

# KIC 011200773

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011200773-01	OBS	7419.01	2.489551	132.044175	29175.6	2.839	3564.7	2560.8	0.79	6018	20.55	637.41
011200773-02	OBS	No	1.244765	132.049499	3169.1	2.687	446.9	392.8	0.79	6018	5.42	1606.20
011200773-03	OBS	No	440.892011	222.819135	637.7	13.659	8.3	7.1	0.79	6018	2.19	0.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011200773-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_KIC_POS
011200773-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—CENT_KIC_POS—EPHEM_MATCH
011200773-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

**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 011200773-01

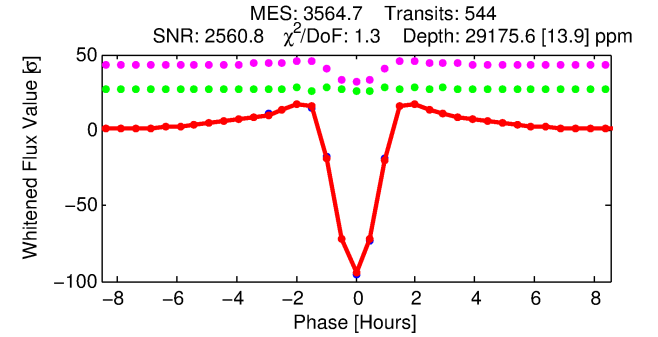
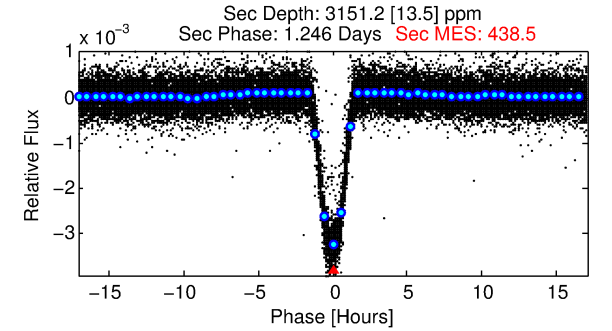
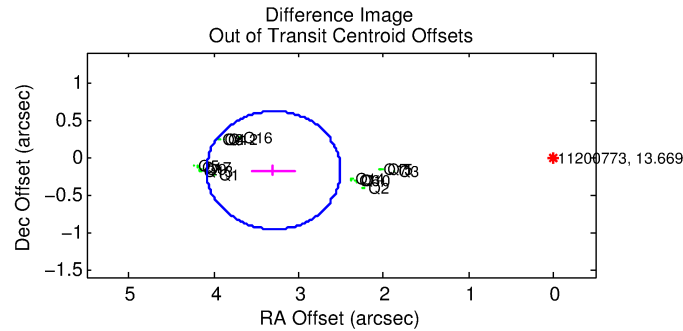
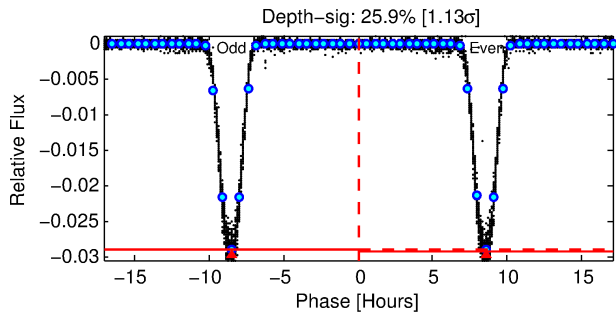
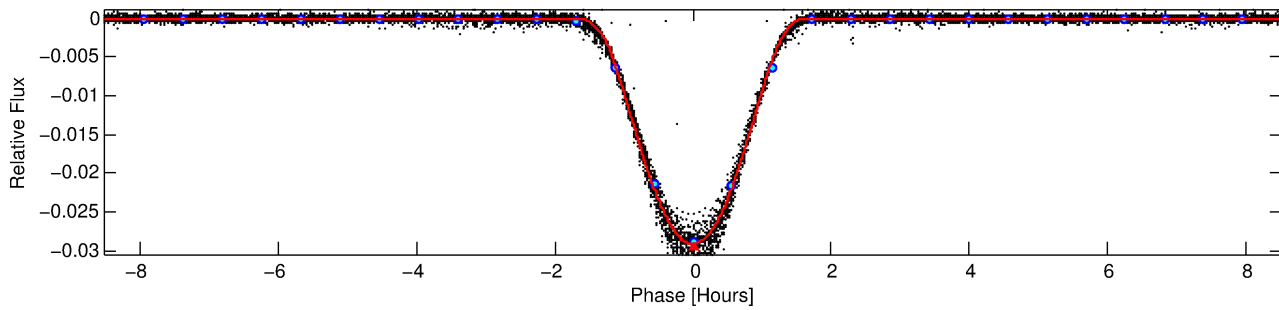
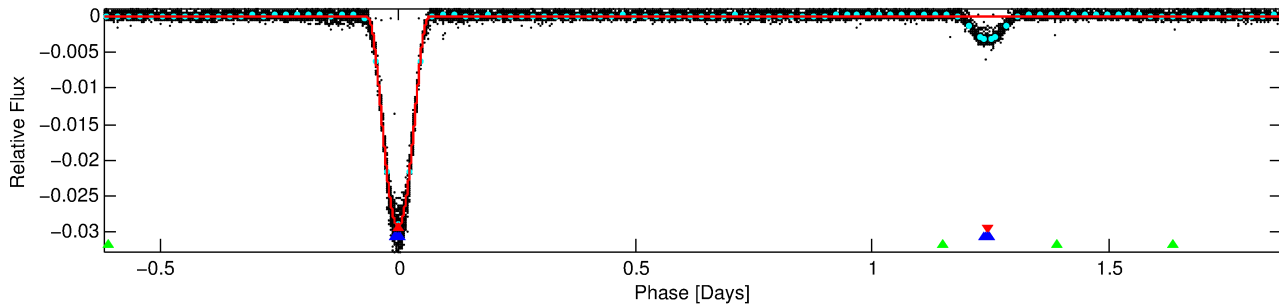
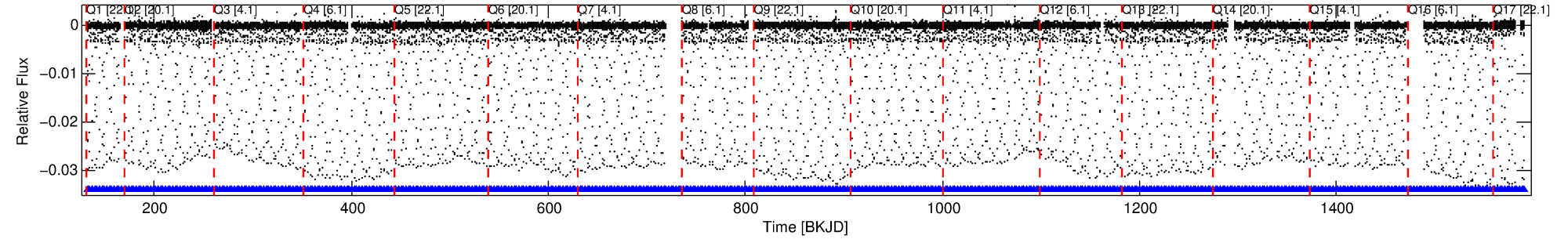
No Significant Match Found

# DV One-Page Summary

KIC: 11200773 Candidate: 1 of 3 Period: 2.490 d

KOI: K07419.01 Corr: 0.999

Kp: 13.67 R\*: 0.79 Rs Teff: 6018.0 K Logg: 4.57 Fe/H: -0.700



## DV Fit Results:

Period = 2.48955 [0.00000] d  
Epoch = 132.0442 [0.0000] BKJD  
Rp/R\* = 0.2371 [0.0037]  
a/R\* = 5.42 [0.01]  
b = 0.95 [0.01]  
Seff = 637.41 [214.20]  
Teq = 1281 [108] K  
Rp = 20.54 [5.18] Re  
a = 0.0341 [0.0073] AU  
Ag = 4.77 [1.53] [2.47σ]  
Teffp = 2928 [83] K [12.14σ]

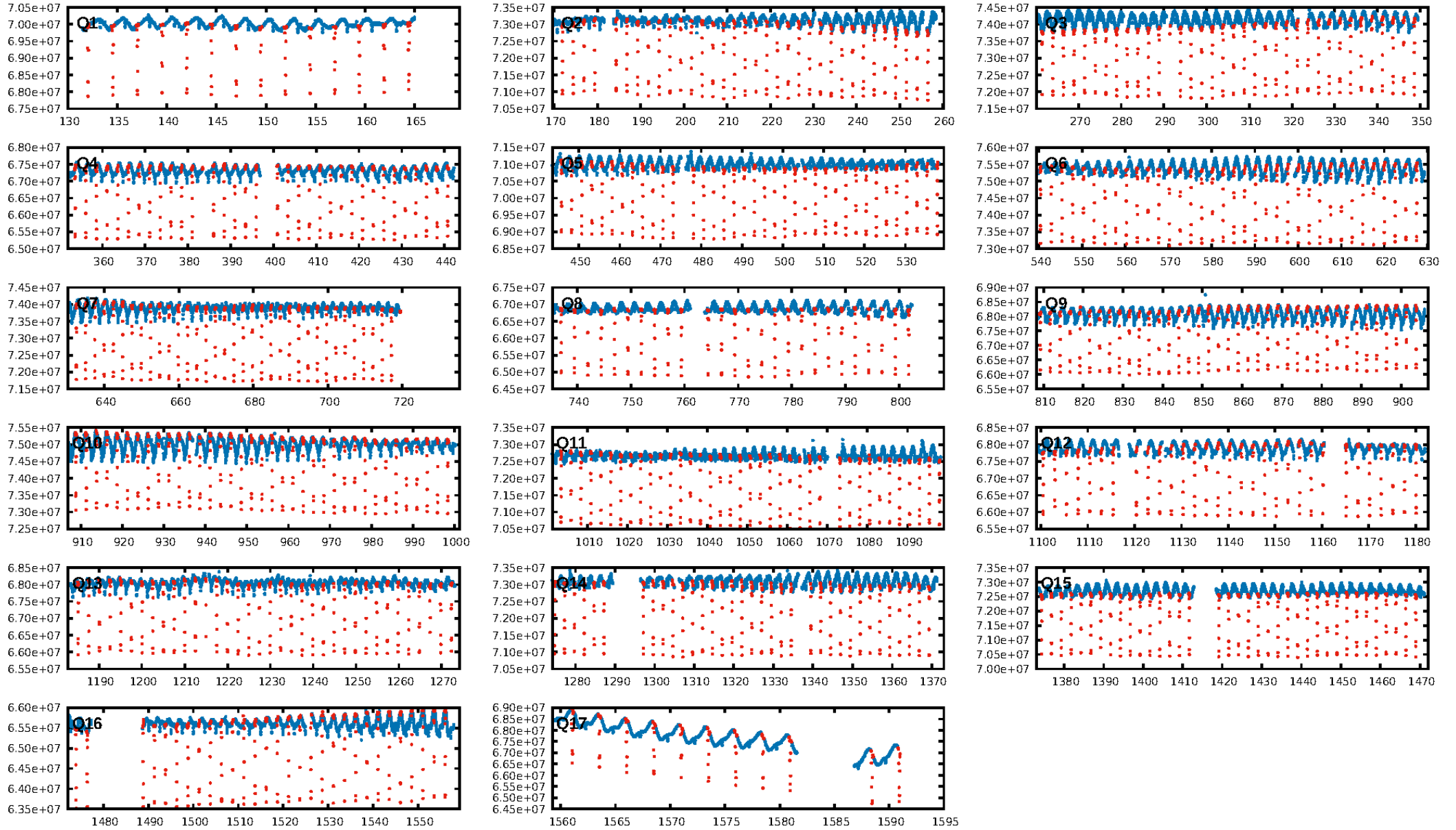
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.64σ]  
LongPeriod-sig: 100.0% [754.16σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [519/519]  
GhostDiagnostic-chr: 3.095  
Centroid-sig: 0.0%  
Centroid-so: 1.487 arcsec [478.84σ]  
OotOffset-rm: 3.300 arcsec [12.55σ]  
KicOffset-rm: 0.327 arcsec [4.76σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 0.00 [0/17]

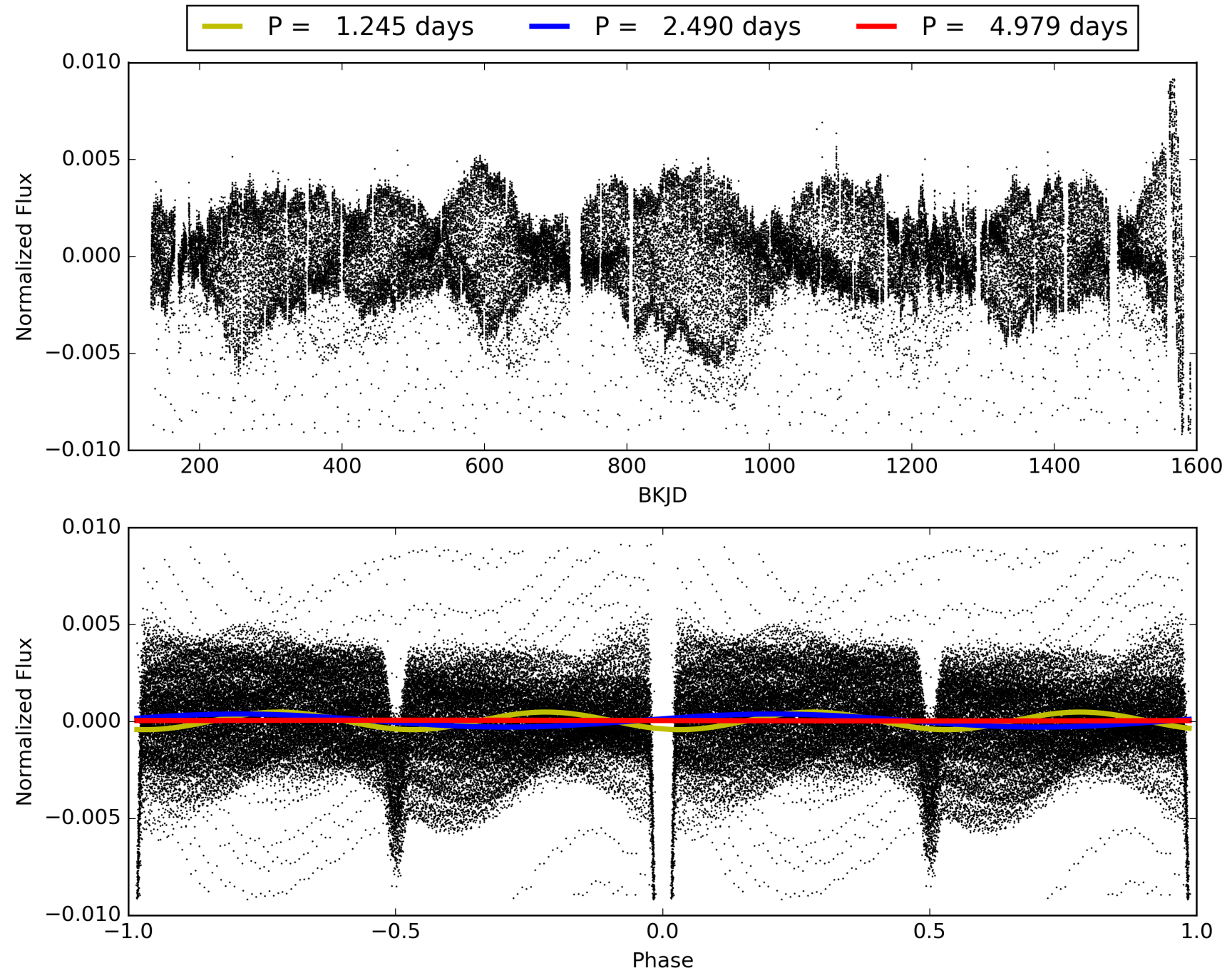
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:02 Z

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

# TCE 011200773-01, PDC Light Curves

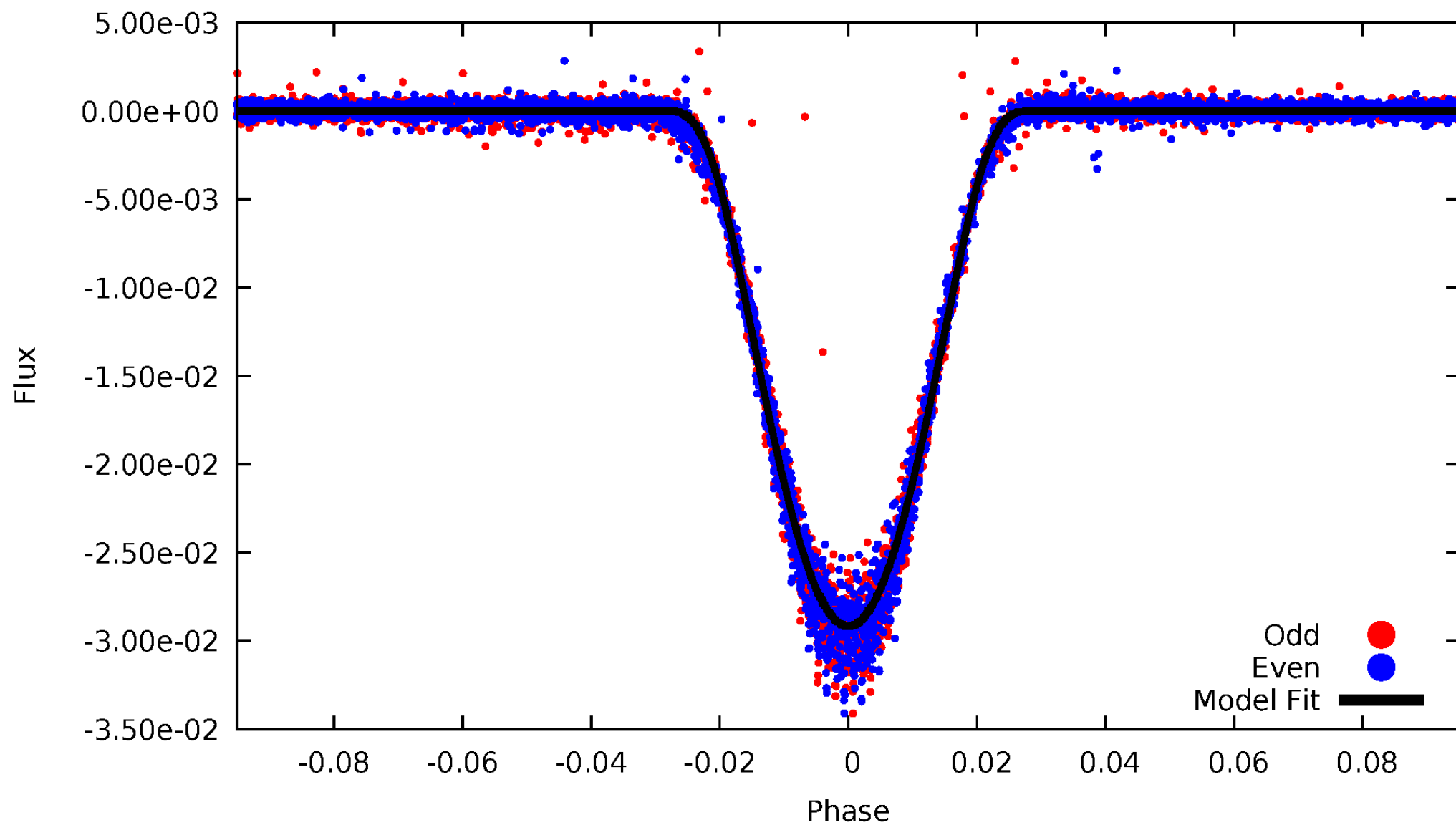


TCE 011200773-01



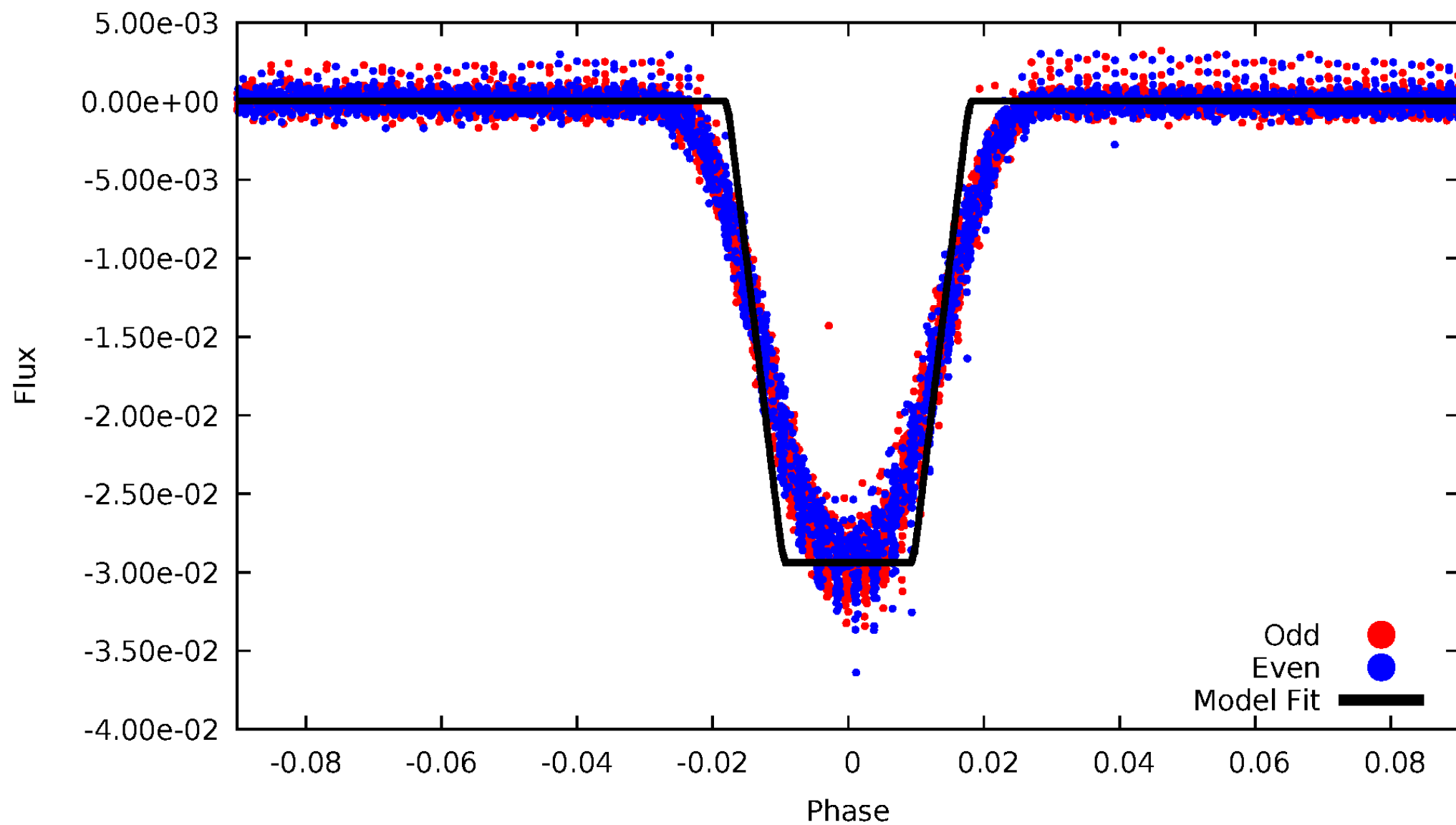
# DV Odd/Even

TCE 011200773-01



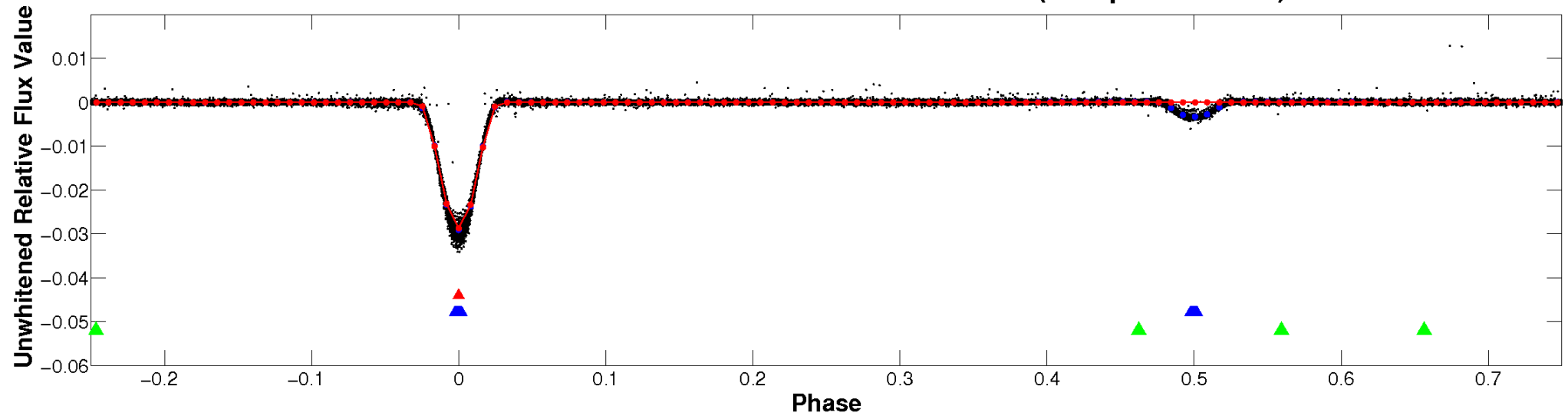
# ALT Odd/Even

TCE 011200773-01

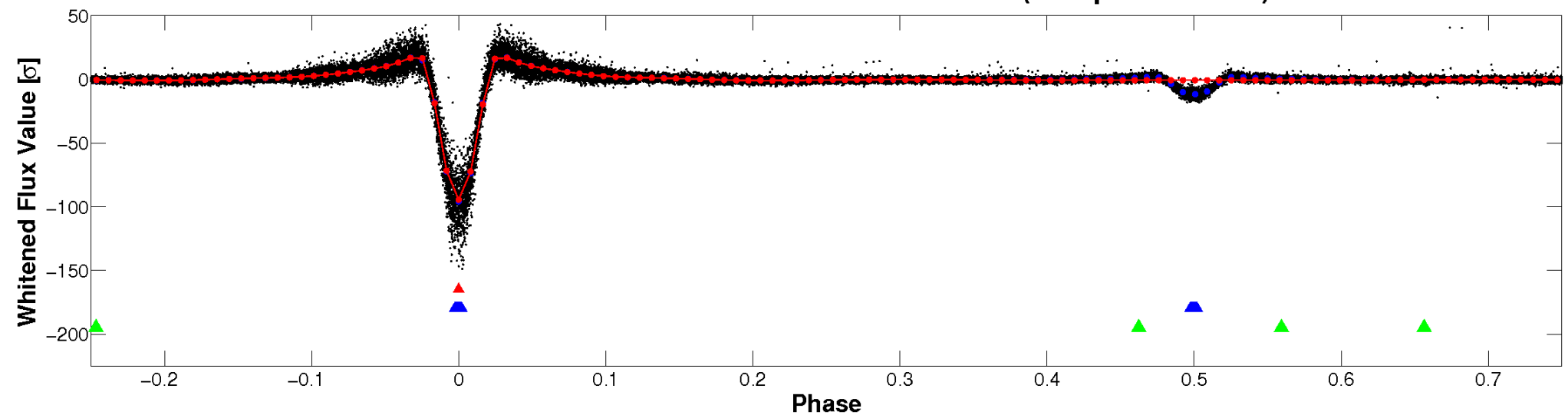


# Non-Whitened Vs. Whitened Light Curve

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

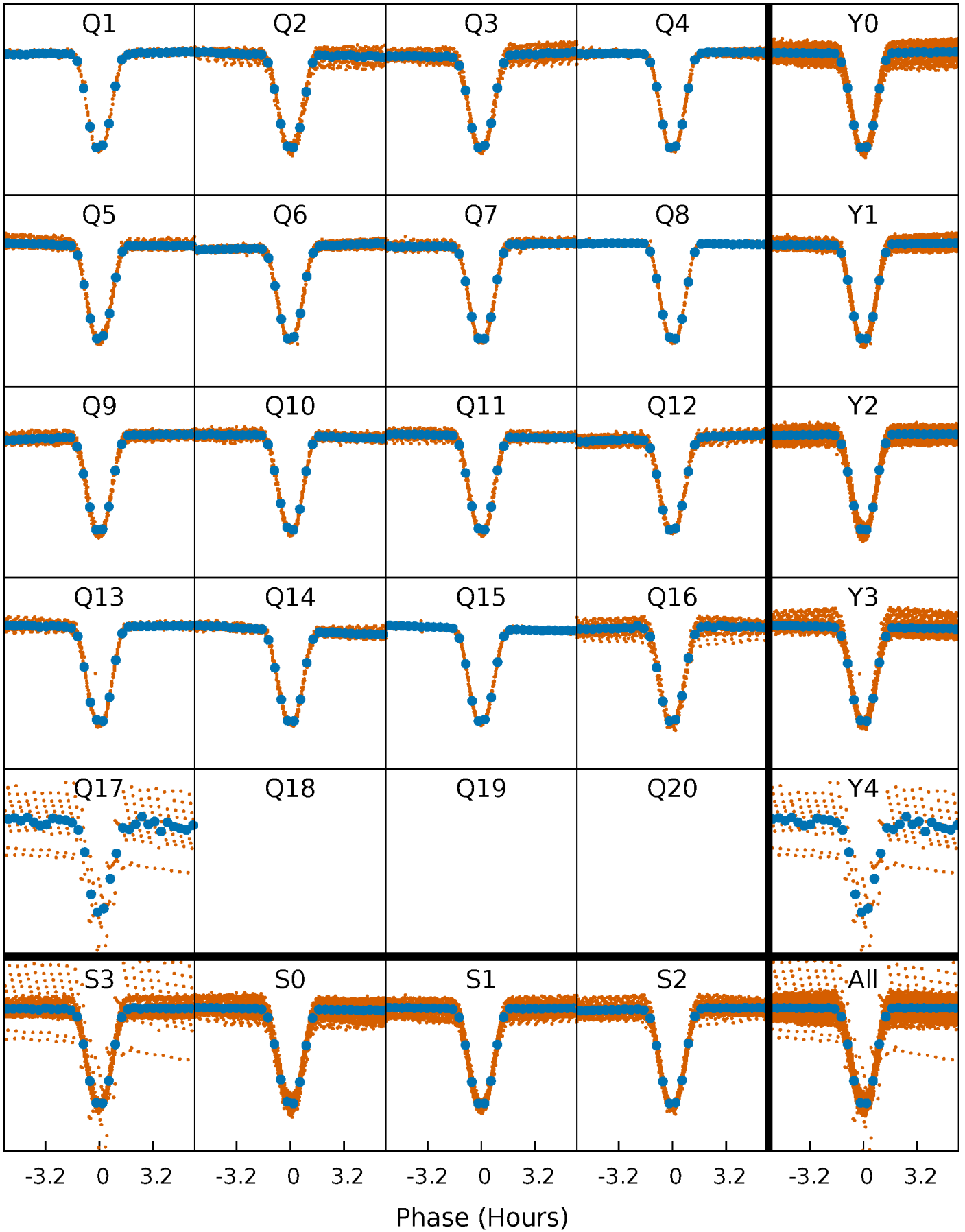


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

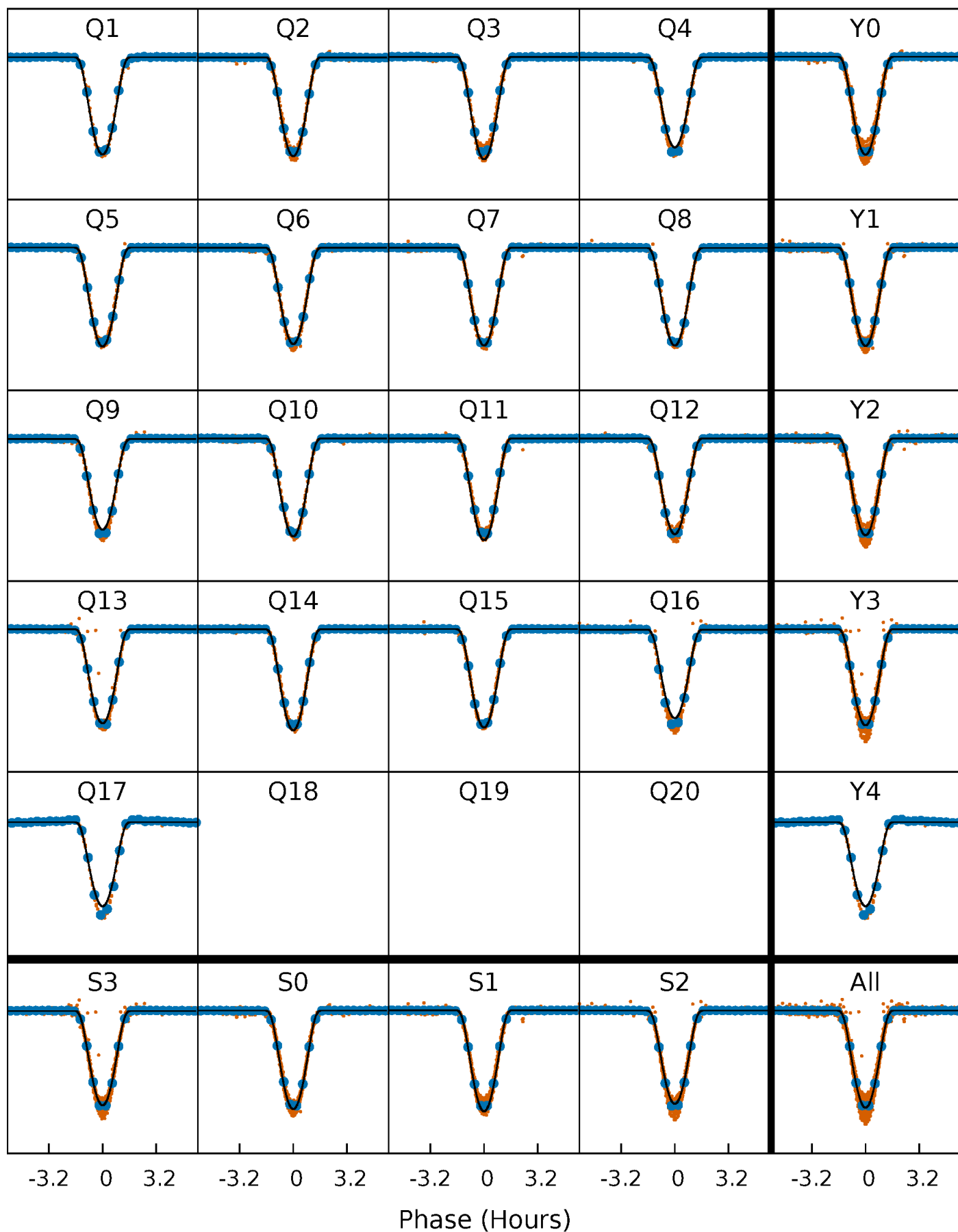
TCE 011200773-01 P= 2.489551 Days  $T_0=132.044175$  (BKJD)





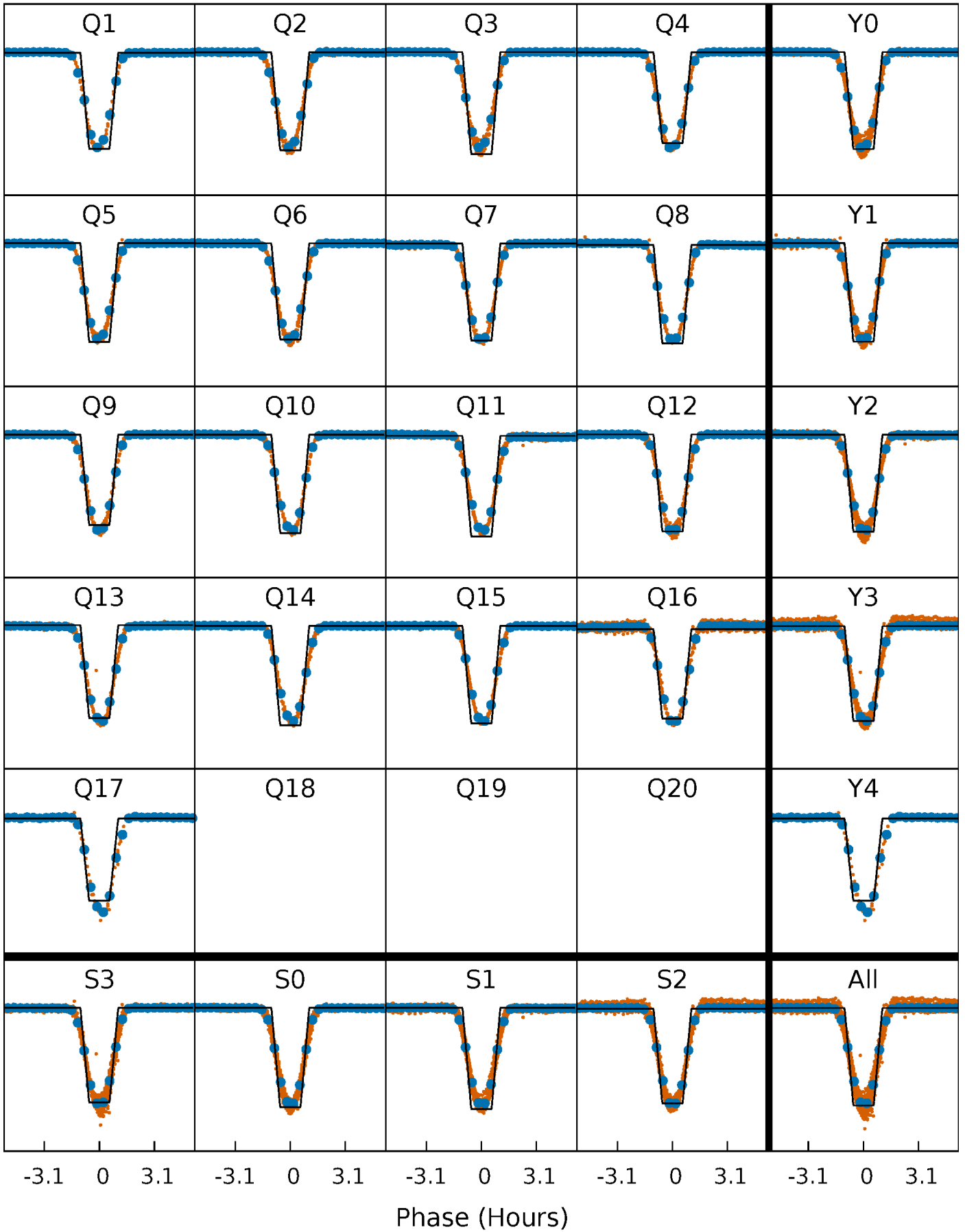
# DV Quarter-Phased Transit Curves

TCE 011200773-01 P= 2.489551 Days  $T_0=132.044175$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

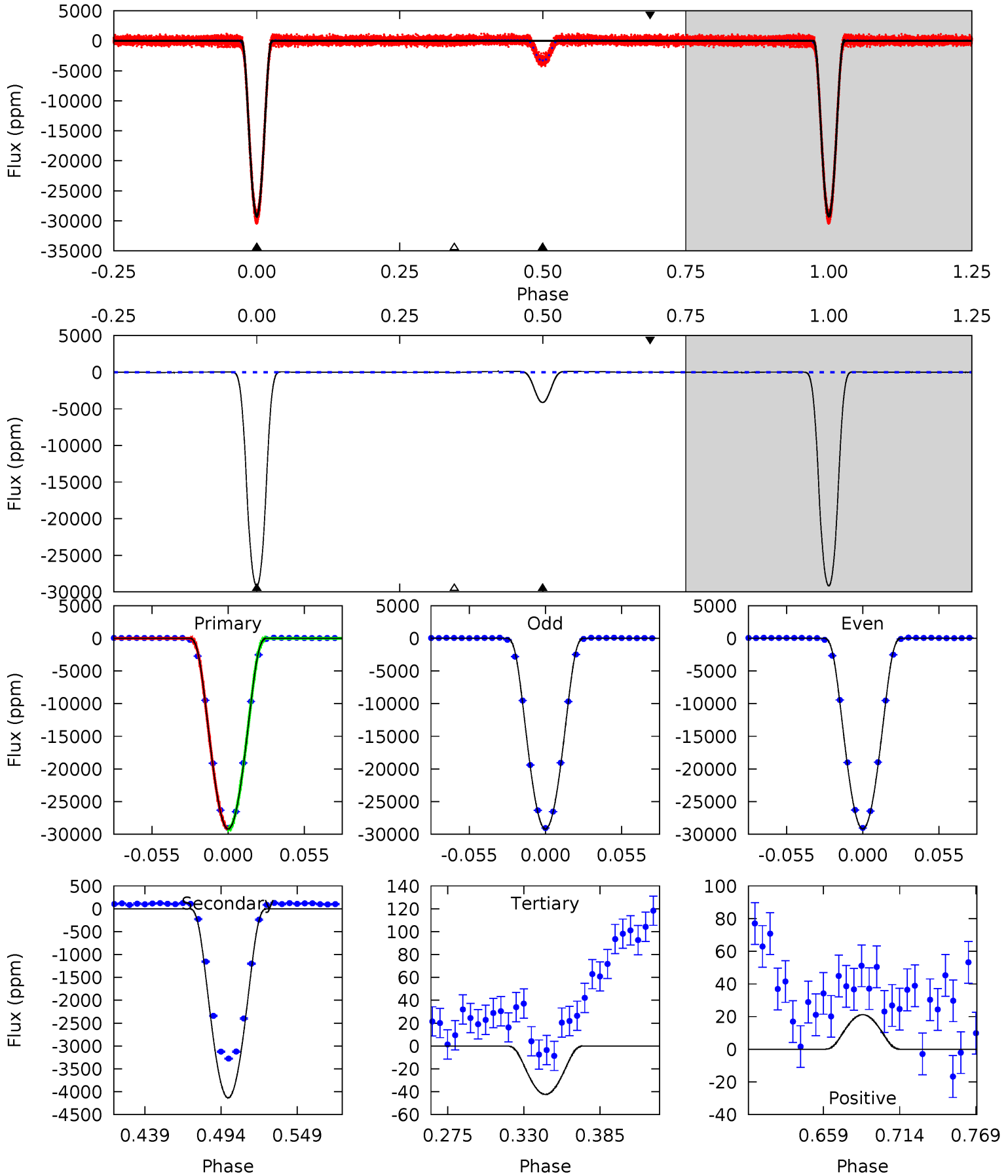
TCE 011200773-01 P= 2.489538 Days  $T_0=132.047134$  (BKJD)



# DV Model-Shift Uniqueness Test

011200773-01, P = 2.489551 Days, E = 129.554624 Days

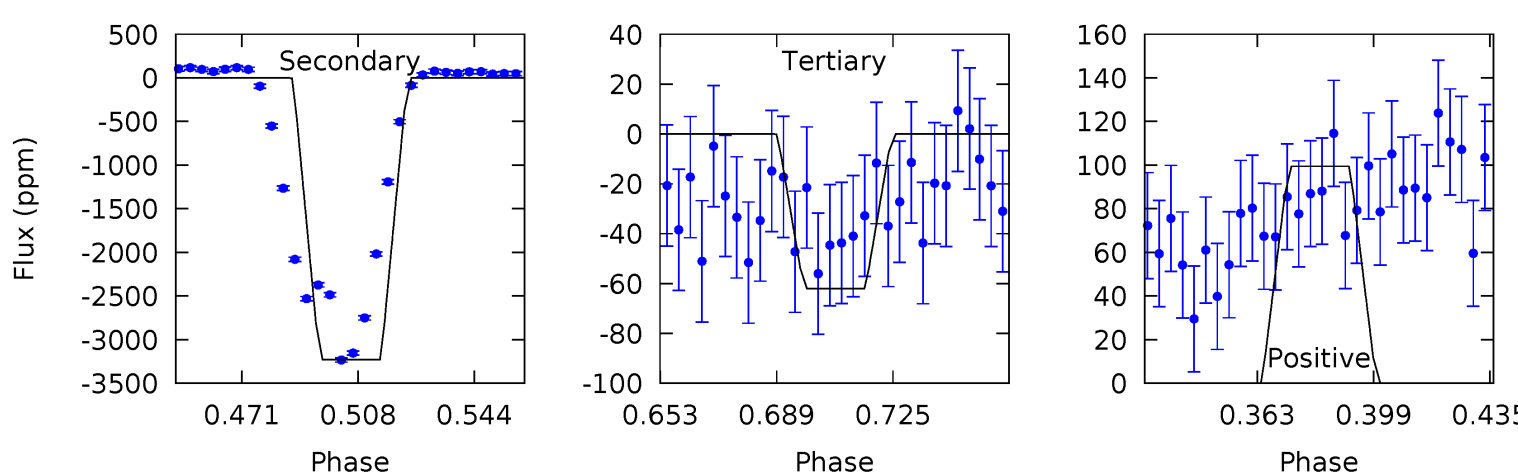
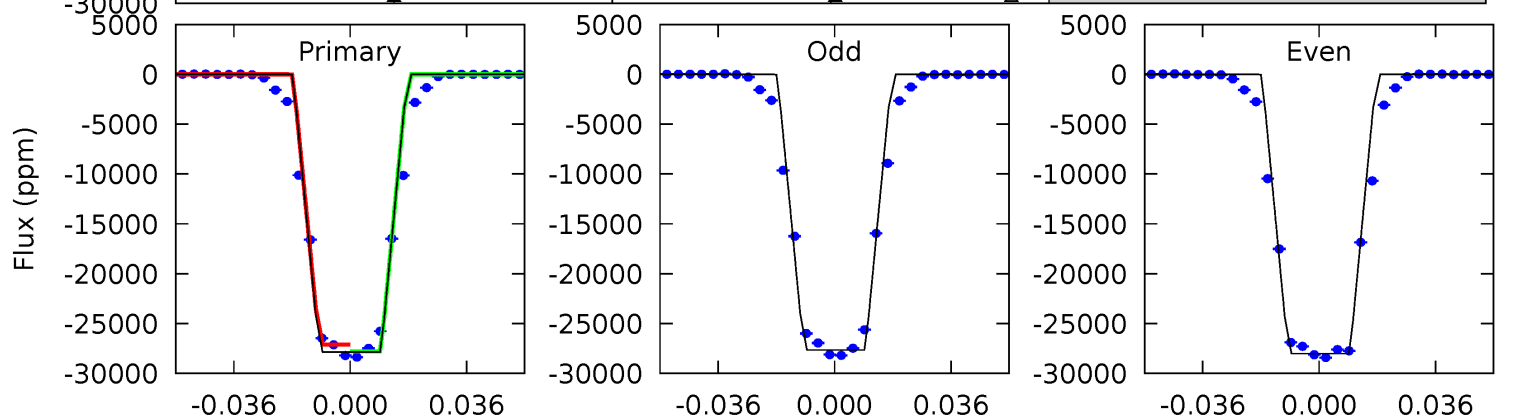
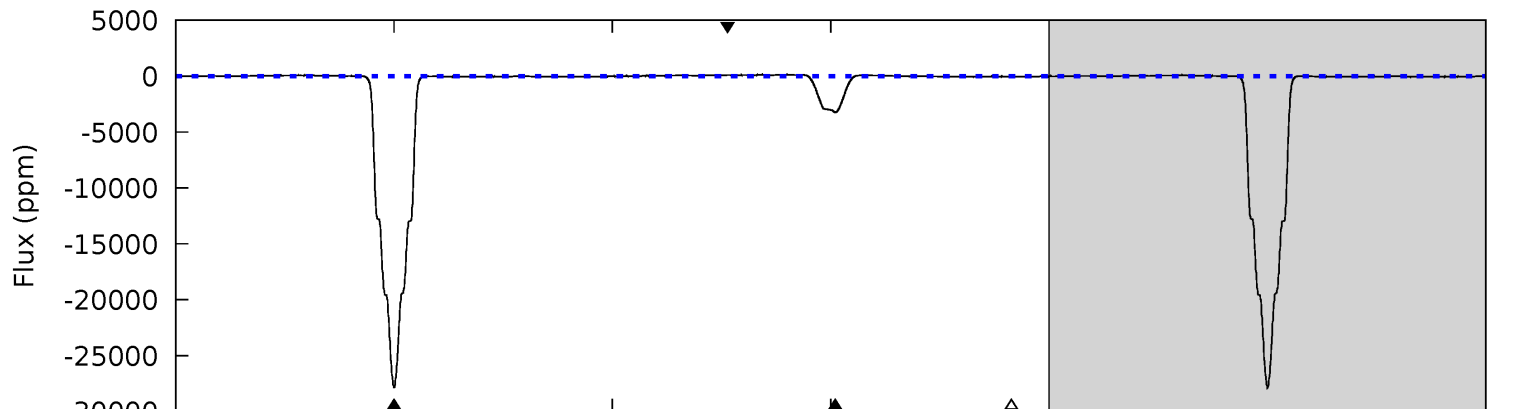
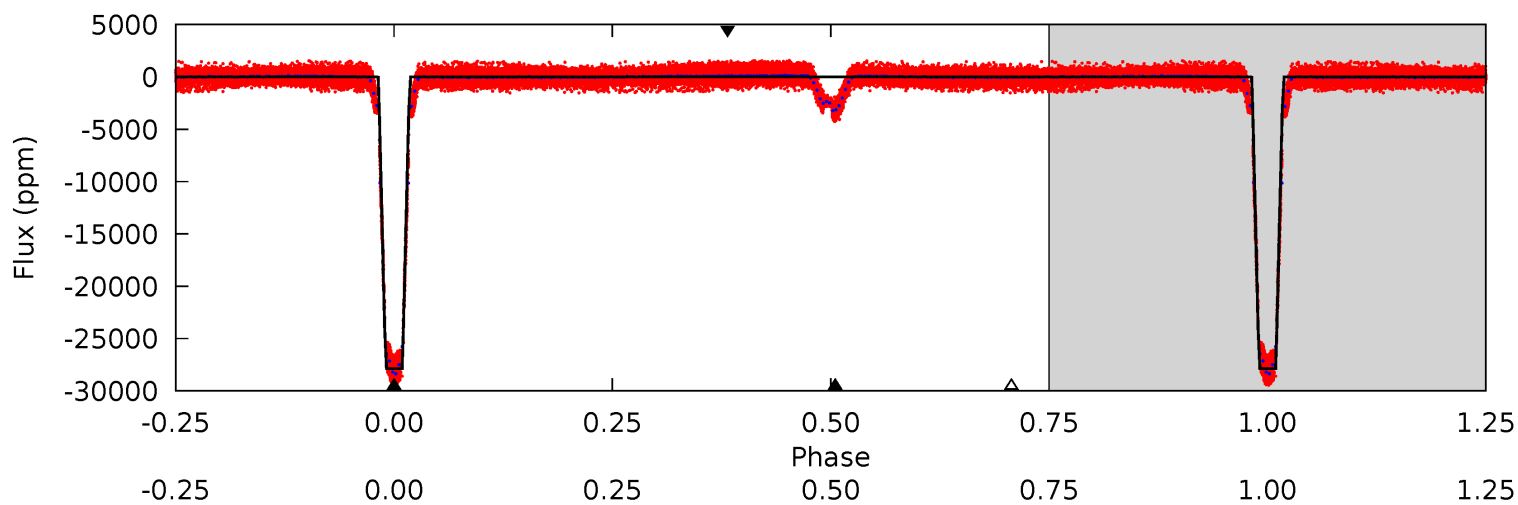
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6047	856.8	8.78	4.38	4.69	1.92	8.00	6039	6043	848.0	852.4	0.83	1.01	0.00	0



# Alt Model-Shift Uniqueness Test

011200773-01, P = 2.489538 Days, E = 129.557596 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
2274	263.5	5.06	8.11	4.77	2.09	3.99	2269	2266	258.5	255.4	14.7	1.01	0.00	0



### Stellar Parameters For KIC 011200773

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6018^{+163}_{-163}$	$4.569^{+0.044}_{-0.176}$	$-0.700^{+0.300}_{-0.300}$	$0.794^{+0.200}_{-0.067}$	$0.853^{+0.080}_{-0.080}$	$2.397^{+0.439}_{-1.128}$
	+3%/-3%	+1%/-4%	+43%/-43%	+25%/-8%	+9%/-9%	+18%/-47%
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 011200773-01 / KOI 7419.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-4135 \pm 5$	$21.08^{+2.82}_{-1.42}$	$1824^{+118}_{-77}$	$3558^{+70}_{-68}$	$5.855^{+0.844}_{-1.180}$
Alt.	$-3230 \pm 12$	$15.31^{+2.08}_{-1.09}$	$1828^{+117}_{-79}$	$3816^{+78}_{-80}$	$8.676^{+1.340}_{-1.766}$

$T_{\text{max}}$  = 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

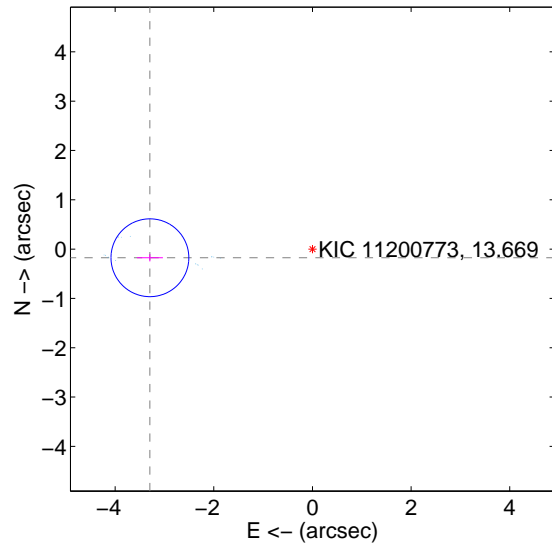
Supplemental centroid analysis for 011200773-01. Kepler magnitude: 13.67. Transit SNR 2560.76

There are 17 quarters with good PRF difference image offsets

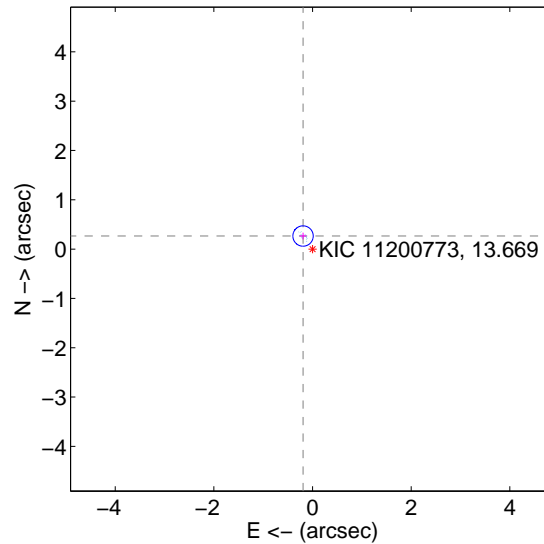
The OOT PRF centroid is offset from the target star catalog position by about 4.07 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.300 \pm 0.263$	12.55	$3.295 \pm 0.263$	$-0.175 \pm 0.074$
PRF-fit source offset from KIC position	$0.327 \pm 0.069$	4.76	$0.192 \pm 0.068$	$0.265 \pm 0.068$
photometric centroid source offset	$1.49 \pm 0.00$	478.84	$-1.45 \pm 0.00$	$0.34 \pm 0.00$

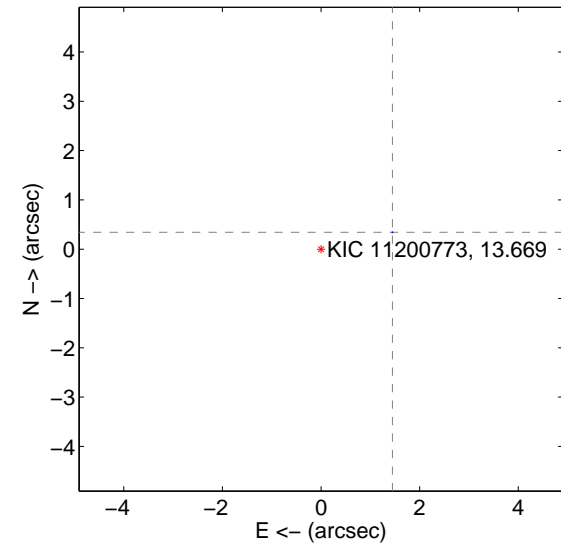
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

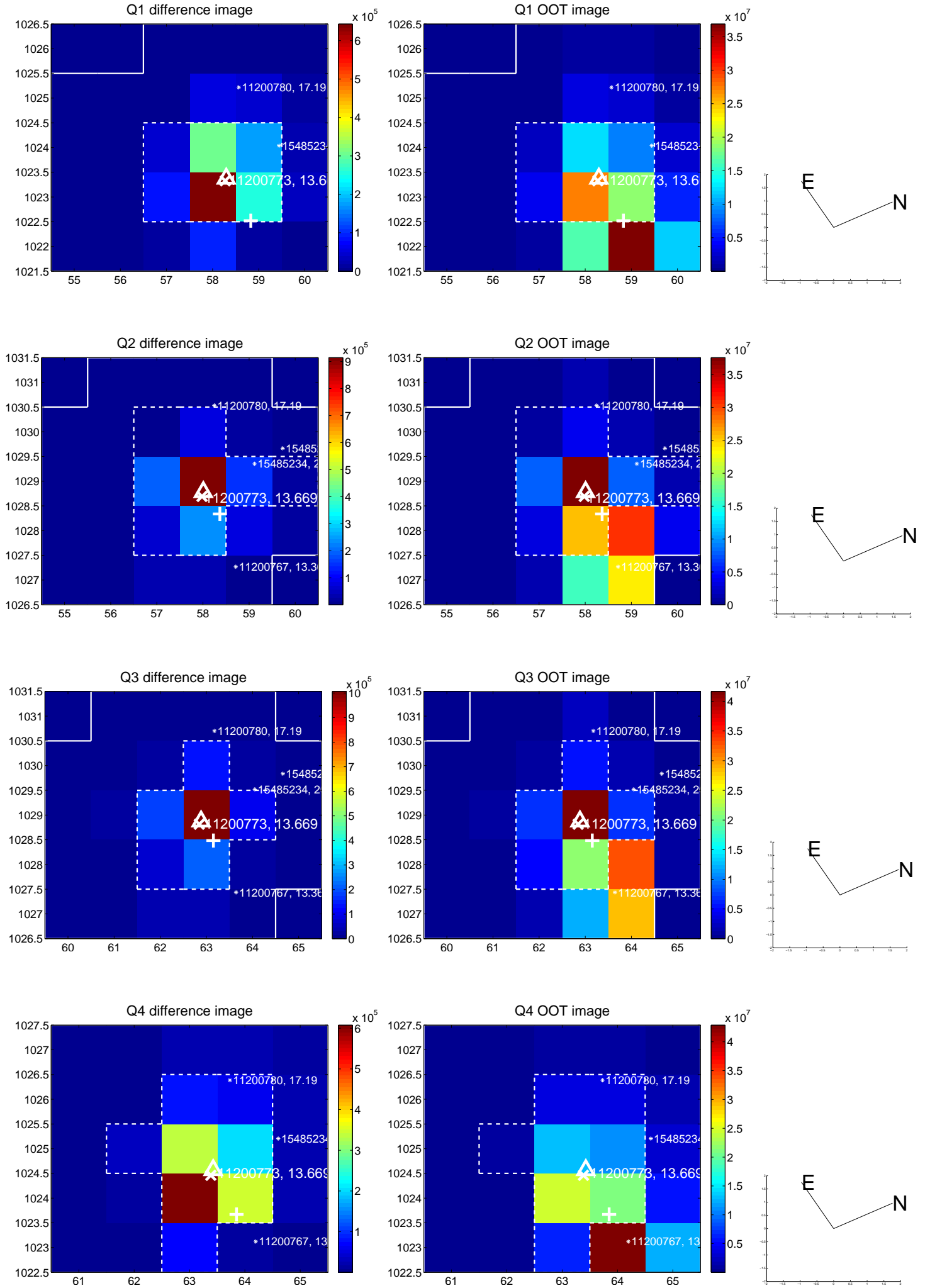


offset from photometric centroids

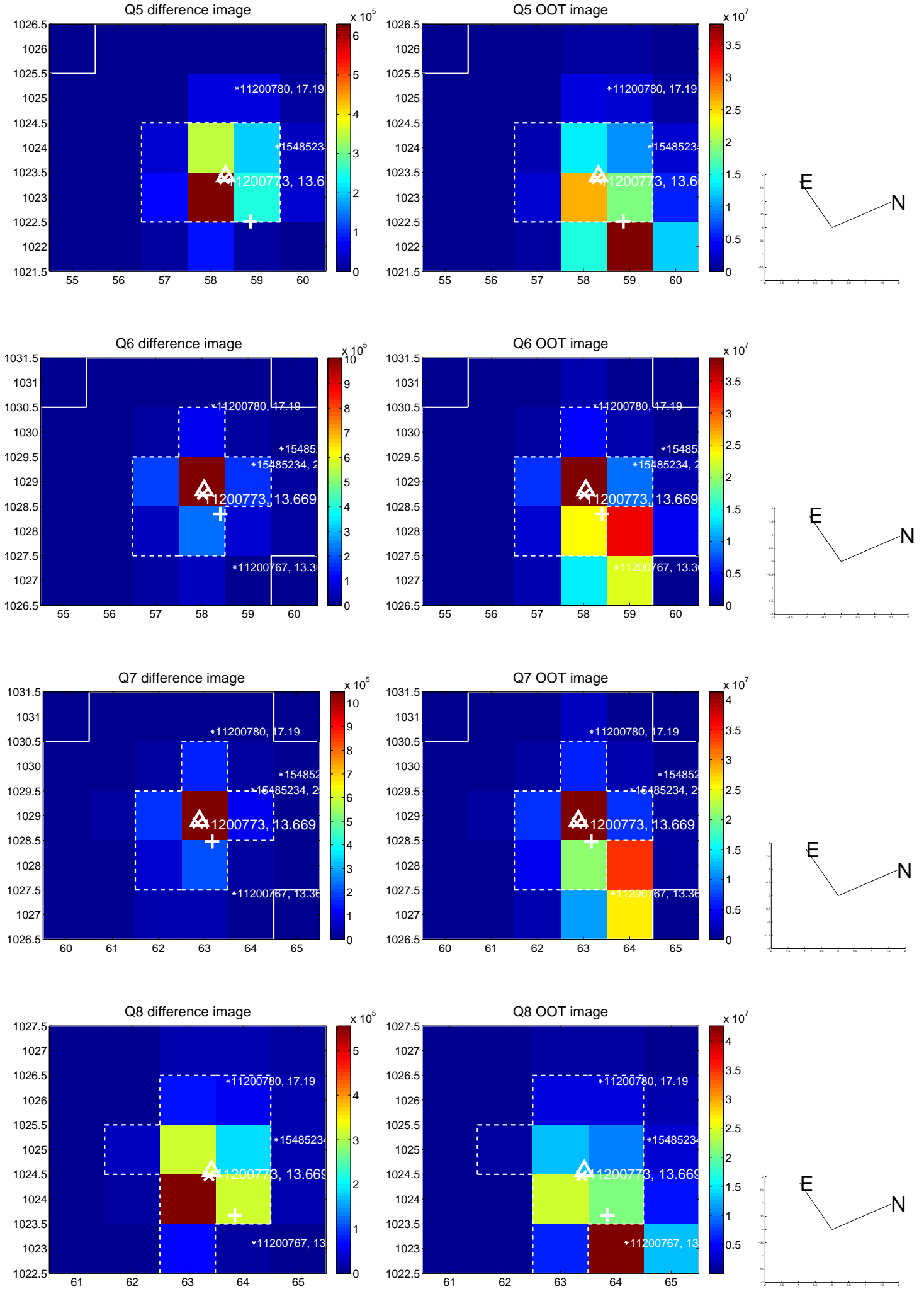


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

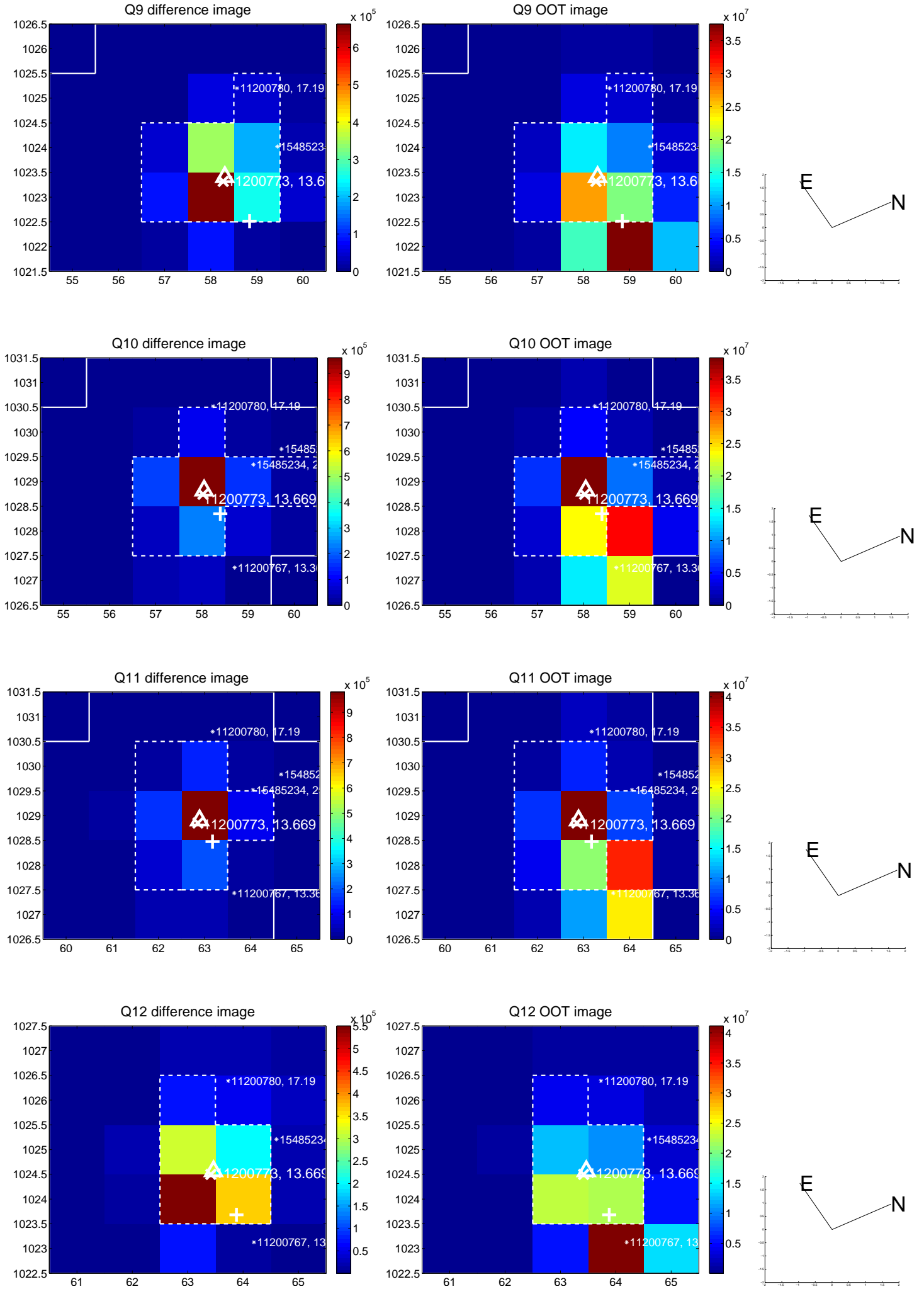


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



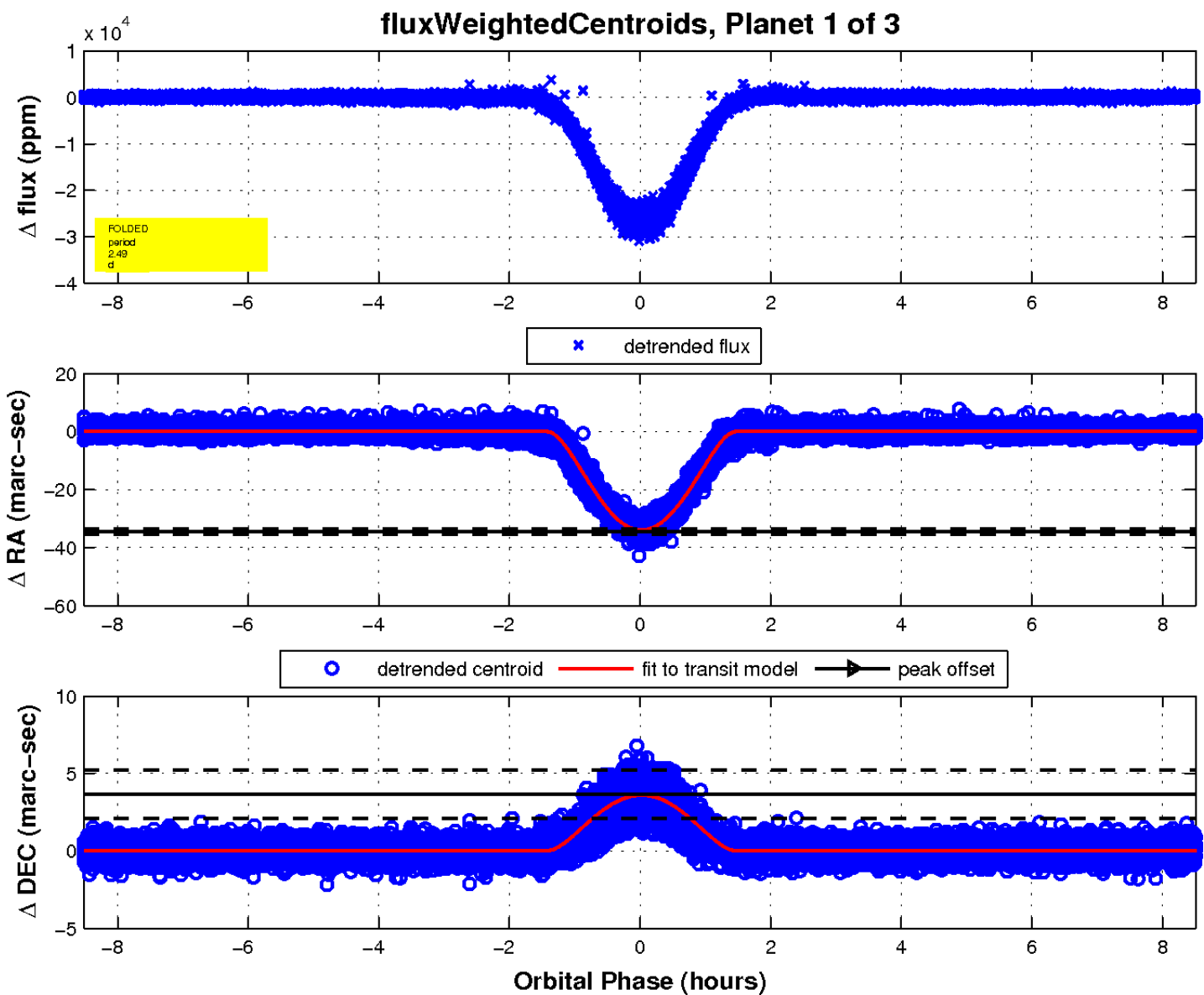
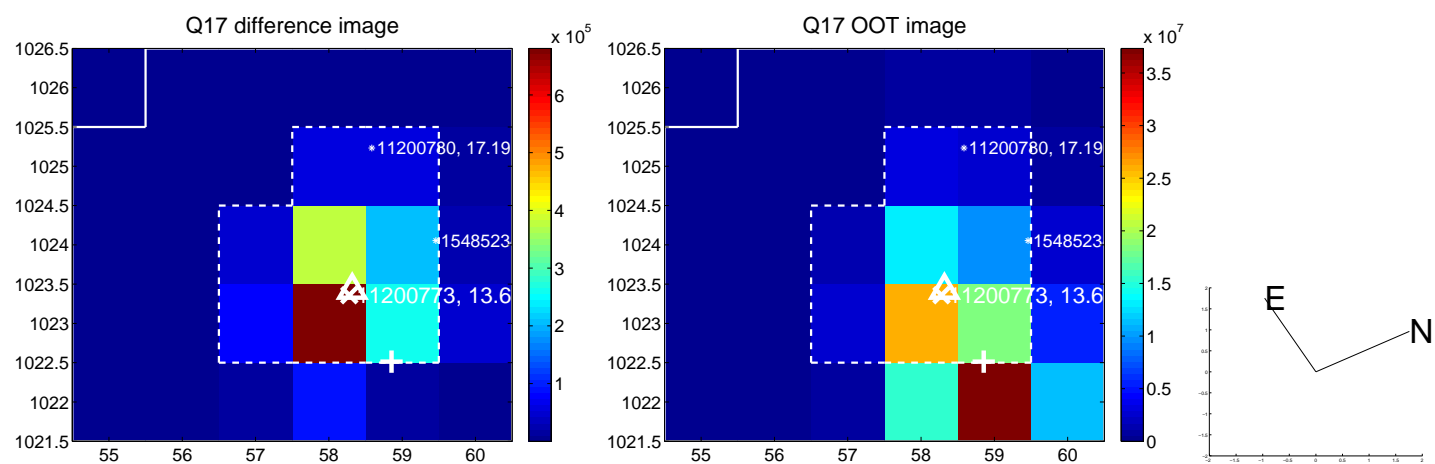


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



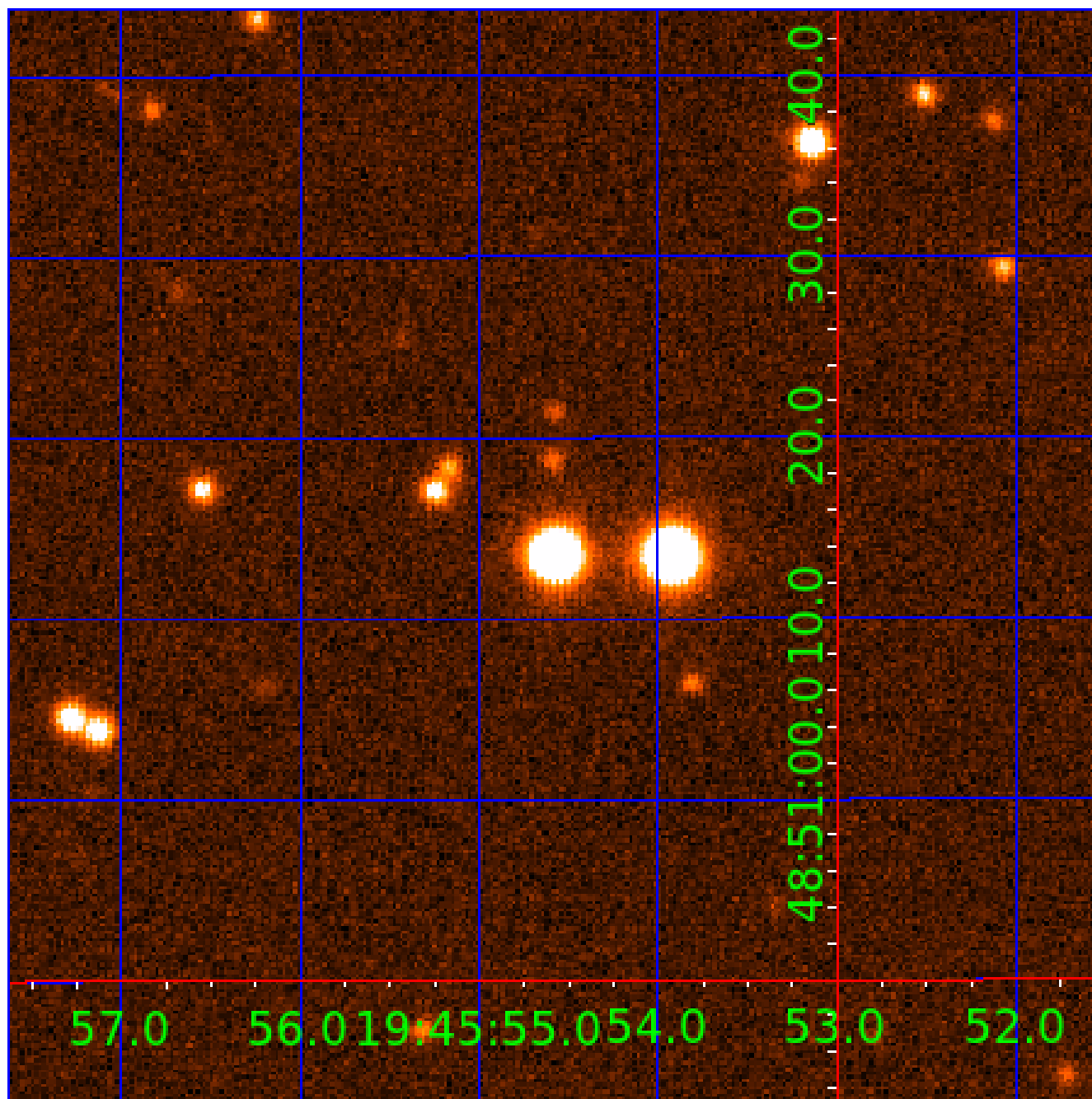


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 011200773

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011200773-01	OBS	7419.01	2.489551	132.044175	29175.6	2.839	3564.7	2560.8	0.79	6018	20.55	637.41
011200773-02	OBS	No	1.244765	132.049499	3169.1	2.687	446.9	392.8	0.79	6018	5.42	1606.20
011200773-03	OBS	No	440.892011	222.819135	637.7	13.659	8.3	7.1	0.79	6018	2.19	0.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011200773-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_KIC_POS
011200773-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—CENT_KIC_POS—EPHEM_MATCH
011200773-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

**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 011200773-02

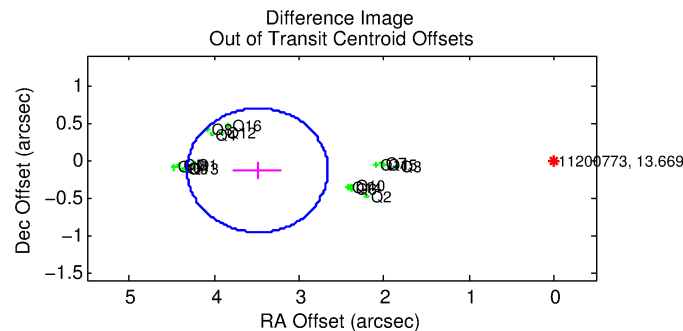
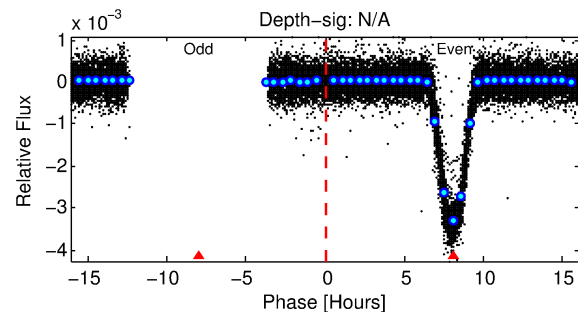
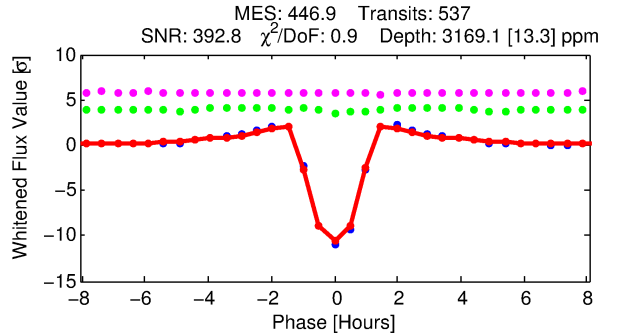
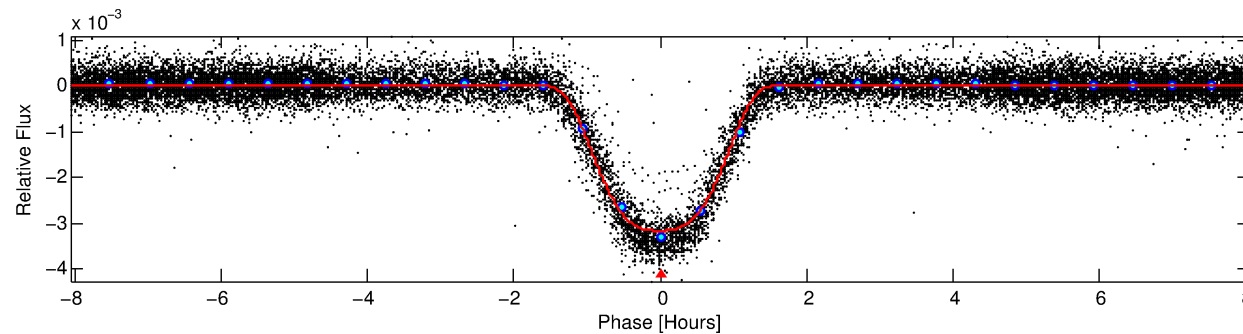
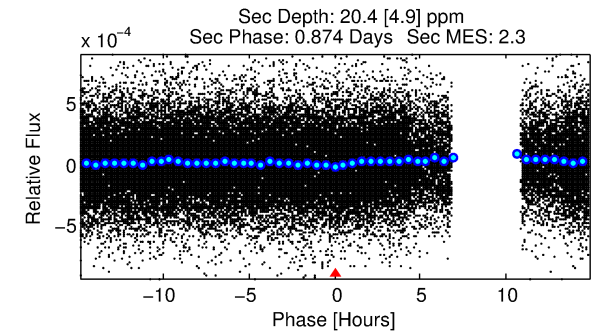
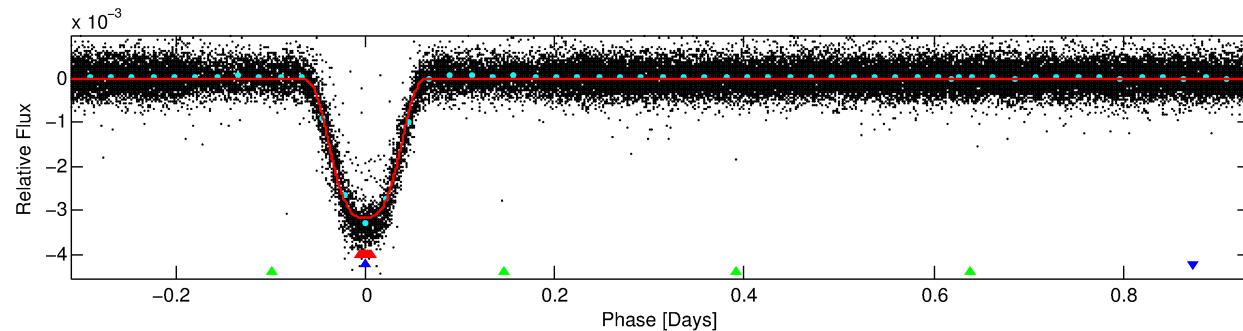
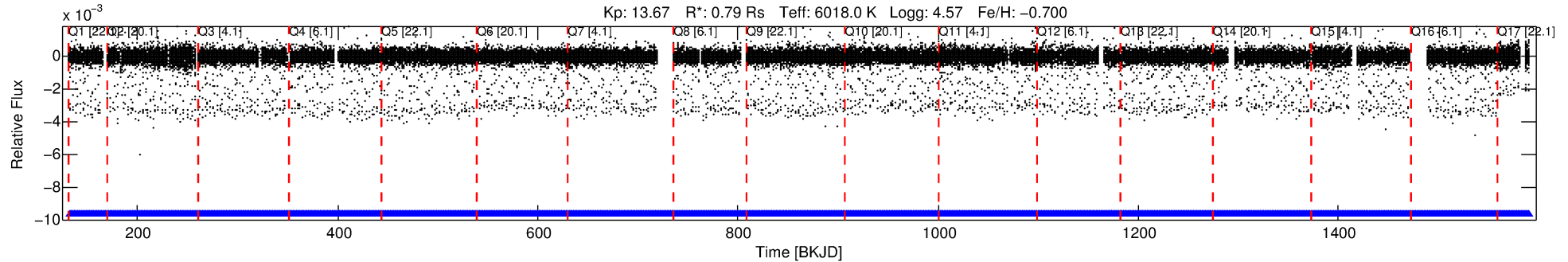
TCE (1)	KIC	Parent (2)	Parent KIC	P <sub>1</sub> :P <sub>2</sub>	Dist ( $\mu$ )	$\Delta$ Row	$\Delta$ Col	m <sub>2</sub>	m <sub>1</sub>	D <sub>2</sub> /D <sub>1</sub>	Mechanism	Flag	$\sigma_P$	$\sigma_T$
011200773-02	11200773	3667.01	11200767	1:2	6.3	2	-1	13.37	13.67	1.26	Direct-PRF	0	1.41	0.35

**Notes:** P<sub>1</sub>:P<sub>2</sub> is the period ratio. Dist is the distance in arcseconds.  $\Delta$ Row and  $\Delta$ Col are the number of pixels apart in row and column. m<sub>2</sub> and m<sub>1</sub> are the magnitudes of the parent and child. D<sub>2</sub>/D<sub>1</sub> is the parent's transit depth divided by the child's.  $\sigma_P$  and  $\sigma_T$  are the significance of the match in period and epoch. For a match to be considered significant  $\sigma_P < 5.0$  and  $\sigma_T < 5.0$ . Matches which have  $\sigma_P$  and  $\sigma_T$  very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

KIC: 11200773 Candidate: 2 of 3 Period: 1.245 d  
KOI: K07419 Corr: No Ephemeris Match

Kp: 13.67 R\*: 0.79 Rs Teff: 6018.0 K Logg: 4.57 Fe/H: -0.700



## DV Fit Results:

Period = 1.24477 [0.00000] d  
Epoch = 132.0495 [0.0001] BKJD  
Rp/R\* = 0.0626 [0.0002]  
a/R\* = 2.09 [0.01]  
b = 0.93 [0.00]  
Seff = 1606.20 [539.76]  
Teq = 1614 [136] K  
Rp = 5.42 [1.37] Re  
a = 0.0215 [0.0046] AU  
Ag = 0.18 [0.07] [-11.70σ]  
Teffp = 1617 [107] K [0.02σ]

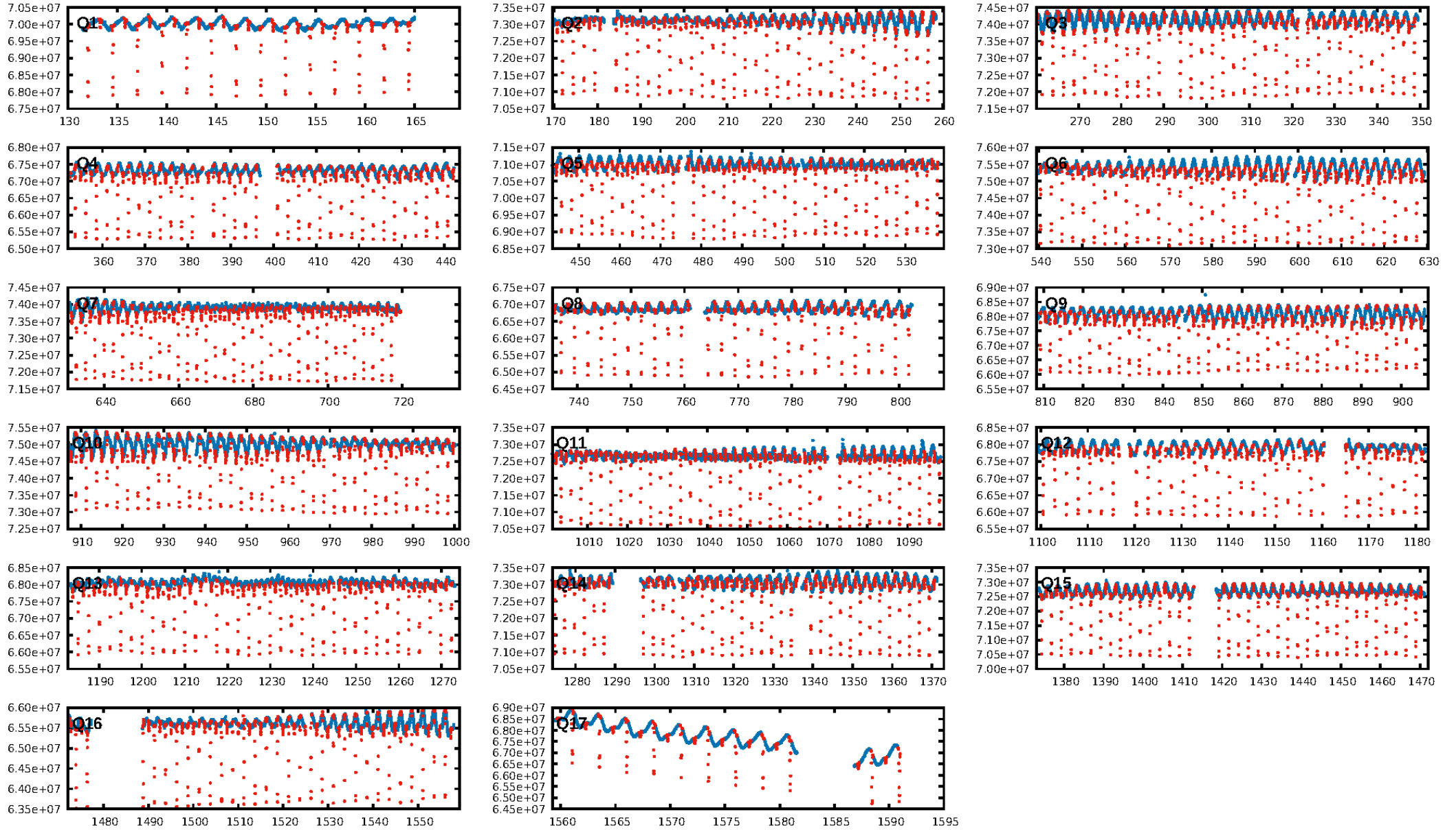
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [7.64σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [513/513]  
GhostDiagnostic-chr: 4.511  
Centroid-sig: 0.0%  
Centroid-so: 2.516 arcsec [131.87σ]  
OotOffset-rm: 3.491 arcsec [12.64σ]  
KicOffset-rm: 0.441 arcsec [6.06σ]  
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 05:48:09 Z

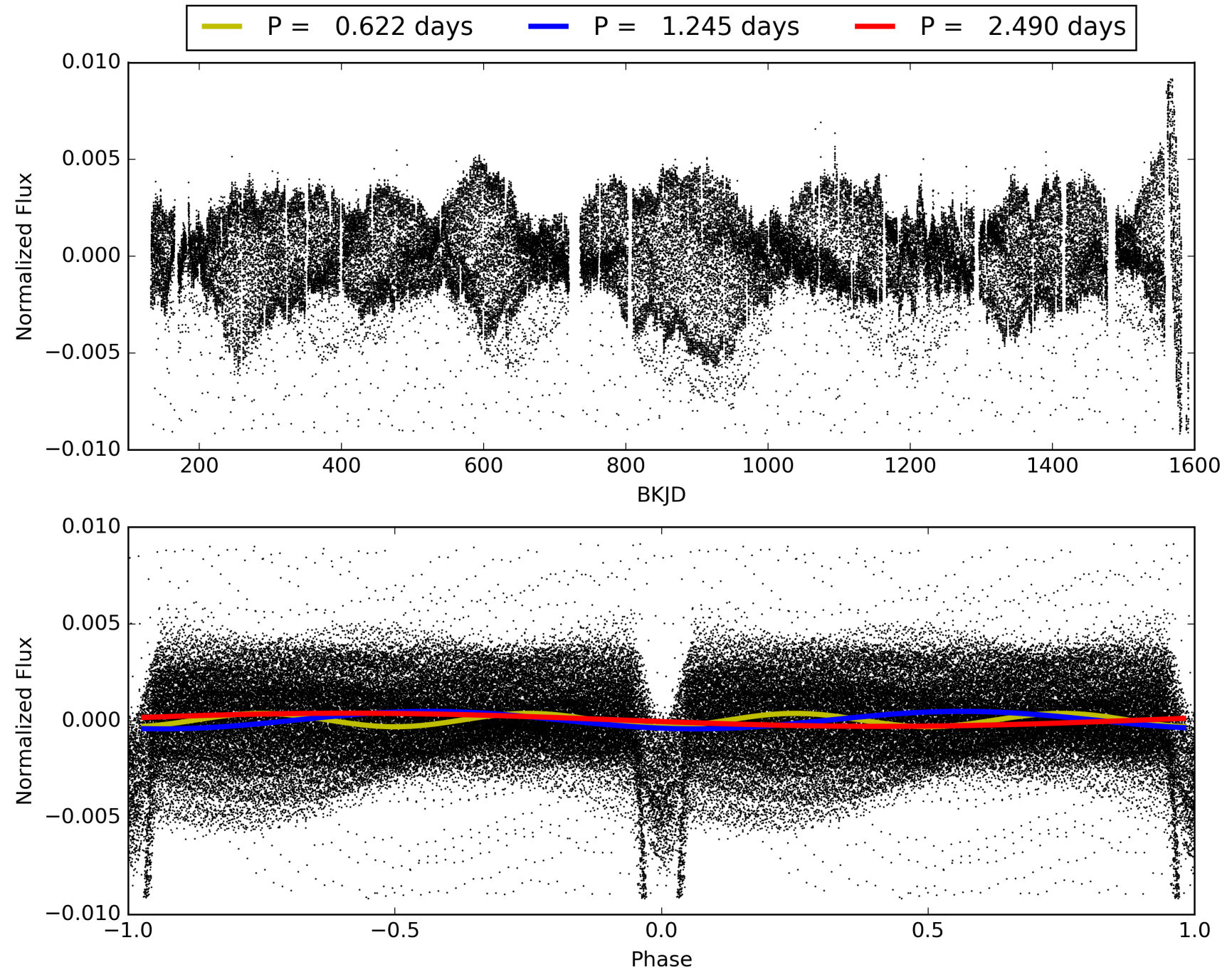
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 011200773-02, PDC Light Curves





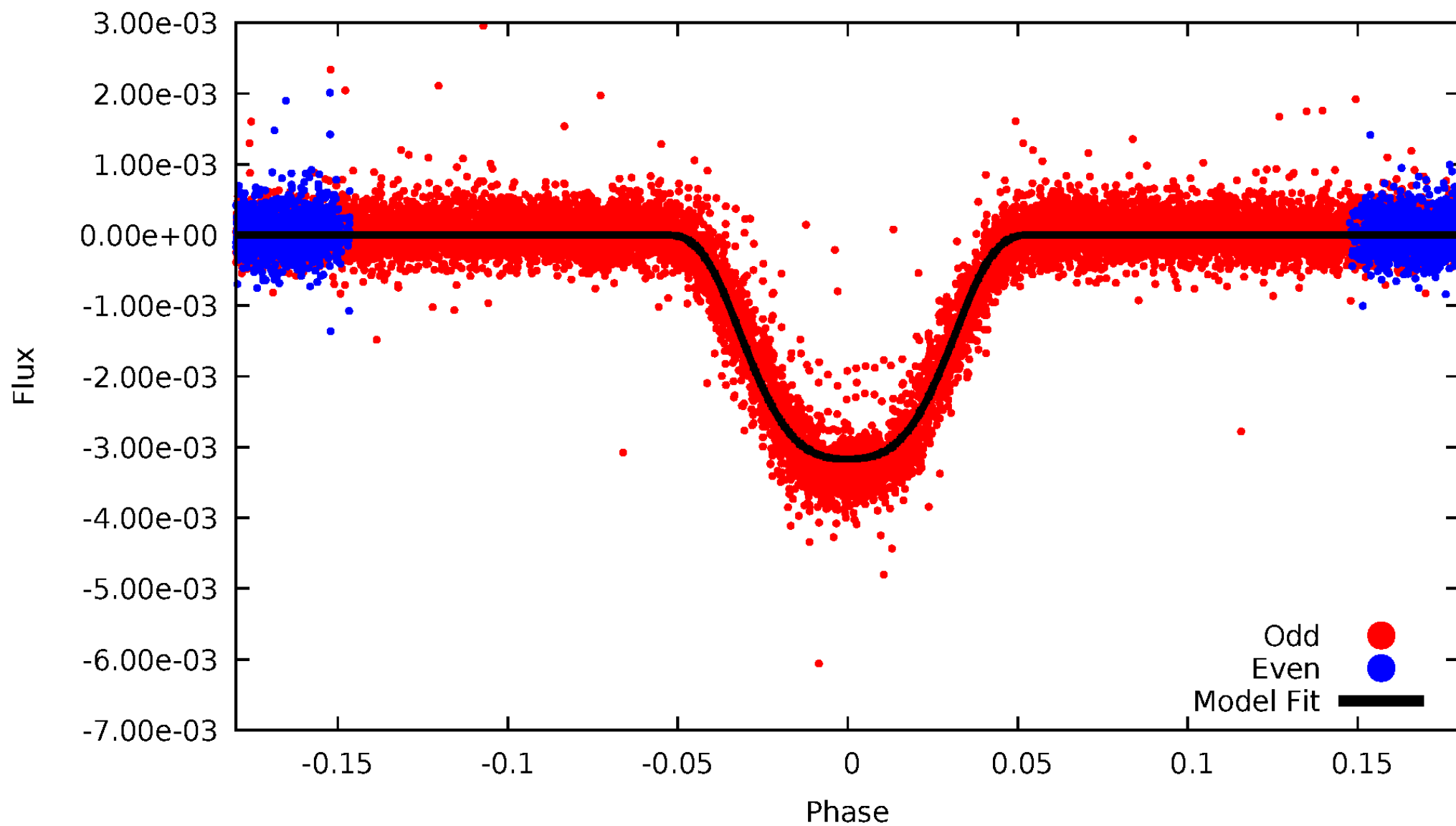
# TCE 011200773-02





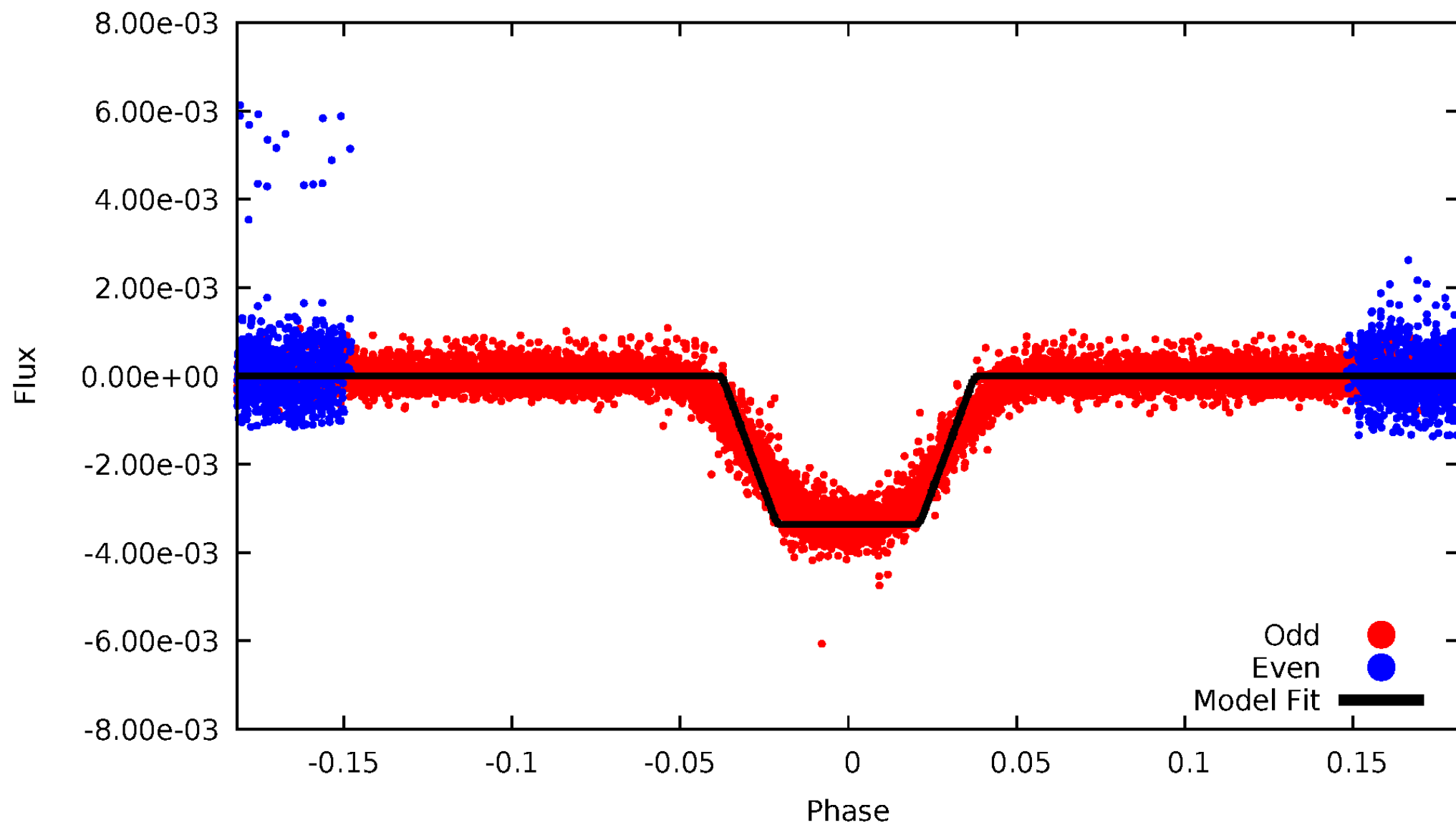
# DV Odd/Even

TCE 011200773-02



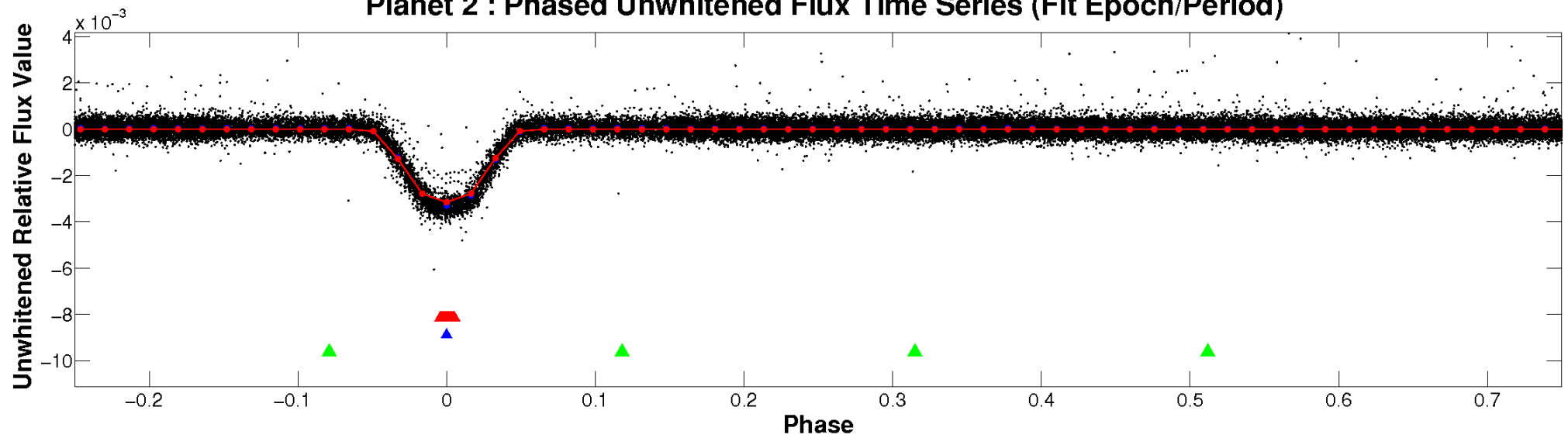
# ALT Odd/Even

TCE 011200773-02

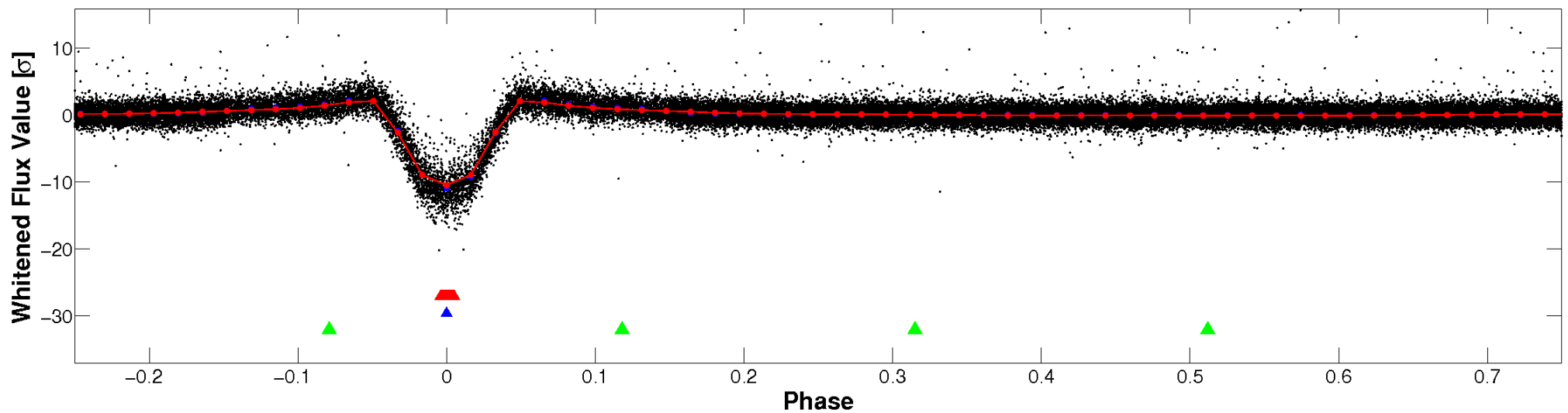


# Non-Whitened Vs. Whitened Light Curve

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

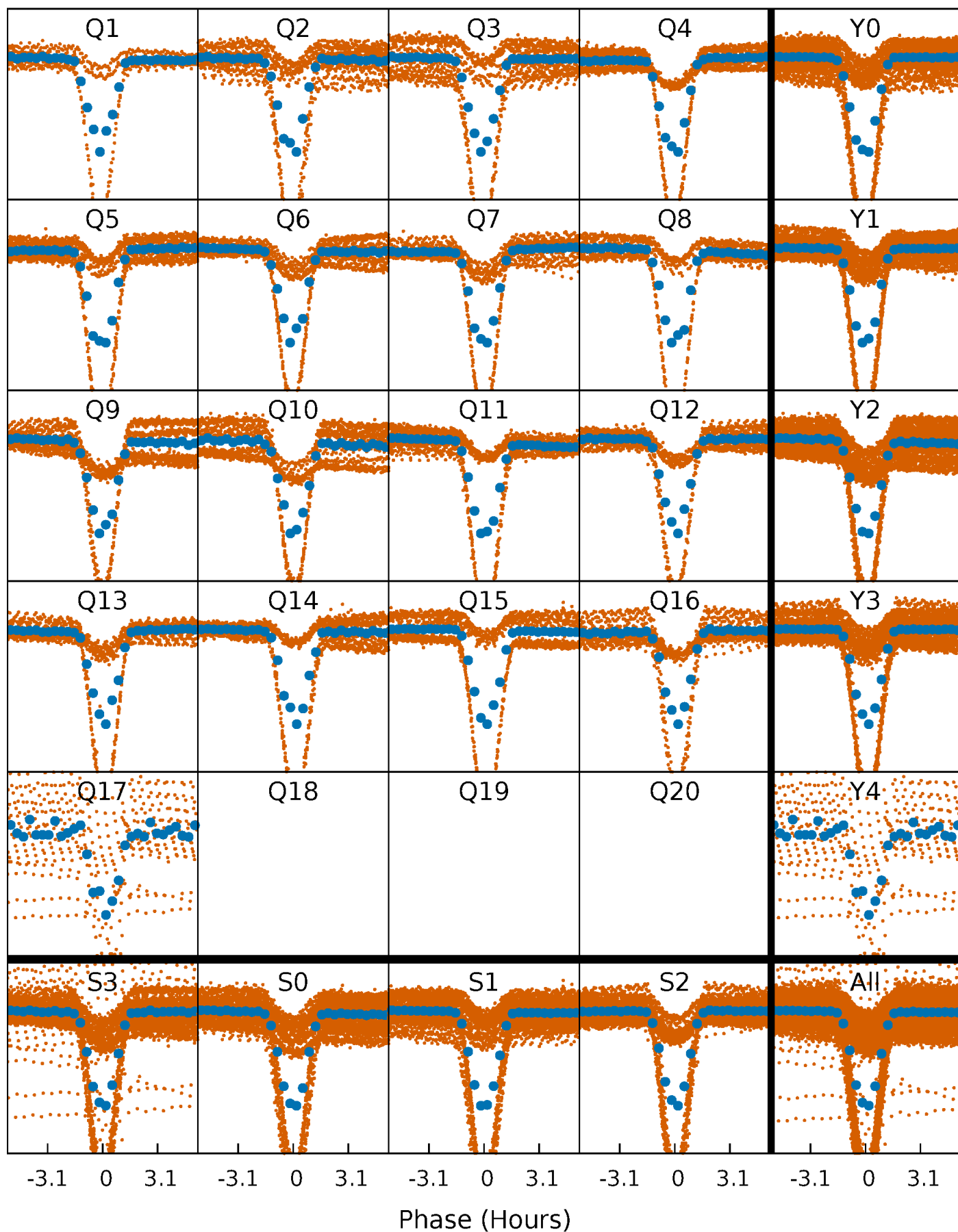


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



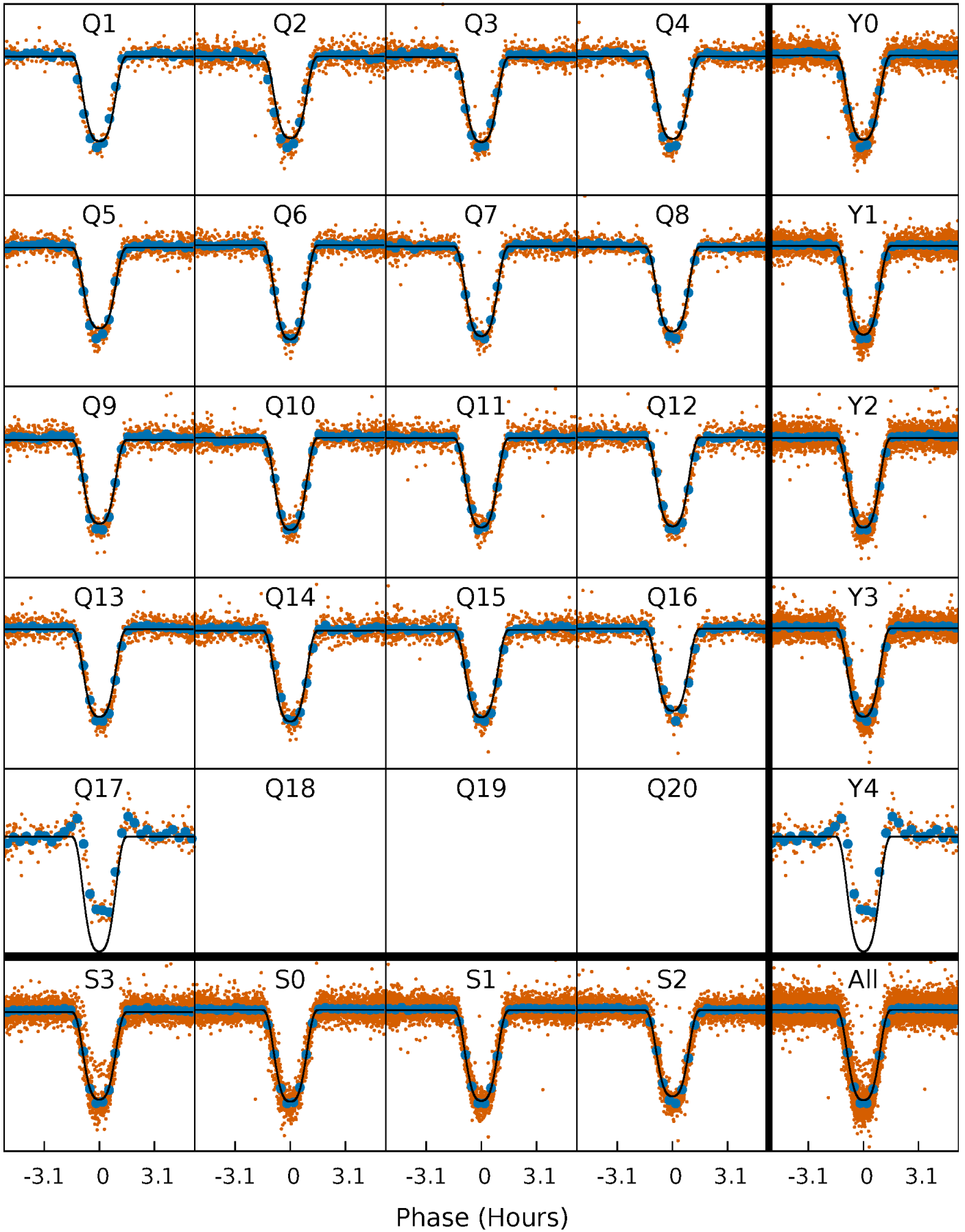
# PDC Quarter-Phased Transit Curves

TCE 011200773-02 P= 1.244765 Days  $T_0=132.049499$  (BKJD)



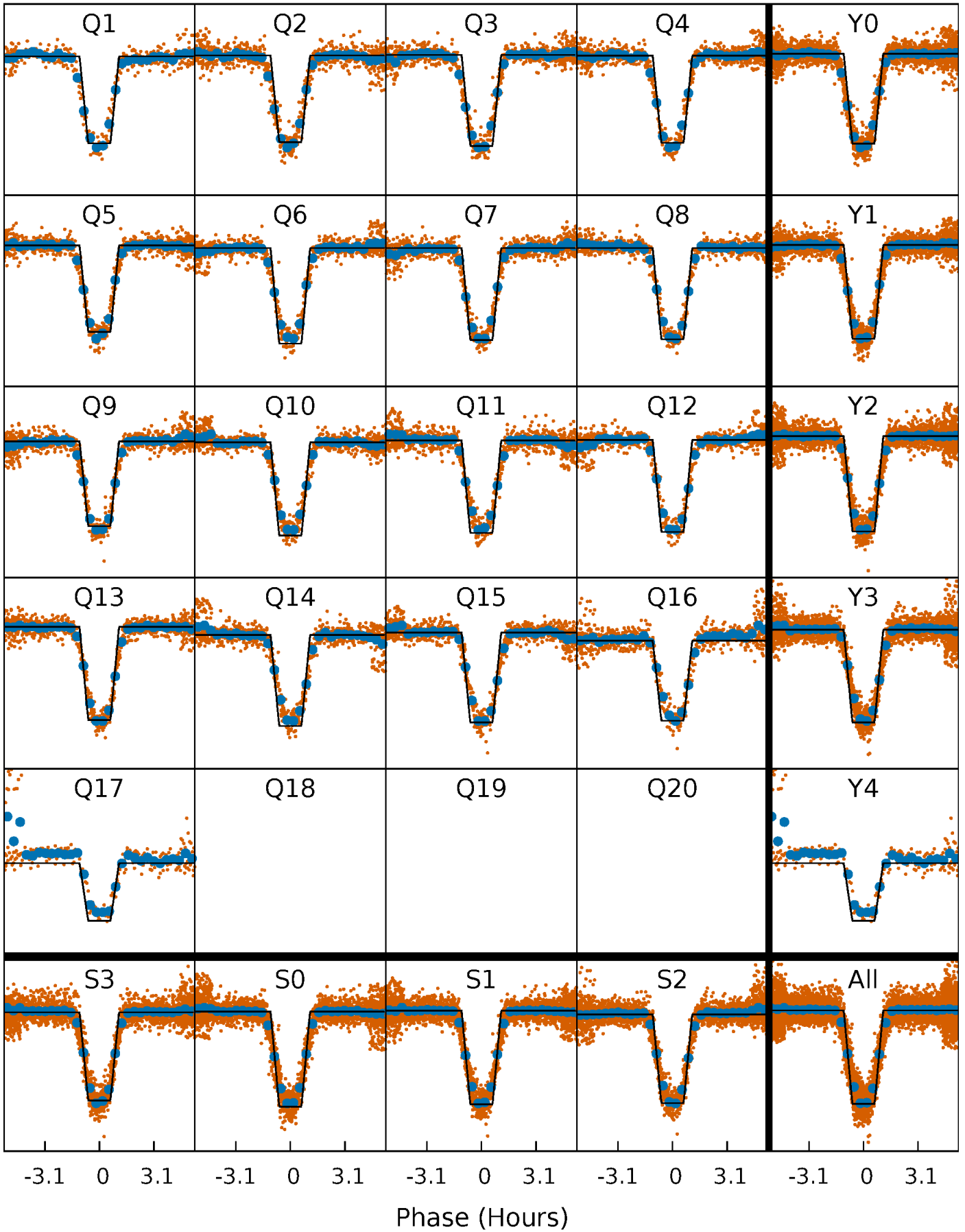
# DV Quarter-Phased Transit Curves

TCE 011200773-02   P= 1.244765 Days    $T_0=132.049499$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

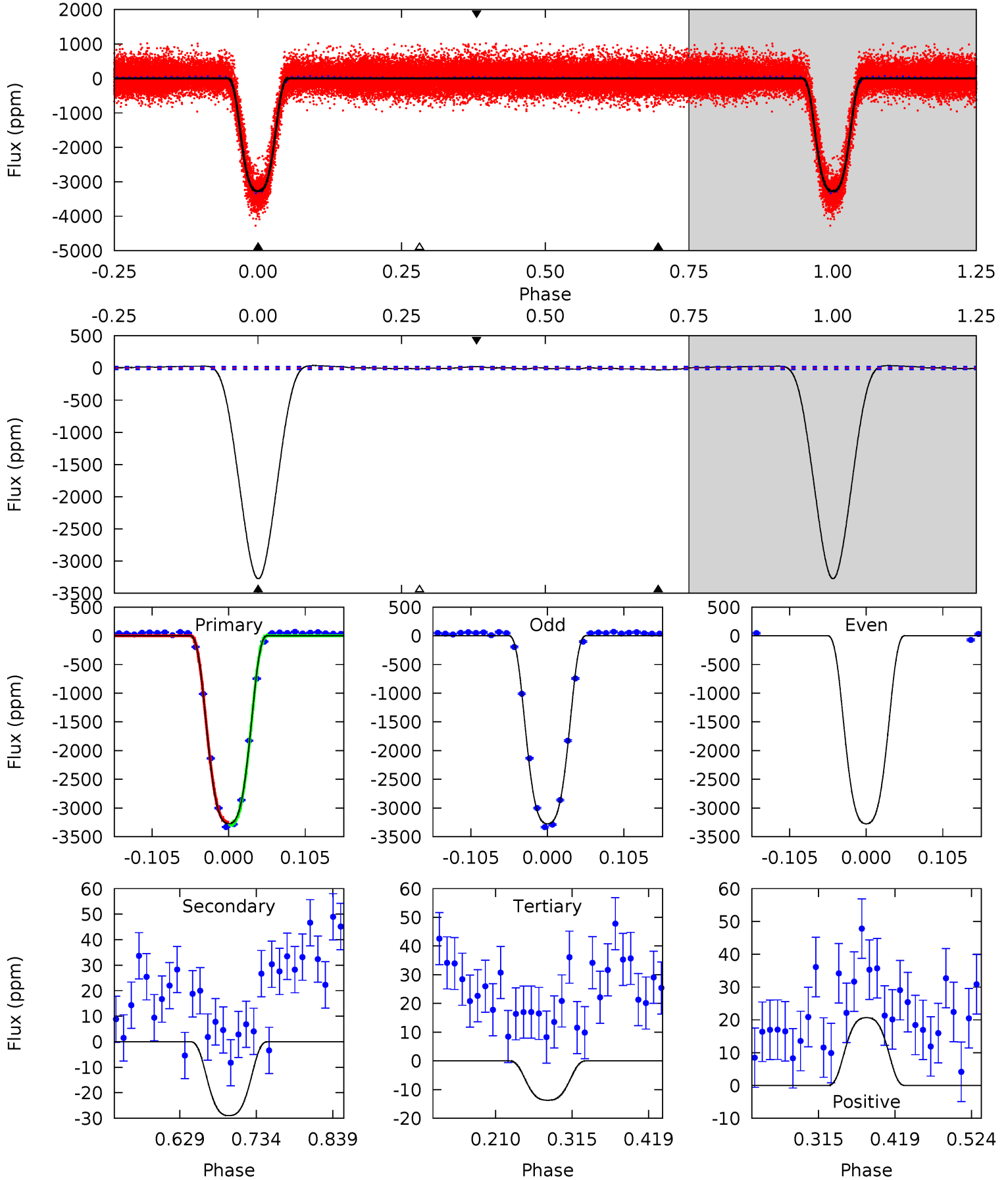
TCE 011200773-02     $P = 1.244767$  Days     $T_0 = 132.048586$  (BKJD)



# DV Model-Shift Uniqueness Test

011200773-02, P = 1.244765 Days, E = 130.804734 Days

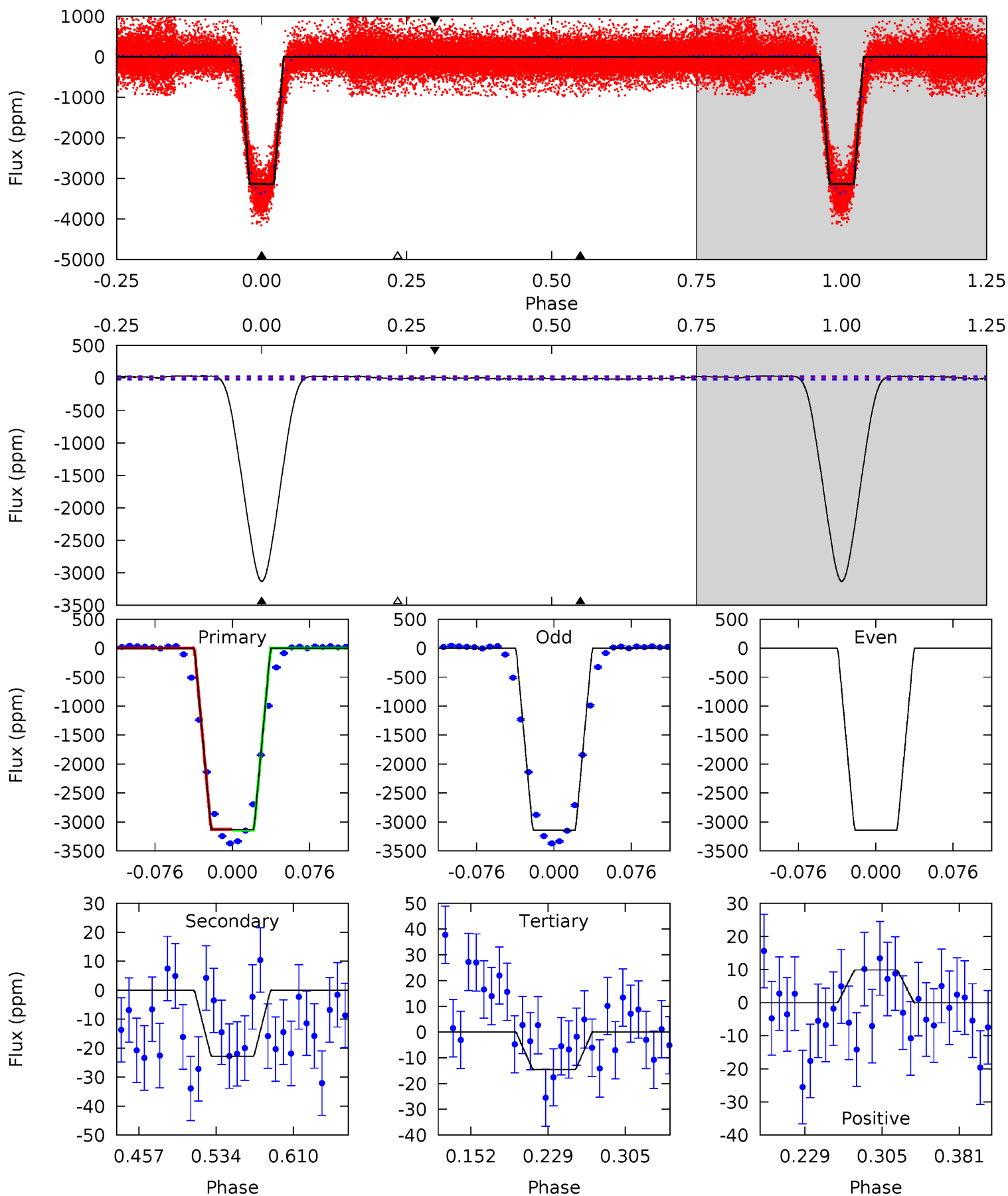
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
755.5	6.68	3.17	4.77	4.55	1.62	2.72	752.4	750.8	3.52	1.91	0	0.99	0.01	0



# Alt Model-Shift Uniqueness Test

011200773-02, P = 1.244767 Days, E = 130.803819 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
594.7	4.33	2.76	1.87	4.62	1.77	2.54	592.0	592.9	1.56	2.45	0	1.00	0.01	1.76





### Stellar Parameters For KIC 011200773

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6018^{+163}_{-163}$	$4.569^{+0.044}_{-0.176}$	$-0.700^{+0.300}_{-0.300}$	$0.794^{+0.200}_{-0.067}$	$0.853^{+0.080}_{-0.080}$	$2.397^{+0.439}_{-1.128}$
	+3%/-3%	+1%/-4%	+43%/-43%	+25%/-8%	+9%/-9%	+18%/-47%
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 011200773-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-29 \pm 4$	$5.51^{+0.76}_{-0.33}$	$2298^{+136}_{-98}$	$-2250^{+334}_{-191}$	$0.228^{+0.055}_{-0.050}$
Alt.	$-23 \pm 5$	$5.11^{+0.72}_{-0.30}$	$2301^{+146}_{-102}$	$-2324^{+286}_{-186}$	$0.208^{+0.061}_{-0.060}$

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

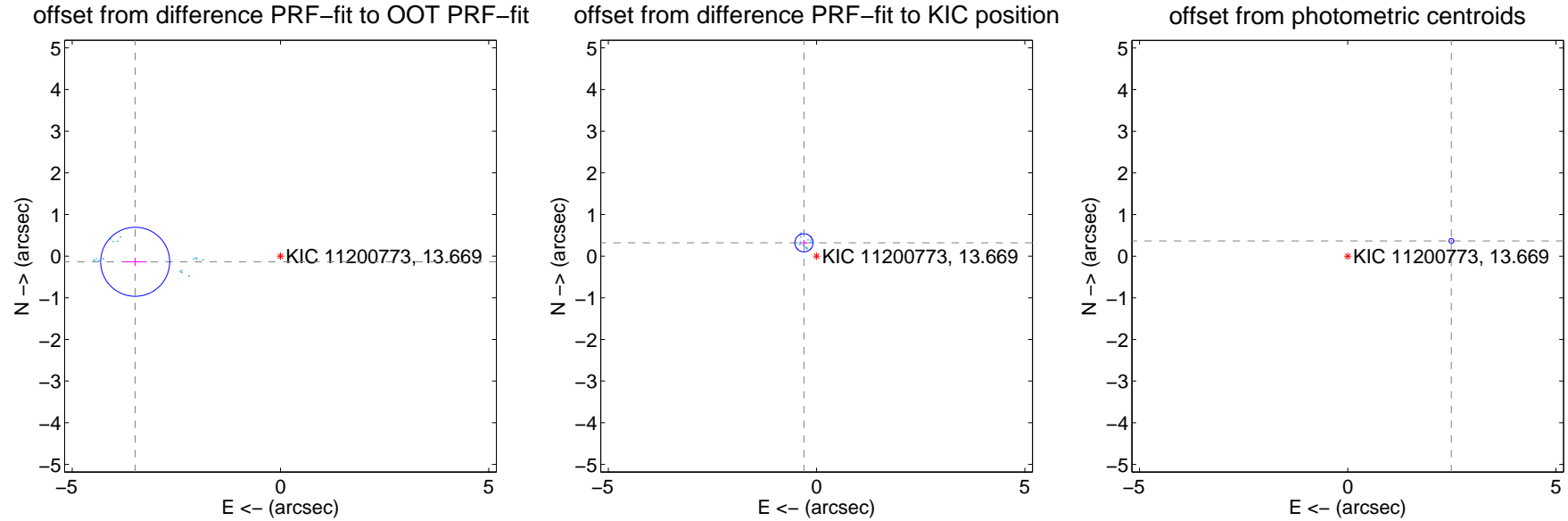
## DV Centroid Data

Supplemental centroid analysis for 011200773-02. Kepler magnitude: 13.67. Transit SNR 392.79

There are 17 quarters with good PRF difference image offsets

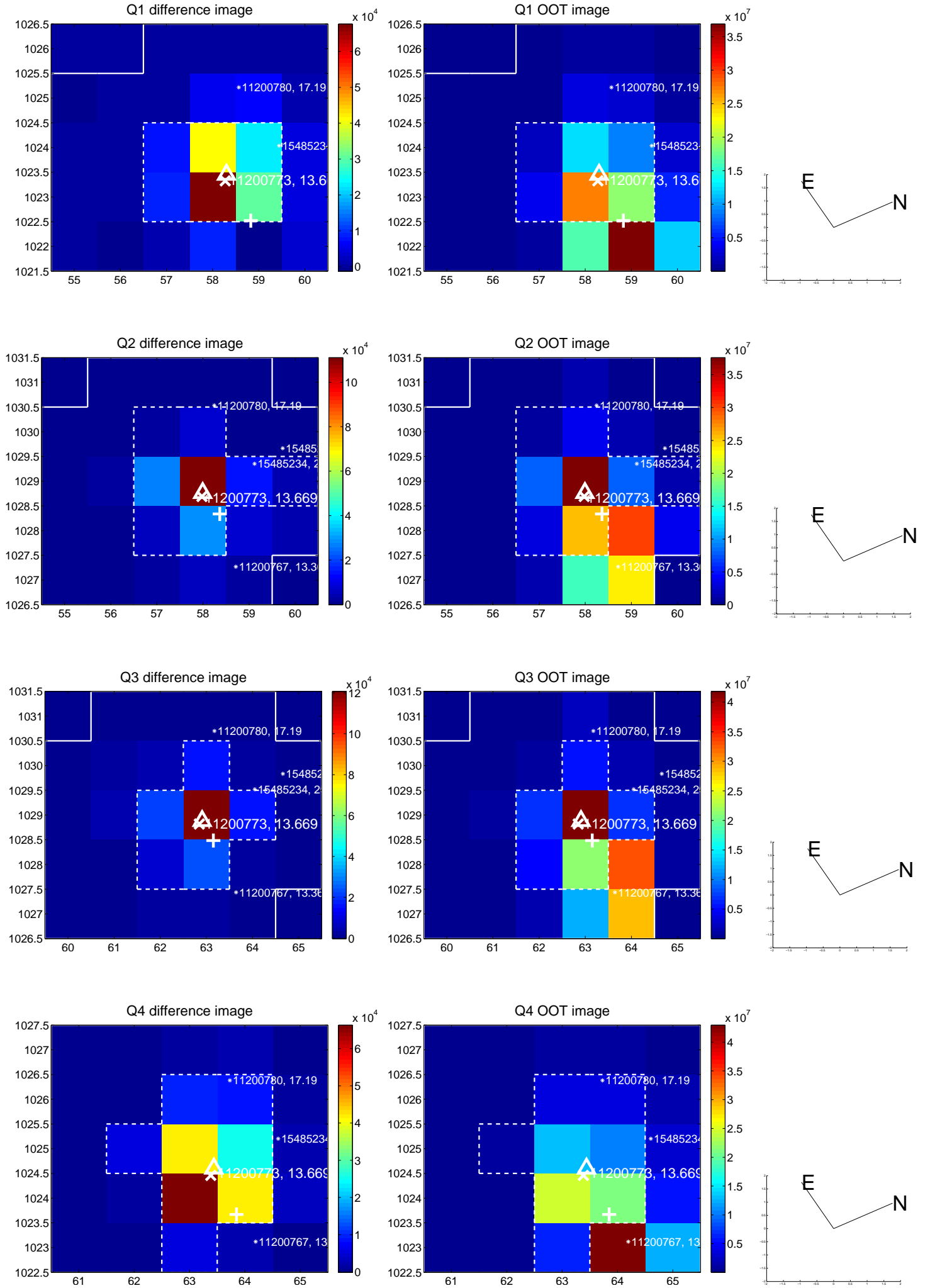
The OOT PRF centroid is offset from the target star catalog position by about 4.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.491 \pm 0.276$	12.64	$3.489 \pm 0.276$	$-0.136 \pm 0.097$
PRF-fit source offset from KIC position	$0.441 \pm 0.073$	6.06	$0.303 \pm 0.073$	$0.321 \pm 0.071$
photometric centroid source offset	$2.52 \pm 0.02$	131.87	$-2.49 \pm 0.02$	$0.37 \pm 0.01$

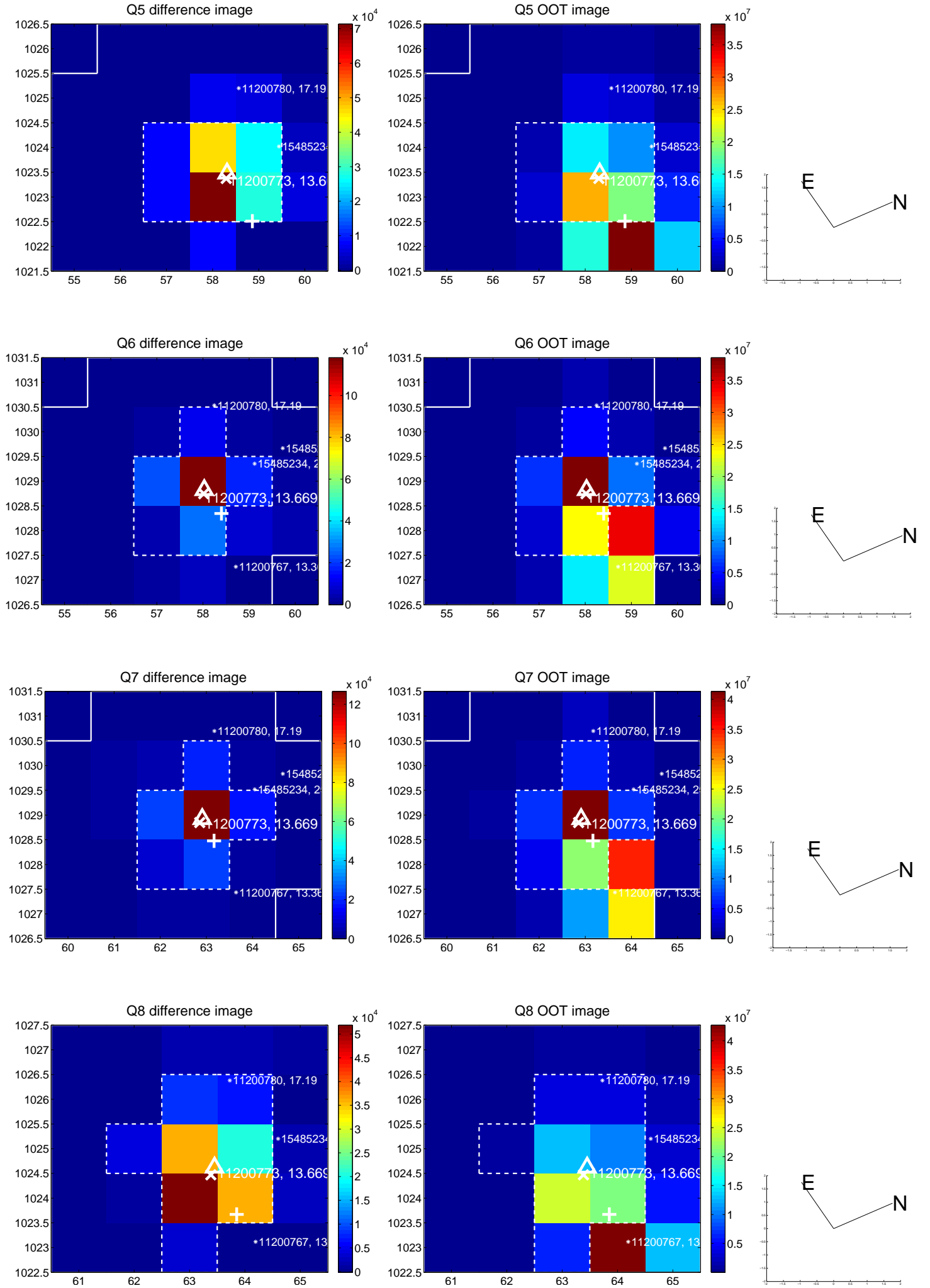


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

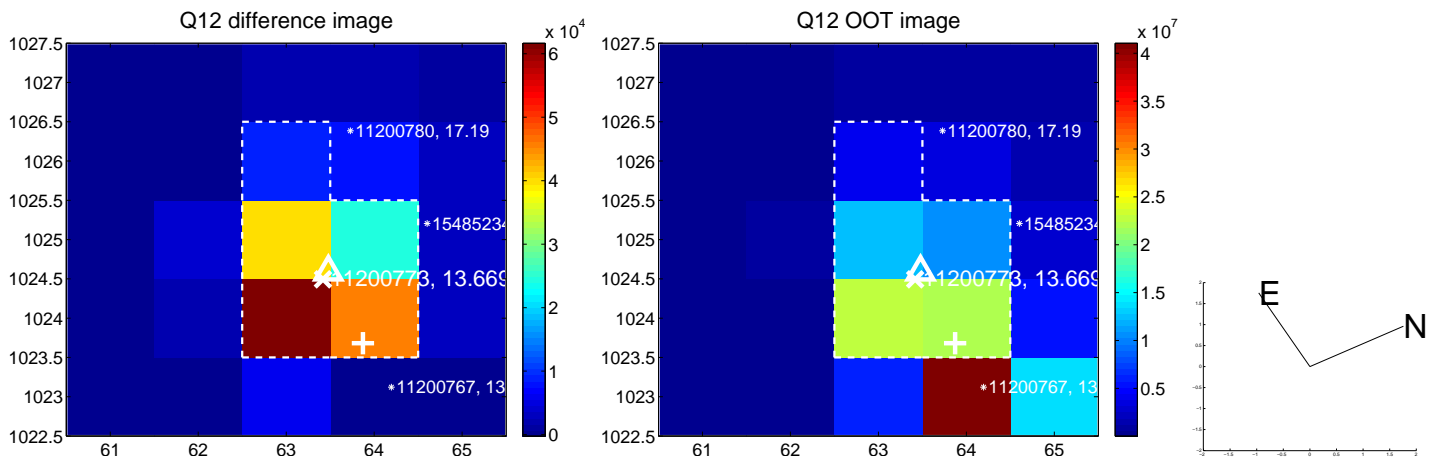
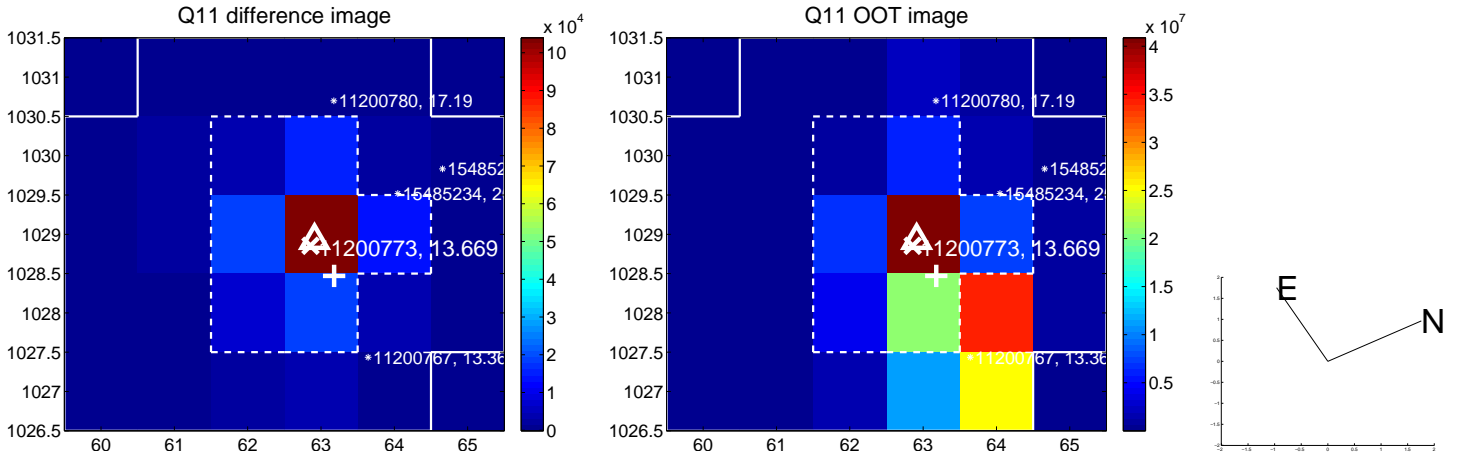
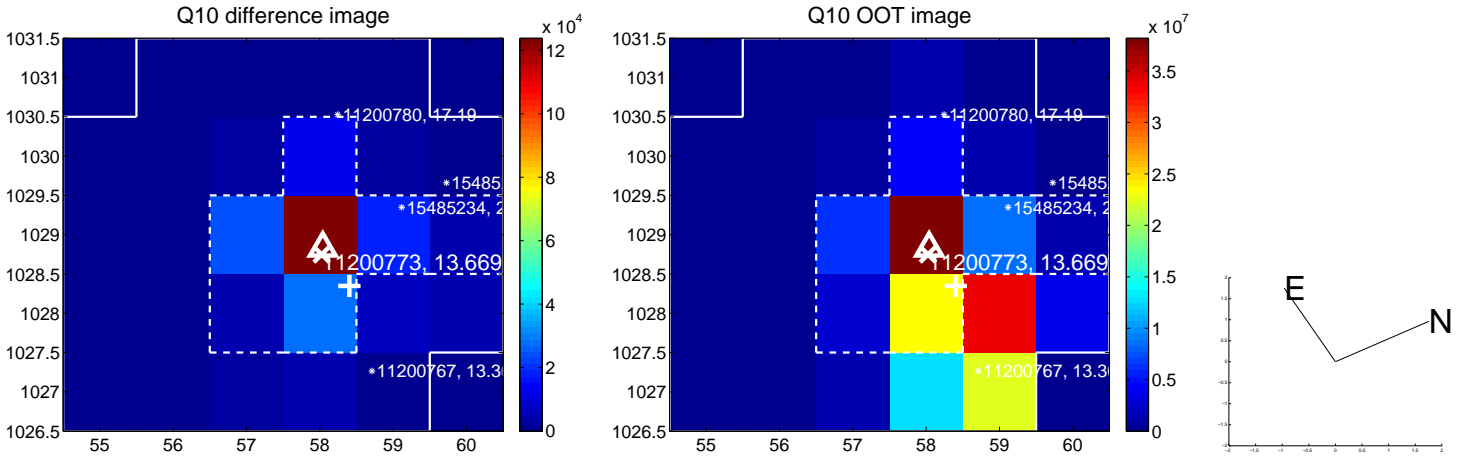
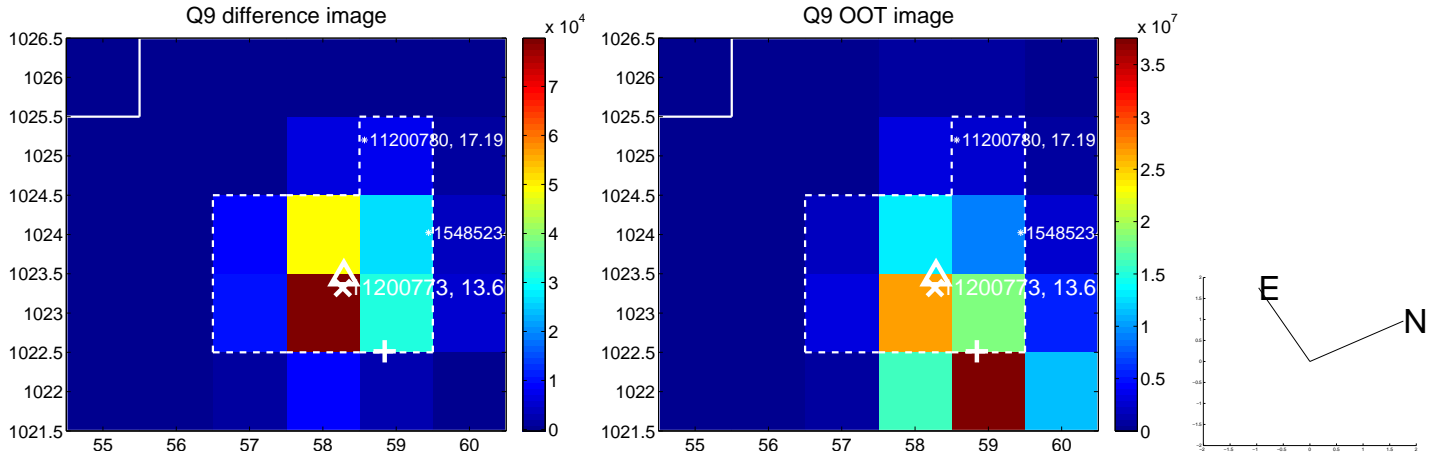
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



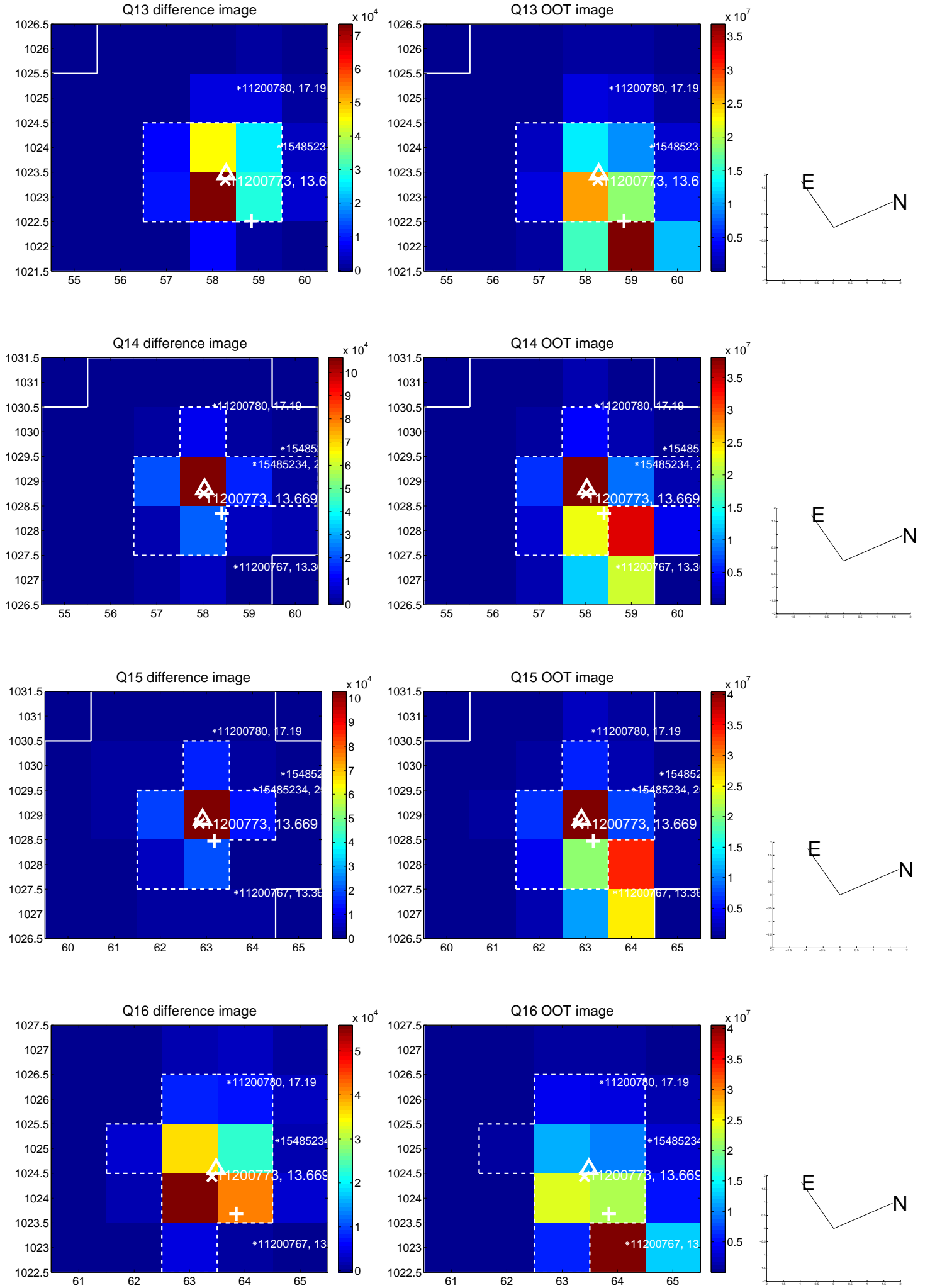
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



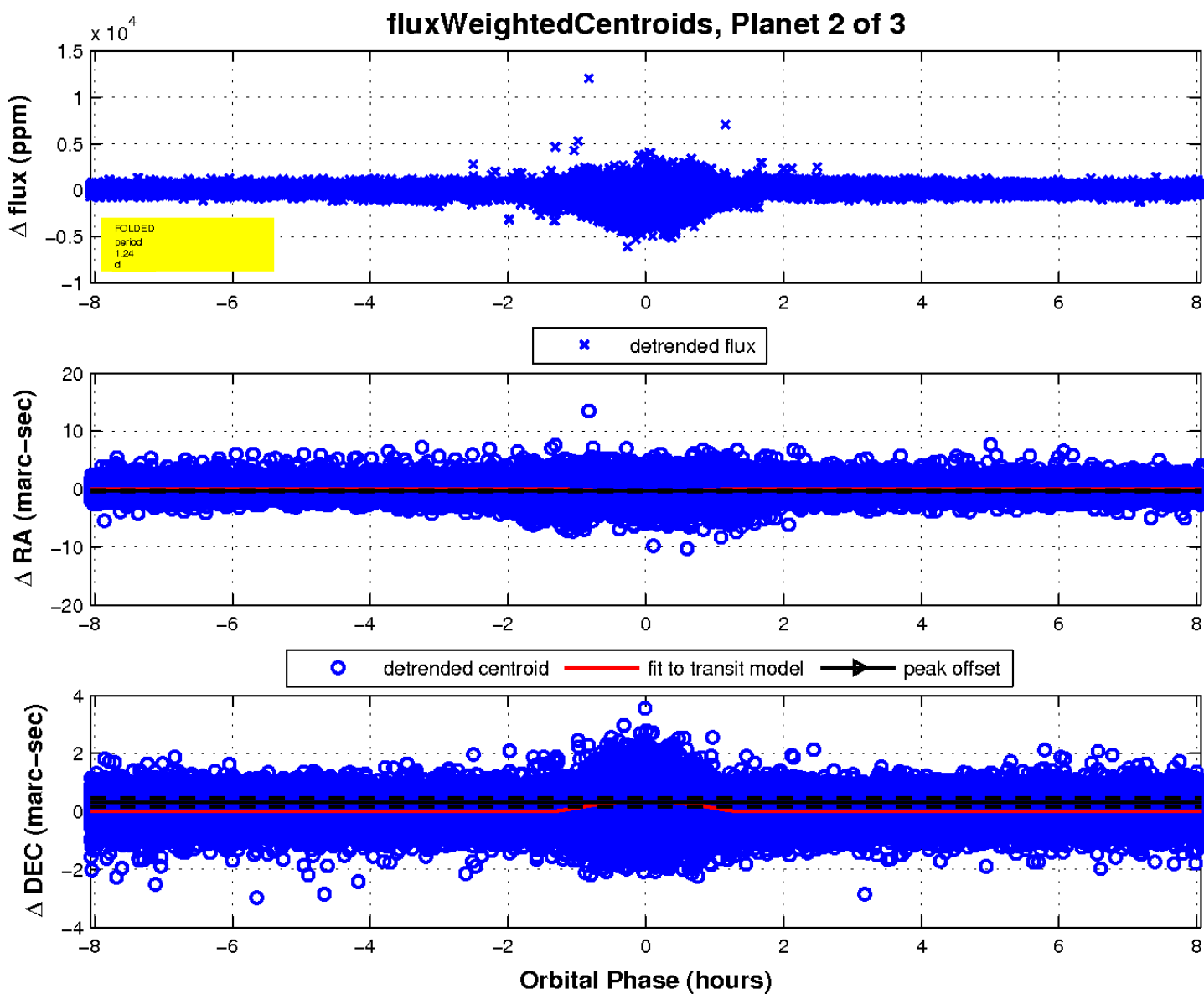
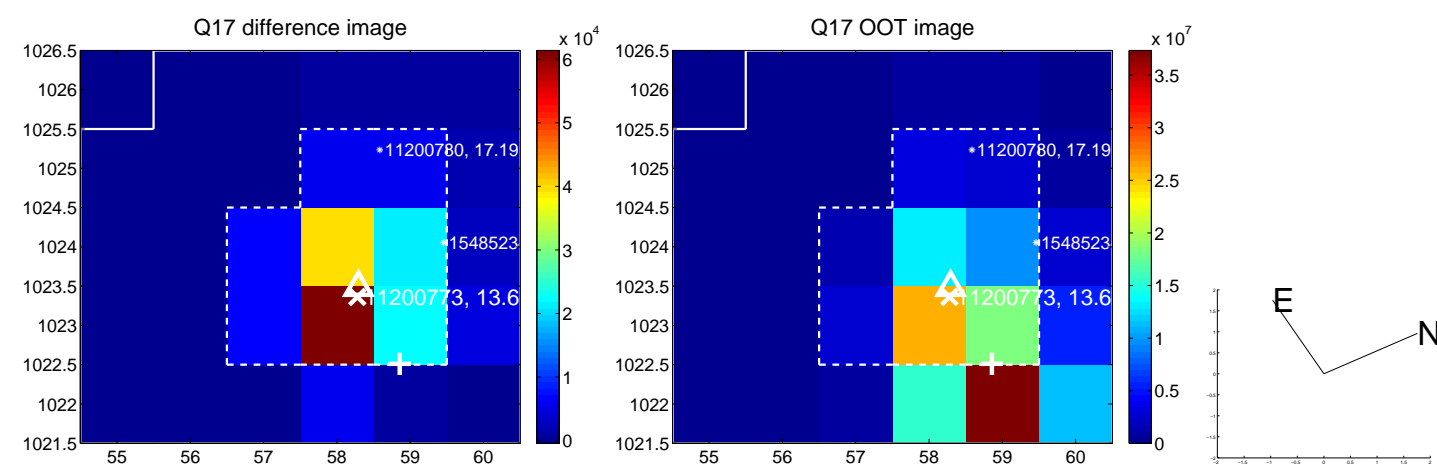
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

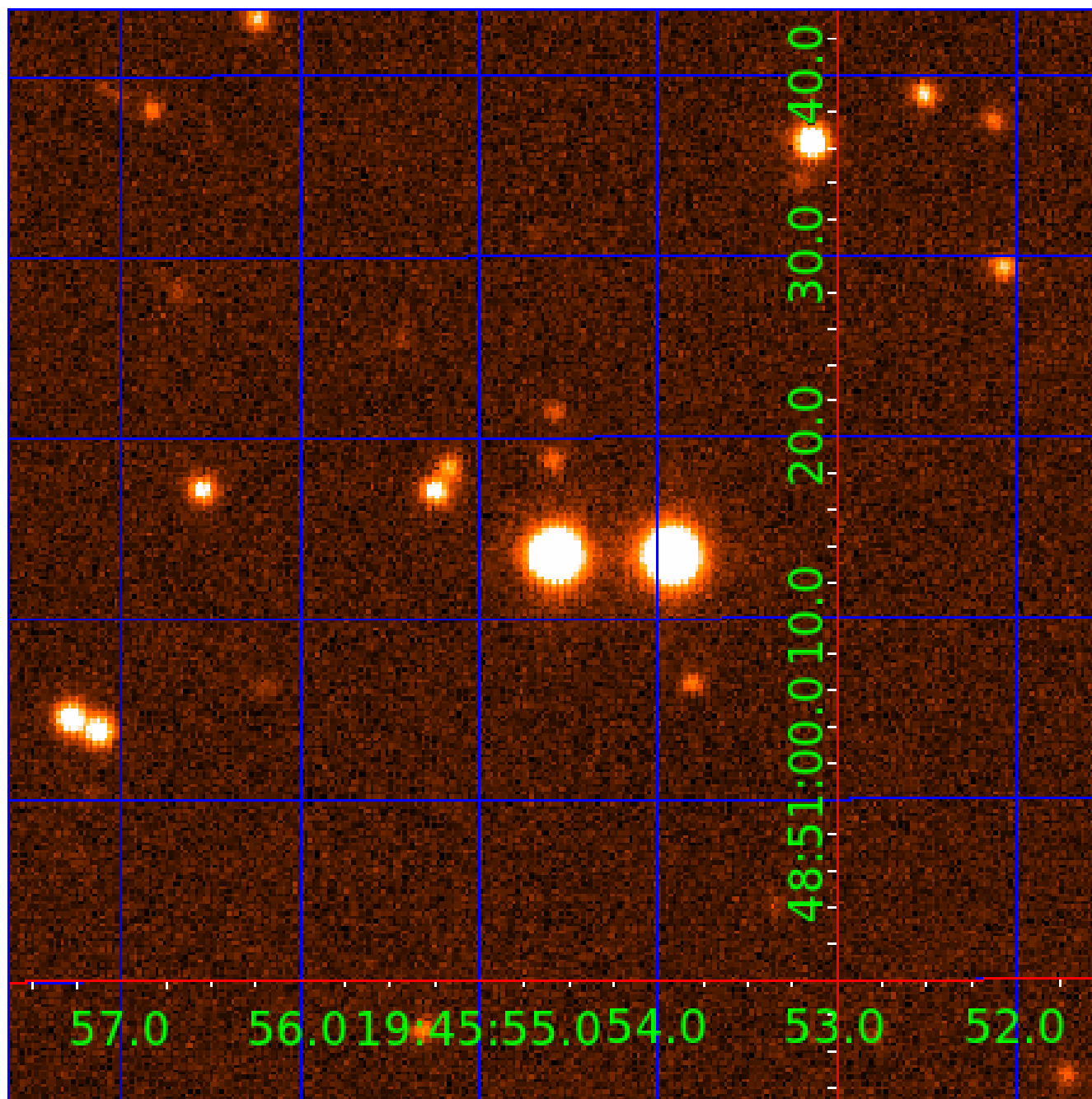


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011200773

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011200773-01	OBS	7419.01	2.489551	132.044175	29175.6	2.839	3564.7	2560.8	0.79	6018	20.55	637.41
011200773-02	OBS	No	1.244765	132.049499	3169.1	2.687	446.9	392.8	0.79	6018	5.42	1606.20
011200773-03	OBS	No	440.892011	222.819135	637.7	13.659	8.3	7.1	0.79	6018	2.19	0.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011200773-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_KIC_POS
011200773-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—CENT_KIC_POS—EPHEM_MATCH
011200773-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

**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.

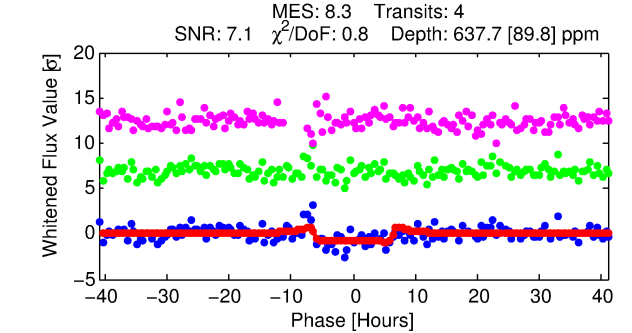
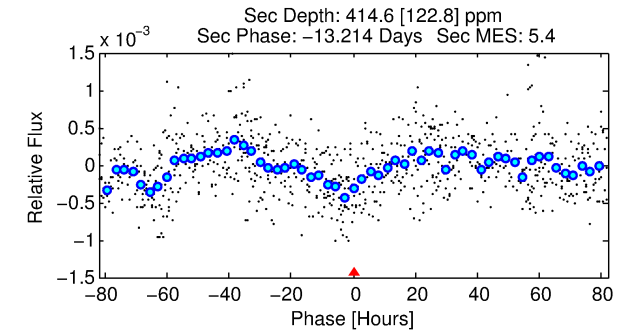
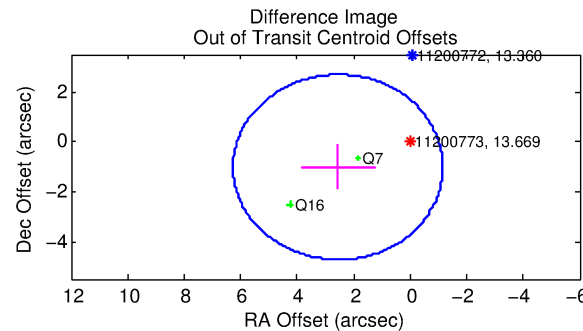
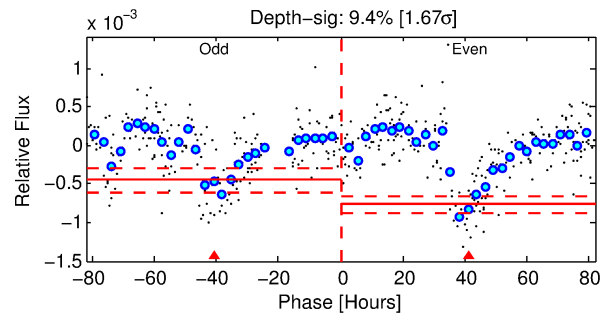
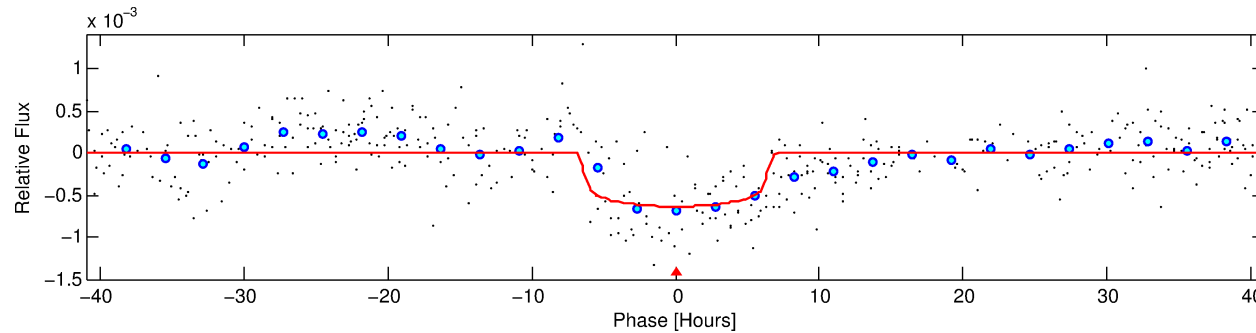
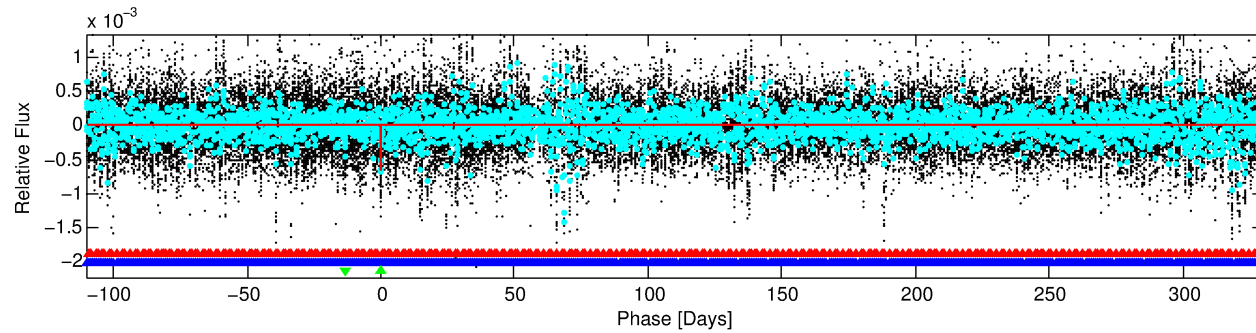
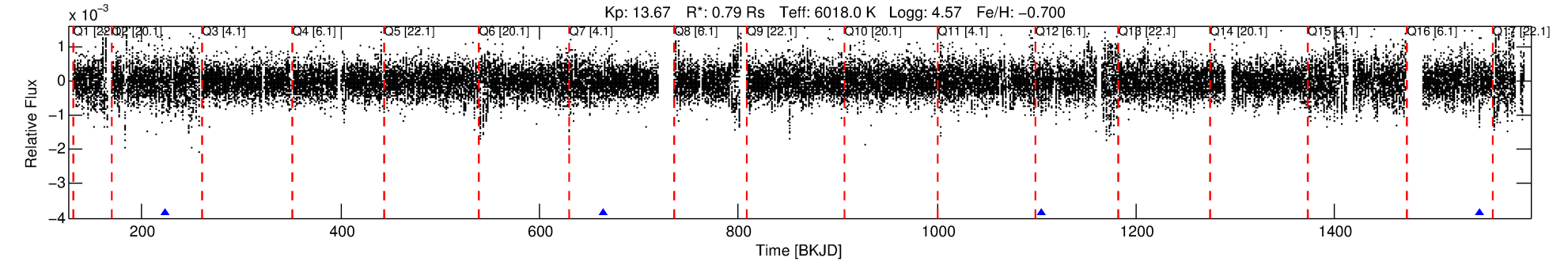
Ephemeris Match Information For 011200773-03

No Significant Match Found

# DV One-Page Summary

KIC: 11200773 Candidate: 3 of 3 Period: 440.892 d

KOI: K07419 Corr: No Ephemeris Match



## DV Fit Results:

Period = 440.89201 [0.00643] d  
Epoch = 222.8191 [0.0137] BKJD  
Rp/R\* = 0.0253 [0.0036]  
a/R\* = 166.69 [98.38]  
b = 0.77 [0.31]  
Seff = 0.64 [0.22]  
Teq = 228 [19] K  
Rp = 2.19 [0.63] Re  
a = 1.0751 [0.2317] AU  
Ag = 54914.44 [28433.59] [1.93 $\sigma$ ]  
Teffp = 5400 [571] K [9.06 $\sigma$ ]

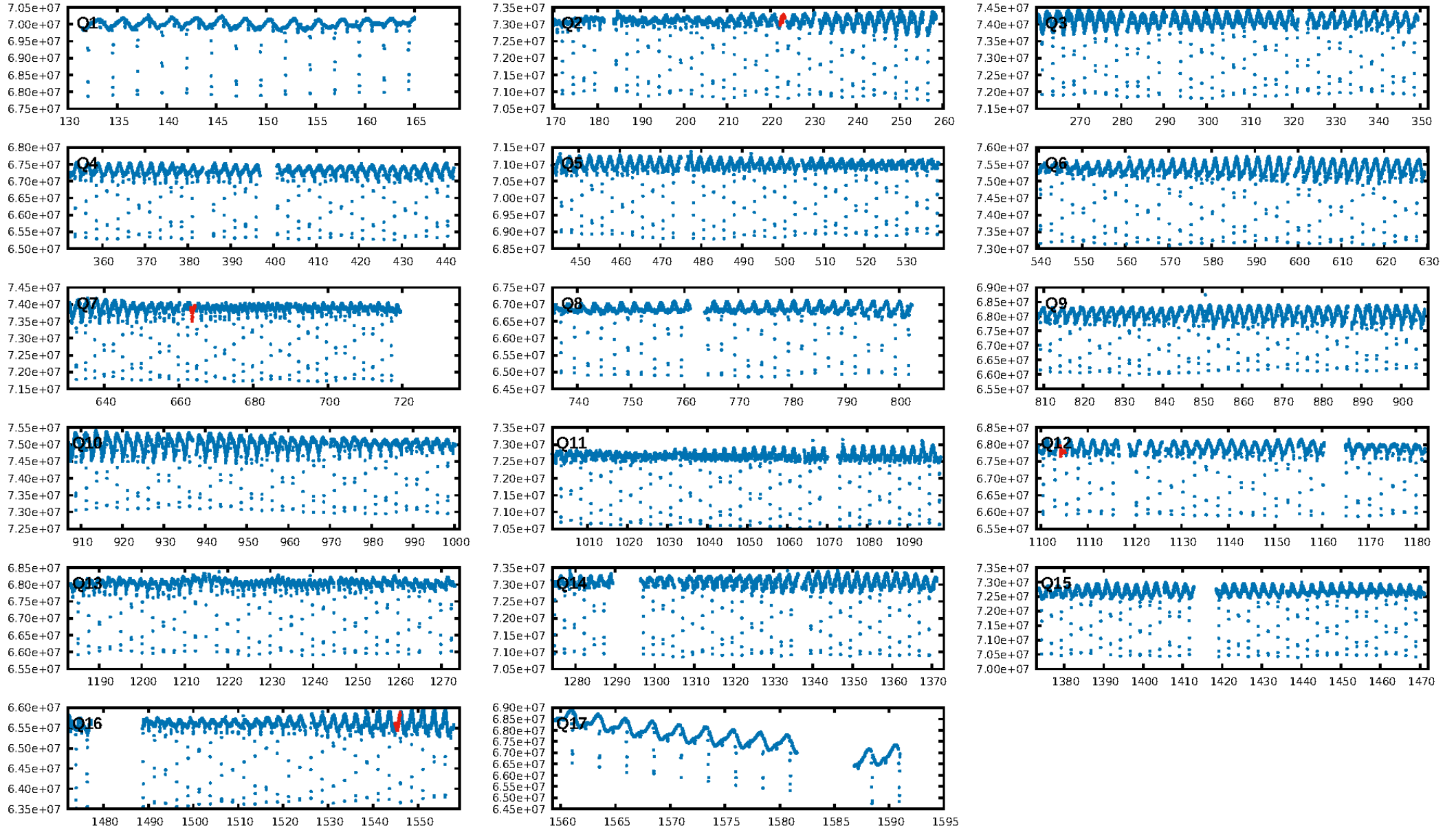
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [754.16 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 6.4%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 2.34e-09**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.263  
**Centroid-sig: 0.3%**  
Centroid-so: 2.104 arcsec [2.44 $\sigma$ ]  
OotOffset-rm: 2.753 arcsec [2.23 $\sigma$ ]  
KicOffset-rm: 0.709 arcsec [0.65 $\sigma$ ]  
OotOffset-st: 0/1/1/0 [2]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 0.00 [0/2]

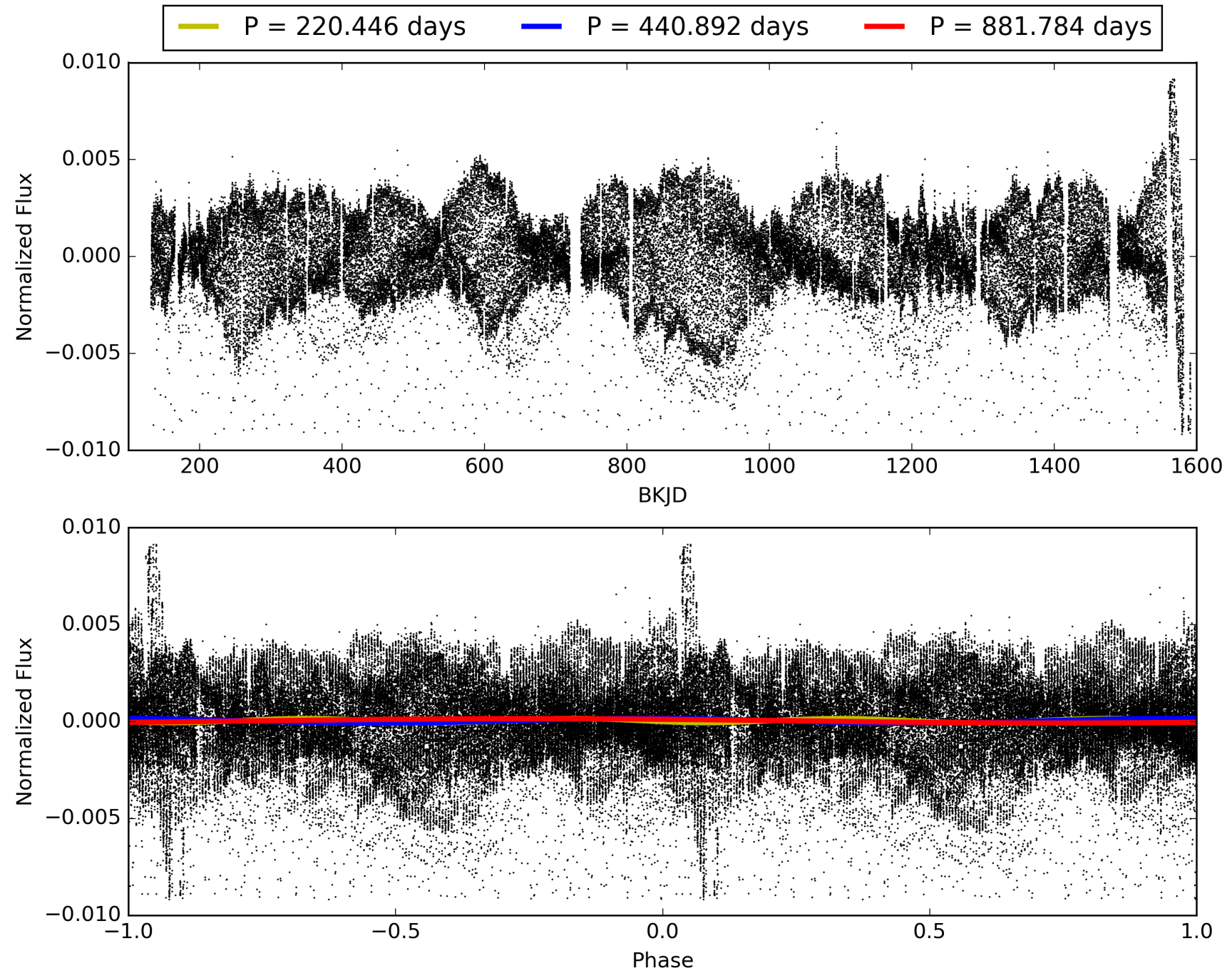
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:19 Z

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

# TCE 011200773-03, PDC Light Curves

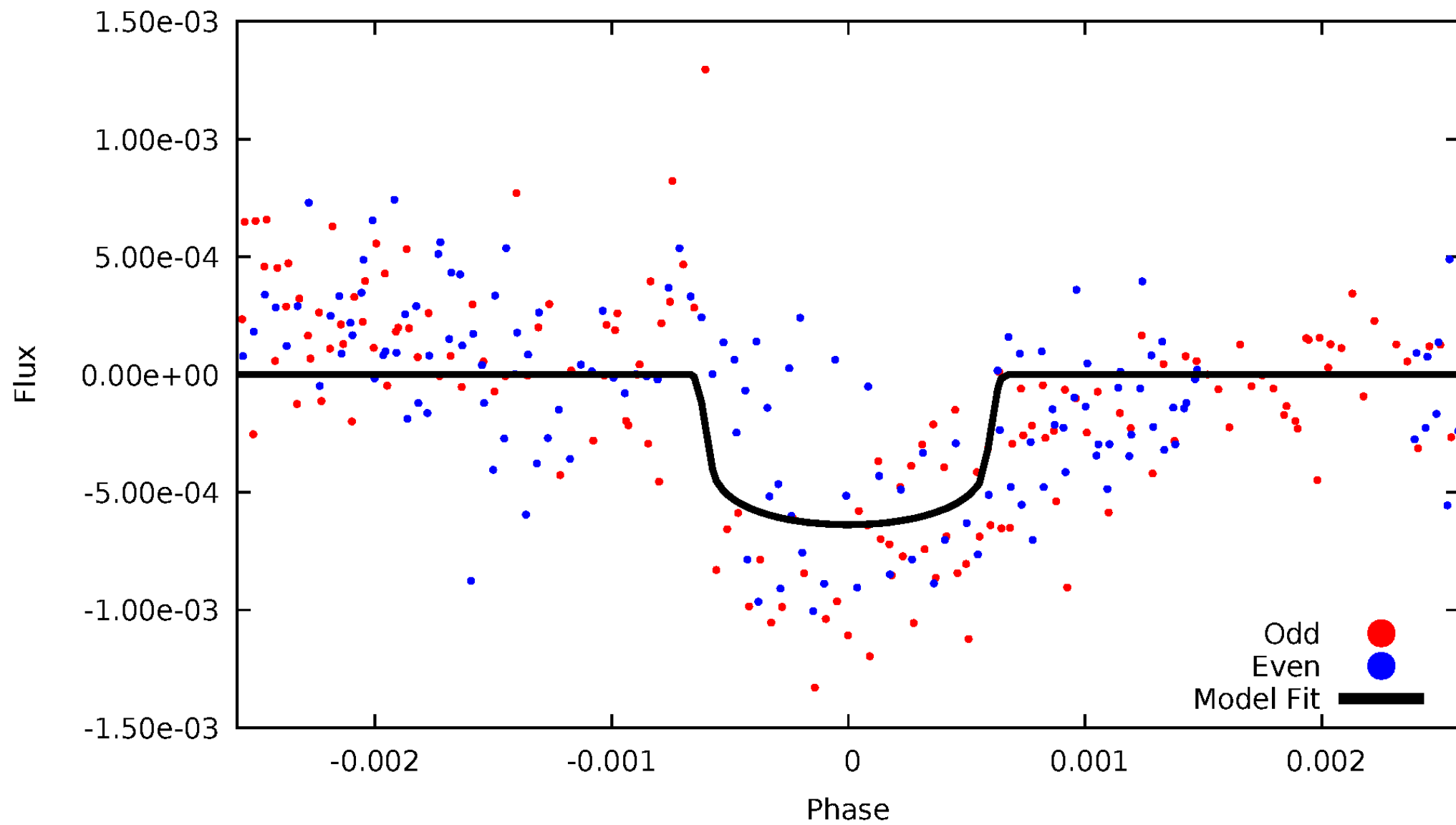


TCE 011200773-03



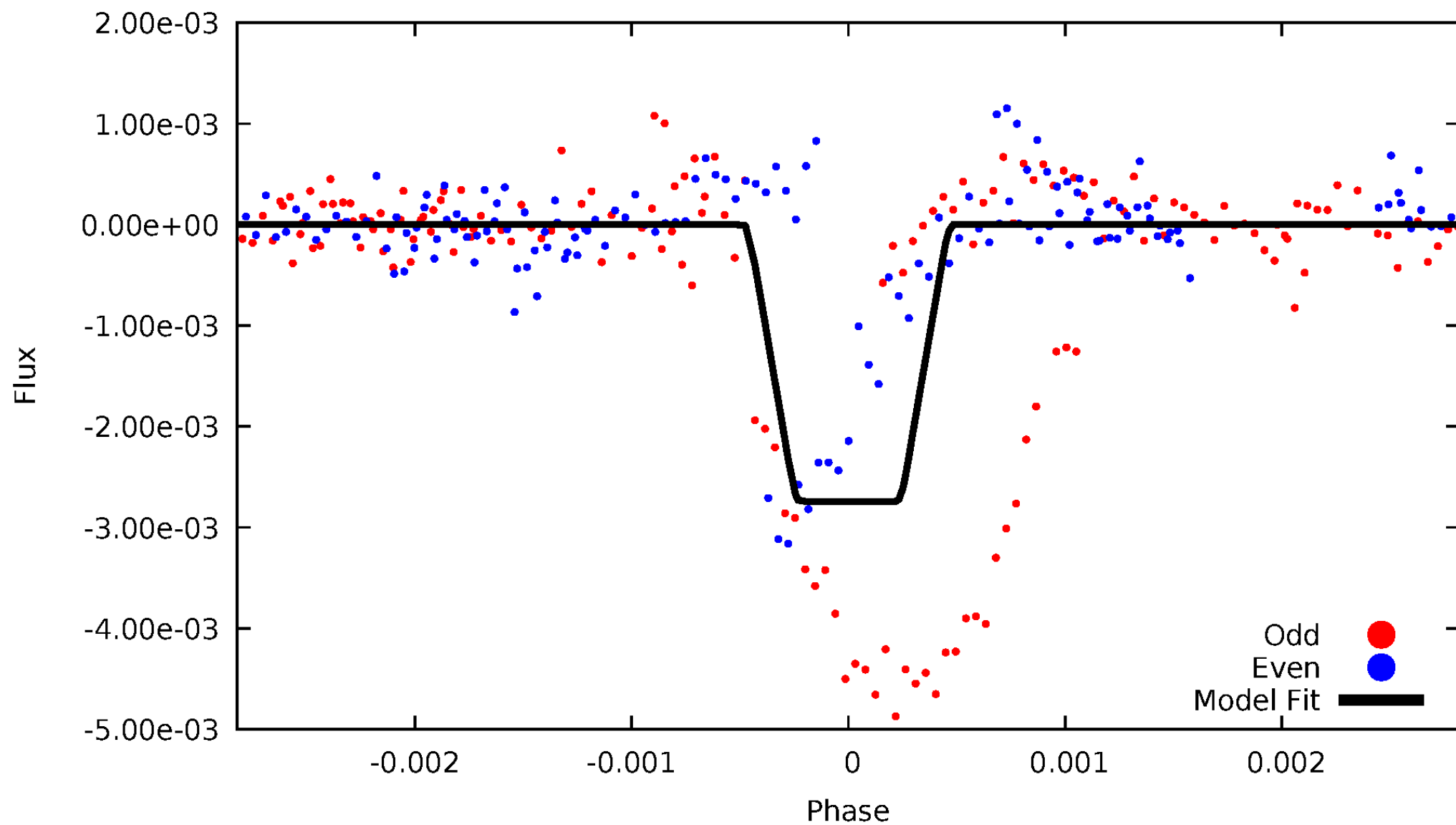
# DV Odd/Even

TCE 011200773-03



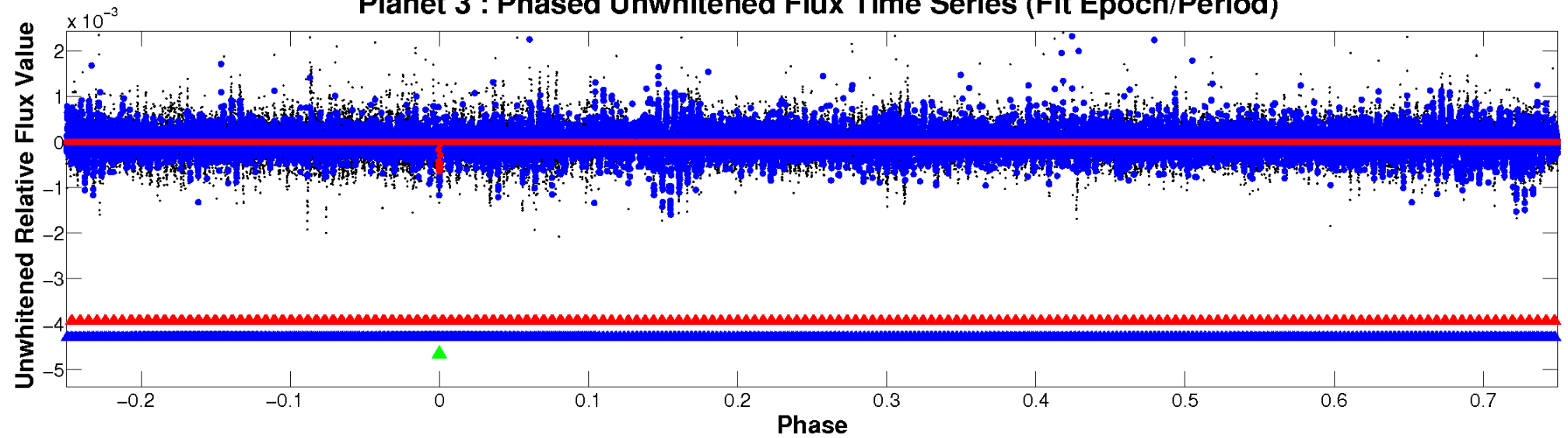
# ALT Odd/Even

TCE 011200773-03

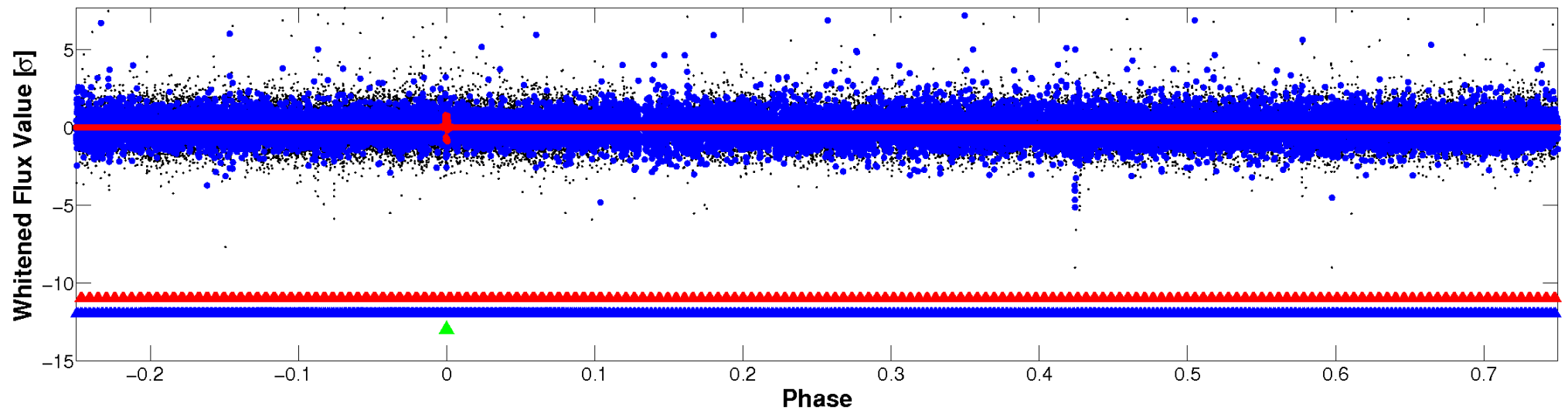


# Non-Whitened Vs. Whitened Light Curve

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



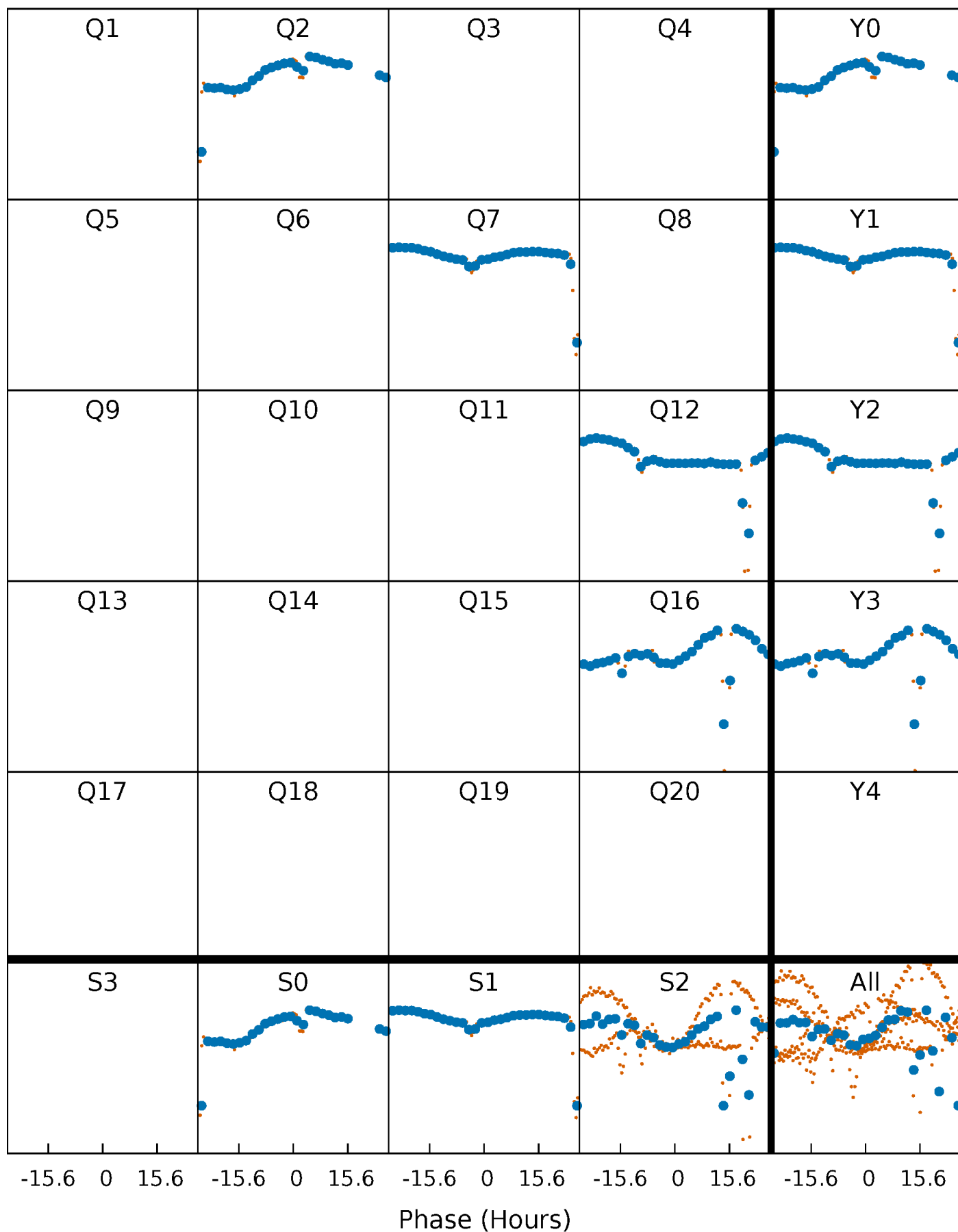
Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

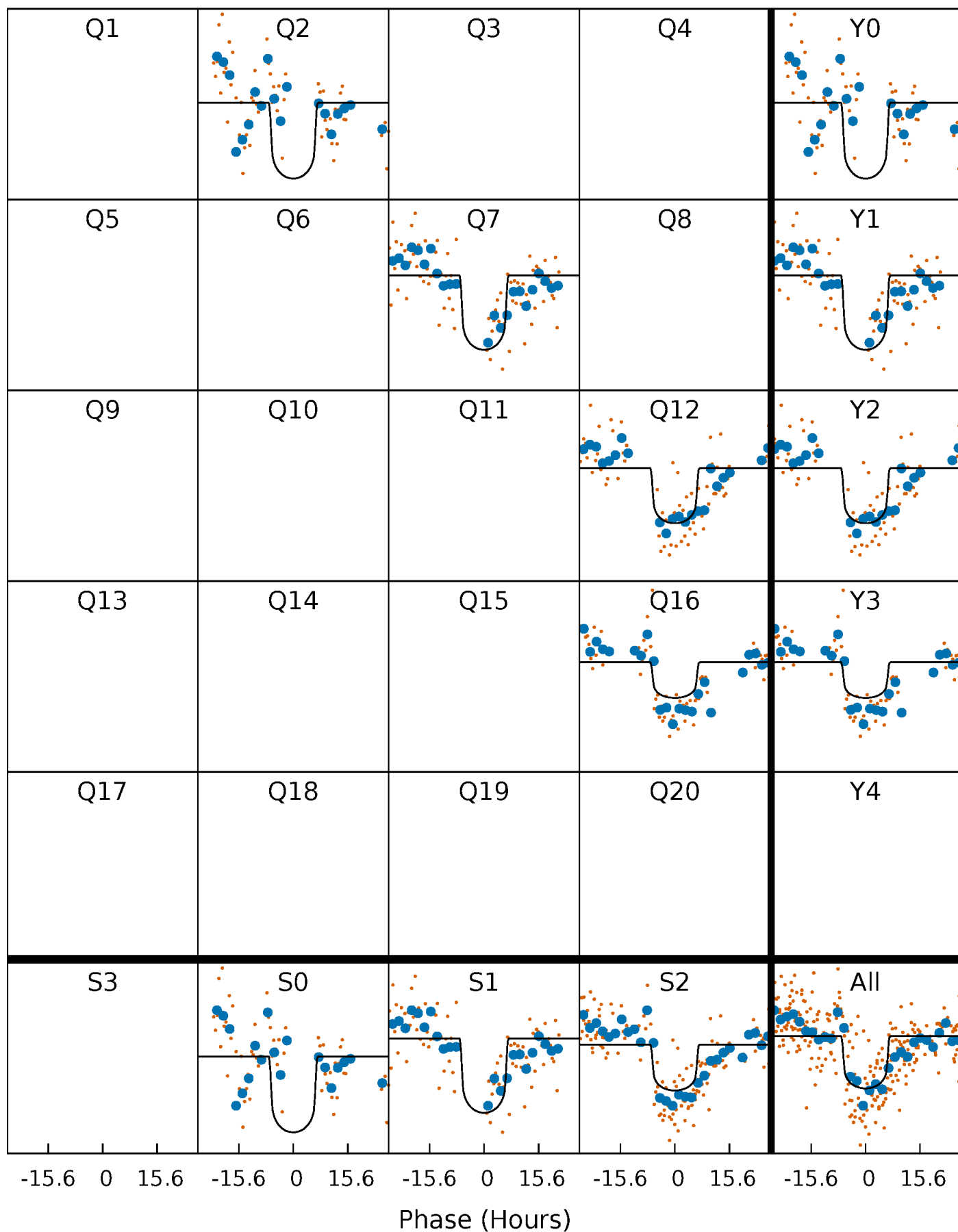
TCE 011200773-03 P=440.892011 Days  $T_0=222.819135$  (BKJD)





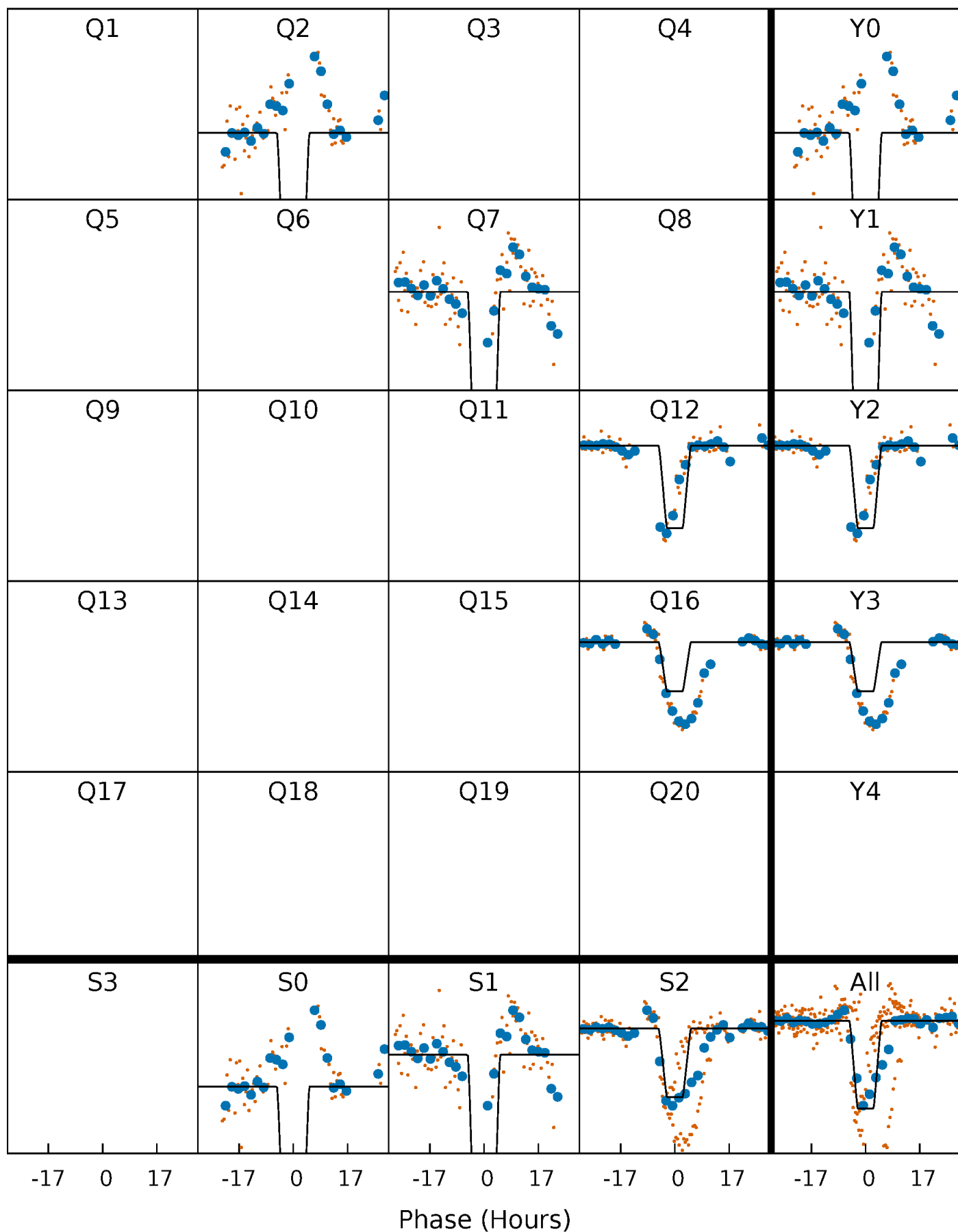
# DV Quarter-Phased Transit Curves

TCE 011200773-03 P=440.892011 Days  $T_0=222.819135$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

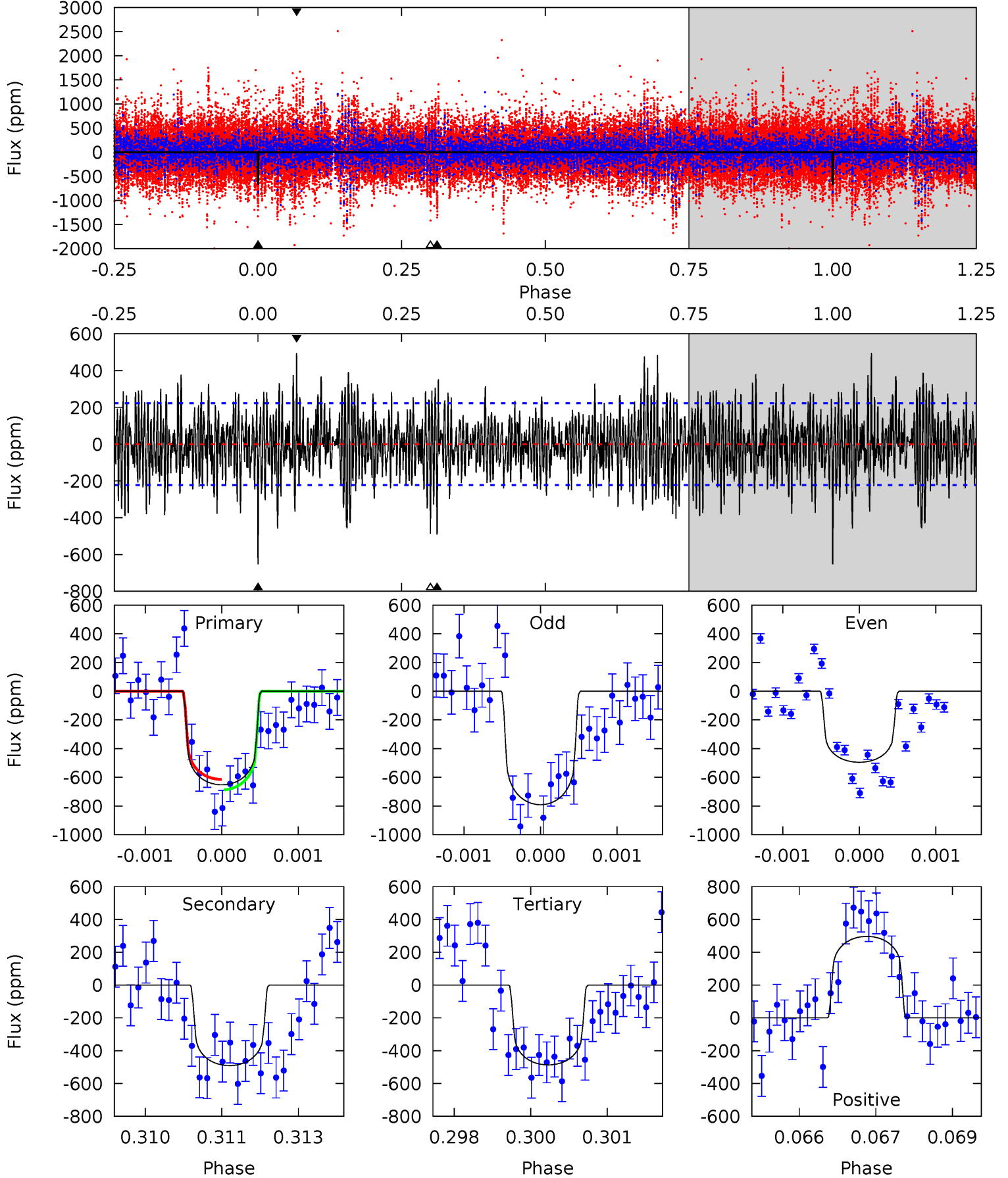
TCE 011200773-03 P=440.881302 Days  $T_0=222.795184$  (BKJD)



# DV Model-Shift Uniqueness Test

011200773-03, P = 440.892011 Days, E = 222.819135 Days

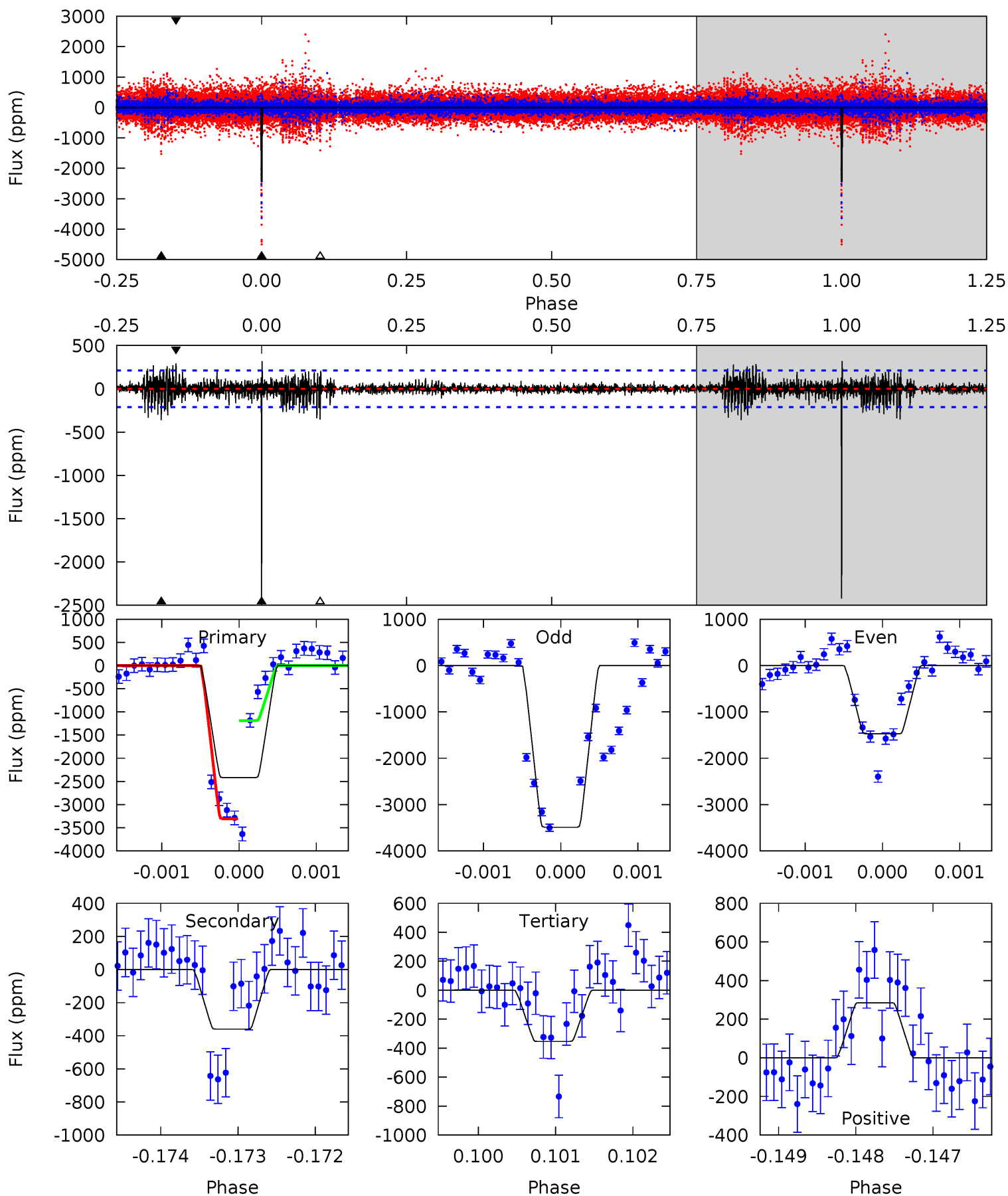
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	11.9	11.8	12.0	5.40	3.22	3.38	4.02	3.79	0.09	-0.14	3.47	0.91	0.43	0.88



# Alt Model-Shift Uniqueness Test

011200773-03, P = 440.881302 Days, E = 222.795184 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
62.2	9.25	9.10	7.34	5.46	3.30	1.35	53.1	54.9	0.15	1.91	28.4	1.32	0.12	27.0



### Stellar Parameters For KIC 011200773

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6018^{+163}_{-163}$	$4.569^{+0.044}_{-0.176}$	$-0.700^{+0.300}_{-0.300}$	$0.794^{+0.200}_{-0.067}$	$0.853^{+0.080}_{-0.080}$	$2.397^{+0.439}_{-1.128}$
	+3%/-3%	+1%/-4%	+43%/-43%	+25%/-8%	+9%/-9%	+18%/-47%
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 011200773-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-491 \pm 41$	$2.28^{+0.37}_{-0.36}$	$324^{+20}_{-14}$	$5657^{+450}_{-387}$	$58869^{+26288}_{-14952}$
Alt.	$-360 \pm 39$	$4.67^{+0.70}_{-0.47}$	$324^{+20}_{-13}$	$3957^{+144}_{-147}$	$10147^{+2686}_{-2205}$

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

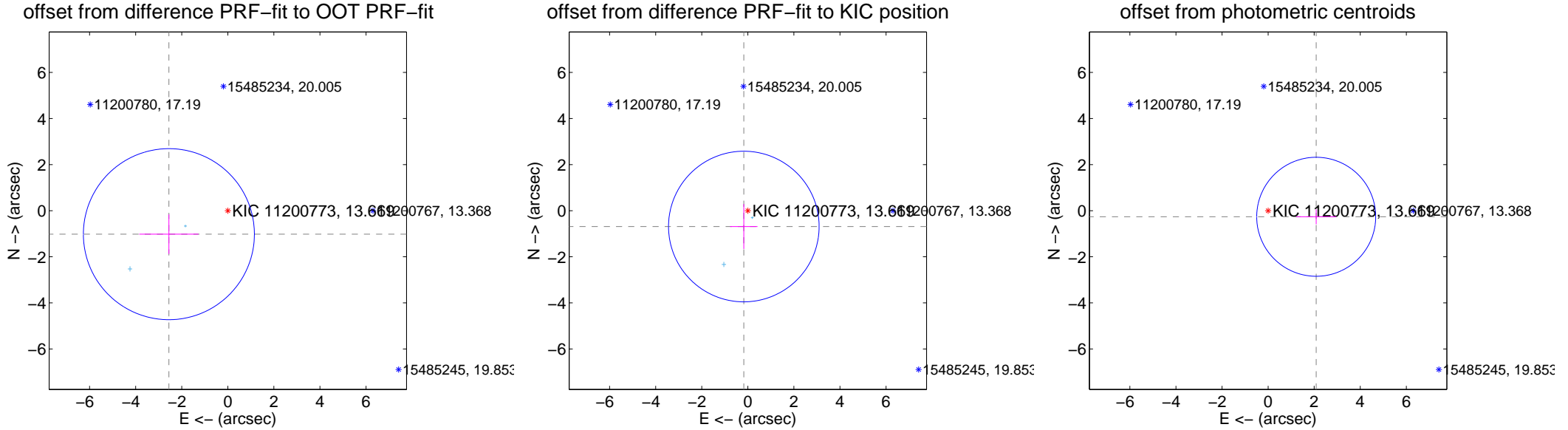
## DV Centroid Data

Supplemental centroid analysis for 011200773-03. Kepler magnitude: 13.67. Transit SNR 7.14

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.21 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.753 \pm 1.237$	2.23	$2.558 \pm 1.287$	$-1.019 \pm 0.855$
PRF-fit source offset from KIC position	$0.709 \pm 1.089$	0.65	$0.174 \pm 0.594$	$-0.687 \pm 0.975$
photometric centroid source offset	$2.10 \pm 0.86$	2.44	$-2.09 \pm 0.87$	$-0.26 \pm 0.33$



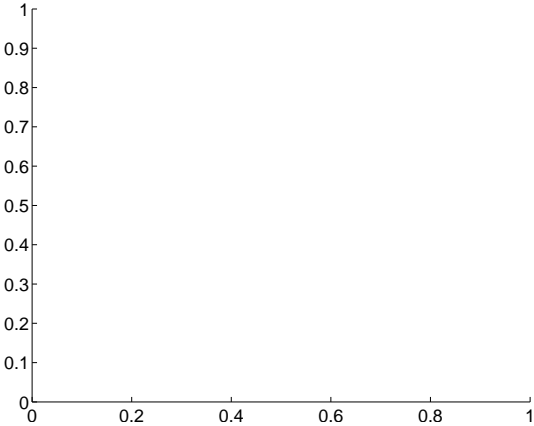
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

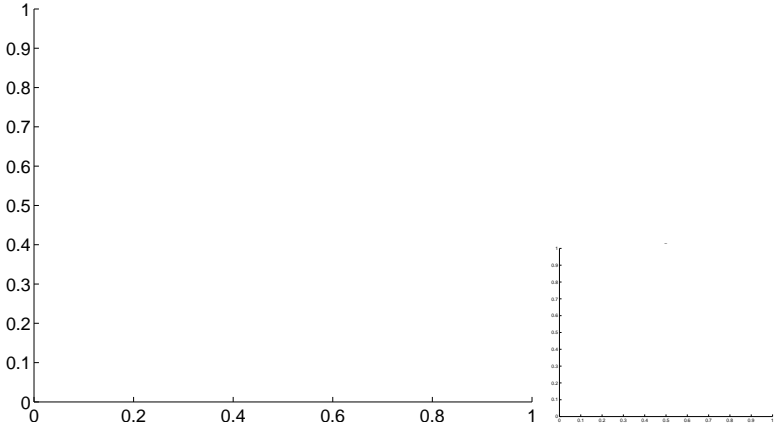


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

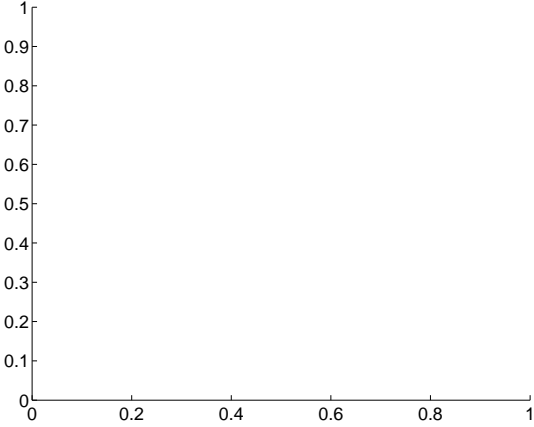
Q5 no difference image



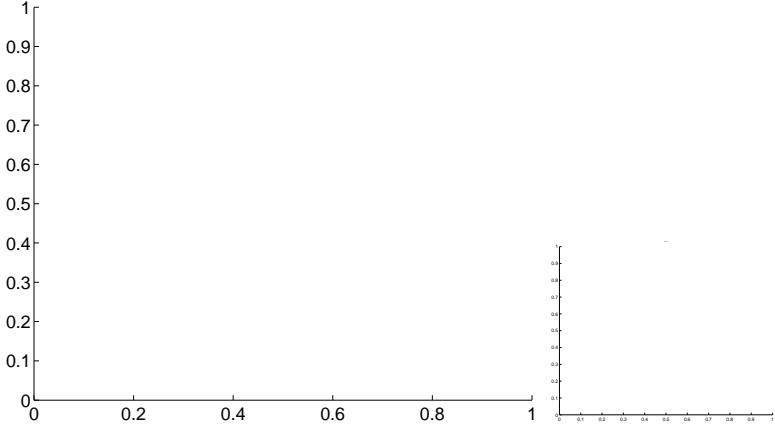
Q5 no OOT image



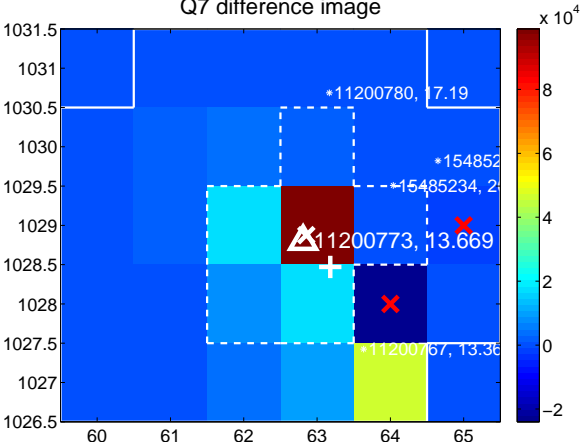
Q6 no difference image



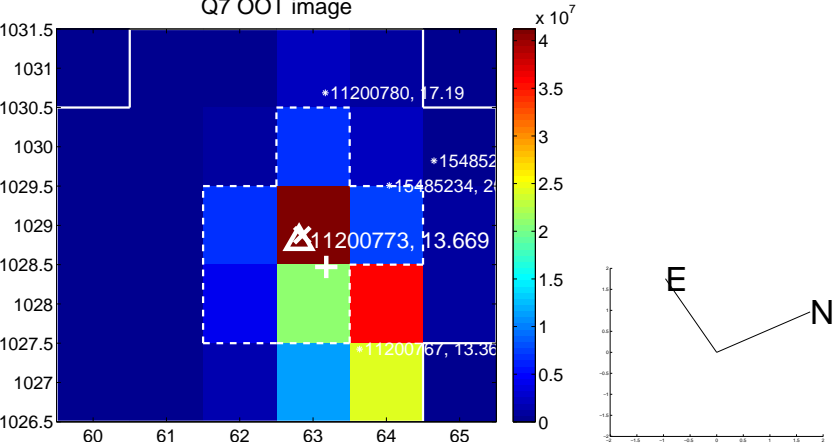
Q6 no OOT image



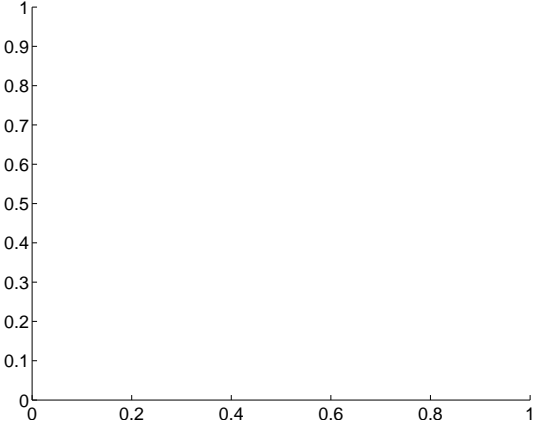
Q7 difference image



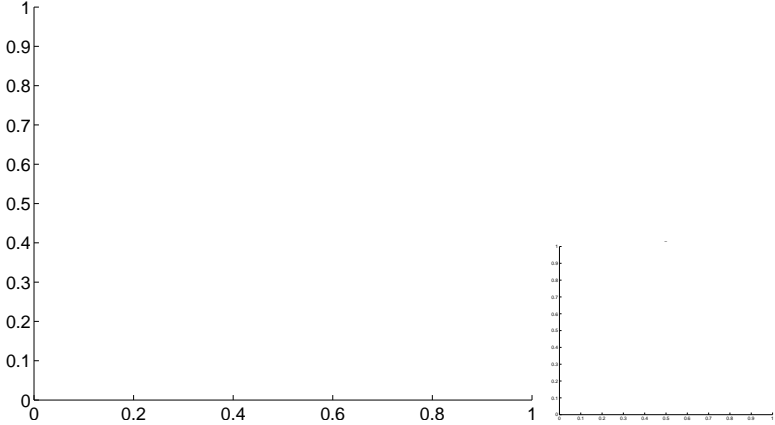
Q7 OOT image



Q8 no difference image



Q8 no OOT image



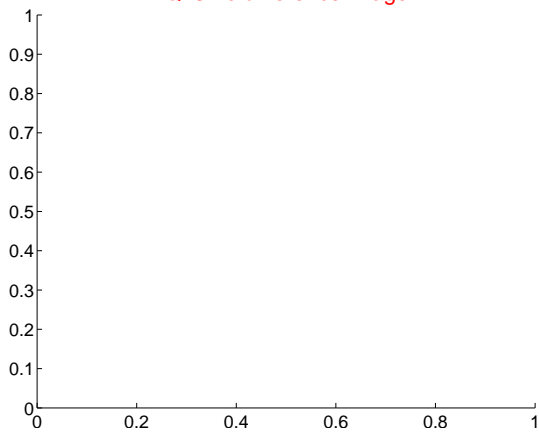


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

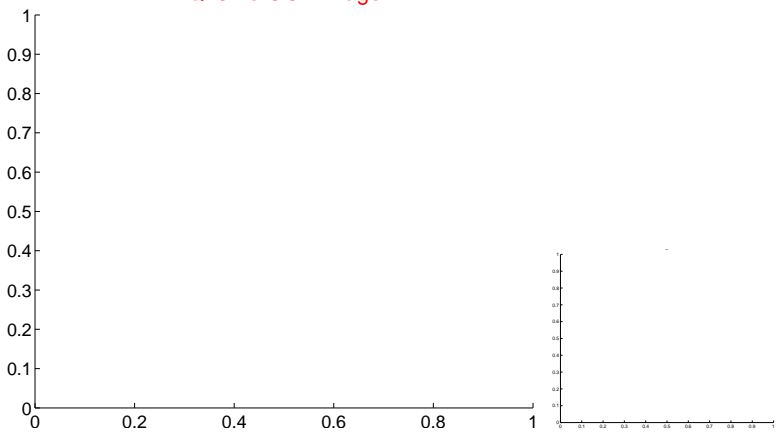


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

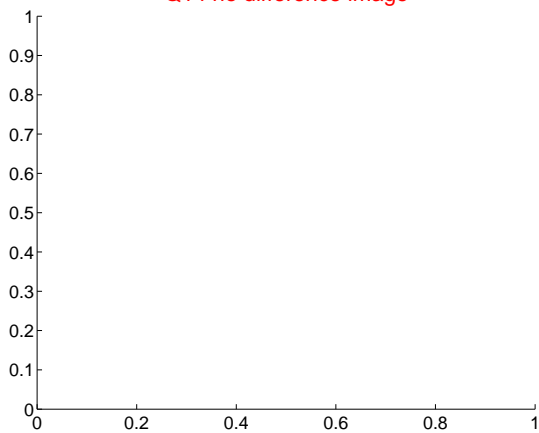
Q13 no difference image



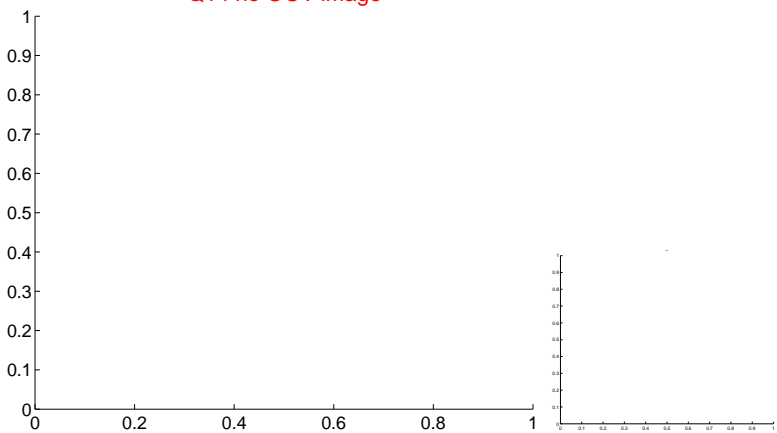
Q13 no OOT image



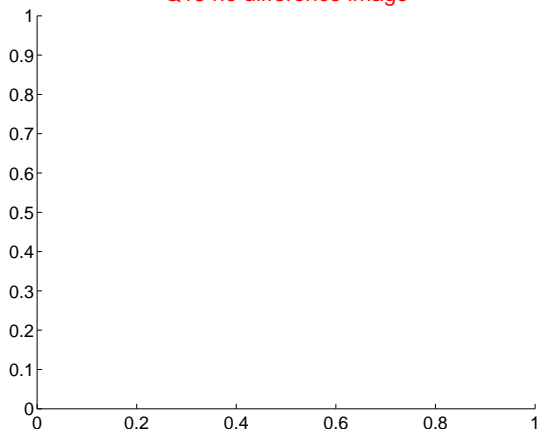
Q14 no difference image



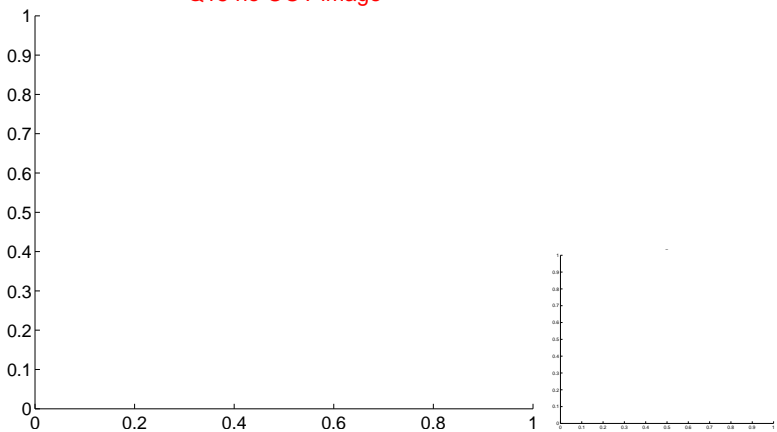
Q14 no OOT image



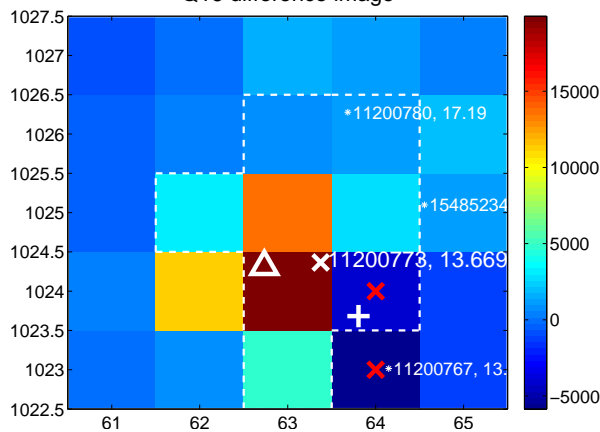
Q15 no difference image



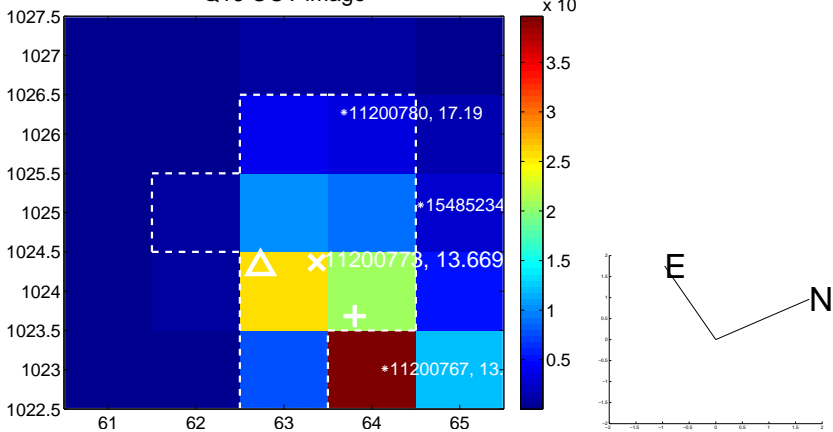
Q15 no OOT image



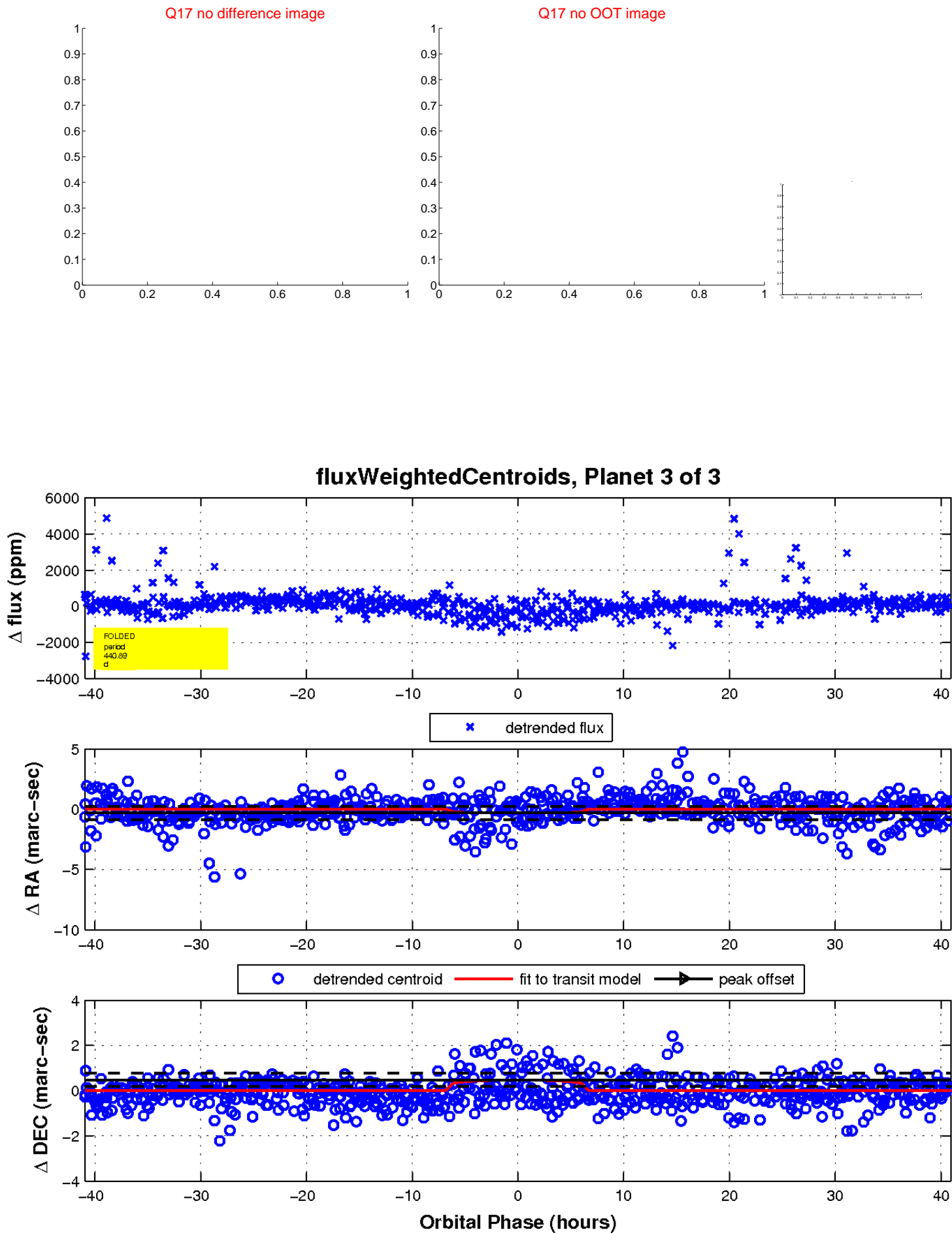
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

