

# KIC 006965293

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006965293-01	OBS	6800.01	2.538924	132.088607	18498.2	3.065	4094.1	2992.7	1.27	6174	23.98	1571.78

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006965293-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

**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.

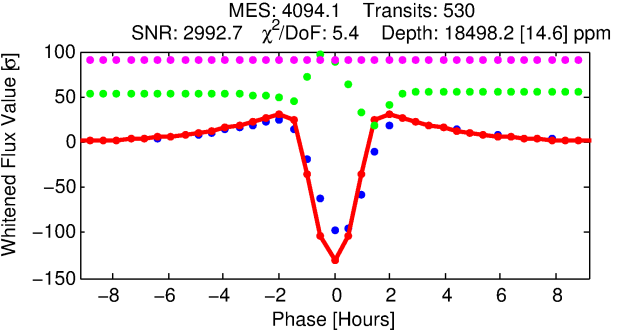
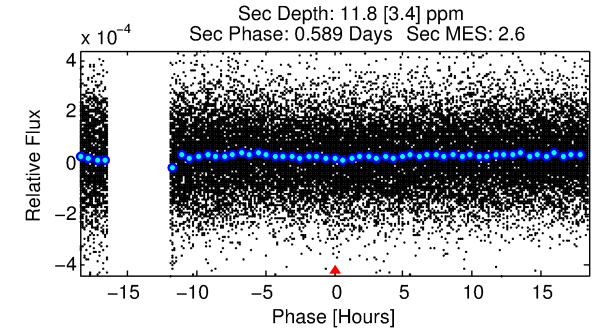
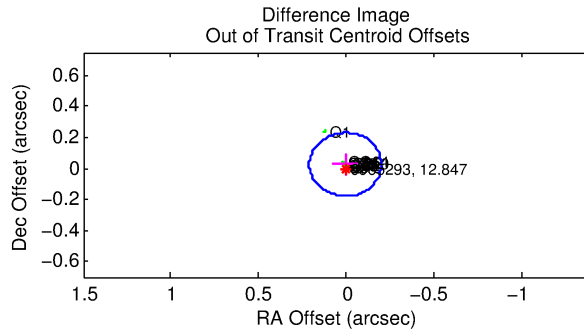
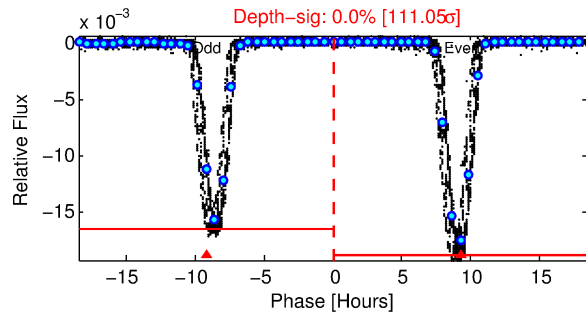
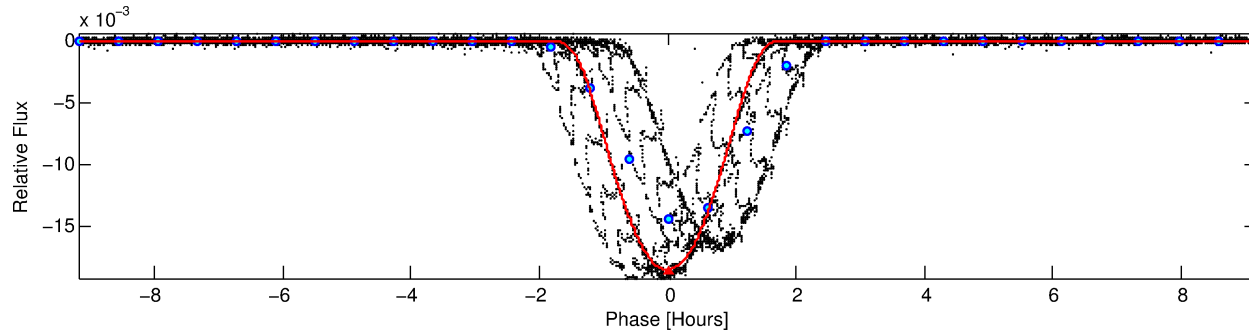
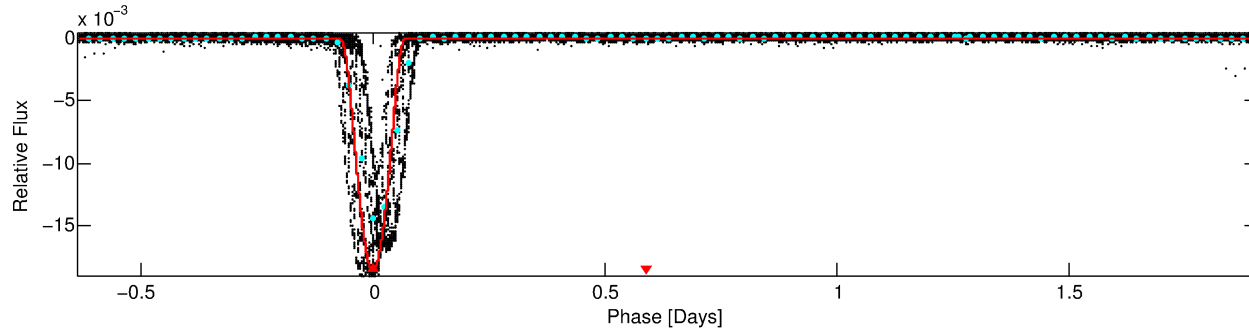
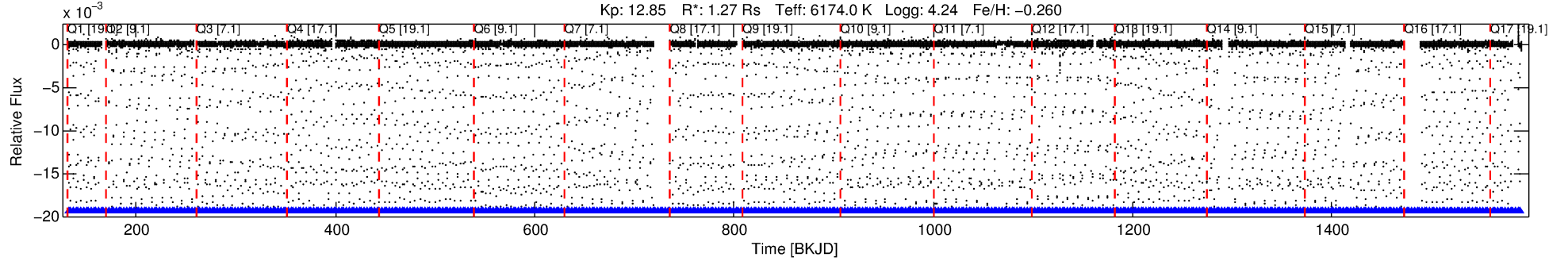
## Ephemeris Match Information For 006965293-01

No Significant Match Found

# DV One-Page Summary

KIC: 6965293 Candidate: 1 of 1 Period: 2.539 d  
KOI: K06800 Corr: No Ephemeris Match

Kp: 12.85 R\*: 1.27 Rs Teff: 6174.0 K Logg: 4.24 Fe/H: -0.260



## DV Fit Results:

Period = 2.53892 [0.00000] d  
Epoch = 132.0886 [0.0000] BKJD  
Rp/R\* = 0.1729 [0.0019]  
a/R\* = 4.65 [0.01]  
b = 0.93 [0.00]  
Seff = 1571.78 [534.52]  
Teff = 1606 [137] K  
Rp = 23.98 [5.06] Re  
a = 0.0366 [0.0073] AU  
Ag = 0.02 [0.01] [-152.30σ]  
Teffp = 870 [68] K [-4.83σ]

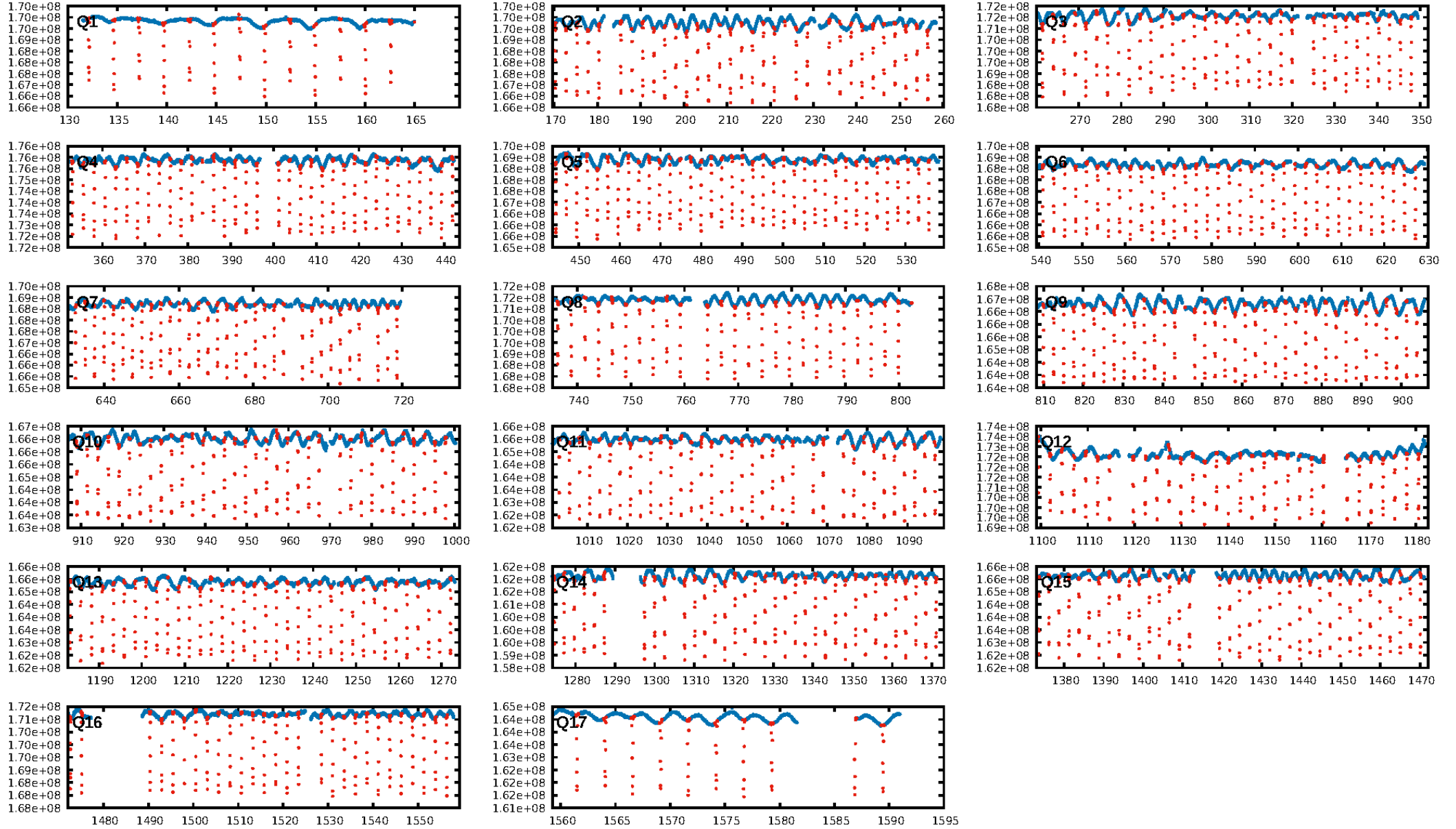
## DV Diagnostic Results:

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 [507/507]  
GhostDiagnostic-chr: 3.568  
Centroid-sig: 0.0%  
Centroid-so: 0.047 arcsec [24.91σ]  
OotOffset-rm: 0.027 arcsec [0.39σ]  
KicOffset-rm: 0.073 arcsec [1.05σ]  
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]

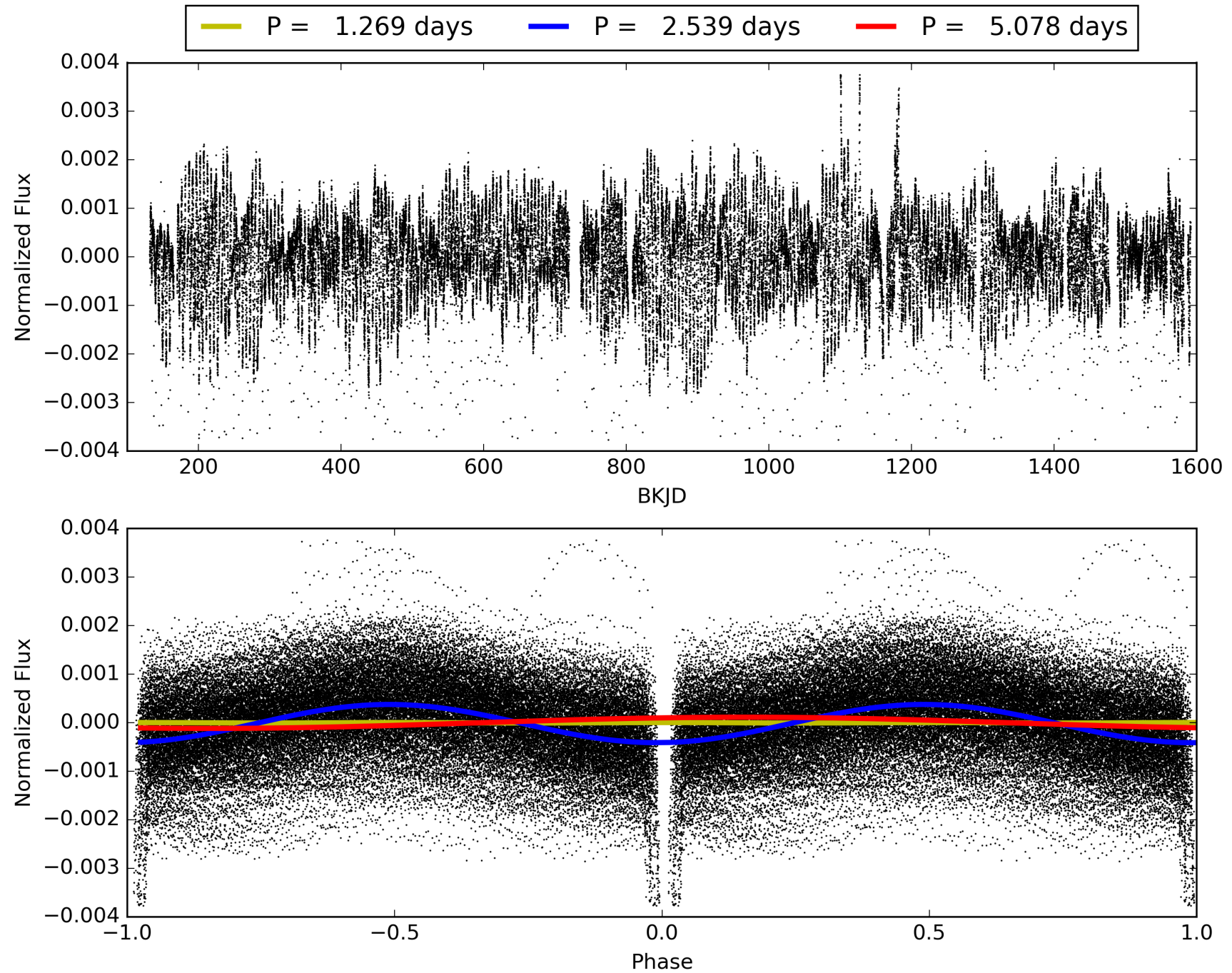
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:12:57 Z

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

# TCE 006965293-01, PDC Light Curves

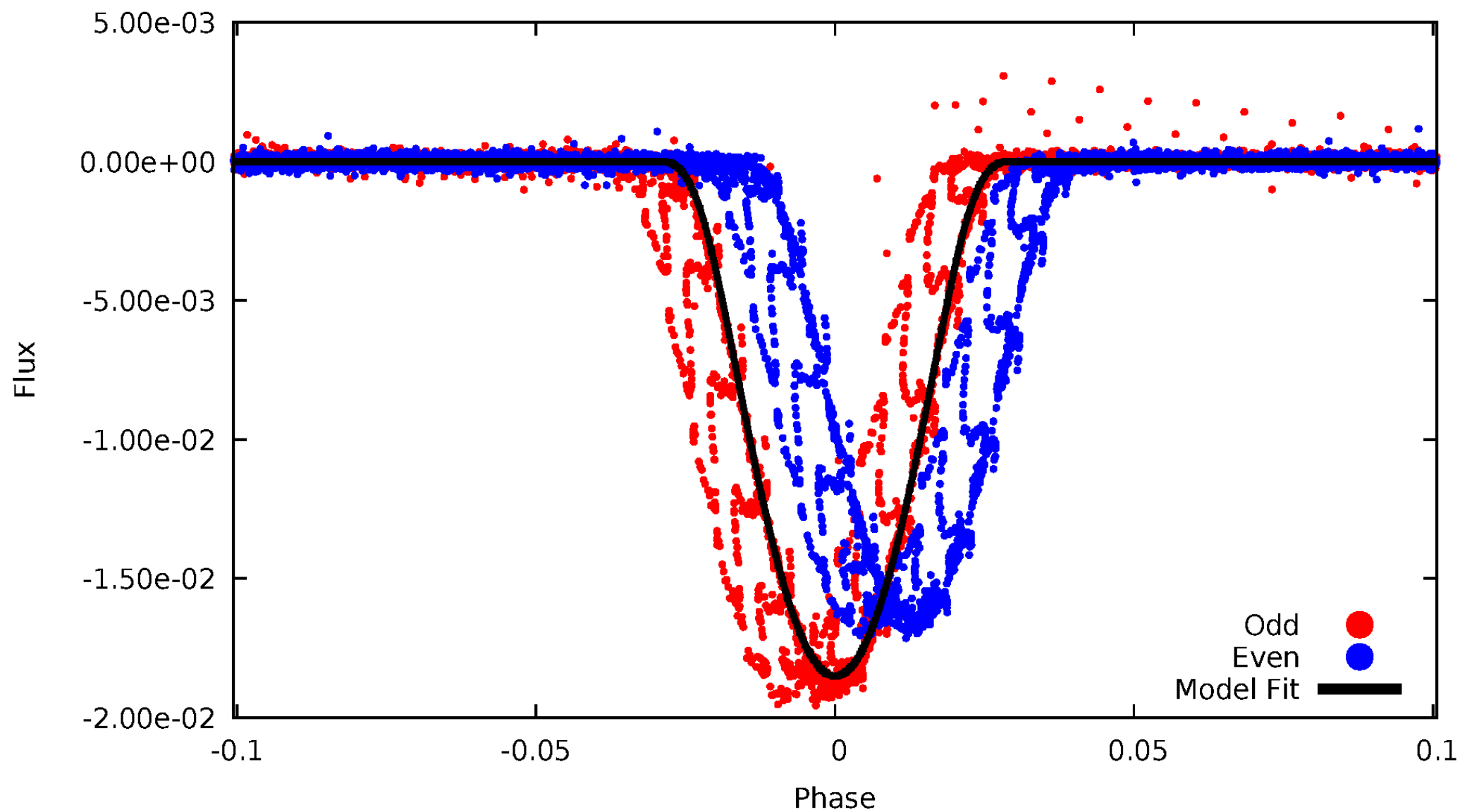


TCE 006965293-01



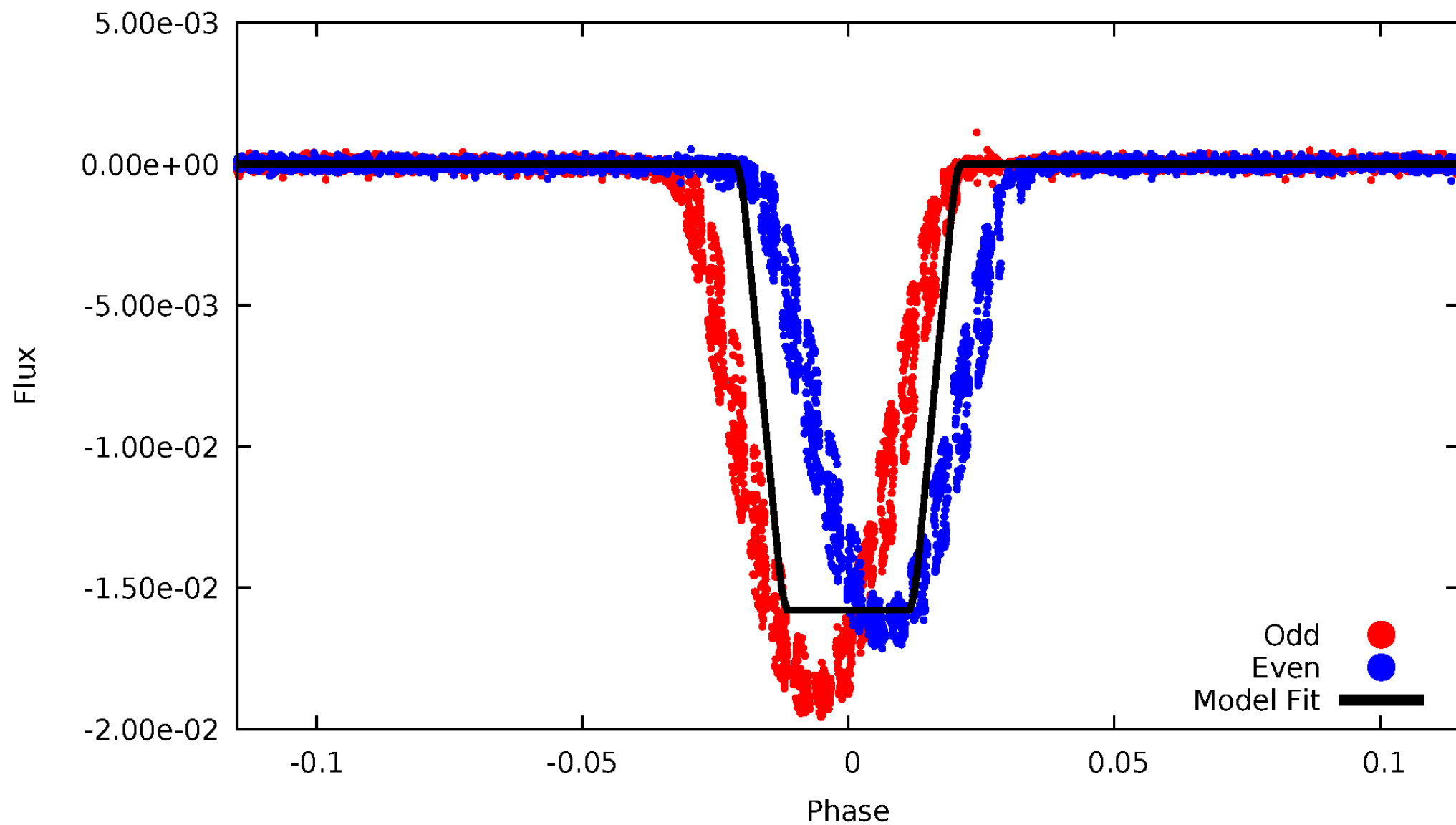
# DV Odd/Even

TCE 006965293-01



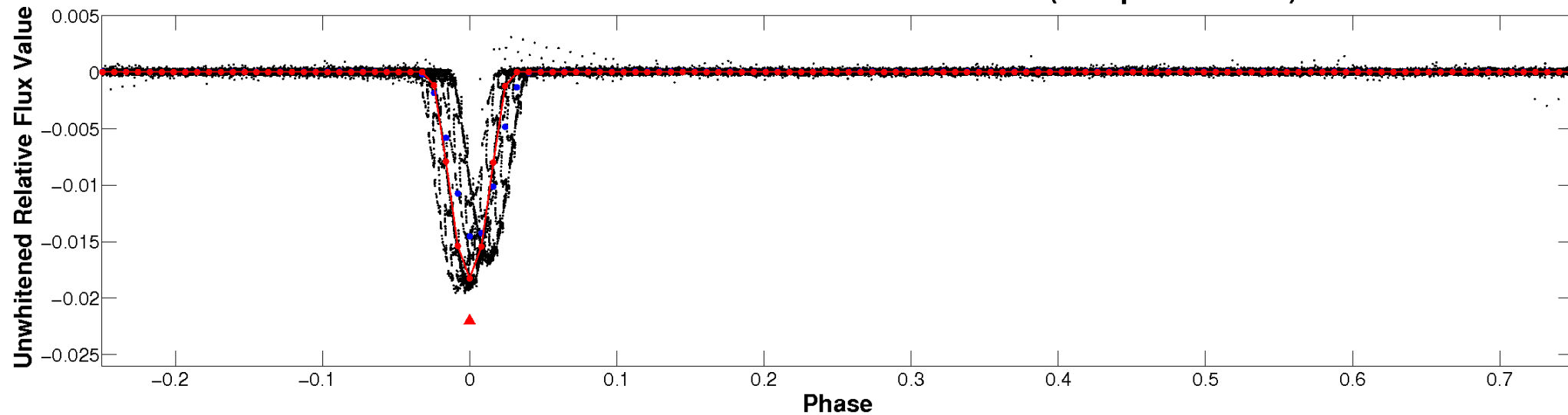
# ALT Odd/Even

TCE 006965293-01

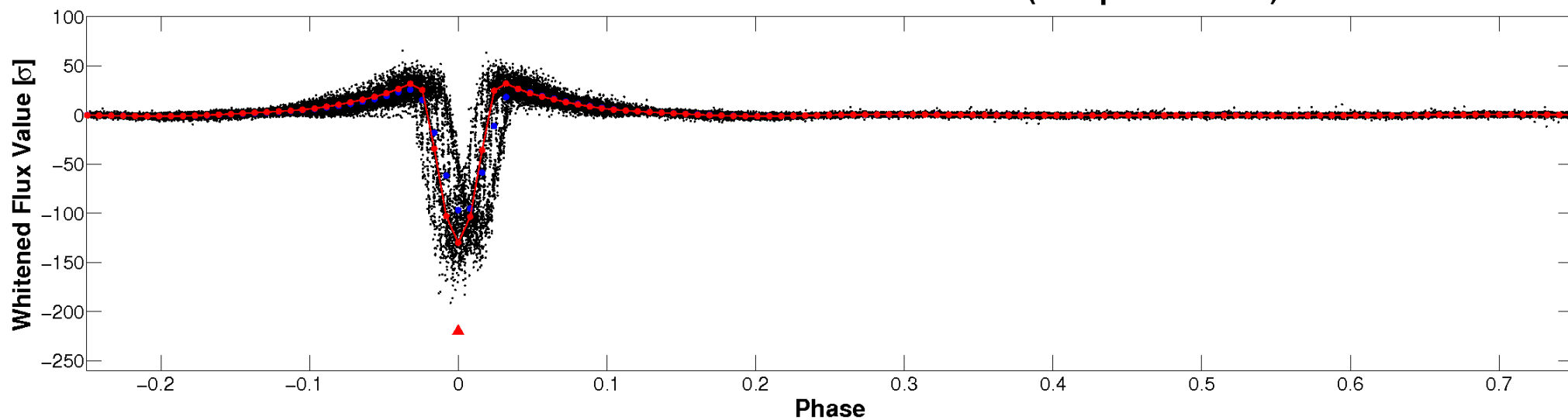


# Non-Whitened Vs. Whitened Light Curve

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



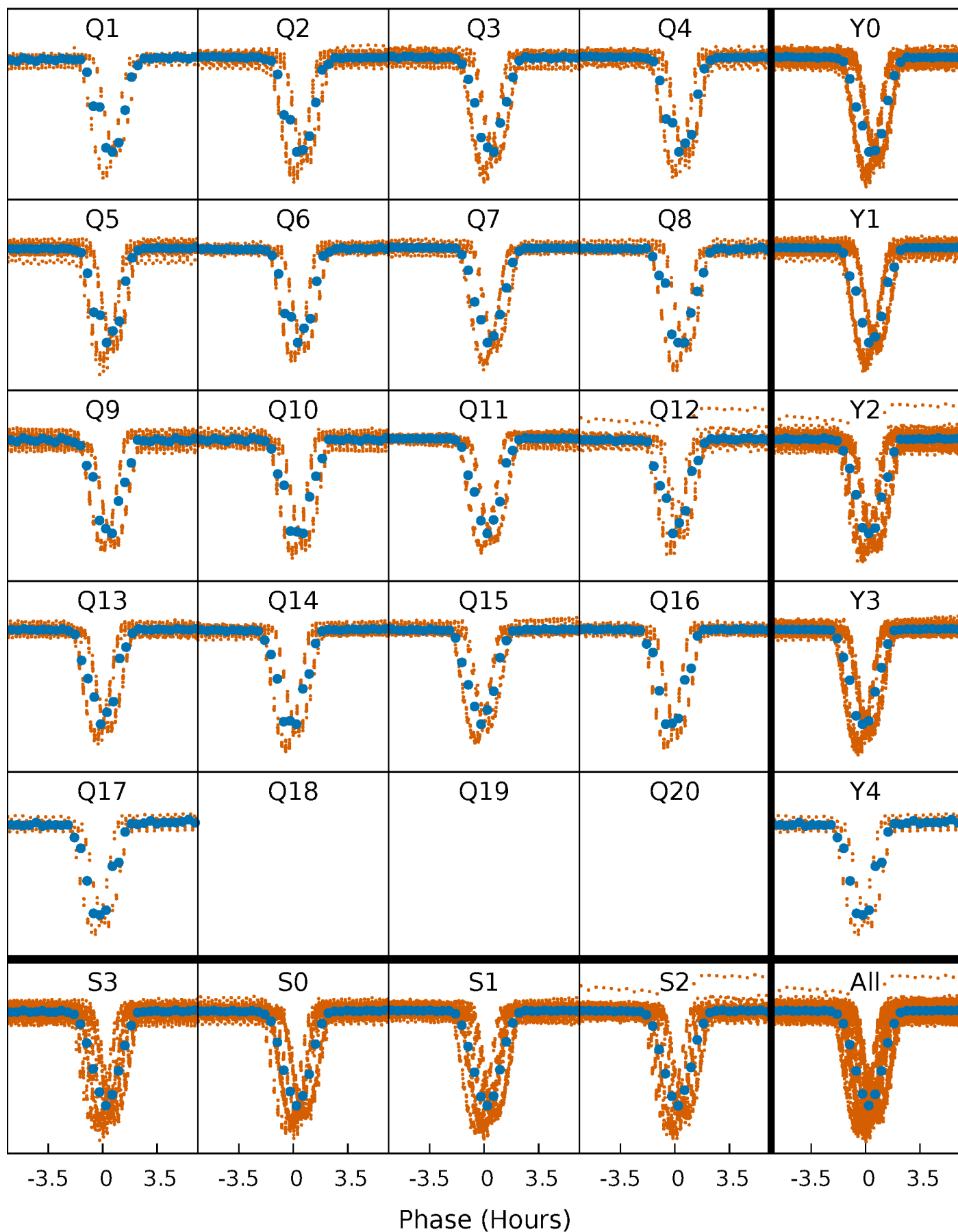
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

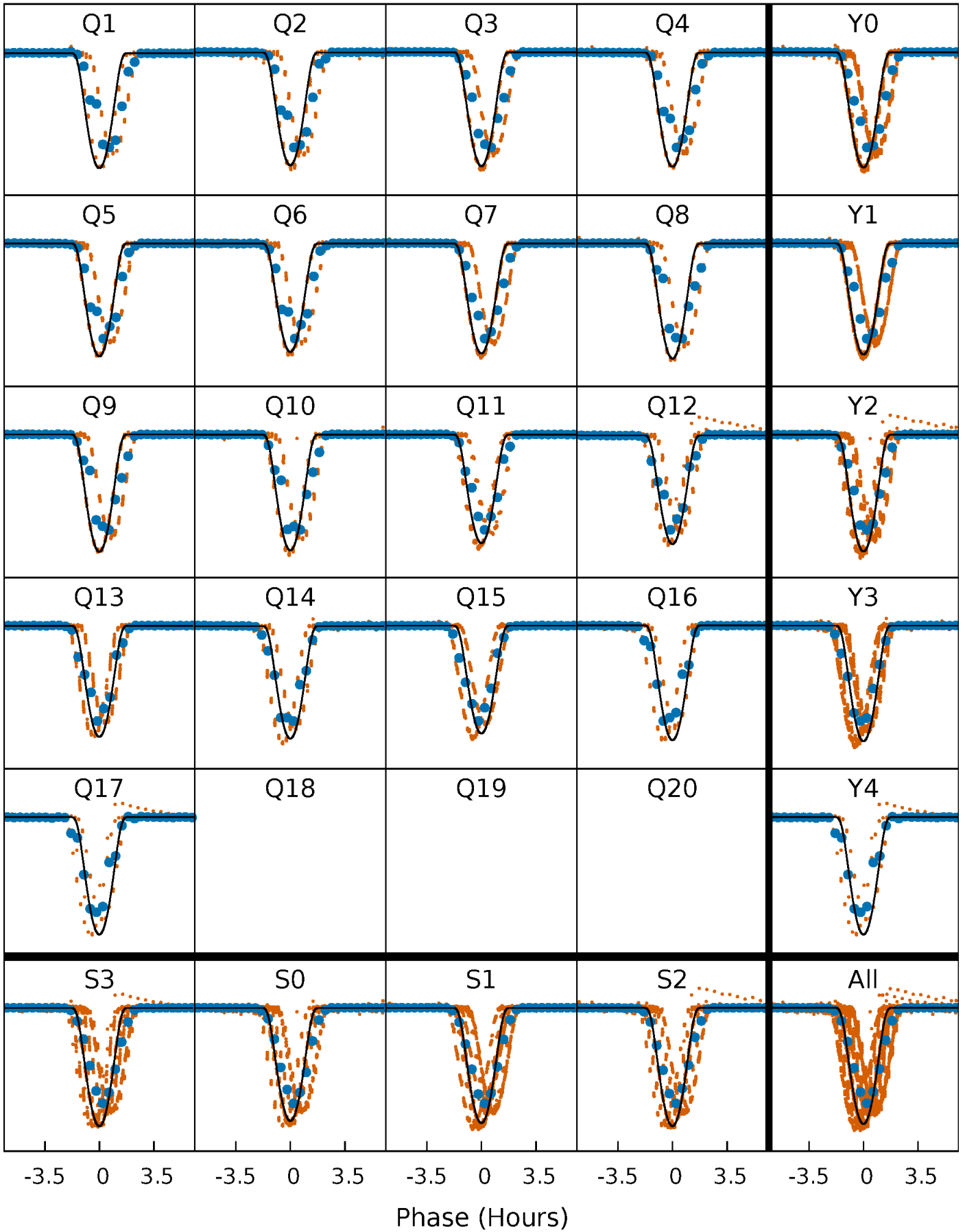
TCE 006965293-01 P= 2.538924 Days  $T_0=132.088607$  (BKJD)





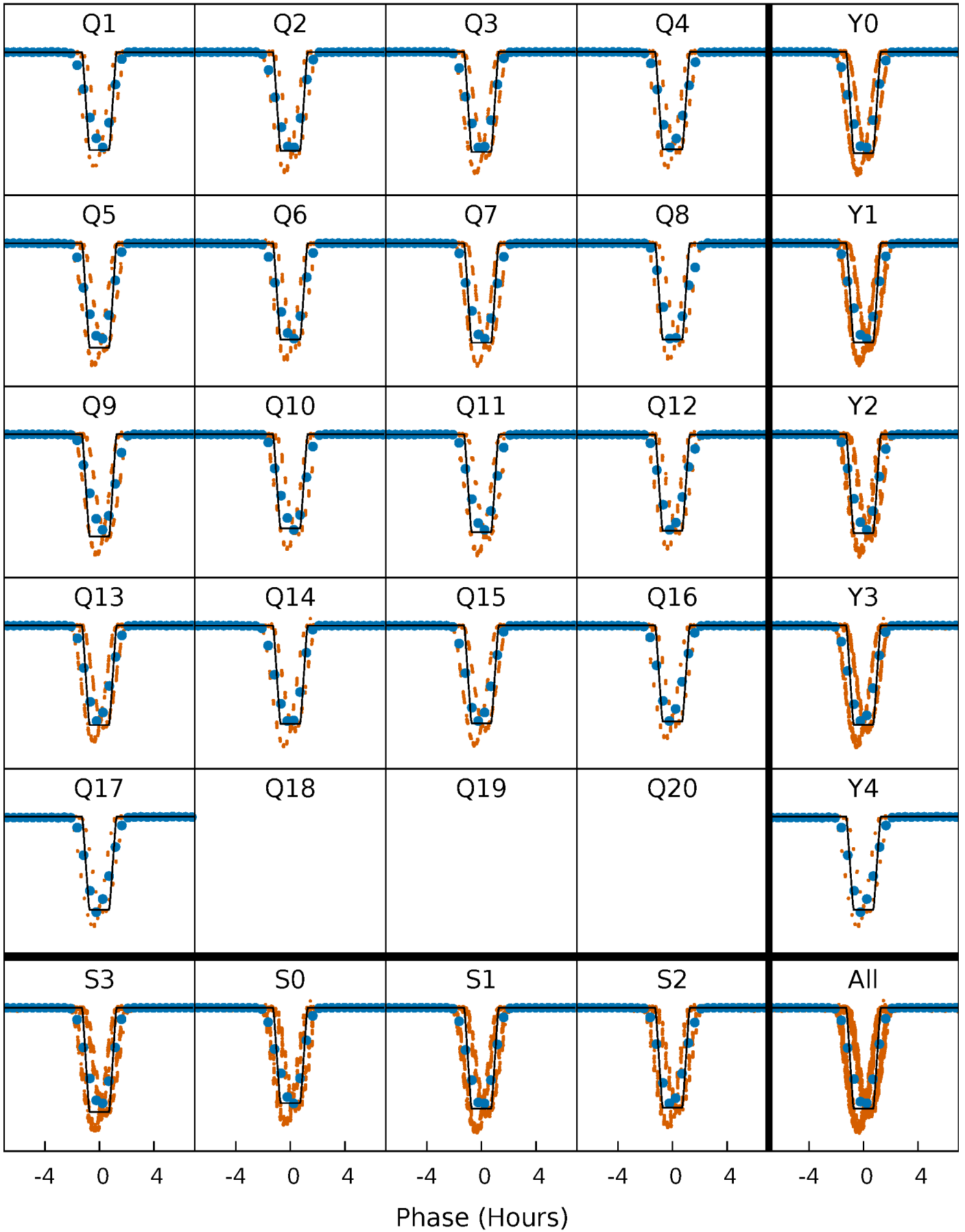
# DV Quarter-Phased Transit Curves

TCE 006965293-01   P= 2.538924 Days    $T_0=132.088607$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

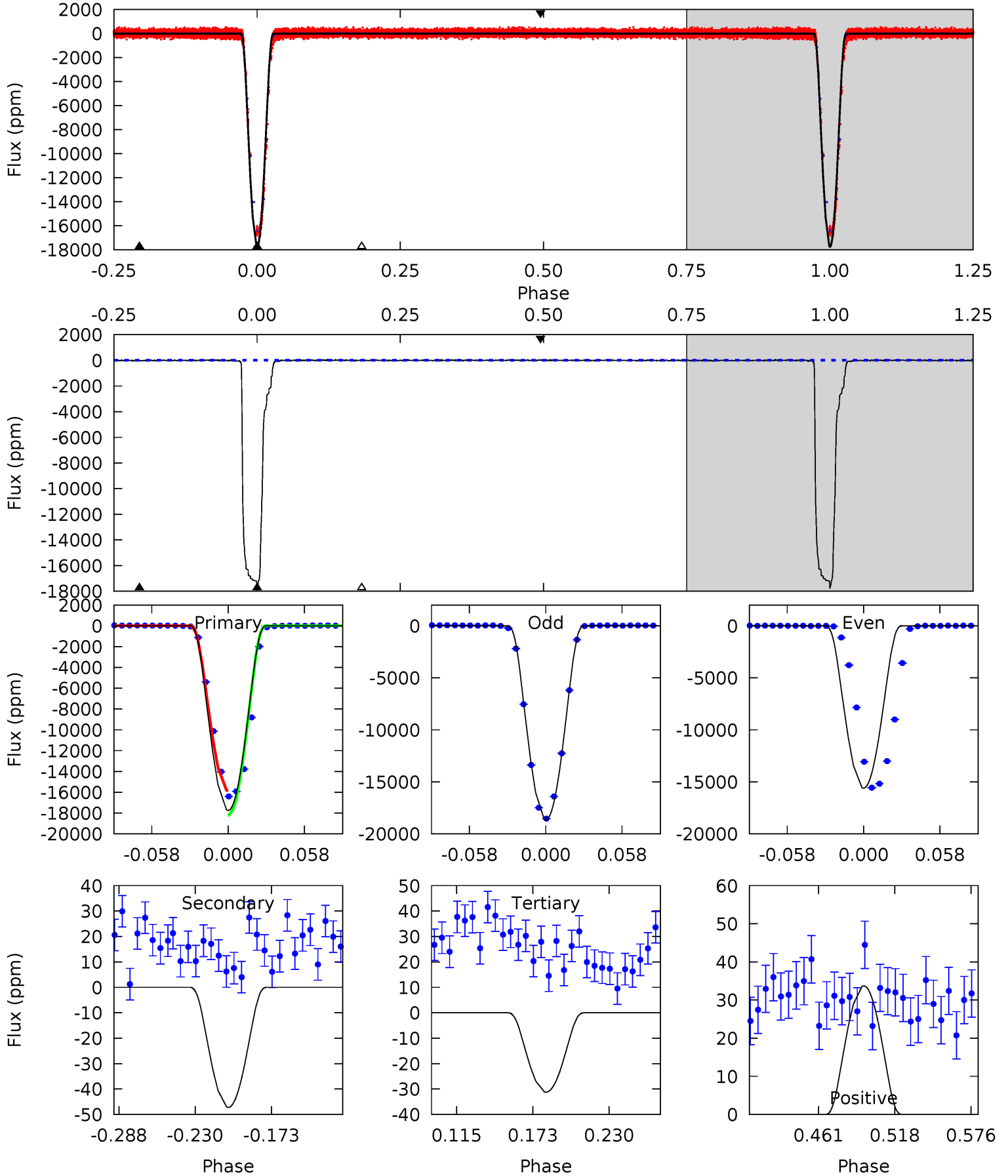
TCE 006965293-01   P= 2.538879 Days    $T_0=132.109950$  (BKJD)



# DV Model-Shift Uniqueness Test

006965293-01, P = 2.538924 Days, E = 129.549683 Days

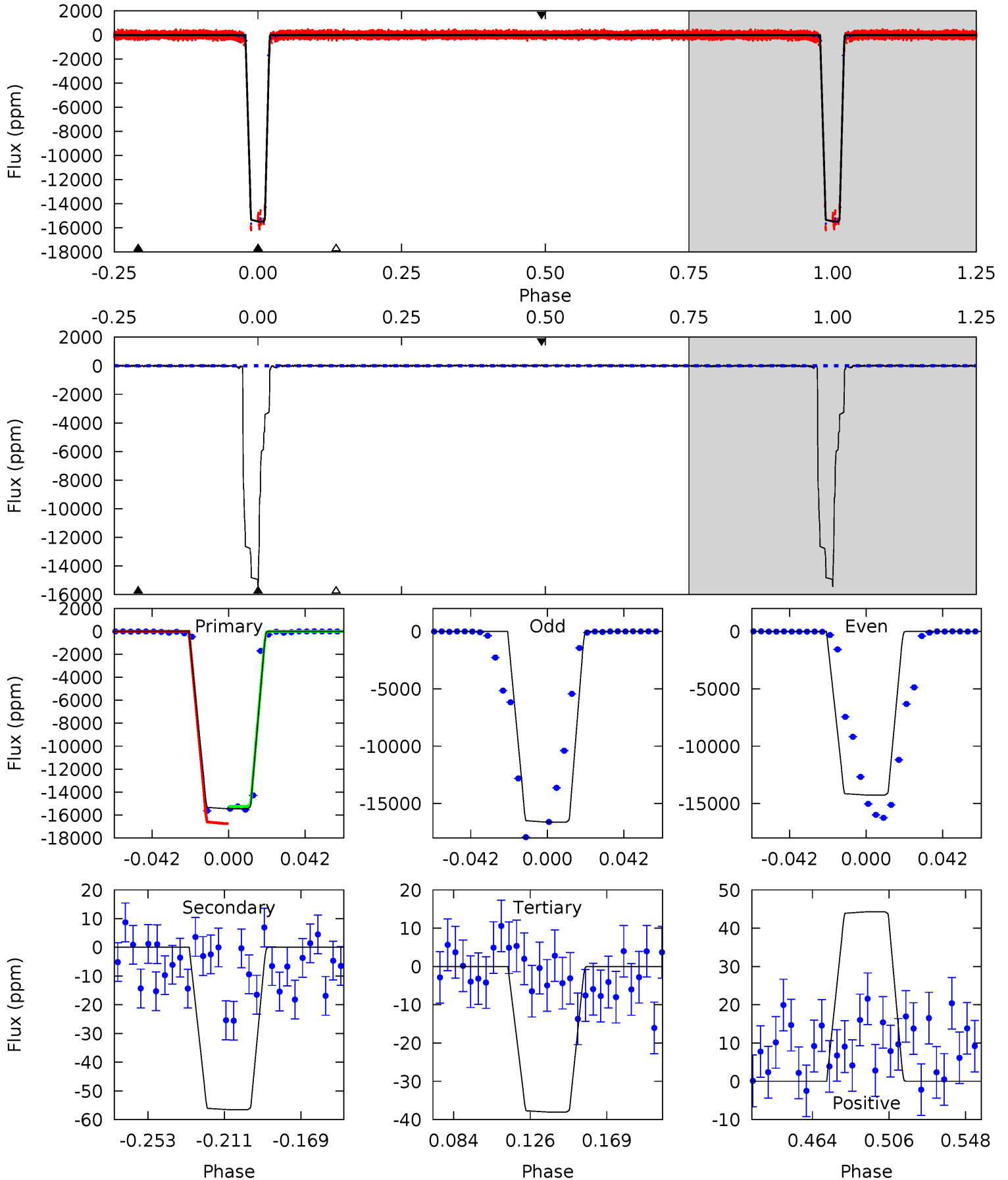
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3302	8.78	5.81	6.27	4.68	1.90	2.11	3296	3295	2.97	2.51	420.8	0.97	0.00	228.2



# Alt Model-Shift Uniqueness Test

006965293-01, P = 2.538879 Days, E = 129.571071 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
1610	5.89	3.96	4.61	4.74	2.03	1.20	1606	1605	1.93	1.28	307.7	1.00	0.00	81.9



### Stellar Parameters For KIC 006965293

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6174^{+166}_{-185}$	$4.235^{+0.186}_{-0.140}$	$-0.260^{+0.300}_{-0.300}$	$1.271^{+0.268}_{-0.268}$	$1.012^{+0.155}_{-0.127}$	$0.695^{+0.613}_{-0.284}$
	+3%/-3%	+4%/-3%	+115%/-115%	+21%/-21%	+15%/-13%	+88%/-41%
Source	PHO1	FLK73	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 006965293-01 / KOI 6800.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-47 \pm 5$	$23.81^{+3.04}_{-2.84}$	$2232^{+132}_{-143}$	$-2562^{+103}_{-91}$	$0.061^{+0.018}_{-0.013}$
Alt.	$-57 \pm 10$	$17.33^{+2.28}_{-2.04}$	$2230^{+136}_{-137}$	$-2435^{+140}_{-124}$	$0.139^{+0.044}_{-0.033}$

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

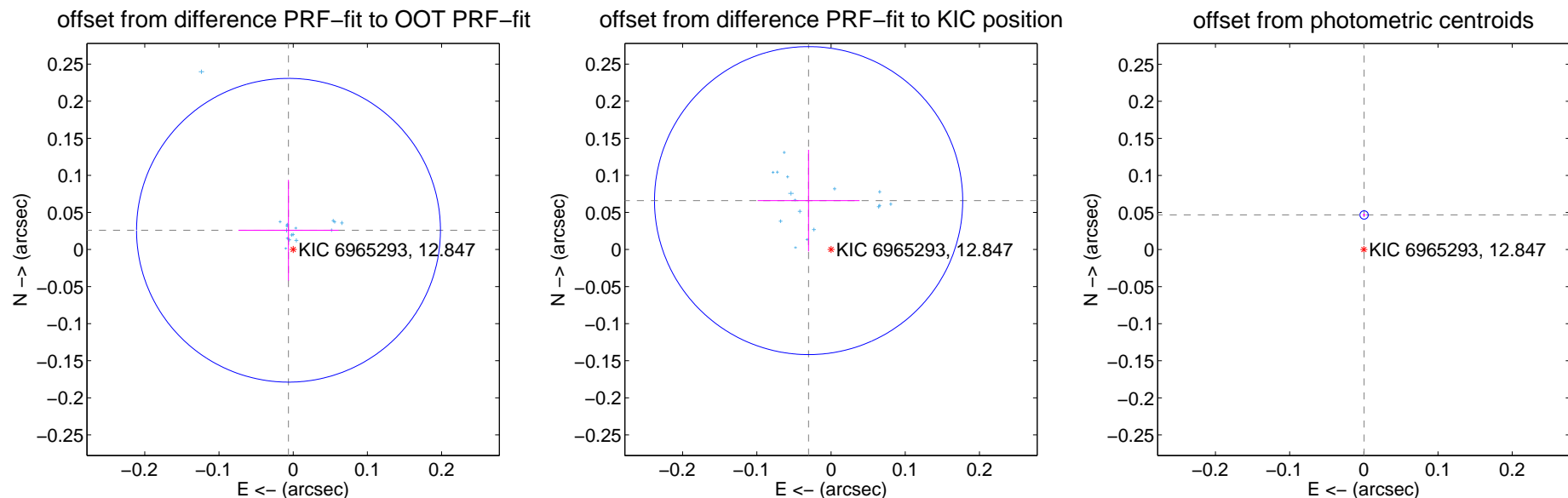
## DV Centroid Data

Supplemental centroid analysis for 006965293-01. Kepler magnitude: 12.85. Transit SNR 2992.73

There are 17 quarters with good PRF difference image offsets

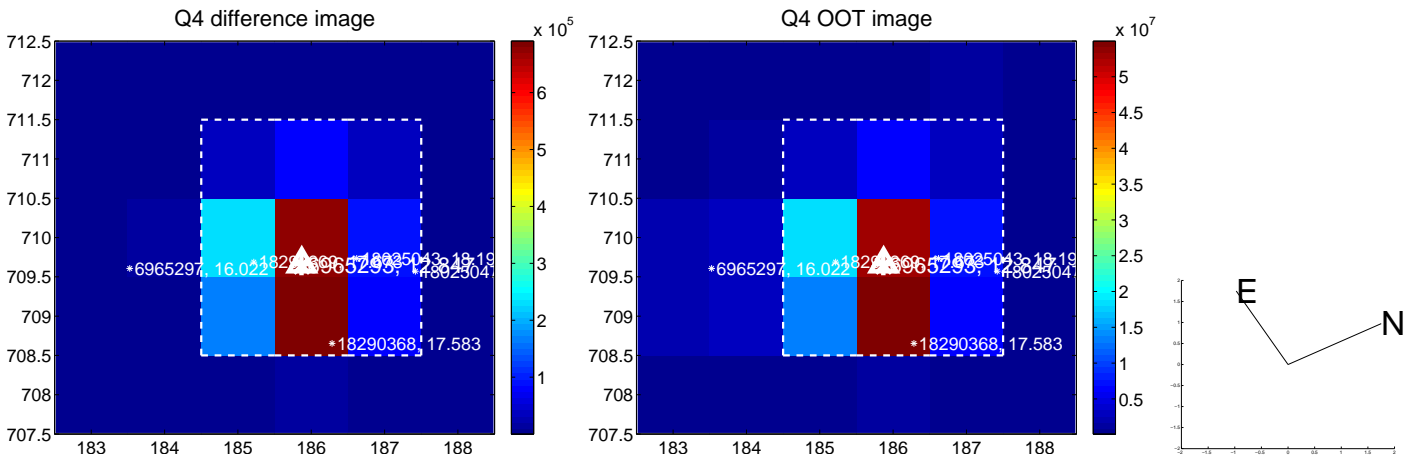
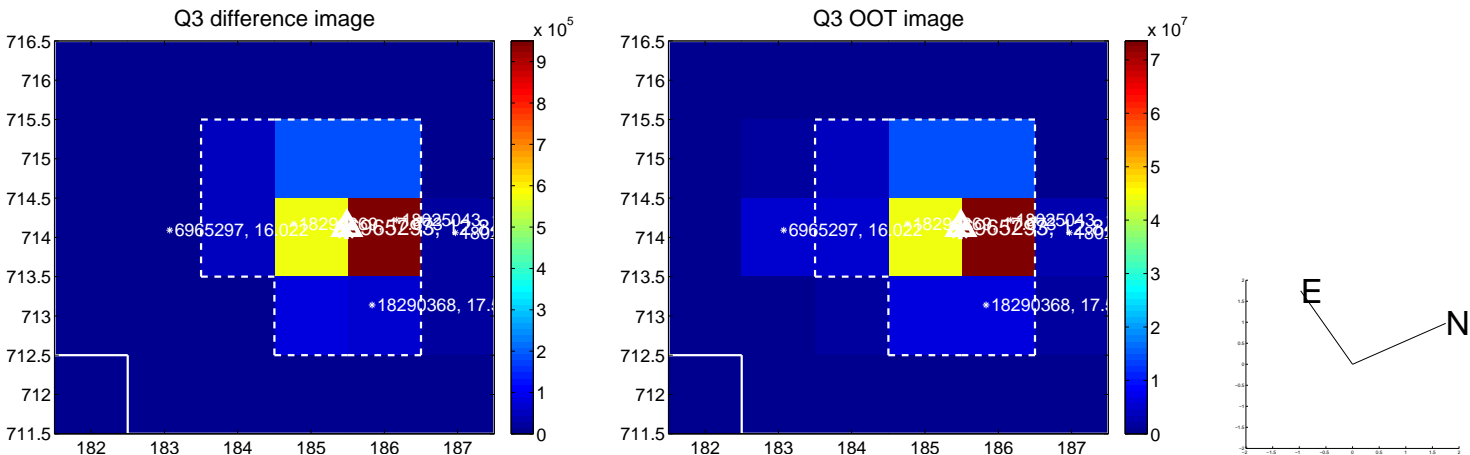
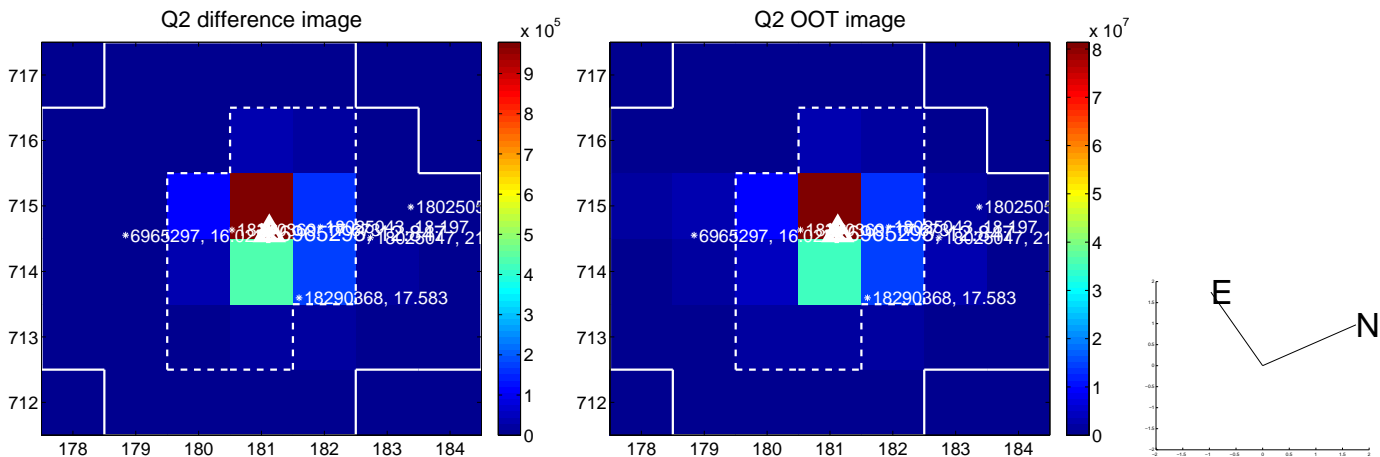
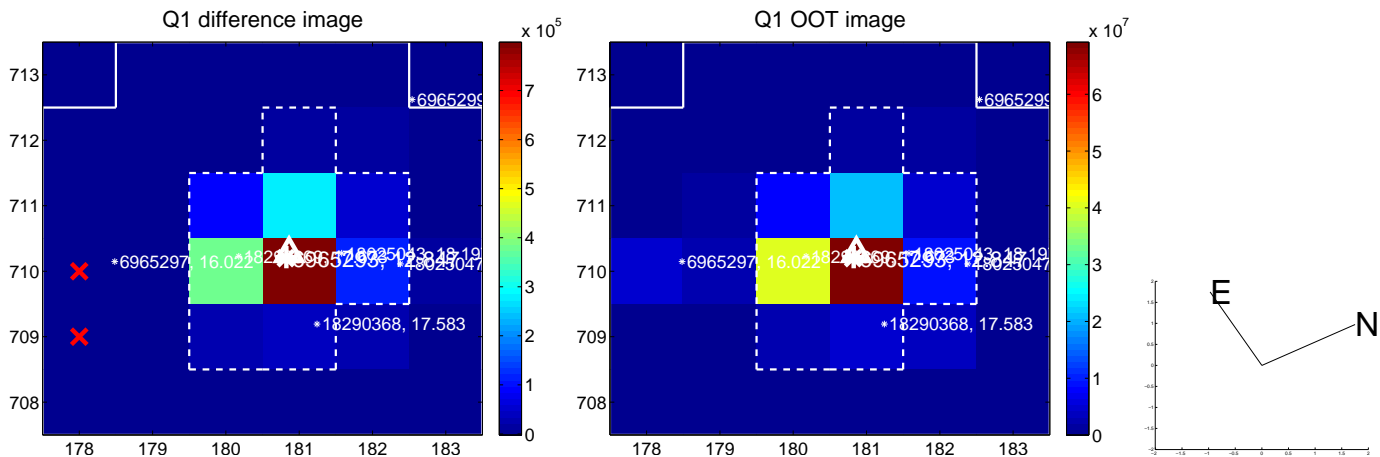
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.027 \pm 0.068$	0.39	$0.006 \pm 0.067$	$0.026 \pm 0.068$
PRF-fit source offset from KIC position	$0.073 \pm 0.069$	1.05	$0.030 \pm 0.069$	$0.066 \pm 0.068$
photometric centroid source offset	$0.05 \pm 0.00$	24.91	$-0.00 \pm 0.00$	$0.05 \pm 0.00$



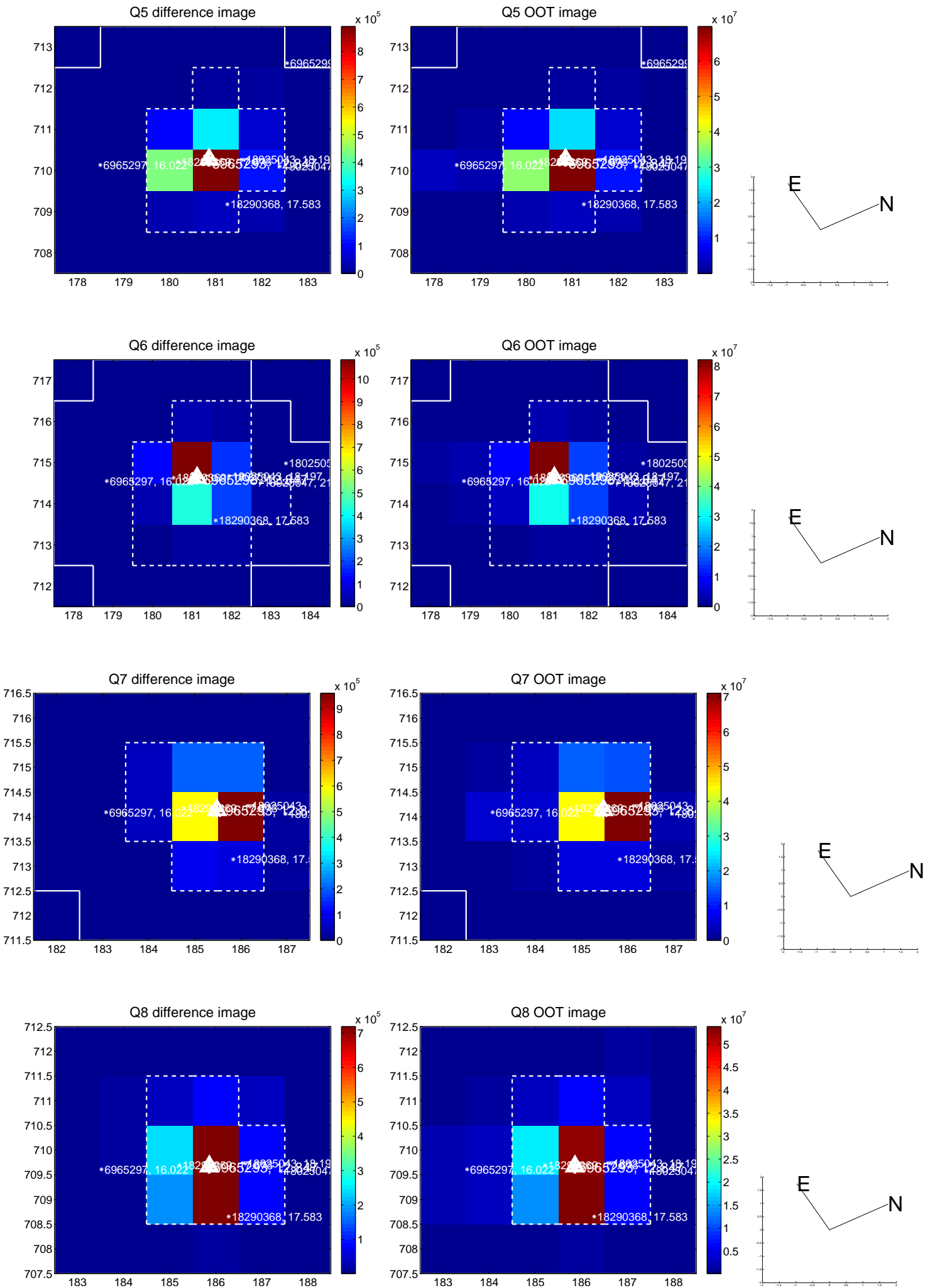
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

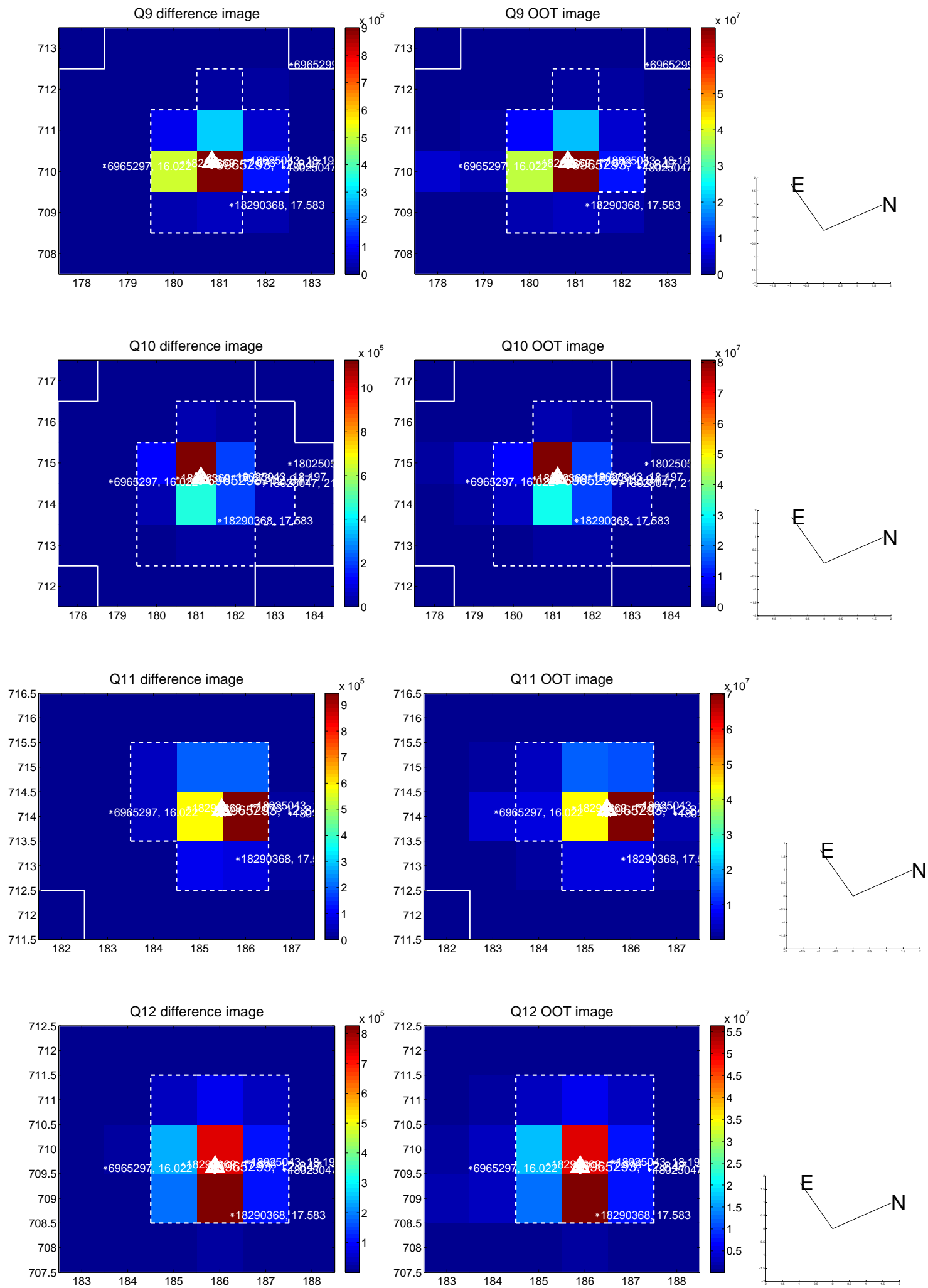




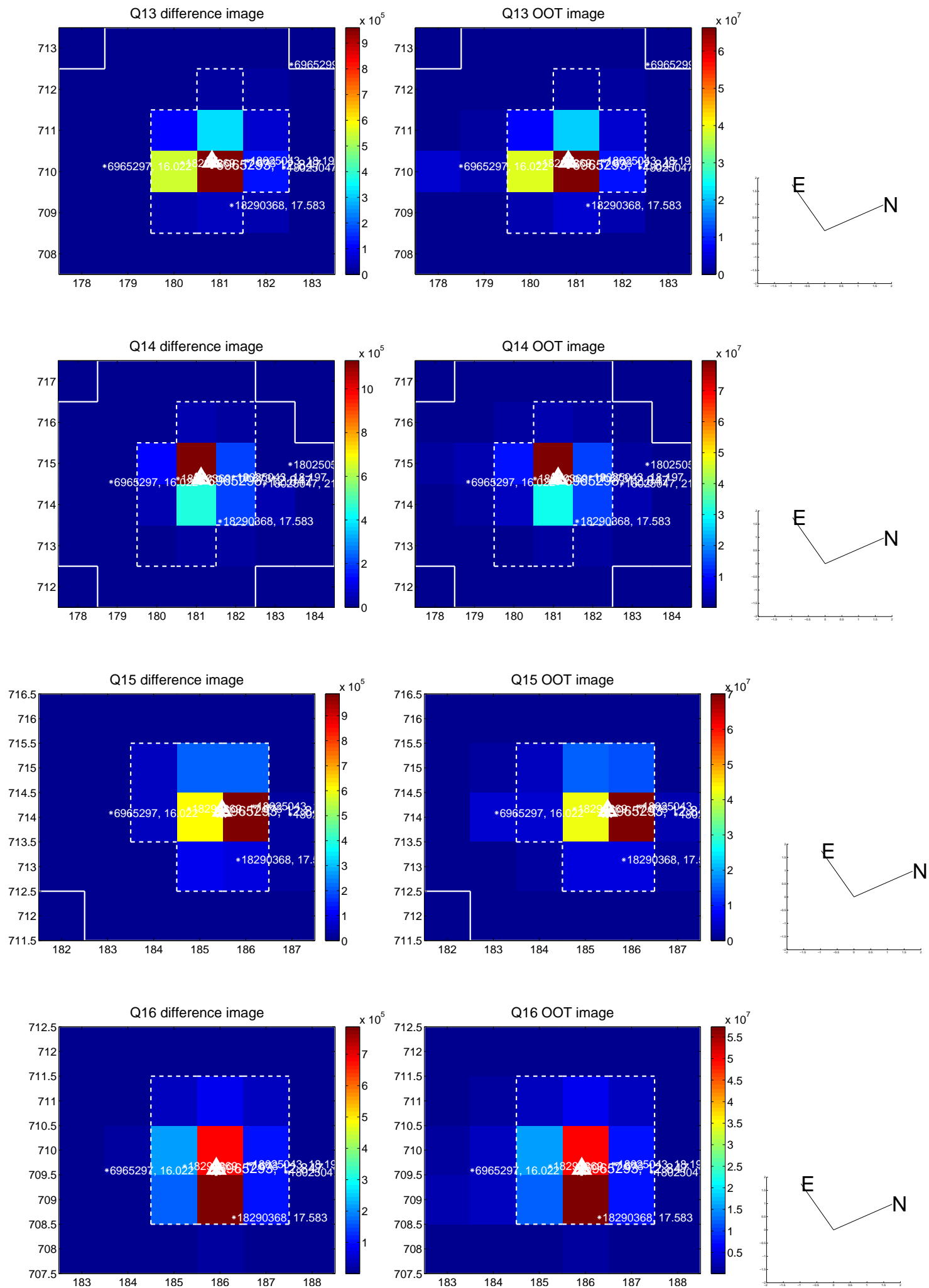
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.





UKIRT Image

