

KIC 006062766

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})
006062766-01	OBS	No	0.534948	131.604003	22.7	0.878	12.5	8.2	1.90	7345	0.92	43116.53
006062766-02	OBS	No	0.534947	131.870305	30.3	1.187	9.3	9.4	1.90	7345	1.06	43116.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006062766-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006062766-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

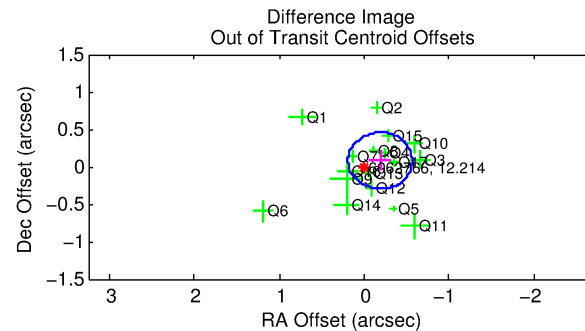
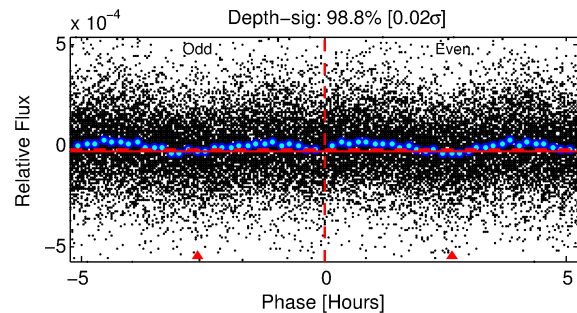
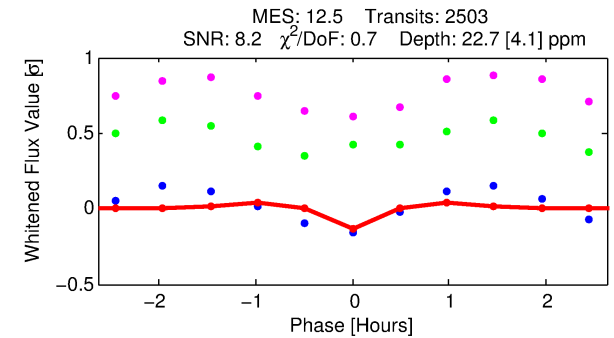
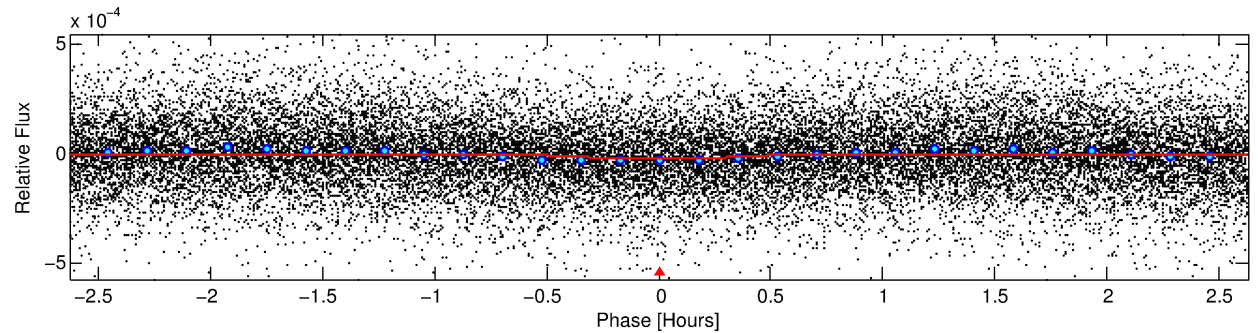
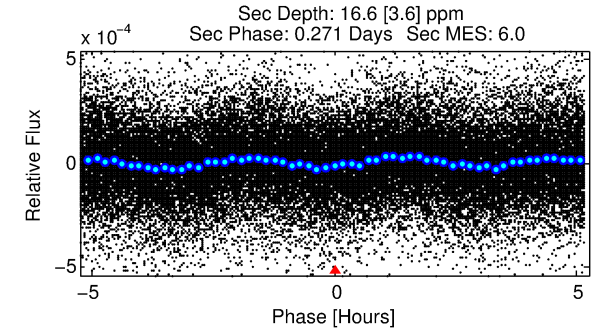
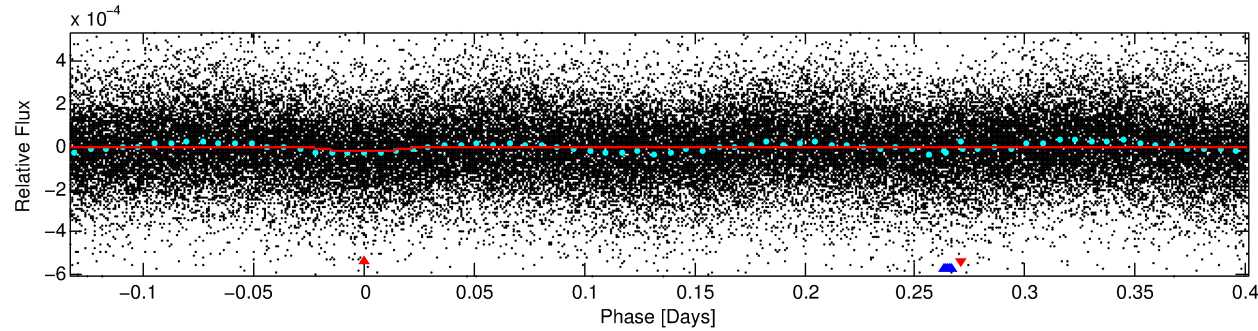
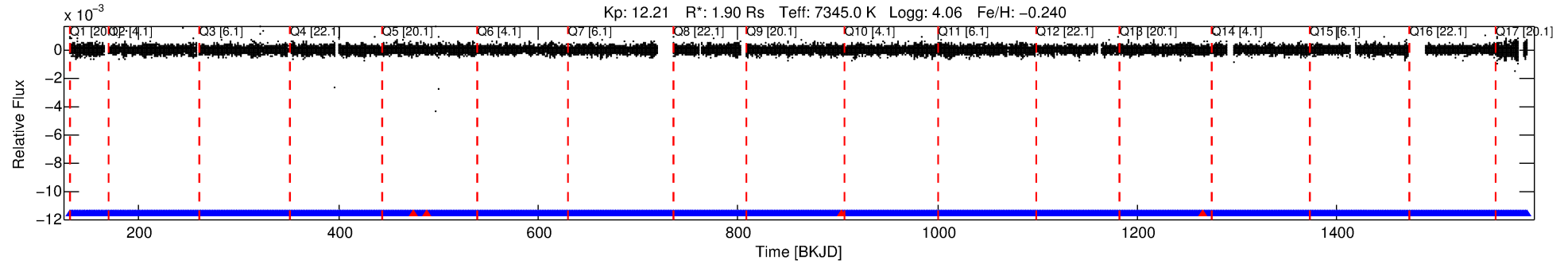
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006062766-01

No Significant Match Found

DV One-Page Summary

KIC: 6062766 Candidate: 1 of 2 Period: 0.535 d



DV Fit Results:

Period = 0.53495 [0.00001] d
Epoch = 131.6040 [0.0013] BKJD
Rp/R* = 0.0045 [0.0040]
a/R* = 4.71 [23.18]
b = 0.03 [152.26]
Seff = 43116.53 [17247.74]
Teq = 3674 [367] K
Rp = 0.92 [0.88] Re
a = 0.0148 [0.0036] AU
Ag = 2.33 [4.36] [0.31σ]
Teffp = 7022 [3226] K [1.03σ]

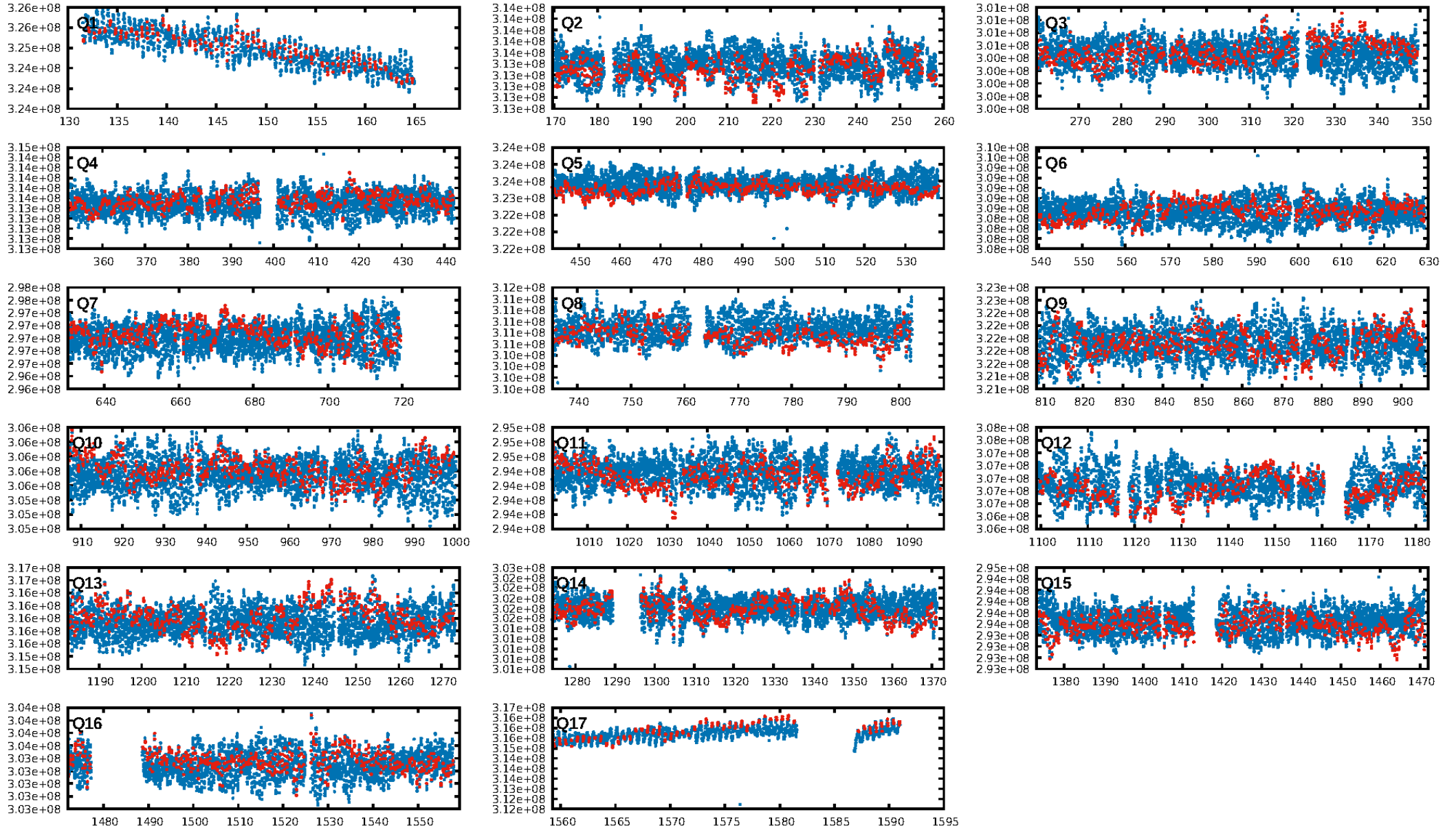
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.73e-24
RollingBand-fgt: 1.00 [2386/2390]
GhostDiagnostic-chr: 2.41
Centroid-sig: 95.3%
Centroid-so: 0.033 arcsec [0.05σ]
OotOffset-rm: 0.208 arcsec [1.65σ]
KicOffset-rm: 0.264 arcsec [2.01σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

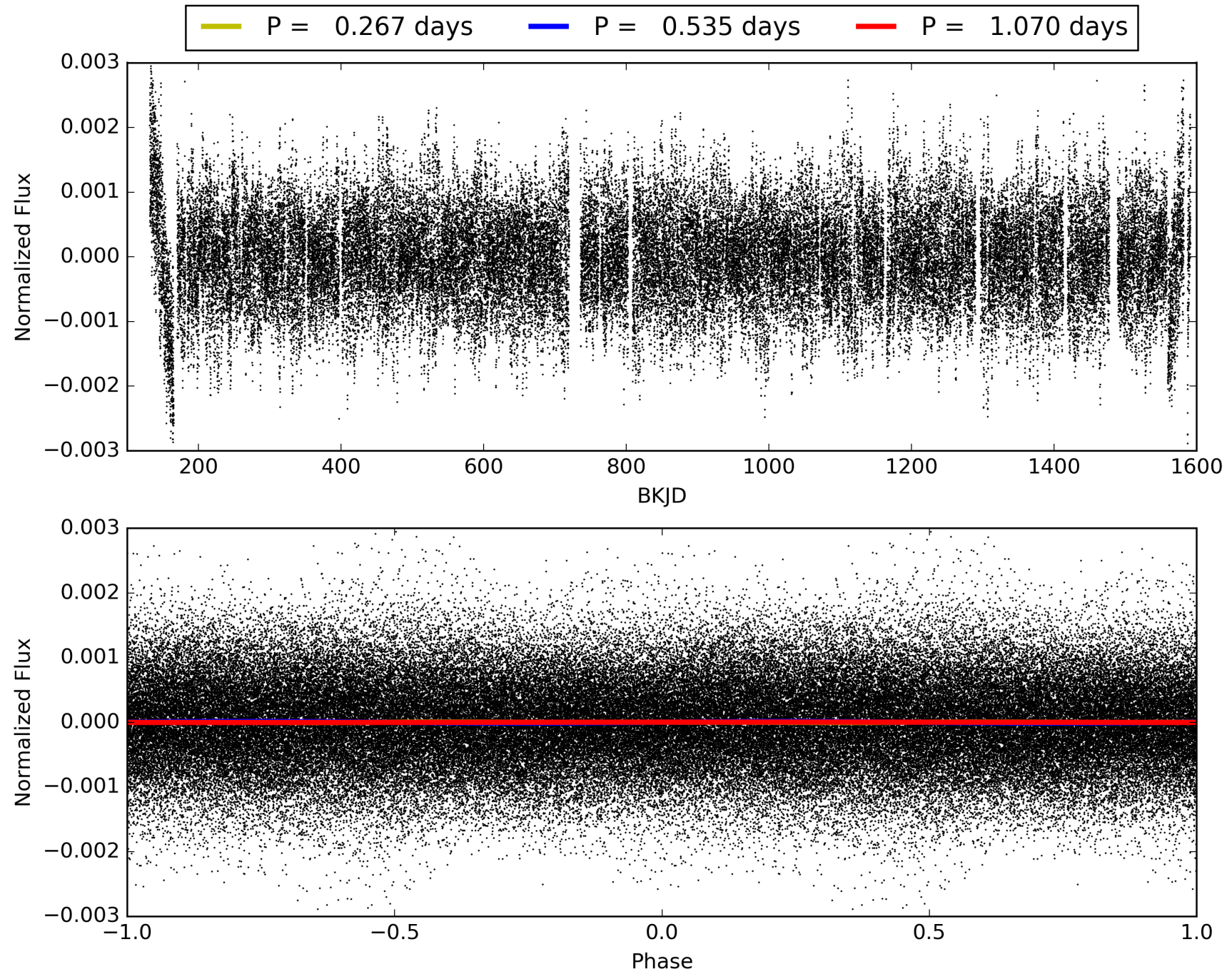
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:17:25 Z

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

TCE 006062766-01, PDC Light Curves

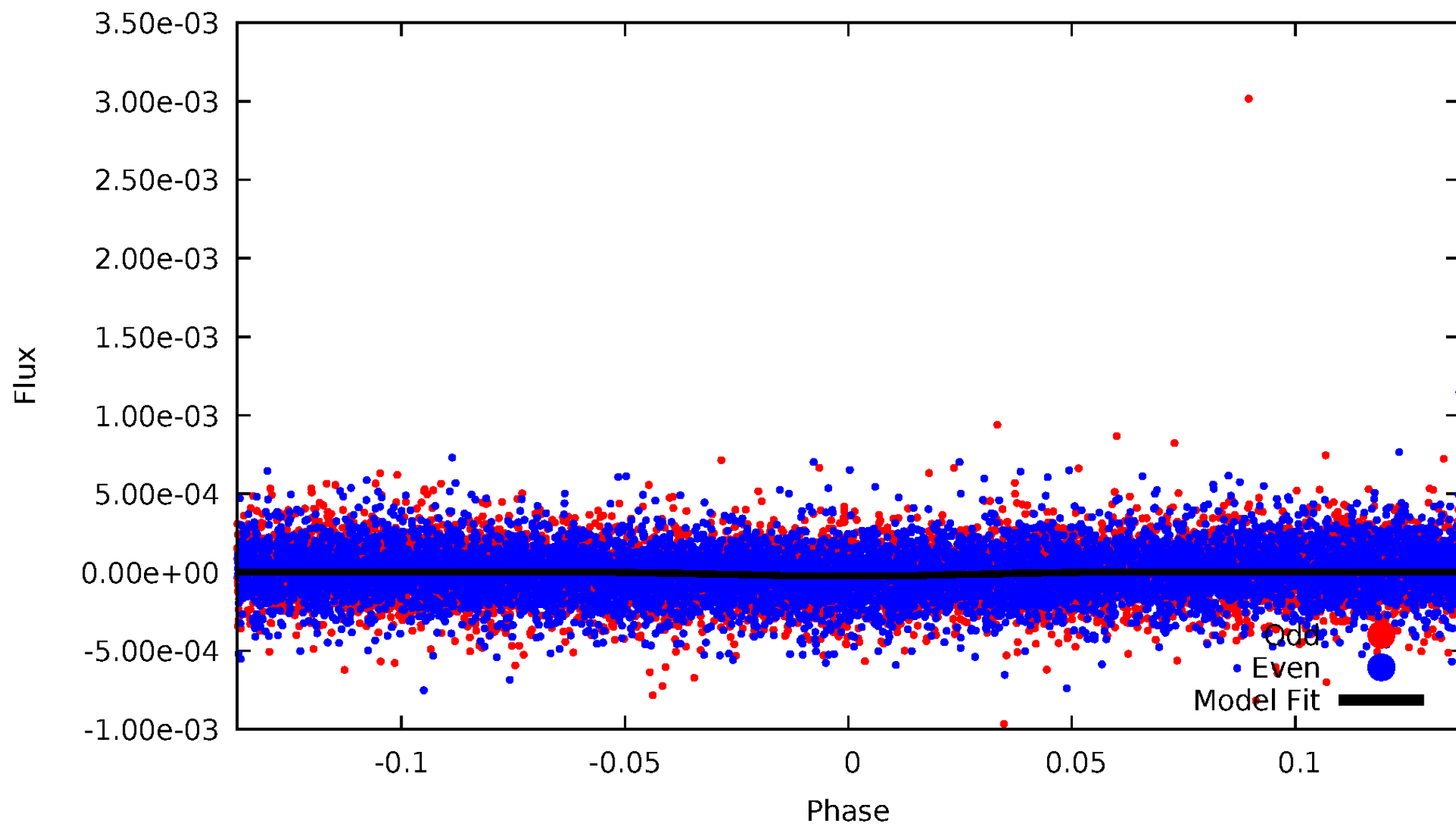


TCE 006062766-01



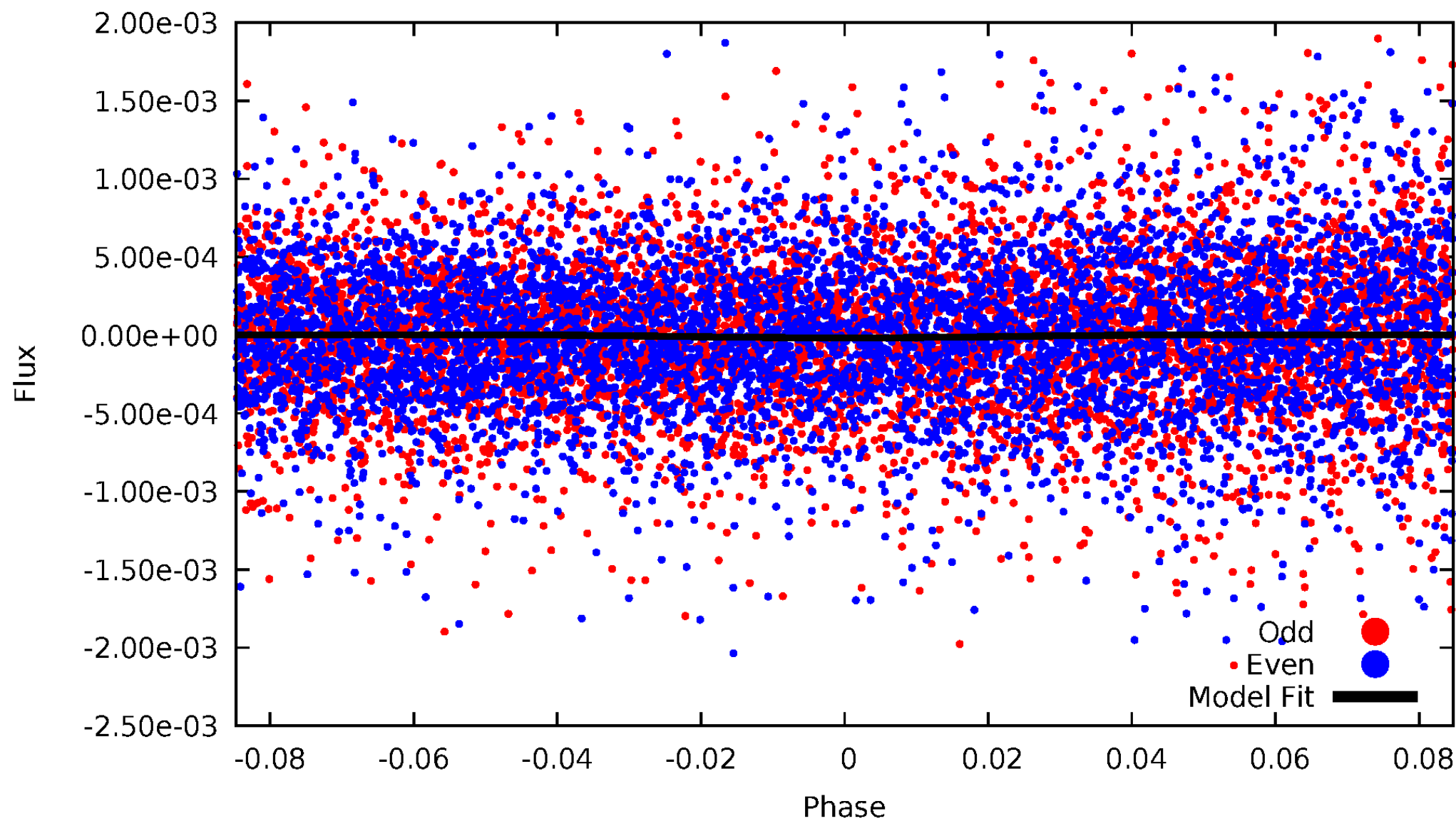
DV Odd/Even

TCE 006062766-01



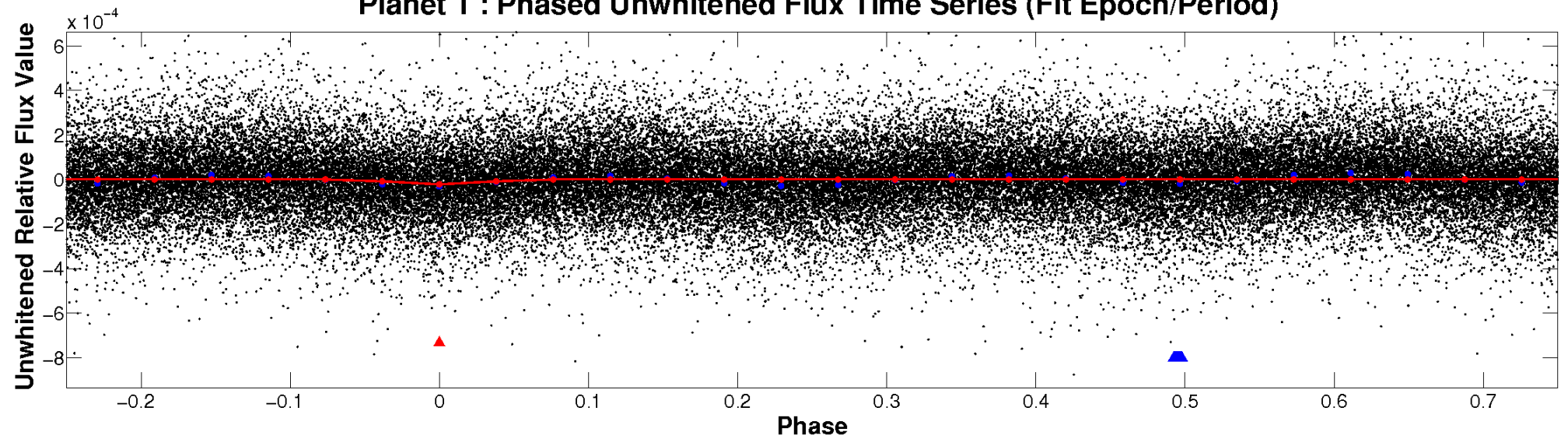
ALT Odd/Even

TCE 006062766-01

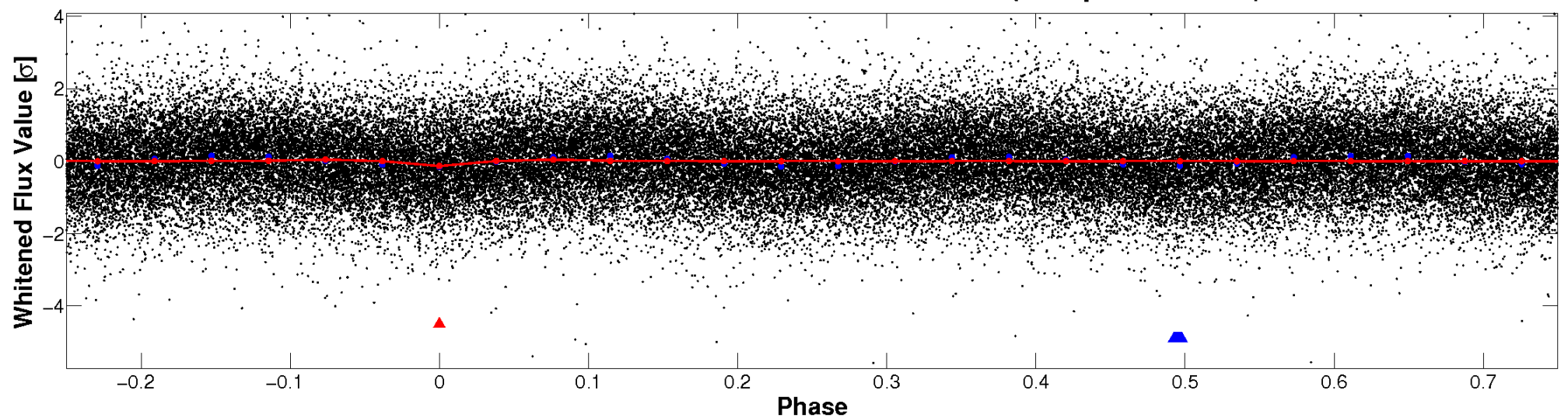


Non-Whitened Vs. Whitened Light Curve

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

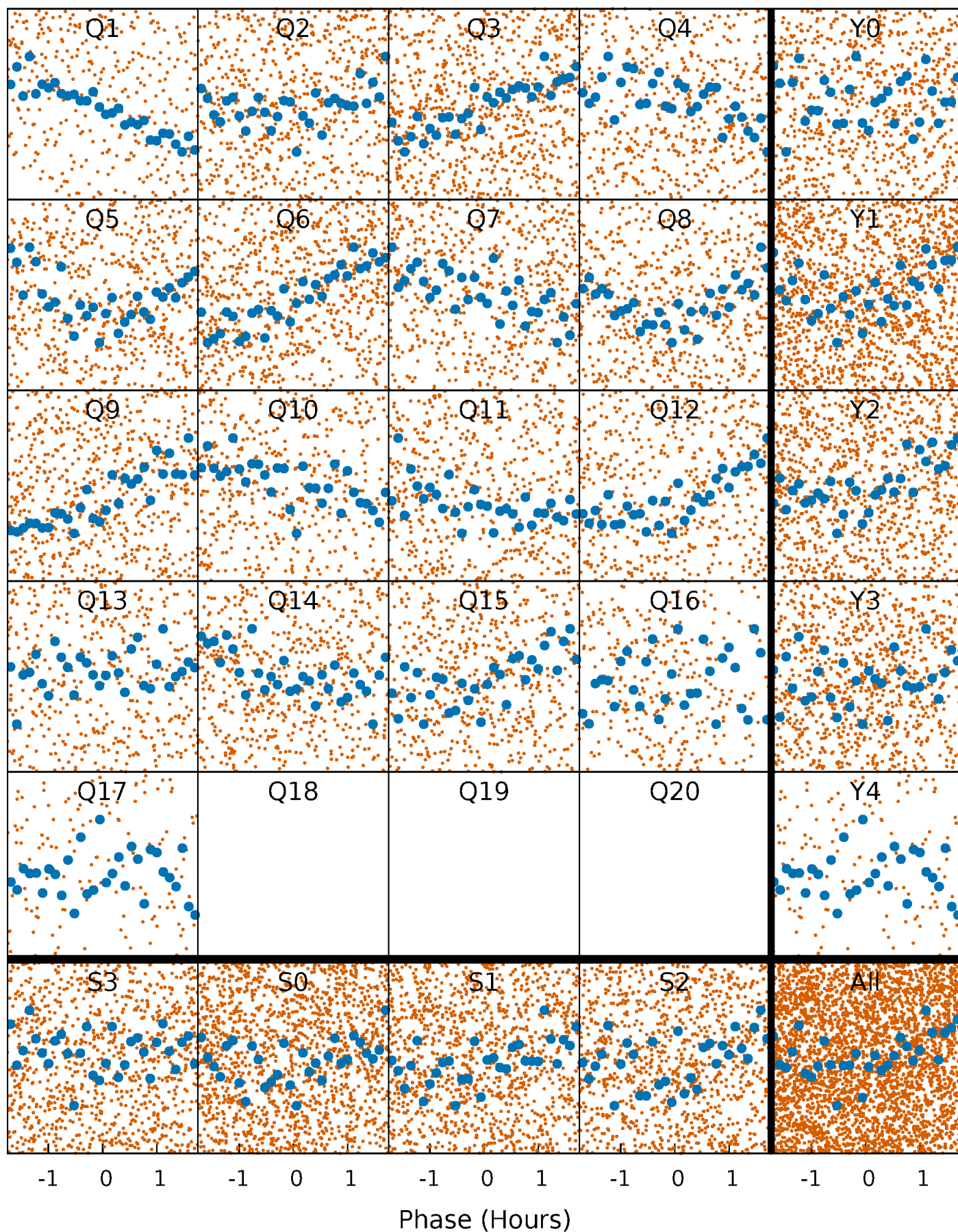


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



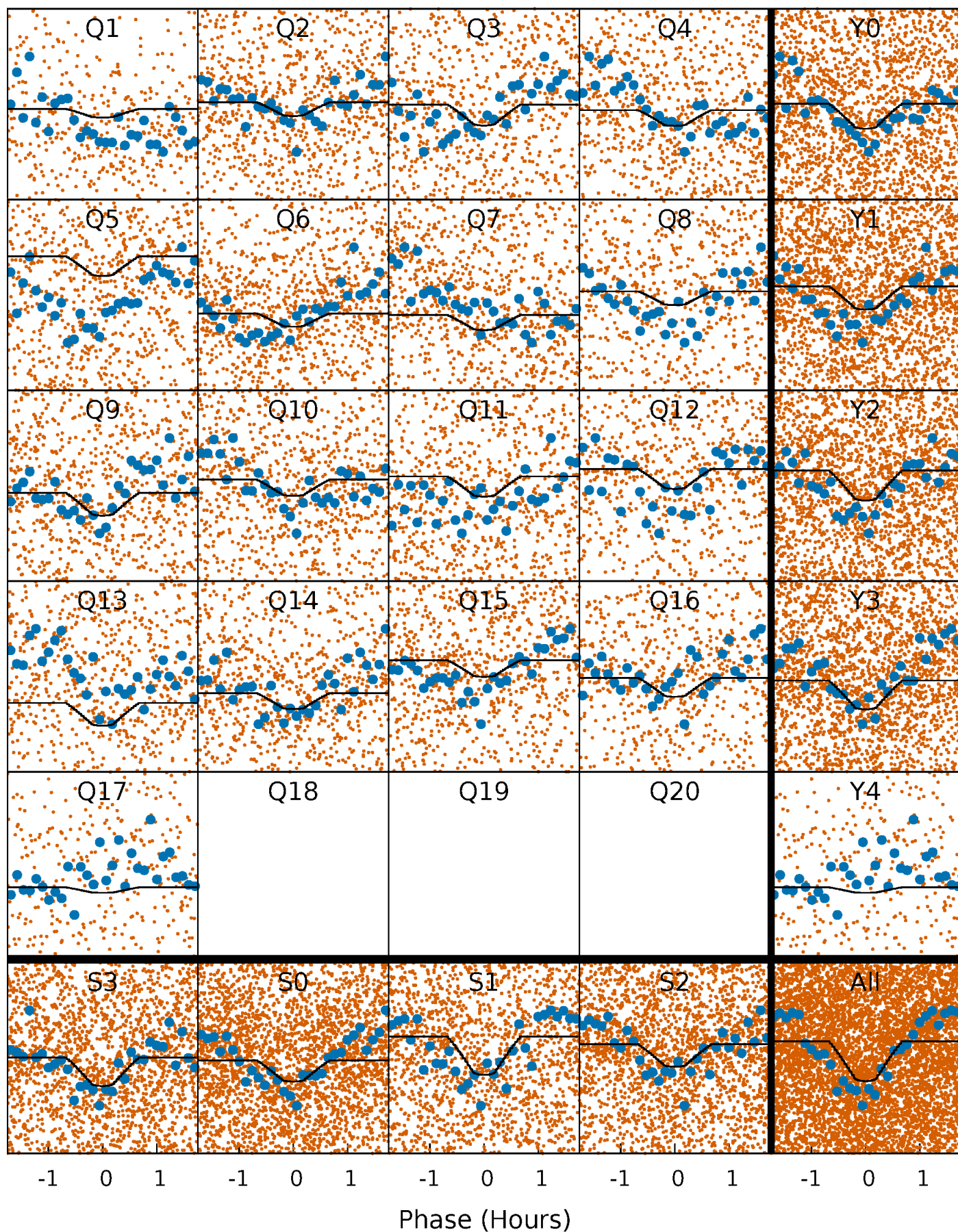
PDC Quarter-Phased Transit Curves

TCE 006062766-01 P= 0.534948 Days $T_0=131.604003$ (BKJD)



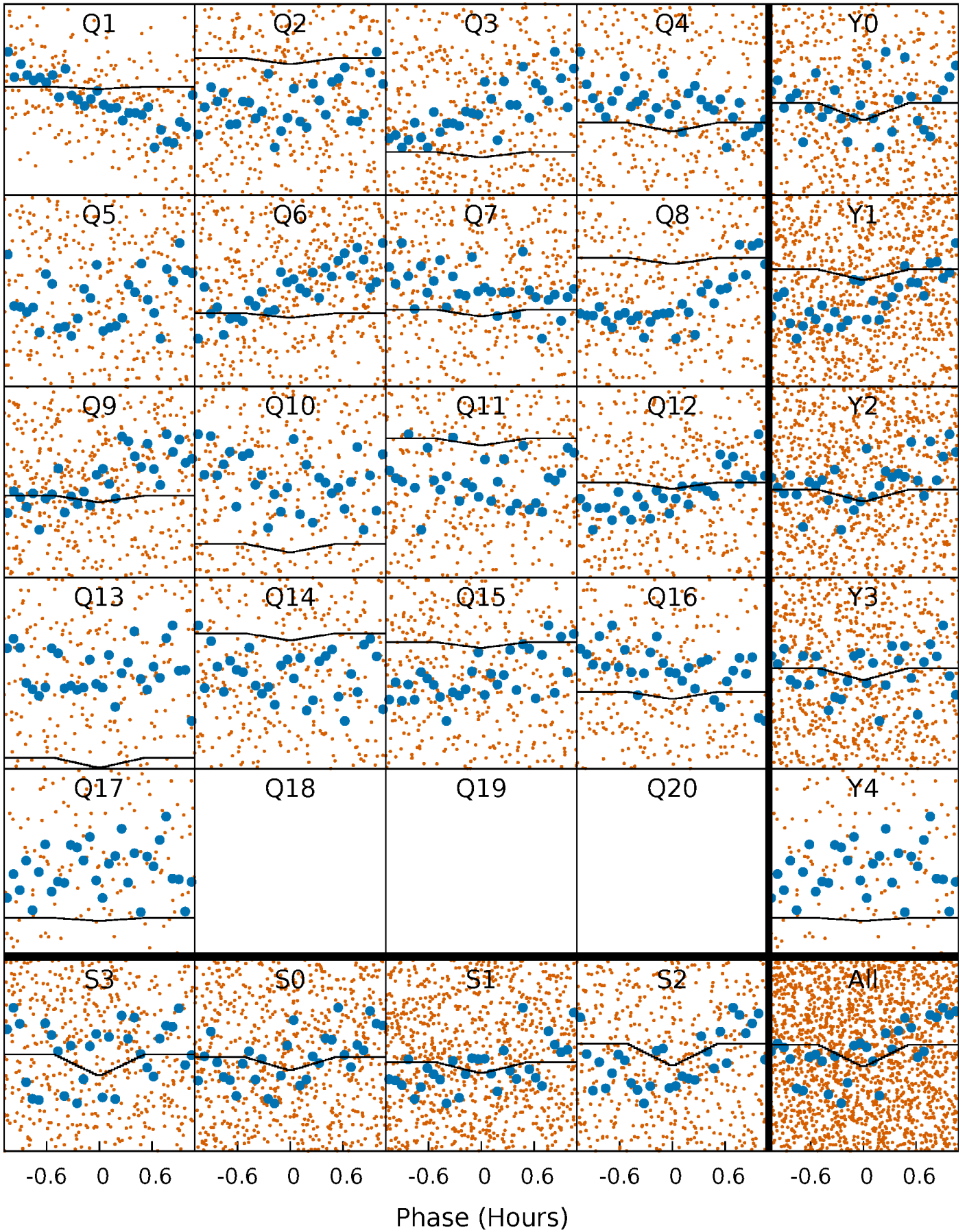
DV Quarter-Phased Transit Curves

TCE 006062766-01 P= 0.534948 Days $T_0=131.604003$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

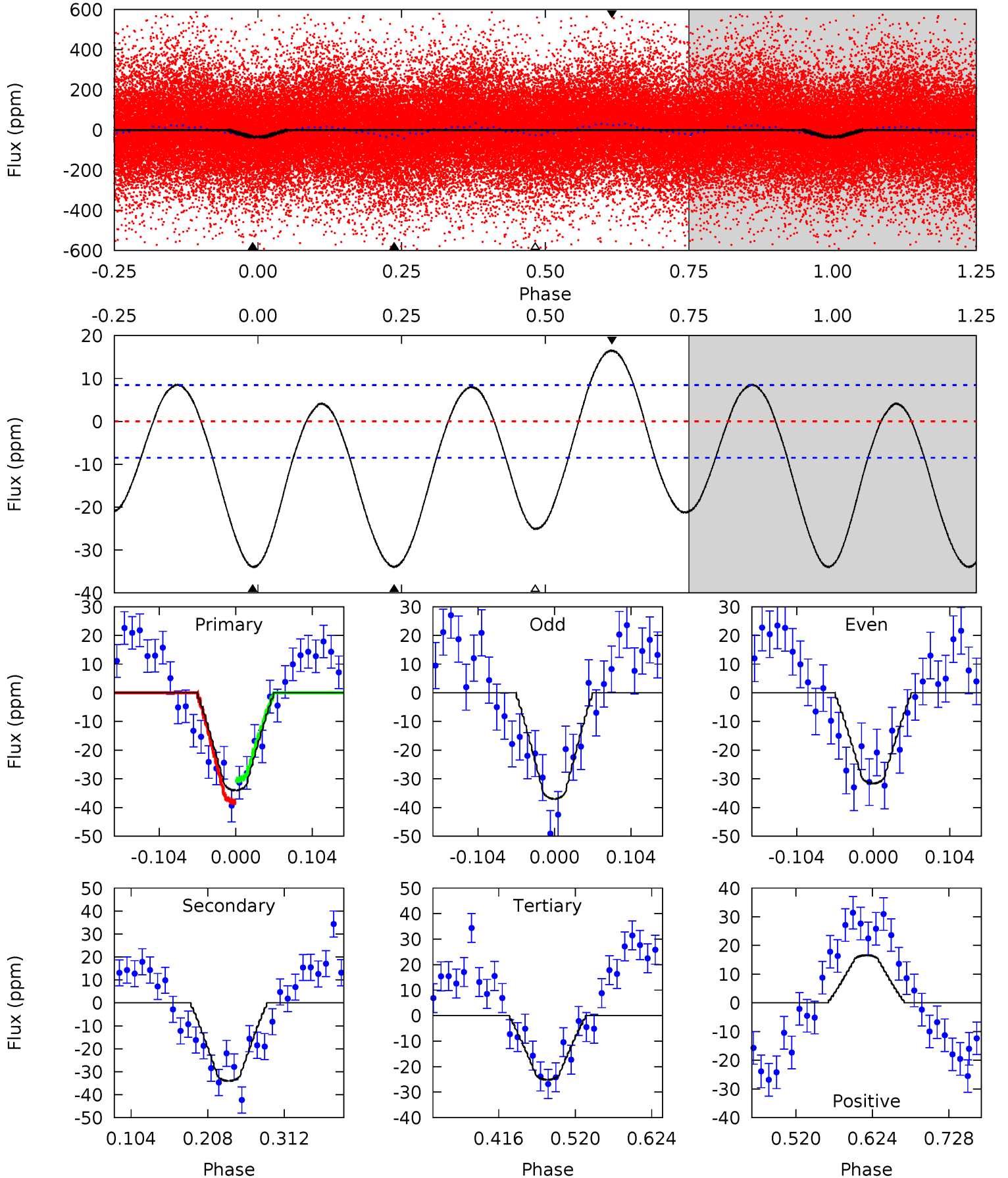
TCE 006062766-01 P= 0.534948 Days $T_0=131.613013$ (BKJD)



DV Model-Shift Uniqueness Test

006062766-01, P = 0.534948 Days, E = 131.069055 Days

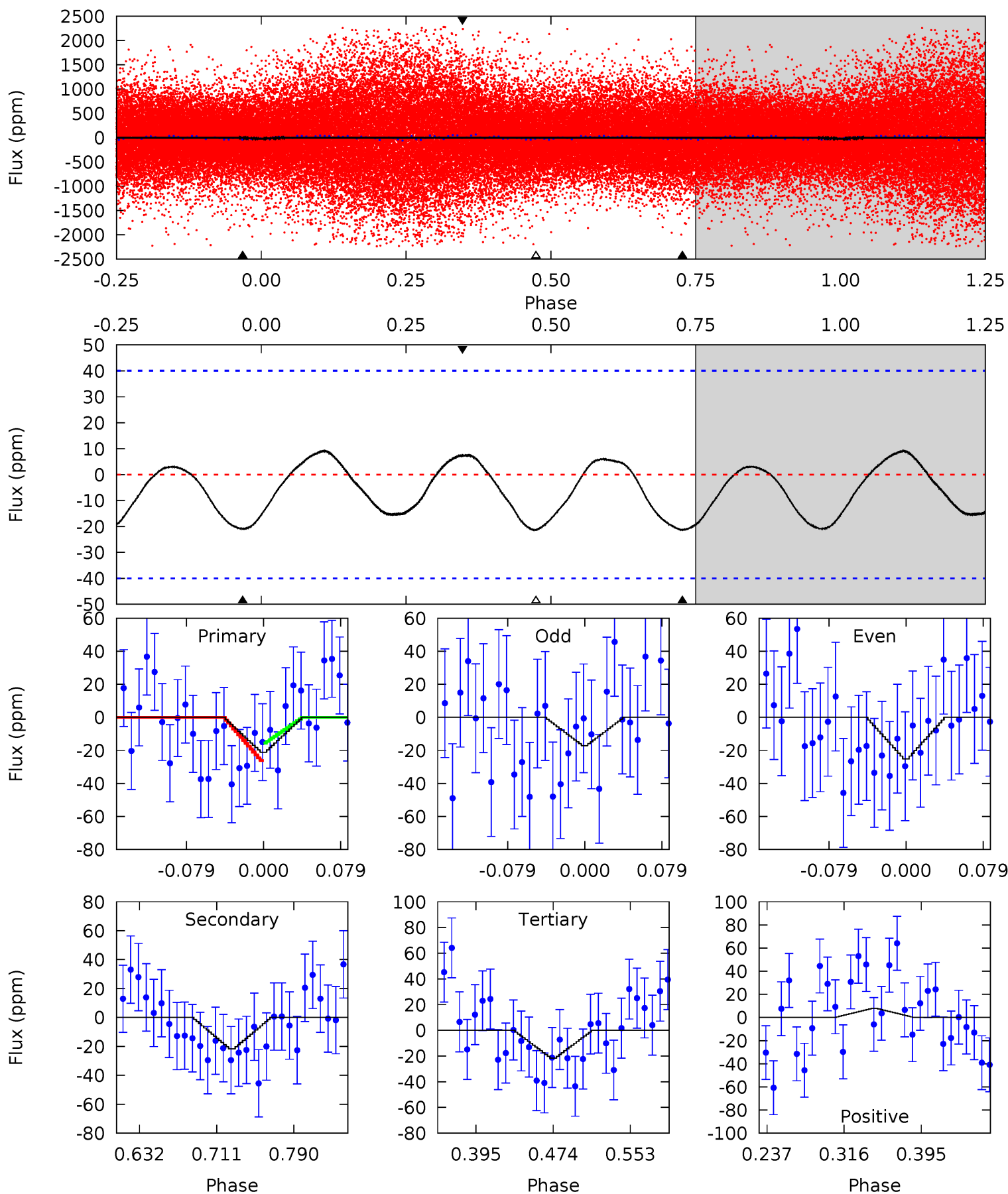
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	18.3	13.5	8.91	4.56	1.63	6.69	4.79	9.39	4.78	9.38	1.46	1.08	0.33	2.07



Alt Model-Shift Uniqueness Test

006062766-01, P = 0.534948 Days, E = 131.078065 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.44	2.50	2.50	0.91	4.61	1.76	1.02	-0.06	1.52	0.01	1.59	0.46	0.86	0.30	0.71



Stellar Parameters For KIC 006062766

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+230}_{-307}	$4.057^{+0.204}_{-0.167}$	$-0.240^{+0.250}_{-0.350}$	$1.898^{+0.525}_{-0.525}$	$1.496^{+0.209}_{-0.279}$	$0.308^{+0.384}_{-0.151}$
	+3%/-4%	+5%/-4%	+104%/-146%	+28%/-28%	+14%/-19%	+125%/-49%
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 006062766-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 2	$1.05^{+0.87}_{-0.65}$	5136^{+391}_{-404}	7620^{+8778}_{-2176}	$3.726^{+22.695}_{-2.617}$
Alt.	-22 ± 9	$1.01^{+0.72}_{-0.60}$	5099^{+394}_{-389}	6686^{+5787}_{-2080}	$2.460^{+11.795}_{-1.763}$

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

DV Centroid Data

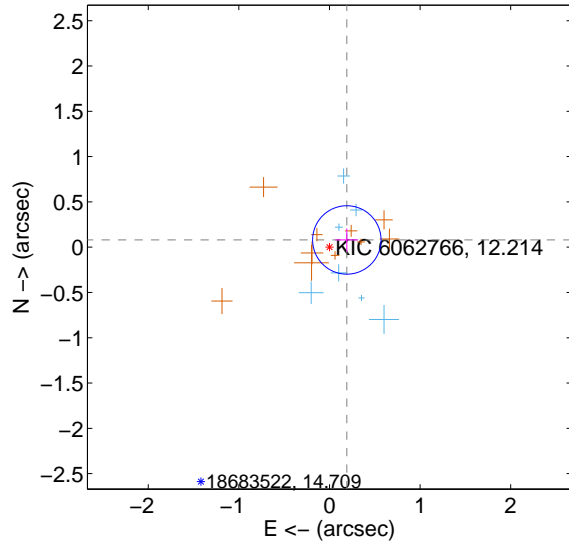
Supplemental centroid analysis for 006062766-01. Kepler magnitude: 12.21. Transit SNR 8.24

There are 7 quarters with good PRF difference image offsets

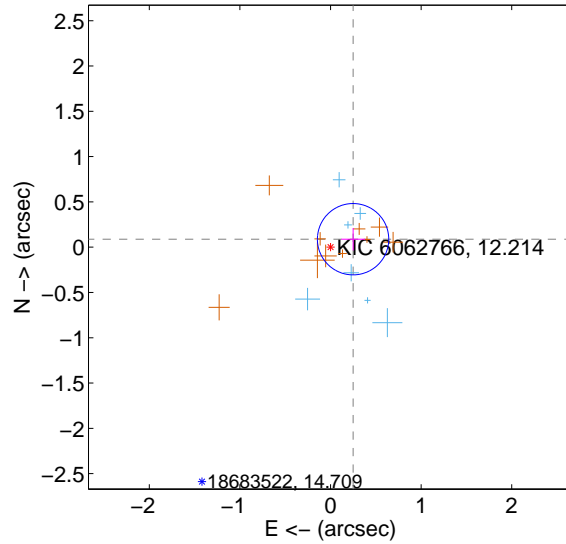
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.208 ± 0.126	1.65	-0.192 ± 0.126	0.080 ± 0.127
PRF-fit source offset from KIC position	0.264 ± 0.131	2.01	-0.249 ± 0.131	0.088 ± 0.124
photometric centroid source offset	0.03 ± 0.73	0.05	0.03 ± 0.75	0.02 ± 0.71

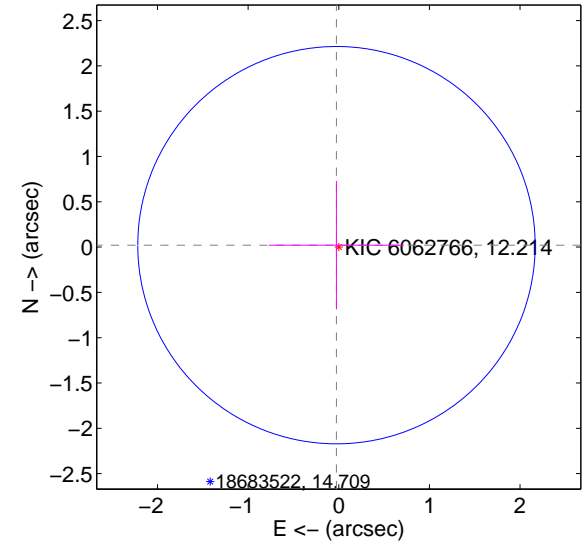
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

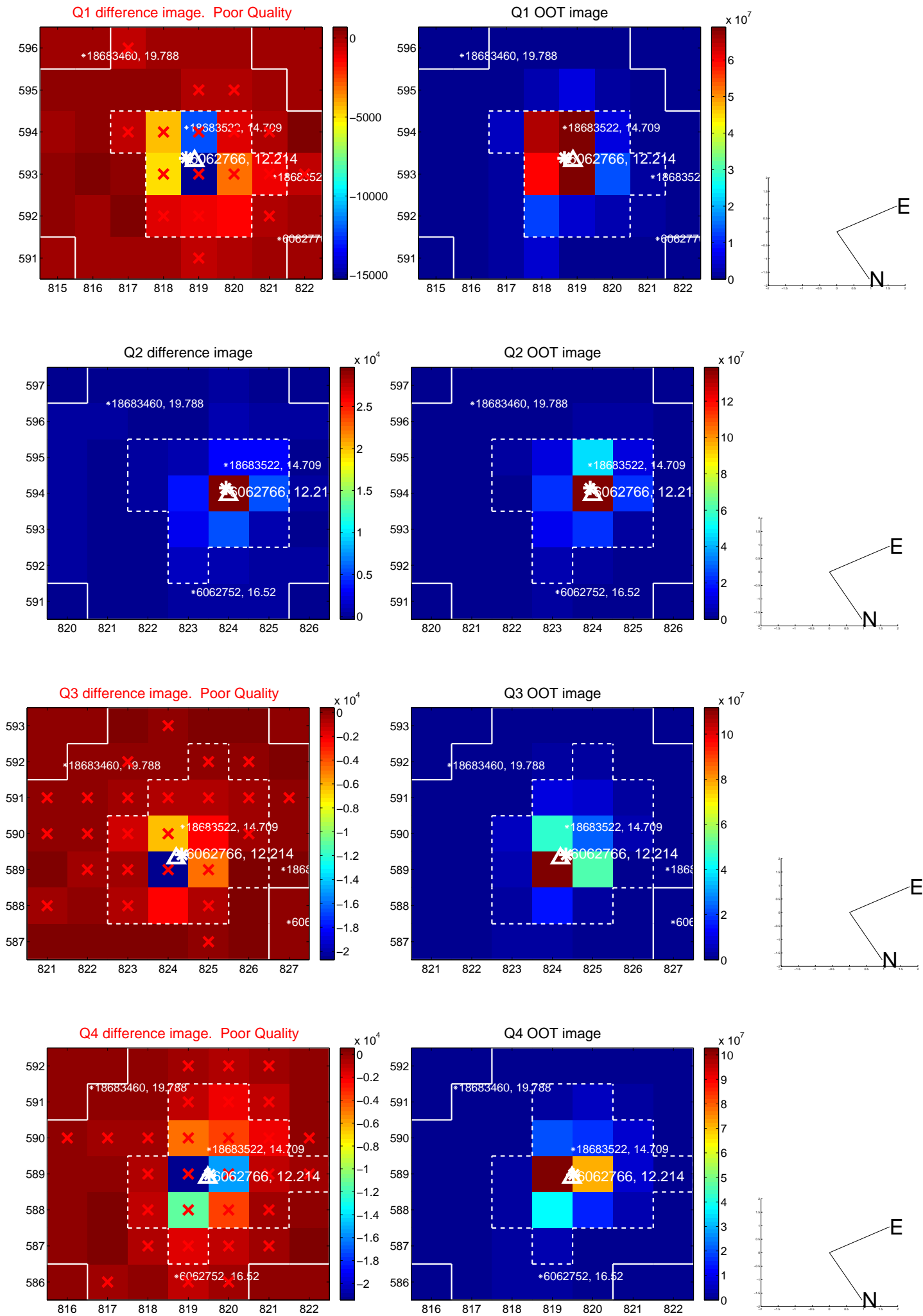


offset from photometric centroids

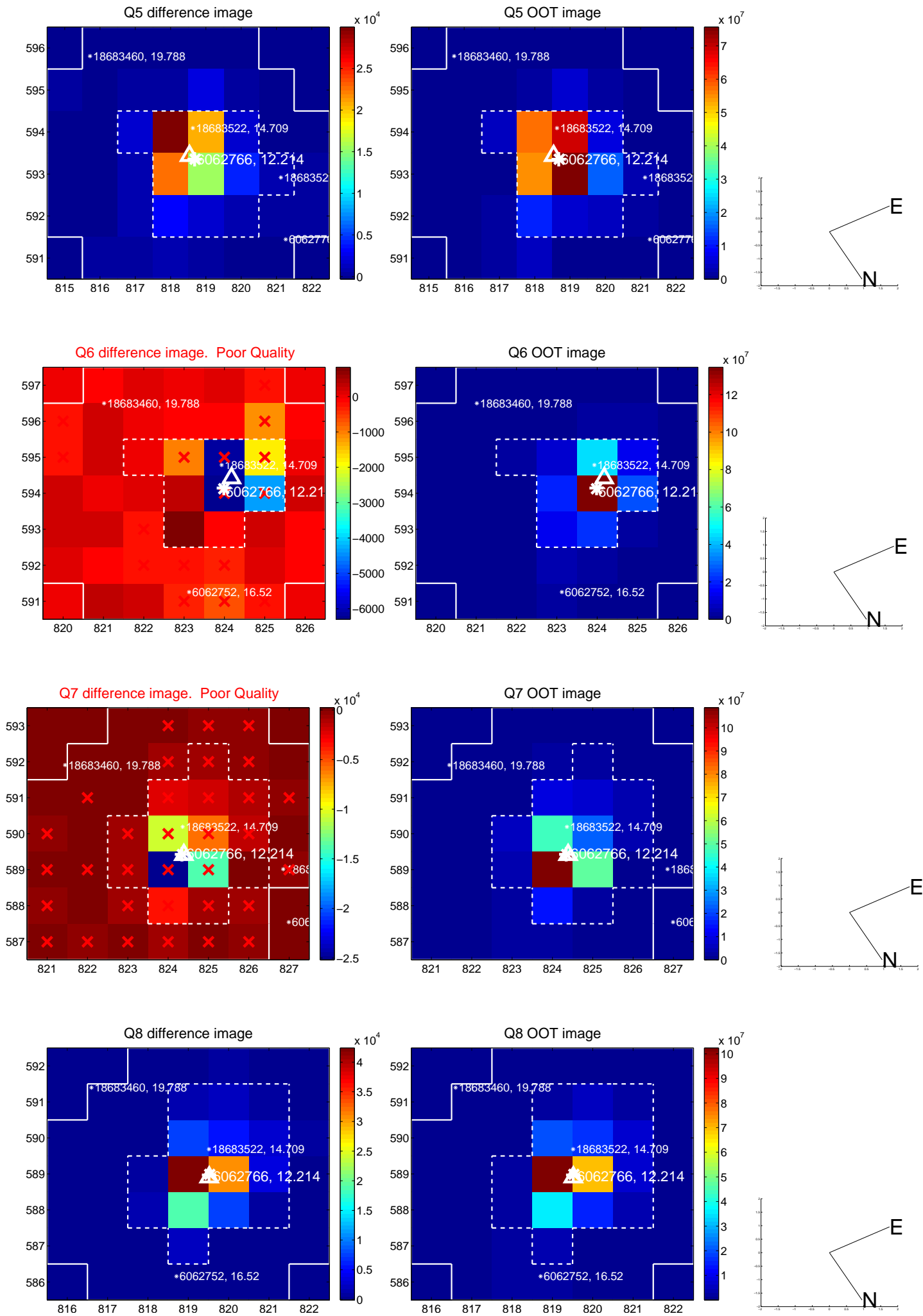


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

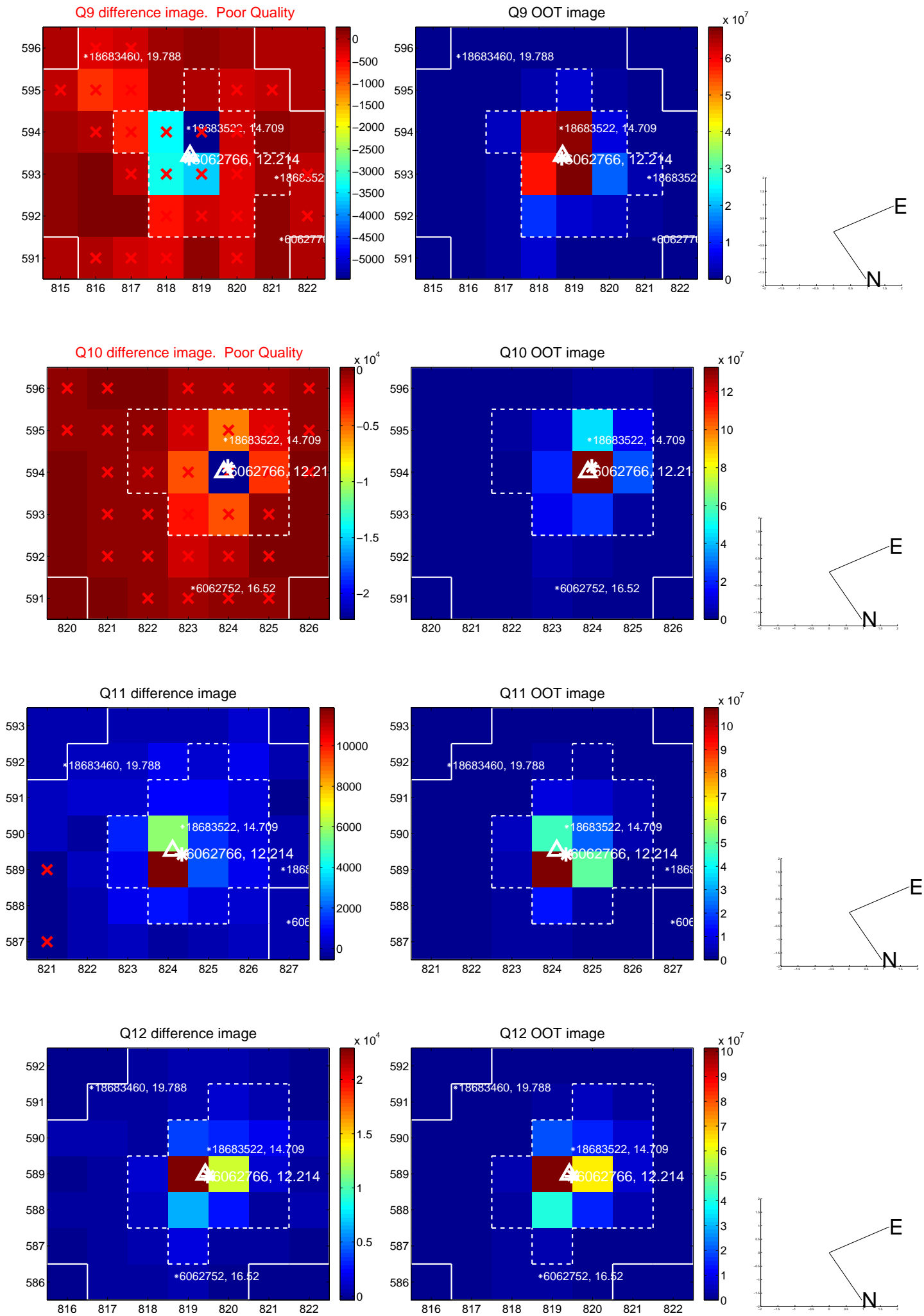
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



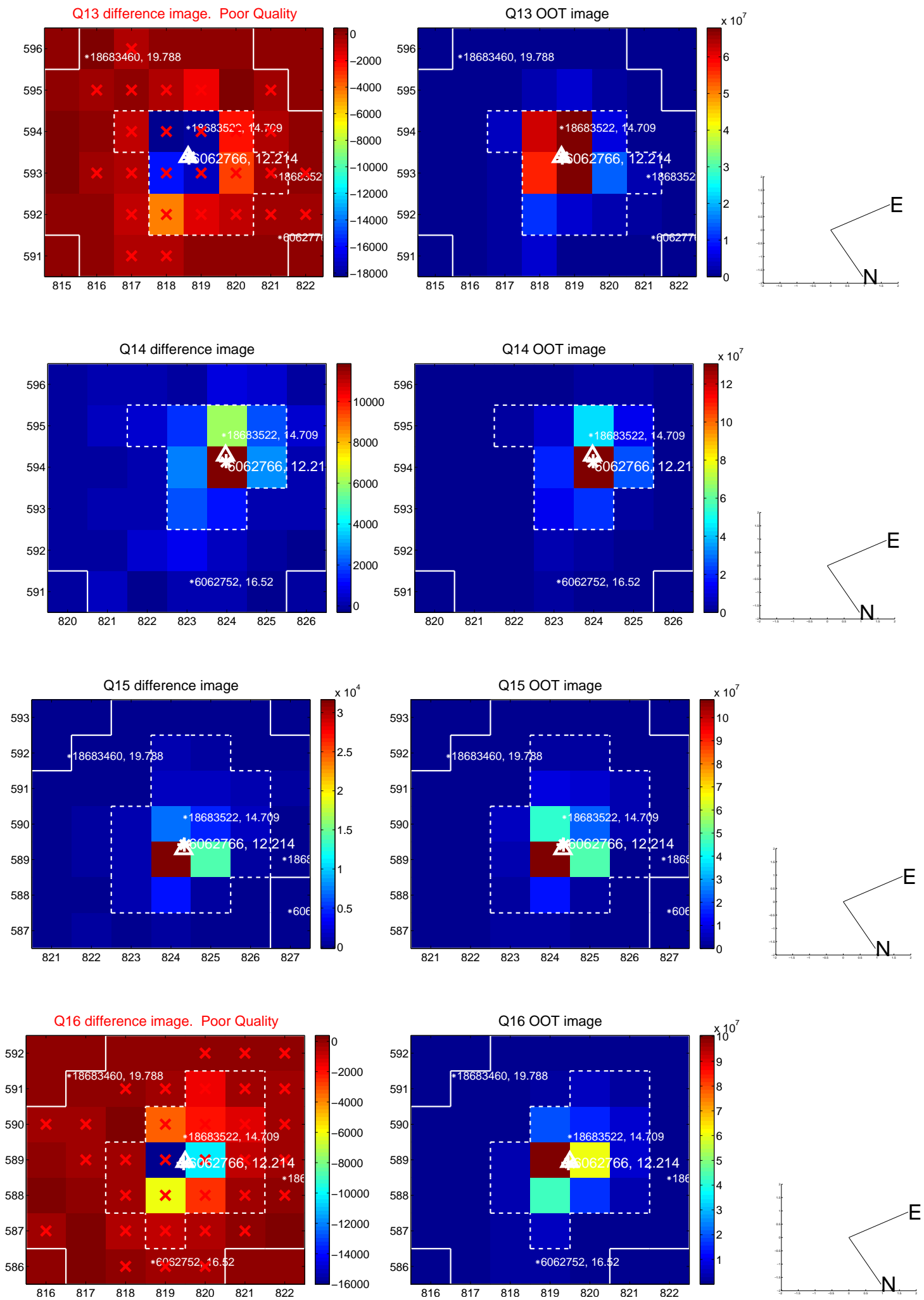
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



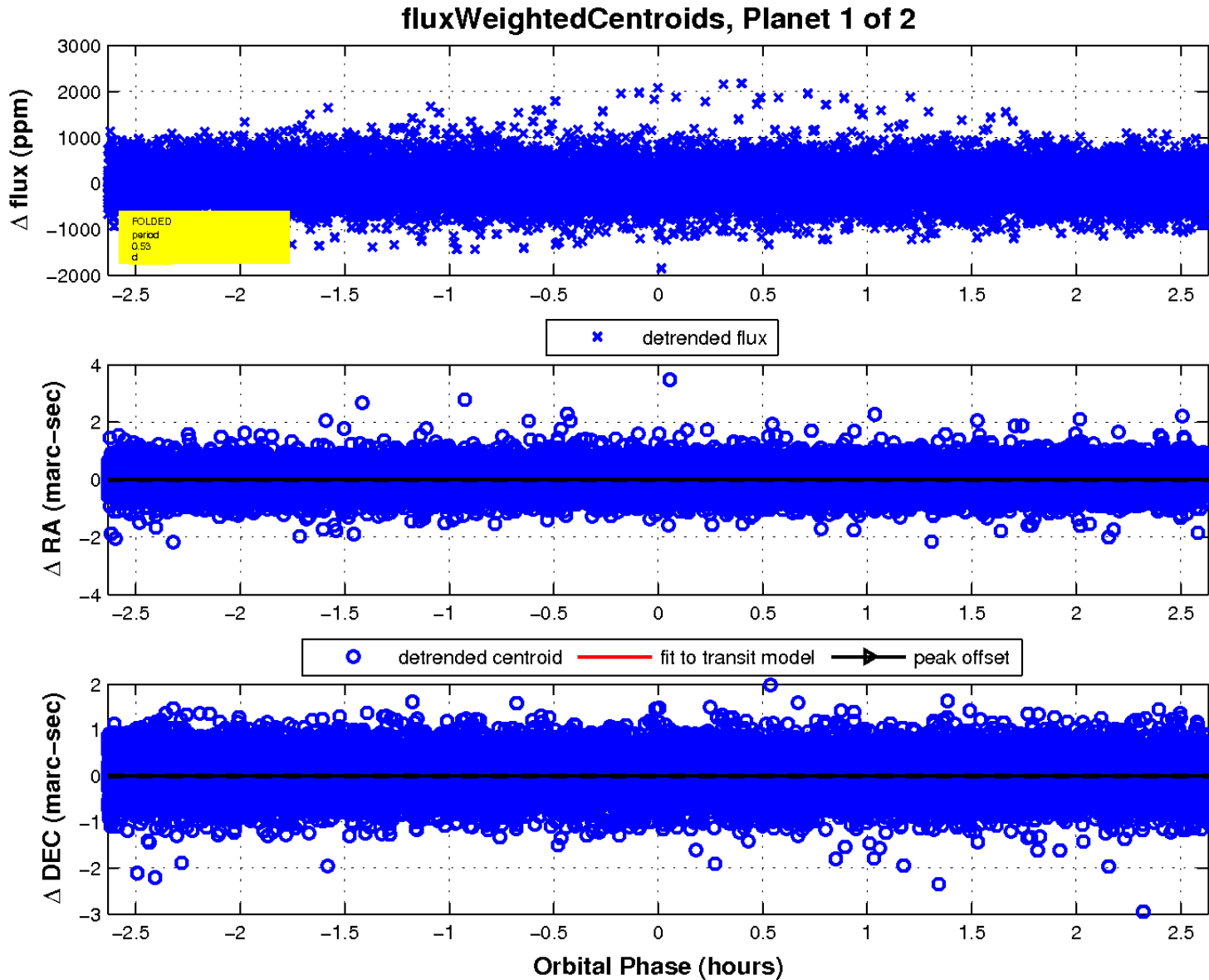
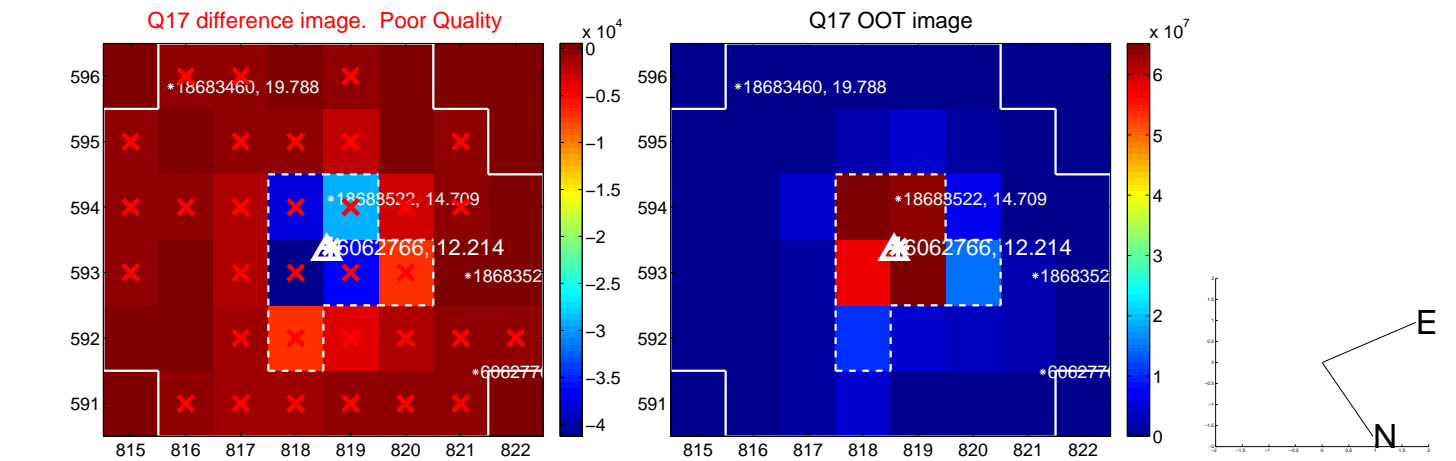
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

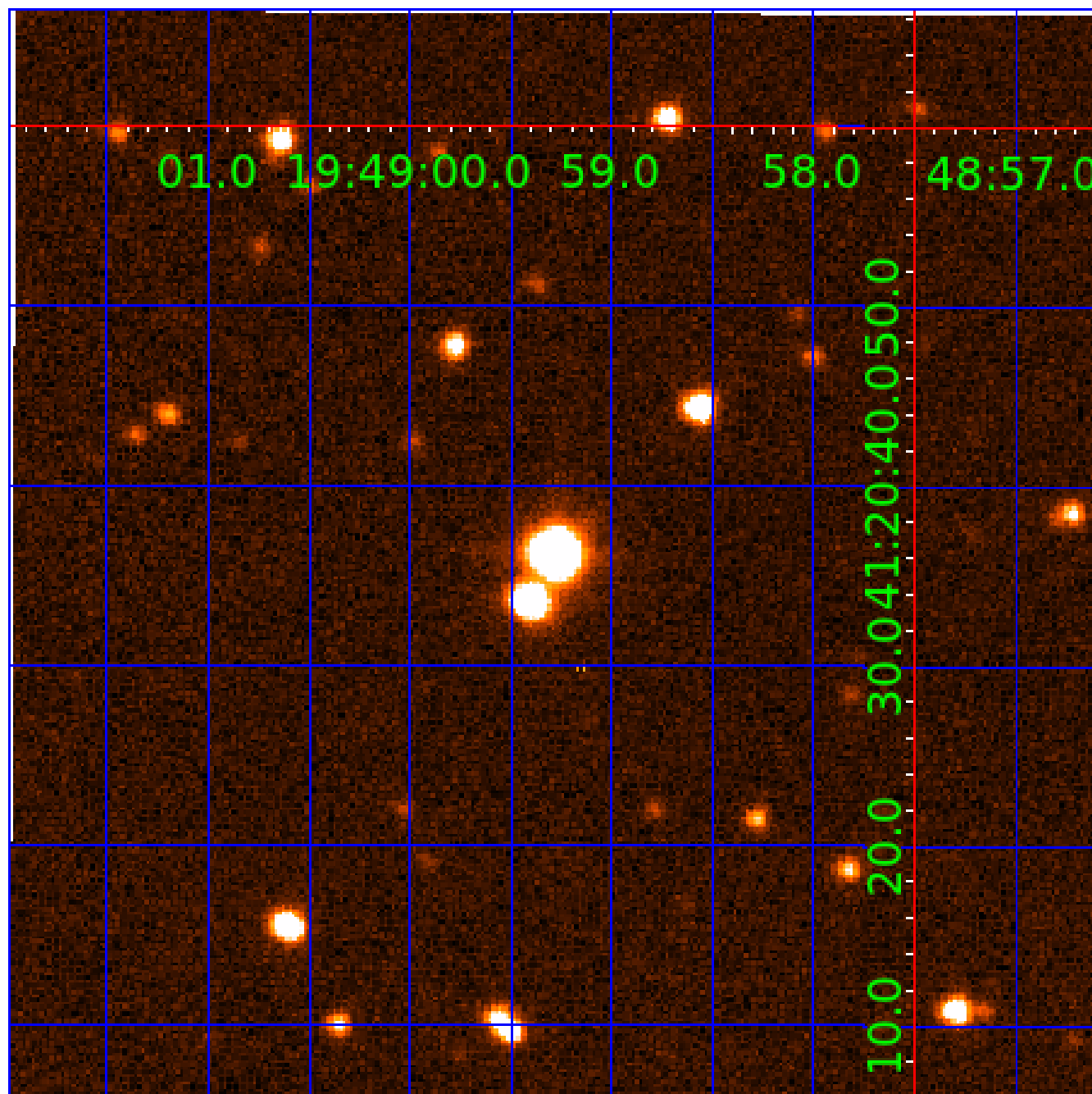


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006062766

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})
006062766-01	OBS	No	0.534948	131.604003	22.7	0.878	12.5	8.2	1.90	7345	0.92	43116.53
006062766-02	OBS	No	0.534947	131.870305	30.3	1.187	9.3	9.4	1.90	7345	1.06	43116.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006062766-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006062766-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

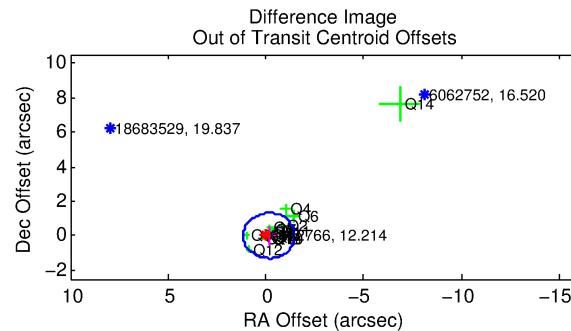
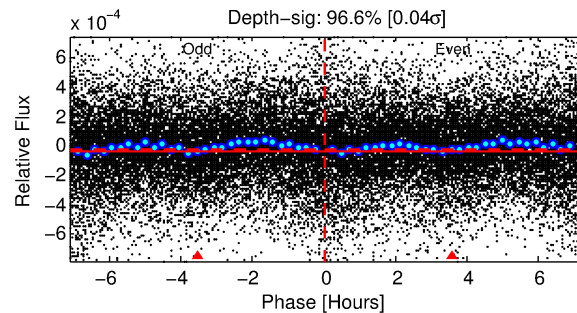
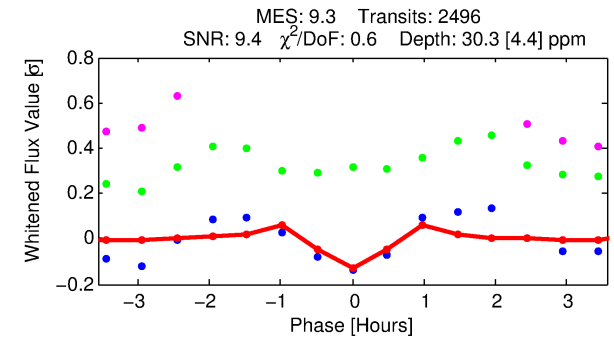
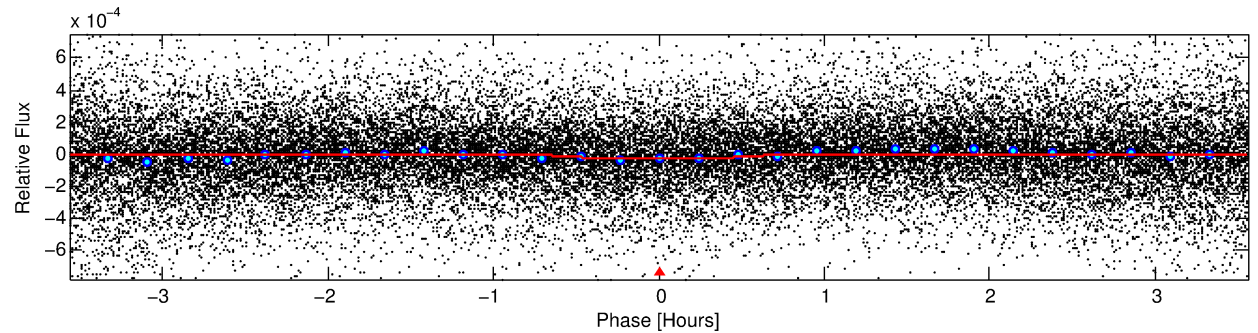
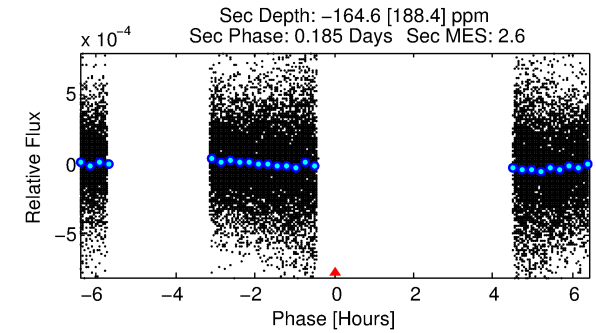
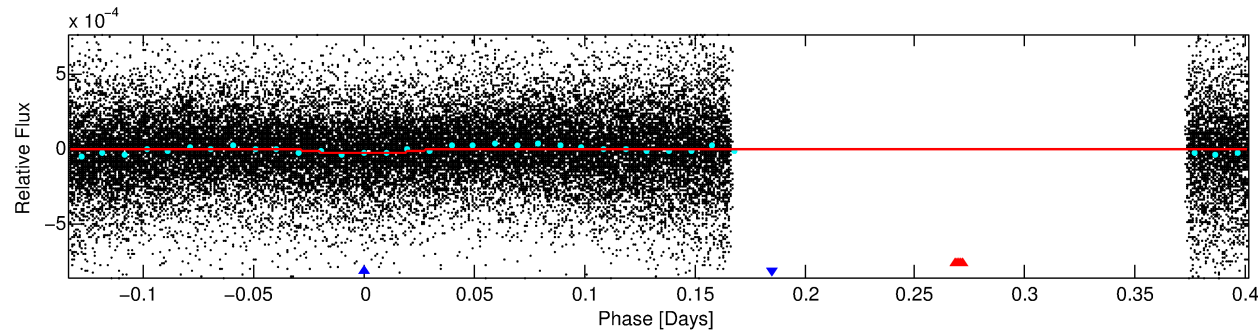
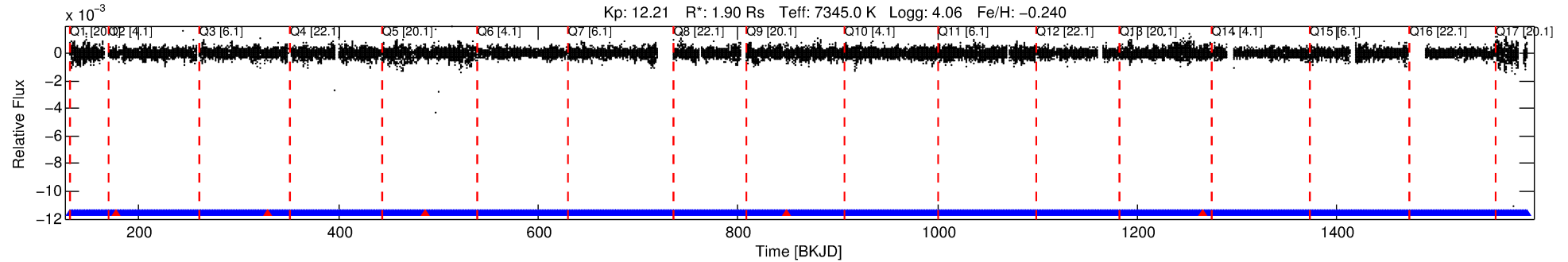
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006062766-02

No Significant Match Found

DV One-Page Summary

KIC: 6062766 Candidate: 2 of 2 Period: 0.535 d



DV Fit Results:

Period = 0.53495 [0.00001] d
Epoch = 131.8703 [0.0012] BKJD
Rp/R* = 0.0051 [0.0040]
a/R* = 3.51 [14.11]
b = 0.01 [325.95]
Seff = 43116.64 [17247.79]
Teq = 3674 [367] K
Rp = 1.06 [0.87] Re
a = 0.0148 [0.0036] AU
Ag = N/A
Teffp = N/A

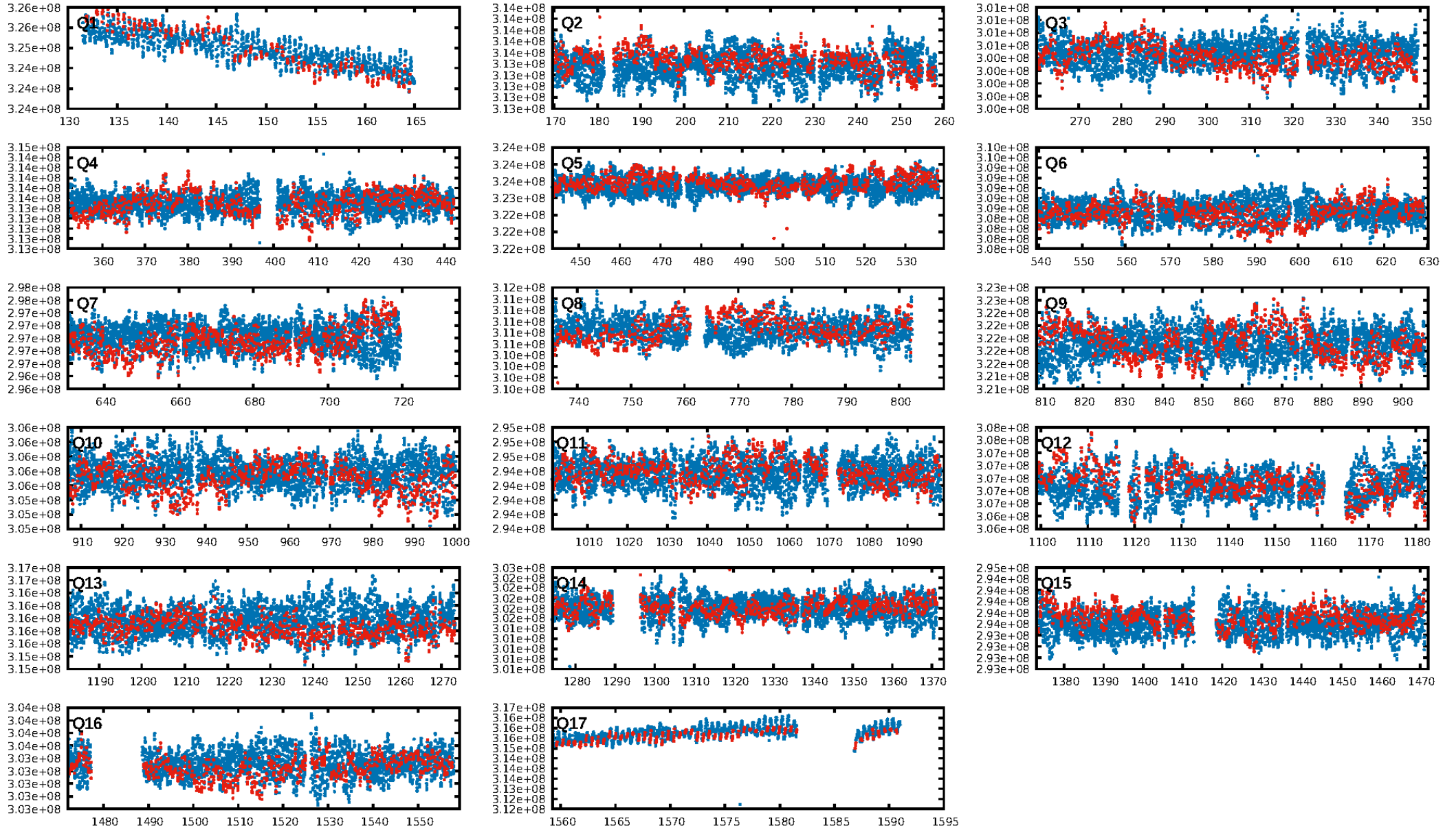
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.08e-14
RollingBand-fgt: 1.00 [2379/2384]
GhostDiagnostic-chr: 14.38
Centroid-sig: 11.3%
Centroid-so: 0.566 arcsec [1.18σ]
OotOffset-rm: 0.148 arcsec [0.34σ]
KicOffset-rm: 0.205 arcsec [0.53σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 1.00 [17/17]

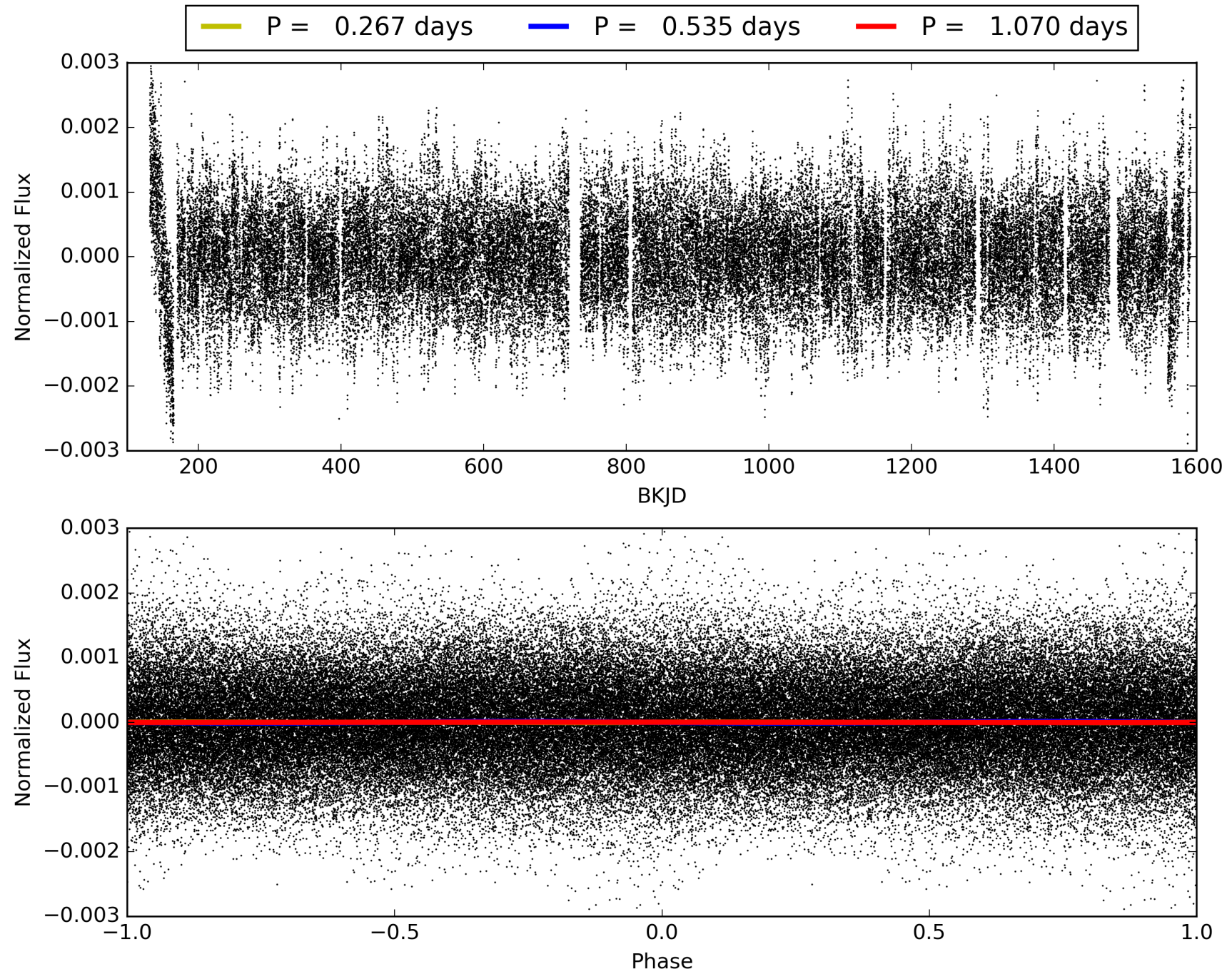
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:17:34 Z

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

TCE 006062766-02, PDC Light Curves

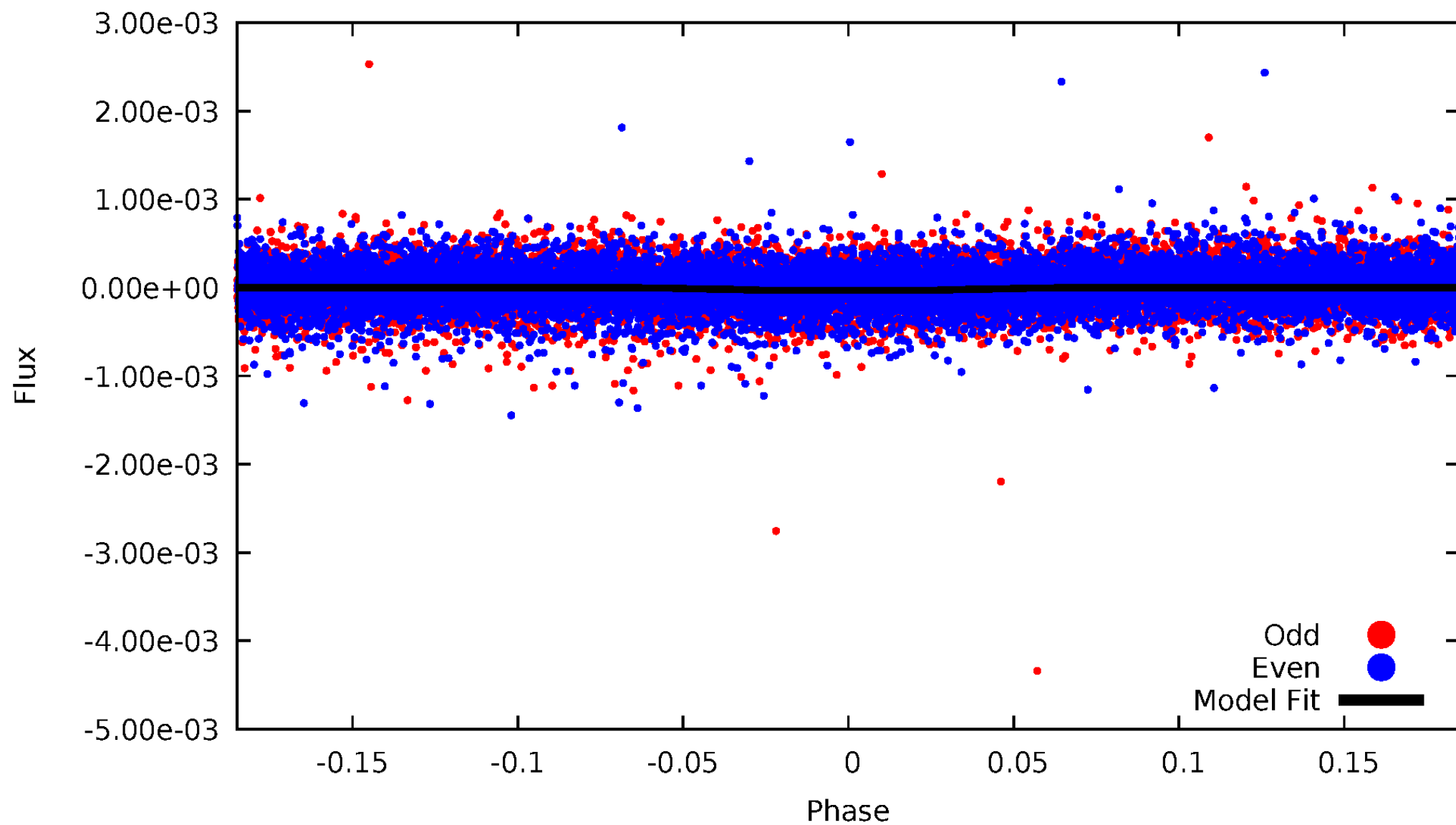


TCE 006062766-02



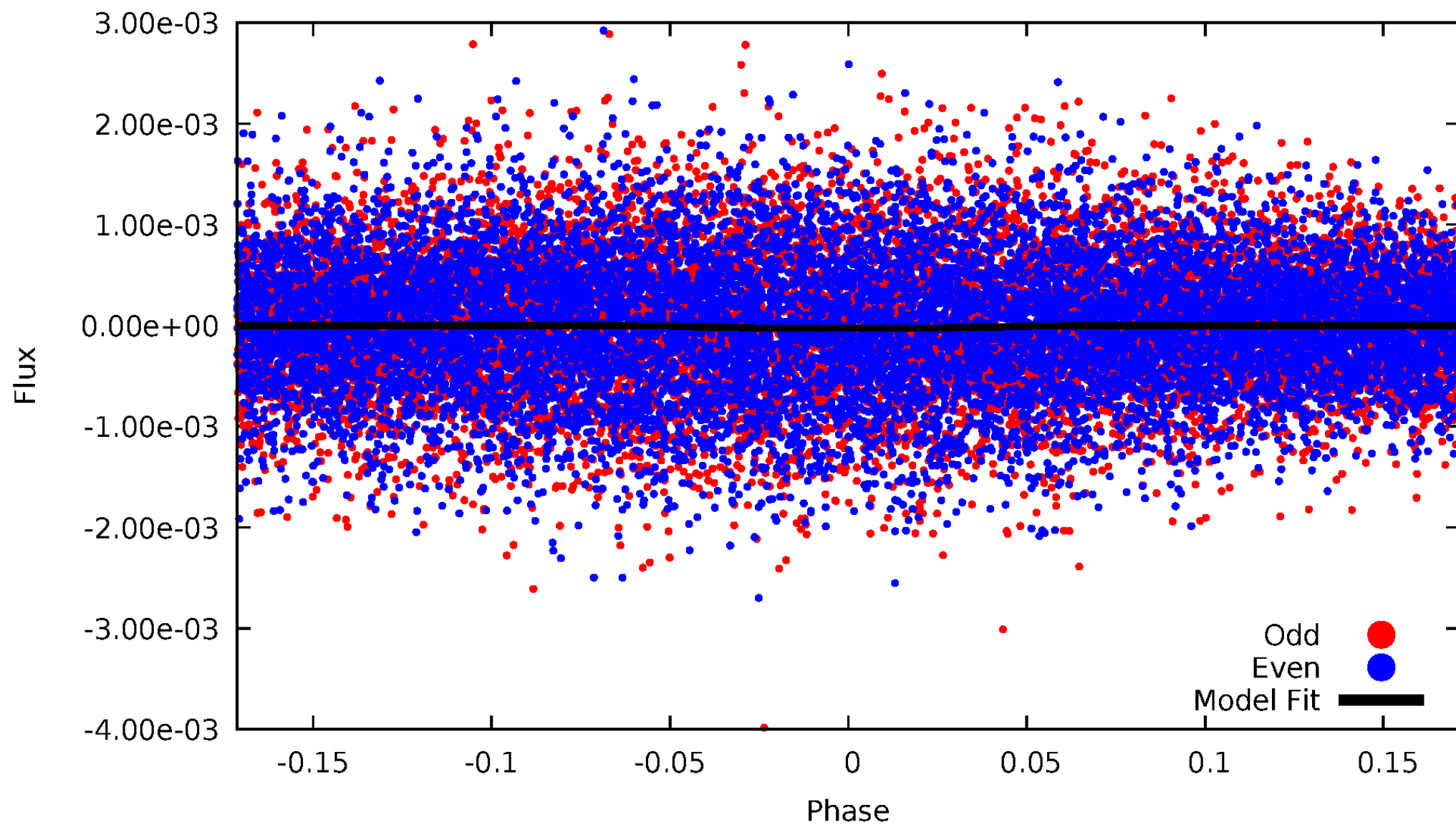
DV Odd/Even

TCE 006062766-02



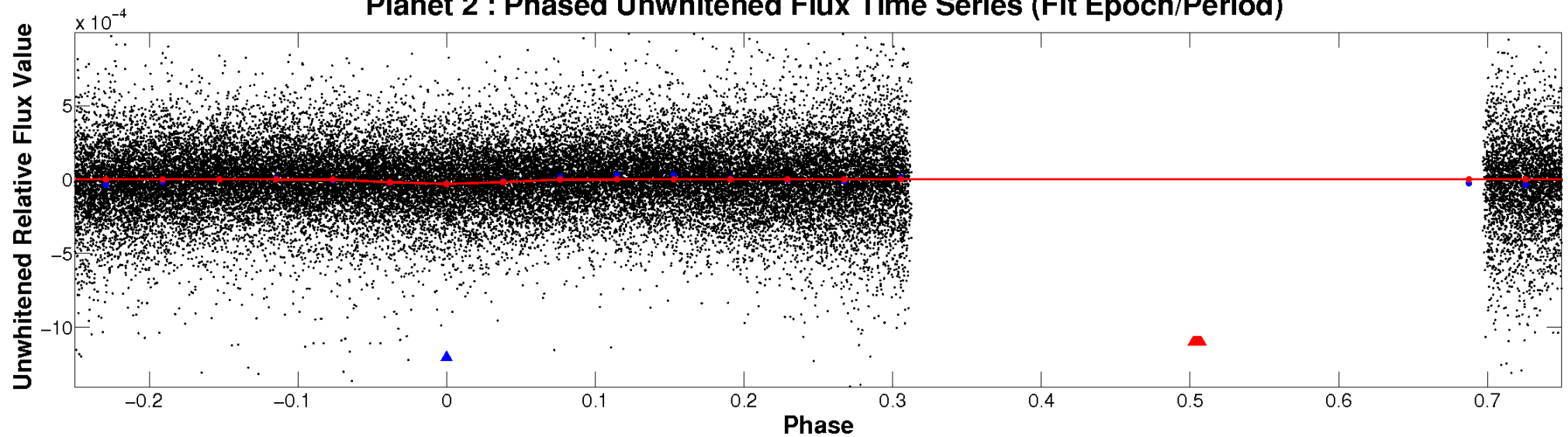
ALT Odd/Even

TCE 006062766-02

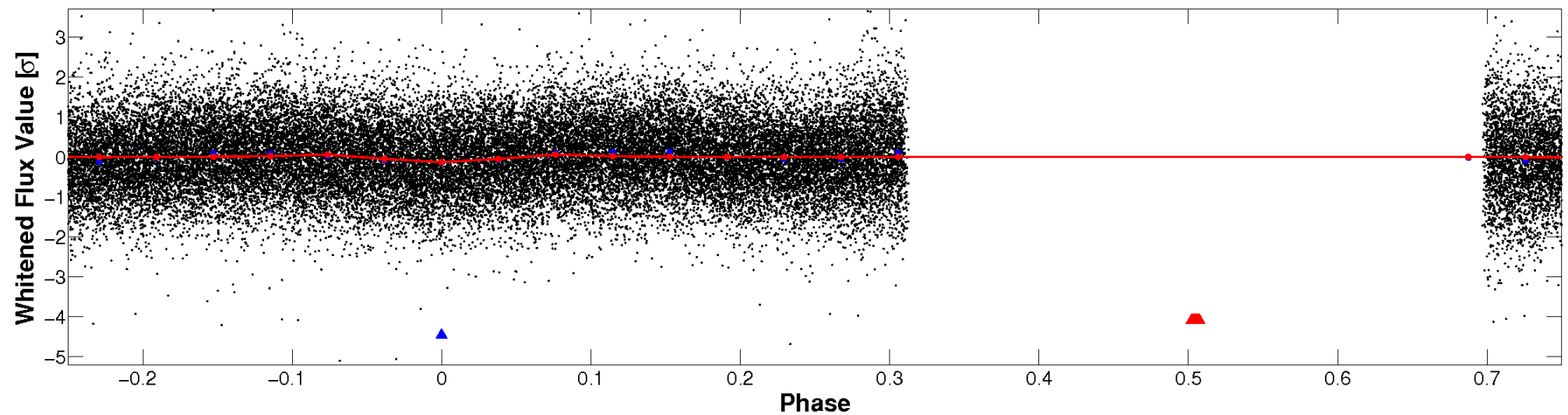


Non-Whitened Vs. Whitened Light Curve

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

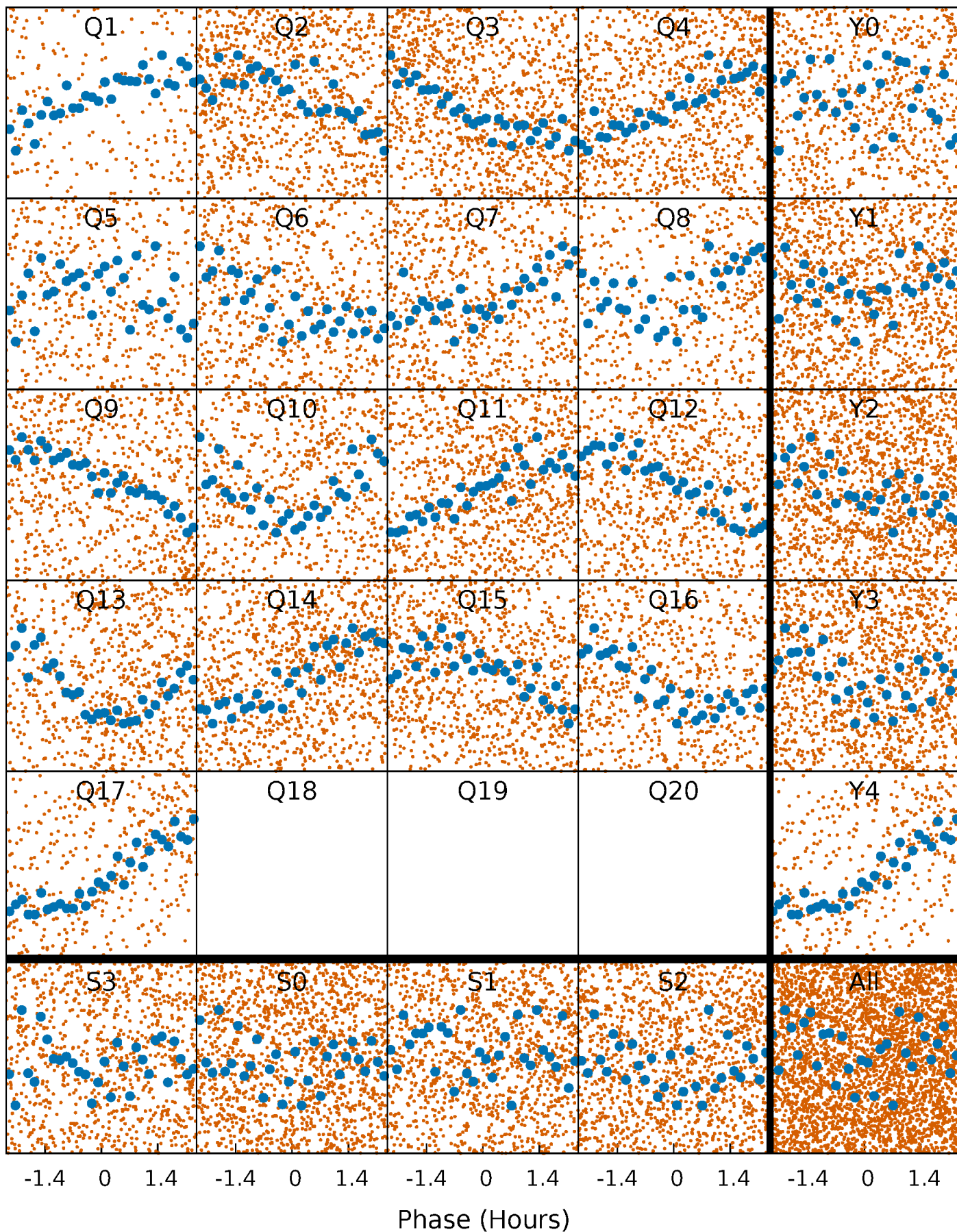


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



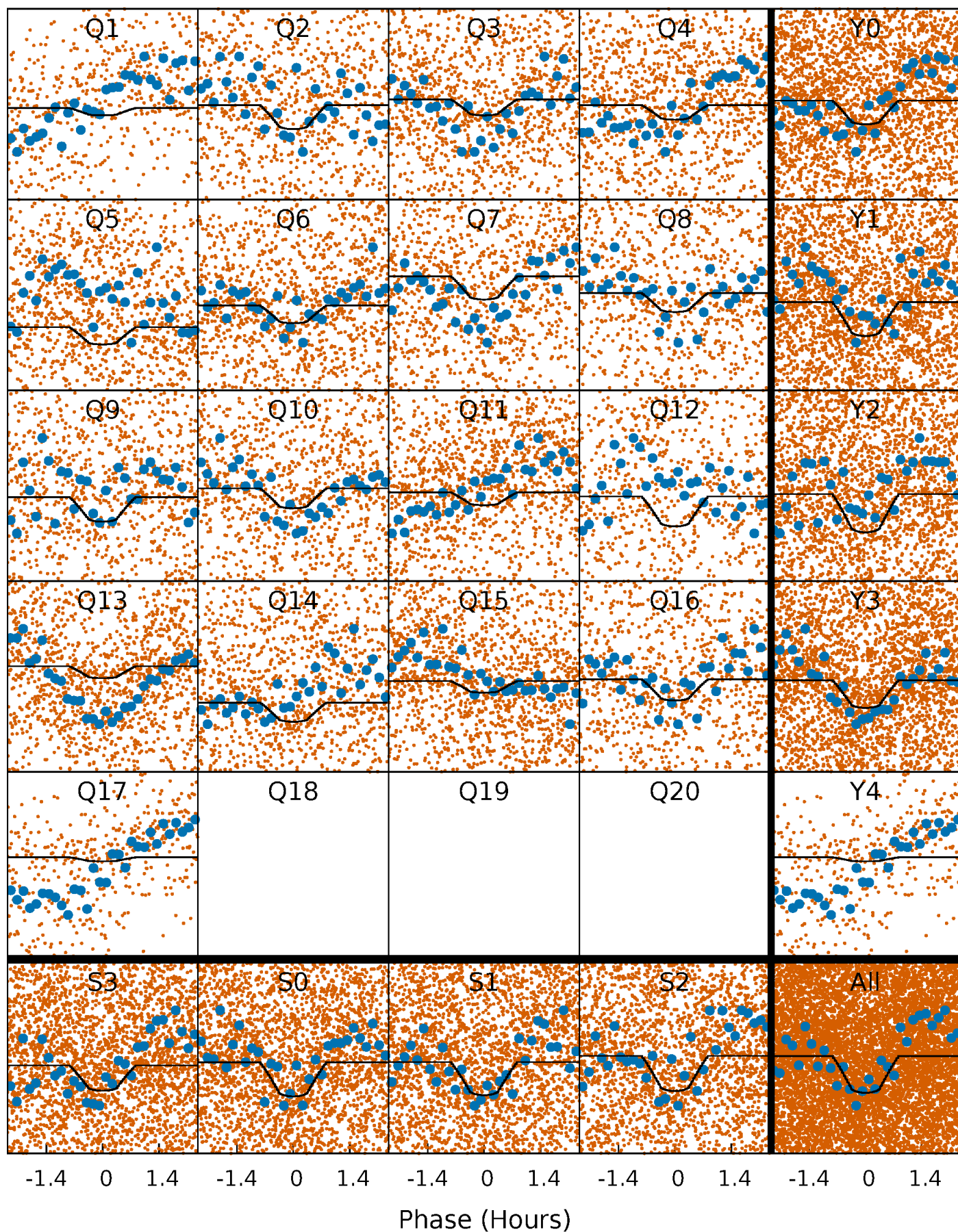
PDC Quarter-Phased Transit Curves

TCE 006062766-02 P= 0.534947 Days $T_0=131.870305$ (BKJD)



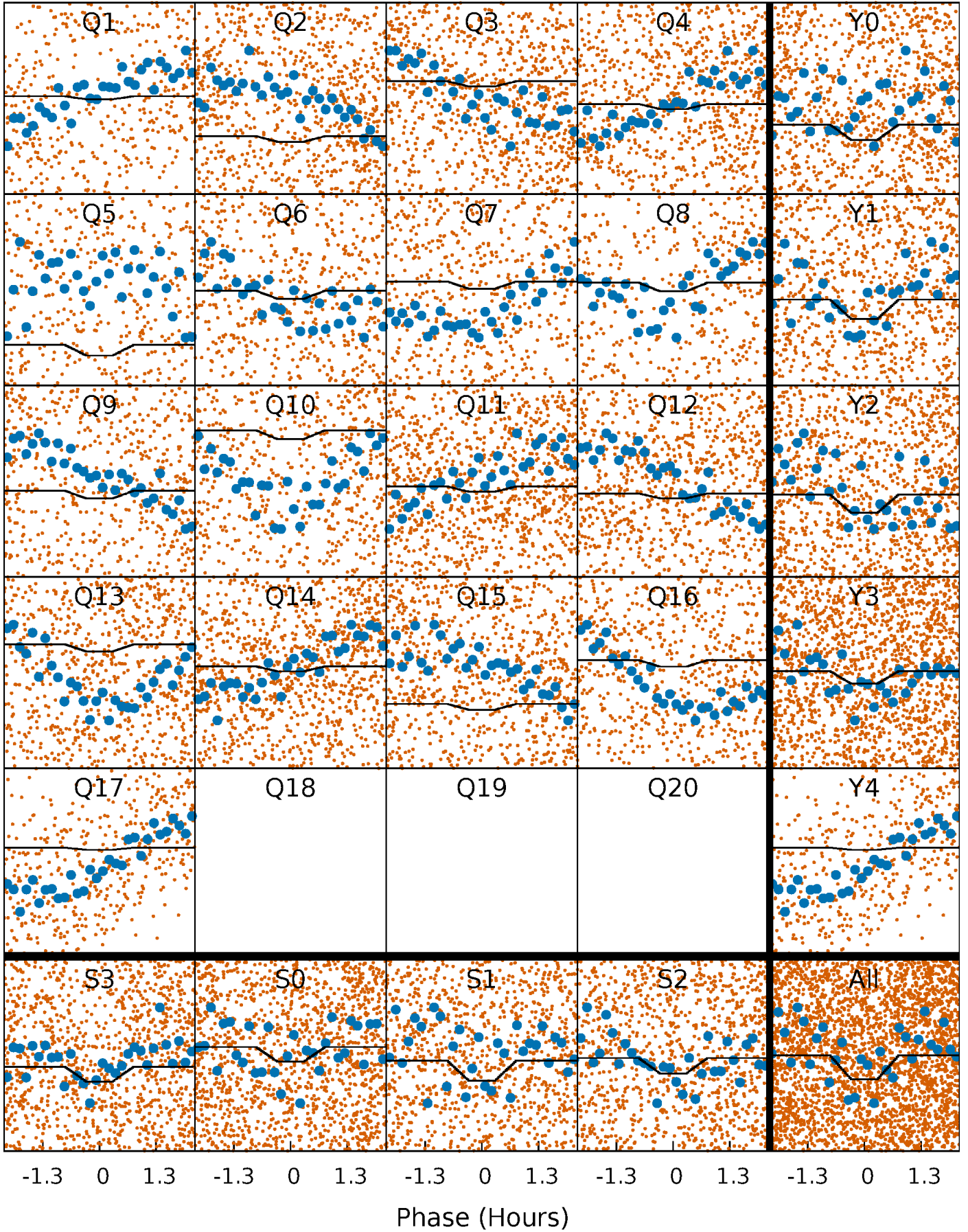
DV Quarter-Phased Transit Curves

TCE 006062766-02 P= 0.534947 Days $T_0=131.870305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

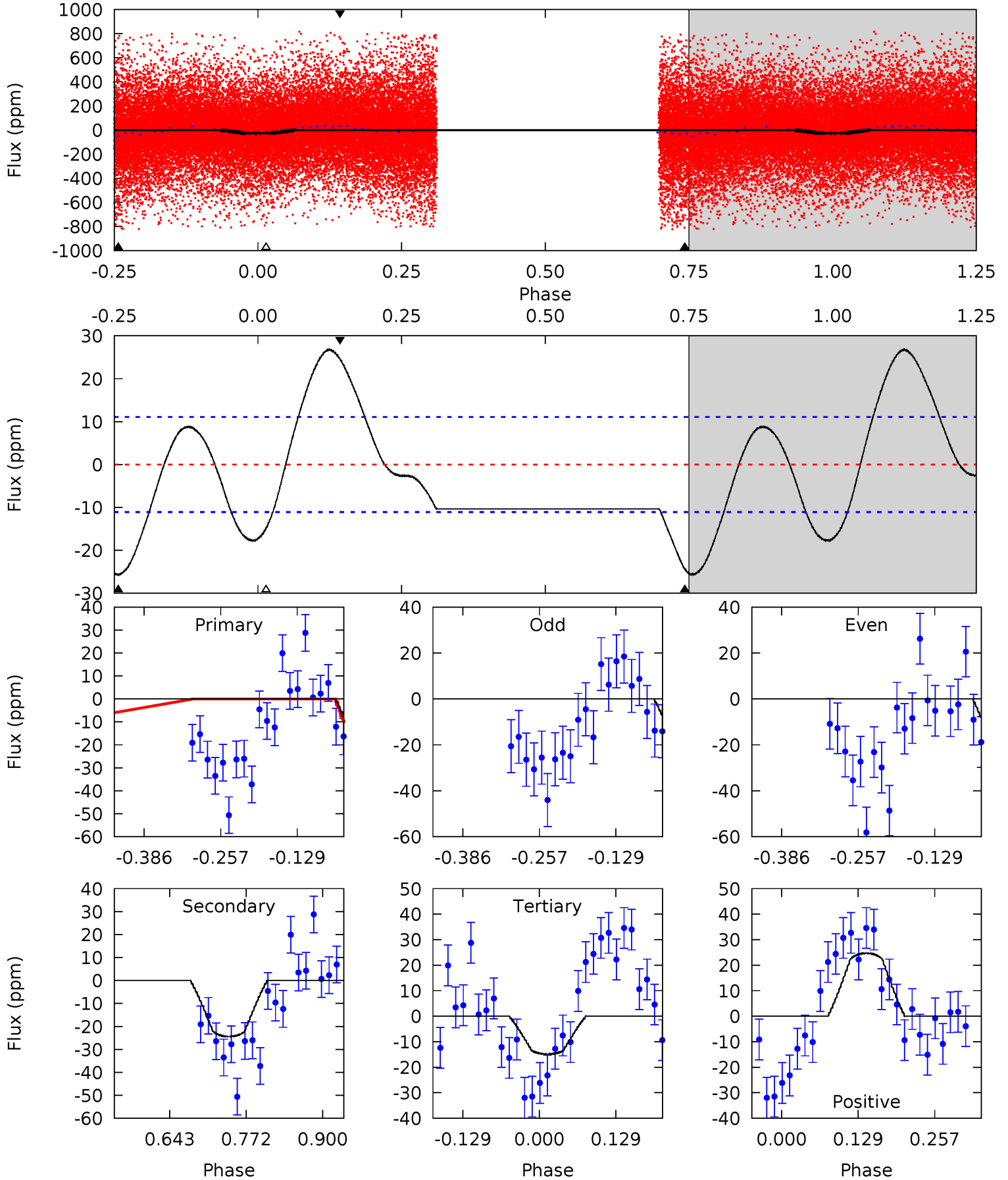
TCE 006062766-02 P= 0.534948 Days $T_0=131.870212$ (BKJD)



DV Model-Shift Uniqueness Test

006062766-02, P = 0.534947 Days, E = 131.335358 Days

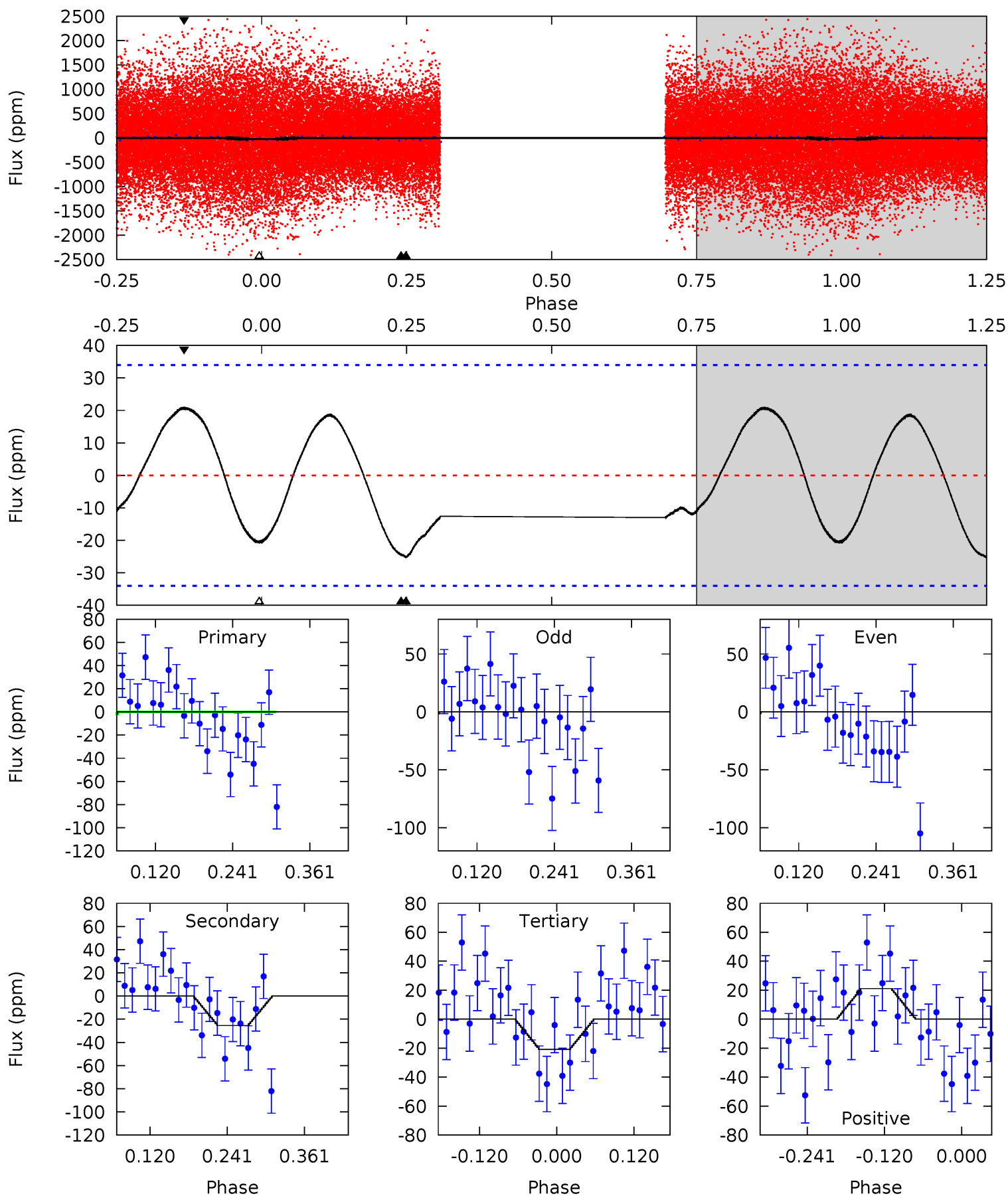
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	9.94	6.04	10.1	4.51	1.52	5.41	4.45	0.44	3.90	-0.12	0.57	1.49	0.51	2.47



Alt Model-Shift Uniqueness Test

006062766-02, P = 0.534948 Days, E = 131.335264 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.29	3.39	2.79	2.81	4.53	1.55	1.79	0.50	0.48	0.60	0.58	0.05	0.52	0.45	0.14



Stellar Parameters For KIC 006062766

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+230}_{-307}	$4.057^{+0.204}_{-0.167}$	$-0.240^{+0.250}_{-0.350}$	$1.898^{+0.525}_{-0.525}$	$1.496^{+0.209}_{-0.279}$	$0.308^{+0.384}_{-0.151}$
	+3%/-4%	+5%/-4%	+104%/-146%	+28%/-28%	+14%/-19%	+125%/-49%
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 006062766-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 2	$1.14^{+0.81}_{-0.70}$	5113^{+384}_{-423}	6535^{+6064}_{-1921}	$2.158^{+12.697}_{-1.406}$
Alt.	-25 ± 8	$1.13^{+0.79}_{-0.67}$	5107^{+412}_{-373}	6739^{+5499}_{-1962}	$2.335^{+10.584}_{-1.588}$

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

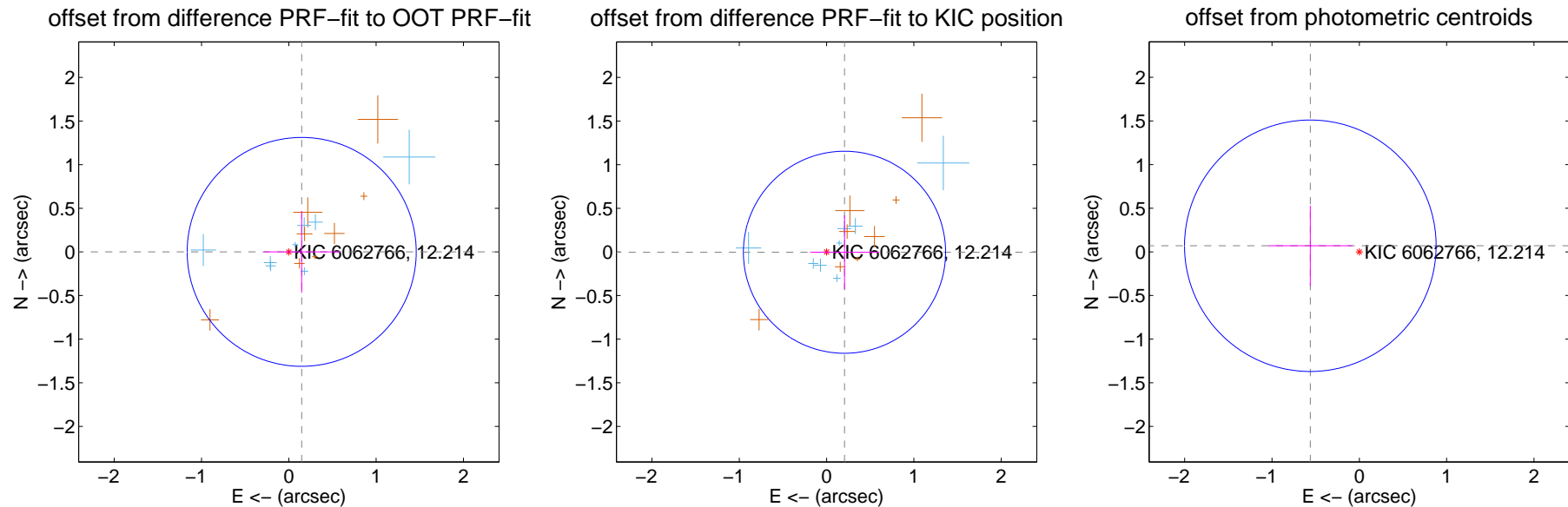
DV Centroid Data

Supplemental centroid analysis for 006062766-02. Kepler magnitude: 12.21. Transit SNR 9.44

There are 8 quarters with good PRF difference image offsets

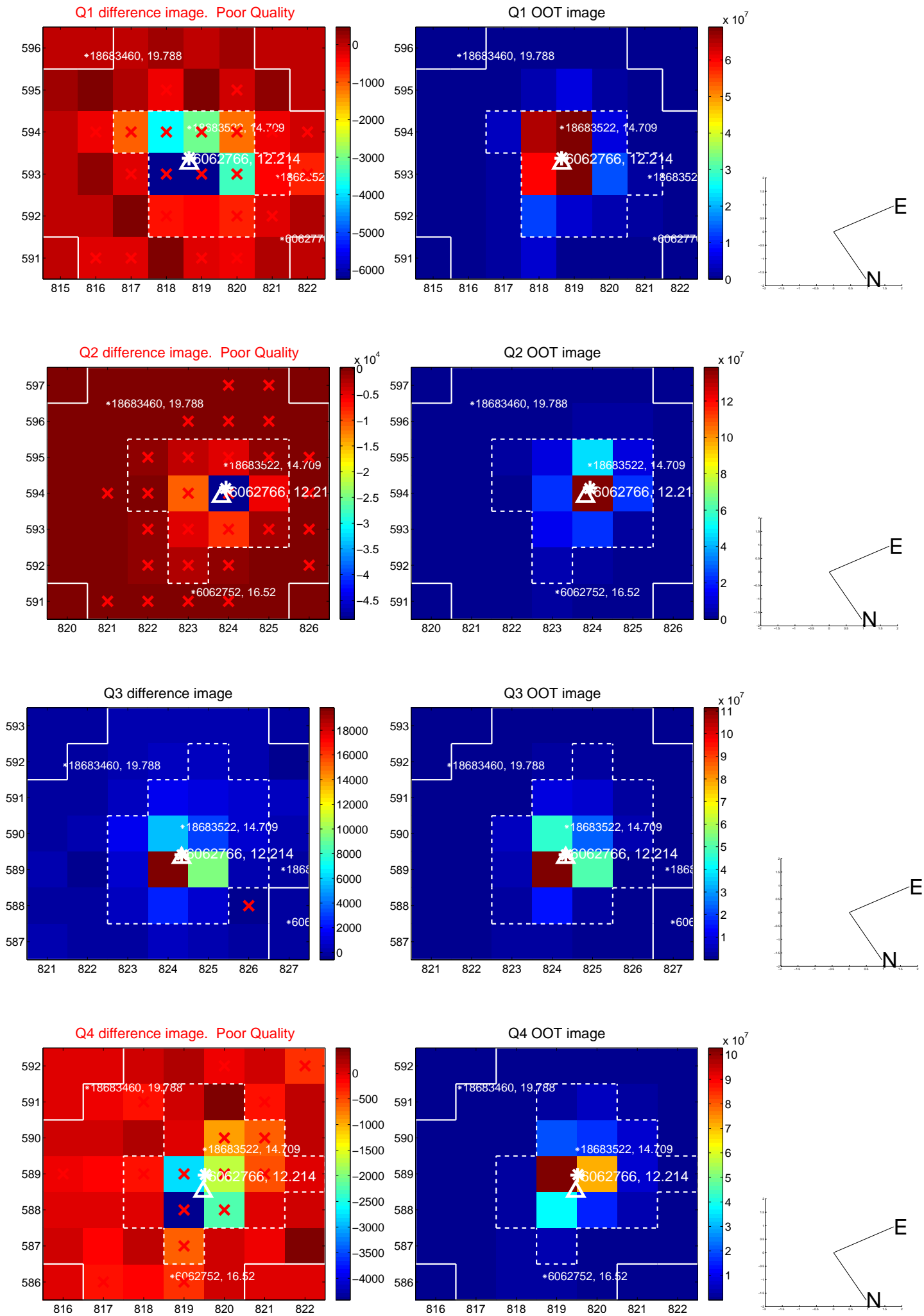
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.437	0.34	-0.148 ± 0.436	0.000 ± 0.468
PRF-fit source offset from KIC position	0.205 ± 0.386	0.53	-0.205 ± 0.394	-0.004 ± 0.424
photometric centroid source offset	0.57 ± 0.48	1.18	0.56 ± 0.48	0.07 ± 0.46

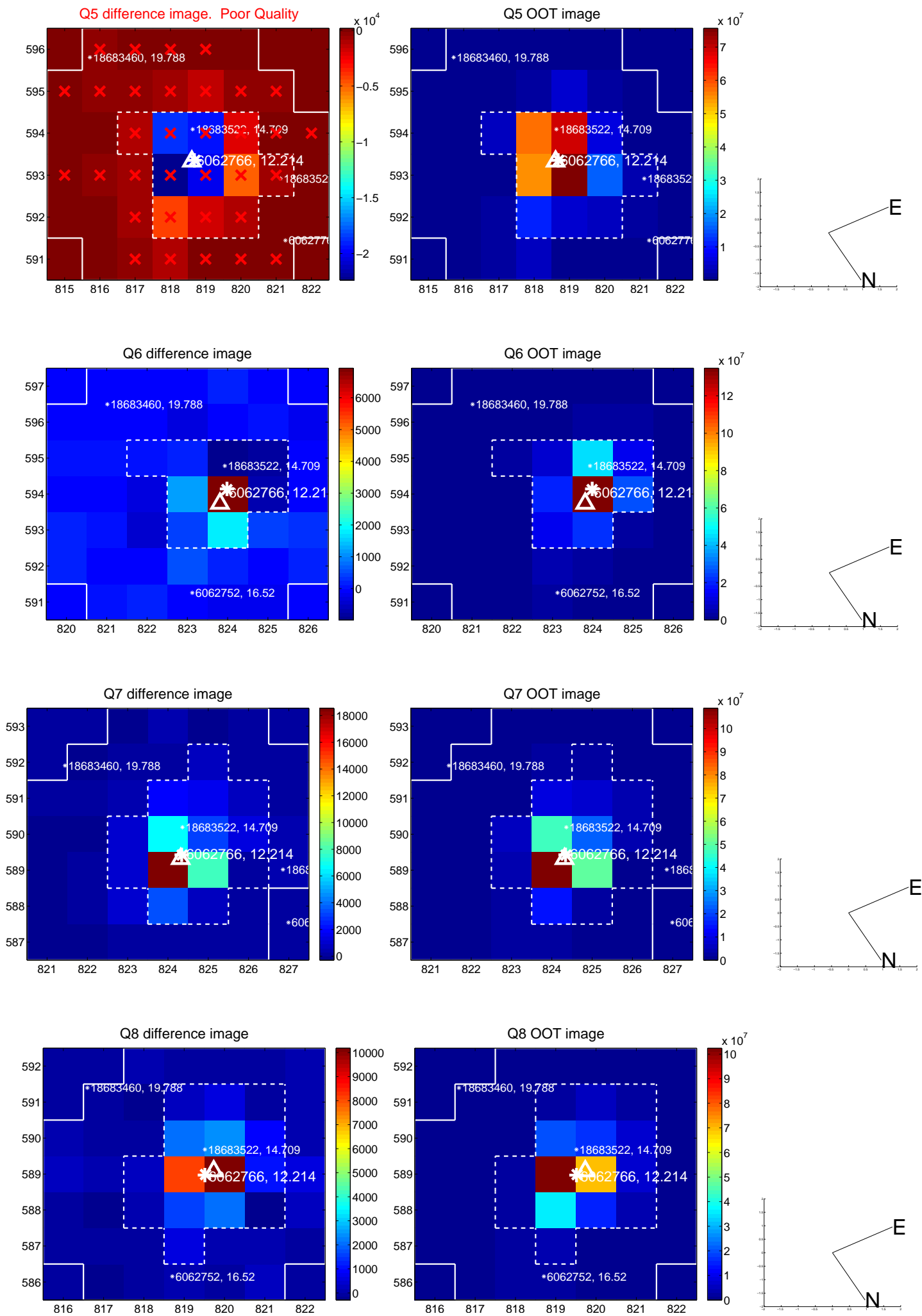


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

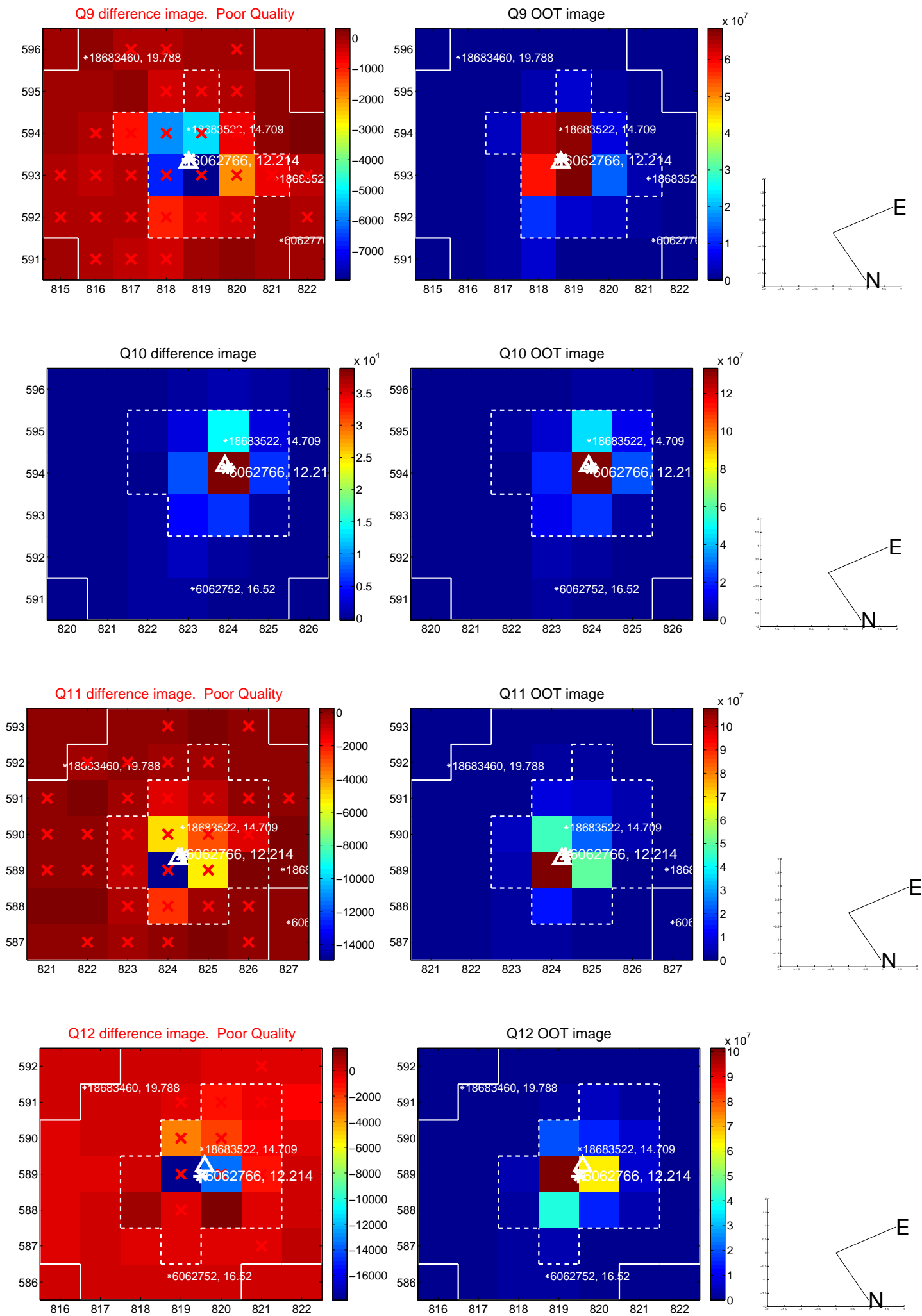
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



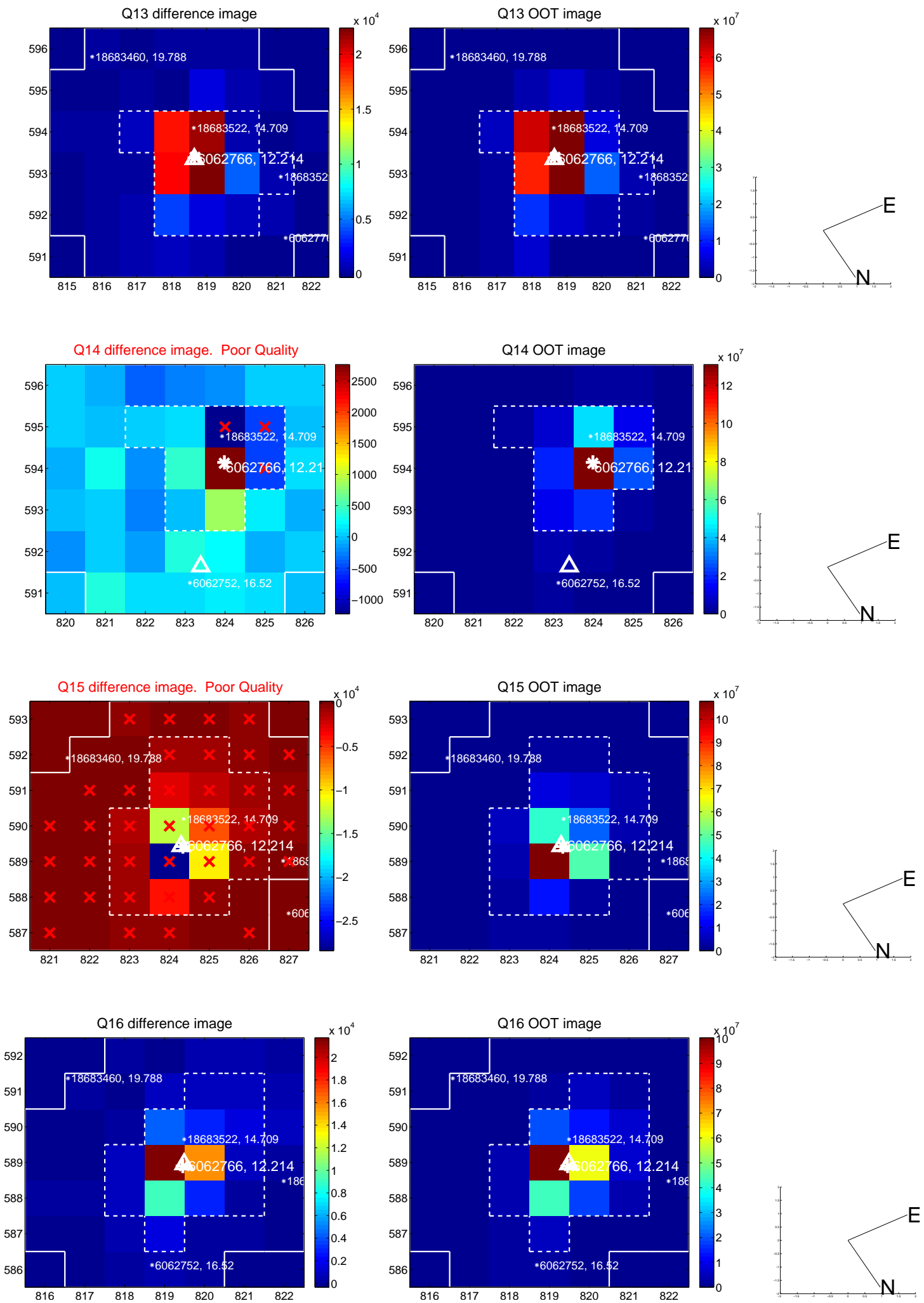
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



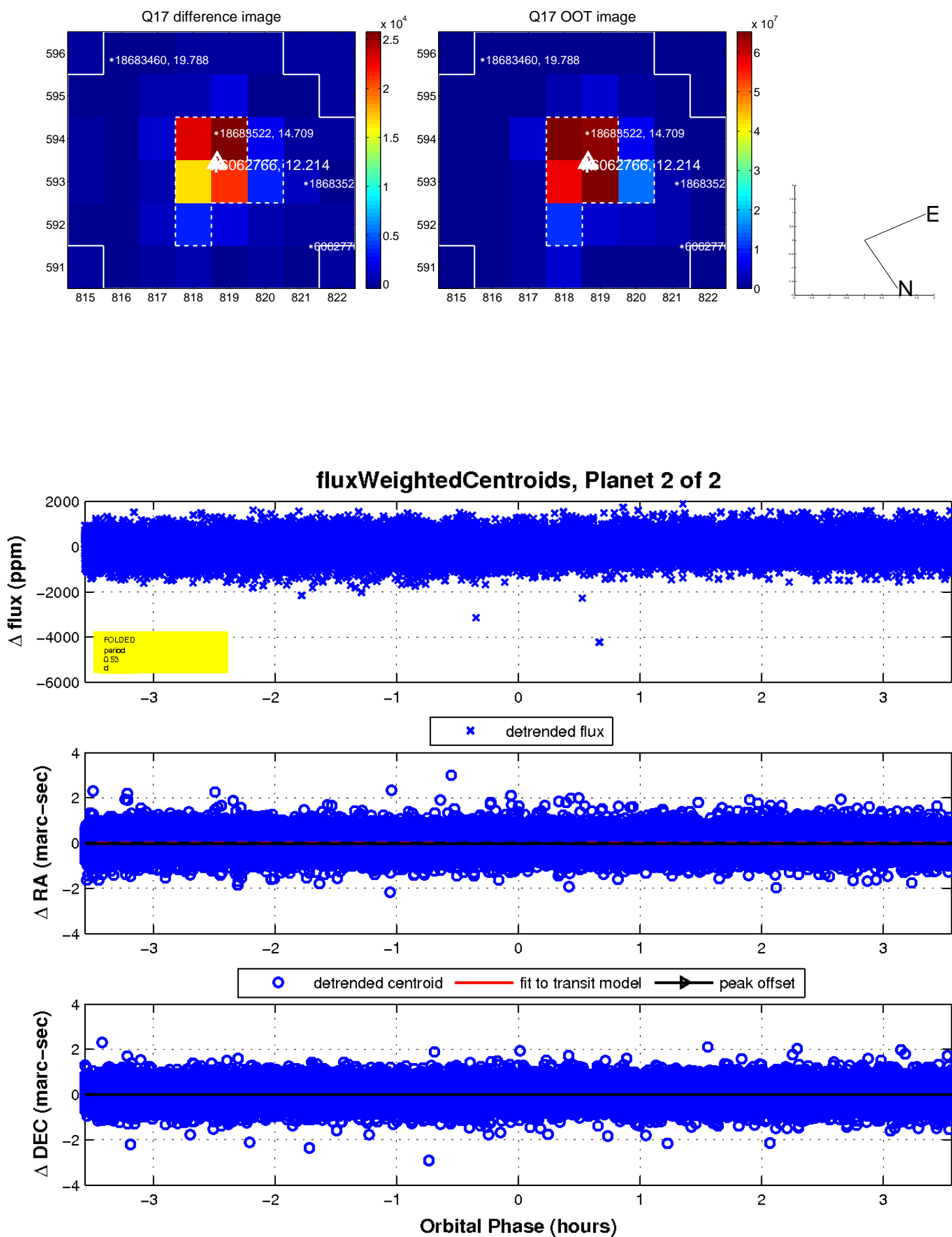
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

