

# KIC 006067817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006067817-01	OBS	No	1.327762	131.878847	33.2	1.670	9.6	15.8	2.93	8074	1.97	34298.26
006067817-02	OBS	No	0.663872	132.057377	19.8	1.770	15.1	13.8	2.93	8074	1.52	86427.78
006067817-03	OBS	No	0.663881	131.711039	19.2	1.533	11.5	12.9	2.93	8074	1.50	86426.21
006067817-04	OBS	No	0.663869	131.891650	19.7	1.324	9.9	8.9	2.93	8074	1.51	86428.24
006067817-05	OBS	No	0.942061	132.393392	31.1	8.172	8.4	14.1	2.93	8074	1.69	54199.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006067817-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

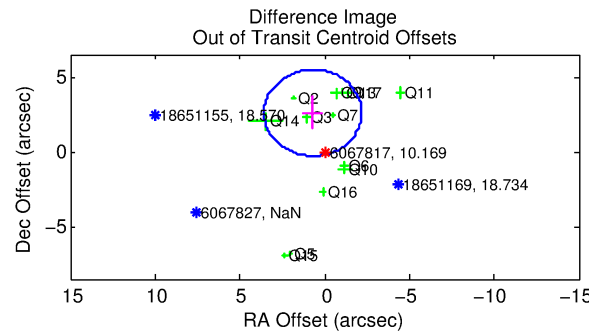
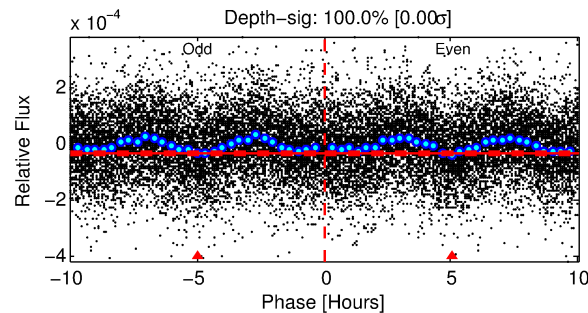
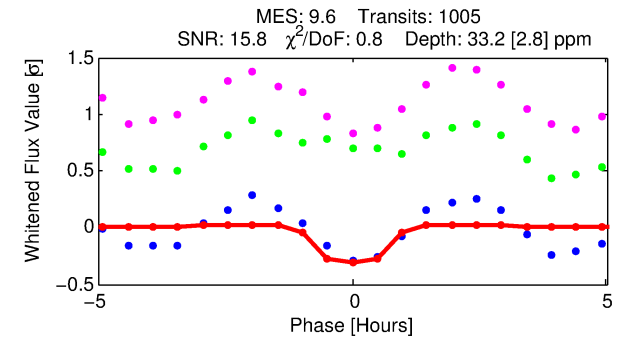
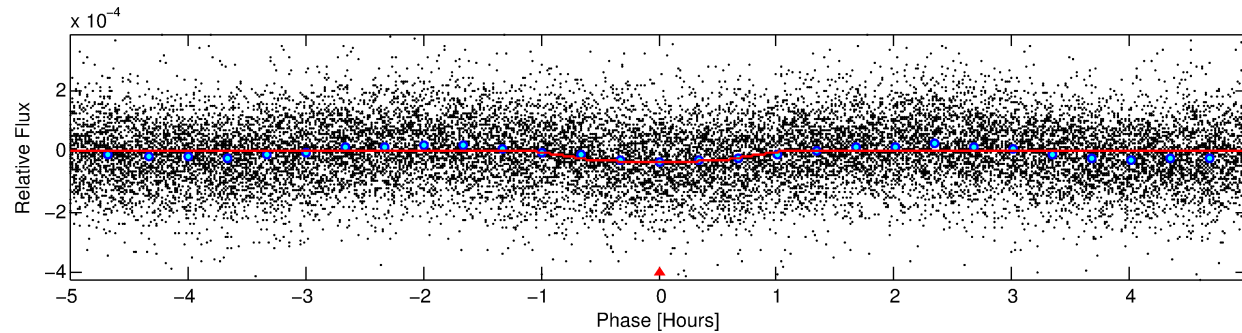
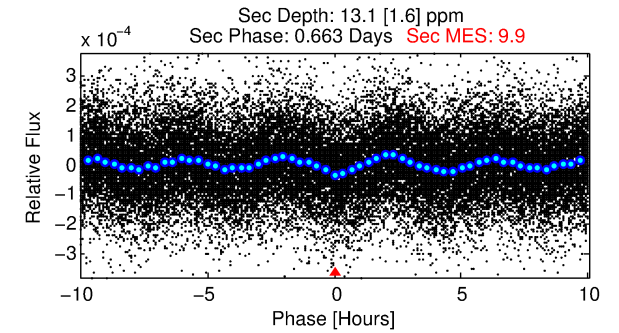
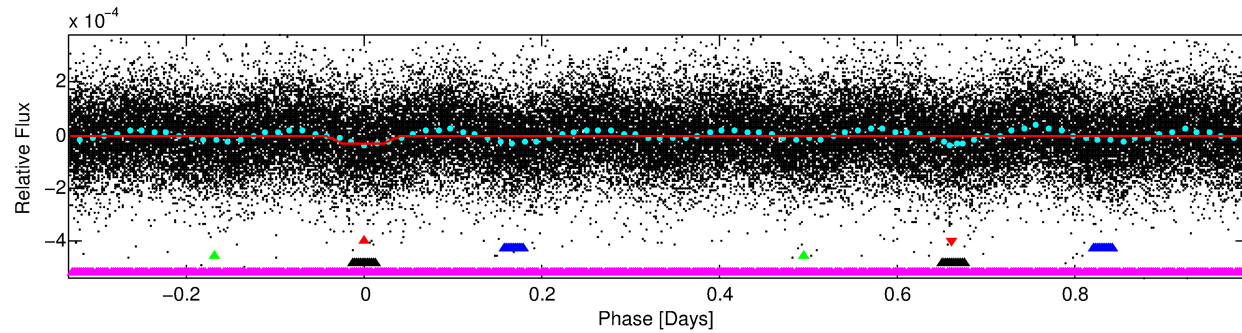
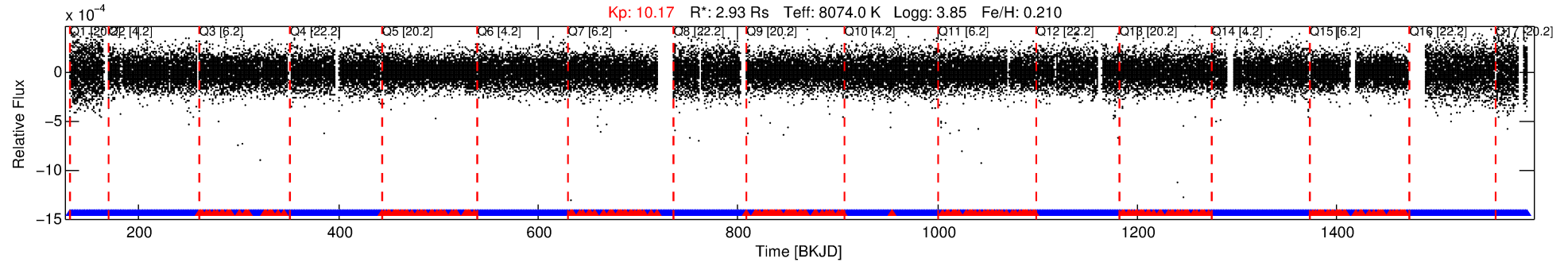
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006067817-01

No Significant Match Found

# DV One-Page Summary

KIC: 6067817 Candidate: 1 of 5 Period: 1.328 d



## DV Fit Results:

Period = 1.32776 [0.00001] d  
Epoch = 131.8788 [0.0016] BKJD  
Rp/R\* = 0.0062 [0.0015]  
a/R\* = 2.85 [3.85]  
b = 0.90 [0.32]  
Seff = 34298.26 [19082.73]  
Teq = 3470 [483] K  
Rp = 1.97 [0.90] Re  
a = 0.0308 [0.0106] AU  
Ag = 1.76 [1.30] [0.59σ]  
Teffp = 6183 [841] K [2.80σ]

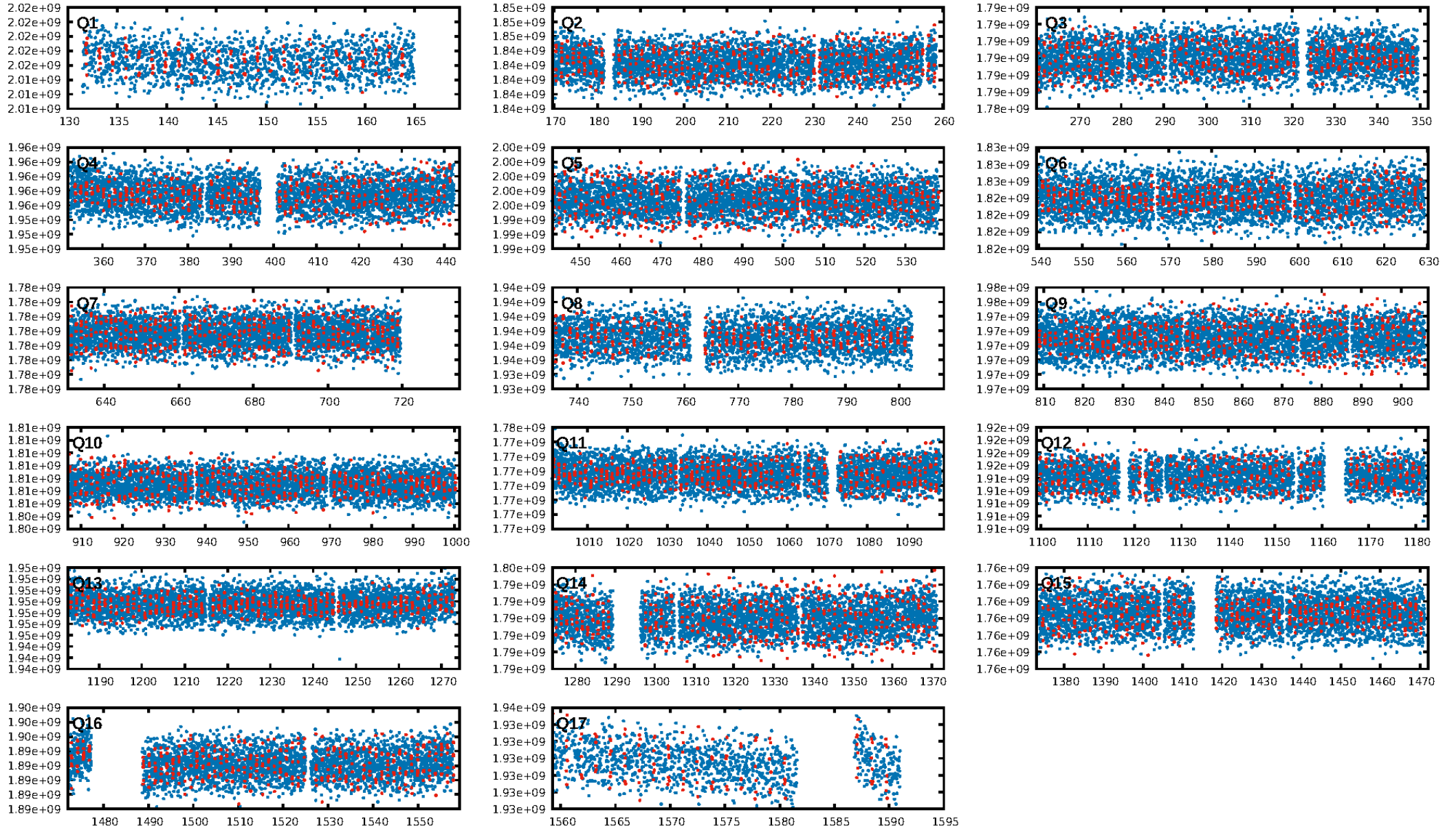
## DV Diagnostic Results:

ShortPeriod-sig: 73.3% [1.11σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.77 [739/960]  
GhostDiagnostic-chr: 0.4198  
Centroid-sig: N/A  
Centroid-so: 1.184 arcsec [2.09σ]  
OotOffset-rm: 2.687 arcsec [2.80σ]  
KicOffset-rm: 3.442 arcsec [3.66σ]  
OotOffset-st: 4/4/1/4 [13]  
KicOffset-st: 4/4/1/4 [13]  
DiffImageQuality-fgm: 0.08 [1/13]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:24:48 Z

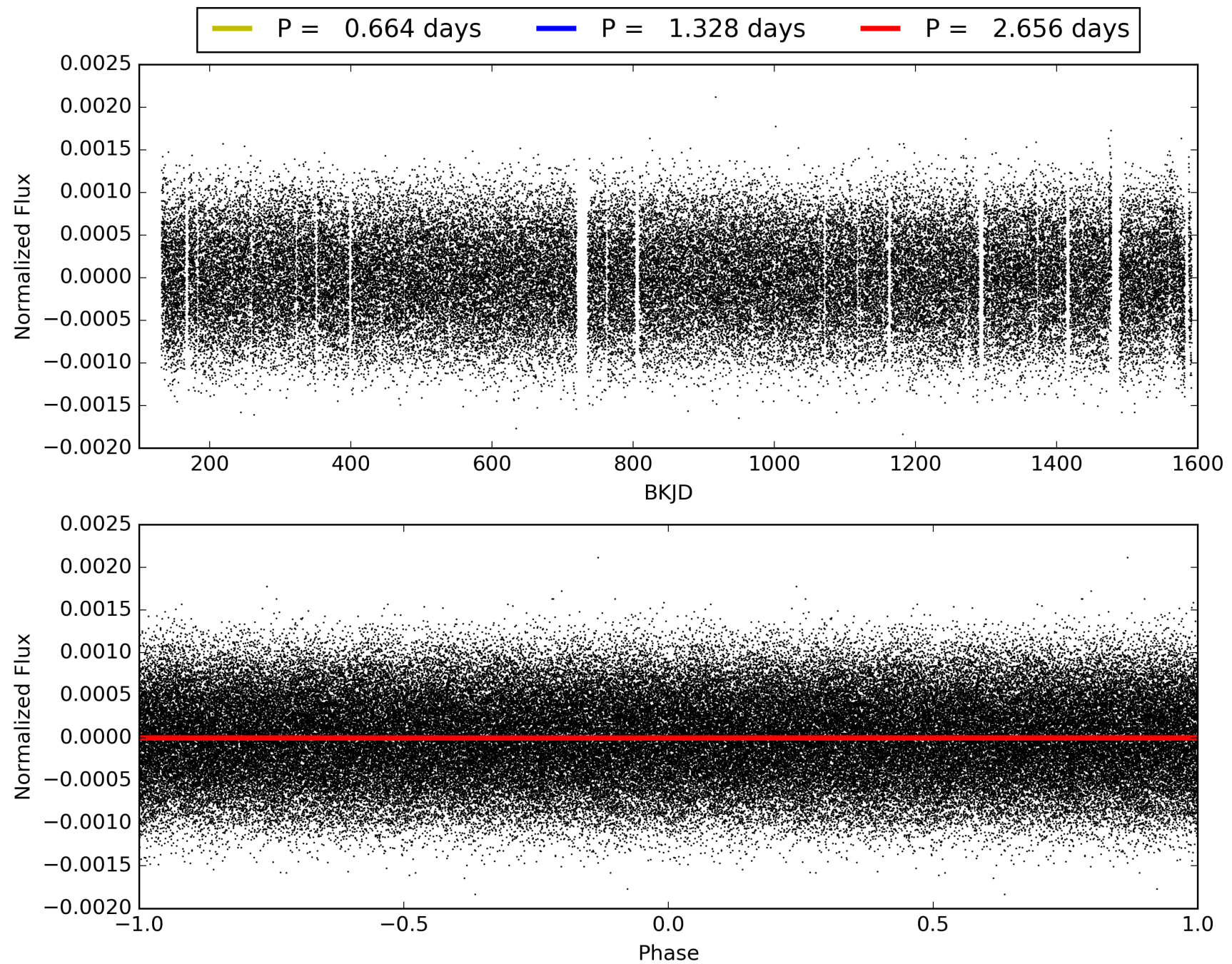
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006067817-01, PDC Light Curves





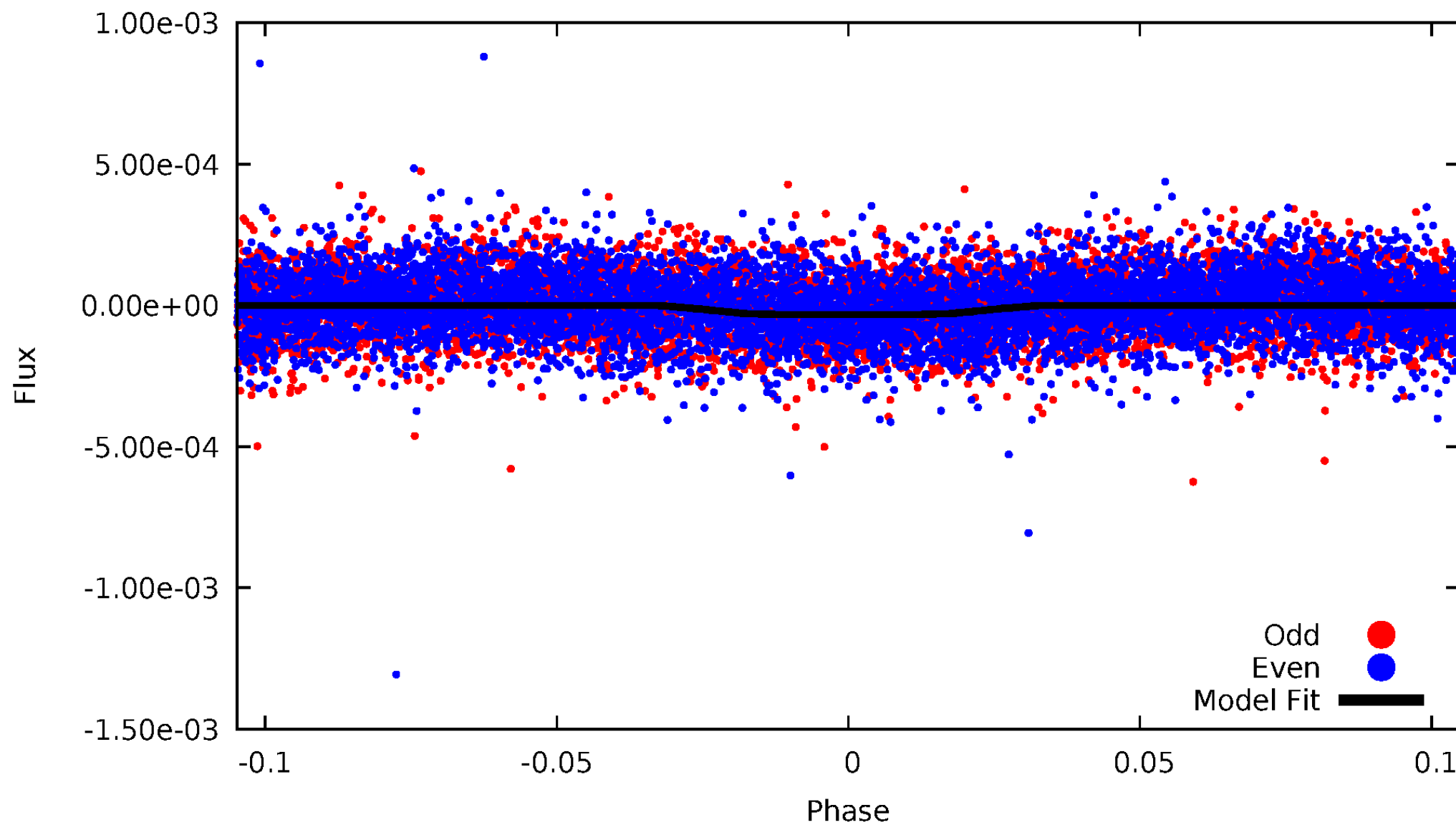
TCE 006067817-01





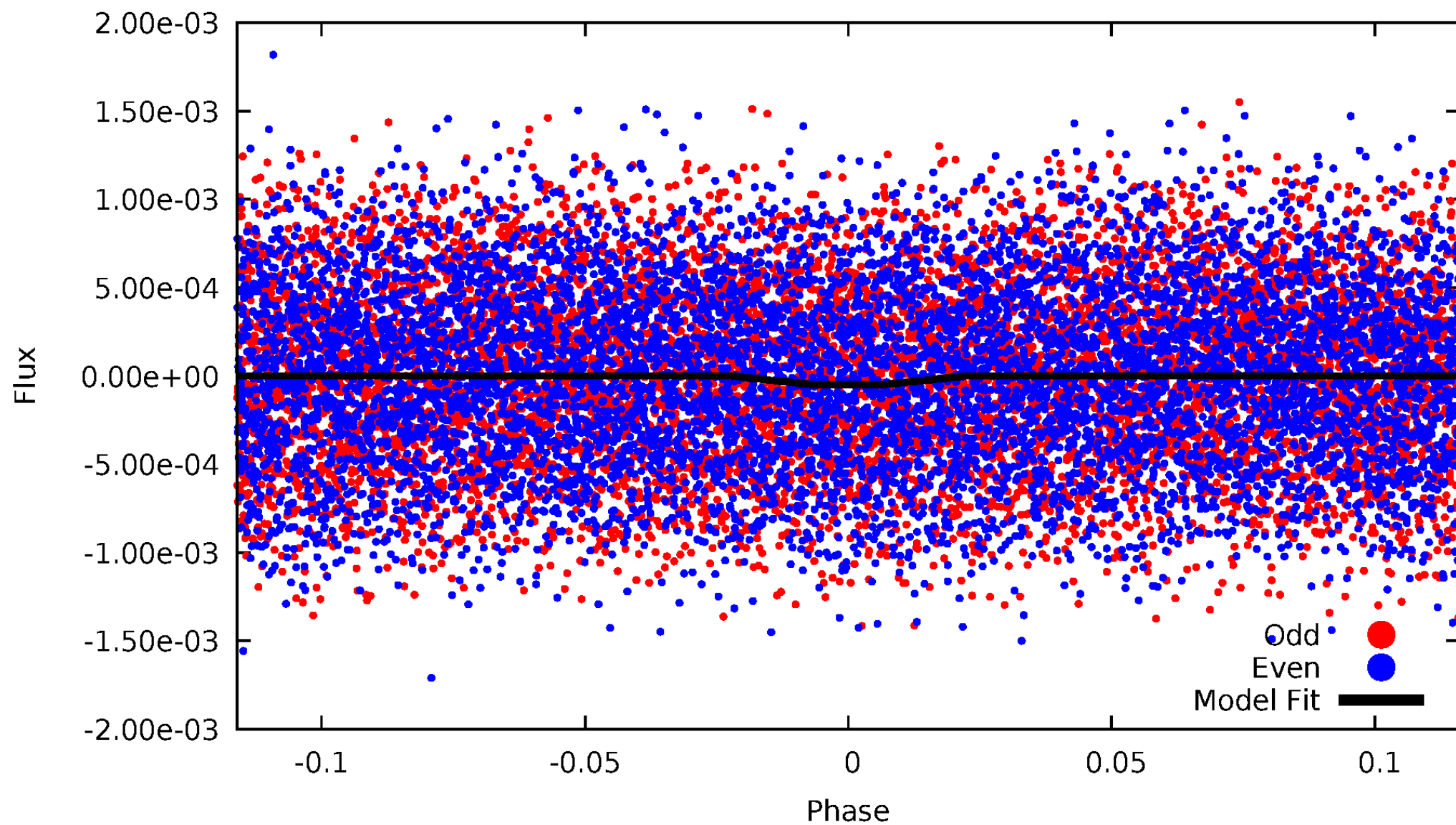
# DV Odd/Even

TCE 006067817-01



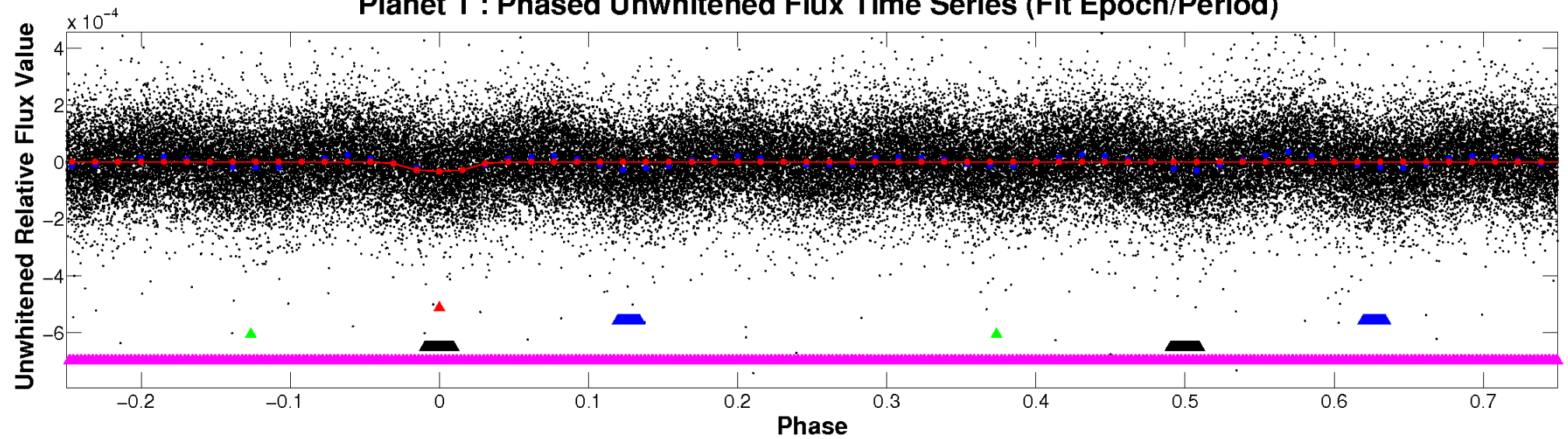
# ALT Odd/Even

TCE 006067817-01

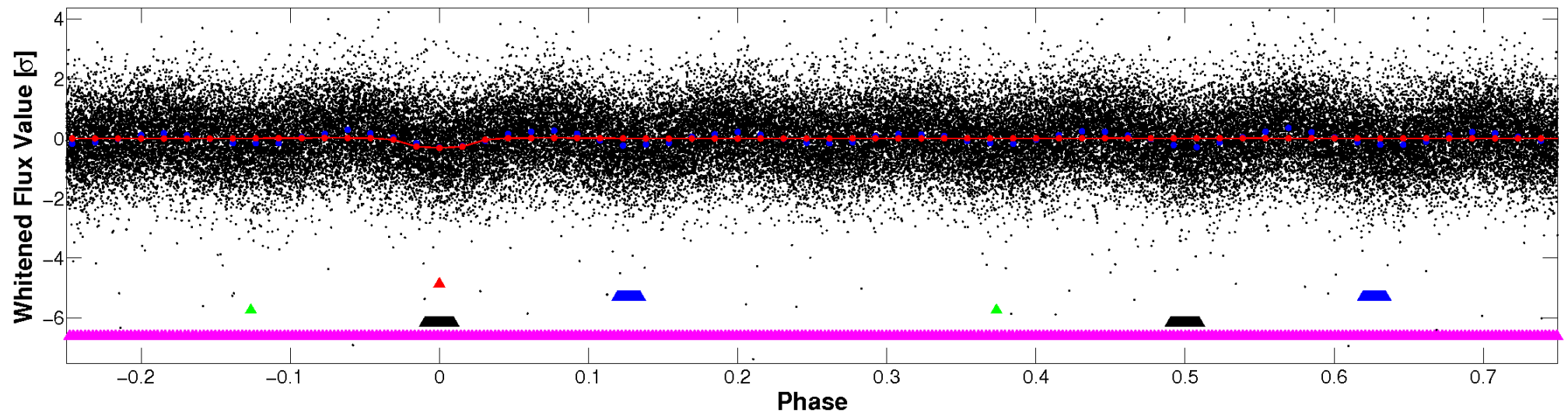


# Non-Whitened Vs. Whitened Light Curve

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



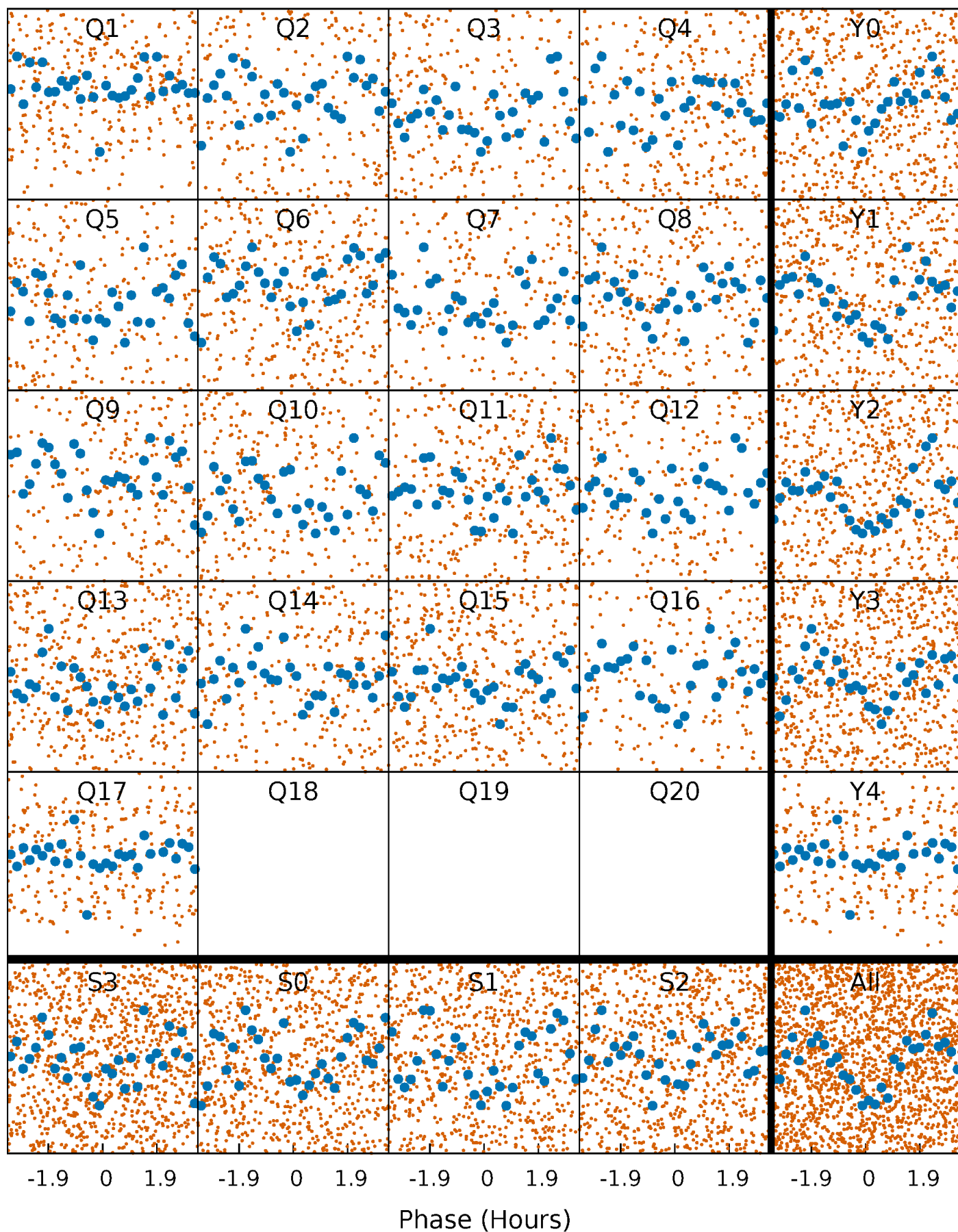
## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





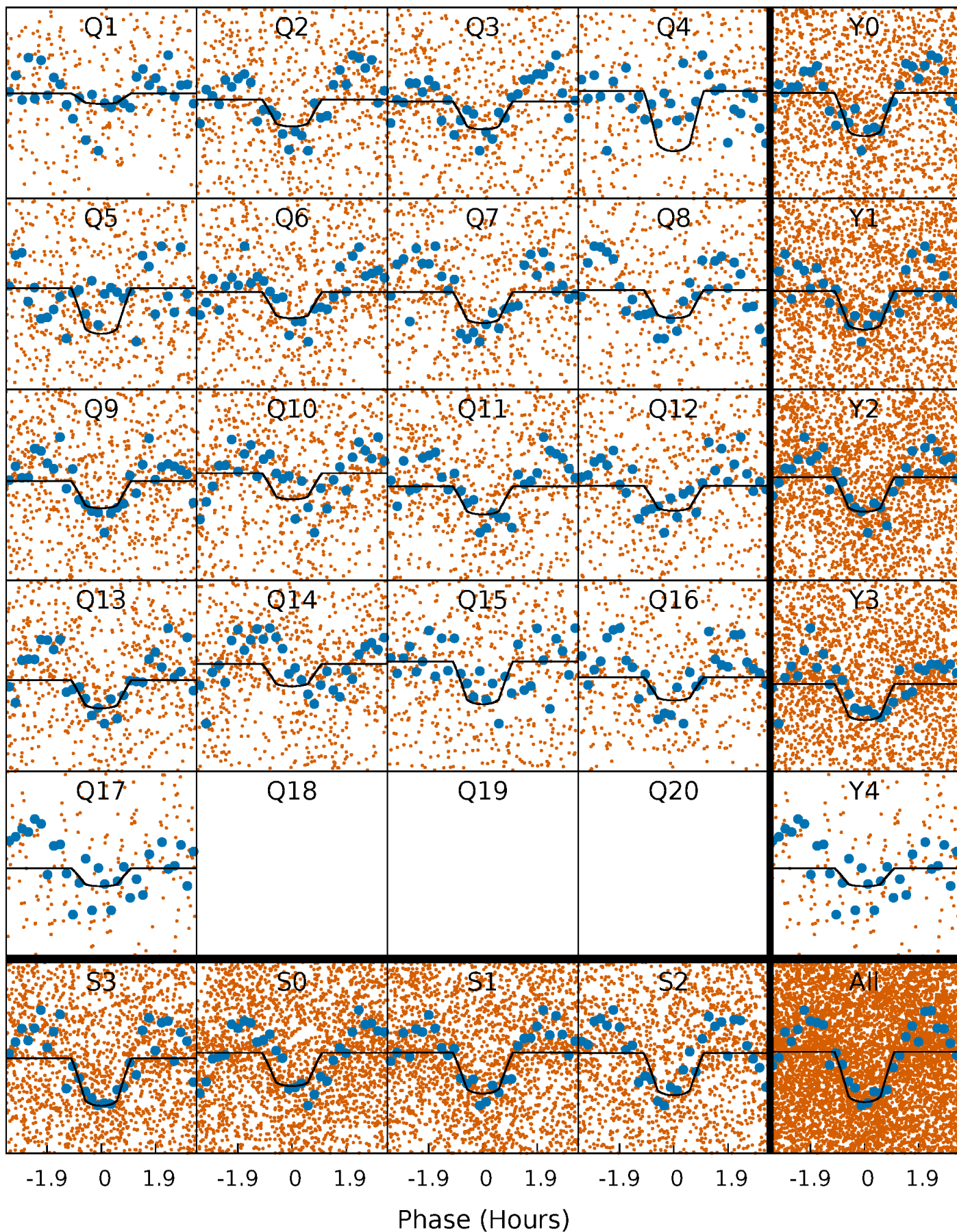
# PDC Quarter-Phased Transit Curves

TCE 006067817-01 P= 1.327761 Days  $T_0=131.878847$  (BKJD)



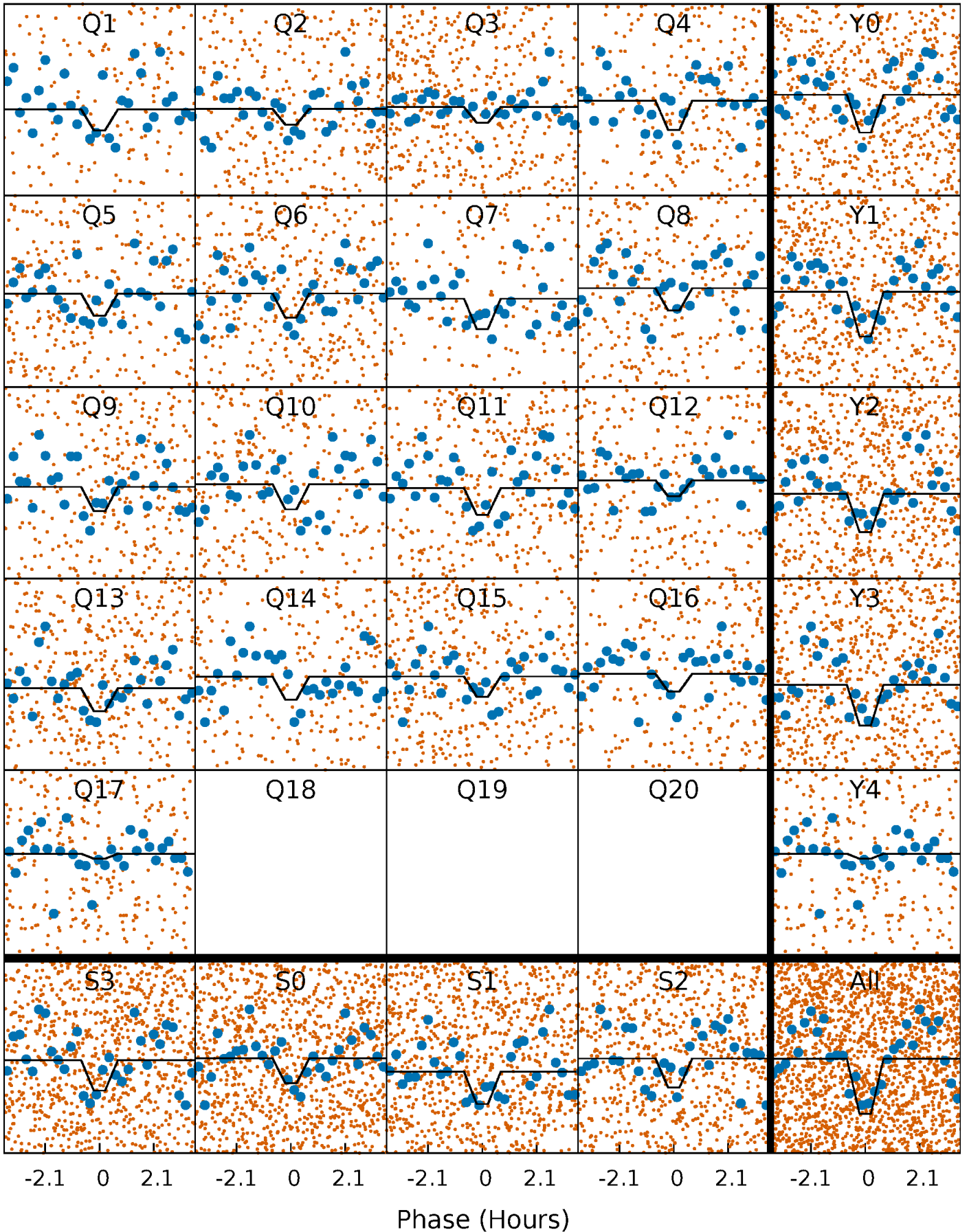
# DV Quarter-Phased Transit Curves

TCE 006067817-01 P= 1.327761 Days  $T_0=131.878847$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006067817-01 P= 1.327774 Days  $T_0=131.876361$  (BKJD)

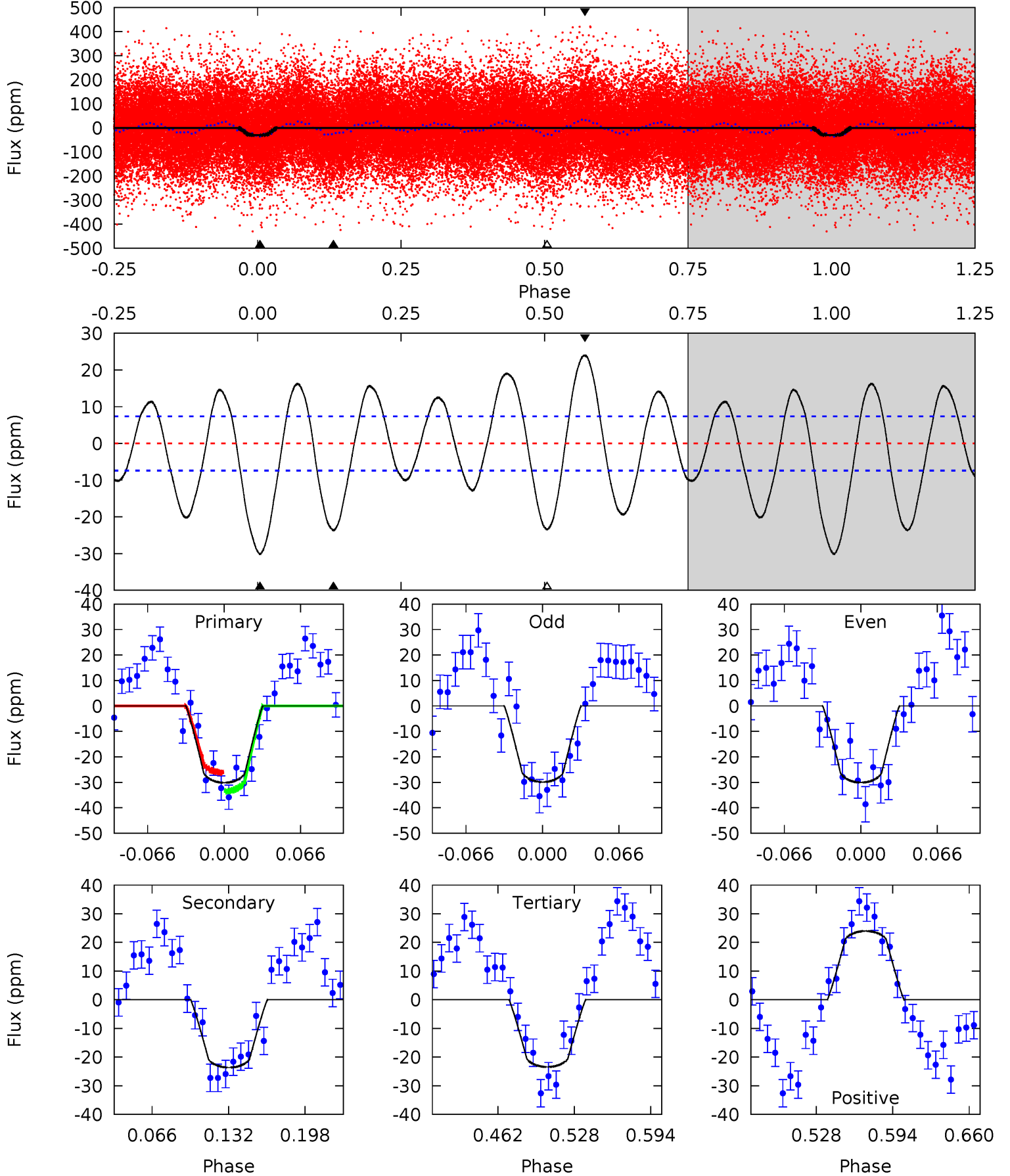




# DV Model-Shift Uniqueness Test

006067817-01, P = 1.327761 Days, E = 130.551086 Days

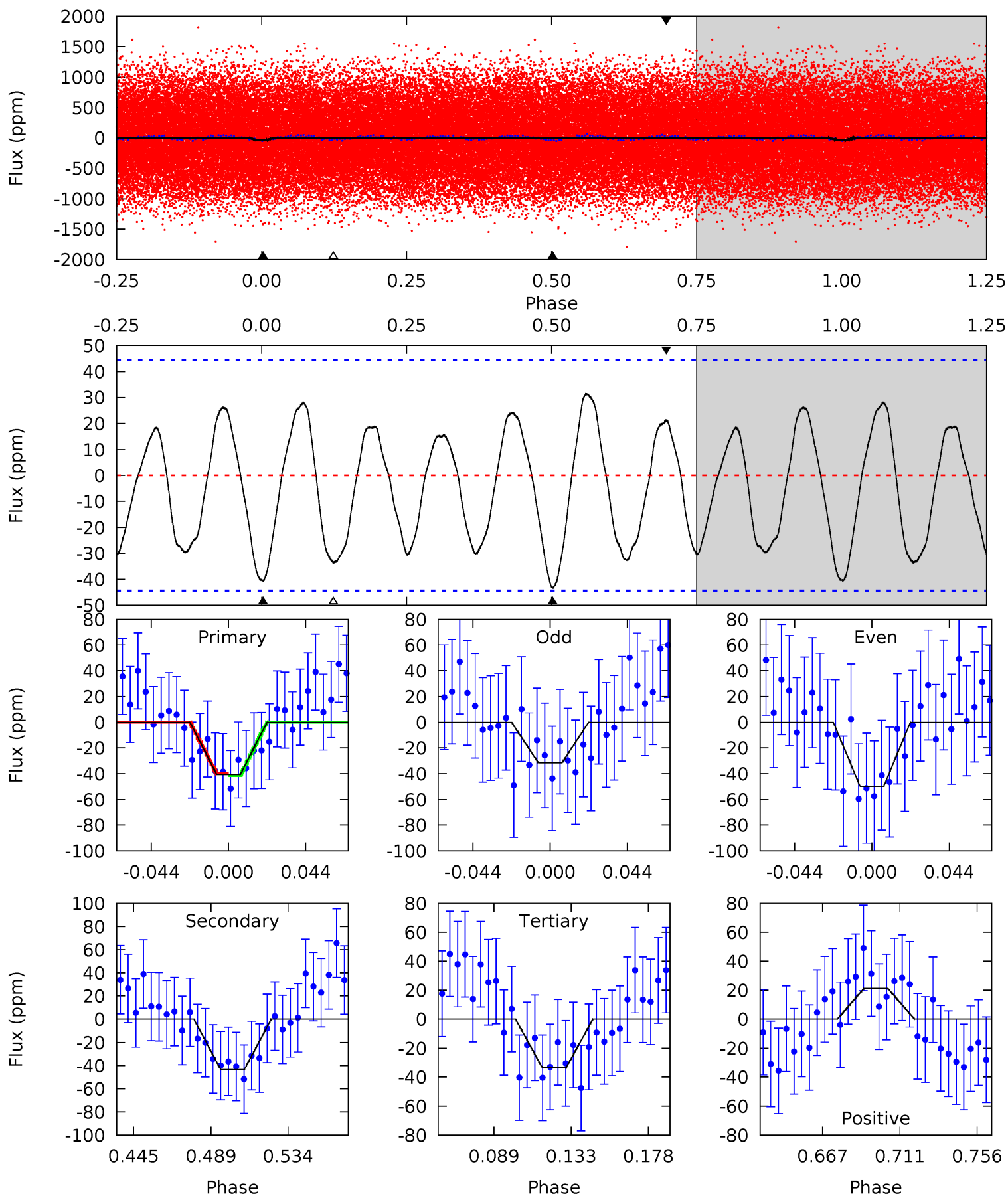
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	14.9	14.8	15.1	4.65	1.84	7.61	4.22	3.88	0.13	-0.21	0.07	1.02	0.44	2.34



# Alt Model-Shift Uniqueness Test

006067817-01, P = 1.327774 Days, E = 130.548587 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
4.33	4.62	3.58	2.27	4.73	2.01	2.09	0.75	2.06	1.04	2.35	0.97	1.18	0.42	0.08



### Stellar Parameters For KIC 006067817

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8074^{+222}_{-361}$	$3.851^{+0.301}_{-0.129}$	$0.210^{+0.150}_{-0.500}$	$2.926^{+0.740}_{-1.111}$	$2.213^{+0.306}_{-0.569}$	$0.124^{+0.278}_{-0.049}$
	+3%/-4%	+8%/-3%	+71%/-238%	+25%/-38%	+14%/-26%	+223%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006067817-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-24 \pm 2$	$1.86^{+0.59}_{-0.54}$	$4767^{+332}_{-477}$	$6829^{+1316}_{-857}$	$3.504^{+3.311}_{-1.436}$
Alt.	$-43 \pm 9$	$2.08^{+0.64}_{-0.57}$	$4709^{+350}_{-465}$	$7545^{+1479}_{-1033}$	$5.014^{+4.742}_{-2.105}$

$T_{max}$  = 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

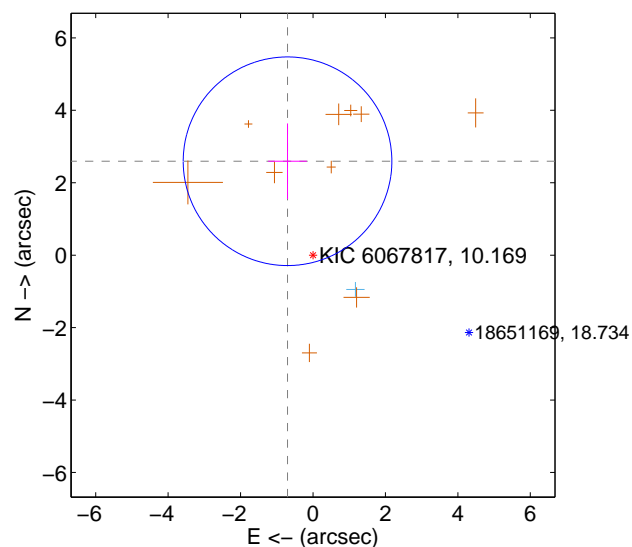
Supplemental centroid analysis for 006067817-01. **Kepler magnitude: 10.17.** Transit SNR 15.79

**There are 1 quarters with good PRF difference image offsets**

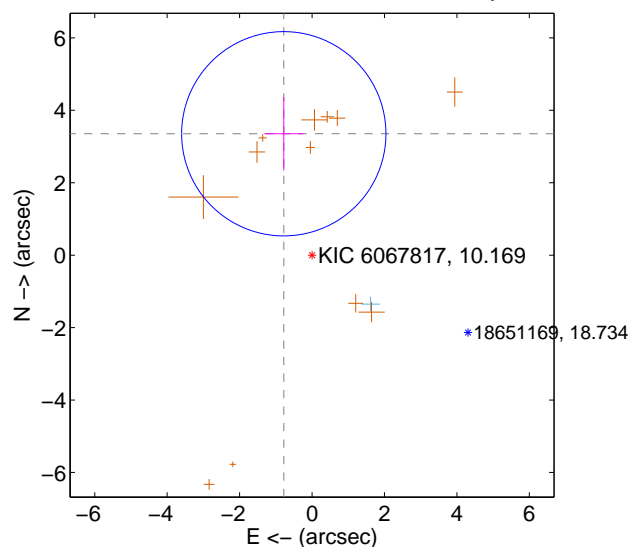
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.687 \pm 0.960$	2.80	$0.703 \pm 0.534$	$2.593 \pm 1.045$
PRF-fit source offset from KIC position	<b><math>3.442 \pm 0.940</math></b>	<b>3.66</b>	$0.780 \pm 0.538$	$3.352 \pm 1.015$
photometric centroid source offset	$1.18 \pm 0.57$	2.09	$-1.17 \pm 0.57$	$-0.20 \pm 0.62$

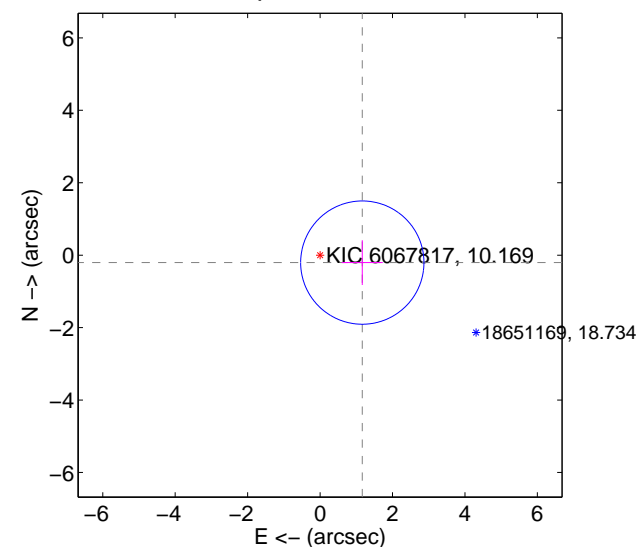
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



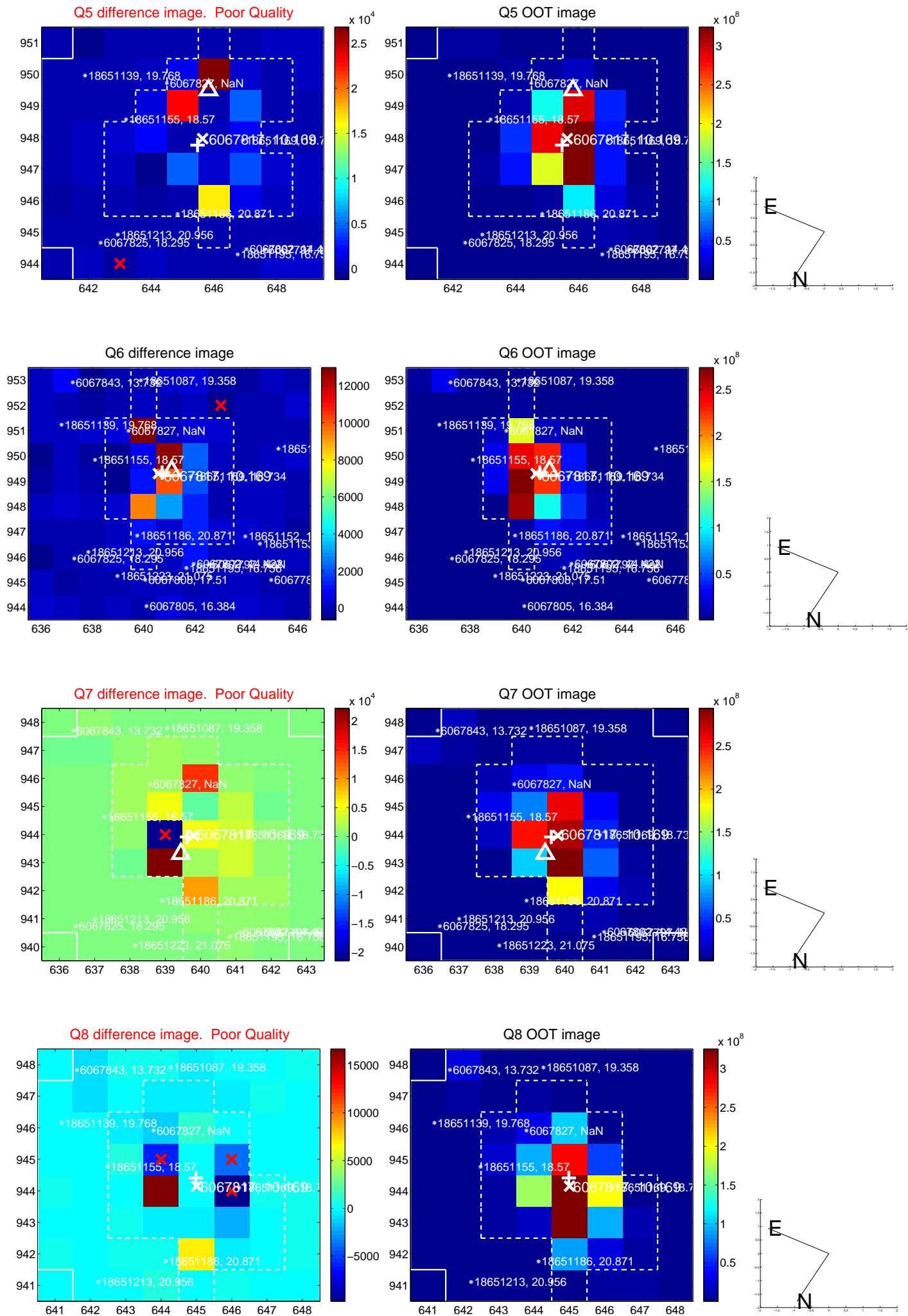
offset from photometric centroids



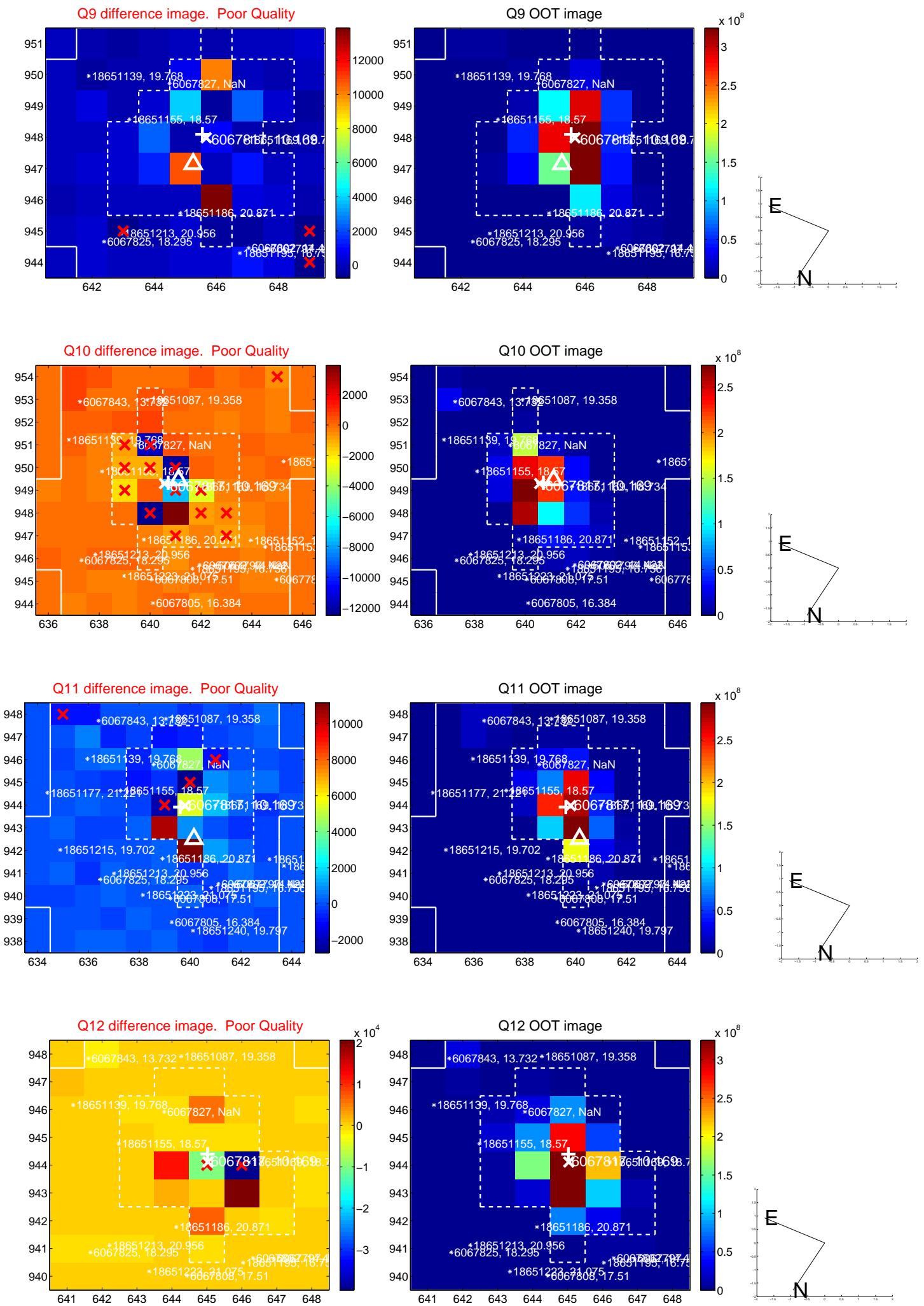
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

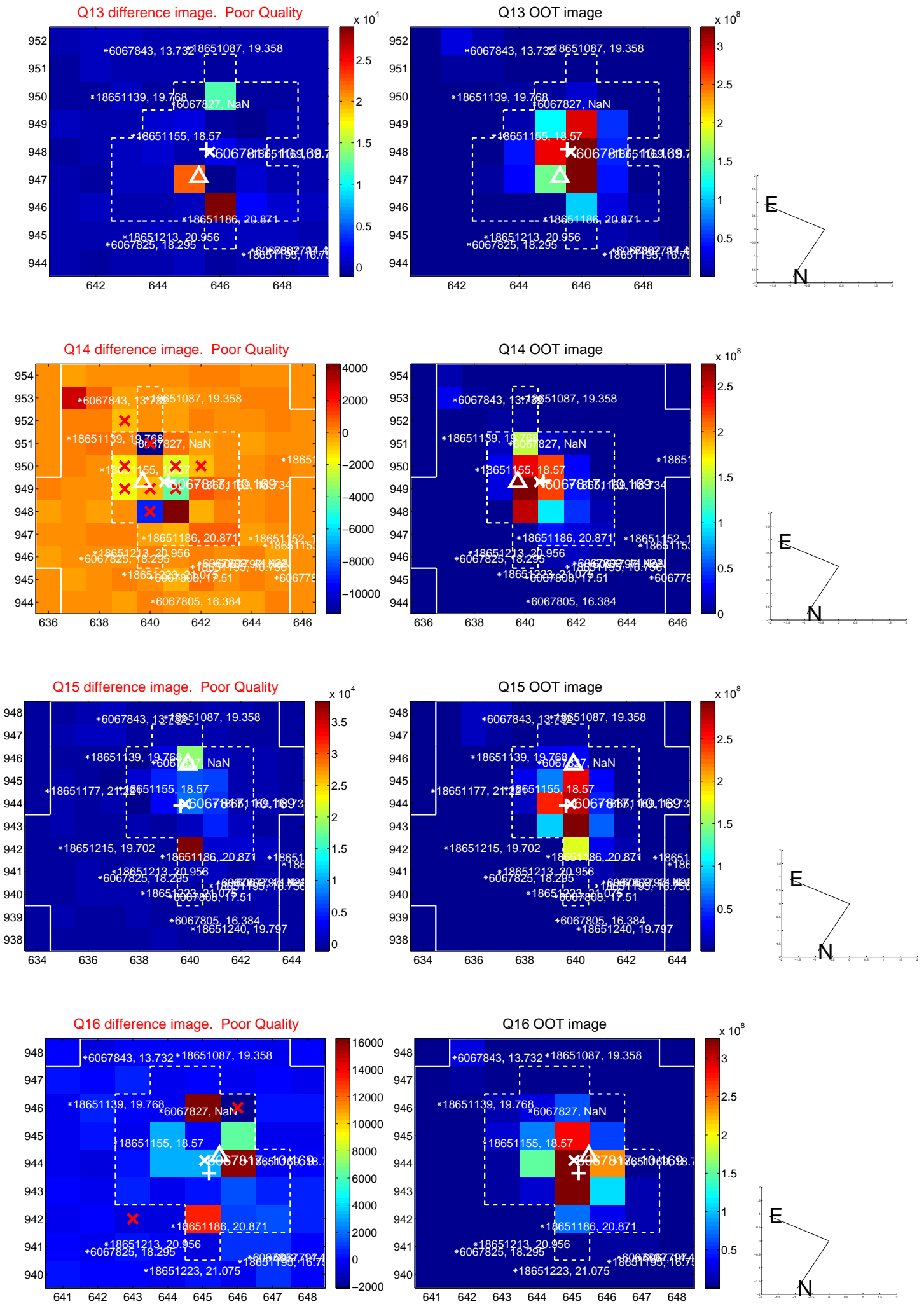


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

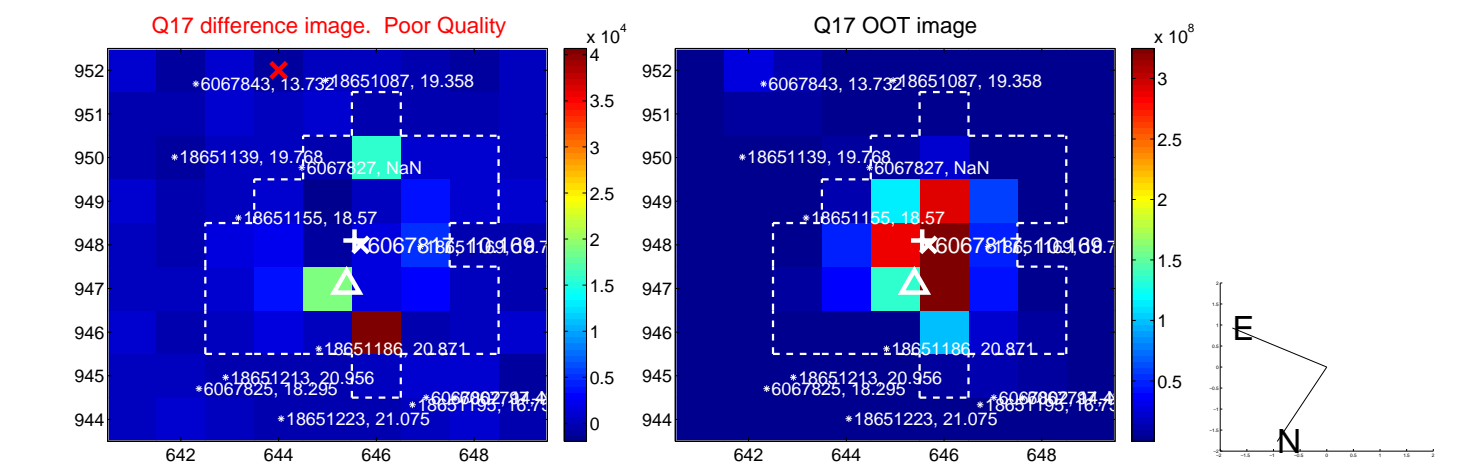




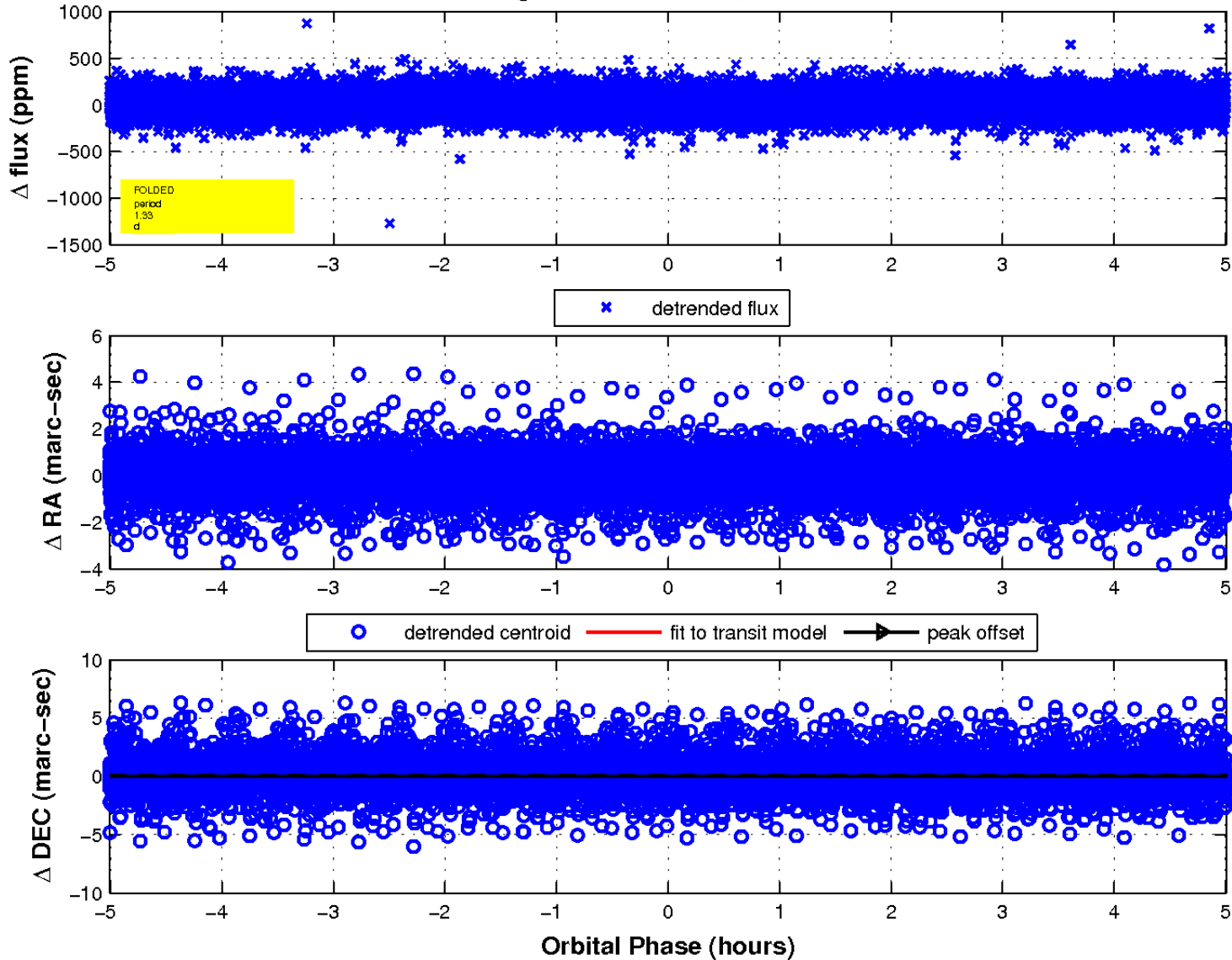
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

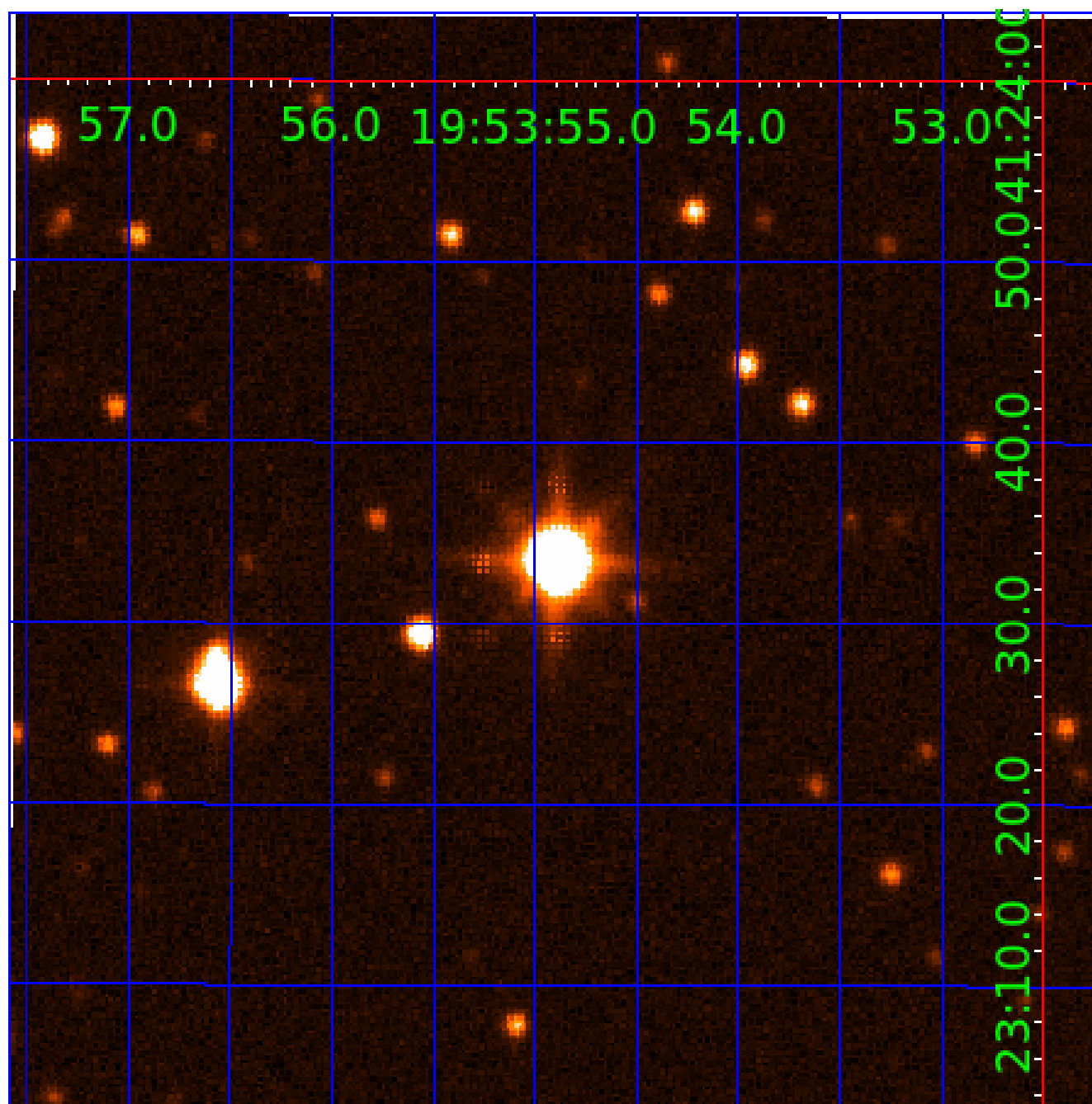


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



# KIC 006067817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006067817-01	OBS	No	1.327762	131.878847	33.2	1.670	9.6	15.8	2.93	8074	1.97	34298.26
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006067817-04	OBS	No	0.663869	131.891650	19.7	1.324	9.9	8.9	2.93	8074	1.51	86428.24
006067817-05	OBS	No	0.942061	132.393392	31.1	8.172	8.4	14.1	2.93	8074	1.69	54199.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006067817-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

**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 006067817-02

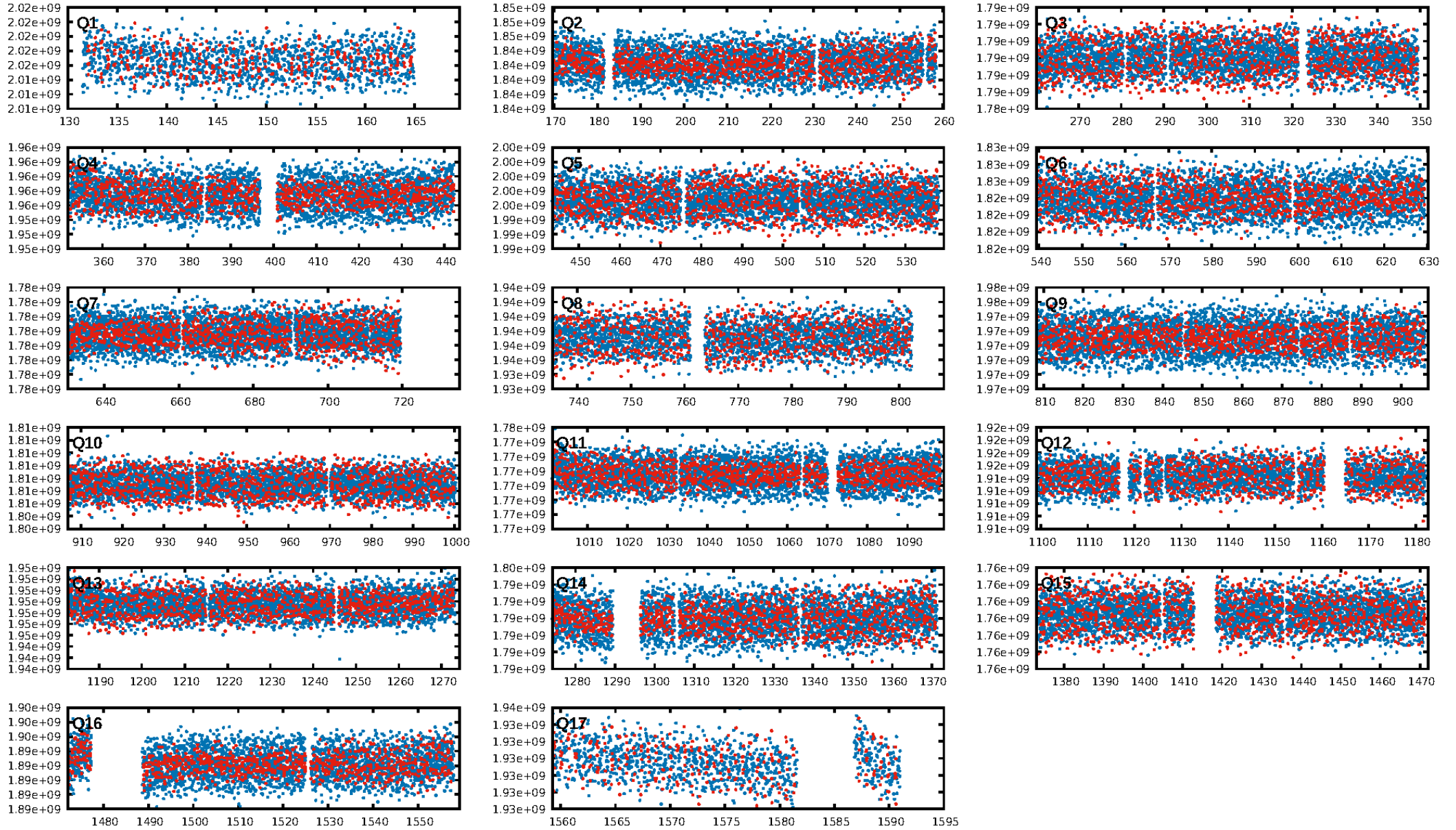
No Significant Match Found



## KIC: 6067817    Candidate: 2 of 5    Period: 0.664 d

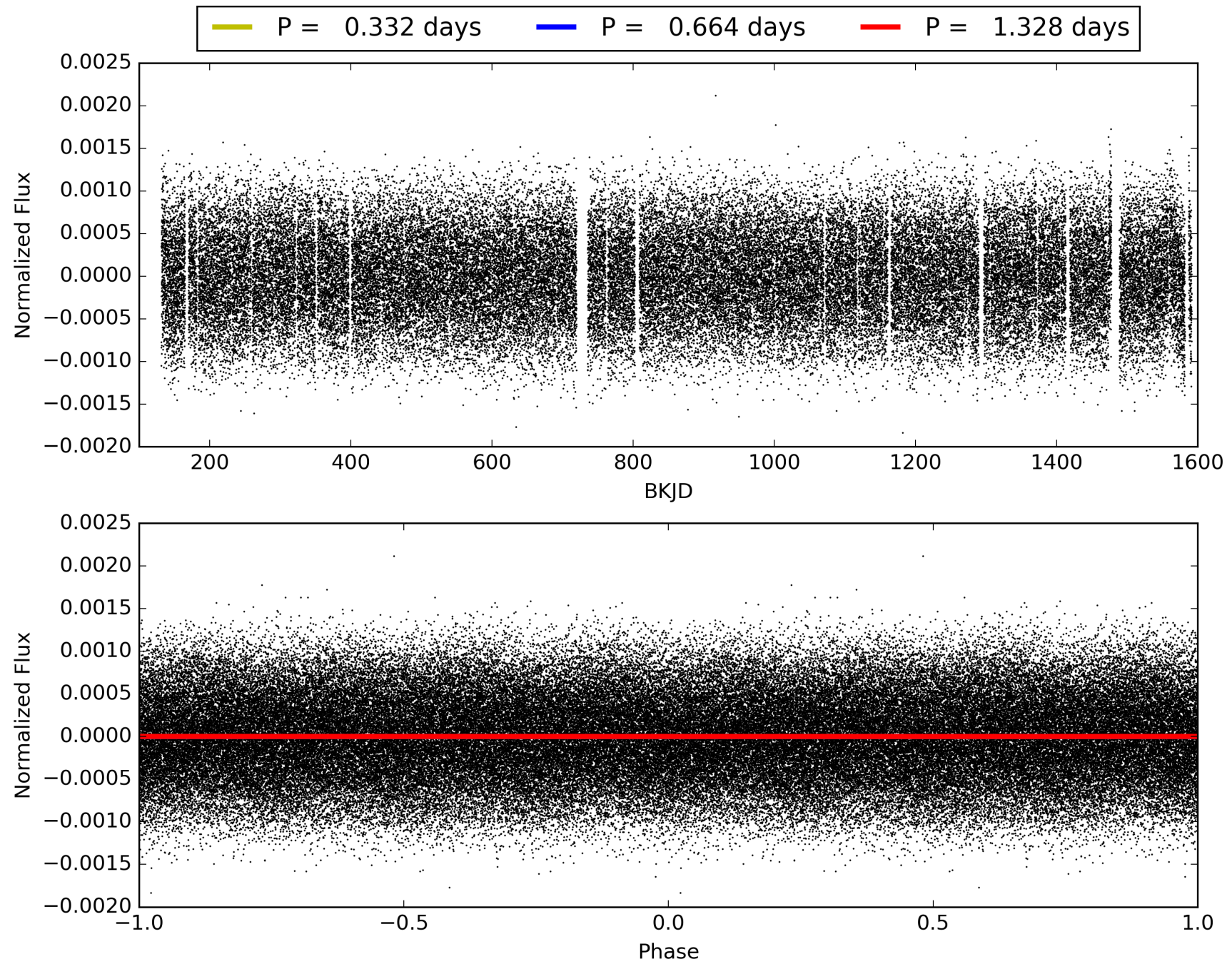


# TCE 006067817-02, PDC Light Curves



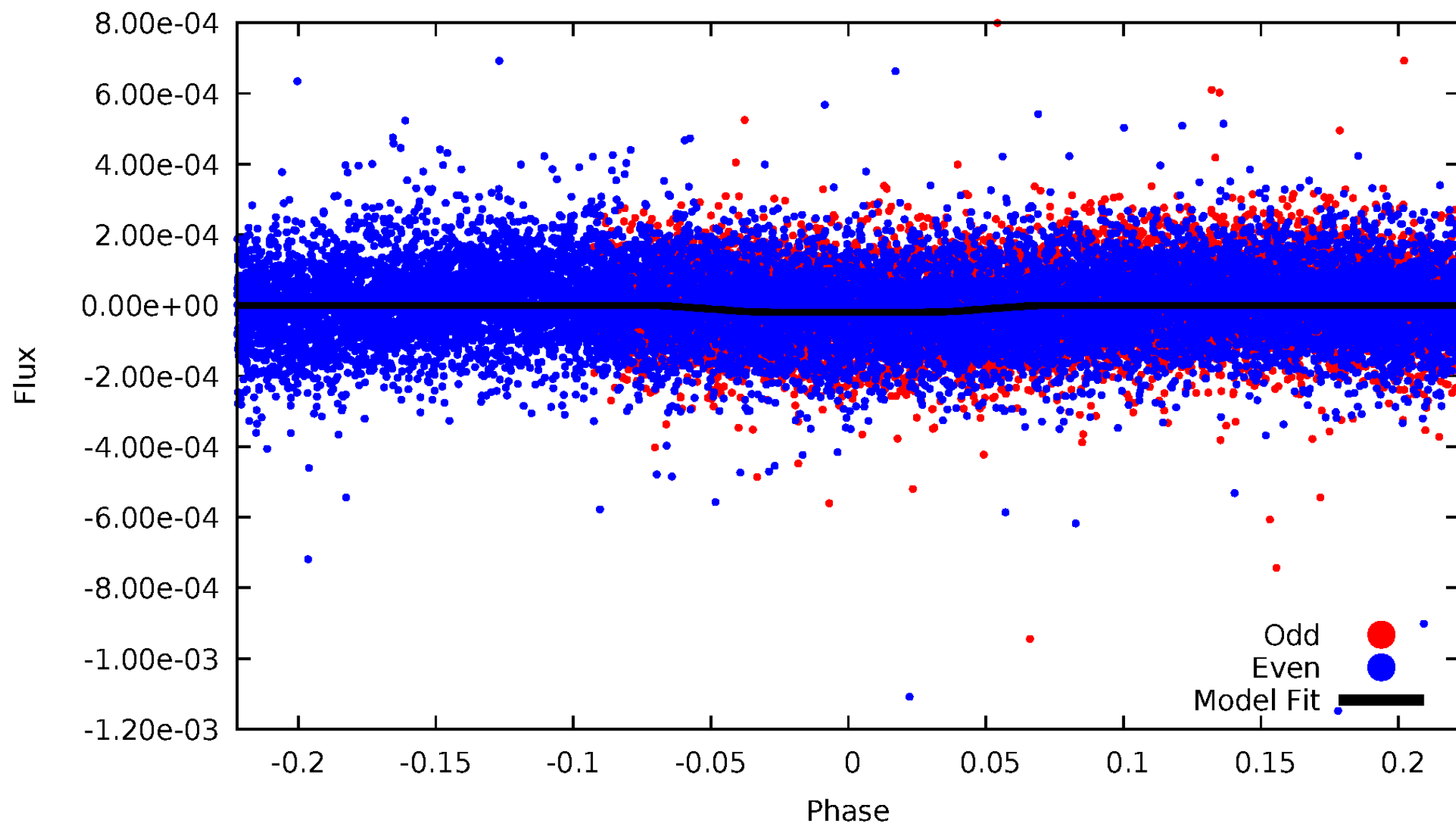


TCE 006067817-02



# DV Odd/Even

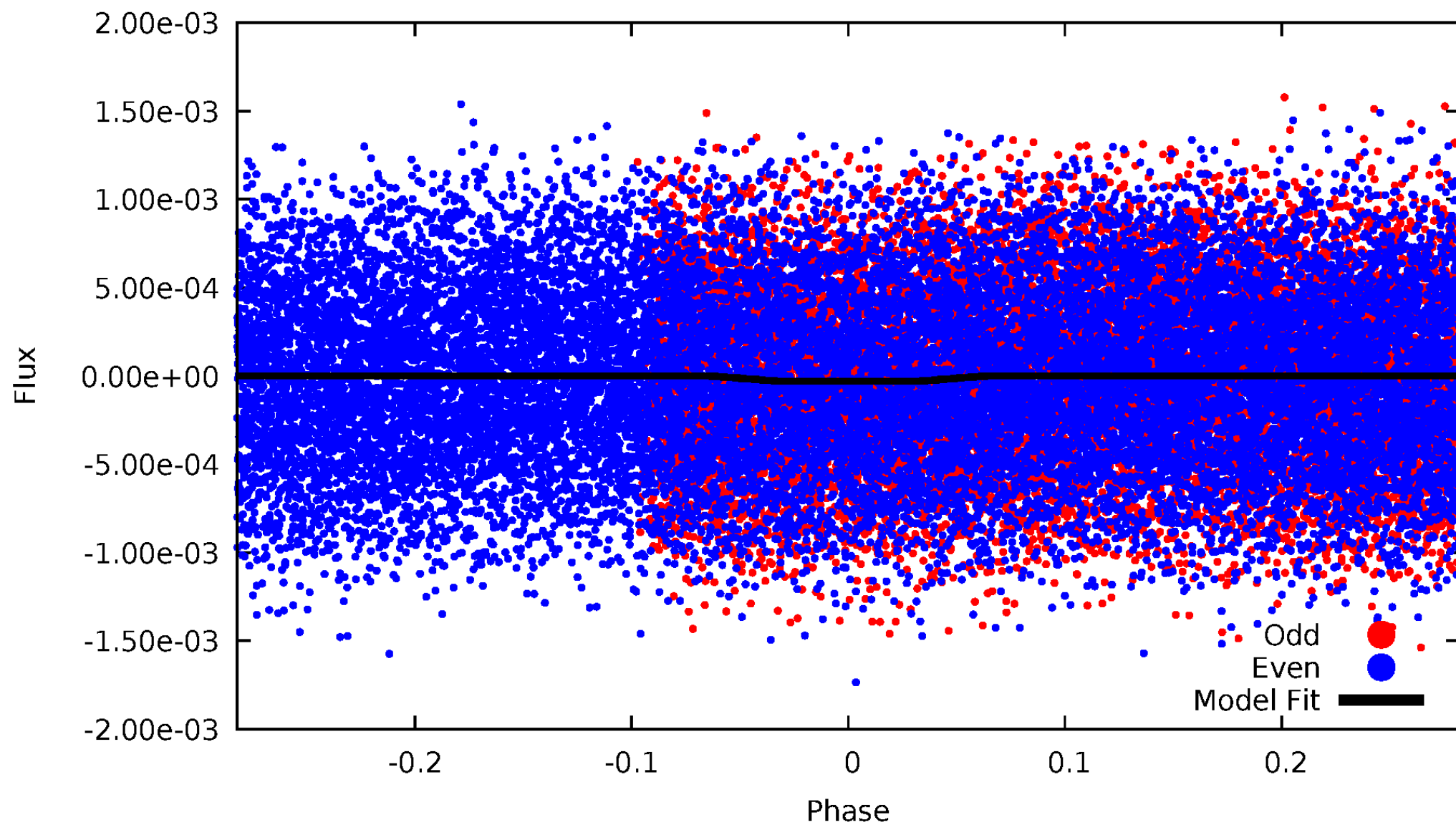
TCE 006067817-02





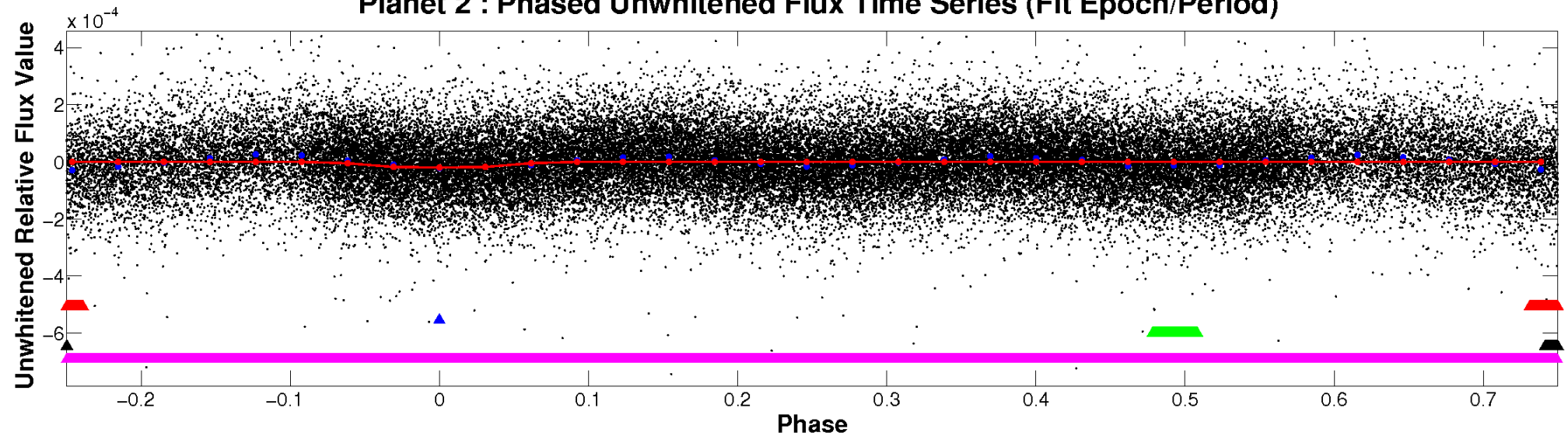
# ALT Odd/Even

TCE 006067817-02

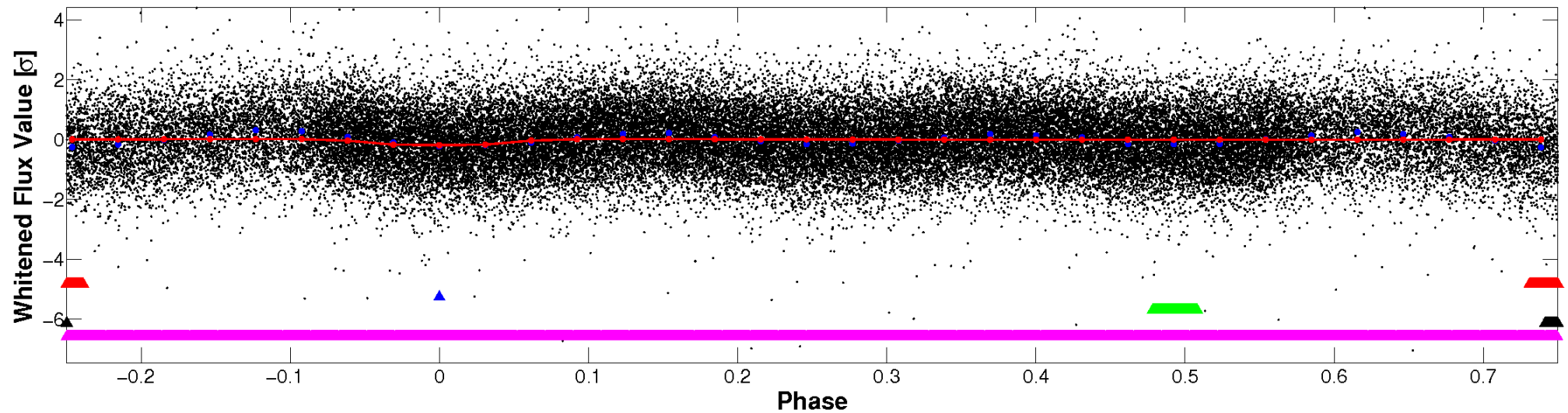


# Non-Whitened Vs. Whitened Light Curve

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

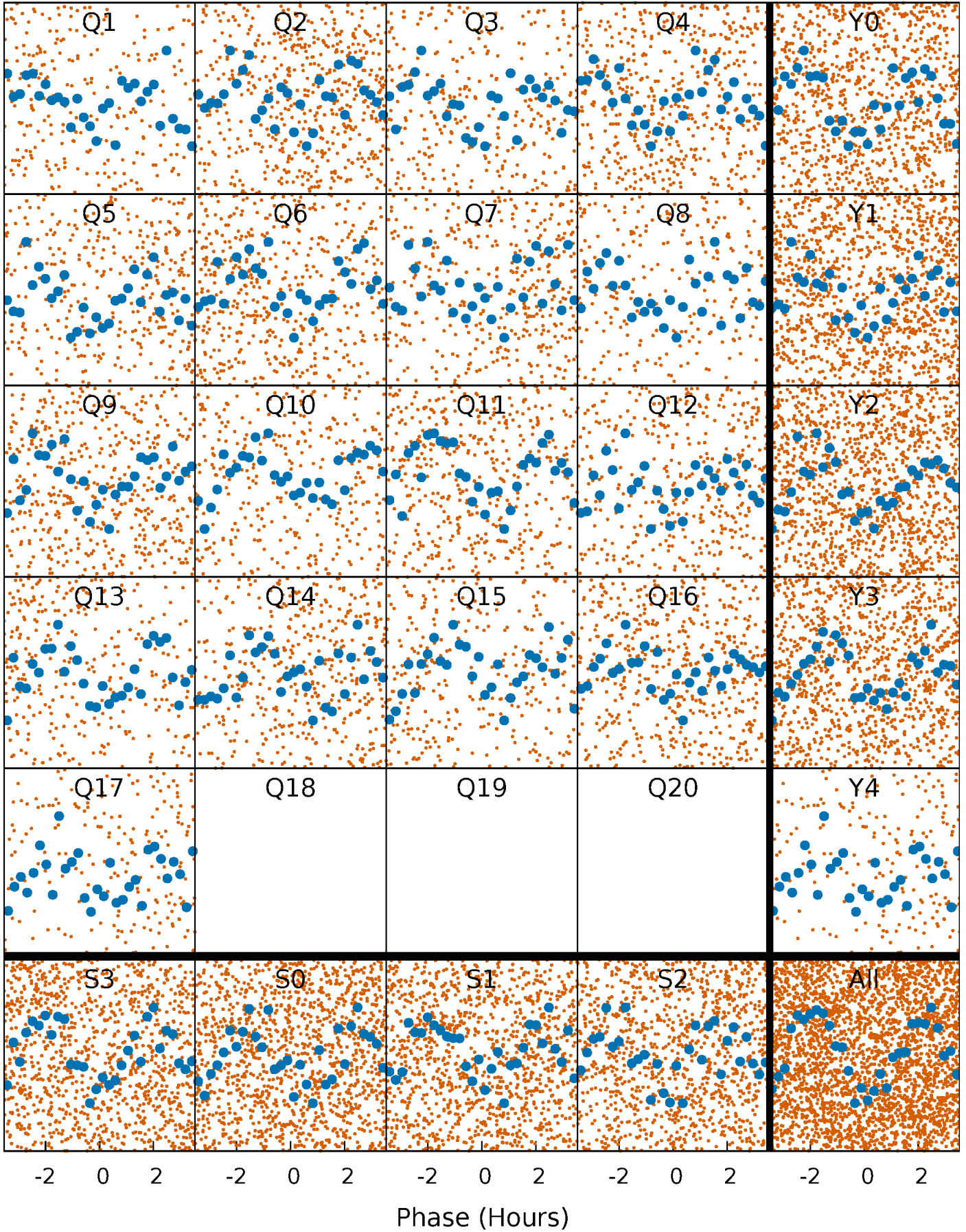


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

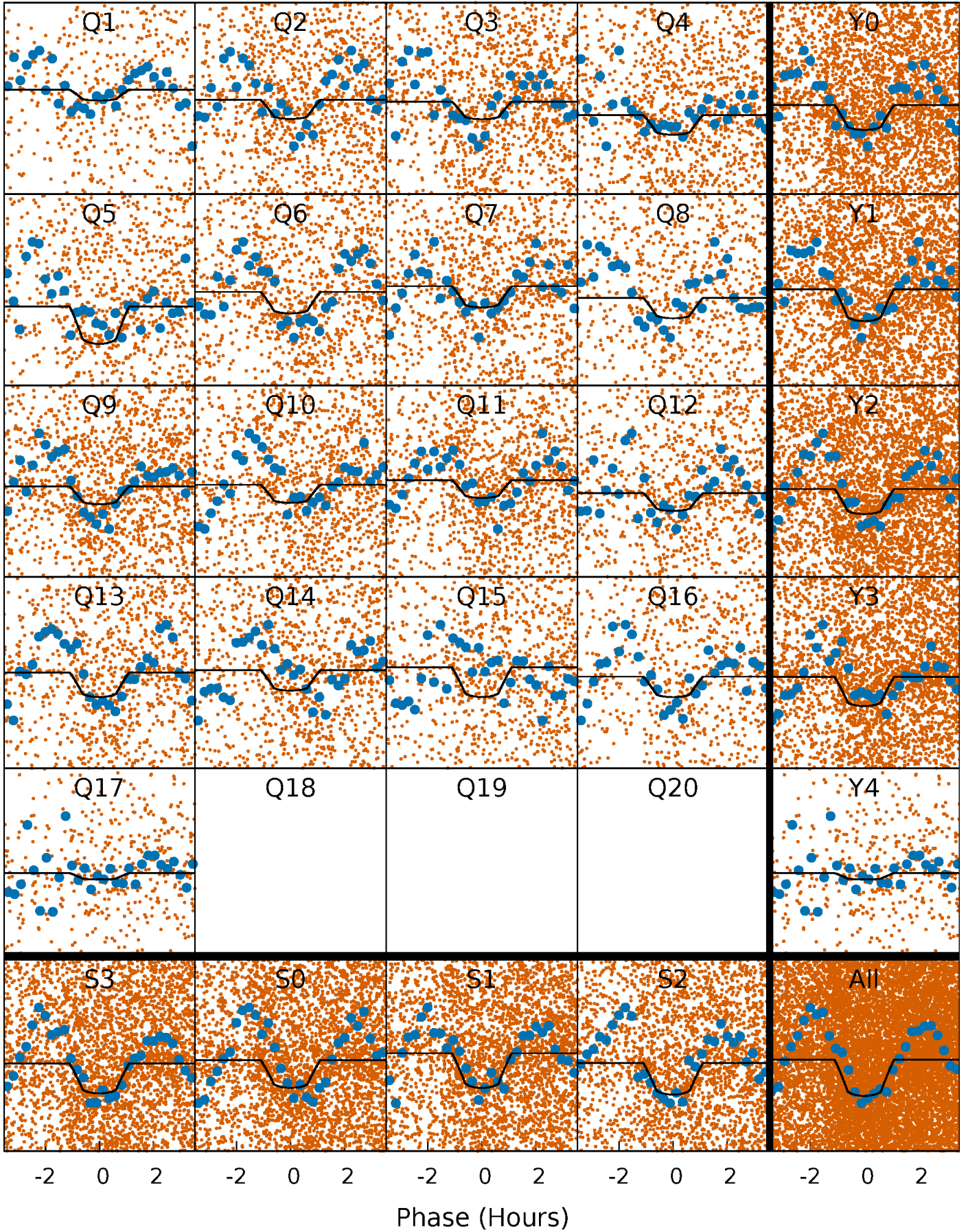
TCE 006067817-02   P= 0.663872 Days    $T_0=132.057377$  (BKJD)





# DV Quarter-Phased Transit Curves

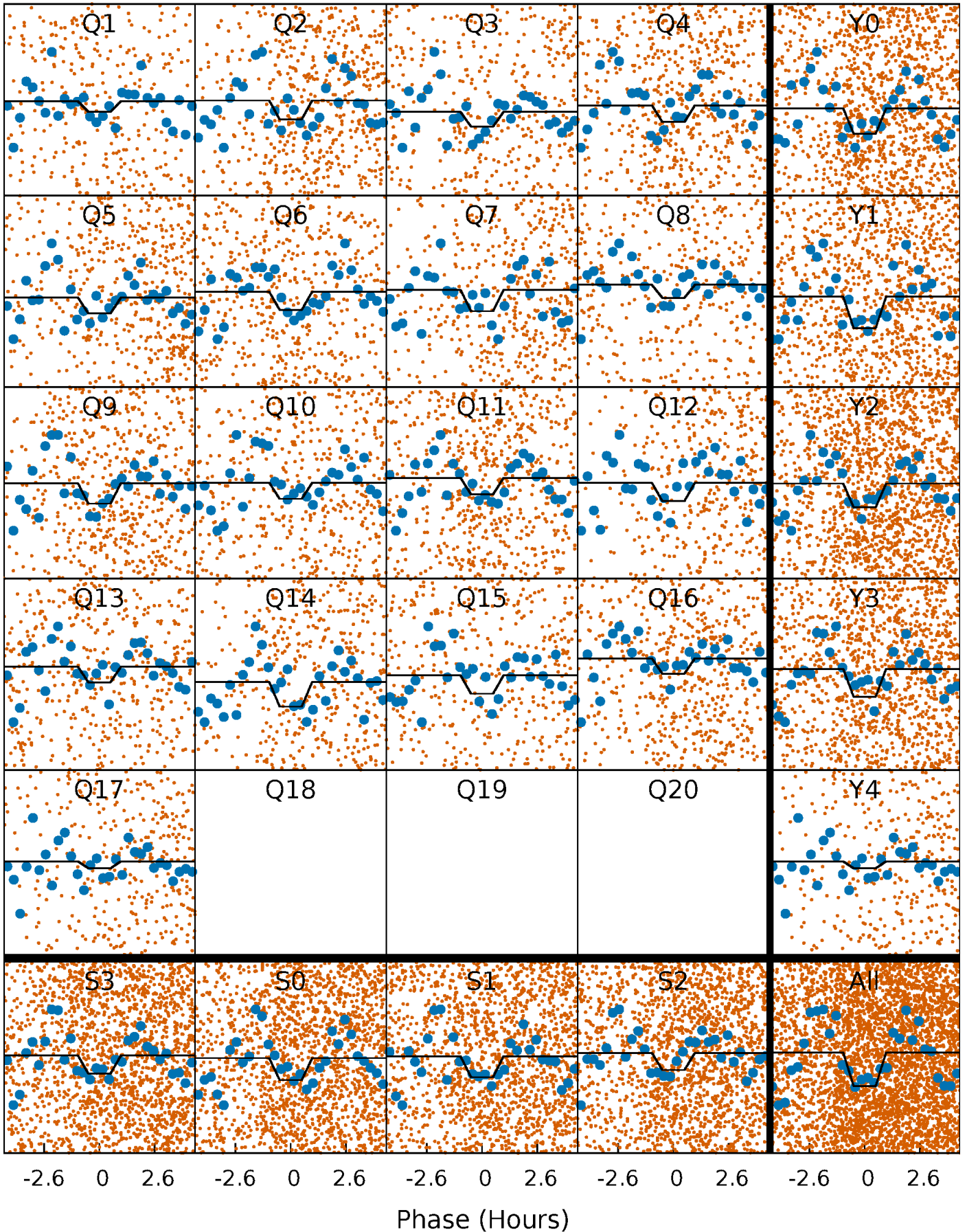
TCE 006067817-02   P= 0.663872 Days    $T_0=132.057377$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

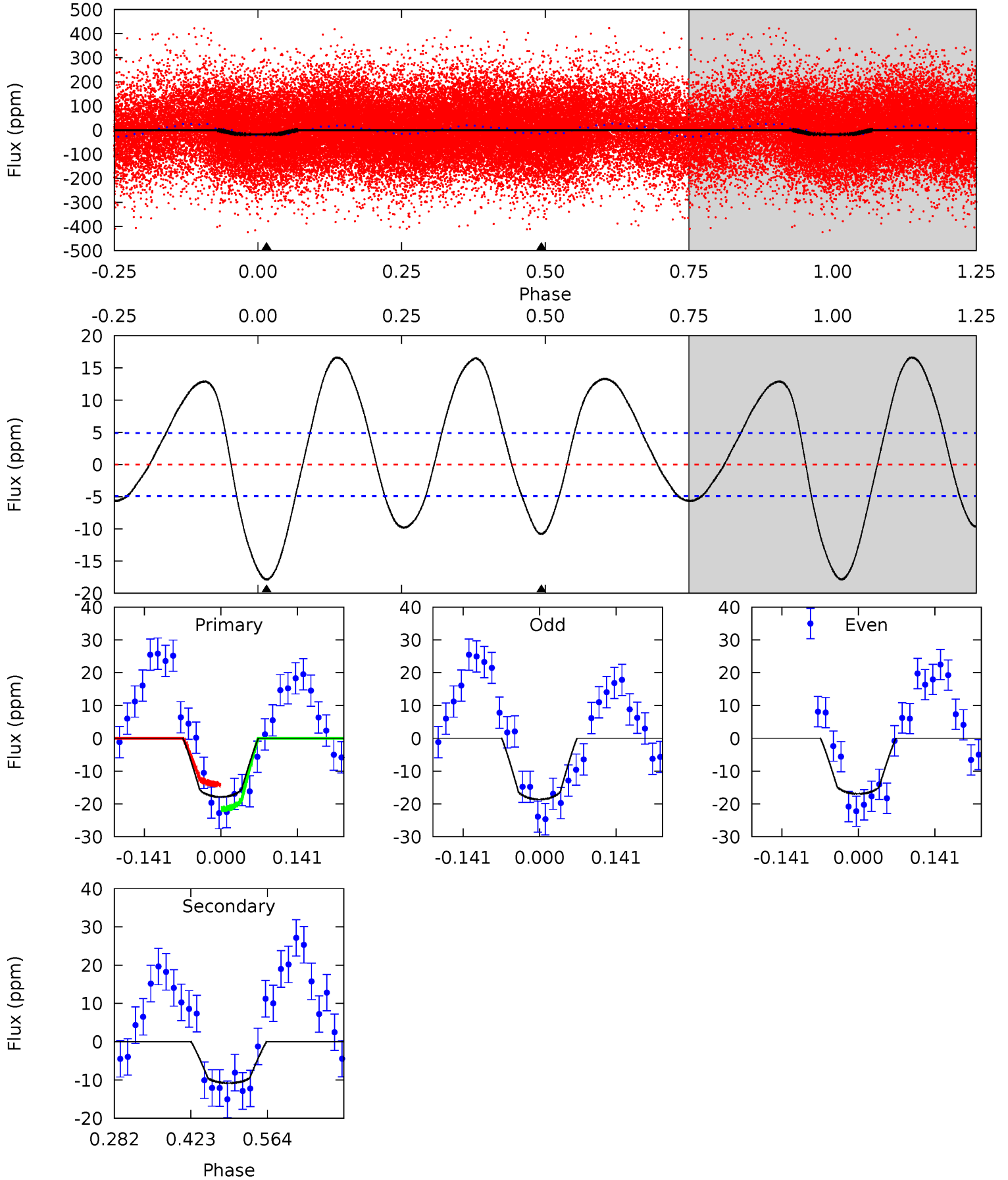
TCE 006067817-02 P= 0.663886 Days  $T_0=132.047665$  (BKJD)



# DV Model-Shift Uniqueness Test

006067817-02, P = 0.663872 Days, E = 131.393505 Days

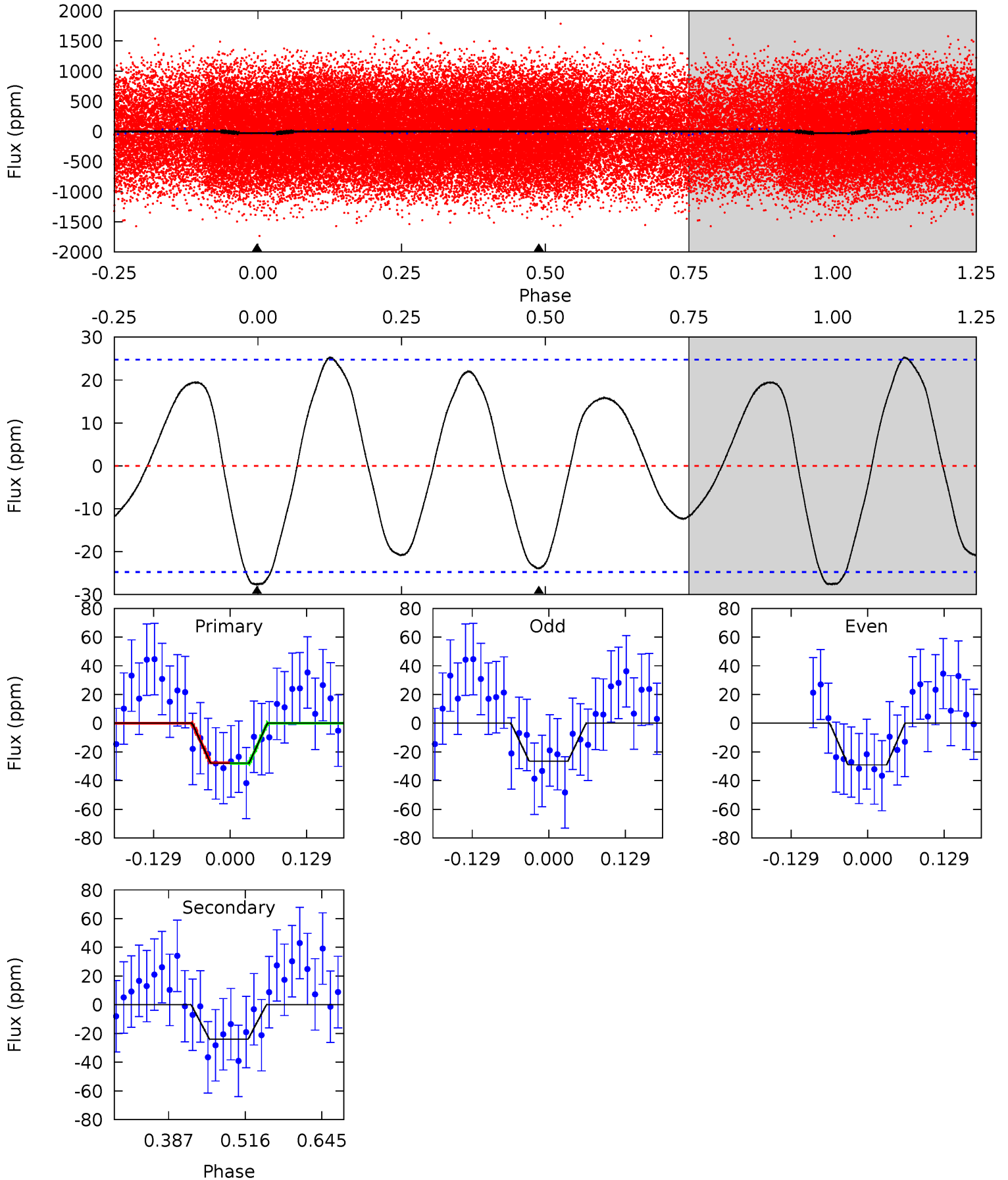
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	9.91	0	0	4.49	1.47	6.64	16.4	16.4	9.91	9.91	0.78	1.01	0.48	3.50



# Alt Model-Shift Uniqueness Test

006067817-02, P = 0.663886 Days, E = 131.383779 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
5.07	4.38	0	0	4.51	1.52	2.52	5.07	5.07	4.38	4.38	0.24	0.93	0.48	0.04



### Stellar Parameters For KIC 006067817

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8074^{+222}_{-361}$	$3.851^{+0.301}_{-0.129}$	$0.210^{+0.150}_{-0.500}$	$2.926^{+0.740}_{-1.111}$	$2.213^{+0.306}_{-0.569}$	$0.124^{+0.278}_{-0.049}$
	+3%/-4%	+8%/-3%	+71%/-238%	+25%/-38%	+14%/-26%	+223%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006067817-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-11 \pm 1$	$1.44^{+0.39}_{-0.36}$	$5958^{+463}_{-561}$	$5956^{+1029}_{-791}$	$1.065^{+0.829}_{-0.393}$
Alt.	$-24 \pm 5$	$1.64^{+0.44}_{-0.42}$	$5988^{+459}_{-612}$	$7142^{+1302}_{-988}$	$1.854^{+1.437}_{-0.781}$

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

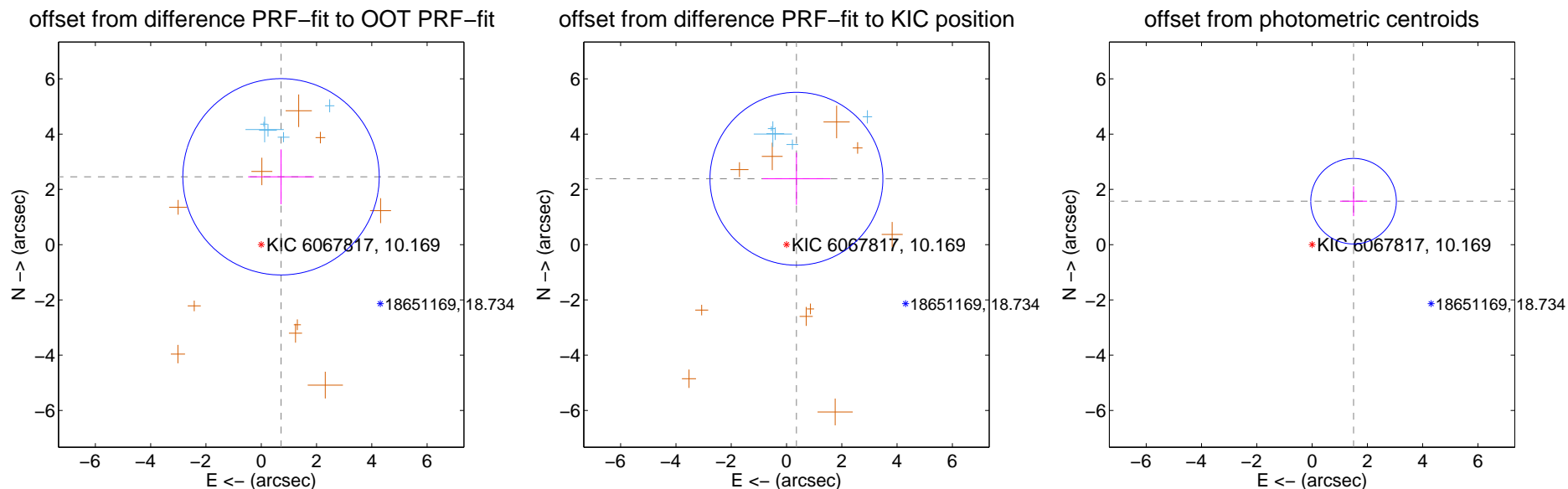
## DV Centroid Data

Supplemental centroid analysis for 006067817-02. **Kepler magnitude: 10.17.** Transit SNR 13.81

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.558 \pm 1.184$	2.16	$-0.716 \pm 1.189$	$2.455 \pm 0.993$
PRF-fit source offset from KIC position	$2.411 \pm 1.043$	2.31	$-0.359 \pm 1.224$	$2.384 \pm 0.944$
photometric centroid source offset	<b><math>2.17 \pm 0.52</math></b>	<b>4.21</b>	$-1.50 \pm 0.49$	$1.57 \pm 0.54$

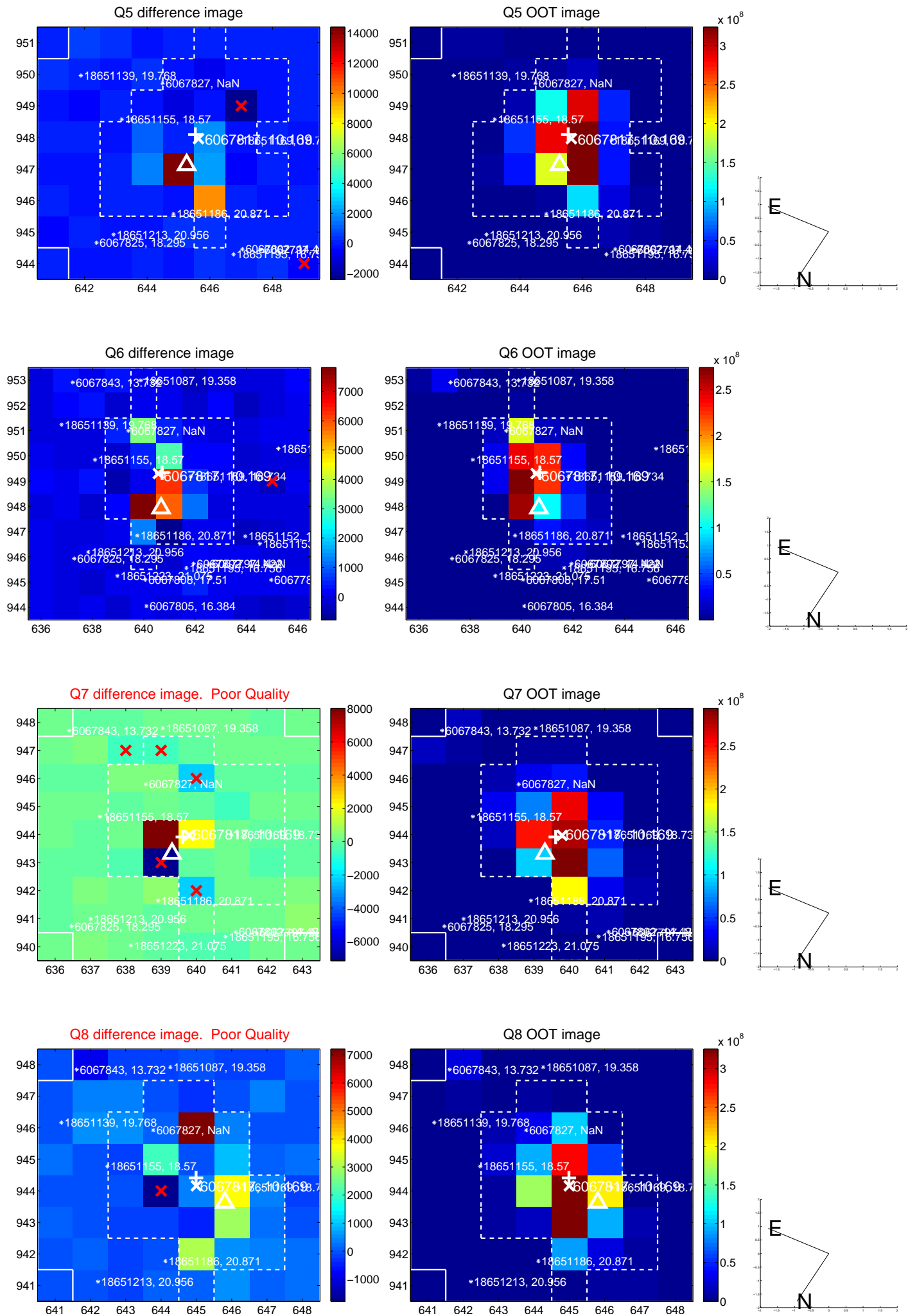


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

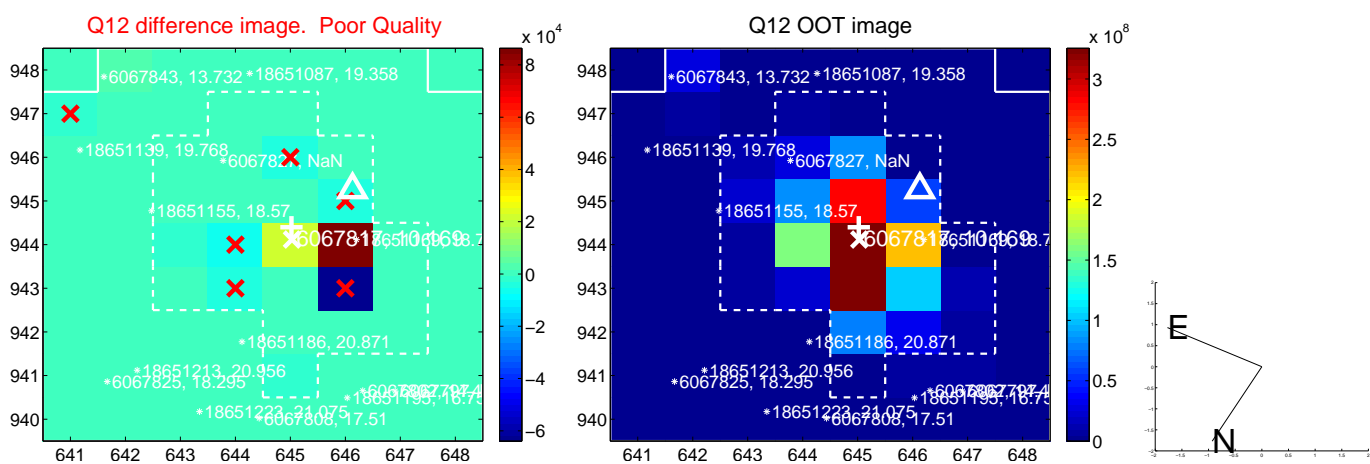
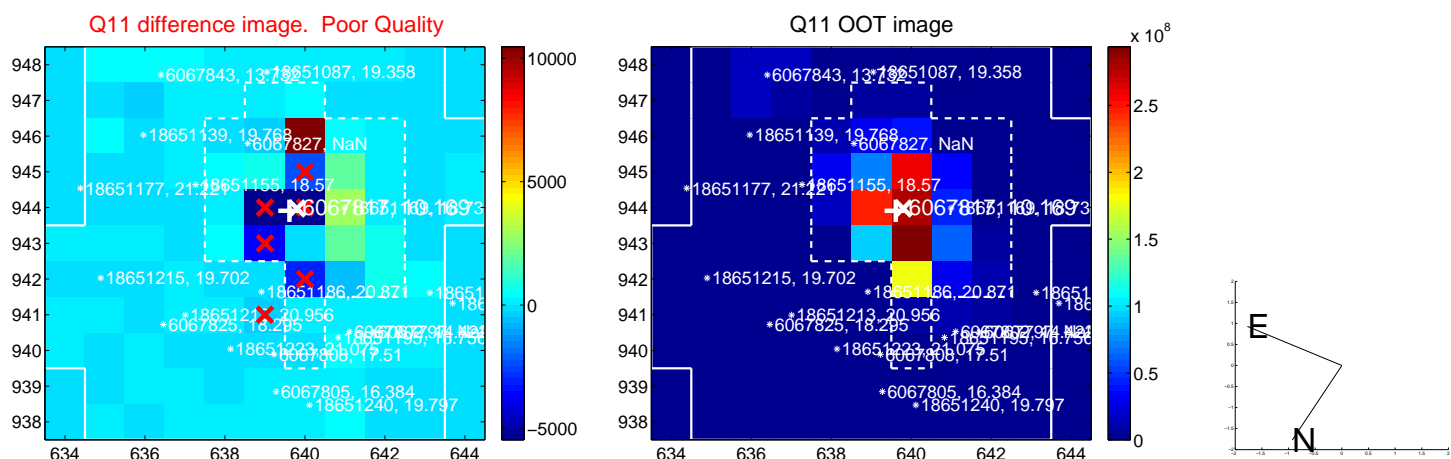
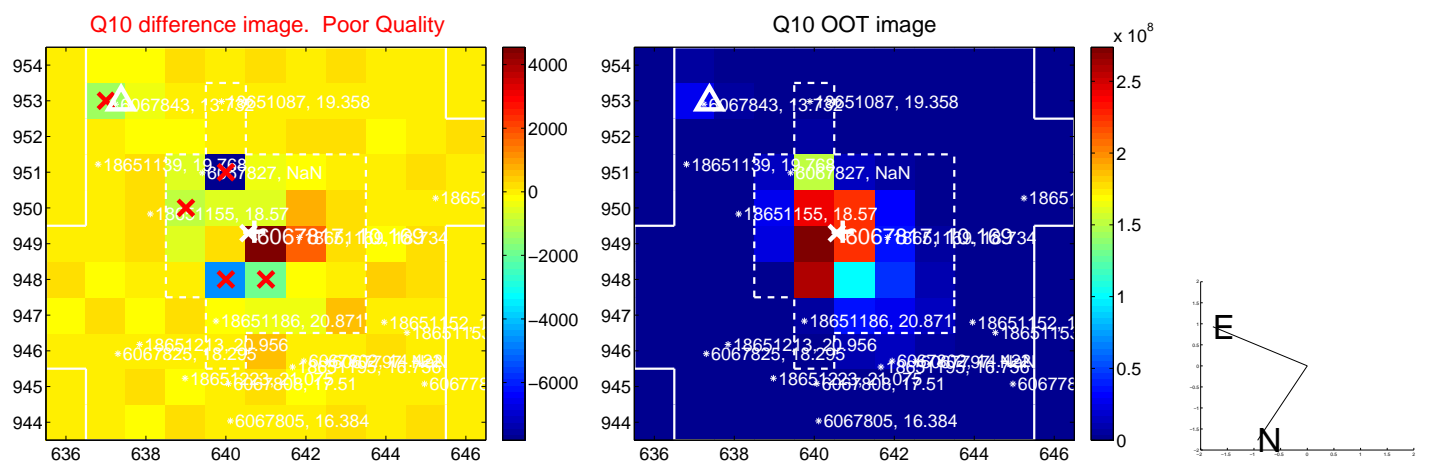
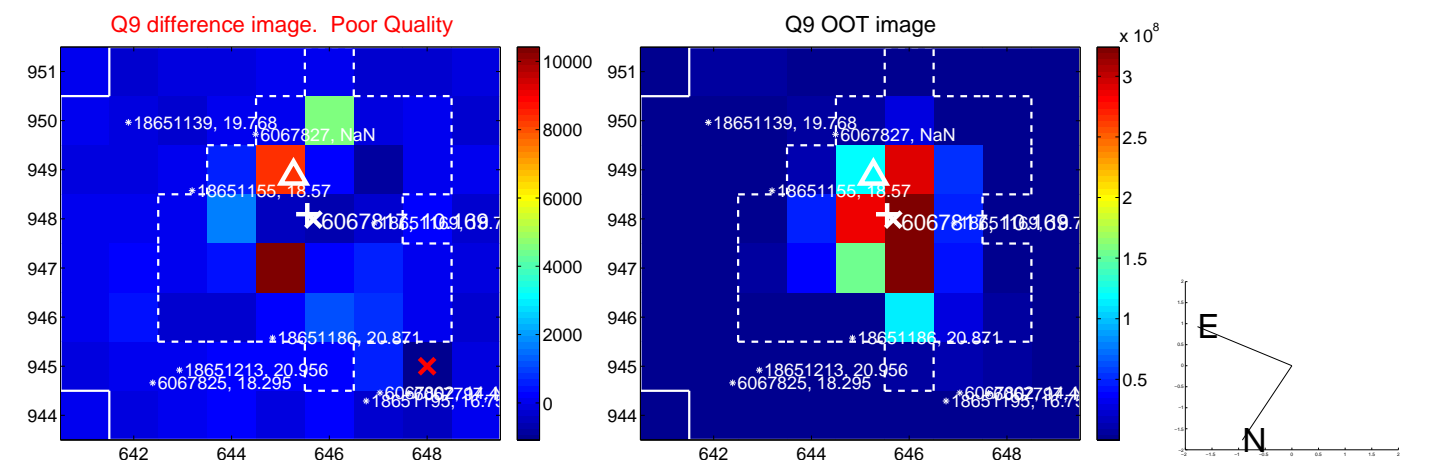




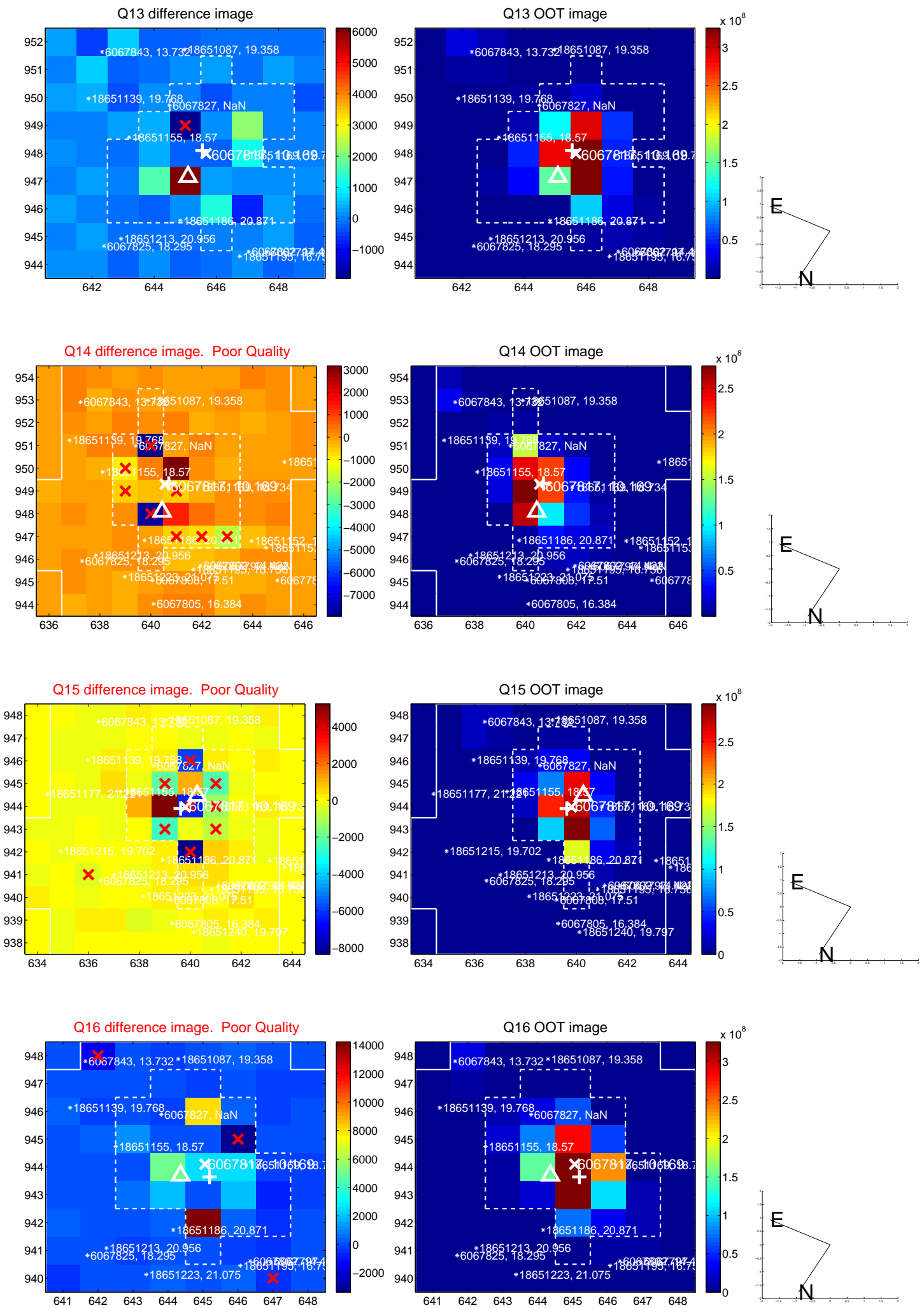
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



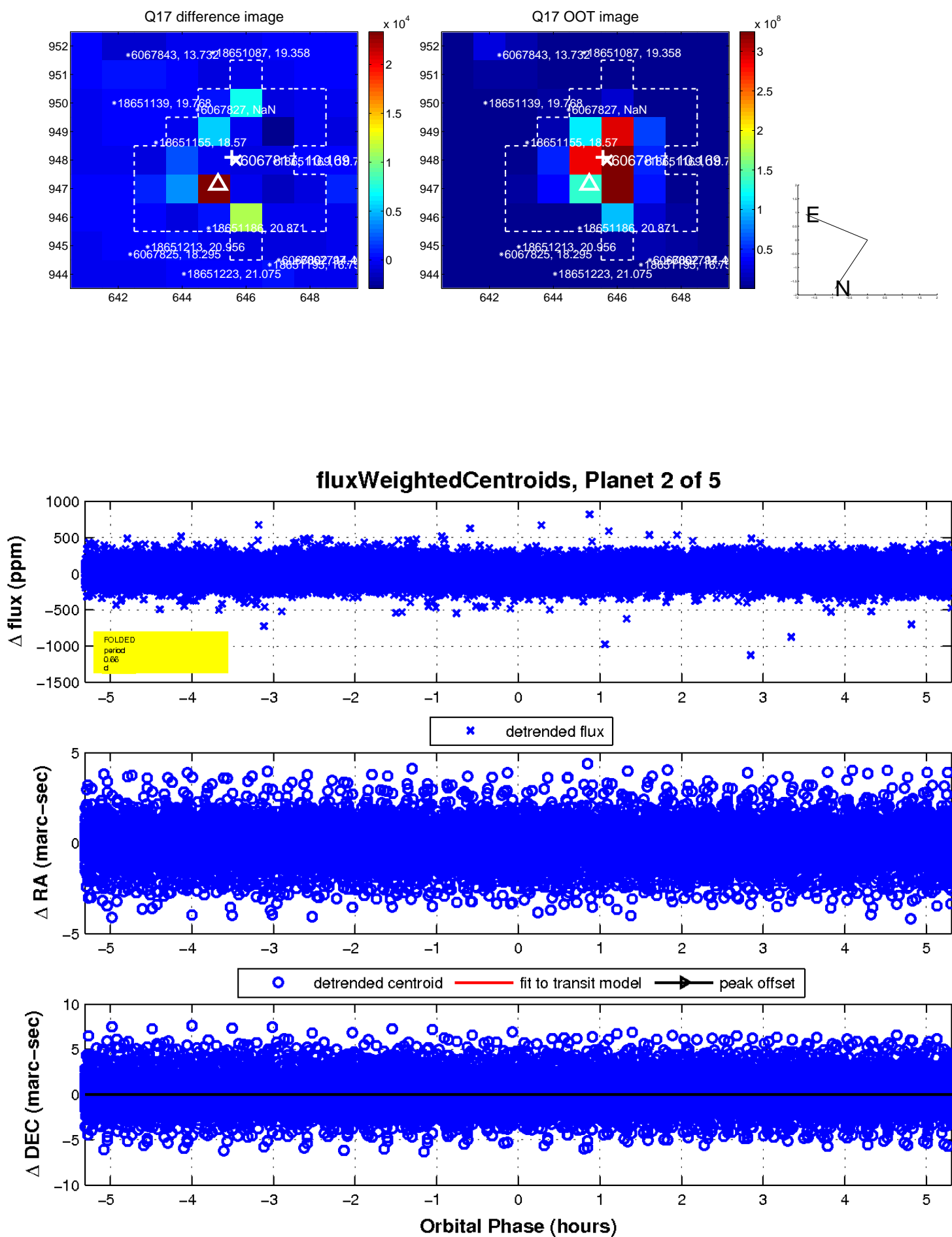
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



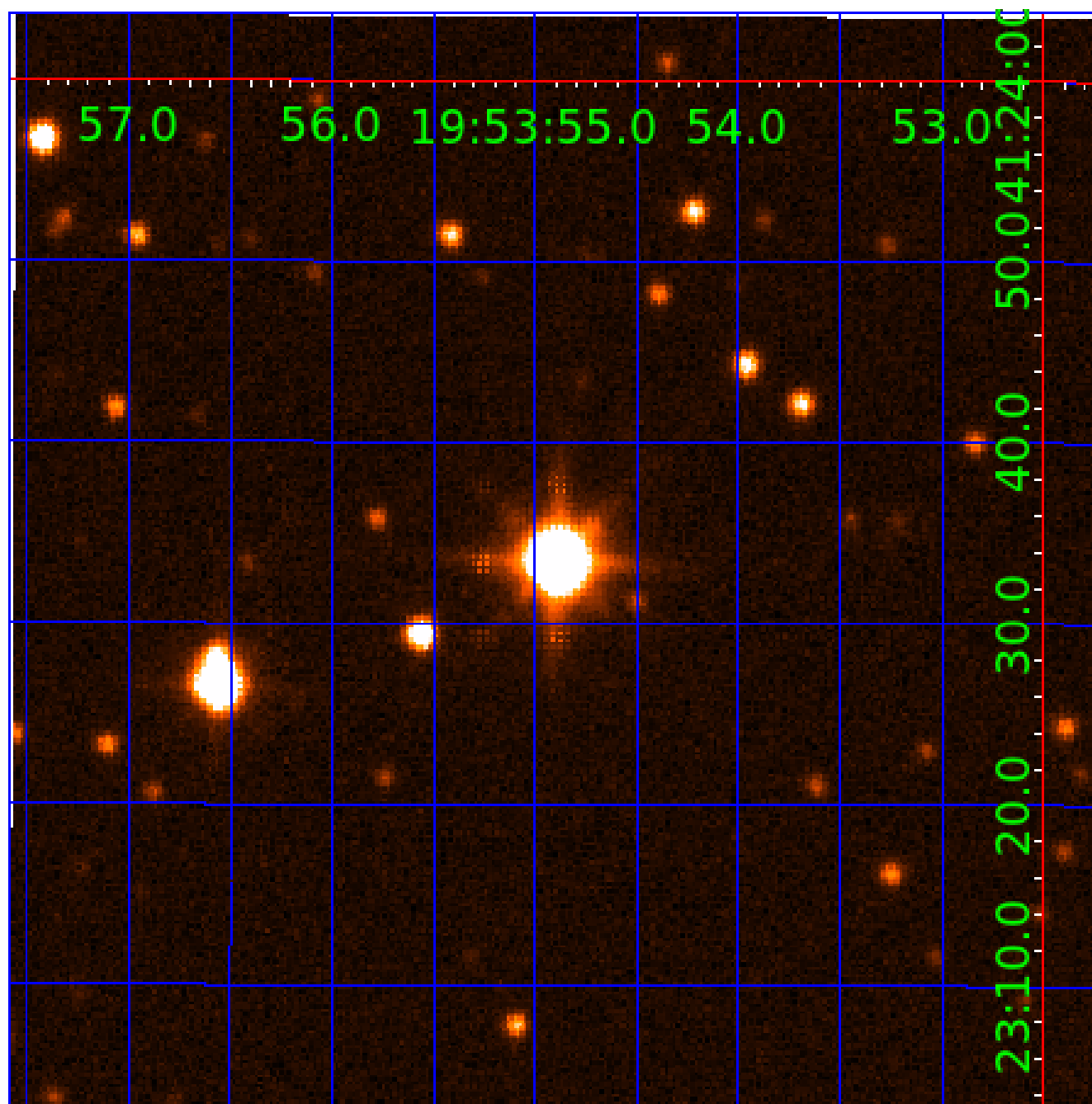
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





UKIRT Image

Declination



# KIC 006067817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006067817-01	OBS	No	1.327762	131.878847	33.2	1.670	9.6	15.8	2.93	8074	1.97	34298.26
006067817-02	OBS	No	0.663872	132.057377	19.8	1.770	15.1	13.8	2.93	8074	1.52	86427.78
006067817-03	OBS	No	0.663881	131.711039	19.2	1.533	11.5	12.9	2.93	8074	1.50	86426.21
006067817-04	OBS	No	0.663869	131.891650	19.7	1.324	9.9	8.9	2.93	8074	1.51	86428.24
006067817-05	OBS	No	0.942061	132.393392	31.1	8.172	8.4	14.1	2.93	8074	1.69	54199.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006067817-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

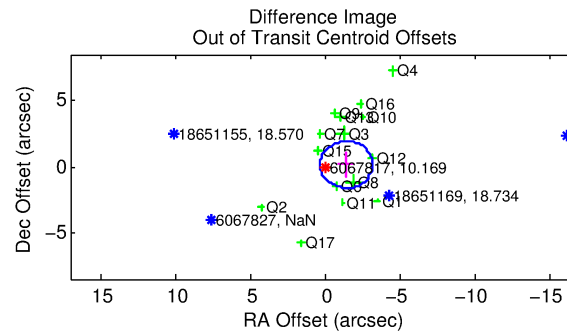
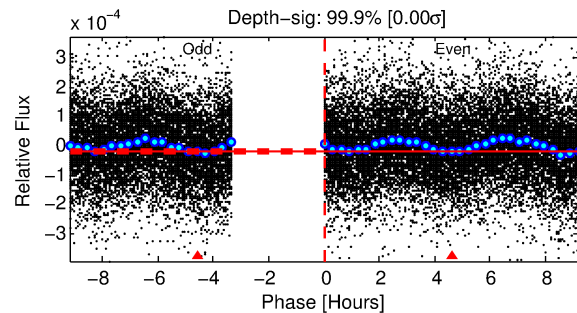
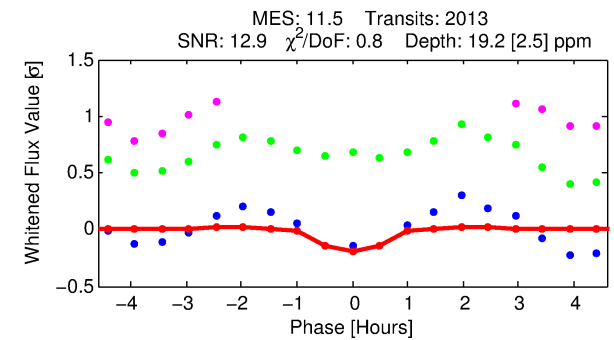
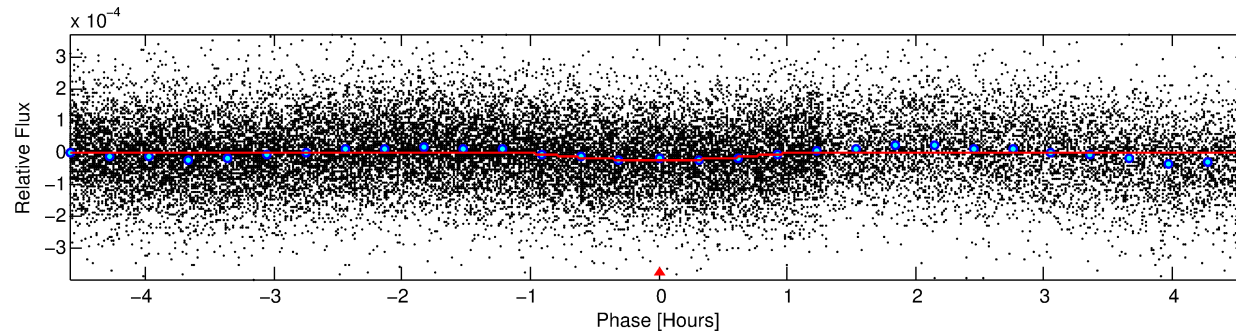
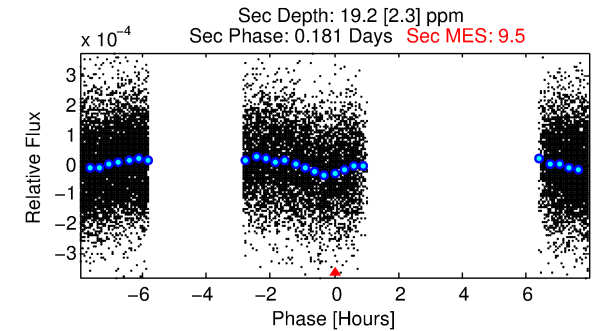
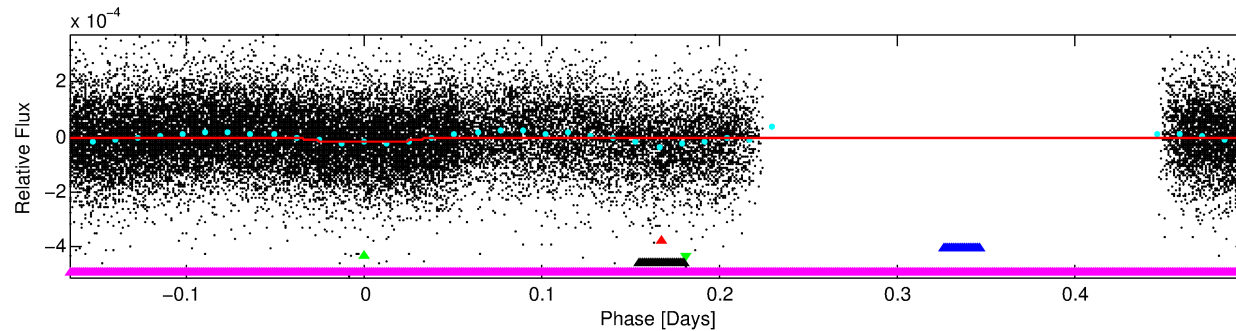
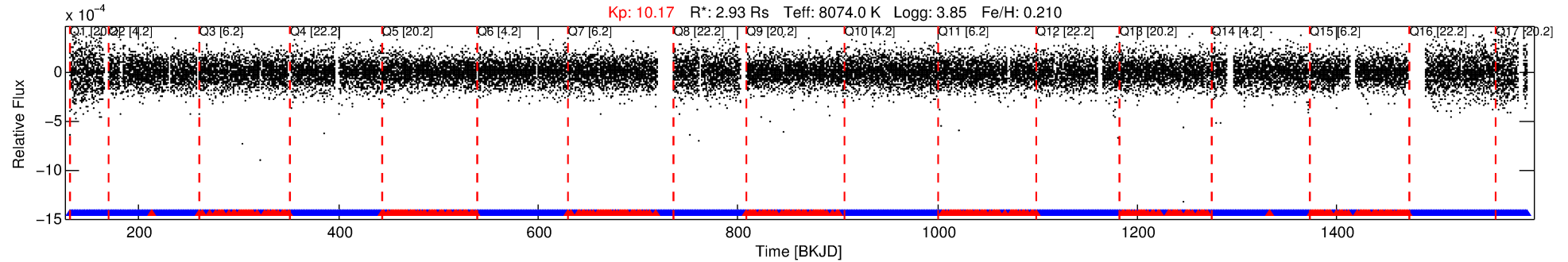
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006067817-03

No Significant Match Found

# DV One-Page Summary

KIC: 6067817 Candidate: 3 of 5 Period: 0.664 d



## DV Fit Results:

Period = 0.66388 [0.00001] d  
Epoch = 131.7110 [0.0019] BKJD  
Rp/R\* = 0.0047 [0.0007]  
R/R\* = 1.75 [1.07]  
b = 0.90 [0.19]  
Seff = 86426.21 [48085.46]  
Teq = 4372 [608] K  
Rp = 1.50 [0.62] Re  
a = 0.0194 [0.0067] AU  
Ag = 1.78 [1.12] [0.70σ]  
Teffp = 7809 [751] K [3.56σ]

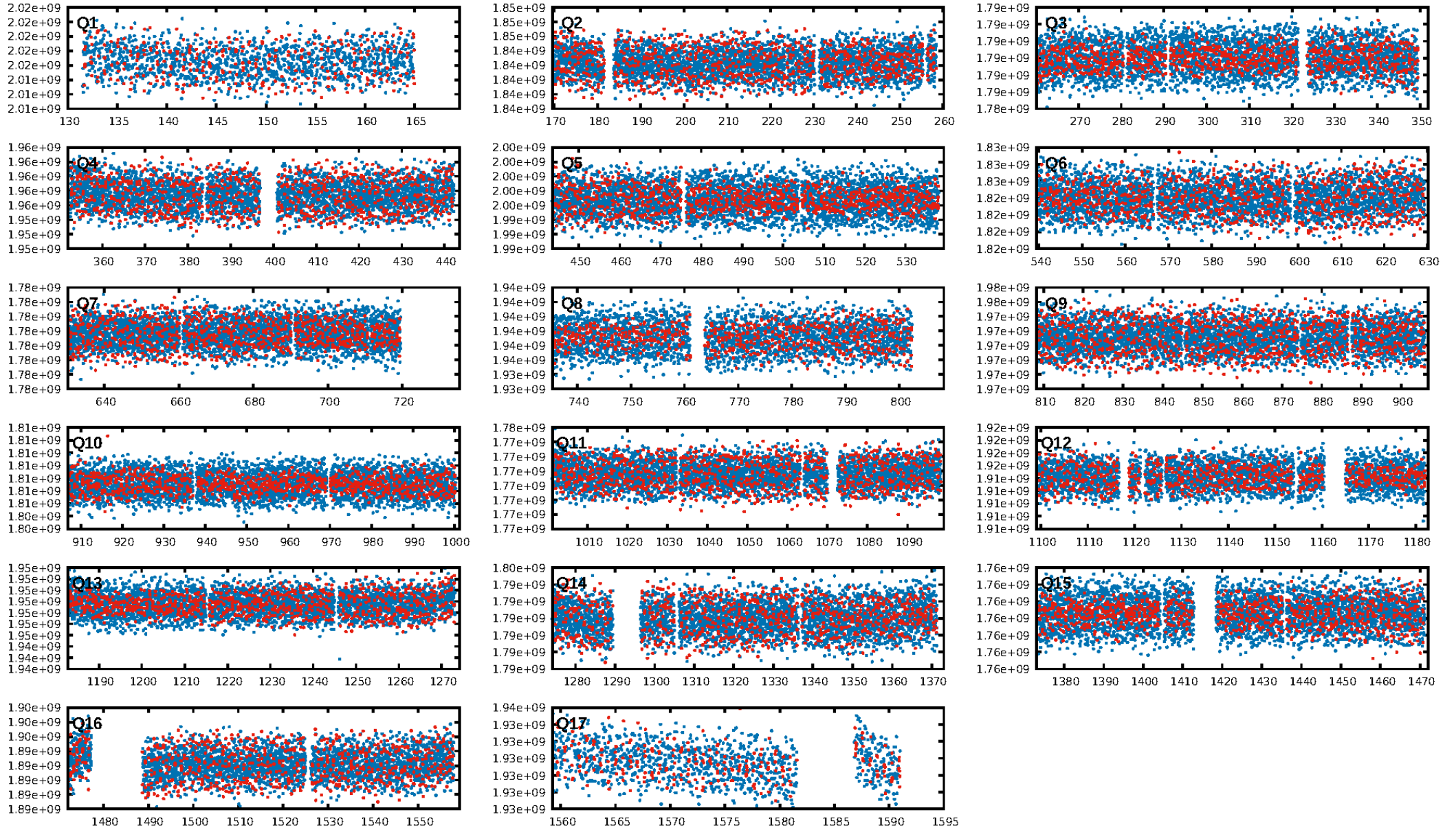
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]  
LongPeriod-sig: 57.8% [0.80σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.80 [1546/1922]  
GhostDiagnostic-chr: 1.686  
Centroid-sig: N/A  
Centroid-so: 0.994 arcsec [1.69σ]  
OotOffset-rm: 1.459 arcsec [2.49σ]  
OotOffset-st: 3/4/4/4 [15]  
KicOffset-rm: 1.095 arcsec [1.65σ]  
KicOffset-st: 3/4/4/4 [15]  
DiffImageQuality-fgm: 0.20 [3/15]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:25:08 Z

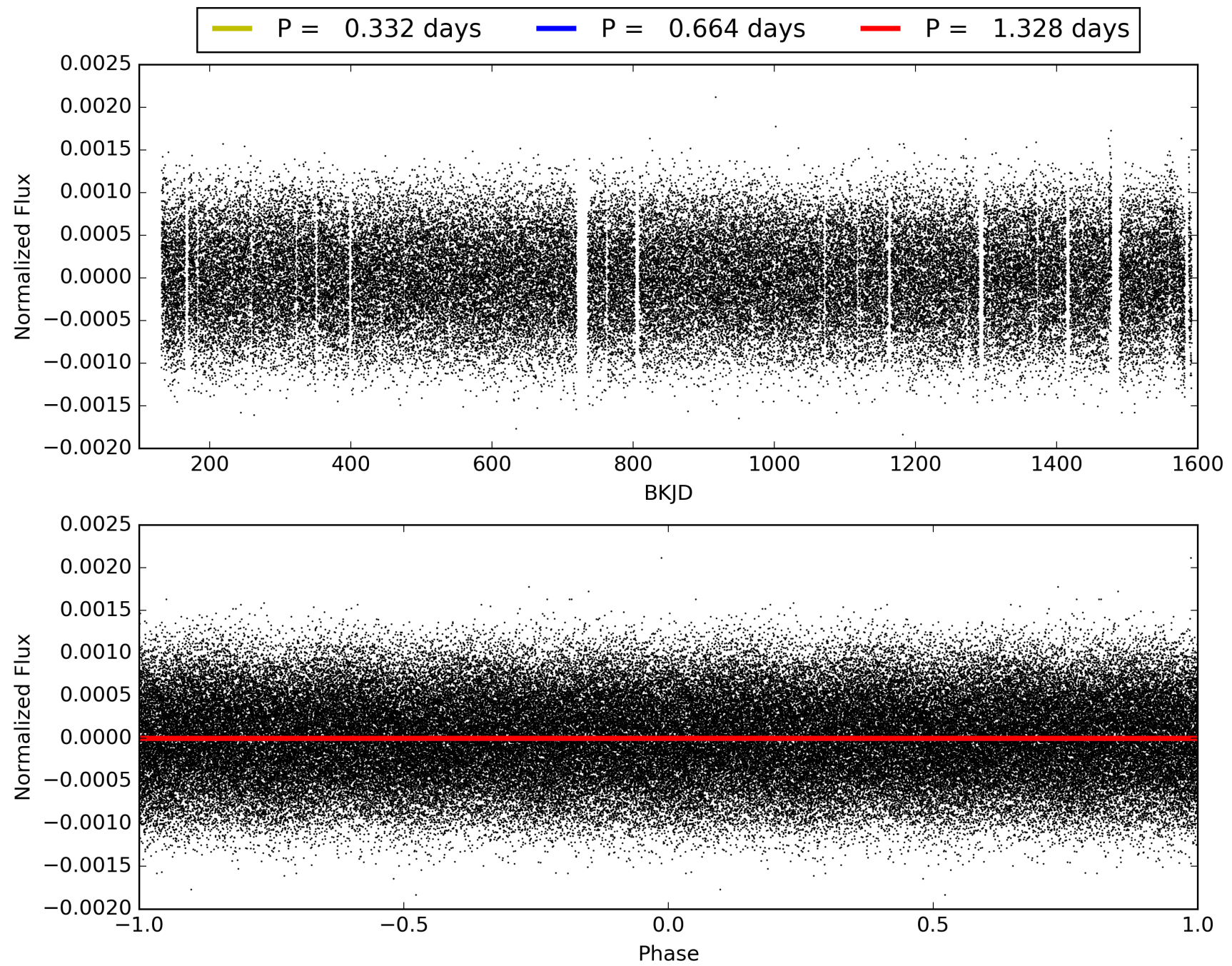
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006067817-03, PDC Light Curves





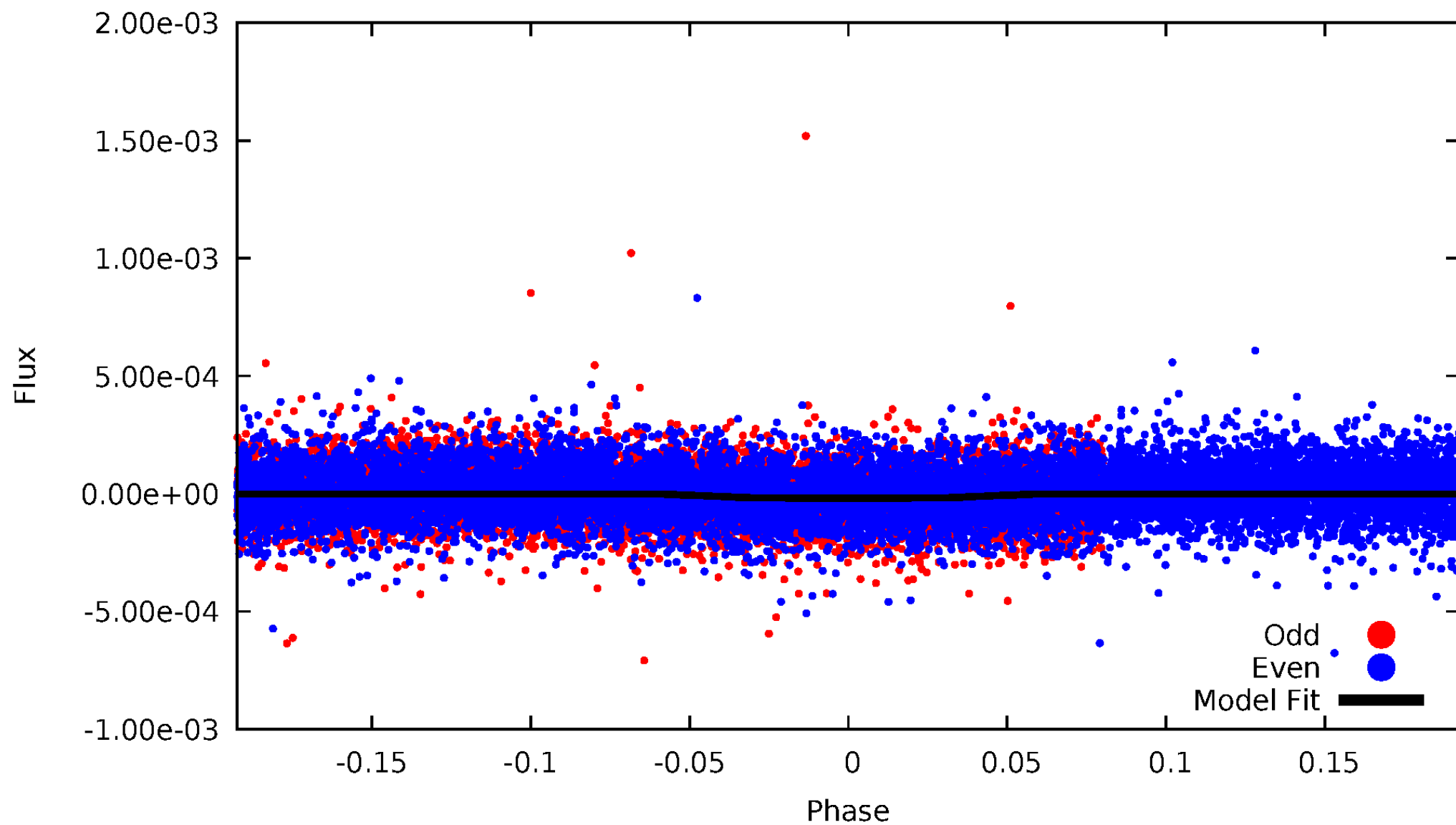
TCE 006067817-03





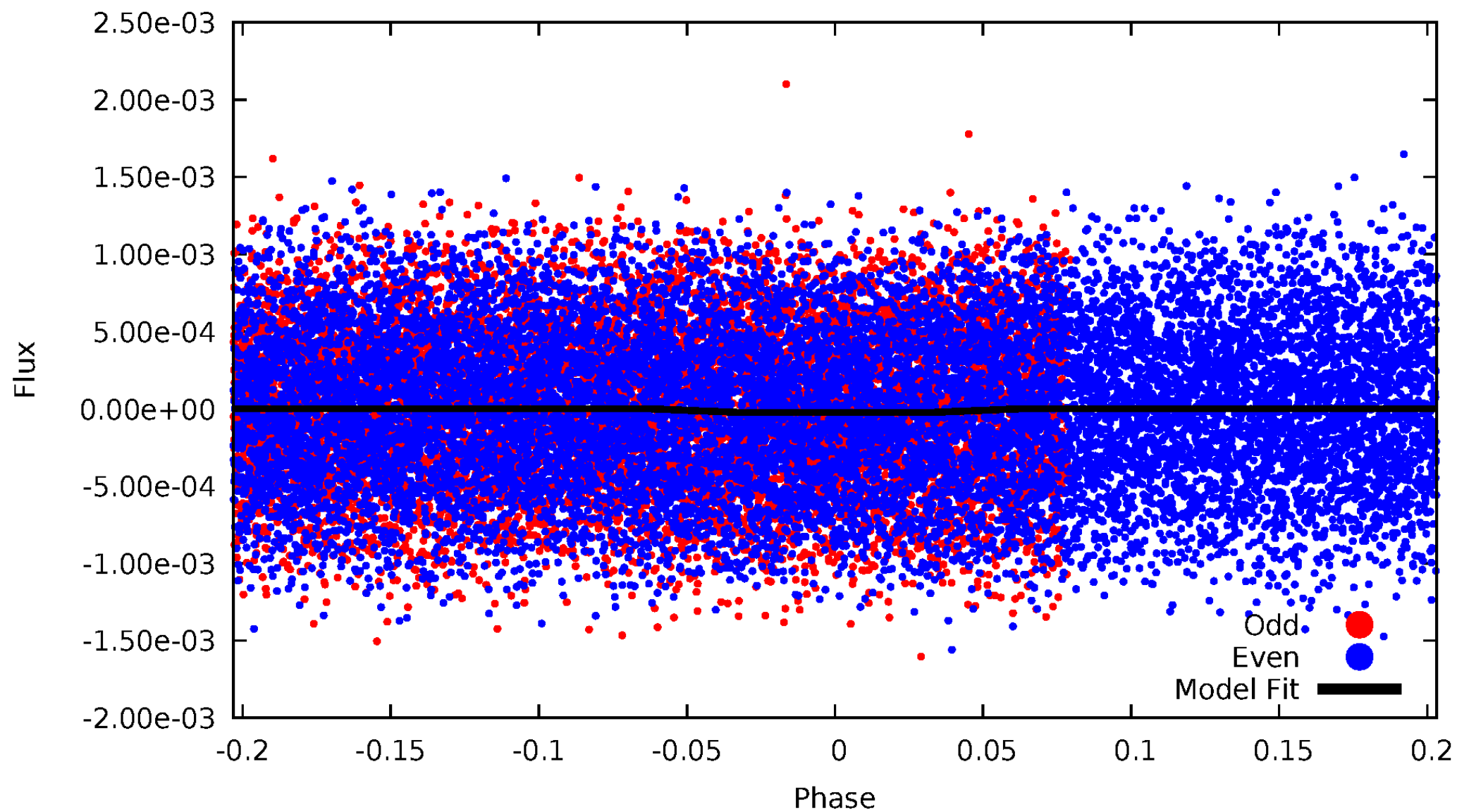
# DV Odd/Even

TCE 006067817-03



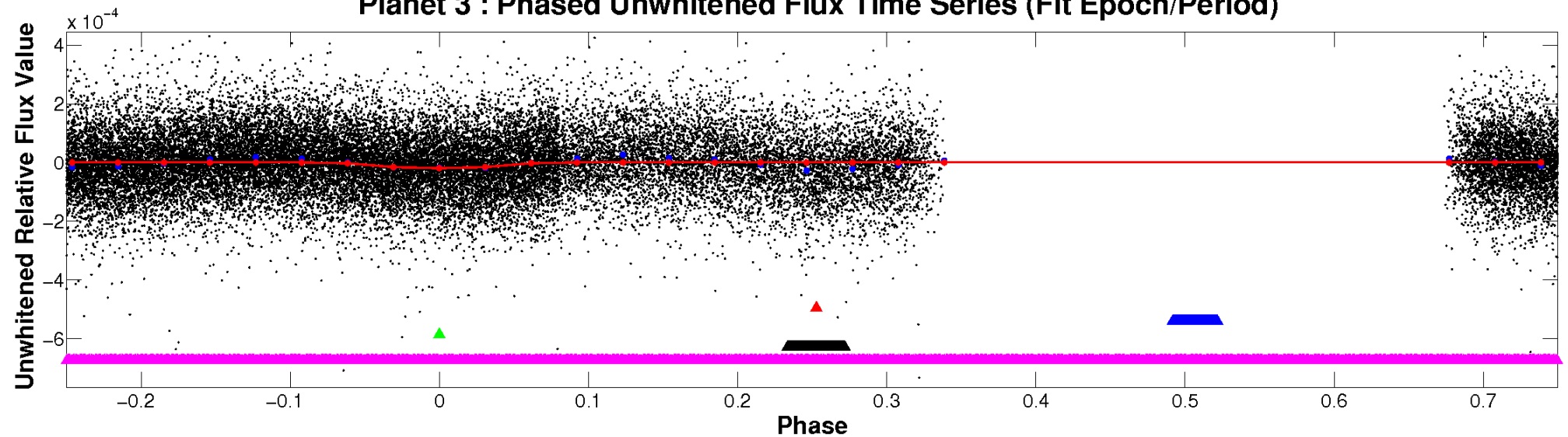
# ALT Odd/Even

TCE 006067817-03

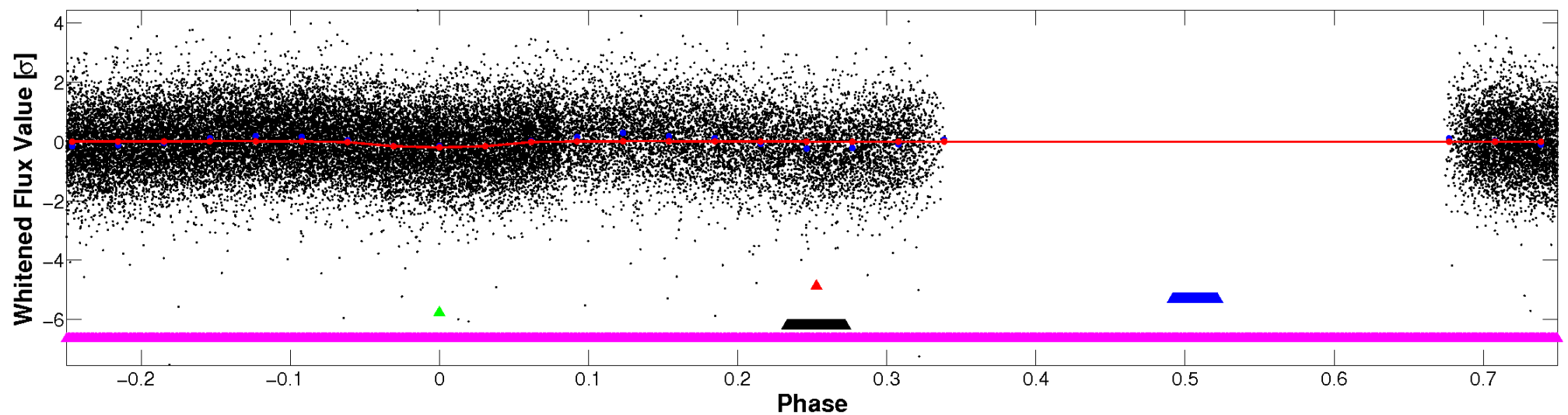


# Non-Whitened Vs. Whitened Light Curve

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

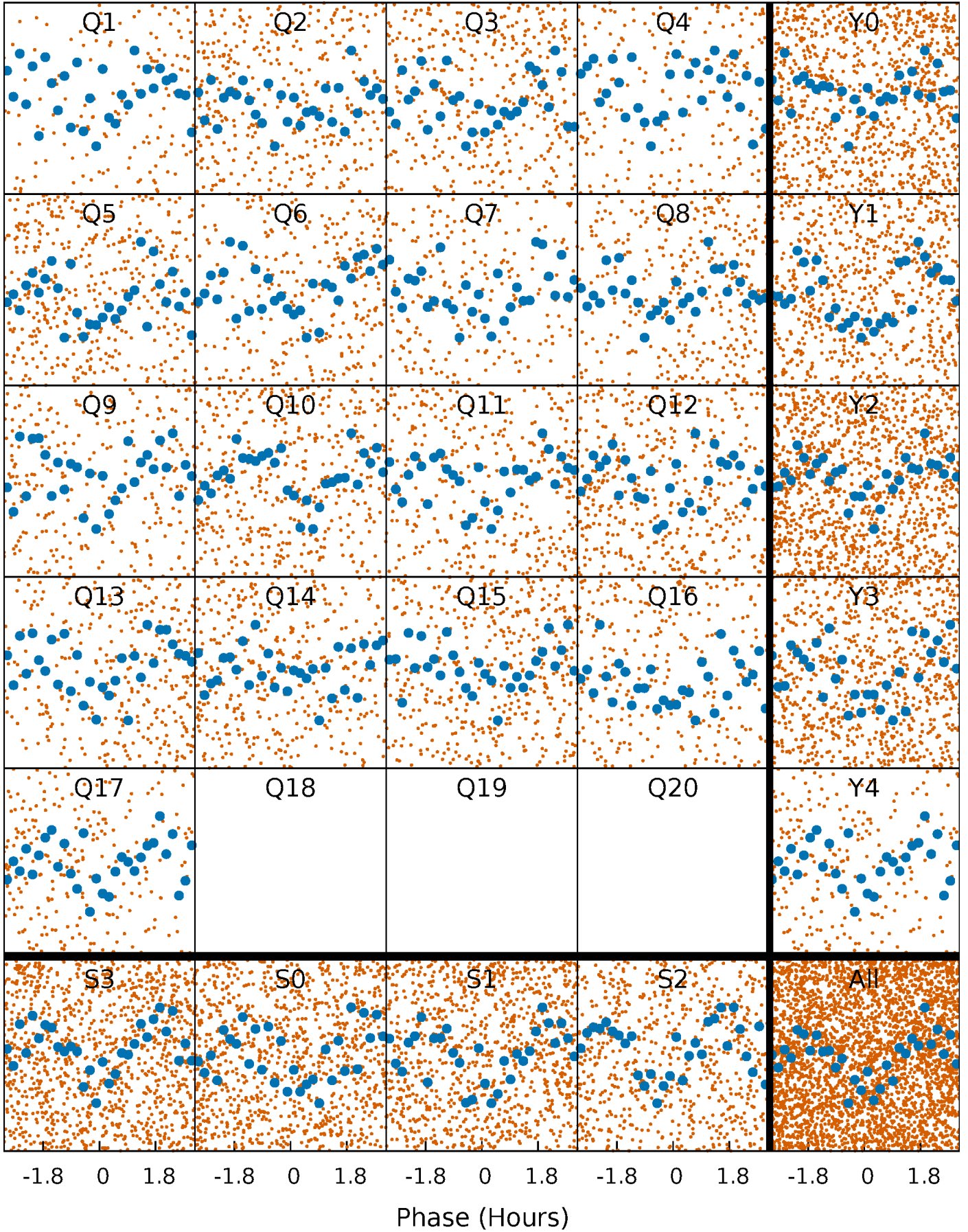


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

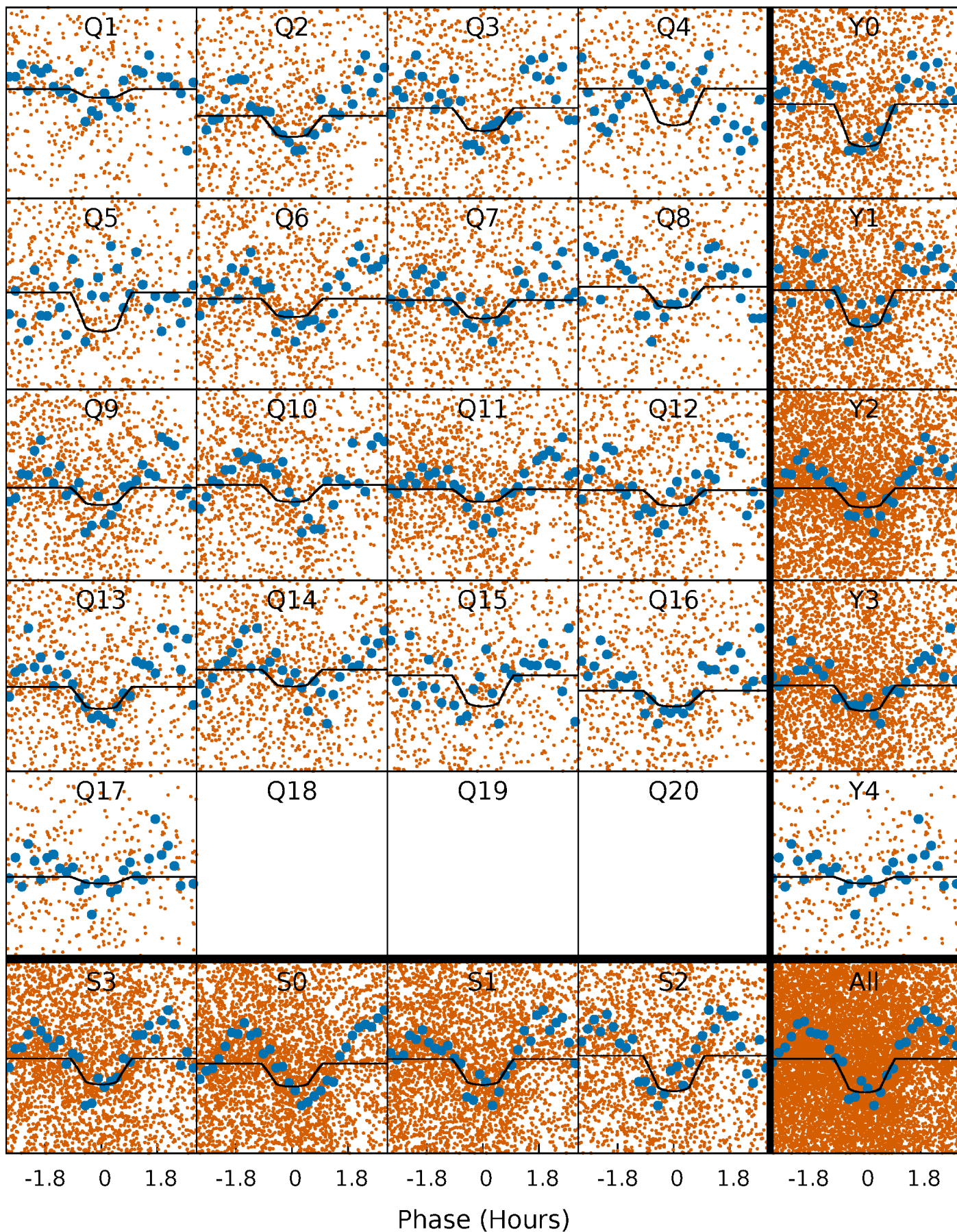
TCE 006067817-03   P= 0.663881 Days    $T_0=131.711039$  (BKJD)





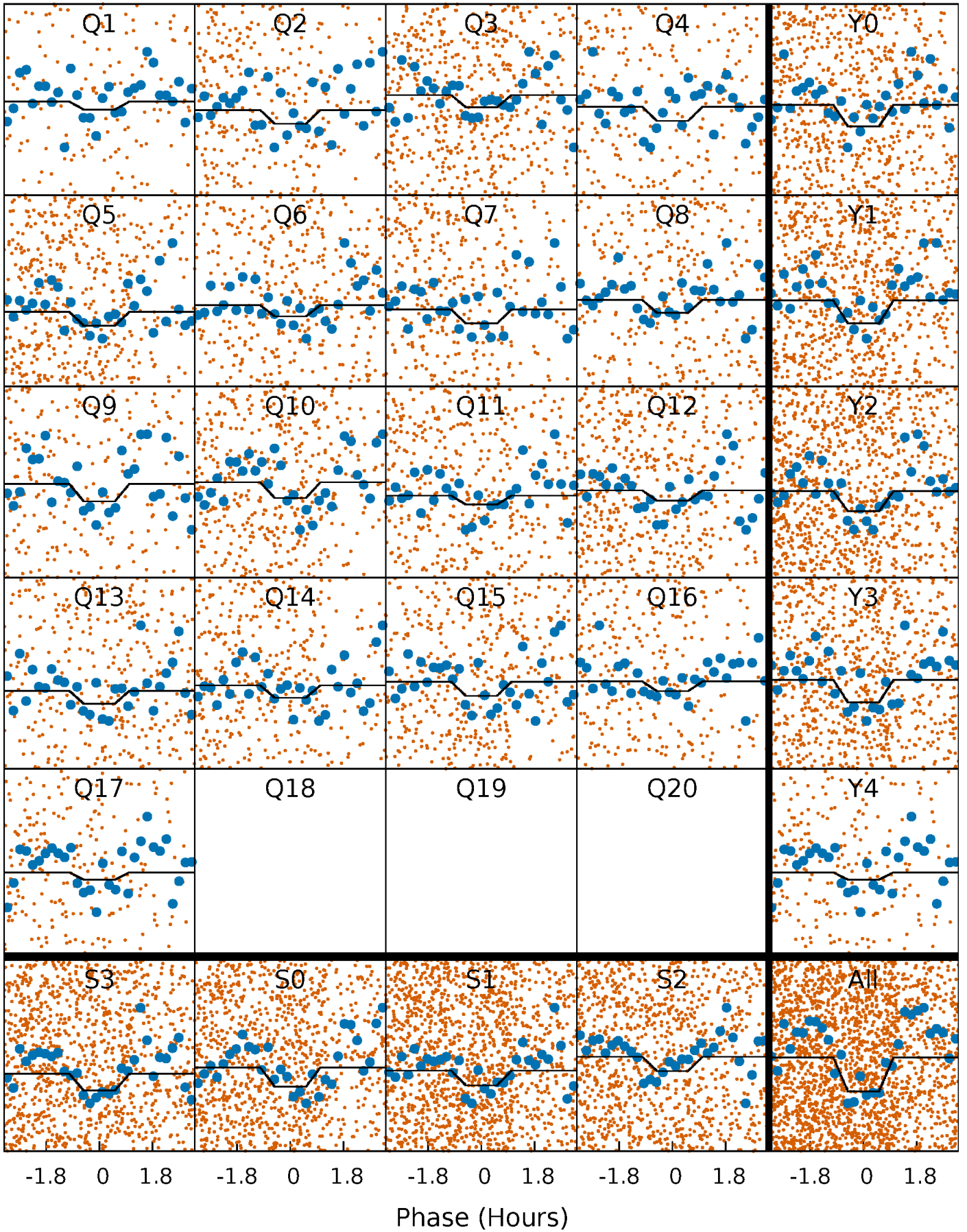
# DV Quarter-Phased Transit Curves

TCE 006067817-03 P= 0.663881 Days  $T_0=131.711039$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

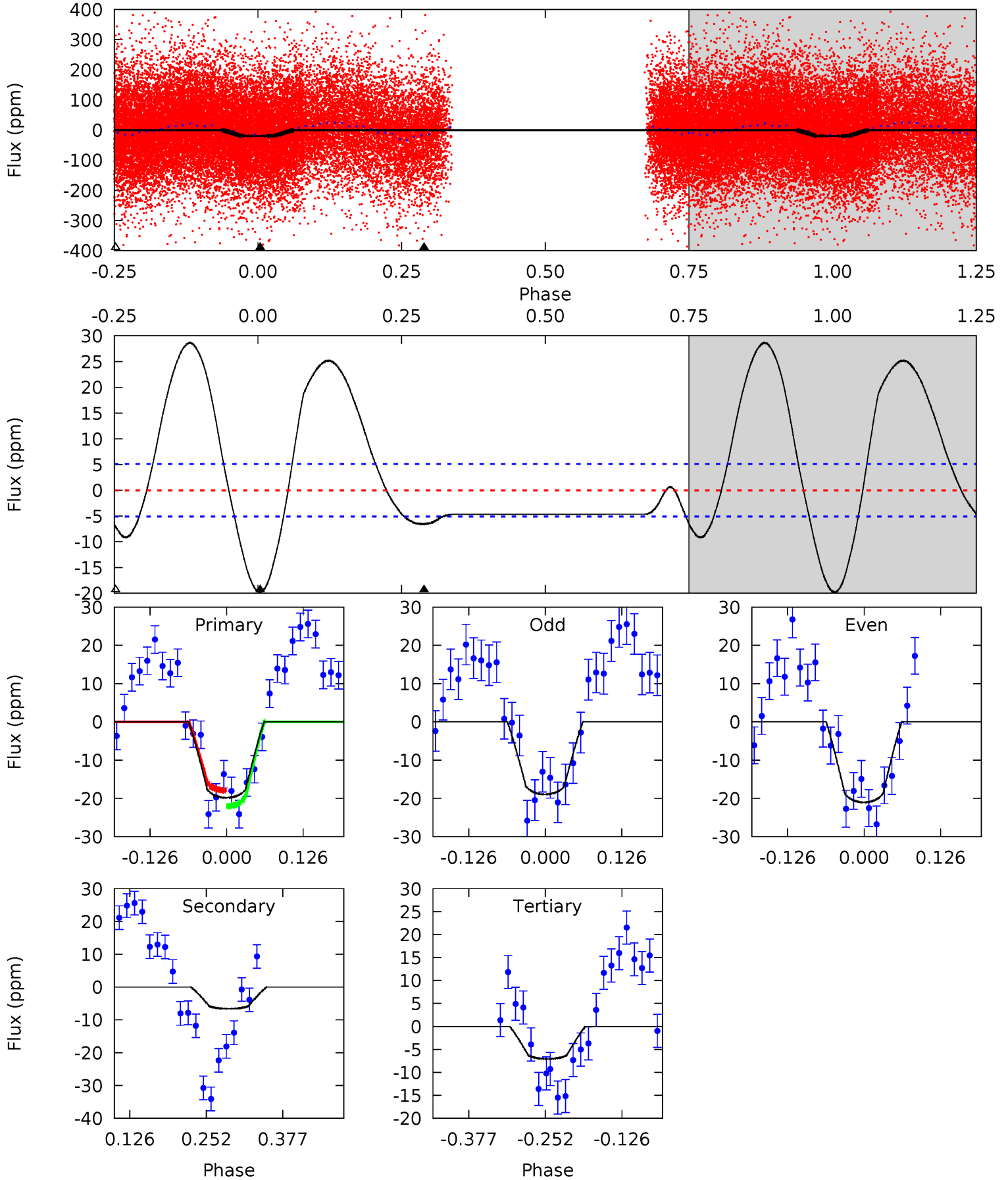
TCE 006067817-03 P= 0.663883 Days  $T_0=131.710831$  (BKJD)



# DV Model-Shift Uniqueness Test

006067817-03, P = 0.663881 Days, E = 131.047158 Days

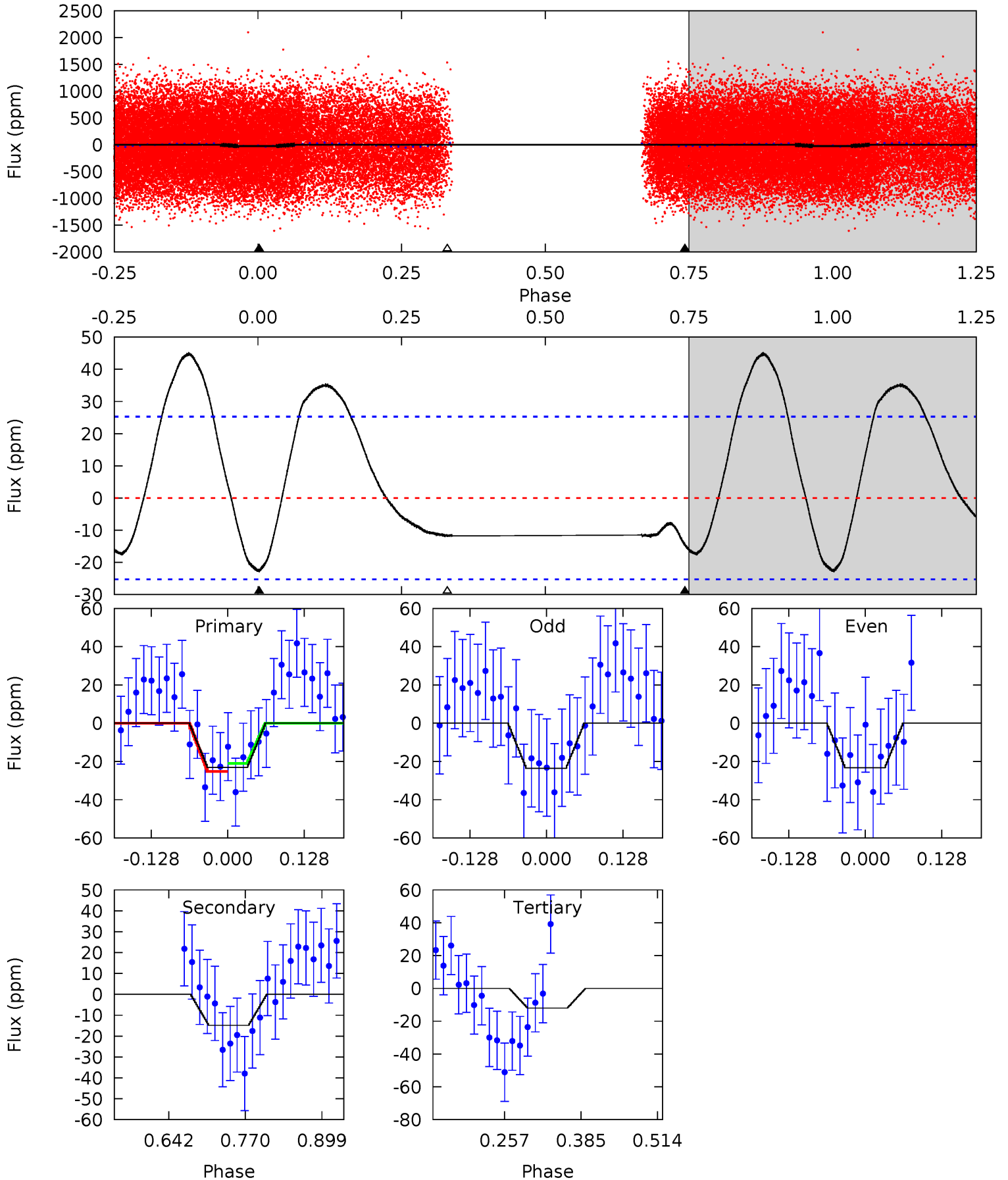
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	5.85	6.26	0	4.52	1.53	11.1	11.3	17.6	-0.42	5.85	0.93	1.01	0.59	1.84



# Alt Model-Shift Uniqueness Test

006067817-03, P = 0.663883 Days, E = 131.046948 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
4.12	2.66	2.15	0	4.51	1.52	2.87	1.97	4.12	0.51	2.66	0.03	0.90	0.66	0.37





### Stellar Parameters For KIC 006067817

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8074^{+222}_{-361}$	$3.851^{+0.301}_{-0.129}$	$0.210^{+0.150}_{-0.500}$	$2.926^{+0.740}_{-1.111}$	$2.213^{+0.306}_{-0.569}$	$0.124^{+0.278}_{-0.049}$
	+3%/-4%	+8%/-3%	+71%/-238%	+25%/-38%	+14%/-26%	+223%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006067817-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-7 \pm 1$	$1.42^{+0.38}_{-0.34}$	$5976^{+474}_{-553}$	$5044^{+789}_{-876}$	$0.660^{+0.457}_{-0.238}$
Alt.	$-15 \pm 6$	$1.43^{+0.37}_{-0.30}$	$5945^{+478}_{-559}$	$6579^{+1226}_{-1205}$	$1.417^{+1.245}_{-0.684}$

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



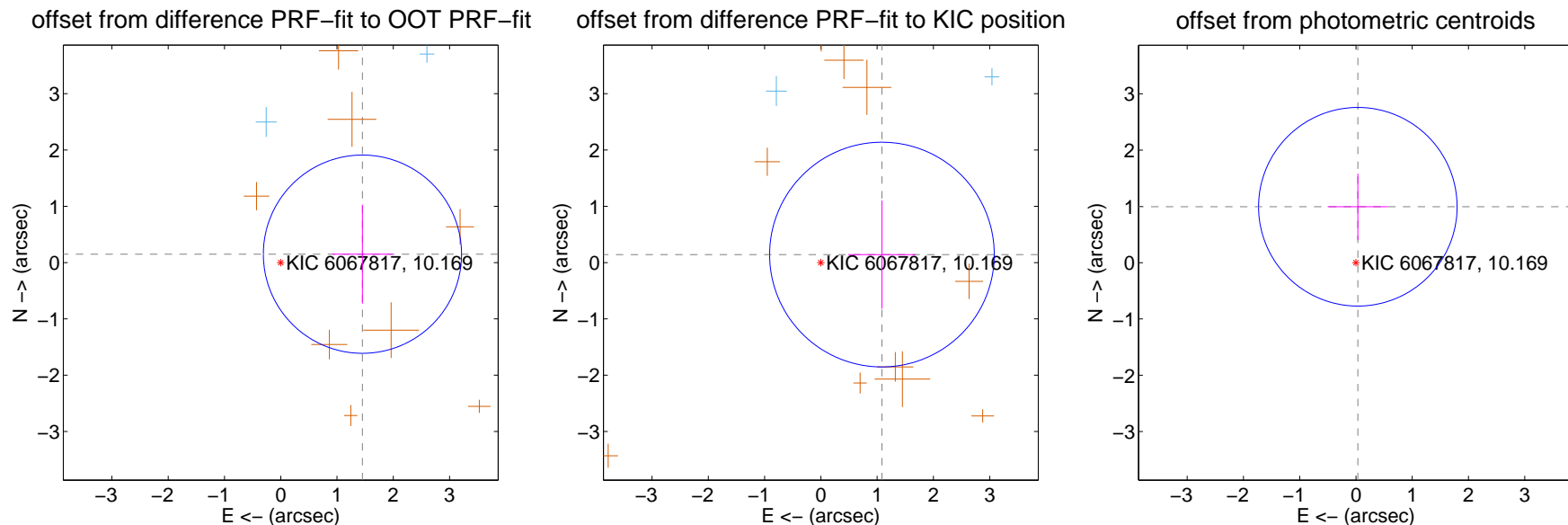
## DV Centroid Data

Supplemental centroid analysis for 006067817-03. **Kepler magnitude: 10.17.** Transit SNR 12.86

**There are 3 quarters with good PRF difference image offsets**

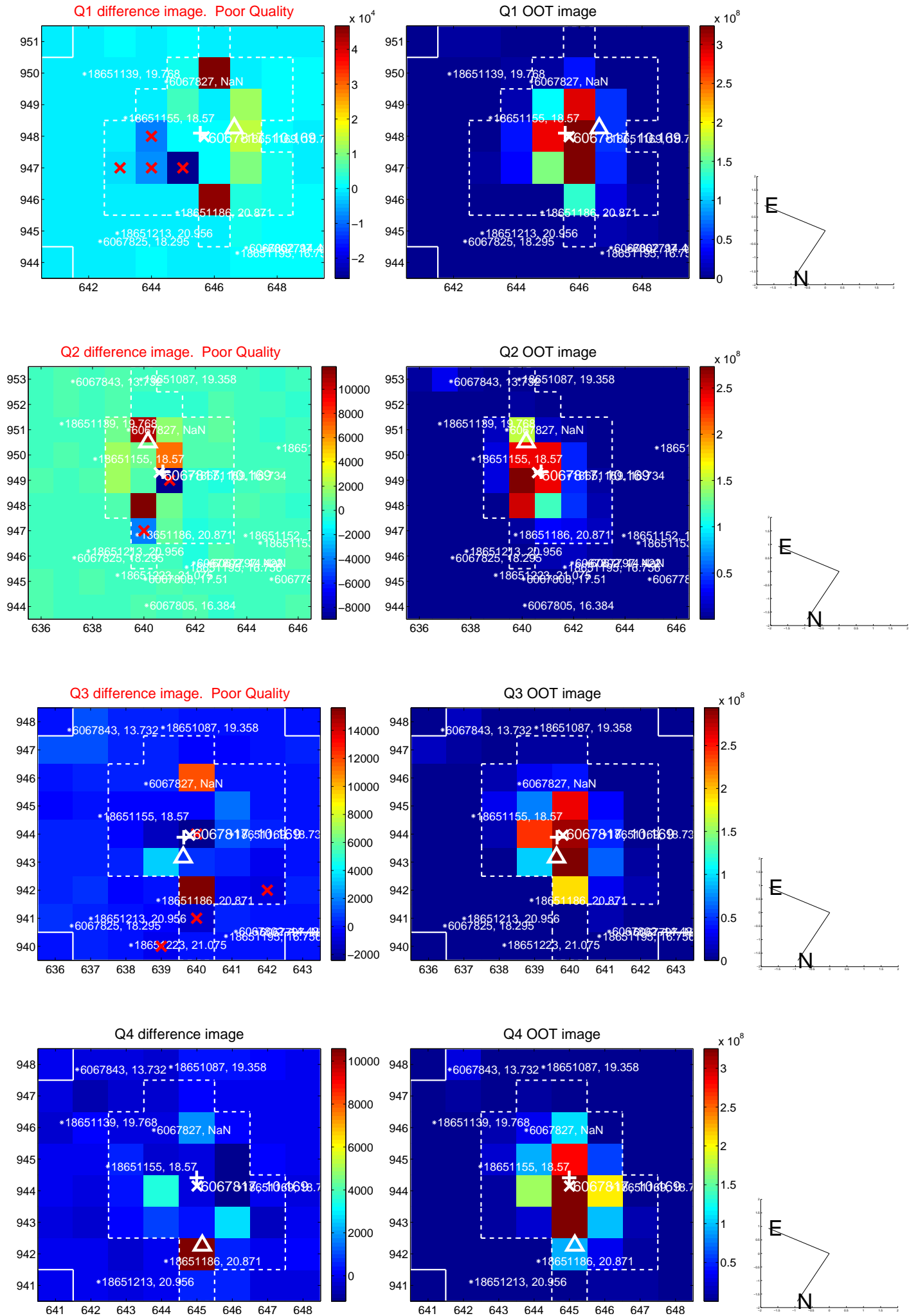
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.459 \pm 0.587$	2.49	$-1.452 \pm 0.536$	$0.149 \pm 0.879$
PRF-fit source offset from KIC position	$1.095 \pm 0.665$	1.65	$-1.085 \pm 0.600$	$0.143 \pm 0.960$
photometric centroid source offset	$0.99 \pm 0.59$	1.69	$-0.03 \pm 0.54$	$0.99 \pm 0.59$

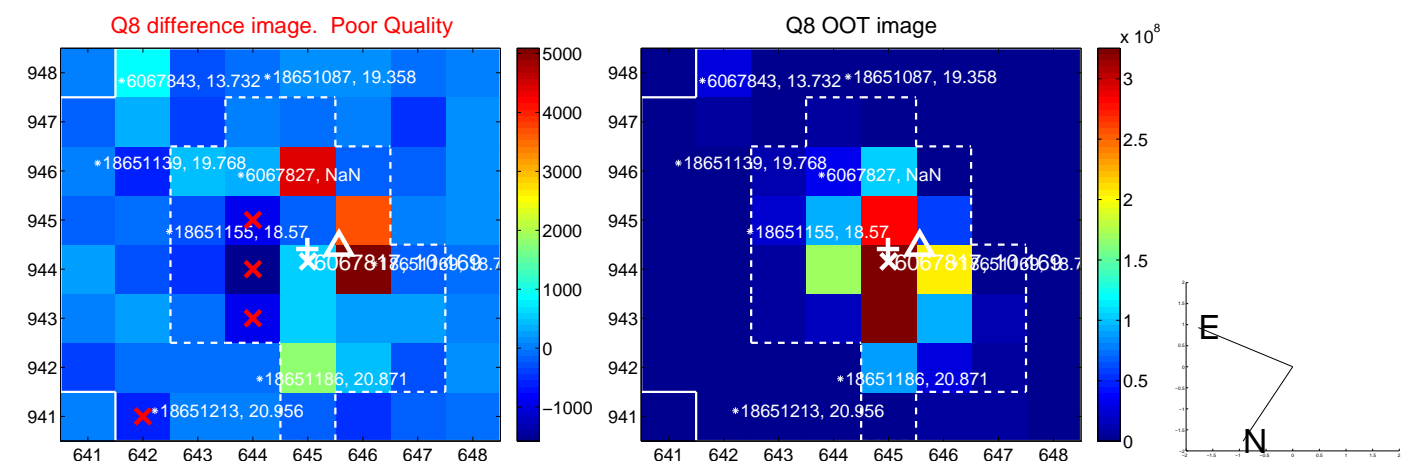
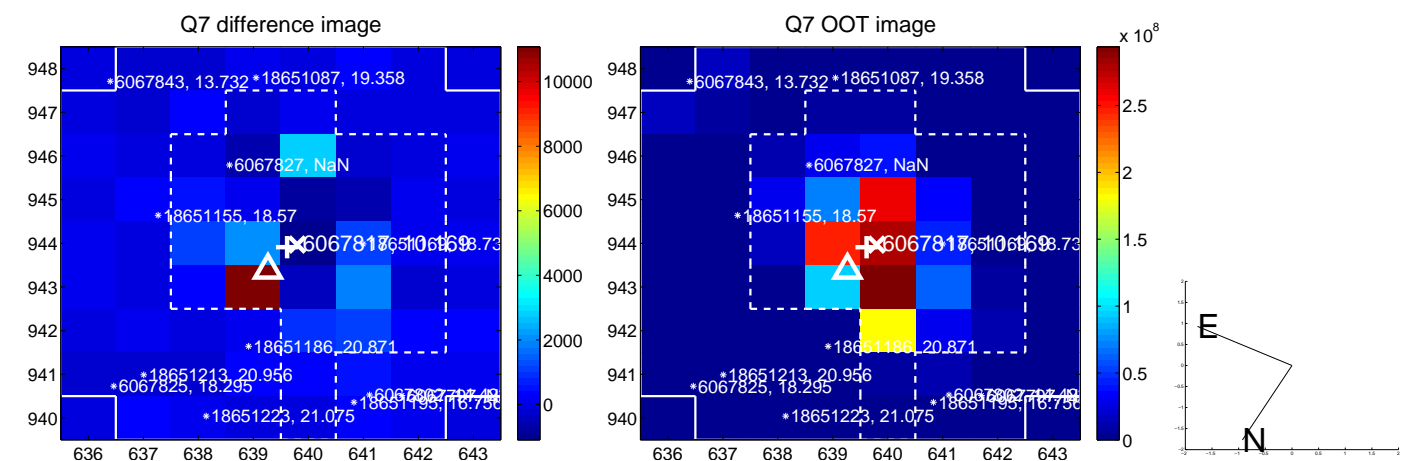
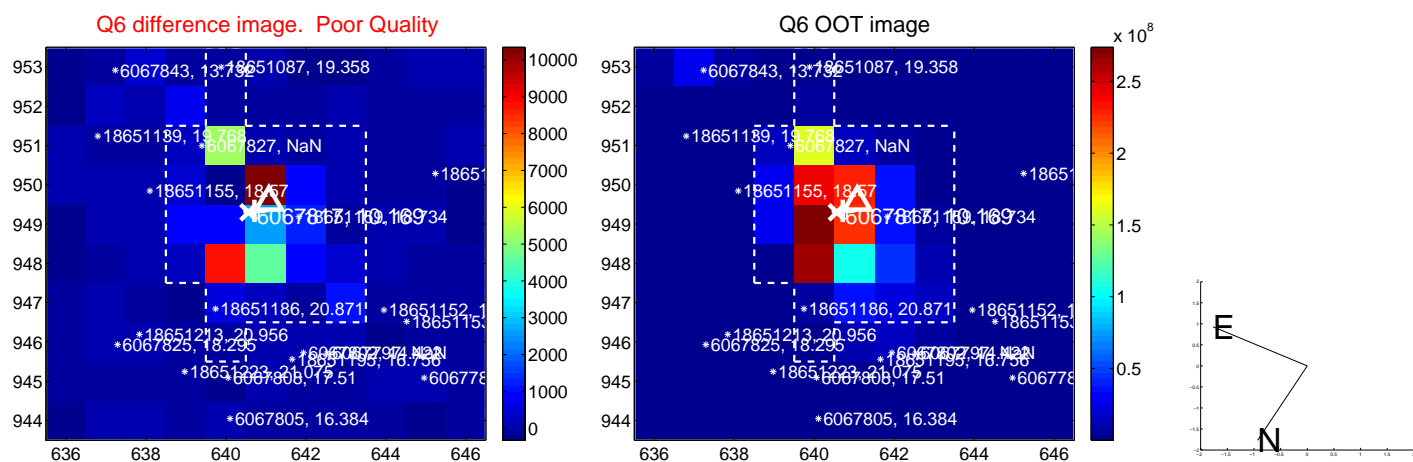
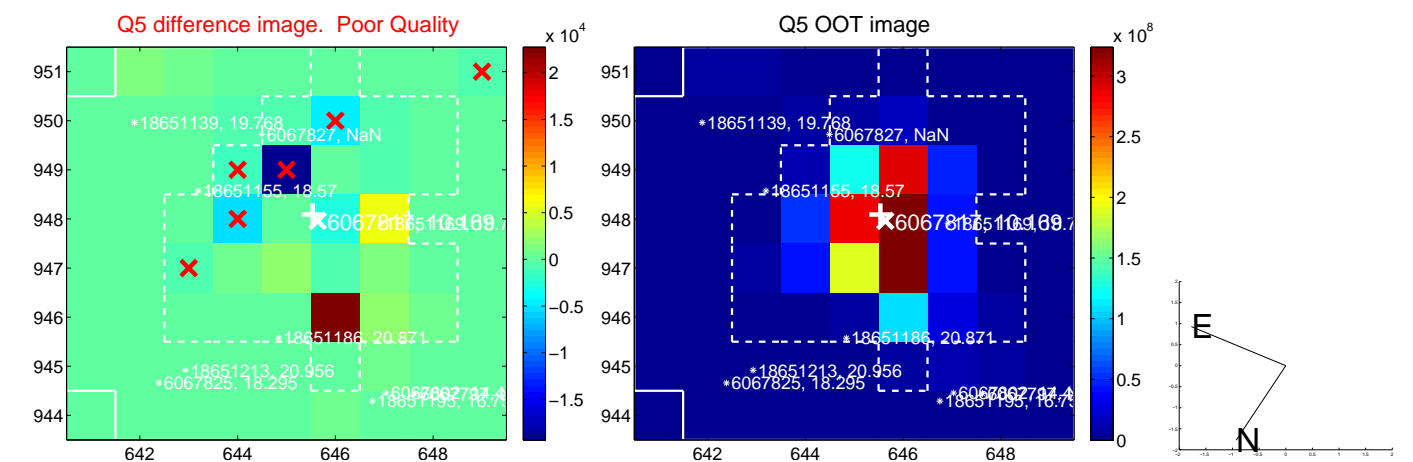


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

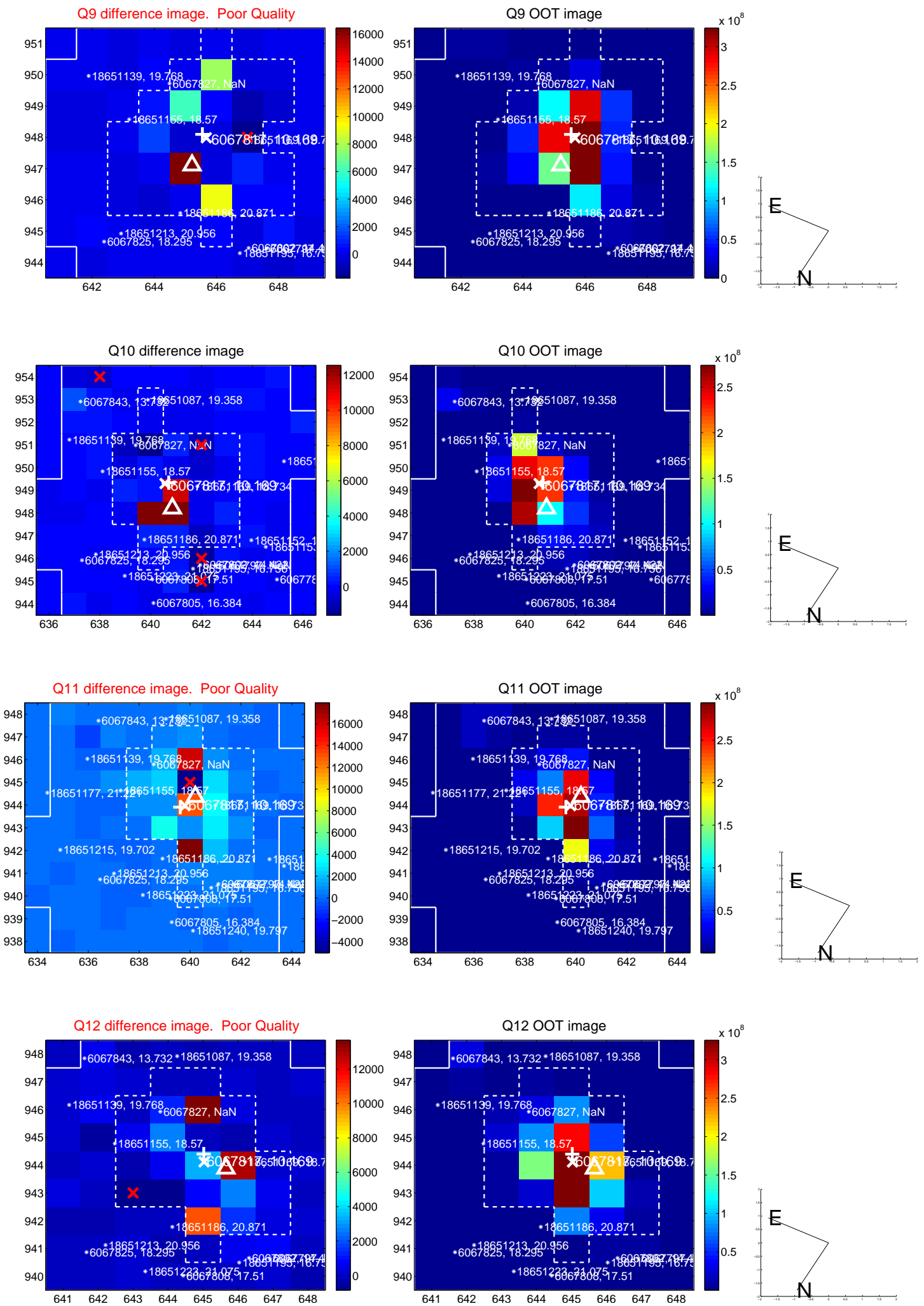
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



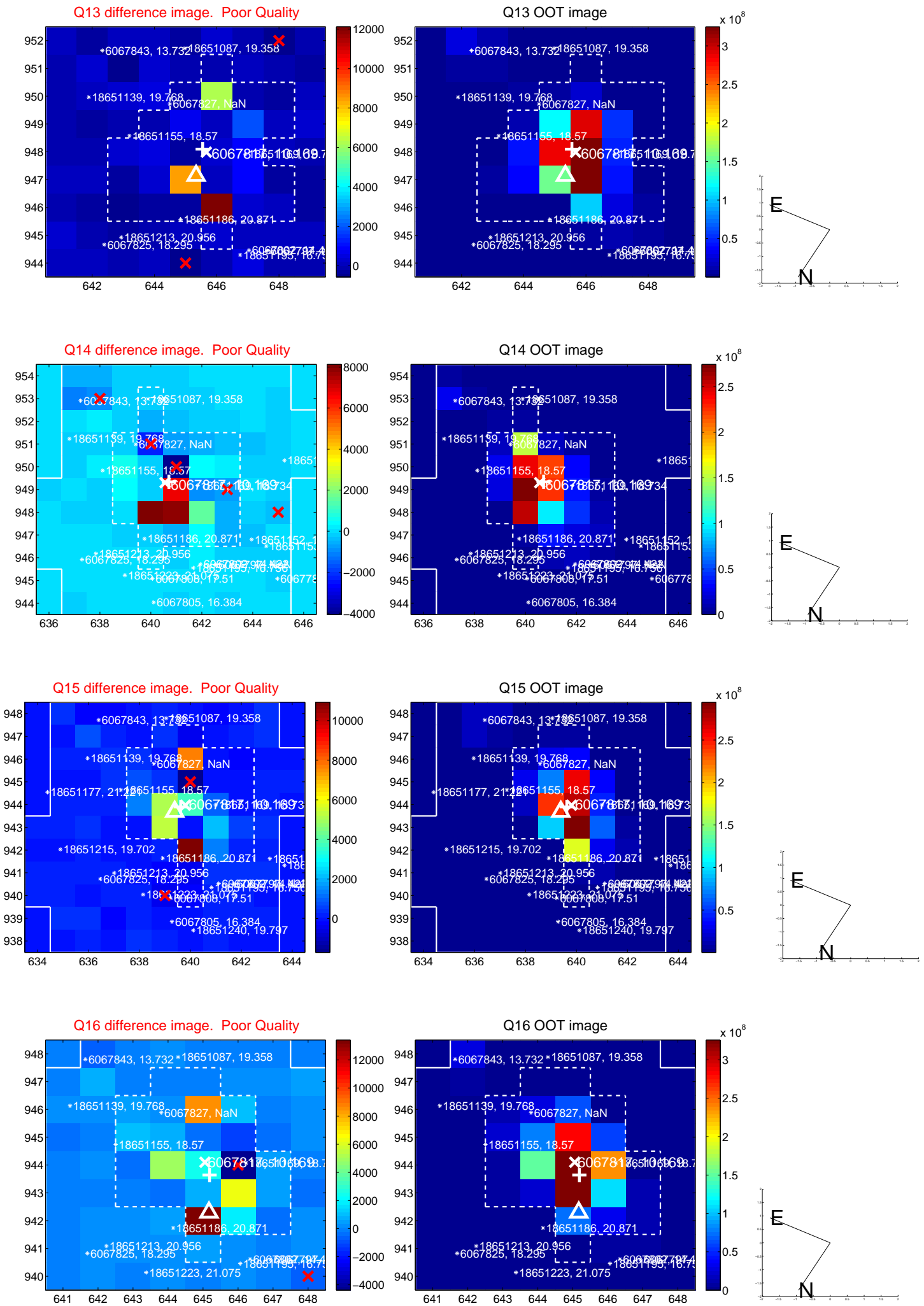
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.

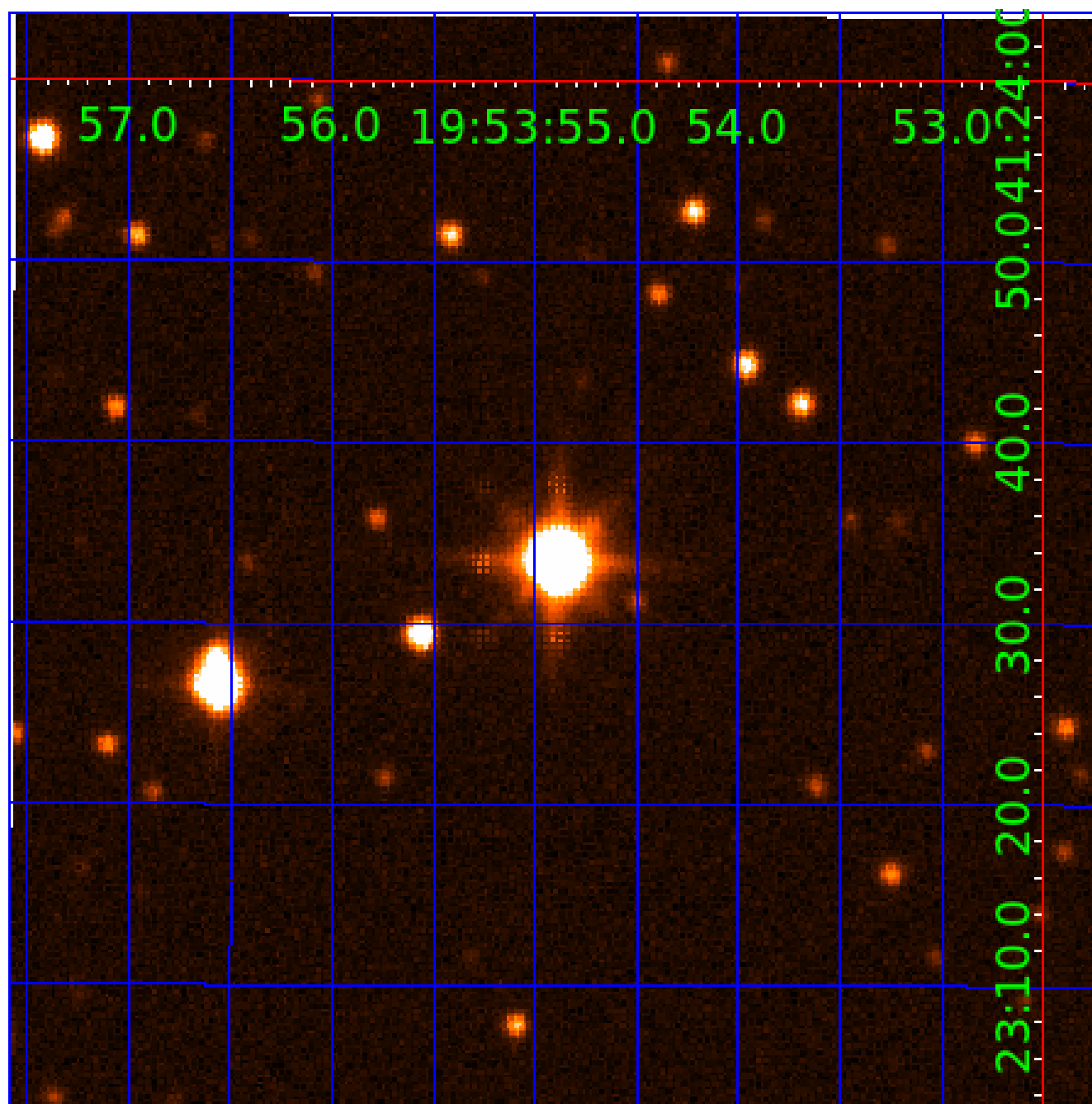






UKIRT Image

Declination



# KIC 006067817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006067817-01	OBS	No	1.327762	131.878847	33.2	1.670	9.6	15.8	2.93	8074	1.97	34298.26
006067817-02	OBS	No	0.663872	132.057377	19.8	1.770	15.1	13.8	2.93	8074	1.52	86427.78
006067817-03	OBS	No	0.663881	131.711039	19.2	1.533	11.5	12.9	2.93	8074	1.50	86426.21
006067817-04	OBS	No	0.663869	131.891650	19.7	1.324	9.9	8.9	2.93	8074	1.51	86428.24
006067817-05	OBS	No	0.942061	132.393392	31.1	8.172	8.4	14.1	2.93	8074	1.69	54199.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006067817-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

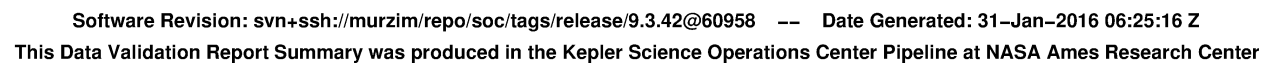
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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.

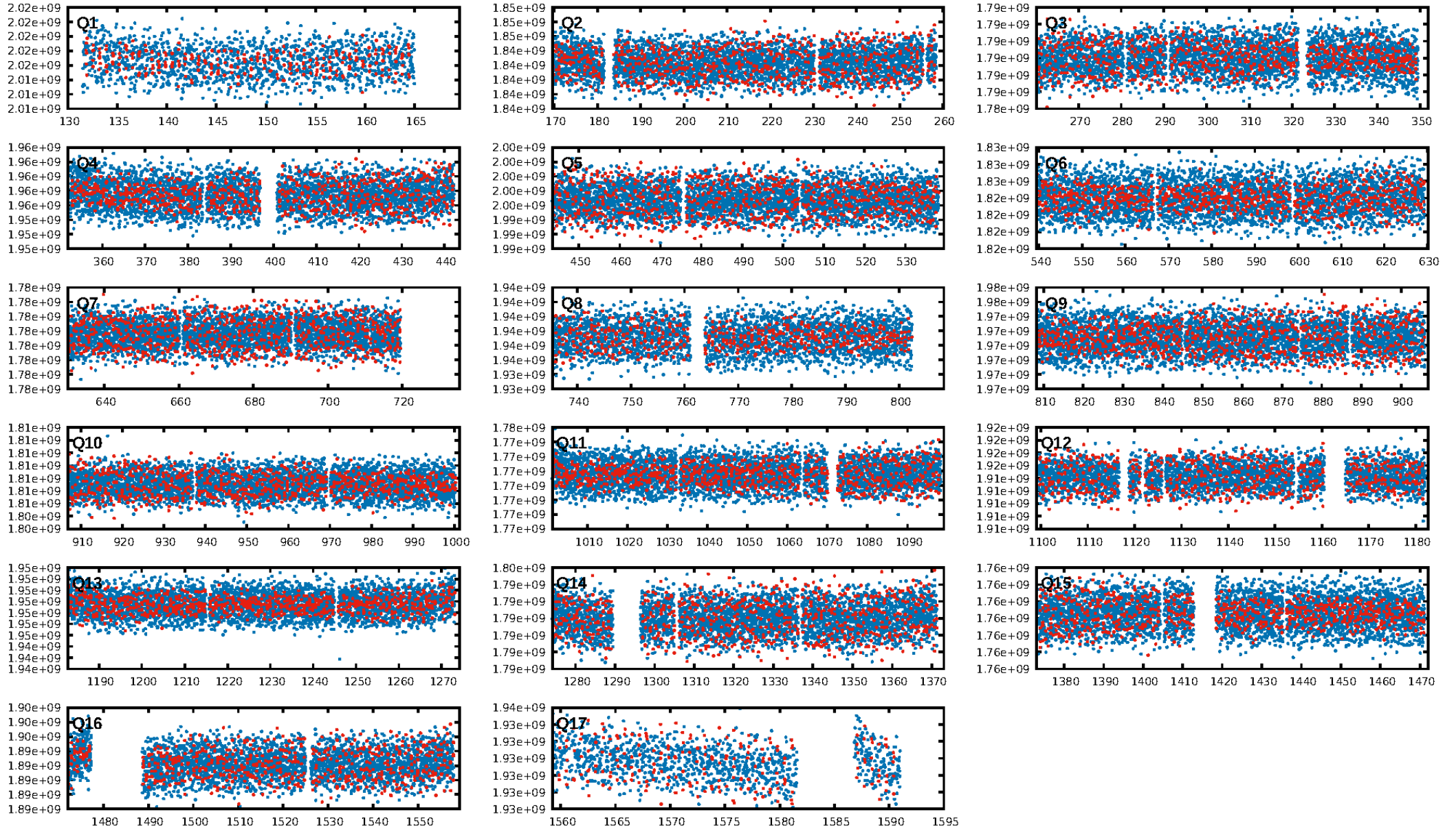
Ephemeris Match Information For 006067817-04

No Significant Match Found

## KIC: 6067817    Candidate: 4 of 5    Period: 0.664 d

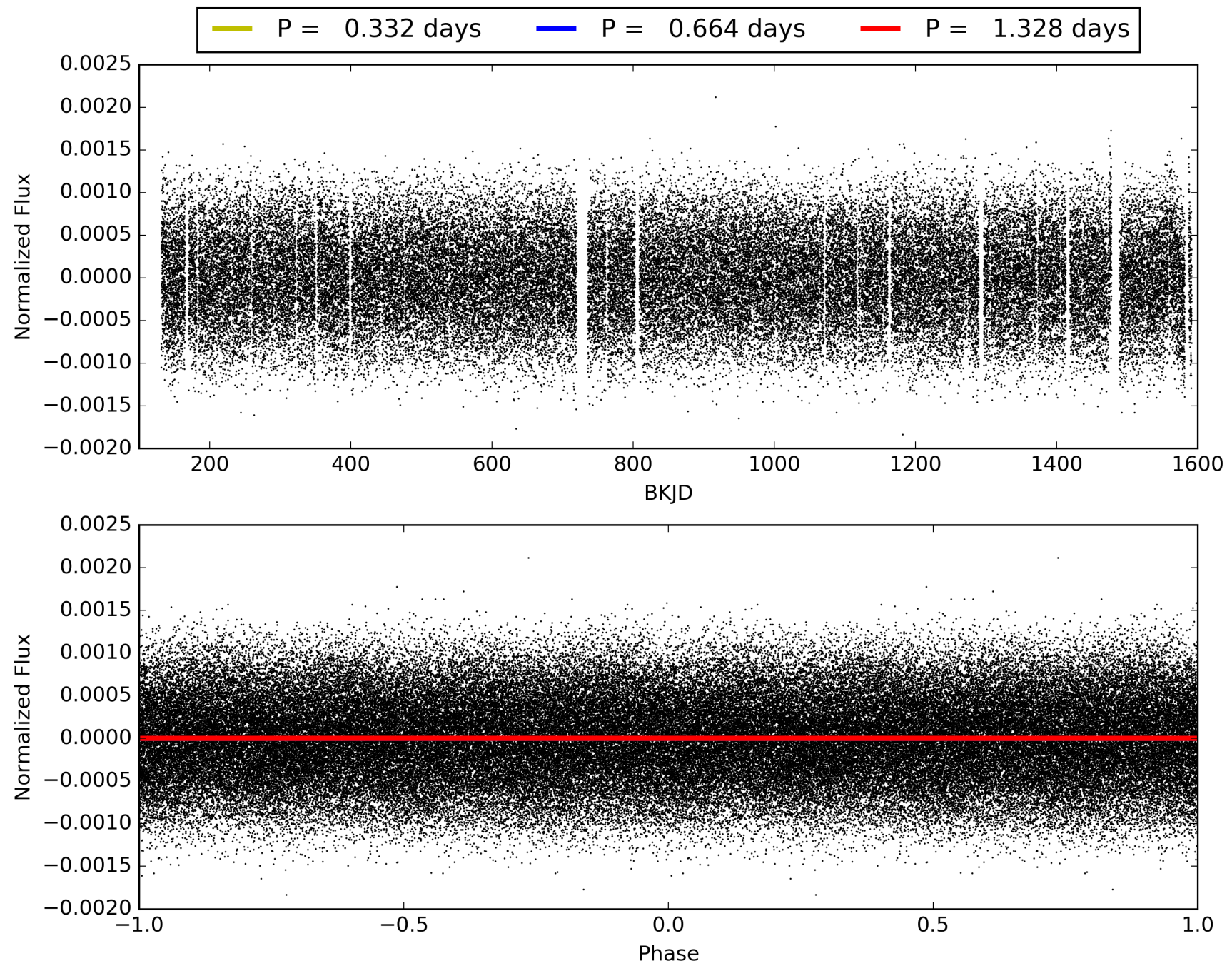


# TCE 006067817-04, PDC Light Curves



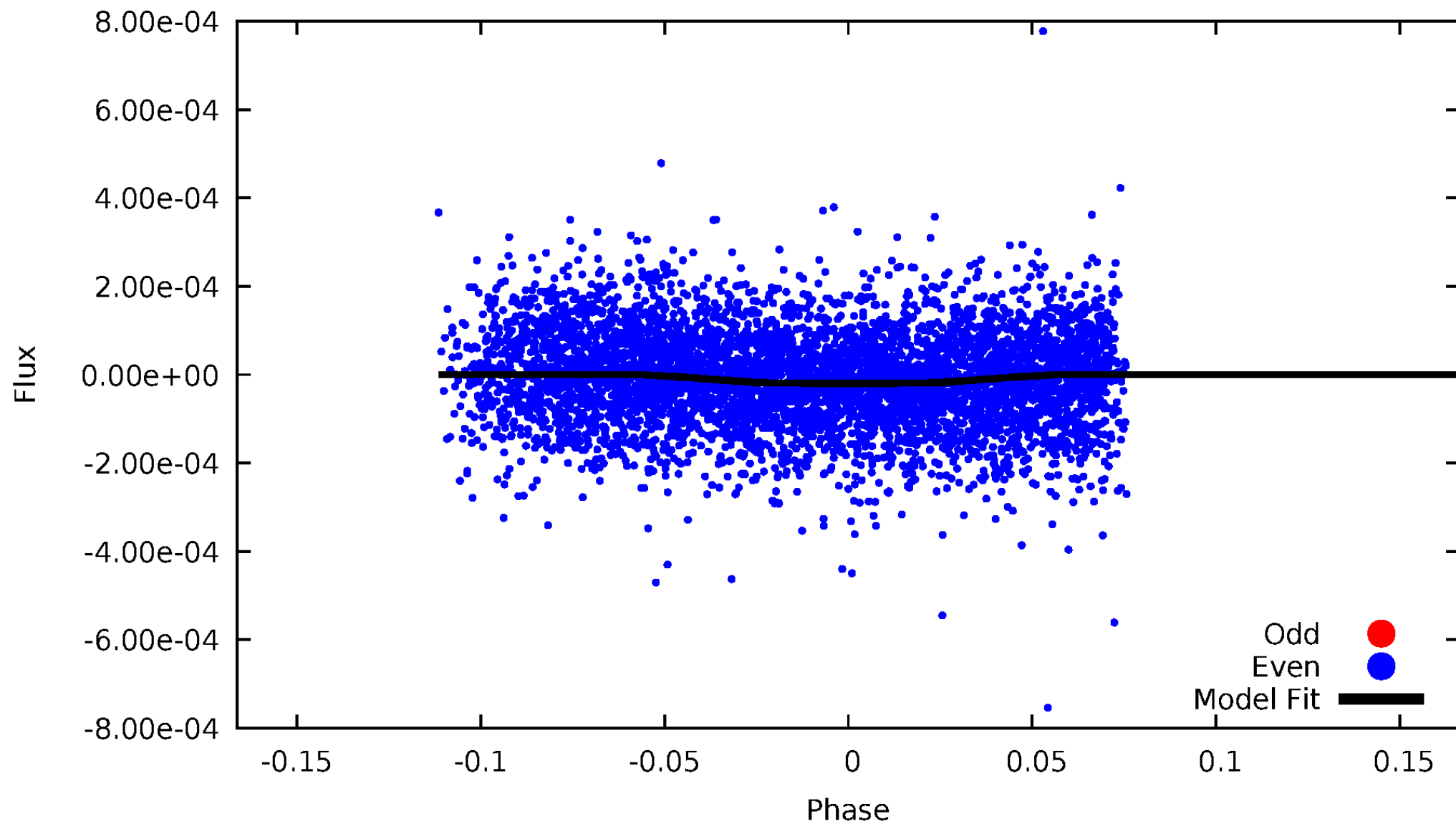


TCE 006067817-04



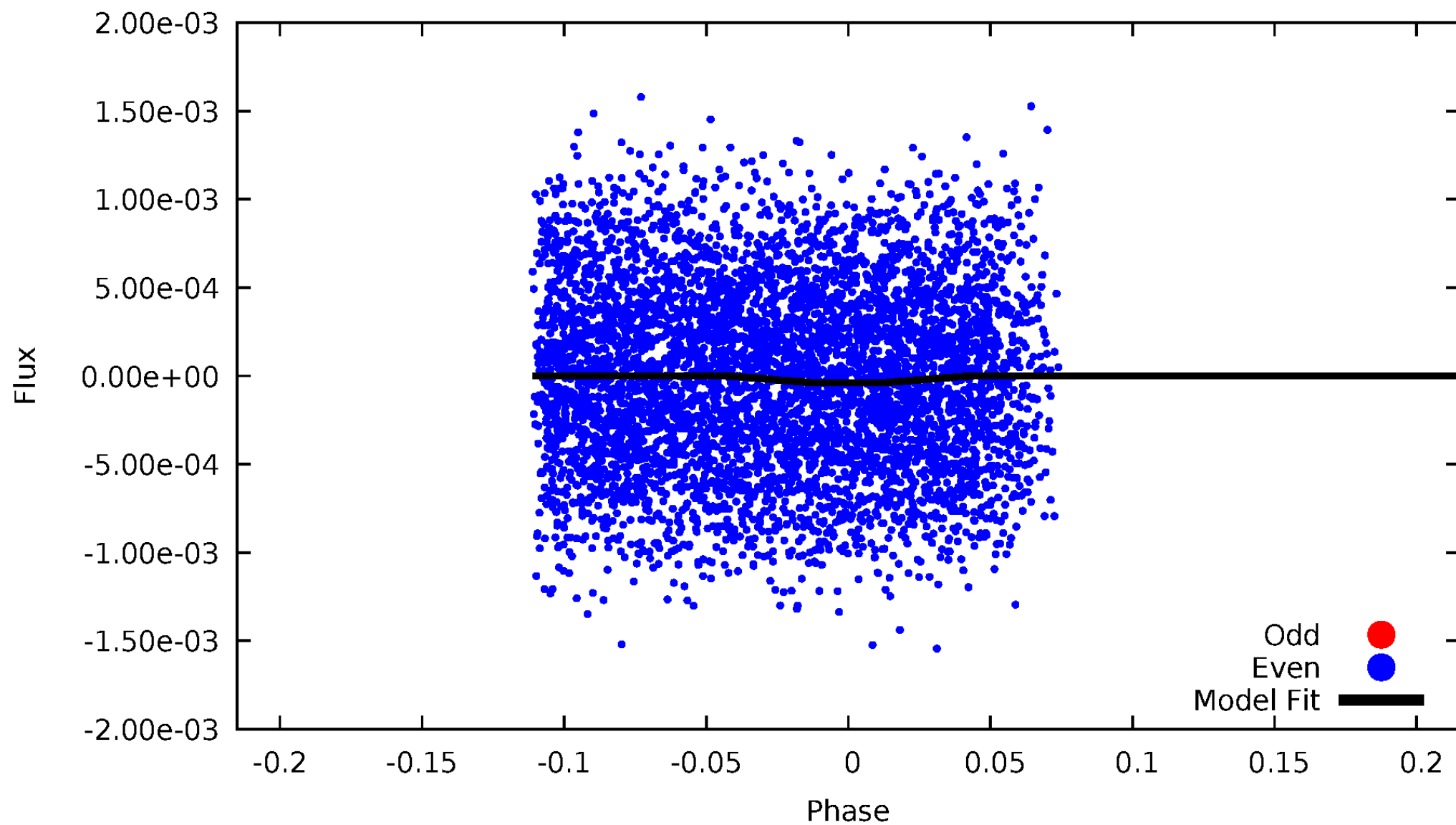
# DV Odd/Even

TCE 006067817-04



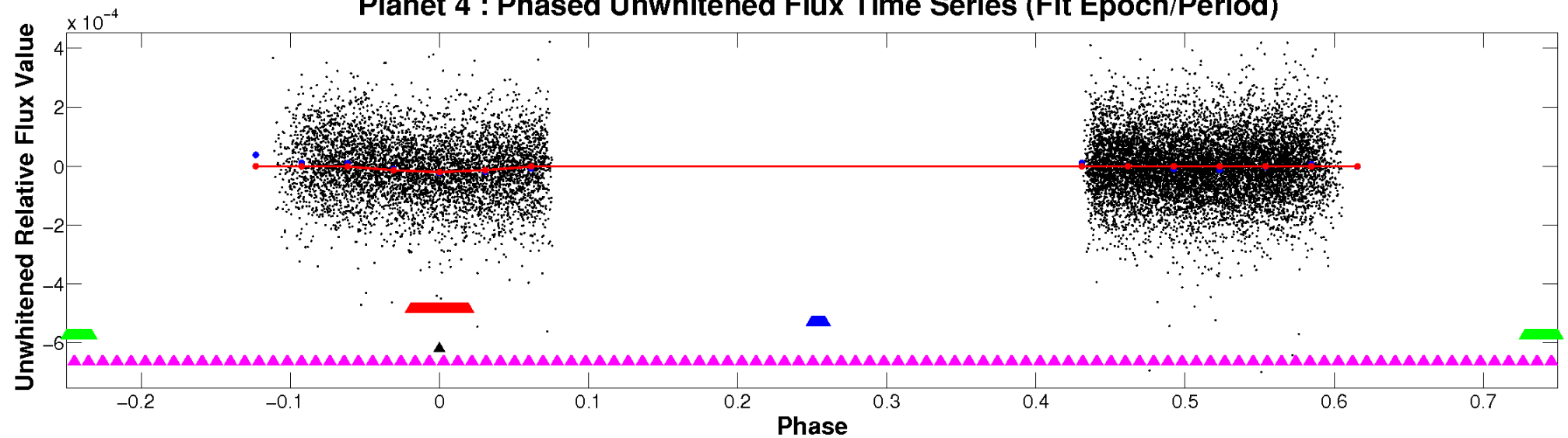
# ALT Odd/Even

TCE 006067817-04

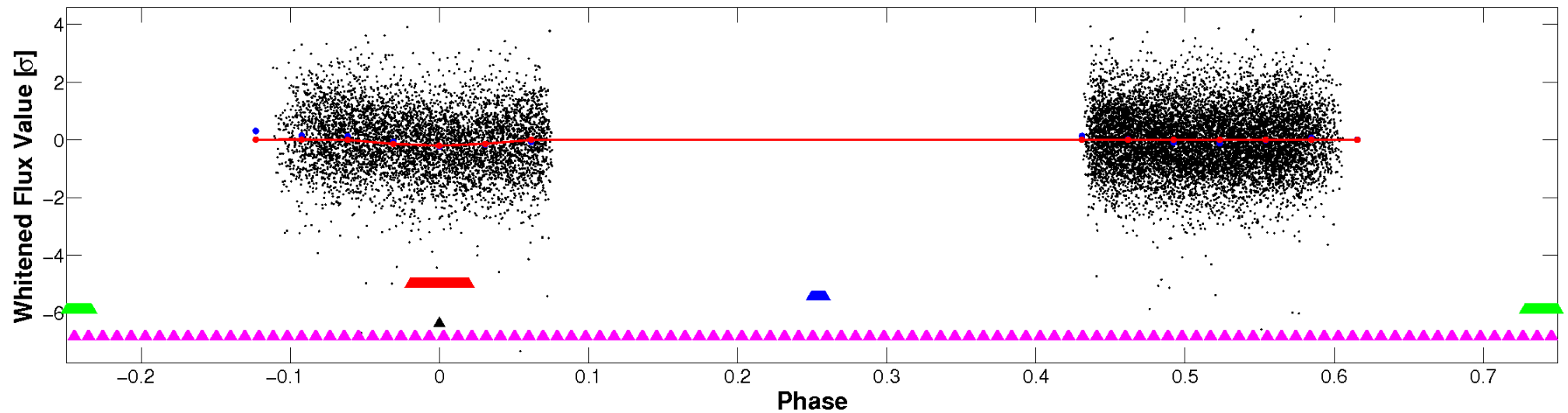


# Non-Whitened Vs. Whitened Light Curve

## Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

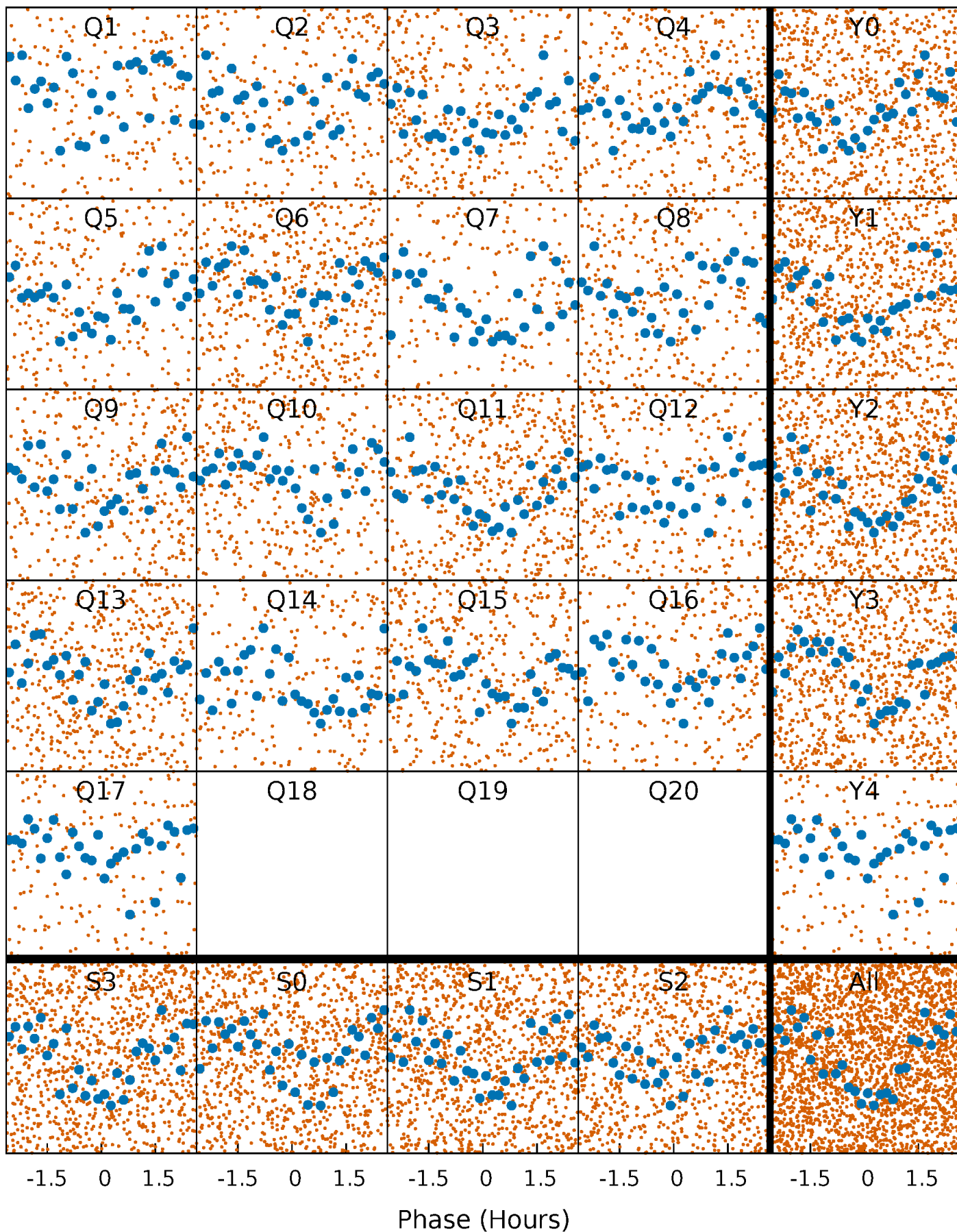


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

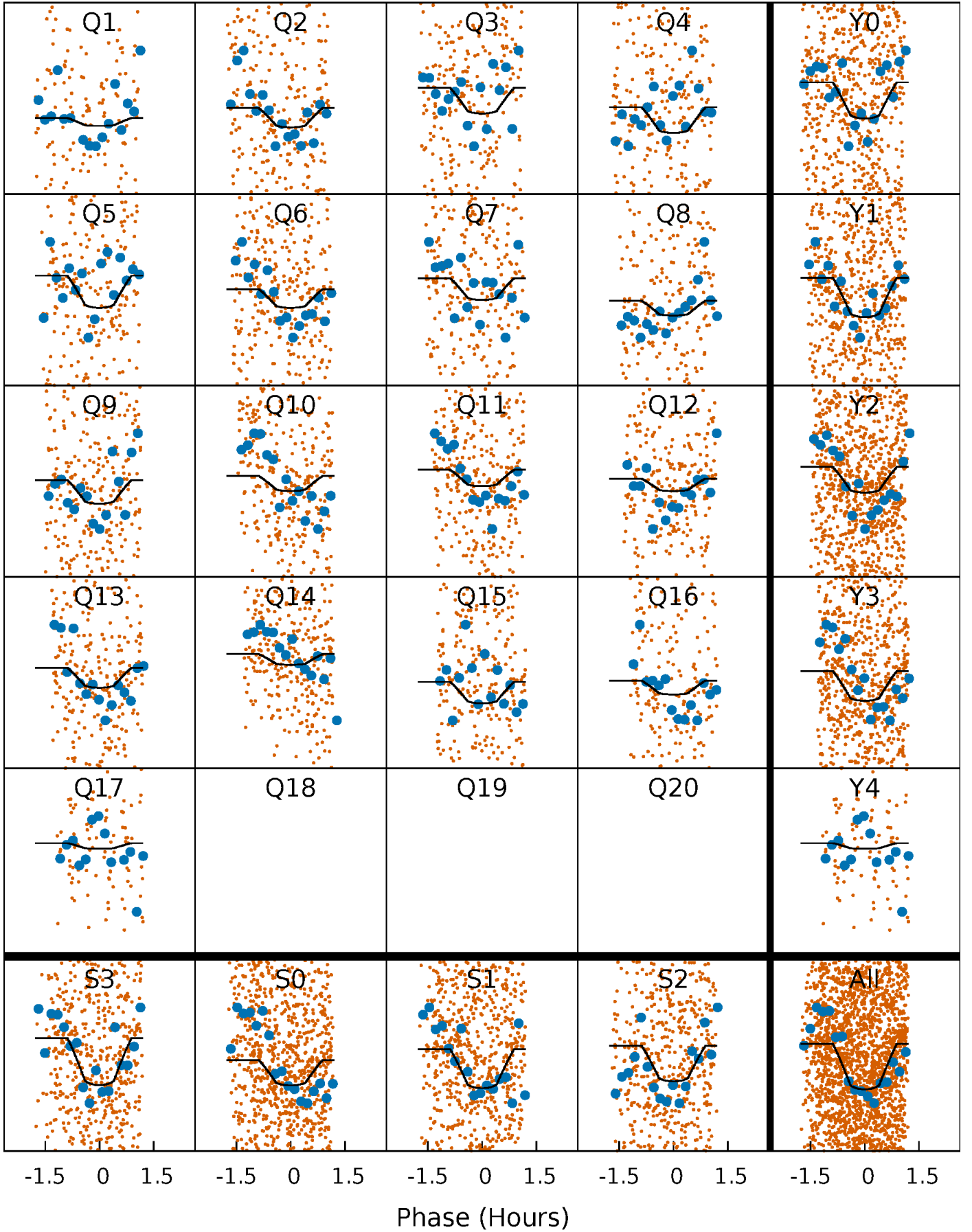
TCE 006067817-04   P= 0.663869 Days    $T_0=131.891650$  (BKJD)





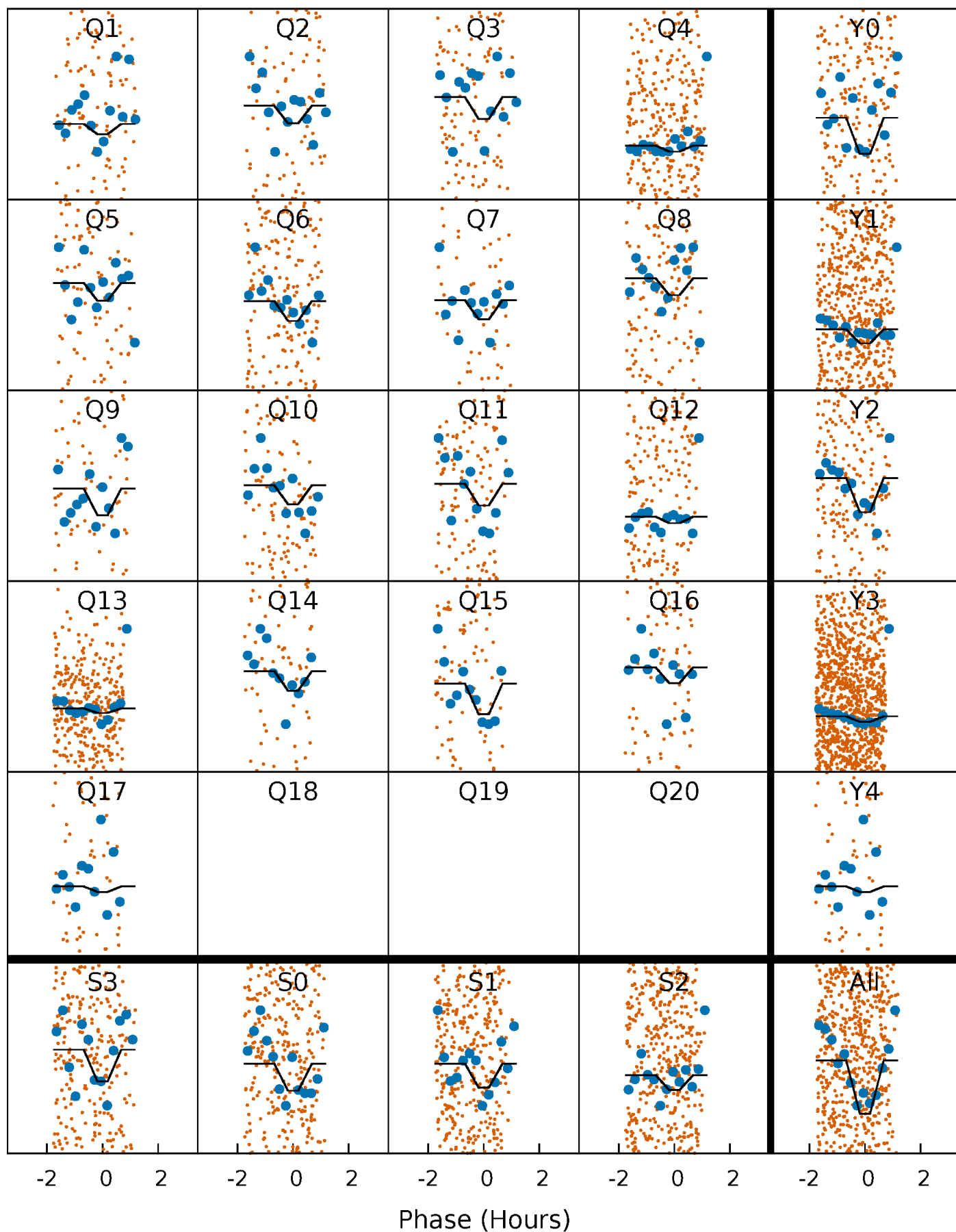
# DV Quarter-Phased Transit Curves

TCE 006067817-04   P= 0.663869 Days    $T_0=131.891650$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

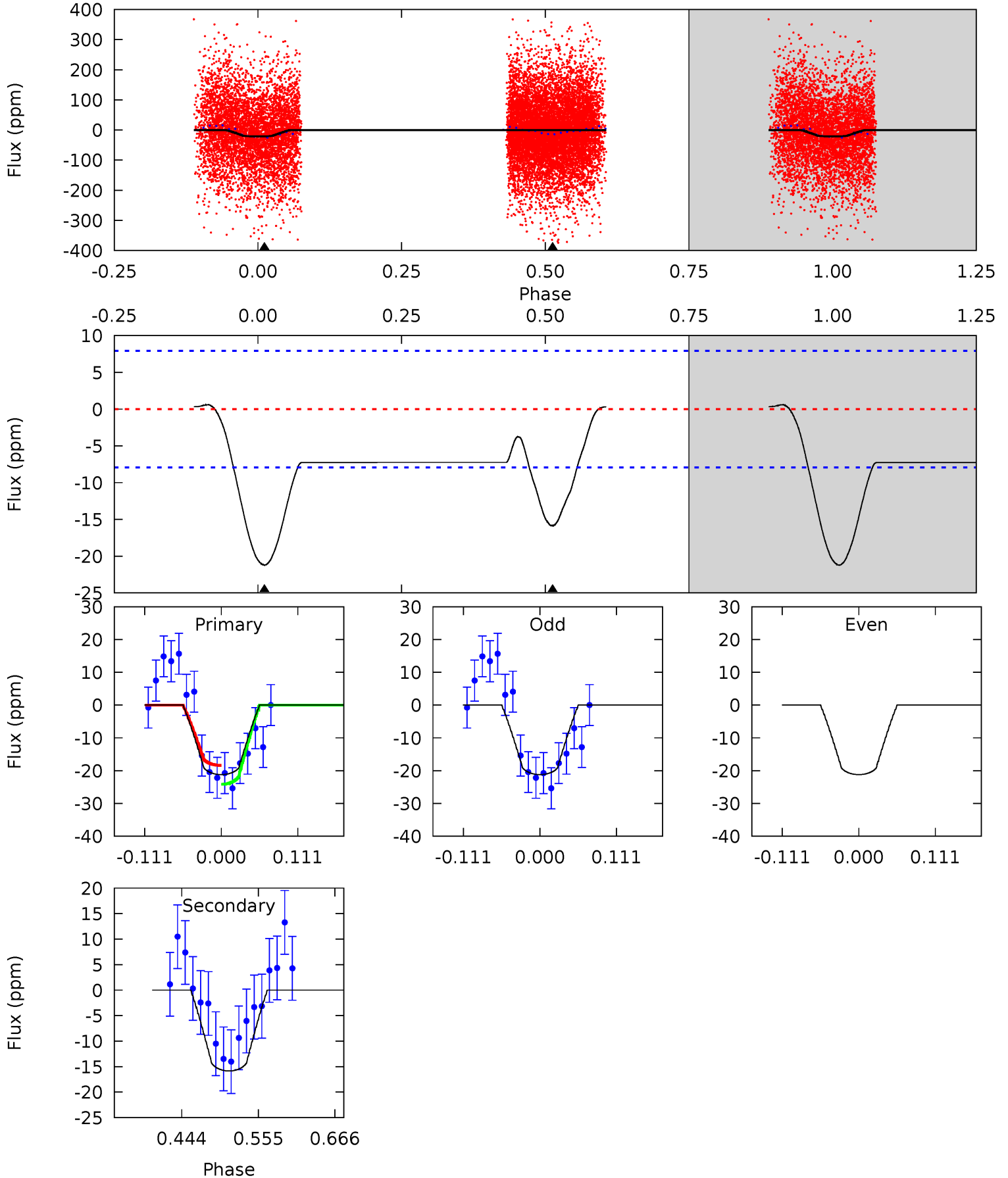
TCE 006067817-04     $P = 0.663883$  Days     $T_0 = 131.886802$  (BKJD)



# DV Model-Shift Uniqueness Test

006067817-04, P = 0.663869 Days, E = 131.227781 Days

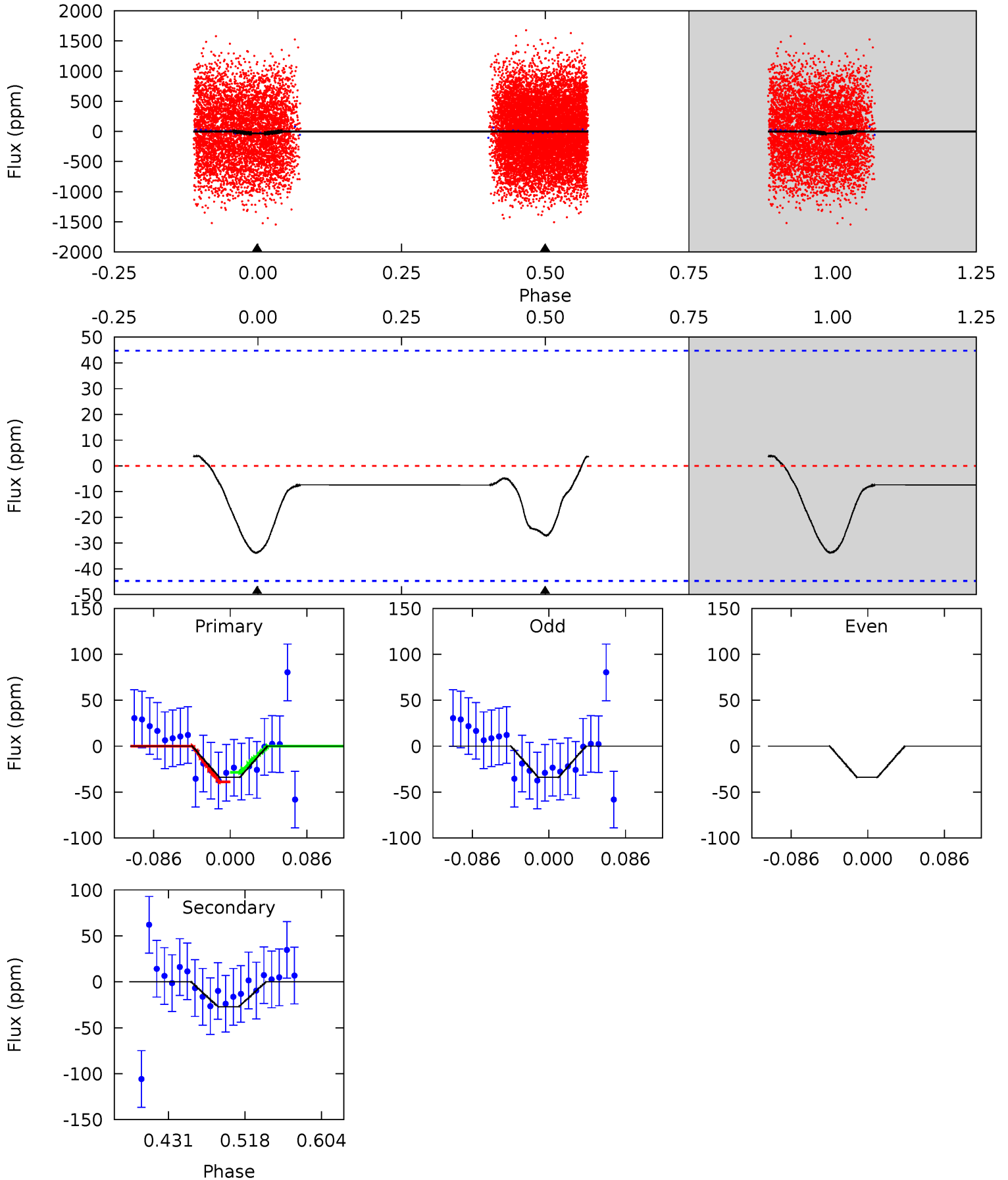
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	9.08	0	0	4.54	1.59	1.30	12.2	12.2	9.08	9.08	0	1.08	0.03	1.66



# Alt Model-Shift Uniqueness Test

006067817-04, P = 0.663883 Days, E = 131.222919 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
3.48	2.80	0	0	4.60	1.72	0.40	3.48	3.48	2.80	2.80	0	1.57	0.11	0.53



### Stellar Parameters For KIC 006067817

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8074^{+222}_{-361}$	$3.851^{+0.301}_{-0.129}$	$0.210^{+0.150}_{-0.500}$	$2.926^{+0.740}_{-1.111}$	$2.213^{+0.306}_{-0.569}$	$0.124^{+0.278}_{-0.049}$
	+3%/-4%	+8%/-3%	+71%/-238%	+25%/-38%	+14%/-26%	+223%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006067817-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-16 \pm 2$	$1.42^{+0.47}_{-0.43}$	$5962^{+494}_{-590}$	$6805^{+1518}_{-996}$	$1.625^{+1.535}_{-0.709}$
Alt.	$-27 \pm 10$	$1.92^{+0.53}_{-0.49}$	$5980^{+482}_{-574}$	$6651^{+1354}_{-1260}$	$1.483^{+1.310}_{-0.720}$

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



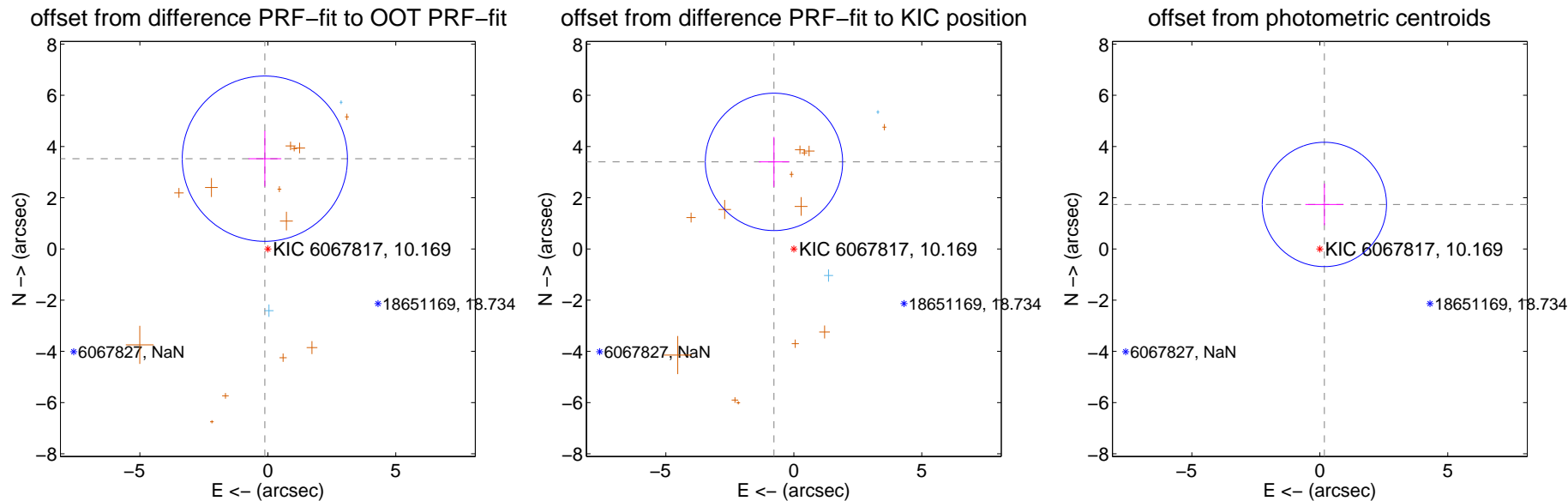
## DV Centroid Data

Supplemental centroid analysis for 006067817-04. **Kepler magnitude: 10.17.** Transit SNR 8.88

**There are 2 quarters with good PRF difference image offsets**

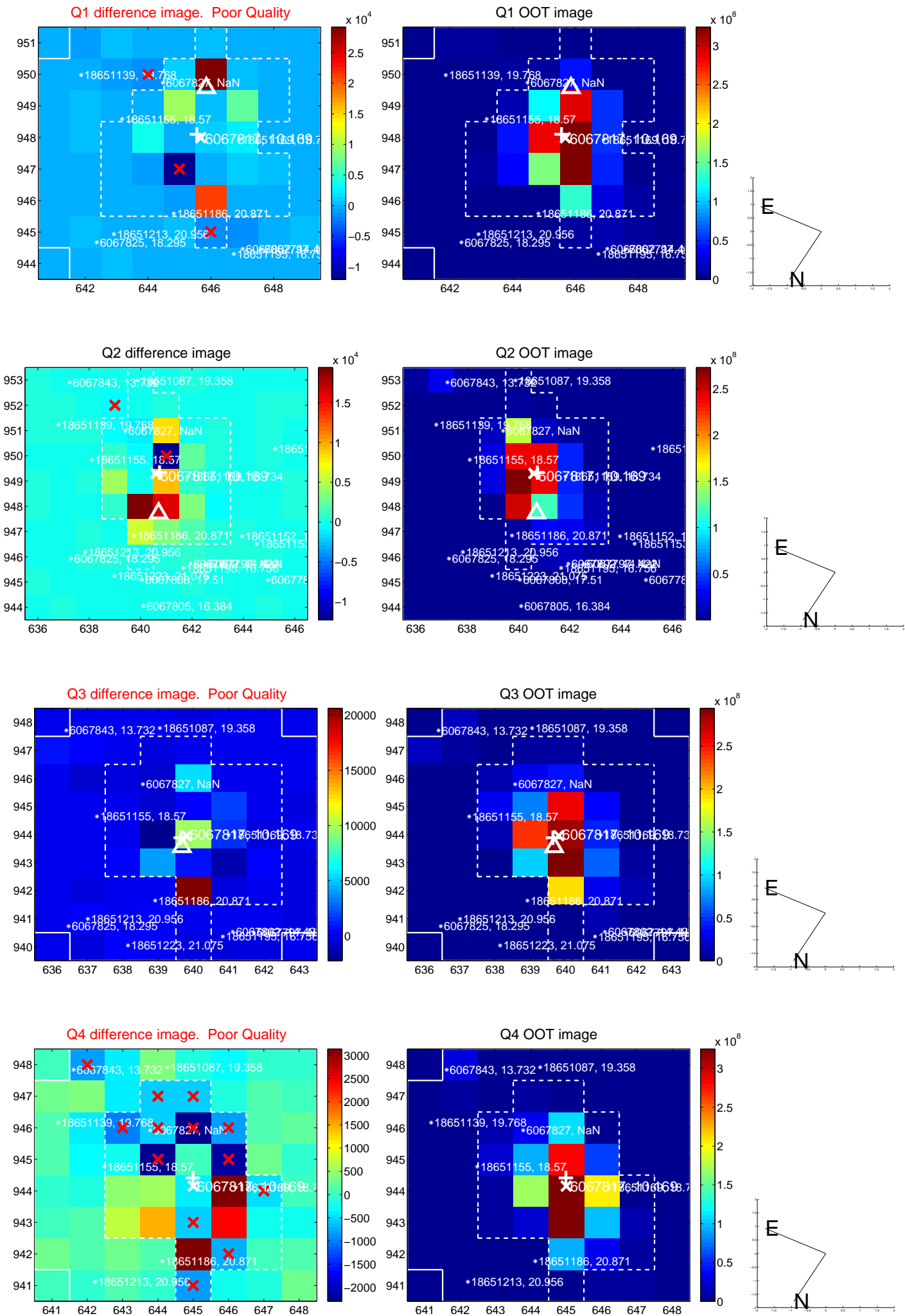
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>3.526 \pm 1.076</math></b>	<b>3.28</b>	$0.117 \pm 0.642$	$3.524 \pm 1.087$
PRF-fit source offset from KIC position	<b><math>3.486 \pm 0.894</math></b>	<b>3.90</b>	$0.776 \pm 0.592$	$3.399 \pm 0.974$
photometric centroid source offset	$1.75 \pm 0.81$	2.16	$-0.18 \pm 0.74$	$1.74 \pm 0.81$

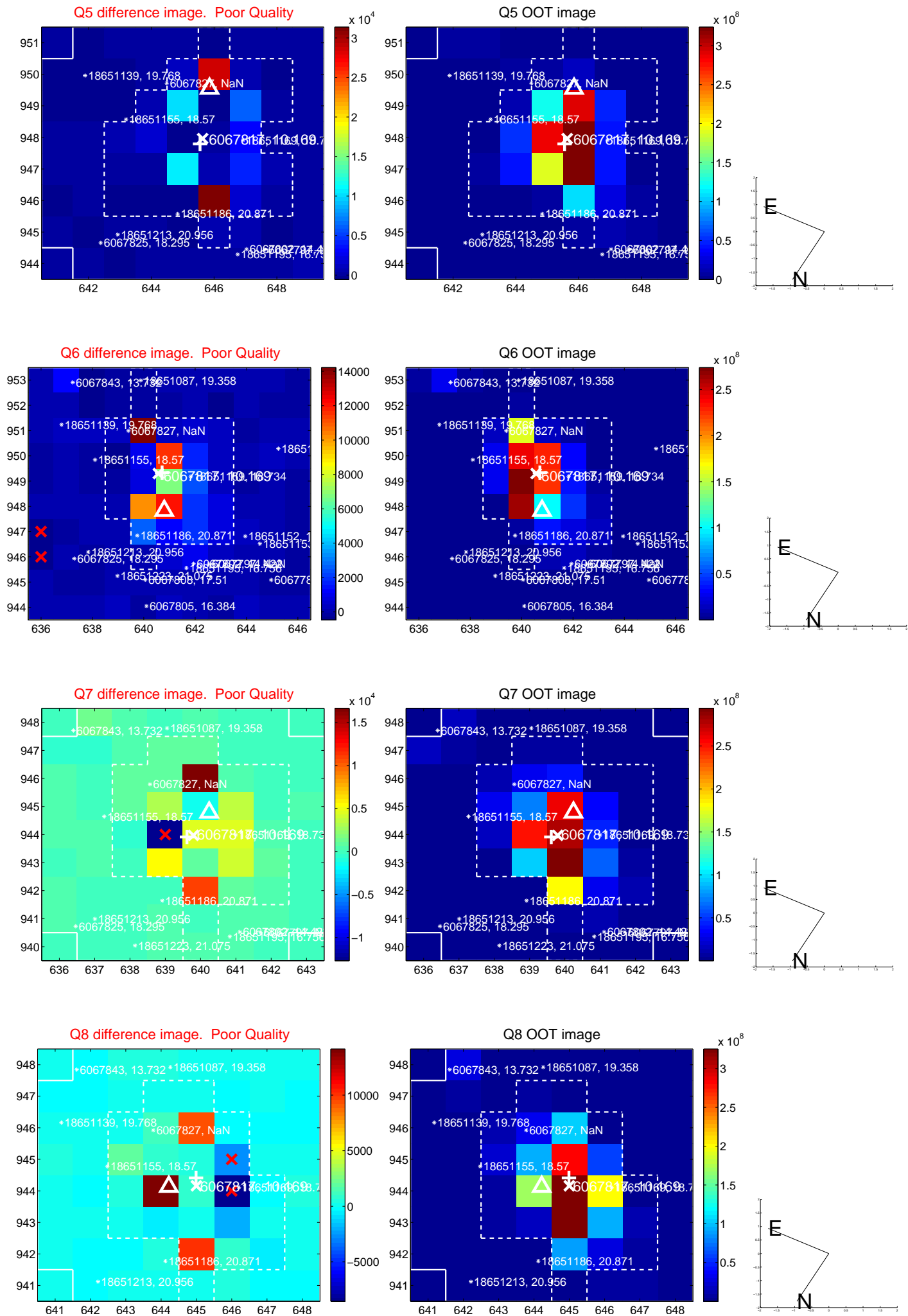


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

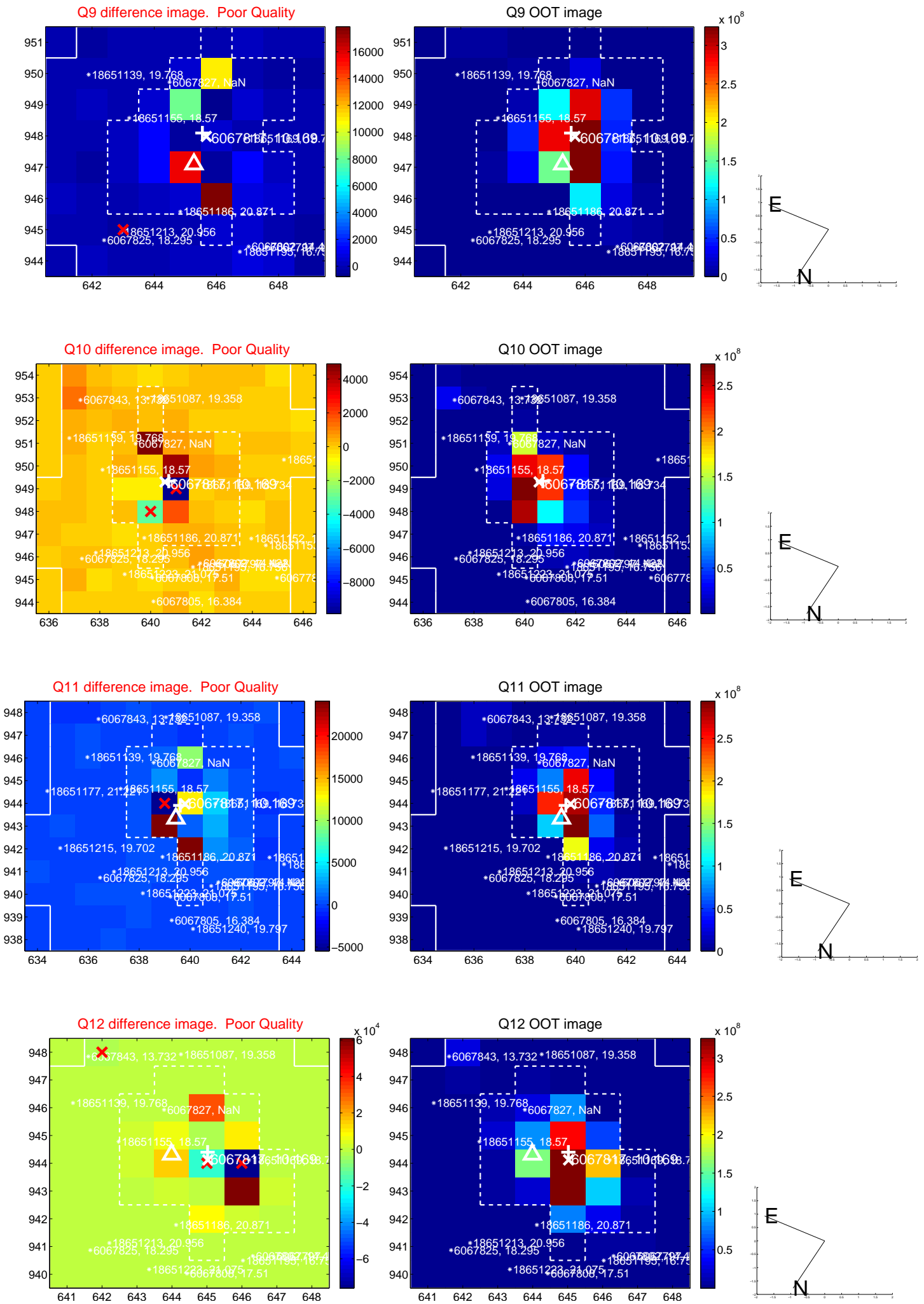
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



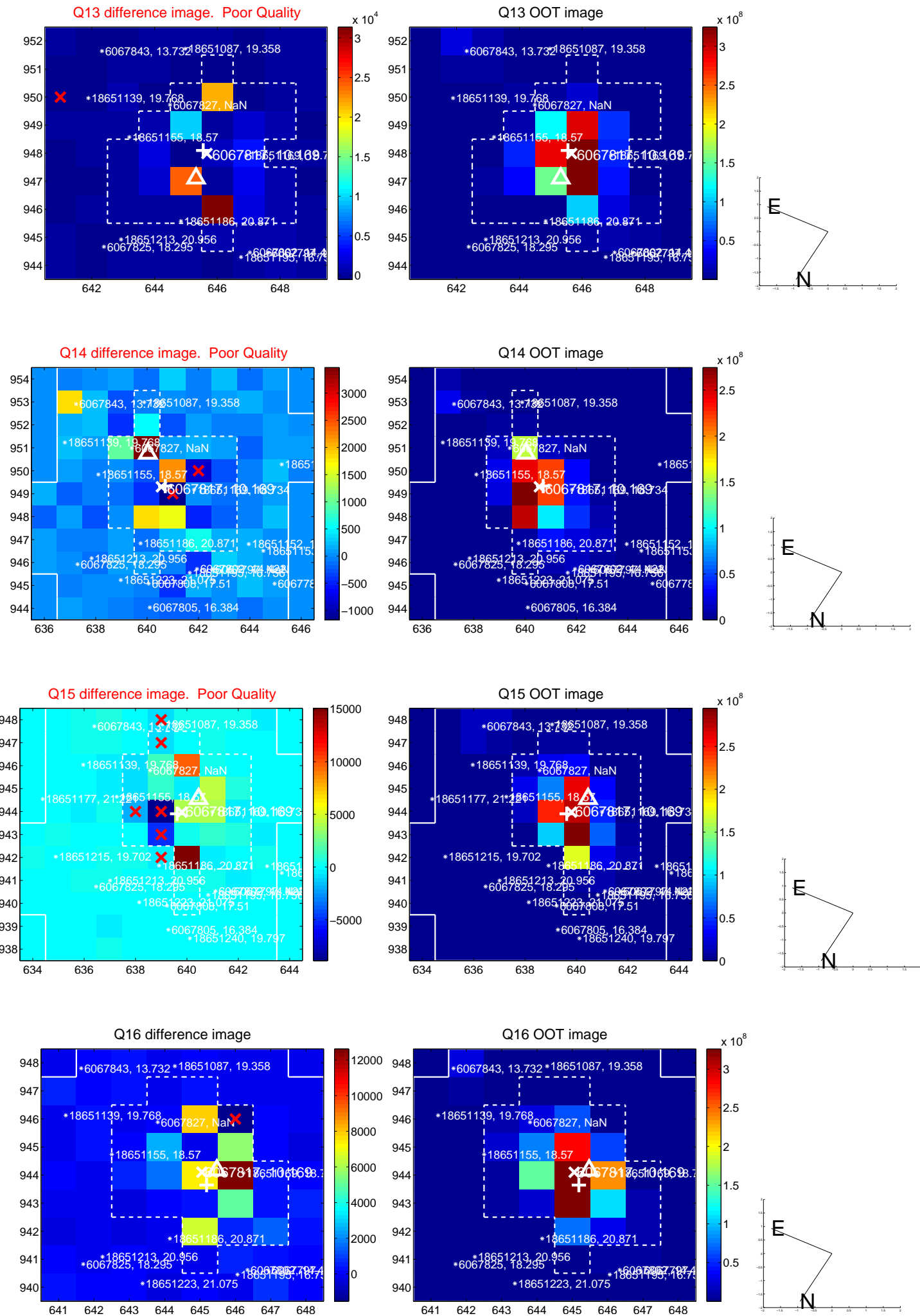
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

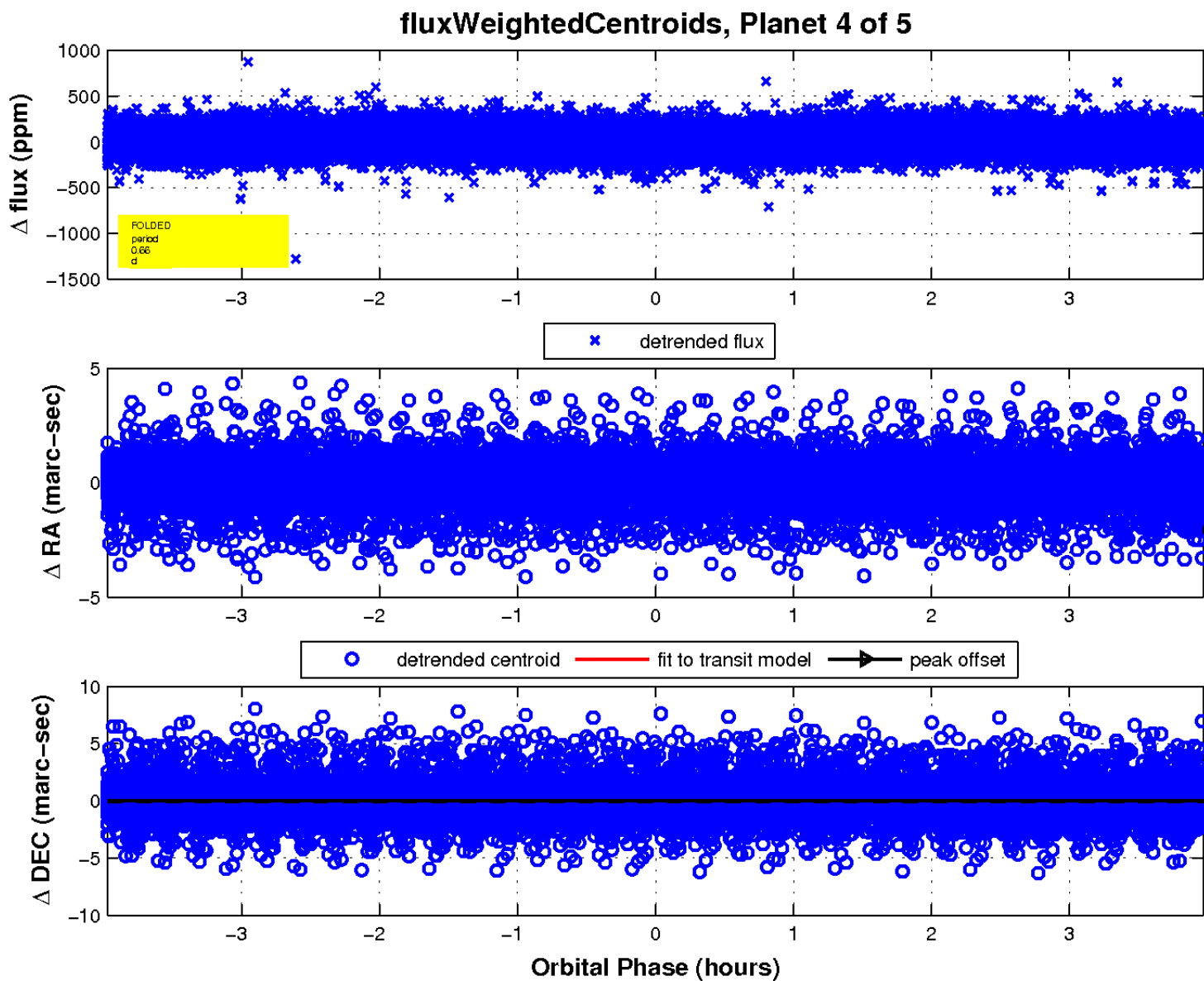
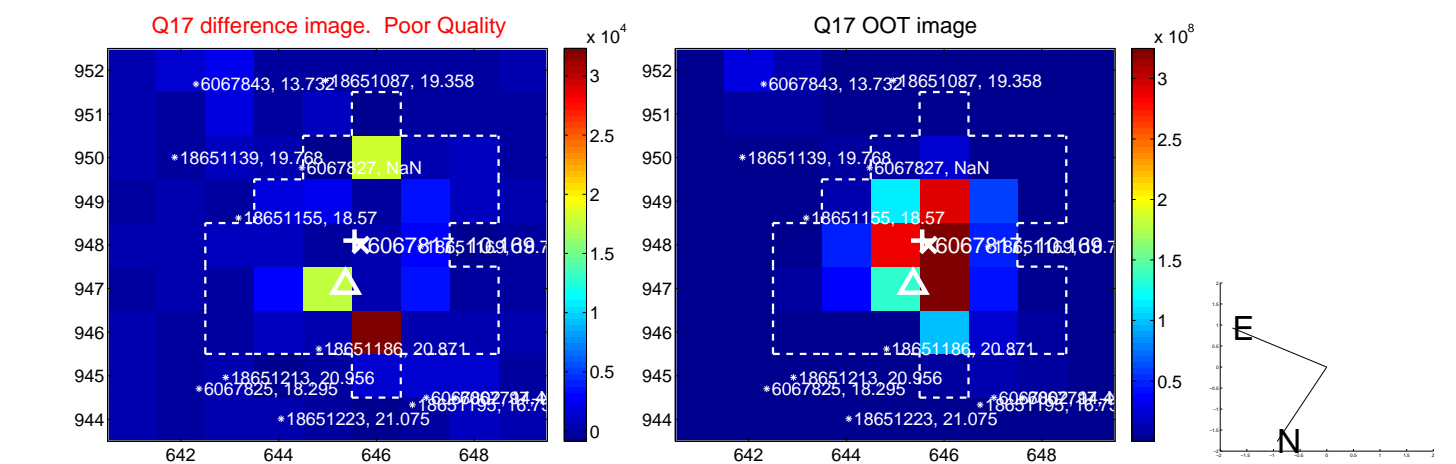


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



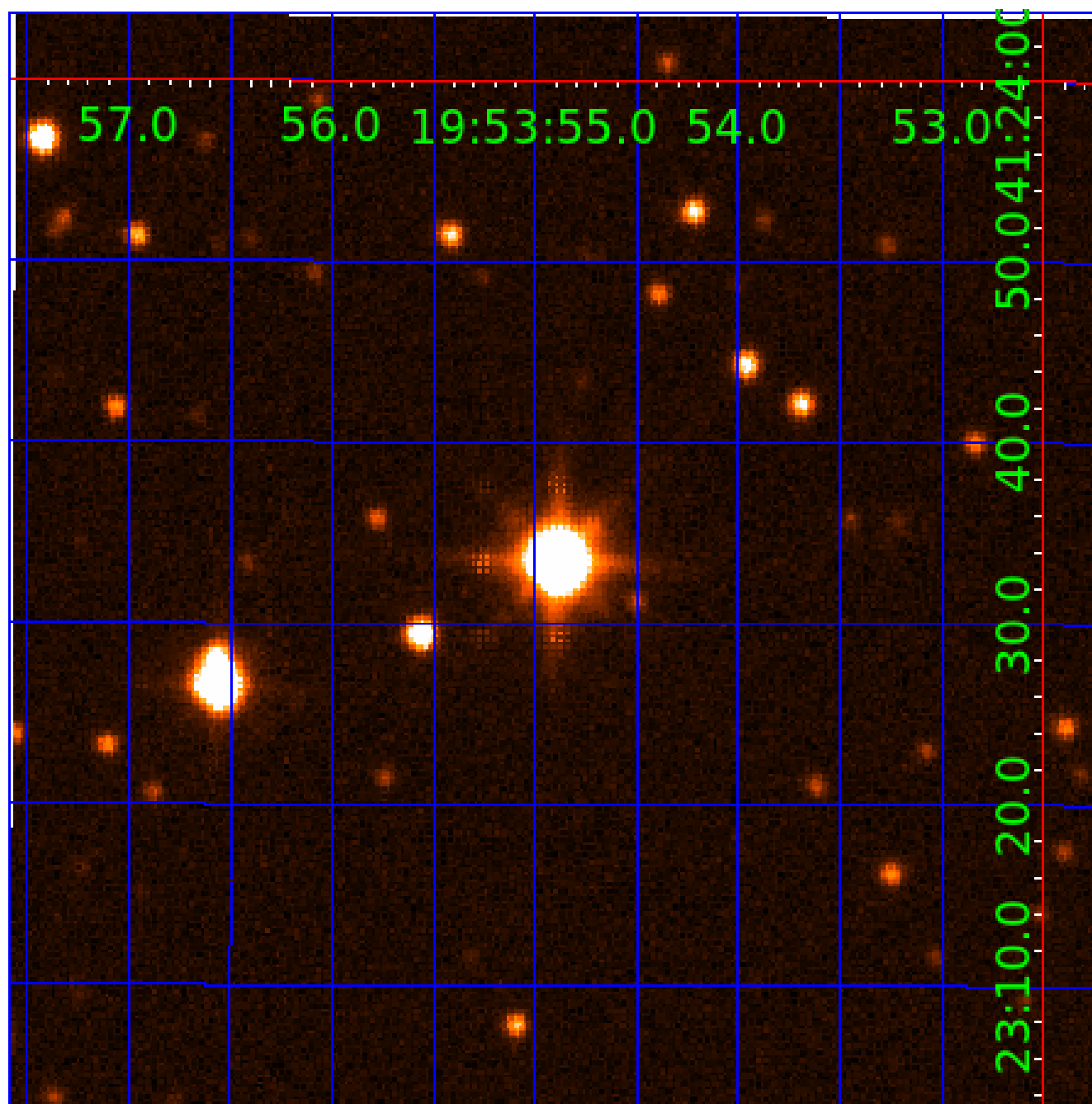


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006067817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006067817-01	OBS	No	1.327762	131.878847	33.2	1.670	9.6	15.8	2.93	8074	1.97	34298.26
006067817-02	OBS	No	0.663872	132.057377	19.8	1.770	15.1	13.8	2.93	8074	1.52	86427.78
006067817-03	OBS	No	0.663881	131.711039	19.2	1.533	11.5	12.9	2.93	8074	1.50	86426.21
006067817-04	OBS	No	0.663869	131.891650	19.7	1.324	9.9	8.9	2.93	8074	1.51	86428.24
006067817-05	OBS	No	0.942061	132.393392	31.1	8.172	8.4	14.1	2.93	8074	1.69	54199.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006067817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006067817-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006067817-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

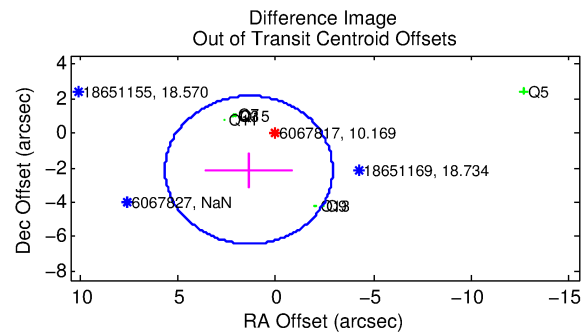
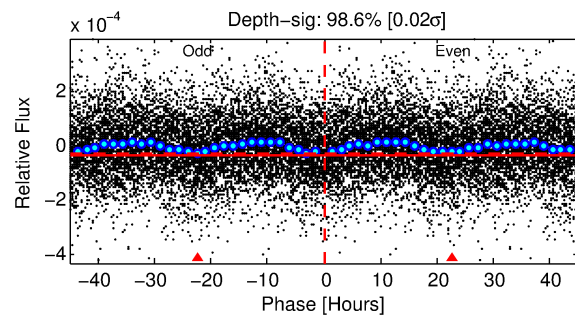
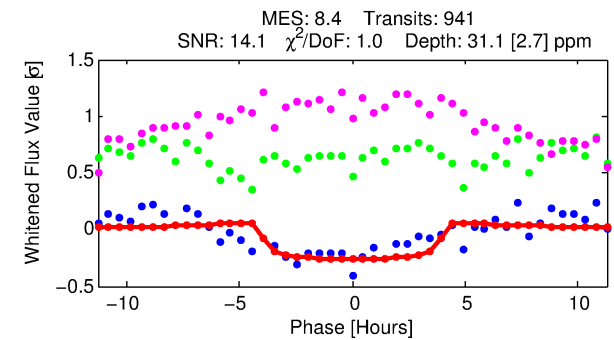
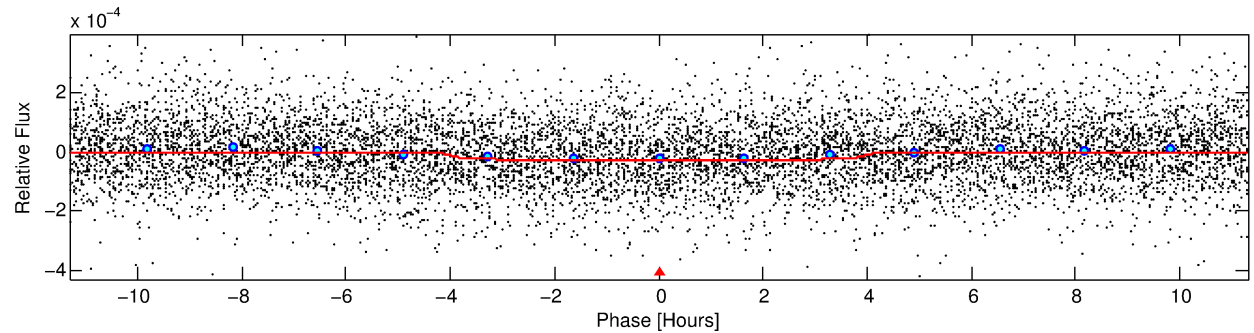
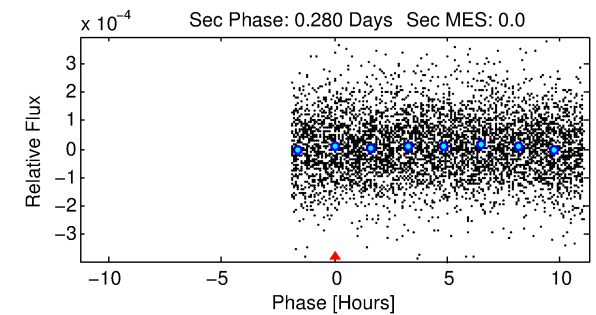
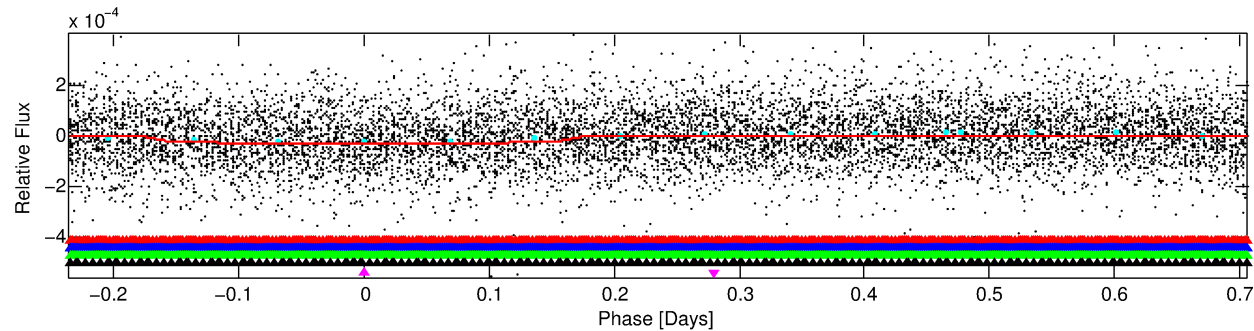
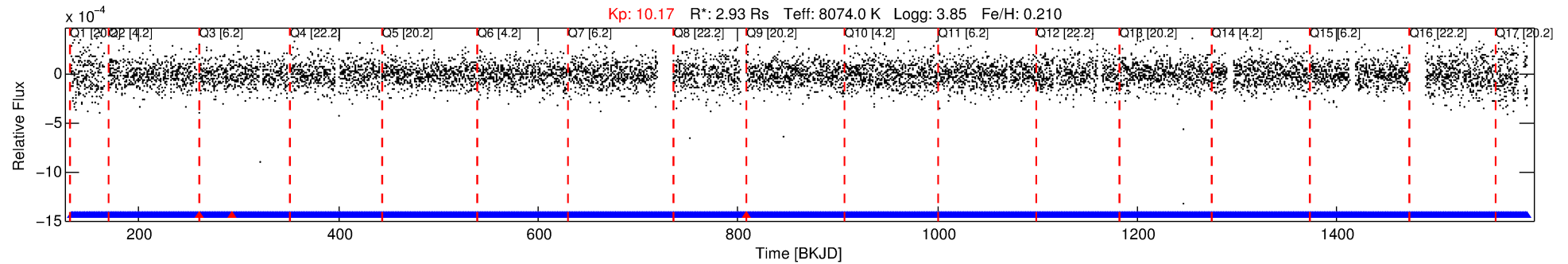
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006067817-05

No Significant Match Found

# DV One-Page Summary

KIC: 6067817 Candidate: 5 of 5 Period: 0.942 d



## DV Fit Results:

Period = 0.94206 [0.00001] d  
 Epoch = 132.3934 [0.0054] BKJD  
 Rp/R\* = 0.0053 [0.0040]  
 a/R\* = 1.08 [0.70]  
 b = 0.50 [6.57]  
 Seff = 54199.26 [30155.16]  
 Teq = 3891 [541] K  
 Rp = 1.69 [1.44] Re  
 a = 0.0245 [0.0084] AU  
 Ag = N/A  
 Tefp = N/A

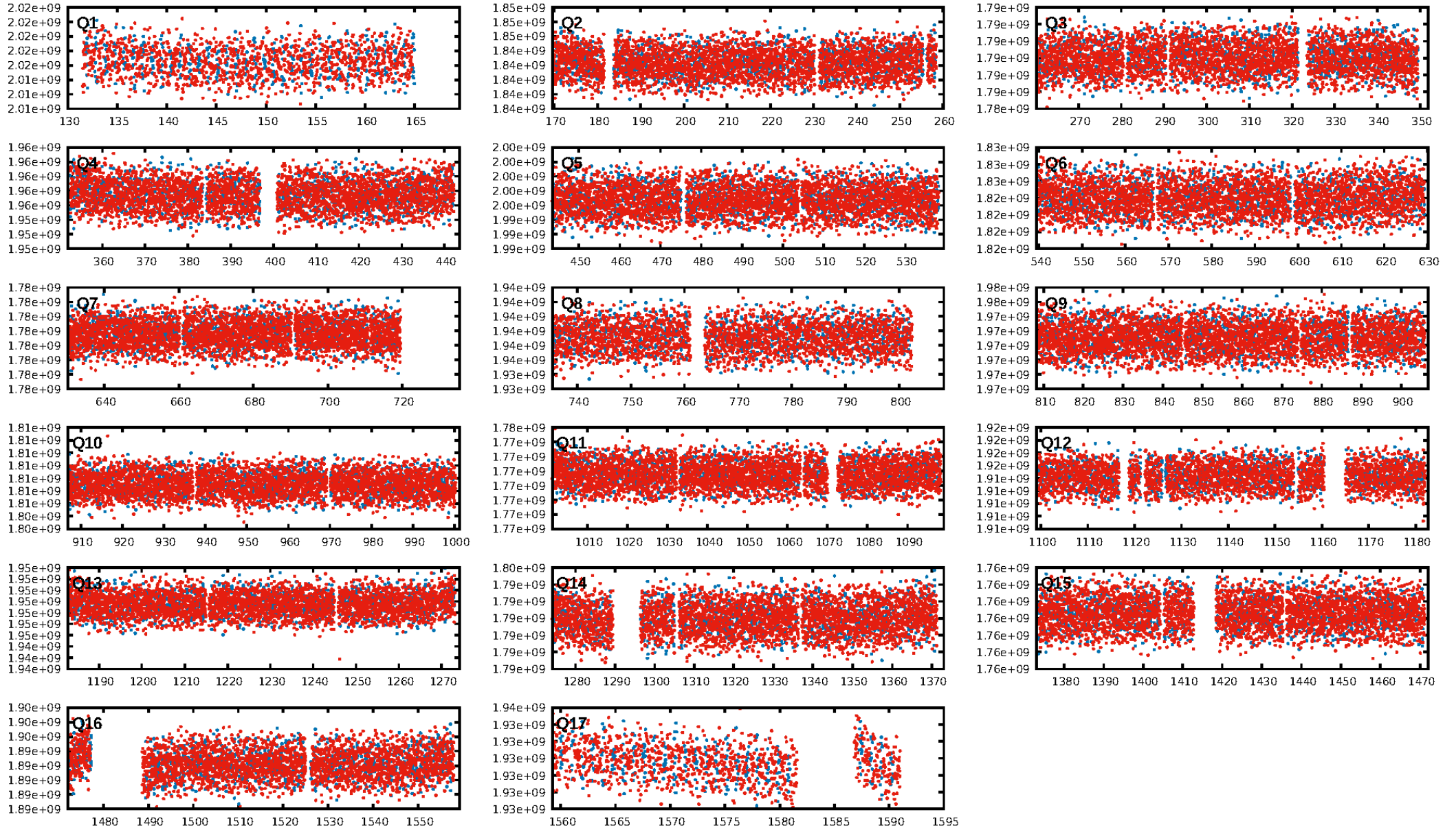
## DV Diagnostic Results:

ShortPeriod-sig: 57.8% [0.80σ]  
 LongPeriod-sig: 73.3% [1.11σ]  
 ModelChiSquare2-sig: N/A  
 ModelChiSquareGof-sig: N/A  
 Bootstrap-pfa: N/A  
 RollingBand-fgt: 1.00 [895/898]  
 GhostDiagnostic-chr: 1.522  
 Centroid-sig: N/A  
 Centroid-so: 1.336 arcsec [4.71σ]  
 OotOffset-rm: 2.534 arcsec [1.77σ]  
 KicOffset-rm: 2.750 arcsec [1.77σ]  
 OotOffset-st: 0/4/0/3 [7]  
 KicOffset-st: 0/4/0/3 [7]  
 DiffImageQuality-fgm: 0.14 [1/7]  
 DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:25:25 Z

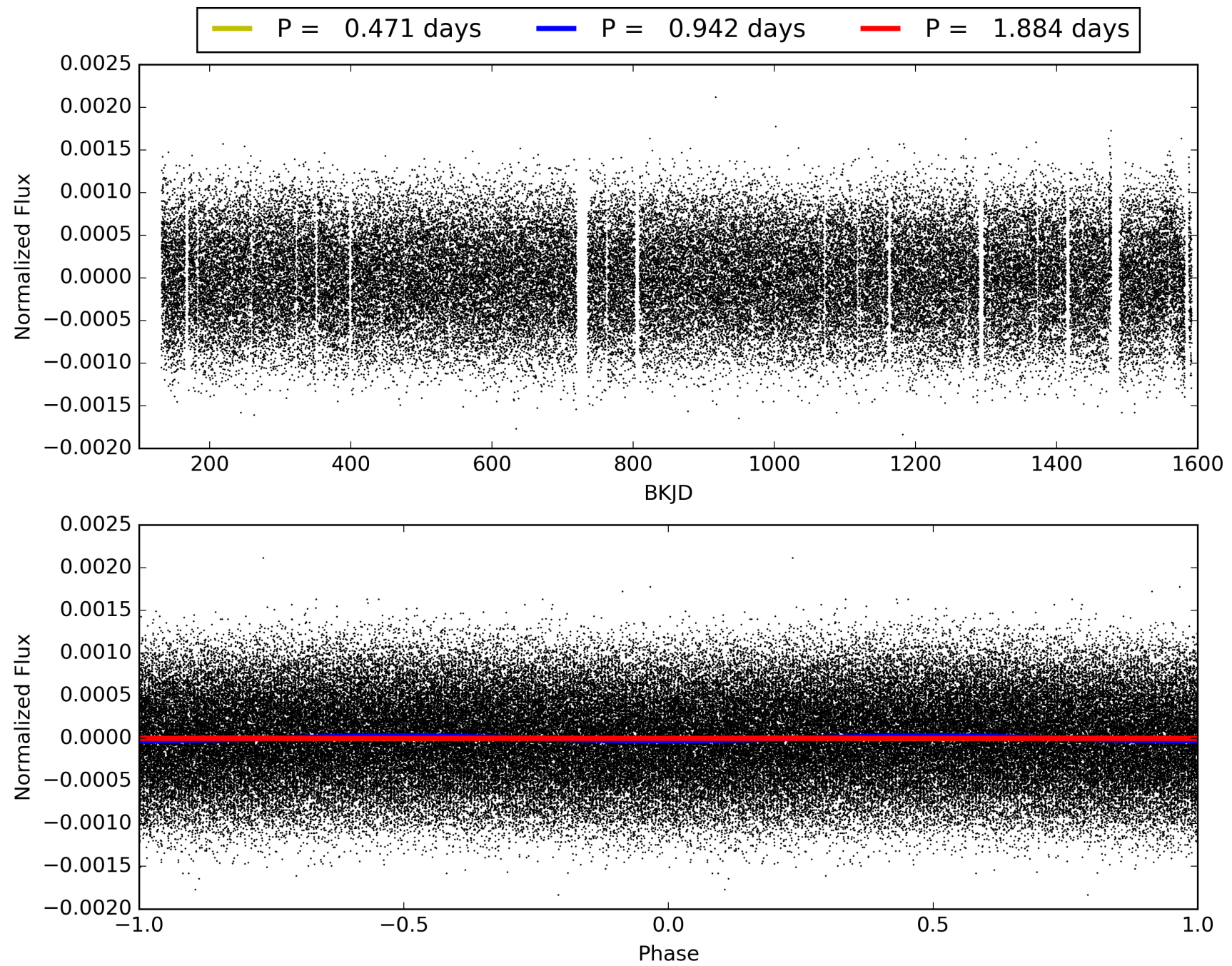
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006067817-05, PDC Light Curves



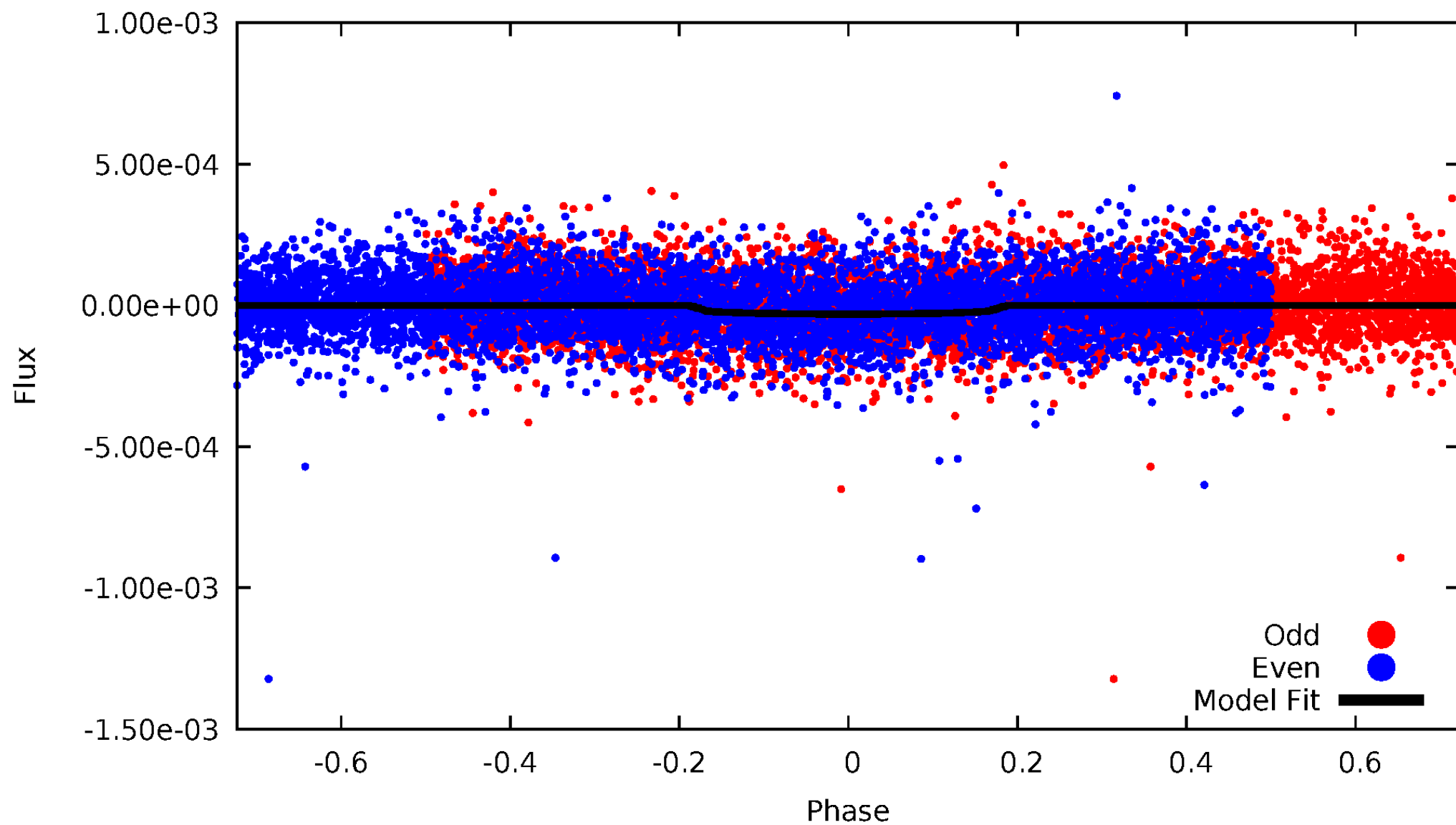


TCE 006067817-05



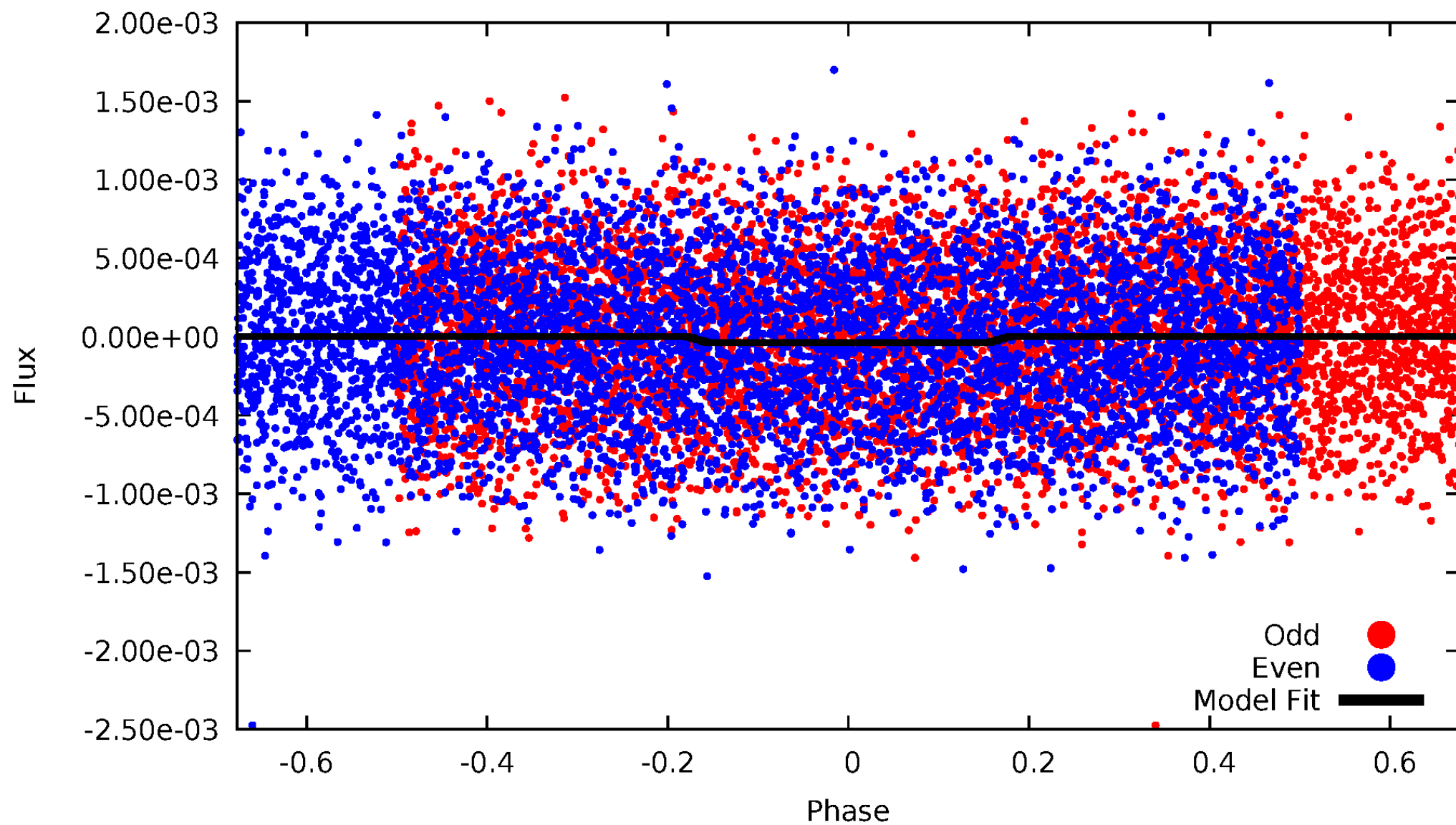
# DV Odd/Even

TCE 006067817-05



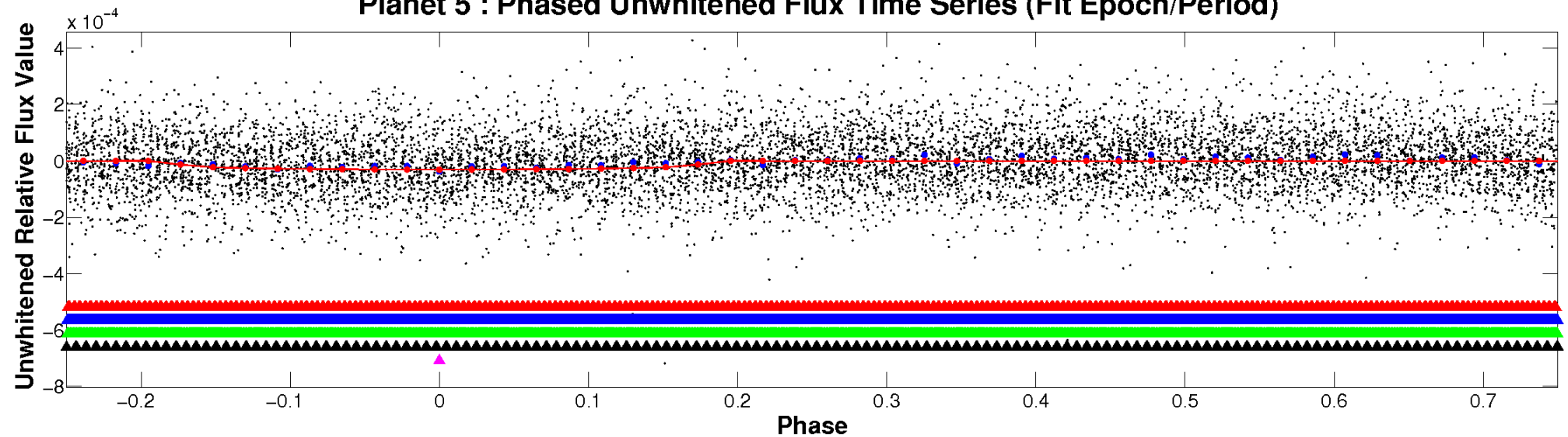
# ALT Odd/Even

TCE 006067817-05

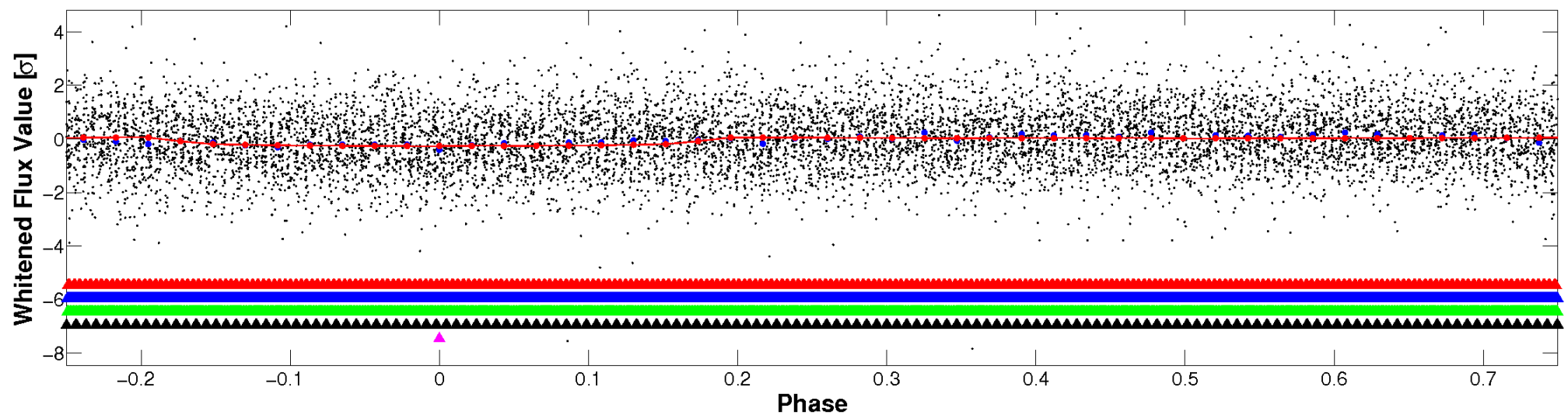


# Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



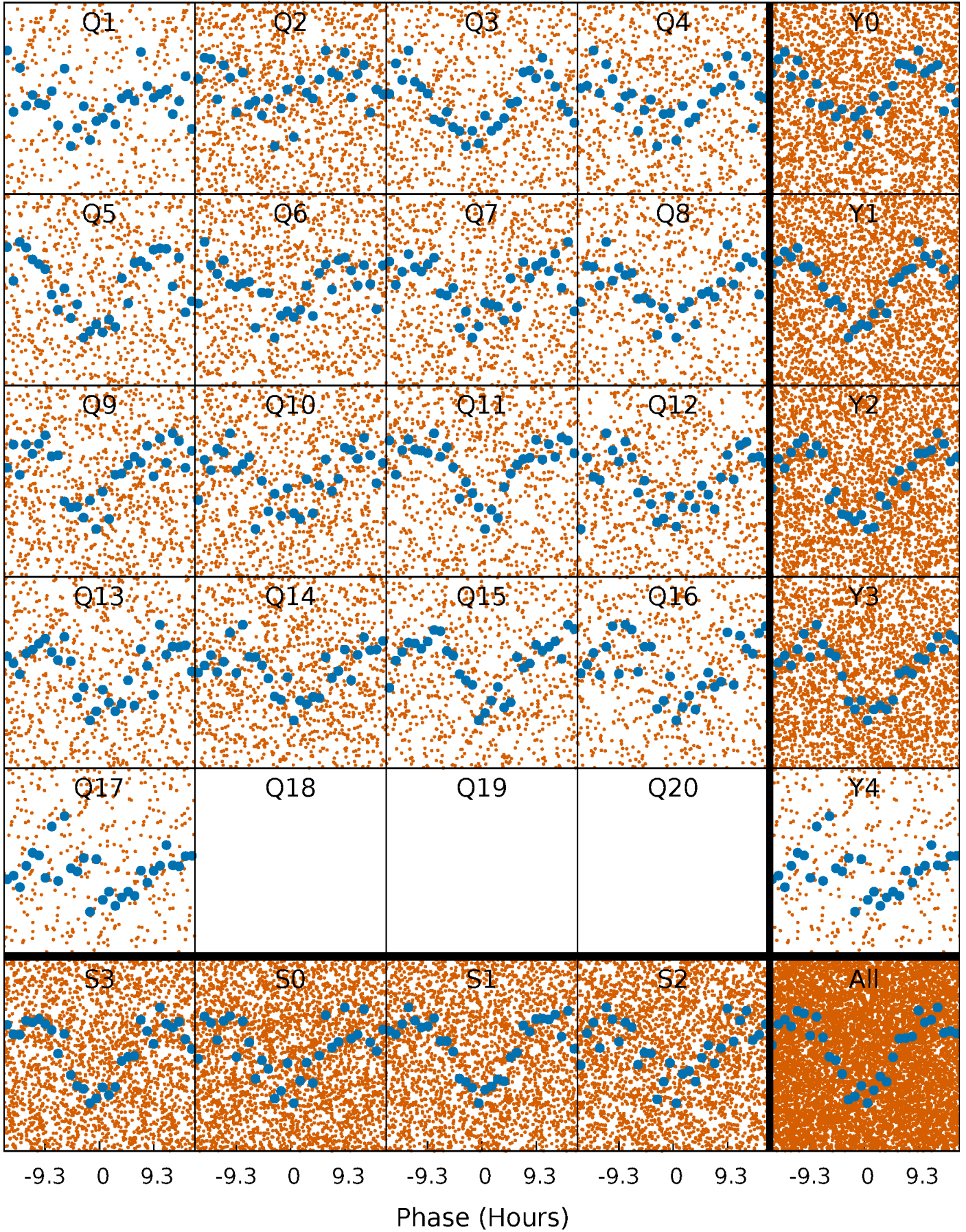
Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

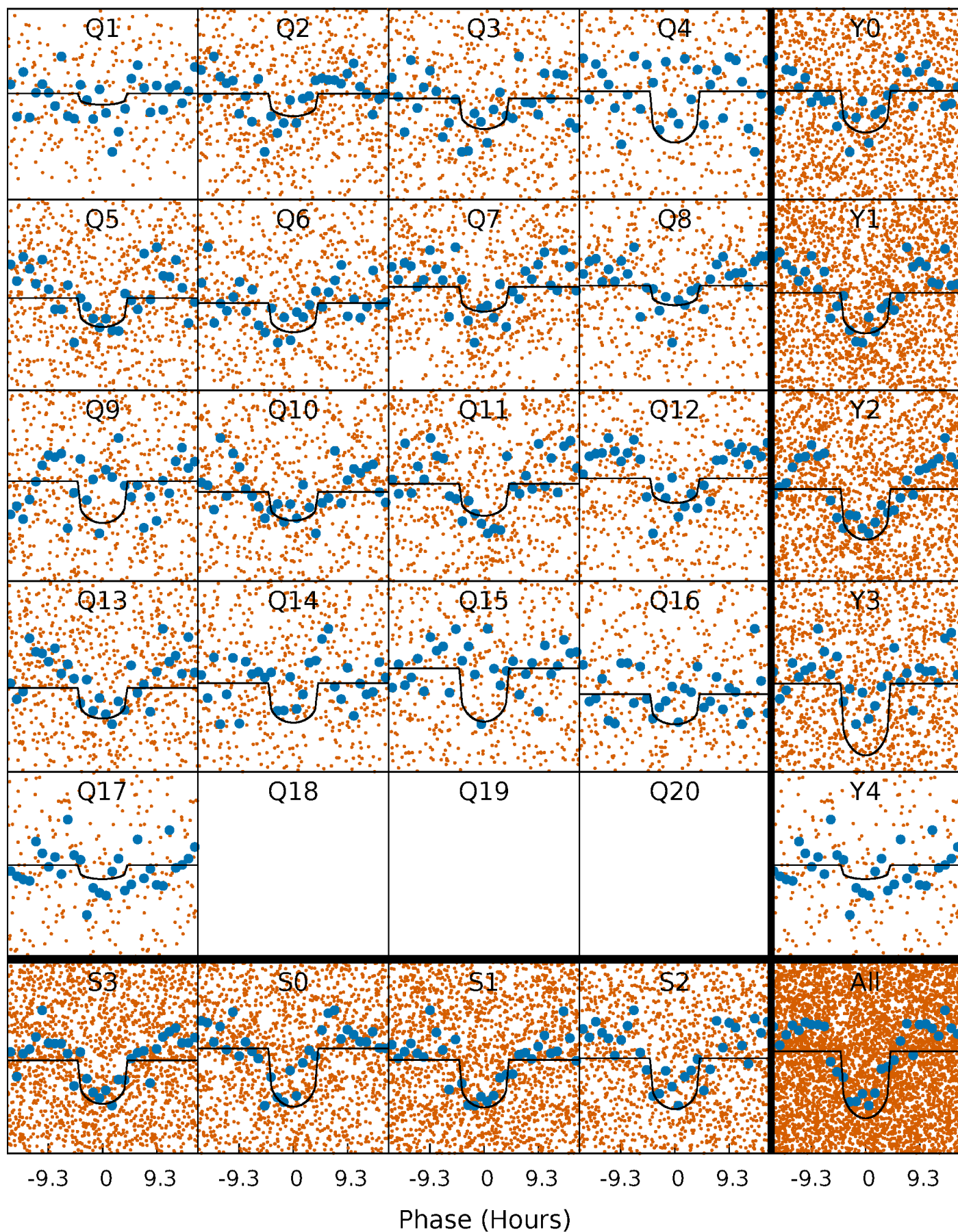
TCE 006067817-05   P= 0.942061 Days    $T_0=132.393392$  (BKJD)





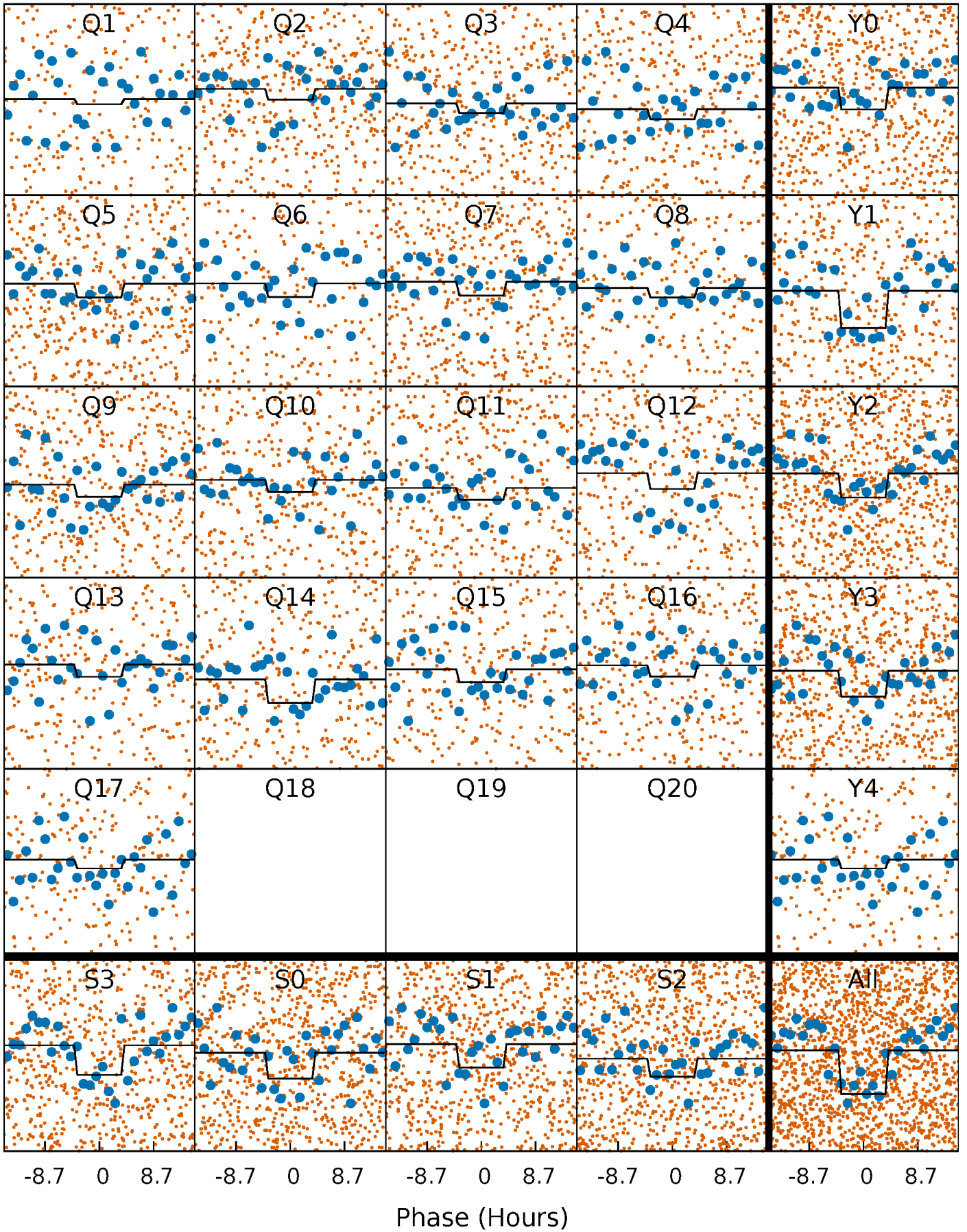
# DV Quarter-Phased Transit Curves

TCE 006067817-05   P= 0.942061 Days    $T_0=132.393392$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

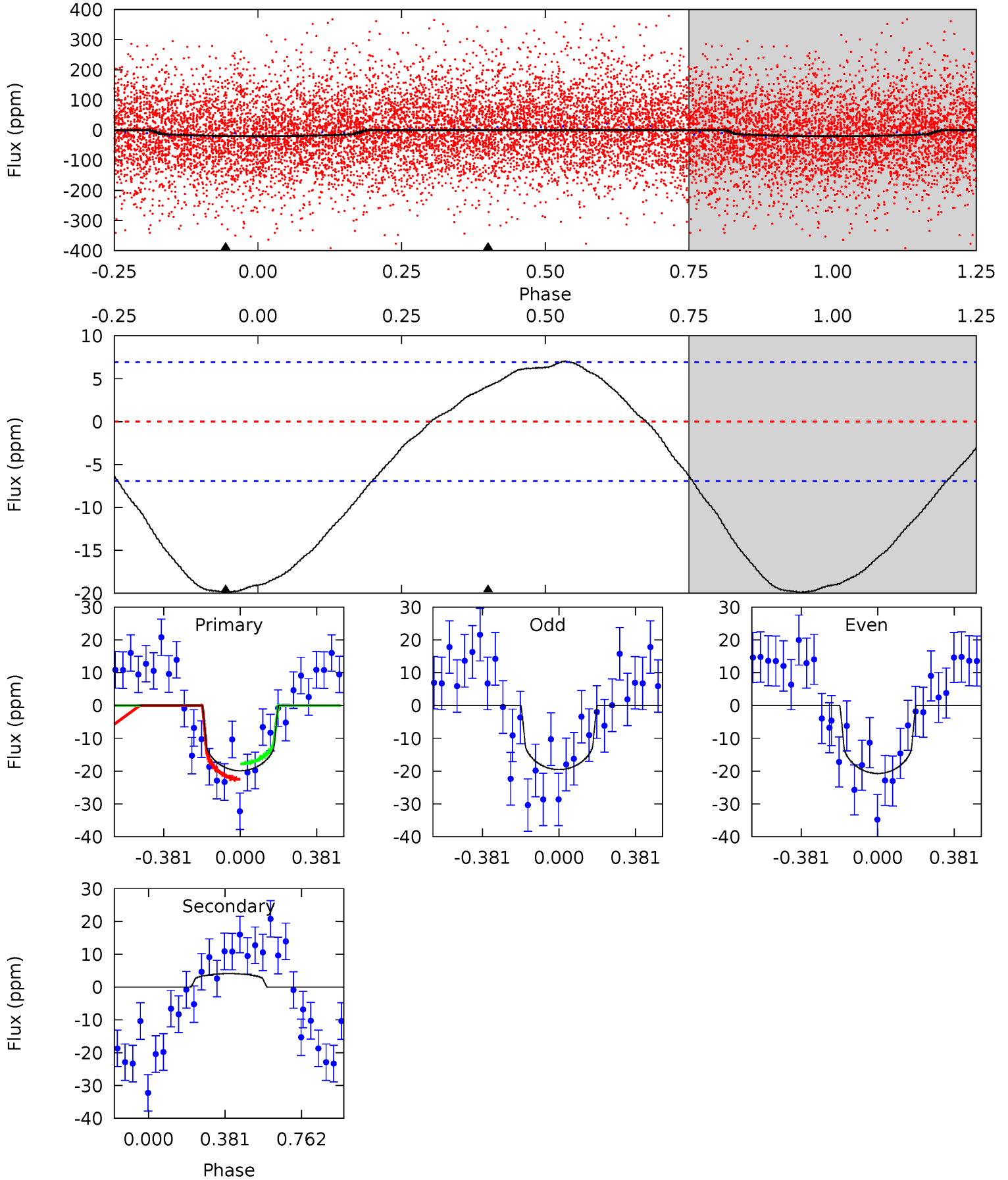
TCE 006067817-05     $P = 0.942035$  Days     $T_0 = 132.400214$  (BKJD)



# DV Model-Shift Uniqueness Test

006067817-05, P = 0.942061 Days, E = 131.451331 Days

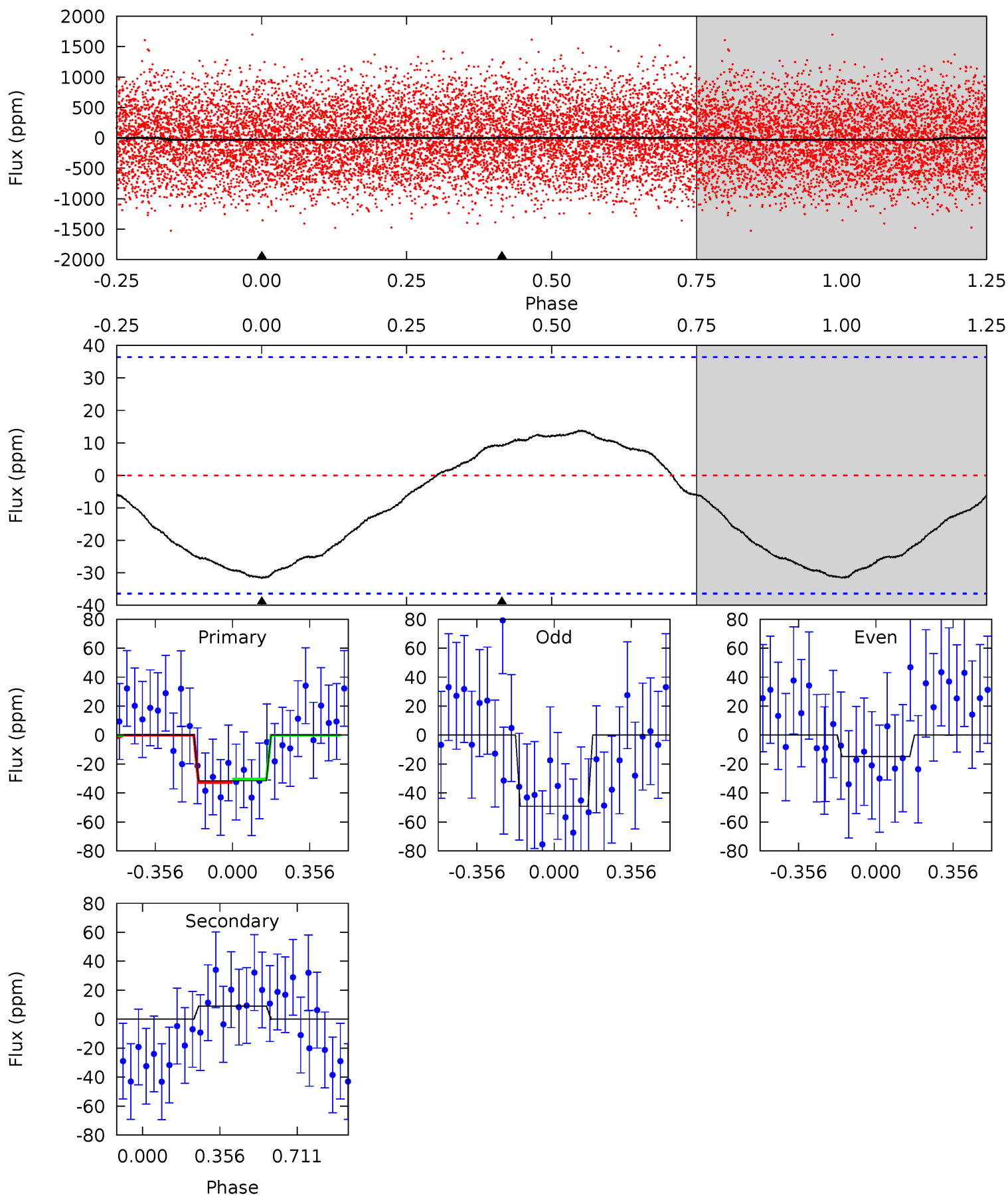
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	-2.53	0	0	4.28	0.88	1.81	12.3	12.3	-2.53	-2.53	0.37	1.16	0.26	1.39



# Alt Model-Shift Uniqueness Test

006067817-05, P = 0.942035 Days, E = 131.458179 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
3.72	-1.06	0	0	4.29	0.92	0.59	3.72	3.72	-1.06	-1.06	1.98	0.84	0.30	0.14





### Stellar Parameters For KIC 006067817

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8074^{+222}_{-361}$	$3.851^{+0.301}_{-0.129}$	$0.210^{+0.150}_{-0.500}$	$2.926^{+0.740}_{-1.111}$	$2.213^{+0.306}_{-0.569}$	$0.124^{+0.278}_{-0.049}$
	+3%/-4%	+8%/-3%	+71%/-238%	+25%/-38%	+14%/-26%	+223%/-39%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006067817-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$4\pm 2$	$1.66^{+1.34}_{-0.95}$	$5298^{+434}_{-501}$	$-5370^{+640}_{-1939}$	$-0.462^{+0.332}_{-1.778}$
Alt.	$9\pm 8$	$1.98^{+1.33}_{-1.11}$	$5317^{+410}_{-476}$	$-5603^{+1110}_{-2632}$	$-0.591^{+0.564}_{-3.073}$

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



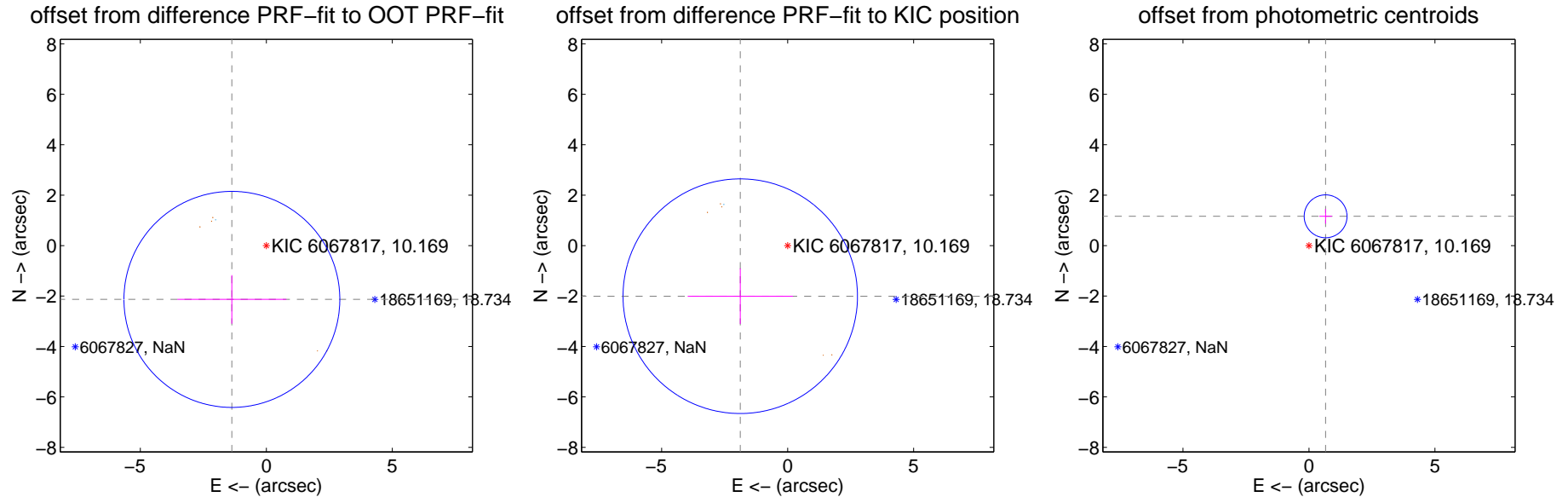
## DV Centroid Data

Supplemental centroid analysis for 006067817-05. **Kepler magnitude: 10.17.** Transit SNR 14.07

**There are 1 quarters with good PRF difference image offsets**

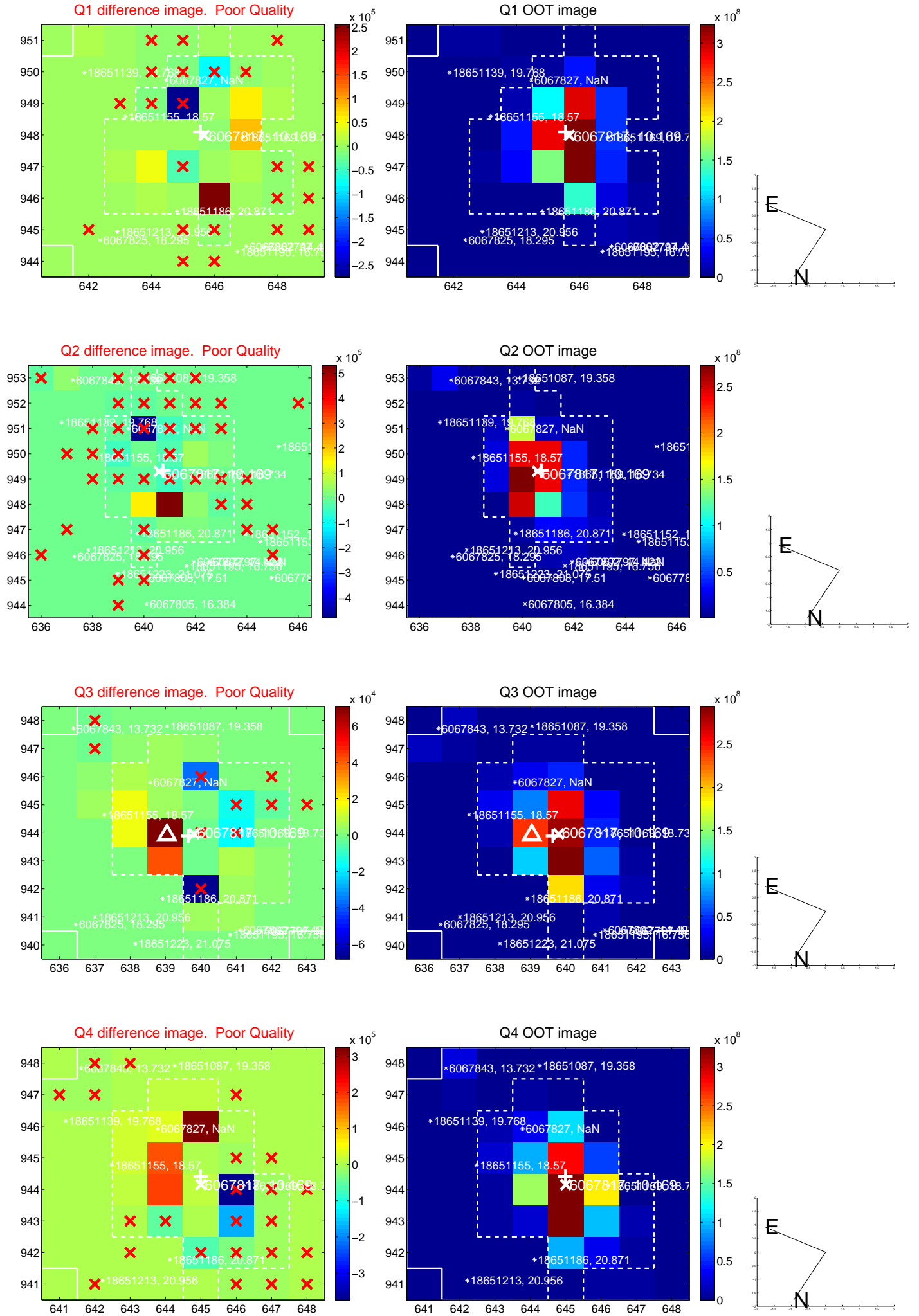
The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.534 \pm 1.428$	1.77	$1.367 \pm 2.163$	$-2.133 \pm 0.962$
PRF-fit source offset from KIC position	$2.750 \pm 1.551$	1.77	$1.880 \pm 2.086$	$-2.006 \pm 1.101$
photometric centroid source offset	<b><math>1.34 \pm 0.28</math></b>	<b>4.71</b>	$-0.66 \pm 0.25$	$1.16 \pm 0.29$

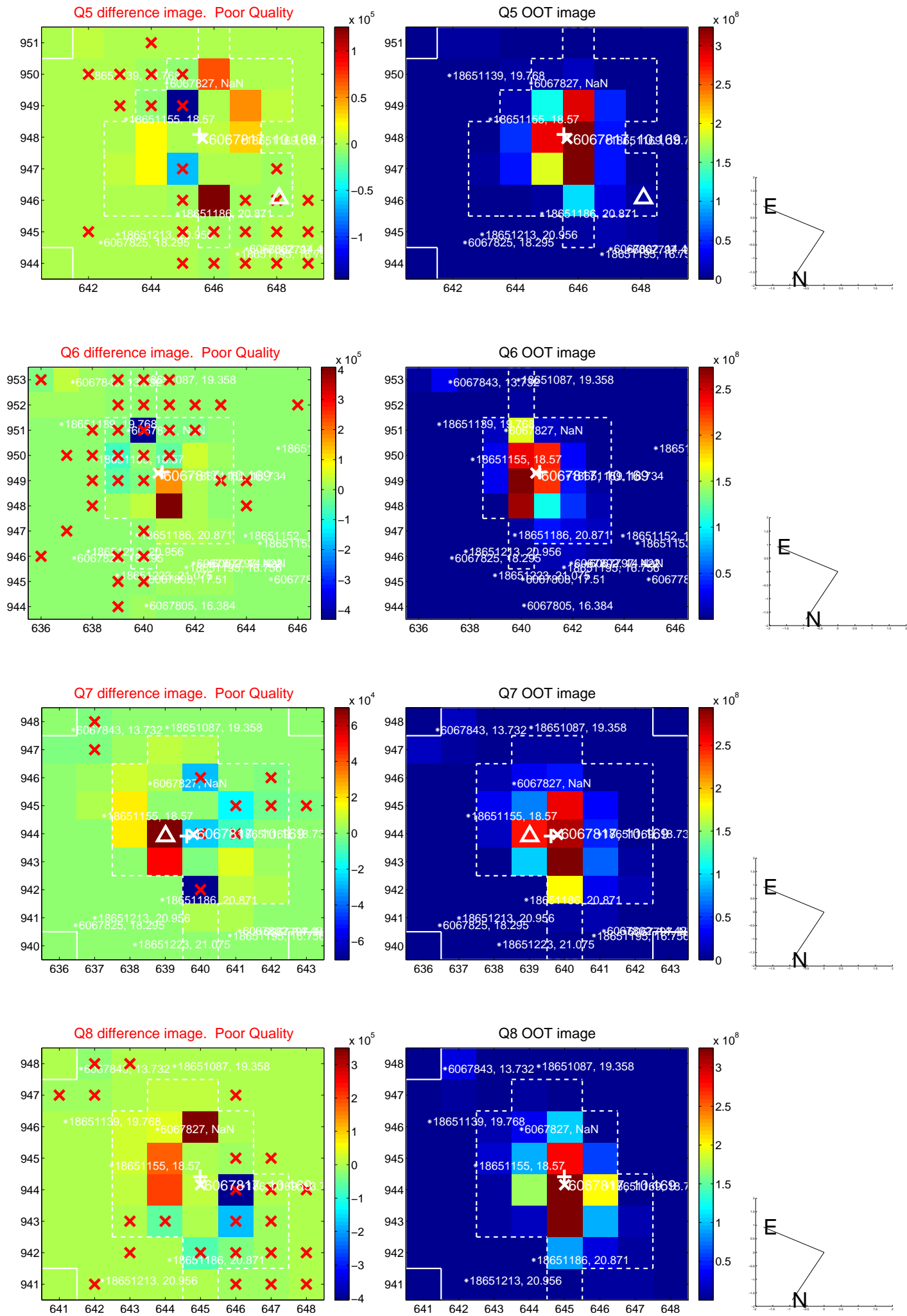


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

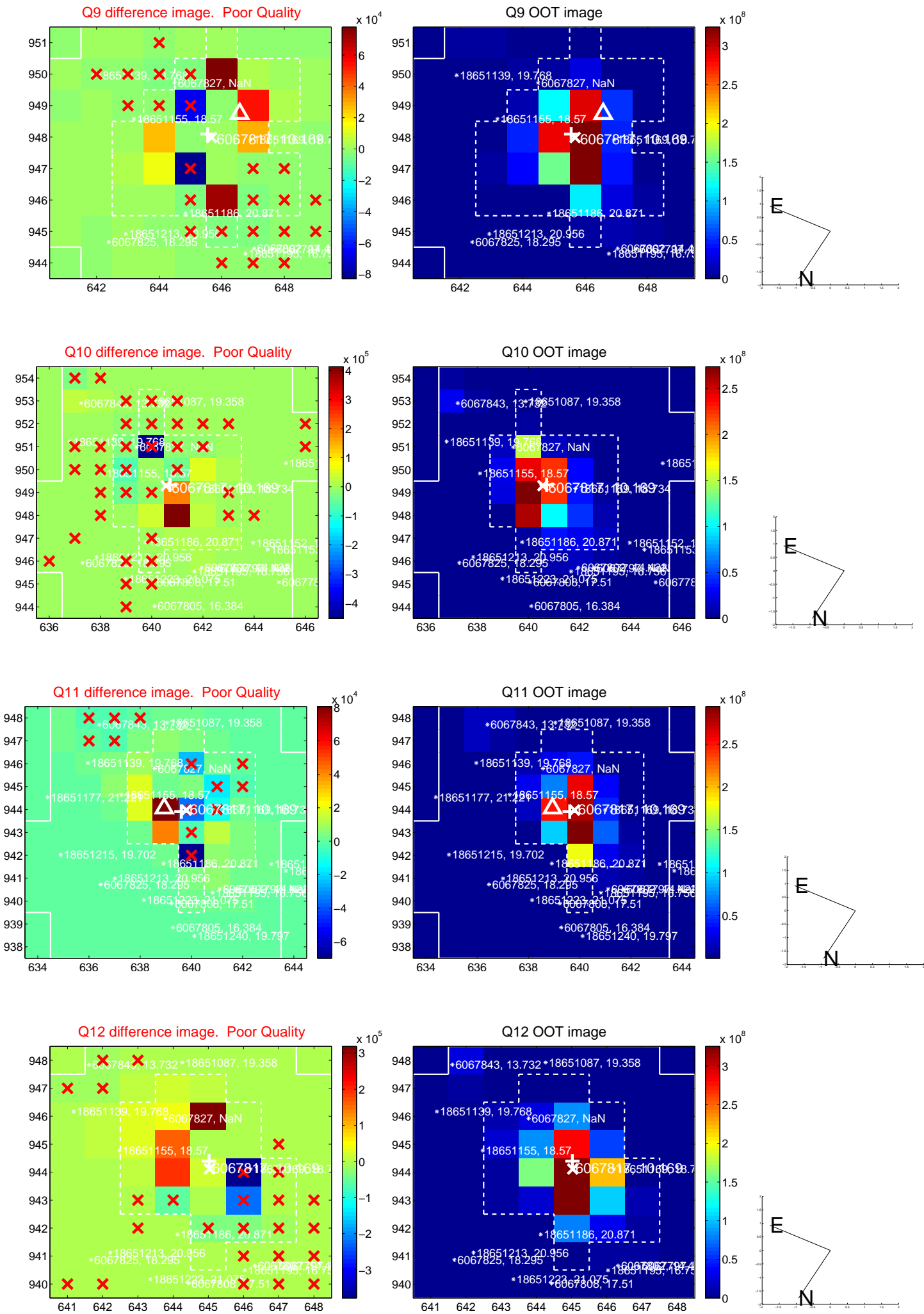
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



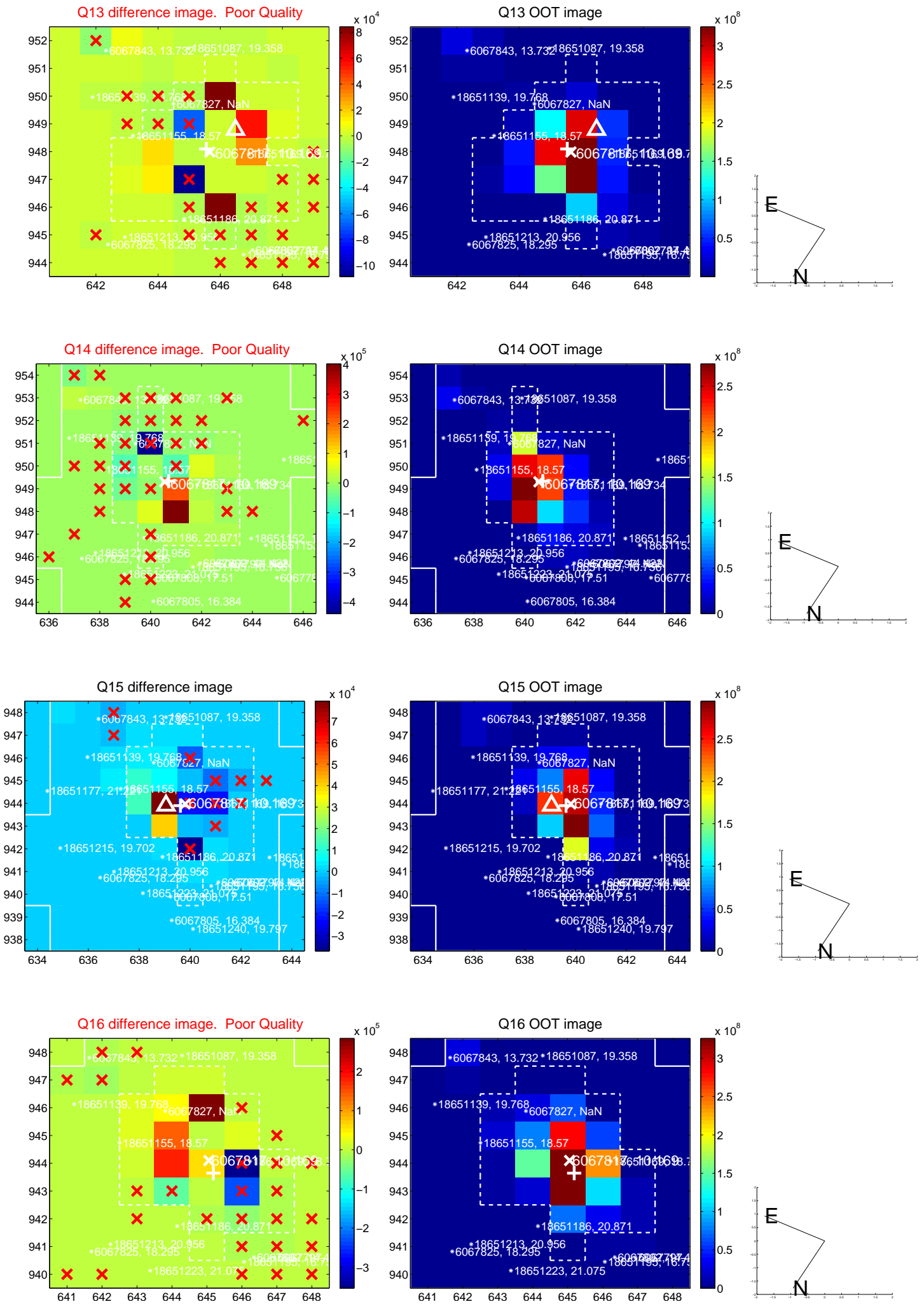
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

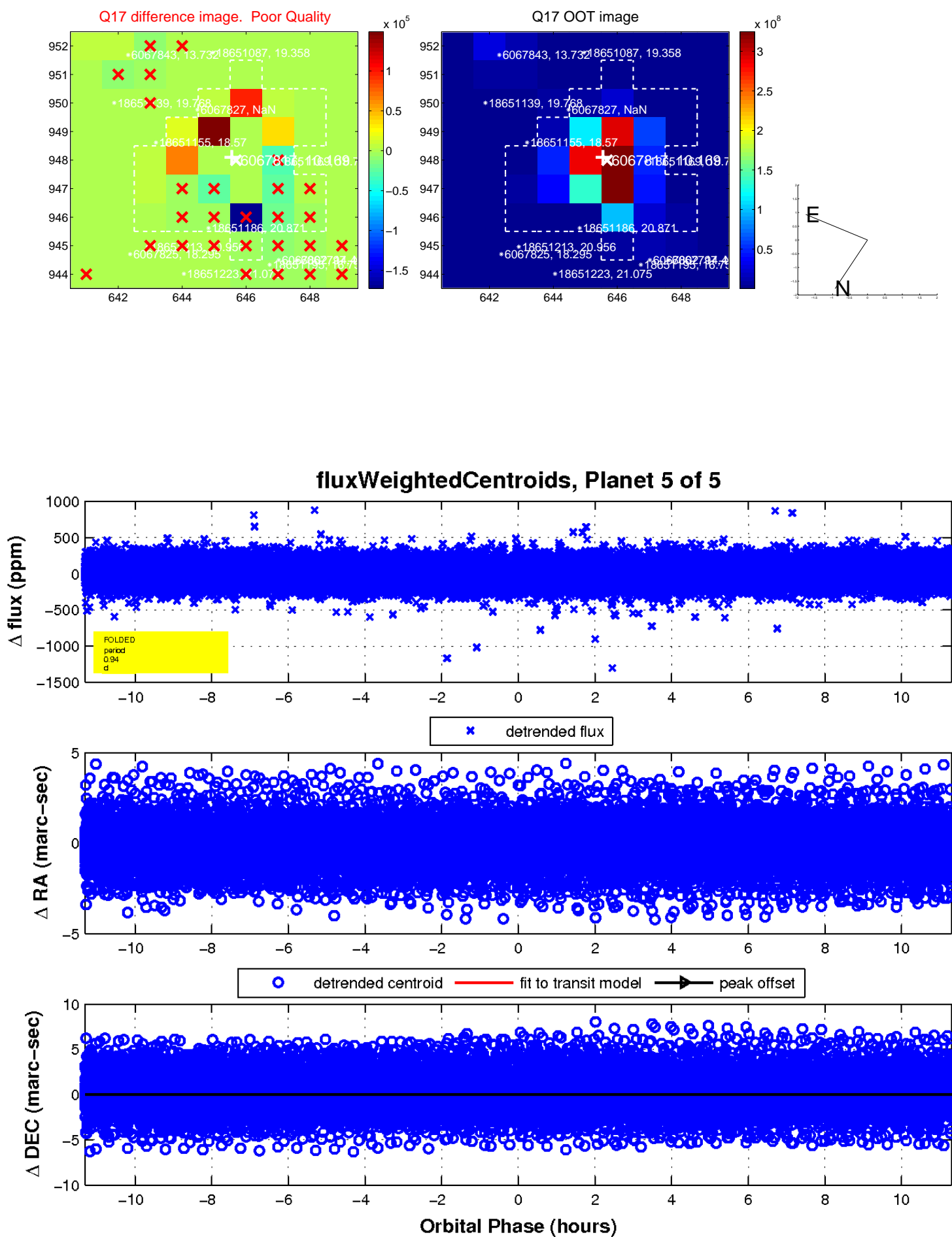


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

