

# KIC 006279388

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006279388-01	OBS	No	0.683230	131.619025	15.6	1.444	9.7	7.4	1.84	7305	0.84	26626.95
006279388-02	OBS	No	0.683235	132.088582	17.5	1.417	10.5	8.6	1.84	7305	0.81	26626.69
006279388-03	OBS	No	0.683228	131.871780	24.0	2.189	11.9	14.5	1.84	7305	0.92	26627.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006279388-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006279388-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006279388-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

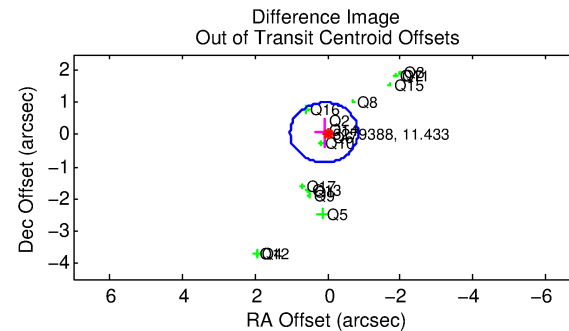
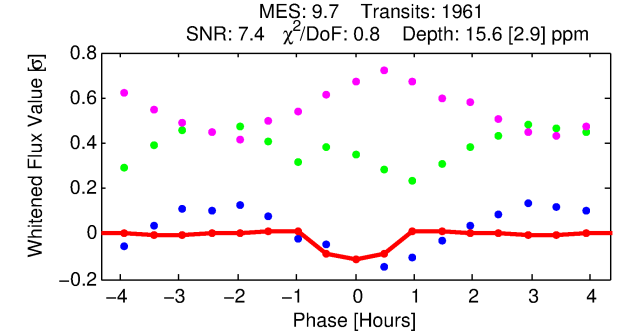
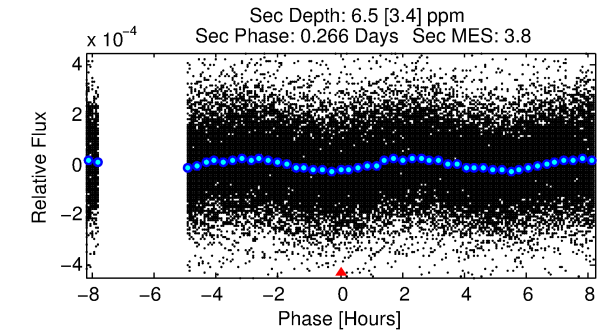
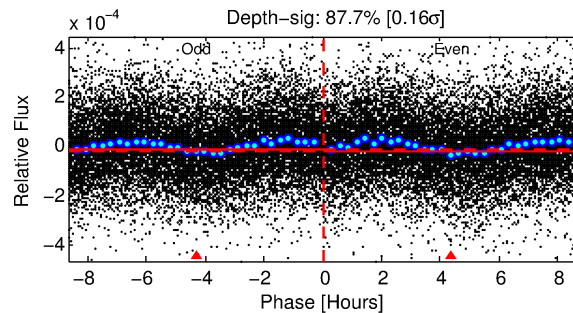
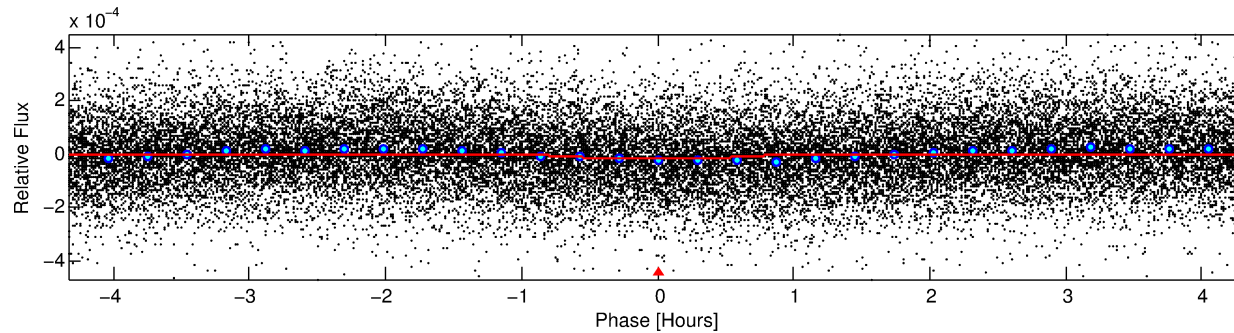
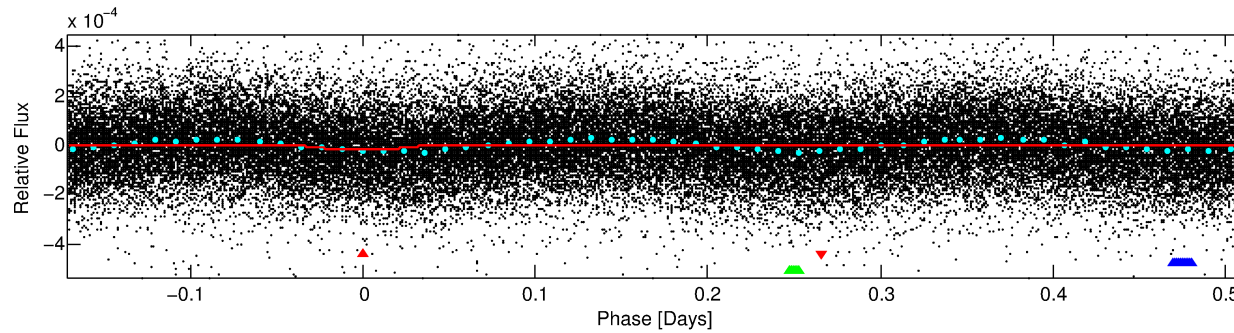
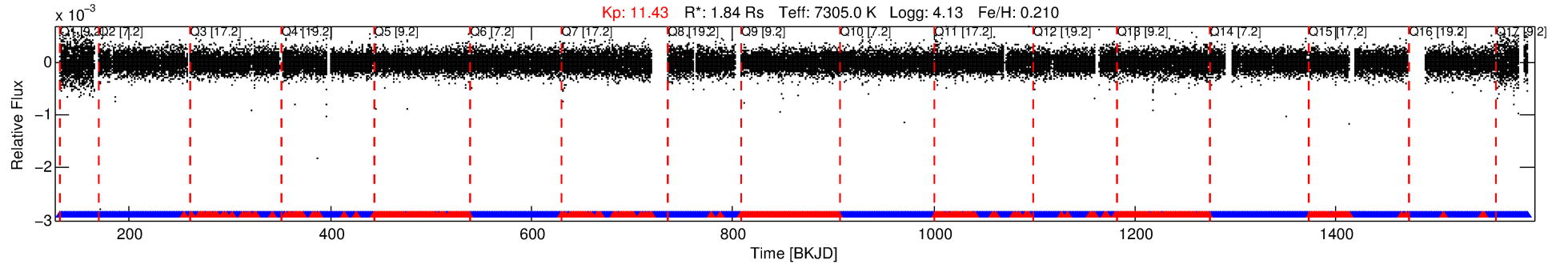
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006279388-01

No Significant Match Found

# DV One-Page Summary

KIC: 6279388 Candidate: 1 of 3 Period: 0.683 d



## DV Fit Results:

Period = 0.68323 [0.00001] d  
Epoch = 131.6190 [0.0027] BKJD  
Rp/R\* = 0.0042 [0.0009]  
a/R\* = 1.97 [1.70]  
b = 0.88 [0.30]  
Seff = 26626.95 [10753.53]  
Teq = 3257 [329] K  
Rp = 0.84 [0.31] Re  
a = 0.0180 [0.0045] AU  
Ag = 1.65 [1.25] [0.52 $\sigma$ ]  
Teffp = 5711 [991] K [2.35 $\sigma$ ]

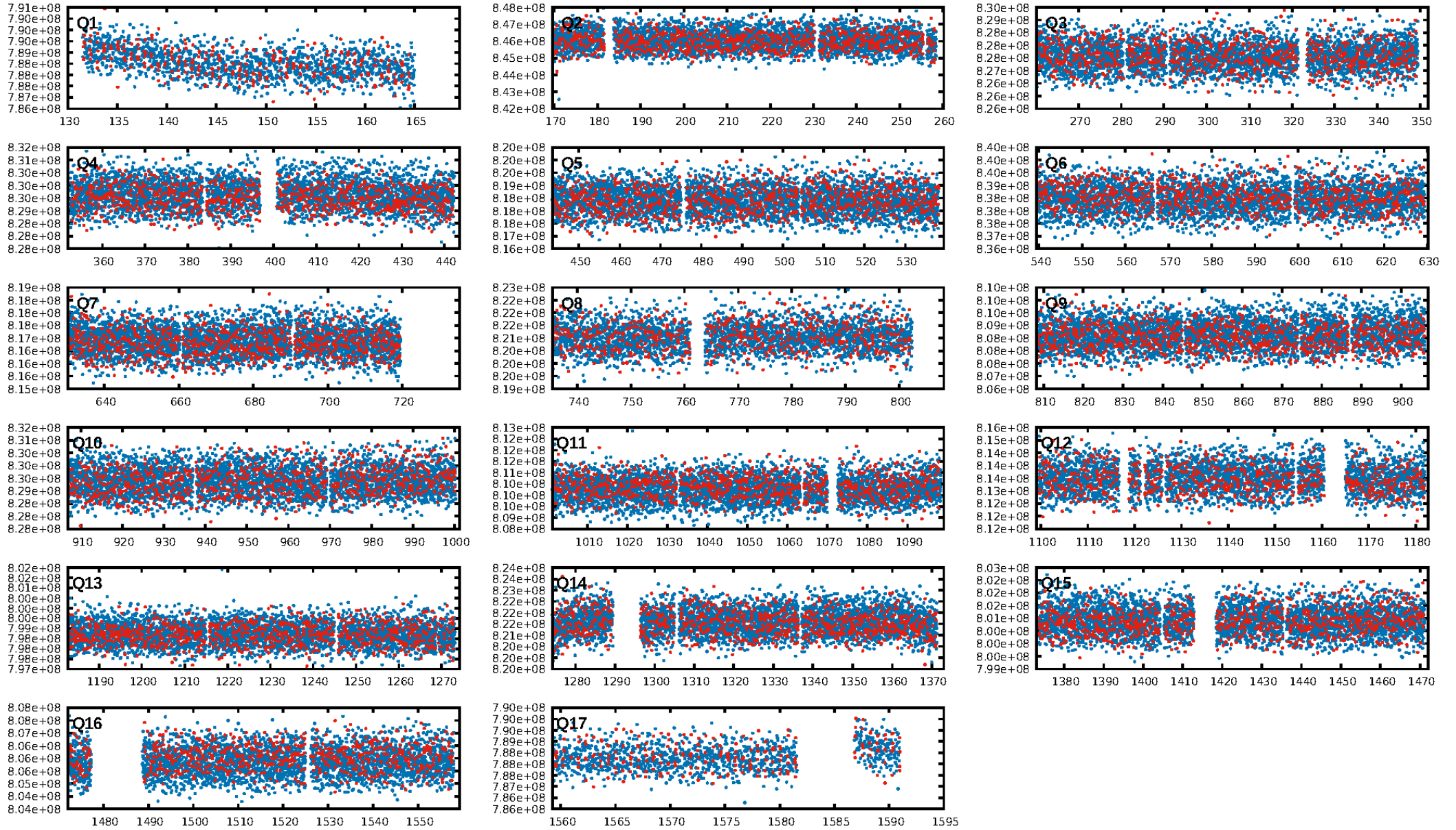
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: 0.0% [0.00 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.11e-67  
RollingBand-fgt: 0.72 [1355/1872]  
GhostDiagnostic-chr: 2.559  
Centroid-sig: N/A  
Centroid-so: 1.126 arcsec [1.89 $\sigma$ ]  
OotOffset-rm: 0.114 arcsec [0.37 $\sigma$ ]  
KicOffset-rm: 0.322 arcsec [0.74 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.53 [9/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:34:35 Z

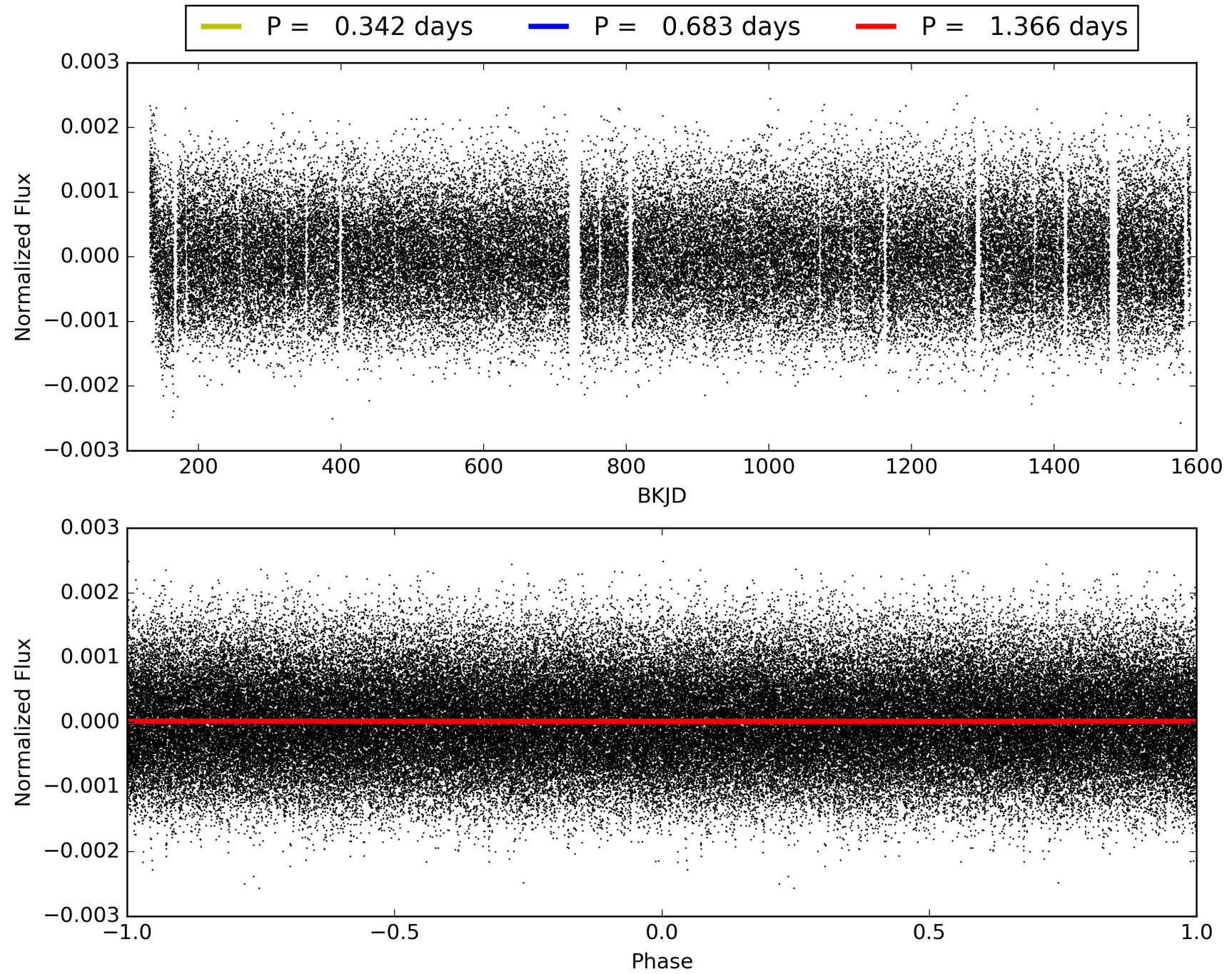
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006279388-01, PDC Light Curves





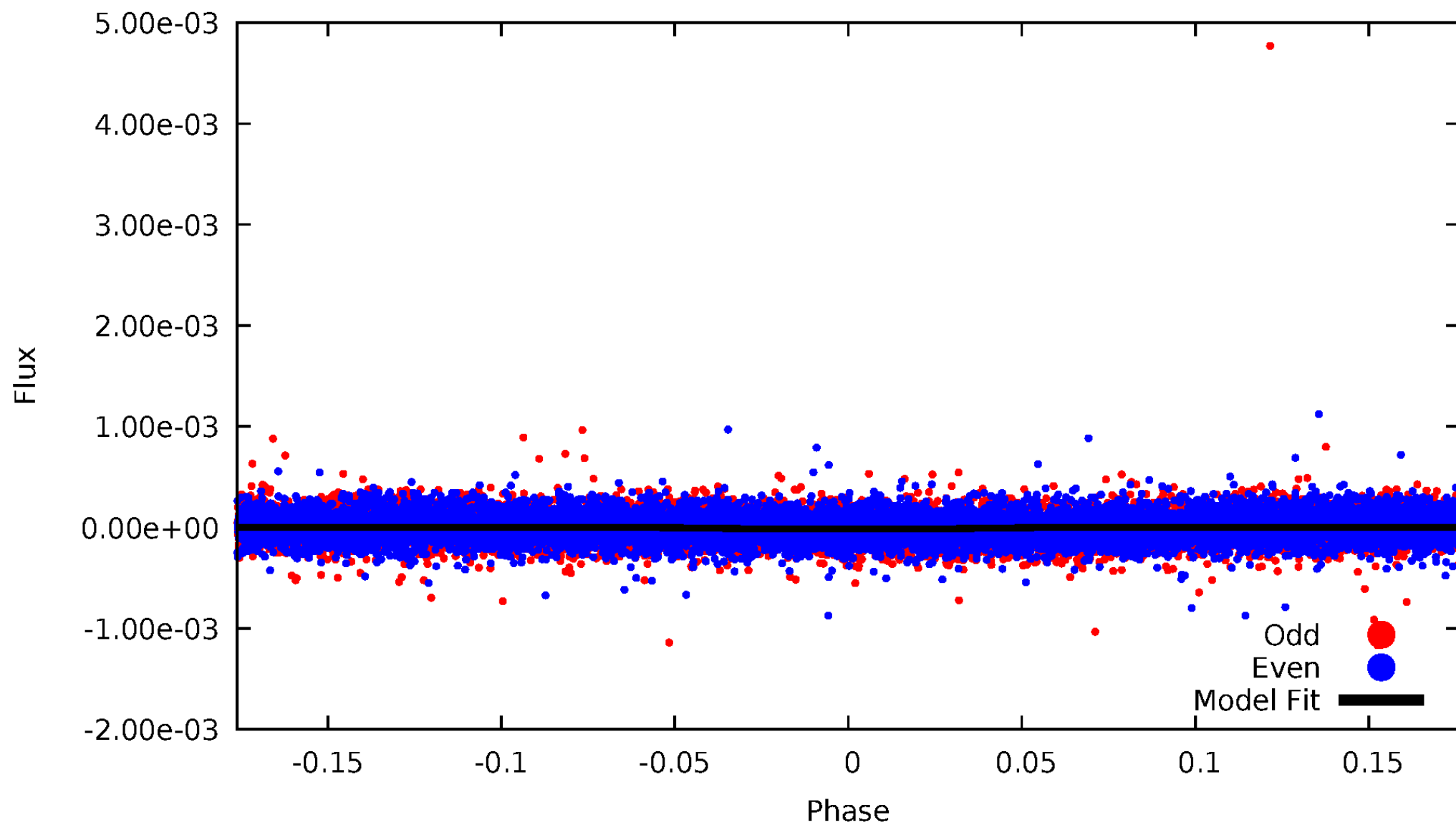
TCE 006279388-01





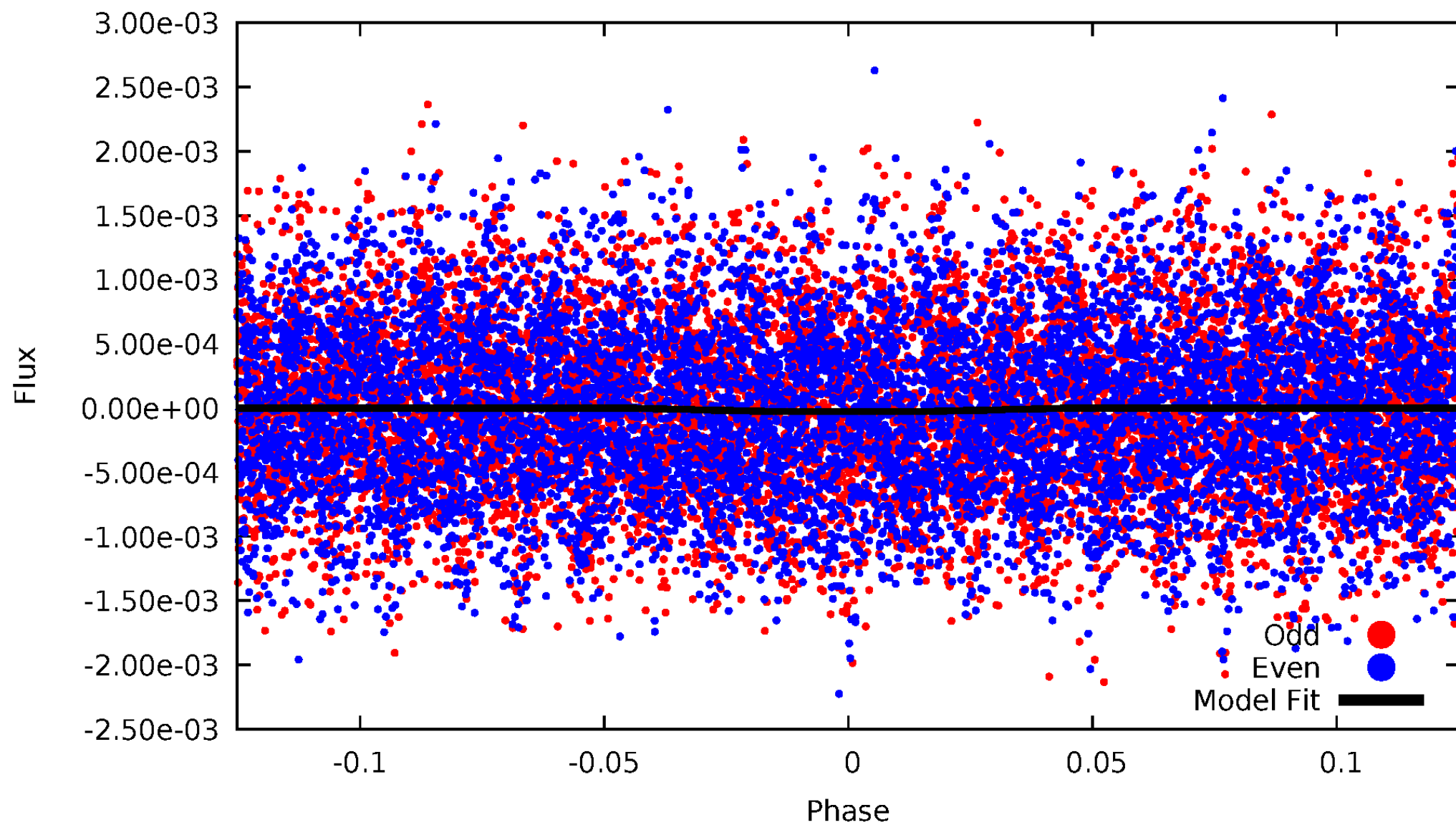
# DV Odd/Even

TCE 006279388-01



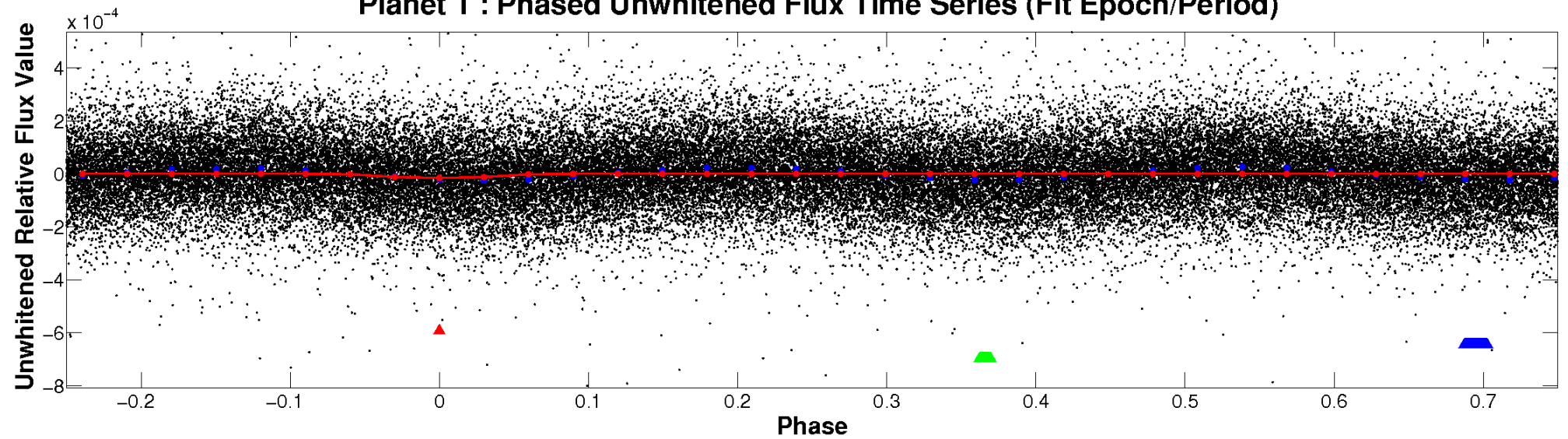
# ALT Odd/Even

TCE 006279388-01

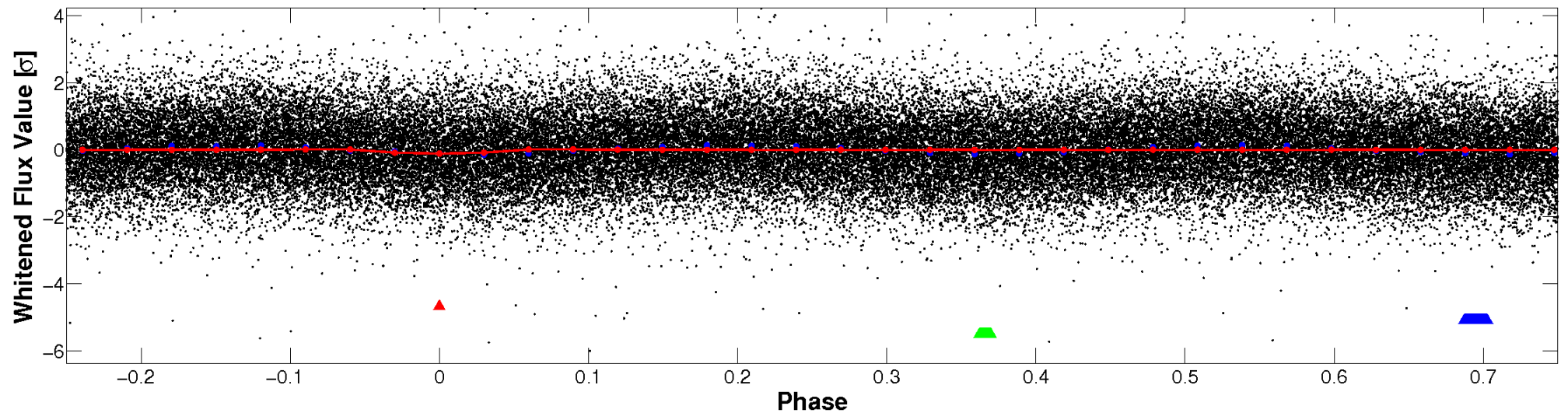


# Non-Whitened Vs. Whitened Light Curve

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



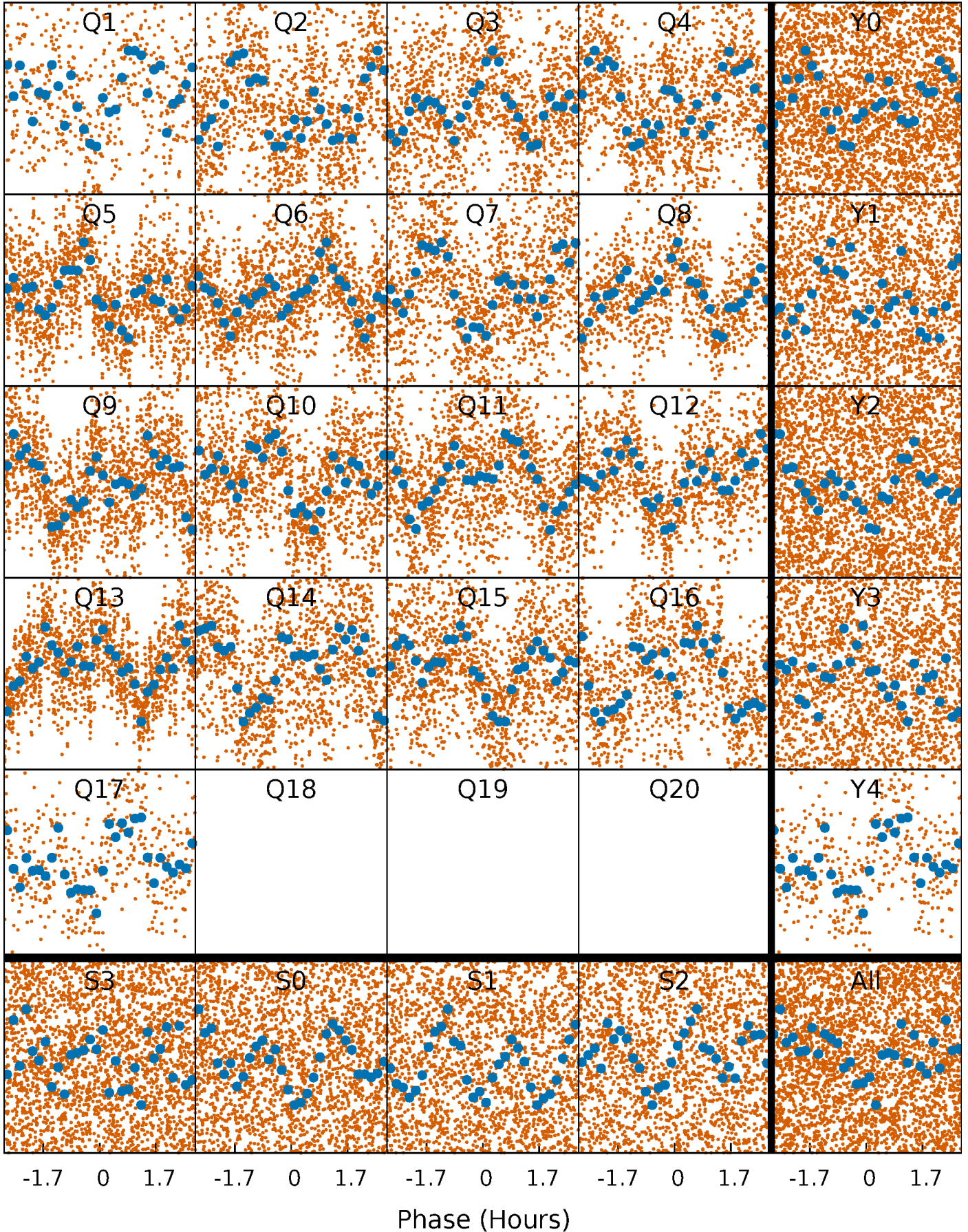
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





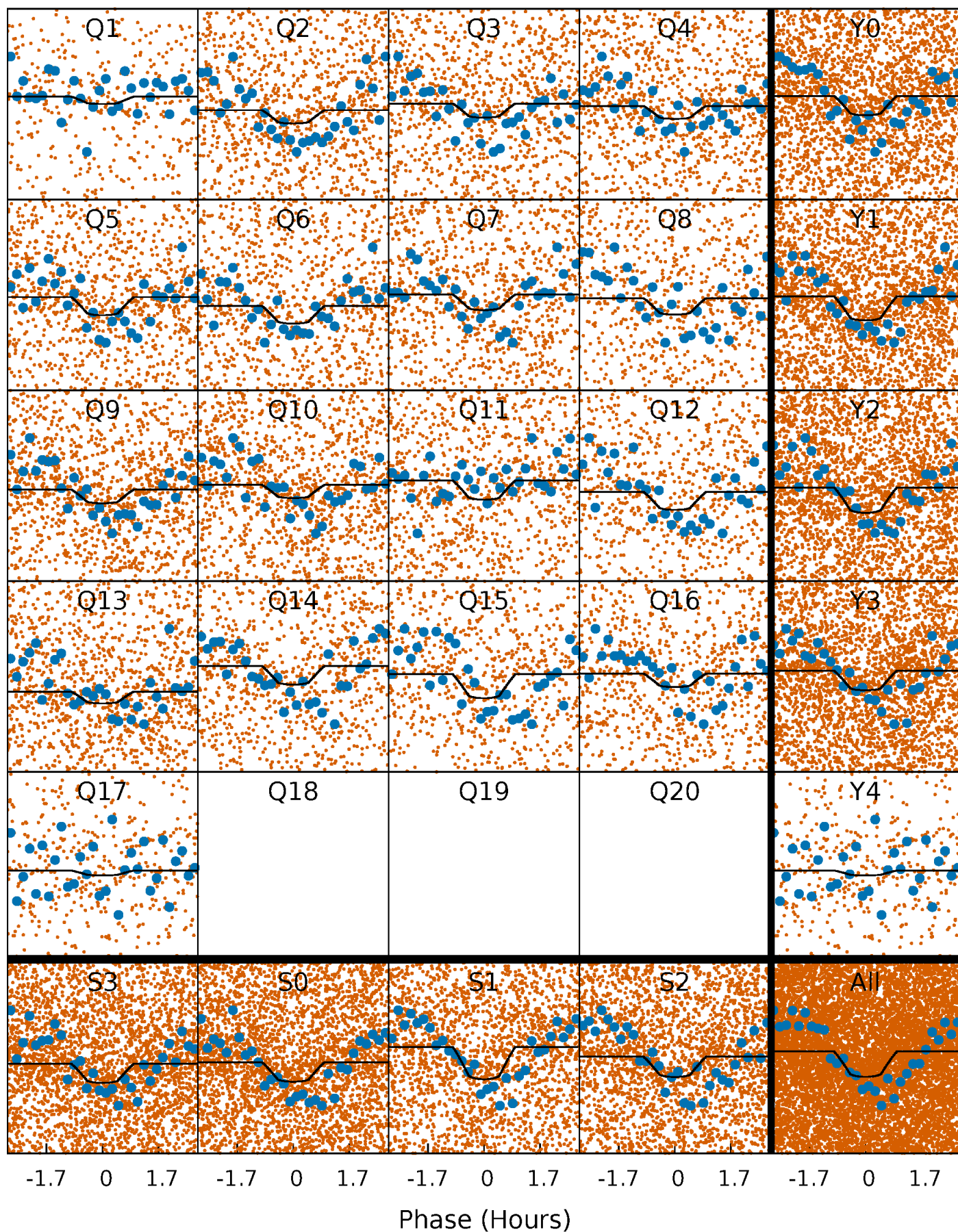
# PDC Quarter-Phased Transit Curves

TCE 006279388-01 P= 0.683230 Days  $T_0=131.619025$  (BKJD)



# DV Quarter-Phased Transit Curves

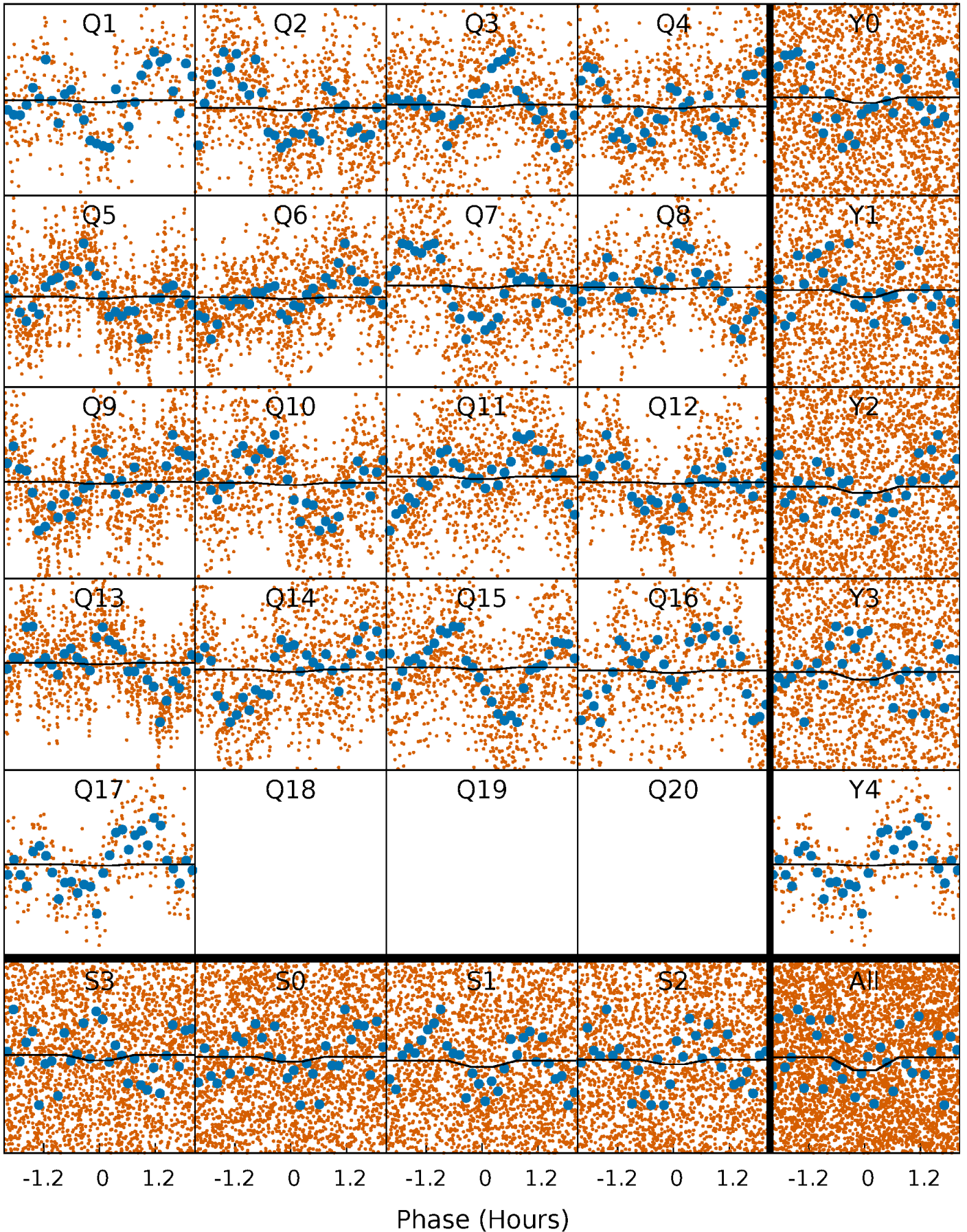
TCE 006279388-01 P= 0.683230 Days  $T_0=131.619025$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

TCE 006279388-01 P= 0.683234 Days  $T_0=131.610523$  (BKJD)

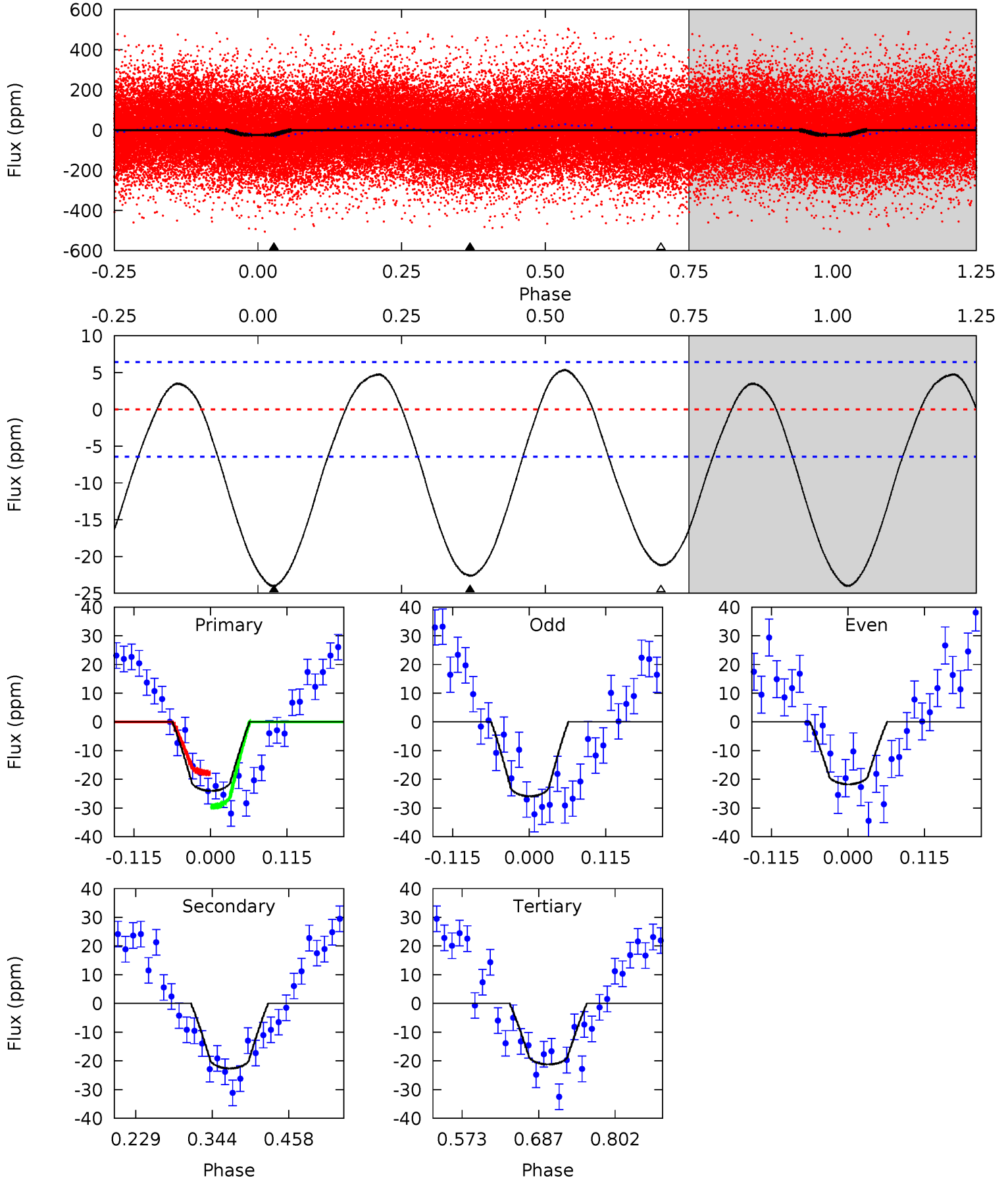




# DV Model-Shift Uniqueness Test

006279388-01, P = 0.683230 Days, E = 130.935795 Days

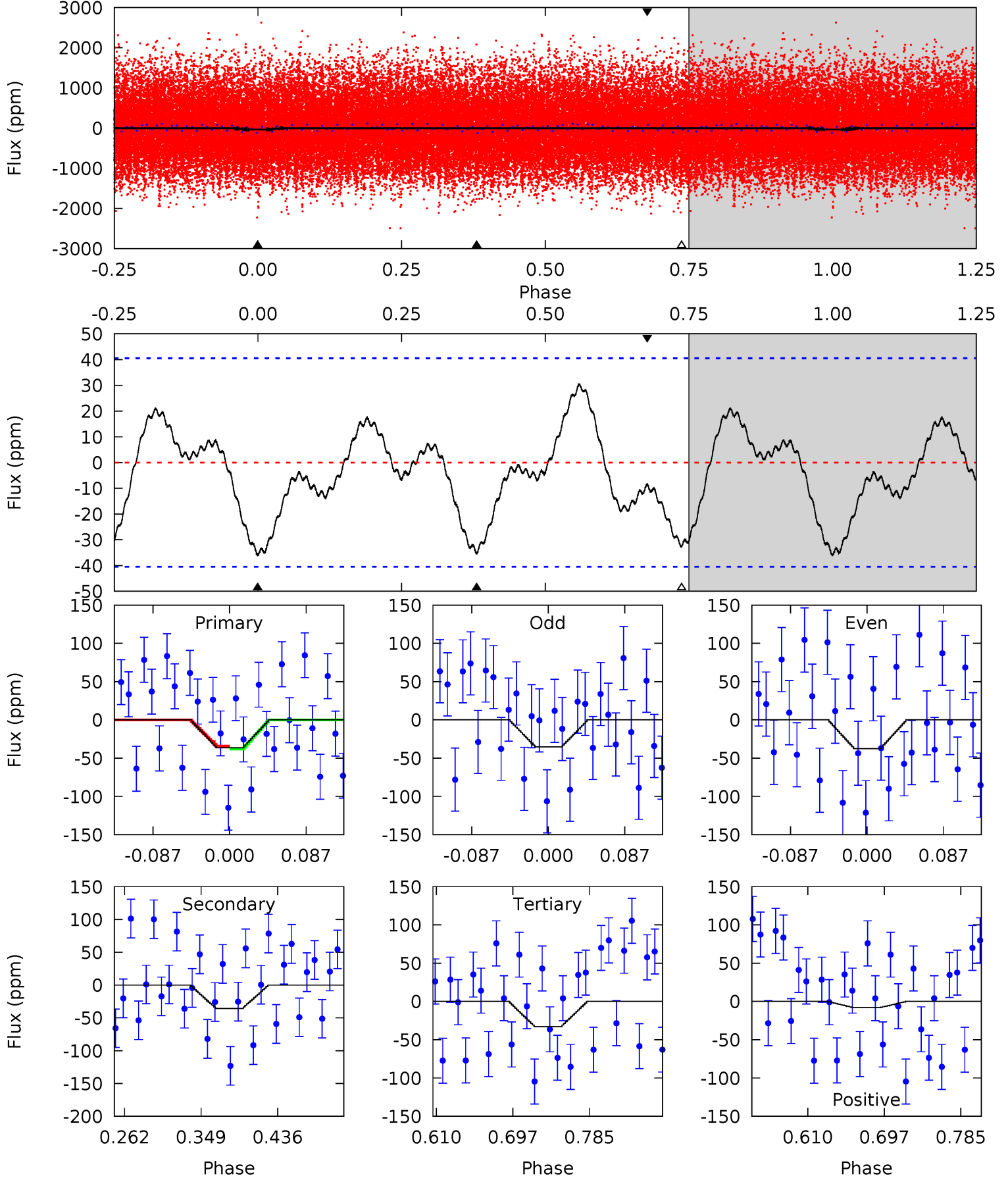
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	15.9	14.9	0	4.54	1.58	6.27	1.98	16.9	0.99	15.9	1.48	1.00	0.18	4.07



# Alt Model-Shift Uniqueness Test

006279388-01, P = 0.683234 Days, E = 130.927289 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	4.05	3.74	-0.92	4.59	1.71	1.65	0.39	5.04	0.32	4.97	0.14	1.80	0.46	0.22



### Stellar Parameters For KIC 006279388

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7305^{+206}_{-353}$	$4.131^{+0.101}_{-0.188}$	$0.210^{+0.150}_{-0.350}$	$1.841^{+0.569}_{-0.306}$	$1.672^{+0.193}_{-0.257}$	$0.378^{+0.184}_{-0.198}$
	+3%/-5%	+2%/-5%	+71%/-167%	+31%/-17%	+12%/-15%	+49%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006279388-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-23 \pm 1$	$0.85^{+0.21}_{-0.18}$	$4565^{+347}_{-294}$	$7688^{+1343}_{-835}$	$5.464^{+3.548}_{-1.851}$
Alt.	$-36 \pm 9$	$1.07^{+0.25}_{-0.22}$	$4568^{+354}_{-288}$	$7596^{+1195}_{-990}$	$5.109^{+3.364}_{-1.882}$

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



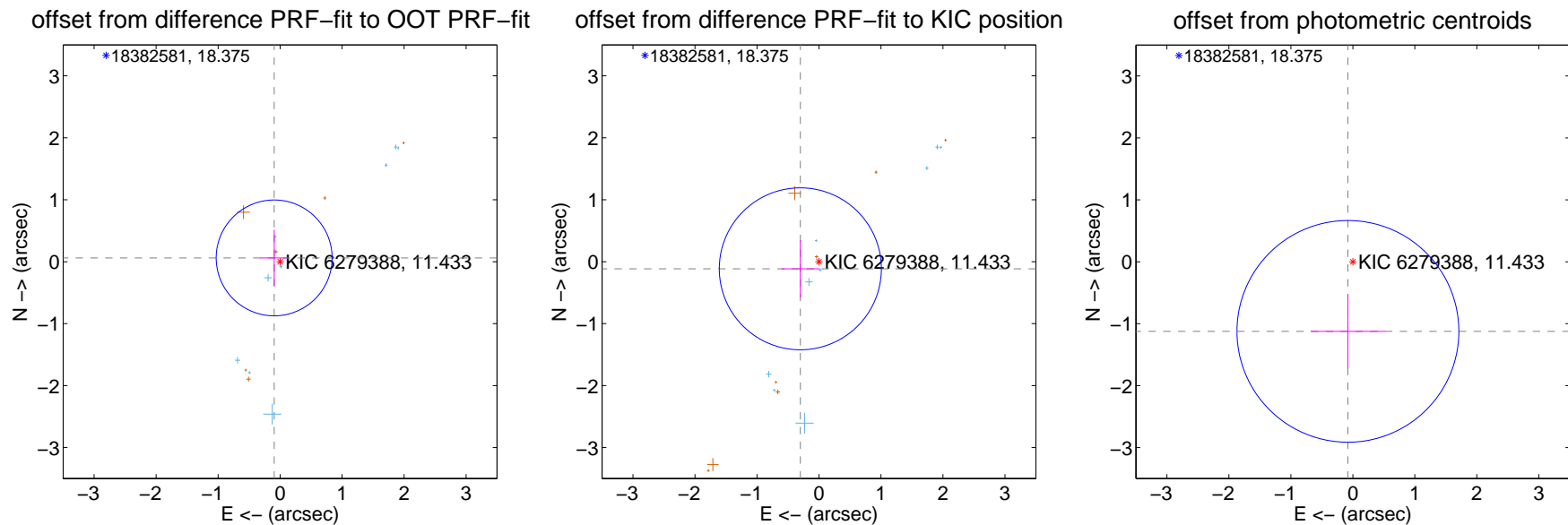
## DV Centroid Data

Supplemental centroid analysis for 006279388-01. **Kepler magnitude: 11.43.** Transit SNR 7.39

There are 9 quarters with good PRF difference image offsets

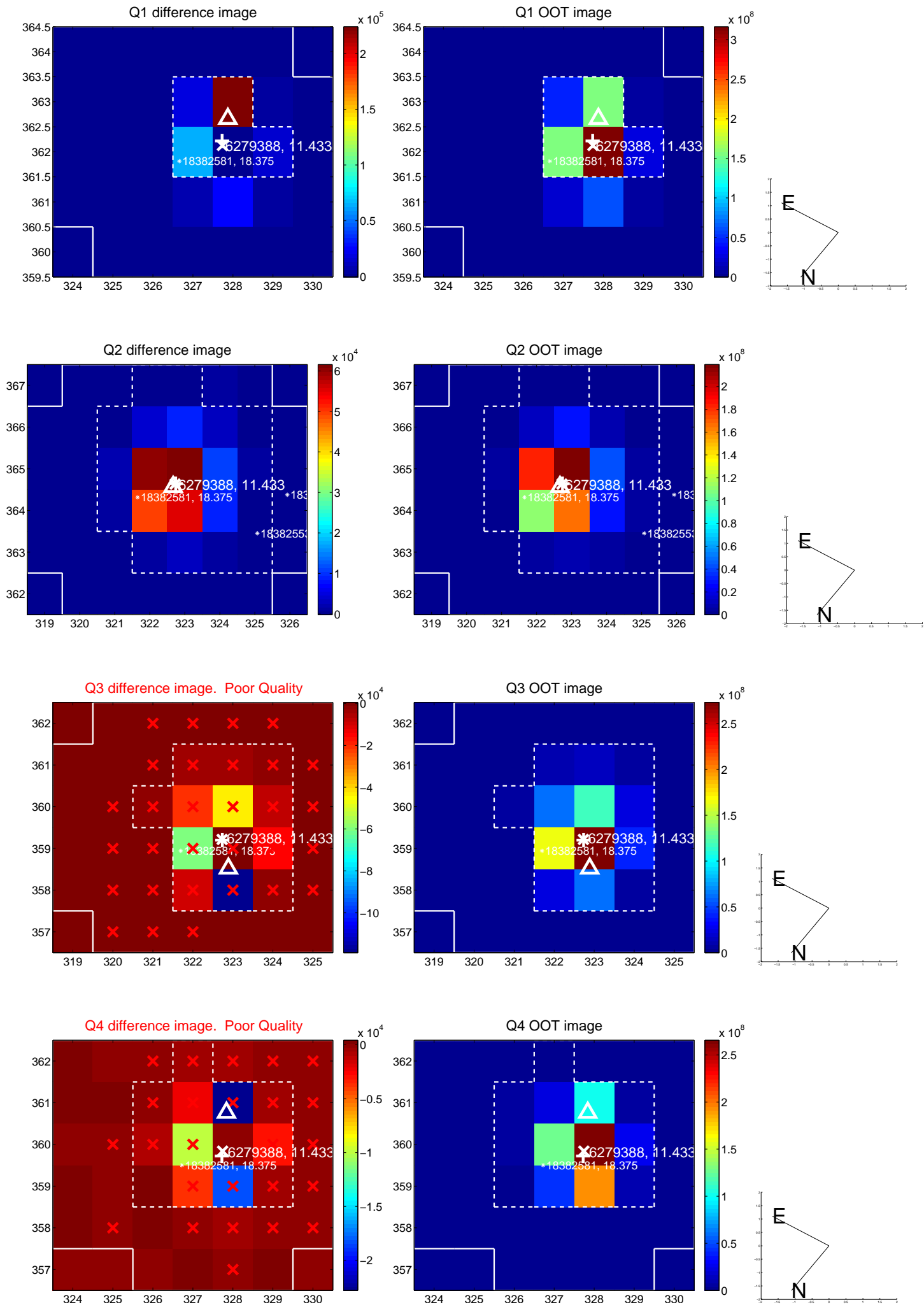
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.114 \pm 0.312$	0.37	$0.096 \pm 0.229$	$0.061 \pm 0.455$
PRF-fit source offset from KIC position	$0.322 \pm 0.436$	0.74	$0.301 \pm 0.305$	$-0.115 \pm 0.464$
photometric centroid source offset	$1.13 \pm 0.60$	1.89	$0.08 \pm 0.60$	$-1.12 \pm 0.60$

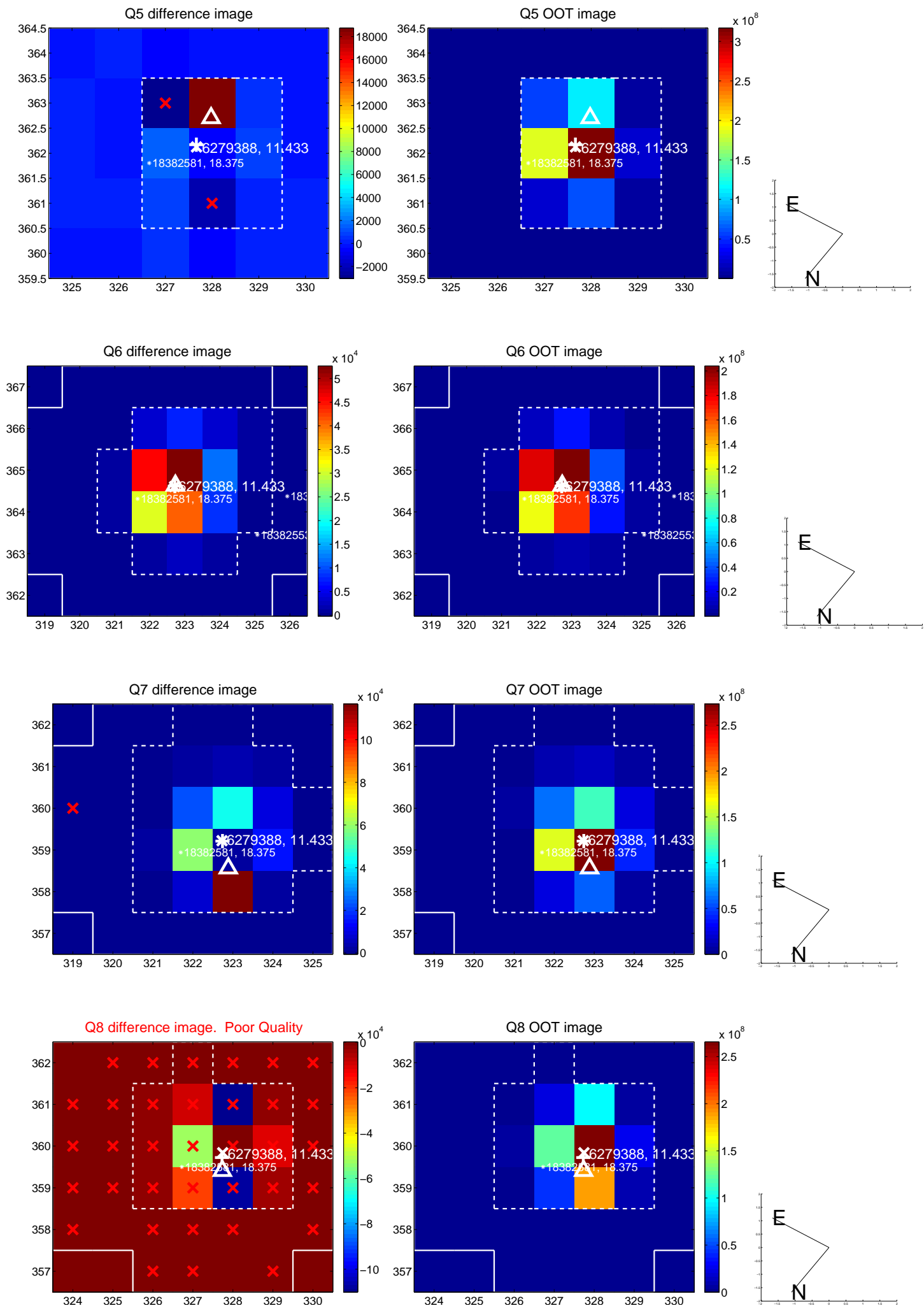


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

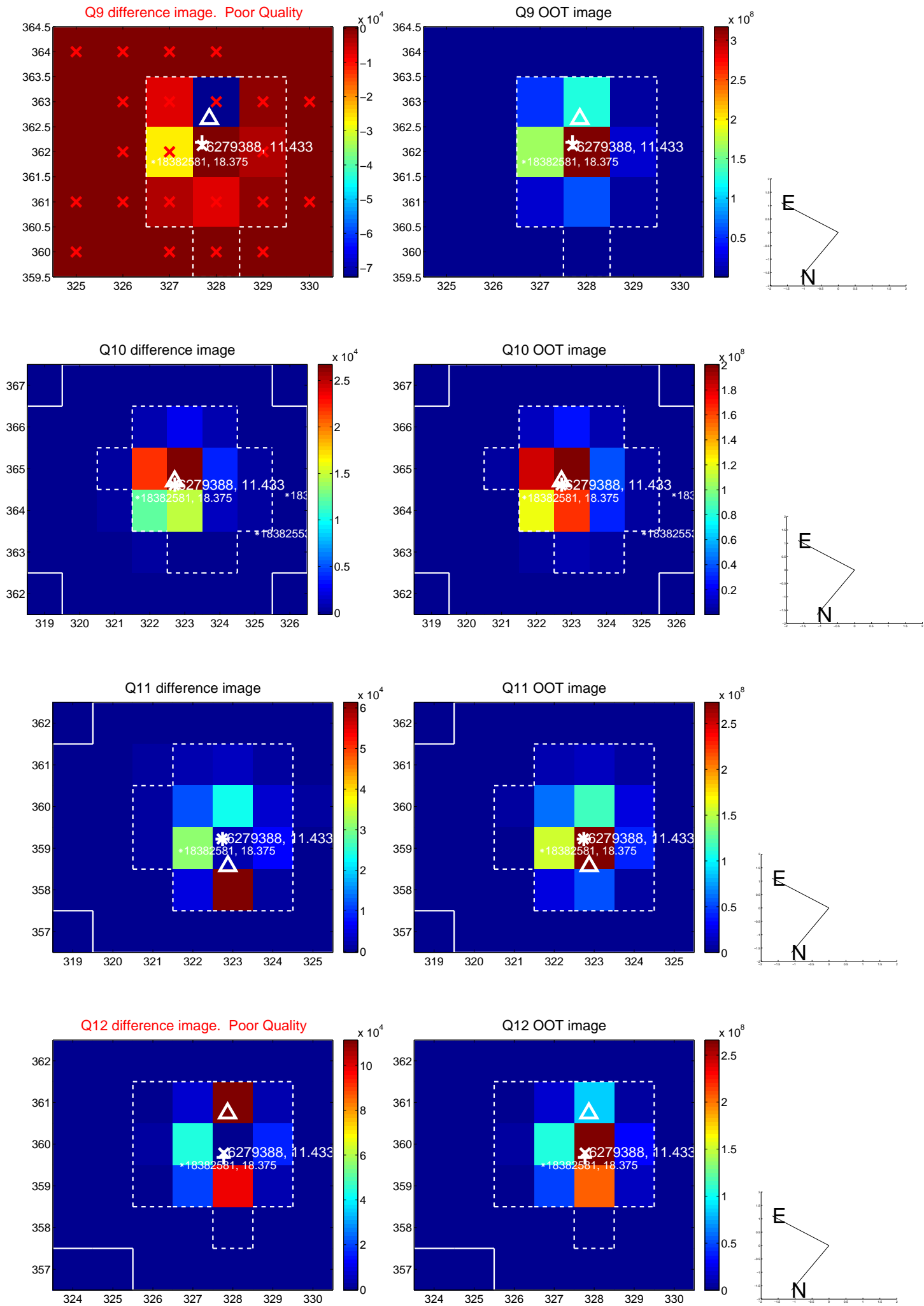


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

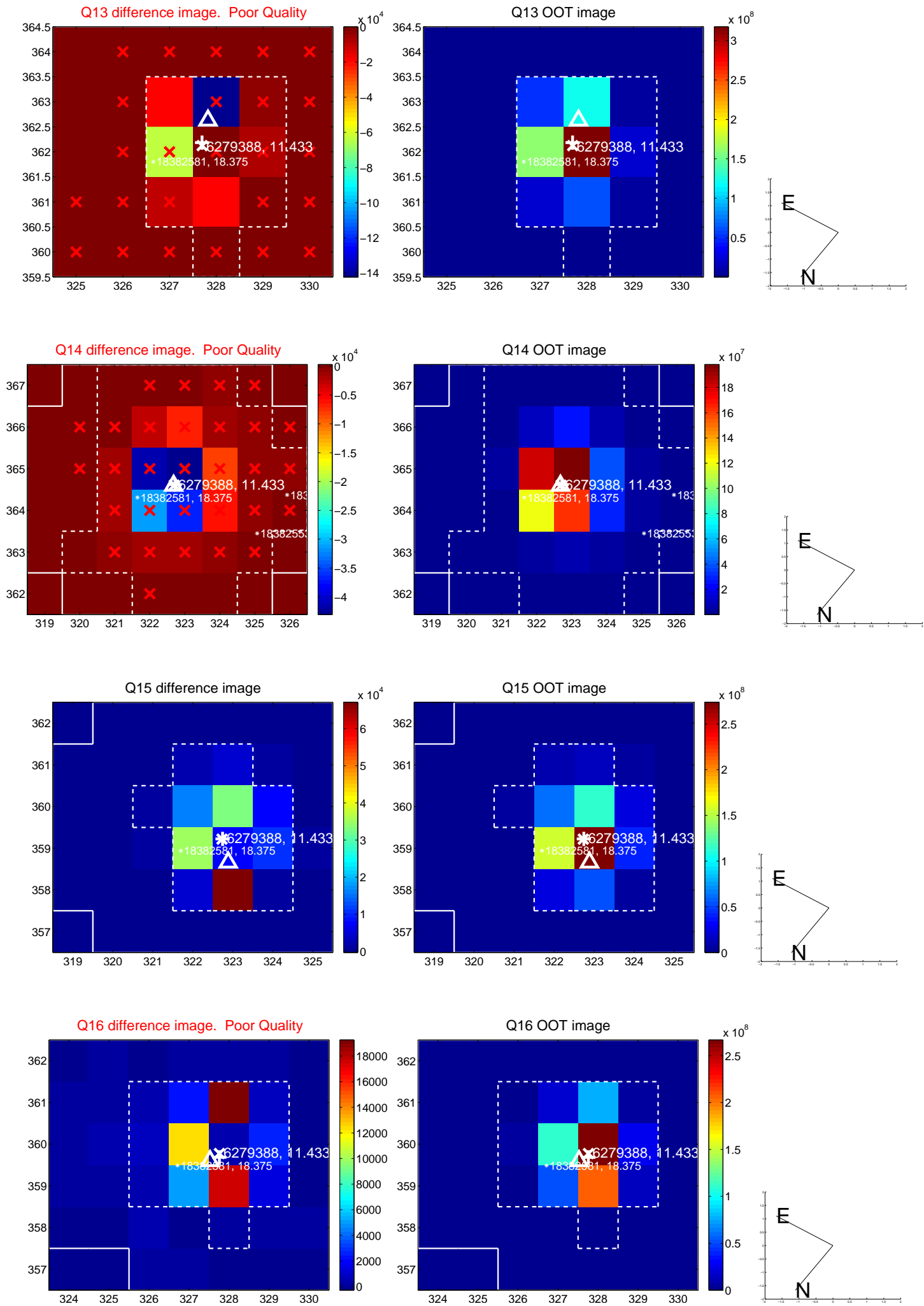




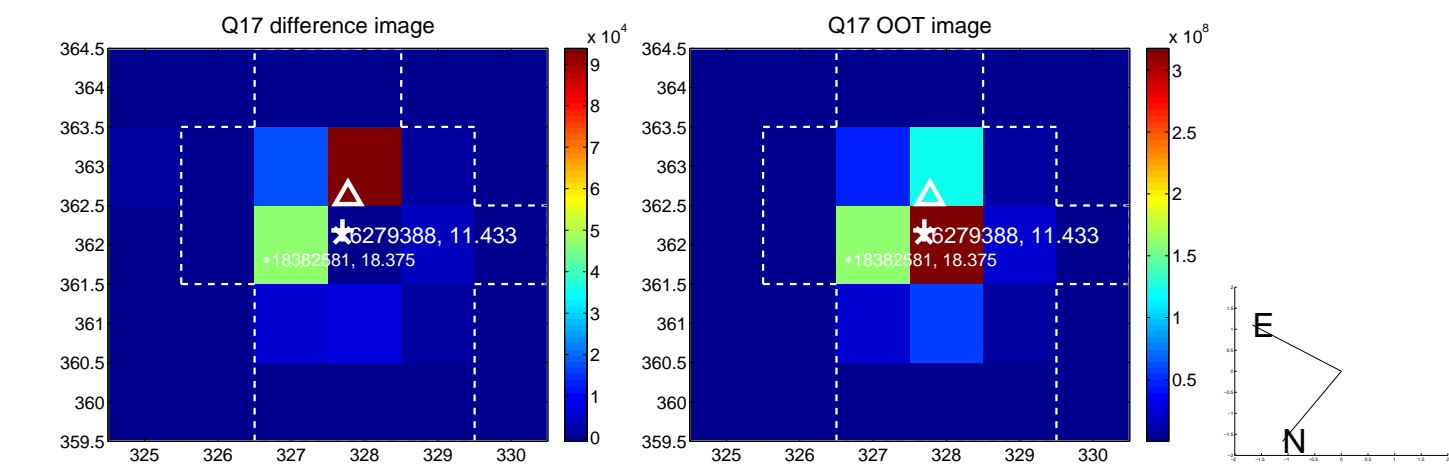
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



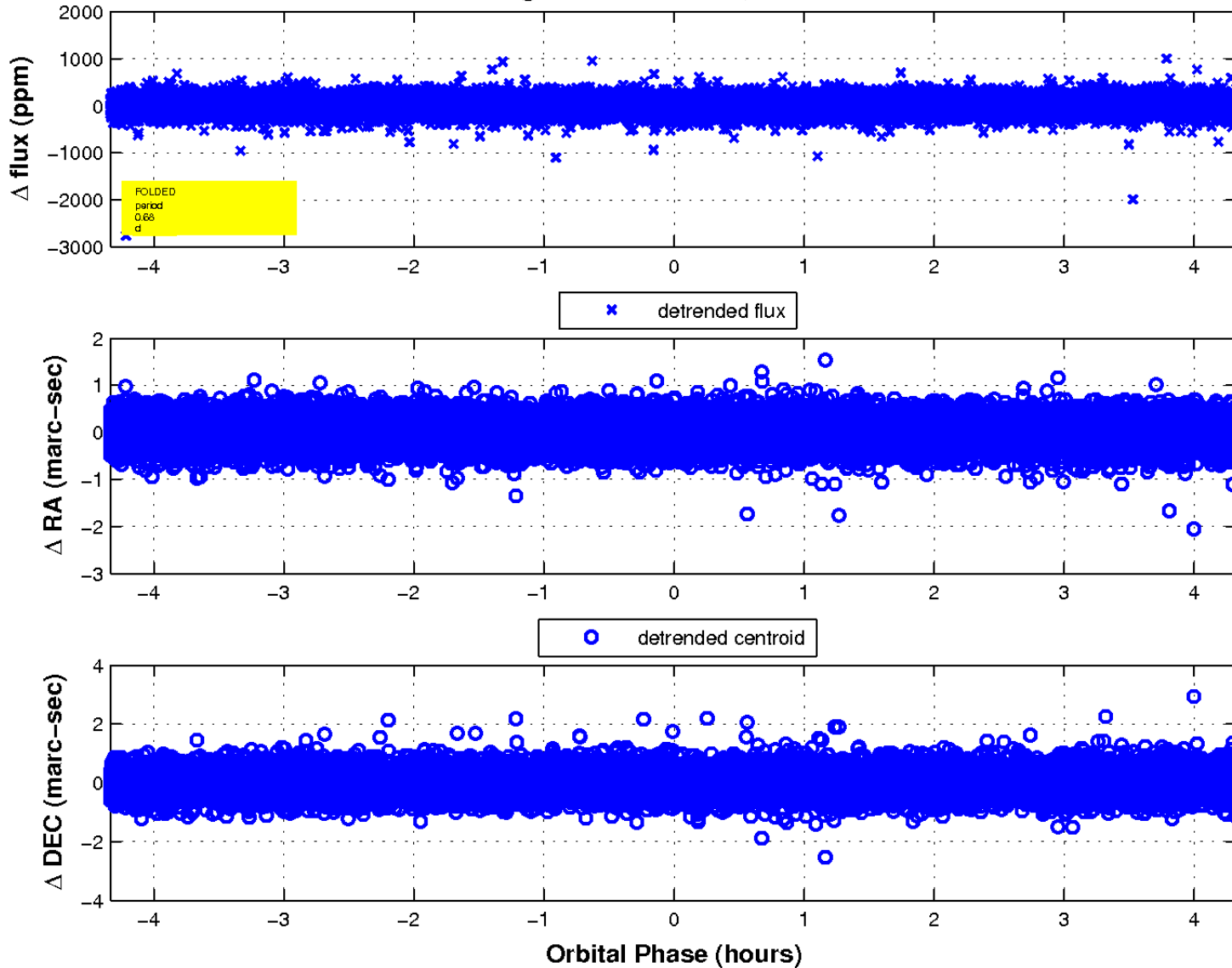
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

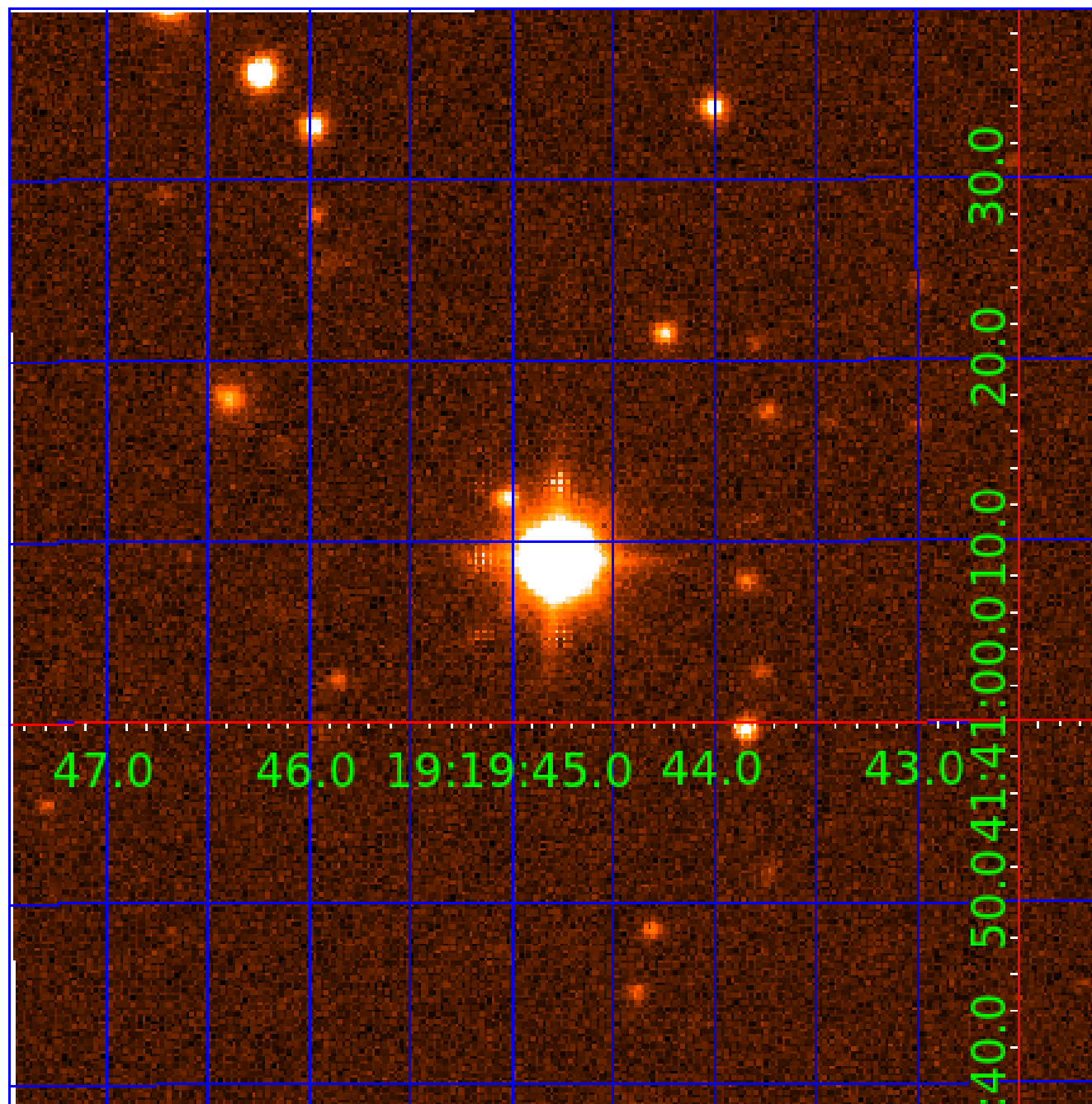


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination





# KIC 006279388

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006279388-01	OBS	No	0.683230	131.619025	15.6	1.444	9.7	7.4	1.84	7305	0.84	26626.95
006279388-02	OBS	No	0.683235	132.088582	17.5	1.417	10.5	8.6	1.84	7305	0.81	26626.69
006279388-03	OBS	No	0.683228	131.871780	24.0	2.189	11.9	14.5	1.84	7305	0.92	26627.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006279388-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006279388-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006279388-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

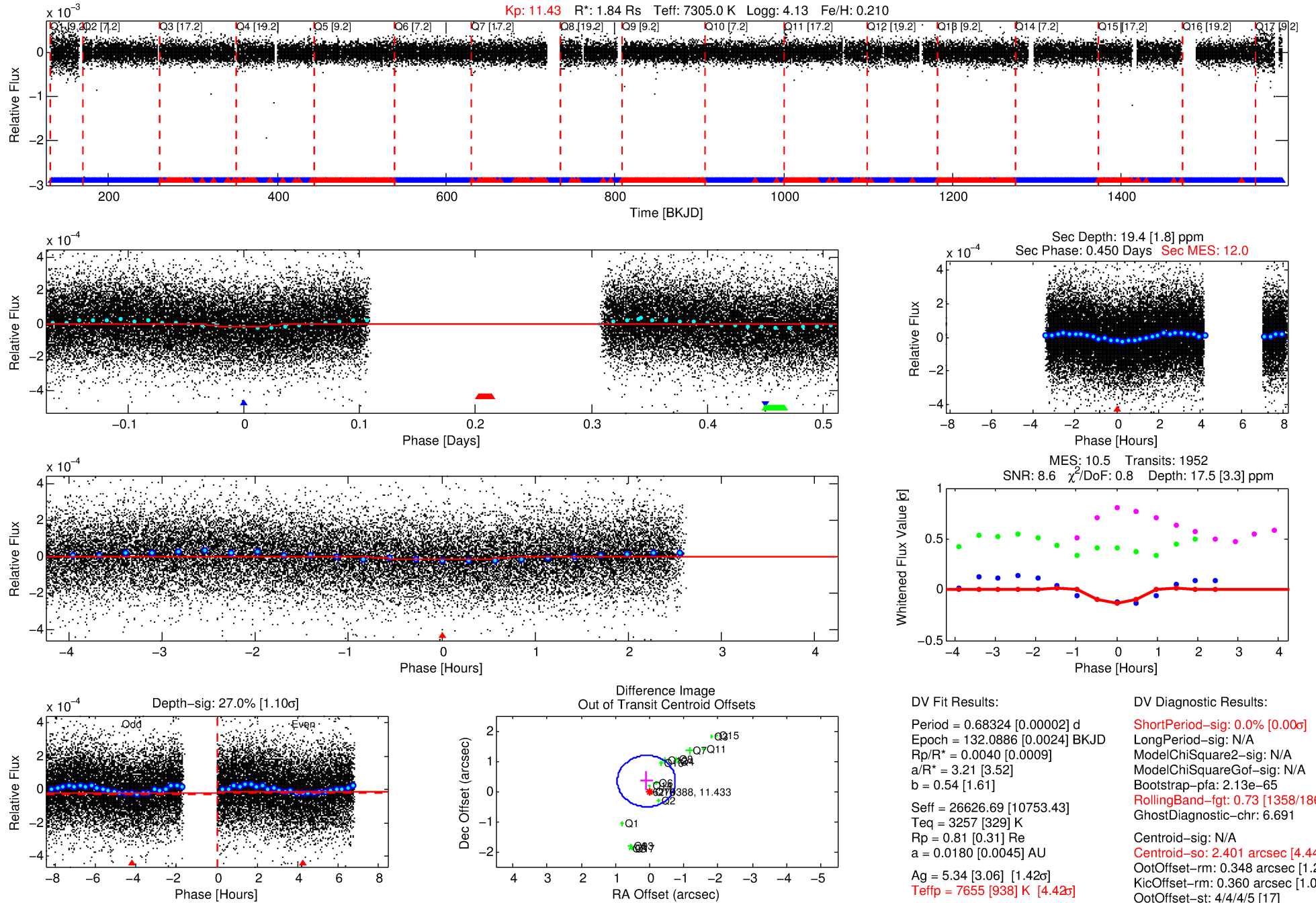
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006279388-02

No Significant Match Found

# DV One-Page Summary

KIC: 6279388 Candidate: 2 of 3 Period: 0.683 d



## DV Fit Results:

Period = 0.68324 [0.00002] d  
Epoch = 132.0886 [0.0024] BKJD  
Rp/R\* = 0.0040 [0.0009]  
a/R\* = 3.21 [3.52]  
b = 0.54 [1.61]  
Seff = 26626.69 [10753.43]  
Teq = 3257 [329] K  
Rp = 0.81 [0.31] Re  
a = 0.0180 [0.0045] AU  
Ag = 5.34 [3.06] [1.42 $\sigma$ ]  
Teffp = 7655 [938] K [4.42 $\sigma$ ]

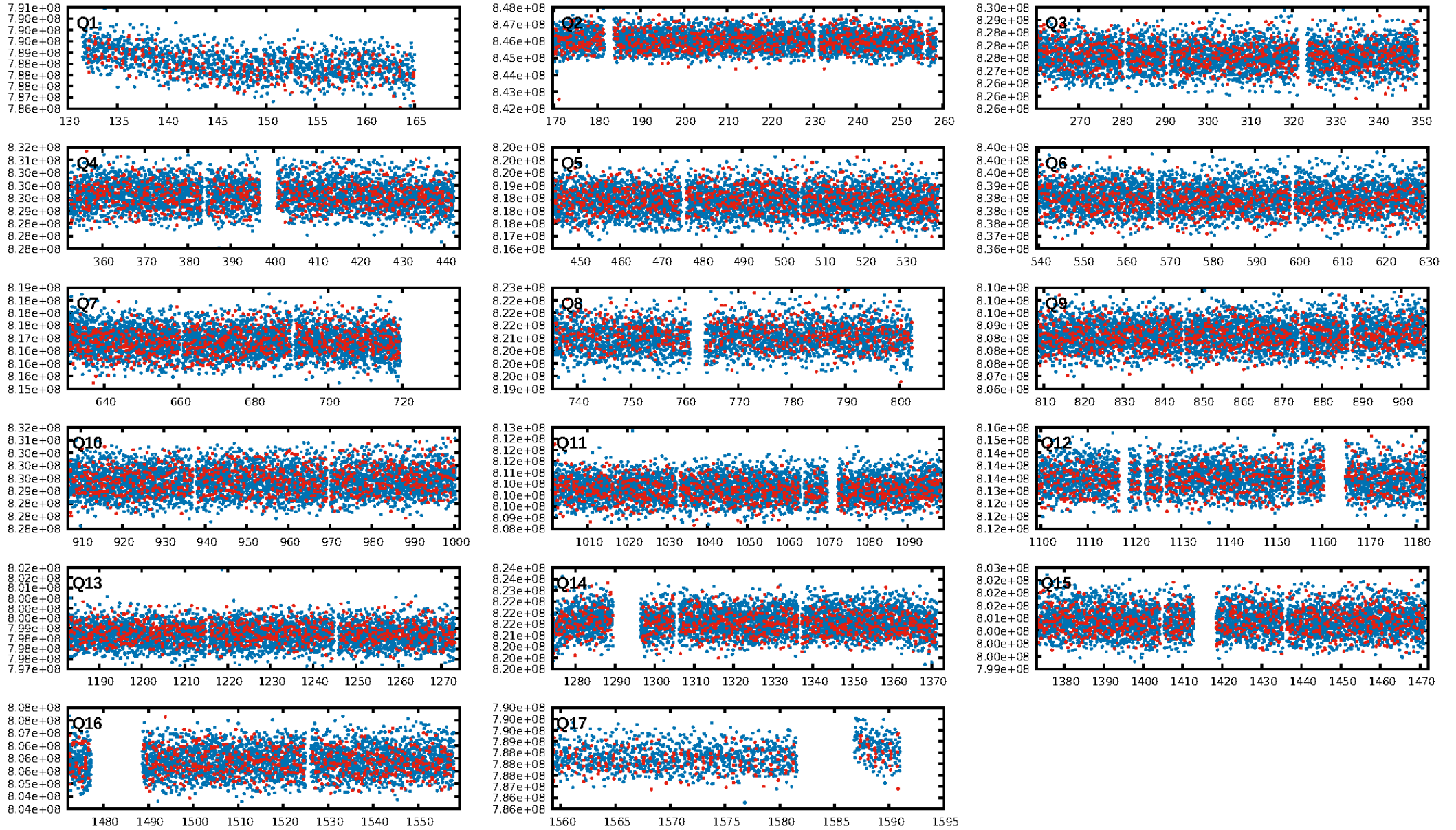
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.13e-65  
RollingBand-fgt: 0.73 [1358/1864]  
GhostDiagnostic-chr: 6.691  
Centroid-sig: N/A  
Centroid-so: 2.401 arcsec [4.44 $\sigma$ ]  
OotOffset-rm: 0.348 arcsec [1.23 $\sigma$ ]  
KicOffset-rm: 0.360 arcsec [1.07 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.29 [5/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:34:45 Z

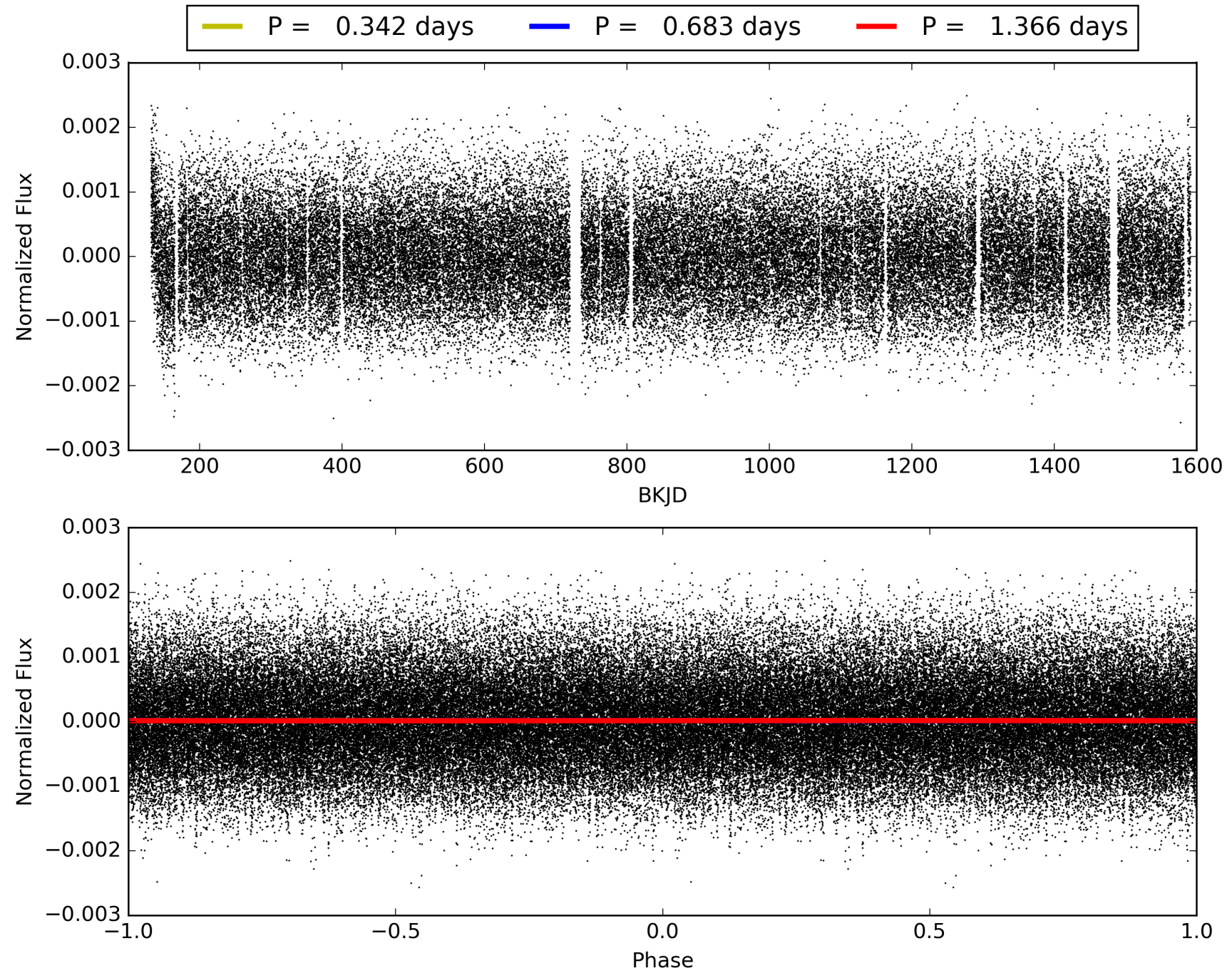
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006279388-02, PDC Light Curves





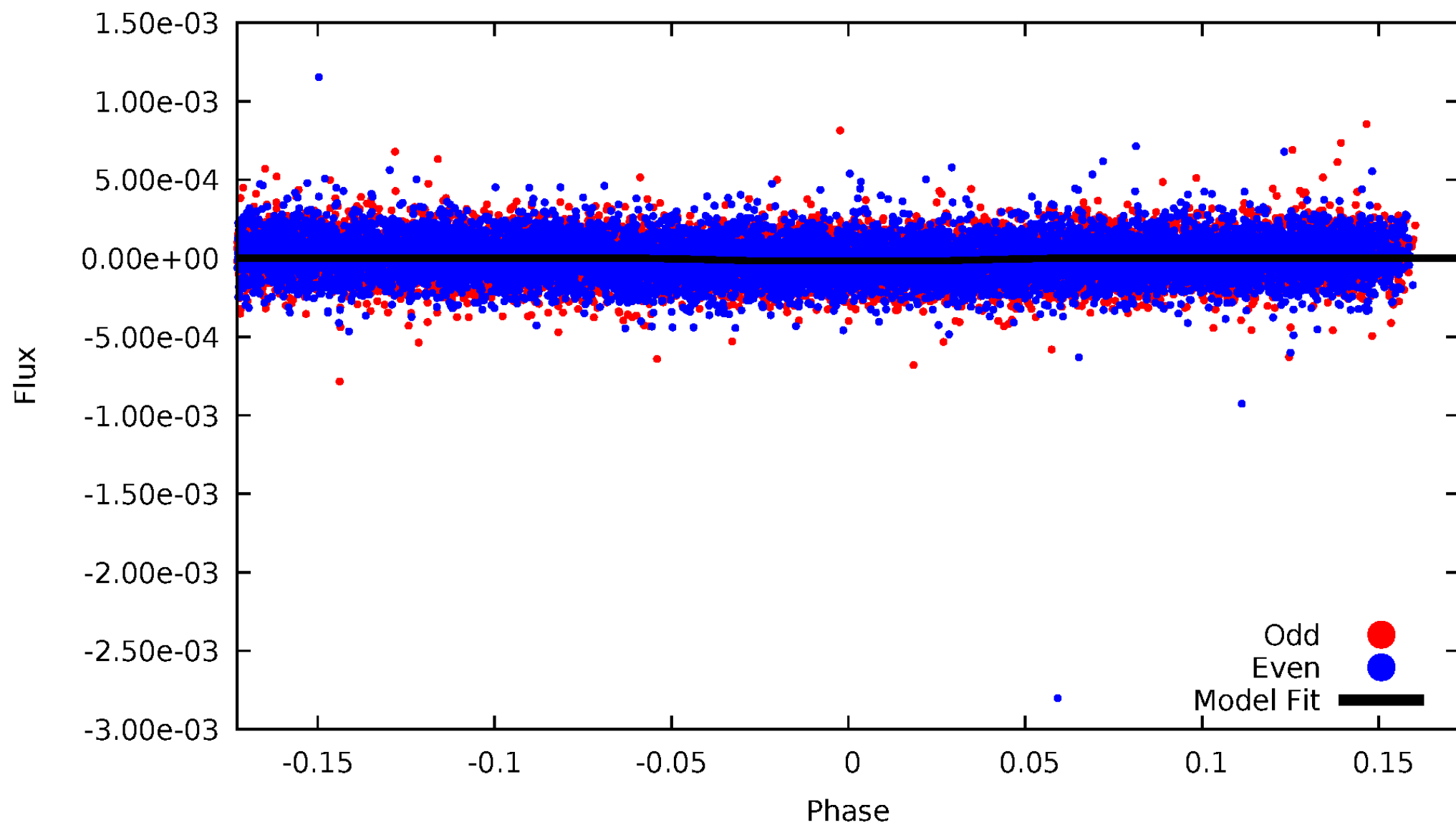
TCE 006279388-02





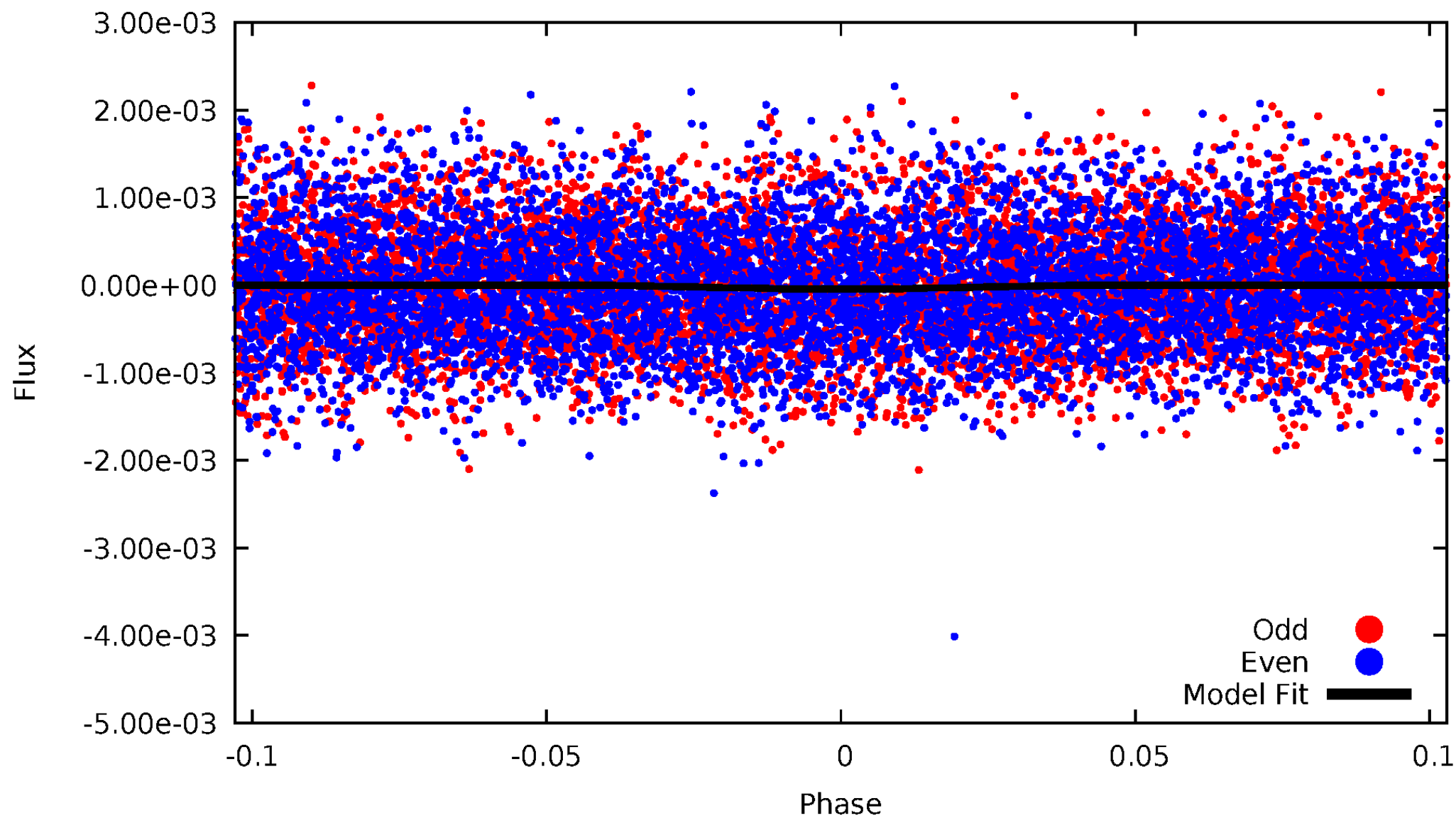
DV Odd/Even

TCE 006279388-02



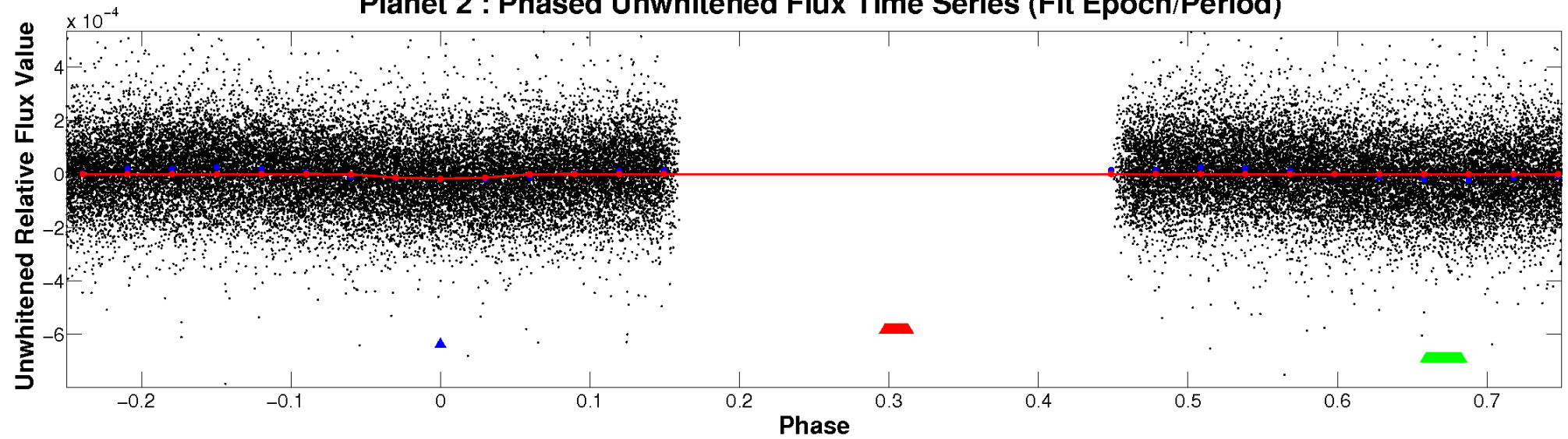
# ALT Odd/Even

TCE 006279388-02

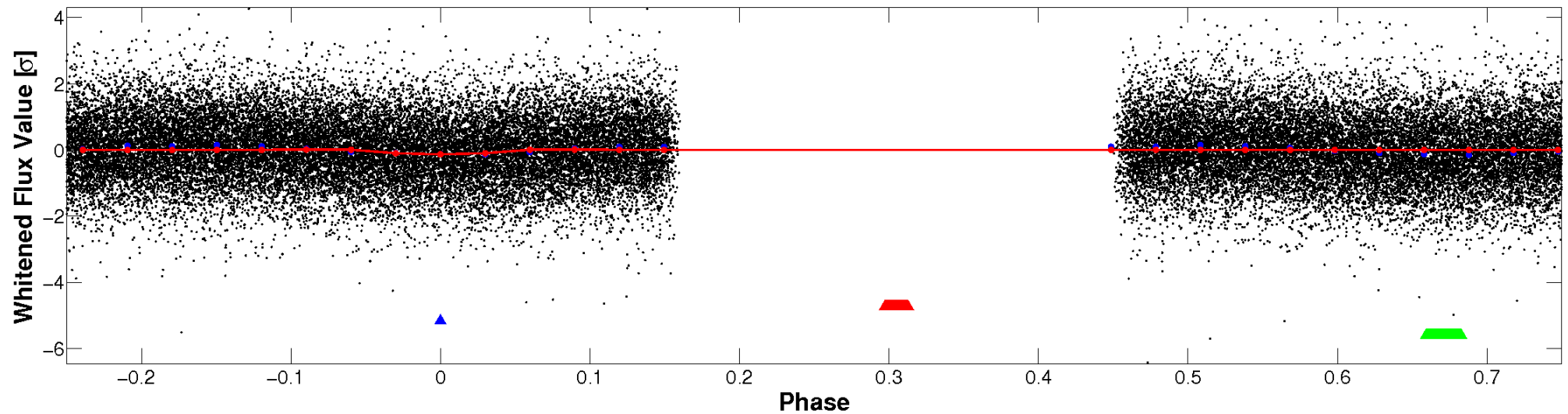


# Non-Whitened Vs. Whitened Light Curve

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

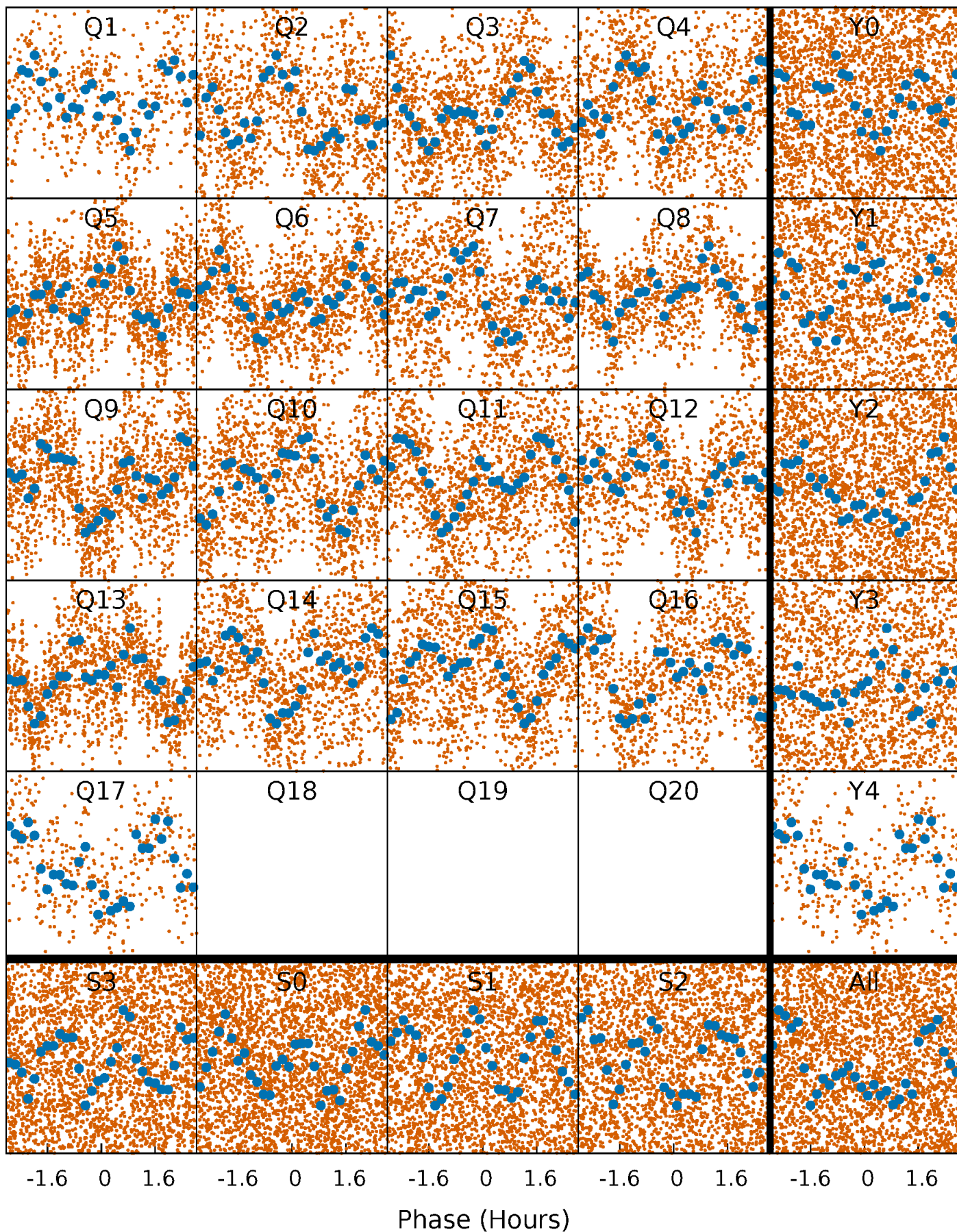


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

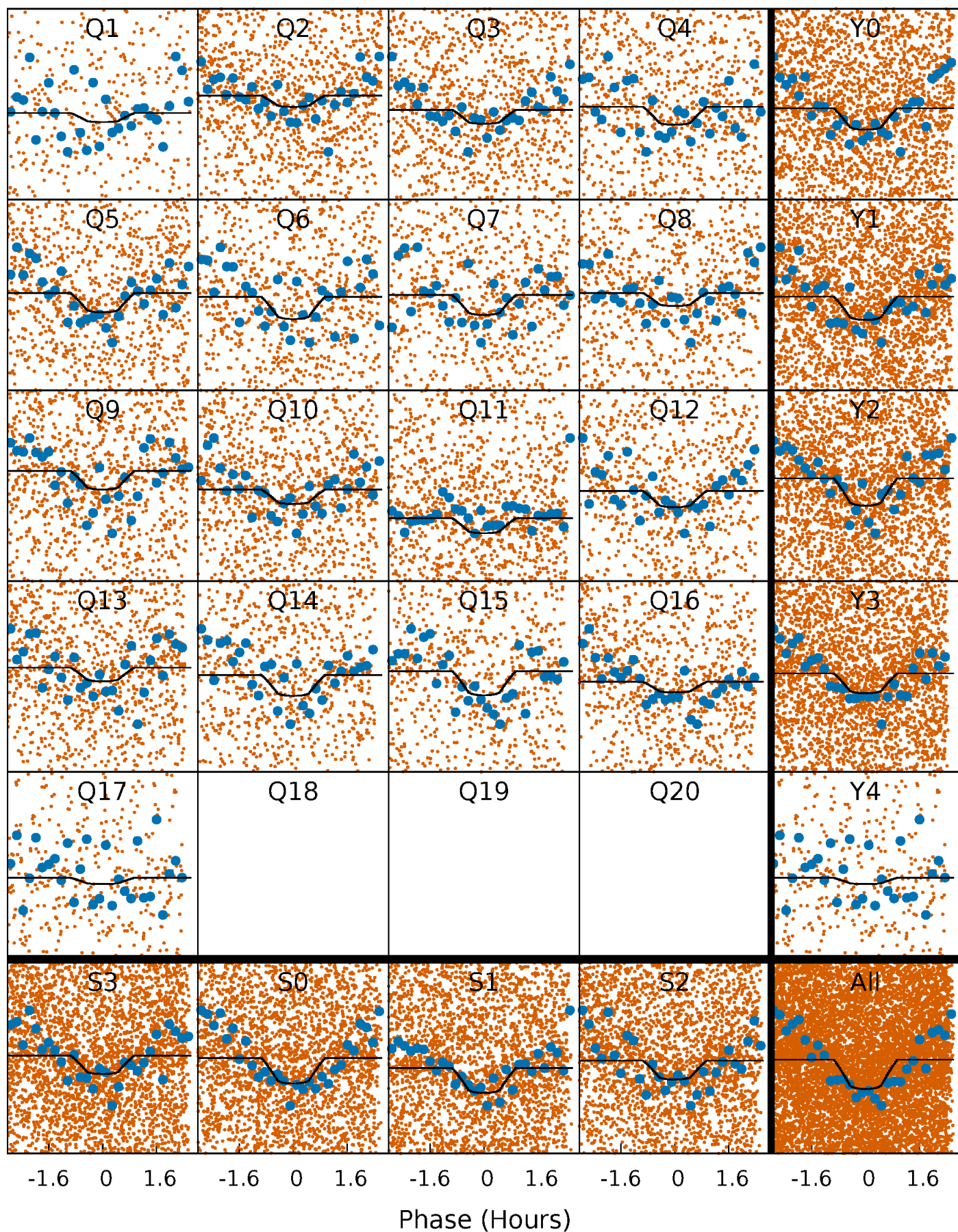
TCE 006279388-02   P= 0.683235 Days    $T_0=132.088582$  (BKJD)





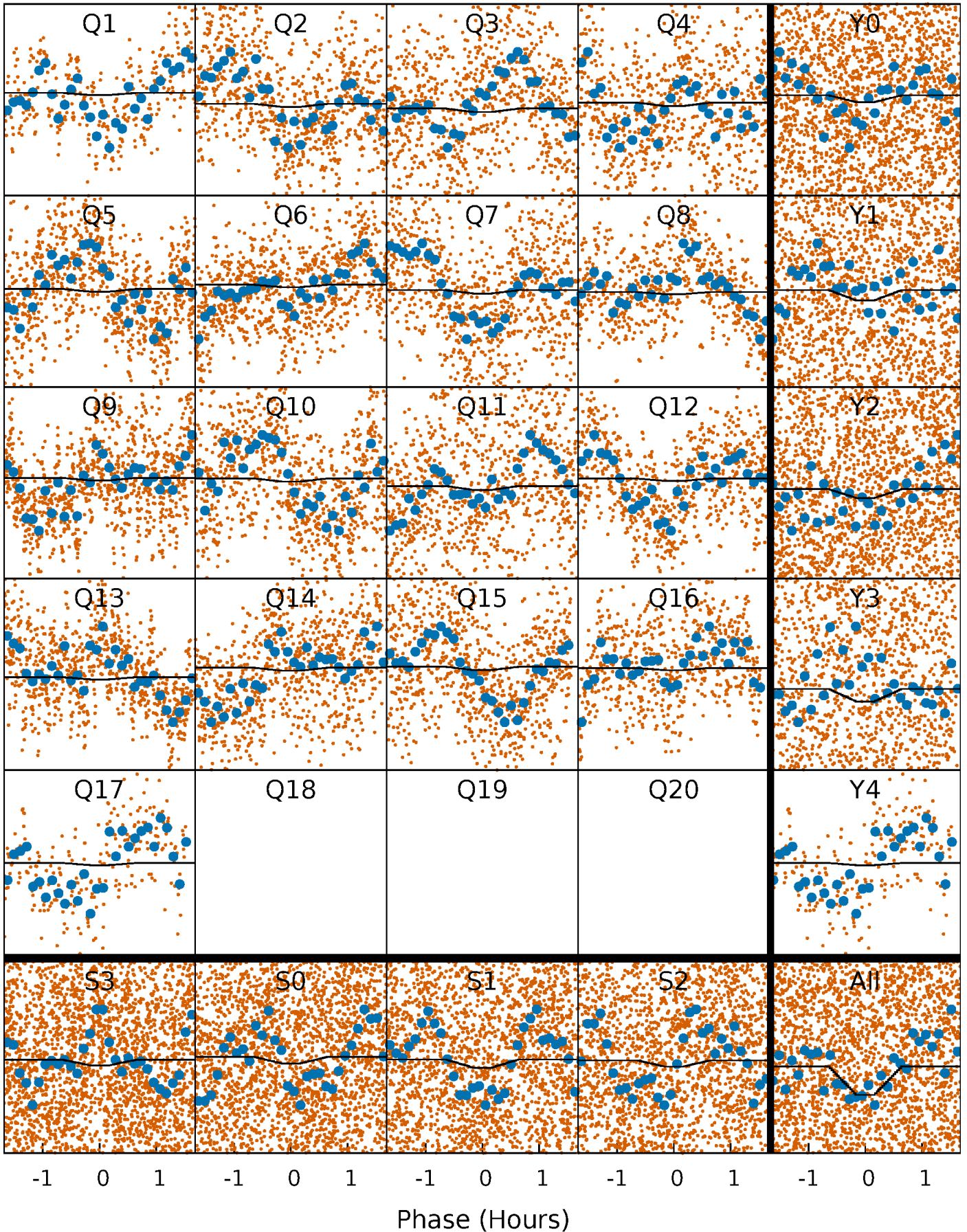
# DV Quarter-Phased Transit Curves

TCE 006279388-02   P= 0.683235 Days    $T_0=132.088582$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

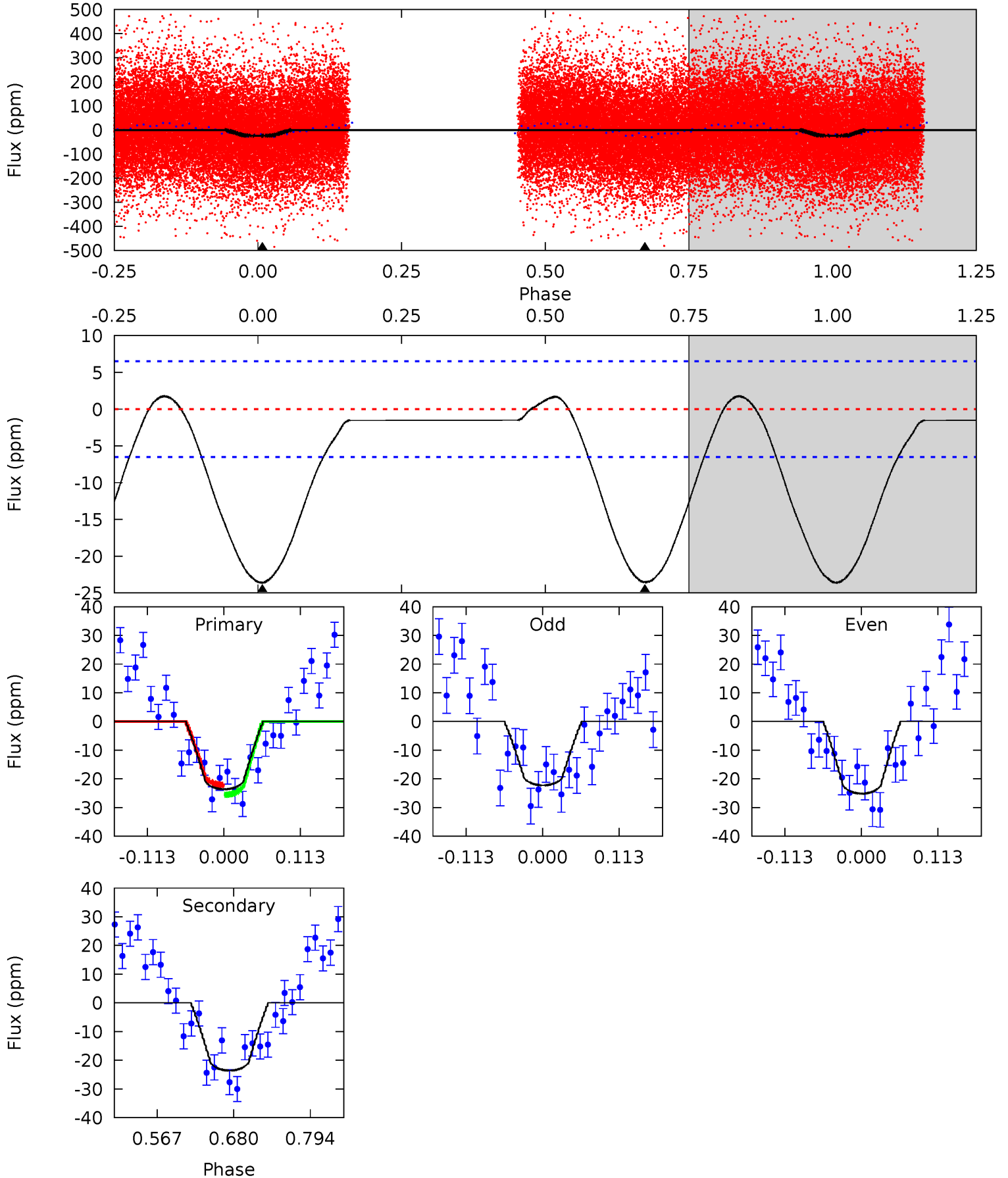
TCE 006279388-02   P= 0.683240 Days    $T_0=132.115548$  (BKJD)



# DV Model-Shift Uniqueness Test

006279388-02, P = 0.683235 Days, E = 131.405347 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
16.5	16.4	0	0	4.54	1.58	1.37	16.5	16.5	16.4	16.4	1.01	0.95	0.07	1.20

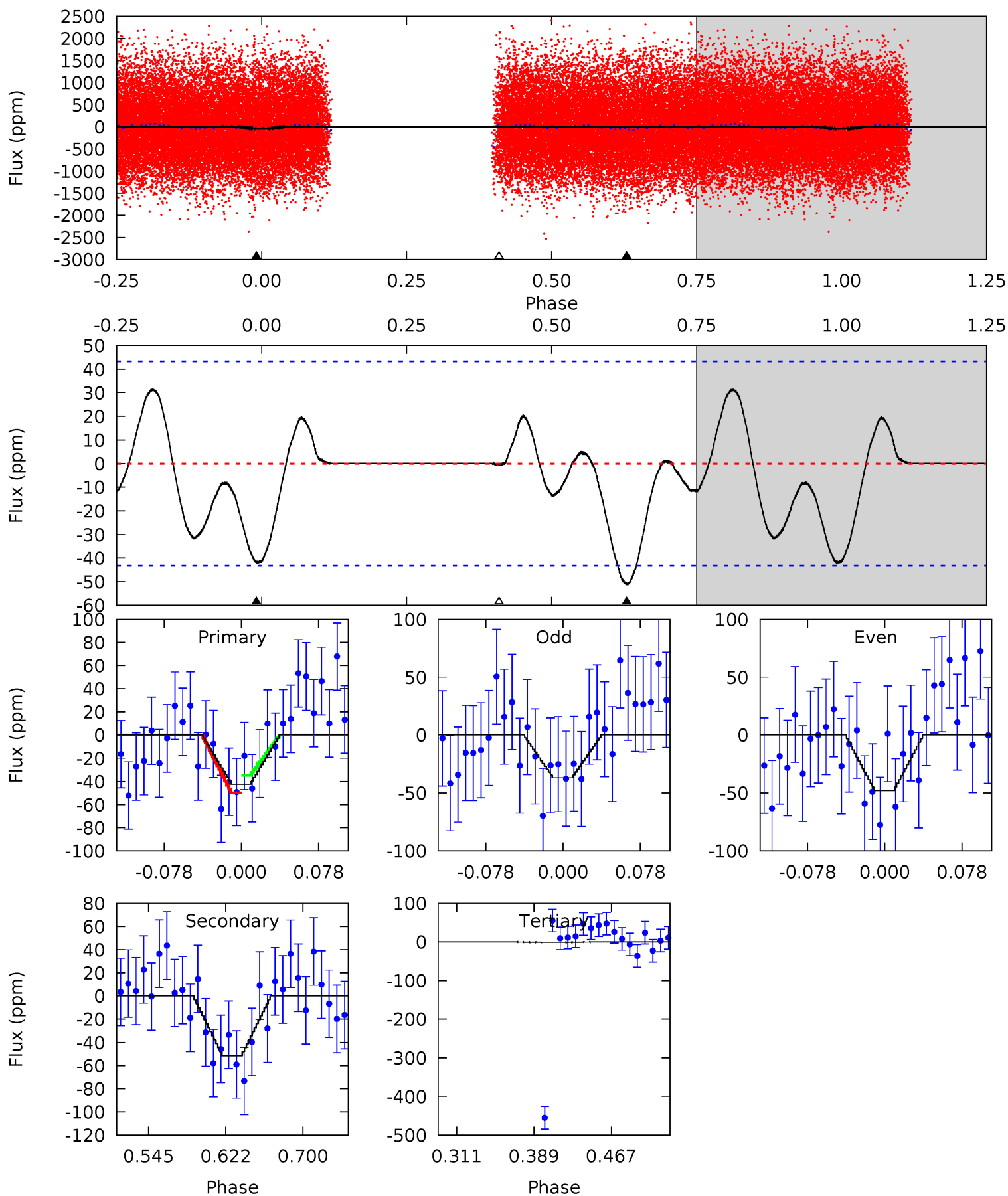




# Alt Model-Shift Uniqueness Test

006279388-02, P = 0.683240 Days, E = 131.432308 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
4.53	5.49	0.12	0	4.62	1.76	1.72	4.41	4.53	5.38	5.49	0.60	1.16	0.38	0.82





### Stellar Parameters For KIC 006279388

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7305^{+206}_{-353}$	$4.131^{+0.101}_{-0.188}$	$0.210^{+0.150}_{-0.350}$	$1.841^{+0.569}_{-0.306}$	$1.672^{+0.193}_{-0.257}$	$0.378^{+0.184}_{-0.198}$
	+3%/-5%	+2%/-5%	+71%/-167%	+31%/-17%	+12%/-15%	+49%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006279388-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-24 \pm 1$	$0.81^{+0.24}_{-0.19}$	$4578^{+346}_{-268}$	$8068^{+1550}_{-1145}$	$6.263^{+4.657}_{-2.461}$
Alt.	$-51 \pm 9$	$1.33^{+0.27}_{-0.24}$	$4588^{+375}_{-284}$	$7574^{+1030}_{-783}$	$5.131^{+2.722}_{-1.779}$

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

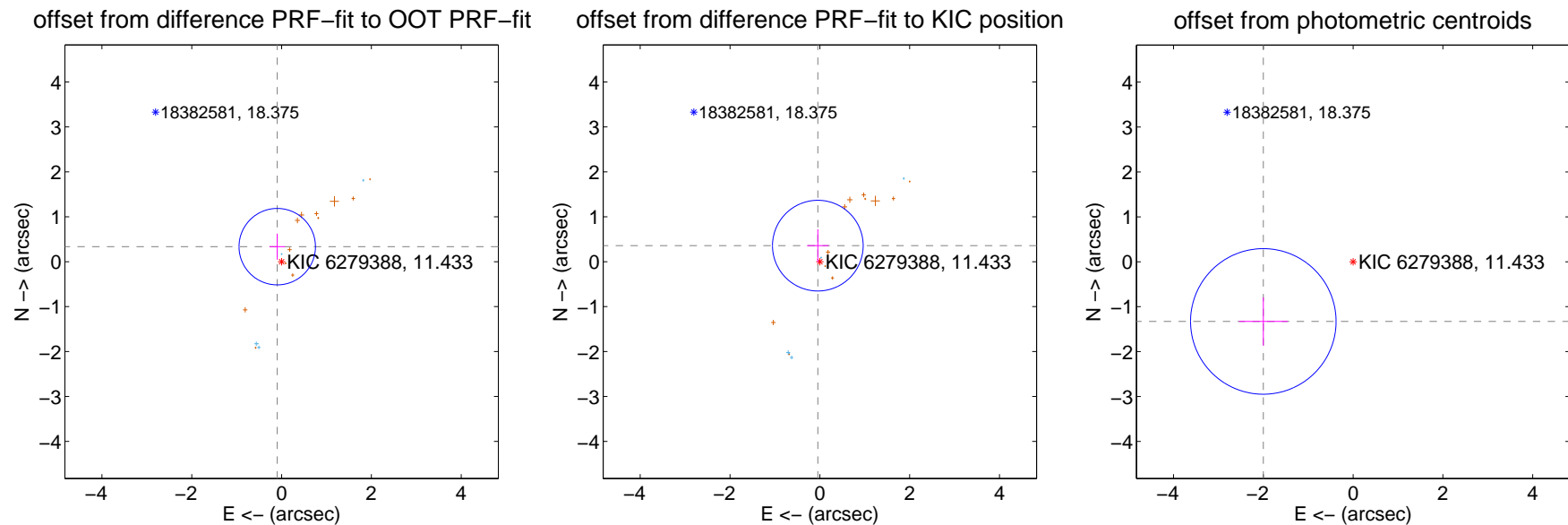
## DV Centroid Data

Supplemental centroid analysis for 006279388-02. **Kepler magnitude: 11.43.** Transit SNR 8.55

There are 5 quarters with good PRF difference image offsets

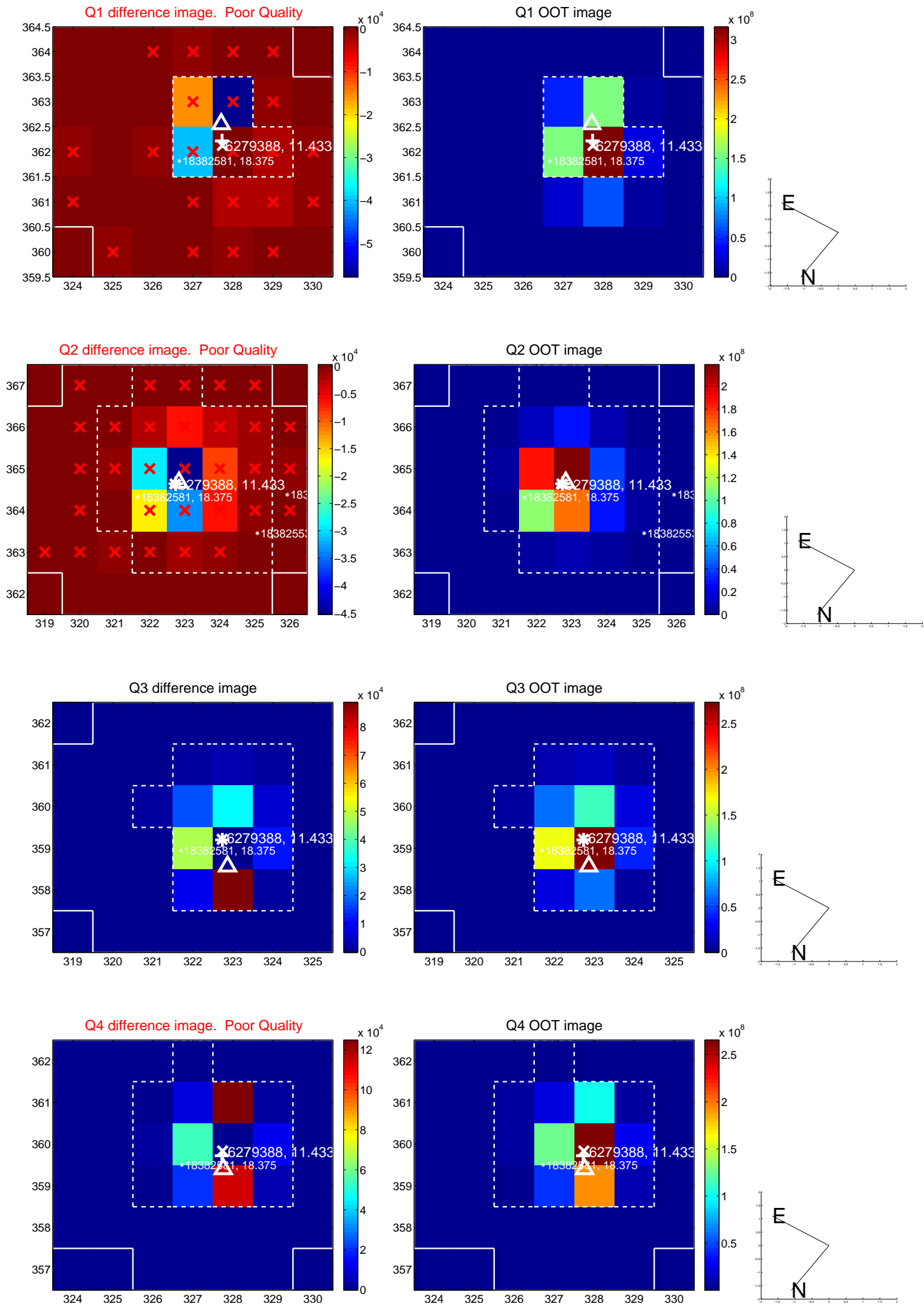
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.348 \pm 0.284$	1.23	$0.097 \pm 0.172$	$0.335 \pm 0.291$
PRF-fit source offset from KIC position	$0.360 \pm 0.337$	1.07	$0.045 \pm 0.239$	$0.357 \pm 0.365$
photometric centroid source offset	$2.40 \pm 0.54$	4.44	$2.00 \pm 0.54$	$-1.33 \pm 0.54$

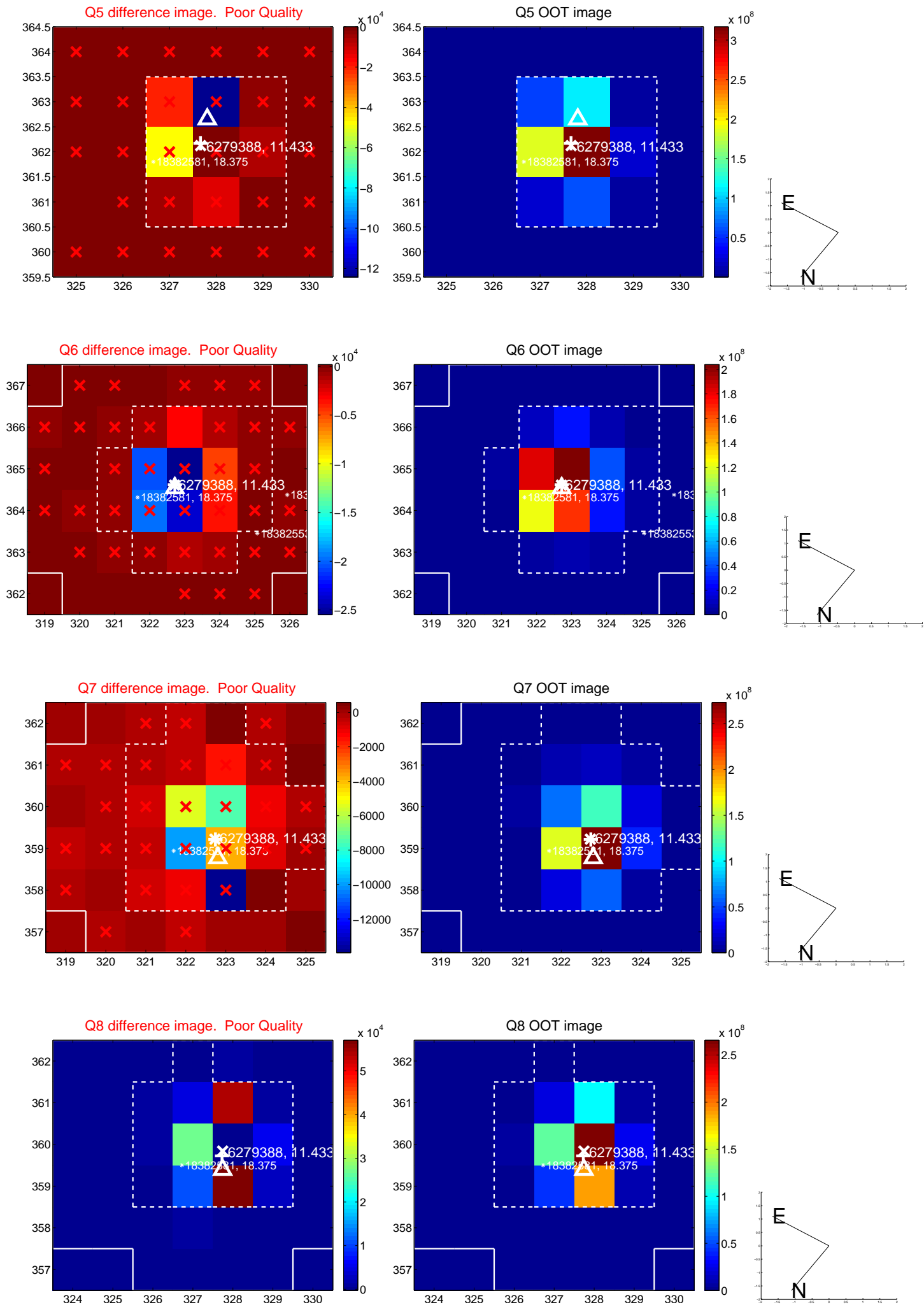


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

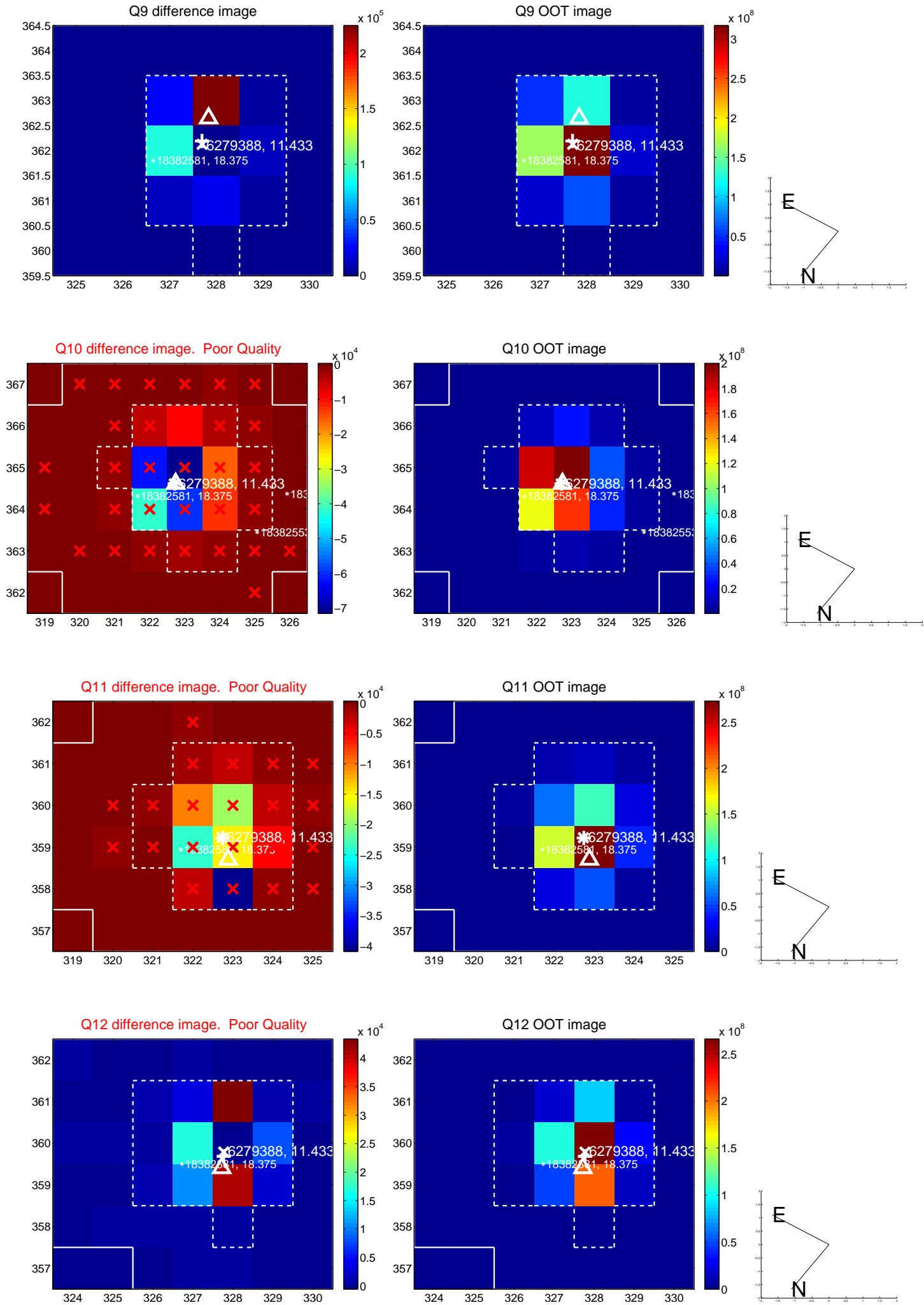
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

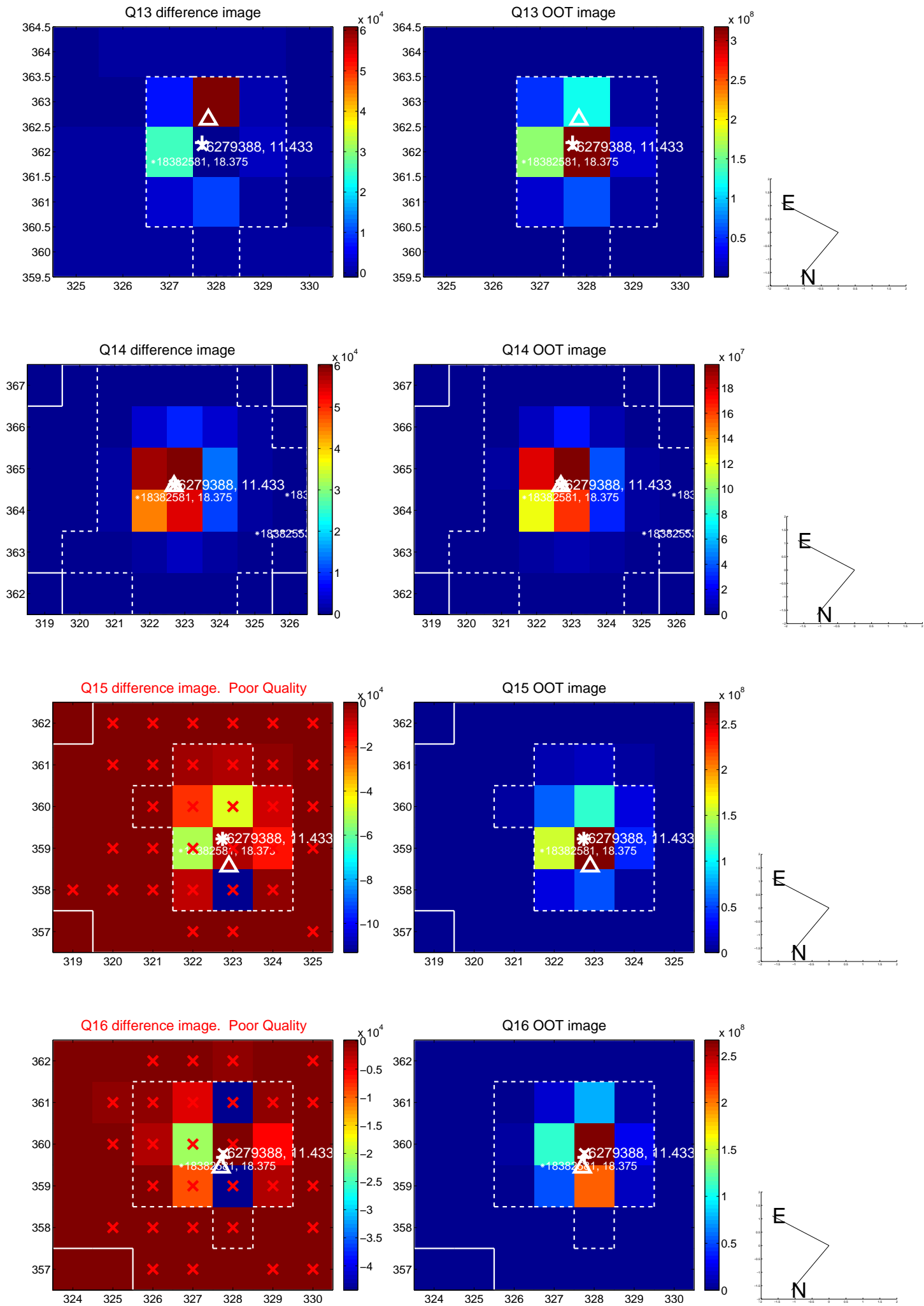


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

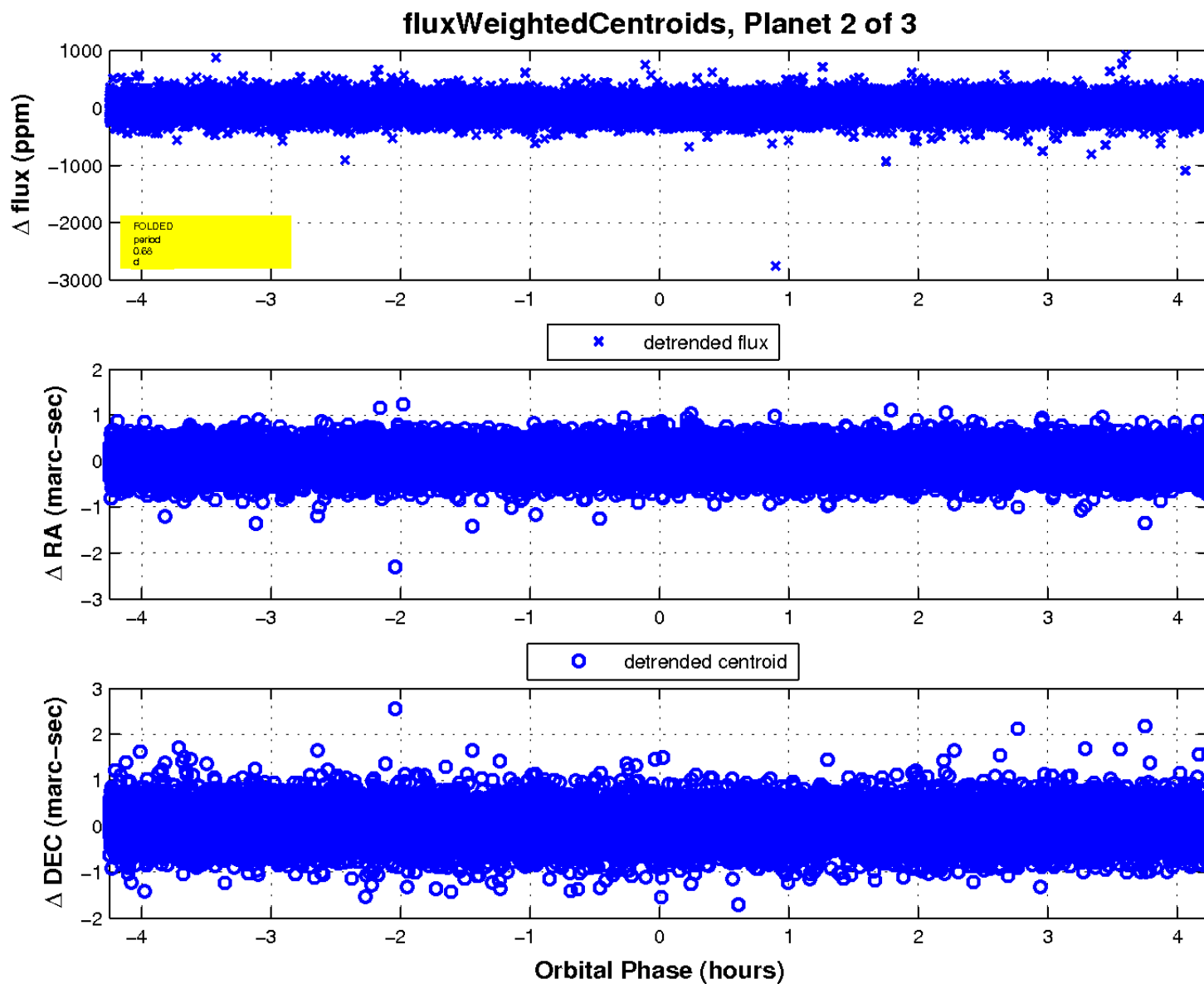
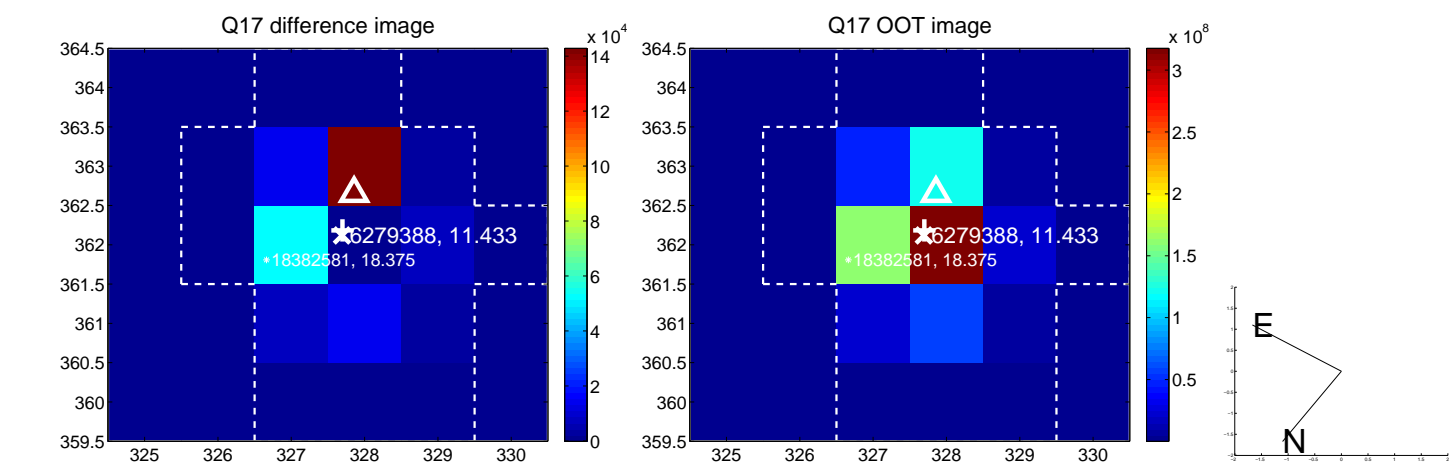




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

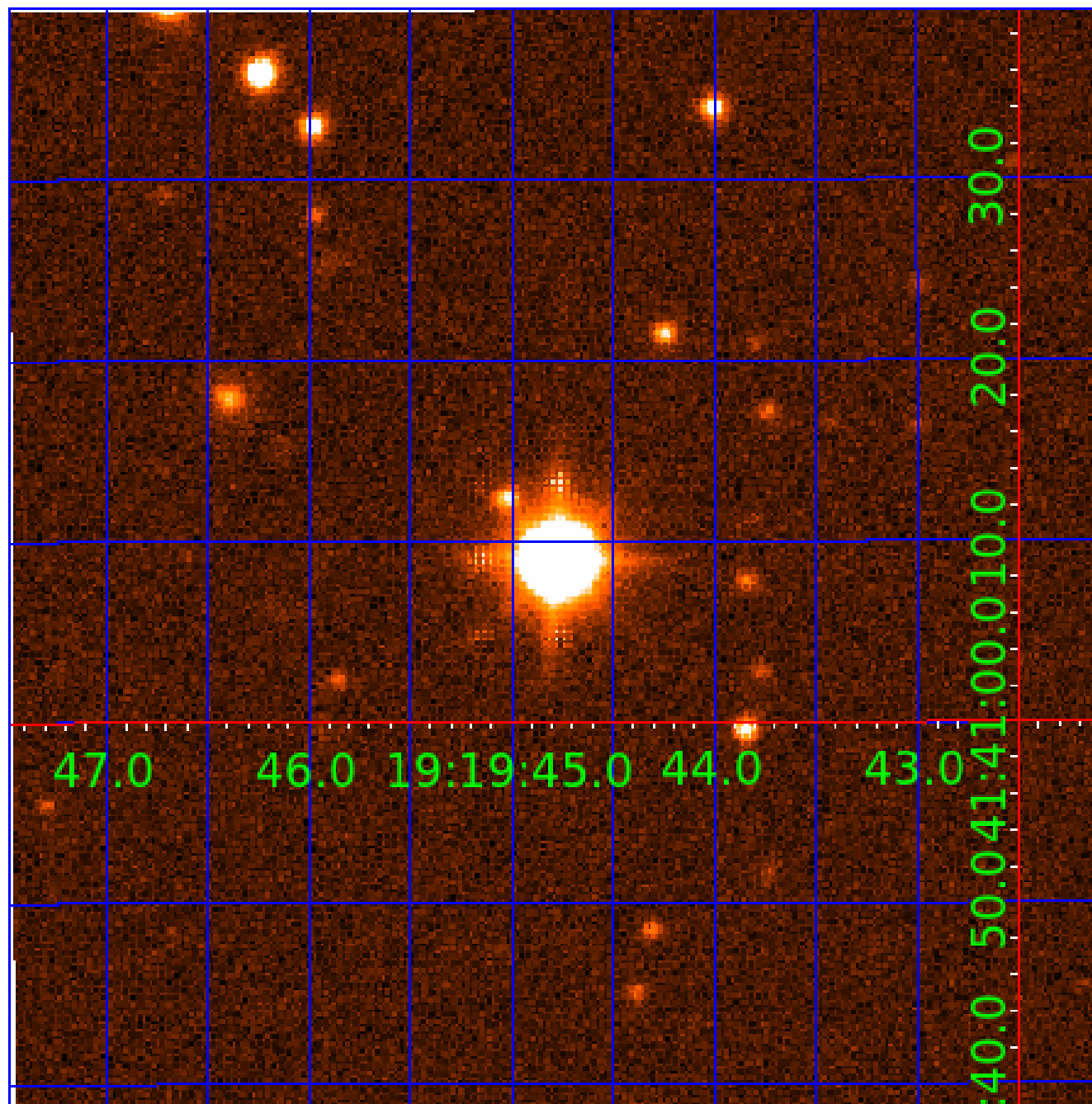


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006279388

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006279388-01	OBS	No	0.683230	131.619025	15.6	1.444	9.7	7.4	1.84	7305	0.84	26626.95
006279388-02	OBS	No	0.683235	132.088582	17.5	1.417	10.5	8.6	1.84	7305	0.81	26626.69
006279388-03	OBS	No	0.683228	131.871780	24.0	2.189	11.9	14.5	1.84	7305	0.92	26627.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006279388-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006279388-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006279388-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

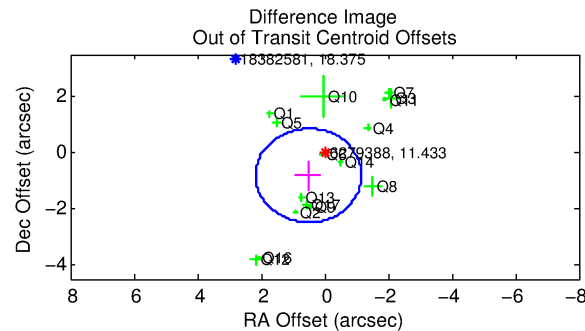
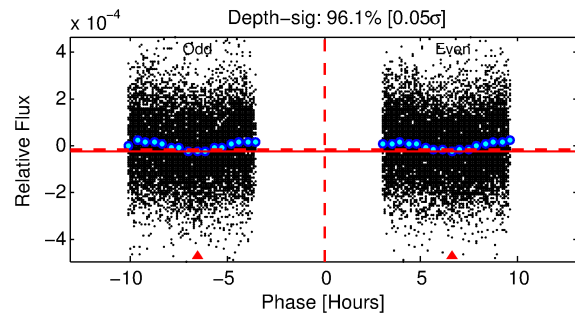
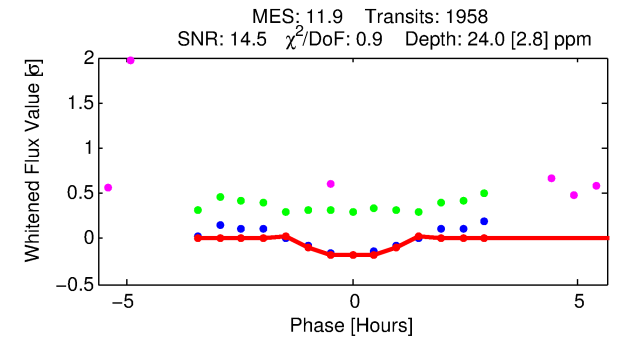
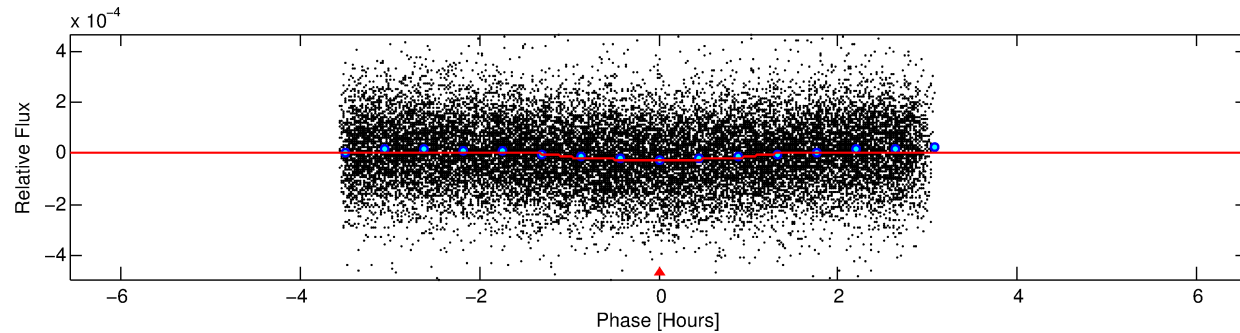
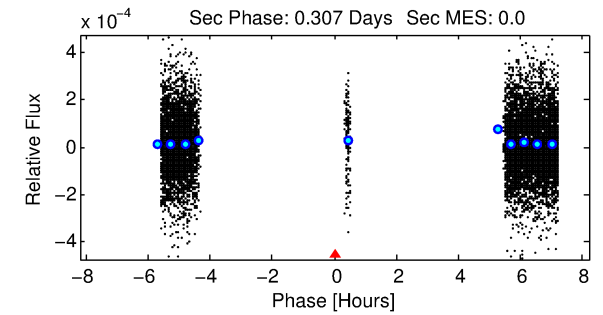
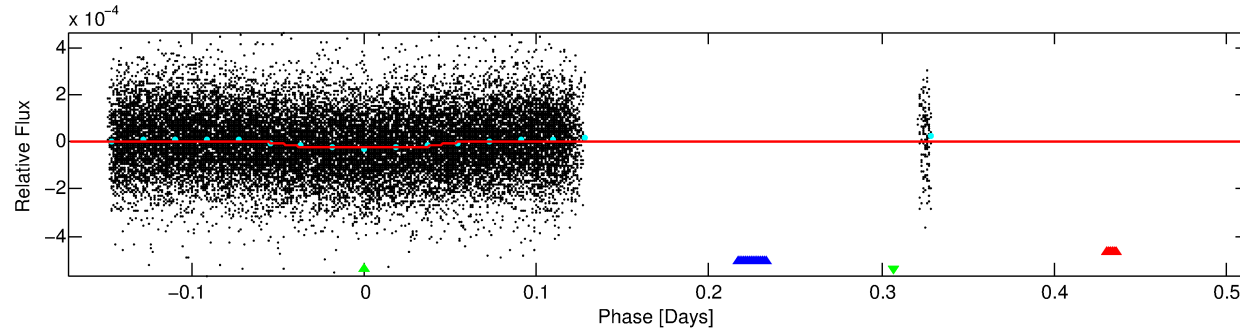
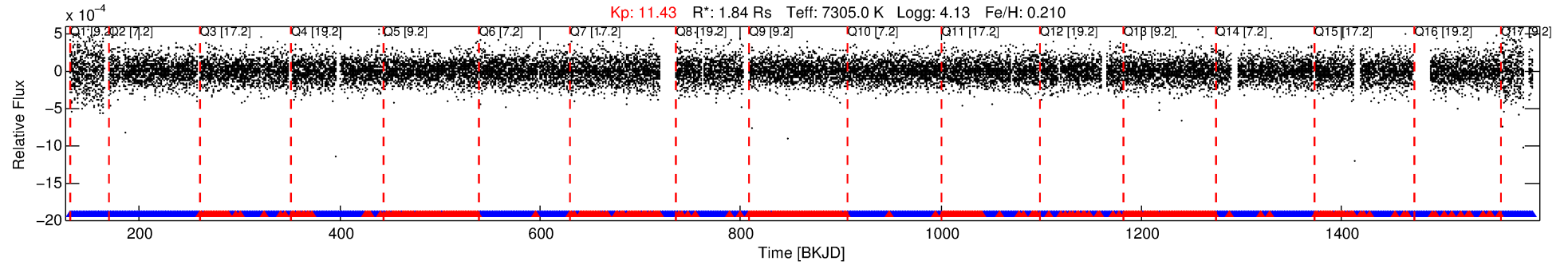
## Ephemeris Match Information For 006279388-03

No Significant Match Found



# DV One-Page Summary

KIC: 6279388 Candidate: 3 of 3 Period: 0.683 d



## DV Fit Results:

Period = 0.68323 [0.00001] d  
Epoch = 131.8718 [0.0020] BKJD  
Rp/R\* = 0.0046 [0.0041]  
a/R\* = 2.46 [10.83]  
b = 0.10 [52.49]  
Seff = 26627.08 [10753.58]  
Teq = 3257 [329] K  
Rp = 0.92 [0.86] Re  
a = 0.0180 [0.0045] AU  
Ag = N/A  
Teffp = N/A

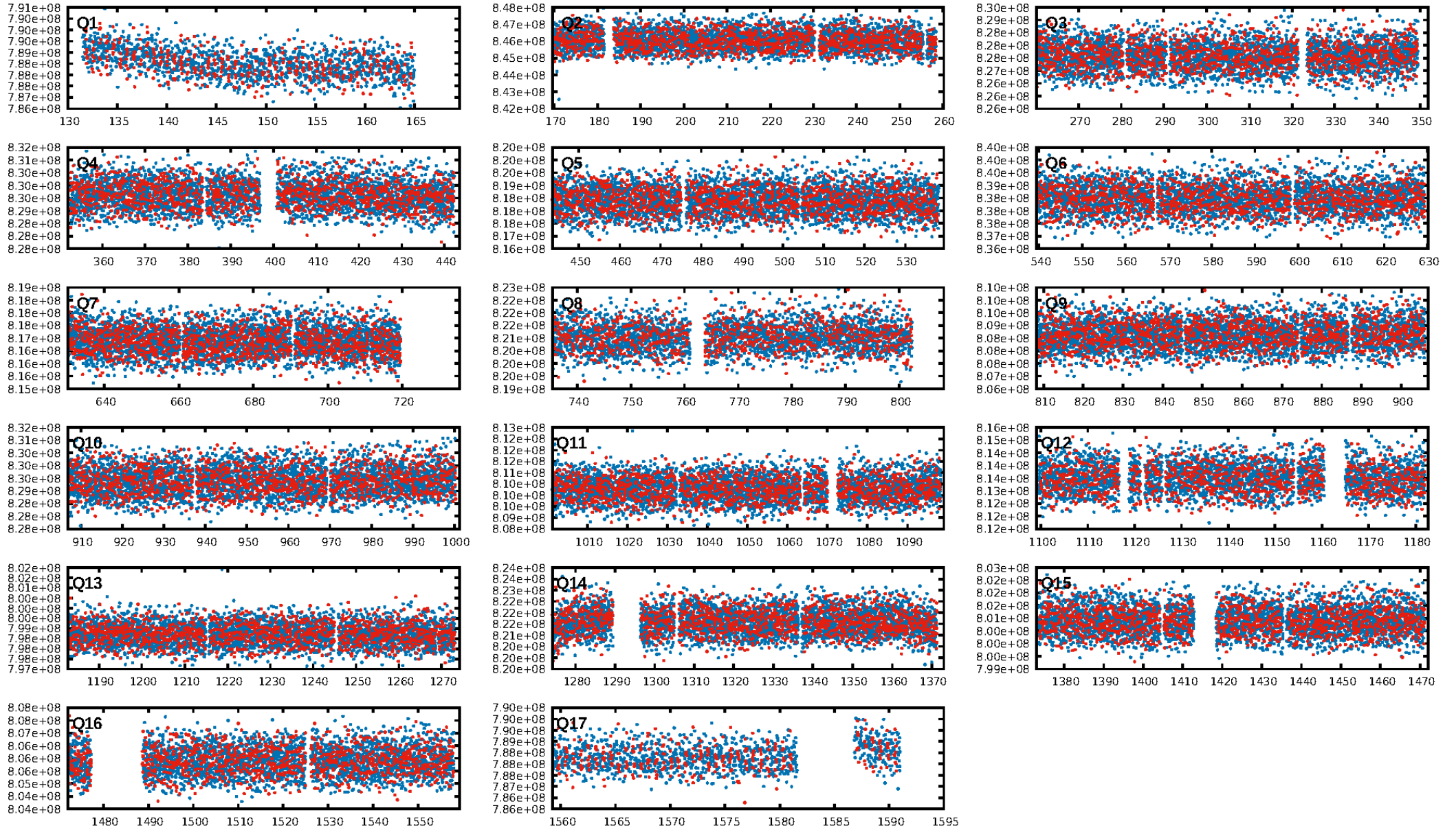
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.86e-82  
RollingBand-fgt: 0.68 [1280/1871]  
GhostDiagnostic-chr: 8.541  
Centroid-sig: N/A  
Centroid-so: 0.720 arcsec [2.22σ]  
OotOffset-rm: 0.961 arcsec [1.73σ]  
KicOffset-rm: 1.058 arcsec [1.97σ]  
OotOffset-st: 4/3/4/5 [16]  
KicOffset-st: 4/3/4/5 [16]  
DiffImageQuality-fgm: 0.50 [8/16]  
DiffImageOverlap-fno: 0.00 [0/17]

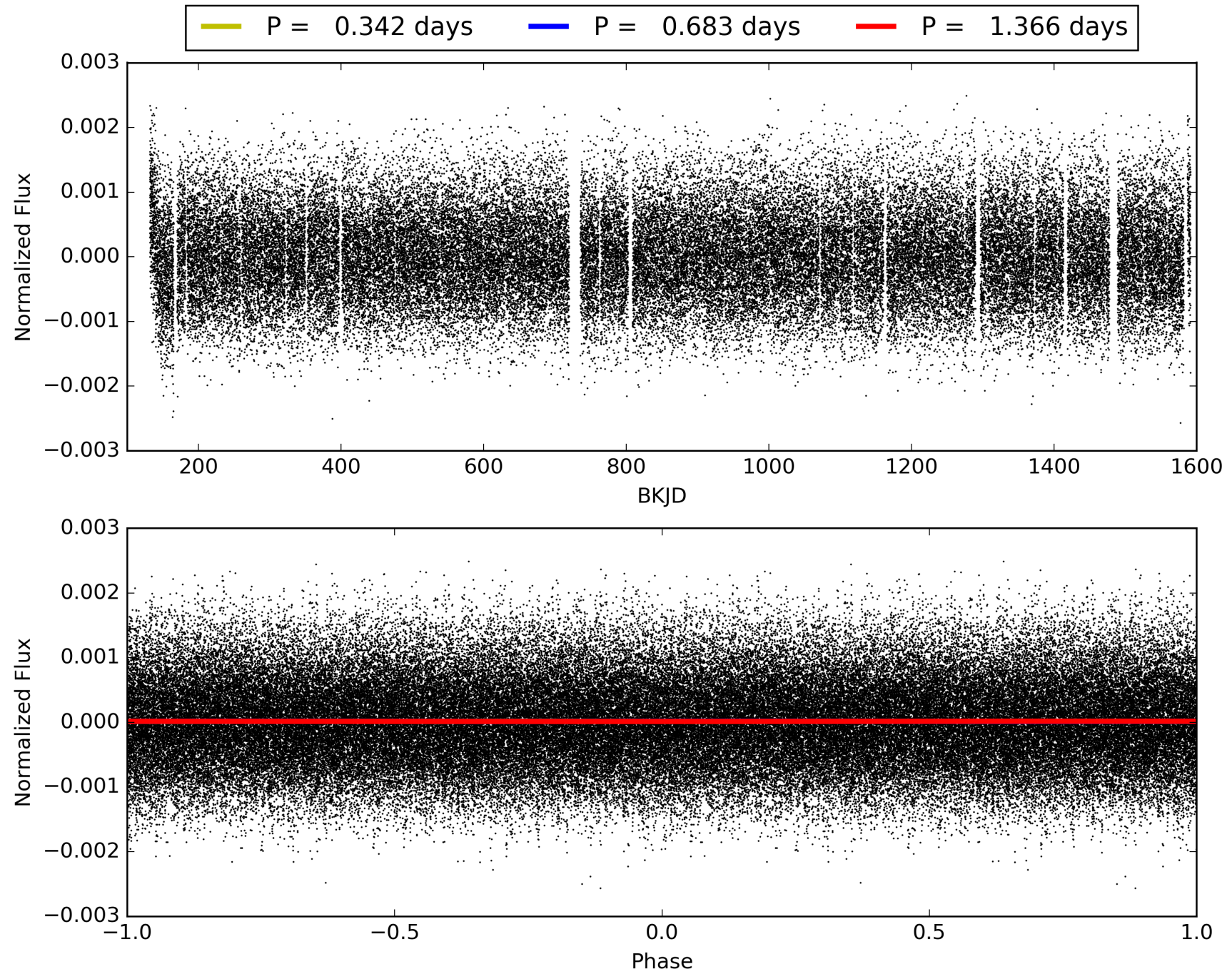
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:34:54 Z

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

# TCE 006279388-03, PDC Light Curves



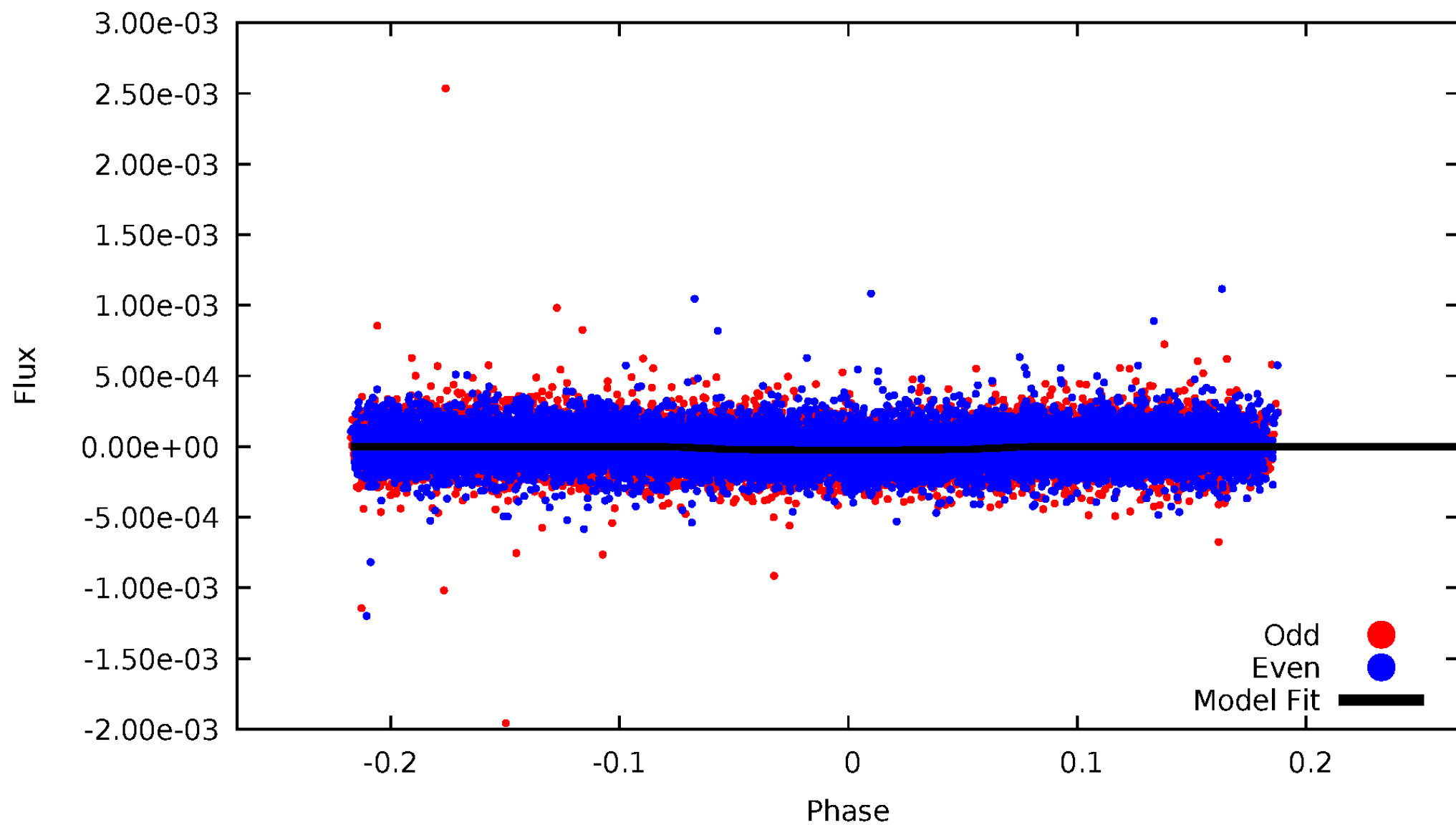
TCE 006279388-03





# DV Odd/Even

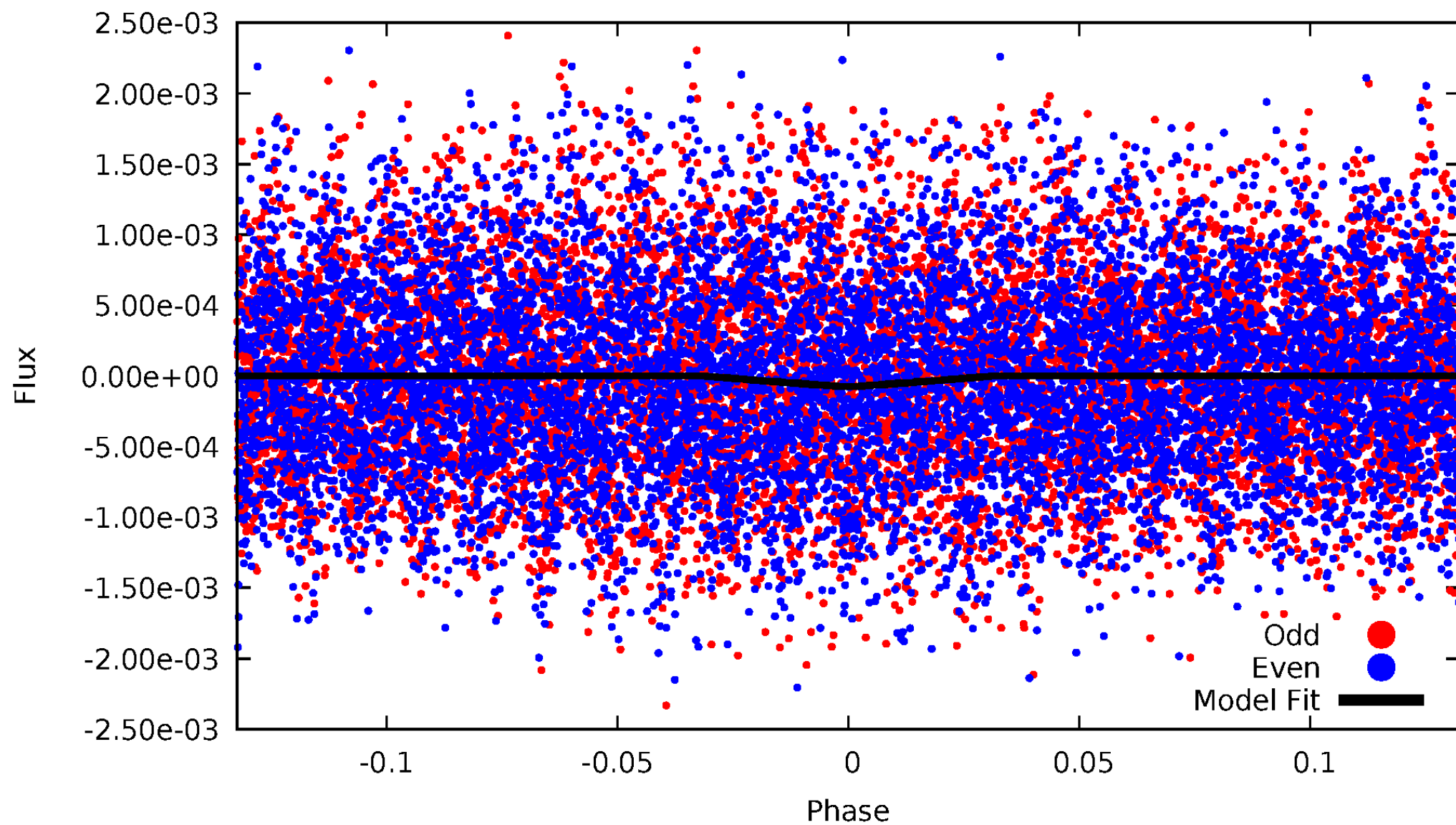
TCE 006279388-03





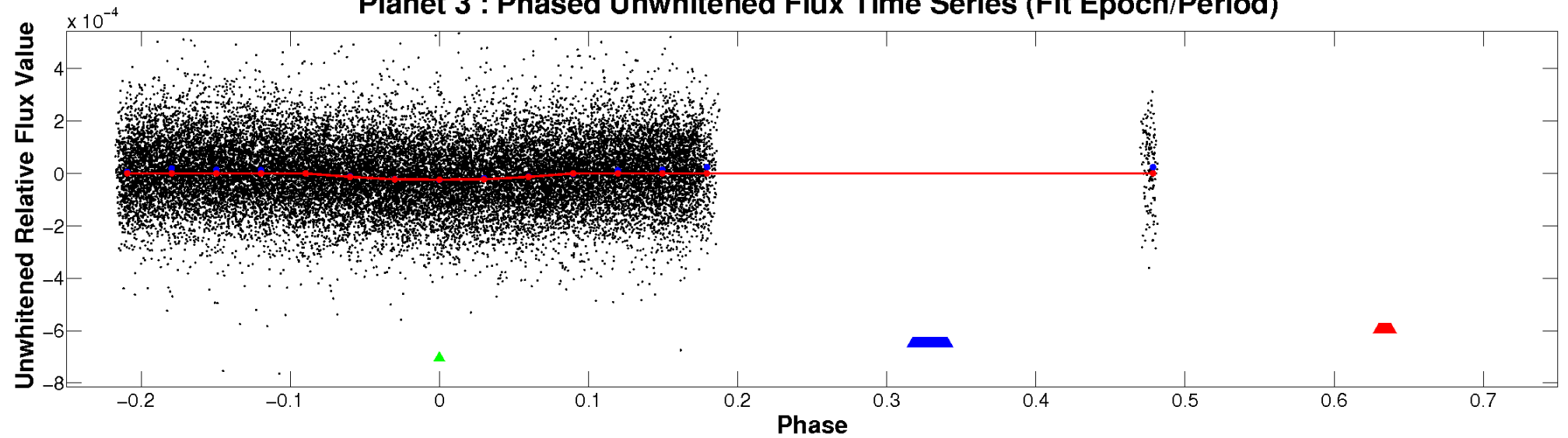
ALT Odd/Even

TCE 006279388-03

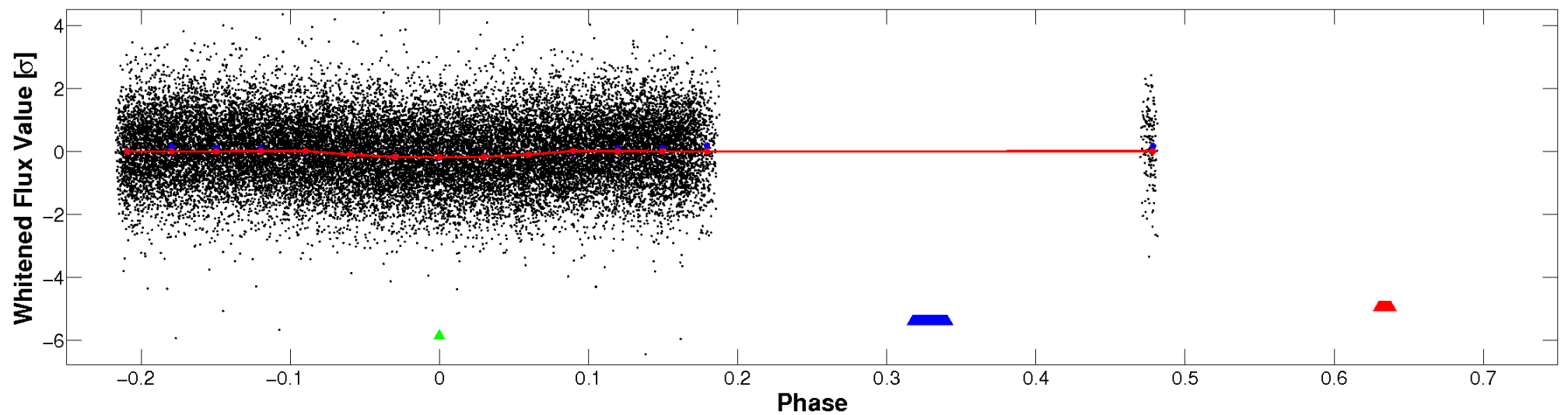


# Non-Whitened Vs. Whitened Light Curve

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

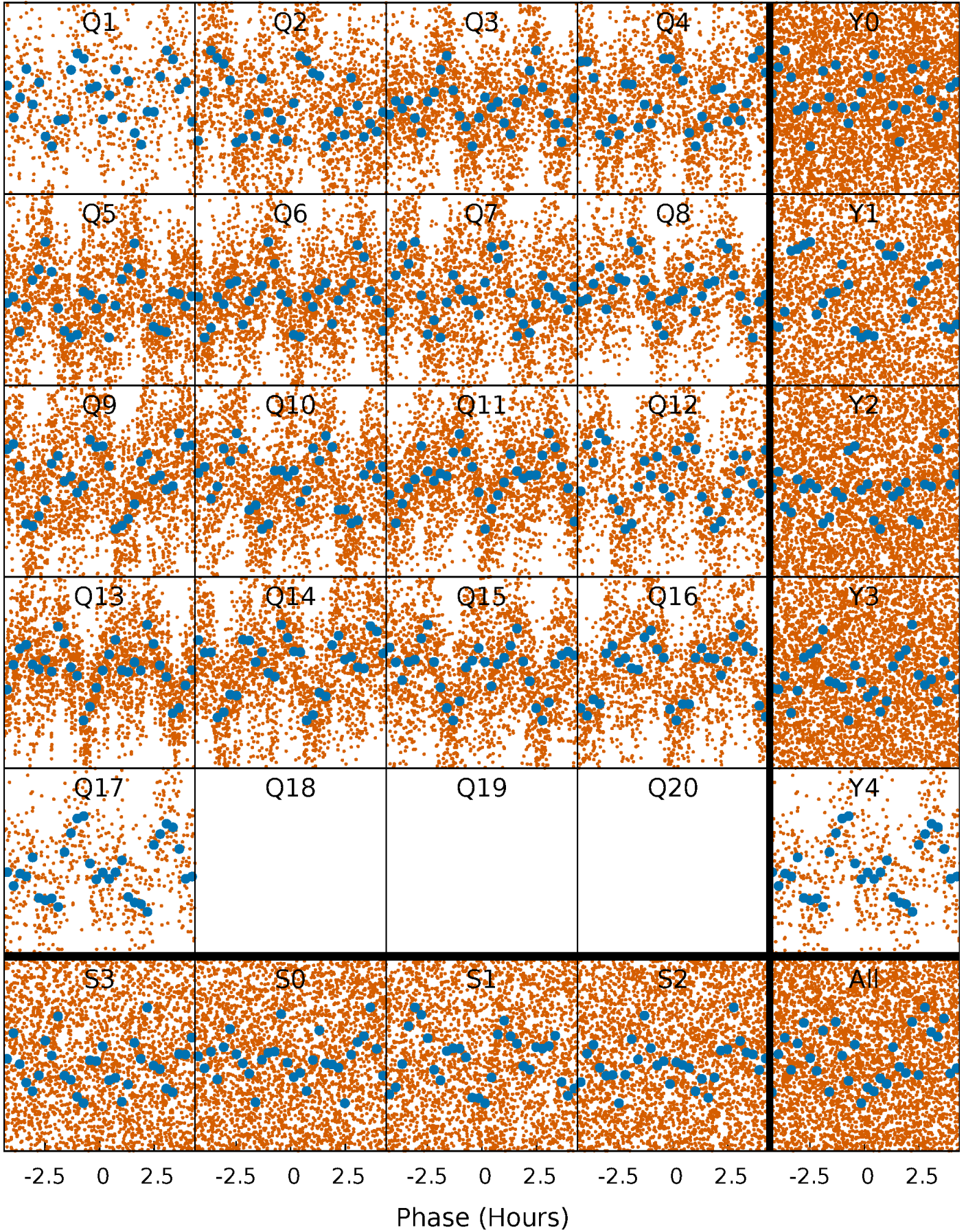


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

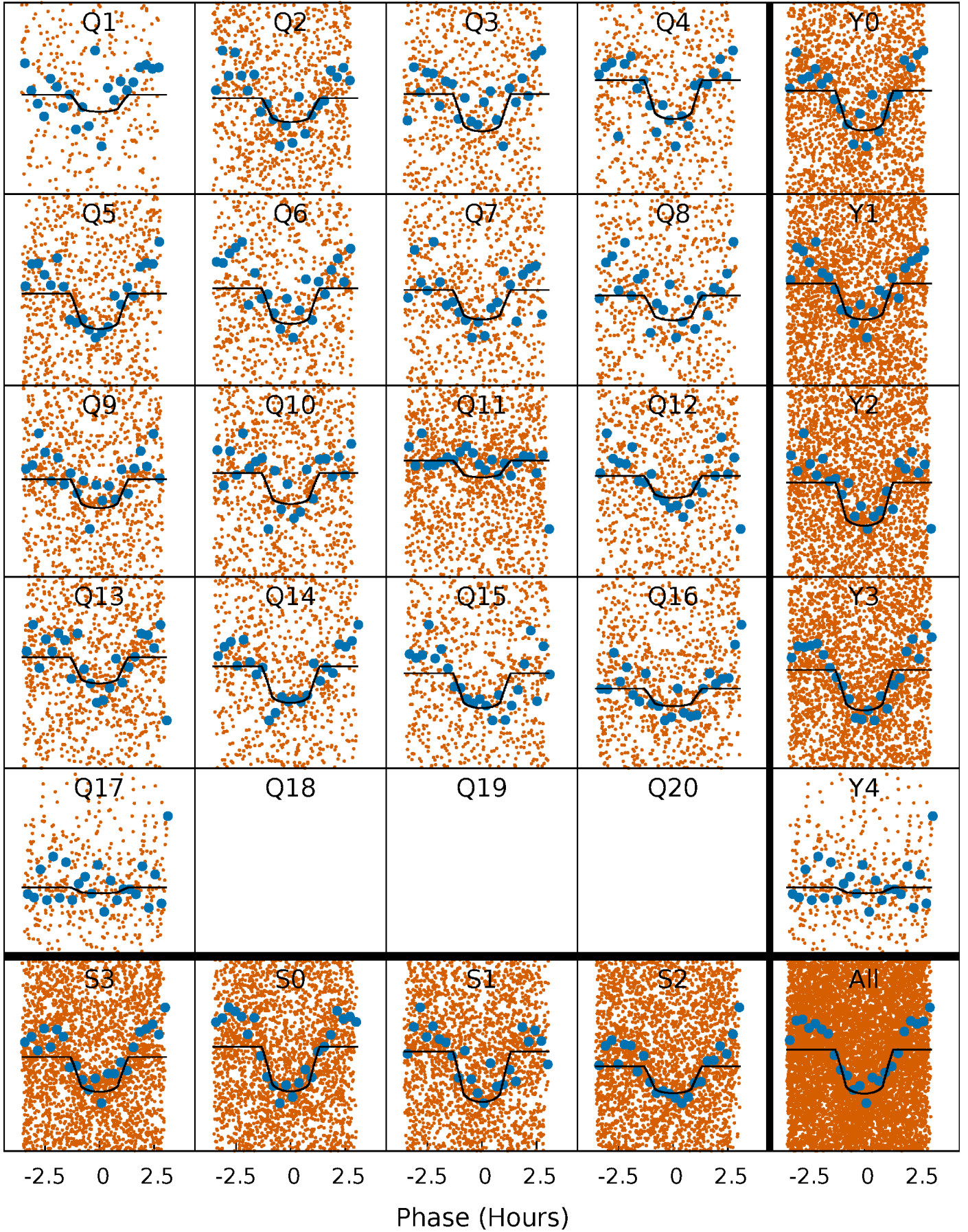
TCE 006279388-03 P= 0.683228 Days  $T_0=131.871780$  (BKJD)





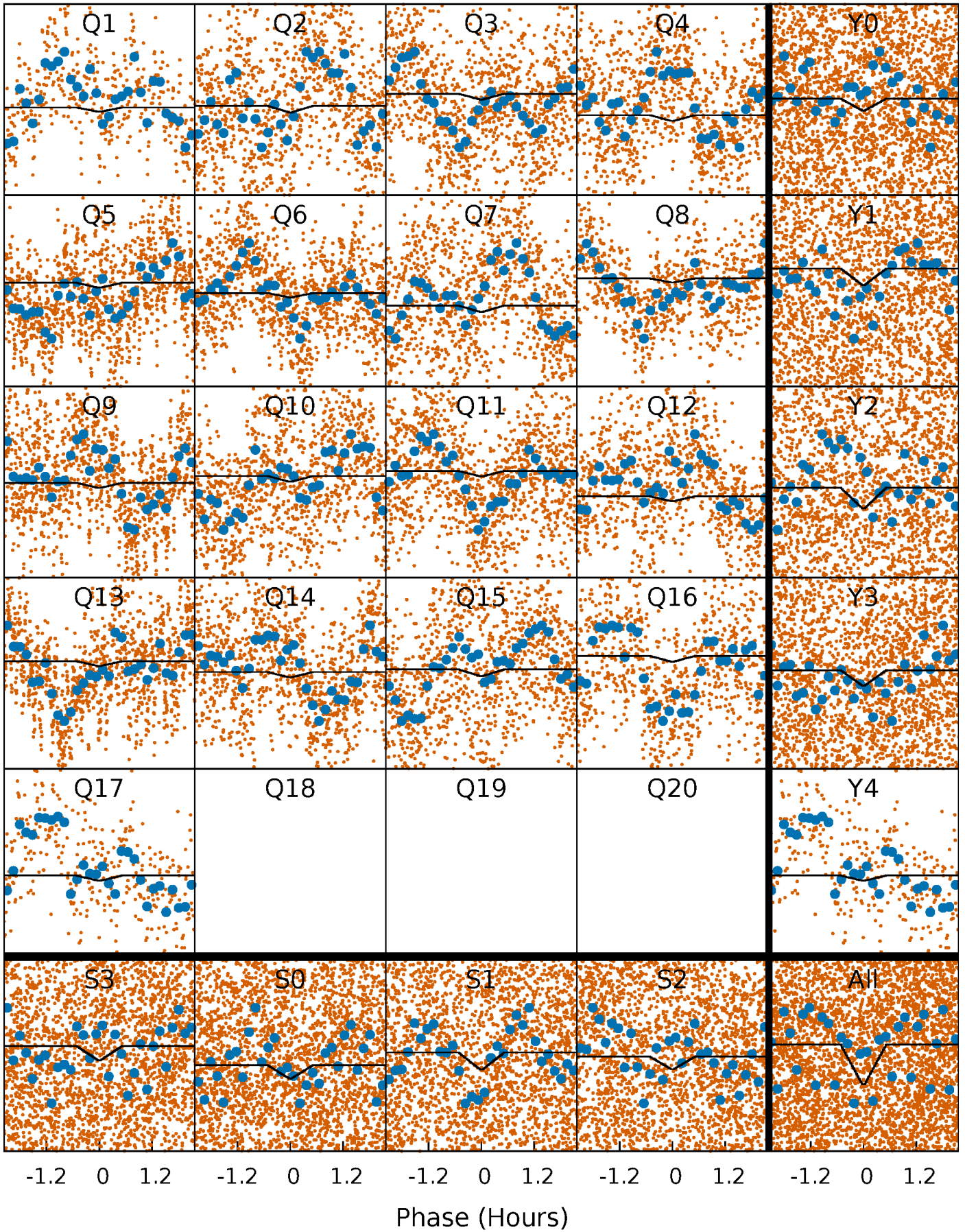
# DV Quarter-Phased Transit Curves

TCE 006279388-03     $P = 0.683228$  Days     $T_0 = 131.871780$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006279388-03 P= 0.683234 Days  $T_0=131.870795$  (BKJD)

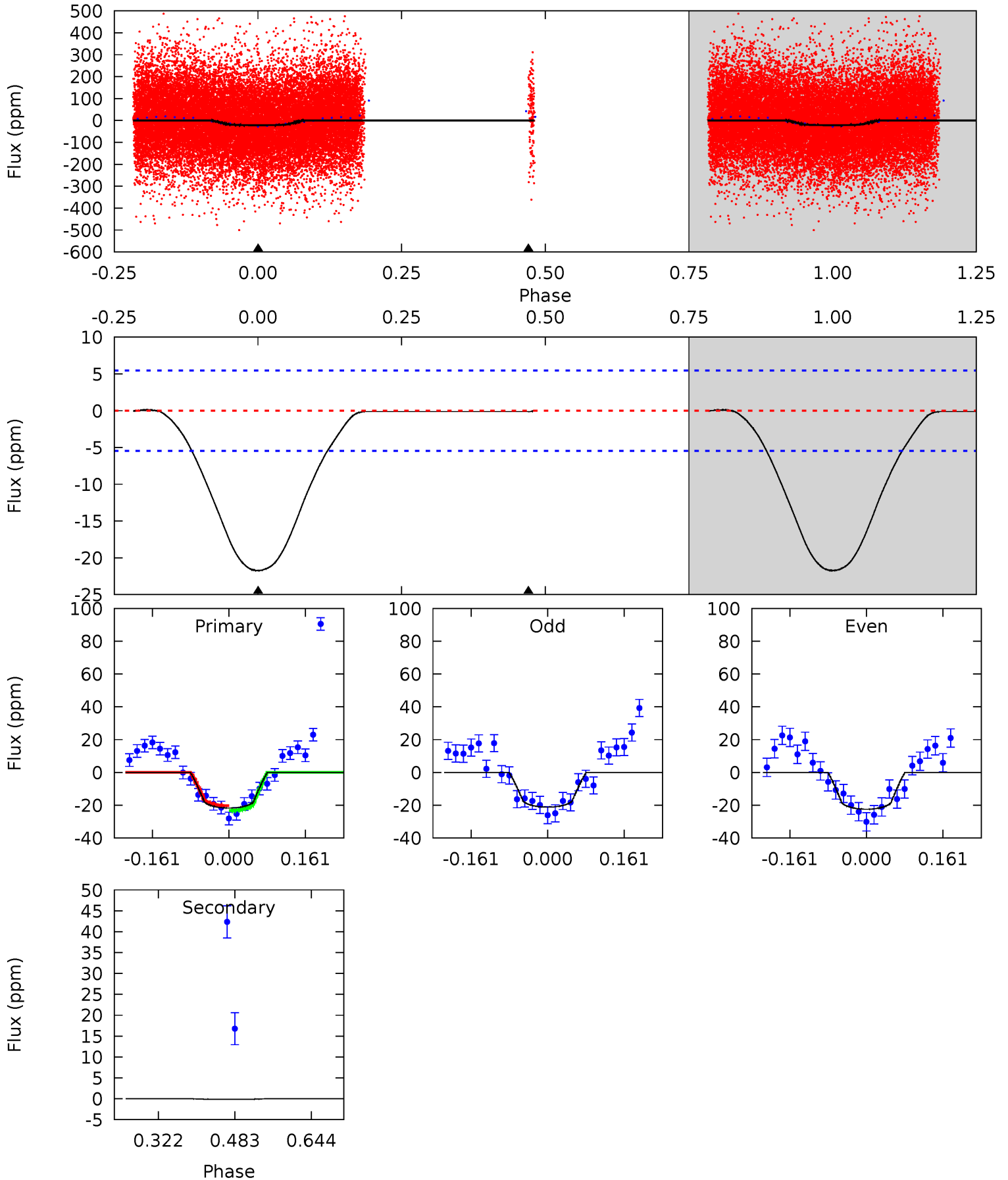




# DV Model-Shift Uniqueness Test

006279388-03, P = 0.683228 Days, E = 131.188552 Days

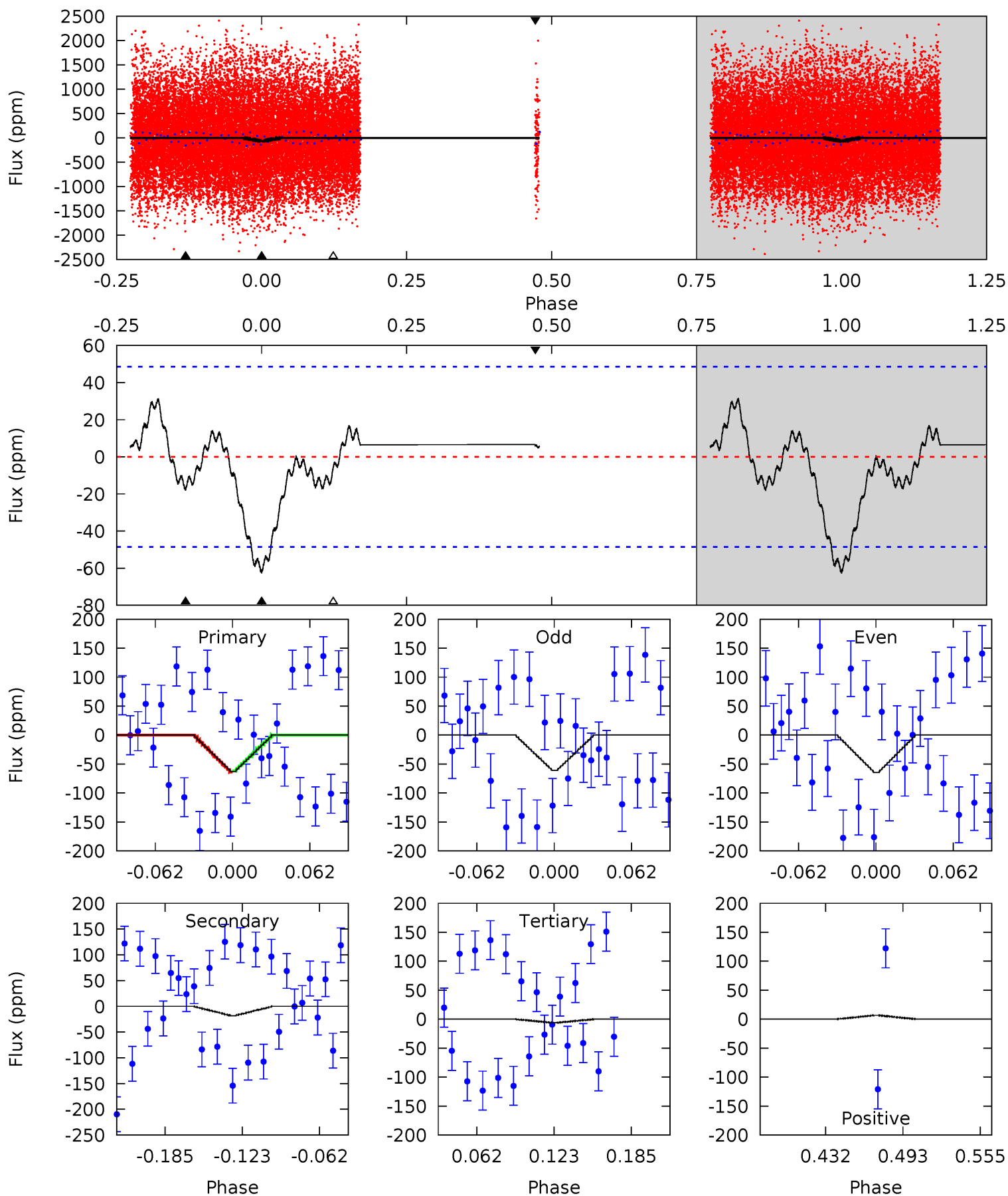
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	0.11	0	0	4.46	1.40	0.22	17.8	17.8	0.11	0.11	0.52	0.92	0.01	1.18



# Alt Model-Shift Uniqueness Test

006279388-03, P = 0.683234 Days, E = 131.187561 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
6.03	1.75	0.59	0.64	4.67	1.87	1.03	5.44	5.40	1.15	1.11	0.16	0.86	0.33	0.11



### Stellar Parameters For KIC 006279388

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7305^{+206}_{-353}$	$4.131^{+0.101}_{-0.188}$	$0.210^{+0.150}_{-0.350}$	$1.841^{+0.569}_{-0.306}$	$1.672^{+0.193}_{-0.257}$	$0.378^{+0.184}_{-0.198}$
	+3%/-5%	+2%/-5%	+71%/-167%	+31%/-17%	+12%/-15%	+49%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006279388-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-0 \pm 1$	$1.07^{+0.79}_{-0.61}$	$4591^{+324}_{-298}$	$-3996^{+1609}_{-618}$	$0.015^{+0.275}_{-0.269}$
Alt.	$-18 \pm 10$	$1.86^{+0.79}_{-0.83}$	$4569^{+321}_{-271}$	$4561^{+2028}_{-7293}$	$0.901^{+2.434}_{-0.623}$

$T_{max}$  = 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

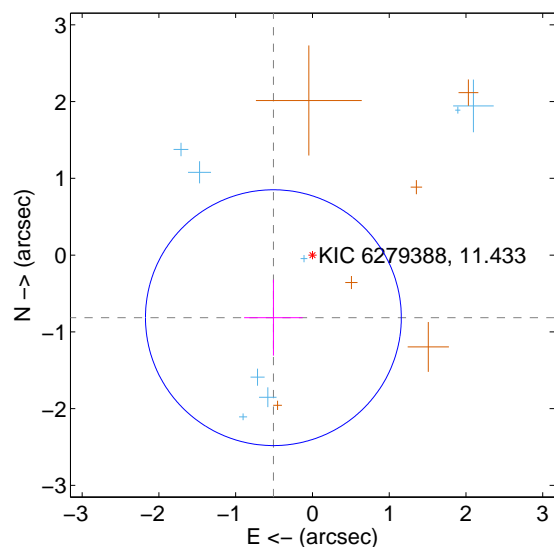
Supplemental centroid analysis for 006279388-03. **Kepler magnitude: 11.43.** Transit SNR 14.53

There are 8 quarters with good PRF difference image offsets

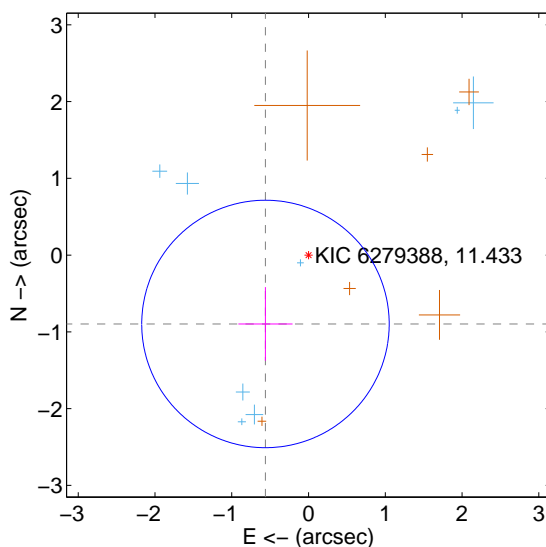
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.961 \pm 0.556$	1.73	$0.509 \pm 0.382$	$-0.815 \pm 0.495$
PRF-fit source offset from KIC position	$1.058 \pm 0.537$	1.97	$0.561 \pm 0.354$	$-0.897 \pm 0.480$
photometric centroid source offset	$0.72 \pm 0.32$	2.22	$0.57 \pm 0.32$	$-0.44 \pm 0.32$

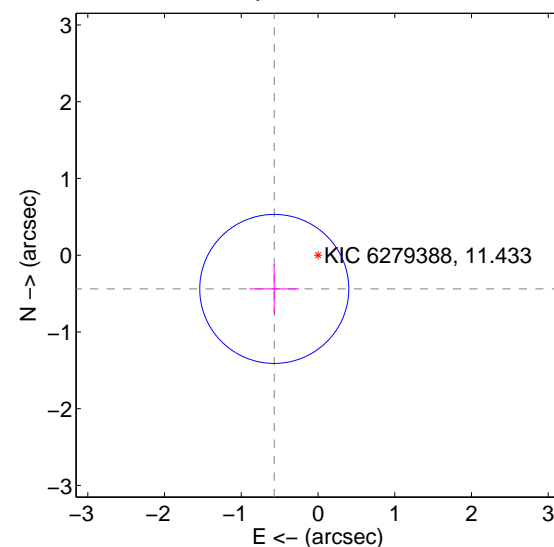
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

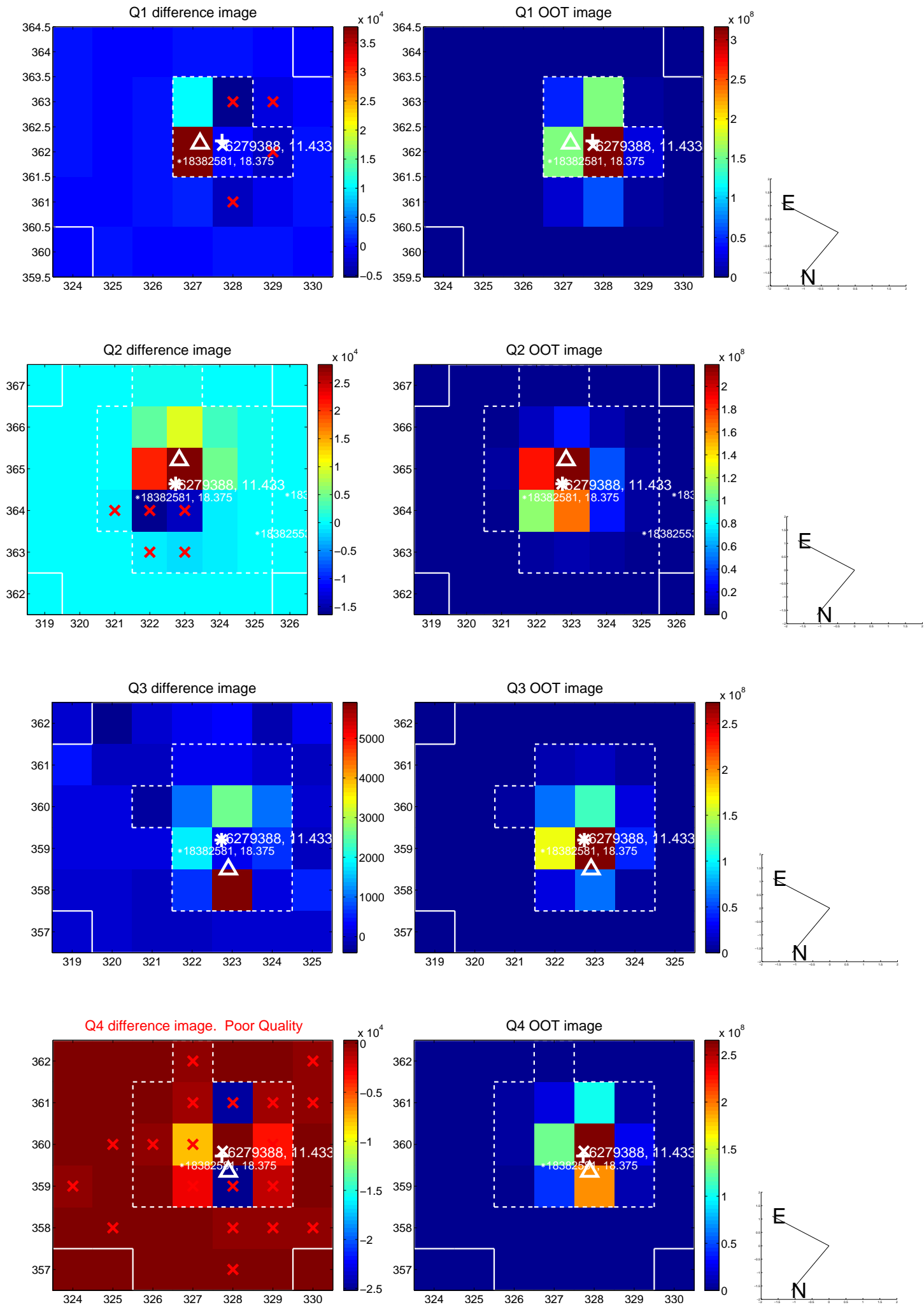


offset from photometric centroids



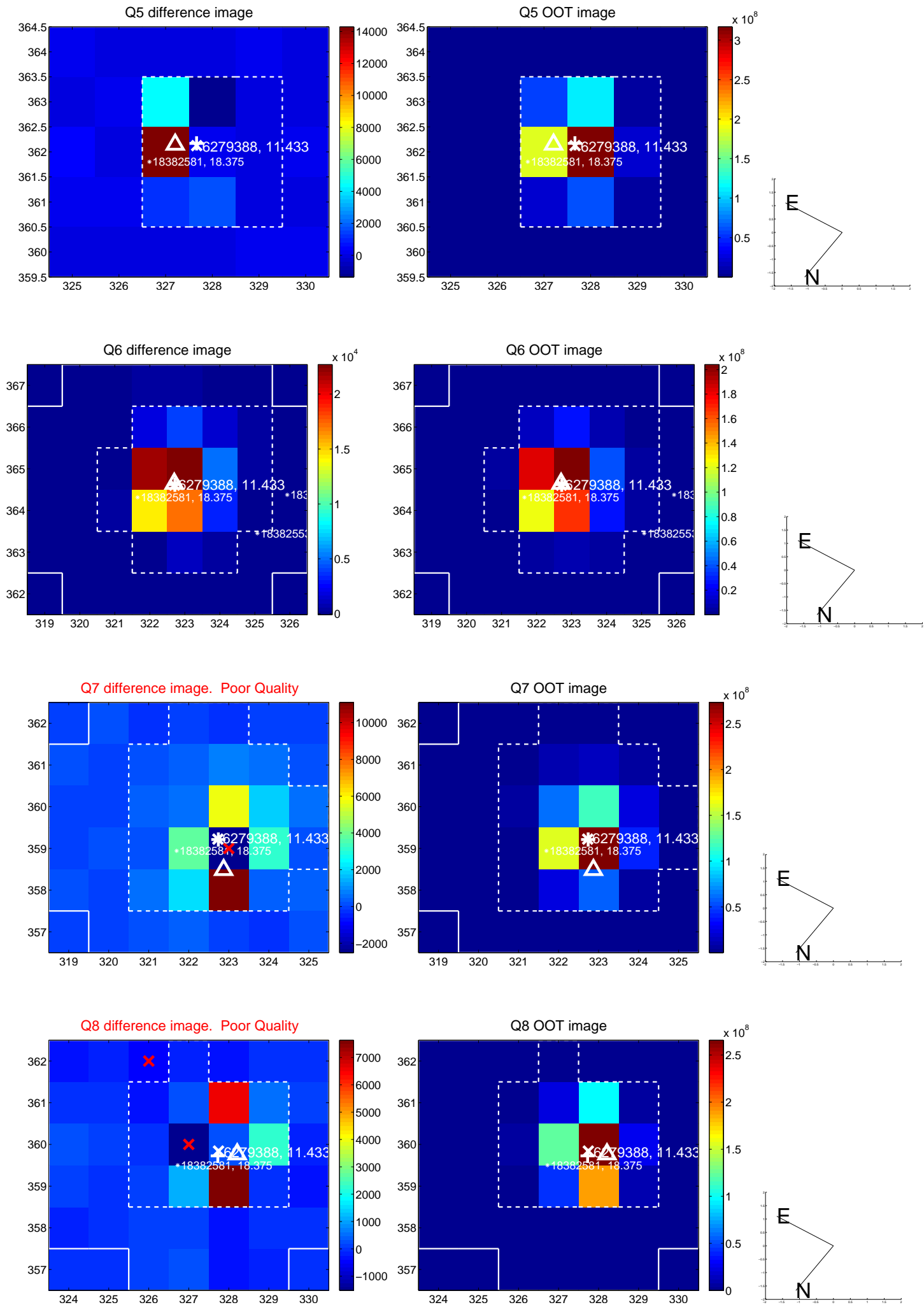
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

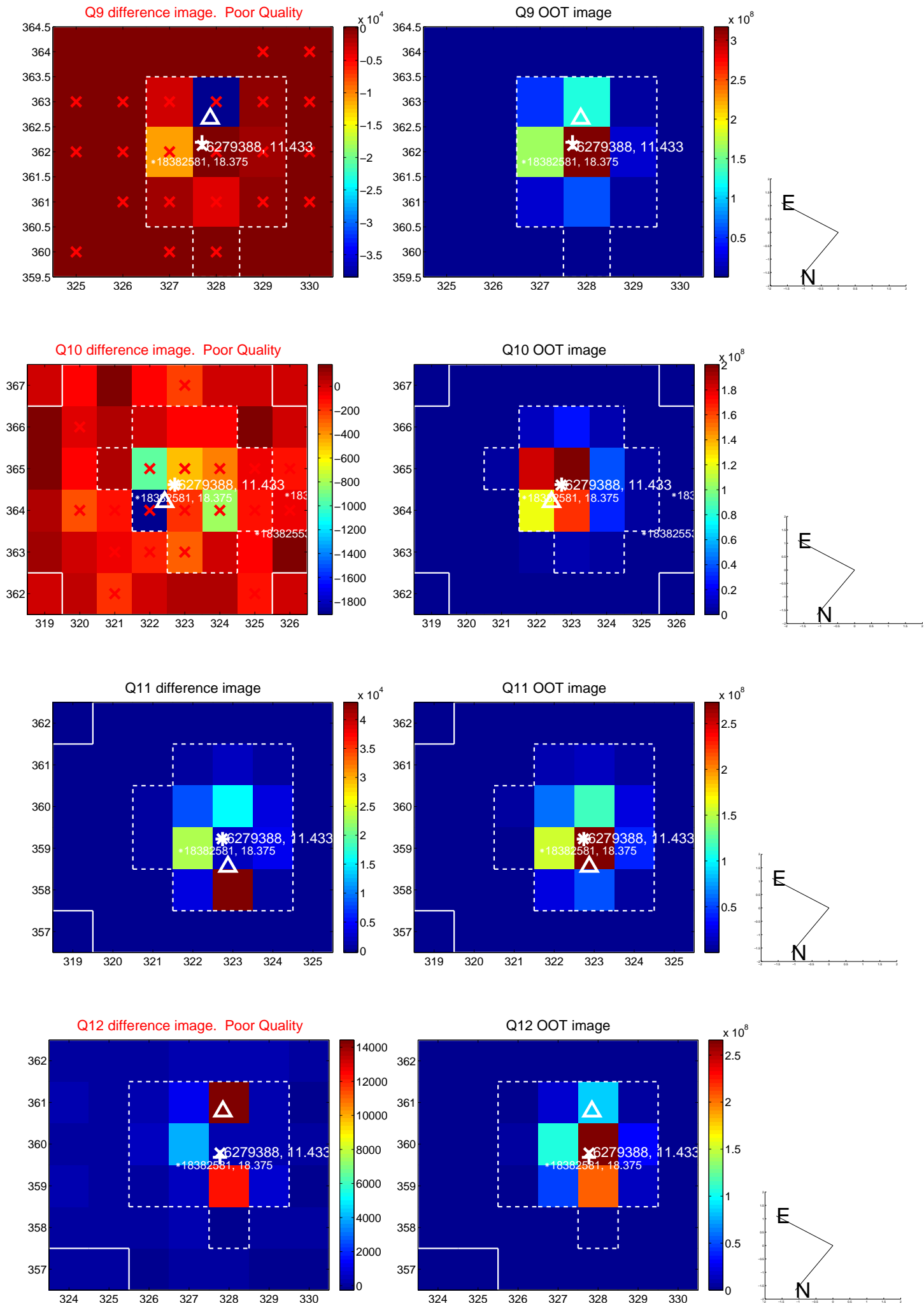




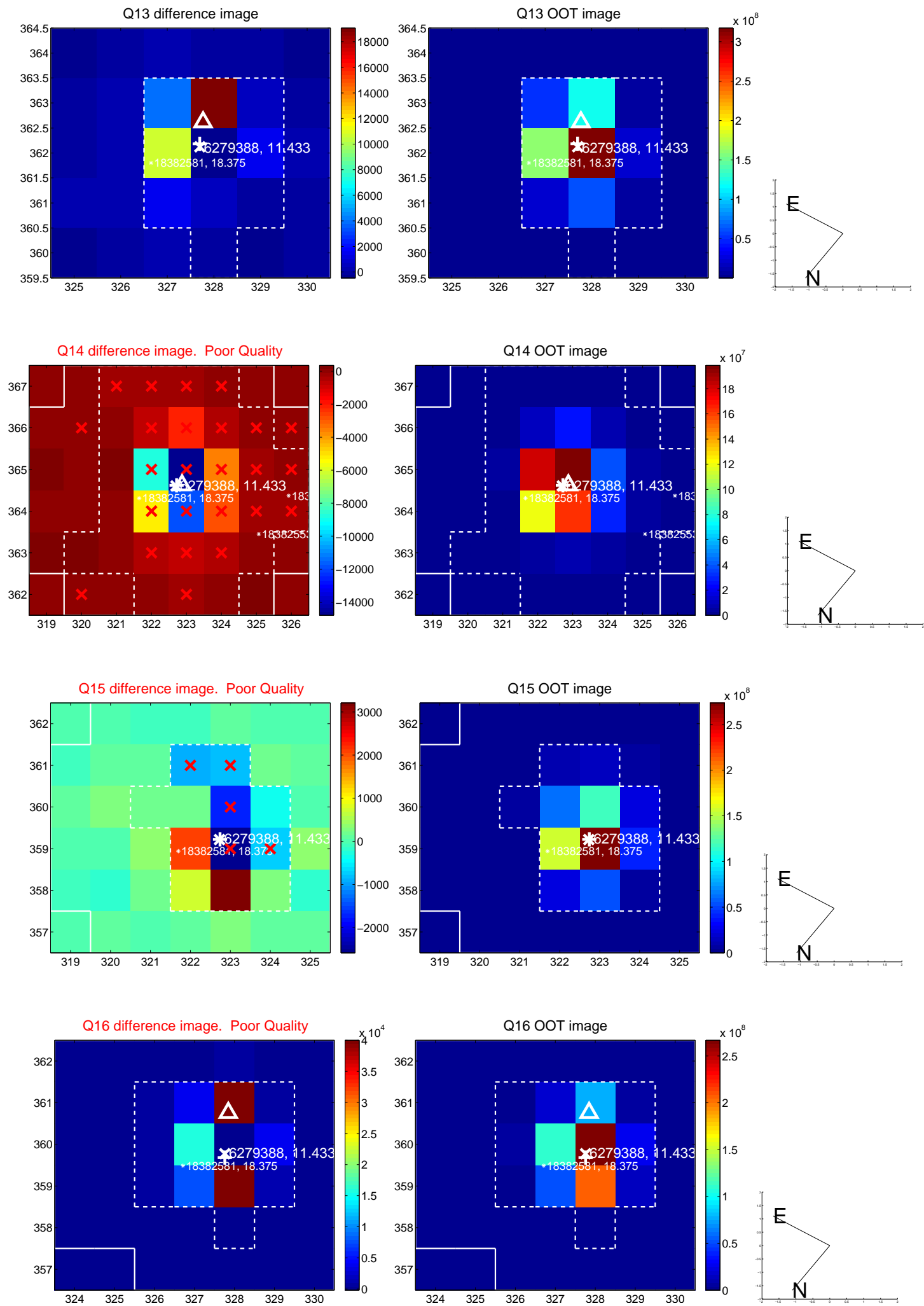
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



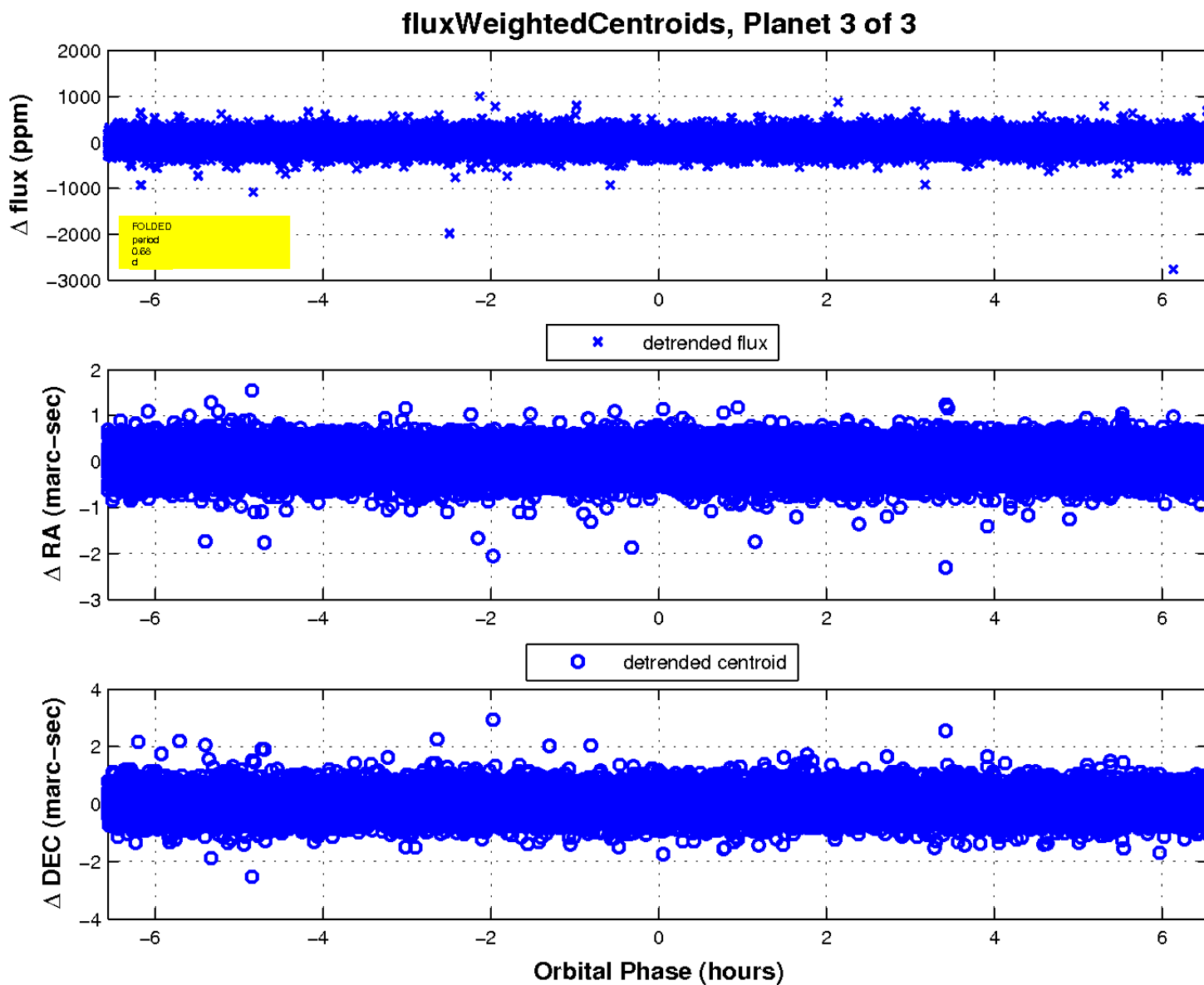
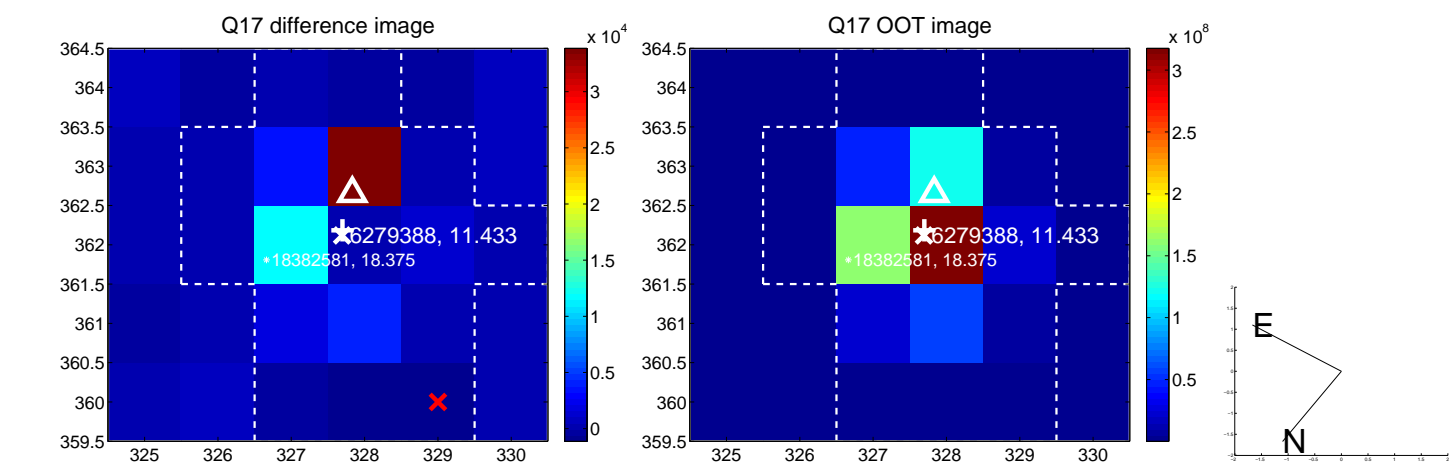
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

