

KIC 008244173

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})
008244173-01	OBS	3545.01	1.092070	132.098494	393924.1	1.500	15114.7	-1.0	0.58	4556	31.43	434.35
008244173-02	OBS	No	6.006306	135.388203	14098.9	9.014	1201.6	164.7	0.58	4556	8.12	44.74
008244173-03	OBS	No	1.092055	131.565483	7006.9	3.500	202.5	-1.0	0.58	4556	4.66	434.36
008244173-04	OBS	No	81.024983	189.430490	52.7	0.663	39.5	0.1	0.58	4556	0.63	1.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008244173-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—HAS_SEC_TCE—CENT_NOFITS
008244173-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
008244173-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008244173-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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 008244173-01

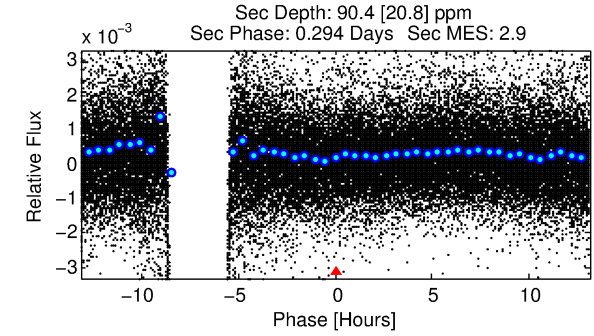
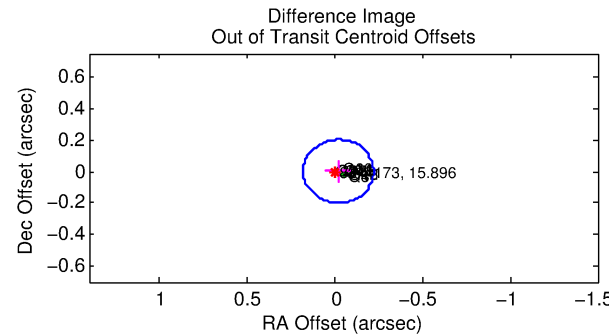
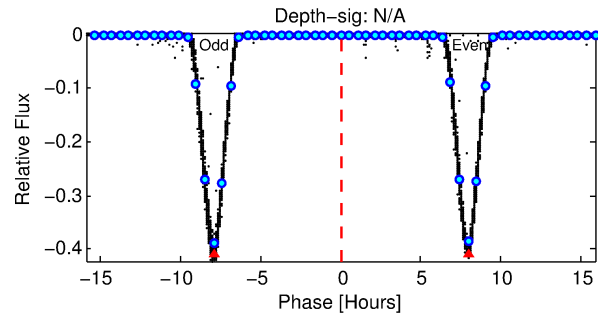
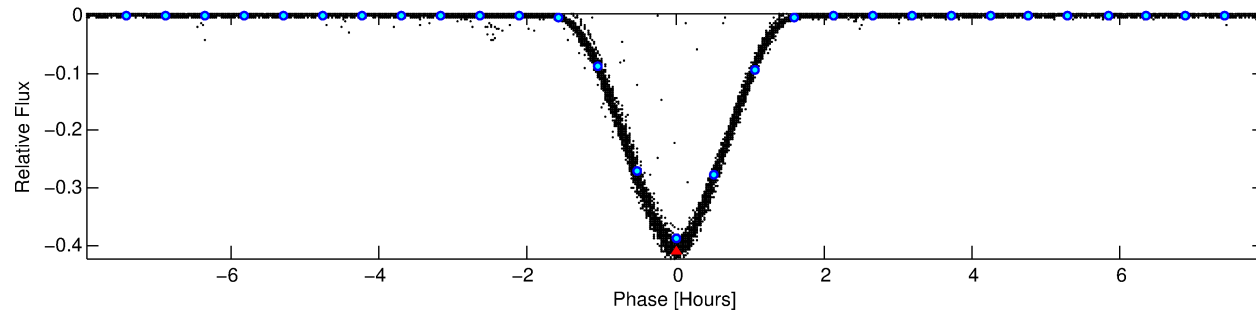
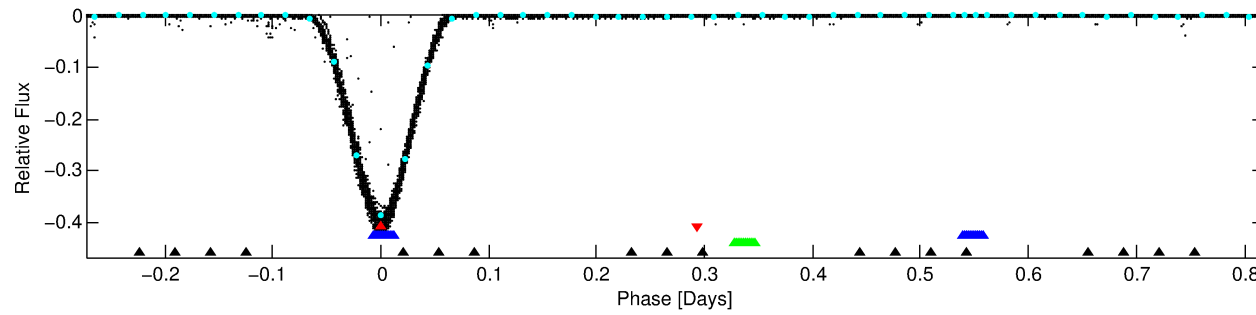
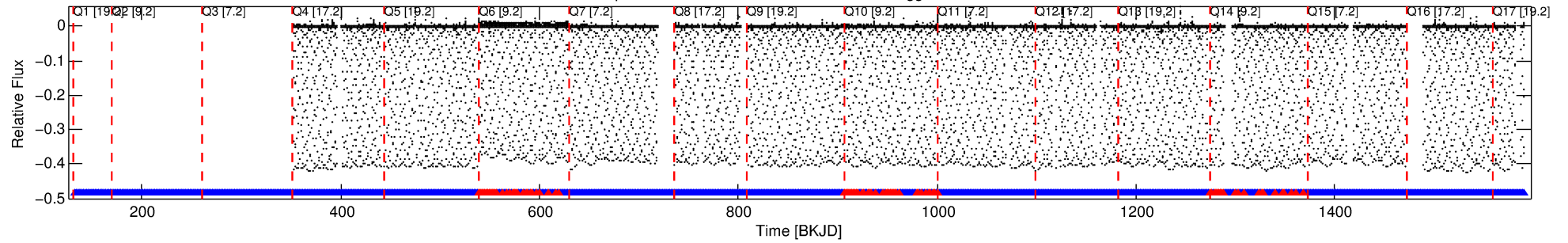
No Significant Match Found

DV One-Page Summary

KIC: 8244173 Candidate: 1 of 4 Period: 1.092 d

KOI: K03545 Corr: No Ephemeris Match

Kp: 15.90 R*: 0.58 Rs Teff: 4556.0 K Logg: 4.67 Fe/H: -0.740



TPS TCE Results:

Period = 1.09207 d
Epoch = 132.0985 BKJD

DV fit results are unavailable

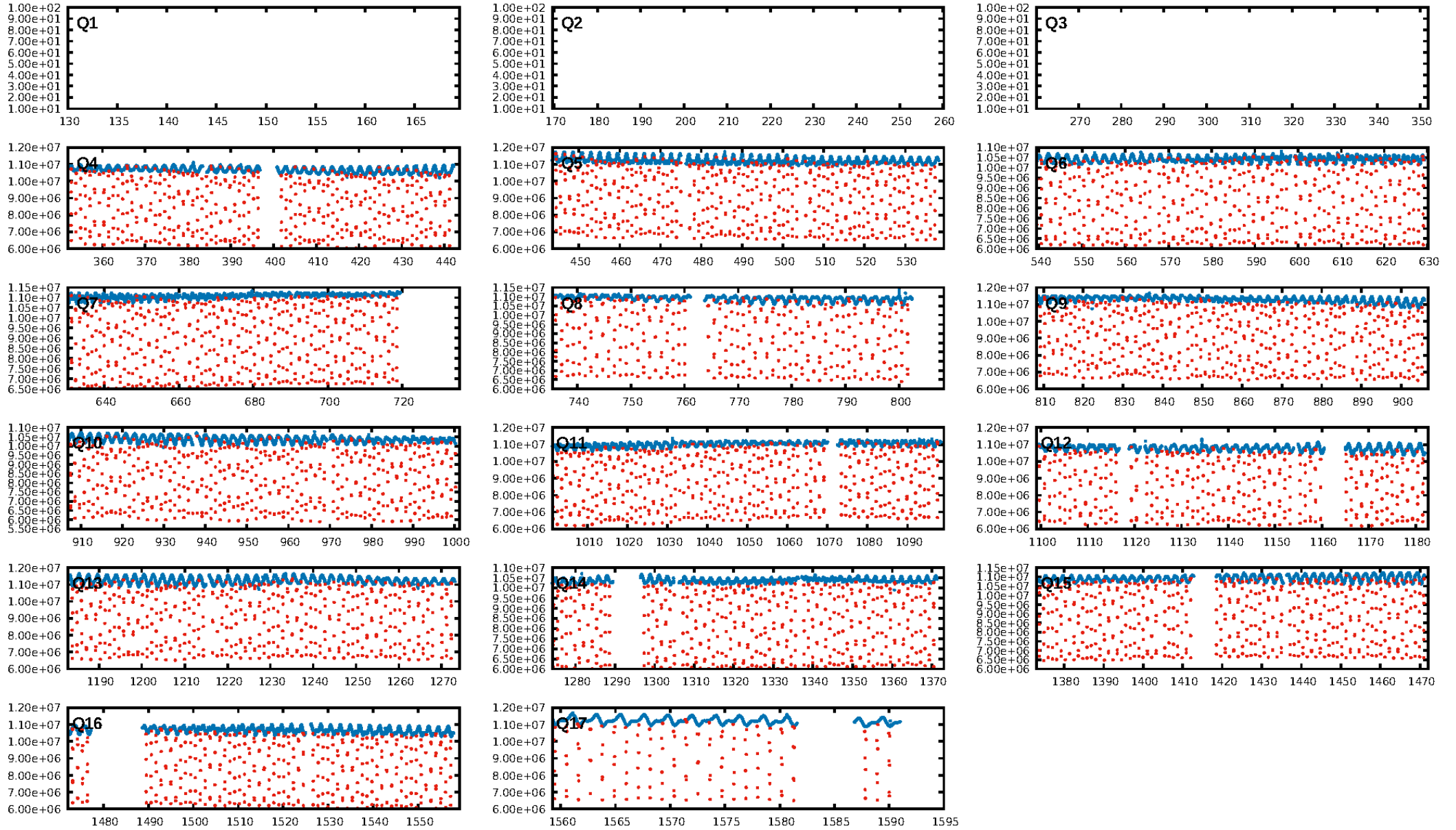
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [12.91 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.90 [913/1010]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.021 arcsec [0.32 σ]
KicOffset-rm: 0.150 arcsec [2.05 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

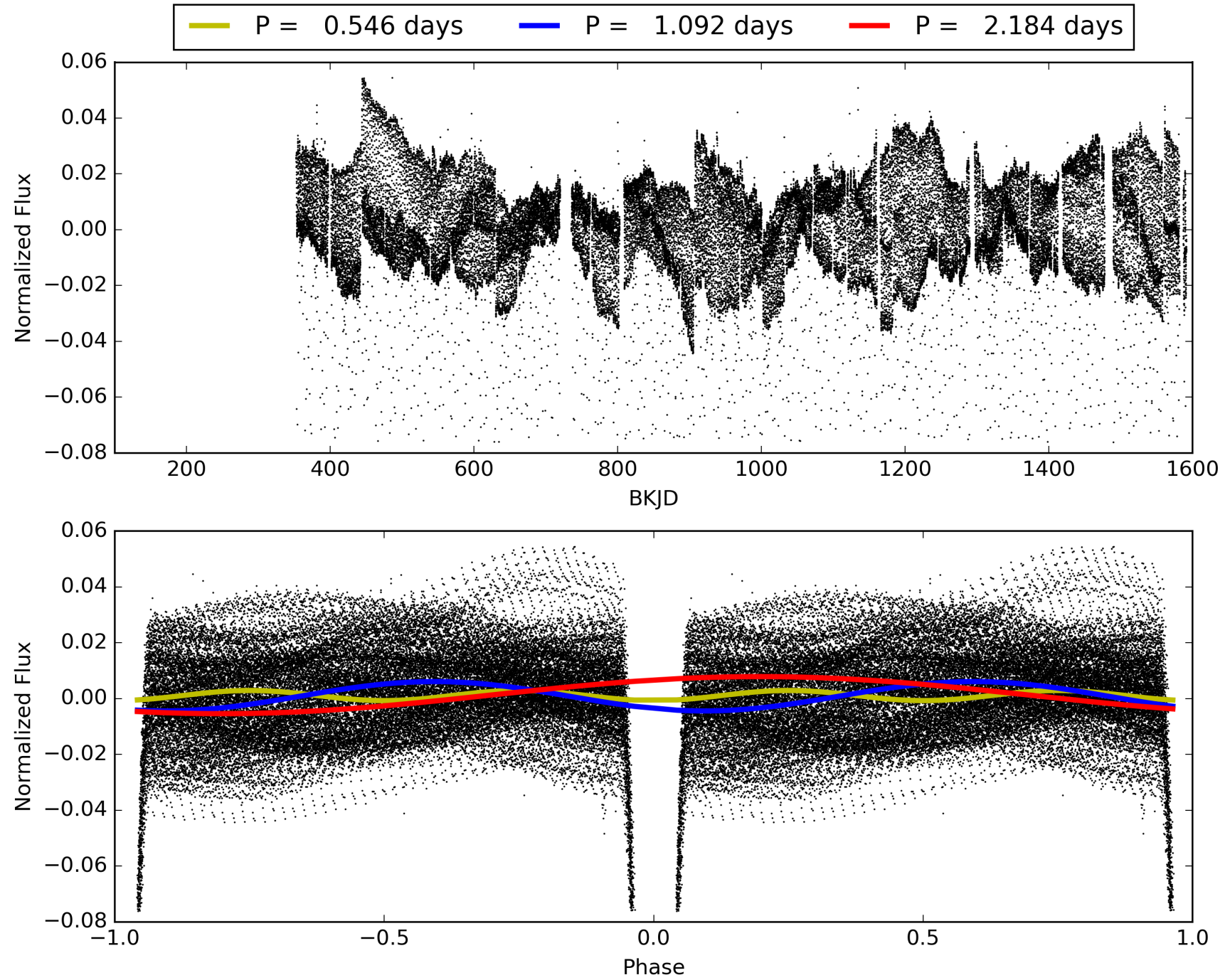
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:03:56 Z

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

TCE 008244173-01, PDC Light Curves

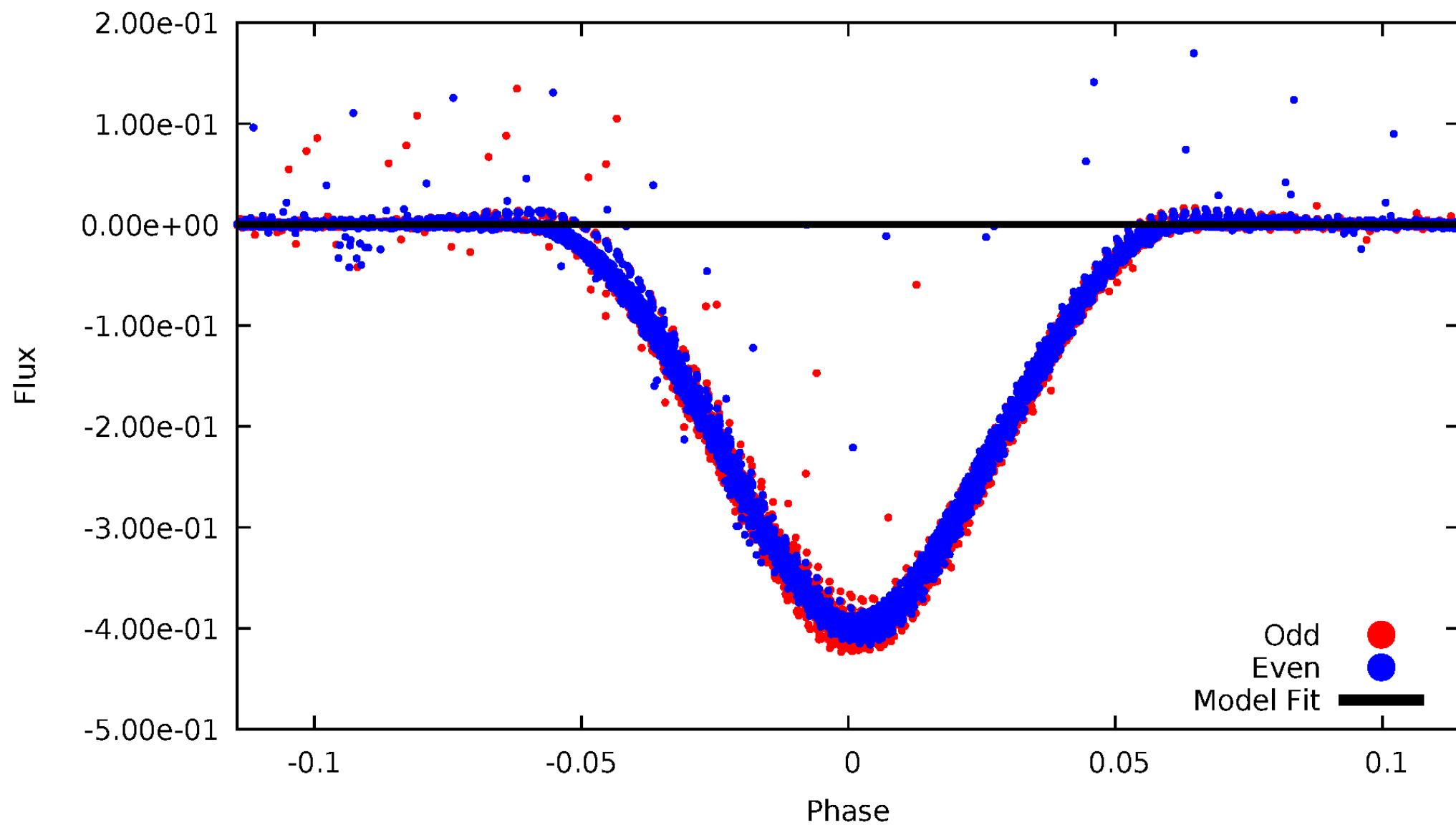


TCE 008244173-01



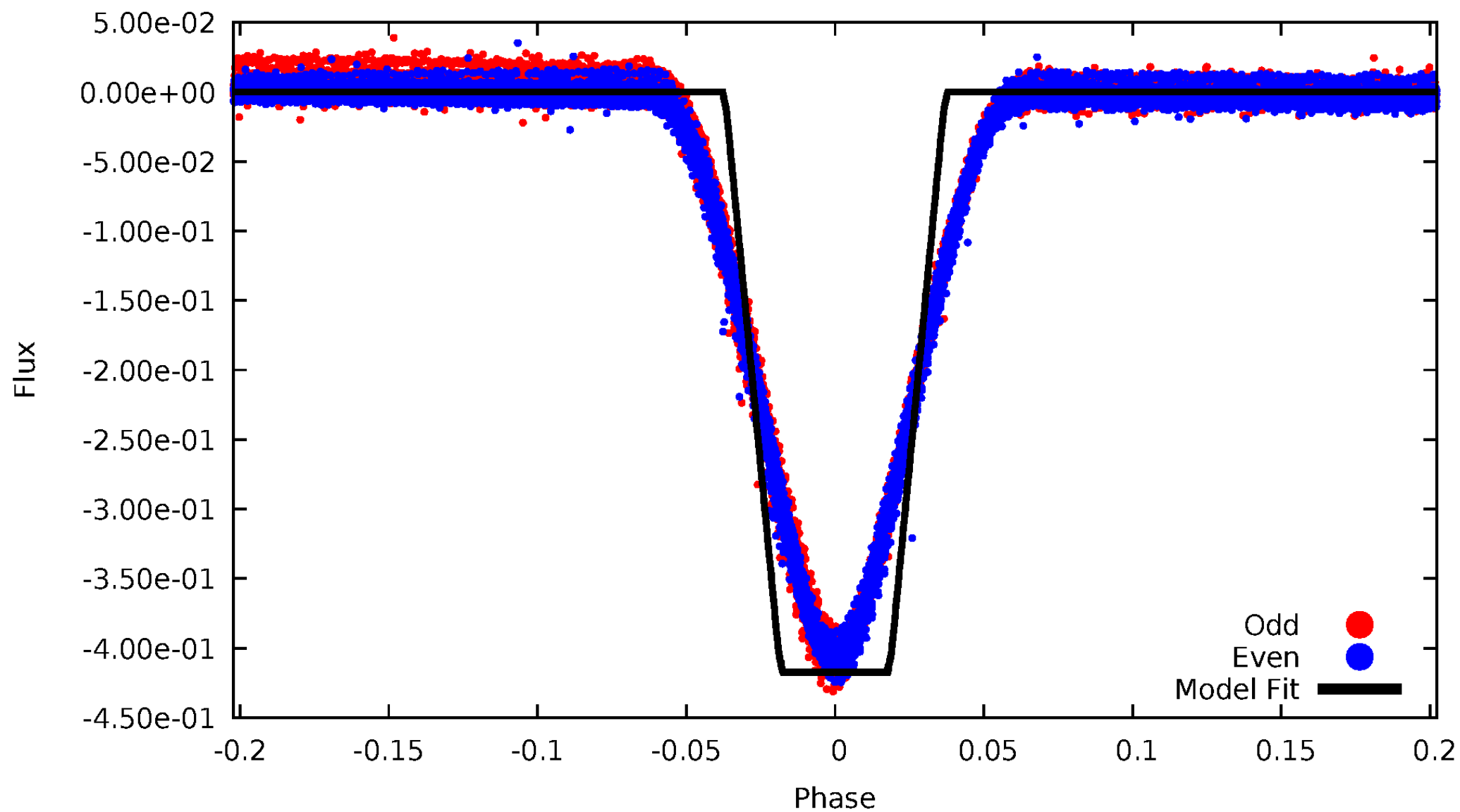
DV Odd/Even

TCE 008244173-01



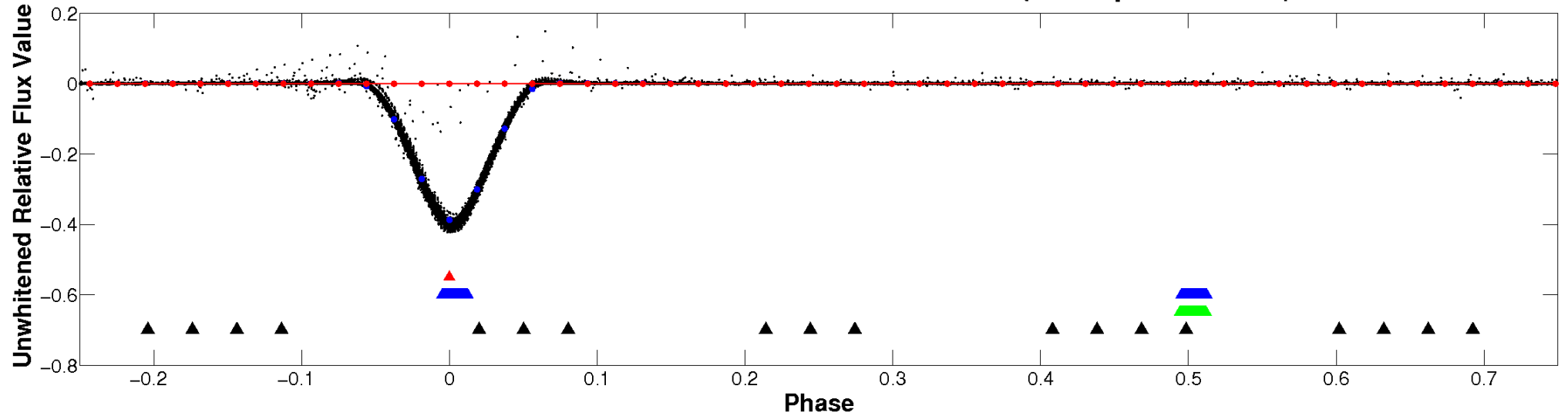
ALT Odd/Even

TCE 008244173-01



Non-Whitened Vs. Whitened Light Curve

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

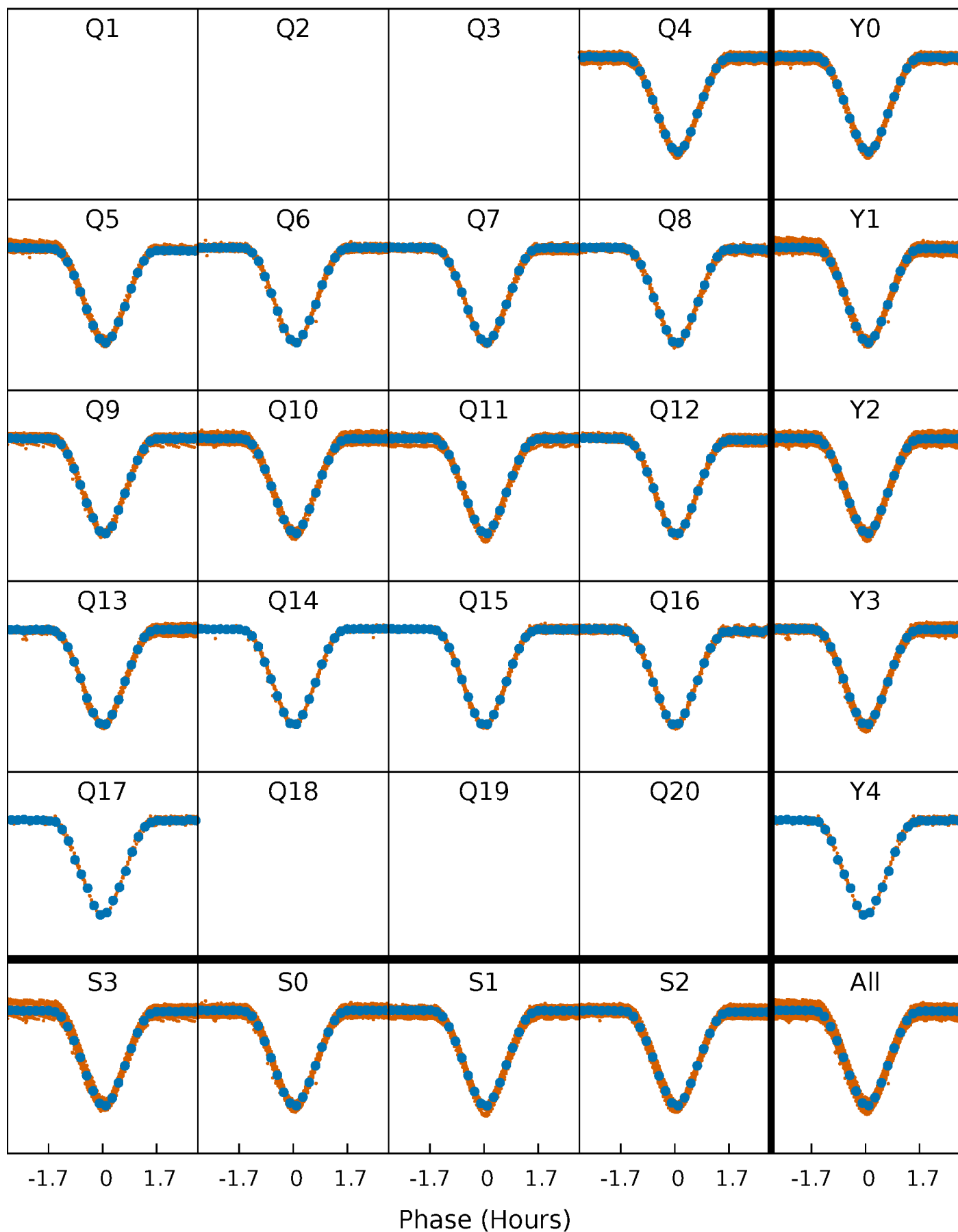


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



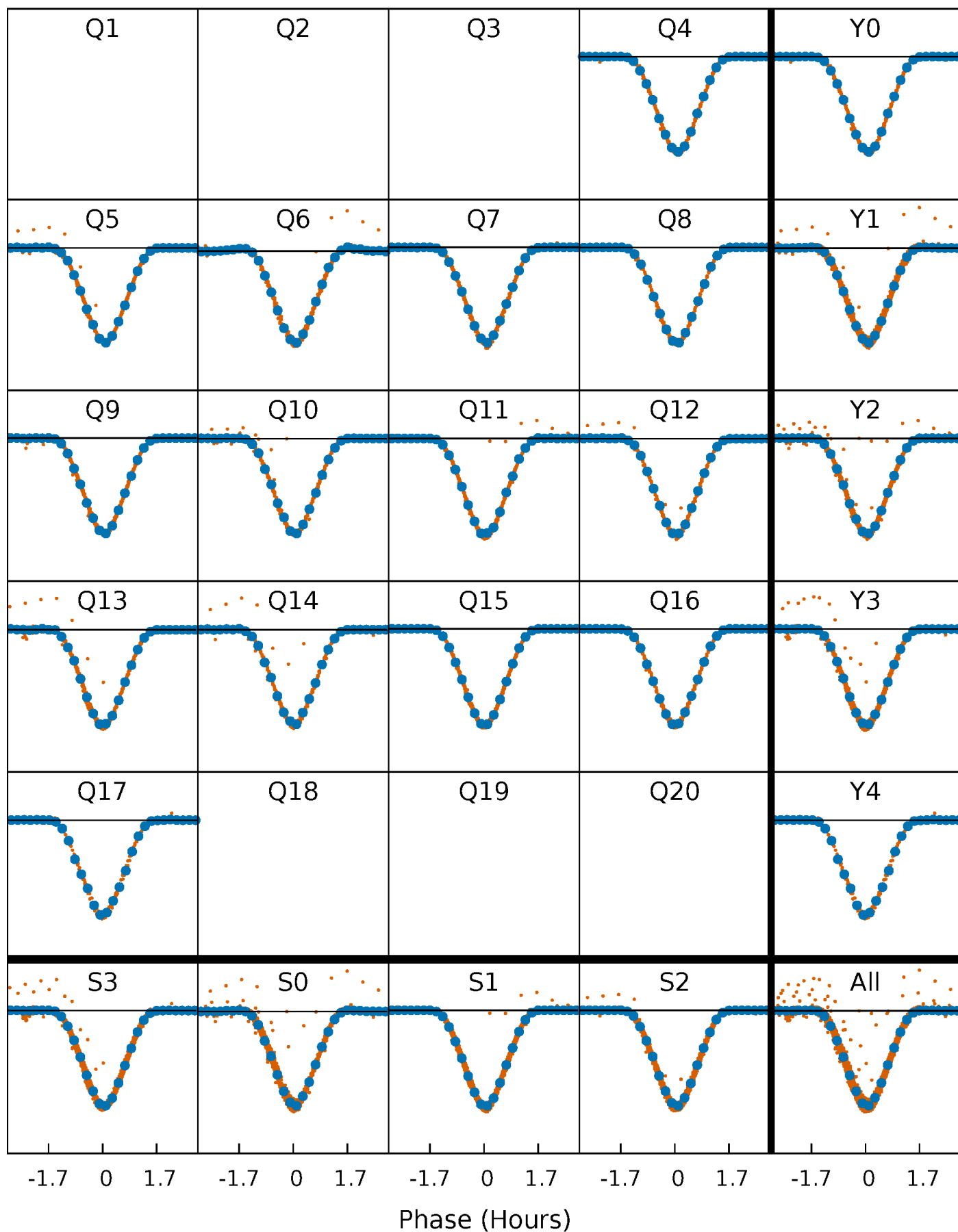
PDC Quarter-Phased Transit Curves

TCE 008244173-01 P= 1.092070 Days $T_0=132.098494$ (BKJD)



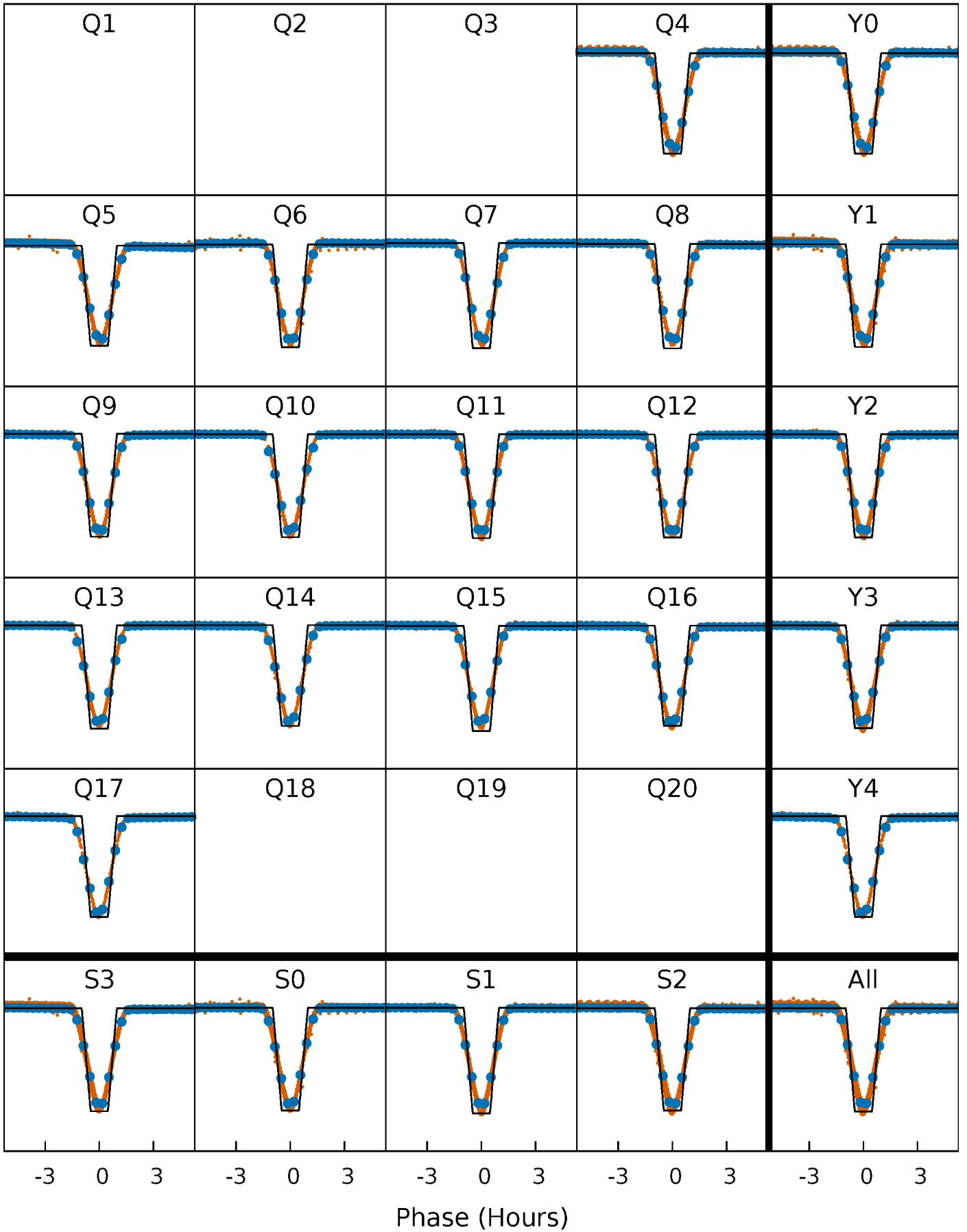
DV Quarter-Phased Transit Curves

TCE 008244173-01 P= 1.092070 Days $T_0=132.098494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

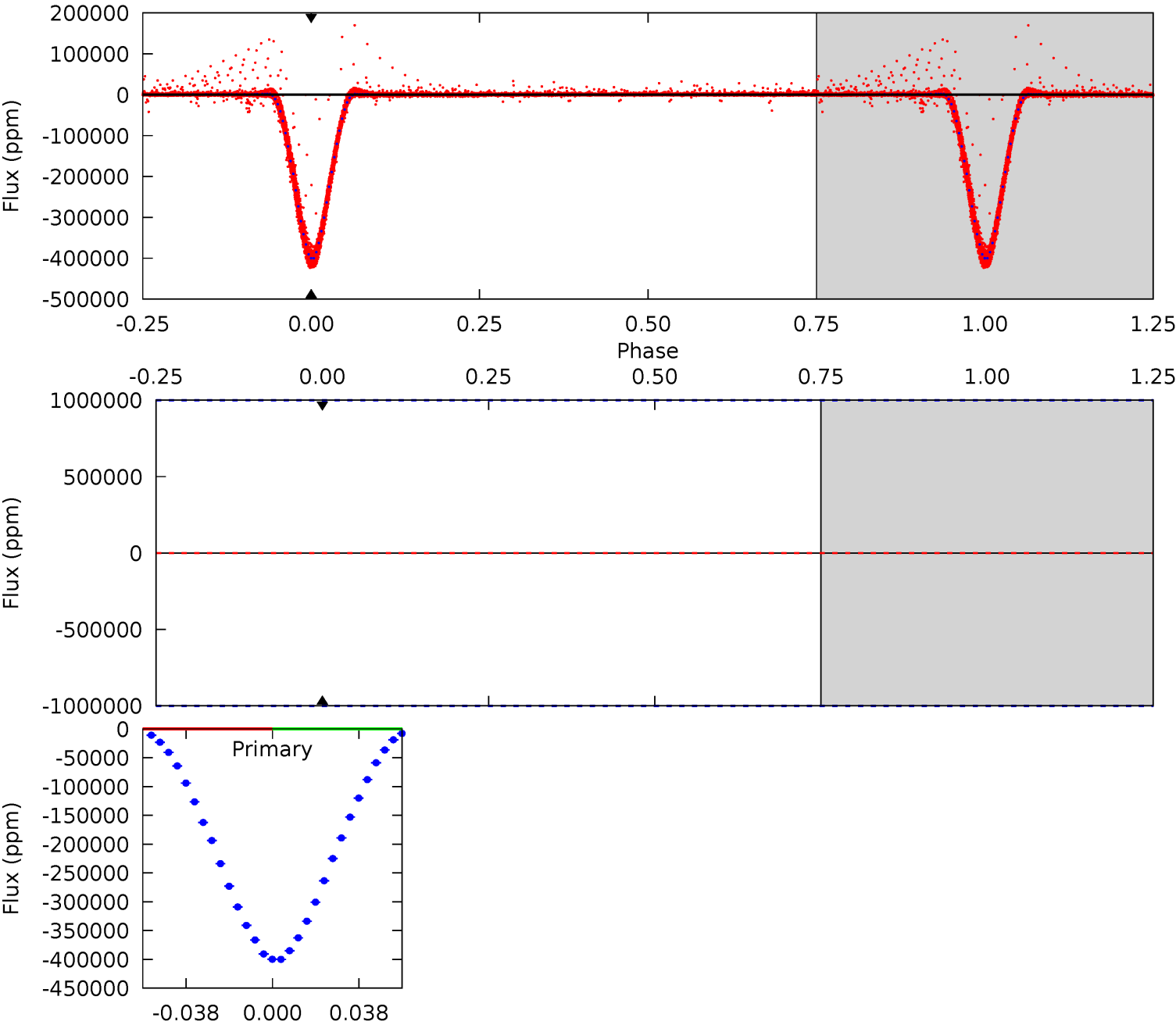
TCE 008244173-01 P= 1.092070 Days $T_0=132.100025$ (BKJD)



DV Model-Shift Uniqueness Test

008244173-01, P = 1.092070 Days, E = 132.098494 Days

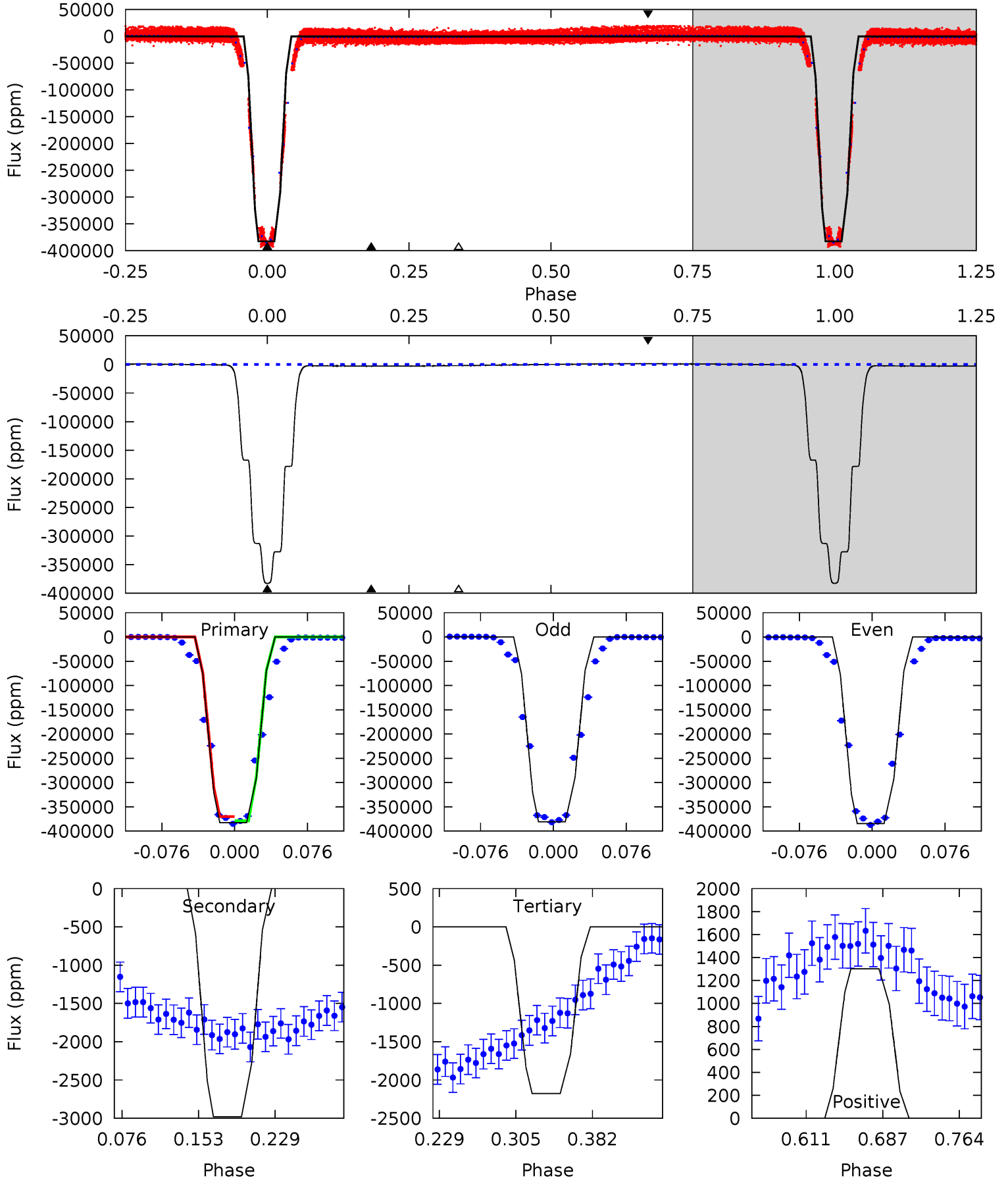
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008244173-01, P = 1.092070 Days, E = 132.100025 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2987	23.2	17.0	10.2	4.62	1.77	9.73	2970	2976	6.25	13.1	14.5	1.00	0.00	0



Stellar Parameters For KIC 008244173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+160}_{-160}	$4.670^{+0.054}_{-0.032}$	$-0.740^{+0.300}_{-0.300}$	$0.576^{+0.047}_{-0.047}$	$0.566^{+0.056}_{-0.033}$	$4.172^{+0.964}_{-0.603}$
	+4%/-4%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-6%	+23%/-14%
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 008244173-01 / KOI 3545.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$31.43^{+6.00}_{-6.78}$	1615^{+69}_{-61}	-2374^{+6340}_{-1465}	$-0.344^{+19.636}_{-15.240}$
Alt.	-2979 ± 128	$40.51^{+6.46}_{-6.18}$	1620^{+60}_{-58}	-1381^{+3385}_{-551}	$0.299^{+0.121}_{-0.078}$

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 $A_{obs} \gg 1.0$

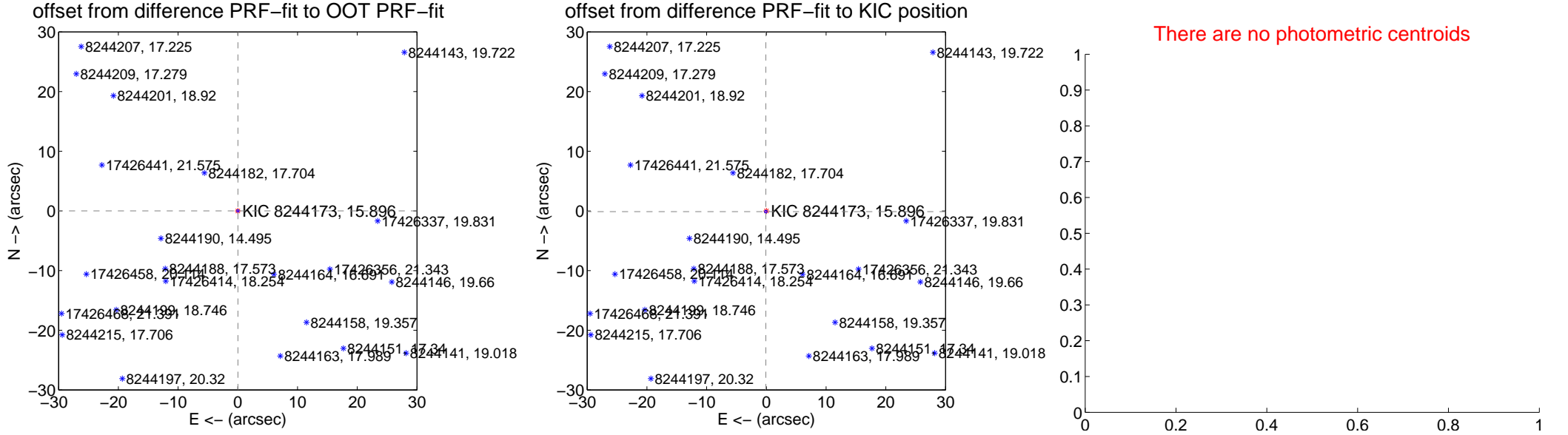
DV Centroid Data

Supplemental centroid analysis for 008244173-01. Kepler magnitude: 15.90. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

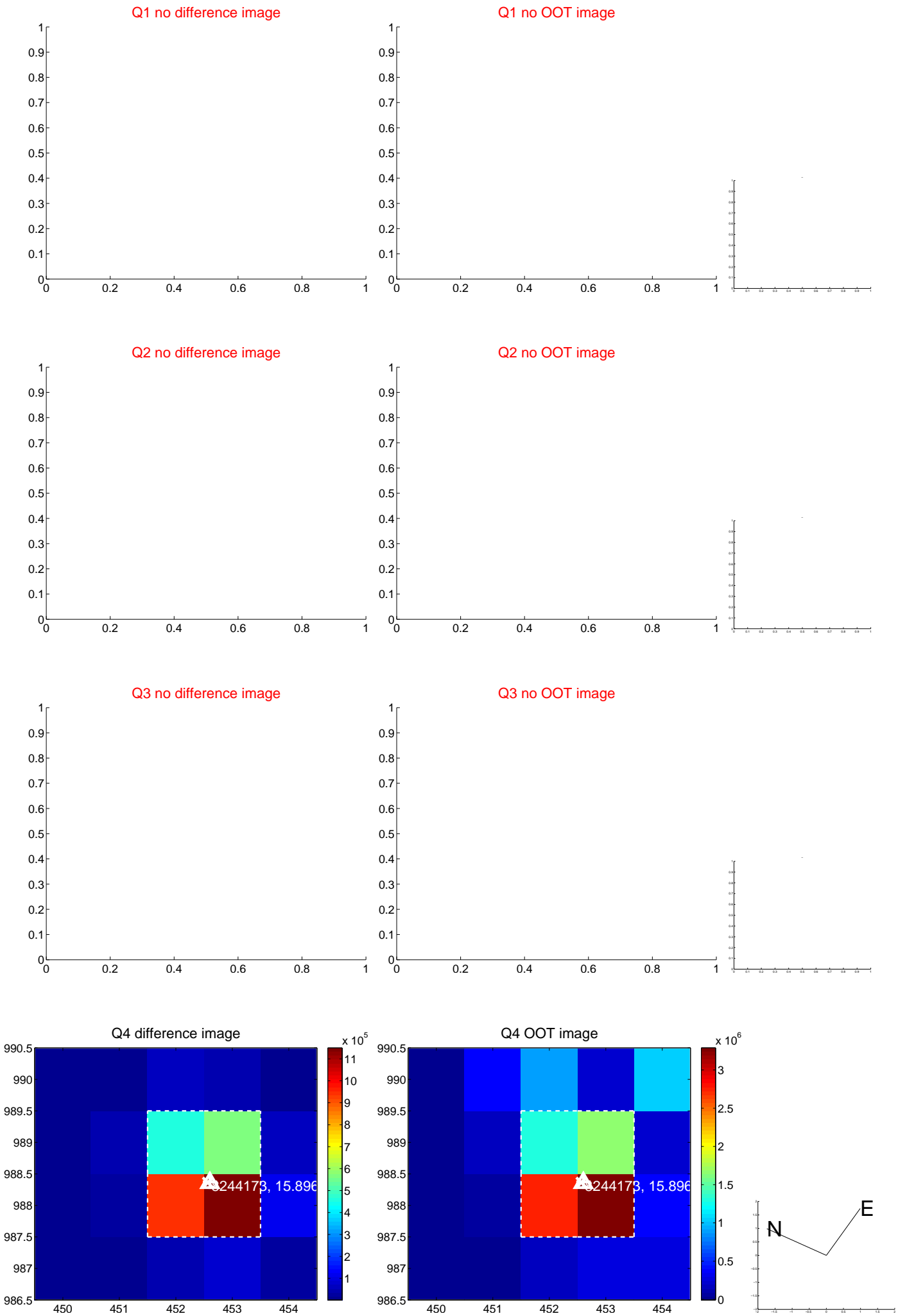
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.021 ± 0.067	0.32	-0.021 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.150 ± 0.073	2.05	0.091 ± 0.069	-0.119 ± 0.071
photometric centroid source offset	—	—	—	—

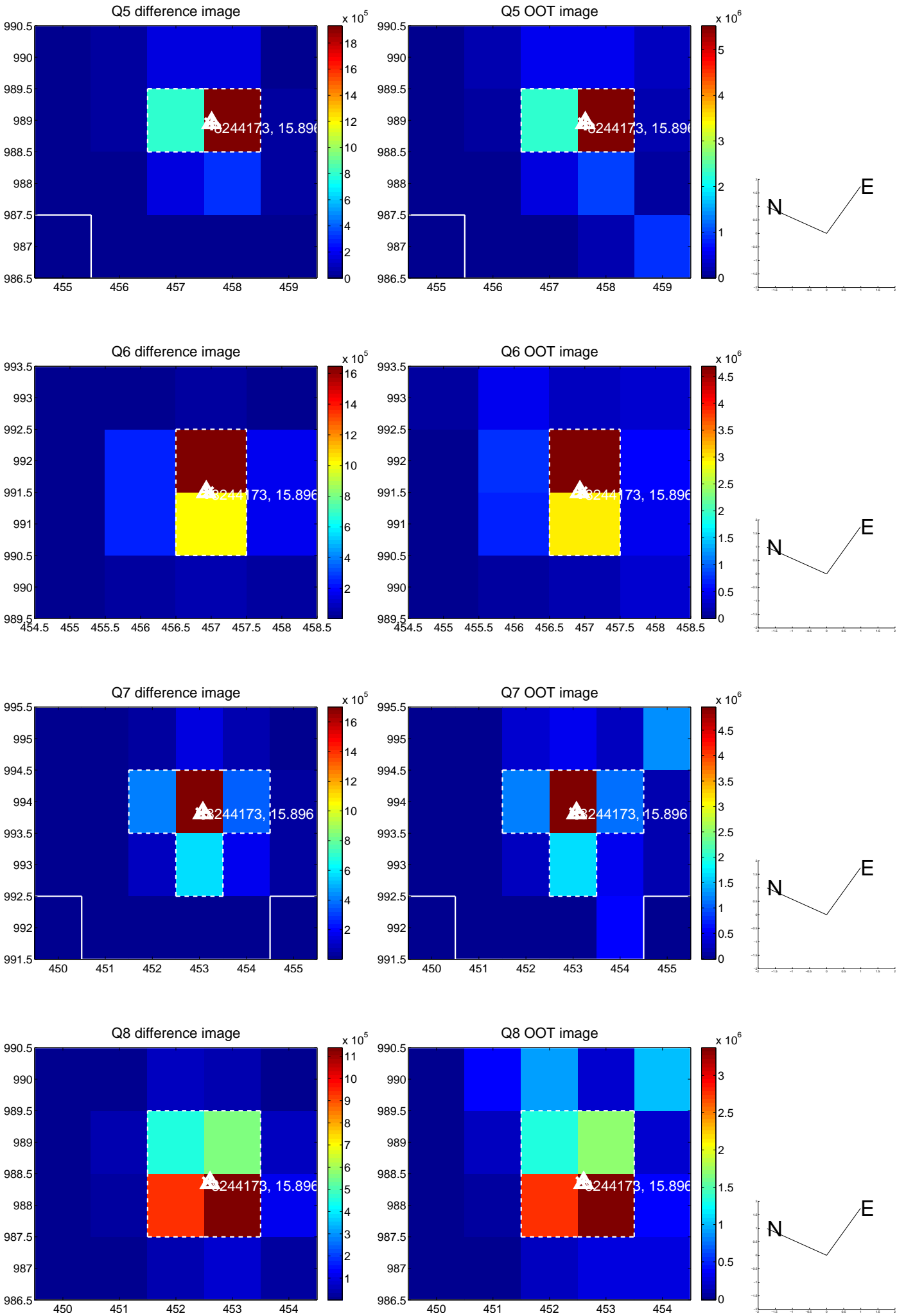


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

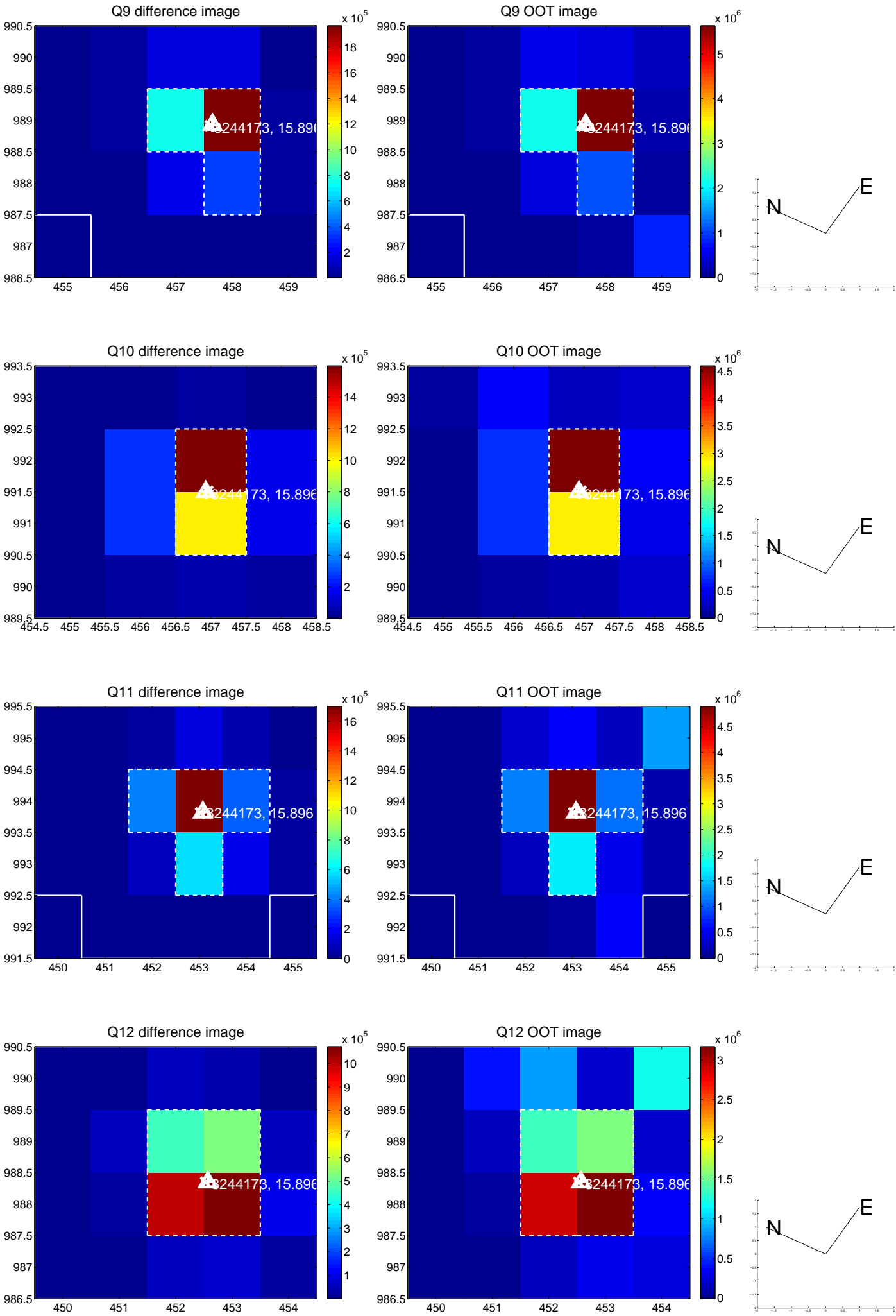
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



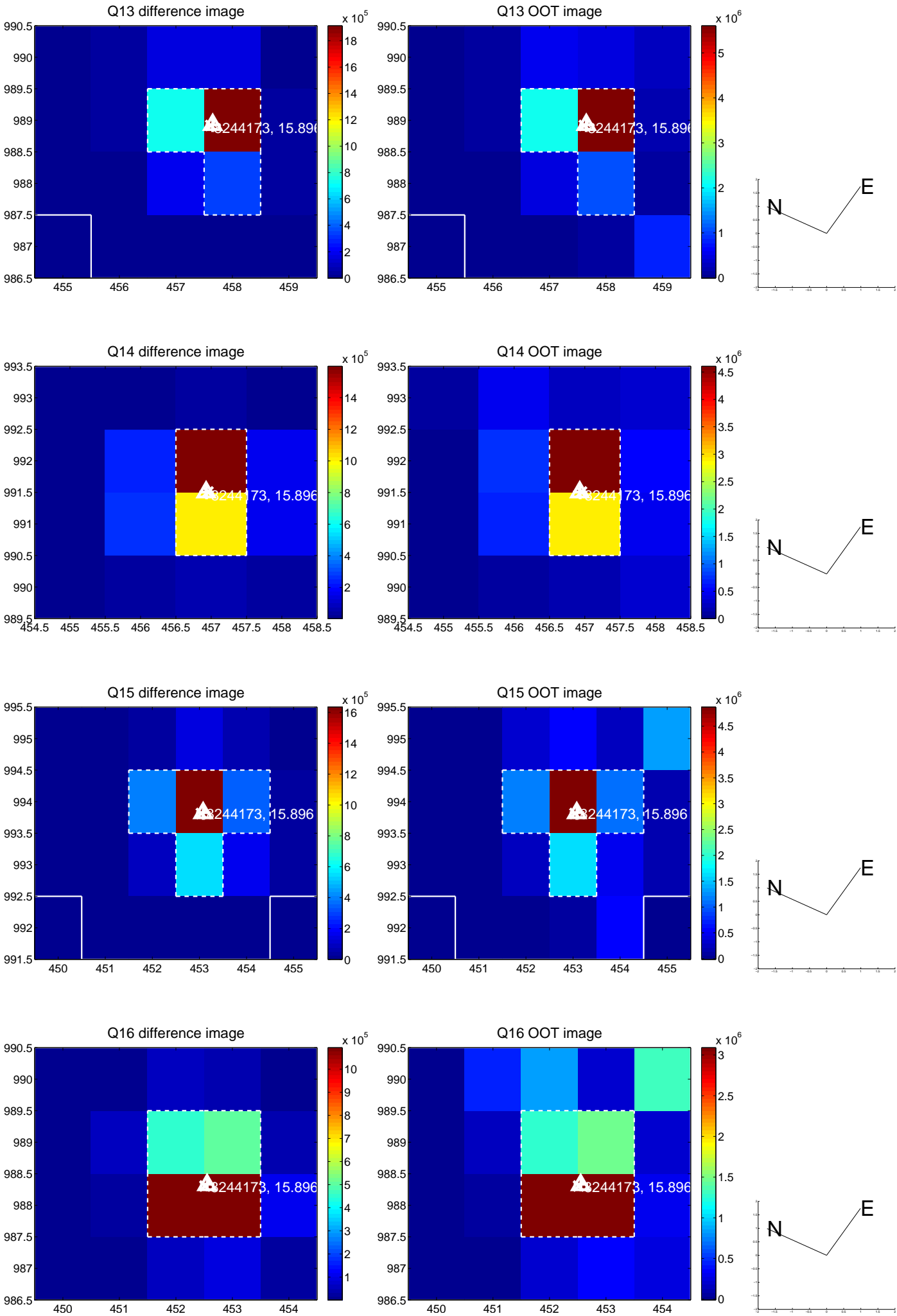
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



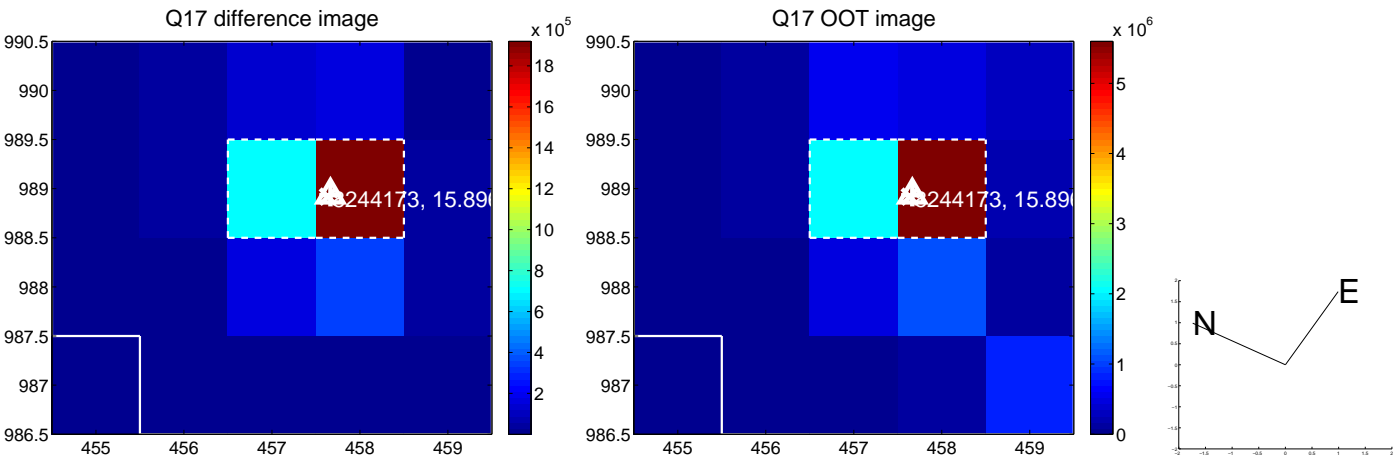
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



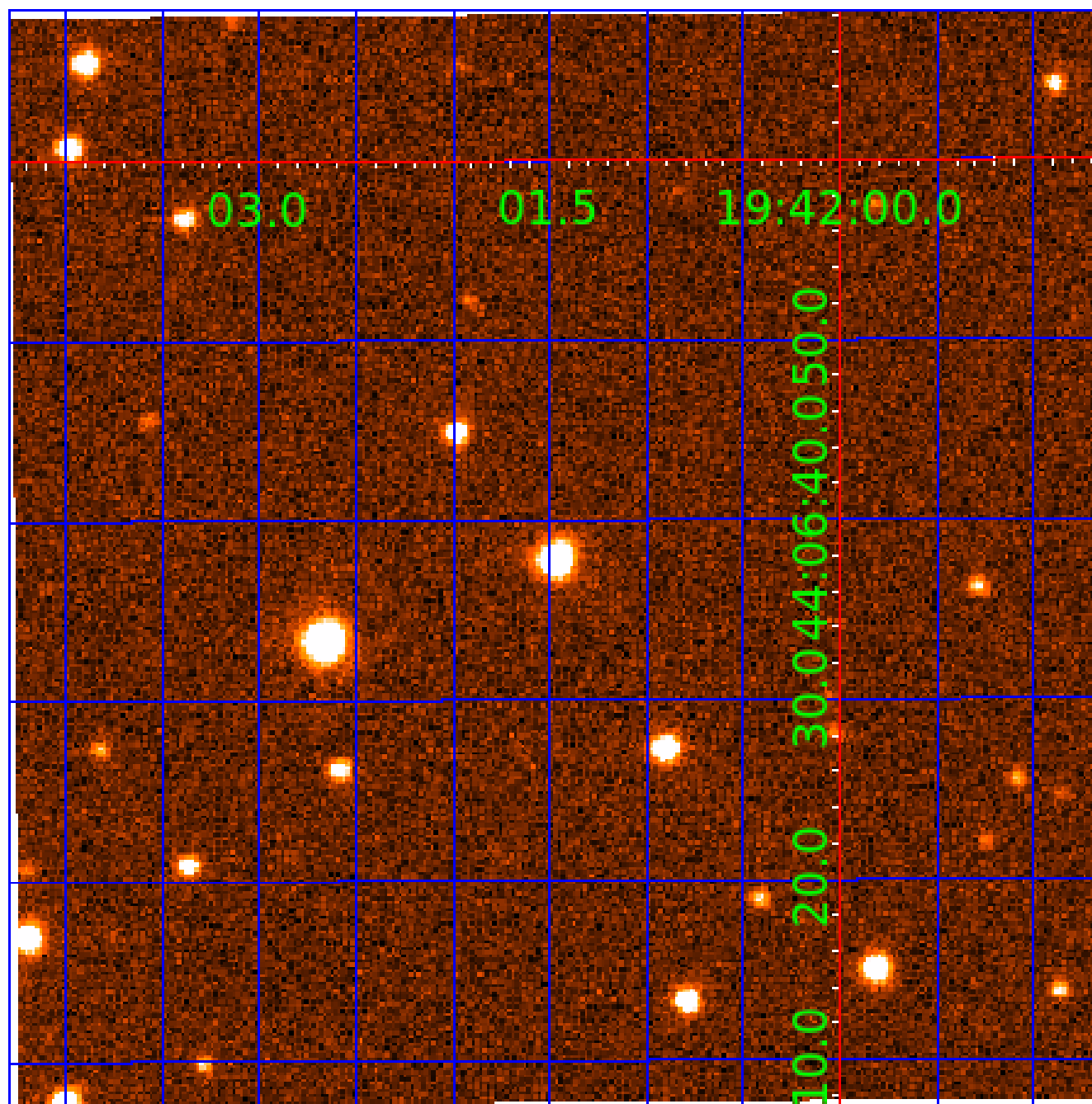
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008244173

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})
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008244173-03	OBS	No	1.092055	131.565483	7006.9	3.500	202.5	-1.0	0.58	4556	4.66	434.36
008244173-04	OBS	No	81.024983	189.430490	52.7	0.663	39.5	0.1	0.58	4556	0.63	1.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008244173-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—HAS_SEC_TCE—CENT_NOFITS
008244173-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
008244173-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008244173-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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.

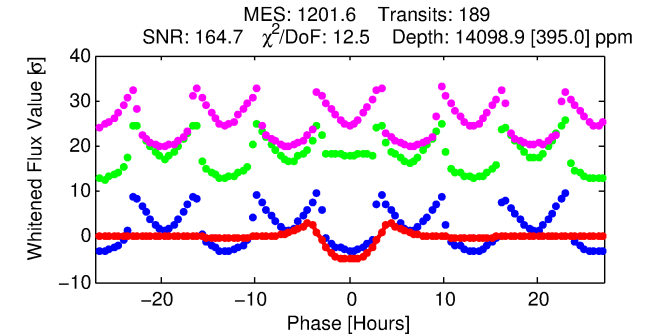
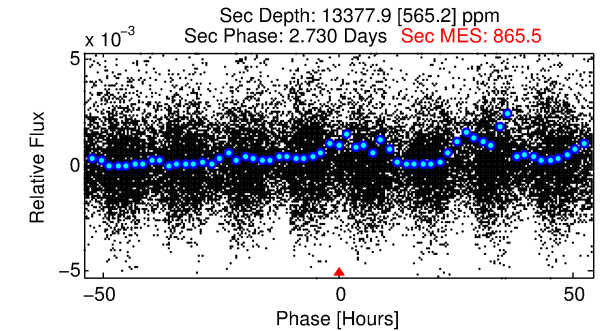
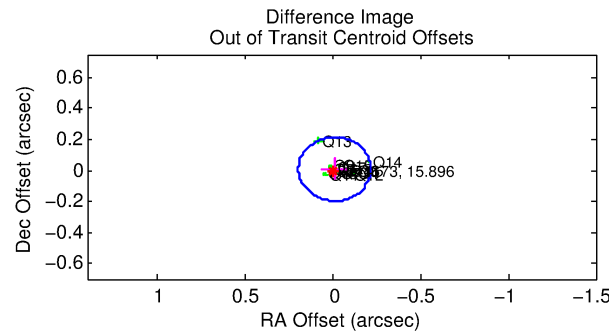
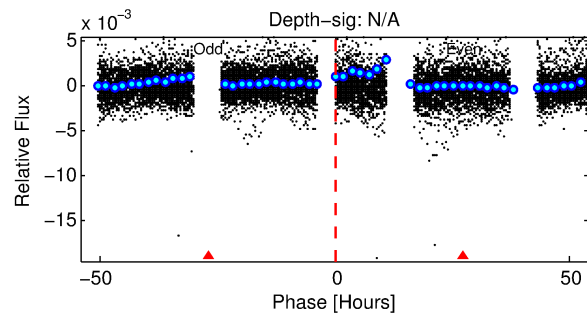
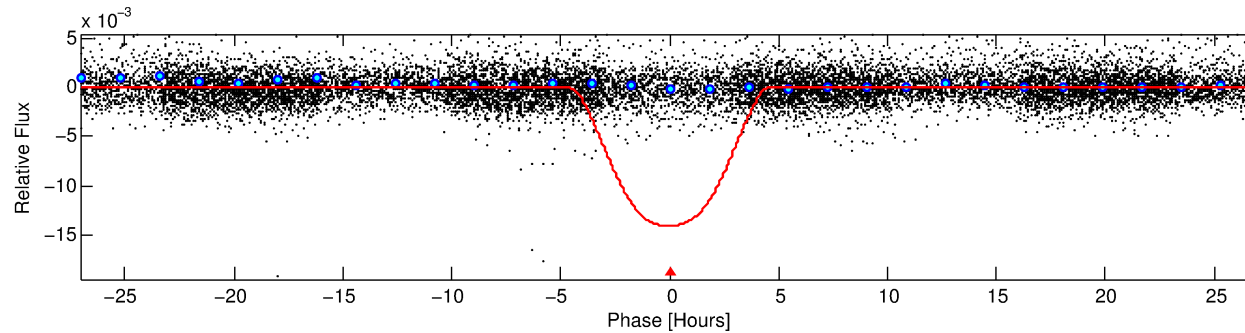
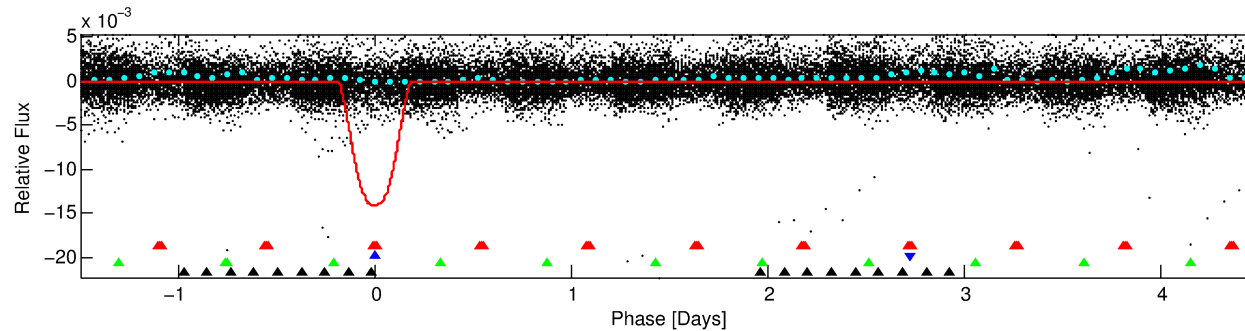
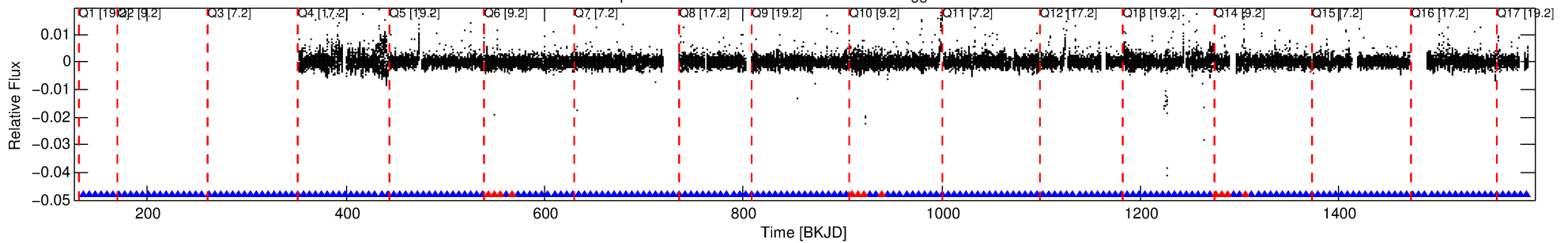
Ephemeris Match Information For 008244173-02

No Significant Match Found

DV One-Page Summary

KIC: 8244173 Candidate: 2 of 4 Period: 6.006 d
KOI: K03545 Corr: No Ephemeris Match

Kp: 15.90 R*: 0.58 Rs Teff: 4556.0 K Logg: 4.67 Fe/H: -0.740



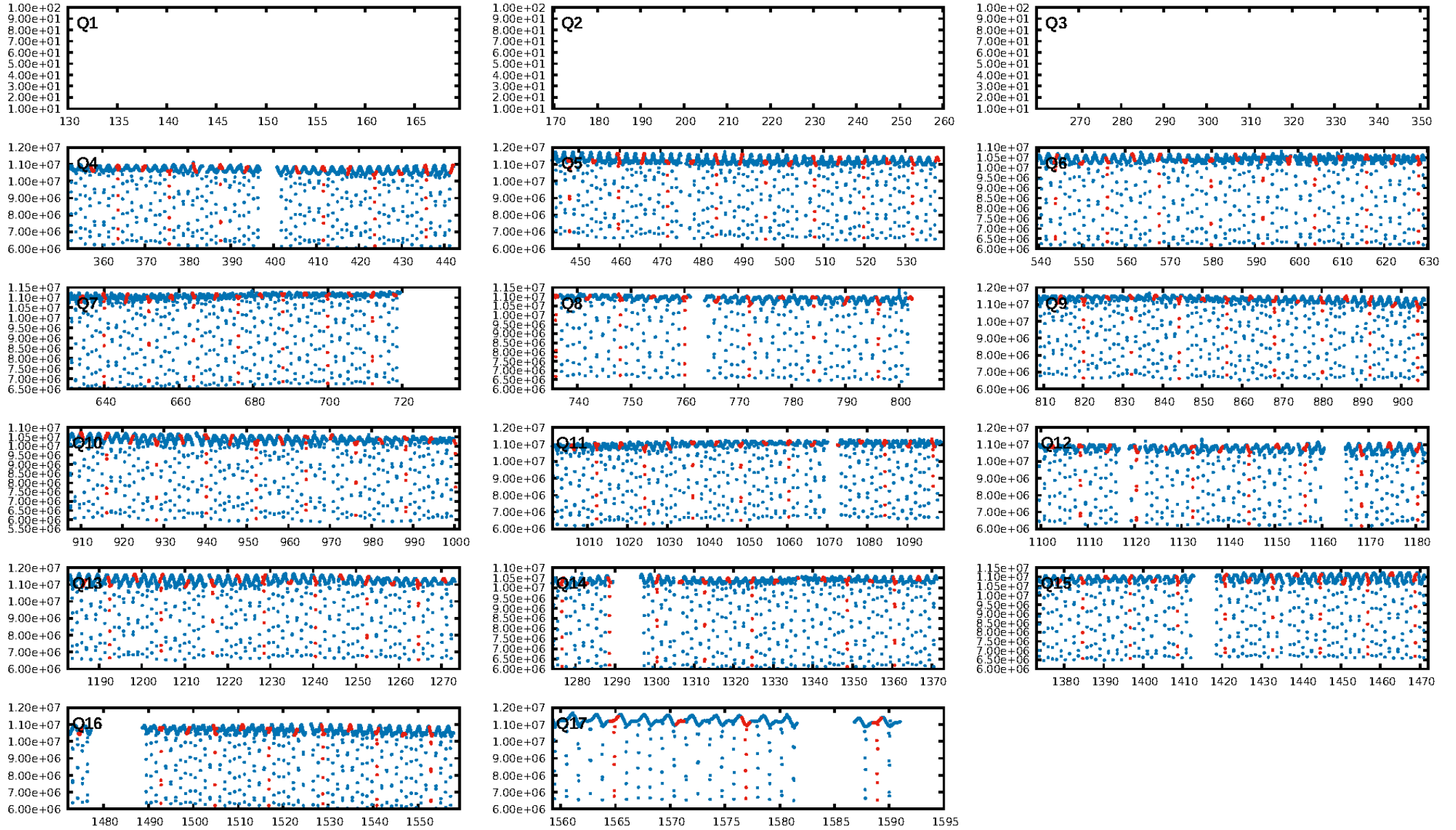
DV Fit Results:

Period = 6.00631 [0.00002] d
Epoch = 135.3882 [0.0033] BKJD
Rp/R* = 0.1292 [0.0025]
a/R* = 3.85 [0.07]
b = 0.86 [0.01]
Seff = 44.74 [7.69]
Teq = 659 [28] K
Rp = 8.12 [0.68] Re
a = 0.0535 [0.0037] AU
Ag = 319.51 [36.59] [8.70σ]
Teffp = 4311 [164] K [22.00σ]

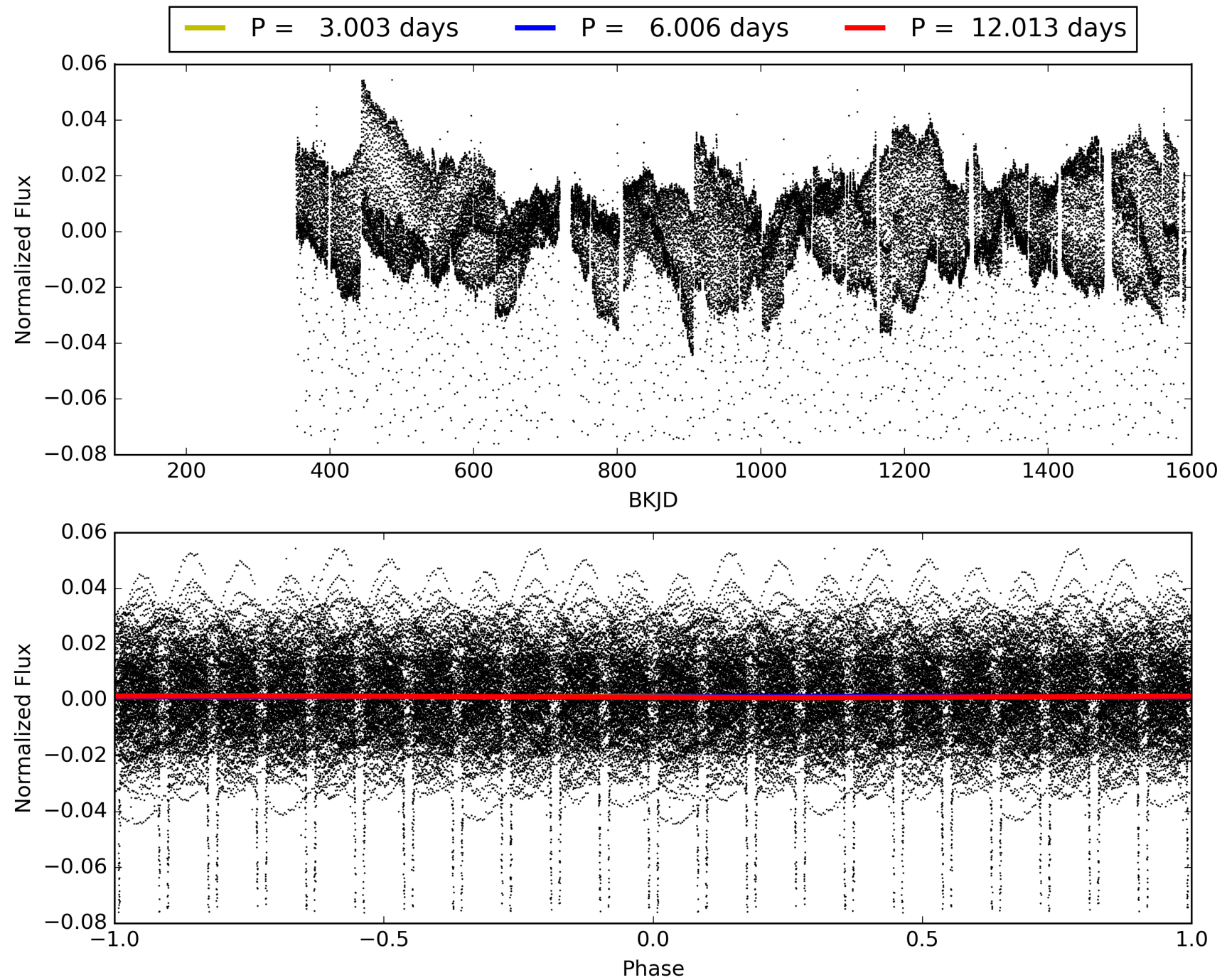
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.91σ]
LongPeriod-sig: 100.0% [199.20σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [173/185]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.013 arcsec [0.19σ]
KicOffset-rm: 0.125 arcsec [1.66σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 008244173-02, PDC Light Curves

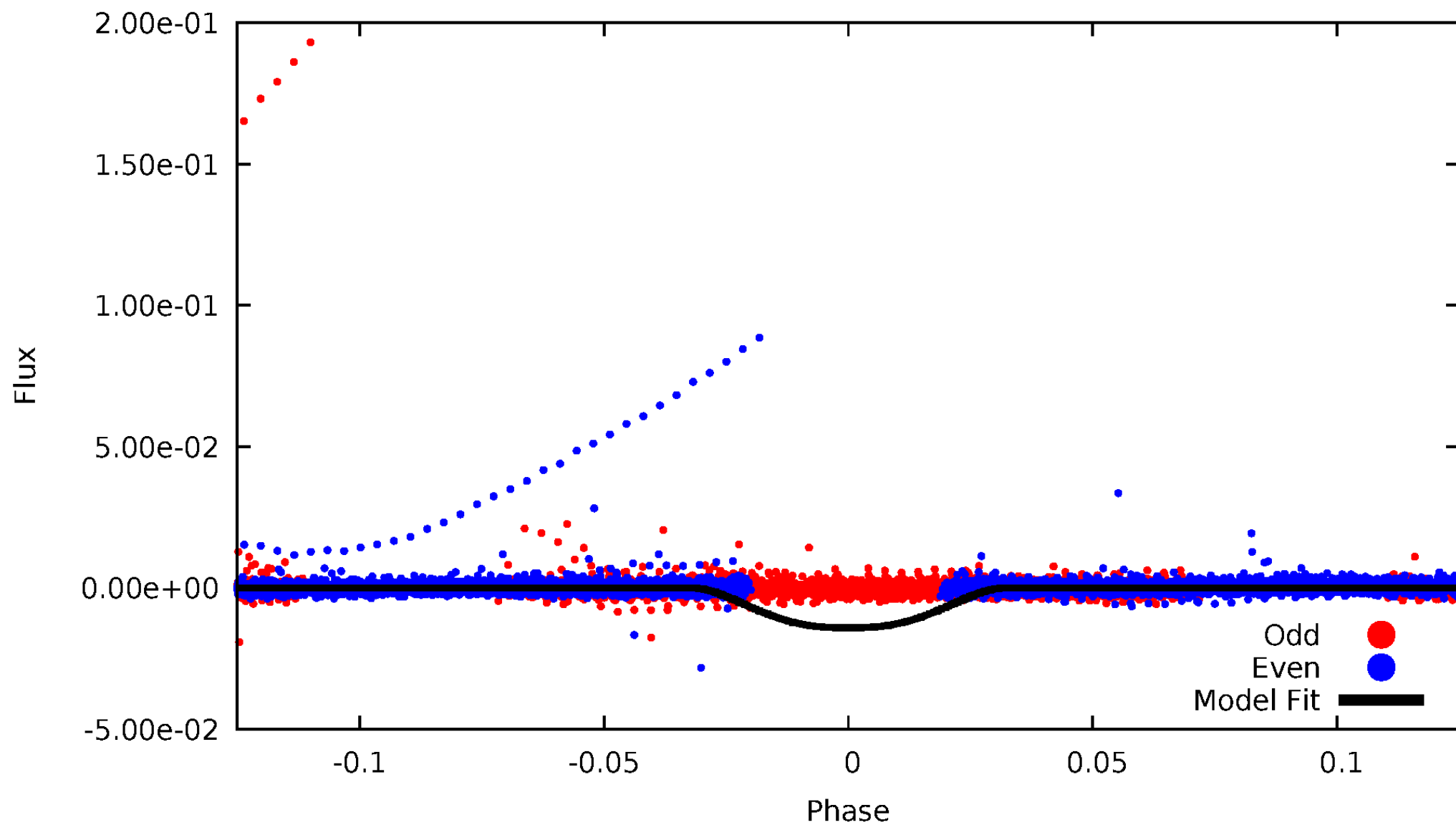


TCE 008244173-02



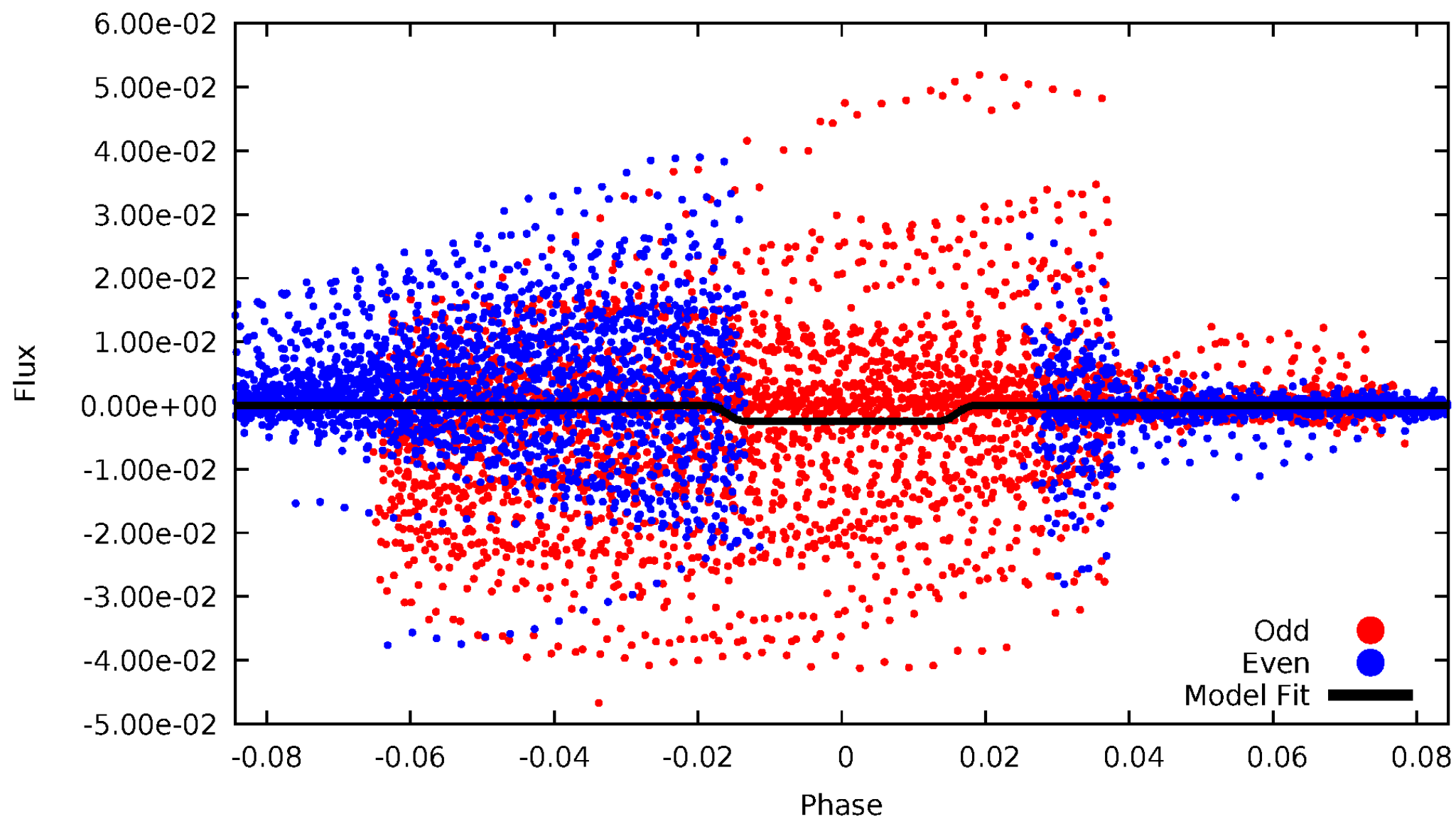
DV Odd/Even

TCE 008244173-02



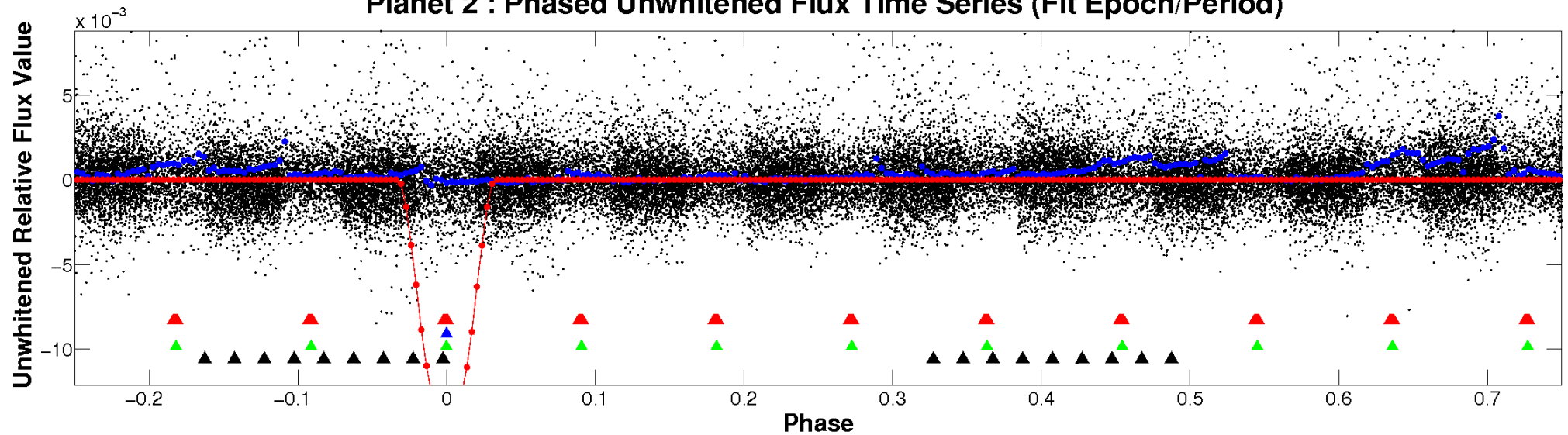
ALT Odd/Even

TCE 008244173-02

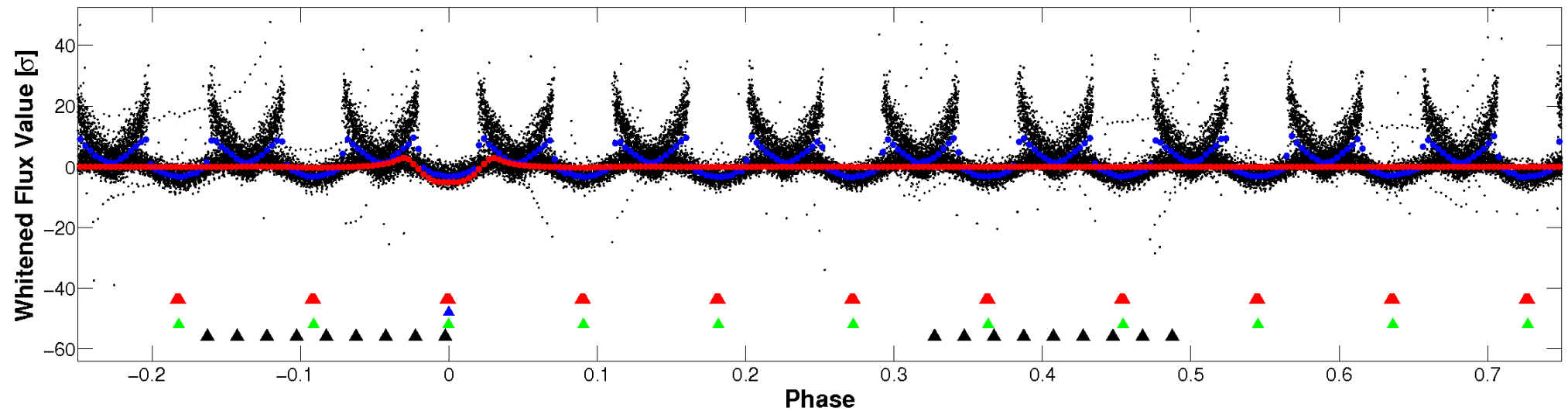


Non-Whitened Vs. Whitened Light Curve

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

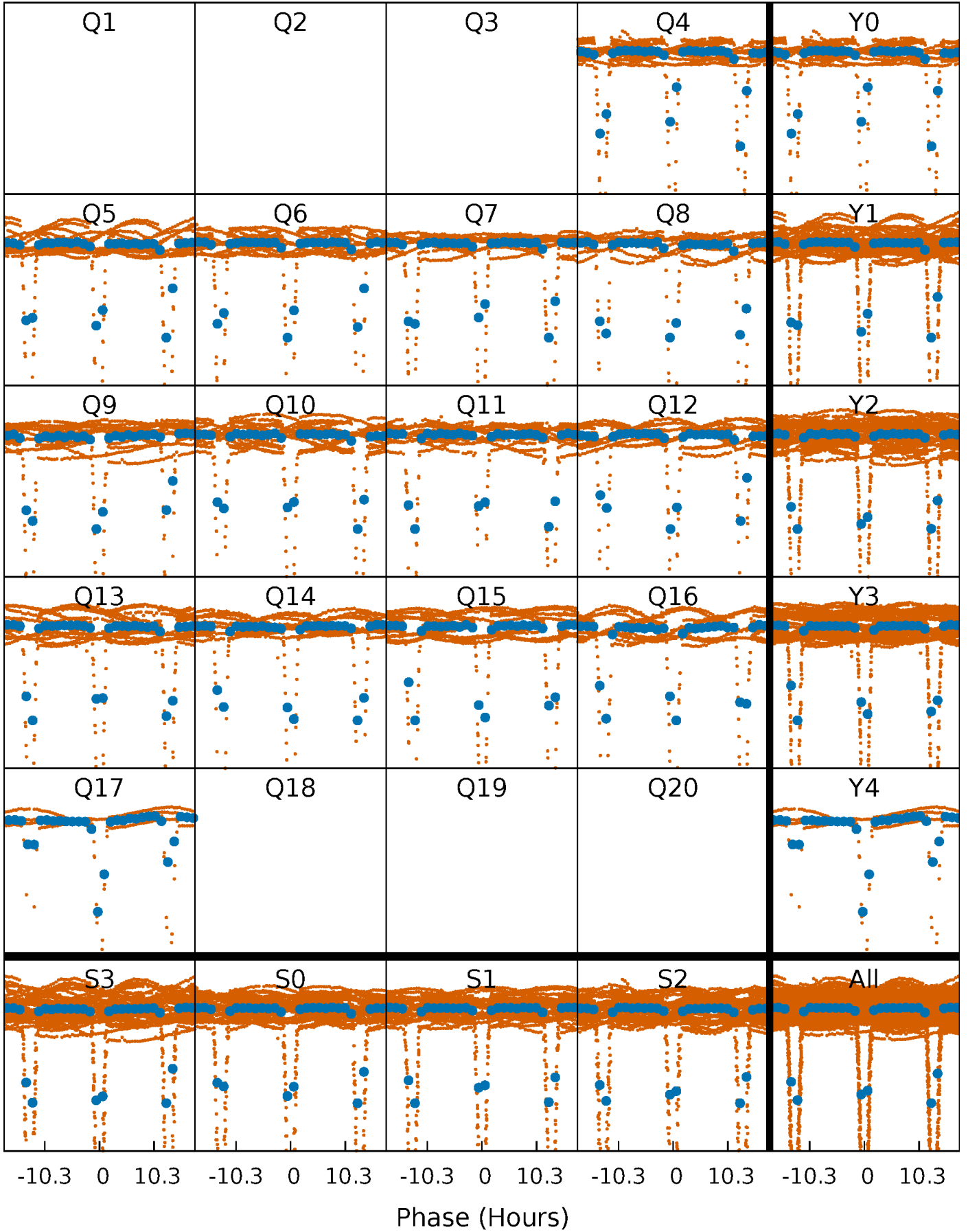


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



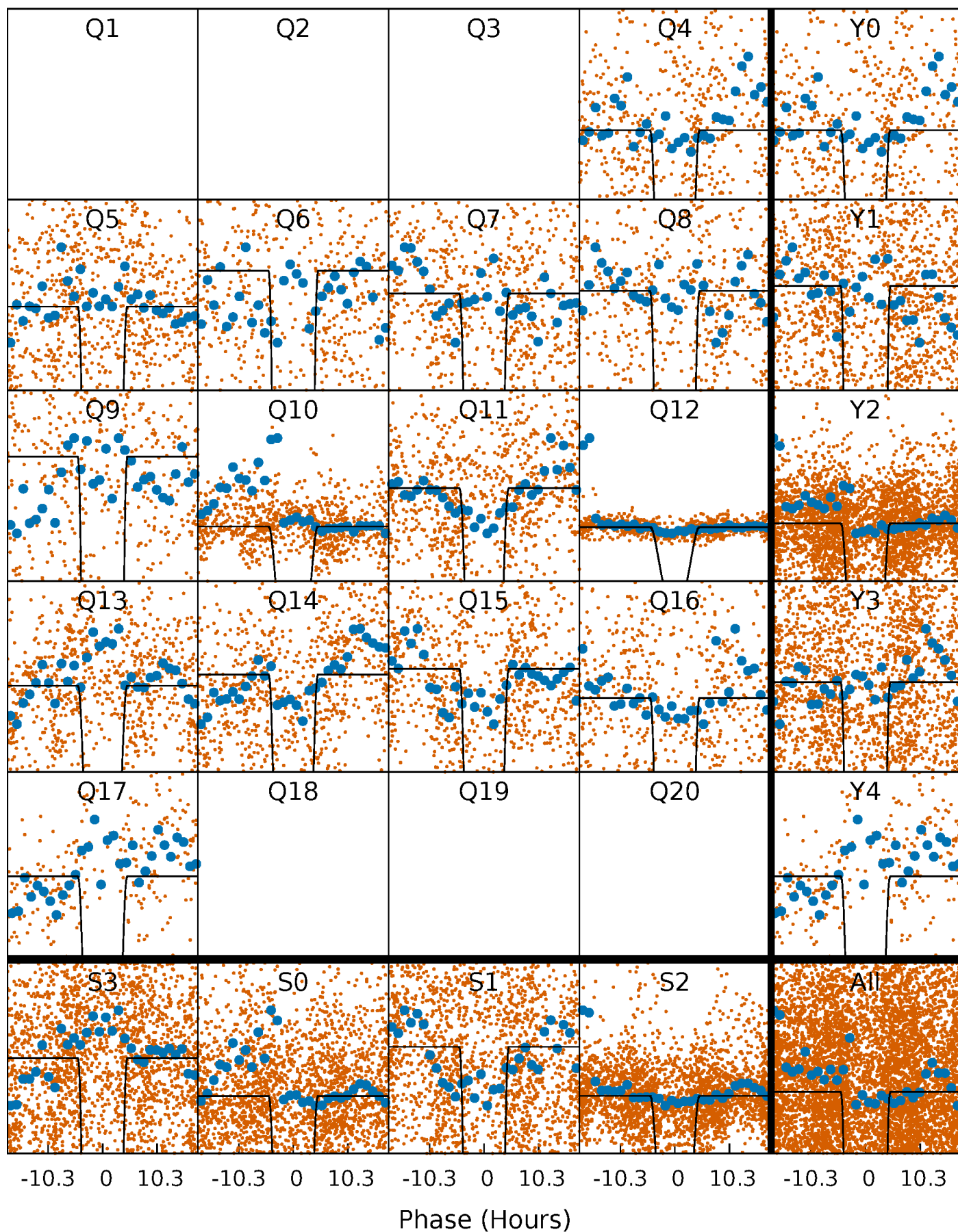
PDC Quarter-Phased Transit Curves

TCE 008244173-02 P= 6.006306 Days $T_0=135.388203$ (BKJD)



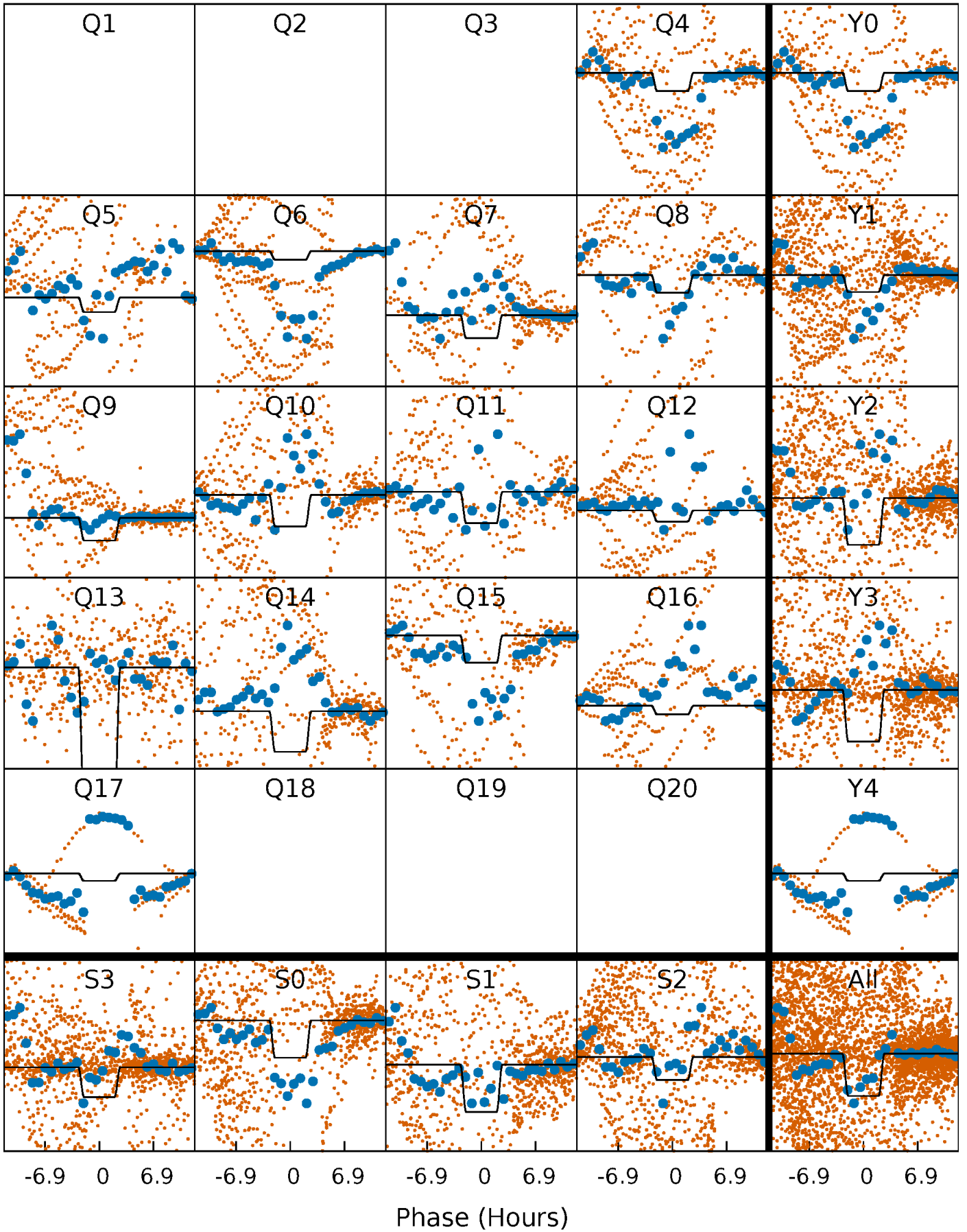
DV Quarter-Phased Transit Curves

TCE 008244173-02 P= 6.006306 Days $T_0=135.388203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

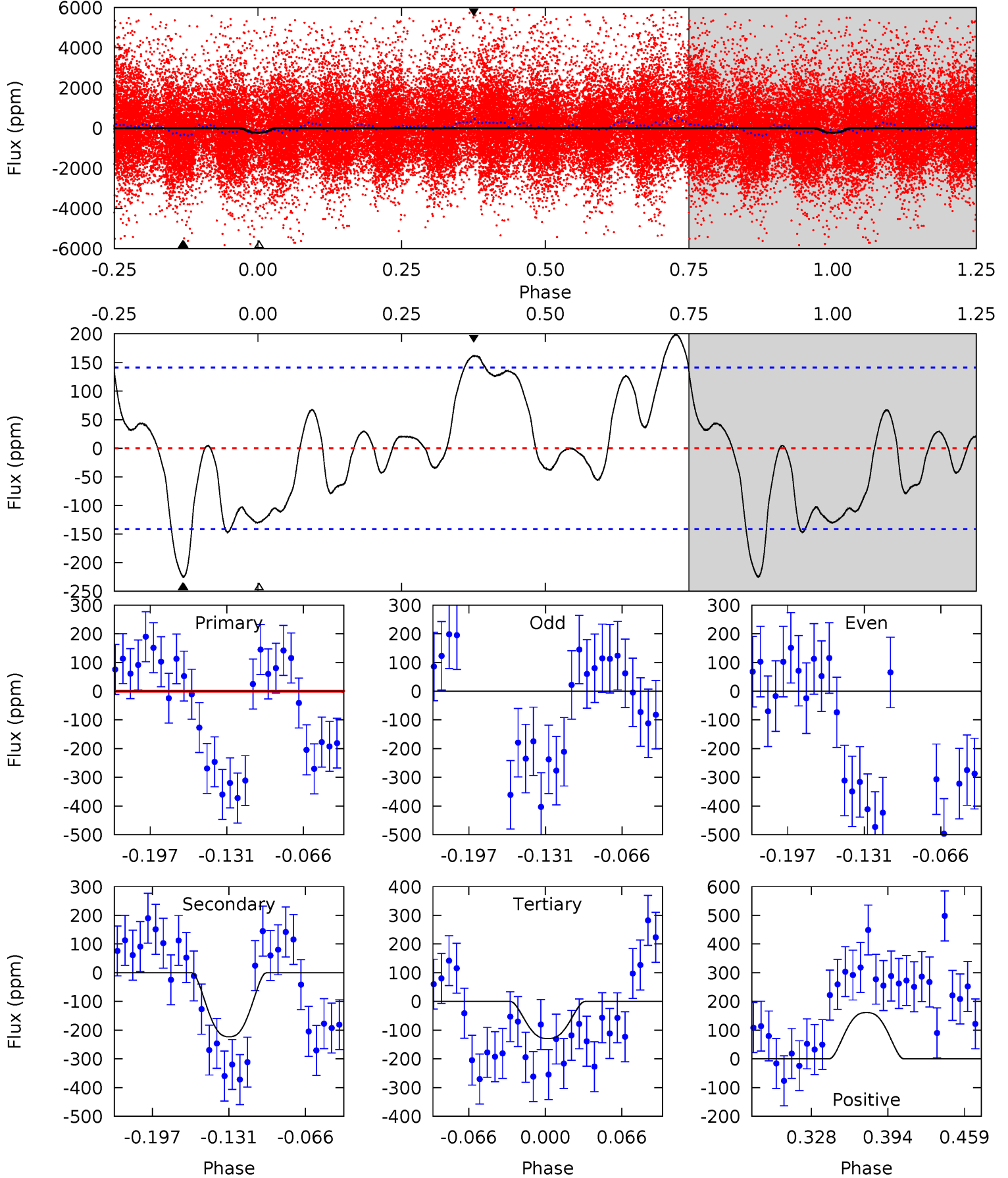
TCE 008244173-02 P= 6.006281 Days $T_0=135.351112$ (BKJD)



DV Model-Shift Uniqueness Test

008244173-02, P = 6.006306 Days, E = 135.388203 Days

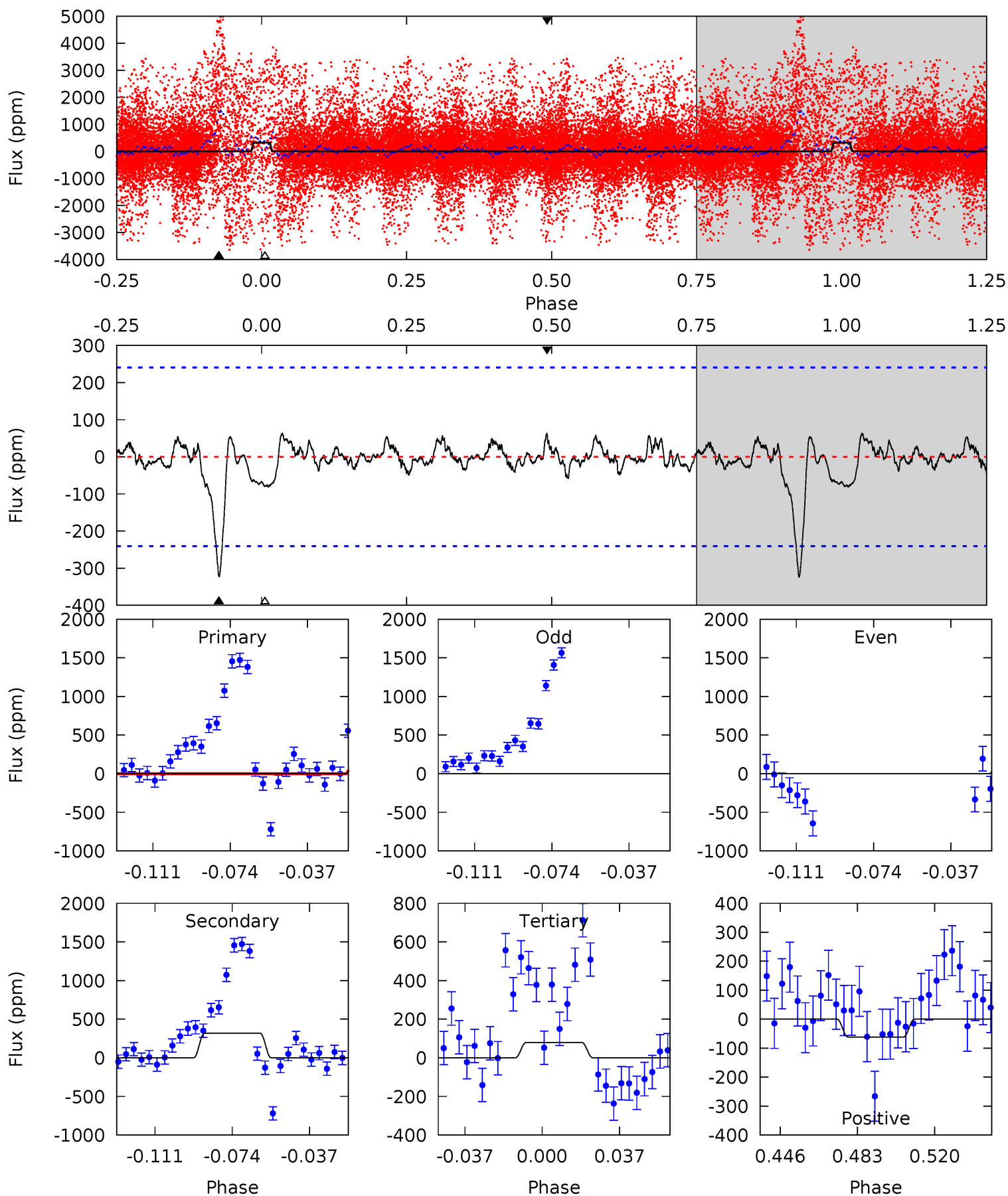
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.41	7.36	4.27	5.32	4.65	1.84	2.79	3.14	2.08	3.10	2.04	3.14	-11.2	0.47	0.41



Alt Model-Shift Uniqueness Test

008244173-02, P = 6.006281 Days, E = 135.351112 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.40	6.30	1.58	1.22	4.77	2.08	0.49	4.83	5.18	4.73	5.08	0	78.3	0.16	0



Stellar Parameters For KIC 008244173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+160}_{-160}	$4.670^{+0.054}_{-0.032}$	$-0.740^{+0.300}_{-0.300}$	$0.576^{+0.047}_{-0.047}$	$0.566^{+0.056}_{-0.033}$	$4.172^{+0.964}_{-0.603}$
	+4%/-4%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-6%	+23%/-14%
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 008244173-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-223 ± 30	$8.09^{+0.42}_{-0.37}$	918^{+35}_{-35}	2369^{+63}_{-65}	$5.431^{+0.853}_{-0.839}$
Alt.	-318 ± 50	$3.11^{+0.23}_{-0.21}$	917^{+38}_{-36}	3205^{+130}_{-128}	52^{+12}_{-9}

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

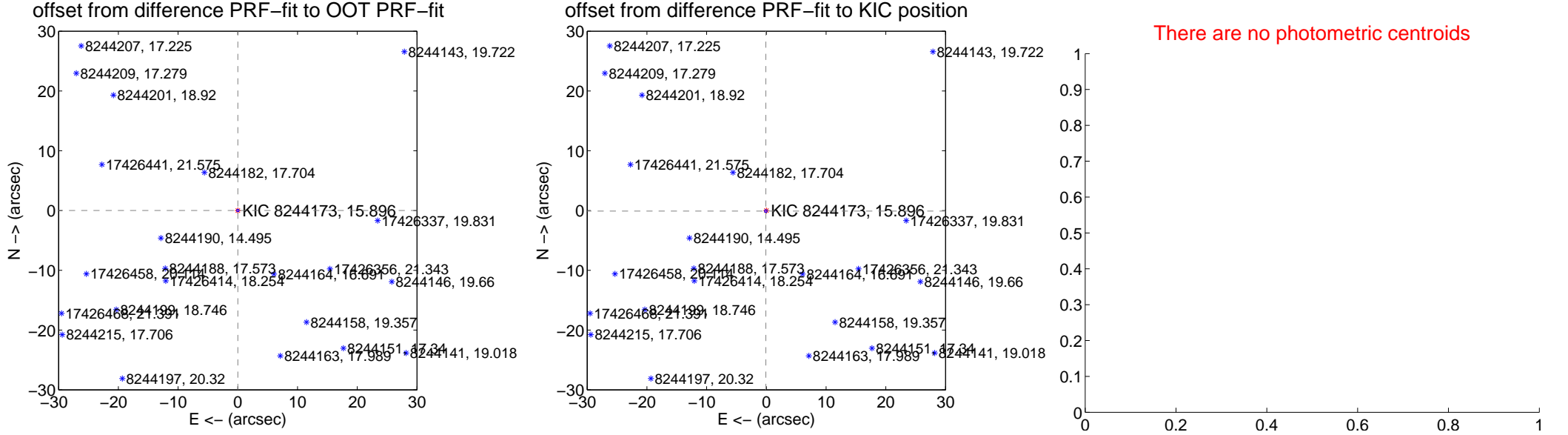
DV Centroid Data

Supplemental centroid analysis for 008244173-02. Kepler magnitude: 15.90. Transit SNR 164.71

There are 14 quarters with good PRF difference image offsets

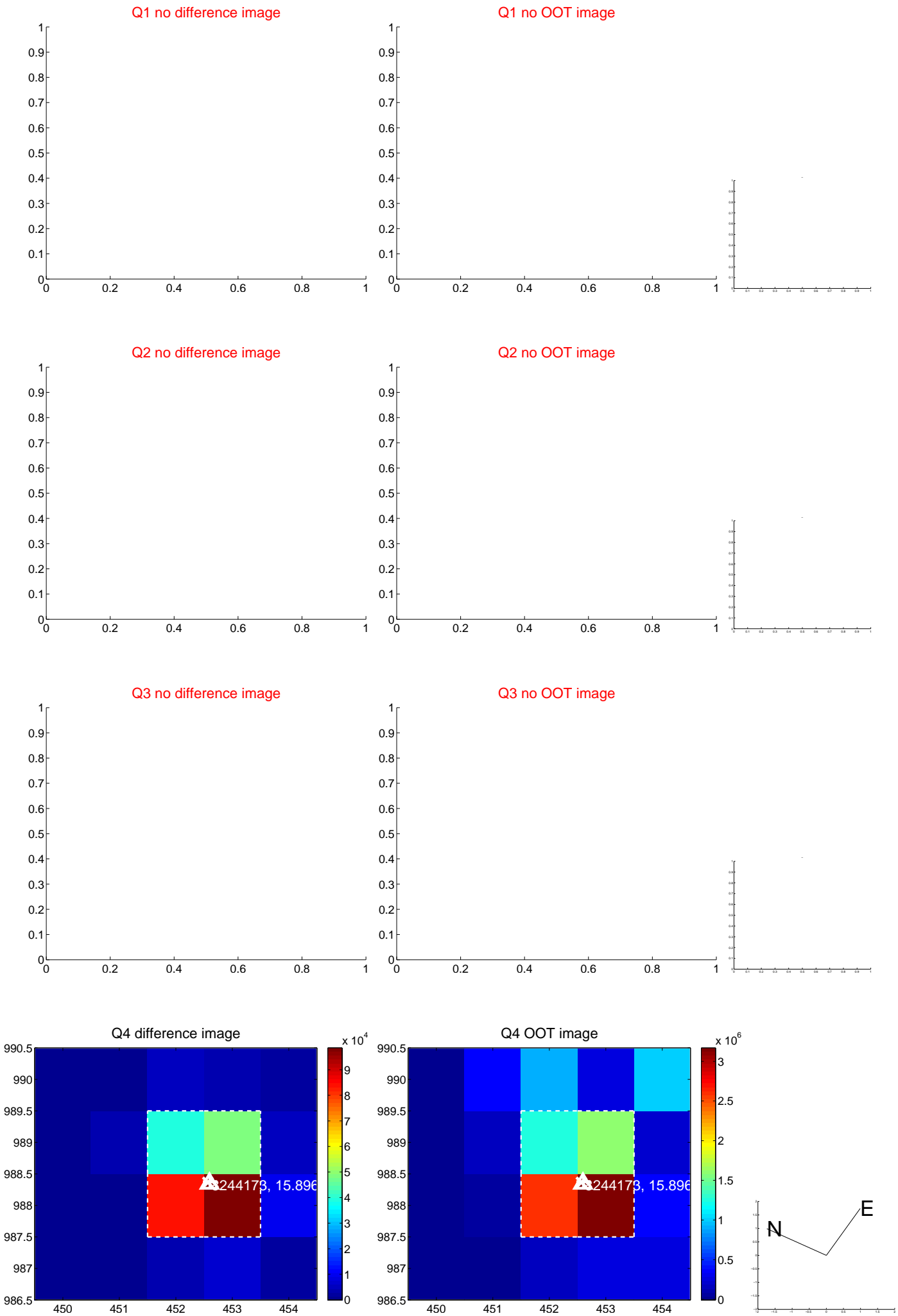
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.013 ± 0.069	0.19	-0.010 ± 0.070	0.009 ± 0.068
PRF-fit source offset from KIC position	0.125 ± 0.075	1.66	0.089 ± 0.073	-0.088 ± 0.072
photometric centroid source offset	—	—	—	—

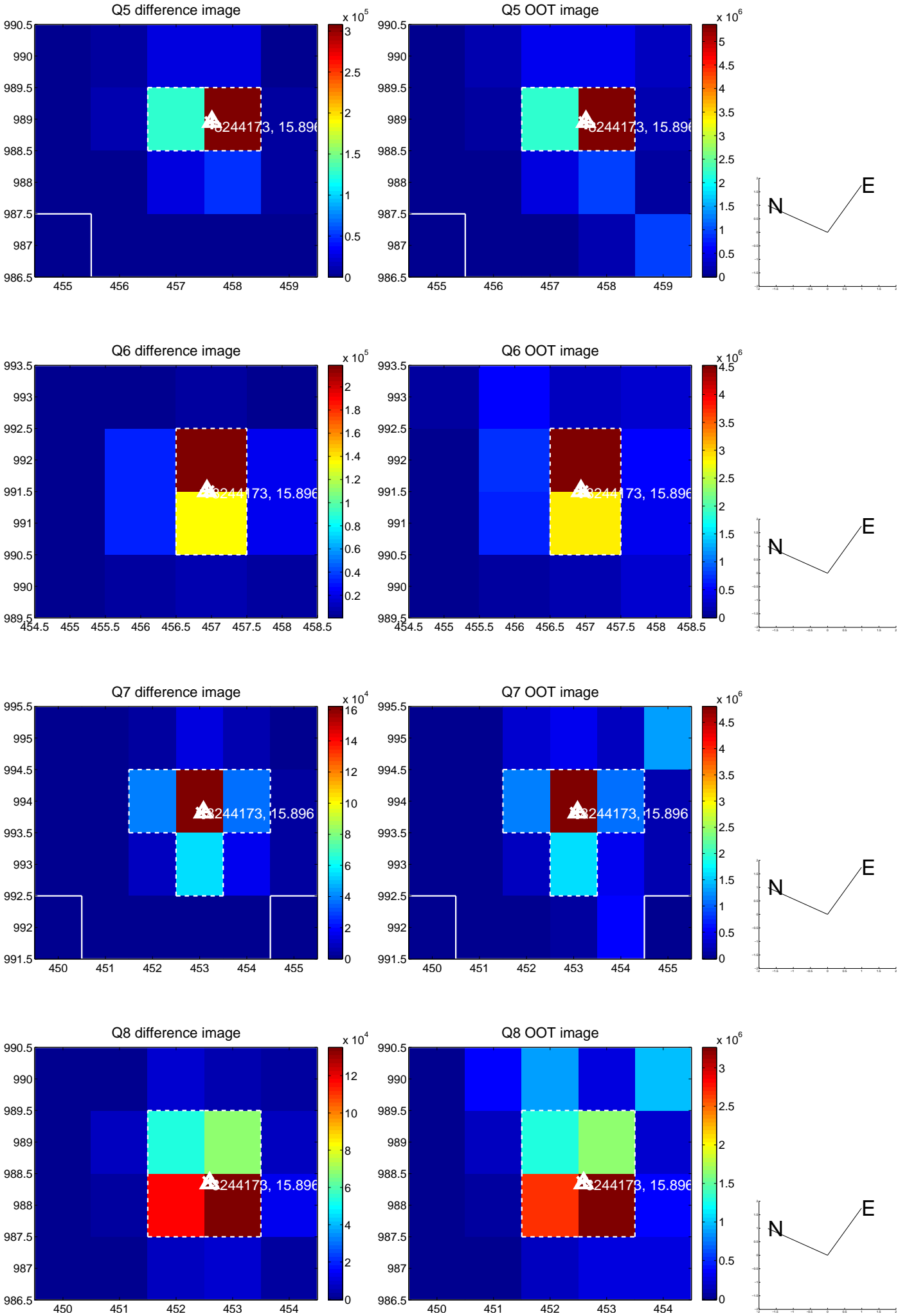


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

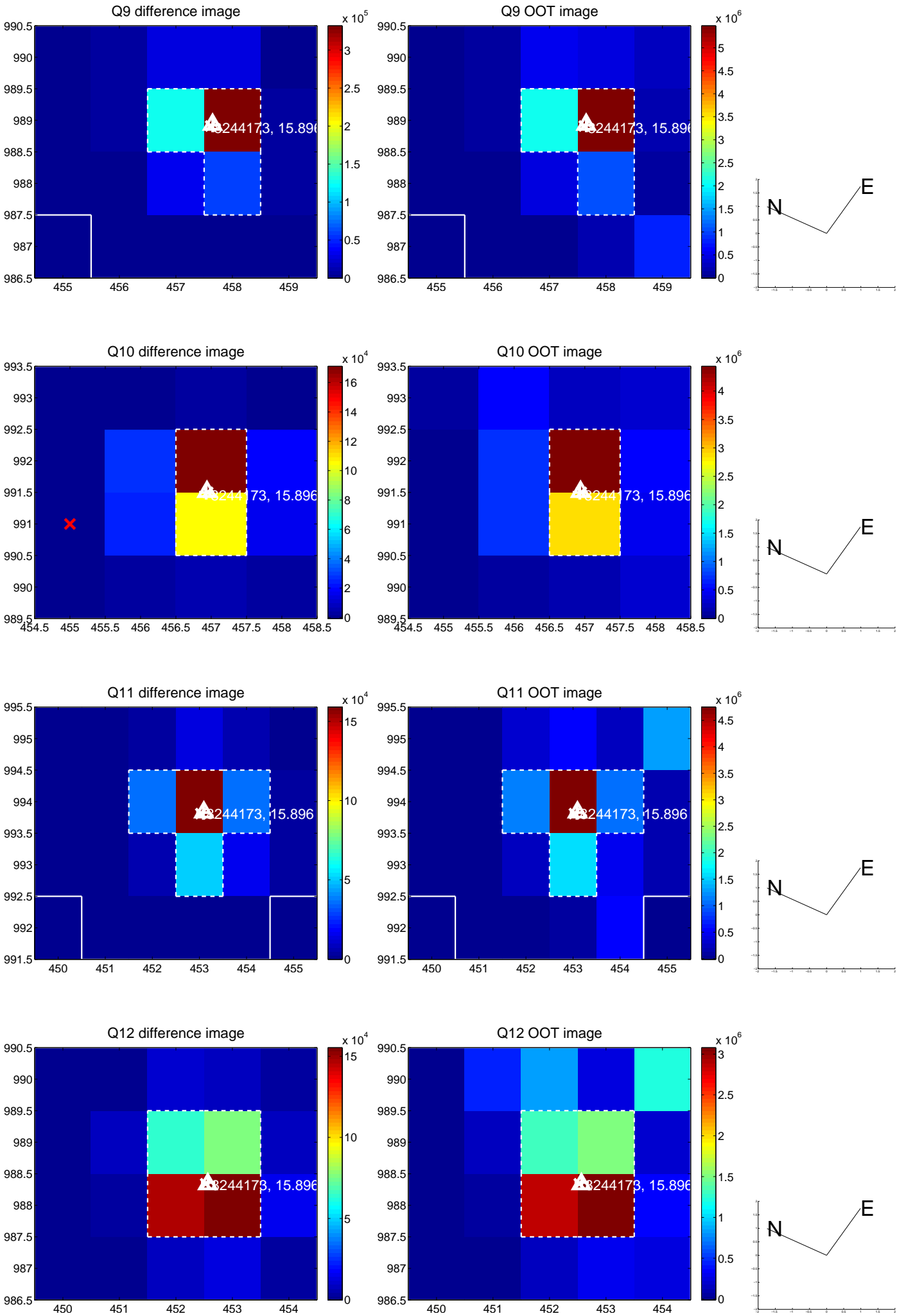
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



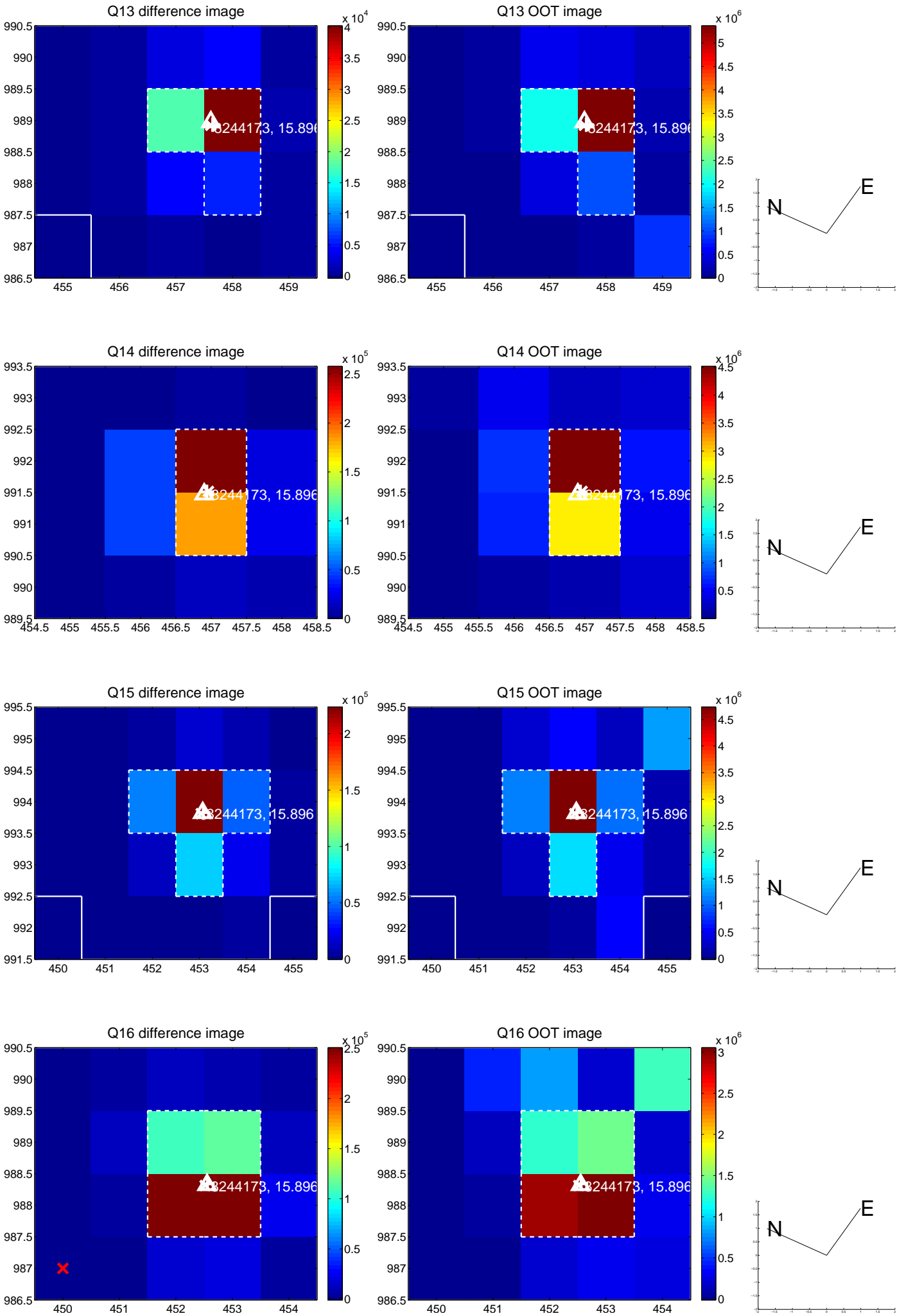
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



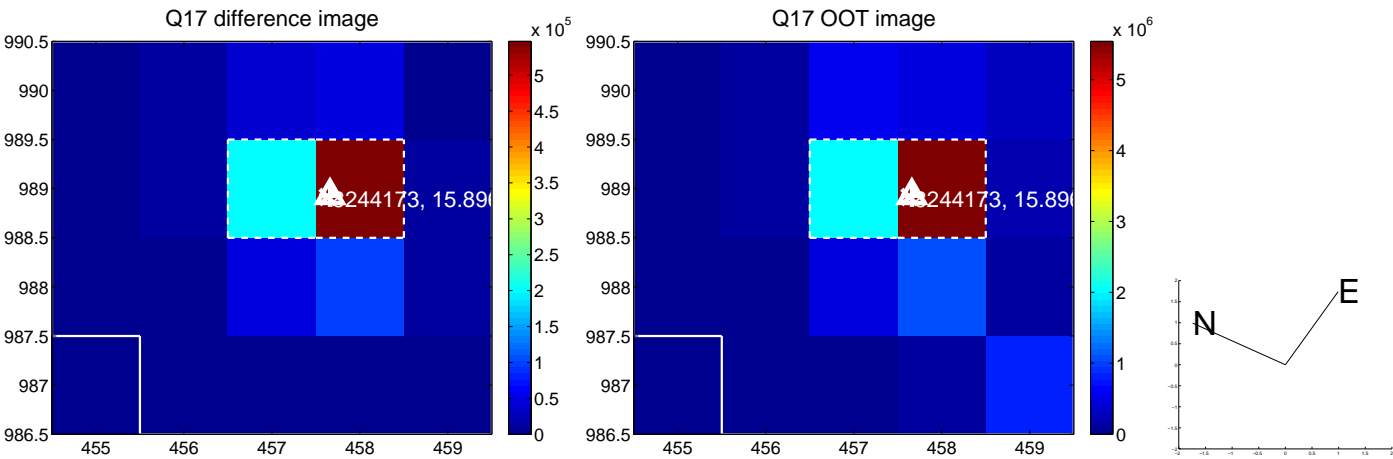
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



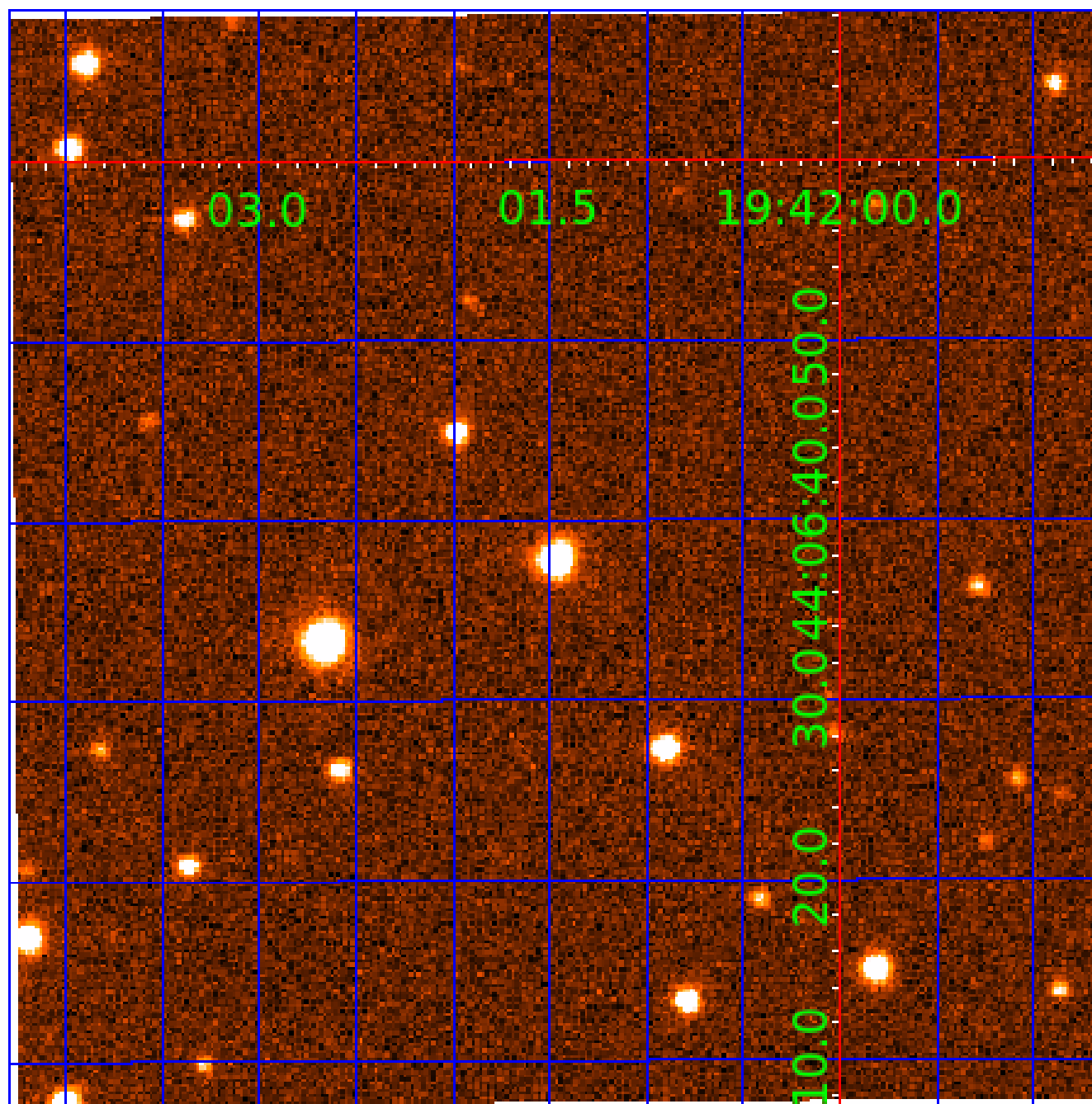
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008244173

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})
008244173-01	OBS	3545.01	1.092070	132.098494	393924.1	1.500	15114.7	-1.0	0.58	4556	31.43	434.35
008244173-02	OBS	No	6.006306	135.388203	14098.9	9.014	1201.6	164.7	0.58	4556	8.12	44.74
008244173-03	OBS	No	1.092055	131.565483	7006.9	3.500	202.5	-1.0	0.58	4556	4.66	434.36
008244173-04	OBS	No	81.024983	189.430490	52.7	0.663	39.5	0.1	0.58	4556	0.63	1.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008244173-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—HAS_SEC_TCE—CENT_NOFITS
008244173-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
008244173-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008244173-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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.

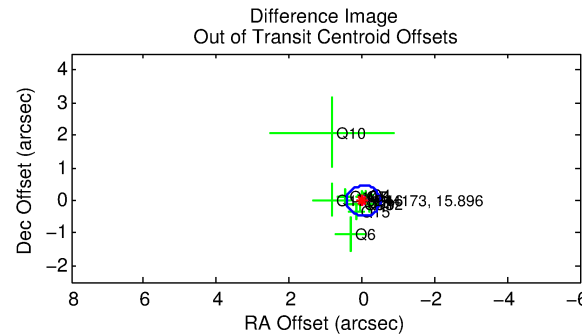
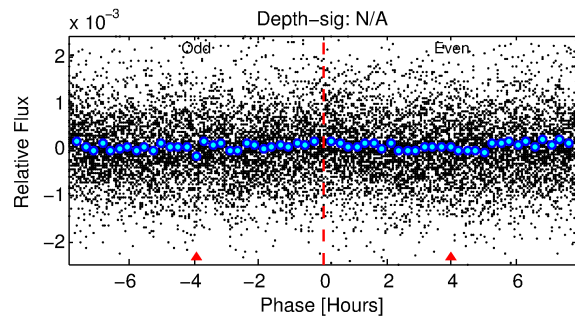
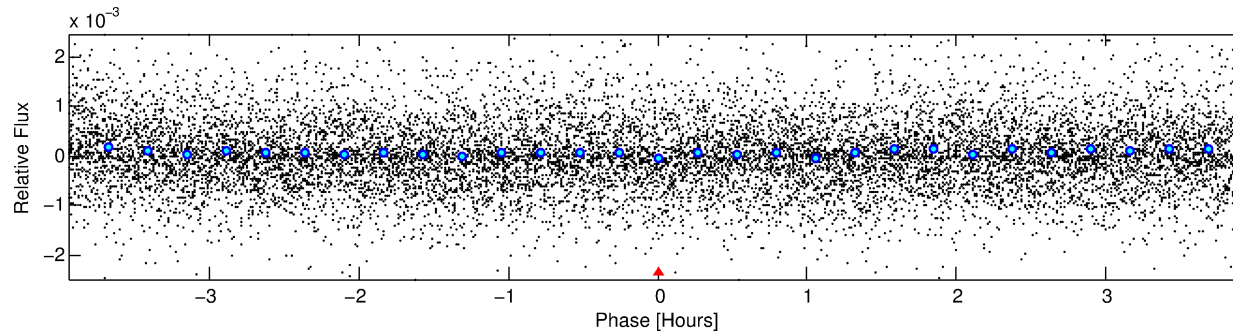
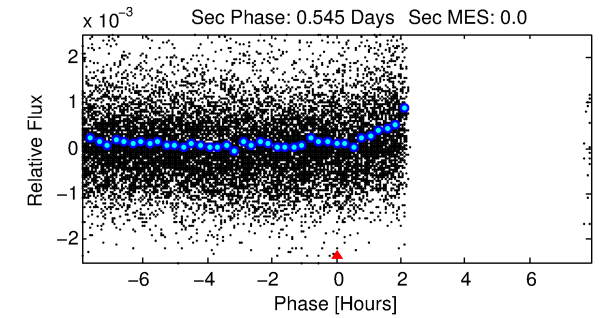
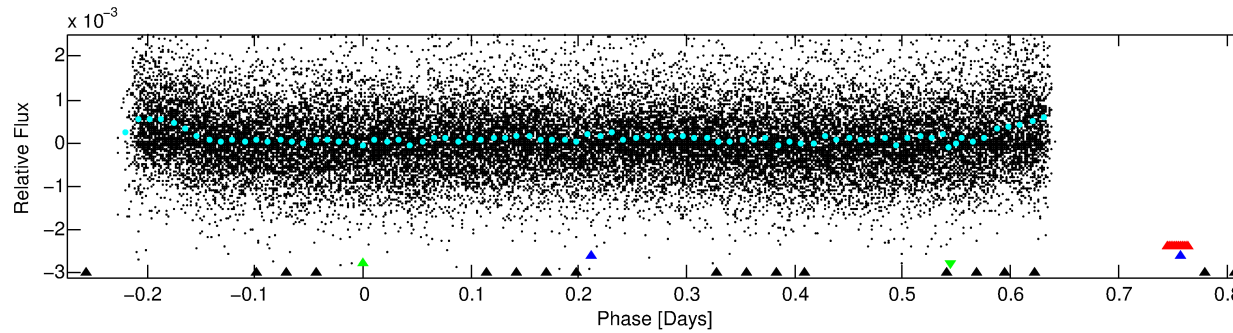
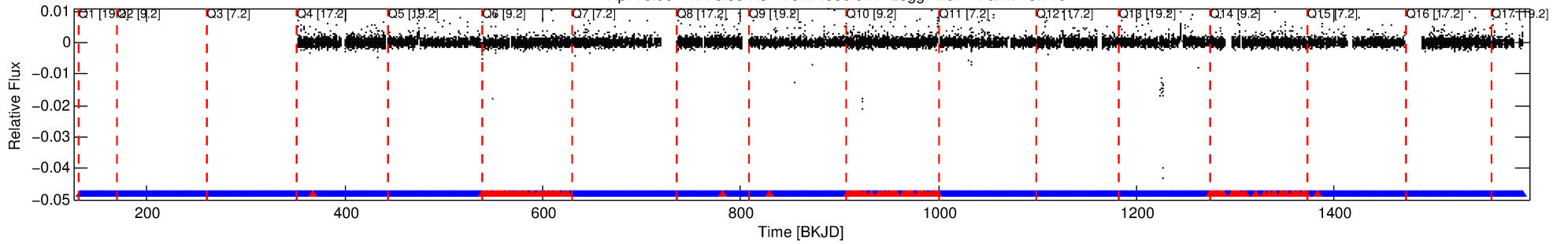
Ephemeris Match Information For 008244173-03

No Significant Match Found

DV One-Page Summary

KIC: 8244173 Candidate: 3 of 4 Period: 1.092 d
KOI: K03545 Corr: No Ephemeris Match

Kp: 15.90 R*: 0.58 Rs Teff: 4556.0 K Logg: 4.67 Fe/H: -0.740



TPS TCE Results:

Period = 1.09206 d
Epoch = 131.5655 BKJD

DV fit results are unavailable

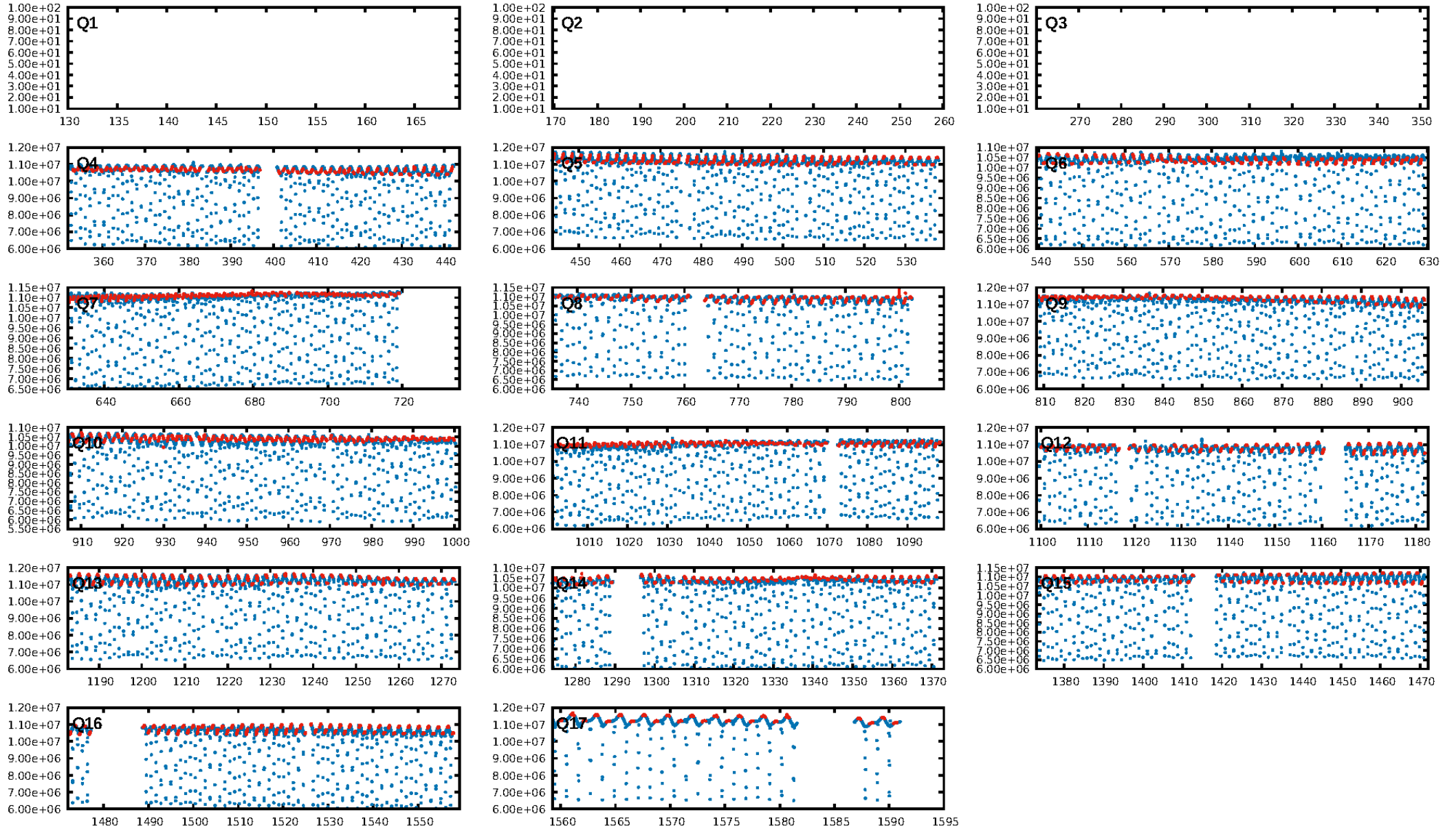
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-189
RollingBand-fgt: 0.85 [701/826]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.041 arcsec [0.26σ]
KicOffset-rm: 0.132 arcsec [0.72σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [14/14]

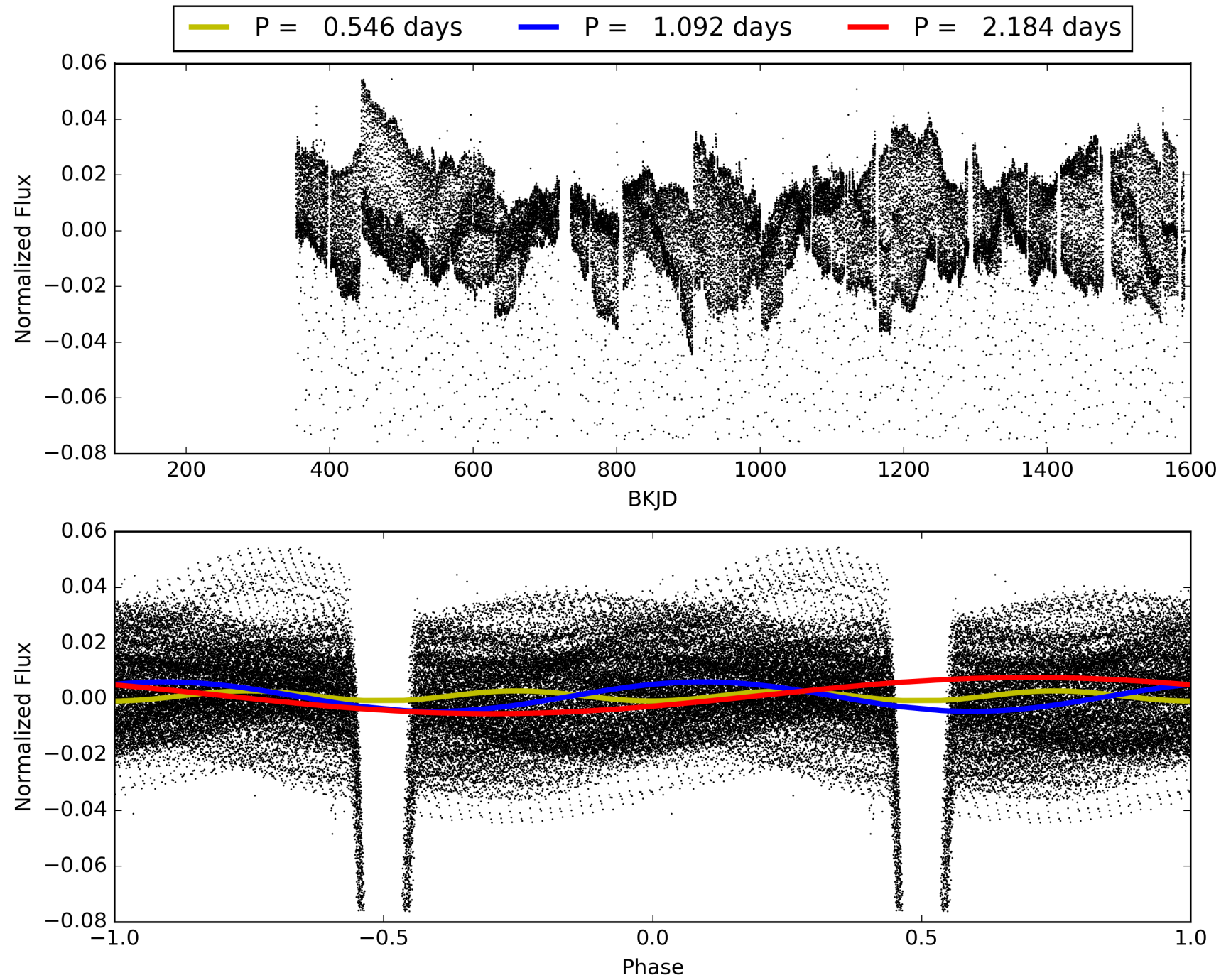
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:04:10 Z

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

TCE 008244173-03, PDC Light Curves

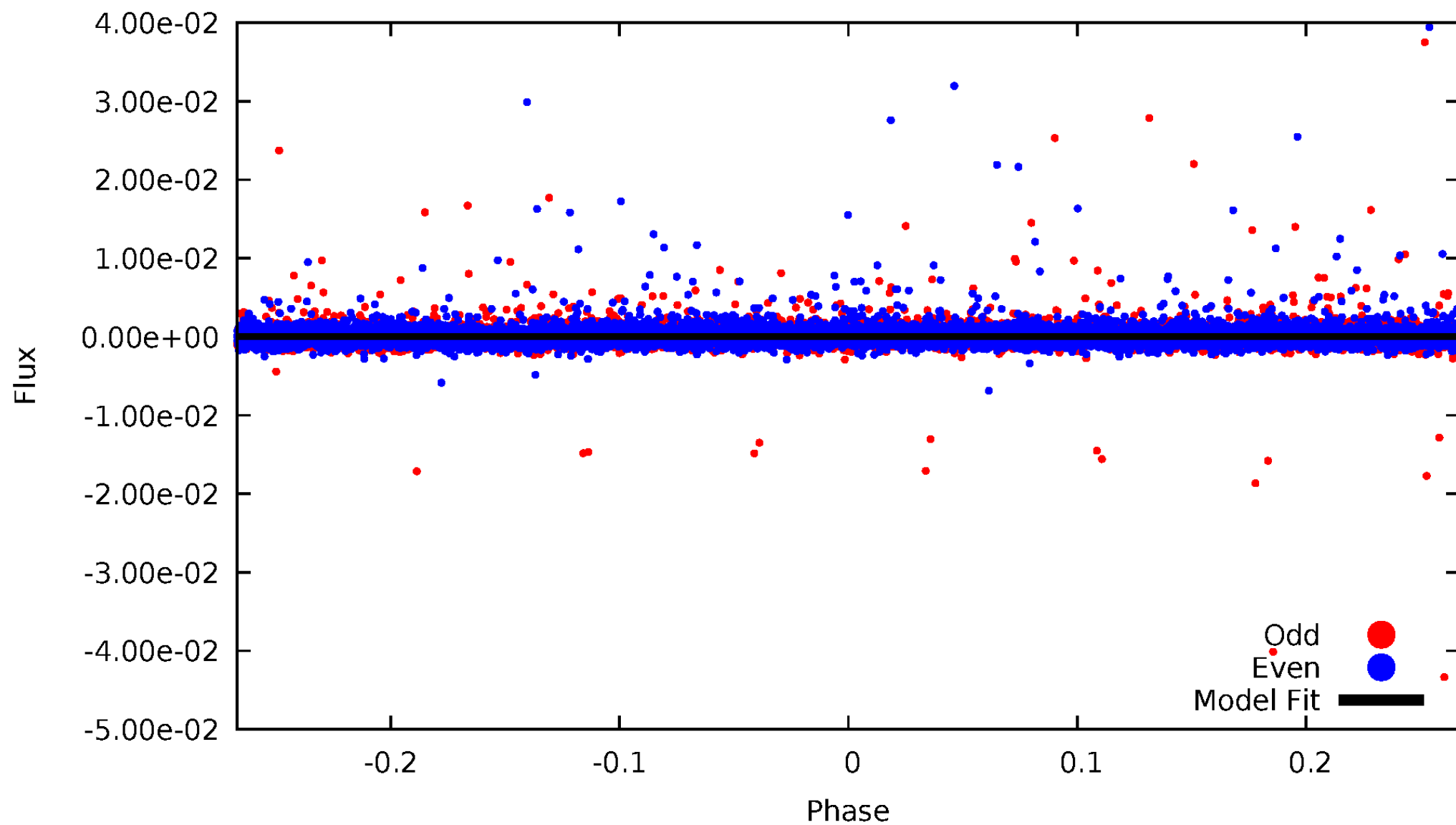


TCE 008244173-03



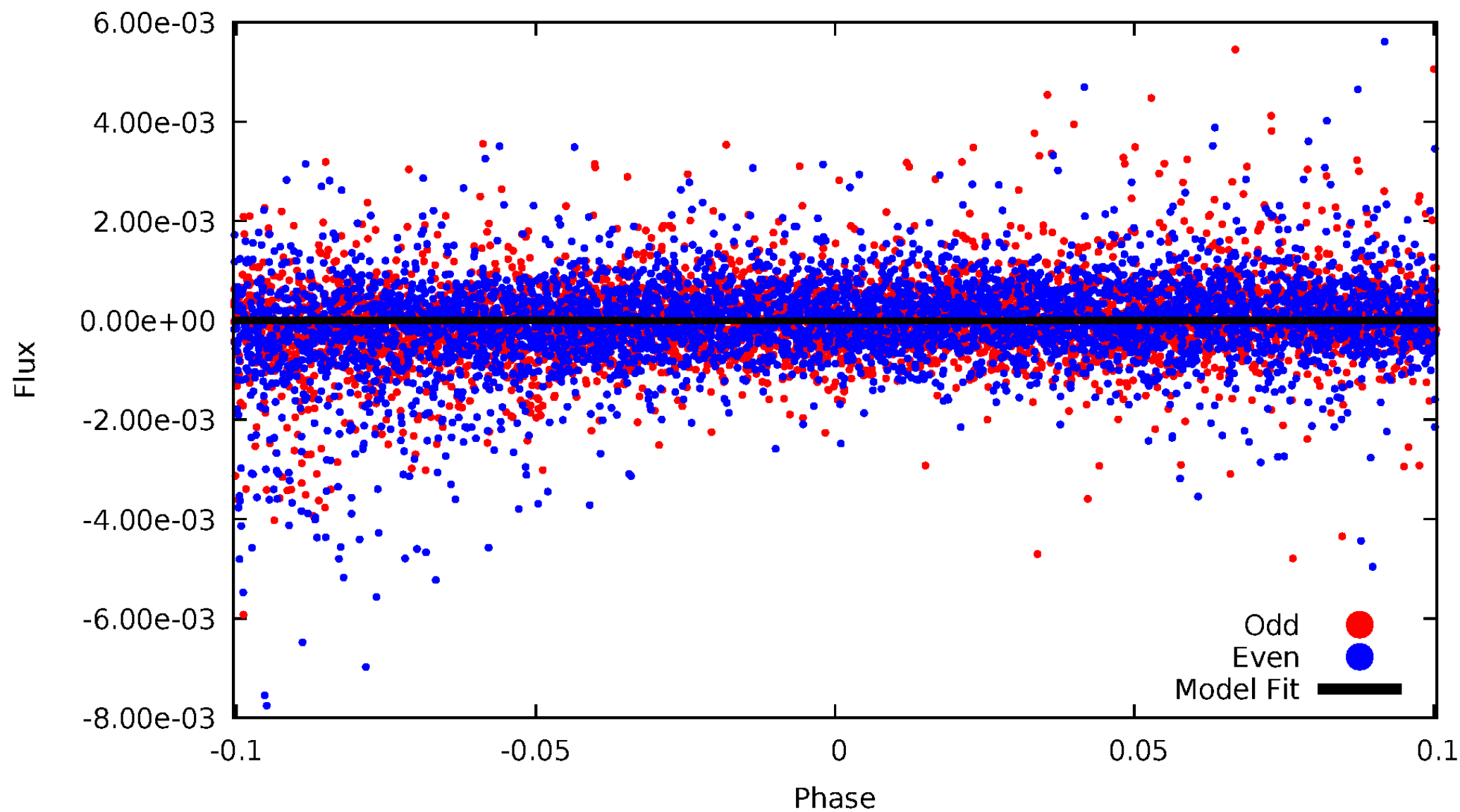
DV Odd/Even

TCE 008244173-03

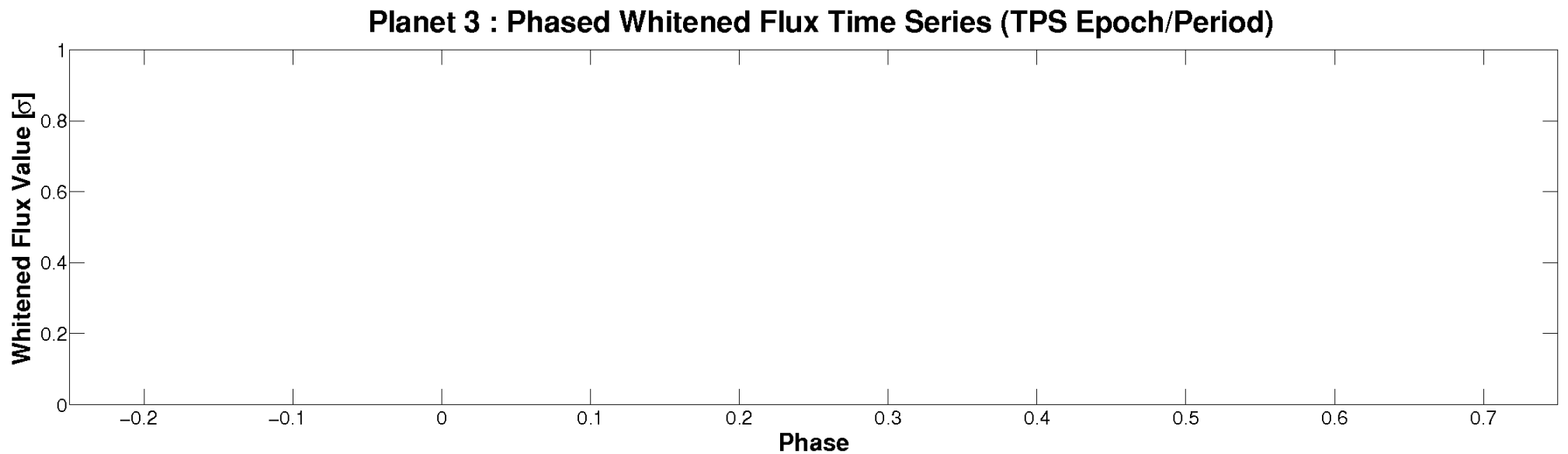
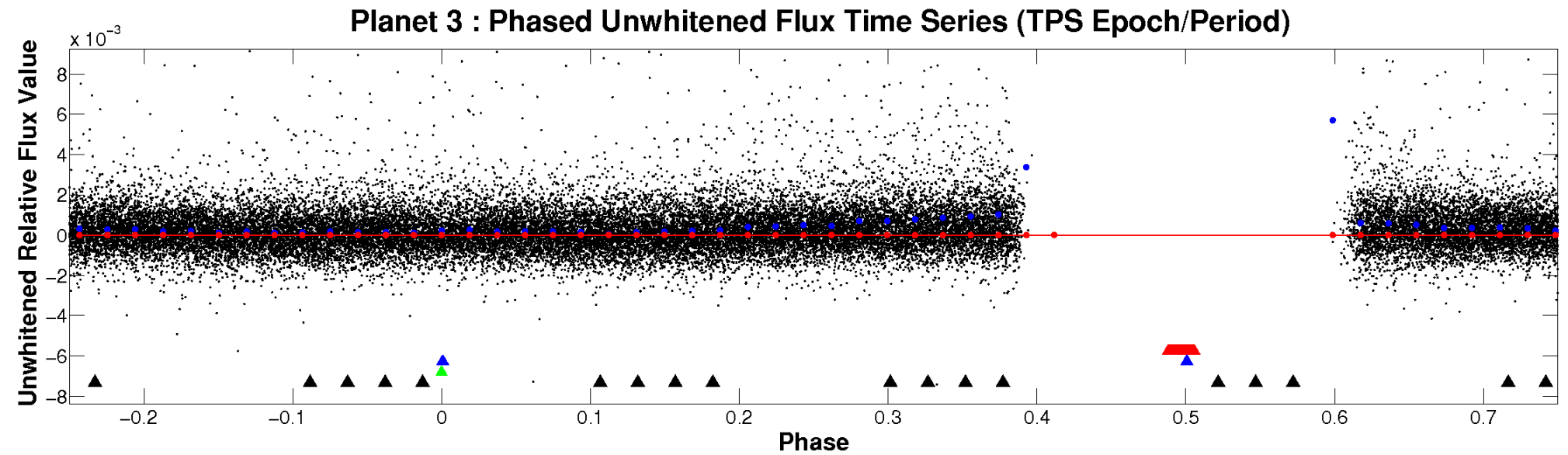


ALT Odd/Even

TCE 008244173-03

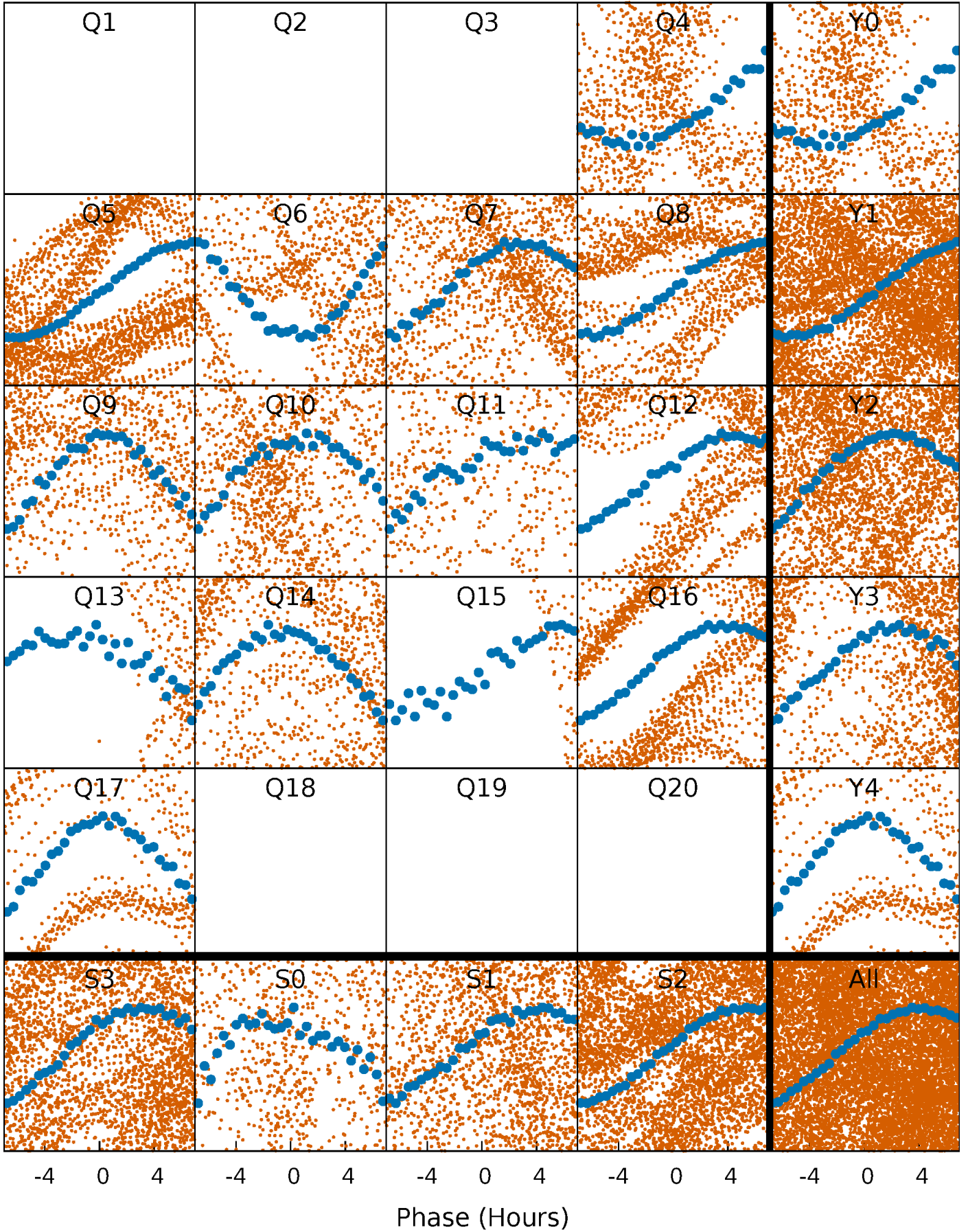


Non-Whitened Vs. Whitened Light Curve



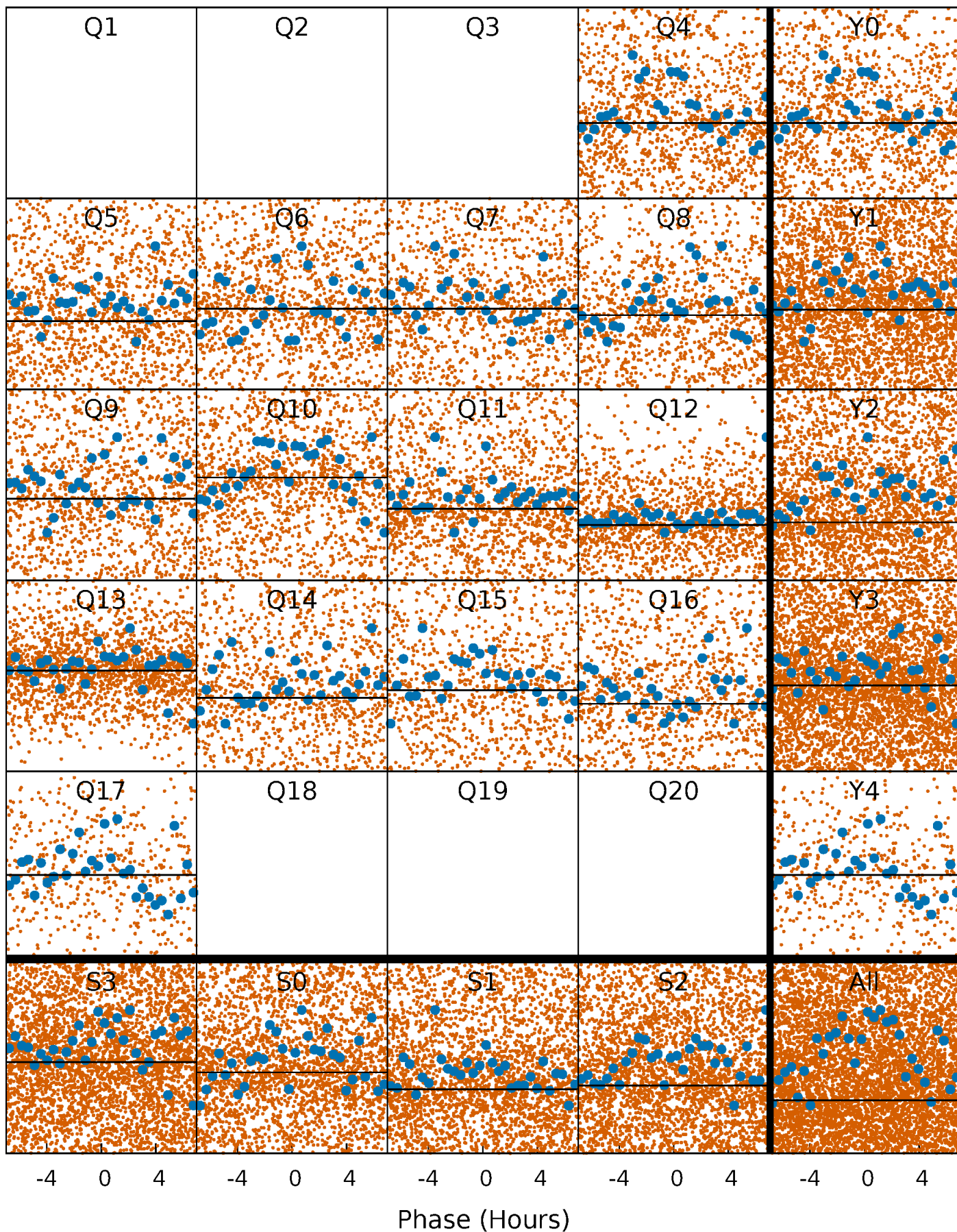
PDC Quarter-Phased Transit Curves

TCE 008244173-03 P= 1.092055 Days $T_0=131.565483$ (BKJD)



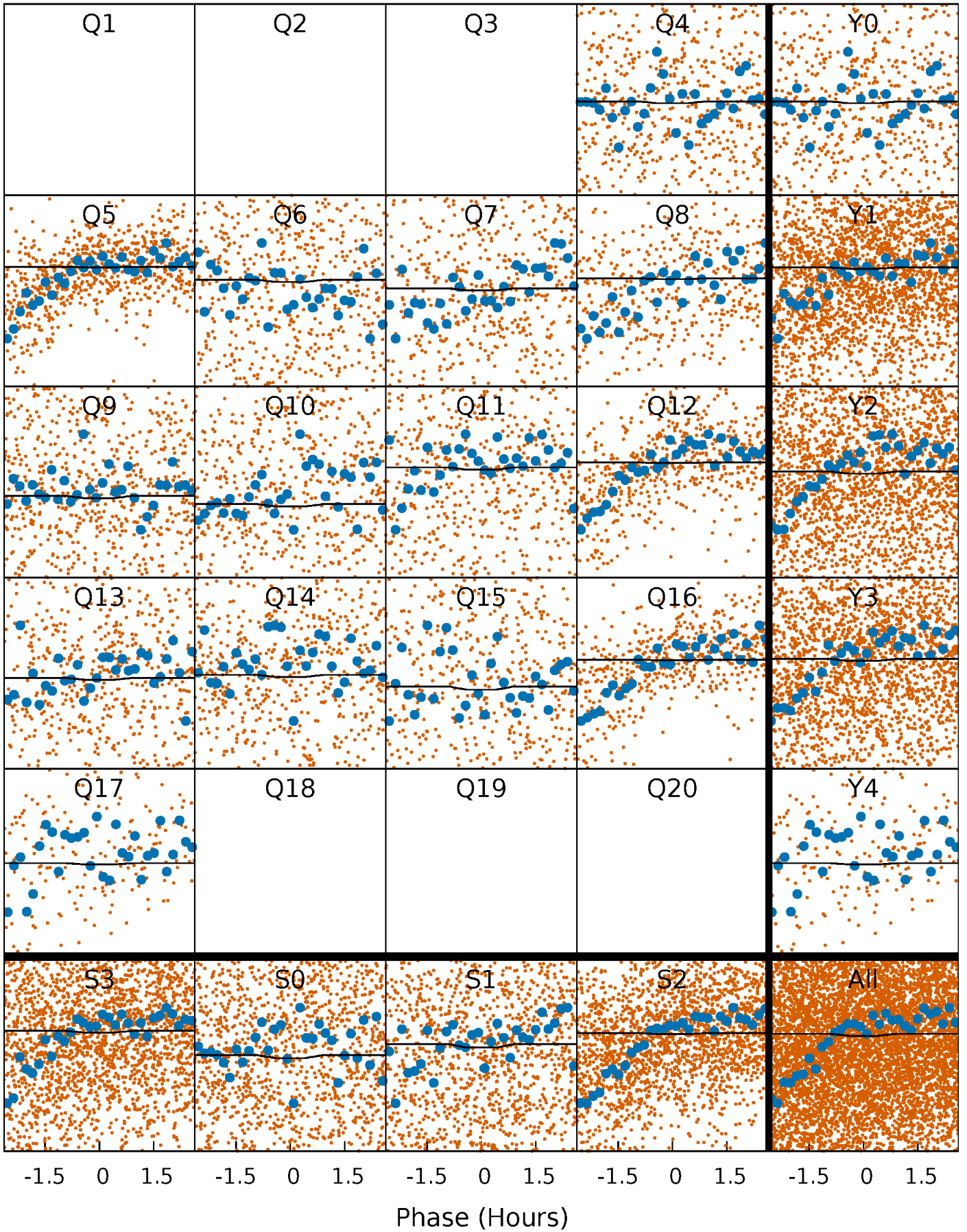
DV Quarter-Phased Transit Curves

TCE 008244173-03 P= 1.092055 Days $T_0=131.565483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

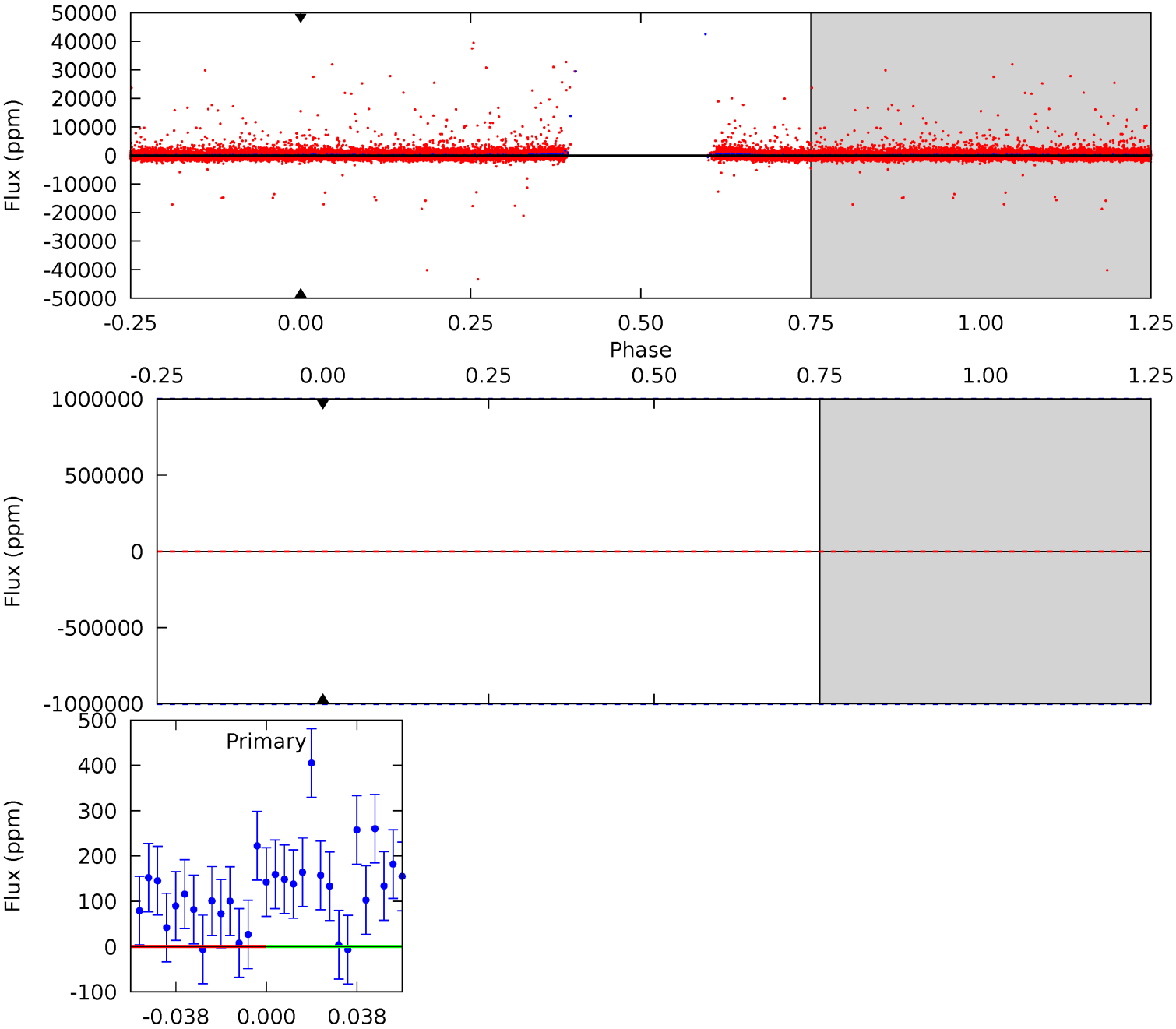
TCE 008244173-03 P= 1.092055 Days $T_0=132.446644$ (BKJD)



DV Model-Shift Uniqueness Test

008244173-03, P = 1.092055 Days, E = 131.565483 Days

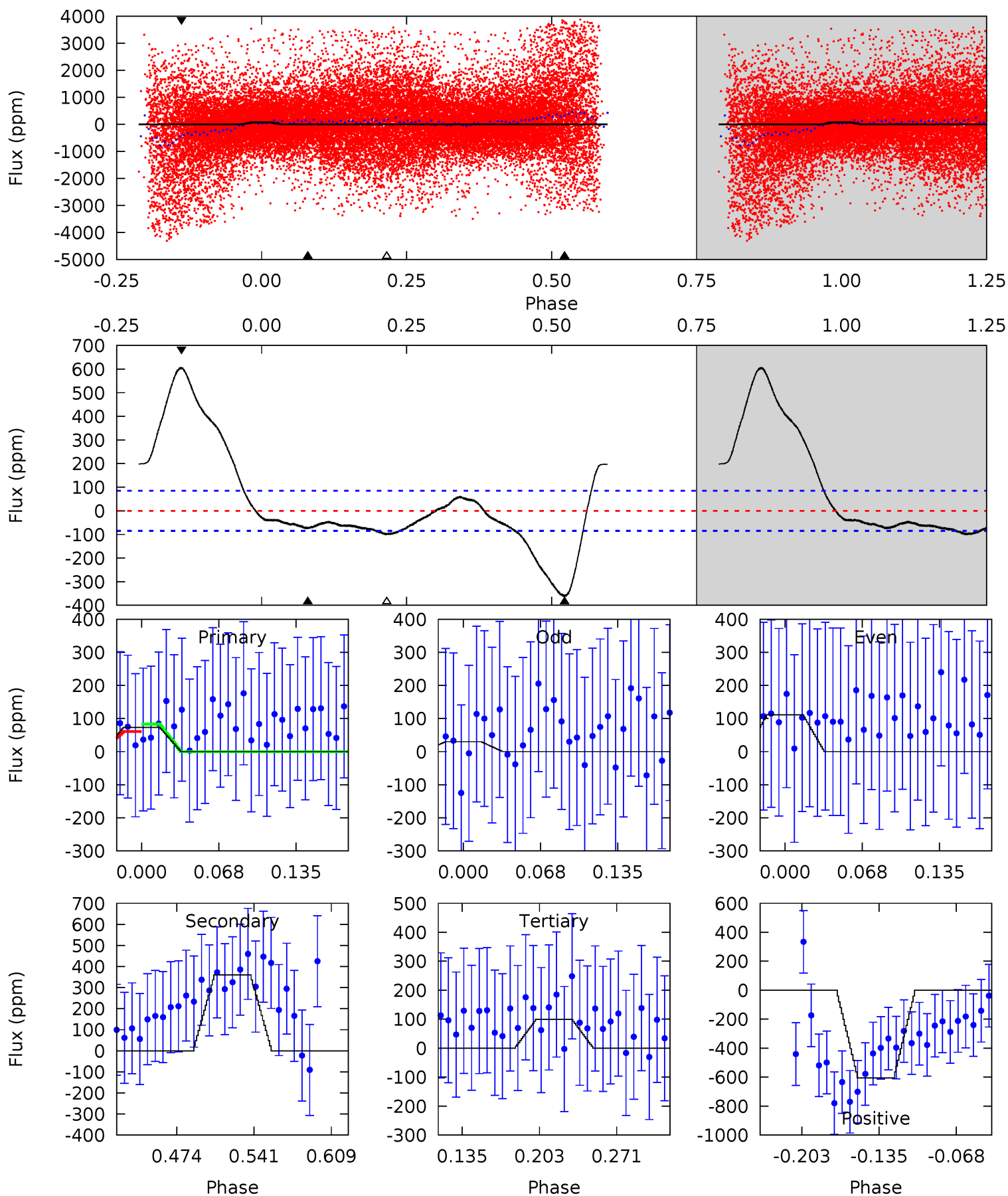
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008244173-03, P = 1.092055 Days, E = 132.446644 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.01	19.7	5.43	33.1	4.65	1.83	11.1	-1.43	-29.1	14.3	-13.4	2.25	1.39	0.63	0.49



Stellar Parameters For KIC 008244173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+160}_{-160}	$4.670^{+0.054}_{-0.032}$	$-0.740^{+0.300}_{-0.300}$	$0.576^{+0.047}_{-0.047}$	$0.566^{+0.056}_{-0.033}$	$4.172^{+0.964}_{-0.603}$
	+4%/-4%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-6%	+23%/-14%
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 008244173-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$6.52^{+5.73}_{-4.19}$	1615^{+70}_{-63}	3636^{+5931}_{-12138}	14^{+680}_{-495}
Alt.	-360 ± 18	$4.19^{+4.88}_{-2.87}$	1620^{+61}_{-60}	2953^{+1424}_{-649}	$3.295^{+29.540}_{-2.564}$

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 $A_{obs} \gg 1.0$

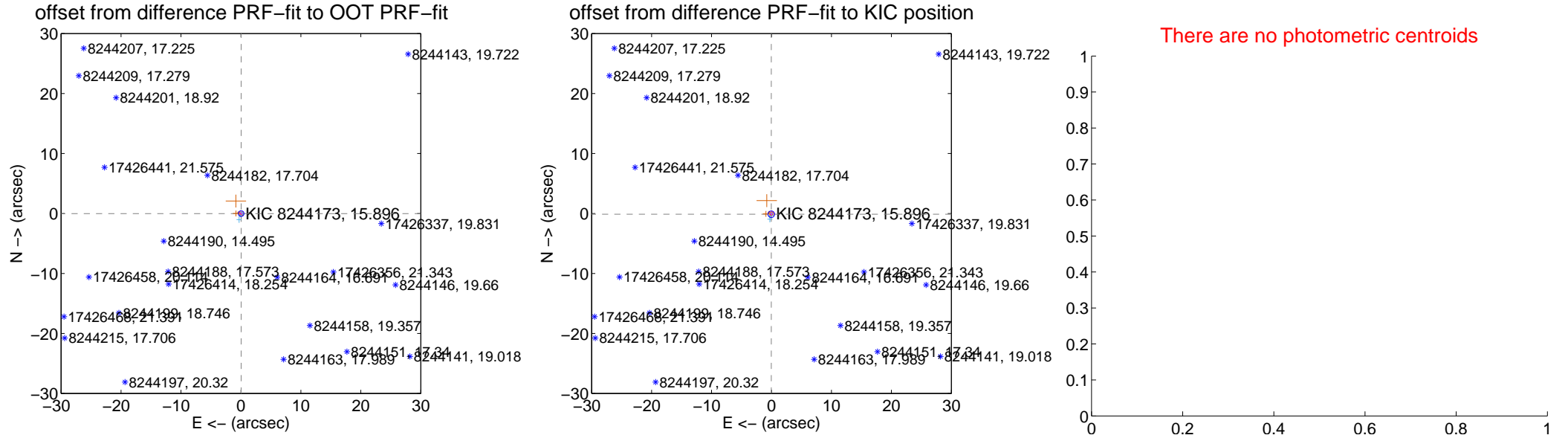
DV Centroid Data

Supplemental centroid analysis for 008244173-03. Kepler magnitude: 15.90. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

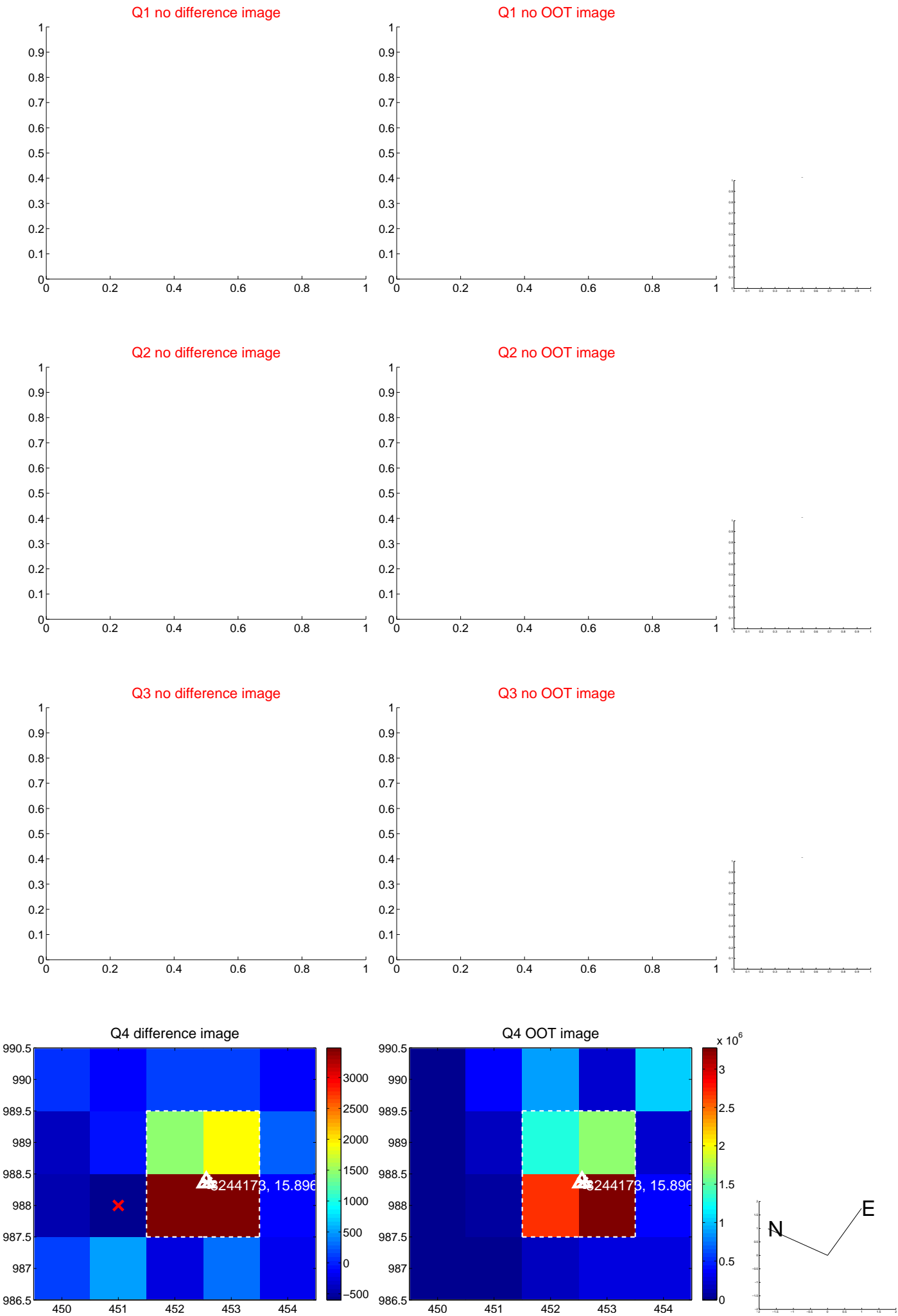
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.156	0.26	-0.037 ± 0.162	-0.017 ± 0.126
PRF-fit source offset from KIC position	0.132 ± 0.182	0.72	0.039 ± 0.103	-0.126 ± 0.198
photometric centroid source offset	—	—	—	—

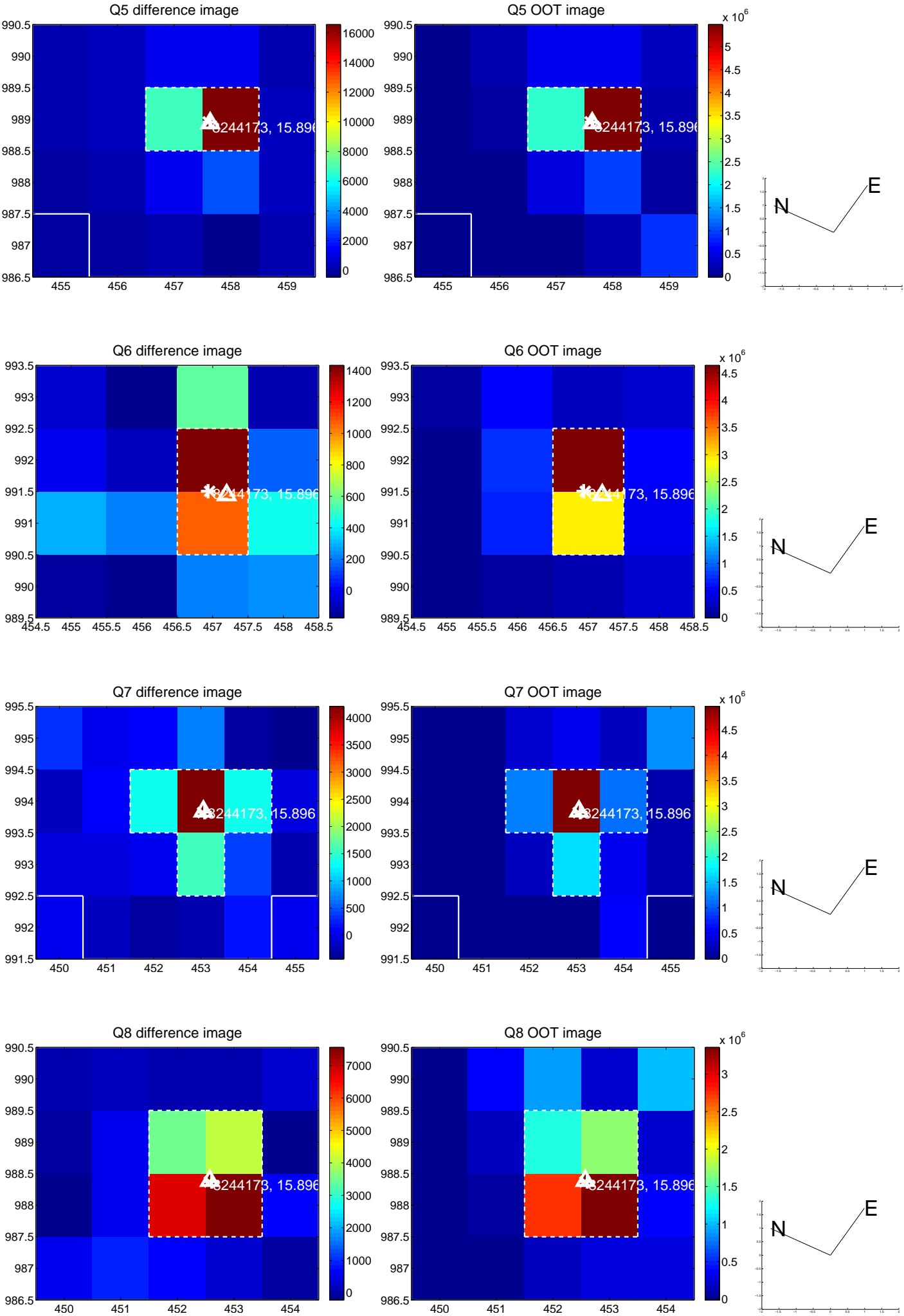


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

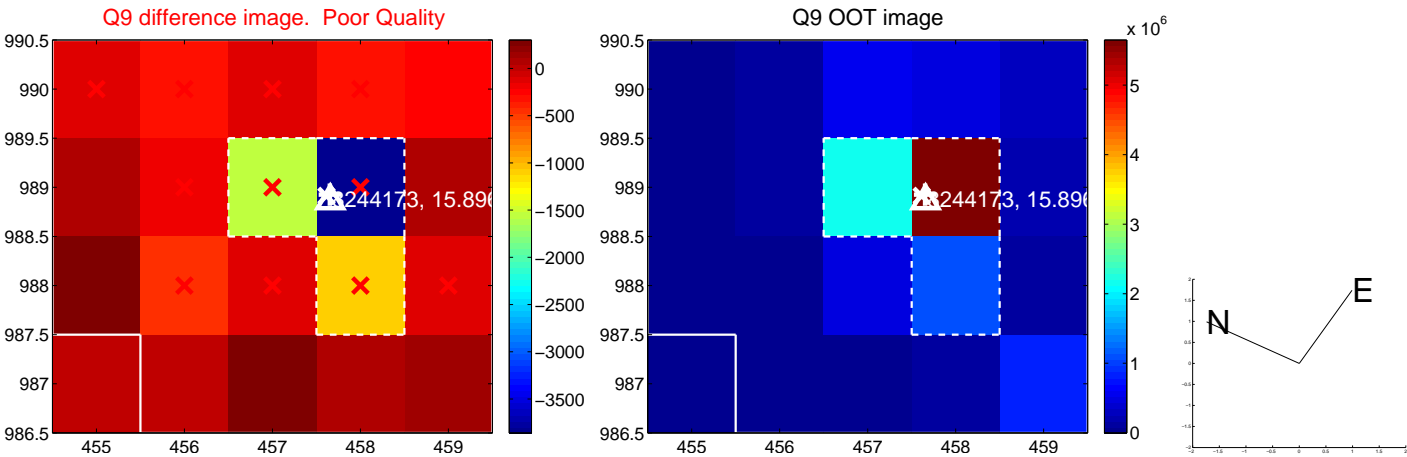
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



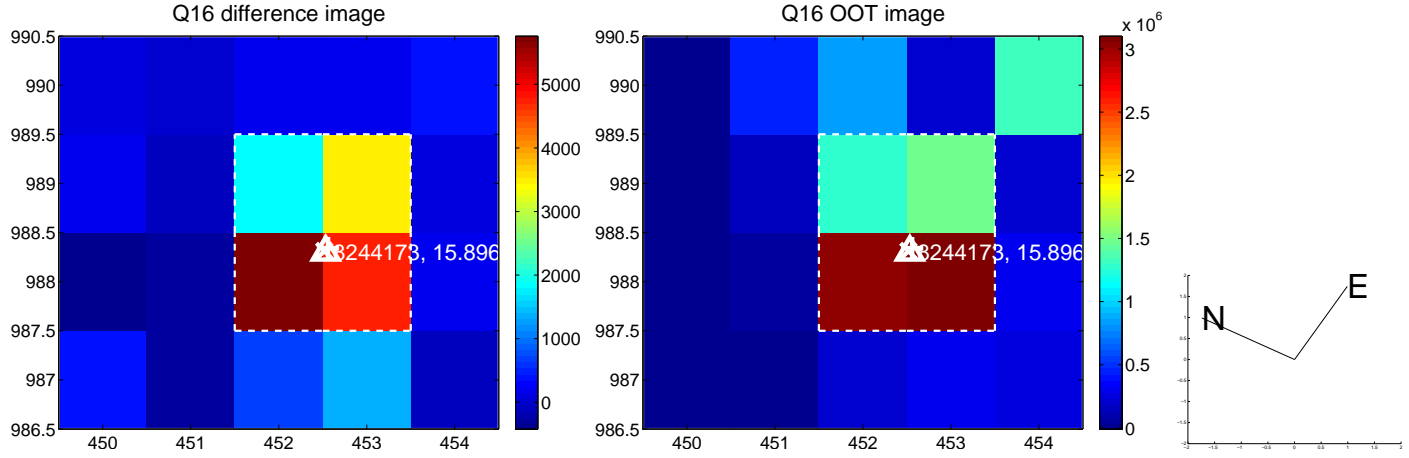
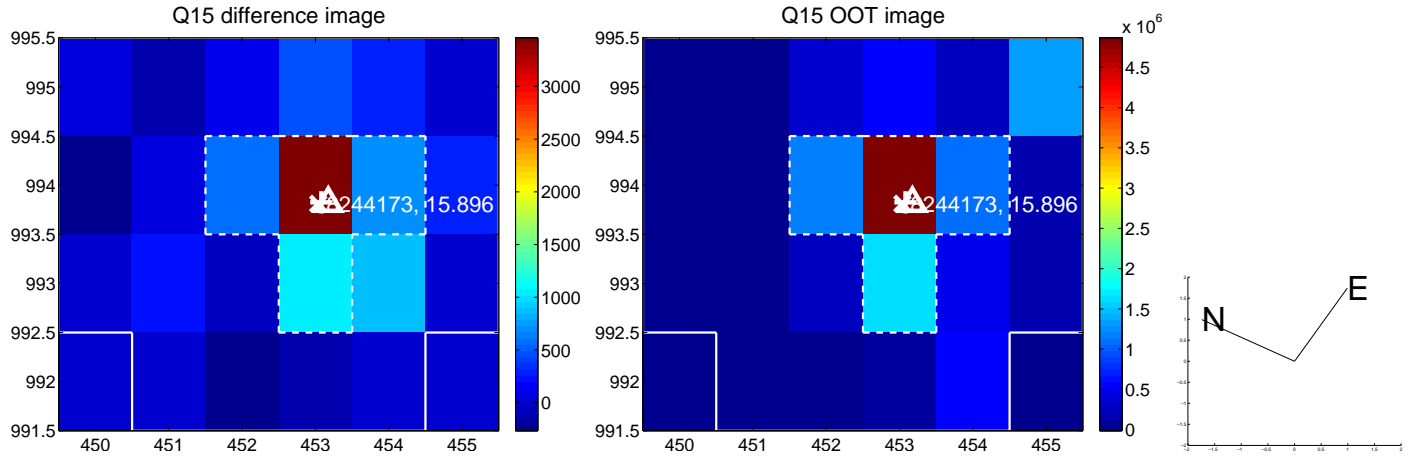
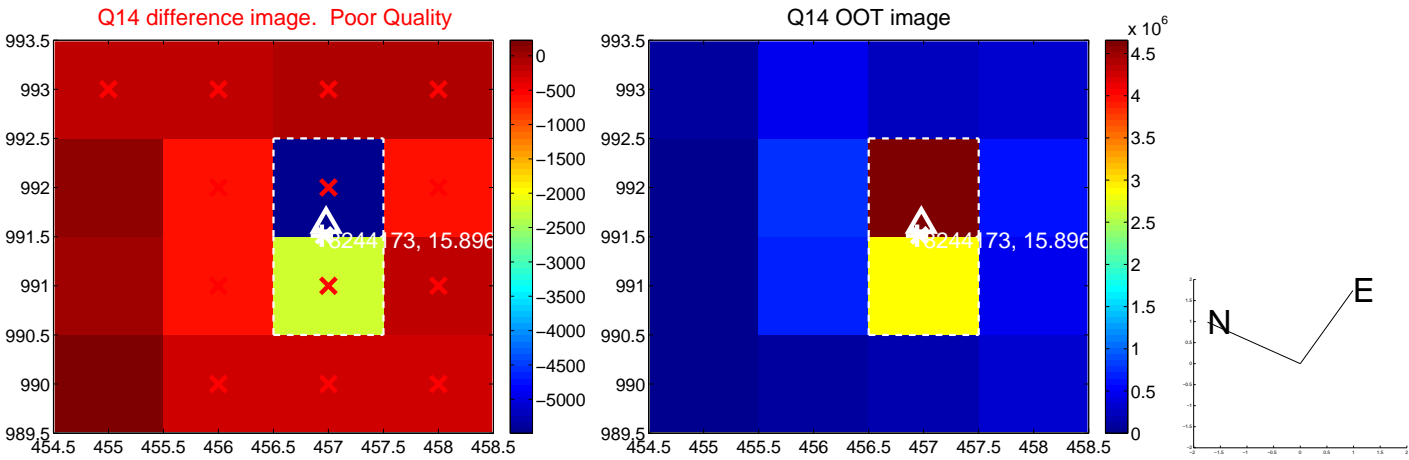
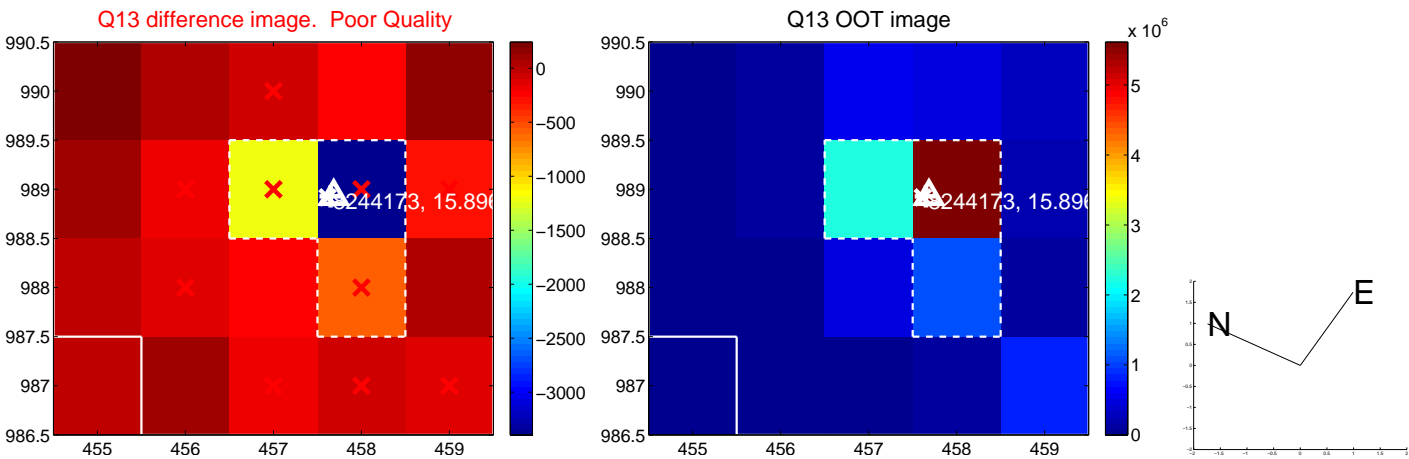
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



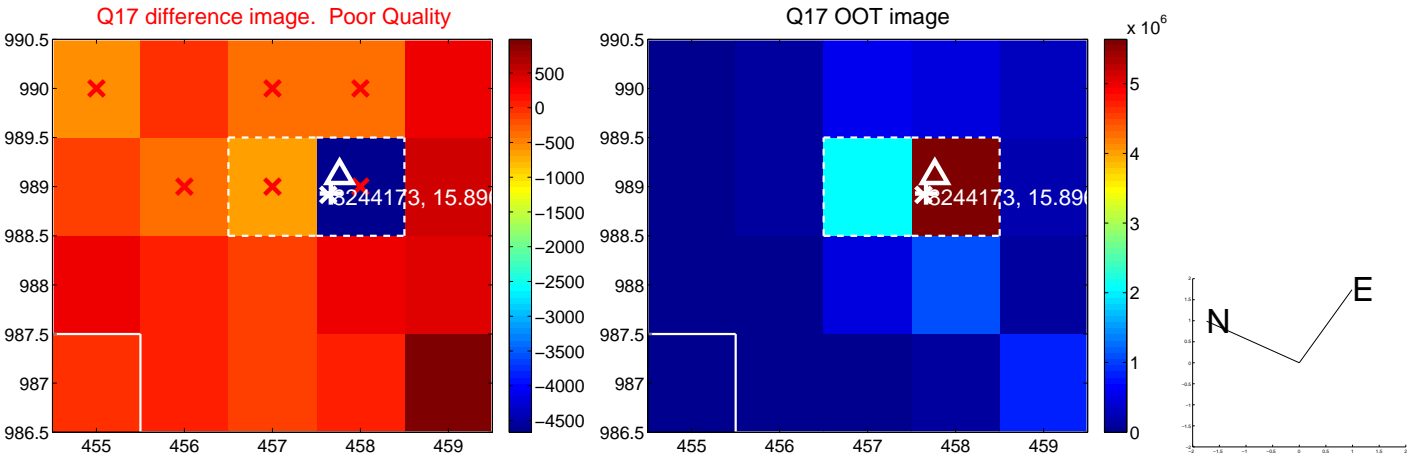
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



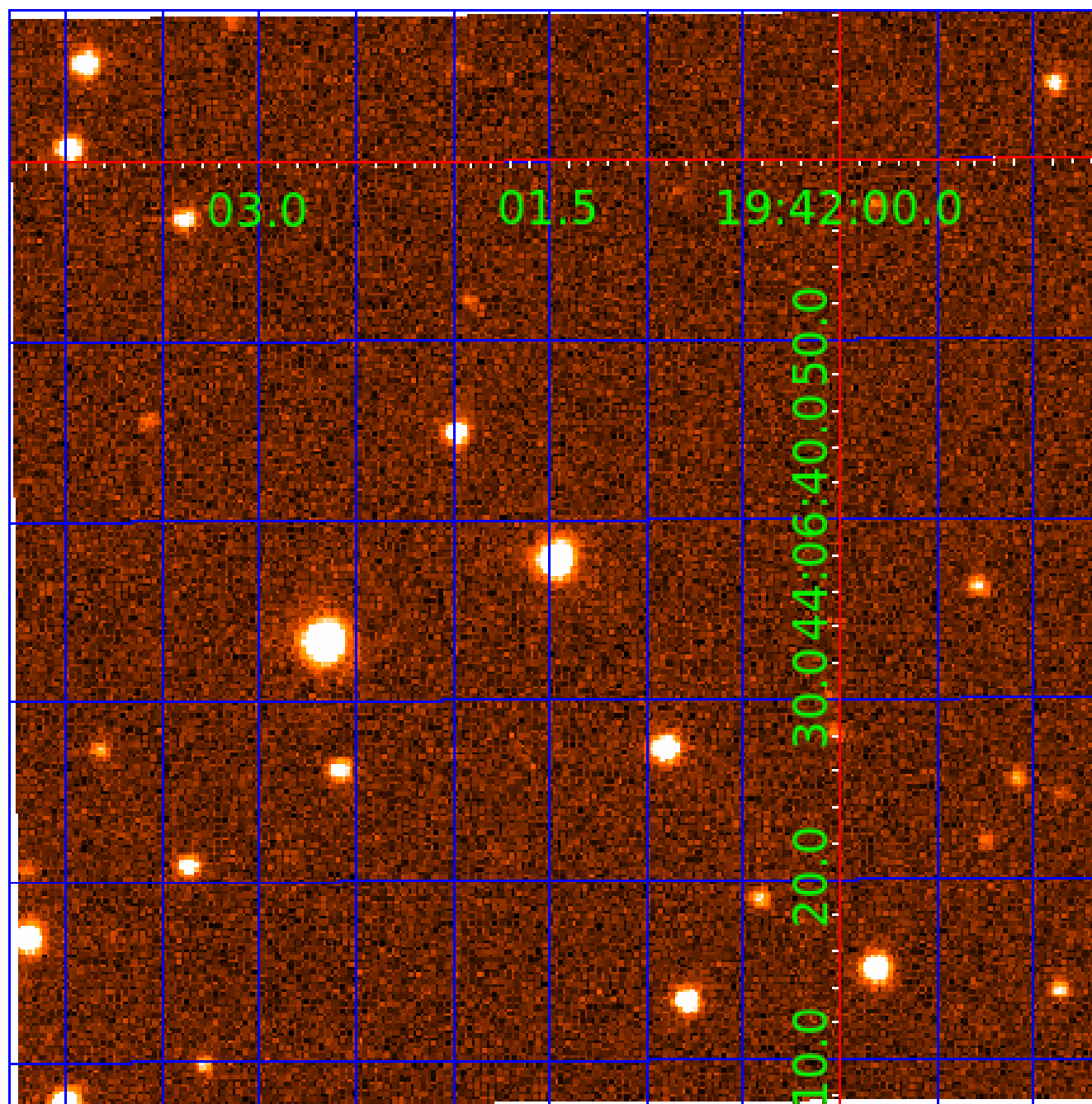
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008244173

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})
008244173-01	OBS	3545.01	1.092070	132.098494	393924.1	1.500	15114.7	-1.0	0.58	4556	31.43	434.35
008244173-02	OBS	No	6.006306	135.388203	14098.9	9.014	1201.6	164.7	0.58	4556	8.12	44.74
008244173-03	OBS	No	1.092055	131.565483	7006.9	3.500	202.5	-1.0	0.58	4556	4.66	434.36
008244173-04	OBS	No	81.024983	189.430490	52.7	0.663	39.5	0.1	0.58	4556	0.63	1.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008244173-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—HAS_SEC_TCE—CENT_NOFITS
008244173-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
008244173-03	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
008244173-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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.

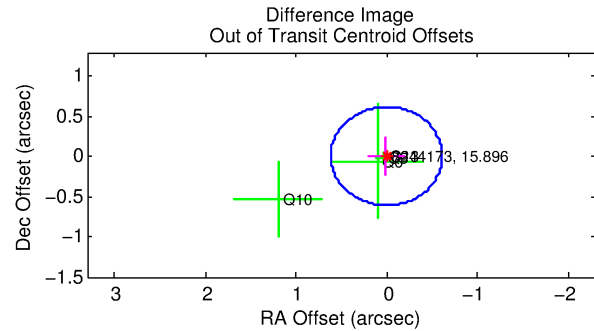
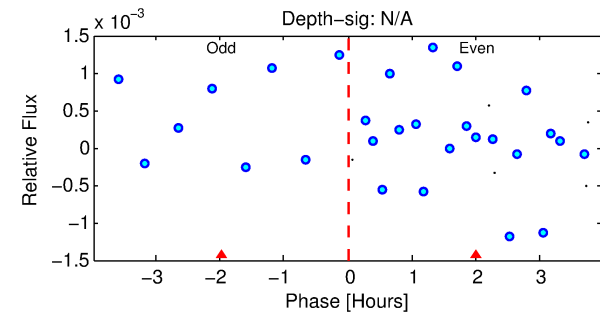
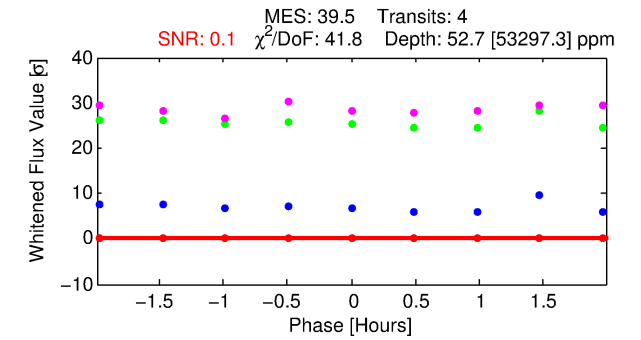
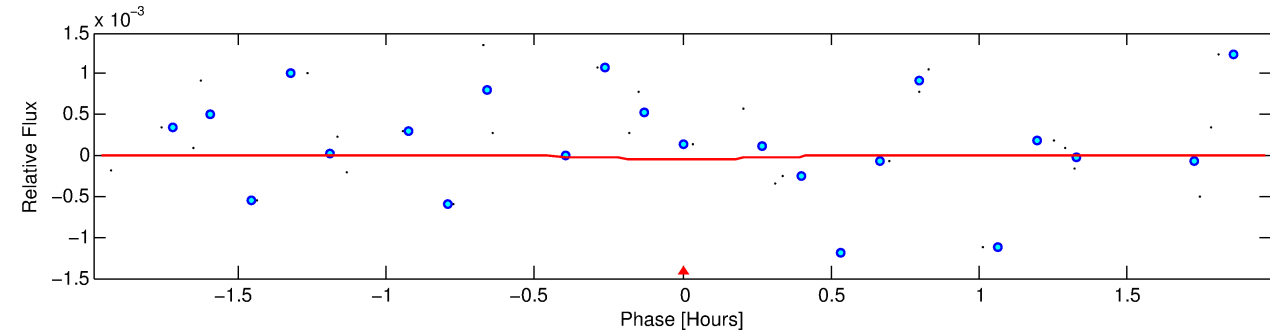
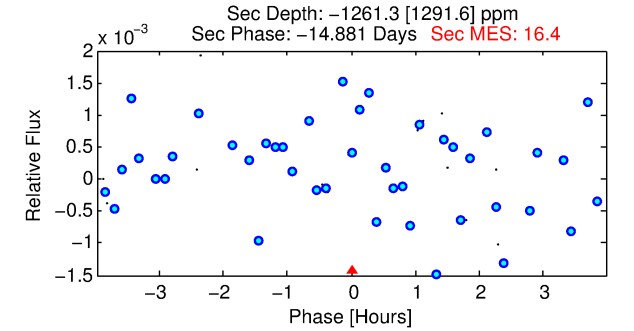
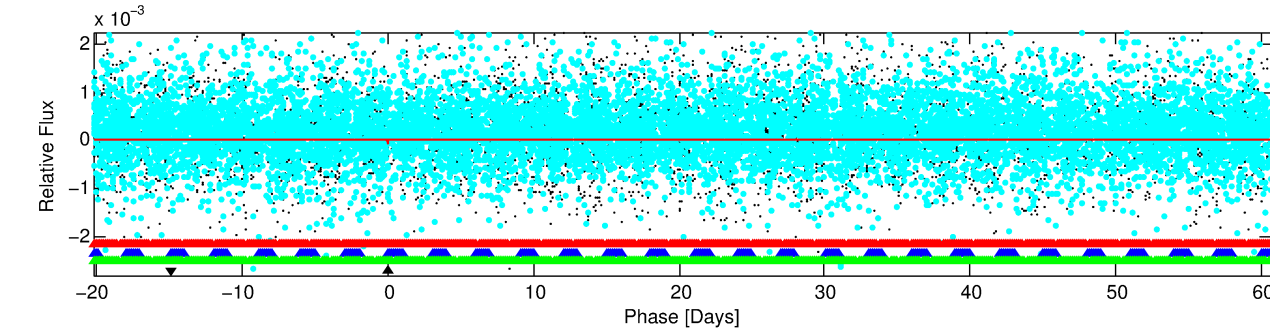
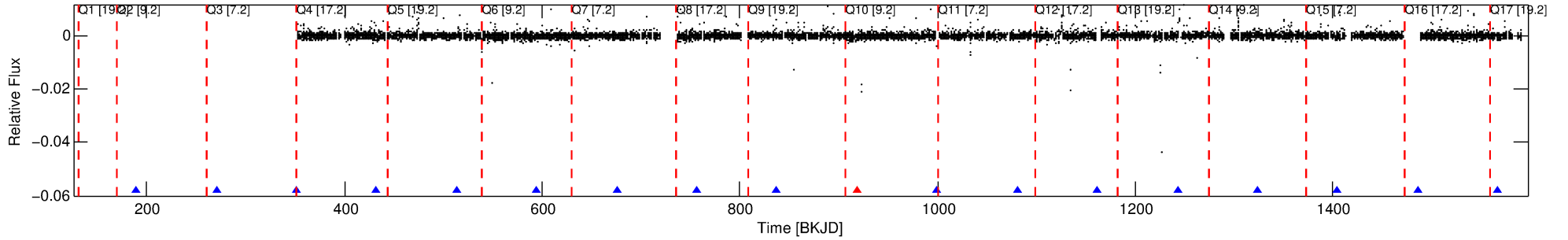
Ephemeris Match Information For 008244173-04

No Significant Match Found

DV One-Page Summary

KIC: 8244173 Candidate: 4 of 4 Period: 81.025 d
KOI: K03545 Corr: No Ephemeris Match

Kp: 15.90 R*: 0.58 Rs Teff: 4556.0 K Logg: 4.67 Fe/H: -0.740



DV Fit Results:

Period = 81.02498 [0.27144] d
Epoch = 189.4305 [2.9965] BKJD
Rp/R* = 0.0100 [8.9602]
a/R* = 229.30 [808249.67]
b = 0.98 [160.63]
Seff = 1.39 [0.24]
Teq = 277 [12] K
Rp = 0.63 [563.19] Re
a = 0.3032 [0.0207] AU
Ag = N/A
Teffp = N/A

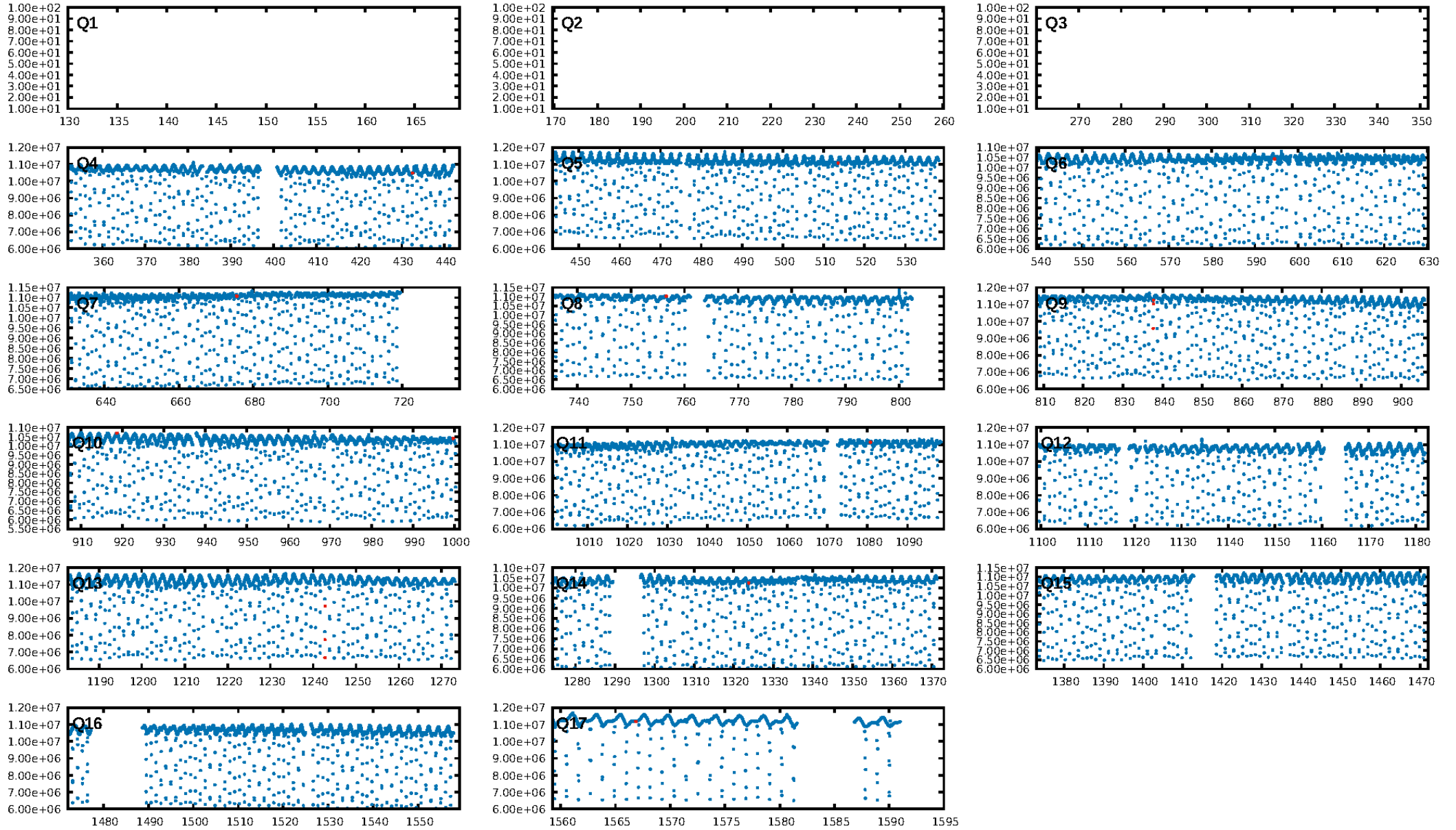
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [199.20σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 1.60e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.010 arcsec [0.05σ]
KicOffset-rm: 0.139 arcsec [0.62σ]
OotOffset-st: 2/0/0/2 [4]
KicOffset-st: 2/0/0/2 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/6]

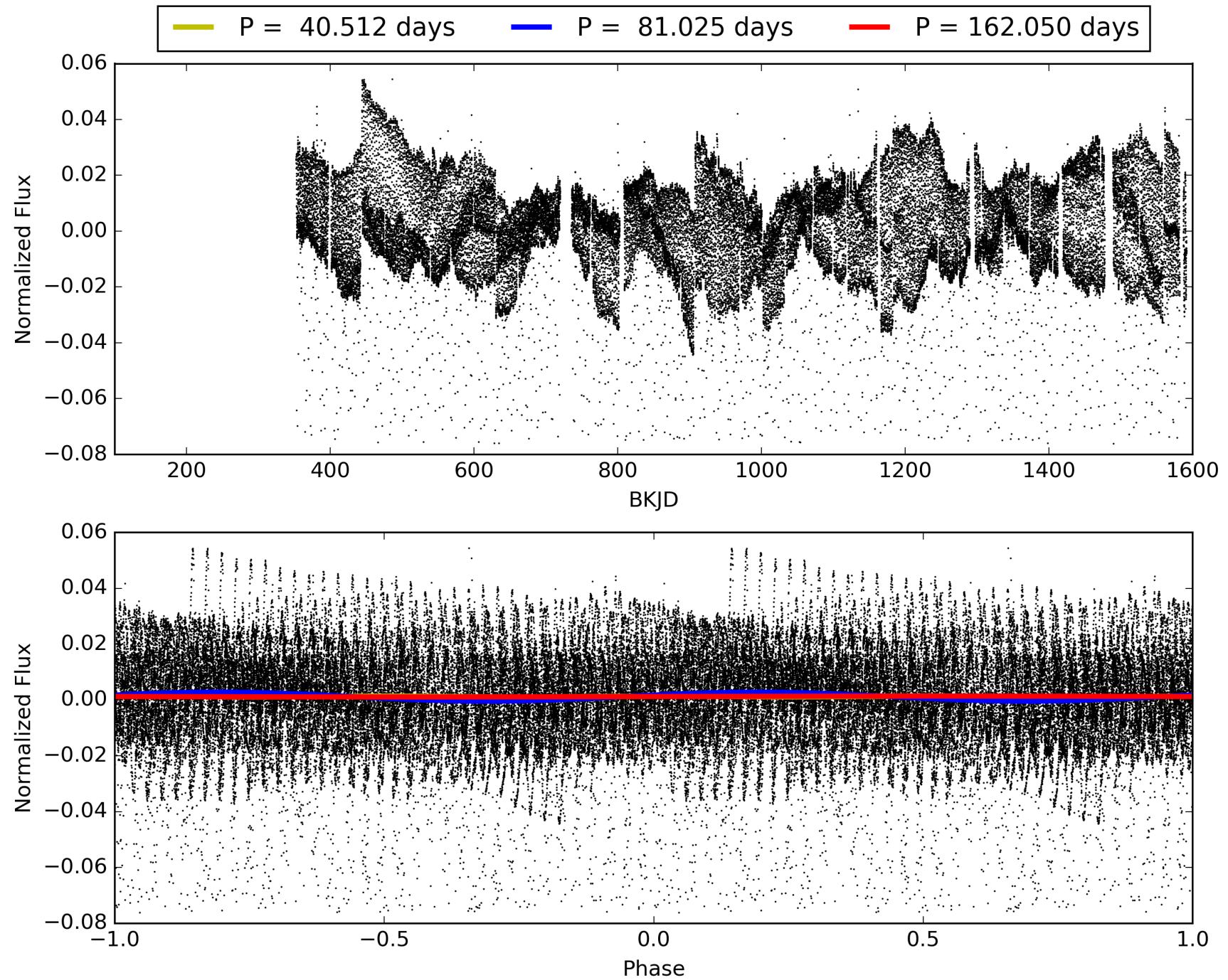
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:04:19 Z

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

TCE 008244173-04, PDC Light Curves

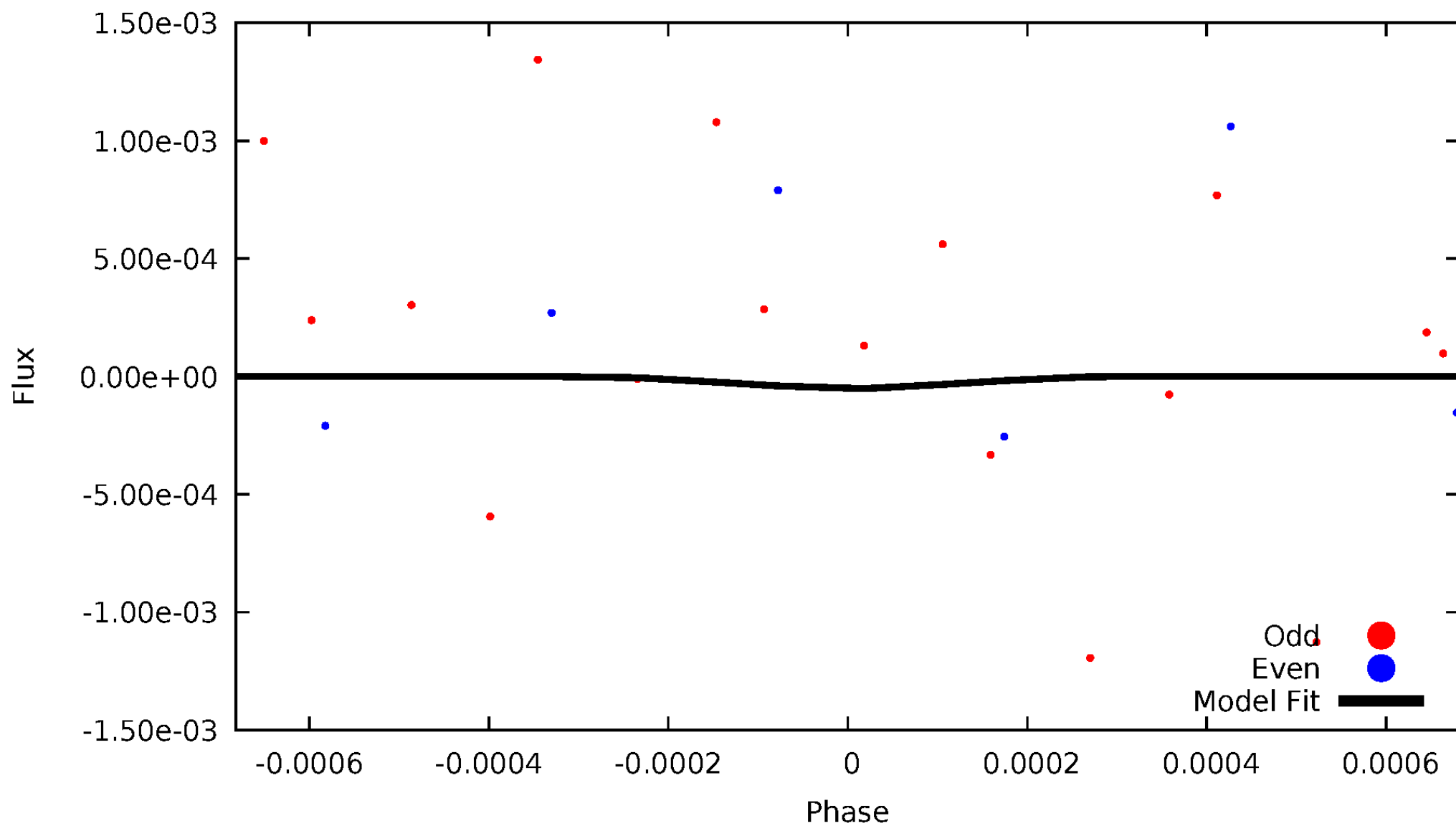


TCE 008244173-04



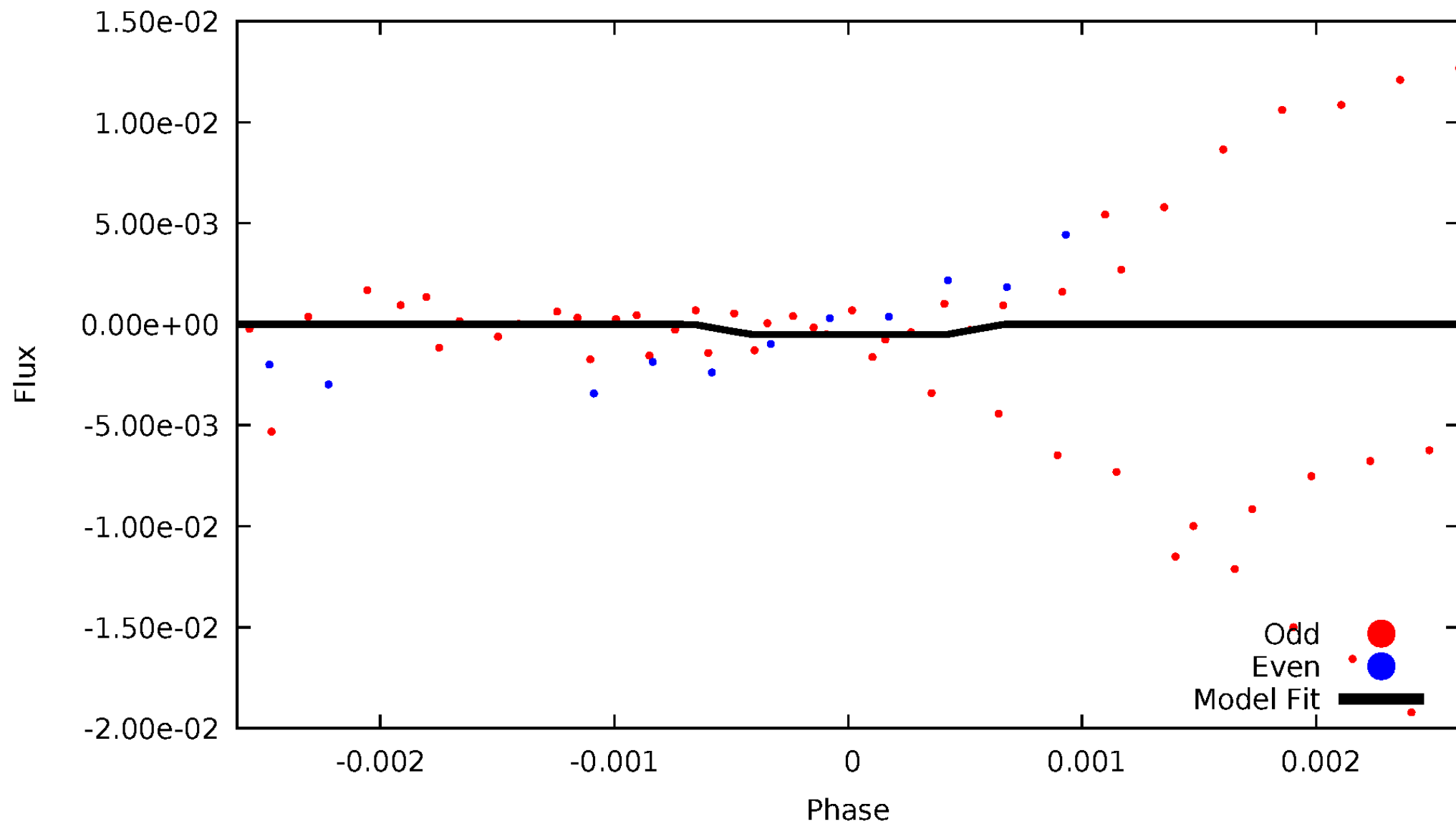
DV Odd/Even

TCE 008244173-04



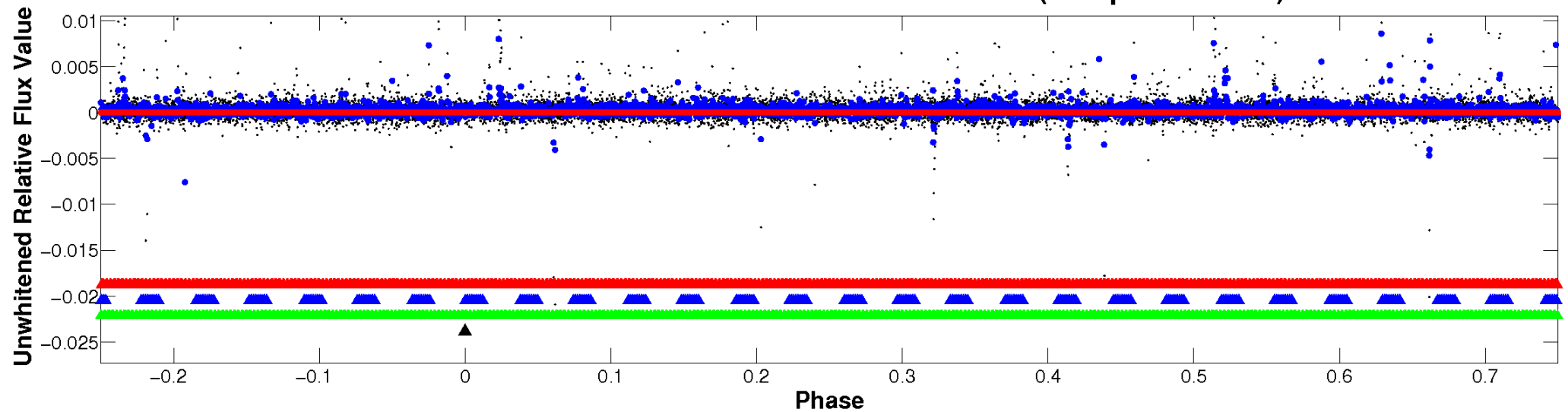
ALT Odd/Even

TCE 008244173-04

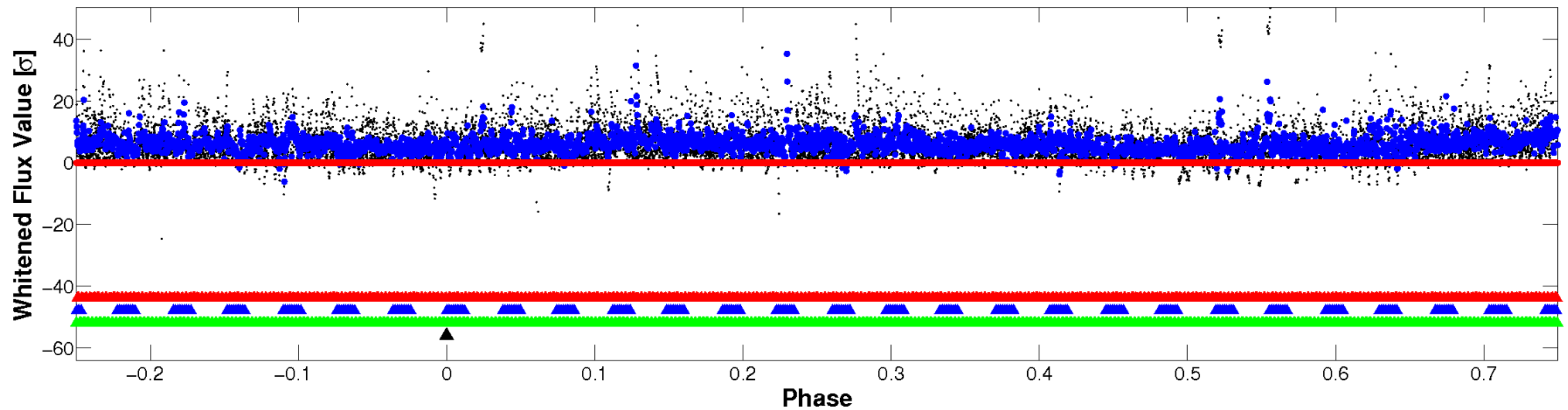


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

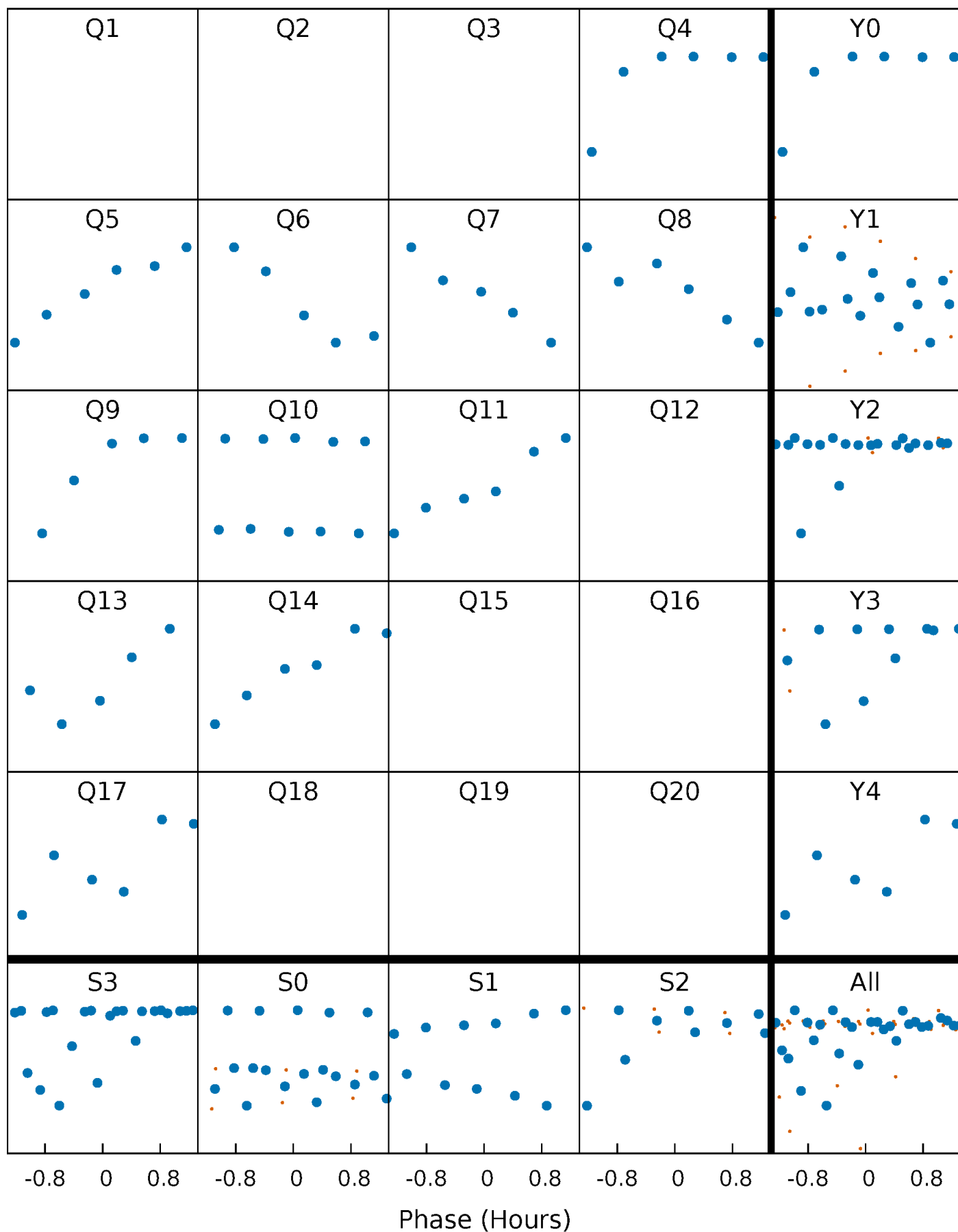


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



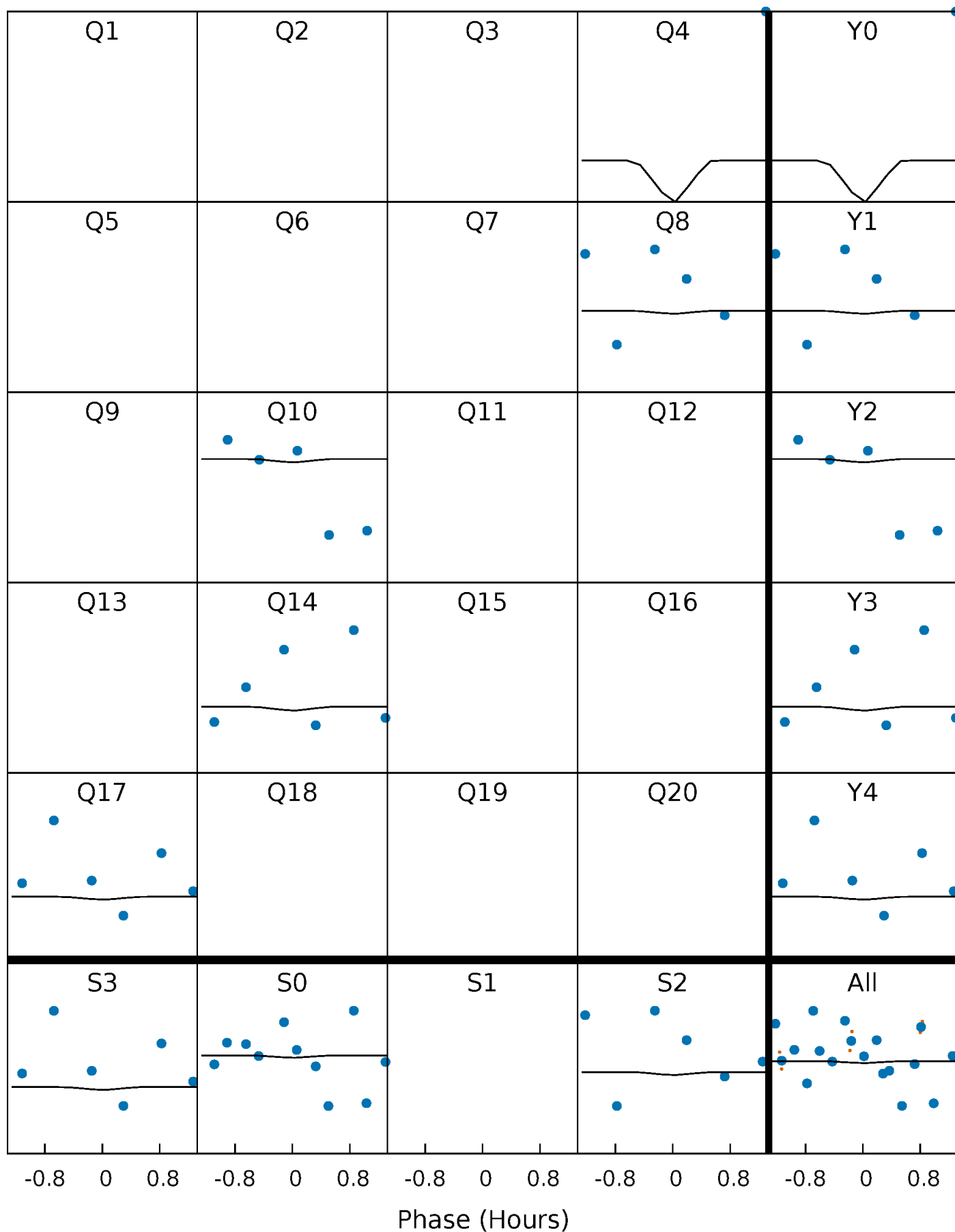
PDC Quarter-Phased Transit Curves

TCE 008244173-04 P= 81.024983 Days $T_0=189.430490$ (BKJD)



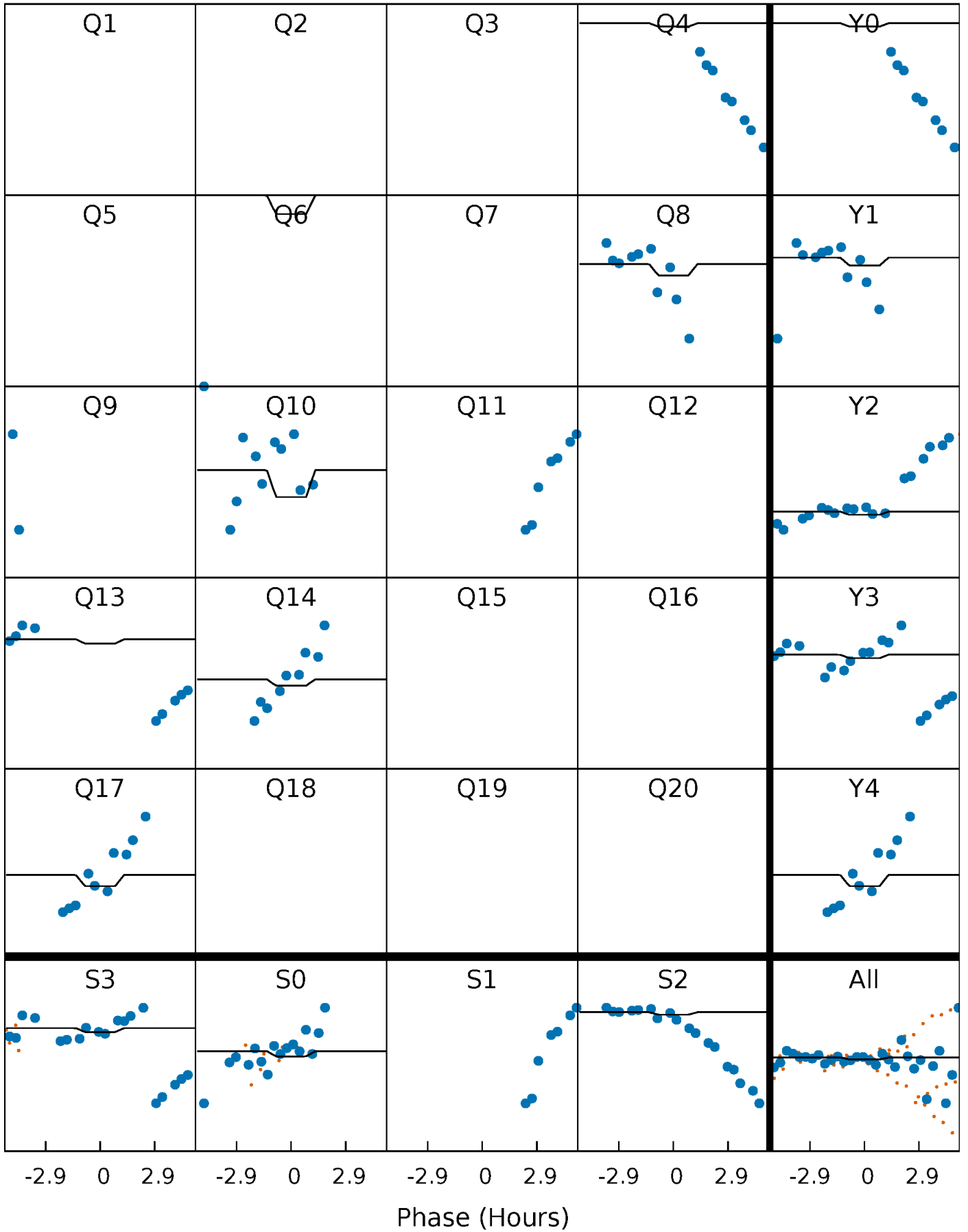
DV Quarter-Phased Transit Curves

TCE 008244173-04 P= 81.024983 Days $T_0=189.430490$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

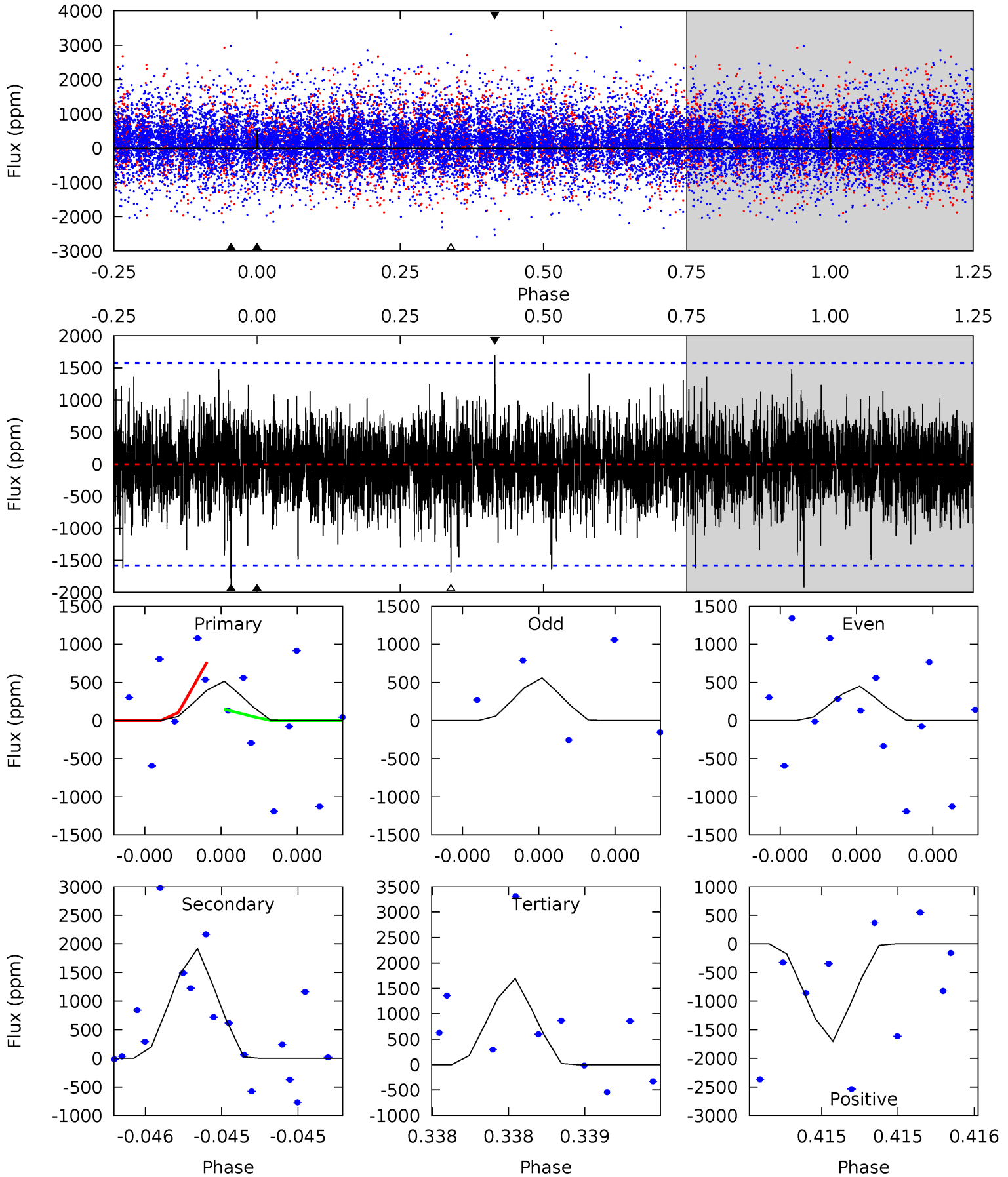
TCE 008244173-04 $P = 81.024972$ Days $T_0 = 189.430766$ (BKJD)



DV Model-Shift Uniqueness Test

008244173-04, P = 81.024983 Days, E = 189.430490 Days

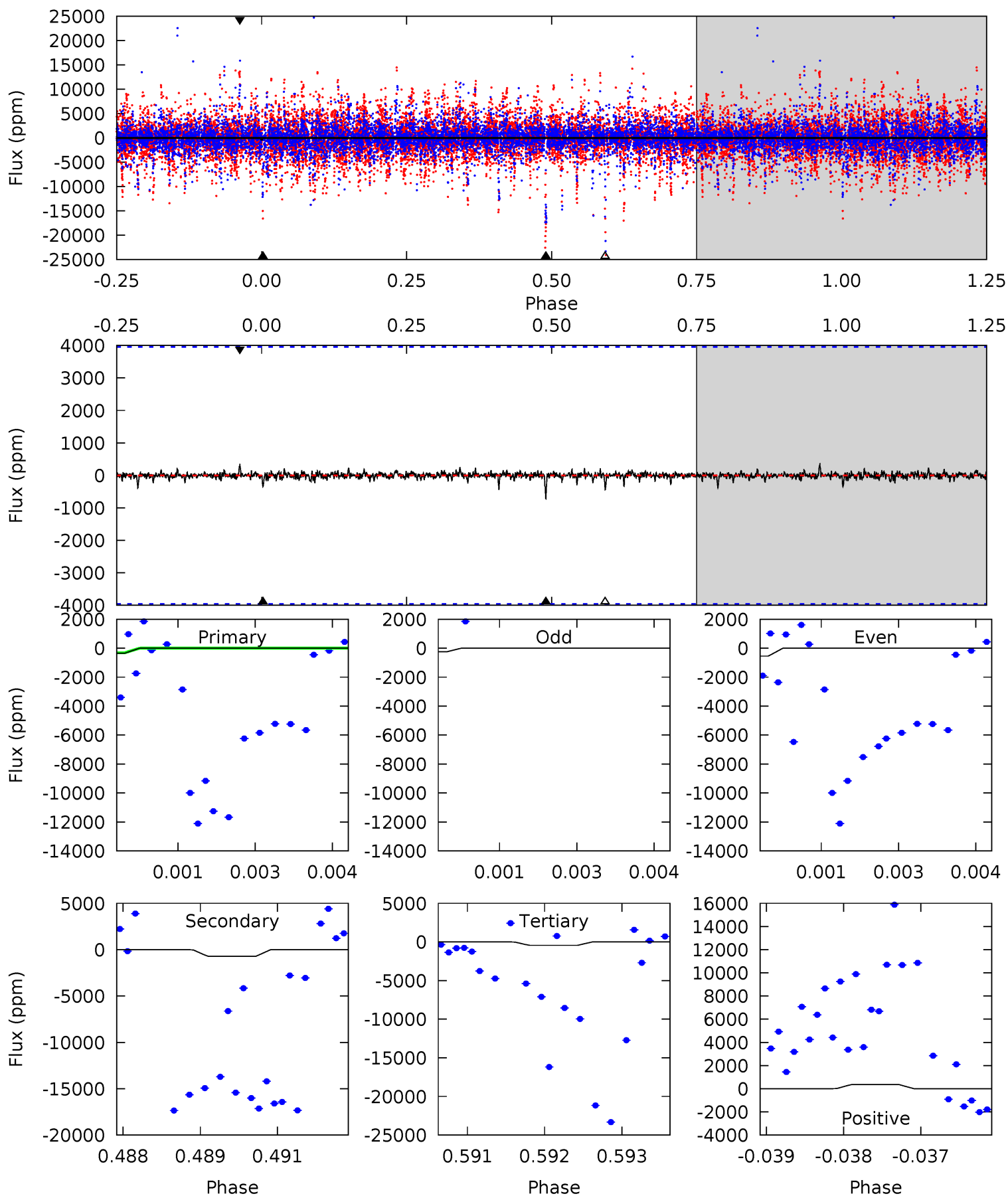
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.83	6.81	6.03	6.05	5.60	3.53	1.36	-4.19	-4.21	0.78	0.76	0.17	1.37	0.47	1.05



Alt Model-Shift Uniqueness Test

008244173-04, P = 81.024972 Days, E = 189.430766 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.47	0.98	0.61	0.48	5.40	3.21	0.09	-0.14	-0.01	0.37	0.50	0.16	-6.02	0.33	0.04



Stellar Parameters For KIC 008244173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+160}_{-160}	$4.670^{+0.054}_{-0.032}$	$-0.740^{+0.300}_{-0.300}$	$0.576^{+0.047}_{-0.047}$	$0.566^{+0.056}_{-0.033}$	$4.172^{+0.964}_{-0.603}$
	+4%/-4%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-6%	+23%/-14%
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 008244173-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1917 ± 281	$386.11^{+387.58}_{-269.64}$	385^{+16}_{-15}	1345^{+372}_{-2603}	$0.657^{+6.820}_{-0.498}$
Alt.	-717 ± 733	$383.40^{+428.99}_{-265.54}$	384^{+16}_{-14}	-1258^{+2779}_{-80}	$0.158^{+1.859}_{-0.170}$

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 $A_{obs} \gg 1.0$

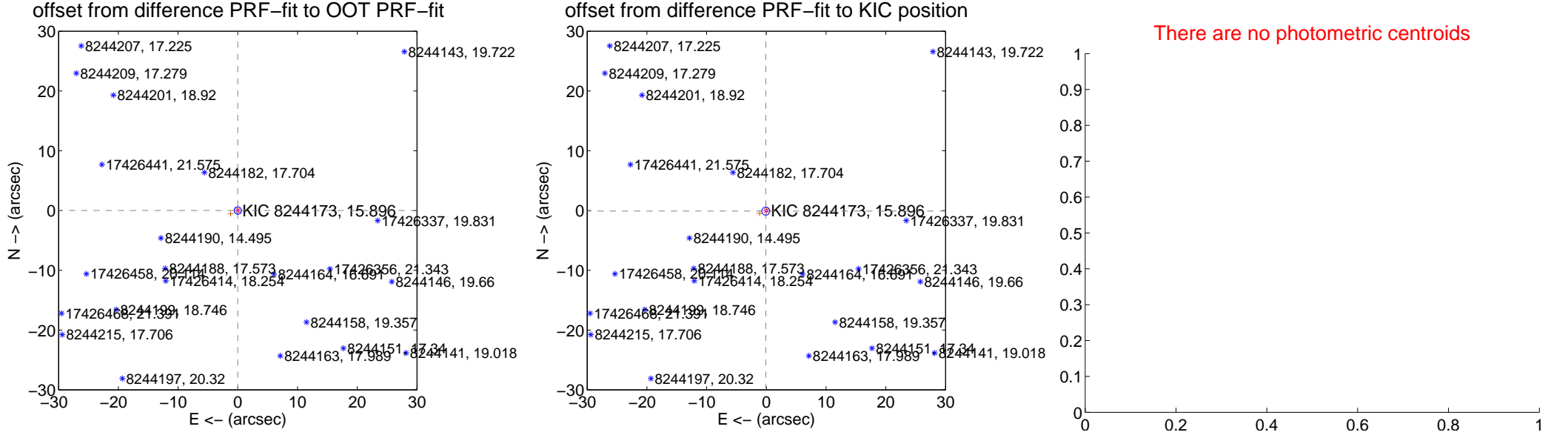
DV Centroid Data

Supplemental centroid analysis for 008244173-04. Kepler magnitude: 15.90. Transit SNR 0.06

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.205	0.05	0.007 ± 0.188	0.006 ± 0.224
PRF-fit source offset from KIC position	0.139 ± 0.224	0.62	0.098 ± 0.226	-0.098 ± 0.111
photometric centroid source offset	—	—	—	—

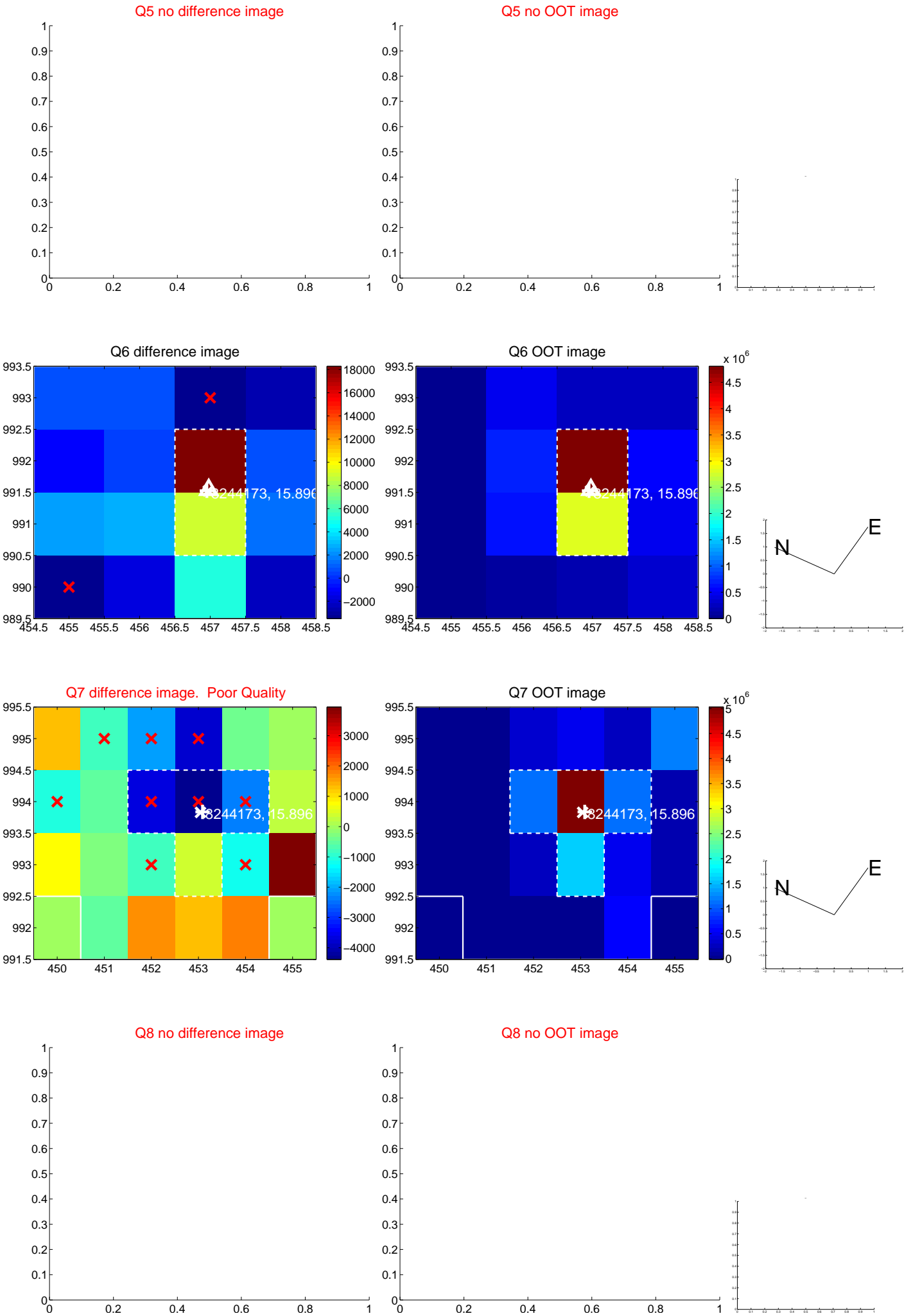


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

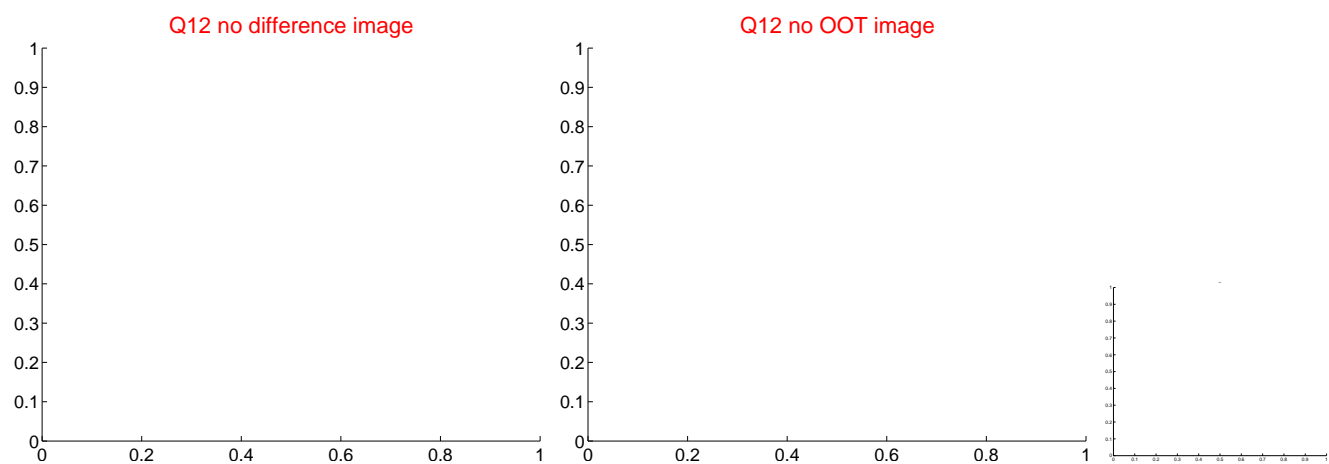
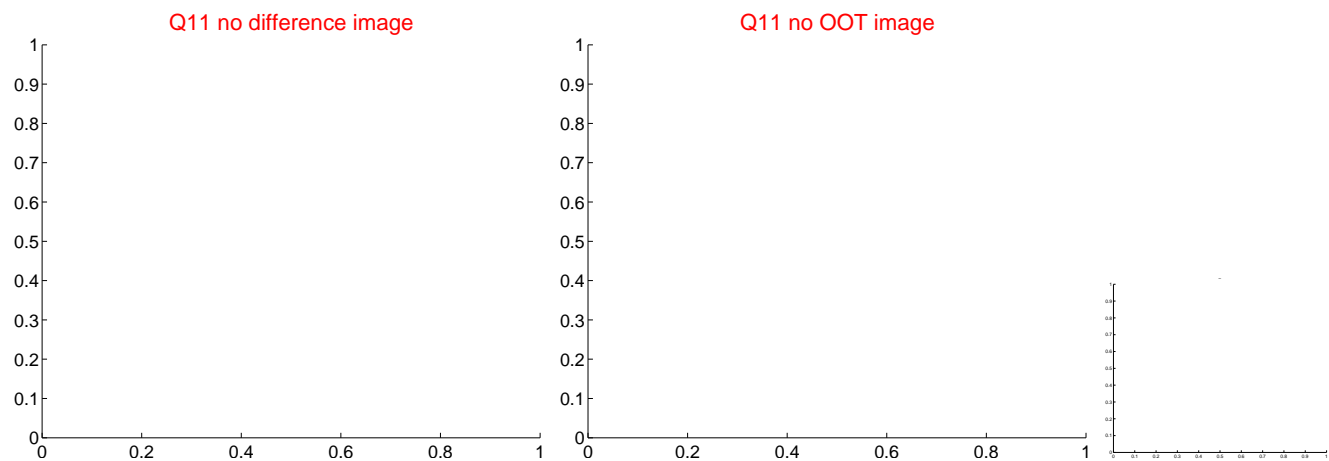
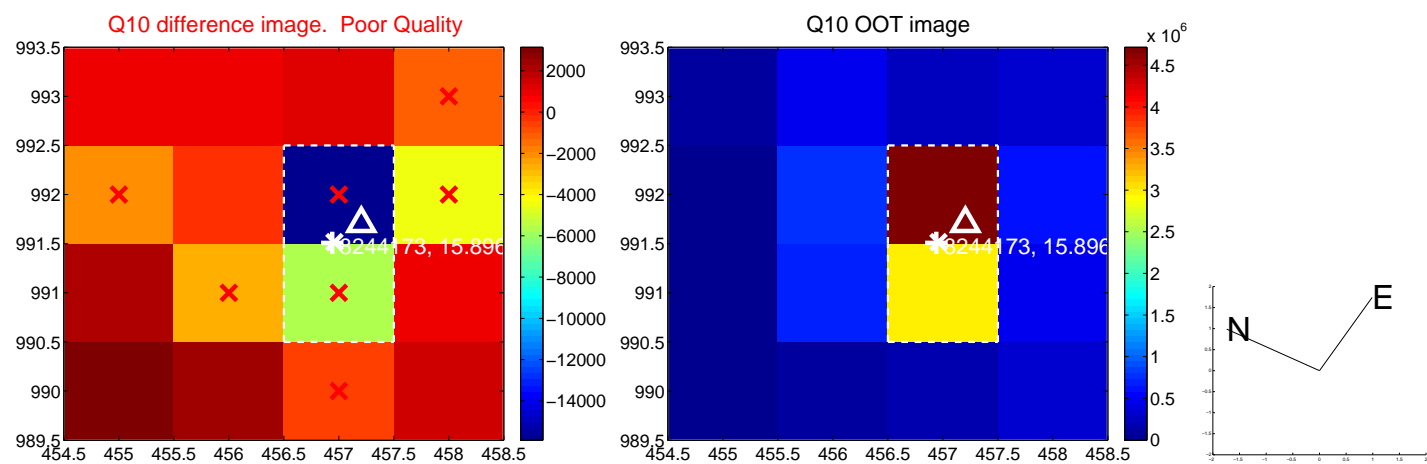
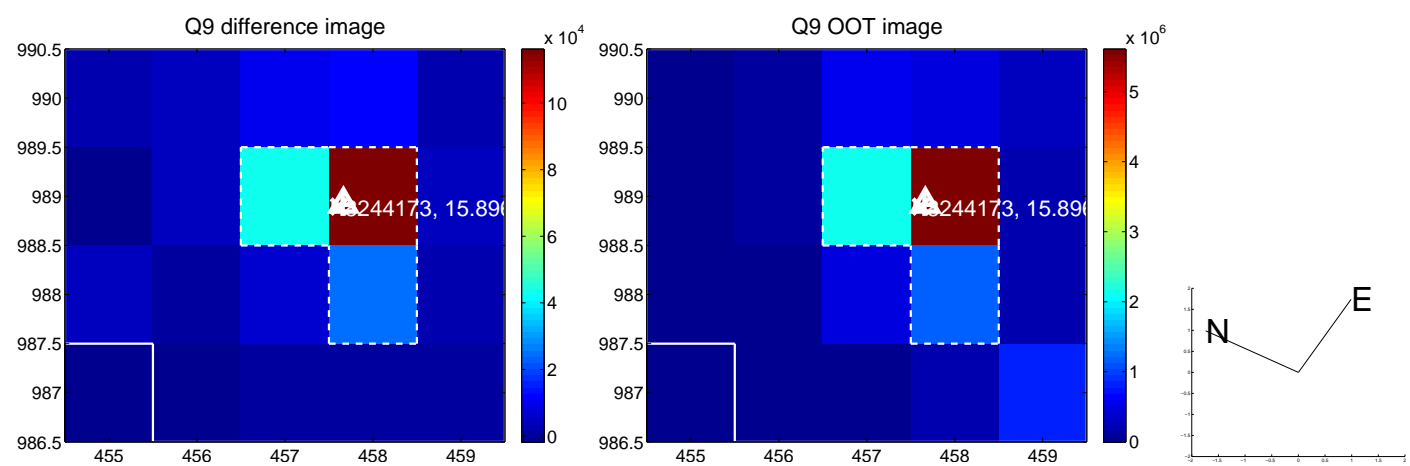
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



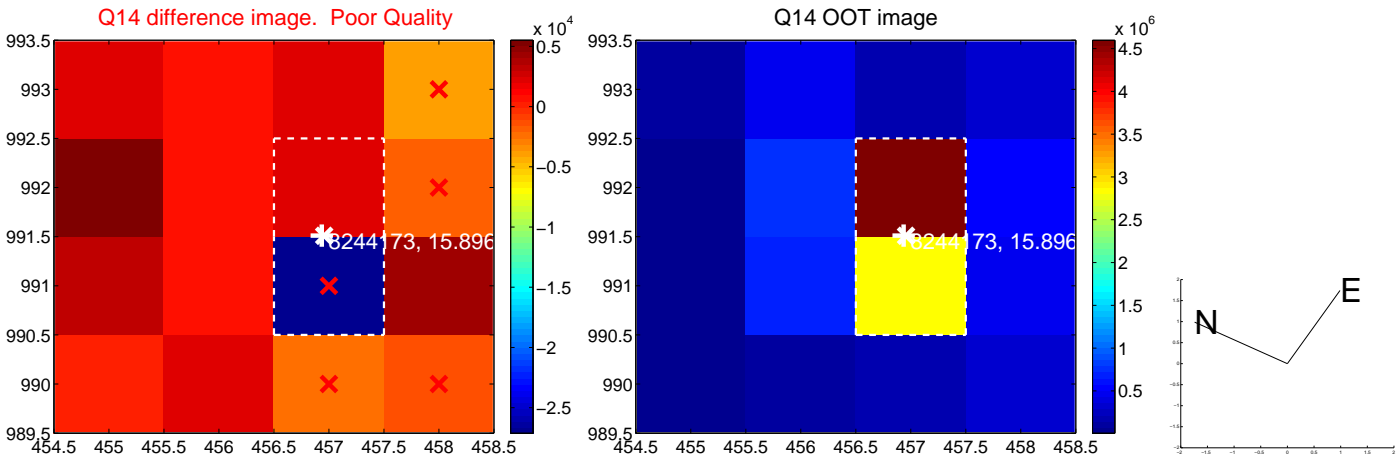
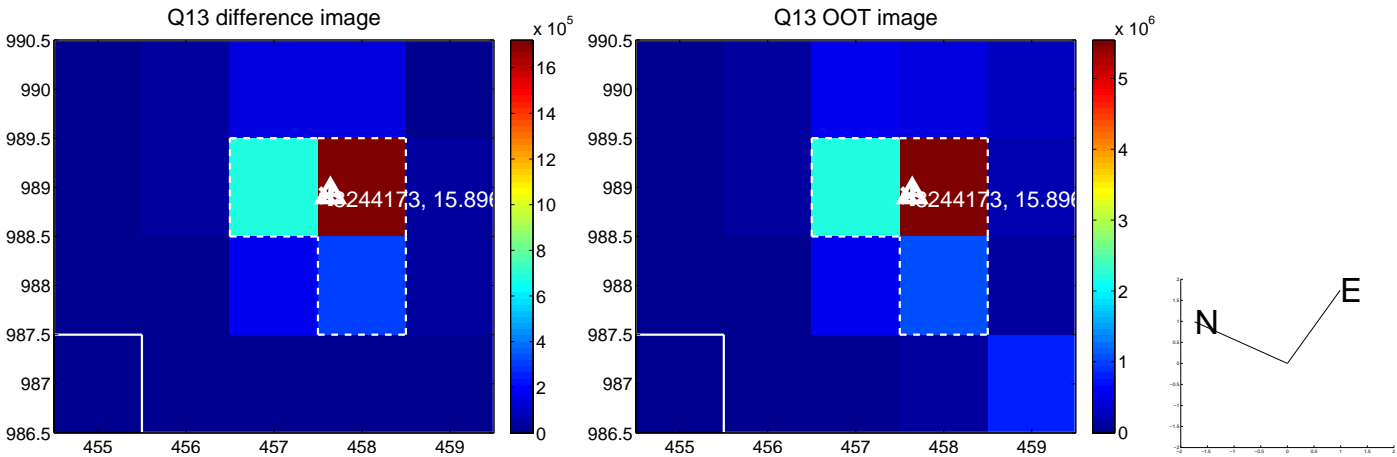
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

