

# KIC 008364119

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008364119-01	OBS	7024.01	7.735958	137.982029	315219.7	3.000	32753.1	-1.0	0.76	5623	32.50	100.10
008364119-02	OBS	No	7.735931	134.207028	274328.1	3.000	30167.7	-1.0	0.76	5623	31.42	100.10
008364119-03	OBS	No	5.157218	135.645384	20310.1	15.000	3668.0	-1.0	0.76	5623	10.79	171.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008364119-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008364119-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008364119-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

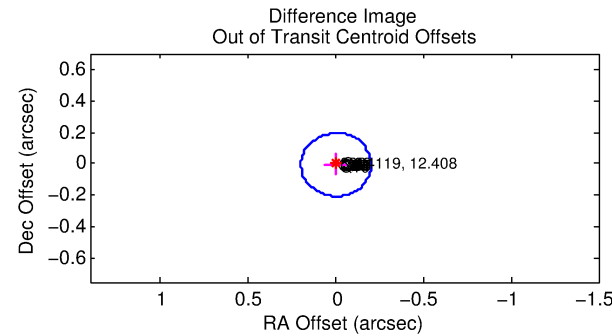
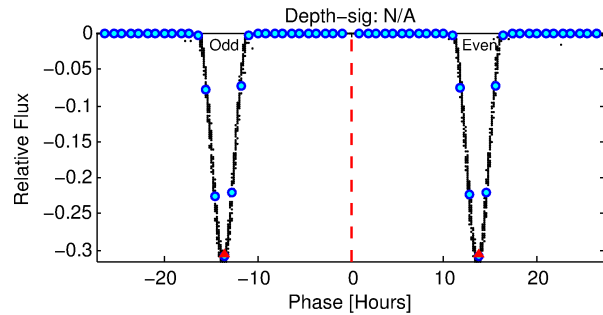
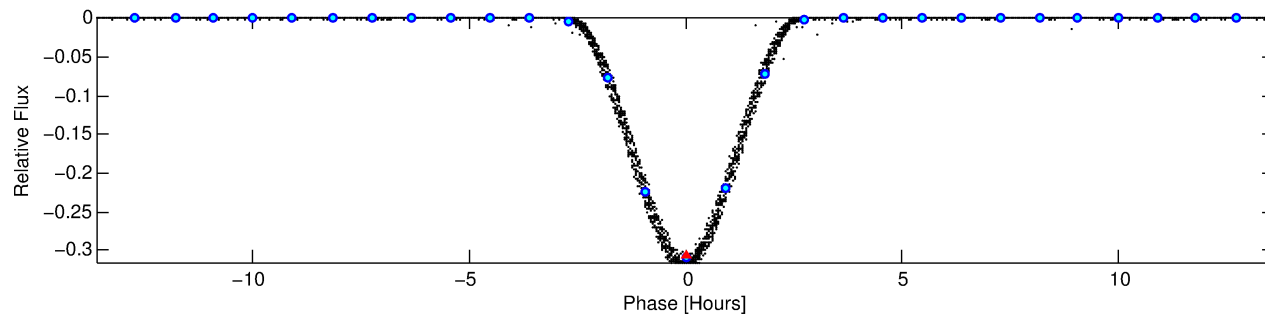
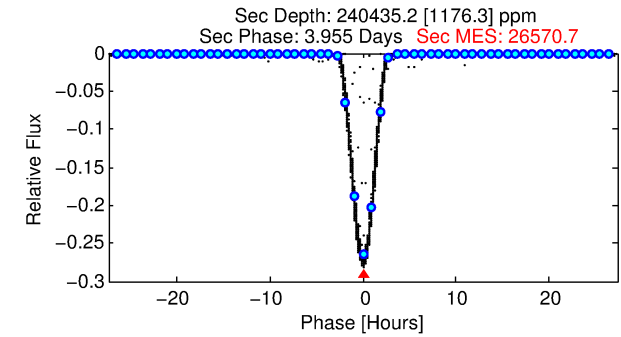
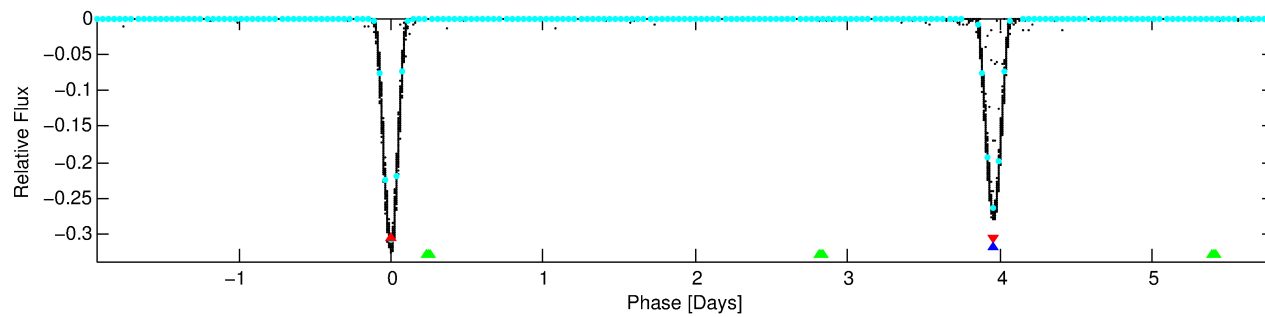
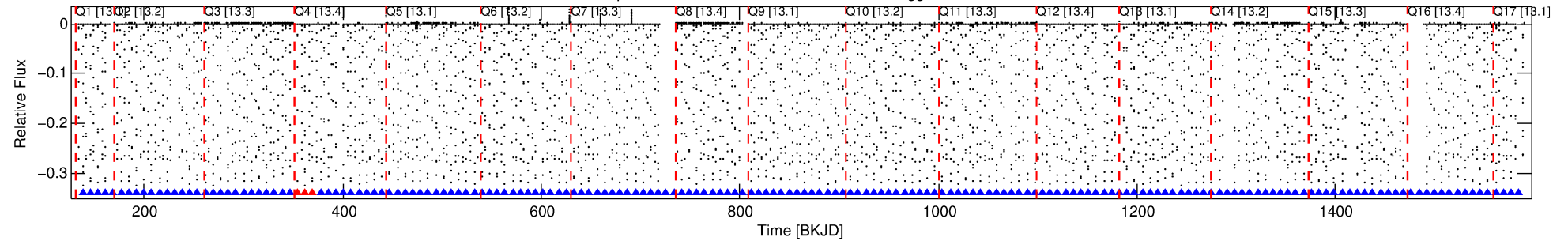
Ephemeris Match Information For 008364119-01

No Significant Match Found

# DV One-Page Summary

KIC: 8364119 Candidate: 1 of 3 Period: 7.736 d  
KOI: K07024.01 Corr: 0.773

Kp: 12.41 R\*: 0.76 Rs Teff: 5623.0 K Logg: 4.60 Fe/H: -0.400



## TPS TCE Results:

Period = 7.73596 d  
Epoch = 137.9820 BKJD

DV fit results are unavailable

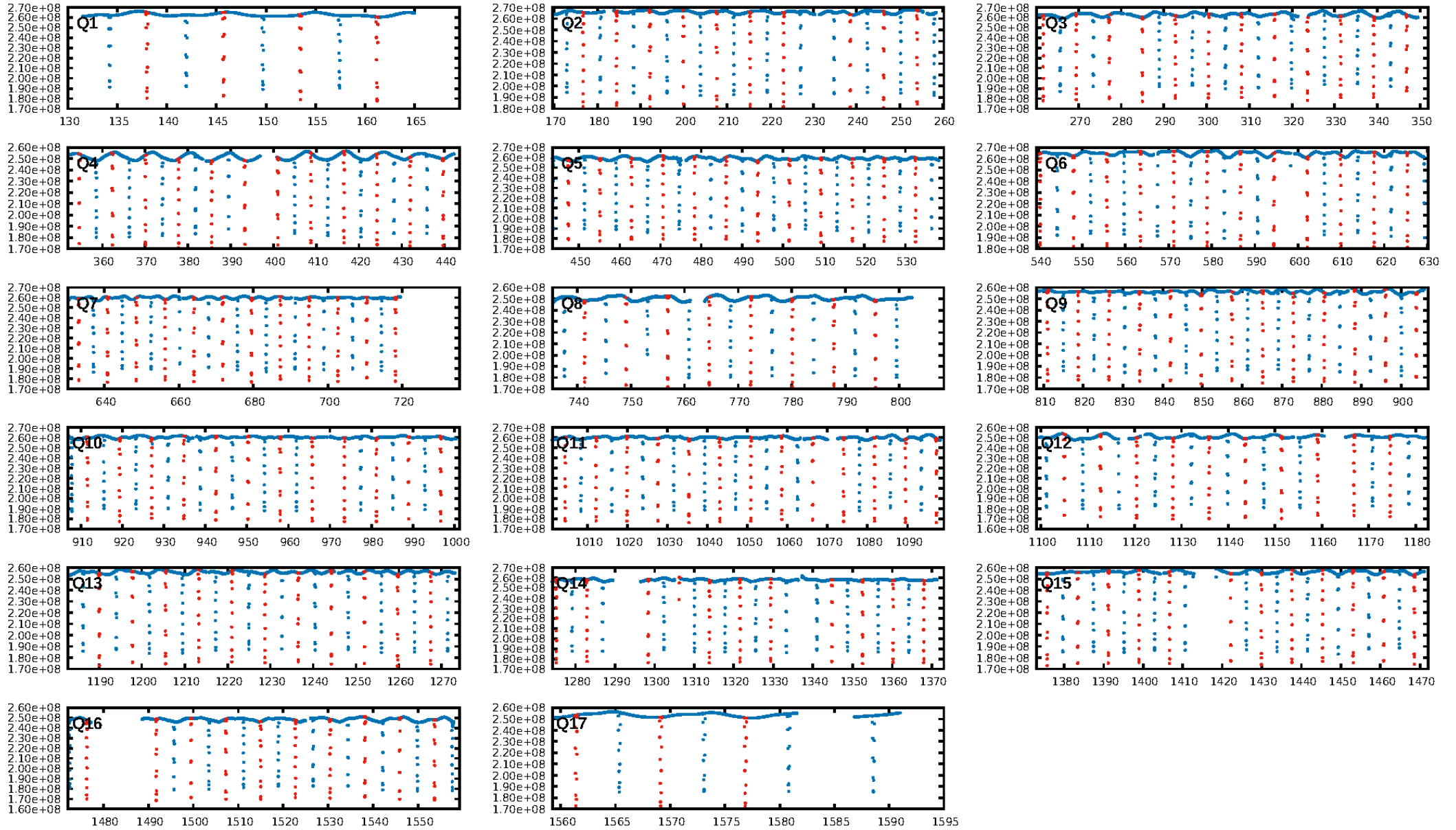
## DV Diagnostic Results:

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: 0.98 [166/169]  
GhostDiagnostic-chr: 1.059  
Centroid-sig: N/A  
Centroid-so: 0.122 arcsec [536.75 $\sigma$ ]  
OotOffset-rm: 0.006 arcsec [0.09 $\sigma$ ]  
KicOffset-rm: 0.066 arcsec [0.98 $\sigma$ ]  
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]

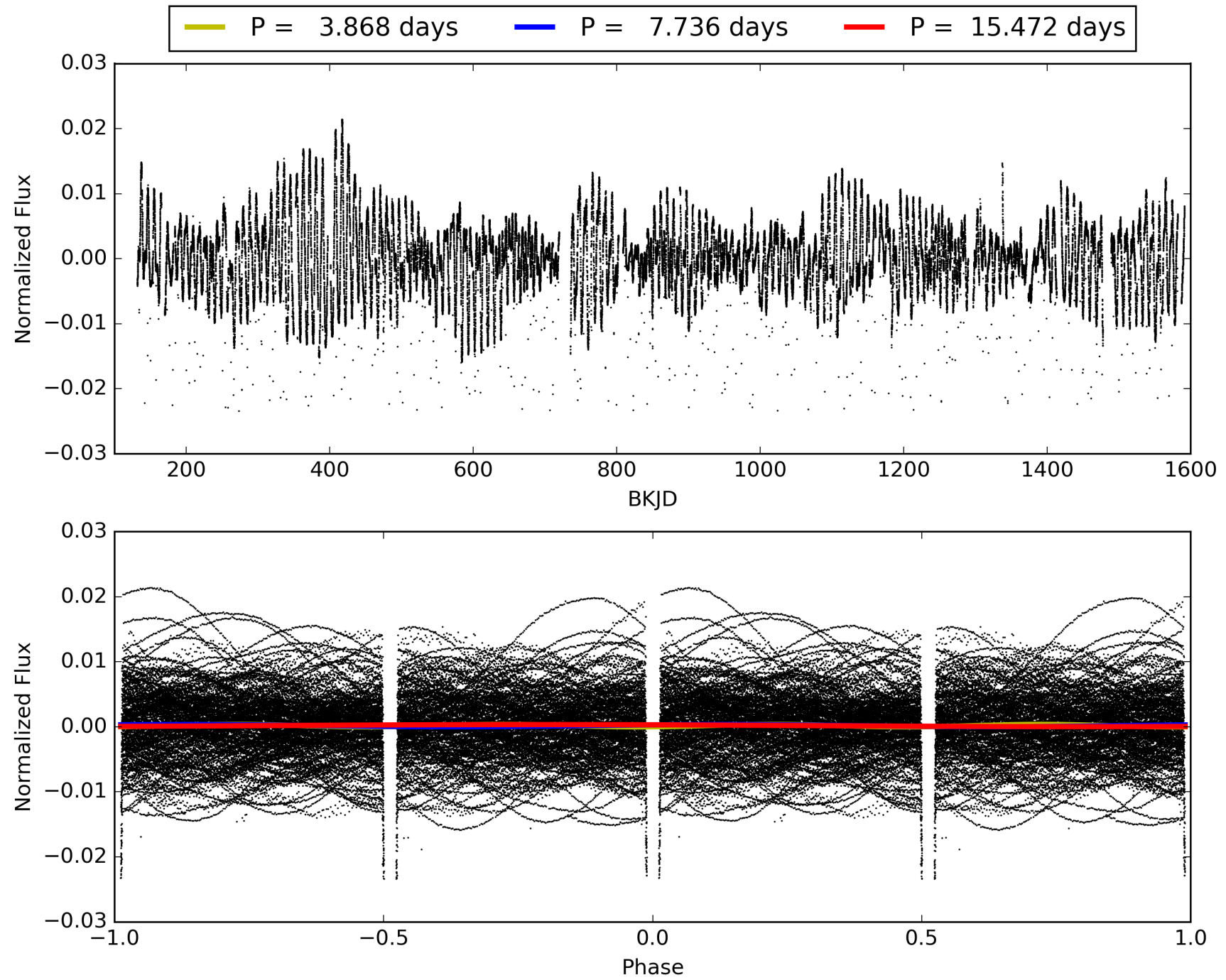
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:56:40 Z

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

# TCE 008364119-01, PDC Light Curves

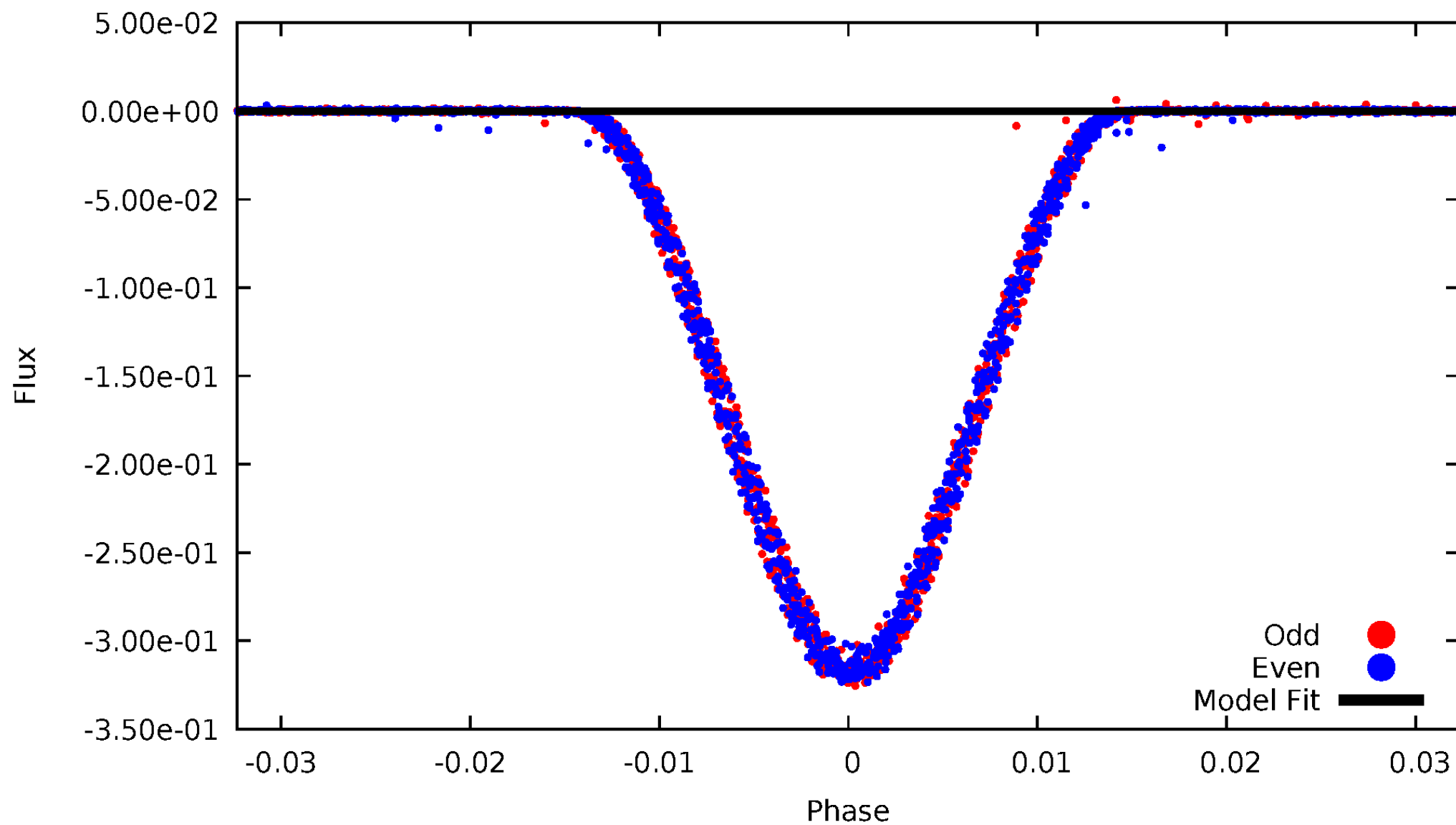


TCE 008364119-01



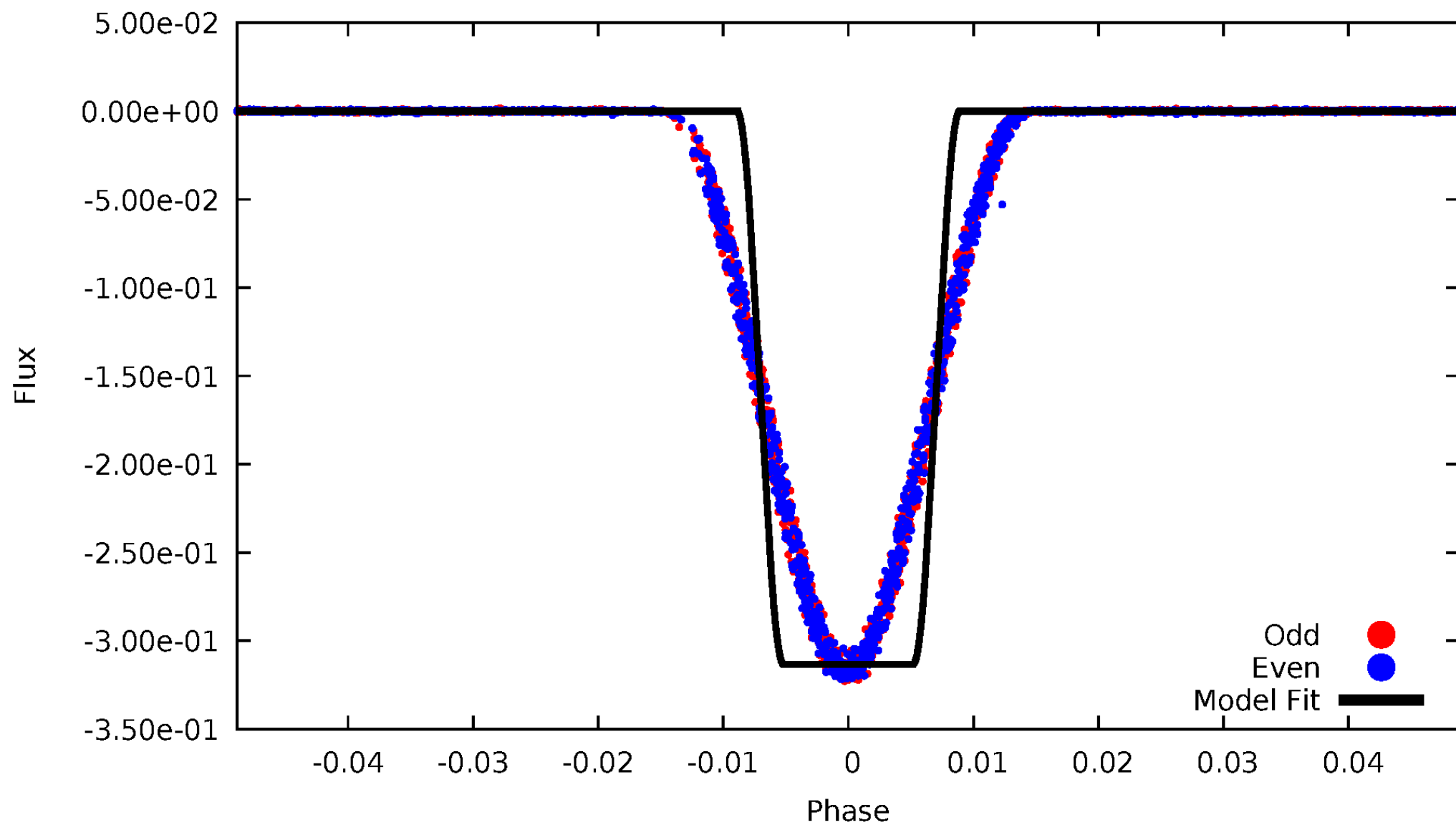
# DV Odd/Even

TCE 008364119-01



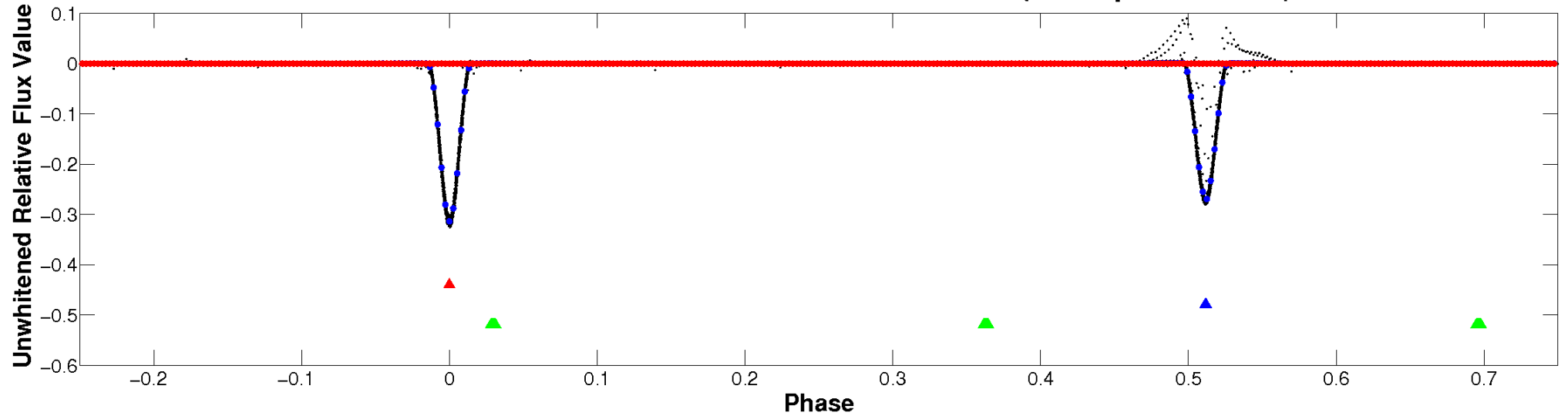
# ALT Odd/Even

TCE 008364119-01



# Non-Whitened Vs. Whitened Light Curve

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

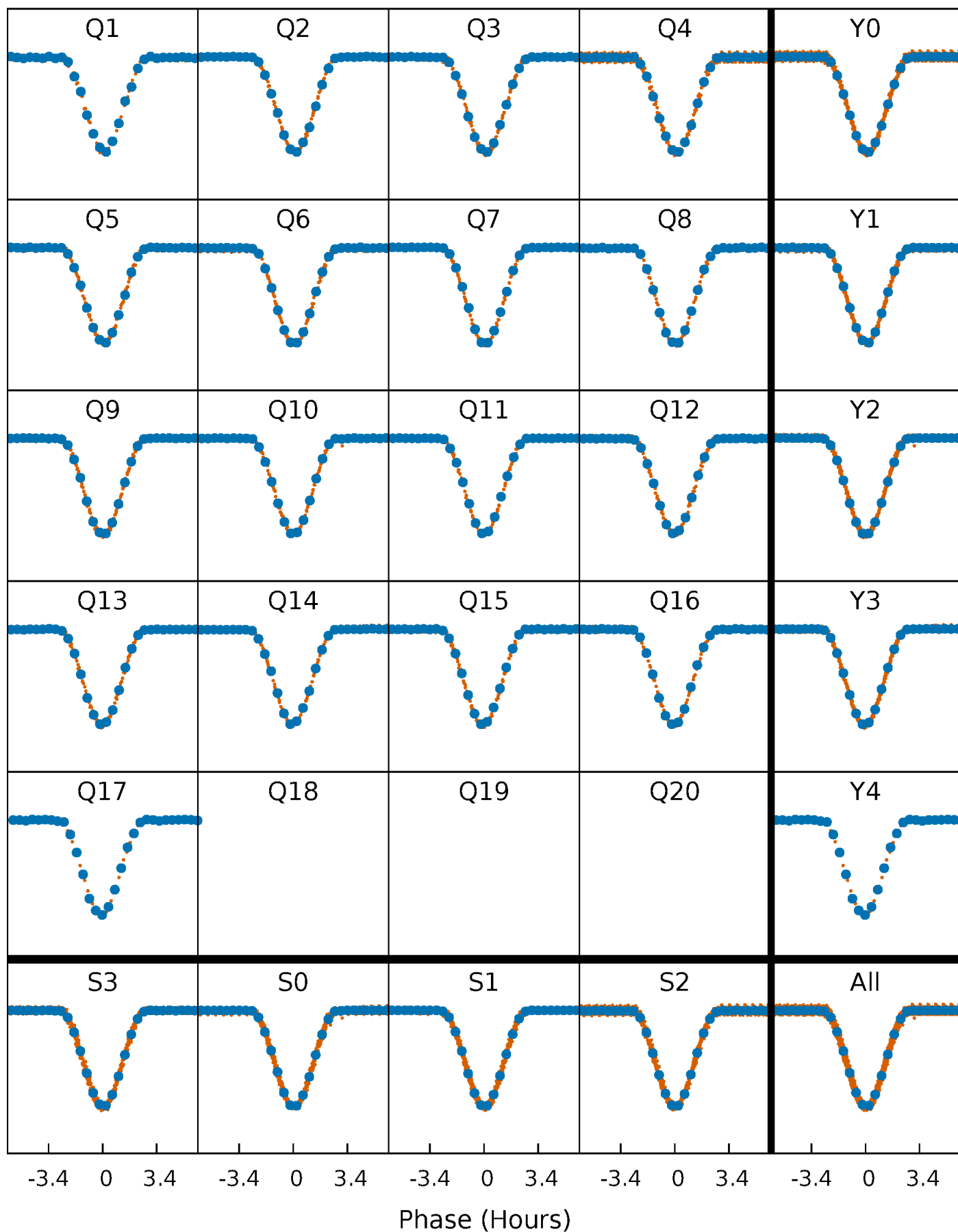


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



# PDC Quarter-Phased Transit Curves

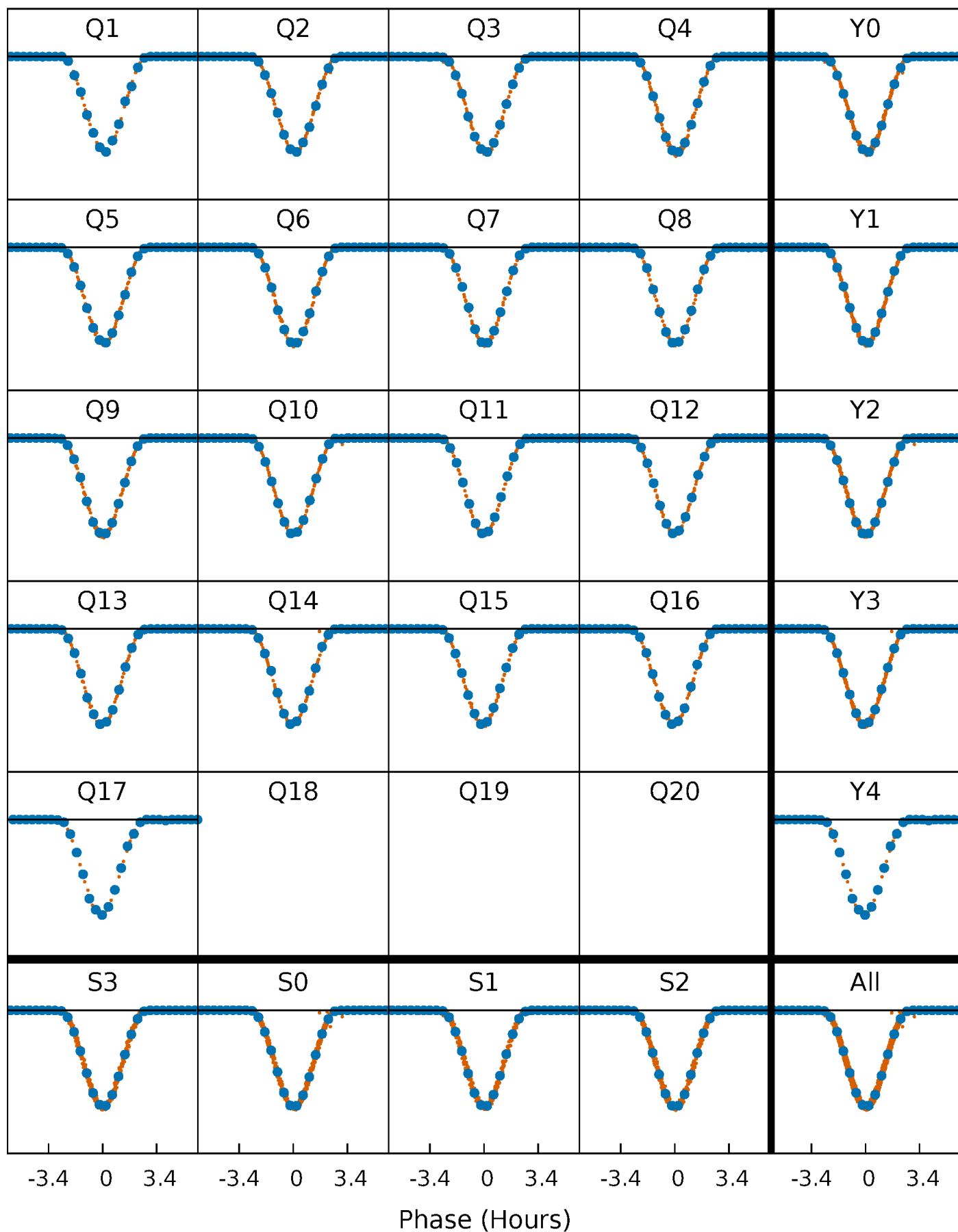
TCE 008364119-01 P= 7.735958 Days  $T_0=137.982029$  (BKJD)





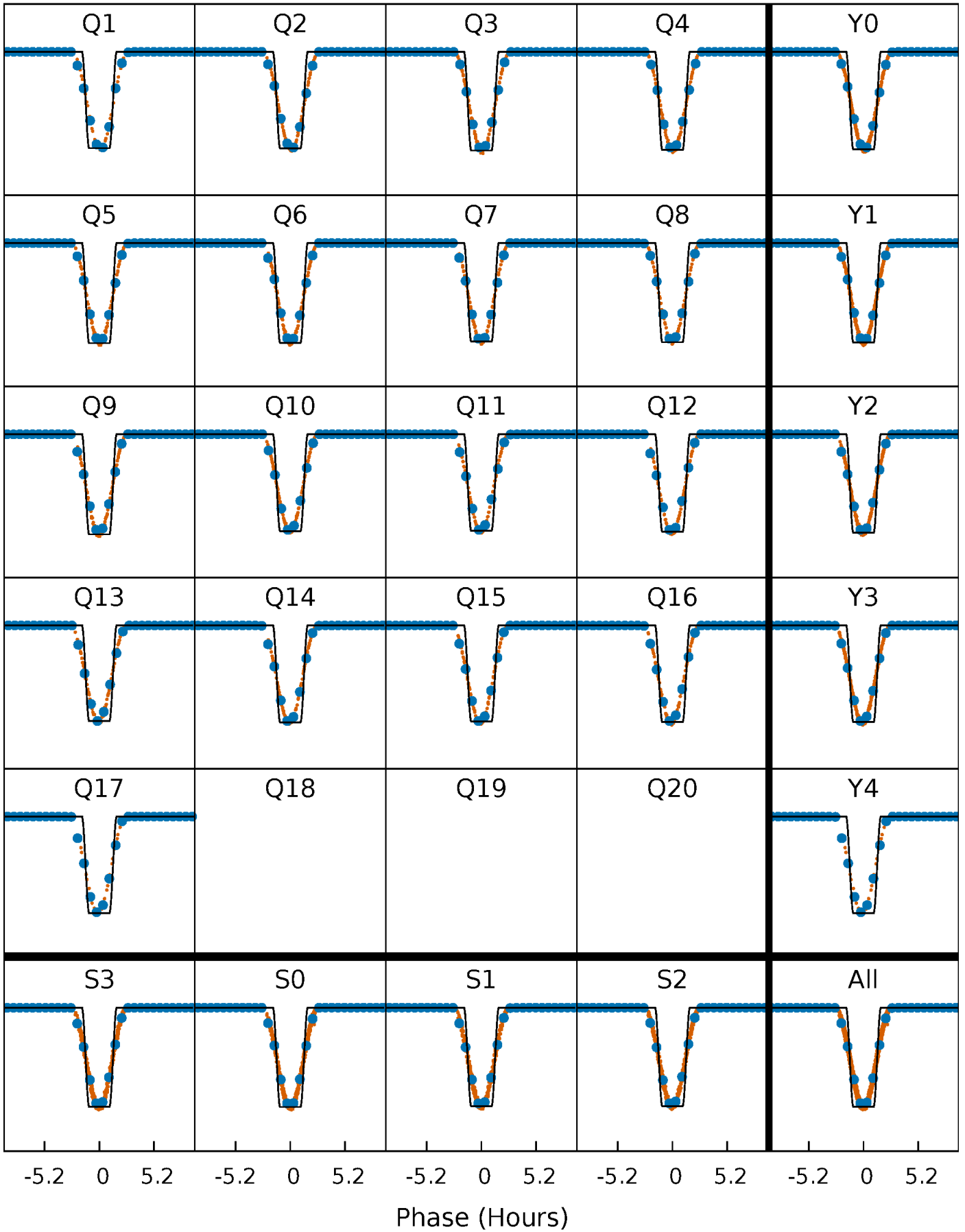
# DV Quarter-Phased Transit Curves

TCE 008364119-01 P= 7.735958 Days  $T_0=137.982029$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

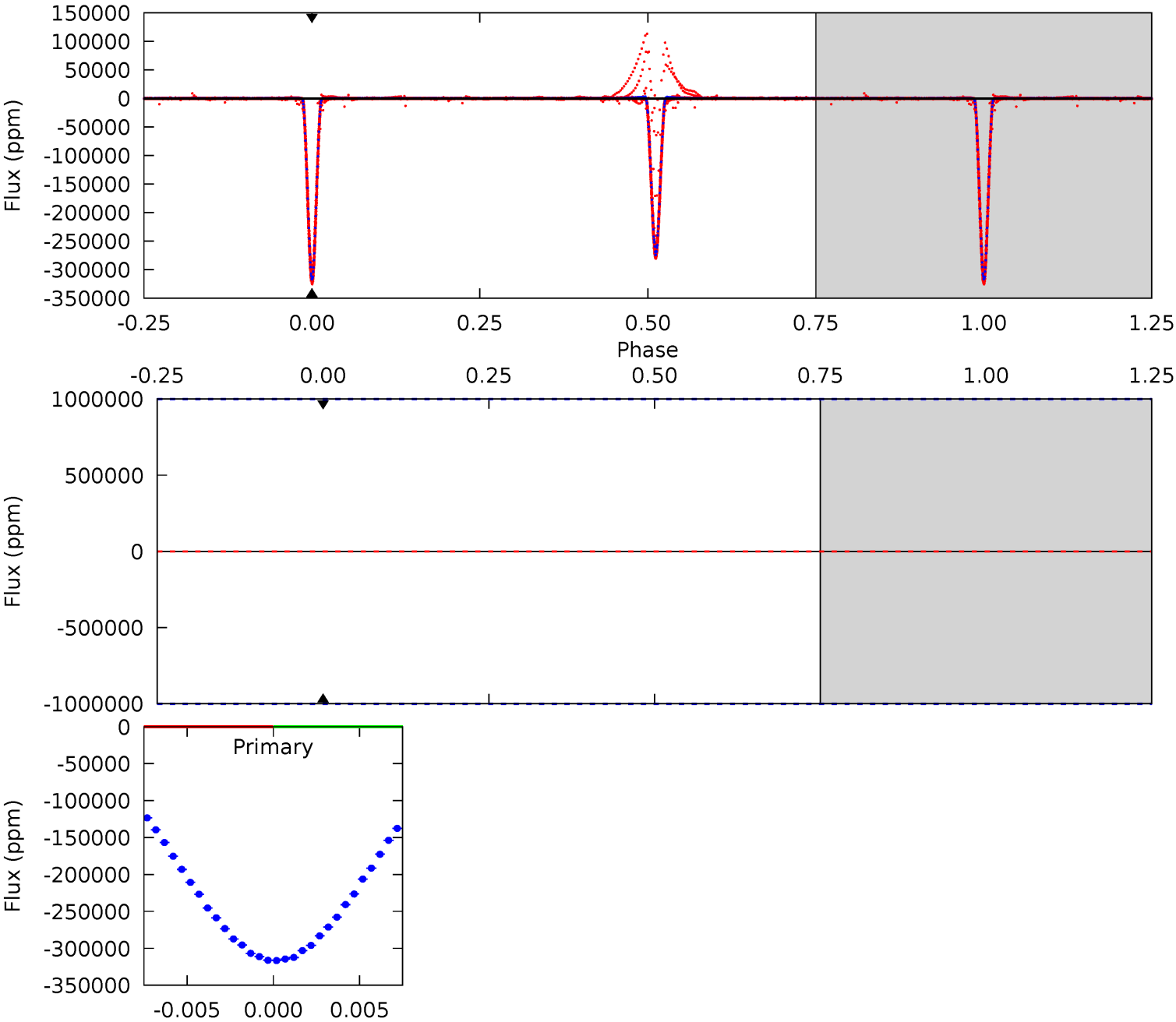
TCE 008364119-01 P= 7.735958 Days  $T_0=137.983867$  (BKJD)



# DV Model-Shift Uniqueness Test

008364119-01, P = 7.735958 Days, E = 130.246071 Days

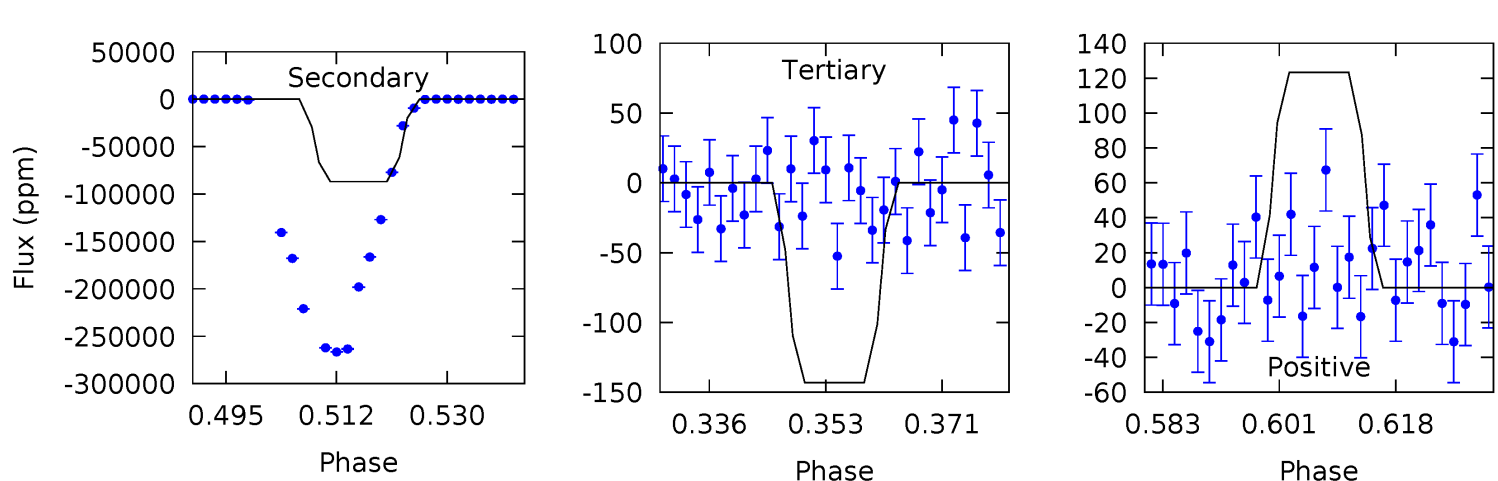
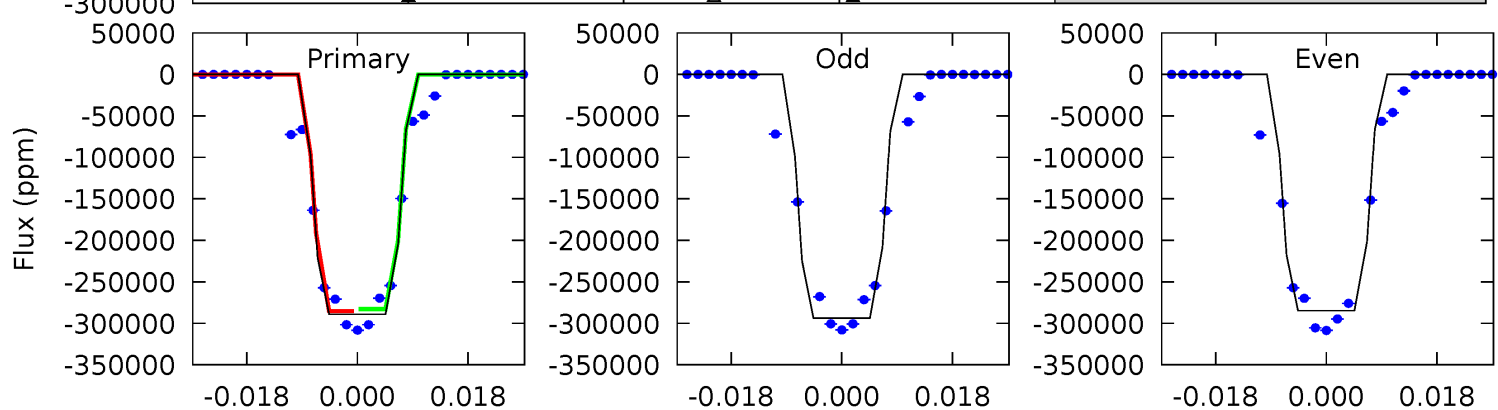
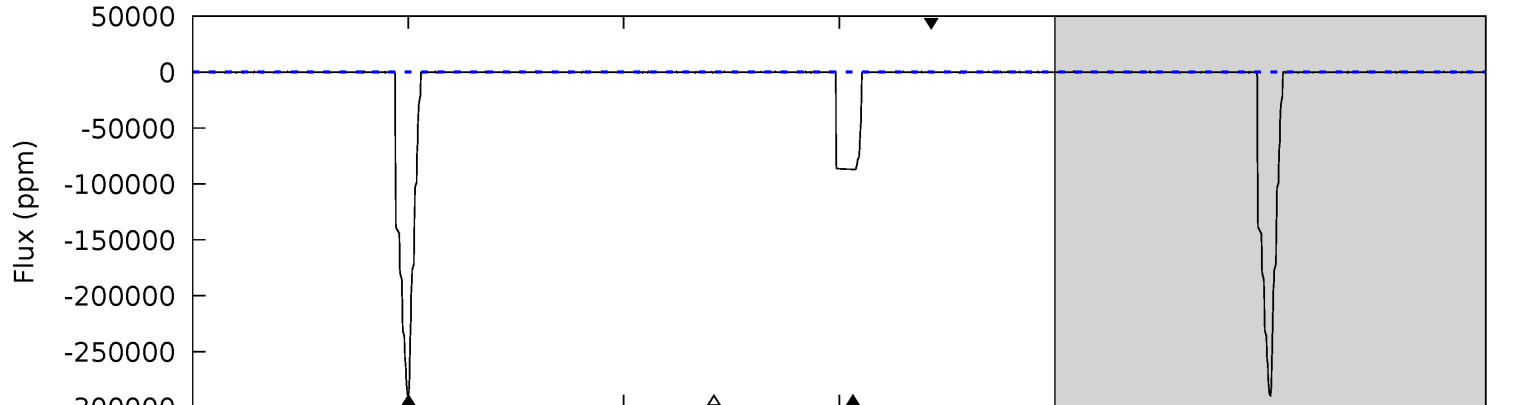
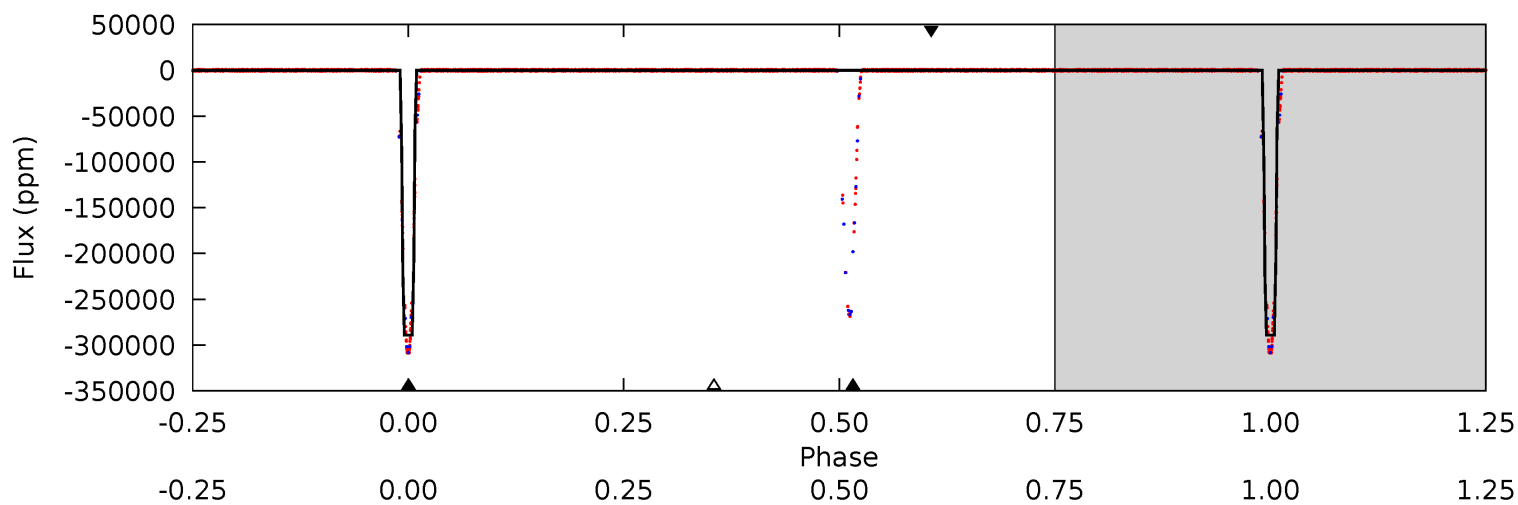
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008364119-01, P = 7.735958 Days, E = 130.247909 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
9208	2766	4.56	3.93	4.92	2.37	49.9	9203	9204	2761	2762	145.2	1.00	0.00	0



### Stellar Parameters For KIC 008364119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5623^{+152}_{-152}$	$4.596^{+0.036}_{-0.144}$	$-0.400^{+0.300}_{-0.300}$	$0.763^{+0.169}_{-0.056}$	$0.853^{+0.080}_{-0.097}$	$2.704^{+0.493}_{-1.123}$
	+3%/-3%	+1%/-3%	+75%/-75%	+22%/-7%	+9%/-11%	+18%/-42%
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 008364119-01 / KOI 7024.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$0 \pm 1000000$	$33.74^{+9.37}_{-9.33}$	$1147^{+59}_{-40}$	$3010^{+2352}_{-8091}$	$11^{+301}_{-259}$
Alt.	$-86857 \pm 31$	$48.18^{+10.02}_{-8.96}$	$1147^{+50}_{-46}$	$4362^{+369}_{-270}$	$115^{+58}_{-35}$

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

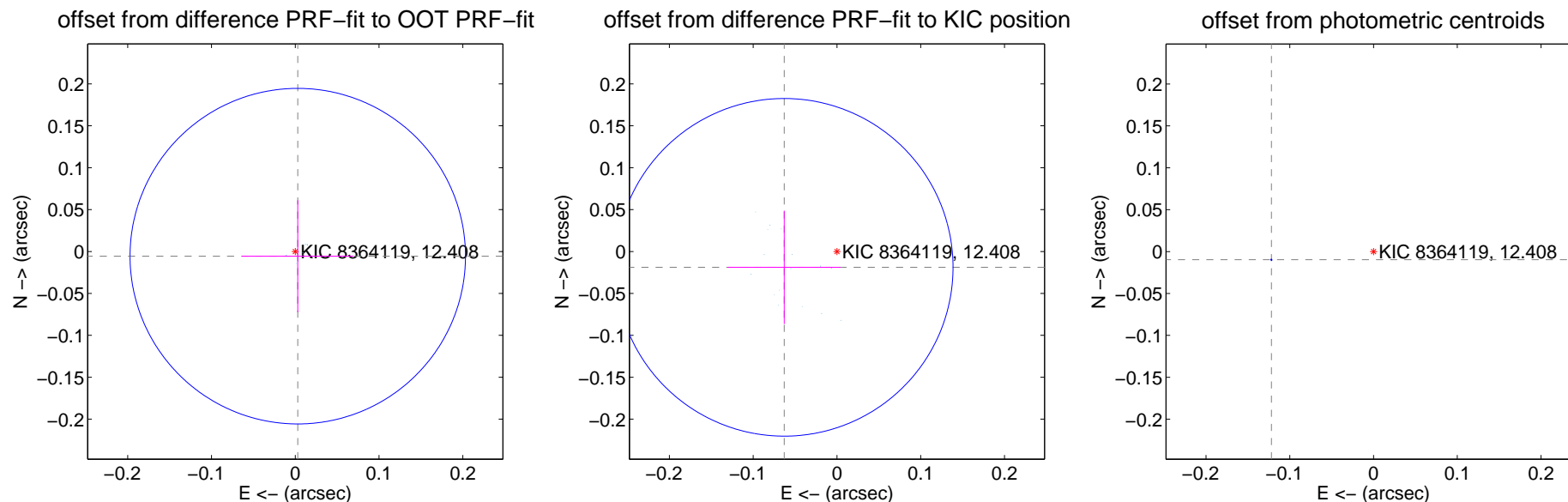
## DV Centroid Data

Supplemental centroid analysis for 008364119-01. Kepler magnitude: 12.41. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

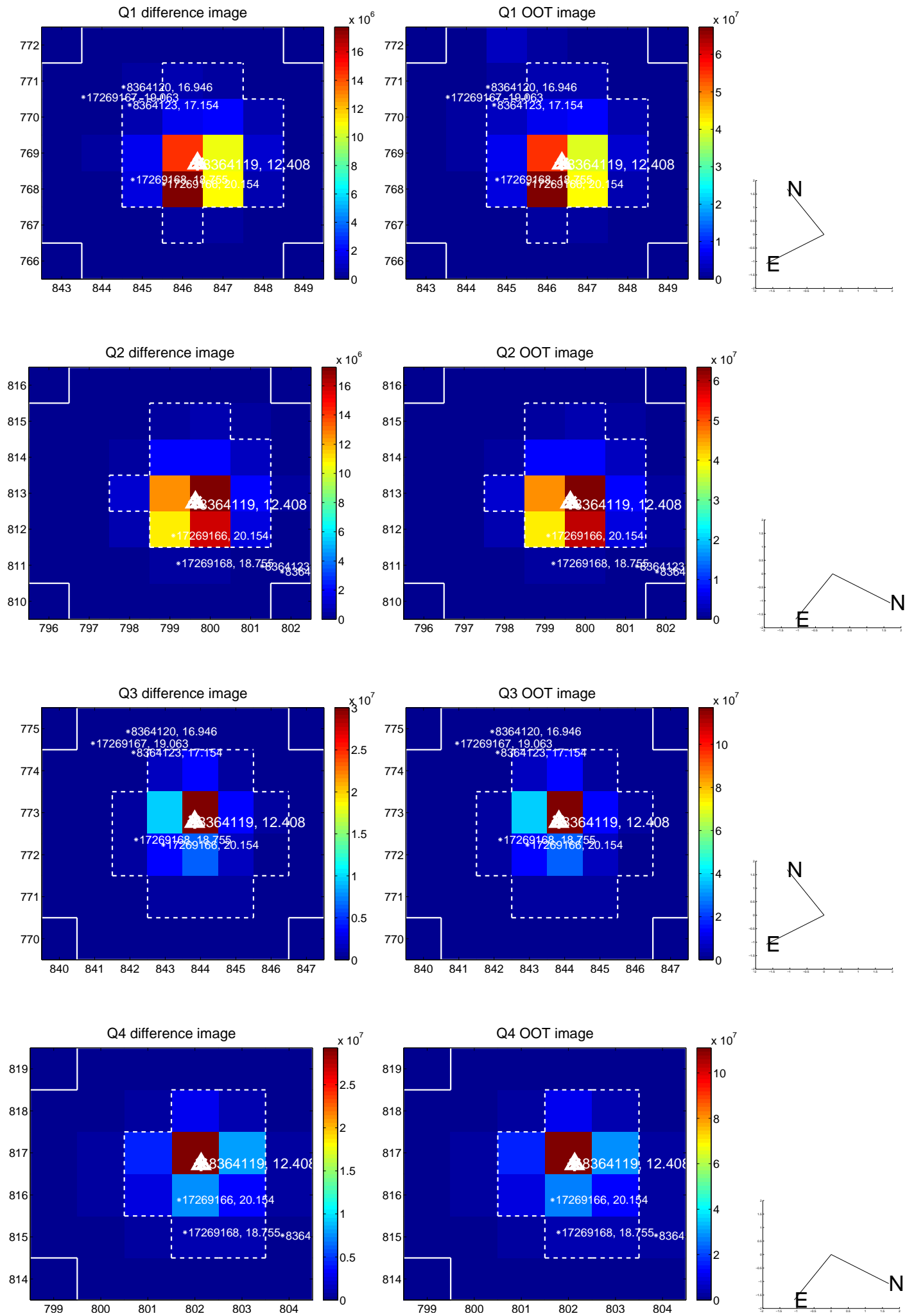
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.006 \pm 0.067$	0.09	$-0.003 \pm 0.067$	$-0.006 \pm 0.067$
PRF-fit source offset from KIC position	$0.066 \pm 0.067$	0.98	$0.063 \pm 0.067$	$-0.019 \pm 0.068$
photometric centroid source offset	$0.12 \pm 0.00$	<b>536.75</b>	$0.12 \pm 0.00$	$-0.01 \pm 0.00$

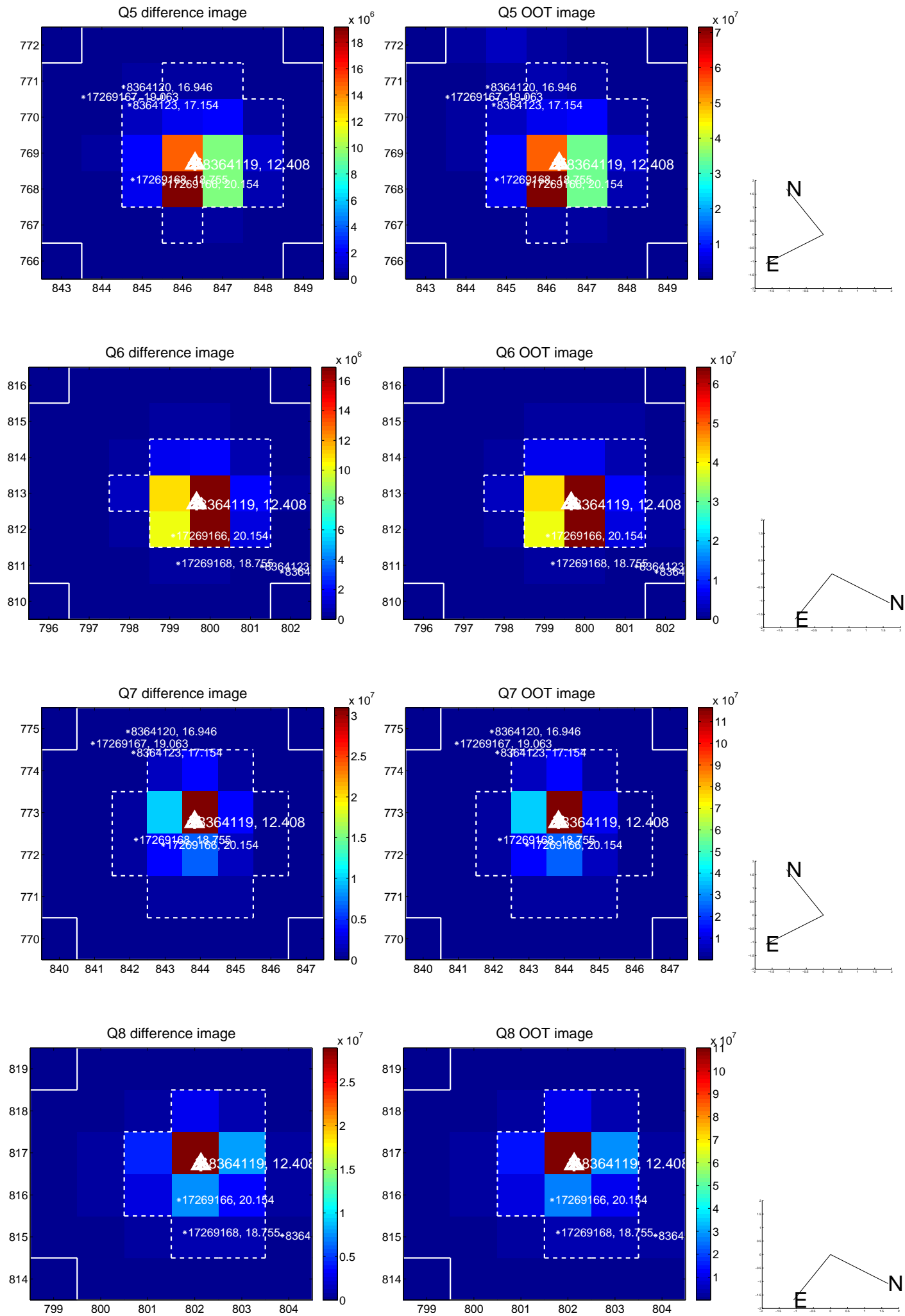


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

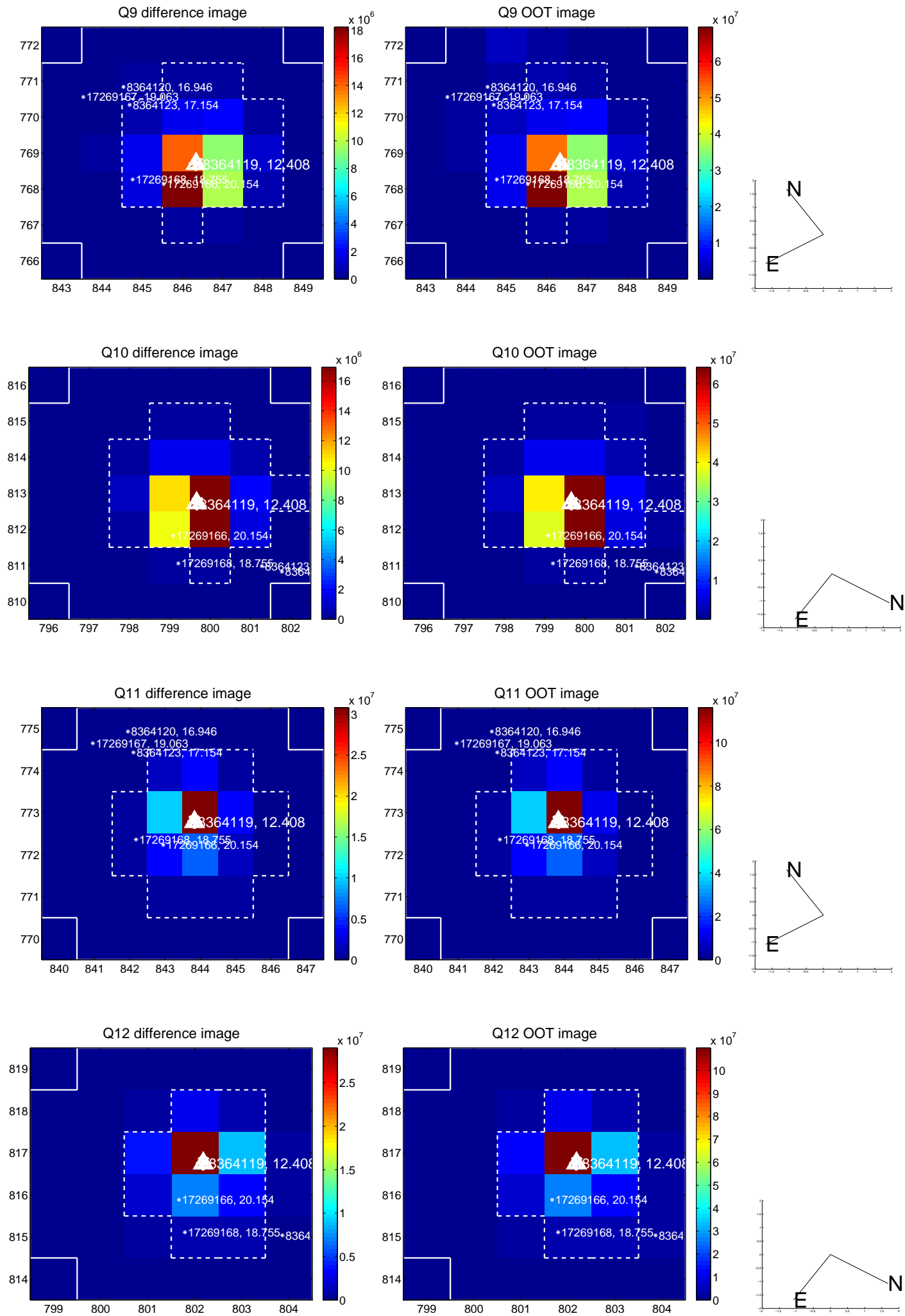


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

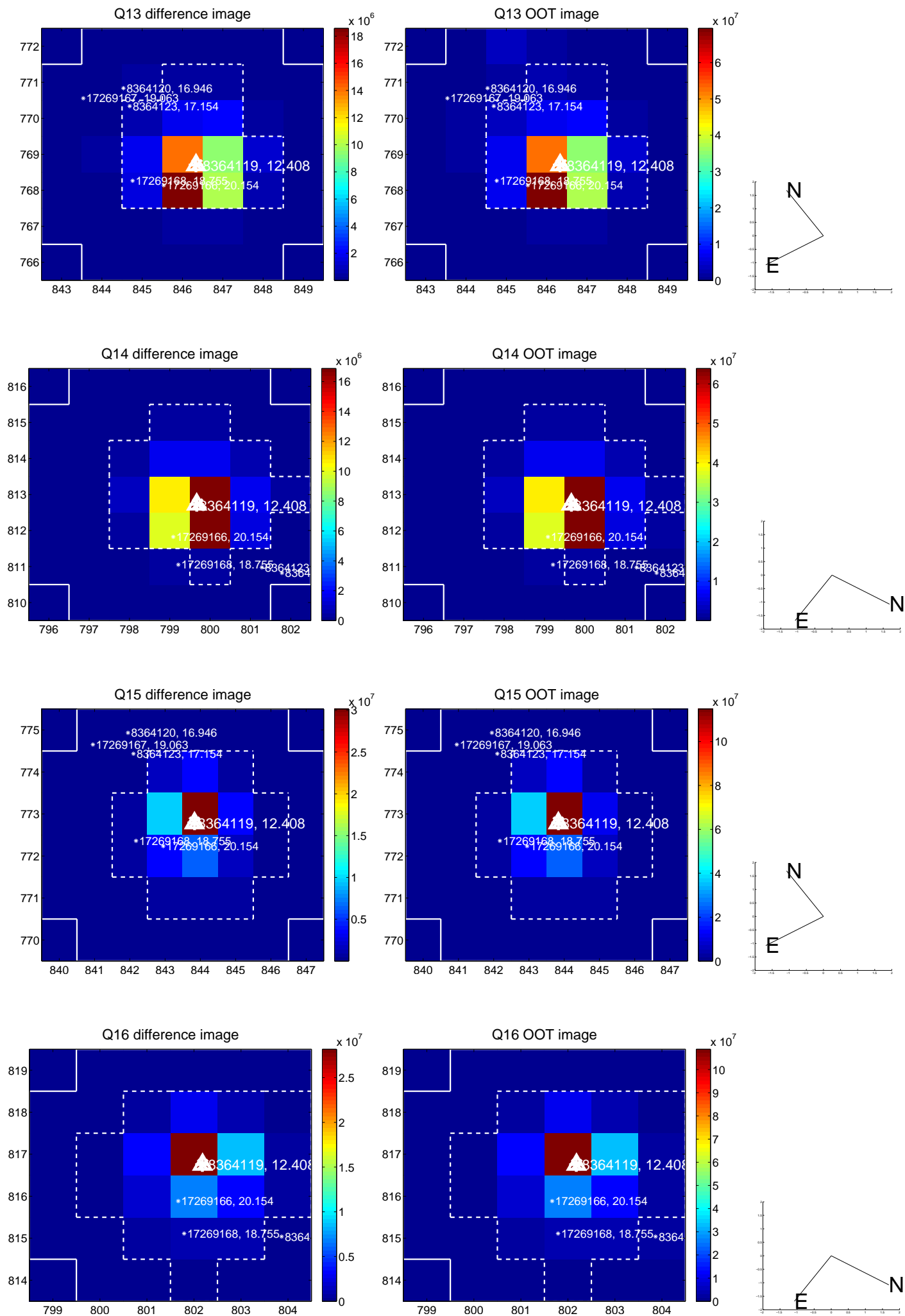




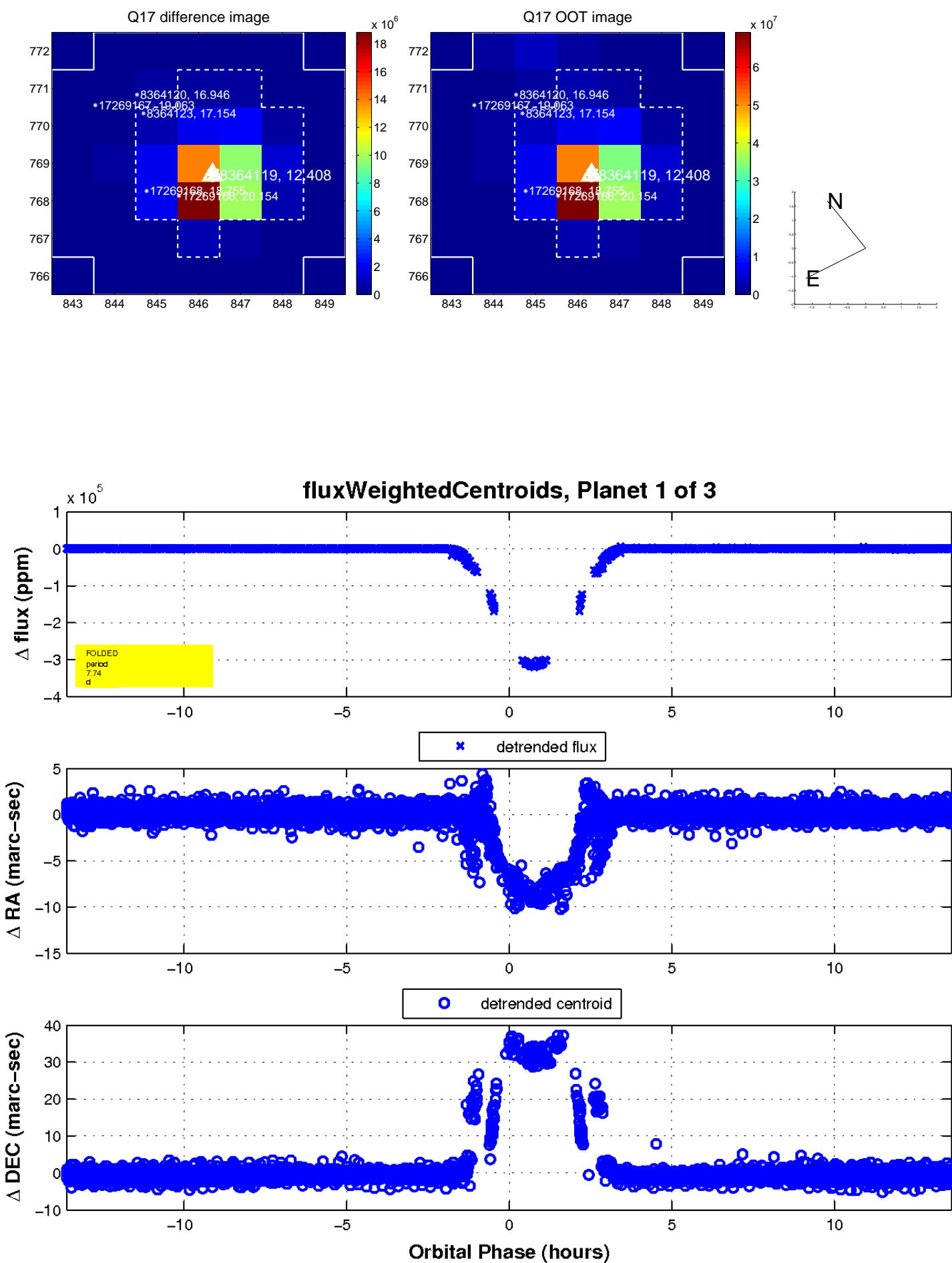
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

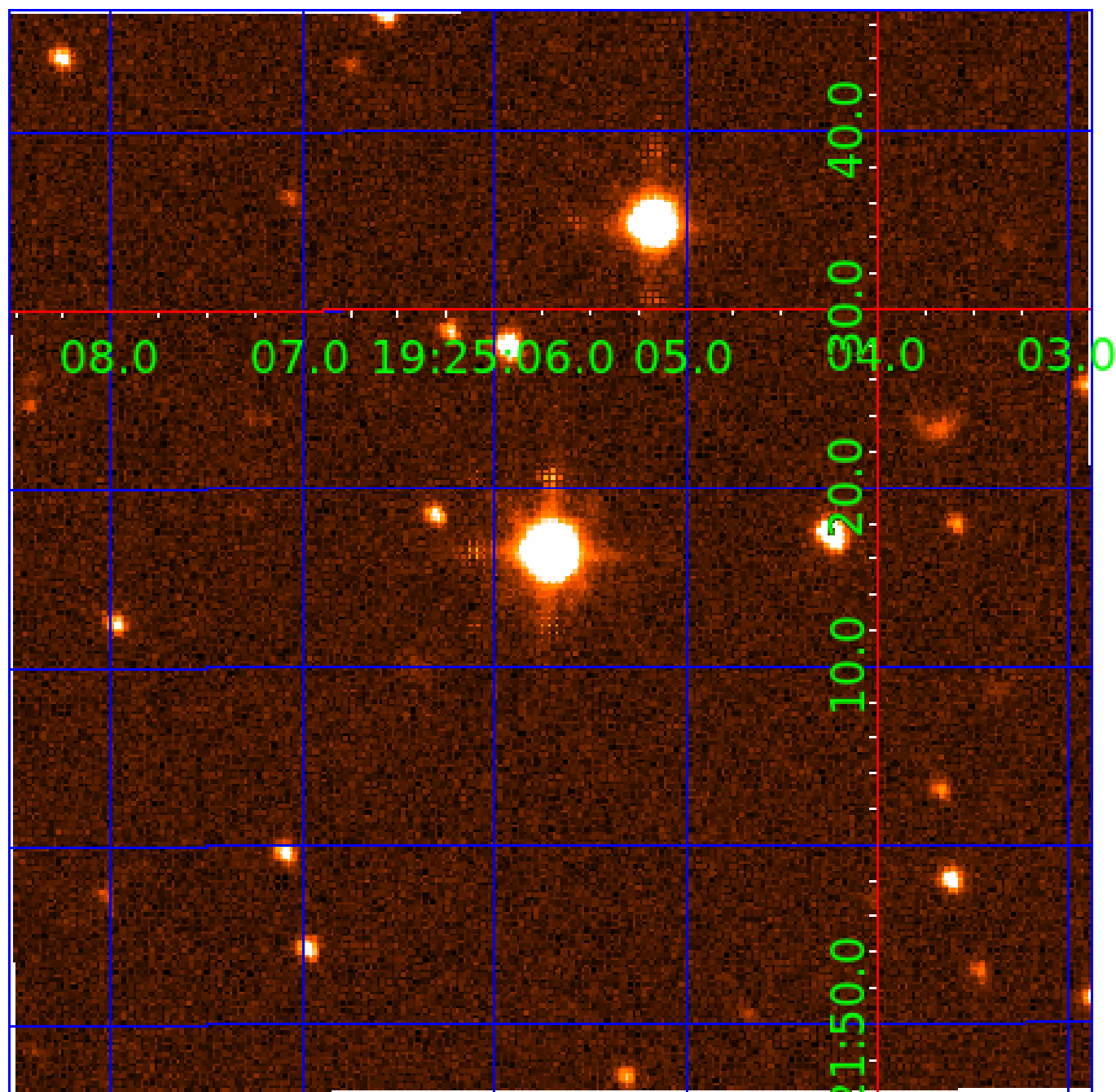


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 008364119

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008364119-01	OBS	7024.01	7.735958	137.982029	315219.7	3.000	32753.1	-1.0	0.76	5623	32.50	100.10
008364119-02	OBS	No	7.735931	134.207028	274328.1	3.000	30167.7	-1.0	0.76	5623	31.42	100.10
008364119-03	OBS	No	5.157218	135.645384	20310.1	15.000	3668.0	-1.0	0.76	5623	10.79	171.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008364119-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008364119-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008364119-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

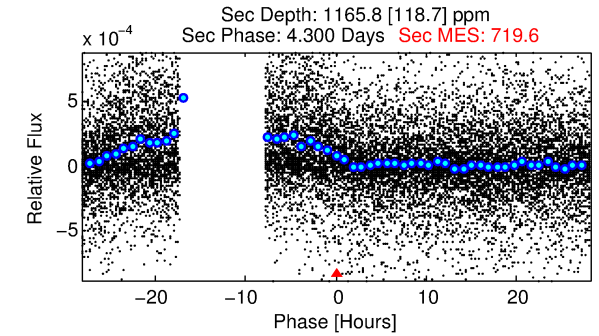
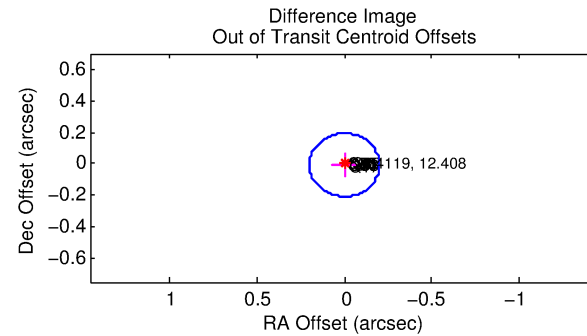
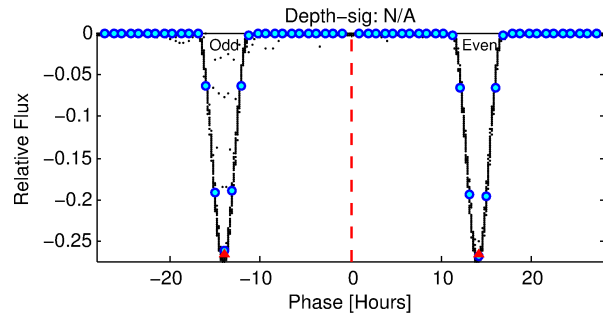
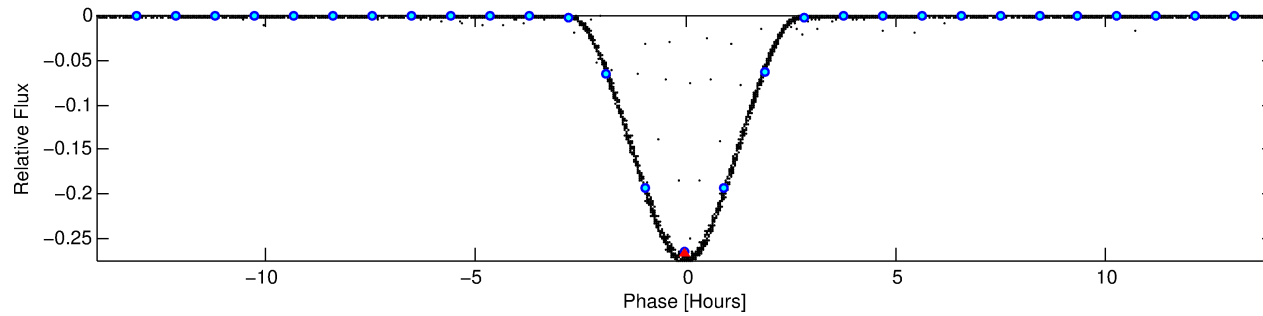
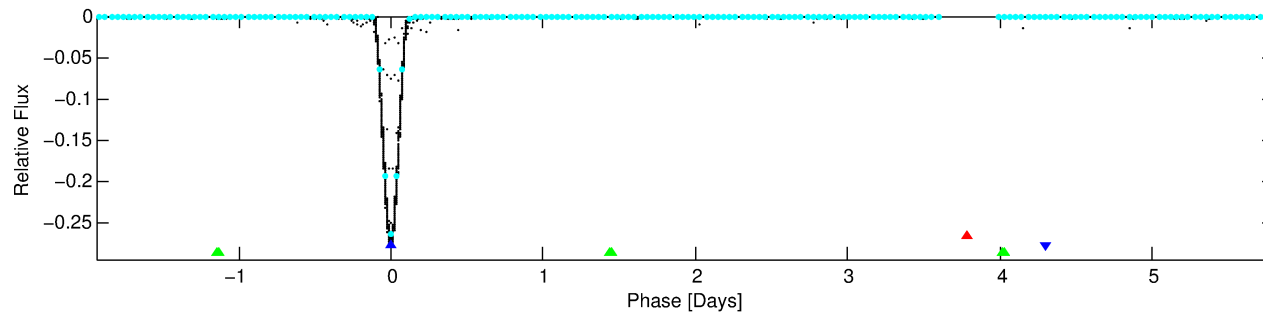
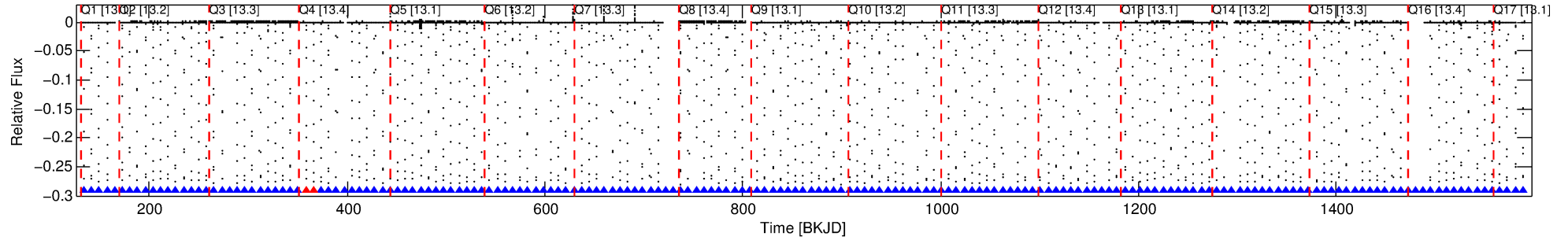
## Ephemeris Match Information For 008364119-02

No Significant Match Found

# DV One-Page Summary

KIC: 8364119 Candidate: 2 of 3 Period: 7.736 d  
KOI: K07024 Corr: No Ephemeris Match

Kp: 12.41 R\*: 0.76 Rs Teff: 5623.0 K Logg: 4.60 Fe/H: -0.400



## TPS TCE Results:

Period = 7.73593 d  
Epoch = 134.2070 BKJD

DV fit results are unavailable

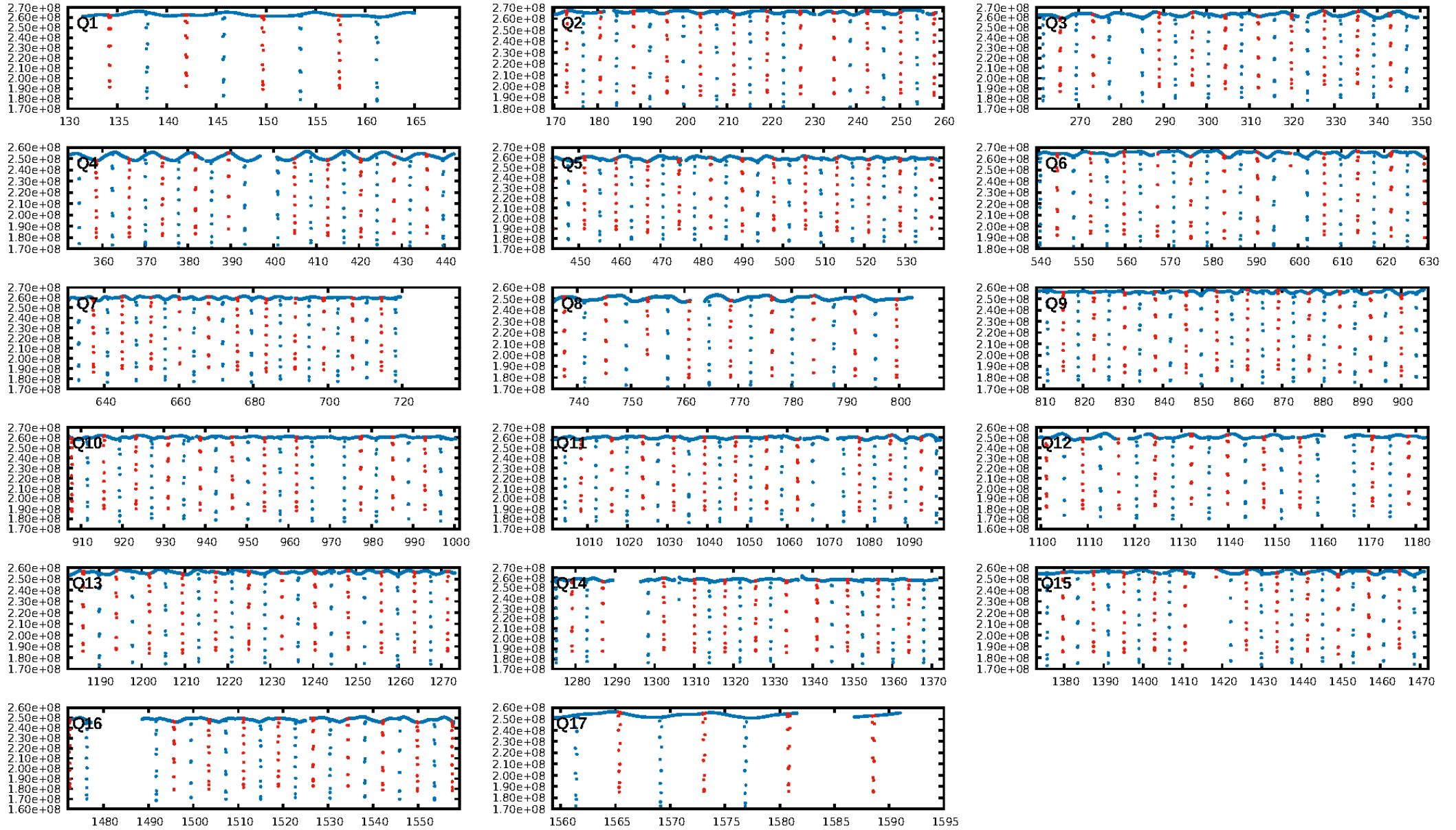
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.05 $\sigma$ ]  
LongPeriod-sig: 0.0% [0.00 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [161/163]  
GhostDiagnostic-chr: 0.697  
Centroid-sig: N/A  
Centroid-so: 0.122 arcsec [503.81 $\sigma$ ]  
OotOffset-rm: 0.007 arcsec [0.10 $\sigma$ ]  
KicOffset-rm: 0.071 arcsec [1.06 $\sigma$ ]  
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]

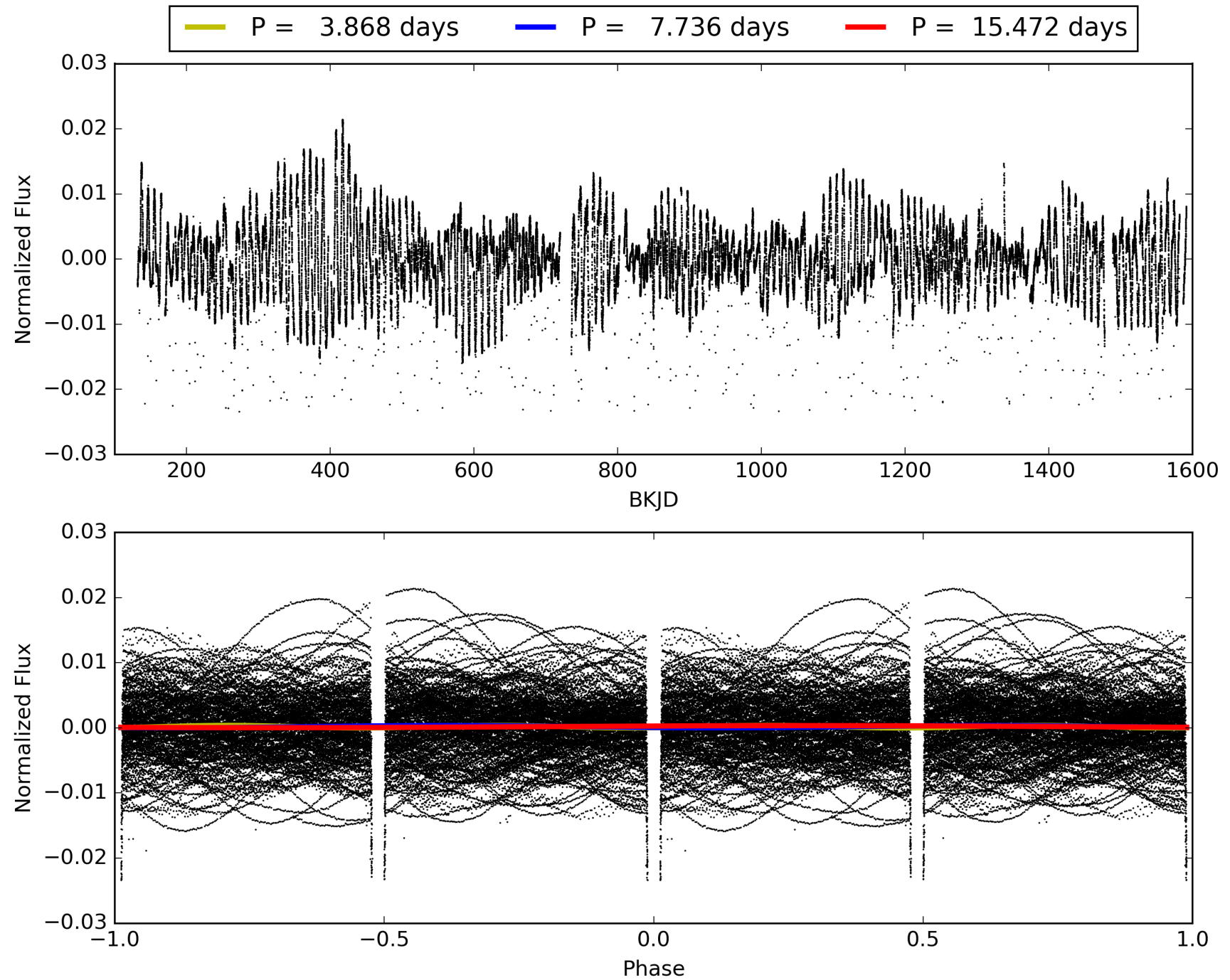
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:56:44 Z

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

# TCE 008364119-02, PDC Light Curves



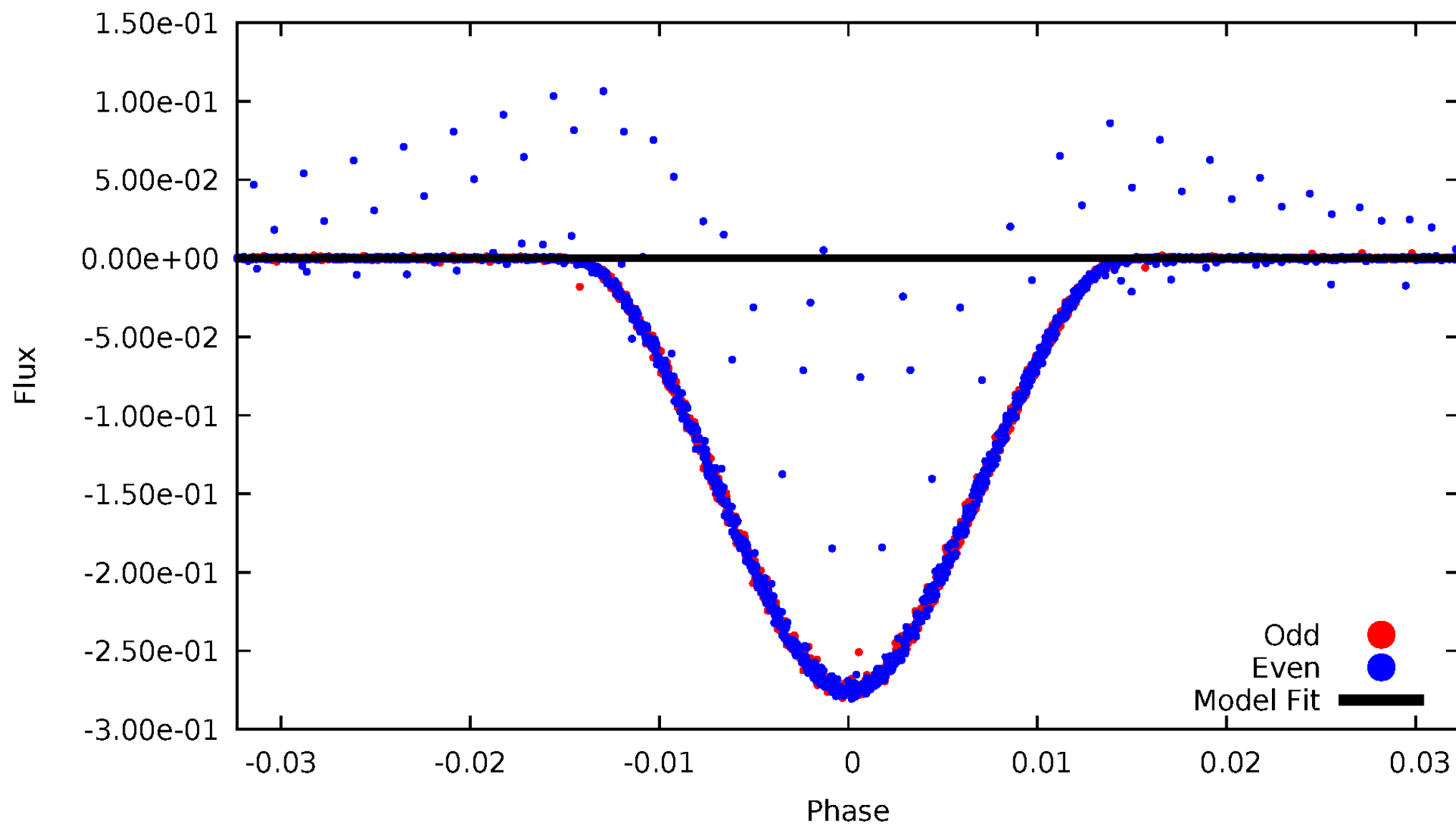
# TCE 008364119-02





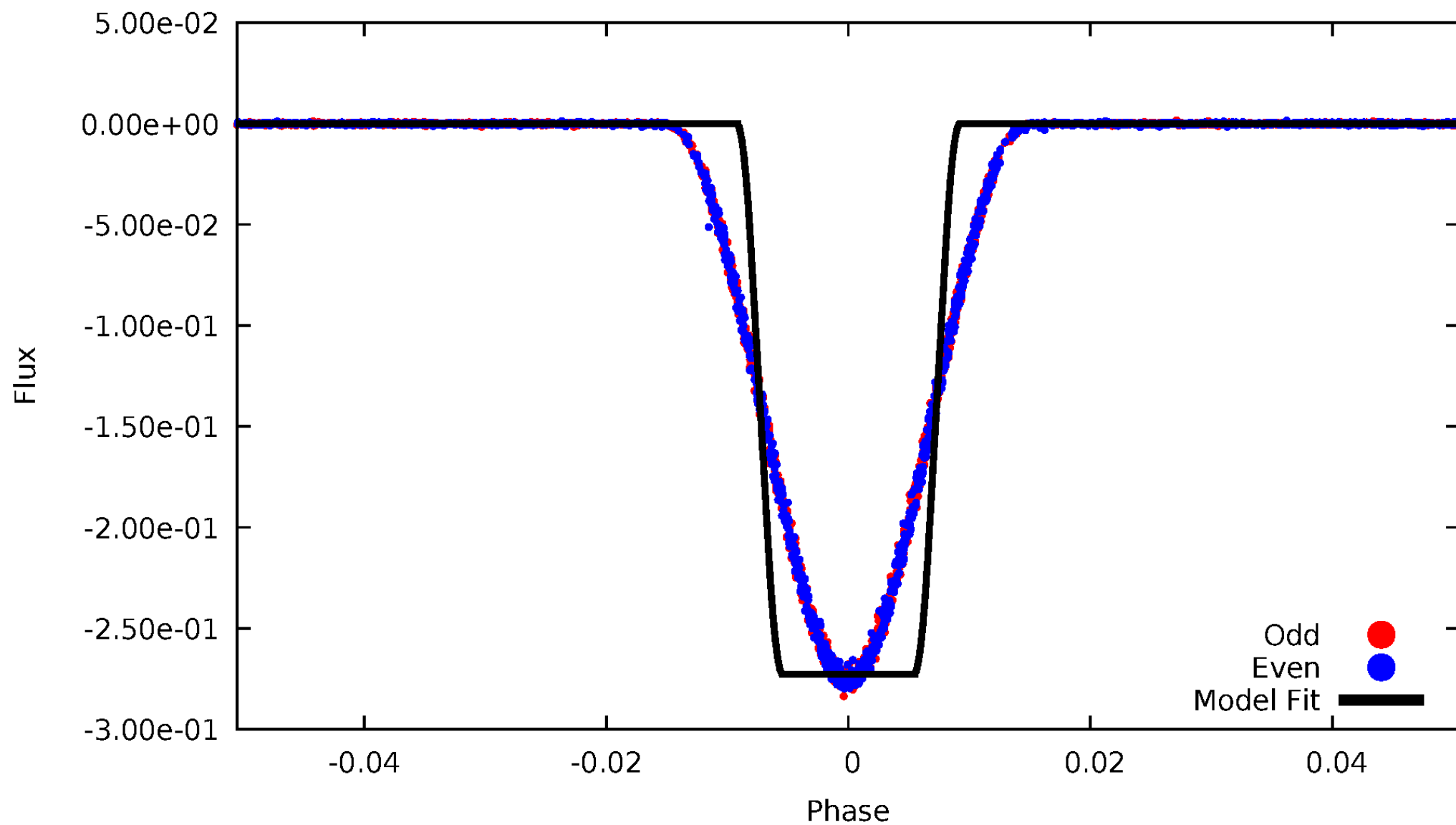
# DV Odd/Even

TCE 008364119-02



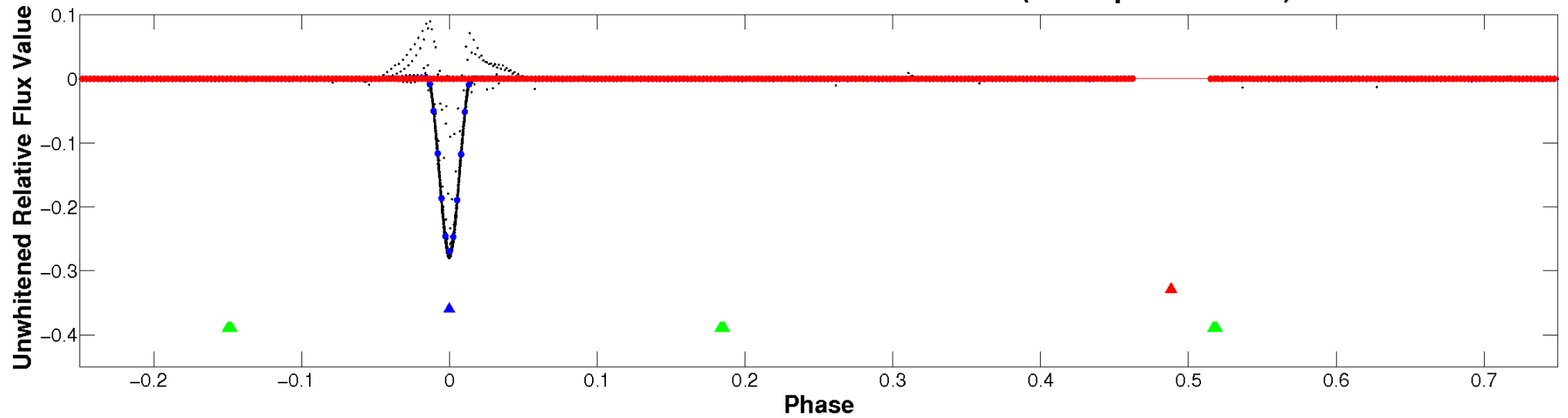
# ALT Odd/Even

TCE 008364119-02

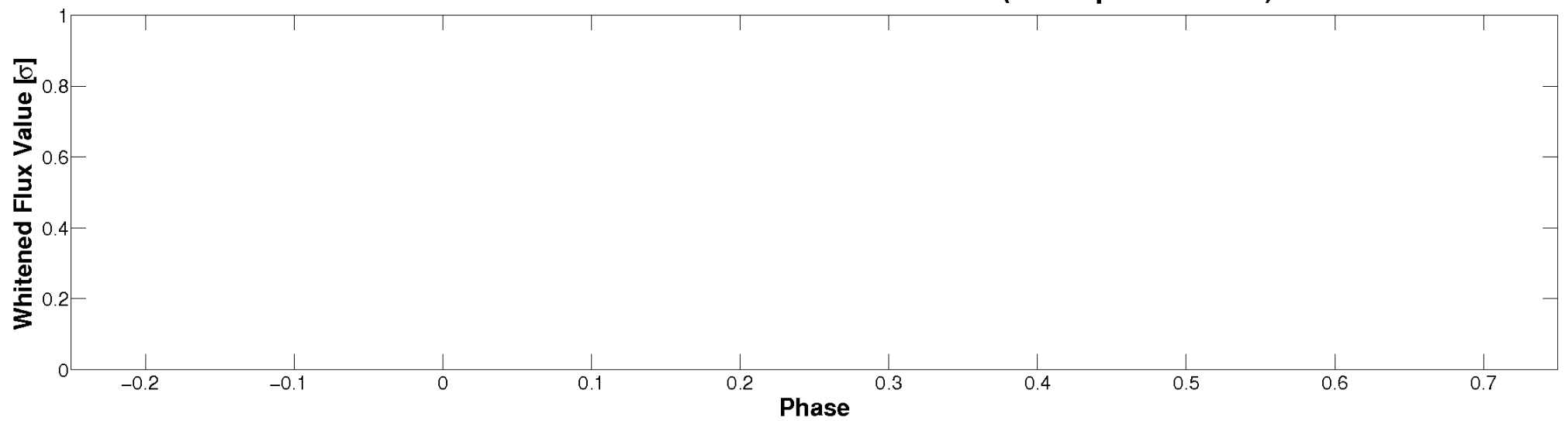


# Non-Whitened Vs. Whitened Light Curve

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

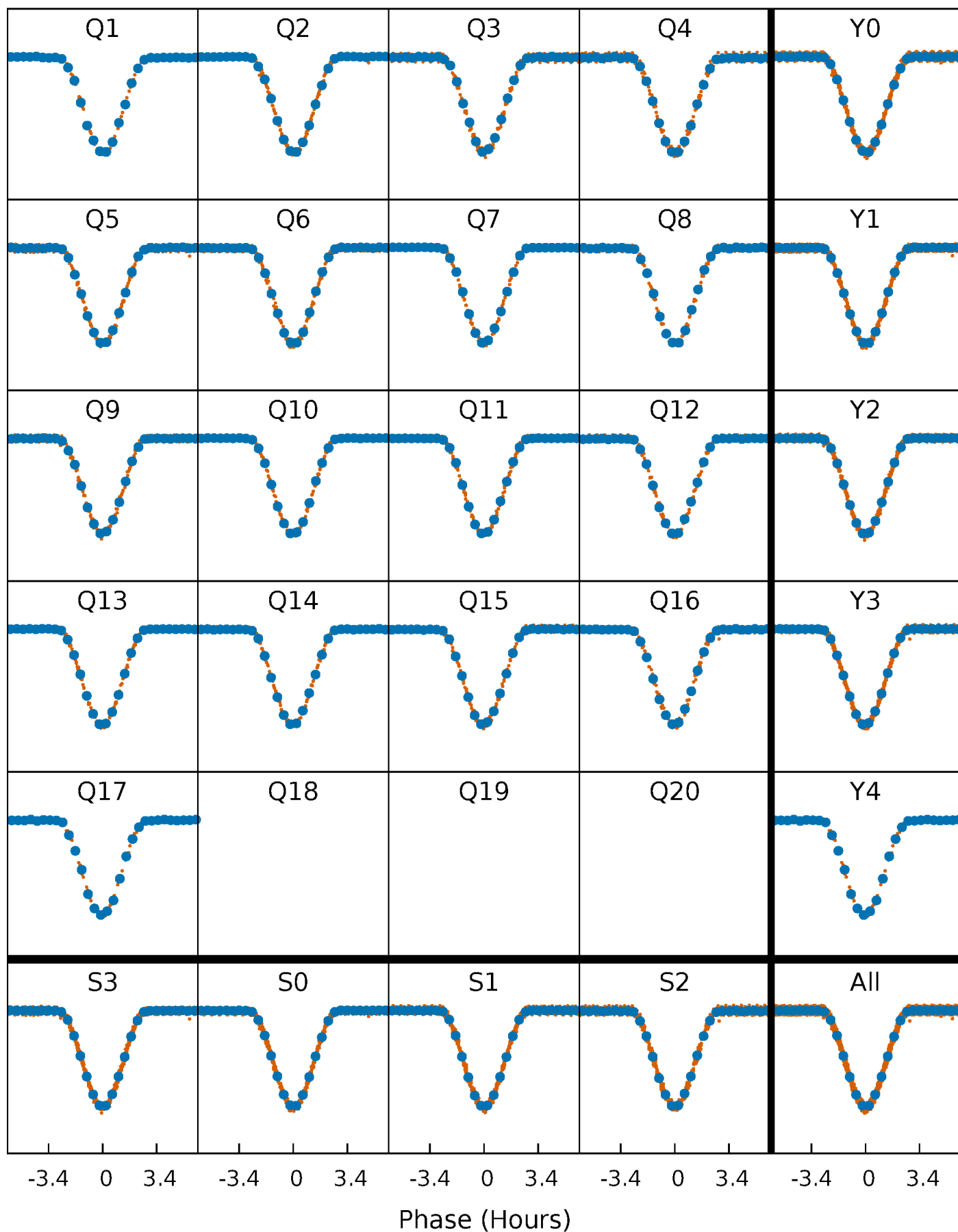


**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



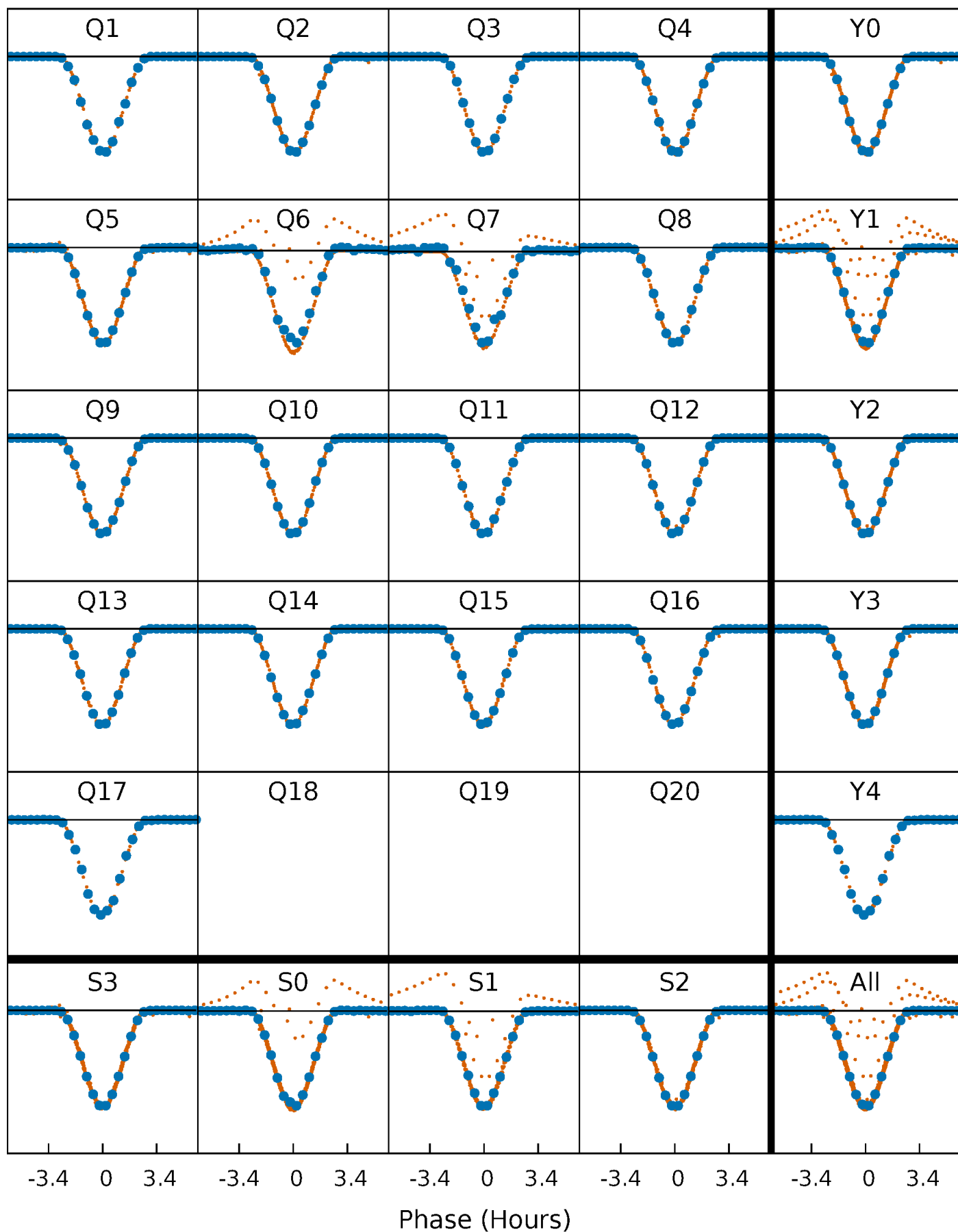
# PDC Quarter-Phased Transit Curves

TCE 008364119-02 P= 7.735931 Days  $T_0=134.207028$  (BKJD)



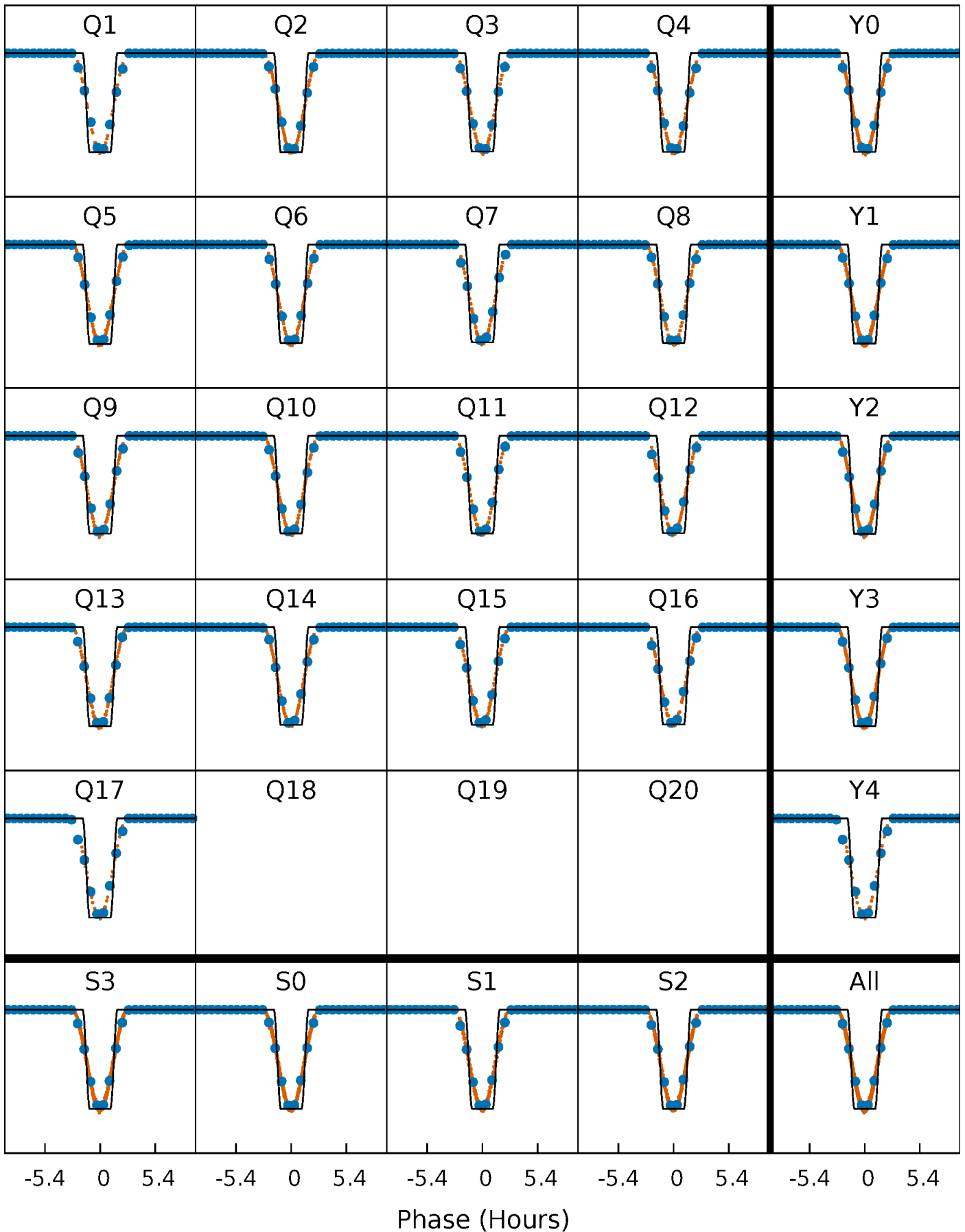
# DV Quarter-Phased Transit Curves

TCE 008364119-02 P= 7.735931 Days  $T_0=134.207028$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

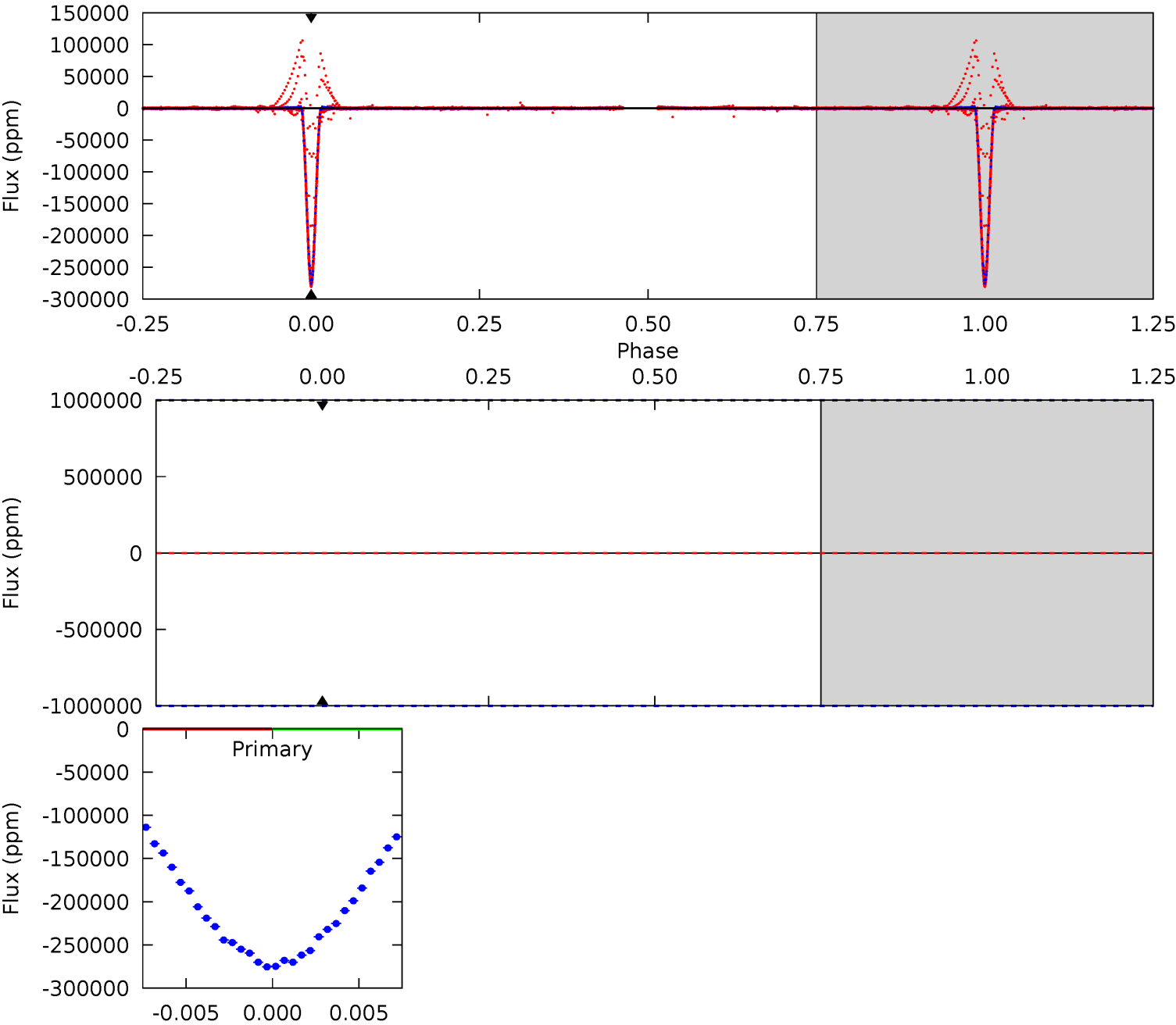
TCE 008364119-02     $P = 7.735931$  Days     $T_0 = 134.207551$  (BKJD)



# DV Model-Shift Uniqueness Test

008364119-02, P = 7.735931 Days, E = 126.471097 Days

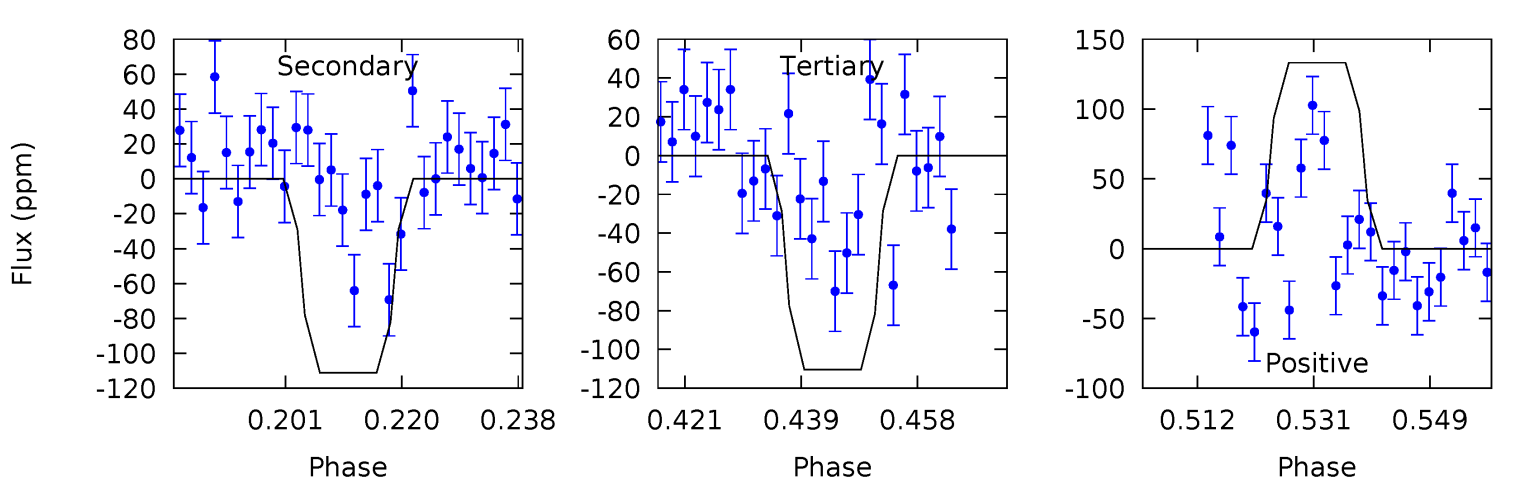
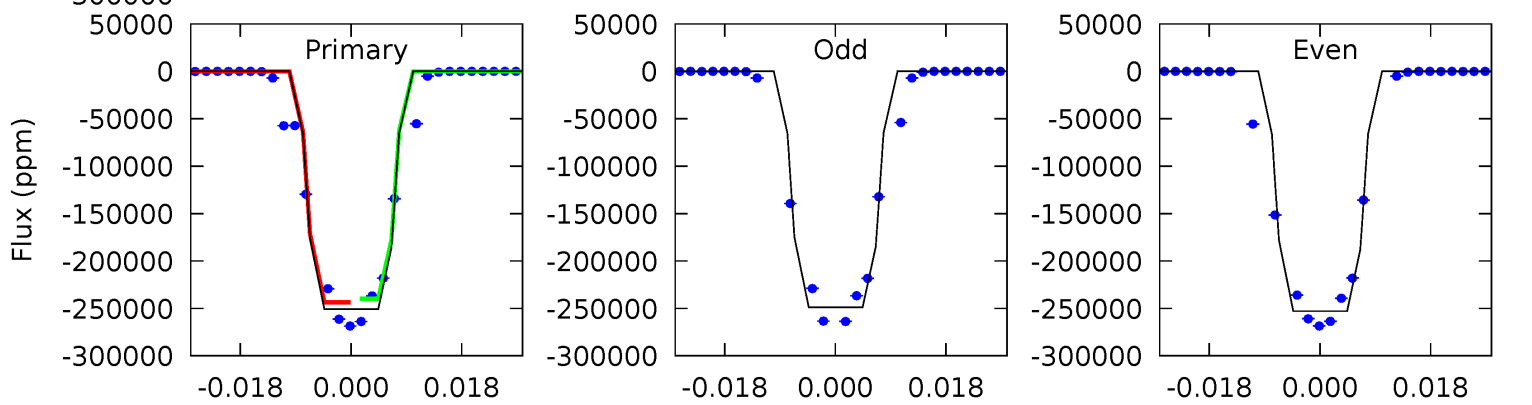
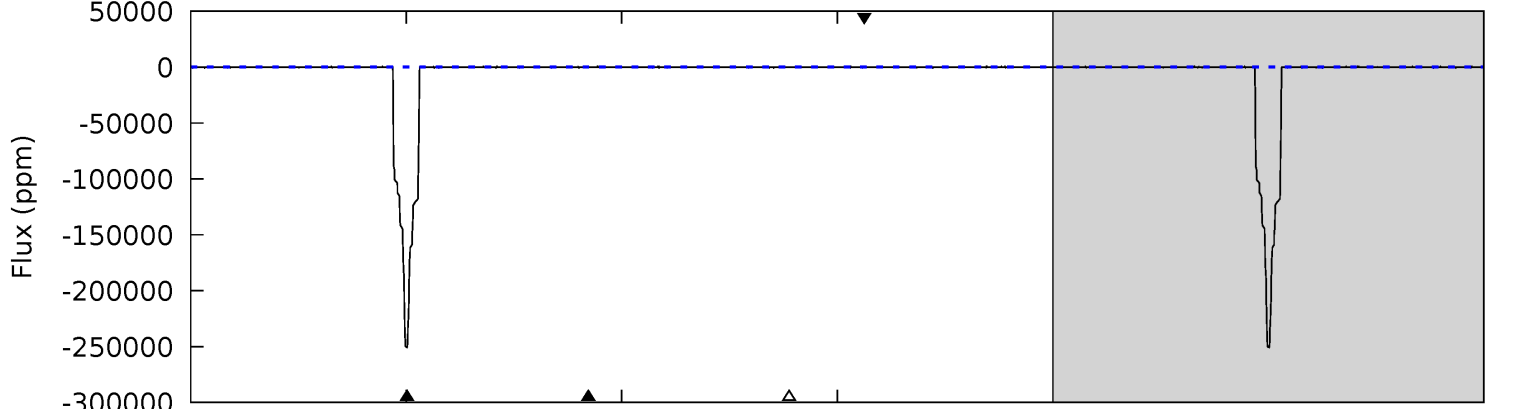
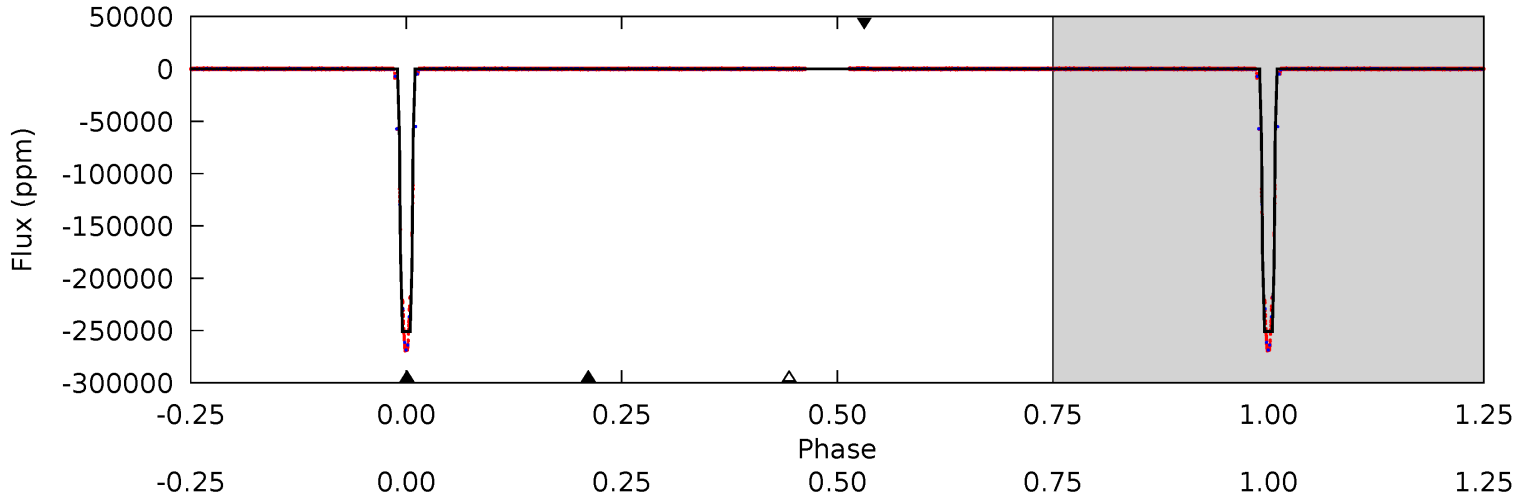
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008364119-02, P = 7.735931 Days, E = 126.471620 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
9851	4.37	4.34	5.23	4.91	2.36	1.08	9847	9846	0.03	-0.86	85.3	1.00	0.00	0





### Stellar Parameters For KIC 008364119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$5623^{+152}_{-152}$	$4.596^{+0.036}_{-0.144}$	$-0.400^{+0.300}_{-0.300}$	$0.763^{+0.169}_{-0.056}$	$0.853^{+0.080}_{-0.097}$	$2.704^{+0.493}_{-1.123}$
	+3%/-3%	+1%/-3%	+75%/-75%	+22%/-7%	+9%/-11%	+18%/-42%
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 008364119-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$32.59^{+9.89}_{-9.06}$	$1149^{+54}_{-45}$	$-2763^{+8161}_{-2478}$	$-6.785^{+320.625}_{-290.044}$
Alt.	$-111 \pm 25$	$45.47^{+10.06}_{-9.15}$	$1146^{+61}_{-45}$	$-1820^{+168}_{-75}$	$0.149^{+0.098}_{-0.055}$

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

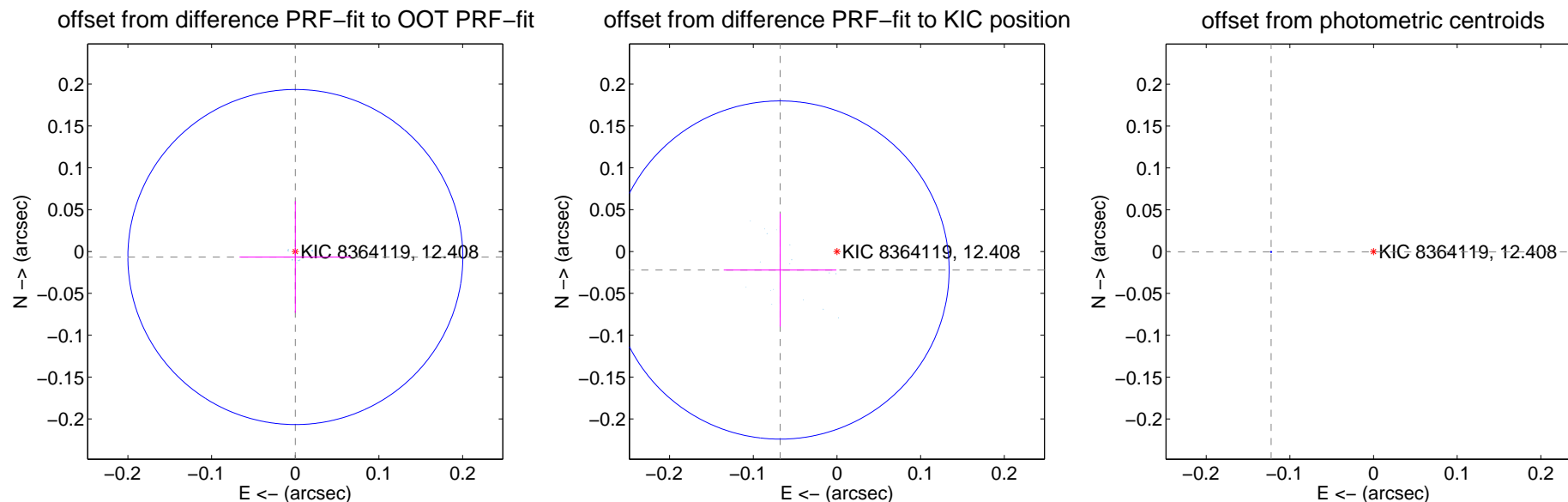
## DV Centroid Data

Supplemental centroid analysis for 008364119-02. Kepler magnitude: 12.41. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

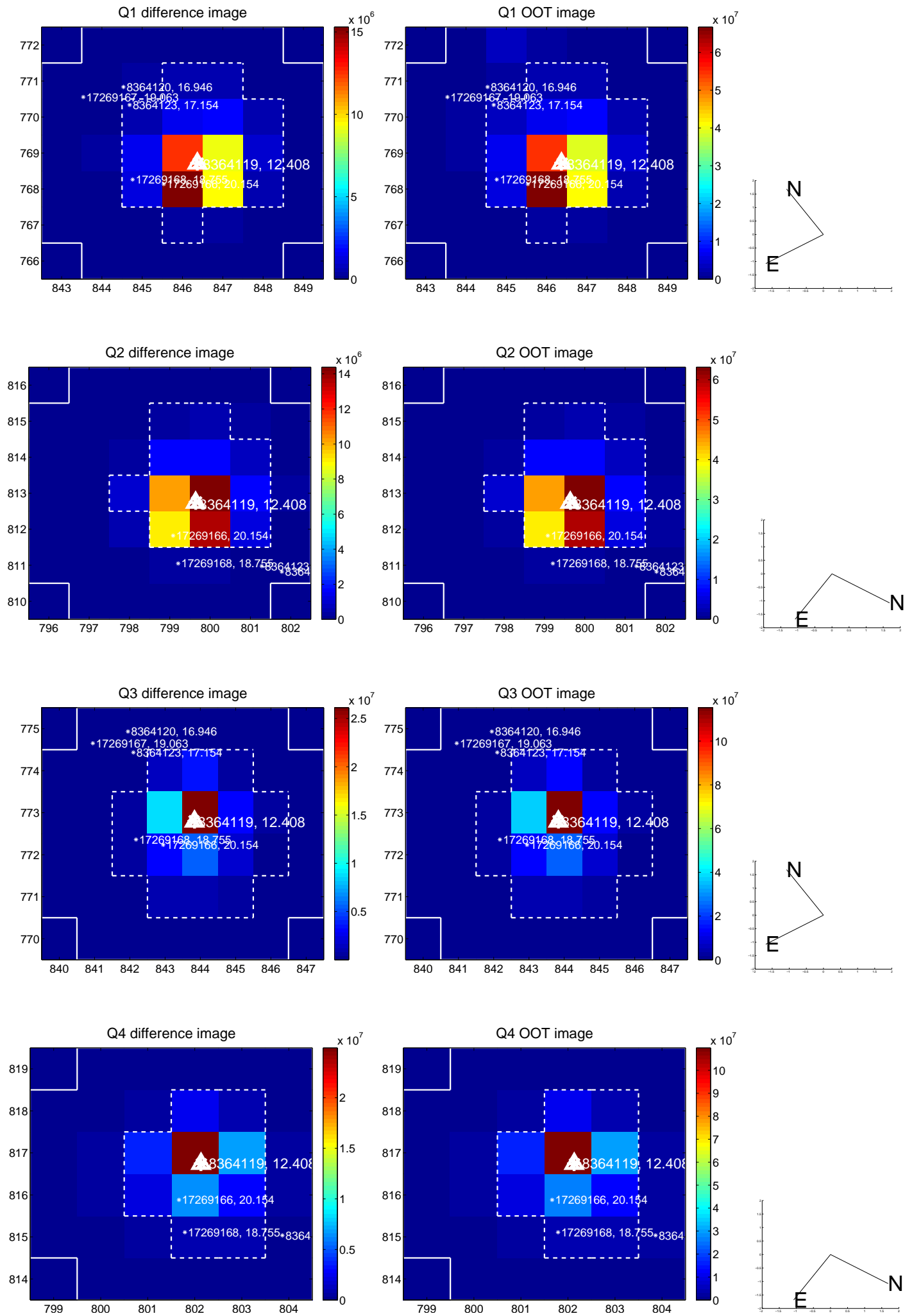
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.007 \pm 0.067$	0.10	$-0.000 \pm 0.067$	$-0.007 \pm 0.067$
PRF-fit source offset from KIC position	$0.071 \pm 0.067$	1.06	$0.068 \pm 0.067$	$-0.022 \pm 0.067$
photometric centroid source offset	$0.12 \pm 0.00$	<b>503.81</b>	$0.12 \pm 0.00$	$-0.00 \pm 0.00$

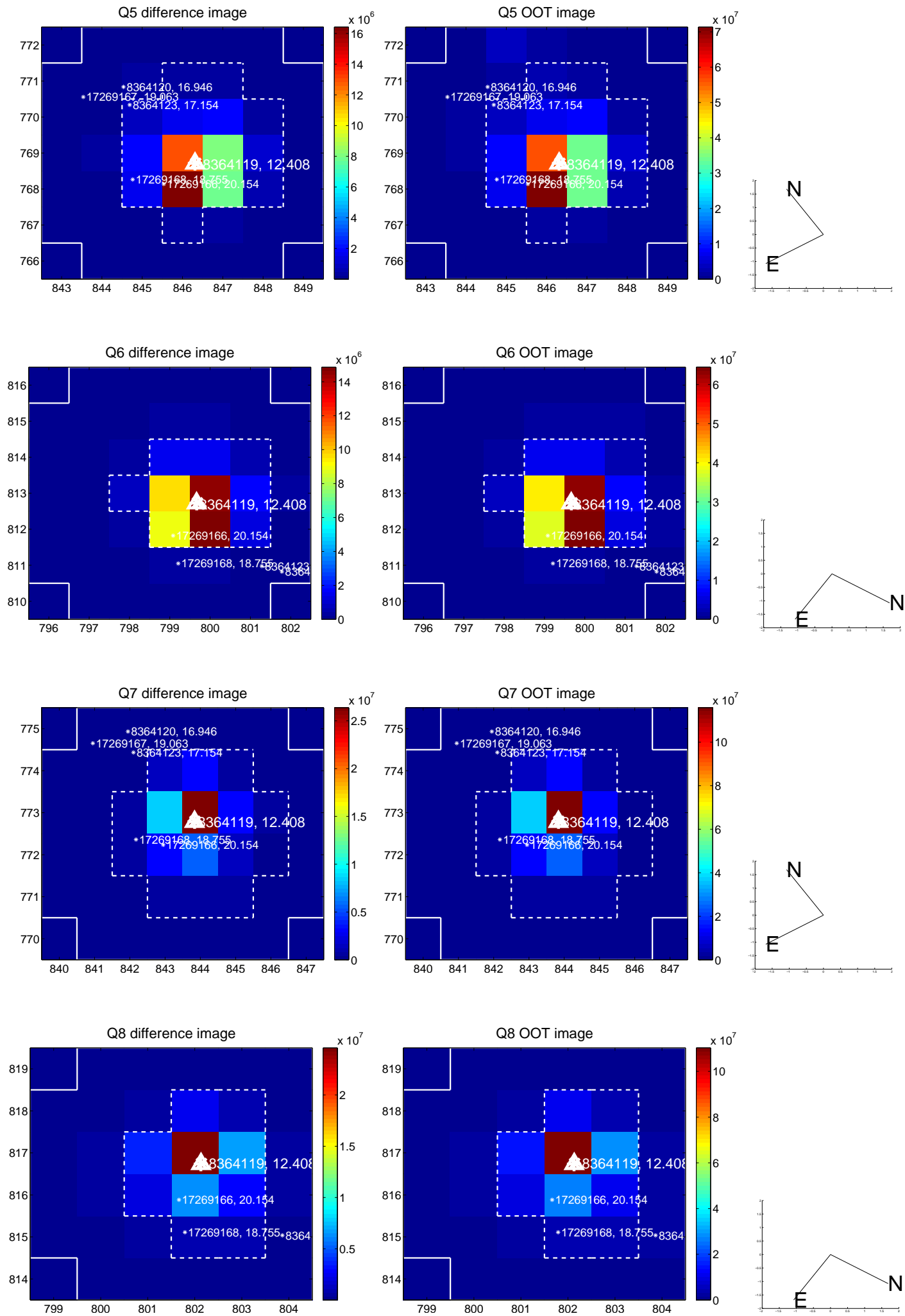


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

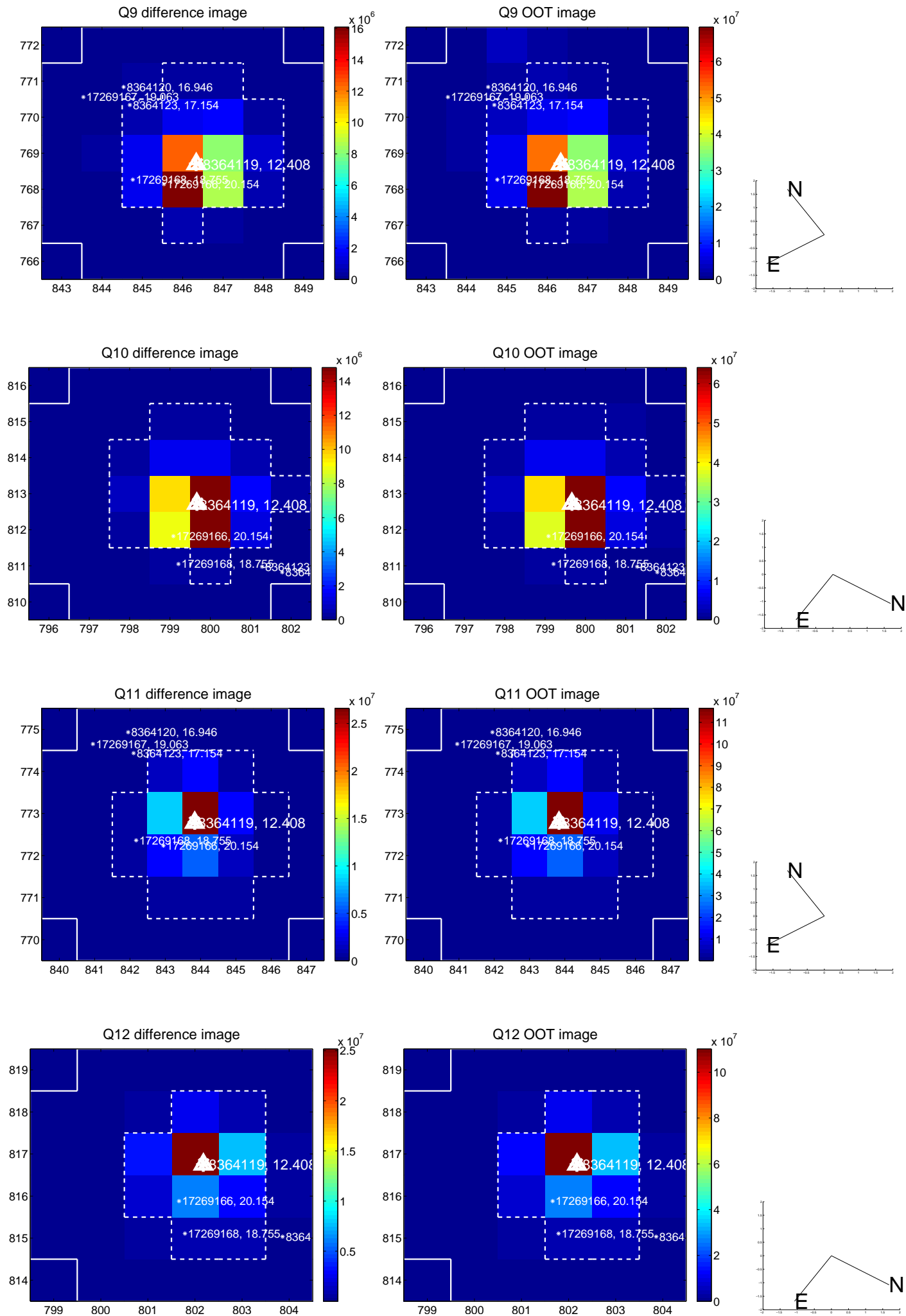
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



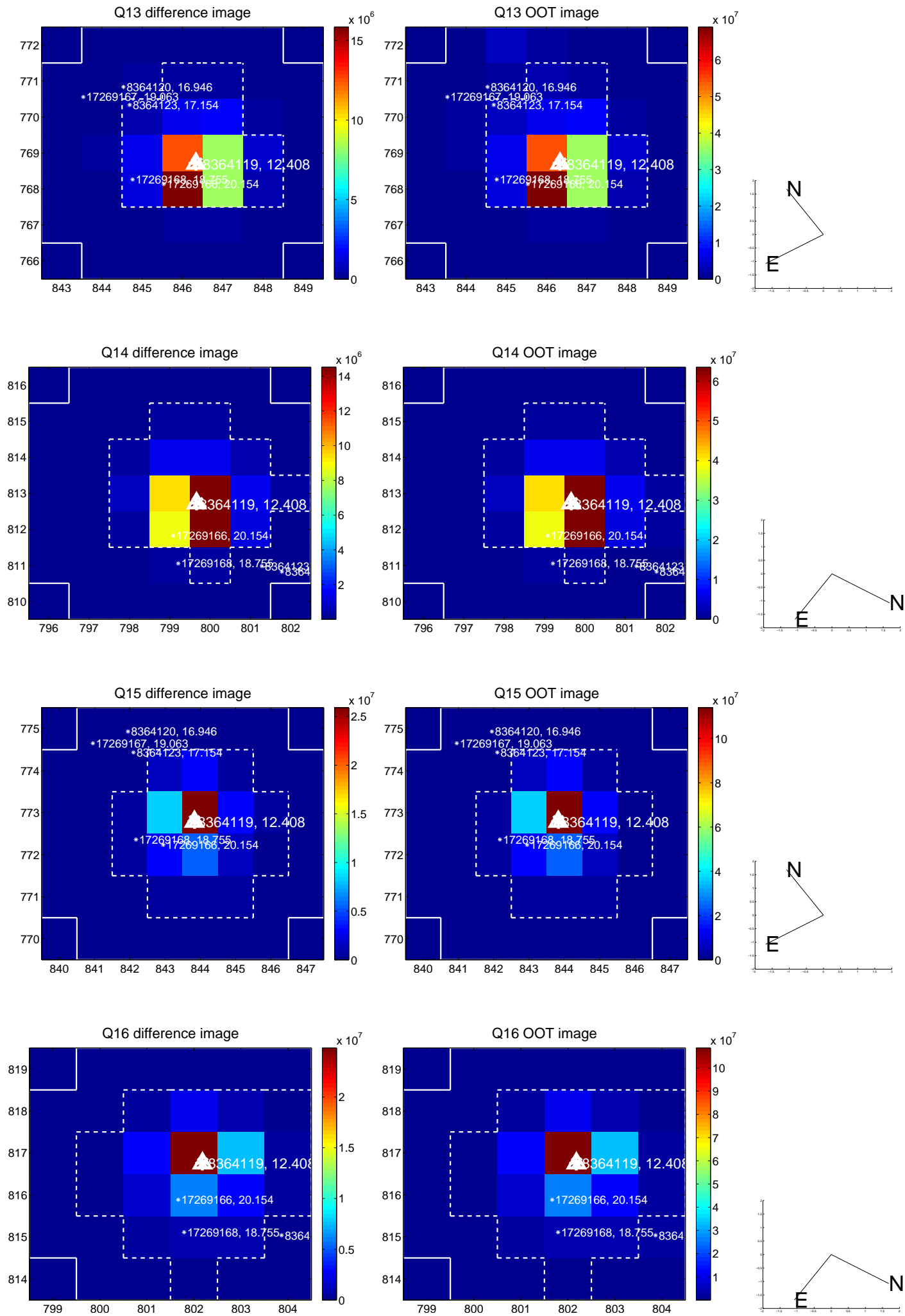
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



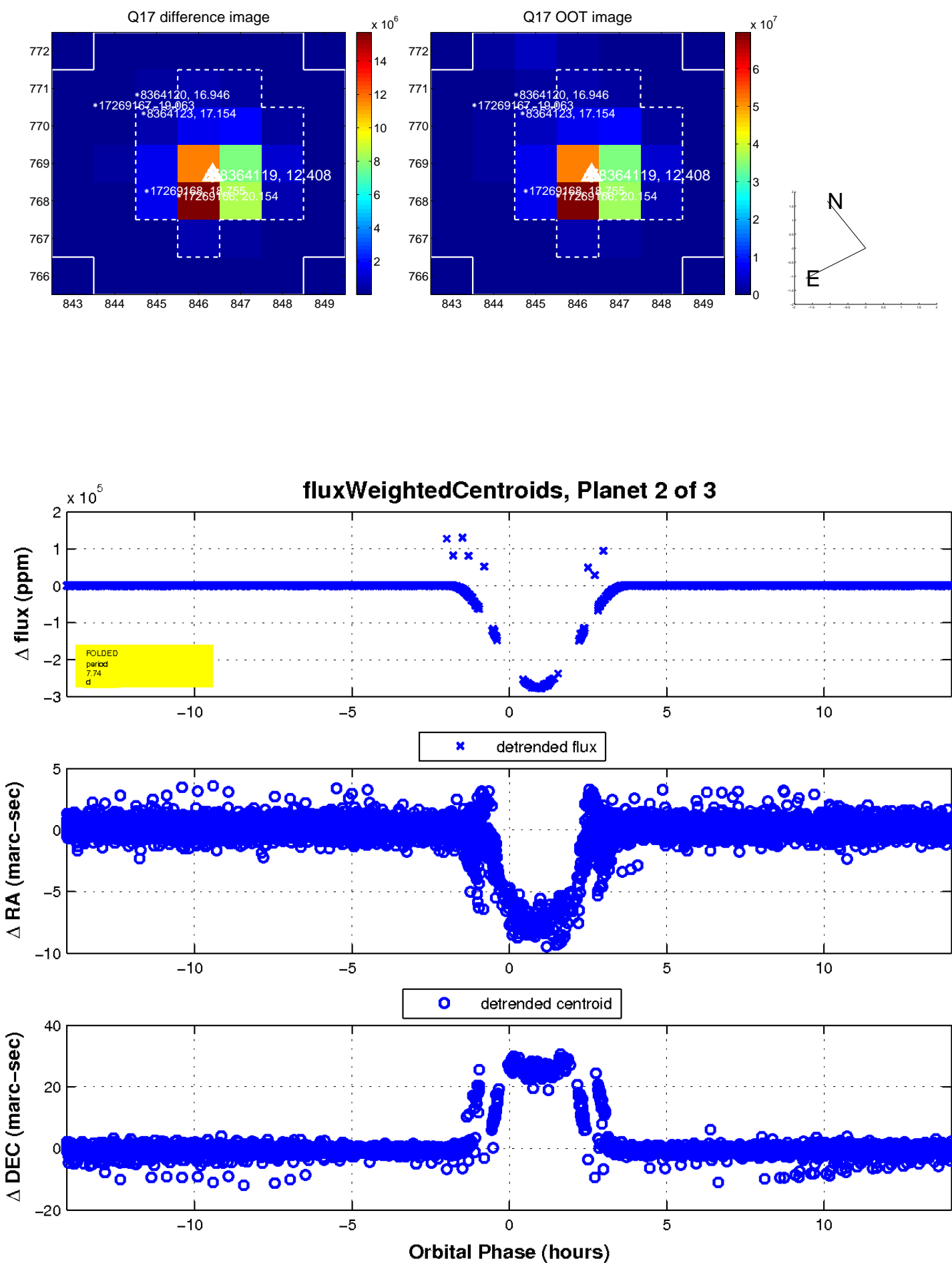
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

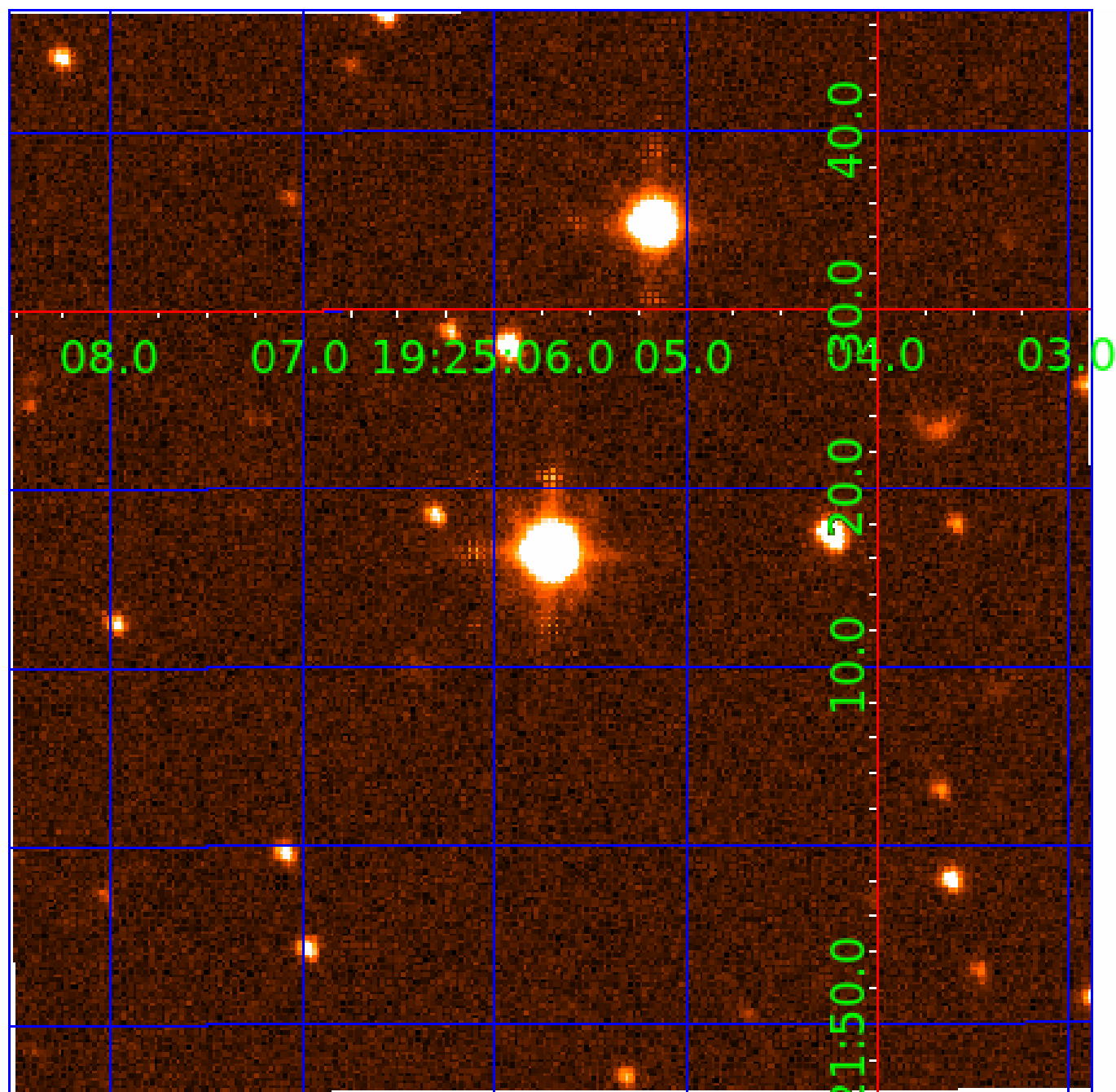


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 008364119

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008364119-01	OBS	7024.01	7.735958	137.982029	315219.7	3.000	32753.1	-1.0	0.76	5623	32.50	100.10
008364119-02	OBS	No	7.735931	134.207028	274328.1	3.000	30167.7	-1.0	0.76	5623	31.42	100.10
008364119-03	OBS	No	5.157218	135.645384	20310.1	15.000	3668.0	-1.0	0.76	5623	10.79	171.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008364119-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008364119-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008364119-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS

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

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

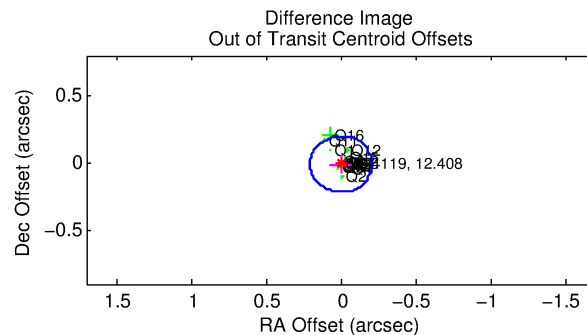
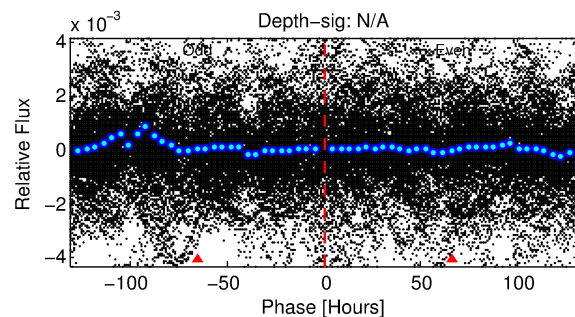
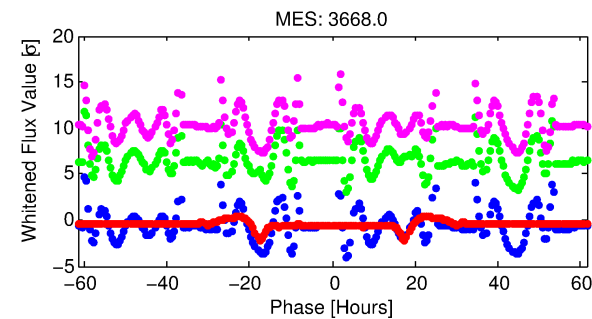
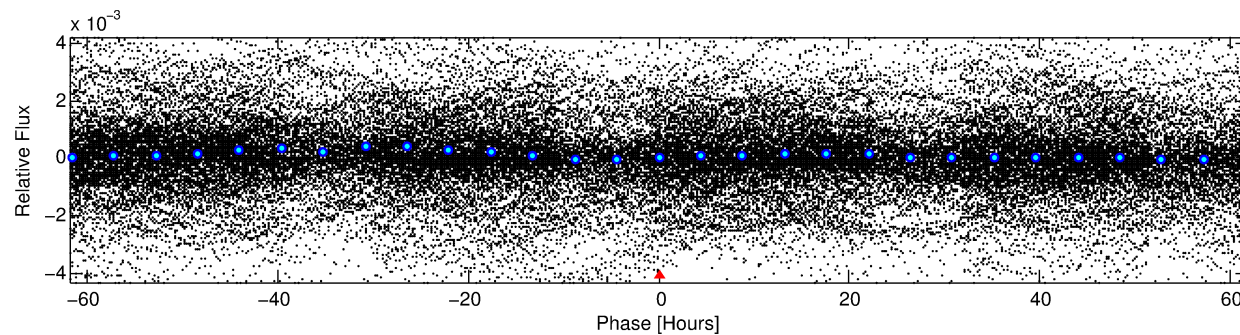
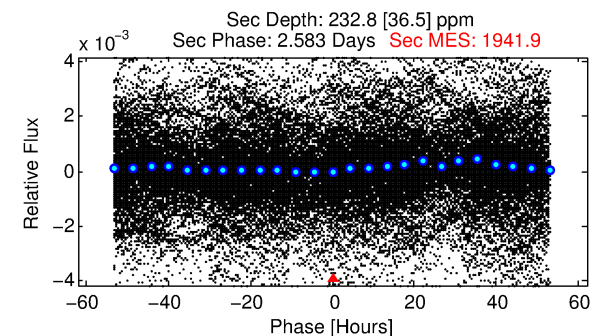
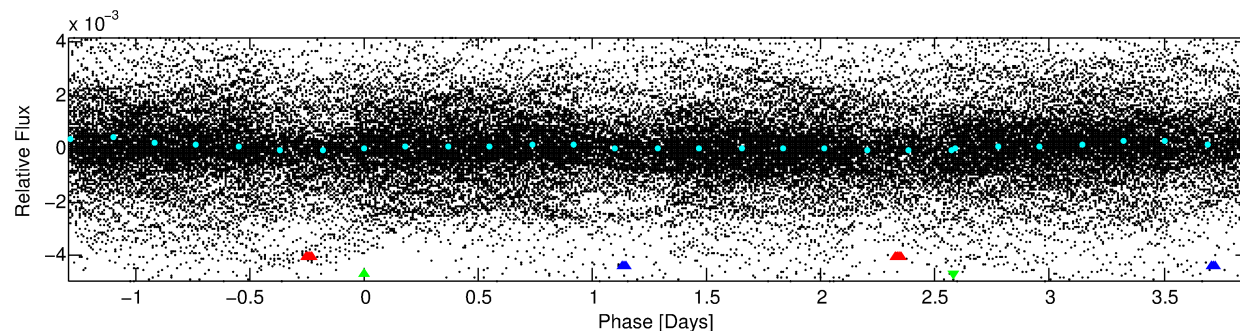
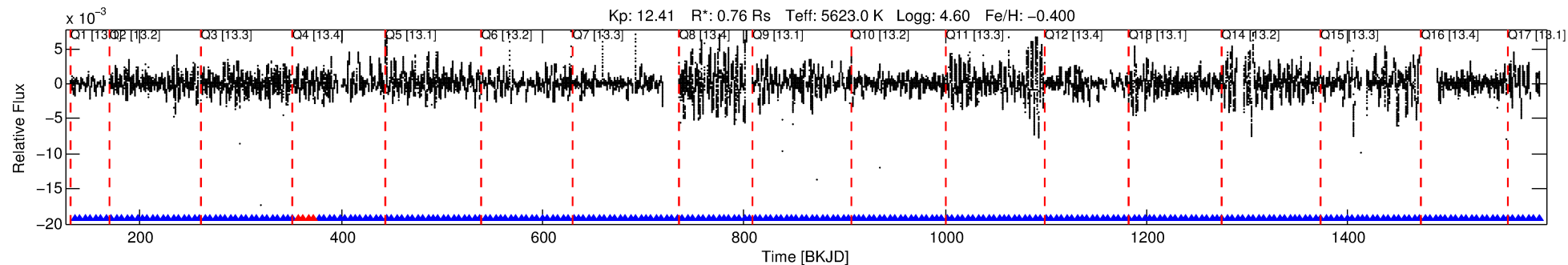
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 008364119-03

No Significant Match Found

# DV One-Page Summary

KIC: 8364119 Candidate: 3 of 3 Period: 5.157 d  
KOI: K07024 Corr: No Ephemeris Match



## TPS TCE Results:

Period = 5.15722 d  
Epoch = 135.6454 BKJD

**DV fit results are unavailable**

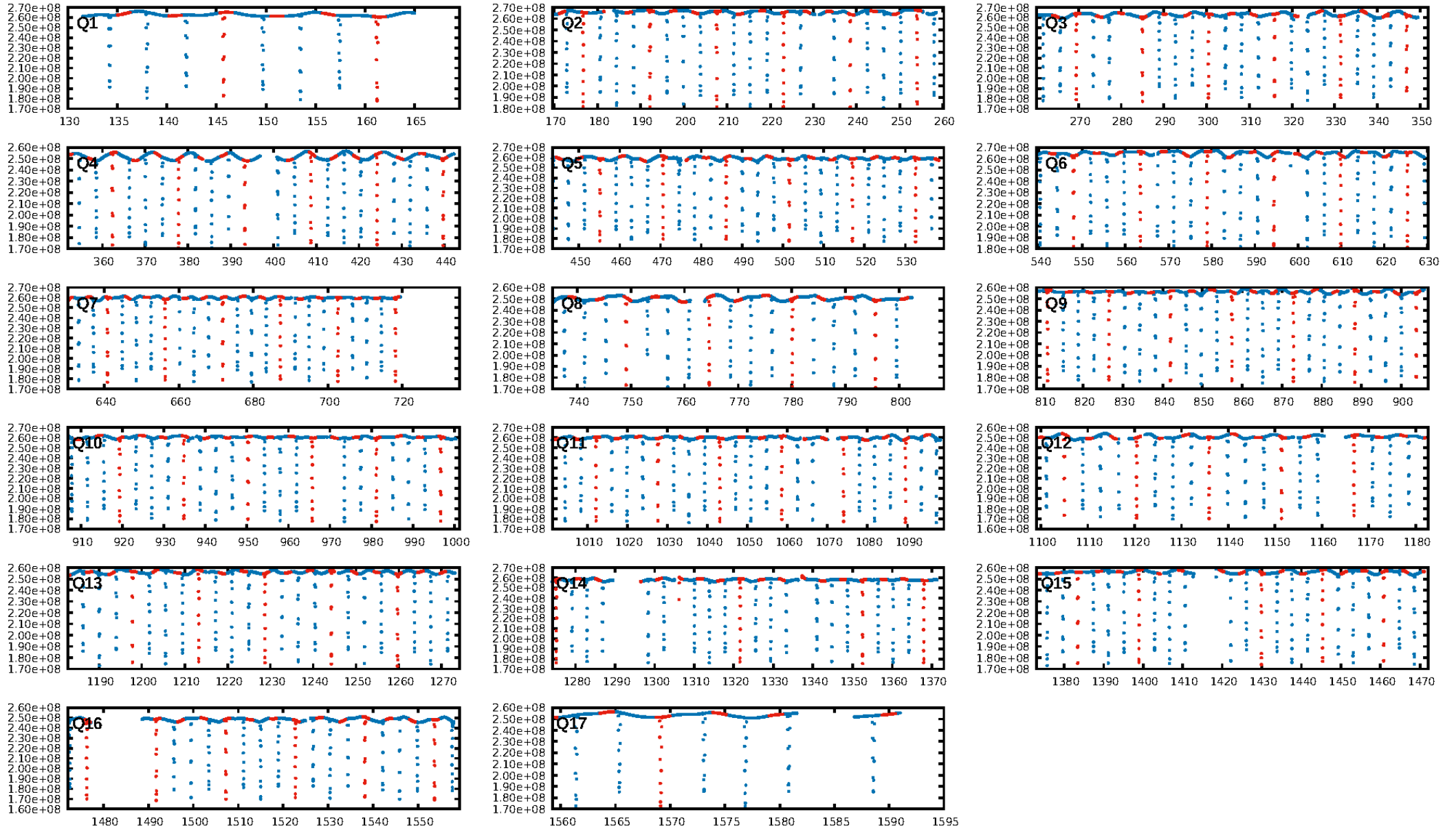
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [4.05σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.98 [252/256]  
GhostDiagnostic-chr: -1.311  
Centroid-sig: N/A  
**Centroid-so: 1.365 arcsec [3.69σ]**  
OotOffset-rm: 0.009 arcsec [0.13σ]  
KicOffset-rm: 0.079 arcsec [1.17σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.06 [1/17]  
DiffImageOverlap-fno: 0.00 [0/17]

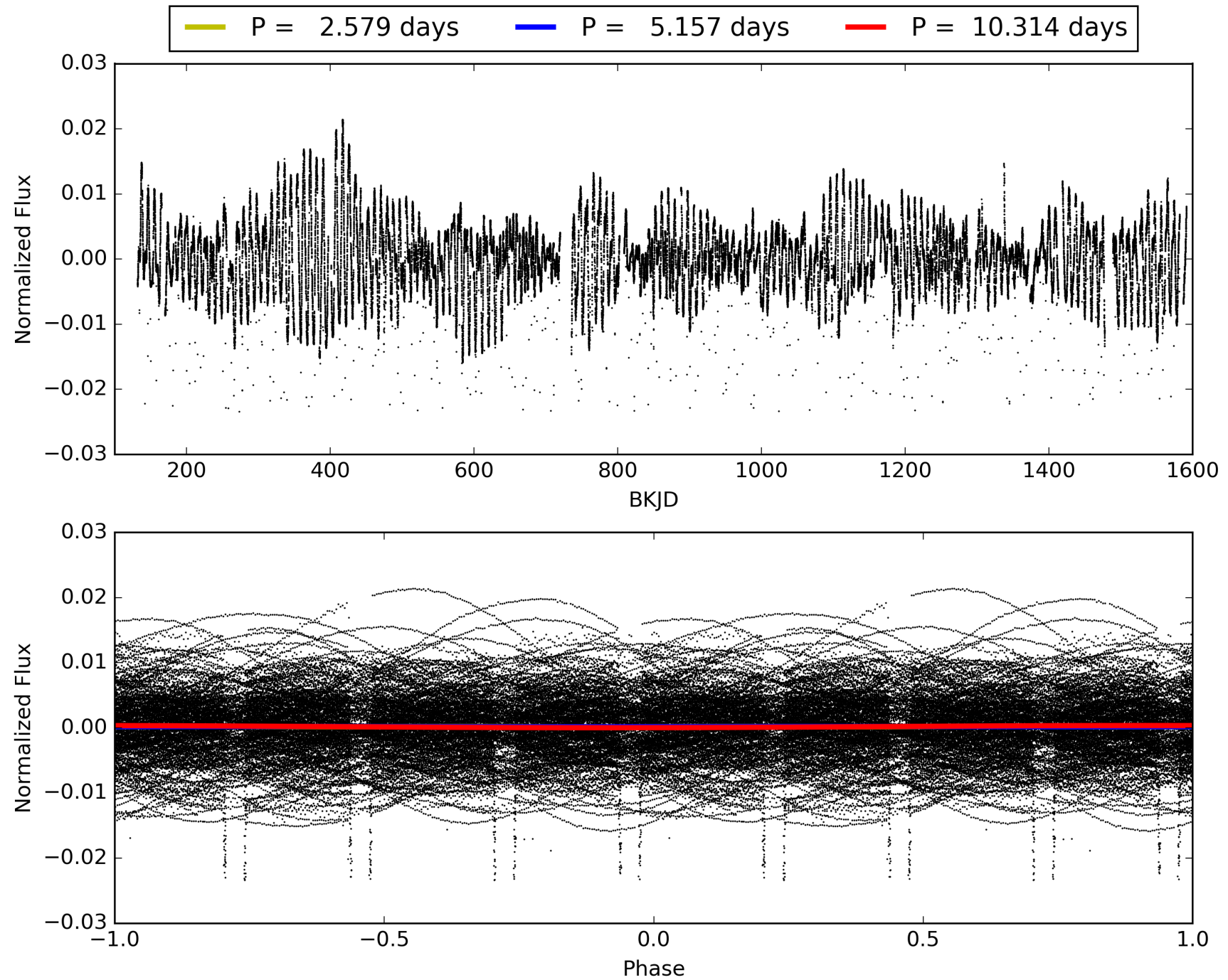
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:56:49 Z

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

# TCE 008364119-03, PDC Light Curves

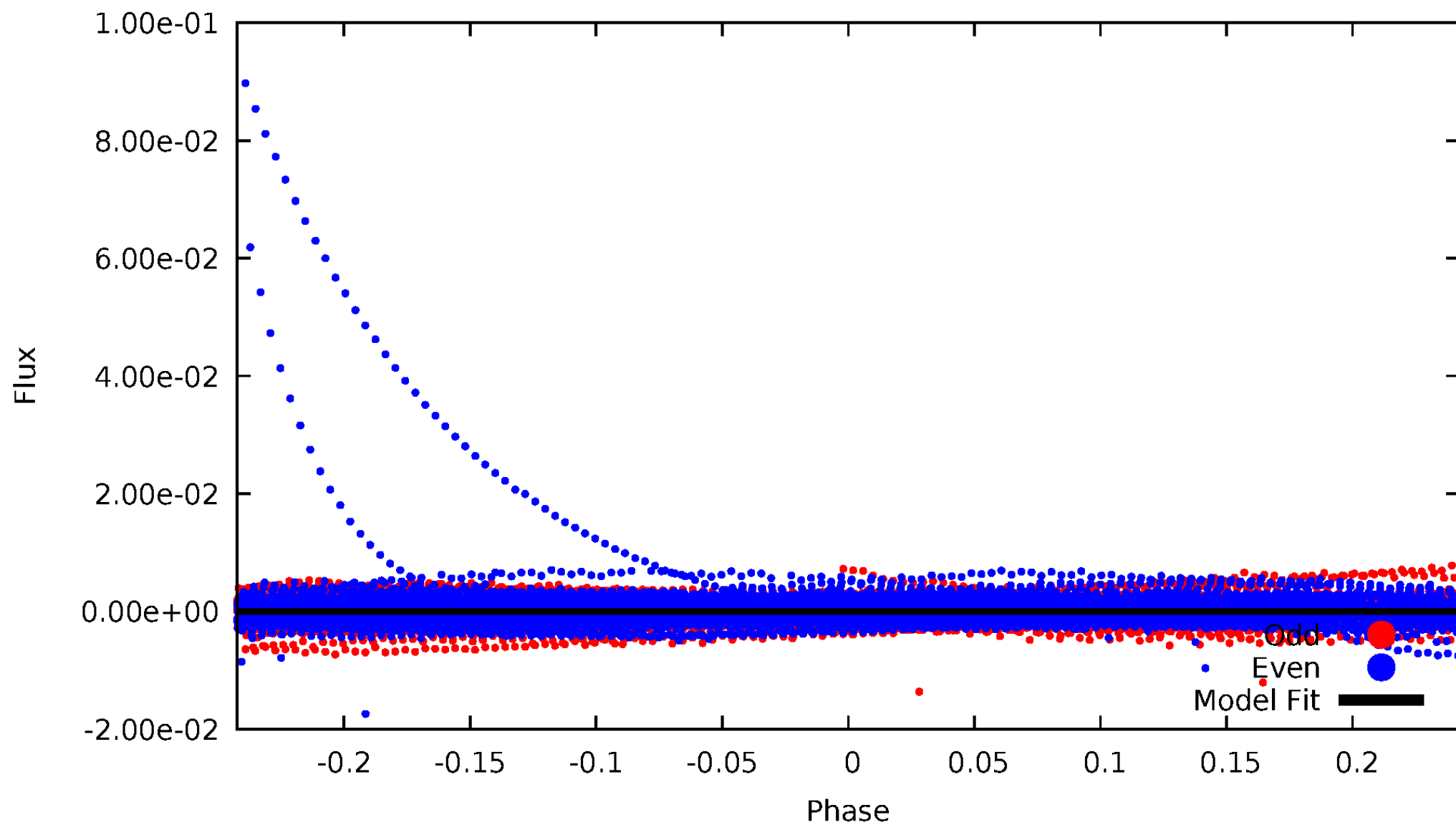


TCE 008364119-03



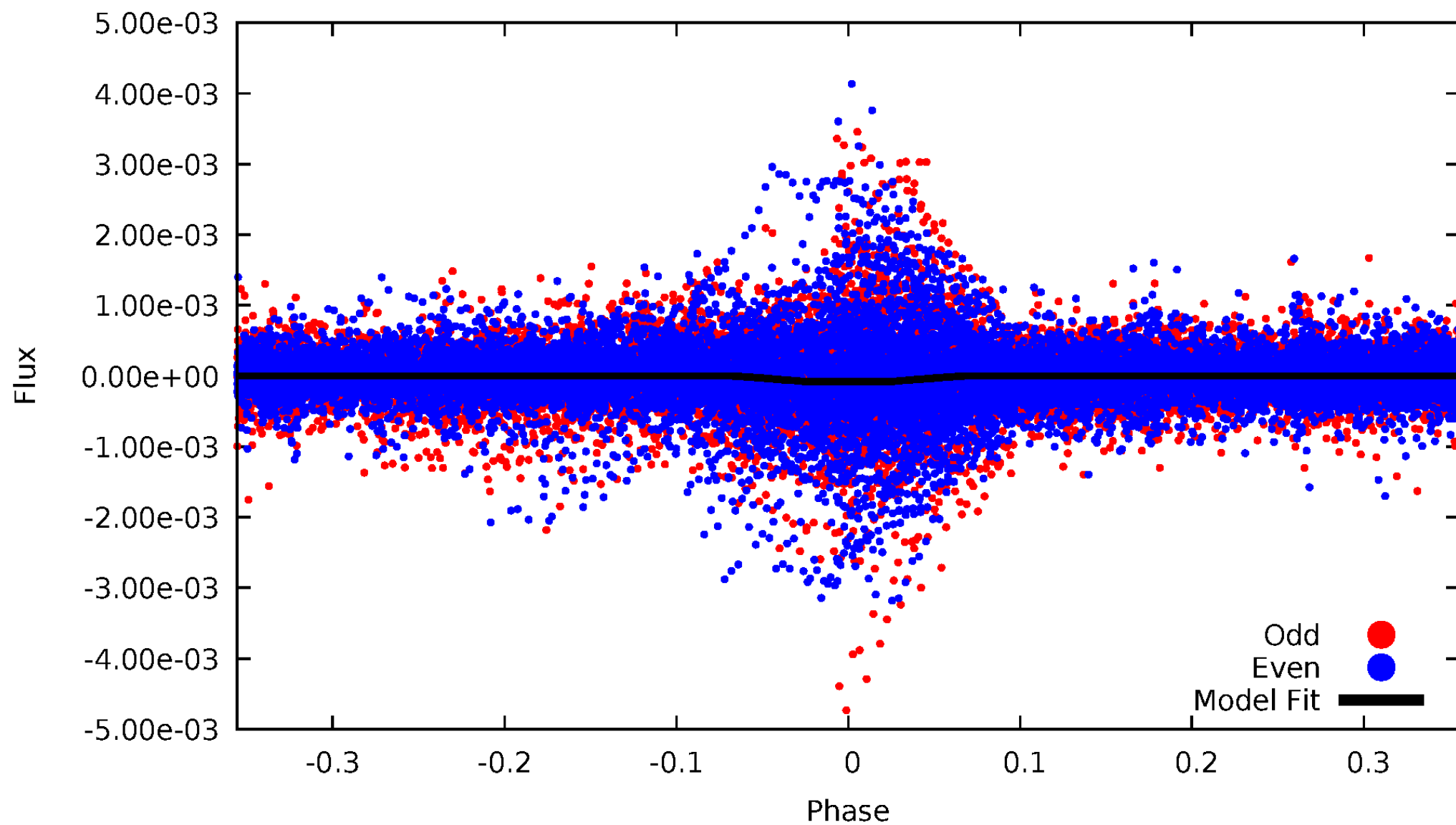
# DV Odd/Even

TCE 008364119-03



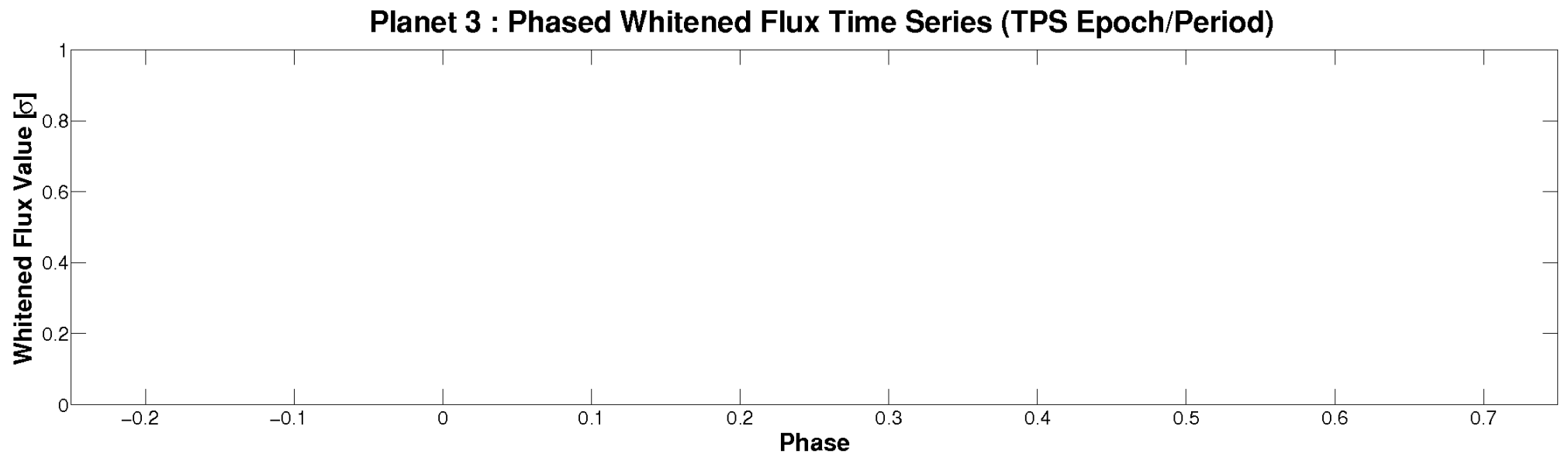
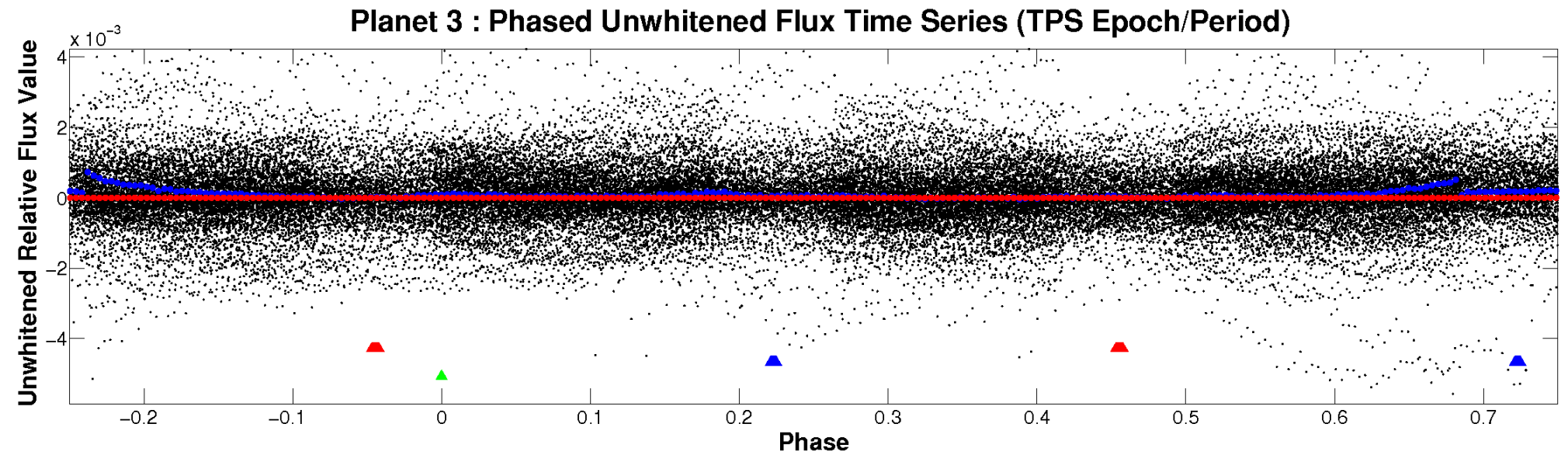
# ALT Odd/Even

TCE 008364119-03



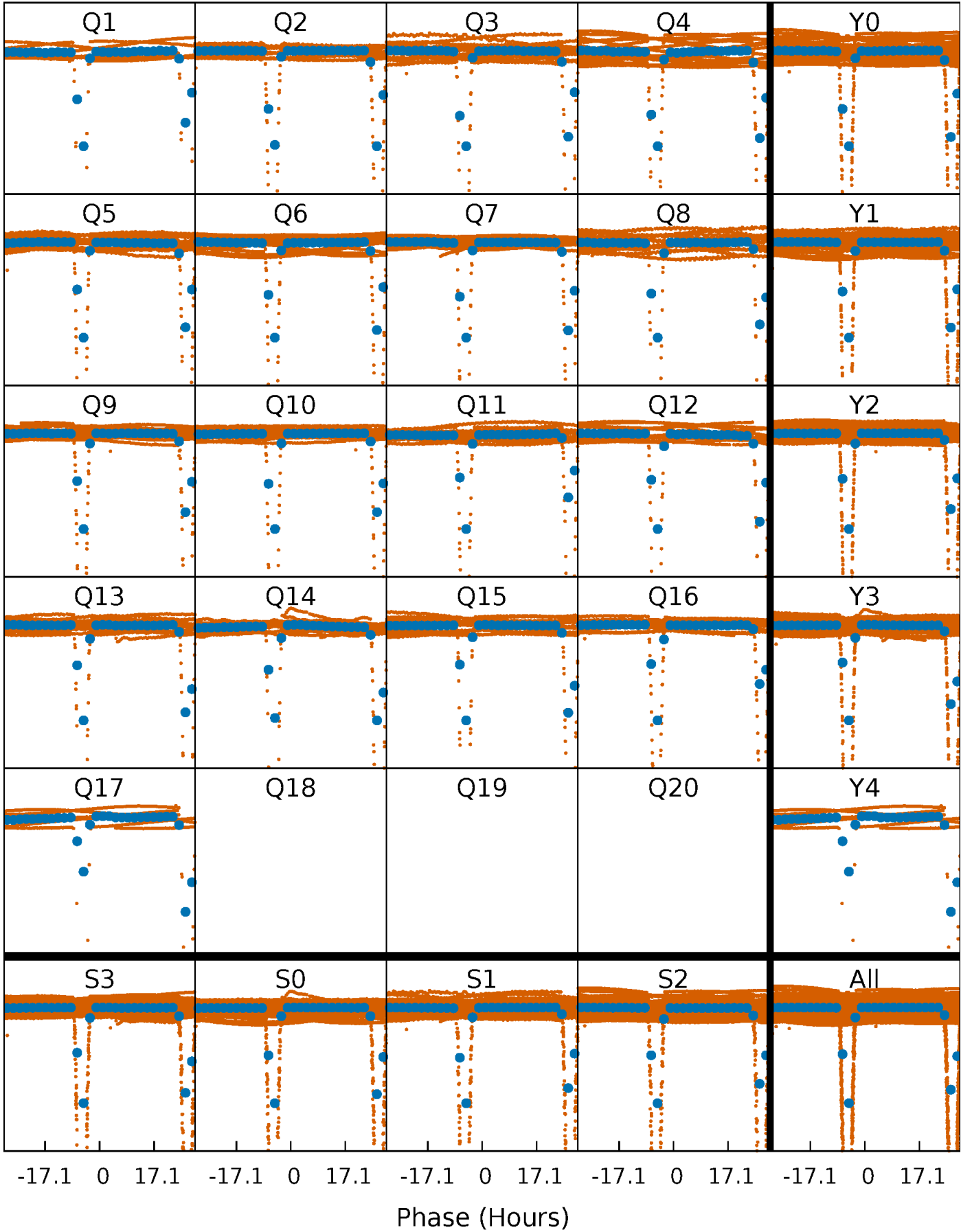


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

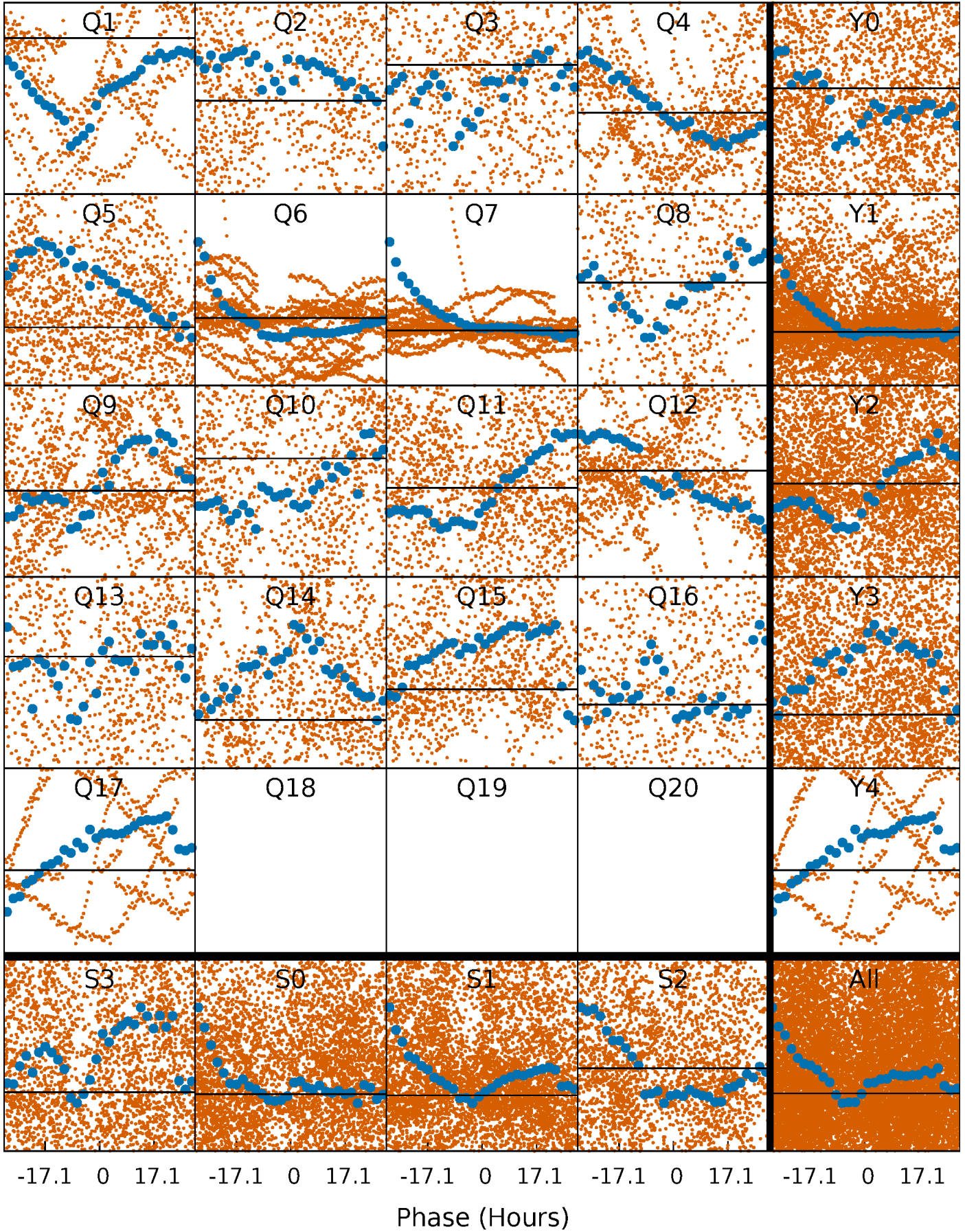
TCE 008364119-03 P= 5.157218 Days  $T_0=135.645384$  (BKJD)





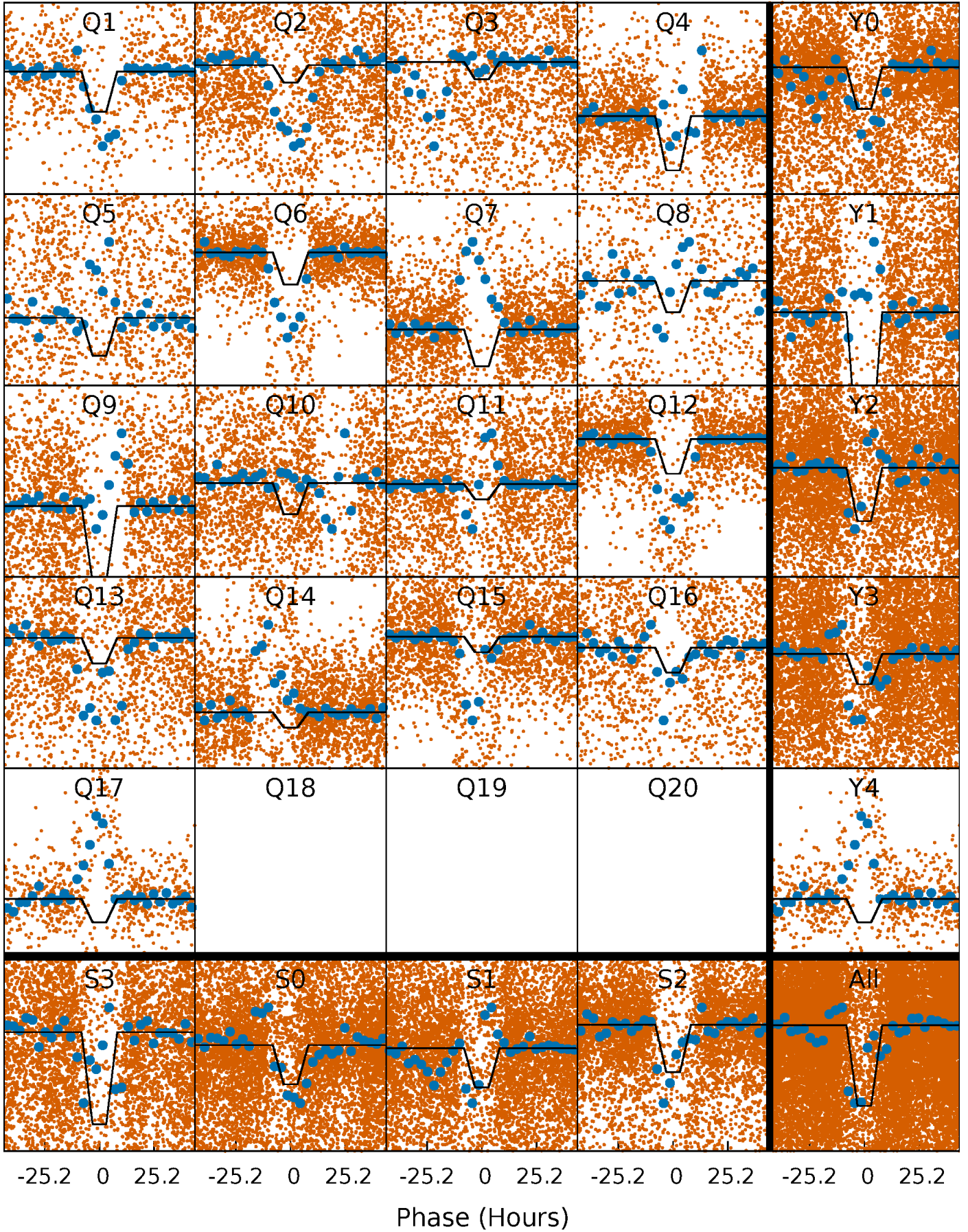
# DV Quarter-Phased Transit Curves

TCE 008364119-03 P= 5.157218 Days  $T_0=135.645384$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

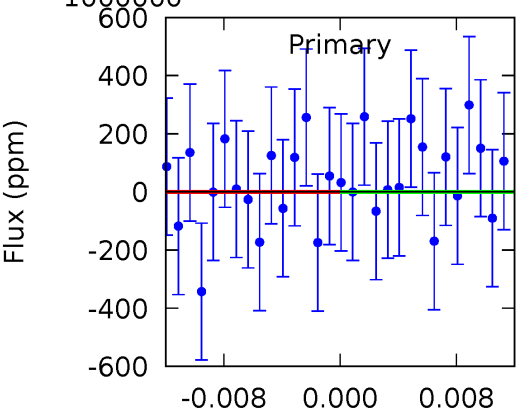
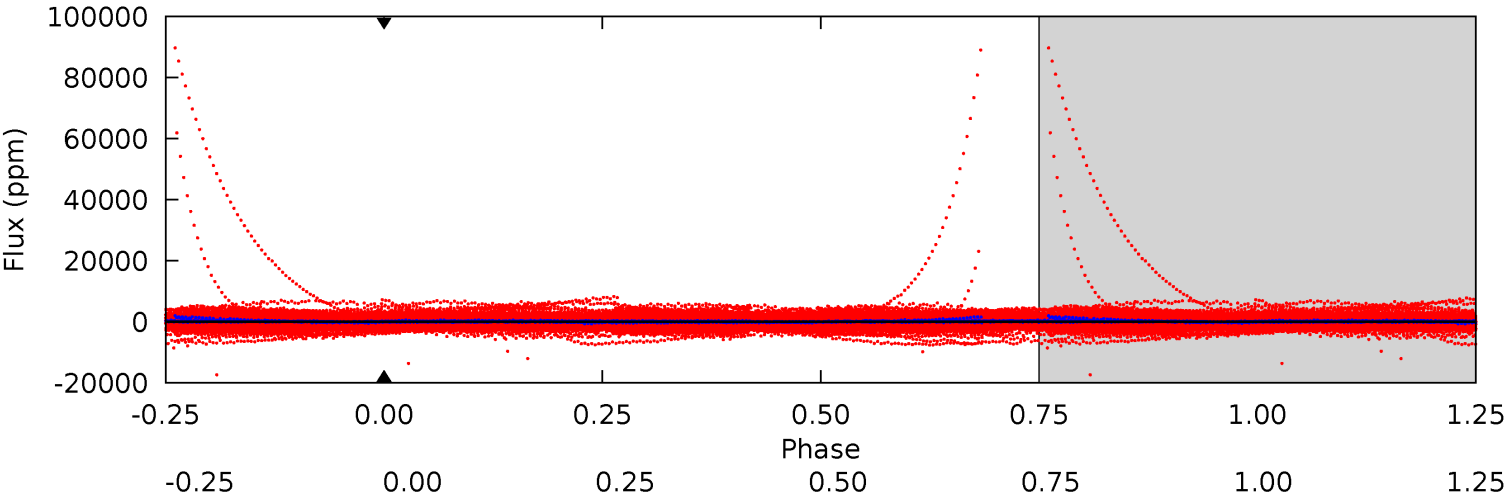
TCE 008364119-03 P= 5.157218 Days  $T_0=135.657815$  (BKJD)



DV Model-Shift Uniqueness Test

008364119-03, P = 5.157218 Days, E = 130.488166 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

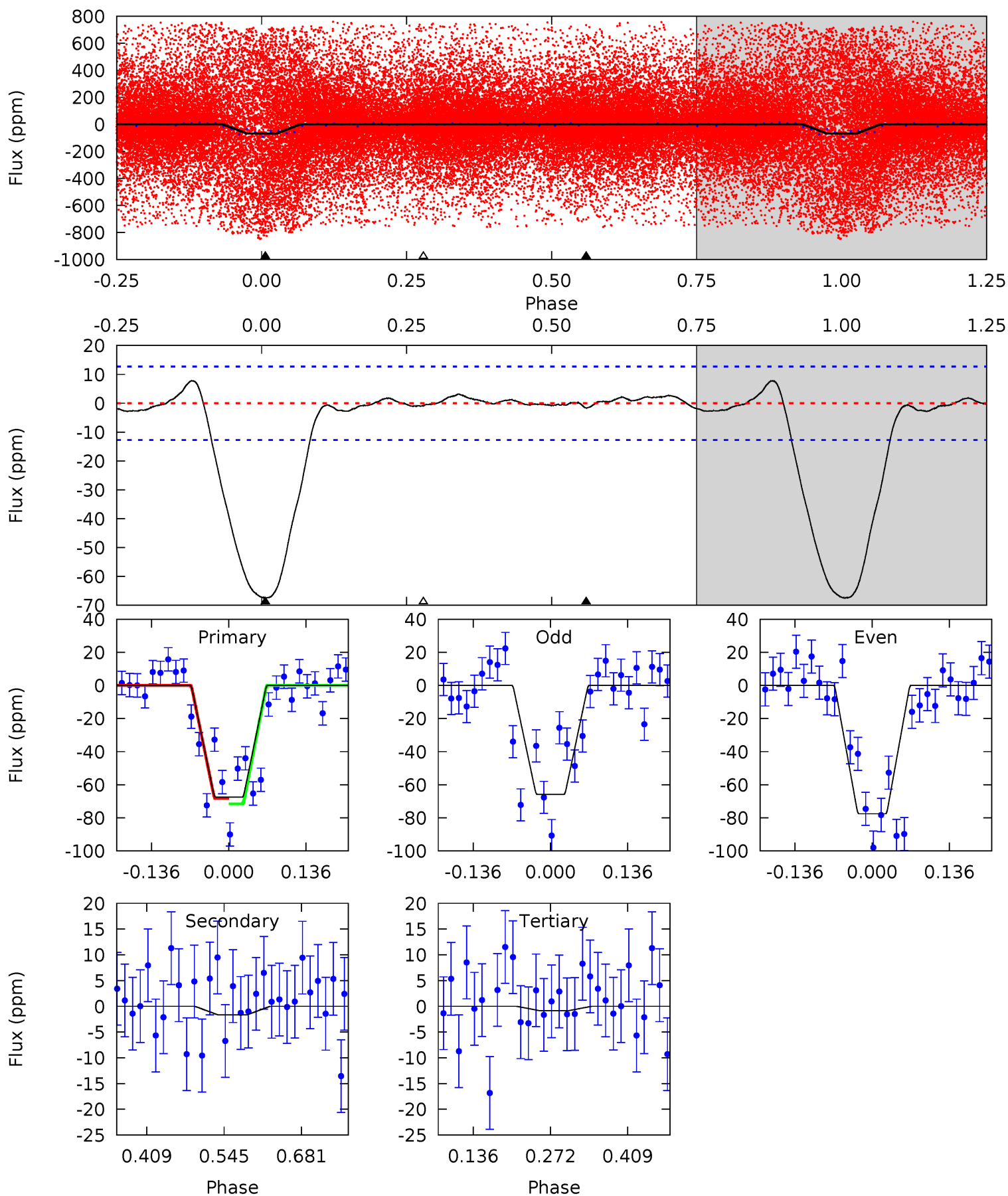




# Alt Model-Shift Uniqueness Test

008364119-03, P = 5.157218 Days, E = 130.500597 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
23.9	0.59	0.30	0	4.50	1.49	0.63	23.6	23.9	0.29	0.59	2.13	11.8	0.10	0.59



### Stellar Parameters For KIC 008364119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5623^{+152}_{-152}$	$4.596^{+0.036}_{-0.144}$	$-0.400^{+0.300}_{-0.300}$	$0.763^{+0.169}_{-0.056}$	$0.853^{+0.080}_{-0.097}$	$2.704^{+0.493}_{-1.123}$
	+3%/-3%	+1%/-3%	+75%/-75%	+22%/-7%	+9%/-11%	+18%/-42%
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 008364119-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$11.89^{+8.72}_{-6.67}$	$1315^{+67}_{-53}$	$3897^{+6663}_{-13721}$	$40^{+1804}_{-1522}$
Alt.	$-2 \pm 3$	$6.30^{+6.74}_{-4.31}$	$1313^{+66}_{-51}$	$-2022^{+4074}_{-95}$	$0.044^{+0.526}_{-0.088}$

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

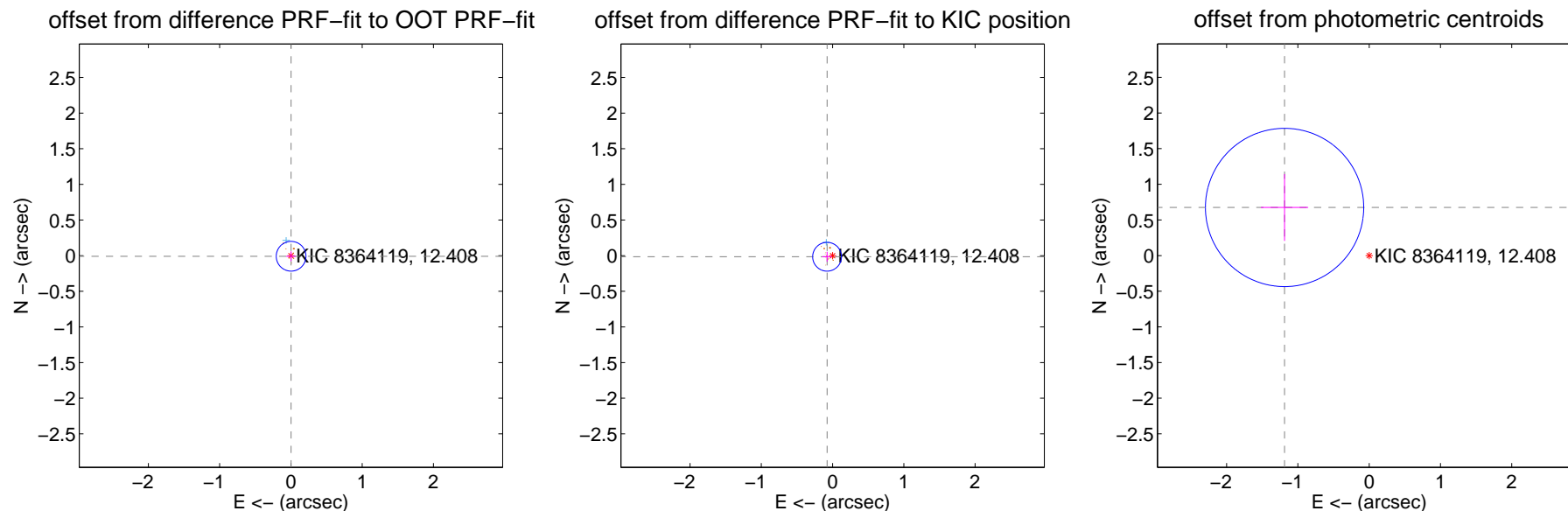
## DV Centroid Data

Supplemental centroid analysis for 008364119-03. Kepler magnitude: 12.41. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

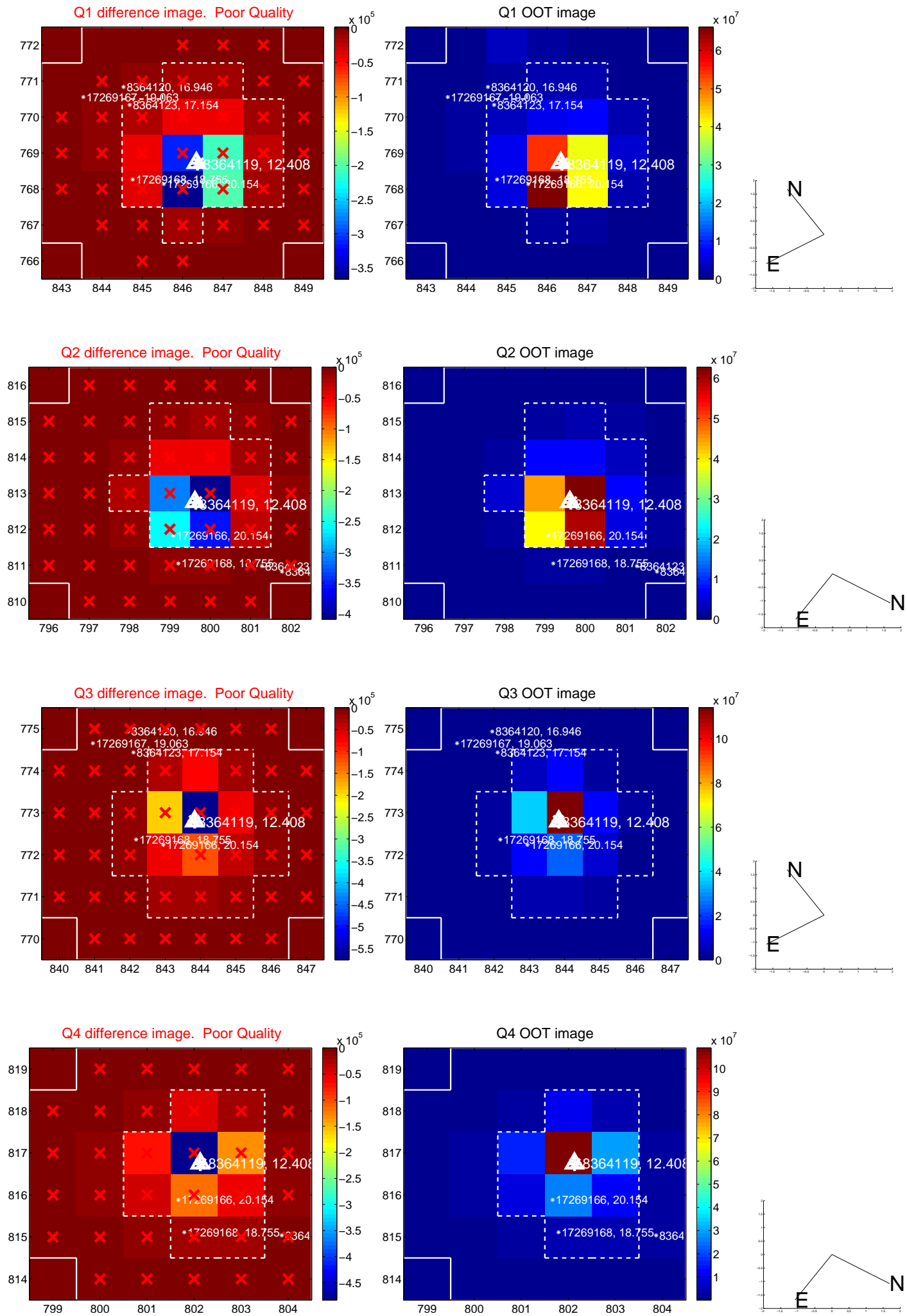
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.009 \pm 0.069$	0.13	$-0.003 \pm 0.067$	$-0.009 \pm 0.069$
PRF-fit source offset from KIC position	$0.079 \pm 0.067$	1.17	$0.077 \pm 0.068$	$-0.015 \pm 0.069$
photometric centroid source offset	$1.37 \pm 0.37$	3.69	$1.19 \pm 0.33$	$0.67 \pm 0.47$

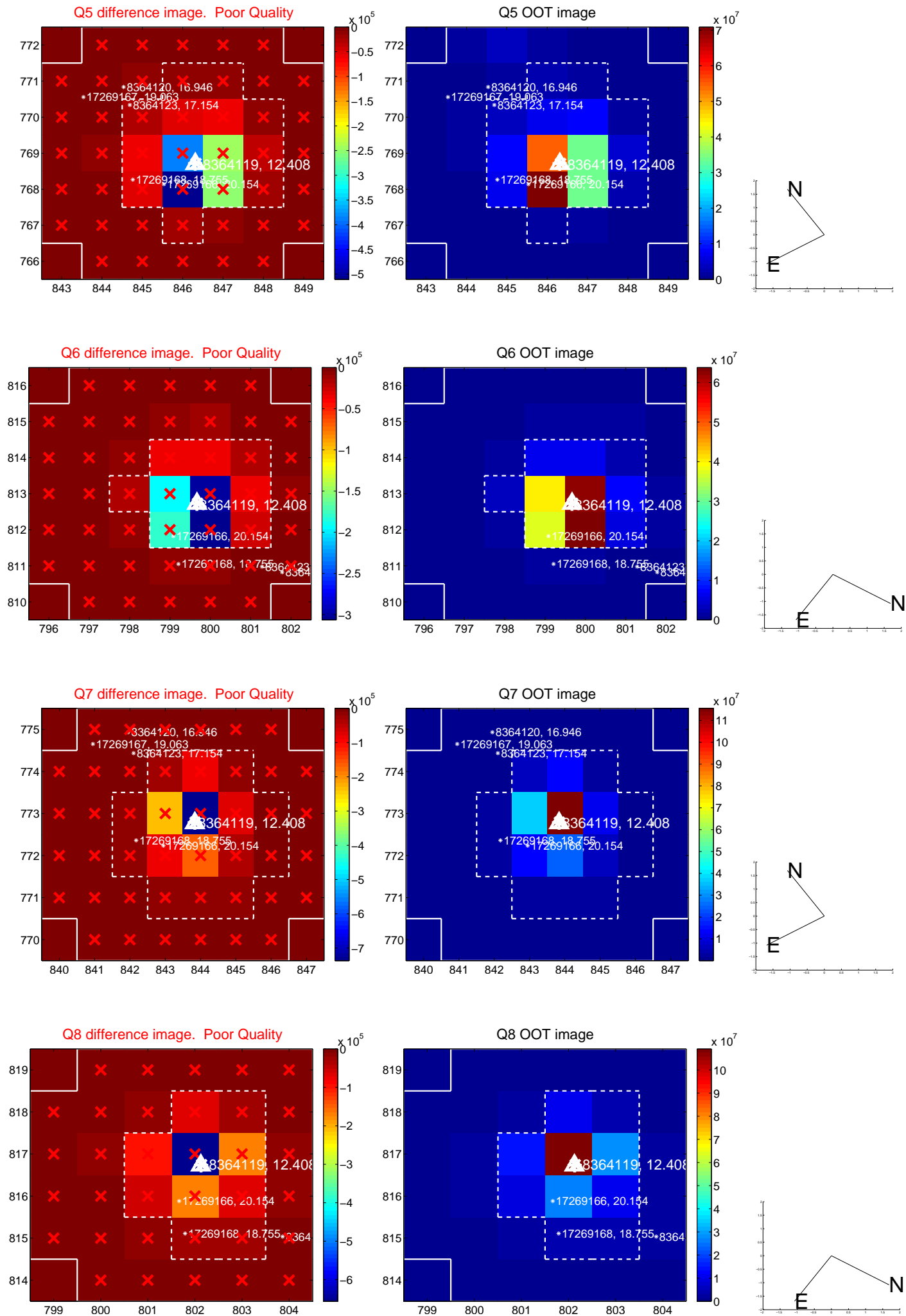


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

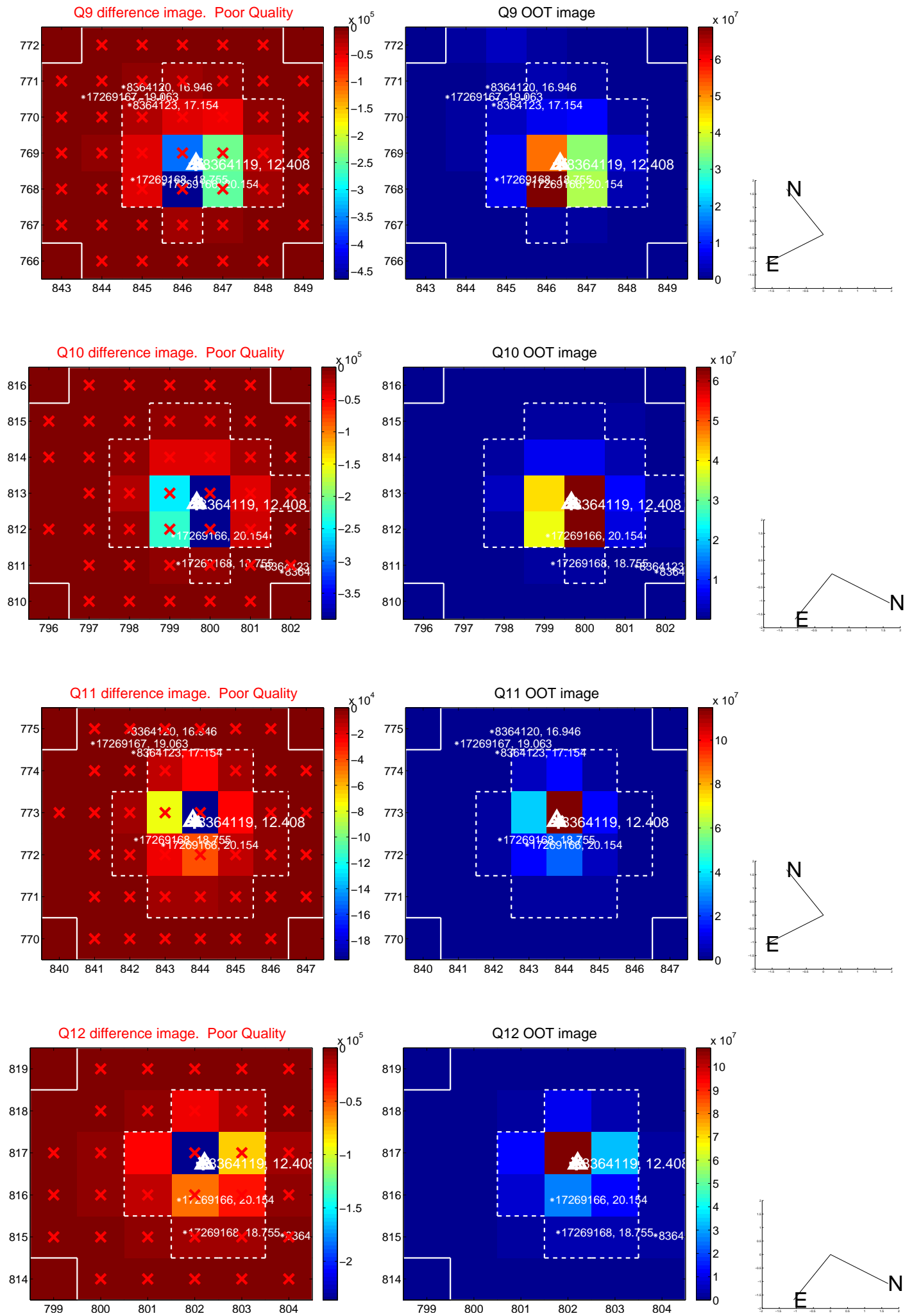


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

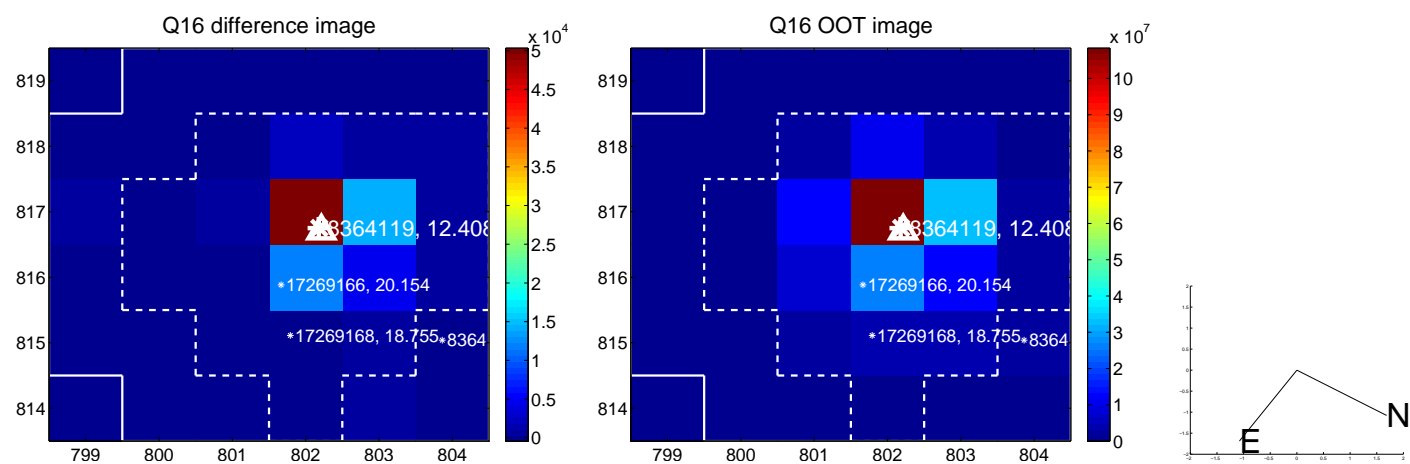
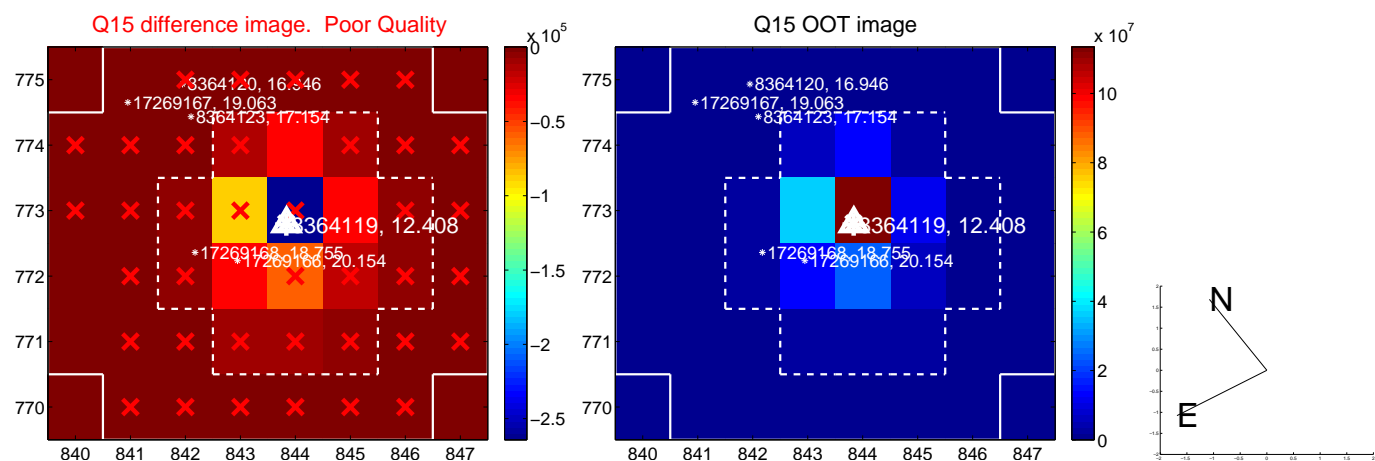
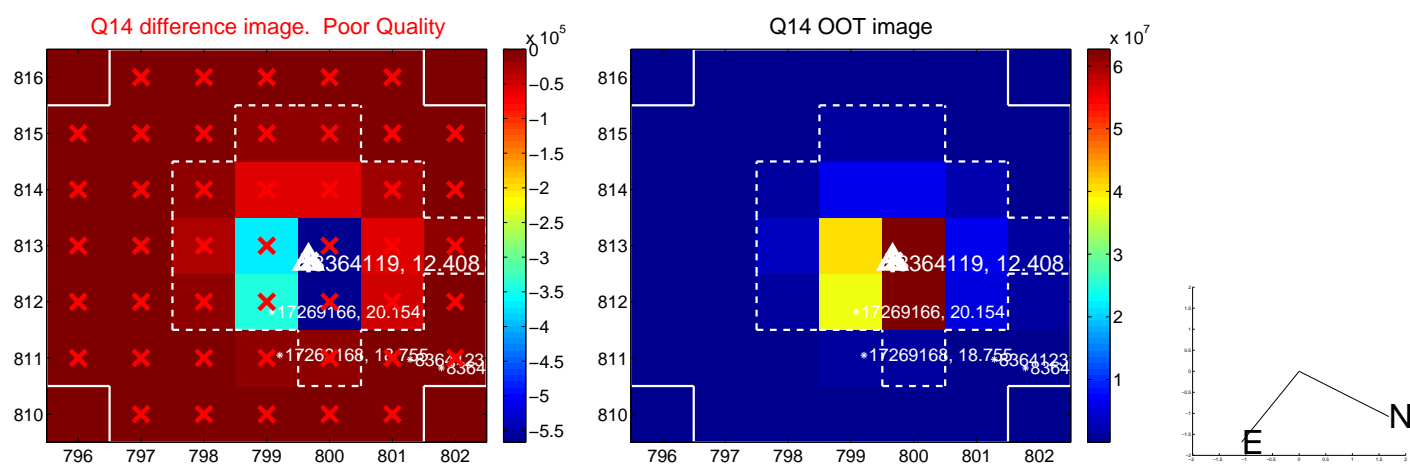
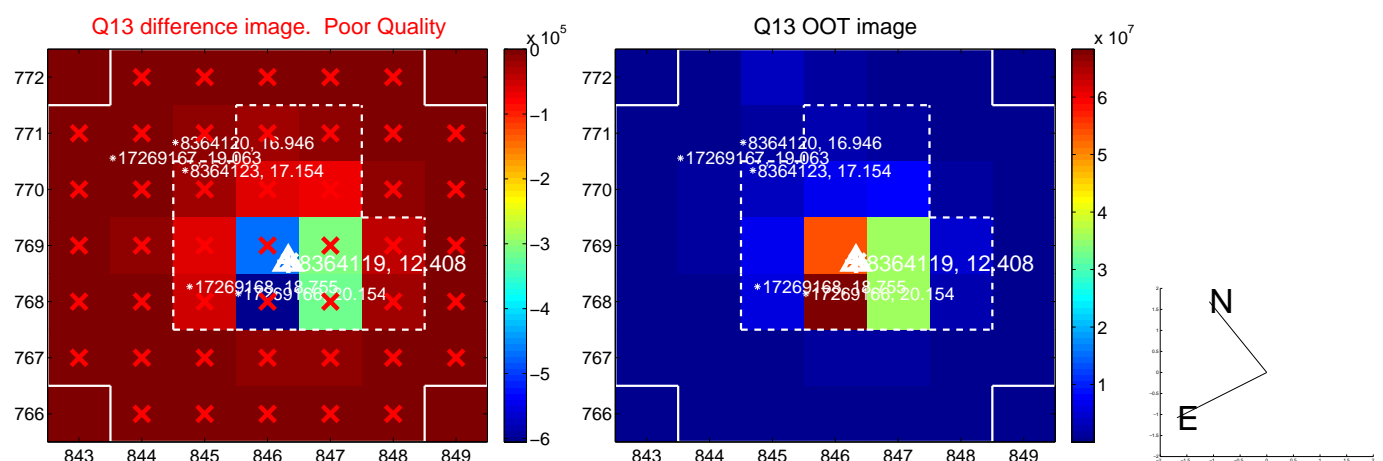




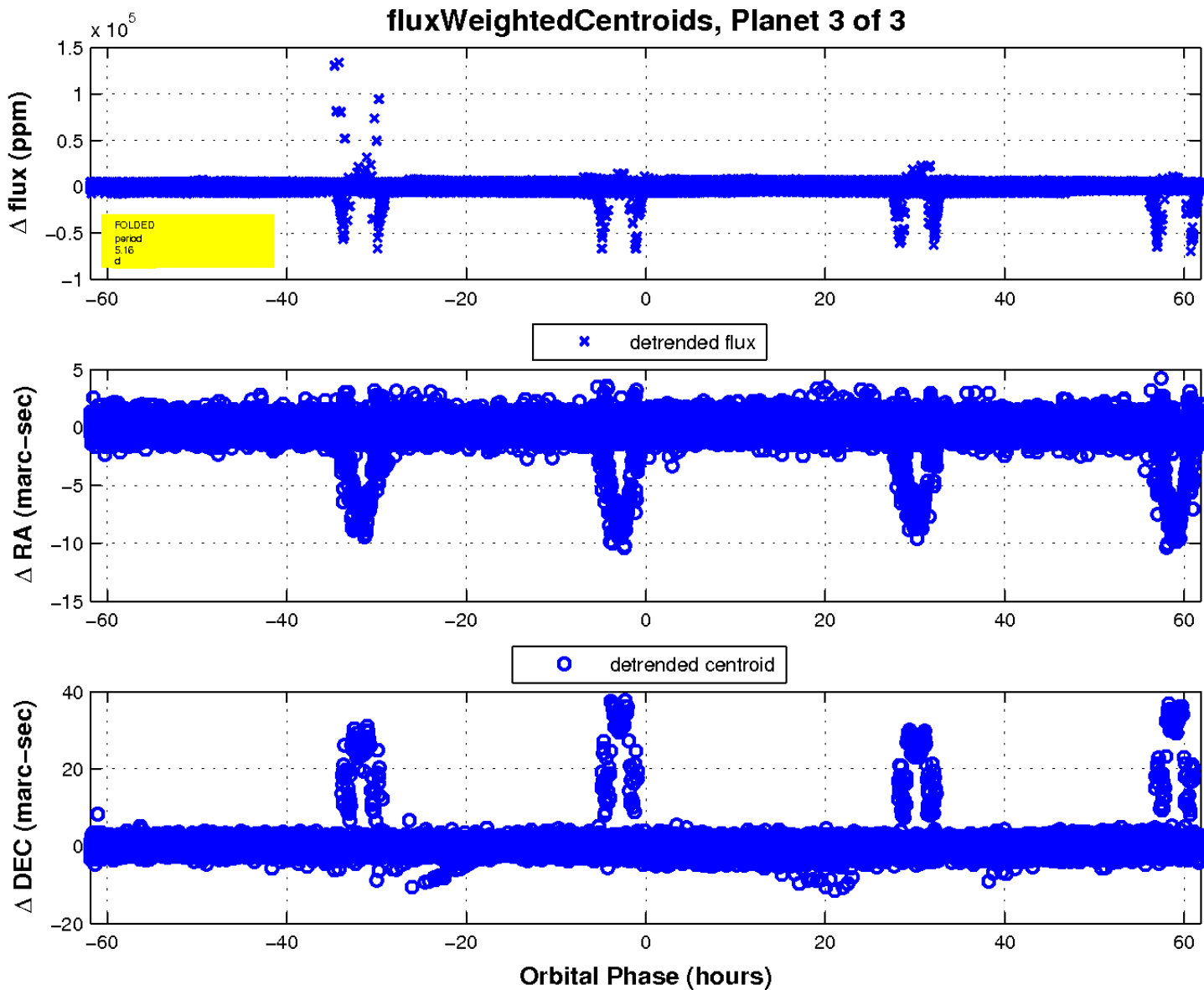
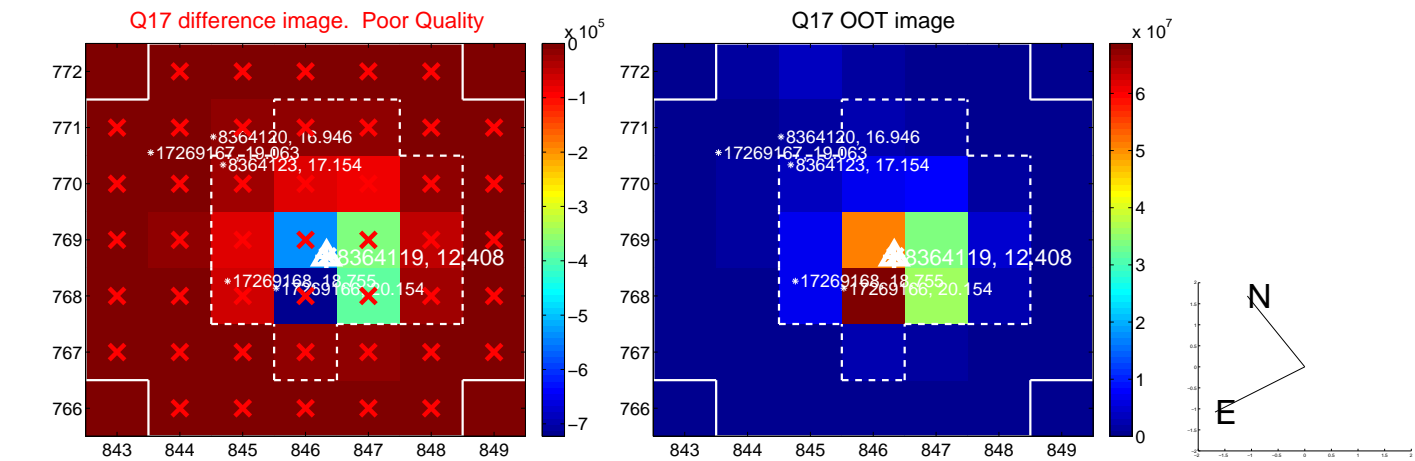
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

