

KIC 006842139

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})
006842139-01	OBS	No	2.171586	131.871709	81.5	7.672	9.0	8.3	2.17	7589	2.22	8738.49
006842139-02	OBS	No	2.171604	133.303498	103.6	6.878	8.9	9.6	2.17	7589	2.63	8738.39
006842139-03	OBS	No	2.171561	132.646826	97.7	6.476	8.8	9.1	2.17	7589	2.23	8738.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006842139-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006842139-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006842139-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

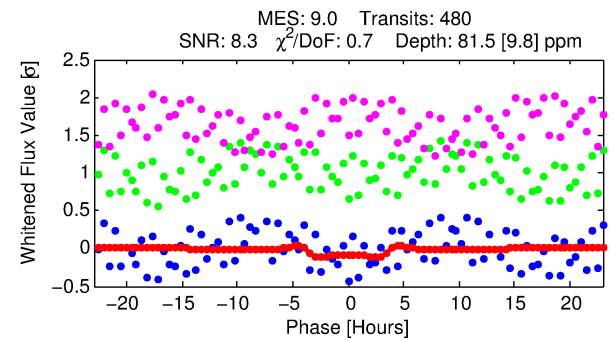
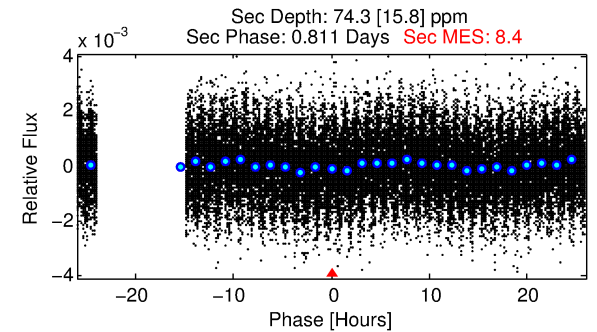
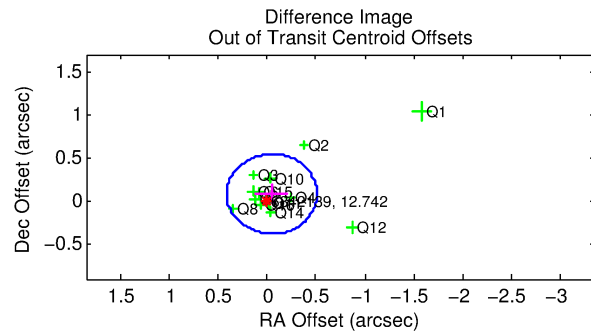
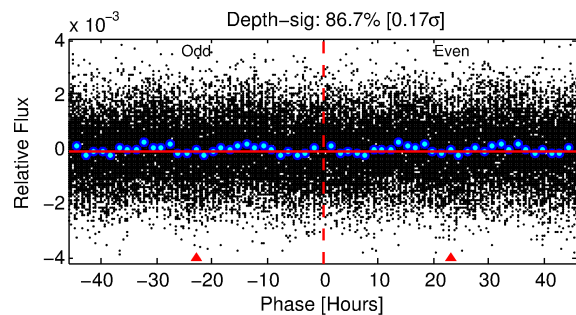
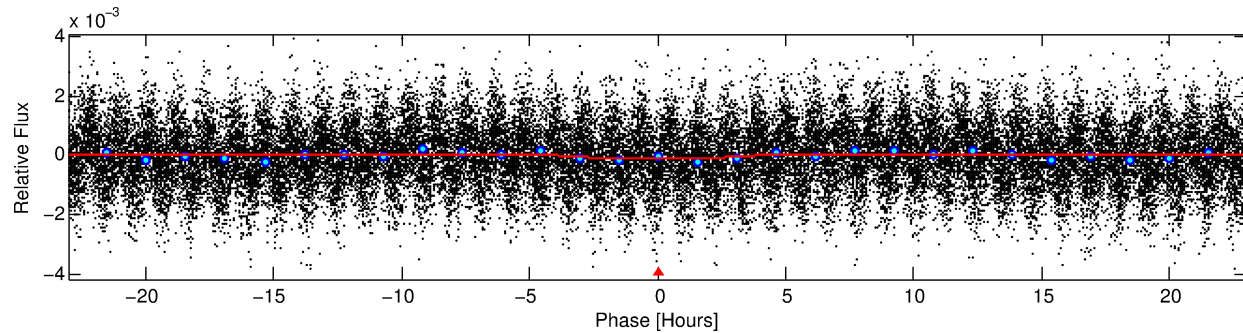
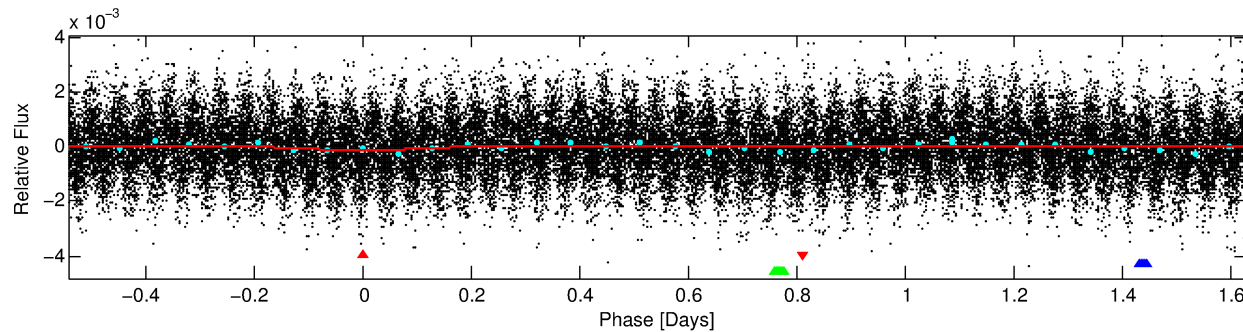
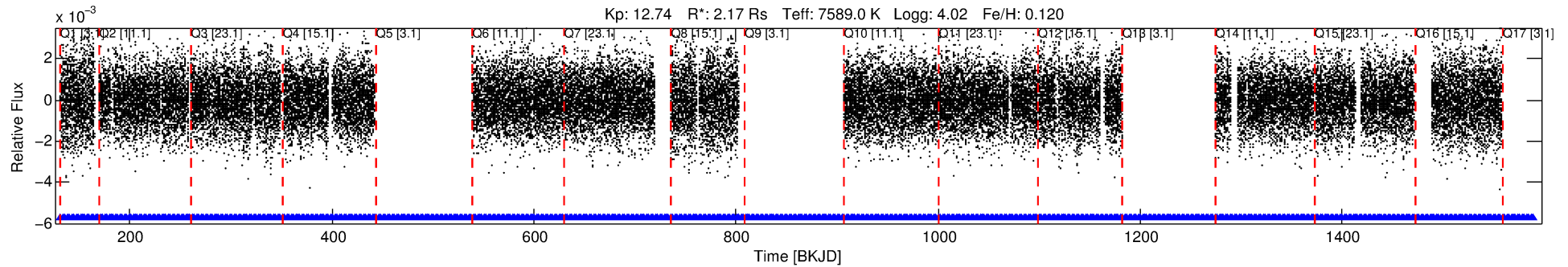
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006842139-01

No Significant Match Found

DV One-Page Summary

KIC: 6842139 Candidate: 1 of 3 Period: 2.172 d



DV Fit Results:

Period = 2.17159 [0.00003] d
Epoch = 131.8717 [0.0079] BKJD
Rp/R* = 0.0094 [0.0042]
a/R* = 1.44 [2.19]
b = 0.87 [0.84]
Seff = 8738.49 [3064.51]
Teq = 2465 [216] K
Rp = 2.22 [1.14] Re
a = 0.0400 [0.0082] AU
Ag = 13.25 [12.90] [0.95 σ]
Teffp = 7273 [1715] K [2.78 σ]

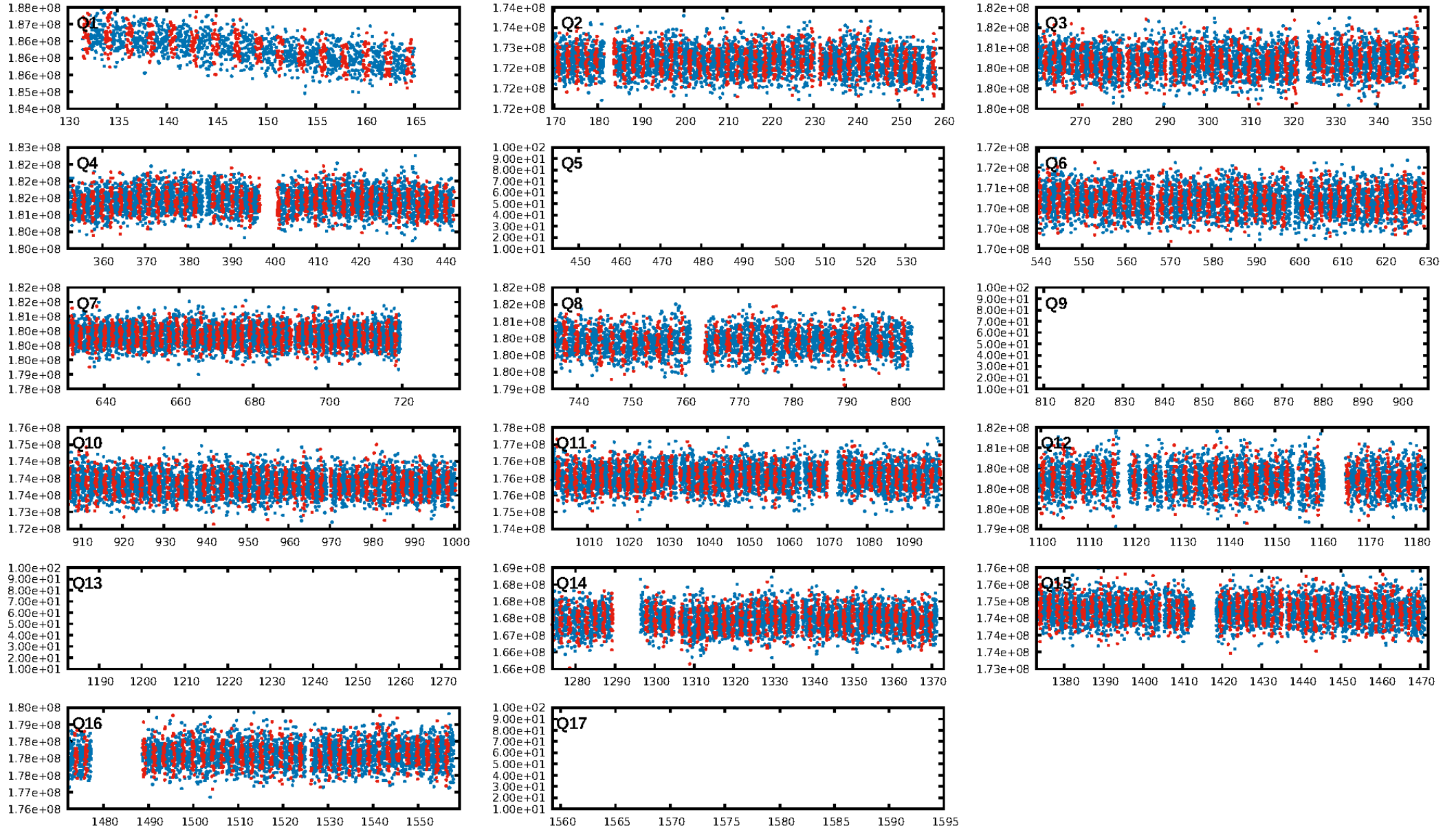
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [464/464]
GhostDiagnostic-chr: 1.479
Centroid-sig: 0.0%
Centroid-so: 1.431 arcsec [5.96 σ]
OotOffset-rm: 0.097 arcsec [0.63 σ]
KicOffset-rm: 0.228 arcsec [2.12 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.00 [0/13]

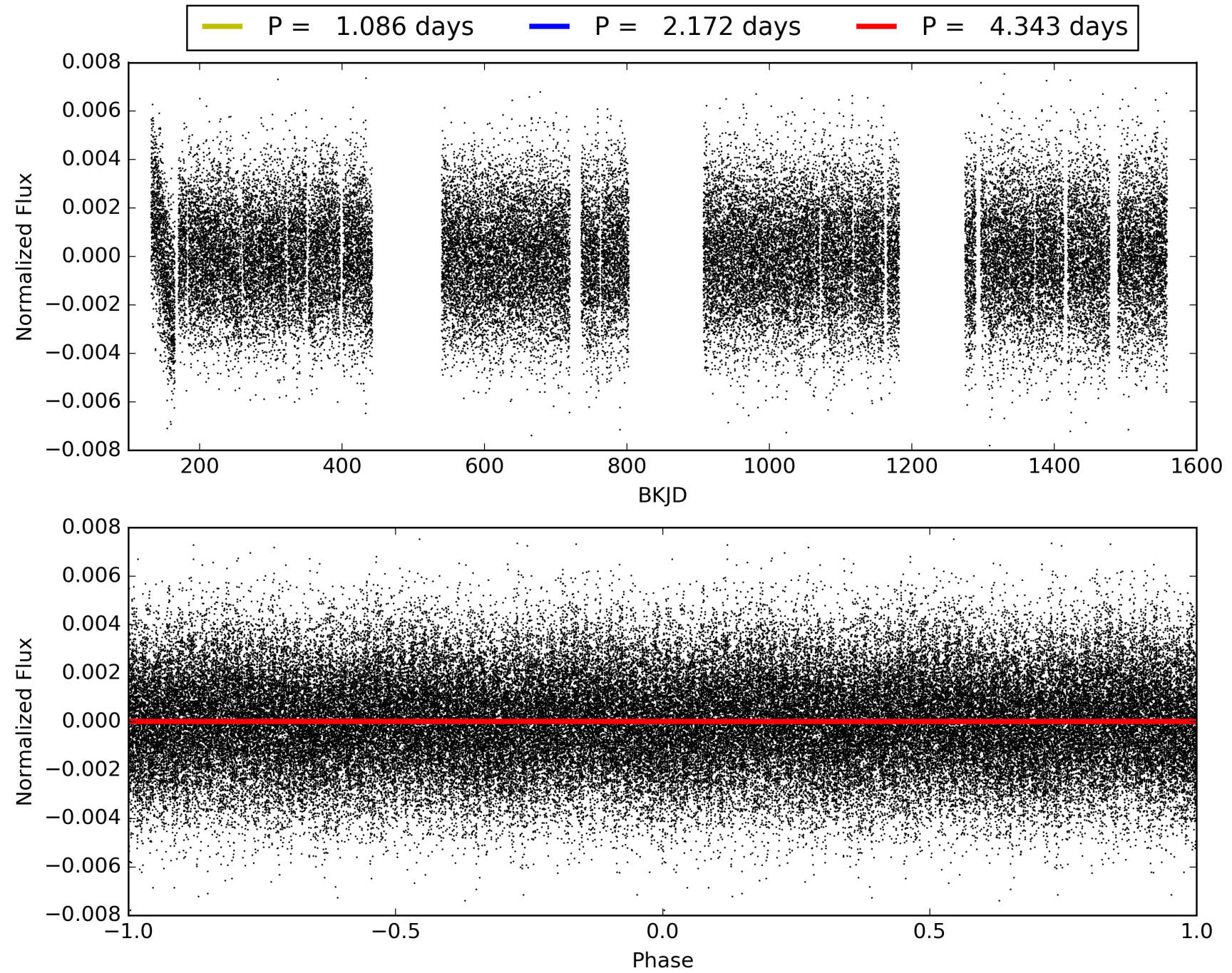
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:04:17 Z

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

TCE 006842139-01, PDC Light Curves

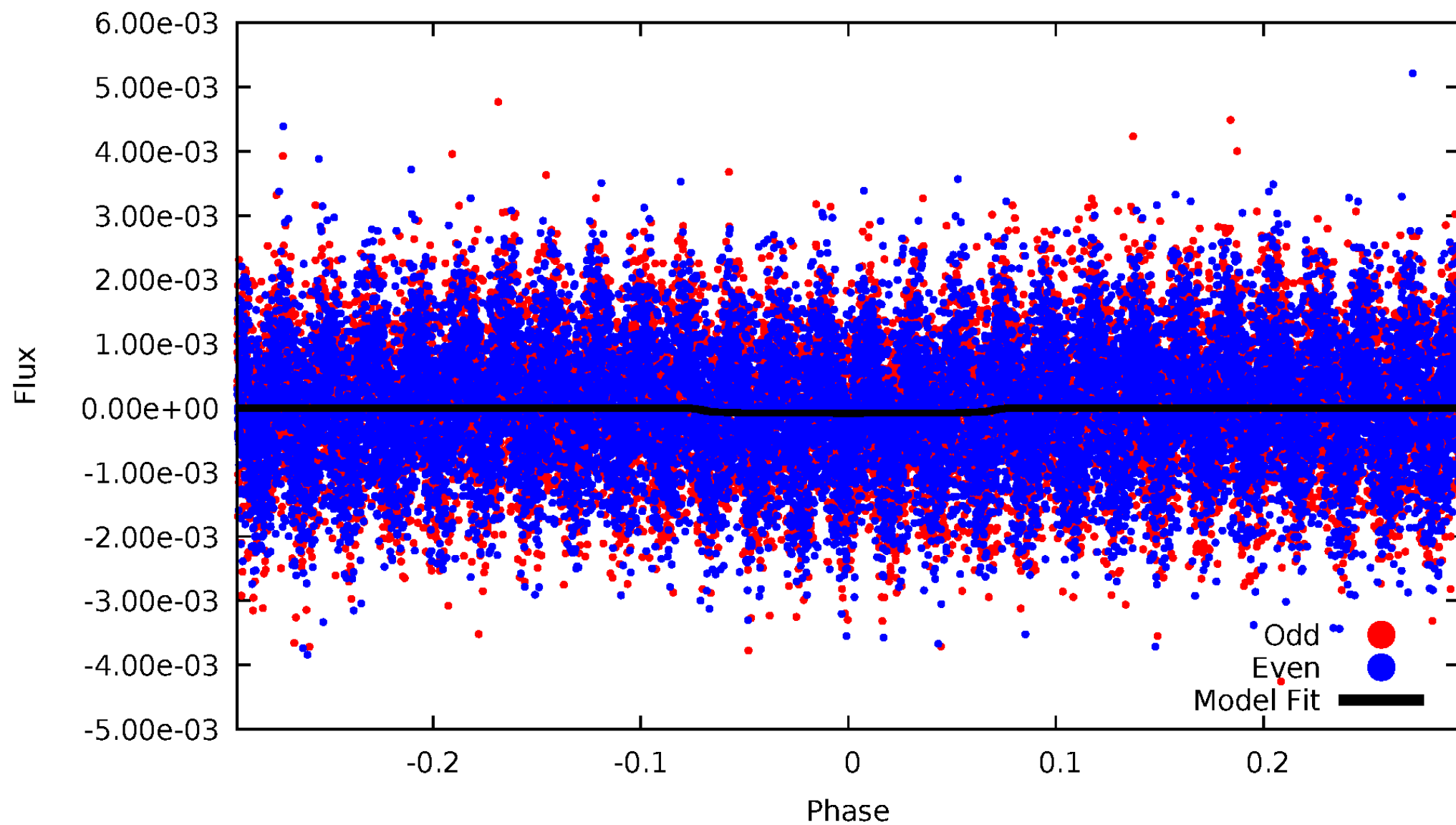


TCE 006842139-01



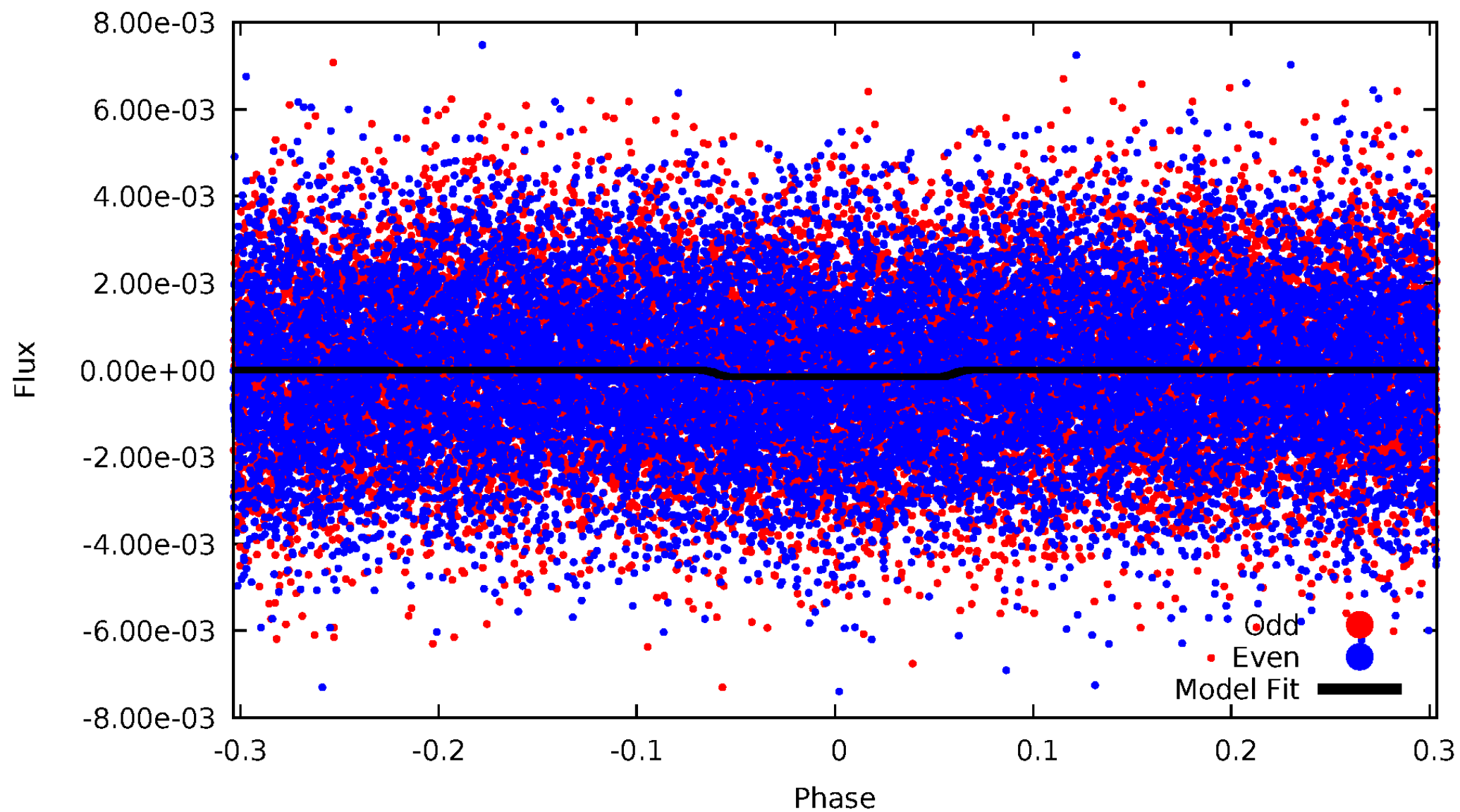
DV Odd/Even

TCE 006842139-01

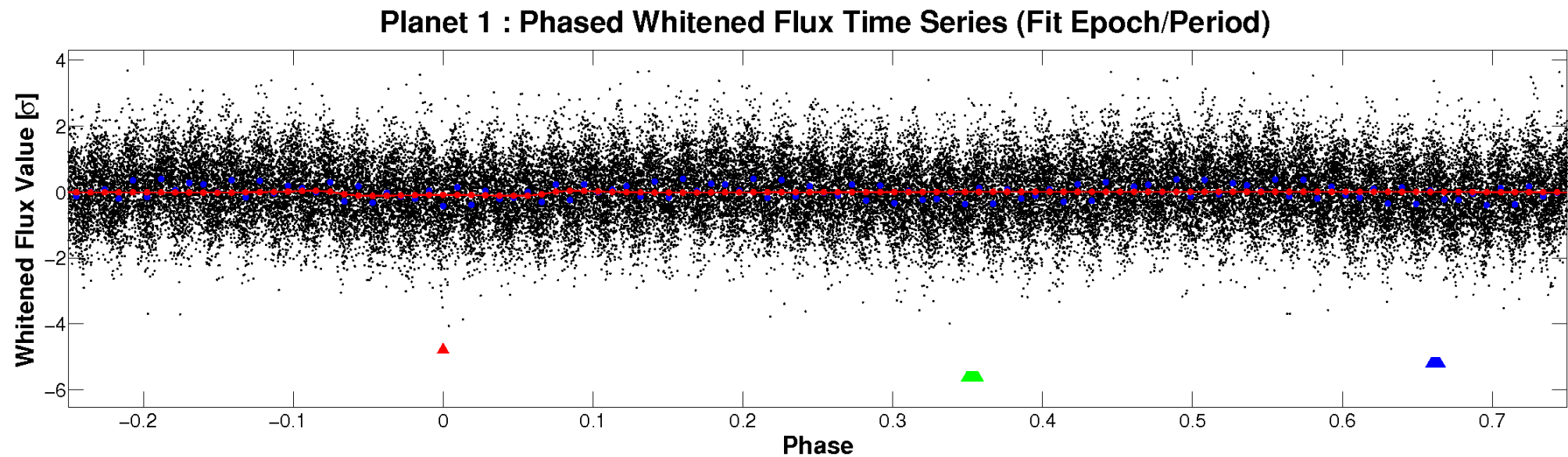
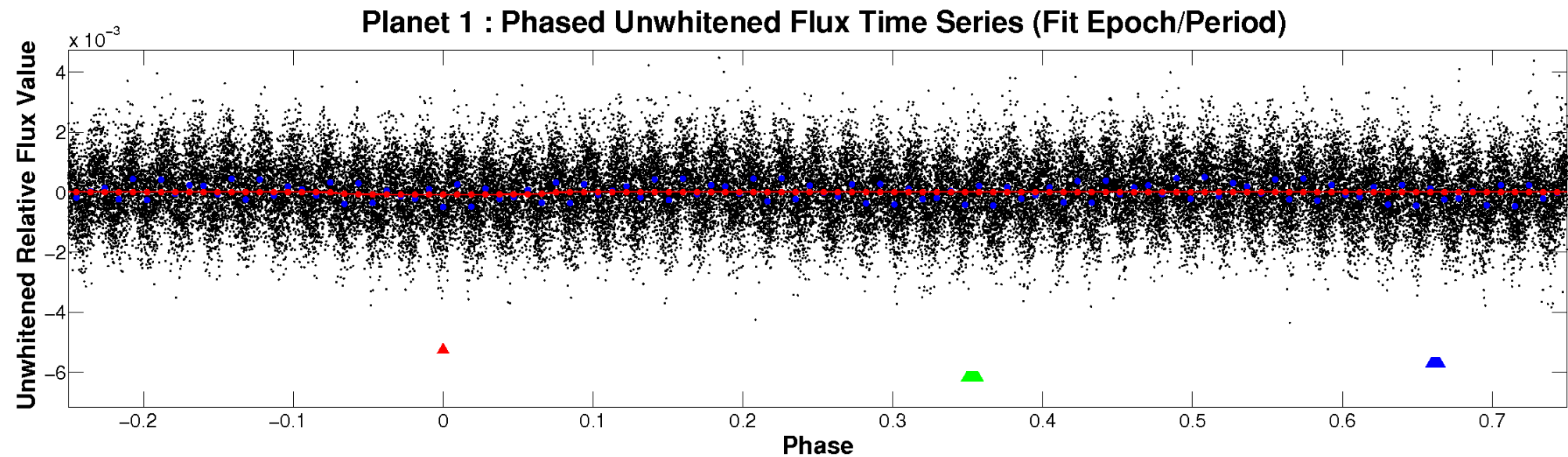


ALT Odd/Even

TCE 006842139-01

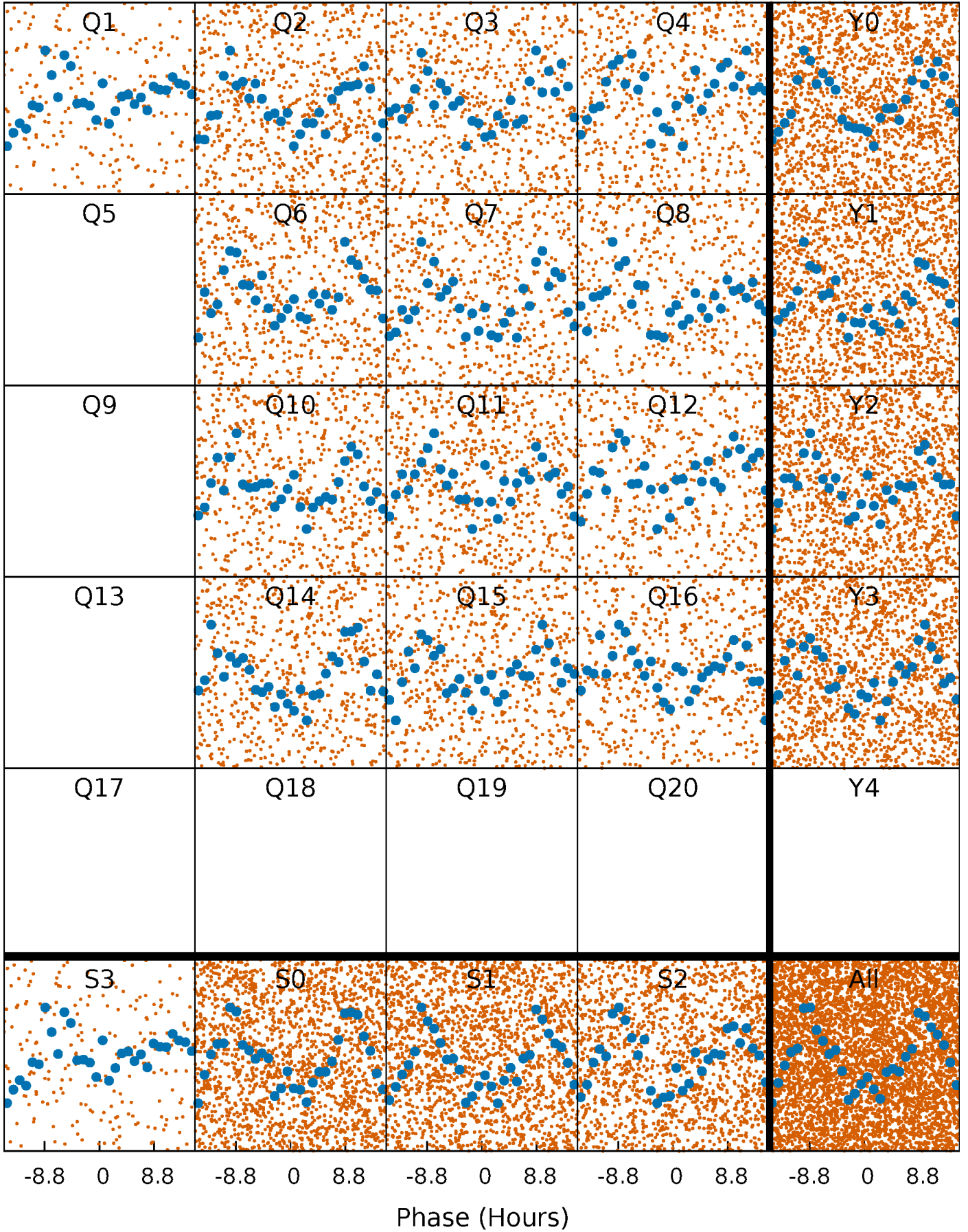


Non-Whitened Vs. Whitened Light Curve



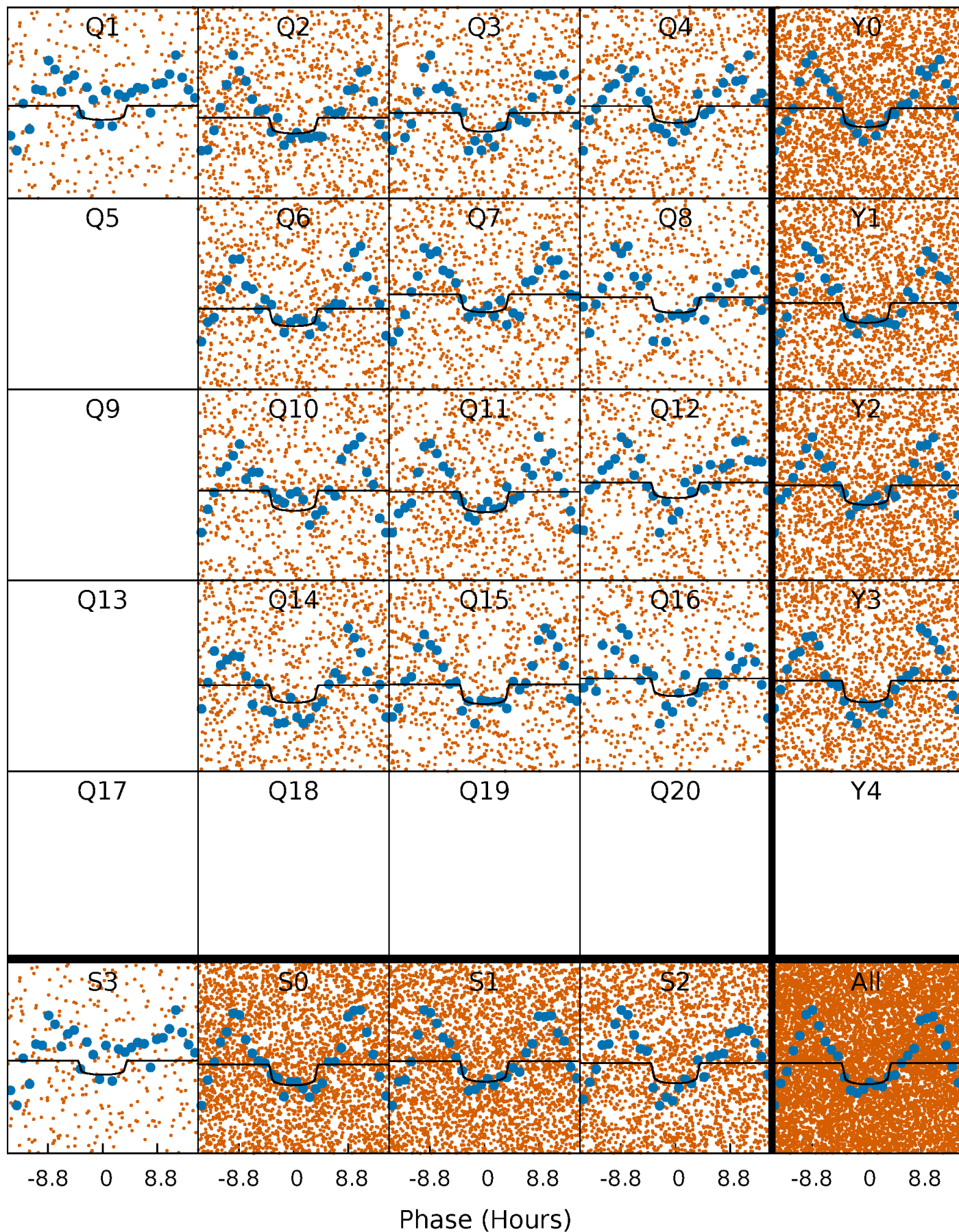
PDC Quarter-Phased Transit Curves

TCE 006842139-01 P= 2.171586 Days $T_0=131.871709$ (BKJD)



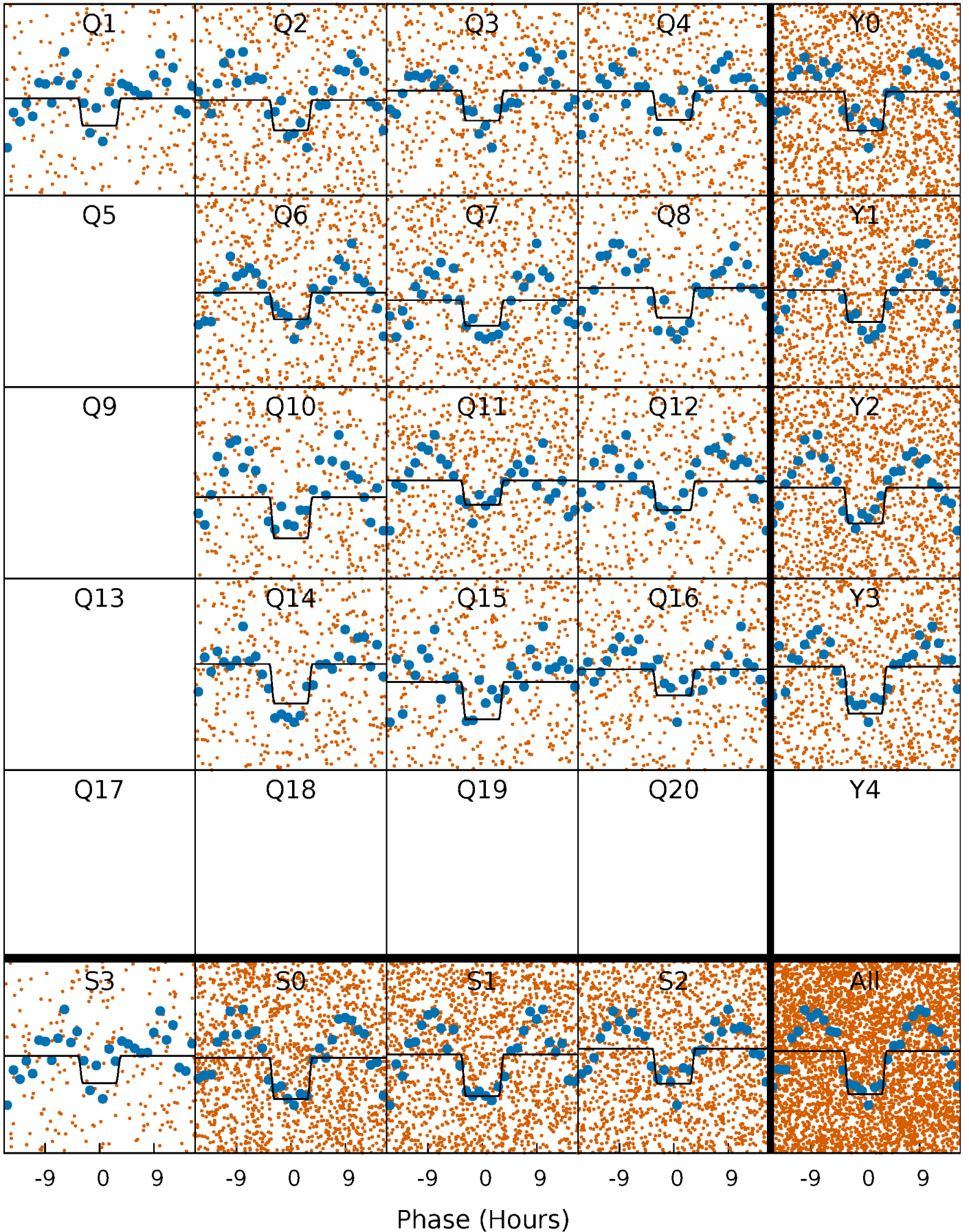
DV Quarter-Phased Transit Curves

TCE 006842139-01 P= 2.171586 Days $T_0=131.871709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

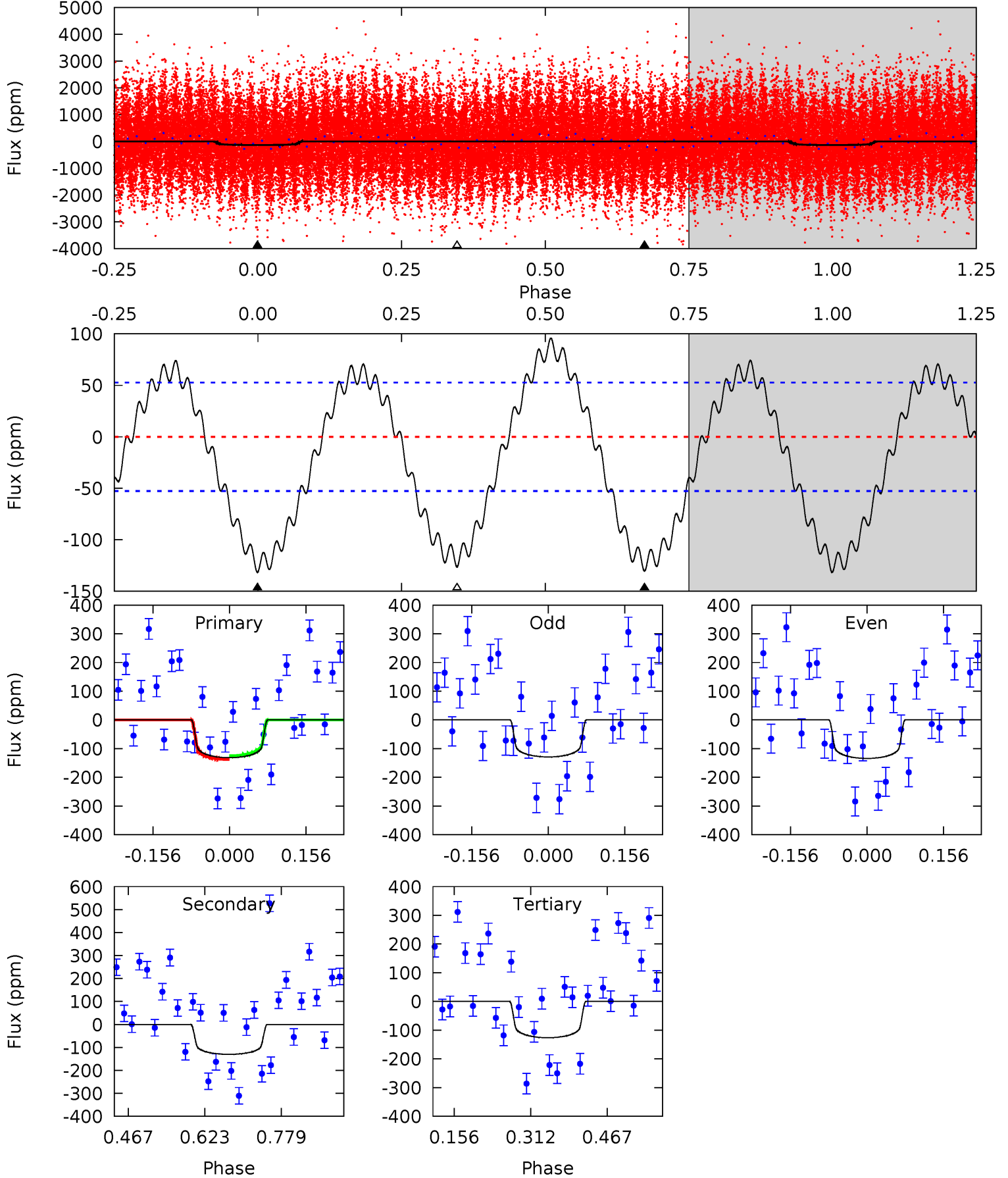
TCE 006842139-01 P= 2.171515 Days $T_0=131.912027$ (BKJD)



DV Model-Shift Uniqueness Test

006842139-01, P = 2.171586 Days, E = 129.700123 Days

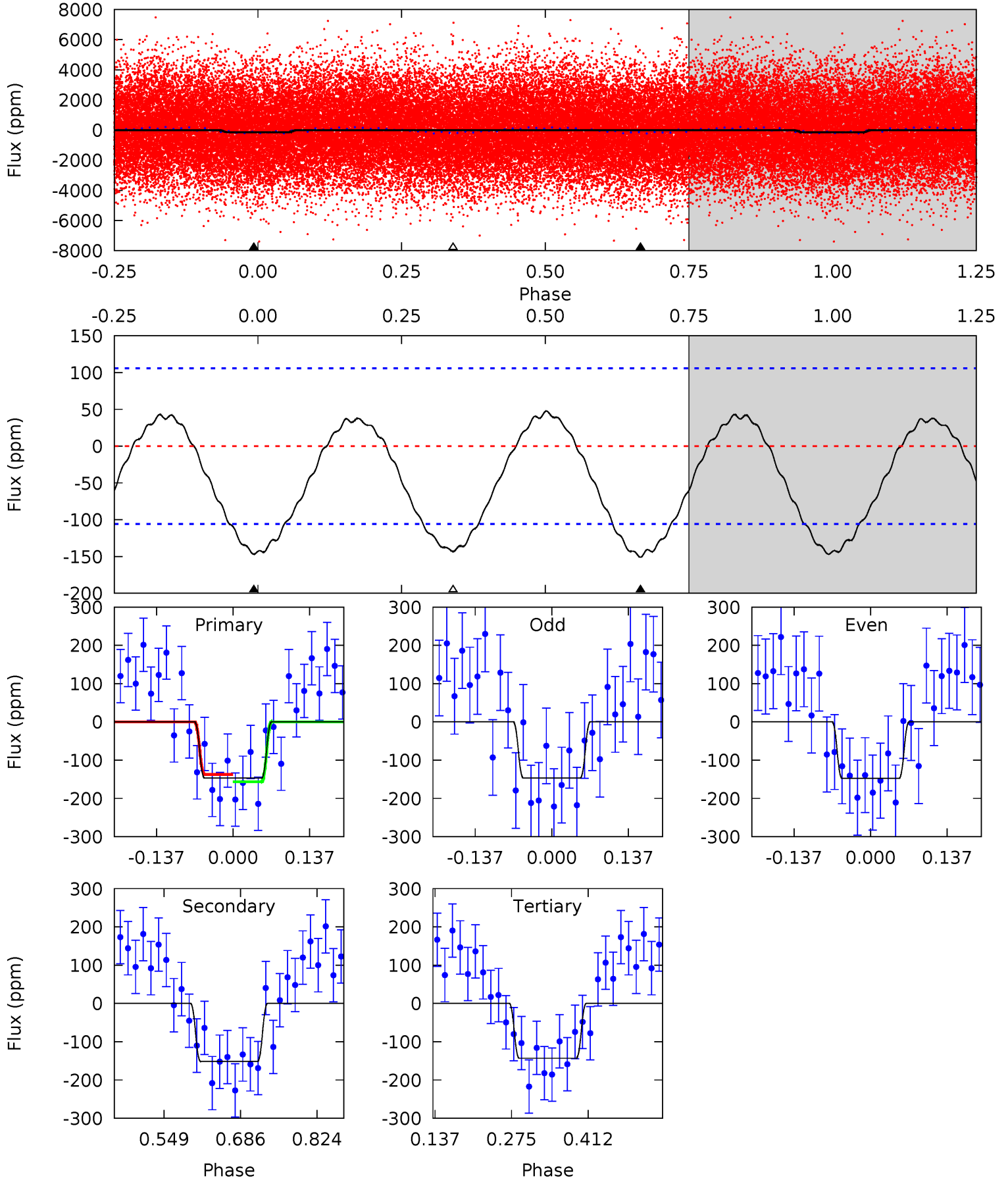
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	11.1	10.7	0	4.47	1.42	5.92	0.45	11.2	0.34	11.1	0.22	0.98	0.42	0.54



Alt Model-Shift Uniqueness Test

006842139-01, P = 2.171515 Days, E = 129.740512 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	6.42	6.09	0	4.50	1.49	2.83	0.16	6.24	0.34	6.42	0.03	1.04	0.24	0.40



Stellar Parameters For KIC 006842139

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7589^{+211}_{-342}	$4.023^{+0.165}_{-0.165}$	$0.120^{+0.200}_{-0.350}$	$2.169^{+0.528}_{-0.528}$	$1.809^{+0.170}_{-0.341}$	$0.250^{+0.252}_{-0.109}$
	+3%/-5%	+4%/-4%	+167%/-292%	+24%/-24%	+9%/-19%	+101%/-44%
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 006842139-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-130±12	$2.19^{+1.06}_{-0.94}$	3428^{+245}_{-229}	8466^{+4361}_{-1703}	23^{+47}_{-13}
Alt.	-151±24	$2.91^{+1.19}_{-1.04}$	3435^{+246}_{-243}	7366^{+2537}_{-1175}	15^{+23}_{-7}

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

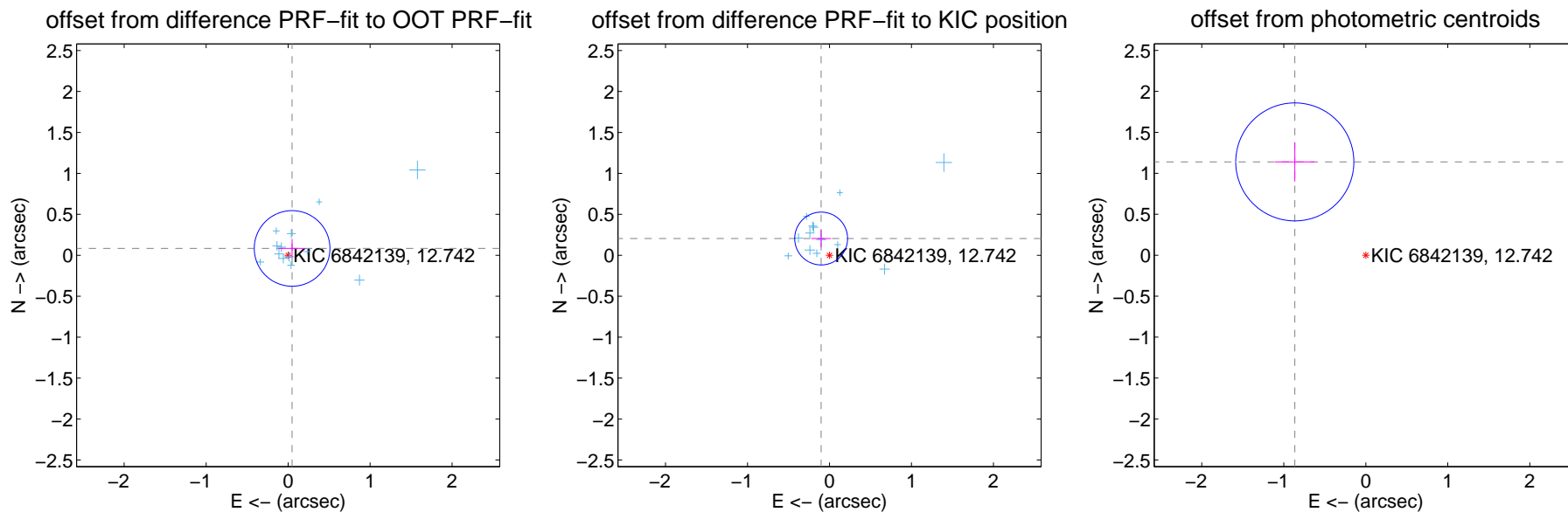
DV Centroid Data

Supplemental centroid analysis for 006842139-01. Kepler magnitude: 12.74. Transit SNR 8.32

There are 13 quarters with good PRF difference image offsets

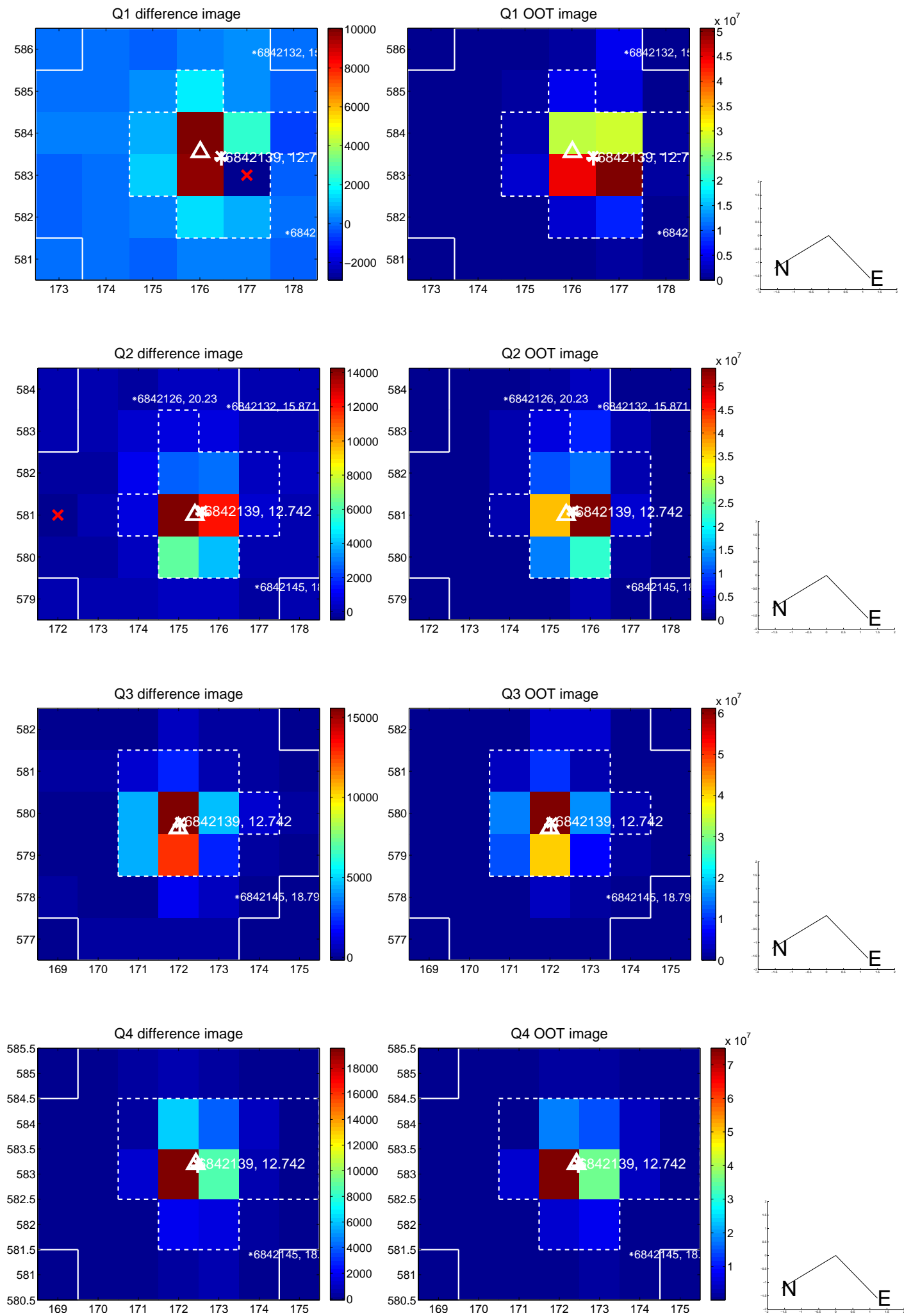
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.154	0.63	-0.049 ± 0.165	0.084 ± 0.114
PRF-fit source offset from KIC position	0.228 ± 0.108	2.12	0.102 ± 0.119	0.205 ± 0.104
photometric centroid source offset	1.43 ± 0.24	5.96	0.87 ± 0.24	1.14 ± 0.24

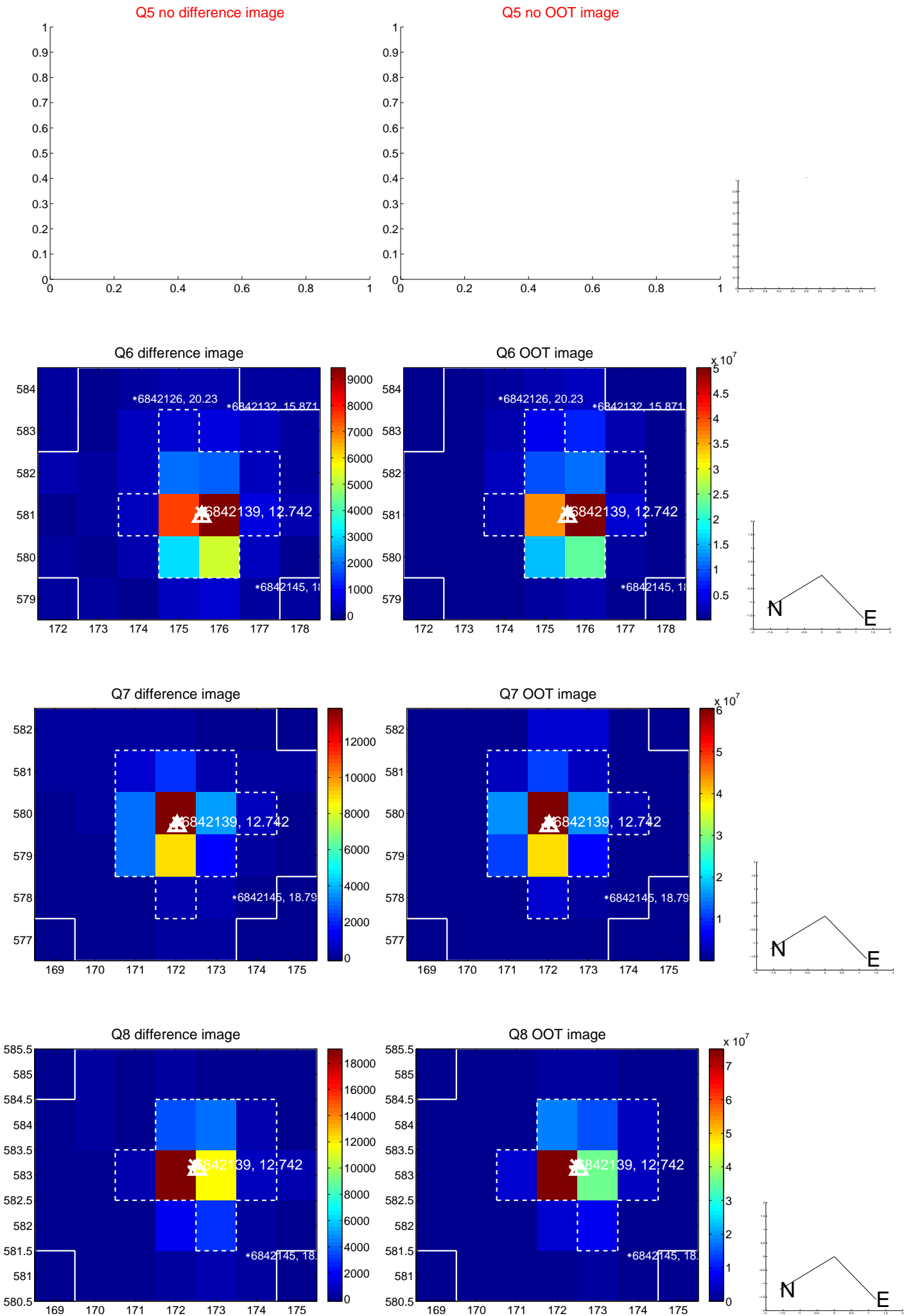


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

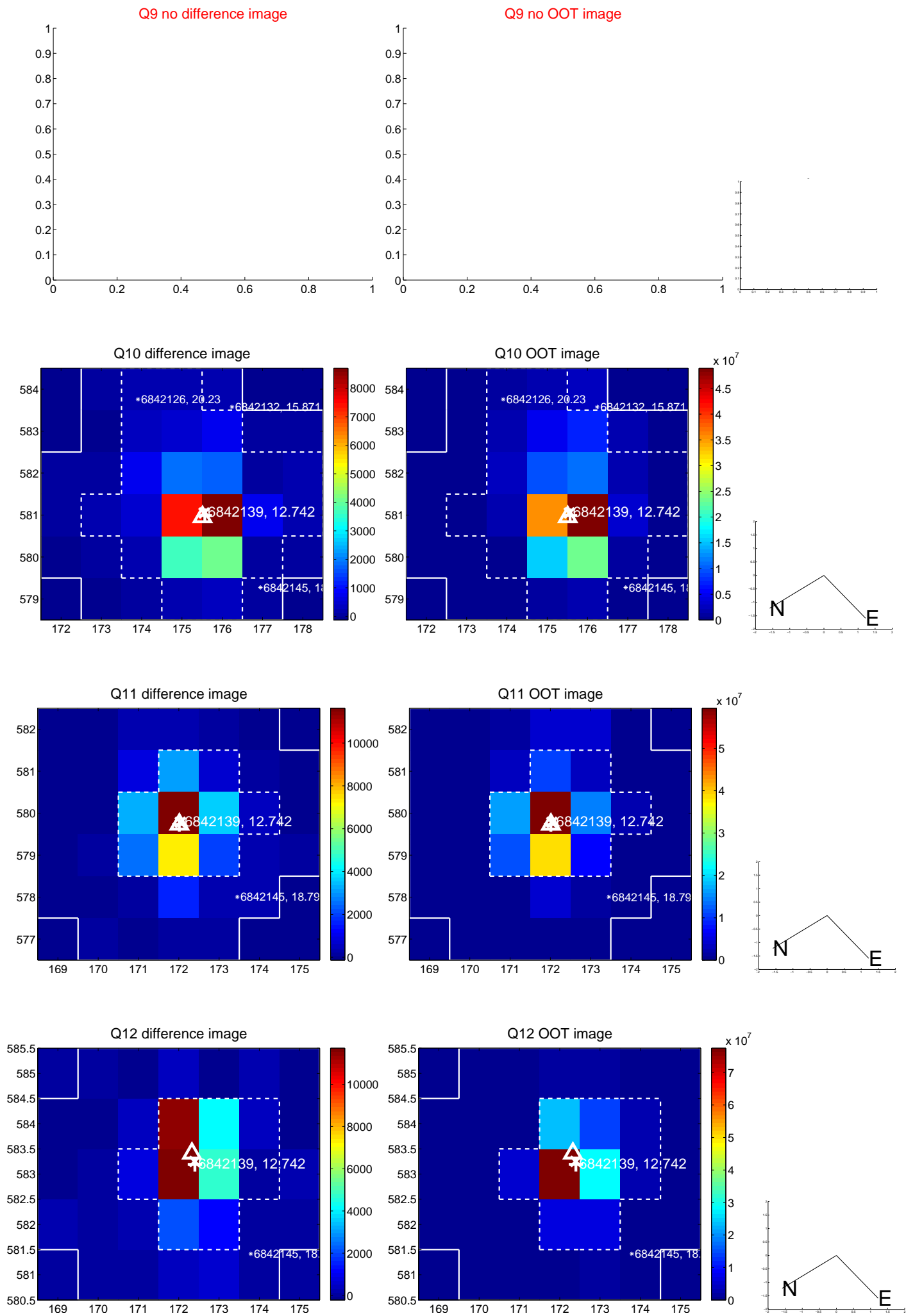
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



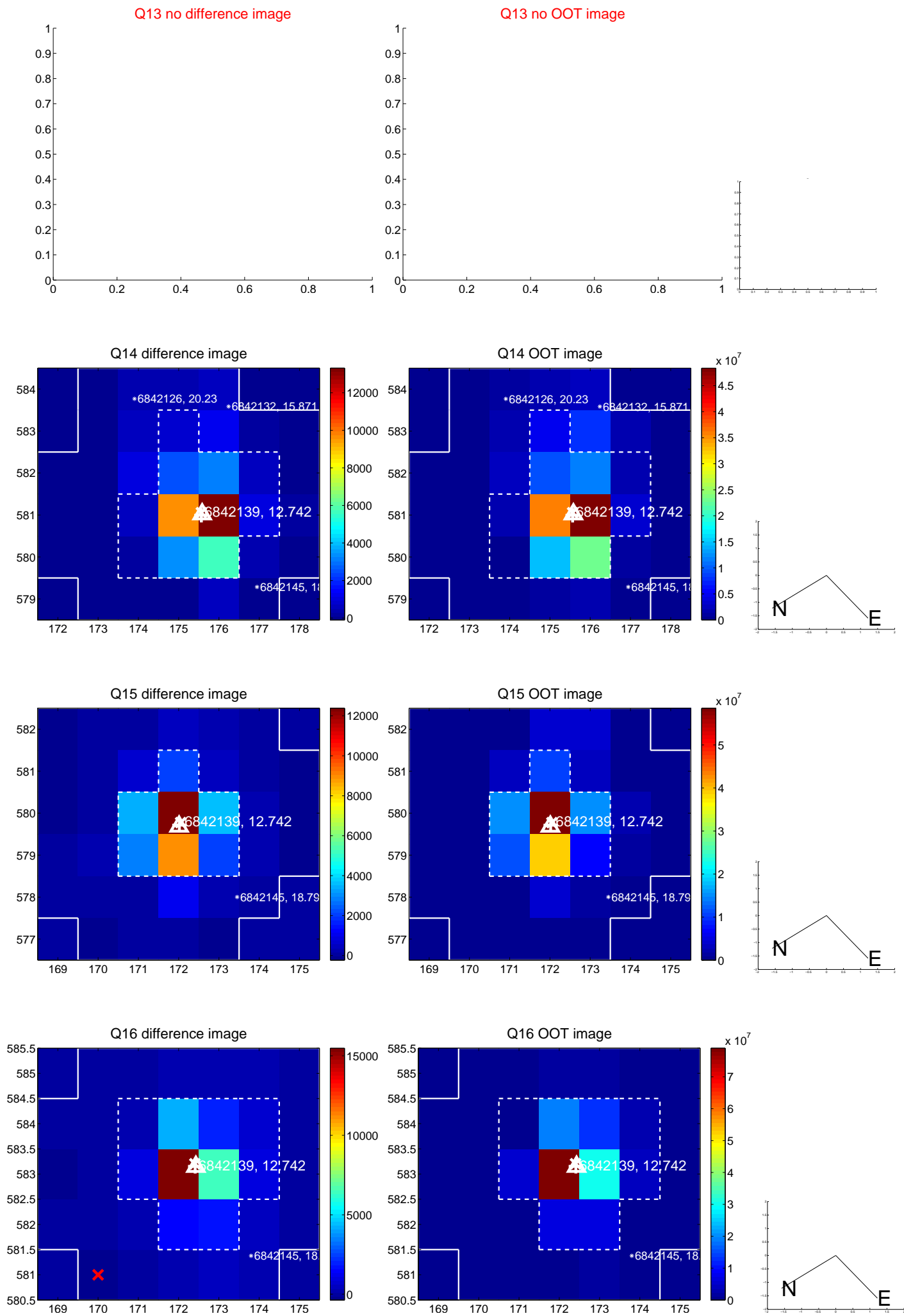
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



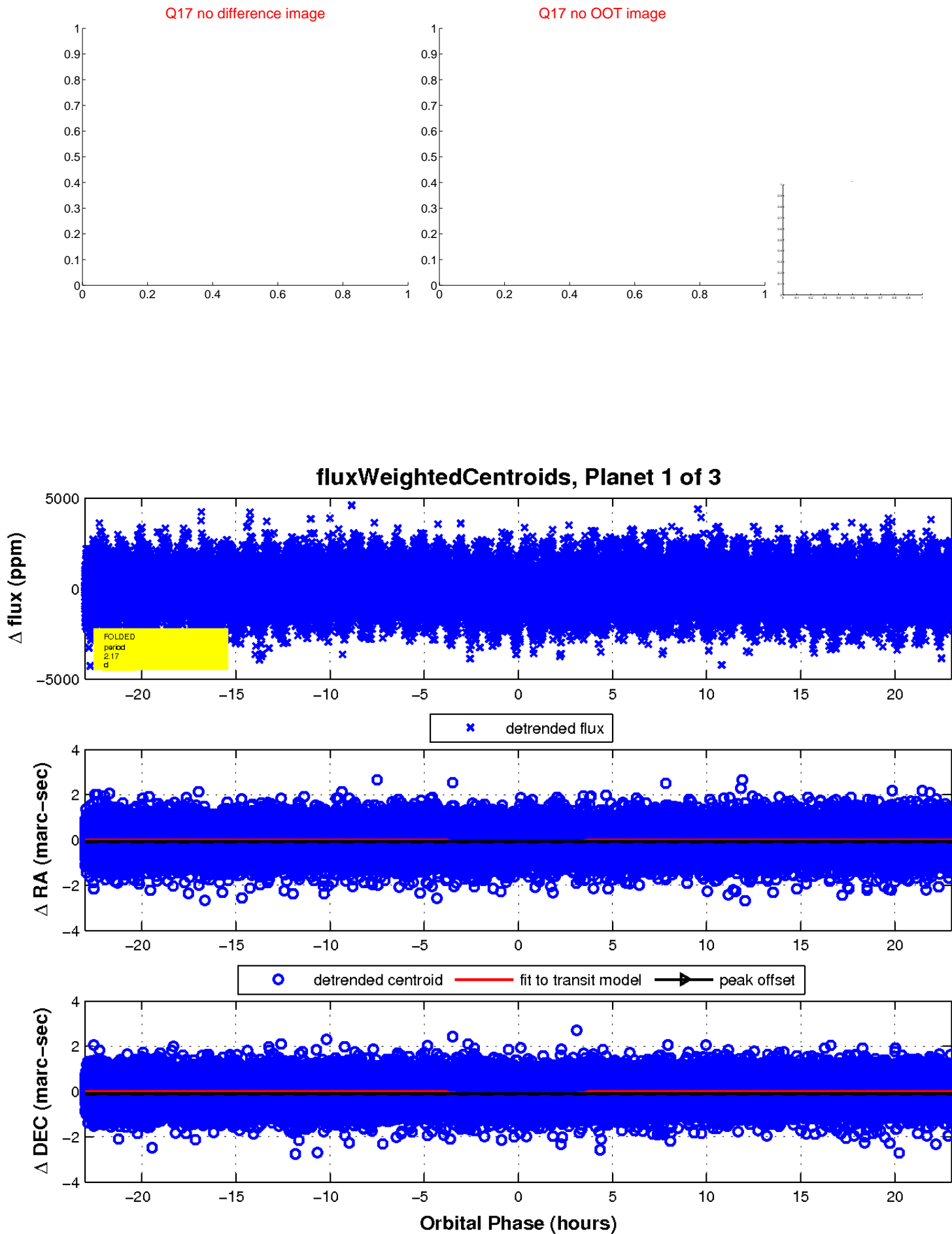
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

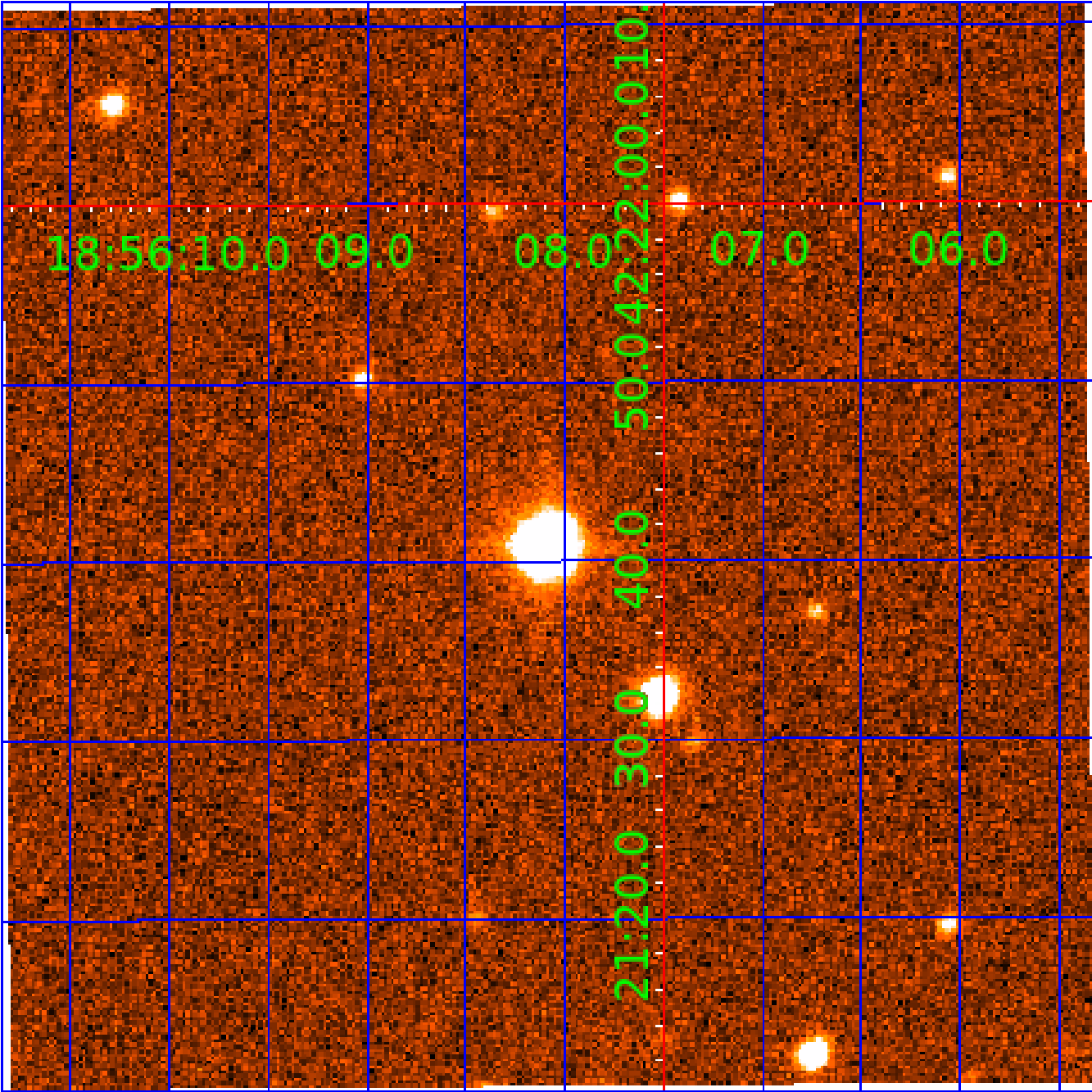


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006842139

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})
006842139-01	OBS	No	2.171586	131.871709	81.5	7.672	9.0	8.3	2.17	7589	2.22	8738.49
006842139-02	OBS	No	2.171604	133.303498	103.6	6.878	8.9	9.6	2.17	7589	2.63	8738.39
006842139-03	OBS	No	2.171561	132.646826	97.7	6.476	8.8	9.1	2.17	7589	2.23	8738.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006842139-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006842139-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006842139-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

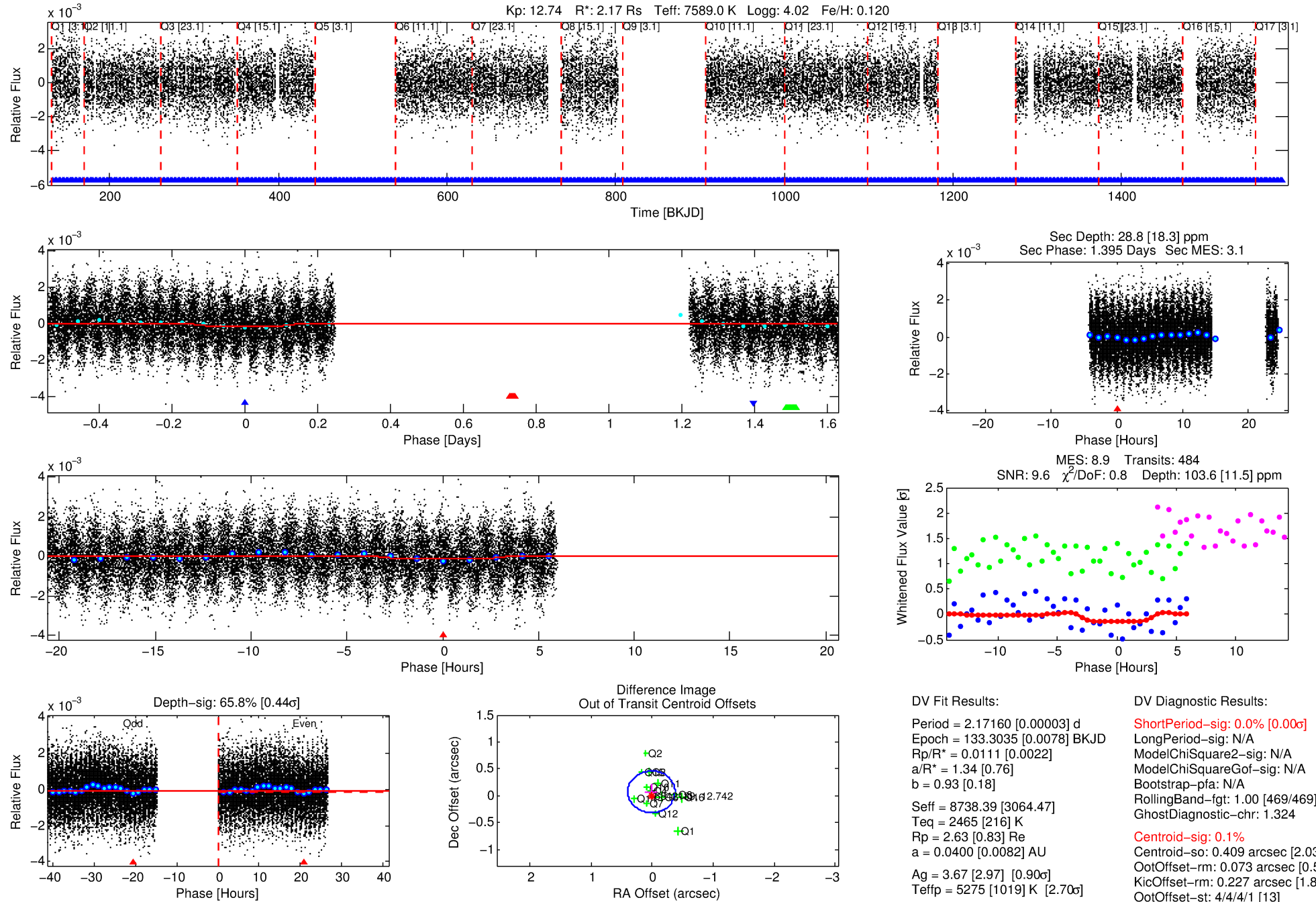
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006842139-02

No Significant Match Found

DV One-Page Summary

KIC: 6842139 Candidate: 2 of 3 Period: 2.172 d



DV Fit Results:

Period = 2.17160 [0.00003] d
Epoch = 133.3035 [0.0078] BKJD
Rp/R* = 0.0111 [0.0022]
a/R* = 1.34 [0.76]
b = 0.93 [0.18]
Seff = 8738.39 [3064.47]
Teq = 2465 [216] K
Rp = 2.63 [0.83] Re
a = 0.0400 [0.0082] AU
Ag = 3.67 [2.97] [0.90 σ]
Teffp = 5275 [1019] K [2.70 σ]

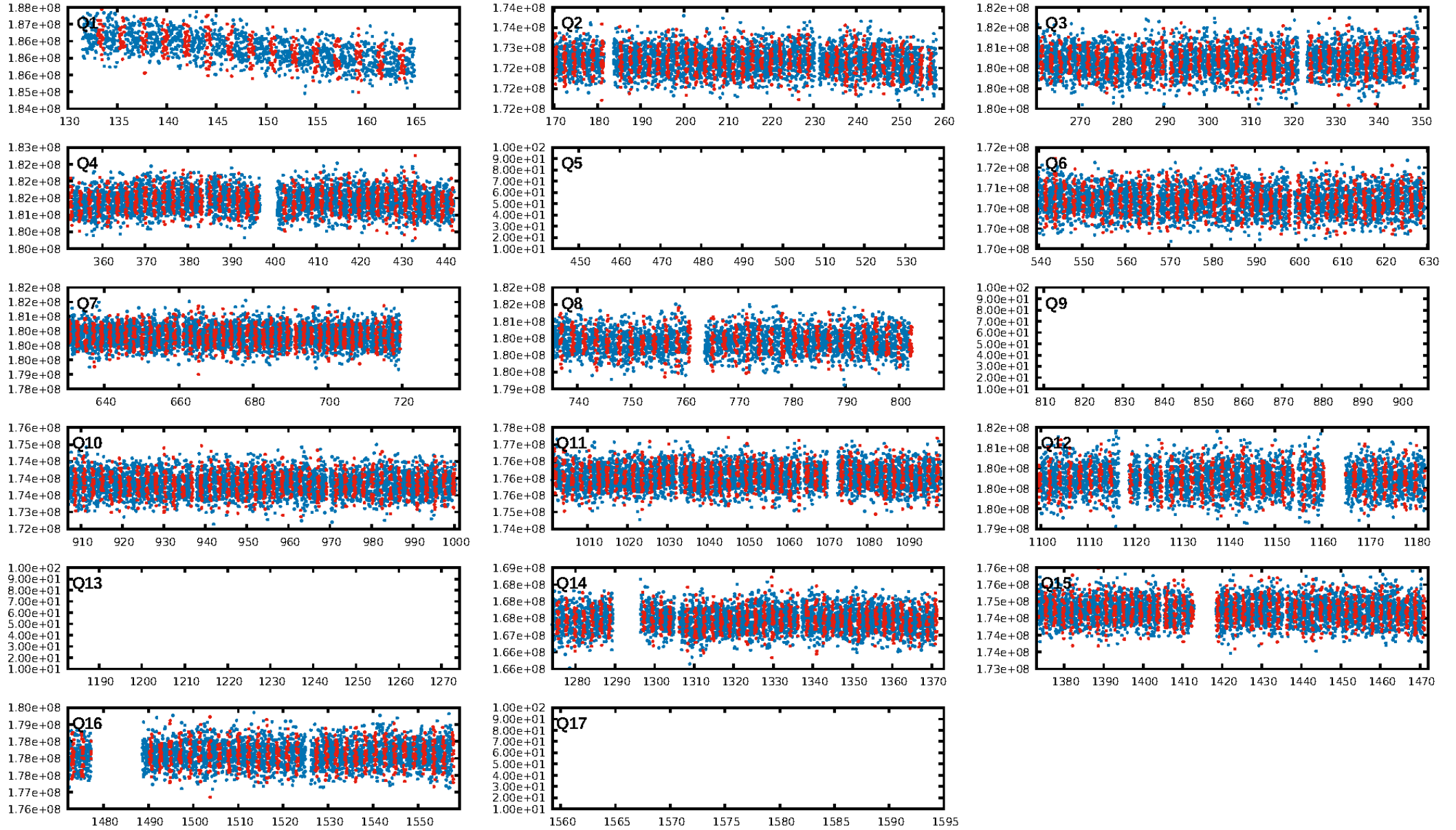
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [469/469]
GhostDiagnostic-chr: 1.324
Centroid-sig: 0.1%
Centroid-so: 0.409 arcsec [2.03 σ]
OotOffset-rm: 0.073 arcsec [0.57 σ]
KicOffset-rm: 0.227 arcsec [1.87 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.00 [0/13]

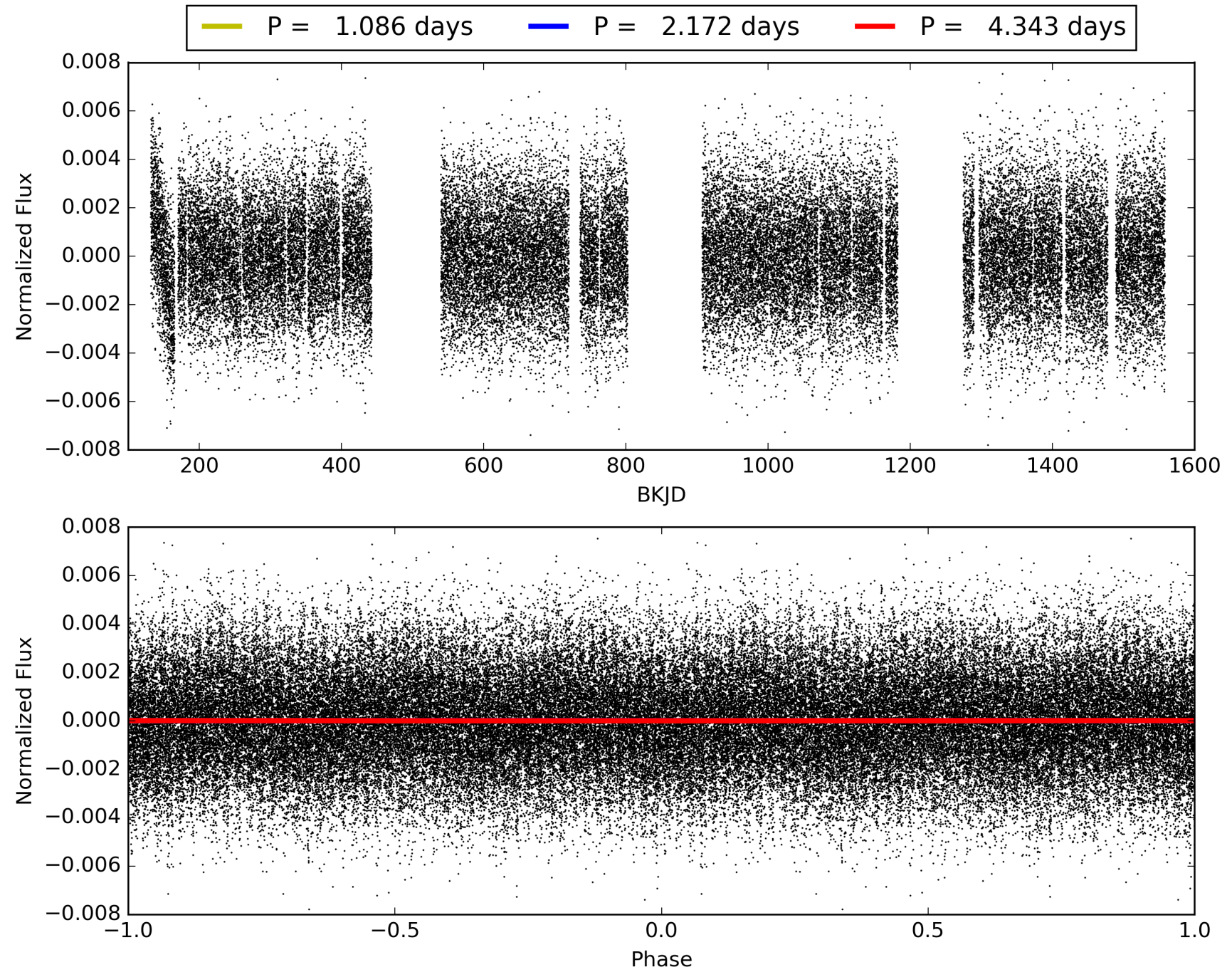
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:04:27 Z

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

TCE 006842139-02, PDC Light Curves

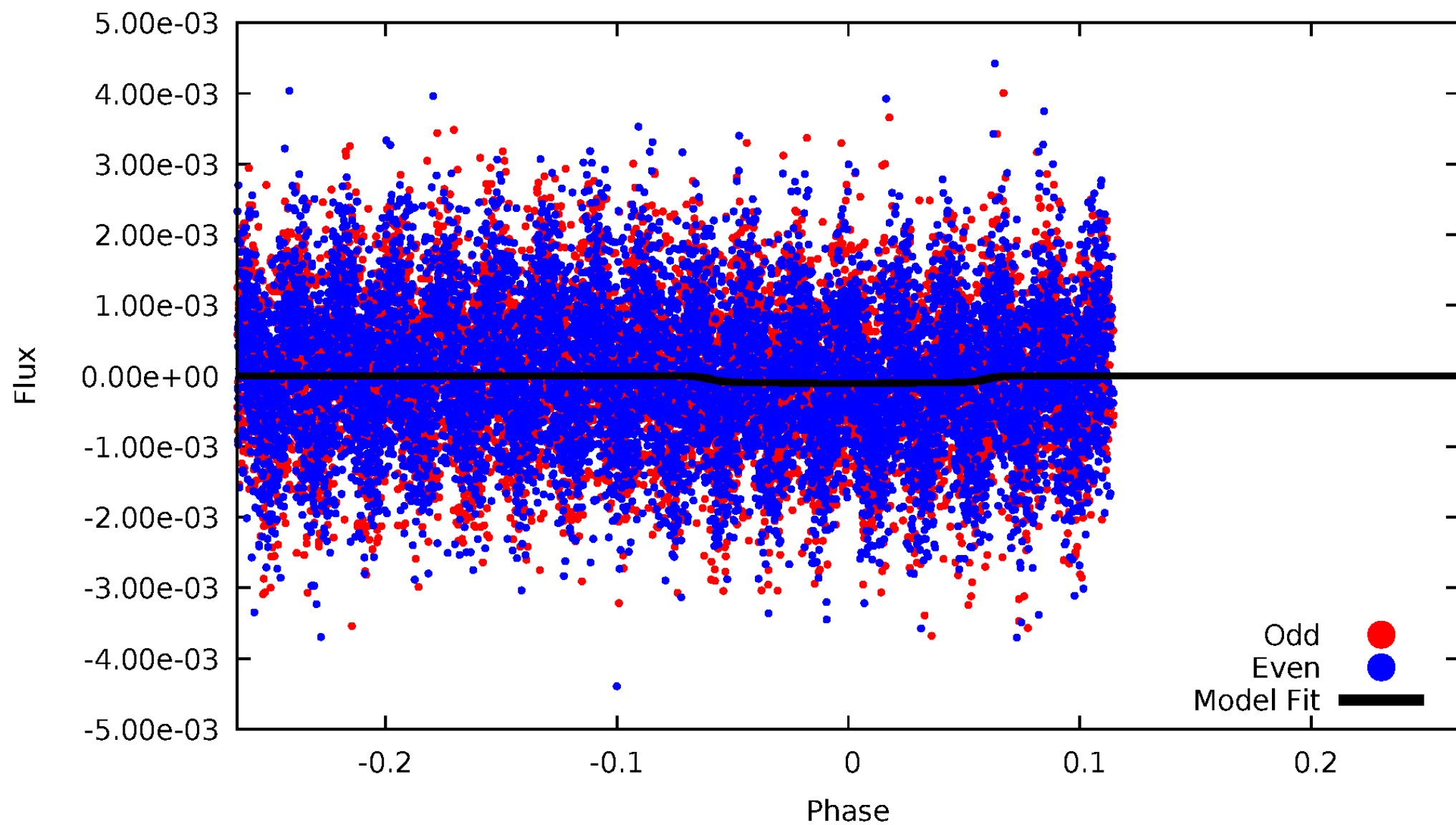


TCE 006842139-02



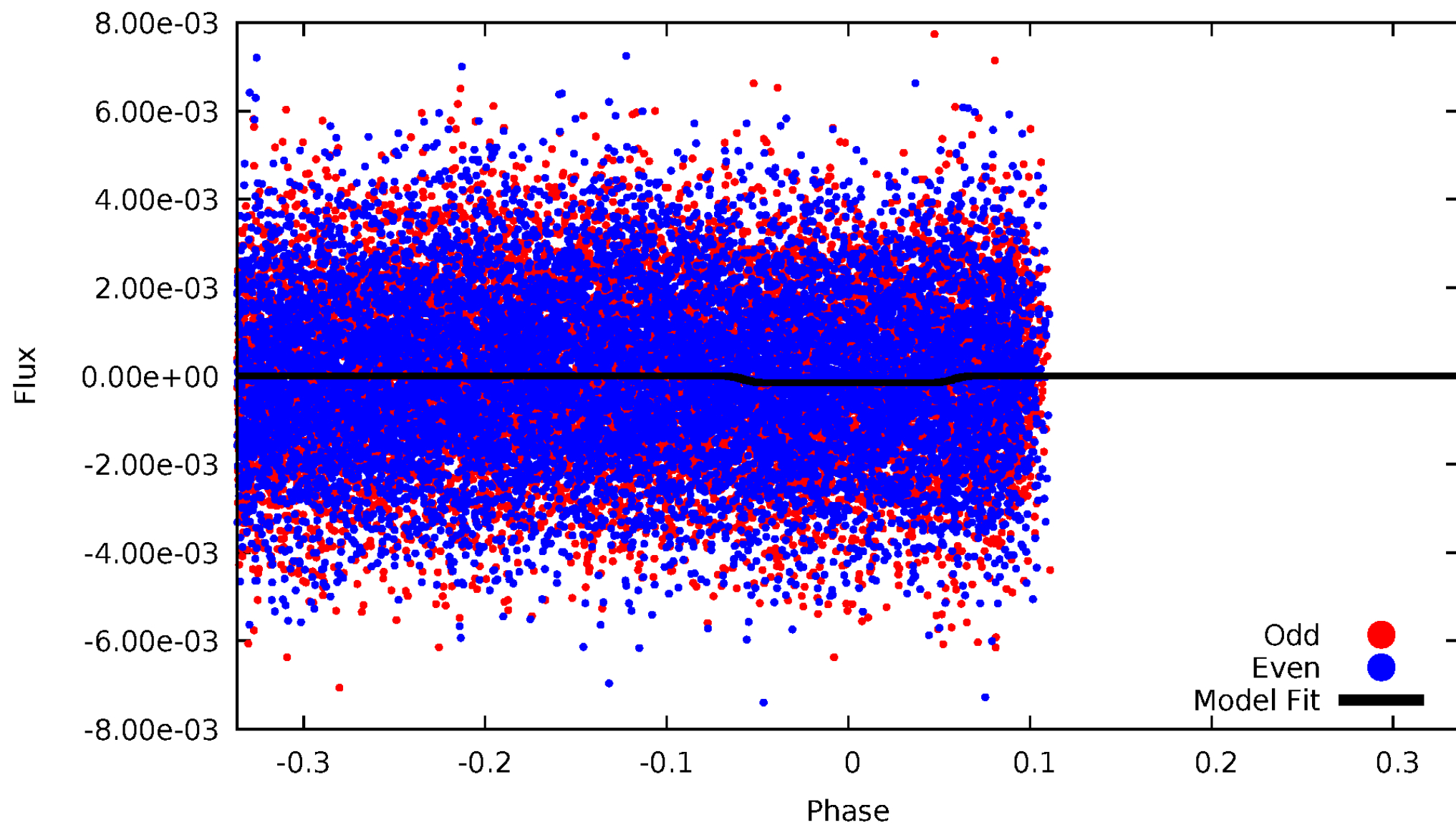
DV Odd/Even

TCE 006842139-02



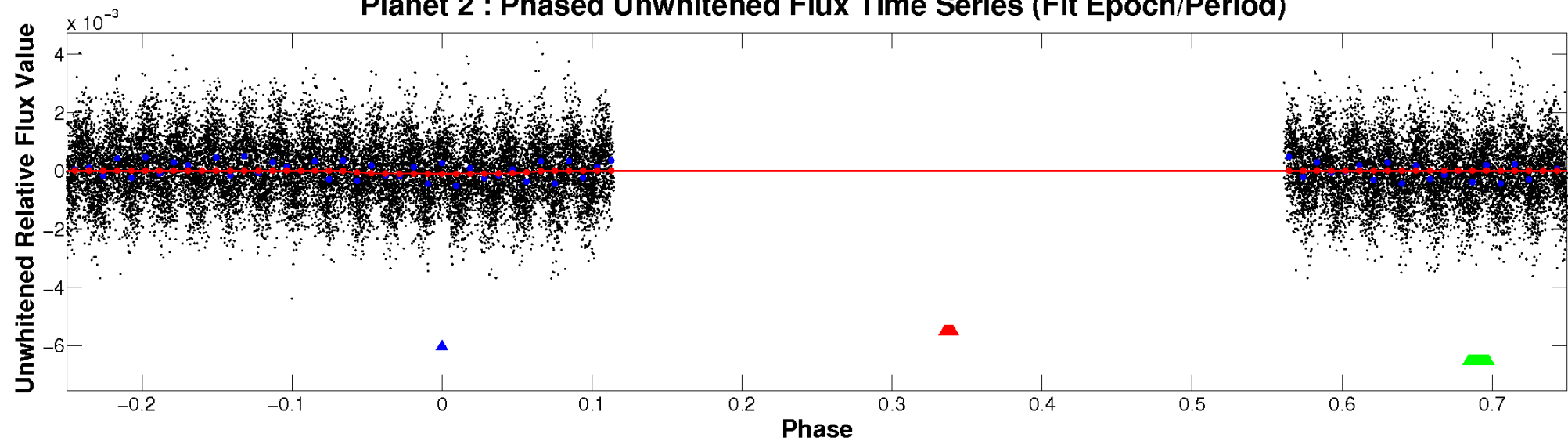
ALT Odd/Even

TCE 006842139-02

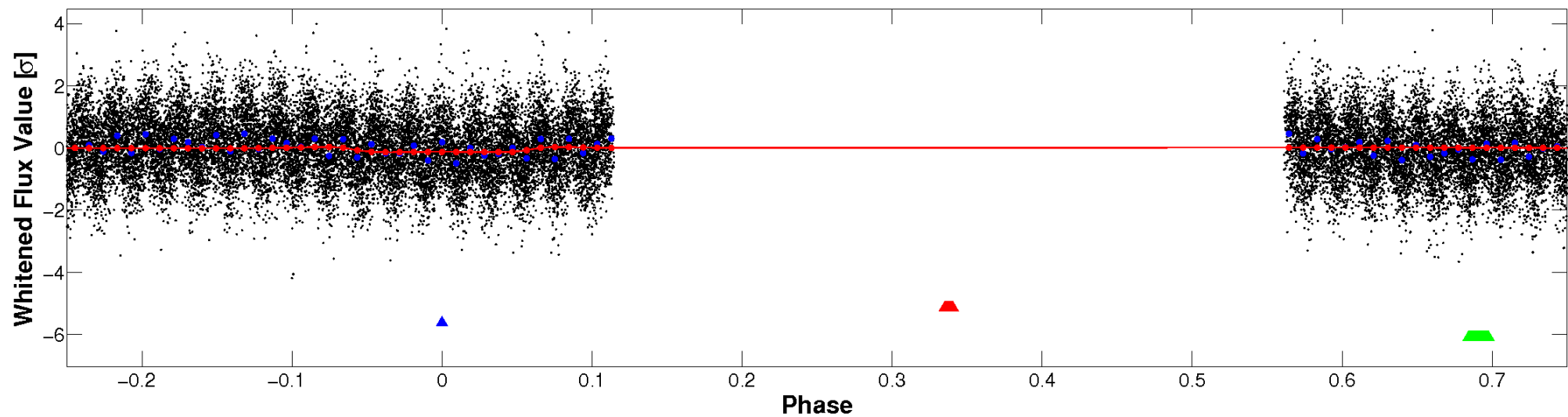


Non-Whitened Vs. Whitened Light Curve

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

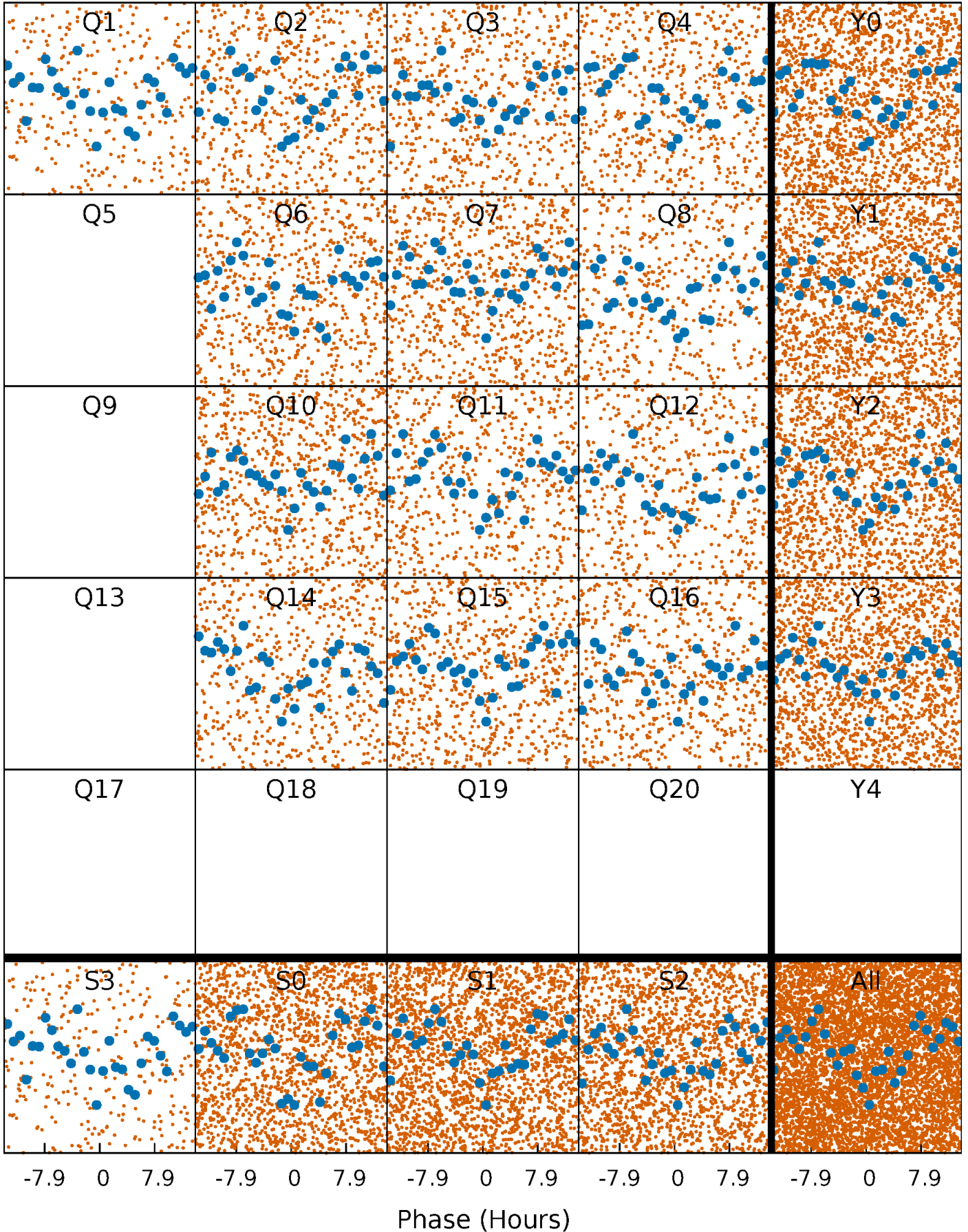


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



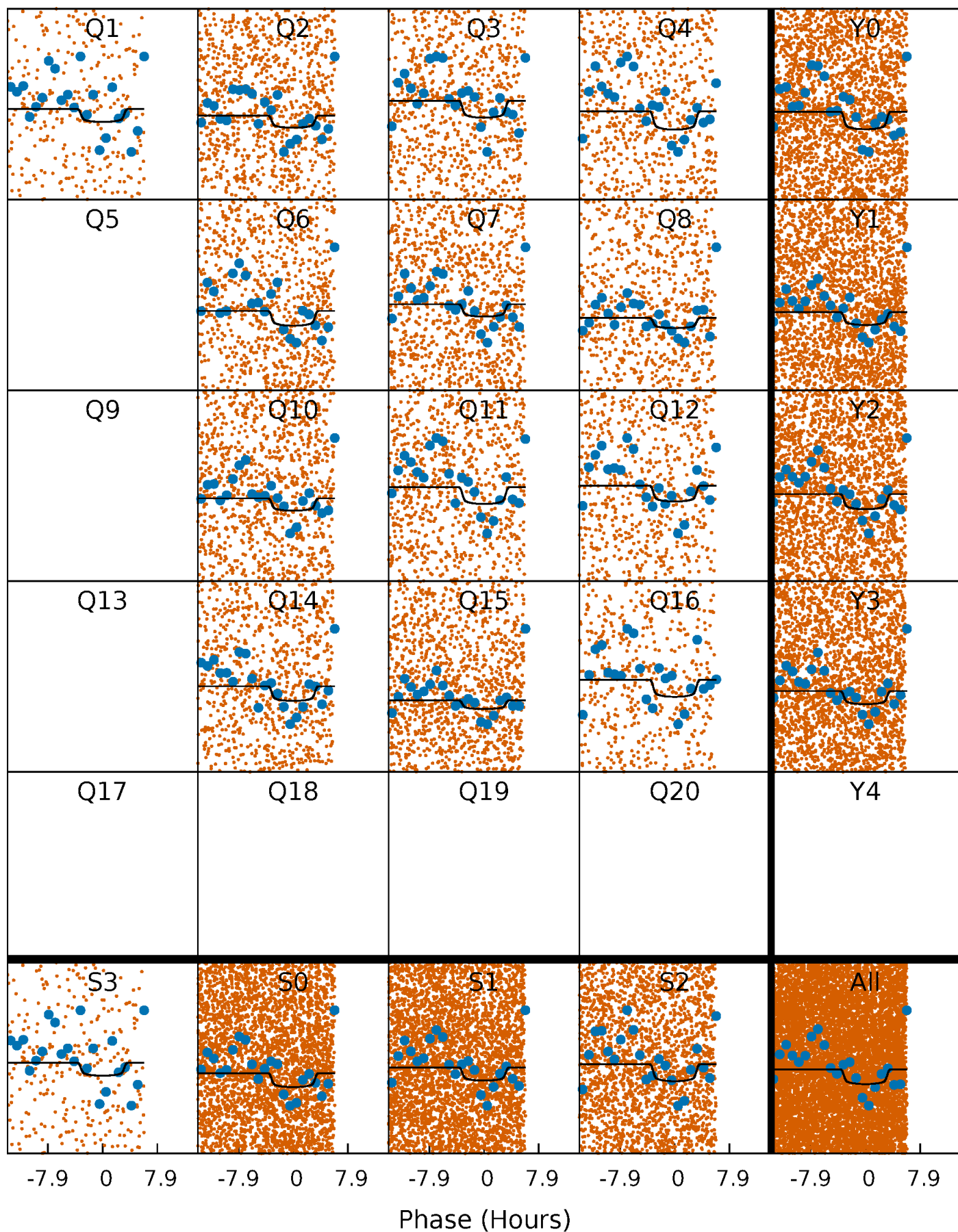
PDC Quarter-Phased Transit Curves

TCE 006842139-02 P= 2.171604 Days $T_0=133.303498$ (BKJD)



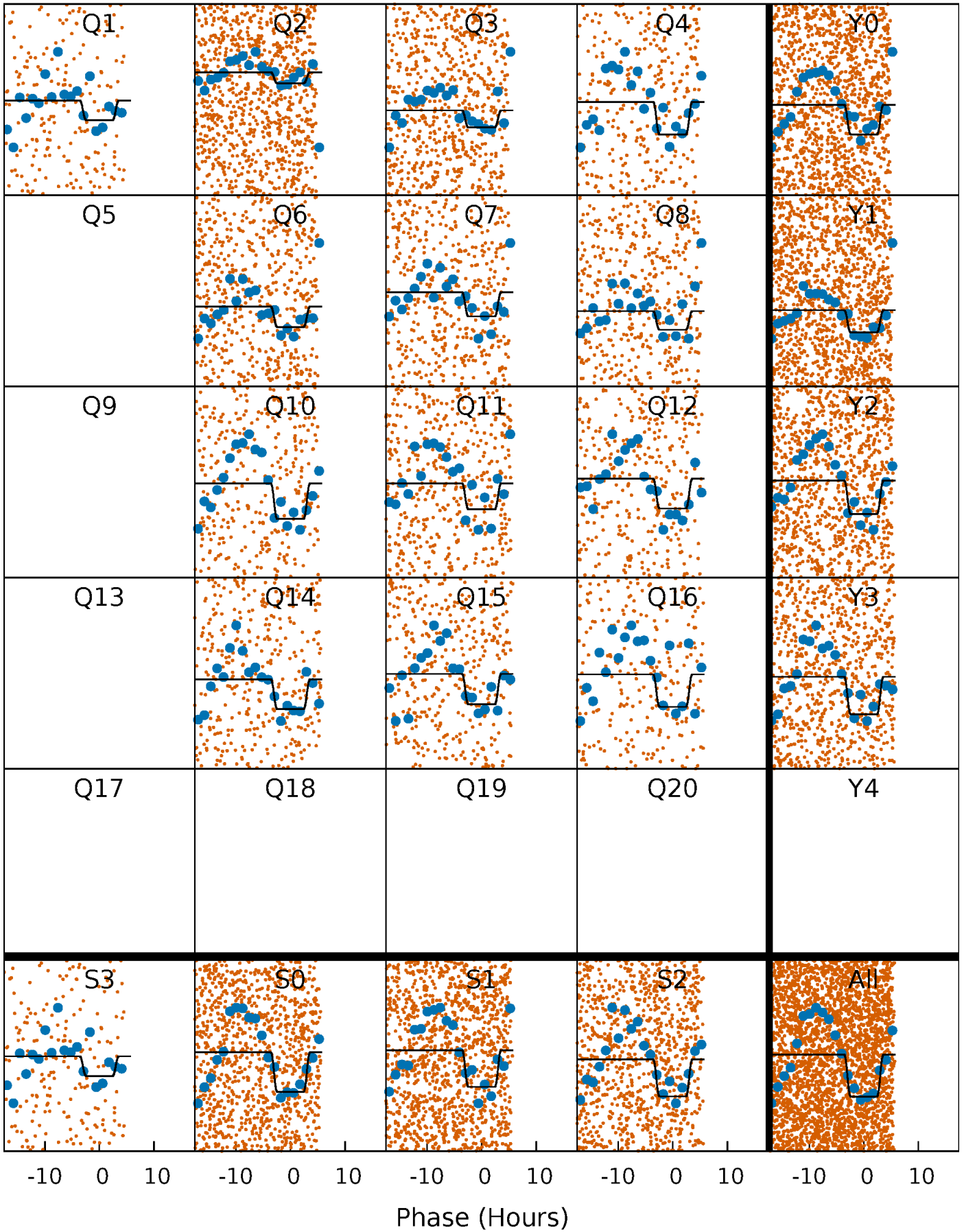
DV Quarter-Phased Transit Curves

TCE 006842139-02 P= 2.171604 Days $T_0=133.303498$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

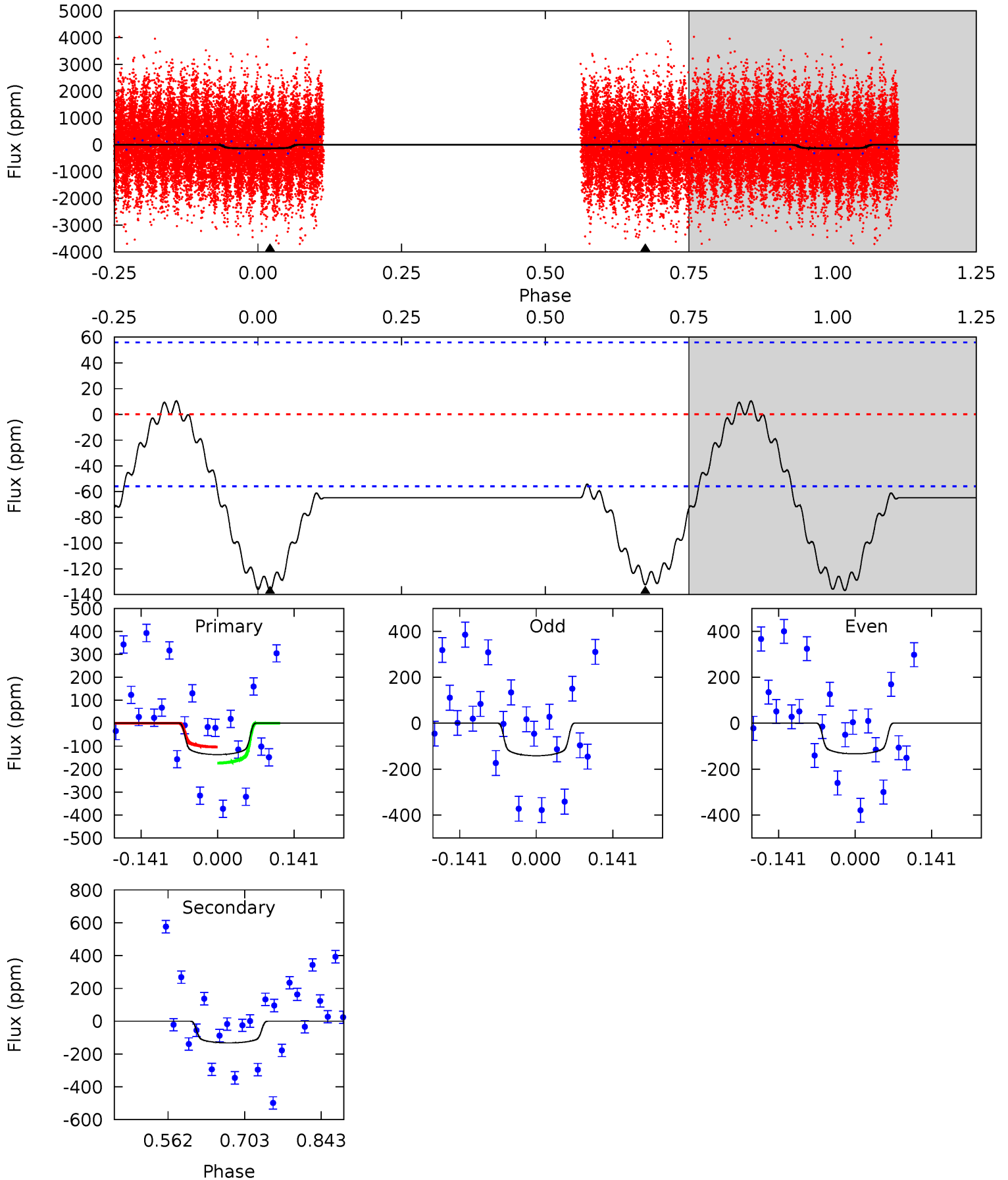
TCE 006842139-02 P= 2.171515 Days $T_0=133.358349$ (BKJD)



DV Model-Shift Uniqueness Test

006842139-02, P = 2.171604 Days, E = 131.131894 Days

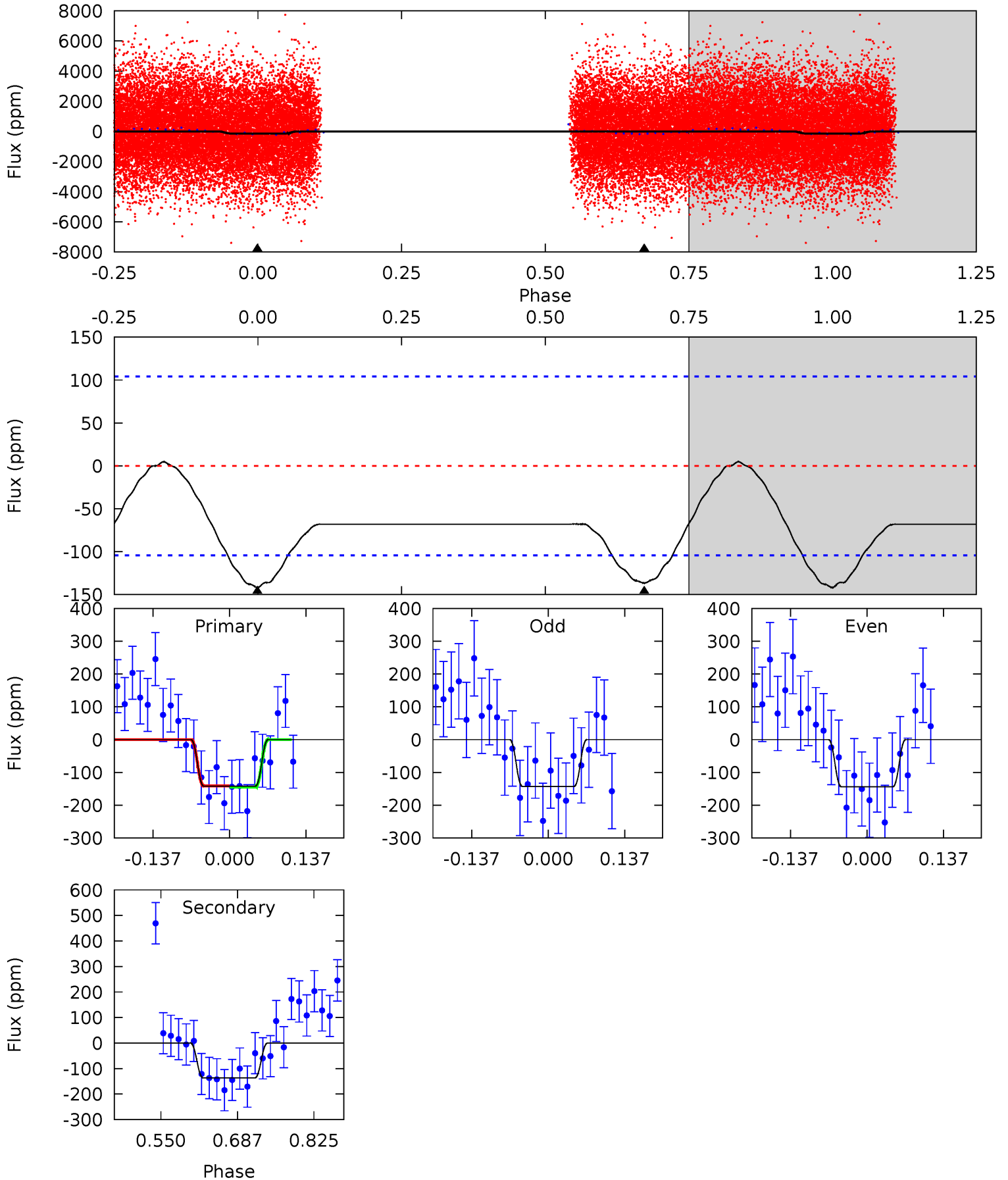
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	10.6	0	0	4.49	1.47	0.44	11.0	11.0	10.6	10.6	0.33	1.01	0.07	2.86



Alt Model-Shift Uniqueness Test

006842139-02, P = 2.171515 Days, E = 131.186834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.12	5.90	0	0	4.50	1.49	0.12	6.12	6.12	5.90	5.90	0.02	1.02	0.03	0.09



Stellar Parameters For KIC 006842139

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7589^{+211}_{-342}	$4.023^{+0.165}_{-0.165}$	$0.120^{+0.200}_{-0.350}$	$2.169^{+0.528}_{-0.528}$	$1.809^{+0.170}_{-0.341}$	$0.250^{+0.252}_{-0.109}$
	+3%/-5%	+4%/-4%	+167%/-292%	+24%/-24%	+9%/-19%	+101%/-44%
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 006842139-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-132 ± 12	$2.65^{+0.62}_{-0.63}$	3459^{+252}_{-235}	7639^{+1273}_{-819}	16^{+11}_{-6}
Alt.	-137 ± 23	$2.92^{+0.68}_{-0.65}$	3448^{+248}_{-244}	7250^{+1074}_{-785}	14^{+9}_{-5}

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

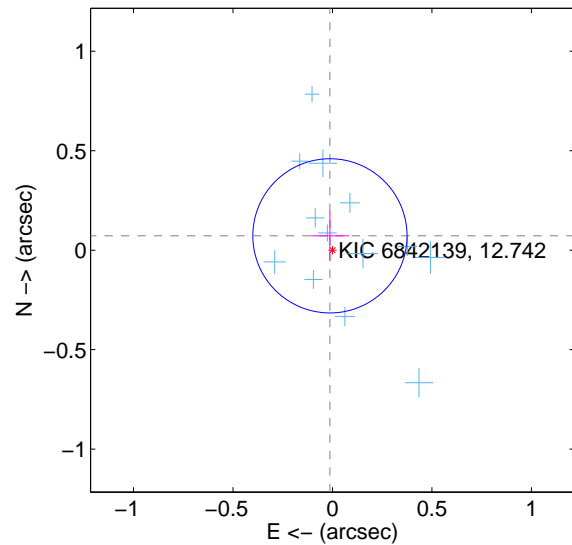
Supplemental centroid analysis for 006842139-02. Kepler magnitude: 12.74. Transit SNR 9.58

There are 13 quarters with good PRF difference image offsets

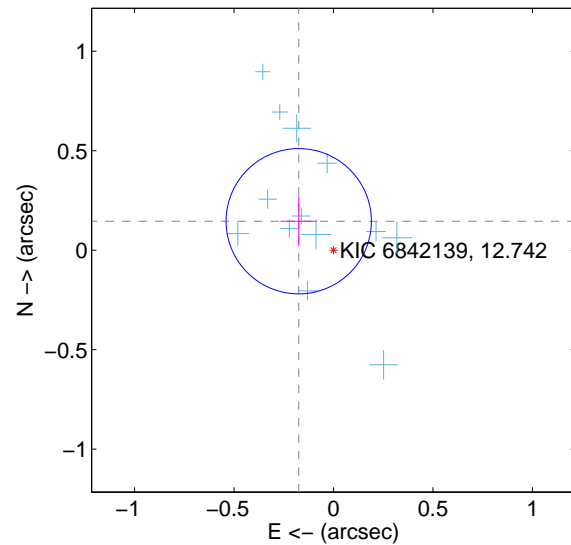
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.073 ± 0.129	0.57	0.013 ± 0.095	0.072 ± 0.125
PRF-fit source offset from KIC position	0.227 ± 0.122	1.87	0.175 ± 0.092	0.146 ± 0.126
photometric centroid source offset	0.41 ± 0.20	2.03	0.34 ± 0.20	0.23 ± 0.20

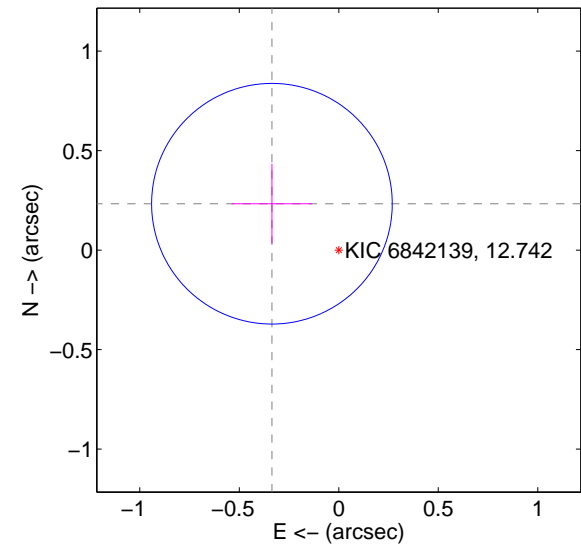
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

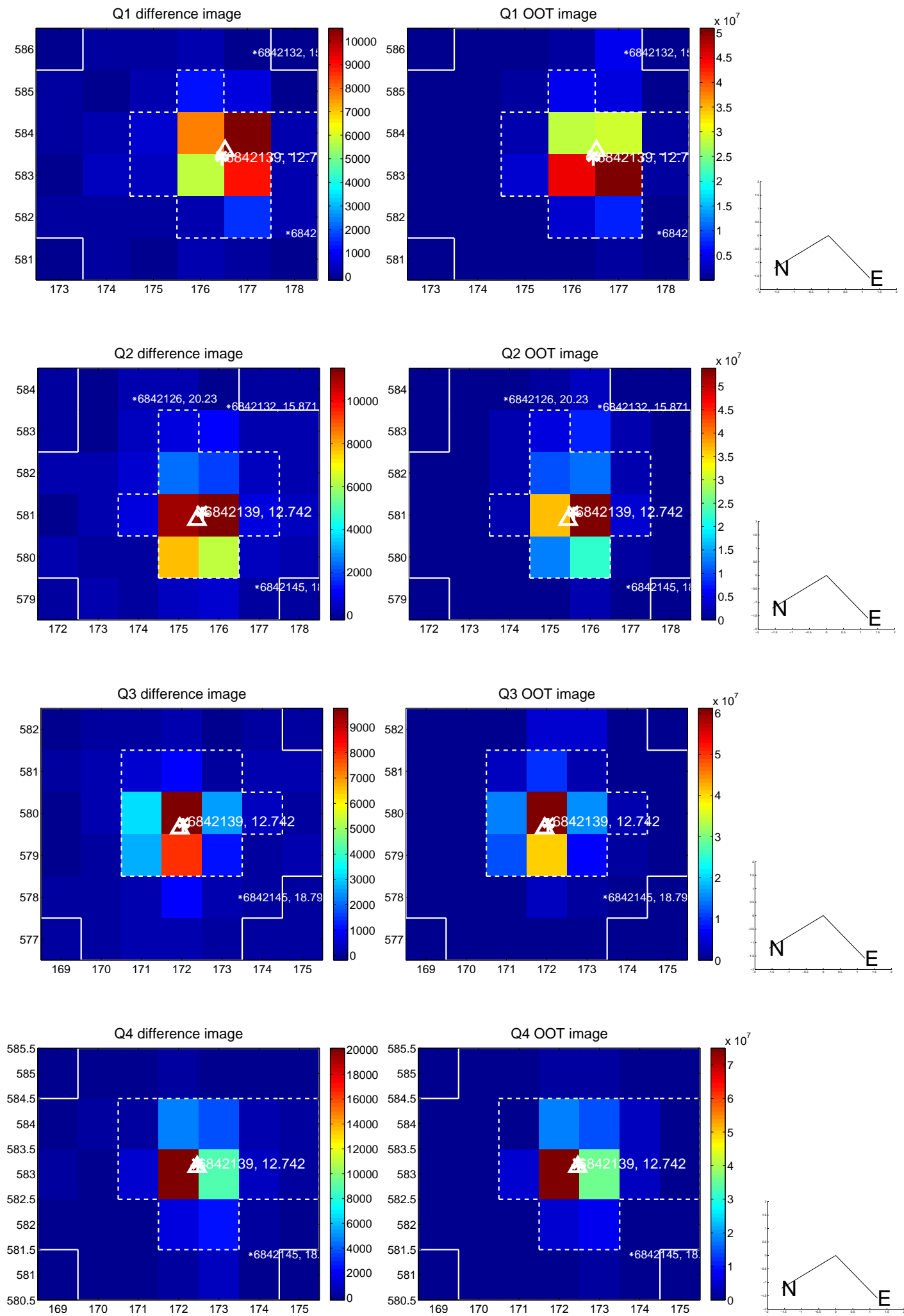


offset from photometric centroids

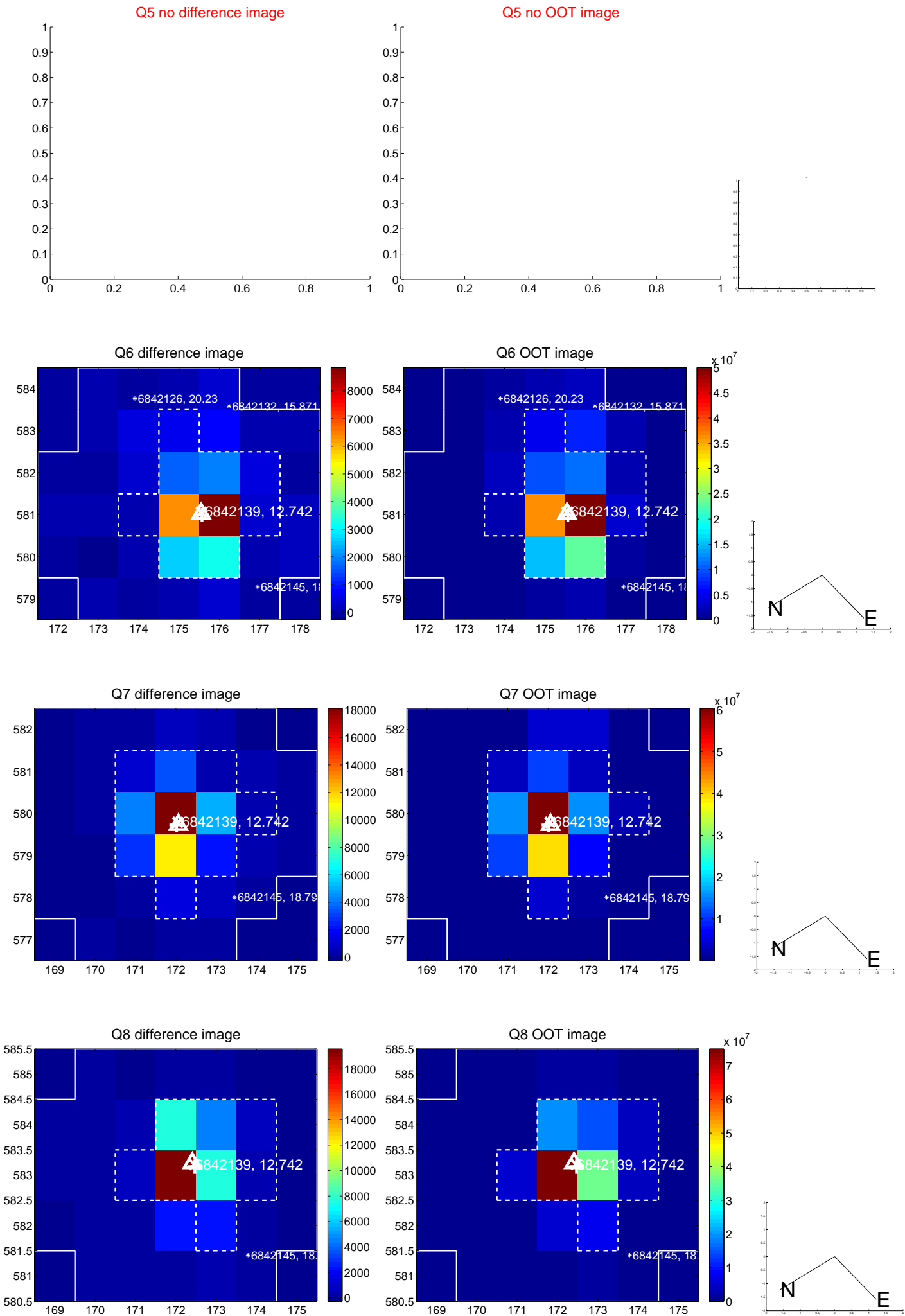


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

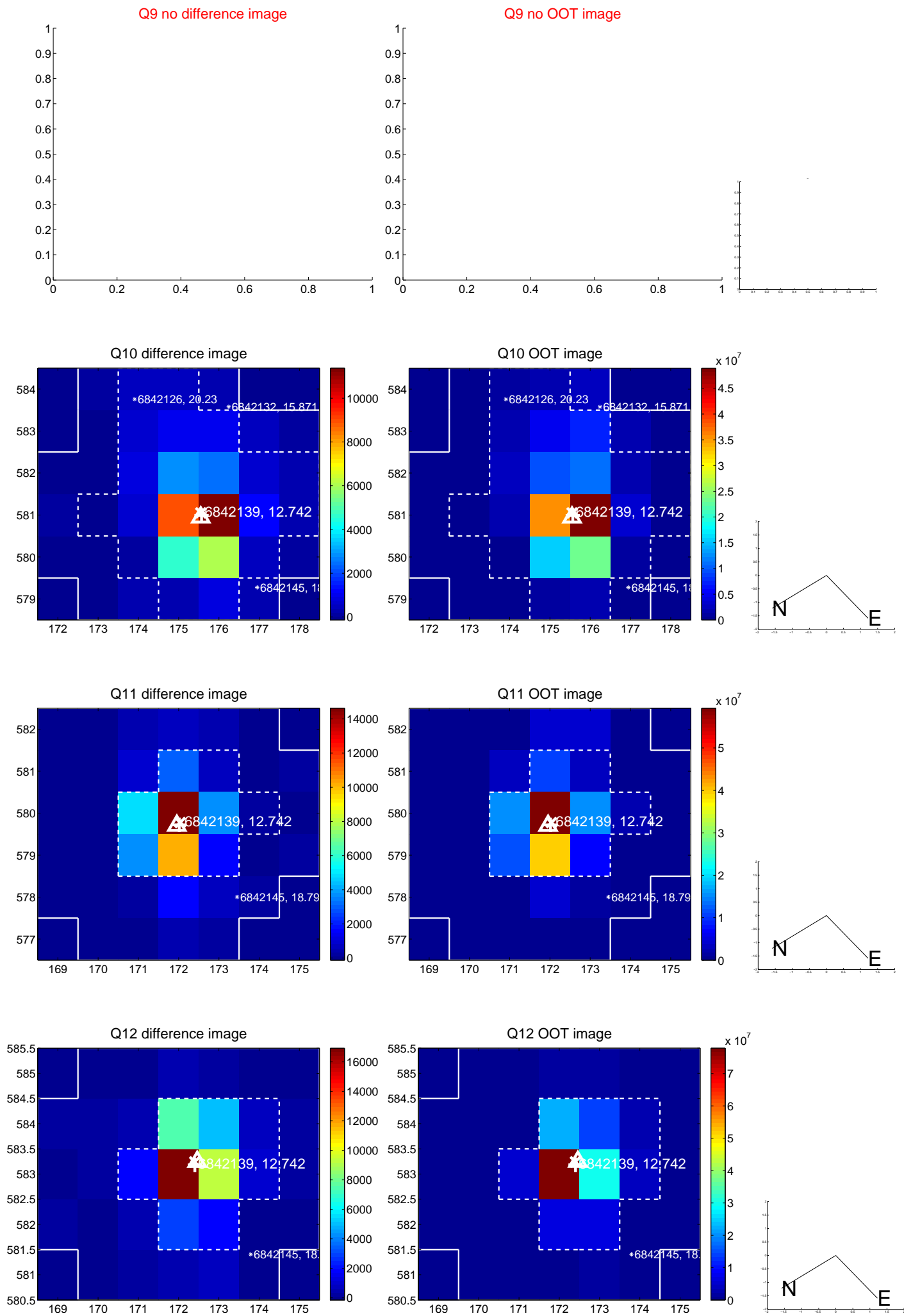
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



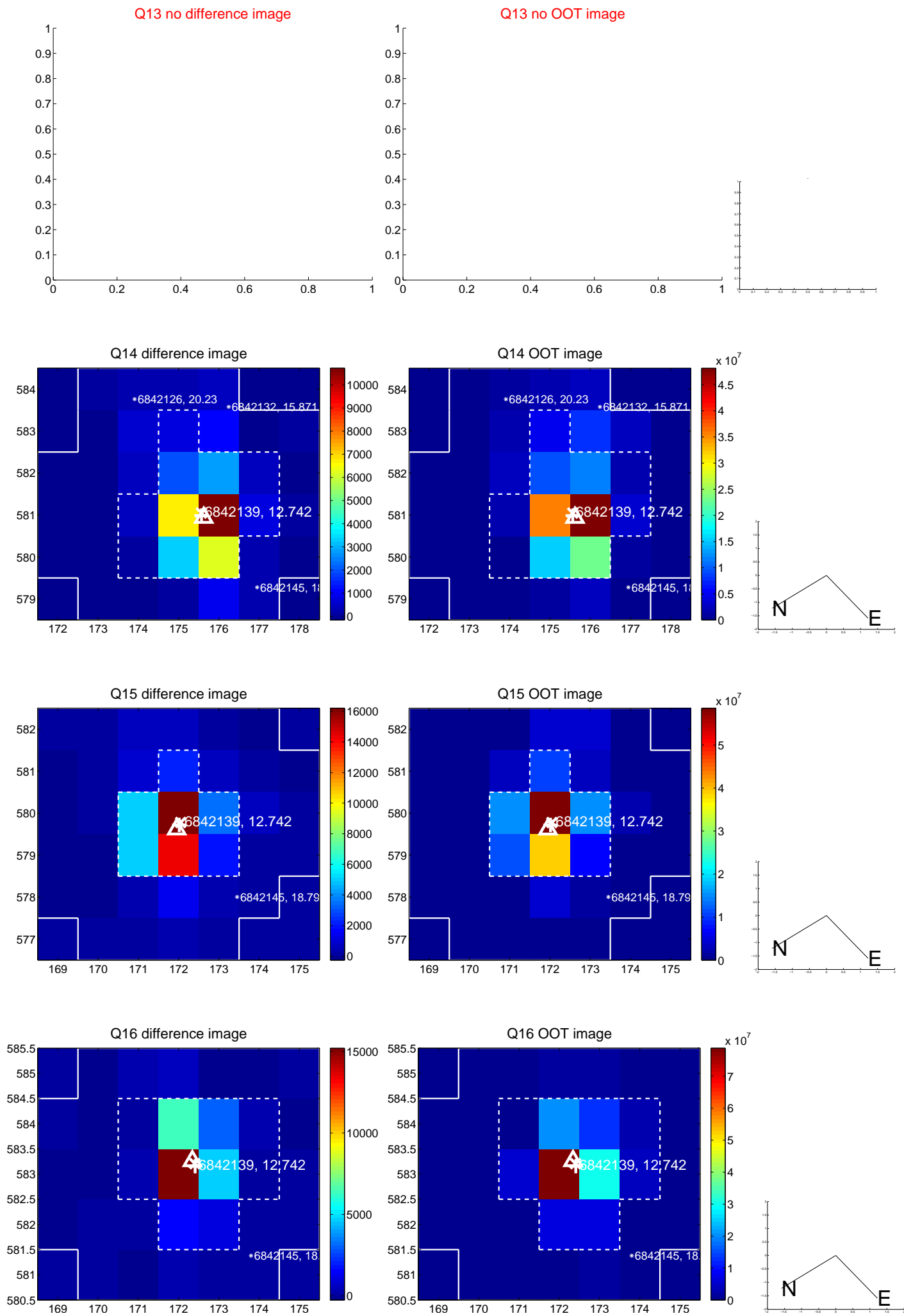
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



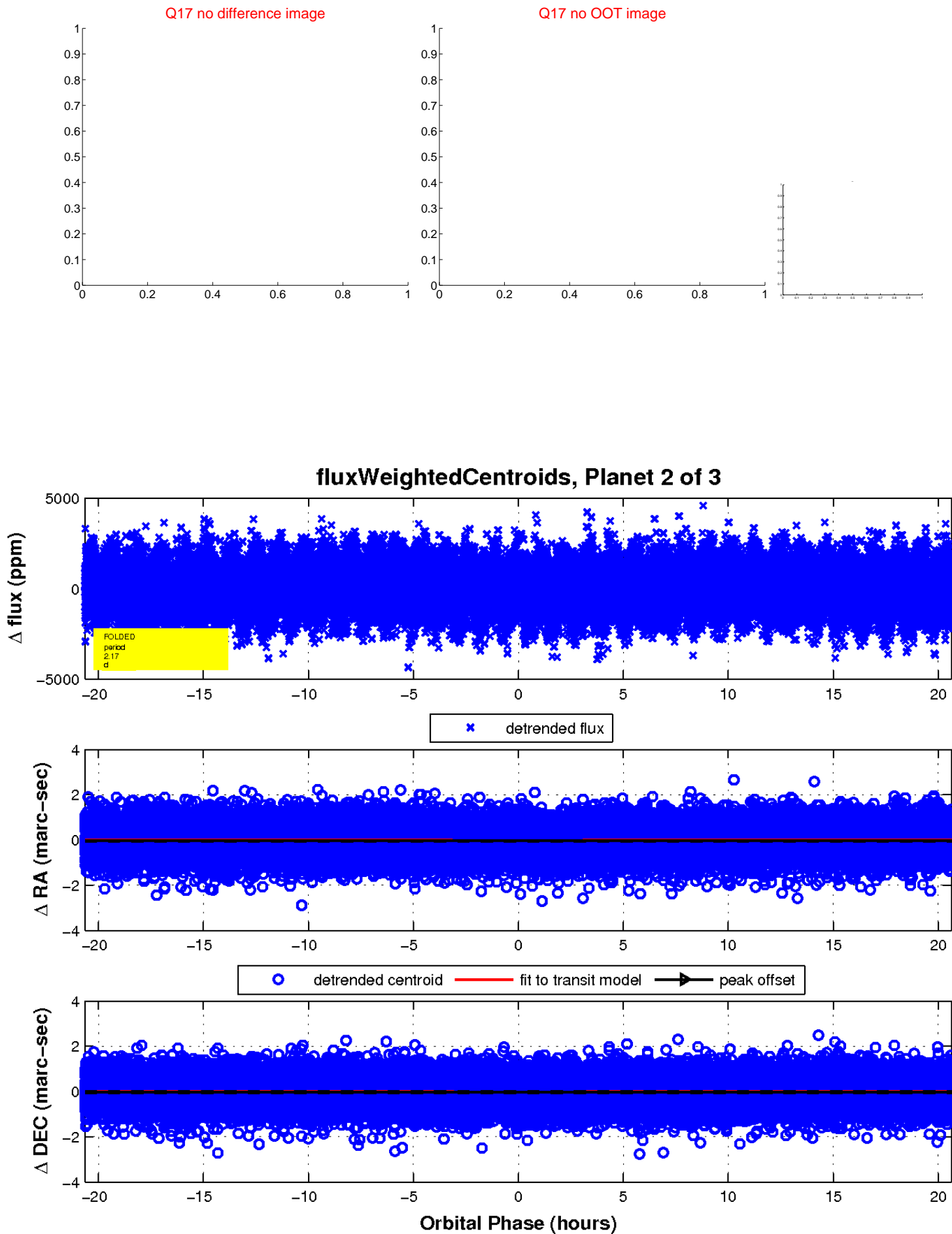
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

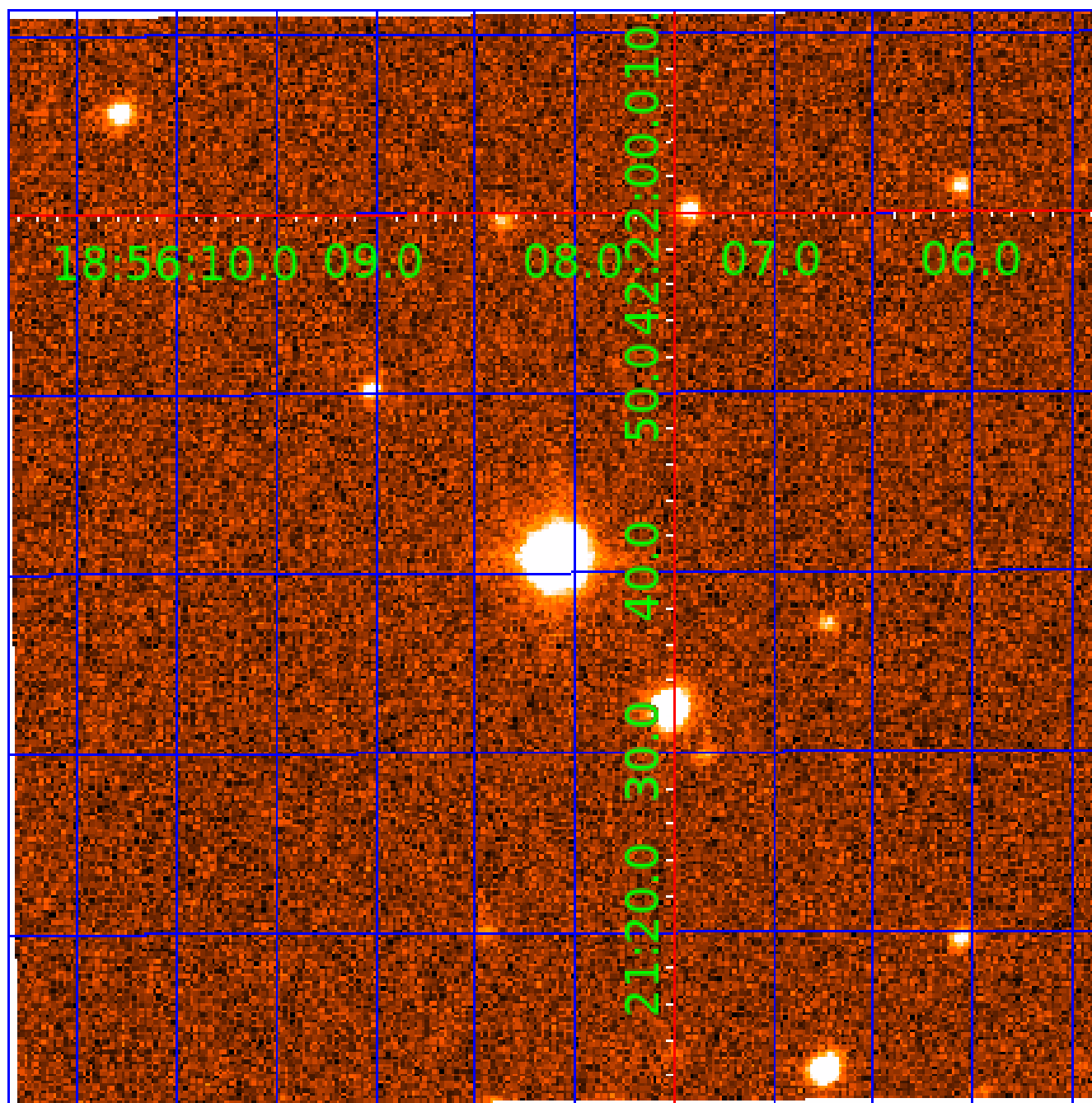


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006842139

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})
006842139-01	OBS	No	2.171586	131.871709	81.5	7.672	9.0	8.3	2.17	7589	2.22	8738.49
006842139-02	OBS	No	2.171604	133.303498	103.6	6.878	8.9	9.6	2.17	7589	2.63	8738.39
006842139-03	OBS	No	2.171561	132.646826	97.7	6.476	8.8	9.1	2.17	7589	2.23	8738.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006842139-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006842139-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
006842139-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

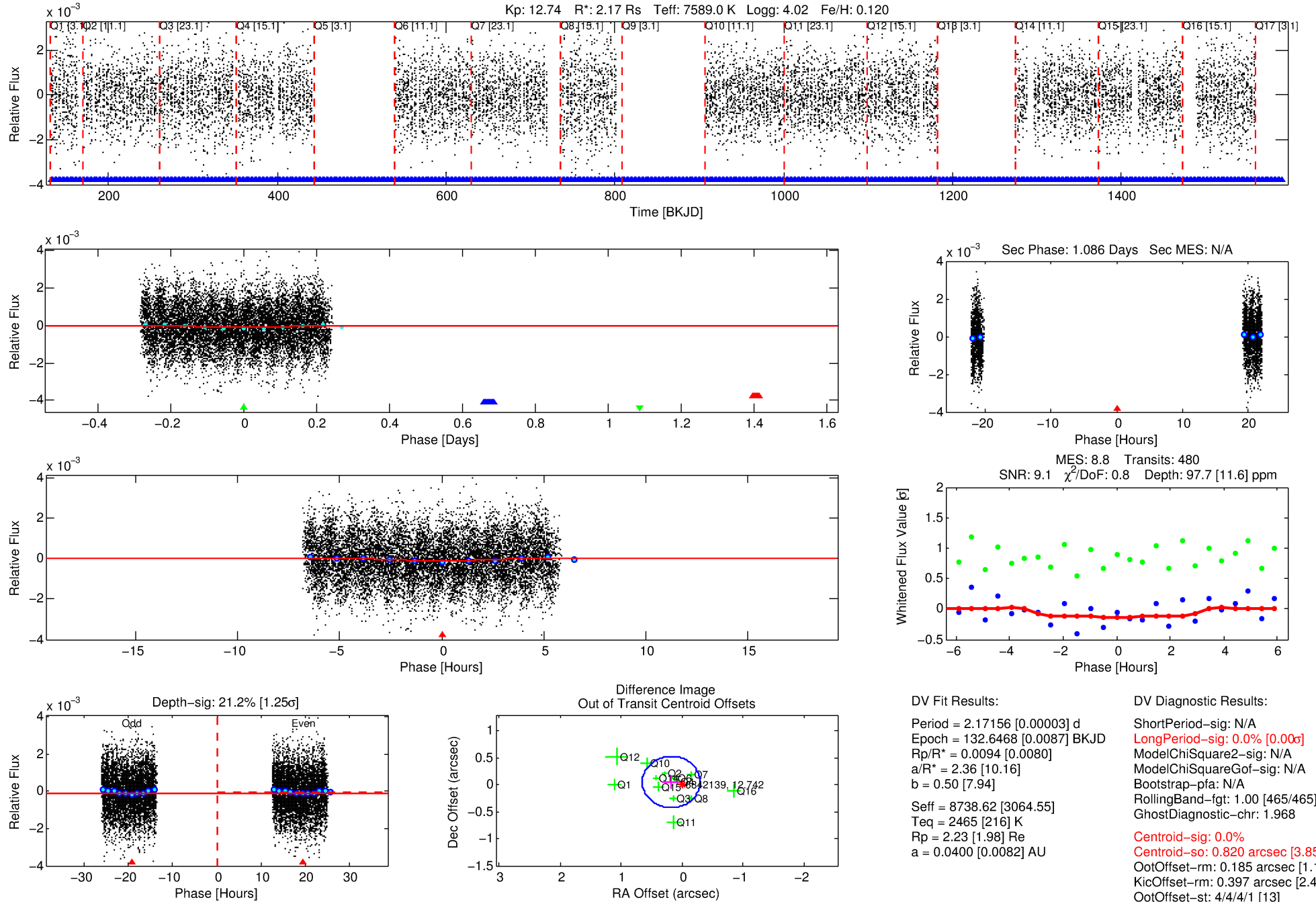
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006842139-03

No Significant Match Found

DV One-Page Summary

KIC: 6842139 Candidate: 3 of 3 Period: 2.172 d



DV Fit Results:

Period = 2.17156 [0.00003] d
Epoch = 132.6468 [0.0087] BKJD
Rp/R* = 0.0094 [0.0080]
a/R* = 2.36 [10.16]
b = 0.50 [7.94]
Seff = 8738.62 [3064.55]
Teq = 2465 [216] K
Rp = 2.23 [1.98] Re
a = 0.0400 [0.0082] AU

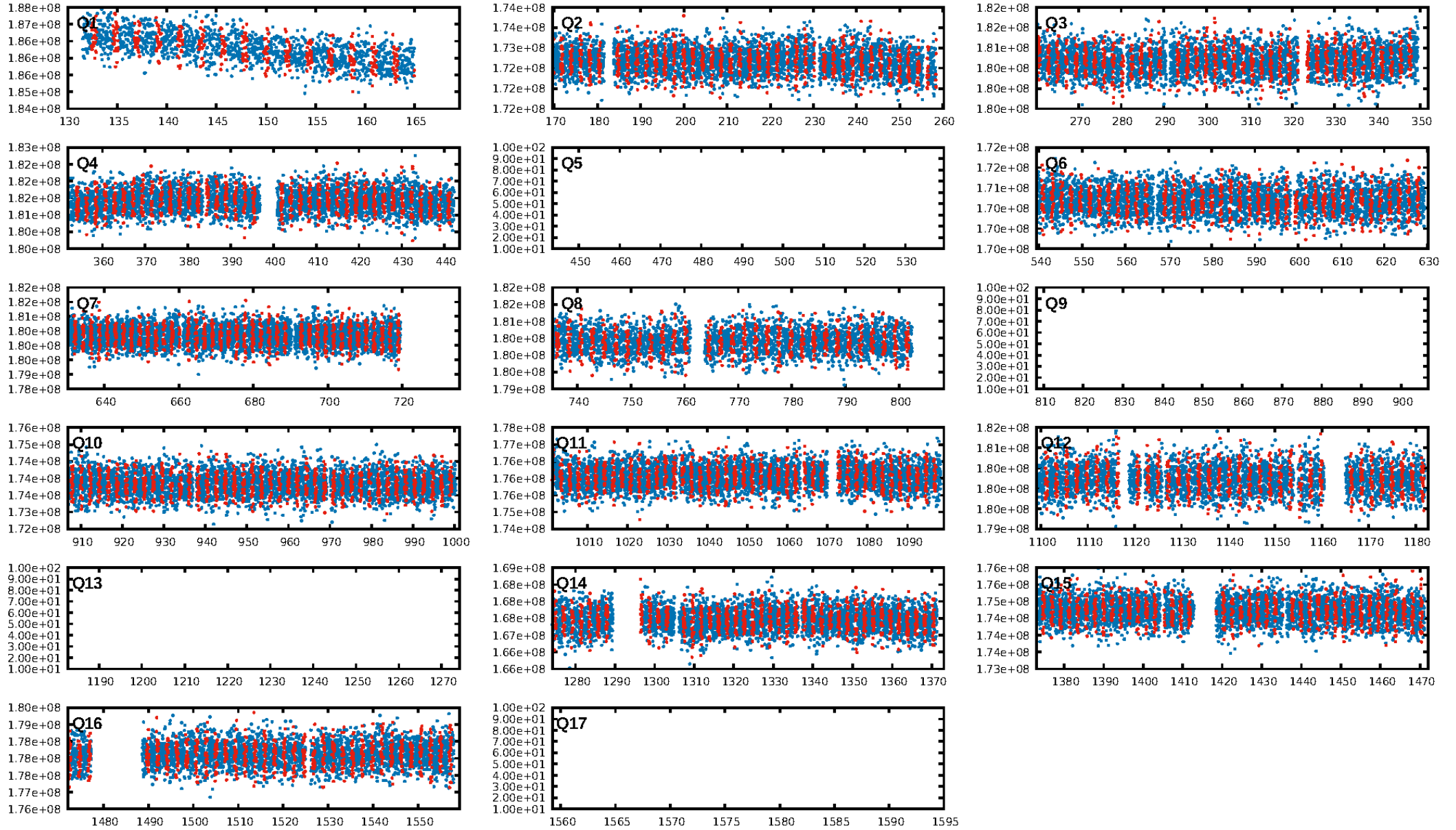
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [465/465]
GhostDiagnostic-chr: 1.968
Centroid-sig: 0.0%
Centroid-so: 0.820 arcsec [3.85 σ]
OotOffset-rm: 0.185 arcsec [1.17 σ]
KicOffset-rm: 0.397 arcsec [2.49 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.46 [6/13]

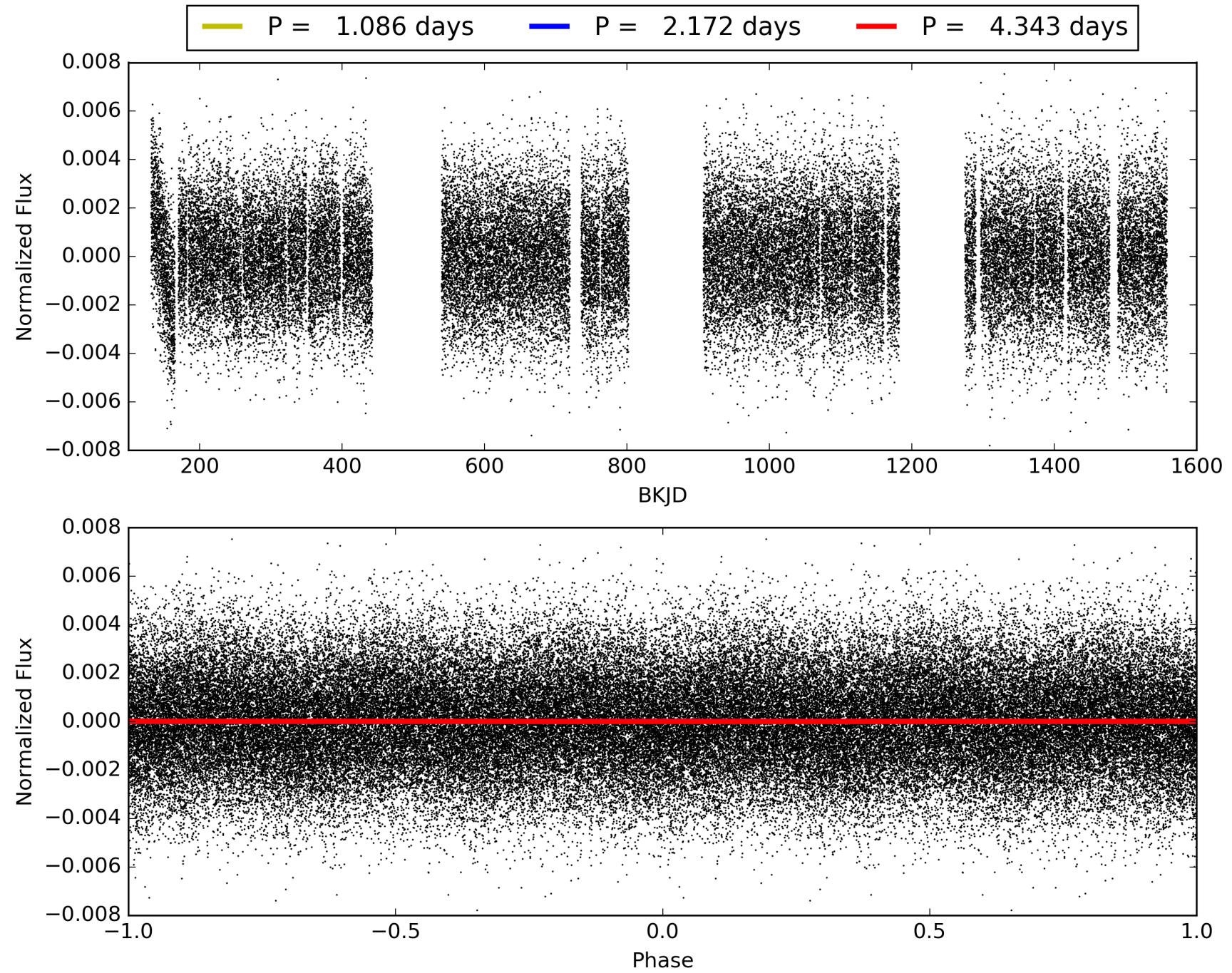
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:04:35 Z

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

TCE 006842139-03, PDC Light Curves

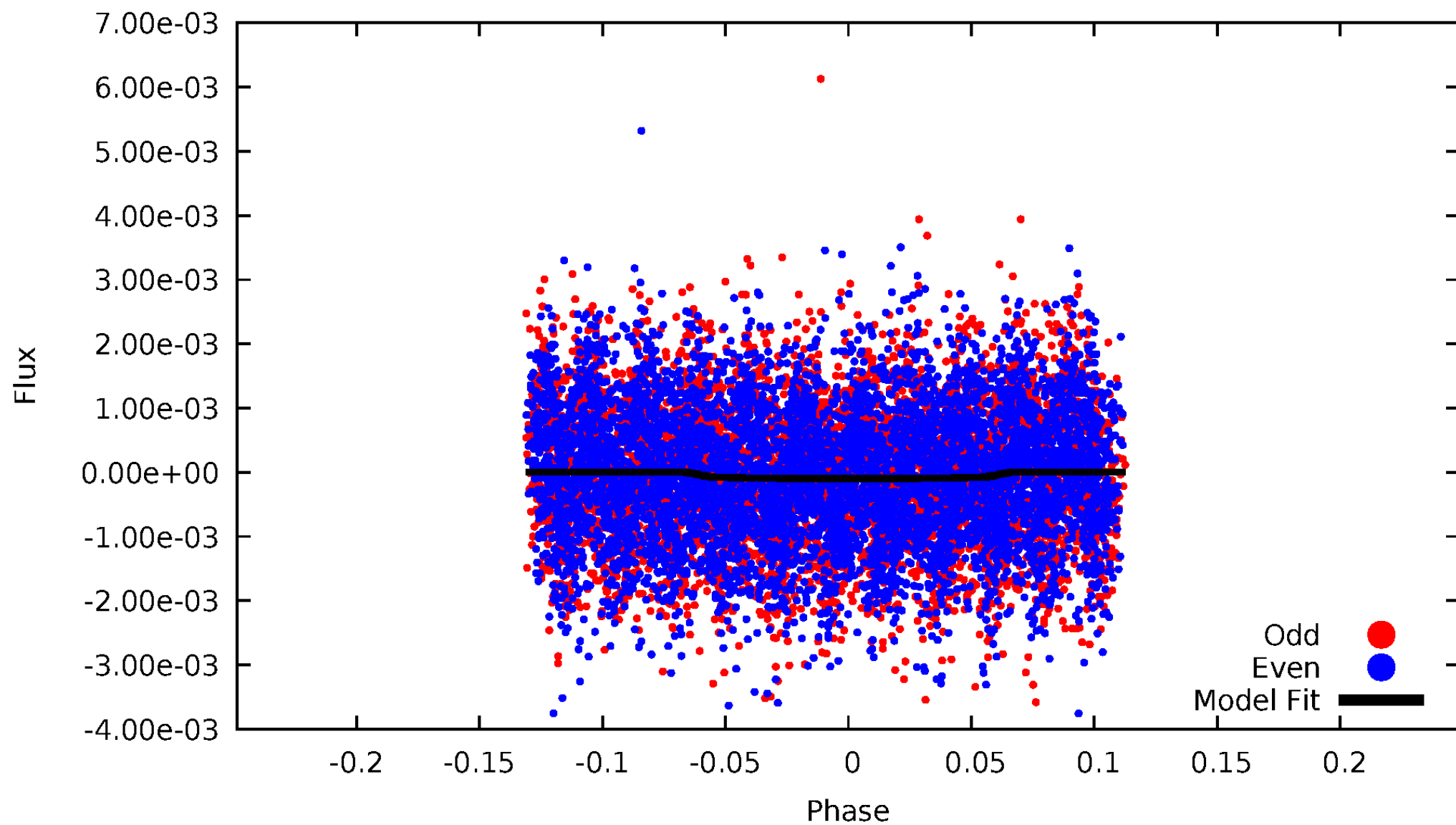


TCE 006842139-03



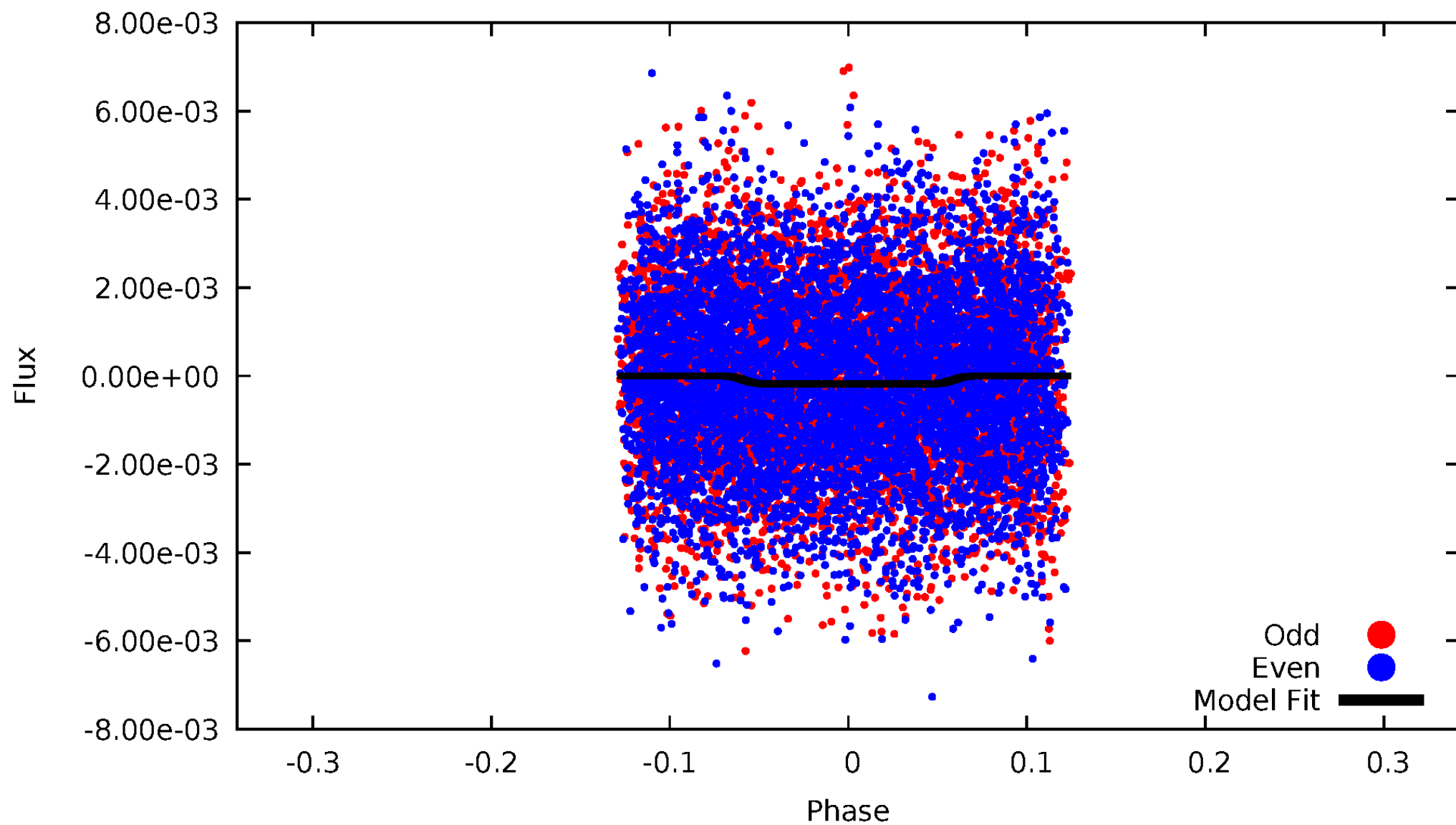
DV Odd/Even

TCE 006842139-03



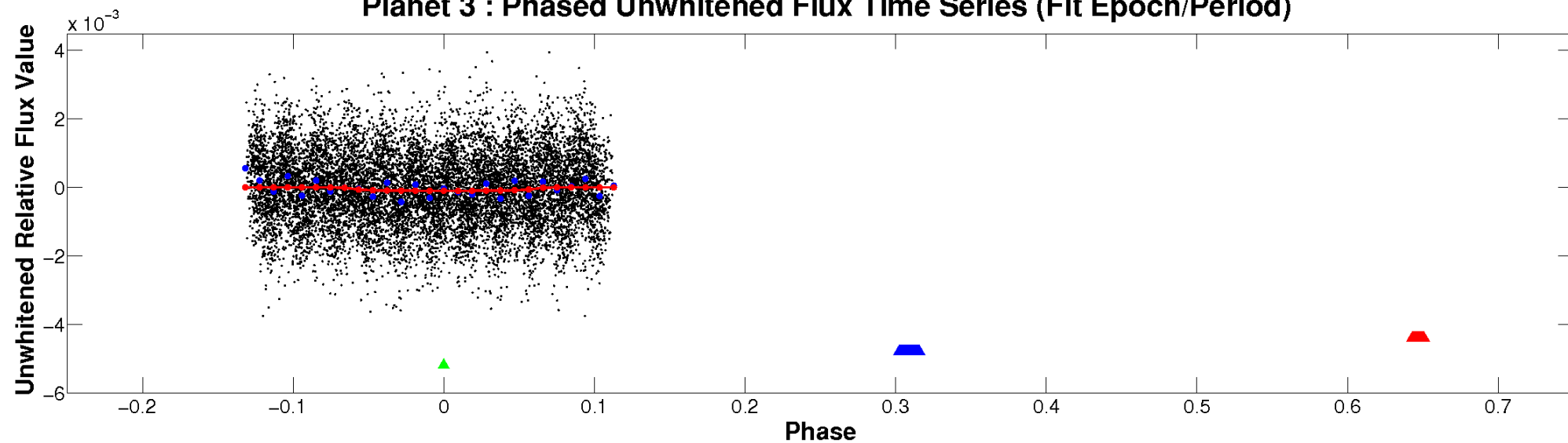
ALT Odd/Even

TCE 006842139-03

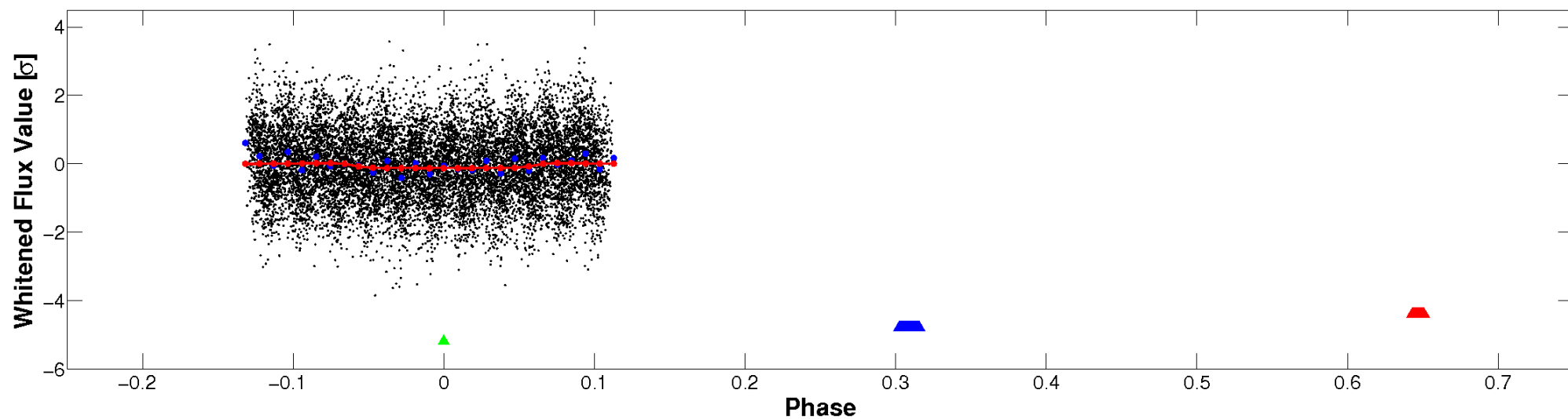


Non-Whitened Vs. Whitened Light Curve

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

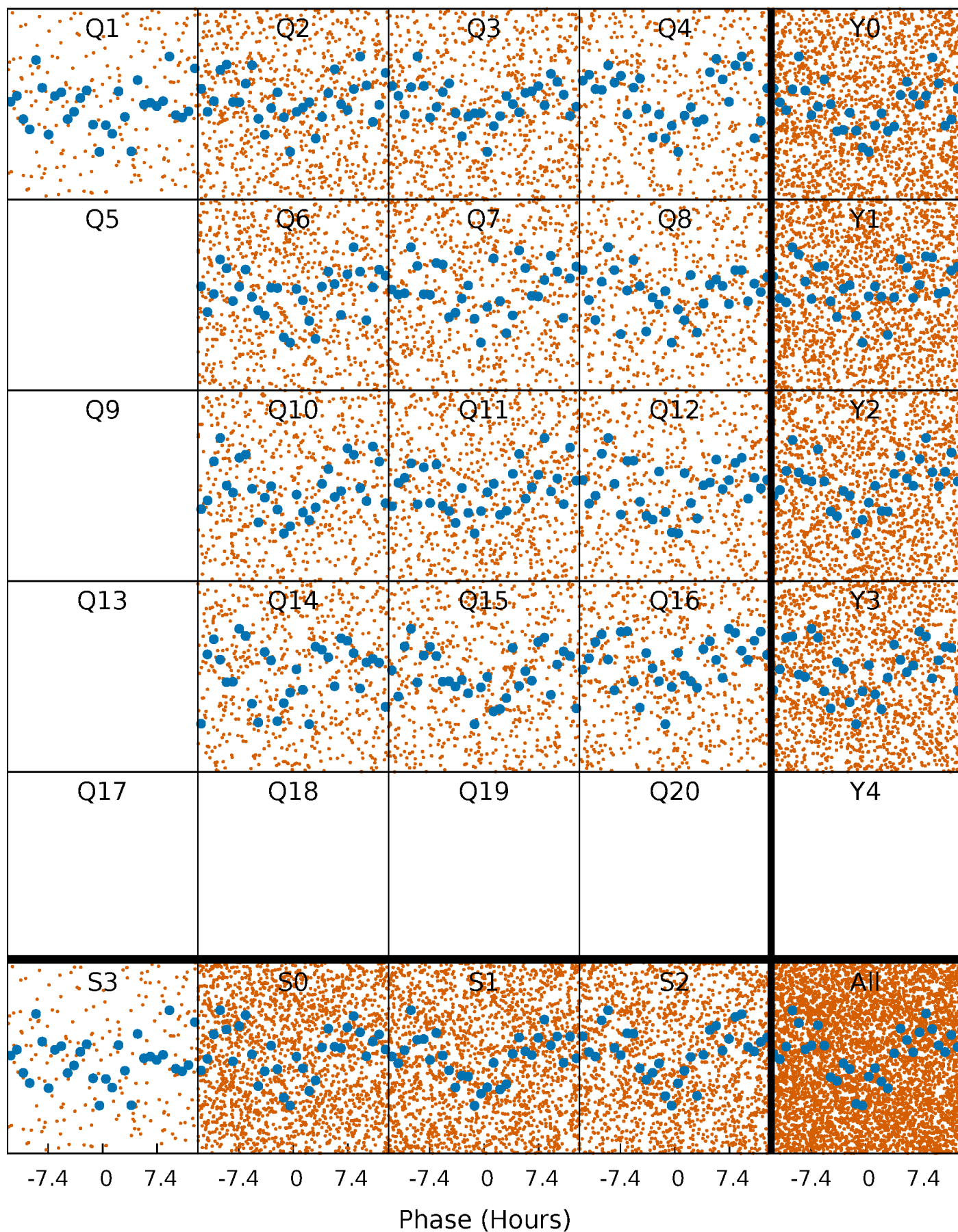


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



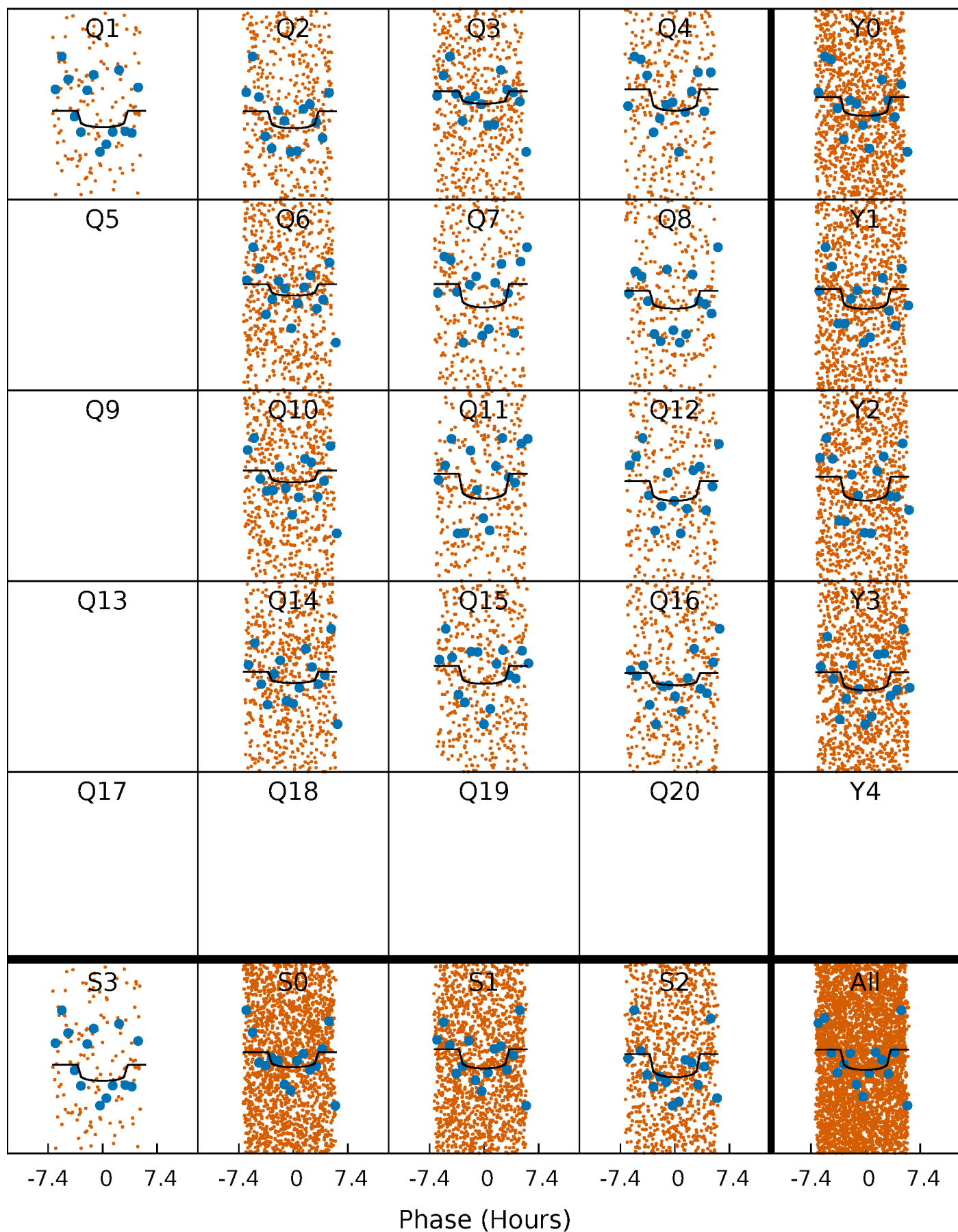
PDC Quarter-Phased Transit Curves

TCE 006842139-03 P= 2.171561 Days $T_0=132.646826$ (BKJD)



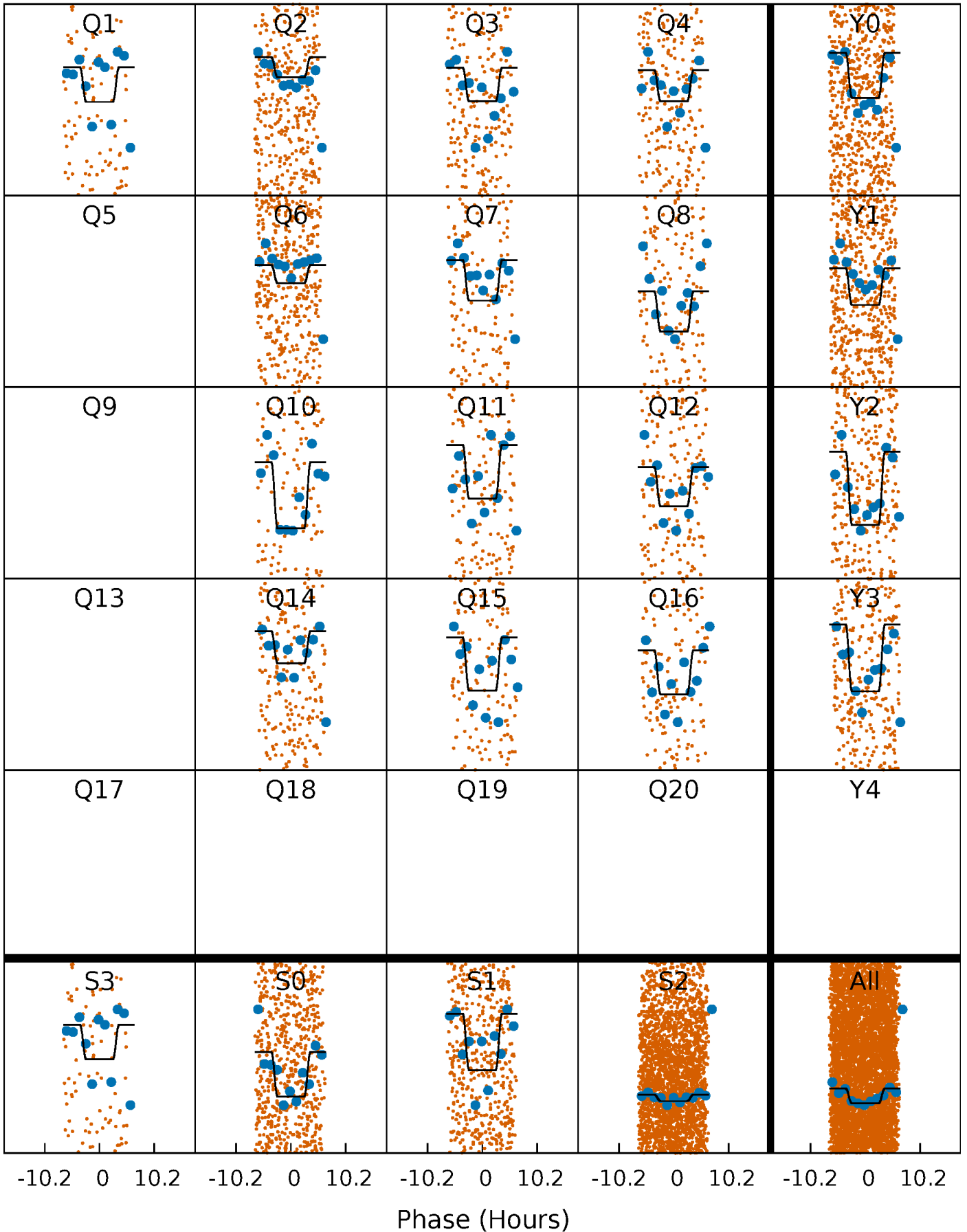
DV Quarter-Phased Transit Curves

TCE 006842139-03 P= 2.171561 Days $T_0=132.646826$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

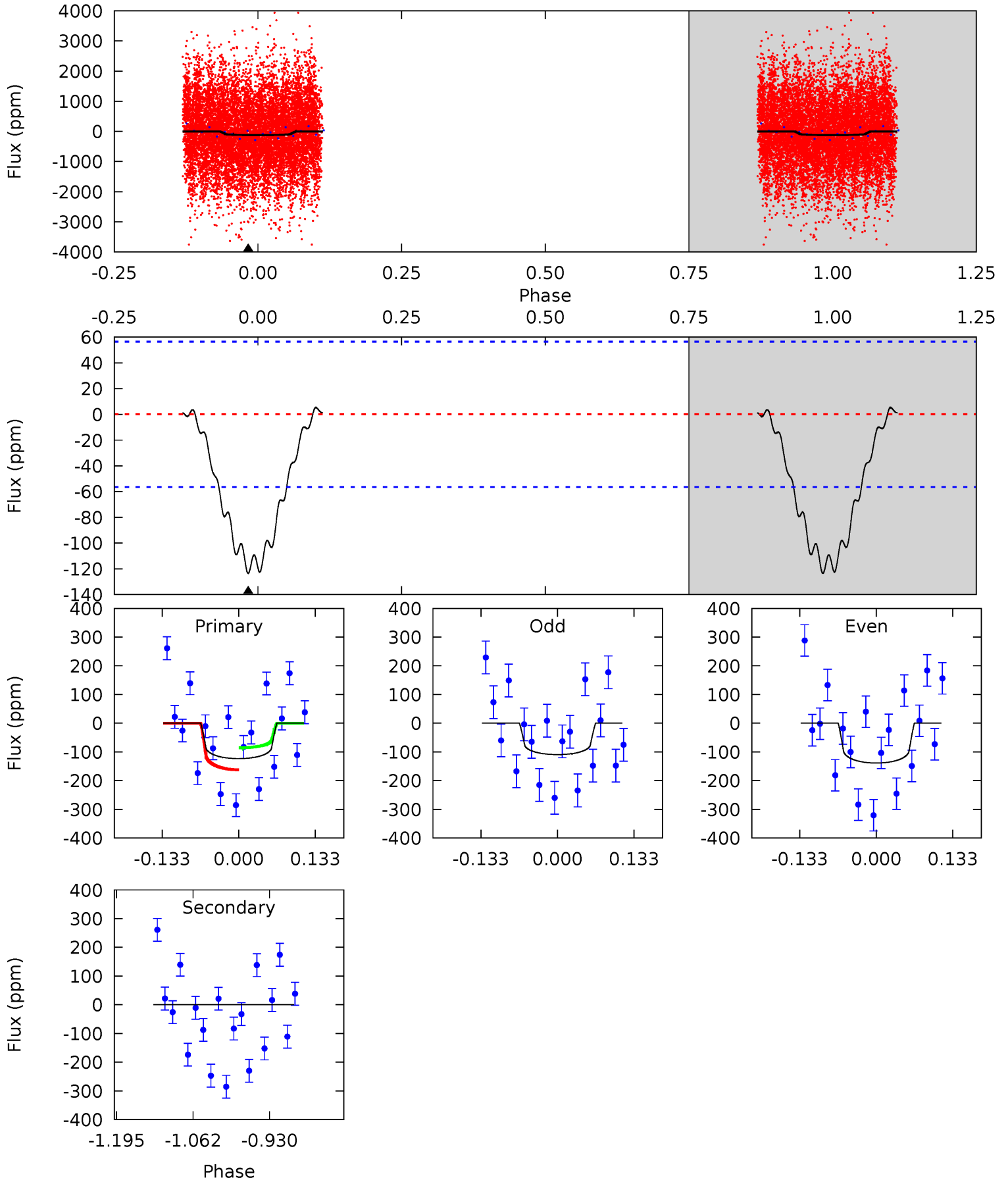
TCE 006842139-03 P= 2.171526 Days $T_0=132.643182$ (BKJD)



DV Model-Shift Uniqueness Test

006842139-03, P = 2.171561 Days, E = 130.475265 Days

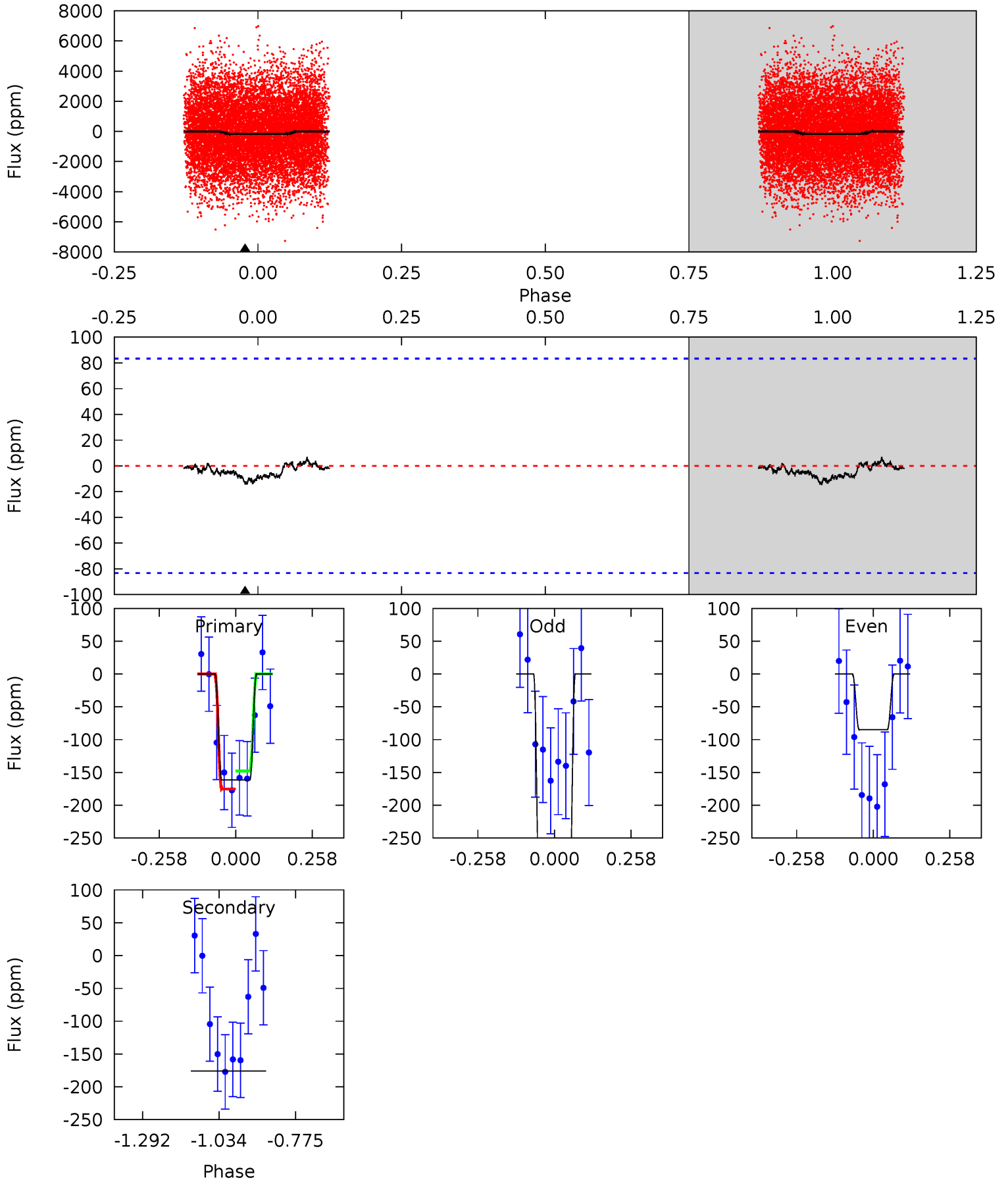
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	0	0	0	4.50	1.50	0.37	9.85	9.85	0	0	1.14	1.27	0.04	3.09



Alt Model-Shift Uniqueness Test

006842139-03, P = 2.171526 Days, E = 130.471656 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.76	0	0	0	4.36	1.13	0.09	0.76	0.76	0	0	0.82	0	0.31	0.73



Stellar Parameters For KIC 006842139

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7589^{+211}_{-342}	$4.023^{+0.165}_{-0.165}$	$0.120^{+0.200}_{-0.350}$	$2.169^{+0.528}_{-0.528}$	$1.809^{+0.170}_{-0.341}$	$0.250^{+0.252}_{-0.109}$
	+3%/-5%	+4%/-4%	+167%/-292%	+24%/-24%	+9%/-19%	+101%/-44%
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 006842139-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 13	$2.49^{+1.79}_{-1.55}$	3435^{+244}_{-248}	-3322^{+8031}_{-1689}	$0.004^{+2.444}_{-2.647}$
Alt.	0 ± 19	$3.11^{+1.84}_{-1.71}$	3427^{+262}_{-256}	-3347^{+7939}_{-1595}	$-0.033^{+2.332}_{-2.423}$

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 $A_{obs} \gg 1.0$

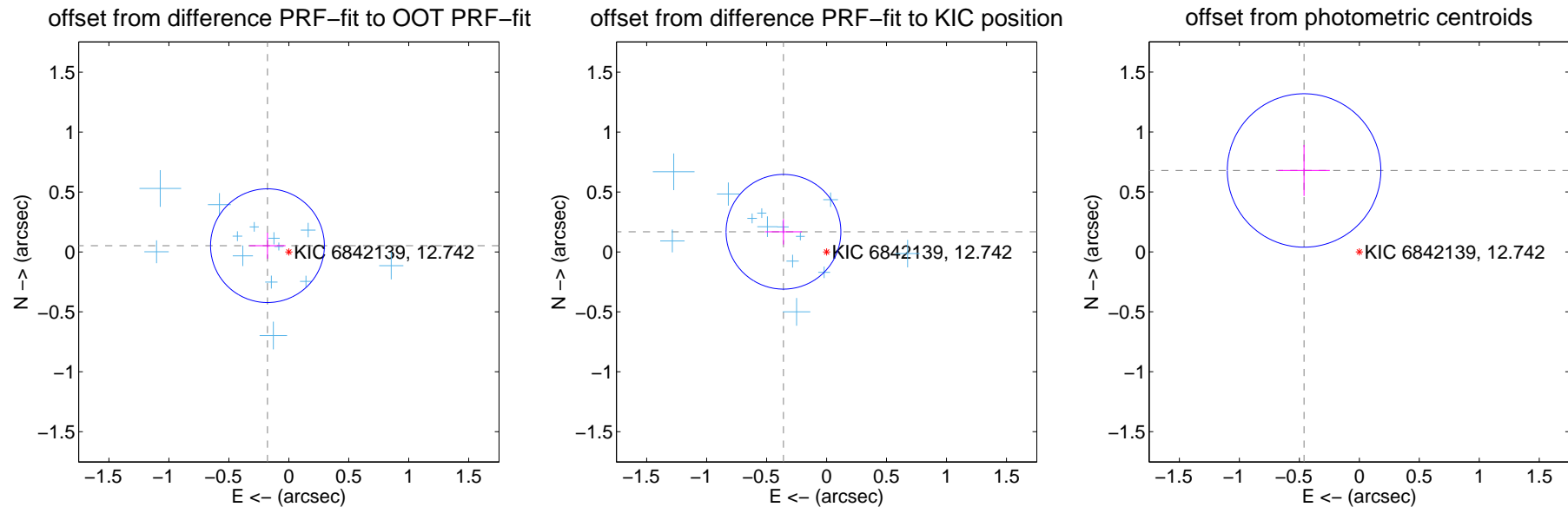
DV Centroid Data

Supplemental centroid analysis for 006842139-03. Kepler magnitude: 12.74. Transit SNR 9.10

There are 13 quarters with good PRF difference image offsets

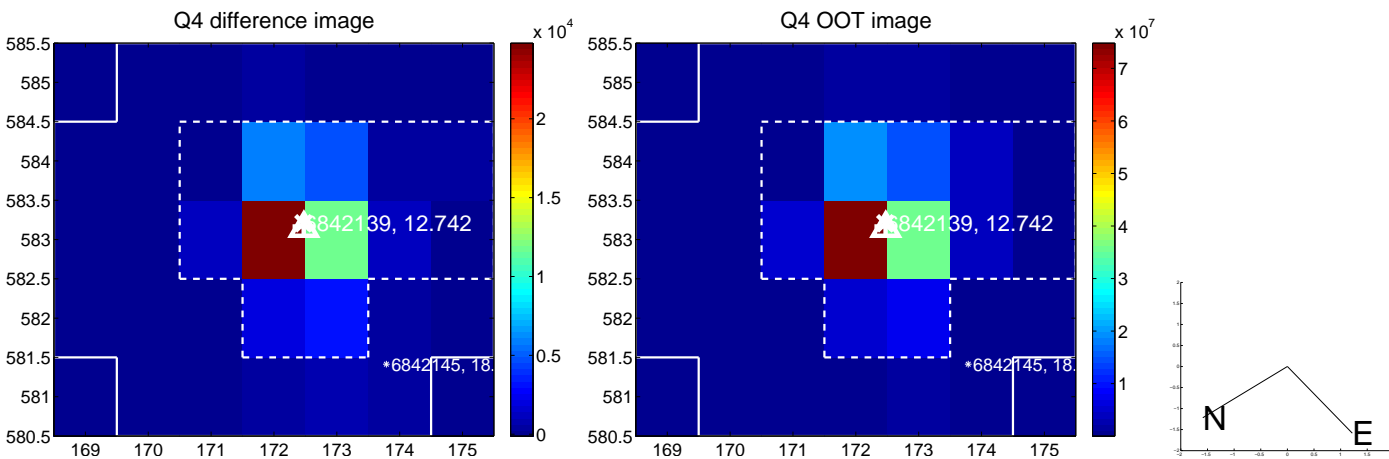
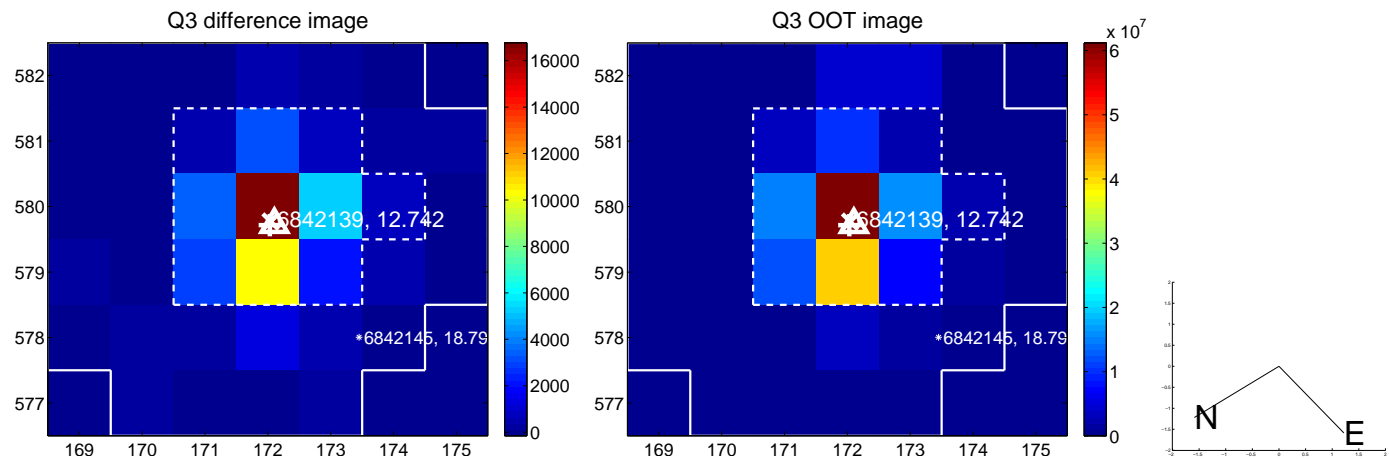
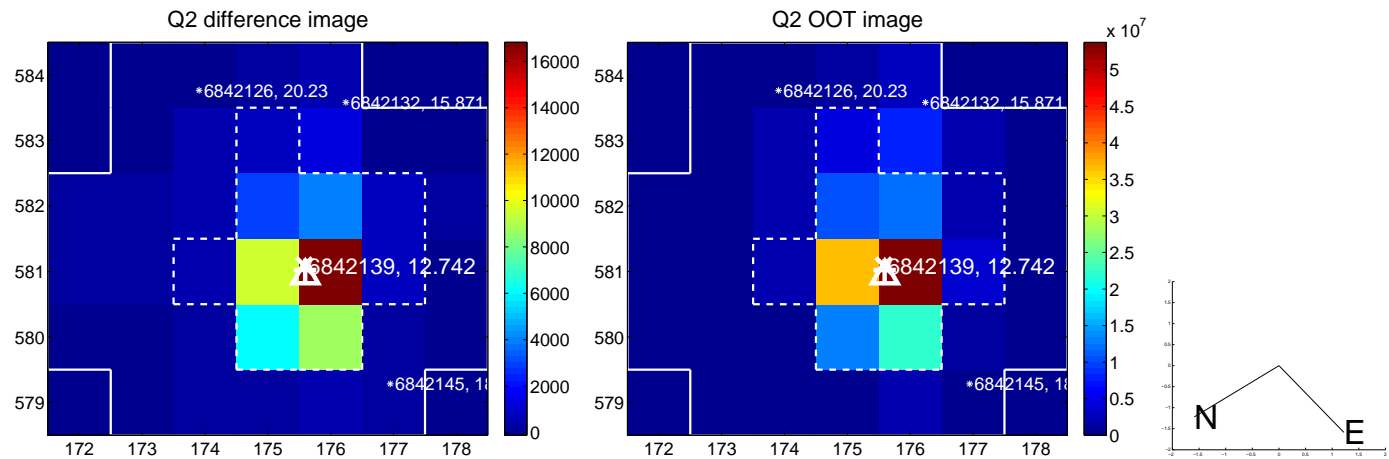
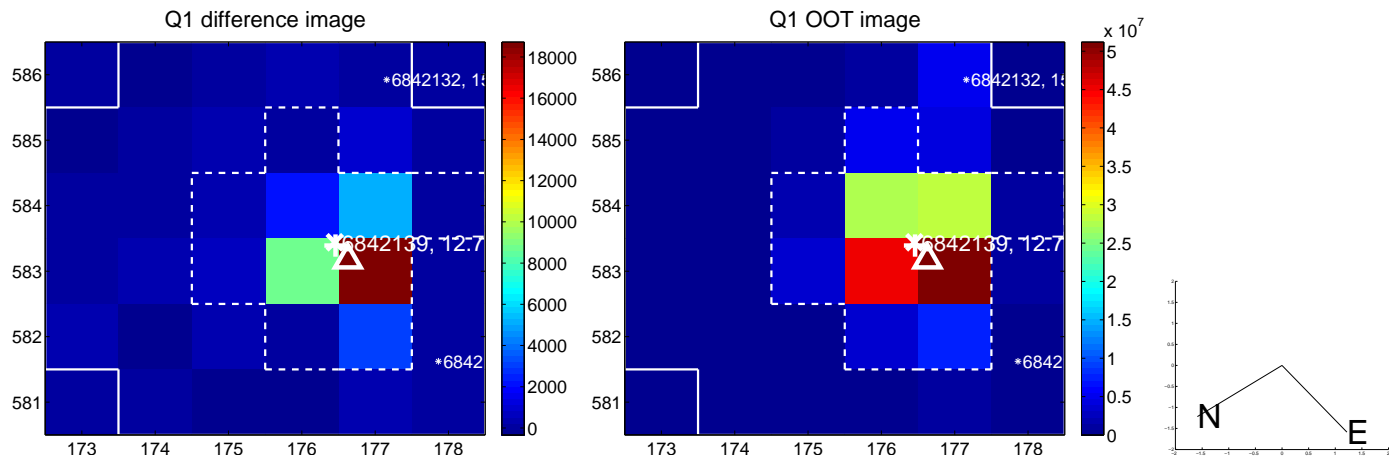
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.185 ± 0.158	1.17	0.178 ± 0.151	0.052 ± 0.109
PRF-fit source offset from KIC position	0.397 ± 0.159	2.49	0.359 ± 0.154	0.168 ± 0.107
photometric centroid source offset	0.82 ± 0.21	3.85	0.46 ± 0.21	0.68 ± 0.21

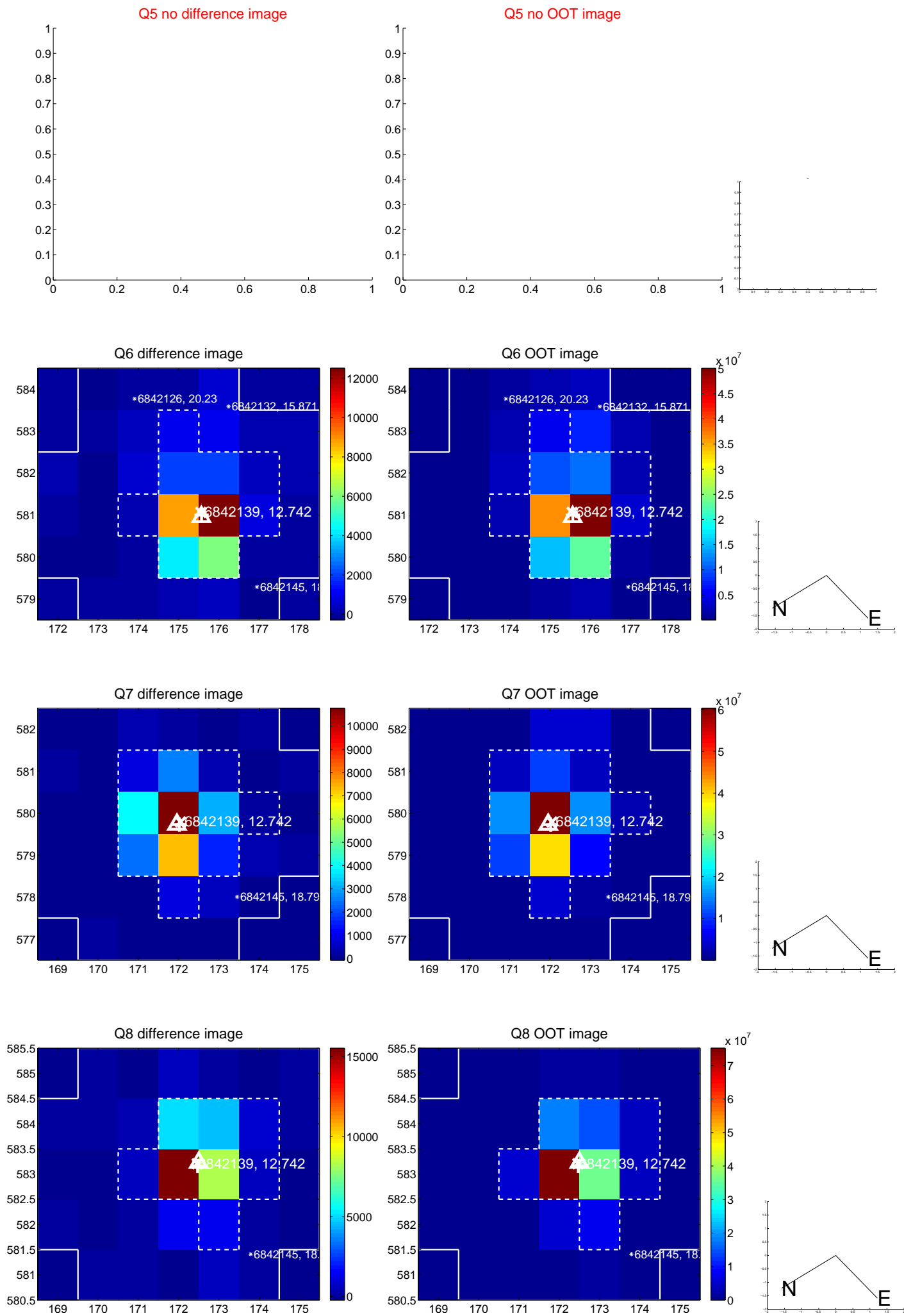


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

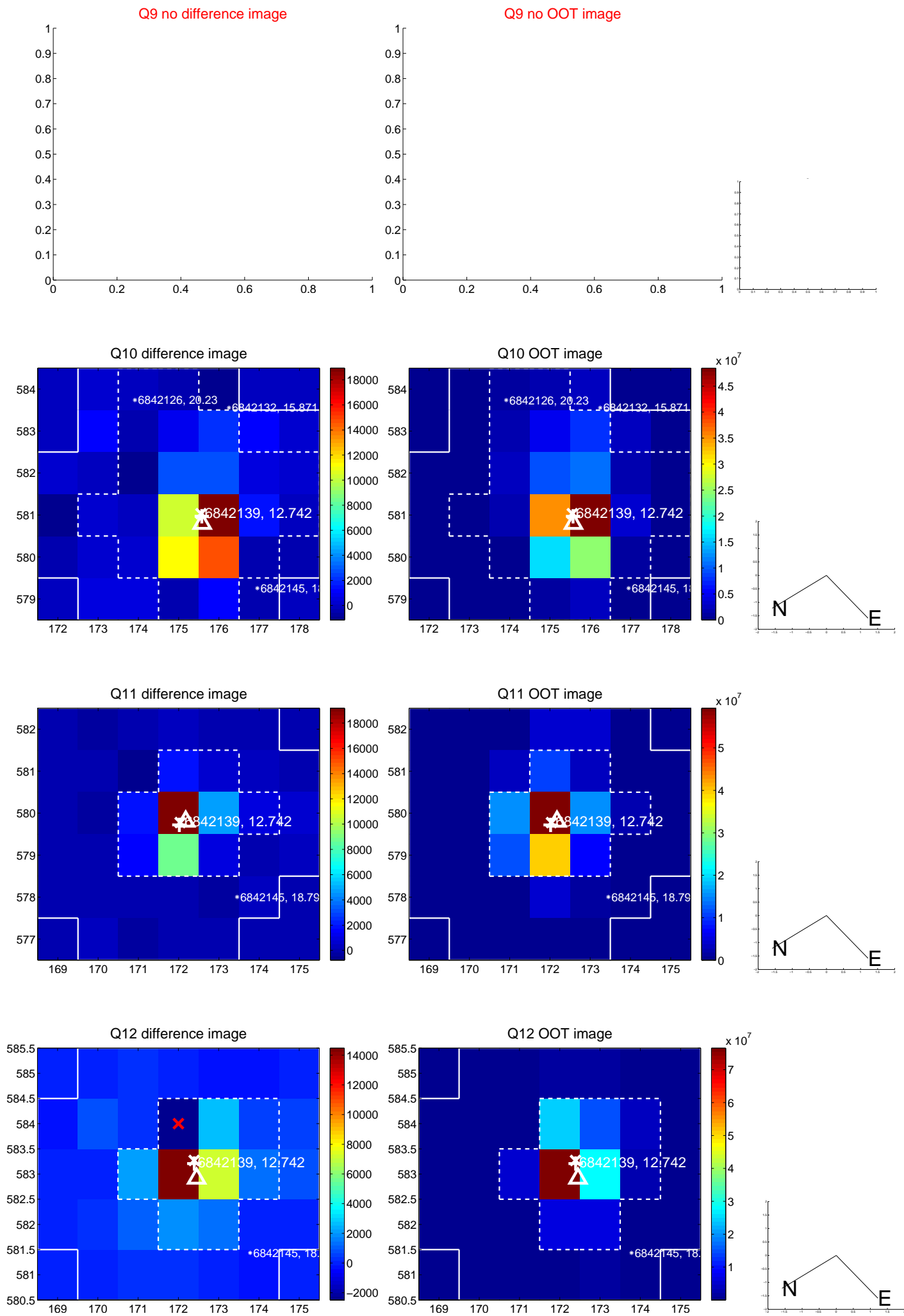
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



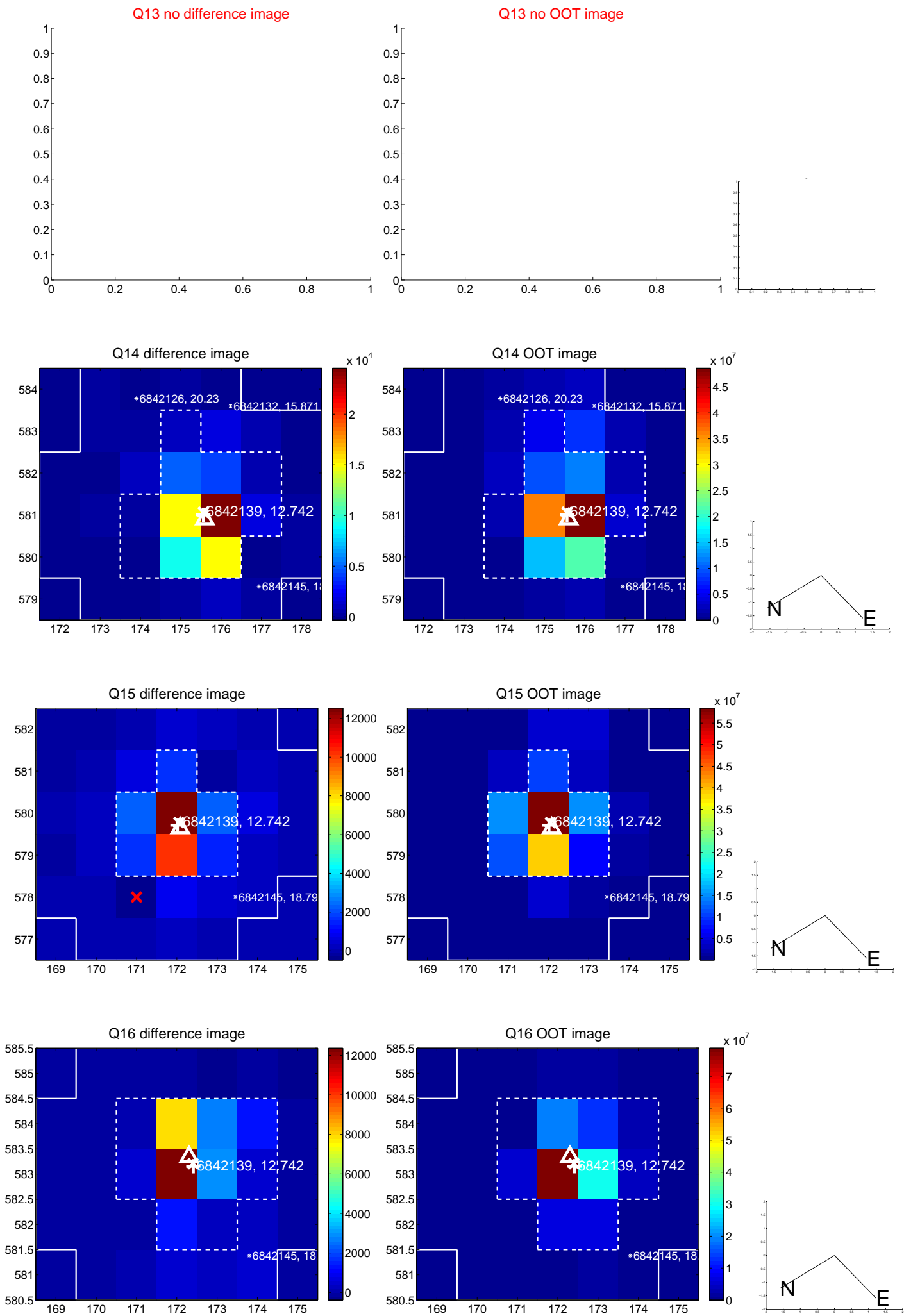
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



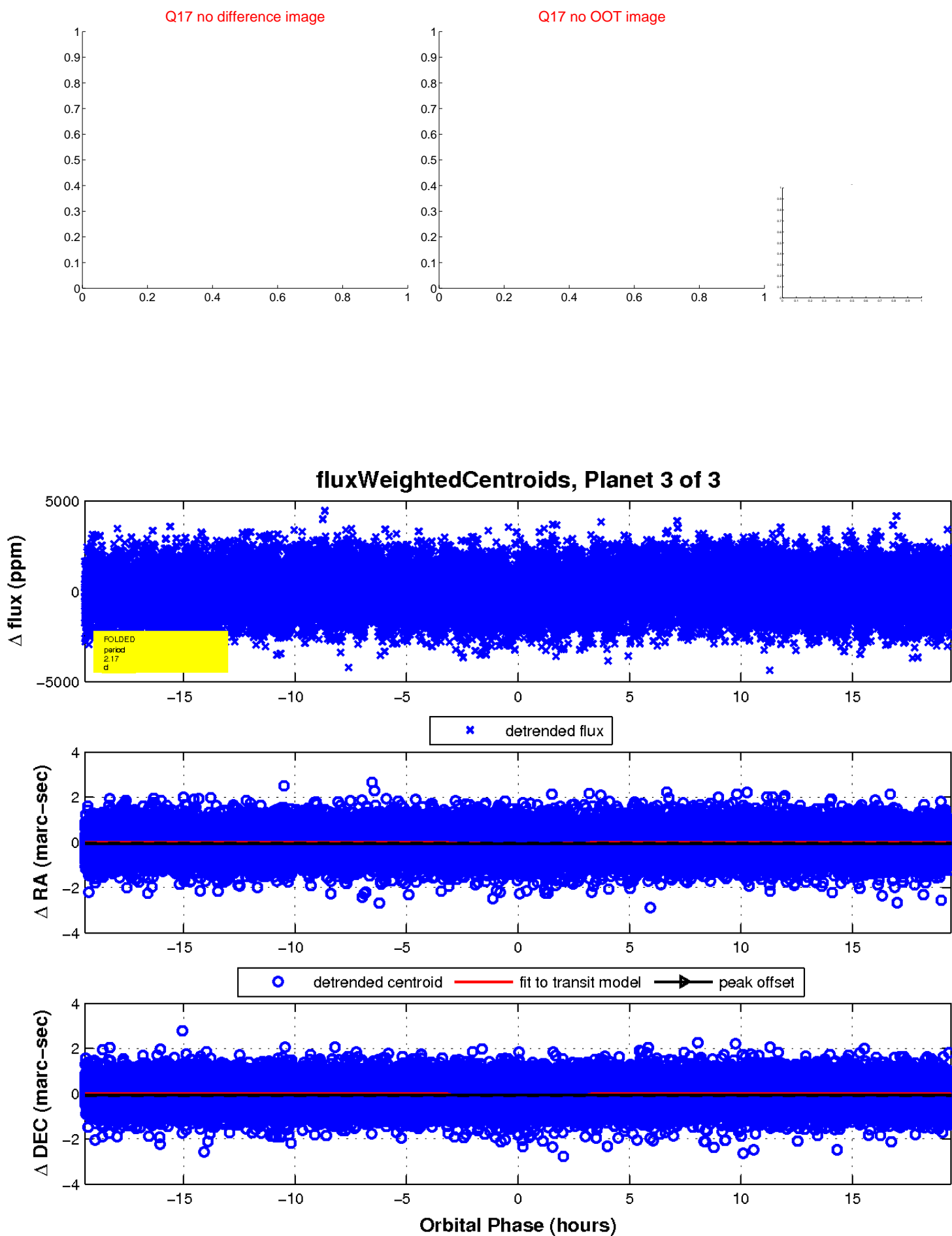
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

