

KIC 008019043

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})
008019043-01	OBS	6048.01	1.985585	132.934134	70236.1	2.470	9029.4	5299.8	3.22	6651	96.23	14467.88
008019043-02	OBS	No	1.985559	131.949010	389.6	1.704	105.9	51.2	3.22	6651	7.36	14468.13
008019043-03	OBS	6048.02	0.804895	132.052164	138.1	0.915	16.7	23.4	3.22	6651	4.45	48224.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008019043-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—HAS_SEC_TCE—CENT_SATURATED
008019043-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
008019043-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_SATURATED—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.

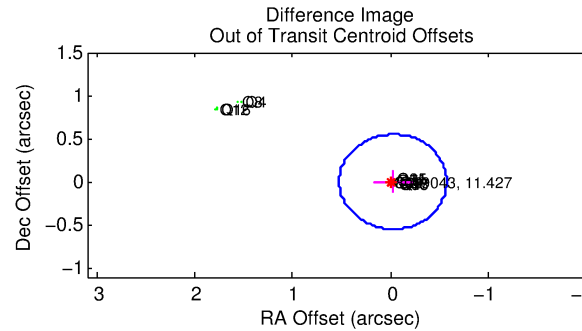
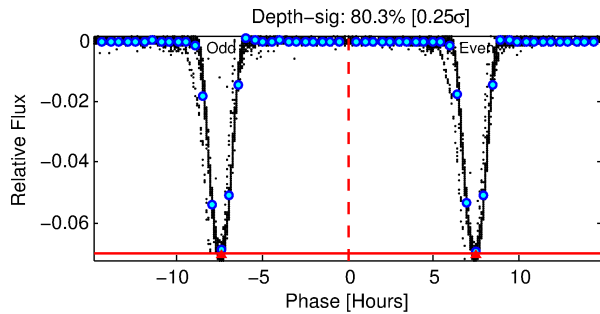
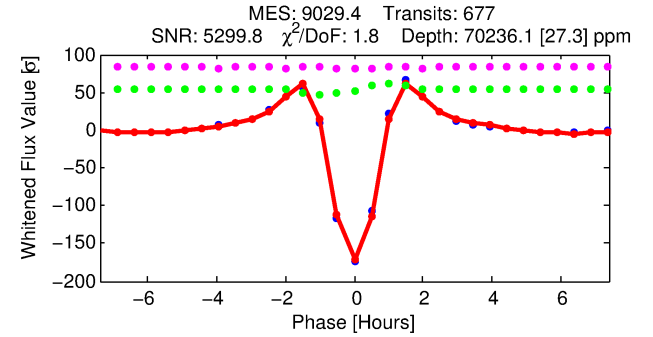
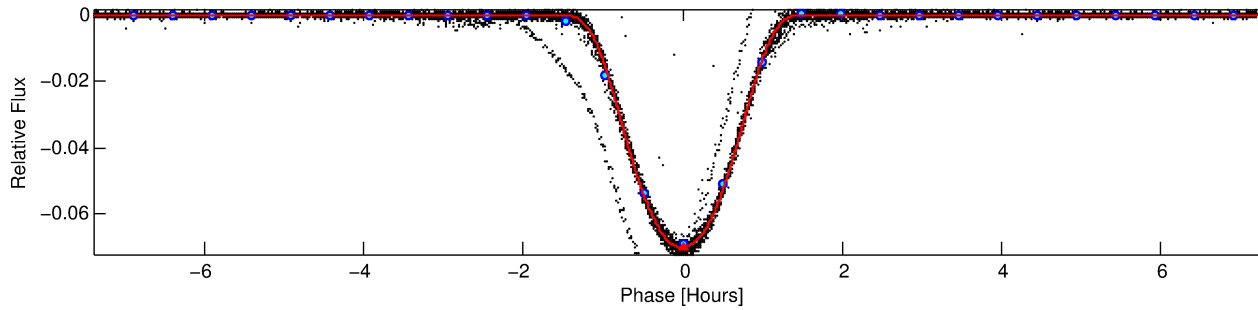
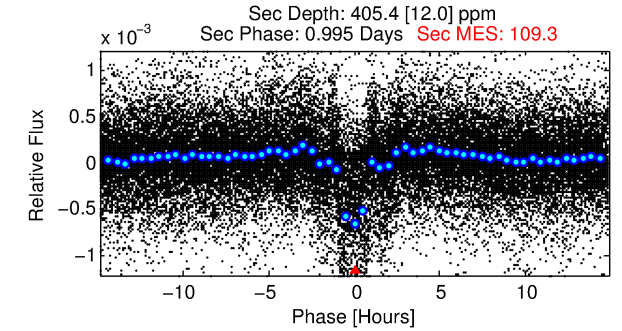
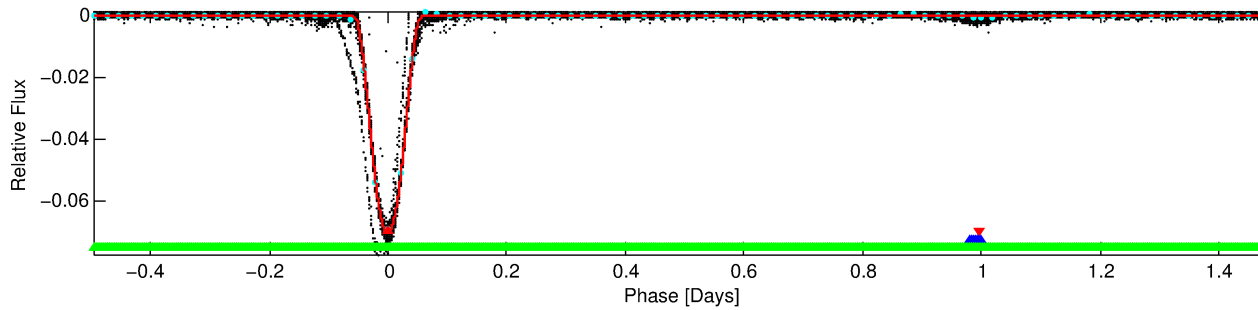
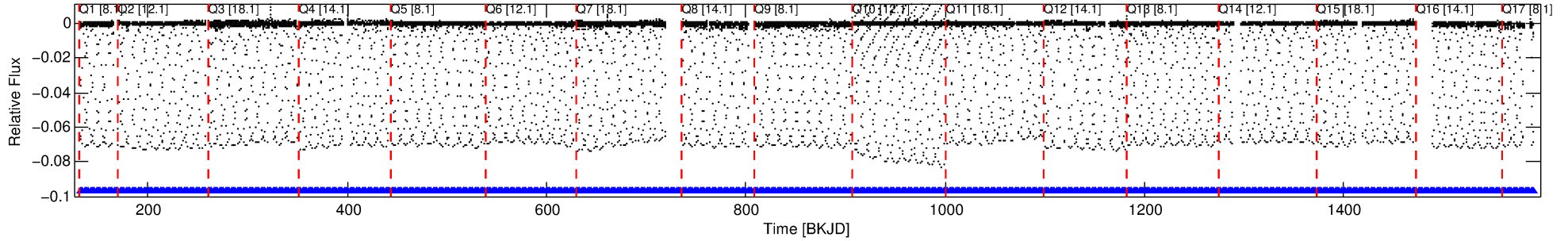
Ephemeris Match Information For 008019043-01

No Significant Match Found

DV One-Page Summary

KIC: 8019043 Candidate: 1 of 3 Period: 1.986 d
KOI: K06048.01 Corr: 0.997

Kp: 11.43 R*: 3.22 Rs Teff: 6651.0 K Logg: 3.60 Fe/H: -0.480



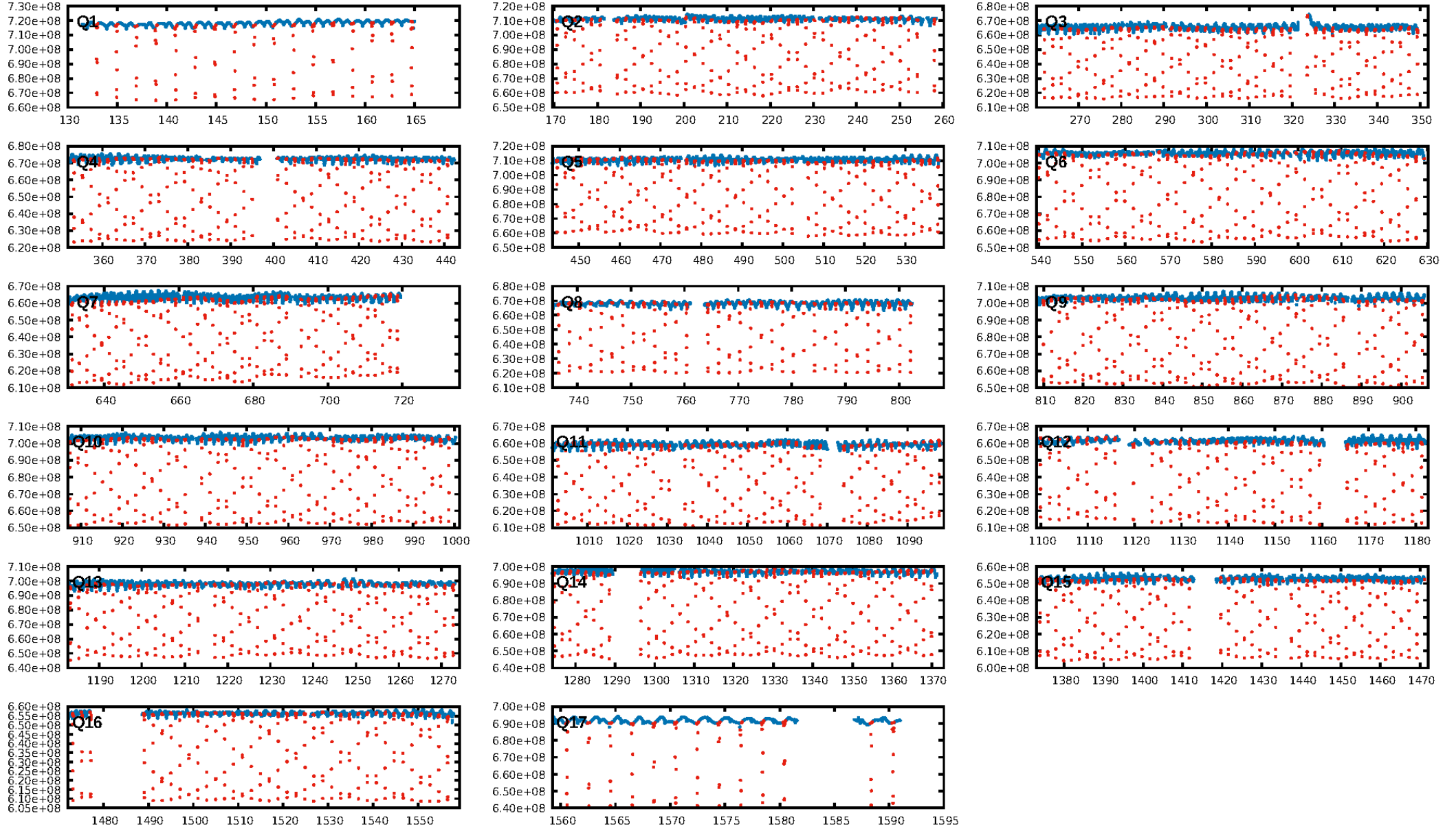
DV Fit Results:

Period = 1.98559 [0.00000] d
Epoch = 132.9341 [0.0000] BKJD
Rp/R* = 0.2739 [0.0003]
a/R* = 6.38 [0.00]
b = 0.75 [0.00]
Seff = 14467.87 [8322.76]
Teq = 2797 [402] K
Rp = 96.23 [36.11] Re
a = 0.0354 [0.0126] AU
Ag = 0.03 [0.02] [-56.68σ]
Teffp = 1803 [51] K [-2.45σ]

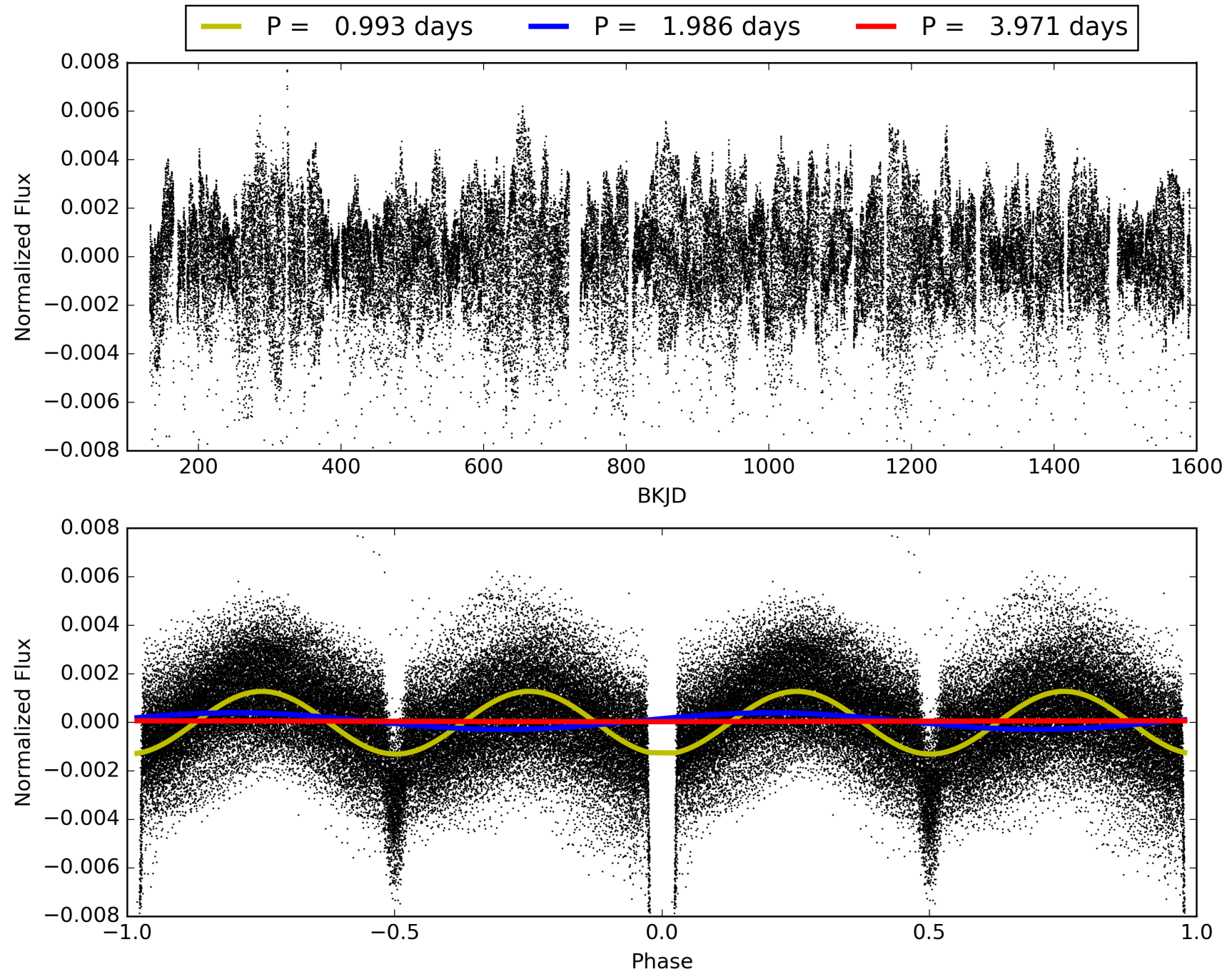
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [647/647]
GhostDiagnostic-chr: 2.912
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.025 arcsec [0.14σ]
KicOffset-rm: 0.051 arcsec [0.51σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008019043-01, PDC Light Curves

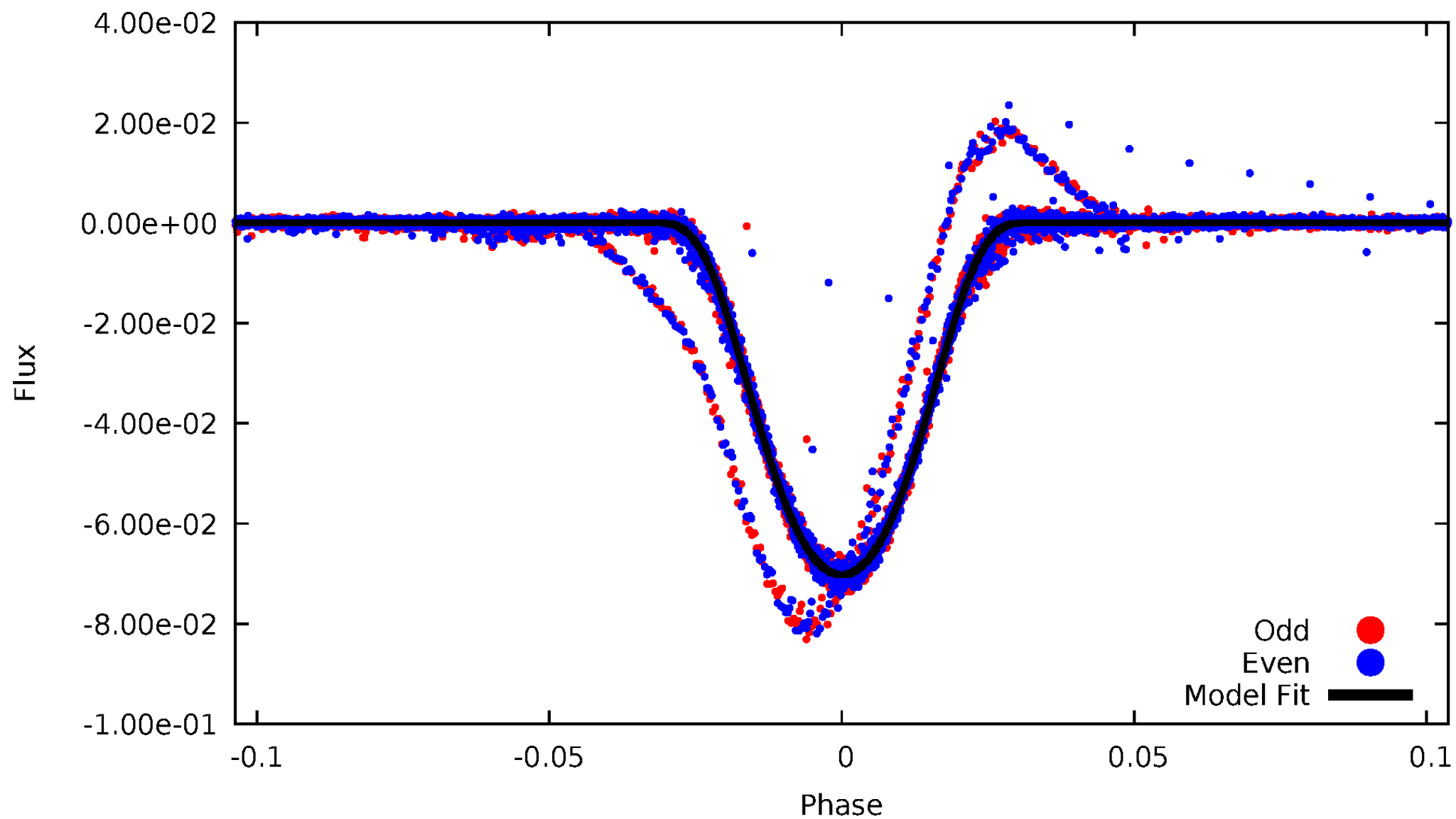


TCE 008019043-01



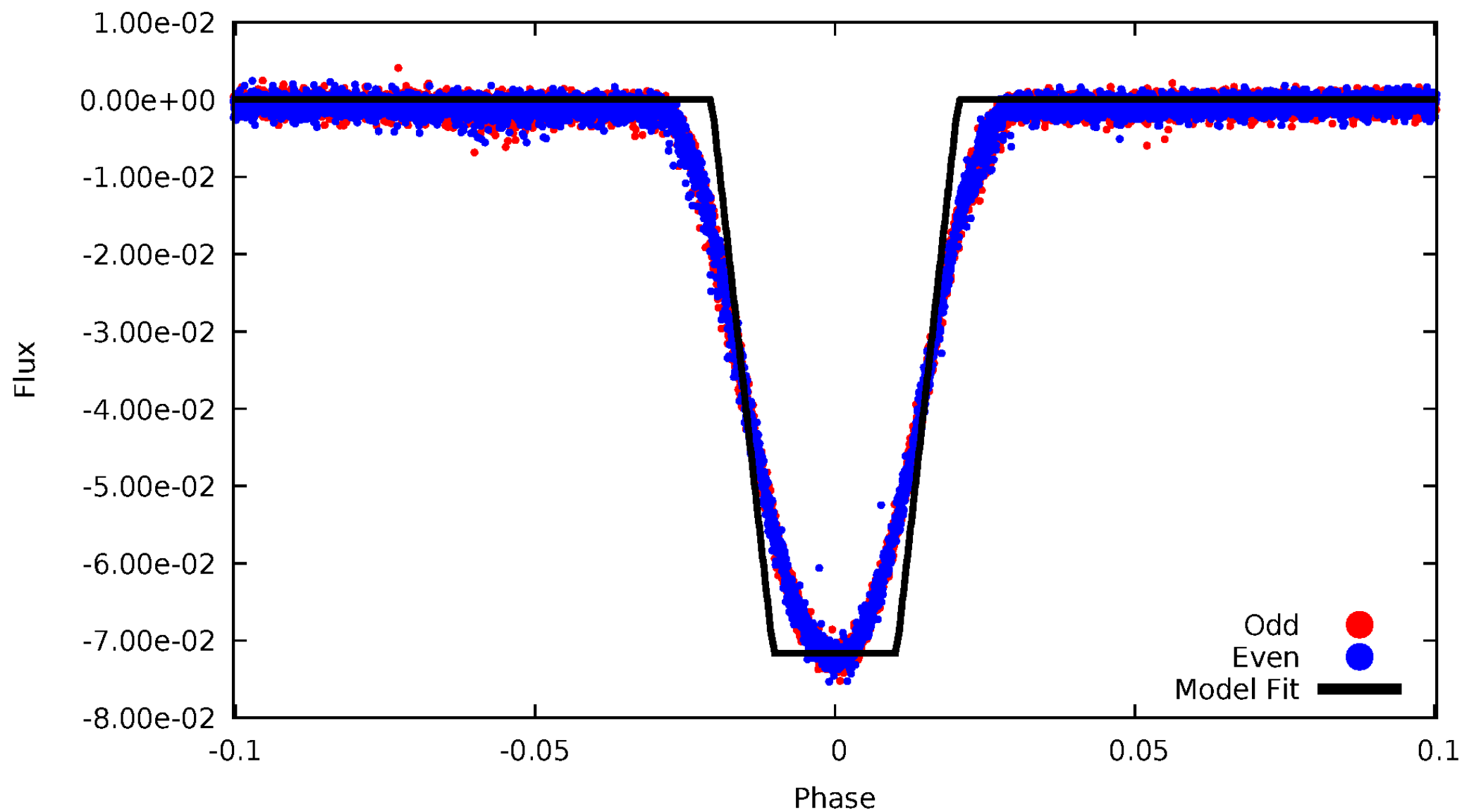
DV Odd/Even

TCE 008019043-01



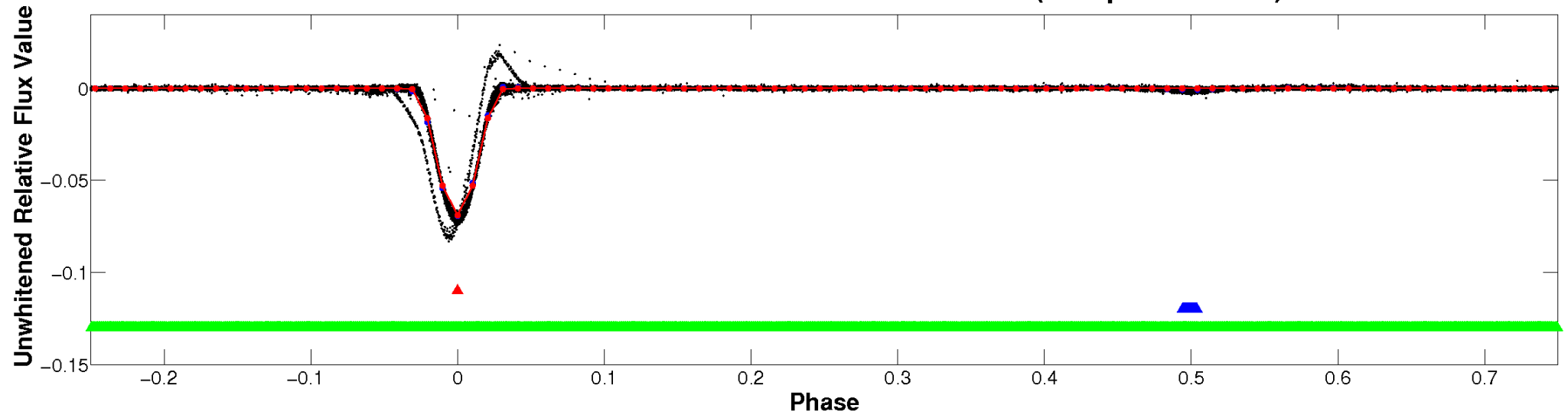
ALT Odd/Even

TCE 008019043-01

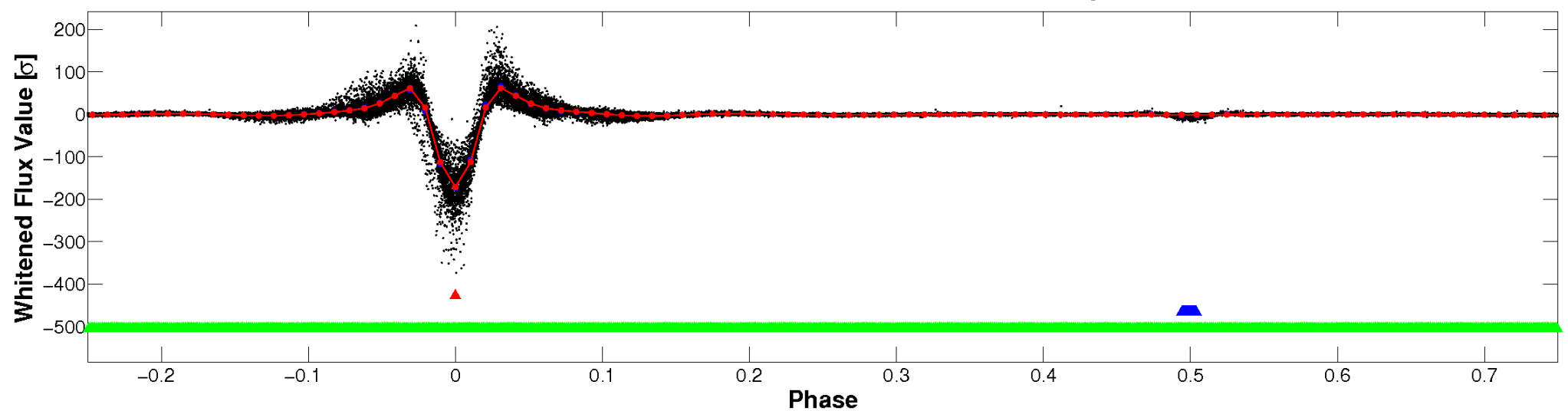


Non-Whitened Vs. Whitened Light Curve

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

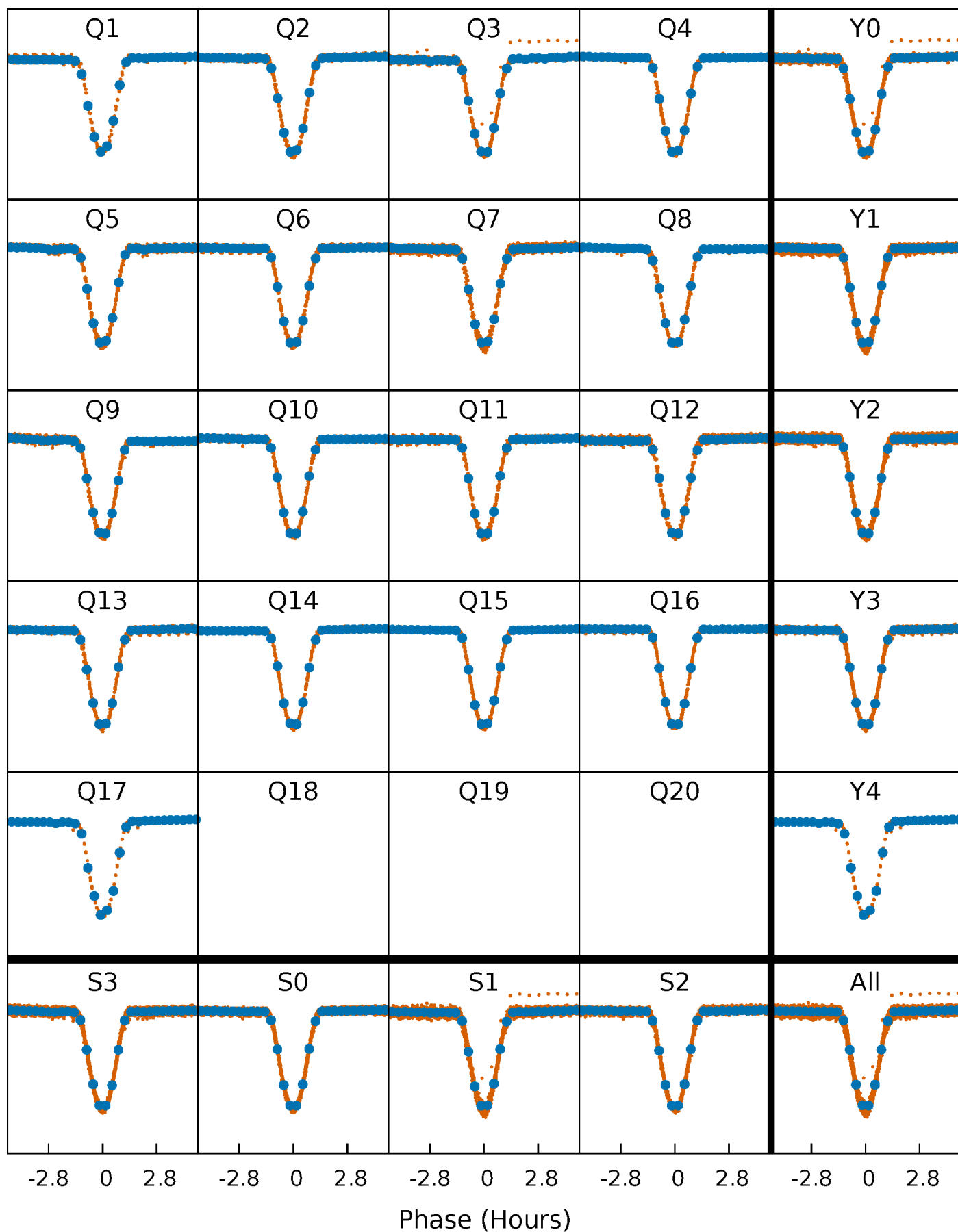


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



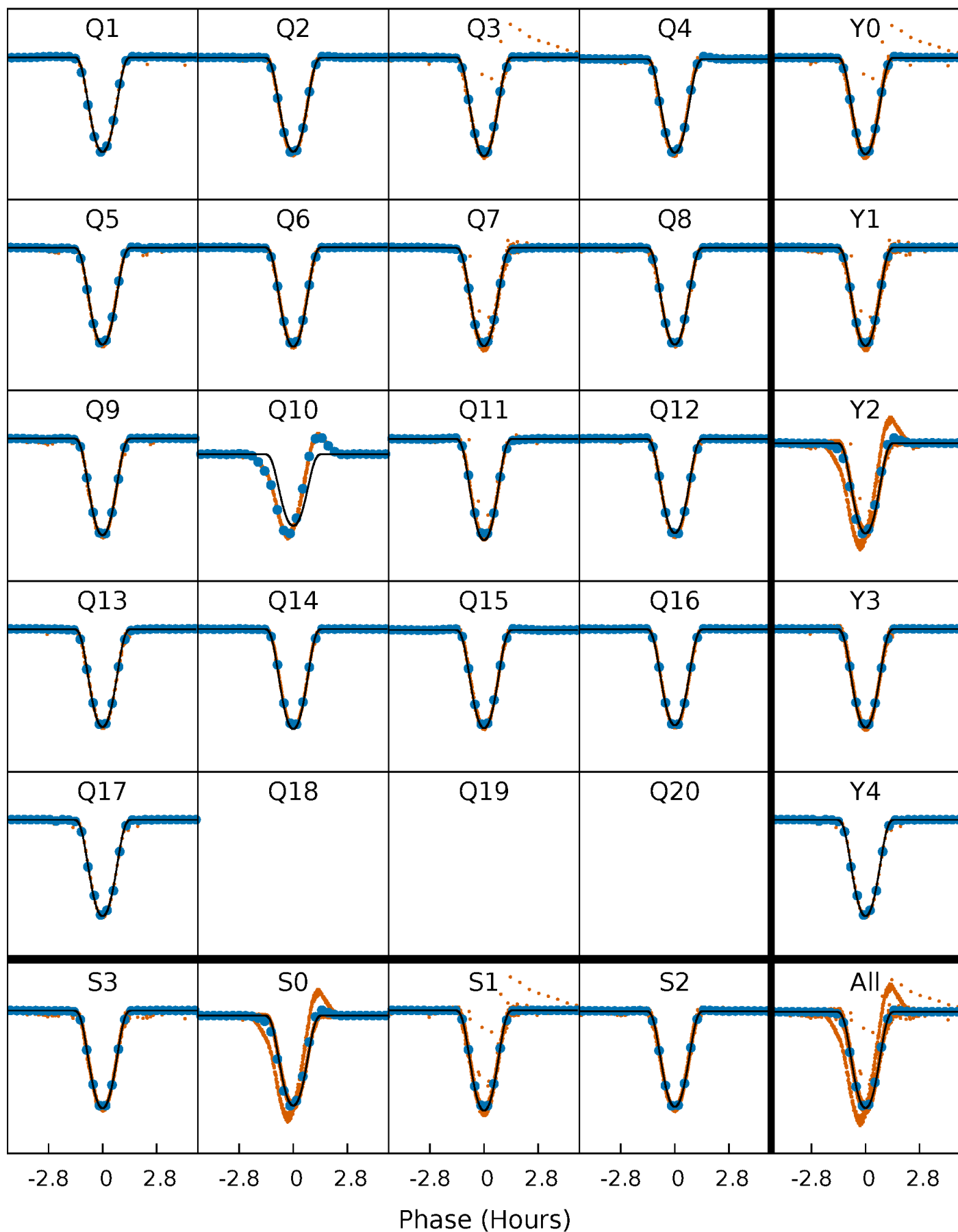
PDC Quarter-Phased Transit Curves

TCE 008019043-01 P= 1.985585 Days $T_0=132.934134$ (BKJD)



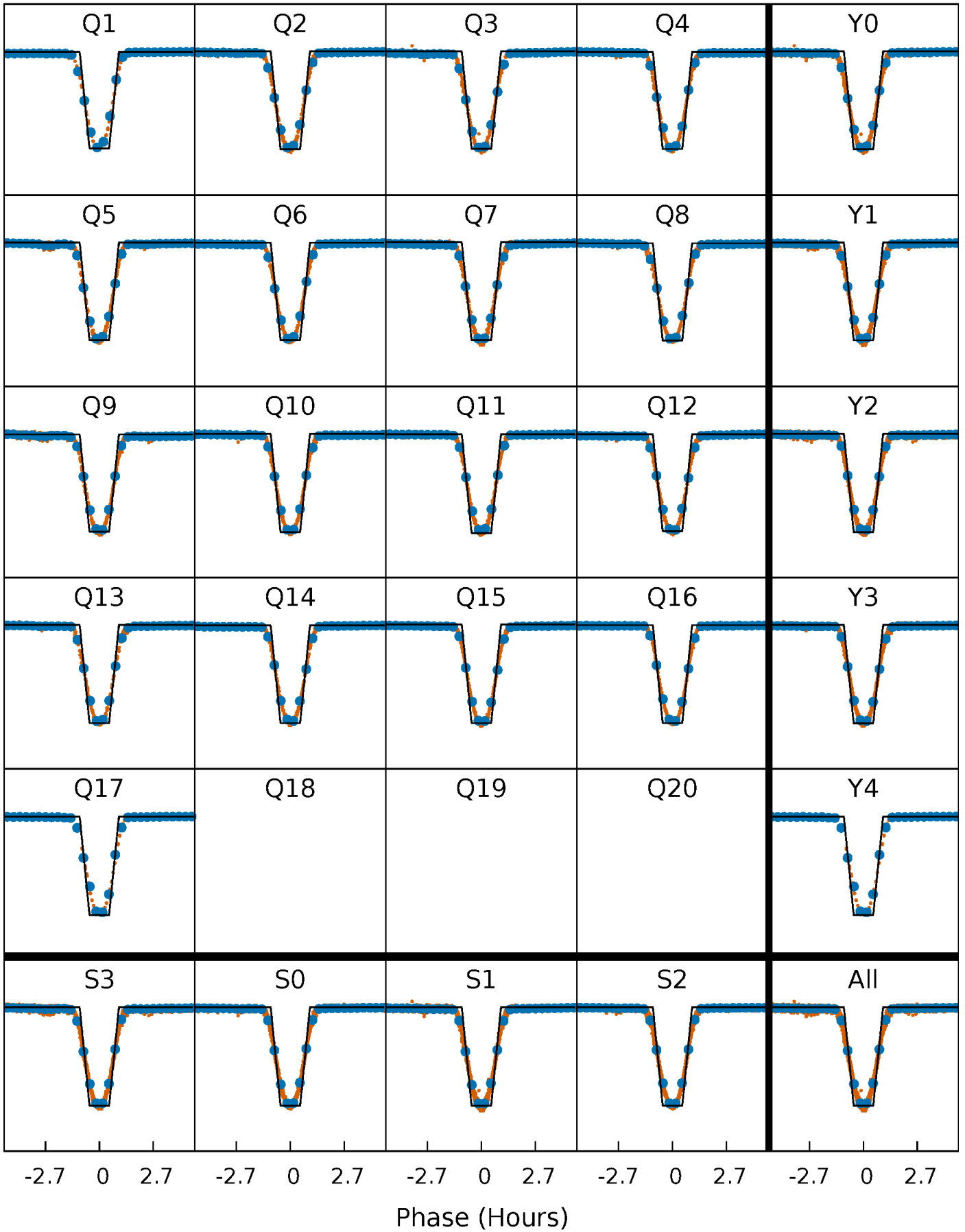
DV Quarter-Phased Transit Curves

TCE 008019043-01 P= 1.985585 Days $T_0=132.934134$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

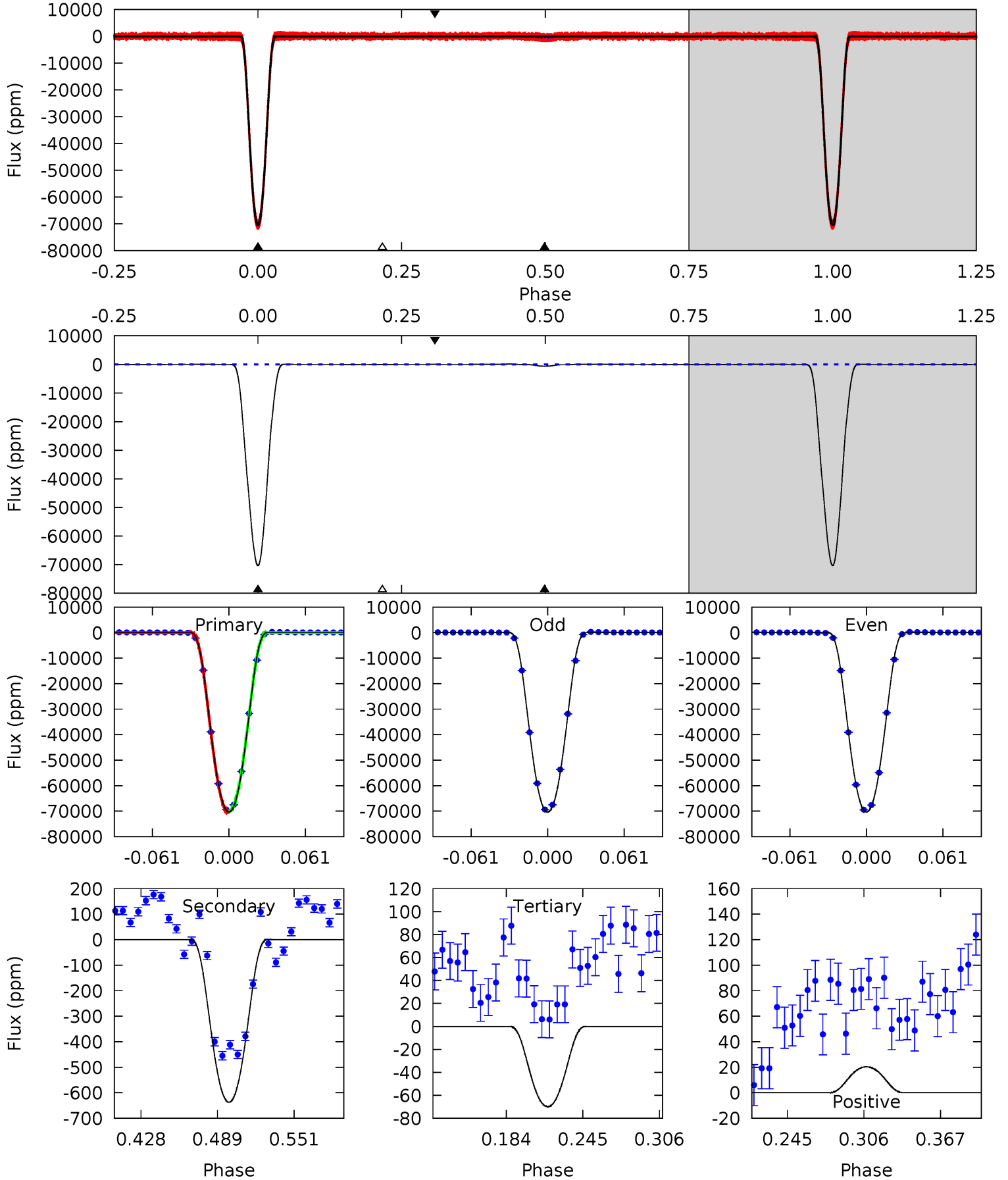
TCE 008019043-01 P= 1.985583 Days $T_0=132.934991$ (BKJD)



DV Model-Shift Uniqueness Test

008019043-01, P = 1.985585 Days, E = 130.948549 Days

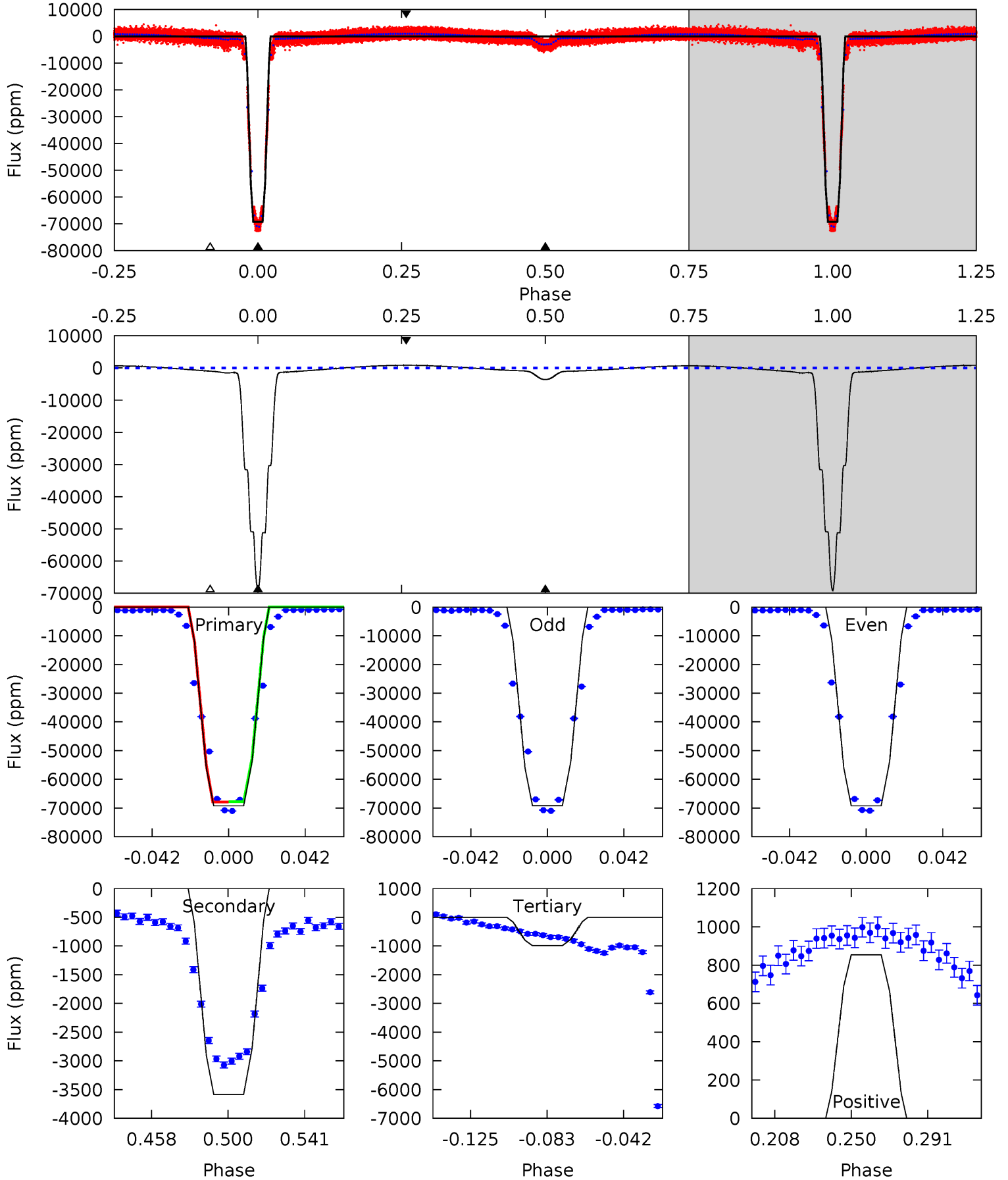
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10183	92.3	10.1	2.95	4.67	1.87	5.75	10173	10180	82.2	89.4	1.82	1.00	0.00	50.7



Alt Model-Shift Uniqueness Test

008019043-01, P = 1.985583 Days, E = 130.949408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2553	132.1	36.4	31.5	4.75	2.04	24.2	2517	2522	95.7	100.6	0.81	0.99	0.01	0



Stellar Parameters For KIC 008019043

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6651^{+180}_{-180}	$3.600^{+0.330}_{-0.110}$	$-0.480^{+0.400}_{-0.250}$	$3.219^{+0.431}_{-1.208}$	$1.503^{+0.223}_{-0.334}$	$0.064^{+0.167}_{-0.017}$
	+3%/-3%	+9%/-3%	+83%/-52%	+13%/-38%	+15%/-22%	+263%/-28%
Source	PHO1	FLK73	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 008019043-01 / KOI 6048.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-637 ± 7	$96.51^{+9.16}_{-21.20}$	3842^{+239}_{-358}	-3494^{+261}_{-153}	$0.050^{+0.026}_{-0.009}$
Alt.	-3583 ± 27	$94.48^{+7.87}_{-19.30}$	3860^{+228}_{-360}	-2380^{+5379}_{-514}	$0.286^{+0.144}_{-0.043}$

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 $A_{obs} \gg 1.0$

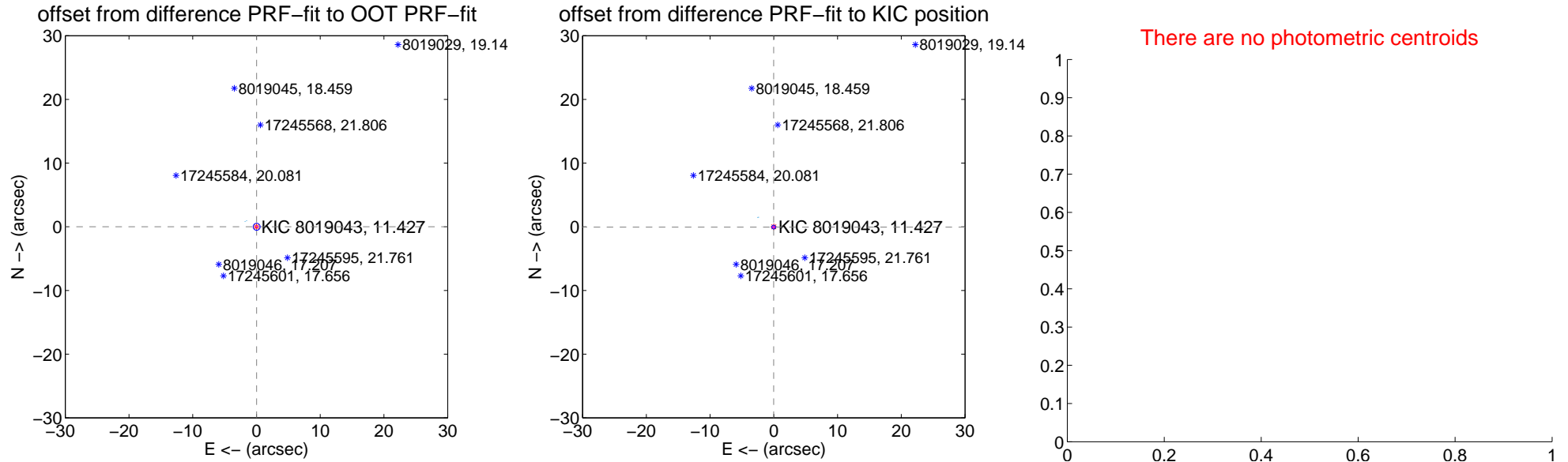
DV Centroid Data

Supplemental centroid analysis for 008019043-01. **Kepler magnitude: 11.43.** Transit SNR 5299.80

There are 17 quarters with good PRF difference image offsets

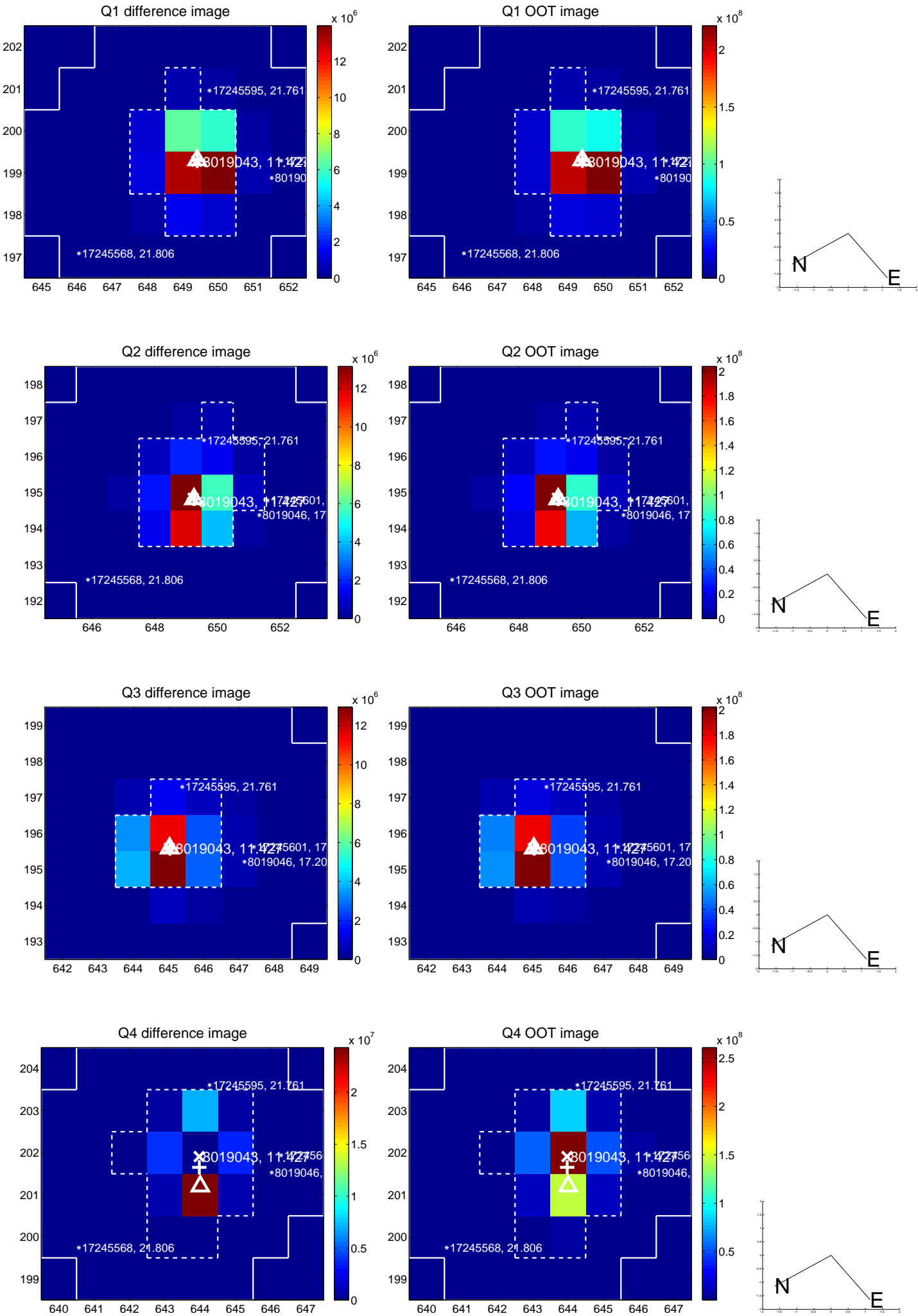
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.025 ± 0.183	0.14	-0.025 ± 0.189	0.002 ± 0.113
PRF-fit source offset from KIC position	0.051 ± 0.100	0.51	0.014 ± 0.249	-0.049 ± 0.163
photometric centroid source offset	—	—	—	—

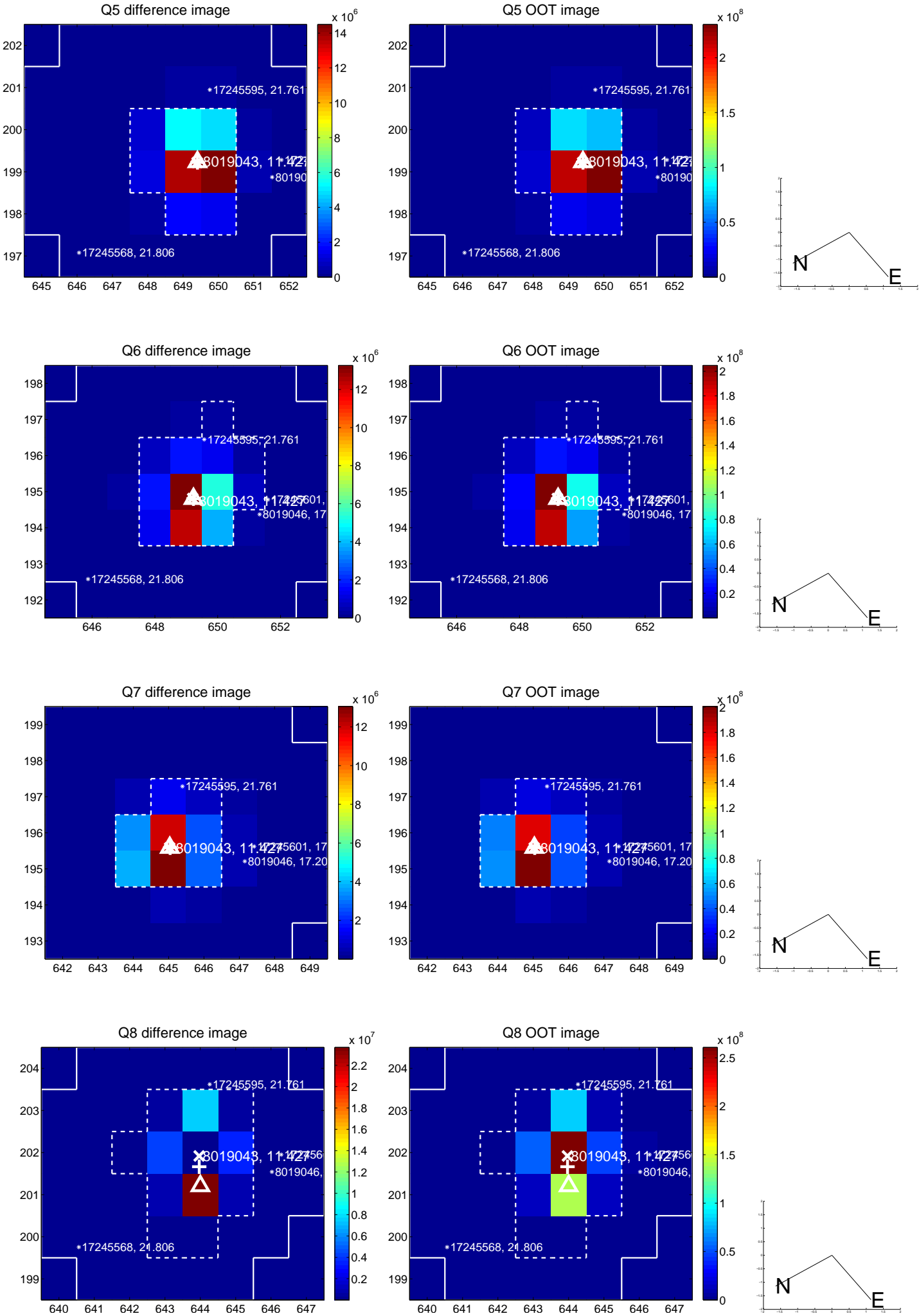


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

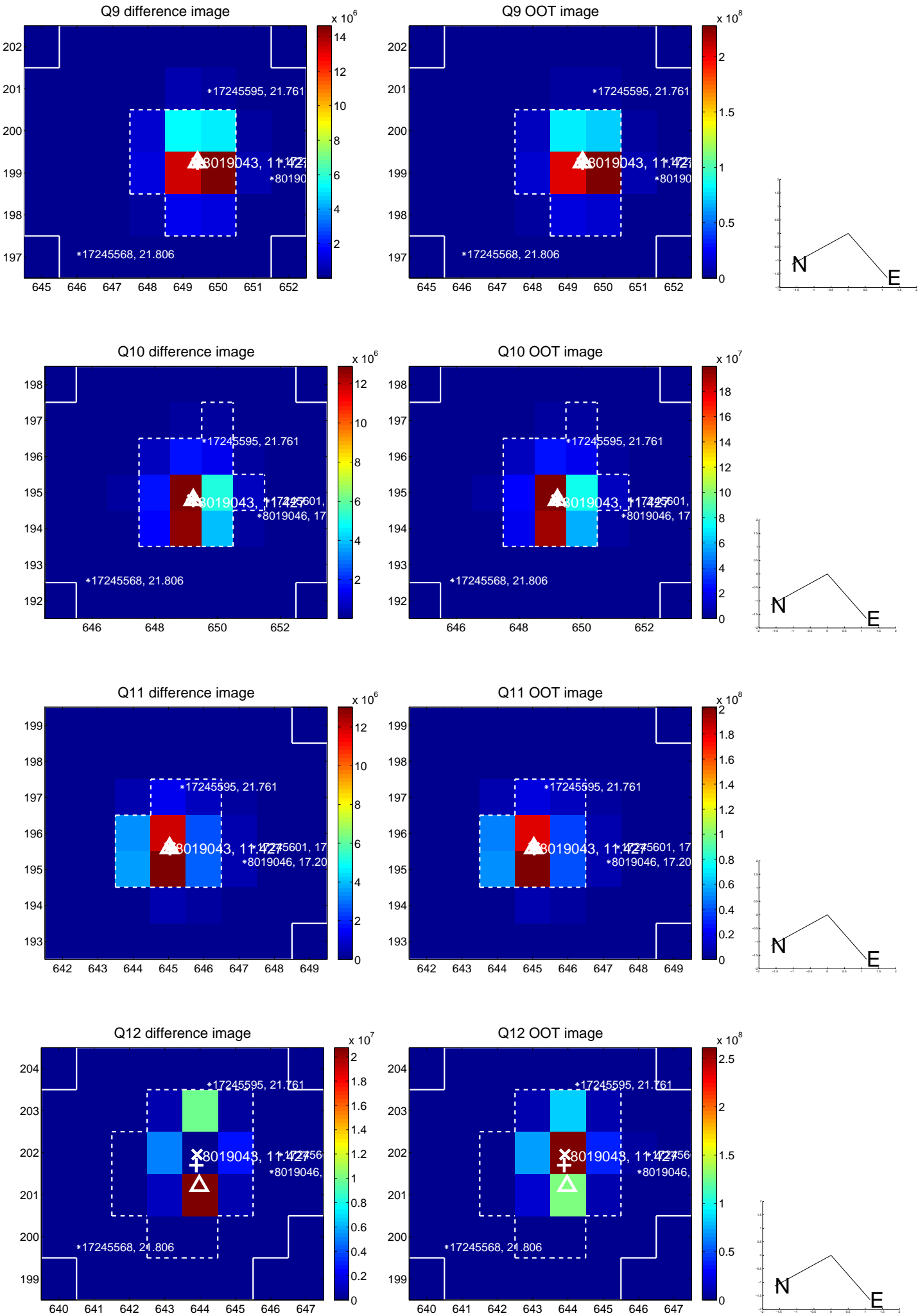
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



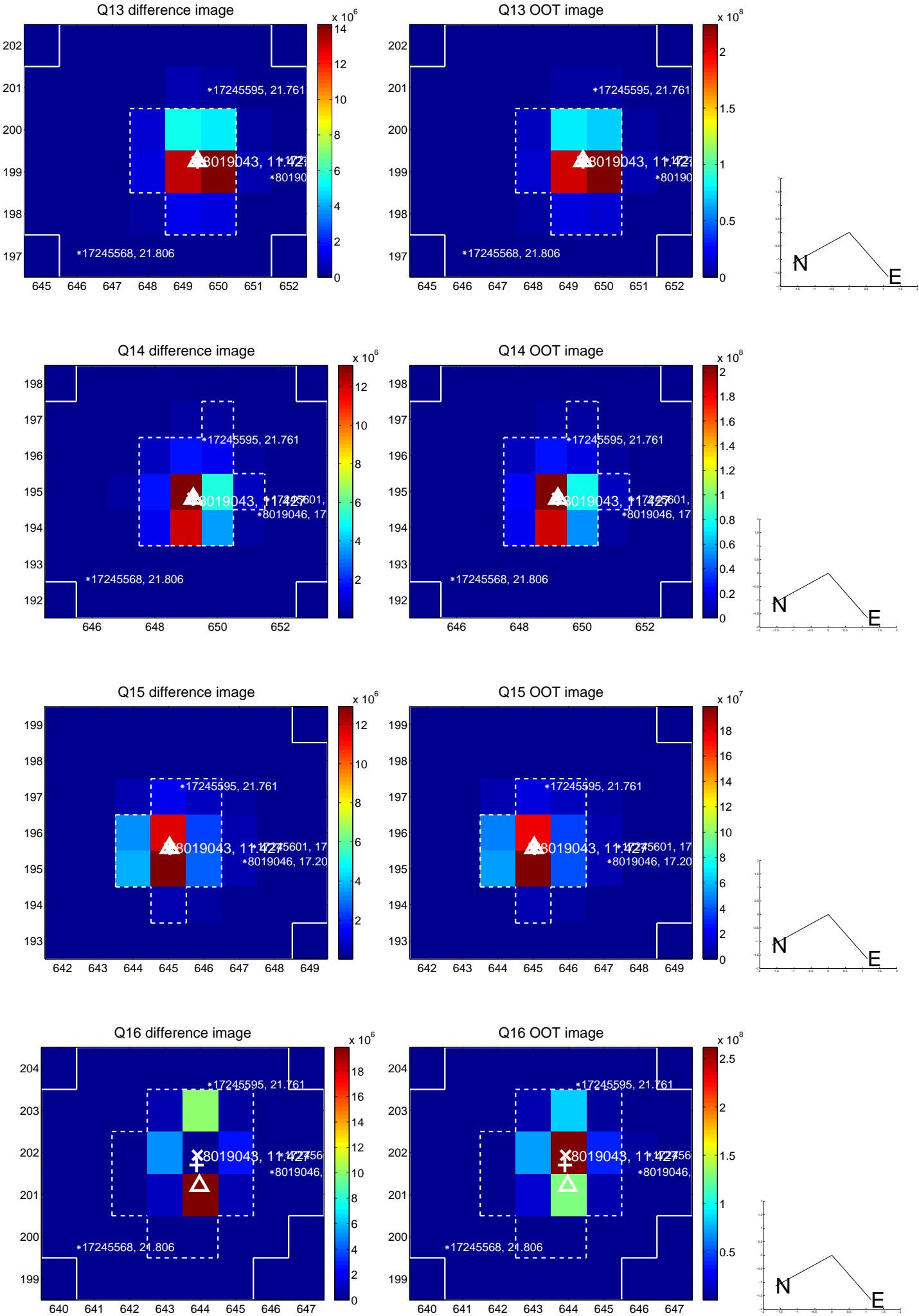
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



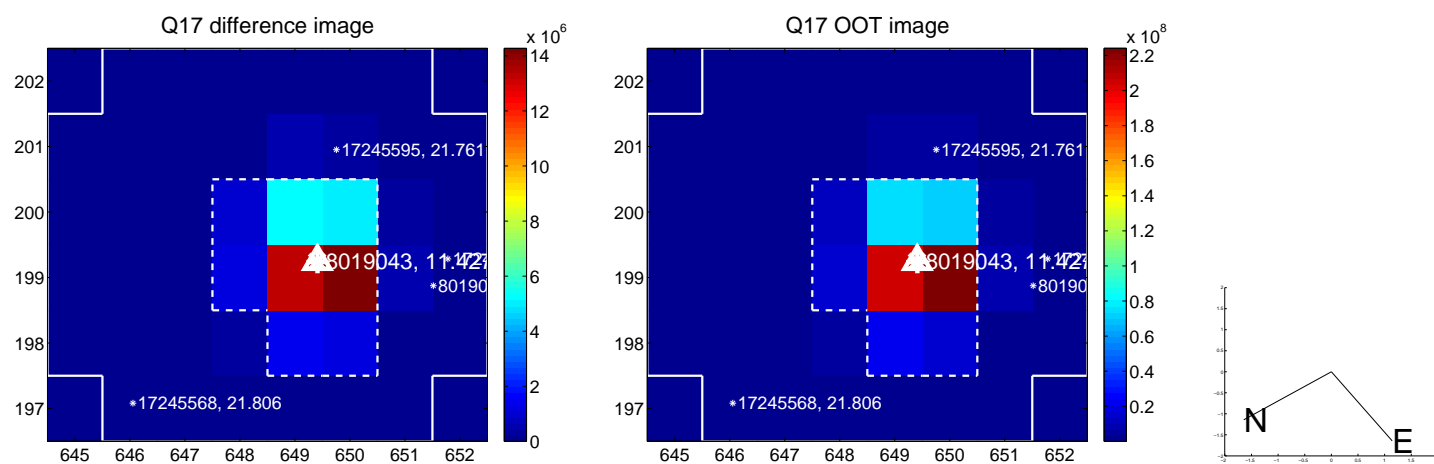
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

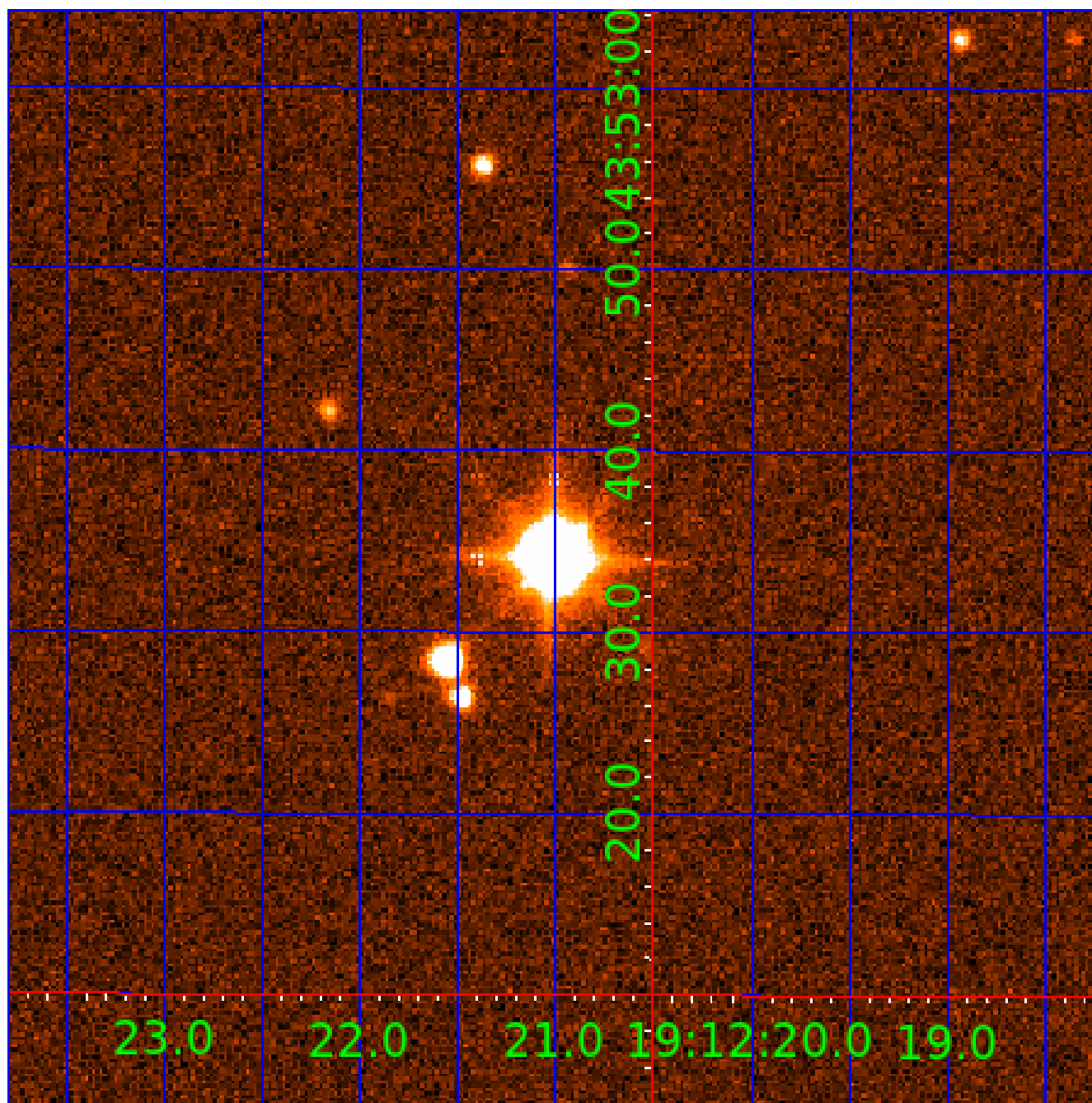


folded centroid time series figure for this object.



UKIRT Image

Declination



KIC 008019043

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})
008019043-01	OBS	6048.01	1.985585	132.934134	70236.1	2.470	9029.4	5299.8	3.22	6651	96.23	14467.88
008019043-02	OBS	No	1.985559	131.949010	389.6	1.704	105.9	51.2	3.22	6651	7.36	14468.13
008019043-03	OBS	6048.02	0.804895	132.052164	138.1	0.915	16.7	23.4	3.22	6651	4.45	48224.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008019043-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—HAS_SEC_TCE—CENT_SATURATED
008019043-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
008019043-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_SATURATED—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.

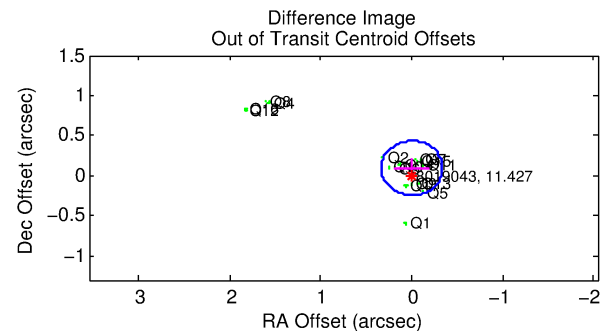
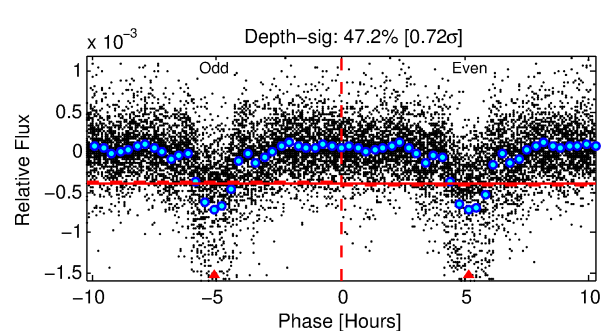
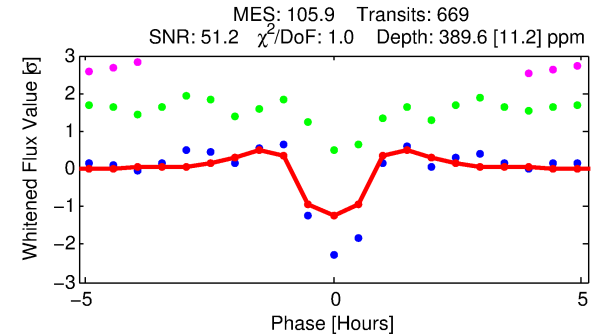
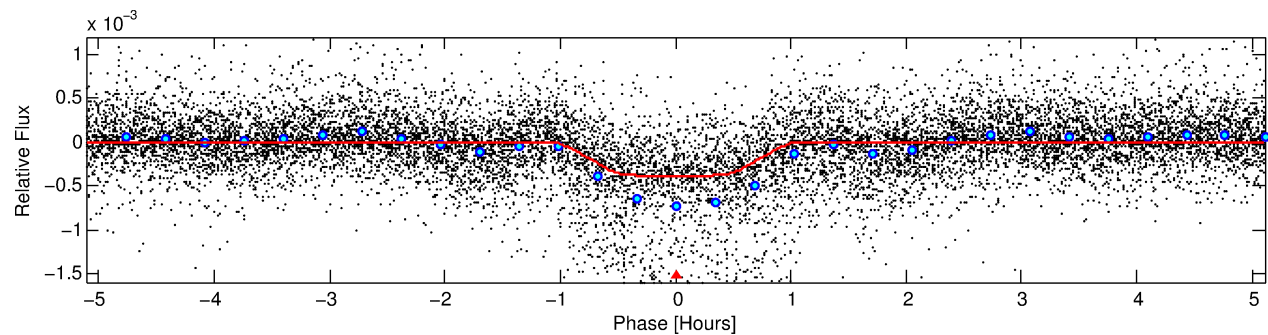
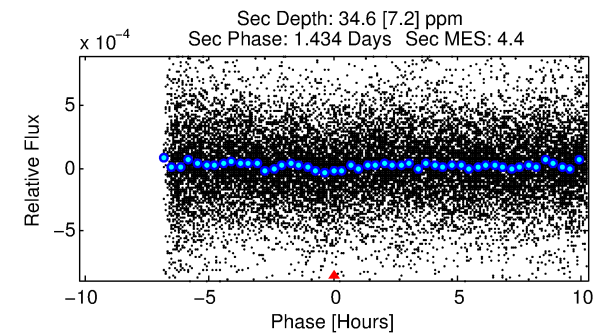
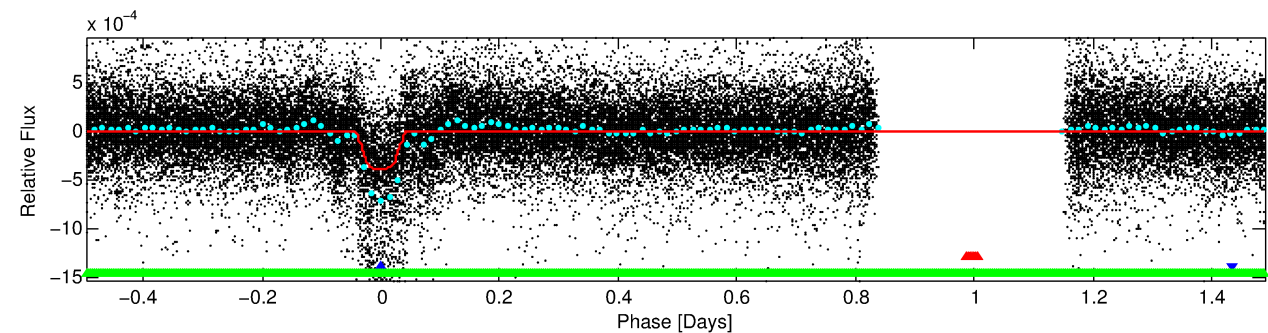
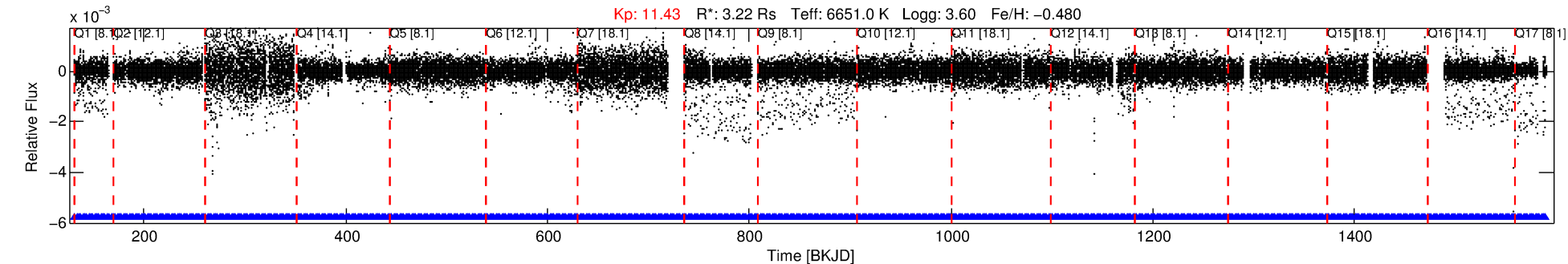
Ephemeris Match Information For 008019043-02

No Significant Match Found

DV One-Page Summary

KIC: 8019043 Candidate: 2 of 3 Period: 1.986 d
KOI: K06048 Corr: No Ephemeris Match

Kp: 11.43 R*: 3.22 Rs Teff: 6651.0 K Logg: 3.60 Fe/H: -0.480



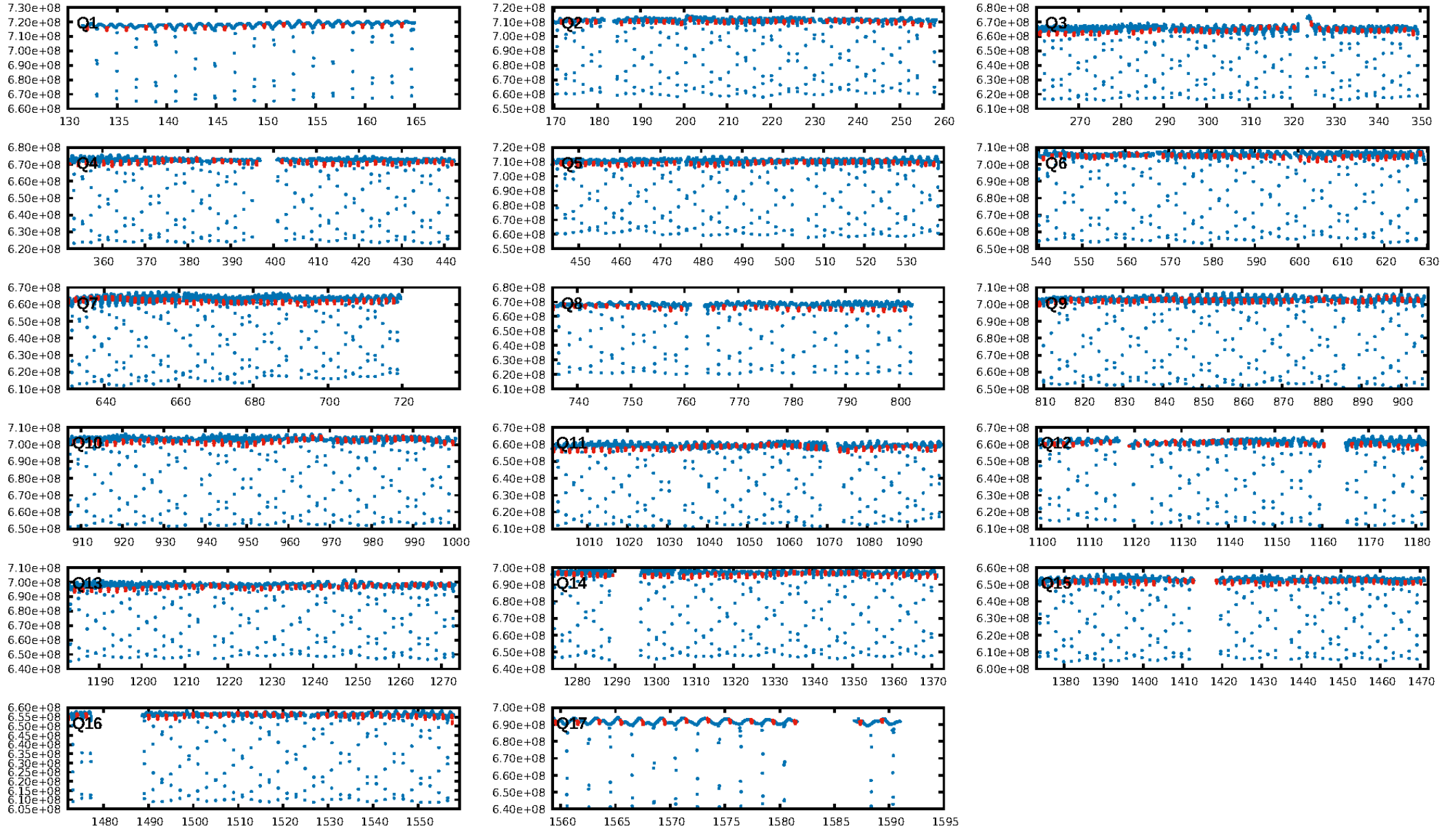
DV Fit Results:

Period = 1.98556 [0.00000] d
Epoch = 131.9490 [0.0004] BKJD
Rp/R* = 0.0210 [0.0019]
a/R* = 4.57 [2.21]
b = 0.89 [0.12]
Seff = 14468.13 [8322.90]
Teff = 2797 [402] K
Rp = 7.36 [2.84] Re
a = 0.0354 [0.0126] AU
Ag = 0.44 [0.28] [-2.01σ]
Teffp = 3525 [260] K [1.52σ]

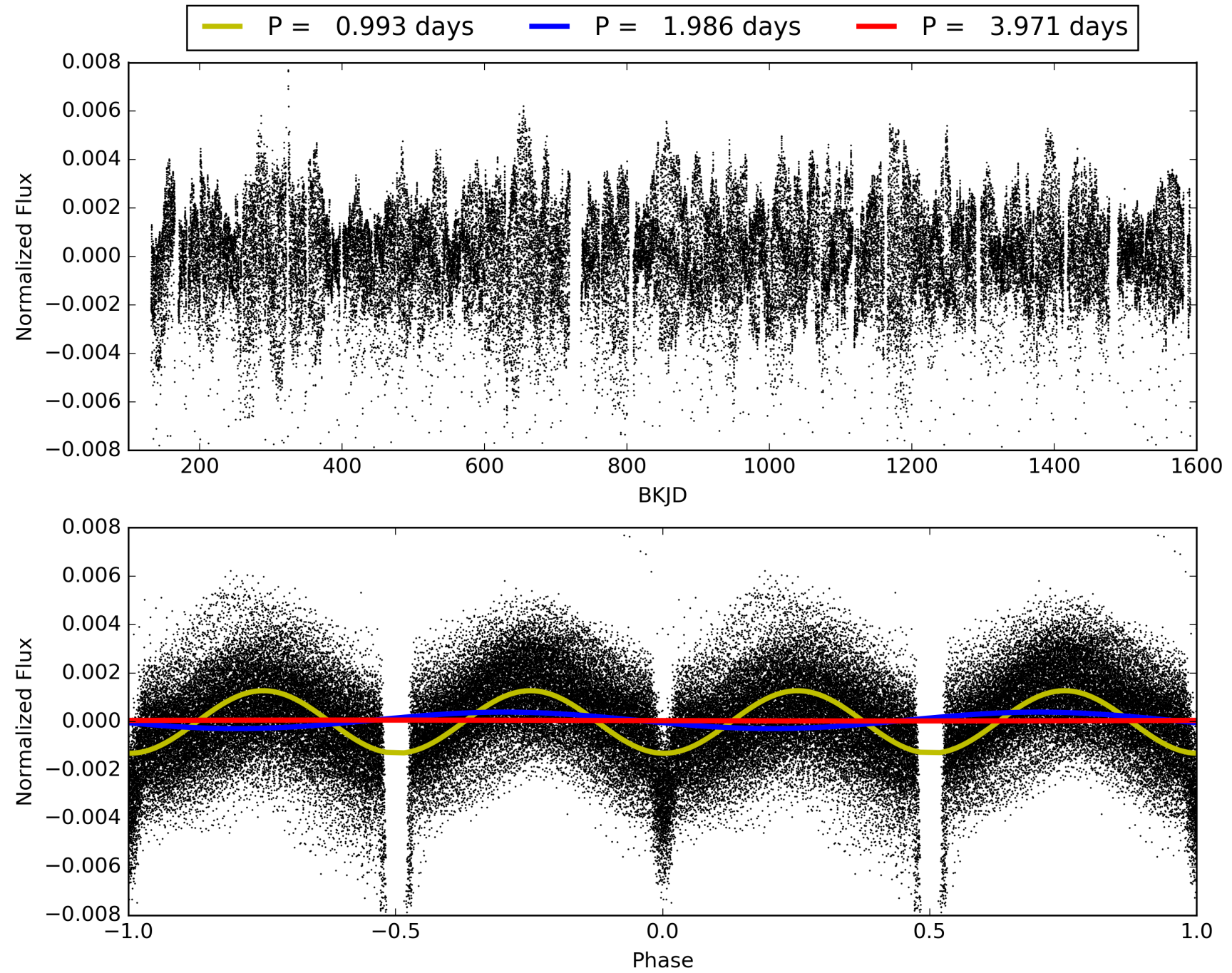
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.65σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [638/638]
GhostDiagnostic-chr: 0.3662
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.095 arcsec [0.84σ]
KicOffset-rm: 0.043 arcsec [0.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008019043-02, PDC Light Curves

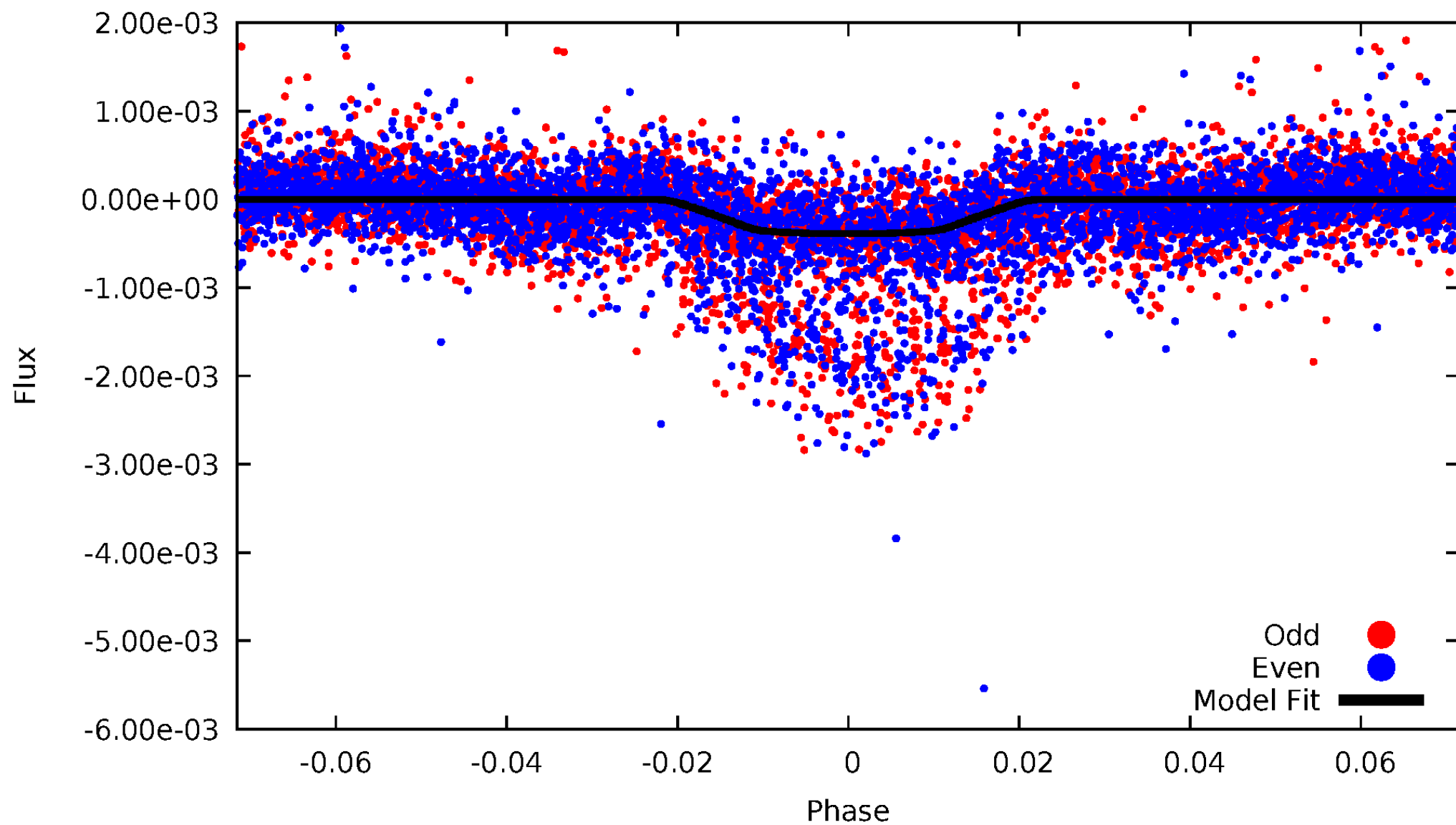


TCE 008019043-02



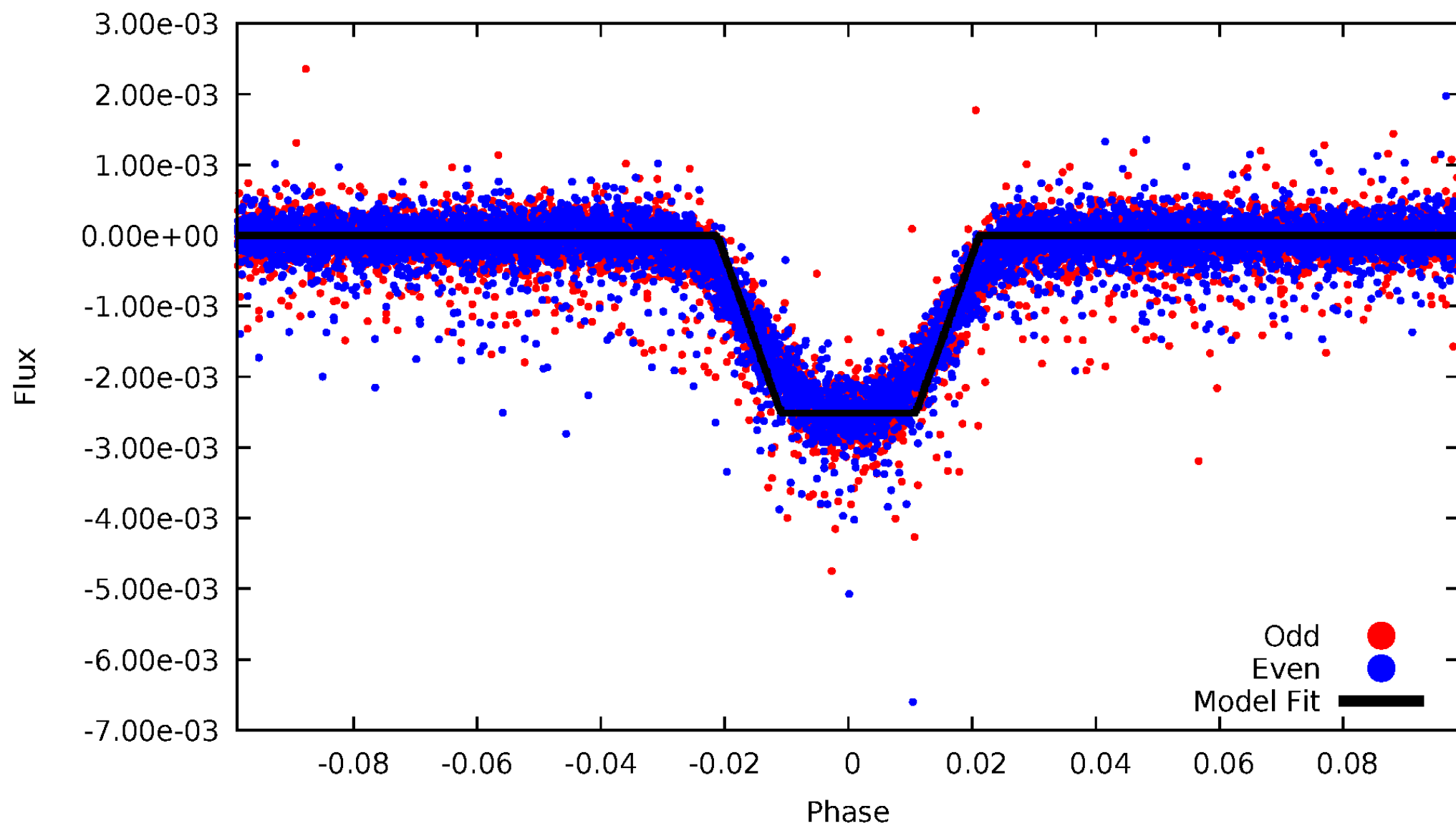
DV Odd/Even

TCE 008019043-02



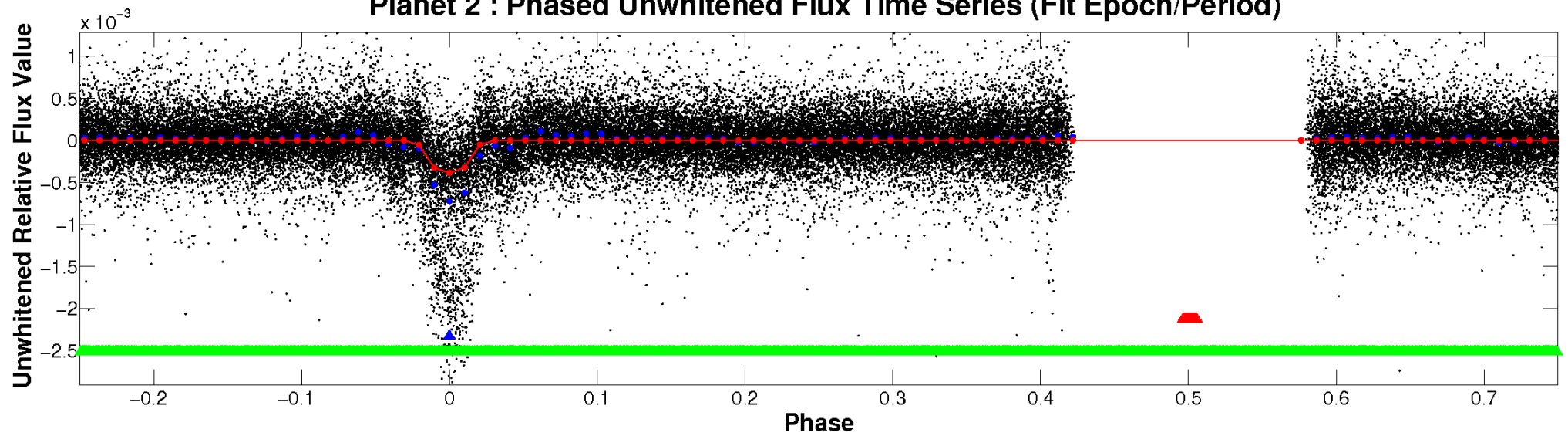
ALT Odd/Even

TCE 008019043-02

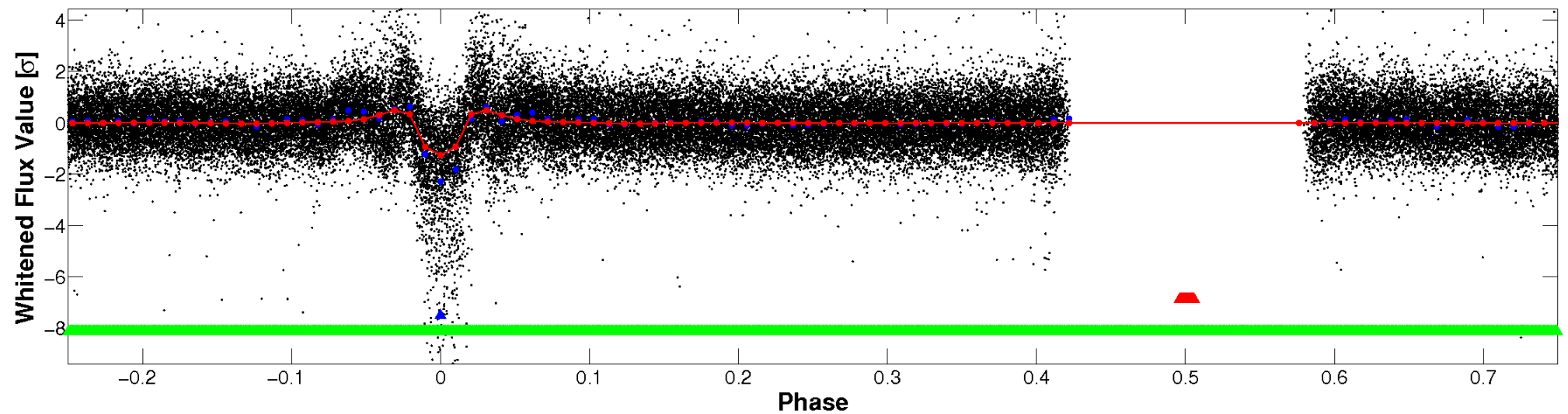


Non-Whitened Vs. Whitened Light Curve

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

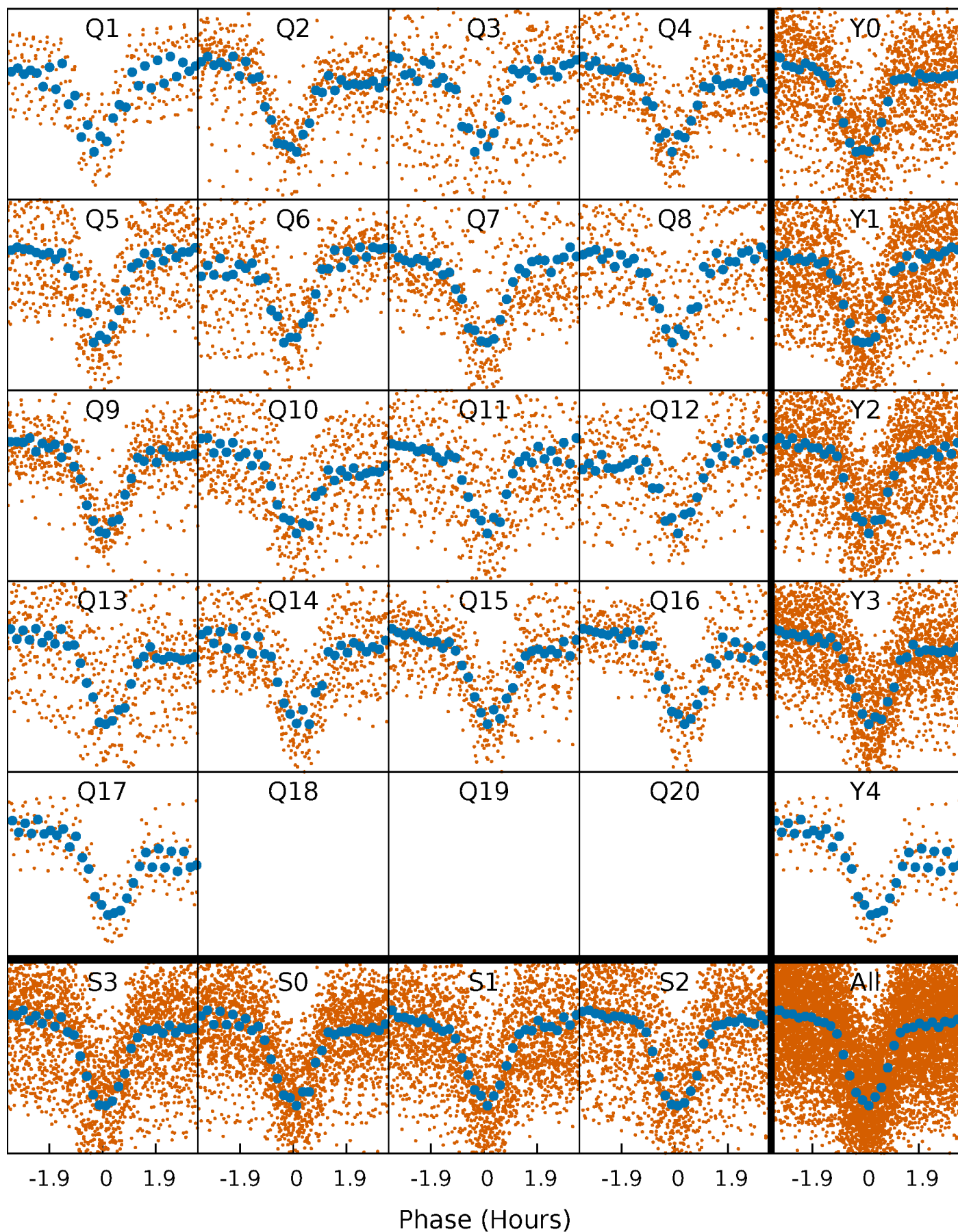


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



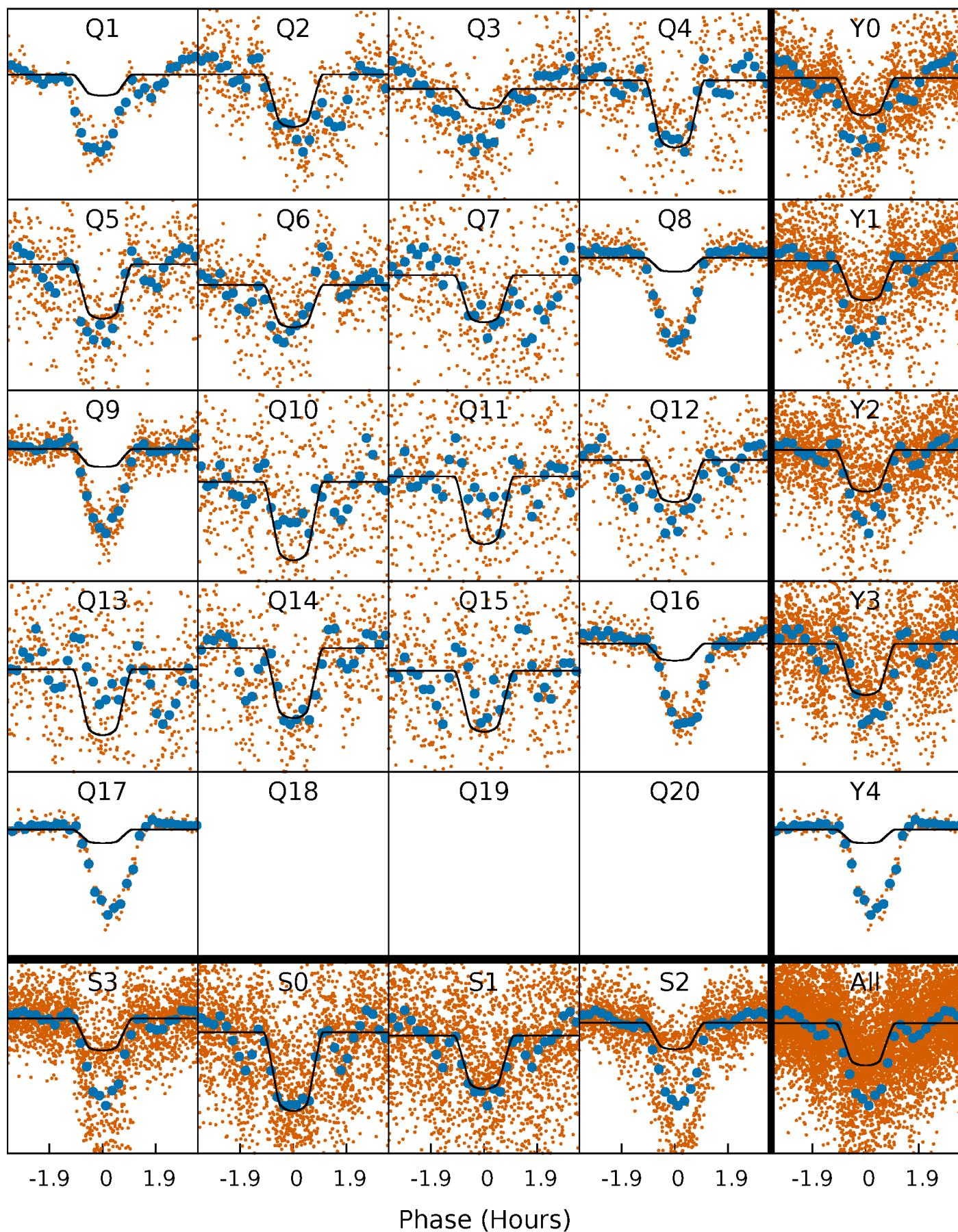
PDC Quarter-Phased Transit Curves

TCE 008019043-02 P= 1.985559 Days $T_0=131.949011$ (BKJD)



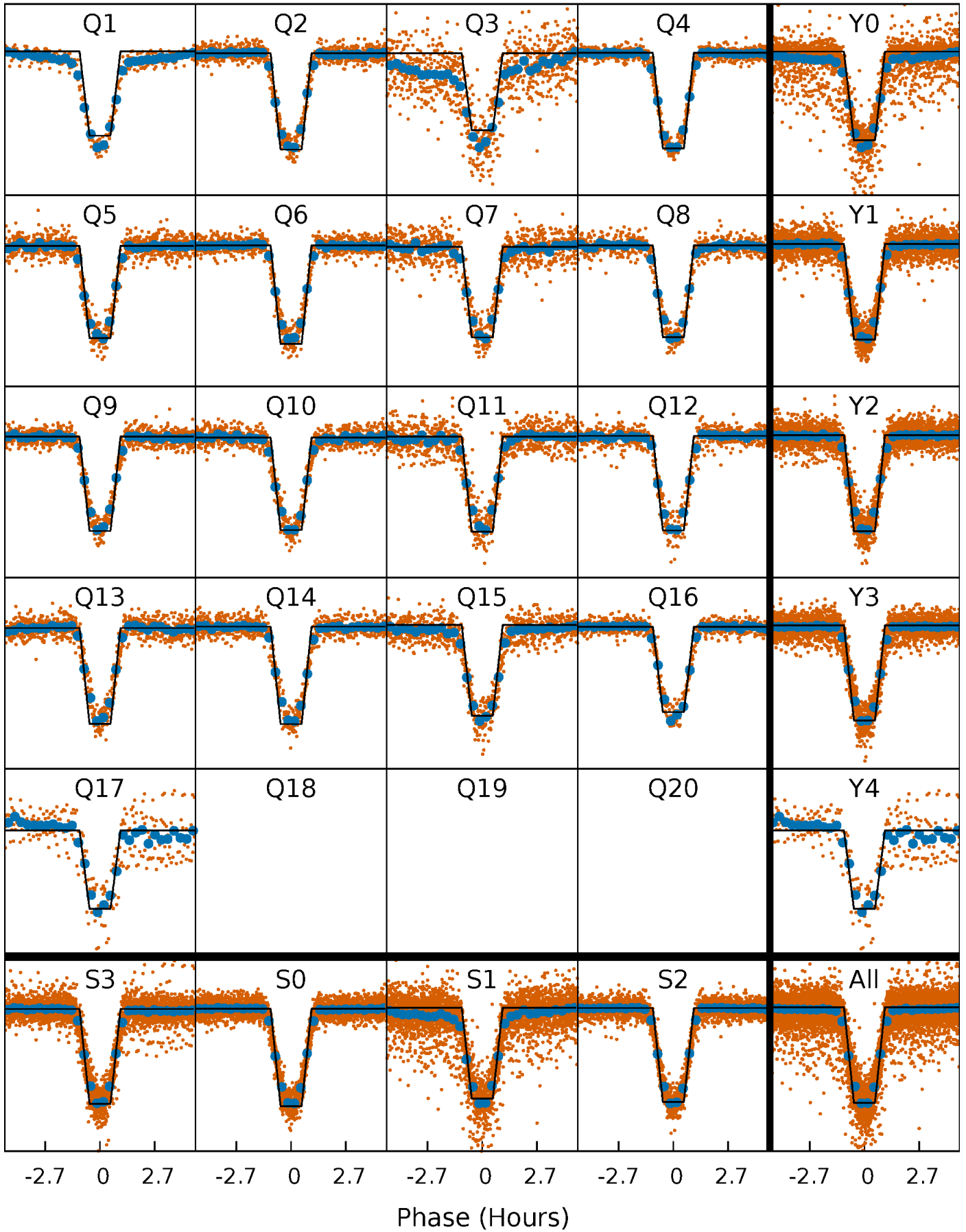
DV Quarter-Phased Transit Curves

TCE 008019043-02 P= 1.985559 Days $T_0=131.949011$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

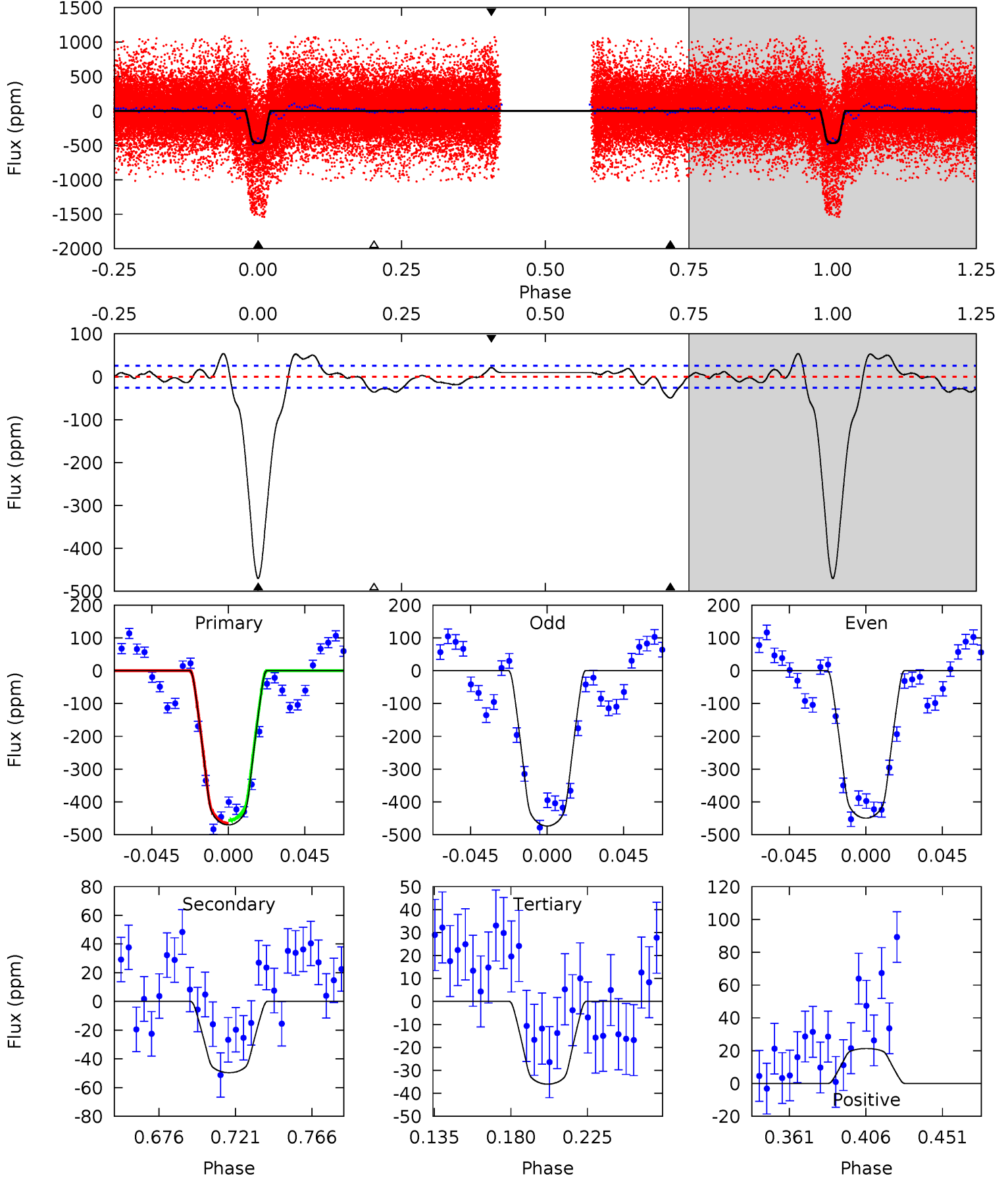
TCE 008019043-02 P= 1.985583 Days $T_0=131.942336$ (BKJD)



DV Model-Shift Uniqueness Test

008019043-02, P = 1.985559 Days, E = 129.963452 Days

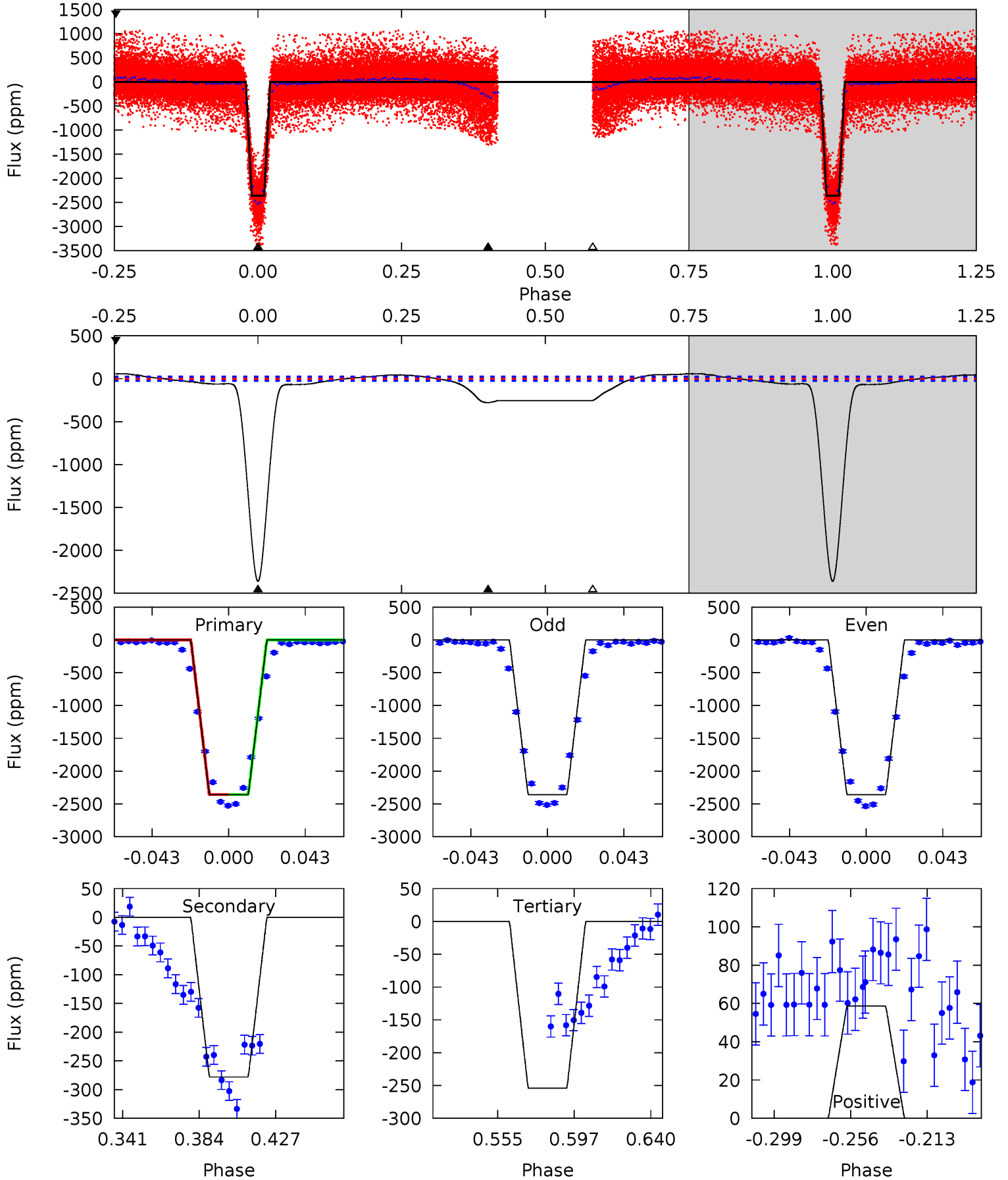
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.9	9.07	6.58	3.89	4.73	2.00	3.67	79.3	82.0	2.49	5.17	2.18	1.54	0.10	0.83



Alt Model-Shift Uniqueness Test

008019043-02, P = 1.985583 Days, E = 129.956753 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
461.3	54.4	49.7	11.5	4.74	2.03	10.6	411.7	449.9	4.71	42.9	0.02	1.02	0.02	0.06



Stellar Parameters For KIC 008019043

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6651^{+180}_{-180}	$3.600^{+0.330}_{-0.110}$	$-0.480^{+0.400}_{-0.250}$	$3.219^{+0.431}_{-1.208}$	$1.503^{+0.223}_{-0.334}$	$0.064^{+0.167}_{-0.017}$
	+3%/-3%	+9%/-3%	+83%/-52%	+13%/-38%	+15%/-22%	+263%/-28%
Source	PHO1	FLK73	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 008019043-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-50 ± 5	$7.16^{+1.17}_{-1.51}$	3856^{+212}_{-373}	3727^{+270}_{-296}	$0.683^{+0.351}_{-0.183}$
Alt.	-278 ± 5	$17.21^{+2.22}_{-3.41}$	3853^{+222}_{-378}	3706^{+177}_{-176}	$0.661^{+0.319}_{-0.138}$

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

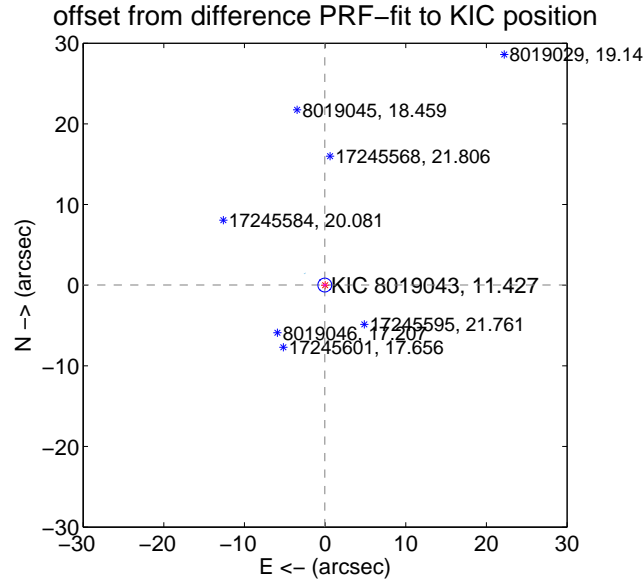
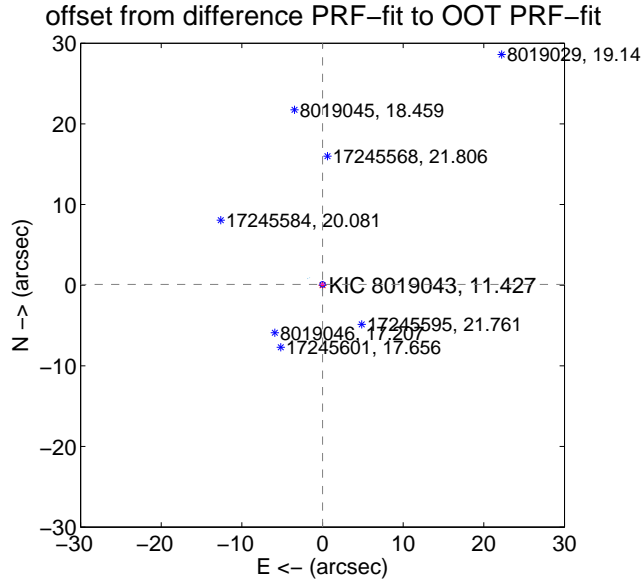
DV Centroid Data

Supplemental centroid analysis for 008019043-02. **Kepler magnitude: 11.43.** Transit SNR 51.24

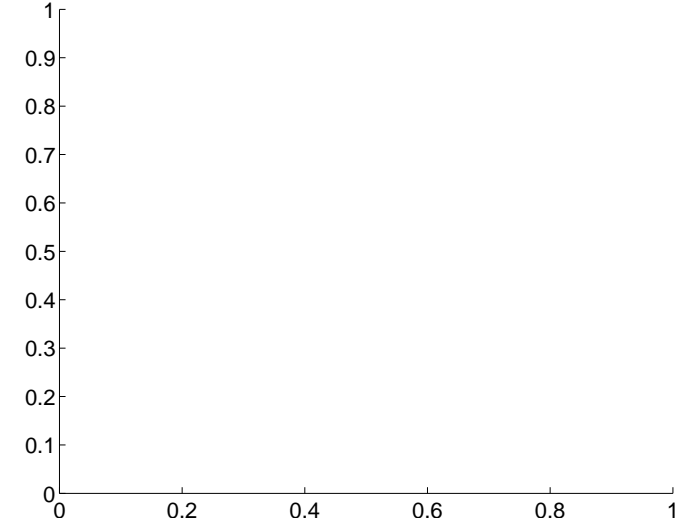
There are 17 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.113	0.84	-0.001 ± 0.176	0.095 ± 0.114
PRF-fit source offset from KIC position	0.043 ± 0.285	0.15	0.041 ± 0.251	0.015 ± 0.167
photometric centroid source offset	—	—	—	—

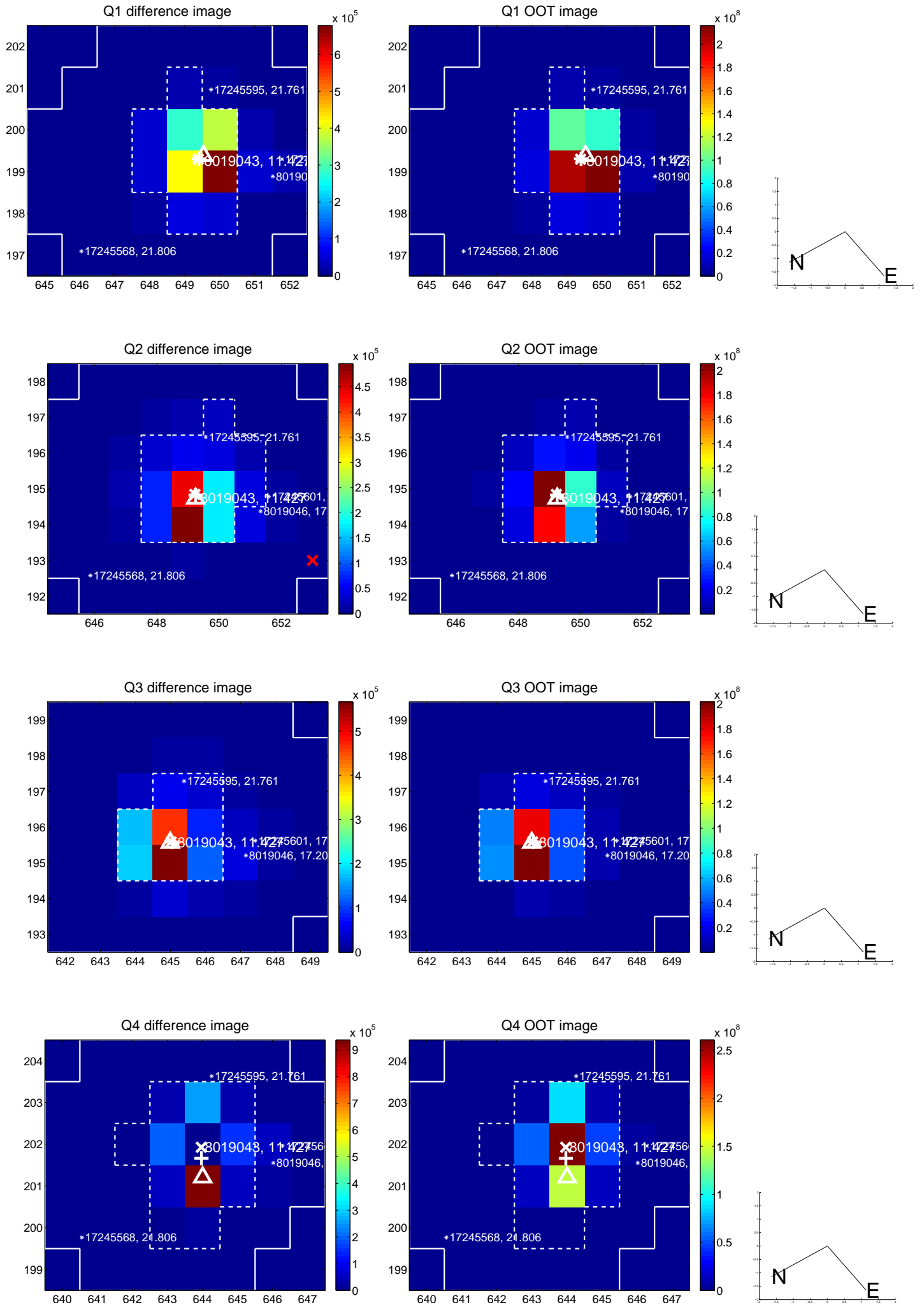


There are no photometric centroids

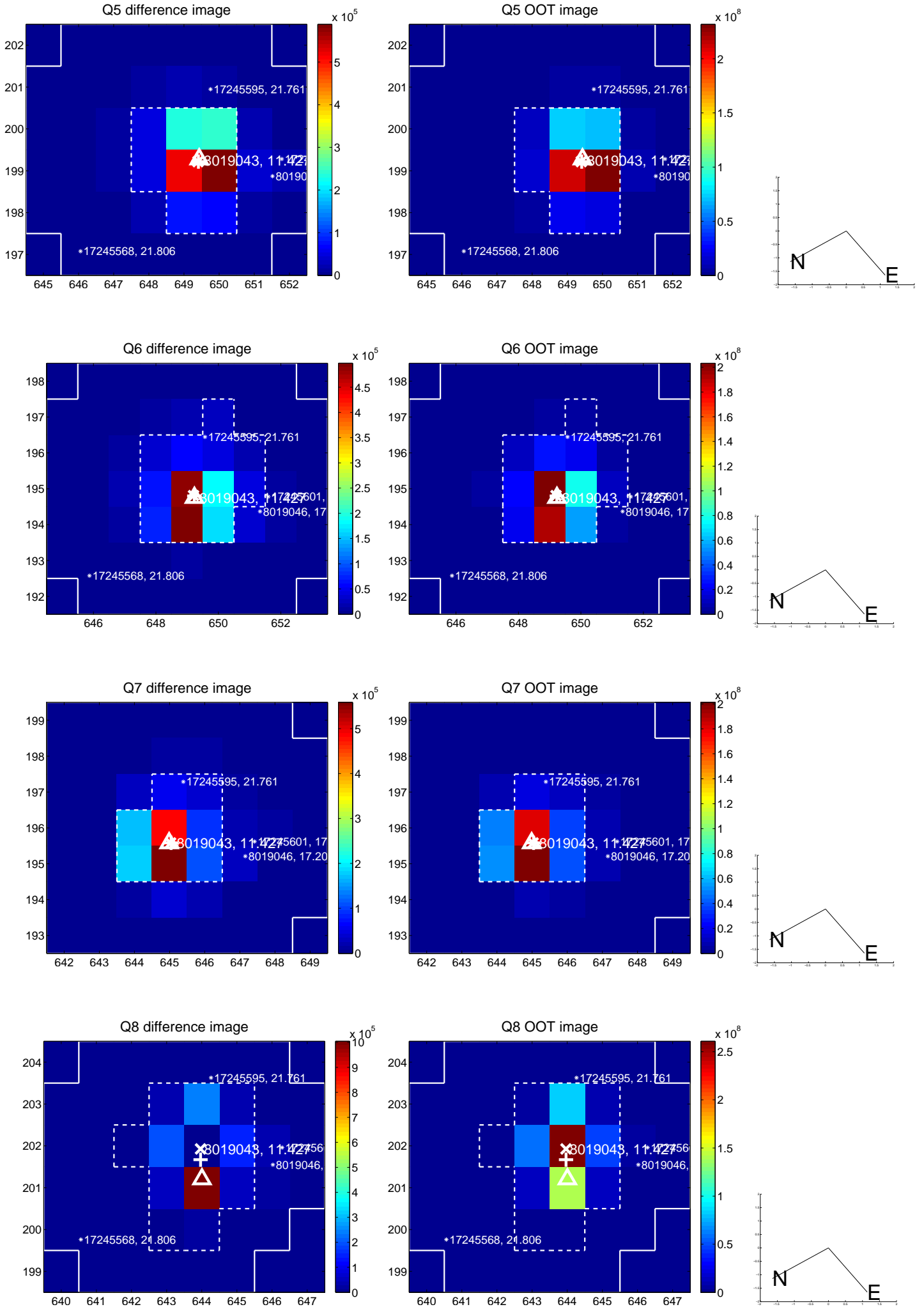


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

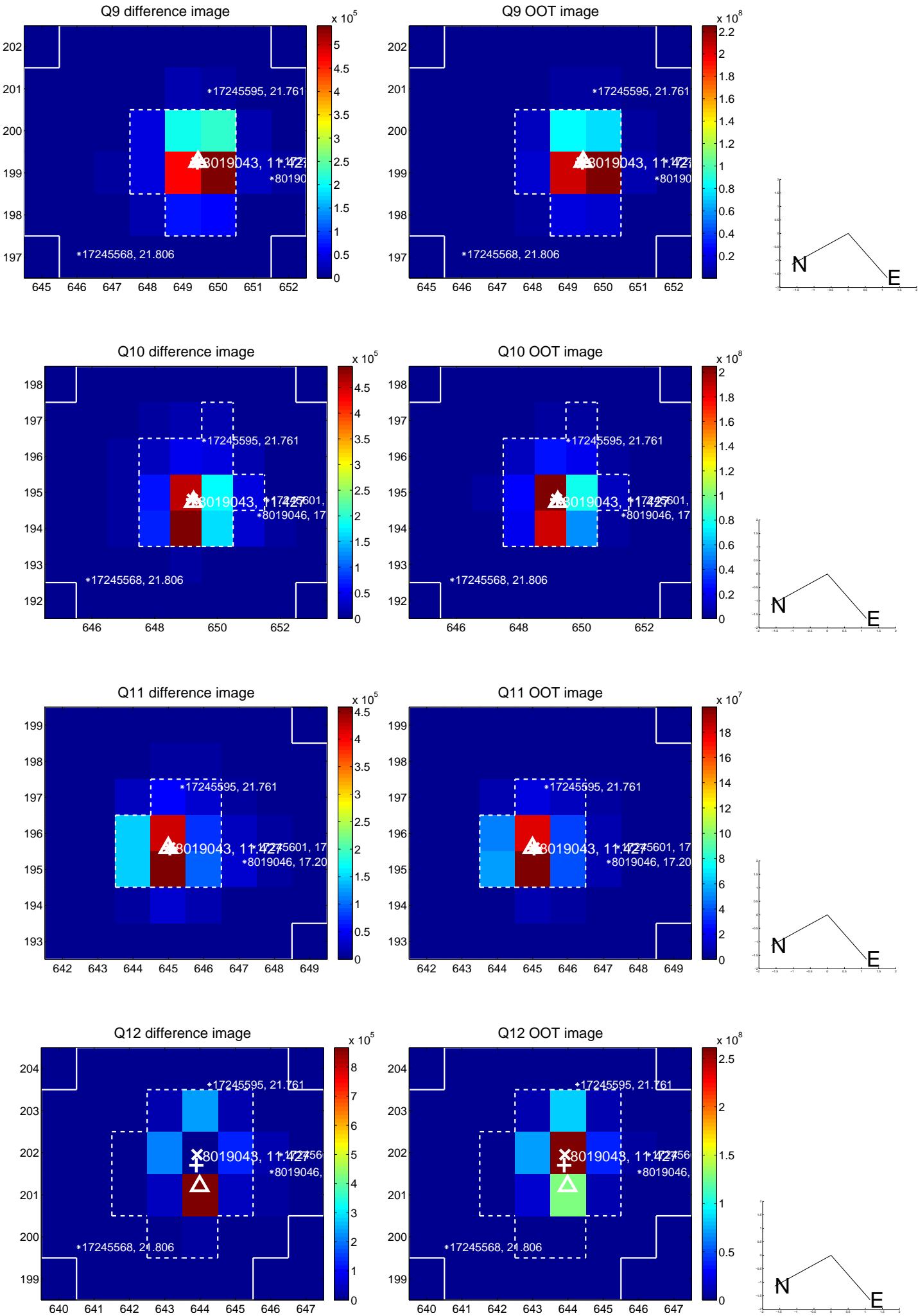
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



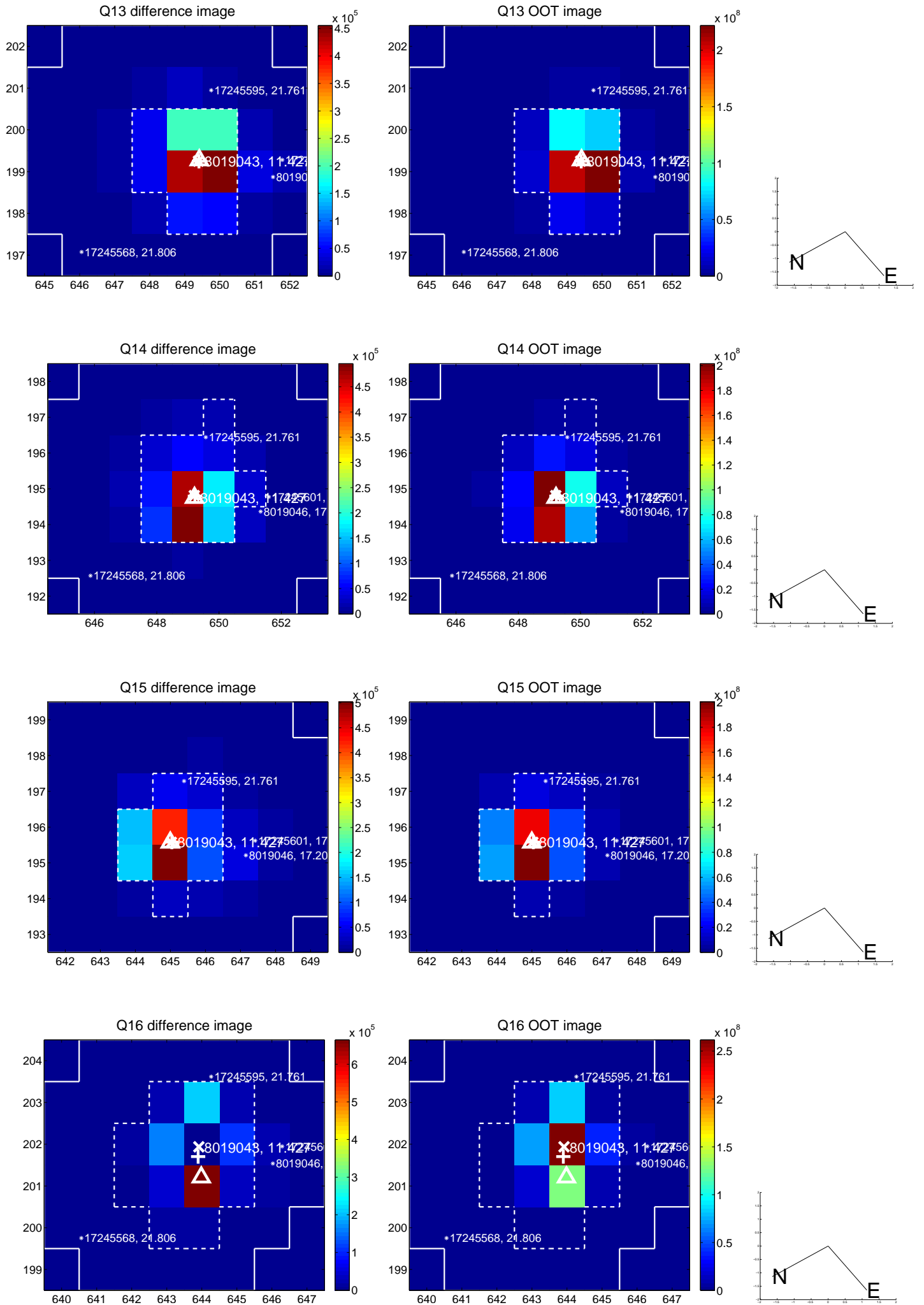
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



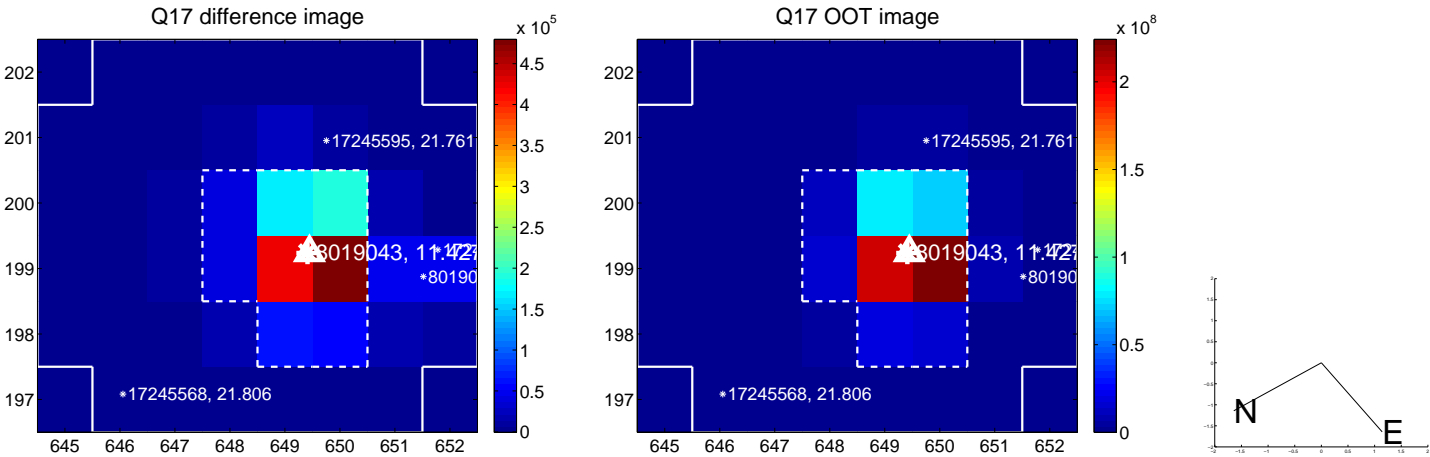
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



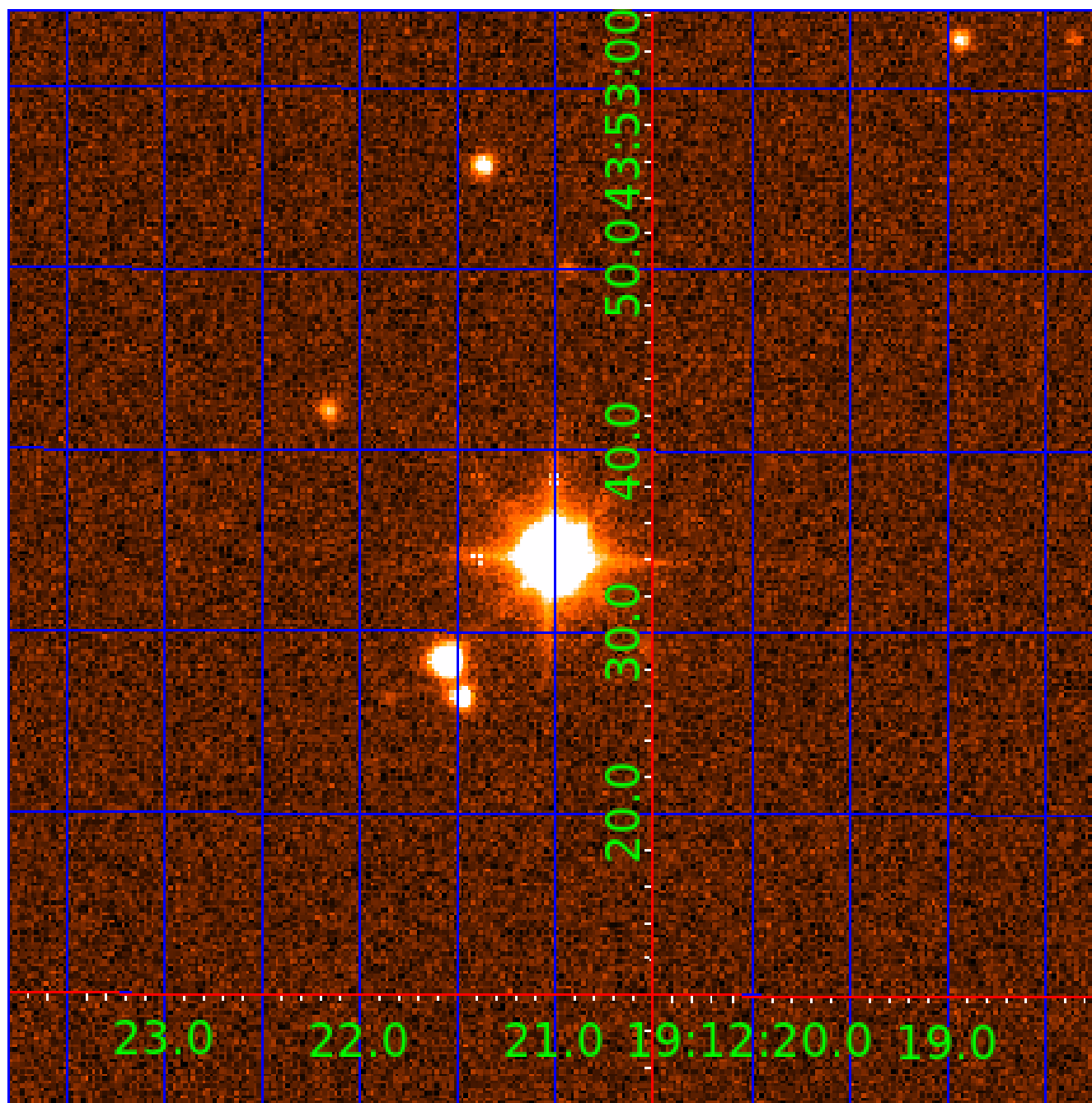
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008019043

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})
008019043-01	OBS	6048.01	1.985585	132.934134	70236.1	2.470	9029.4	5299.8	3.22	6651	96.23	14467.88
008019043-02	OBS	No	1.985559	131.949010	389.6	1.704	105.9	51.2	3.22	6651	7.36	14468.13
008019043-03	OBS	6048.02	0.804895	132.052164	138.1	0.915	16.7	23.4	3.22	6651	4.45	48224.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008019043-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—HAS_SEC_TCE—CENT_SATURATED
008019043-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
008019043-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_SATURATED—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.

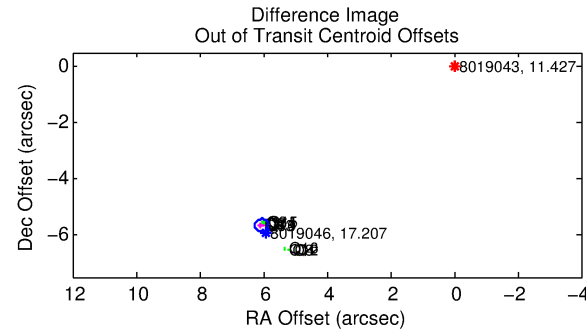
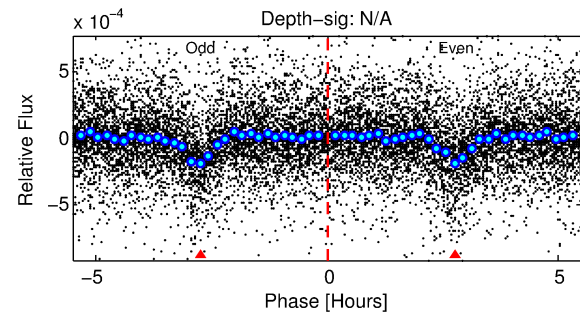
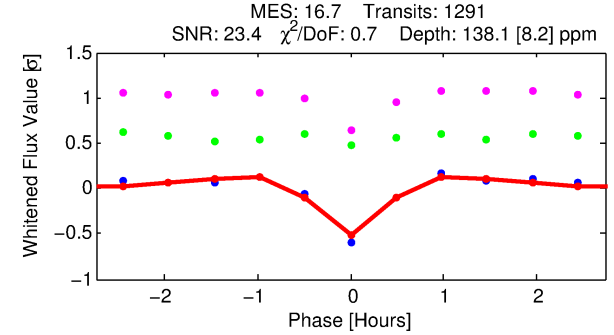
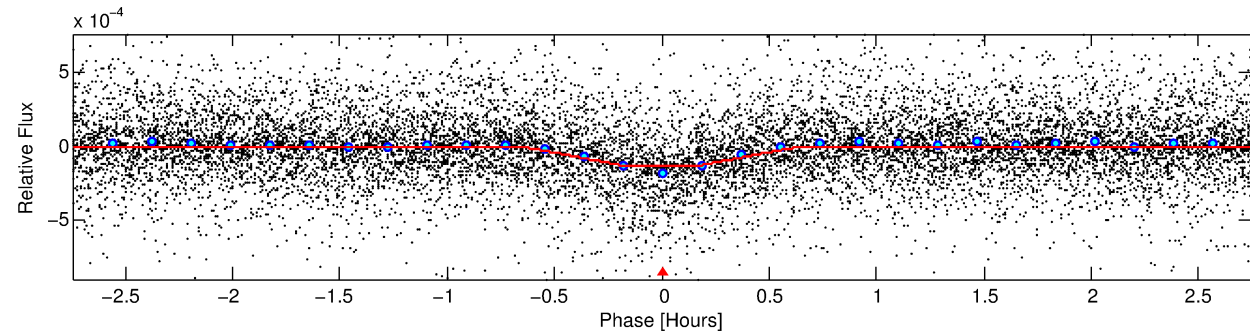
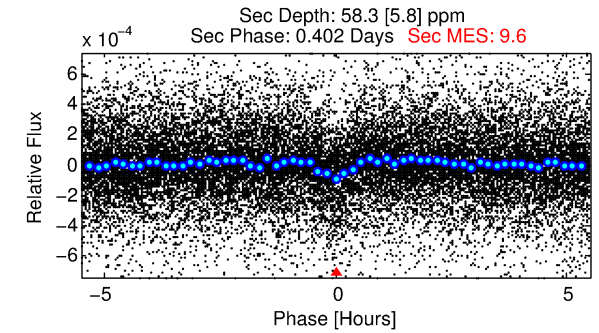
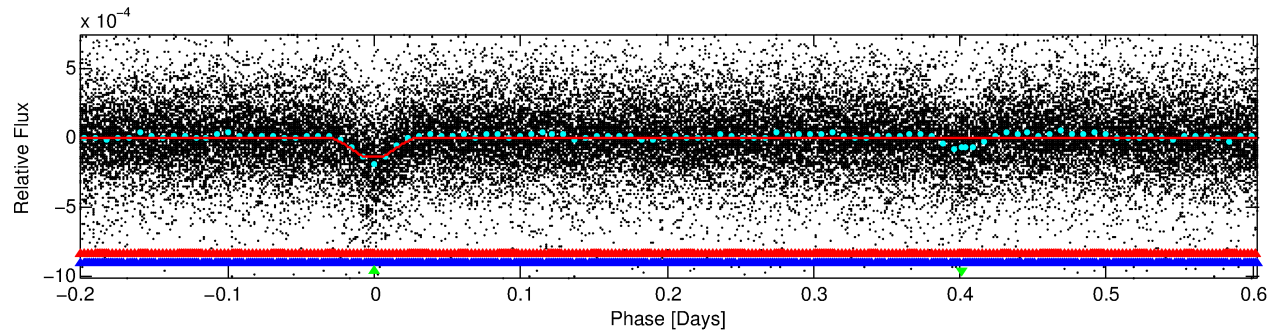
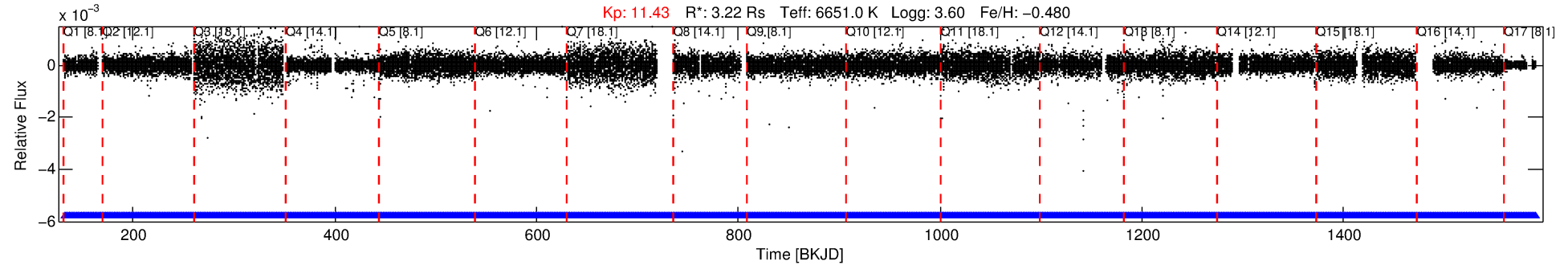
Ephemeris Match Information For 008019043-03

No Significant Match Found

DV One-Page Summary

KIC: 8019043 Candidate: 3 of 3 Period: 0.805 d
KOI: K06048 Corr: No Ephemeris Match

Kp: 11.43 R*: 3.22 Rs Teff: 6651.0 K Logg: 3.60 Fe/H: -0.480



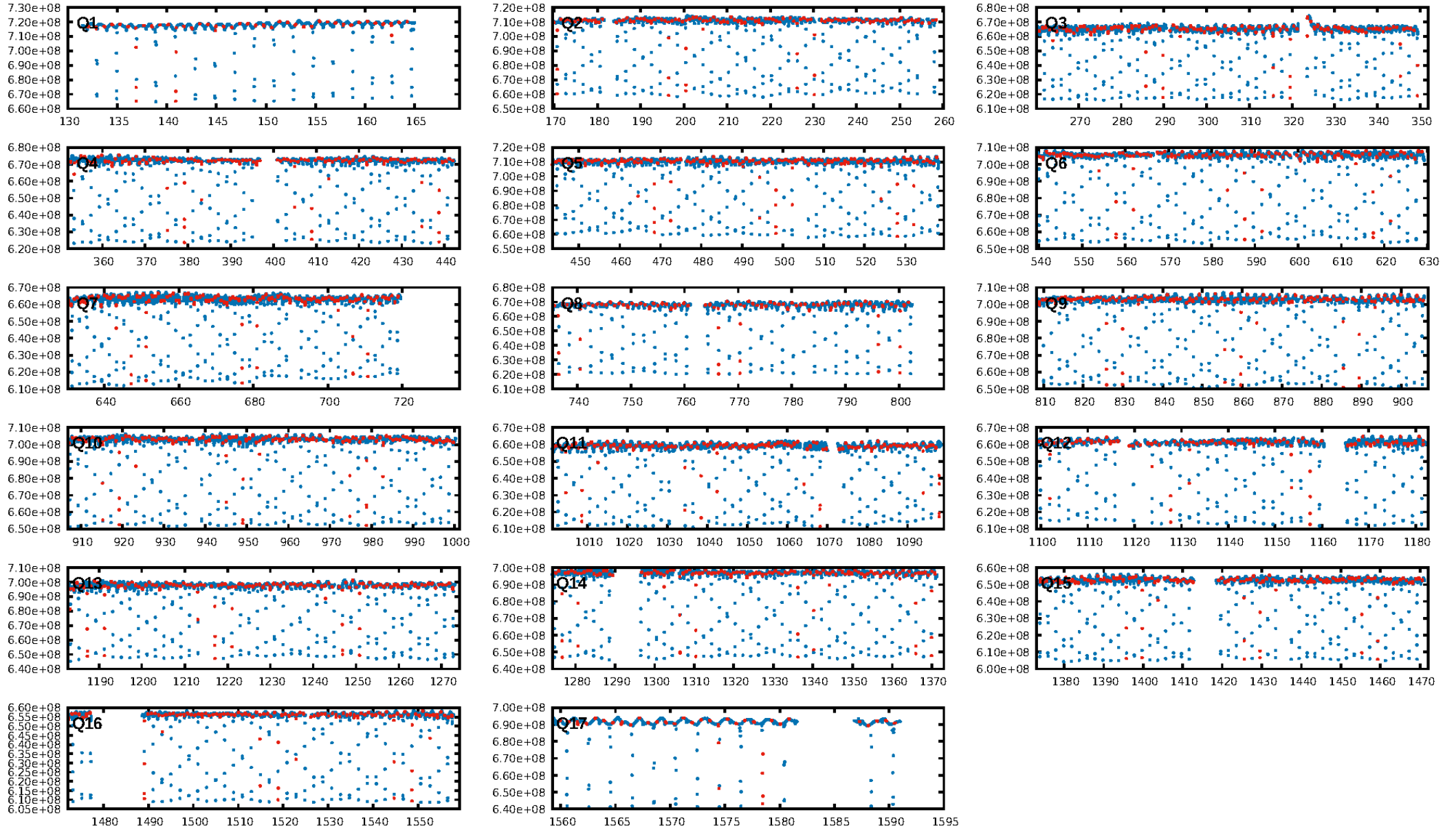
DV Fit Results:

Period = 0.80490 [0.00000] d
Epoch = 132.0522 [0.0005] BKJD
Rp/R* = 0.0127 [0.0024]
a/R* = 3.24 [3.27]
b = 0.90 [0.23]
Seff = 48224.78 [27741.68]
Teq = 3779 [543] K
Rp = 4.45 [1.87] Re
a = 0.0194 [0.0069] AU
Ag = 0.61 [0.42] [-0.94σ]
Teff = 5162 [519] K [1.84σ]

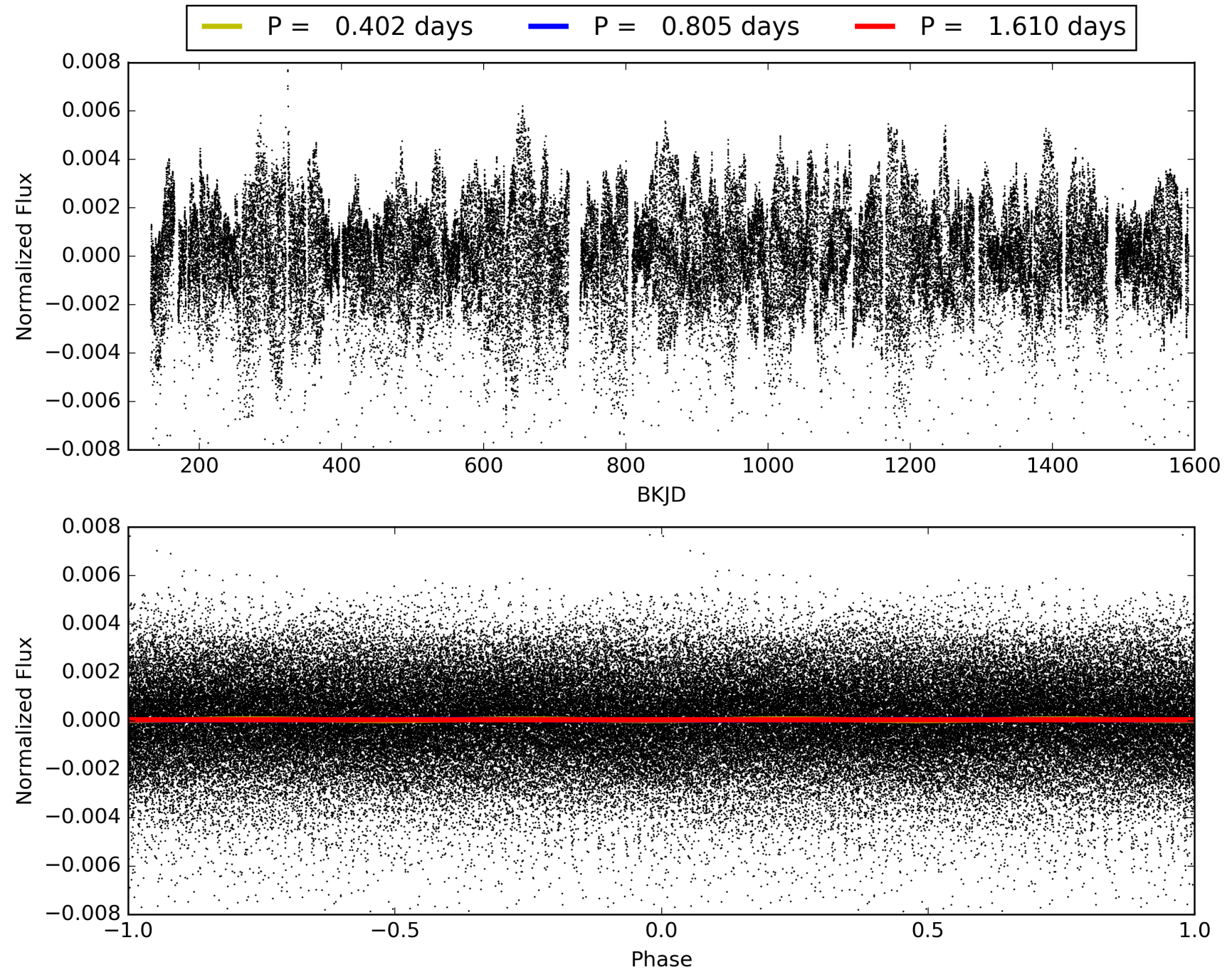
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [14.65σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1233/1233]
GhostDiagnostic-chr: -0.1657
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 8.289 arcsec [112.17σ]
KicOffset-rm: 8.371 arcsec [116.00σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008019043-03, PDC Light Curves

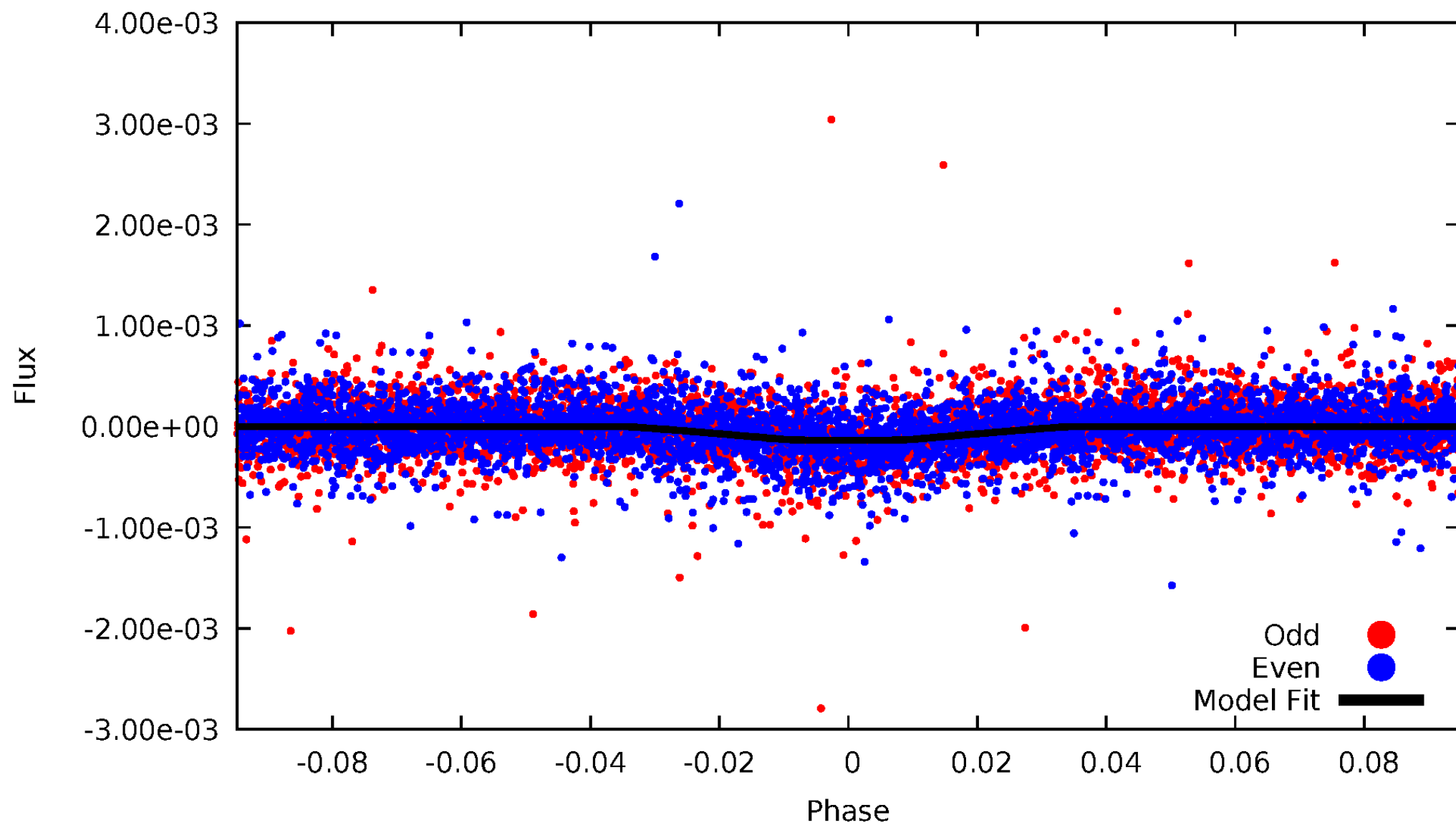


TCE 008019043-03



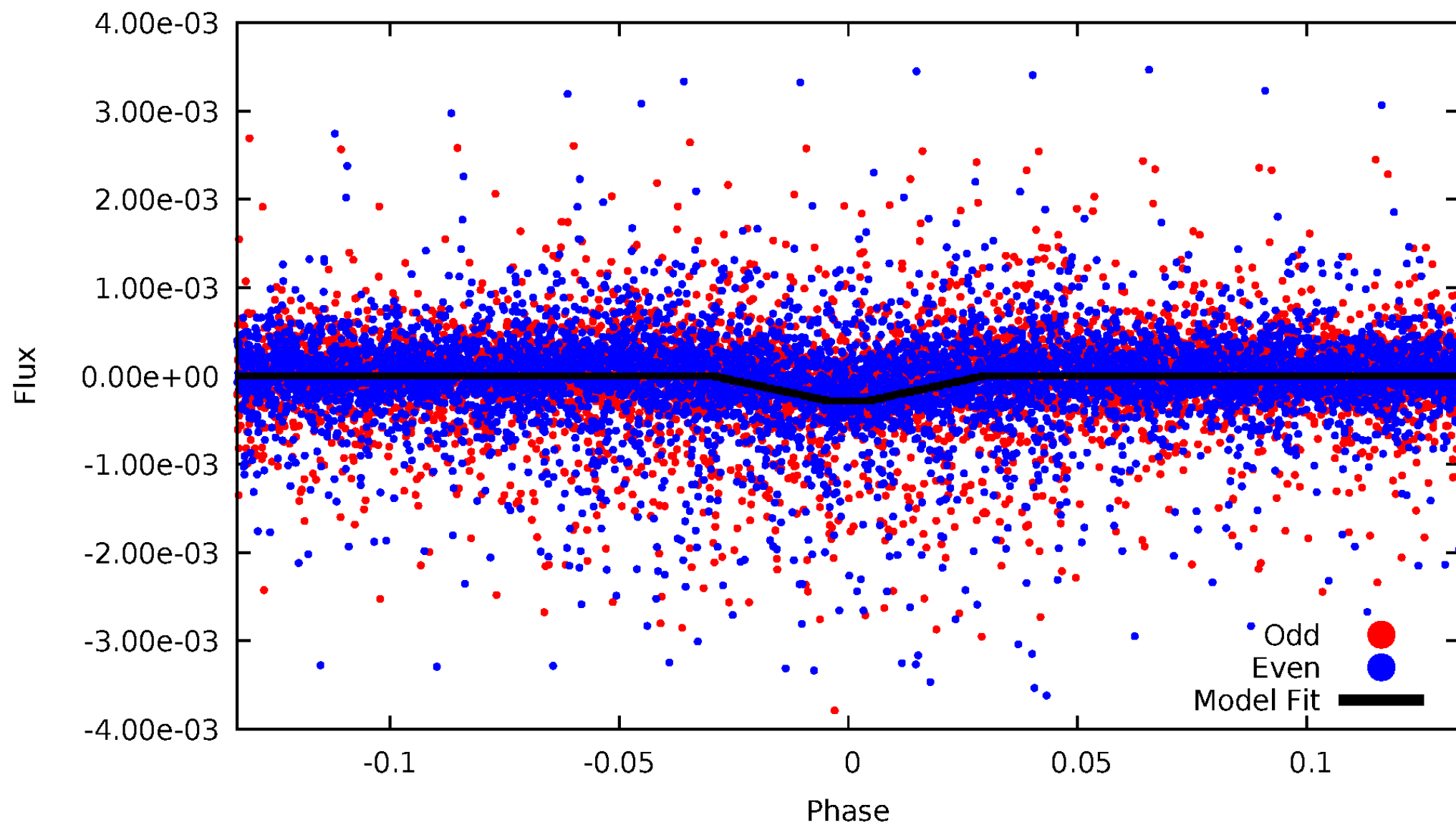
DV Odd/Even

TCE 008019043-03

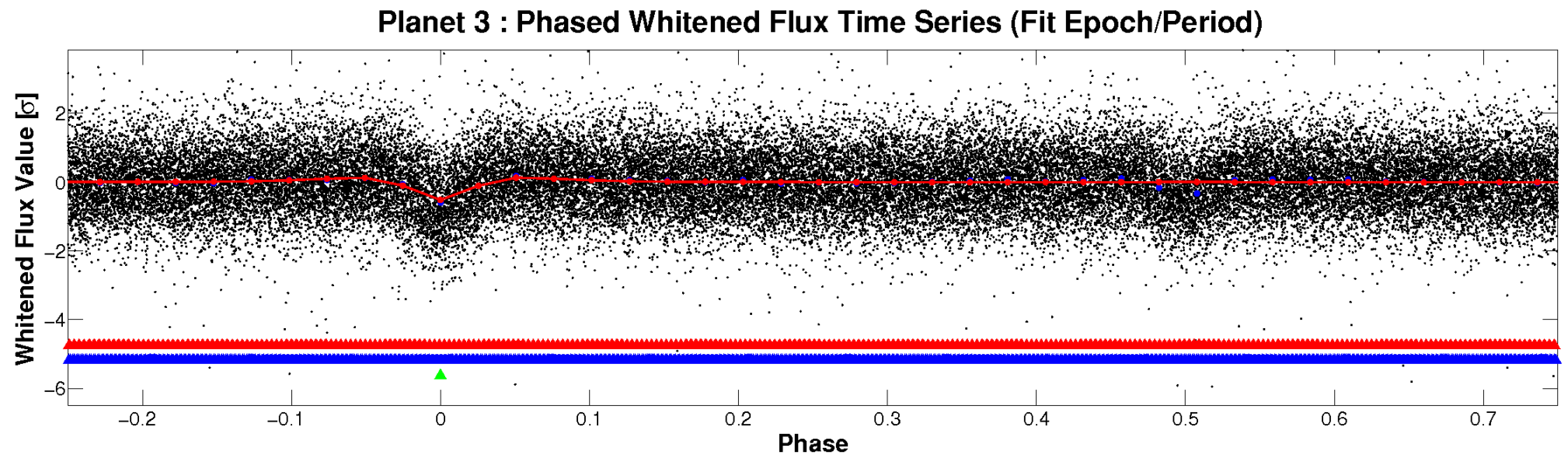
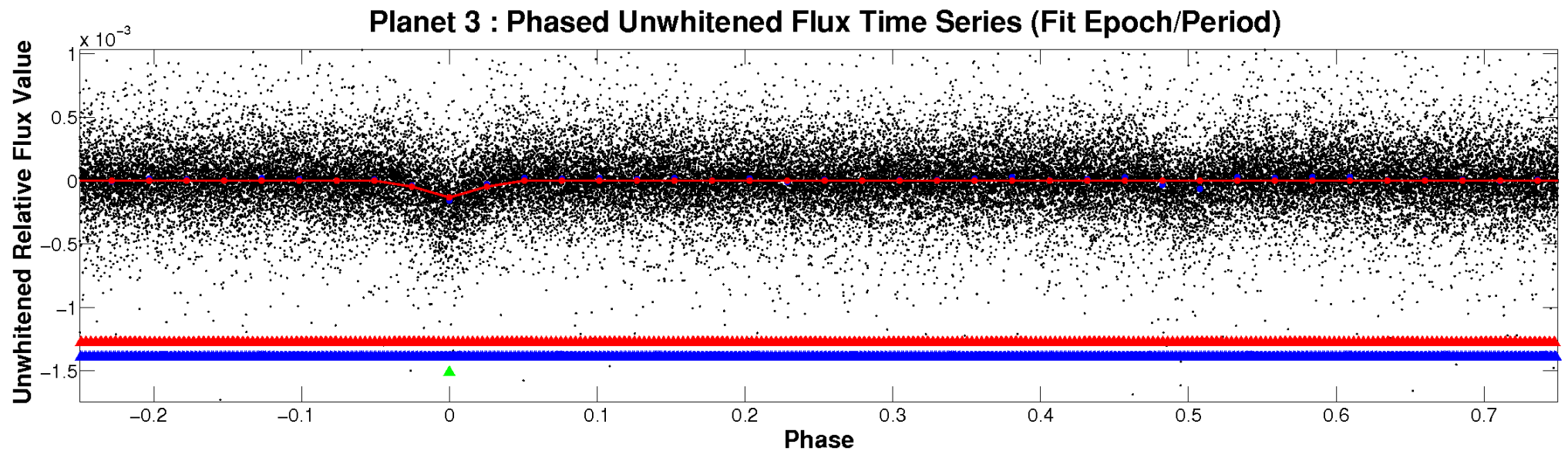


ALT Odd/Even

TCE 008019043-03

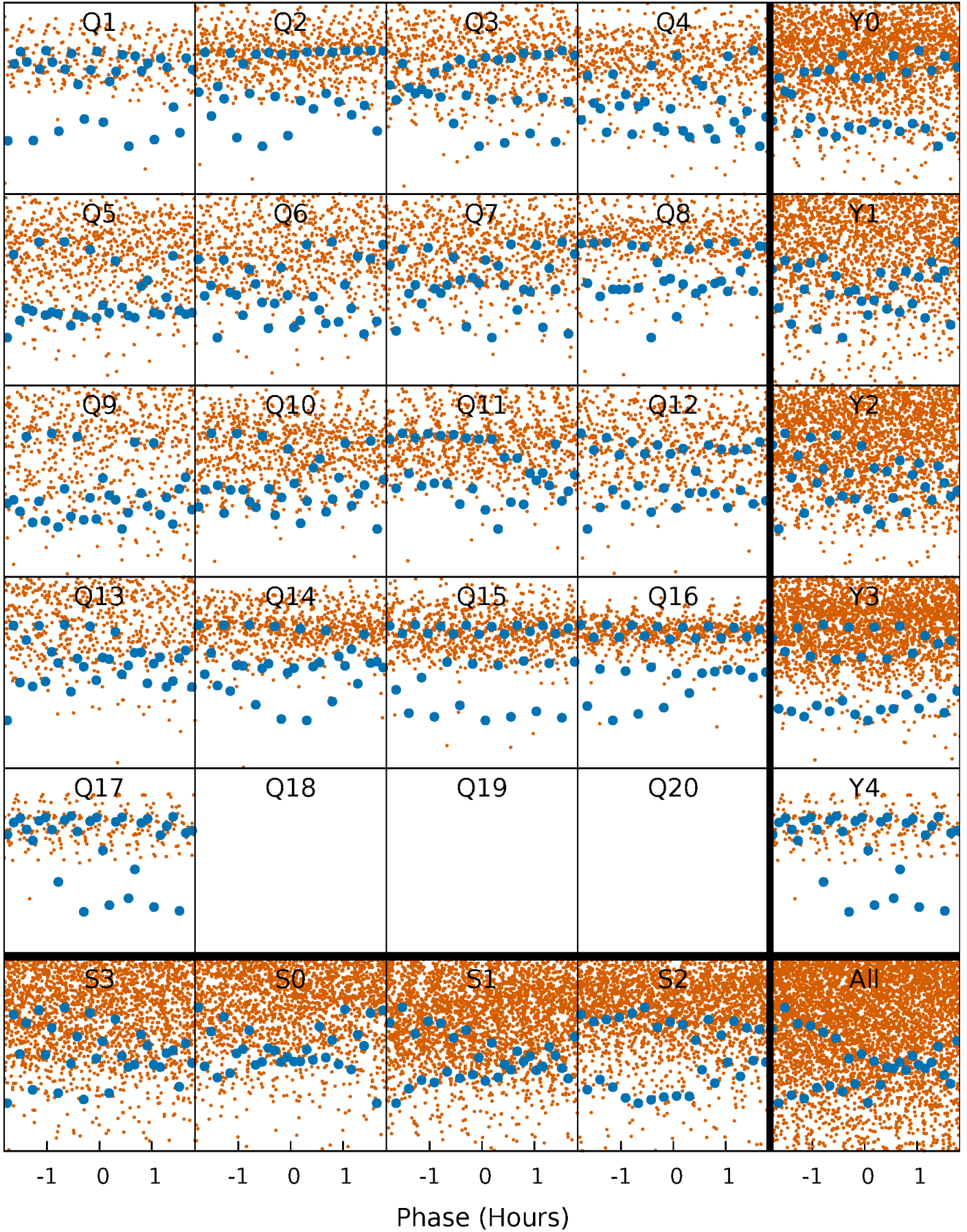


Non-Whitened Vs. Whitened Light Curve



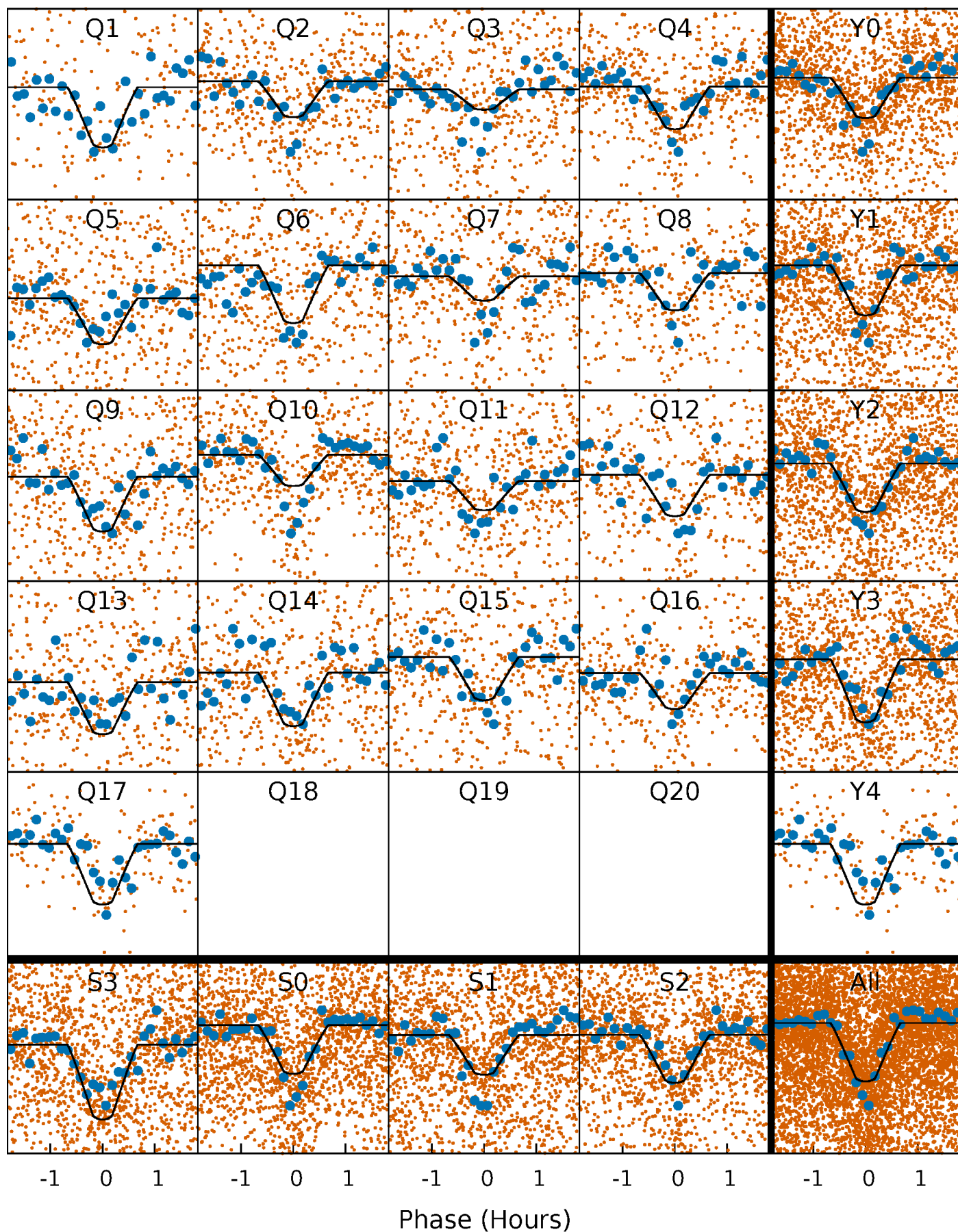
PDC Quarter-Phased Transit Curves

TCE 008019043-03 P= 0.804895 Days $T_0=132.052164$ (BKJD)



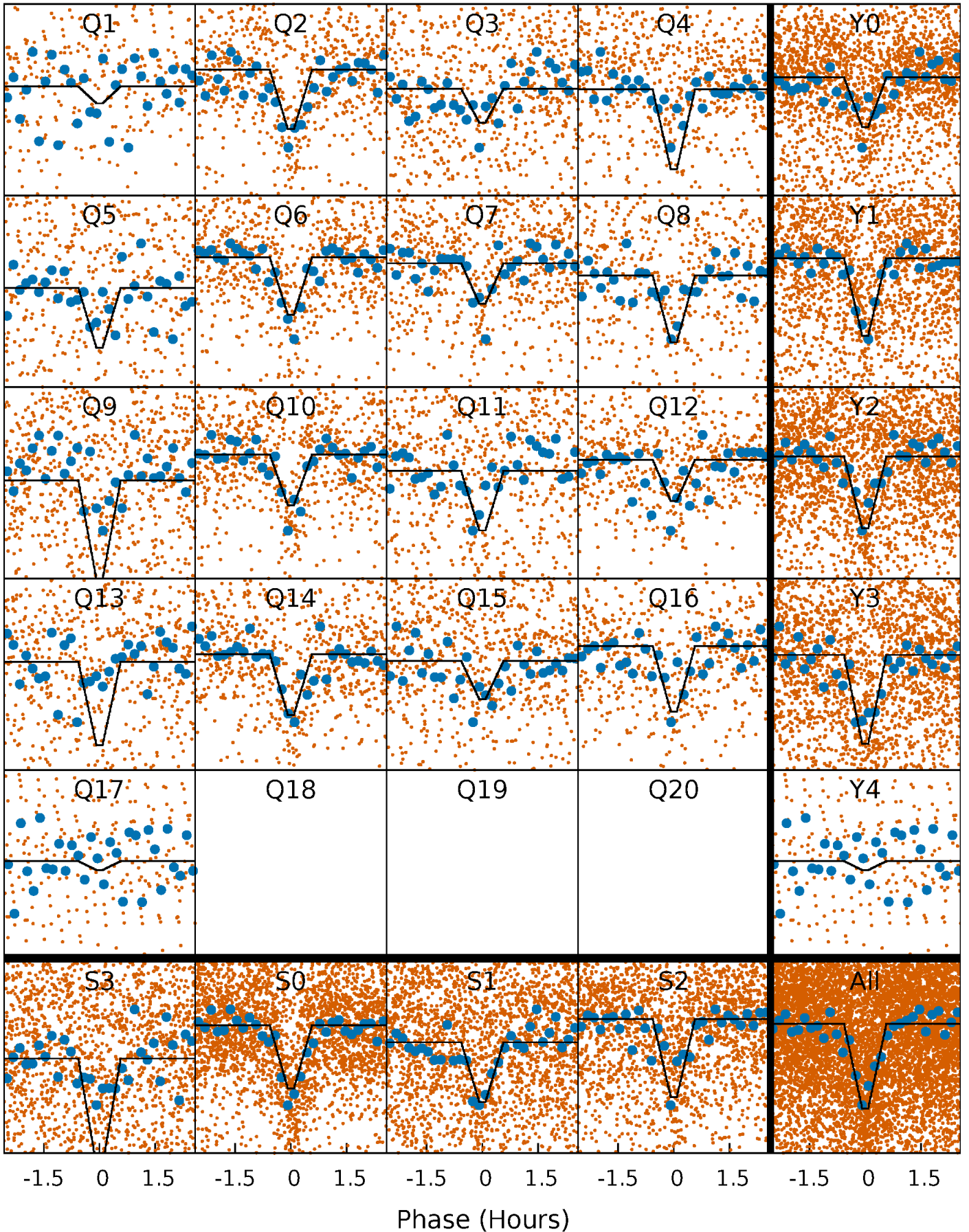
DV Quarter-Phased Transit Curves

TCE 008019043-03 P= 0.804895 Days $T_0=132.052164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

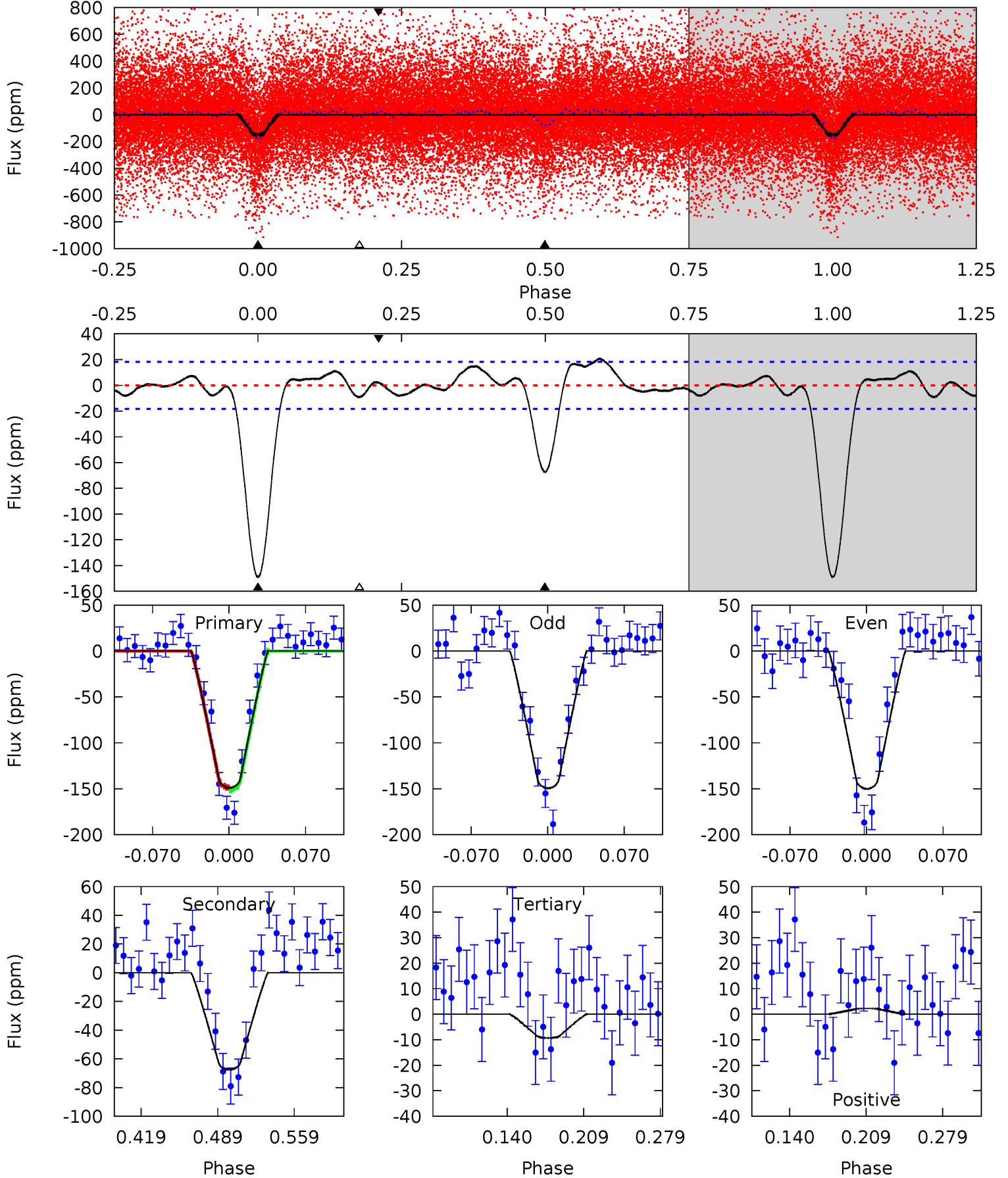
TCE 008019043-03 P= 0.804898 Days $T_0=132.050711$ (BKJD)



DV Model-Shift Uniqueness Test

008019043-03, P = 0.804895 Days, E = 131.247269 Days

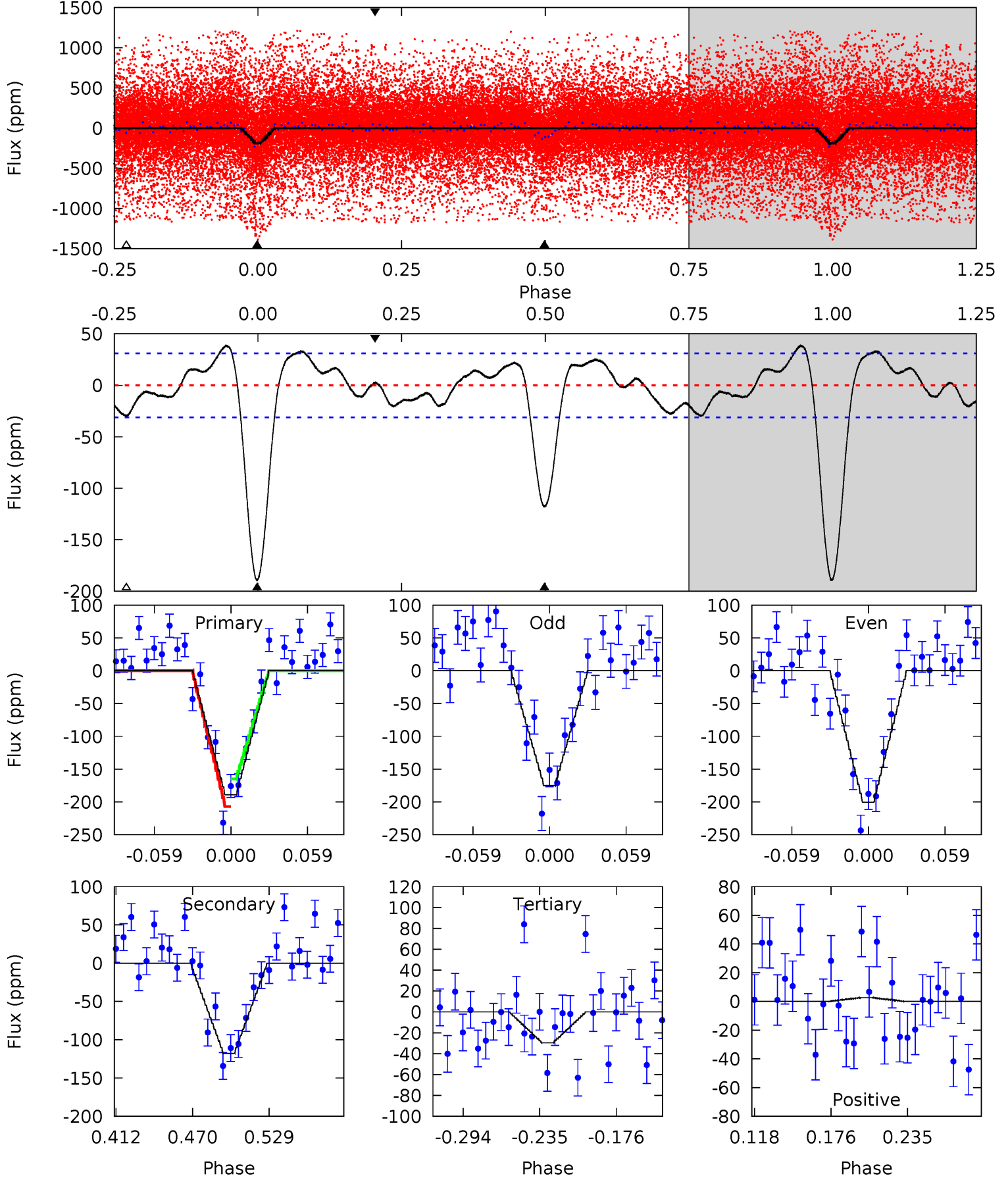
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.7	17.1	2.36	0.56	4.64	1.81	1.79	35.4	37.2	14.7	16.5	0.08	0.99	0.12	0.30



Alt Model-Shift Uniqueness Test

008019043-03, P = 0.804898 Days, E = 131.245813 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	17.7	4.47	0.40	4.67	1.89	2.43	24.0	28.1	13.3	17.3	1.90	1.22	0.17	3.22



Stellar Parameters For KIC 008019043

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6651^{+180}_{-180}	$3.600^{+0.330}_{-0.110}$	$-0.480^{+0.400}_{-0.250}$	$3.219^{+0.431}_{-1.208}$	$1.503^{+0.223}_{-0.334}$	$0.064^{+0.167}_{-0.017}$
	+3%/-3%	+9%/-3%	+83%/-52%	+13%/-38%	+15%/-22%	+263%/-28%
Source	PHO1	FLK73	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 008019043-03 / KOI 6048.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-67 ± 4	$4.20^{+1.04}_{-0.95}$	5208^{+294}_{-475}	4852^{+674}_{-650}	$0.791^{+0.525}_{-0.278}$
Alt.	-118 ± 7	$5.67^{+1.16}_{-1.25}$	5204^{+308}_{-481}	4793^{+560}_{-505}	$0.743^{+0.511}_{-0.212}$

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 $A_{obs} \gg 1.0$

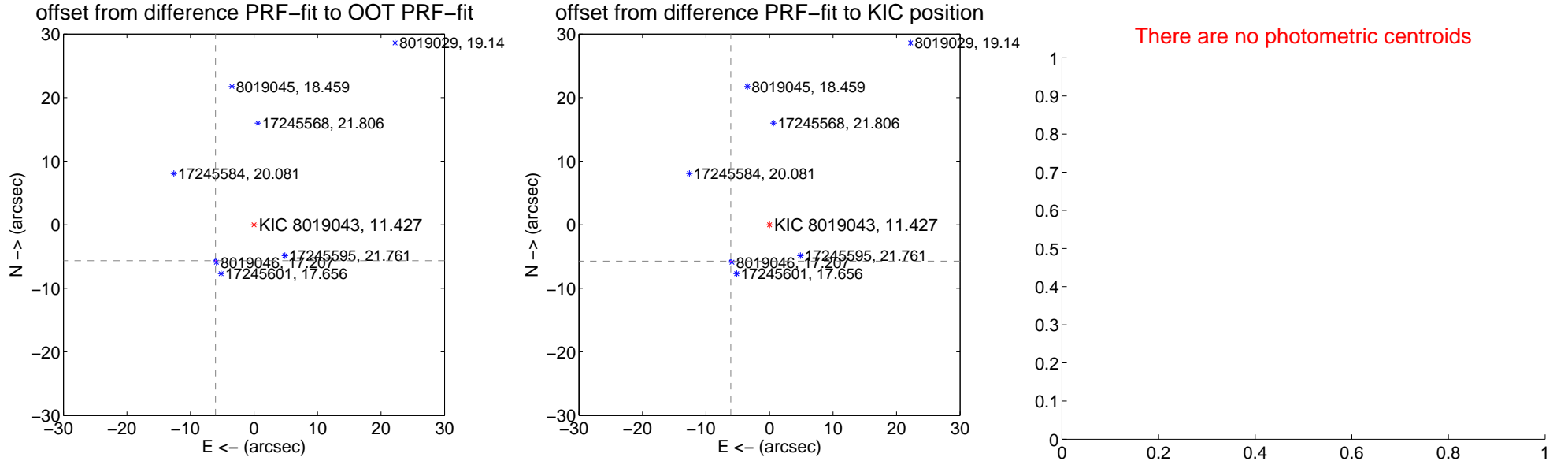
DV Centroid Data

Supplemental centroid analysis for 008019043-03. **Kepler magnitude: 11.43.** Transit SNR 23.35

There are 13 quarters with good PRF difference image offsets

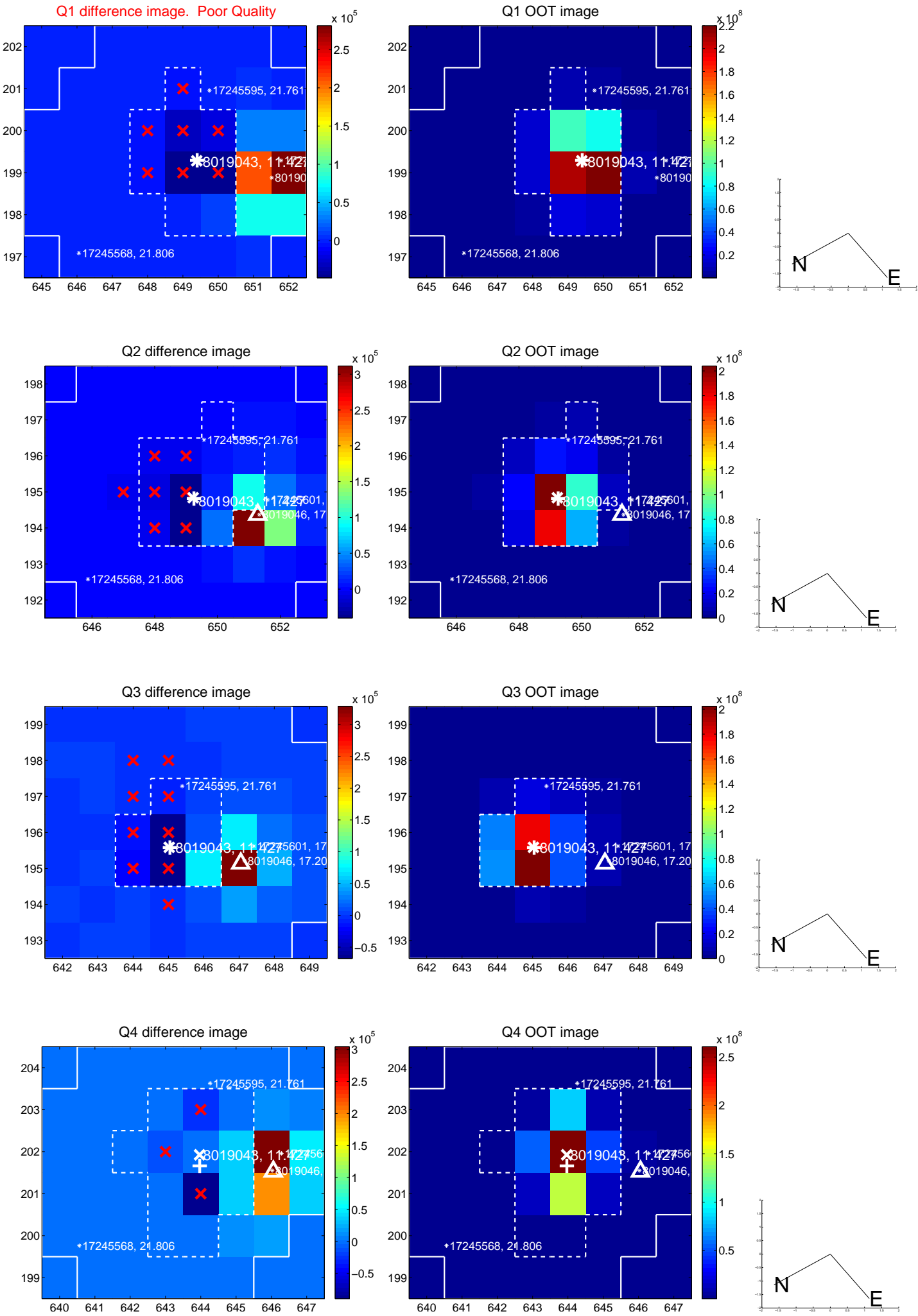
The direct PRF centroid is offset from the target star catalog position by about 0.93 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.289 \pm 0.074	112.17	6.061 \pm 0.074	-5.654 \pm 0.074
PRF-fit source offset from KIC position	8.371 \pm 0.072	116.00	6.099 \pm 0.069	-5.734 \pm 0.076
photometric centroid source offset	—	—	—	—

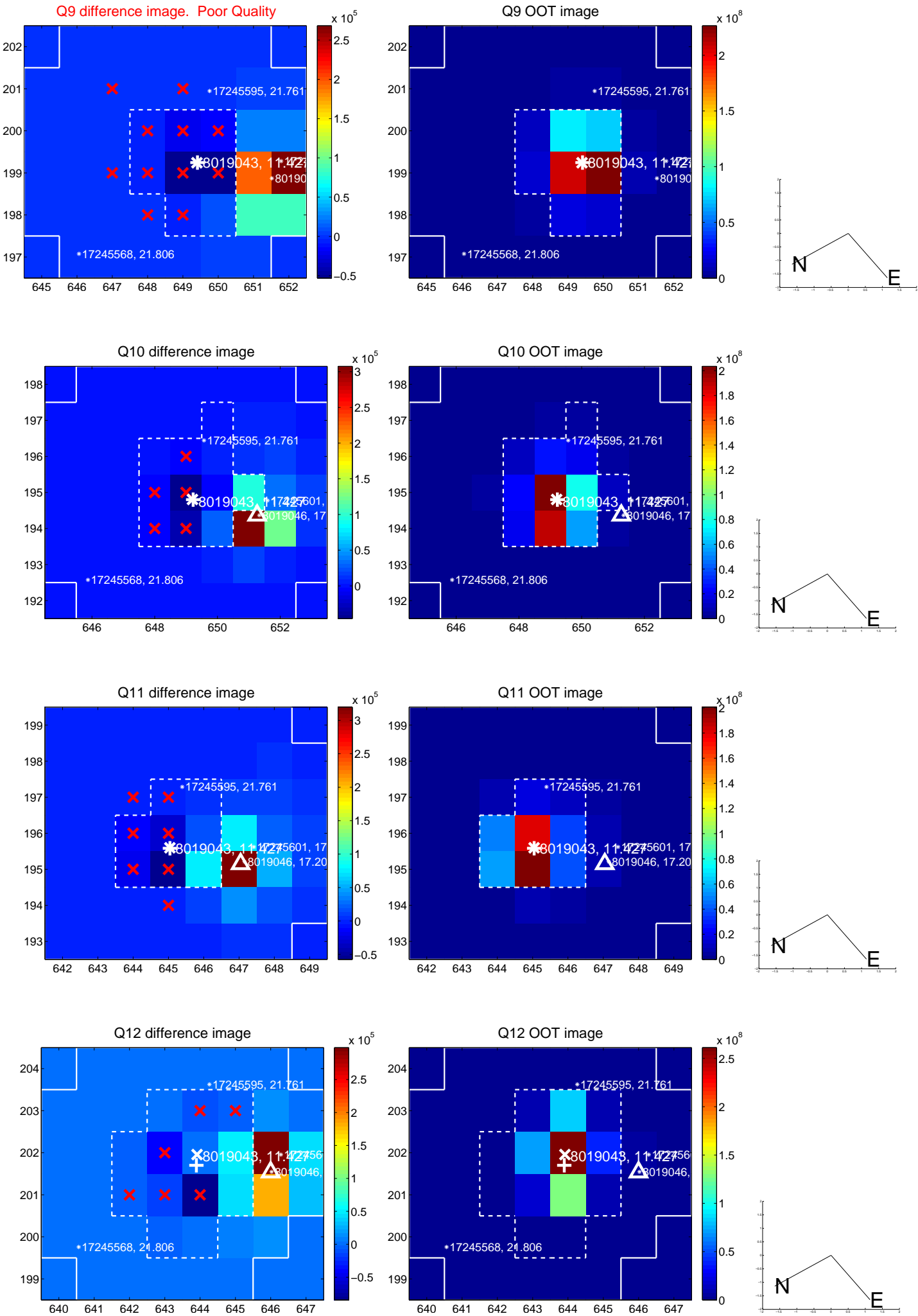


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

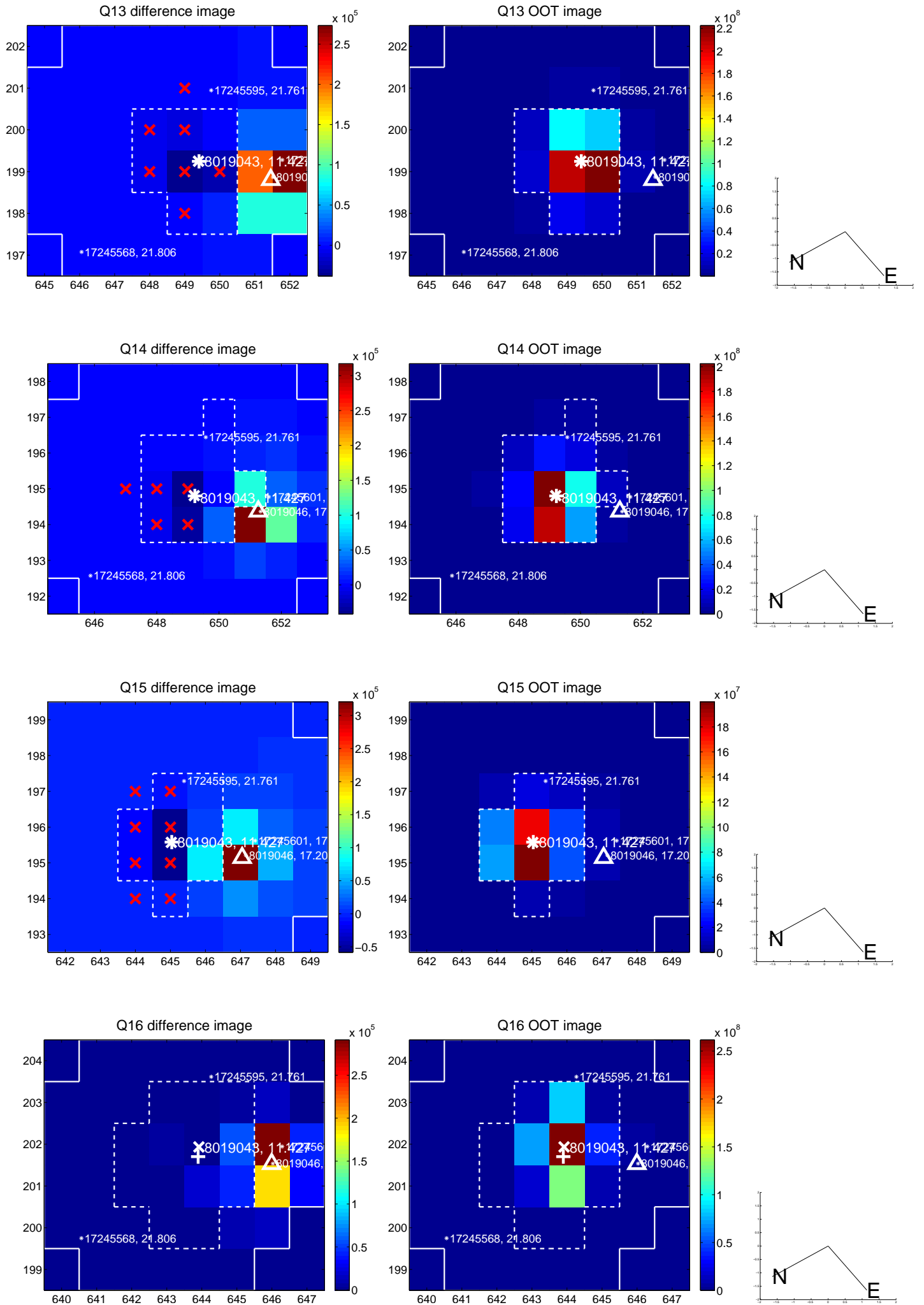
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



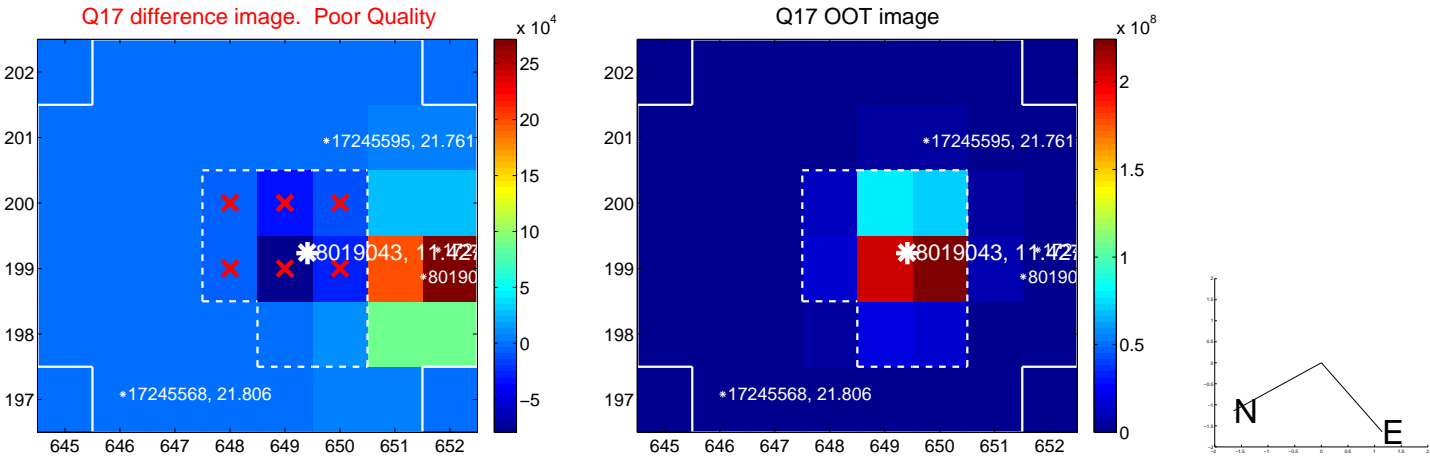
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

