

# KIC 005695524

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005695524-01	OBS	1897.01	59.770833	148.972332	558.4	4.794	29.7	32.0	1.12	6214	3.11	17.55

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005695524-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT

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

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

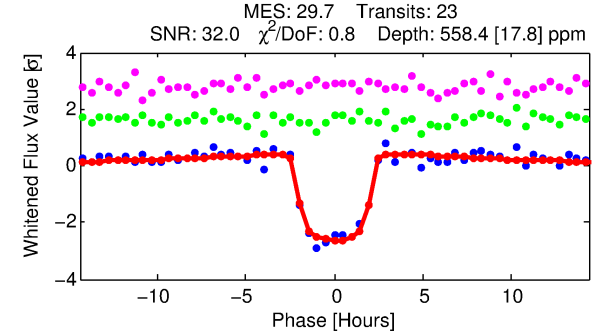
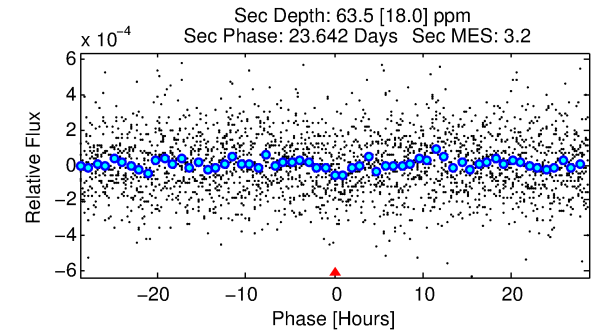
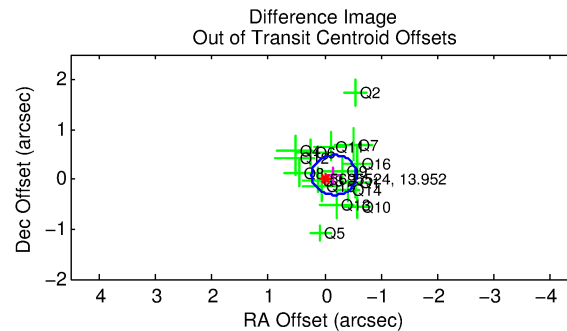
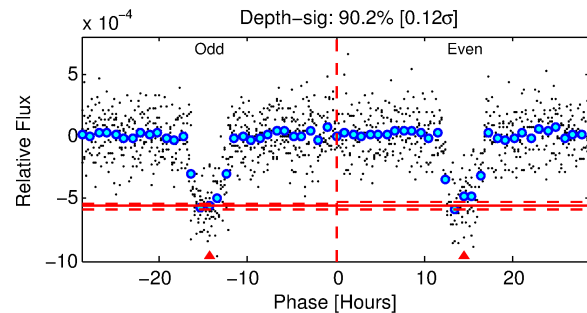
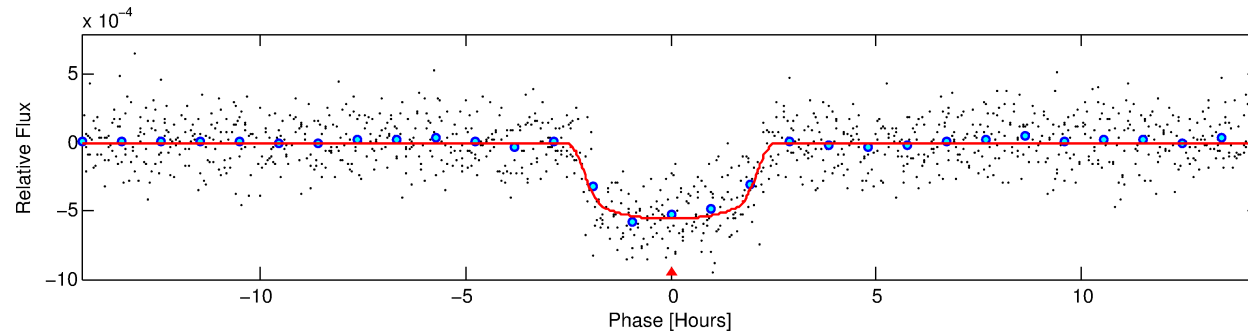
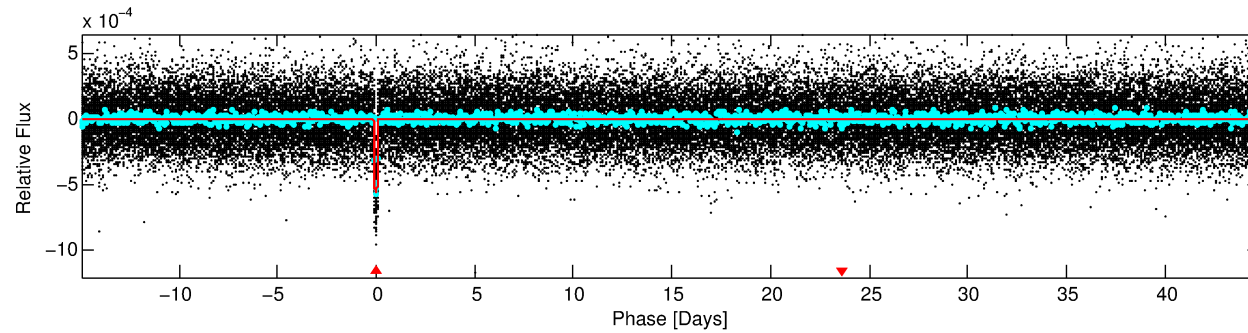
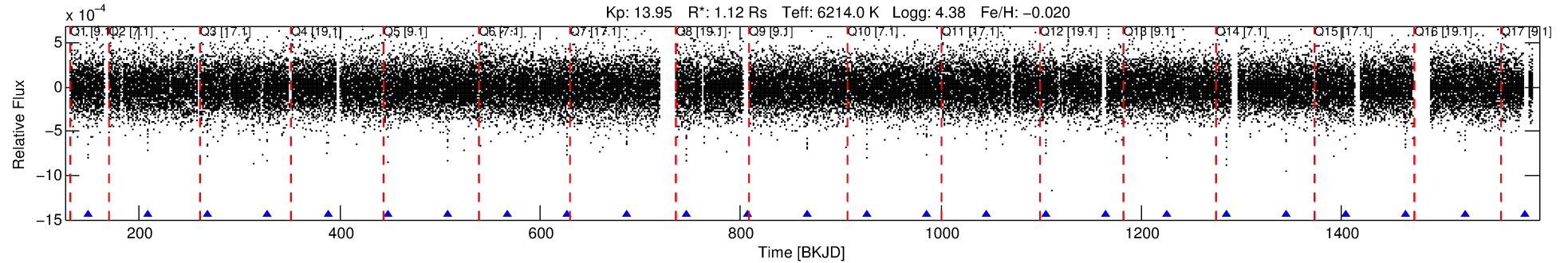
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005695524-01

No Significant Match Found

# DV One-Page Summary

KIC: 5695524 Candidate: 1 of 1 Period: 59.771 d  
KOI: K01897.01 Corr: 0.967



## DV Fit Results:

Period = 59.77083 [0.00020] d  
Epoch = 148.9723 [0.0027] BKJD  
Rp/R\* = 0.0254 [0.0013]  
a/R\* = 47.44 [11.71]  
b = 0.90 [0.05]  
Seff = 17.55 [7.50]  
Teq = 522 [56] K  
Rp = 3.11 [1.08] Re  
a = 0.3095 [0.0874] AU  
Ag = 346.52 [174.60] [1.98 $\sigma$ ]  
Teffp = 3482 [289] K [10.05 $\sigma$ ]

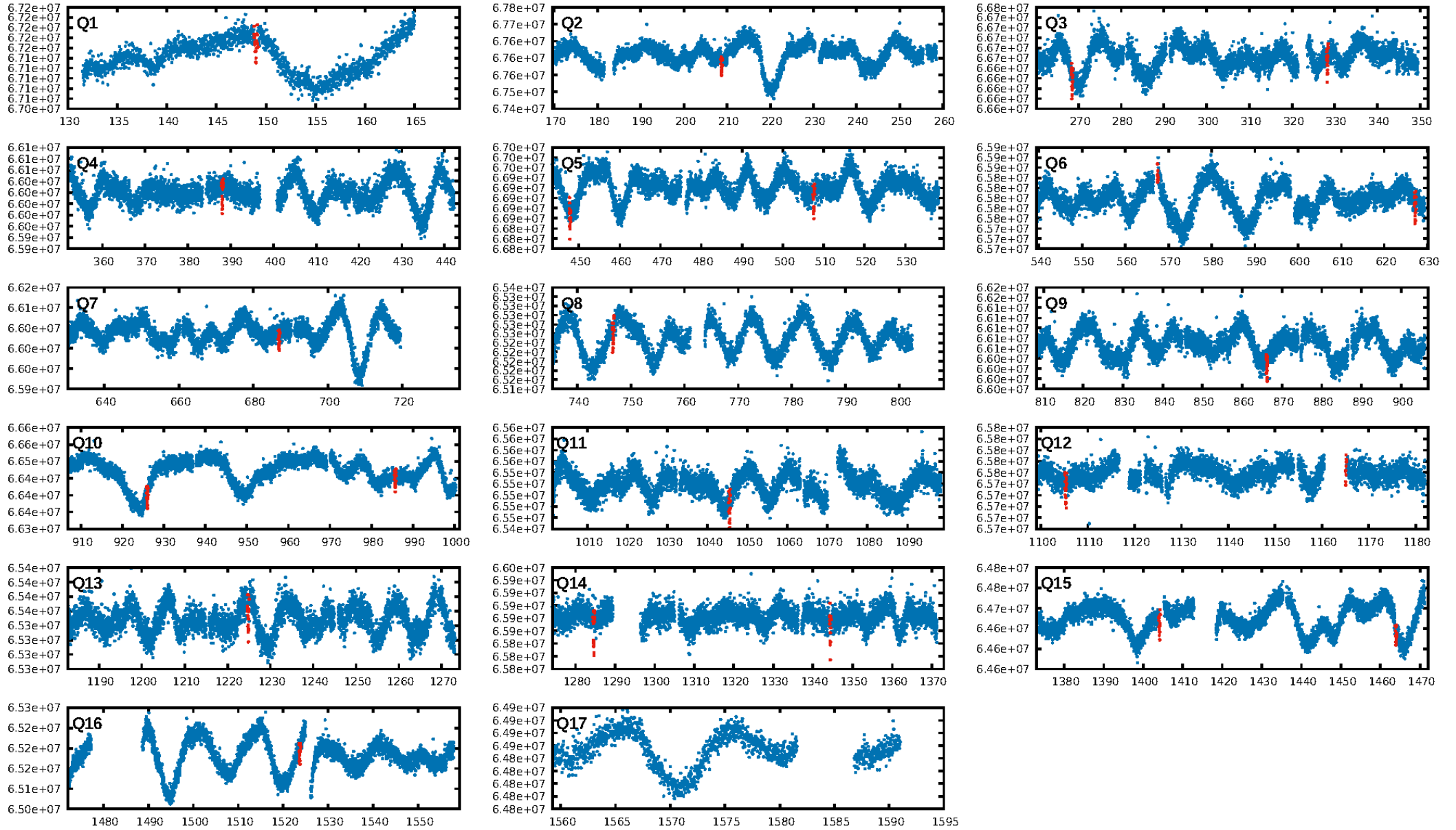
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 89.7%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 7.10e-169  
RollingBand-fgt: 1.00 [22/22]  
GhostDiagnostic-chr: 6.599  
Centroid-sig: 20.5%  
Centroid-so: 0.407 arcsec [1.12 $\sigma$ ]  
OotOffset-rm: 0.184 arcsec [1.38 $\sigma$ ]  
KicOffset-rm: 0.209 arcsec [1.58 $\sigma$ ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [16/16]

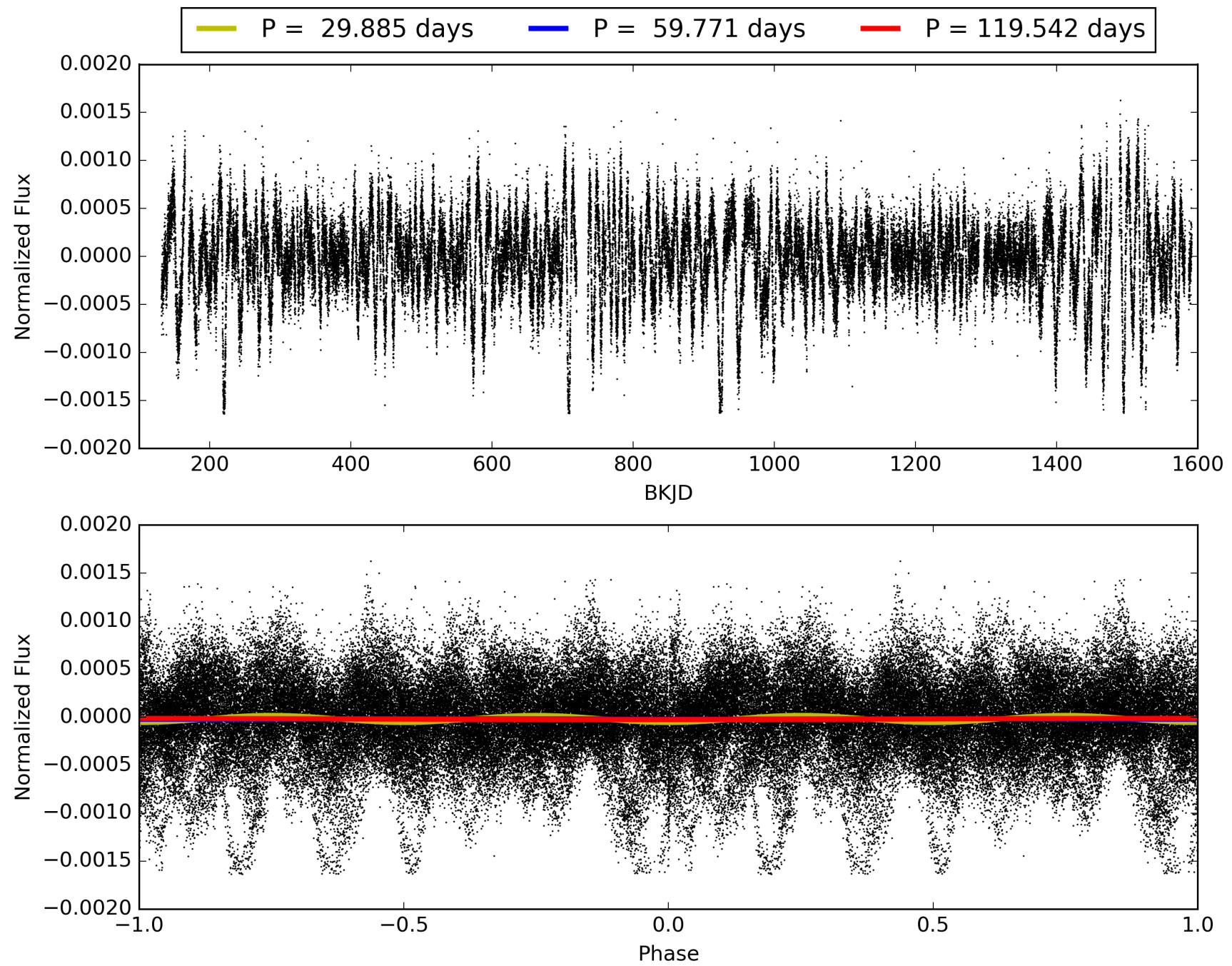
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:44:32 Z

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

# TCE 005695524-01, PDC Light Curves

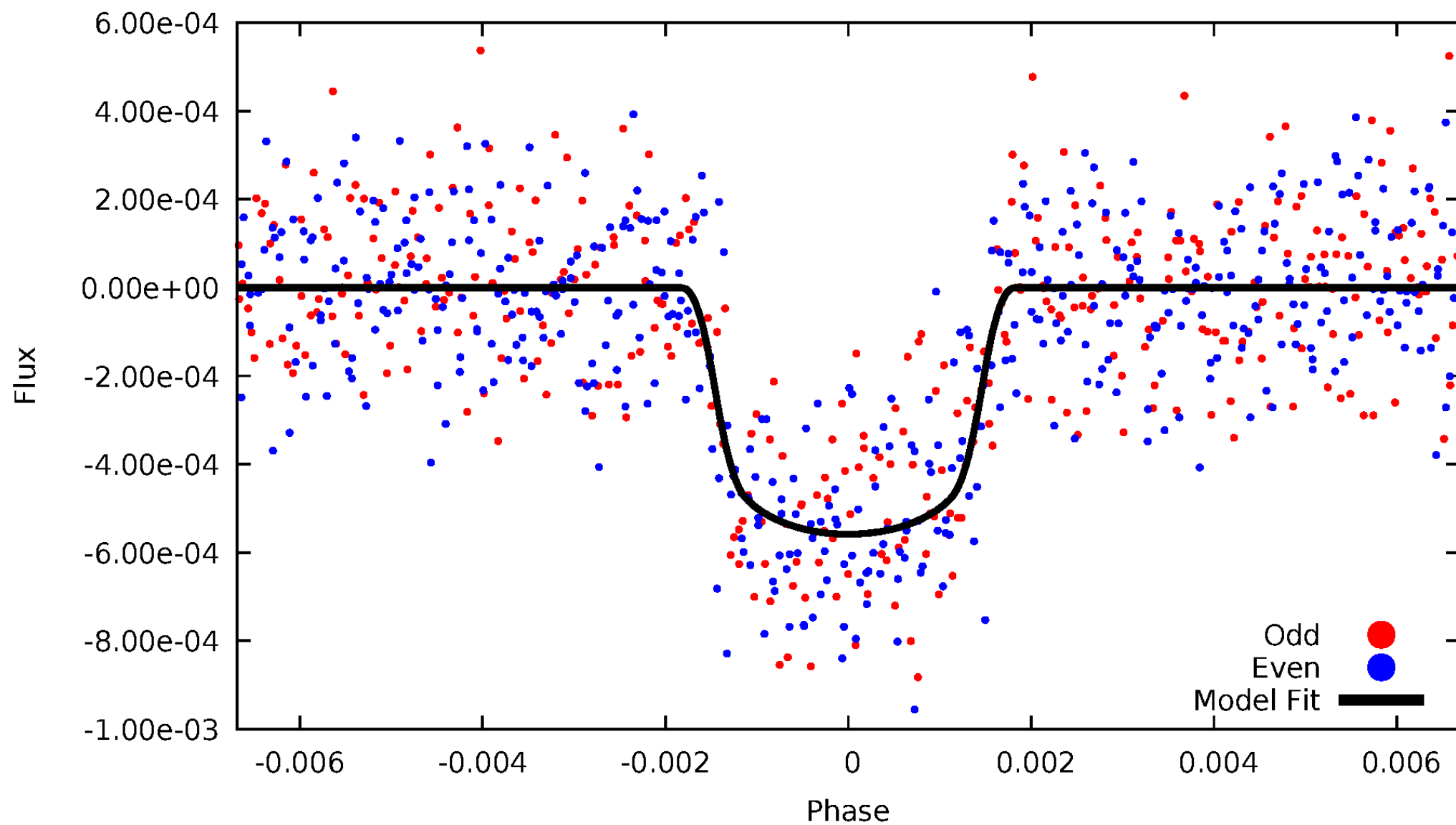


TCE 005695524-01



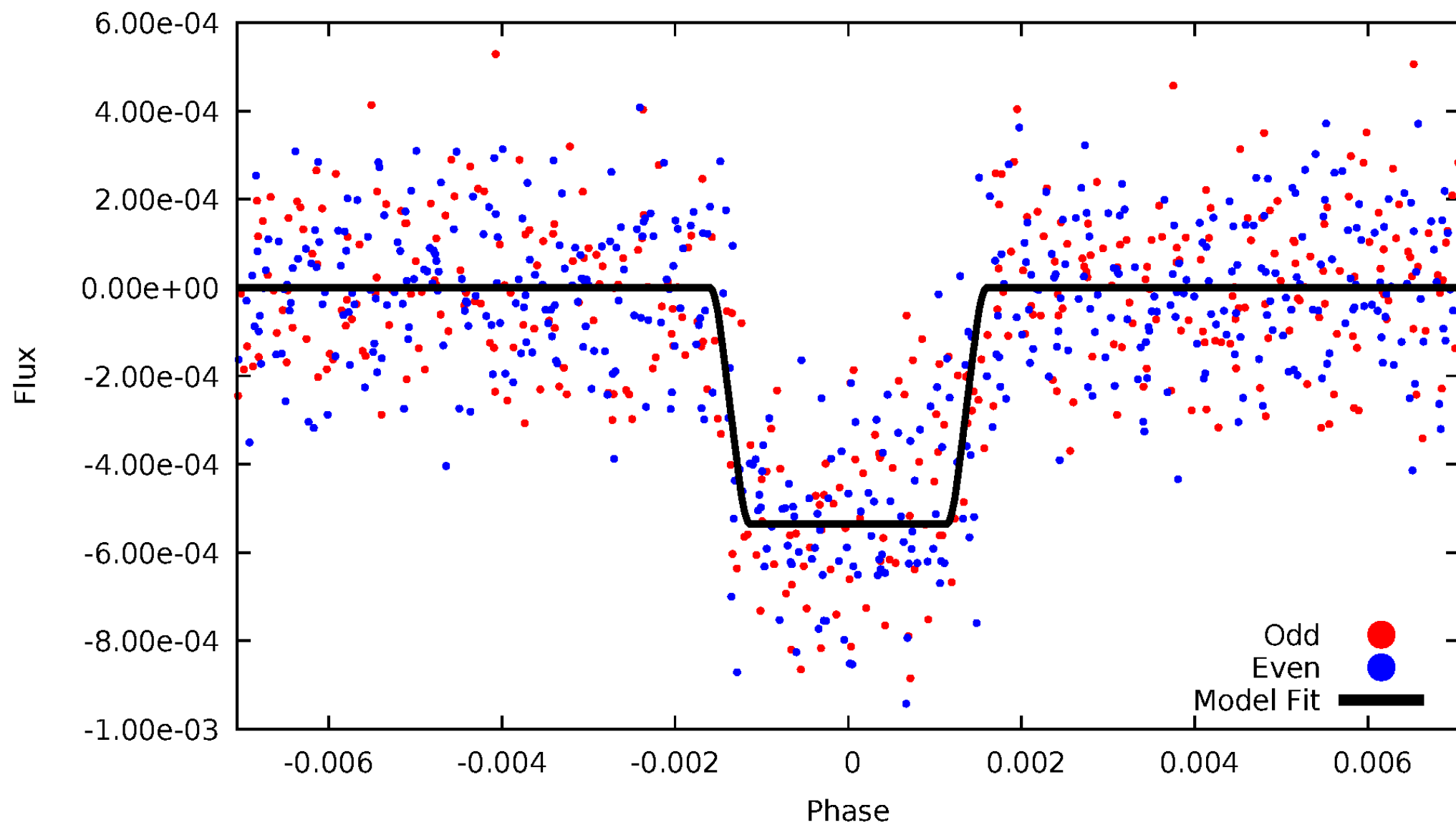
# DV Odd/Even

TCE 005695524-01

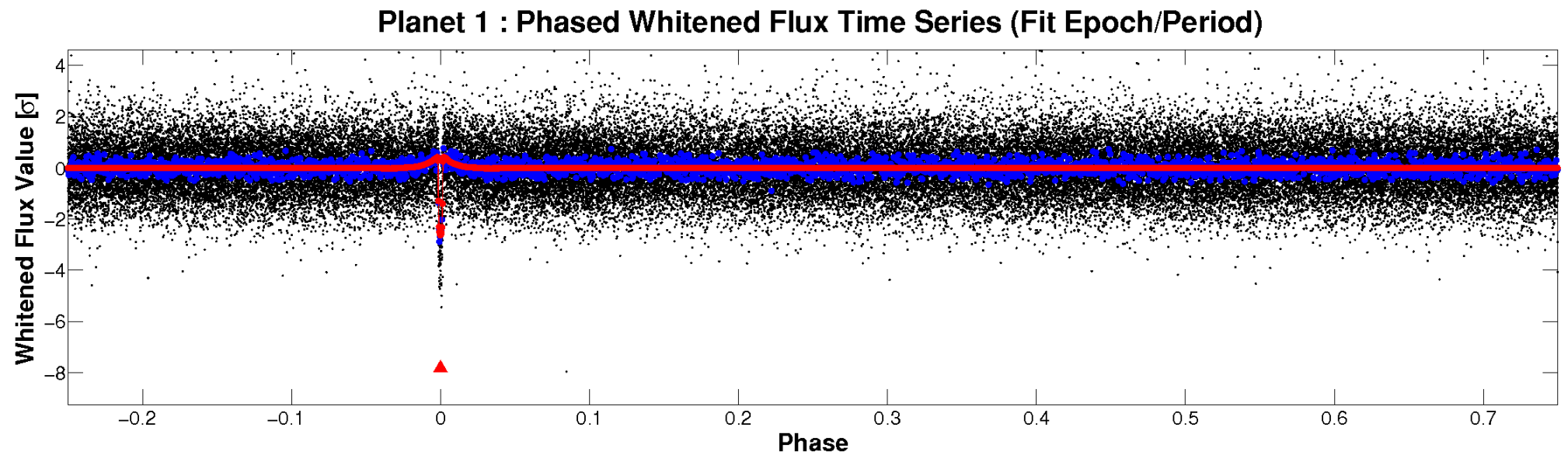
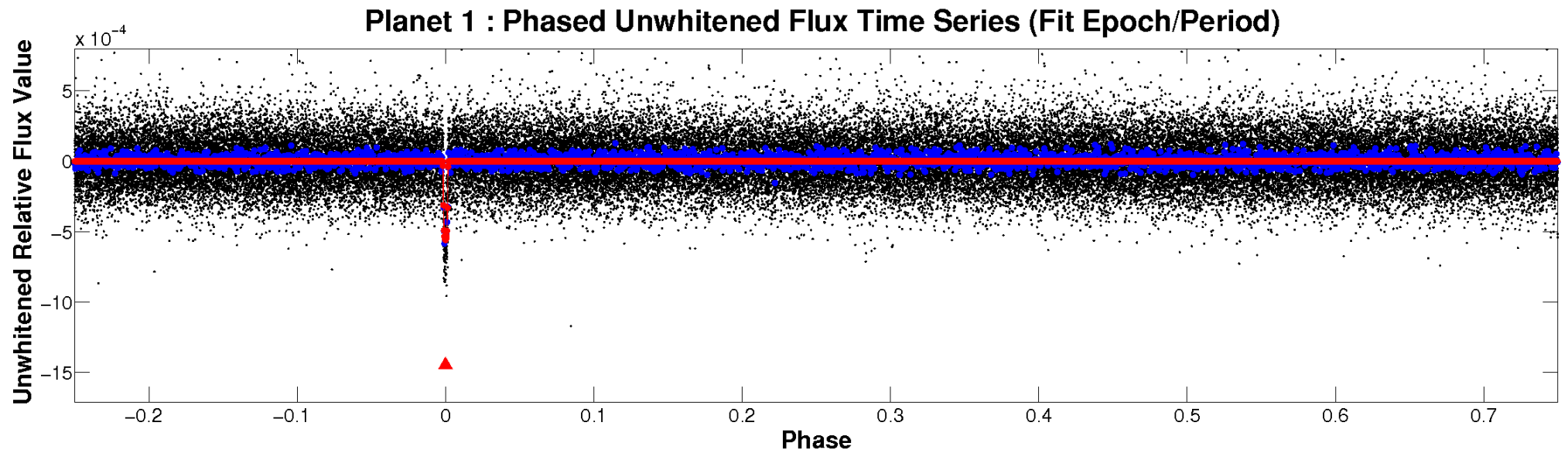


# ALT Odd/Even

TCE 005695524-01

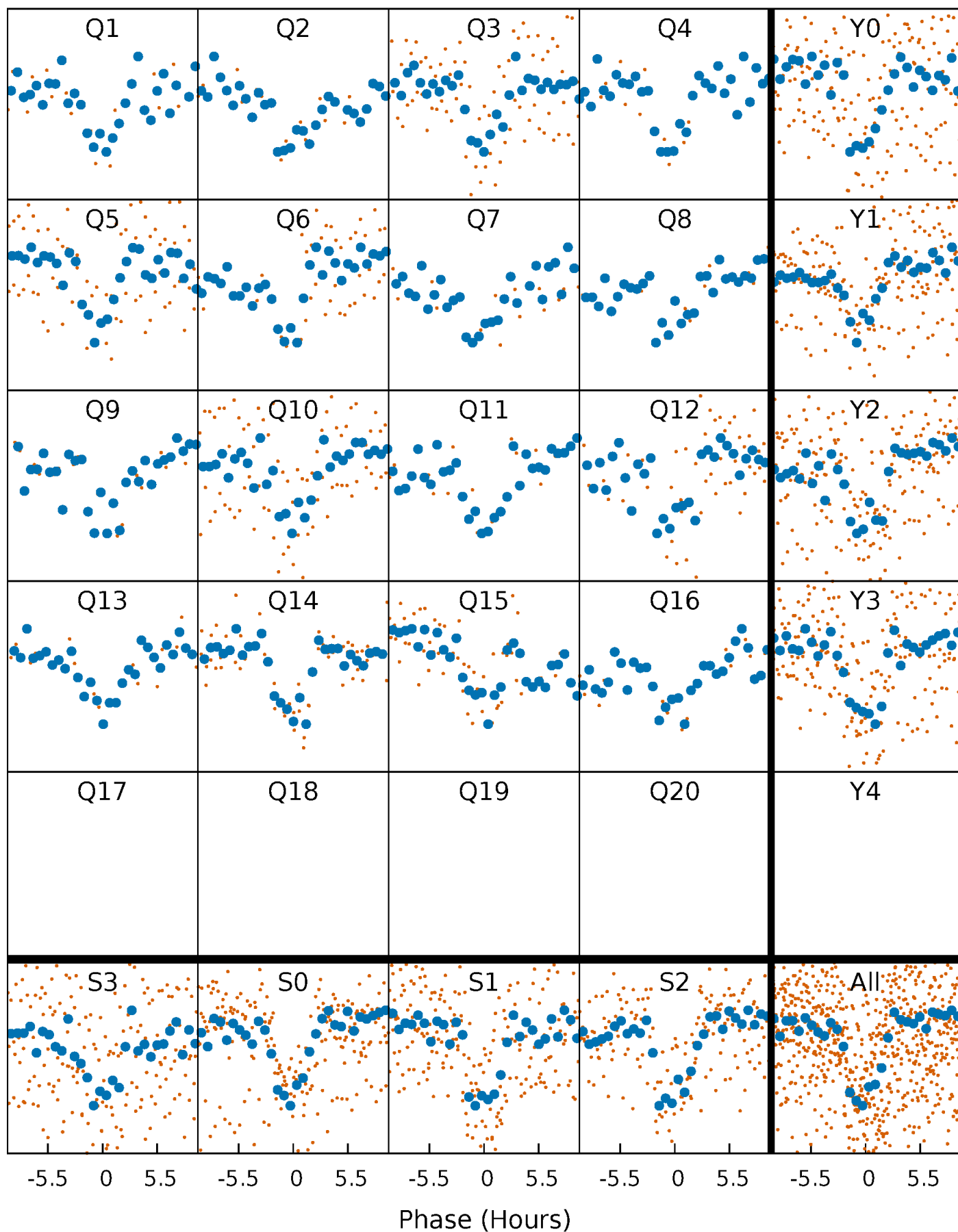


# Non-Whitened Vs. Whitened Light Curve



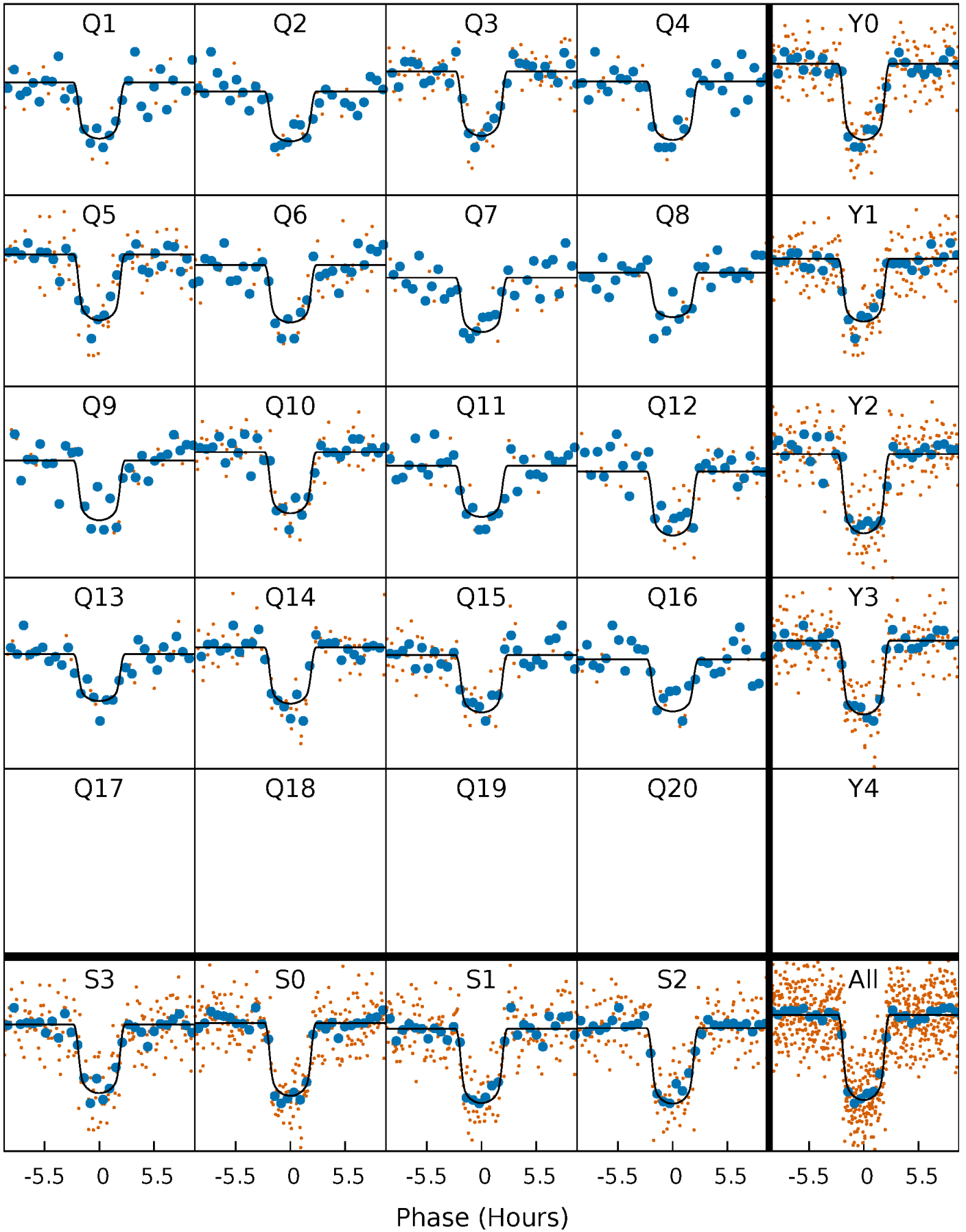
# PDC Quarter-Phased Transit Curves

TCE 005695524-01 P= 59.770833 Days  $T_0=148.972332$  (BKJD)



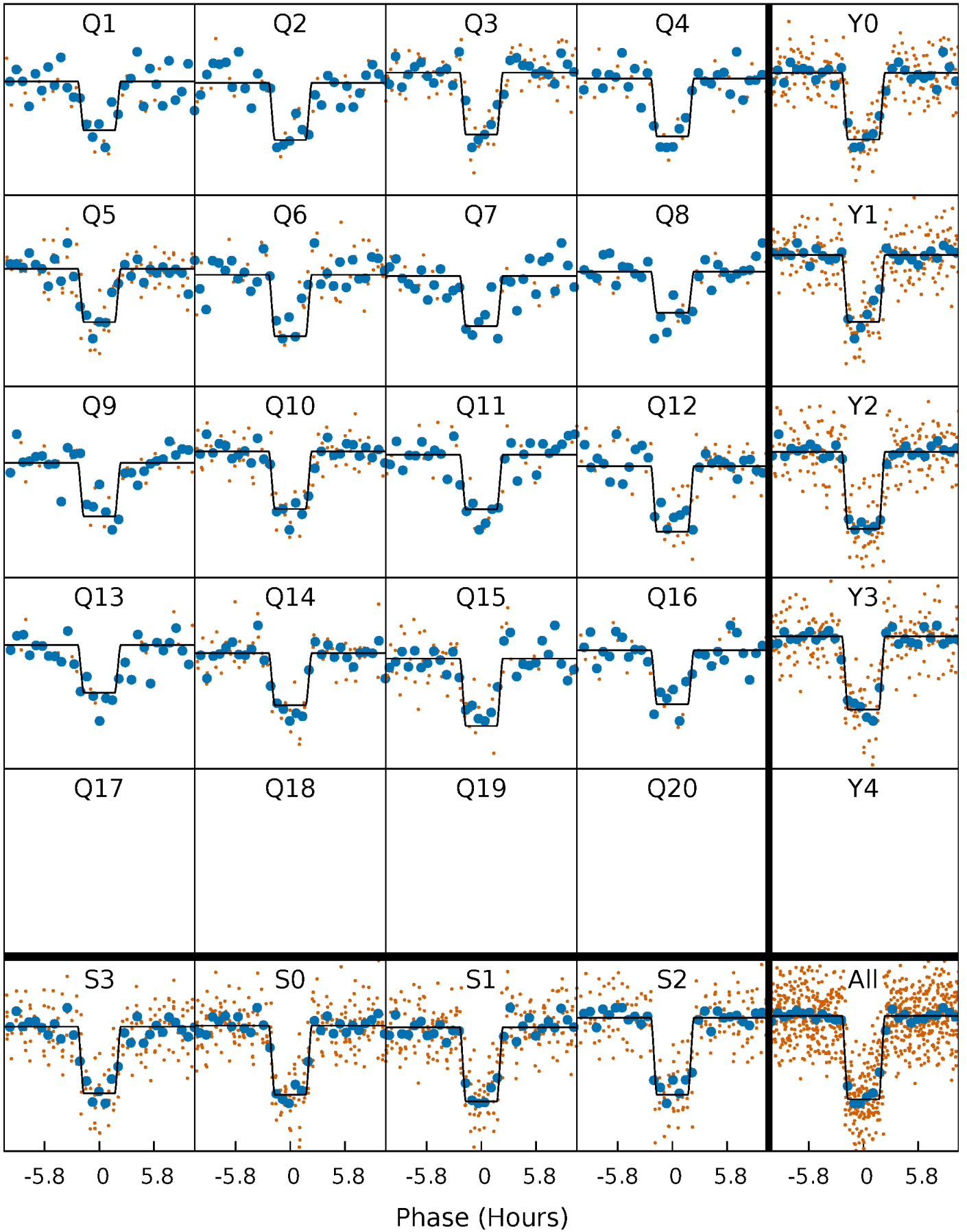
# DV Quarter-Phased Transit Curves

TCE 005695524-01   P= 59.770833 Days    $T_0=148.972332$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

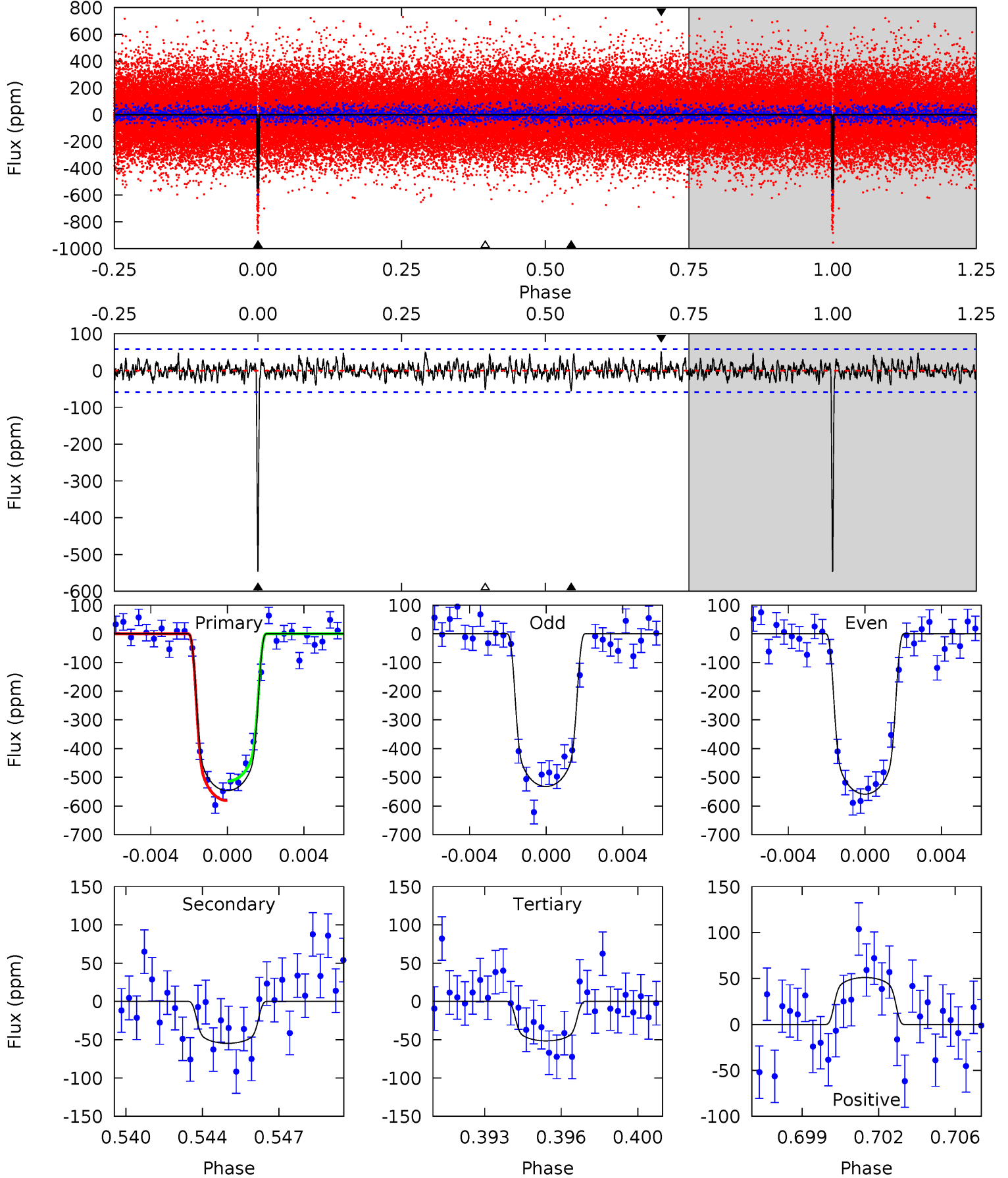
TCE 005695524-01 P= 59.771436 Days  $T_0=148.963722$  (BKJD)



# DV Model-Shift Uniqueness Test

005695524-01, P = 59.770833 Days, E = 89.201499 Days

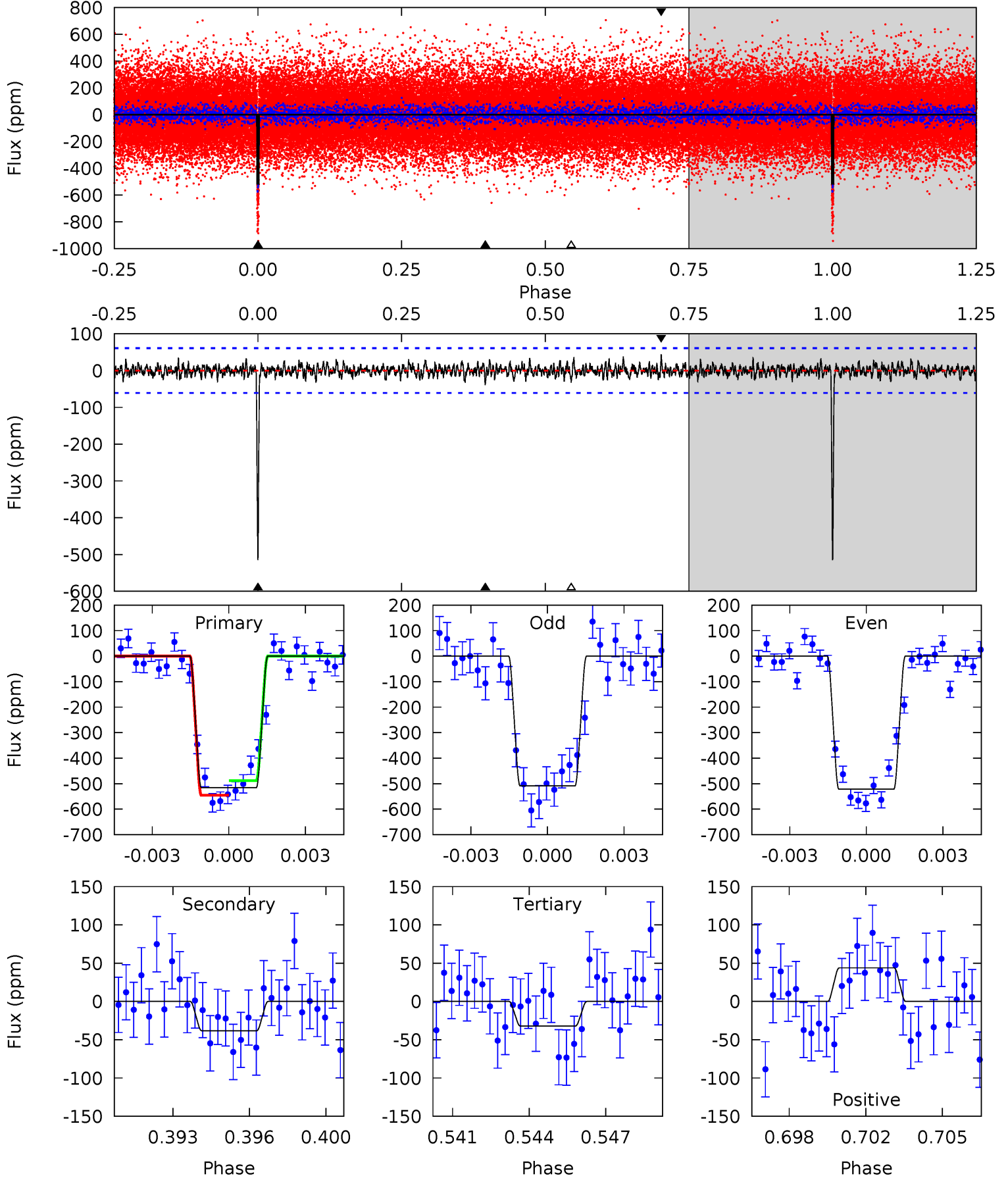
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.0	4.90	4.61	4.58	5.22	2.91	1.31	44.4	44.4	0.29	0.33	1.20	0.98	0.09	3.02



# Alt Model-Shift Uniqueness Test

005695524-01, P = 59.771436 Days, E = 89.192286 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
44.4	3.29	2.77	3.77	5.24	2.95	0.94	41.6	40.6	0.52	-0.48	0.57	0.99	0.08	2.49



### Stellar Parameters For KIC 005695524

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6214^{+173}_{-217}$	$4.382^{+0.087}_{-0.217}$	$-0.020^{+0.250}_{-0.300}$	$1.122^{+0.384}_{-0.153}$	$1.101^{+0.173}_{-0.126}$	$1.100^{+0.415}_{-0.575}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+34%/-14%	+16%/-11%	+38%/-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 005695524-01 / KOI 1897.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-55 \pm 11$	$3.21^{+0.56}_{-0.35}$	$739^{+54}_{-39}$	$3740^{+177}_{-165}$	$273^{+99}_{-77}$
Alt.	$-38 \pm 12$	$2.92^{+0.55}_{-0.33}$	$742^{+62}_{-42}$	$3635^{+191}_{-218}$	$224^{+100}_{-80}$

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

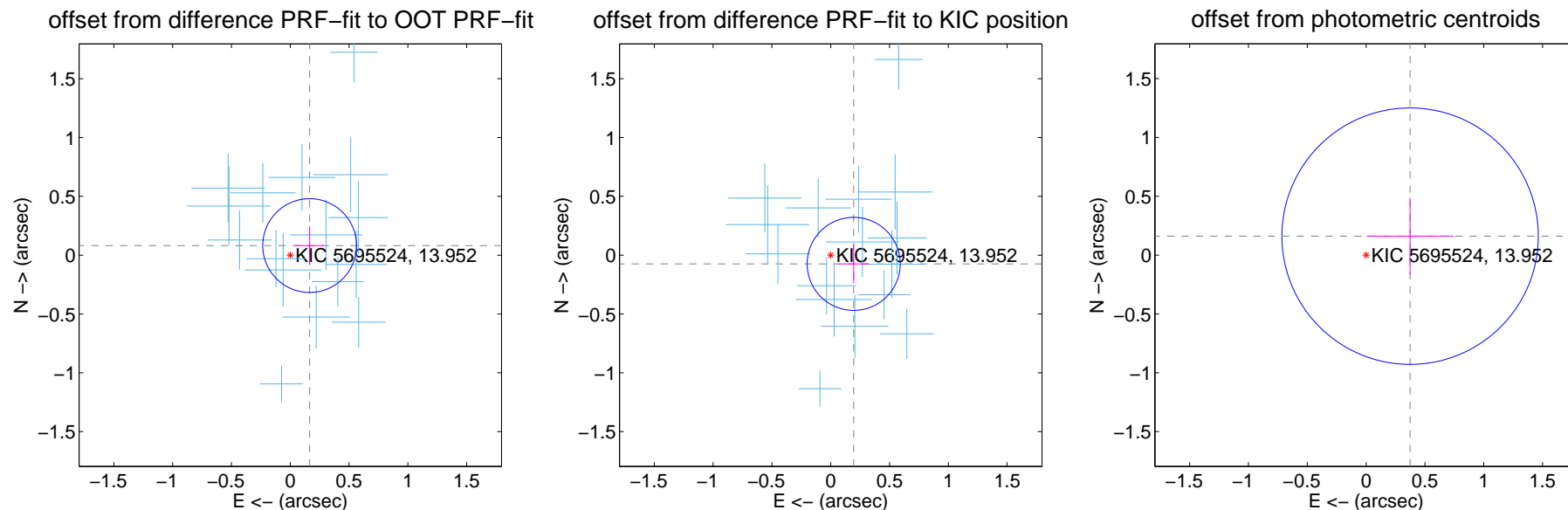
## DV Centroid Data

Supplemental centroid analysis for 005695524-01. Kepler magnitude: 13.95. Transit SNR 32.04

There are 16 quarters with good PRF difference image offsets

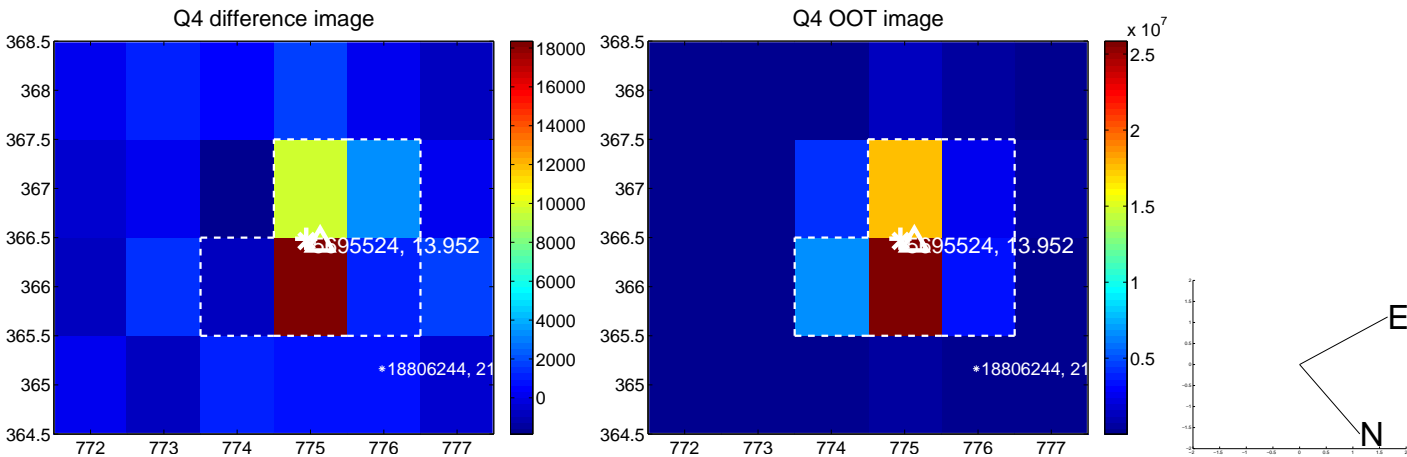
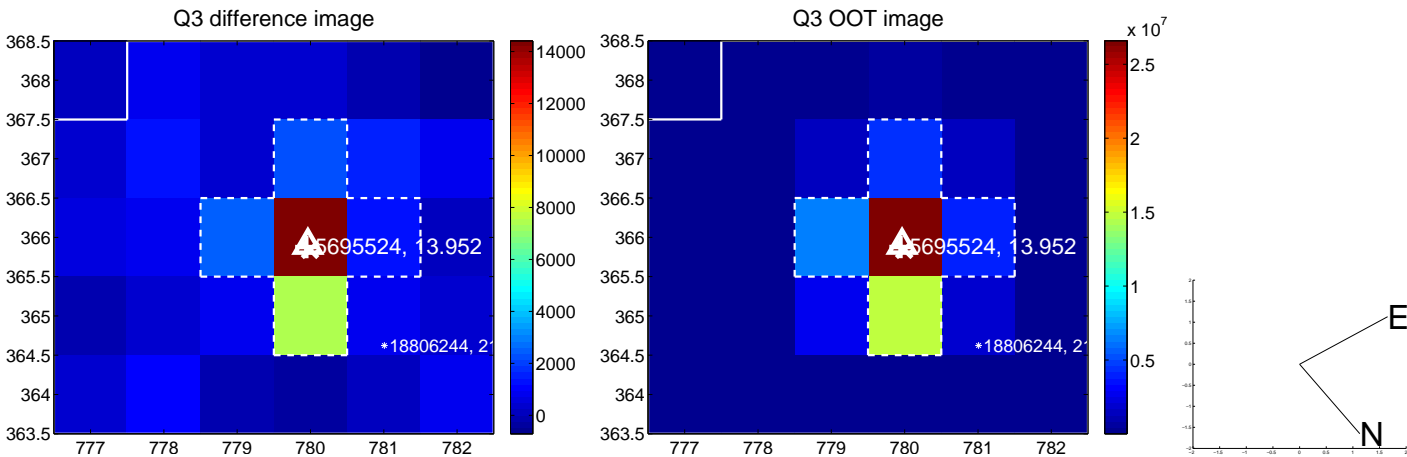
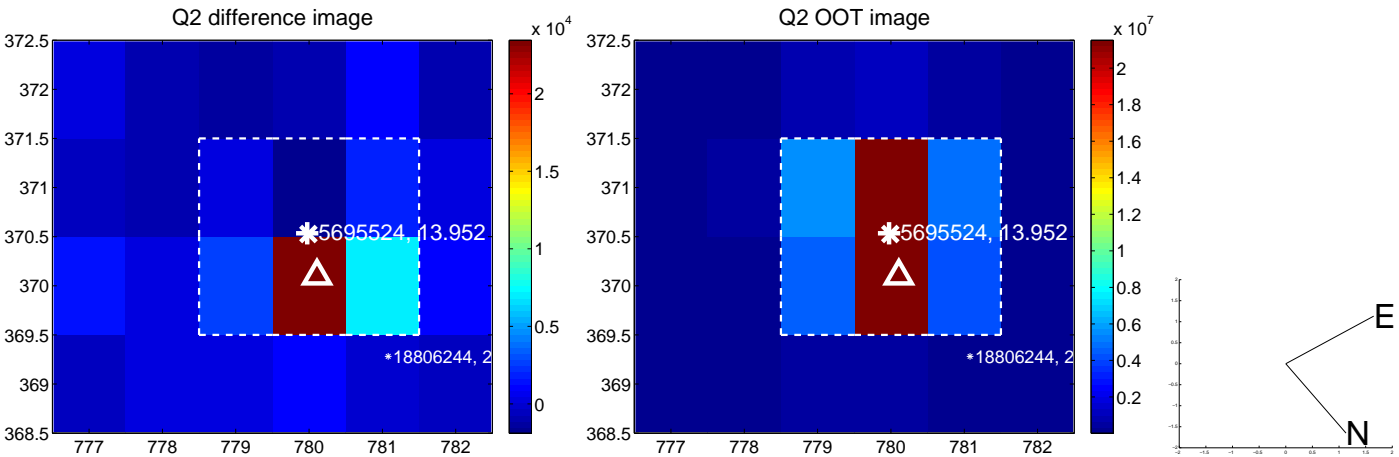
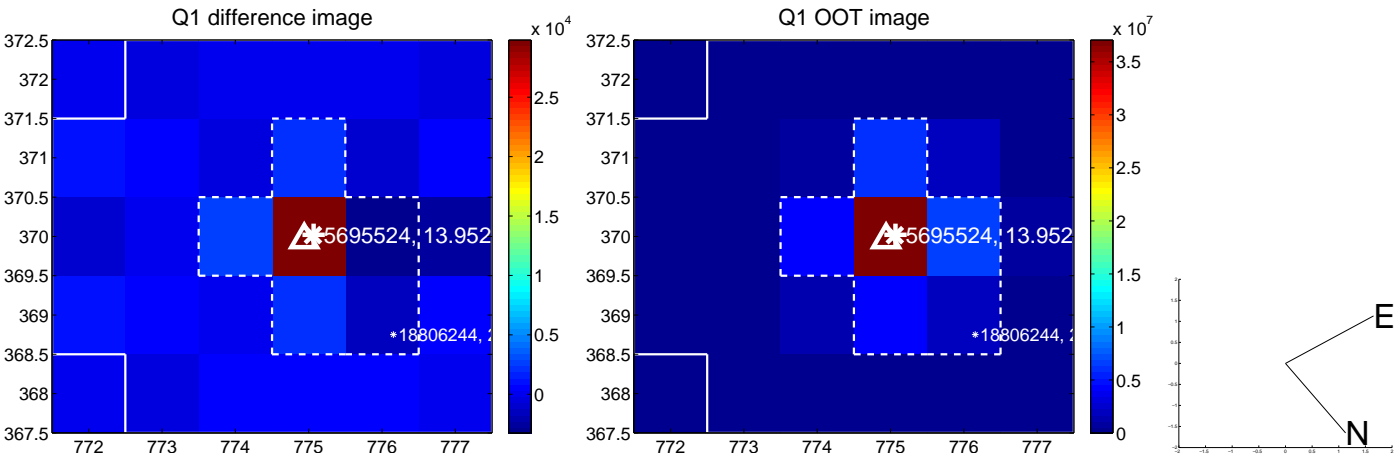
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.184 \pm 0.133$	1.38	$-0.165 \pm 0.124$	$0.082 \pm 0.164$
PRF-fit source offset from KIC position	$0.209 \pm 0.132$	1.58	$-0.195 \pm 0.127$	$-0.074 \pm 0.164$
photometric centroid source offset	$0.41 \pm 0.36$	1.12	$-0.37 \pm 0.37$	$0.16 \pm 0.33$

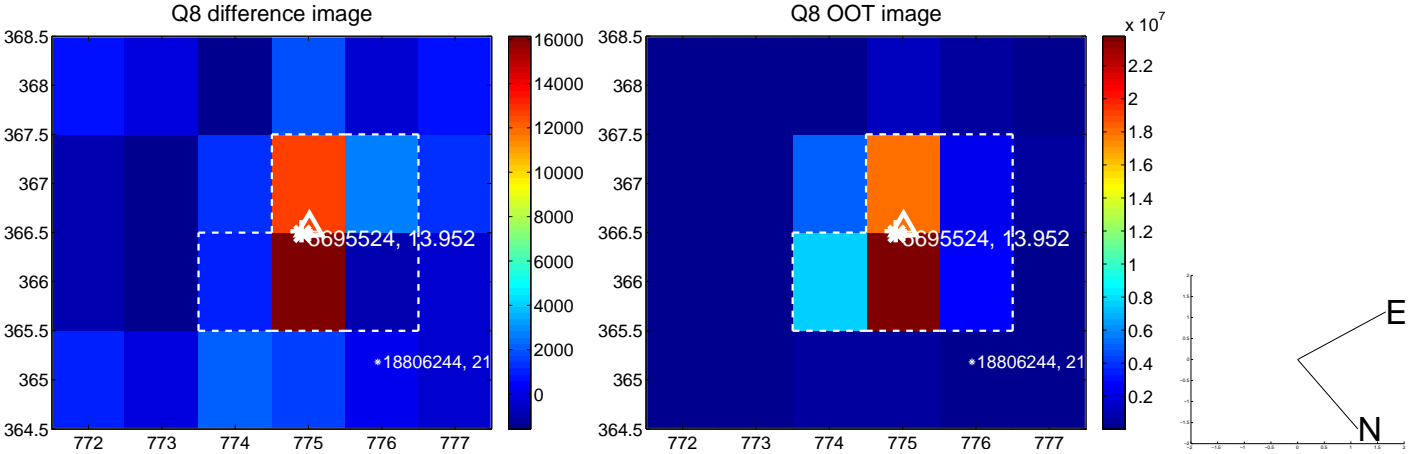
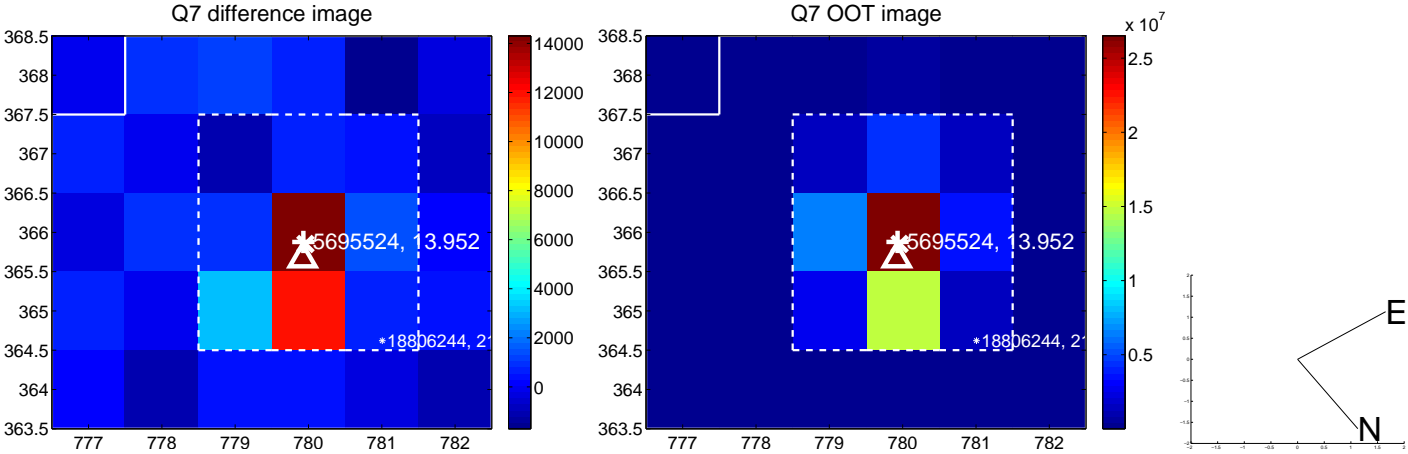
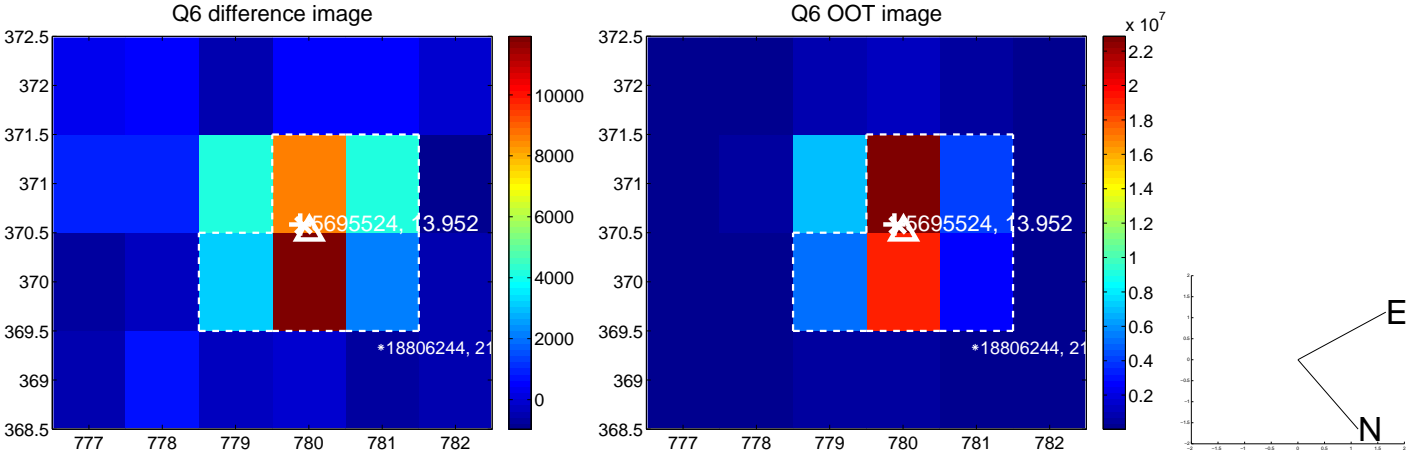
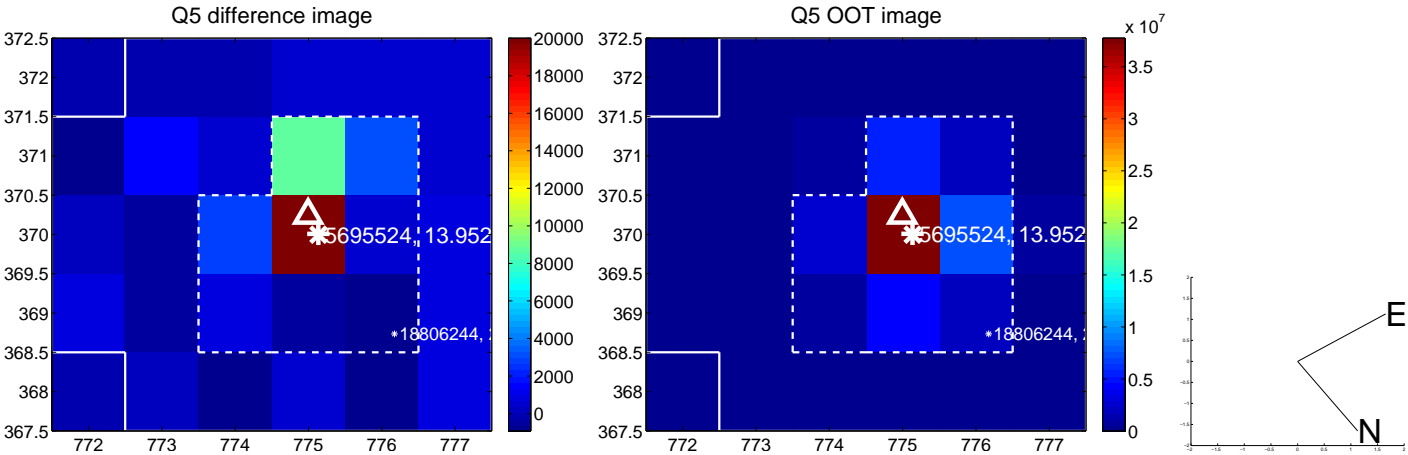


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

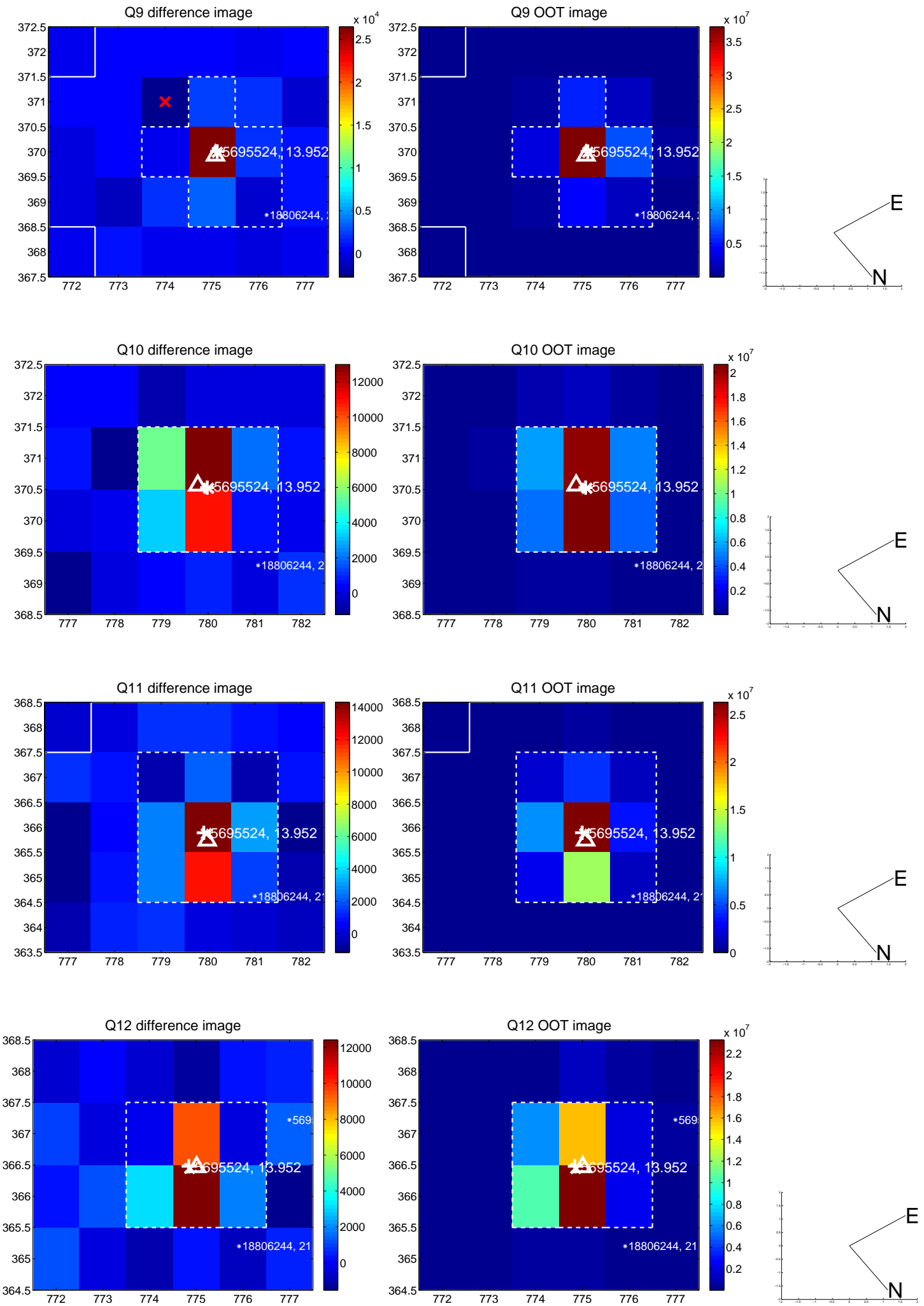
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

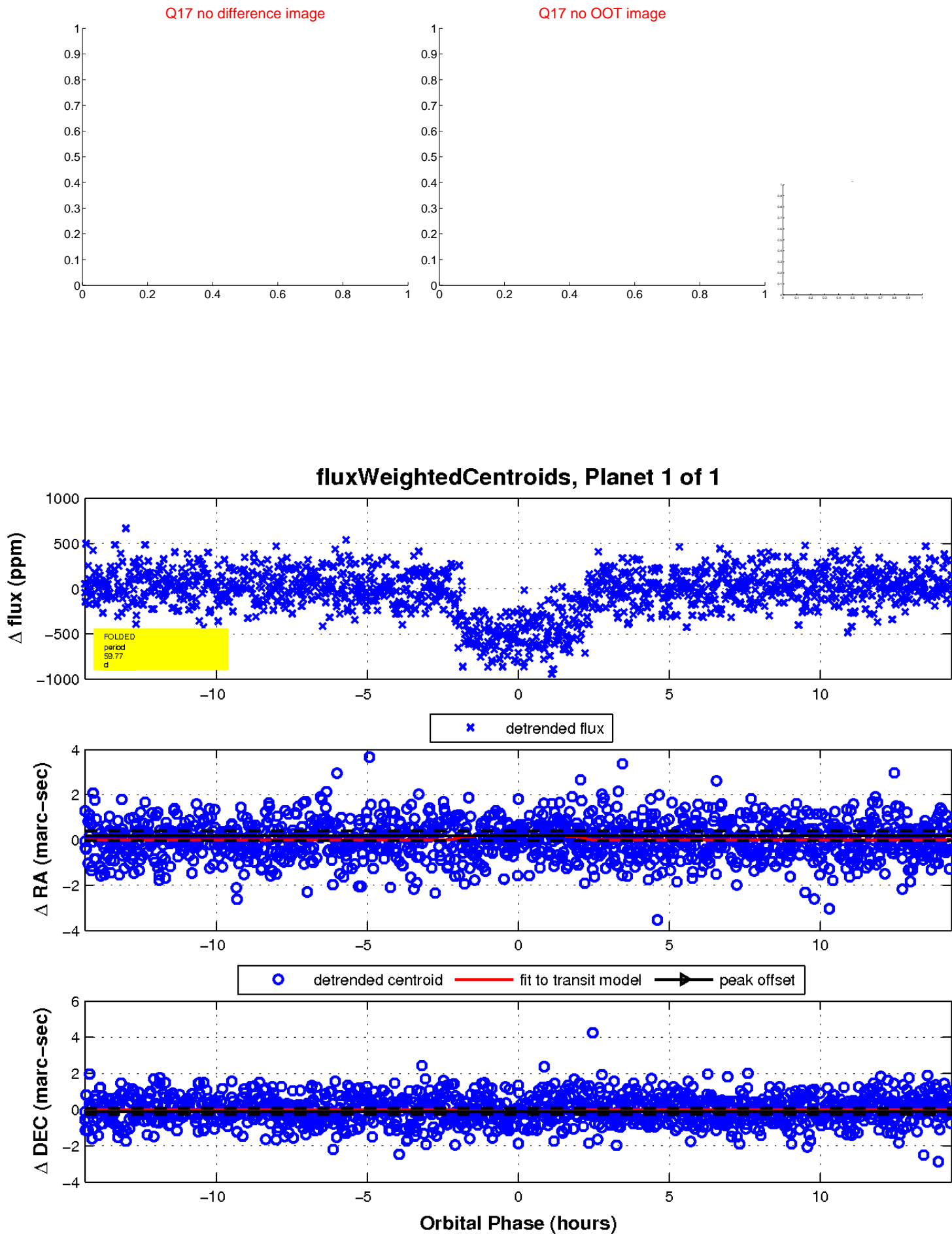


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

