

# KIC 007622072

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007622072-01	OBS	6894.01	3.186734	133.752597	5947.5	4.044	1225.7	625.5	1.25	5953	15.64	1114.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007622072-01	OBS	FP	0.00	0	1	1	0	DEPTH_ODDEVEN_DV—MOD_ODDEVEN_DV—DEEP_V_SHAPED—CENT_UNRESOLVED_OFFSET

**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.

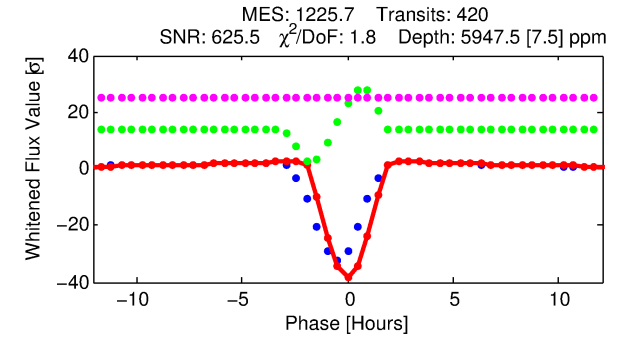
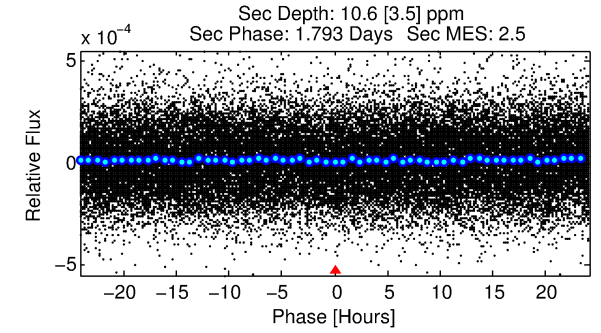
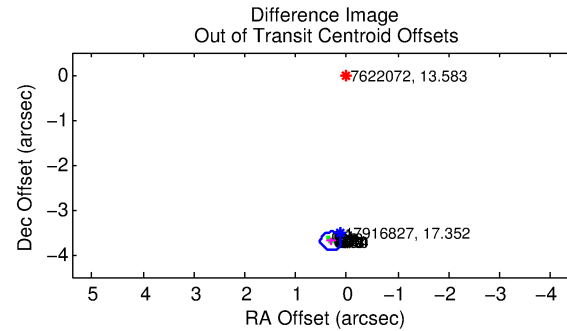
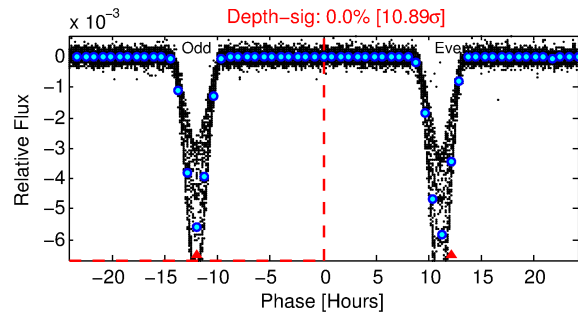
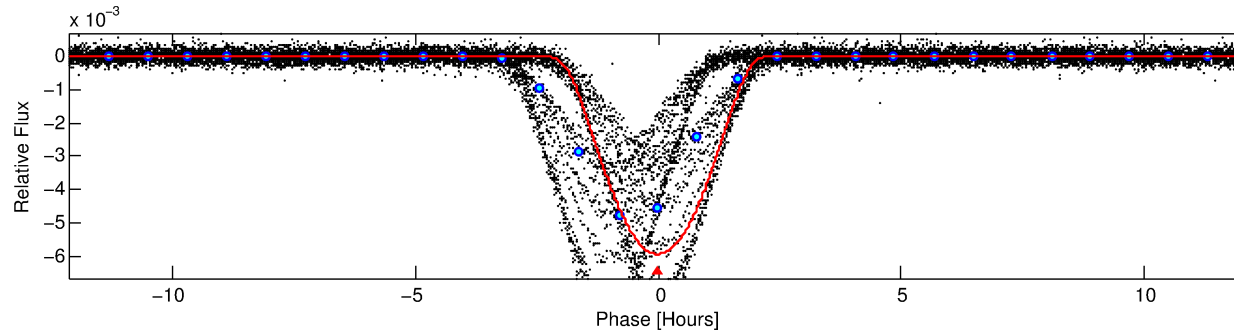
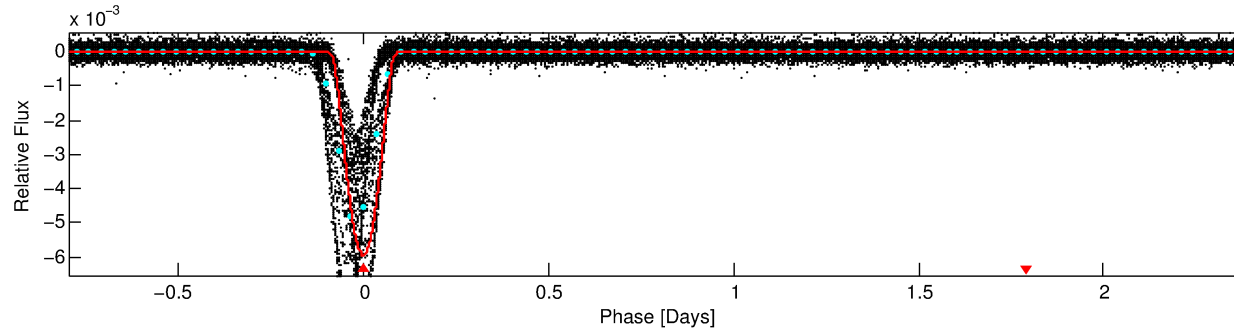
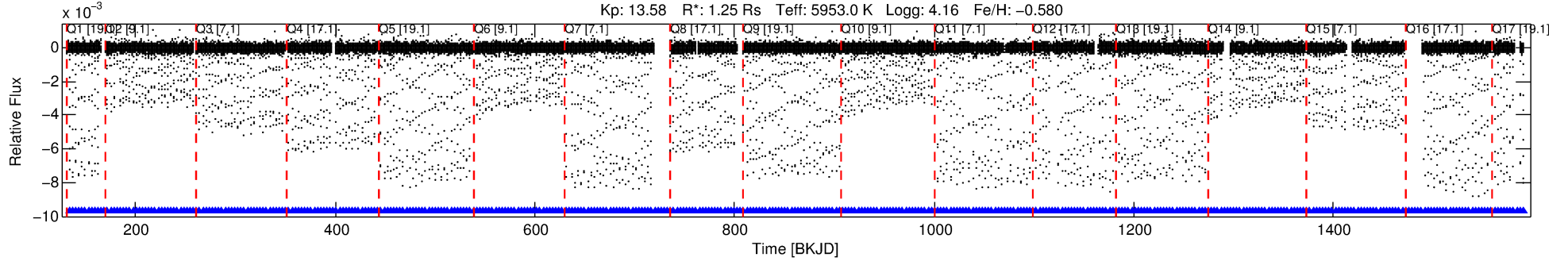
## Ephemeris Match Information For 007622072-01

No Significant Match Found

# DV One-Page Summary

KIC: 7622072 Candidate: 1 of 1 Period: 3.187 d  
KOI: K06894 Corr: No Ephemeris Match

Kp: 13.58 R\*: 1.25 Rs Teff: 5953.0 K Logg: 4.16 Fe/H: -0.580



## DV Fit Results:

Period = 3.18673 [0.00000] d  
Epoch = 133.7526 [0.0001] BKJD  
Rp/R\* = 0.1143 [0.0039]  
a/R\* = 3.36 [0.02]  
b = 0.98 [0.01]  
Seff = 1114.06 [645.33]  
Teq = 1473 [213] K  
Rp = 15.64 [4.87] Re  
a = 0.0399 [0.0134] AU  
Ag = 0.04 [0.02] [-38.56σ]  
Teffp = 1004 [90] K [-2.02σ]

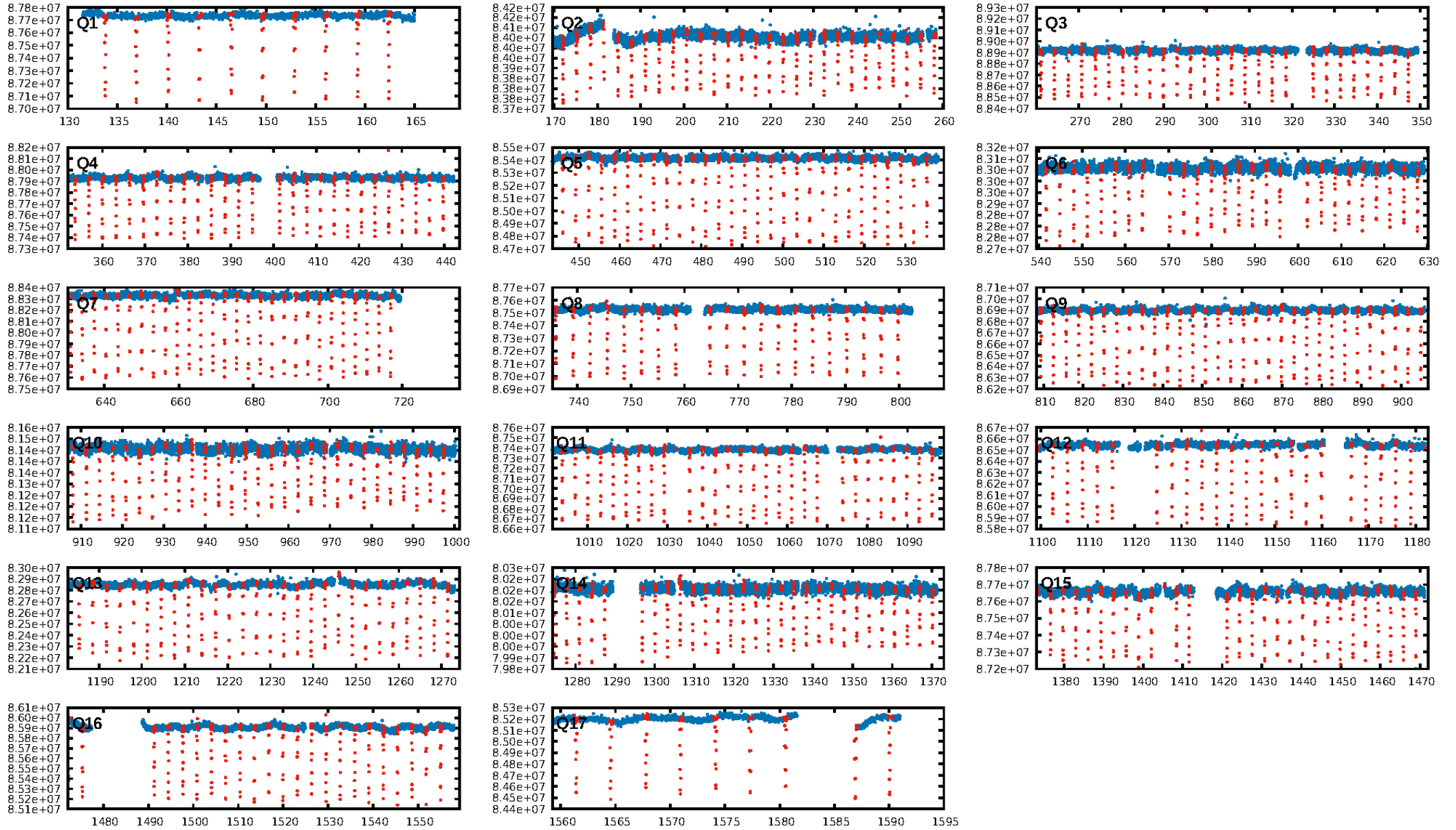
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [401/401]  
GhostDiagnostic-chr: 0.5812  
Centroid-sig: 0.0%  
Centroid-so: 4.236 arcsec [501.03σ]  
OotOffset-rm: 3.709 arcsec [54.85σ]  
KicOffset-rm: 3.555 arcsec [52.93σ]  
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]

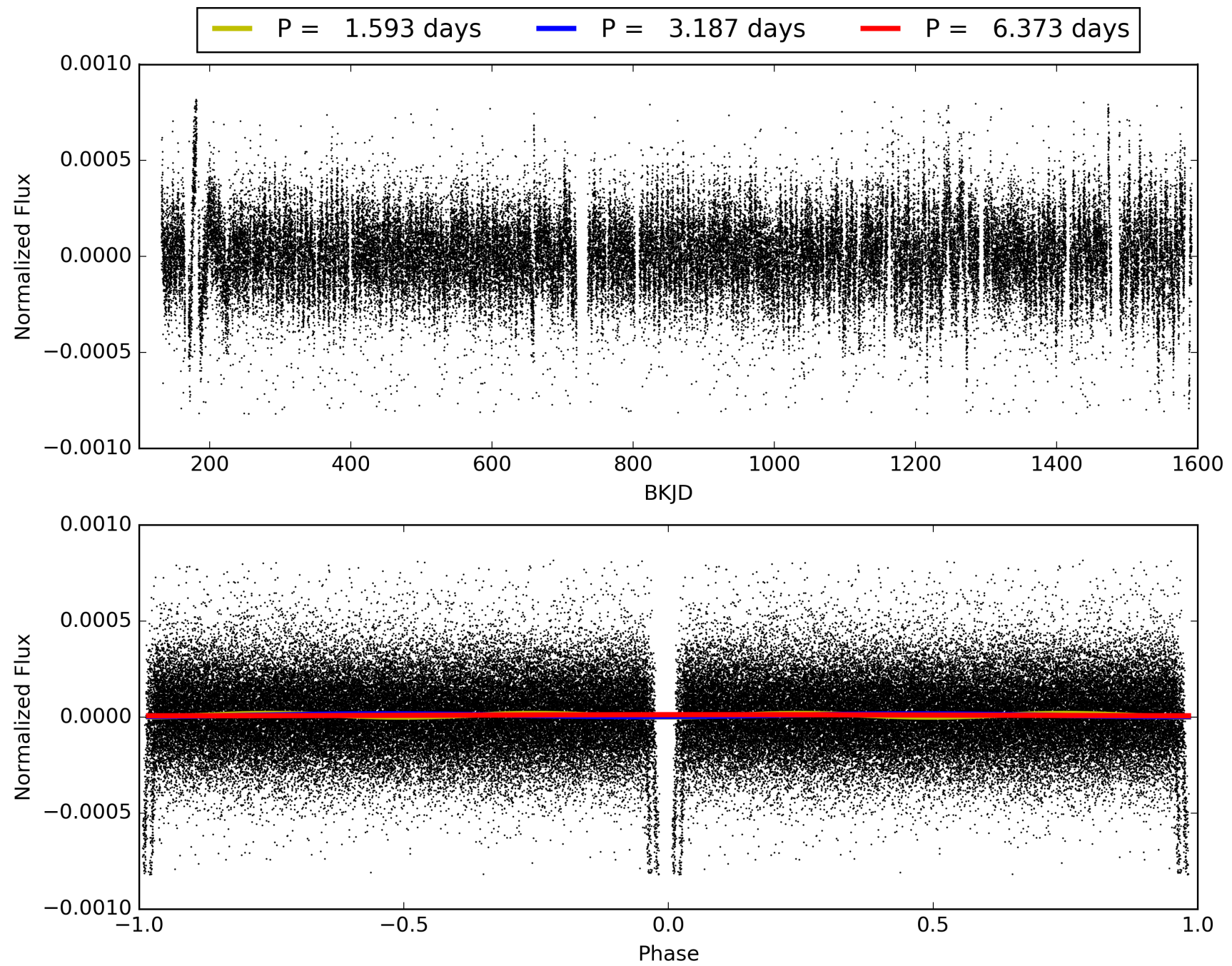
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:55:44 Z

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

# TCE 007622072-01, PDC Light Curves

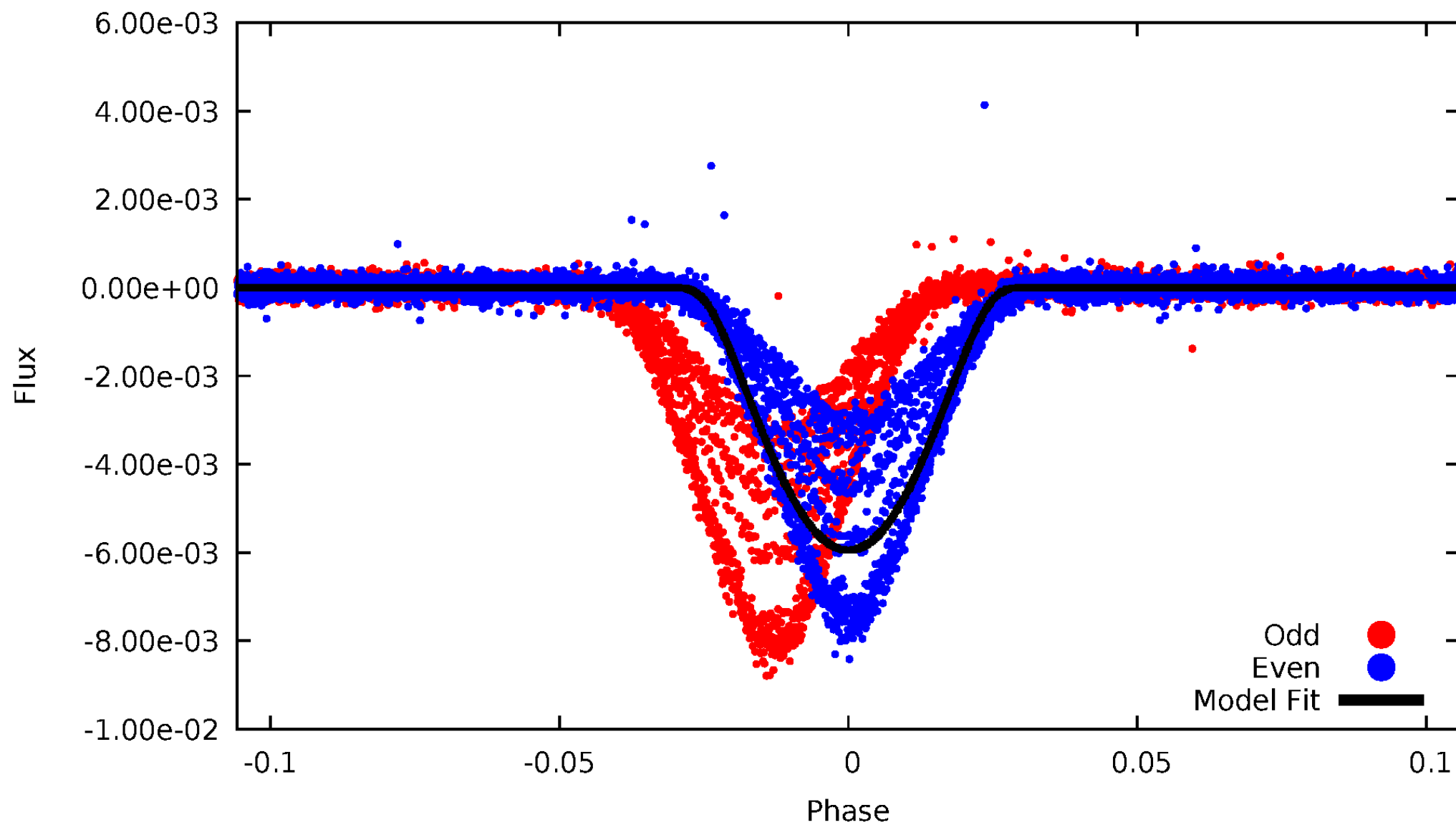


TCE 007622072-01



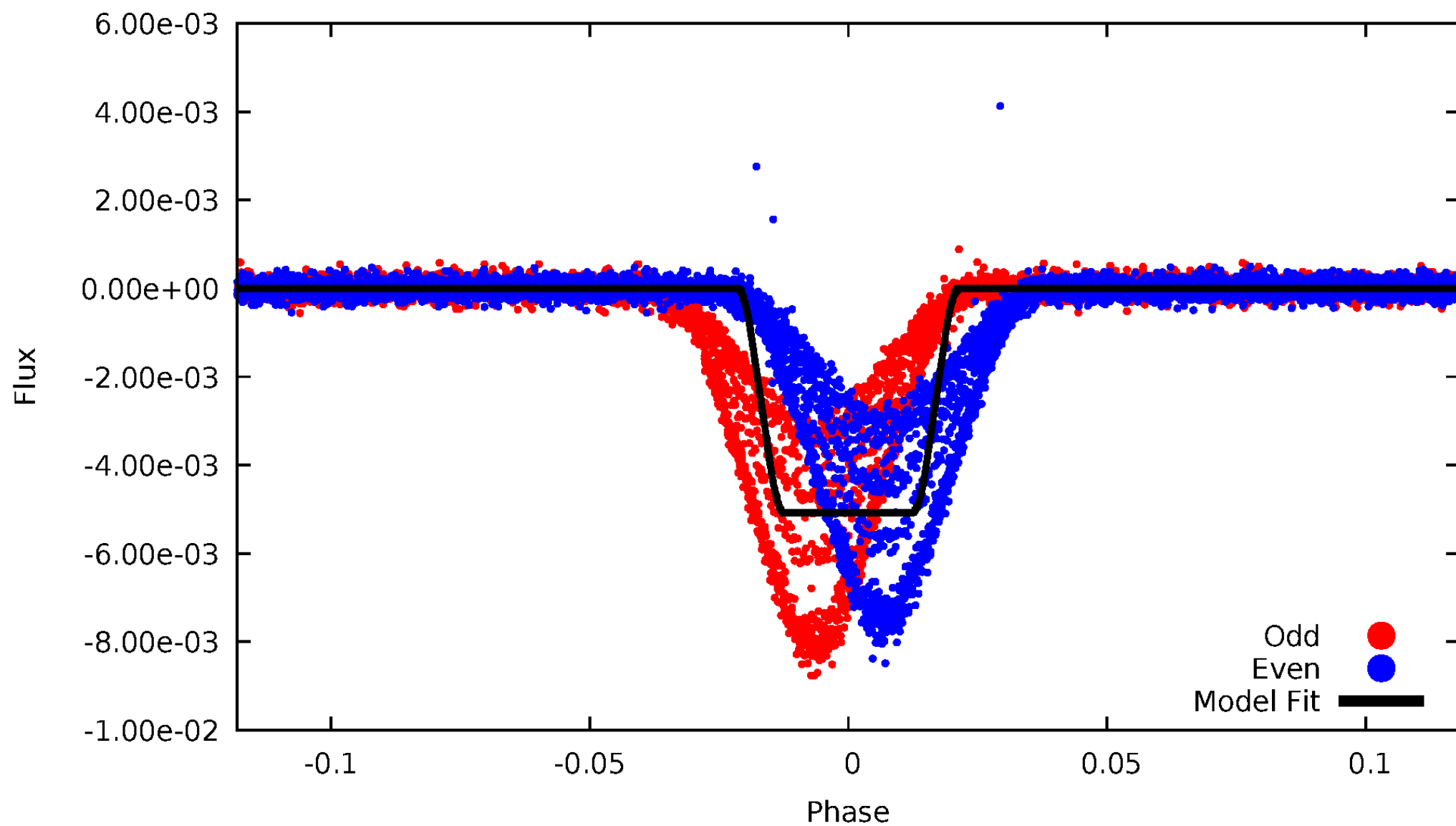
# DV Odd/Even

TCE 007622072-01

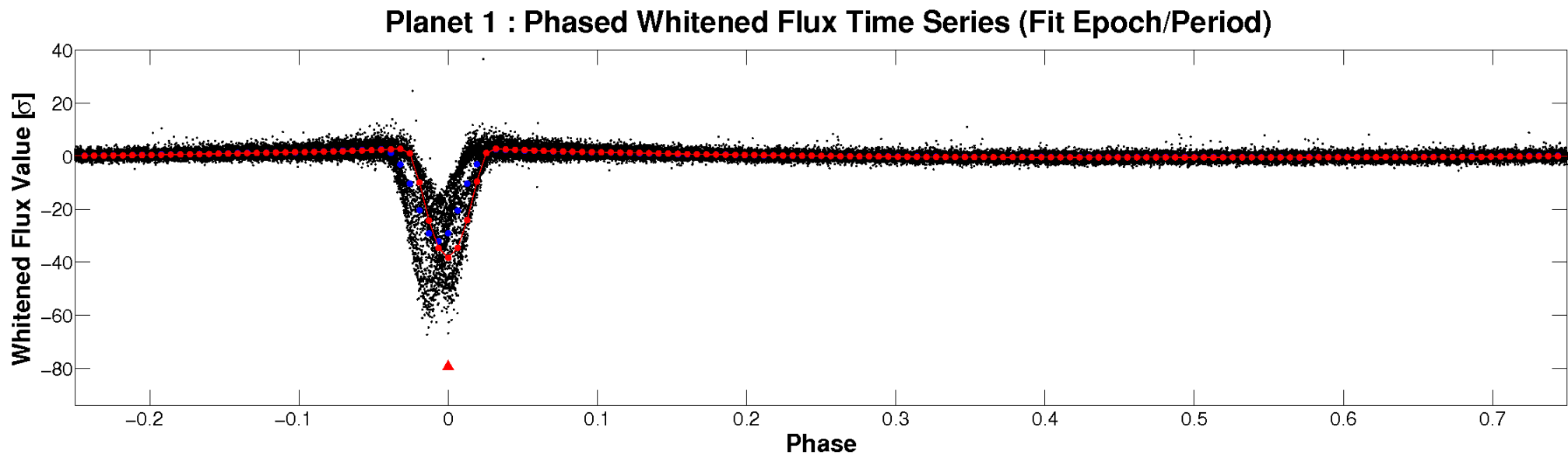
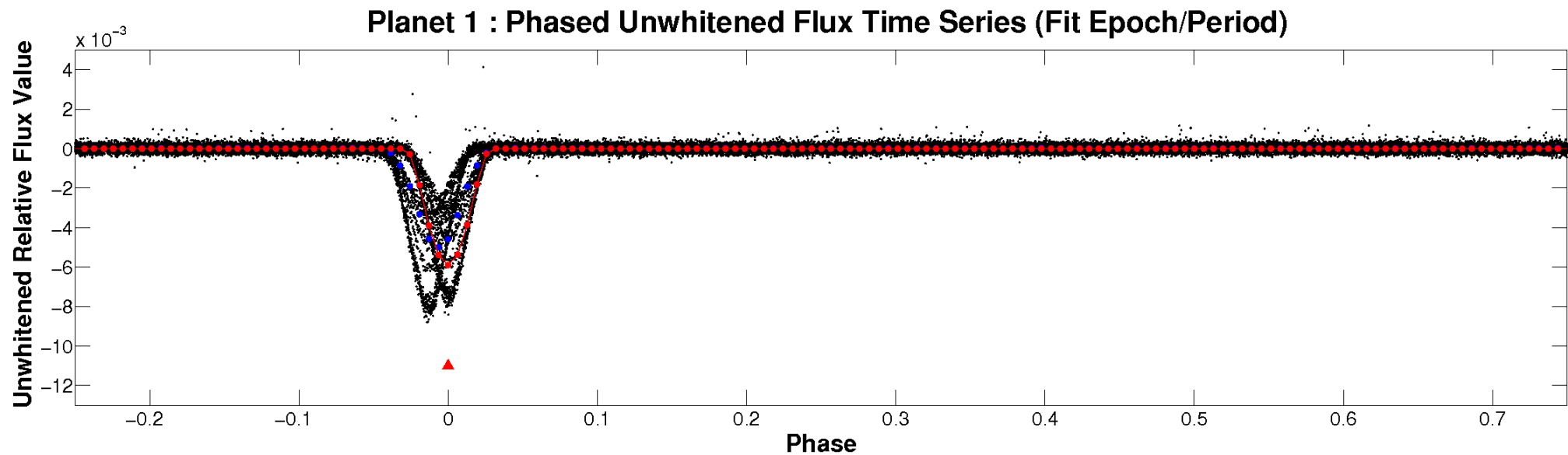


# ALT Odd/Even

TCE 007622072-01



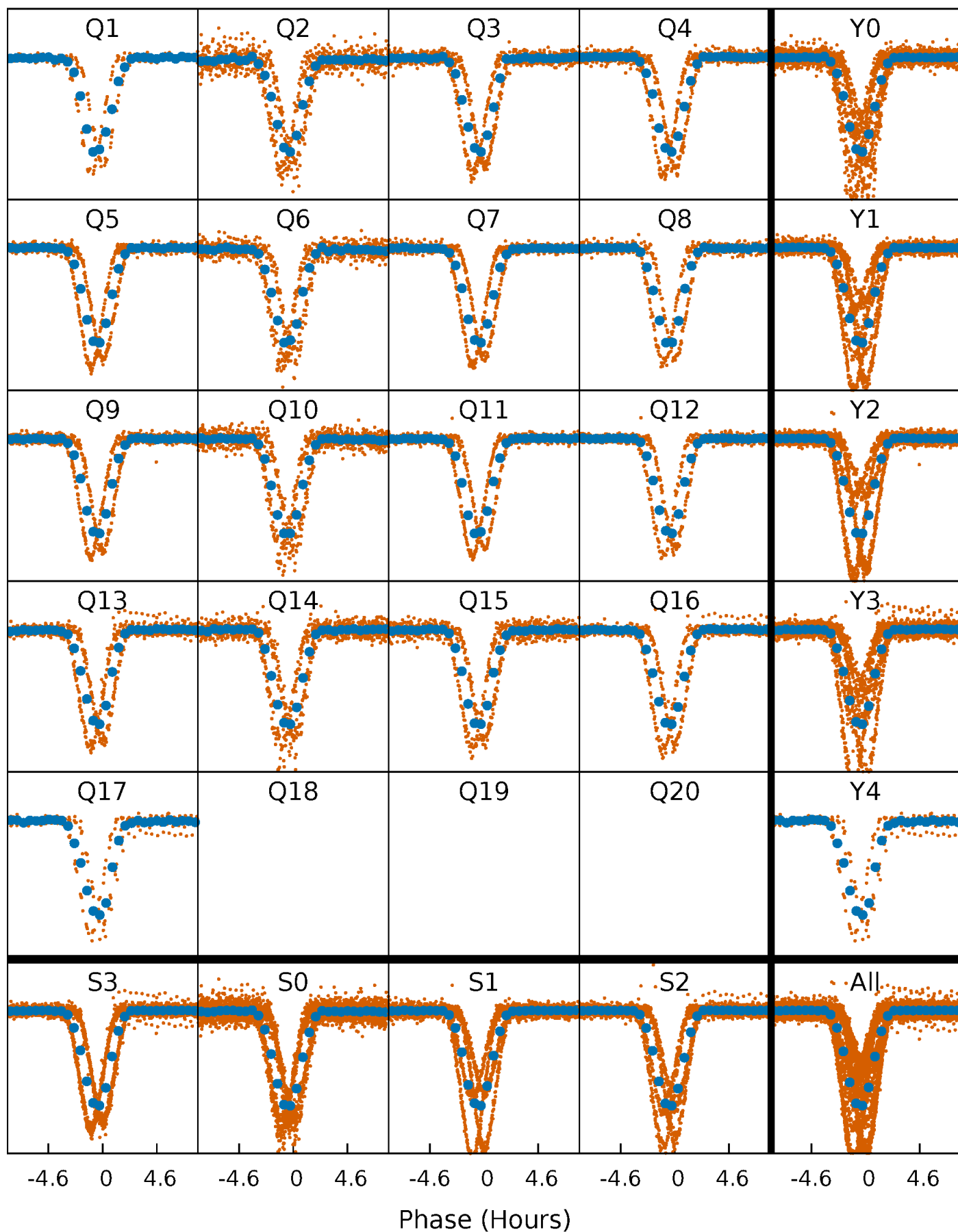
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

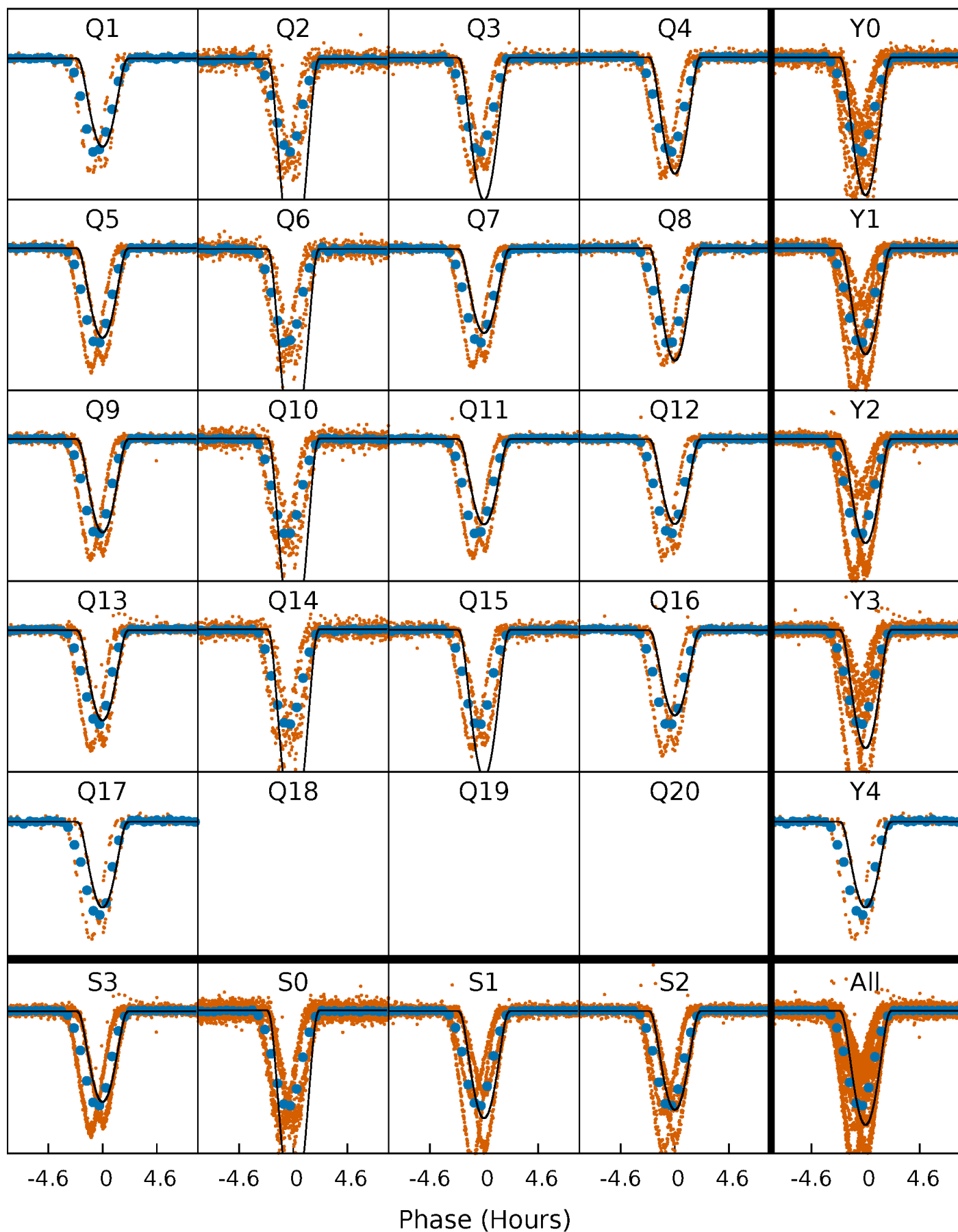
TCE 007622072-01 P= 3.186734 Days  $T_0=133.752597$  (BKJD)





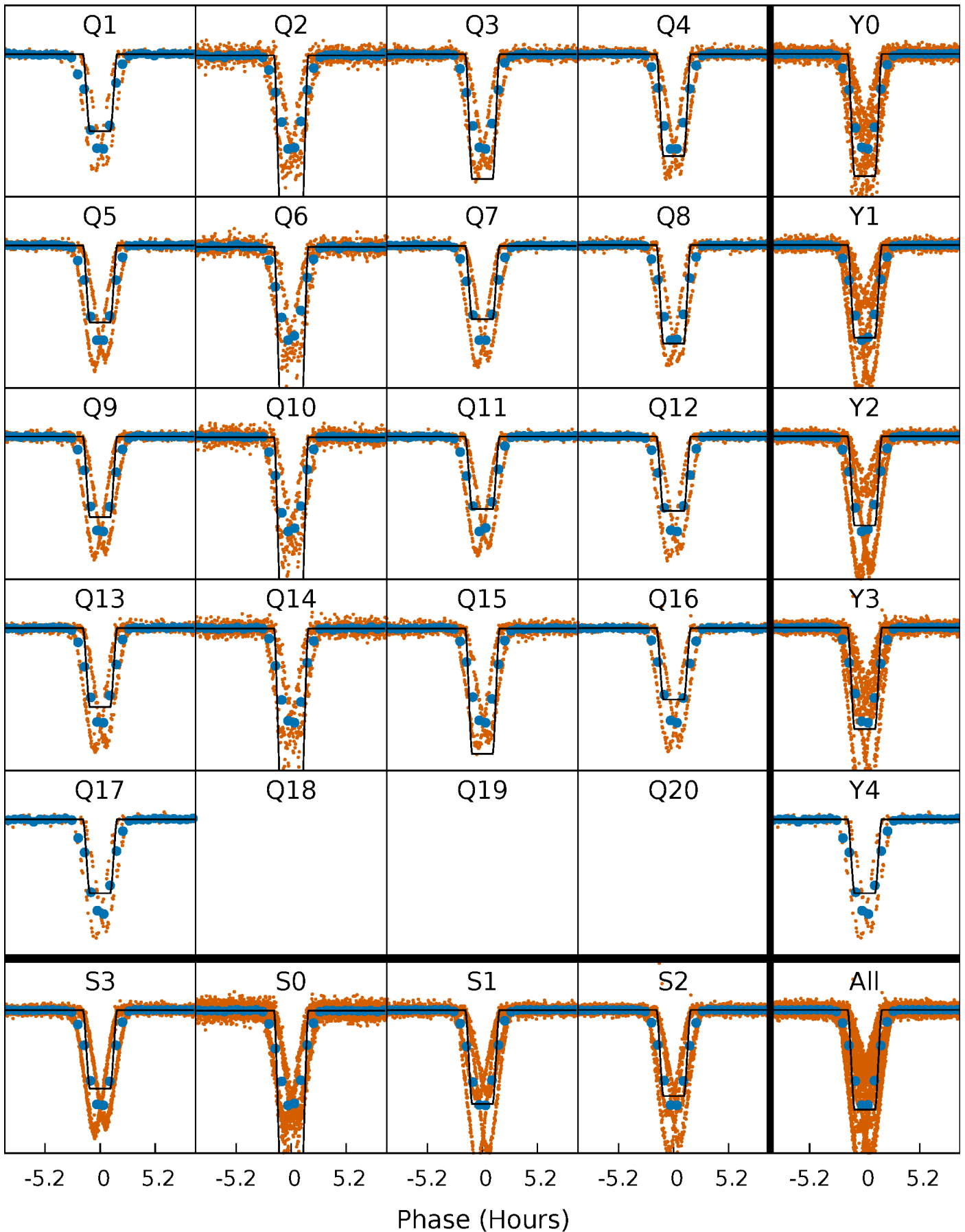
# DV Quarter-Phased Transit Curves

TCE 007622072-01 P= 3.186734 Days  $T_0=133.752597$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

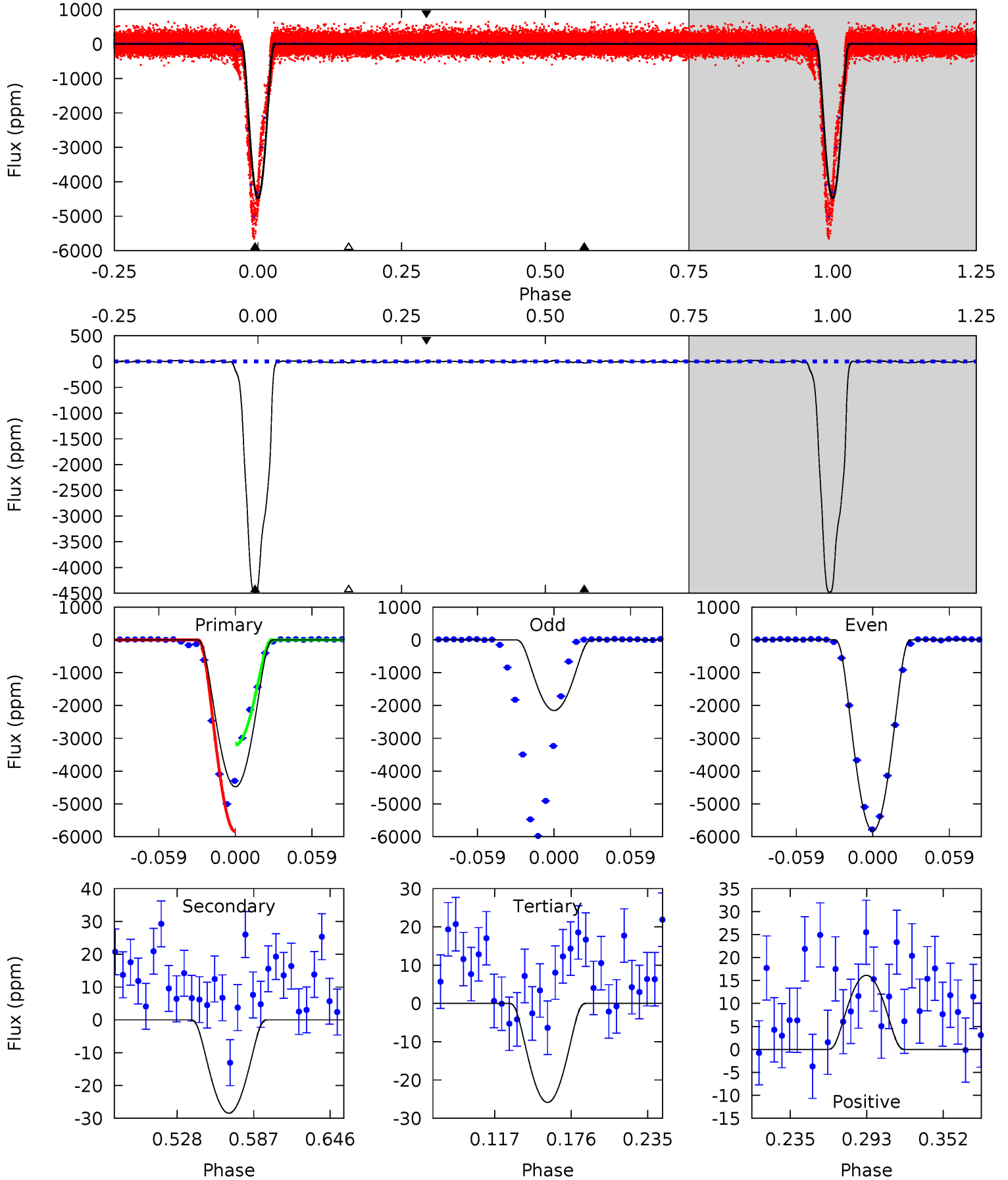
TCE 007622072-01   P= 3.186725 Days    $T_0=133.734601$  (BKJD)



# DV Model-Shift Uniqueness Test

007622072-01, P = 3.186734 Days, E = 130.565863 Days

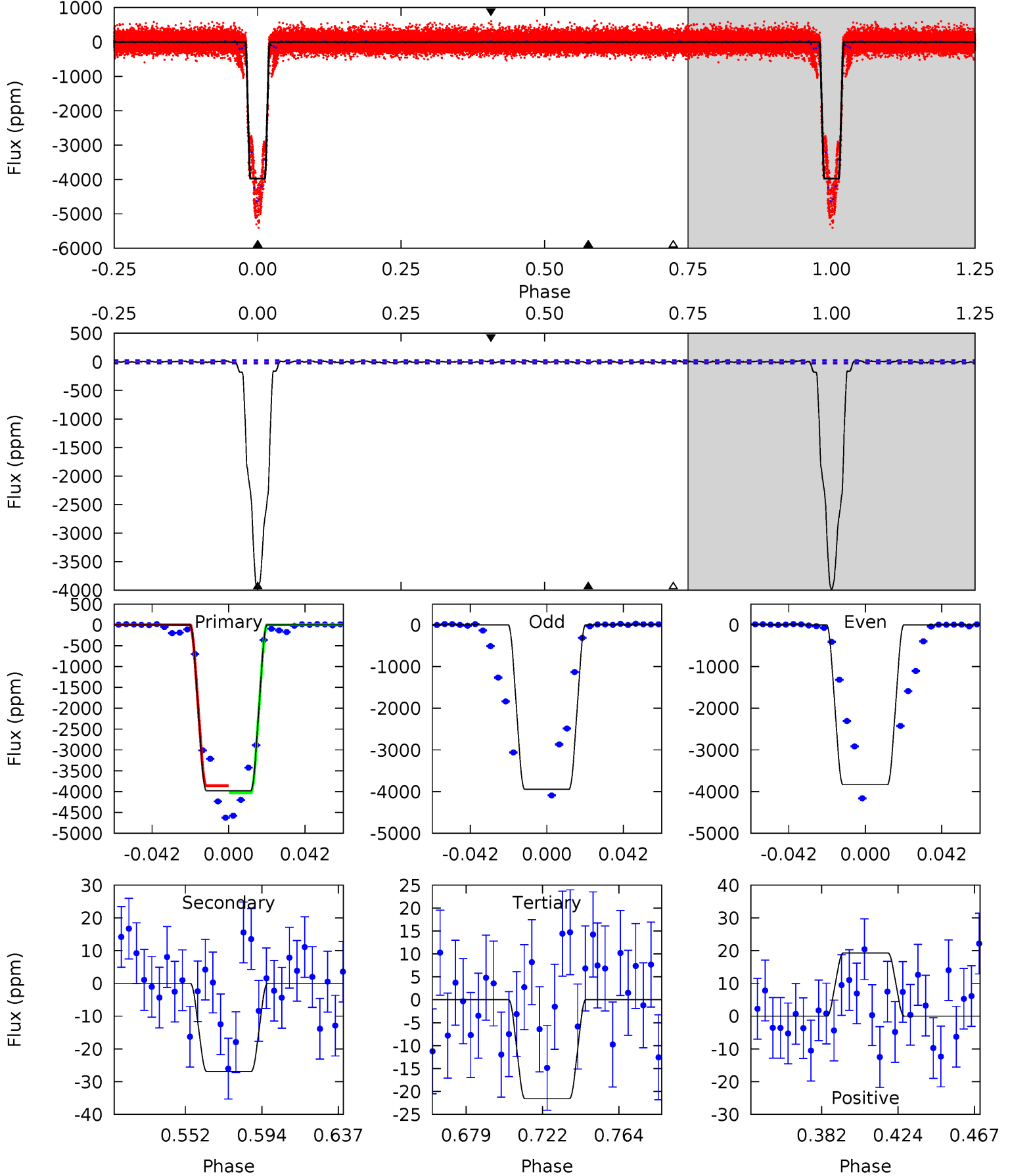
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1134	7.20	6.55	4.09	4.68	1.89	2.15	1127	1130	0.66	3.12	556.9	0.92	0.01	0



# Alt Model-Shift Uniqueness Test

007622072-01, P = 3.186725 Days, E = 130.547876 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
698.8	4.73	3.79	3.40	4.74	2.03	1.28	695.1	695.4	0.94	1.33	11.4	0.95	0.01	0



### Stellar Parameters For KIC 007622072

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5953^{+177}_{-159}$	$4.161^{+0.344}_{-0.185}$	$-0.580^{+0.300}_{-0.250}$	$1.254^{+0.349}_{-0.388}$	$0.831^{+0.116}_{-0.068}$	$0.593^{+1.285}_{-0.295}$
	+3%/-3%	+8%/-4%	+52%/-43%	+28%/-31%	+14%/-8%	+217%/-50%
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 007622072-01 / KOI 6894.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-28 \pm 4$	$15.61^{+2.66}_{-2.73}$	$2049^{+166}_{-190}$	$-2400^{+173}_{-128}$	$0.103^{+0.051}_{-0.030}$
Alt.	$-27 \pm 6$	$9.59^{+1.76}_{-1.50}$	$2039^{+166}_{-174}$	$-2014^{+4107}_{-326}$	$0.259^{+0.116}_{-0.084}$

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

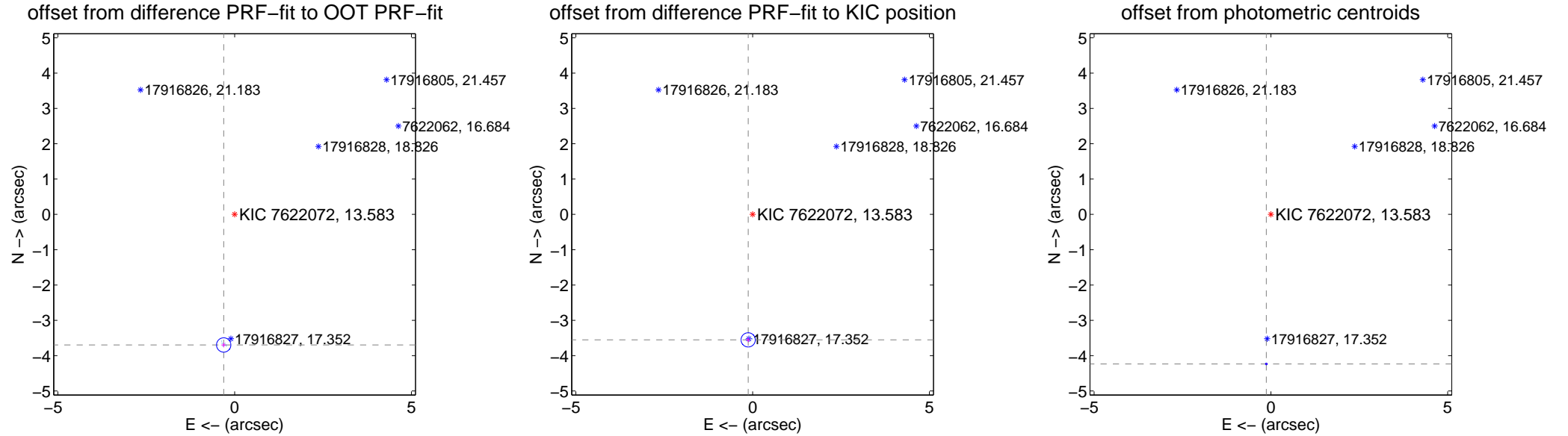
## DV Centroid Data

Supplemental centroid analysis for 007622072-01. Kepler magnitude: 13.58. Transit SNR 625.47

There are 17 quarters with good PRF difference image offsets

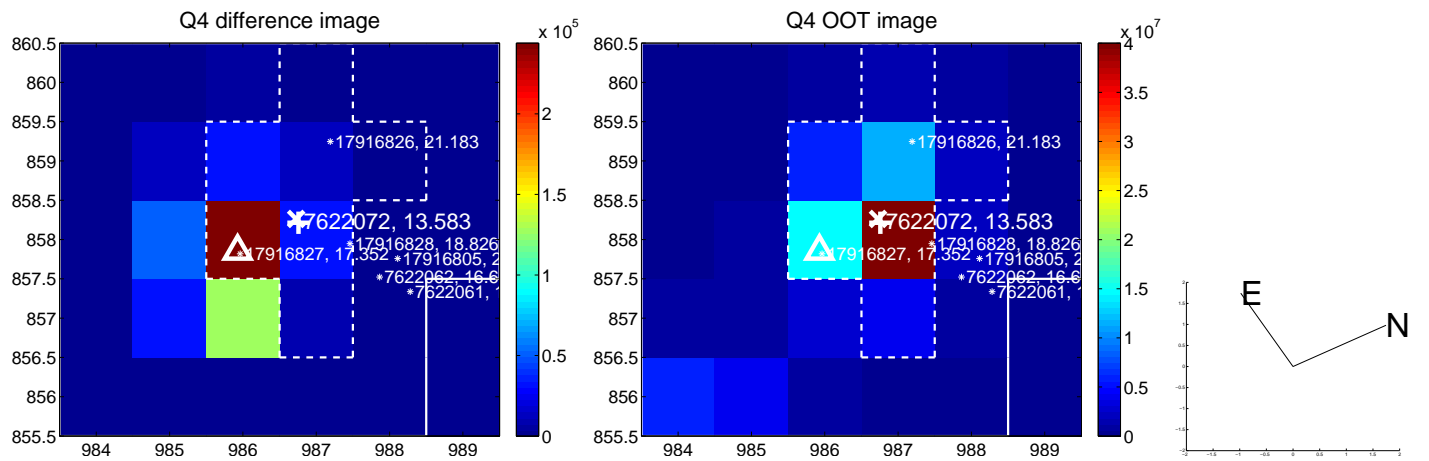
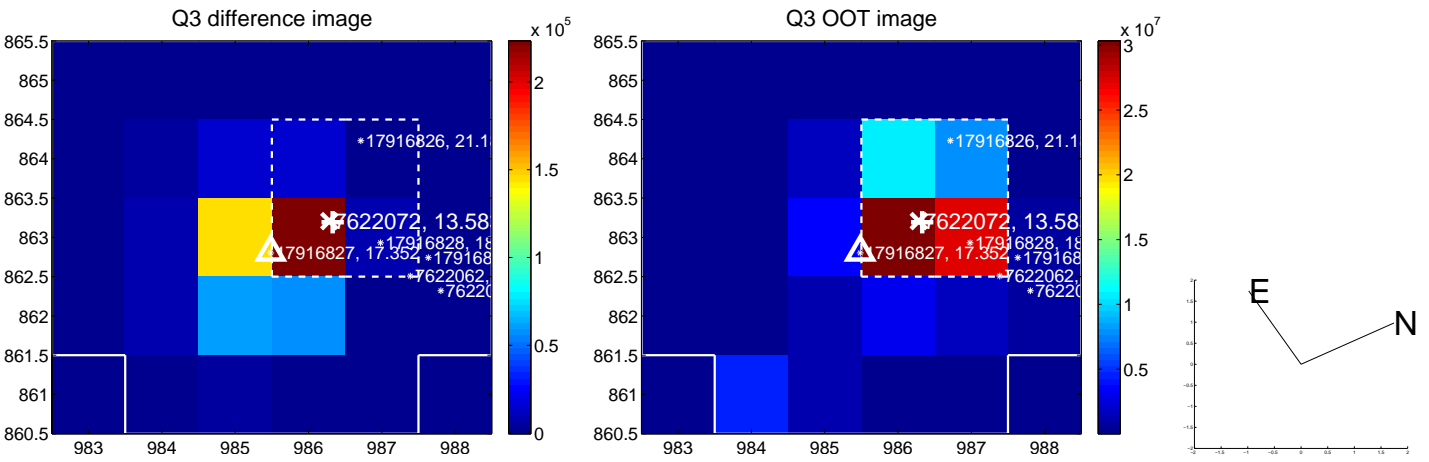
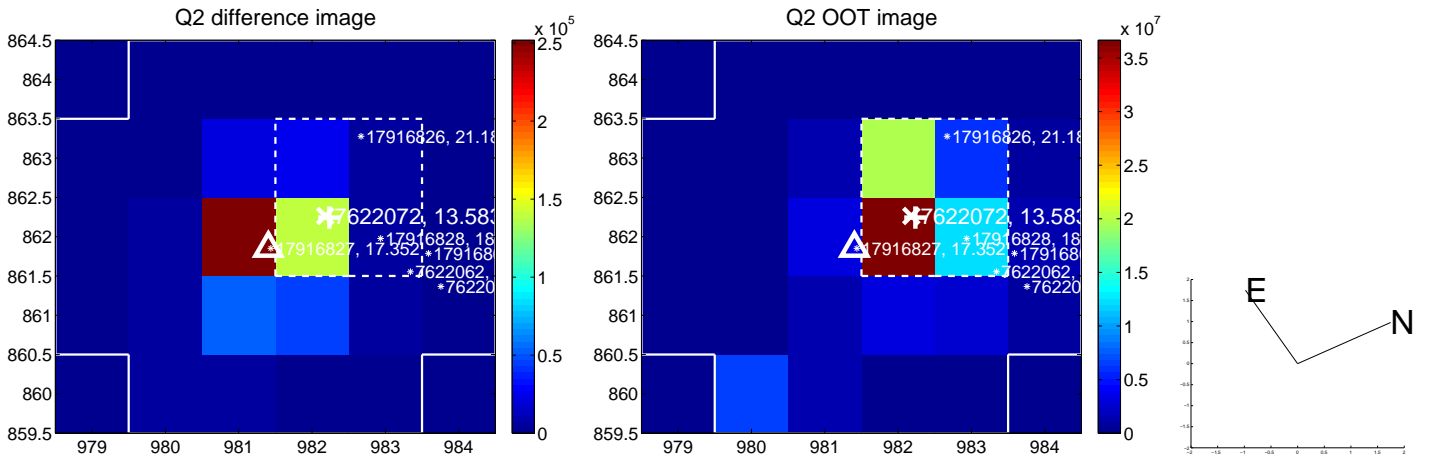
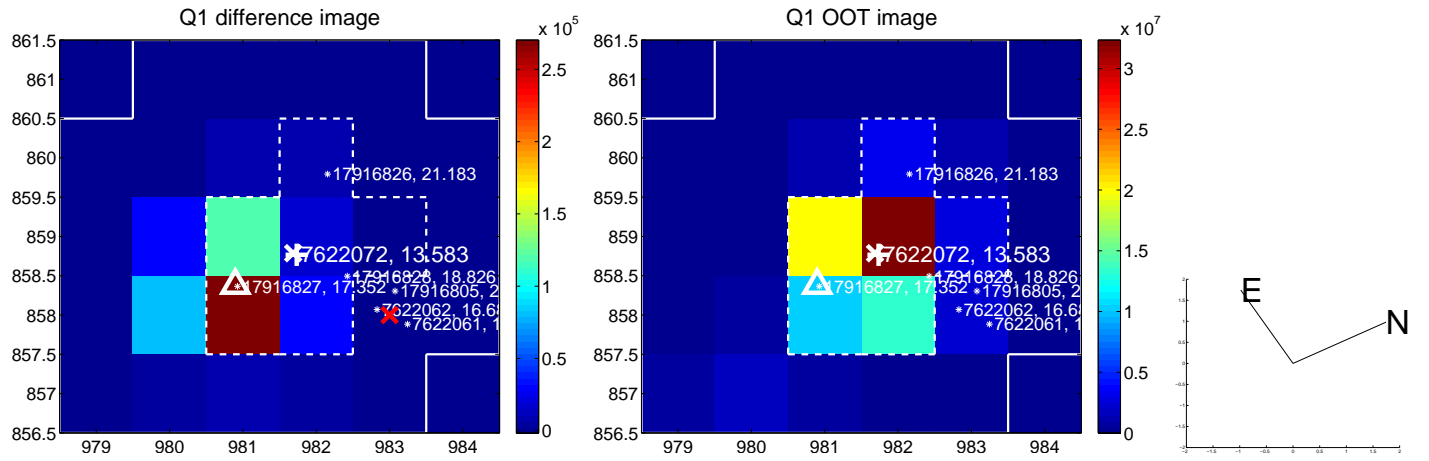
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>3.709 <math>\pm</math> 0.068</b>	<b>54.85</b>	0.309 $\pm$ 0.068	-3.697 $\pm$ 0.068
PRF-fit source offset from KIC position	<b>3.555 <math>\pm</math> 0.067</b>	<b>52.93</b>	0.126 $\pm$ 0.069	-3.552 $\pm$ 0.067
photometric centroid source offset	<b>4.24 <math>\pm</math> 0.01</b>	<b>501.03</b>	0.13 $\pm$ 0.01	-4.23 $\pm$ 0.01



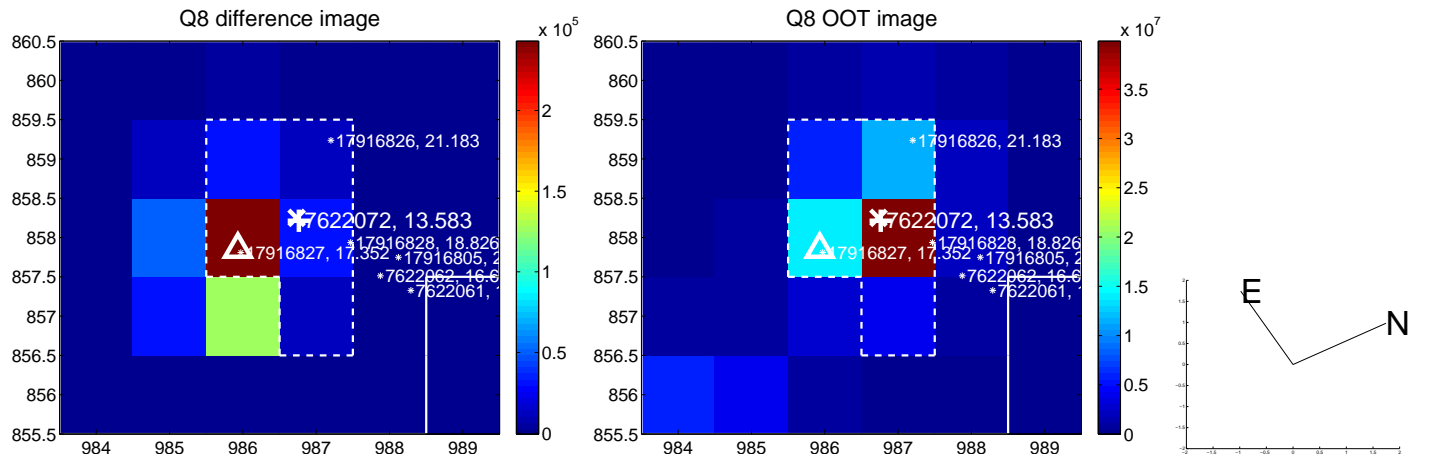
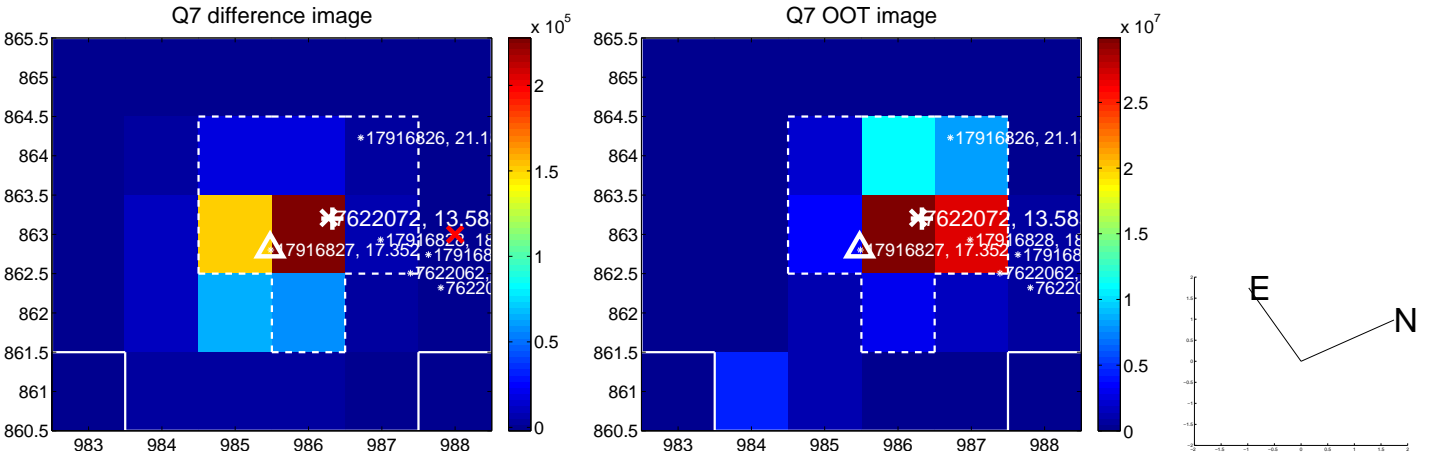
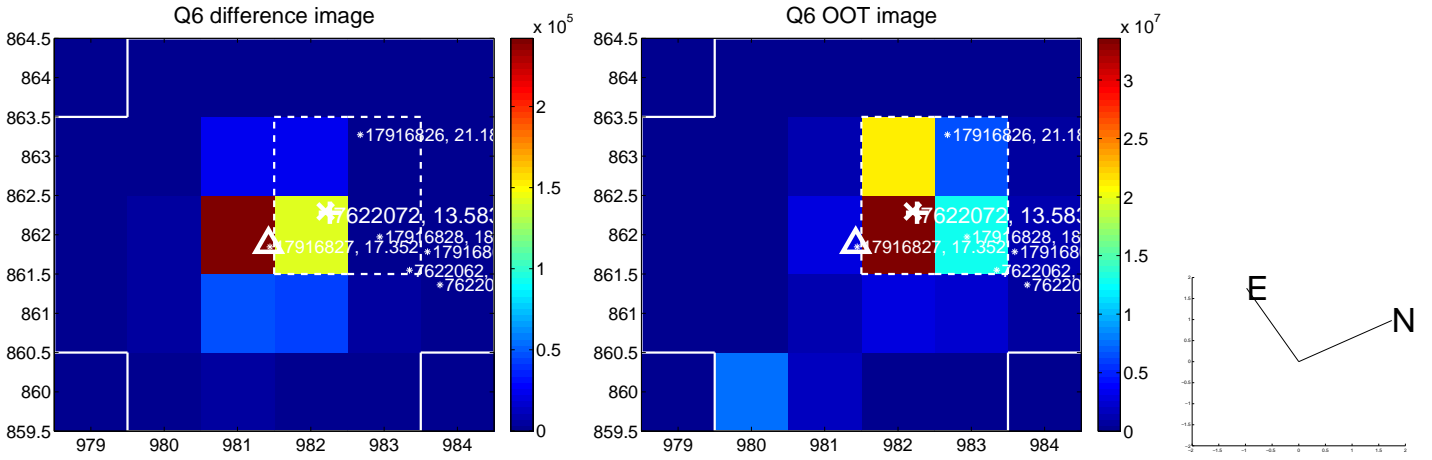
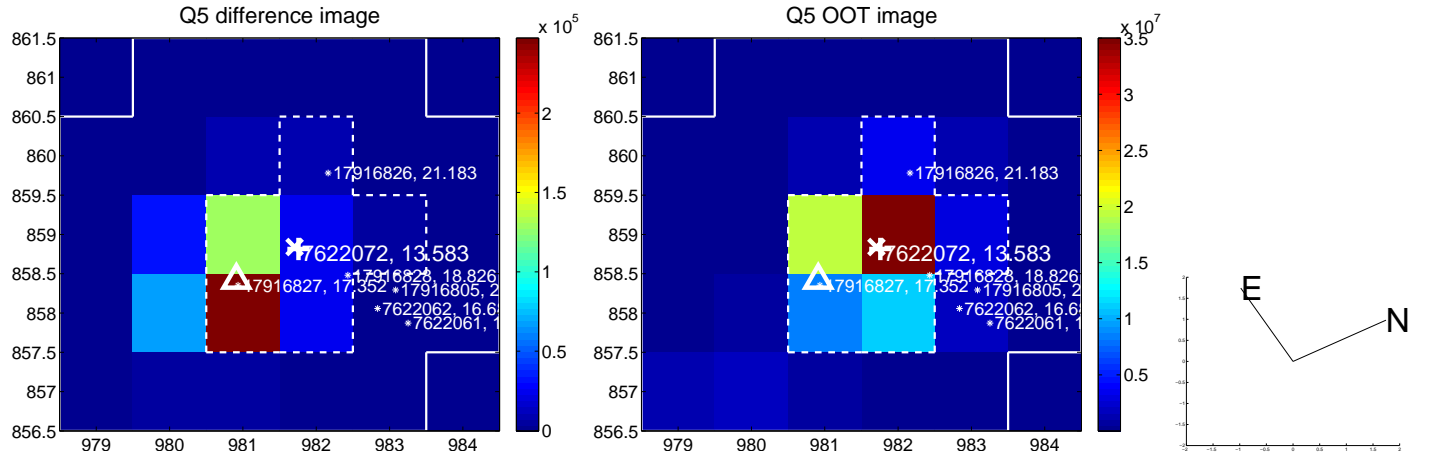
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

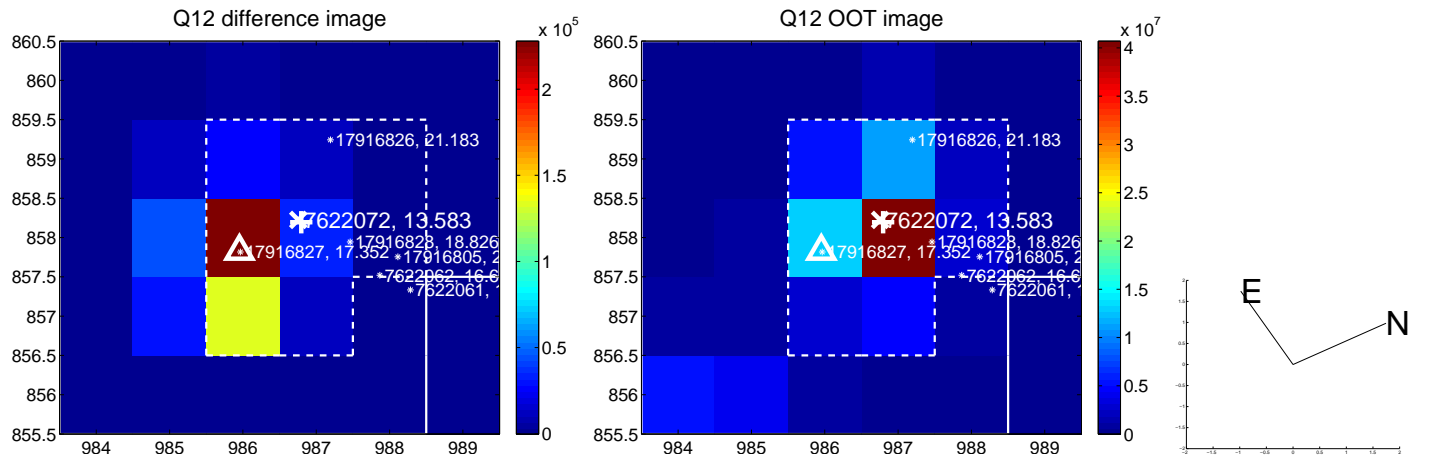
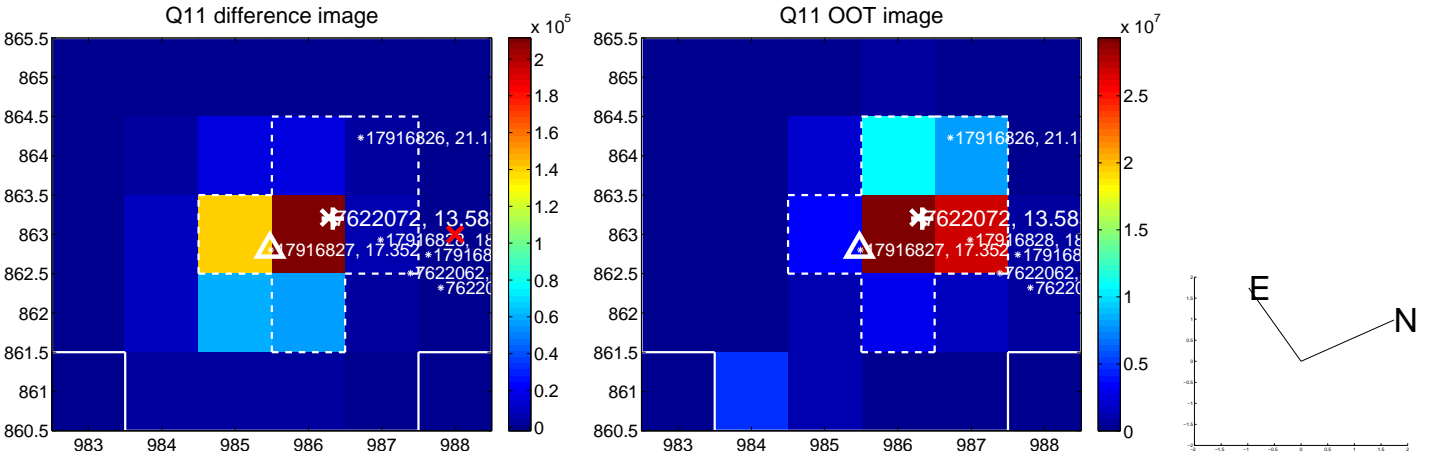
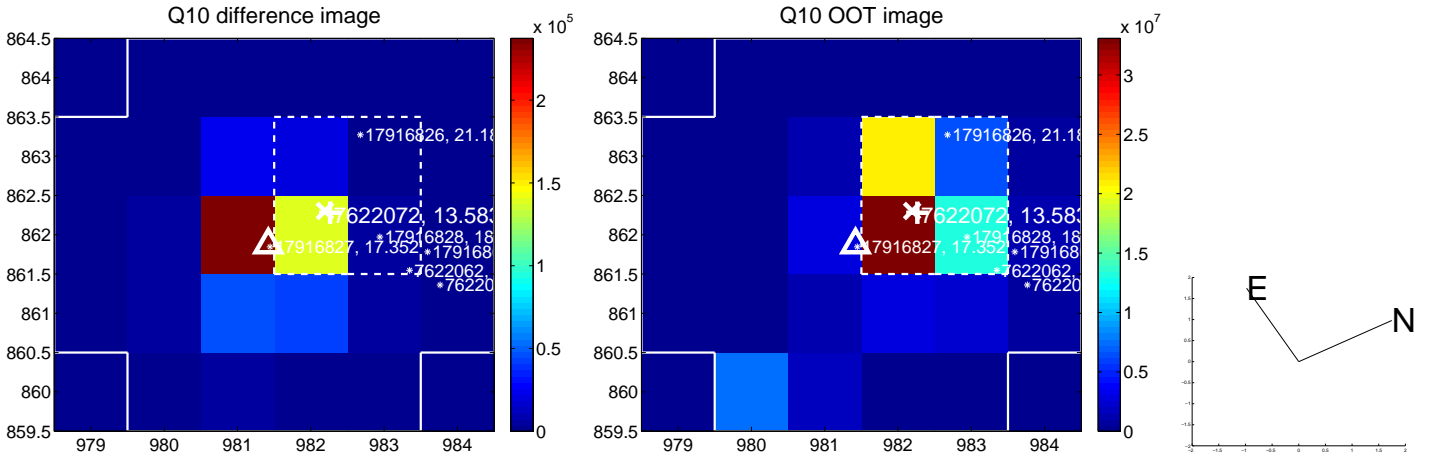
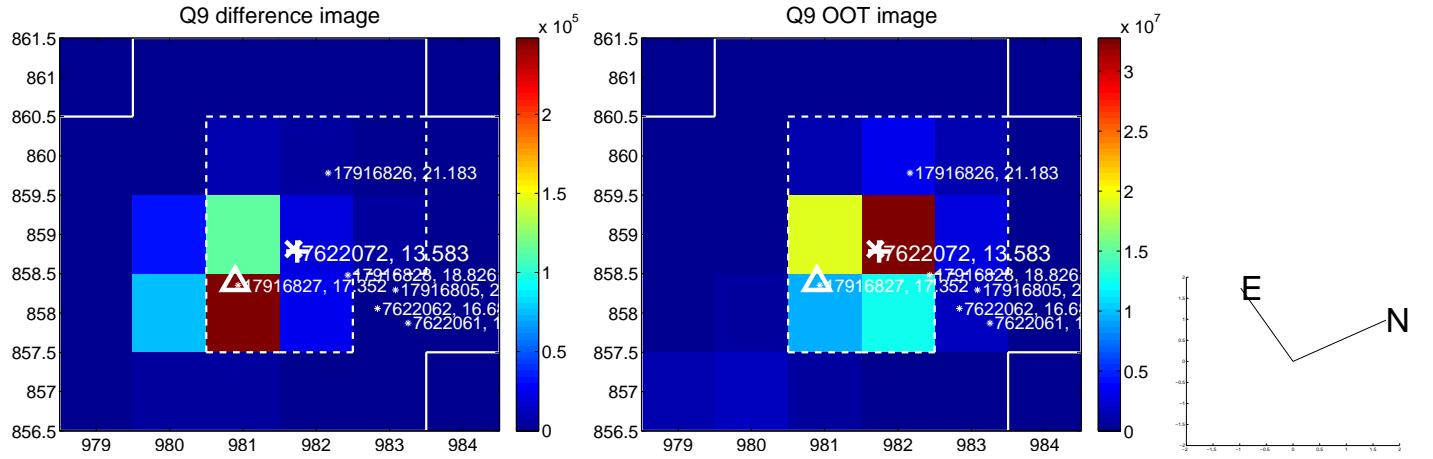




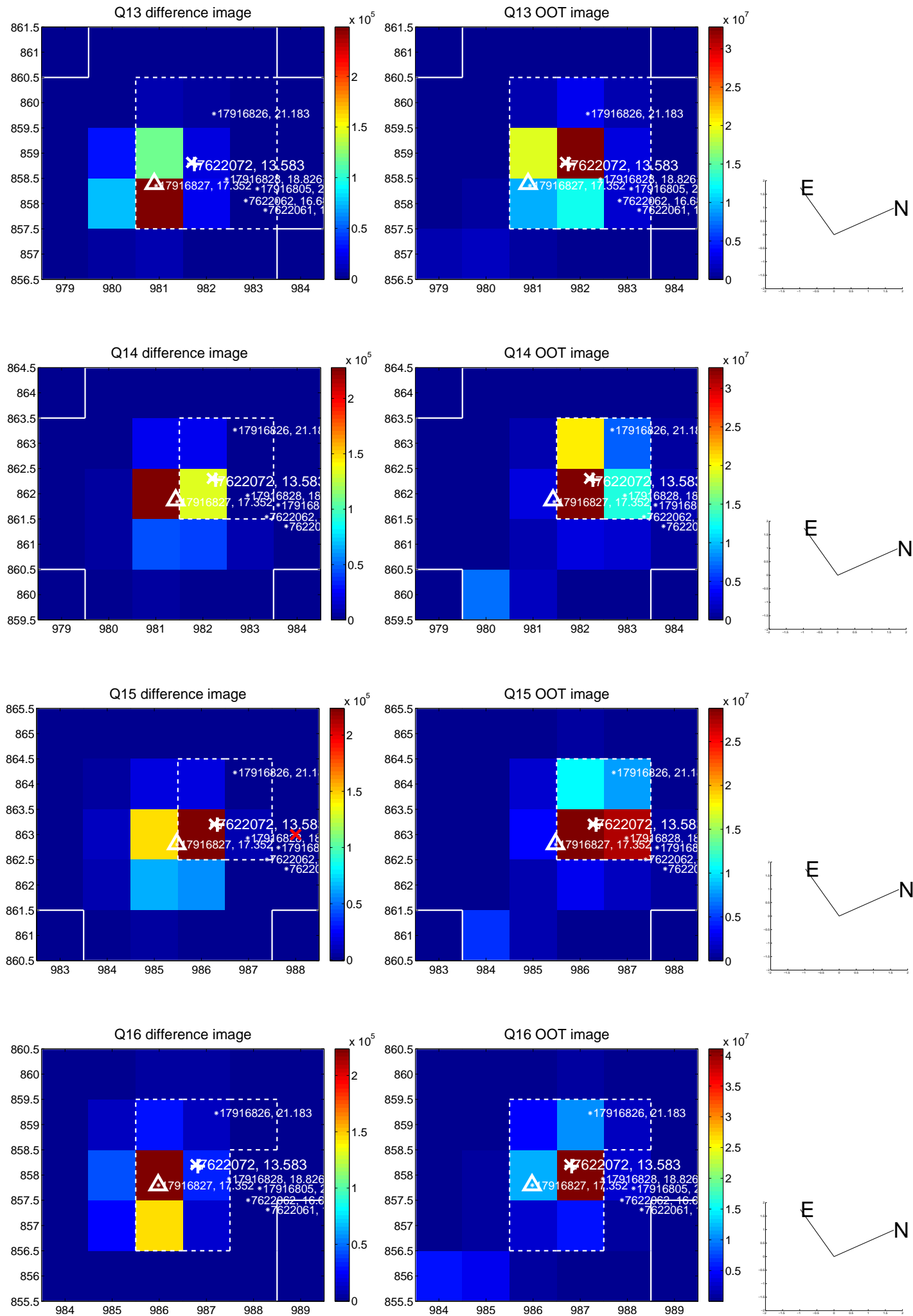
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



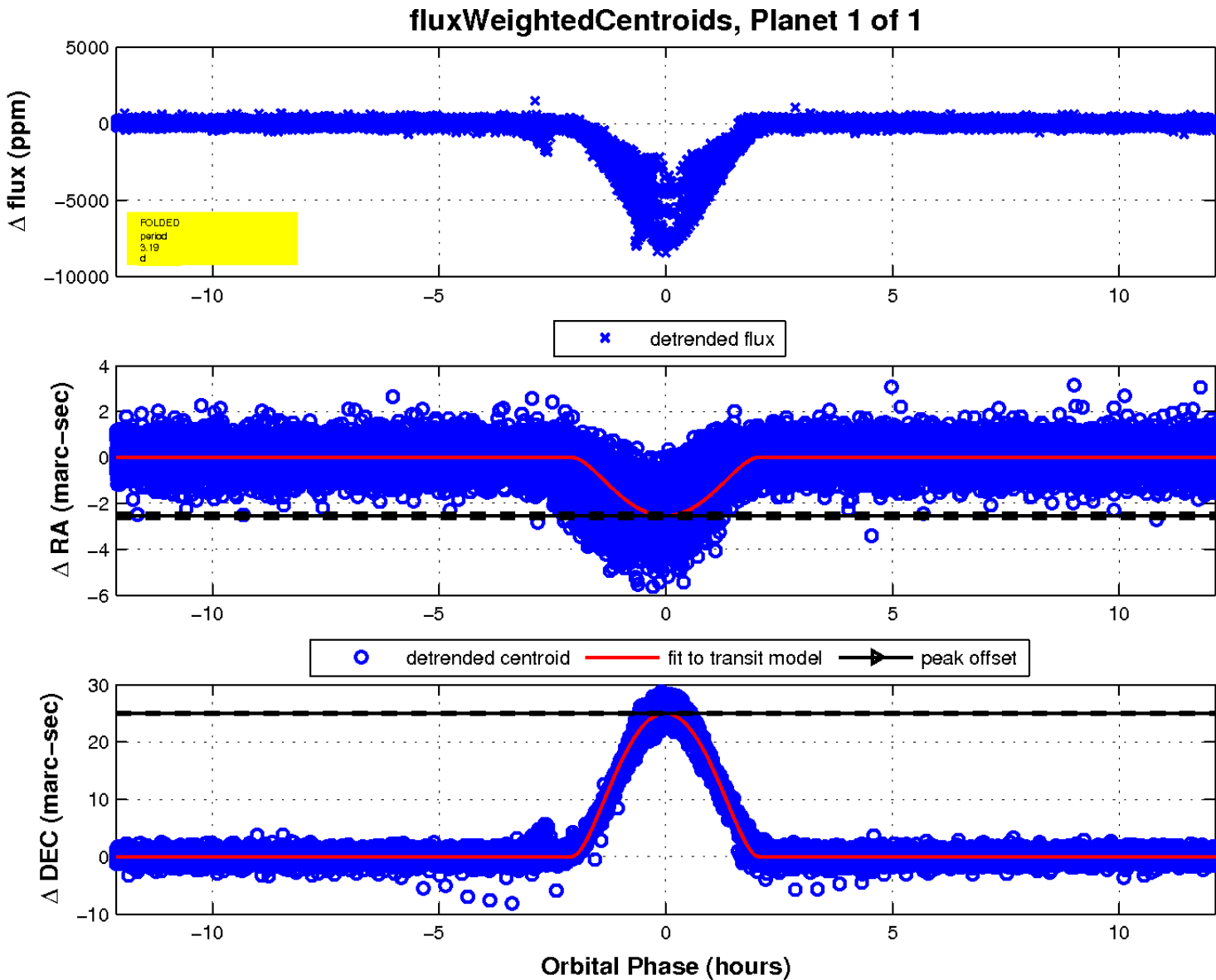
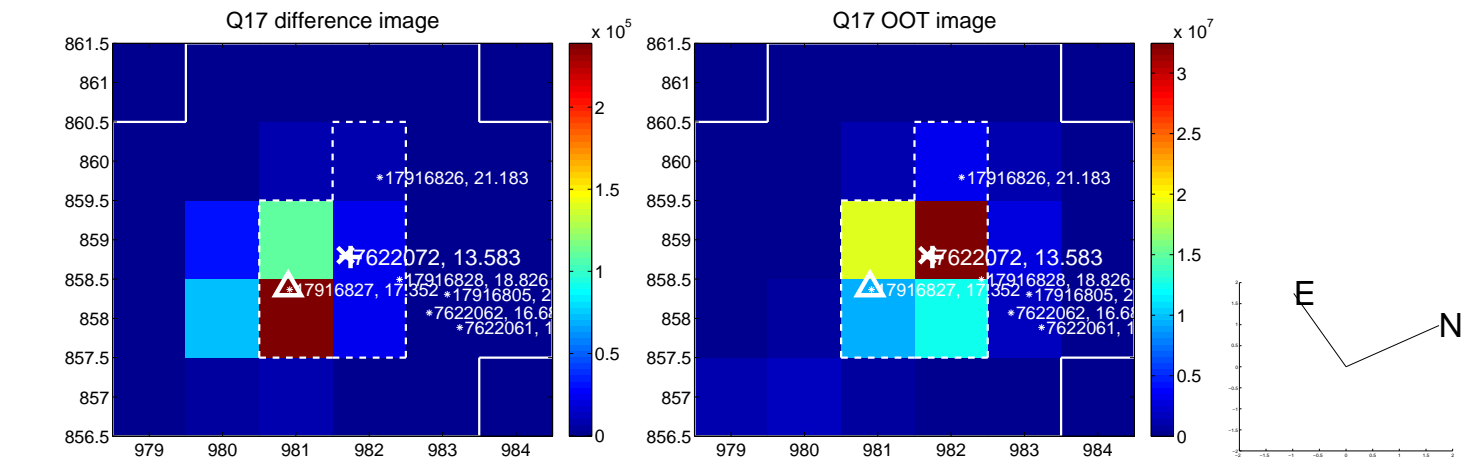
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

