

KIC 008310243

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})
008310243-01	OBS	No	0.662566	131.912525	184.0	1.163	15.9	10.9	1.87	7281	2.95	30426.15
008310243-02	OBS	No	0.662585	132.118114	176.7	2.175	12.6	13.3	1.87	7281	2.88	30425.02
008310243-03	OBS	No	0.662583	131.679944	113.1	2.000	7.7	7.1	1.87	7281	2.03	30425.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008310243-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008310243-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008310243-03	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.

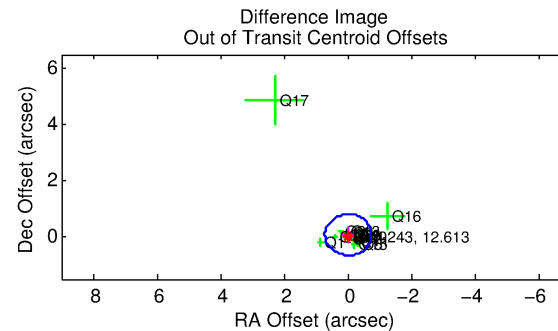
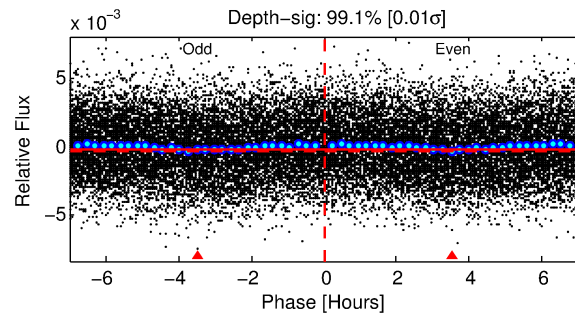
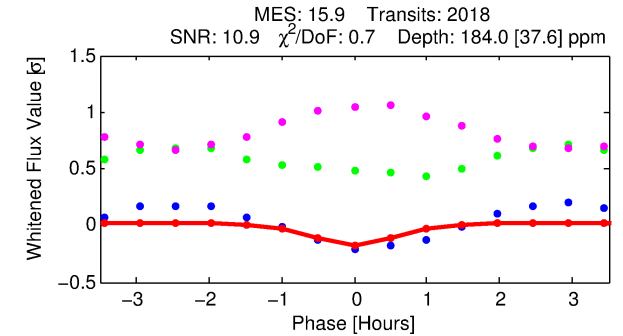
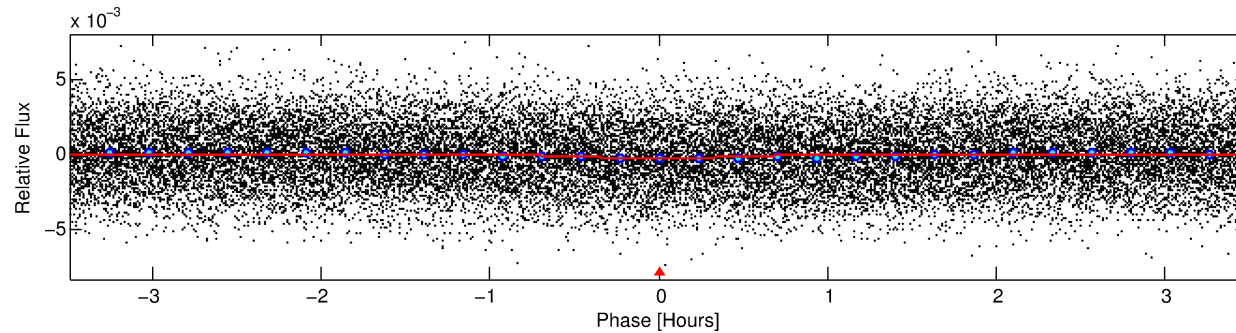
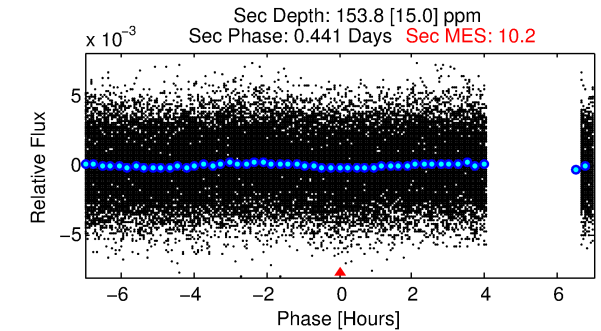
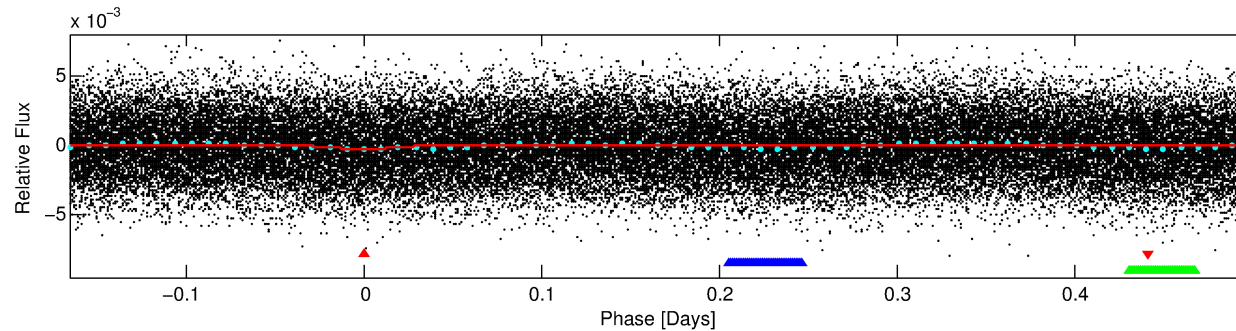
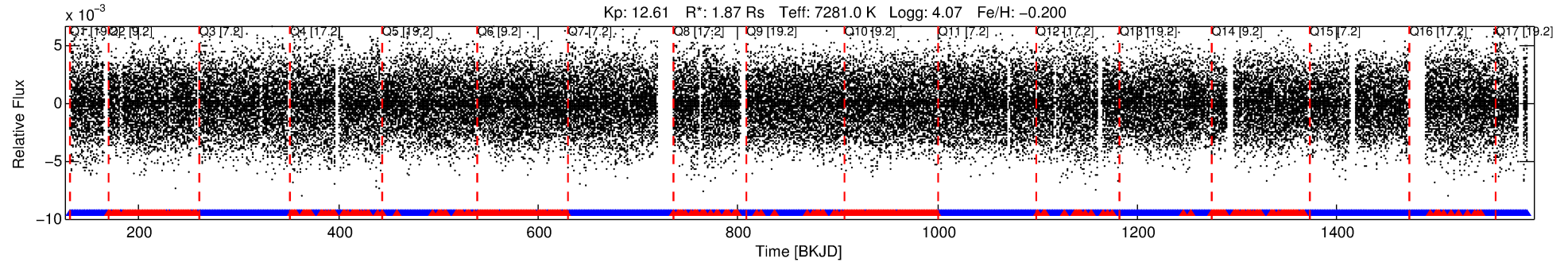
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008310243-01

No Significant Match Found

DV One-Page Summary

KIC: 8310243 Candidate: 1 of 3 Period: 0.663 d



DV Fit Results:

Period = 0.66257 [0.00001] d
Epoch = 131.9125 [0.0023] BKJD
Rp/R* = 0.0144 [0.0104]
a/R* = 2.27 [8.18]
b = 0.90 [0.99]
Seff = 30426.15 [11939.38]
Teq = 3368 [330] K
Rp = 2.95 [2.27] Re
a = 0.0170 [0.0041] AU
Ag = 2.82 [4.18] [0.43σ]
Teffp = 6746 [2446] K [1.37σ]

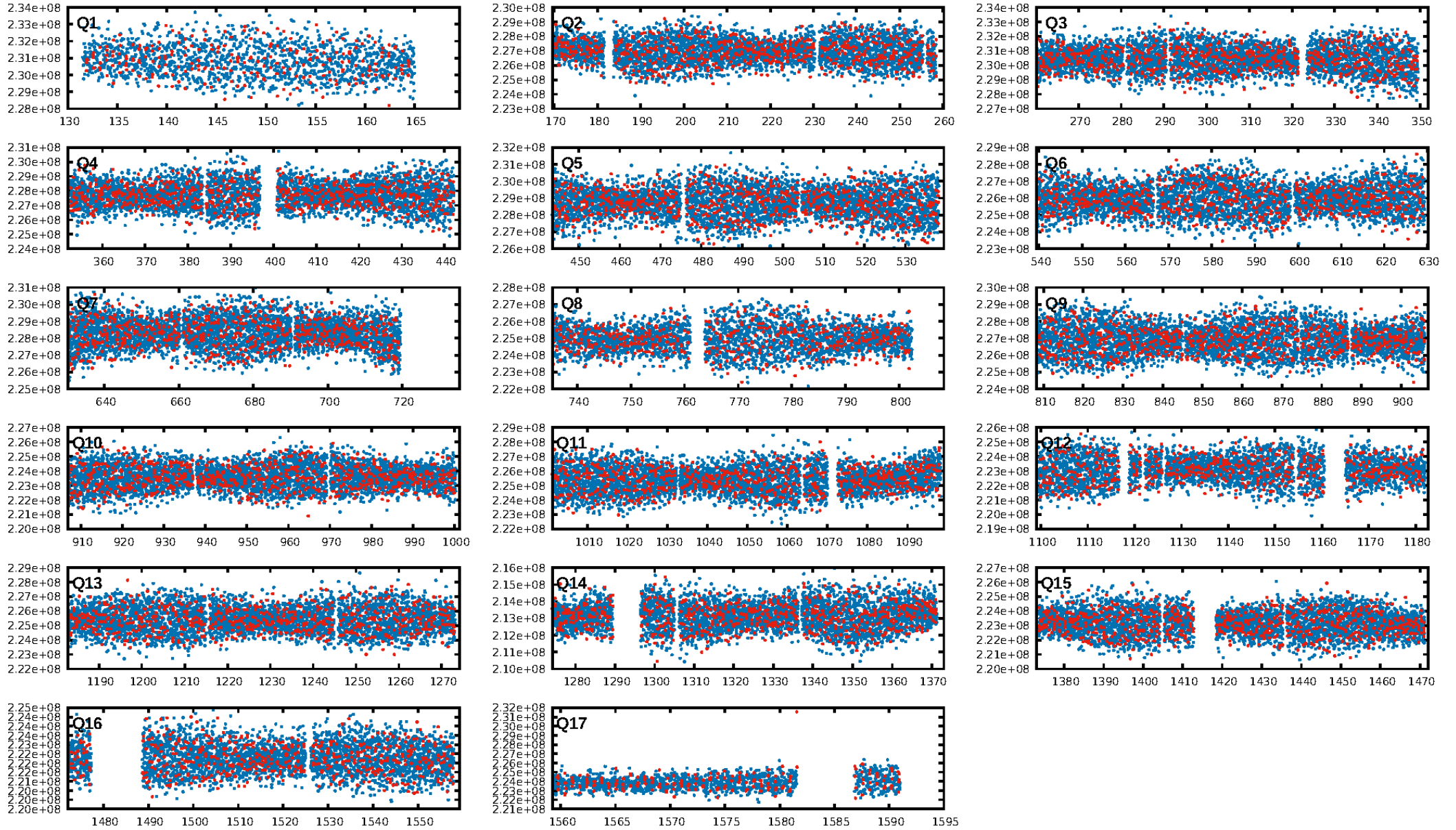
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.72 [1390/1927]
GhostDiagnostic-chr: 1.593
Centroid-sig: 31.3%
Centroid-so: 0.130 arcsec [1.34σ]
OotOffset-rm: 0.077 arcsec [0.31σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.186 arcsec [0.66σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

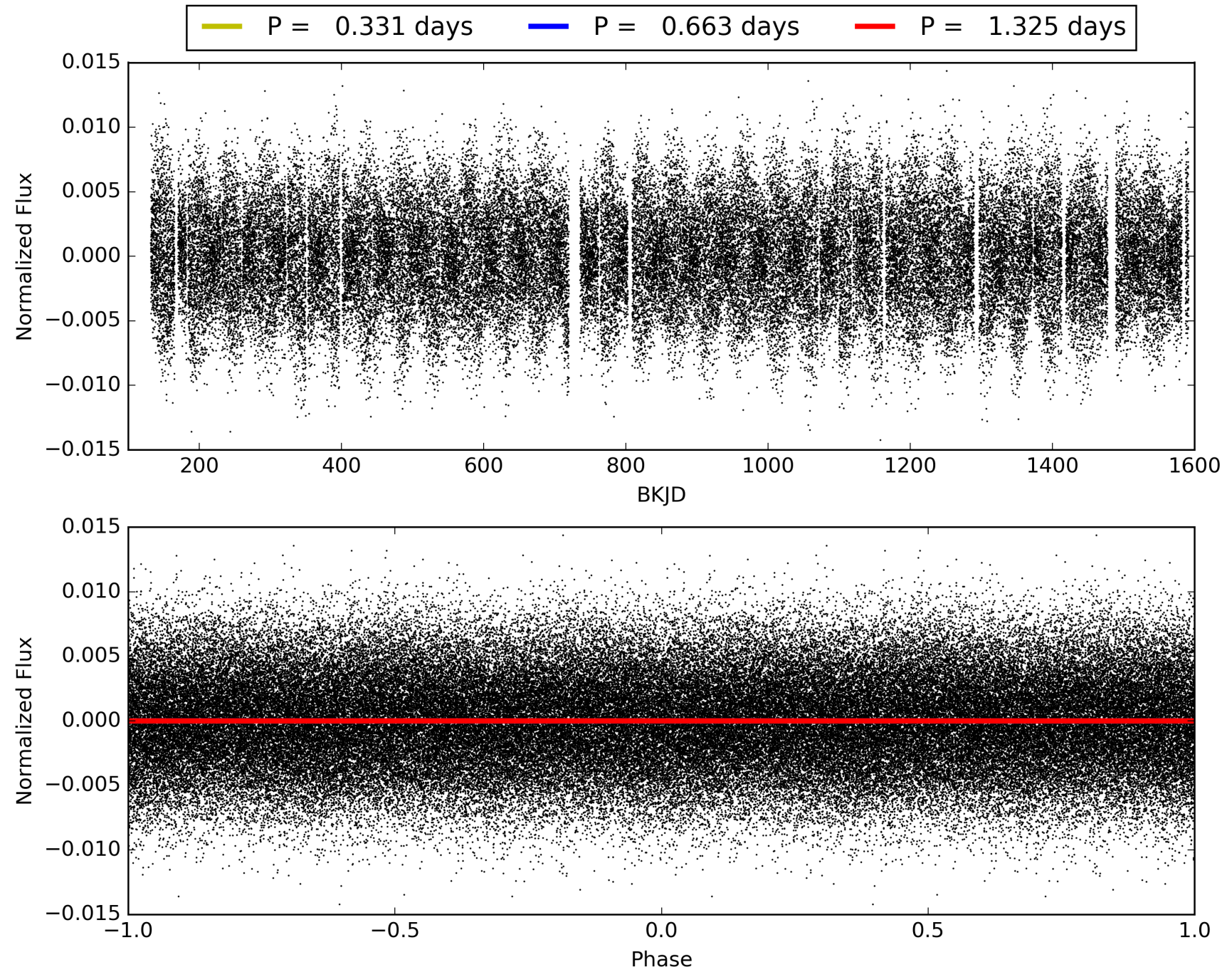
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:10 Z

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

TCE 008310243-01, PDC Light Curves

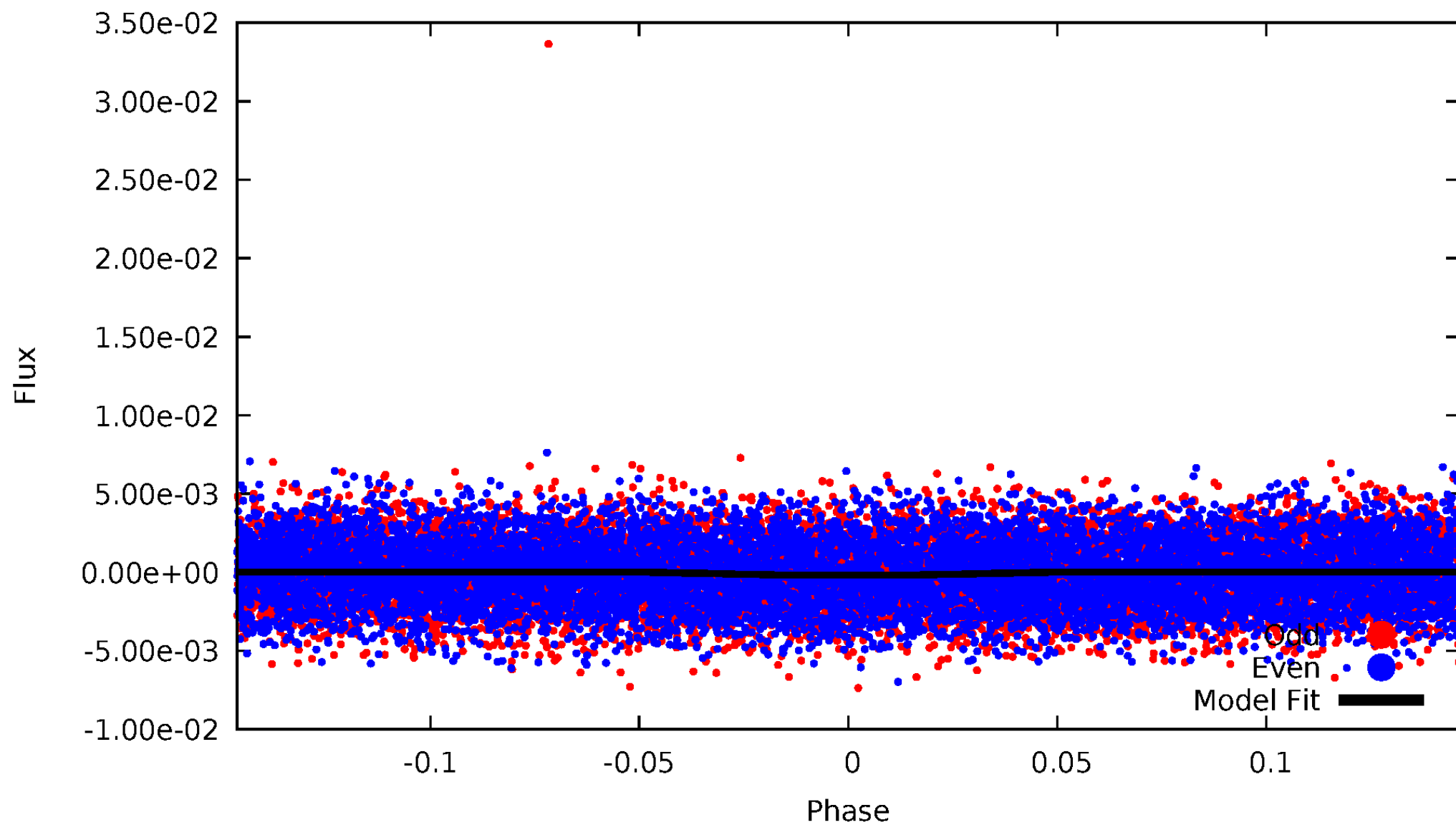


TCE 008310243-01



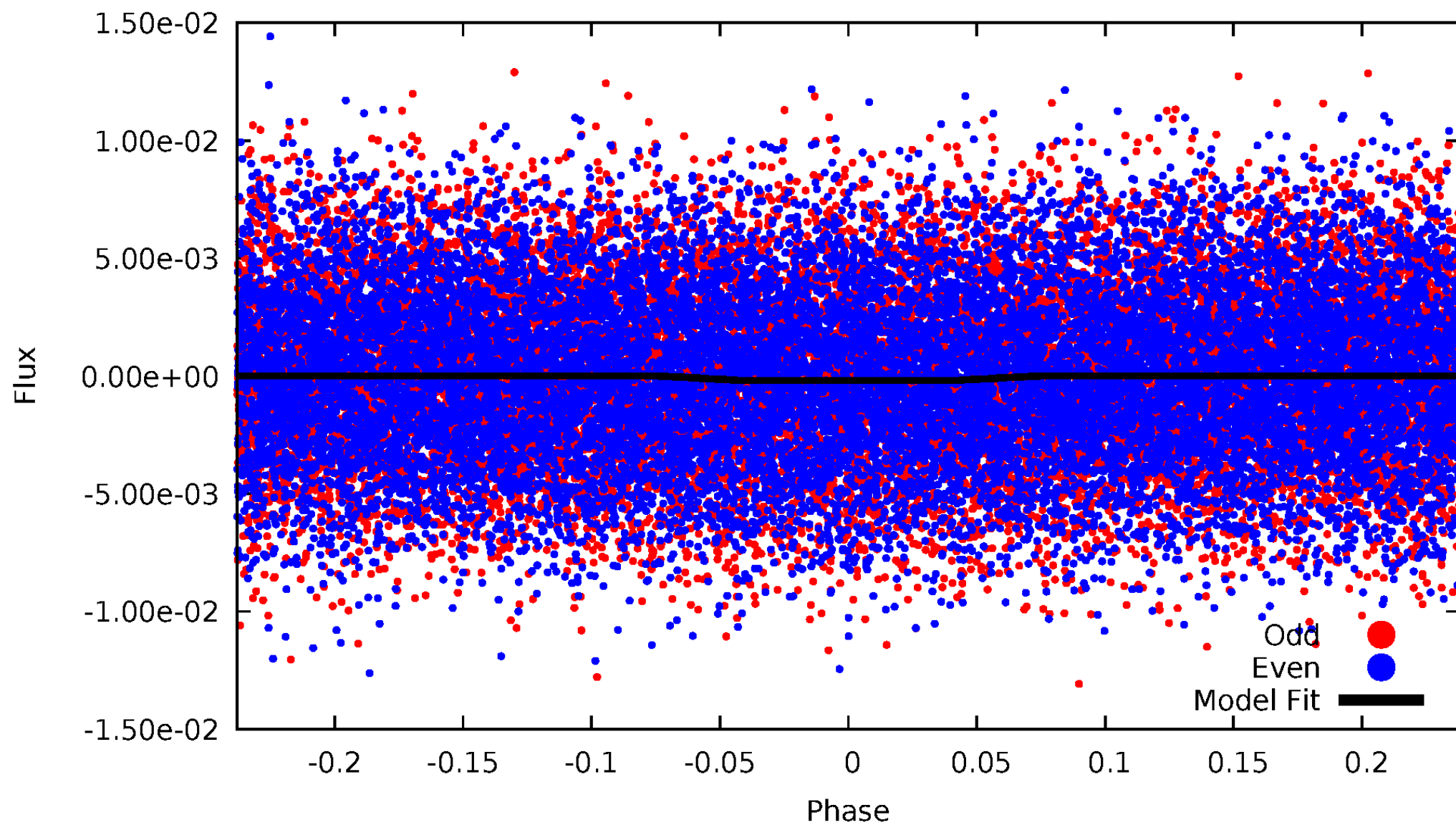
DV Odd/Even

TCE 008310243-01

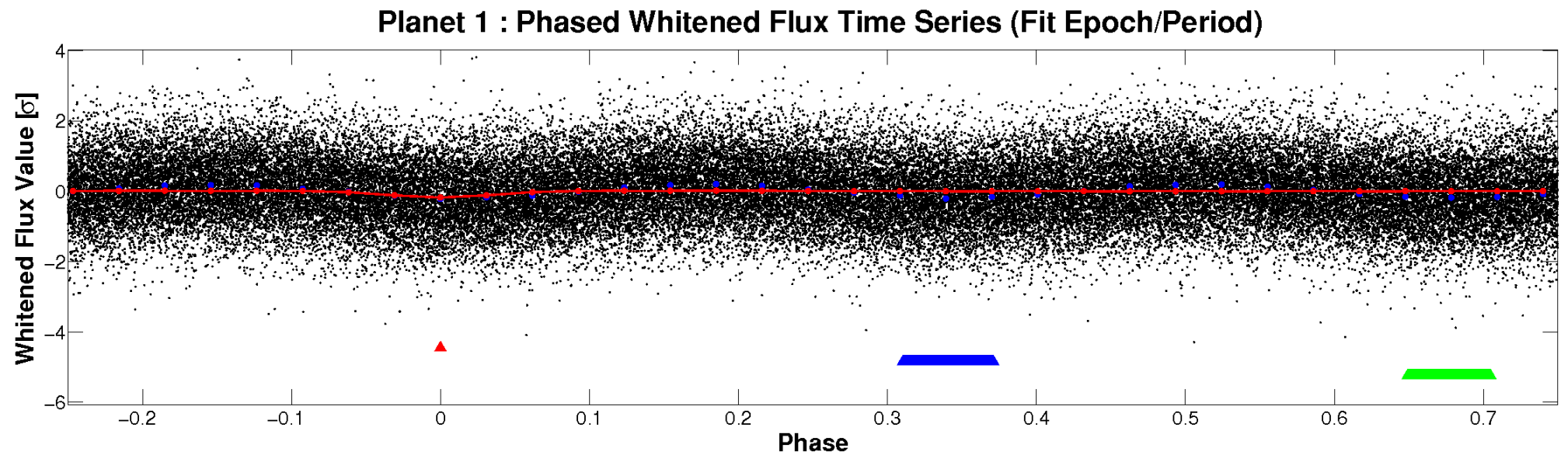
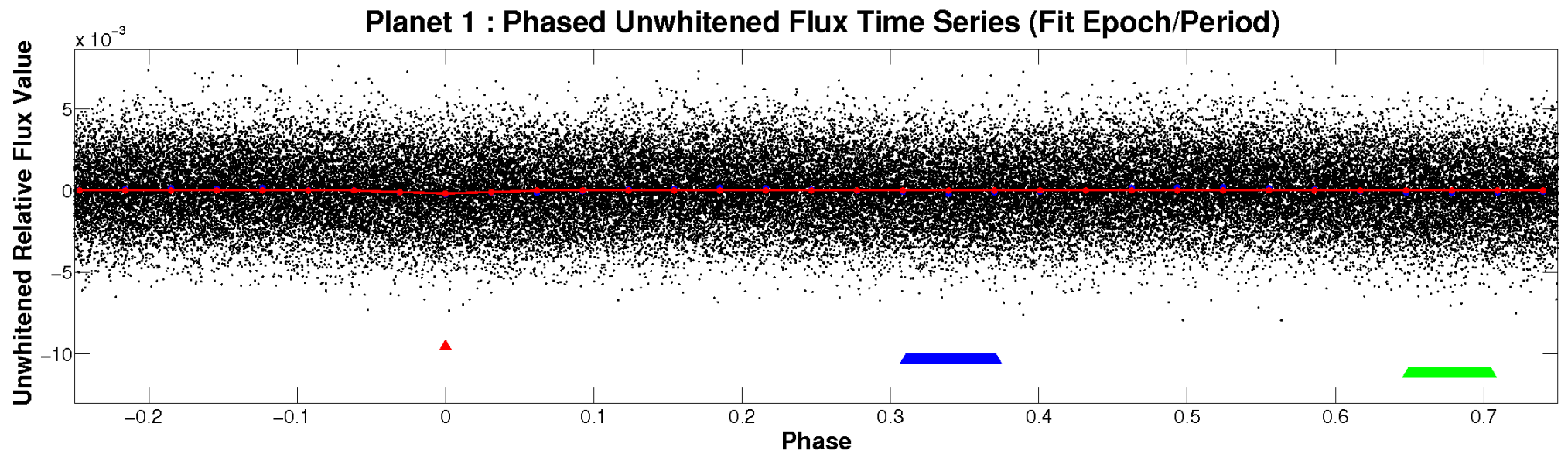


ALT Odd/Even

TCE 008310243-01

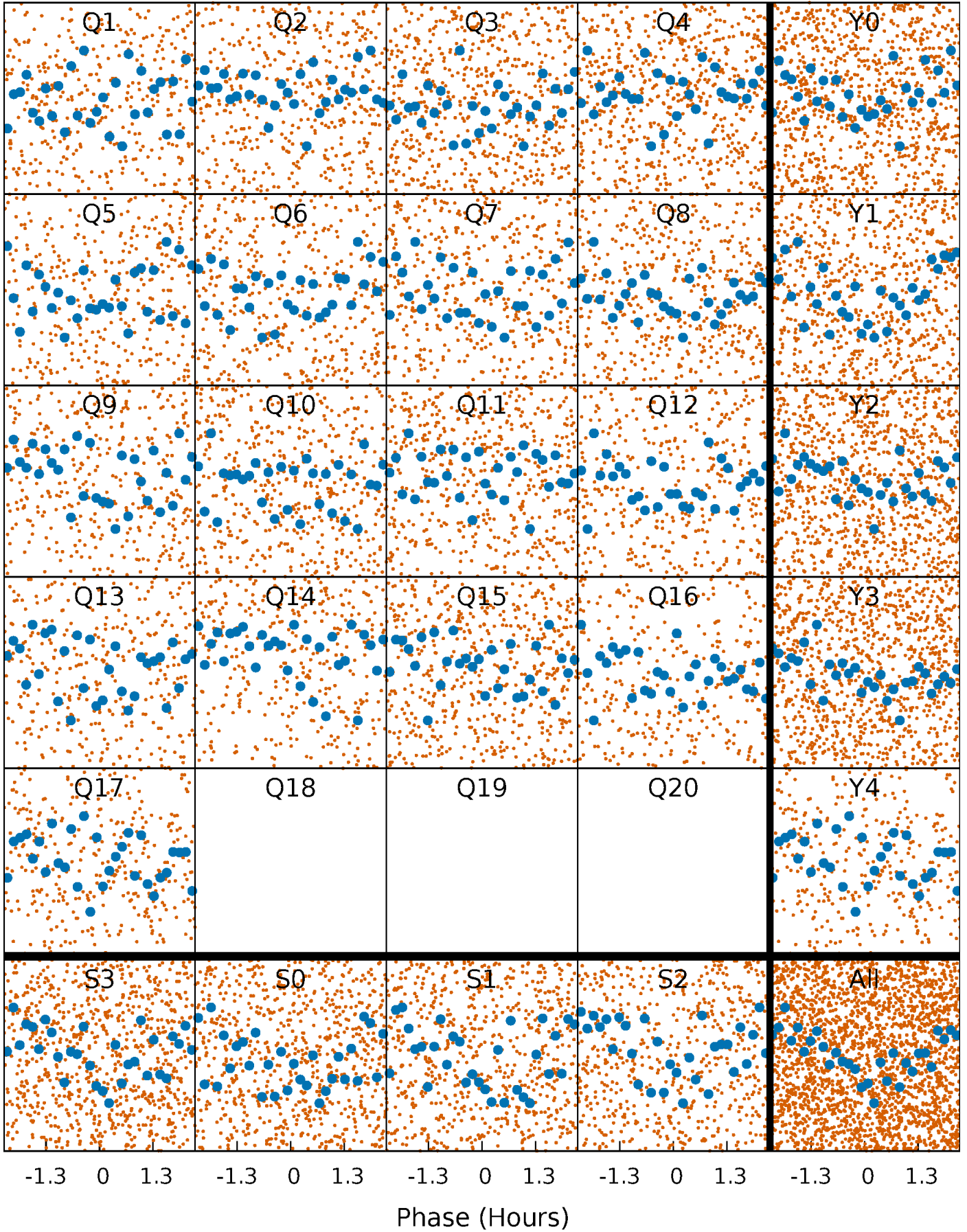


Non-Whitened Vs. Whitened Light Curve



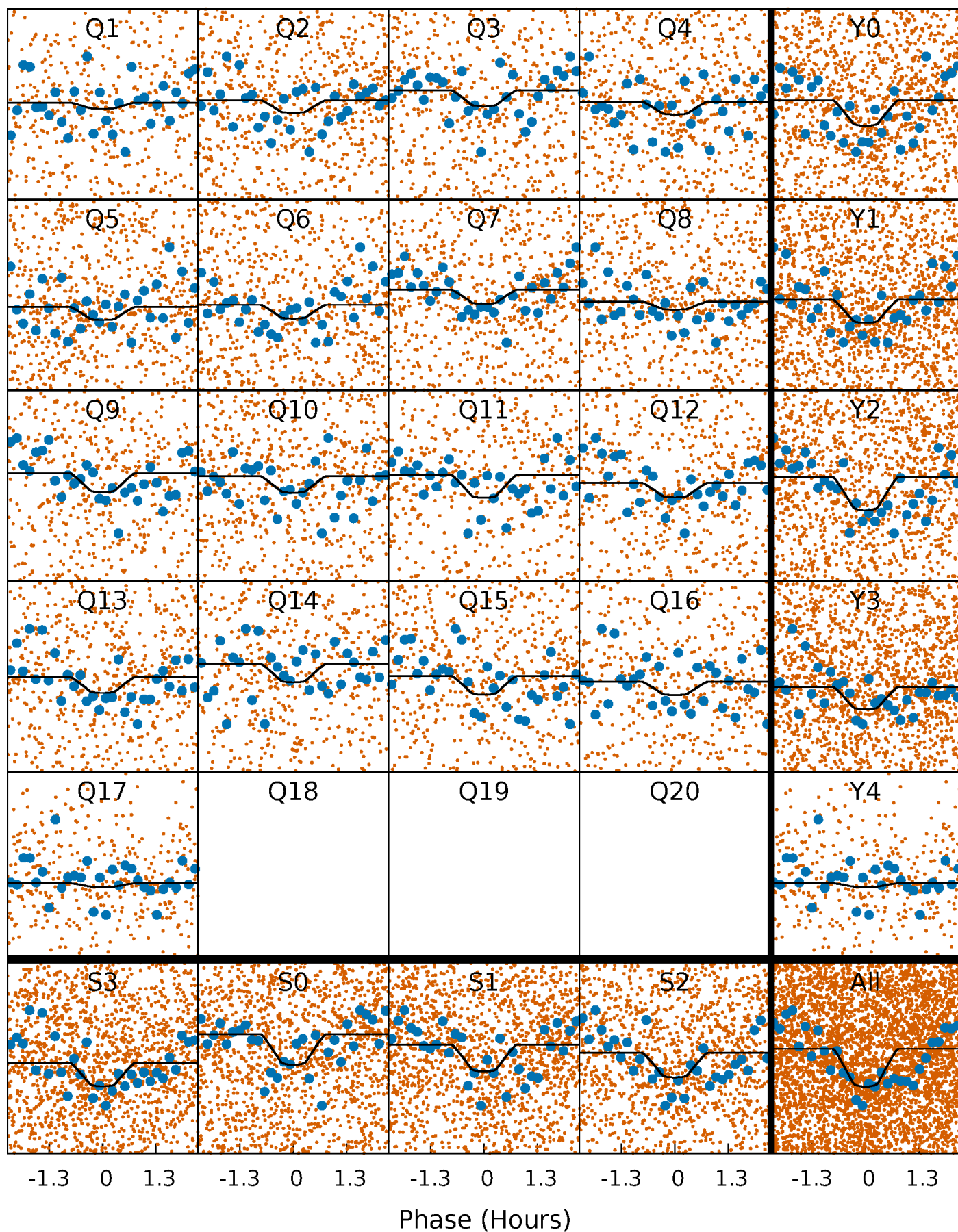
PDC Quarter-Phased Transit Curves

TCE 008310243-01 P= 0.662566 Days $T_0=131.912525$ (BKJD)



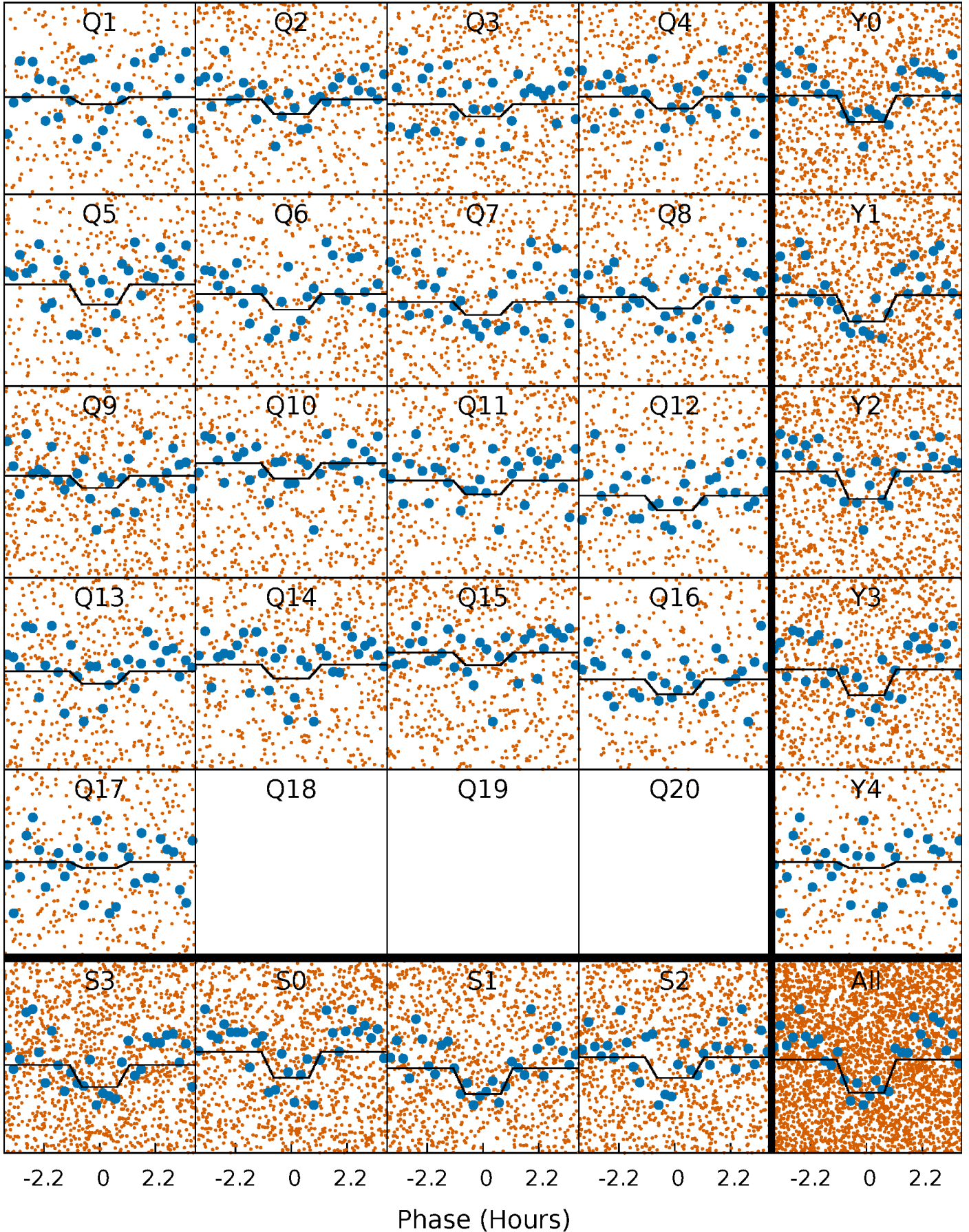
DV Quarter-Phased Transit Curves

TCE 008310243-01 P= 0.662566 Days $T_0=131.912525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

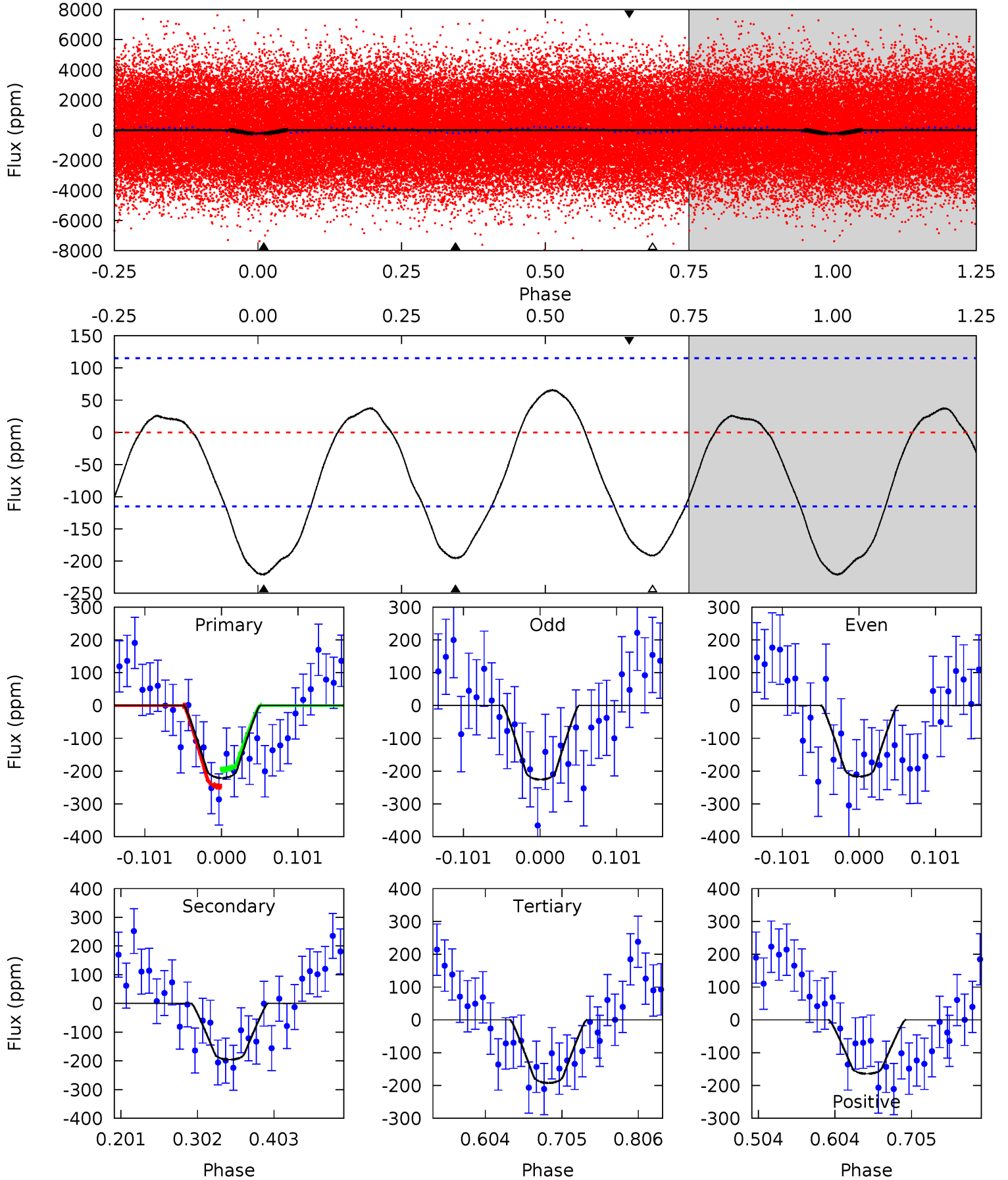
TCE 008310243-01 P= 0.662582 Days $T_0=131.912685$ (BKJD)



DV Model-Shift Uniqueness Test

008310243-01, P = 0.662566 Days, E = 131.249959 Days

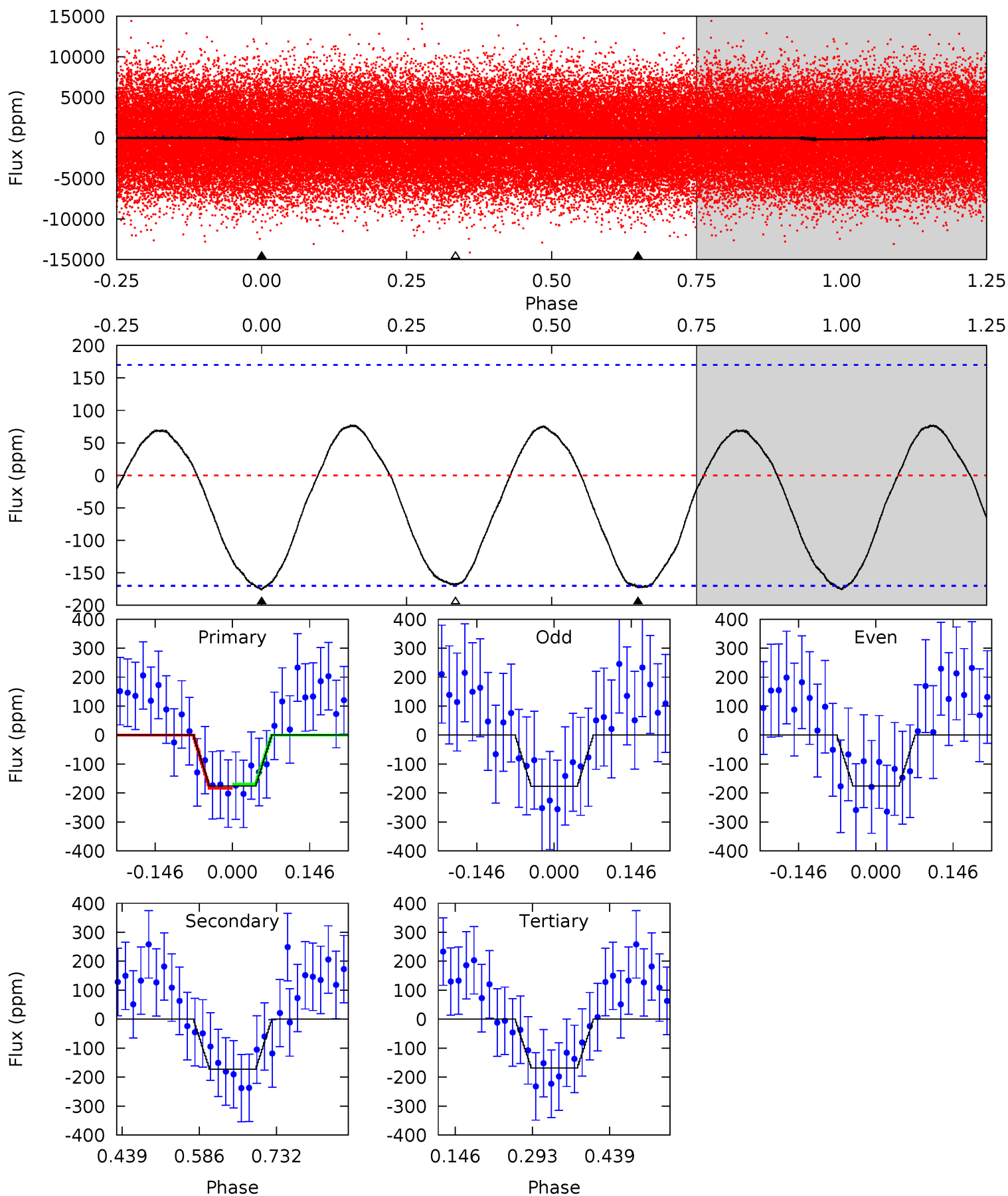
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.77	7.76	7.62	-6.51	4.56	1.64	3.09	1.15	15.3	0.14	14.3	0.18	1.00	0.23	1.02



Alt Model-Shift Uniqueness Test

008310243-01, P = 0.662582 Days, E = 131.250103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.65	4.56	4.44	0	4.48	1.45	2.35	0.21	4.65	0.12	4.56	0.02	1.00	0.30	0.20



Stellar Parameters For KIC 008310243

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$4.069^{+0.198}_{-0.162}$	$-0.200^{+0.250}_{-0.350}$	$1.870^{+0.515}_{-0.464}$	$1.491^{+0.211}_{-0.257}$	$0.321^{+0.382}_{-0.153}$
	+3%/-4%	+5%/-4%	+125%/-175%	+28%/-25%	+14%/-17%	+119%/-48%
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 008310243-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-196 ± 25	$3.18^{+2.09}_{-1.86}$	4688^{+358}_{-347}	6588^{+5347}_{-1670}	$2.989^{+14.746}_{-1.886}$
Alt.	-173 ± 38	$3.02^{+2.10}_{-1.73}$	4689^{+350}_{-339}	6494^{+5657}_{-1636}	$3.007^{+13.379}_{-1.958}$

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

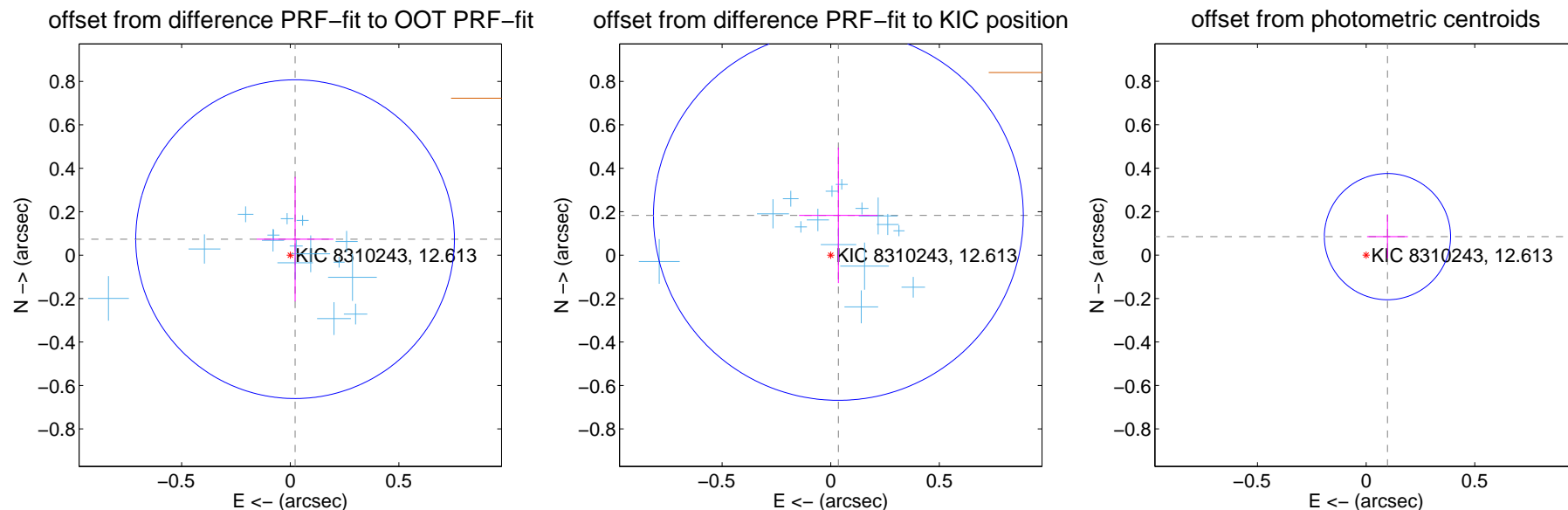
DV Centroid Data

Supplemental centroid analysis for 008310243-01. Kepler magnitude: 12.61. Transit SNR 10.95

There are 15 quarters with good PRF difference image offsets

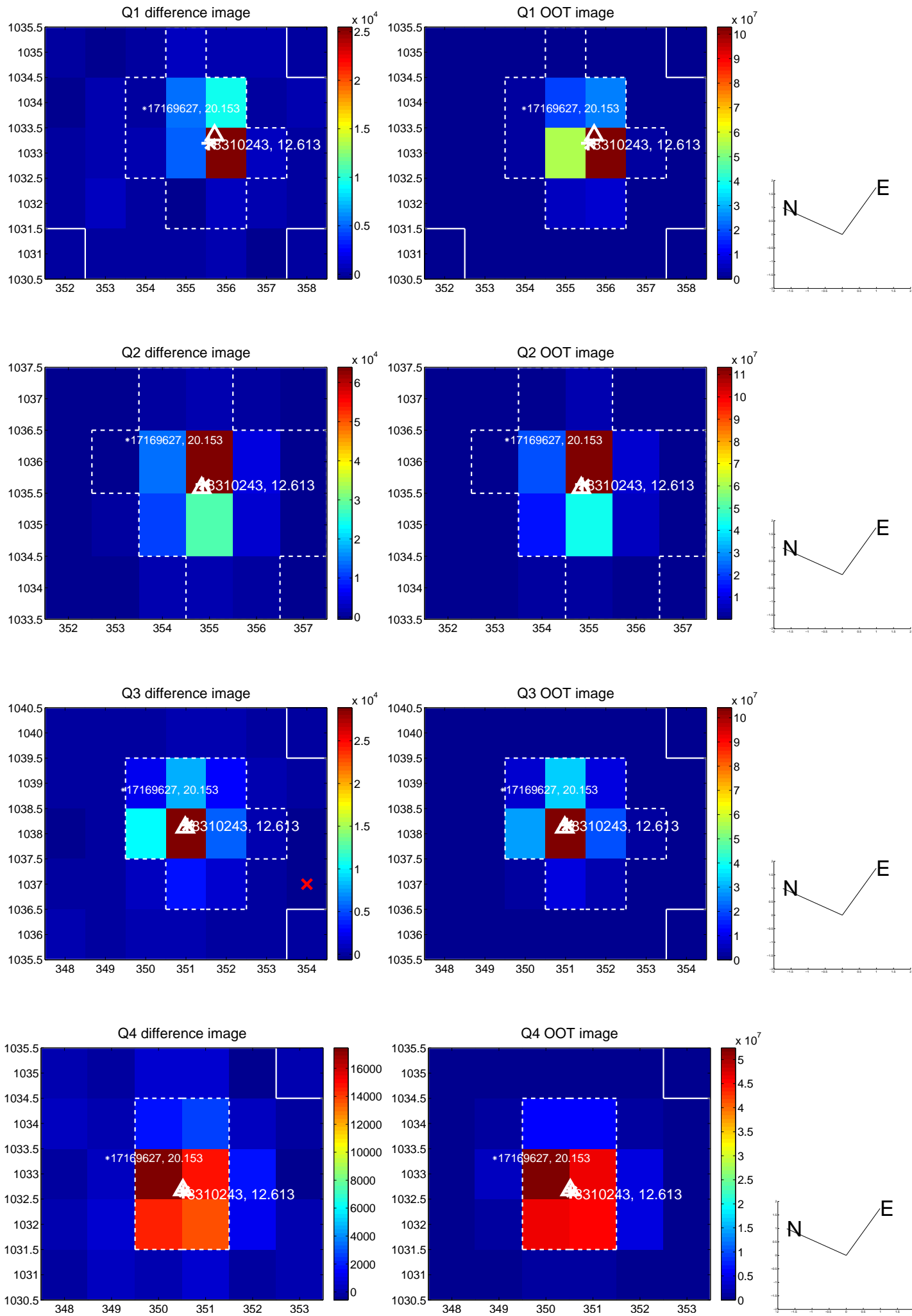
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.245	0.31	-0.022 ± 0.176	0.074 ± 0.287
PRF-fit source offset from KIC position	0.186 ± 0.284	0.66	-0.035 ± 0.181	0.183 ± 0.312
photometric centroid source offset	0.13 ± 0.10	1.34	-0.10 ± 0.09	0.08 ± 0.10

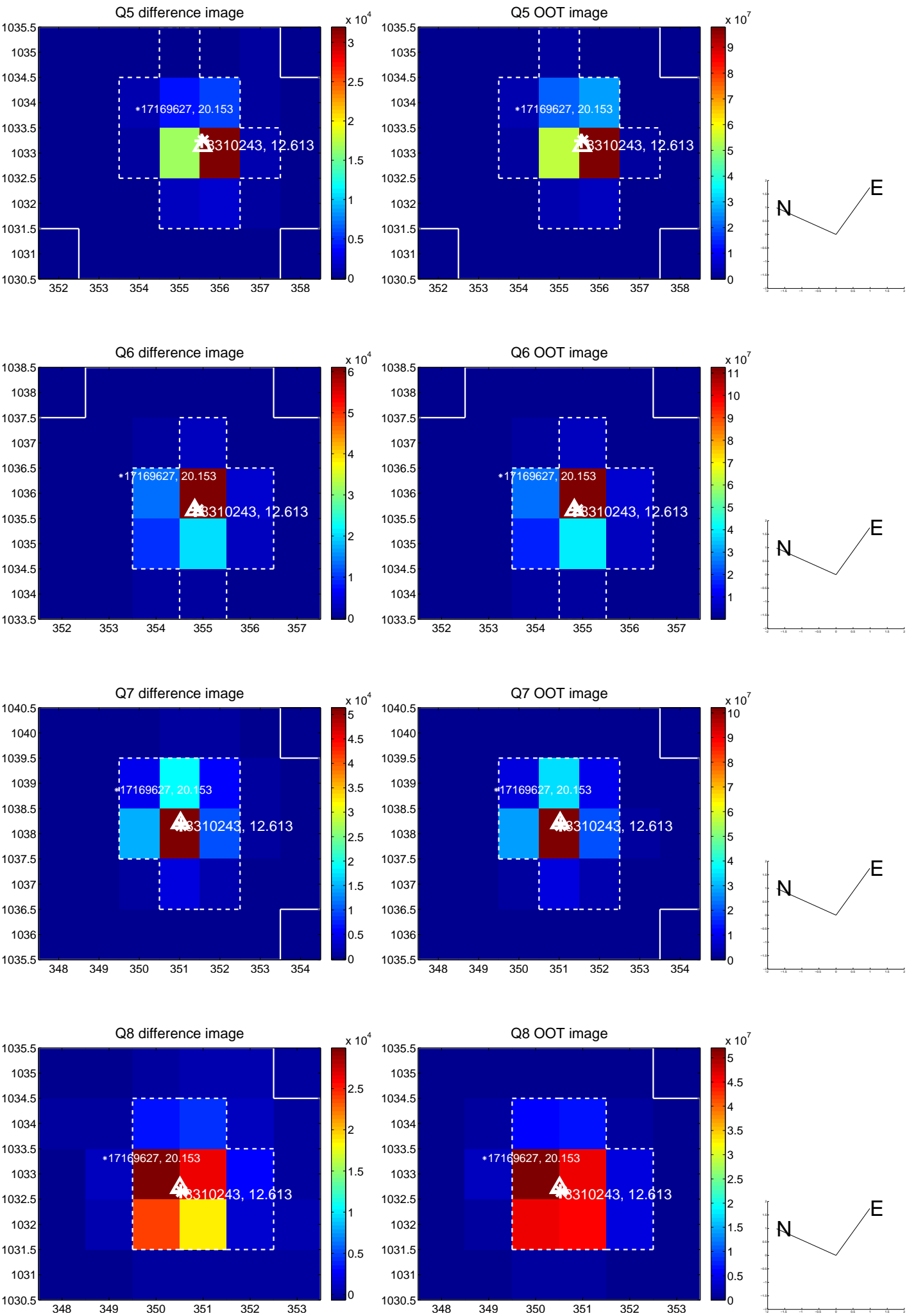


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

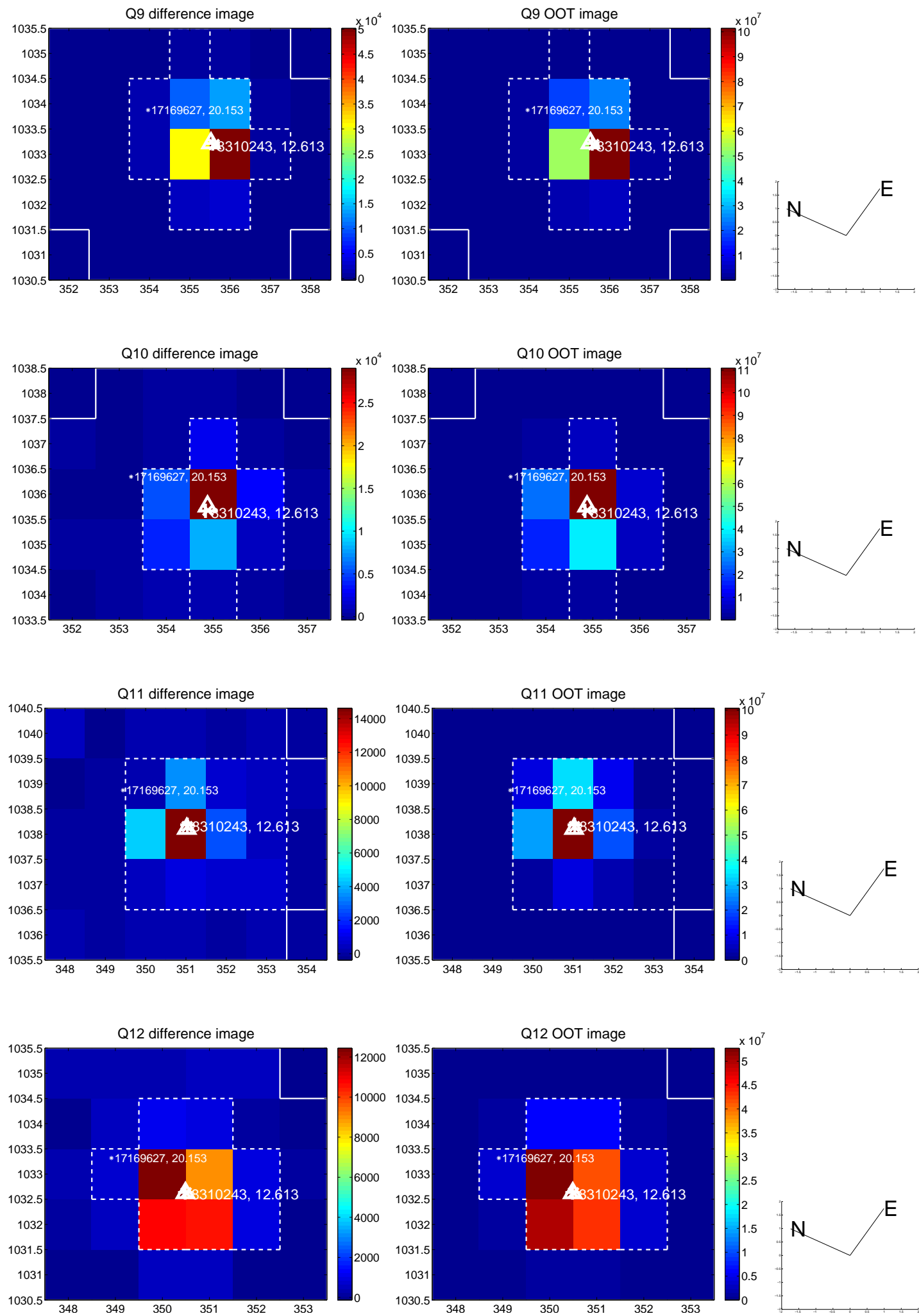
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



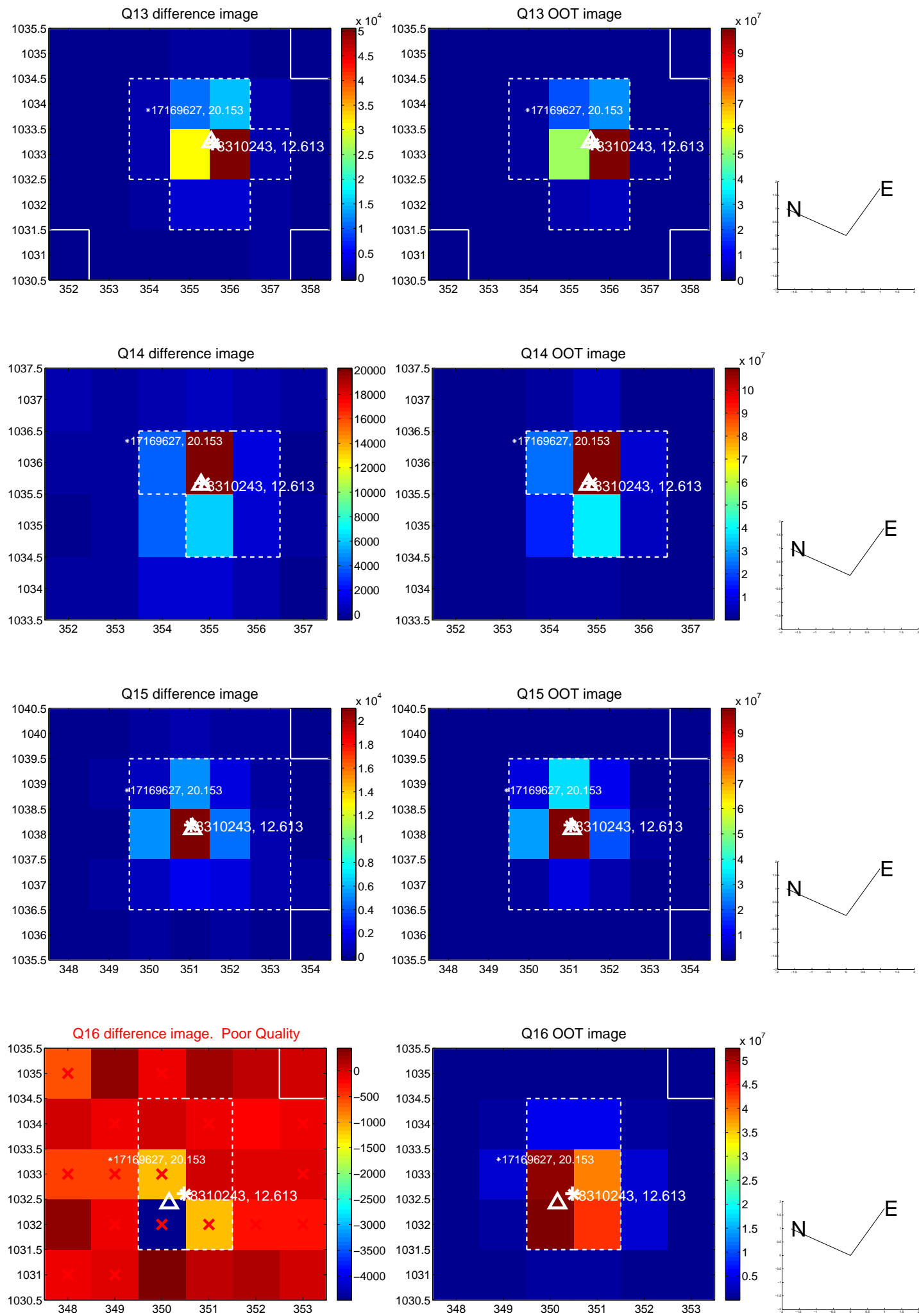
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



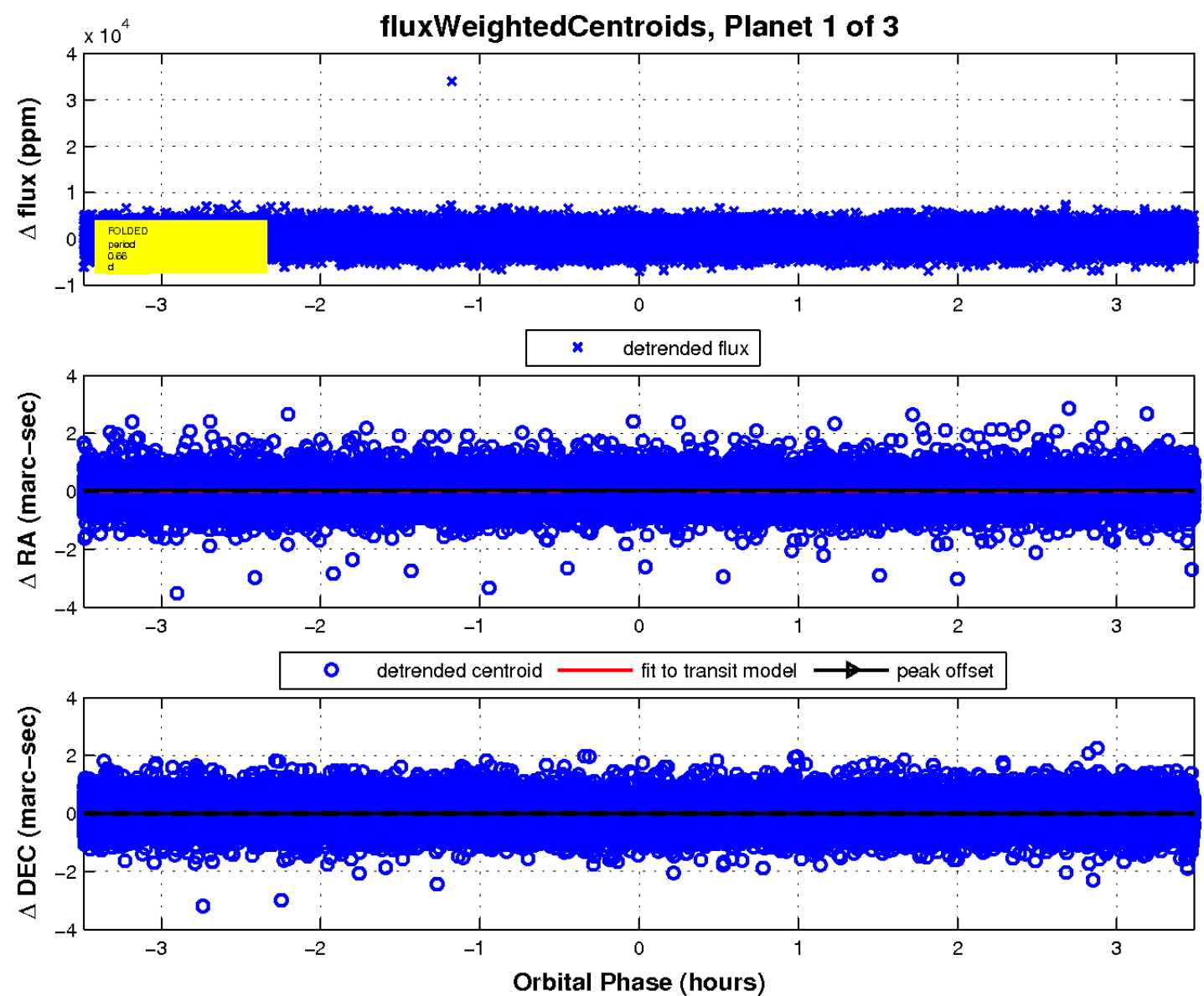
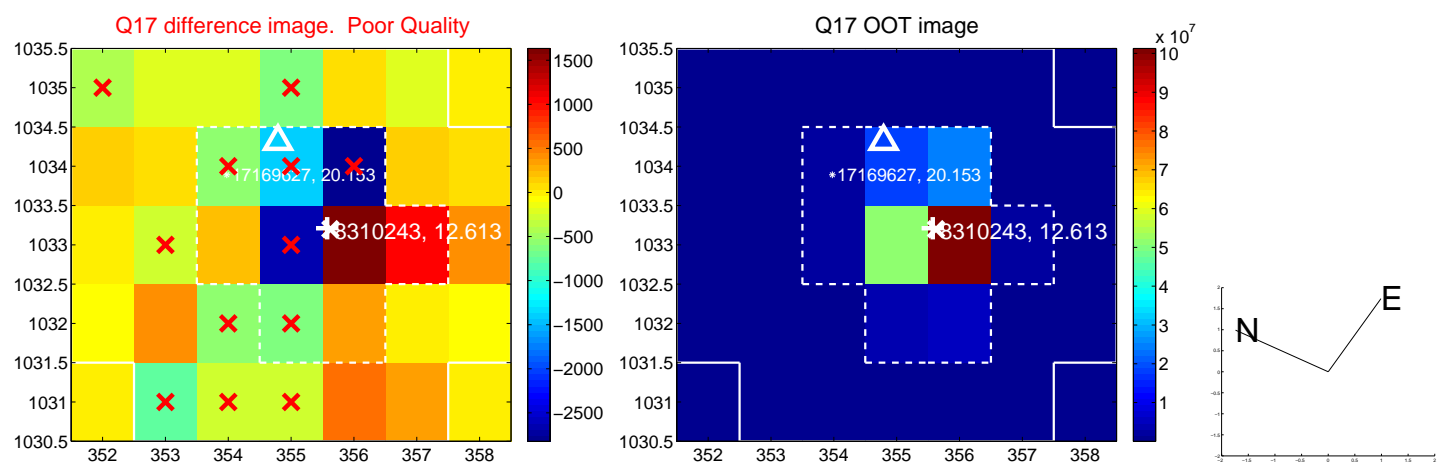
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

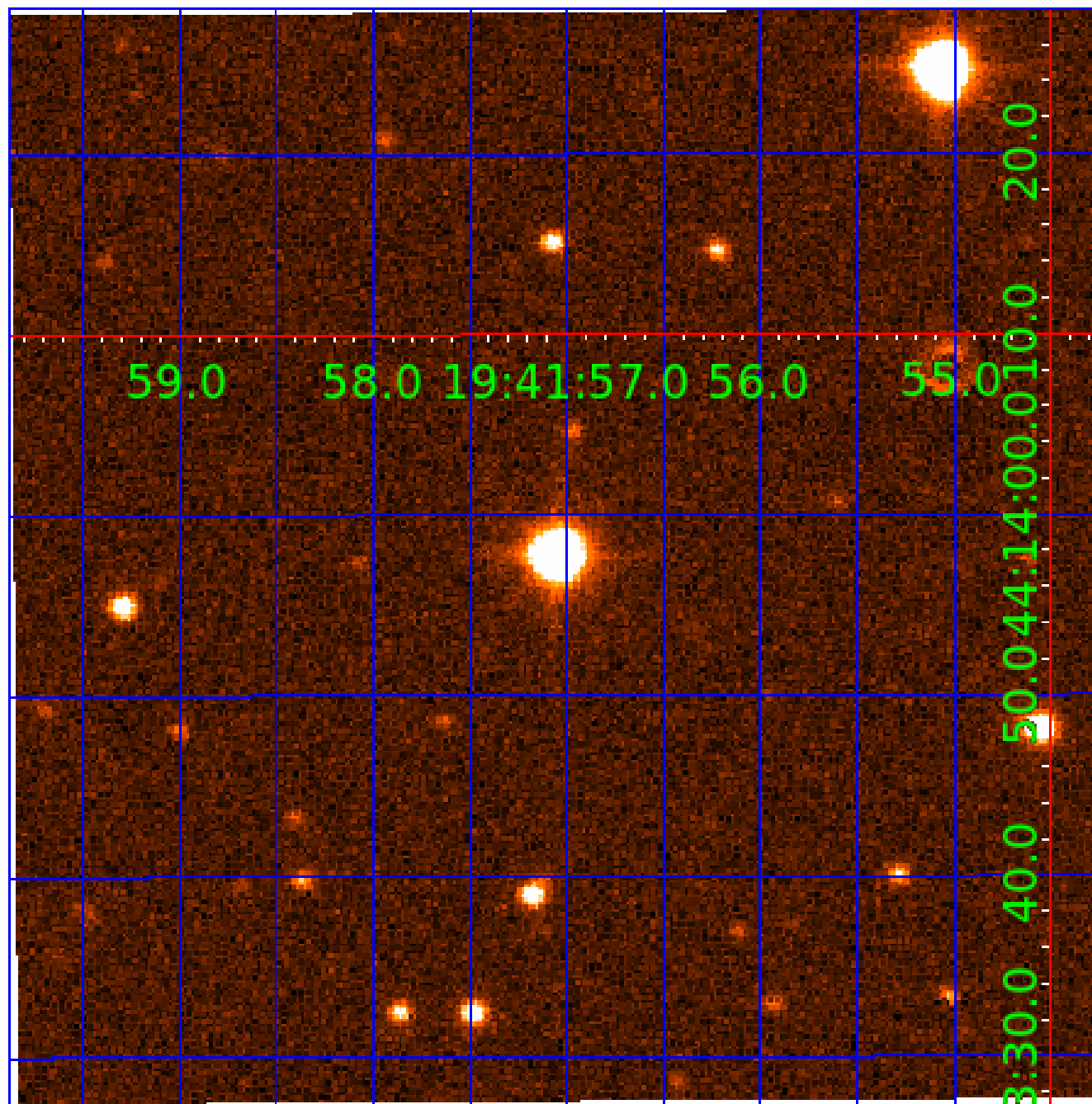


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008310243

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})
008310243-01	OBS	No	0.662566	131.912525	184.0	1.163	15.9	10.9	1.87	7281	2.95	30426.15
008310243-02	OBS	No	0.662585	132.118114	176.7	2.175	12.6	13.3	1.87	7281	2.88	30425.02
008310243-03	OBS	No	0.662583	131.679944	113.1	2.000	7.7	7.1	1.87	7281	2.03	30425.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008310243-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008310243-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008310243-03	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.

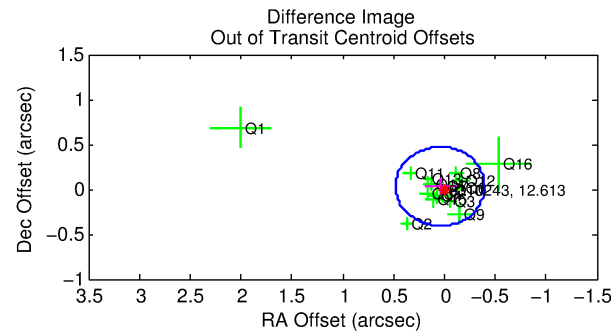
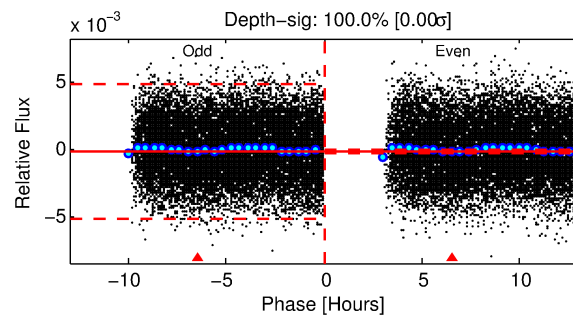
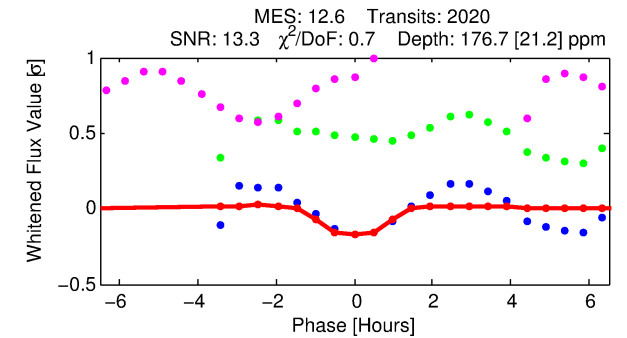
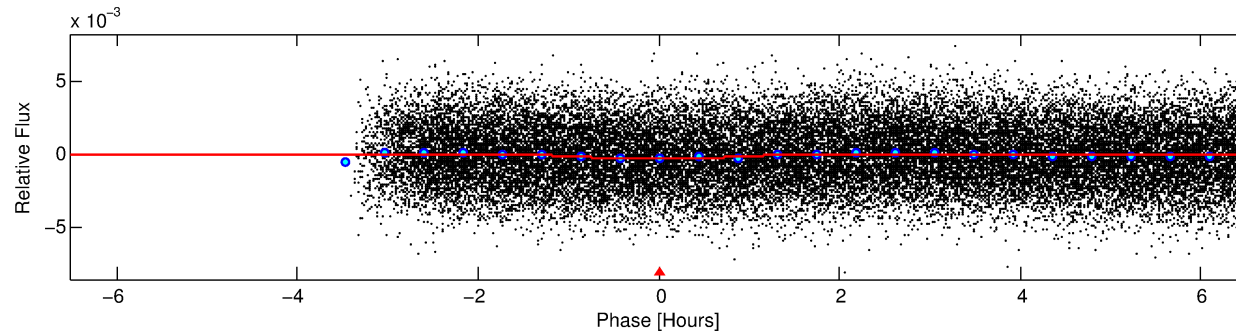
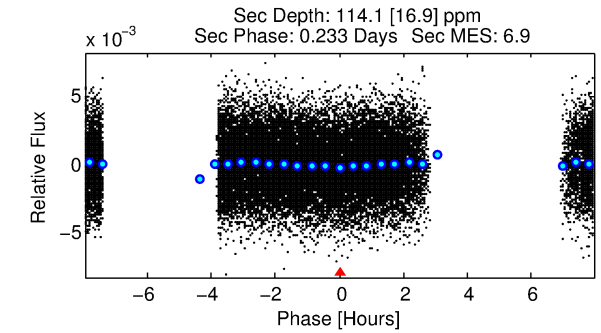
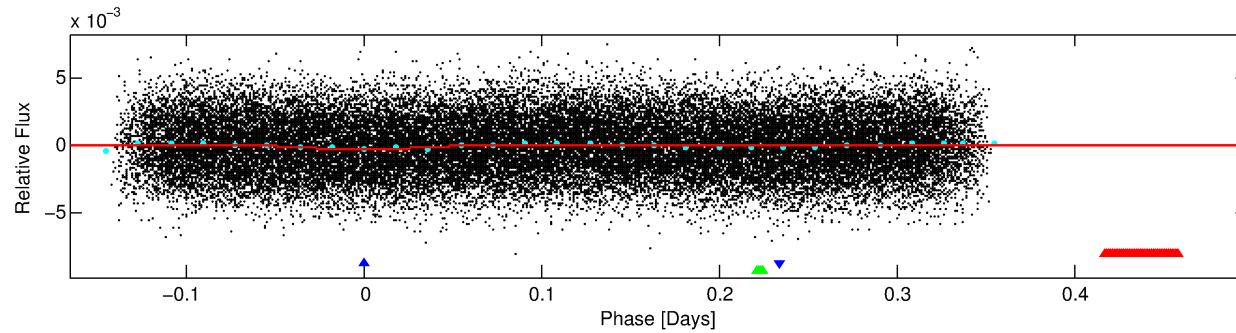
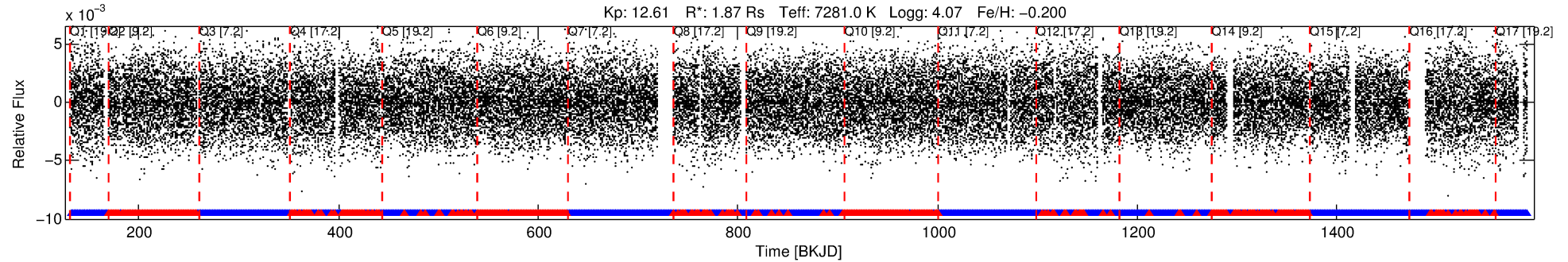
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008310243-02

No Significant Match Found

DV One-Page Summary

KIC: 8310243 Candidate: 2 of 3 Period: 0.663 d



DV Fit Results:

Period = 0.66258 [0.00001] d
Epoch = 132.1181 [0.0025] BKJD
Rp/R* = 0.0141 [0.0103]
a/R* = 1.44 [3.39]
b = 0.90 [0.98]
Seff = 30425.02 [11938.94]
Teq = 3368 [330] K
Rp = 2.88 [2.24] Re
a = 0.0170 [0.0041] AU
Ag = 2.18 [3.28] [0.36σ]
Teffp = 6329 [2322] K [1.26σ]

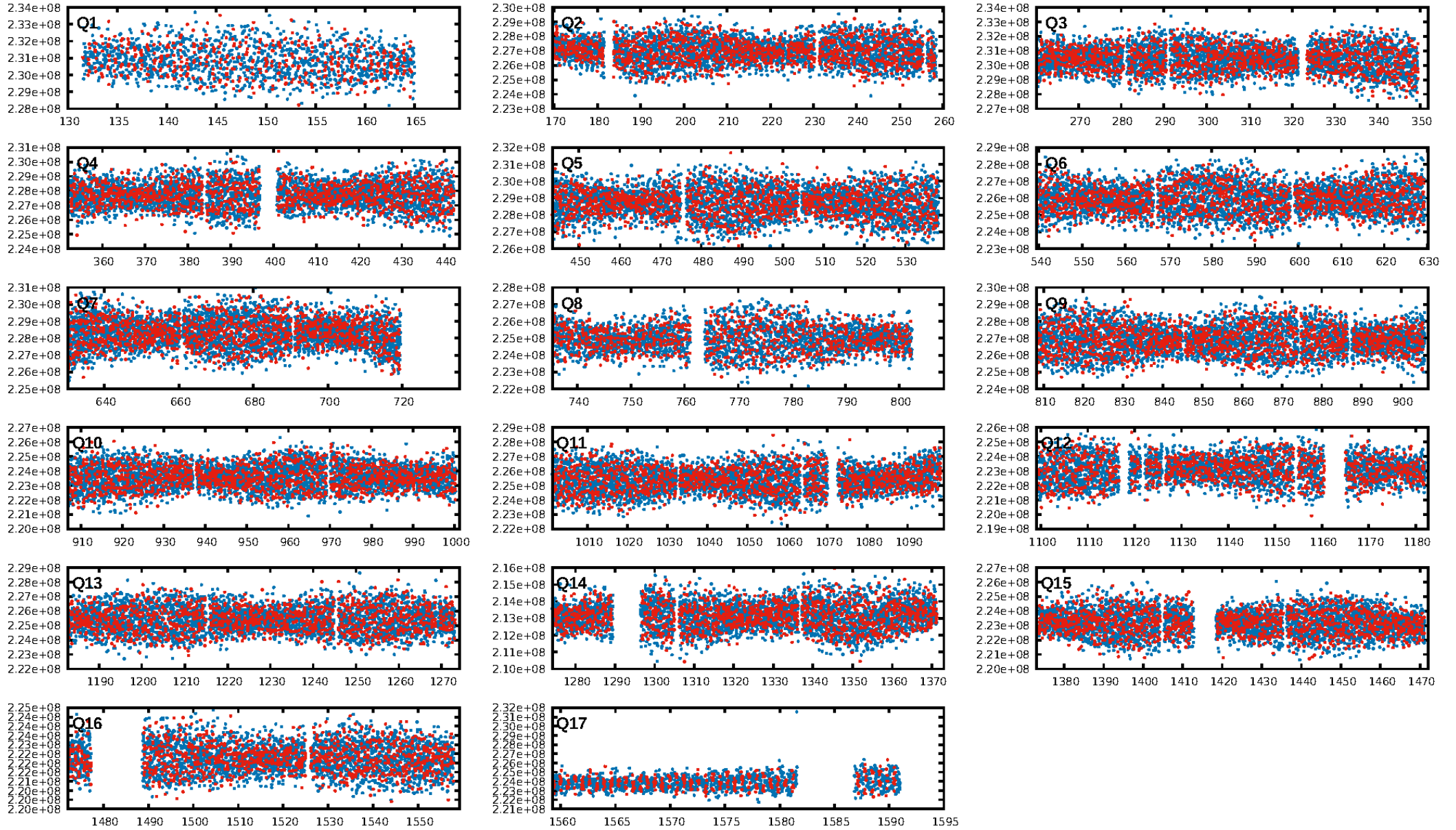
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.69 [1336/1930]
GhostDiagnostic-chr: 2.32
Centroid-sig: 0.0%
Centroid-so: 0.163 arcsec [2.21σ]
OotOffset-rm: 0.052 arcsec [0.36σ]
KicOffset-rm: 0.143 arcsec [1.50σ]
OotOffset-st: 4/4/4 [16]
KicOffset-st: 4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.00 [0/17]

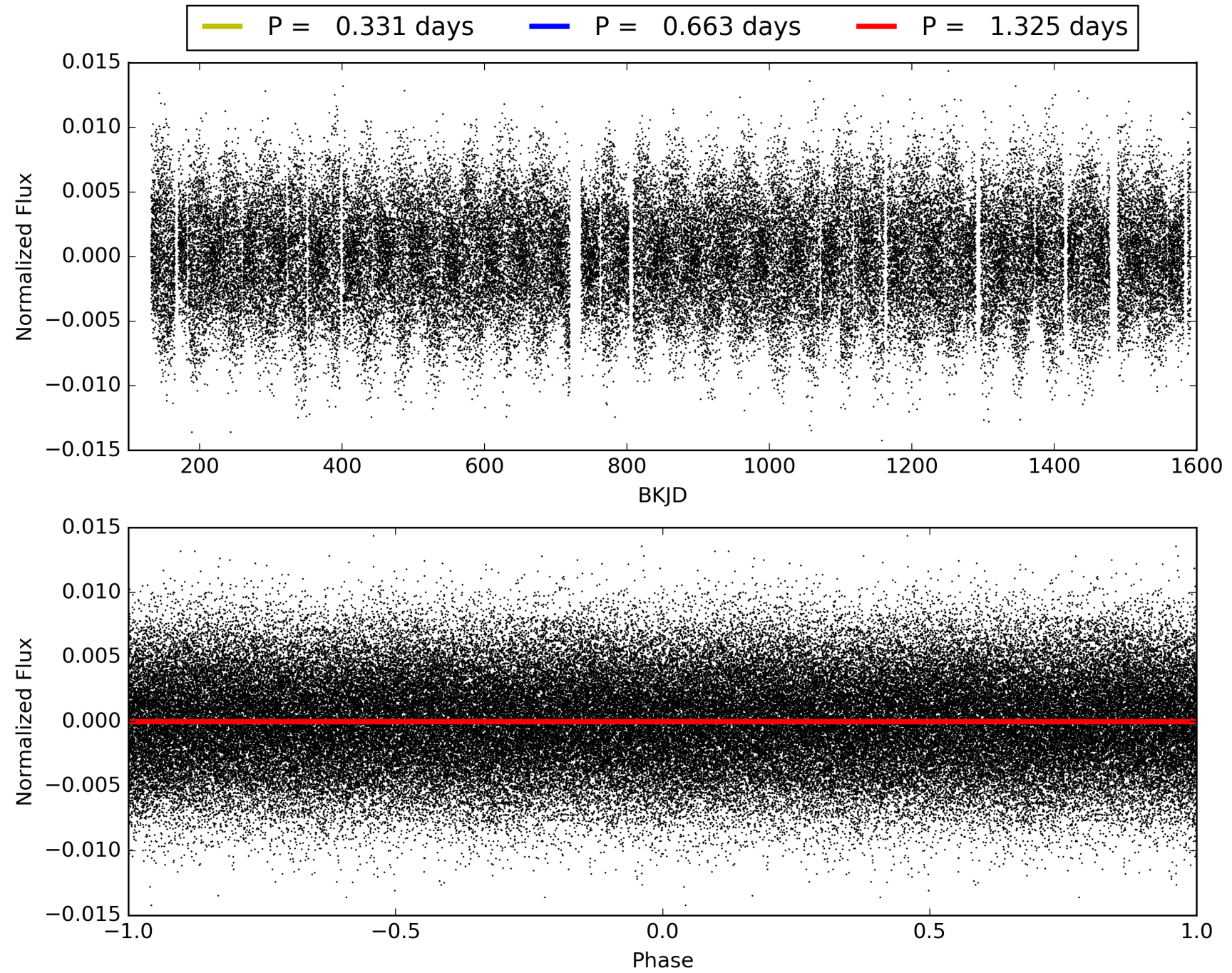
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:21 Z

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

TCE 008310243-02, PDC Light Curves

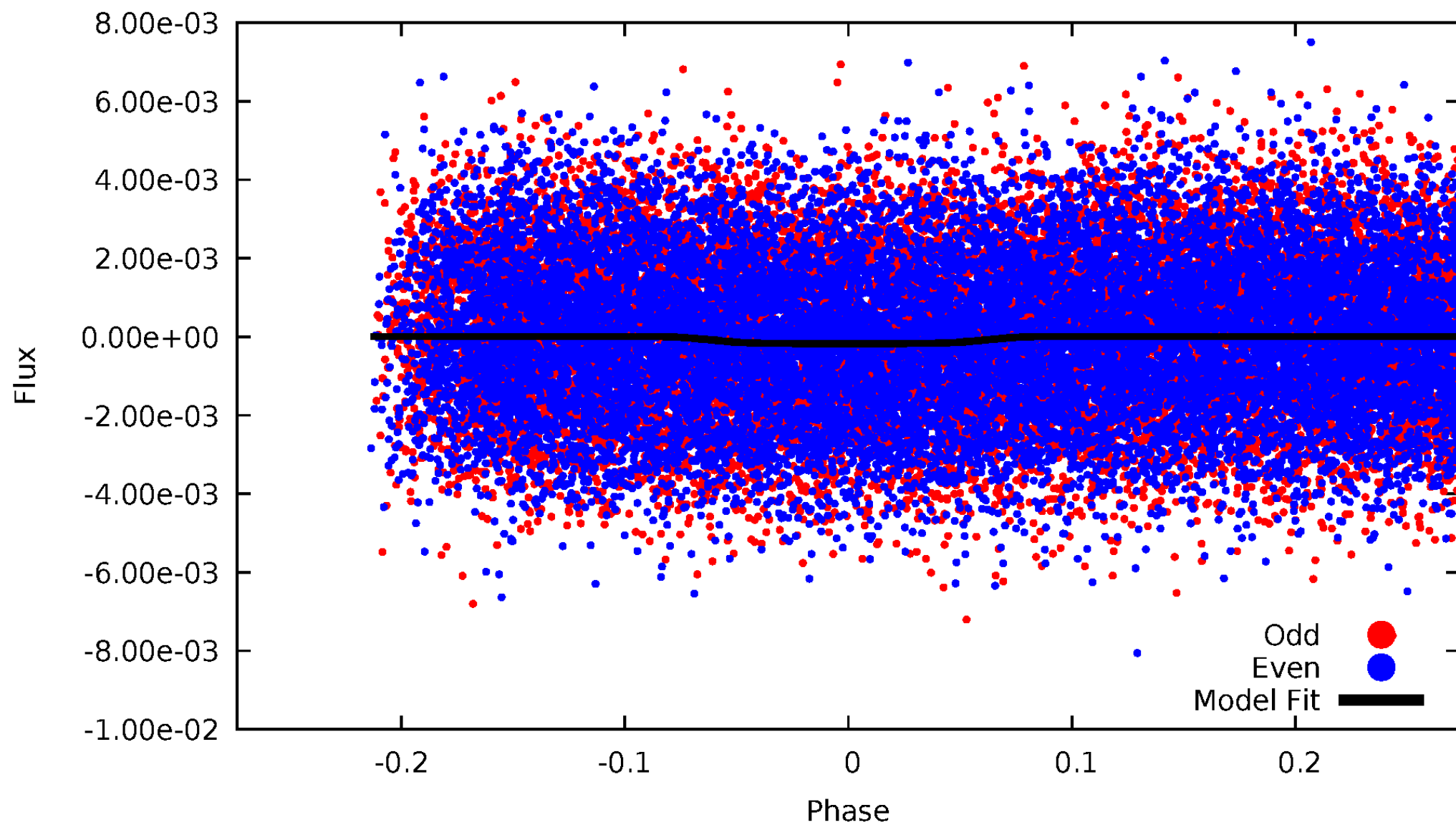


TCE 008310243-02



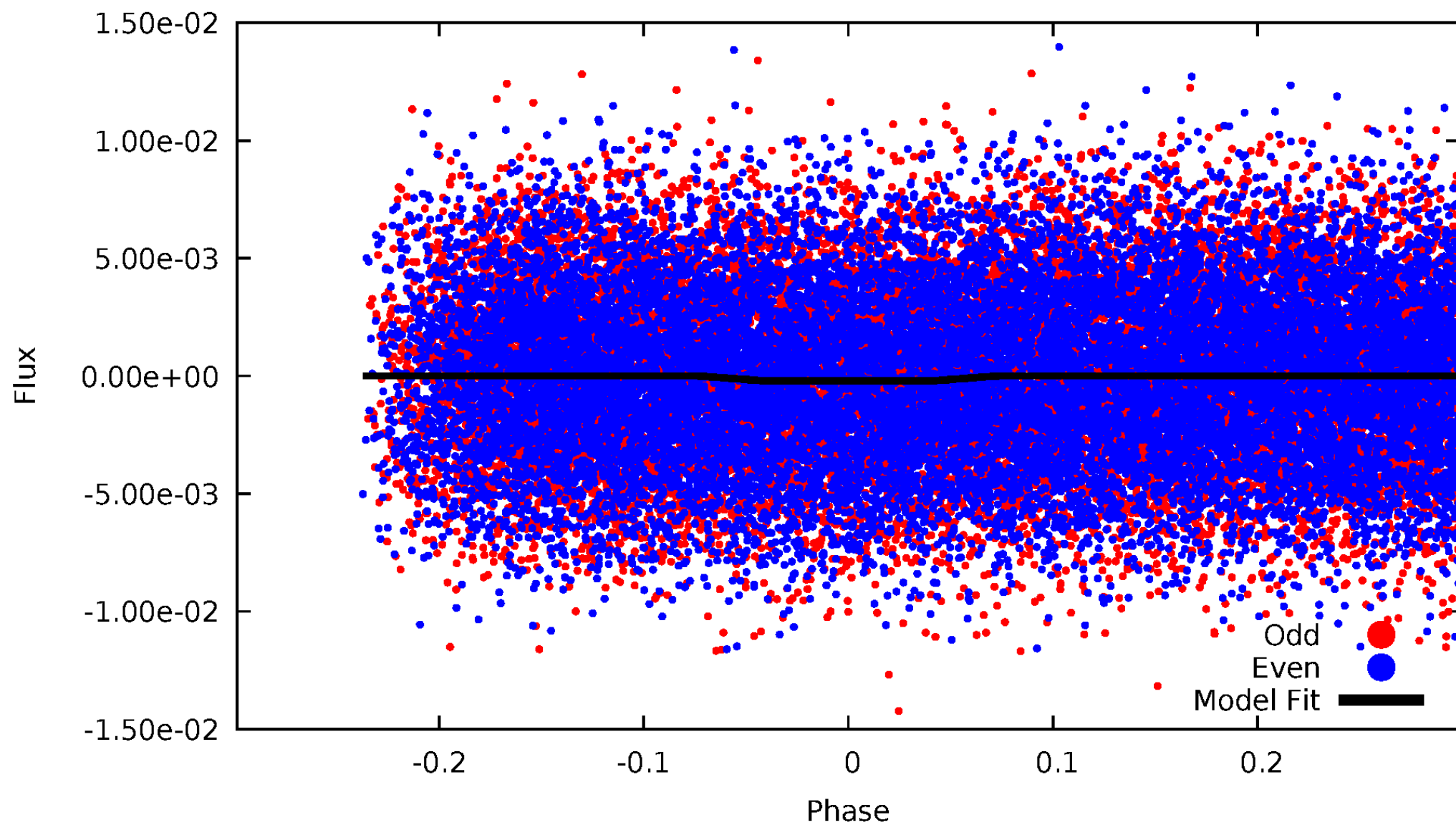
DV Odd/Even

TCE 008310243-02



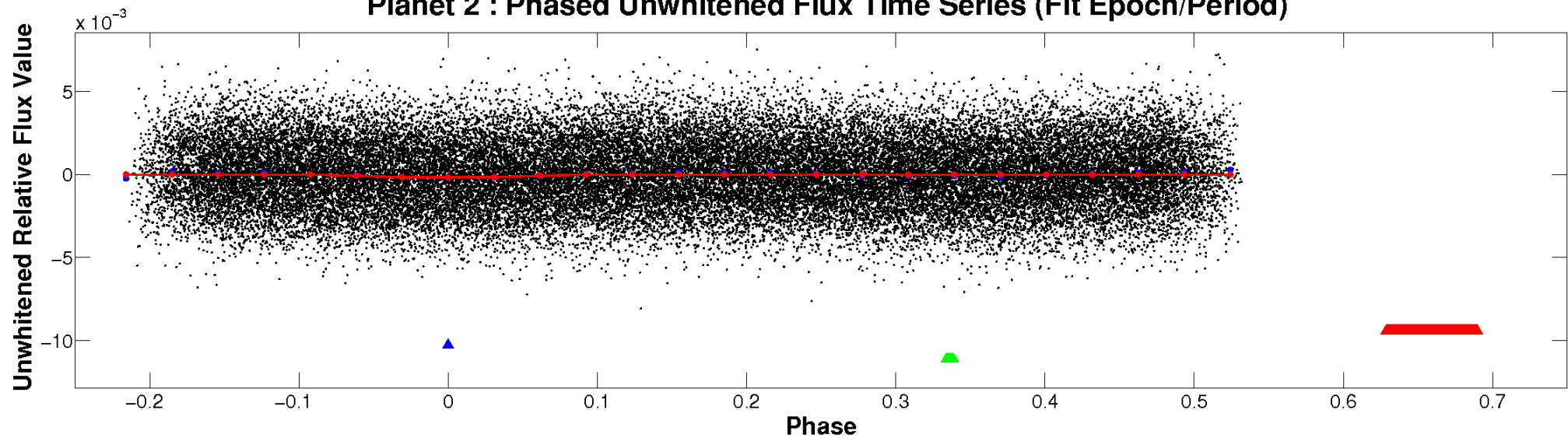
ALT Odd/Even

TCE 008310243-02

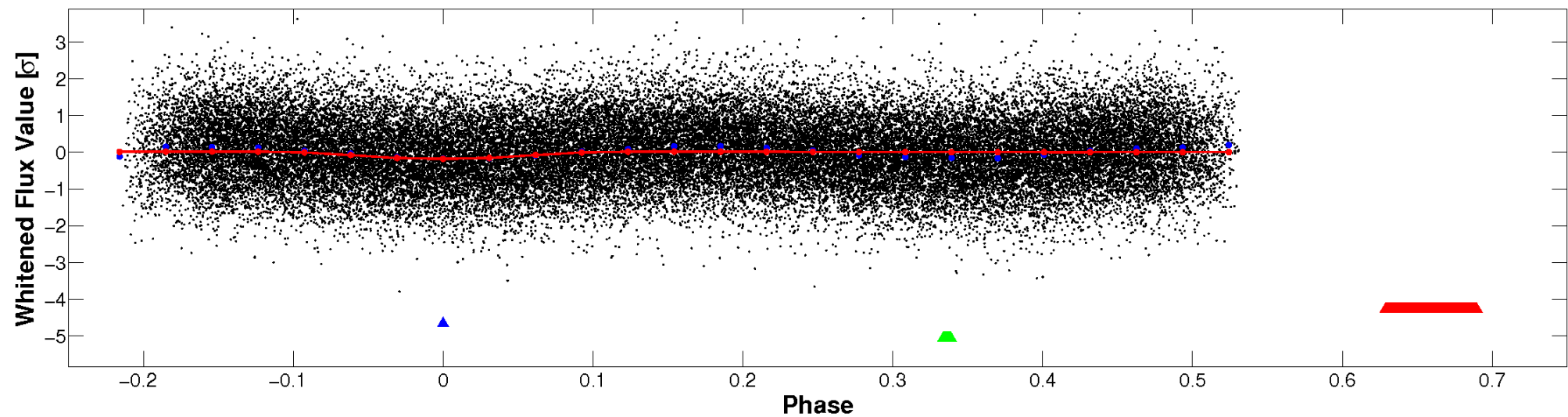


Non-Whitened Vs. Whitened Light Curve

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

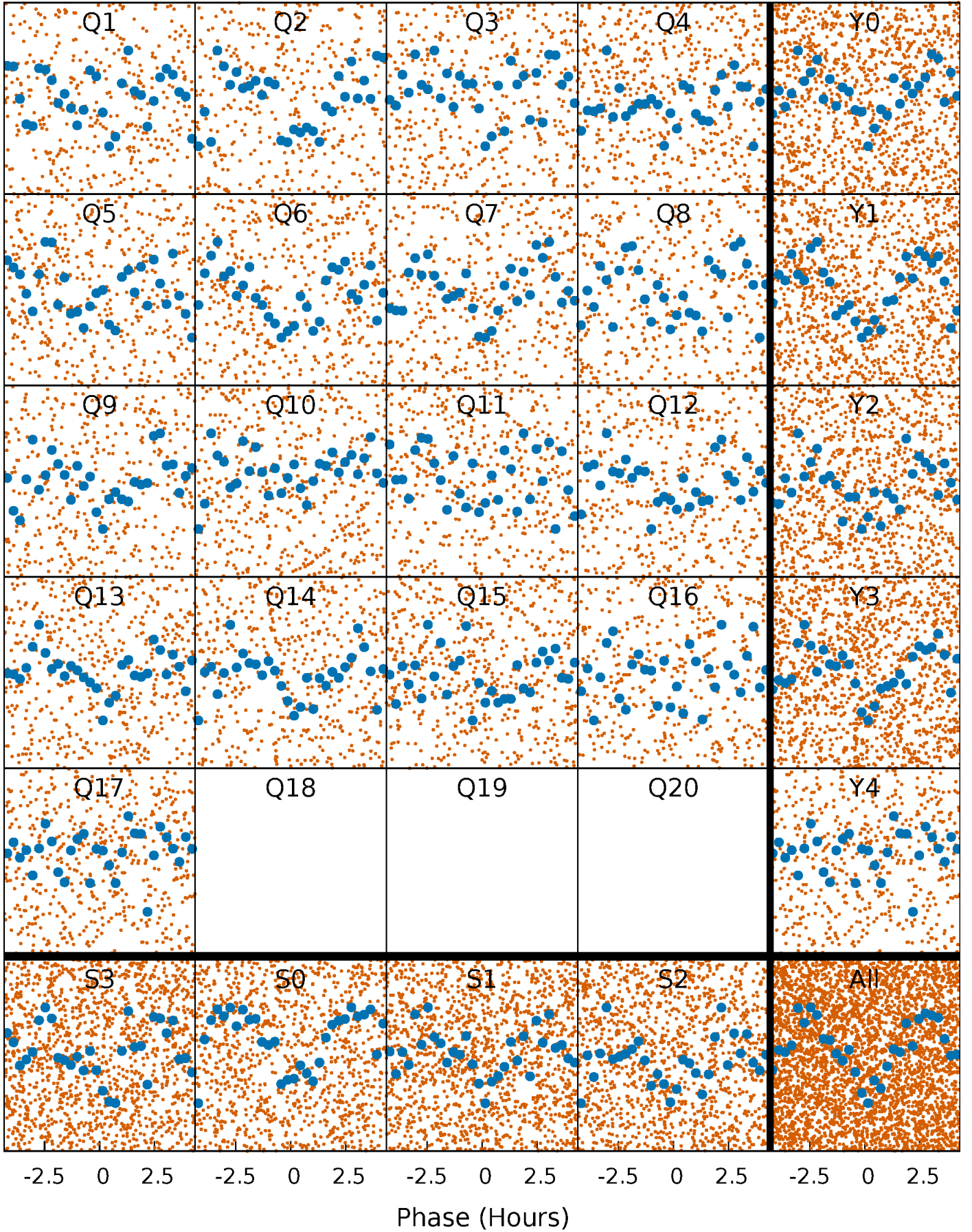


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



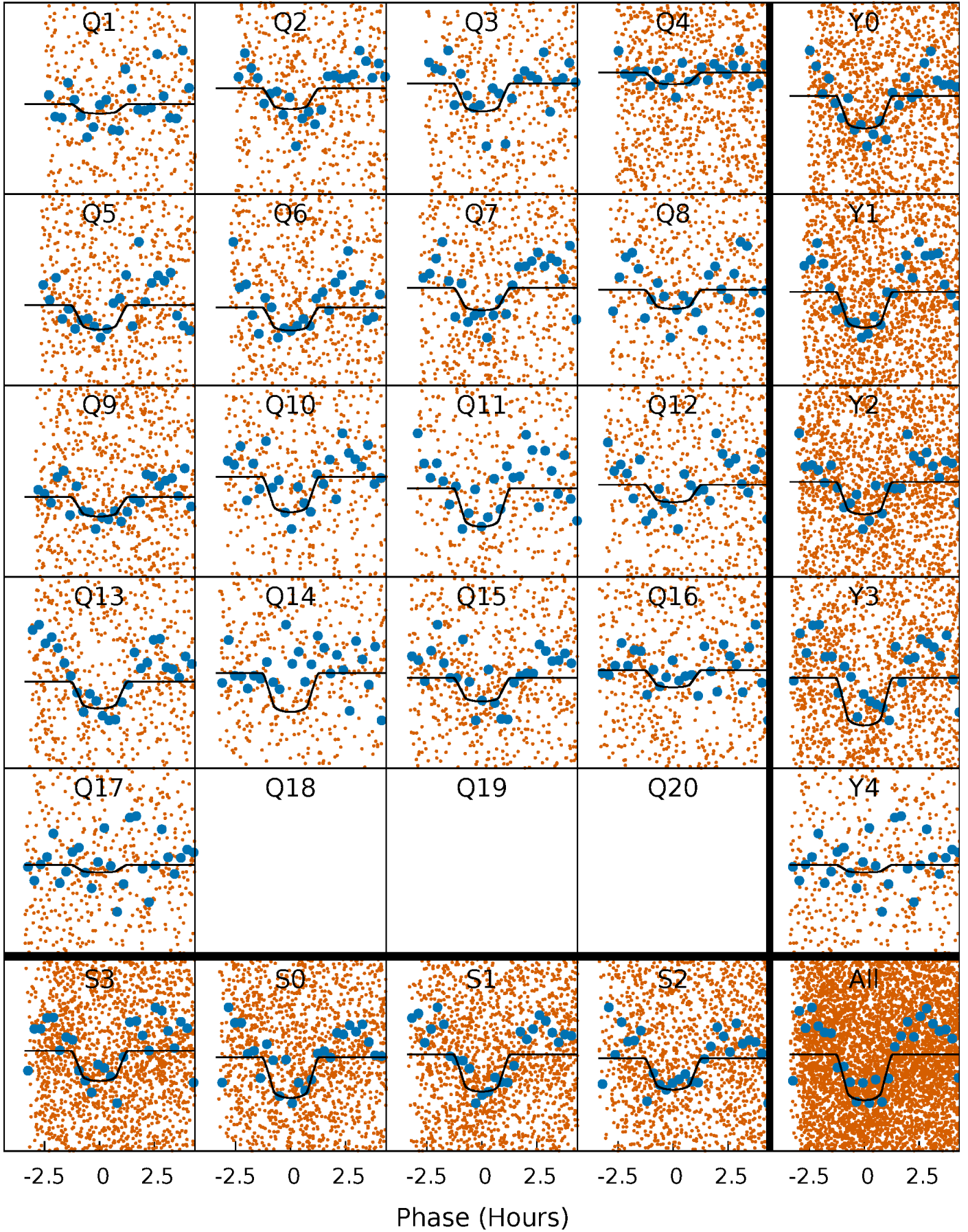
PDC Quarter-Phased Transit Curves

TCE 008310243-02 P= 0.662585 Days $T_0=132.118114$ (BKJD)



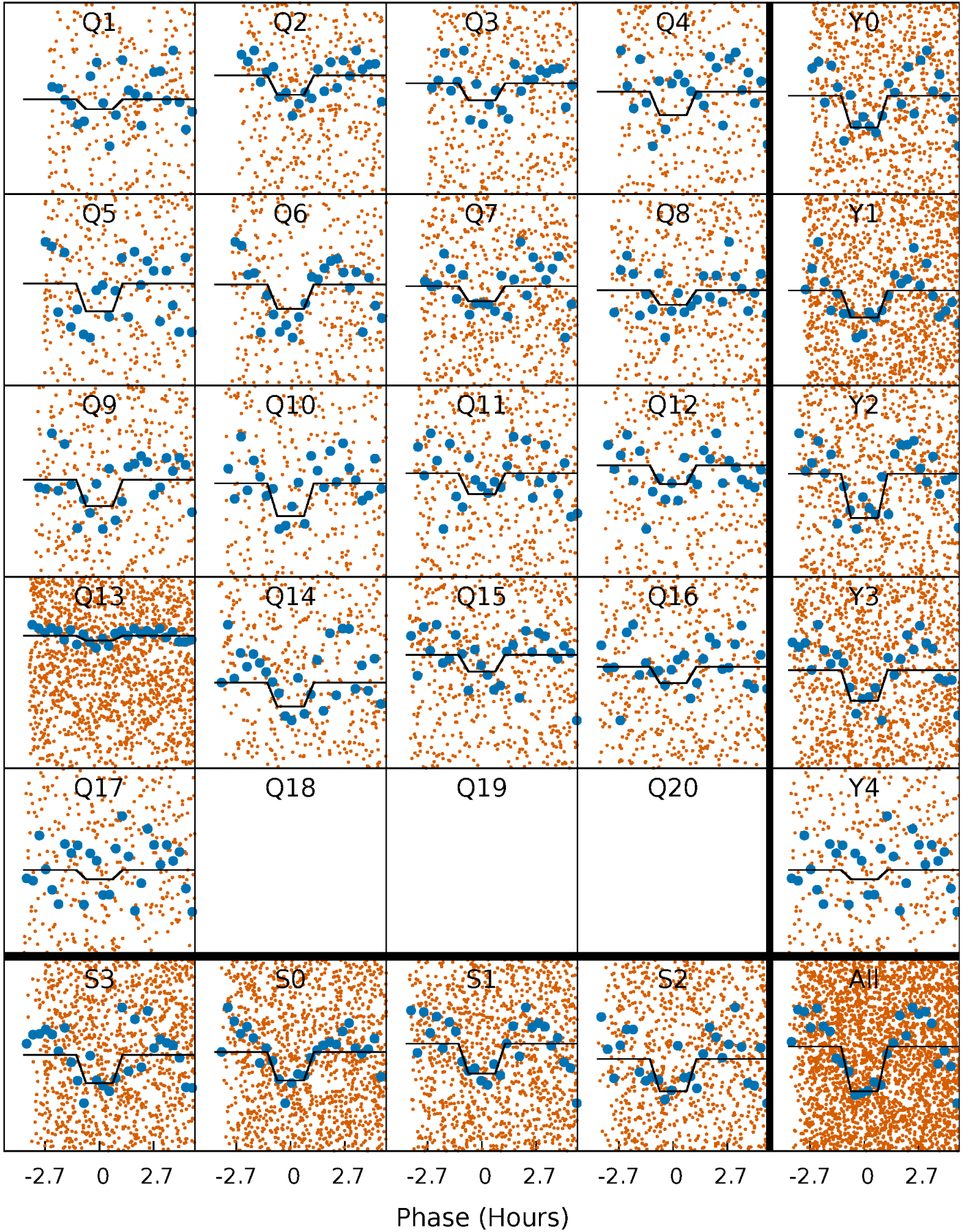
DV Quarter-Phased Transit Curves

TCE 008310243-02 $P = 0.662585$ Days $T_0 = 132.118114$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

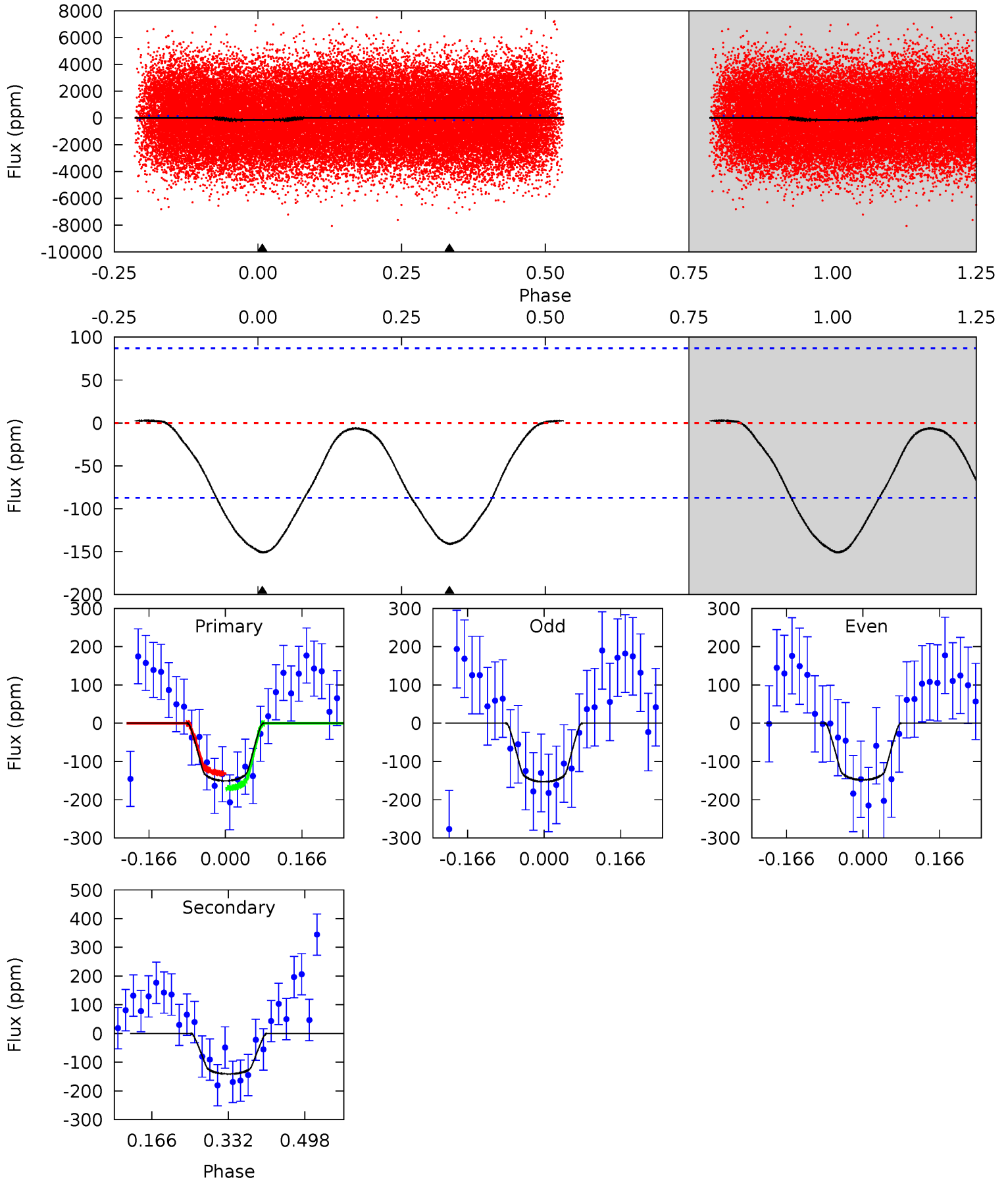
TCE 008310243-02 P= 0.662591 Days $T_0=132.120559$ (BKJD)



DV Model-Shift Uniqueness Test

008310243-02, P = 0.662585 Days, E = 131.455529 Days

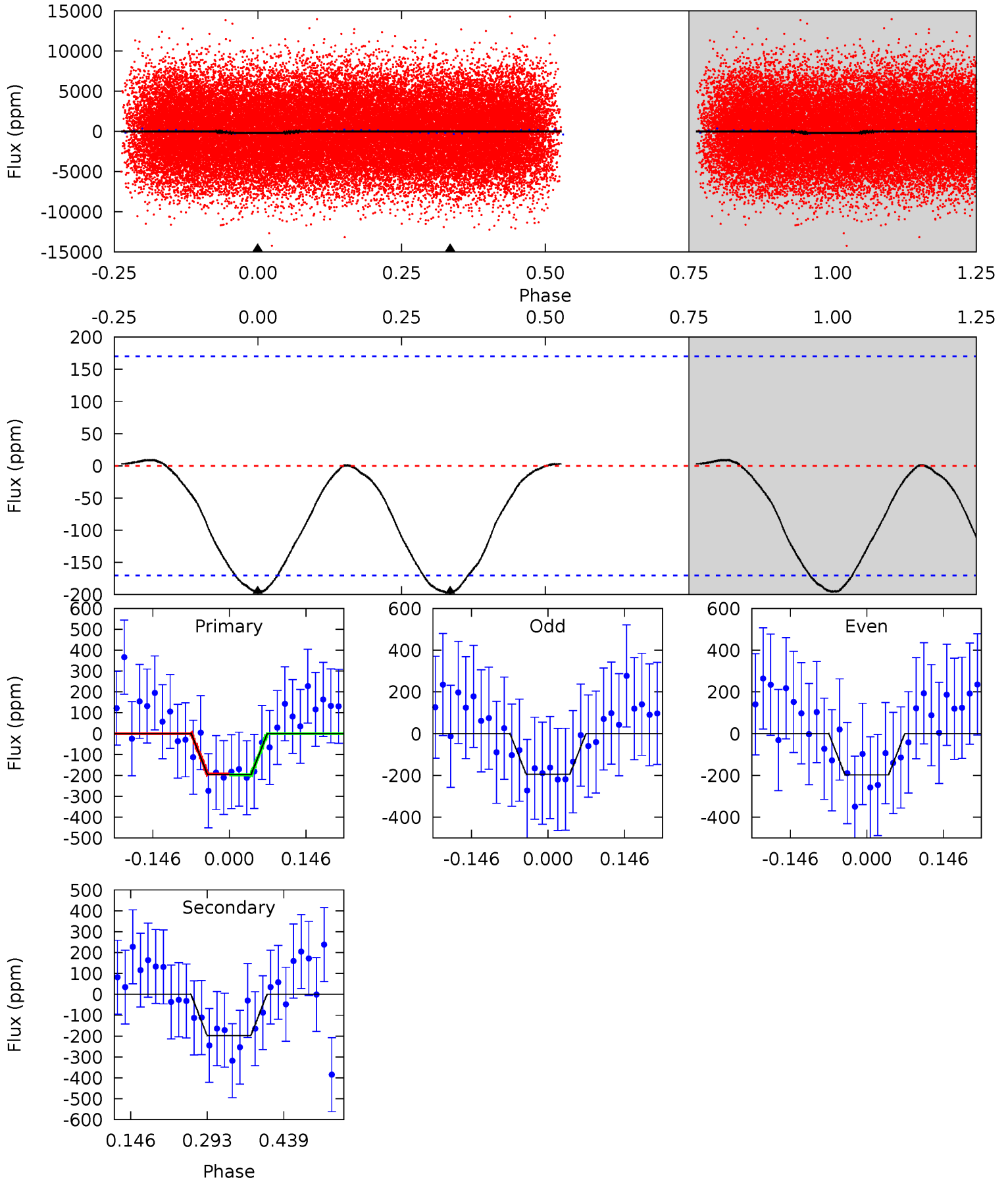
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.71	7.21	0	0	4.46	1.39	0.19	7.71	7.71	7.21	7.21	0.12	1.03	0.02	1.02



Alt Model-Shift Uniqueness Test

008310243-02, P = 0.662591 Days, E = 131.457968 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.16	5.20	0	0	4.48	1.45	0.17	5.16	5.16	5.20	5.20	0.03	1.05	0.04	0.06



Stellar Parameters For KIC 008310243

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$4.069^{+0.198}_{-0.162}$	$-0.200^{+0.250}_{-0.350}$	$1.870^{+0.515}_{-0.464}$	$1.491^{+0.211}_{-0.257}$	$0.321^{+0.382}_{-0.153}$
	+3%/-4%	+5%/-4%	+125%/-175%	+28%/-25%	+14%/-17%	+119%/-48%
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 008310243-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-141 ± 20	$3.04^{+1.97}_{-1.71}$	4661^{+341}_{-354}	6128^{+4360}_{-1522}	$2.452^{+10.330}_{-1.600}$
Alt.	-197 ± 38	$3.03^{+2.09}_{-1.84}$	4654^{+343}_{-311}	6710^{+6184}_{-1731}	$3.453^{+18.217}_{-2.333}$

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

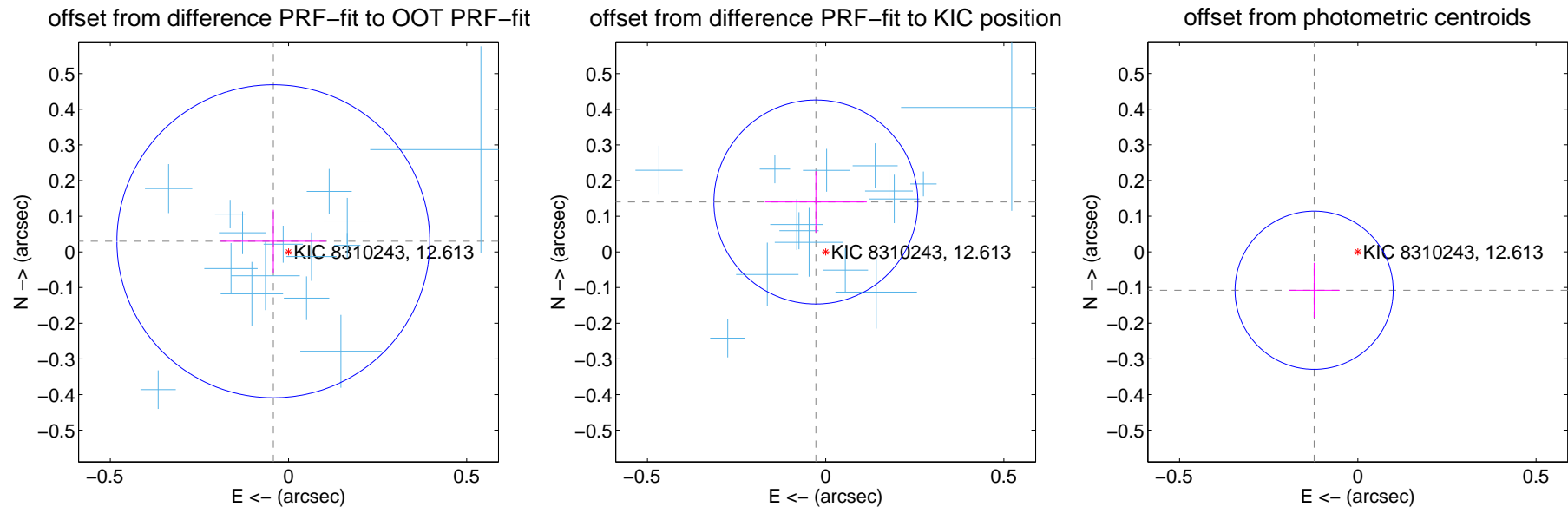
DV Centroid Data

Supplemental centroid analysis for 008310243-02. Kepler magnitude: 12.61. Transit SNR 13.32

There are 16 quarters with good PRF difference image offsets

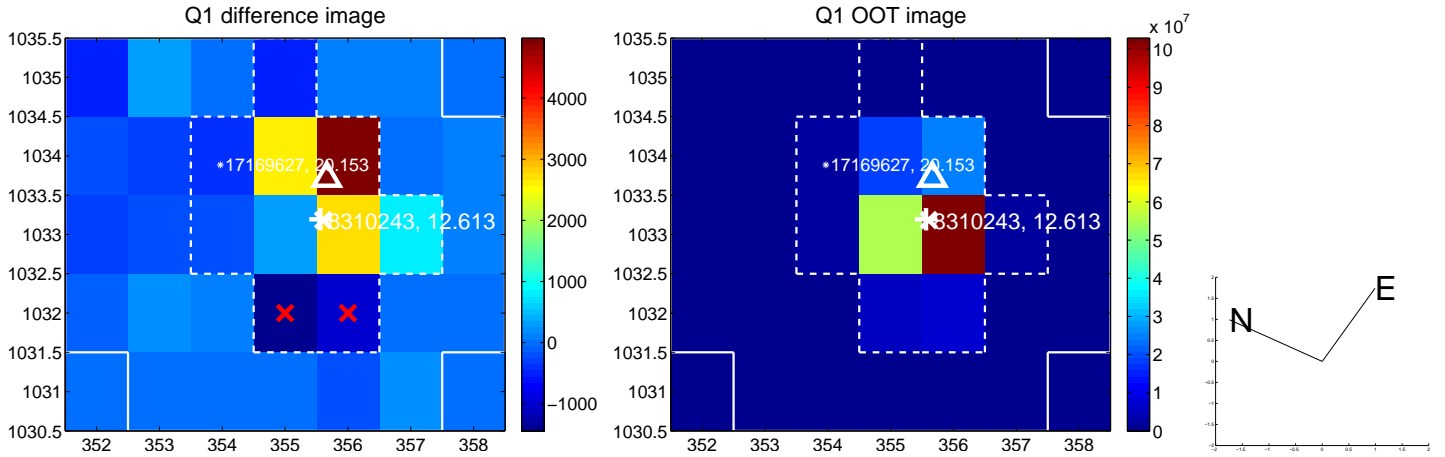
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.052 ± 0.146	0.36	0.043 ± 0.148	0.030 ± 0.088
PRF-fit source offset from KIC position	0.143 ± 0.095	1.50	0.027 ± 0.143	0.140 ± 0.086
photometric centroid source offset	0.16 ± 0.07	2.21	0.12 ± 0.07	-0.11 ± 0.08

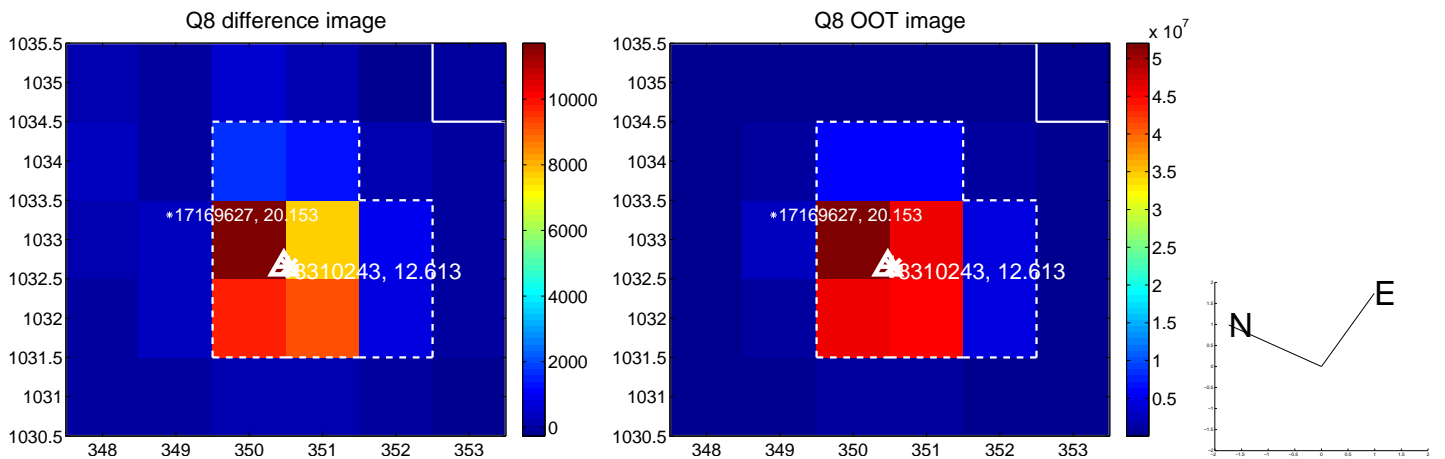
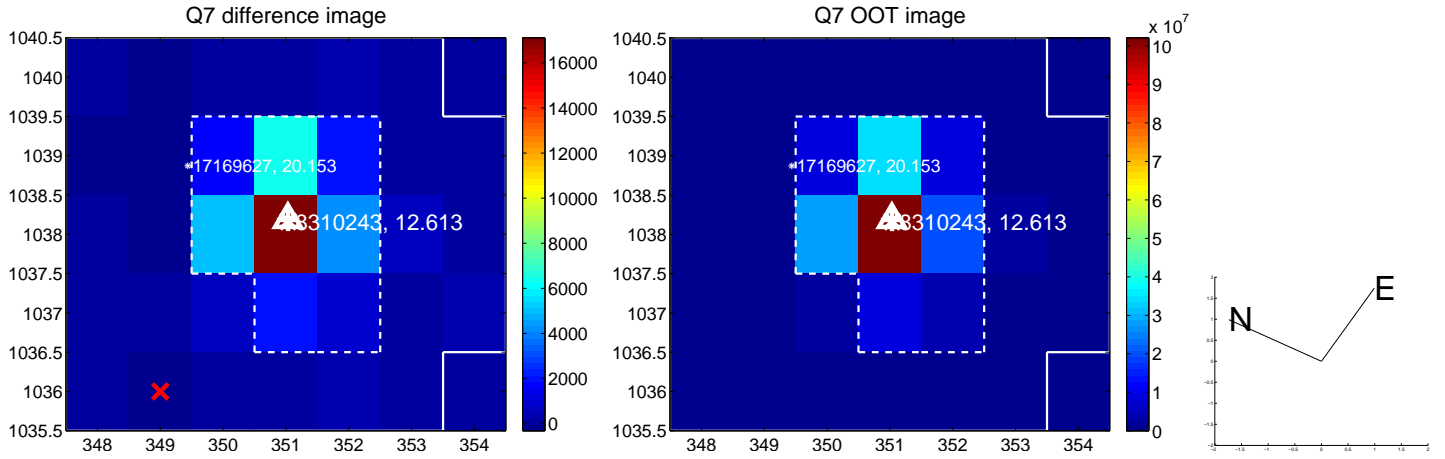
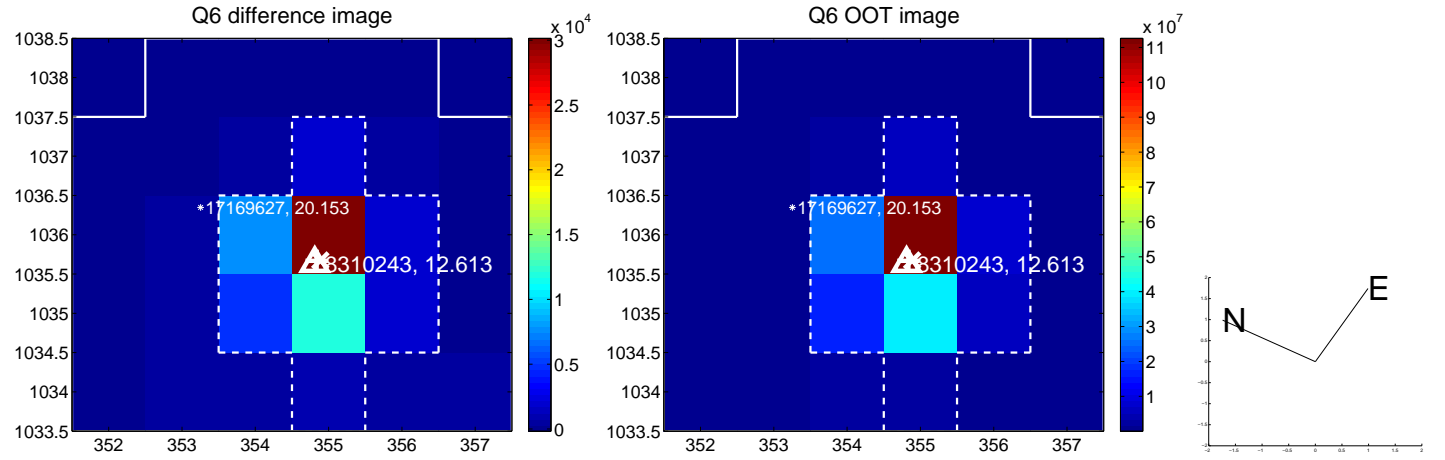
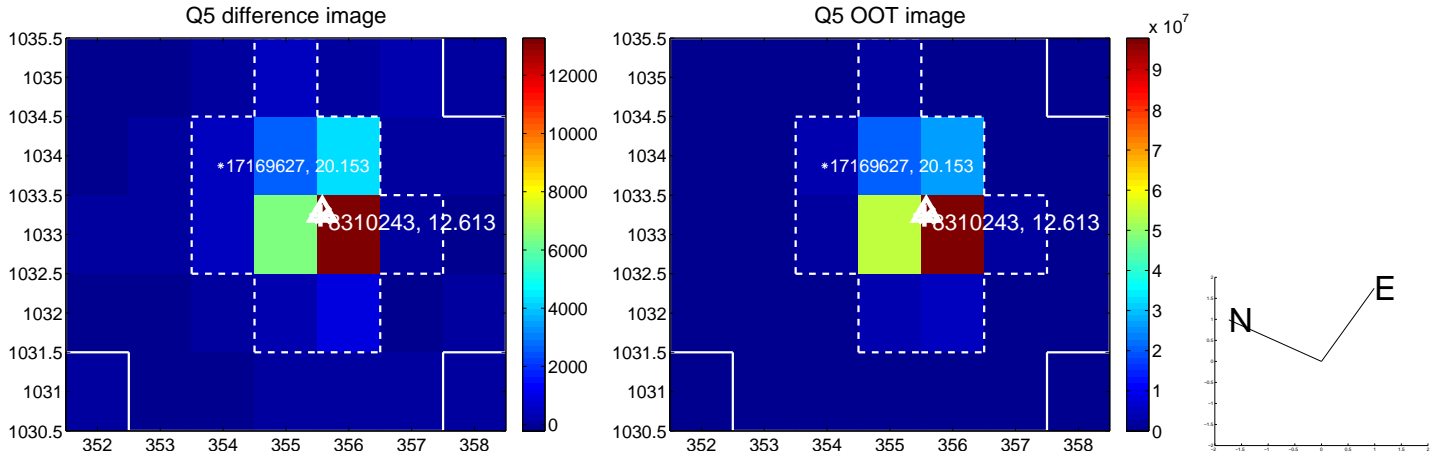


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

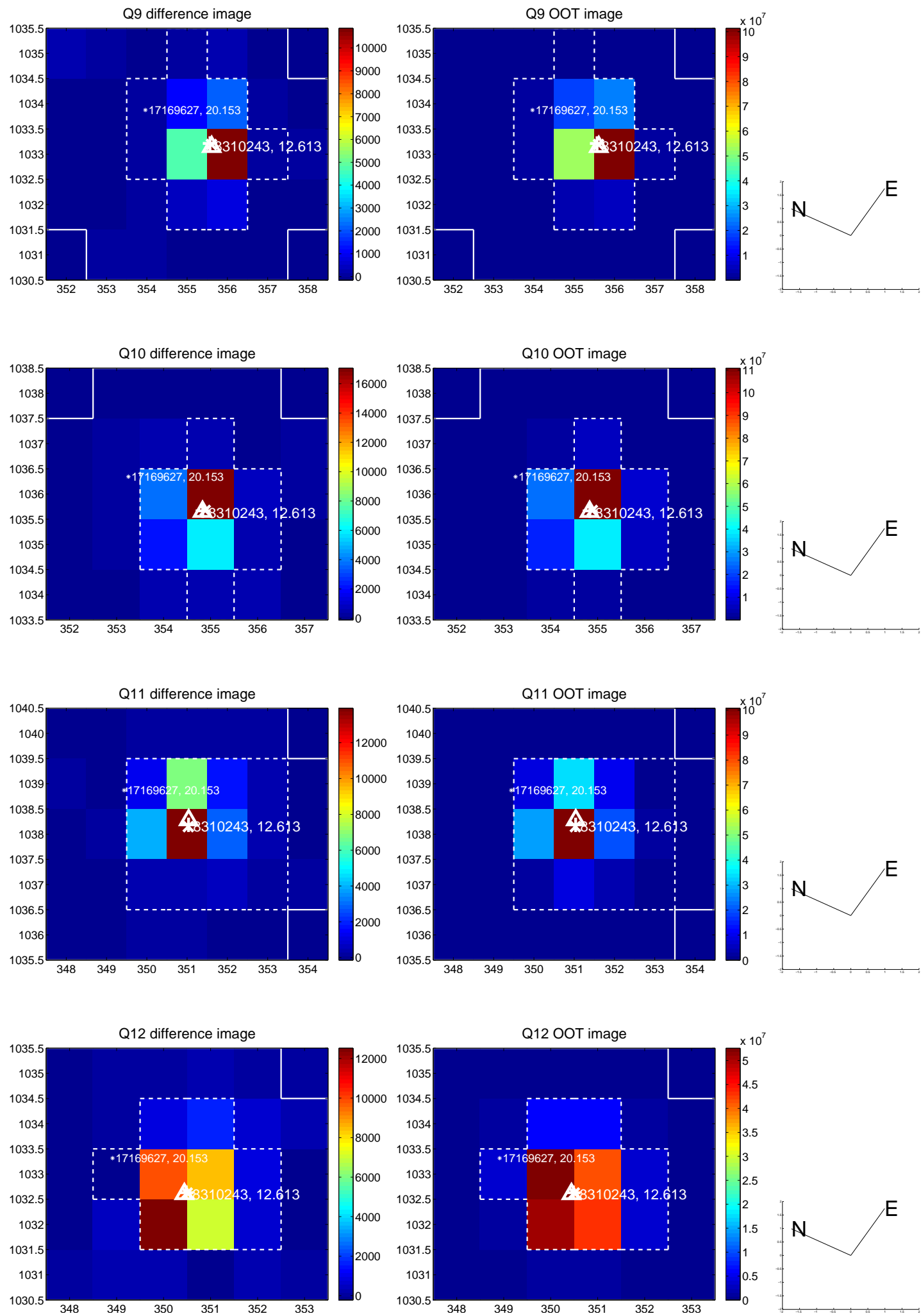
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



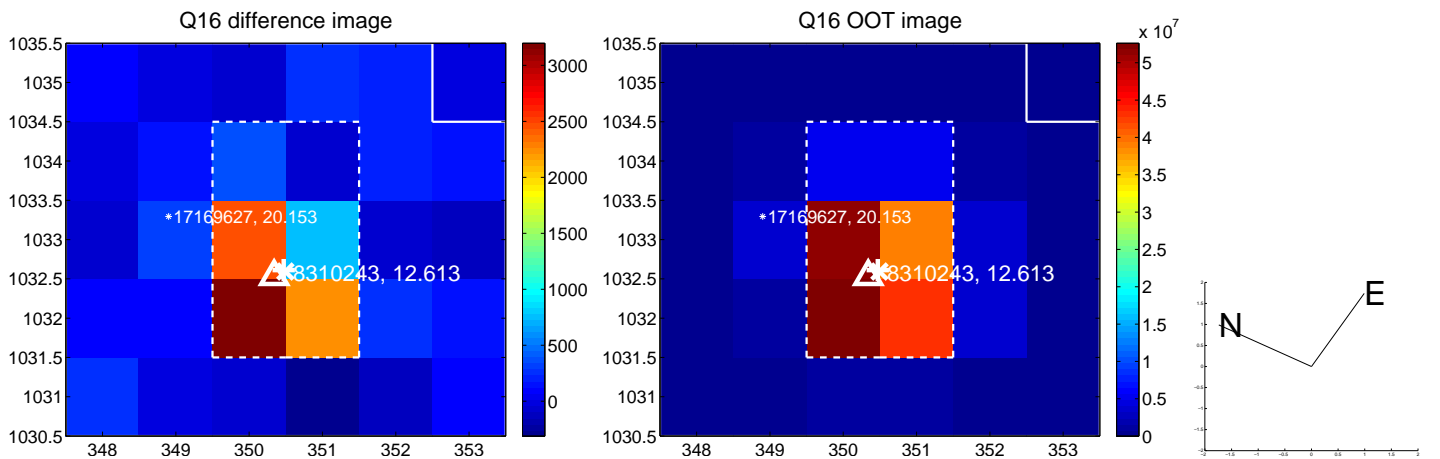
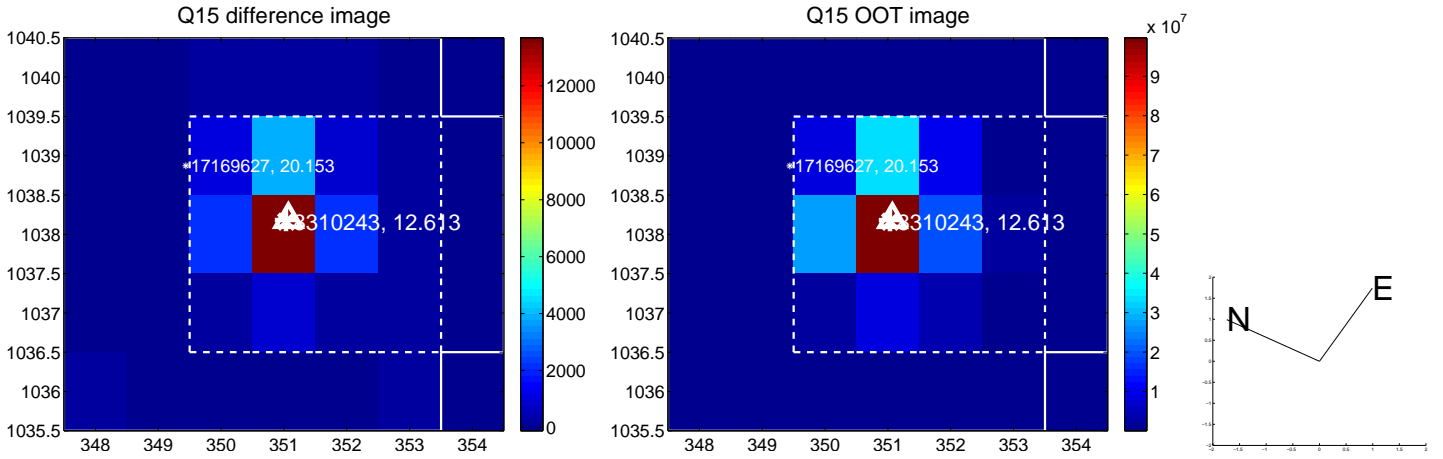
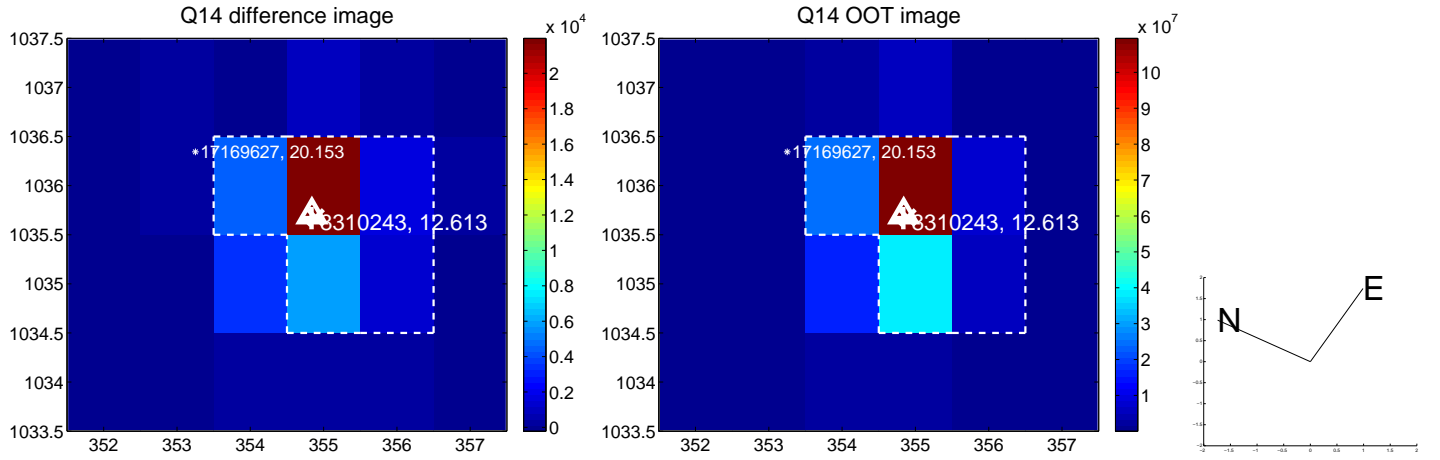
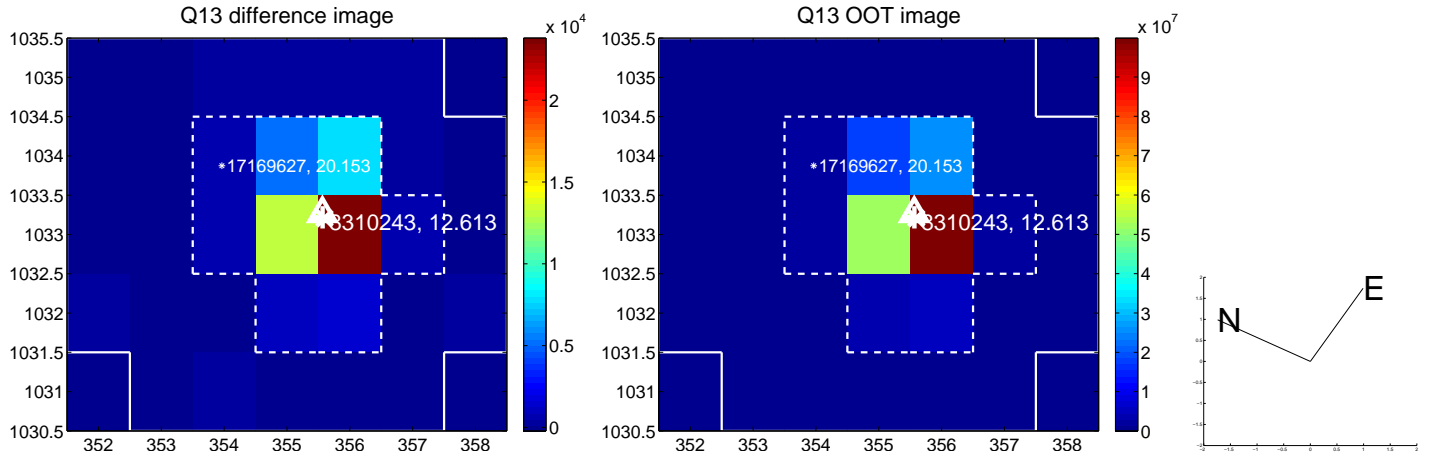
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



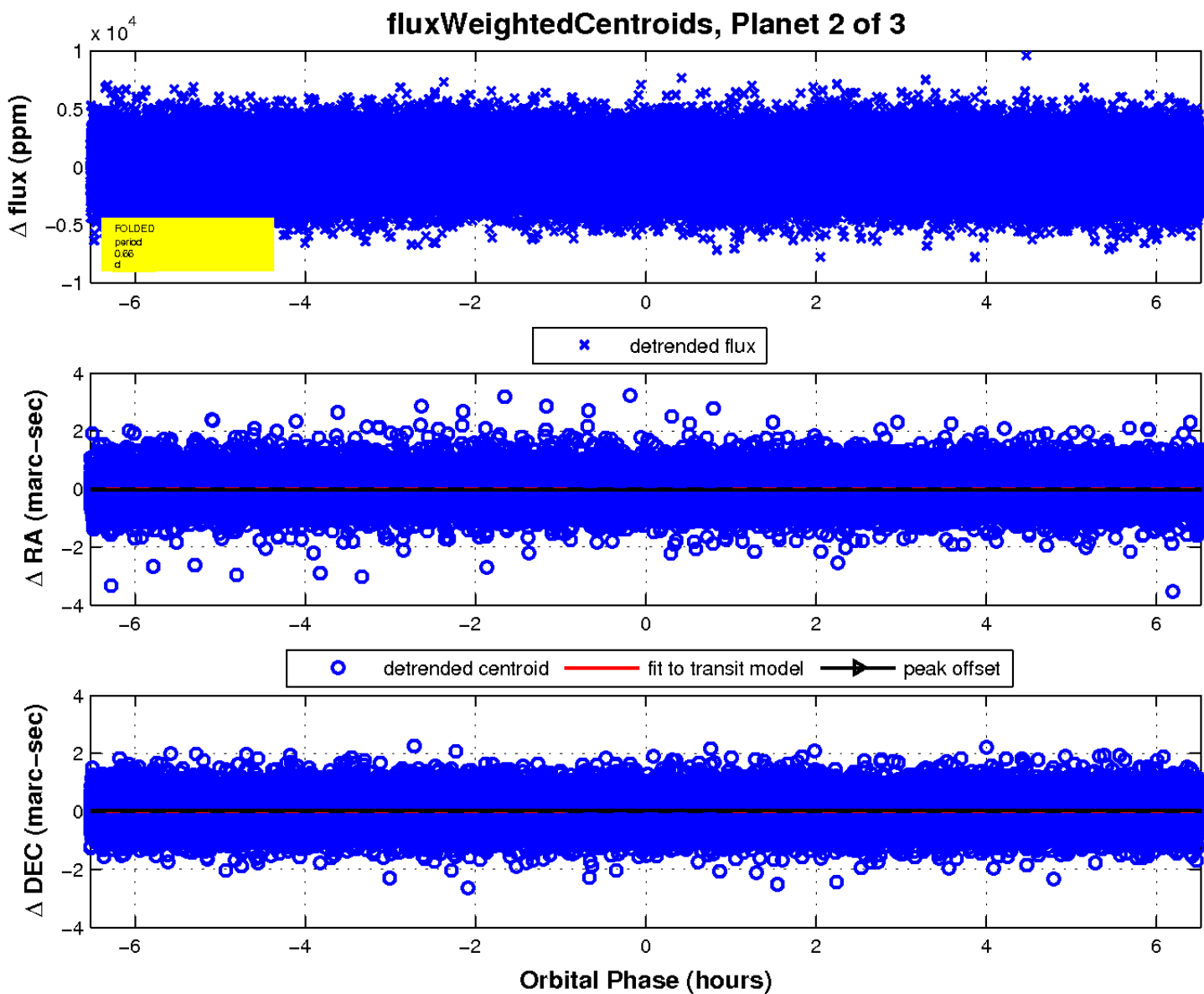
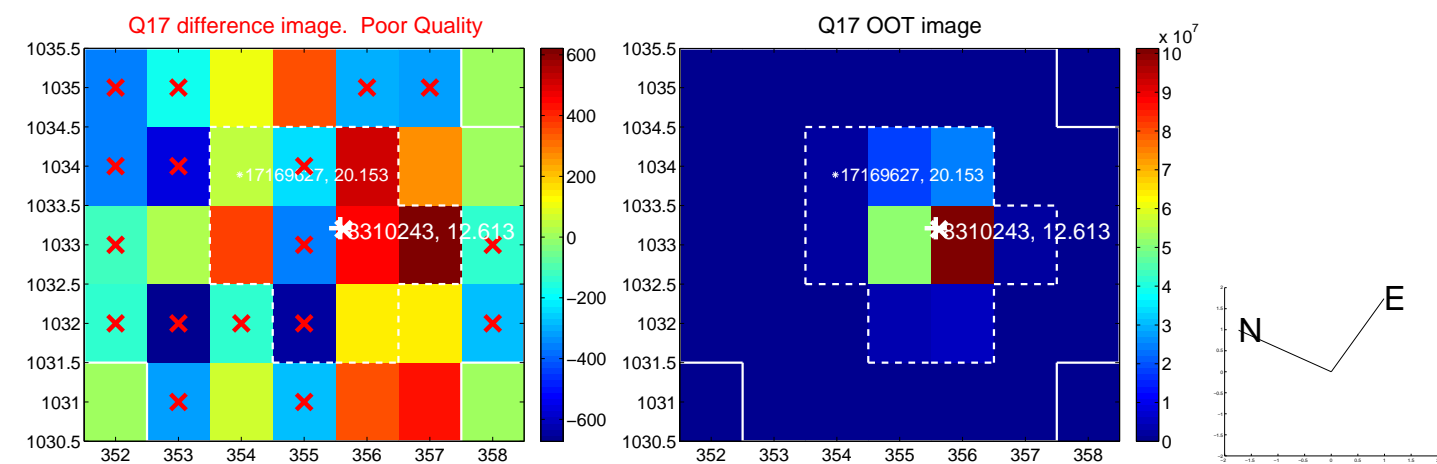
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

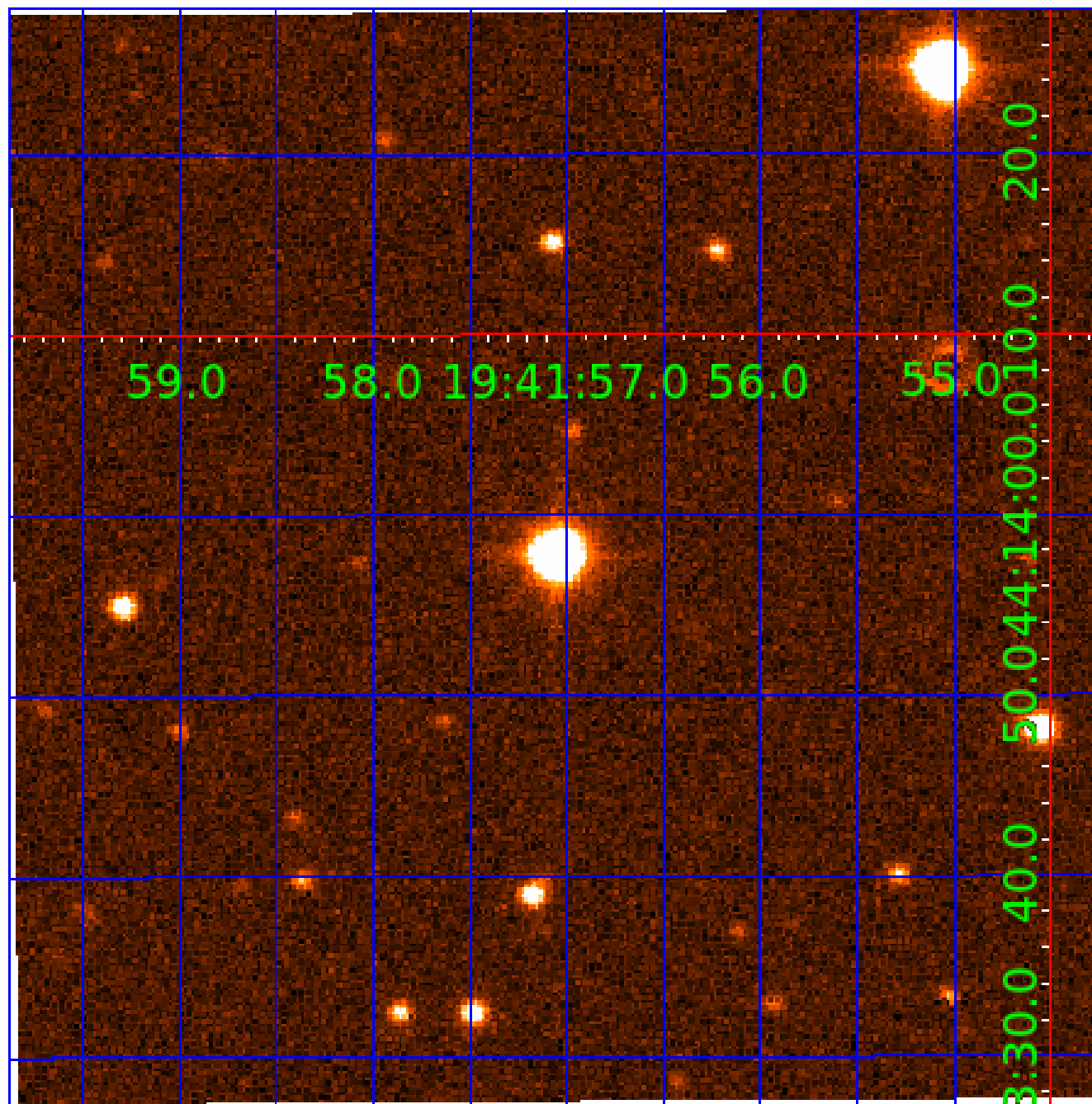


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008310243

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})
008310243-01	OBS	No	0.662566	131.912525	184.0	1.163	15.9	10.9	1.87	7281	2.95	30426.15
008310243-02	OBS	No	0.662585	132.118114	176.7	2.175	12.6	13.3	1.87	7281	2.88	30425.02
008310243-03	OBS	No	0.662583	131.679944	113.1	2.000	7.7	7.1	1.87	7281	2.03	30425.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008310243-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008310243-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008310243-03	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.

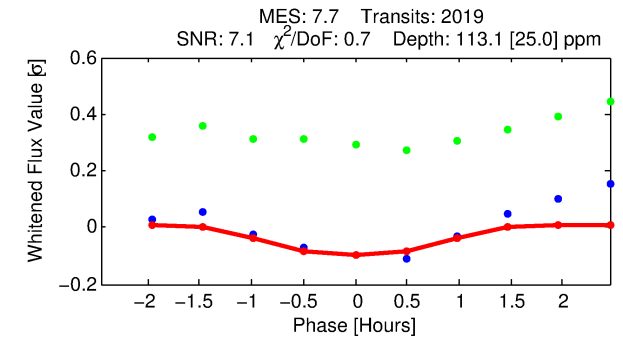
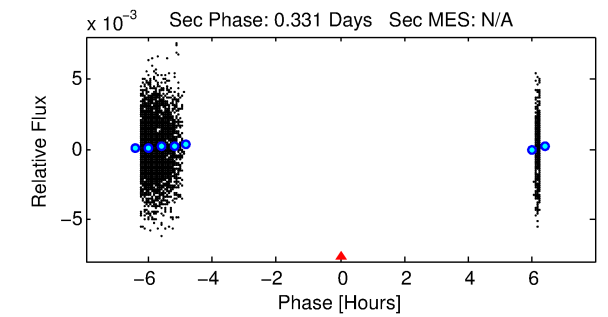
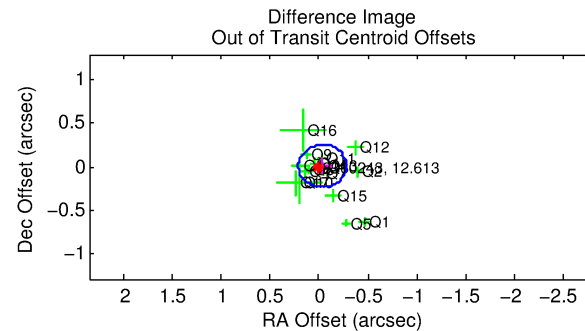
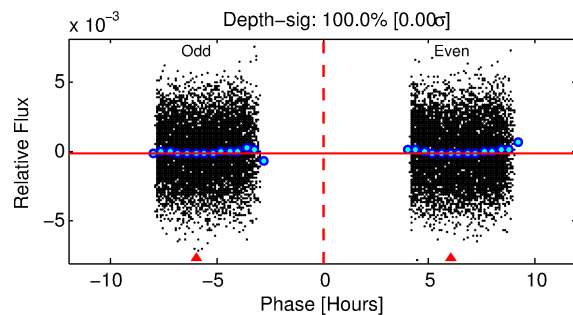
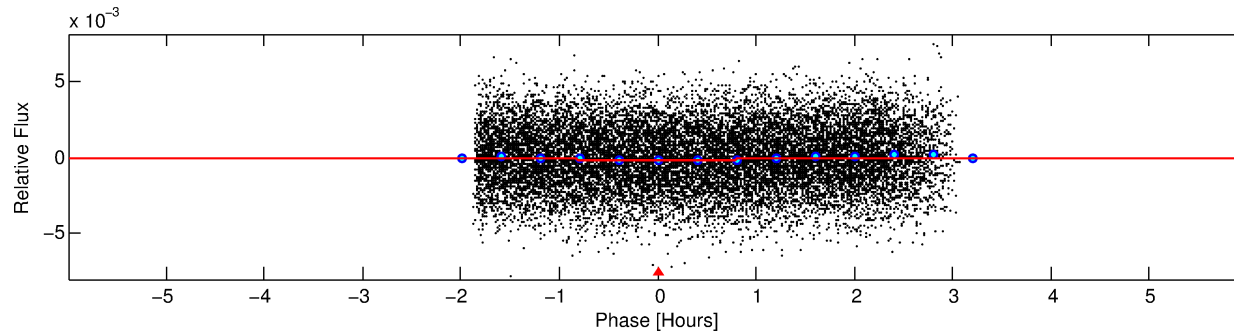
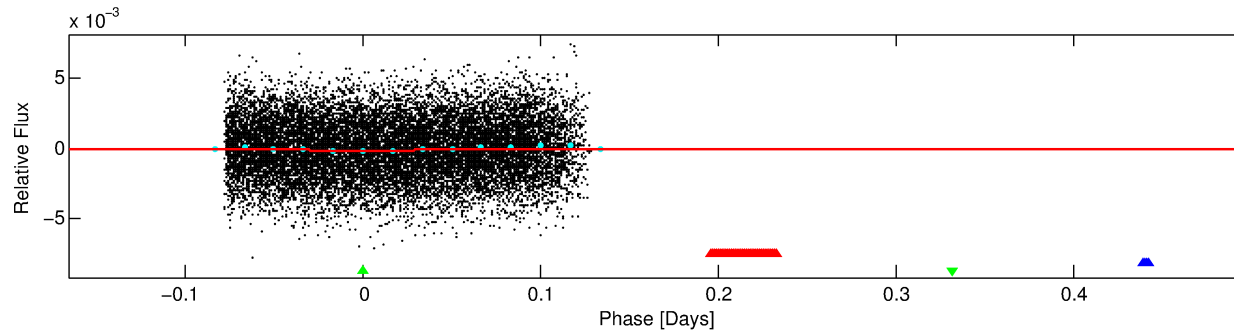
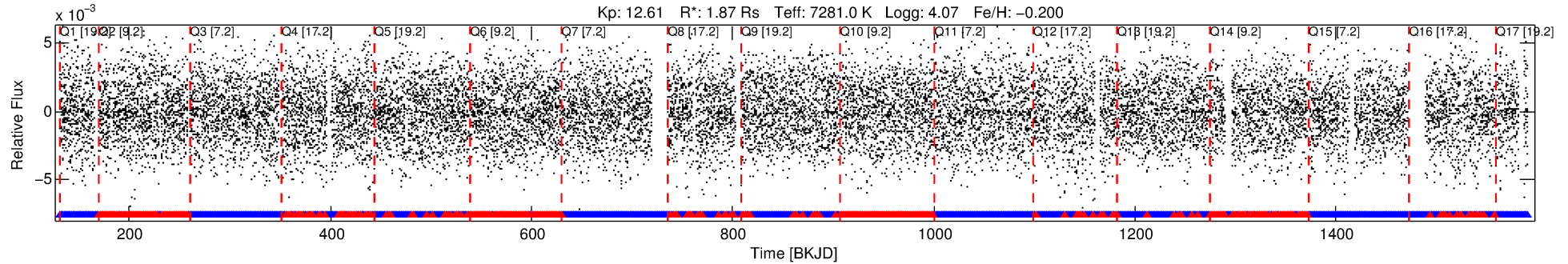
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008310243-03

No Significant Match Found

DV One-Page Summary

KIC: 8310243 Candidate: 3 of 3 Period: 0.663 d



DV Fit Results:

Period = 0.66258 [0.00002] d
Epoch = 131.6799 [0.0045] BKJD
Rp/R* = 0.0100 [0.0134]
a/R* = 2.52 [16.85]
b = 0.30 [24.18]
Seff = 30425.11 [11938.97]
Teq = 3368 [330] K
Rp = 2.03 [2.79] Re
a = 0.0170 [0.0041] AU

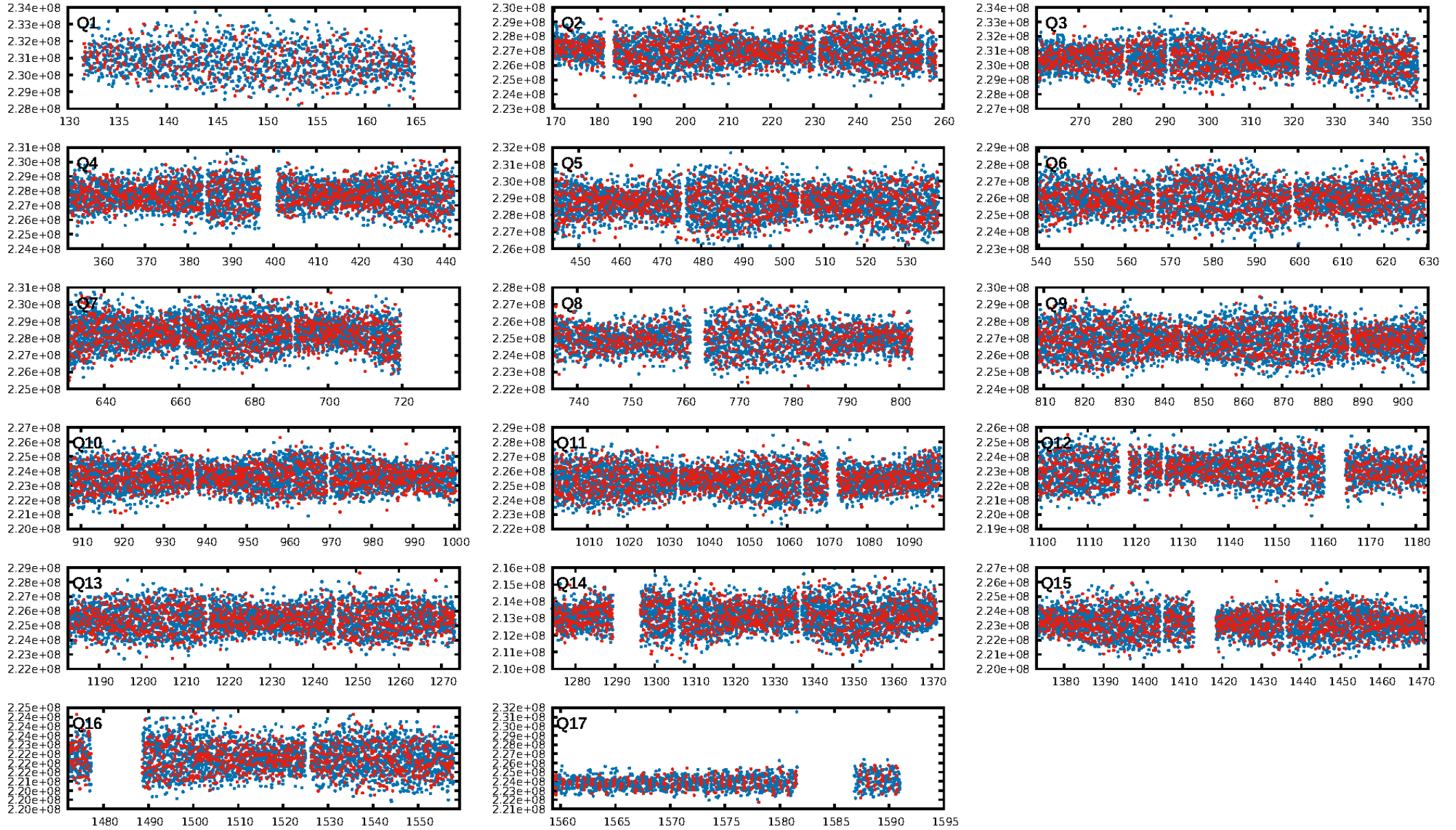
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.70 [1358/1928]
GhostDiagnostic-chr: 1.227
Centroid-sig: 79.6%
Centroid-so: 0.043 arcsec [0.38σ]
OotOffset-rm: 0.034 arcsec [0.42σ]
KicOffset-rm: 0.133 arcsec [1.57σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

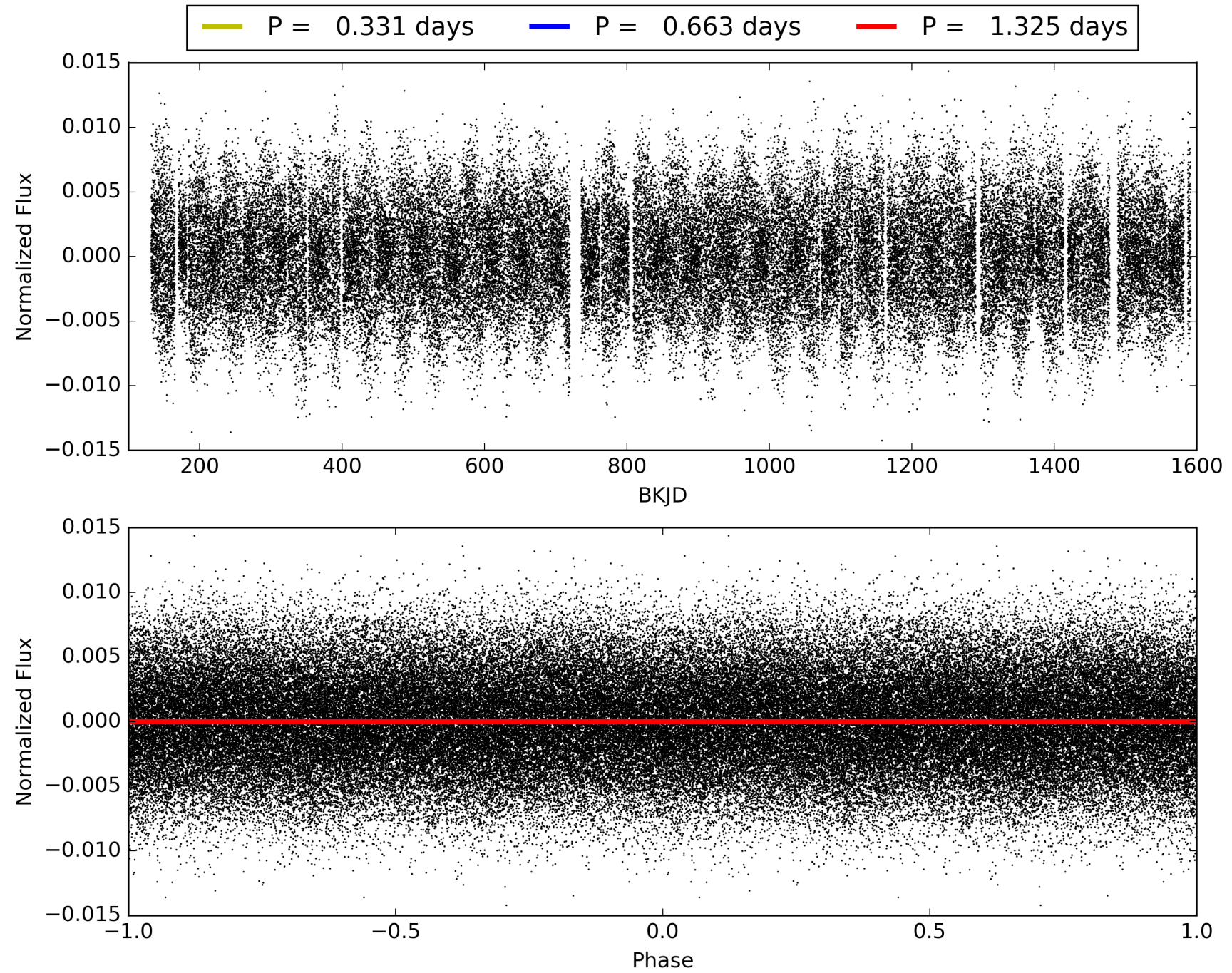
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:30 Z

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

TCE 008310243-03, PDC Light Curves

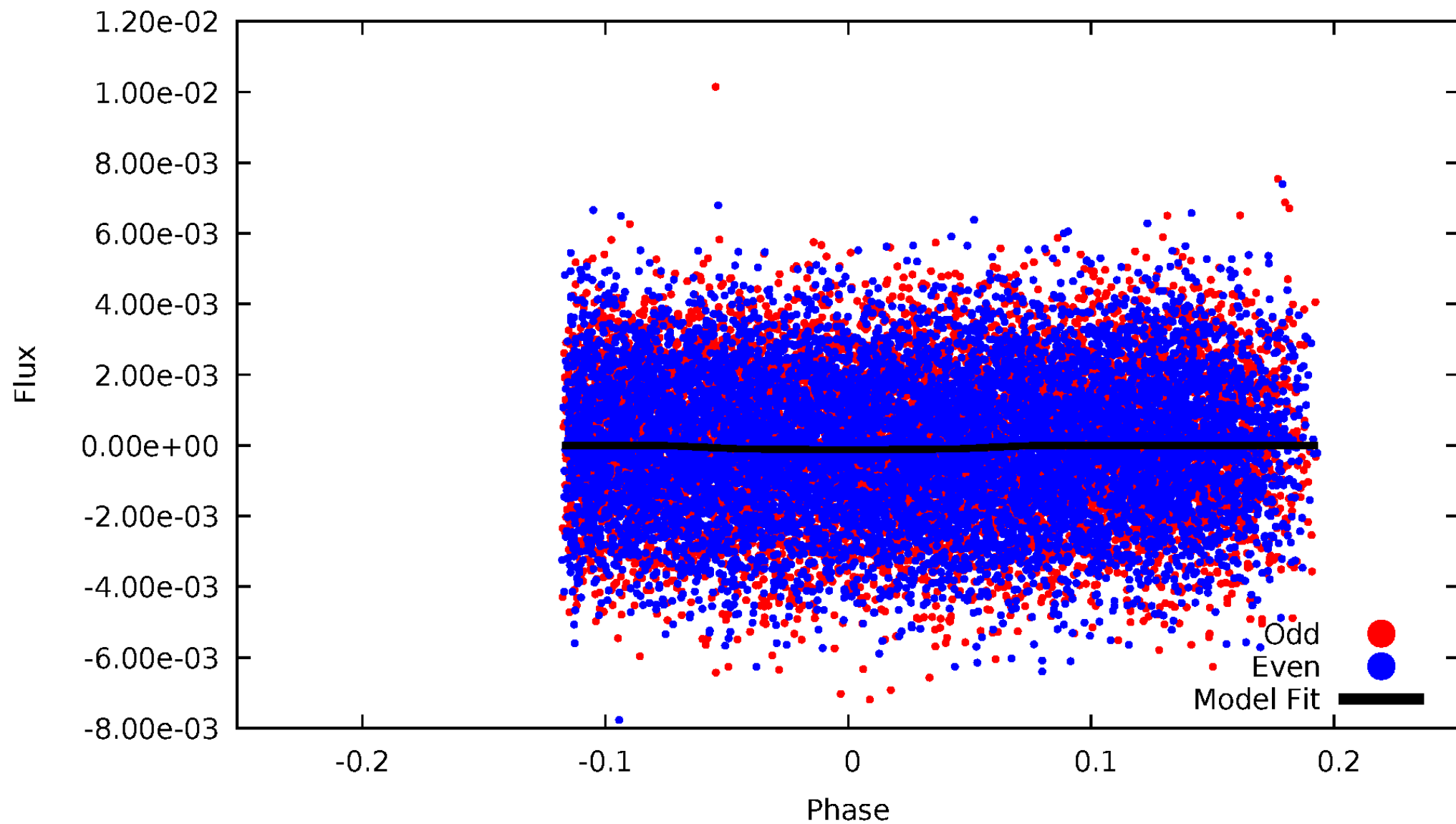


TCE 008310243-03



DV Odd/Even

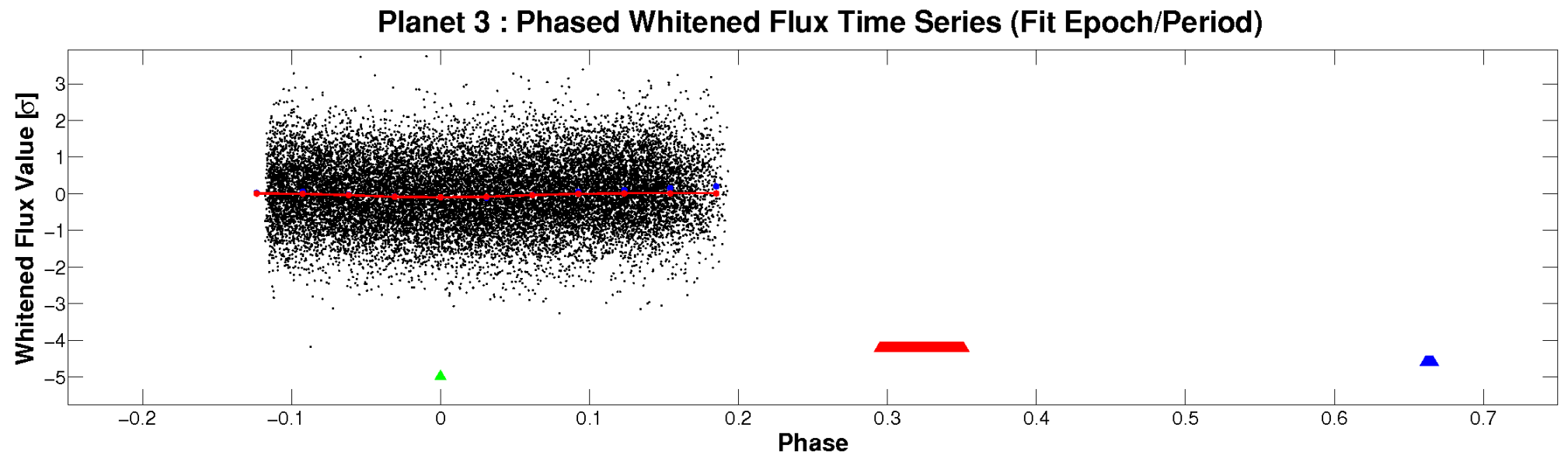
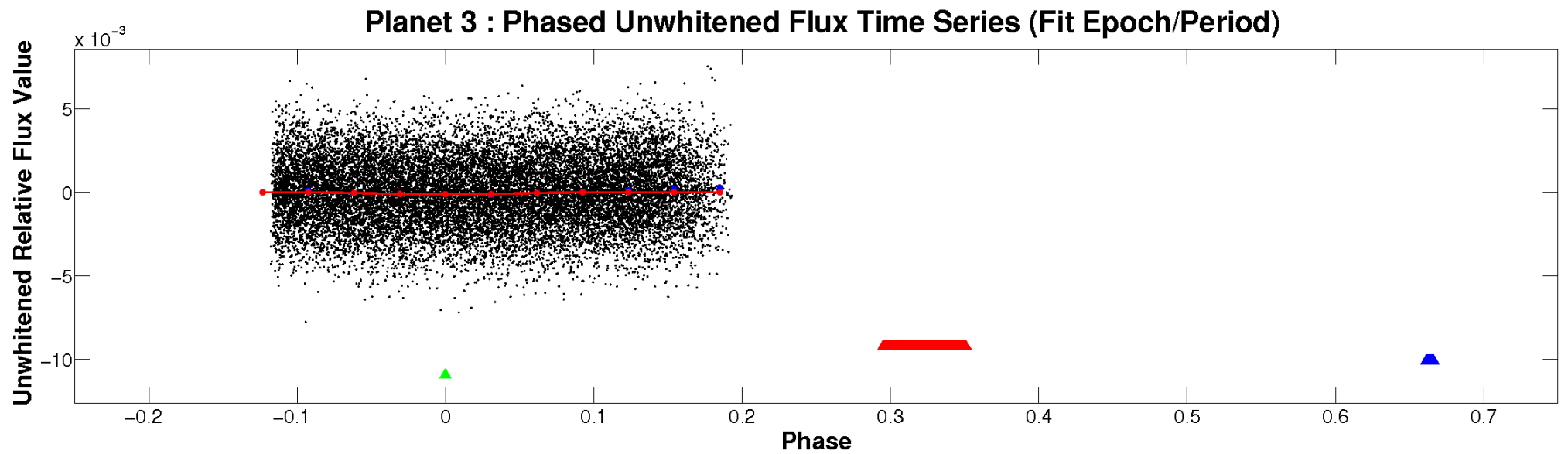
TCE 008310243-03



ALT Odd/Even

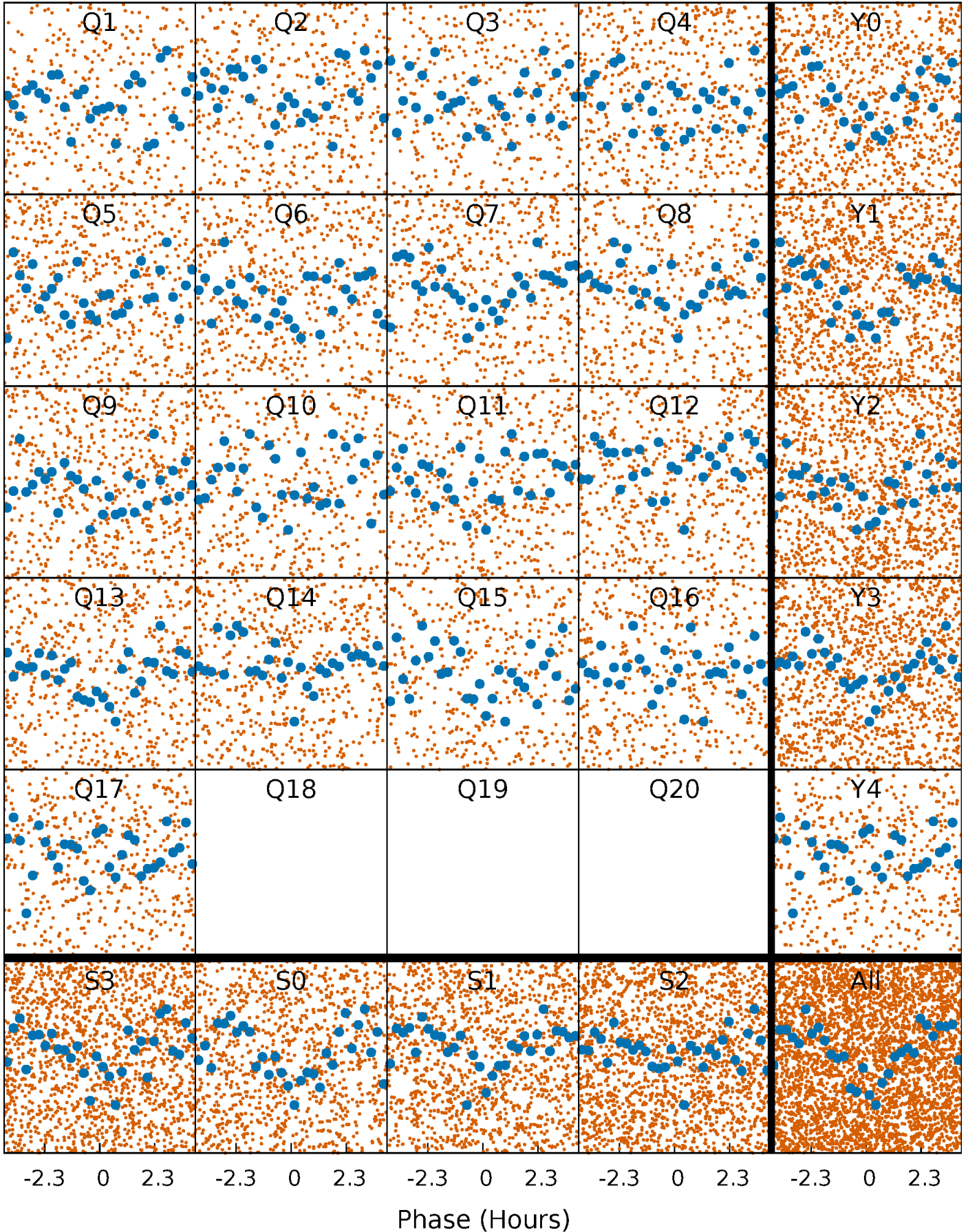
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



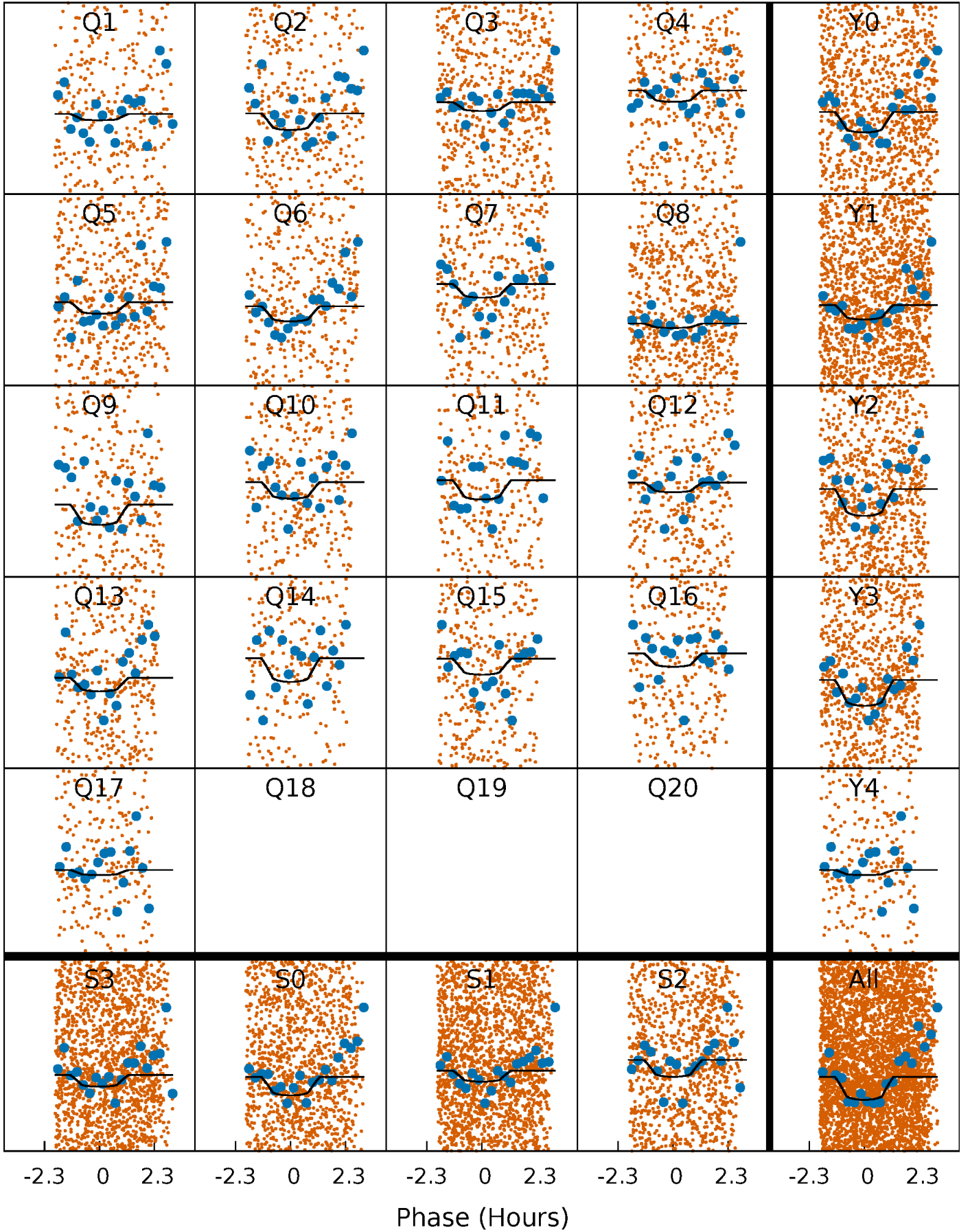
PDC Quarter-Phased Transit Curves

TCE 008310243-03 P= 0.662583 Days $T_0=131.679944$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008310243-03 P= 0.662583 Days $T_0=131.679944$ (BKJD)

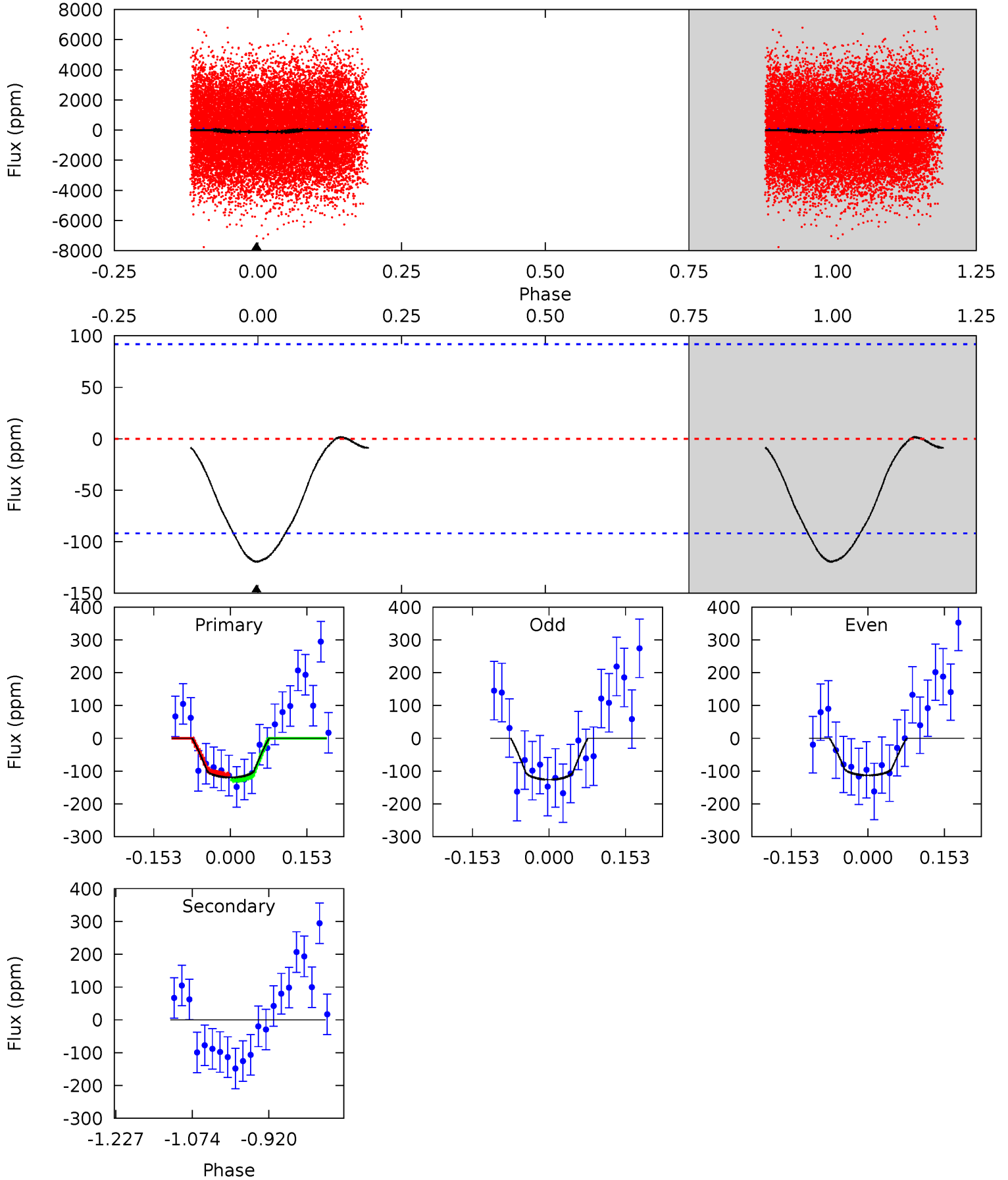


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008310243-03, P = 0.662583 Days, E = 131.017361 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.83	0	0	0	4.47	1.43	0.15	5.83	5.83	0	0	0.32	1.03	0.01	0.37



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008310243

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$4.069^{+0.198}_{-0.162}$	$-0.200^{+0.250}_{-0.350}$	$1.870^{+0.515}_{-0.464}$	$1.491^{+0.211}_{-0.257}$	$0.321^{+0.382}_{-0.153}$
	+3%/-4%	+5%/-4%	+125%/-175%	+28%/-25%	+14%/-17%	+119%/-48%
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 008310243-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 21	$2.76^{+2.48}_{-1.72}$	4681^{+313}_{-362}	-4052^{+8306}_{-1161}	$0.008^{+0.711}_{-0.684}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

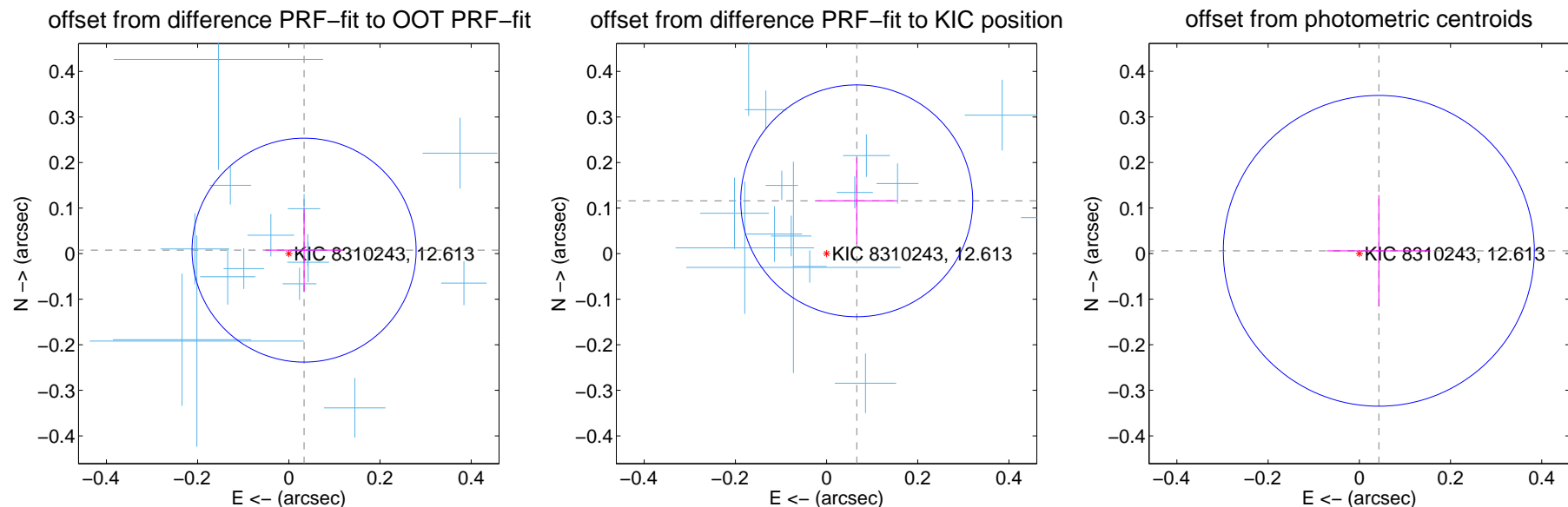
DV Centroid Data

Supplemental centroid analysis for 008310243-03. Kepler magnitude: 12.61. Transit SNR 7.11

There are 17 quarters with good PRF difference image offsets

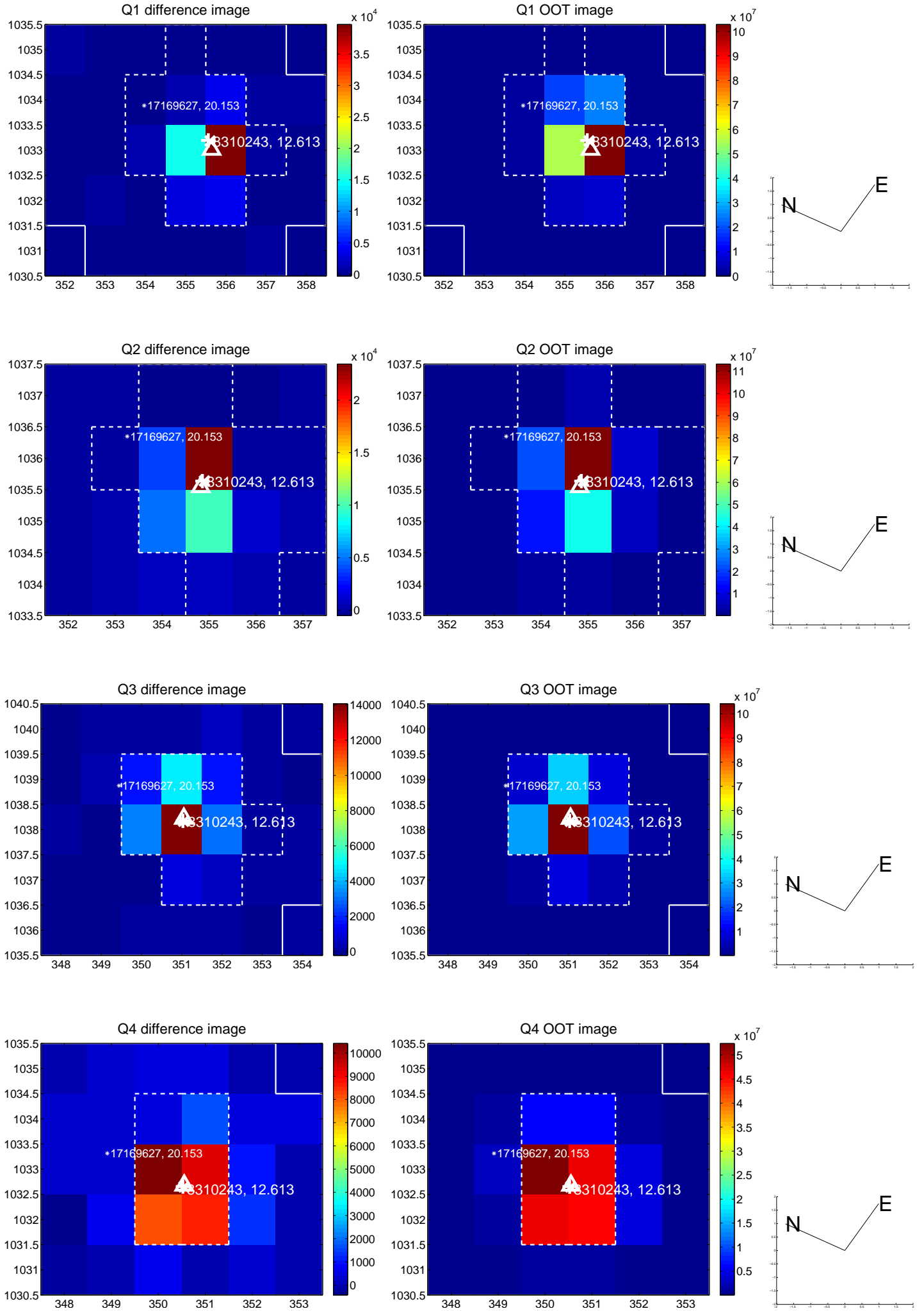
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.034 ± 0.082	0.42	-0.034 ± 0.085	0.008 ± 0.091
PRF-fit source offset from KIC position	0.133 ± 0.085	1.57	-0.066 ± 0.089	0.116 ± 0.095
photometric centroid source offset	0.04 ± 0.11	0.38	-0.04 ± 0.11	0.01 ± 0.12

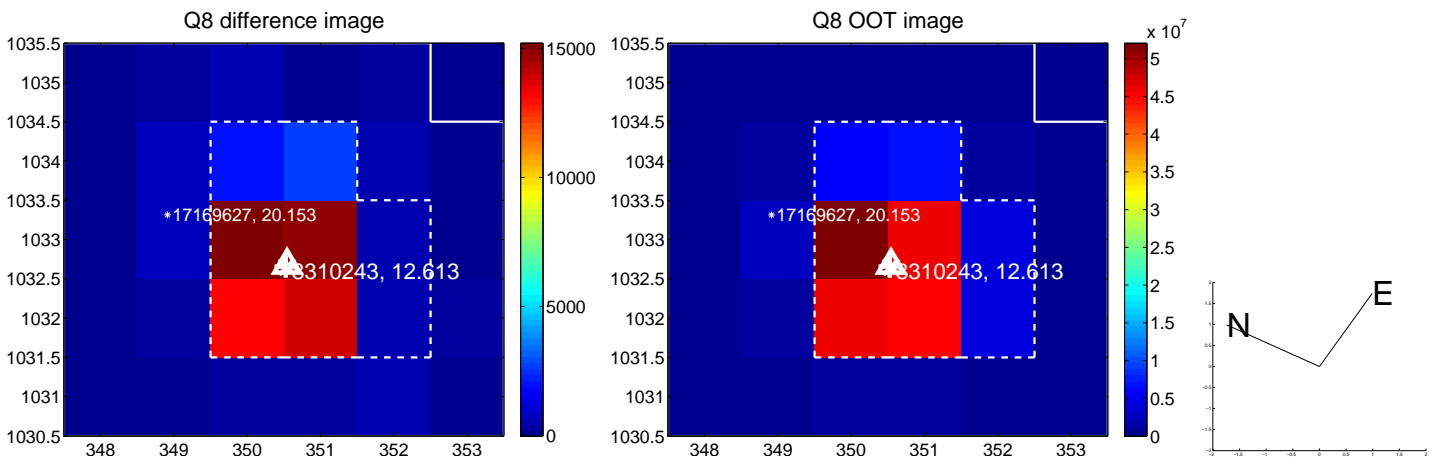
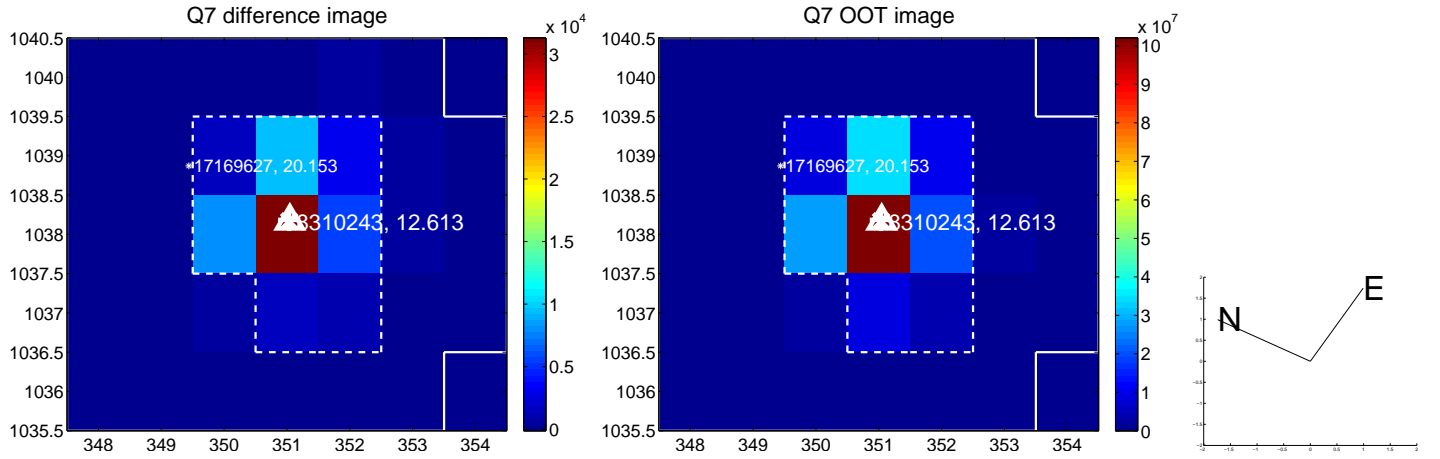
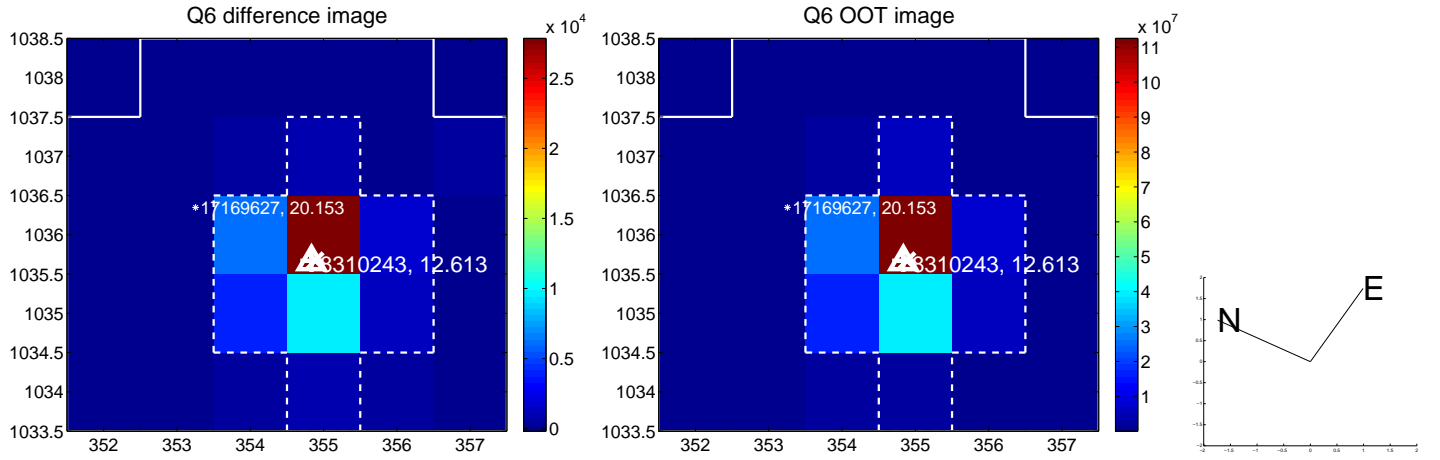
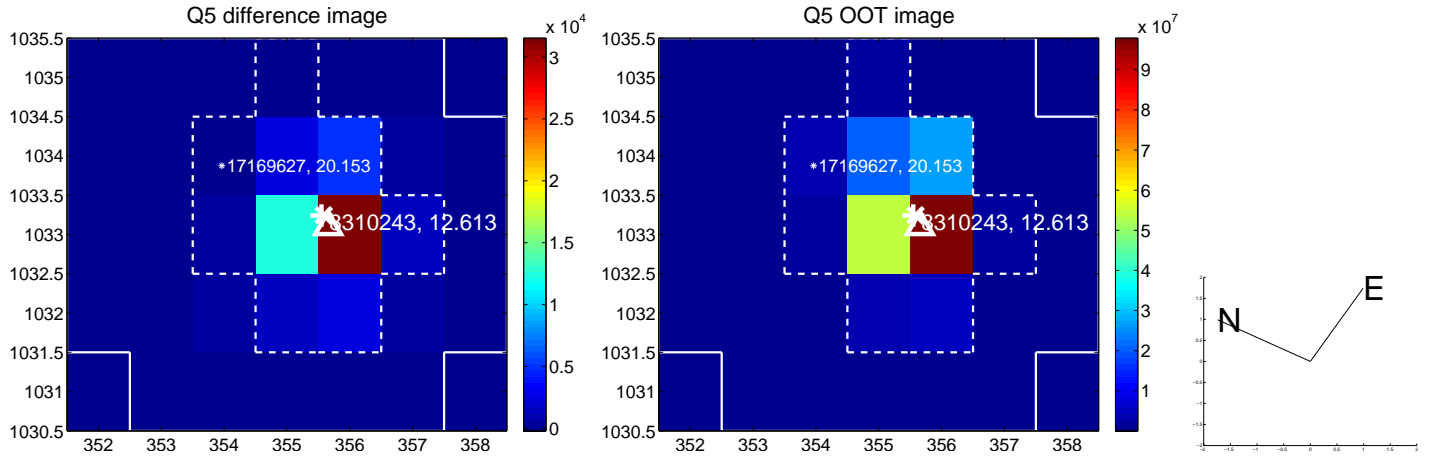


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

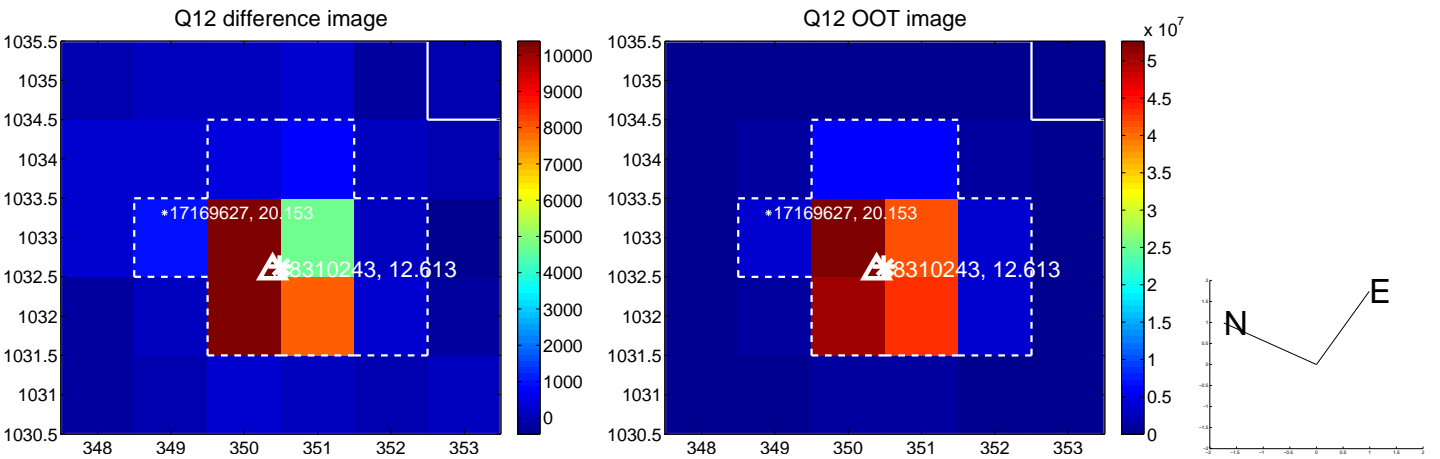
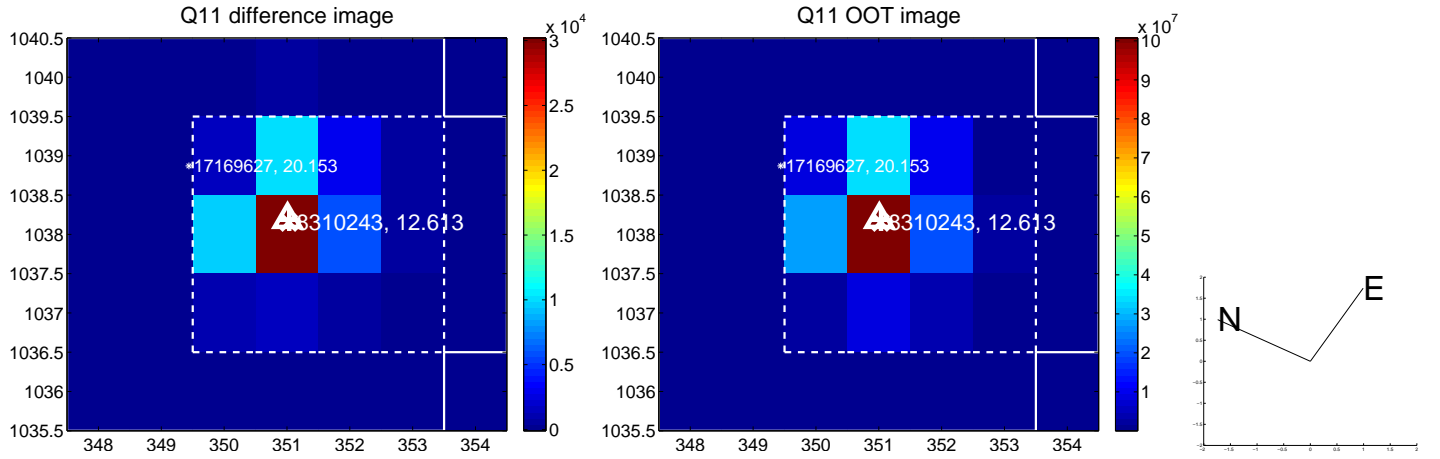
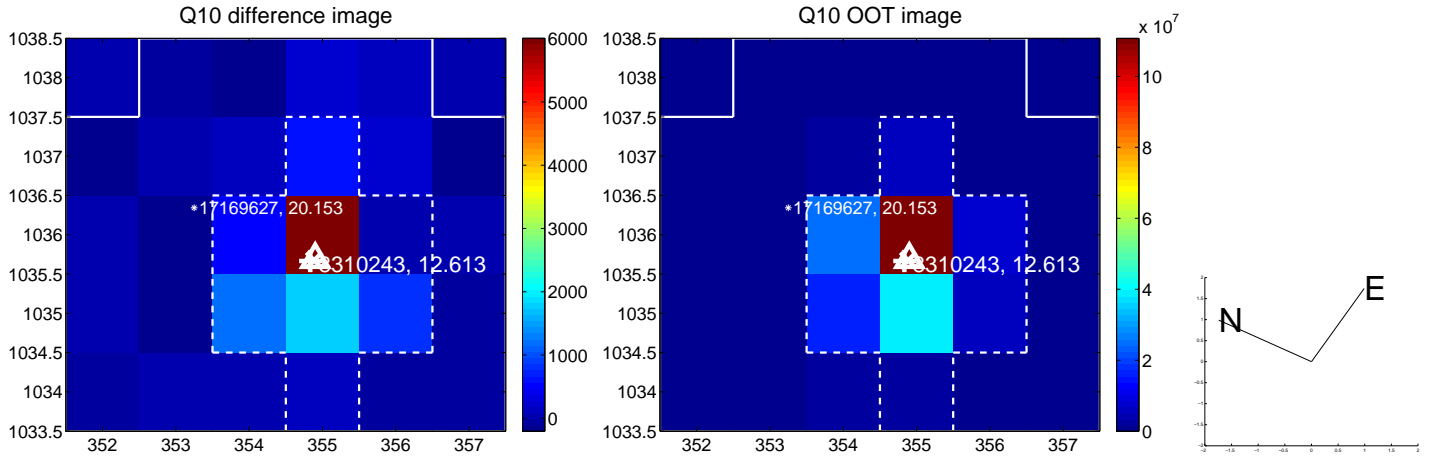
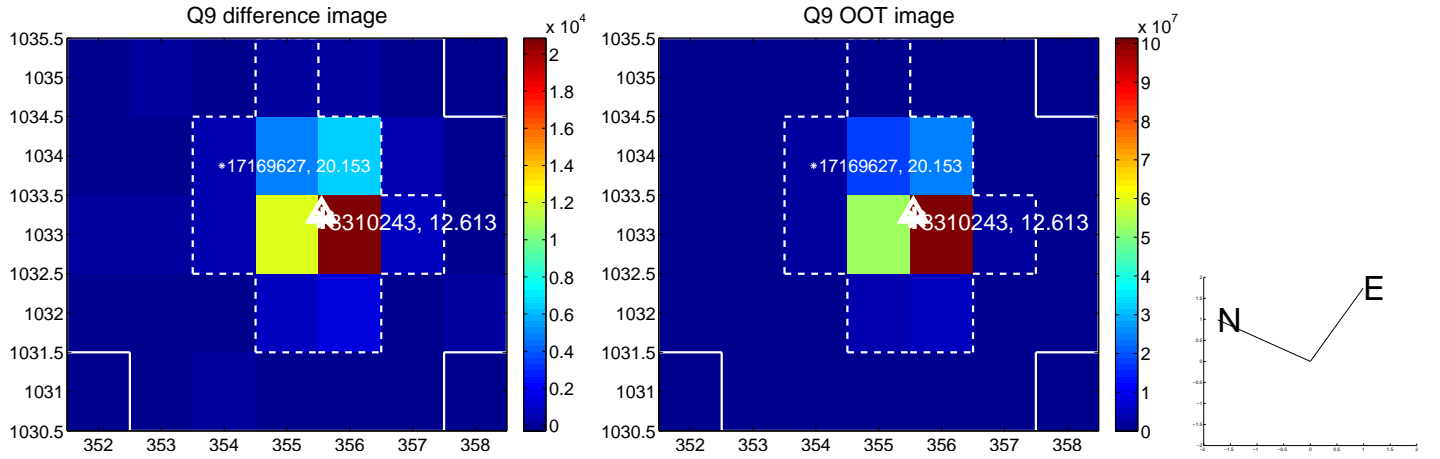
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



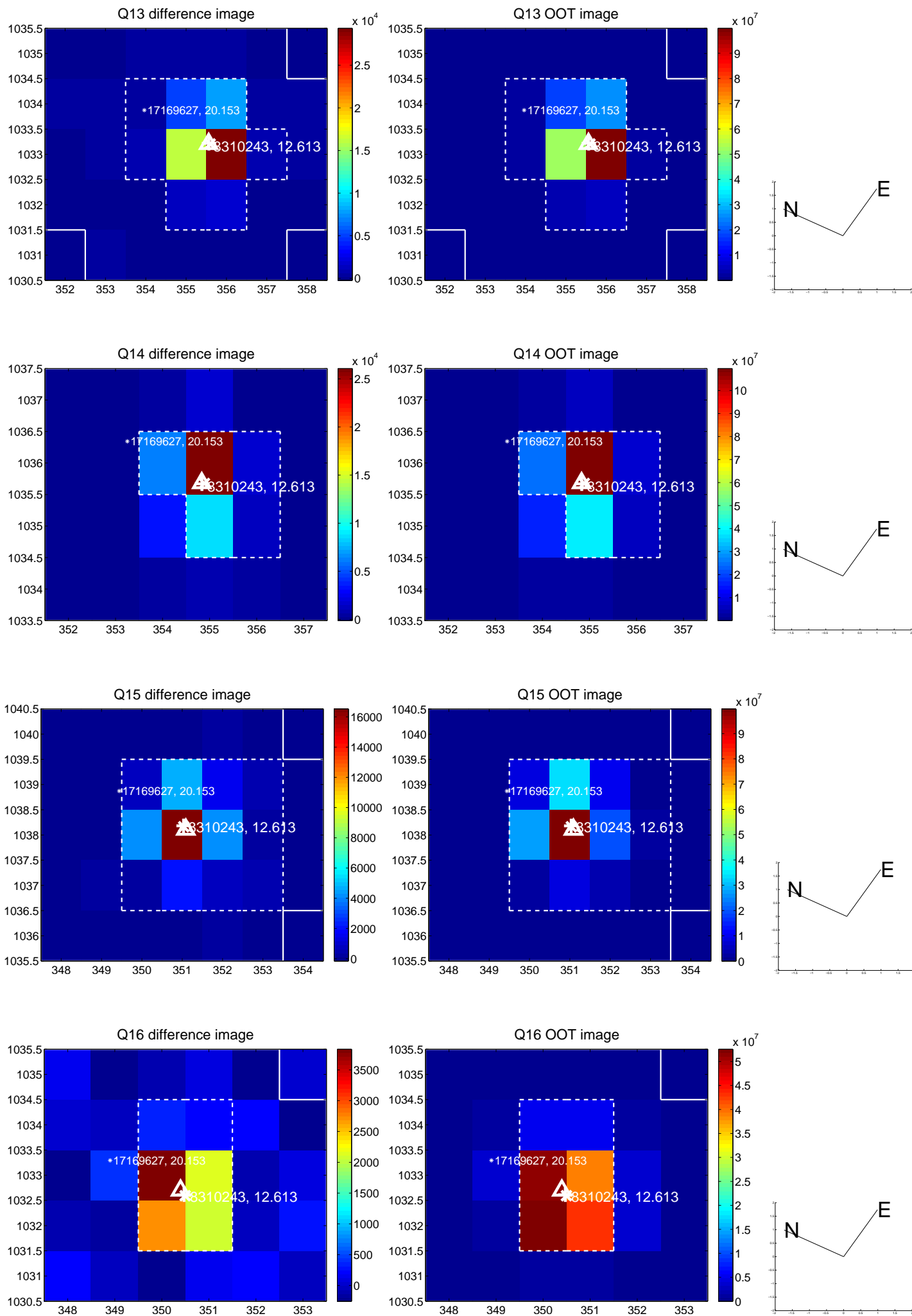
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



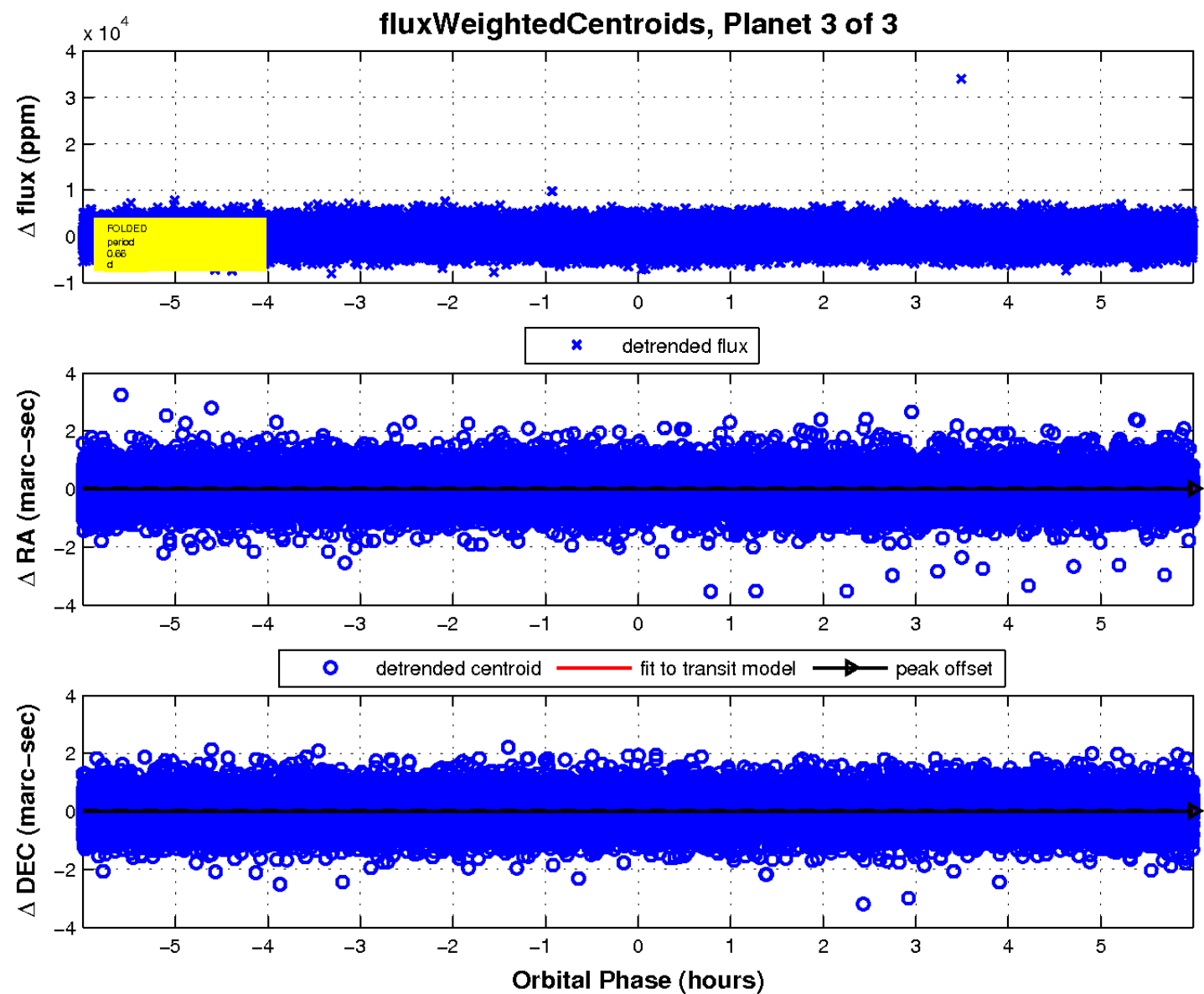
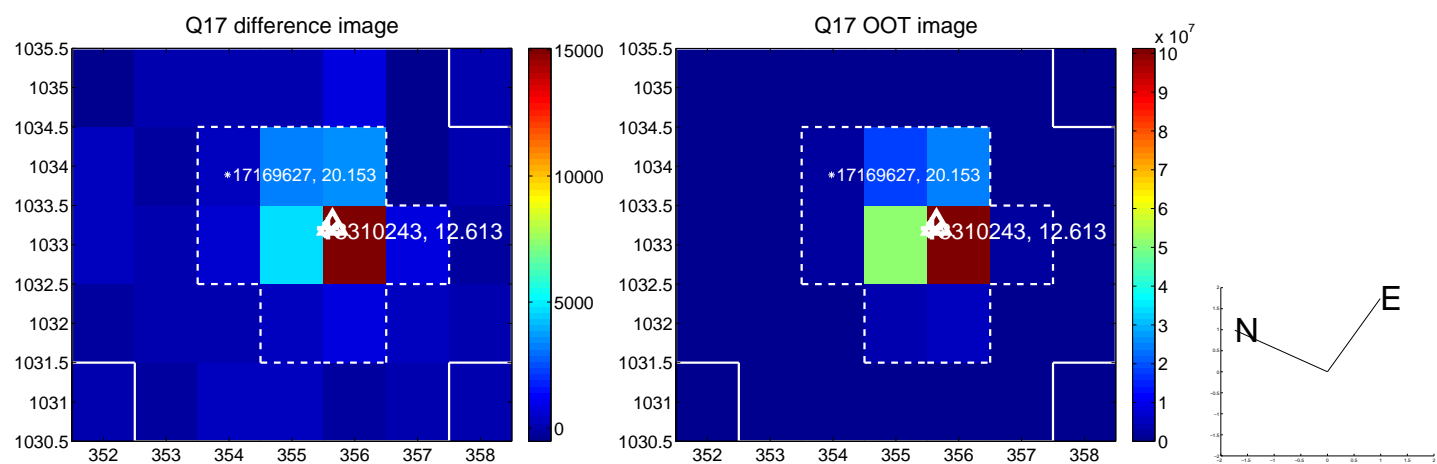
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

