

# KIC 006065823

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006065823-01	OBS	No	0.845018	131.572888	31.6	2.396	12.5	11.1	1.52	6572	0.92	10903.57
006065823-02	OBS	No	0.845061	132.009965	18.6	3.822	10.0	8.6	1.52	6572	0.66	10902.82
006065823-03	OBS	No	6.914876	133.760139	181.0	1.797	7.2	7.2	1.52	6572	2.38	661.22

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065823-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006065823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006065823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

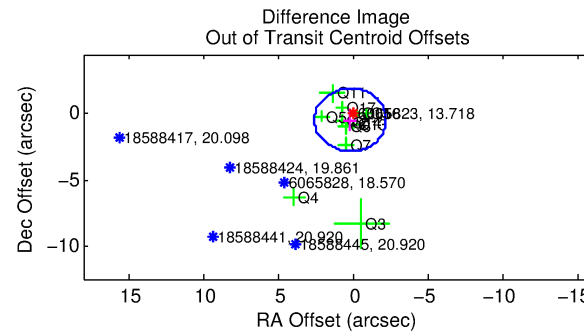
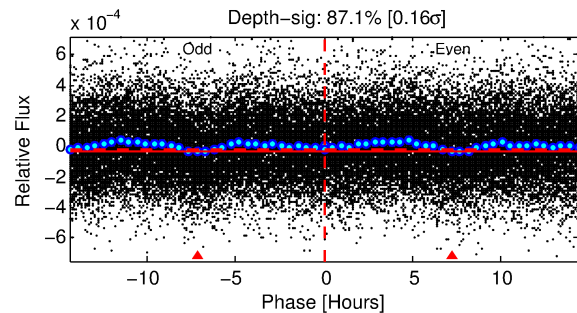
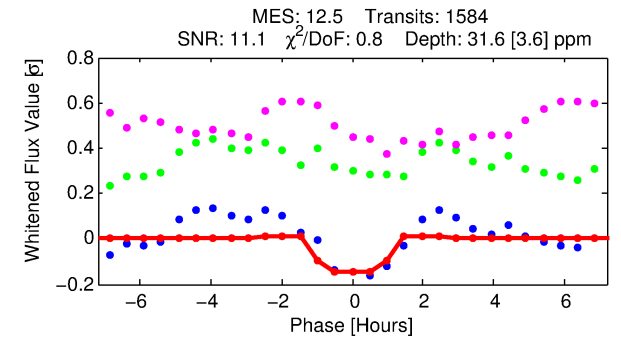
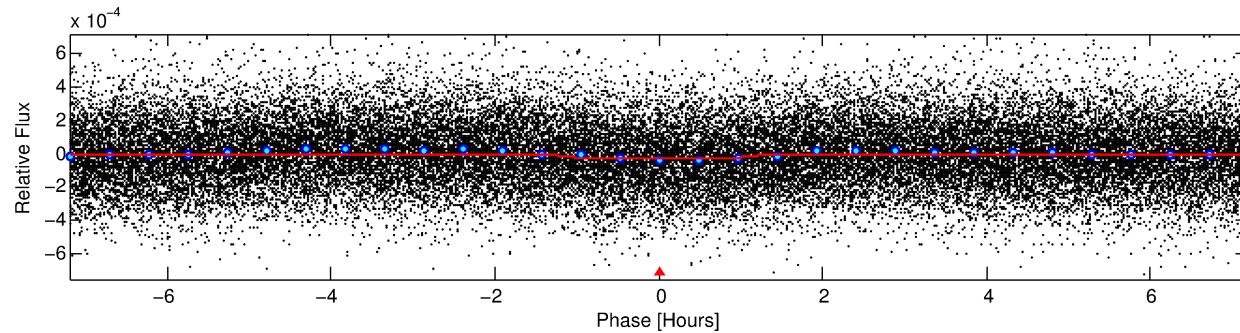
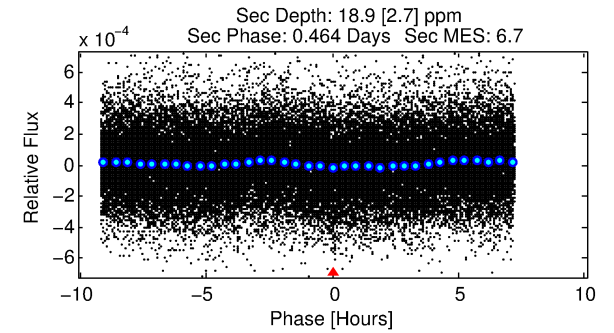
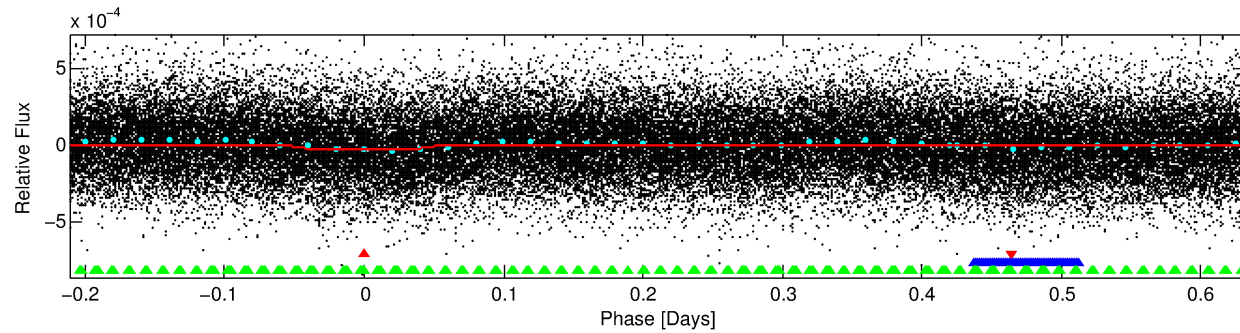
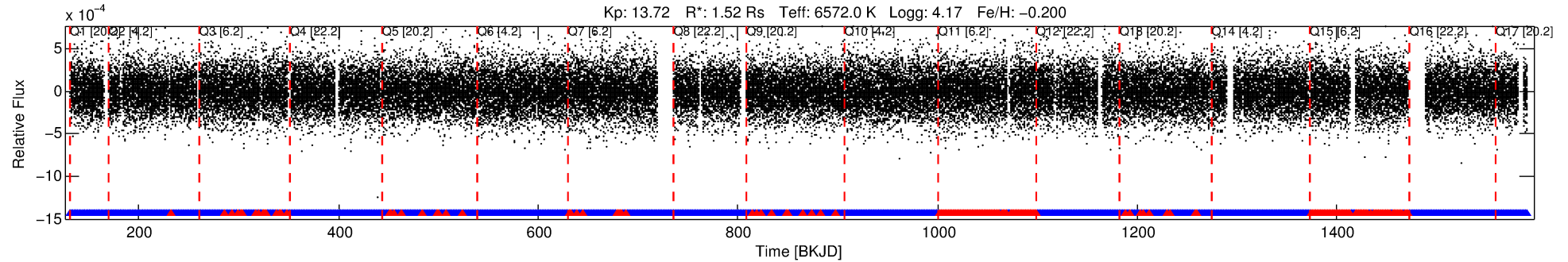
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006065823-01

No Significant Match Found

# DV One-Page Summary

KIC: 6065823 Candidate: 1 of 3 Period: 0.845 d



## DV Fit Results:

Period = 0.84502 [0.00001] d  
Epoch = 131.5729 [0.0027] BKJD  
Rp/R\* = 0.0055 [0.0012]  
a/R\* = 2.10 [1.93]  
b = 0.71 [0.85]  
Seff = 10903.57 [4056.22]  
Teq = 2606 [242] K  
Rp = 0.92 [0.34] Re  
a = 0.0188 [0.0045] AU  
Ag = 4.38 [2.54] [1.33σ]  
Teffp = 5830 [710] K [4.30σ]

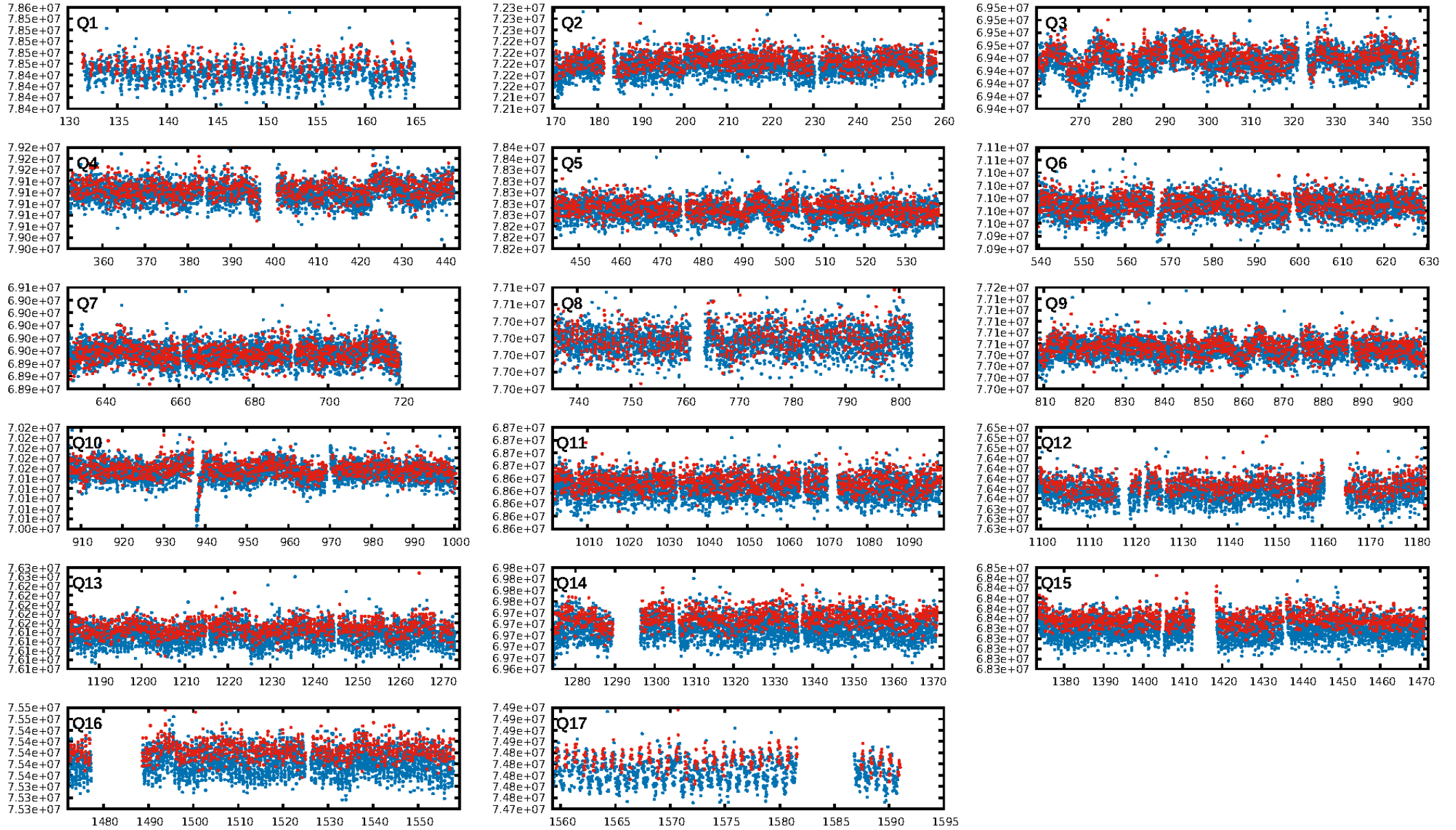
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.32e-23  
RollingBand-fgt: 0.83 [1251/1512]  
GhostDiagnostic-chr: 14.42  
Centroid-sig: 2.0%  
Centroid-so: 1.544 arcsec [1.59σ]  
OotOffset-rm: 0.488 arcsec [0.61σ]  
KicOffset-rm: 0.551 arcsec [0.70σ]  
OotOffset-st: 3/4/2/3 [12]  
KicOffset-st: 3/4/2/3 [12]  
DiffImageQuality-fgm: 0.33 [4/12]  
DiffImageOverlap-fno: 0.71 [12/17]

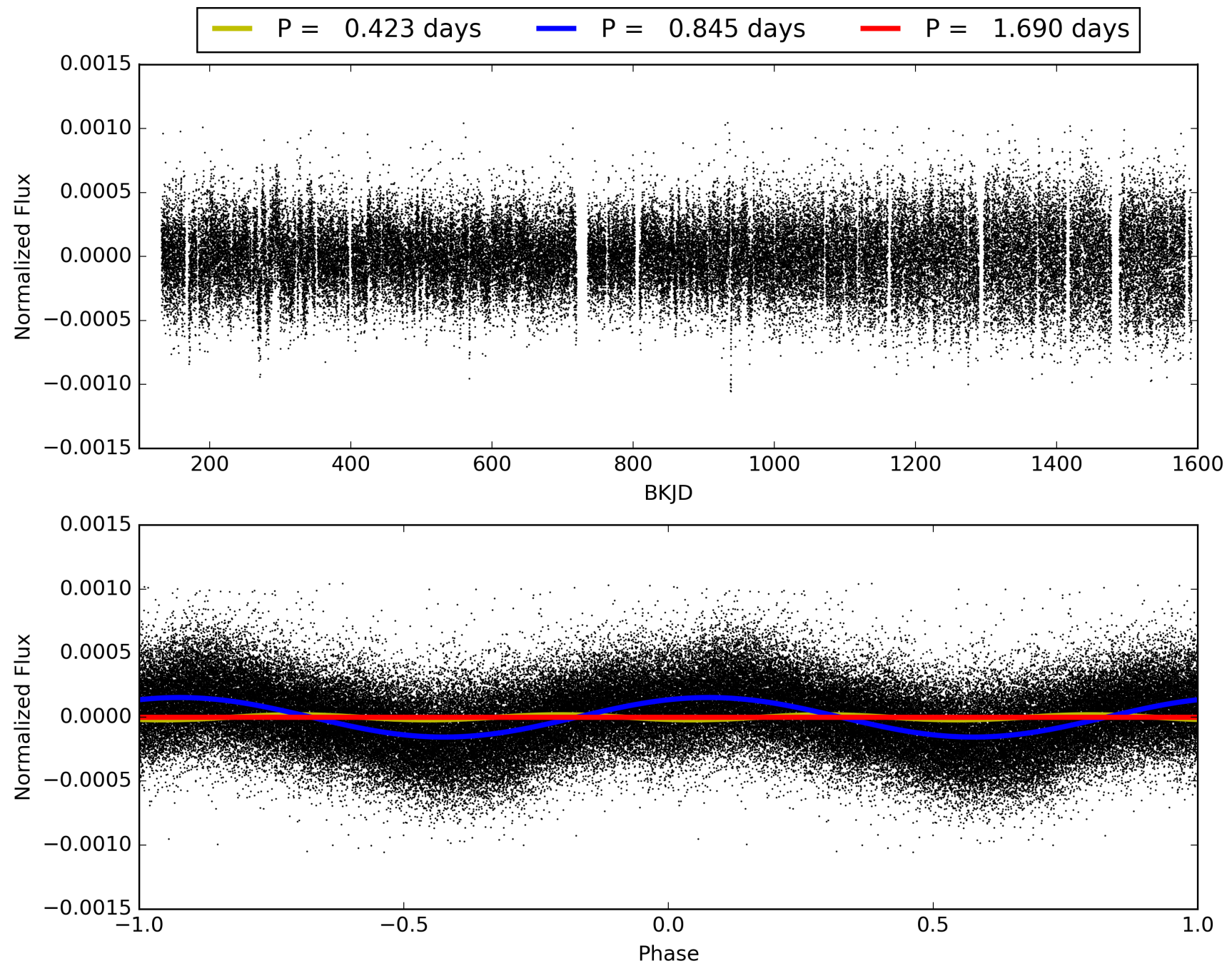
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:16:39 Z

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

# TCE 006065823-01, PDC Light Curves



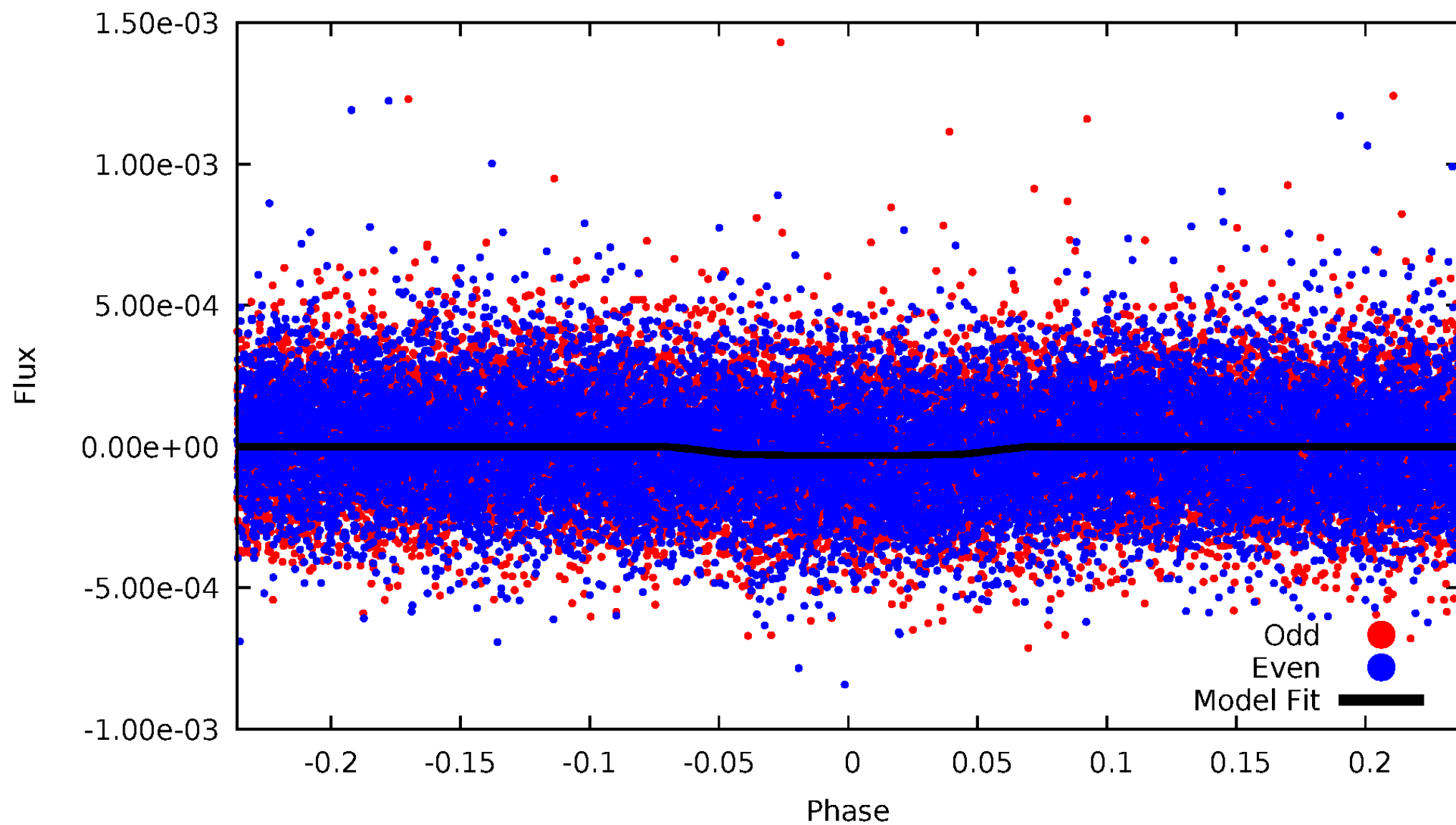
TCE 006065823-01





# DV Odd/Even

TCE 006065823-01



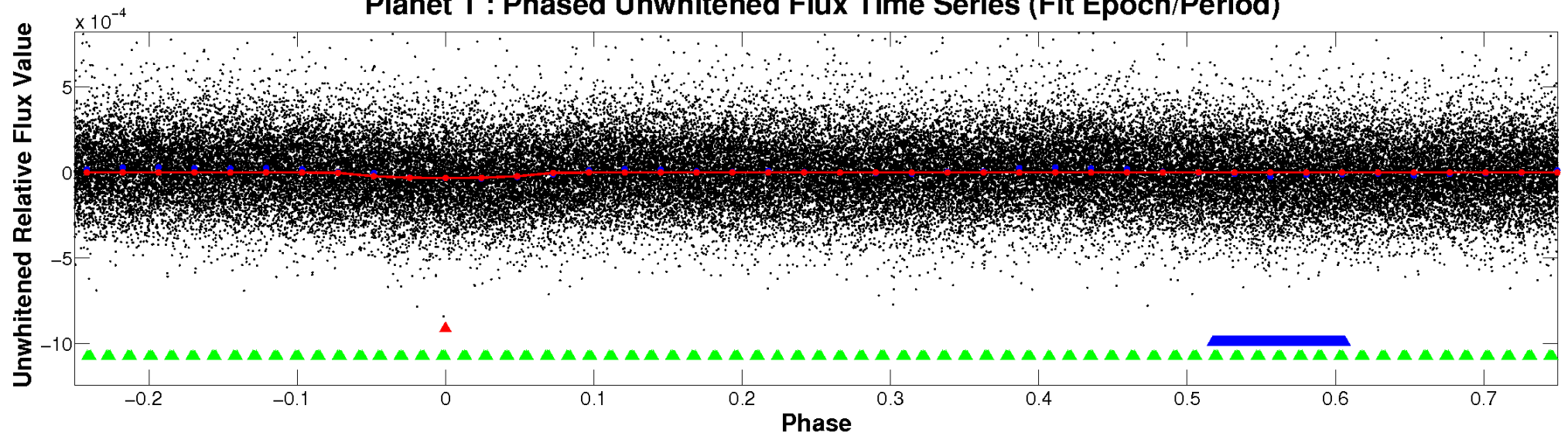


ALT Odd/Even

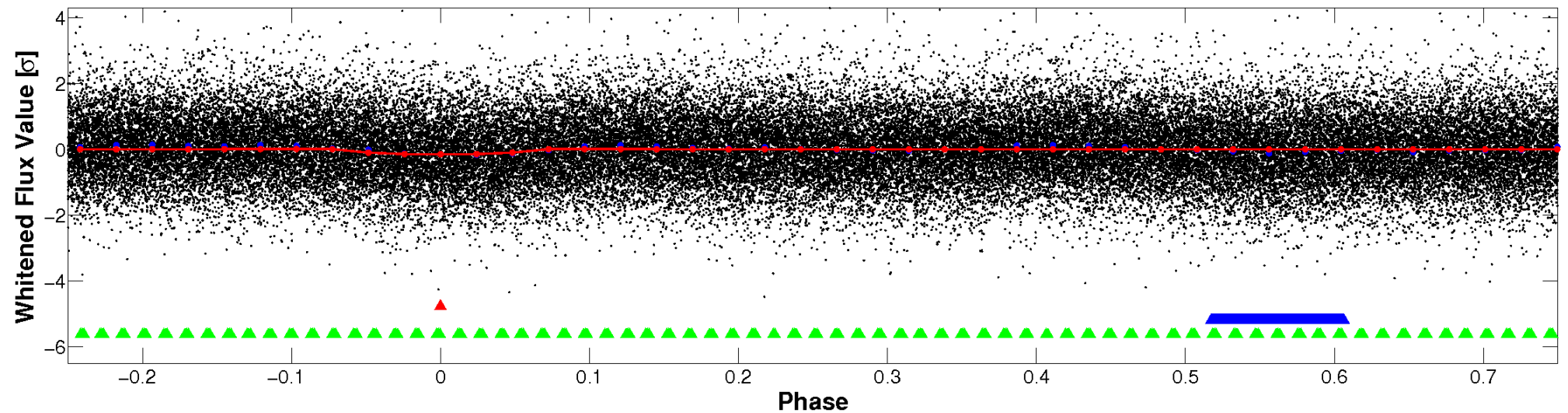
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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



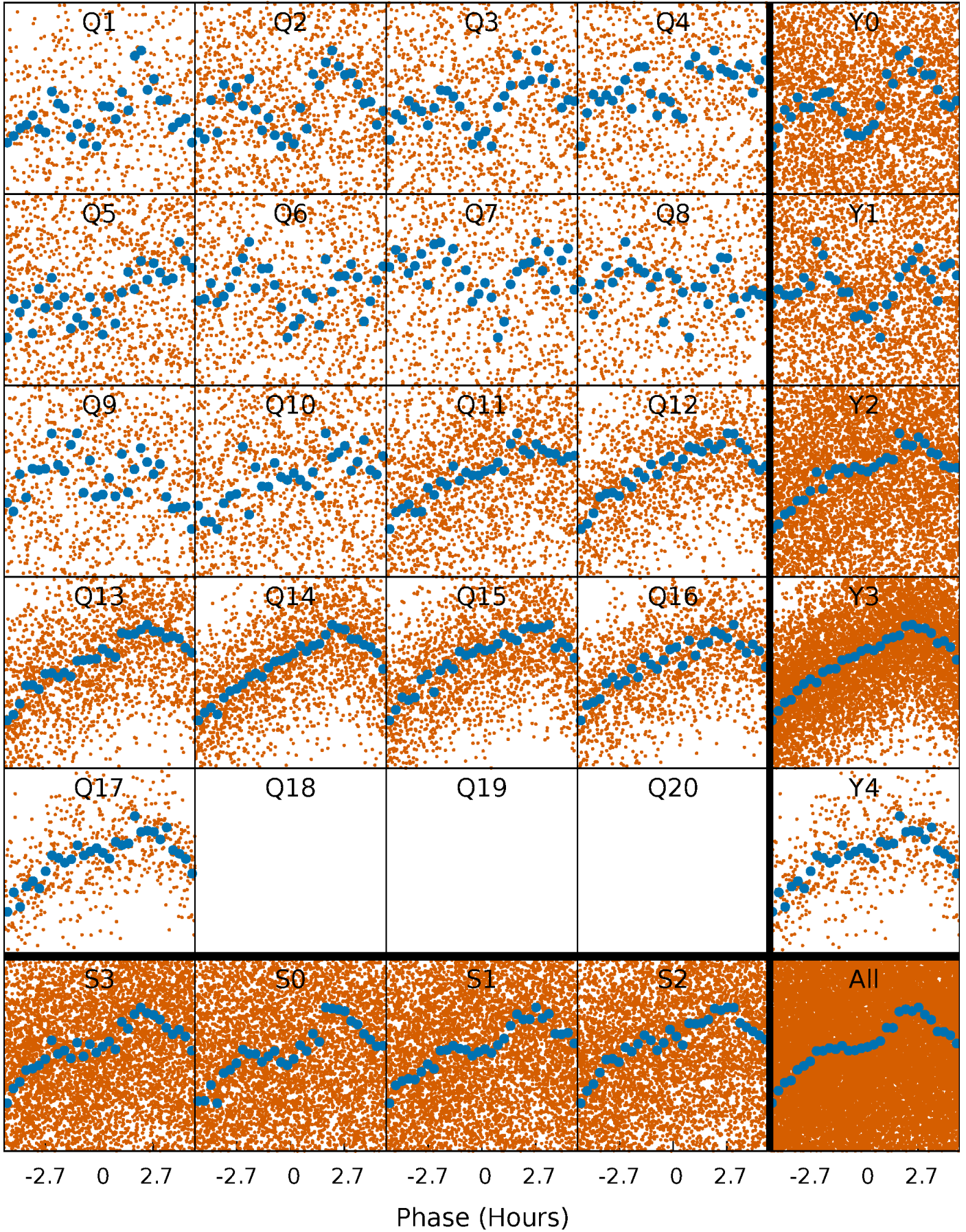
## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





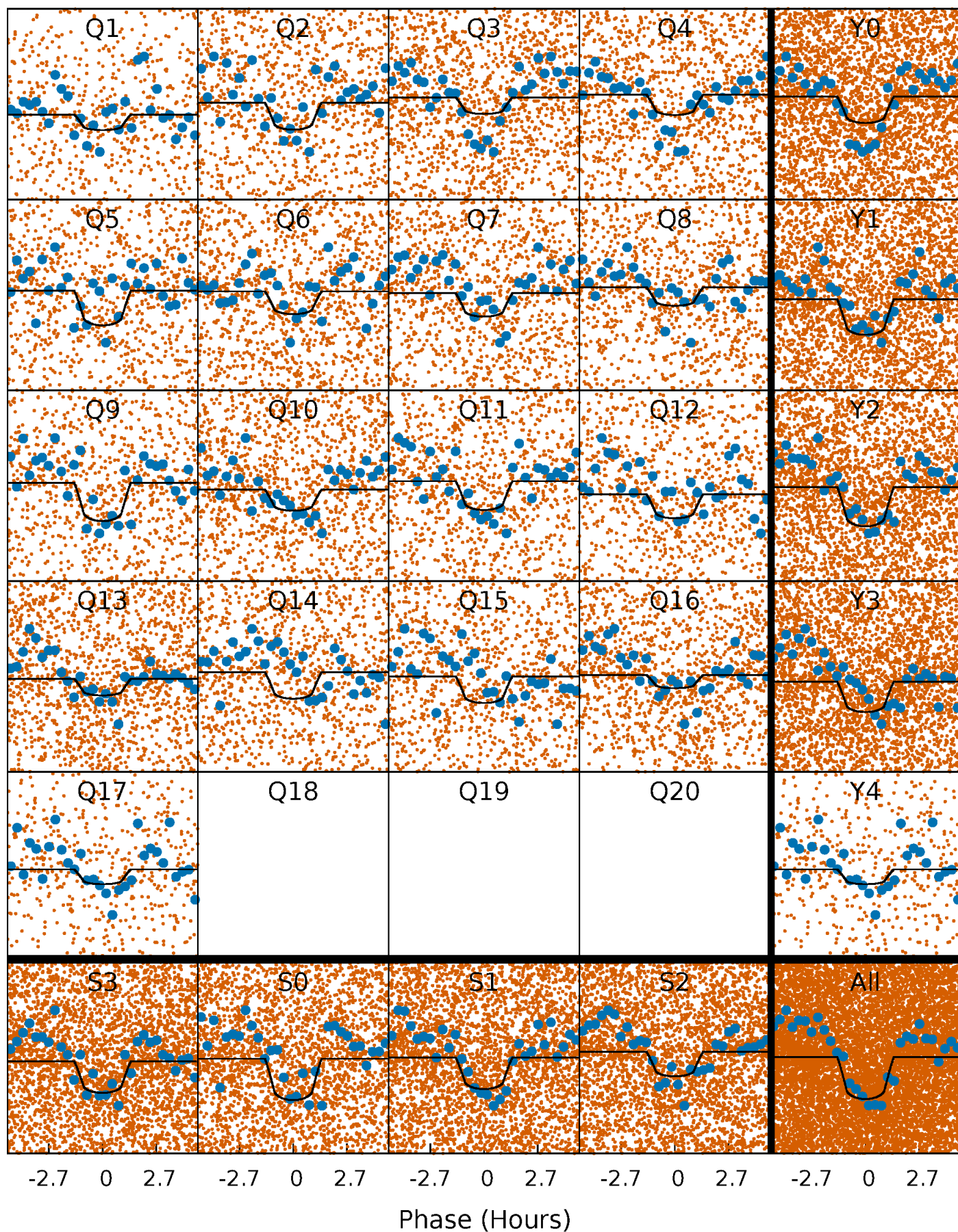
# PDC Quarter-Phased Transit Curves

TCE 006065823-01 P= 0.845018 Days  $T_0=131.572888$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 006065823-01 P= 0.845018 Days  $T_0=131.572888$  (BKJD)



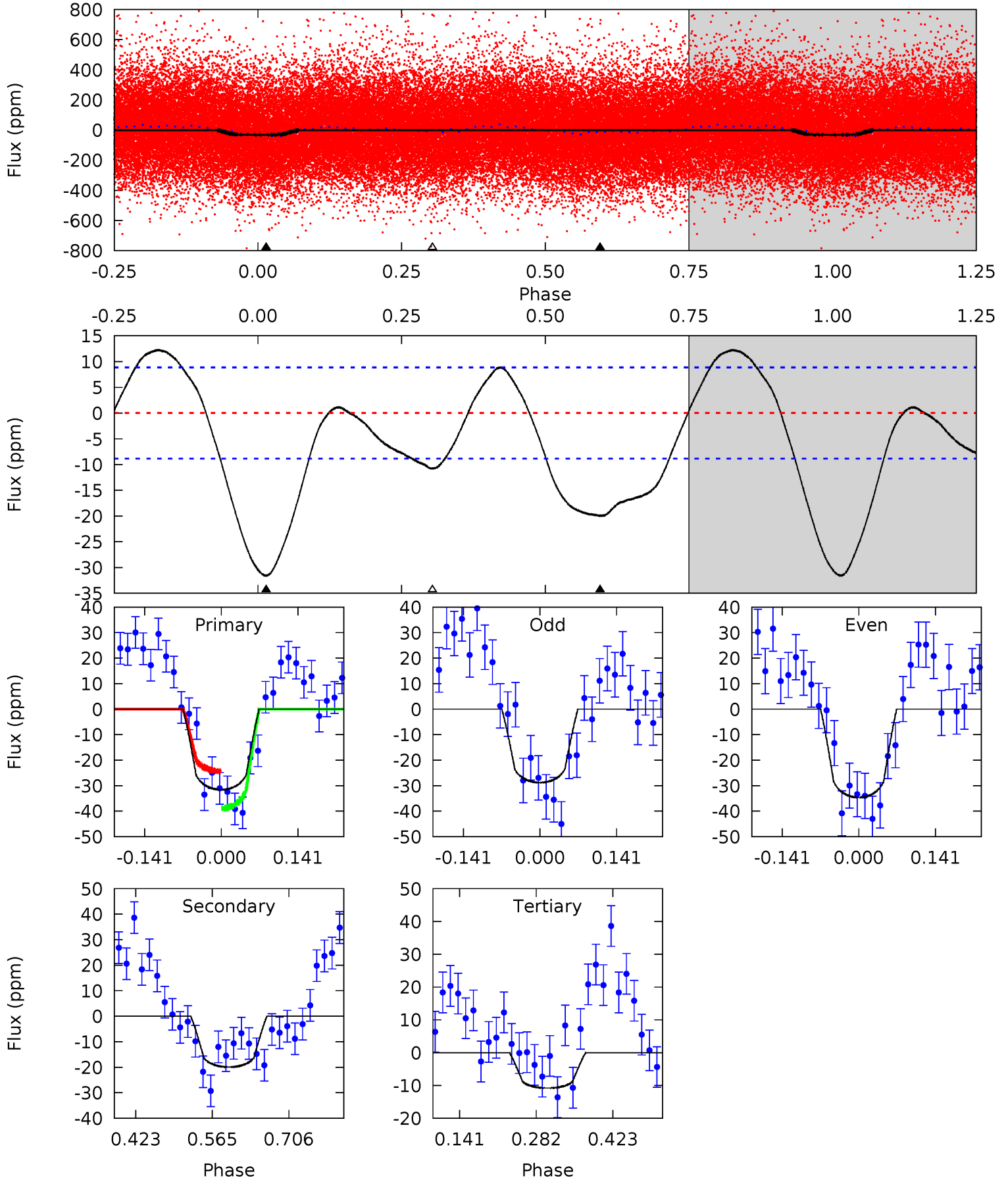
This plot does not exist for this TCE.



# DV Model-Shift Uniqueness Test

006065823-01, P = 0.845018 Days, E = 130.727870 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
16.0	10.1	5.47	0	4.49	1.47	3.85	10.5	16.0	4.64	10.1	1.48	0.96	0.28	3.71



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 006065823

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6572^{+175}_{-233}$	$4.169^{+0.185}_{-0.185}$	$-0.200^{+0.250}_{-0.300}$	$1.519^{+0.442}_{-0.362}$	$1.249^{+0.181}_{-0.201}$	$0.502^{+0.555}_{-0.243}$
	+3%/-4%	+4%/-4%	+125%/-150%	+29%/-24%	+14%/-16%	+111%/-49%
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 006065823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-20 \pm 2$	$0.90^{+0.26}_{-0.22}$	$3630^{+277}_{-255}$	$5820^{+850}_{-648}$	$4.710^{+3.684}_{-1.873}$
Alt.	N/A	N/A	N/A	N/A	N/A

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



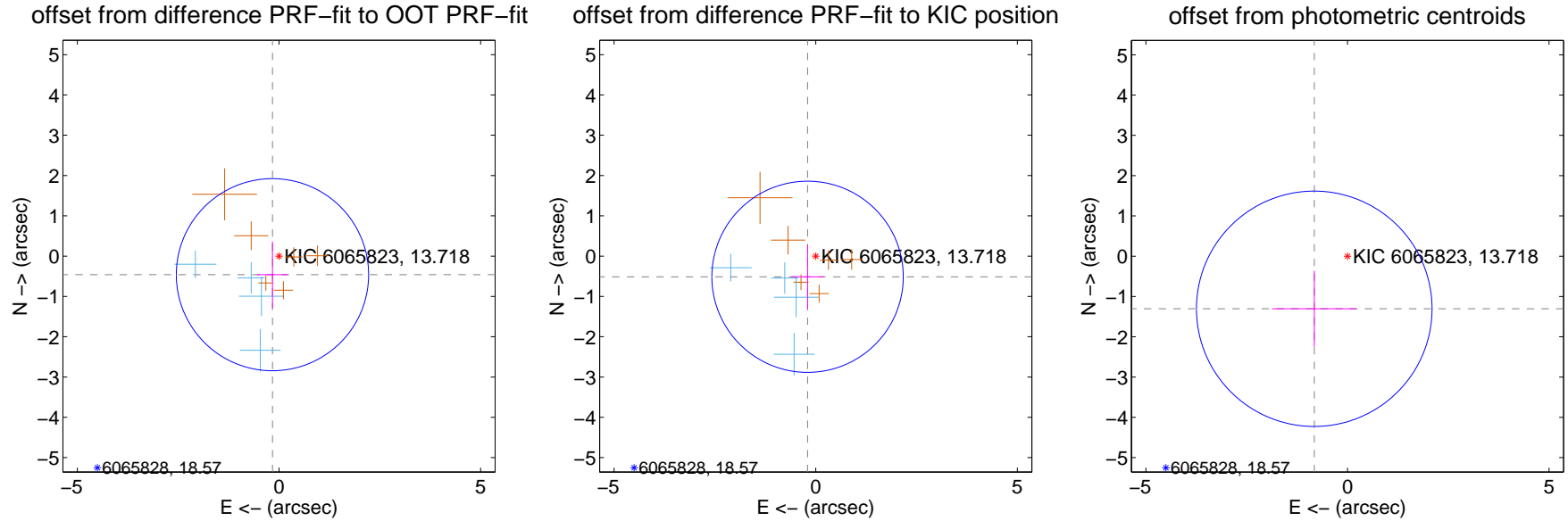
## DV Centroid Data

Supplemental centroid analysis for 006065823-01. Kepler magnitude: 13.72. Transit SNR 11.14

There are 4 quarters with good PRF difference image offsets

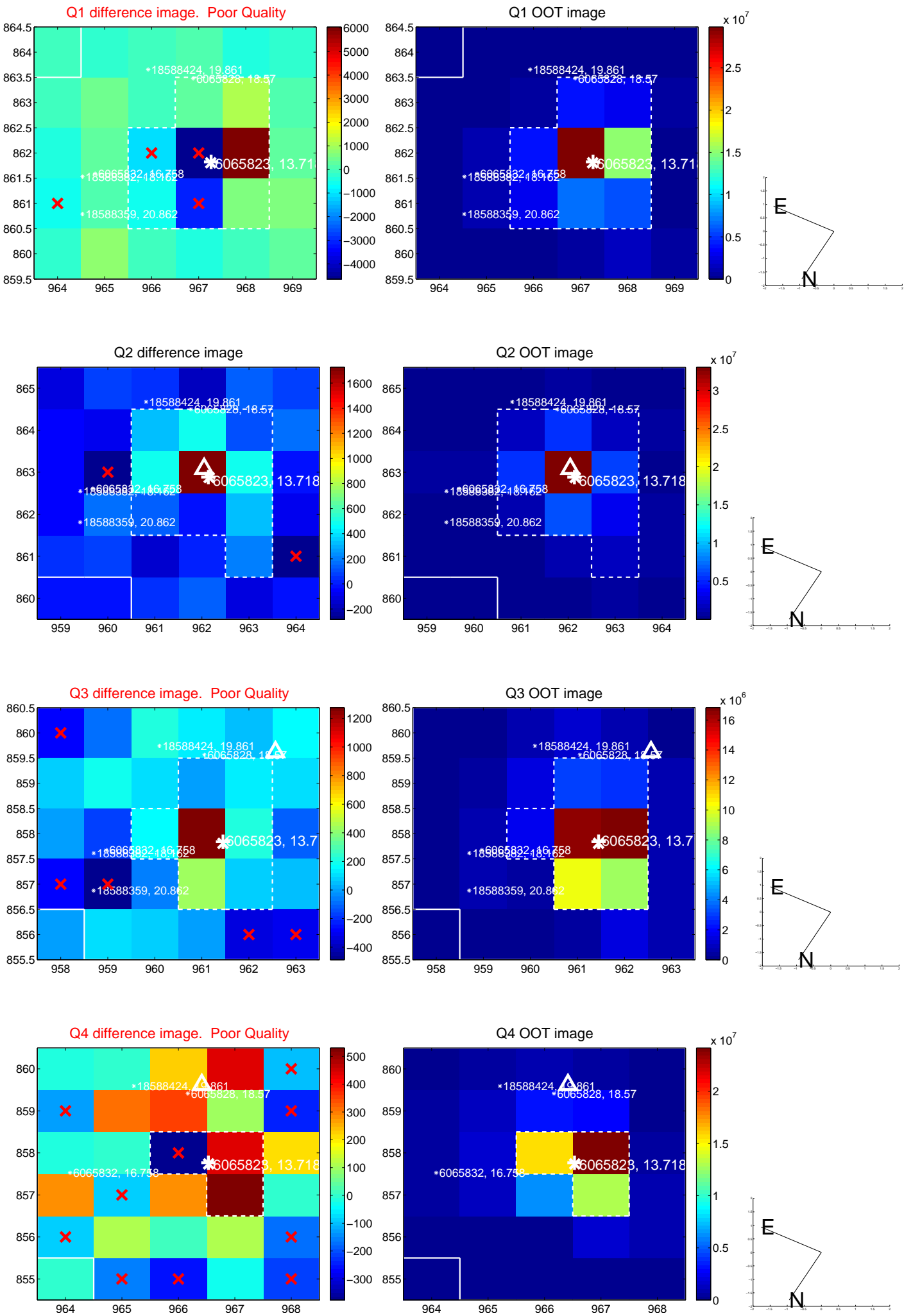
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.488 \pm 0.795$	0.61	$0.162 \pm 0.379$	$-0.461 \pm 0.825$
PRF-fit source offset from KIC position	$0.551 \pm 0.791$	0.70	$0.202 \pm 0.403$	$-0.513 \pm 0.799$
photometric centroid source offset	$1.54 \pm 0.97$	1.59	$0.82 \pm 1.05$	$-1.31 \pm 0.94$

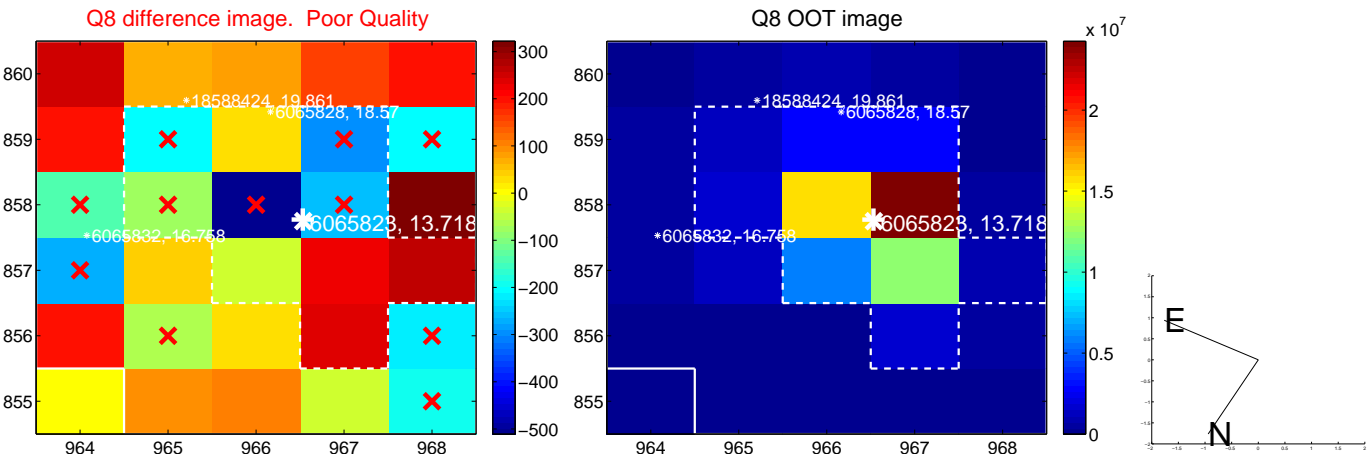
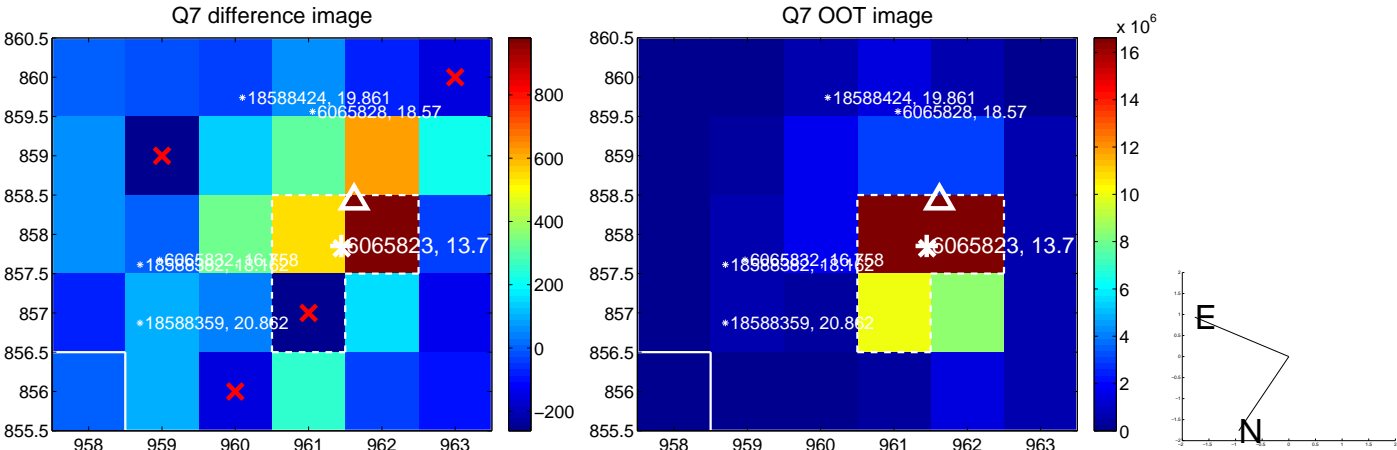
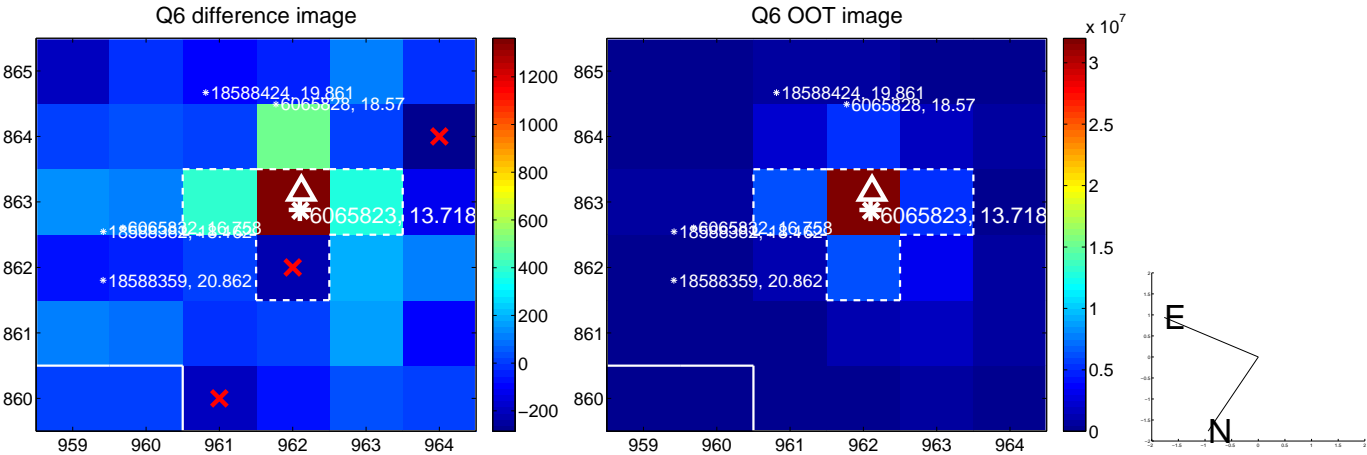
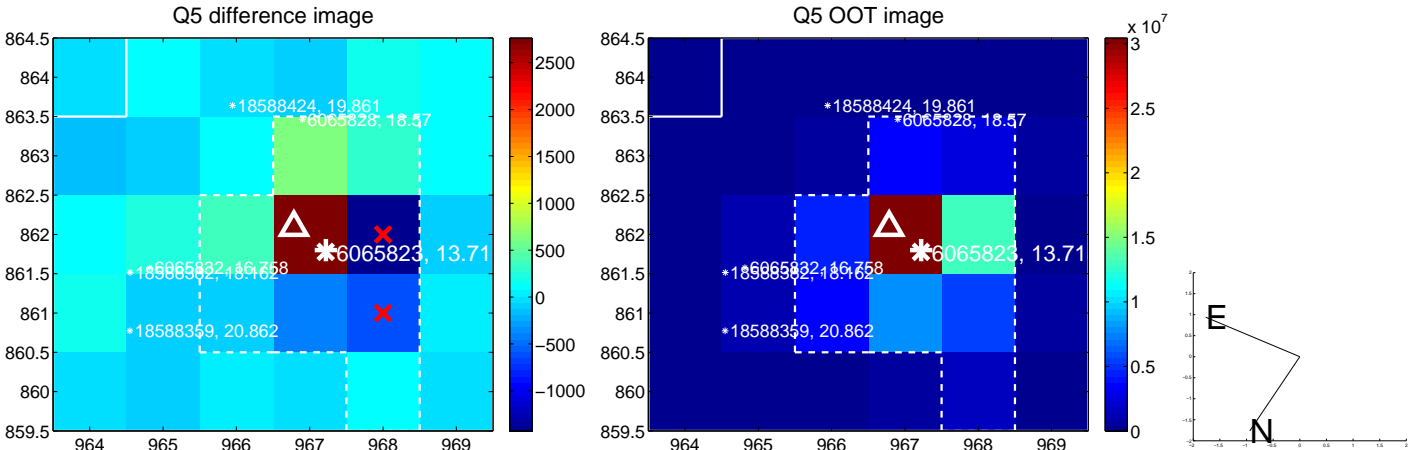


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

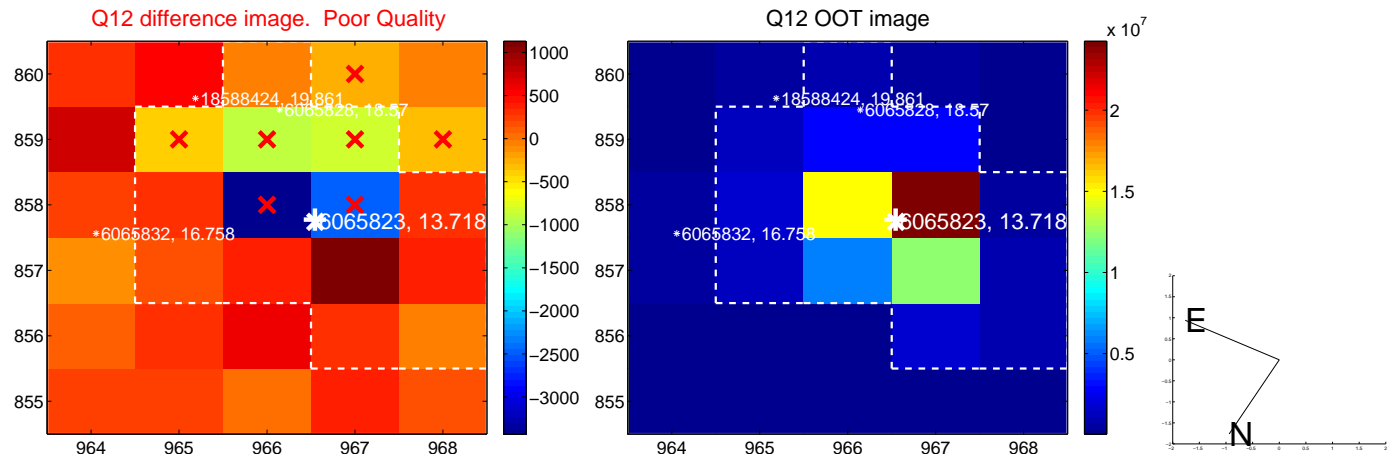
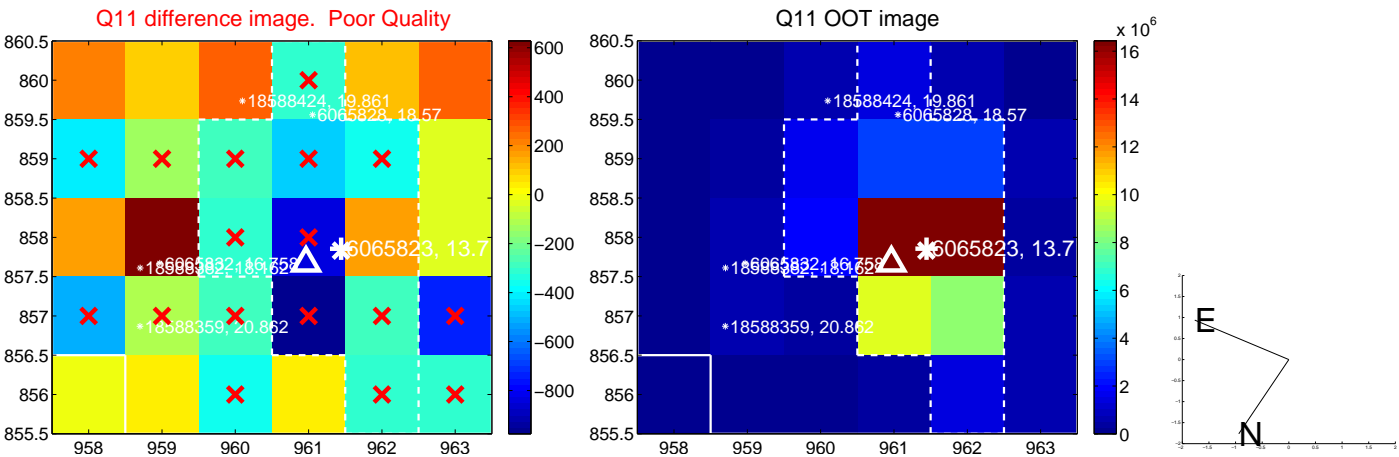
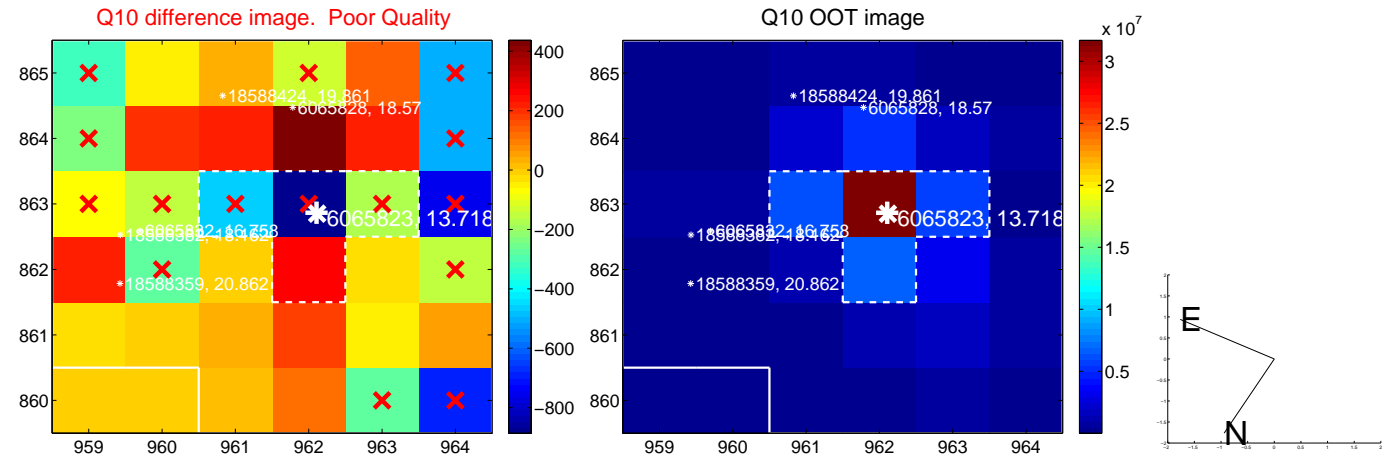
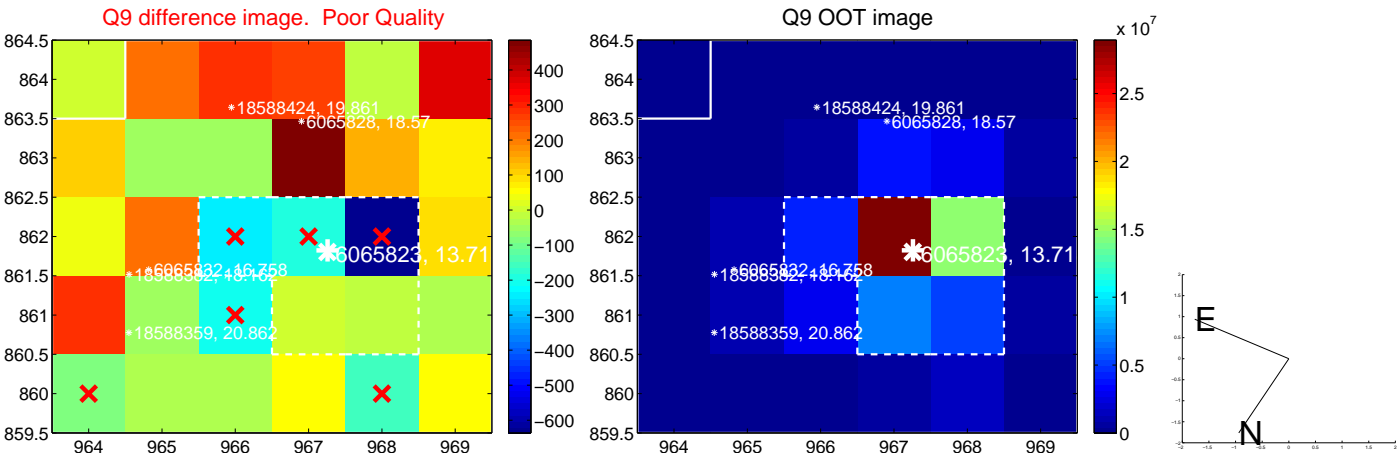
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



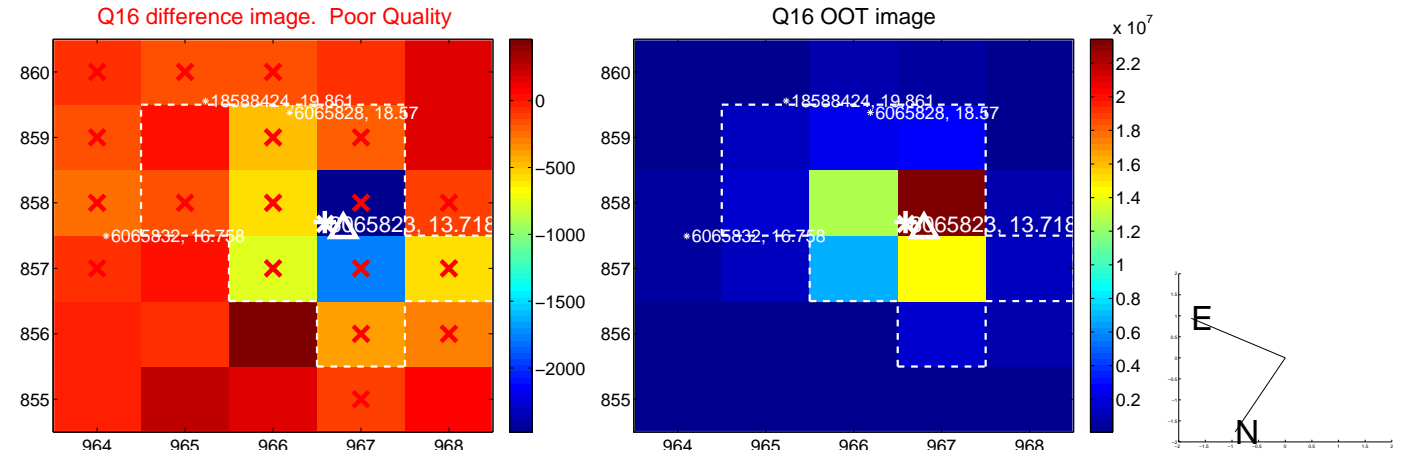
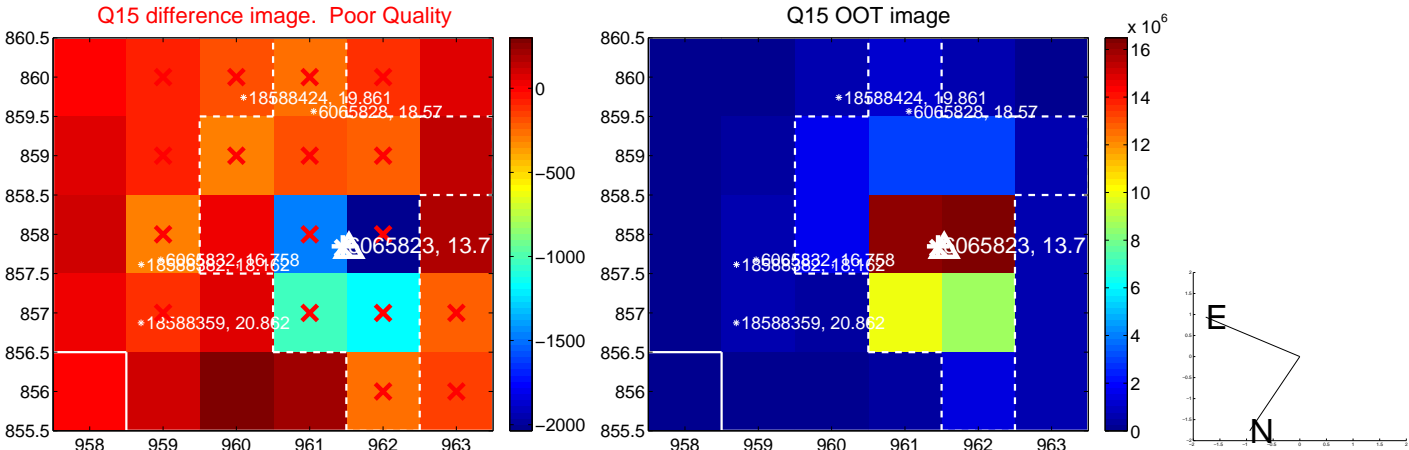
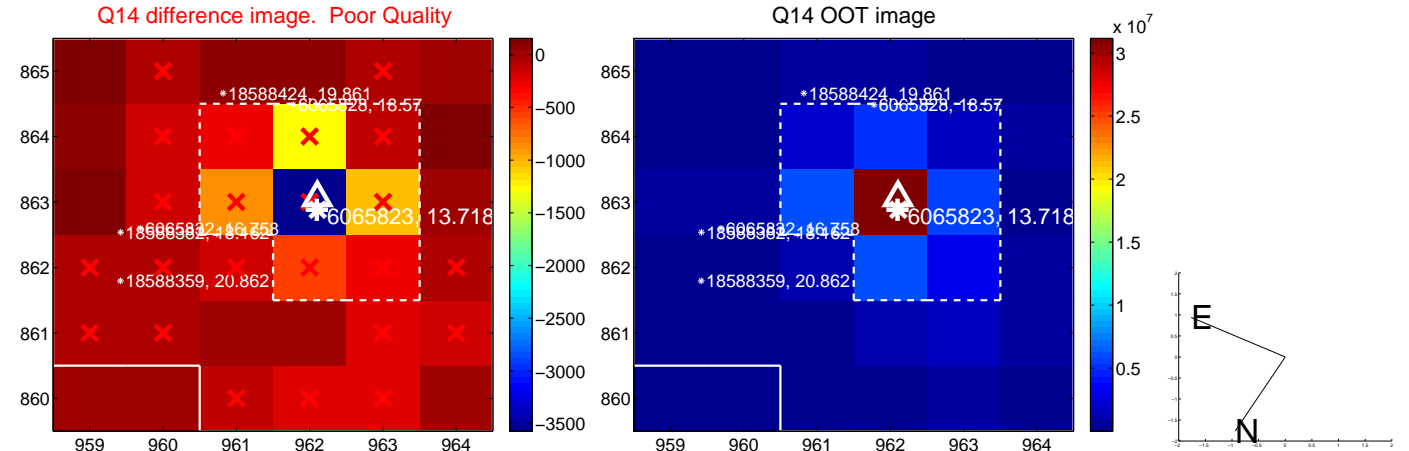
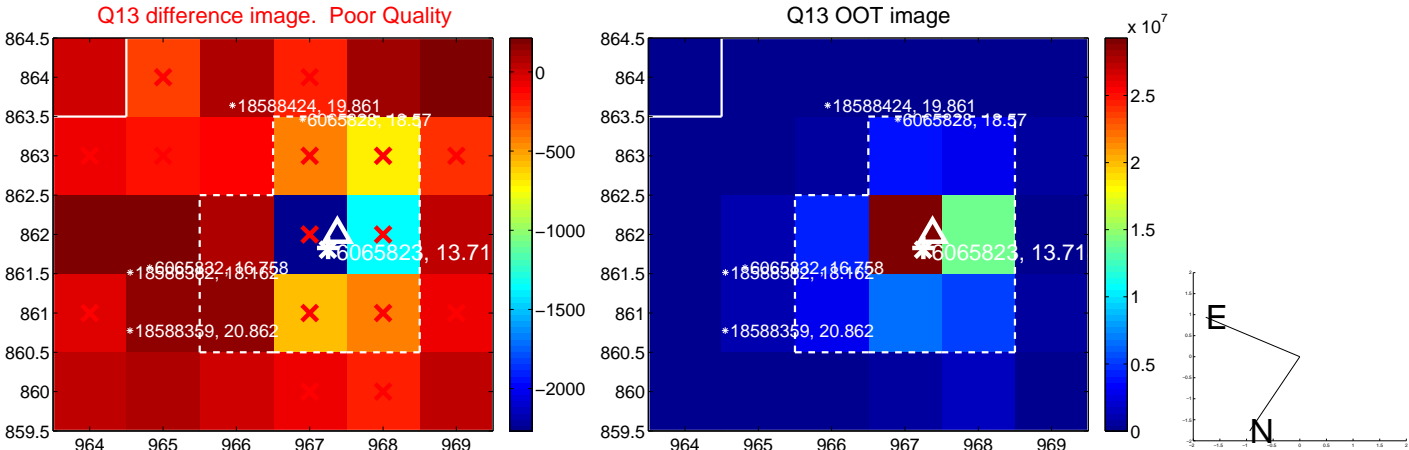
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



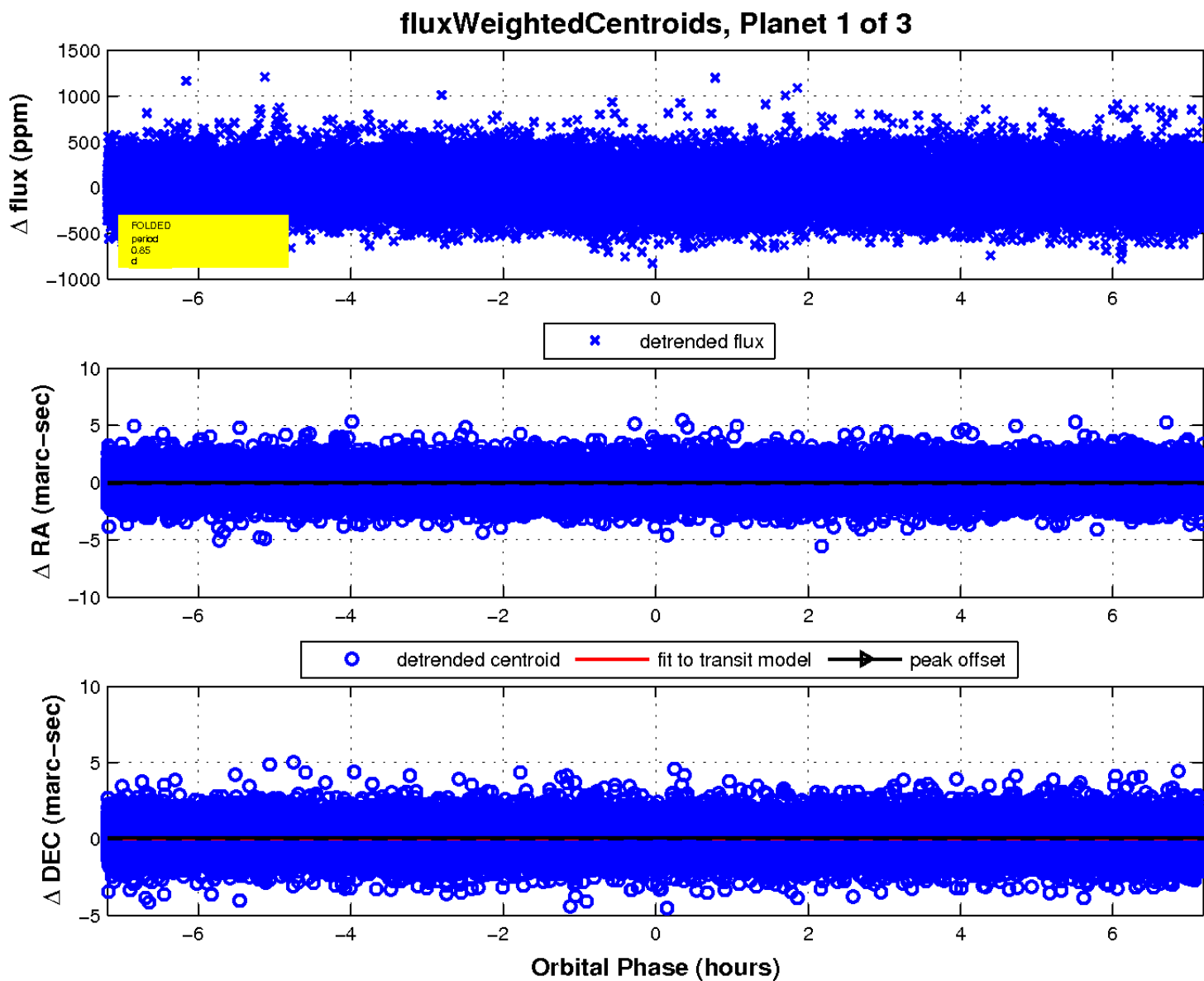
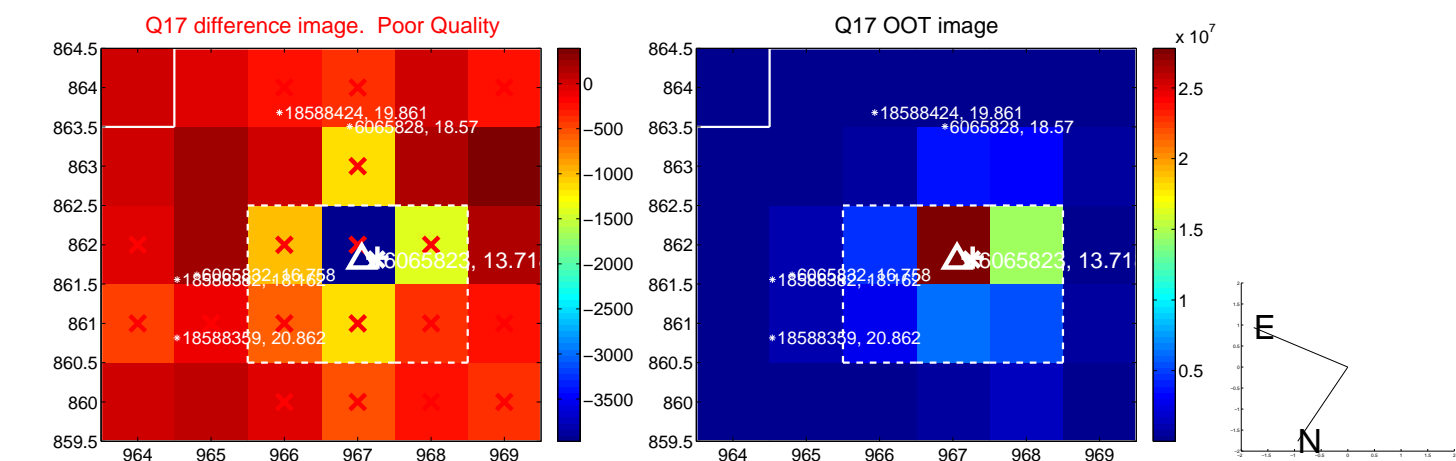
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



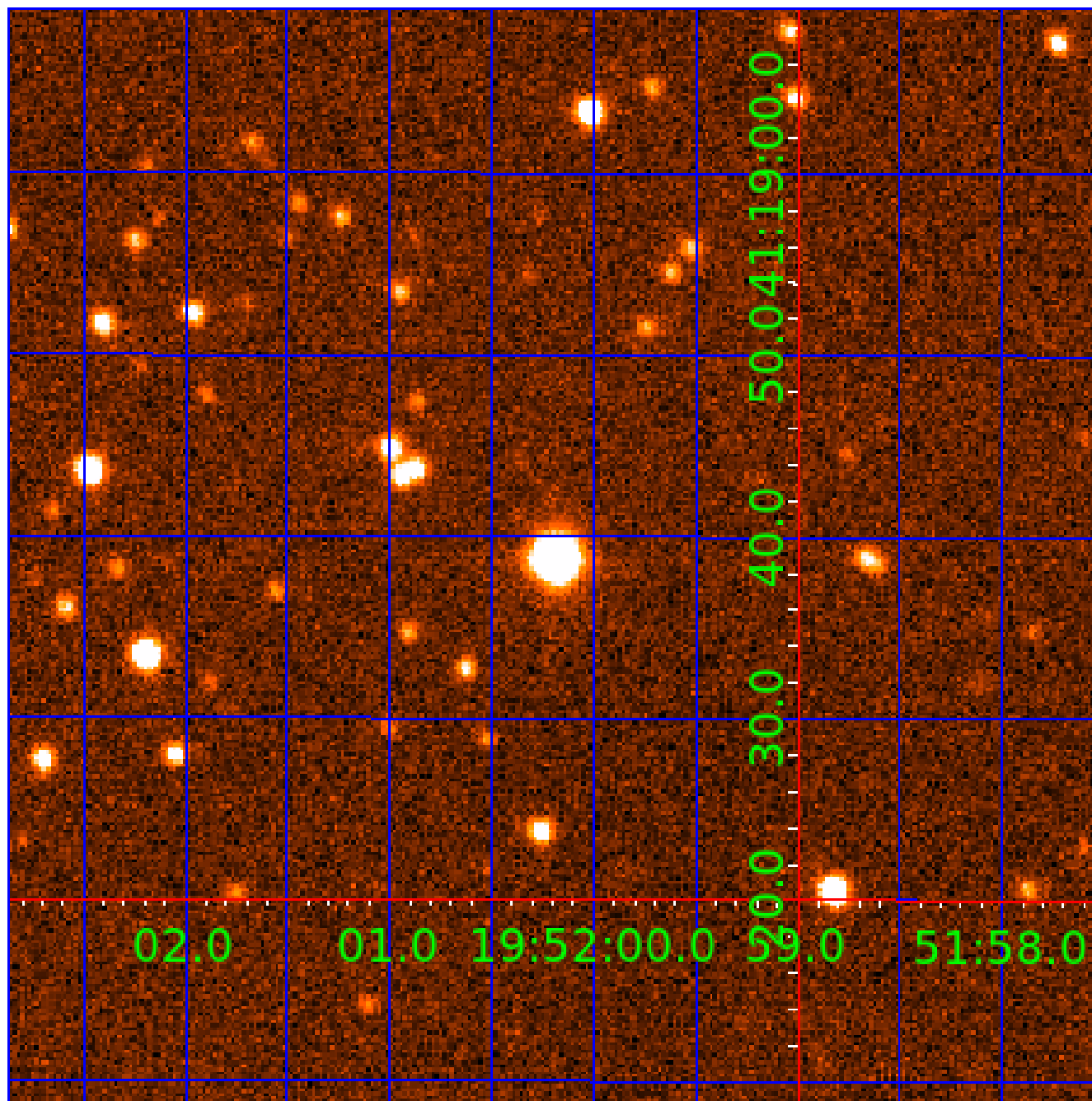
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





UKIRT Image

Declination



# KIC 006065823

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006065823-01	OBS	No	0.845018	131.572888	31.6	2.396	12.5	11.1	1.52	6572	0.92	10903.57
006065823-02	OBS	No	0.845061	132.009965	18.6	3.822	10.0	8.6	1.52	6572	0.66	10902.82
006065823-03	OBS	No	6.914876	133.760139	181.0	1.797	7.2	7.2	1.52	6572	2.38	661.22

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065823-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006065823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006065823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

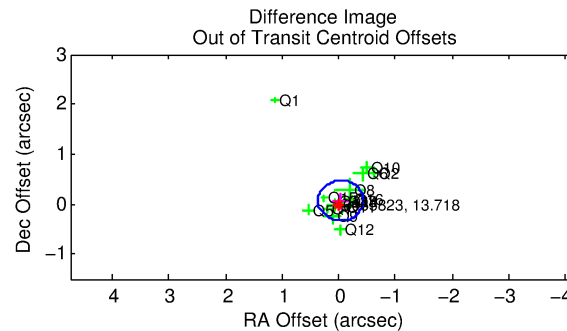
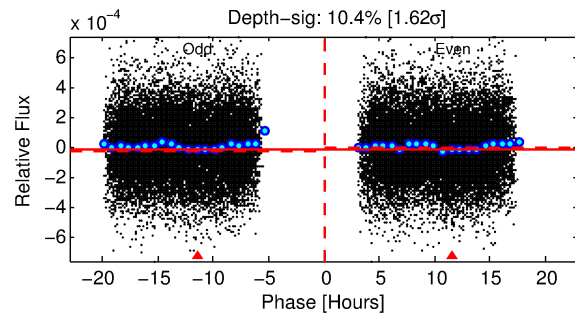
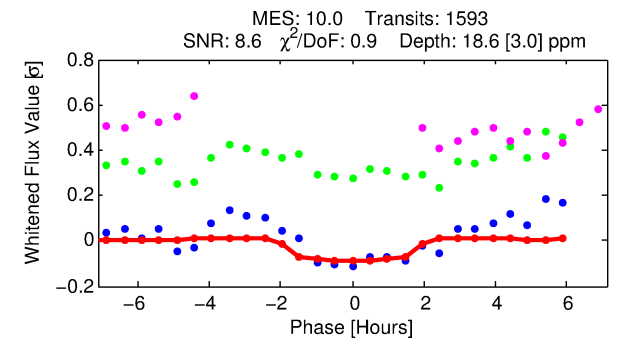
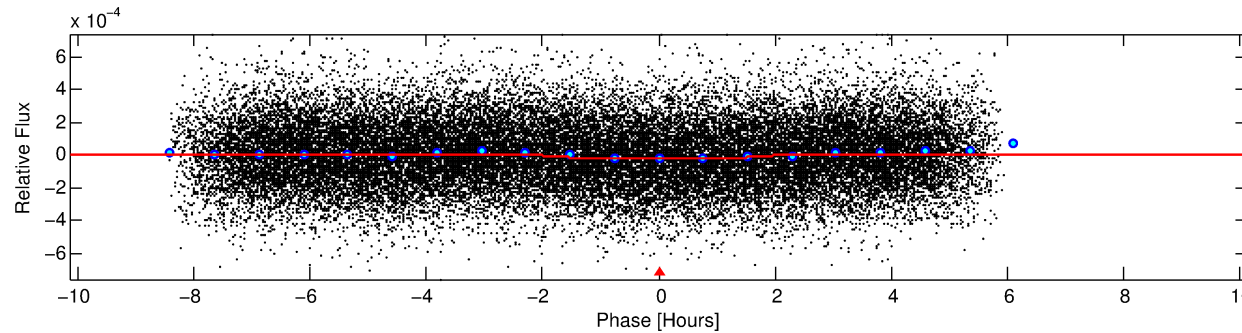
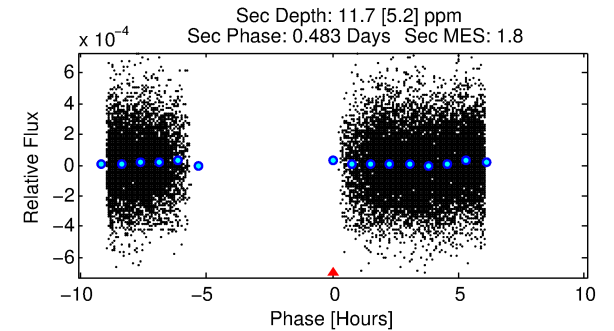
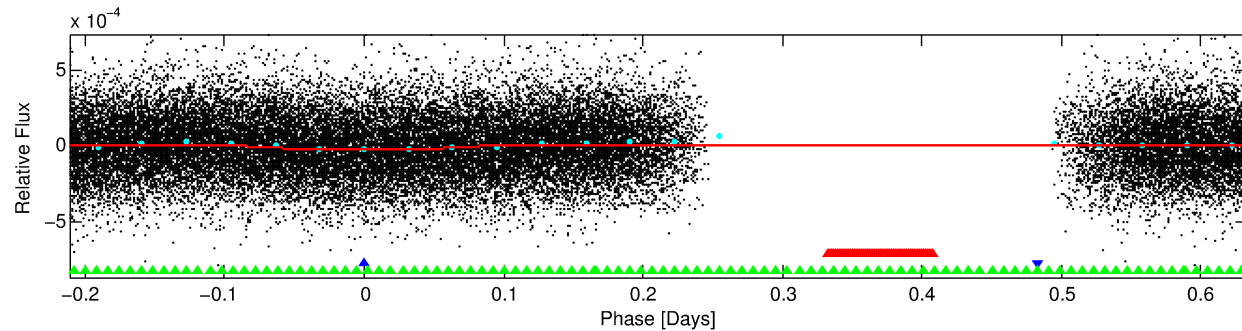
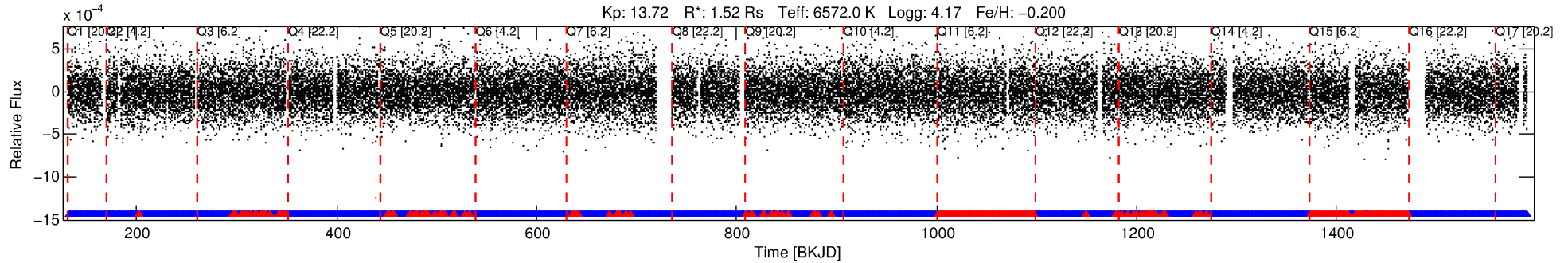
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006065823-02

No Significant Match Found

# DV One-Page Summary

KIC: 6065823 Candidate: 2 of 3 Period: 0.845 d



## DV Fit Results:

Period = 0.84506 [0.00001] d  
Epoch = 132.0100 [0.0050] BKJD  
Rp/R\* = 0.0040 [0.0043]  
a/R\* = 1.77 [6.93]  
b = 0.21 [25.81]  
Seff = 10902.82 [4055.94]  
Teq = 2606 [242] K  
Rp = 0.66 [0.73] Re  
a = 0.0188 [0.0045] AU  
Ag = 5.18 [11.47] [0.36σ]  
Teffp = 6077 [3333] K [1.04σ]

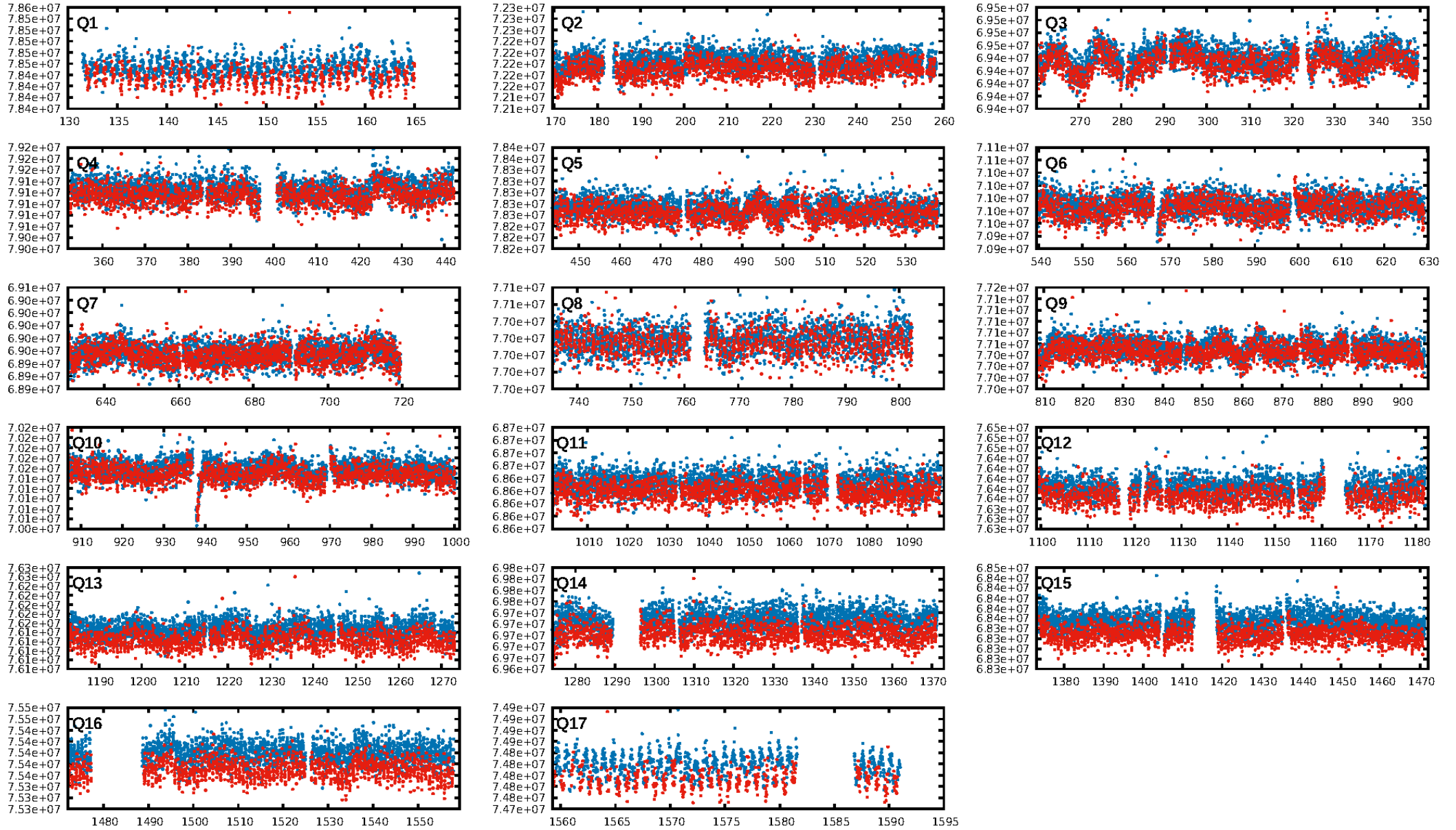
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]  
LongPeriod-sig: 100.0% [34.50σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.06e-16  
RollingBand-fgt: 0.80 [1221/1521]  
GhostDiagnostic-chr: 0.7269  
Centroid-sig: 30.6%  
Centroid-so: 1.298 arcsec [0.93σ]  
OotOffset-rm: 0.075 arcsec [0.56σ]  
KicOffset-rm: 0.008 arcsec [0.07σ]  
OotOffset-st: 4/3/4/5 [16]  
KicOffset-st: 4/3/4/5 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 0.00 [0/17]

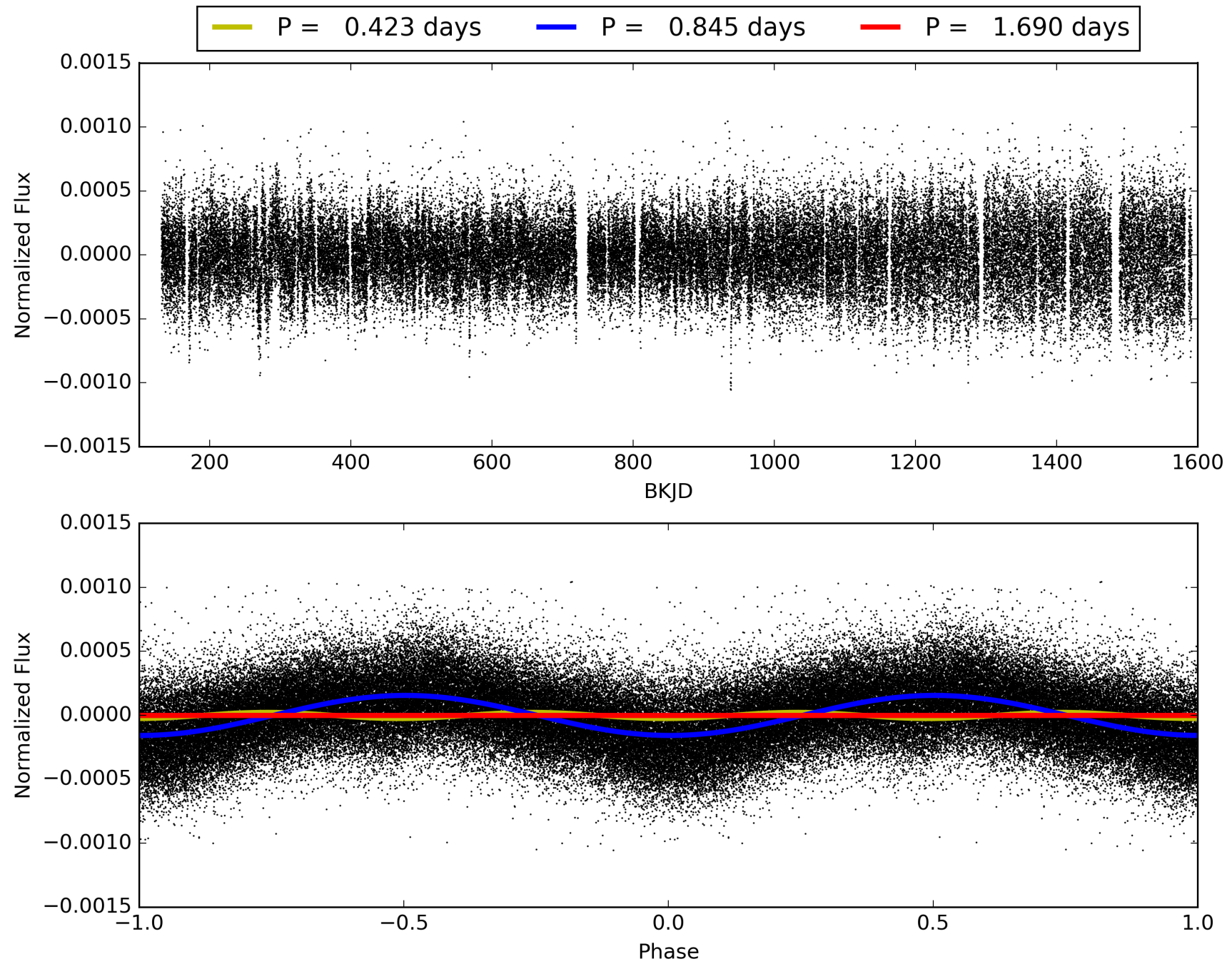
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:17:02 Z

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

# TCE 006065823-02, PDC Light Curves



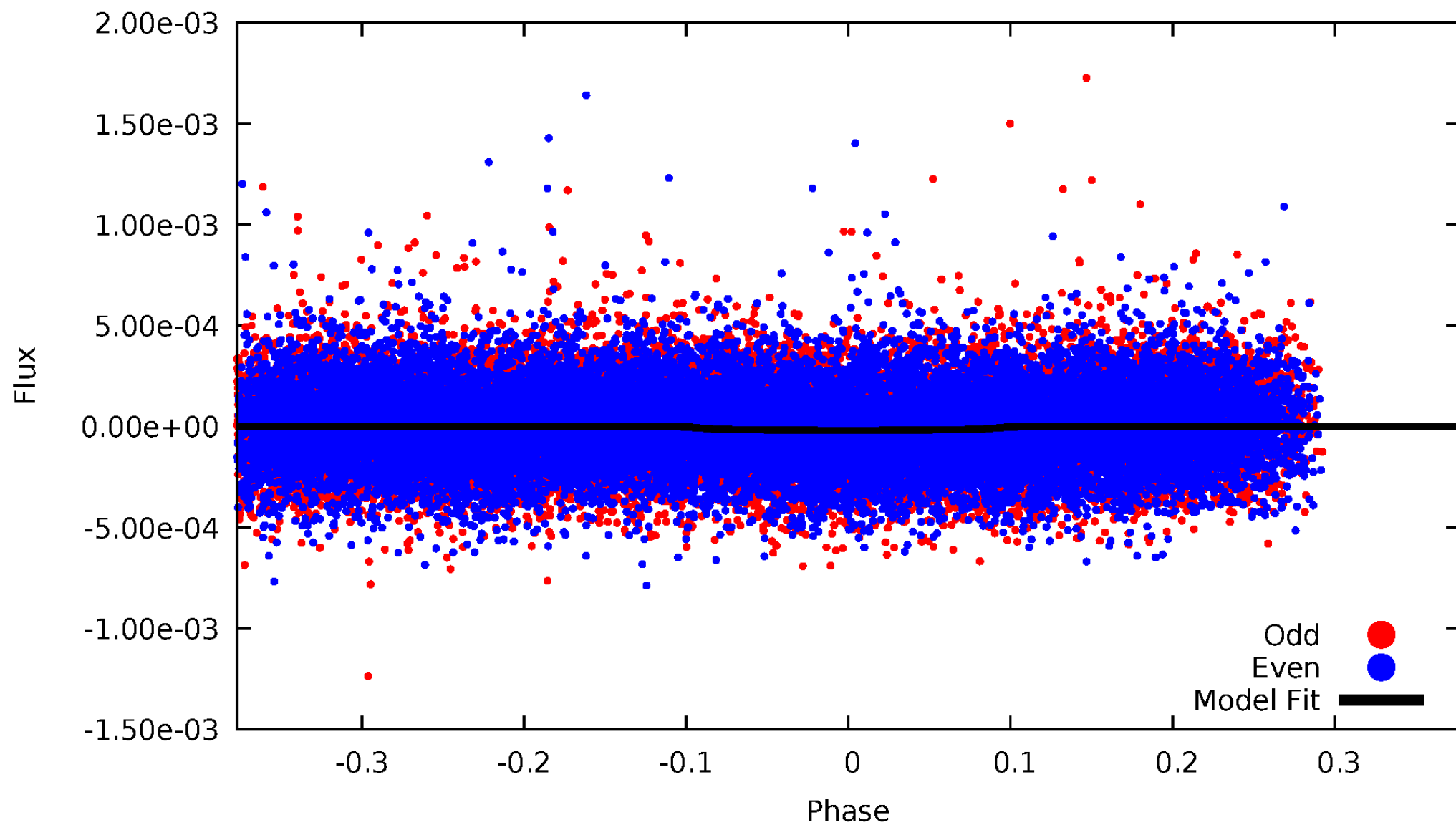
TCE 006065823-02





# DV Odd/Even

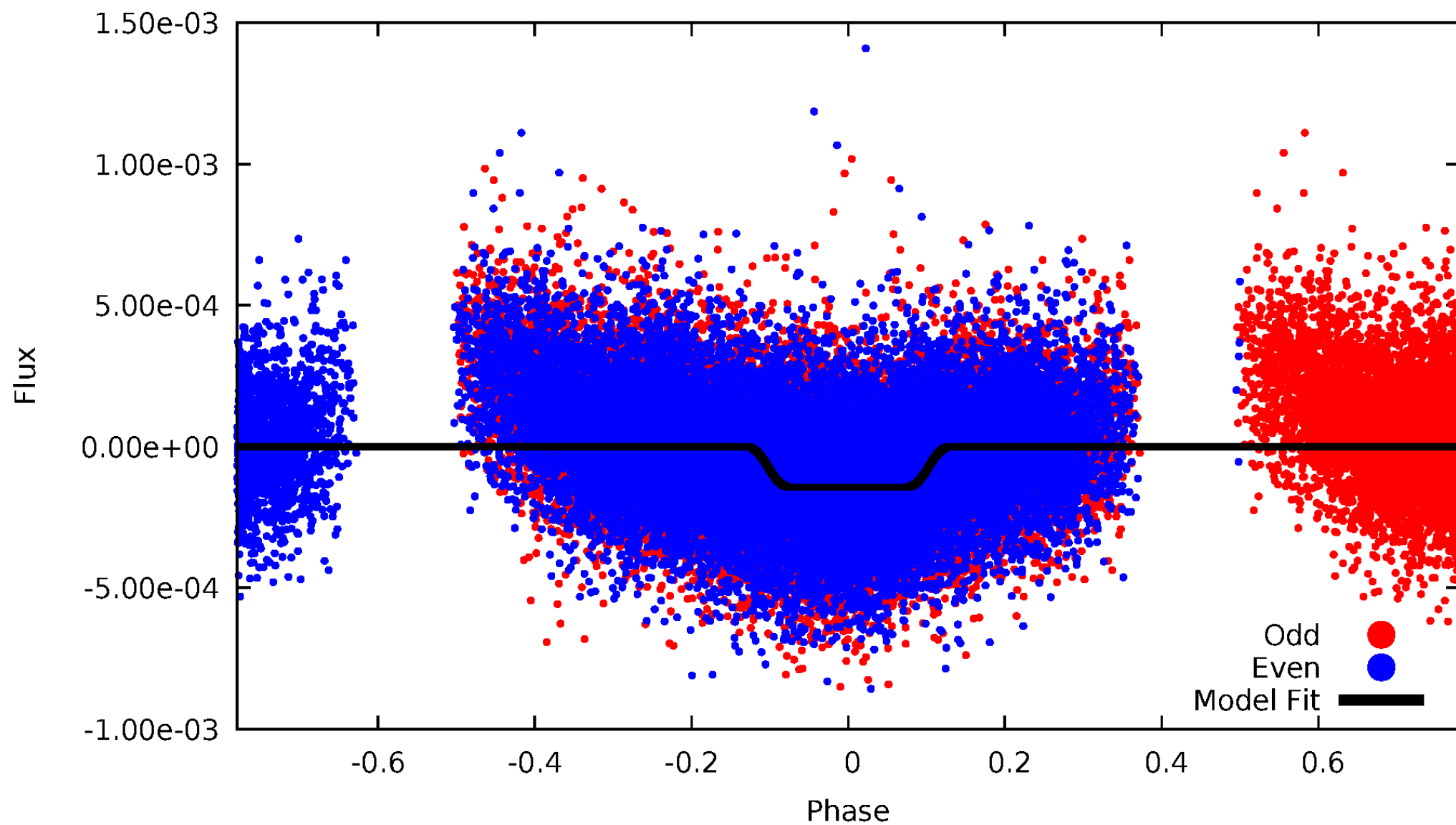
TCE 006065823-02





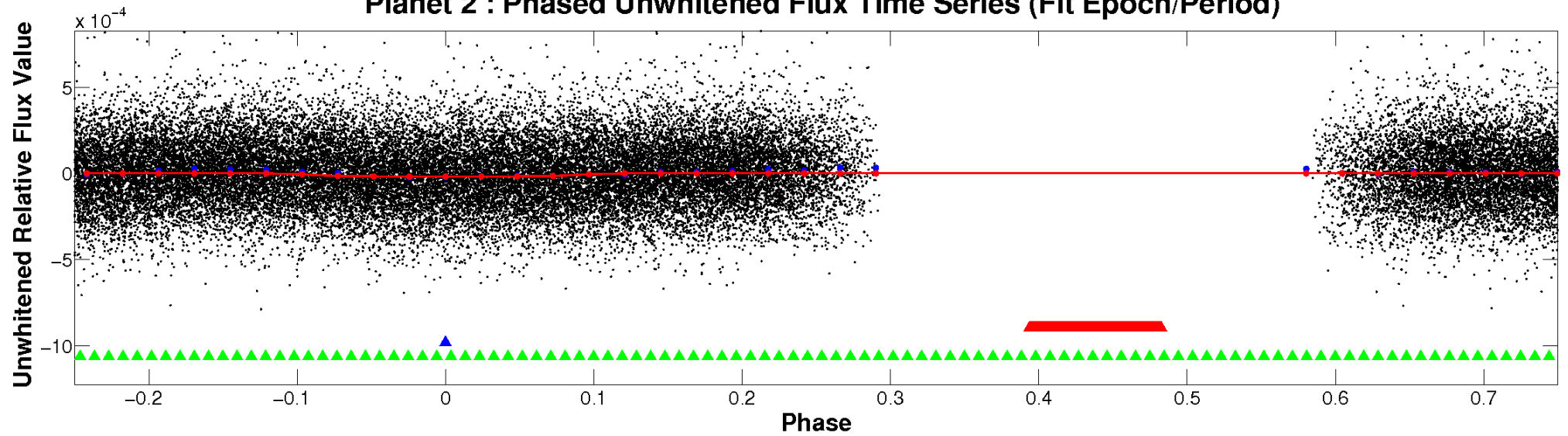
# ALT Odd/Even

TCE 006065823-02

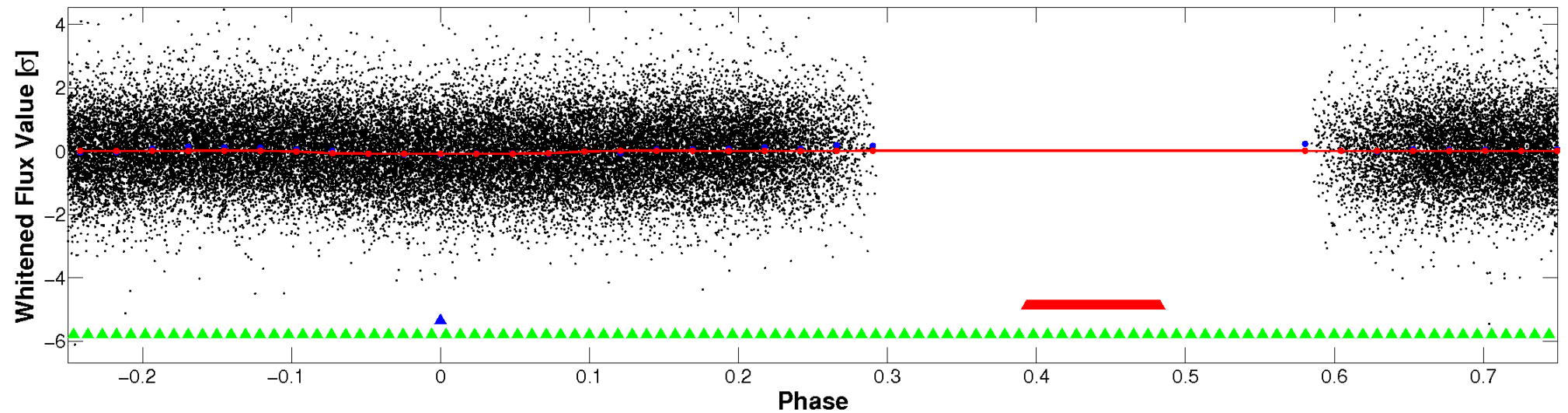


# Non-Whitened Vs. Whitened Light Curve

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

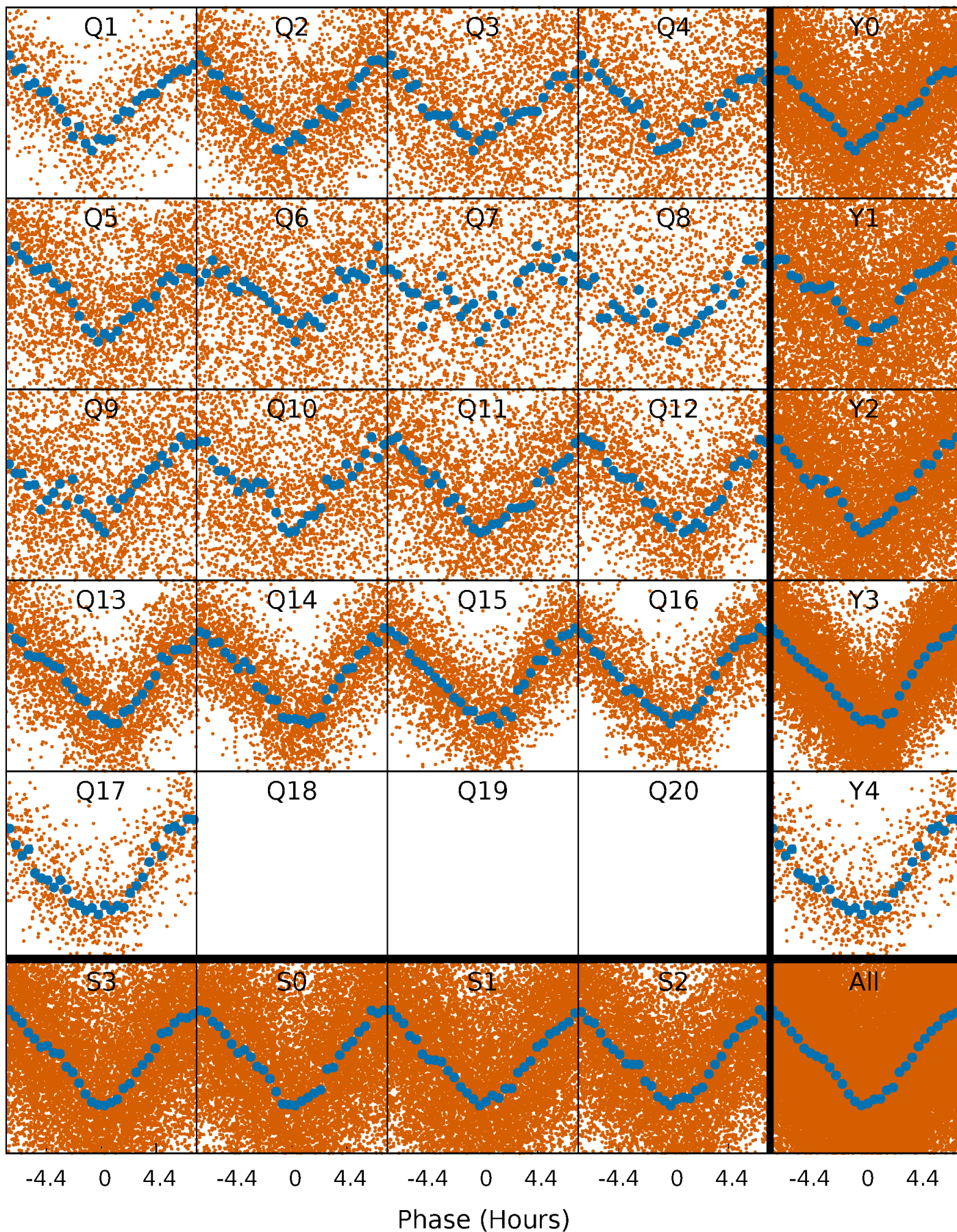


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

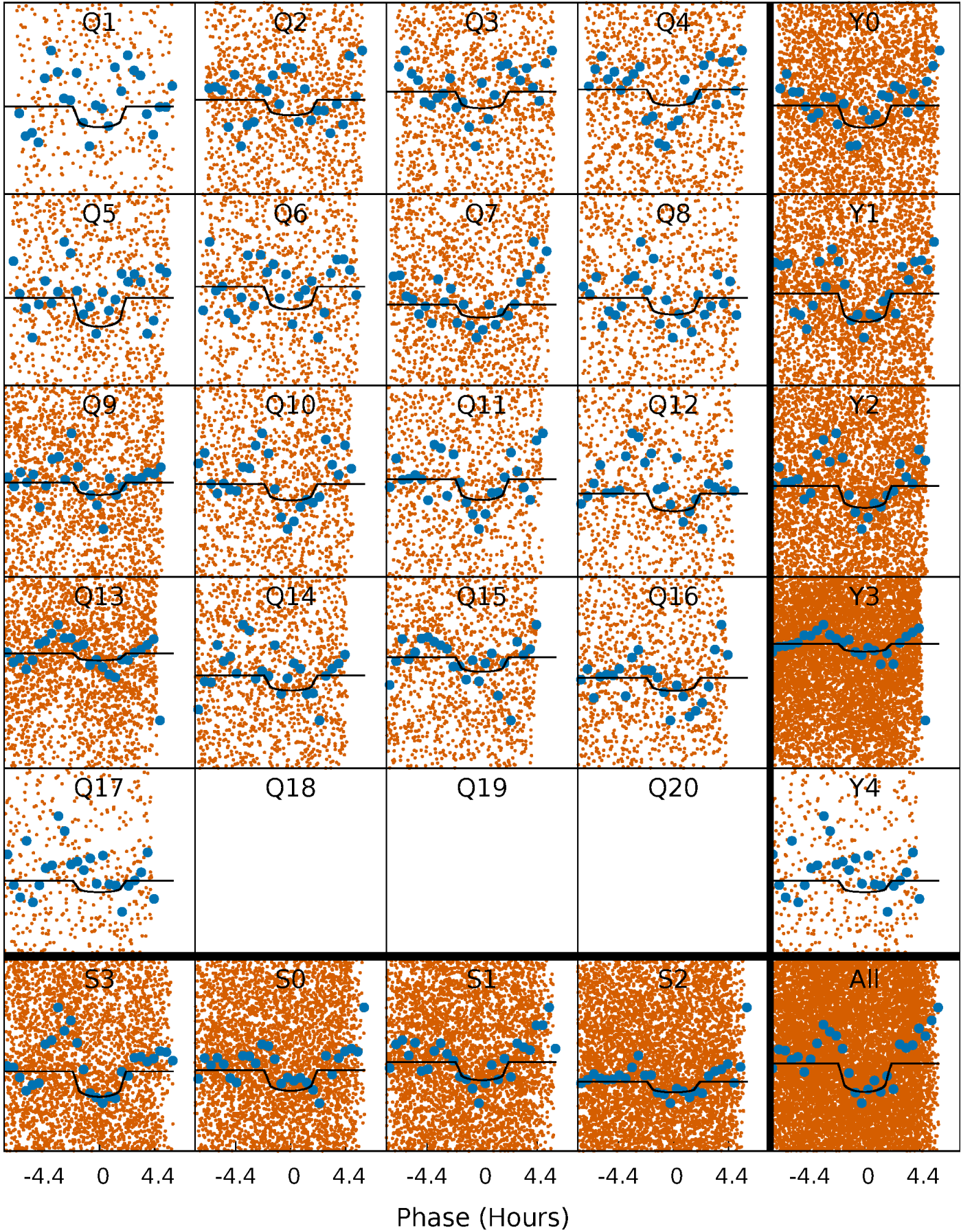
TCE 006065823-02 P= 0.845061 Days  $T_0=132.009965$  (BKJD)





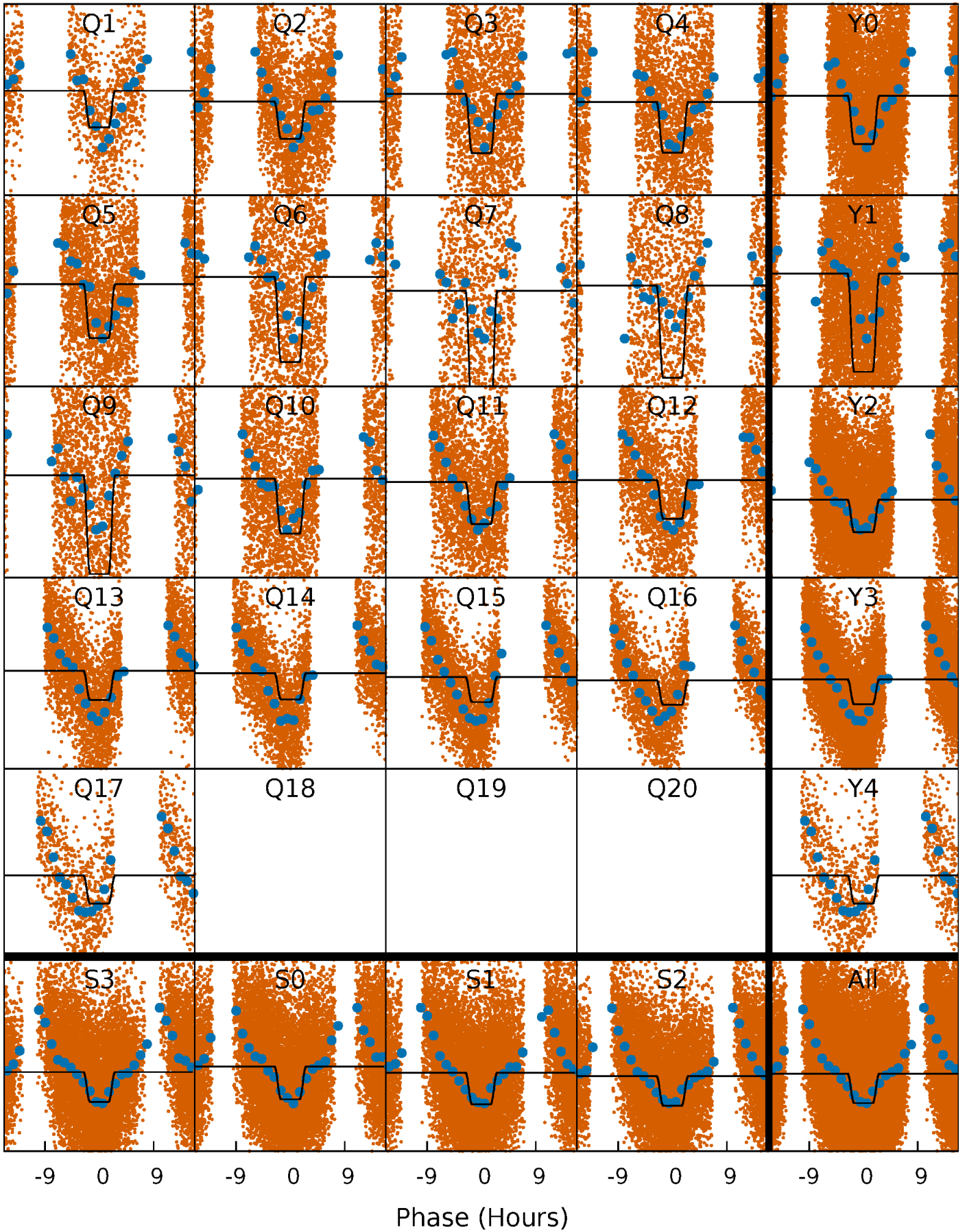
# DV Quarter-Phased Transit Curves

TCE 006065823-02   P= 0.845061 Days    $T_0=132.009965$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

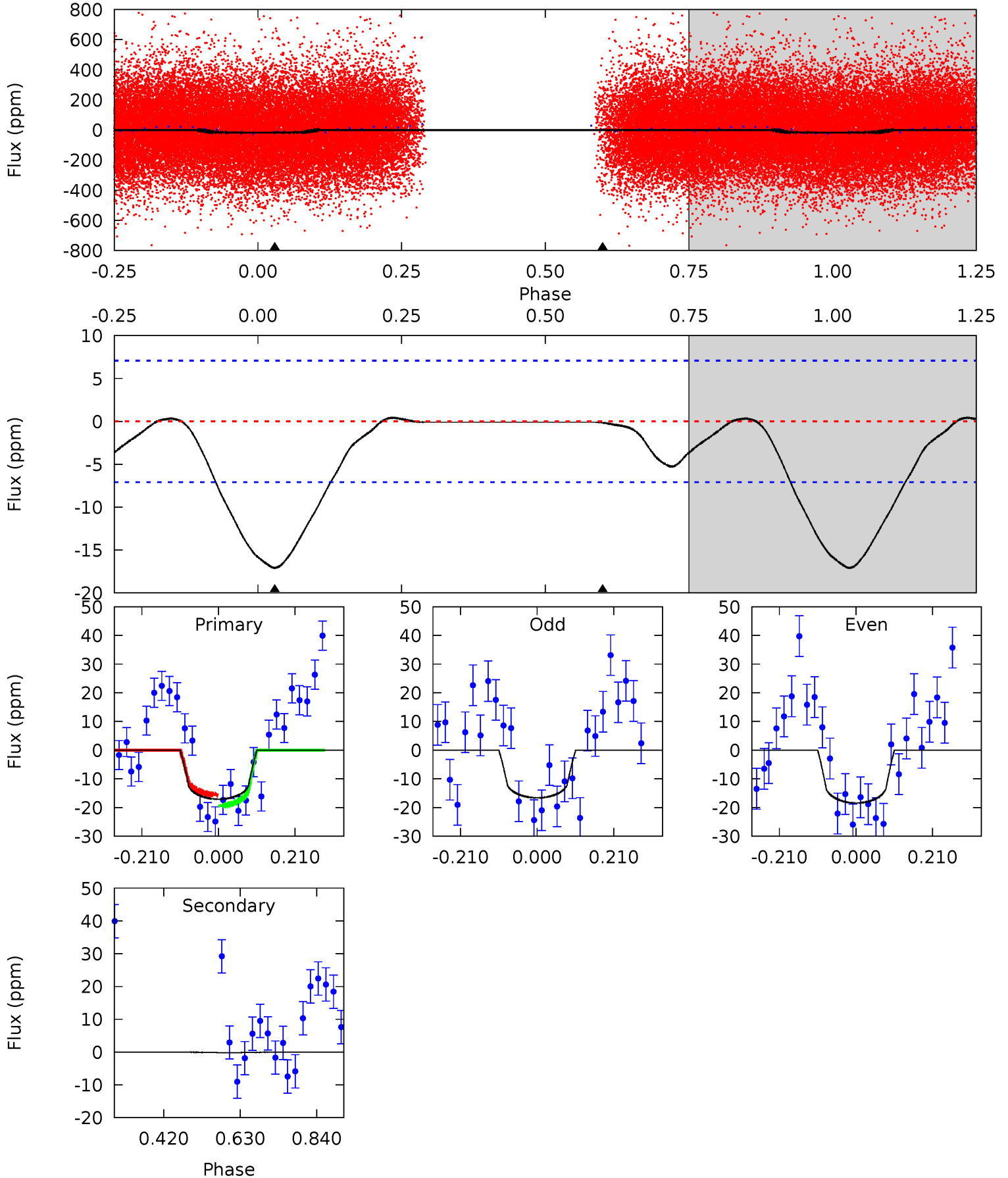
TCE 006065823-02   P= 0.845146 Days    $T_0=131.941715$  (BKJD)



# DV Model-Shift Uniqueness Test

006065823-02, P = 0.845061 Days, E = 131.164904 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
10.6	0.10	0	0	4.41	1.25	0.32	10.6	10.6	0.10	0.10	0.56	0.93	0.02	1.18

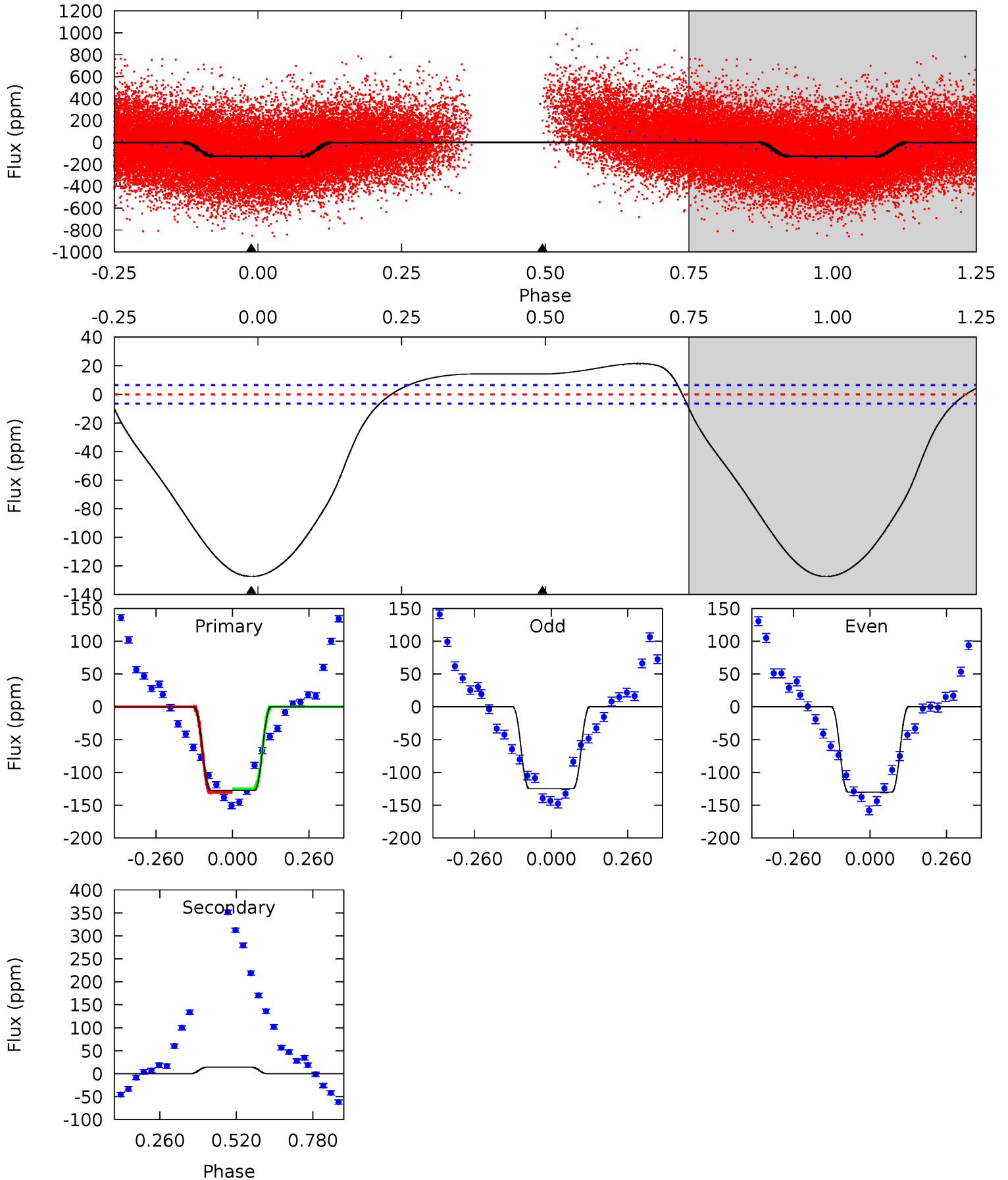




# Alt Model-Shift Uniqueness Test

006065823-02, P = 0.845146 Days, E = 131.096569 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
85.6	-9.55	0	0	4.36	1.13	5.16	85.6	85.6	-9.55	-9.55	1.72	1.02	0.14	1.83



### Stellar Parameters For KIC 006065823

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6572^{+175}_{-233}$	$4.169^{+0.185}_{-0.185}$	$-0.200^{+0.250}_{-0.300}$	$1.519^{+0.442}_{-0.362}$	$1.249^{+0.181}_{-0.201}$	$0.502^{+0.555}_{-0.243}$
	+3%/-4%	+4%/-4%	+125%/-150%	+29%/-24%	+14%/-16%	+111%/-49%
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 006065823-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-0 \pm 2$	$0.79^{+0.65}_{-0.53}$	$3633^{+285}_{-260}$	$-3463^{+7373}_{-844}$	$0.008^{+0.933}_{-0.646}$
Alt.	$14 \pm 1$	$2.02^{+0.77}_{-0.75}$	$3632^{+314}_{-252}$	$-4266^{+301}_{-585}$	$-0.678^{+0.326}_{-1.091}$

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

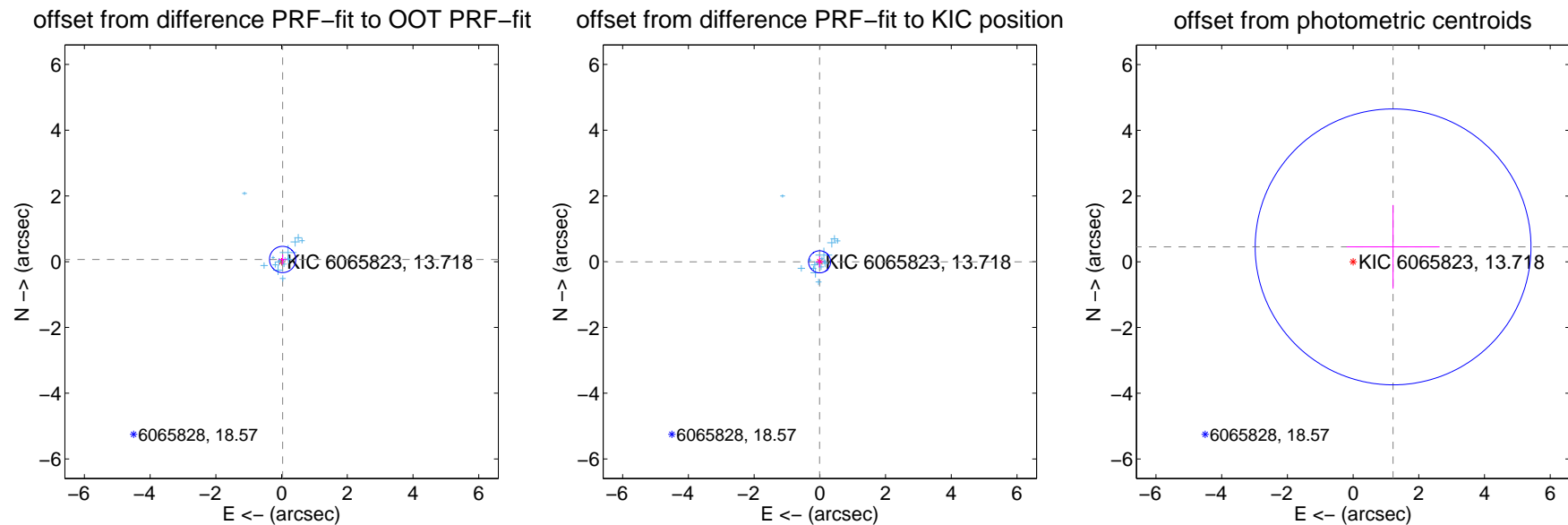
## DV Centroid Data

Supplemental centroid analysis for 006065823-02. Kepler magnitude: 13.72. Transit SNR 8.59

There are 16 quarters with good PRF difference image offsets

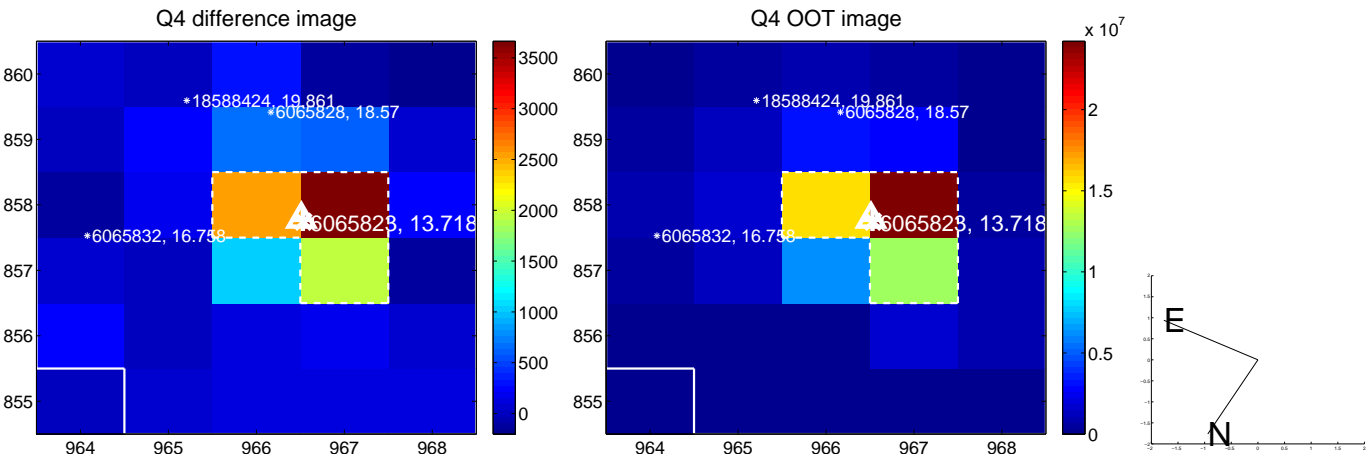
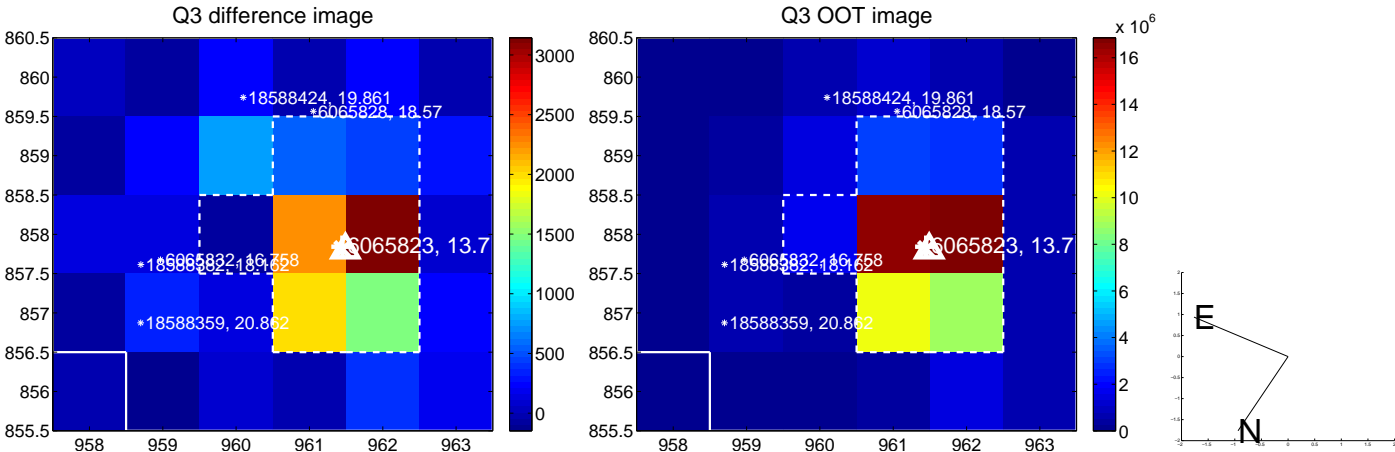
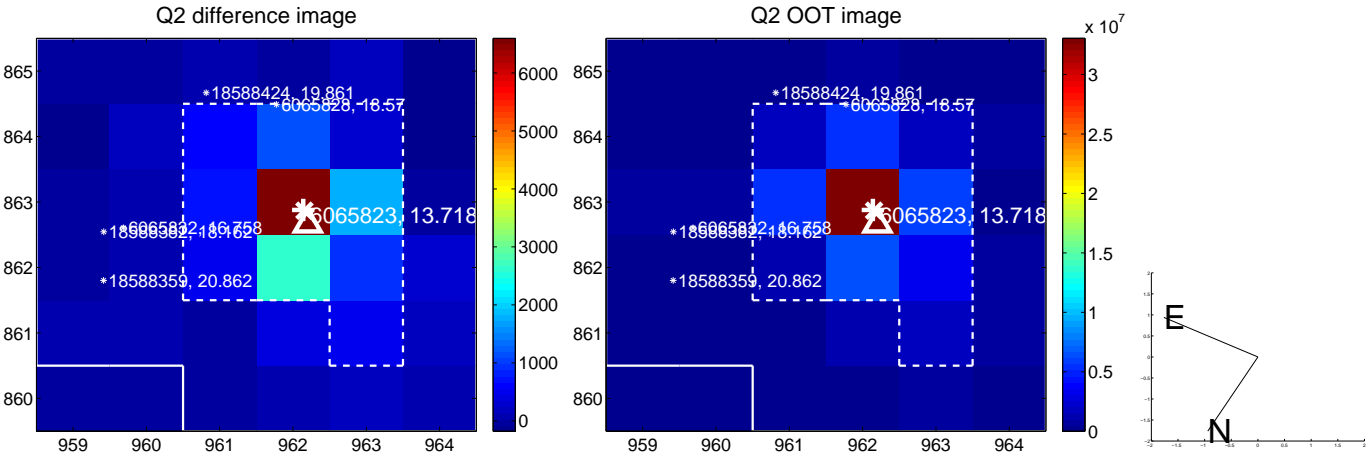
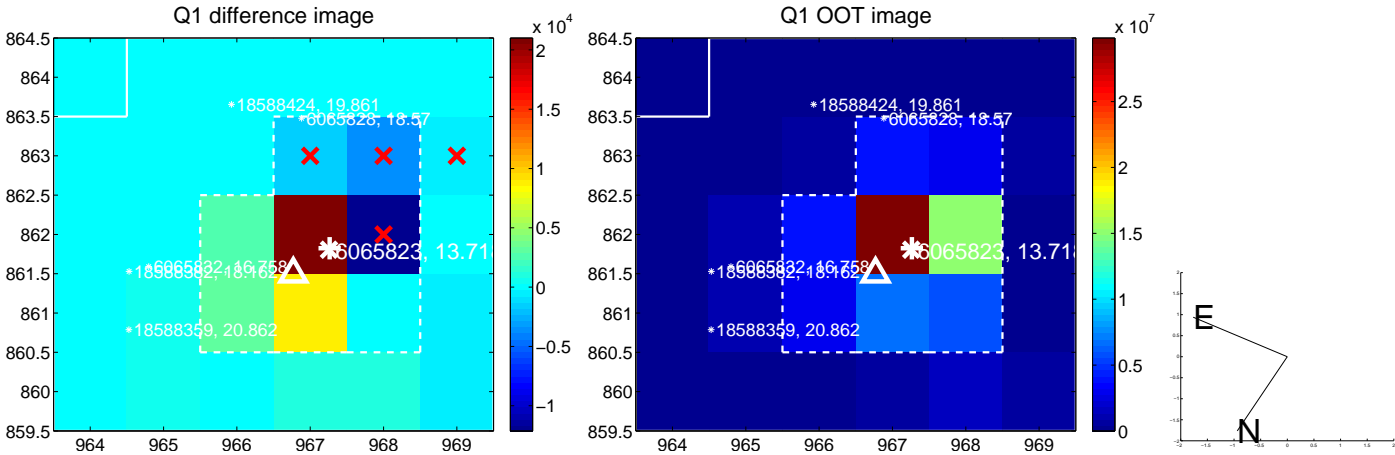
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.075 \pm 0.133$	0.56	$-0.032 \pm 0.124$	$0.068 \pm 0.151$
PRF-fit source offset from KIC position	$0.008 \pm 0.112$	0.07	$0.007 \pm 0.115$	$-0.004 \pm 0.168$
photometric centroid source offset	$1.30 \pm 1.40$	0.93	$-1.22 \pm 1.42$	$0.45 \pm 1.27$

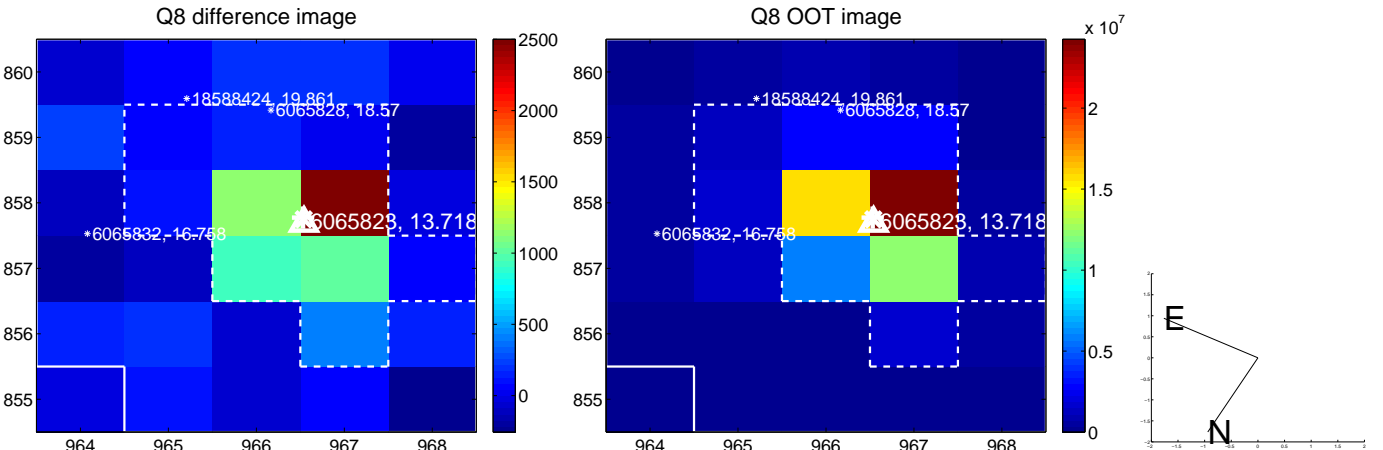
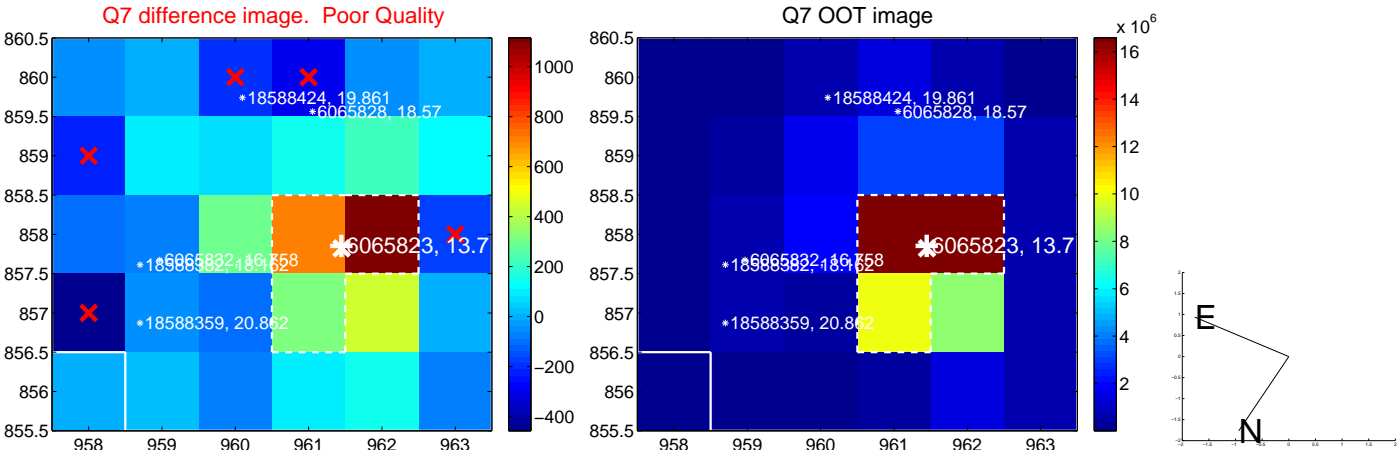
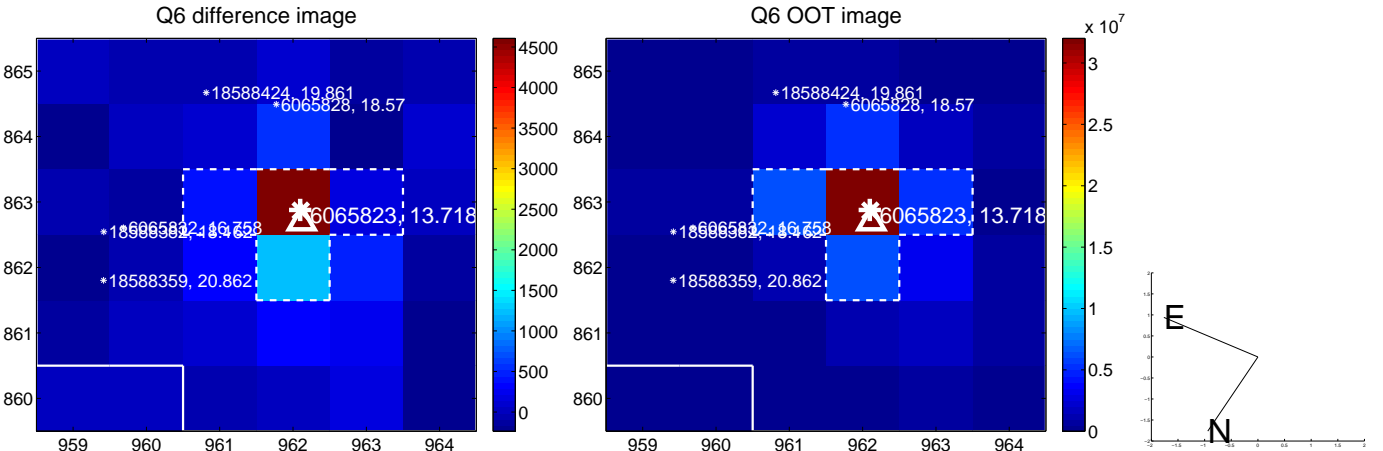
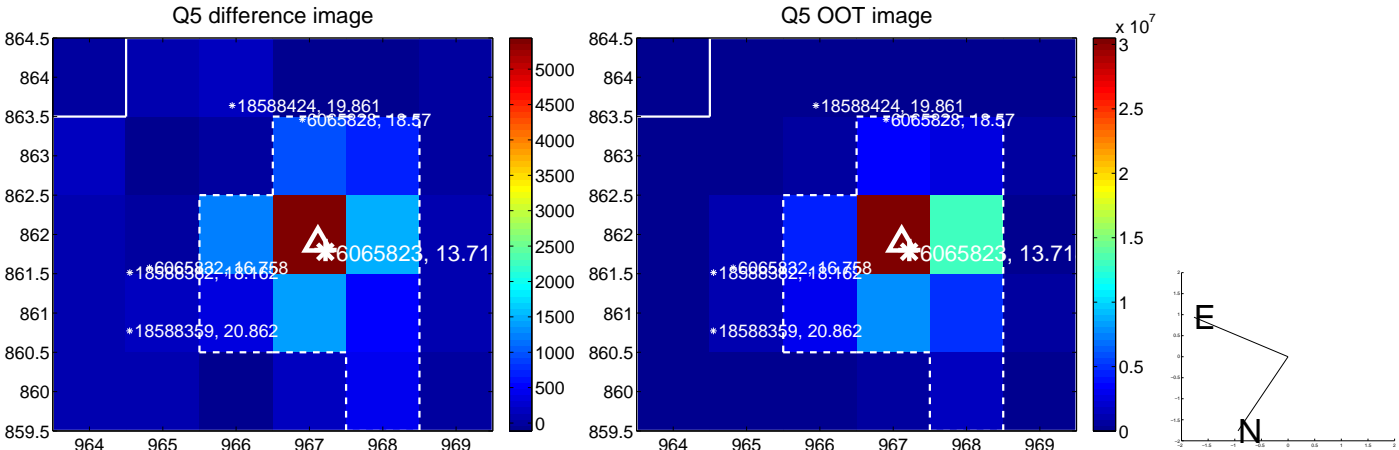


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

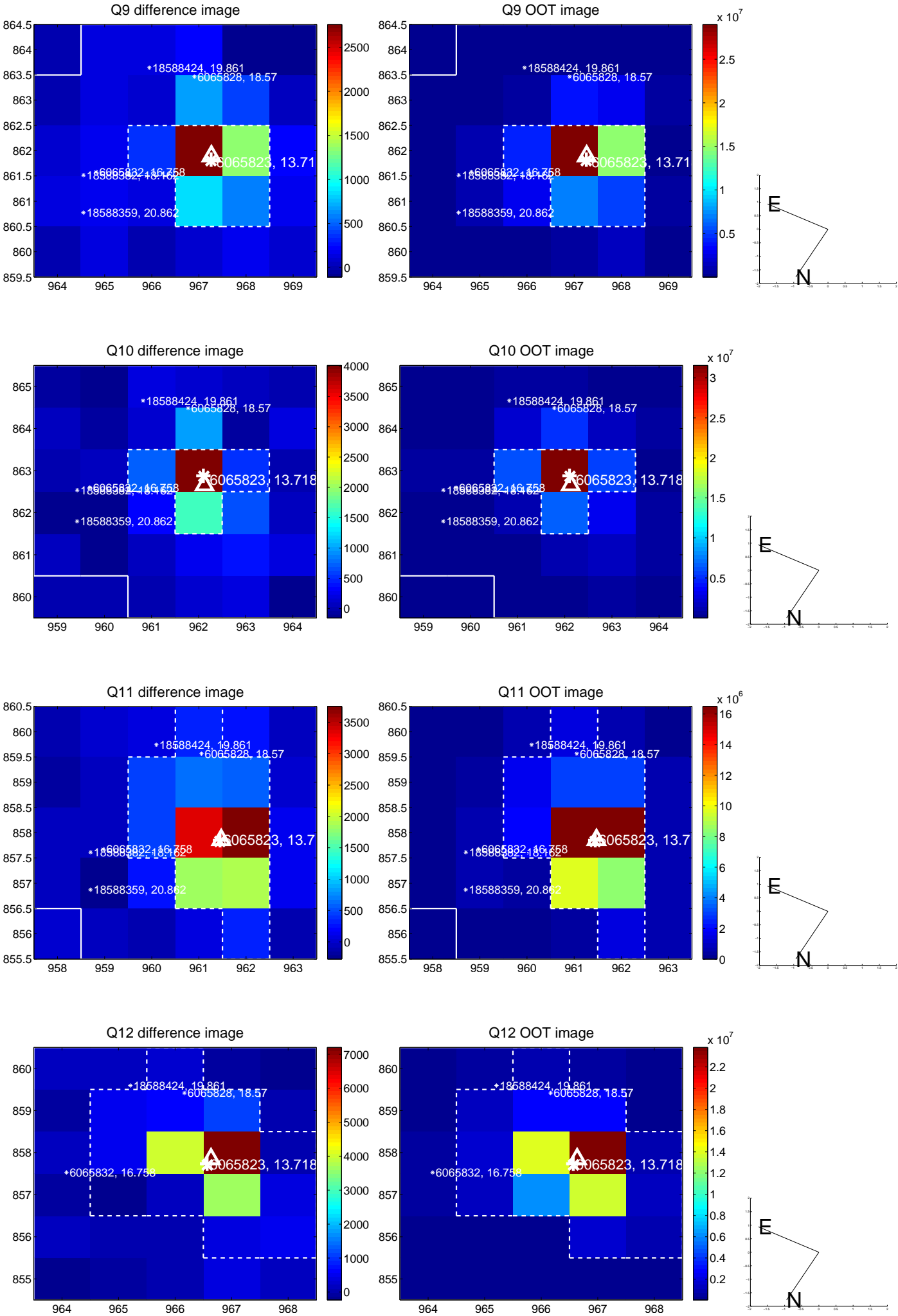
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

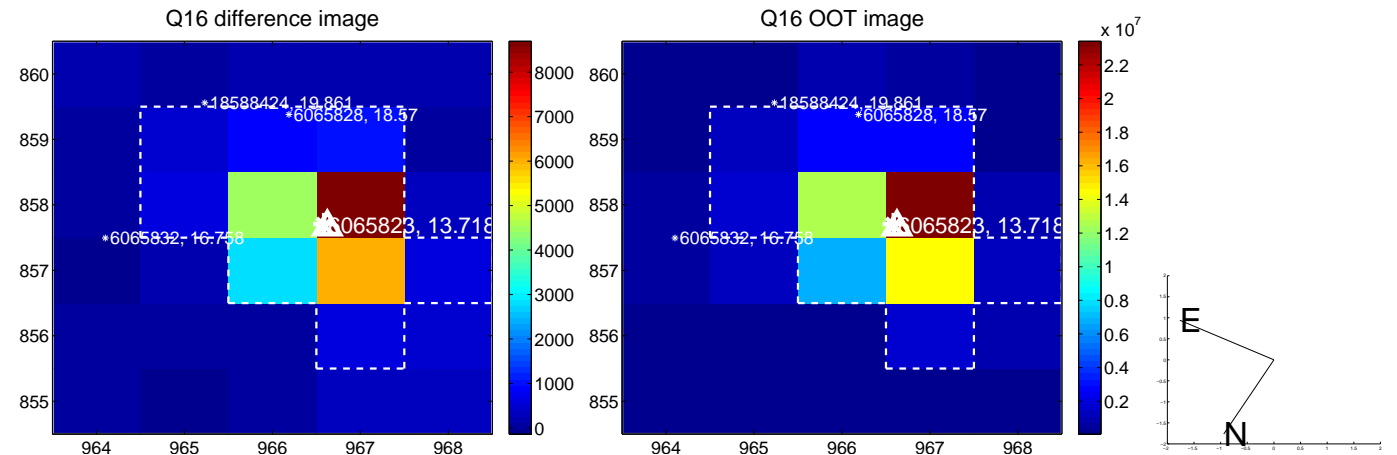
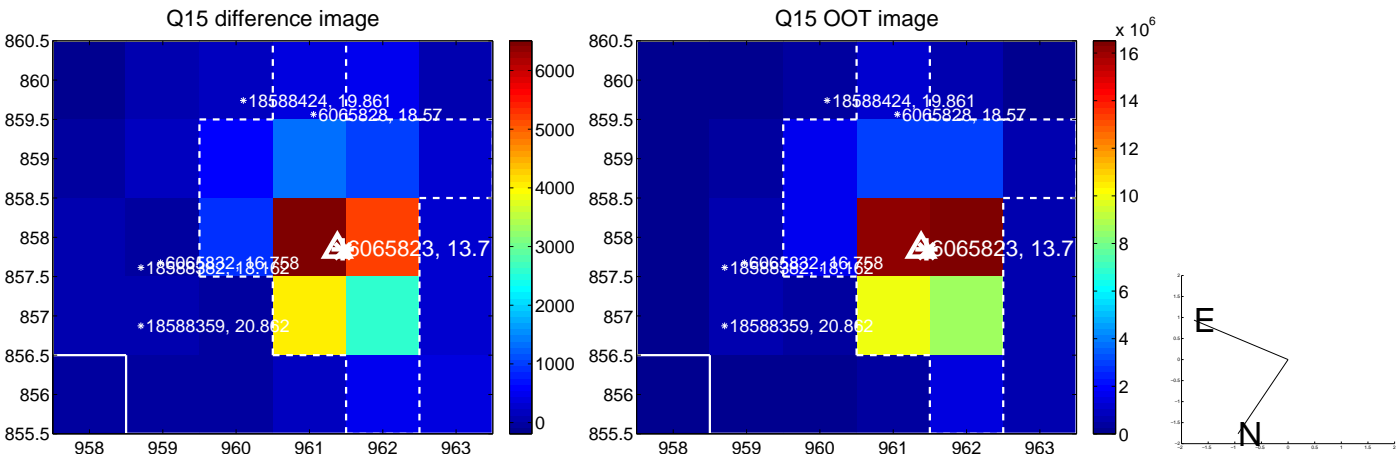
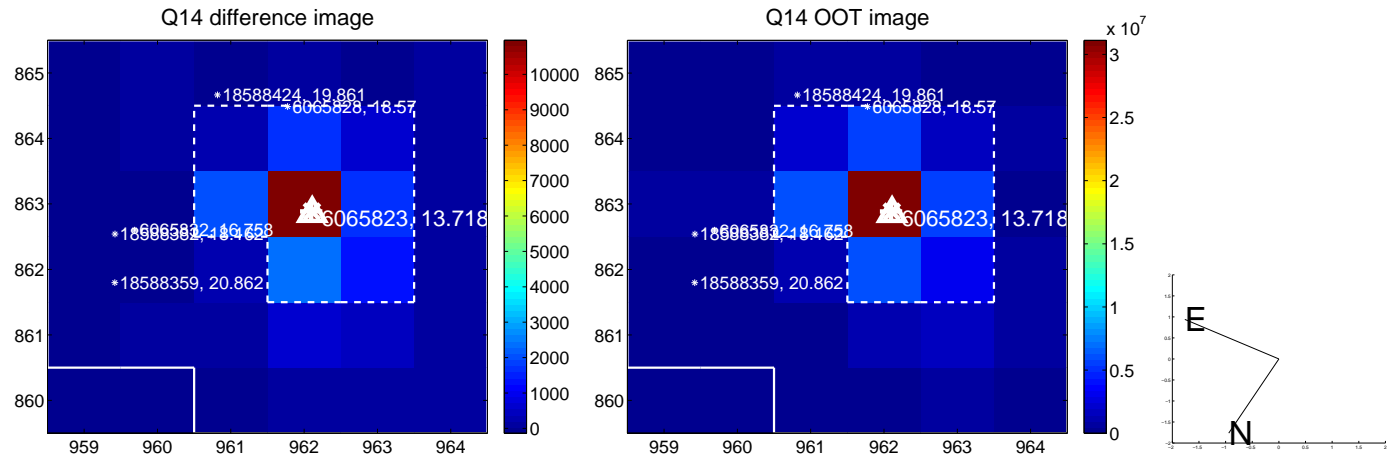
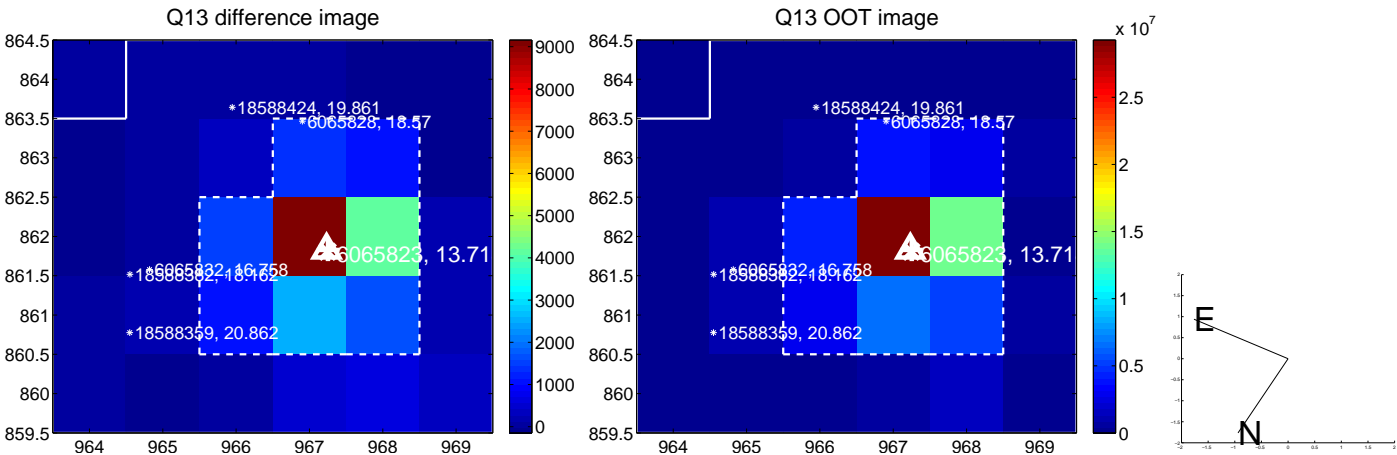


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

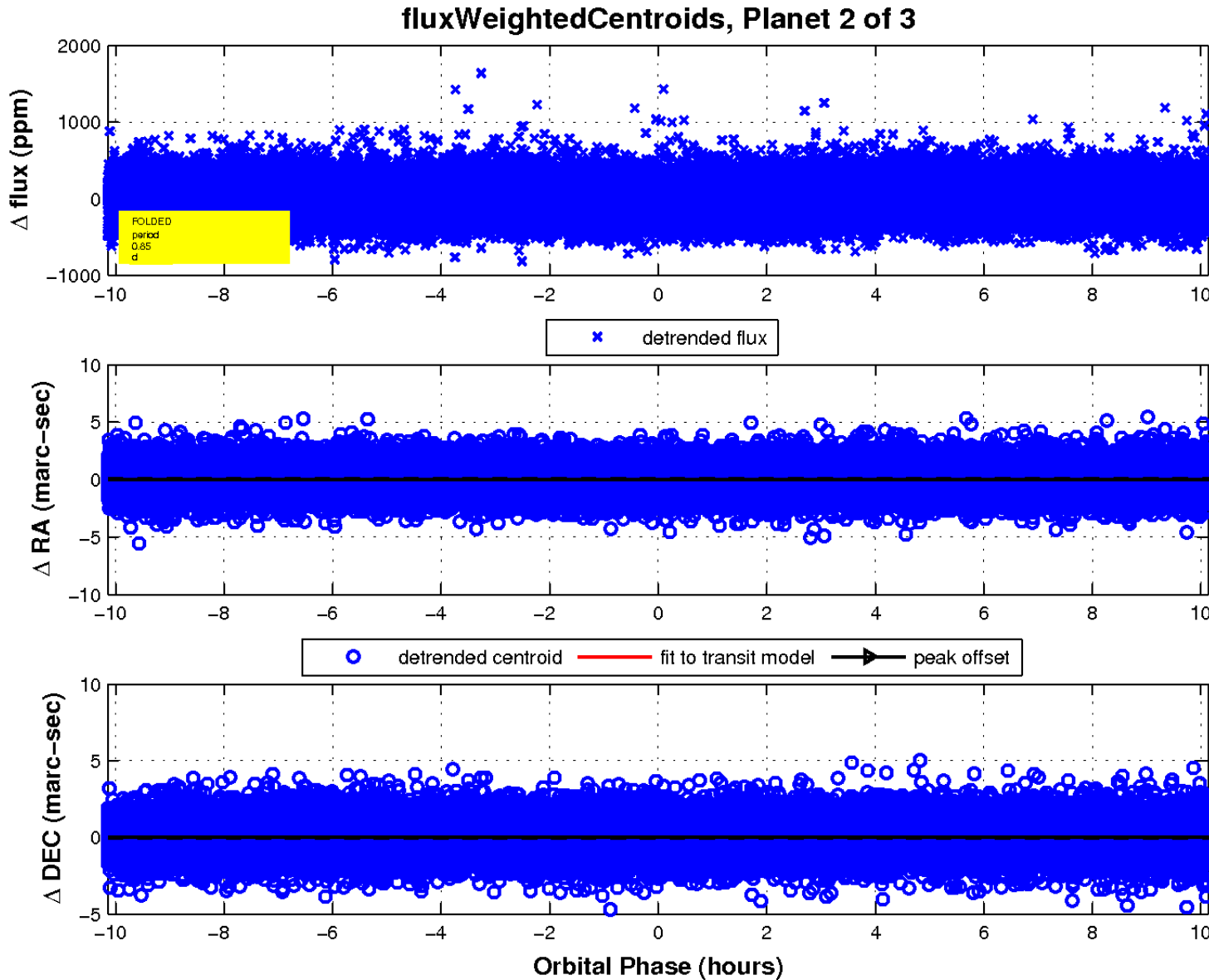
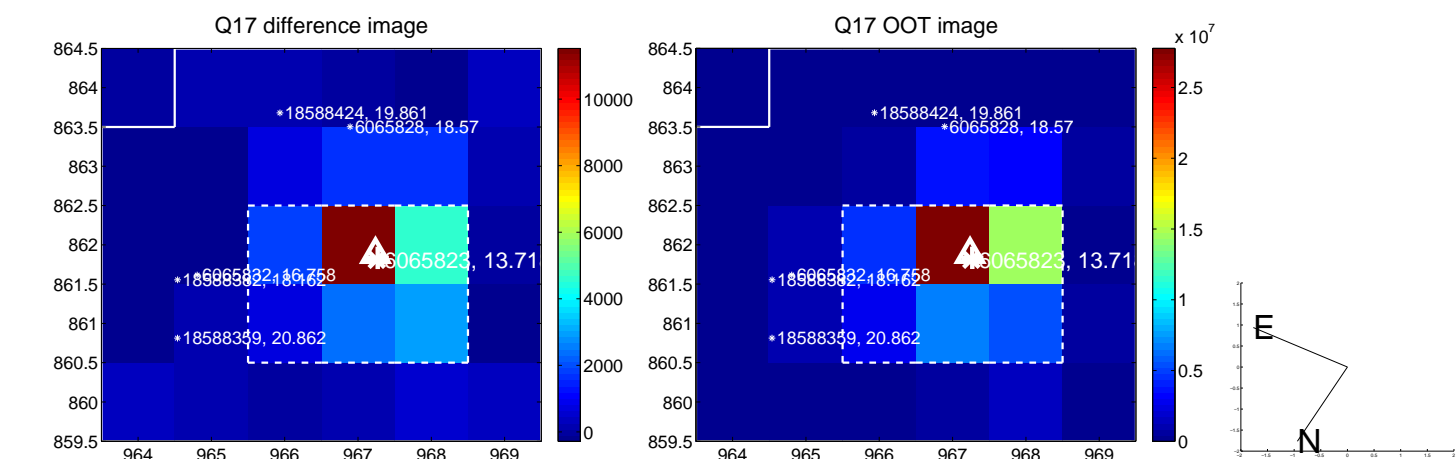




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

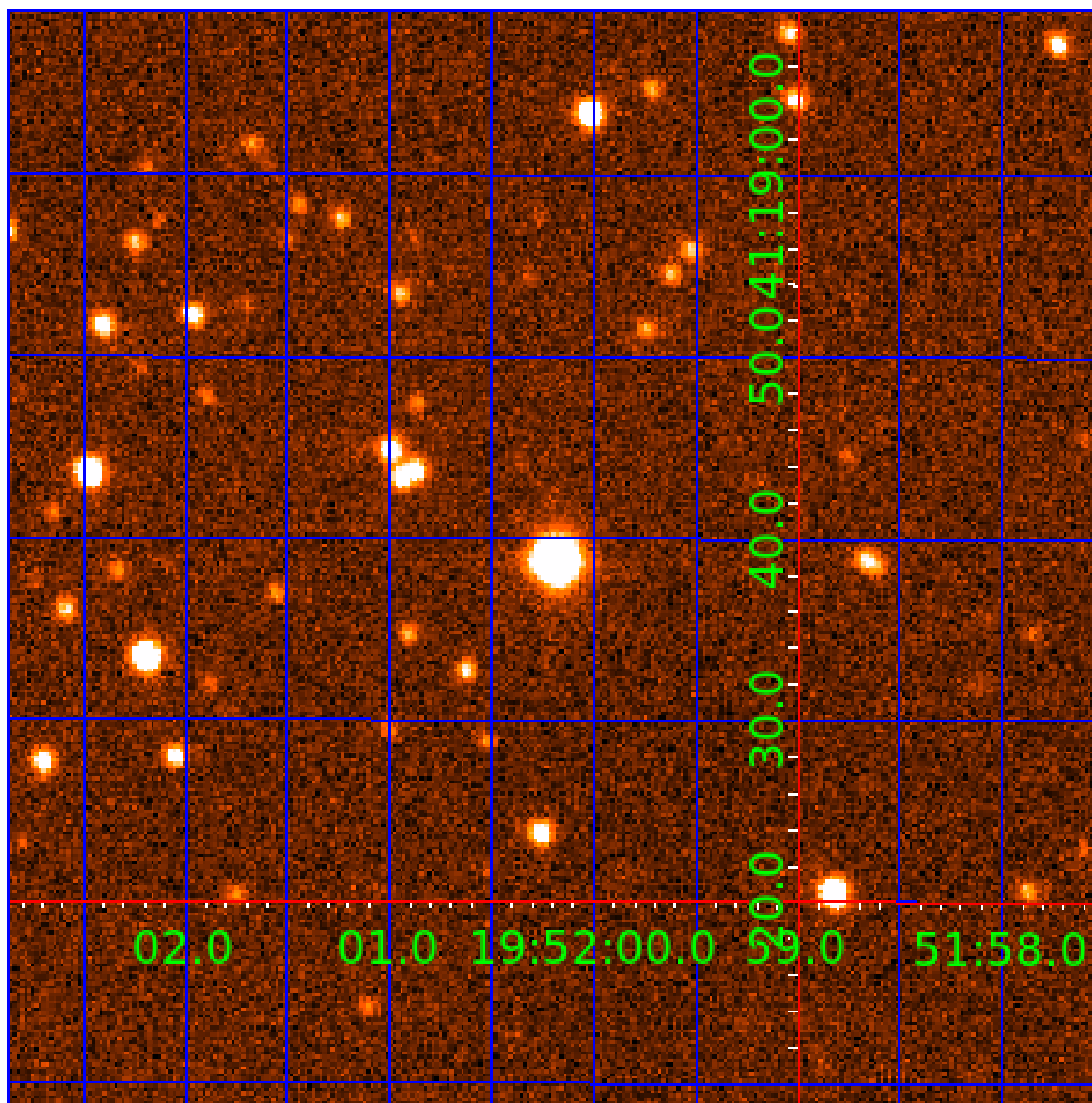


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006065823

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006065823-01	OBS	No	0.845018	131.572888	31.6	2.396	12.5	11.1	1.52	6572	0.92	10903.57
006065823-02	OBS	No	0.845061	132.009965	18.6	3.822	10.0	8.6	1.52	6572	0.66	10902.82
006065823-03	OBS	No	6.914876	133.760139	181.0	1.797	7.2	7.2	1.52	6572	2.38	661.22

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065823-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006065823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006065823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

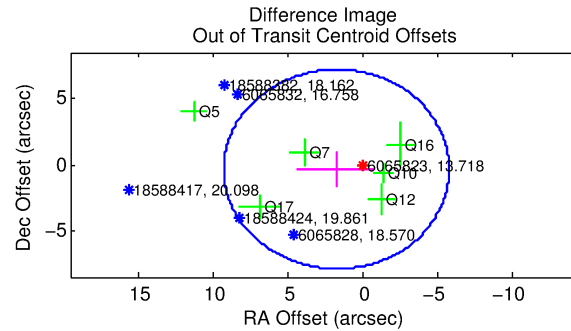
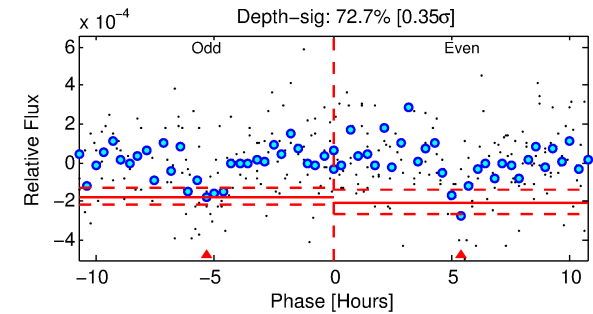
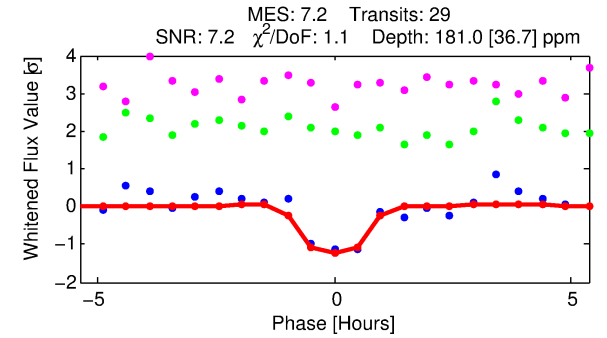
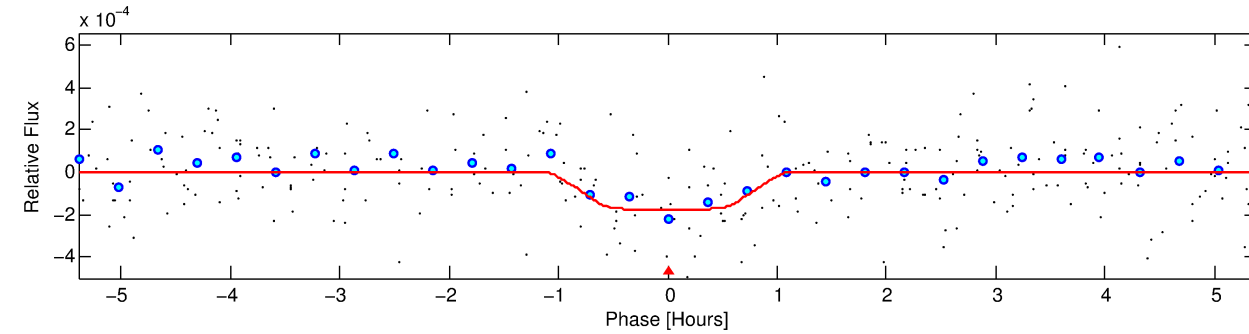
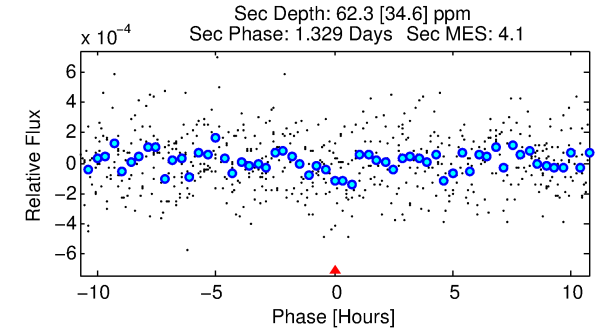
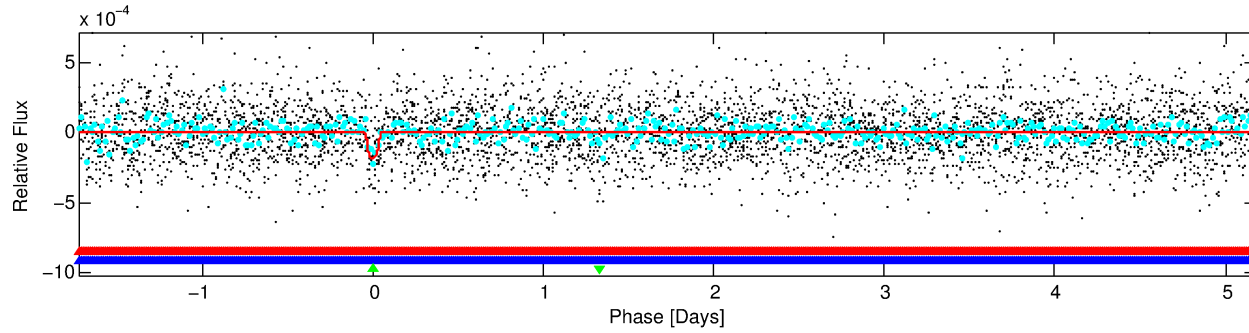
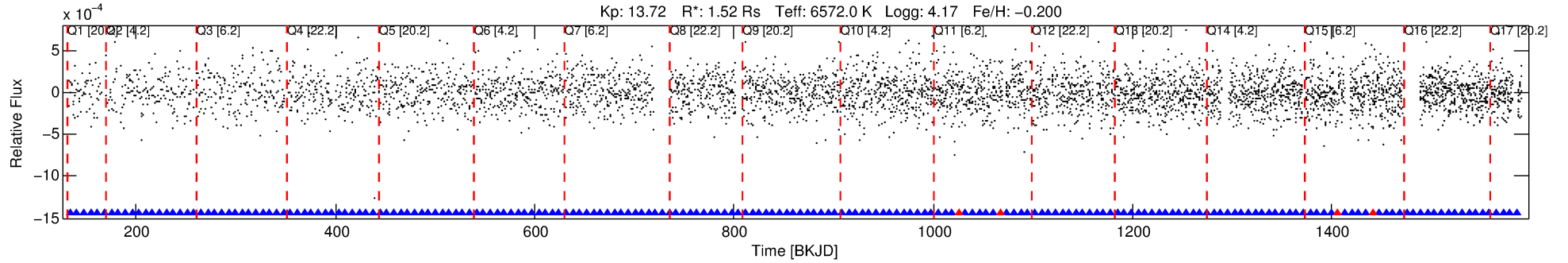
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006065823-03

No Significant Match Found

# DV One-Page Summary

KIC: 6065823 Candidate: 3 of 3 Period: 6.915 d



## DV Fit Results:

Period = 6.91488 [0.00005] d  
Epoch = 133.7601 [0.0062] BKJD  
Rp/R\* = 0.0144 [0.0188]  
a/R\* = 14.05 [105.65]  
b = 0.90 [1.70]  
Seff = 661.22 [245.98]  
Teq = 1293 [120] K  
Rp = 2.38 [3.19] Re  
a = 0.0764 [0.0184] AU  
Ag = 35.25 [94.94] [0.36σ]  
Teffp = 4871 [3258] K [1.10σ]

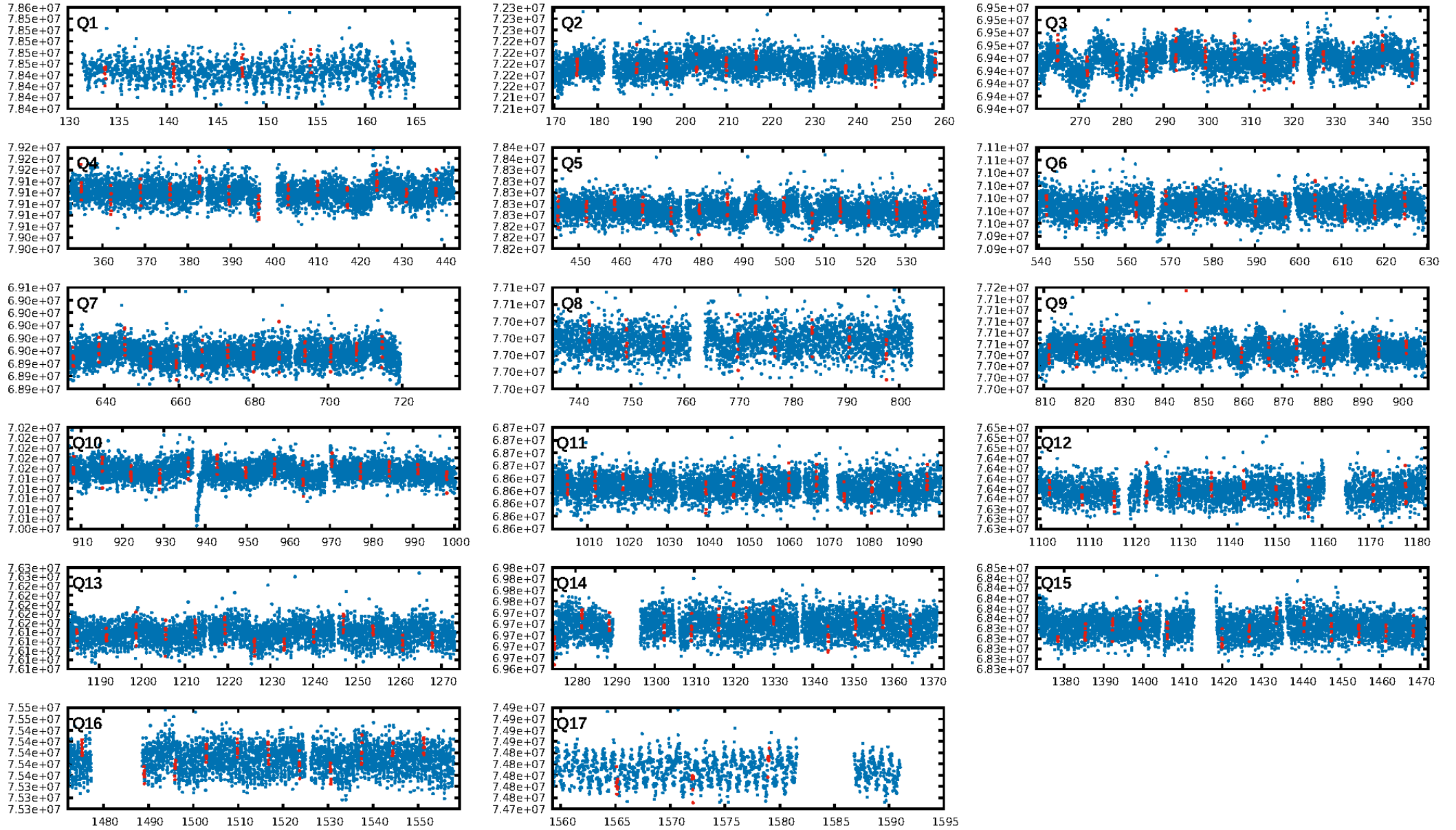
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.50σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 8.7%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 1.06e-08**  
RollingBand-fgt: 0.86 [25/29]  
**GhostDiagnostic-chr: 1.257**  
Centroid-sig: 57.3%  
Centroid-so: 0.571 arcsec [0.92σ]  
OotOffset-rm: 1.743 arcsec [0.69σ]  
KicOffset-rm: 1.796 arcsec [0.72σ]  
OotOffset-st: 1/1/2/2 [6]  
KicOffset-st: 1/1/2/2 [6]  
DiffImageQuality-fgm: 0.17 [1/6]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:17:11 Z

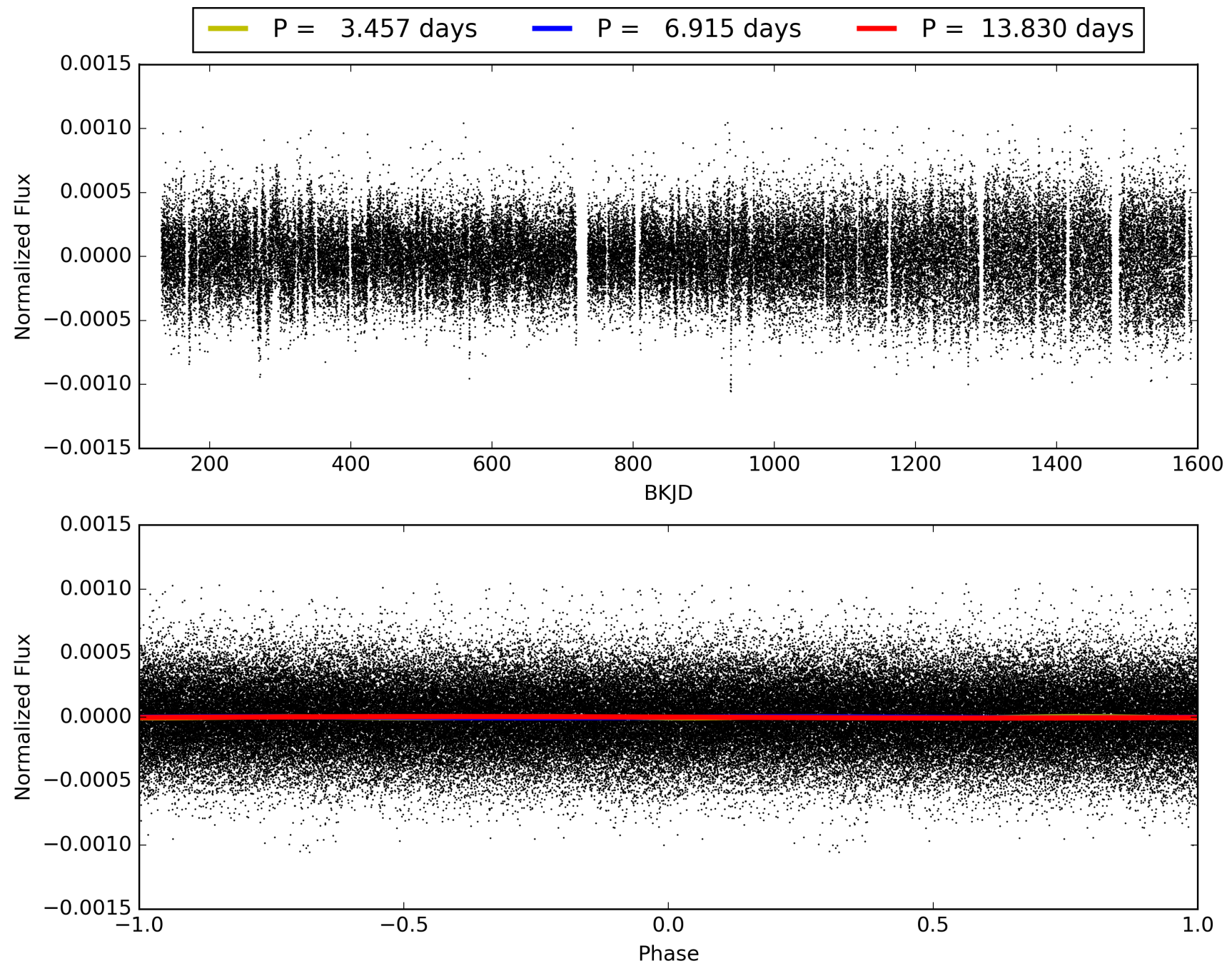
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006065823-03, PDC Light Curves



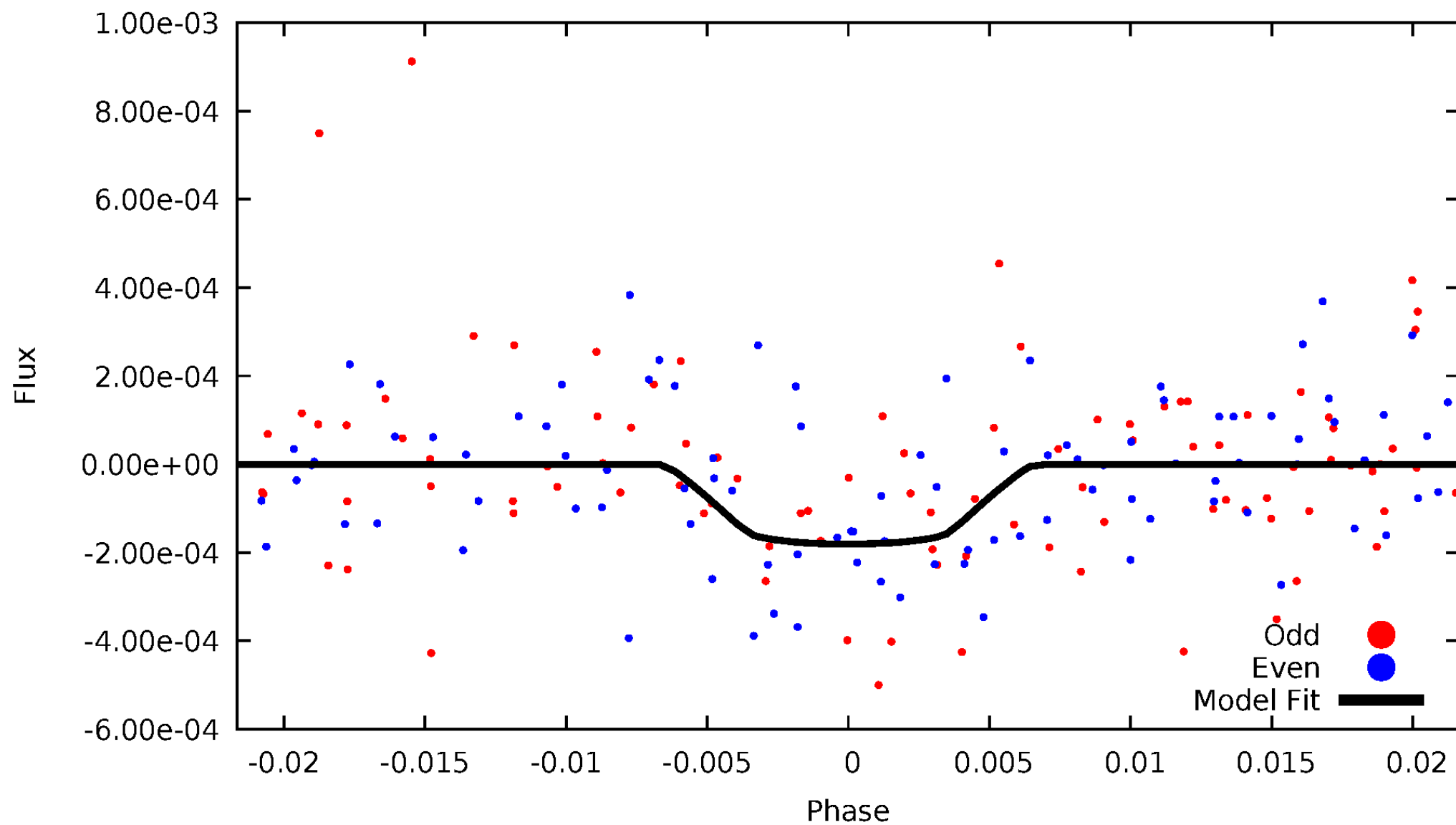


TCE 006065823-03



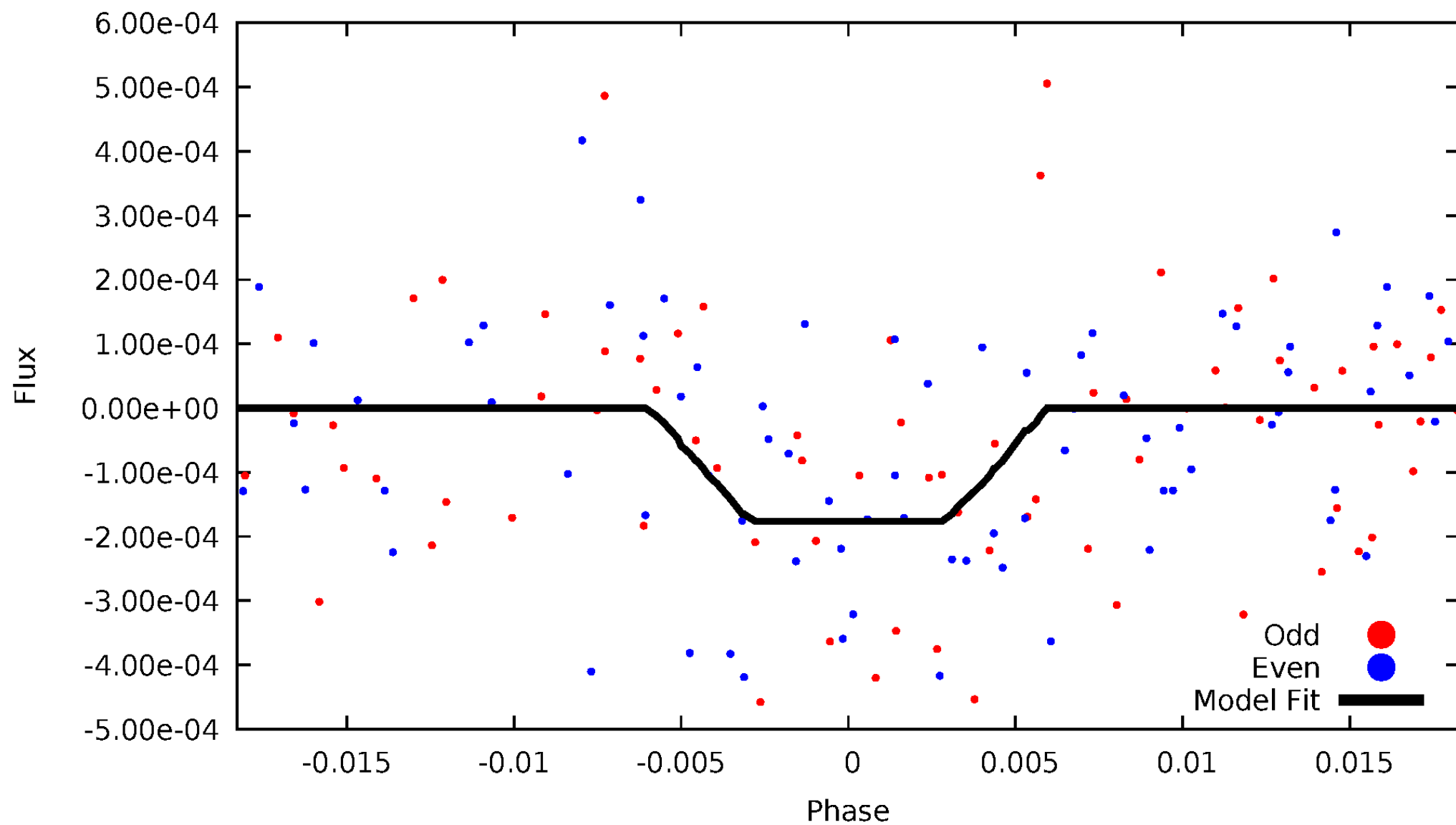
# DV Odd/Even

TCE 006065823-03

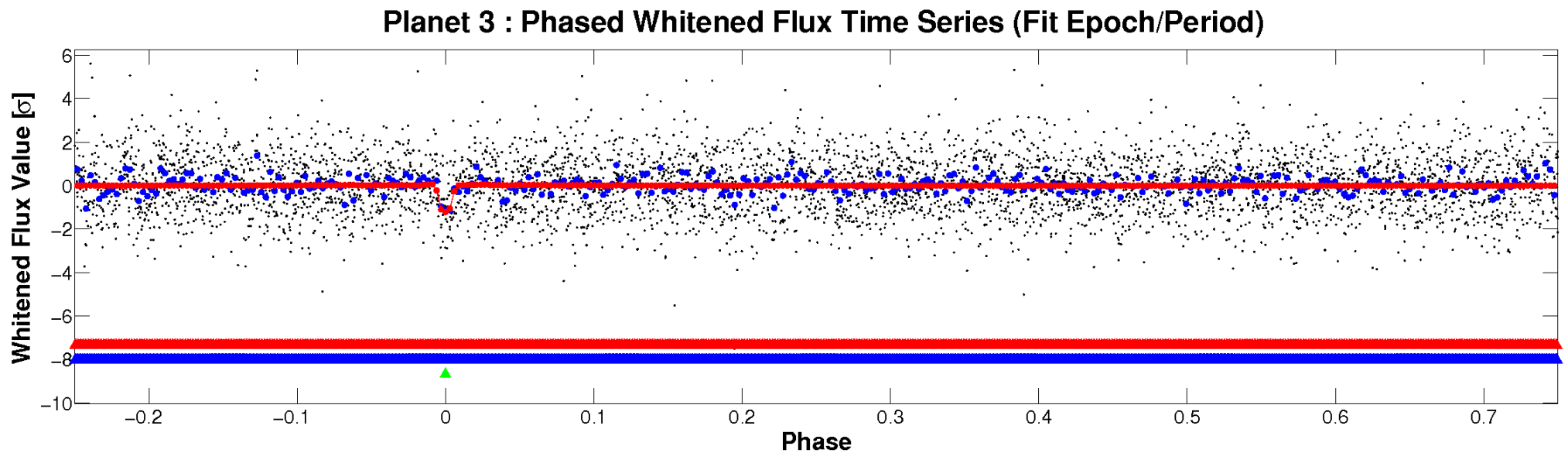
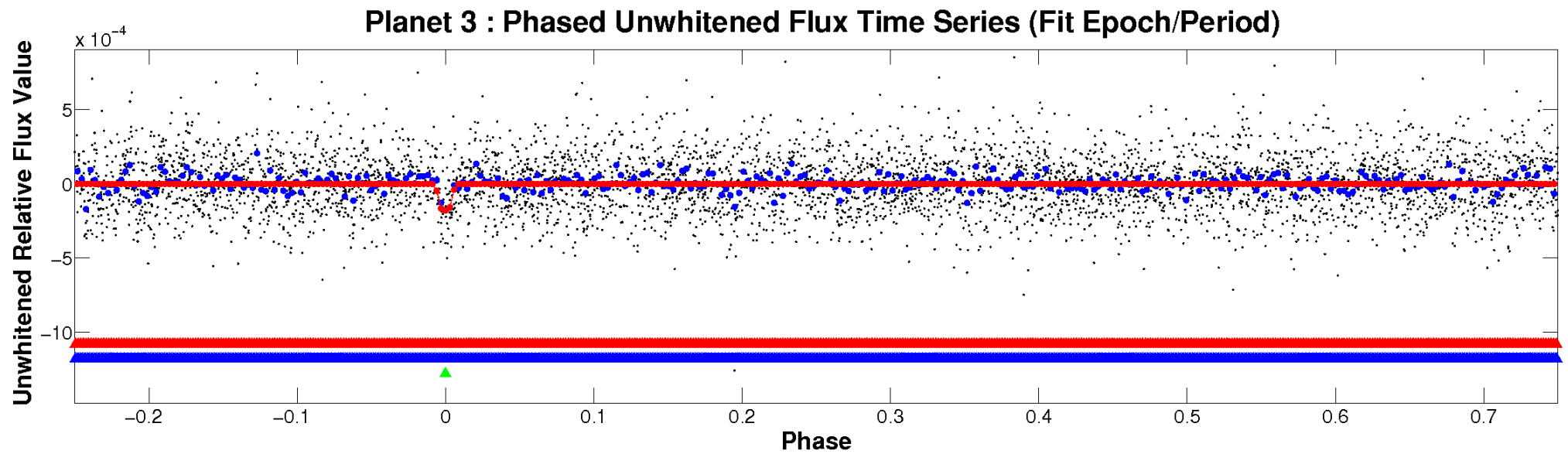


# ALT Odd/Even

TCE 006065823-03

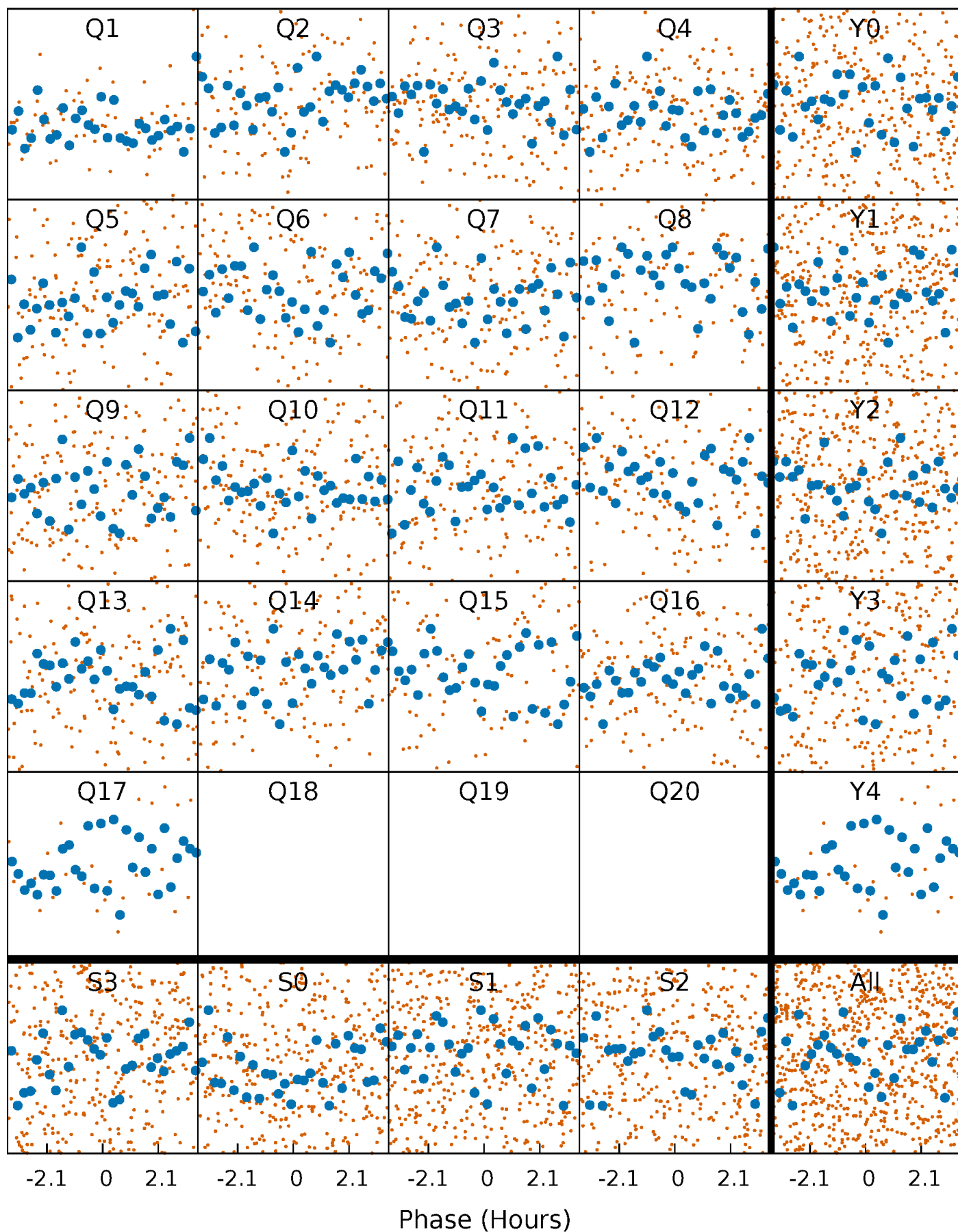


# Non-Whitened Vs. Whitened Light Curve



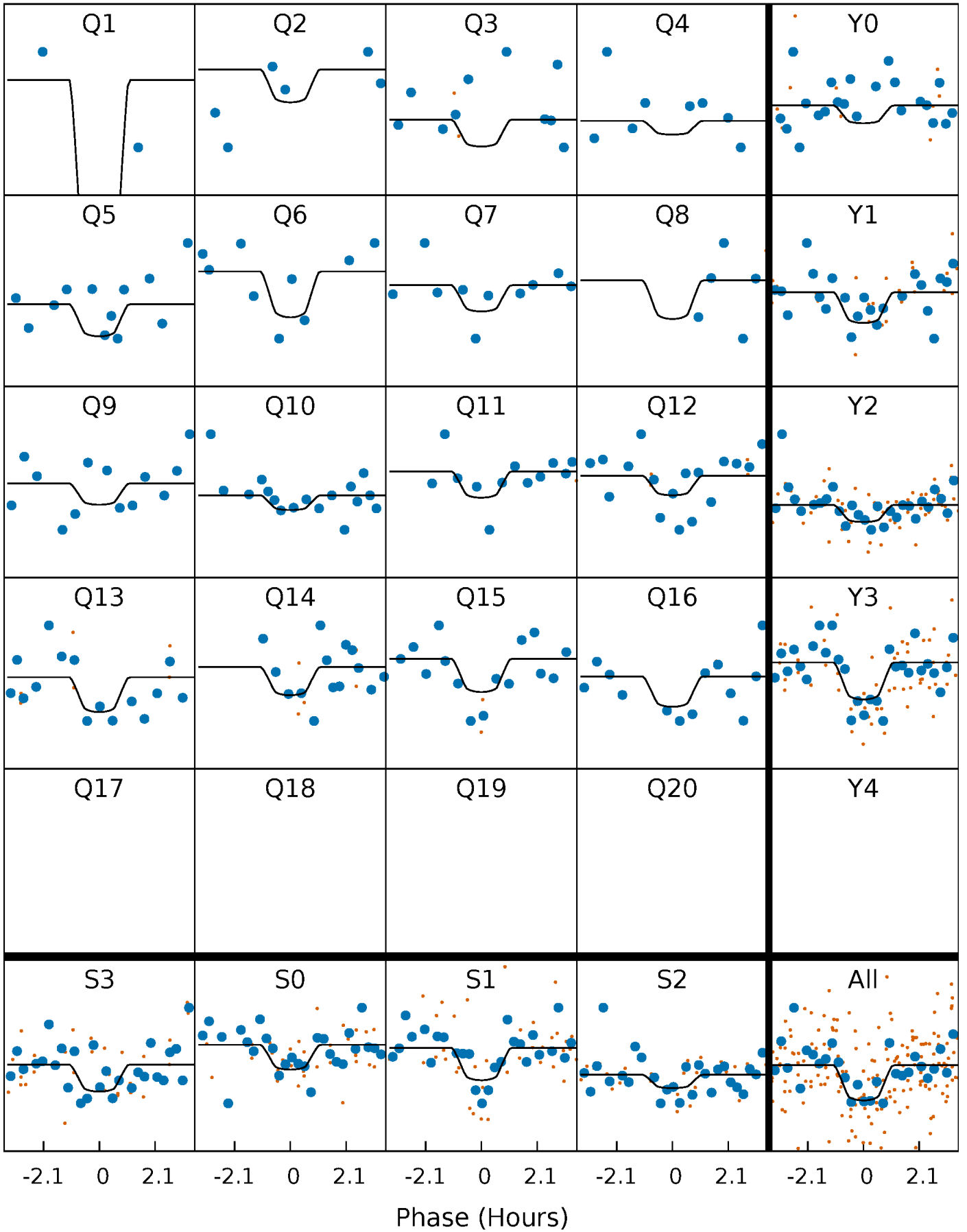
# PDC Quarter-Phased Transit Curves

TCE 006065823-03 P= 6.914876 Days  $T_0=133.760139$  (BKJD)



# DV Quarter-Phased Transit Curves

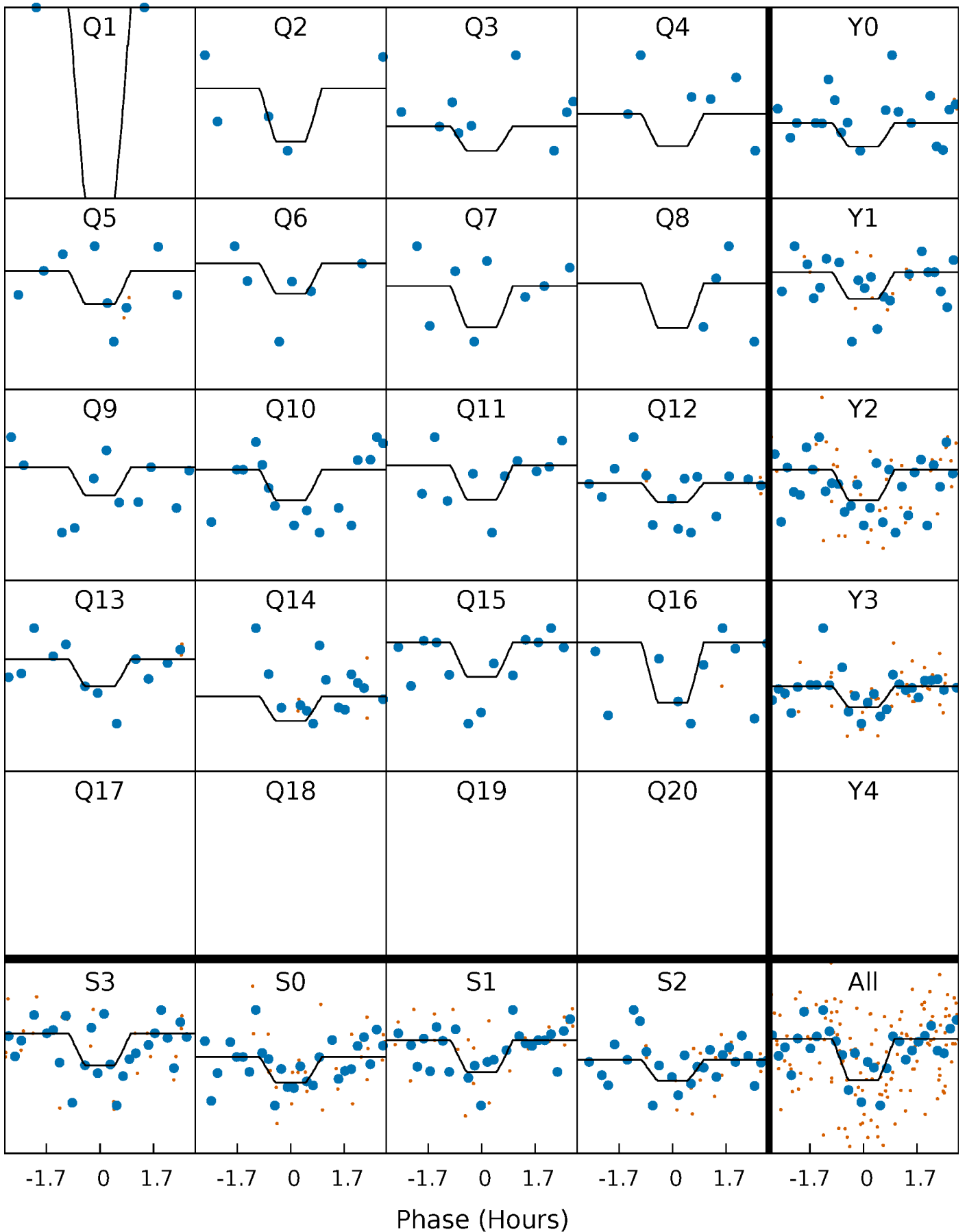
TCE 006065823-03 P= 6.914876 Days  $T_0=133.760139$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

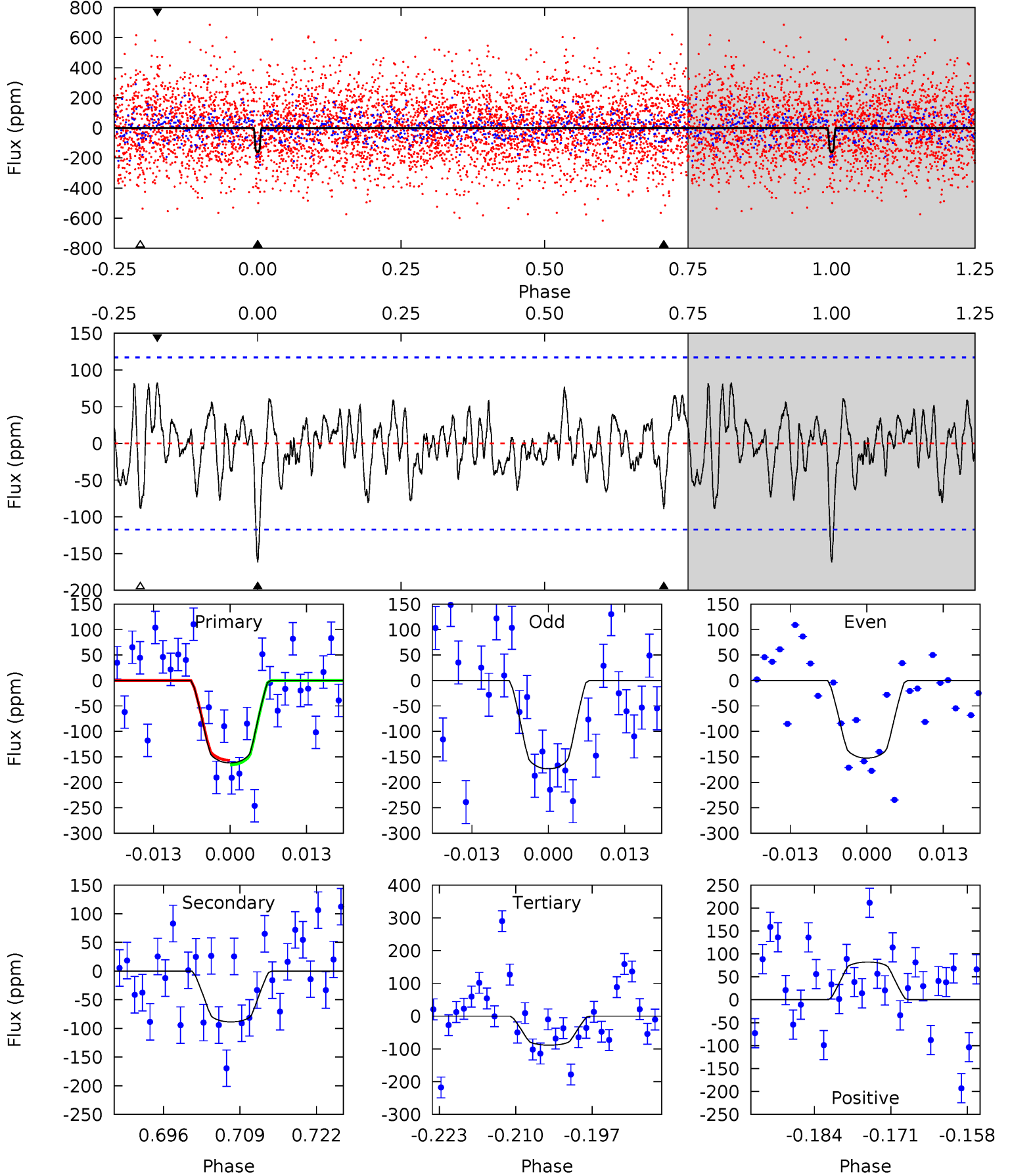
TCE 006065823-03 P= 6.914923 Days  $T_0=133.754796$  (BKJD)



# DV Model-Shift Uniqueness Test

006065823-03, P = 6.914876 Days, E = 126.845263 Days

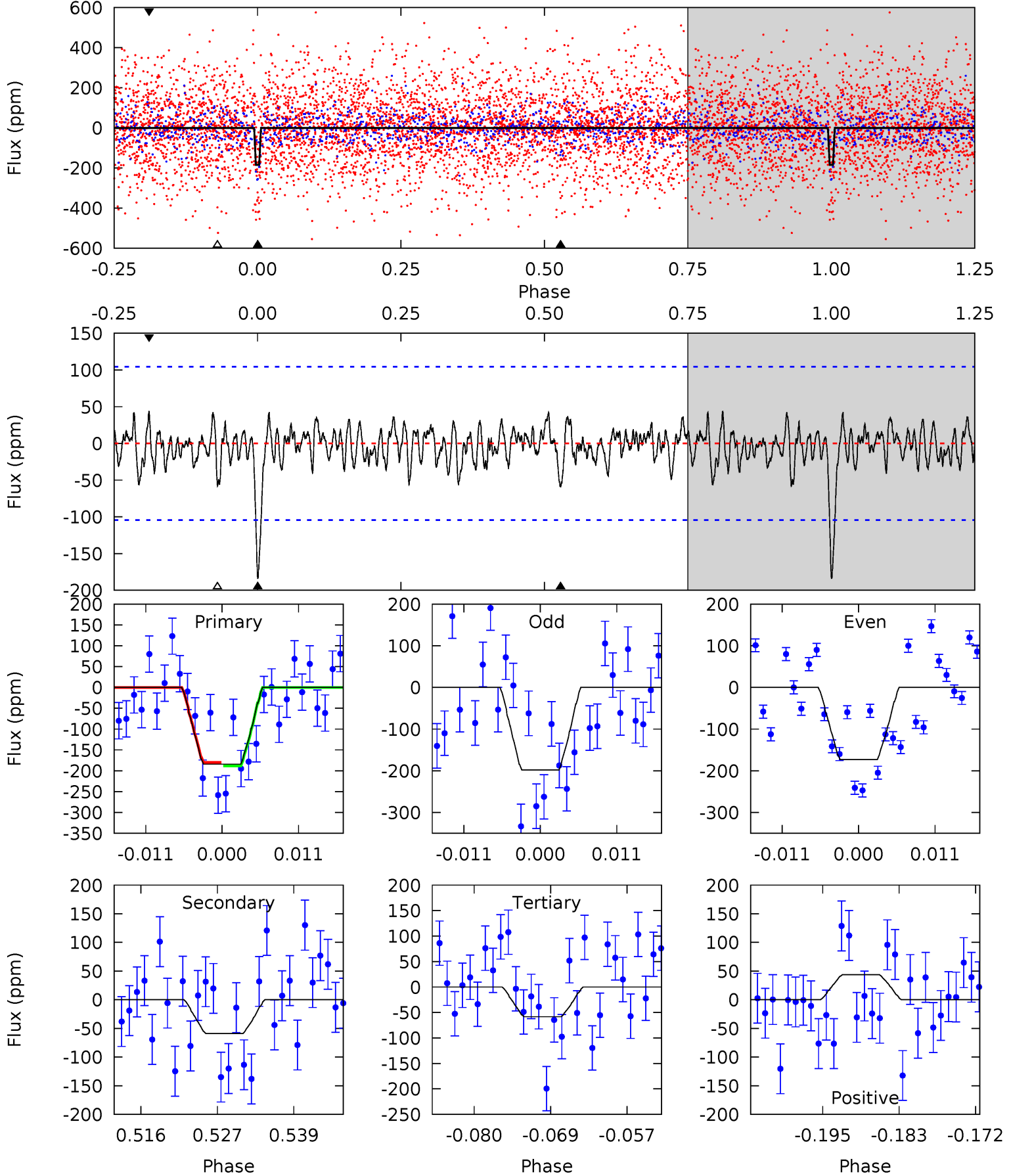
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.87	3.77	3.76	3.49	4.97	2.48	1.36	3.11	3.38	0.00	0.27	0.45	0.79	0.34	0.19



# Alt Model-Shift Uniqueness Test

006065823-03, P = 6.914923 Days, E = 126.839873 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
8.82	2.81	2.79	2.09	5.00	2.53	0.91	6.03	6.73	0.02	0.72	0.61	1.01	0.19	0.19



### Stellar Parameters For KIC 006065823

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6572^{+175}_{-233}$	$4.169^{+0.185}_{-0.185}$	$-0.200^{+0.250}_{-0.300}$	$1.519^{+0.442}_{-0.362}$	$1.249^{+0.181}_{-0.201}$	$0.502^{+0.555}_{-0.243}$
	+3%/-4%	+4%/-4%	+125%/-150%	+29%/-24%	+14%/-16%	+111%/-49%
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 006065823-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-89 \pm 24$	$3.28^{+2.93}_{-2.19}$	$1801^{+138}_{-130}$	$4640^{+3197}_{-968}$	$25^{+206}_{-18}$
Alt.	$-59 \pm 21$	$3.07^{+2.93}_{-2.11}$	$1802^{+152}_{-123}$	$4330^{+3370}_{-894}$	$18^{+192}_{-13}$

$T_{\text{max}}$  = 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

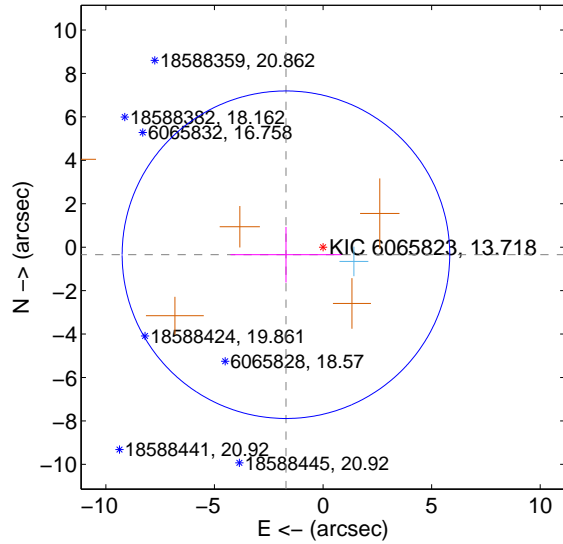
Supplemental centroid analysis for 006065823-03. Kepler magnitude: 13.72. Transit SNR 7.15

There are 1 quarters with good PRF difference image offsets

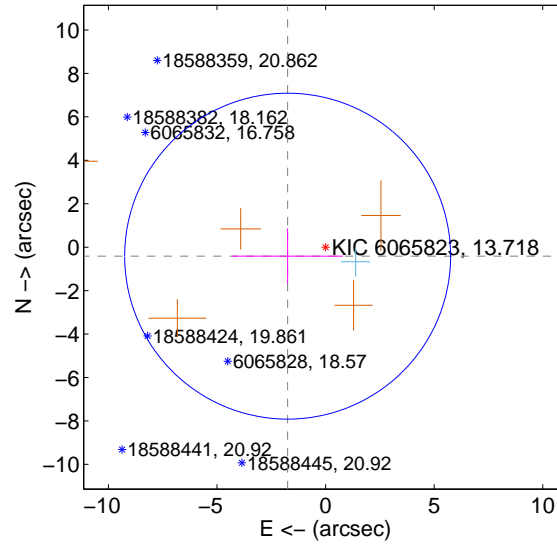
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.743 \pm 2.513$	0.69	$1.708 \pm 2.552$	$-0.348 \pm 1.279$
PRF-fit source offset from KIC position	$1.796 \pm 2.501$	0.72	$1.747 \pm 2.552$	$-0.414 \pm 1.284$
photometric centroid source offset	$0.57 \pm 0.62$	0.92	$0.52 \pm 0.63$	$0.24 \pm 0.57$

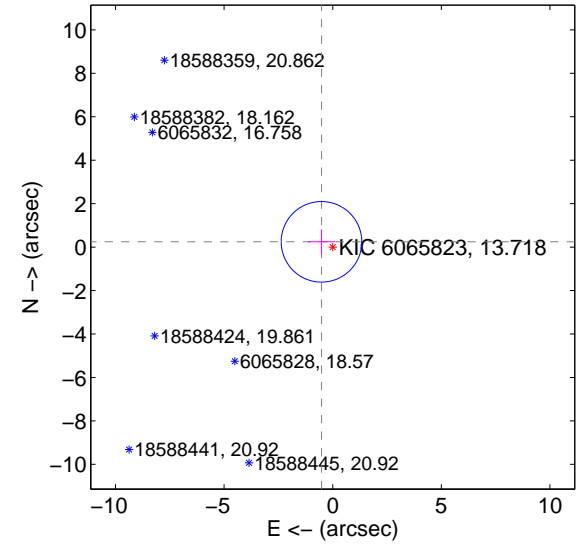
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

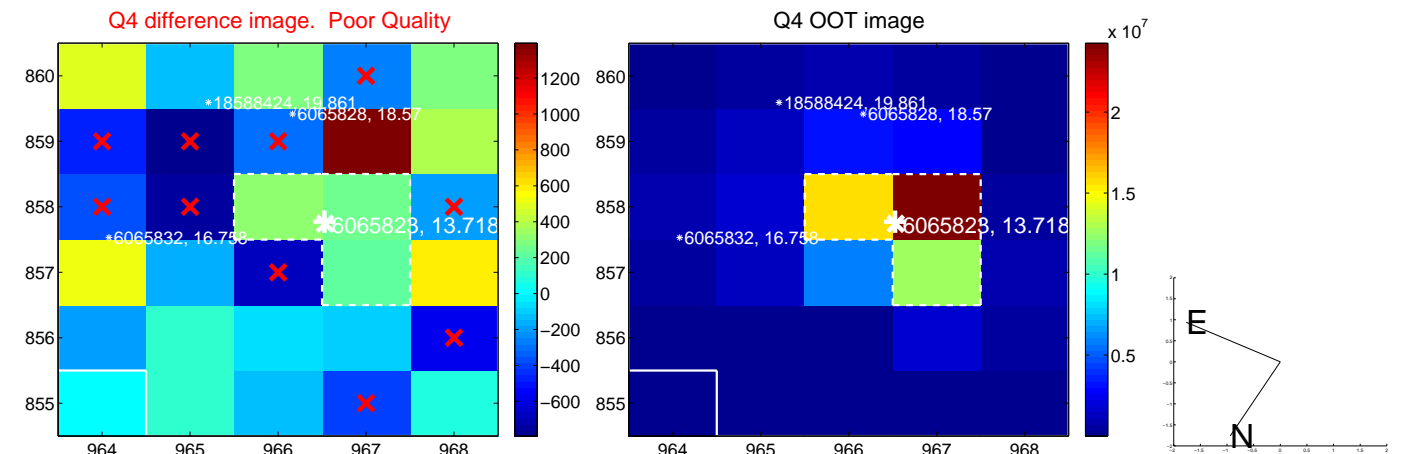
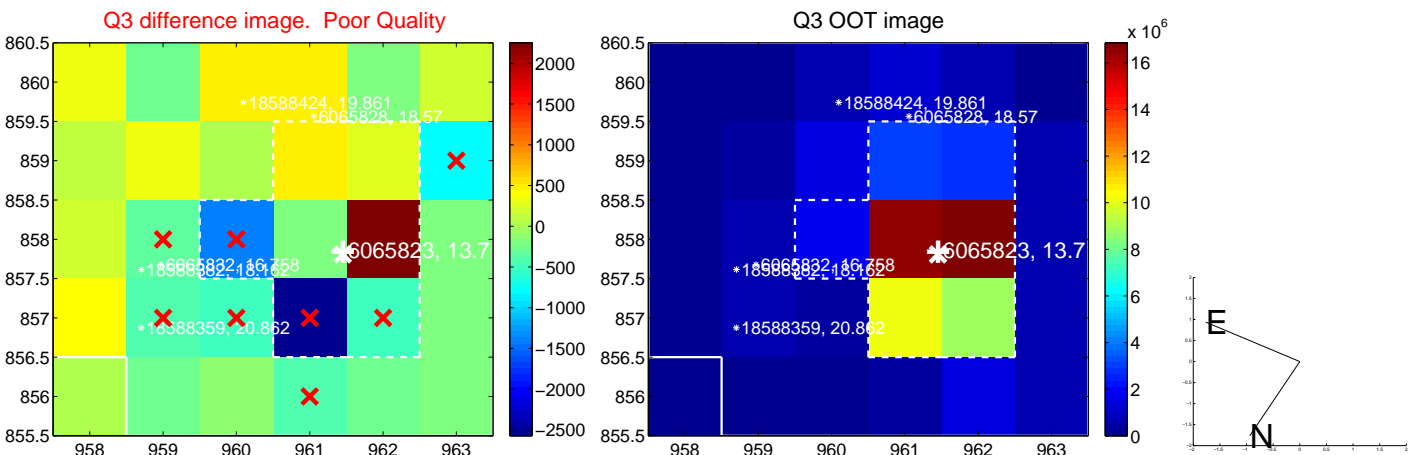
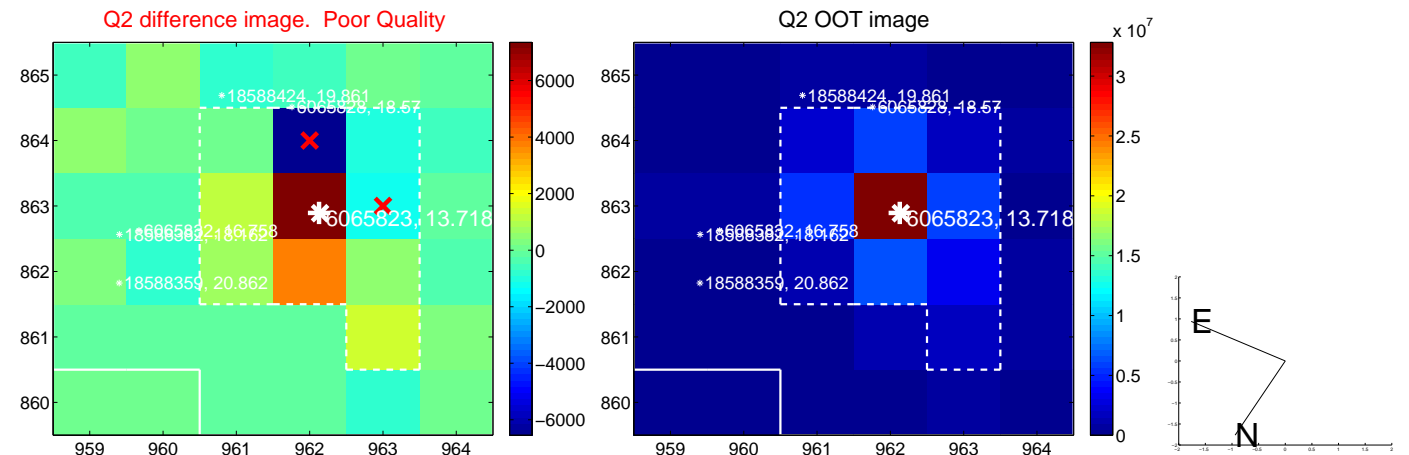
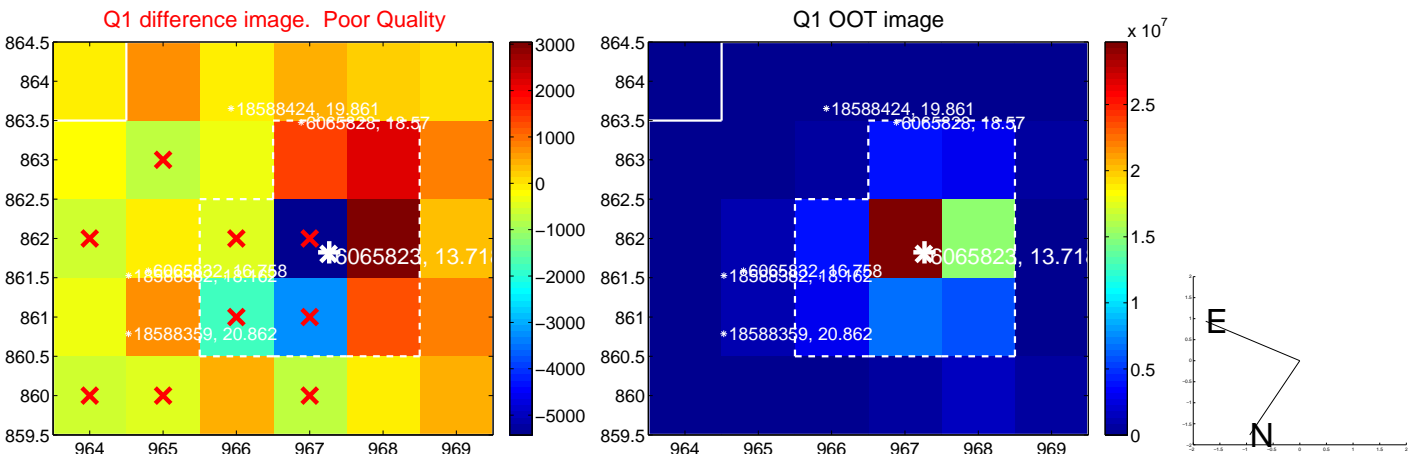


offset from photometric centroids



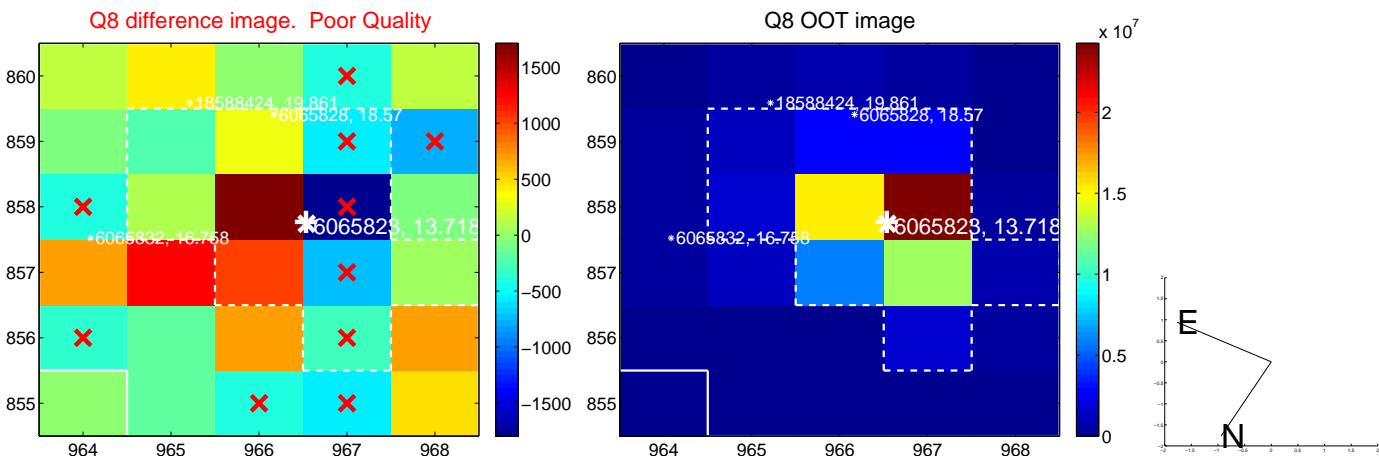
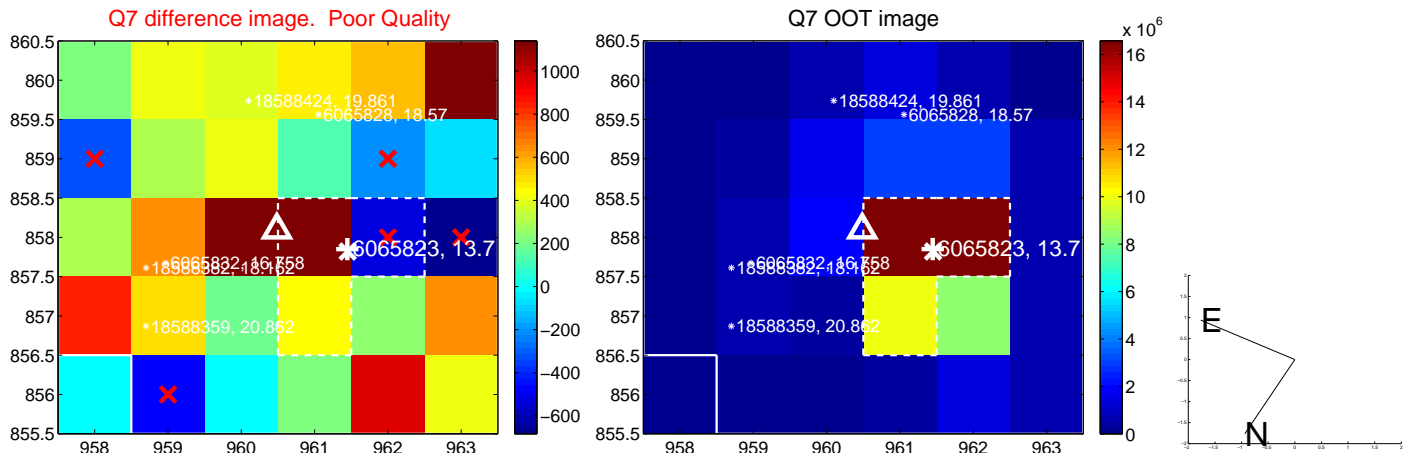
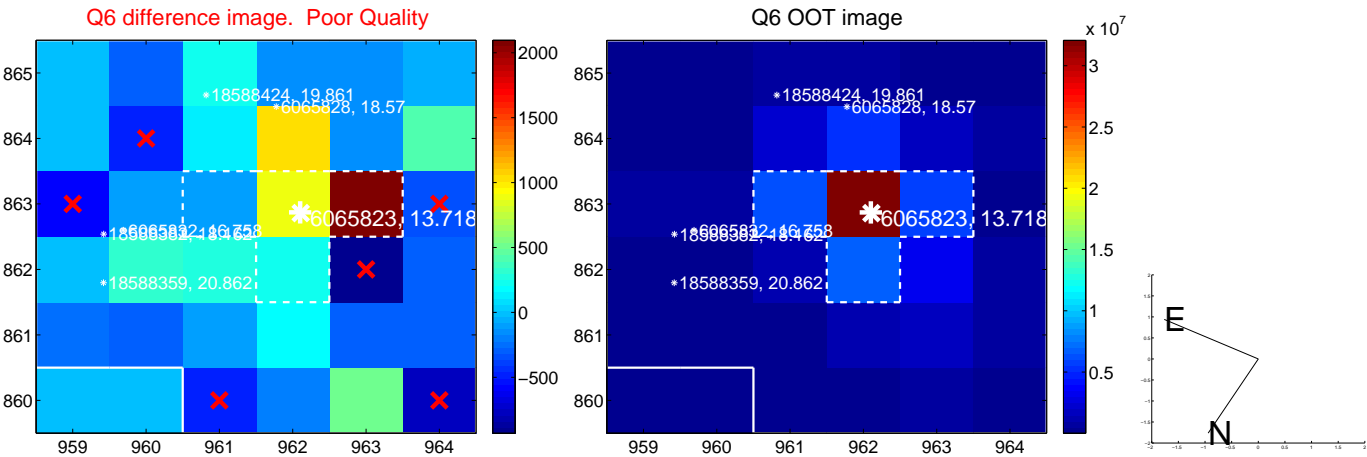
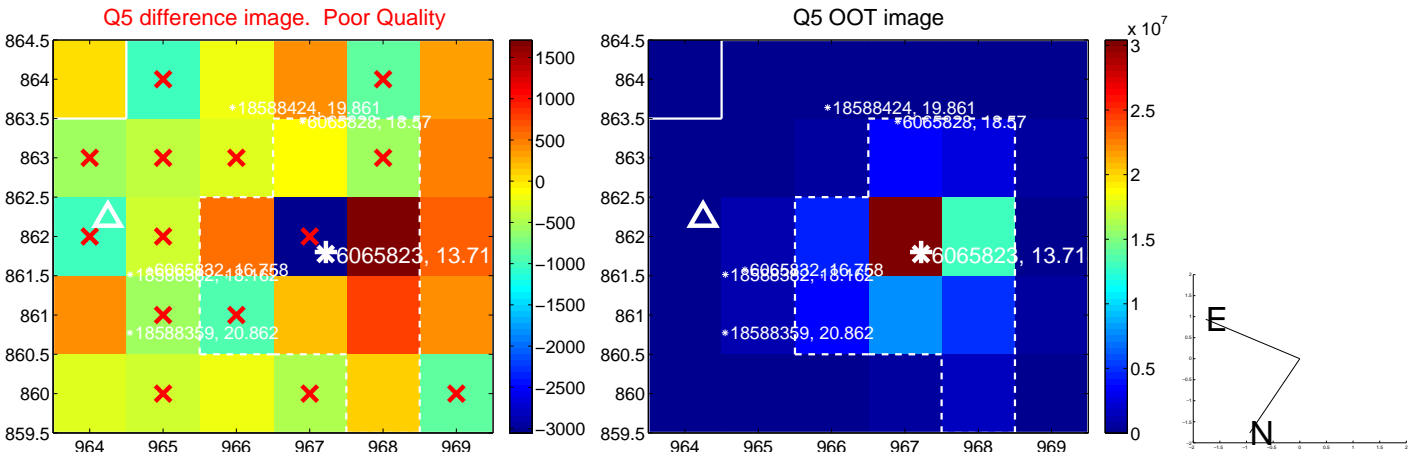
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

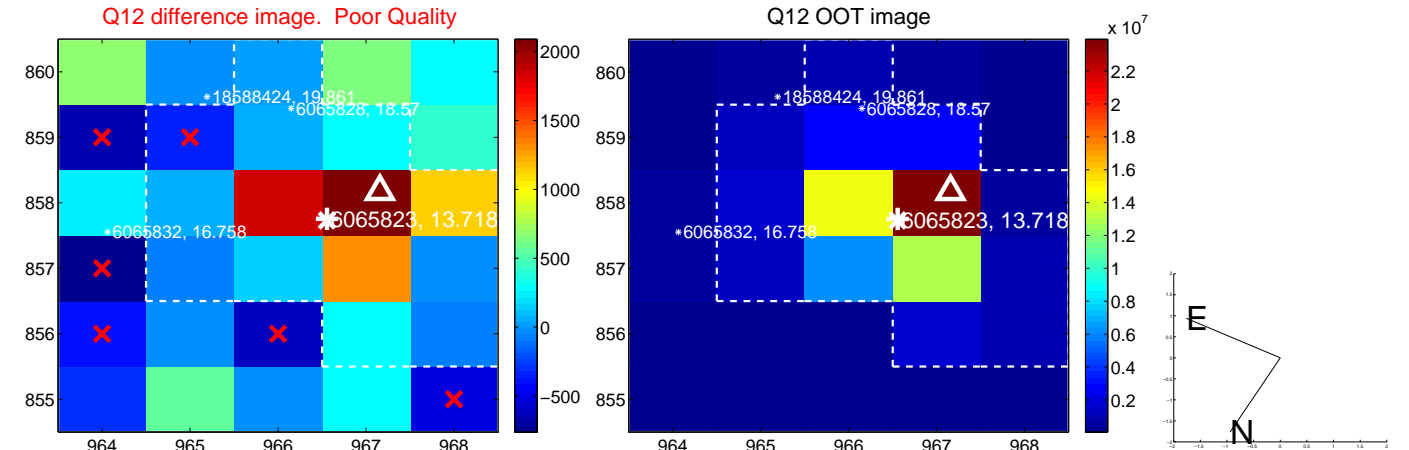
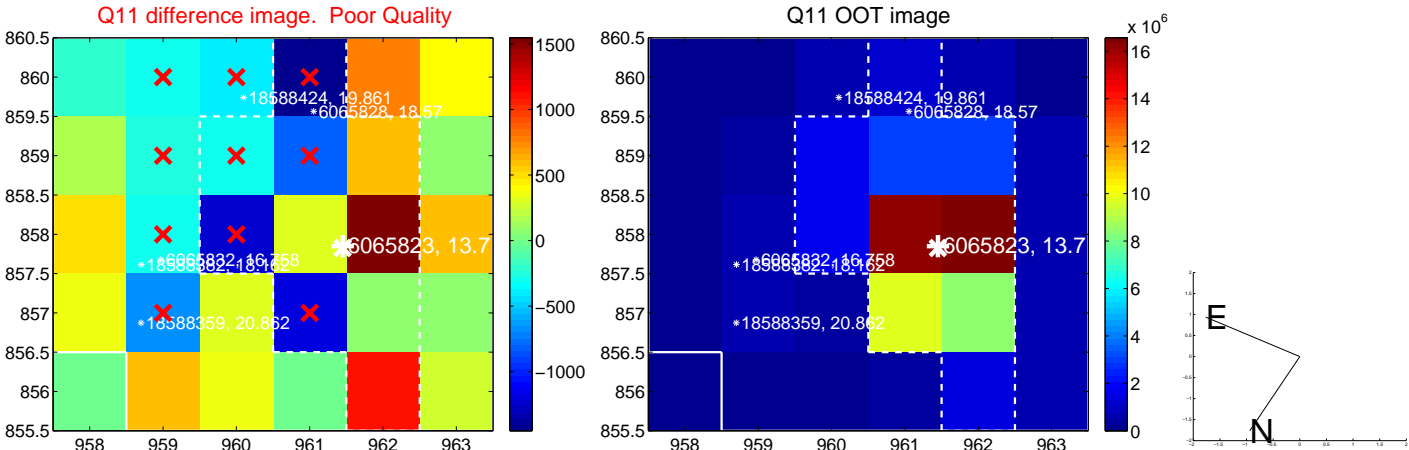
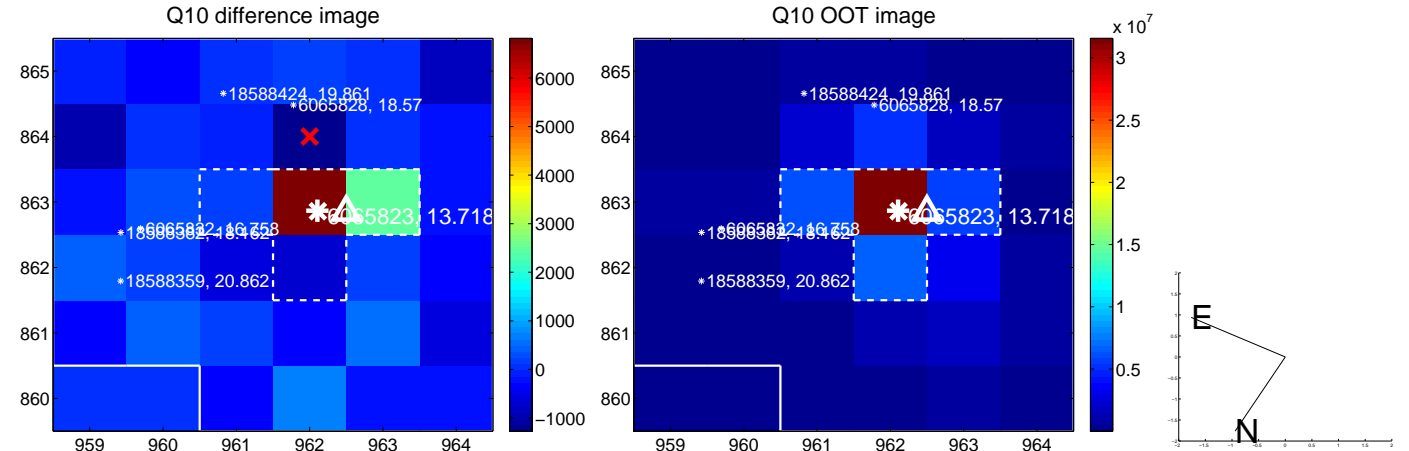
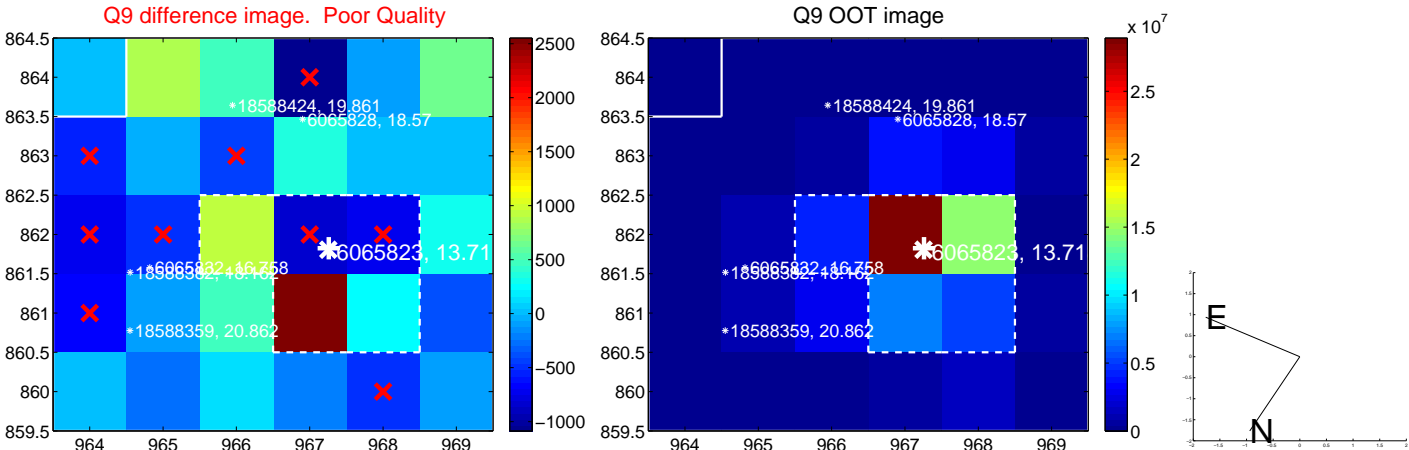




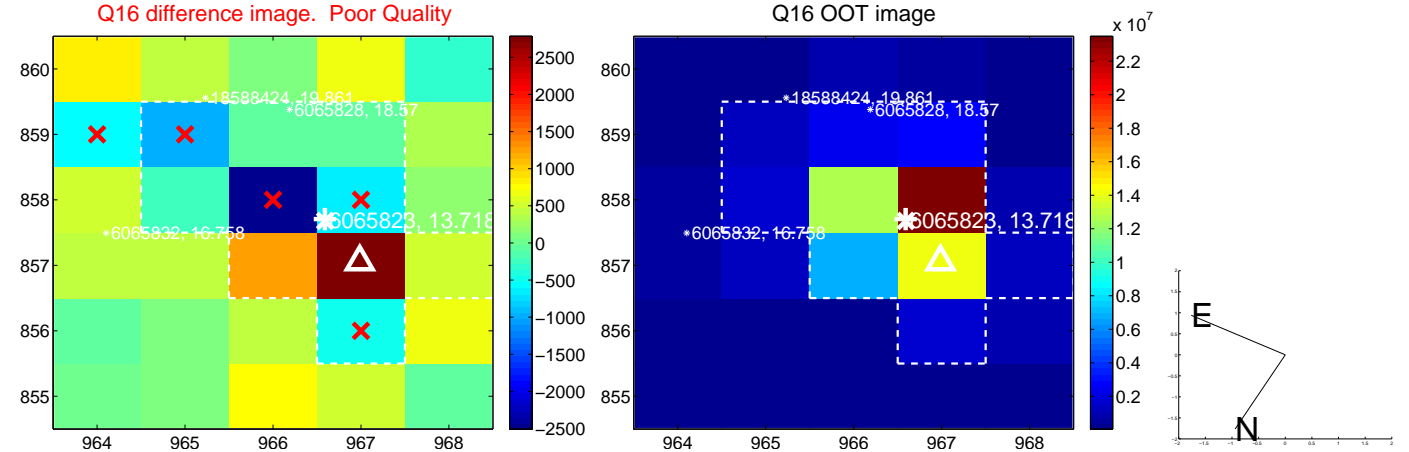
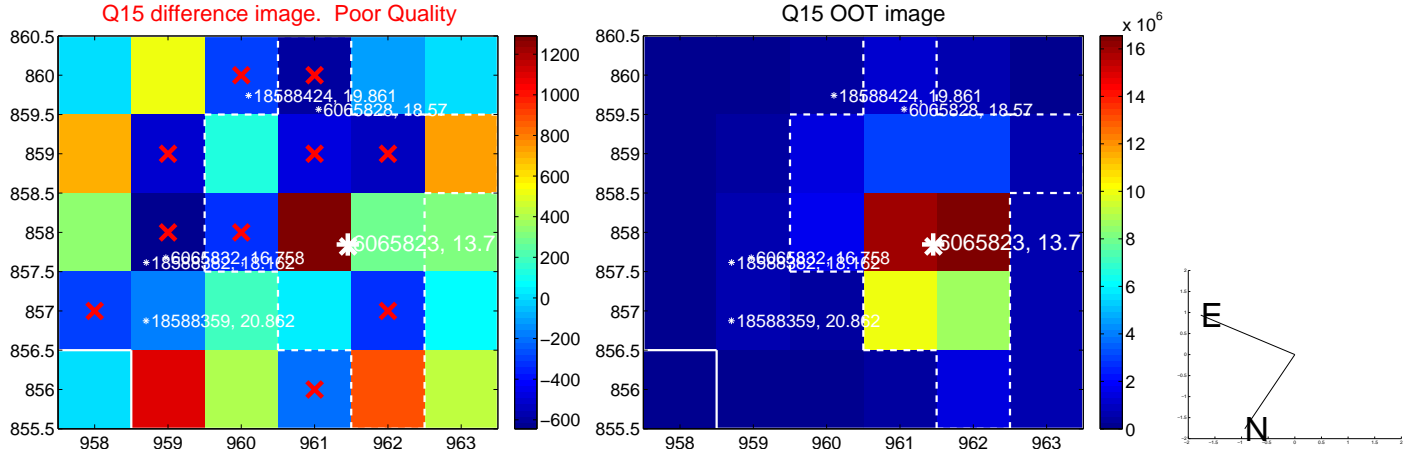
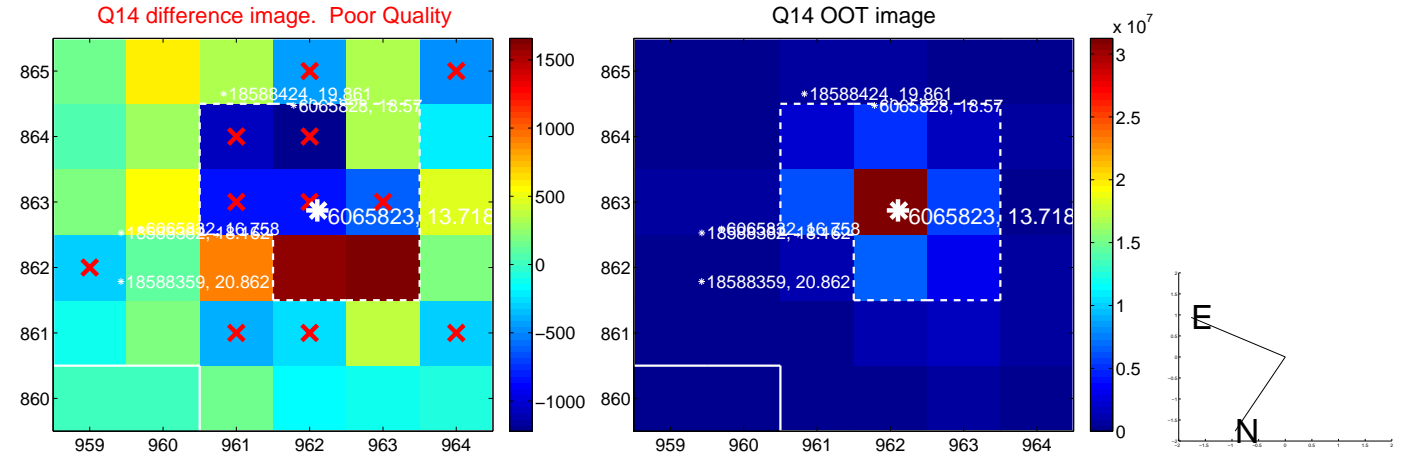
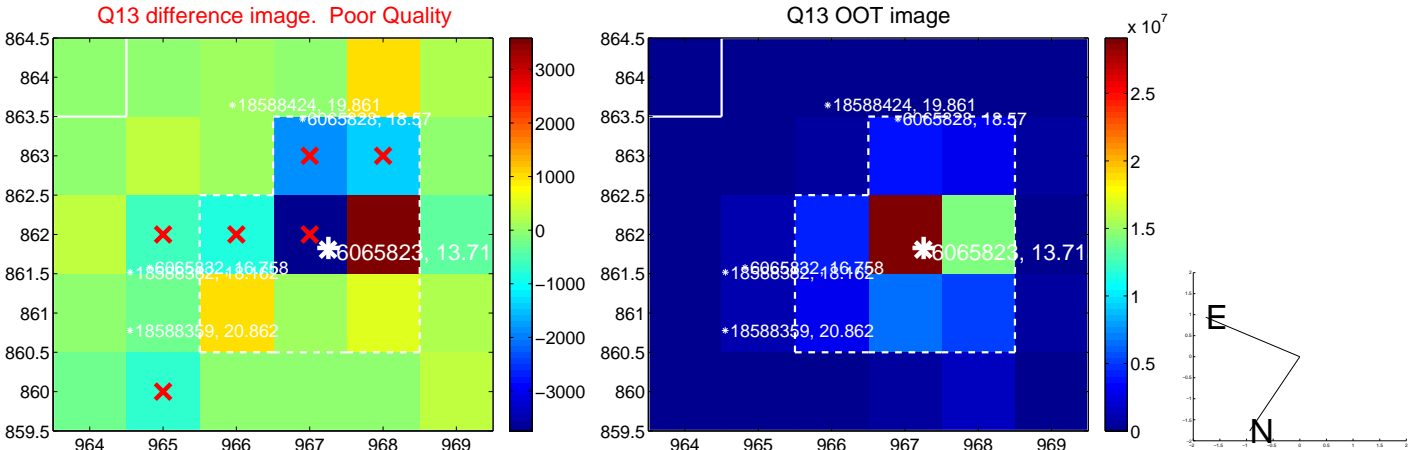
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



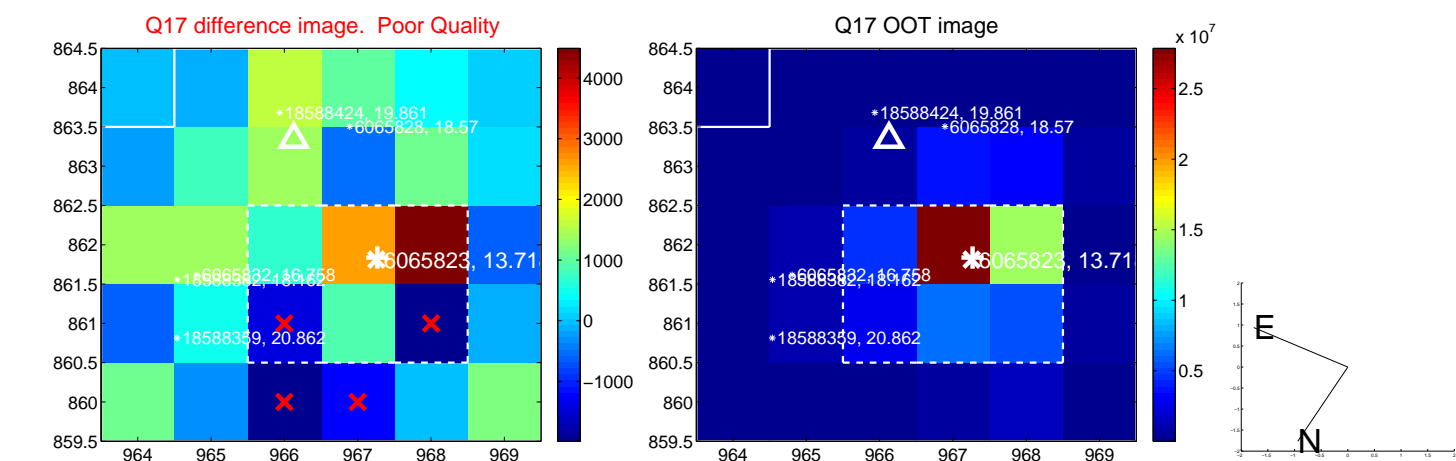
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



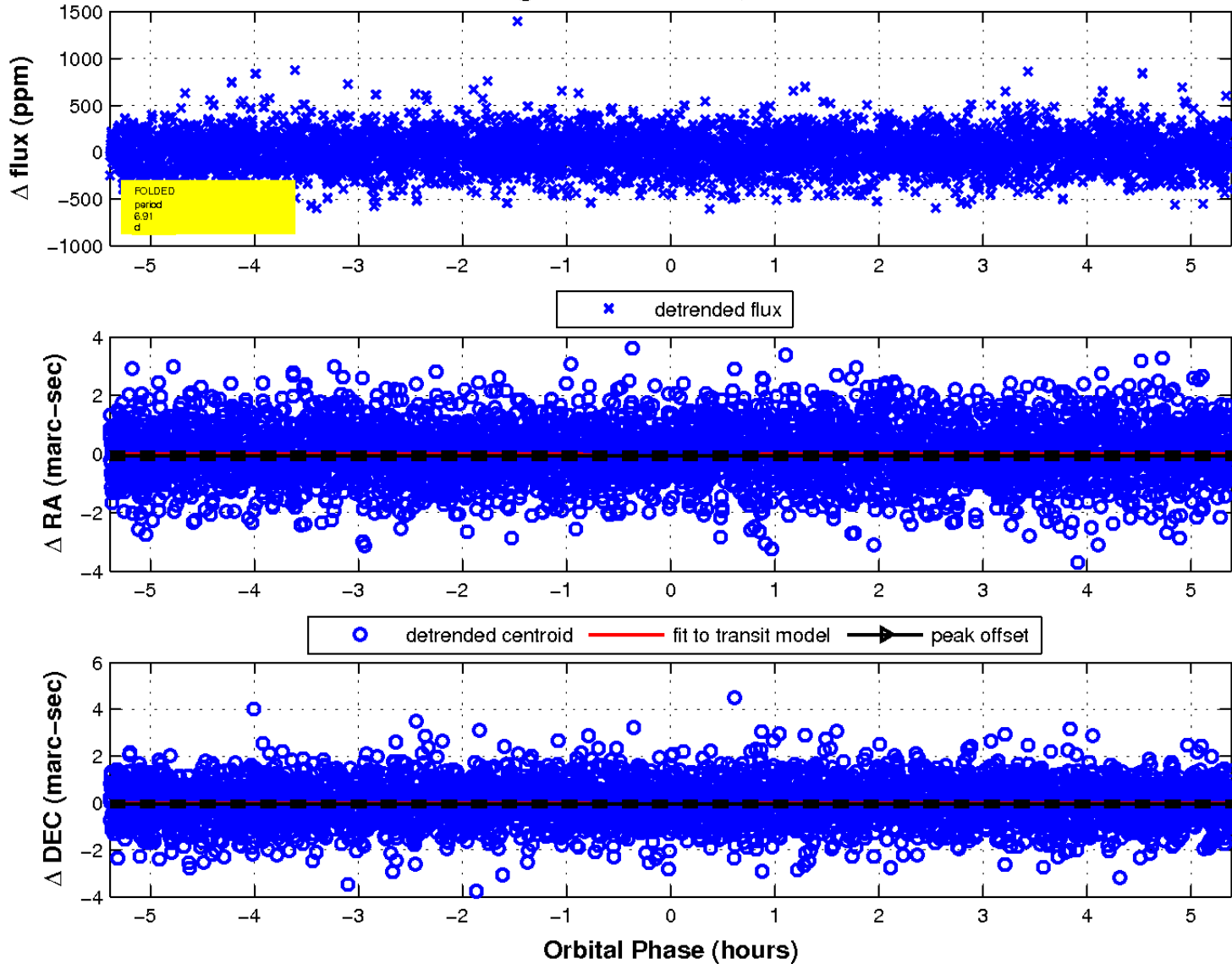
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

