

KIC 008446738

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})
008446738-01	OBS	No	0.922780	132.046797	13.6	3.429	17.2	12.4	2.30	7363	0.92	28957.21
008446738-02	OBS	No	0.872726	131.902614	26.4	1.352	11.0	12.6	2.30	7363	1.38	31192.51
008446738-03	OBS	No	0.872750	132.263361	31.2	1.484	8.2	15.7	2.30	7363	1.51	31191.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008446738-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008446738-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008446738-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

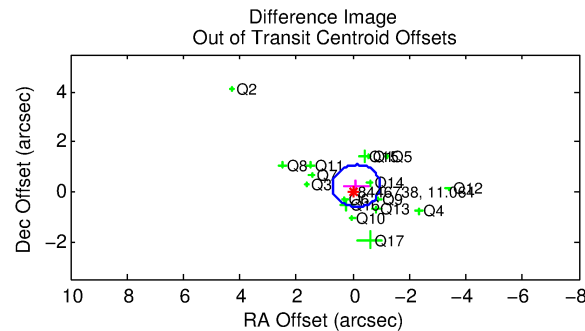
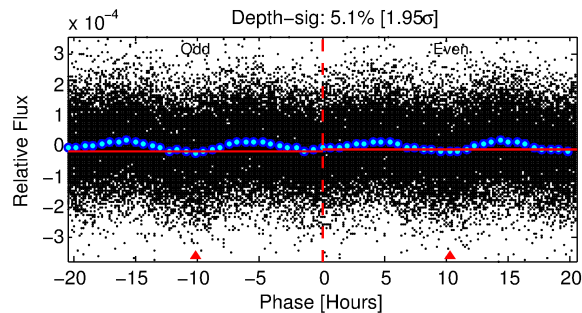
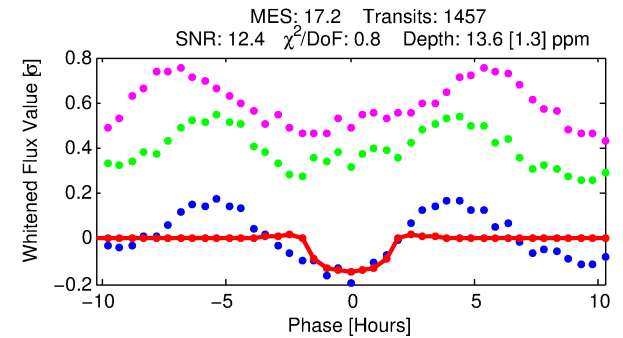
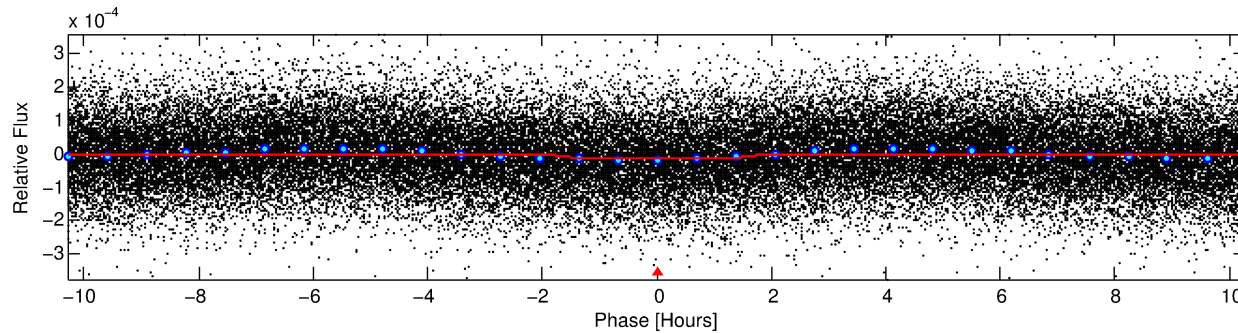
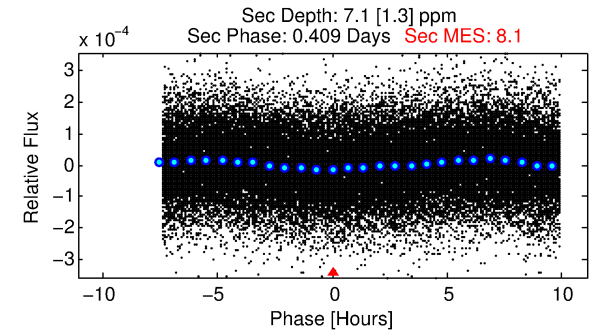
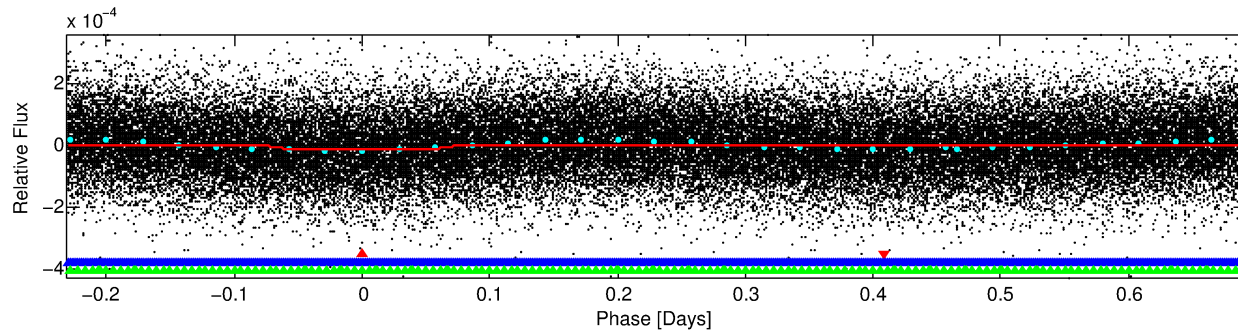
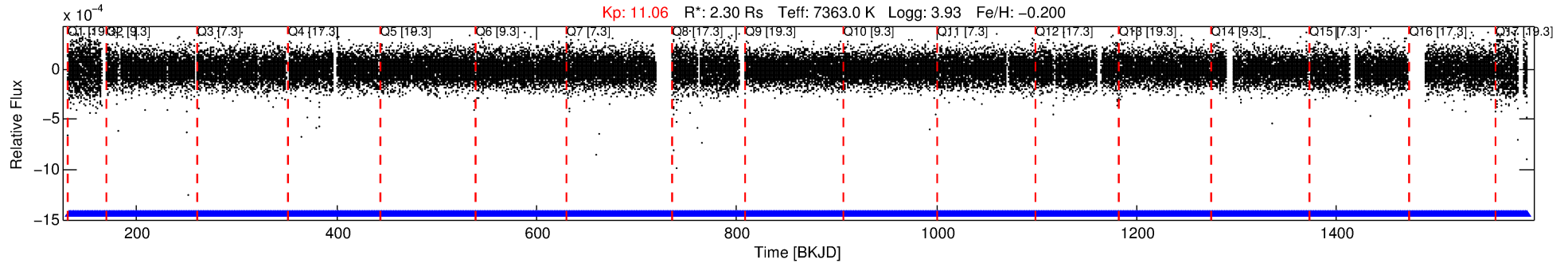
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008446738-01

No Significant Match Found

DV One-Page Summary

KIC: 8446738 Candidate: 1 of 3 Period: 0.923 d



DV Fit Results:

Period = 0.92278 [0.00001] d
Epoch = 132.0468 [0.0033] BKJD
Rp/R* = 0.0037 [0.0006]
a/R* = 1.61 [0.79]
b = 0.75 [0.47]
Seff = 28957.21 [15722.85]
Teq = 3326 [452] K
Rp = 0.92 [0.35] Re
a = 0.0219 [0.0072] AU
Ag = 2.21 [1.39] [0.87σ]
Teffp = 6269 [620] K [3.84σ]

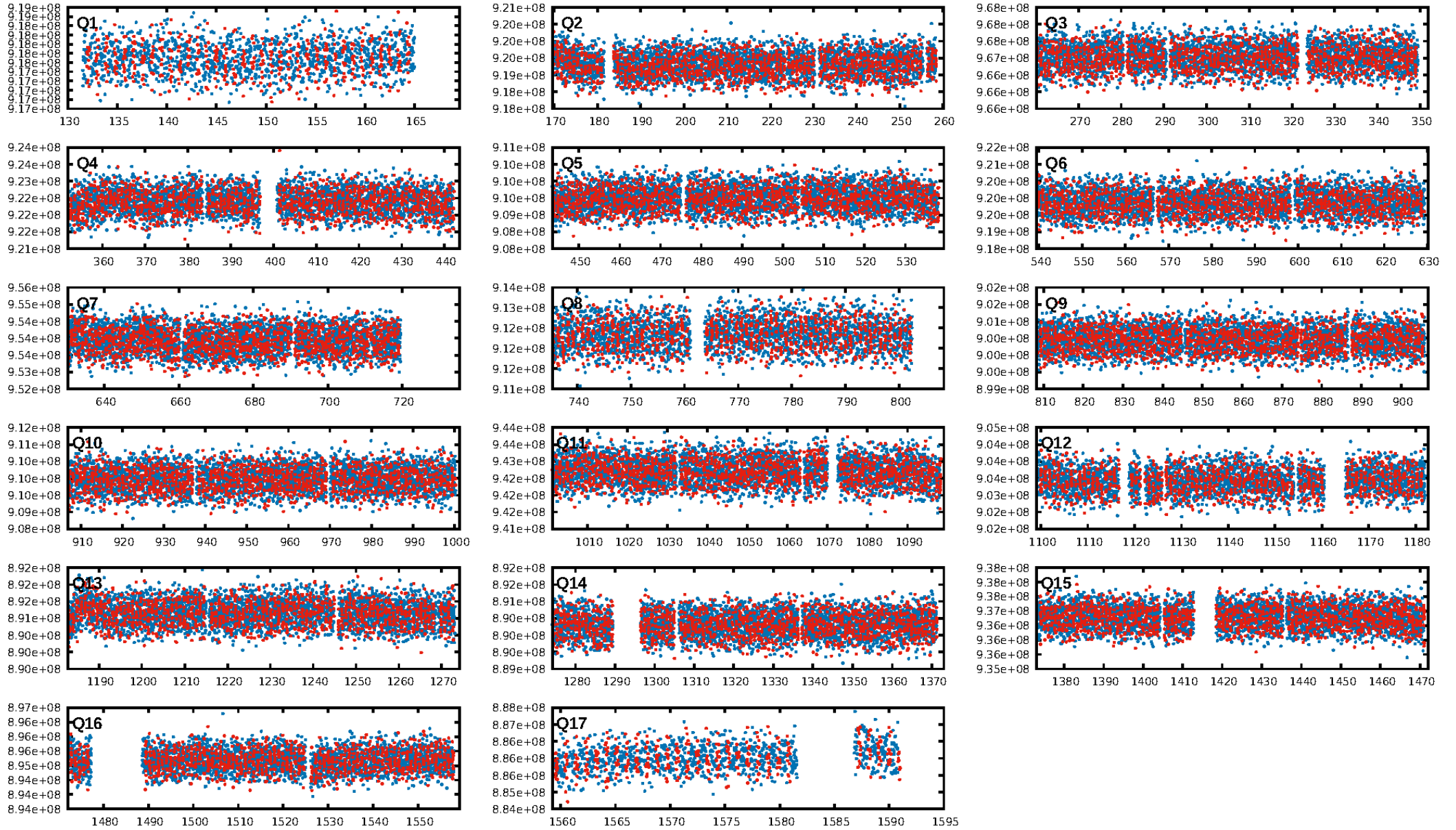
DV Diagnostic Results:

ShortPeriod-sig: 25.2% [0.32σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.27e-60
RollingBand-fgt: 1.00 [1392/1392]
GhostDiagnostic-chr: 2.551
Centroid-sig: 15.6%
Centroid-so: 0.532 arcsec [1.09σ]
OotOffset-rm: 0.259 arcsec [0.92σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.256 arcsec [0.90σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

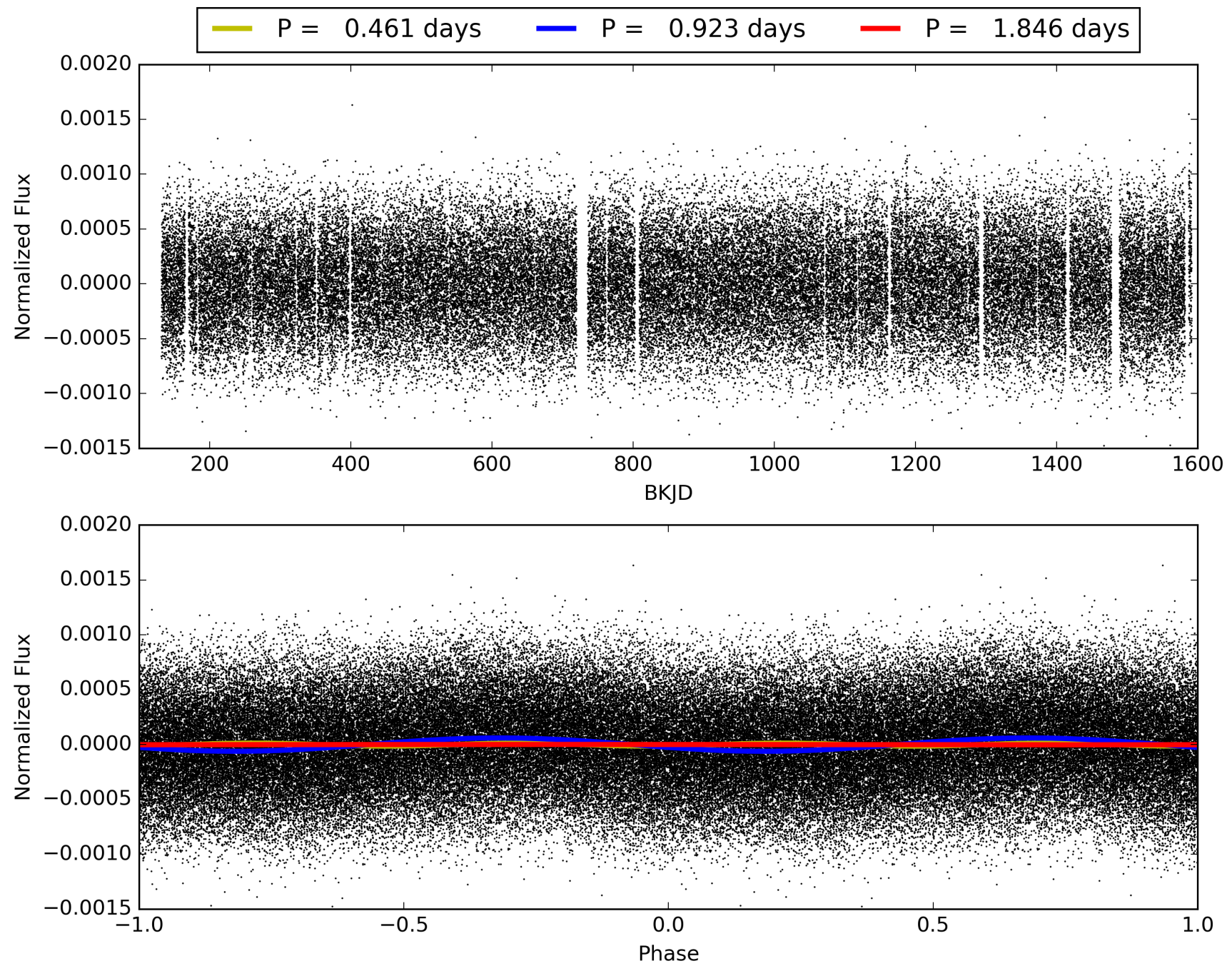
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:49:09 Z

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

TCE 008446738-01, PDC Light Curves

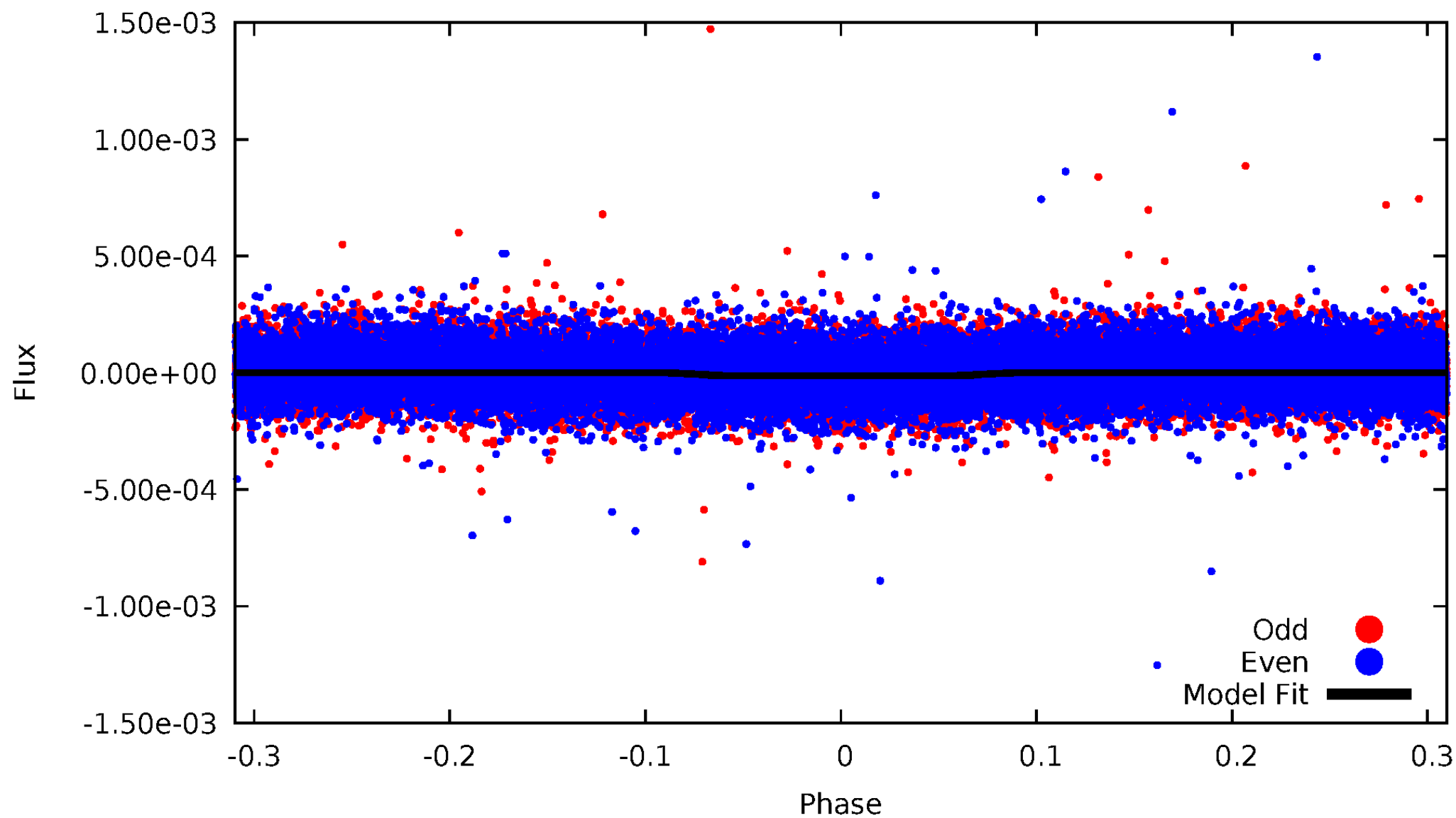


TCE 008446738-01



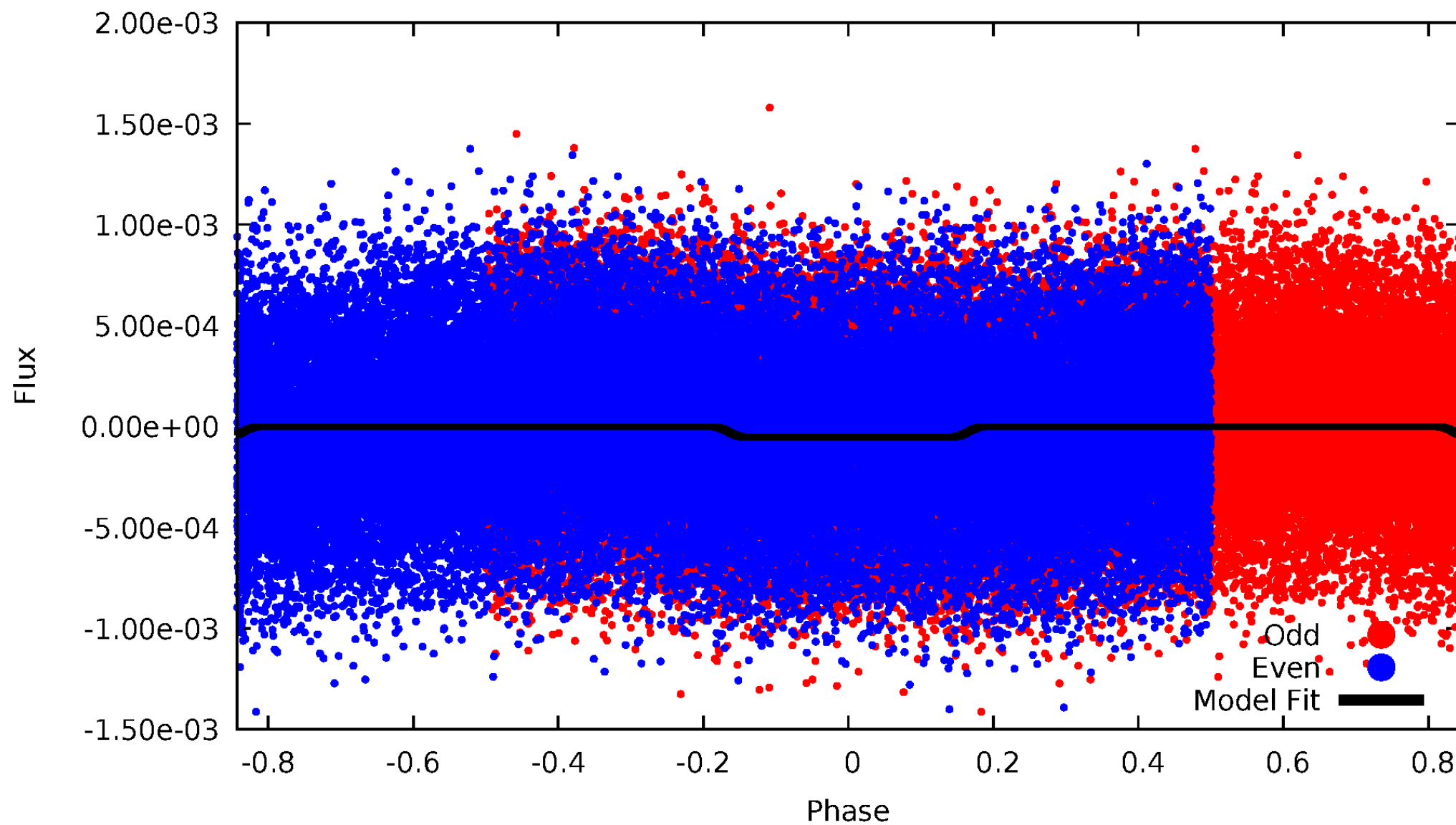
DV Odd/Even

TCE 008446738-01



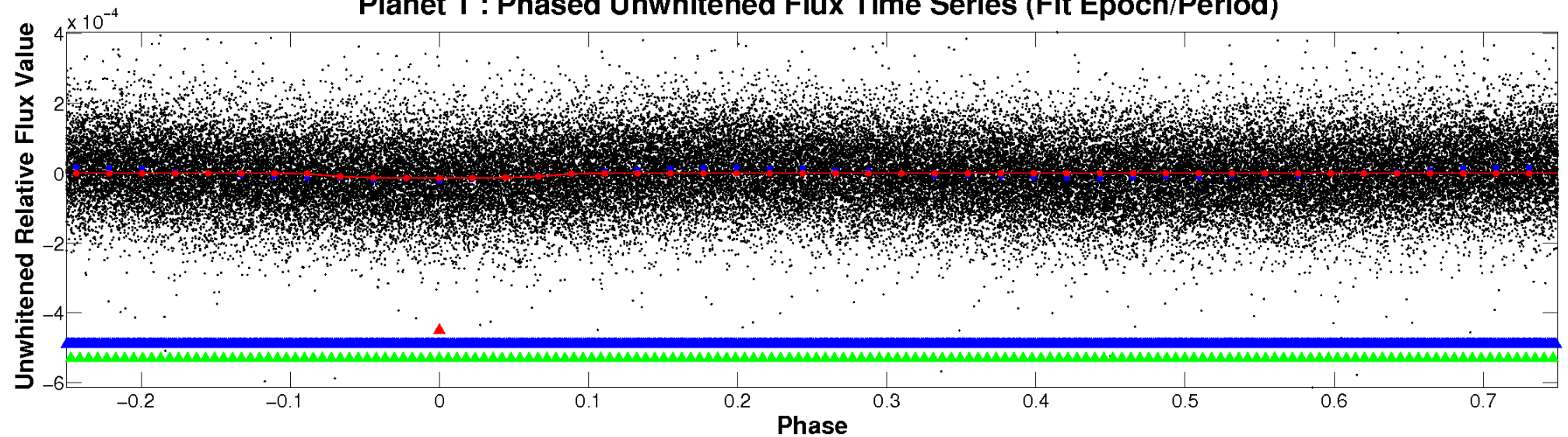
ALT Odd/Even

TCE 008446738-01

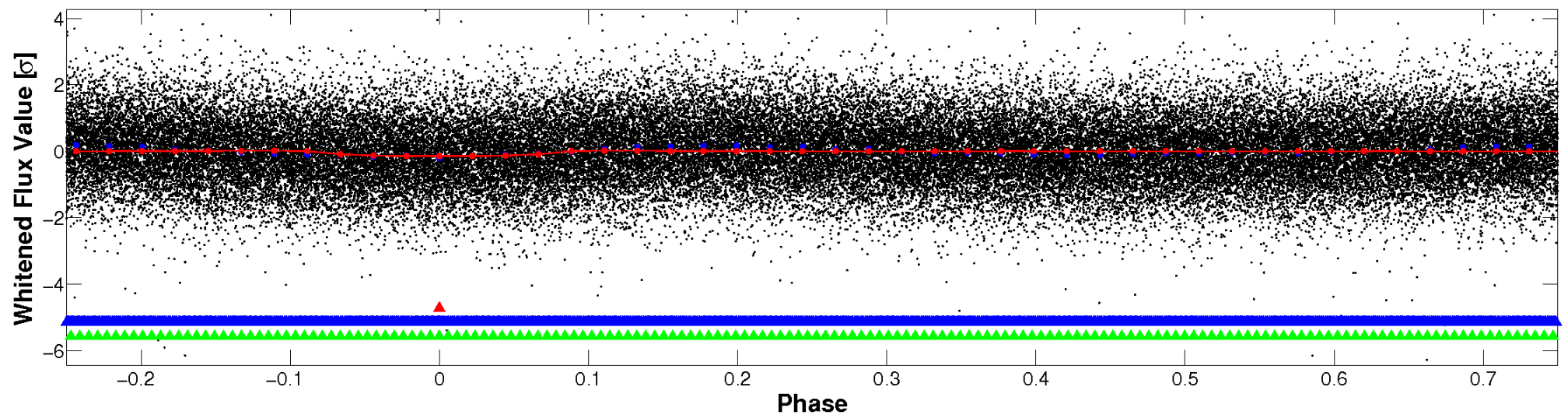


Non-Whitened Vs. Whitened Light Curve

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

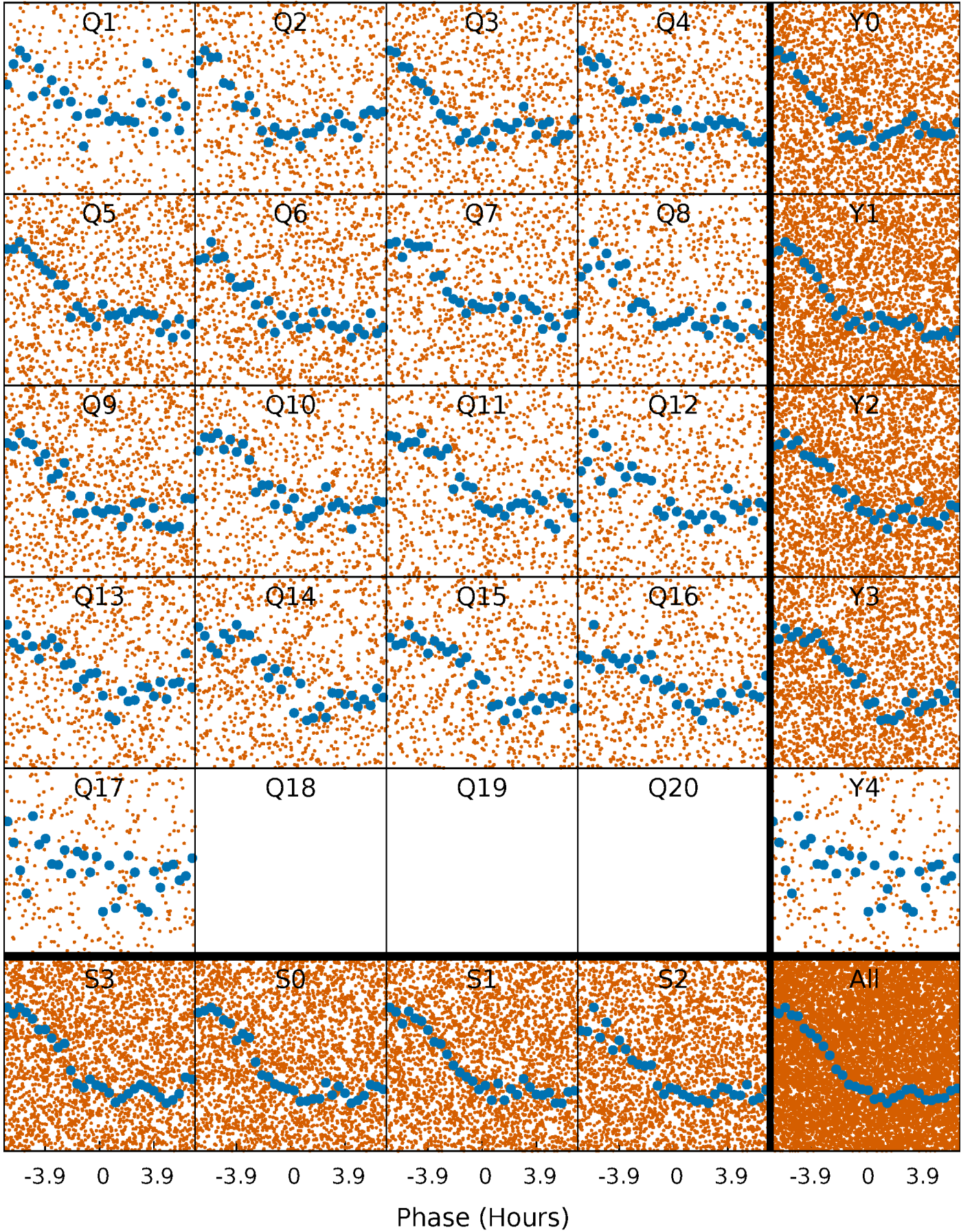


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



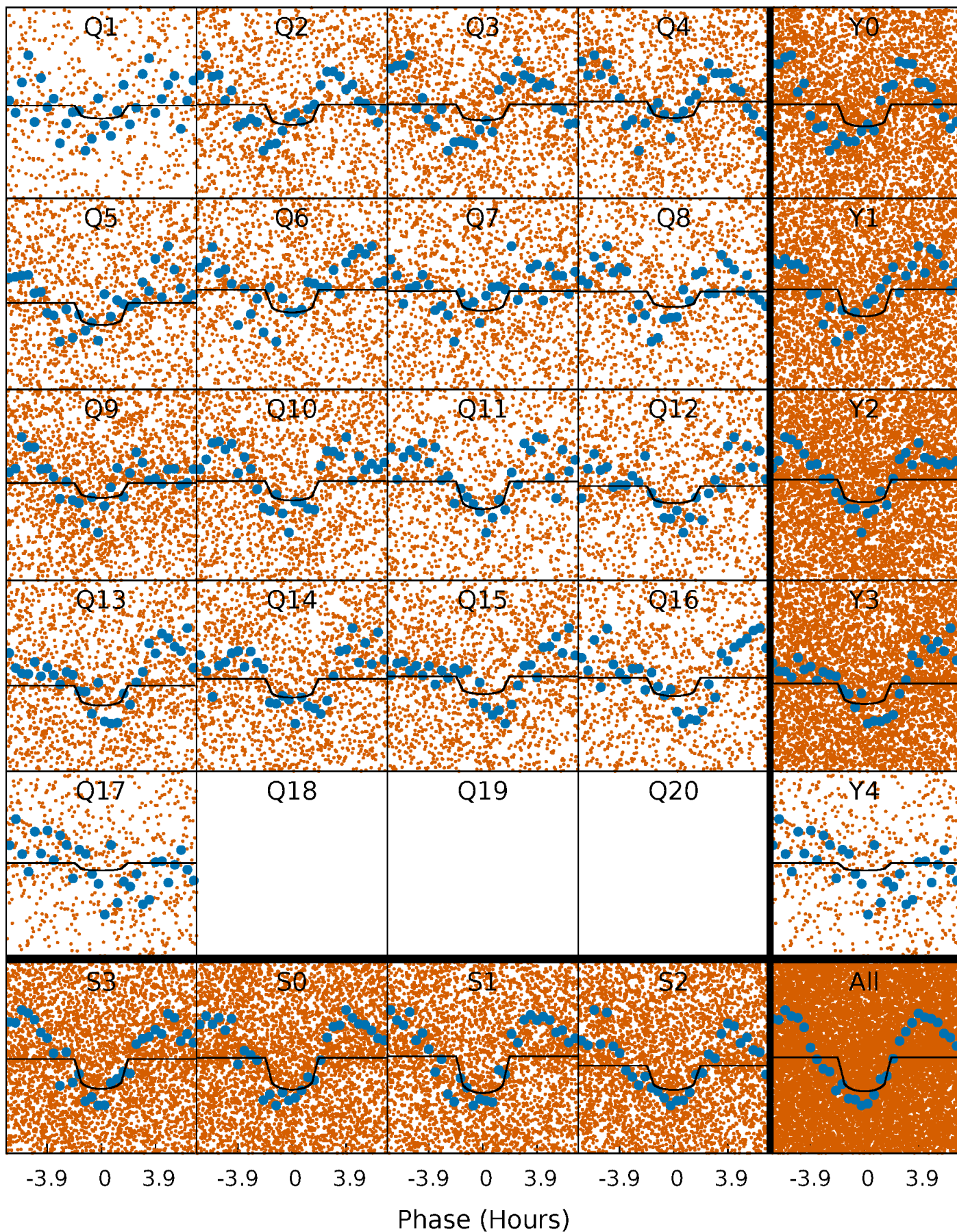
PDC Quarter-Phased Transit Curves

TCE 008446738-01 P= 0.922780 Days $T_0=132.046796$ (BKJD)



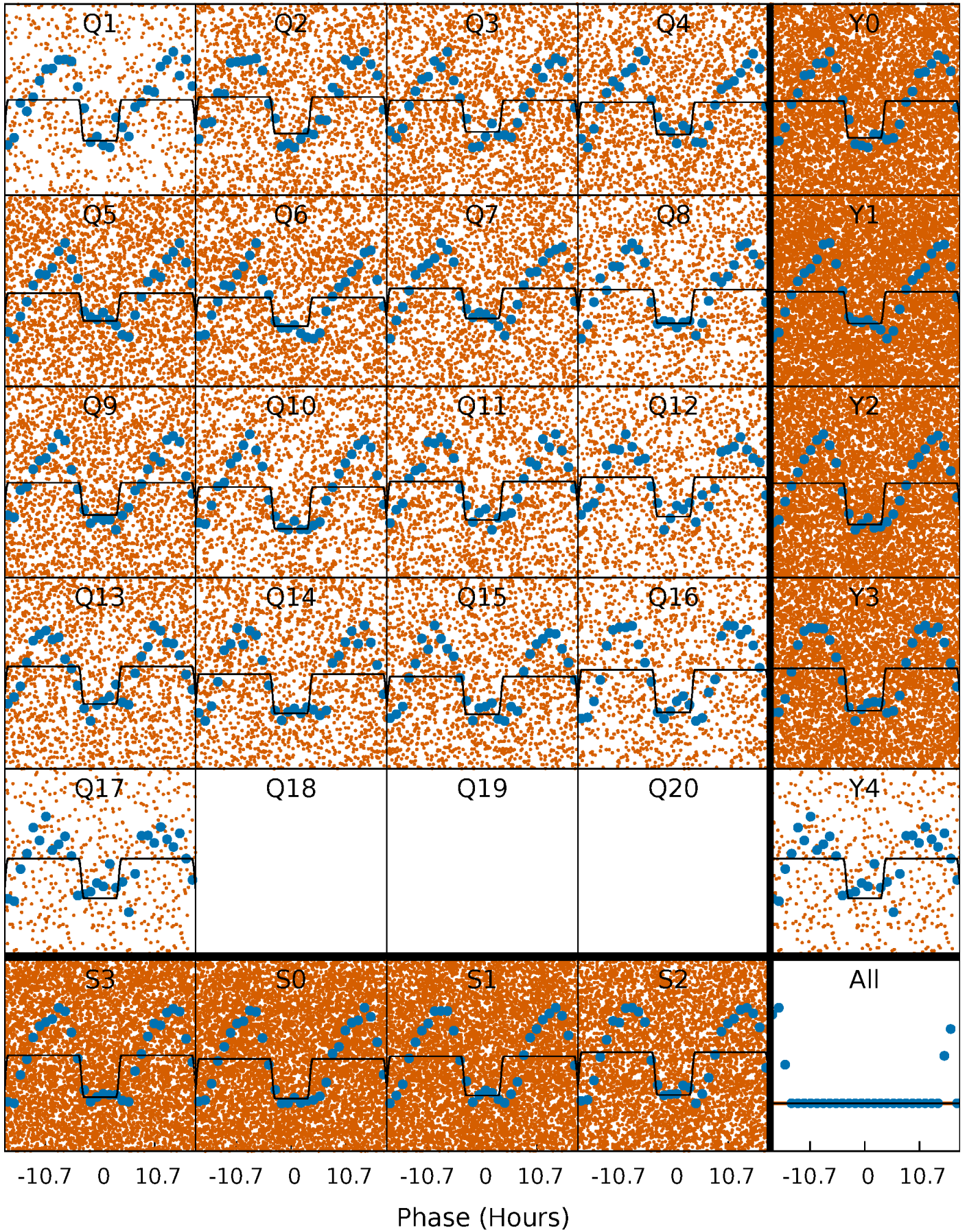
DV Quarter-Phased Transit Curves

TCE 008446738-01 P= 0.922780 Days $T_0=132.046796$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

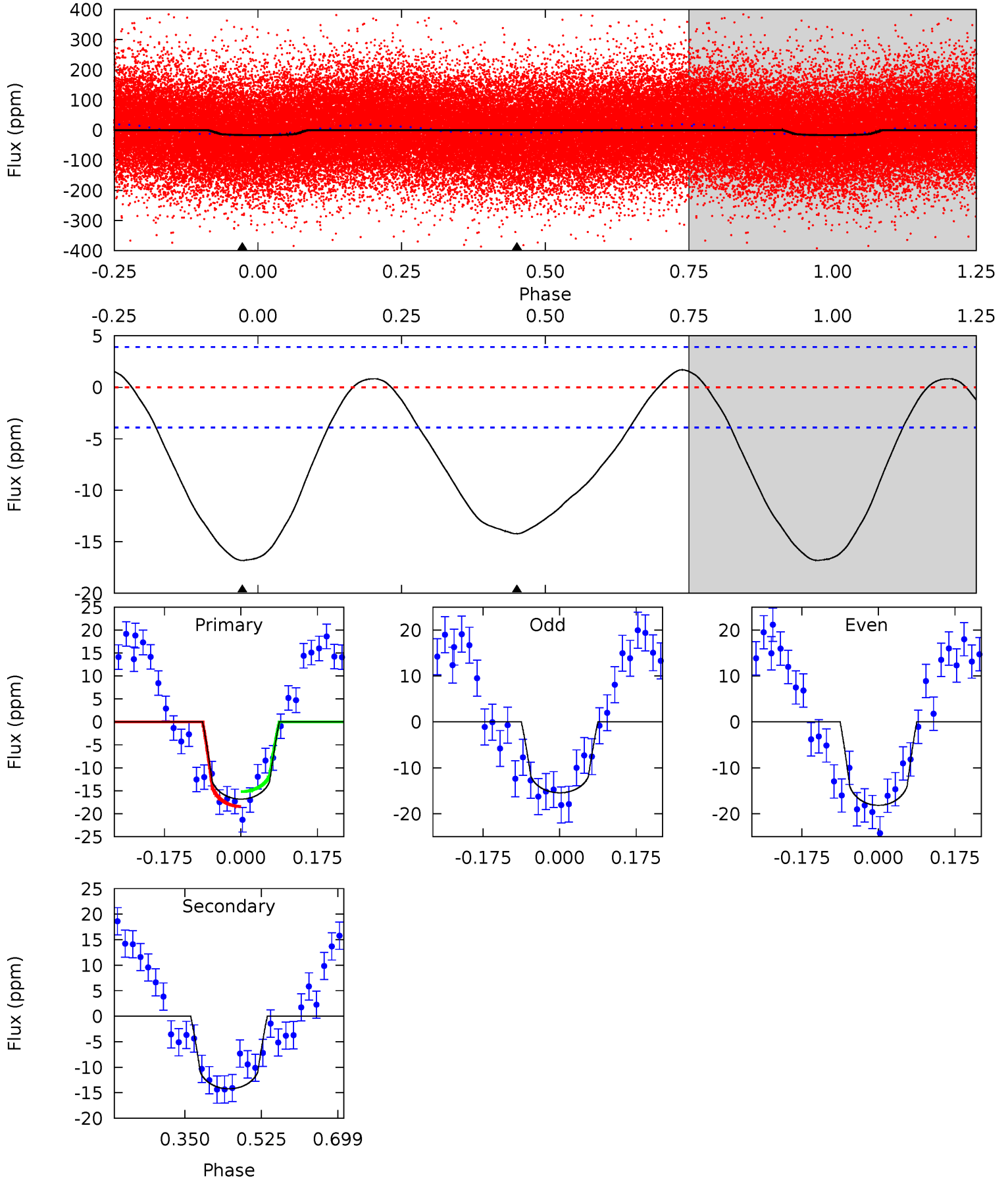
TCE 008446738-01 P= 0.922892 Days $T_0=132.052808$ (BKJD)



DV Model-Shift Uniqueness Test

008446738-01, P = 0.922780 Days, E = 131.124016 Days

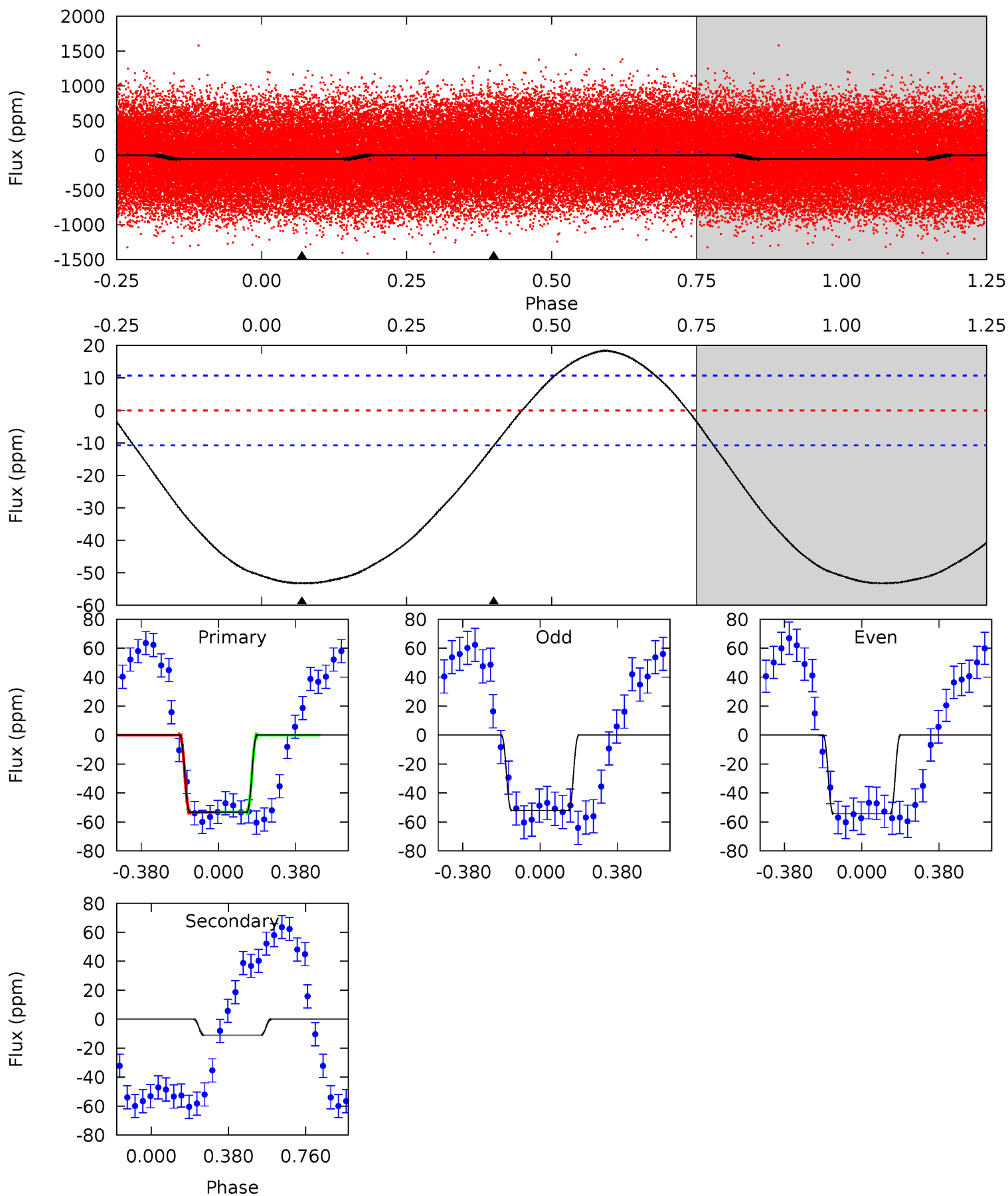
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	16.2	0	0	4.45	1.36	2.06	19.1	19.1	16.2	16.2	1.55	0.98	0.09	1.84



Alt Model-Shift Uniqueness Test

008446738-01, P = 0.922892 Days, E = 131.129916 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	4.38	0	0	4.28	0.88	2.64	21.1	21.1	4.38	4.38	0.46	1.00	0.26	0.05



Stellar Parameters For KIC 008446738

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7363^{+230}_{-307}	$3.932^{+0.301}_{-0.129}$	$-0.200^{+0.250}_{-0.350}$	$2.297^{+0.532}_{-0.797}$	$1.643^{+0.183}_{-0.340}$	$0.191^{+0.375}_{-0.086}$
	+3%/-4%	+8%/-3%	+125%/-175%	+23%/-35%	+11%/-21%	+197%/-45%
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 008446738-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 1	$0.88^{+0.20}_{-0.20}$	4587^{+322}_{-471}	7303^{+866}_{-671}	$4.840^{+2.855}_{-1.612}$
Alt.	-11 ± 3	$1.79^{+0.30}_{-0.36}$	4563^{+335}_{-426}	4572^{+389}_{-452}	$0.901^{+0.520}_{-0.279}$

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 $A_{\text{obs}} \gg 1.0$

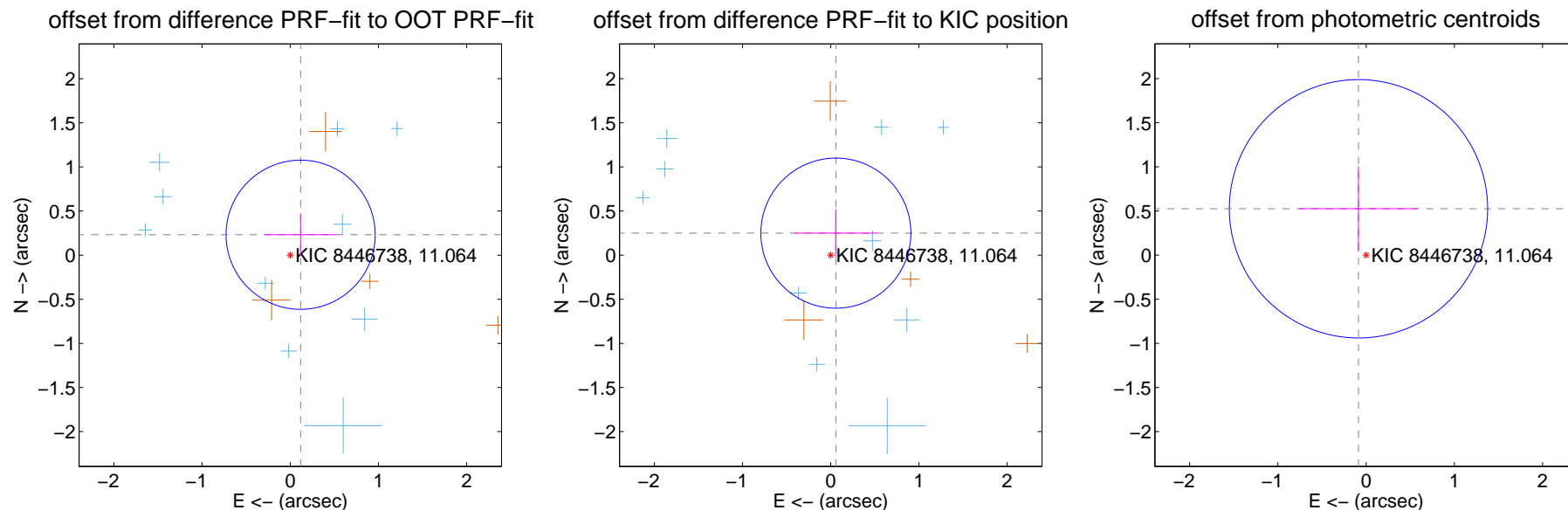
DV Centroid Data

Supplemental centroid analysis for 008446738-01. **Kepler magnitude: 11.06.** Transit SNR 12.42

There are 12 quarters with good PRF difference image offsets

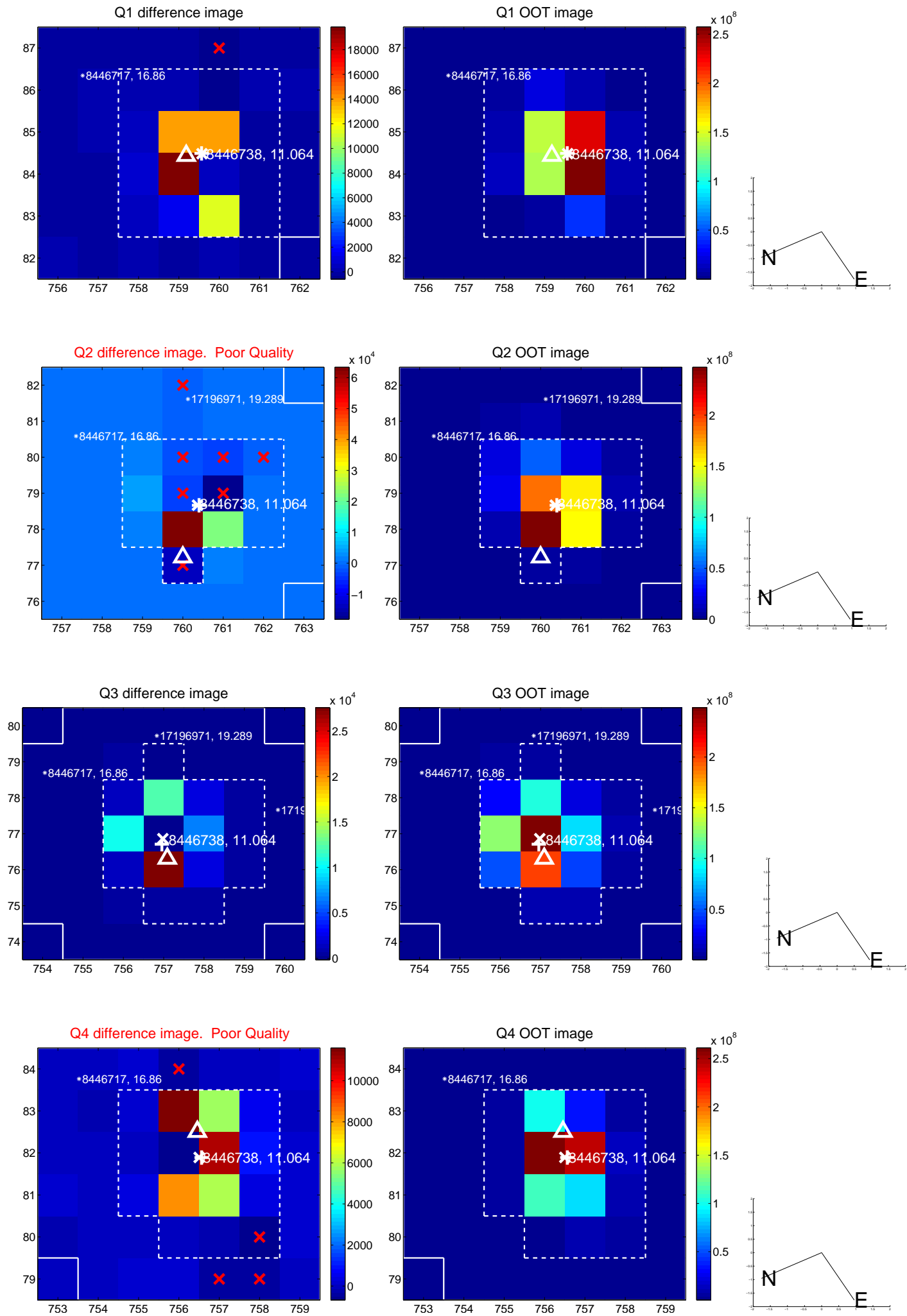
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.259 ± 0.282	0.92	-0.117 ± 0.407	0.231 ± 0.239
PRF-fit source offset from KIC position	0.256 ± 0.284	0.90	-0.058 ± 0.467	0.249 ± 0.270
photometric centroid source offset	0.53 ± 0.49	1.09	0.09 ± 0.67	0.52 ± 0.48

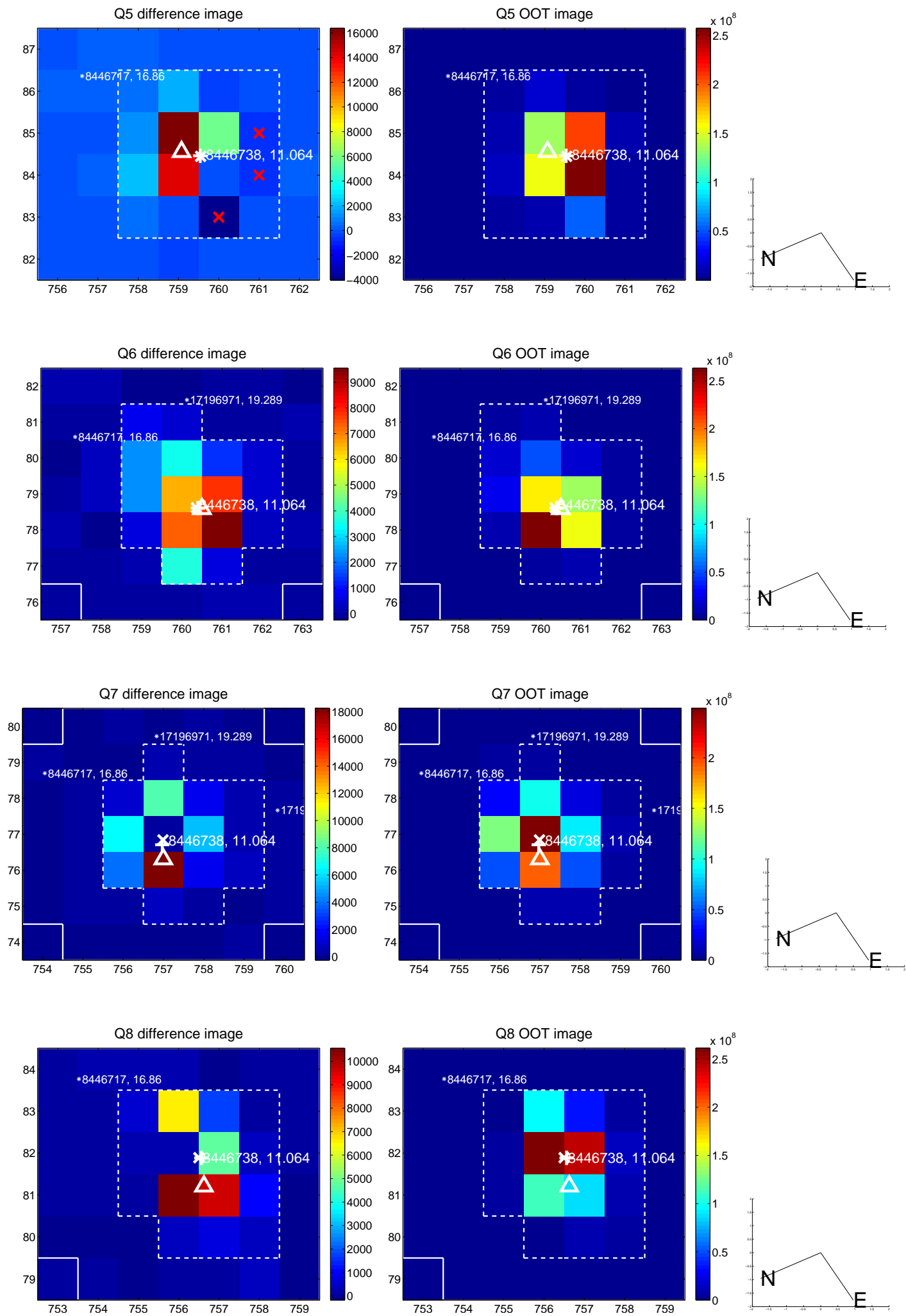


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

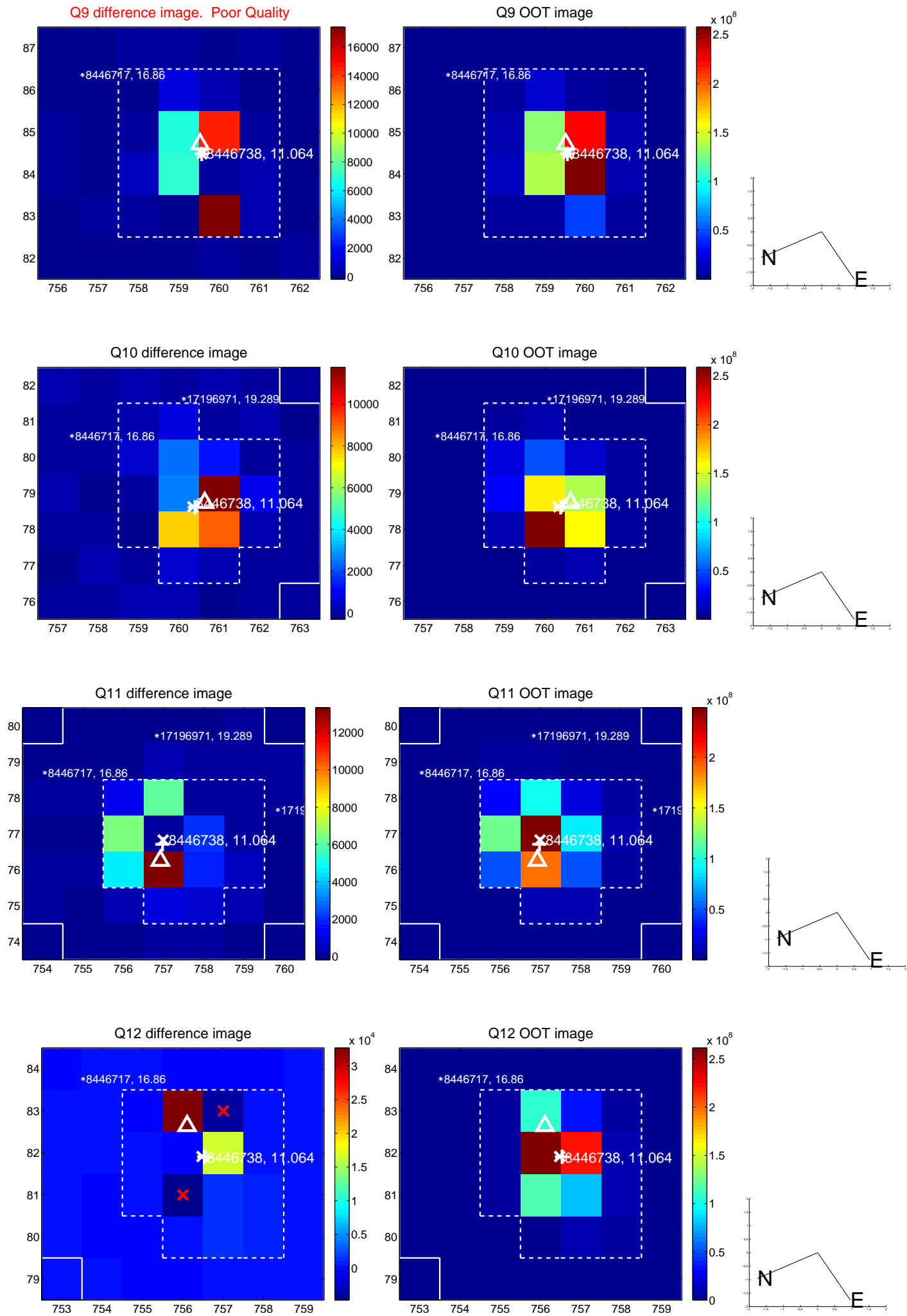
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



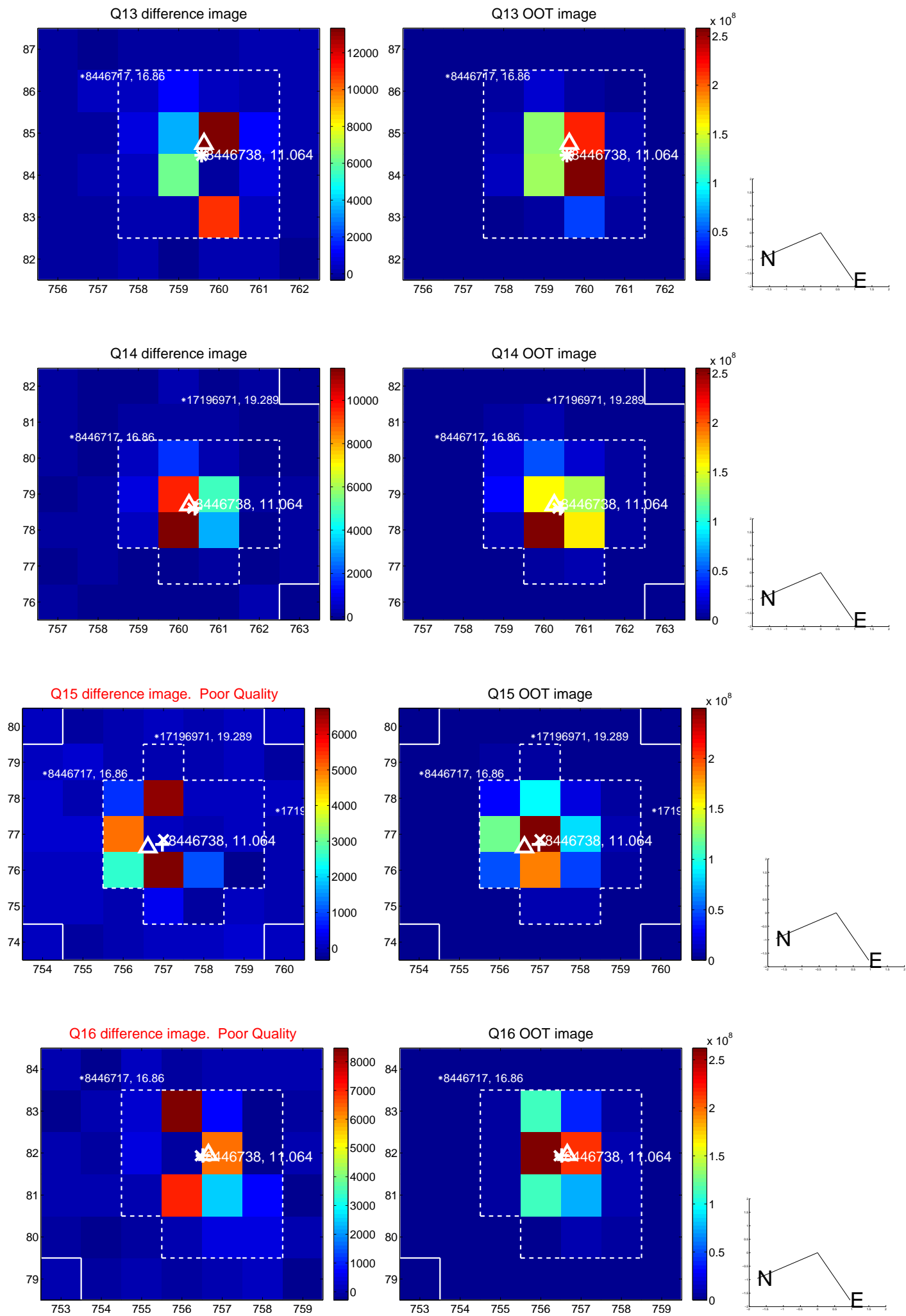
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



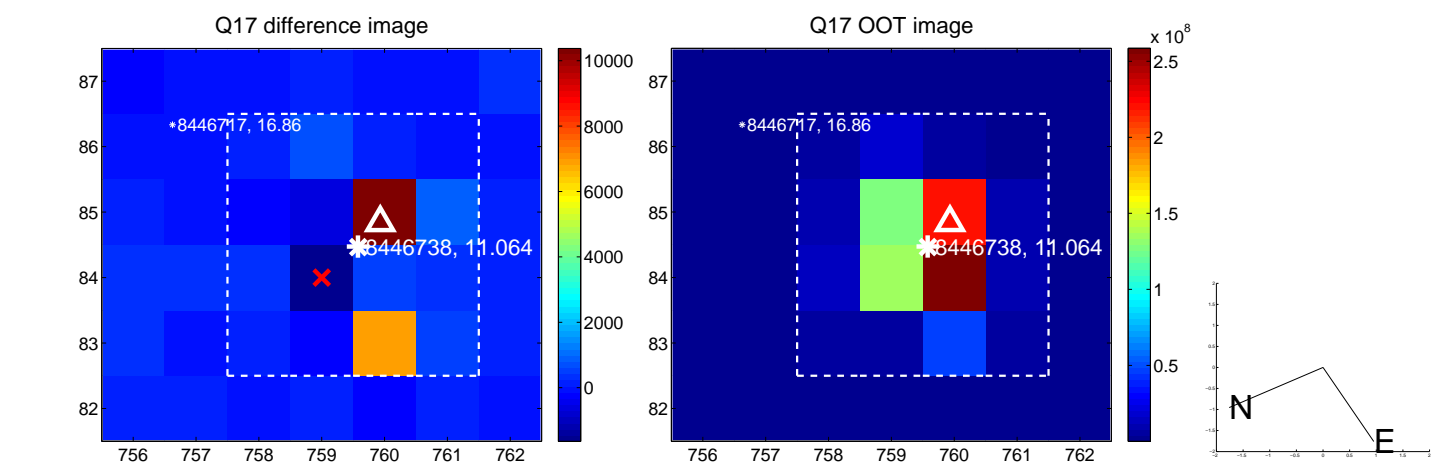
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



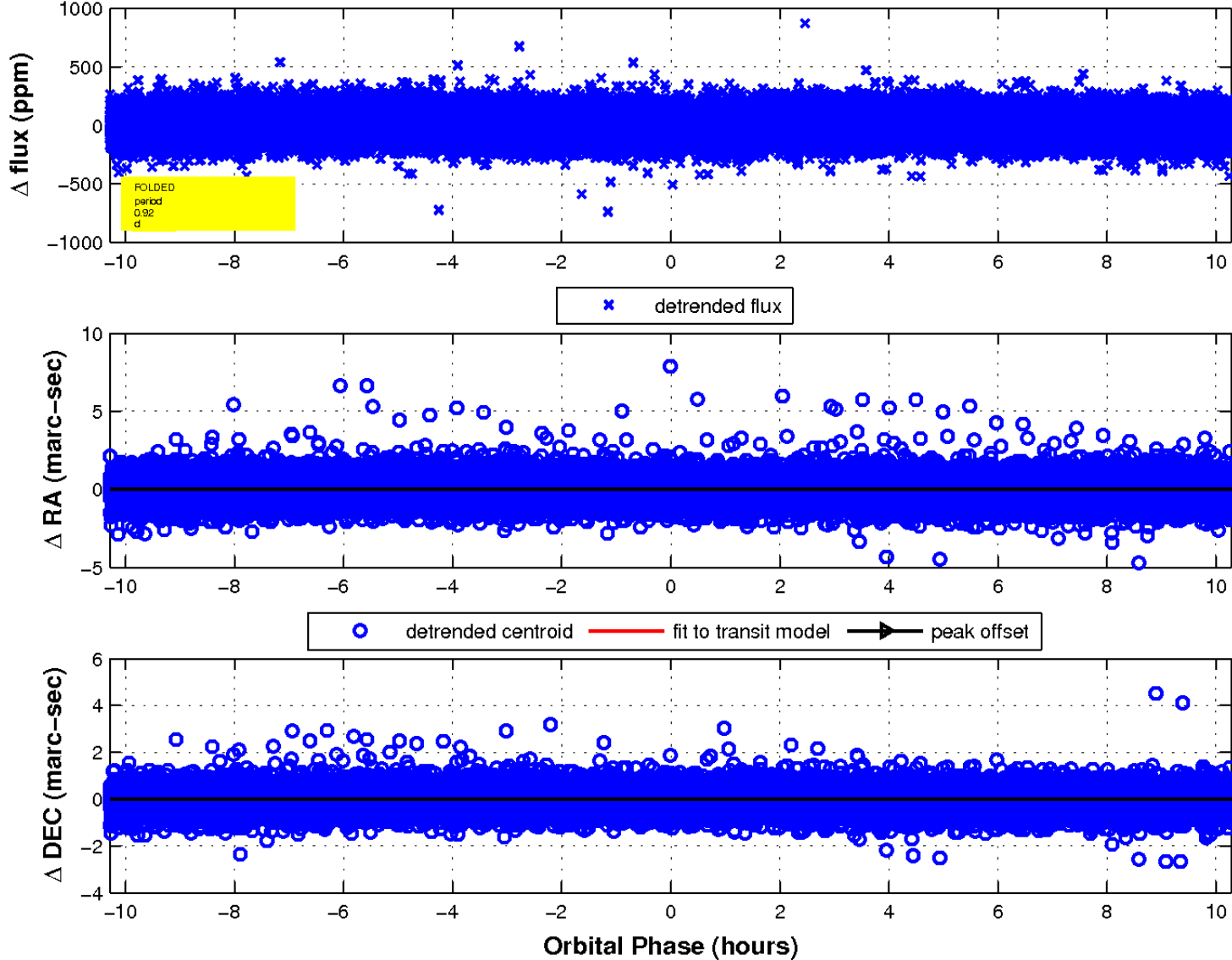
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

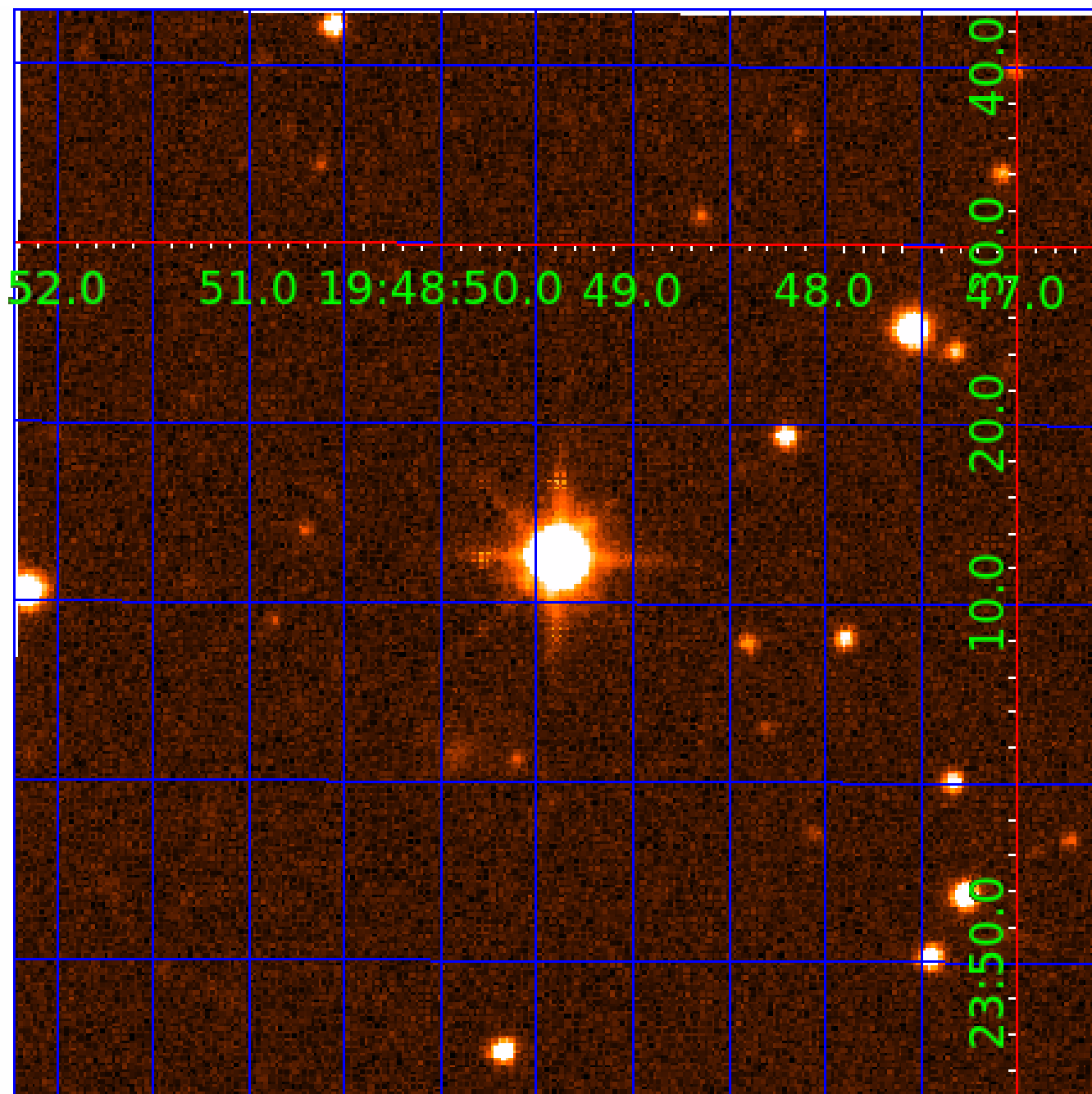


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008446738

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})
008446738-01	OBS	No	0.922780	132.046797	13.6	3.429	17.2	12.4	2.30	7363	0.92	28957.21
008446738-02	OBS	No	0.872726	131.902614	26.4	1.352	11.0	12.6	2.30	7363	1.38	31192.51
008446738-03	OBS	No	0.872750	132.263361	31.2	1.484	8.2	15.7	2.30	7363	1.51	31191.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008446738-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008446738-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008446738-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

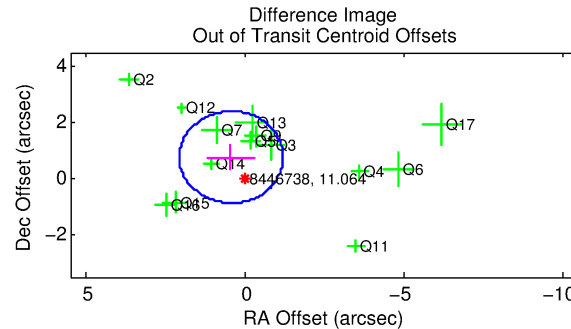
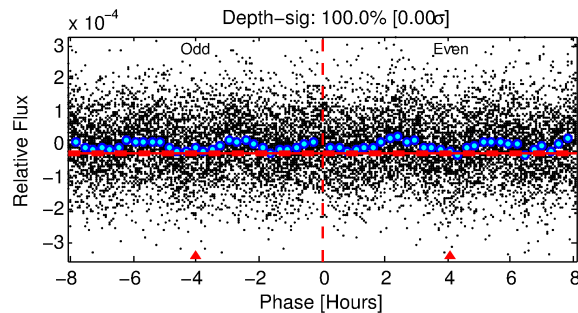
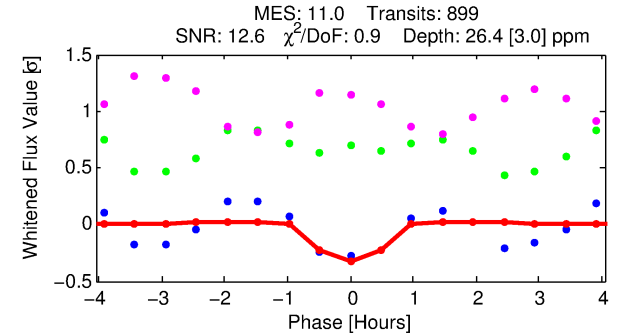
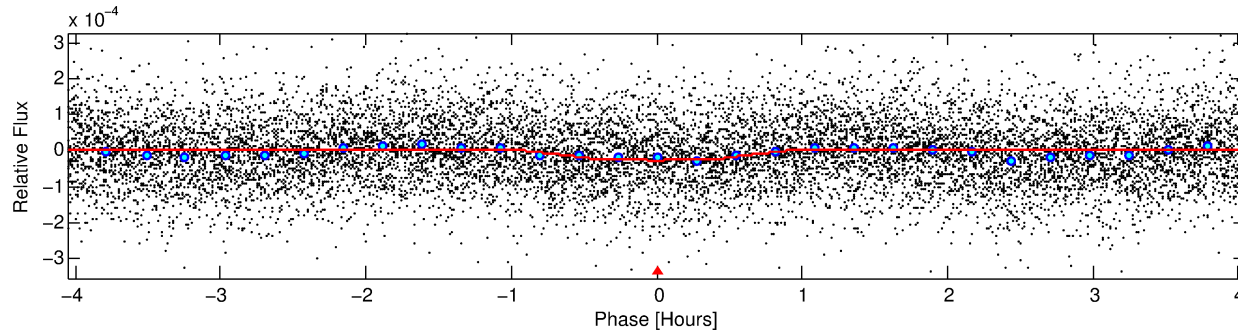
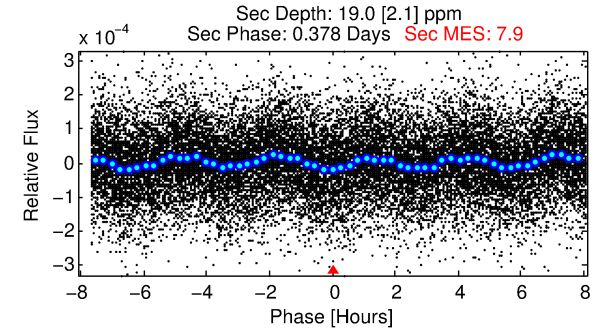
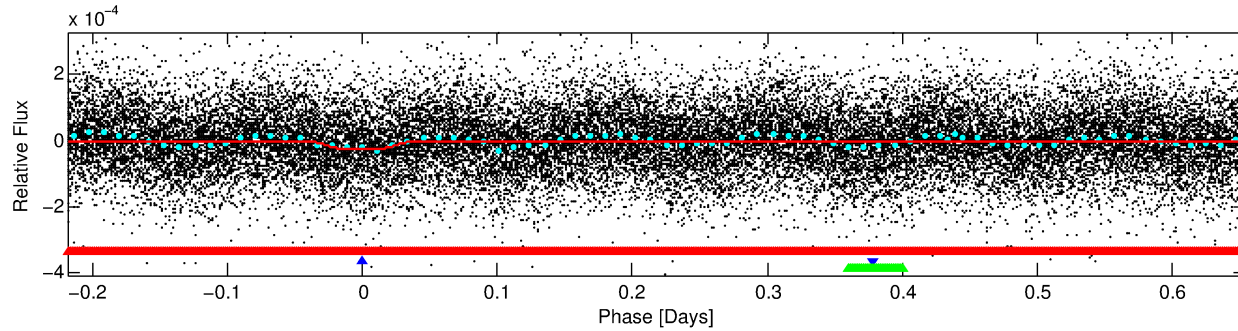
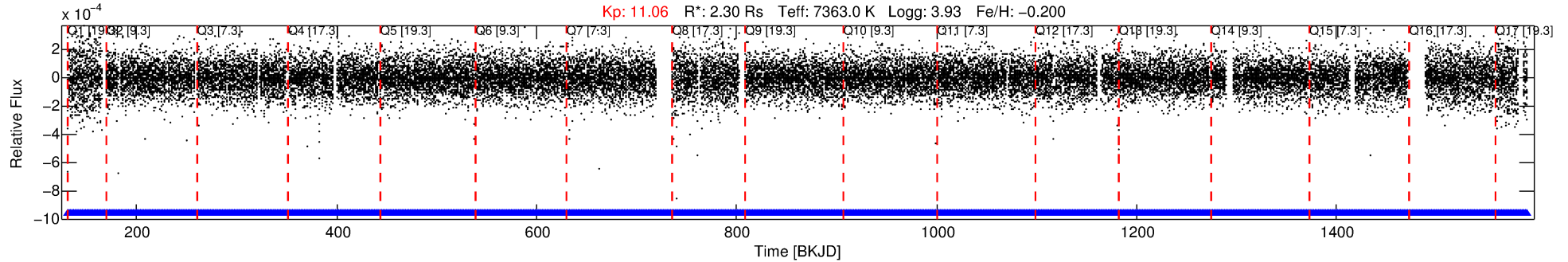
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008446738-02

No Significant Match Found

DV One-Page Summary

KIC: 8446738 Candidate: 2 of 3 Period: 0.873 d



DV Fit Results:

Period = 0.87273 [0.00001] d
Epoch = 131.9026 [0.0018] BKJD
Rp/R* = 0.0055 [0.0011]
a/R* = 2.42 [2.14]
b = 0.90 [0.23]
Seff = 31192.51 [16936.55]
Teq = 3389 [460] K
Rp = 1.38 [0.55] Re
a = 0.0211 [0.0069] AU
Ag = 2.43 [1.59] [0.90σ]
Teffp = 6542 [707] K [3.74σ]

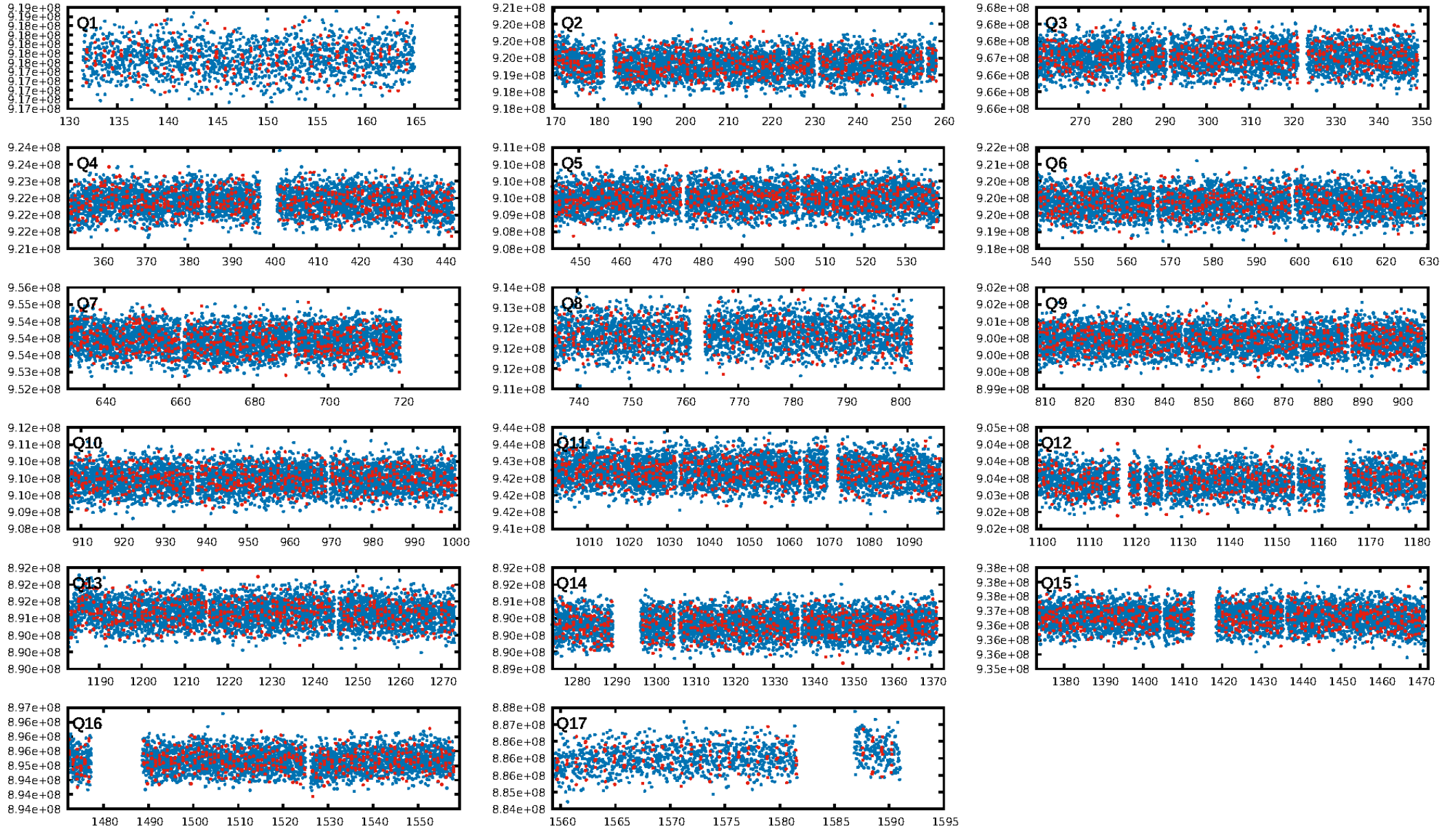
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.85e-25
RollingBand-fgt: 1.00 [861/861]
GhostDiagnostic-chr: 1.414
Centroid-sig: 57.3%
Centroid-so: 0.223 arcsec [0.57σ]
OotOffset-rm: 0.883 arcsec [1.62σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-rm: 1.091 arcsec [1.92σ]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [17/17]

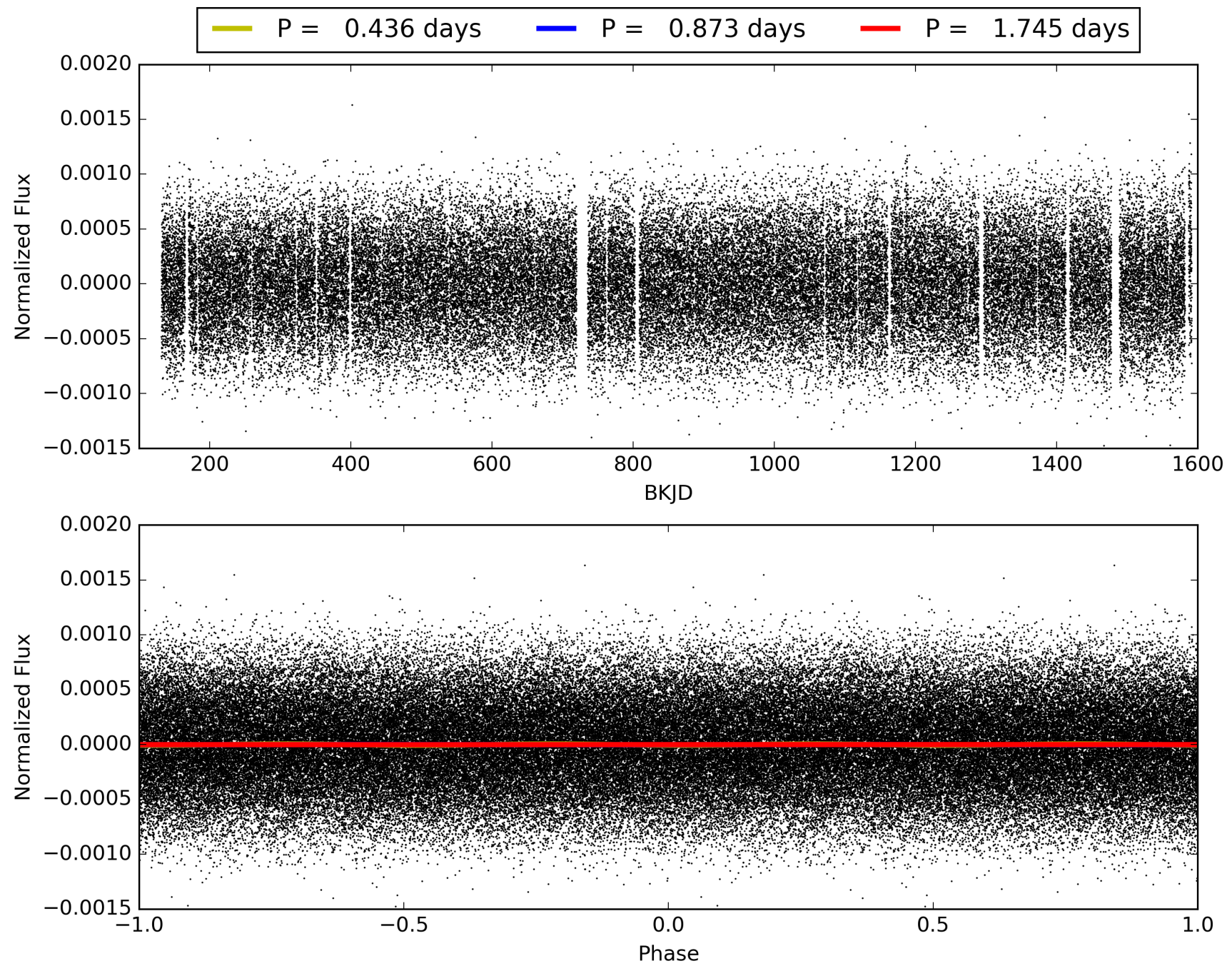
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:49:21 Z

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

TCE 008446738-02, PDC Light Curves

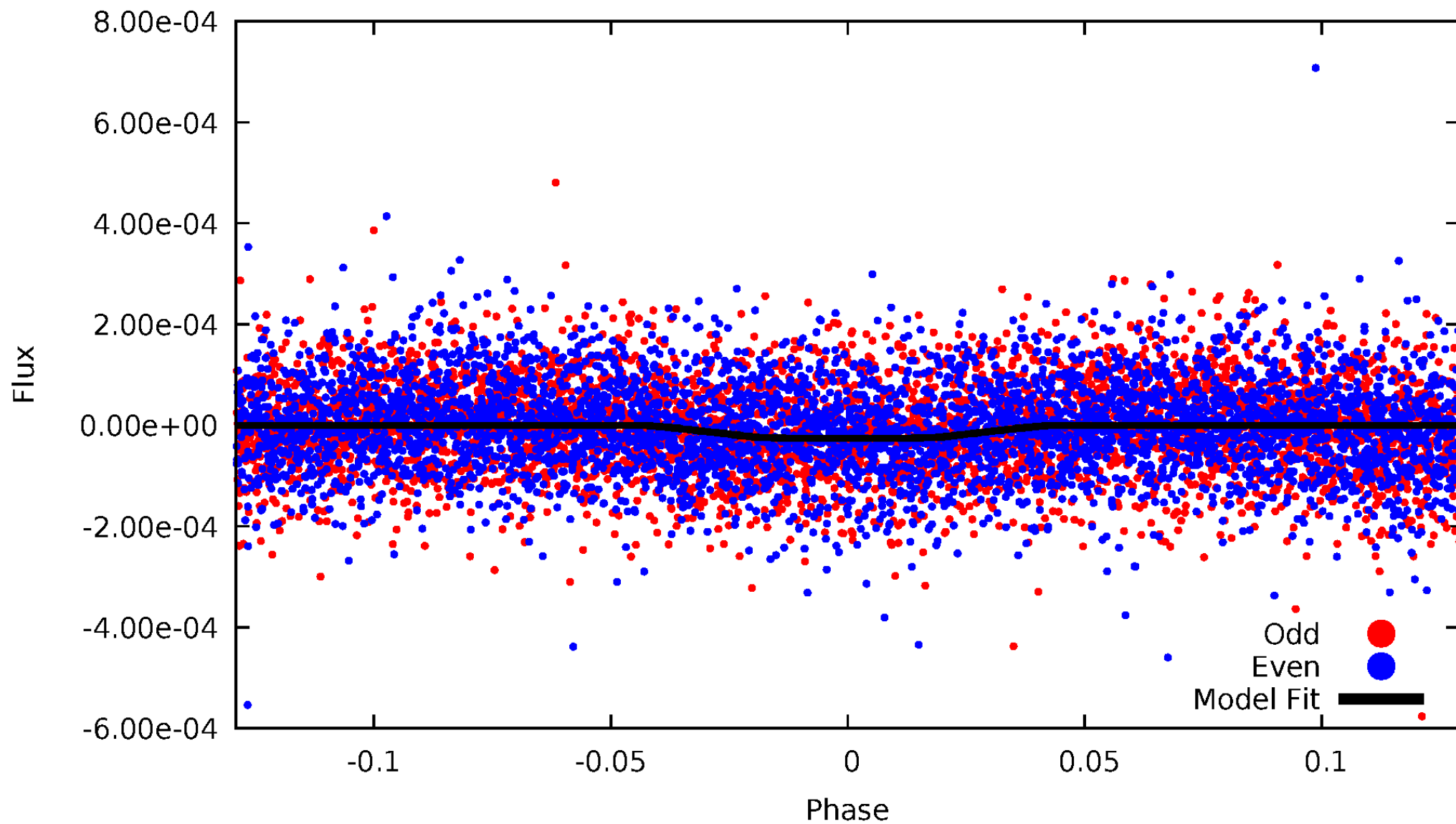


TCE 008446738-02



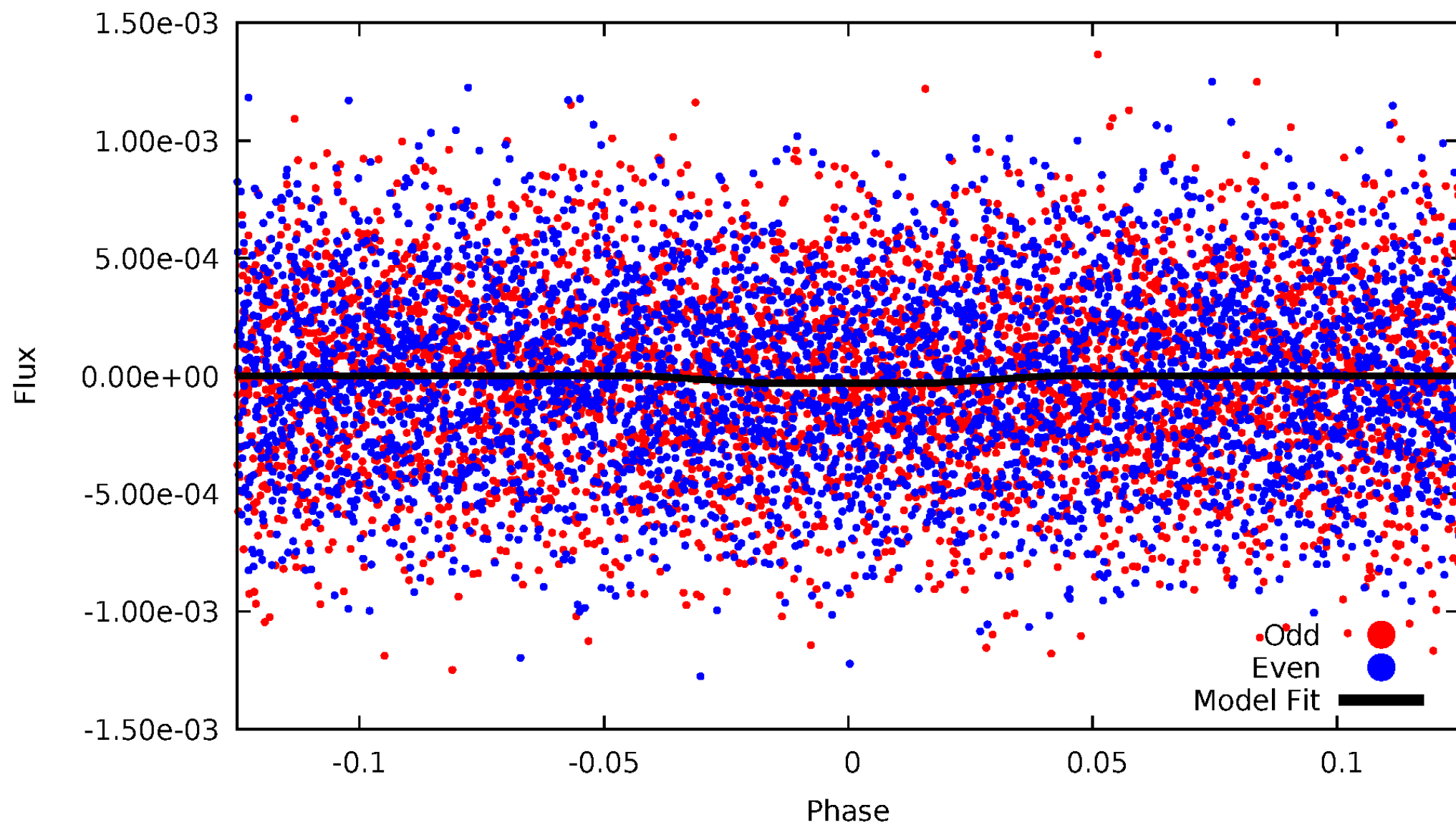
DV Odd/Even

TCE 008446738-02



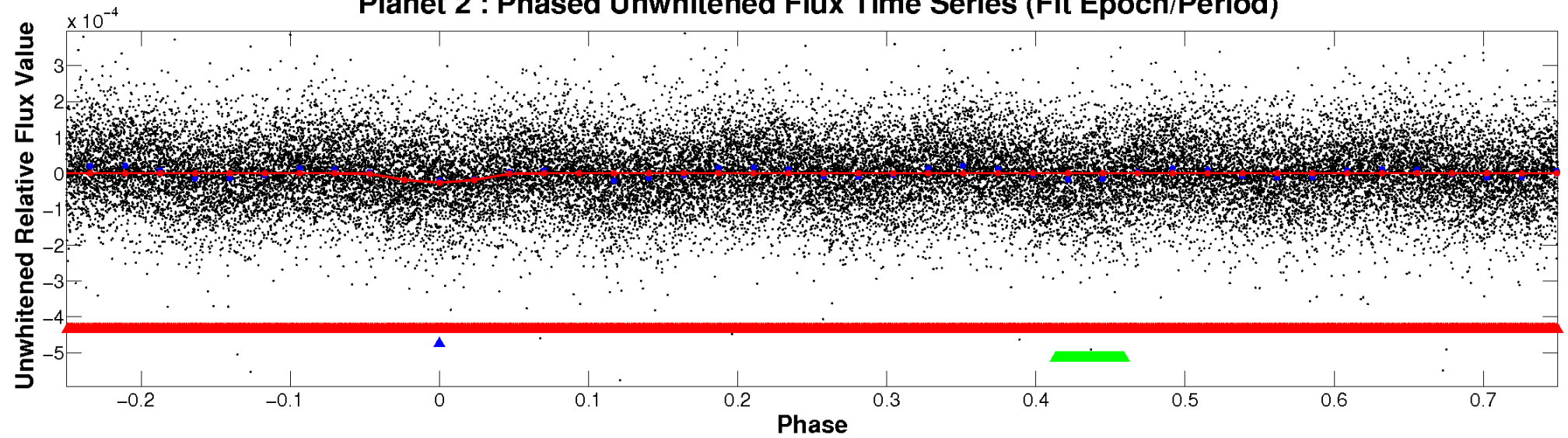
ALT Odd/Even

TCE 008446738-02

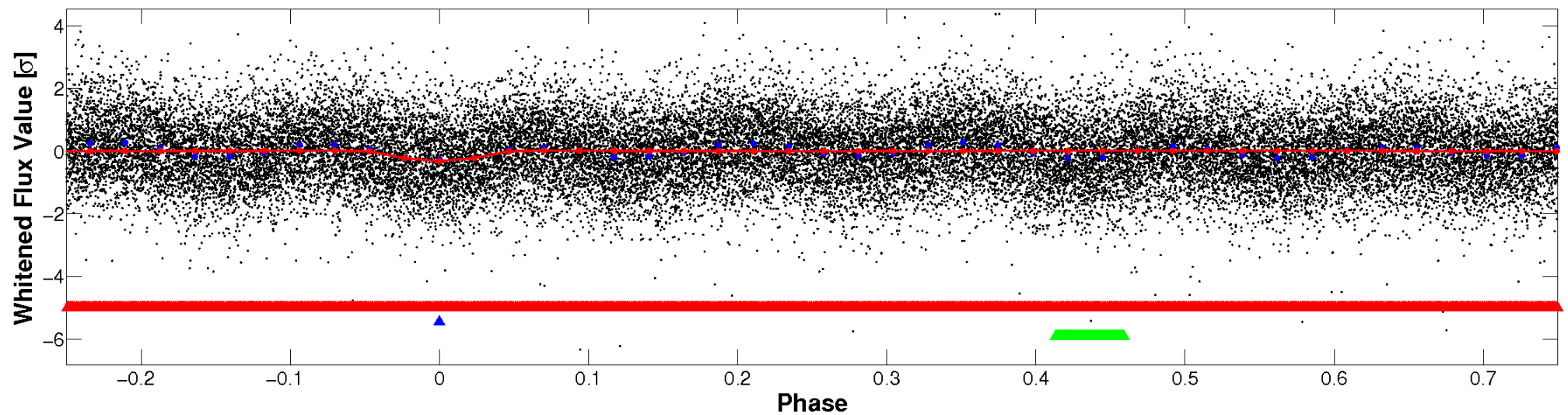


Non-Whitened Vs. Whitened Light Curve

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

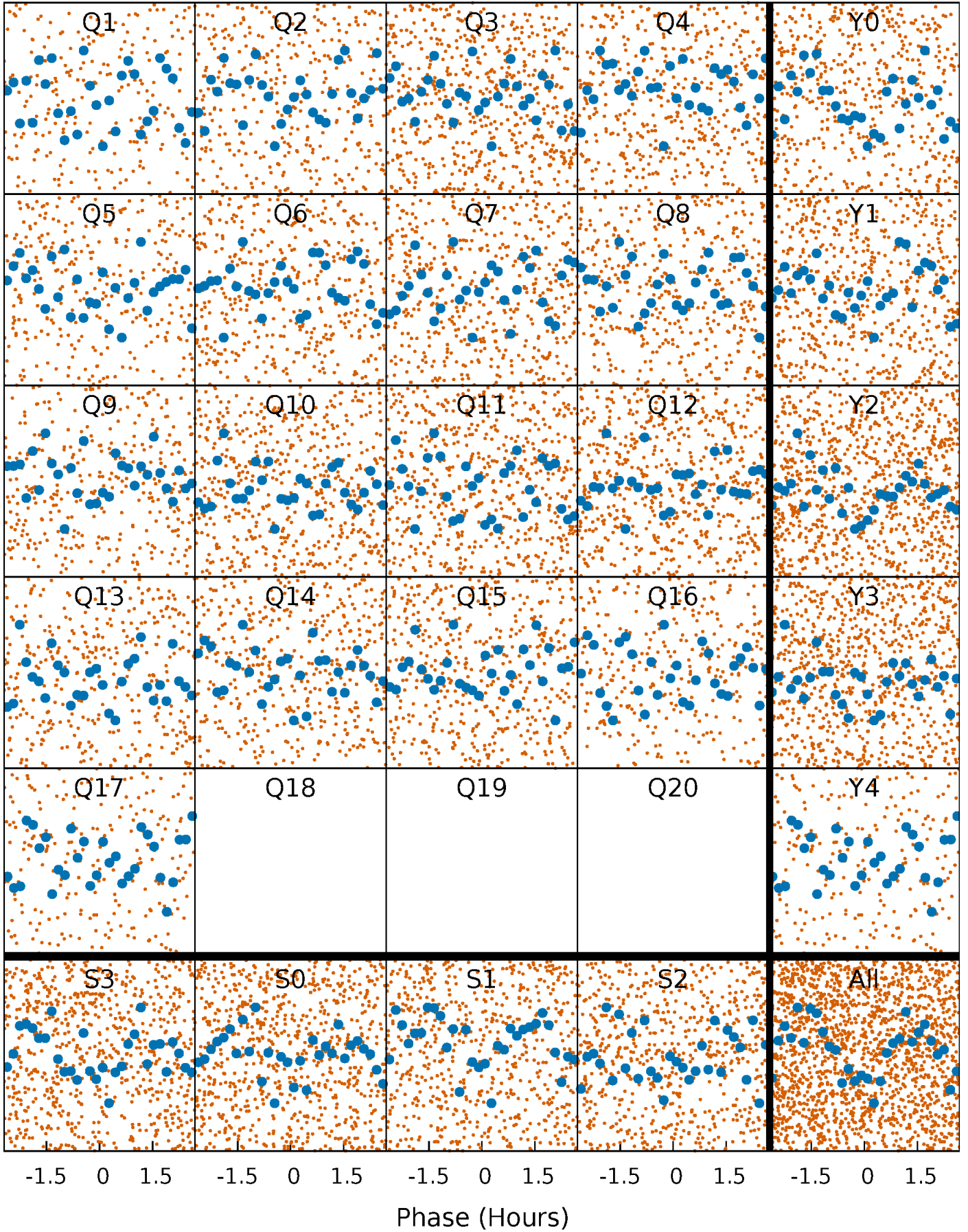


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



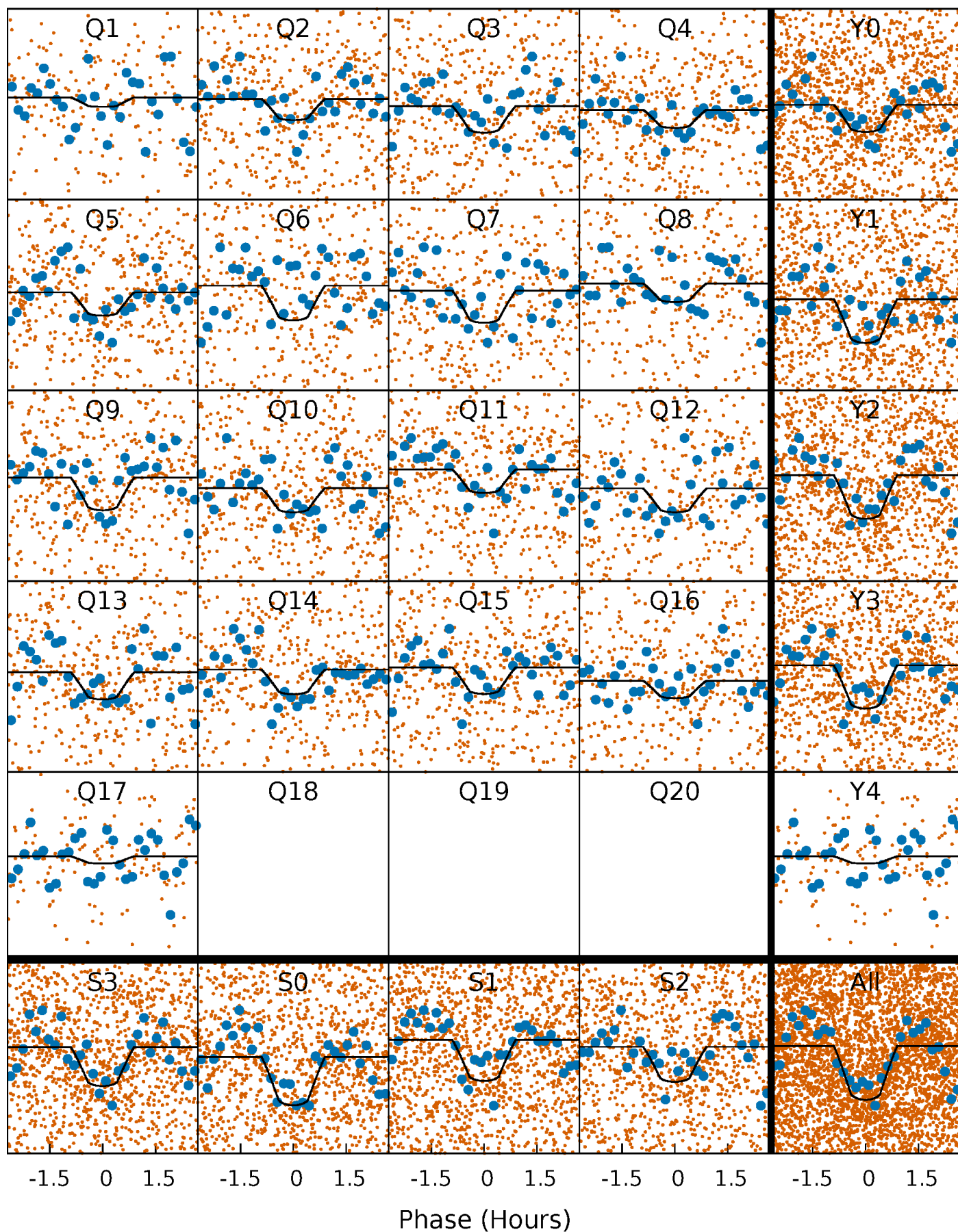
PDC Quarter-Phased Transit Curves

TCE 008446738-02 P= 0.872726 Days $T_0=131.902614$ (BKJD)



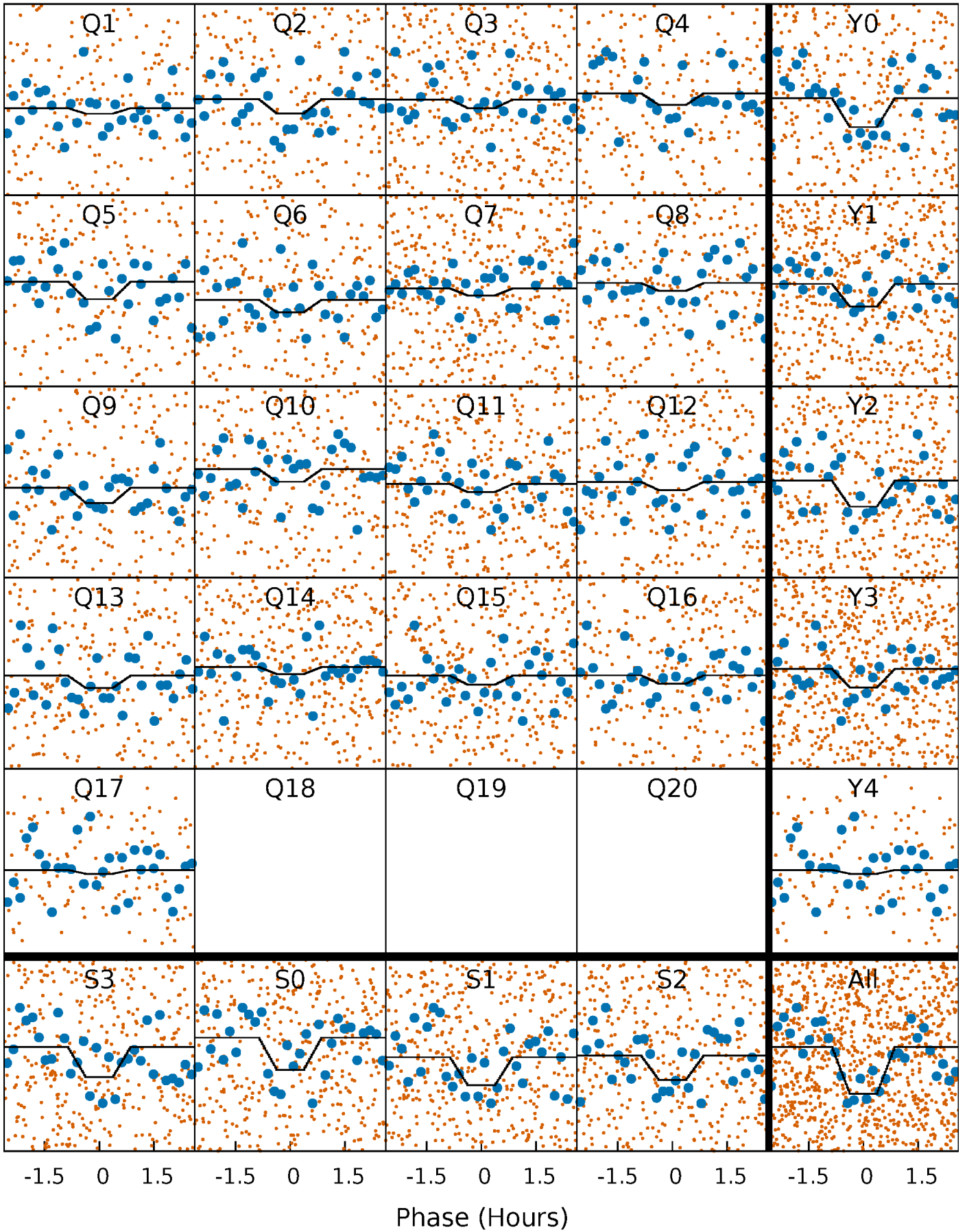
DV Quarter-Phased Transit Curves

TCE 008446738-02 P= 0.872726 Days $T_0=131.902614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

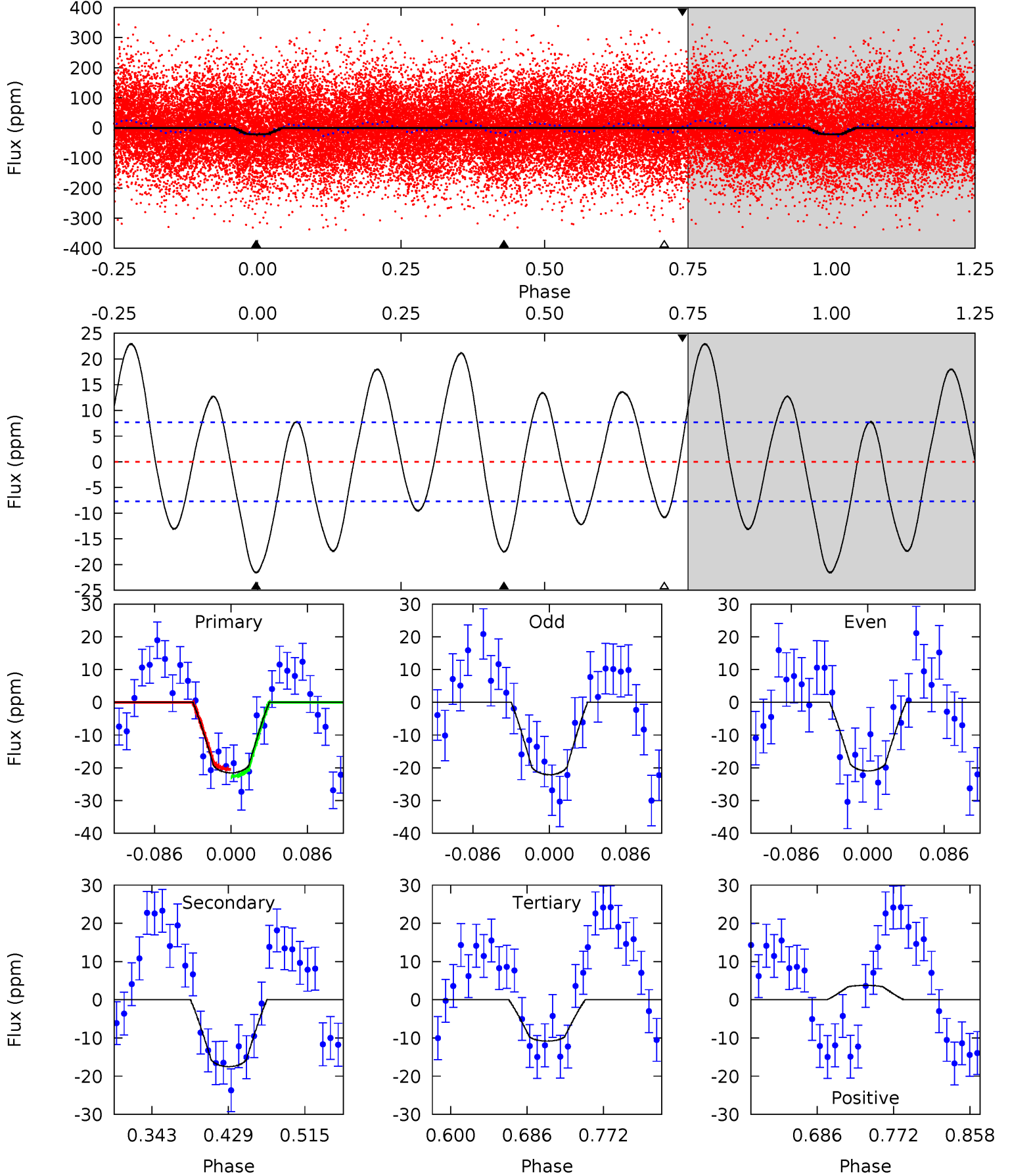
TCE 008446738-02 P= 0.872723 Days $T_0=131.902566$ (BKJD)



DV Model-Shift Uniqueness Test

008446738-02, P = 0.872726 Days, E = 131.029888 Days

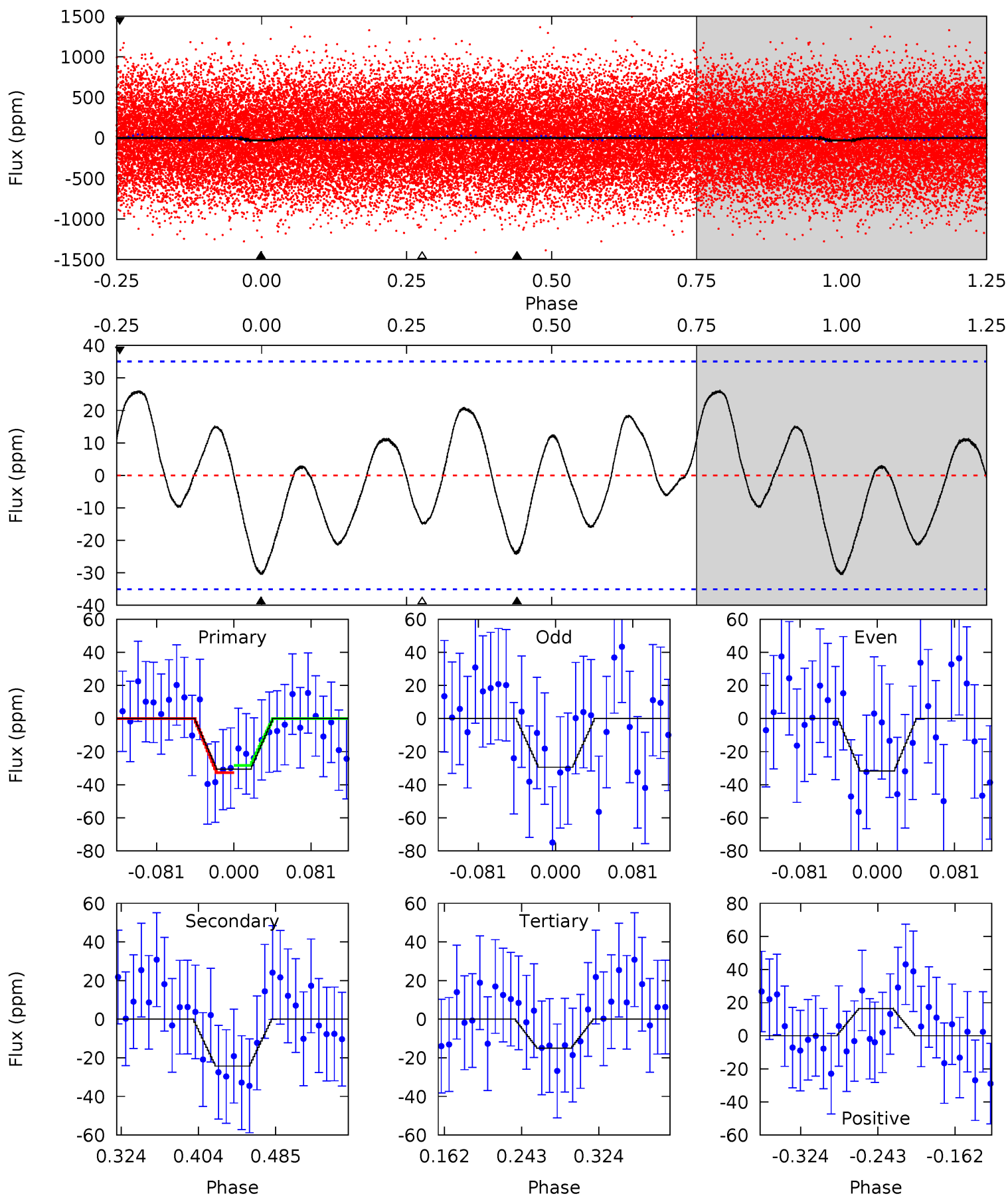
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	10.5	6.47	2.25	4.60	1.72	6.35	6.42	10.6	4.01	8.23	0.34	0.99	0.52	0.63



Alt Model-Shift Uniqueness Test

008446738-02, P = 0.872723 Days, E = 131.029843 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.02	3.19	1.97	2.15	4.61	1.75	1.60	2.05	1.87	1.22	1.04	0.15	0.80	0.46	0.29



Stellar Parameters For KIC 008446738

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7363^{+230}_{-307}	$3.932^{+0.301}_{-0.129}$	$-0.200^{+0.250}_{-0.350}$	$2.297^{+0.532}_{-0.797}$	$1.643^{+0.183}_{-0.340}$	$0.191^{+0.375}_{-0.086}$
	+3%/-4%	+8%/-3%	+125%/-175%	+23%/-35%	+11%/-21%	+197%/-45%
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 008446738-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 2	$1.31^{+0.34}_{-0.34}$	4639^{+359}_{-410}	6140^{+863}_{-642}	$2.472^{+1.868}_{-0.935}$
Alt.	-24 ± 8	$1.31^{+0.34}_{-0.32}$	4643^{+350}_{-440}	6678^{+1121}_{-944}	$3.358^{+2.845}_{-1.551}$

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 $A_{\text{obs}} \gg 1.0$

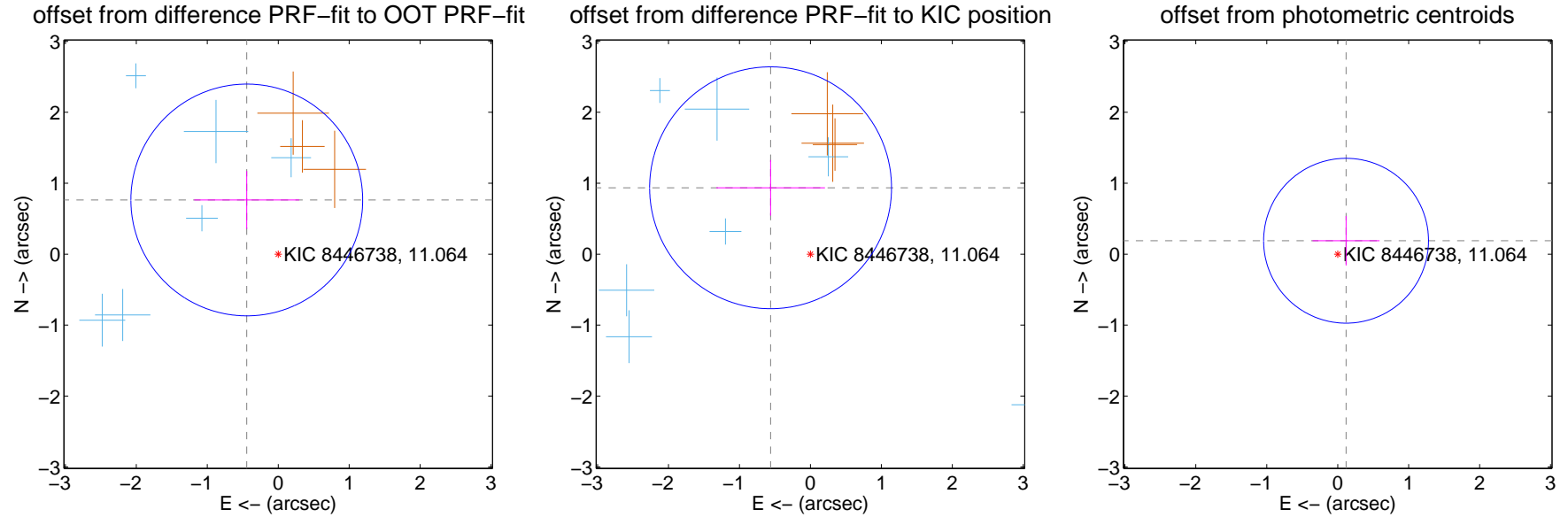
DV Centroid Data

Supplemental centroid analysis for 008446738-02. **Kepler magnitude: 11.06.** Transit SNR 12.64

There are 8 quarters with good PRF difference image offsets

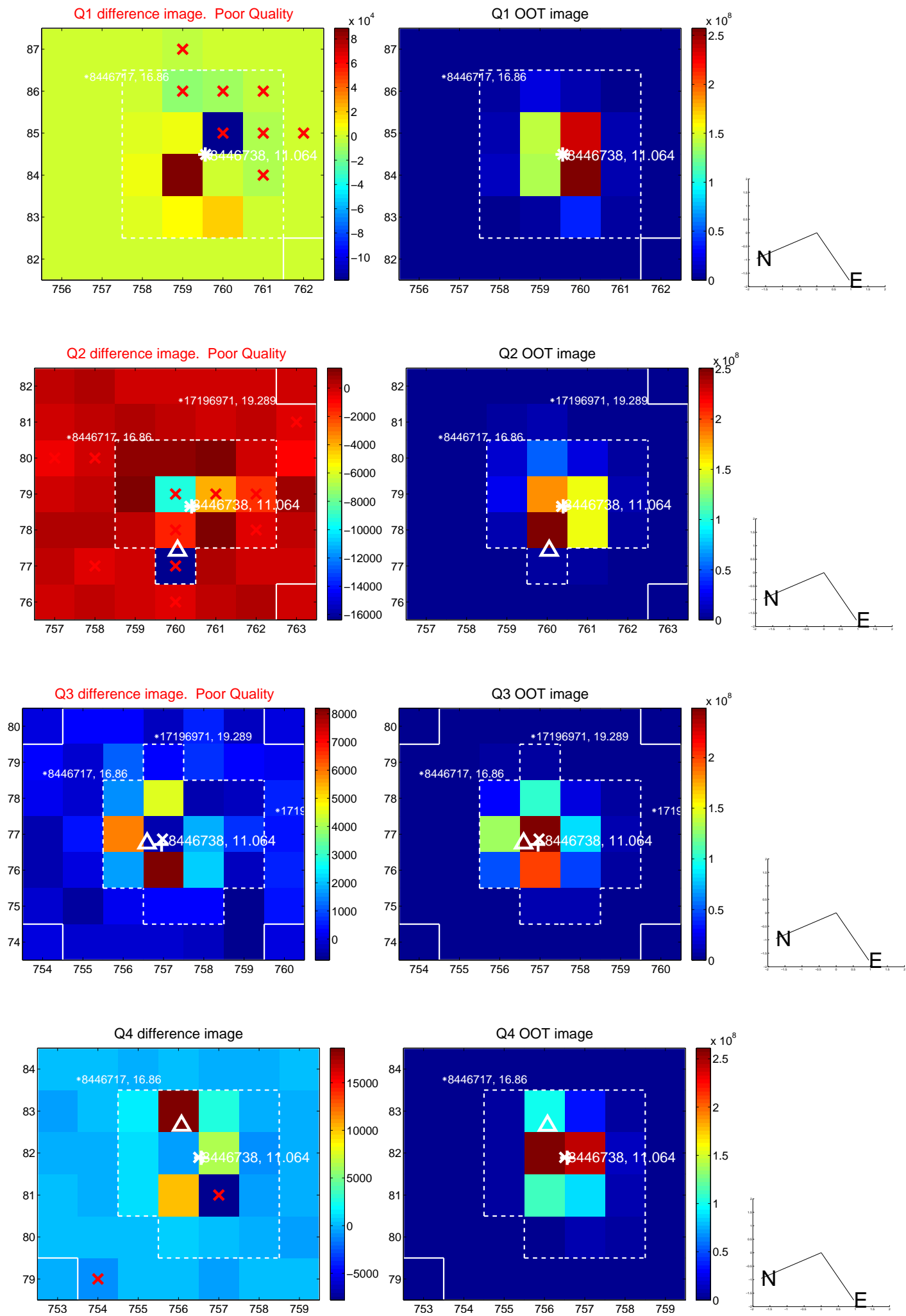
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.883 ± 0.545	1.62	0.443 ± 0.740	0.764 ± 0.407
PRF-fit source offset from KIC position	1.091 ± 0.568	1.92	0.561 ± 0.766	0.936 ± 0.392
photometric centroid source offset	0.22 ± 0.39	0.57	-0.12 ± 0.47	0.19 ± 0.35

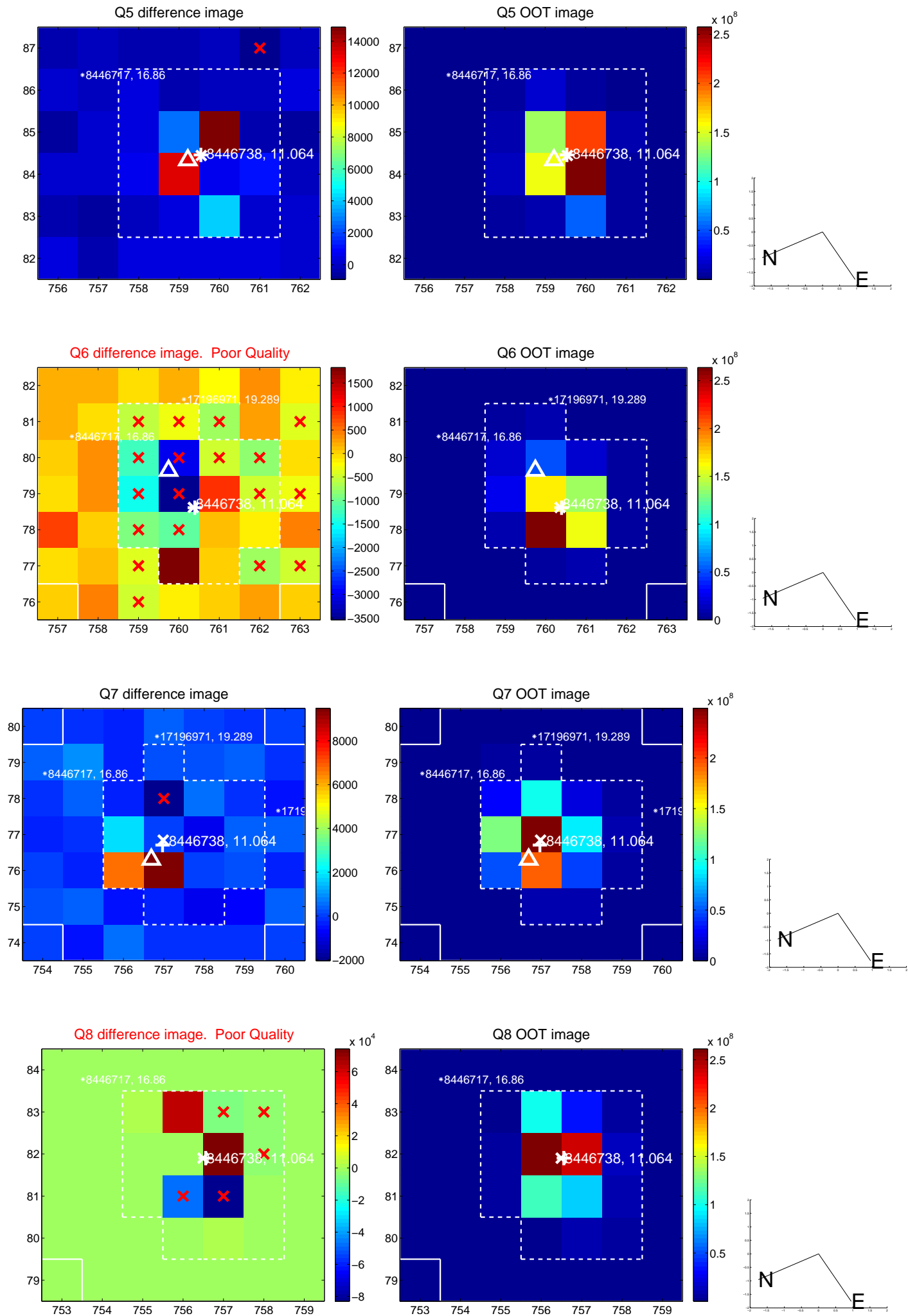


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

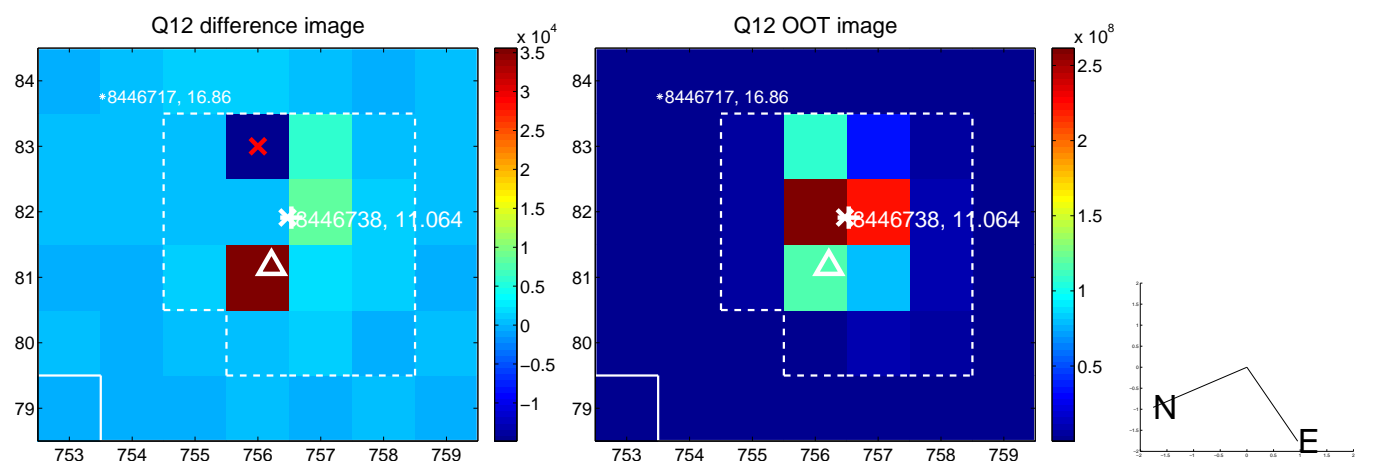
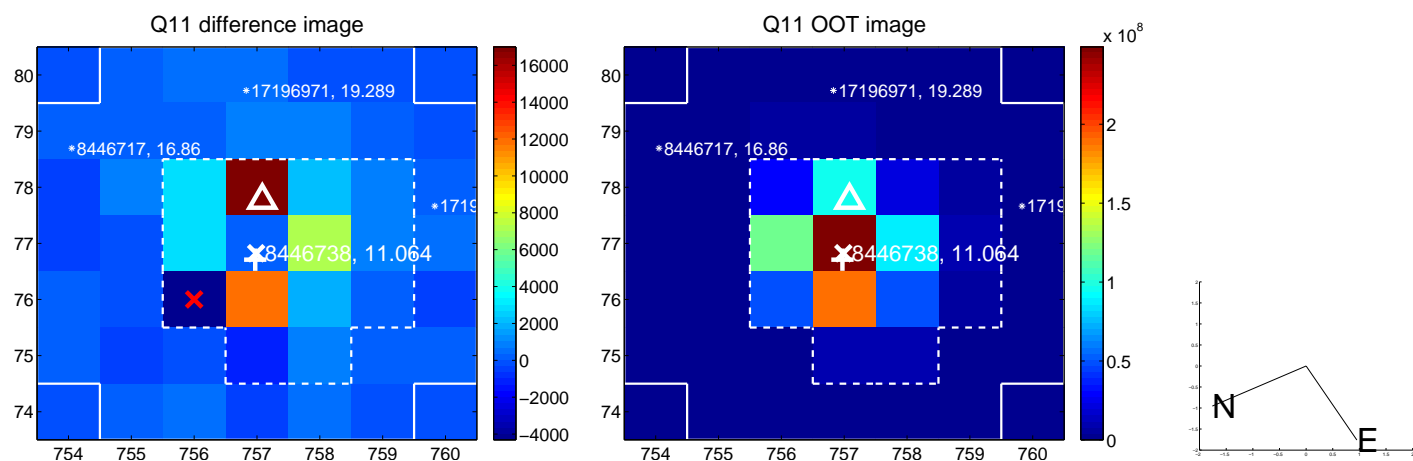
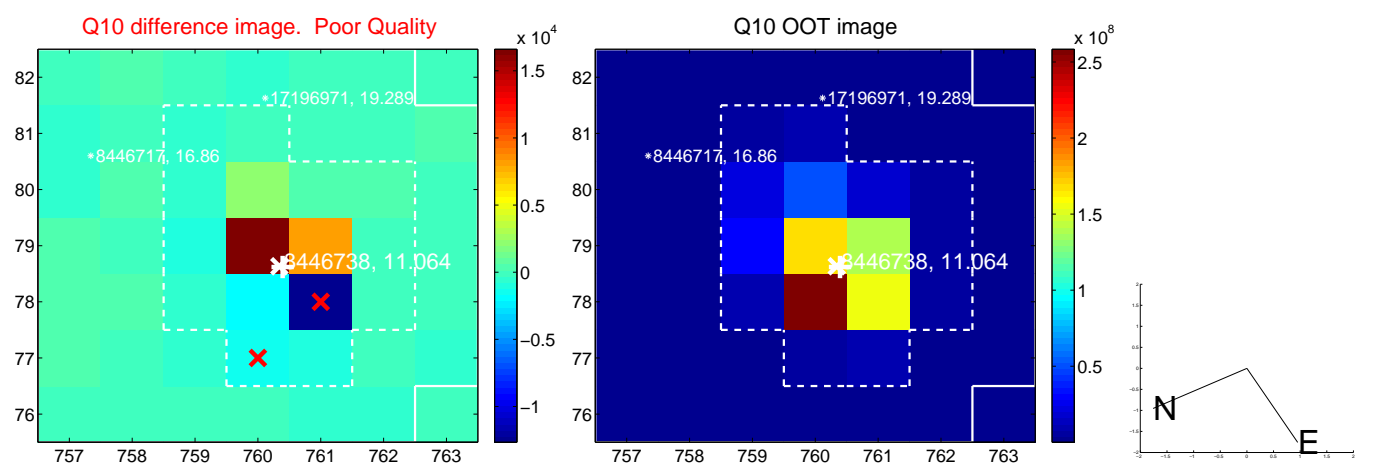
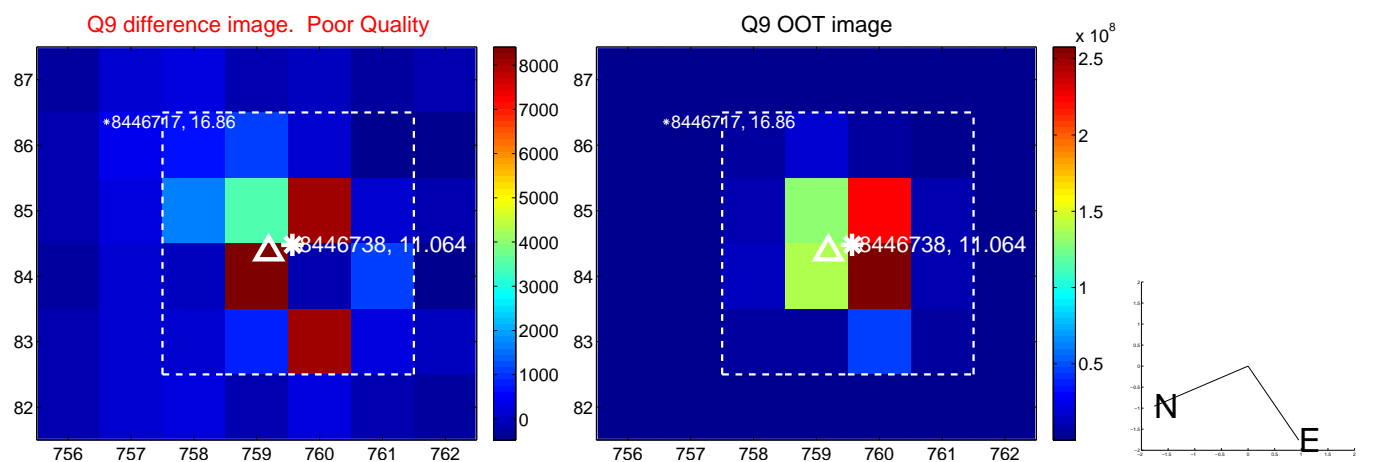
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



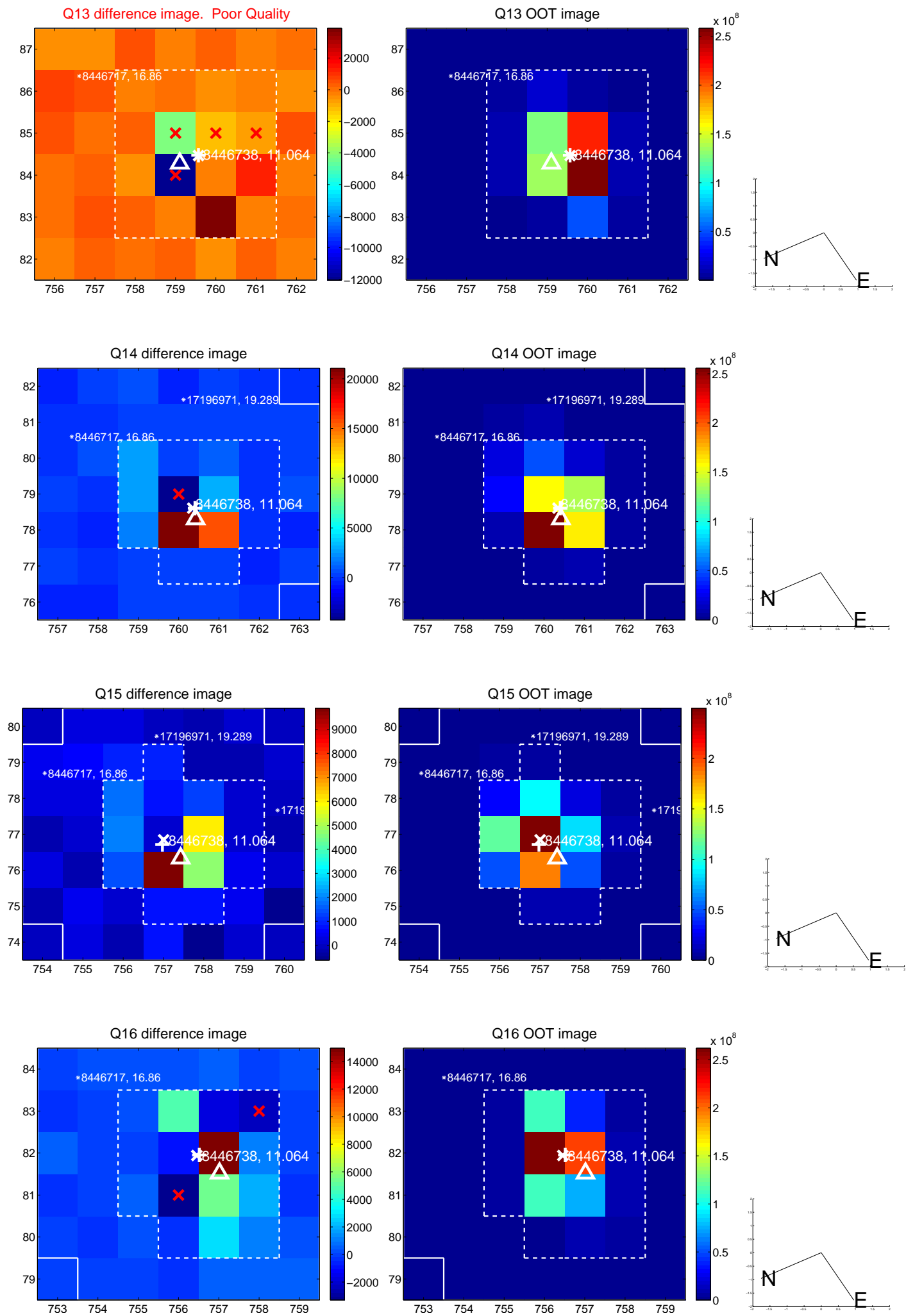
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



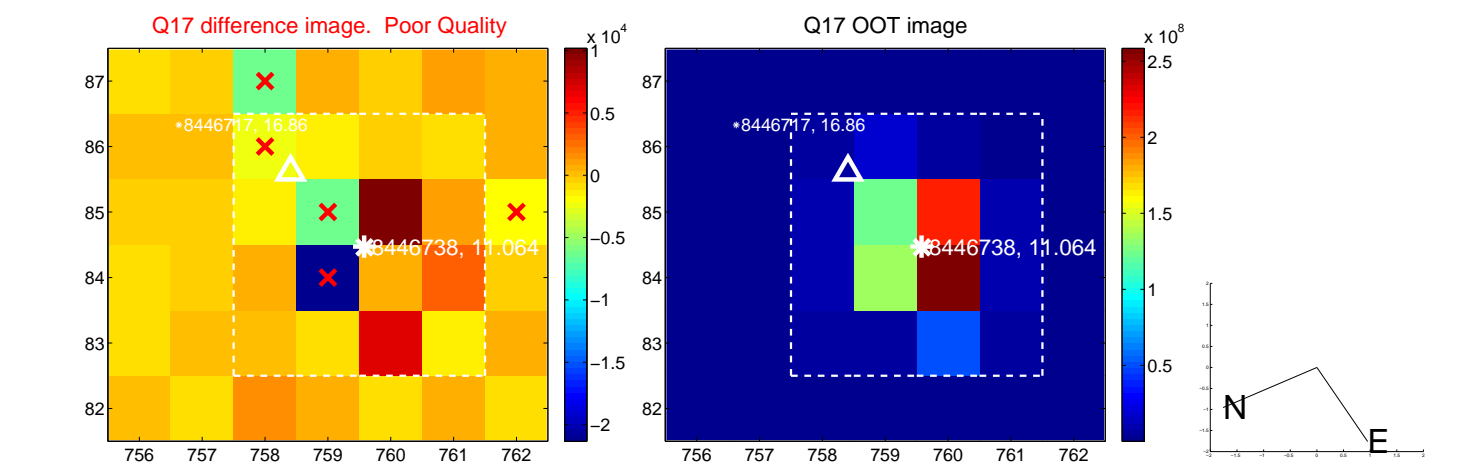
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



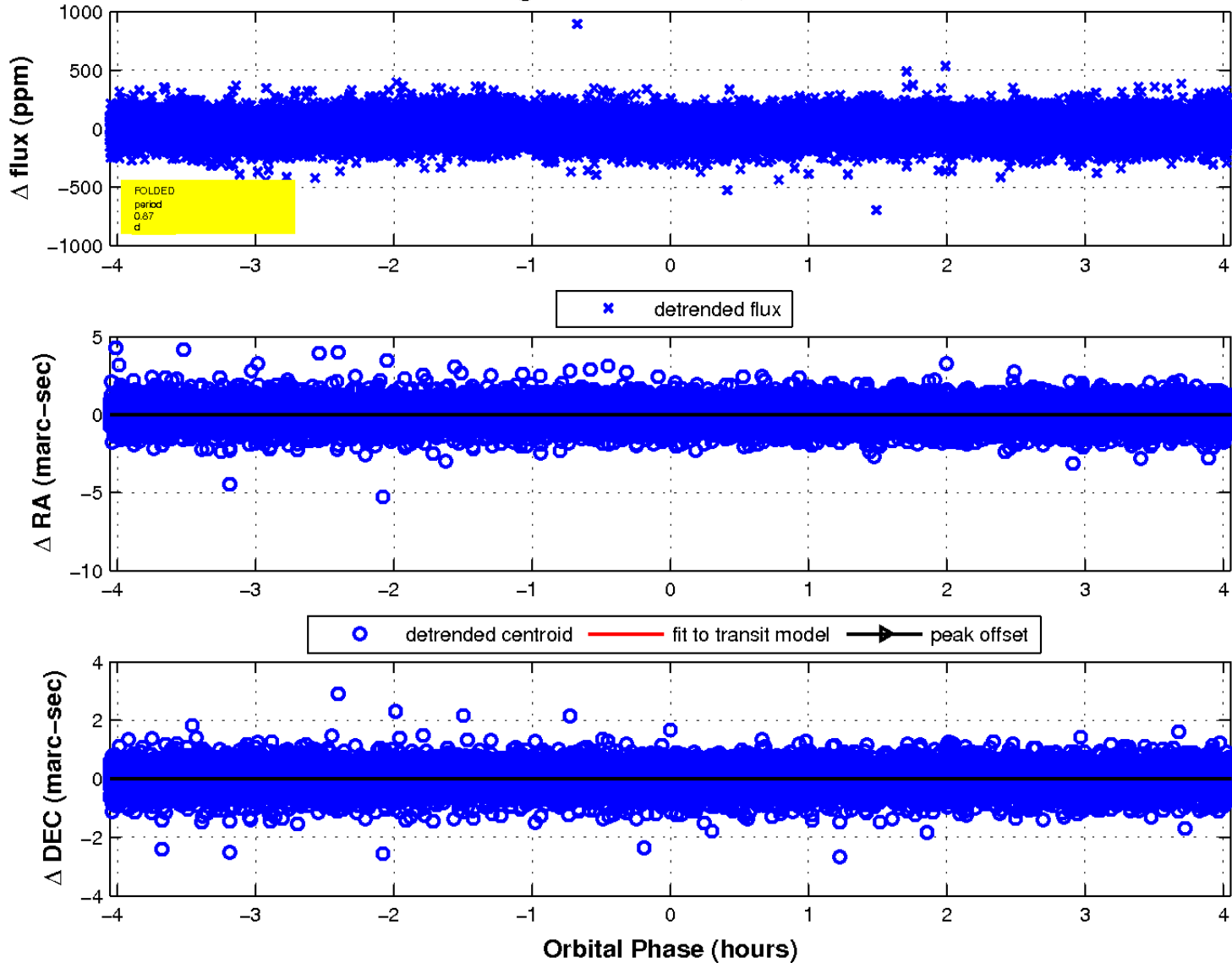
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

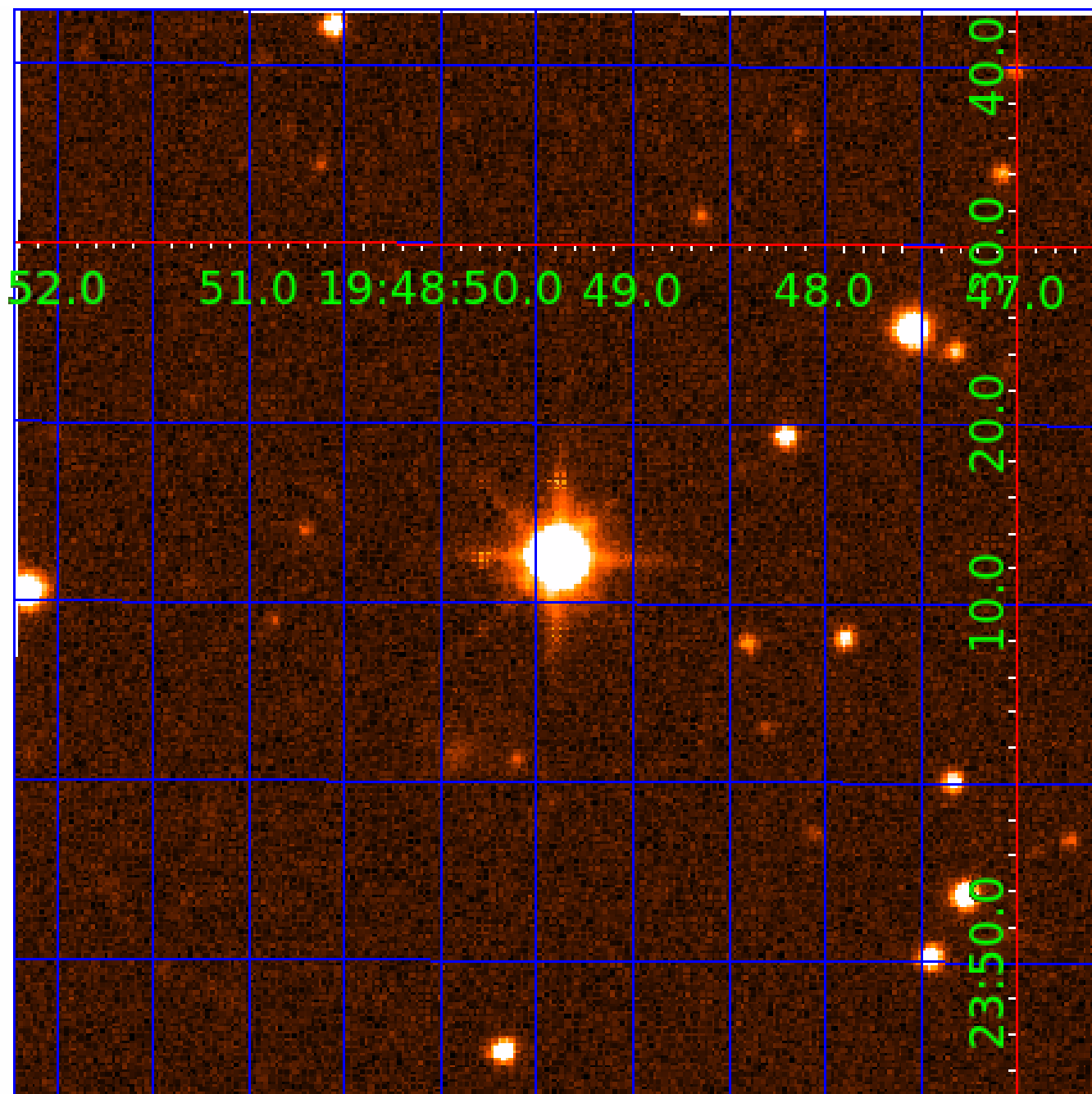


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008446738

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})
008446738-01	OBS	No	0.922780	132.046797	13.6	3.429	17.2	12.4	2.30	7363	0.92	28957.21
008446738-02	OBS	No	0.872726	131.902614	26.4	1.352	11.0	12.6	2.30	7363	1.38	31192.51
008446738-03	OBS	No	0.872750	132.263361	31.2	1.484	8.2	15.7	2.30	7363	1.51	31191.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008446738-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008446738-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008446738-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

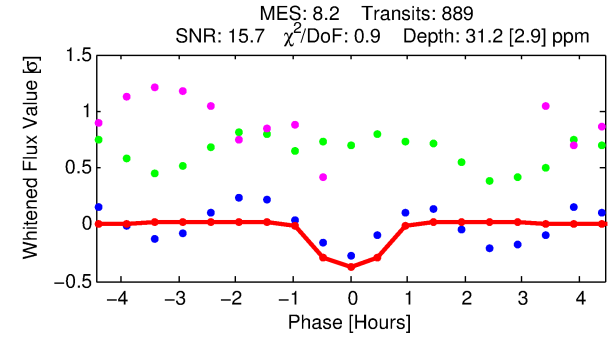
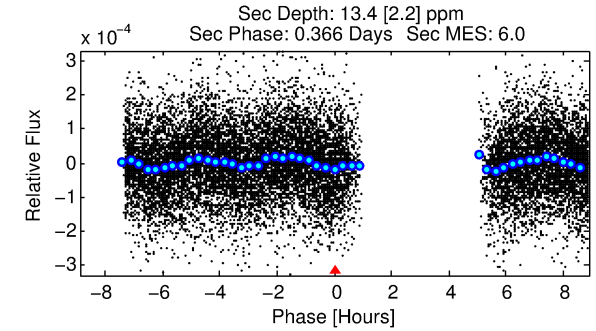
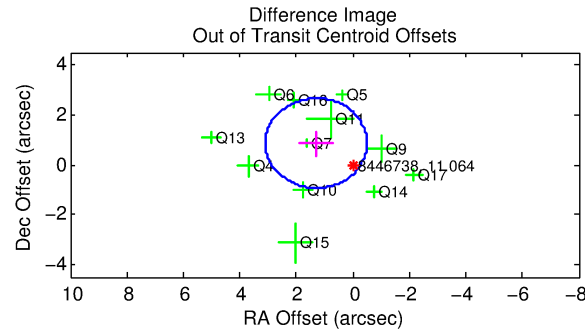
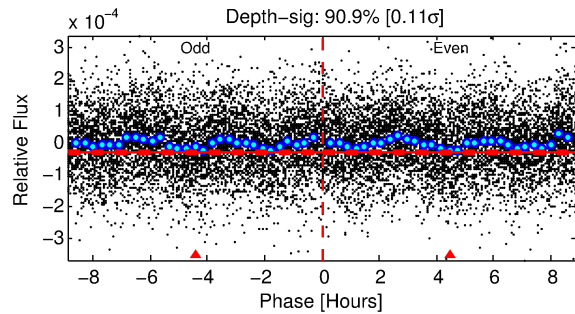
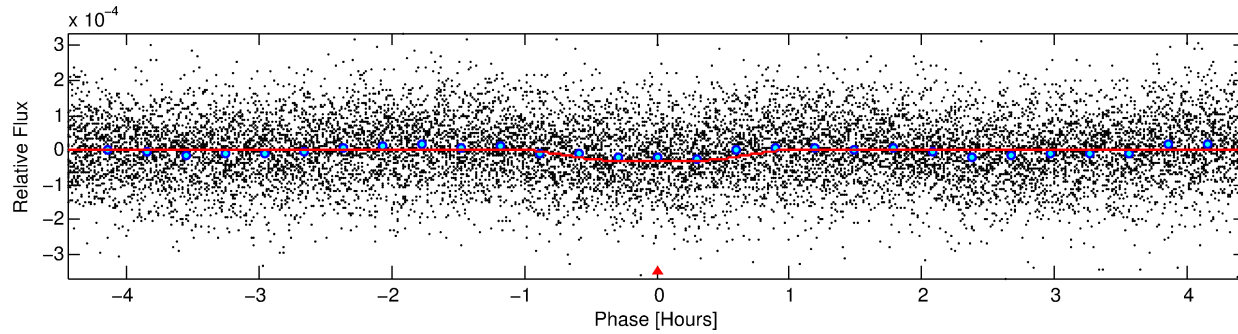
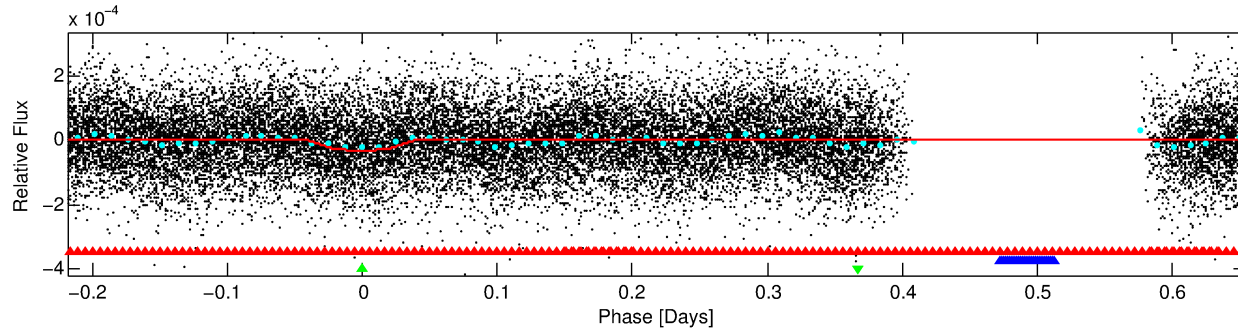
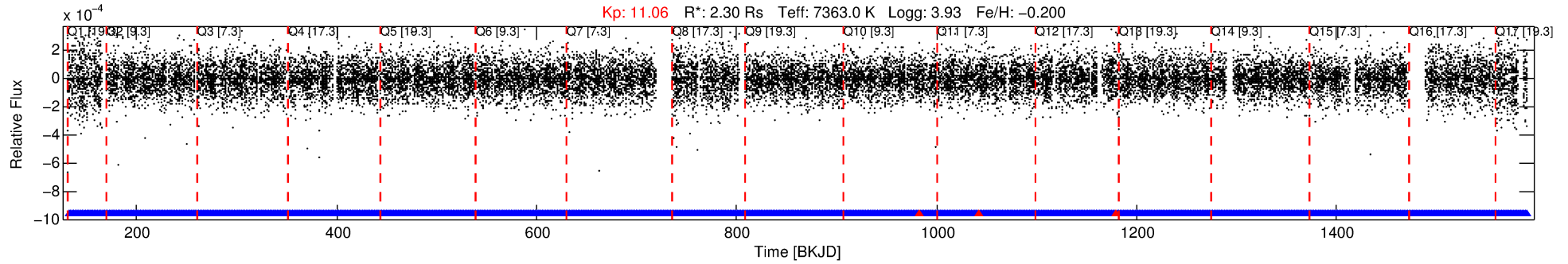
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008446738-03

No Significant Match Found

DV One-Page Summary

KIC: 8446738 Candidate: 3 of 3 Period: 0.873 d



DV Fit Results:

Period = 0.87275 [0.00001] d
Epoch = 132.2634 [0.0016] BKJD
Rp/R* = 0.0060 [0.0014]
a/R* = 2.19 [2.33]
b = 0.90 [0.28]
Seff = 31191.37 [16935.93]
Teq = 3389 [460] K
Rp = 1.51 [0.63] Re
a = 0.0211 [0.0069] AU
Ag = 1.44 [1.03] [0.43 σ]
Teff = 5739 [748] K [2.68 σ]

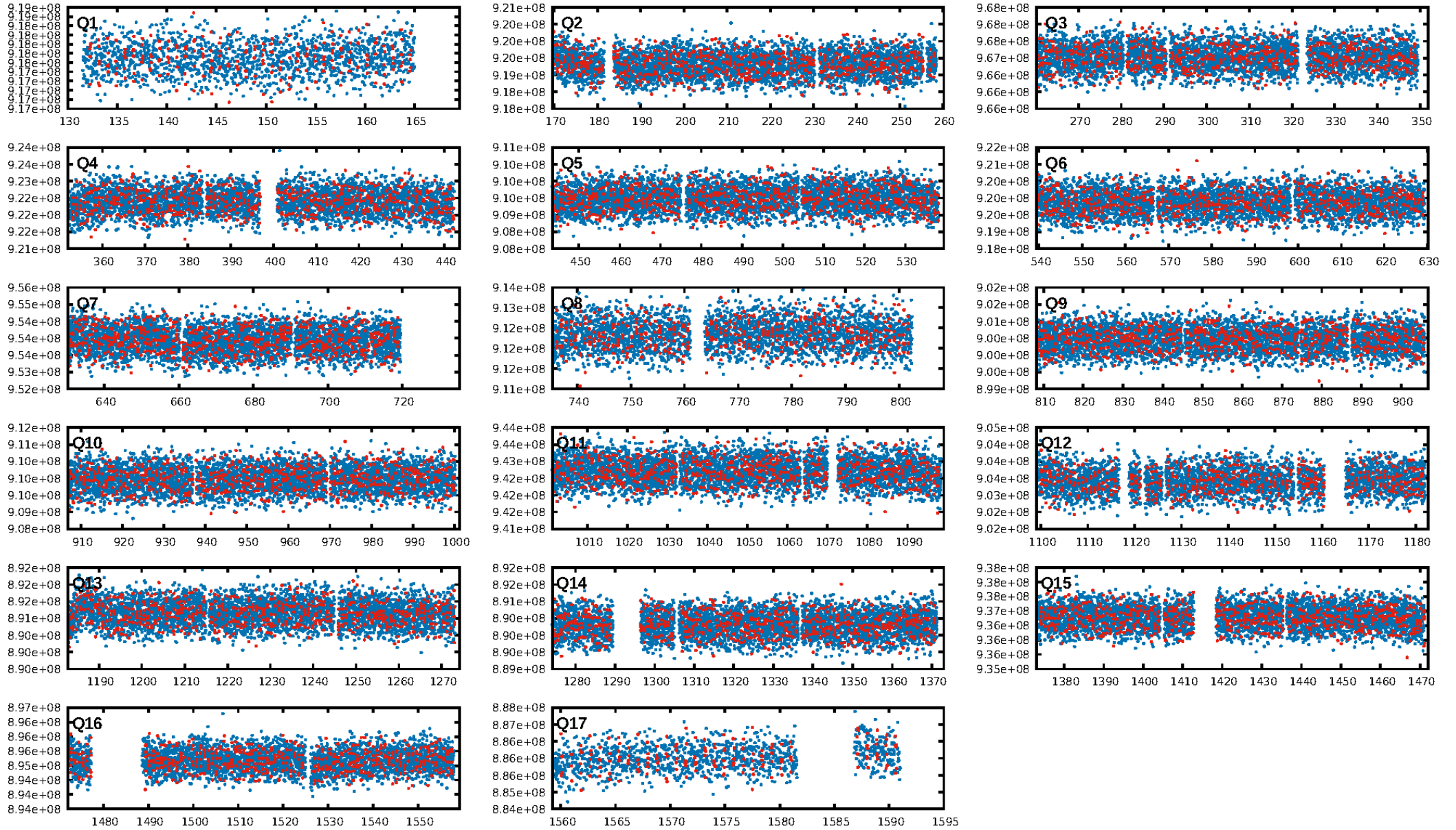
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 25.2% [0.32 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.68e-15
RollingBand-fgt: 1.00 [842/845]
GhostDiagnostic-chr: 78.09
Centroid-sig: 54.1%
Centroid-so: 0.185 arcsec [0.60 σ]
OotOffset-rm: 1.563 arcsec [2.61 σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-rm: 1.744 arcsec [3.09 σ]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

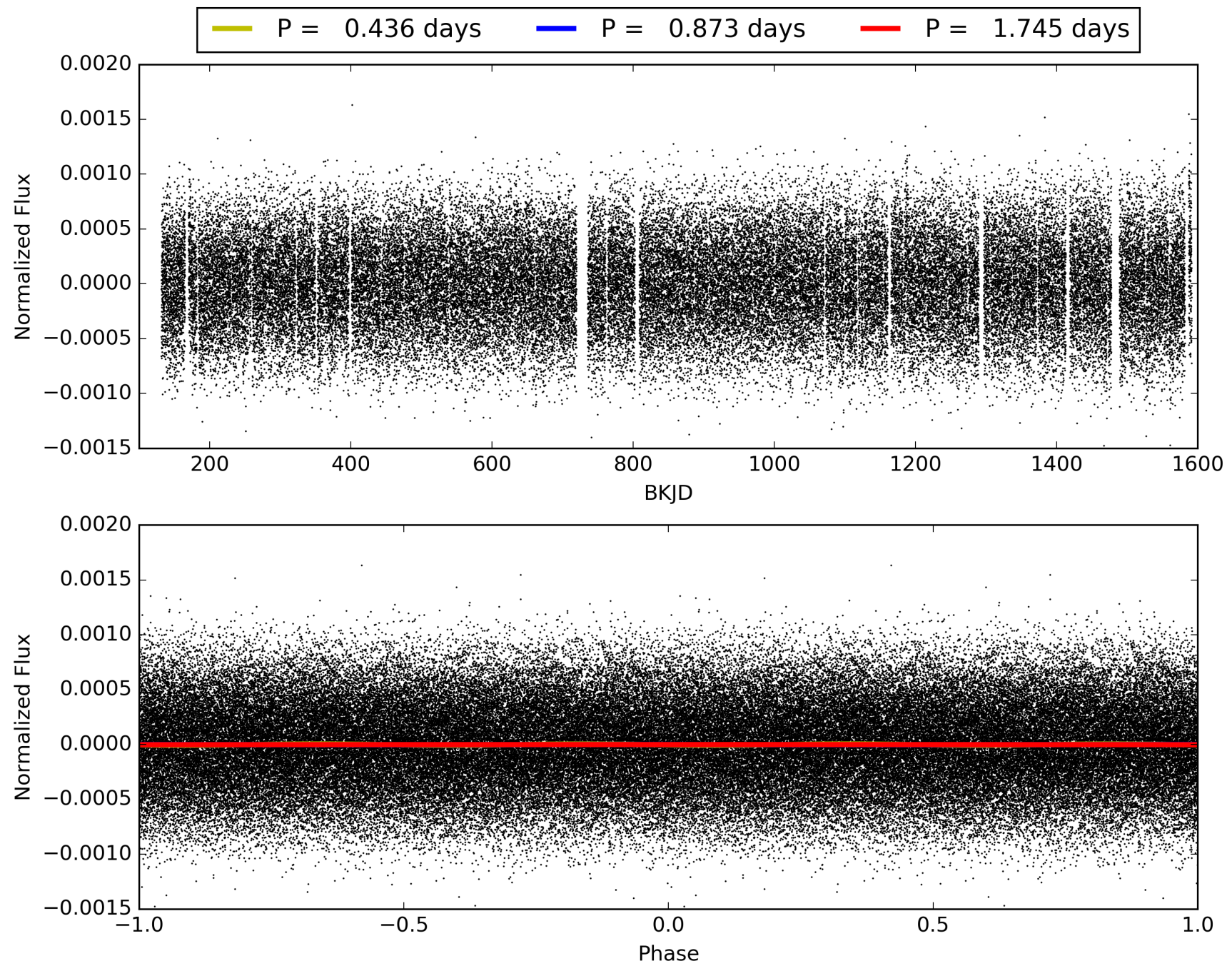
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:49:28 Z

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

TCE 008446738-03, PDC Light Curves

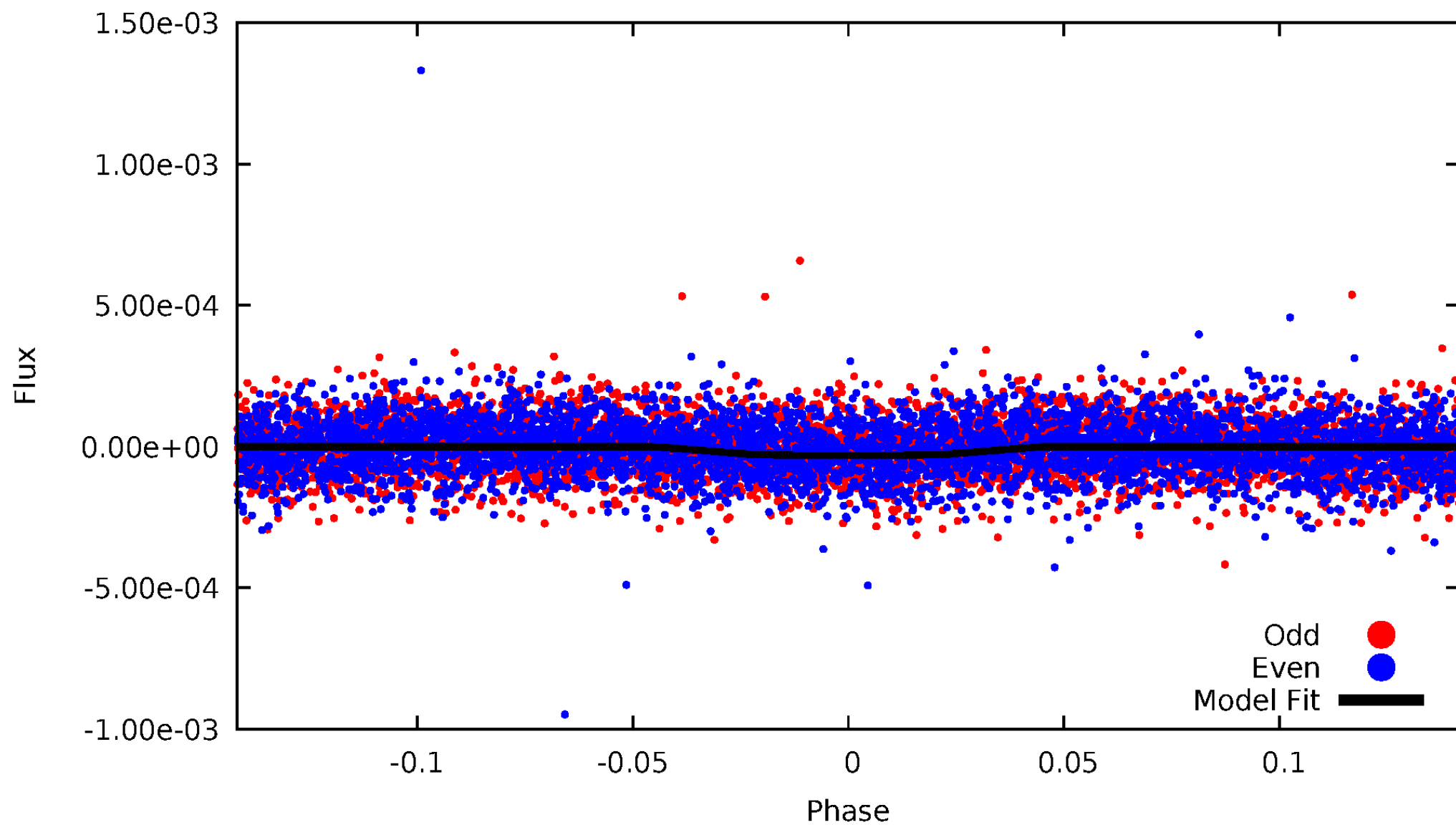


TCE 008446738-03



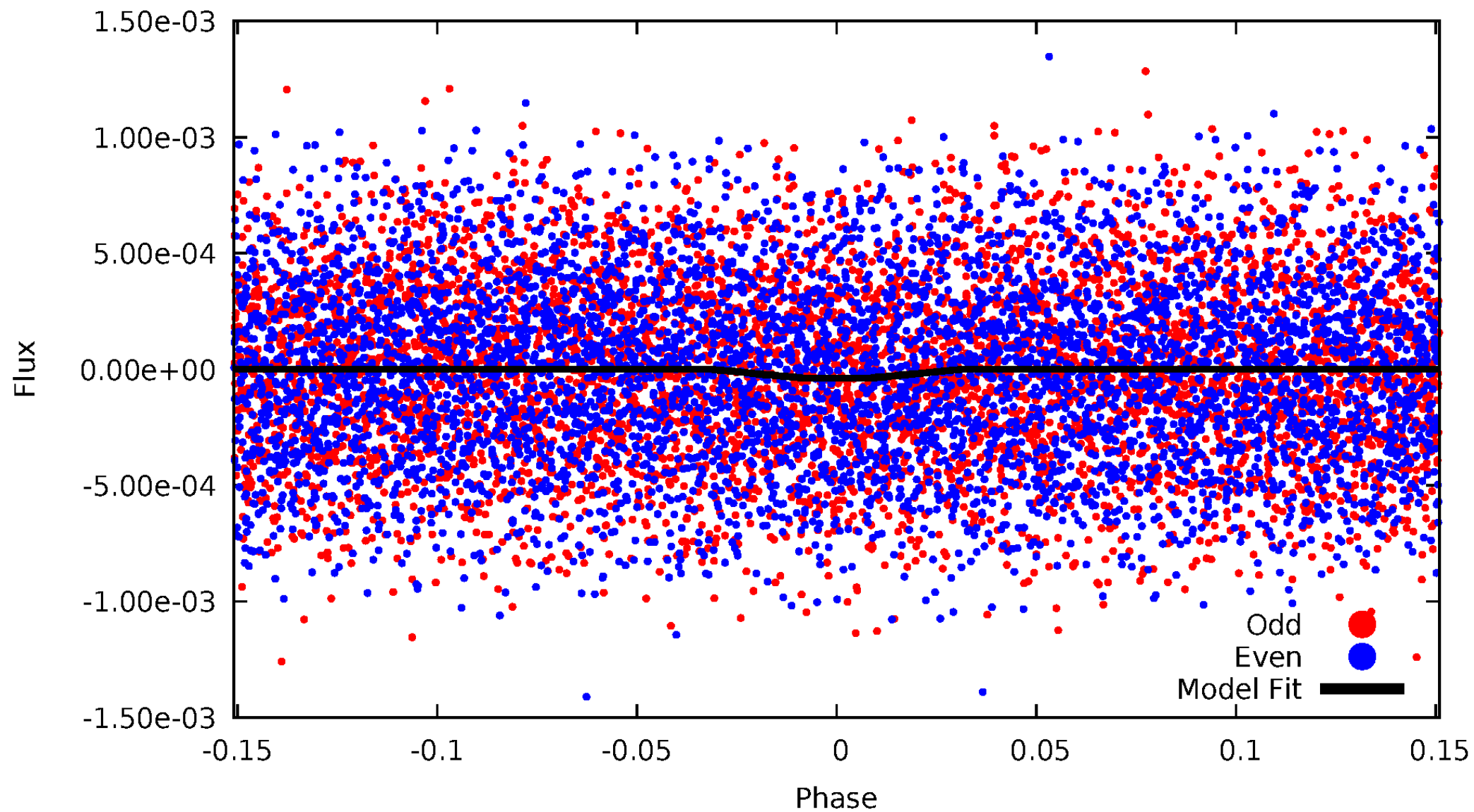
DV Odd/Even

TCE 008446738-03



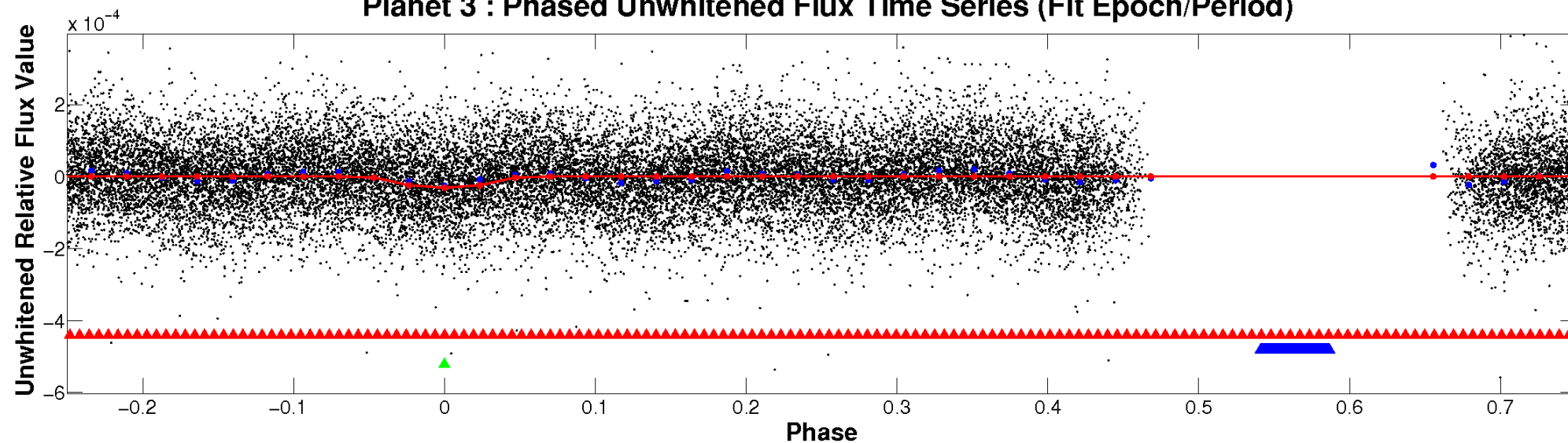
ALT Odd/Even

TCE 008446738-03

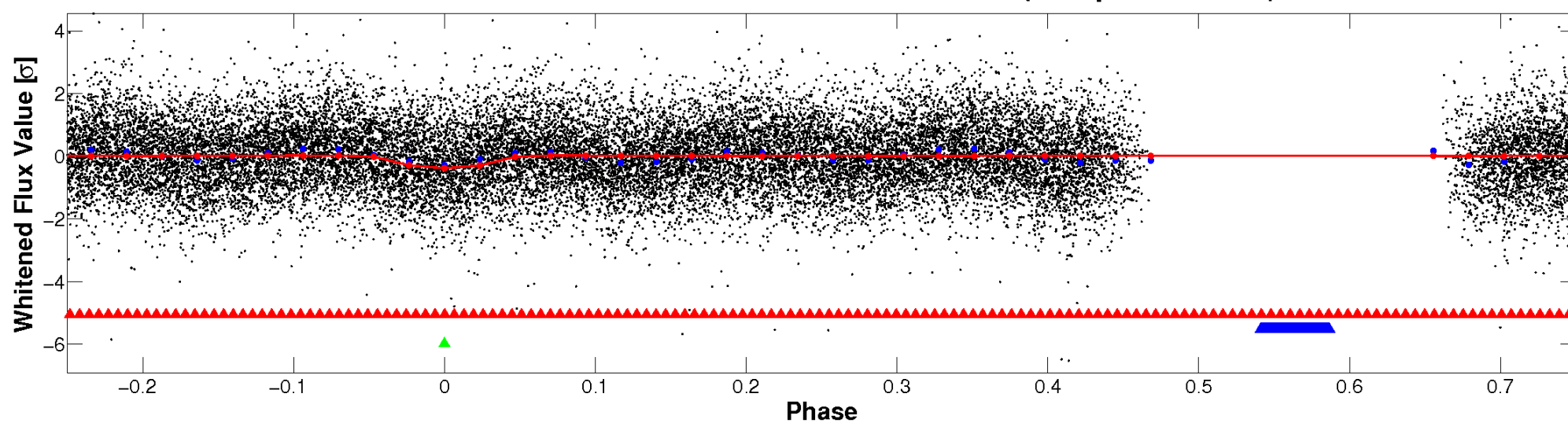


Non-Whitened Vs. Whitened Light Curve

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

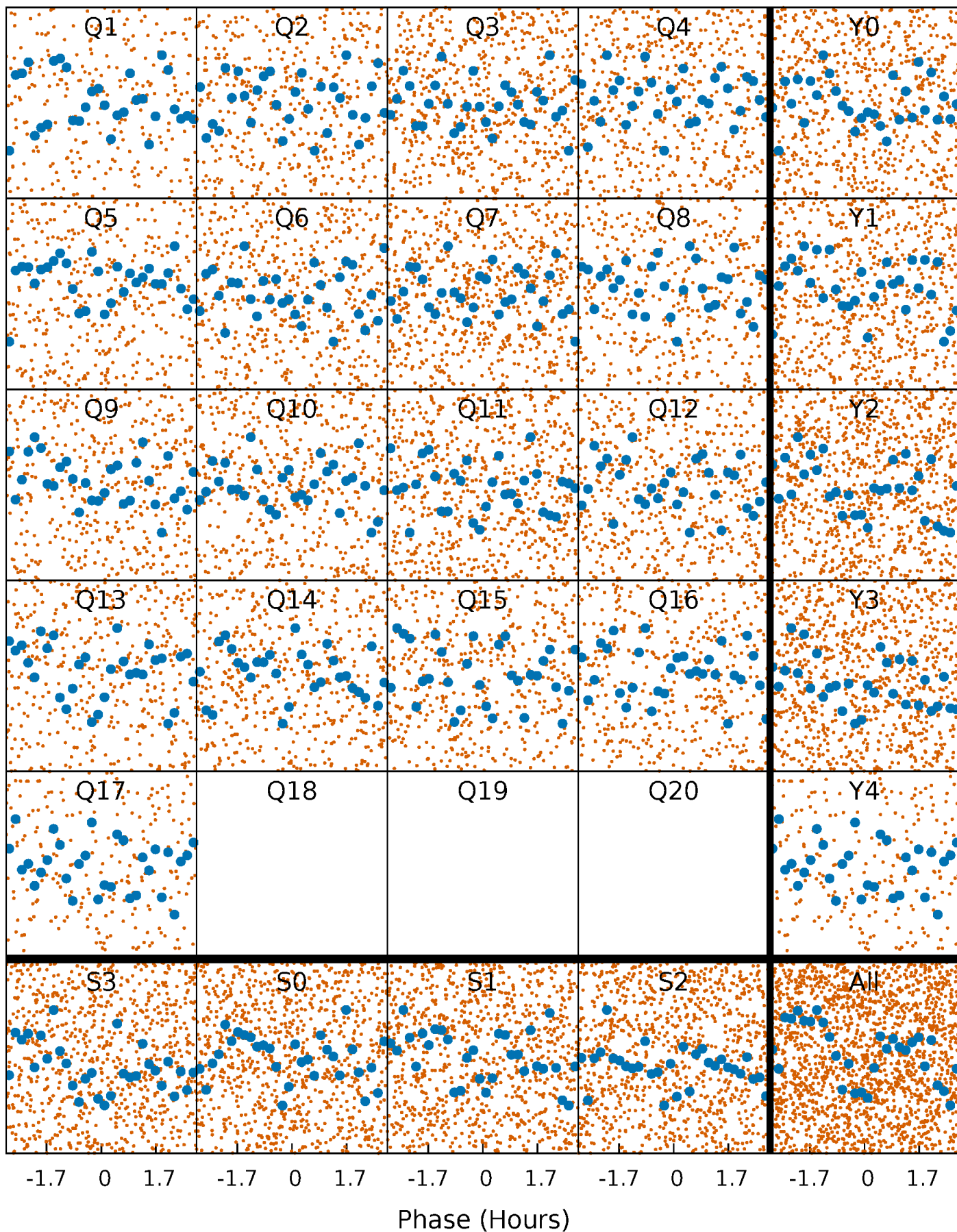


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



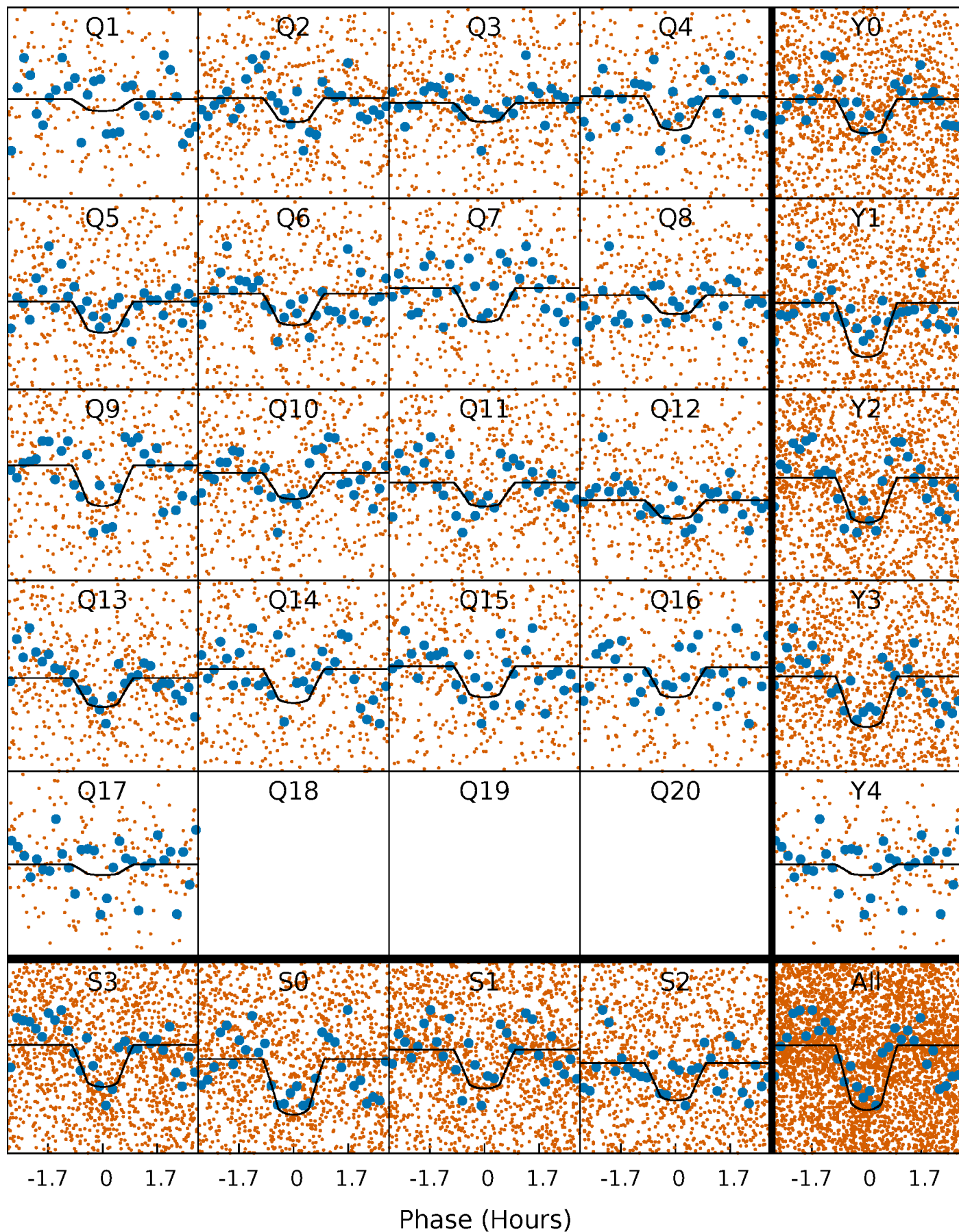
PDC Quarter-Phased Transit Curves

TCE 008446738-03 P= 0.872750 Days $T_0=132.263361$ (BKJD)



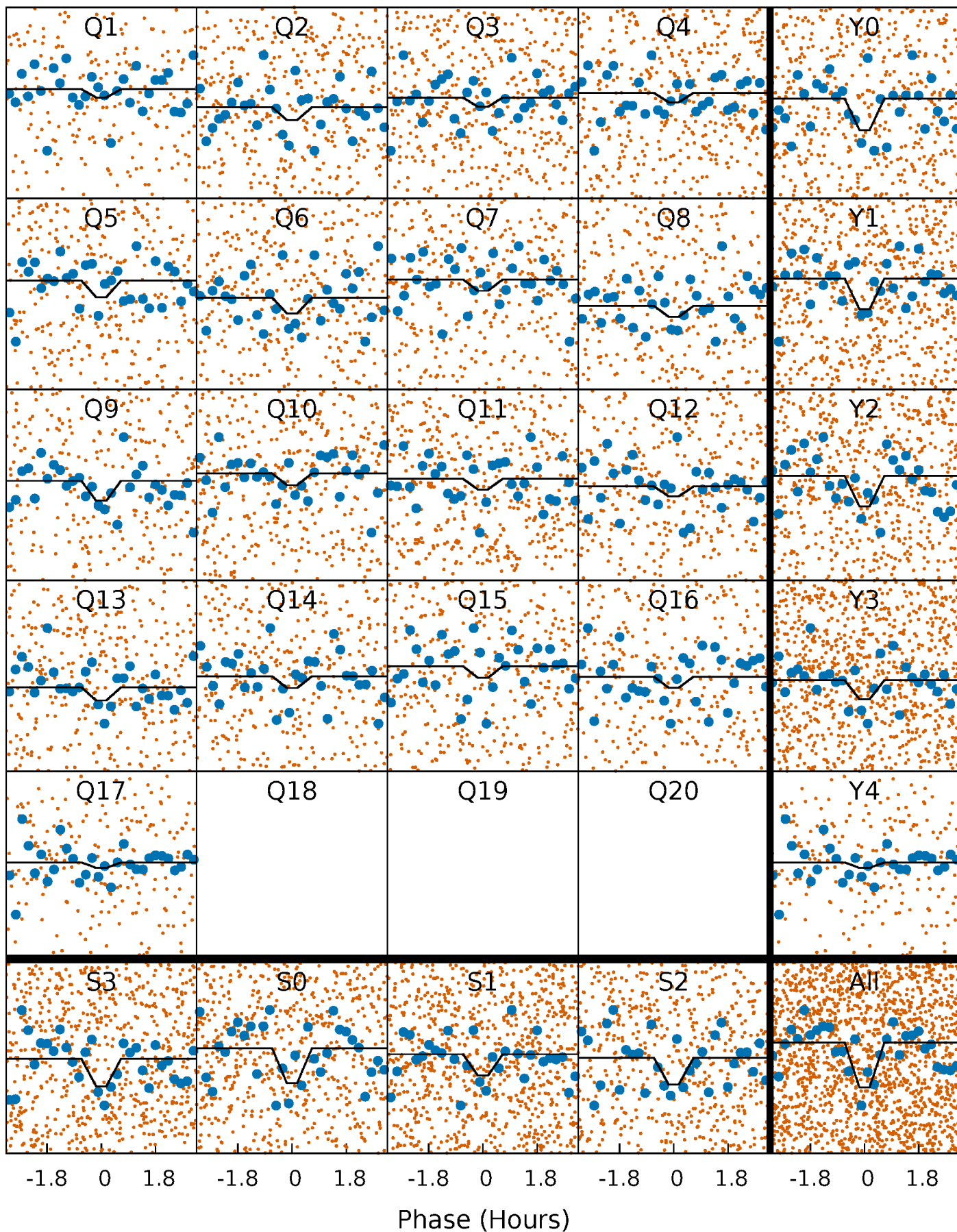
DV Quarter-Phased Transit Curves

TCE 008446738-03 P= 0.872750 Days $T_0=132.263361$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

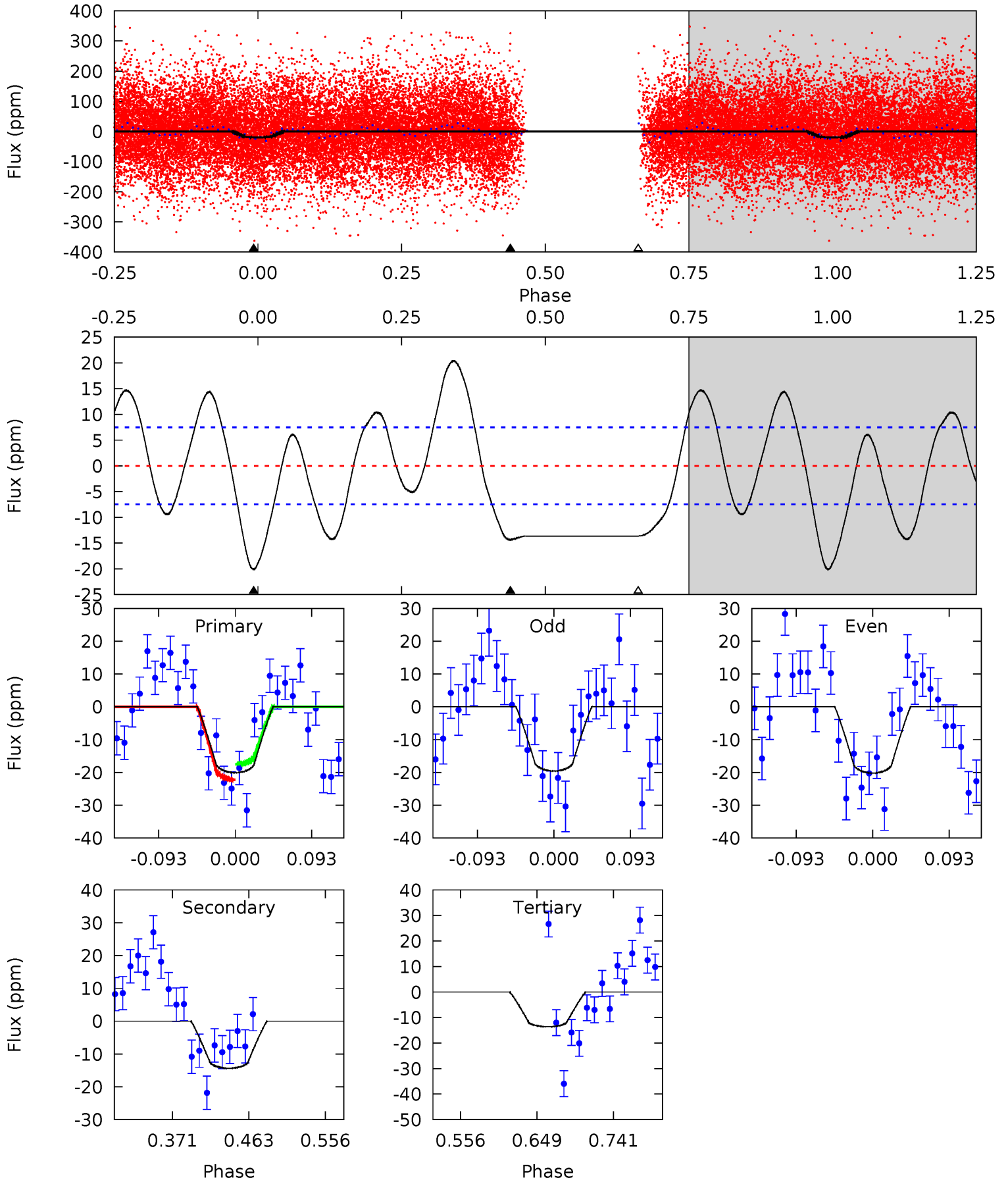
TCE 008446738-03 P= 0.872745 Days $T_0=132.263843$ (BKJD)



DV Model-Shift Uniqueness Test

008446738-03, P = 0.872750 Days, E = 131.390611 Days

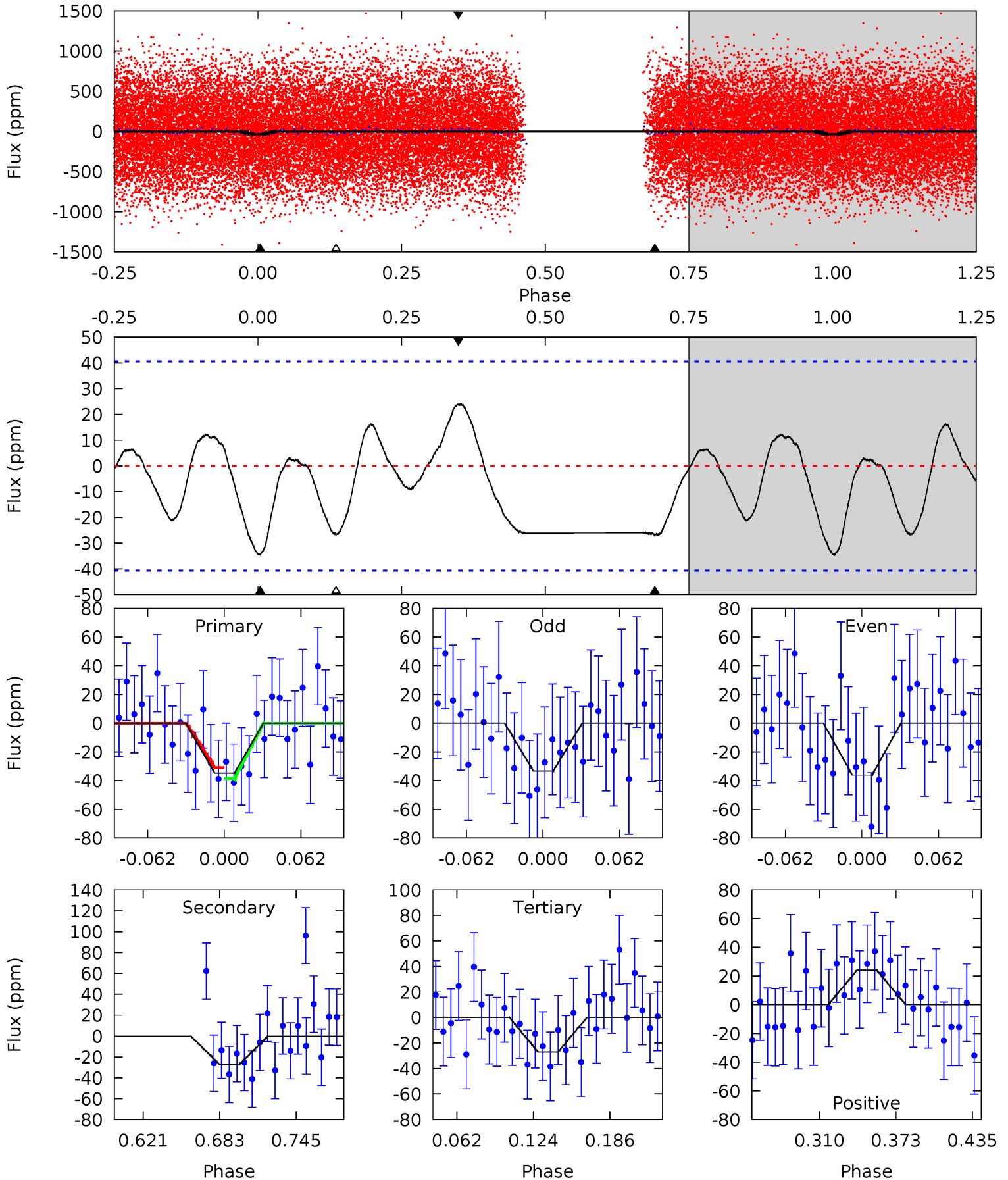
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	8.82	8.36	0	4.58	1.68	5.70	3.97	12.3	0.45	8.82	0.19	0.88	0.50	1.45



Alt Model-Shift Uniqueness Test

008446738-03, P = 0.872745 Days, E = 131.391098 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.99	3.11	3.11	2.76	4.66	1.87	1.49	0.88	1.22	0.00	0.35	0.16	0.87	0.41	0.43



Stellar Parameters For KIC 008446738

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7363^{+230}_{-307}	$3.932^{+0.301}_{-0.129}$	$-0.200^{+0.250}_{-0.350}$	$2.297^{+0.532}_{-0.797}$	$1.643^{+0.183}_{-0.340}$	$0.191^{+0.375}_{-0.086}$
	+3%/-4%	+8%/-3%	+125%/-175%	+23%/-35%	+11%/-21%	+197%/-45%
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 008446738-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 2	$1.44^{+0.46}_{-0.41}$	4640^{+390}_{-386}	5447^{+928}_{-645}	$1.642^{+1.548}_{-0.671}$
Alt.	-27 ± 9	$1.41^{+0.47}_{-0.38}$	4629^{+351}_{-421}	6492^{+1440}_{-1054}	$3.169^{+3.159}_{-1.593}$

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 $A_{\text{obs}} \gg 1.0$

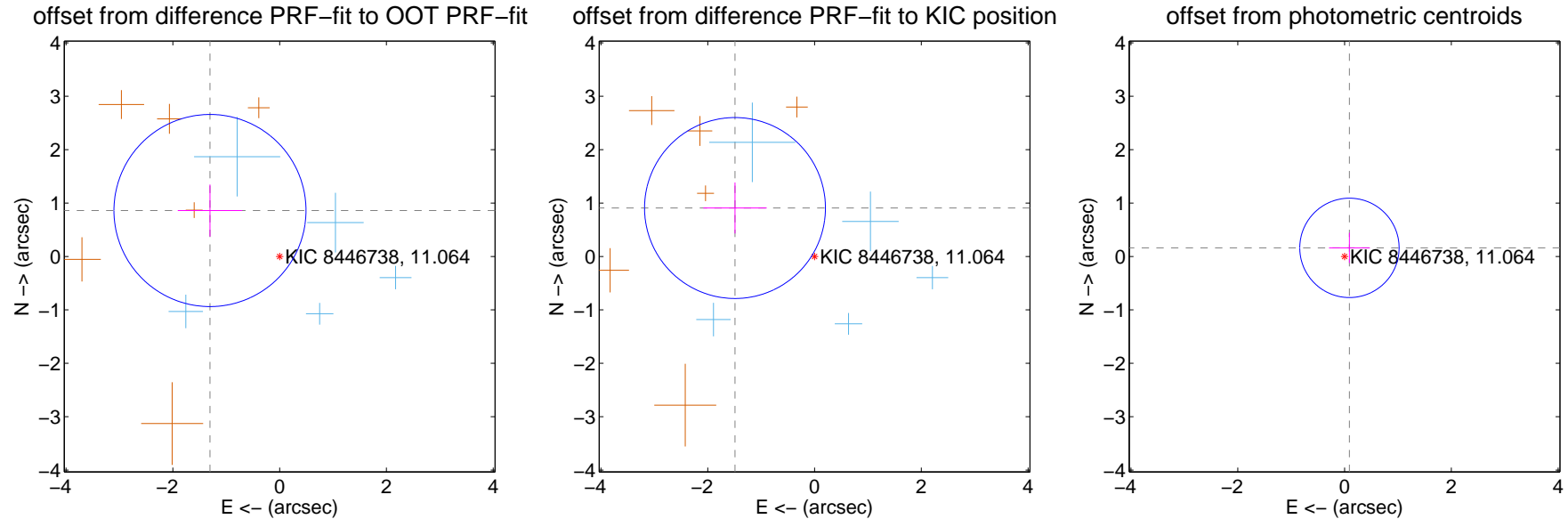
DV Centroid Data

Supplemental centroid analysis for 008446738-03. **Kepler magnitude: 11.06**. Transit SNR 15.65

There are 6 quarters with good PRF difference image offsets

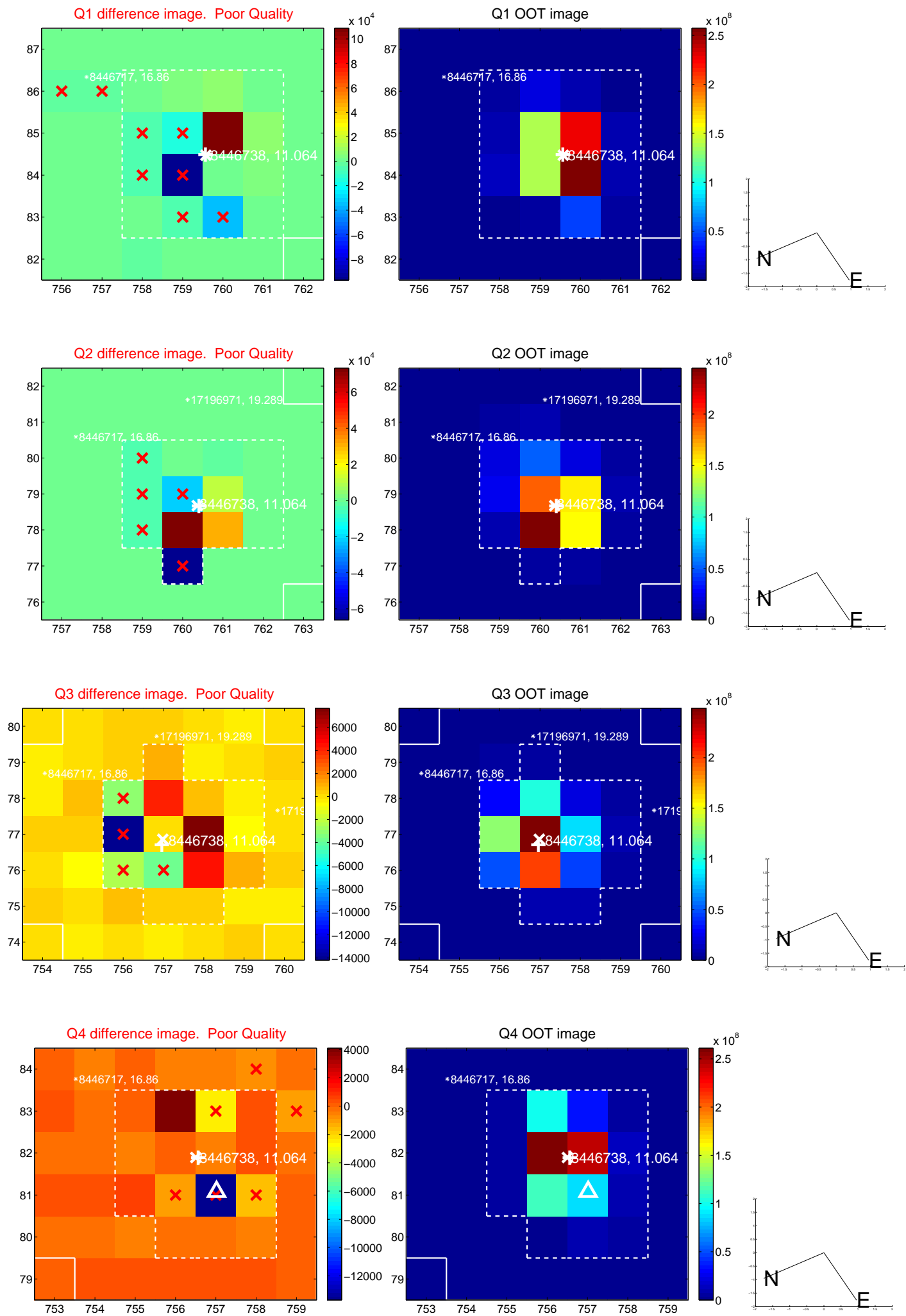
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.563 ± 0.599	2.61	1.305 ± 0.603	0.860 ± 0.486
PRF-fit source offset from KIC position	1.744 ± 0.565	3.09	1.490 ± 0.594	0.907 ± 0.478
photometric centroid source offset	0.19 ± 0.31	0.60	-0.09 ± 0.38	0.16 ± 0.28

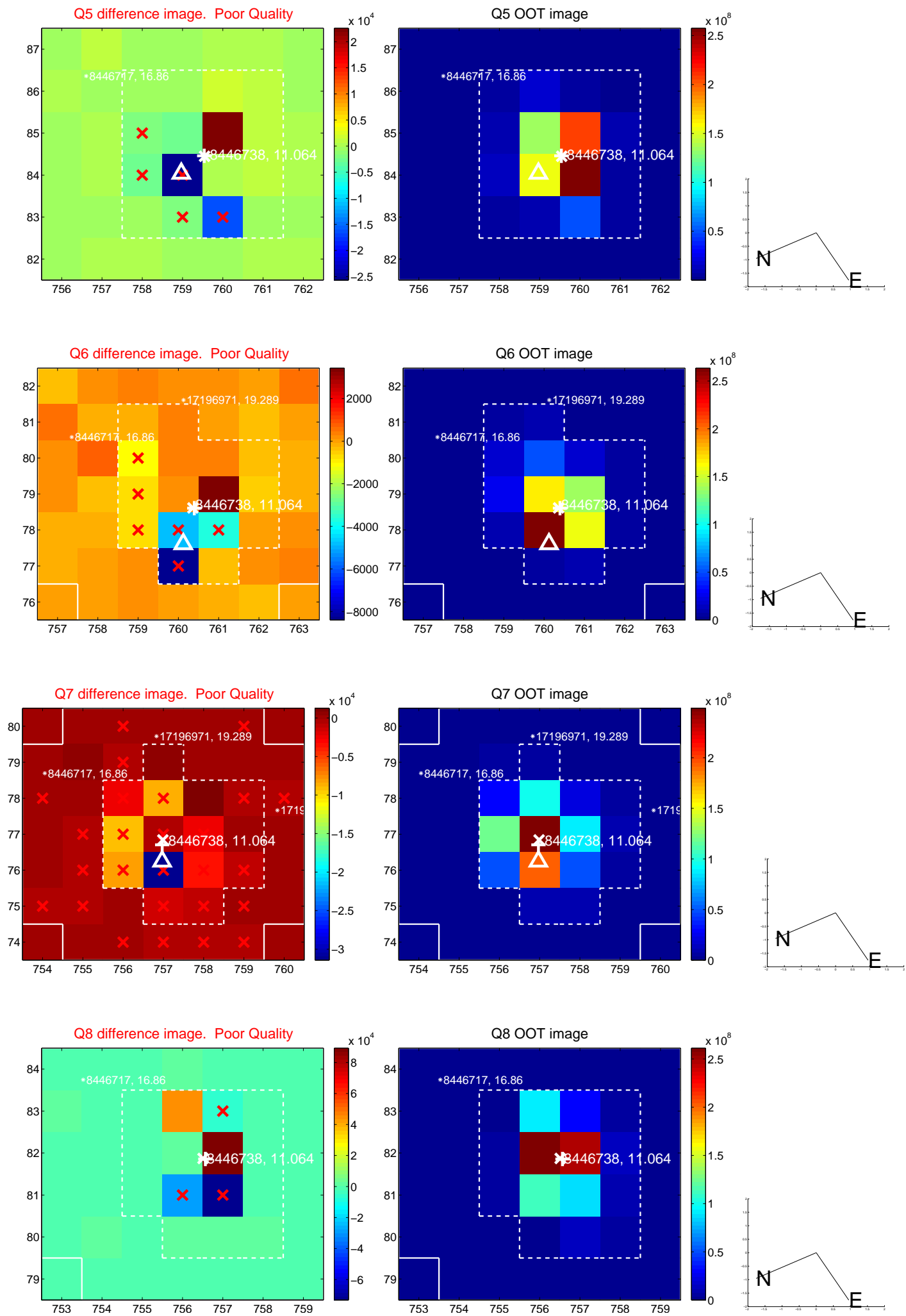


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

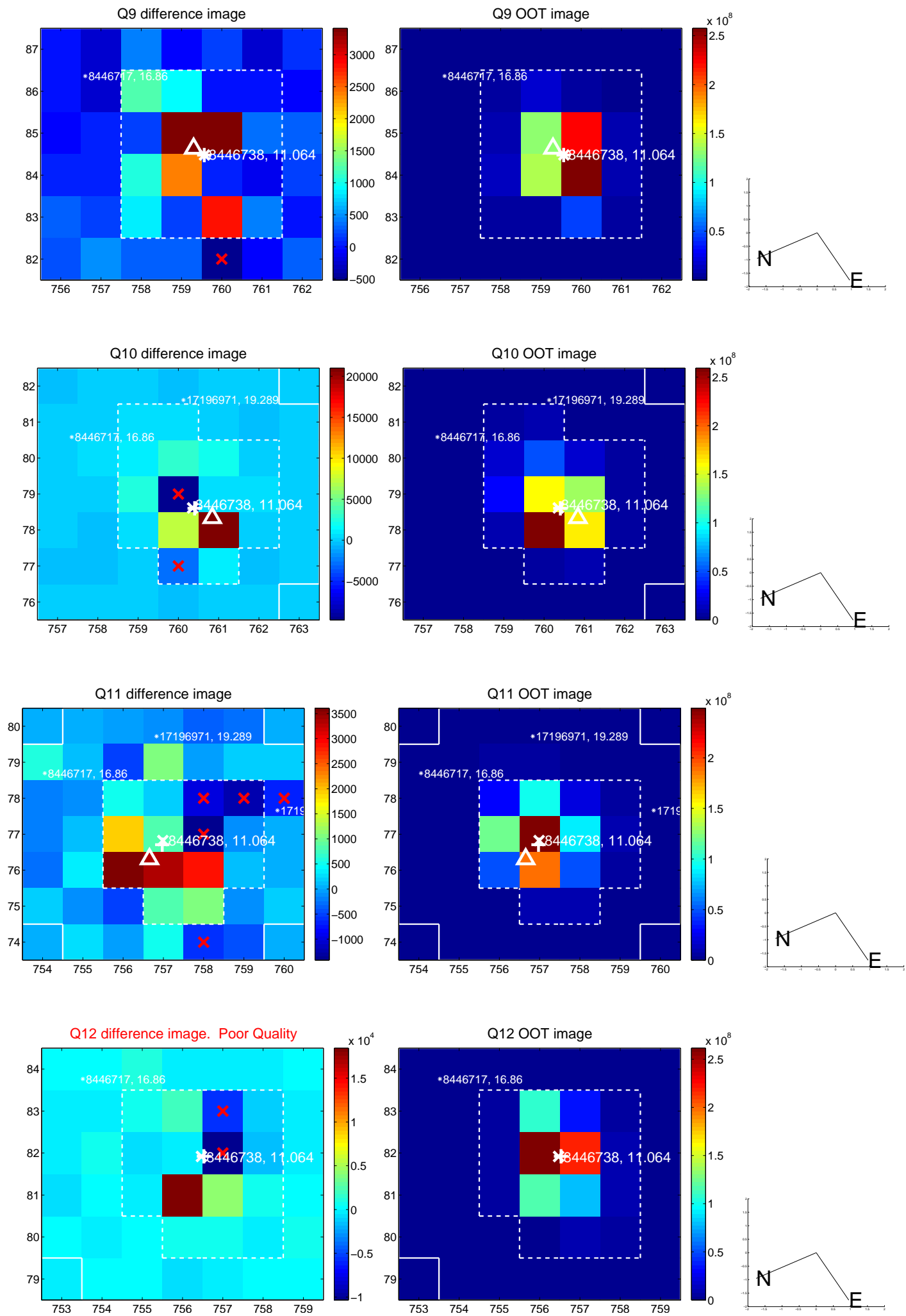
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



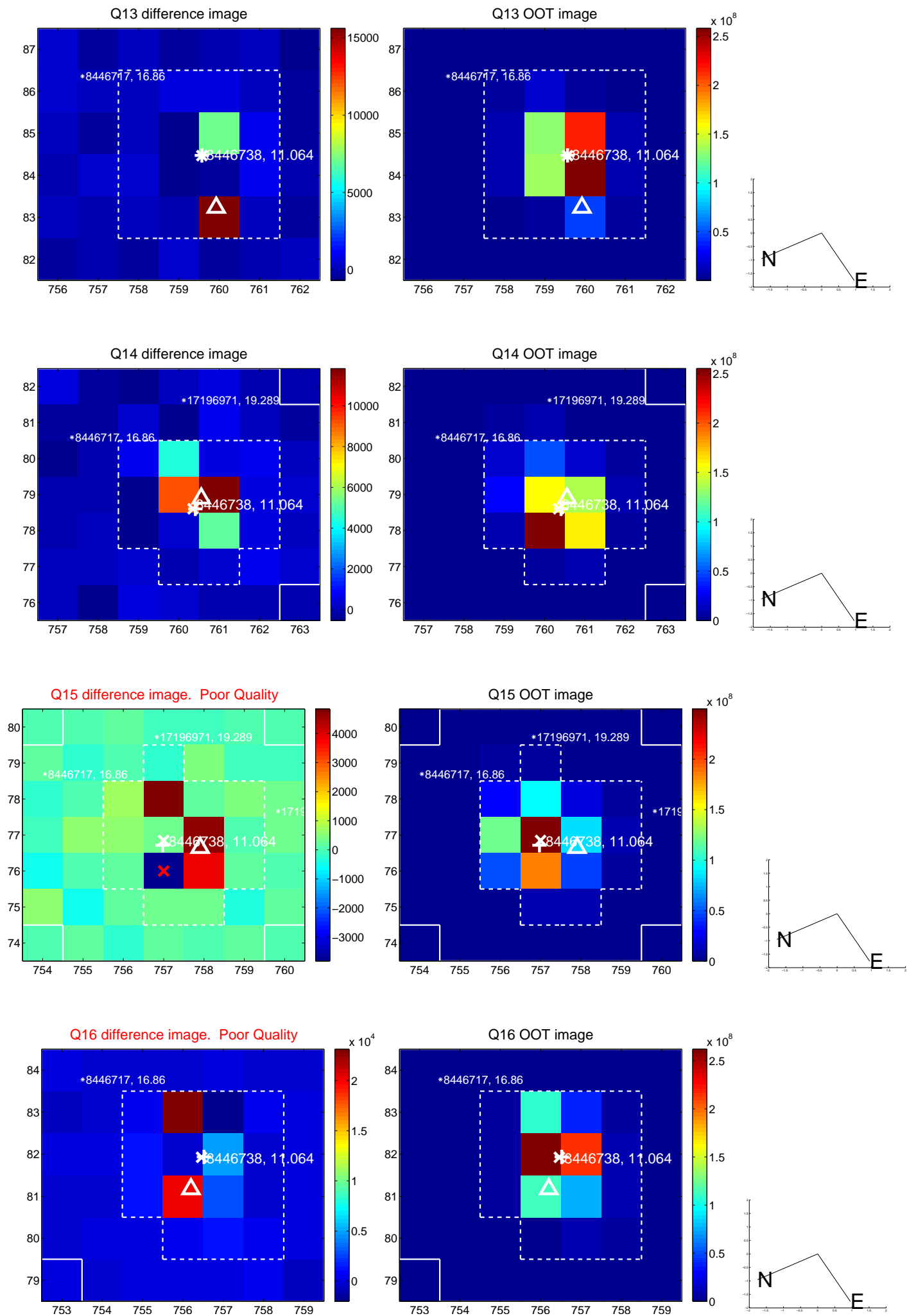
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



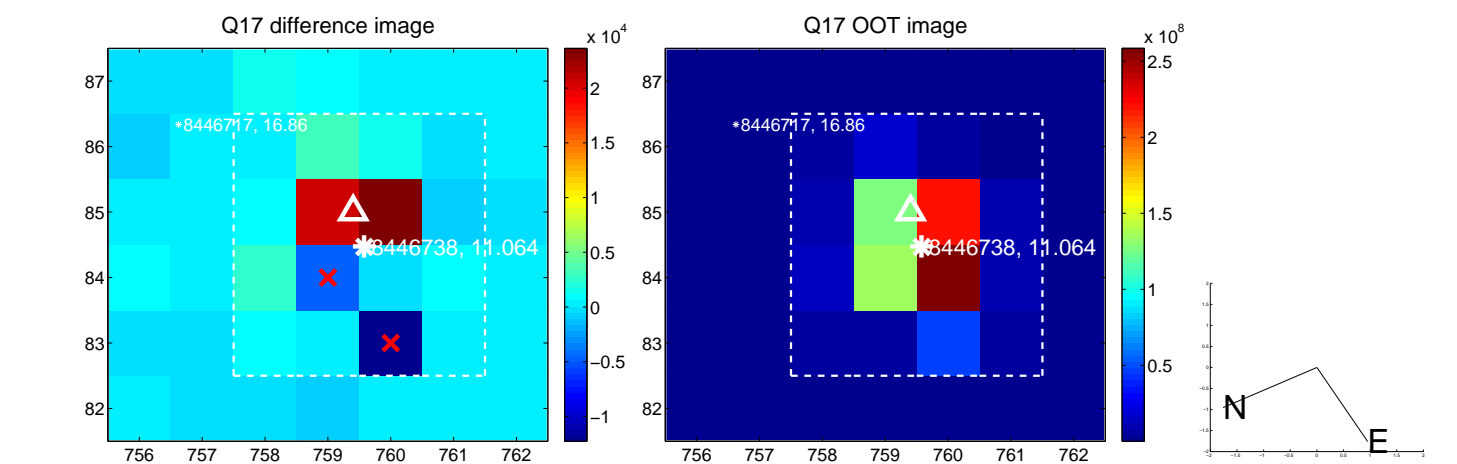
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



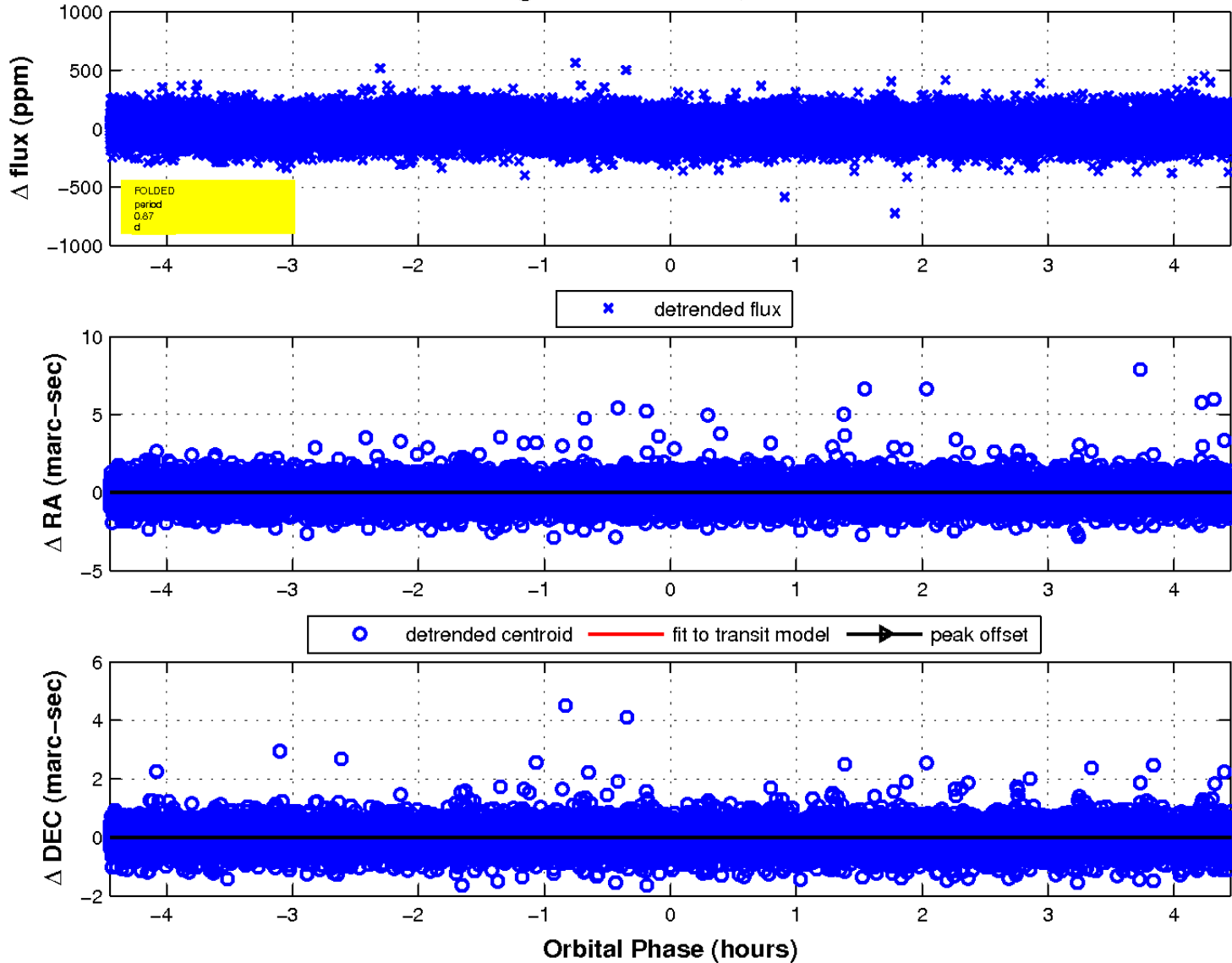
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

