

# KIC 011252617

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011252617-01	OBS	6236.01	4.478117	132.872038	118143.7	3.365	4687.3	3783.4	1.06	6304	38.98	521.86
011252617-02	OBS	No	2.239059	132.872884	4517.9	3.198	195.0	190.7	1.06	6304	8.53	1315.01
011252617-03	OBS	6236.02	1.276198	131.685588	158.5	3.446	11.6	12.9	1.06	6304	1.56	2782.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011252617-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011252617-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011252617-03	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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.

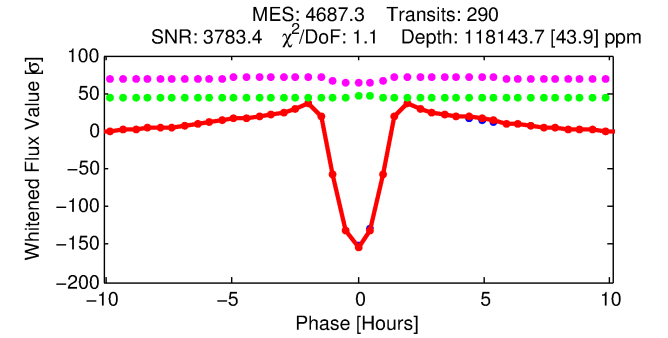
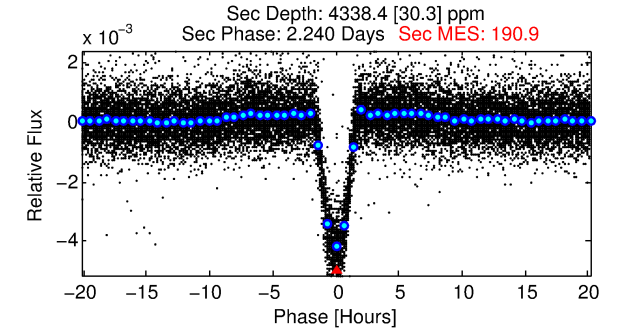
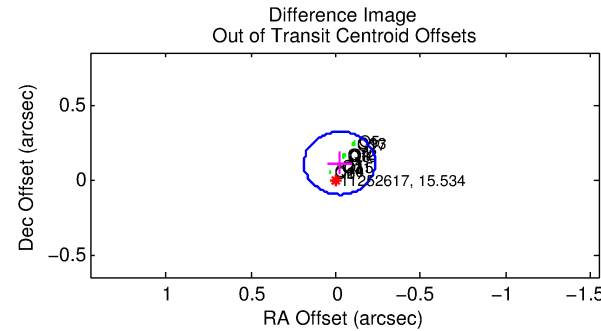
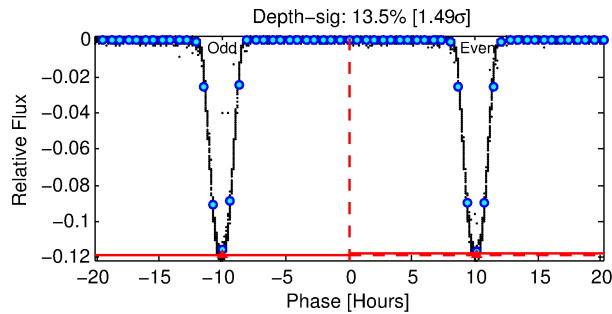
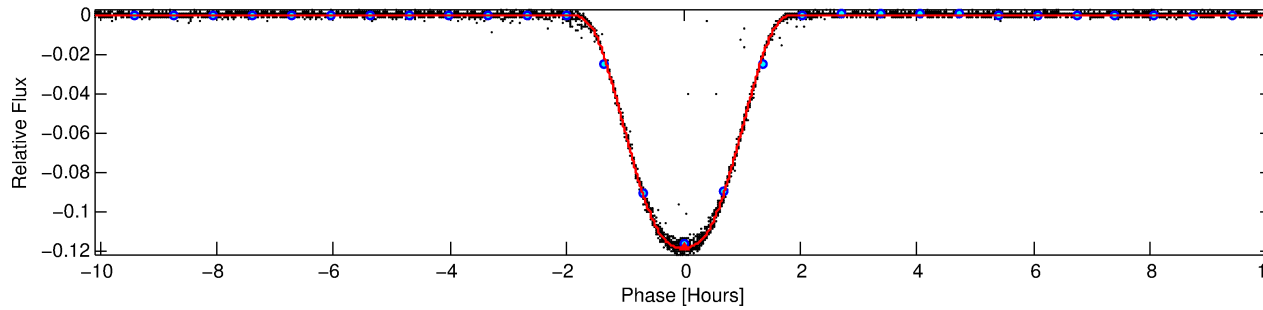
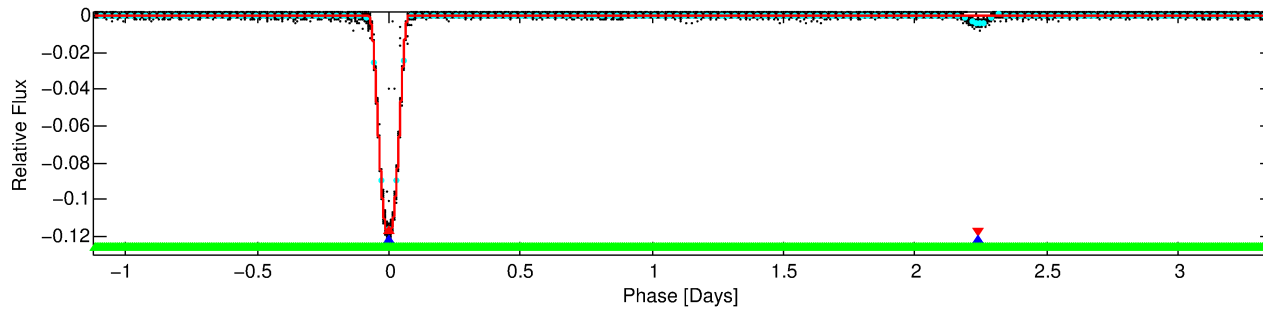
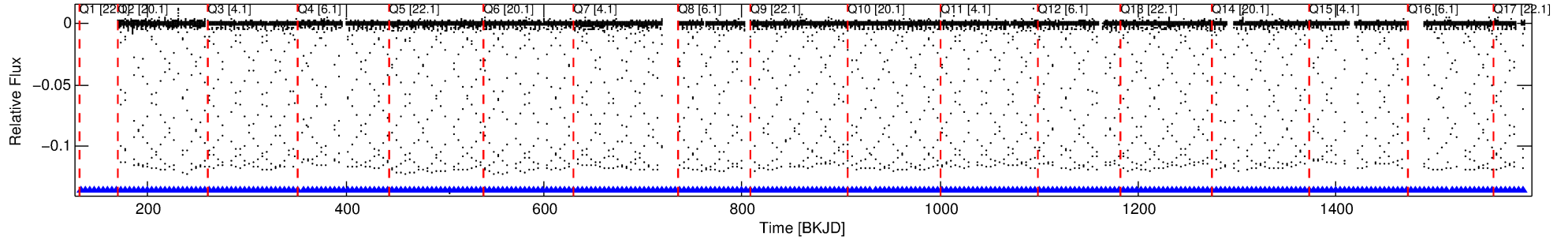
Ephemeris Match Information For 011252617-01

No Significant Match Found

# DV One-Page Summary

KIC: 11252617 Candidate: 1 of 3 Period: 4.478 d  
KOI: K06236.01 Corr: 0.995

Kp: 15.53 R\*: 1.06 Rs Teff: 6304.0 K Logg: 4.43 Fe/H: -0.140



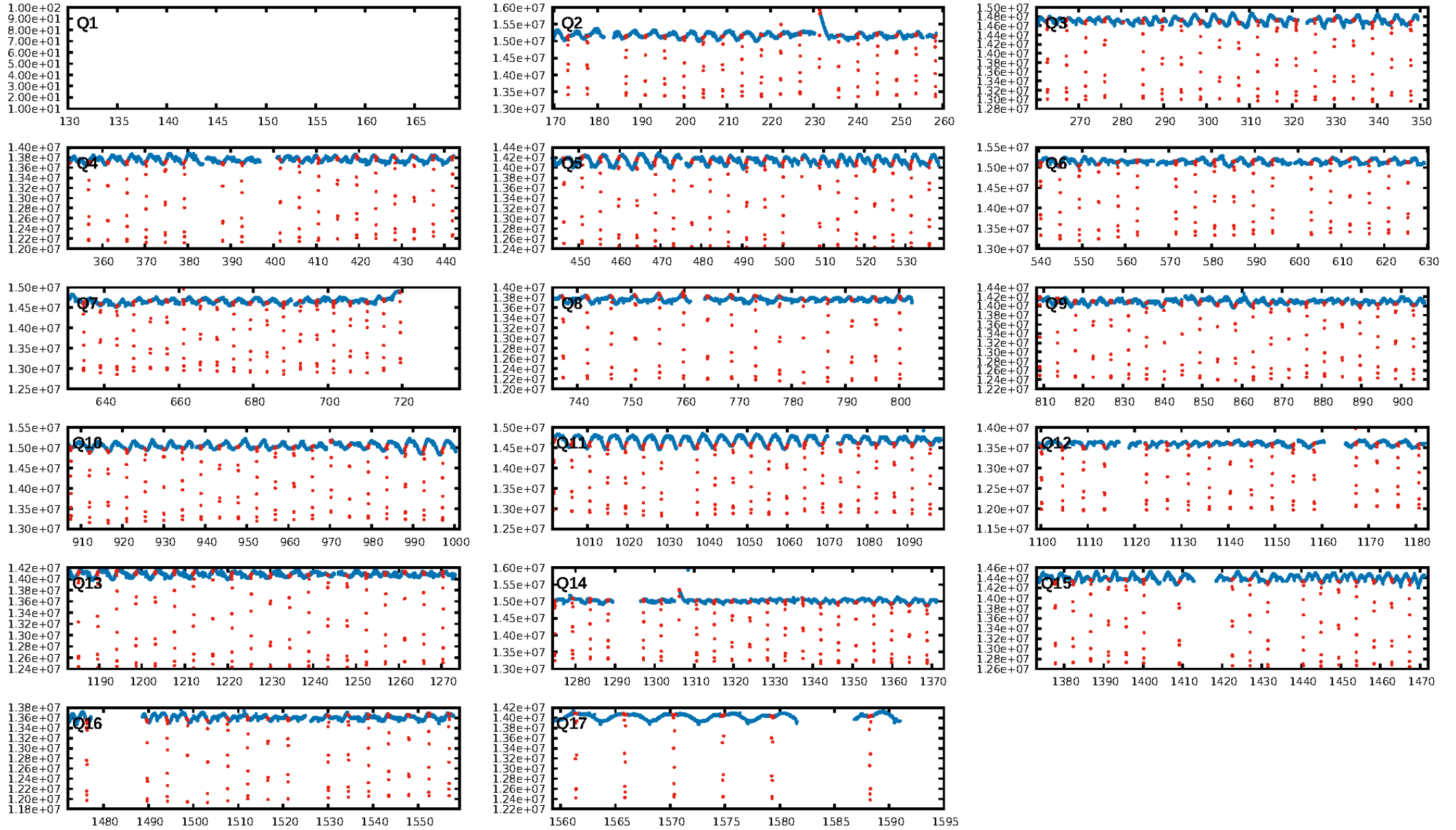
## DV Fit Results:

Period = 4.47812 [0.00000] d  
Epoch = 132.8720 [0.0000] BKJD  
Rp/R\* = 0.3377 [0.0001]  
a/R\* = 12.04 [0.01]  
b = 0.63 [0.00]  
Seff = 521.86 [202.55]  
Teff = 1219 [118] K  
Rp = 38.99 [11.79] Re  
a = 0.0551 [0.0138] AU  
Ag = 4.77 [1.72] [2.19σ]  
Teffp = 2784 [99] K [10.13σ]

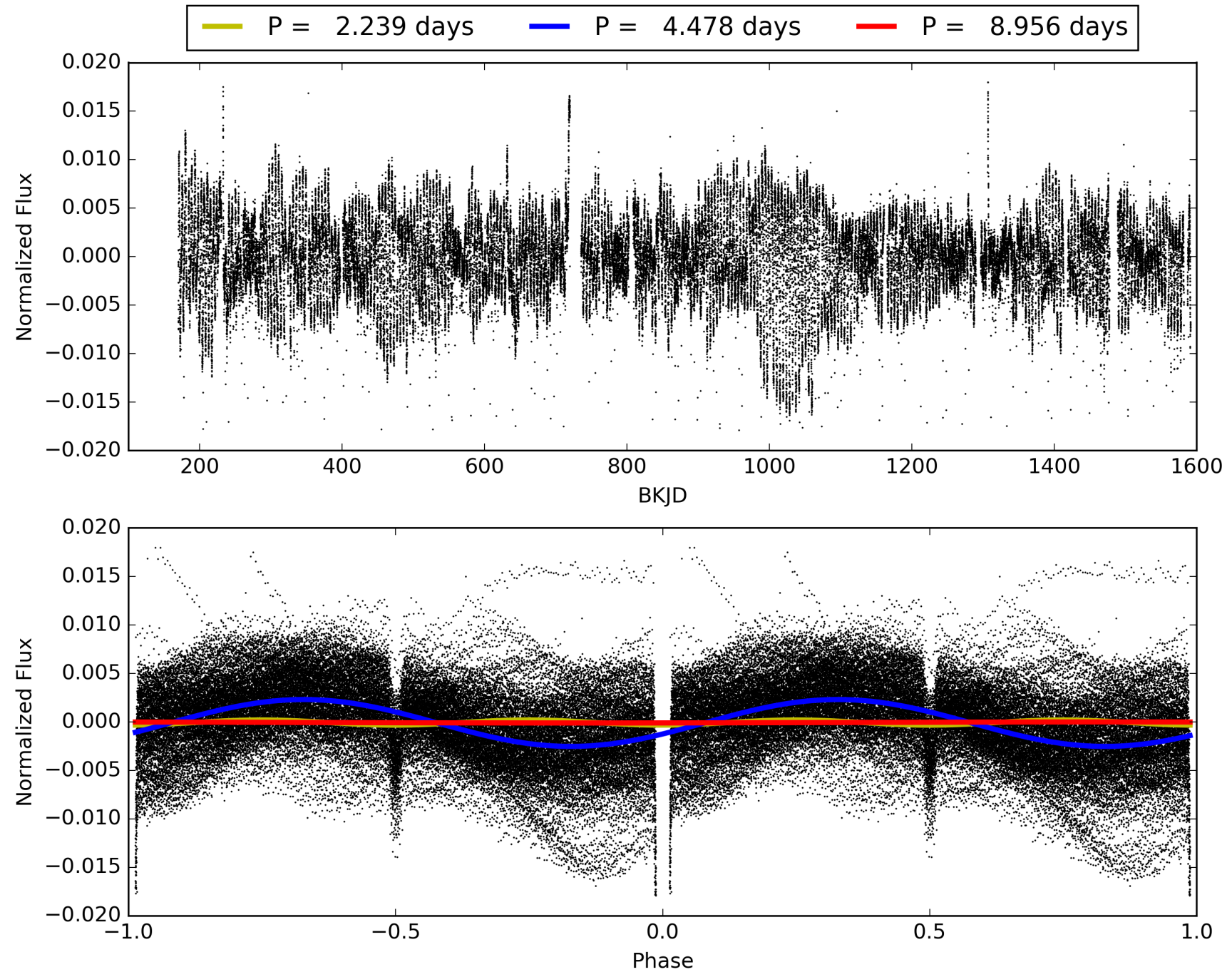
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.58σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [284/284]  
GhostDiagnostic-chr: 3.291  
Centroid-sig: N/A  
Centroid-so: 0.375 arcsec [109.01σ]  
OotOffset-rm: 0.112 arcsec [1.60σ]  
KicOffset-rm: 0.138 arcsec [2.04σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 0.00 [0/16]

# TCE 011252617-01, PDC Light Curves

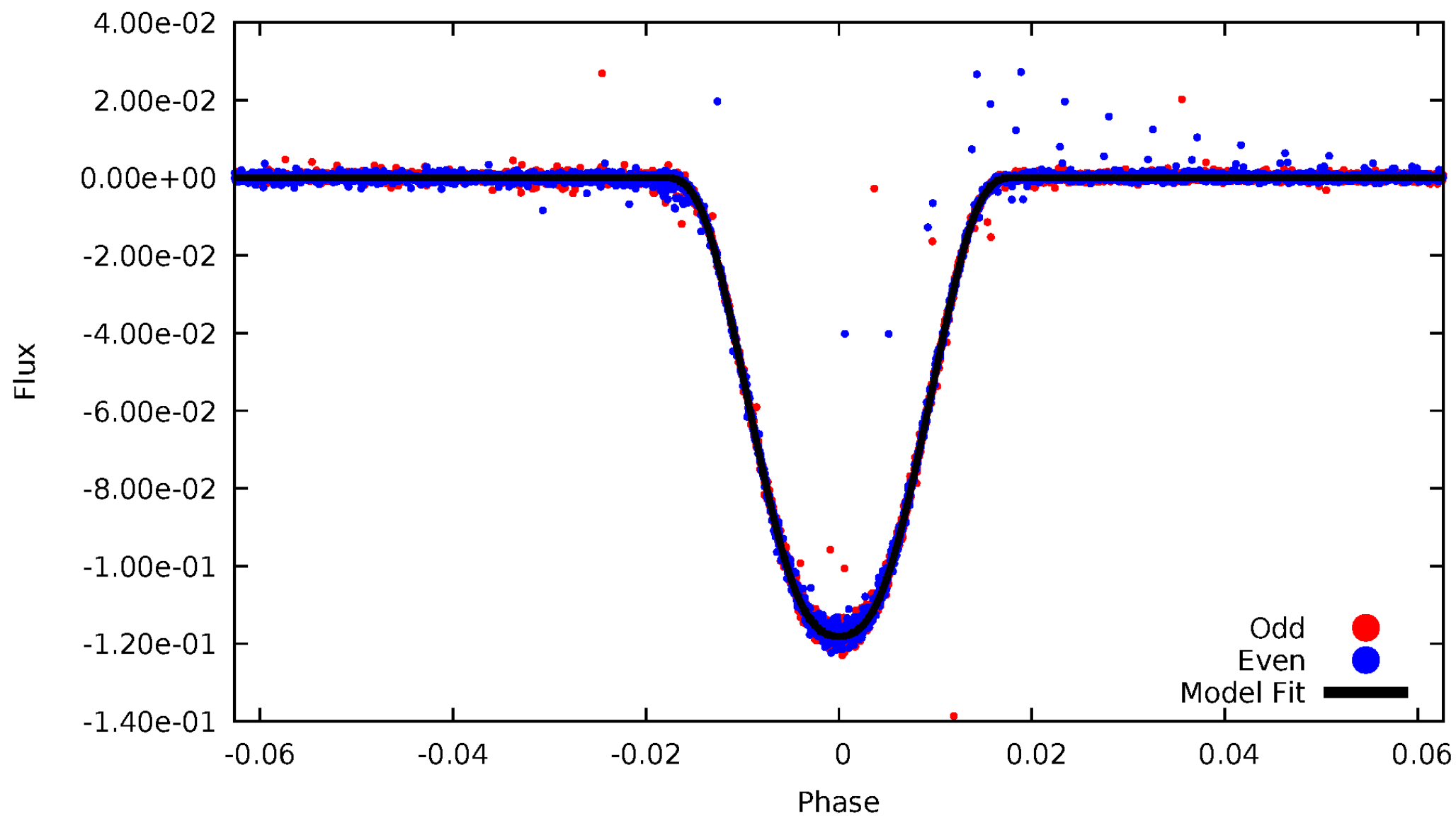


TCE 011252617-01



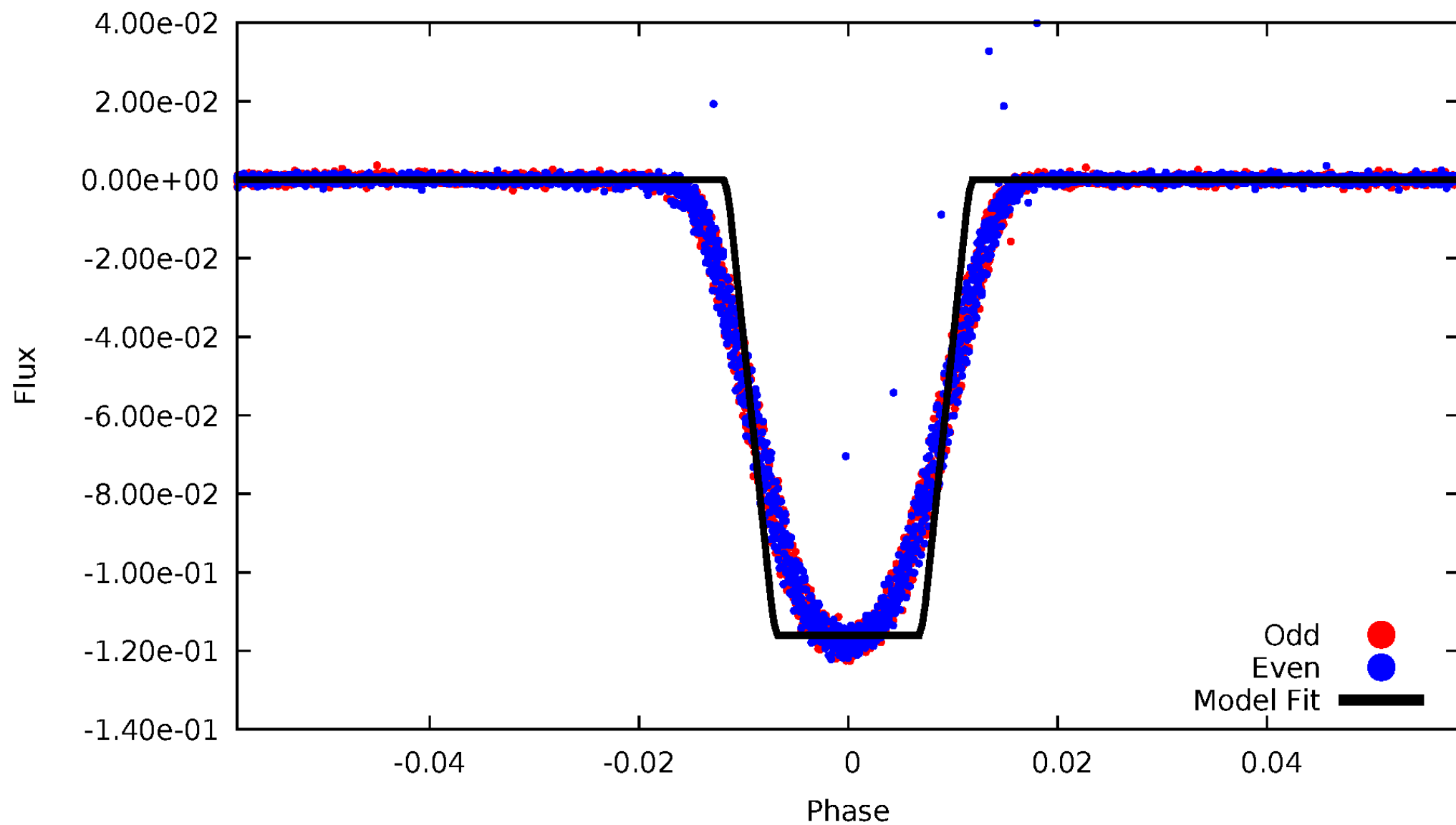
# DV Odd/Even

TCE 011252617-01



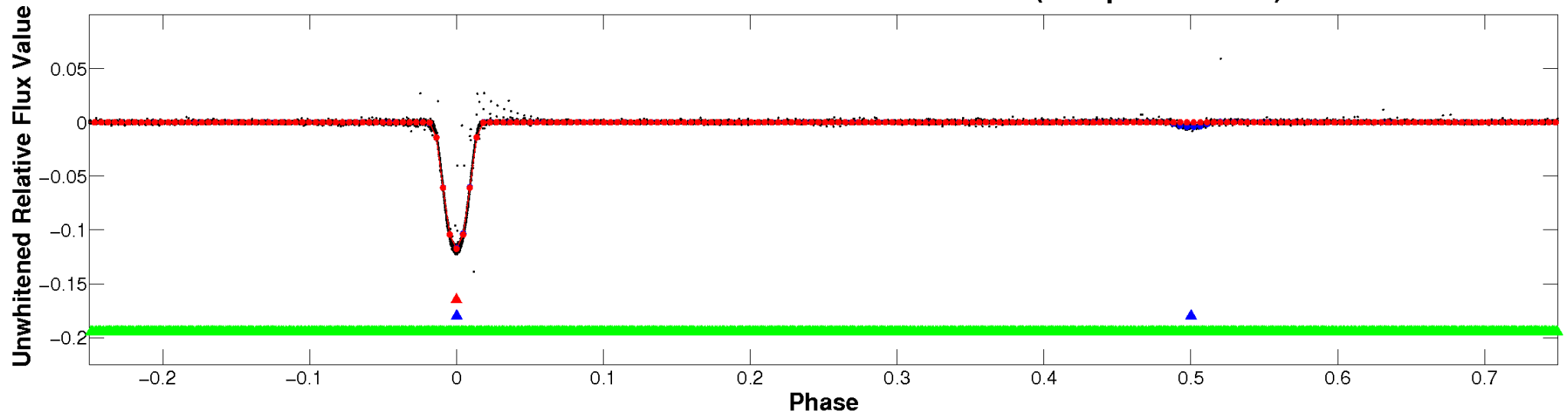
# ALT Odd/Even

TCE 011252617-01

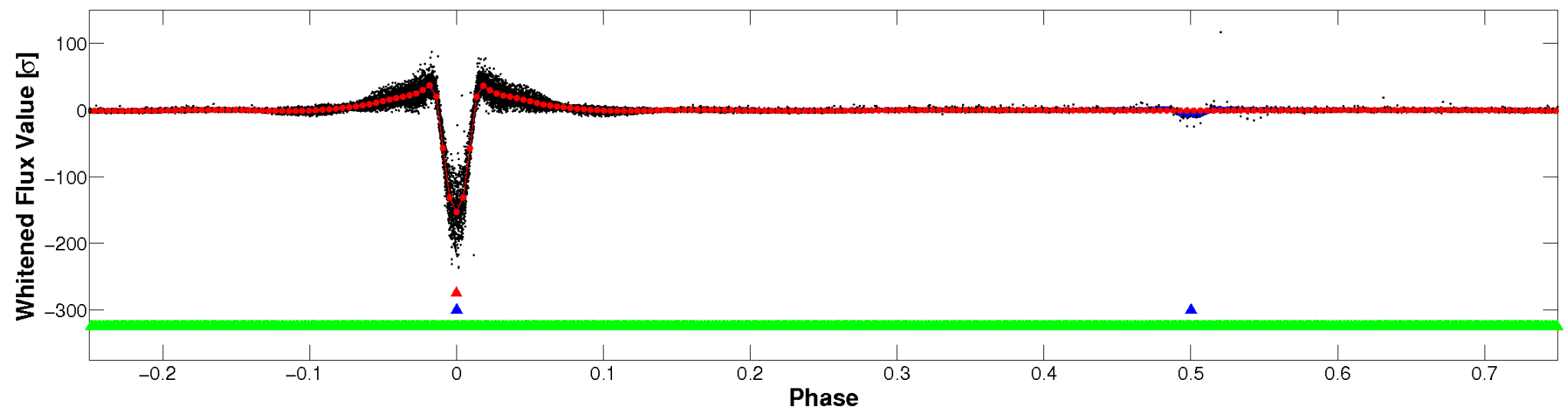


# Non-Whitened Vs. Whitened Light Curve

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

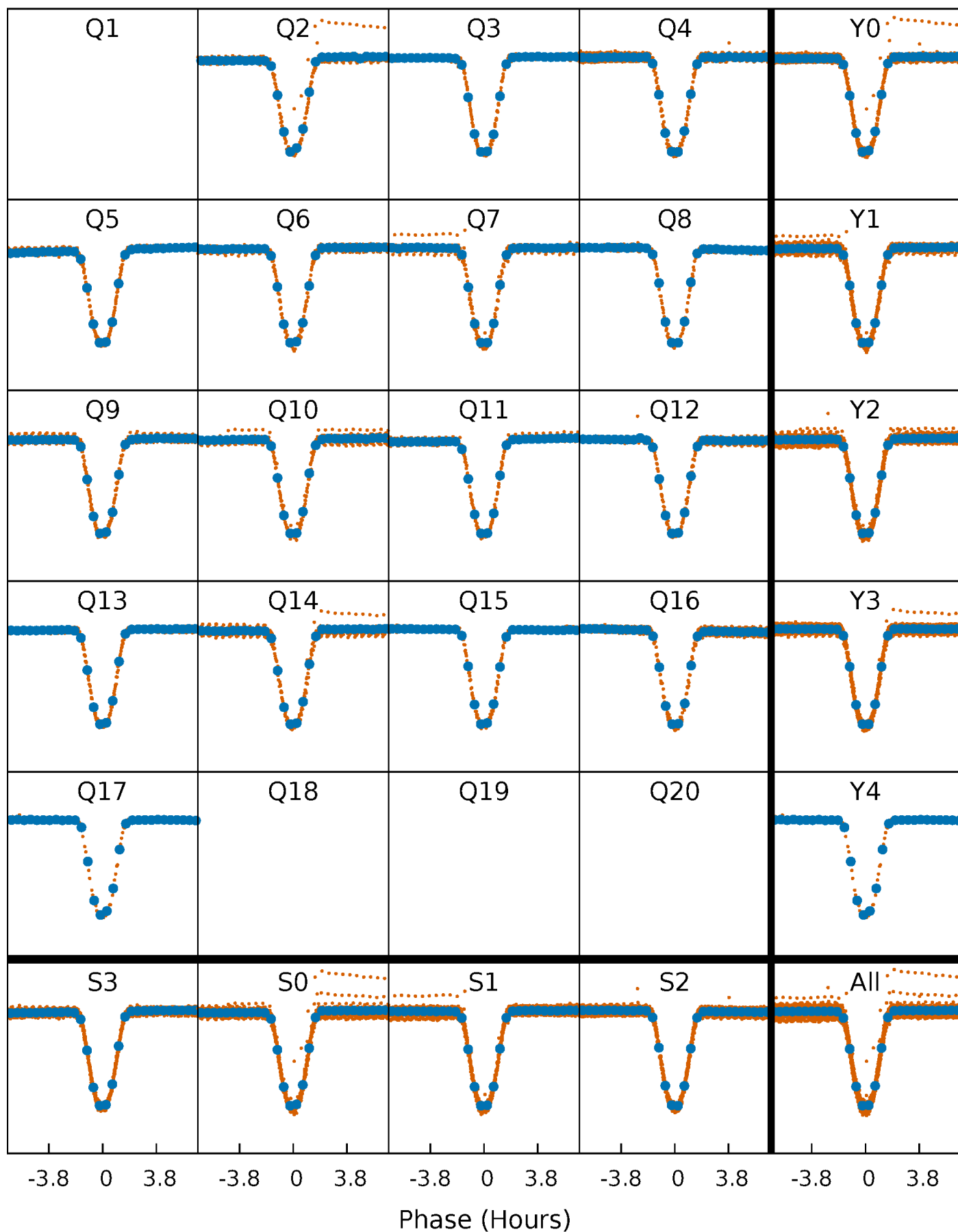


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

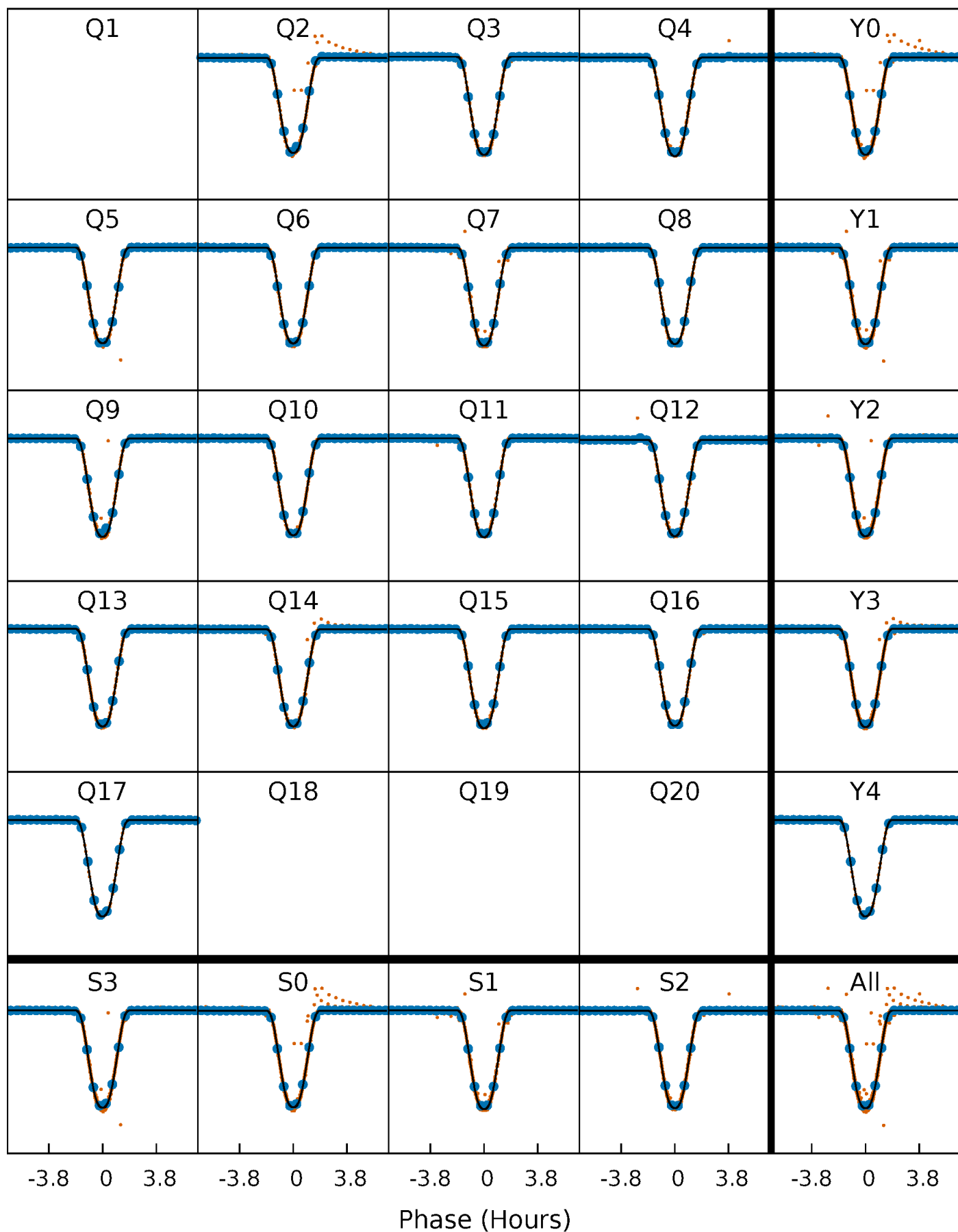
TCE 011252617-01 P= 4.478117 Days  $T_0=132.872038$  (BKJD)





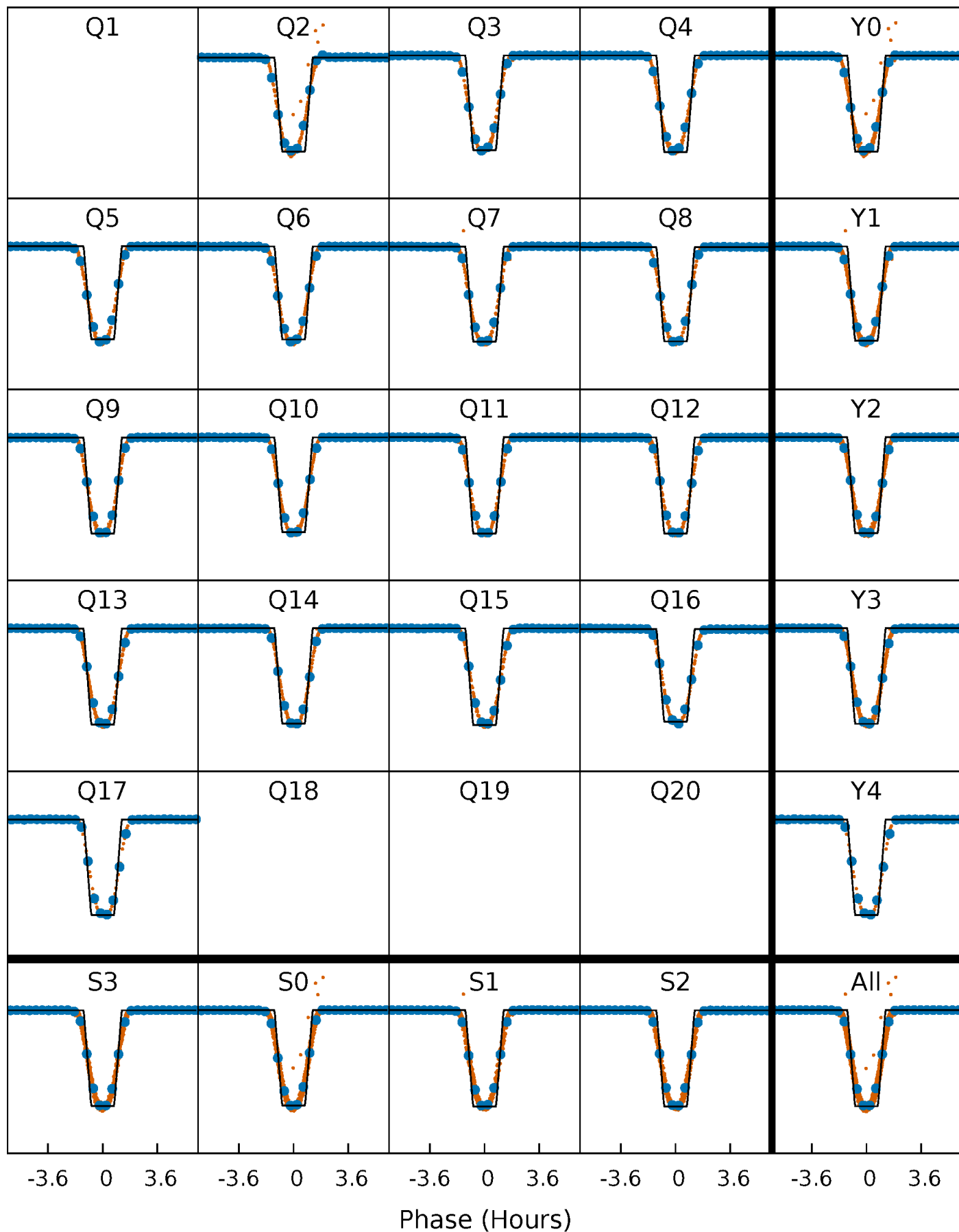
# DV Quarter-Phased Transit Curves

TCE 011252617-01 P= 4.478117 Days  $T_0=132.872038$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

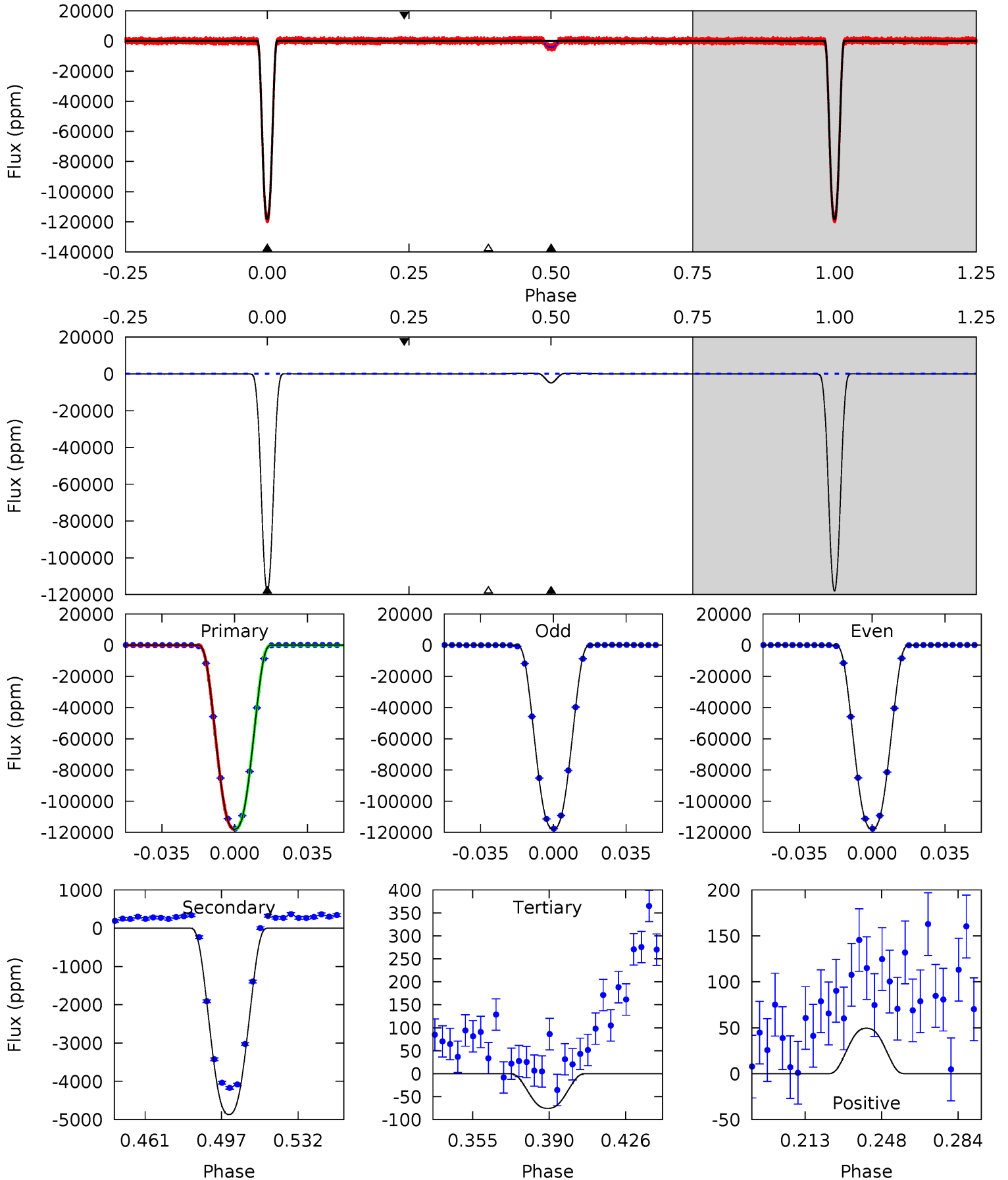
TCE 011252617-01   P= 4.478090 Days    $T_0=132.876472$  (BKJD)



# DV Model-Shift Uniqueness Test

011252617-01, P = 4.478117 Days, E = 132.872038 Days

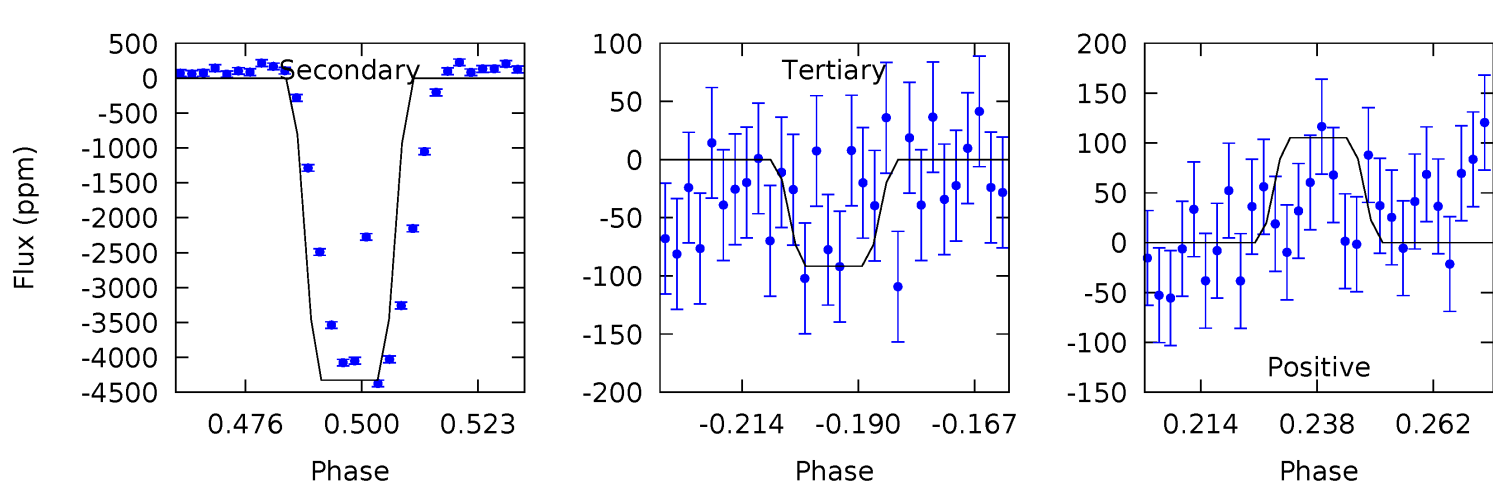
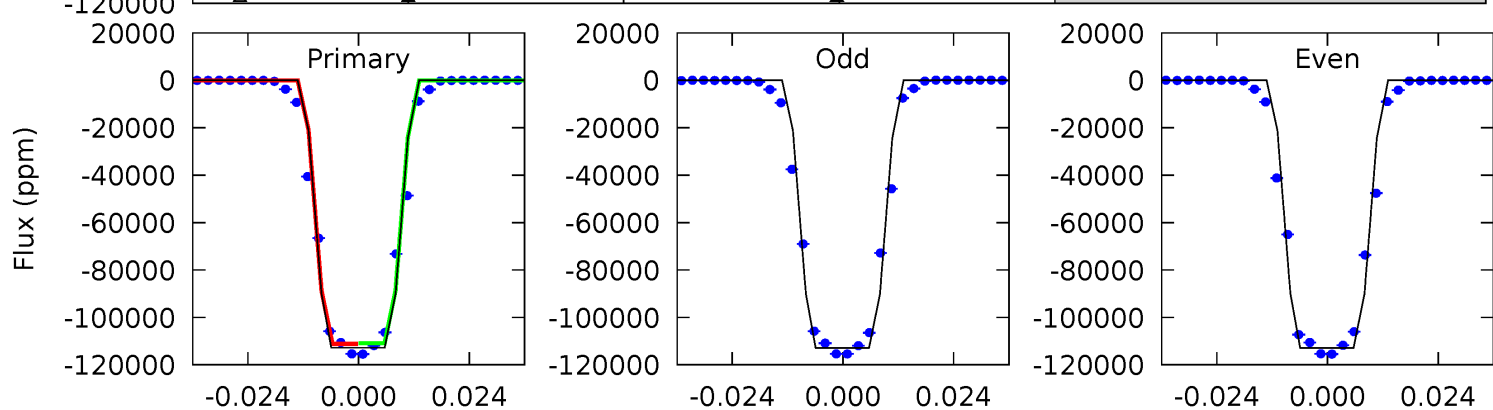
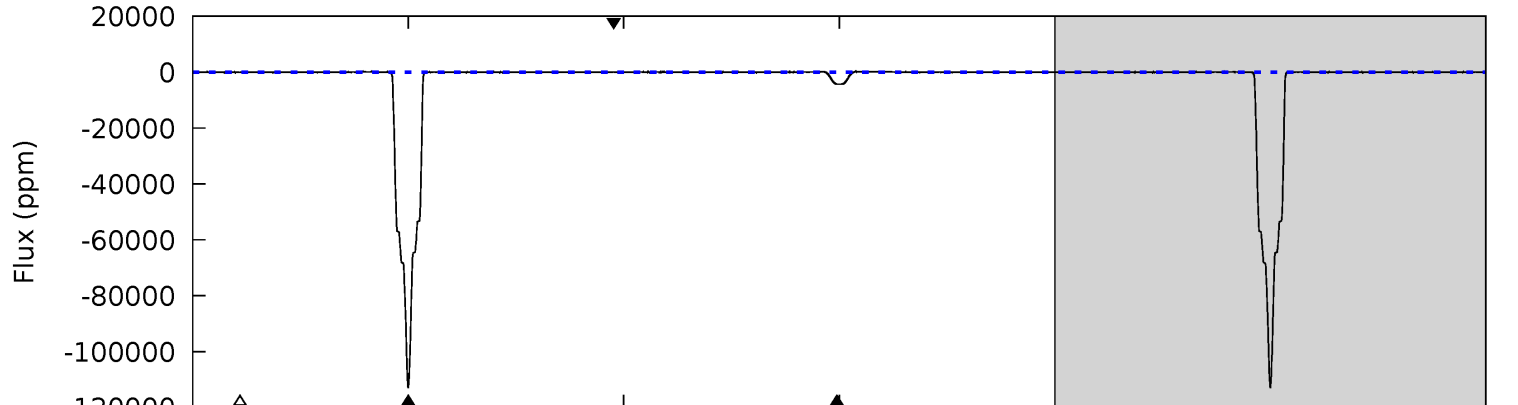
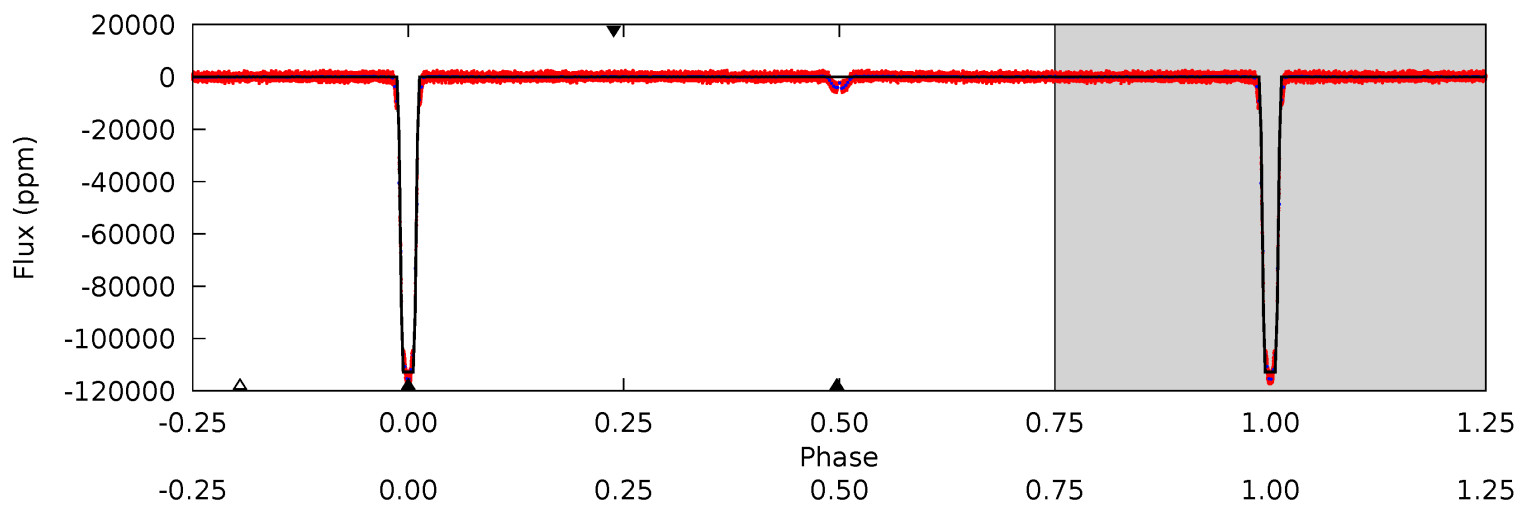
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8604	355.0	5.51	3.60	4.78	2.10	6.24	8599	8600	349.5	351.4	1.92	1.00	0.00	3.46



# Alt Model-Shift Uniqueness Test

011252617-01, P = 4.478090 Days, E = 132.876472 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
3822	146.7	3.11	3.57	4.86	2.26	1.77	3819	3818	143.6	143.1	0.75	0.99	0.00	0



### Stellar Parameters For KIC 011252617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6304^{+169}_{-225}$	$4.435^{+0.065}_{-0.195}$	$-0.140^{+0.250}_{-0.300}$	$1.058^{+0.320}_{-0.128}$	$1.110^{+0.144}_{-0.144}$	$1.319^{+0.435}_{-0.636}$
	+3%/-4%	+1%/-4%	+179%/-214%	+30%/-12%	+13%/-13%	+33%/-48%
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 011252617-01 / KOI 6236.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-4867 \pm 14$	$39.94^{+5.44}_{-3.12}$	$1733^{+111}_{-87}$	$3360^{+56}_{-68}$	$5.037^{+0.801}_{-1.044}$
Alt.	$-4328 \pm 30$	$40.26^{+6.12}_{-3.40}$	$1729^{+123}_{-94}$	$3279^{+59}_{-66}$	$4.418^{+0.697}_{-1.020}$

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

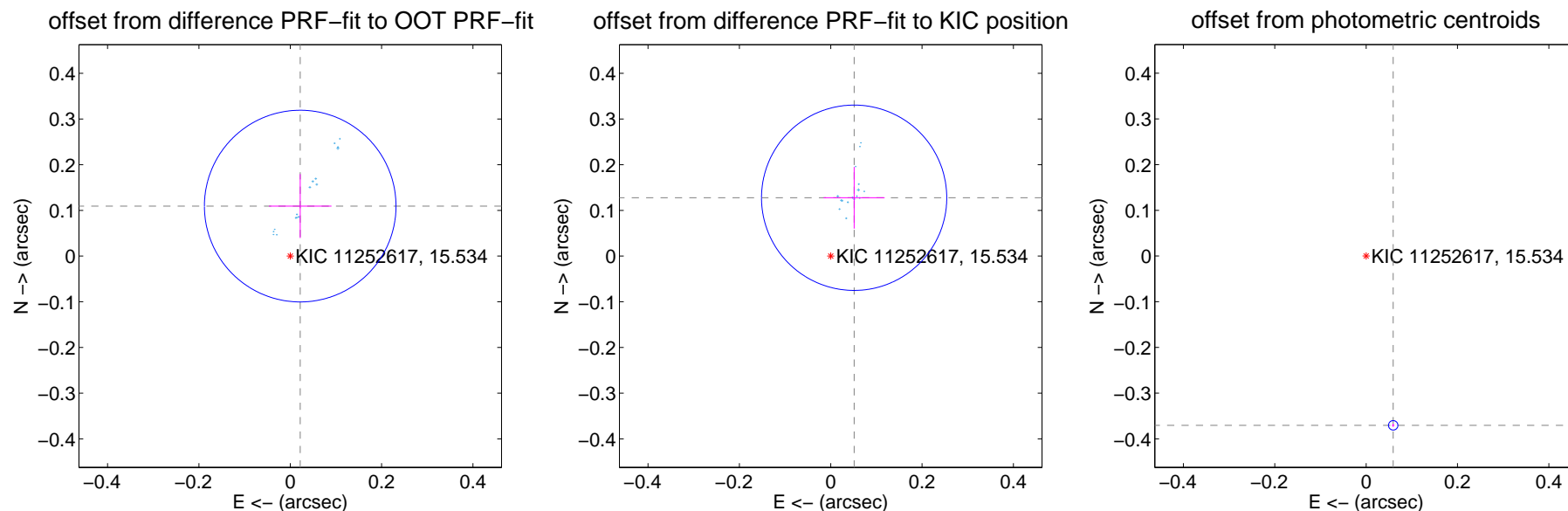
## DV Centroid Data

Supplemental centroid analysis for 011252617-01. Kepler magnitude: 15.53. Transit SNR 3783.42

There are 16 quarters with good PRF difference image offsets

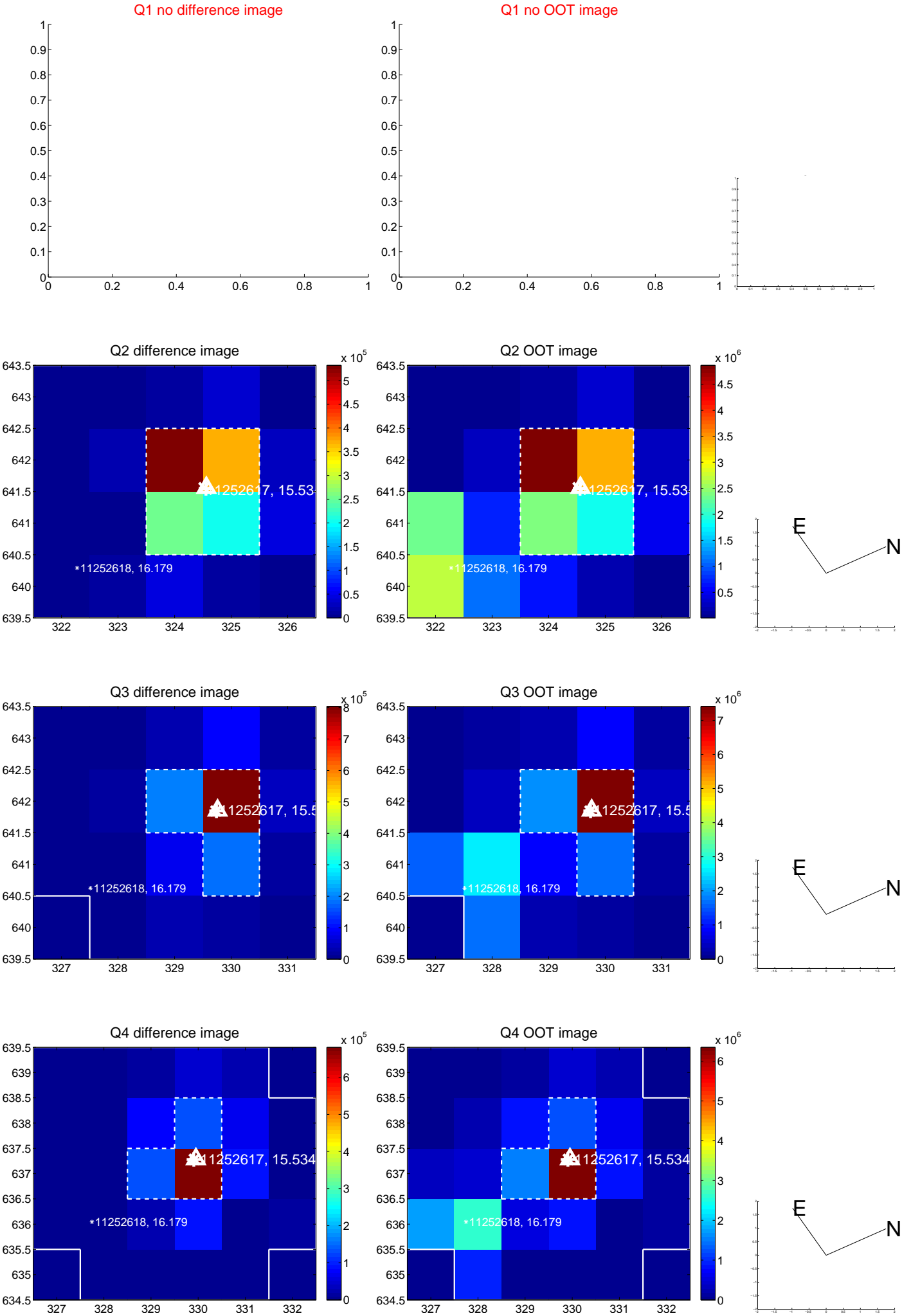
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.112 \pm 0.070$	1.60	$-0.022 \pm 0.069$	$0.109 \pm 0.070$
PRF-fit source offset from KIC position	$0.138 \pm 0.068$	2.04	$-0.051 \pm 0.067$	$0.128 \pm 0.068$
photometric centroid source offset	$0.38 \pm 0.00$	109.01	$-0.06 \pm 0.00$	$-0.37 \pm 0.00$

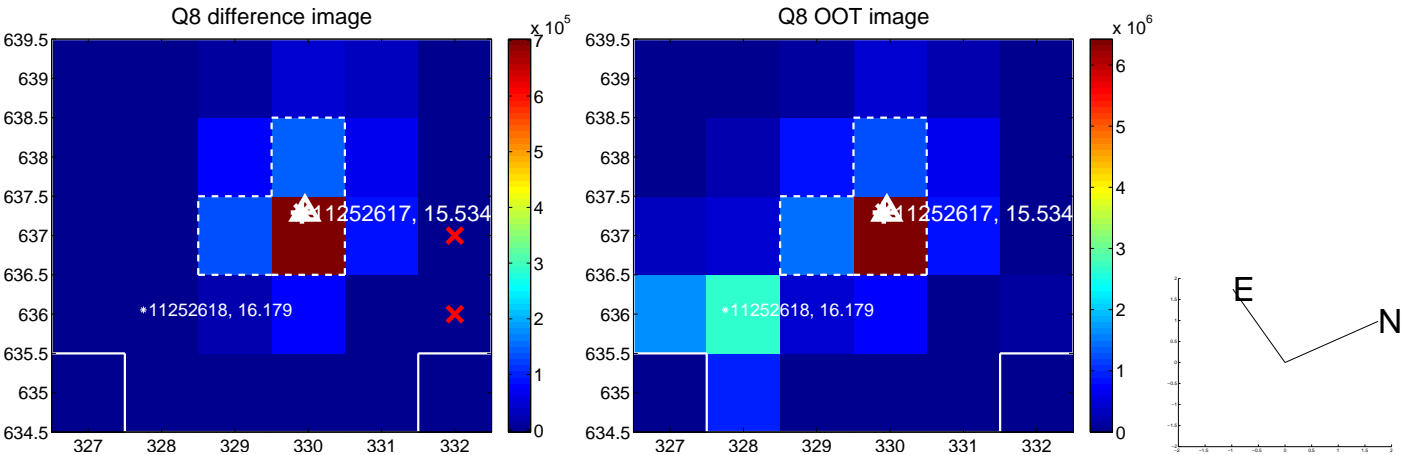
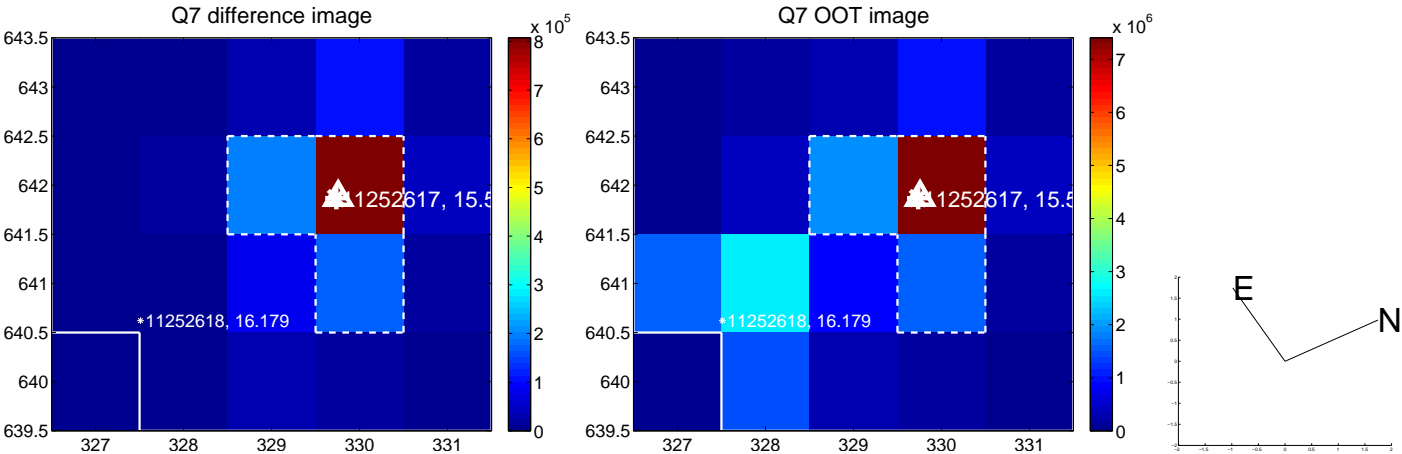
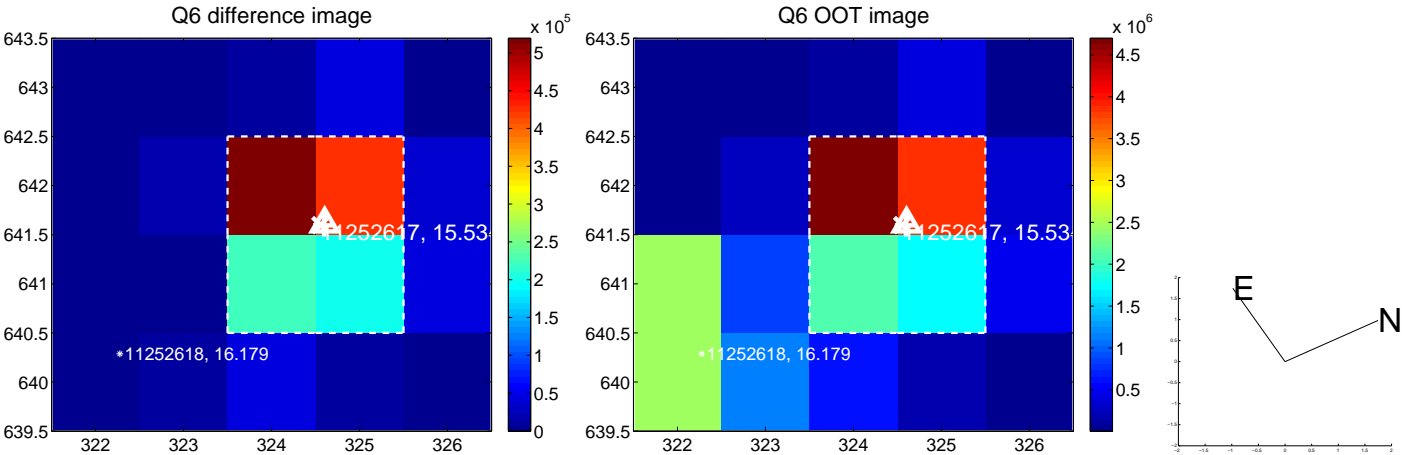
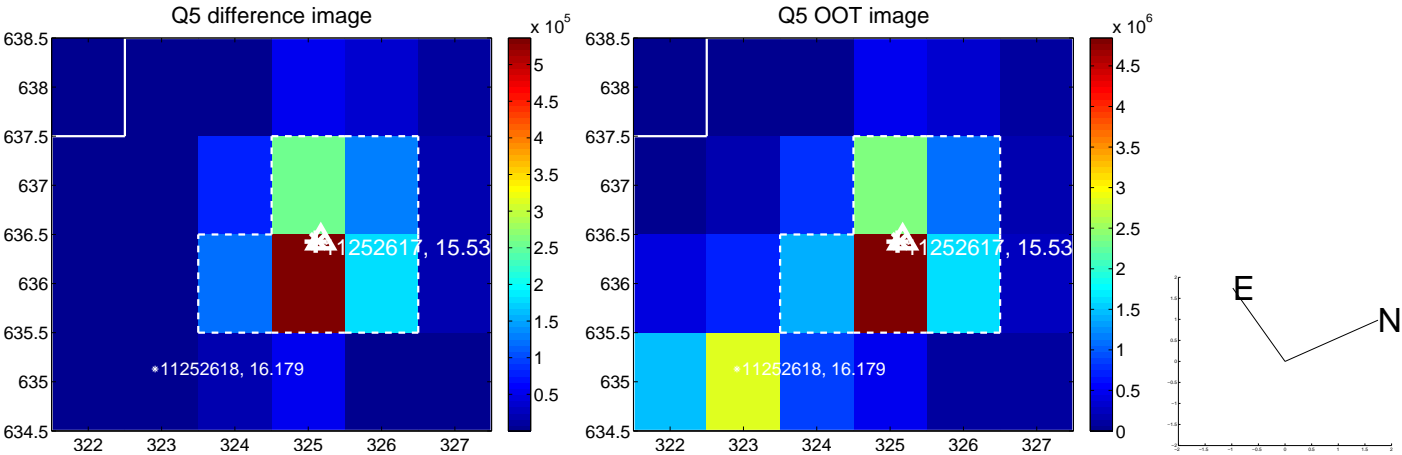


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

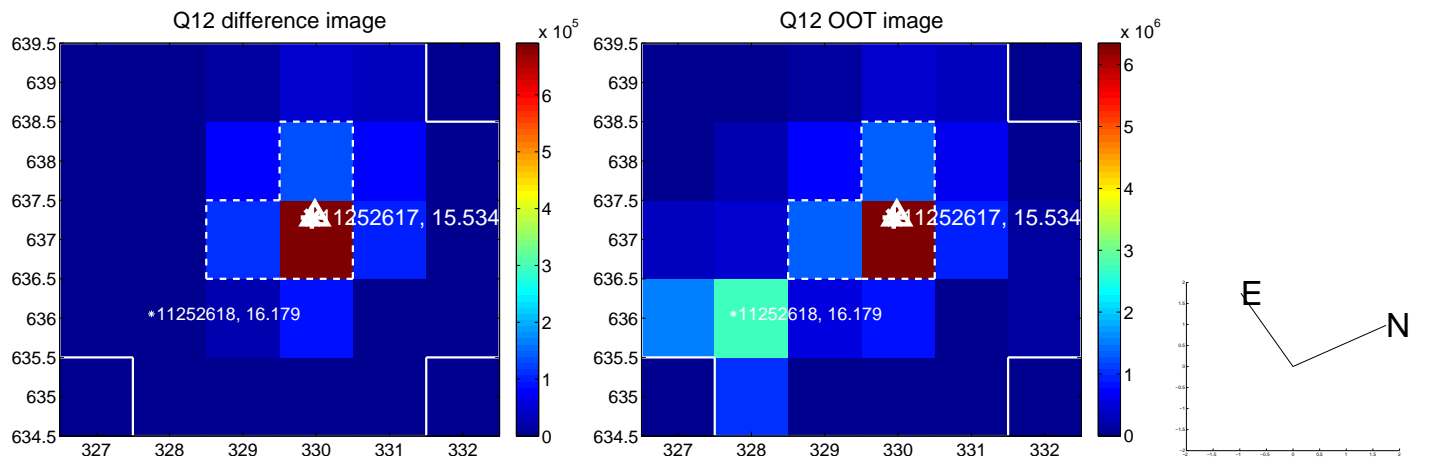
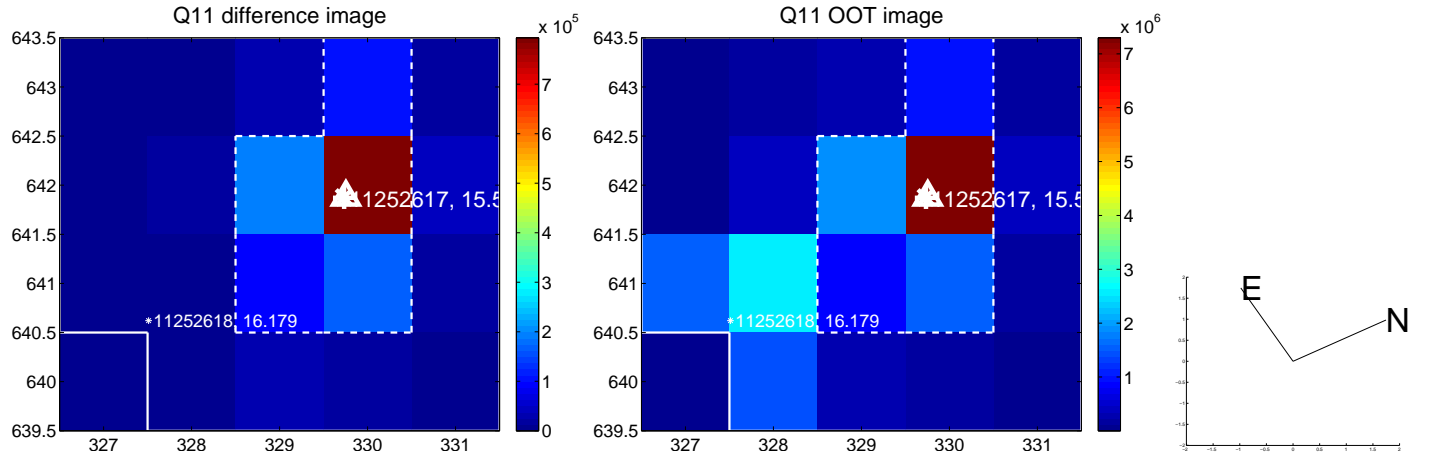
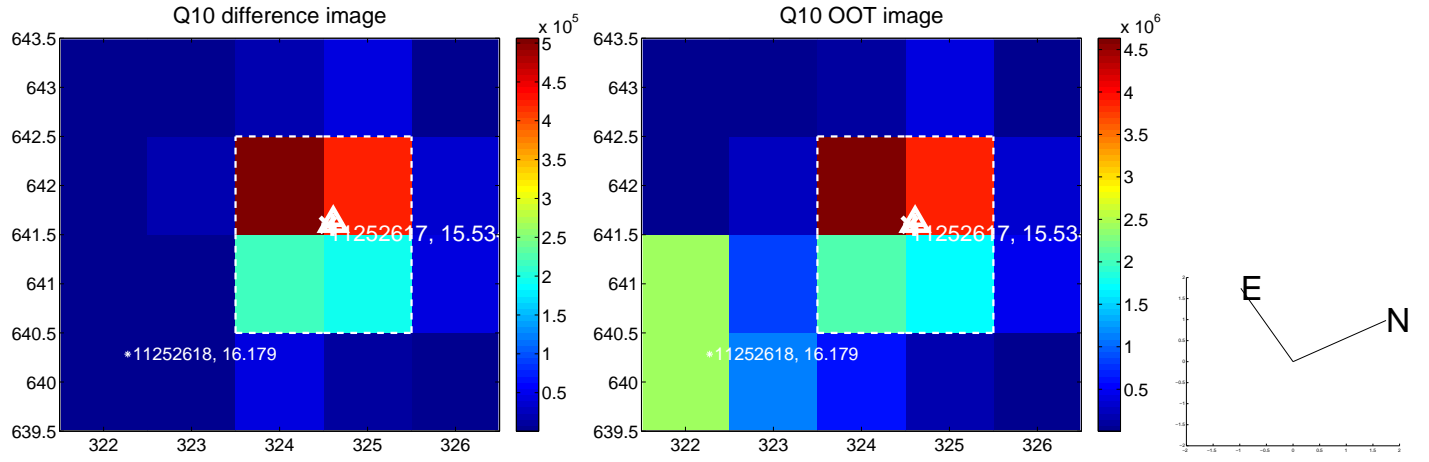
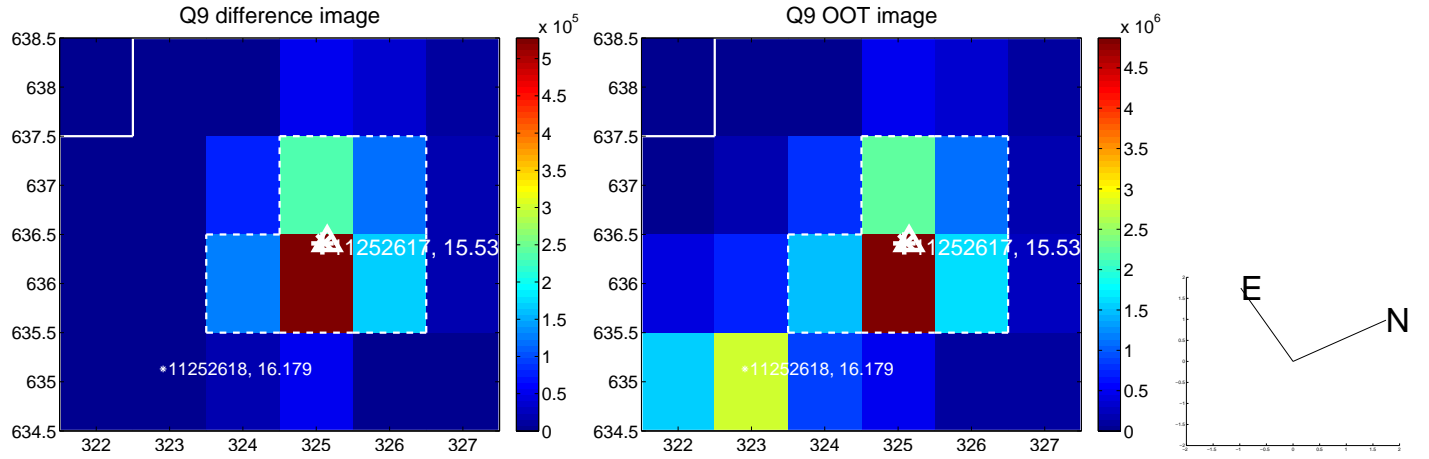


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

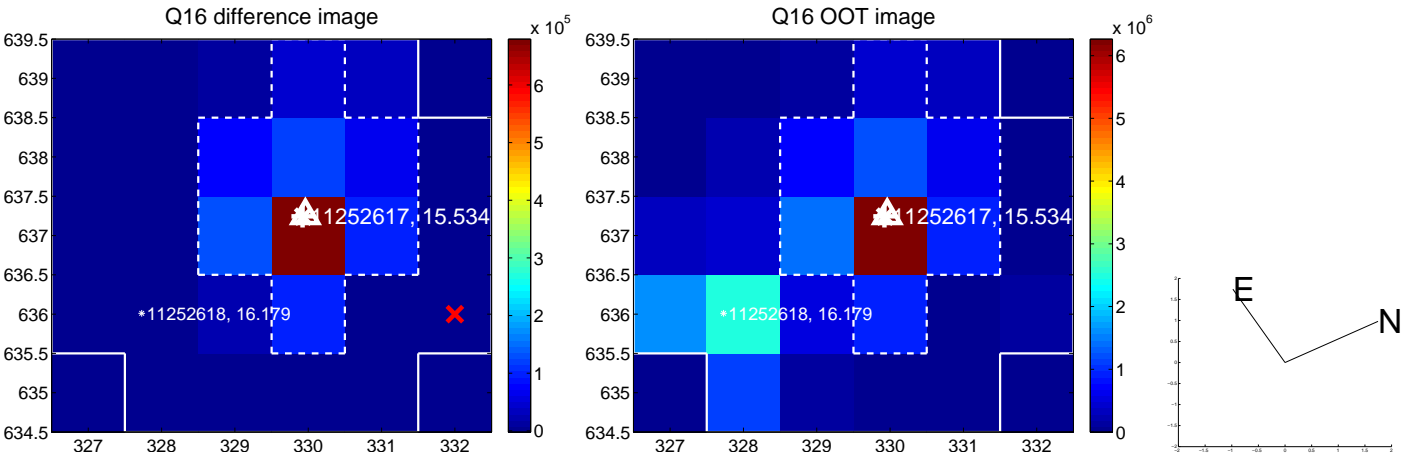
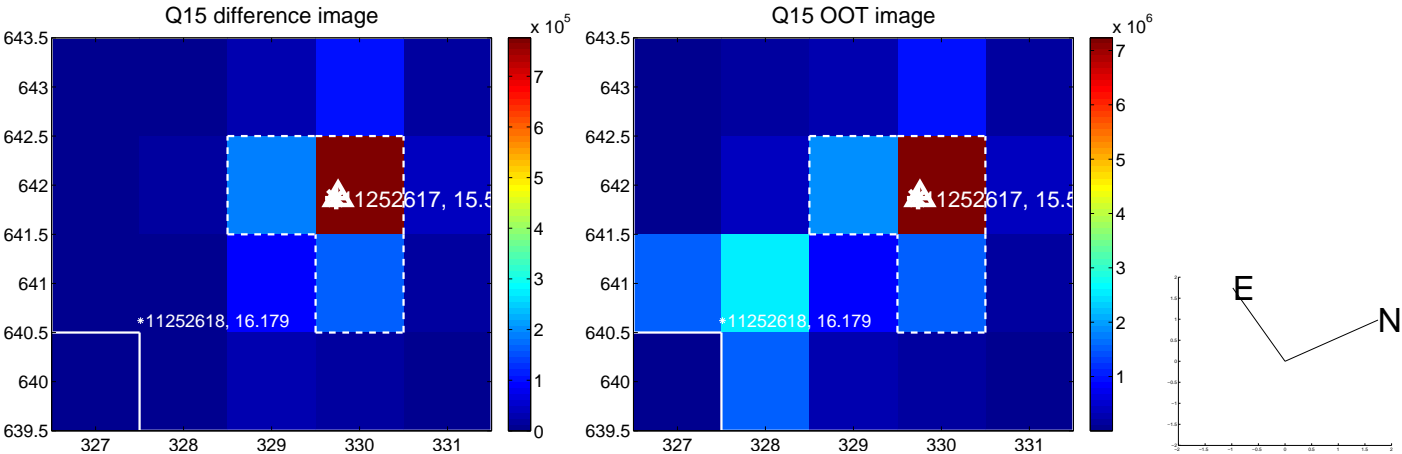
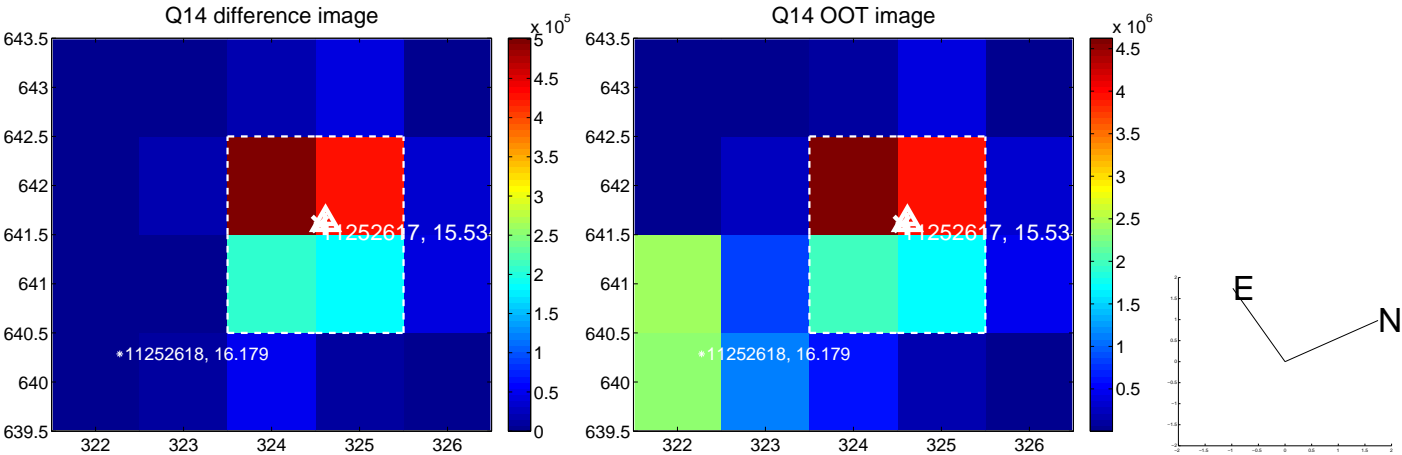
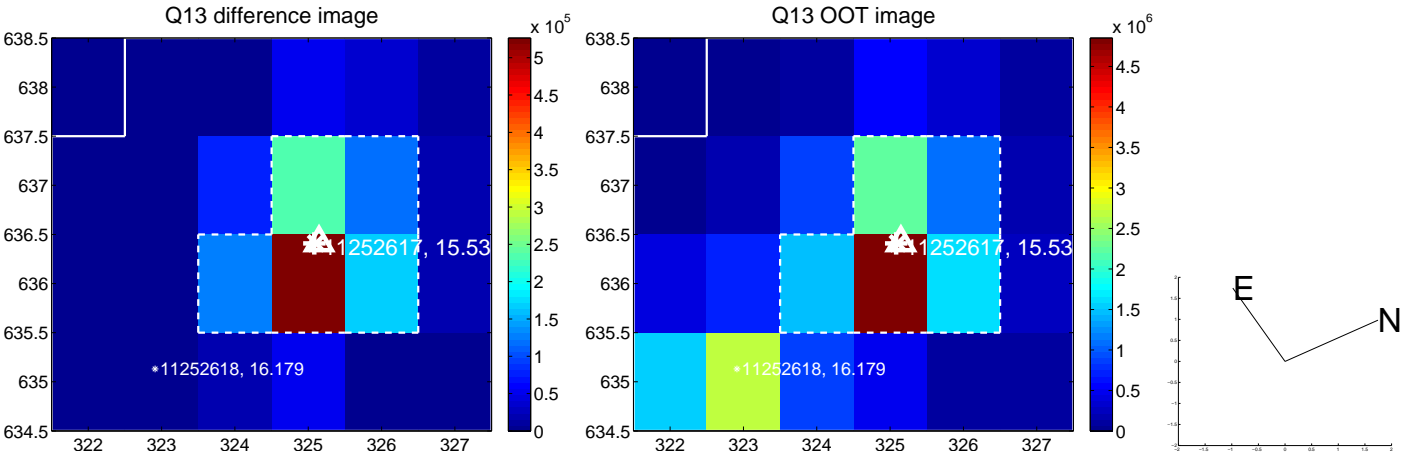




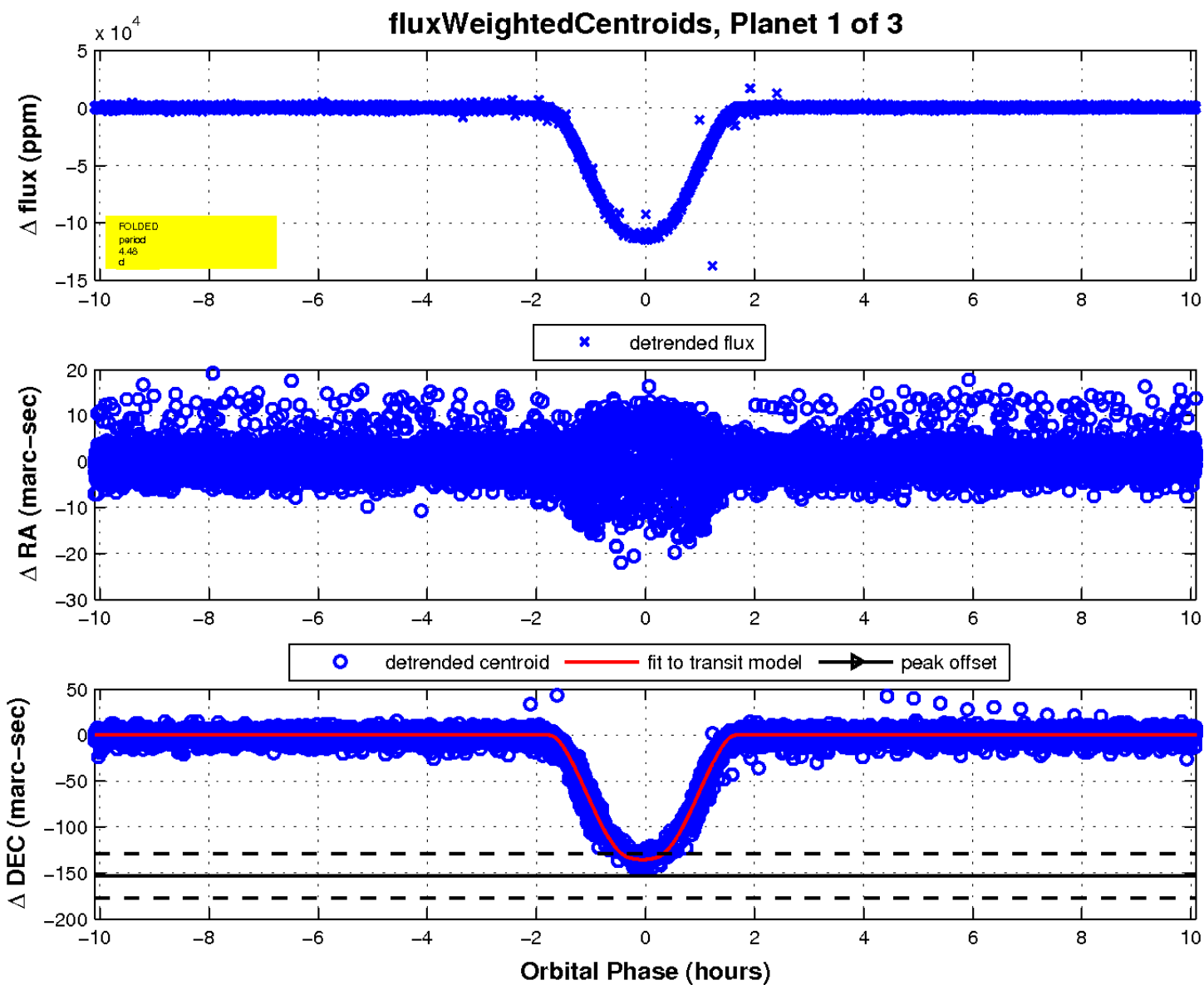
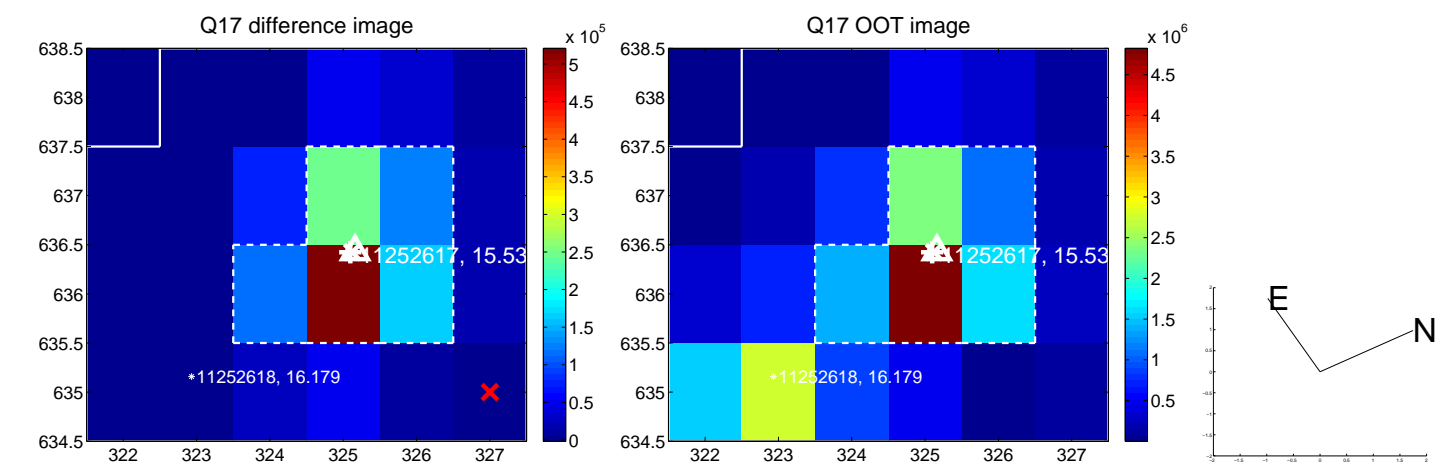
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

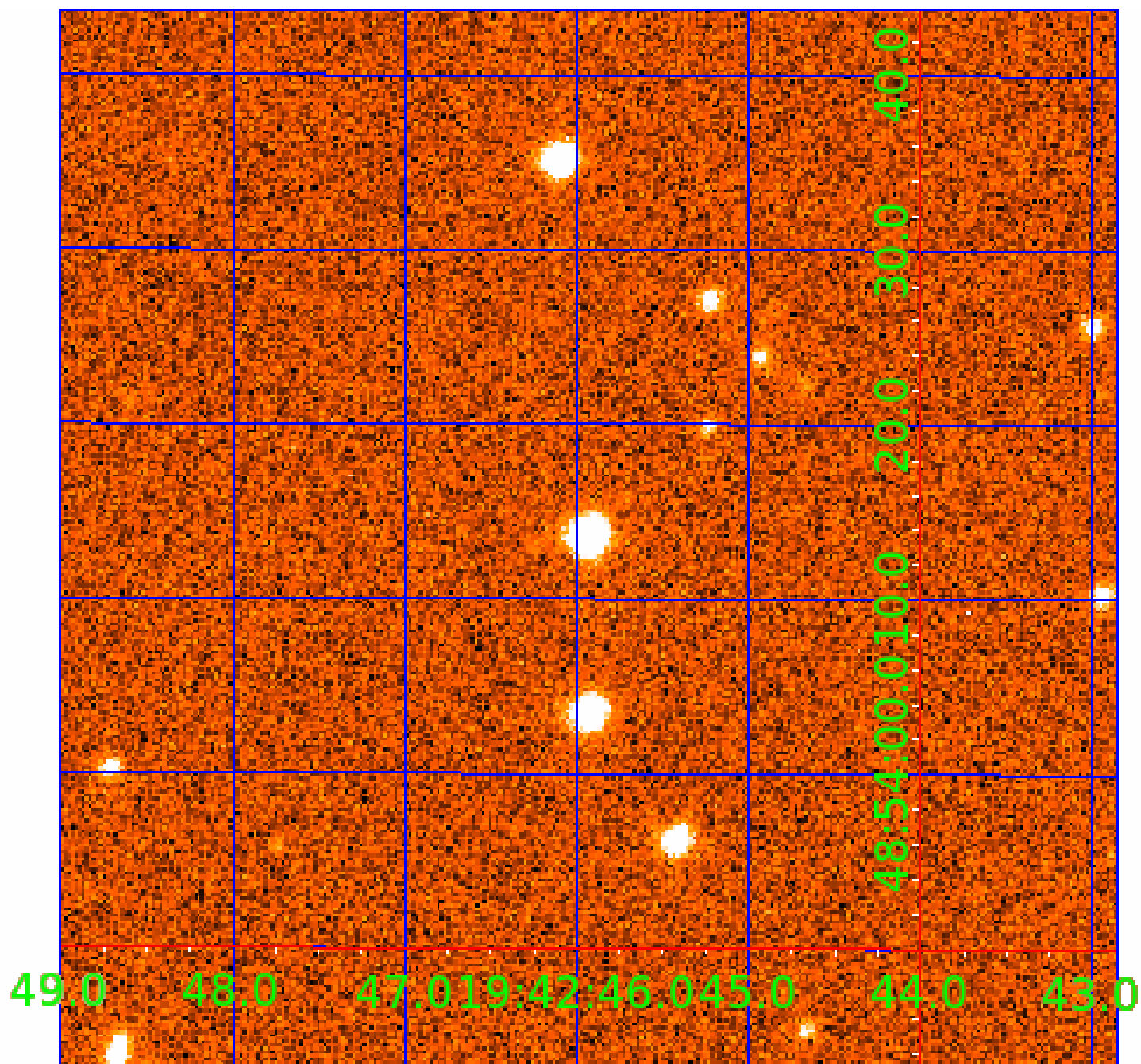


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



# UKIRT Image

Declination



# KIC 011252617

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011252617-01	OBS	6236.01	4.478117	132.872038	118143.7	3.365	4687.3	3783.4	1.06	6304	38.98	521.86
011252617-02	OBS	No	2.239059	132.872884	4517.9	3.198	195.0	190.7	1.06	6304	8.53	1315.01
011252617-03	OBS	6236.02	1.276198	131.685588	158.5	3.446	11.6	12.9	1.06	6304	1.56	2782.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011252617-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011252617-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011252617-03	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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.

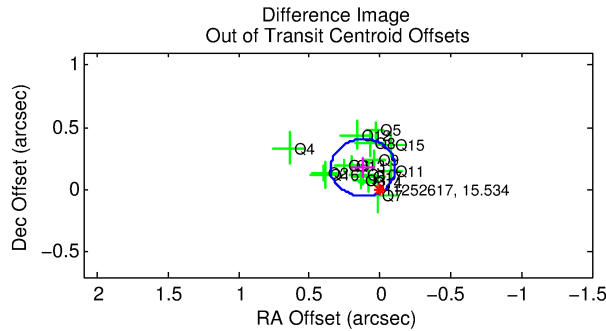
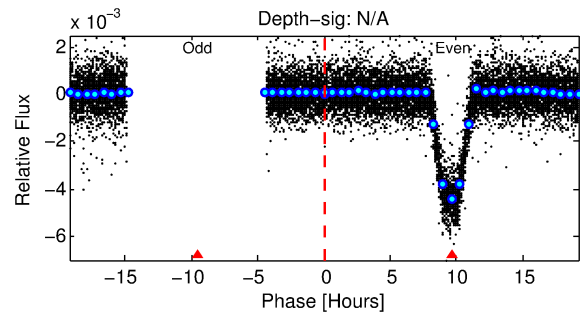
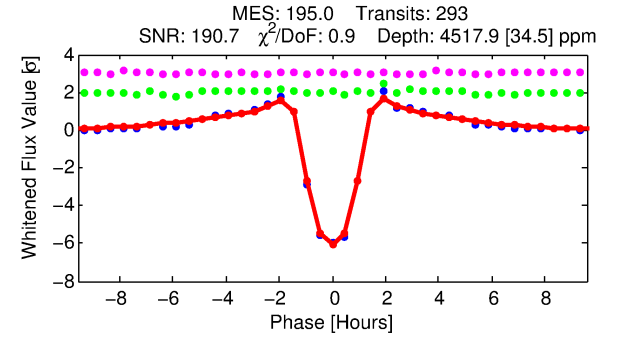
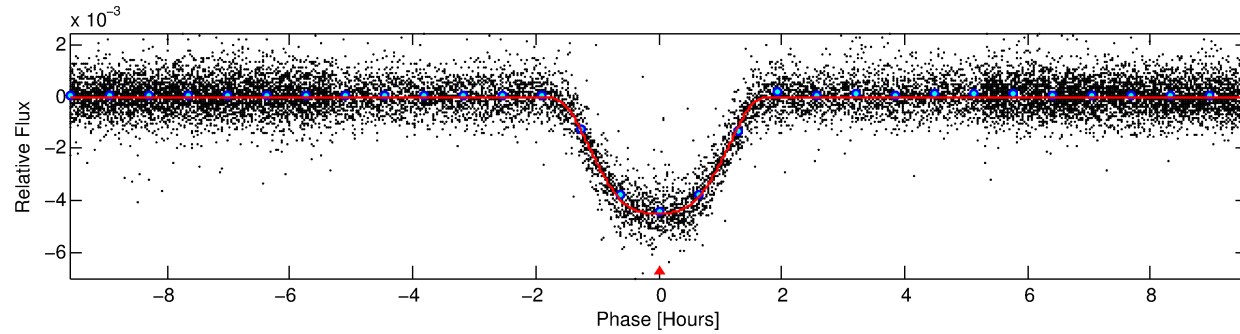
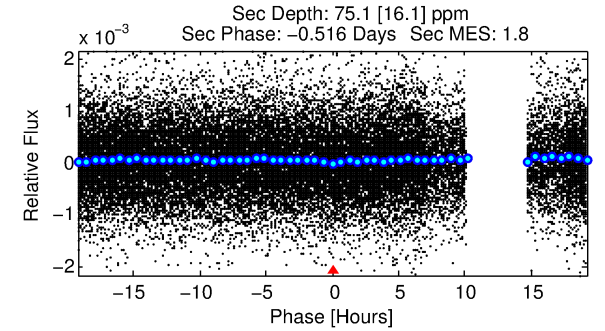
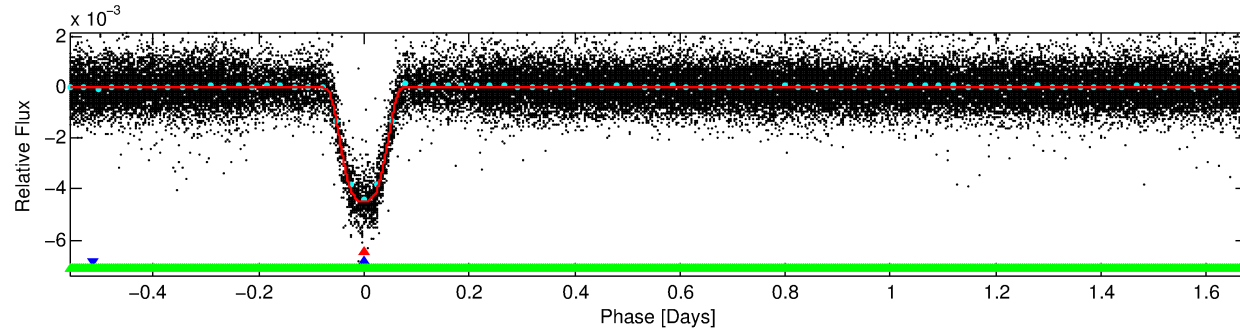
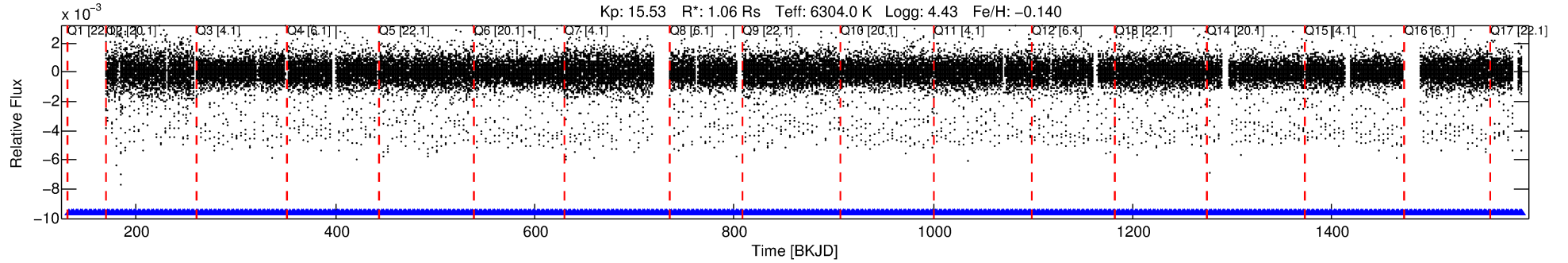
Ephemeris Match Information For 011252617-02

No Significant Match Found

# DV One-Page Summary

KIC: 11252617 Candidate: 2 of 3 Period: 2.239 d

KOI: K06236 Corr: No Ephemeris Match



## DV Fit Results:

Period = 2.23906 [0.00000] d  
Epoch = 132.8729 [0.0002] BKJD  
Rp/R\* = 0.0739 [0.0004]  
a/R\* = 3.16 [0.03]  
b = 0.91 [0.00]  
Seff = 1315.01 [510.39]  
Teq = 1536 [149] K  
Rp = 8.53 [2.58] Re  
a = 0.0347 [0.0087] AU  
Ag = 0.68 [0.29] [-1.10σ]  
Teffp = 2160 [139] K [3.06σ]

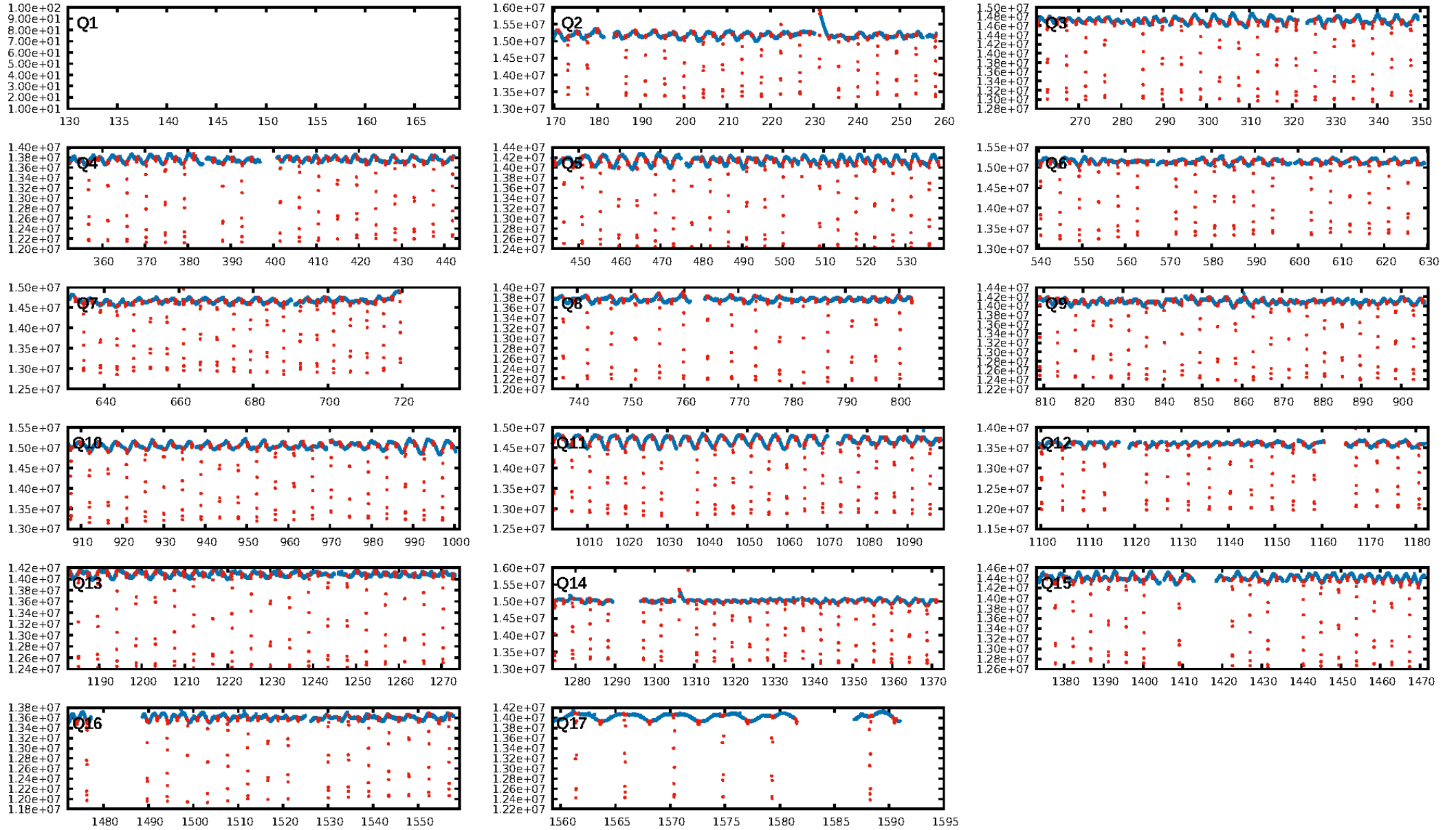
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.92σ]  
LongPeriod-sig: 100.0% [11.58σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [287/287]  
GhostDiagnostic-chr: 3.274  
Centroid-sig: N/A  
Centroid-so: 0.211 arcsec [3.55σ]  
OotOffset-rm: 0.213 arcsec [2.79σ]  
KicOffset-rm: 0.255 arcsec [3.42σ]  
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: 30-Jan-2016 06:19:00 Z

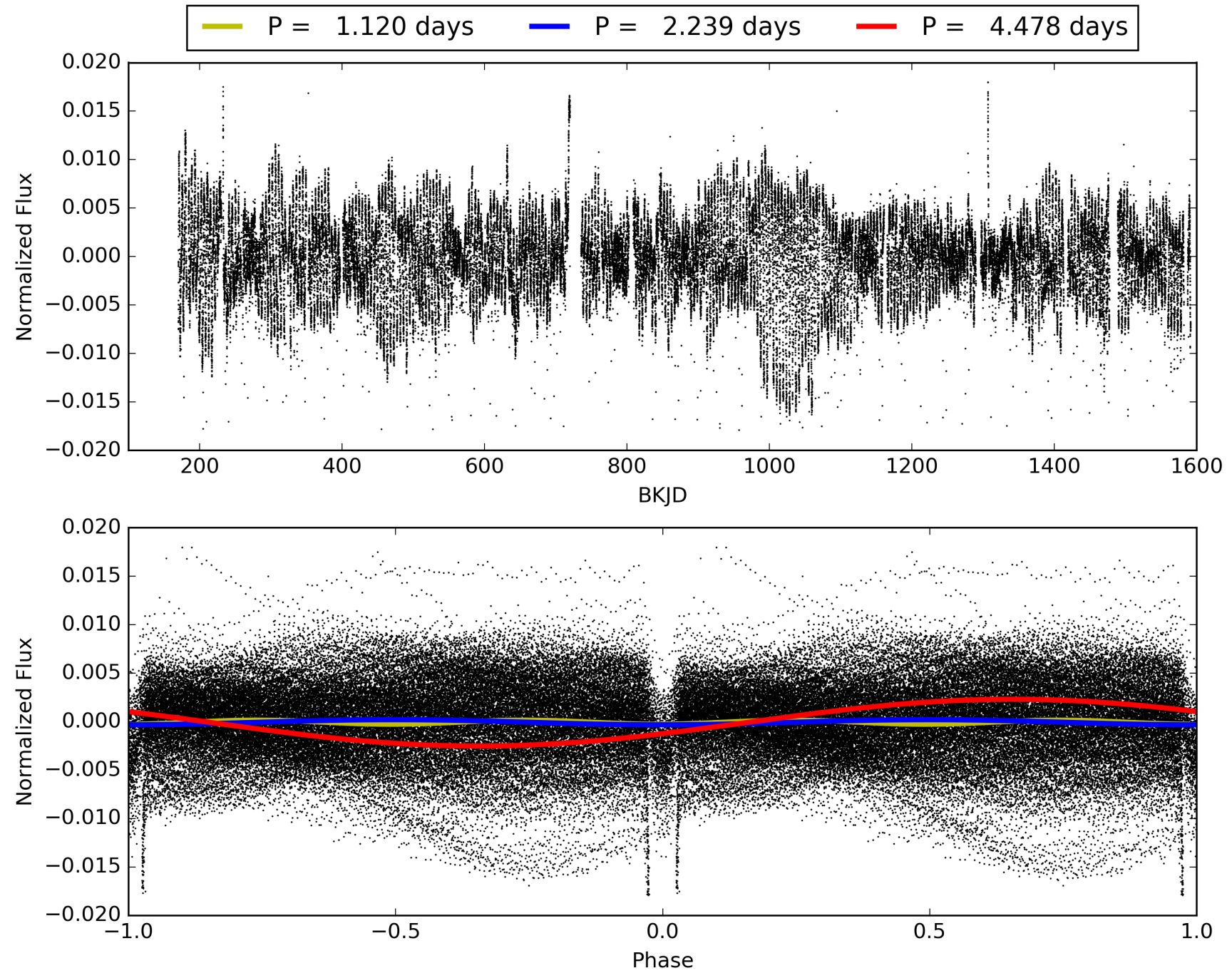
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 011252617-02, PDC Light Curves





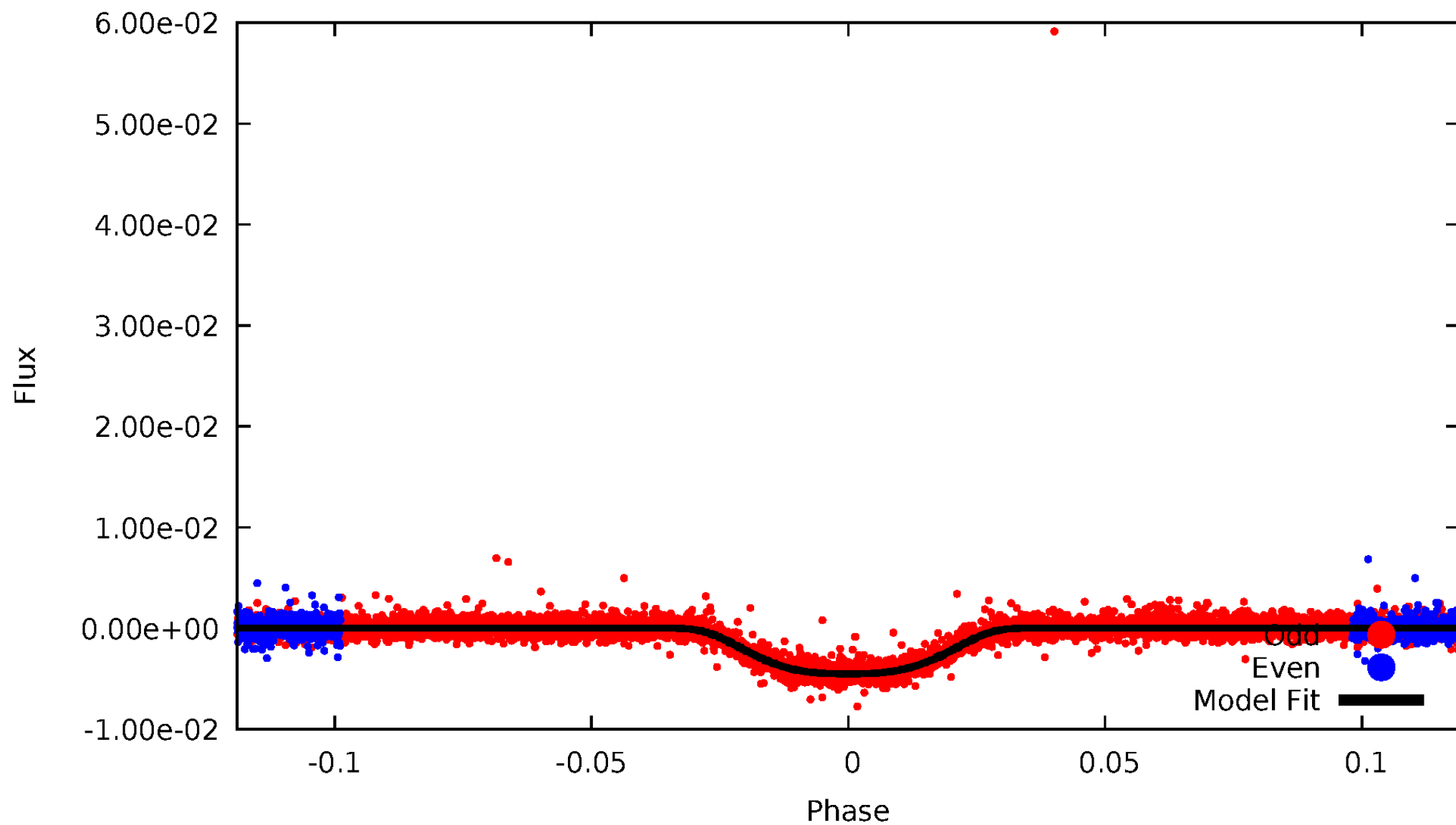
TCE 011252617-02





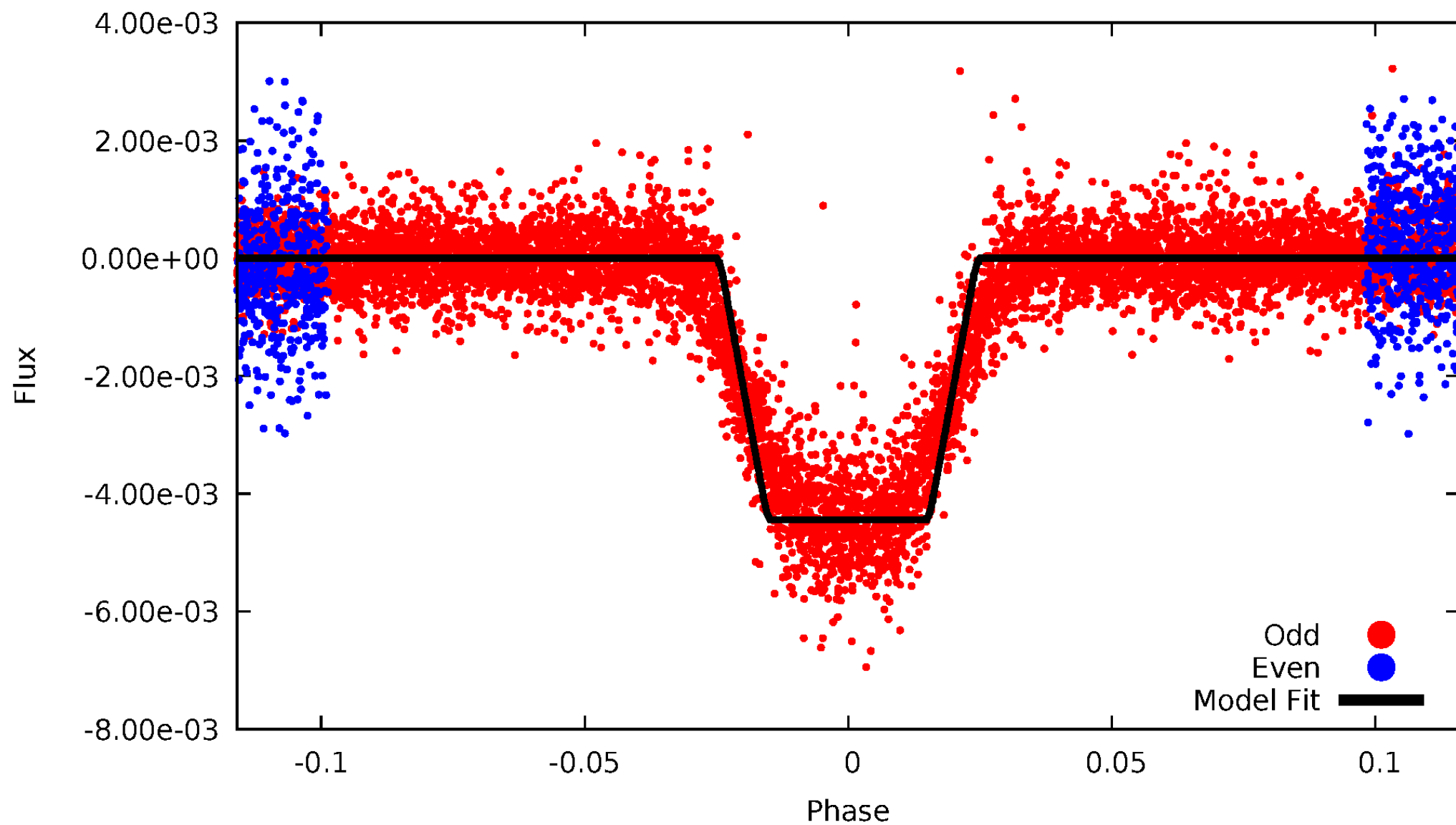
# DV Odd/Even

TCE 011252617-02



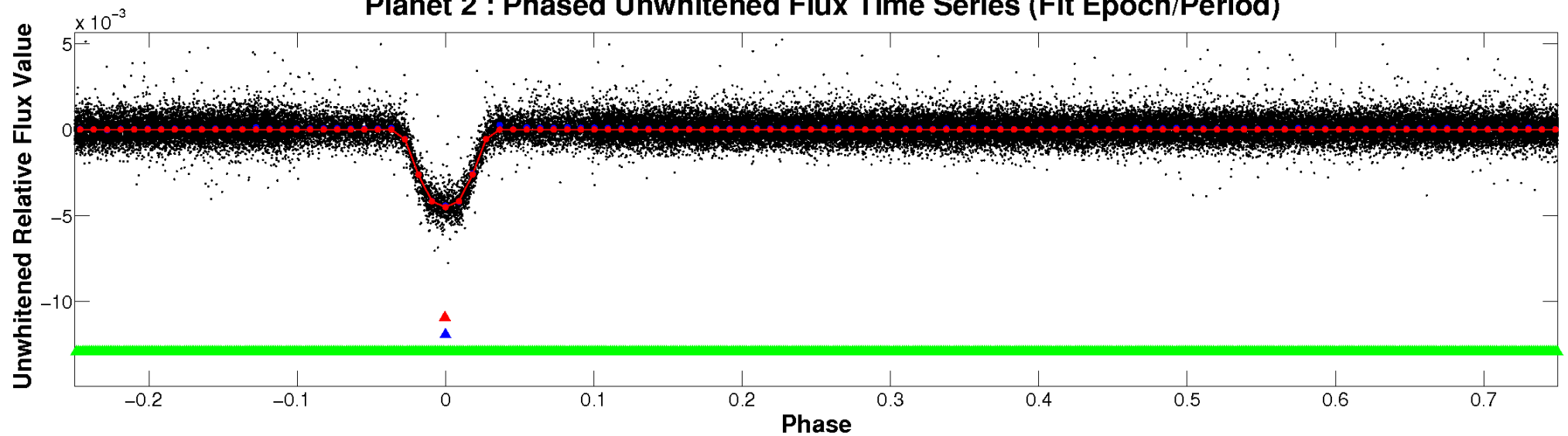
# ALT Odd/Even

TCE 011252617-02

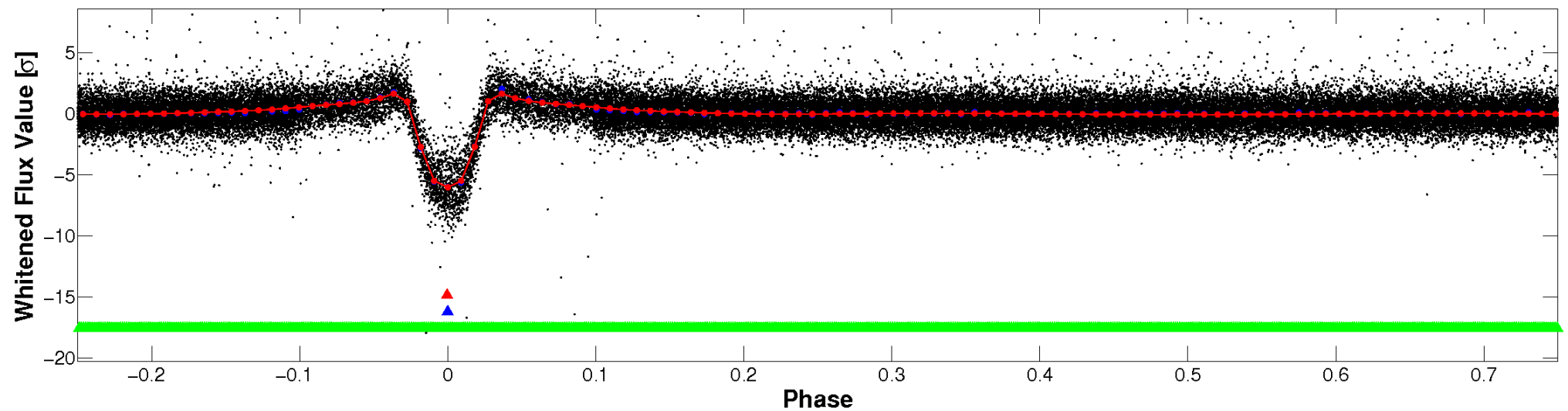


# Non-Whitened Vs. Whitened Light Curve

## Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

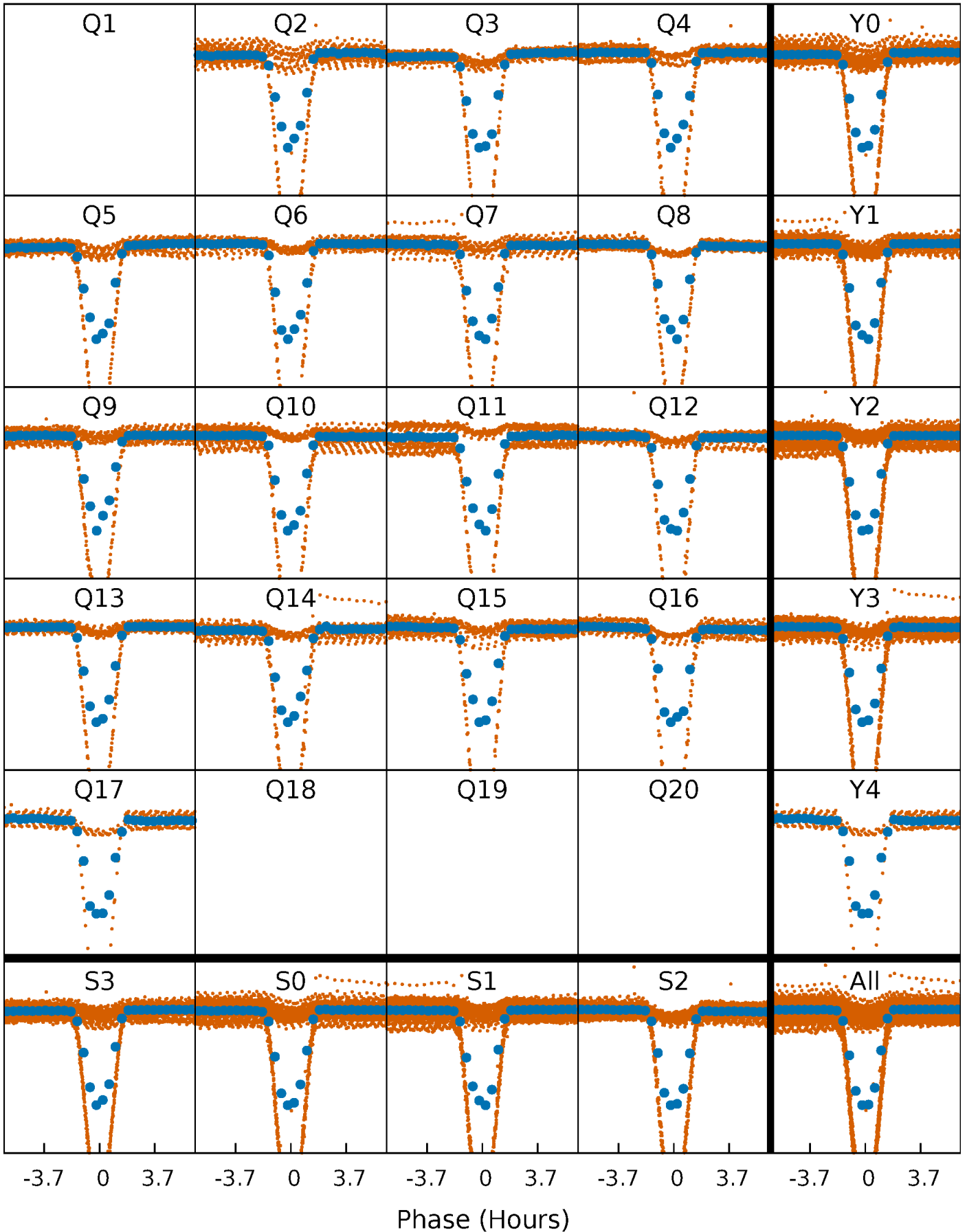


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



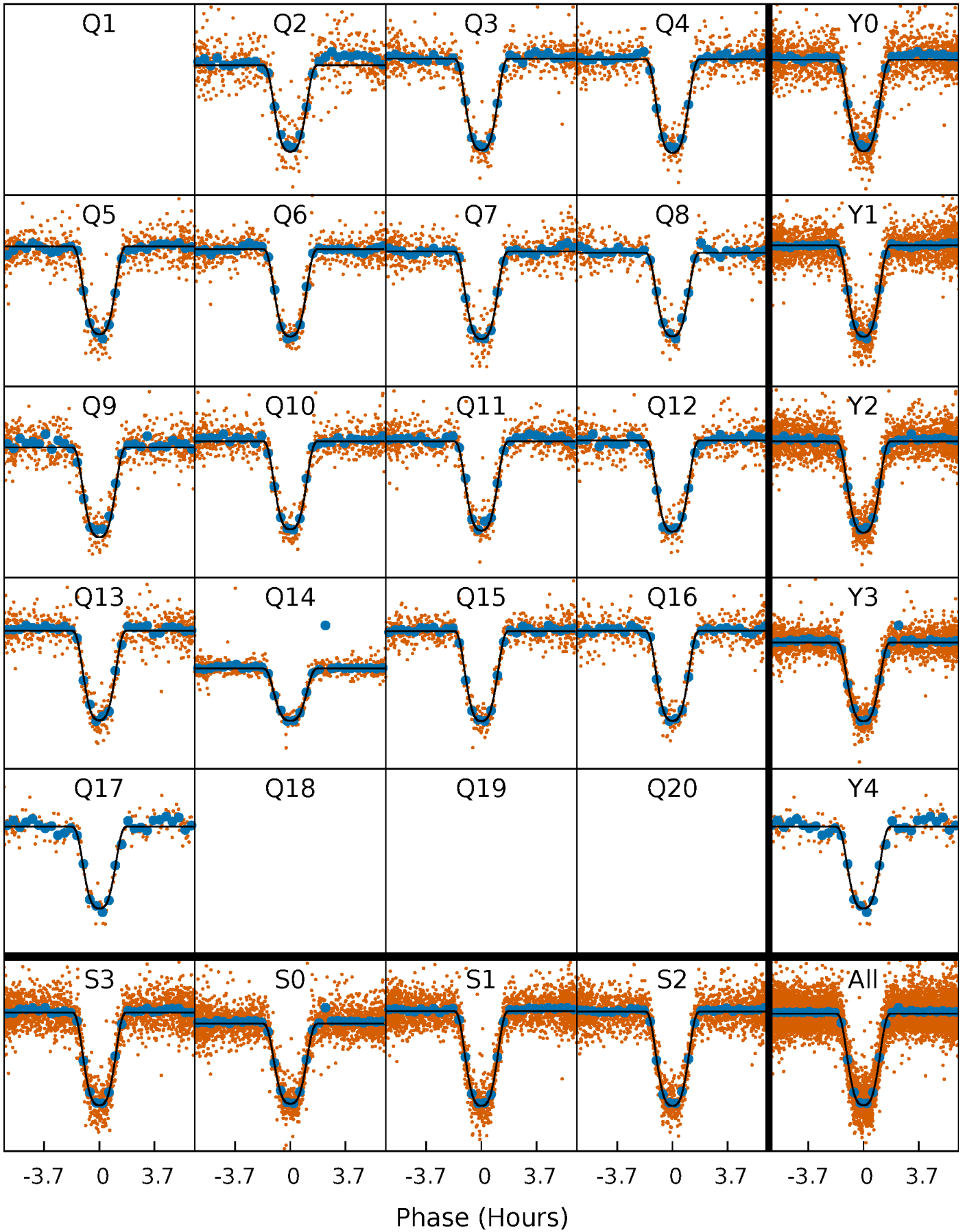
# PDC Quarter-Phased Transit Curves

TCE 011252617-02 P= 2.239059 Days  $T_0=132.872884$  (BKJD)



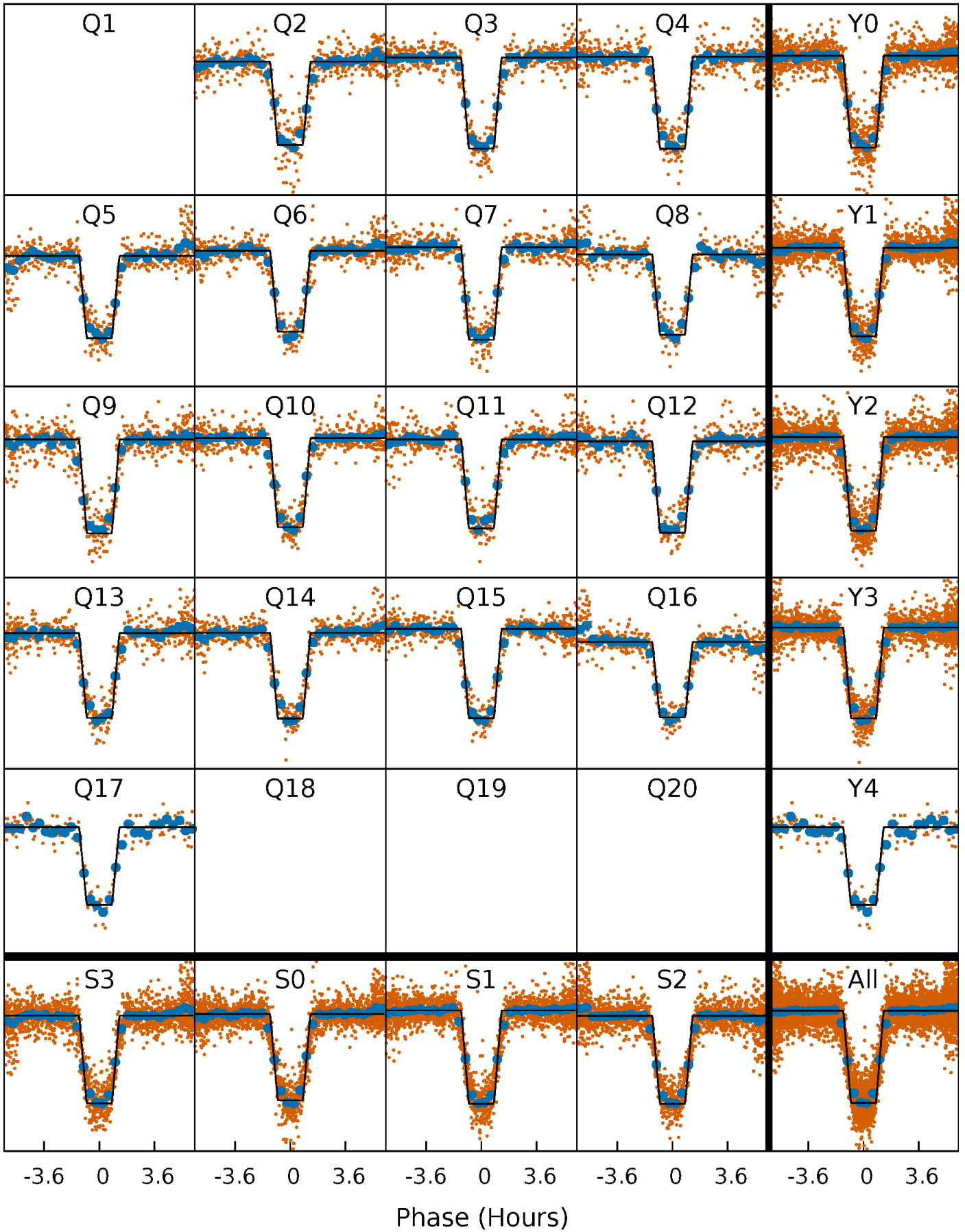
# DV Quarter-Phased Transit Curves

TCE 011252617-02   P= 2.239059 Days    $T_0=132.872884$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

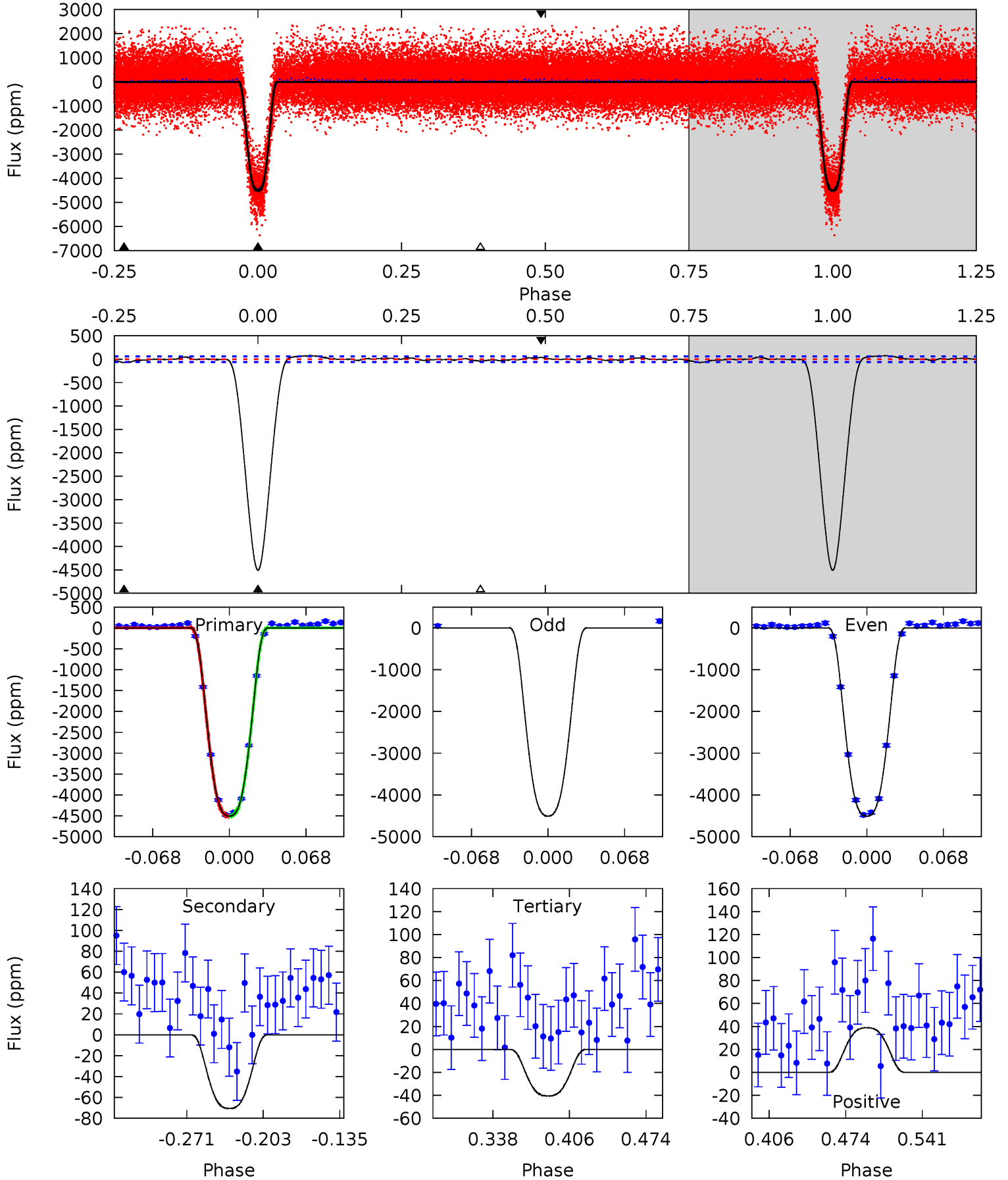
TCE 011252617-02   P= 2.239060 Days    $T_0=132.872221$  (BKJD)



# DV Model-Shift Uniqueness Test

011252617-02, P = 2.239059 Days, E = 132.872884 Days

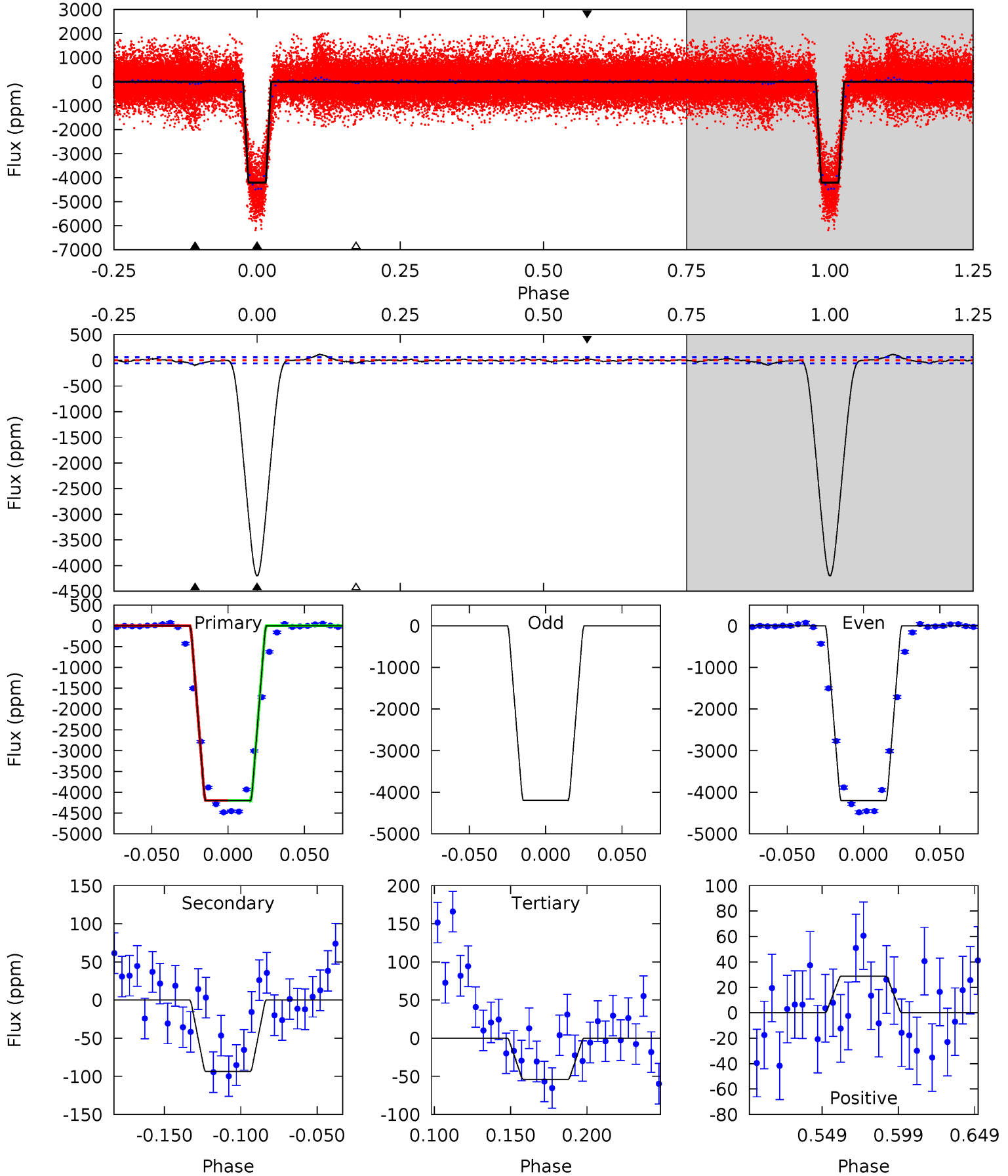
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
353.5	5.54	3.18	3.05	4.65	1.83	1.67	350.3	350.5	2.35	2.49	0.05	1.00	0.02	0.07



# Alt Model-Shift Uniqueness Test

011252617-02, P = 2.239060 Days, E = 132.872221 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
334.5	7.44	4.30	2.29	4.71	1.96	1.82	330.2	332.2	3.15	5.15	0.08	1.00	0.03	0.13





### Stellar Parameters For KIC 011252617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6304^{+169}_{-225}$	$4.435^{+0.065}_{-0.195}$	$-0.140^{+0.250}_{-0.300}$	$1.058^{+0.320}_{-0.128}$	$1.110^{+0.144}_{-0.144}$	$1.319^{+0.435}_{-0.636}$
	+3%/-4%	+1%/-4%	+179%/-214%	+30%/-12%	+13%/-13%	+33%/-48%
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 011252617-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-71 \pm 13$	$8.66^{+1.45}_{-0.68}$	$2184^{+150}_{-112}$	$2588^{+130}_{-195}$	$0.593^{+0.158}_{-0.162}$
Alt.	$-93 \pm 13$	$7.86^{+1.33}_{-0.63}$	$2185^{+157}_{-111}$	$2883^{+103}_{-107}$	$0.956^{+0.244}_{-0.248}$

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

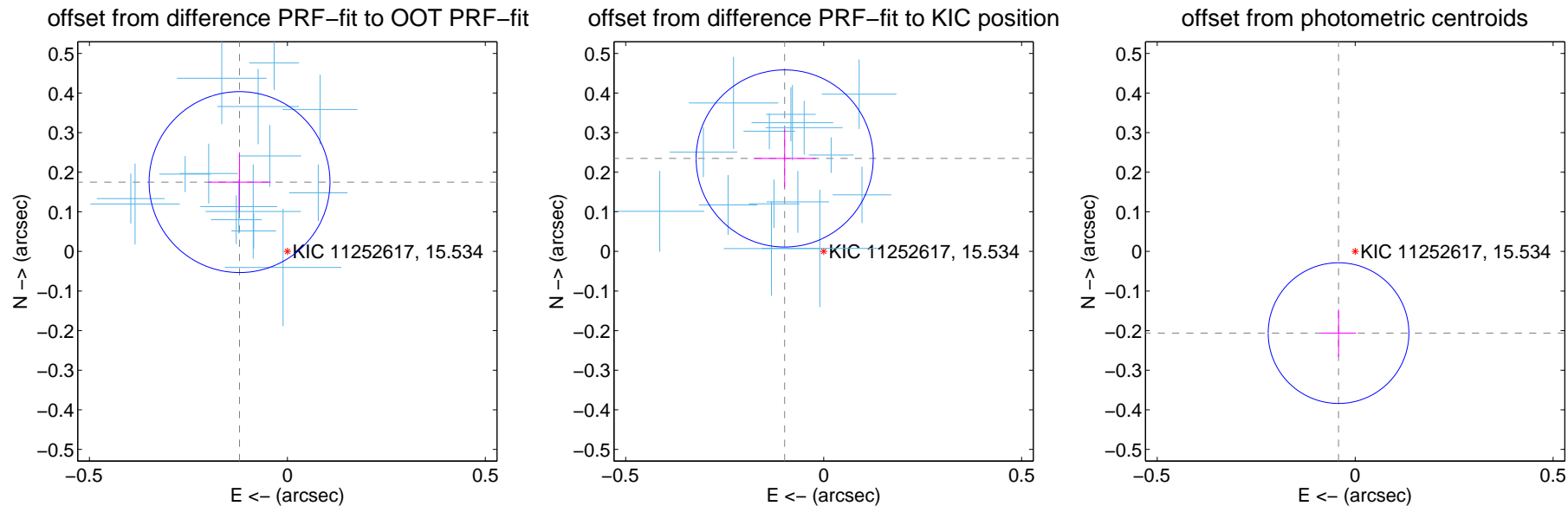
## DV Centroid Data

Supplemental centroid analysis for 011252617-02. Kepler magnitude: 15.53. Transit SNR 190.75

There are 16 quarters with good PRF difference image offsets

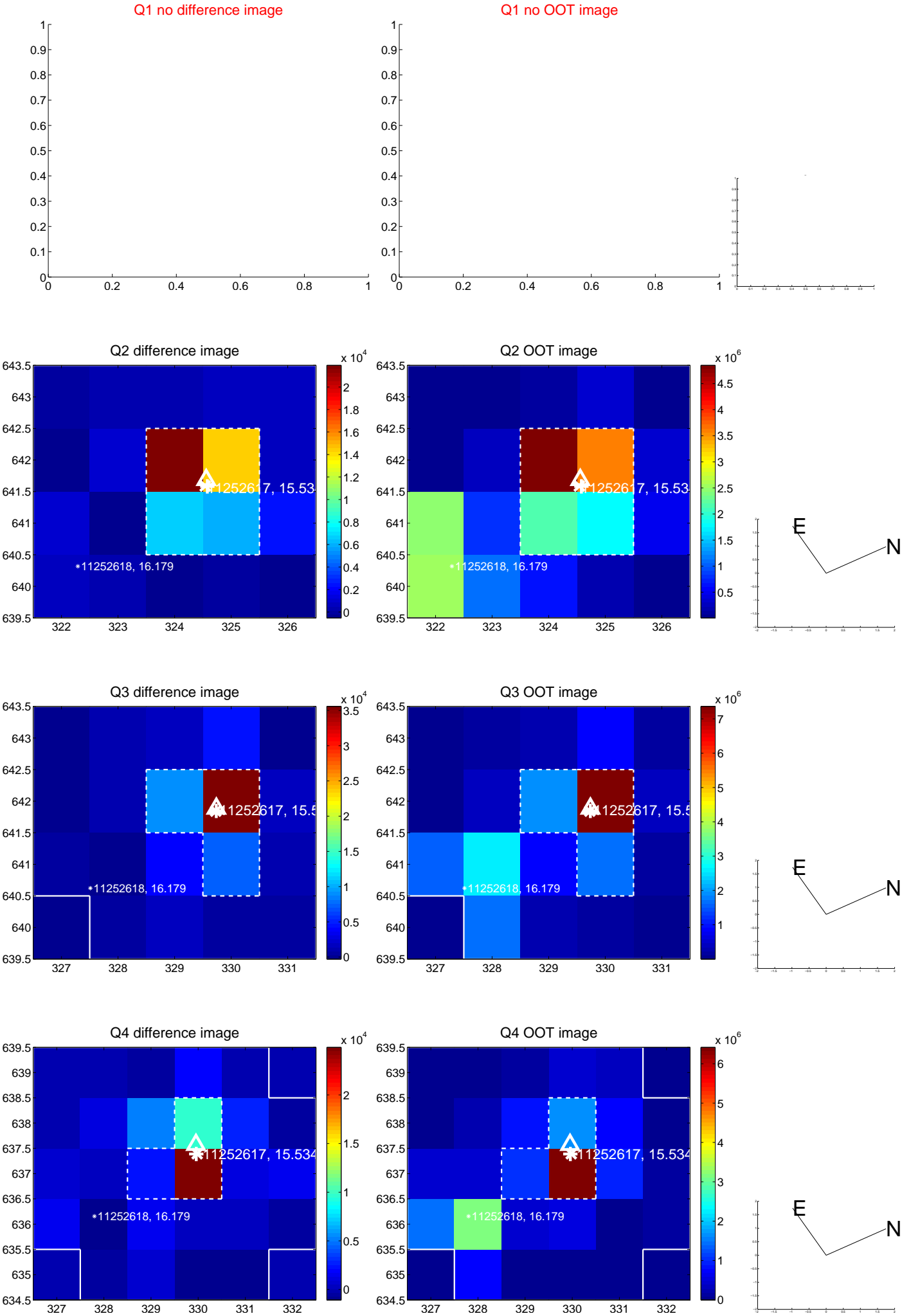
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.213 \pm 0.076$	2.79	$0.121 \pm 0.079$	$0.175 \pm 0.075$
PRF-fit source offset from KIC position	$0.255 \pm 0.075$	3.42	$0.099 \pm 0.079$	$0.235 \pm 0.073$
photometric centroid source offset	$0.21 \pm 0.06$	3.55	$0.04 \pm 0.04$	$-0.21 \pm 0.06$

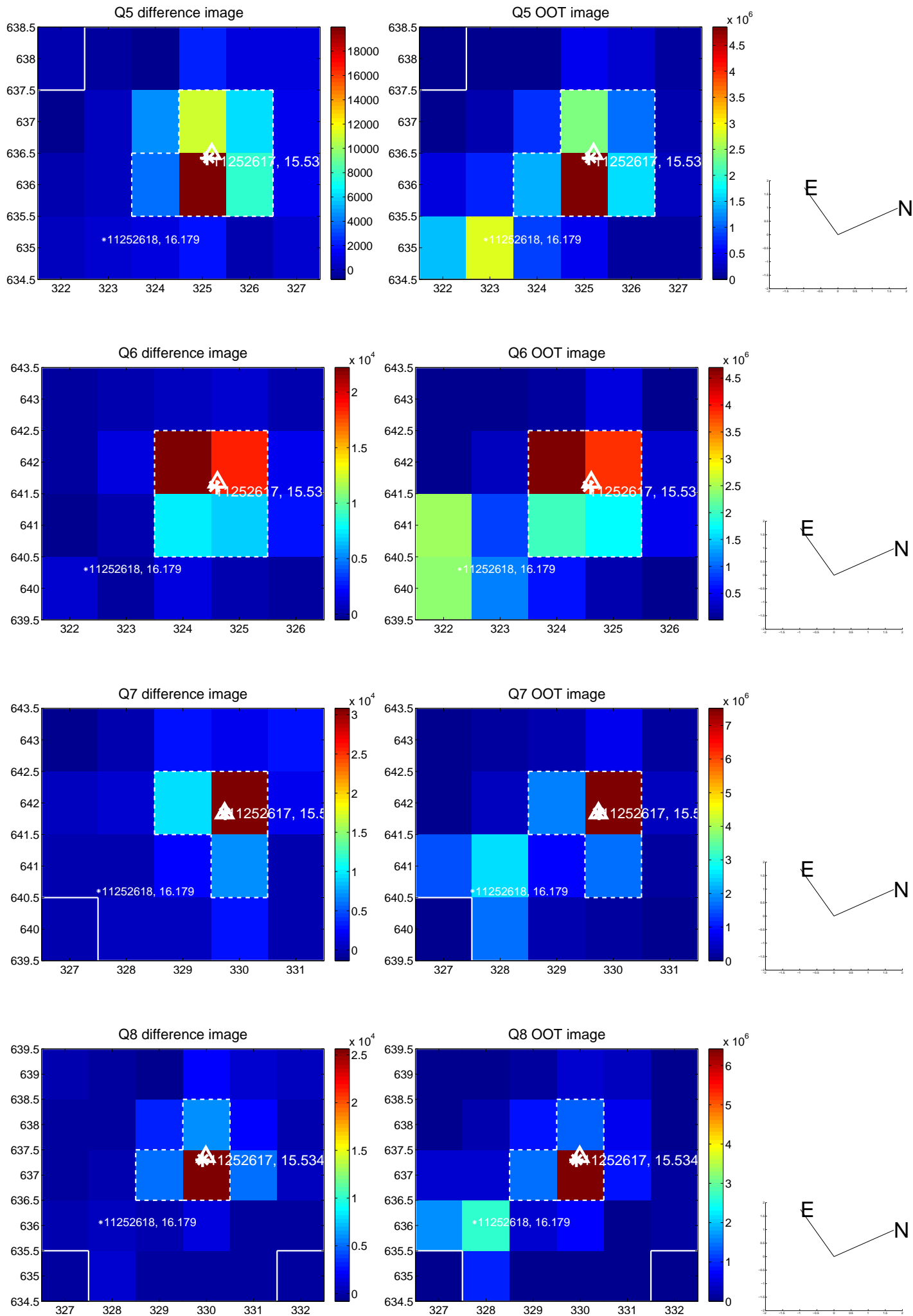


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

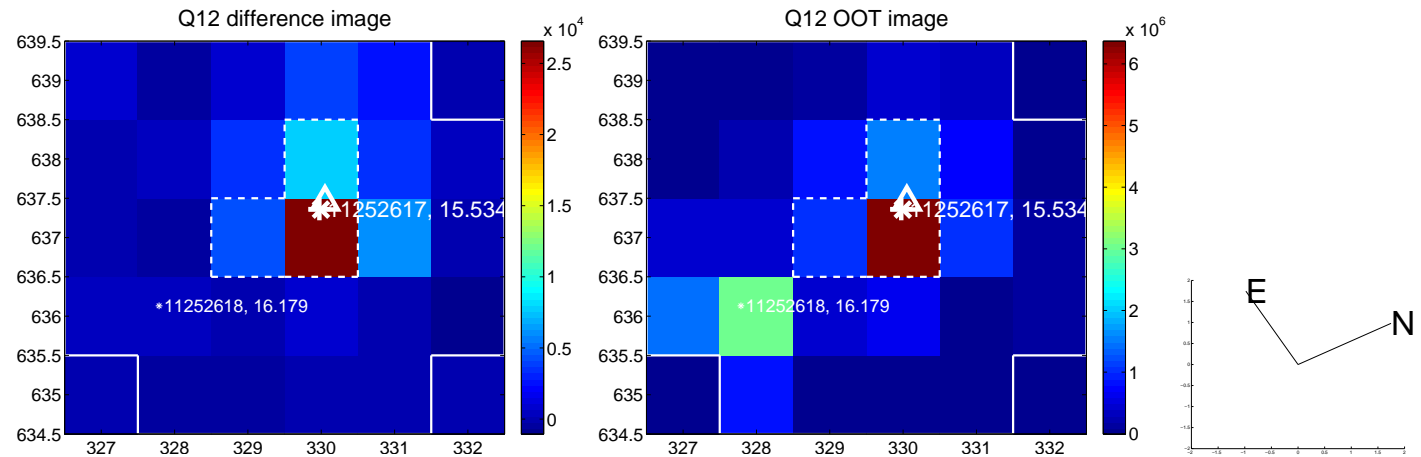
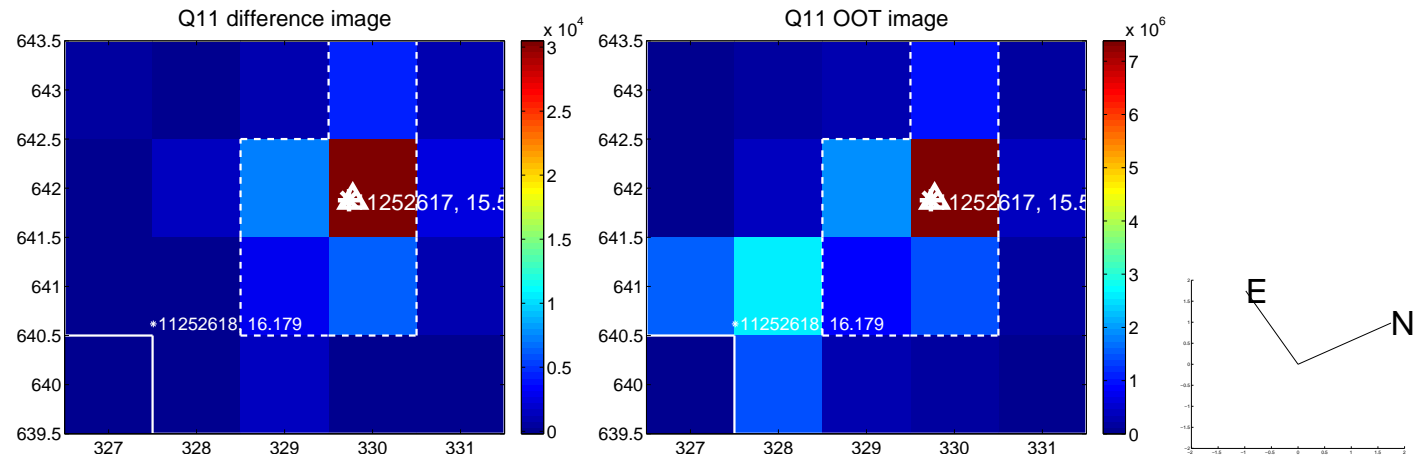
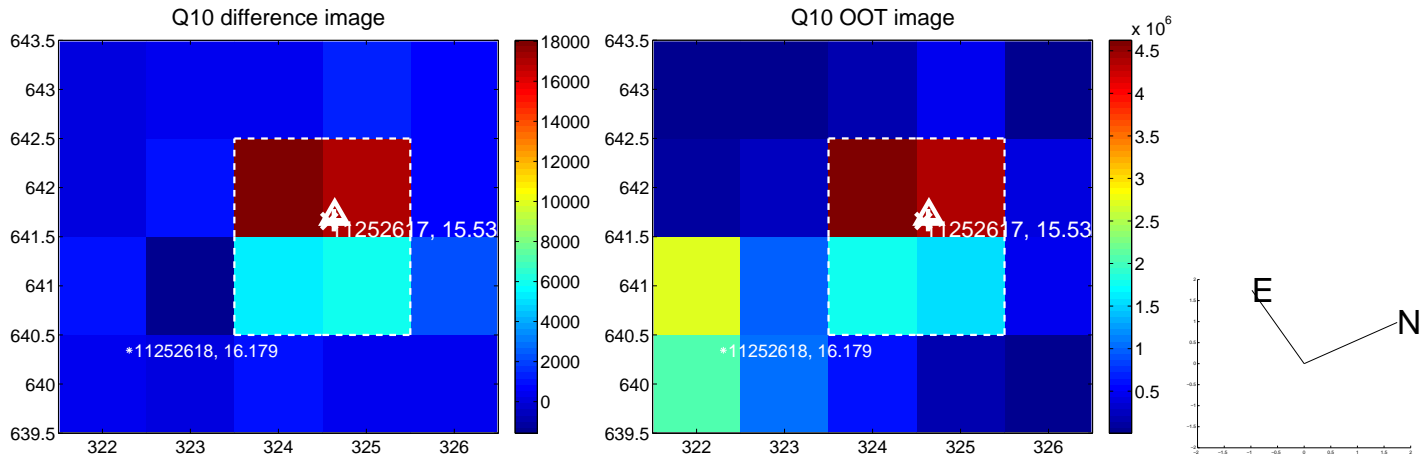
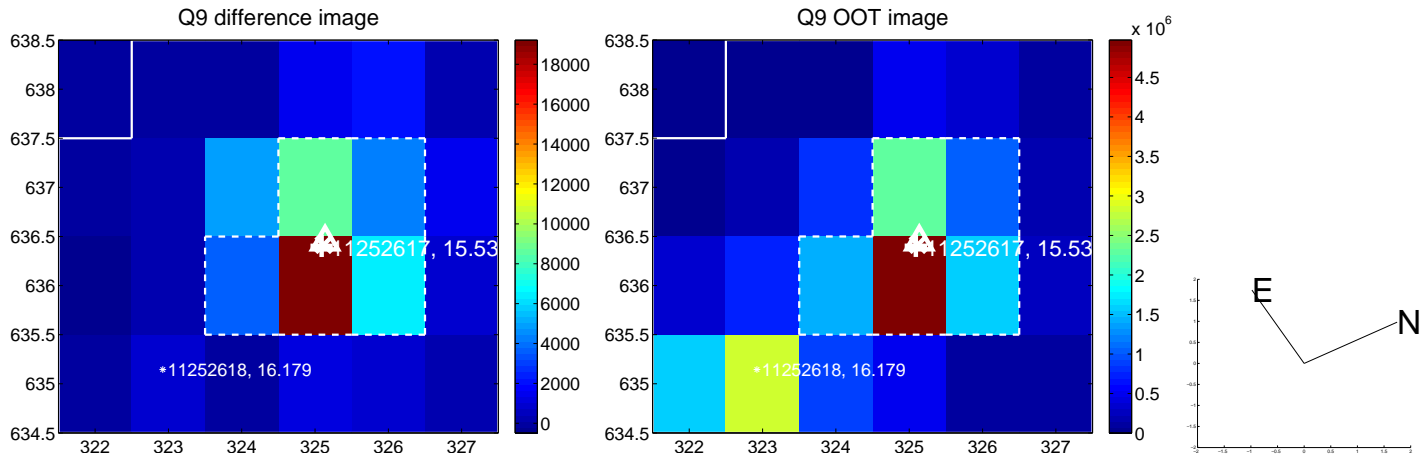
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



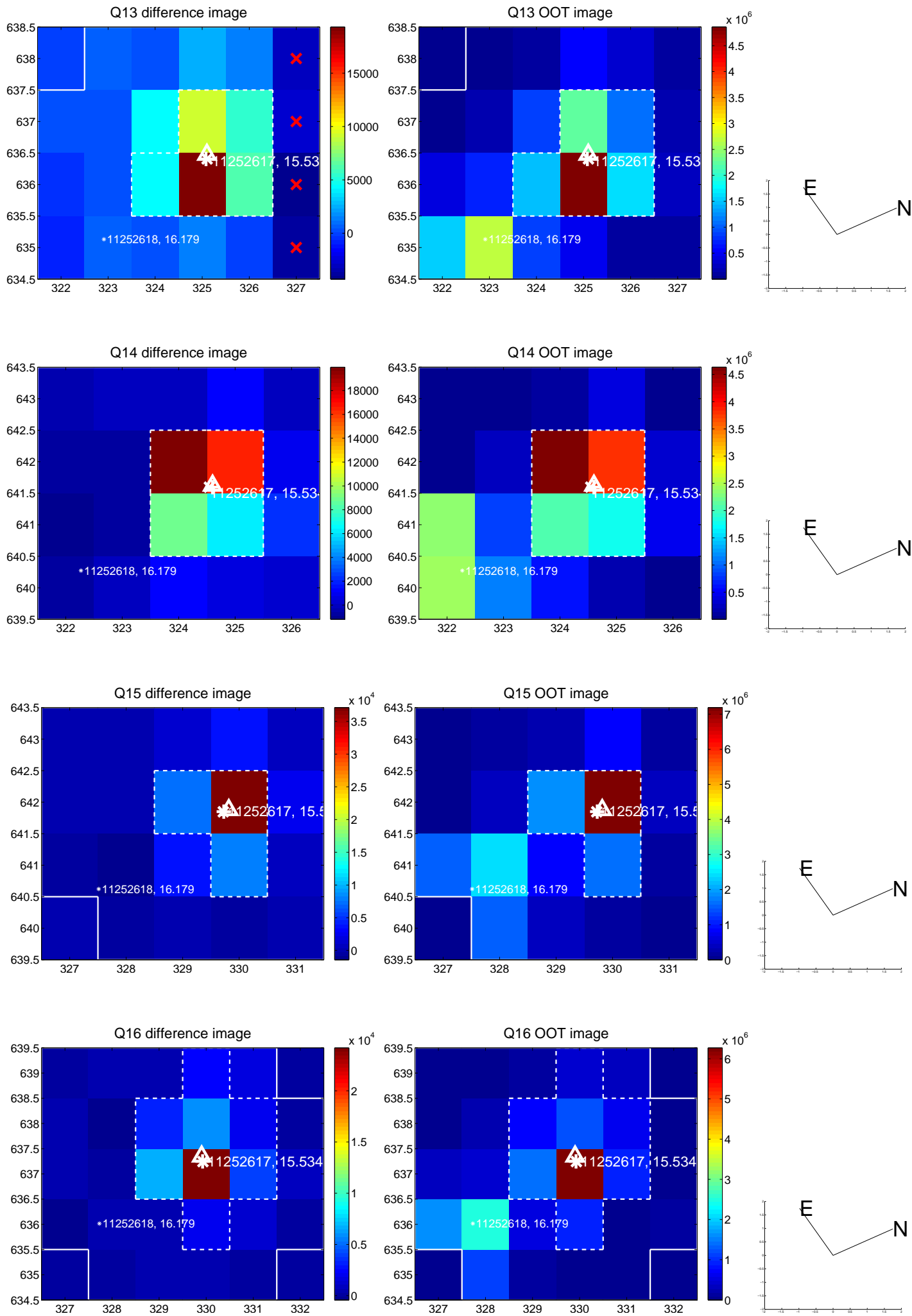
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



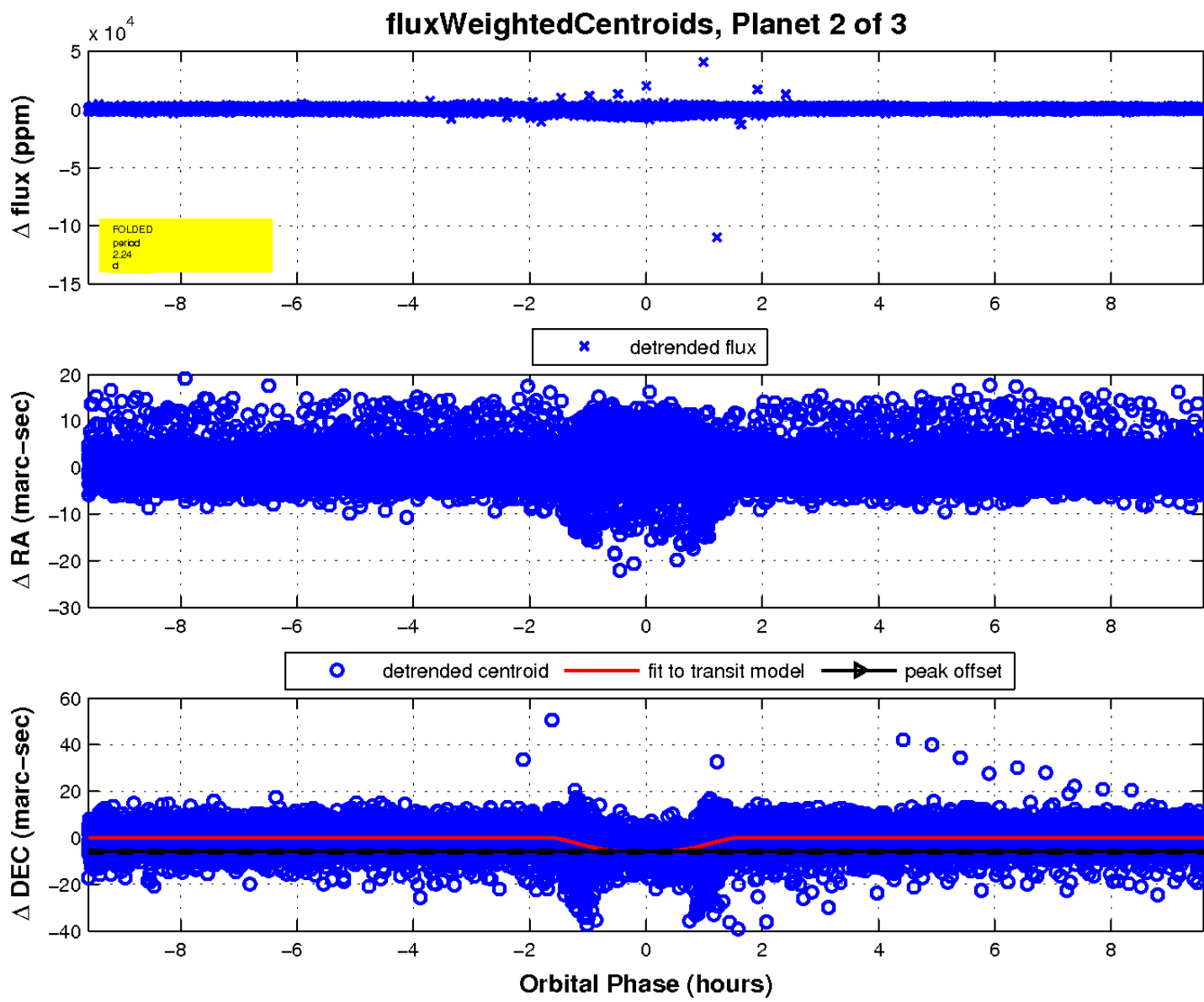
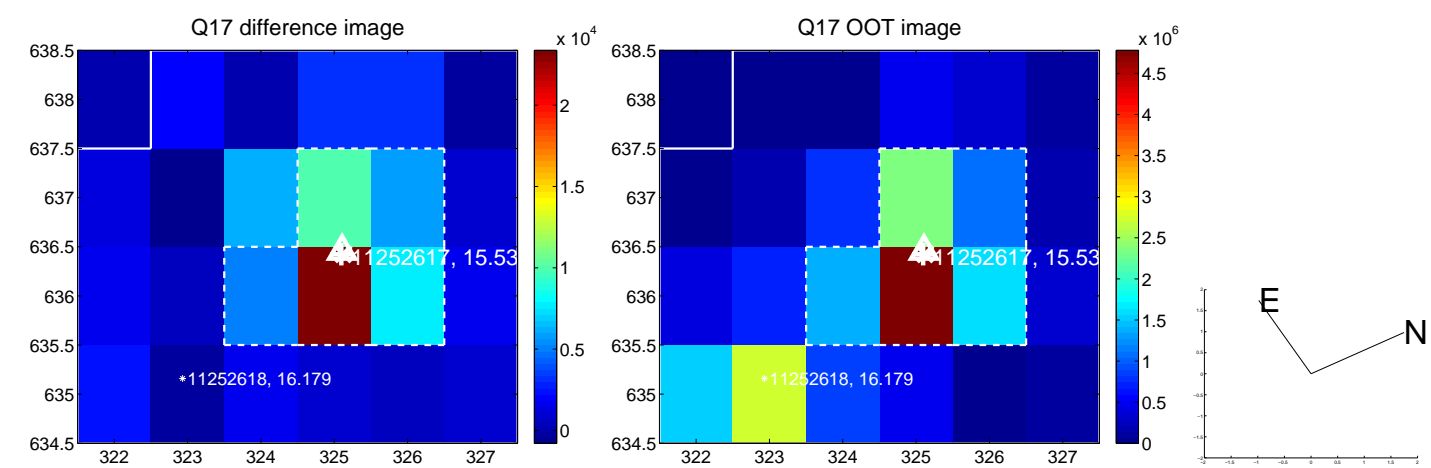
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

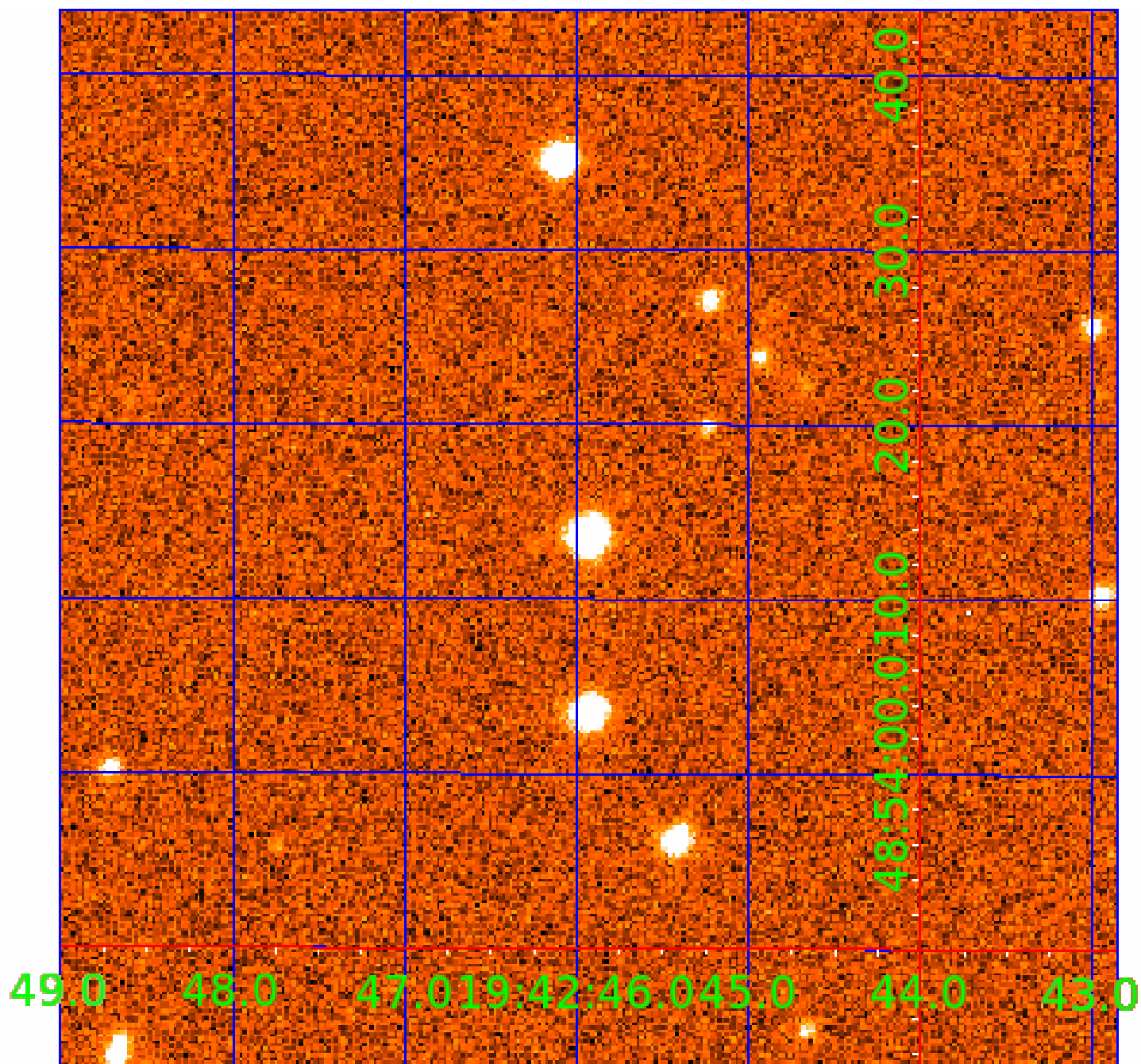


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



# UKIRT Image

Declination





# KIC 011252617

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011252617-01	OBS	6236.01	4.478117	132.872038	118143.7	3.365	4687.3	3783.4	1.06	6304	38.98	521.86
011252617-02	OBS	No	2.239059	132.872884	4517.9	3.198	195.0	190.7	1.06	6304	8.53	1315.01
011252617-03	OBS	6236.02	1.276198	131.685588	158.5	3.446	11.6	12.9	1.06	6304	1.56	2782.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011252617-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011252617-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011252617-03	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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.

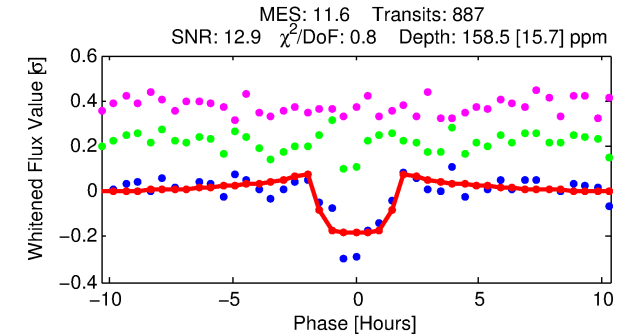
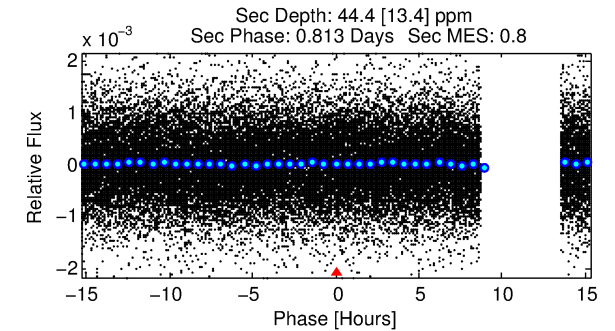
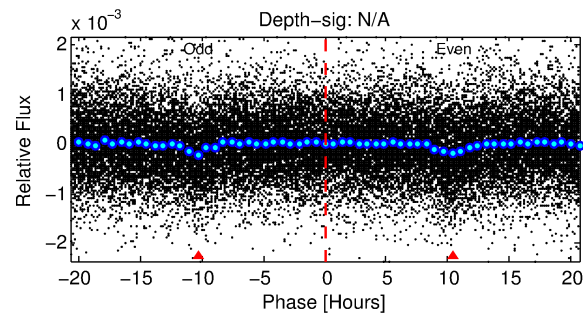
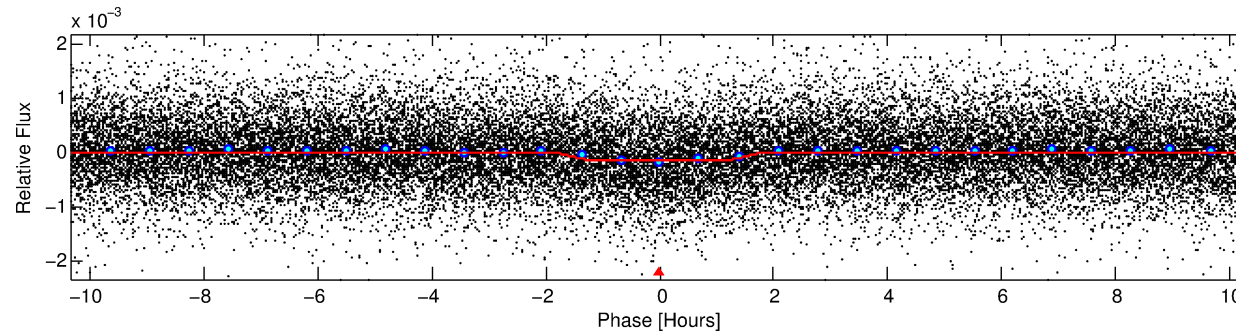
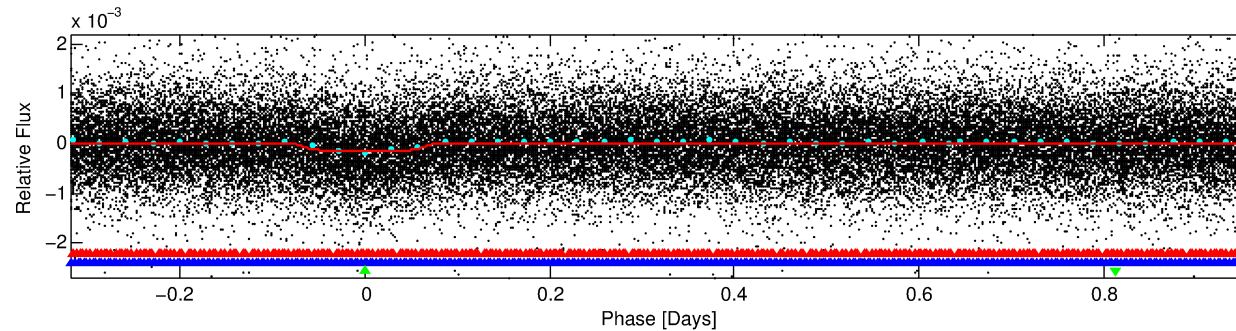
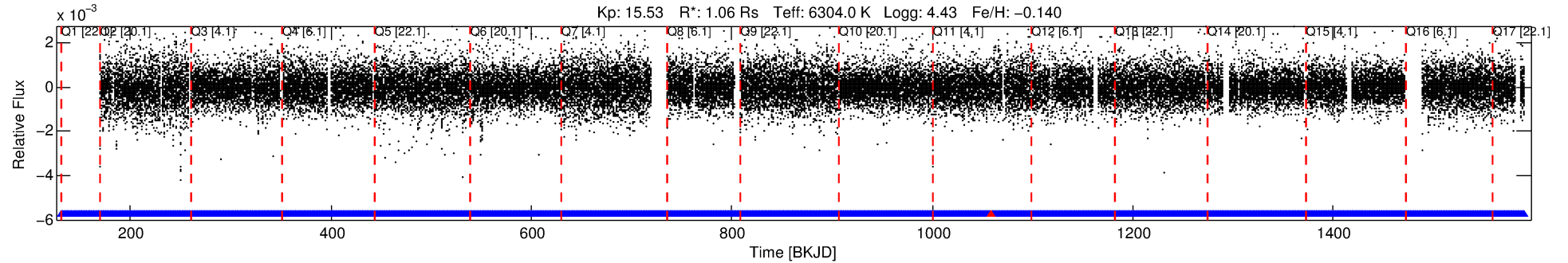
Ephemeris Match Information For 011252617-03

No Significant Match Found

# DV One-Page Summary

KIC: 11252617 Candidate: 3 of 3 Period: 1.276 d  
KOI: K06236.02 Corr: 0.797

Kp: 15.53 R\*: 1.06 Rs Teff: 6304.0 K Logg: 4.43 Fe/H: -0.140



## DV Fit Results:

Period = 1.27620 [0.00001] d  
Epoch = 131.6856 [0.0025] BKJD  
Rp/R\* = 0.0135 [0.0036]  
a/R\* = 1.63 [1.46]  
b = 0.90 [0.32]  
Seff = 2782.65 [1080.02]  
Teq = 1852 [180] K  
Rp = 1.56 [0.63] Re  
a = 0.0239 [0.0060] AU  
Ag = 5.73 [4.08] [1.16σ]  
Teffp = 4431 [698] K [3.58σ]

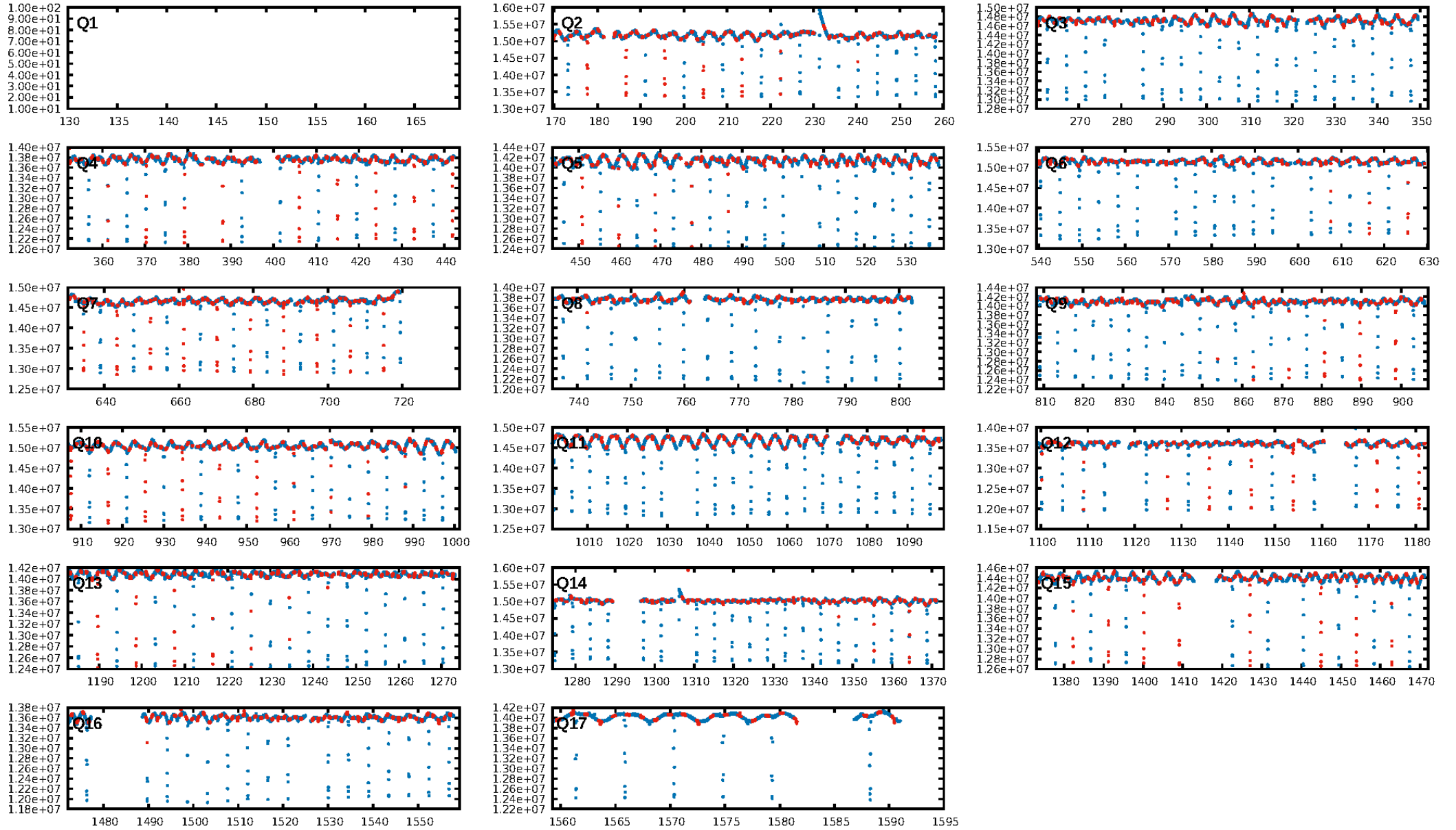
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [4.92σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [869/870]  
GhostDiagnostic-chr: -0.4751  
Centroid-sig: N/A  
Centroid-so: 19.016 arcsec [31.45σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [16/16]

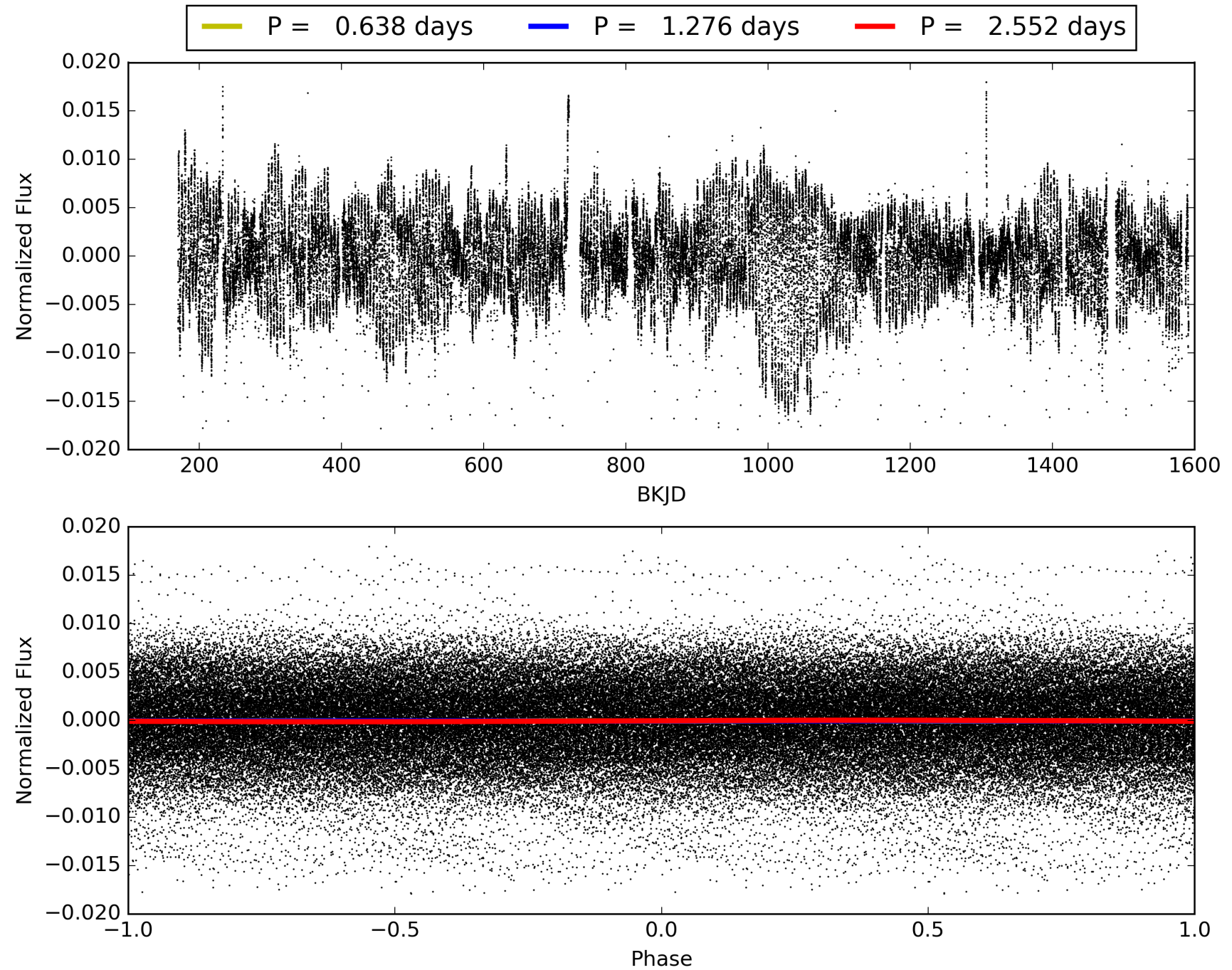
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:19:09 Z

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

# TCE 011252617-03, PDC Light Curves

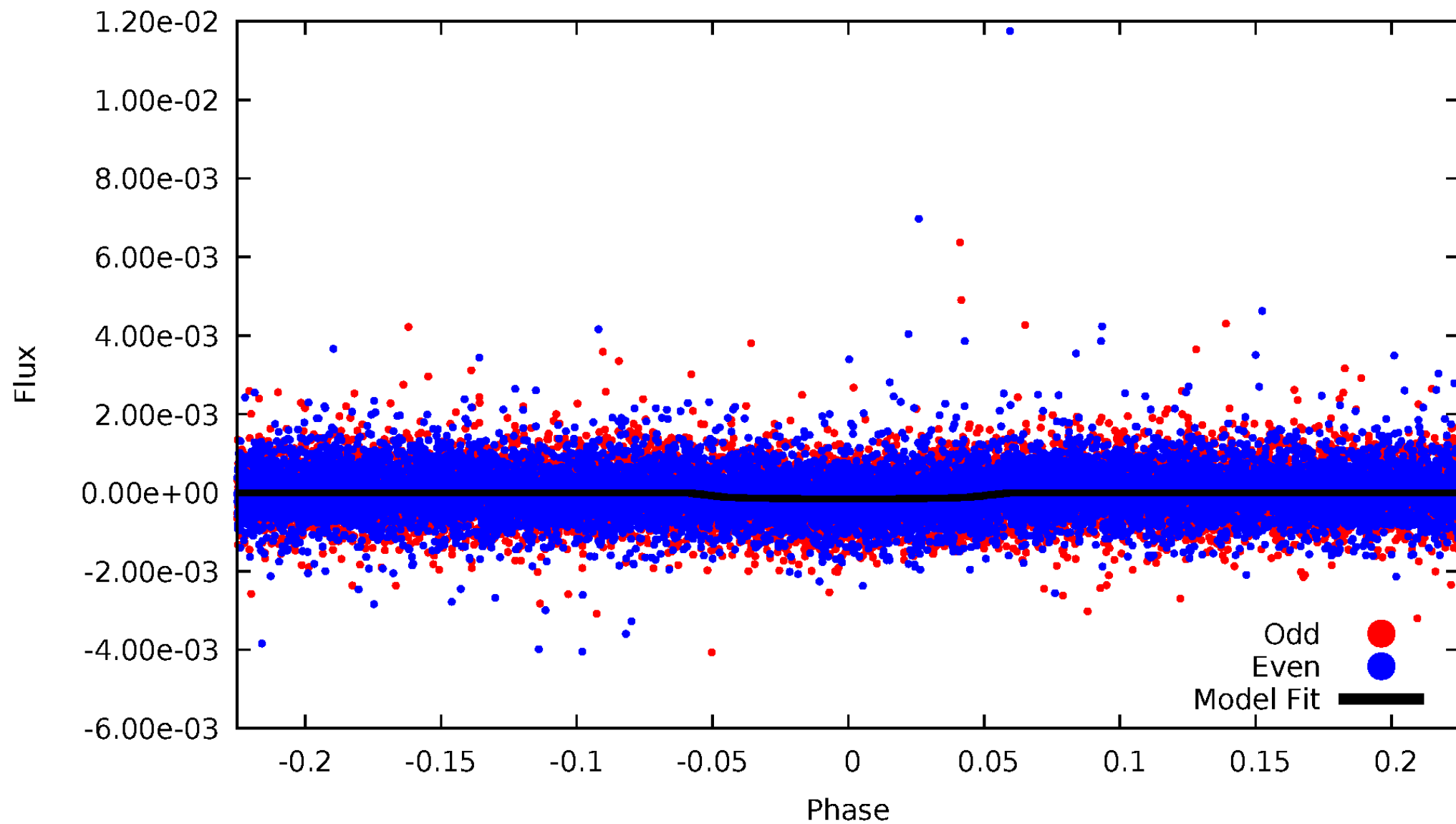


# TCE 011252617-03



# DV Odd/Even

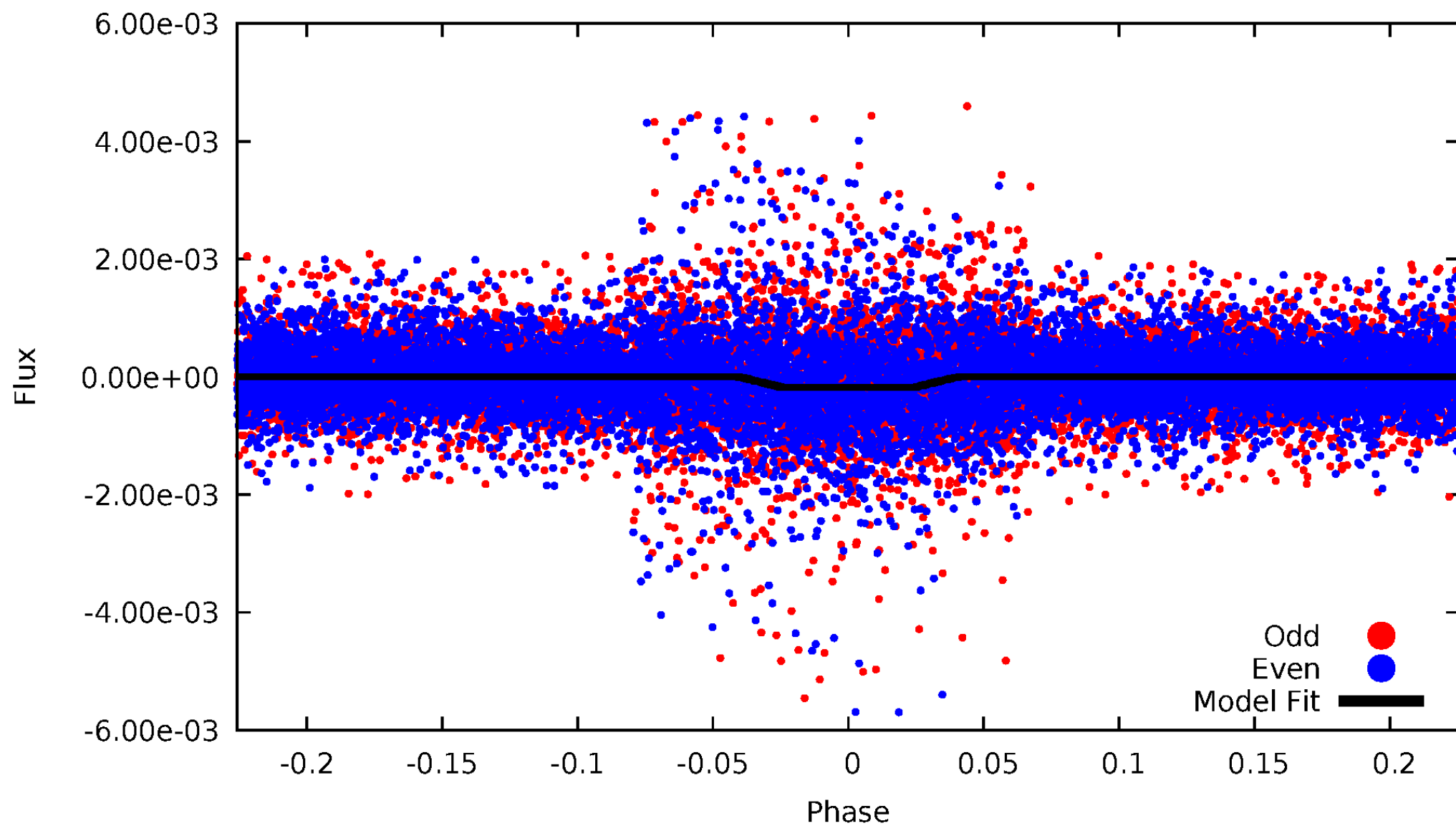
TCE 011252617-03





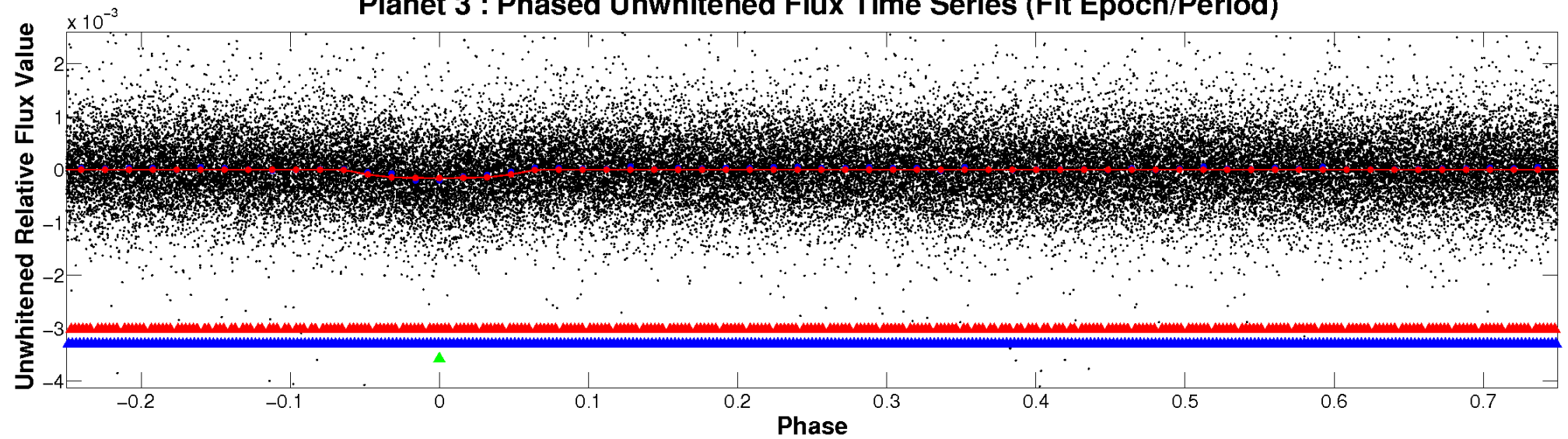
# ALT Odd/Even

TCE 011252617-03

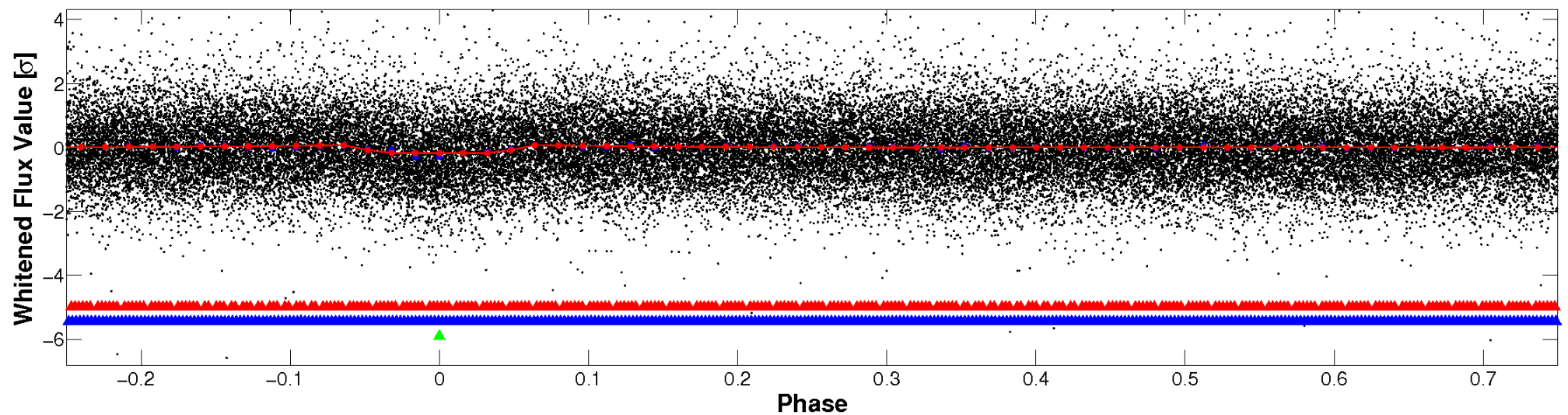


# Non-Whitened Vs. Whitened Light Curve

## Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

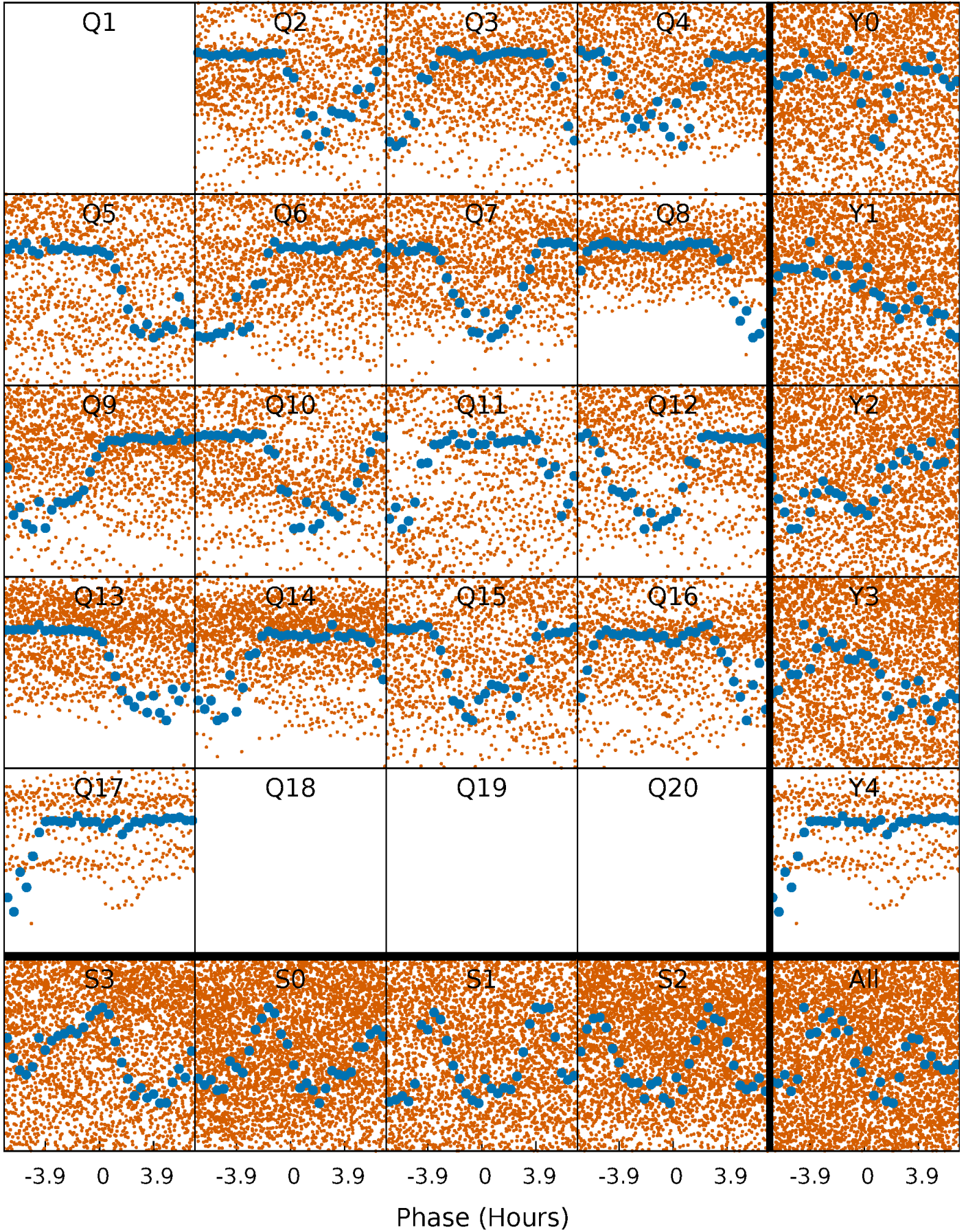


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

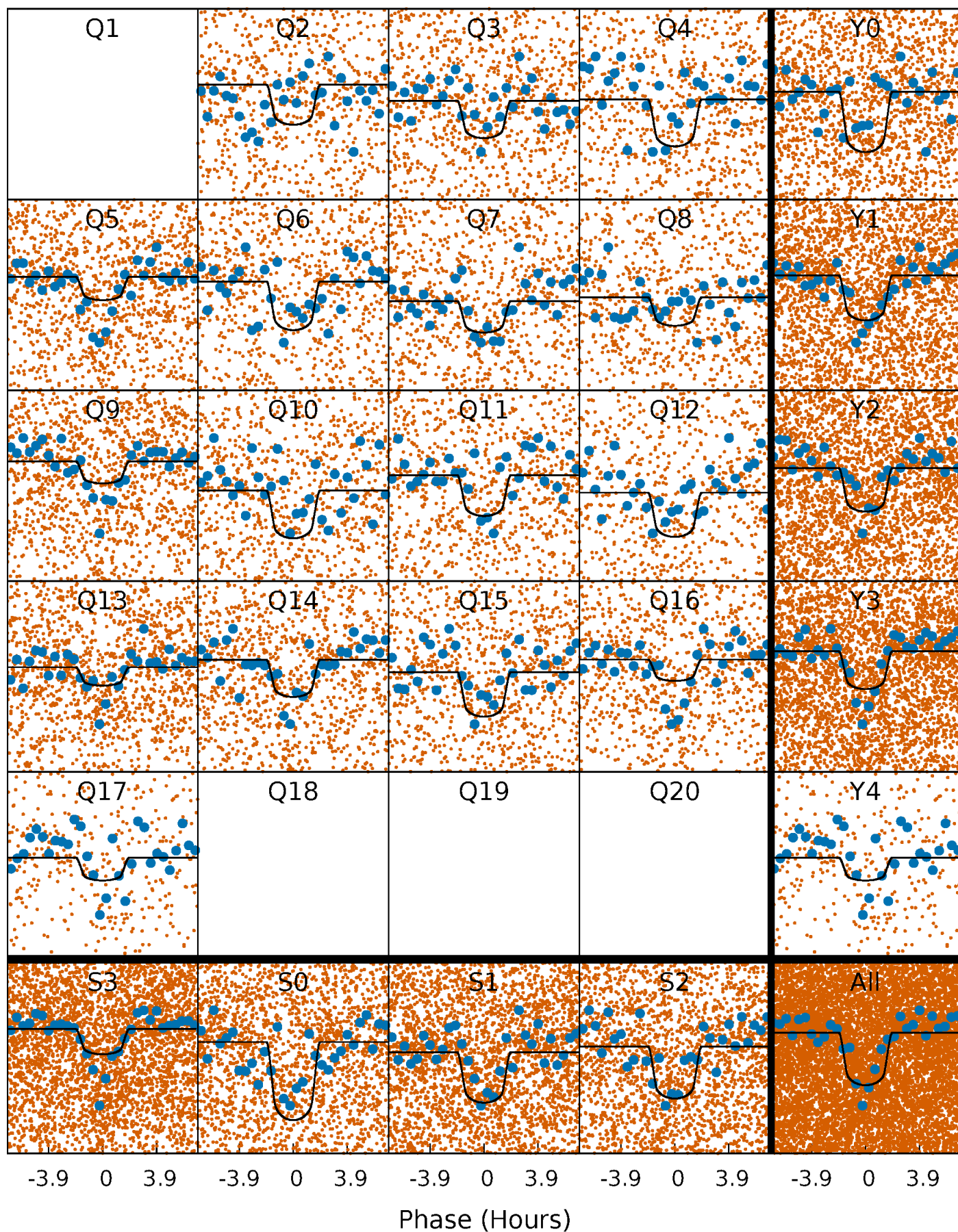
TCE 011252617-03 P= 1.276198 Days  $T_0=131.685588$  (BKJD)





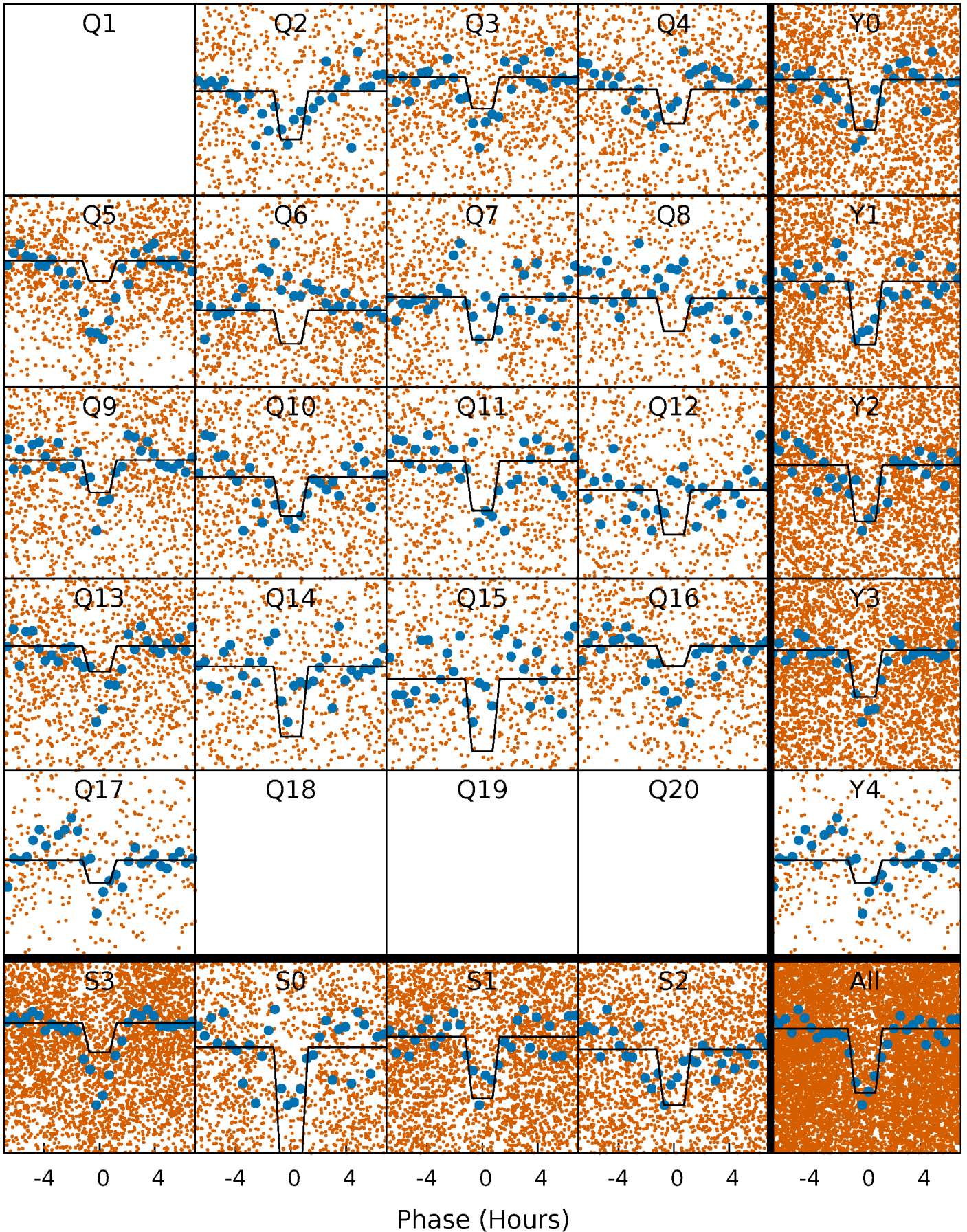
# DV Quarter-Phased Transit Curves

TCE 011252617-03 P= 1.276198 Days  $T_0=131.685588$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011252617-03 P= 1.276198 Days  $T_0=131.683007$  (BKJD)

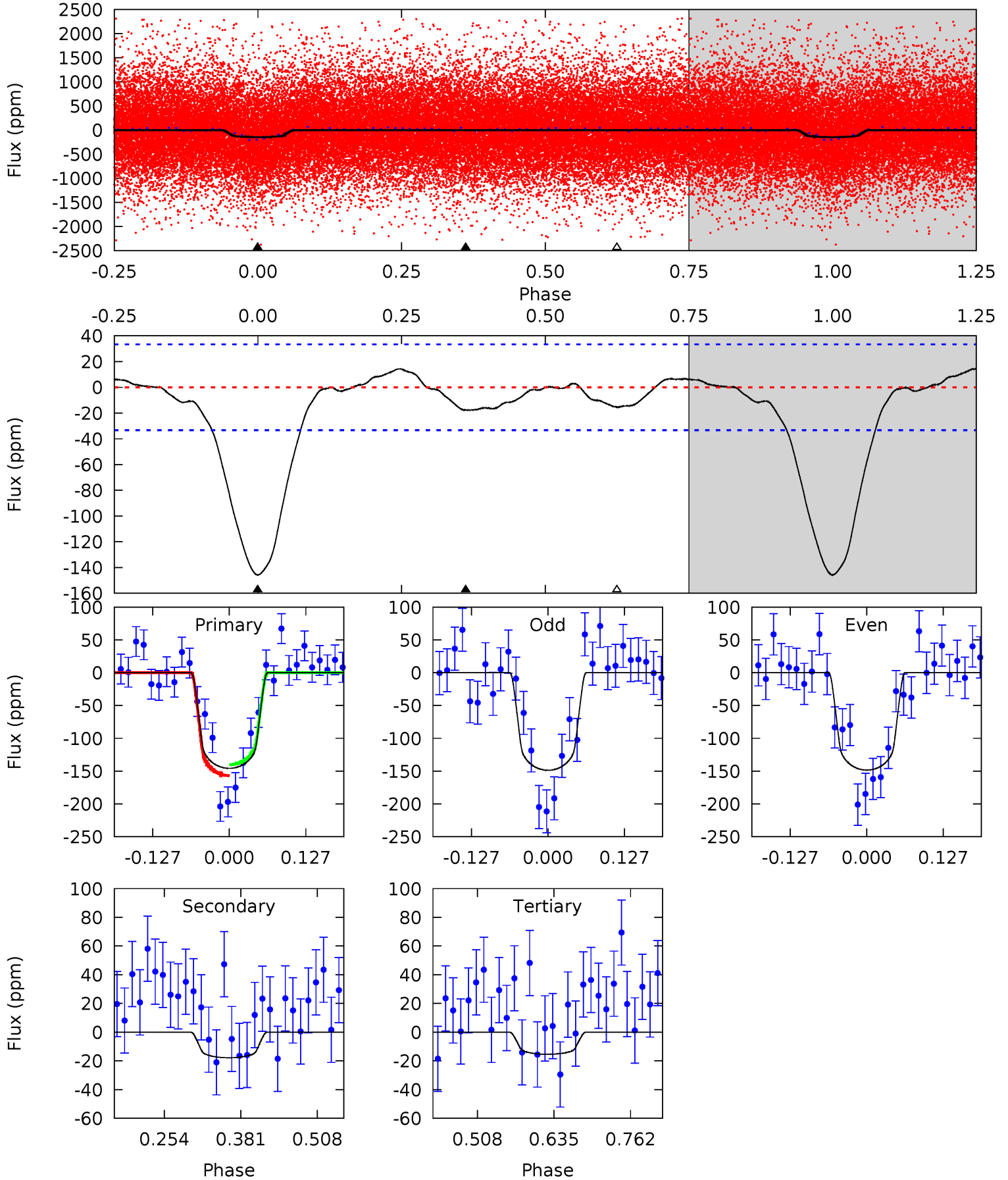




# DV Model-Shift Uniqueness Test

011252617-03, P = 1.276198 Days, E = 131.685588 Days

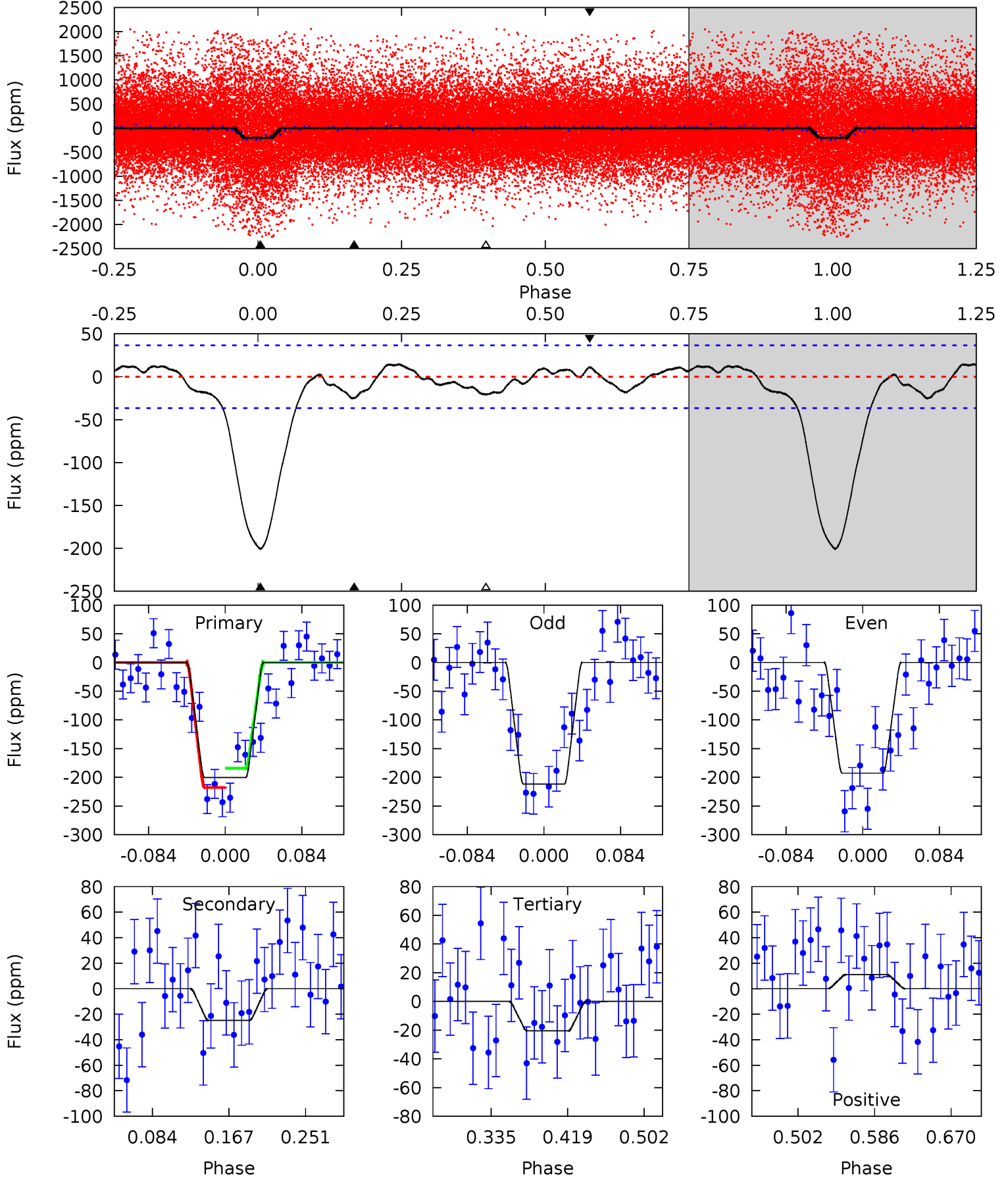
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	2.42	2.09	0	4.51	1.53	0.96	17.7	19.8	0.33	2.42	0.02	1.00	0.09	1.13



# Alt Model-Shift Uniqueness Test

011252617-03, P = 1.276198 Days, E = 131.683007 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
25.2	3.13	2.58	1.39	4.60	1.73	1.29	22.6	23.8	0.55	1.74	1.19	0.99	0.07	2.10



### Stellar Parameters For KIC 011252617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6304^{+169}_{-225}$	$4.435^{+0.065}_{-0.195}$	$-0.140^{+0.250}_{-0.300}$	$1.058^{+0.320}_{-0.128}$	$1.110^{+0.144}_{-0.144}$	$1.319^{+0.435}_{-0.636}$
	+3%/-4%	+1%/-4%	+179%/-214%	+30%/-12%	+13%/-13%	+33%/-48%
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 011252617-03 / KOI 6236.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-18 \pm 7$	$1.61^{+0.52}_{-0.47}$	$2630^{+195}_{-126}$	$3709^{+636}_{-451}$	$1.883^{+2.345}_{-0.929}$
Alt.	$-25 \pm 8$	$1.61^{+0.47}_{-0.42}$	$2626^{+170}_{-128}$	$3984^{+621}_{-437}$	$2.781^{+2.854}_{-1.224}$

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

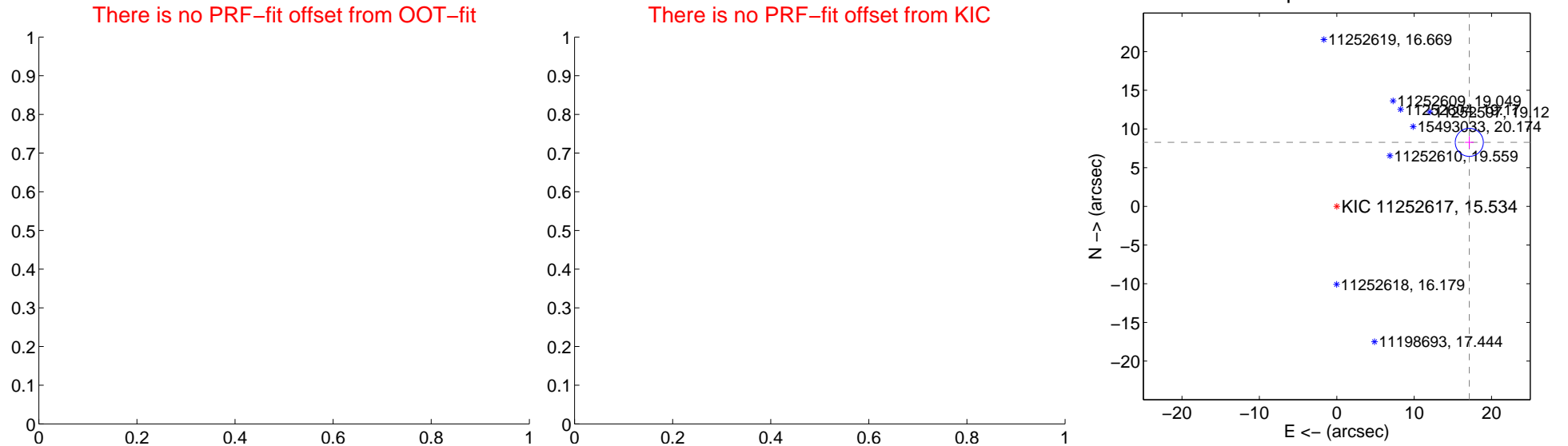
## DV Centroid Data

Supplemental centroid analysis for 011252617-03. Kepler magnitude: 15.53. Transit SNR 12.87

There are 0 quarters with good PRF difference image offsets

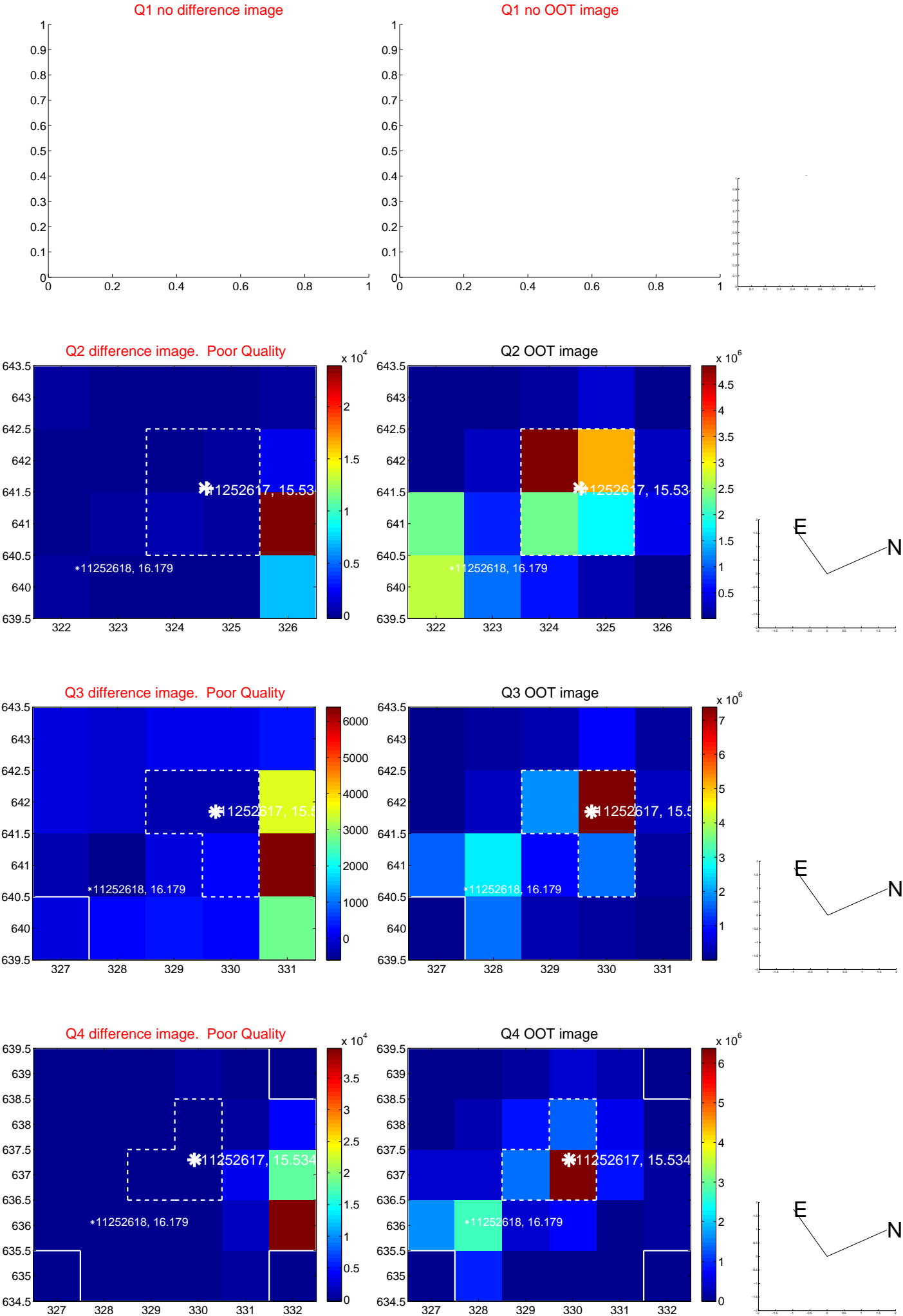
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$19.02 \pm 0.60$	$31.45$	$-17.12 \pm 0.56$	$8.27 \pm 0.78$

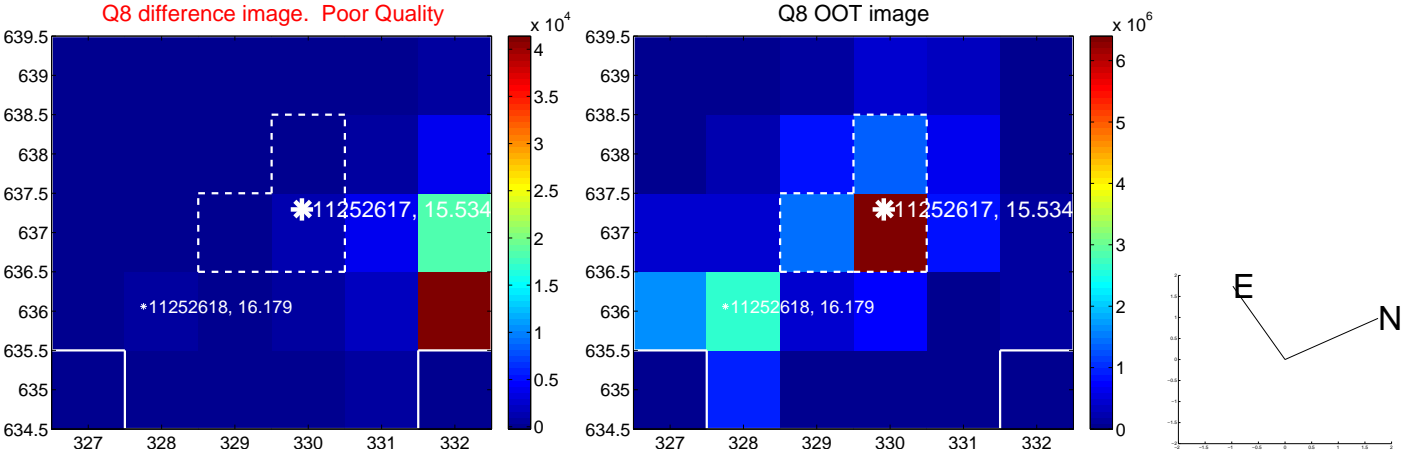
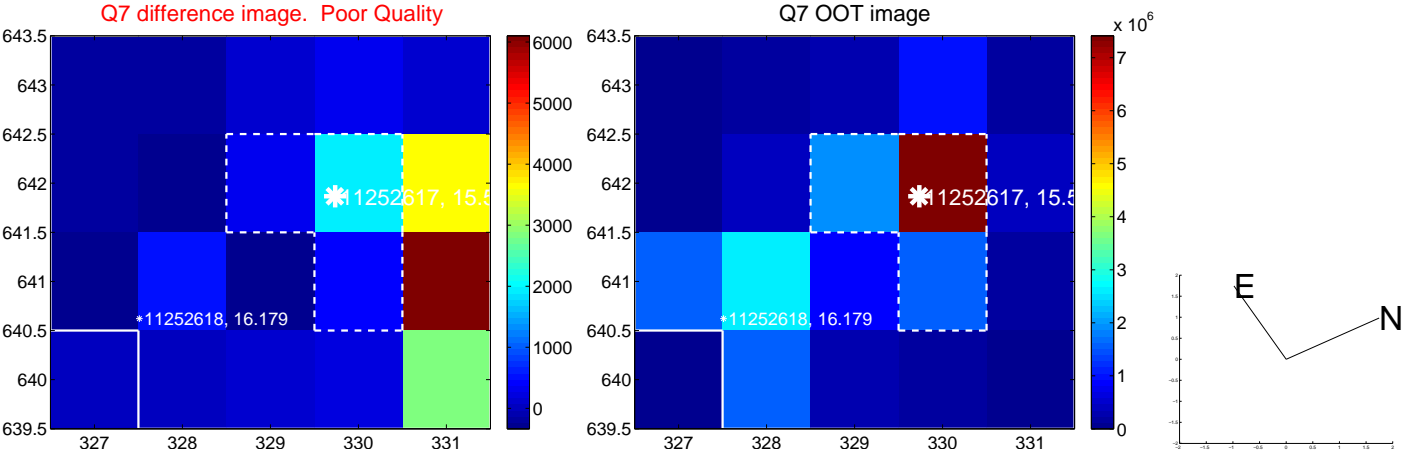
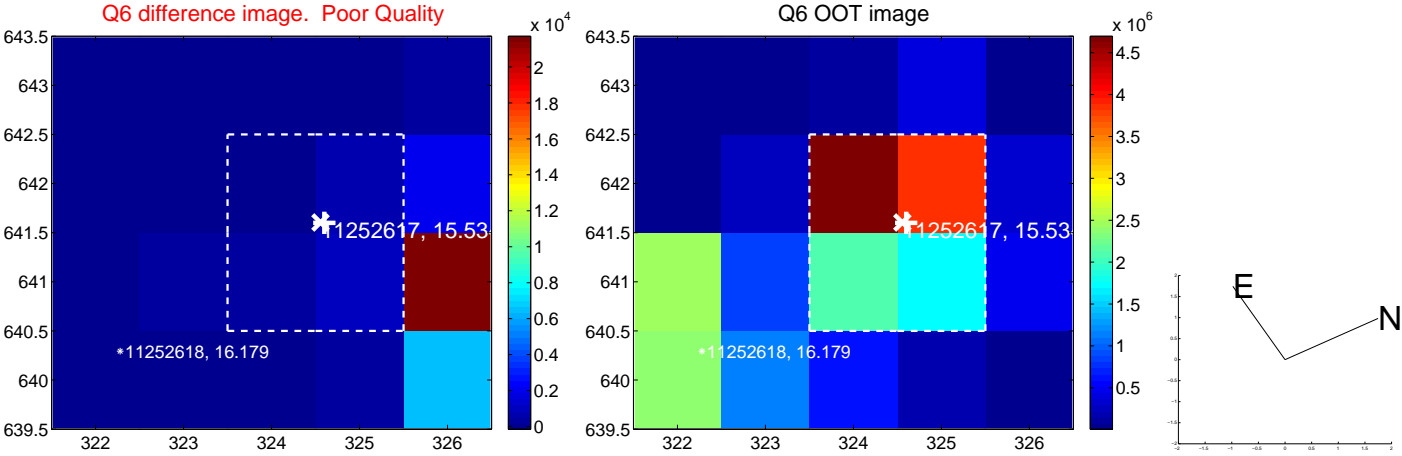
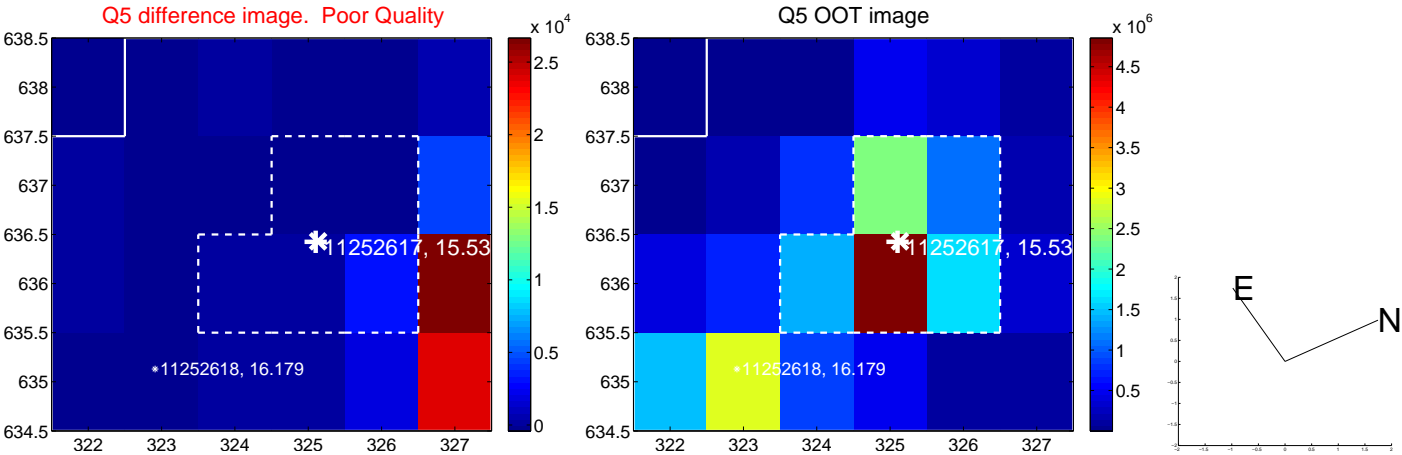


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

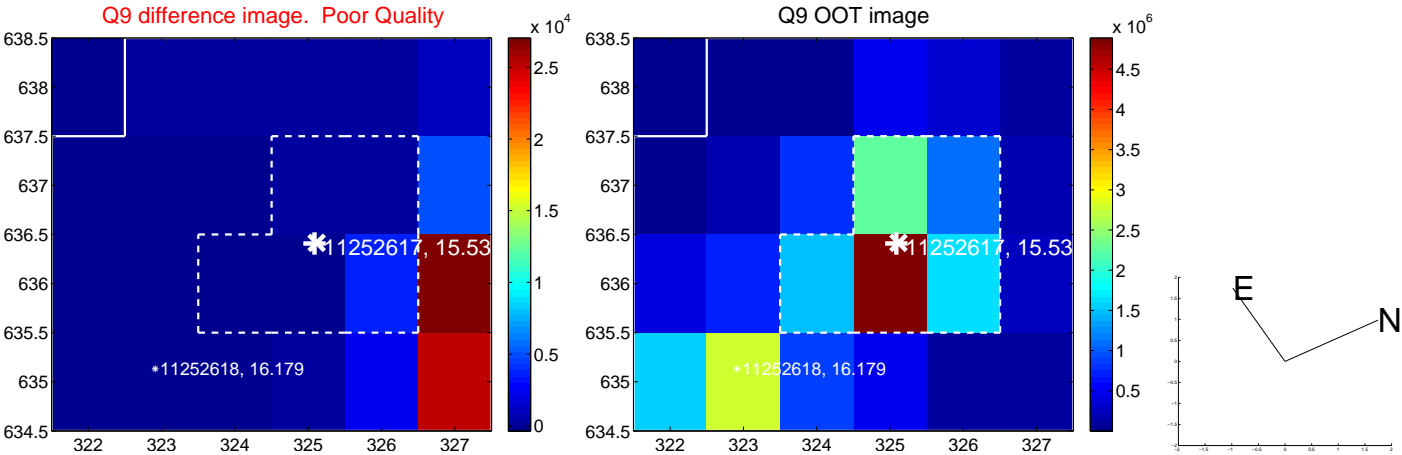


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

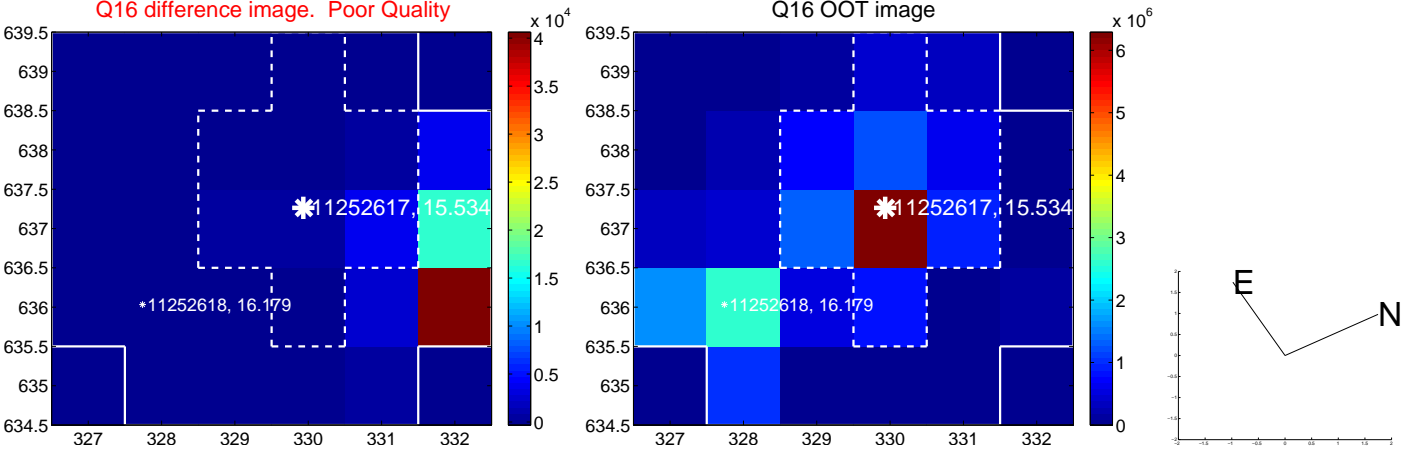
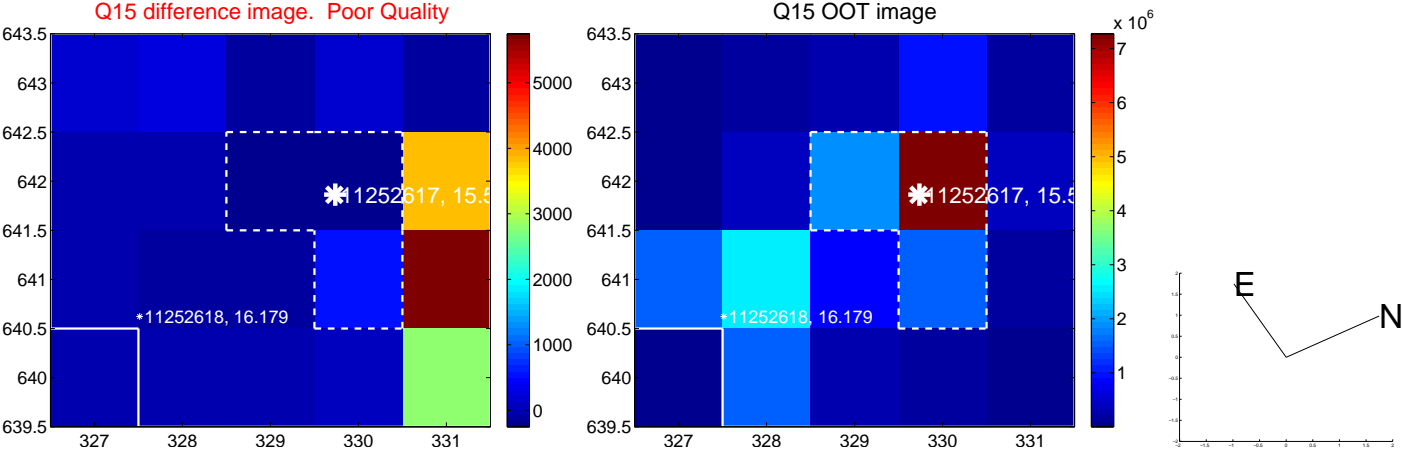
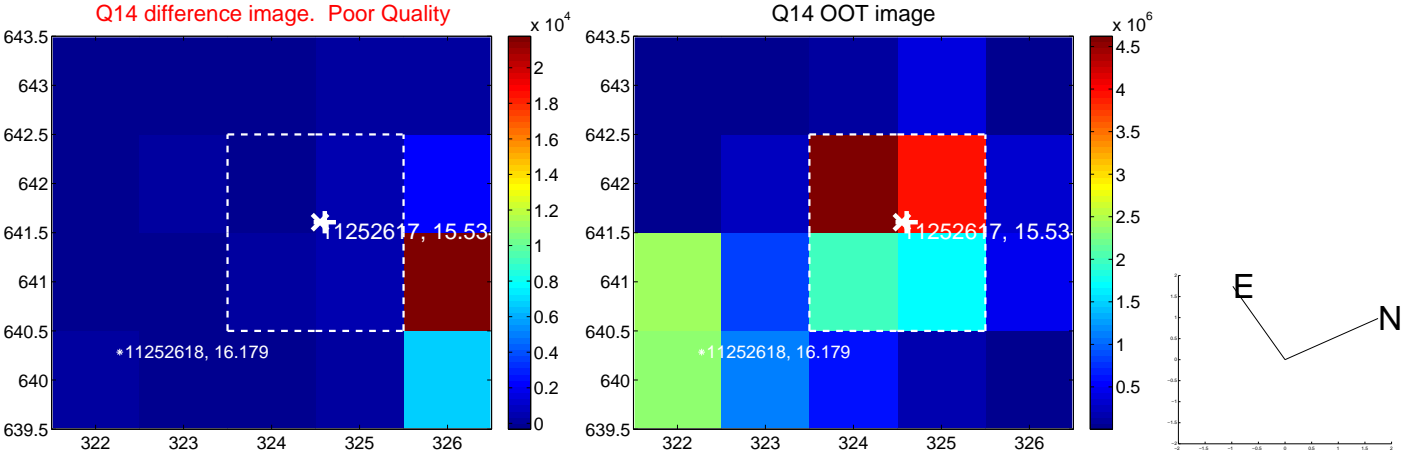
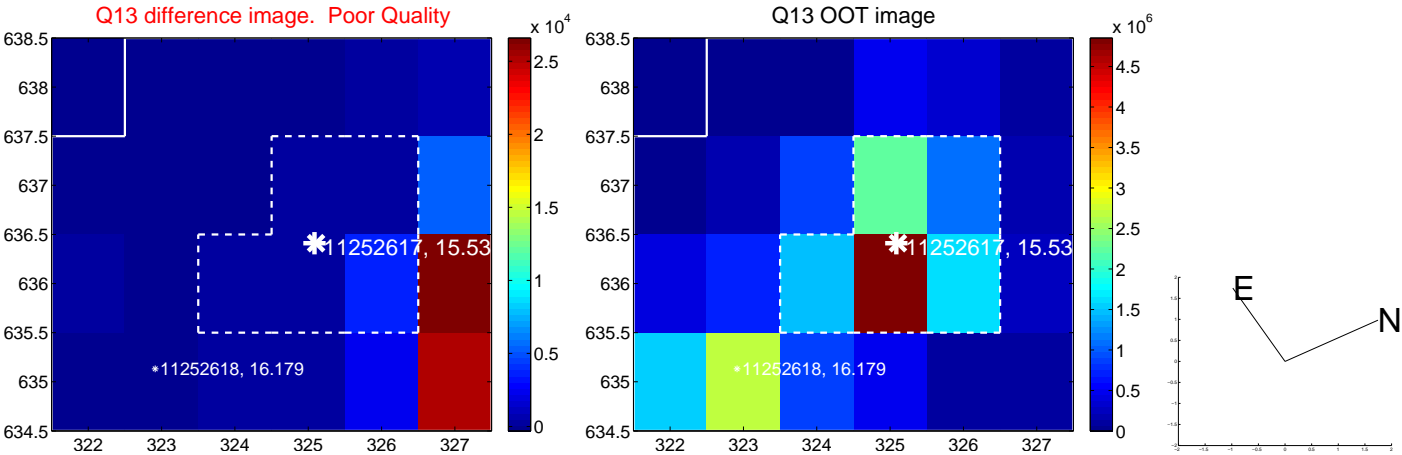




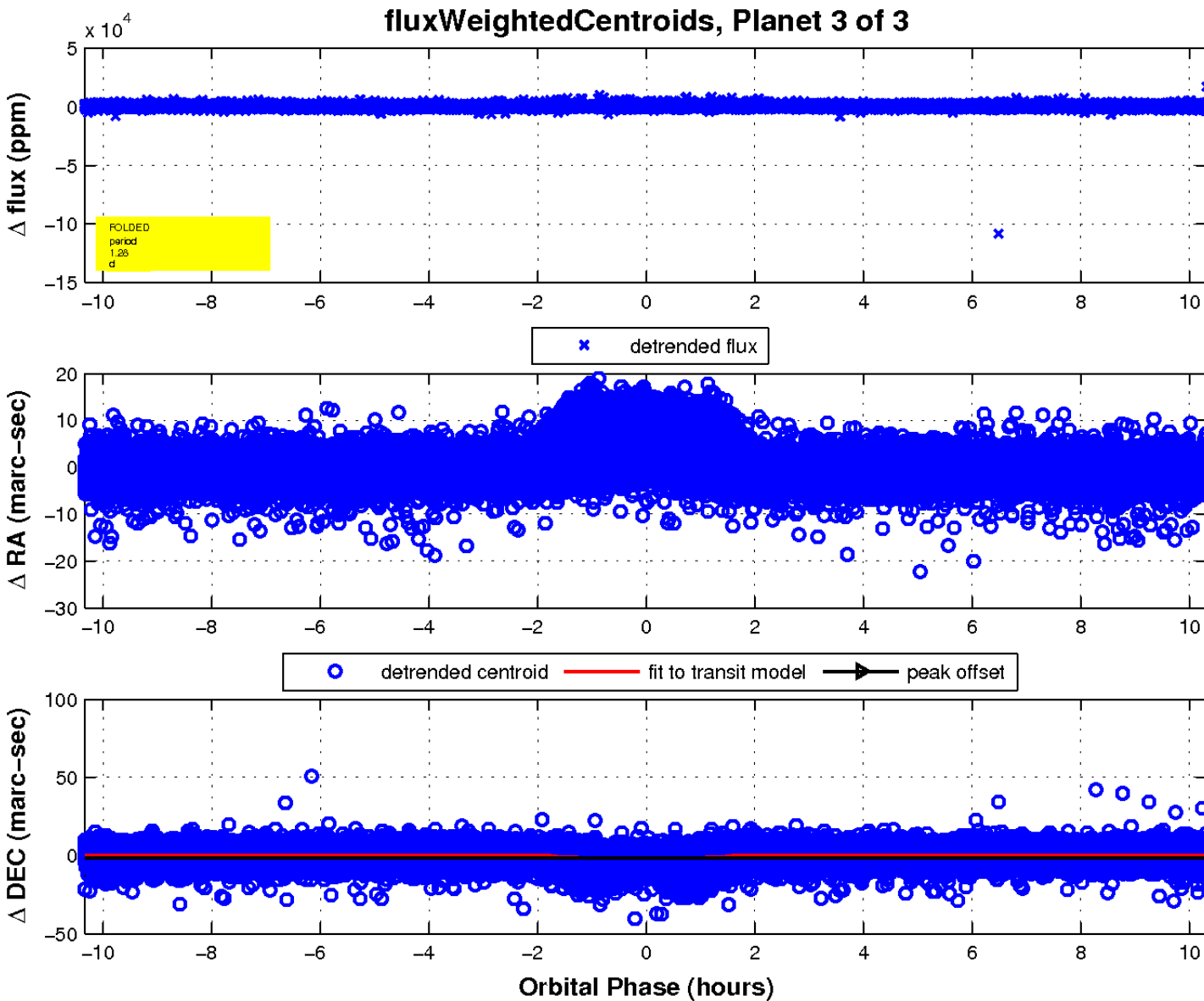
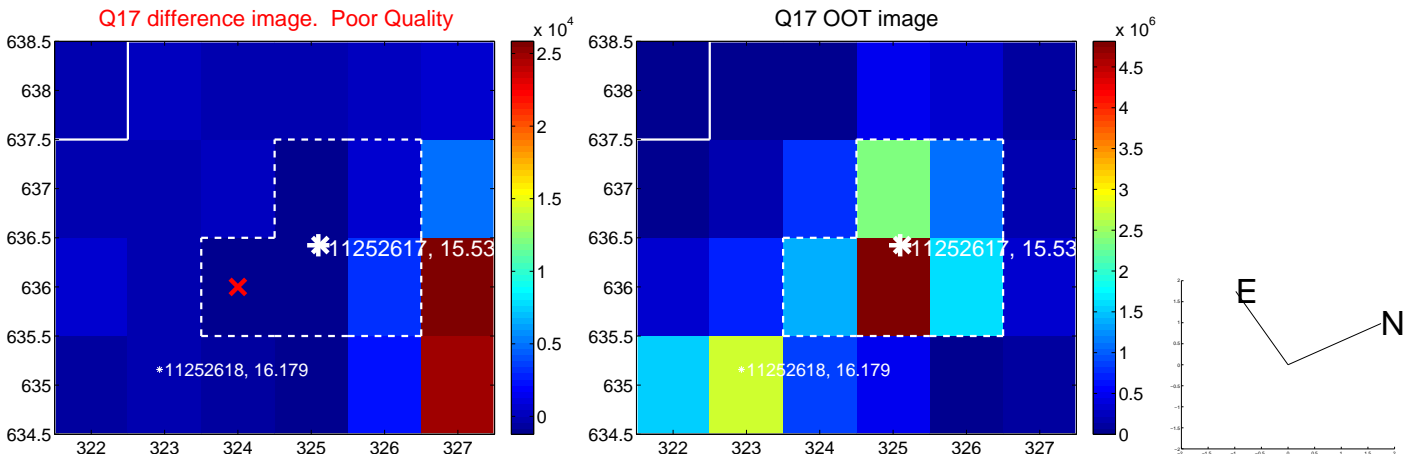
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

