

# KIC 010095469

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010095469-01	OBS	No	0.677763	131.621610	463666.1	2.000	2612.0	-1.0	1.42	6487	47.90	13422.25
010095469-02	OBS	No	0.677747	131.779944	2308.3	2.000	91.7	-1.0	1.42	6487	6.88	13422.66

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010095469-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
010095469-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—NO_FITS—SAME_NTL_PERIOD—CENT_NOFITS

**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.

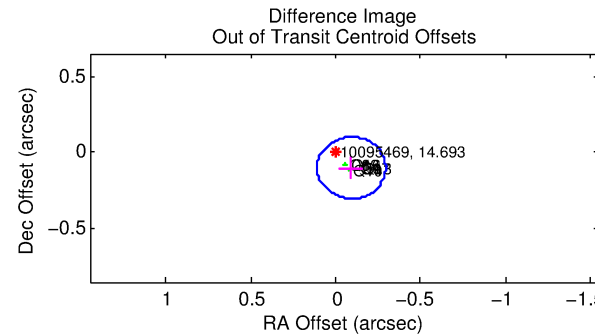
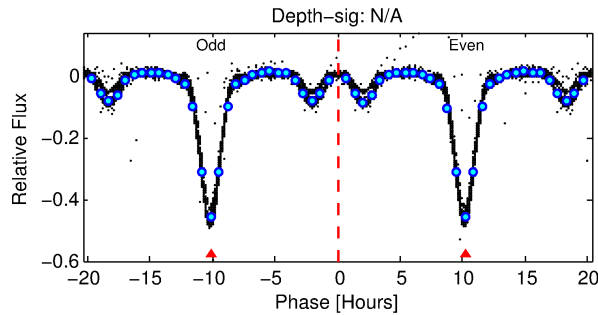
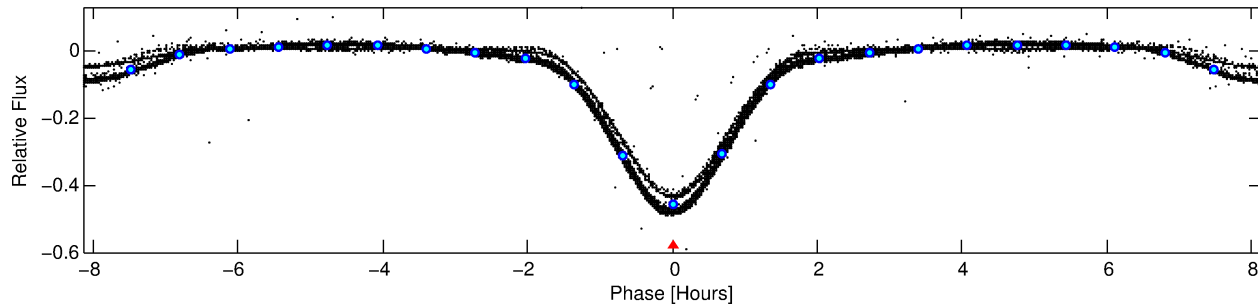
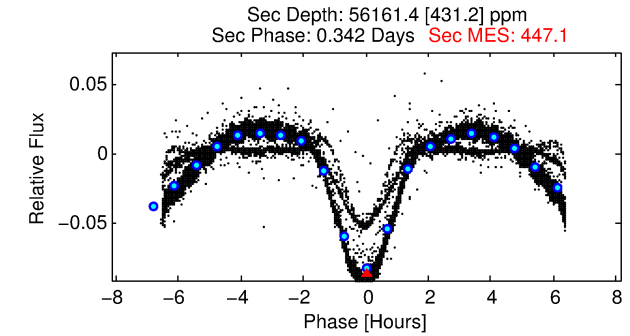
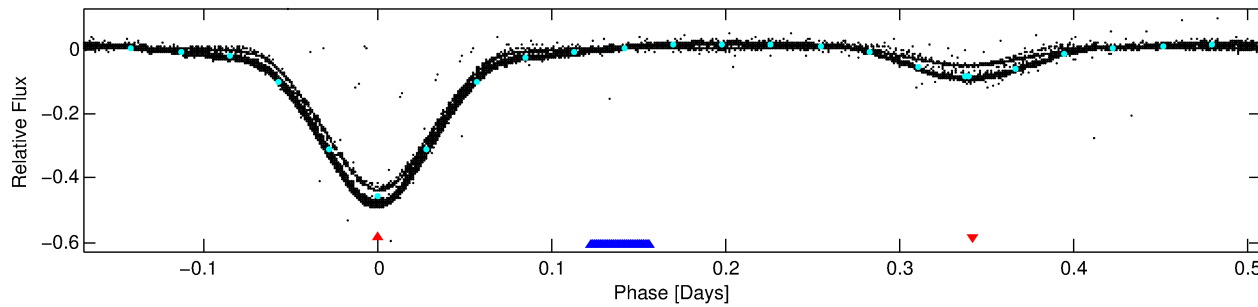
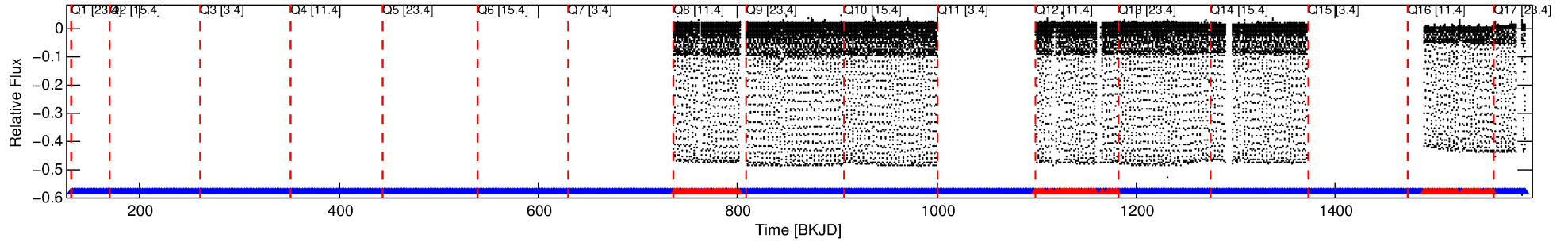
## Ephemeris Match Information For 010095469-01

No Significant Match Found

# DV One-Page Summary

KIC: 10095469 Candidate: 1 of 2 Period: 0.678 d

Kp: 14.69 R\*: 1.42 Rs Teff: 6487.0 K Logg: 4.16 Fe/H: -0.400



## TPS TCE Results:

Period = 0.67776 d  
Epoch = 131.6216 BKJD

DV fit results are unavailable

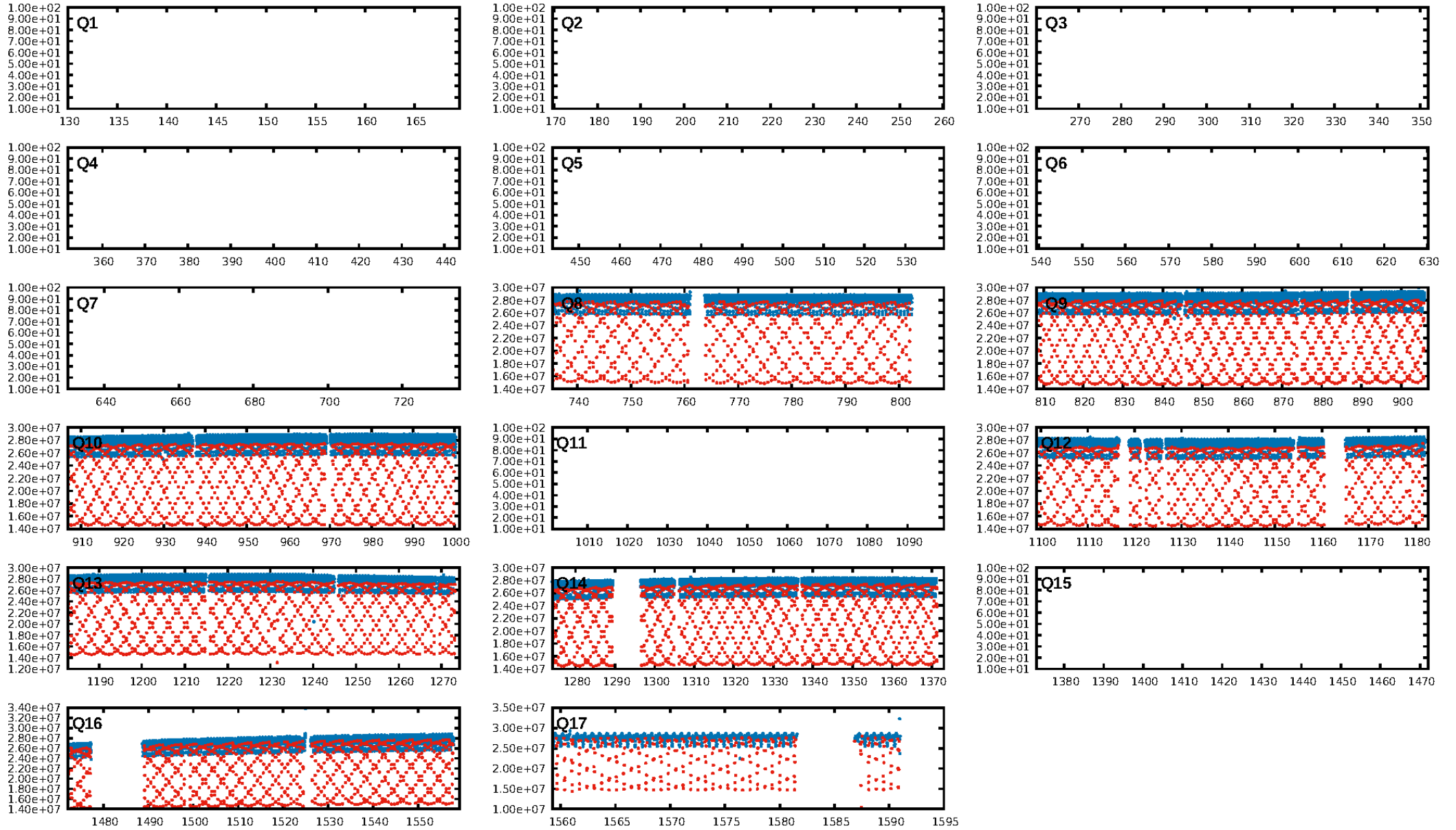
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.82 [688/844]  
GhostDiagnostic-chr: 2.04  
Centroid-sig: N/A  
Centroid-so: 0.138 arcsec [154.04 $\sigma$ ]  
OotOffset-rm: 0.136 arcsec [2.02 $\sigma$ ]  
KicOffset-rm: 0.039 arcsec [0.53 $\sigma$ ]  
OotOffset-st: 2/0/3/3 [8]  
KicOffset-st: 2/0/3/3 [8]  
DiffImageQuality-fgm: 1.00 [8/8]  
DiffImageOverlap-fno: 1.00 [8/8]

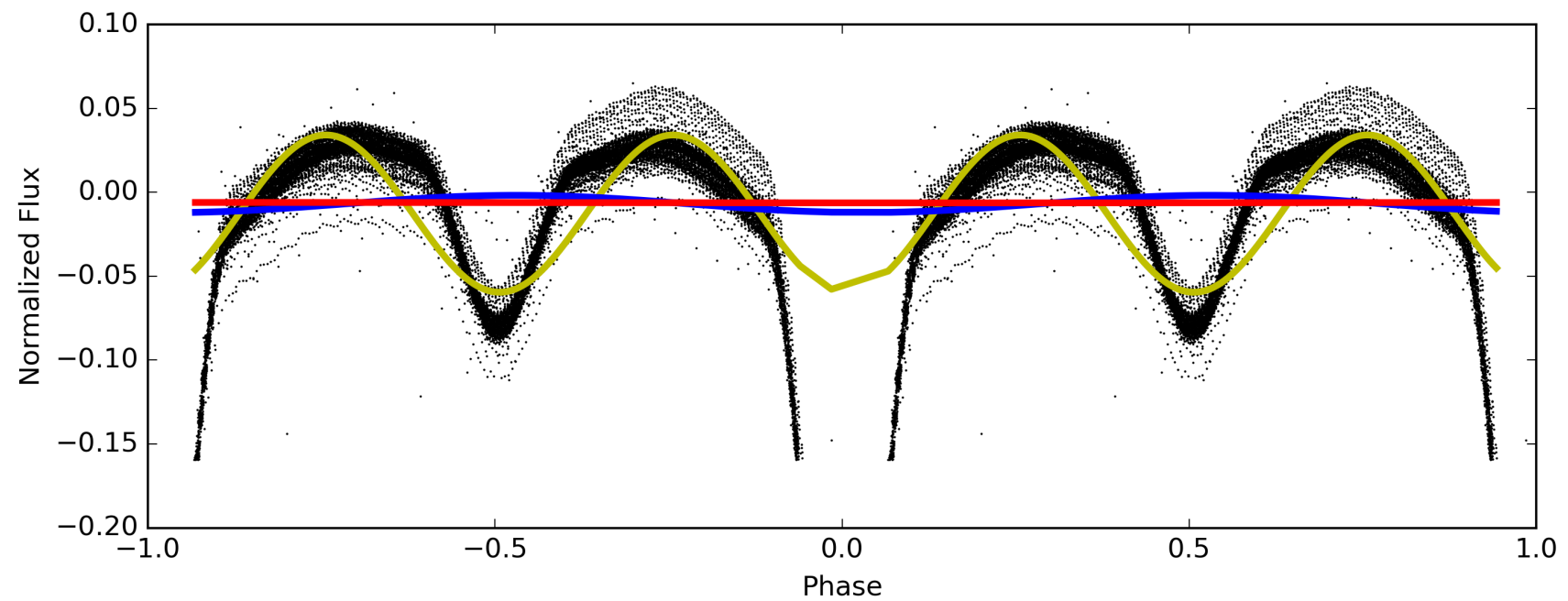
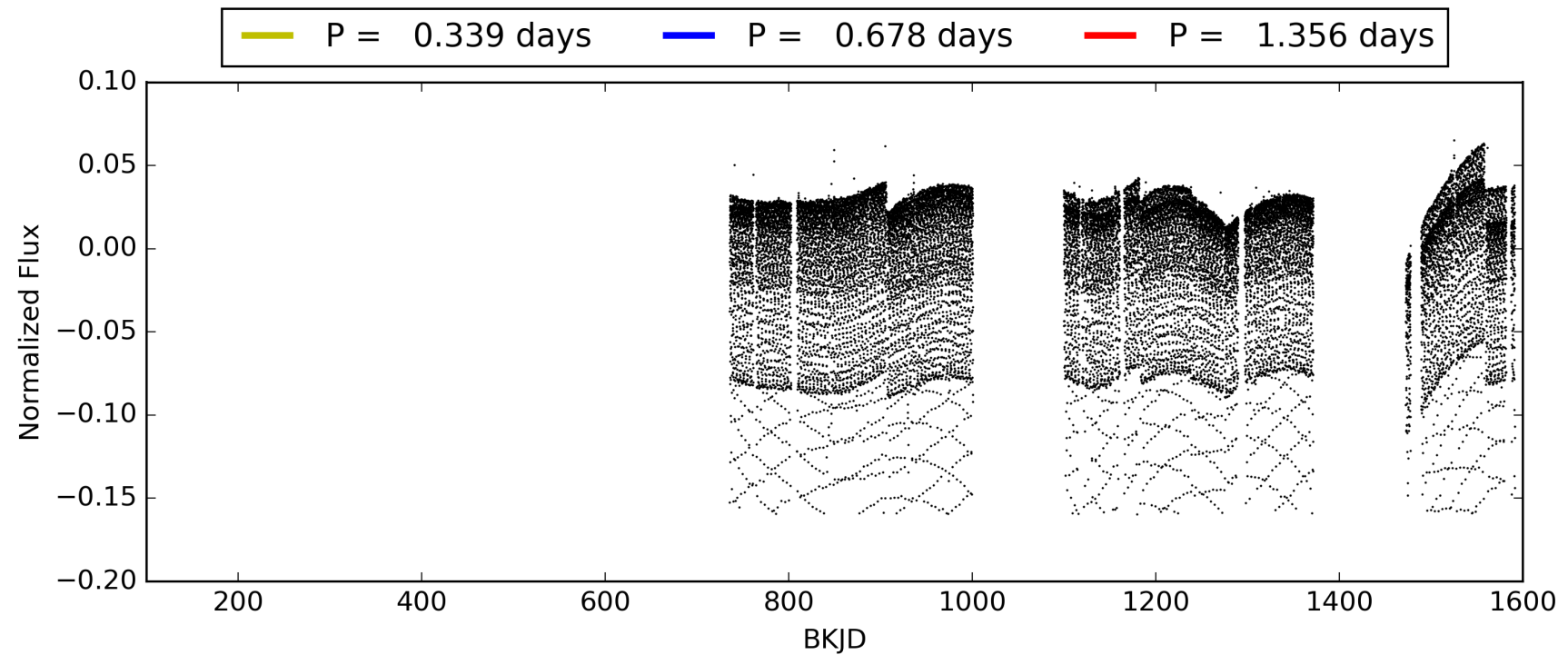
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:08:43 Z

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

# TCE 010095469-01, PDC Light Curves

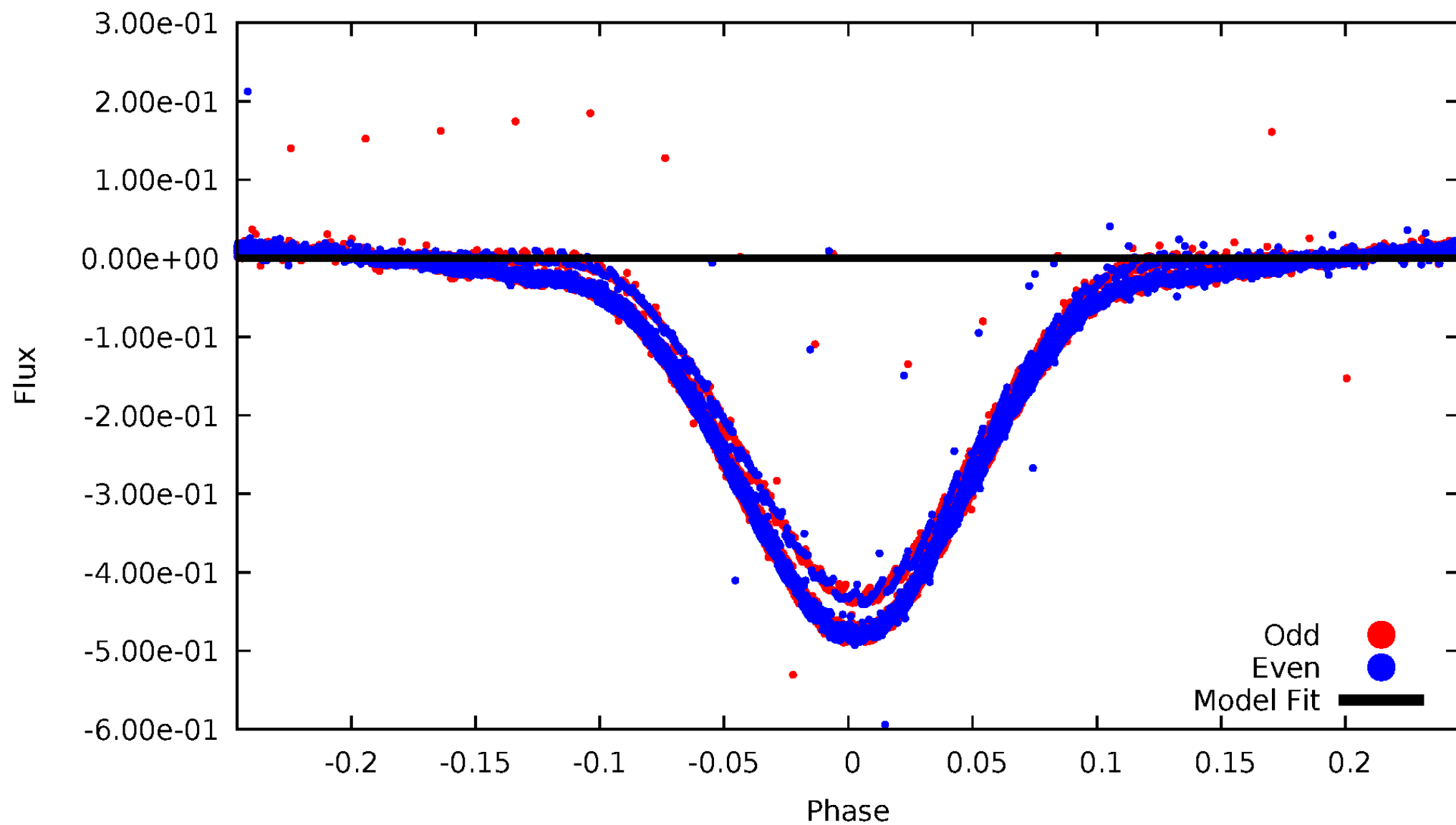


TCE 010095469-01



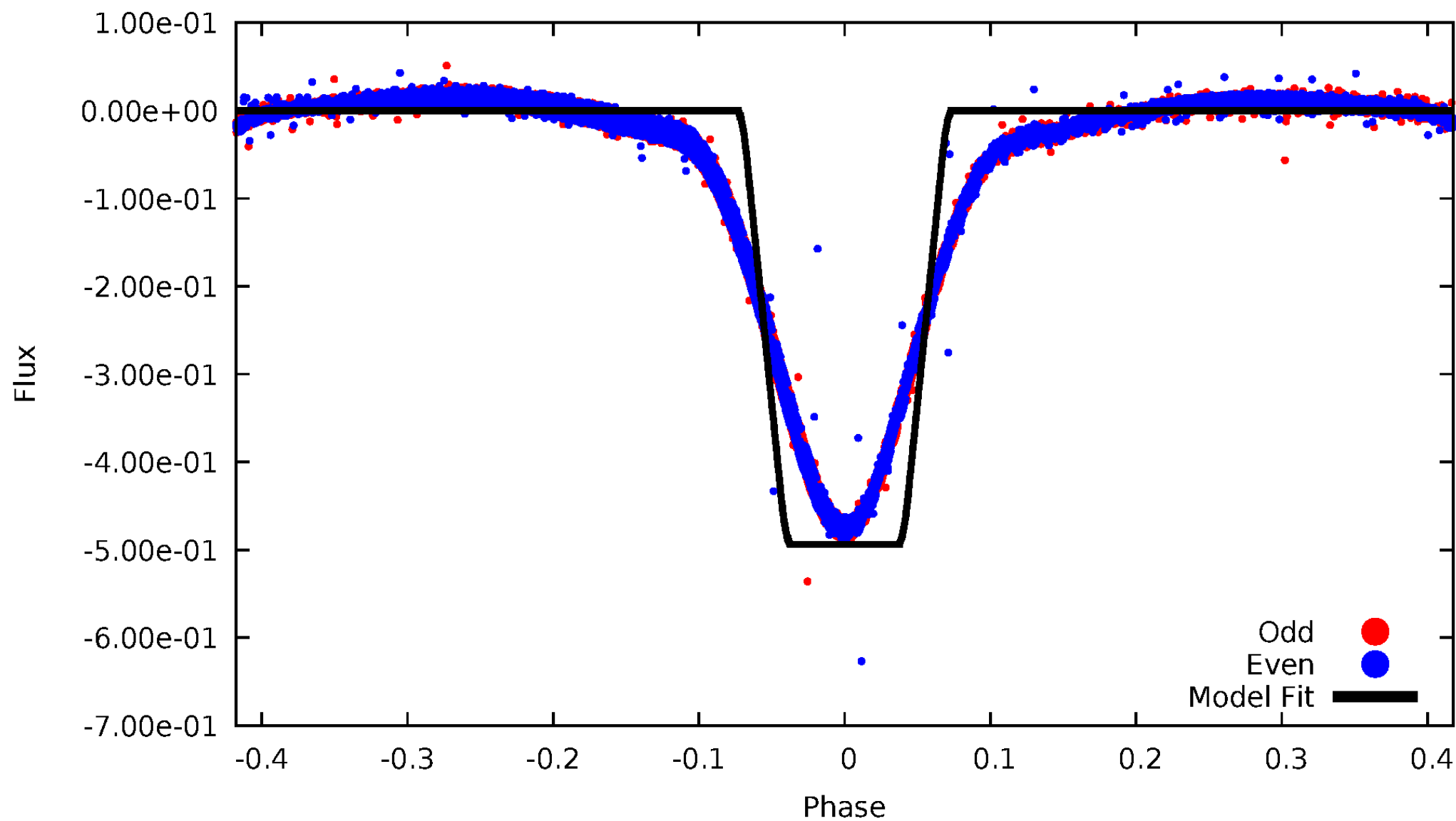
# DV Odd/Even

TCE 010095469-01



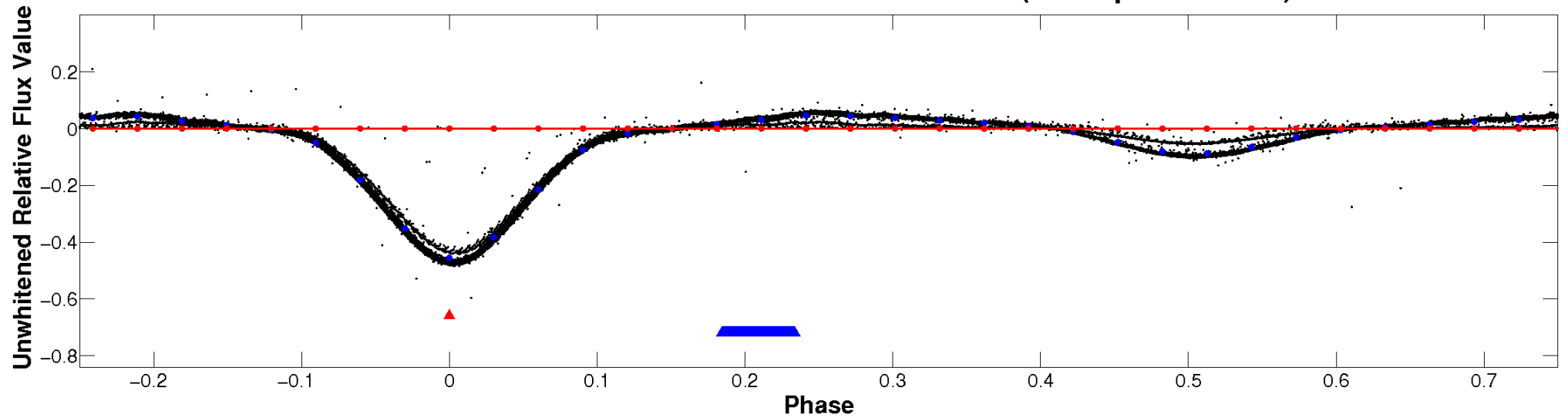
# ALT Odd/Even

TCE 010095469-01



# Non-Whitened Vs. Whitened Light Curve

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

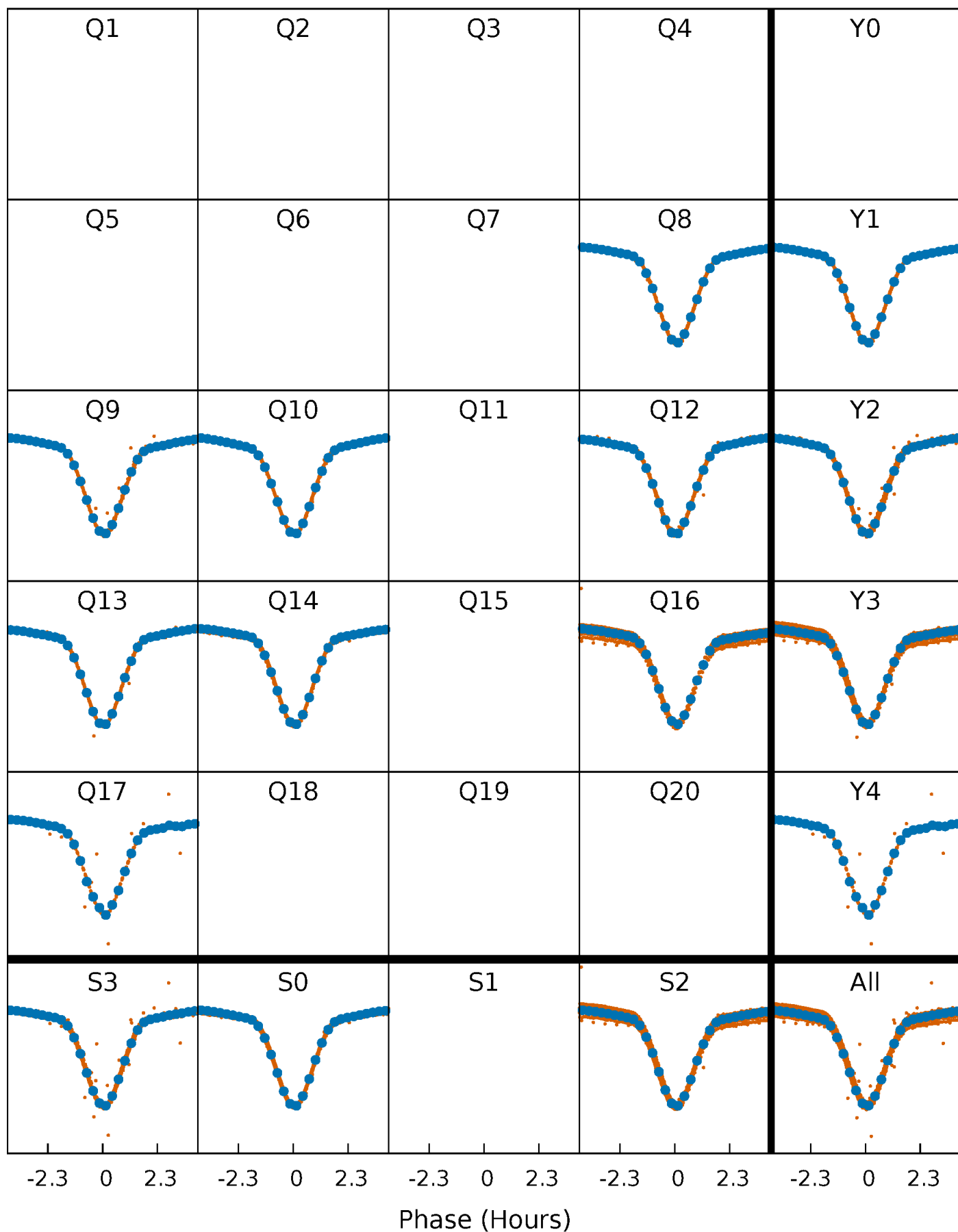


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

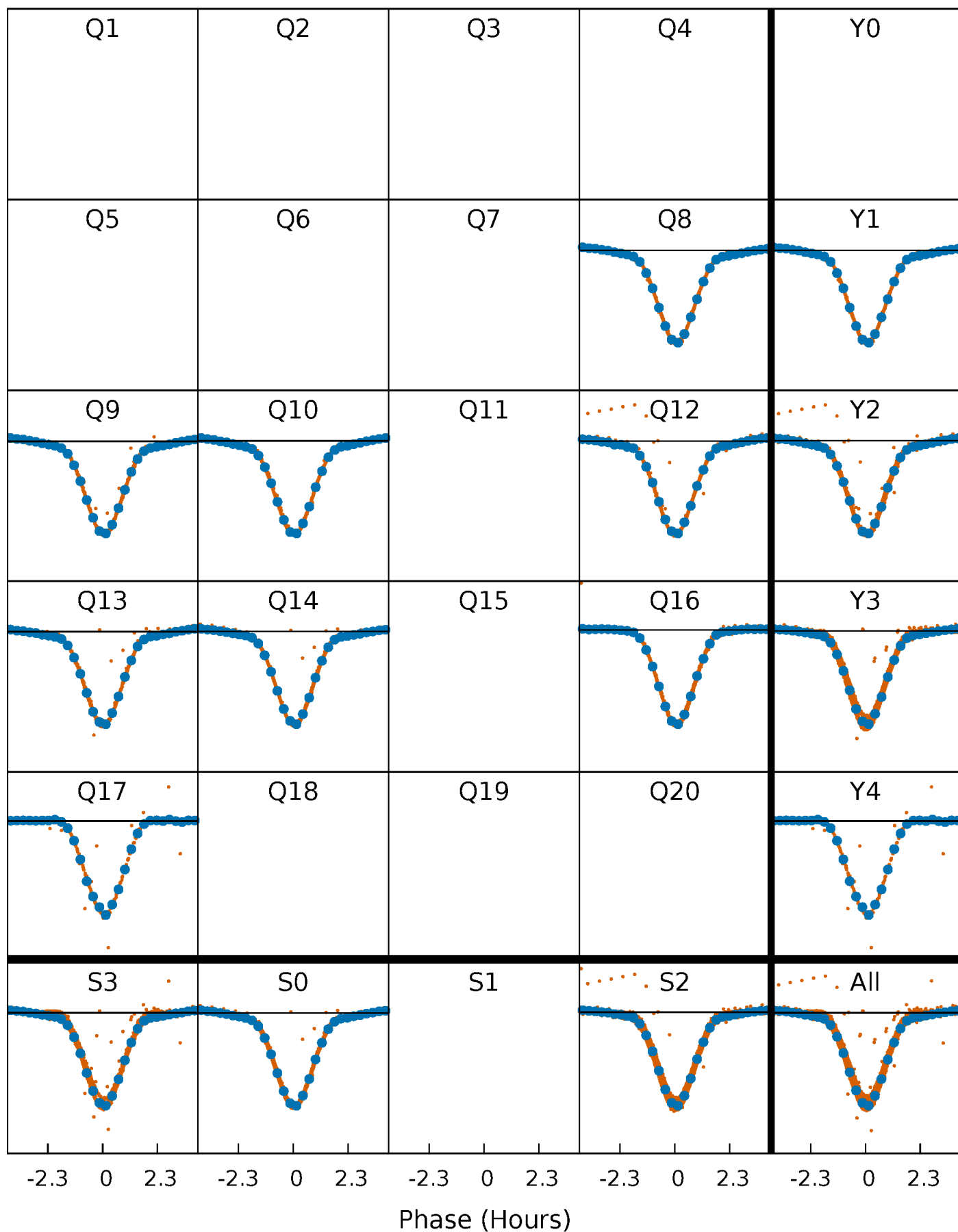
TCE 010095469-01 P= 0.677763 Days  $T_0=131.621610$  (BKJD)





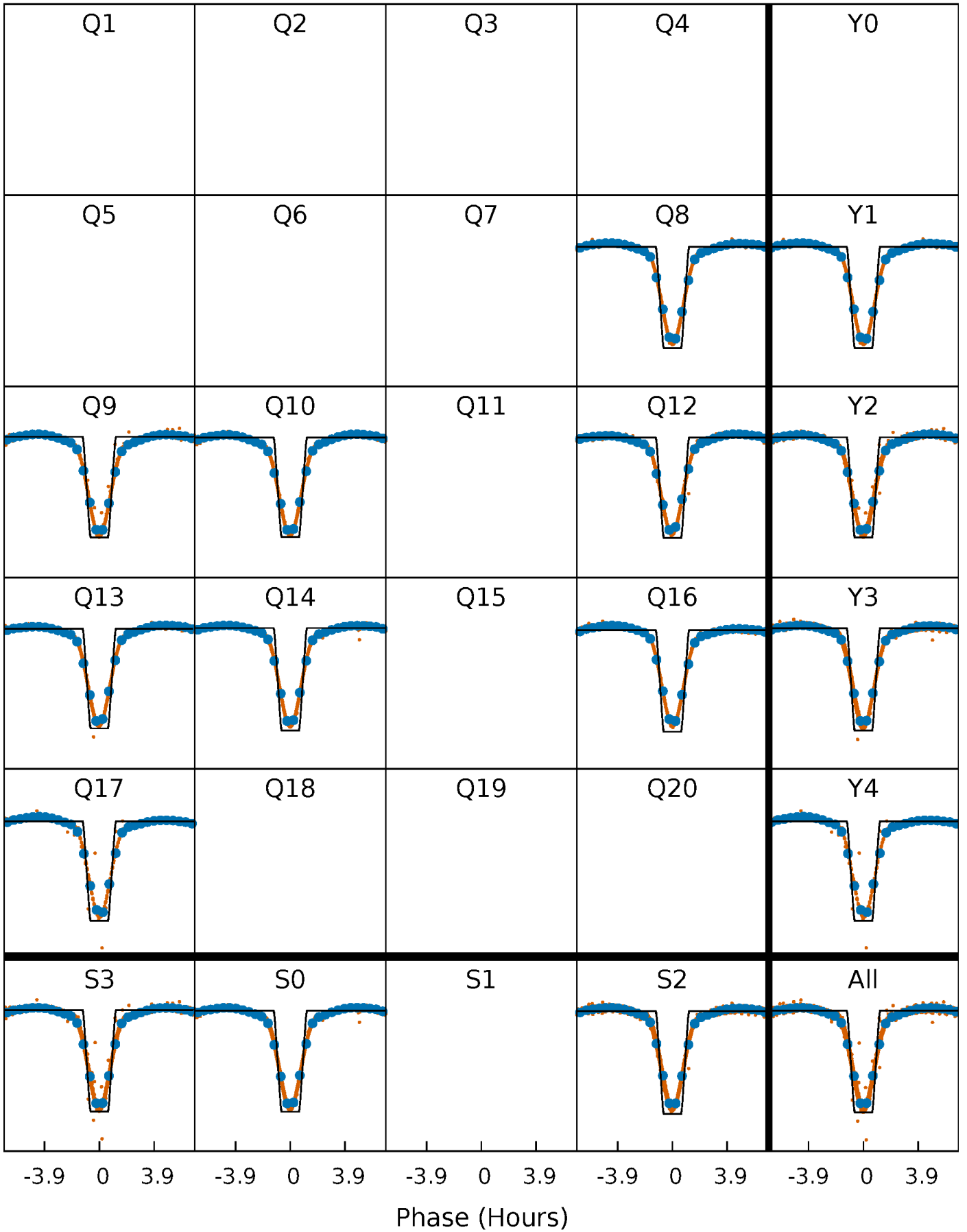
# DV Quarter-Phased Transit Curves

TCE 010095469-01 P= 0.677763 Days  $T_0=131.621610$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

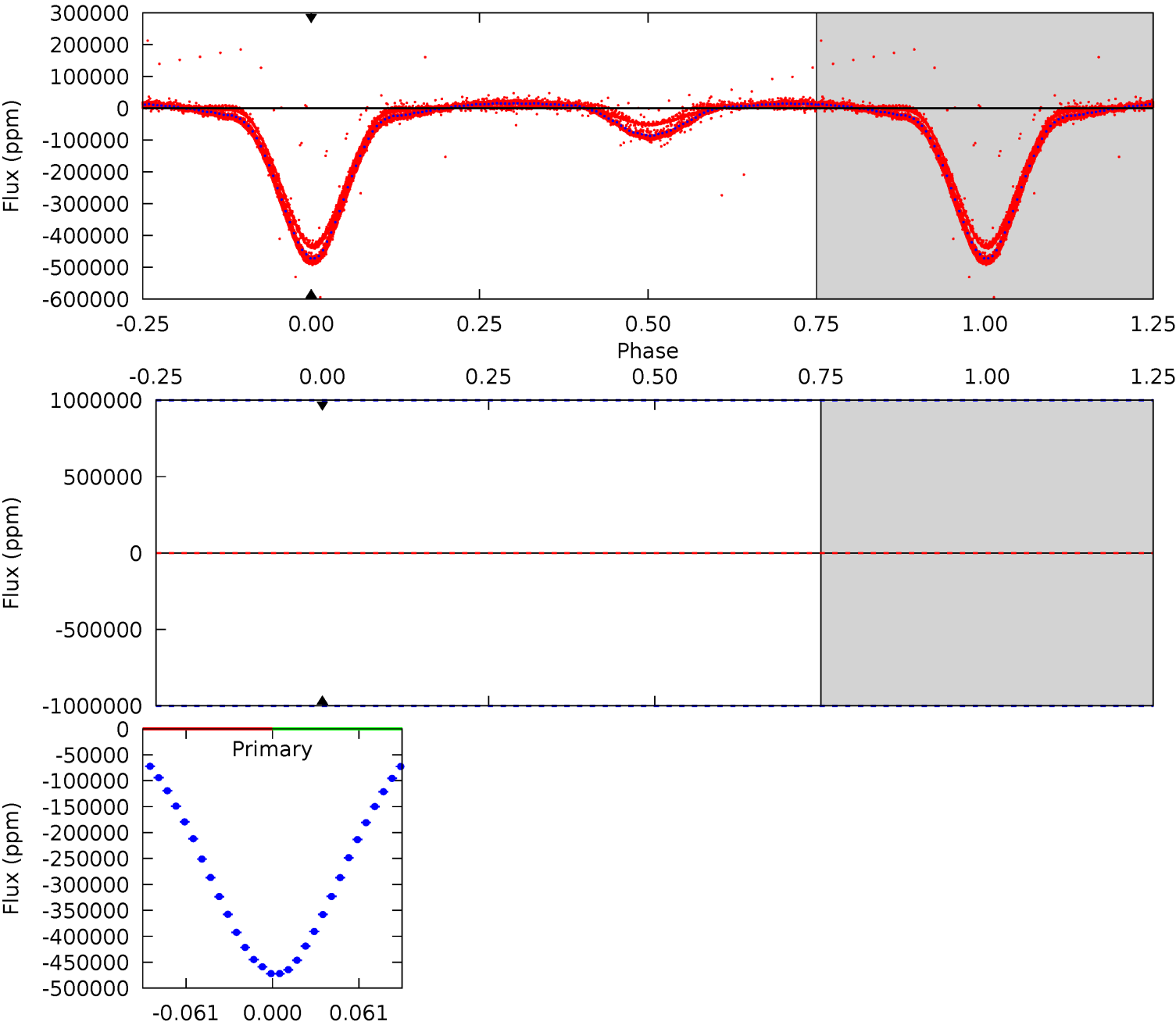
TCE 010095469-01   P= 0.677763 Days    $T_0=131.623763$  (BKJD)



# DV Model-Shift Uniqueness Test

010095469-01, P = 0.677763 Days, E = 131.621610 Days

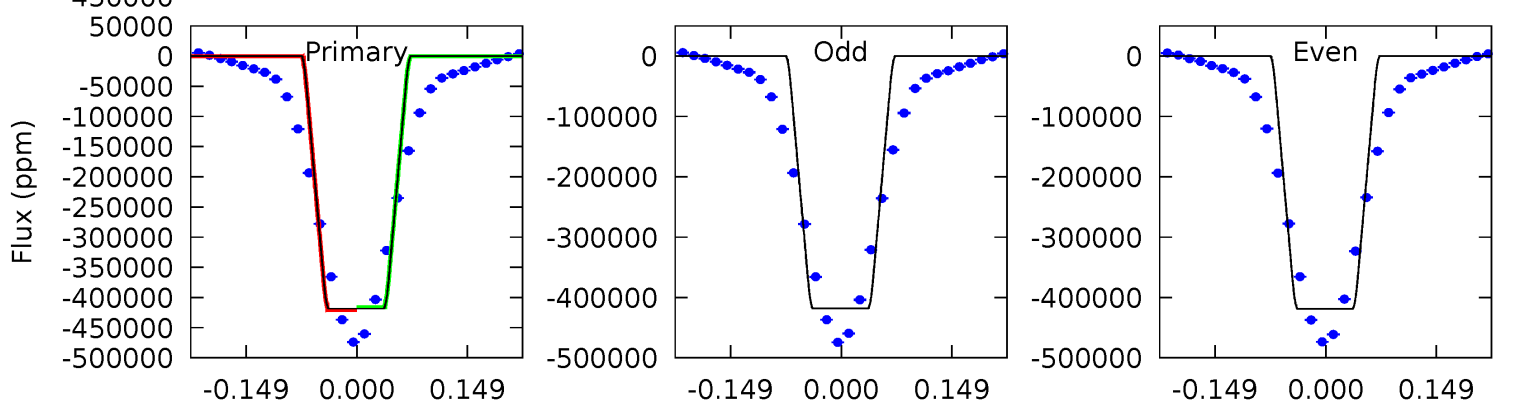
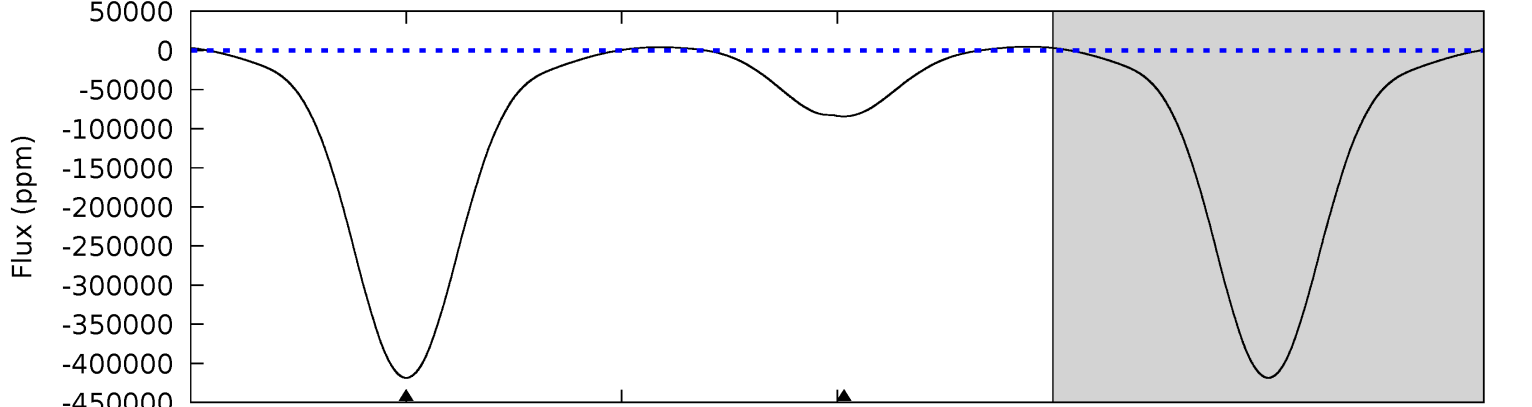
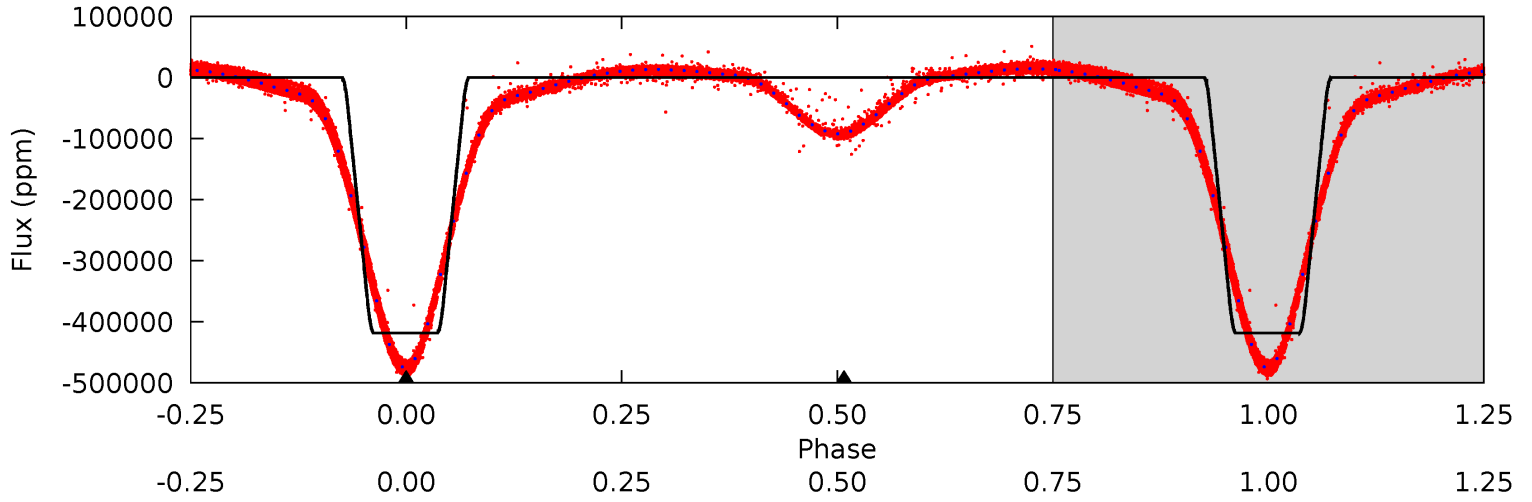
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

010095469-01, P = 0.677763 Days, E = 131.623763 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
2281	459.9	0	0	4.48	1.44	55.4	2281	2281	459.9	459.9	0.84	1.00	0.01	11.6



### Stellar Parameters For KIC 010095469

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6487^{+181}_{-227}$	$4.162^{+0.220}_{-0.160}$	$-0.400^{+0.250}_{-0.300}$	$1.420^{+0.384}_{-0.384}$	$1.068^{+0.177}_{-0.129}$	$0.525^{+0.704}_{-0.243}$
	+3%/-3%	+5%/-4%	+62%/-75%	+27%/-27%	+17%/-12%	+134%/-46%
Source	KIC0	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 010095469-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$47.64^{+17.16}_{-16.61}$	$3823^{+297}_{-284}$	$-3443^{+10411}_{-3145}$	$0.036^{+7.366}_{-6.033}$
Alt.	$-84386 \pm 183$	$108.44^{+22.13}_{-22.16}$	$3812^{+290}_{-288}$	$4169^{+369}_{-312}$	$1.039^{+0.552}_{-0.313}$

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

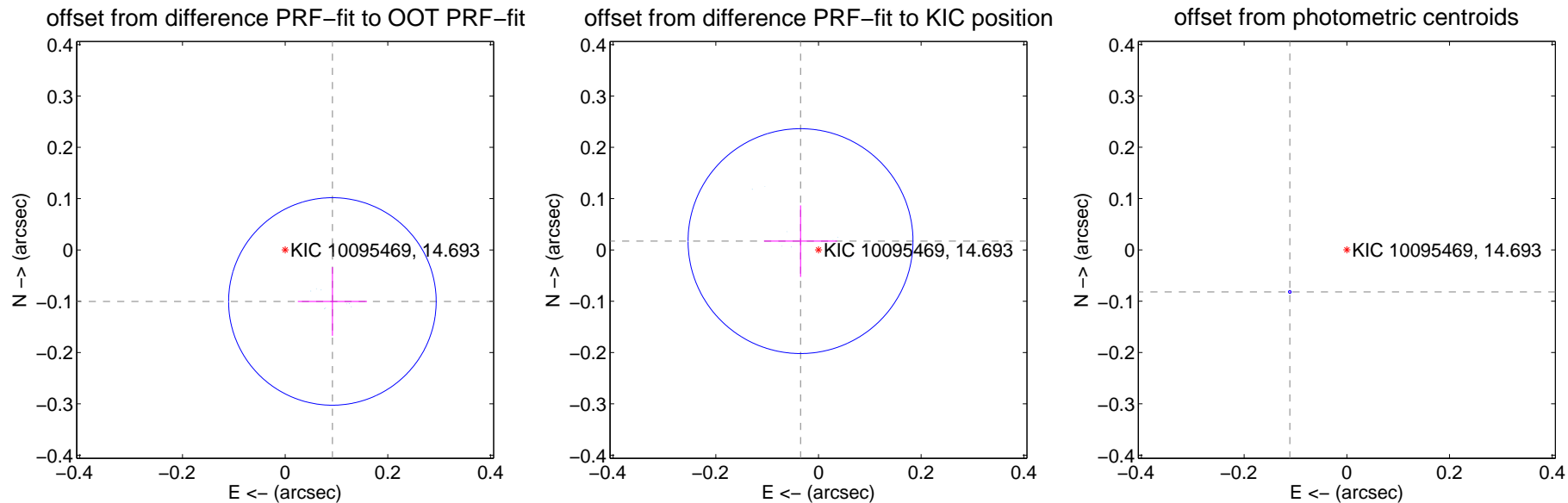
## DV Centroid Data

Supplemental centroid analysis for 010095469-01. Kepler magnitude: 14.69. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.136 \pm 0.067$	2.02	$-0.092 \pm 0.067$	$-0.100 \pm 0.067$
PRF-fit source offset from KIC position	$0.039 \pm 0.073$	0.53	$0.035 \pm 0.071$	$0.017 \pm 0.070$
photometric centroid source offset	$0.14 \pm 0.00$	154.04	$0.11 \pm 0.00$	$-0.08 \pm 0.00$

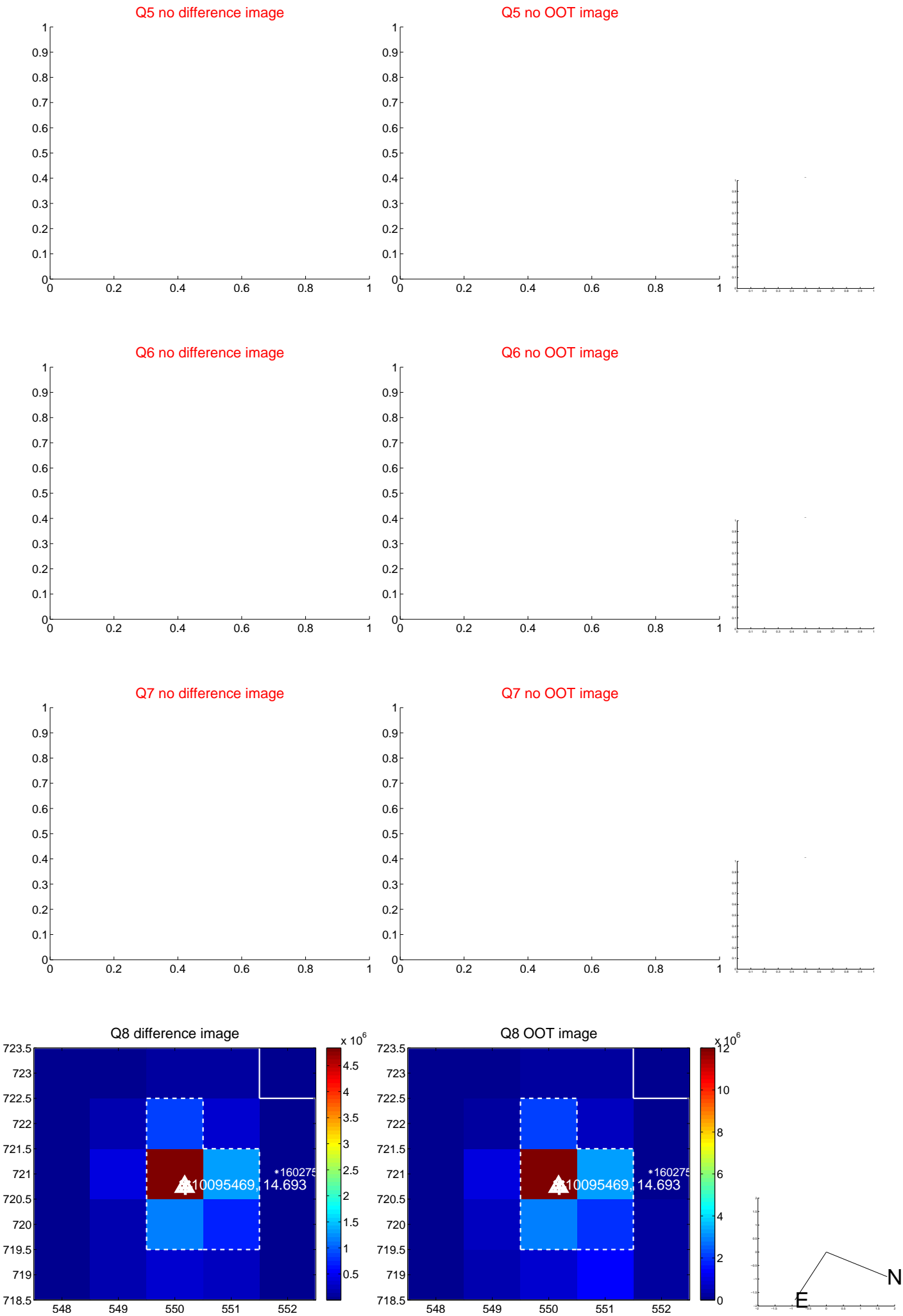


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

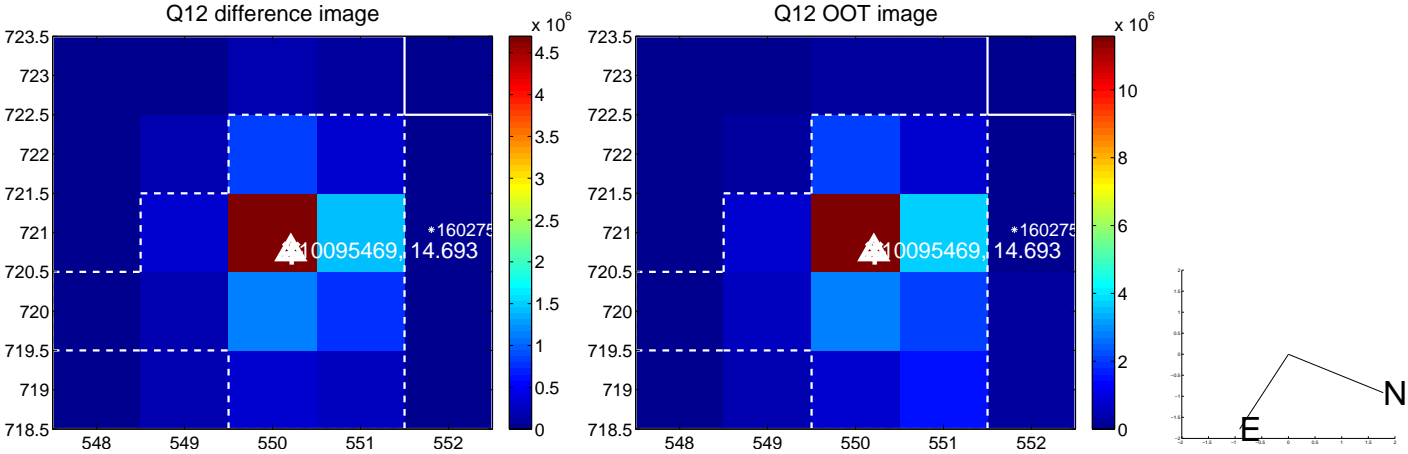
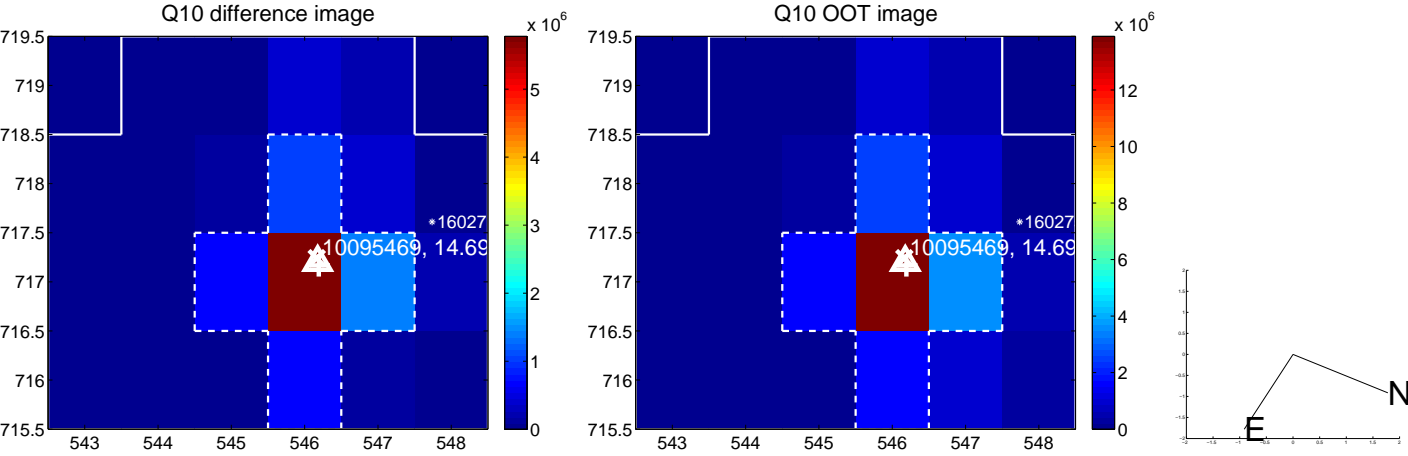
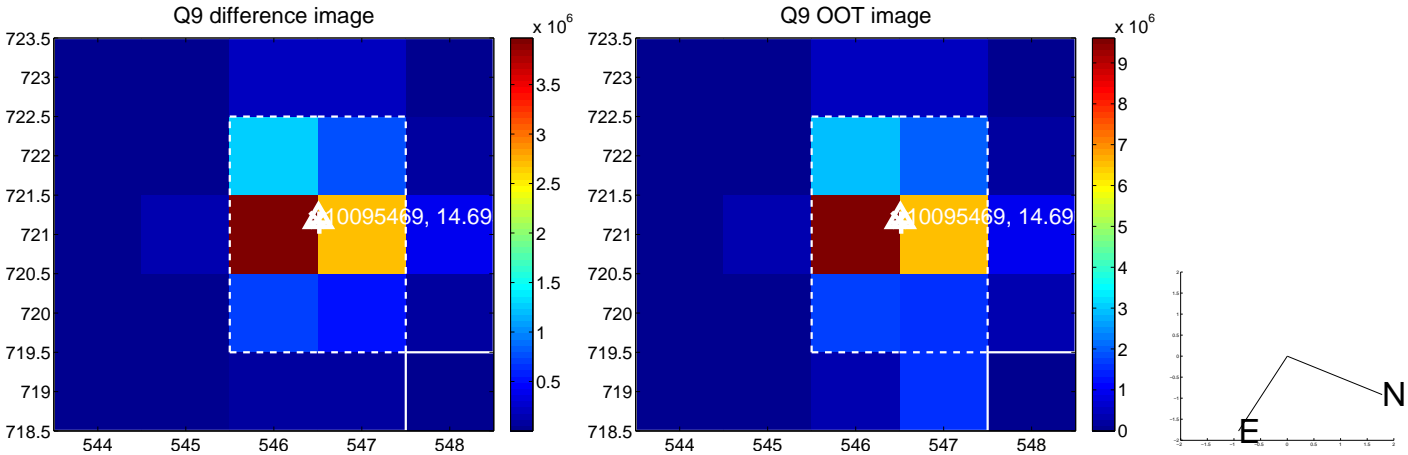


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

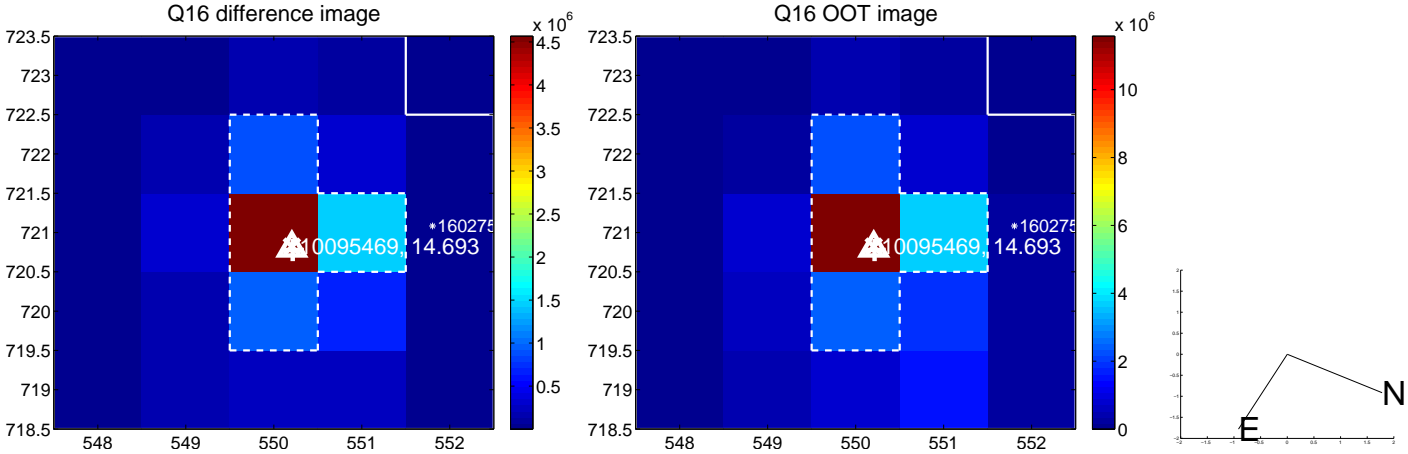
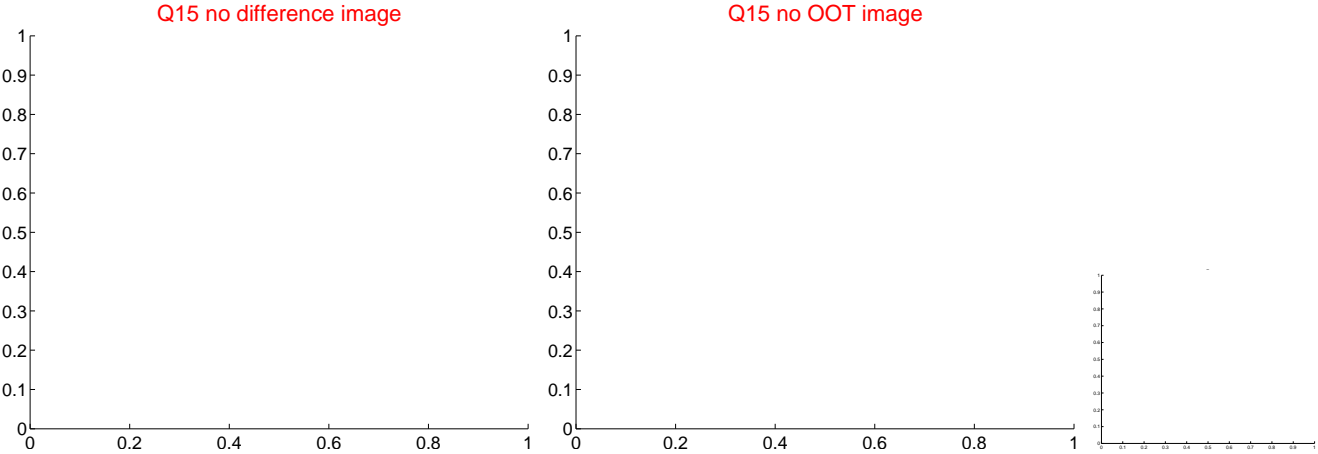
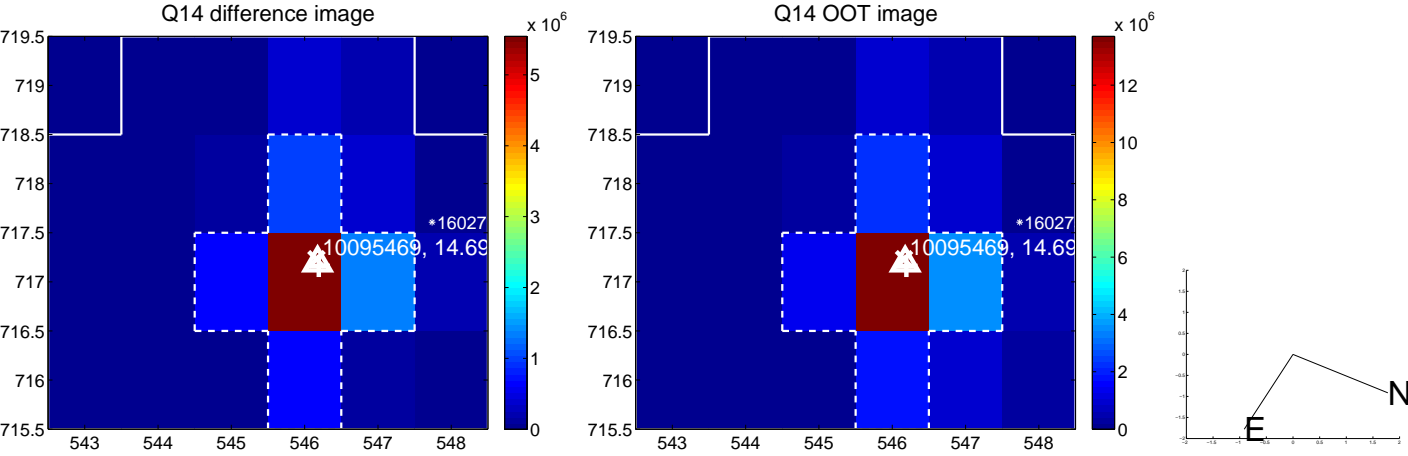
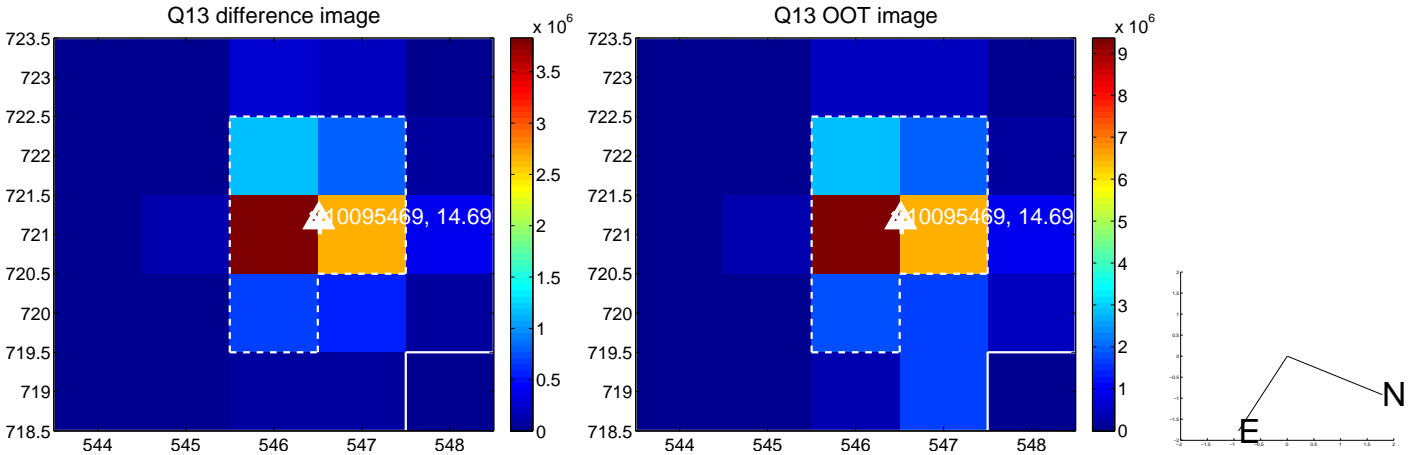




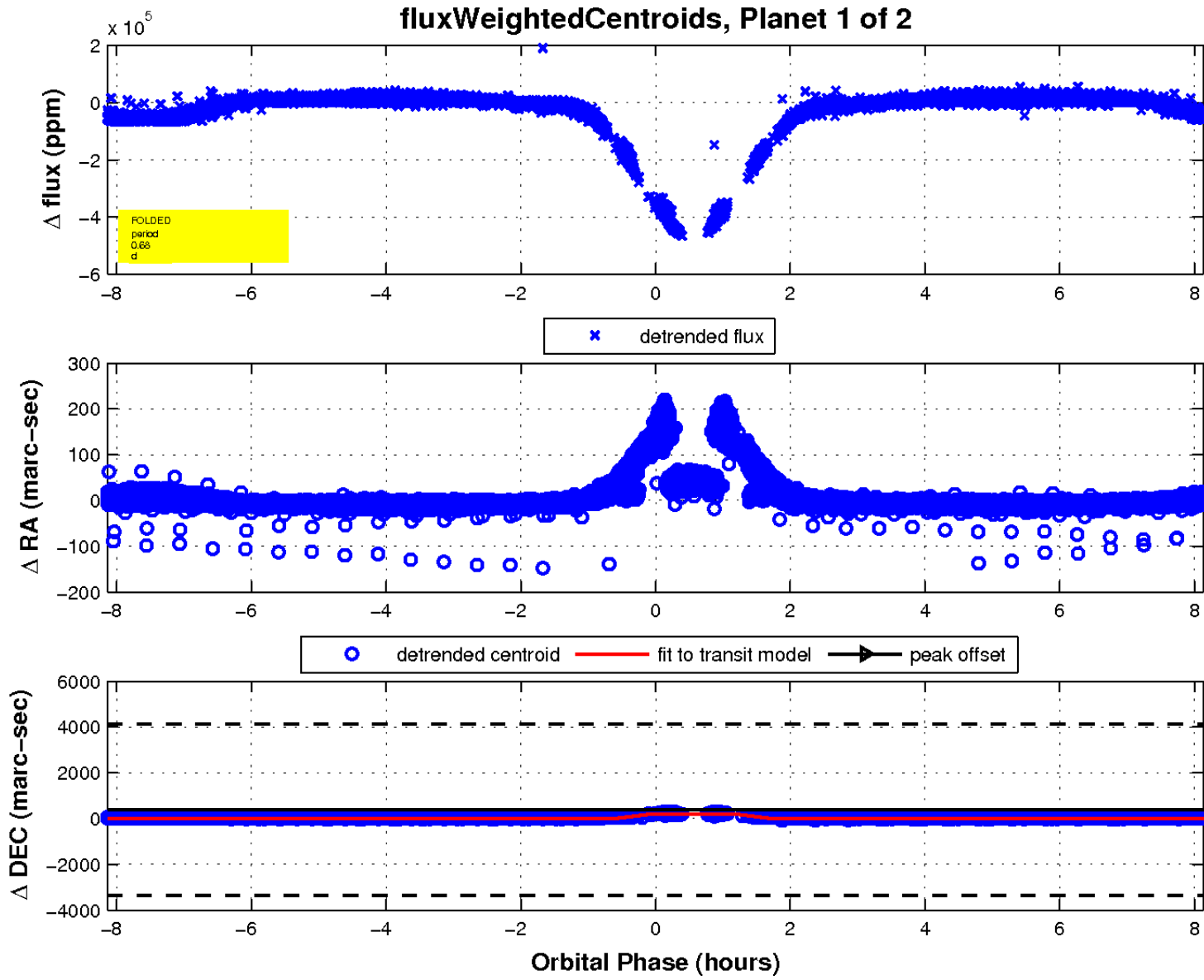
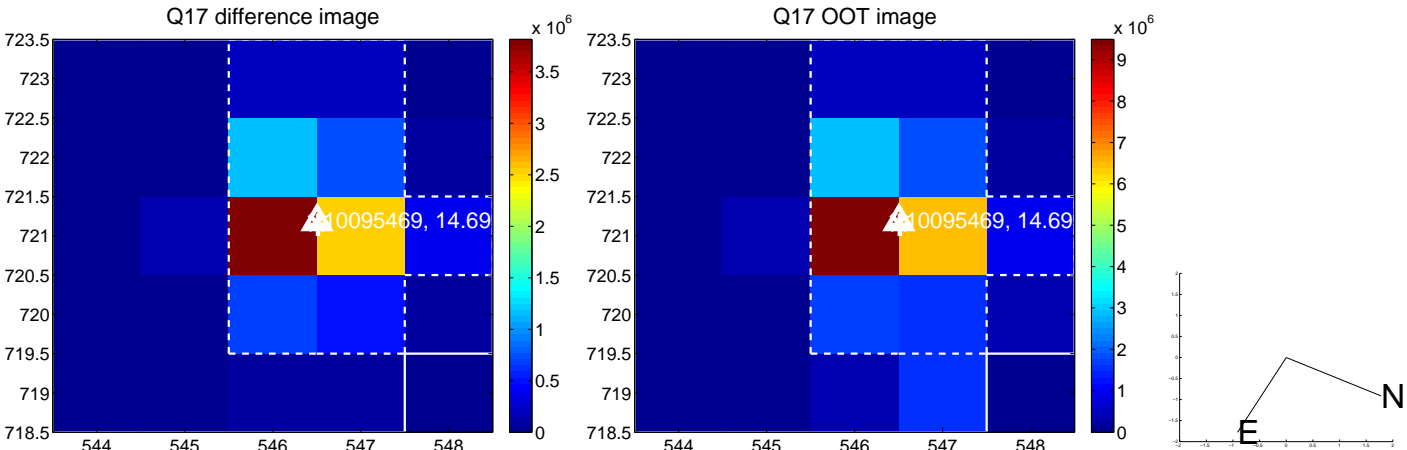
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

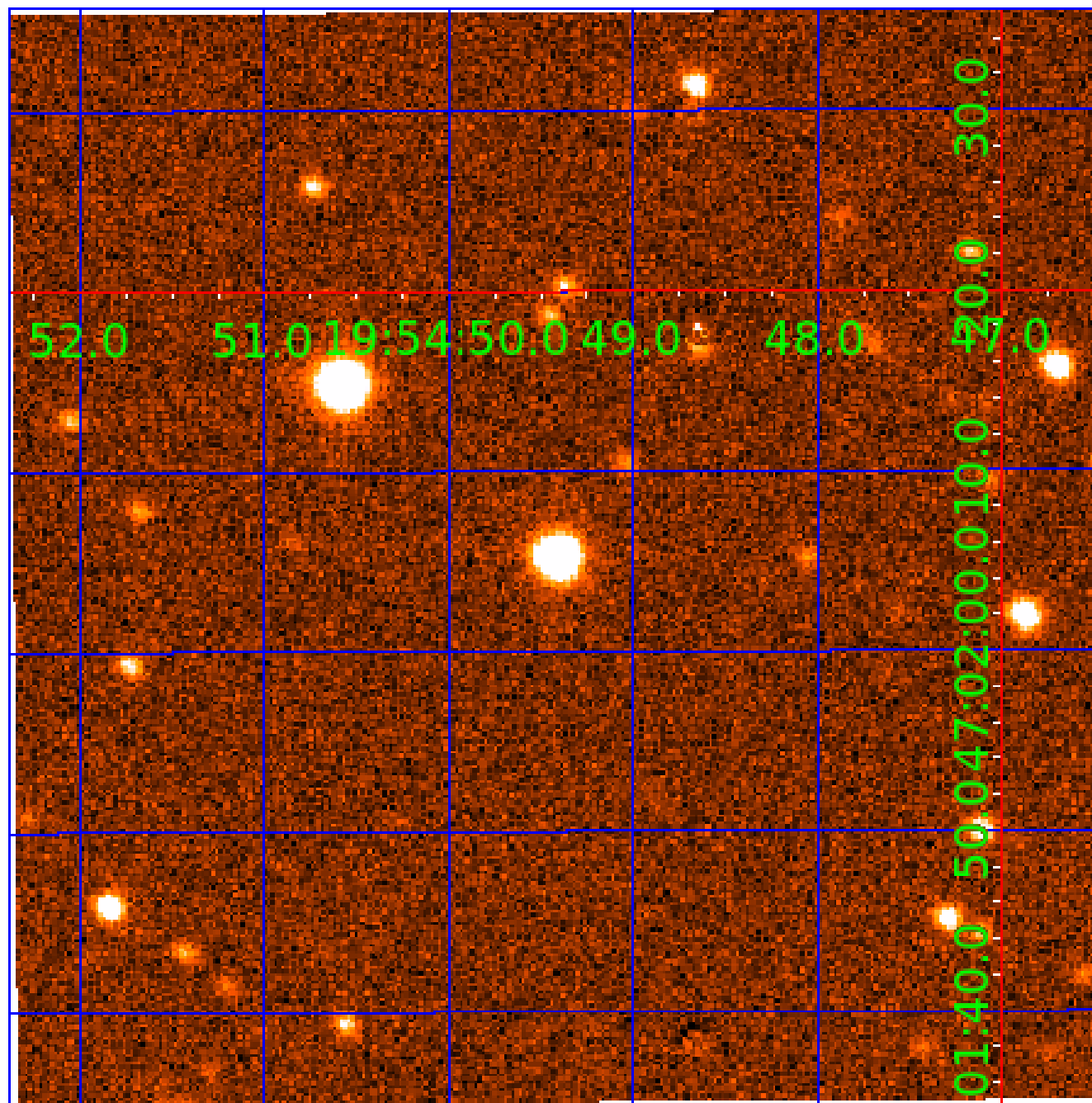


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010095469

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010095469-01	OBS	No	0.677763	131.621610	463666.1	2.000	2612.0	-1.0	1.42	6487	47.90	13422.25
010095469-02	OBS	No	0.677747	131.779944	2308.3	2.000	91.7	-1.0	1.42	6487	6.88	13422.66

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010095469-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
010095469-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—NO_FITS—SAME_NTL_PERIOD—CENT_NOFITS

**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.

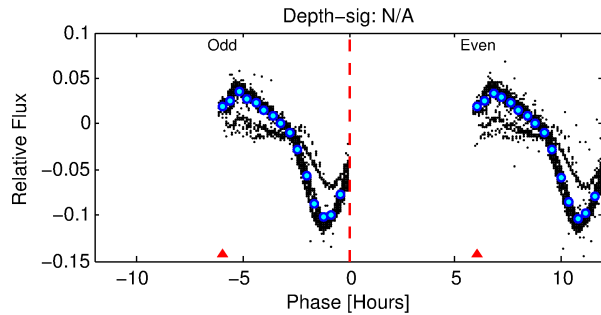
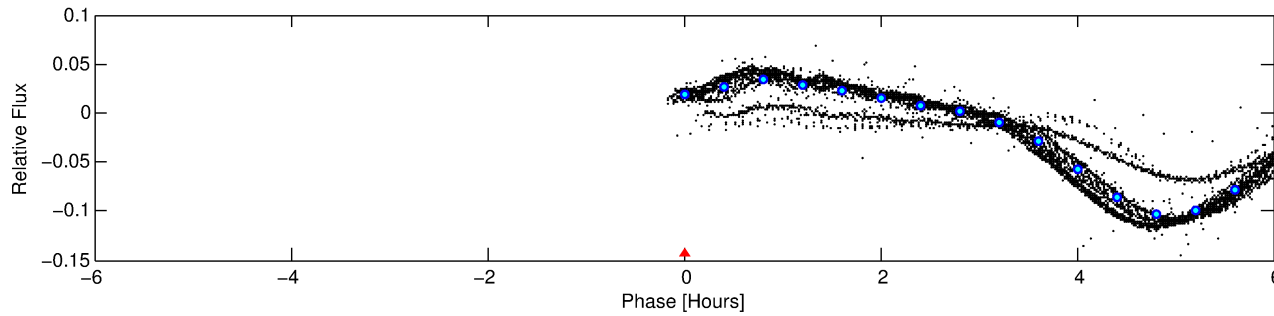
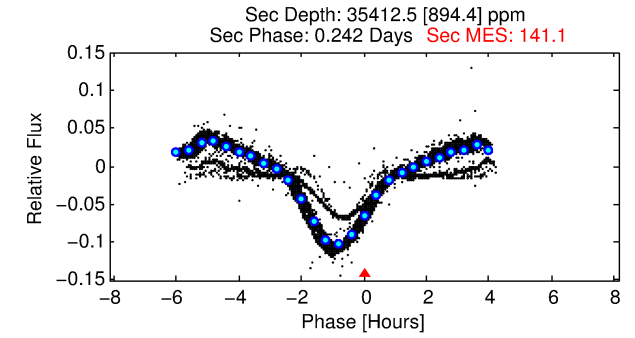
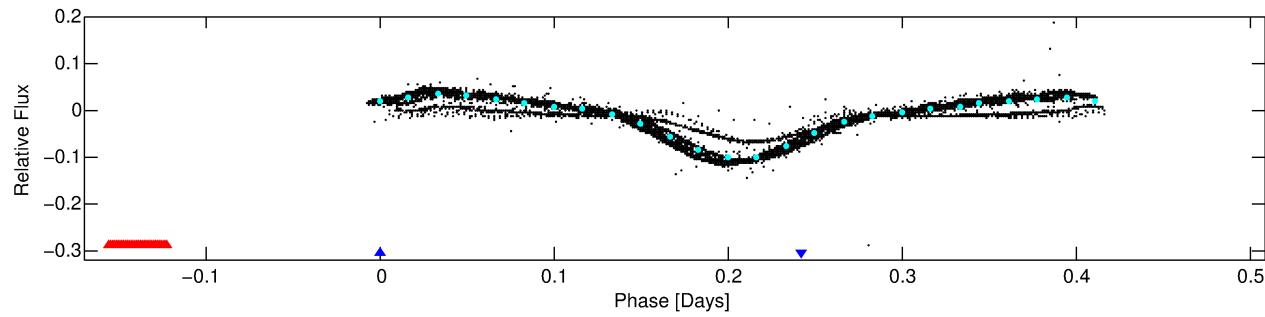
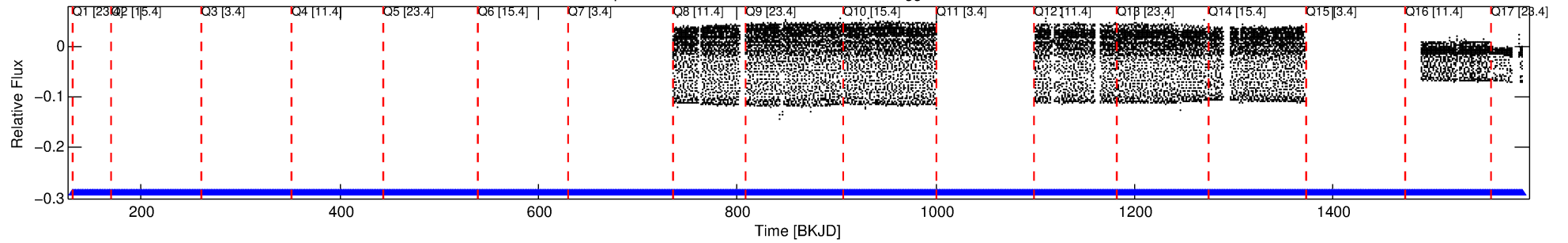
## Ephemeris Match Information For 010095469-02

No Significant Match Found

# DV One-Page Summary

KIC: 10095469 Candidate: 2 of 2 Period: 0.678 d

Kp: 14.69 R\*: 1.42 Rs Teff: 6487.0 K Logg: 4.16 Fe/H: -0.400



## TPS TCE Results:

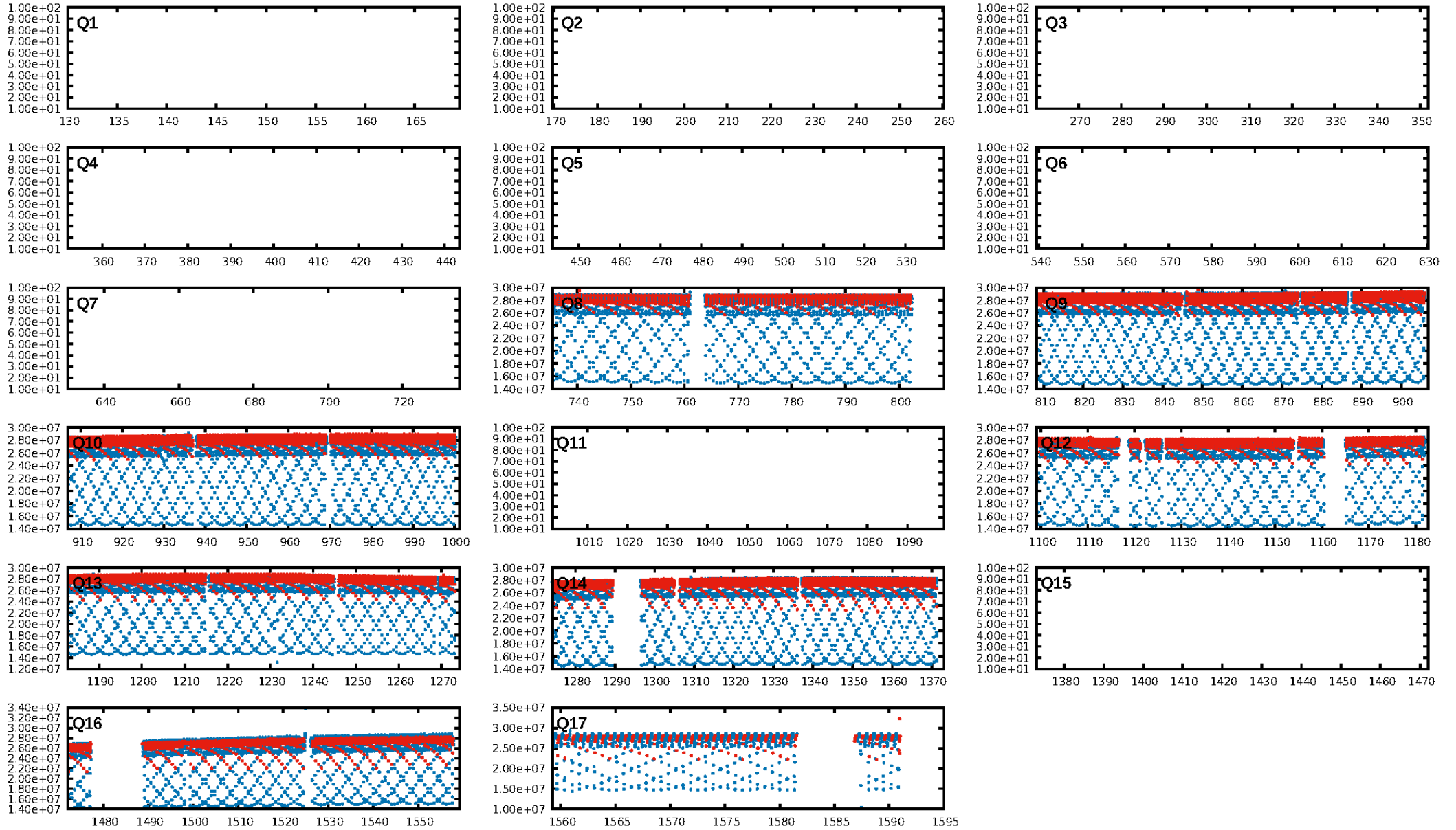
Period = 0.67775 d  
Epoch = 131.7799 BKJD

DV fit results are unavailable

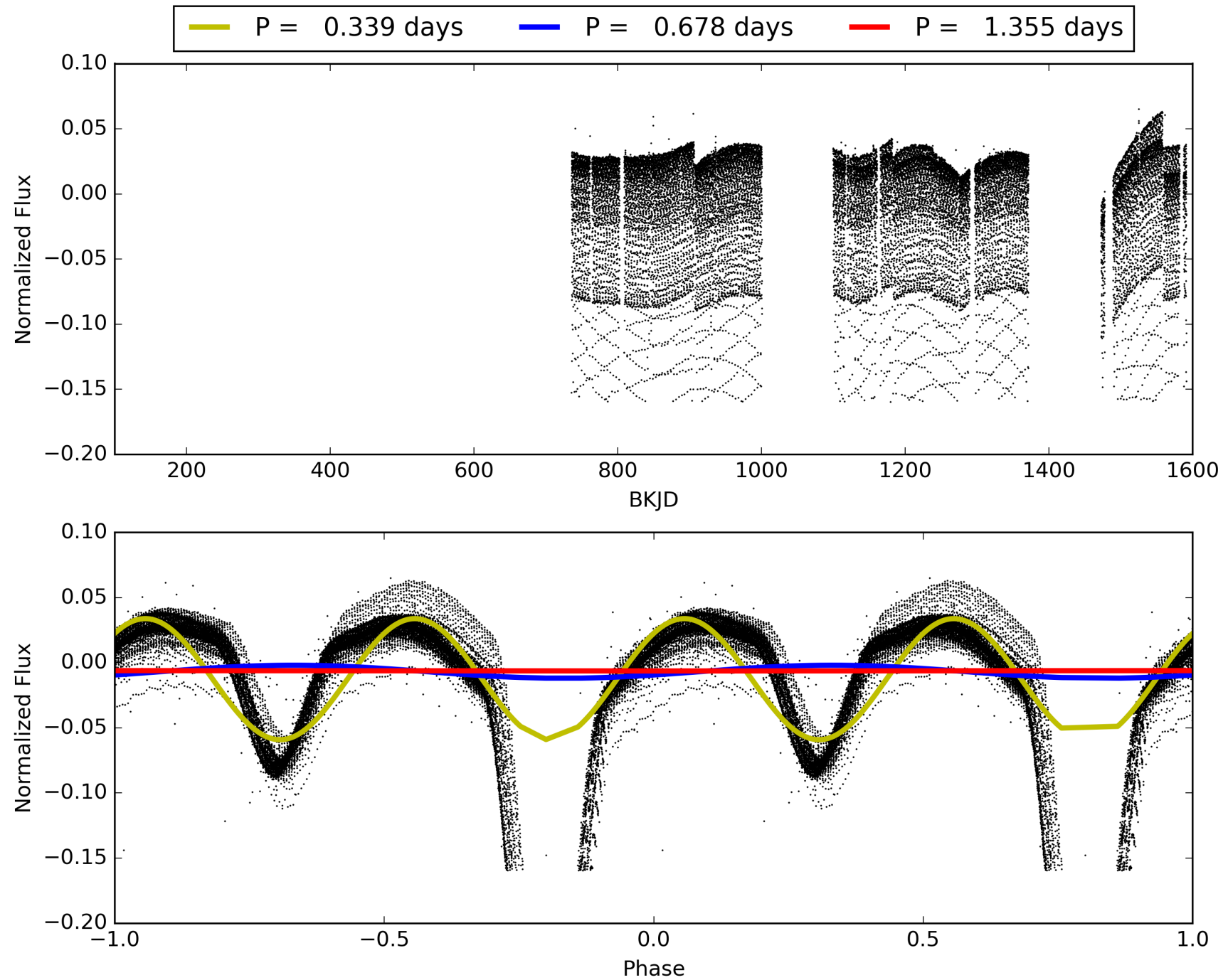
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: N/A  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: N/A

# TCE 010095469-02, PDC Light Curves



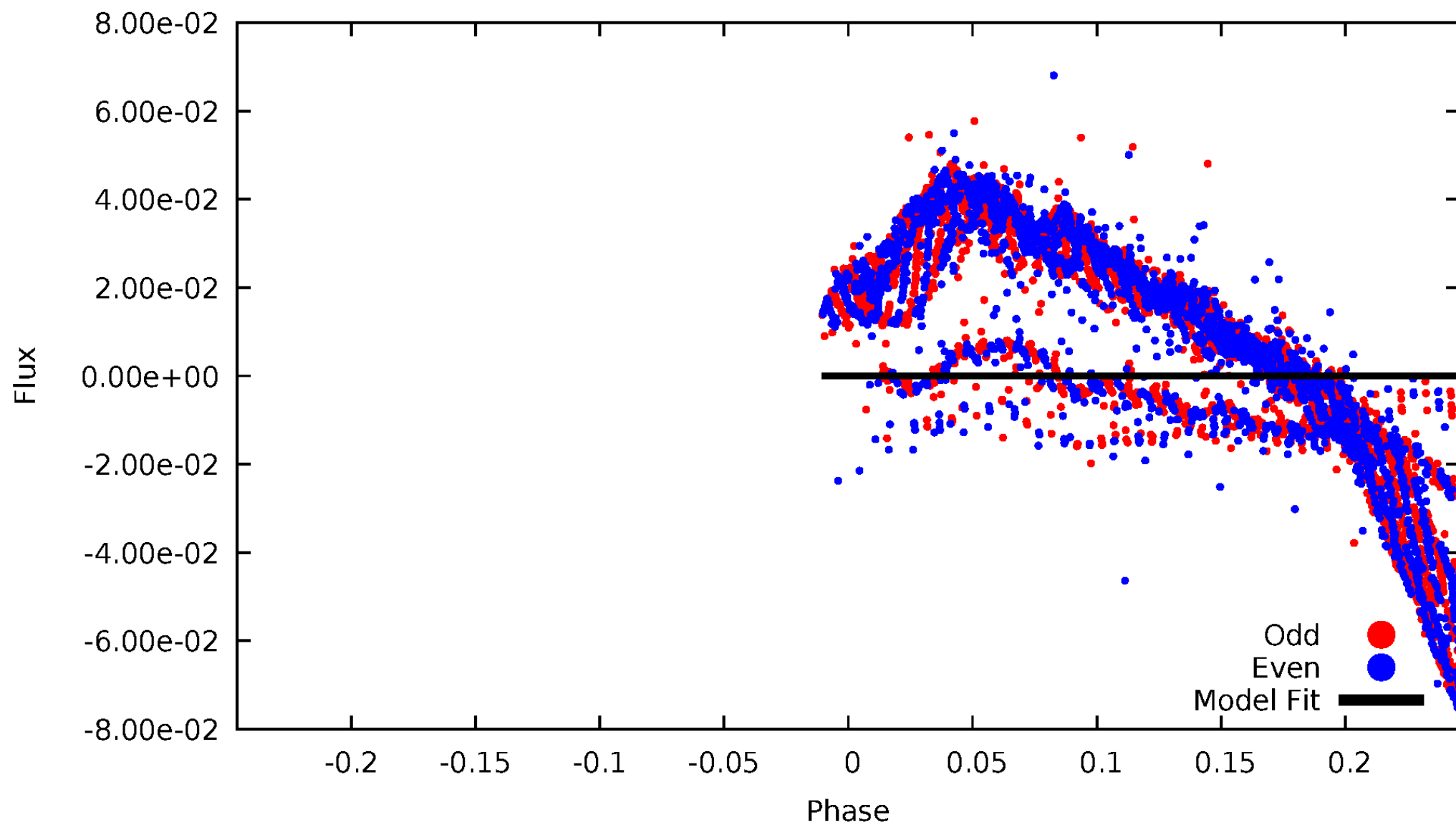
TCE 010095469-02





DV Odd/Even

TCE 010095469-02



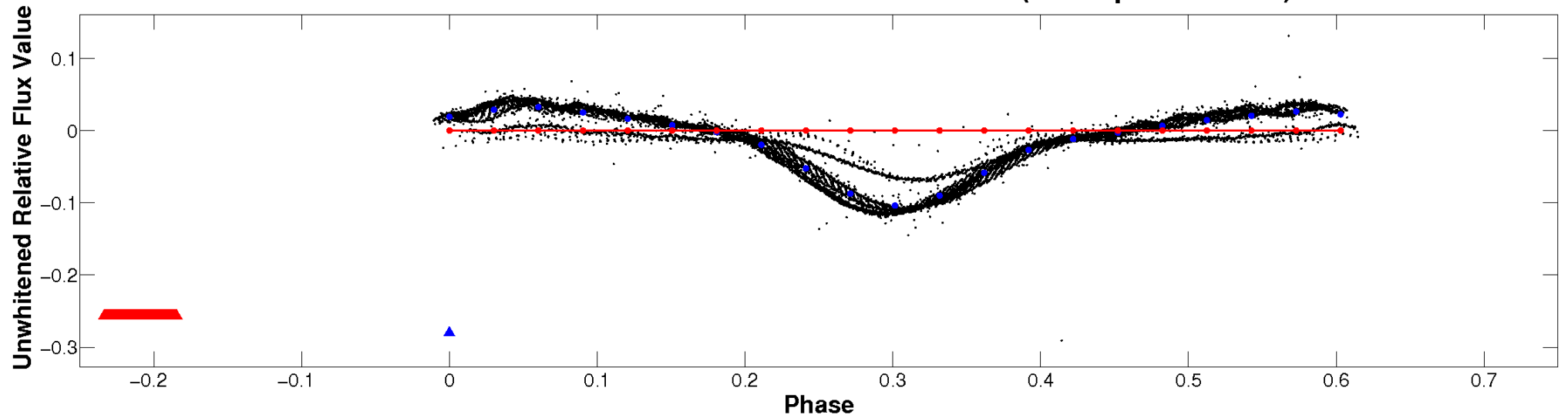


ALT Odd/Even

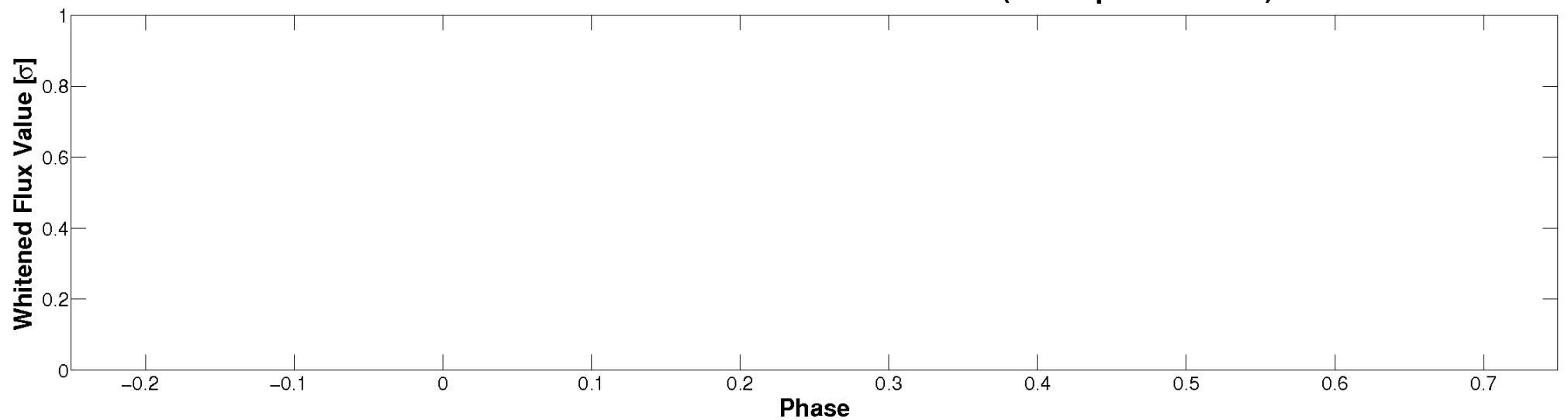
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

**Planet 2 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)**

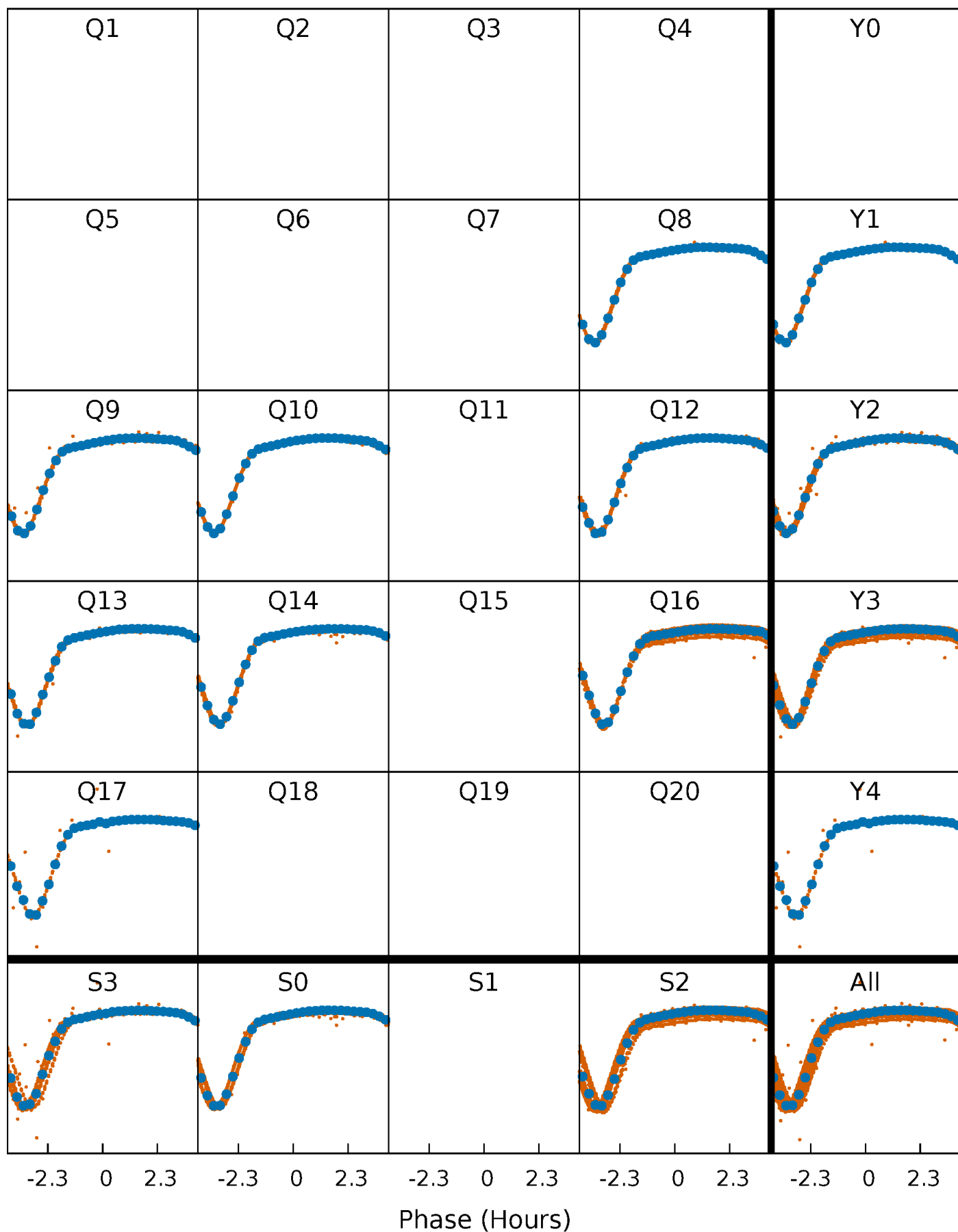


**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



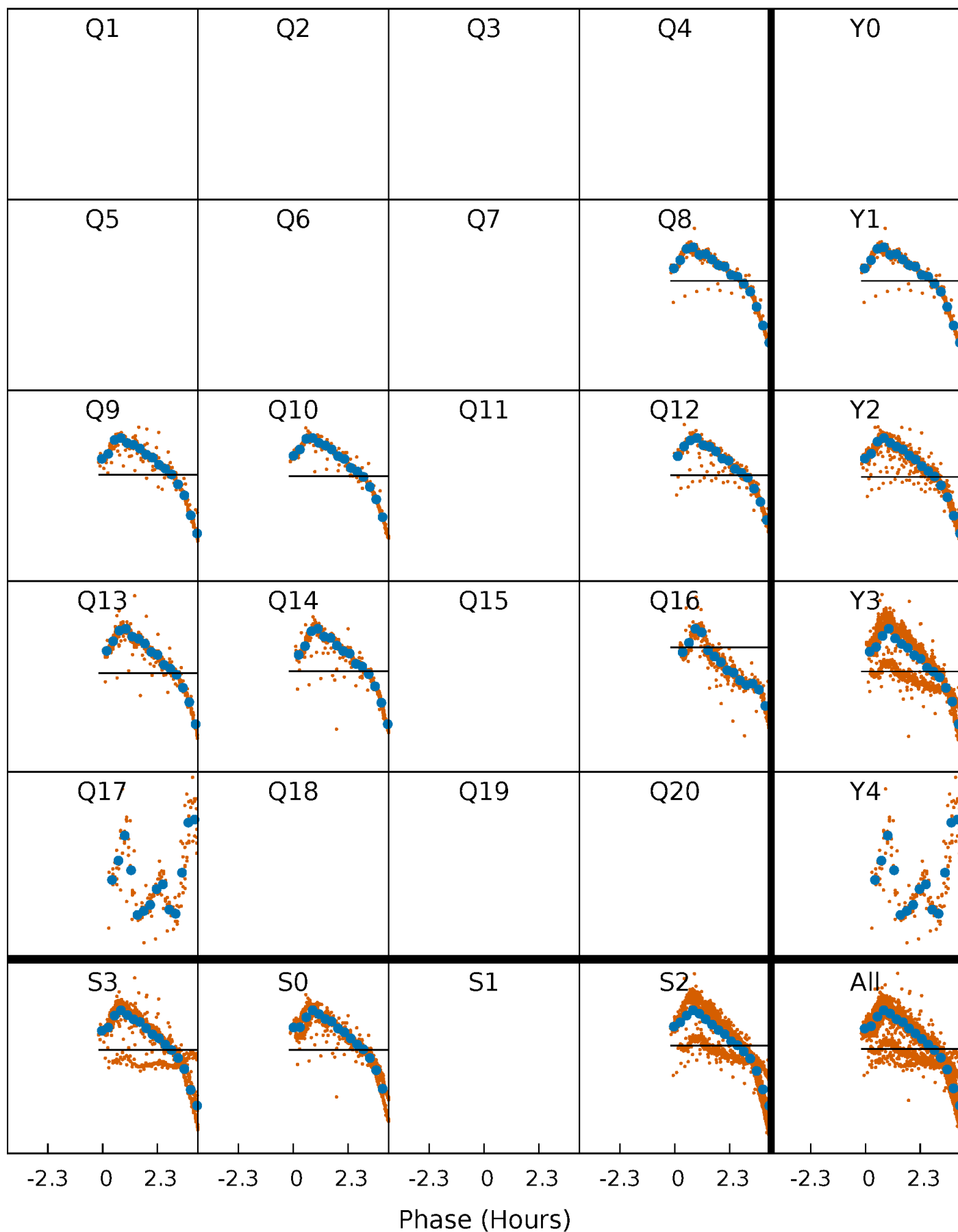
# PDC Quarter-Phased Transit Curves

TCE 010095469-02   P= 0.677747 Days    $T_0=131.779944$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 010095469-02     $P = 0.677747$  Days     $T_0 = 131.779944$  (BKJD)

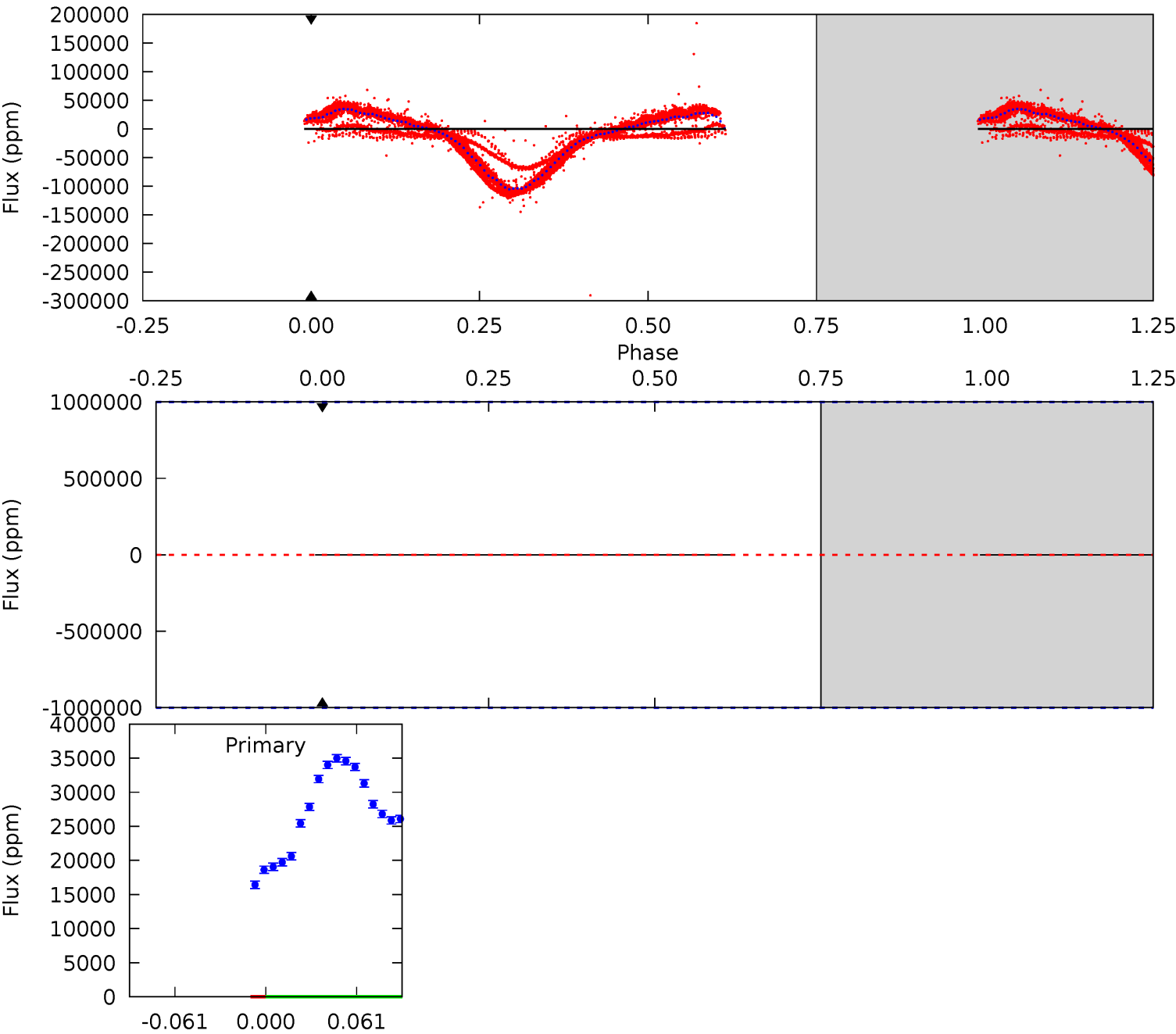


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

010095469-02, P = 0.677747 Days, E = 131.779944 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
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0





## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 010095469

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6487^{+181}_{-227}$	$4.162^{+0.220}_{-0.160}$	$-0.400^{+0.250}_{-0.300}$	$1.420^{+0.384}_{-0.384}$	$1.068^{+0.177}_{-0.129}$	$0.525^{+0.704}_{-0.243}$
	+3%/-3%	+5%/-4%	+62%/-75%	+27%/-27%	+17%/-12%	+134%/-46%
Source	KIC0	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 010095469-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$0 \pm 1000000$	$12.58^{+12.55}_{-8.34}$	$3803^{+294}_{-304}$	$5598^{+20410}_{-25338}$	$3.958^{+160.800}_{-108.056}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

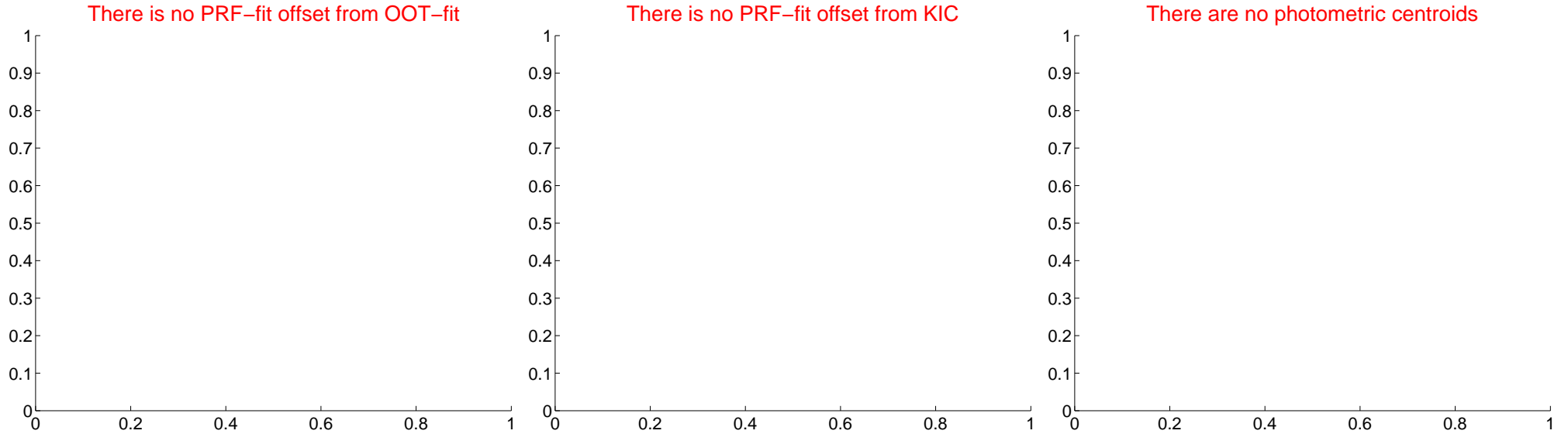
## DV Centroid Data

Supplemental centroid analysis for 010095469-02. Kepler magnitude: 14.69. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

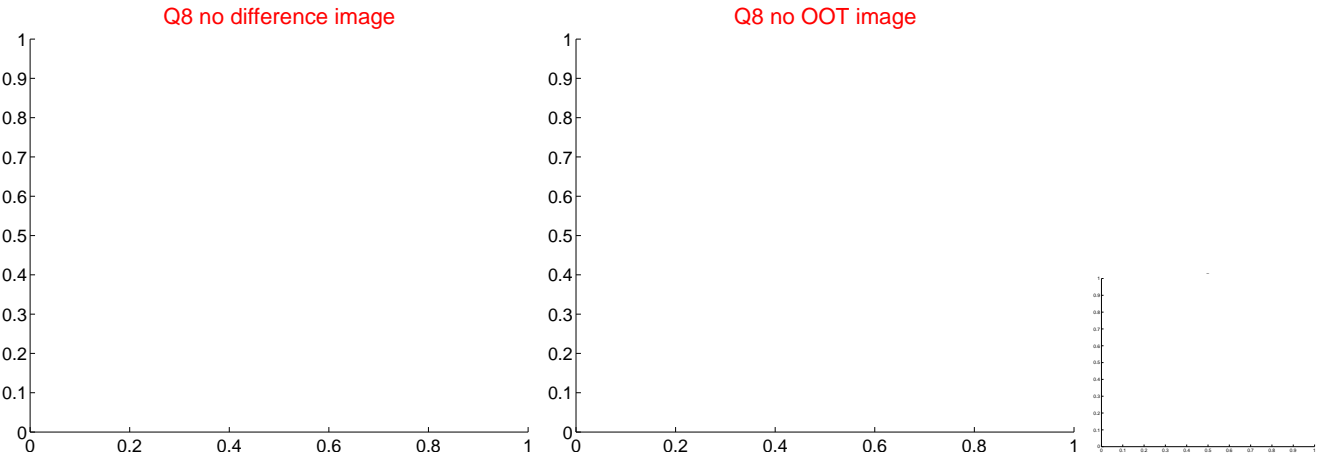
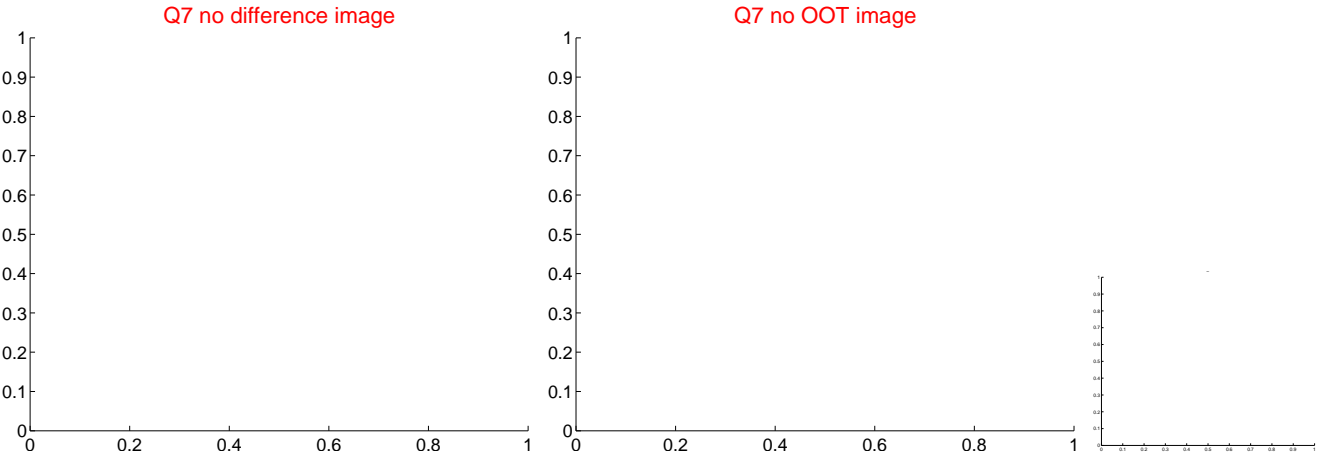
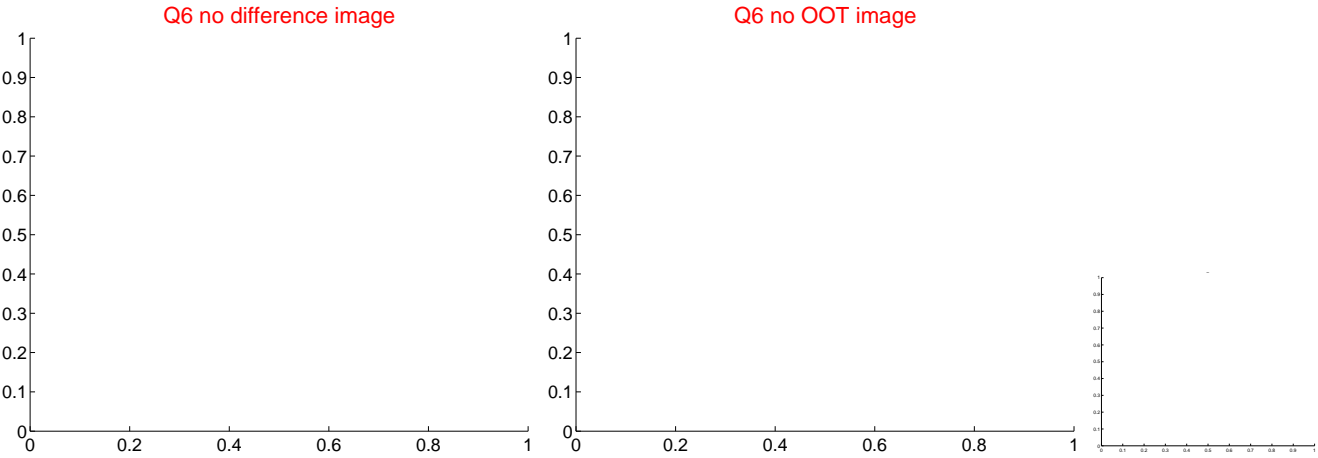
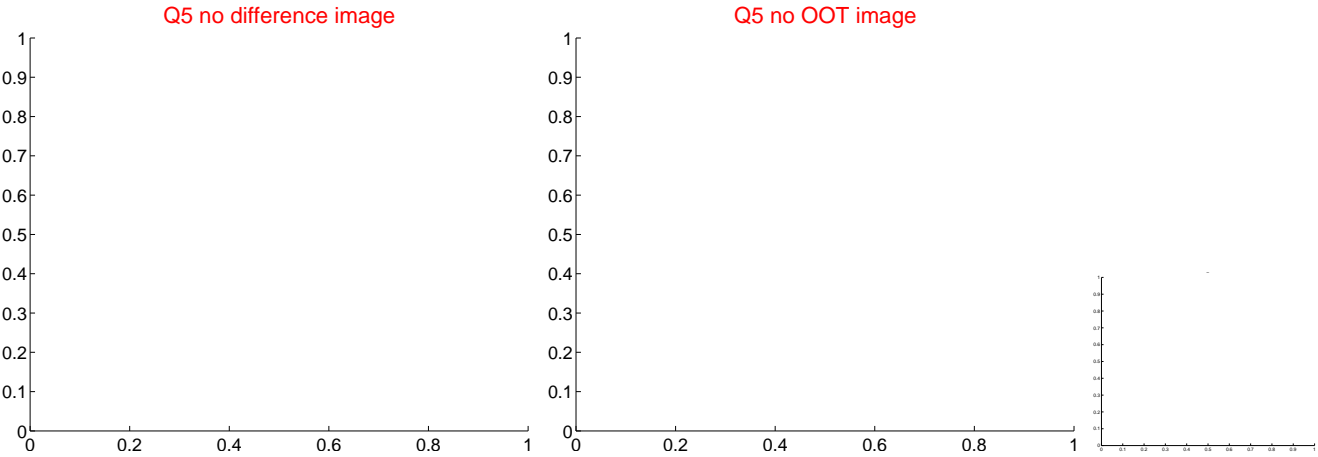


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



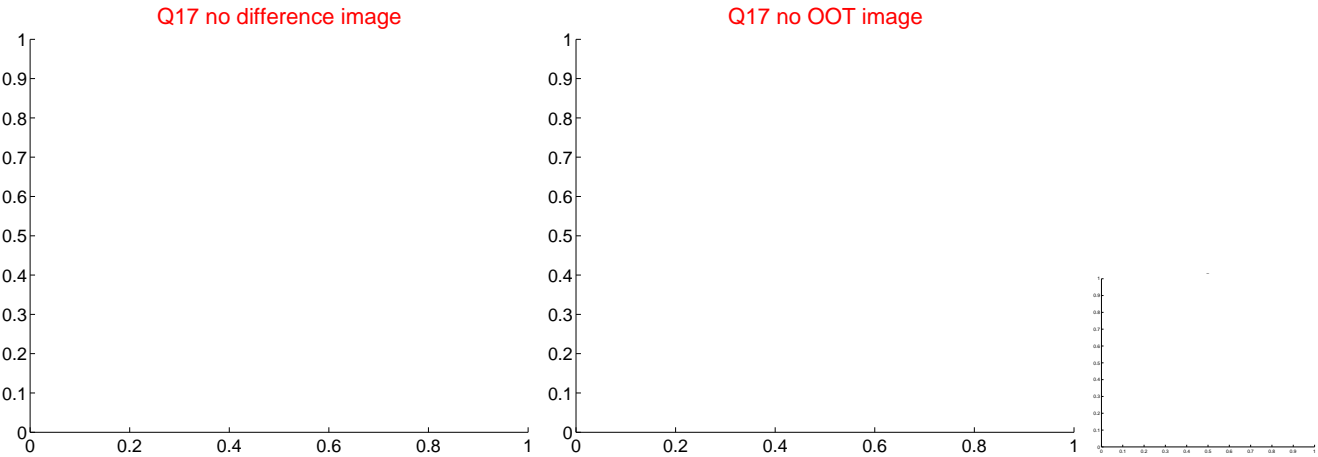
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.



UKIRT Image

Declination

