

# KIC 008773869

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008773869-01	OBS	0462.01	1.576319	133.055895	146.8	2.861	32.9	34.6	1.67	5087	2.46	2471.72

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008773869-01	OBS	FP	0.00	0	0	1	0	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.

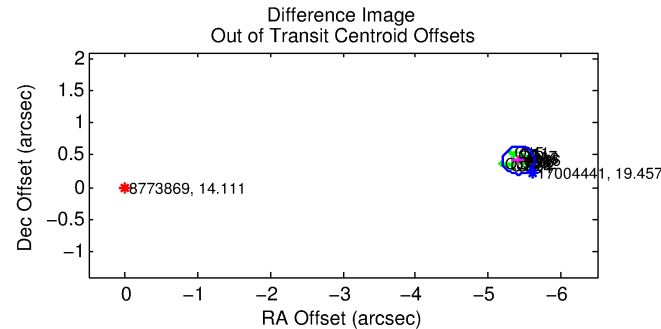
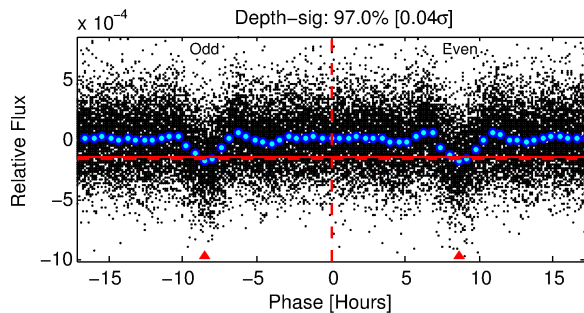
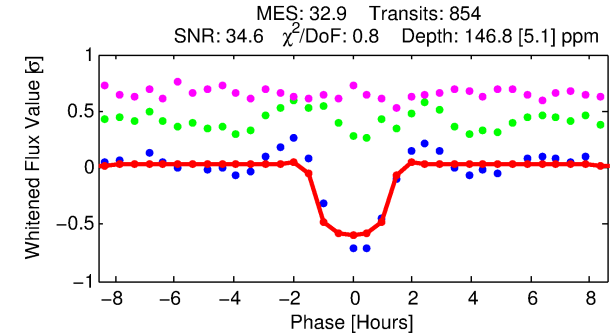
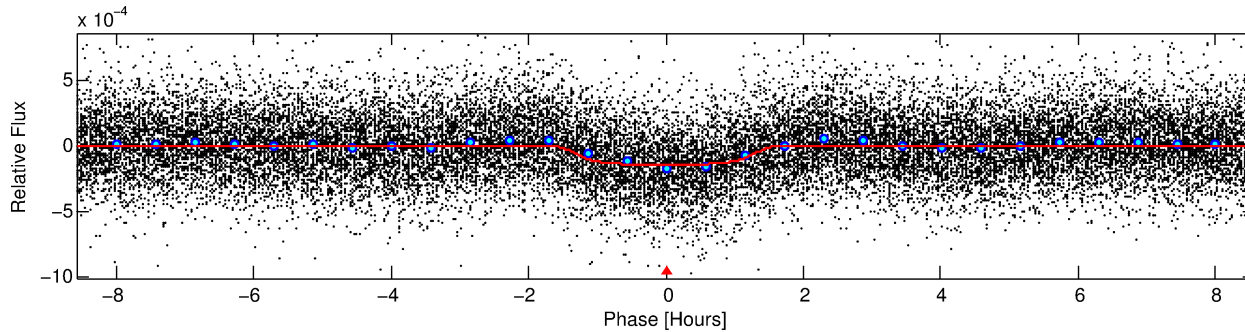
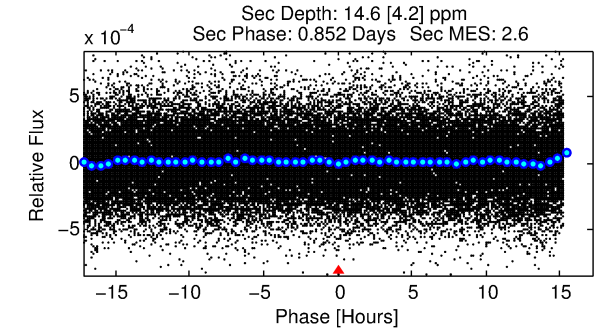
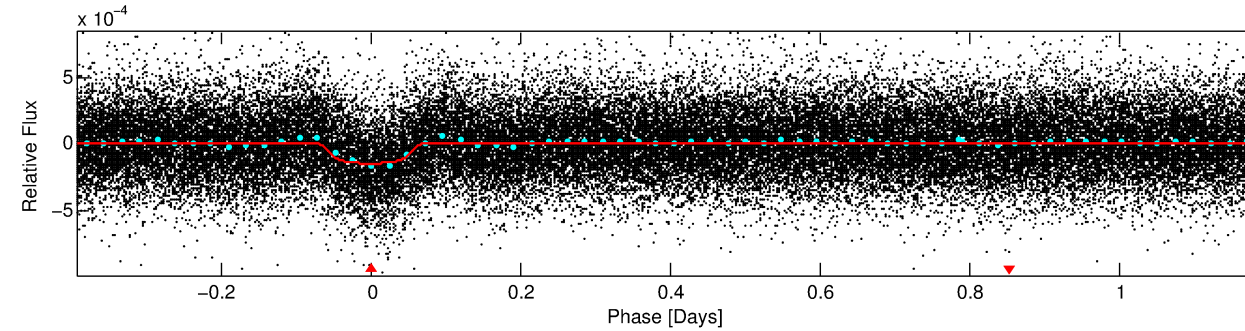
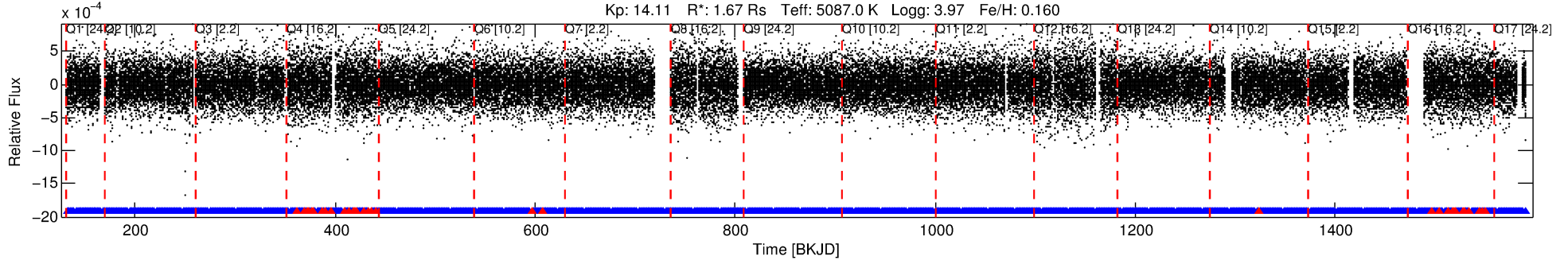
## Ephemeris Match Information For 008773869-01

No Significant Match Found

# DV One-Page Summary

KIC: 8773869 Candidate: 1 of 1 Period: 1.576 d  
KOI: K00462.01 Corr: 0.934

Kp: 14.11 R\*: 1.67 Rs Teff: 5087.0 K Logg: 3.97 Fe/H: 0.160



## DV Fit Results:

Period = 1.57632 [0.00000] d  
Epoch = 133.0559 [0.0011] BKJD  
Rp/R\* = 0.0135 [0.0030]  
a/R\* = 2.17 [1.53]  
b = 0.90 [0.19]  
Seff = 2471.72 [2480.05]  
Teq = 1798 [451] K  
Rp = 2.46 [1.38] Re  
a = 0.0260 [0.0151] AU  
Ag = 0.90 [1.01] [-0.10σ]  
Teffp = 2706 [364] K [1.57σ]

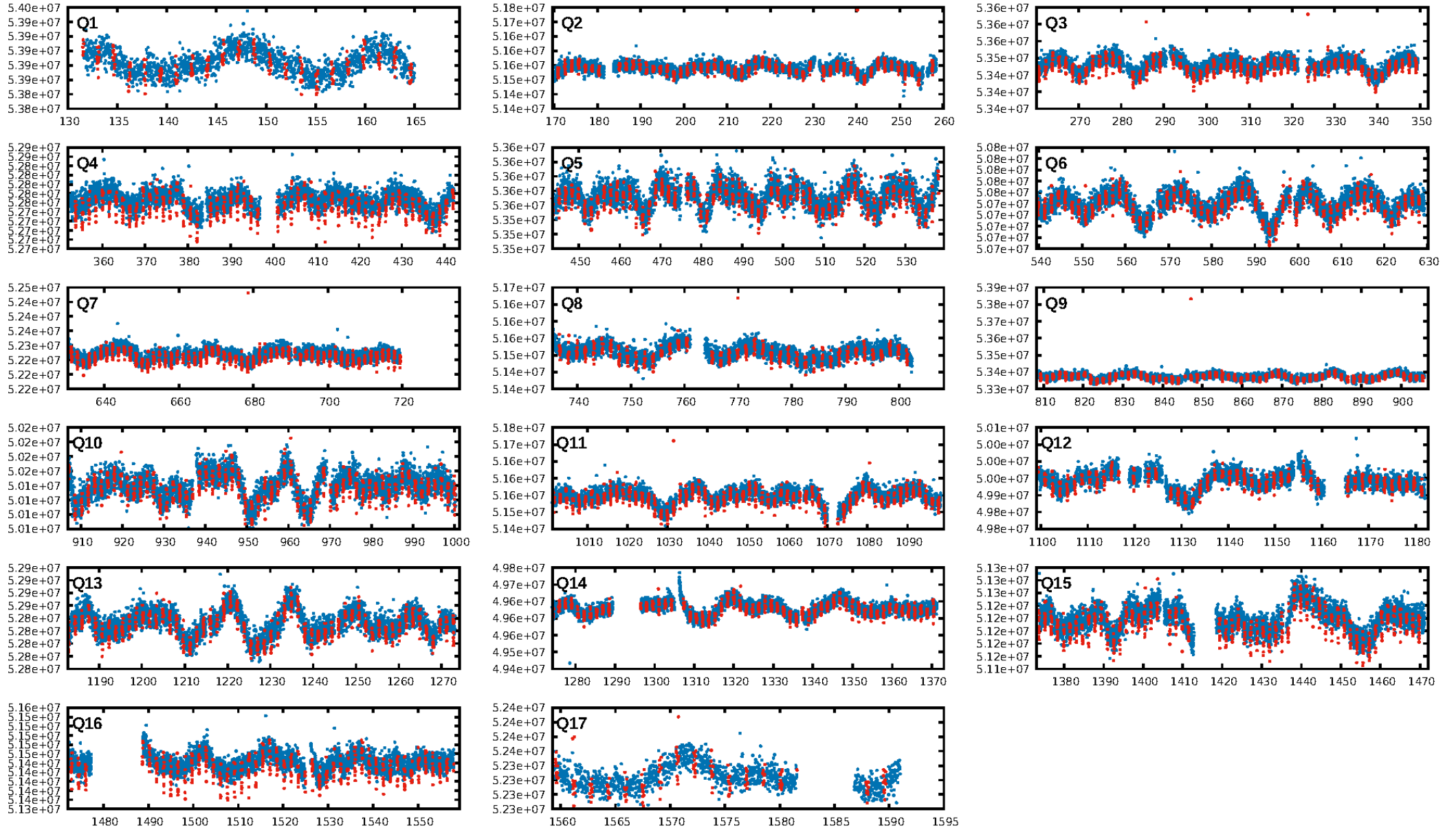
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.06e-226  
RollingBand-fgt: 0.96 [783/816]  
GhostDiagnostic-chr: -0.1083  
Centroid-sig: 0.0%  
Centroid-so: 32.276 arcsec [108.17σ]  
OotOffset-rm: 5.429 arcsec [74.76σ]  
KicOffset-rm: 5.588 arcsec [78.05σ]  
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]

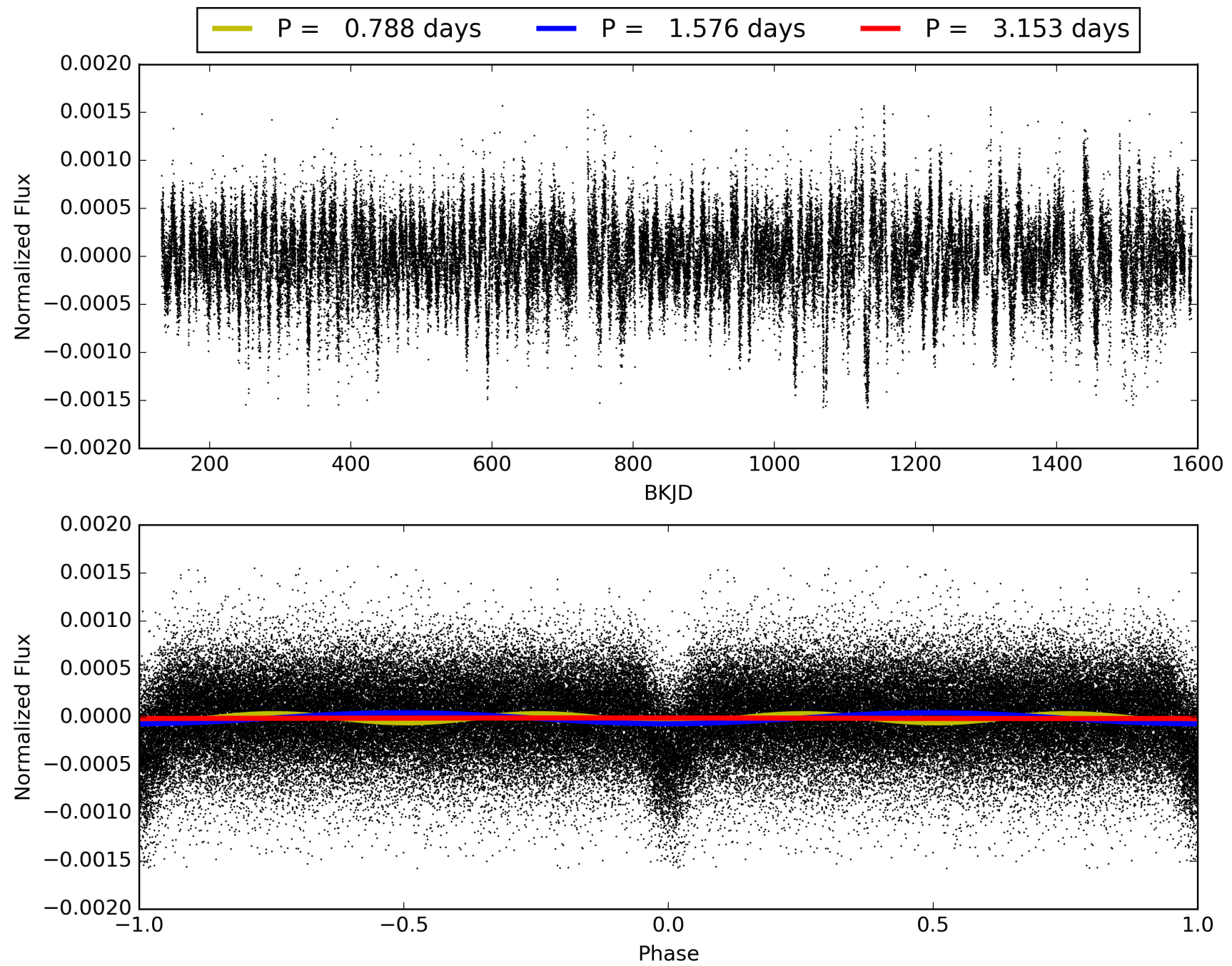
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:44:31 Z

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

# TCE 008773869-01, PDC Light Curves

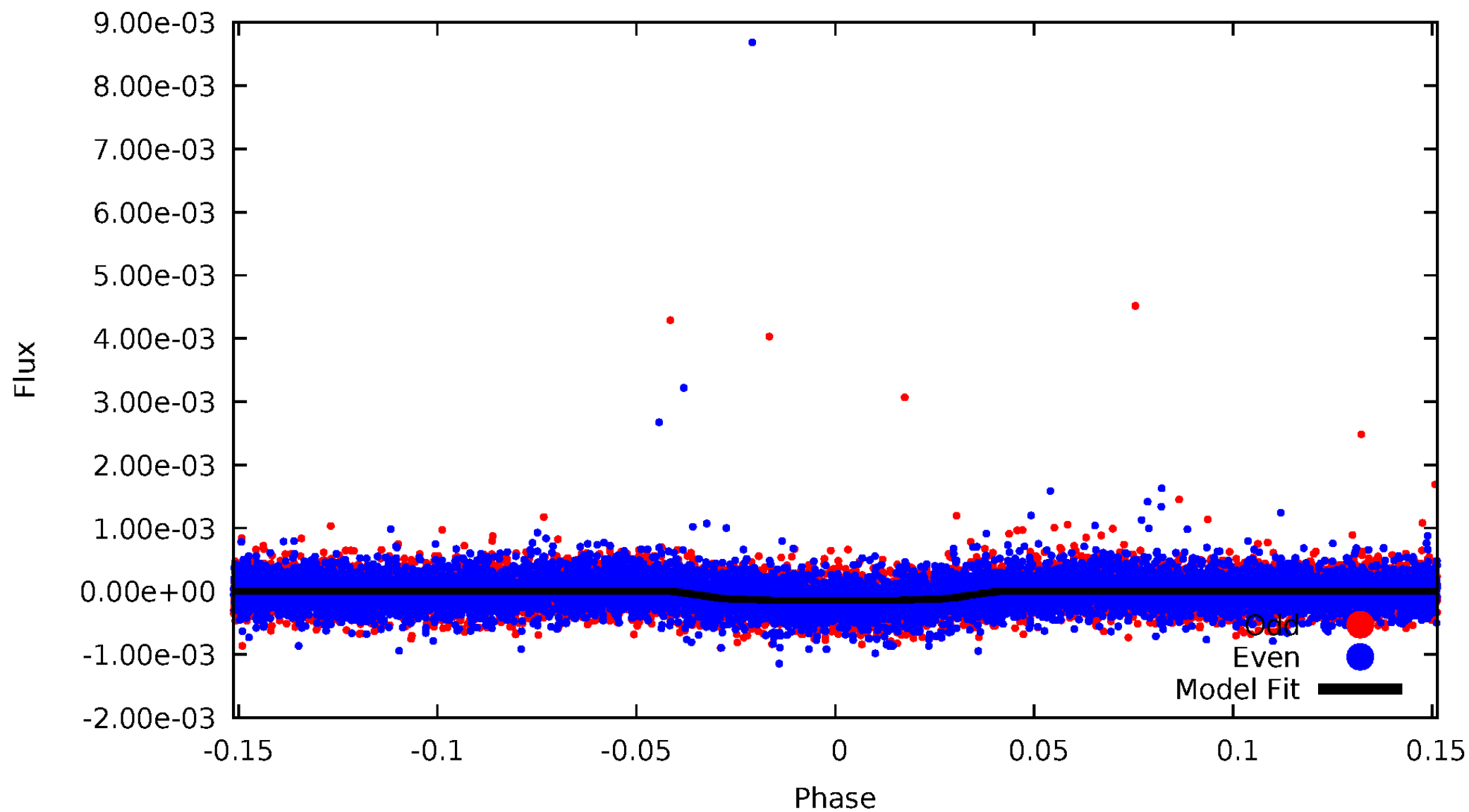


TCE 008773869-01



# DV Odd/Even

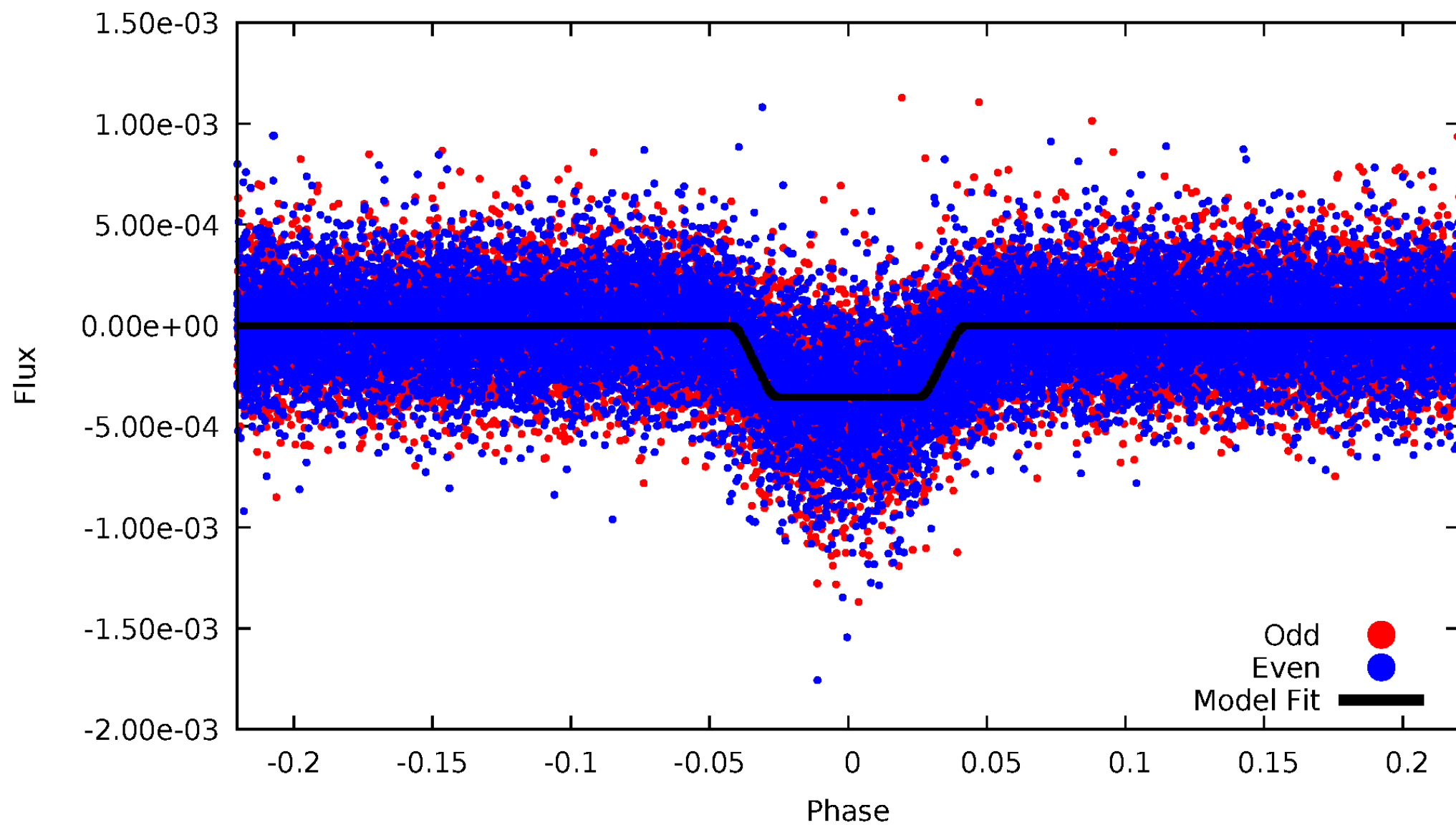
TCE 008773869-01



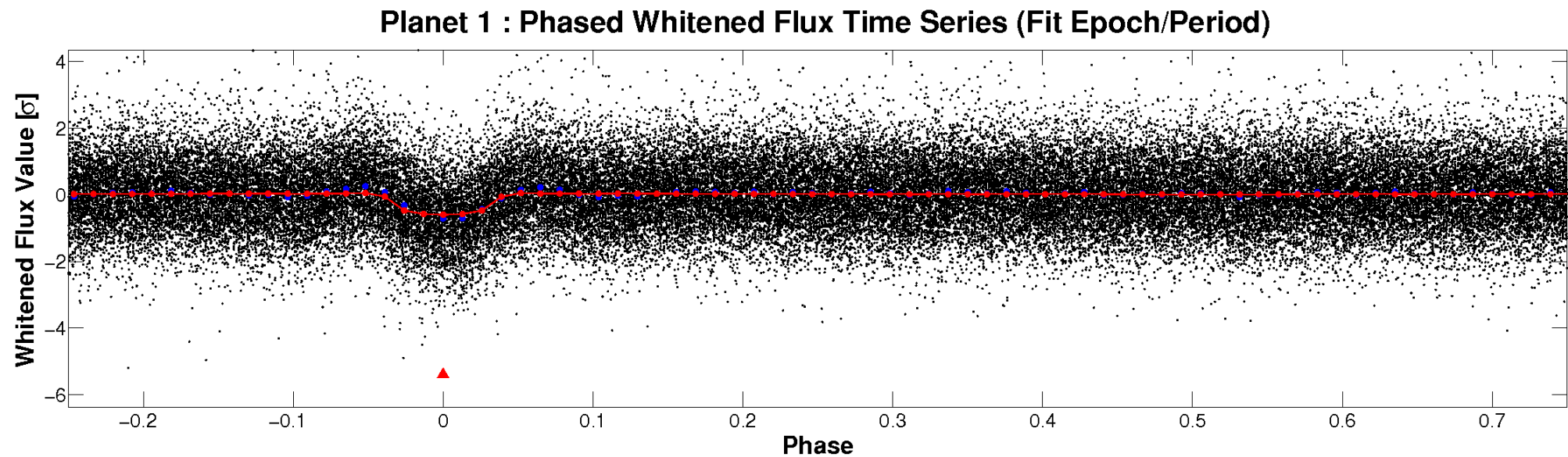
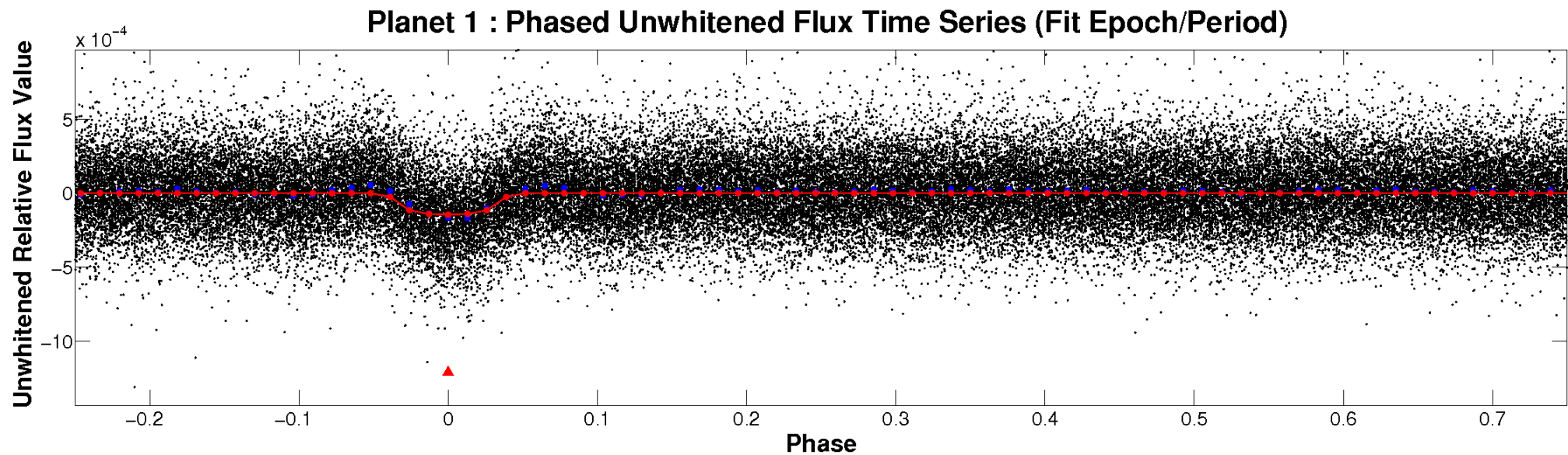


# ALT Odd/Even

TCE 008773869-01

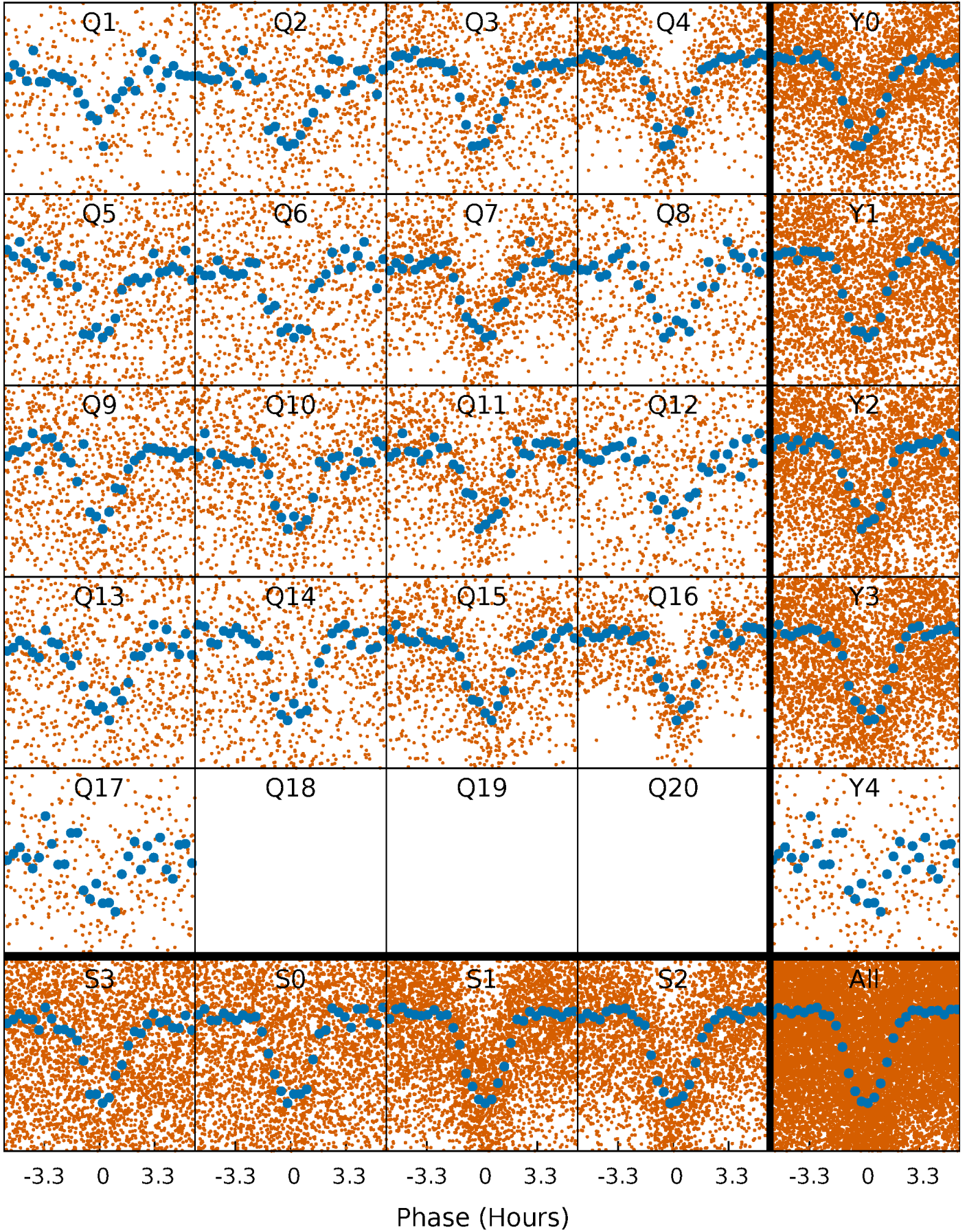


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

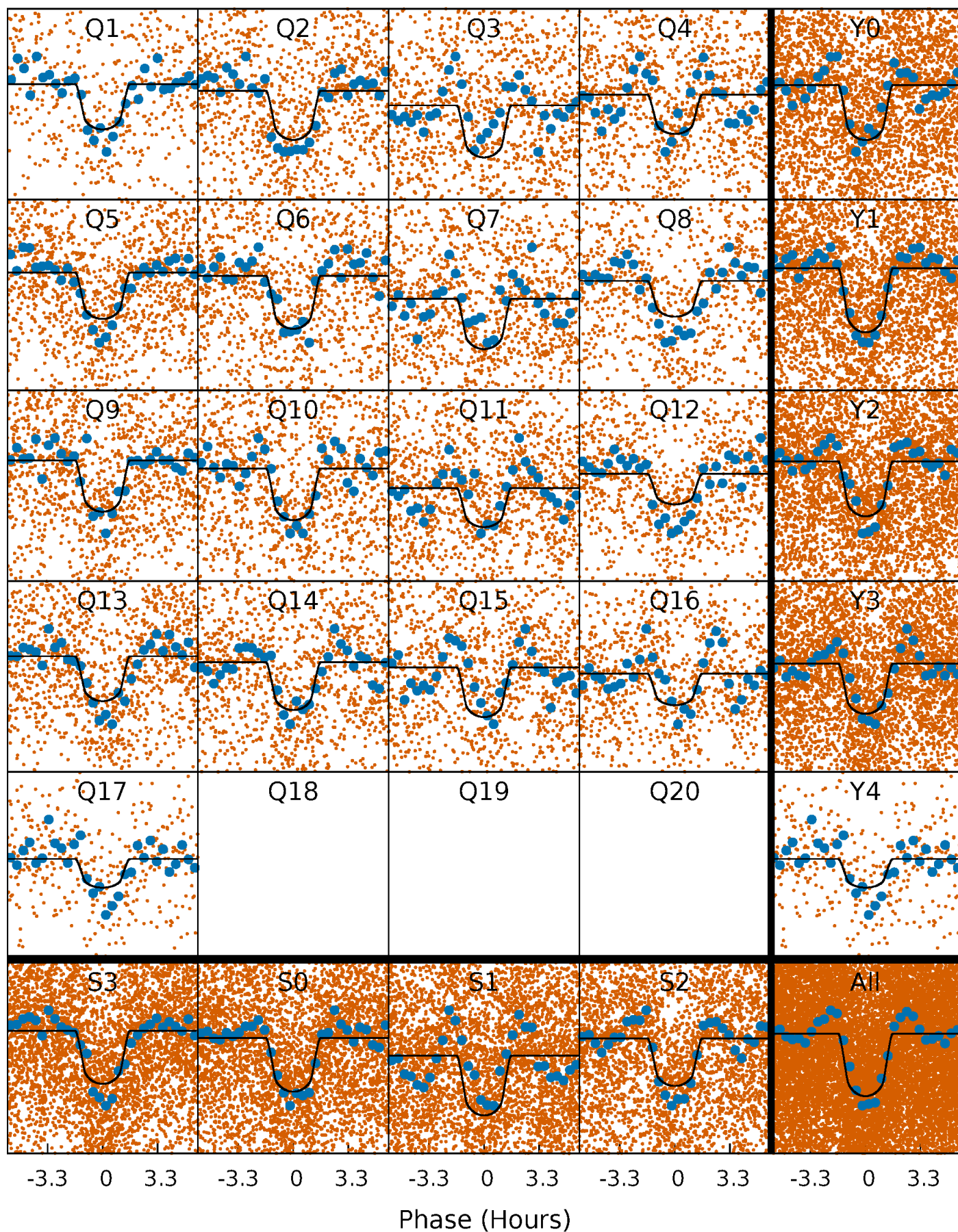
TCE 008773869-01 P= 1.576319 Days  $T_0=133.055895$  (BKJD)





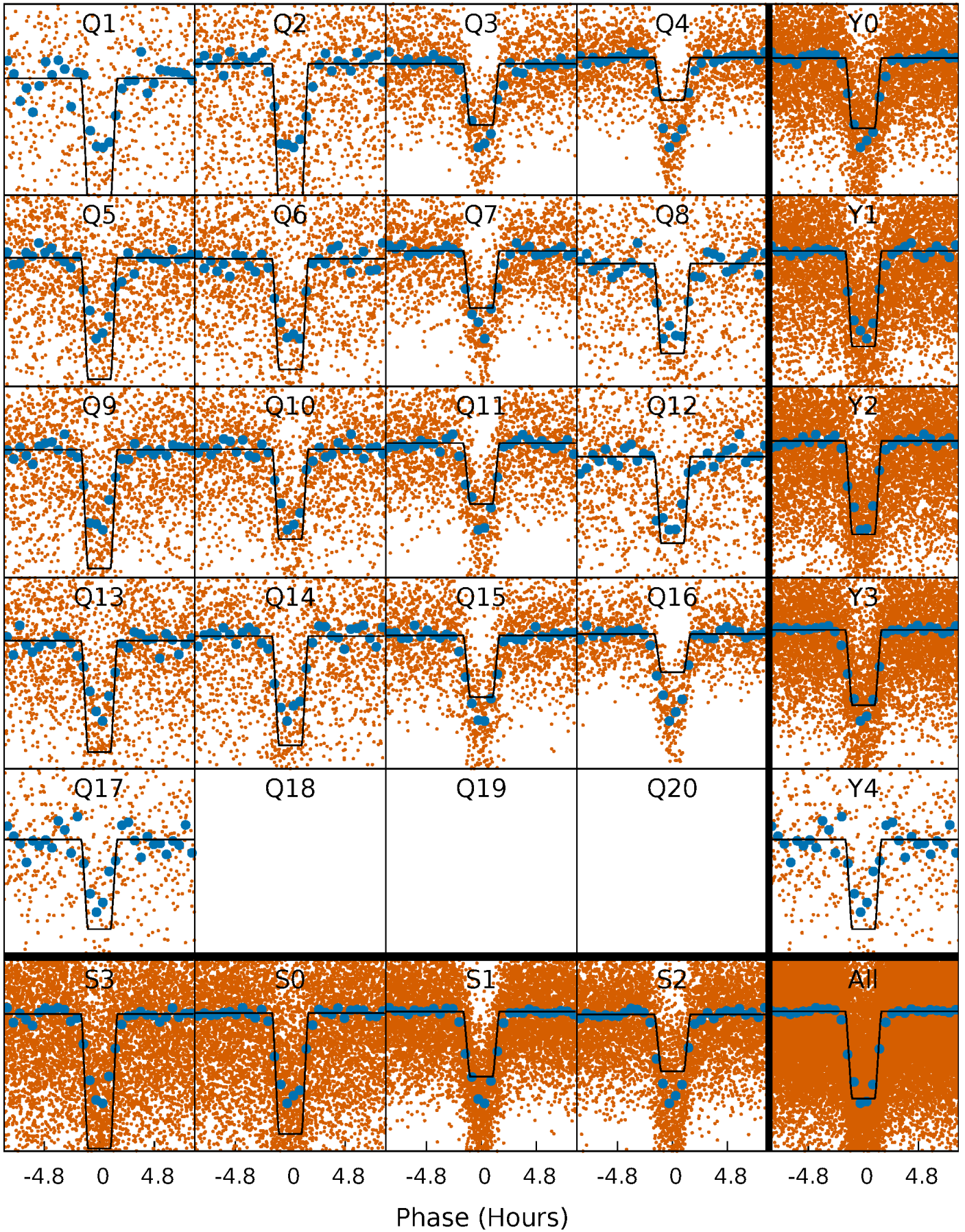
# DV Quarter-Phased Transit Curves

TCE 008773869-01 P= 1.576319 Days  $T_0=133.055895$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008773869-01 P= 1.576349 Days  $T_0=133.045817$  (BKJD)

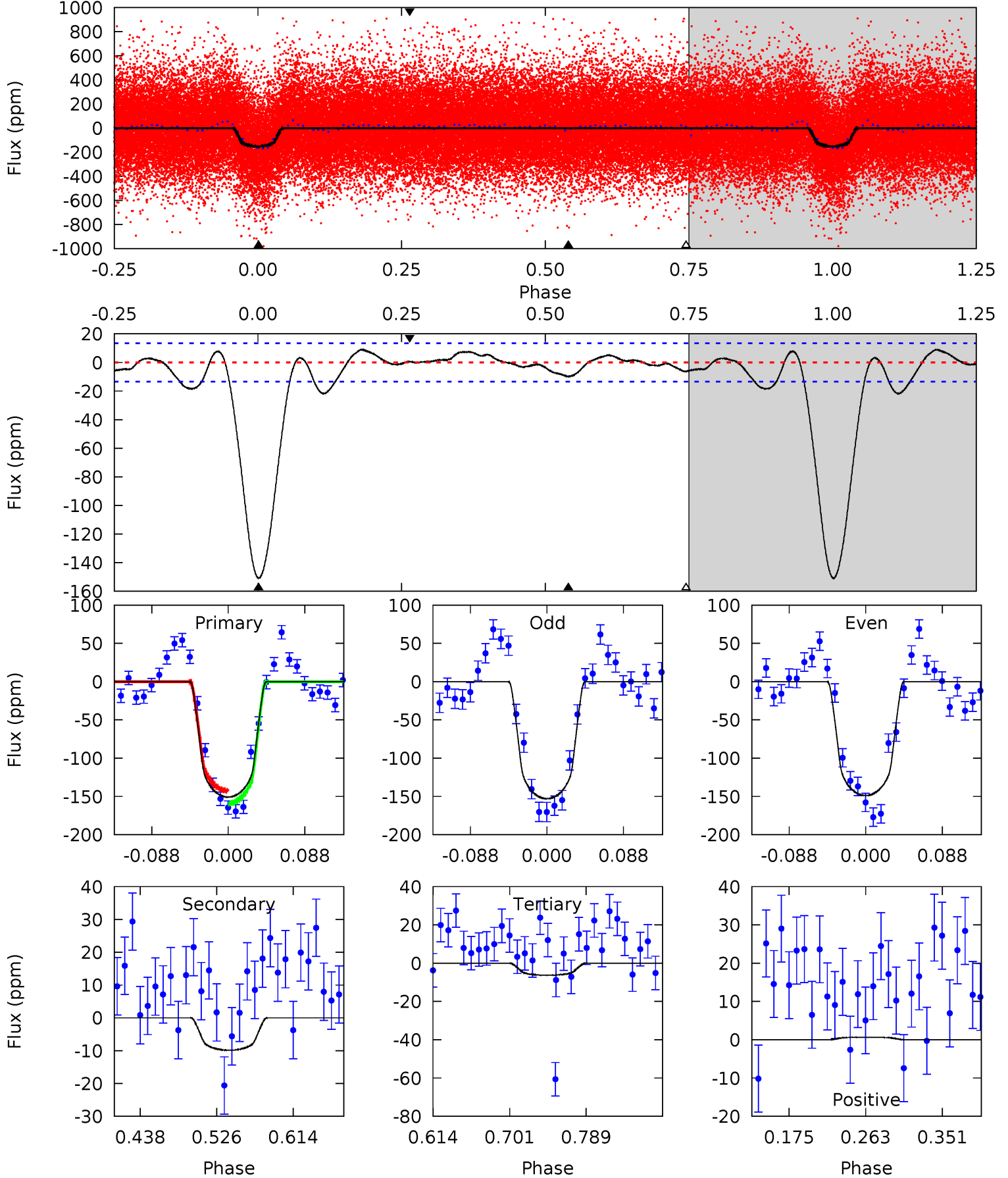




# DV Model-Shift Uniqueness Test

008773869-01, P = 1.576319 Days, E = 131.479576 Days

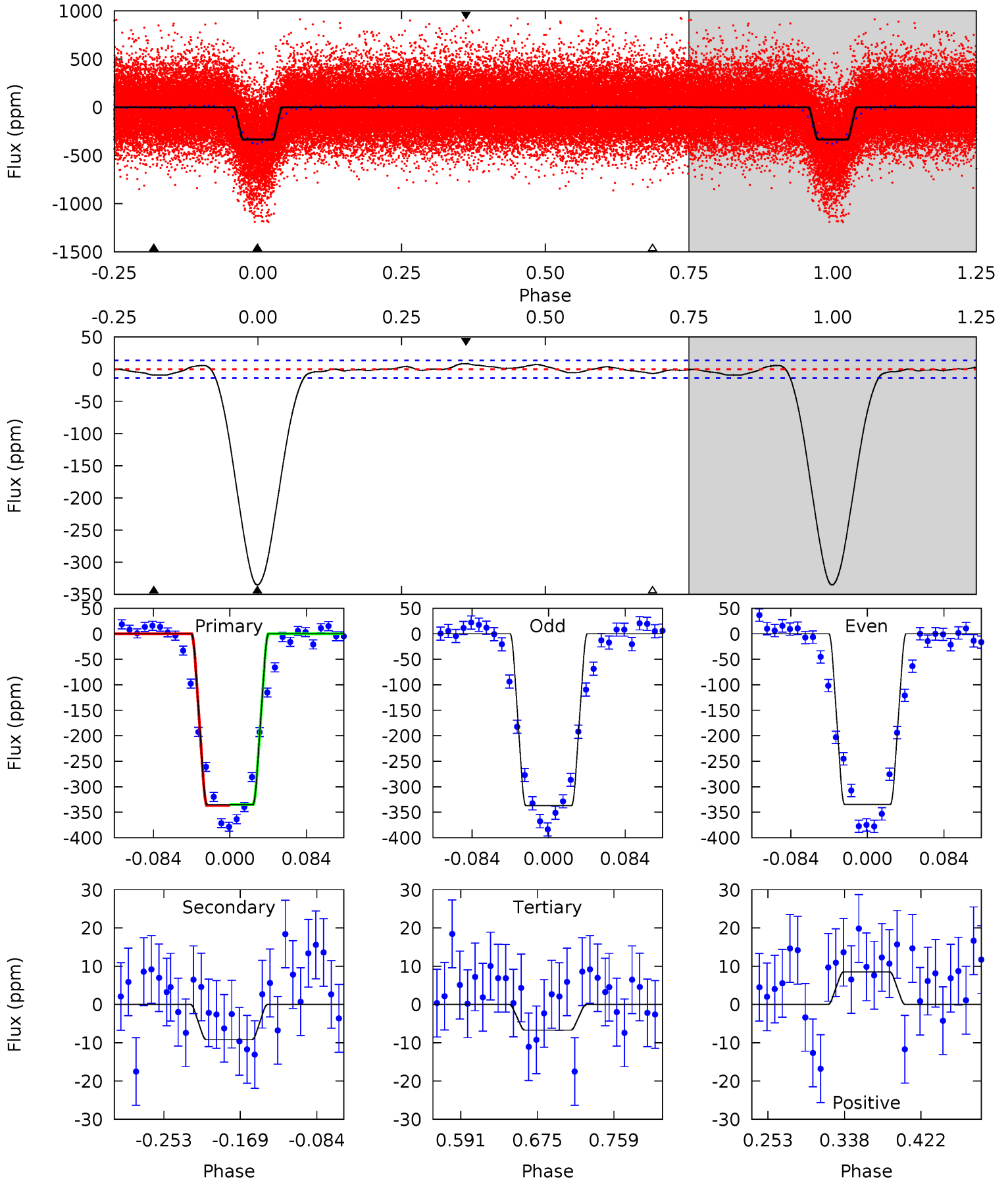
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.8	3.39	2.16	0.22	4.59	1.71	2.46	49.6	51.5	1.23	3.16	0.71	1.00	0.06	2.87



# Alt Model-Shift Uniqueness Test

008773869-01, P = 1.576349 Days, E = 131.469468 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
113.7	3.11	2.27	2.89	4.60	1.73	1.25	111.4	110.8	0.84	0.22	0.41	1.09	0.02	0.29





### Stellar Parameters For KIC 008773869

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5087^{+151}_{-151}$	$3.967^{+0.609}_{-0.261}$	$0.160^{+0.250}_{-0.250}$	$1.666^{+0.861}_{-0.861}$	$0.937^{+0.124}_{-0.136}$	$0.286^{+2.328}_{-0.189}$
	+3%/-3%	+15%/-7%	+156%/-156%	+52%/-52%	+13%/-15%	+815%/-66%
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 008773869-01 / KOI 0462.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-10 \pm 3$	$2.24^{+0.94}_{-0.70}$	$2438^{+332}_{-340}$	$2821^{+383}_{-651}$	$0.701^{+0.915}_{-0.370}$
Alt.	$-9 \pm 3$	$3.23^{+1.08}_{-1.00}$	$2461^{+321}_{-363}$	$2051^{+631}_{-4673}$	$0.325^{+0.372}_{-0.167}$

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

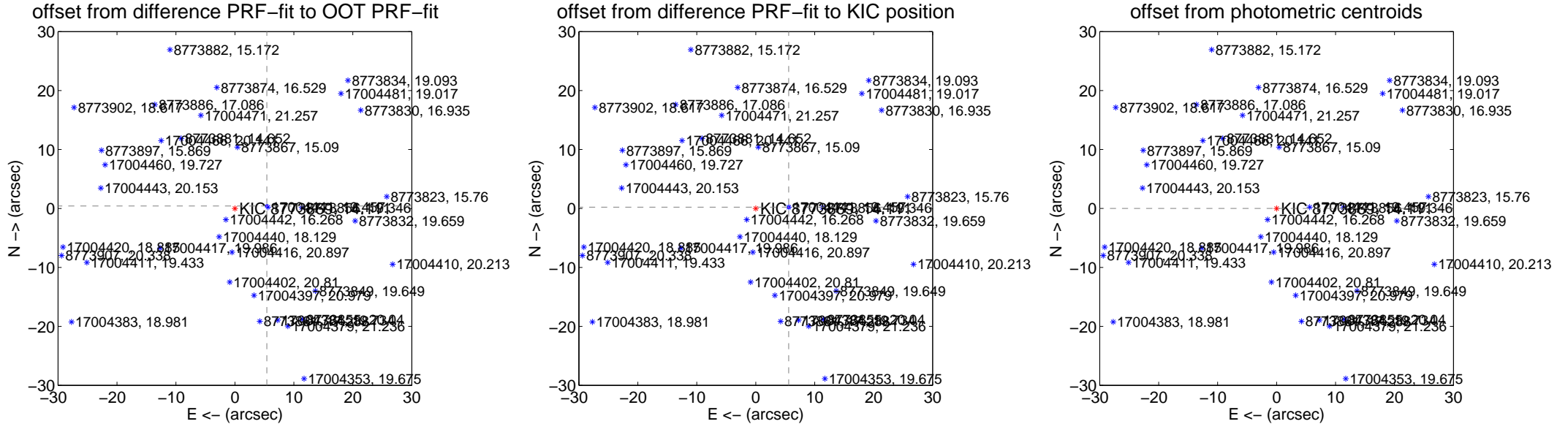
## DV Centroid Data

Supplemental centroid analysis for 008773869-01. Kepler magnitude: 14.11. Transit SNR 34.58

There are 17 quarters with good PRF difference image offsets

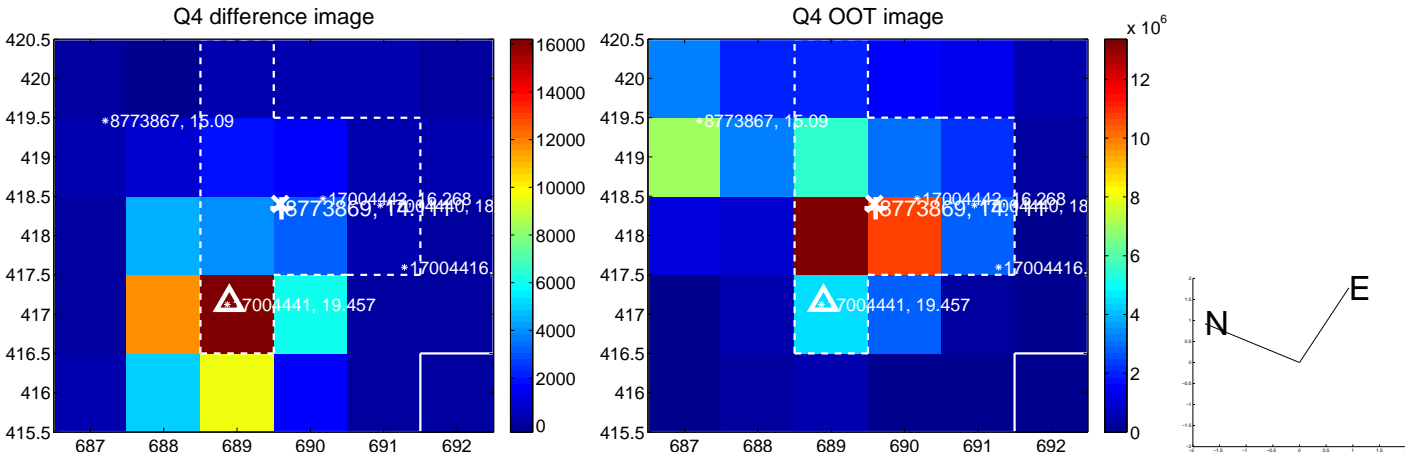
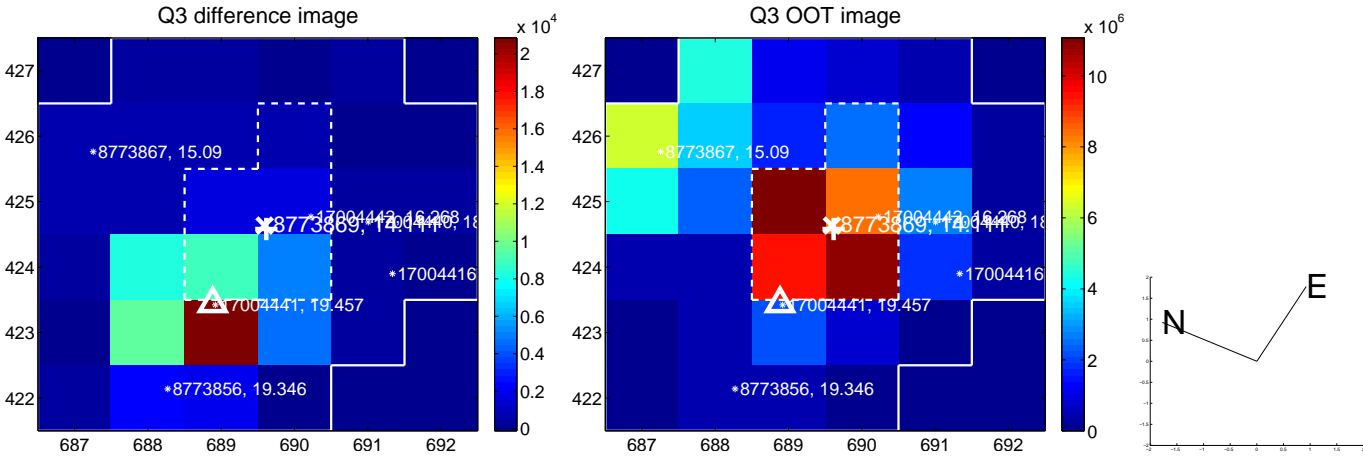
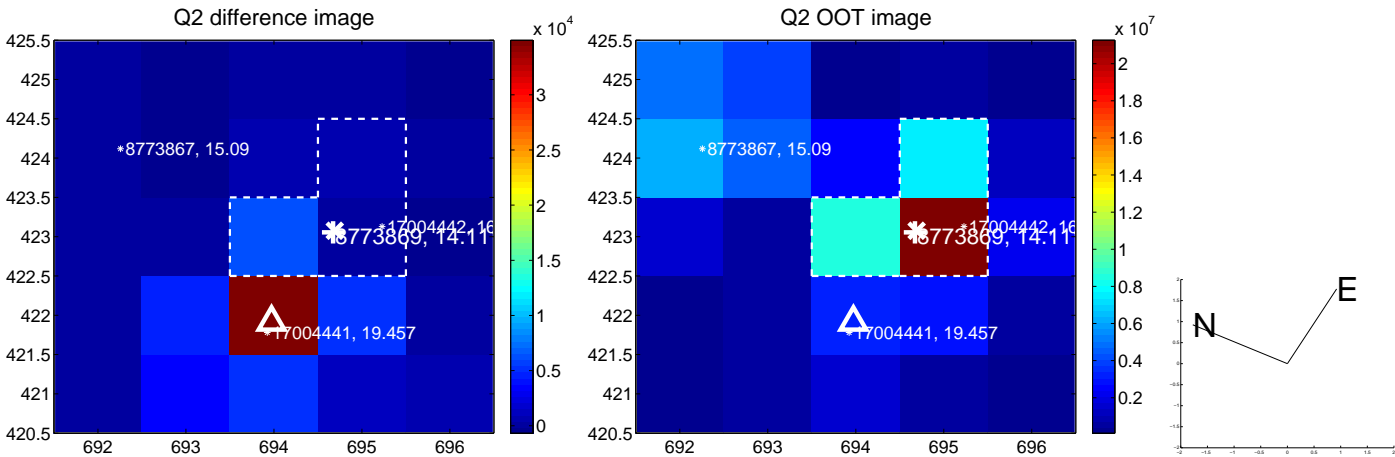
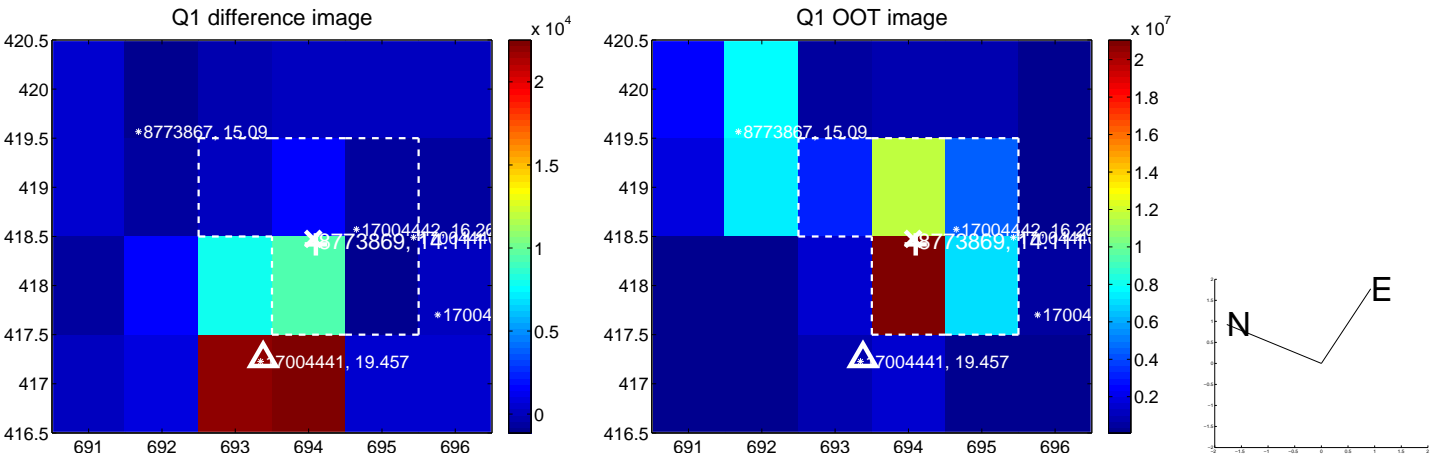
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	5.429 $\pm$ 0.073	74.76	-5.413 $\pm$ 0.073	0.421 $\pm$ 0.069
PRF-fit source offset from KIC position	5.588 $\pm$ 0.072	78.05	-5.584 $\pm$ 0.072	0.224 $\pm$ 0.070
photometric centroid source offset	32.28 $\pm$ 0.30	108.17	-32.28 $\pm$ 0.30	0.01 $\pm$ 0.36

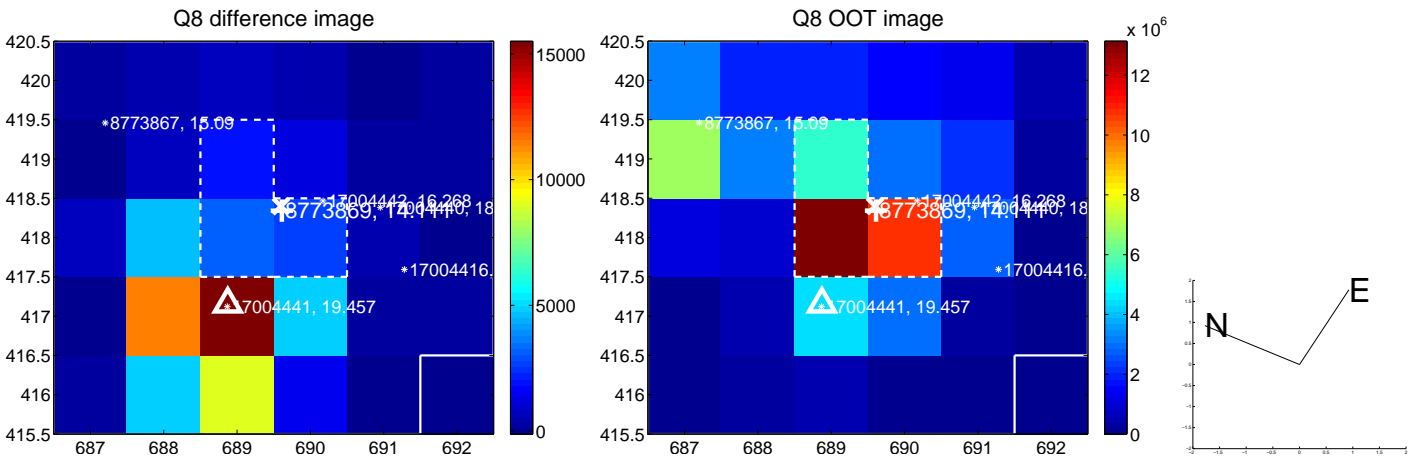
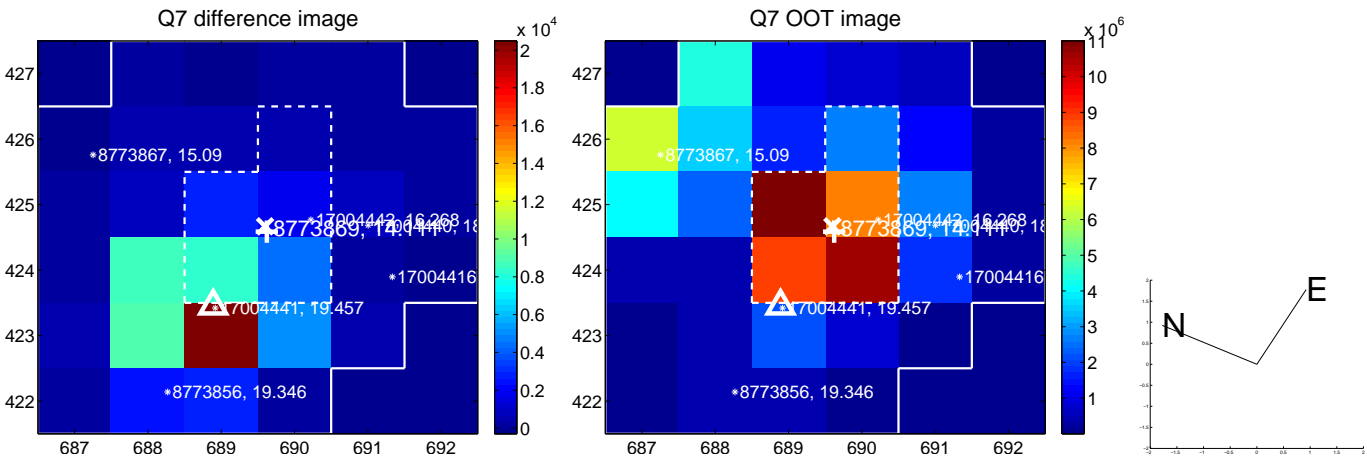
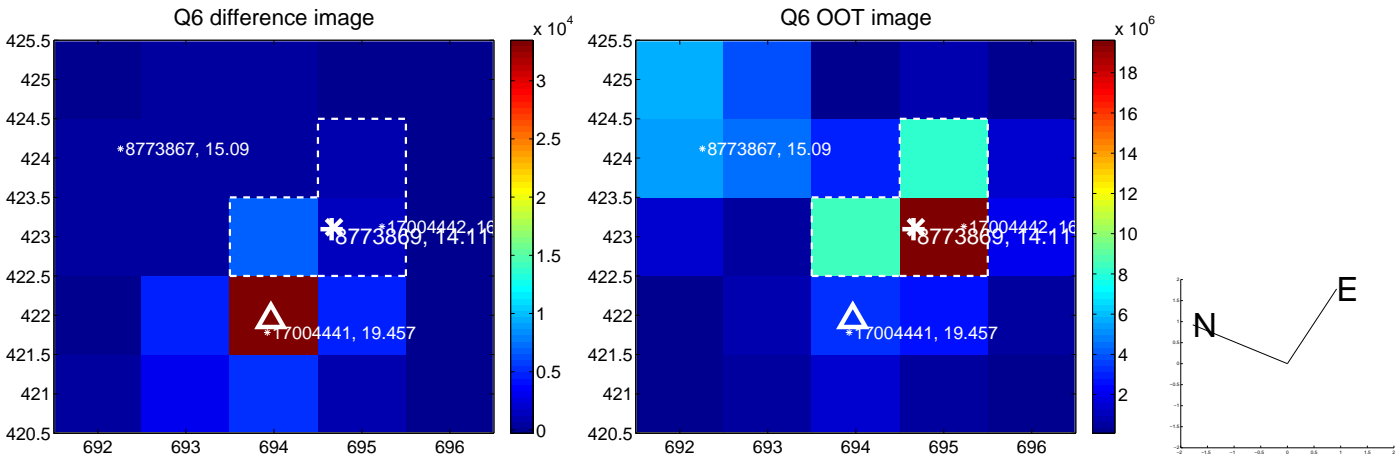
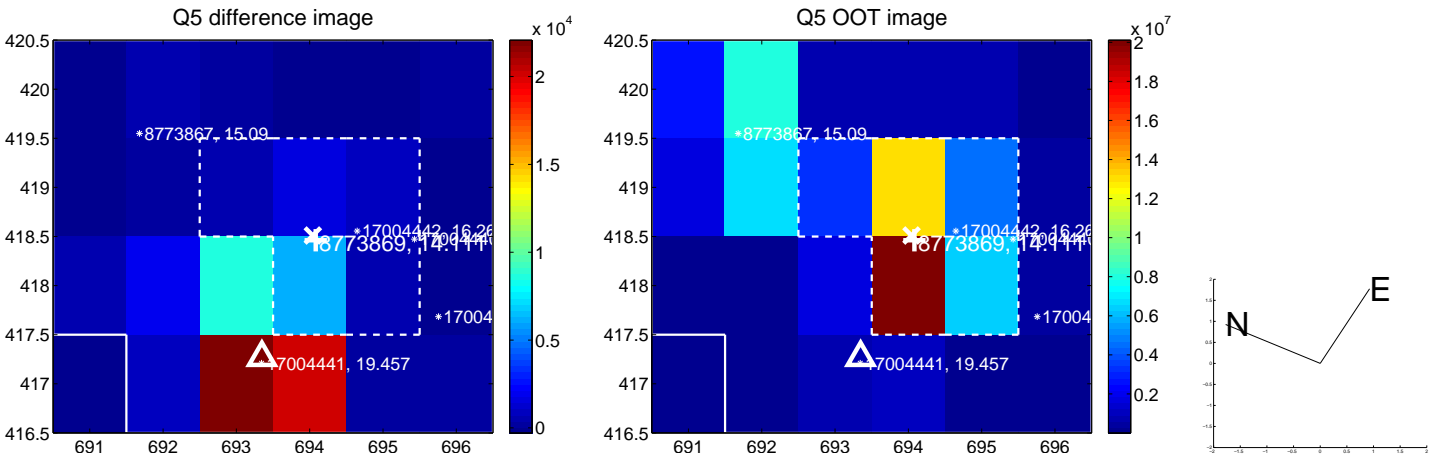


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

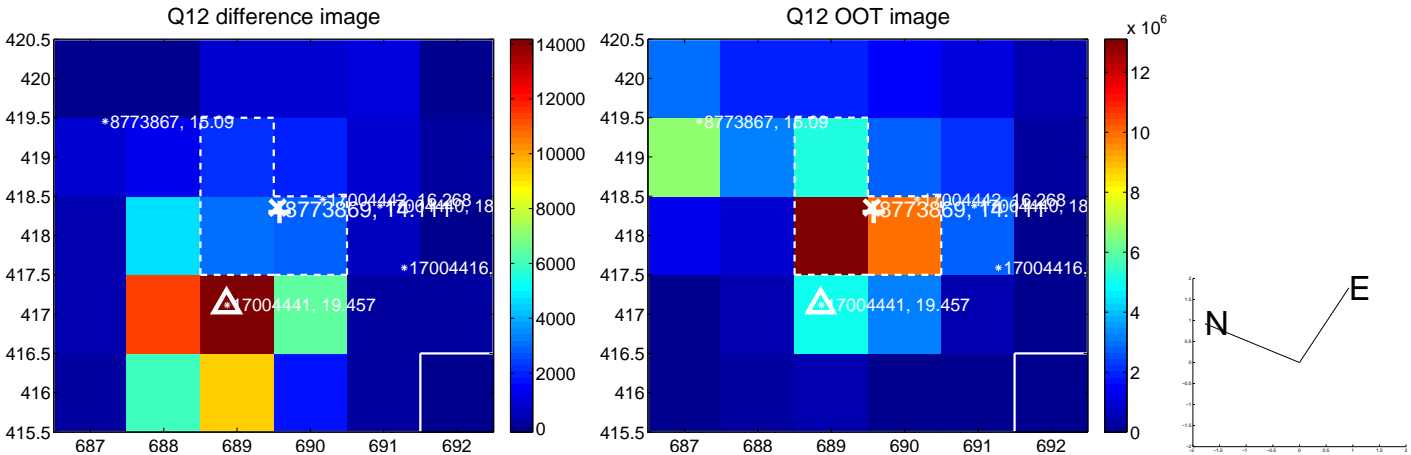
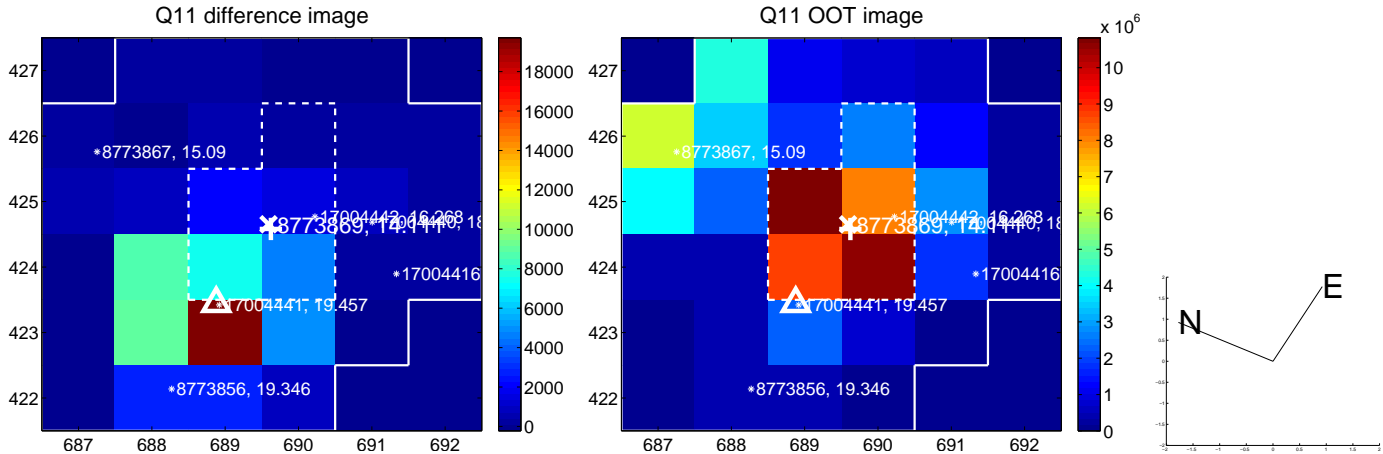
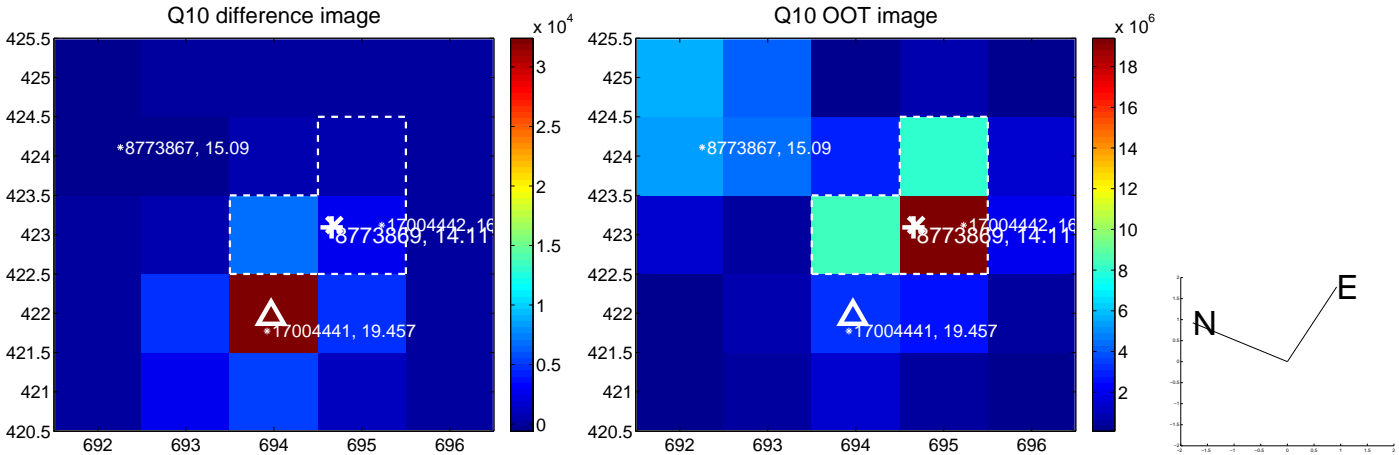
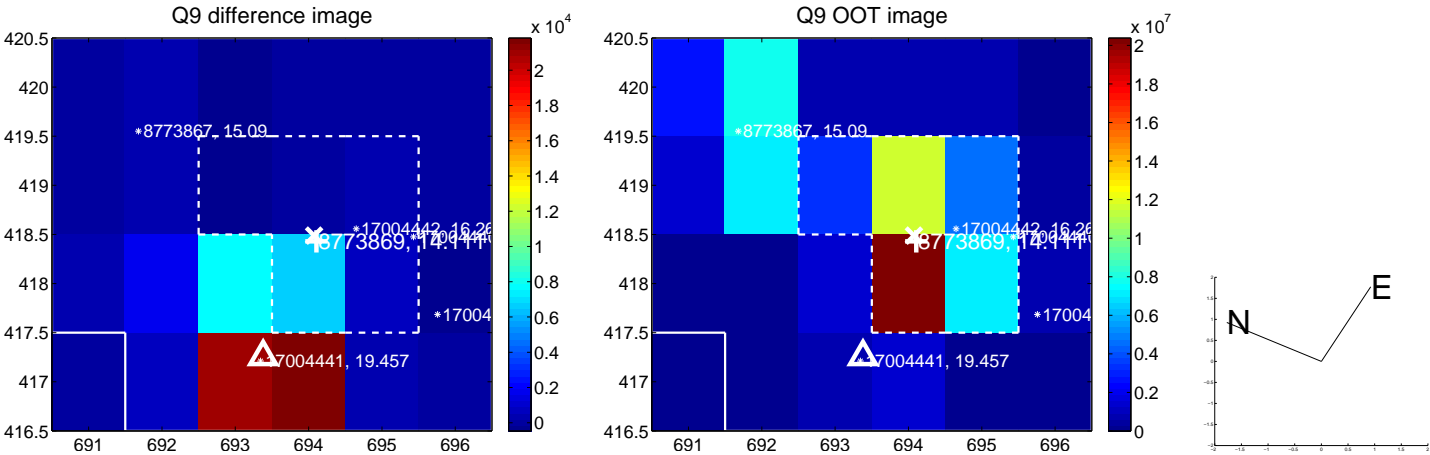


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

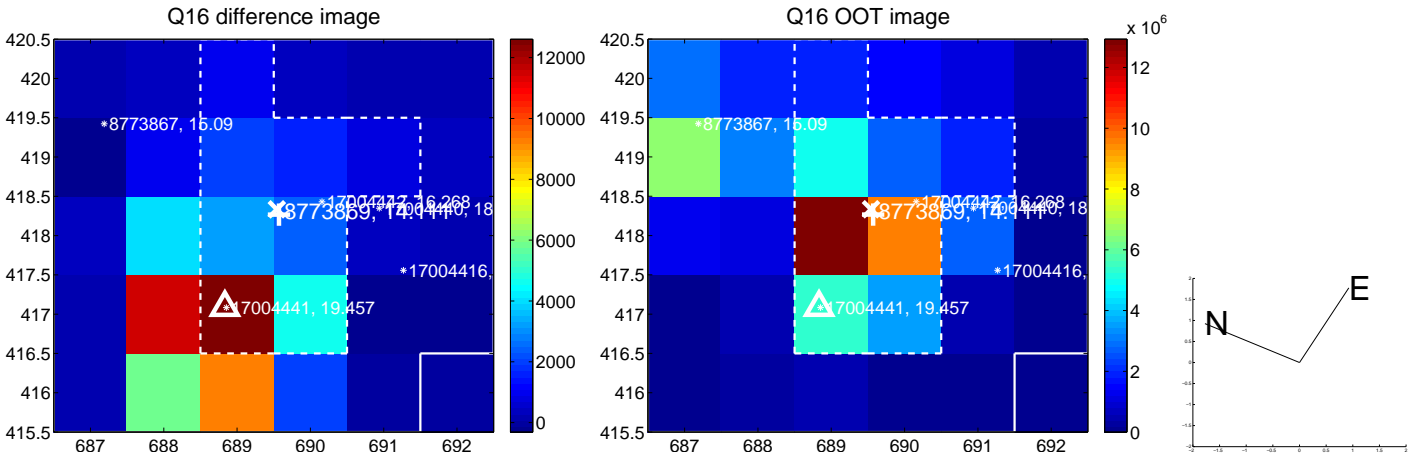
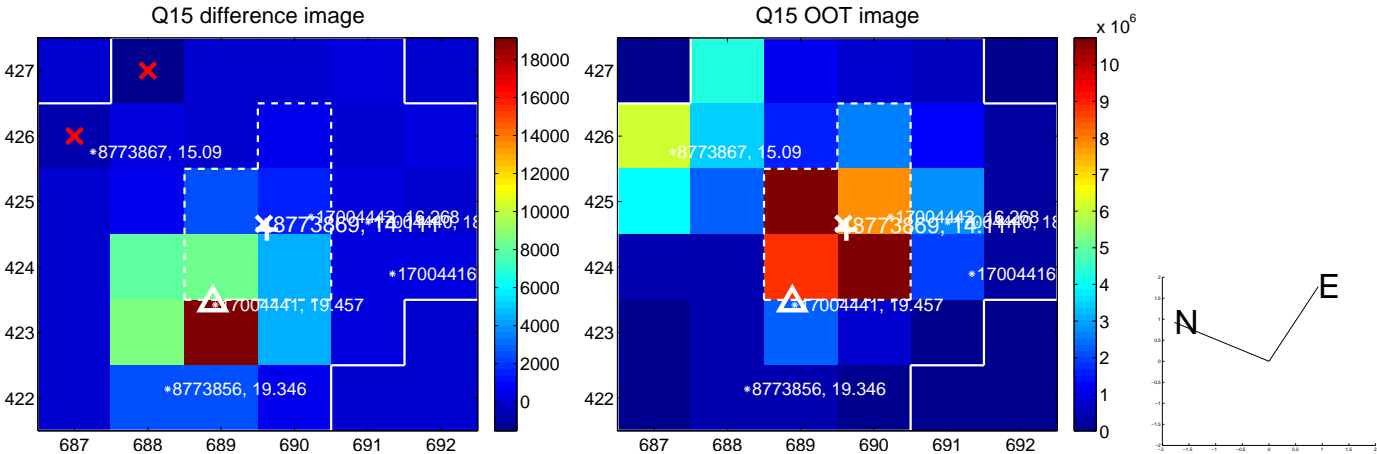
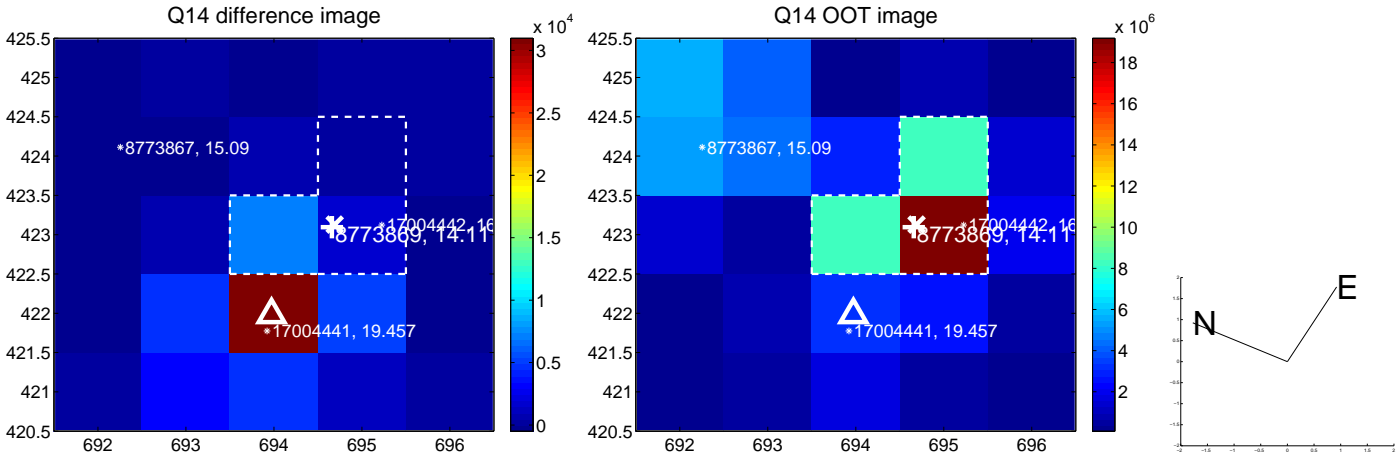
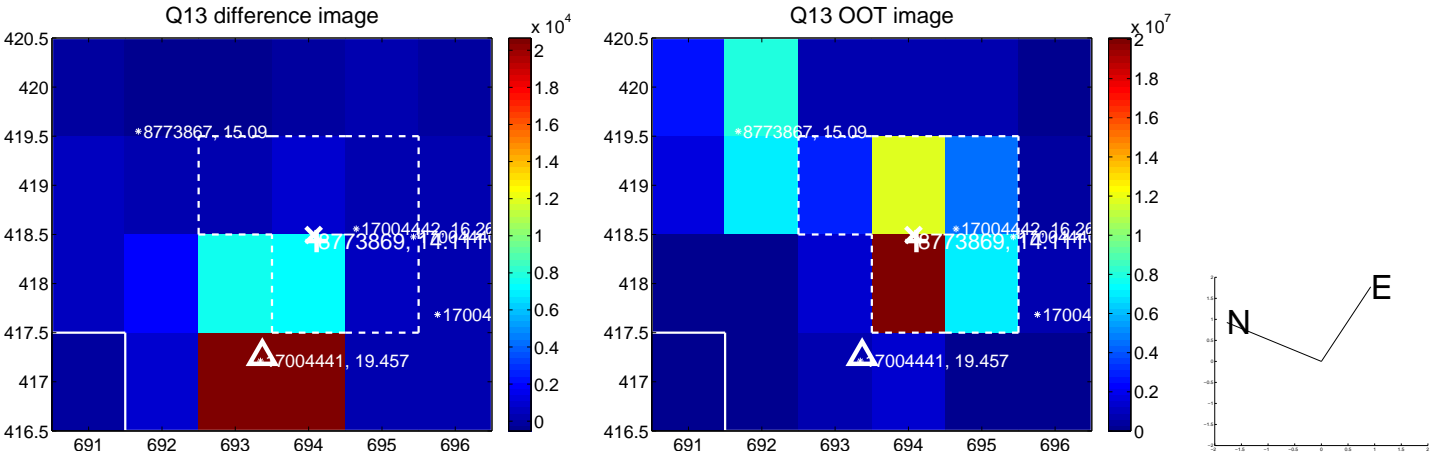




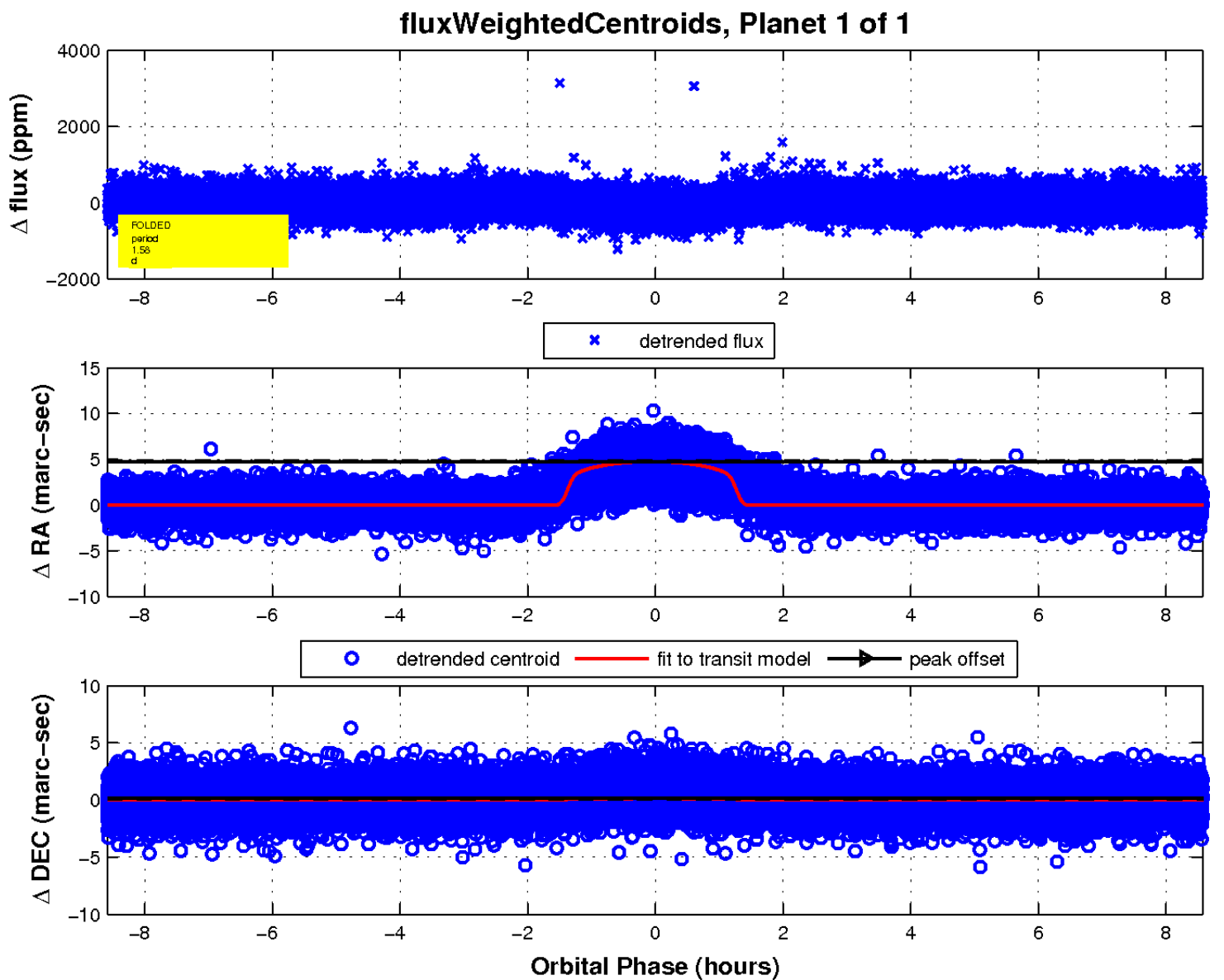
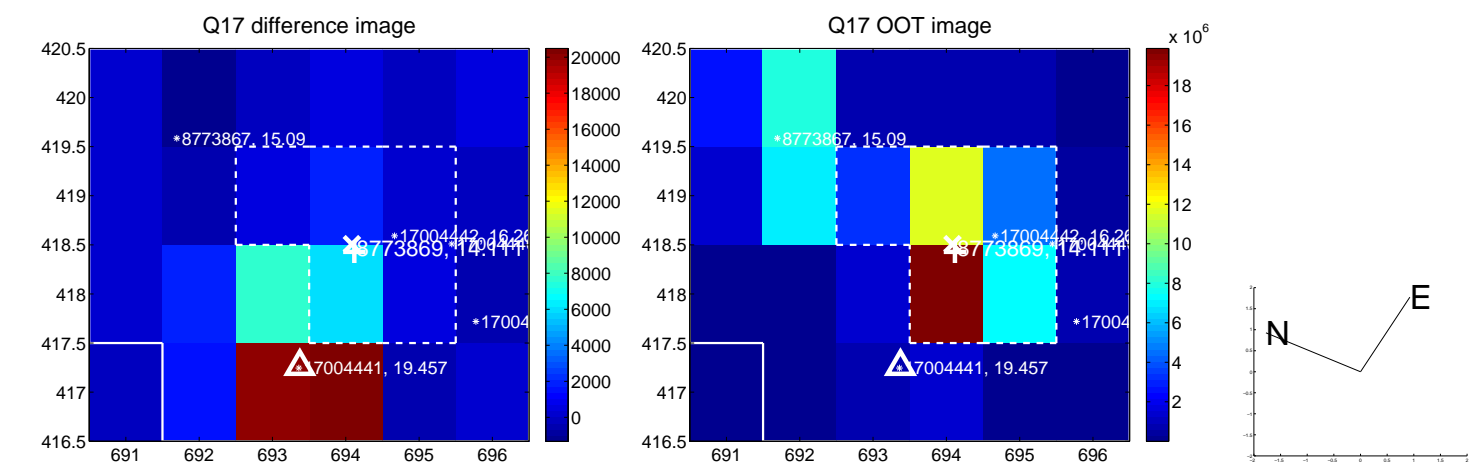
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



UKIRT Image

Declination

