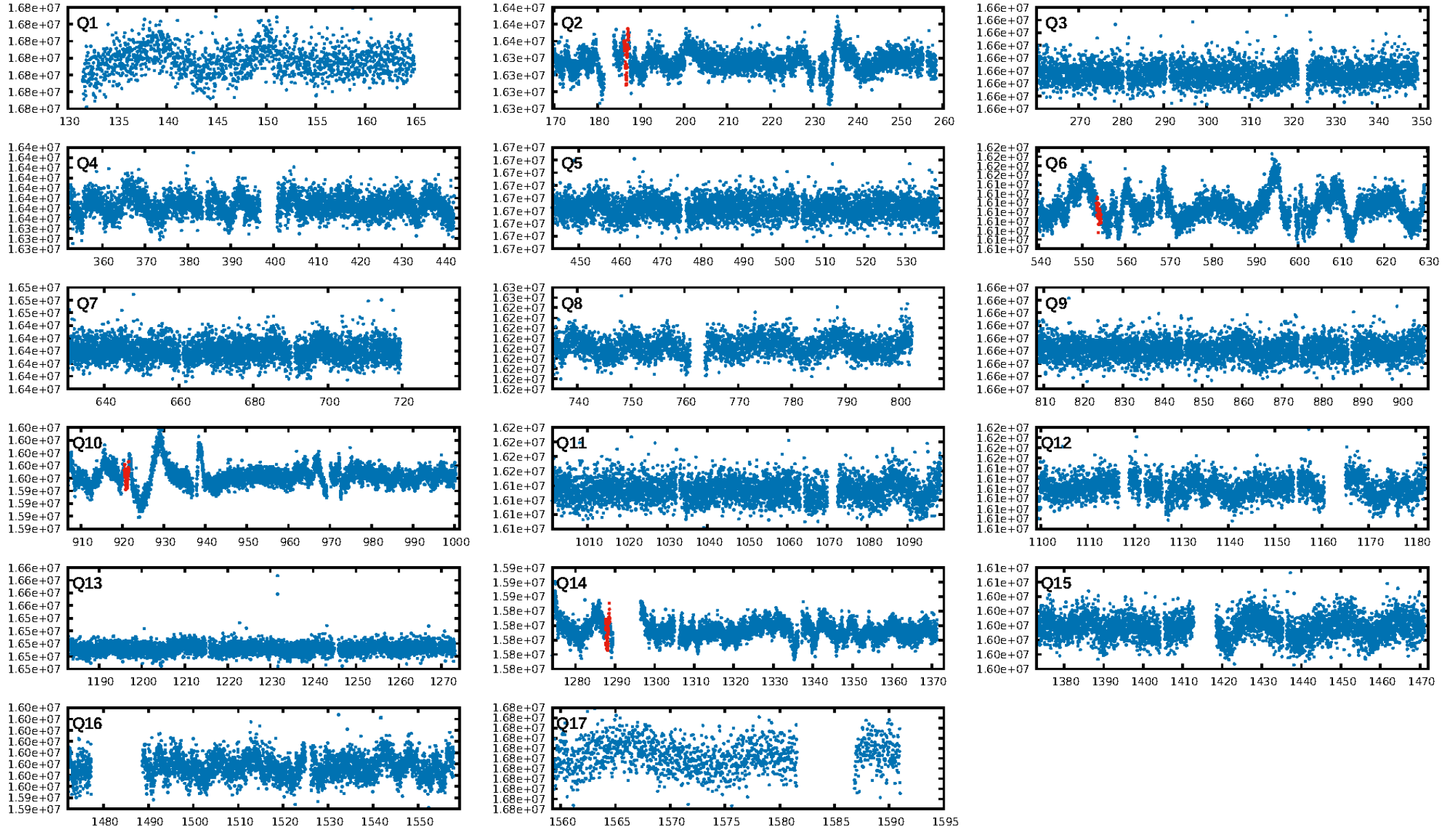
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 3.4%  
ModelChiSquareGof-sig: 99.9%  
Bootstrap-pfa: 5.94e-11  
RollingBand-fgt: 0.00 [0/4]  
GhostDiagnostic-chr: 0.8636  
Centroid-sig: 0.0%  
Centroid-so: 6.037 arcsec [2.70σ]  
OotOffset-rm: 2.755 arcsec [2.30σ]  
KicOffset-rm: 2.727 arcsec [2.08σ]  
OotOffset-st: 3/0/0/0 [3]  
KicOffset-st: 3/0/0/0 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 1.00 [4/4]

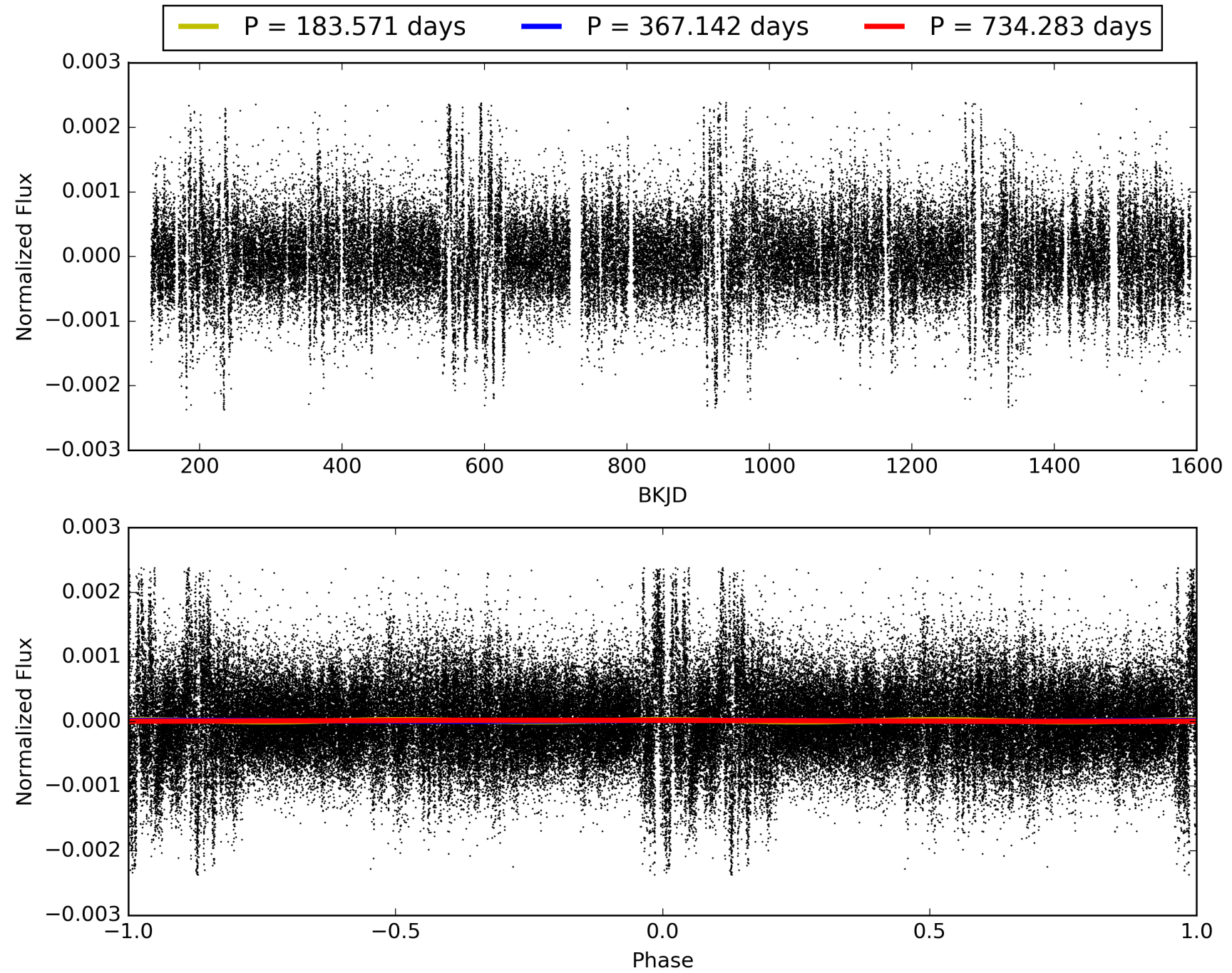
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:35:12 Z

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

# TCE 008175925-01, PDC Light Curves

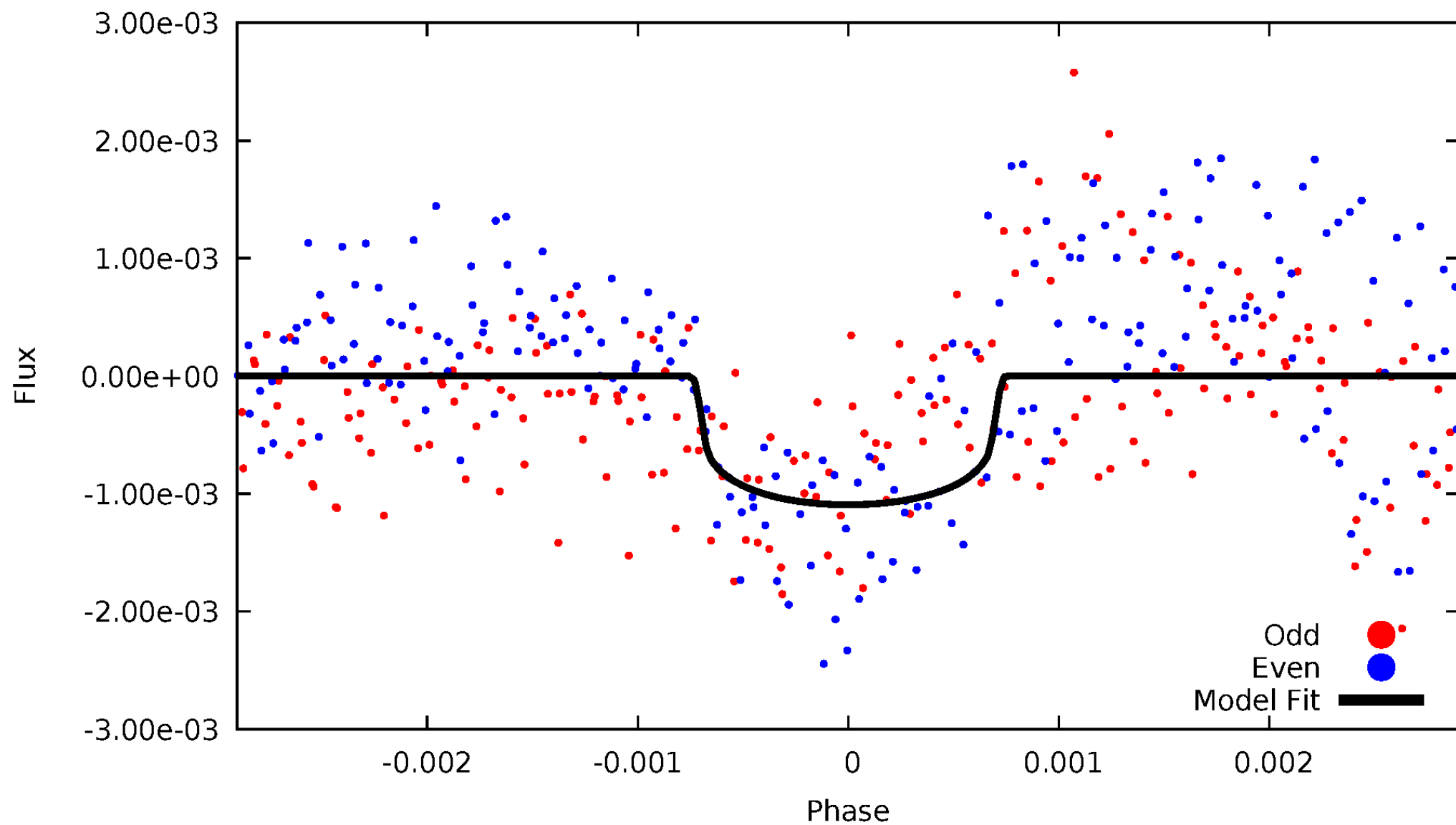


TCE 008175925-01



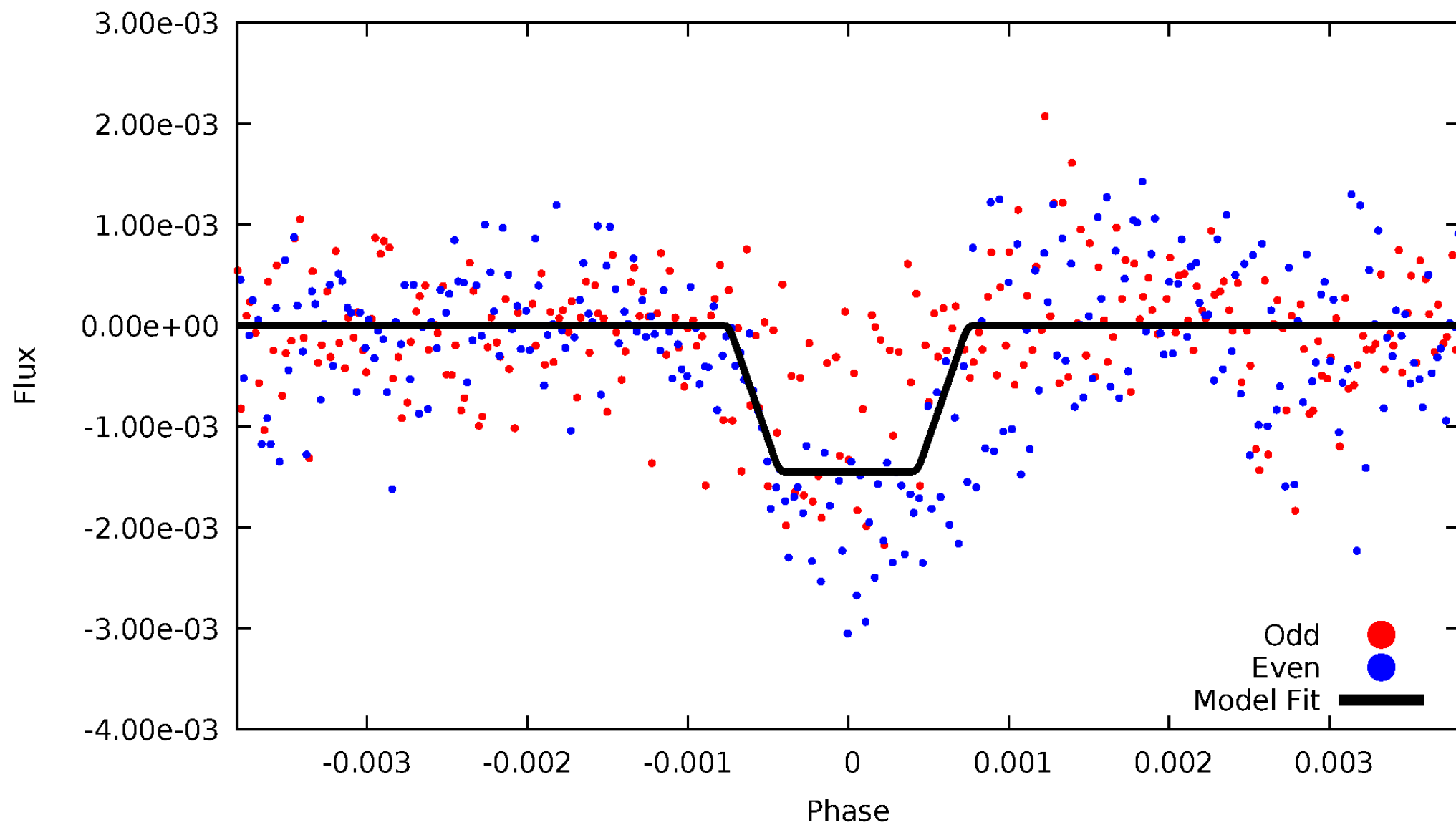
# DV Odd/Even

TCE 008175925-01



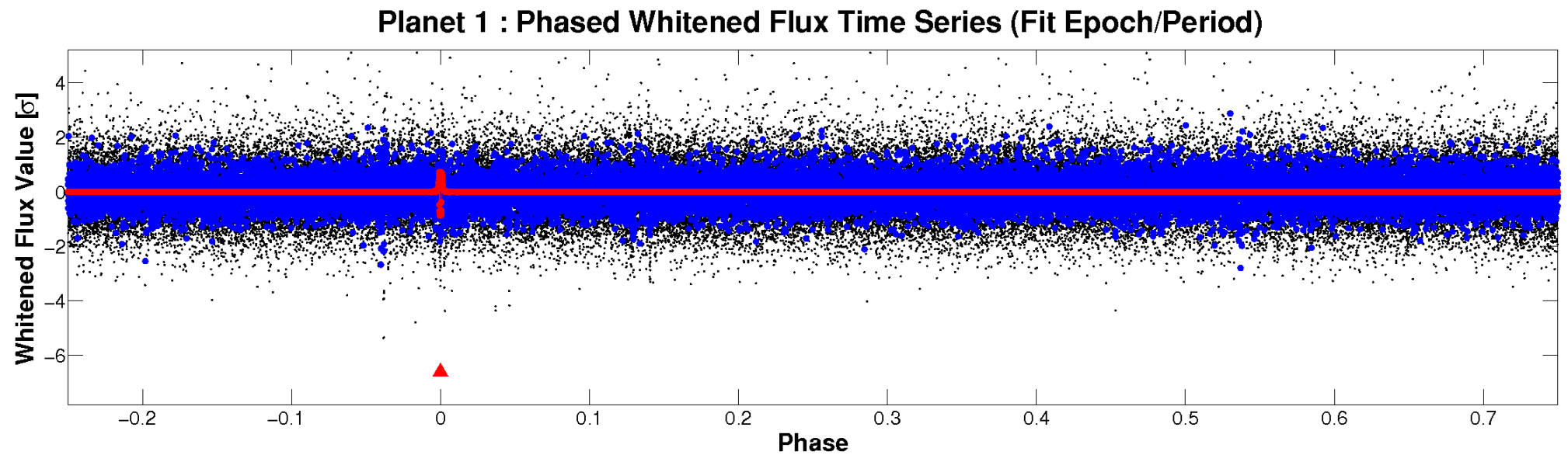
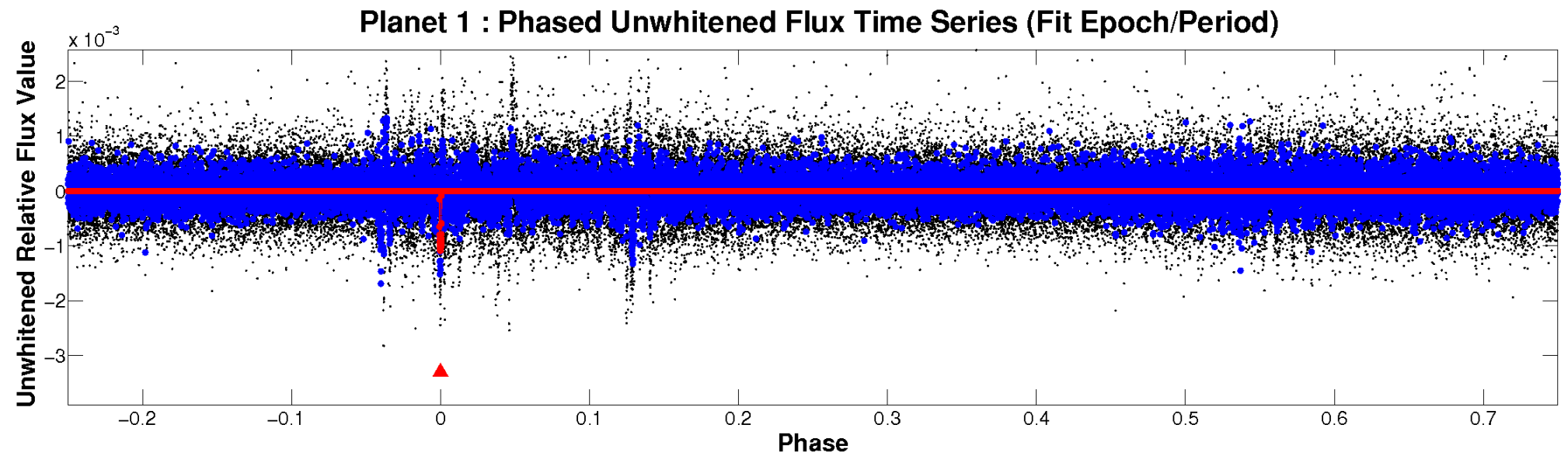
# ALT Odd/Even

TCE 008175925-01



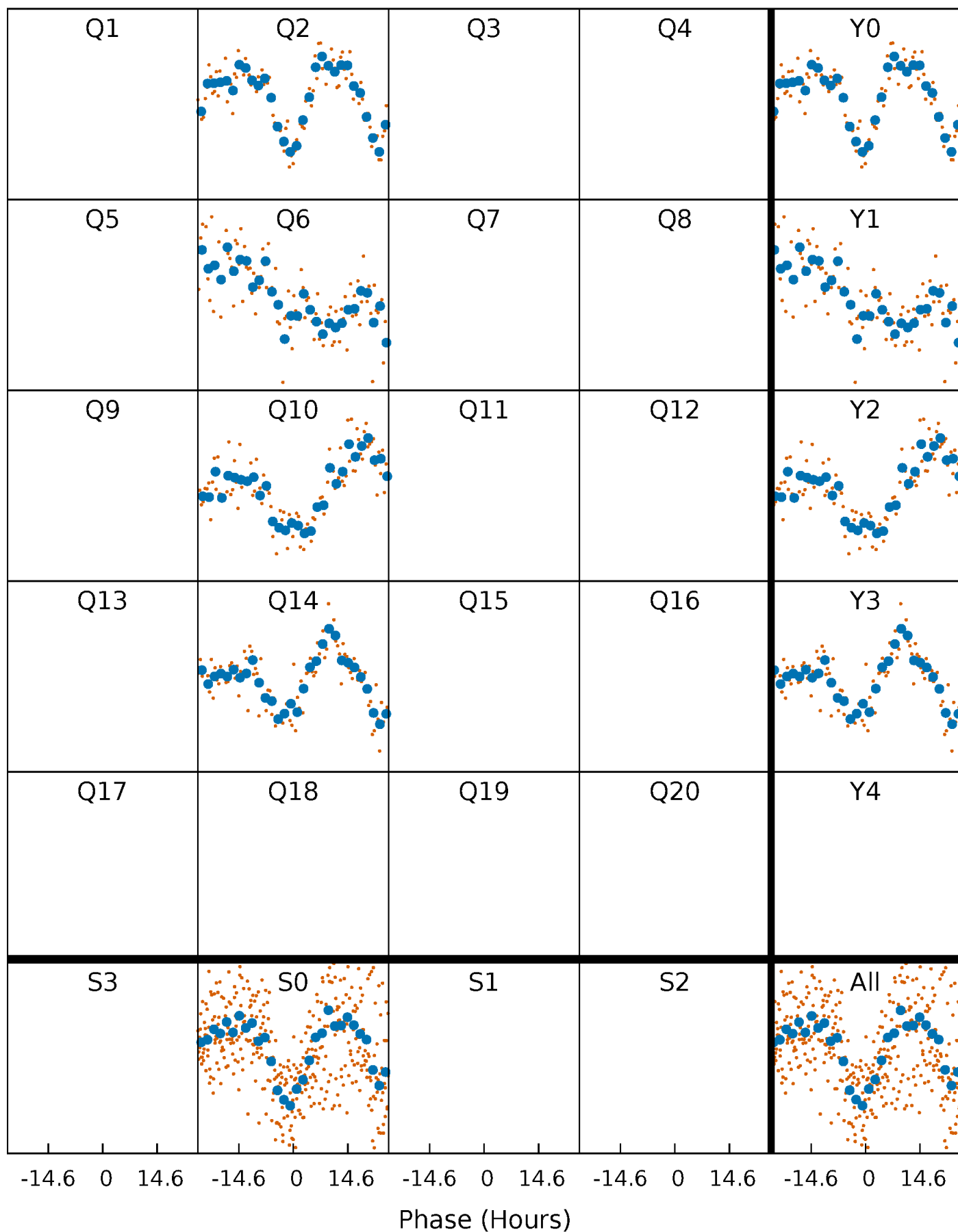


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

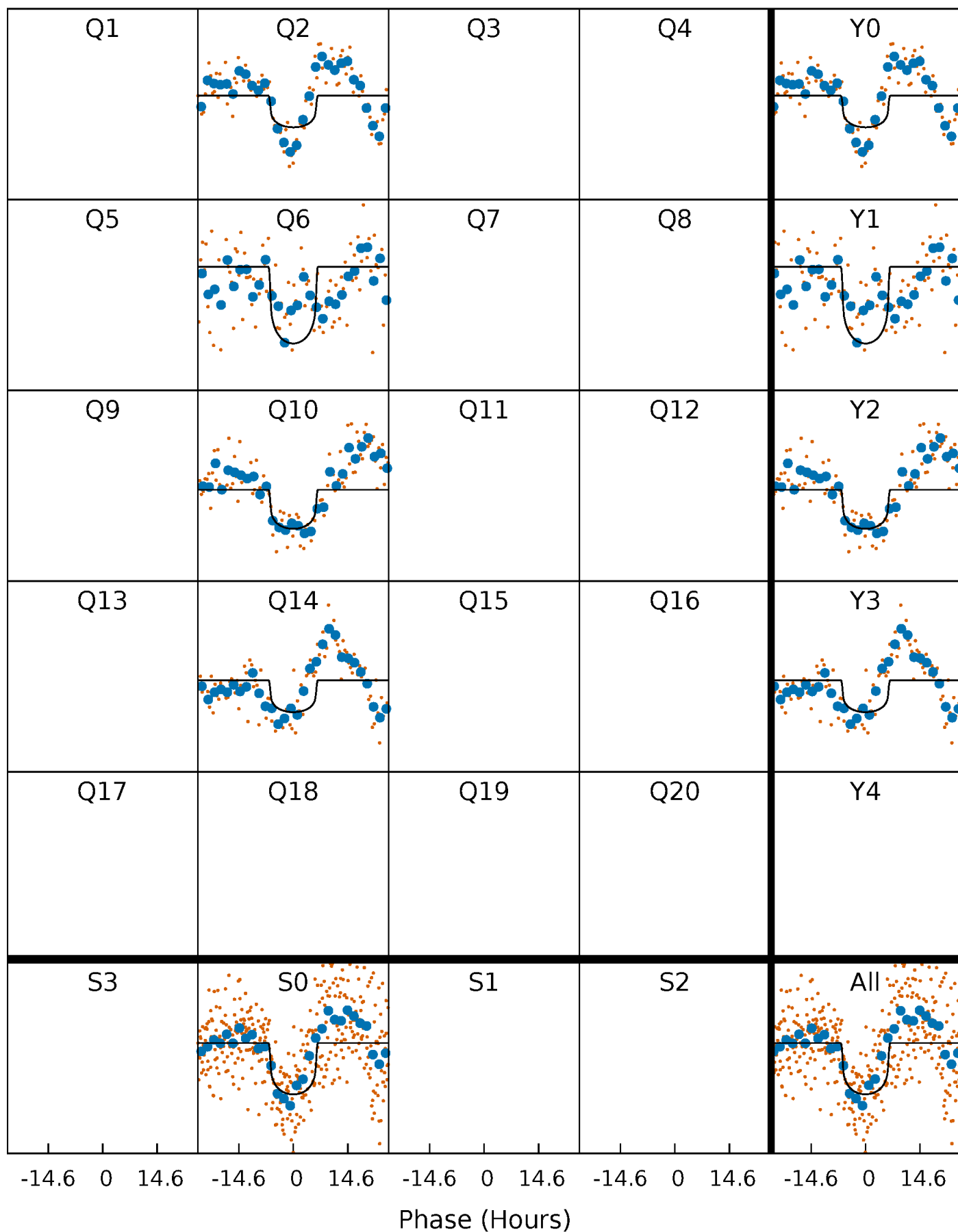
TCE 008175925-01 P=367.141599 Days  $T_0=186.686581$  (BKJD)





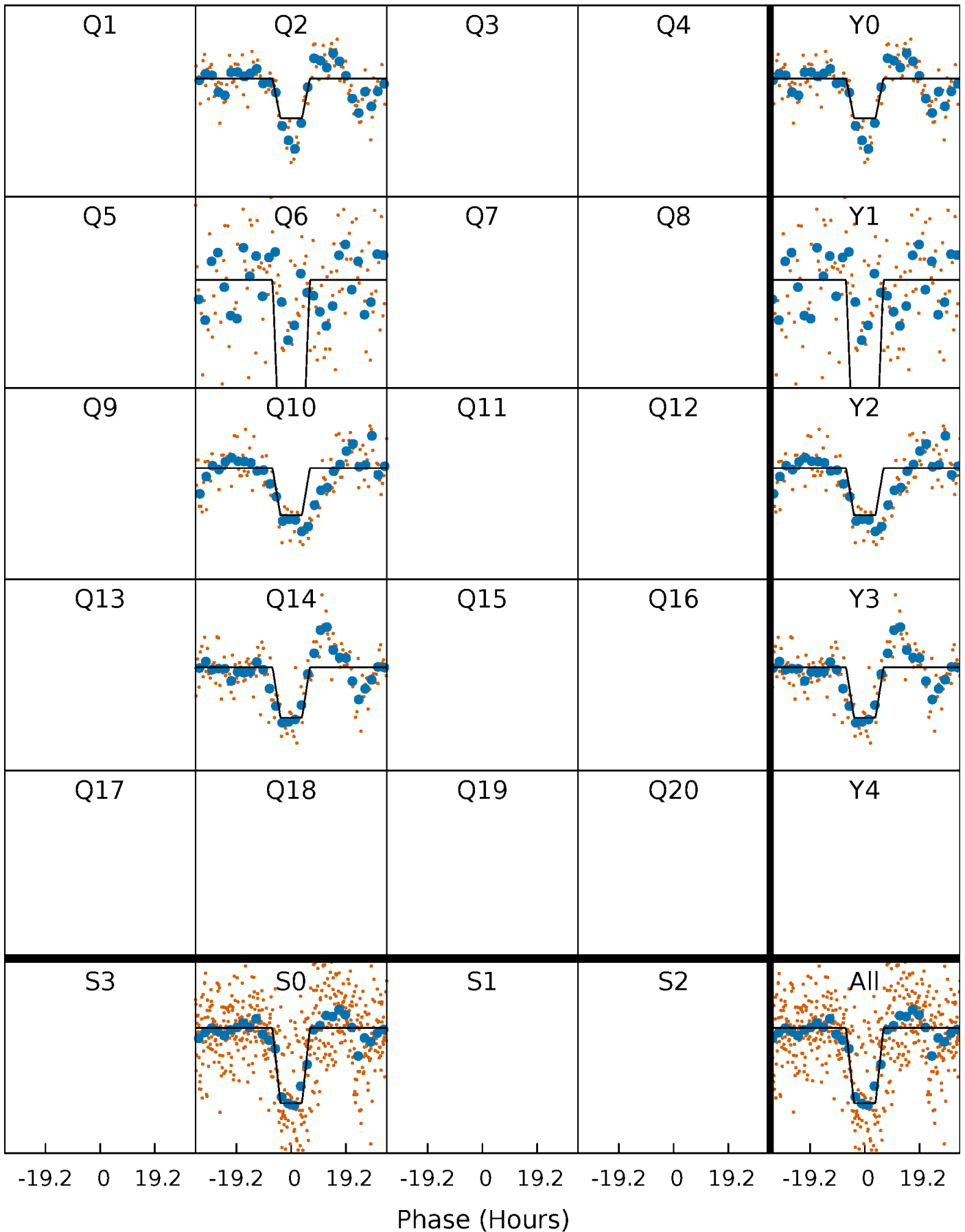
# DV Quarter-Phased Transit Curves

TCE 008175925-01 P=367.141599 Days  $T_0=186.686581$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

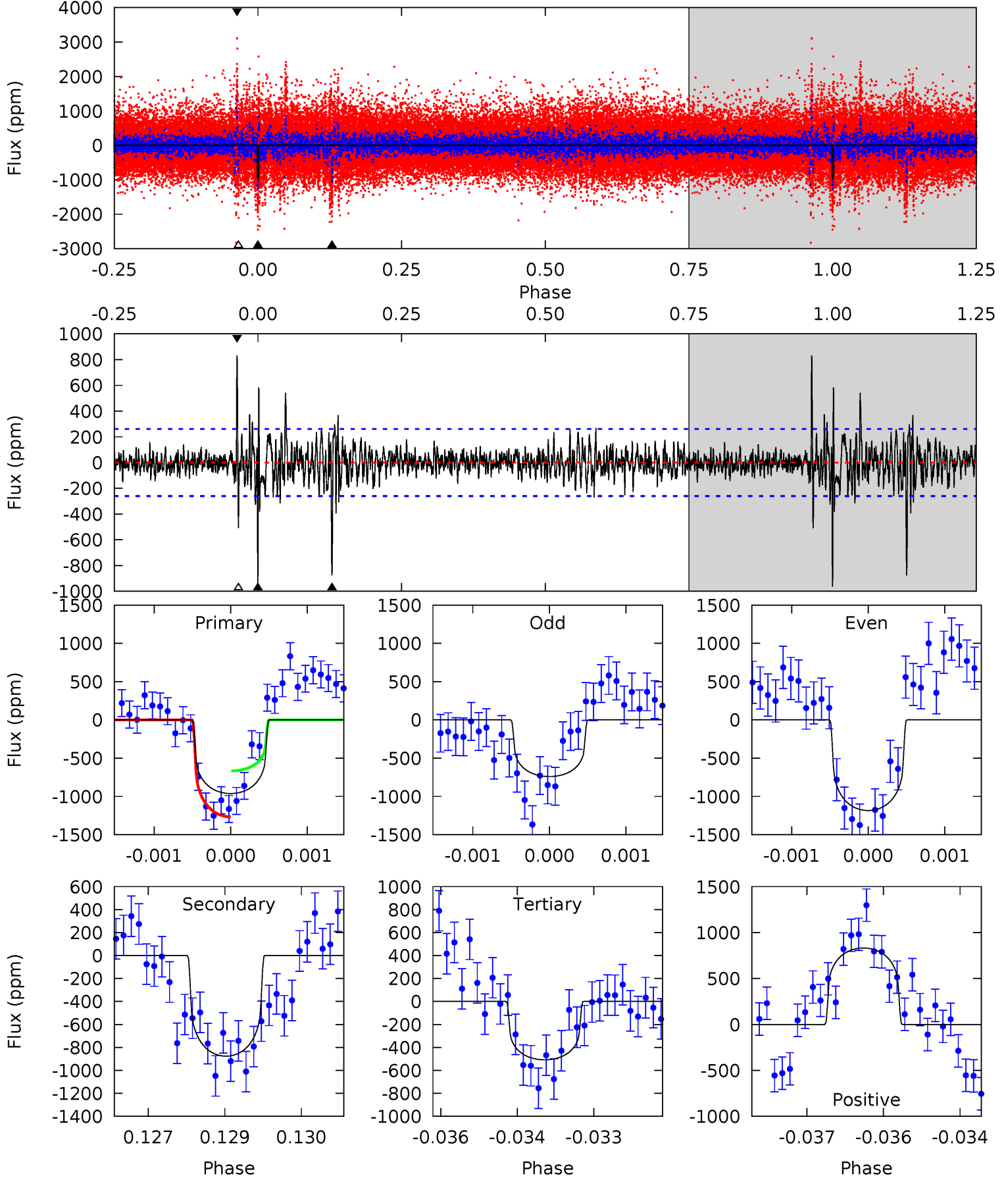
TCE 008175925-01 P=367.136584 Days  $T_0=186.645198$  (BKJD)



# DV Model-Shift Uniqueness Test

008175925-01, P = 367.141599 Days, E = 186.686581 Days

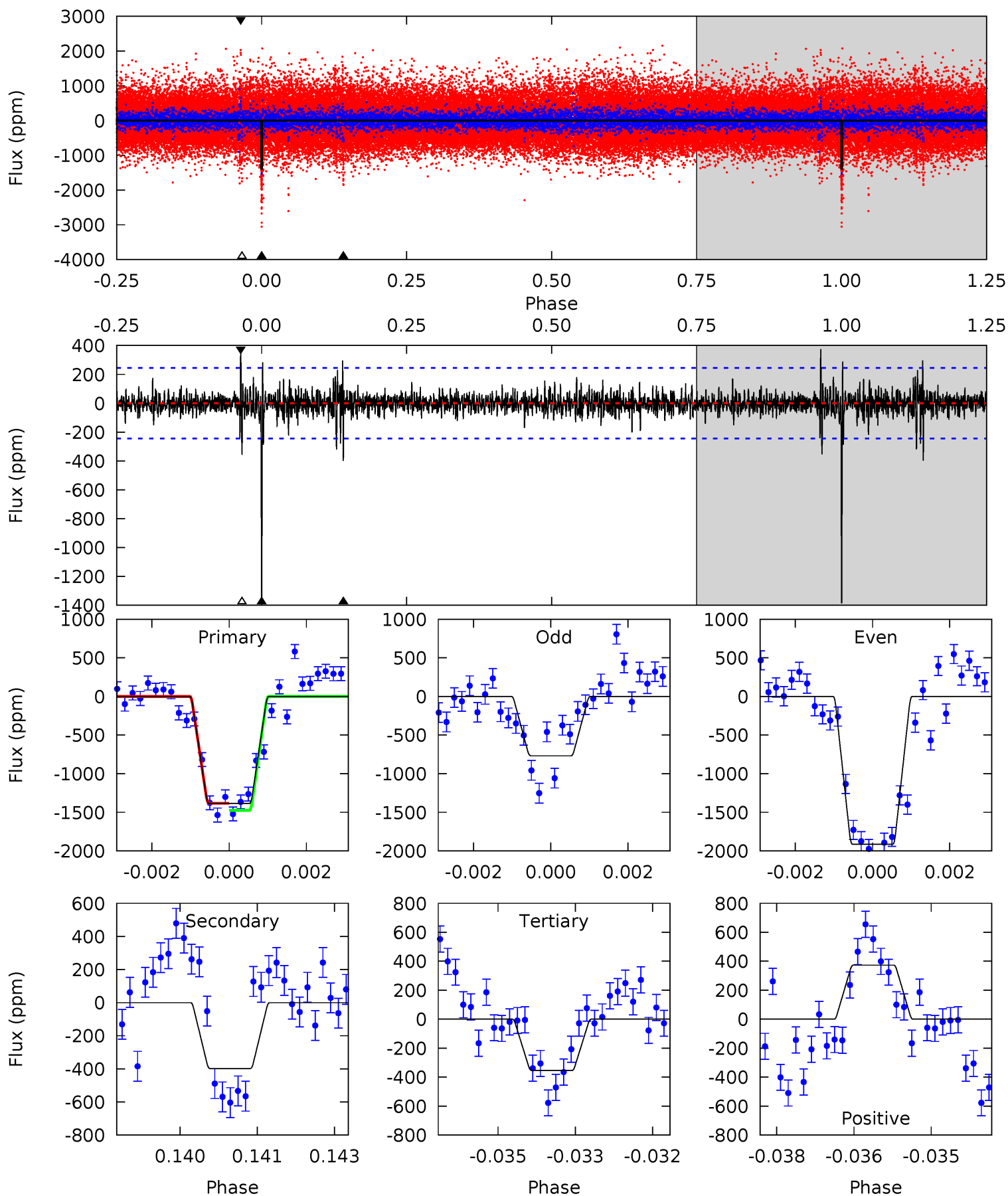
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	18.1	10.5	17.2	5.38	3.18	1.93	9.37	2.70	7.60	0.93	4.59	0.94	0.46	6.20



# Alt Model-Shift Uniqueness Test

008175925-01, P = 367.136584 Days, E = 186.645198 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
30.5	8.75	7.77	8.20	5.38	3.17	1.18	22.7	22.3	0.98	0.55	12.6	0.84	0.21	1.01



### Stellar Parameters For KIC 008175925

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5817^{+157}_{-192}$	$4.442^{+0.081}_{-0.202}$	$0.040^{+0.250}_{-0.300}$	$0.996^{+0.297}_{-0.127}$	$1.002^{+0.126}_{-0.113}$	$1.429^{+0.517}_{-0.740}$
	+3%/-3%	+2%/-5%	+625%/-750%	+30%/-13%	+13%/-11%	+36%/-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 008175925-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-876 \pm 48$	$3.61^{+2.19}_{-2.01}$	$362^{+26}_{-19}$	$5591^{+3278}_{-1026}$	$37015^{+153196}_{-22382}$
Alt.	$-398 \pm 46$	$4.48^{+2.13}_{-2.08}$	$362^{+25}_{-19}$	$4339^{+1346}_{-552}$	$10844^{+28337}_{-5831}$

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

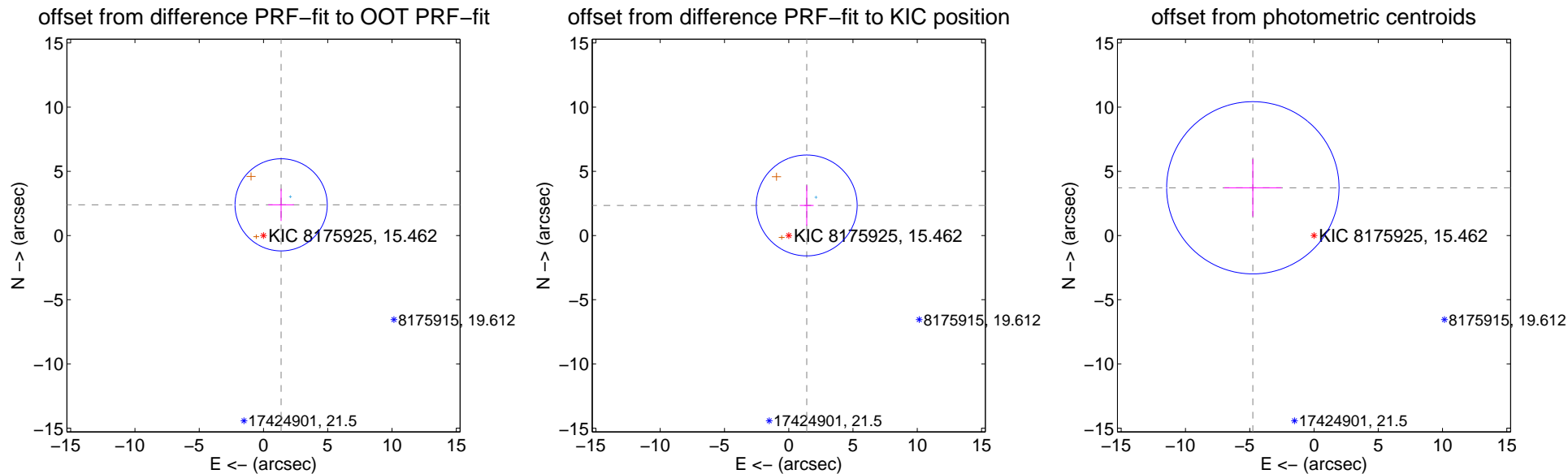
## DV Centroid Data

Supplemental centroid analysis for 008175925-01. Kepler magnitude: 15.46. Transit SNR 8.81

There are 1 quarters with good PRF difference image offsets

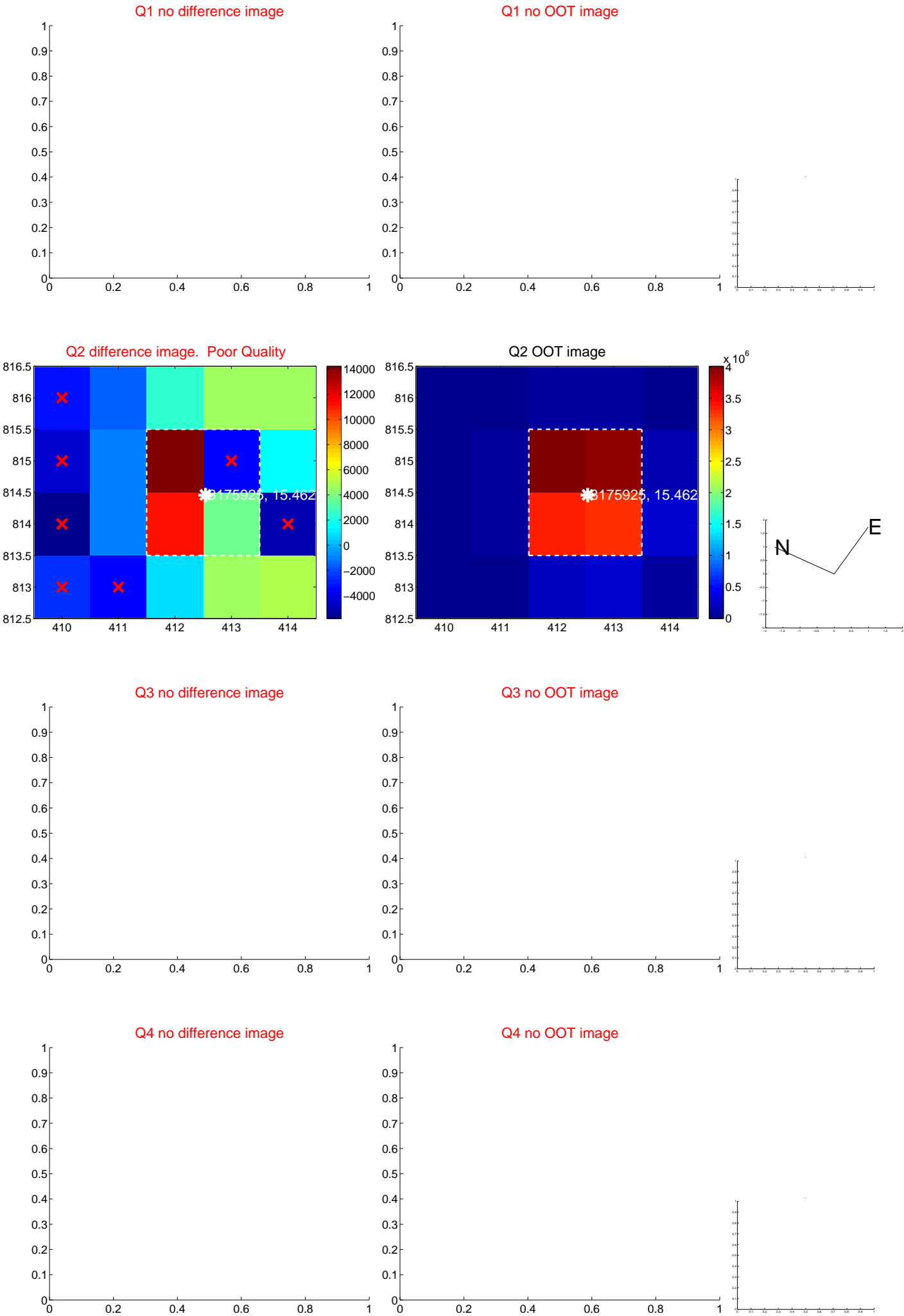
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.755 \pm 1.196$	2.30	$-1.373 \pm 0.998$	$2.389 \pm 1.254$
PRF-fit source offset from KIC position	$2.727 \pm 1.309$	2.08	$-1.397 \pm 0.537$	$2.341 \pm 1.570$
photometric centroid source offset	$6.04 \pm 2.23$	2.70	$4.76 \pm 2.23$	$3.72 \pm 2.24$



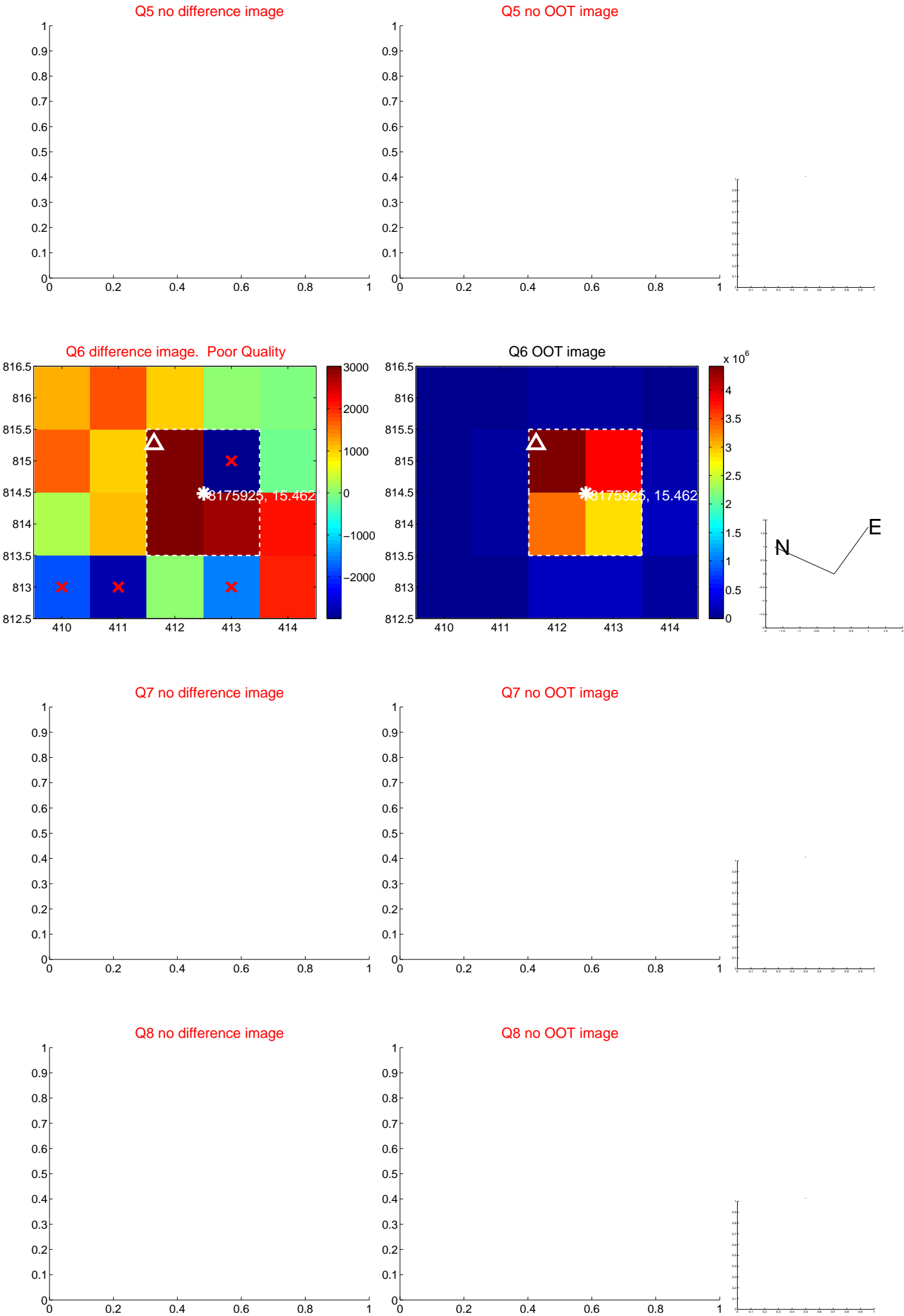
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

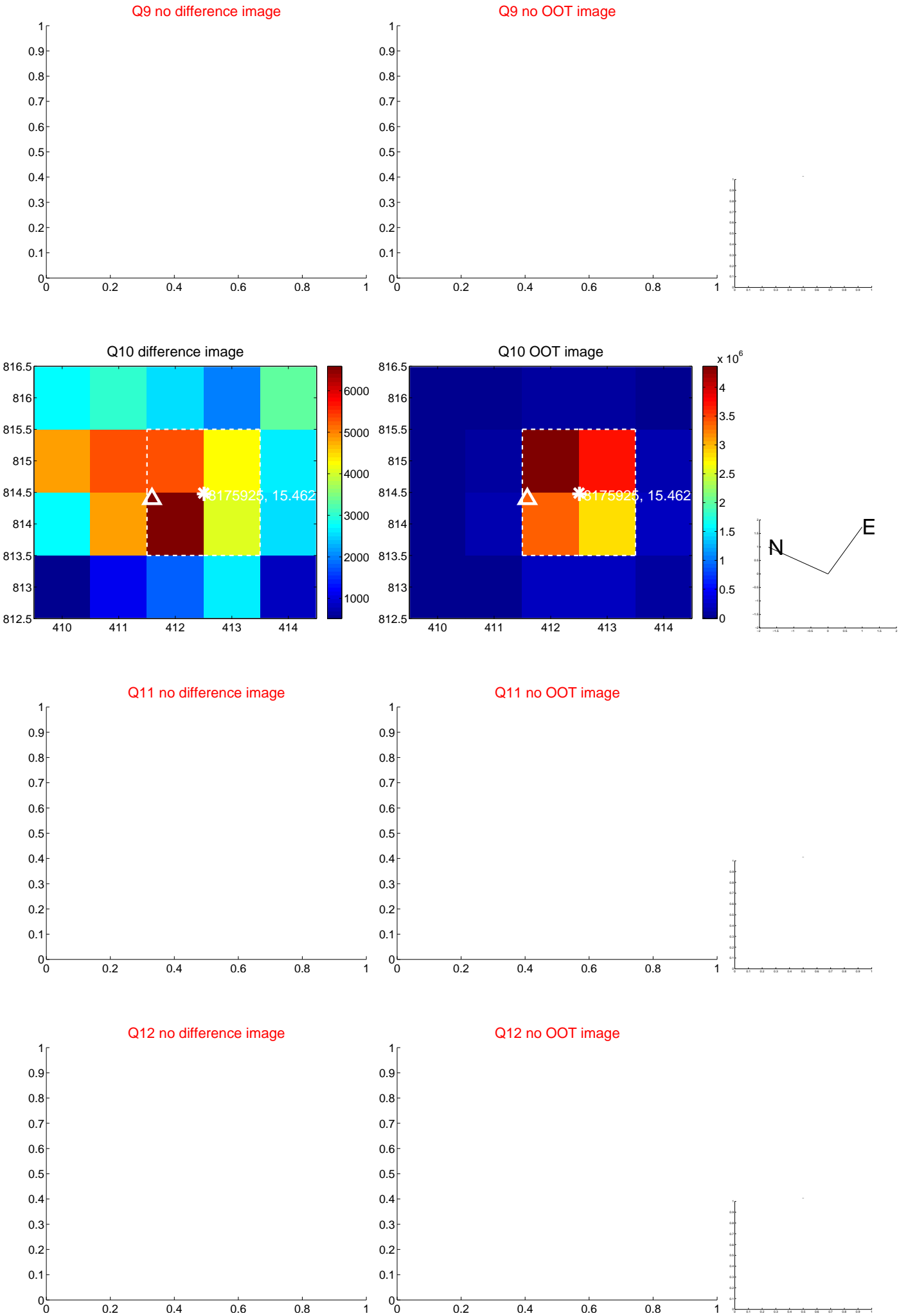




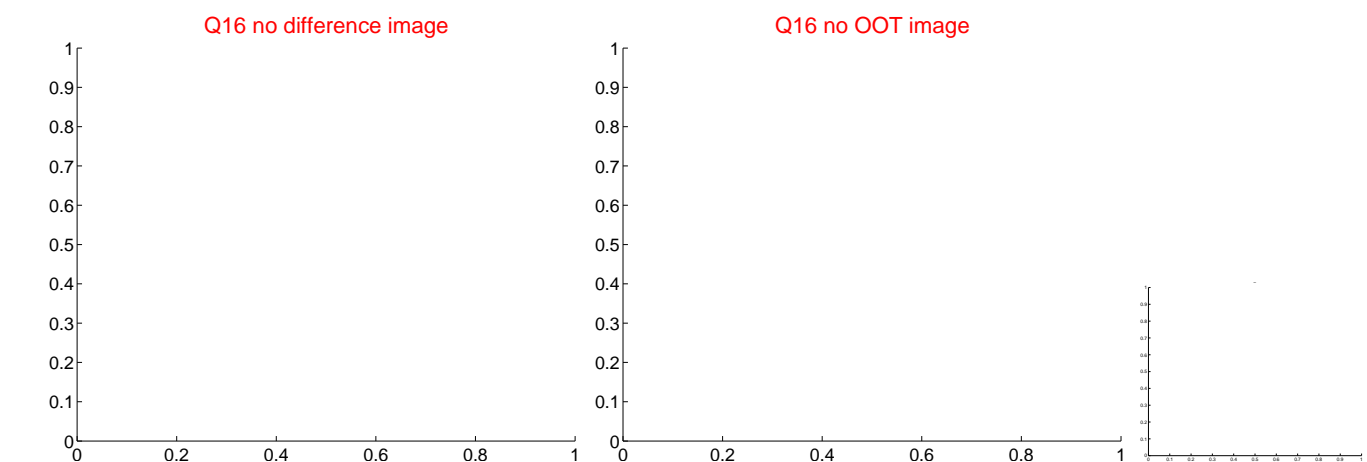
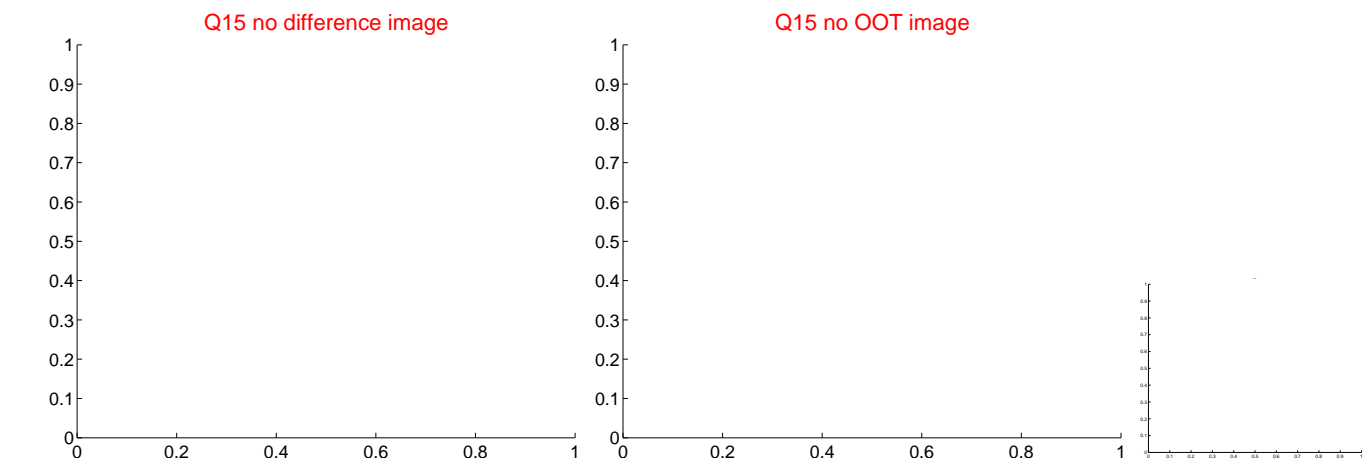
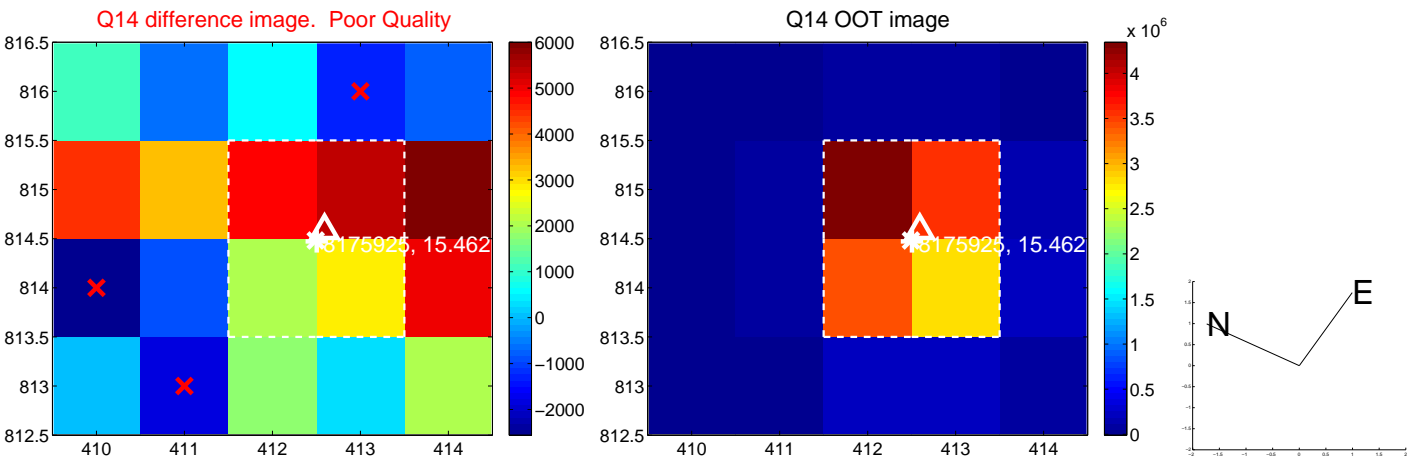
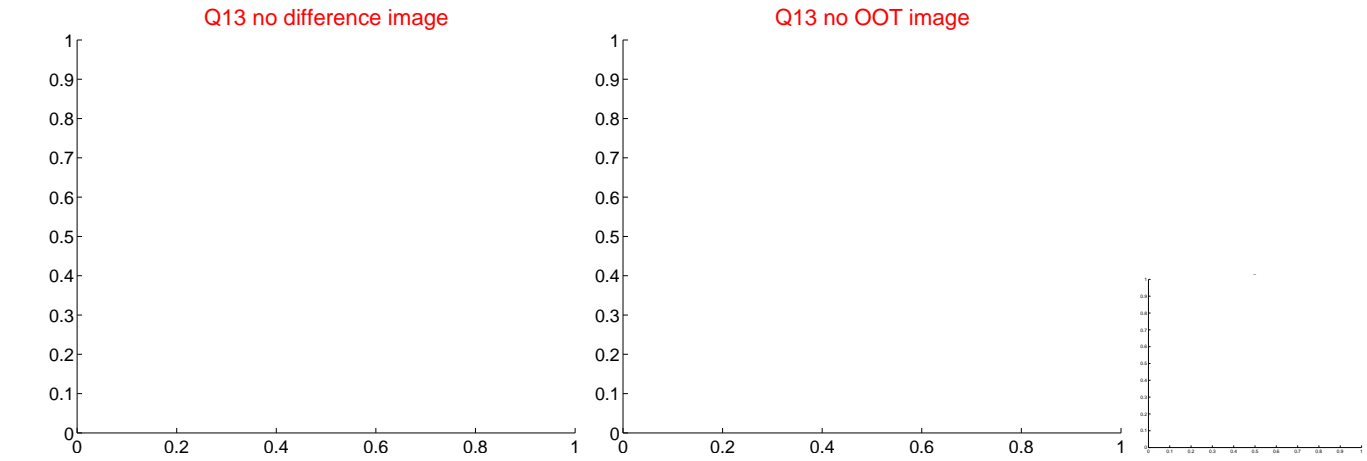
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



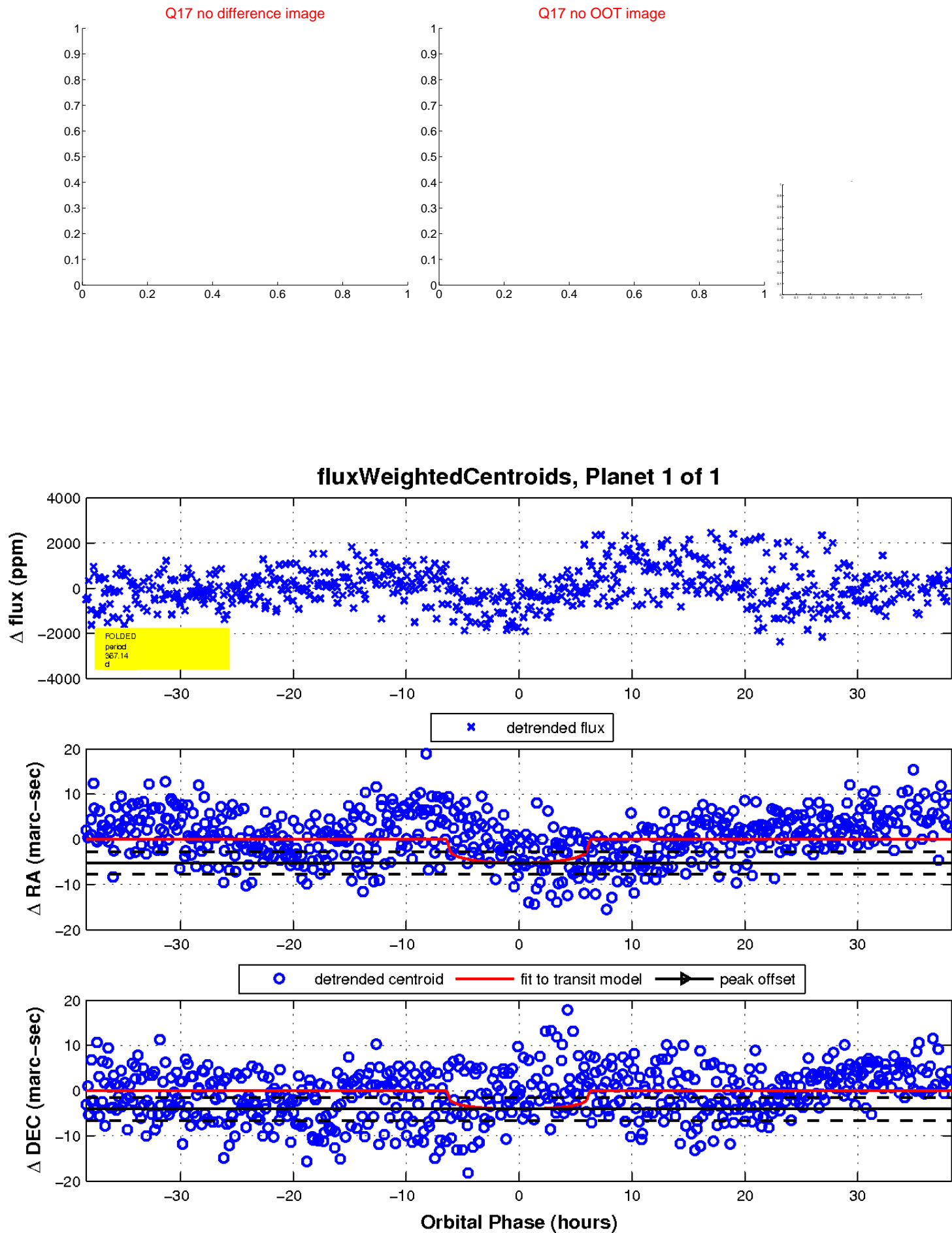
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

