

KIC 003645863

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})
003645863-01	OBS	No	1.573821	132.454784	76.7	3.297	8.8	9.3	1.66	7617	1.75	8780.62
003645863-02	OBS	No	1.573820	131.659278	106.6	5.755	12.0	12.0	1.66	7617	2.42	8780.63
003645863-03	OBS	No	129.343328	145.313590	1138.8	5.221	10.5	8.3	1.66	7617	9.95	24.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003645863-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
003645863-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003645863-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST

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

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

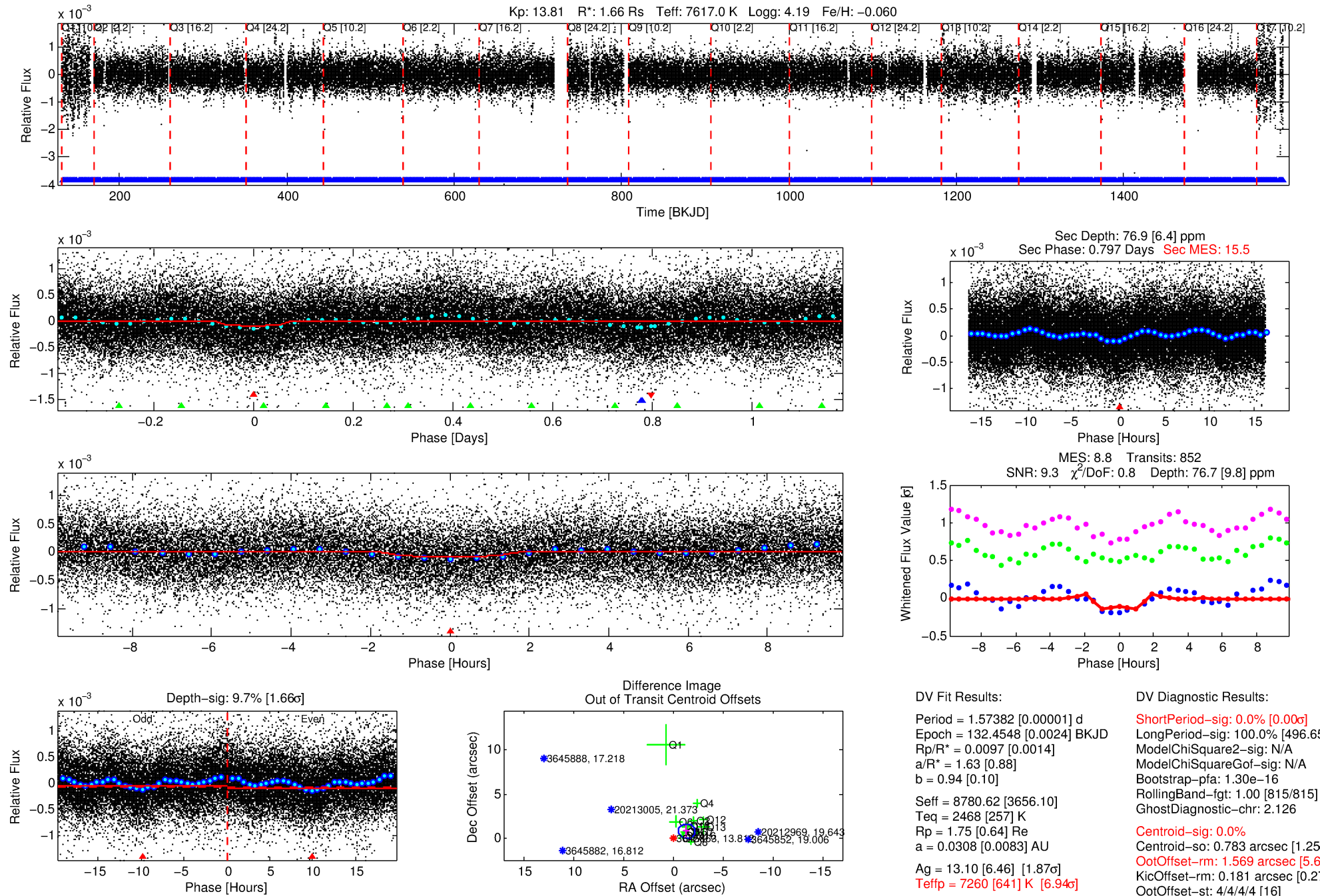
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003645863-01

No Significant Match Found

DV One-Page Summary

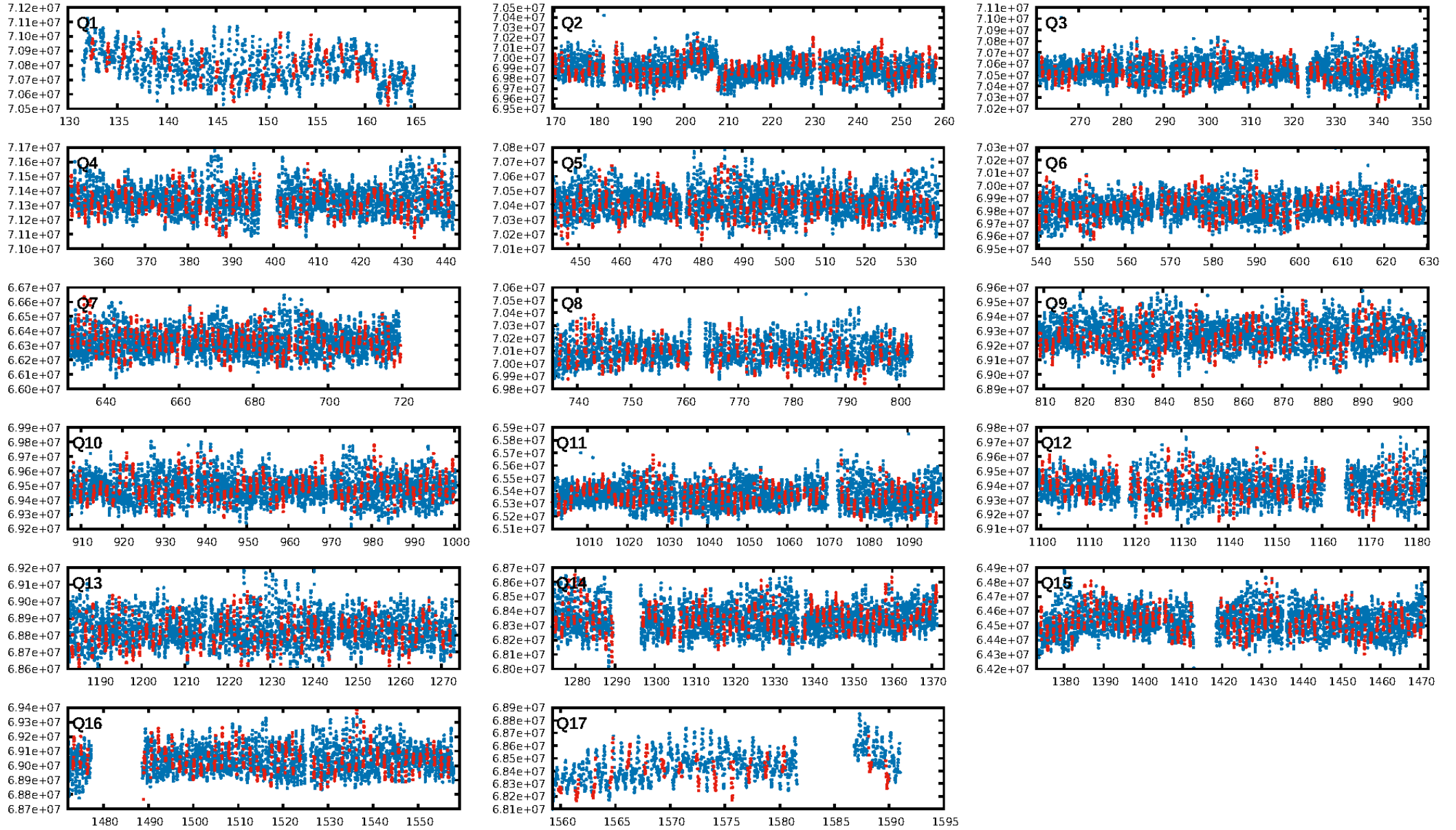
KIC: 3645863 Candidate: 1 of 3 Period: 1.574 d



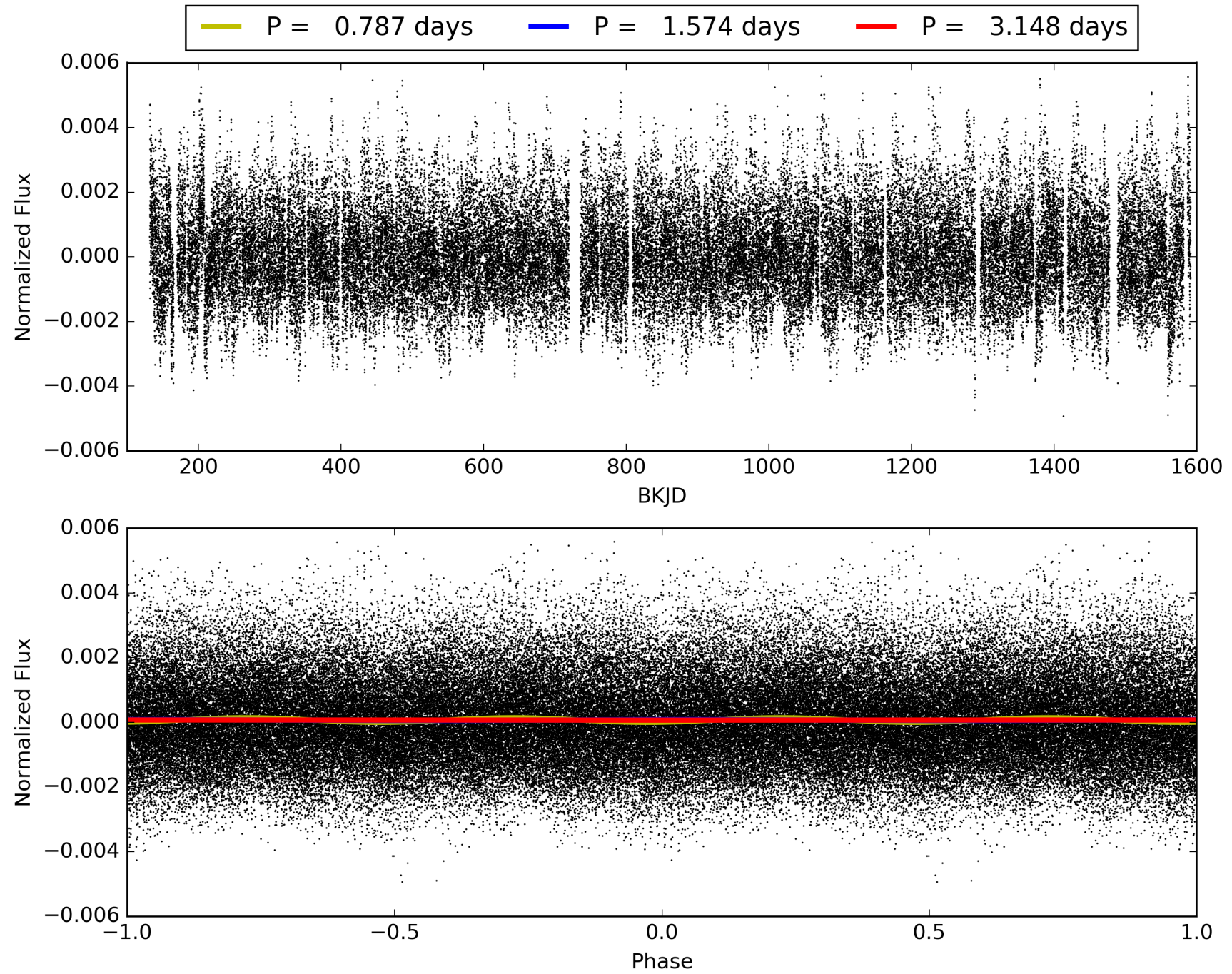
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:09:39 Z

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

TCE 003645863-01, PDC Light Curves

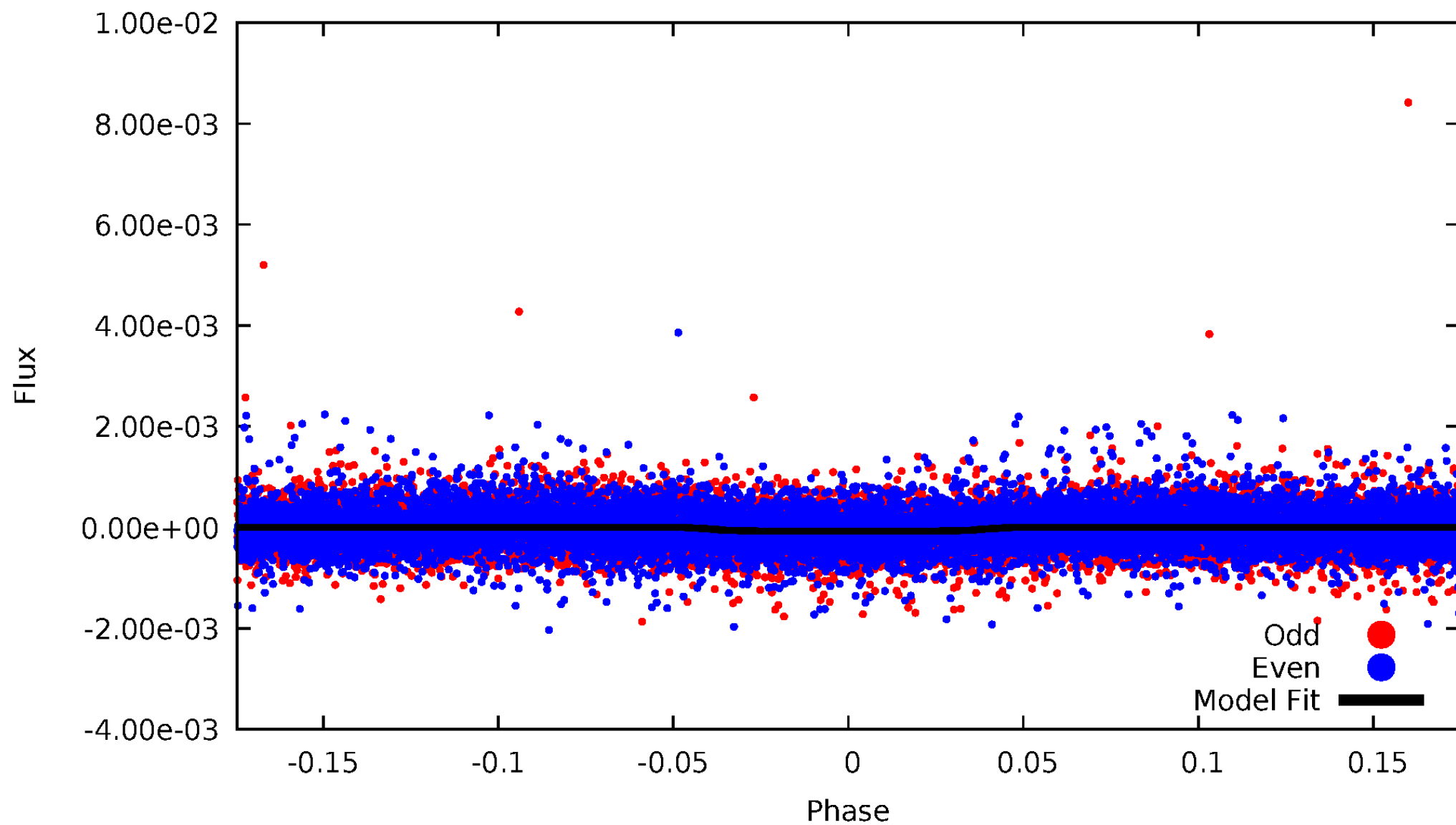


TCE 003645863-01



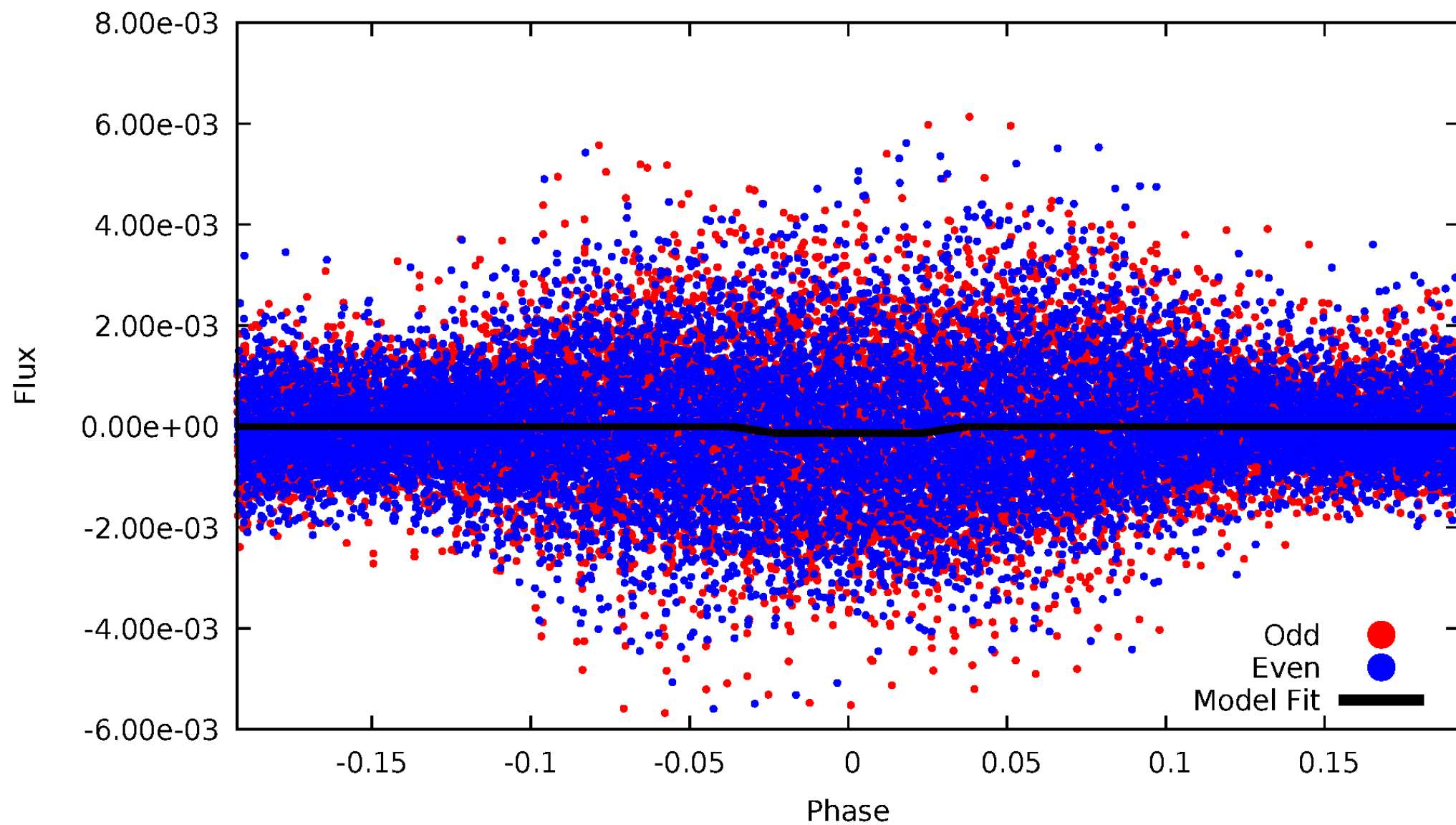
DV Odd/Even

TCE 003645863-01



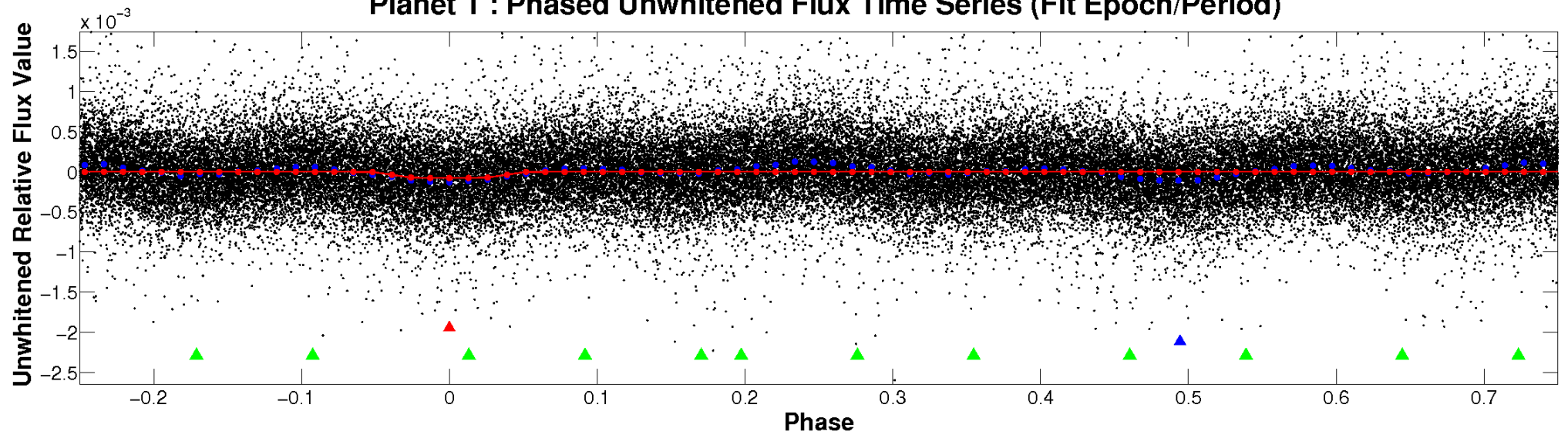
ALT Odd/Even

TCE 003645863-01

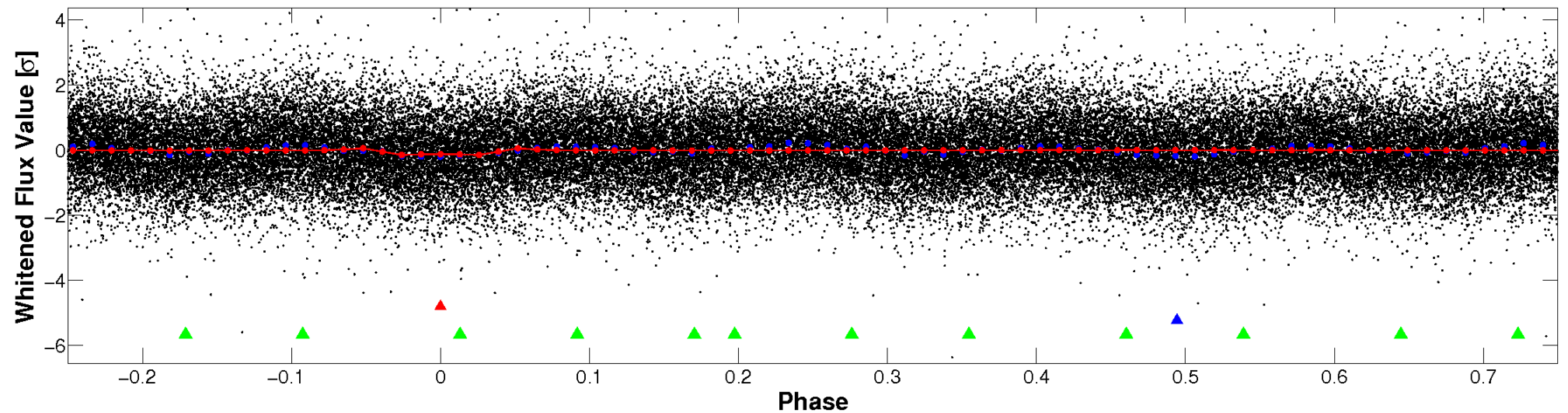


Non-Whitened Vs. Whitened Light Curve

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

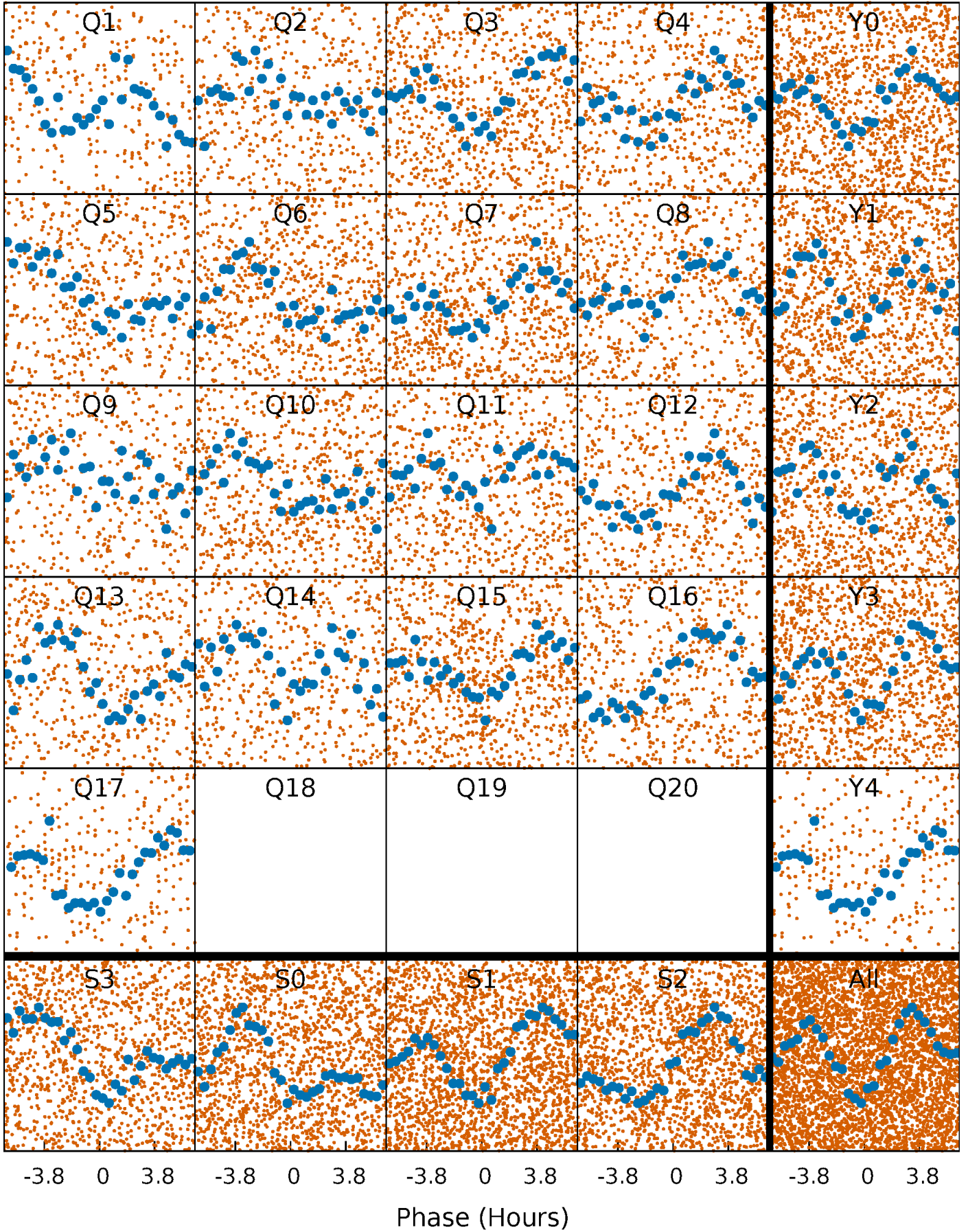


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



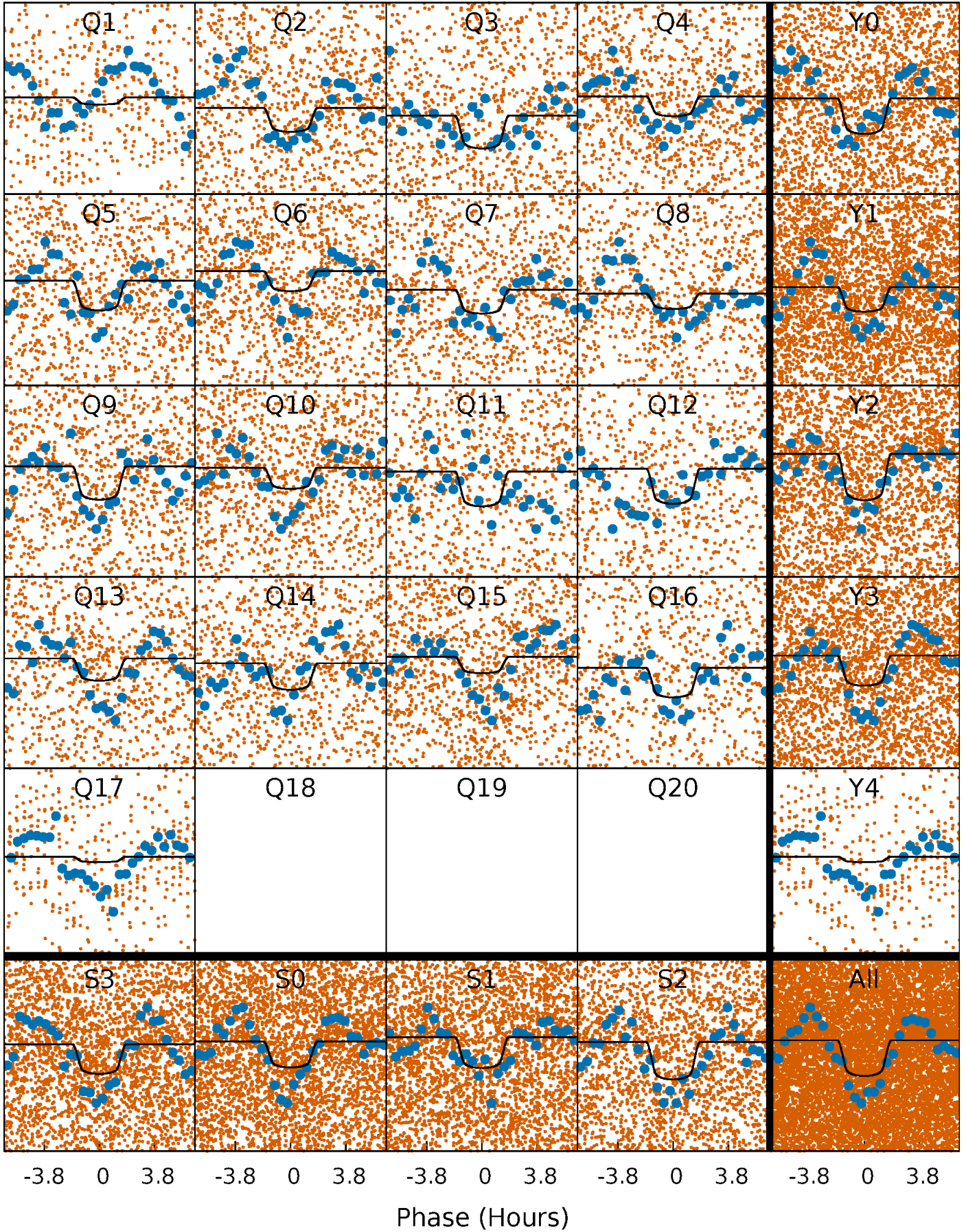
PDC Quarter-Phased Transit Curves

TCE 003645863-01 P= 1.573821 Days $T_0=132.454784$ (BKJD)



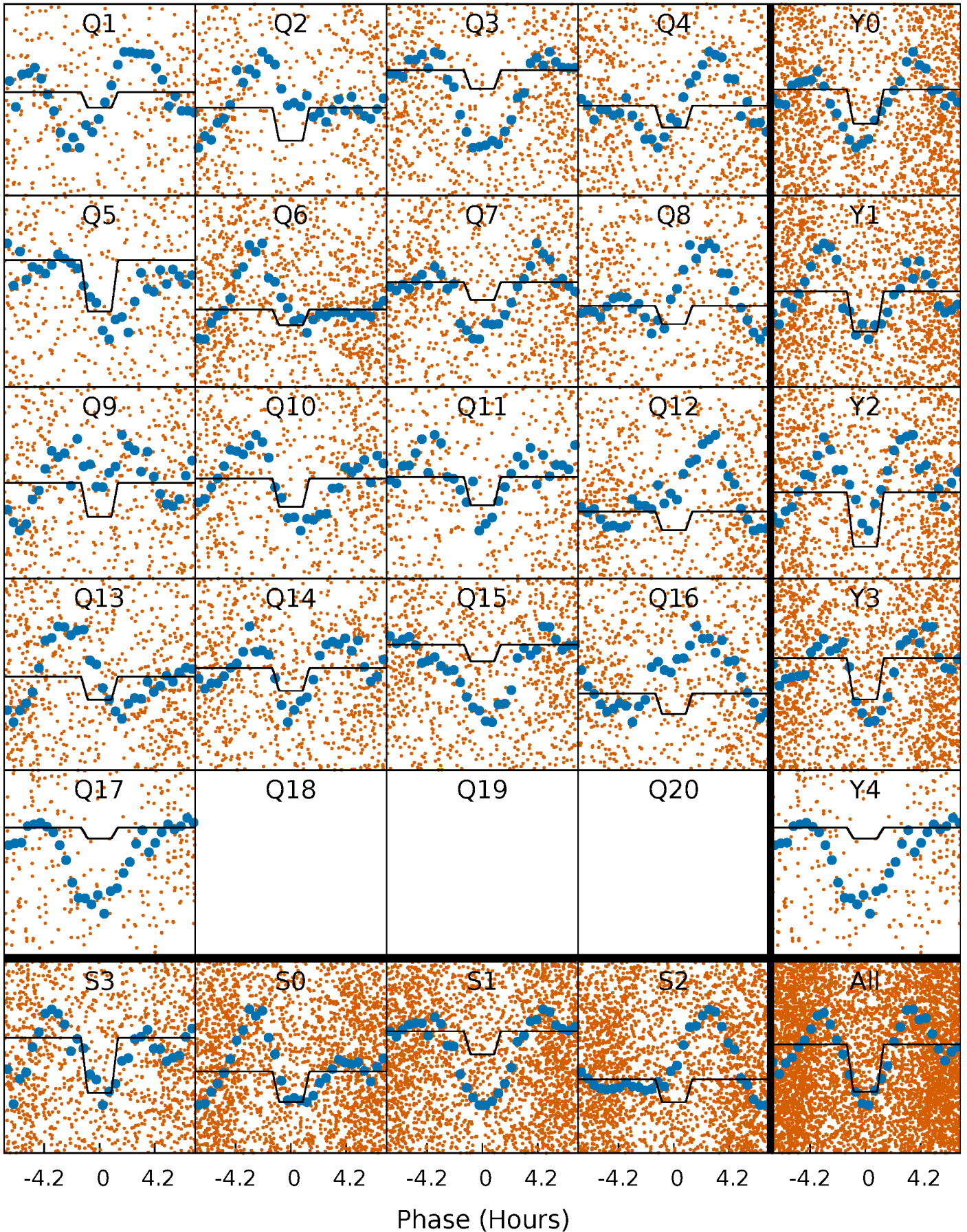
DV Quarter-Phased Transit Curves

TCE 003645863-01 P= 1.573821 Days $T_0=132.454784$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

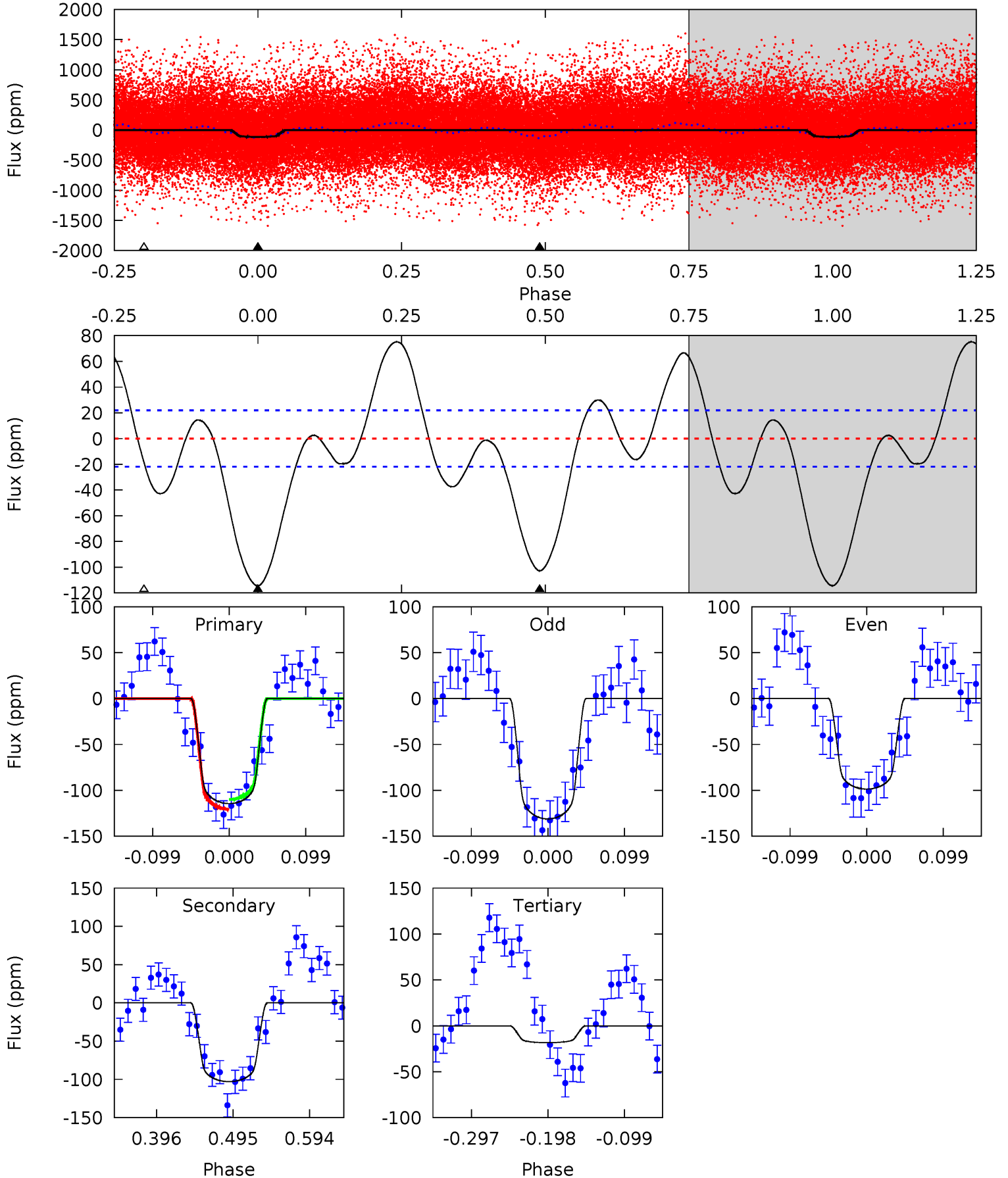
TCE 003645863-01 P= 1.573838 Days $T_0=132.433785$ (BKJD)



DV Model-Shift Uniqueness Test

003645863-01, P = 1.573821 Days, E = 130.880963 Days

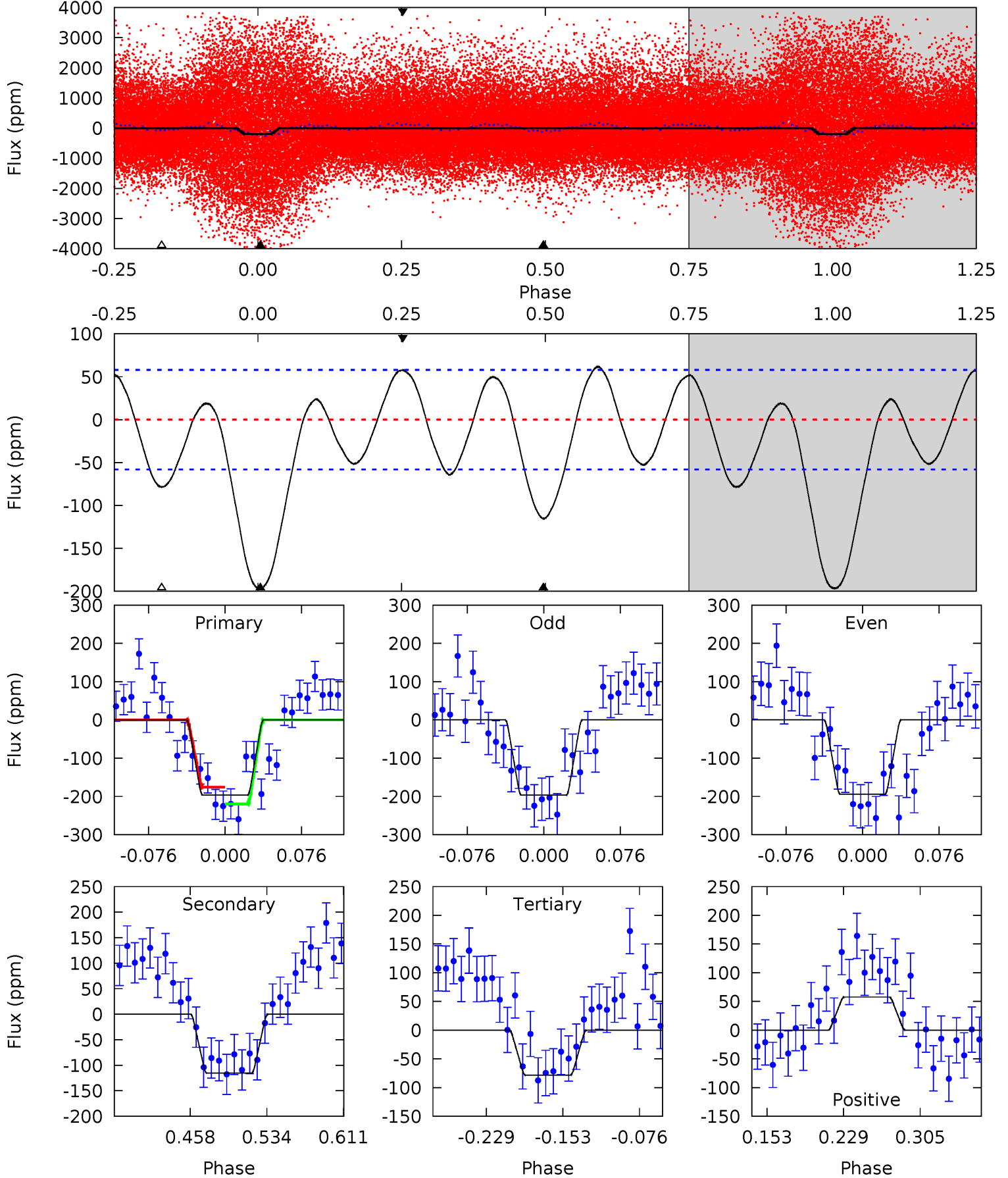
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	21.4	3.83	0	4.57	1.65	7.04	20.0	23.8	17.6	21.4	3.40	1.01	0.40	1.11



Alt Model-Shift Uniqueness Test

003645863-01, P = 1.573838 Days, E = 130.859947 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	9.18	6.25	4.60	4.62	1.77	3.21	9.40	11.1	2.93	4.58	0.11	0.75	0.24	1.75



Stellar Parameters For KIC 003645863

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7617^{+211}_{-316}	$4.194^{+0.087}_{-0.203}$	$-0.060^{+0.200}_{-0.350}$	$1.664^{+0.551}_{-0.276}$	$1.574^{+0.219}_{-0.219}$	$0.482^{+0.232}_{-0.248}$
	+3%/-4%	+2%/-5%	+333%/-583%	+33%/-17%	+14%/-14%	+48%/-52%
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 003645863-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-103 ± 5	$1.82^{+0.41}_{-0.34}$	3492^{+286}_{-190}	7744^{+939}_{-699}	16^{+8}_{-5}
Alt.	-115 ± 13	$2.12^{+0.45}_{-0.34}$	3482^{+251}_{-198}	7241^{+725}_{-574}	13^{+6}_{-4}

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

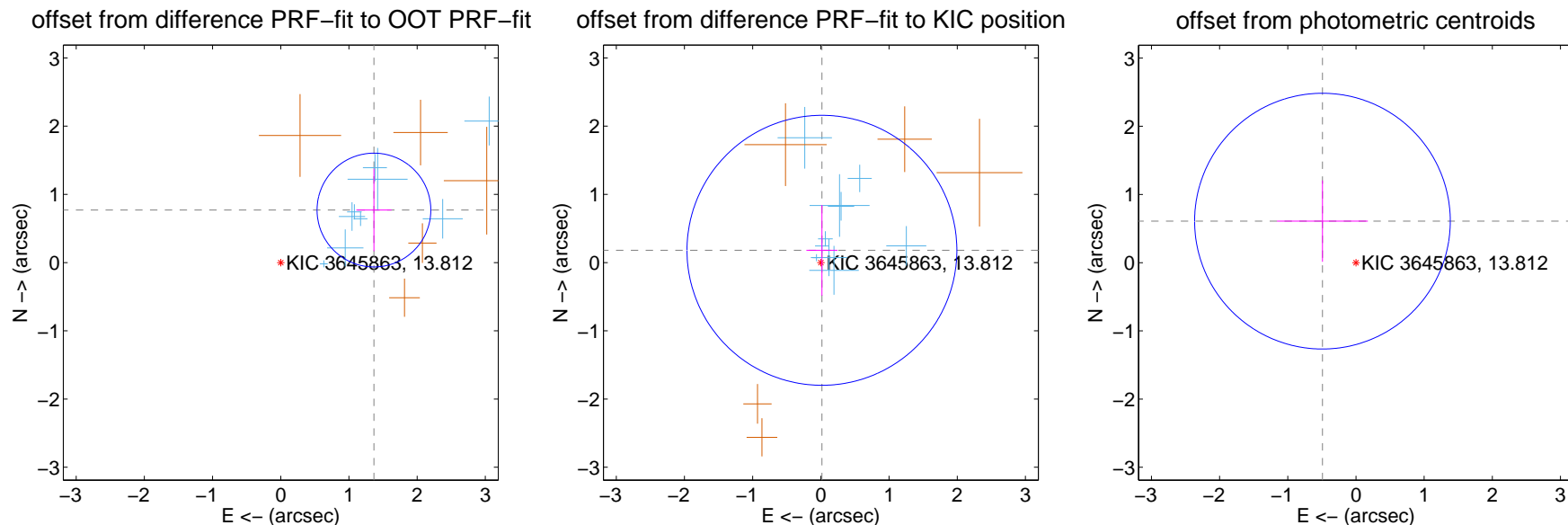
DV Centroid Data

Supplemental centroid analysis for 003645863-01. Kepler magnitude: 13.81. Transit SNR 9.33

There are 10 quarters with good PRF difference image offsets

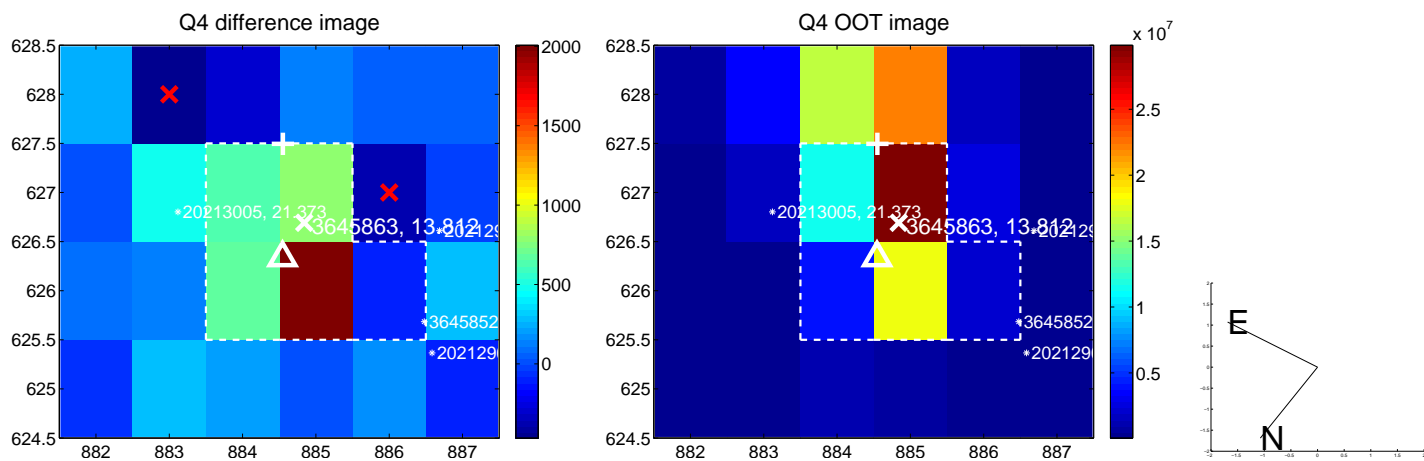
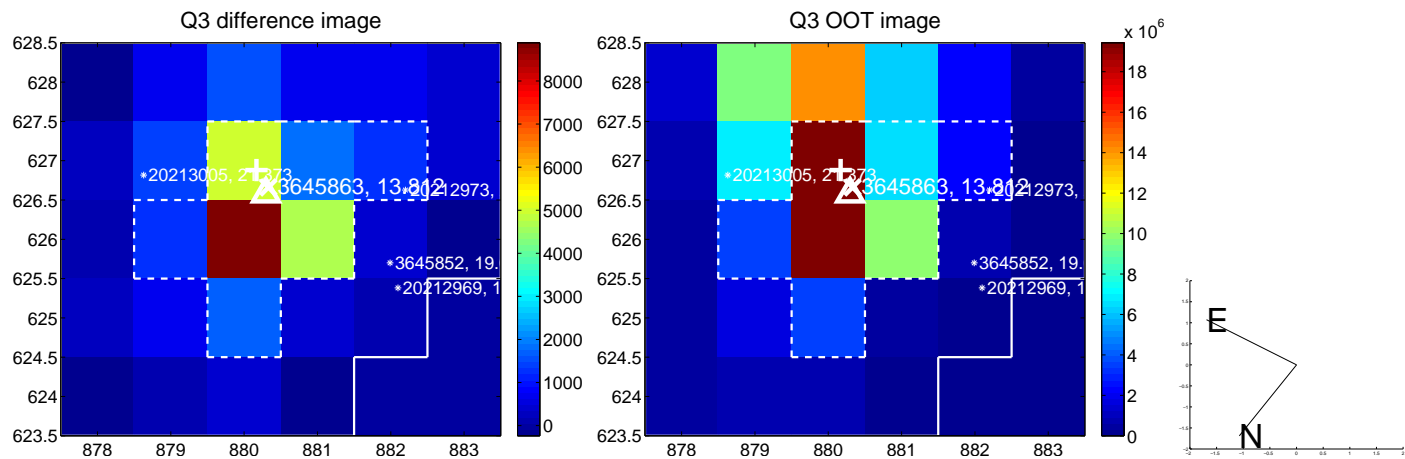
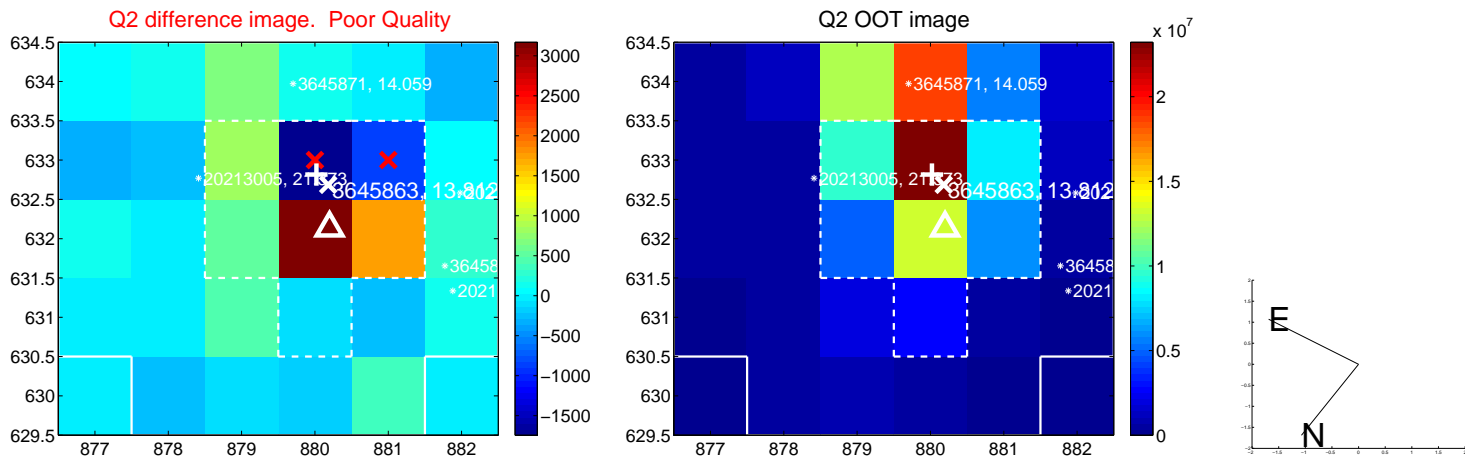
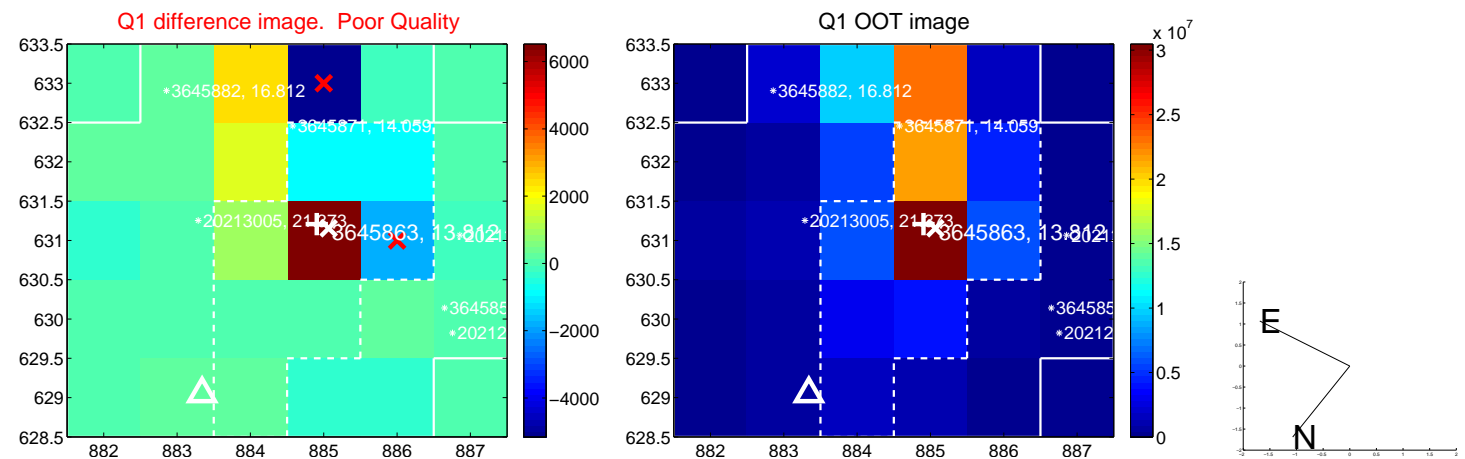
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.569 ± 0.278	5.64	-1.367 ± 0.258	0.770 ± 0.604
PRF-fit source offset from KIC position	0.181 ± 0.660	0.27	-0.016 ± 0.228	0.180 ± 0.664
photometric centroid source offset	0.78 ± 0.63	1.25	0.49 ± 0.67	0.61 ± 0.60

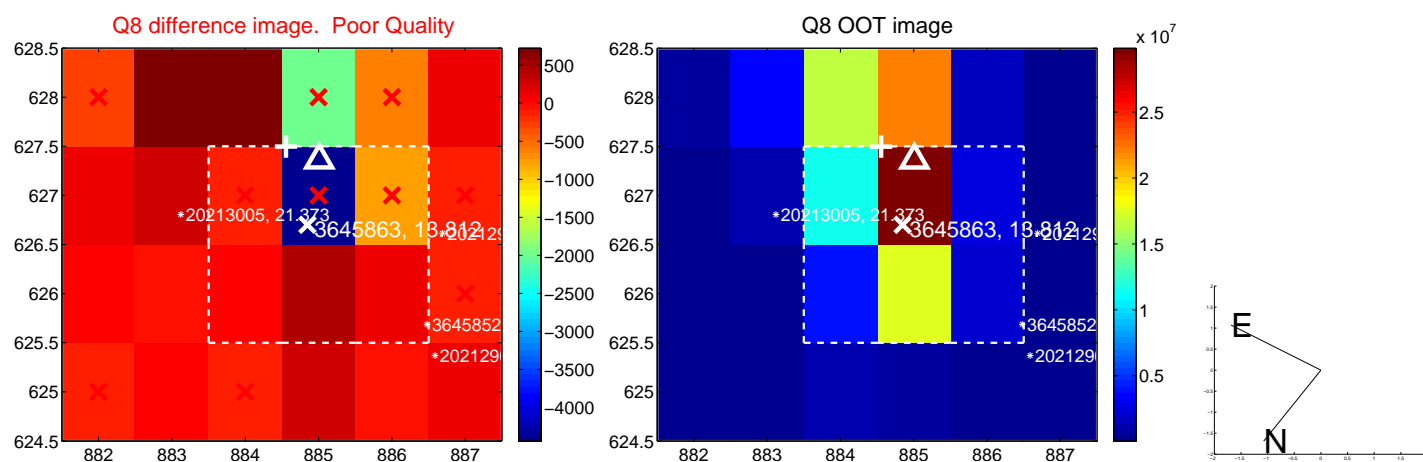
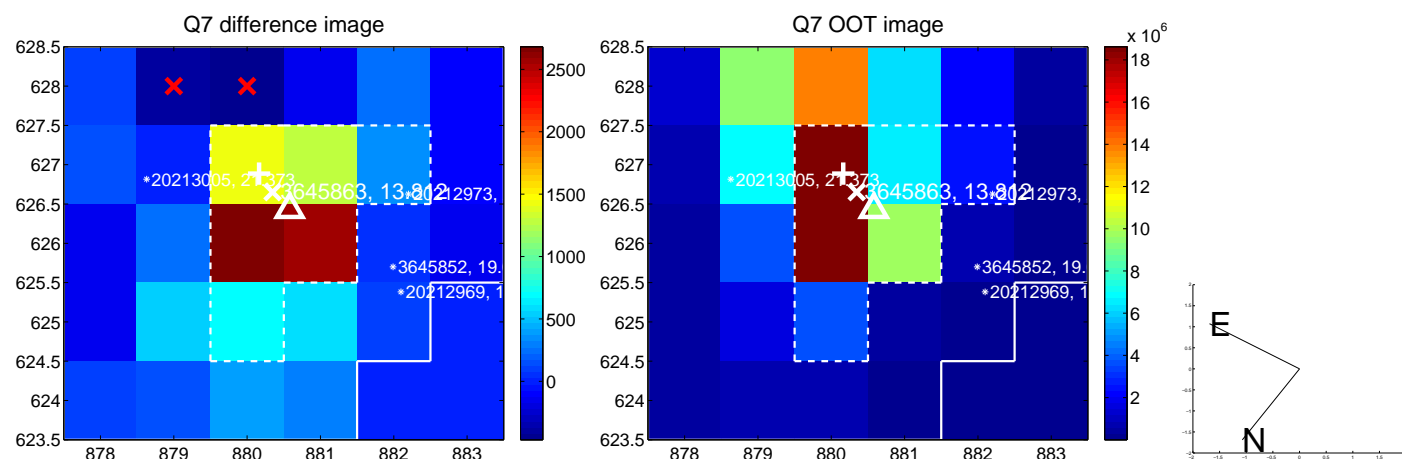
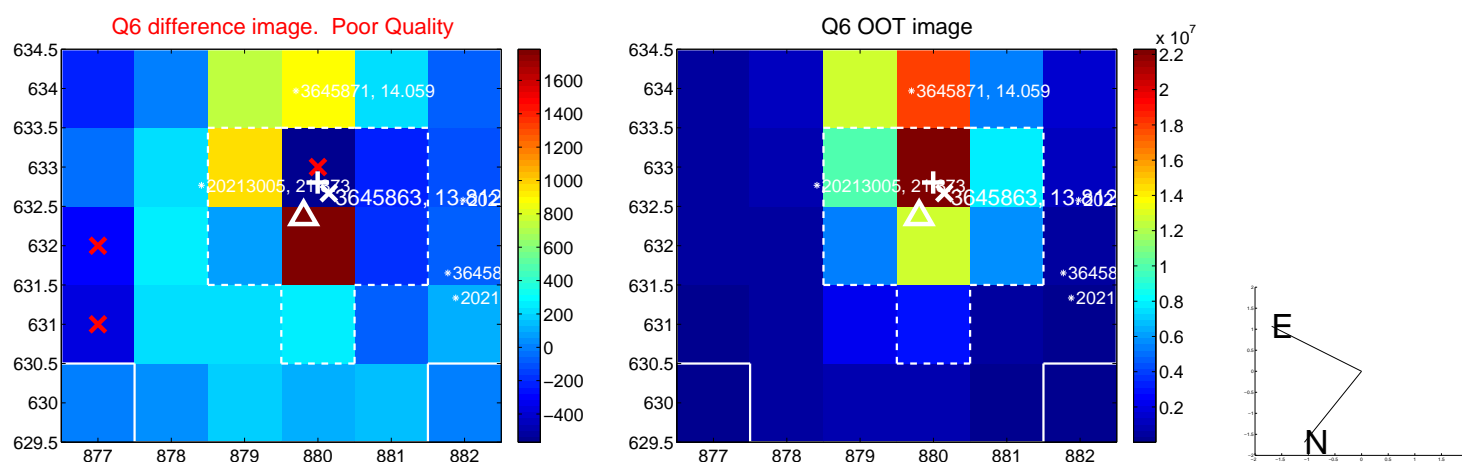
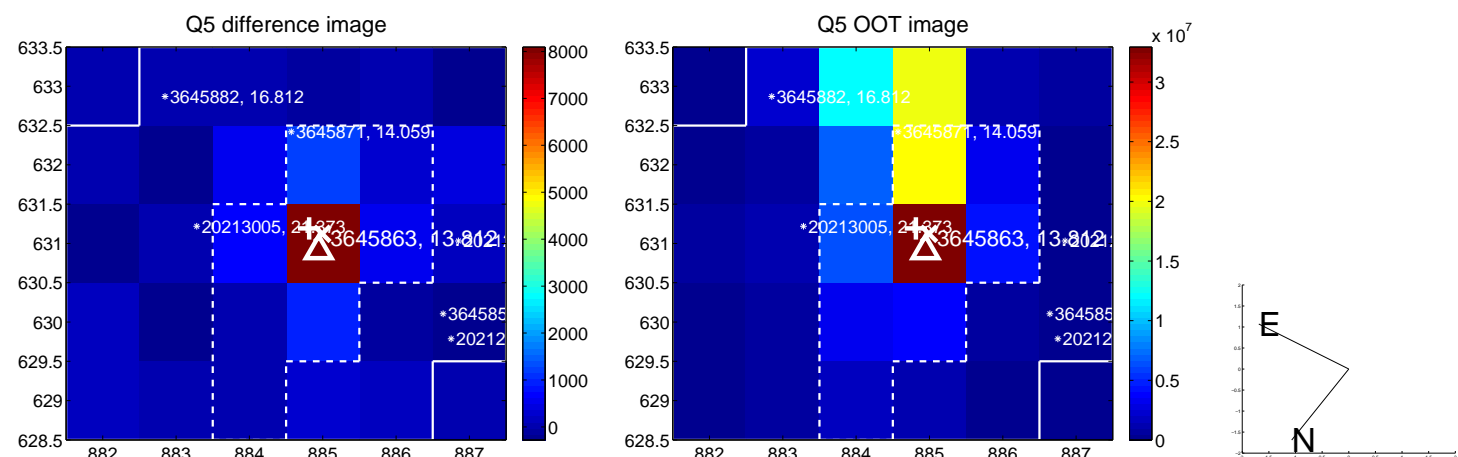


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

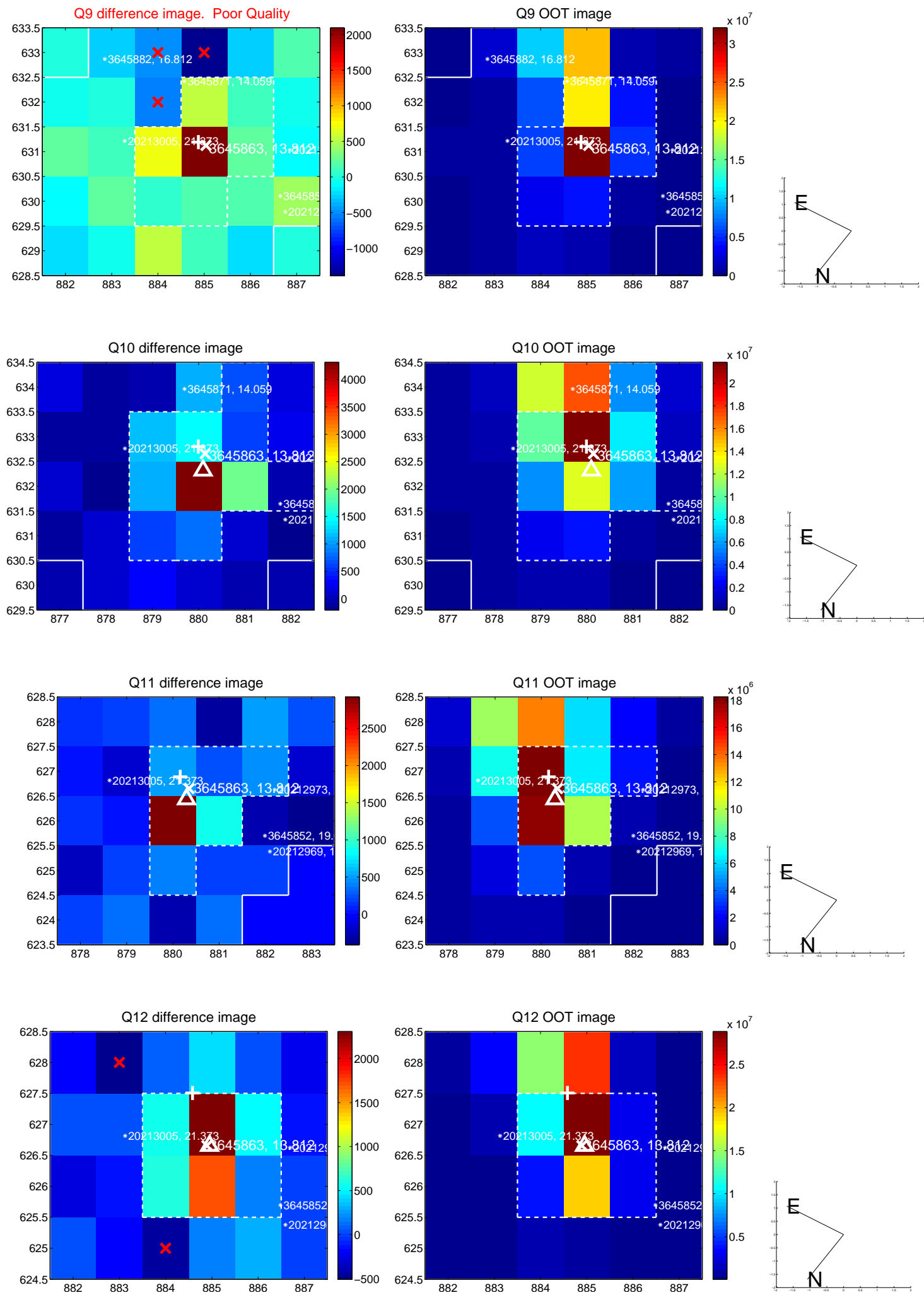
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



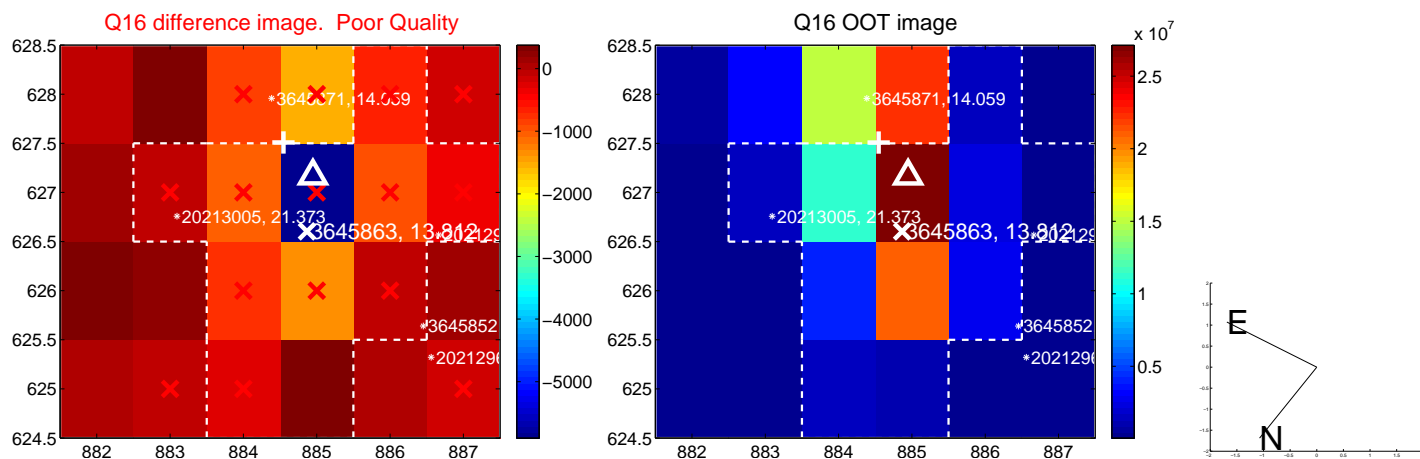
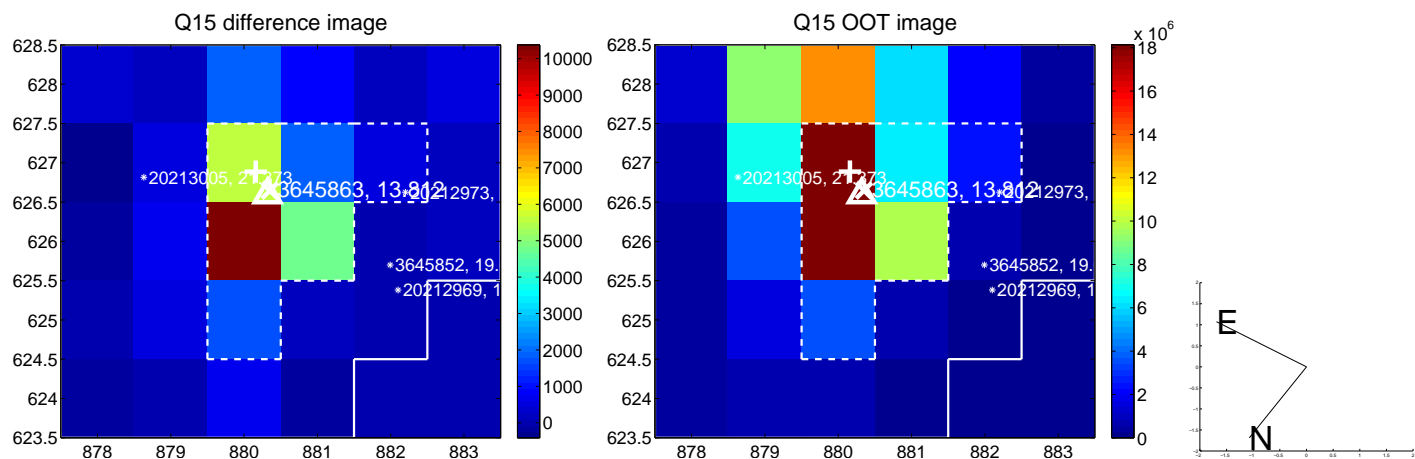
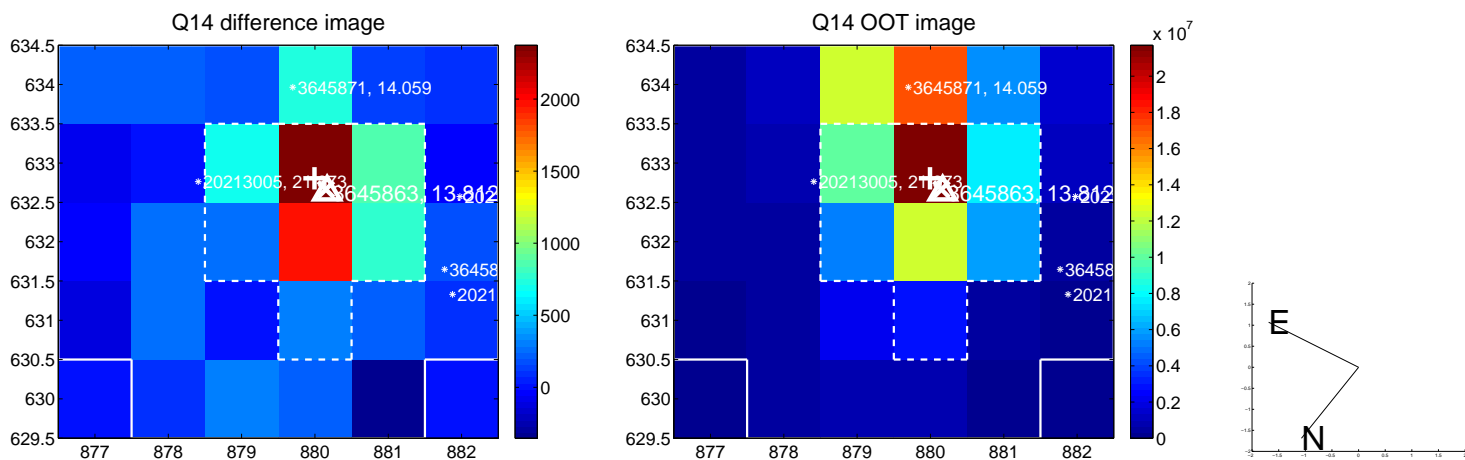
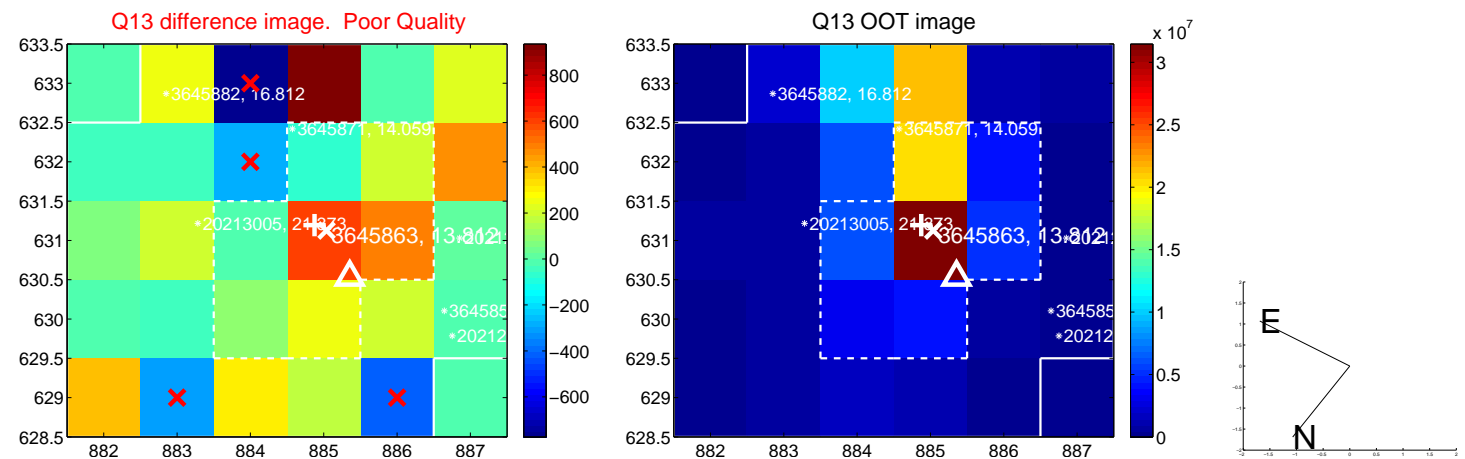
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



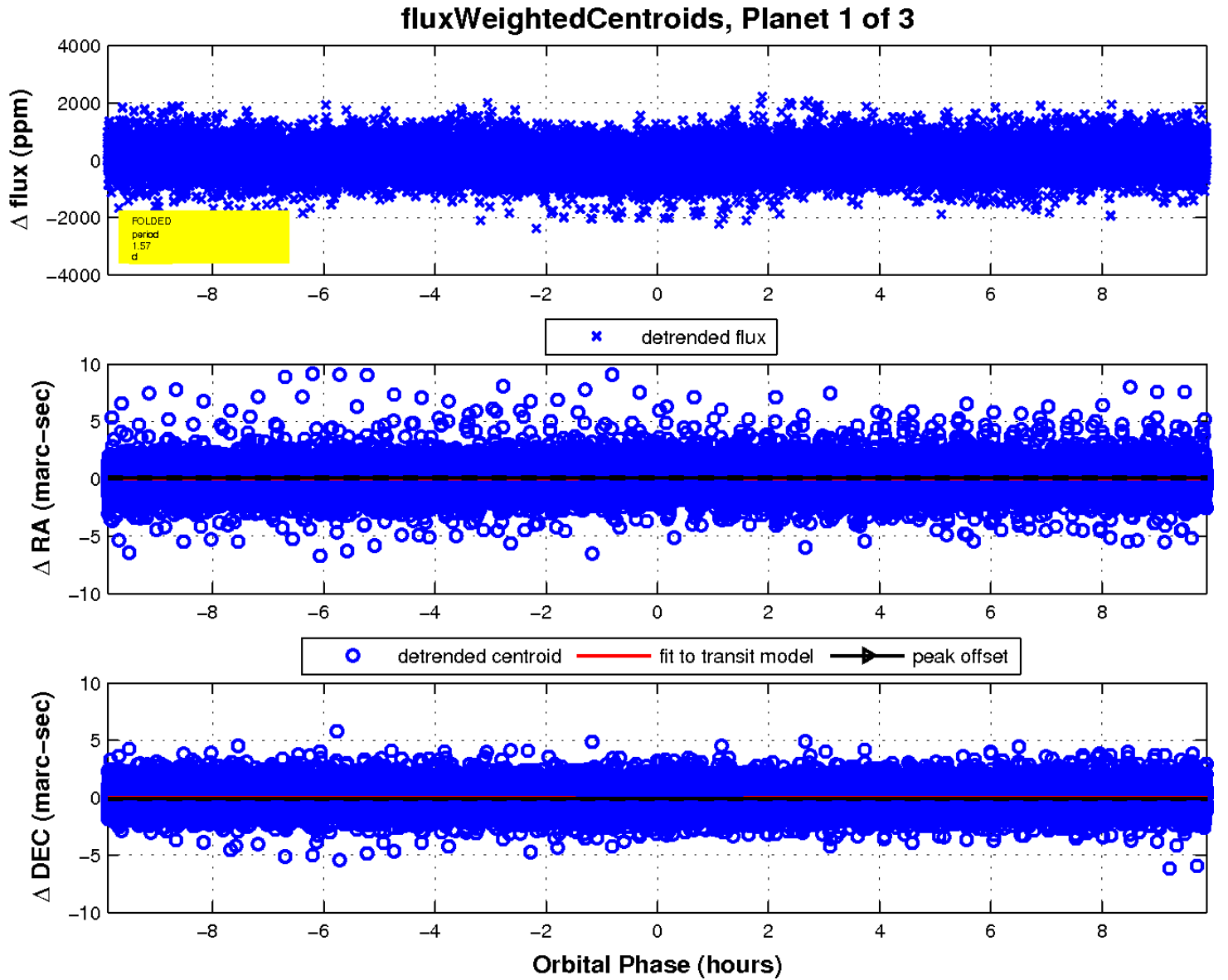
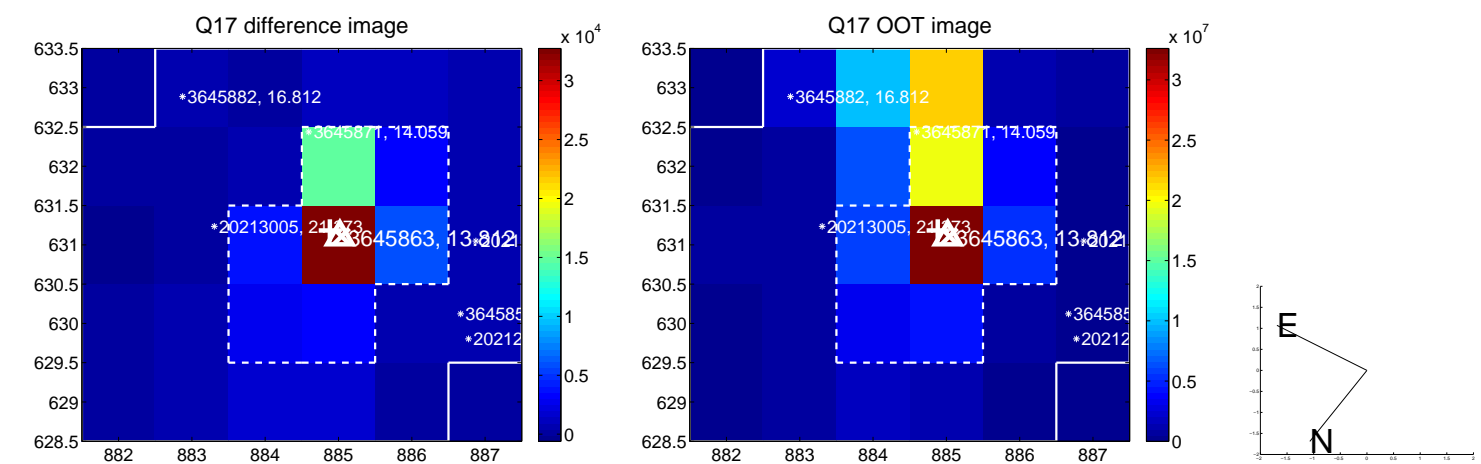
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

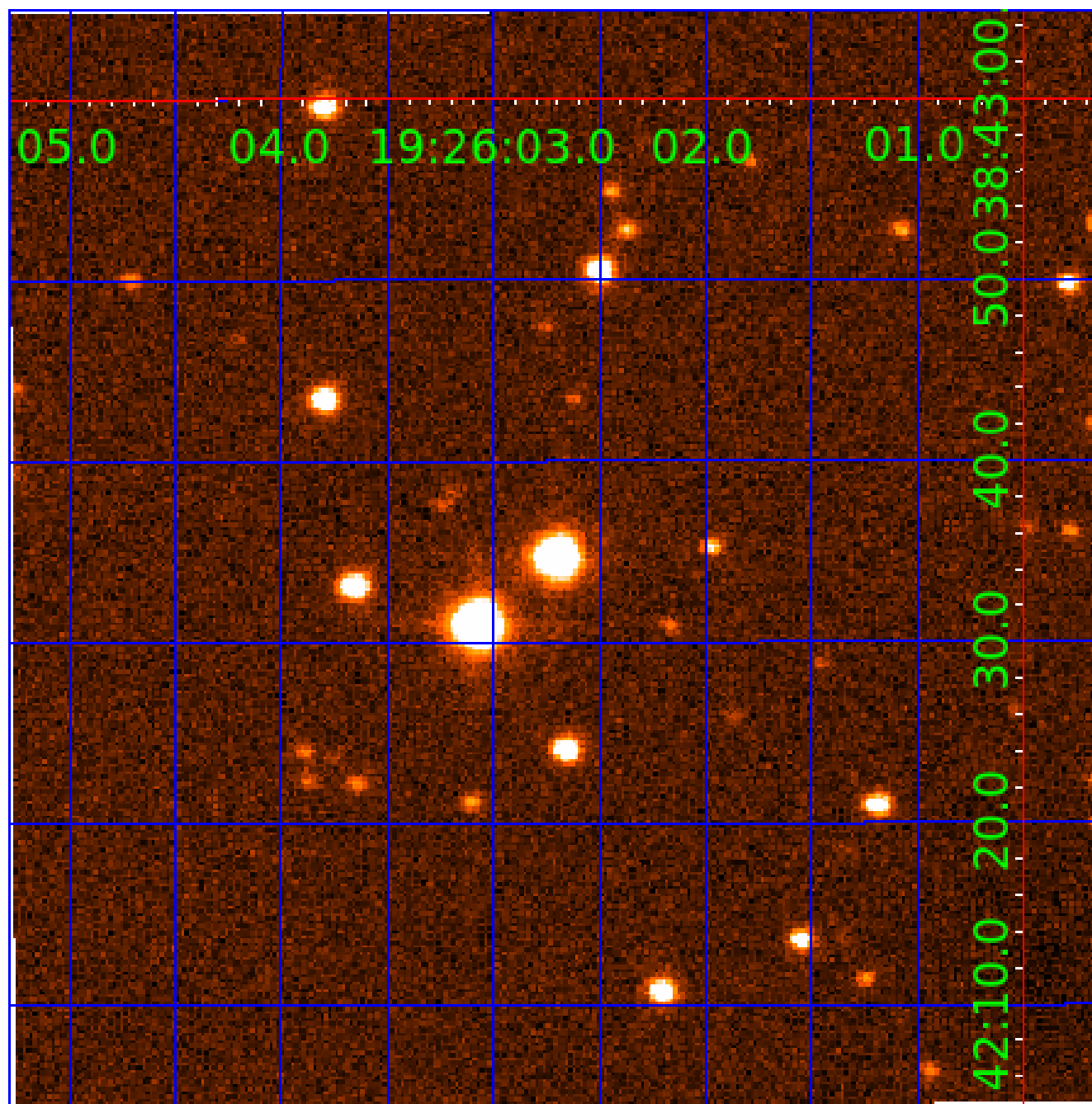


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003645863

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})
003645863-01	OBS	No	1.573821	132.454784	76.7	3.297	8.8	9.3	1.66	7617	1.75	8780.62
003645863-02	OBS	No	1.573820	131.659278	106.6	5.755	12.0	12.0	1.66	7617	2.42	8780.63
003645863-03	OBS	No	129.343328	145.313590	1138.8	5.221	10.5	8.3	1.66	7617	9.95	24.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003645863-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
003645863-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003645863-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST

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

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

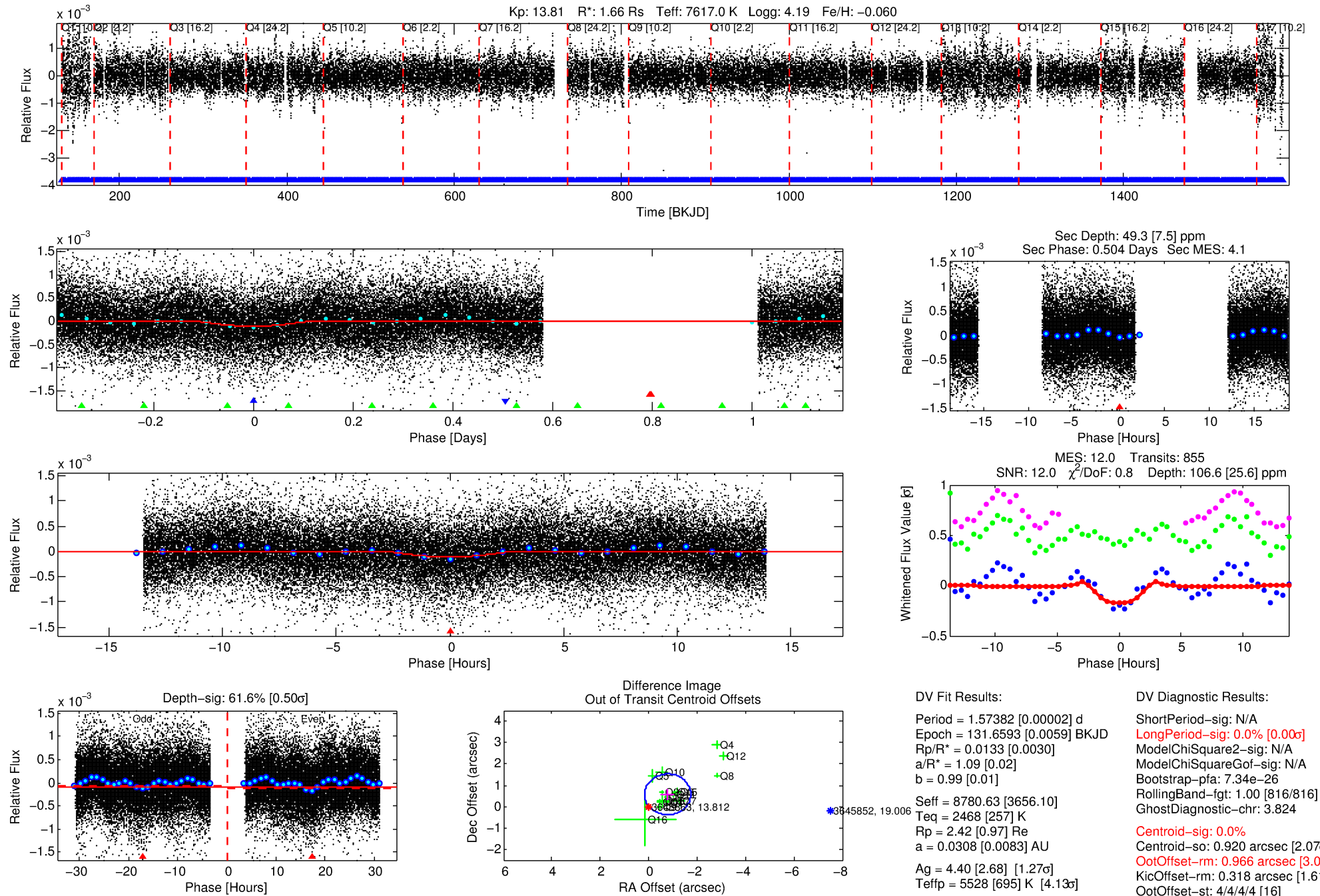
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003645863-02

No Significant Match Found

DV One-Page Summary

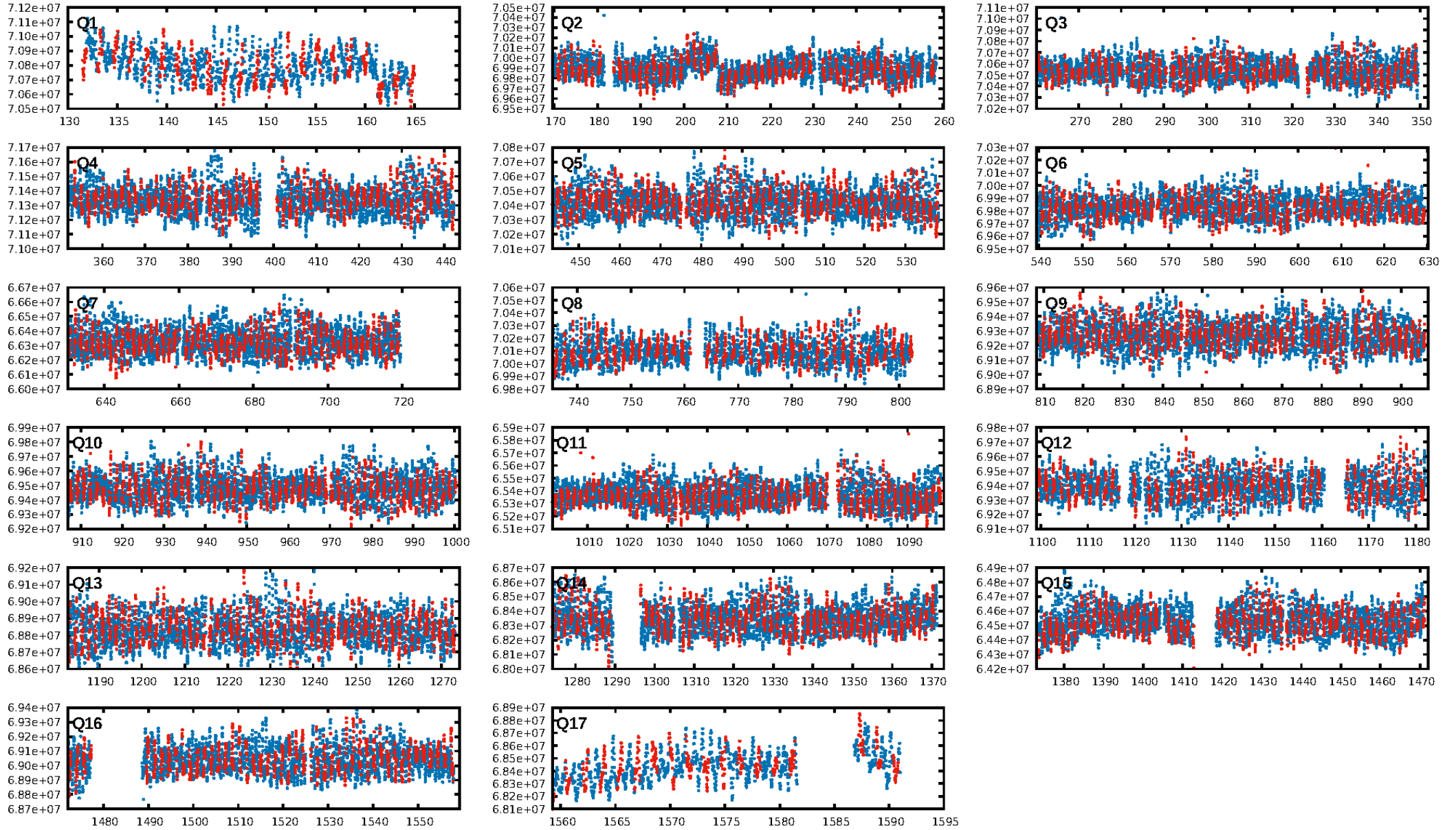
KIC: 3645863 Candidate: 2 of 3 Period: 1.574 d



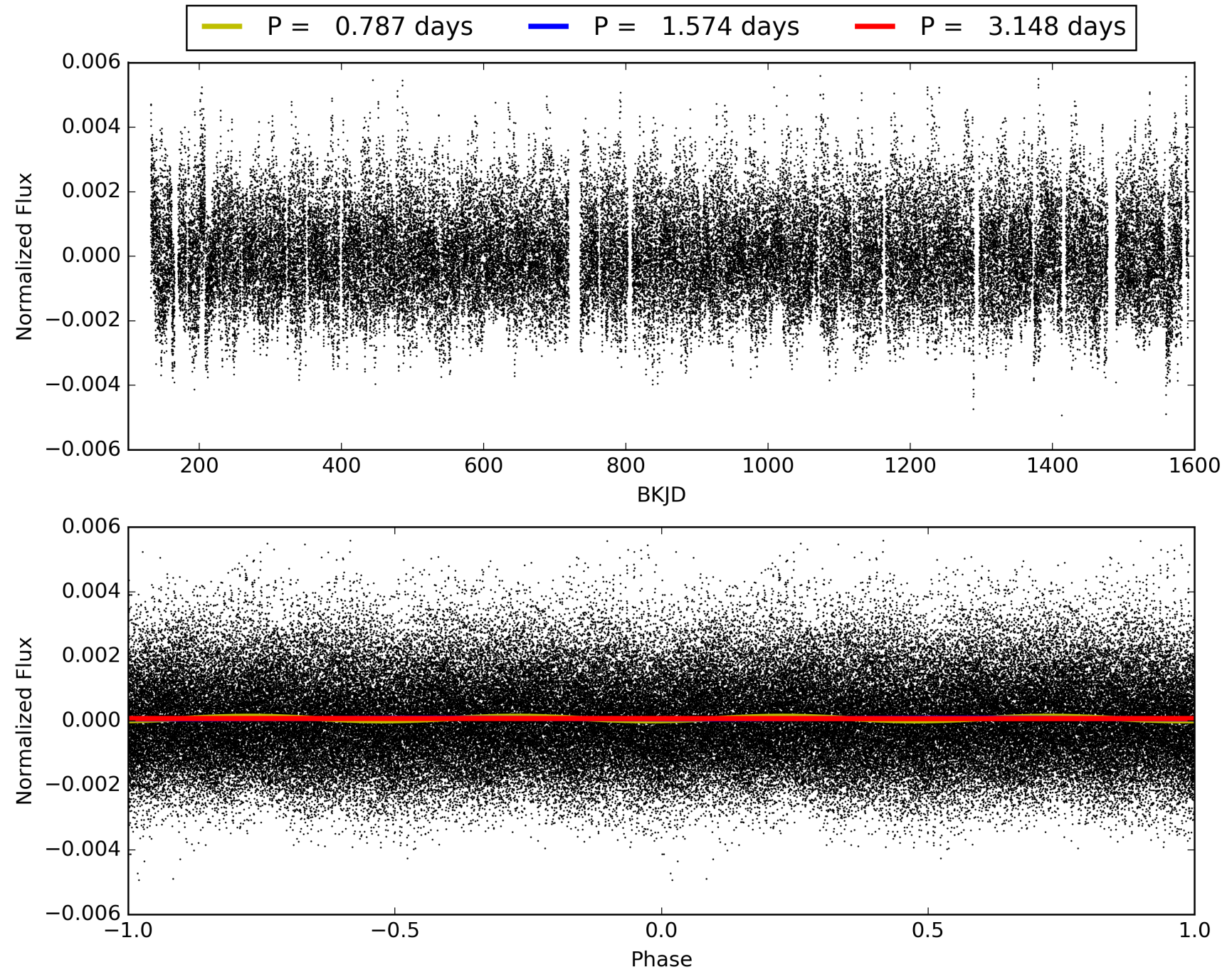
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:09:49 Z

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

TCE 003645863-02, PDC Light Curves

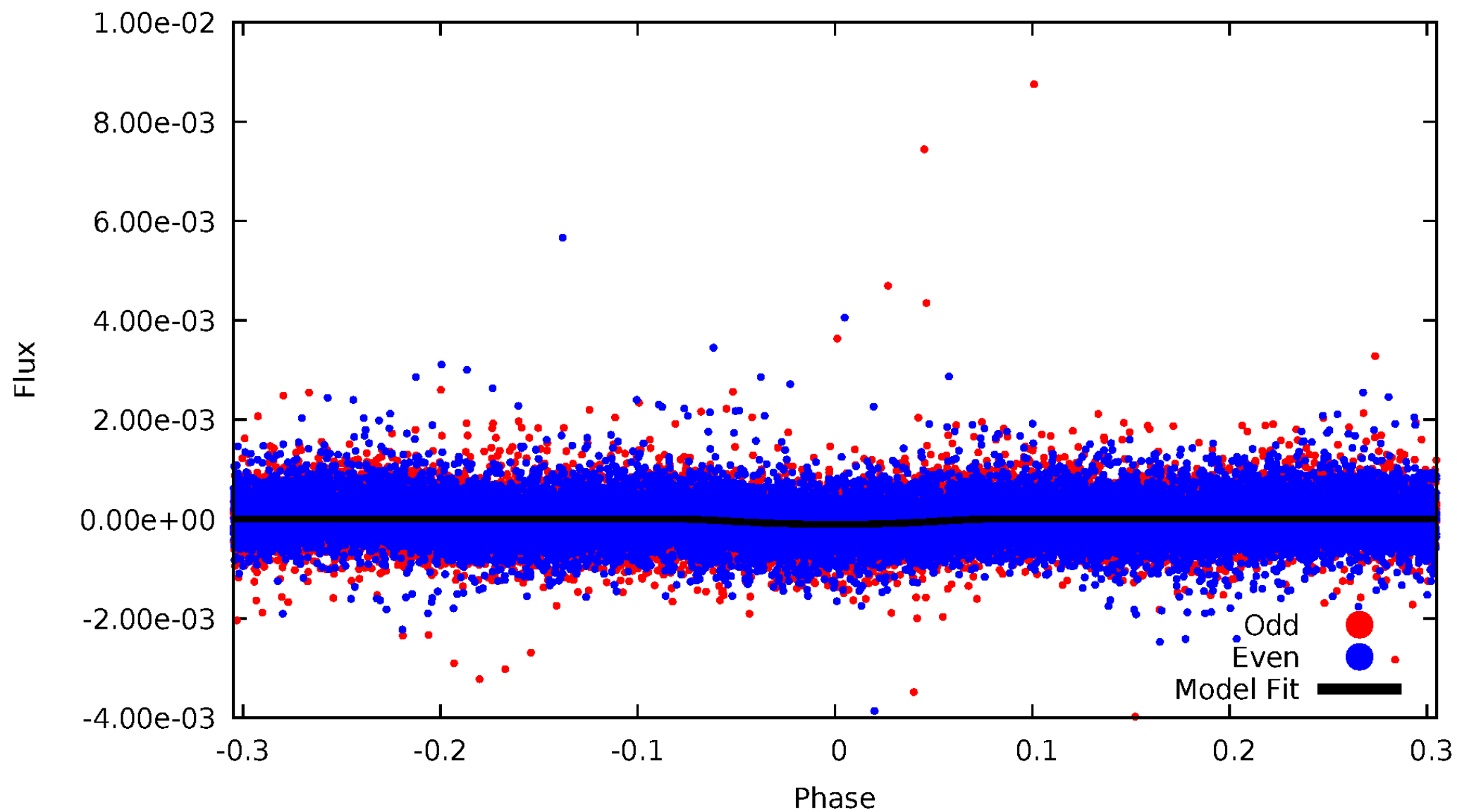


TCE 003645863-02



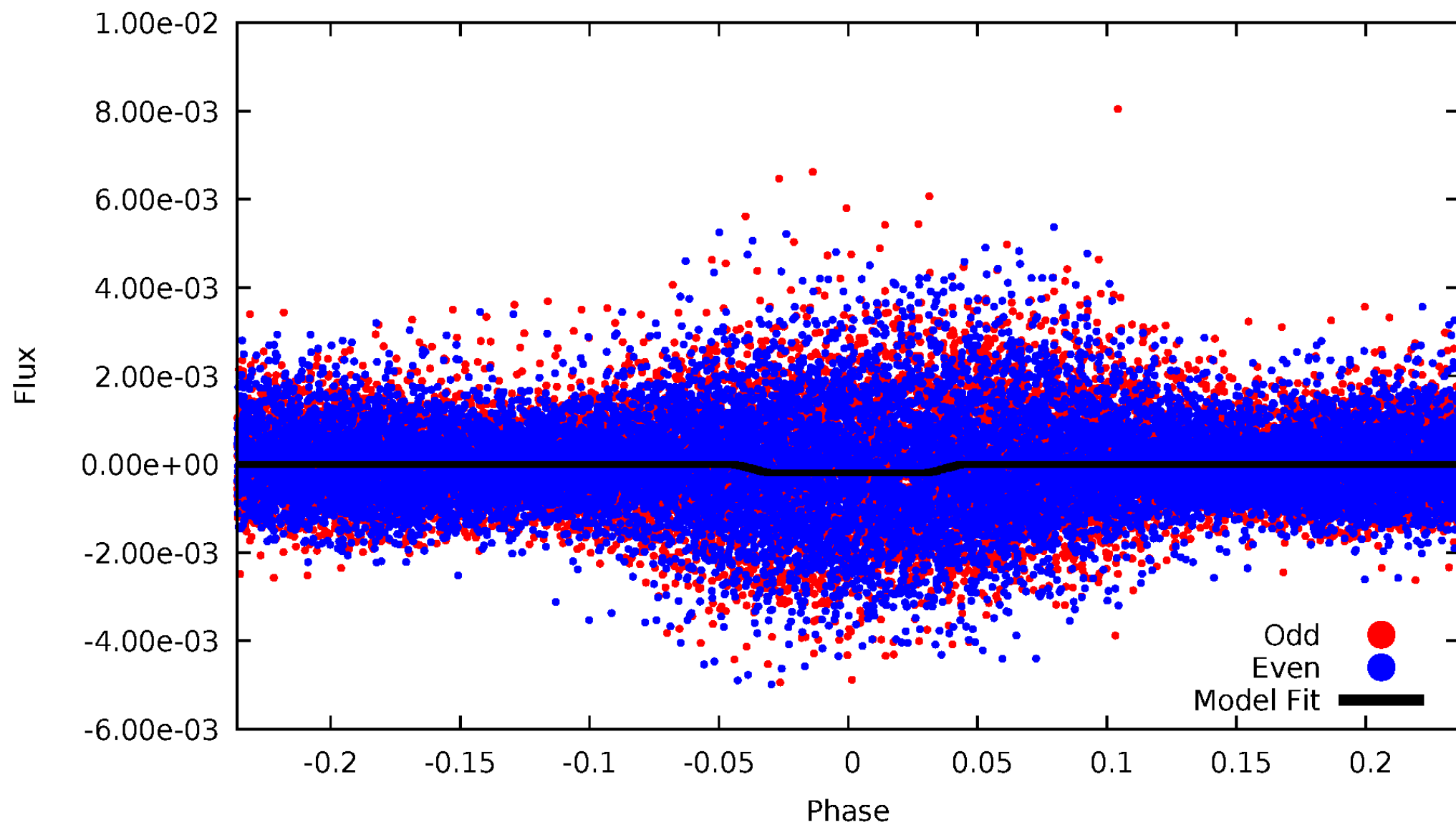
DV Odd/Even

TCE 003645863-02



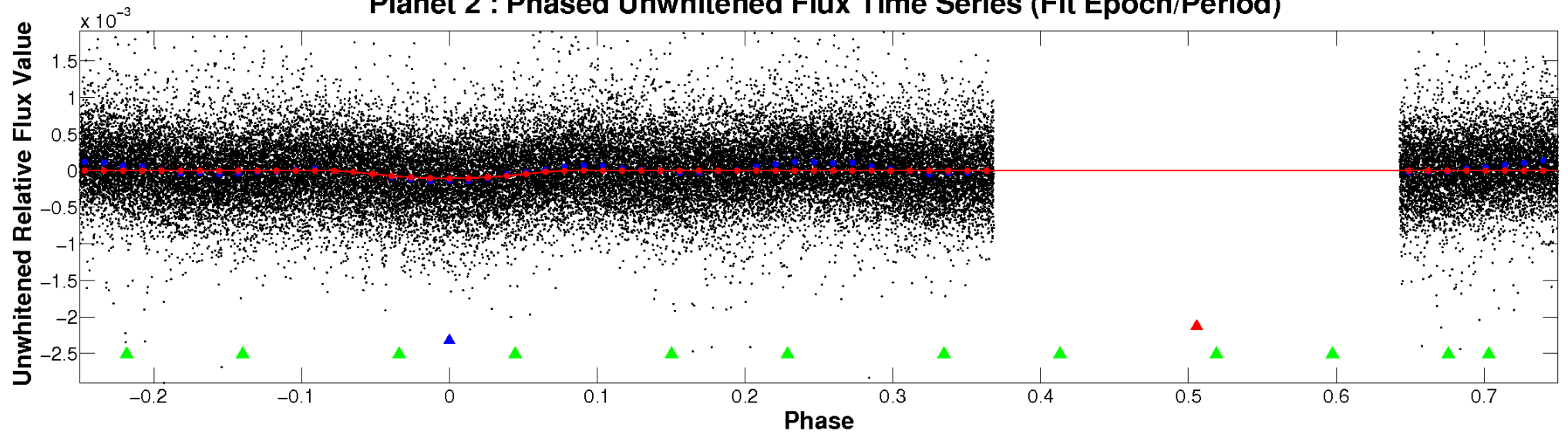
ALT Odd/Even

TCE 003645863-02

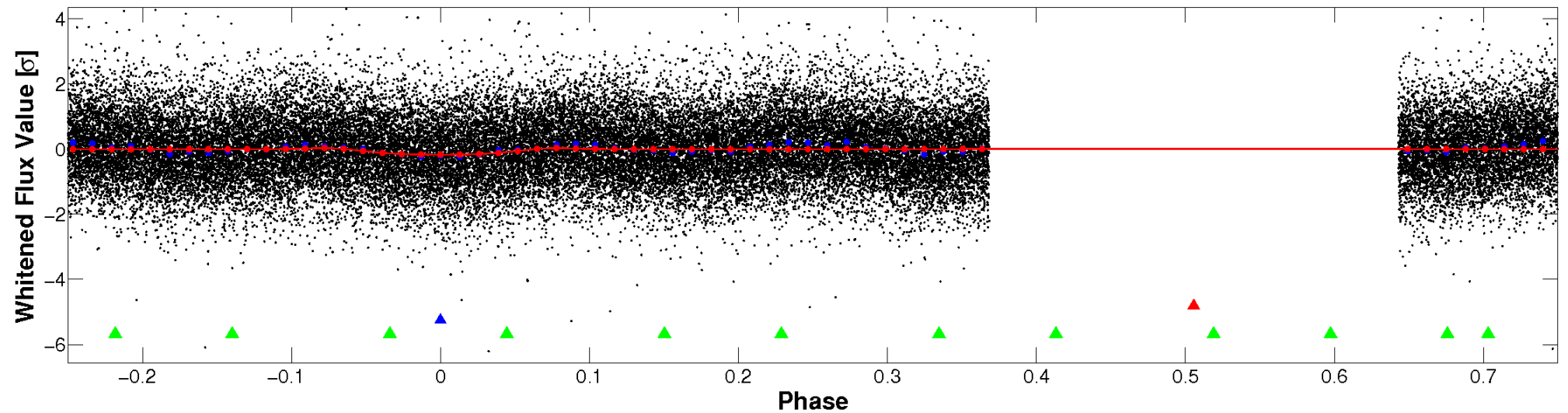


Non-Whitened Vs. Whitened Light Curve

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

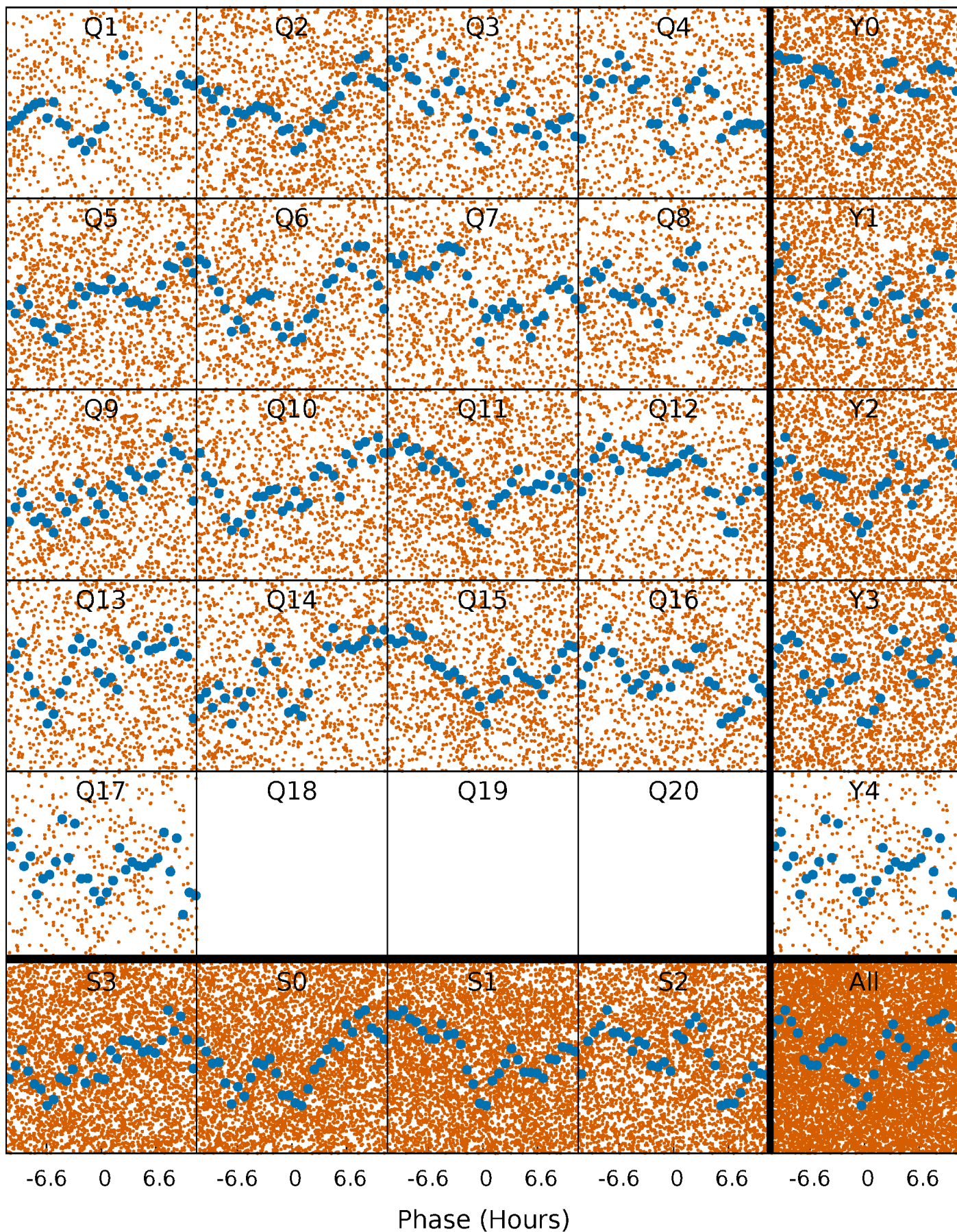


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



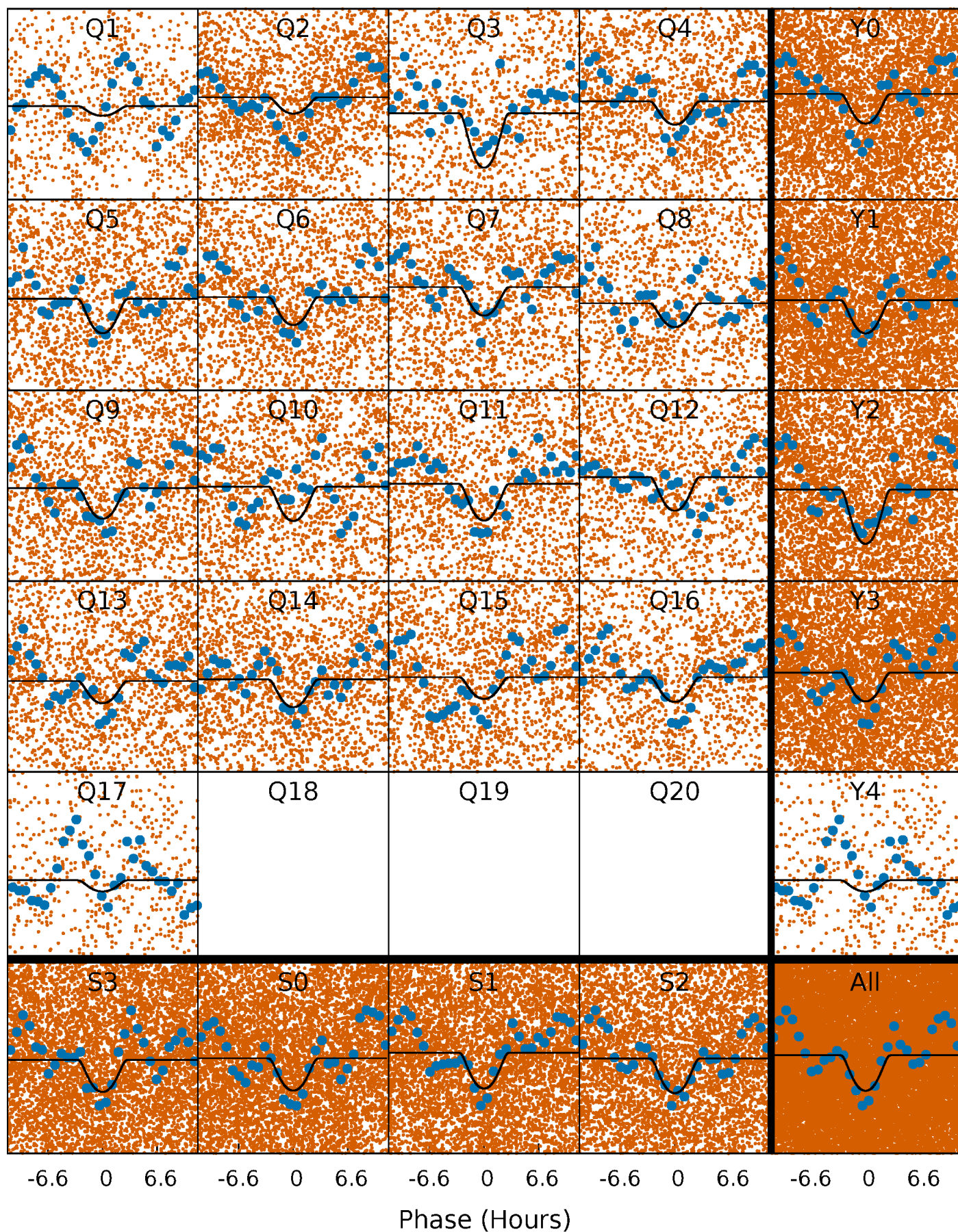
PDC Quarter-Phased Transit Curves

TCE 003645863-02 P= 1.573820 Days $T_0=131.659278$ (BKJD)



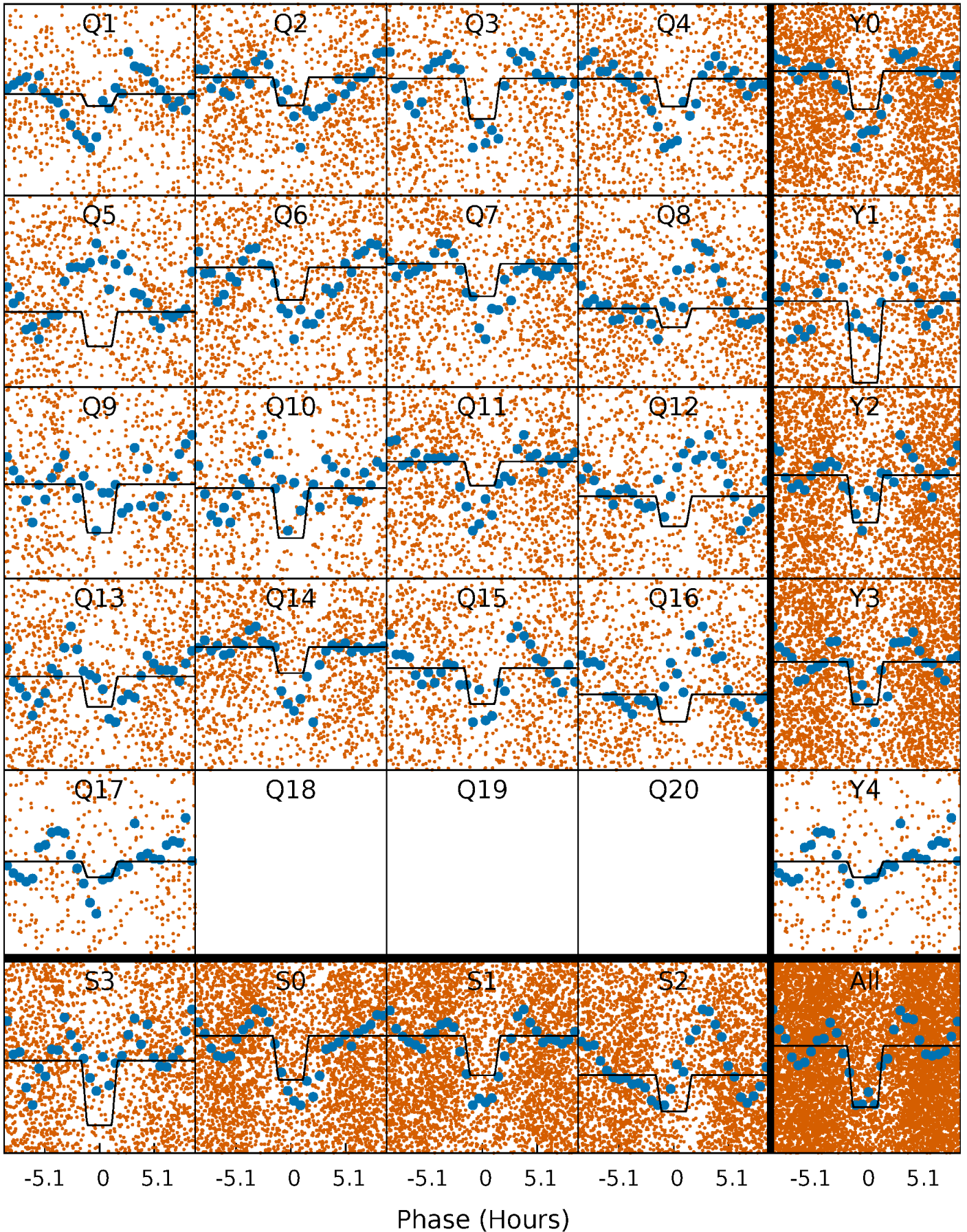
DV Quarter-Phased Transit Curves

TCE 003645863-02 P= 1.573820 Days $T_0=131.659278$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

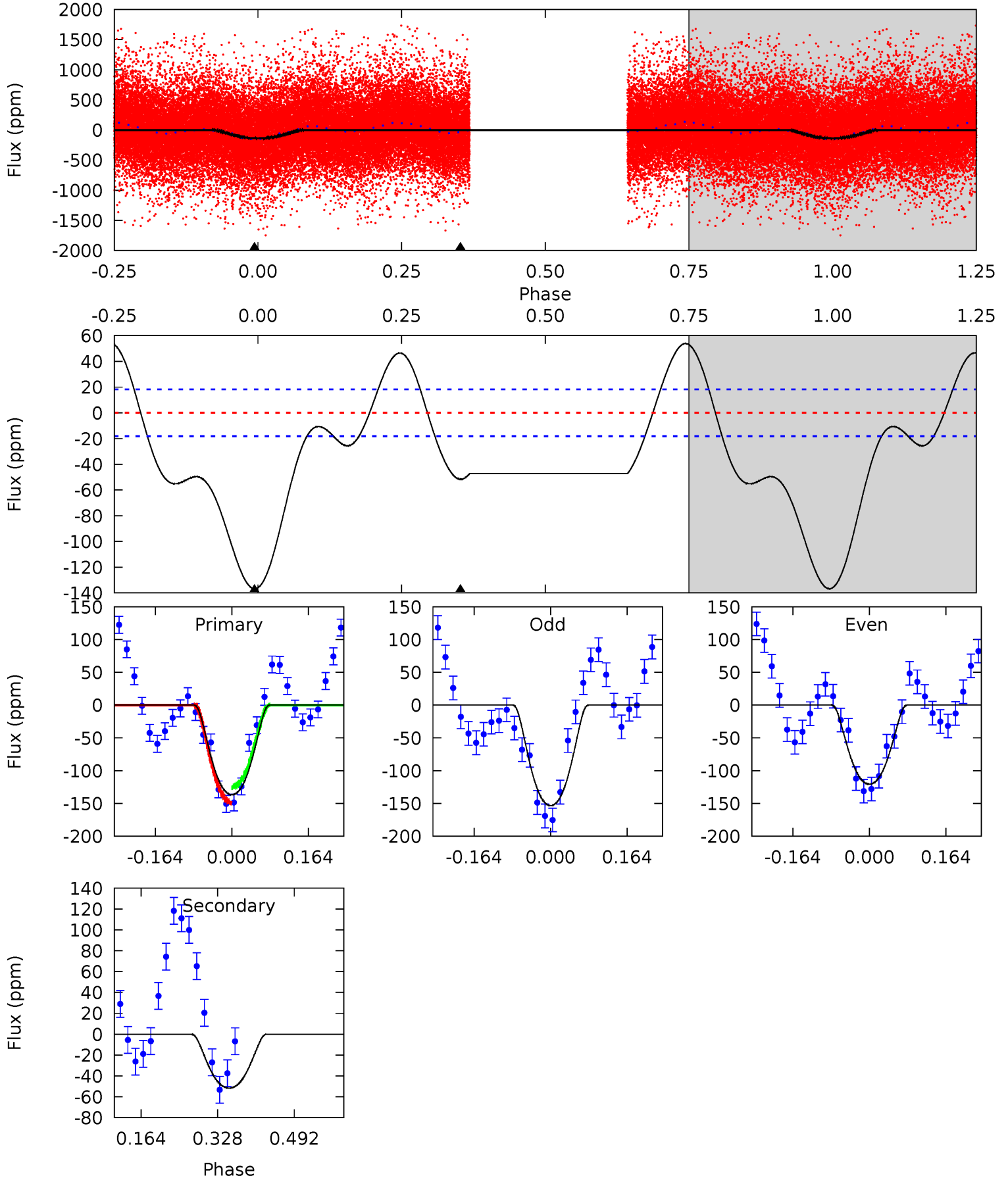
TCE 003645863-02 P= 1.573856 Days $T_0=131.632151$ (BKJD)



DV Model-Shift Uniqueness Test

003645863-02, P = 1.573820 Days, E = 130.085458 Days

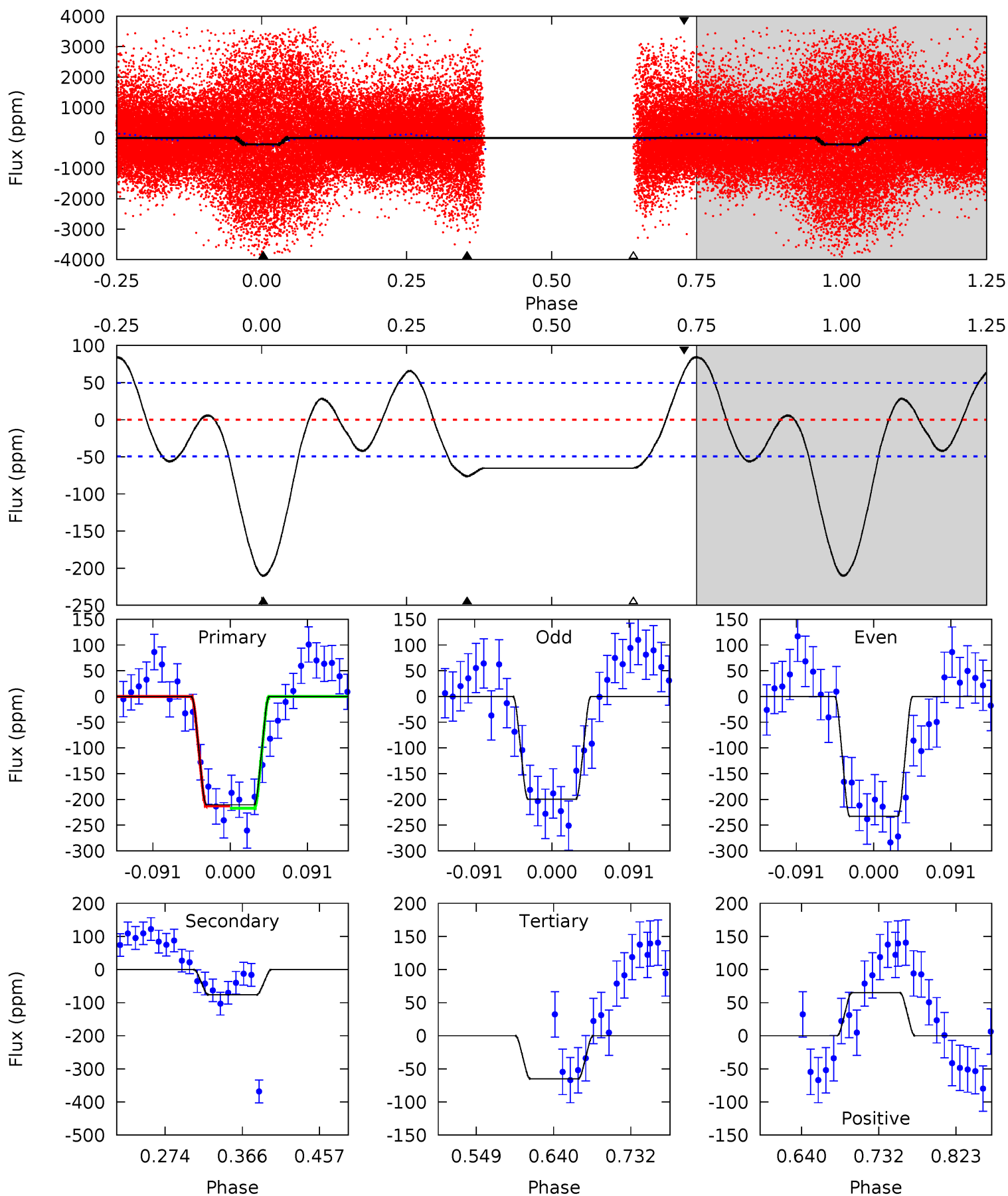
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	12.7	0	0	4.46	1.39	7.94	33.6	33.6	12.7	12.7	4.05	1.06	0.28	2.95



Alt Model-Shift Uniqueness Test

003645863-02, P = 1.573856 Days, E = 130.058295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	7.07	6.04	6.02	4.58	1.69	3.96	13.4	13.5	1.03	1.05	1.56	0.86	0.29	0.22



Stellar Parameters For KIC 003645863

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7617^{+211}_{-316}	$4.194^{+0.087}_{-0.203}$	$-0.060^{+0.200}_{-0.350}$	$1.664^{+0.551}_{-0.276}$	$1.574^{+0.219}_{-0.219}$	$0.482^{+0.232}_{-0.248}$
	+3%/-4%	+2%/-5%	+333%/-583%	+33%/-17%	+14%/-14%	+48%/-52%
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 003645863-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 4	$2.55^{+0.68}_{-0.68}$	3499^{+273}_{-206}	5386^{+797}_{-519}	$4.120^{+3.287}_{-1.564}$
Alt.	-76 ± 11	$2.61^{+0.72}_{-0.59}$	3509^{+264}_{-220}	5821^{+804}_{-607}	$5.663^{+4.059}_{-2.243}$

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

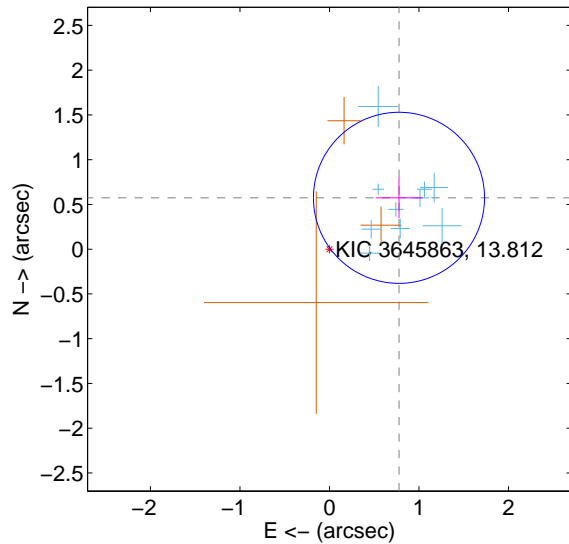
Supplemental centroid analysis for 003645863-02. Kepler magnitude: 13.81. Transit SNR 12.03

There are 11 quarters with good PRF difference image offsets

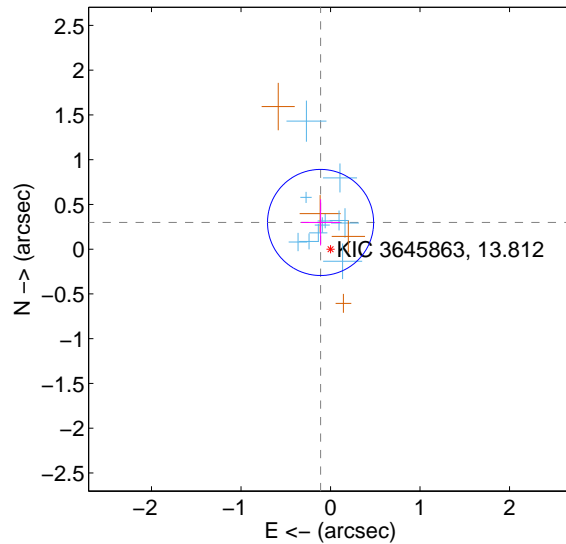
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.966 ± 0.319	3.03	-0.777 ± 0.260	0.574 ± 0.227
PRF-fit source offset from KIC position	0.318 ± 0.198	1.61	0.111 ± 0.217	0.298 ± 0.257
photometric centroid source offset	0.92 ± 0.44	2.07	0.12 ± 0.49	0.91 ± 0.44

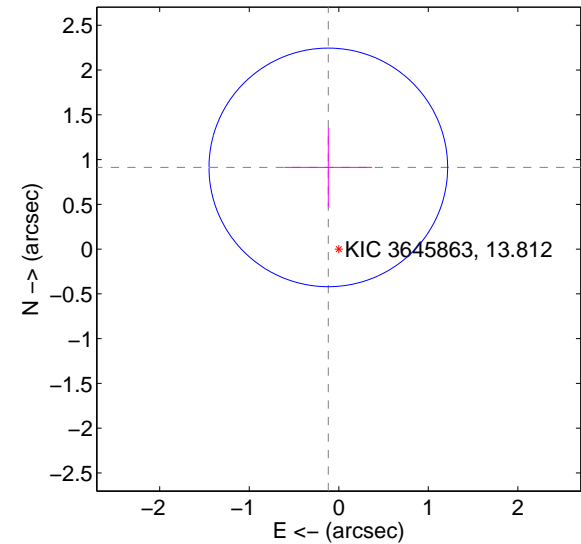
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

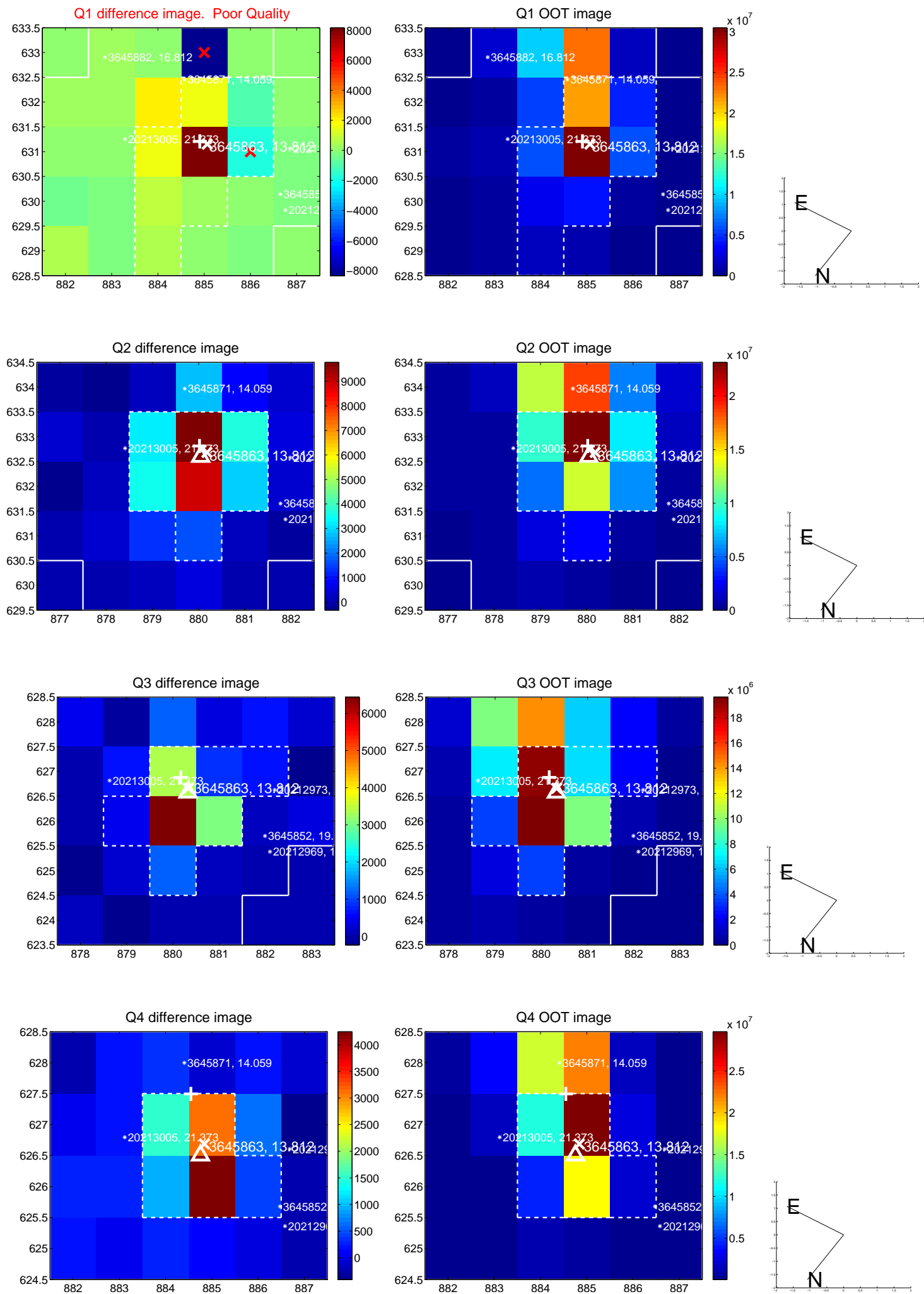


offset from photometric centroids

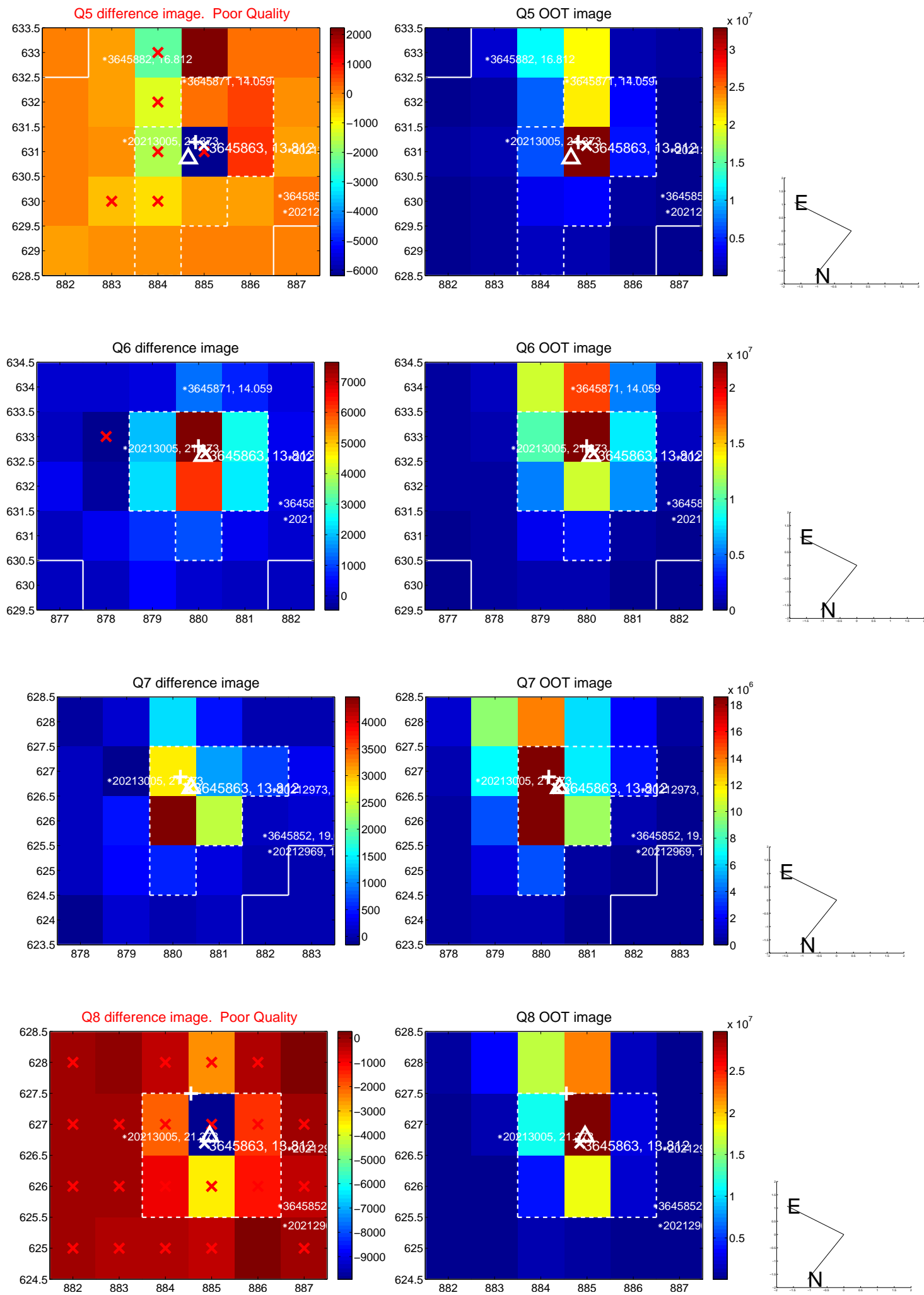


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

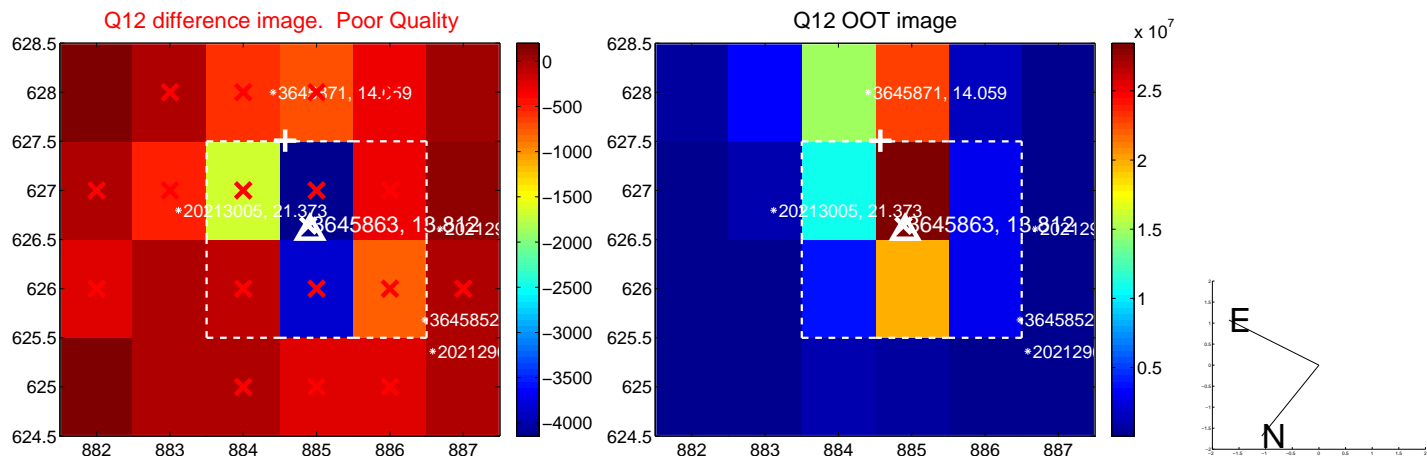
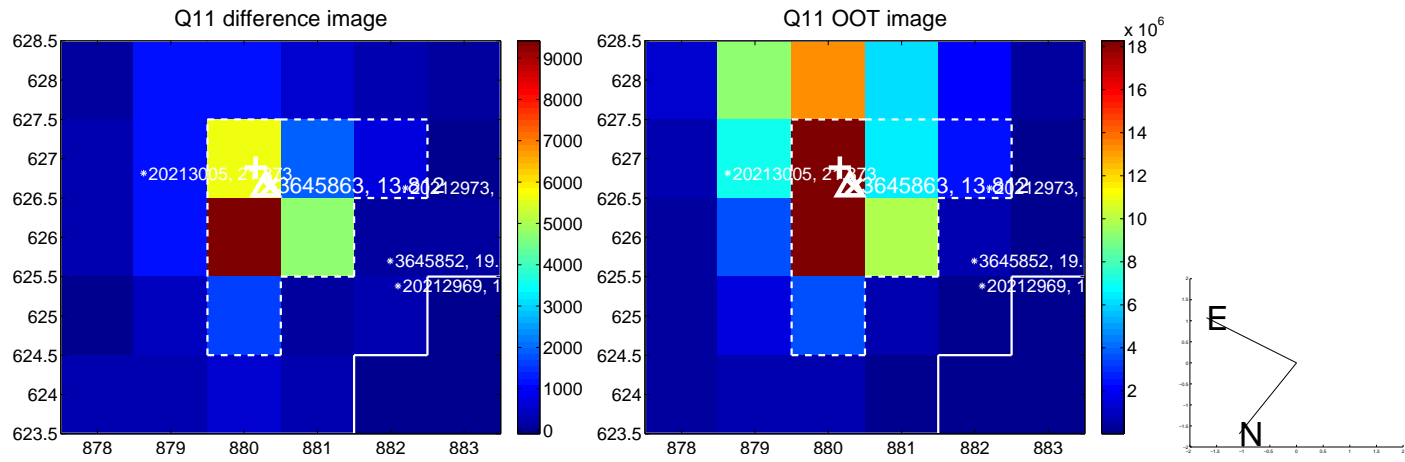
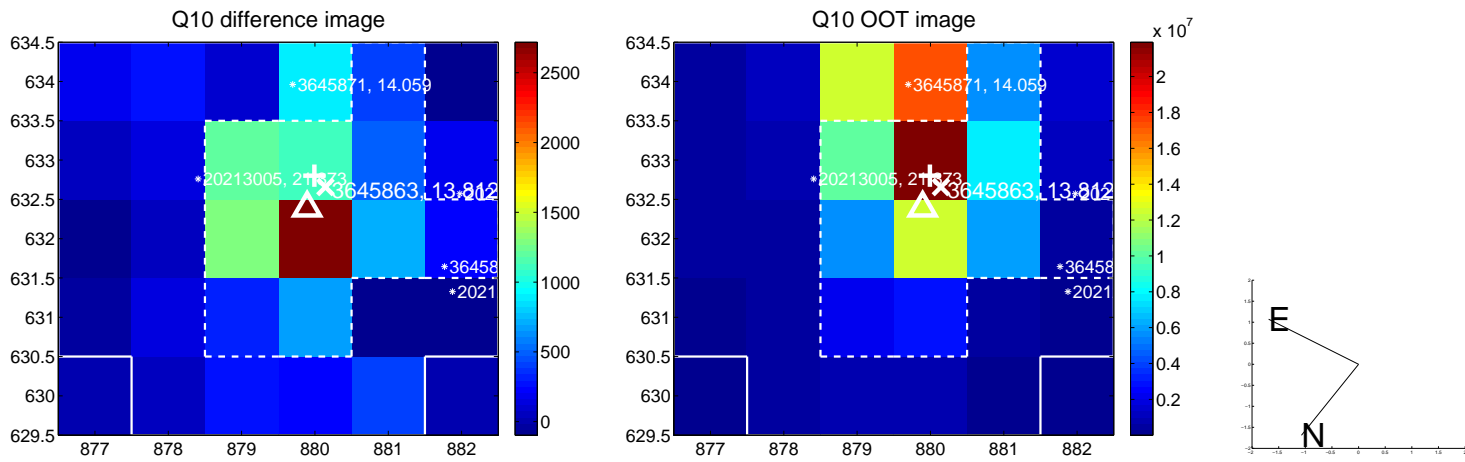
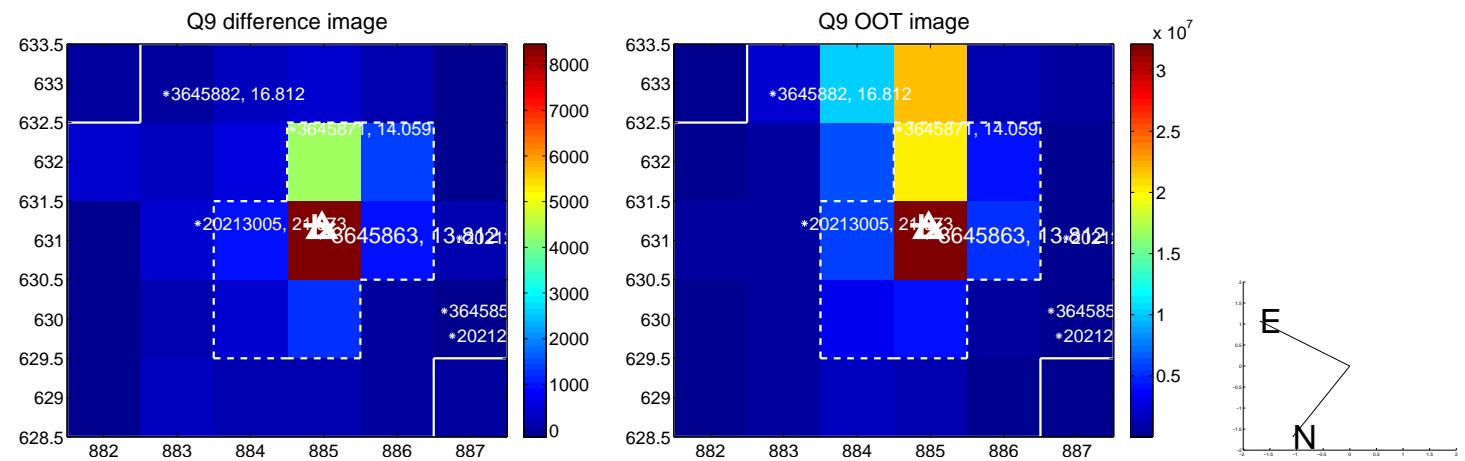
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



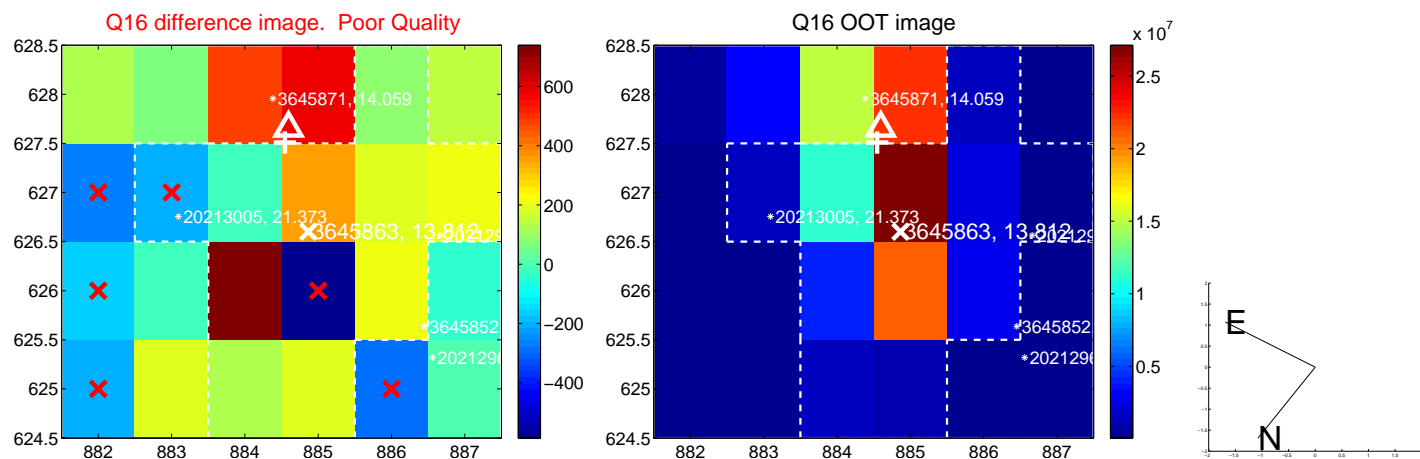
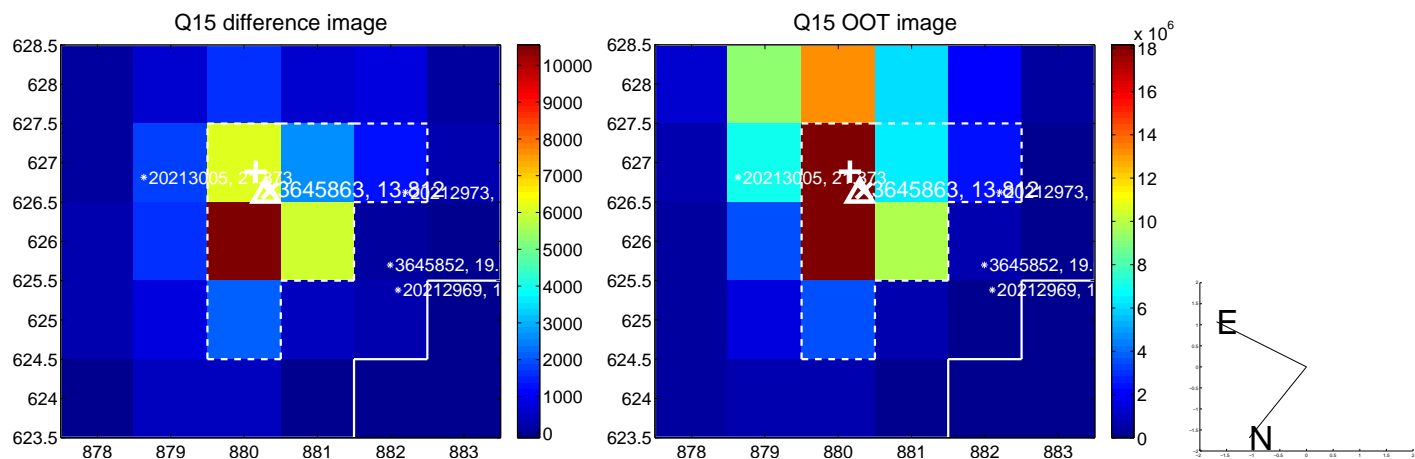
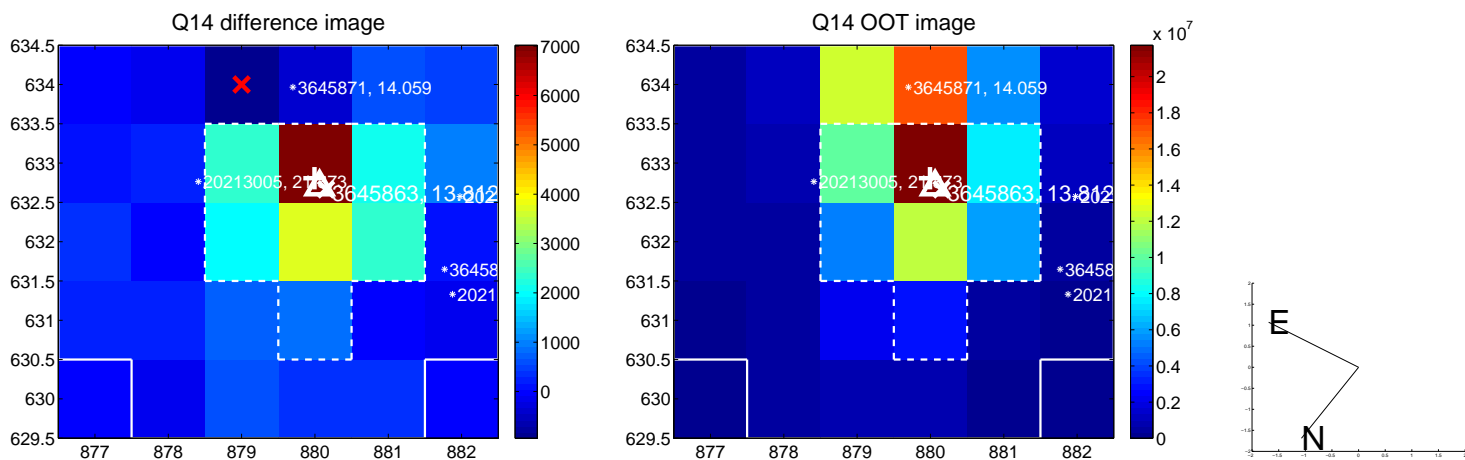
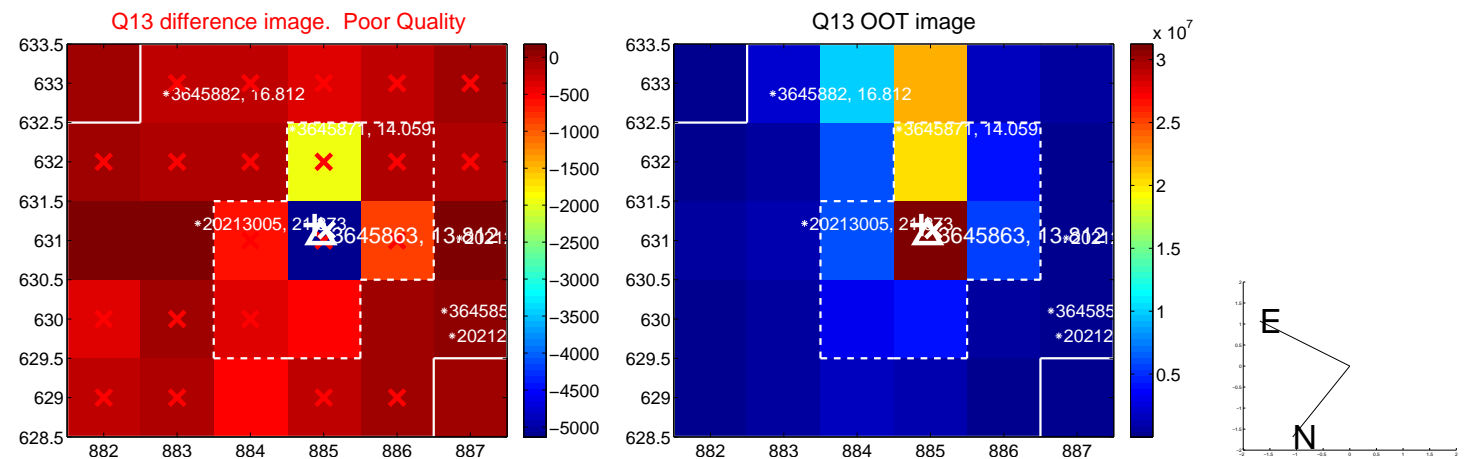
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



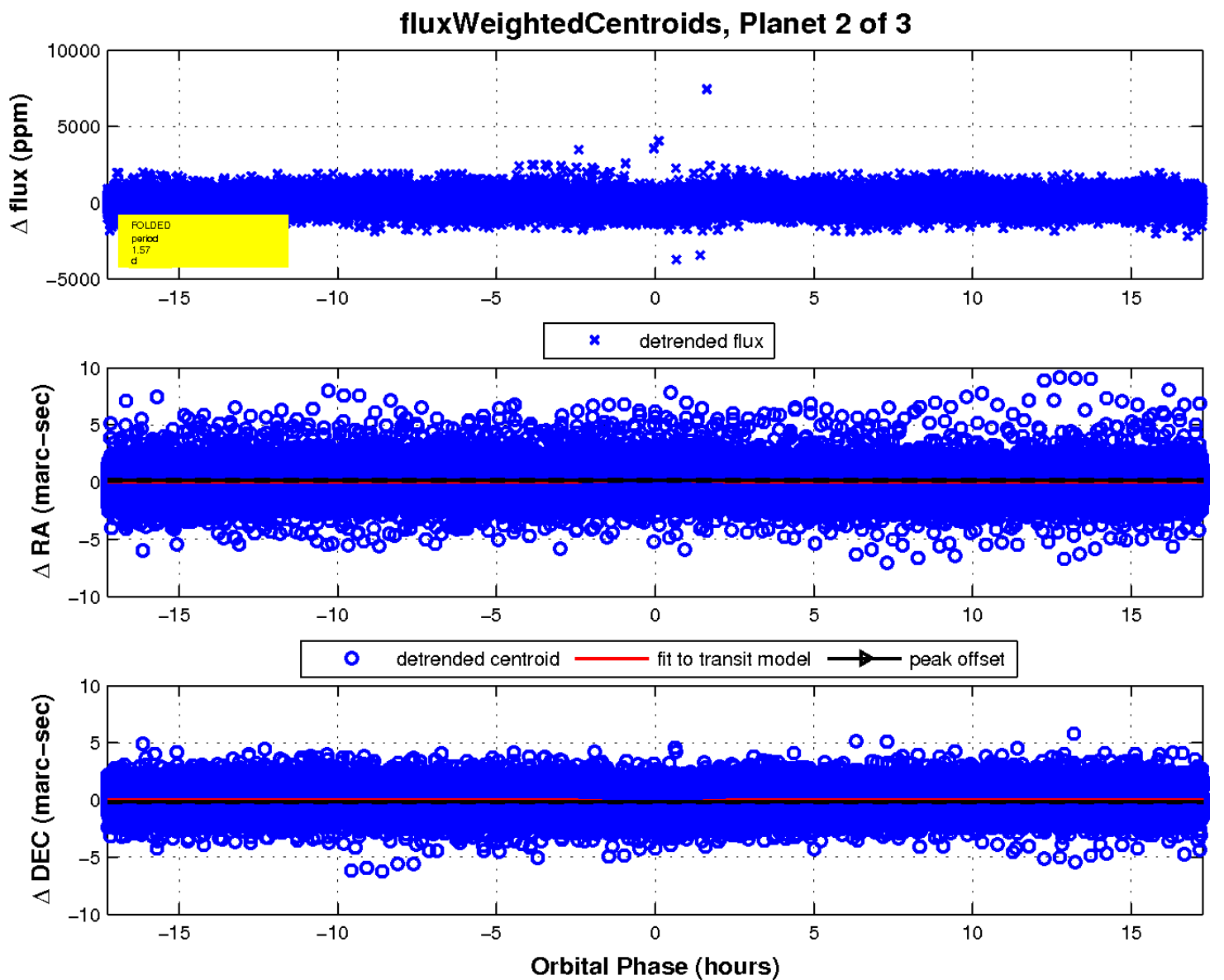
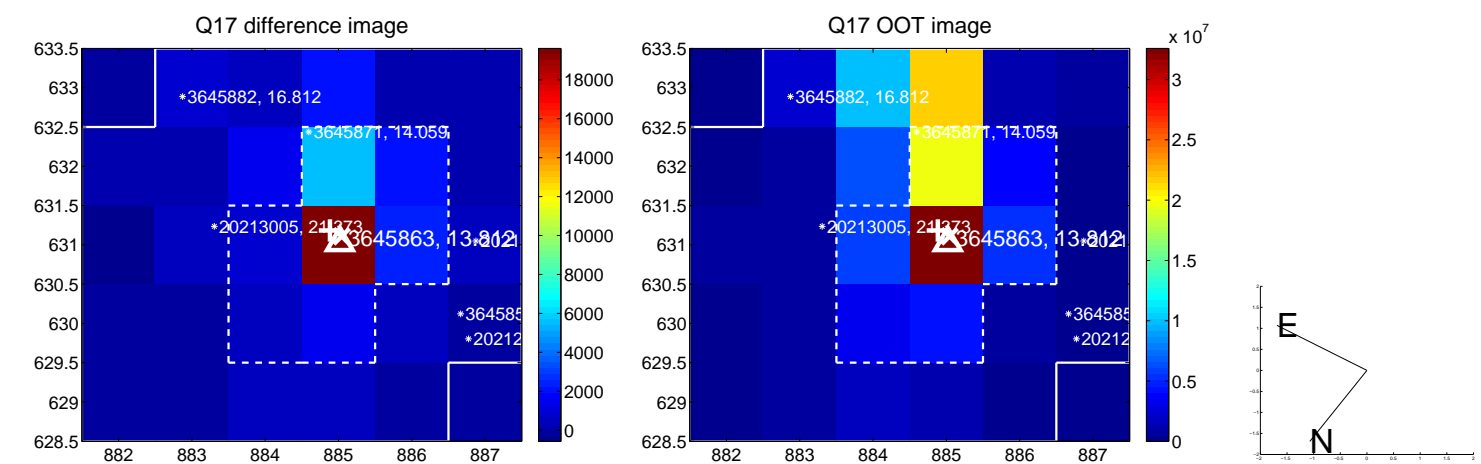
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

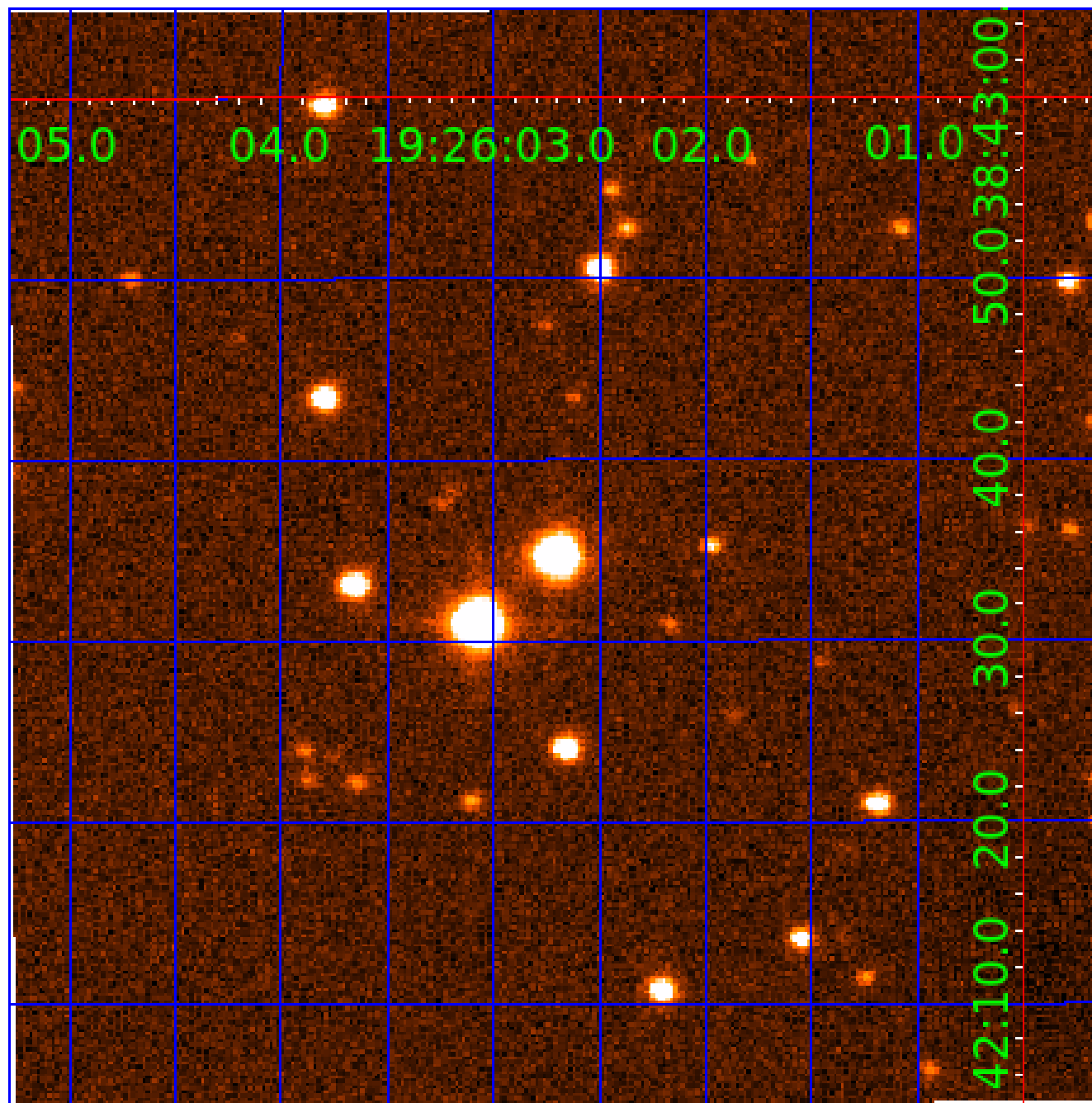


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003645863

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})
003645863-01	OBS	No	1.573821	132.454784	76.7	3.297	8.8	9.3	1.66	7617	1.75	8780.62
003645863-02	OBS	No	1.573820	131.659278	106.6	5.755	12.0	12.0	1.66	7617	2.42	8780.63
003645863-03	OBS	No	129.343328	145.313590	1138.8	5.221	10.5	8.3	1.66	7617	9.95	24.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003645863-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
003645863-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
003645863-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST

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

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

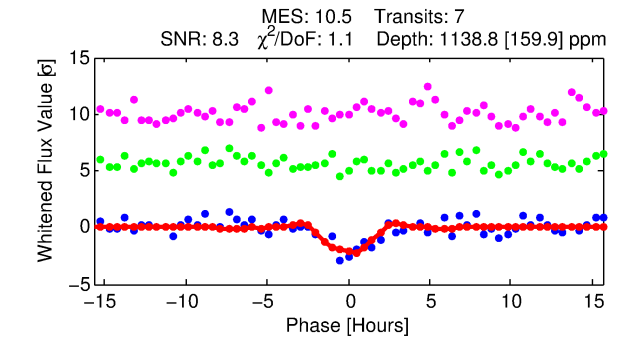
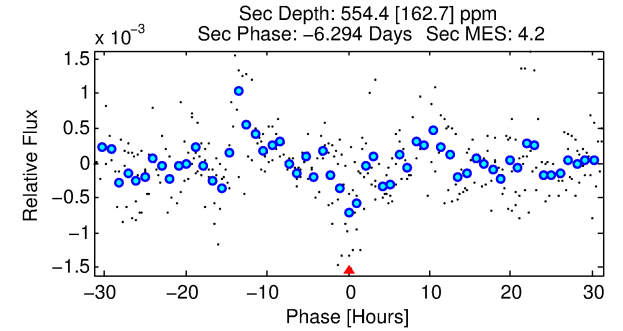
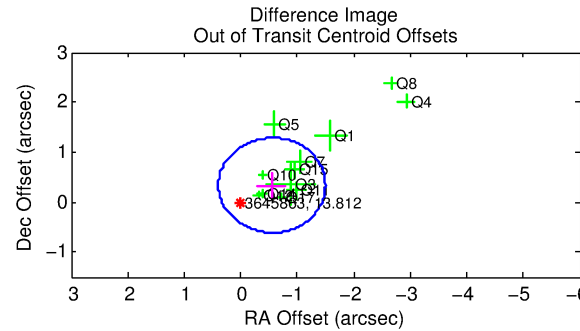
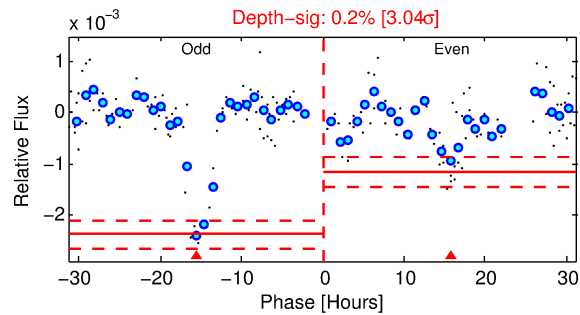
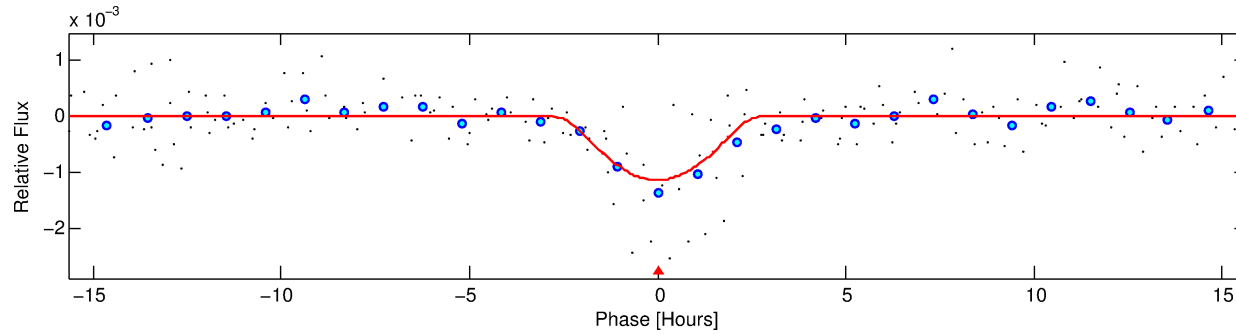
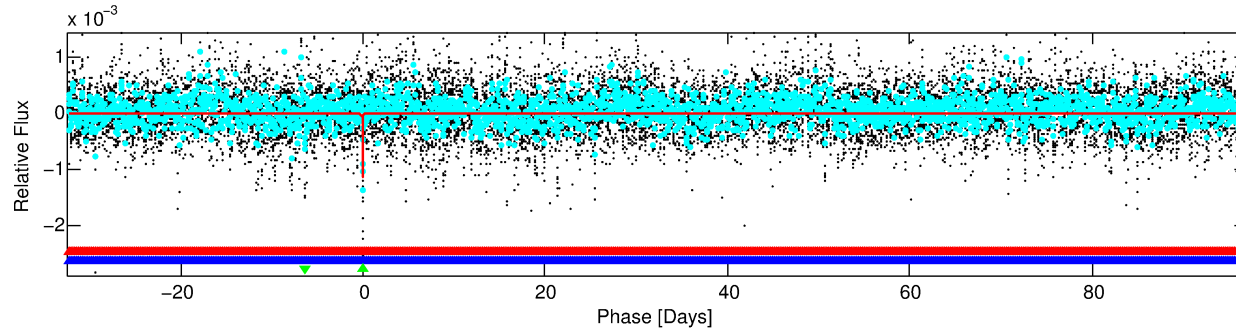
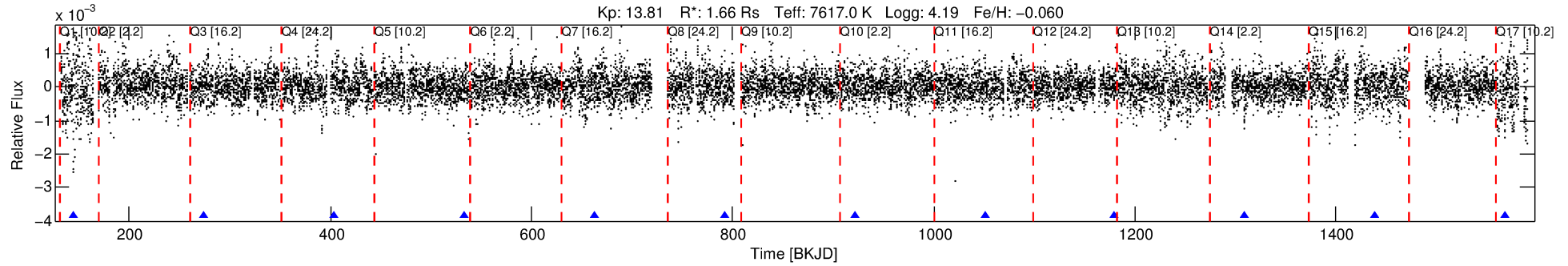
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003645863-03

No Significant Match Found

DV One-Page Summary

KIC: 3645863 Candidate: 3 of 3 Period: 129.343 d



DV Fit Results:

Period = 129.34333 [0.00196] d
Epoch = 145.3136 [0.0132] BKJD
Rp/R* = 0.0548 [0.1468]
a/R* = 65.27 [44.44]
b = 1.00 [0.22]
Seff = 24.57 [10.23]
Teq = 568 [59] K
Rp = 9.95 [26.87] Re
a = 0.5829 [0.1575] AU
Ag = 1046.65 [5631.55] [0.19 σ]
Teffp = 4993 [6702] K [0.66 σ]

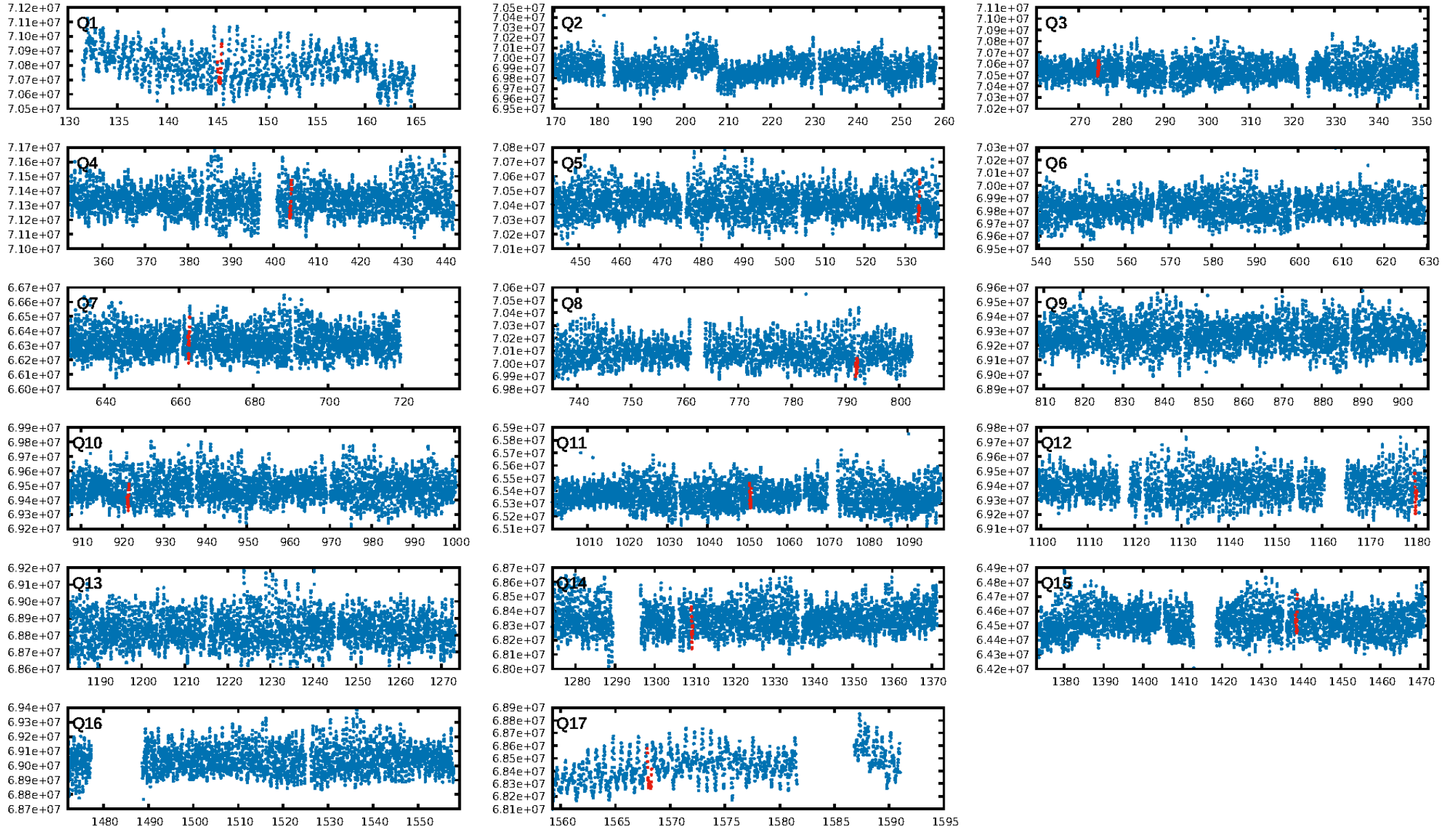
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [496.65 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.89e-16
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.2182
Centroid-sig: 0.0%
Centroid-so: 1.816 arcsec [4.15 σ]
OotOffset-rm: 0.647 arcsec [2.05 σ]
KicOffset-rm: 0.290 arcsec [2.59 σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 0.00 [0/12]

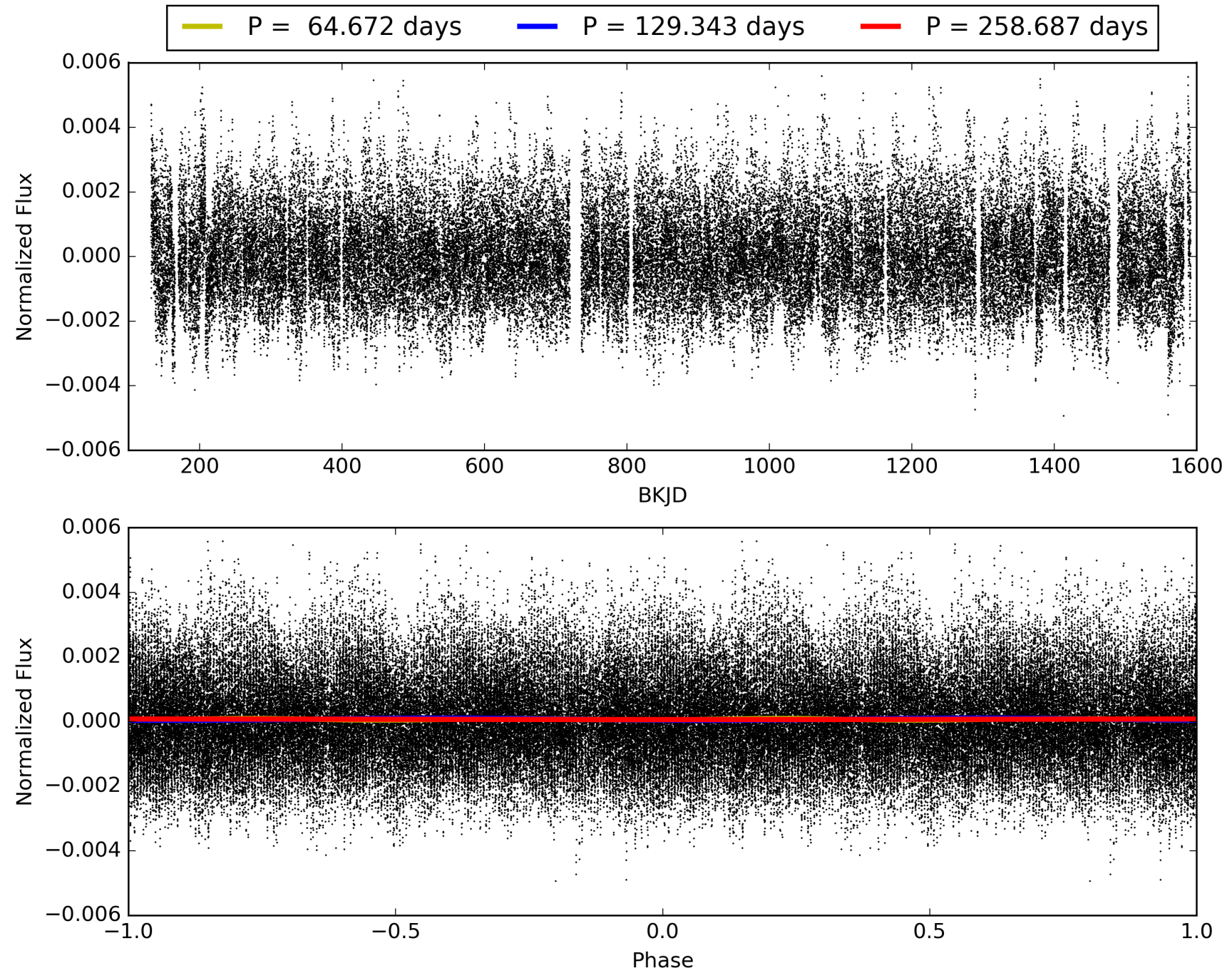
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:09:58 Z

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

TCE 003645863-03, PDC Light Curves

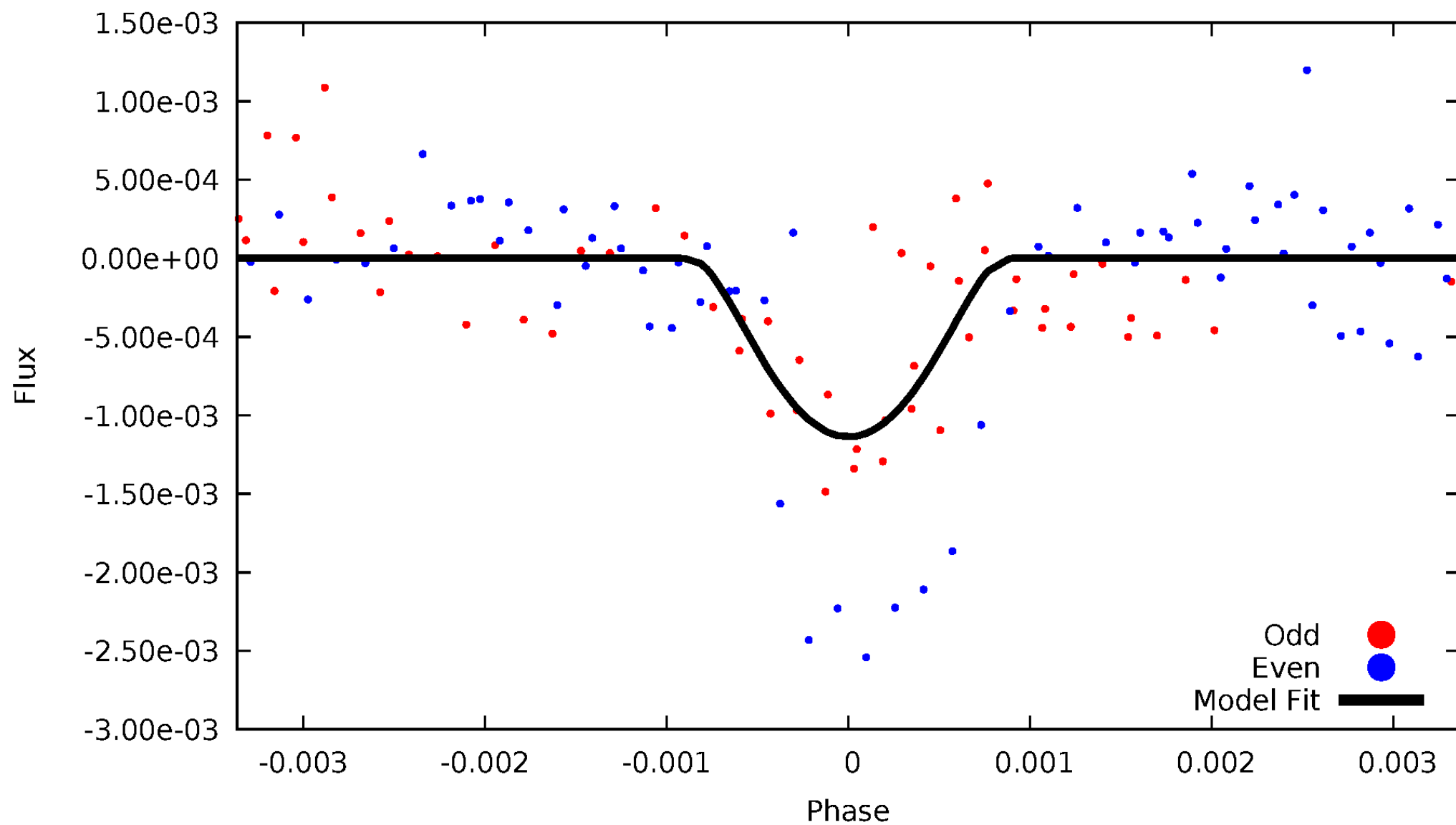


TCE 003645863-03



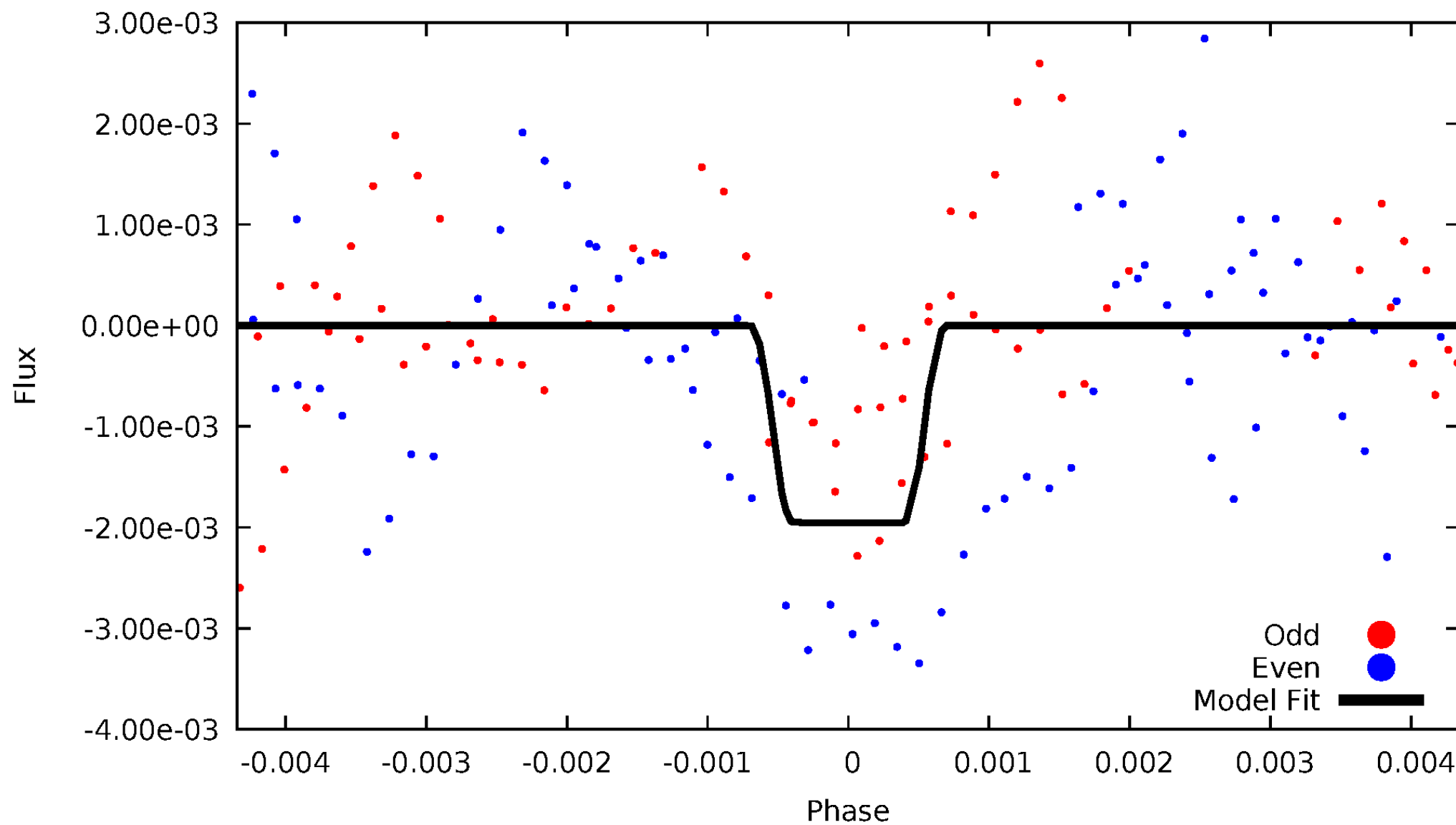
DV Odd/Even

TCE 003645863-03



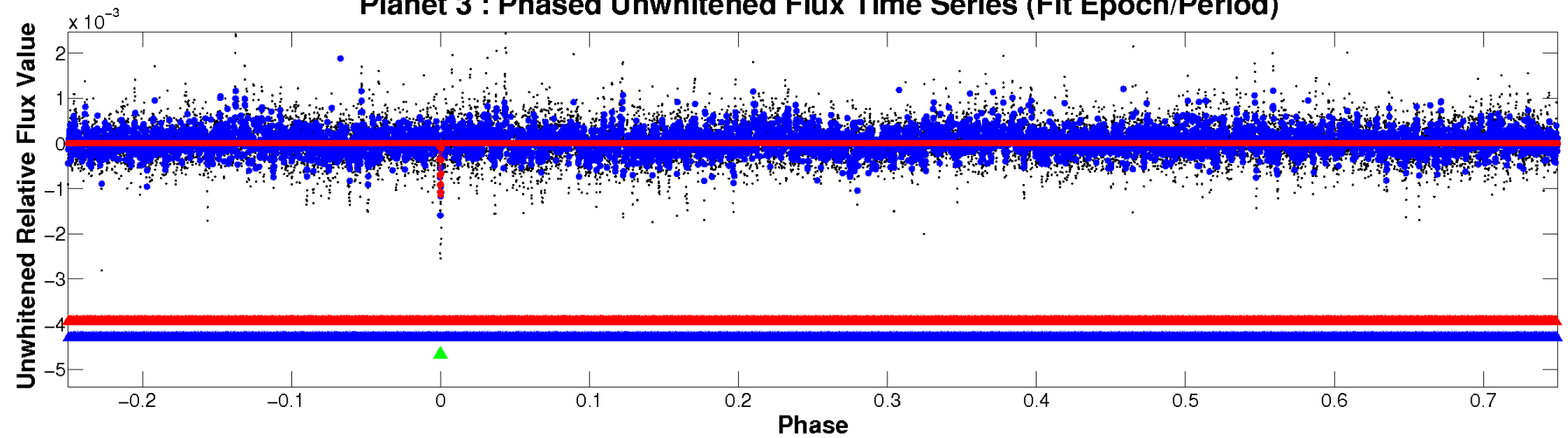
ALT Odd/Even

TCE 003645863-03

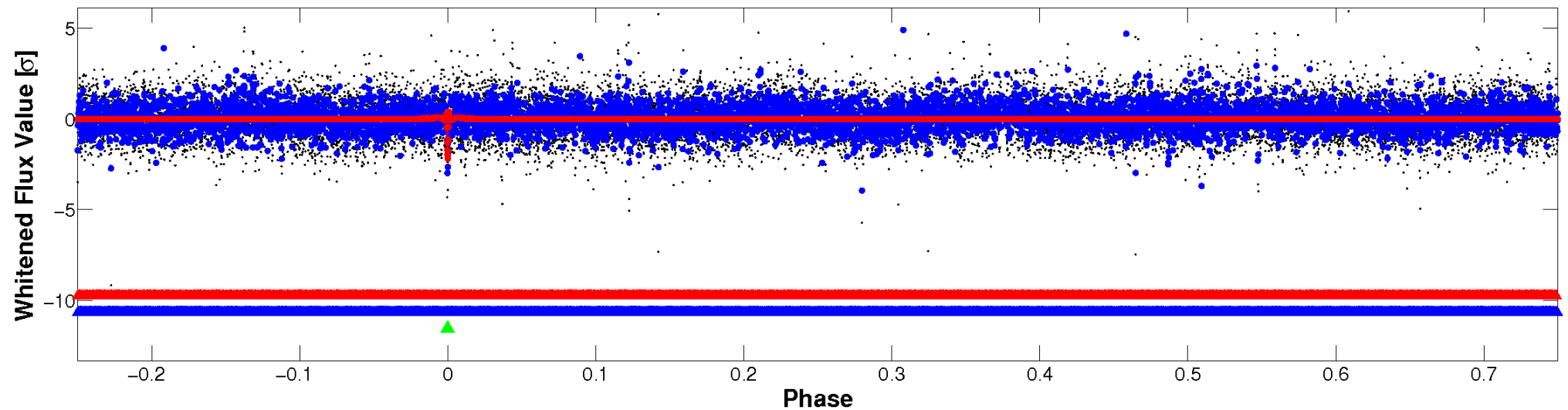


Non-Whitened Vs. Whitened Light Curve

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

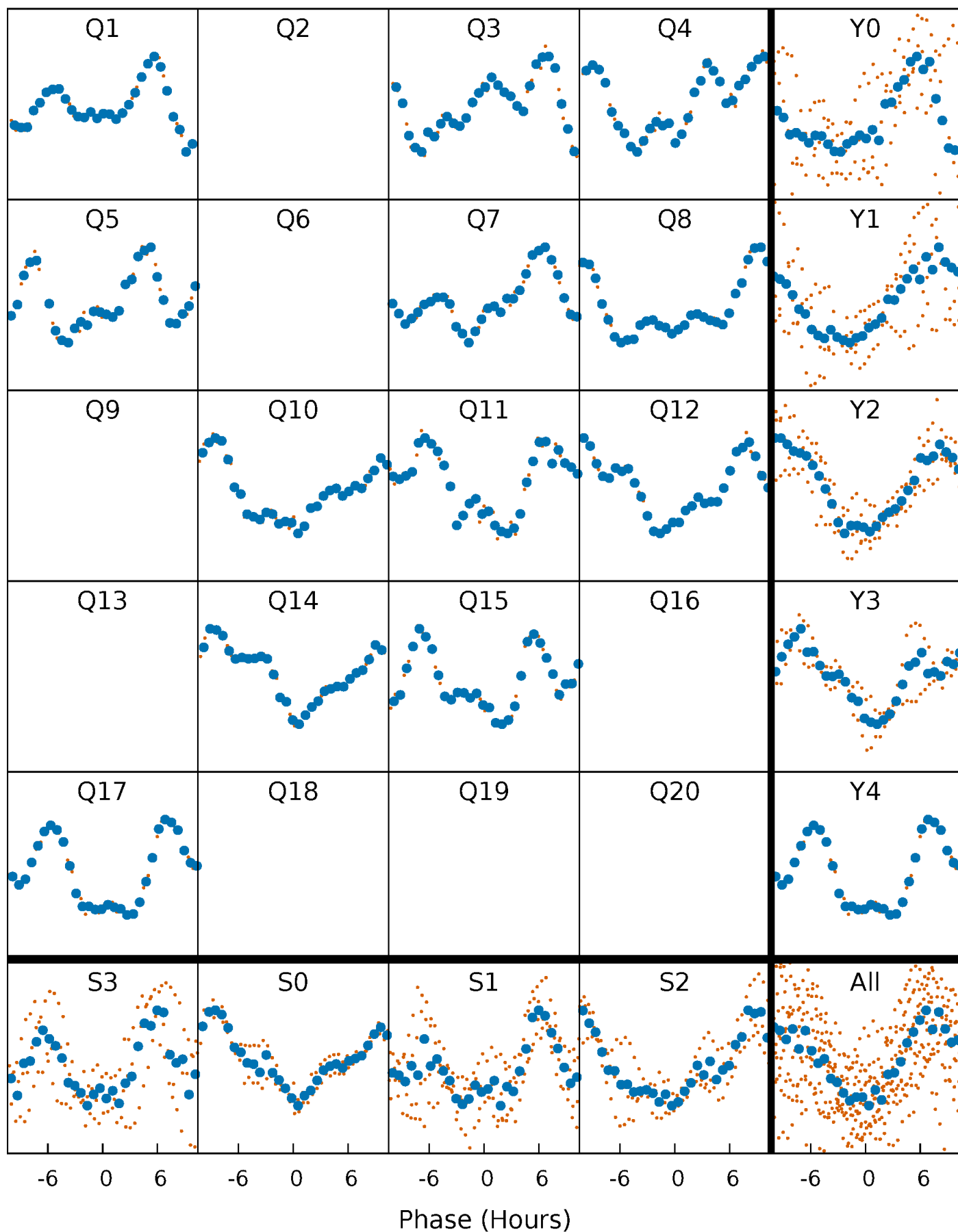


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



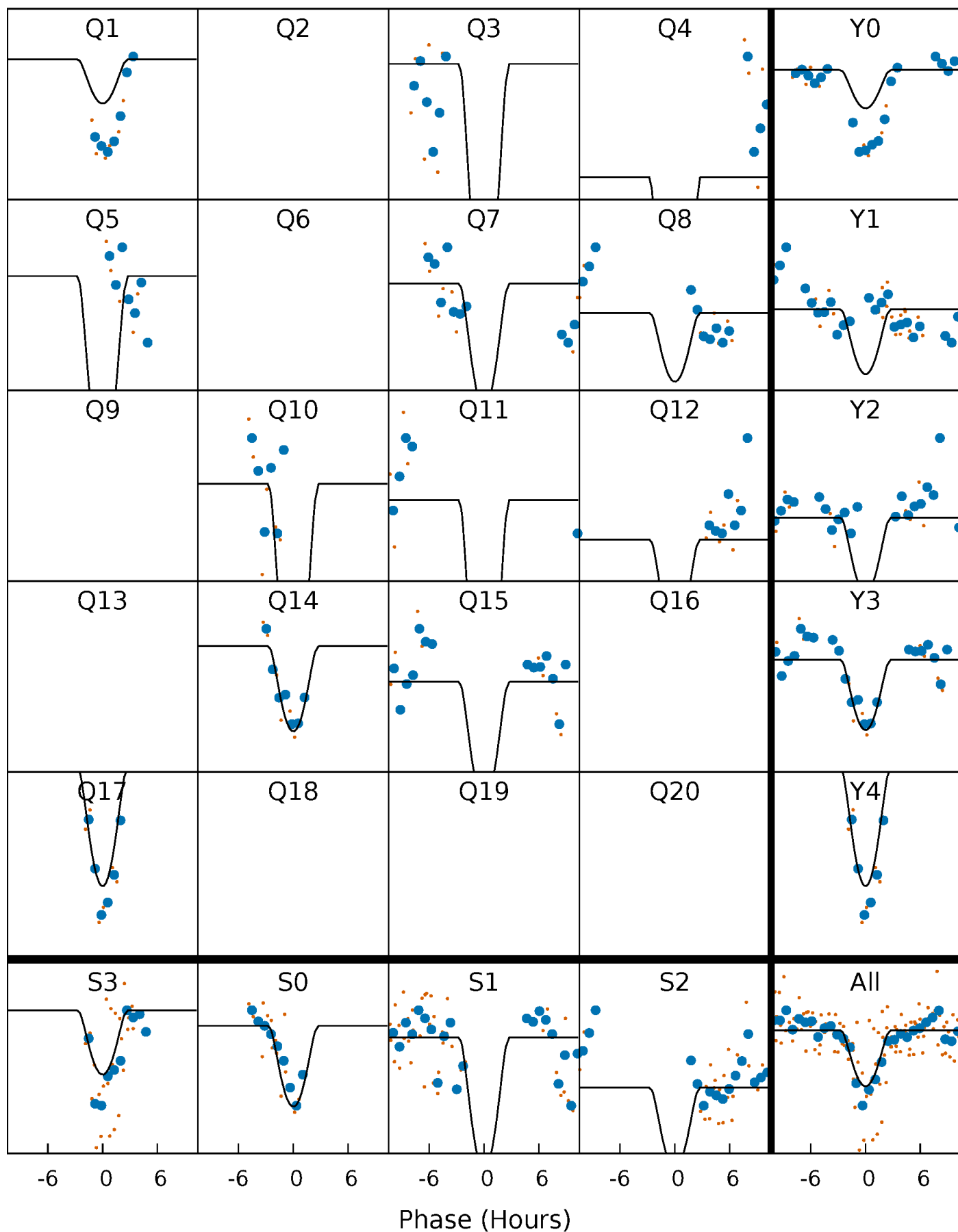
PDC Quarter-Phased Transit Curves

TCE 003645863-03 $P=129.343328$ Days $T_0=145.313590$ (BKJD)



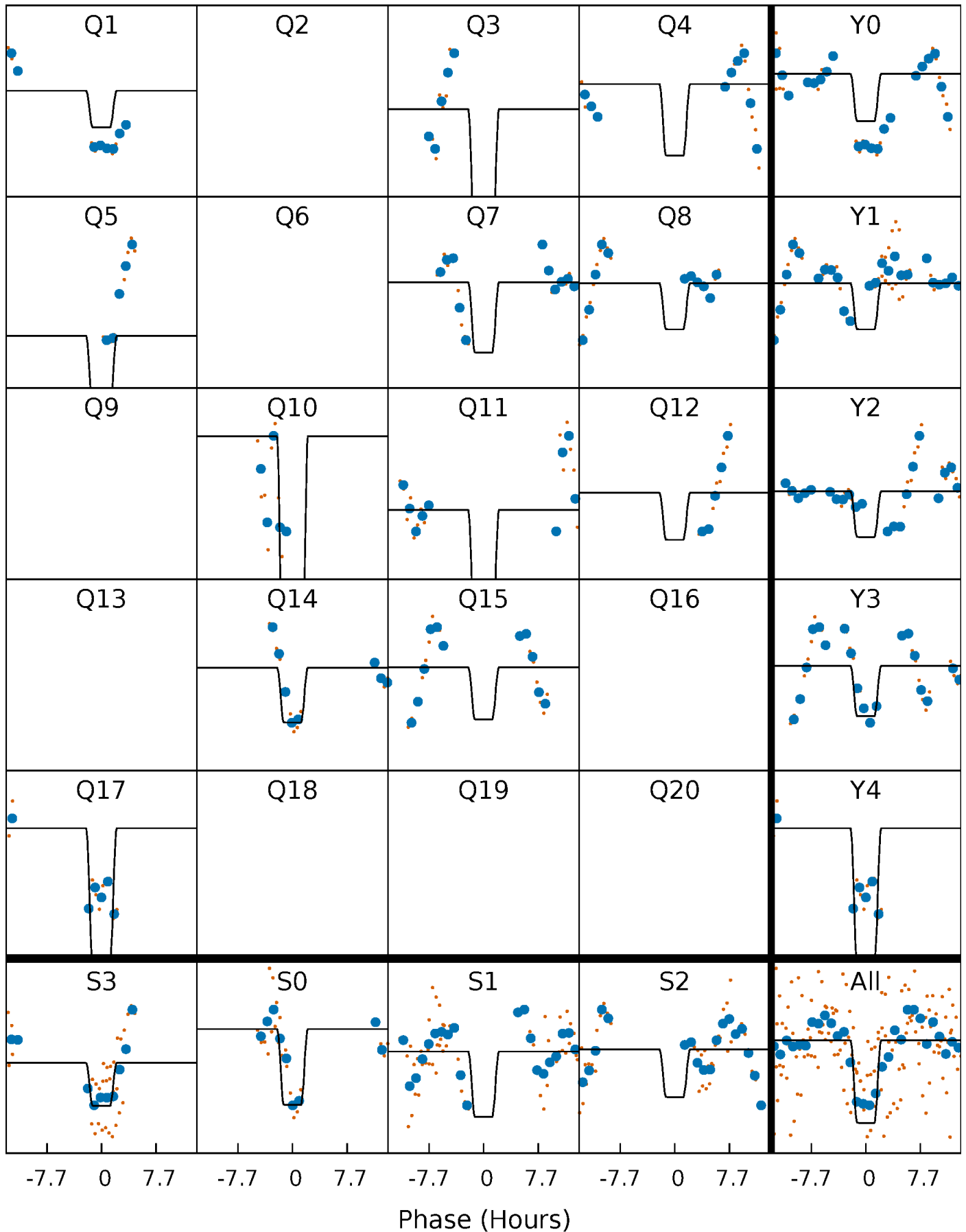
DV Quarter-Phased Transit Curves

TCE 003645863-03 $P=129.343328$ Days $T_0=145.313590$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

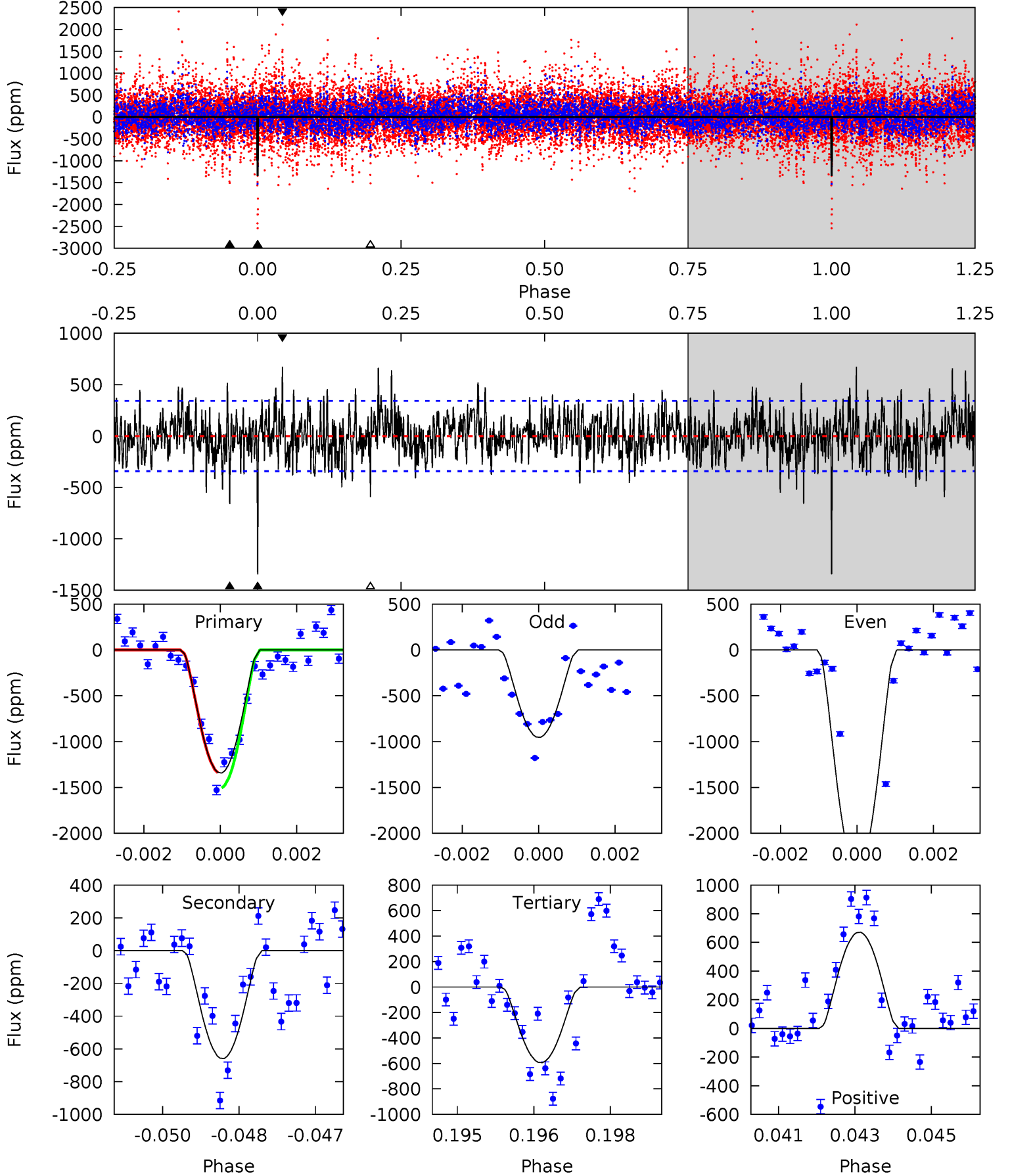
TCE 003645863-03 $P=129.342091$ Days $T_0=145.322396$ (BKJD)



DV Model-Shift Uniqueness Test

003645863-03, $P = 129.343328$ Days, $E = 15.970262$ Days

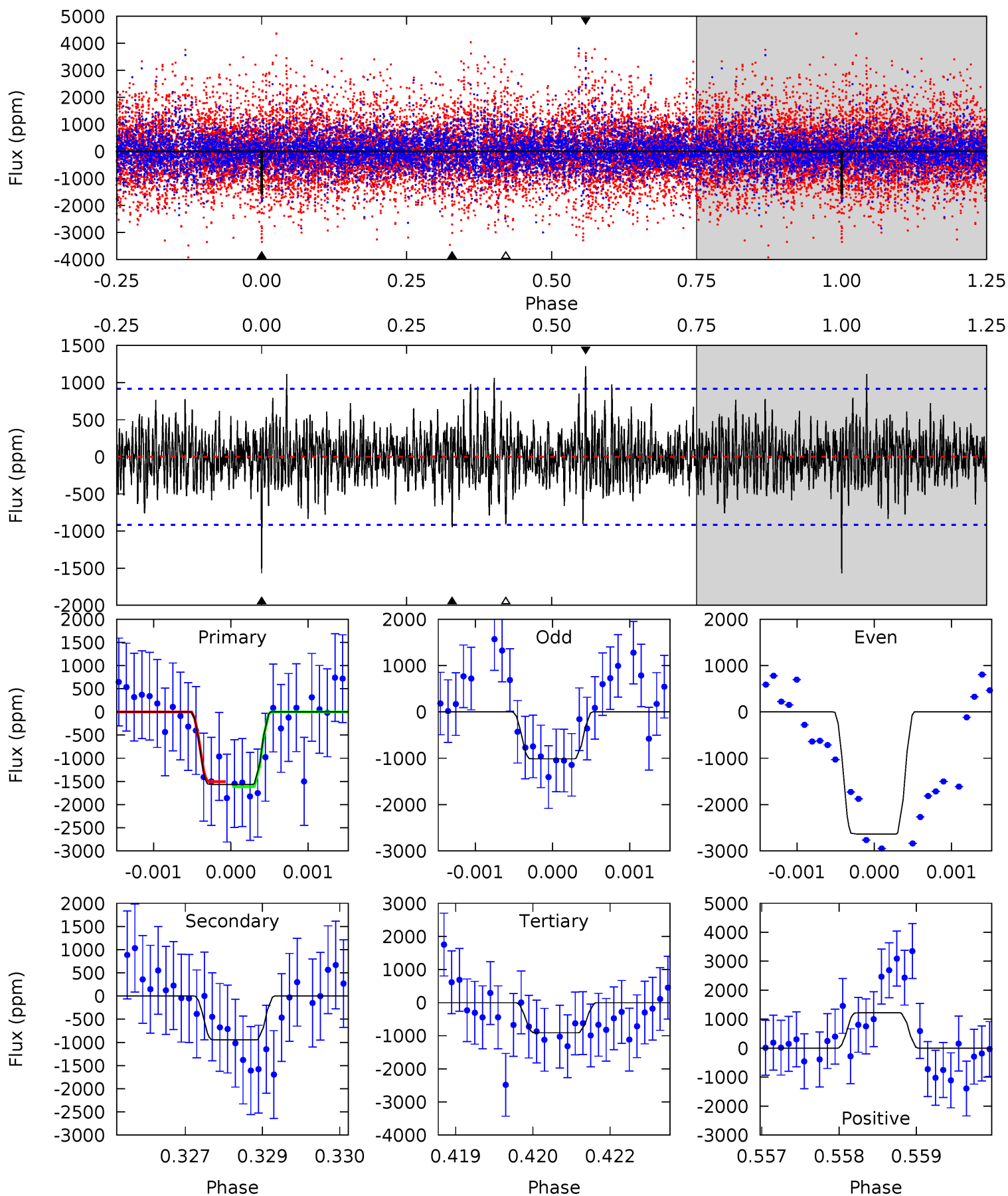
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	10.3	9.31	10.5	5.35	3.13	2.64	11.7	10.5	1.03	-0.19	10.6	0.72	0.33	1.27



Alt Model-Shift Uniqueness Test

003645863-03, P = 129.342091 Days, E = 15.980305 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	5.57	5.35	7.20	5.40	3.21	1.63	3.88	2.03	0.23	-1.62	4.62	1.30	0.44	0.34



Stellar Parameters For KIC 003645863

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7617^{+211}_{-316}	$4.194^{+0.087}_{-0.203}$	$-0.060^{+0.200}_{-0.350}$	$1.664^{+0.551}_{-0.276}$	$1.574^{+0.219}_{-0.219}$	$0.482^{+0.232}_{-0.248}$
	+3%/-4%	+2%/-5%	+333%/-583%	+33%/-17%	+14%/-14%	+48%/-52%
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 003645863-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-659 ± 64	$22.64^{+23.18}_{-15.77}$	803^{+61}_{-45}	3798^{+2372}_{-735}	234^{+2233}_{-176}
Alt.	-946 ± 170	$22.61^{+21.34}_{-15.28}$	807^{+67}_{-50}	4068^{+2543}_{-785}	335^{+2632}_{-247}

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 $A_{obs} \gg 1.0$

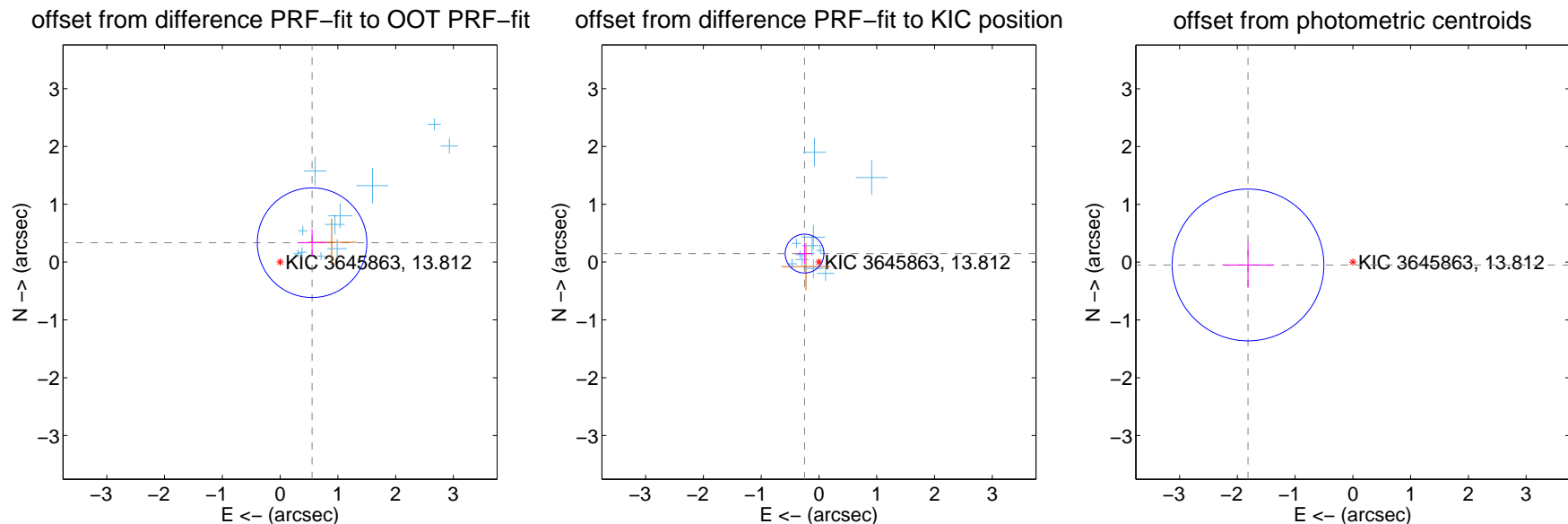
DV Centroid Data

Supplemental centroid analysis for 003645863-03. Kepler magnitude: 13.81. Transit SNR 8.29

There are 11 quarters with good PRF difference image offsets

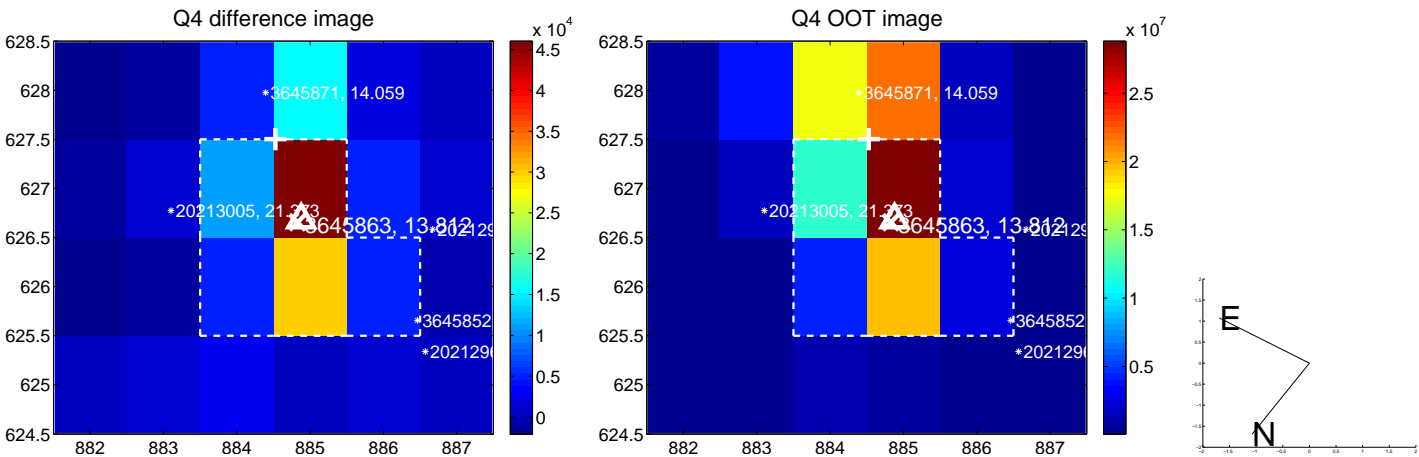
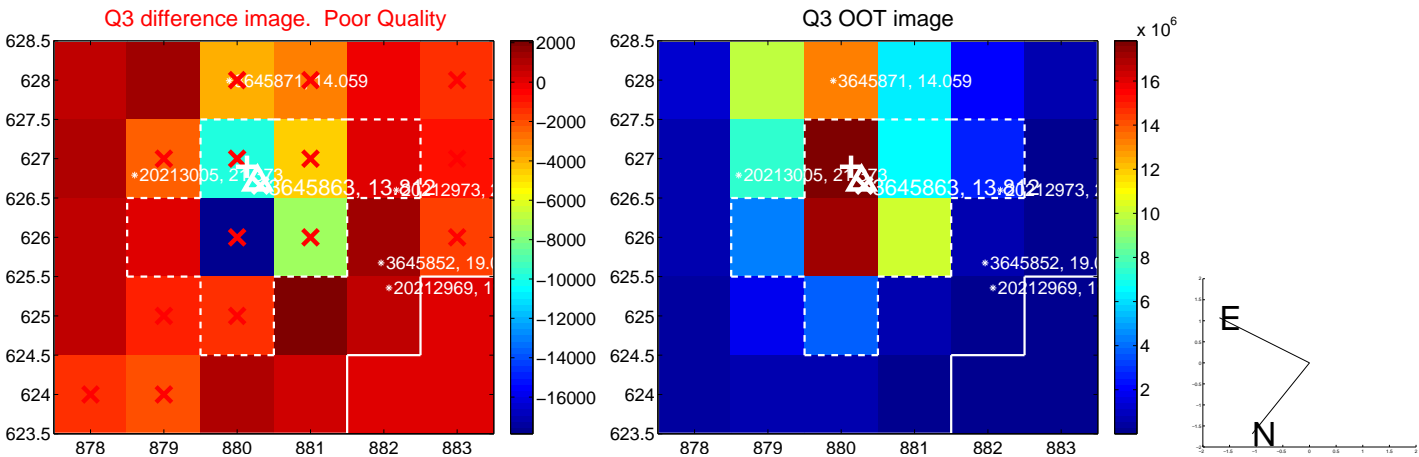
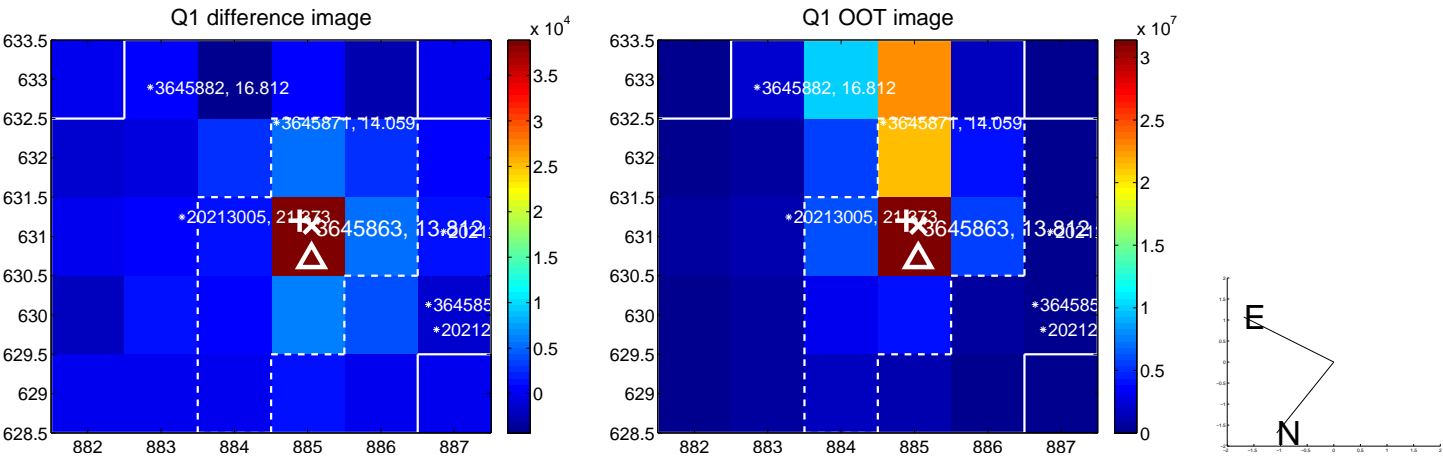
The direct PRF centroid is offset from the target star catalog position by about 0.69 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.647 ± 0.316	2.05	-0.554 ± 0.250	0.335 ± 0.233
PRF-fit source offset from KIC position	0.290 ± 0.112	2.59	0.250 ± 0.117	0.147 ± 0.178
photometric centroid source offset	1.82 ± 0.44	4.15	1.82 ± 0.44	-0.05 ± 0.39

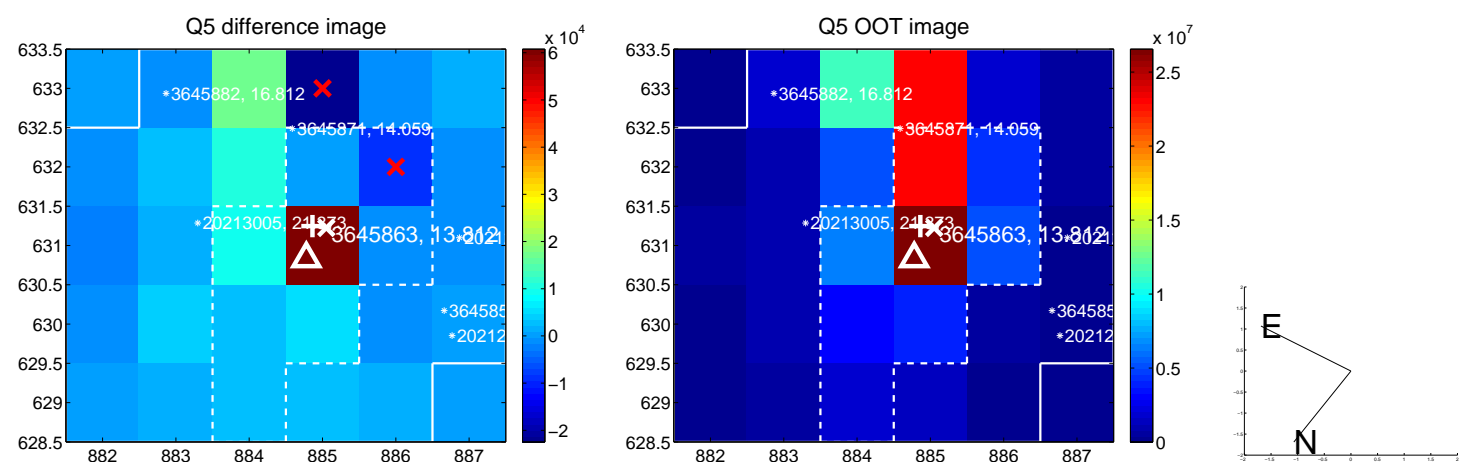


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

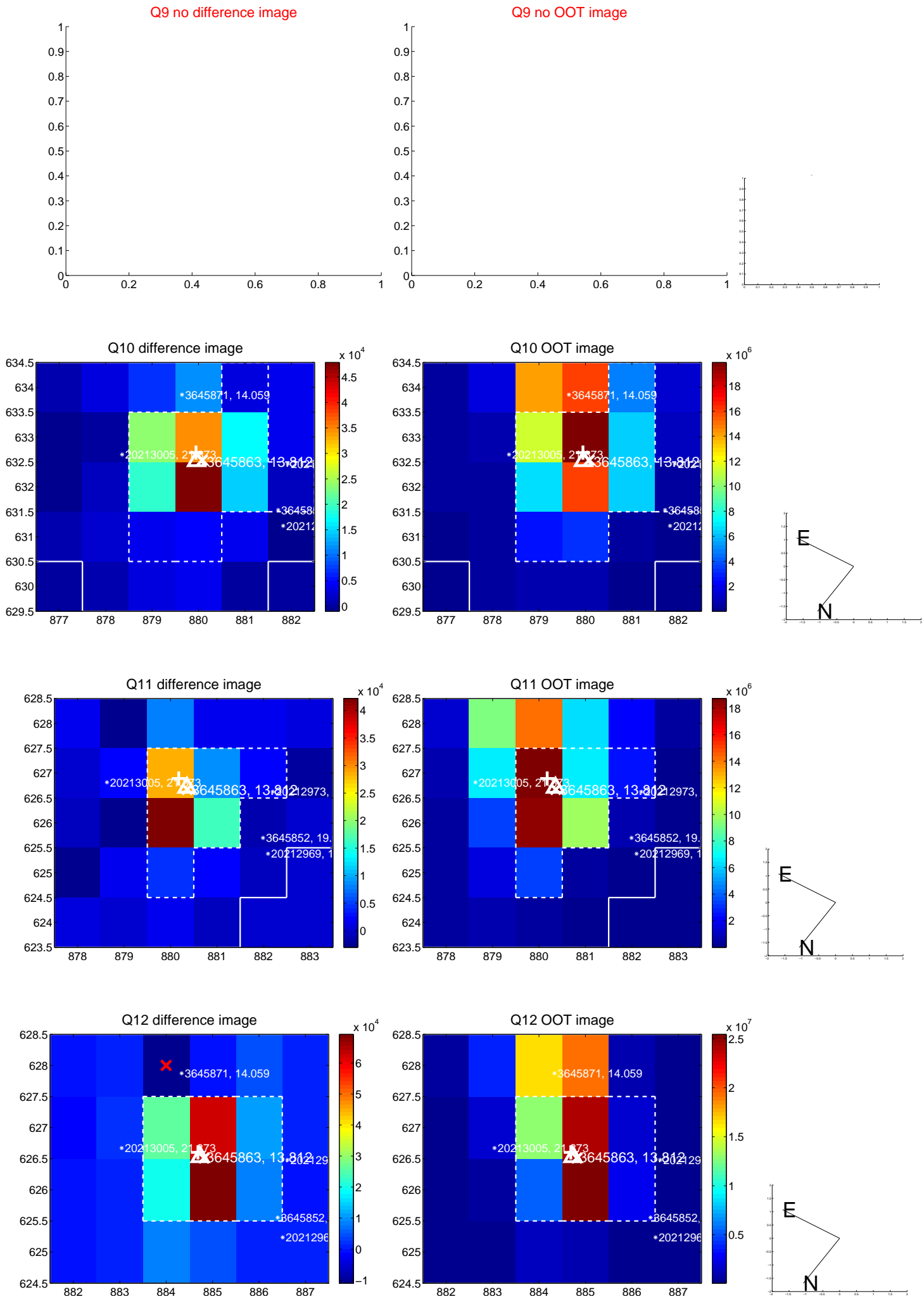
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

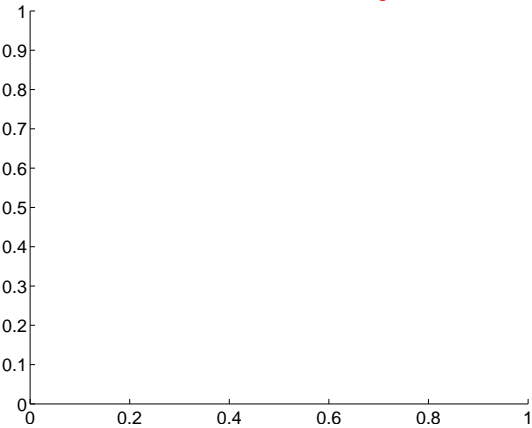


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

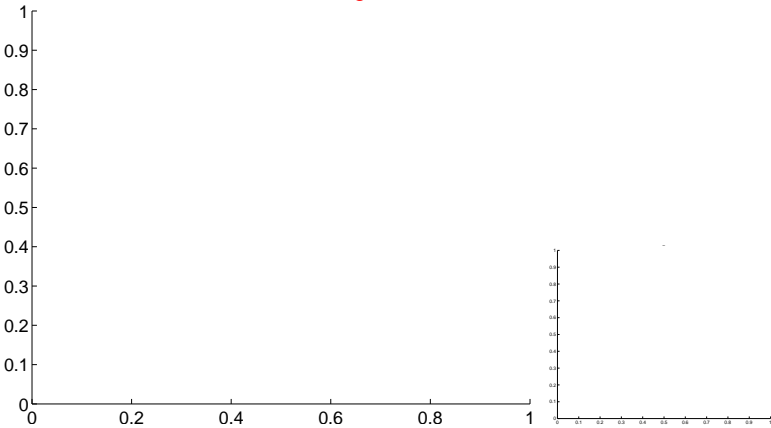


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

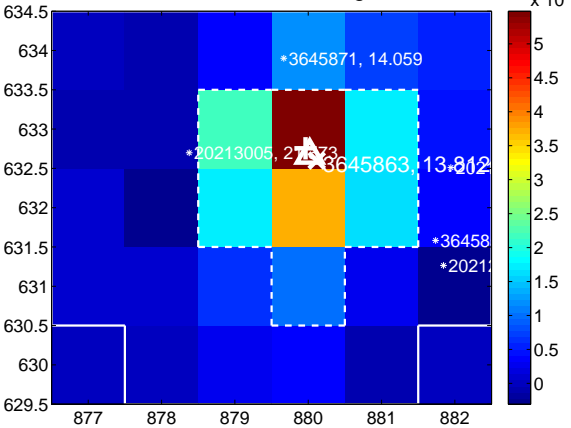
Q13 no difference image



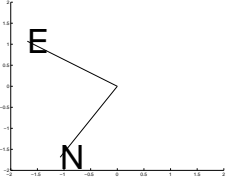
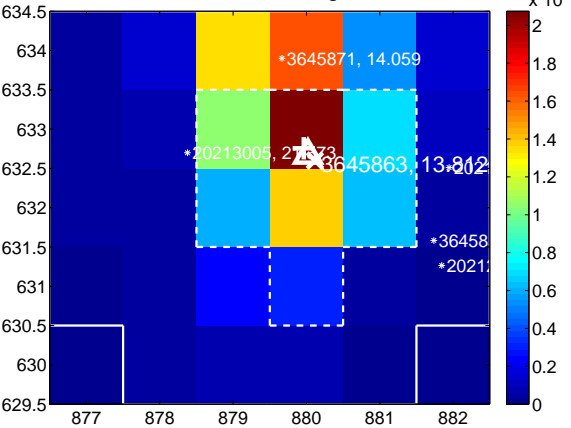
Q13 no OOT image



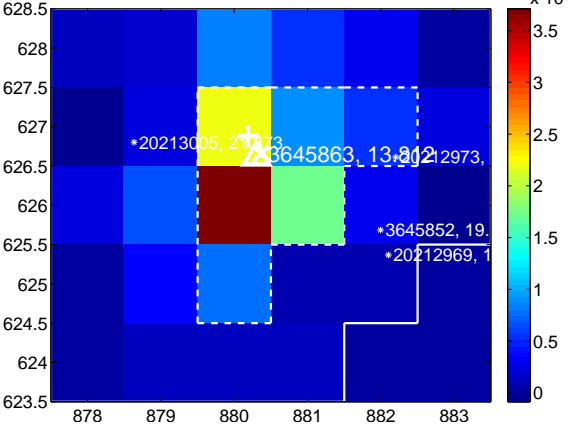
Q14 difference image



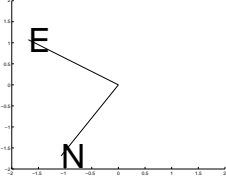
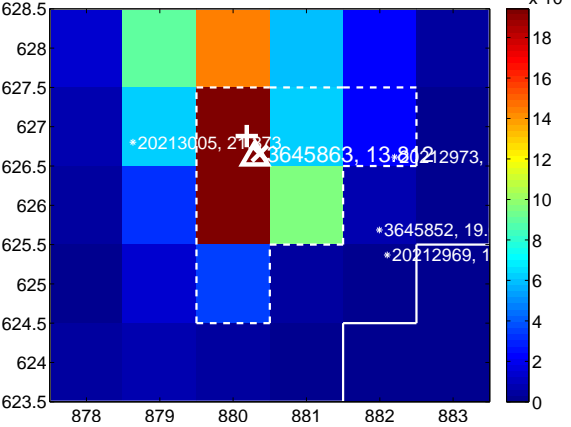
Q14 OOT image



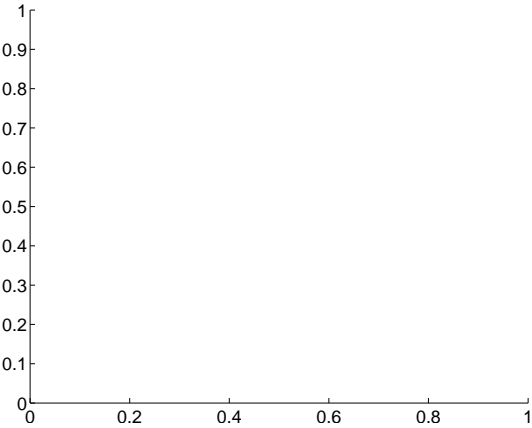
Q15 difference image



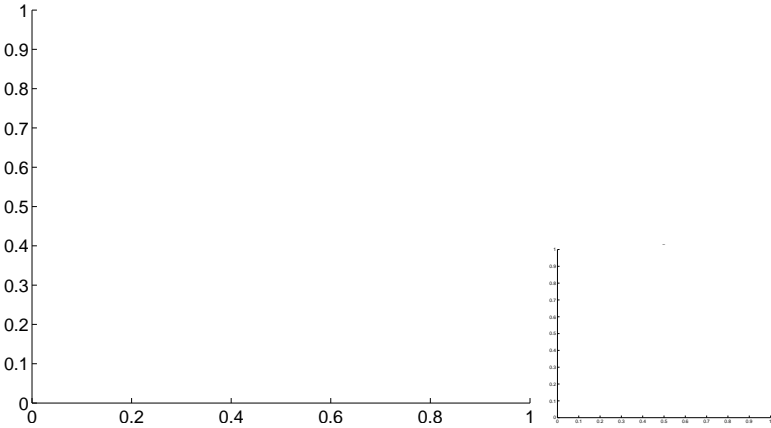
Q15 OOT image



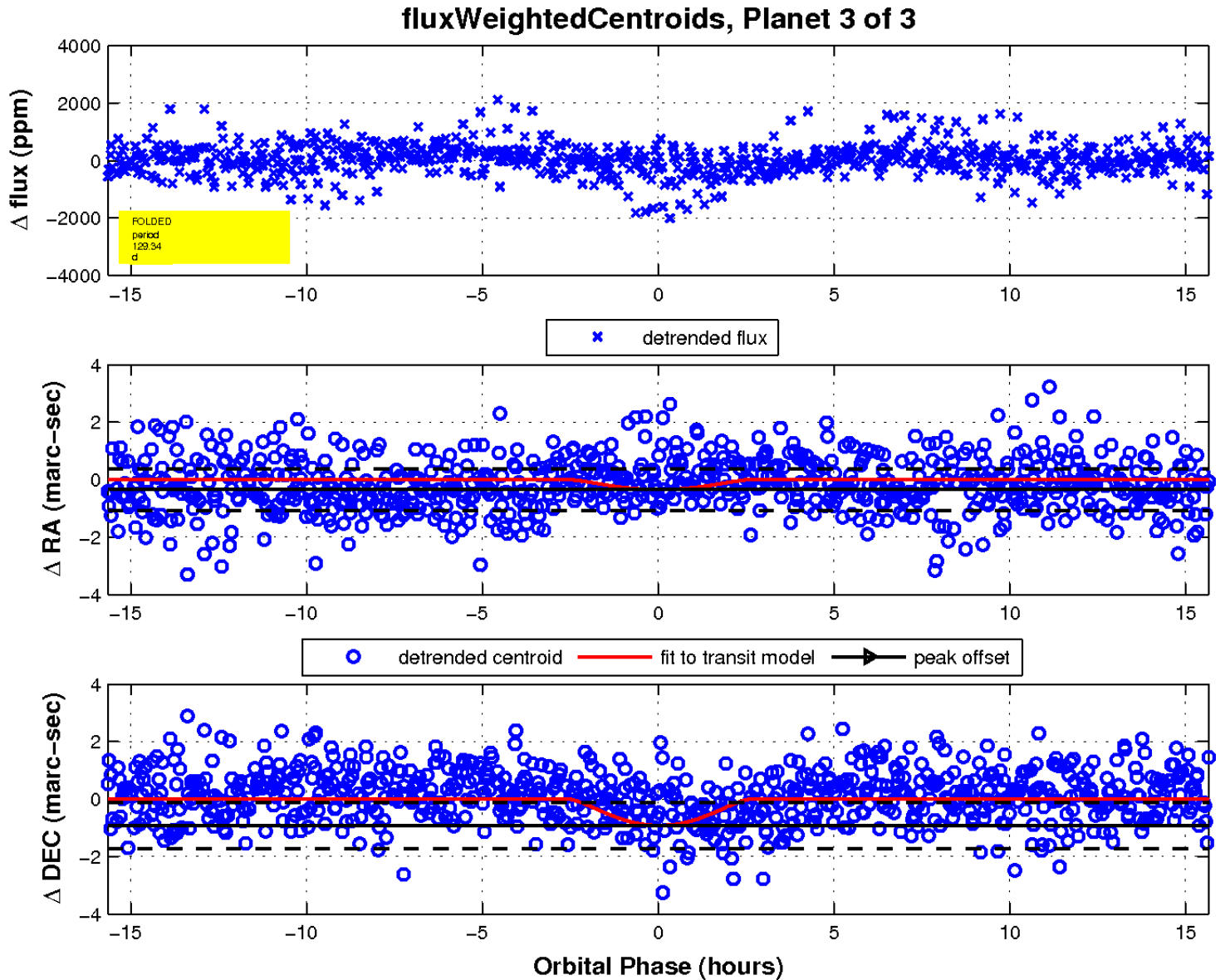
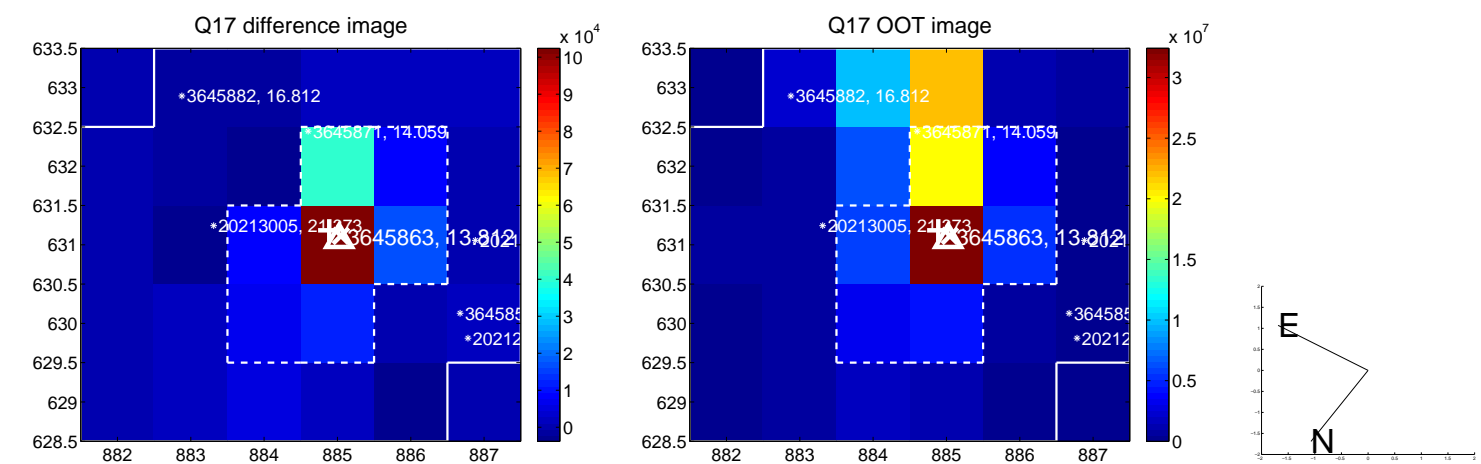
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

