

KIC 008262223

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})
008262223-01	OBS	7004.01	1.613015	131.748188	136048.6	3.905	9171.0	8106.1	2.78	7832	137.63	23162.90
008262223-02	OBS	No	1.613021	132.552661	11446.6	2.500	4615.8	-1.0	2.78	7832	30.07	23162.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008262223-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008262223-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

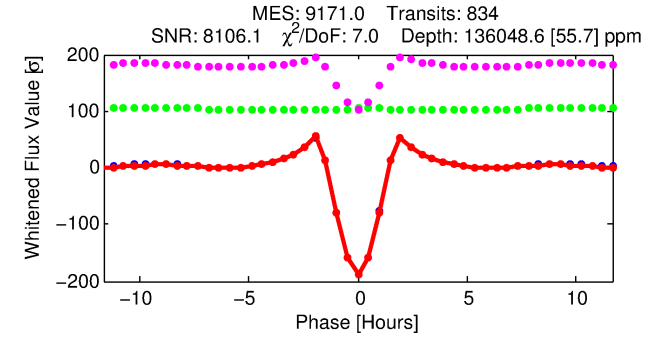
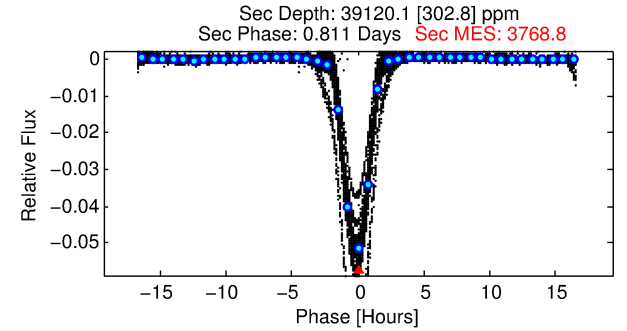
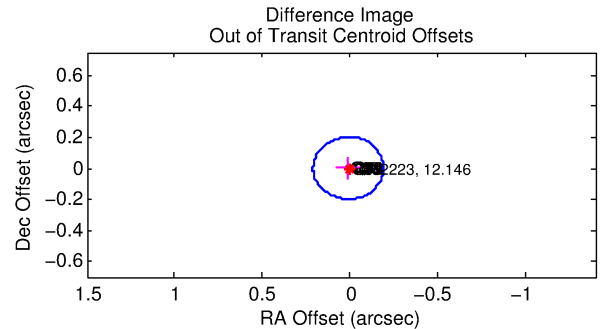
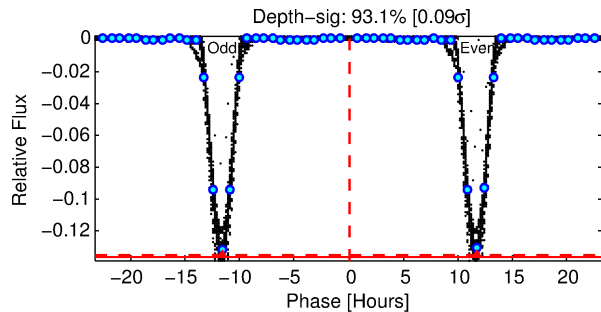
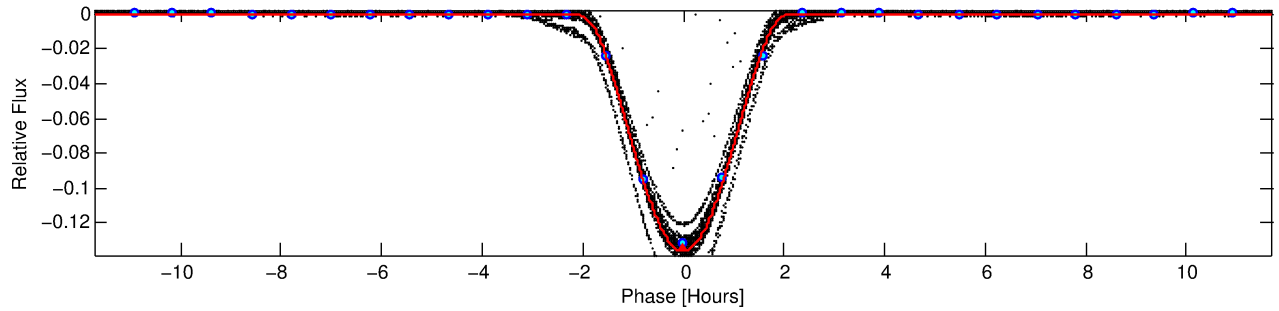
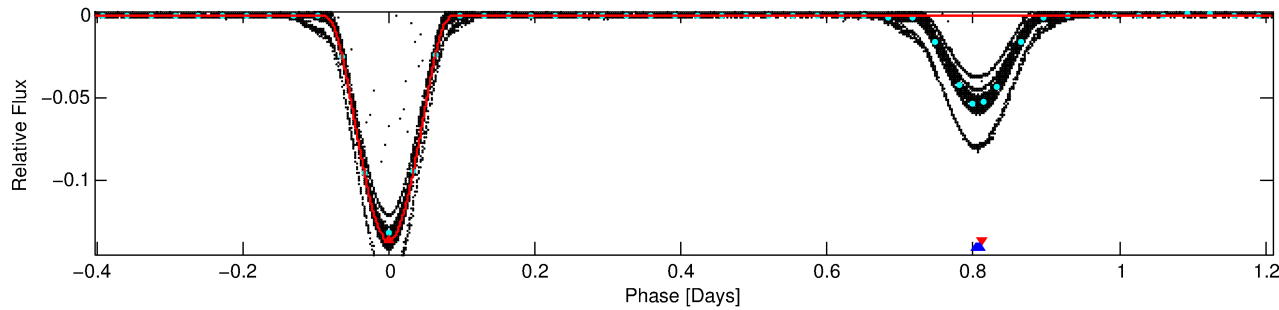
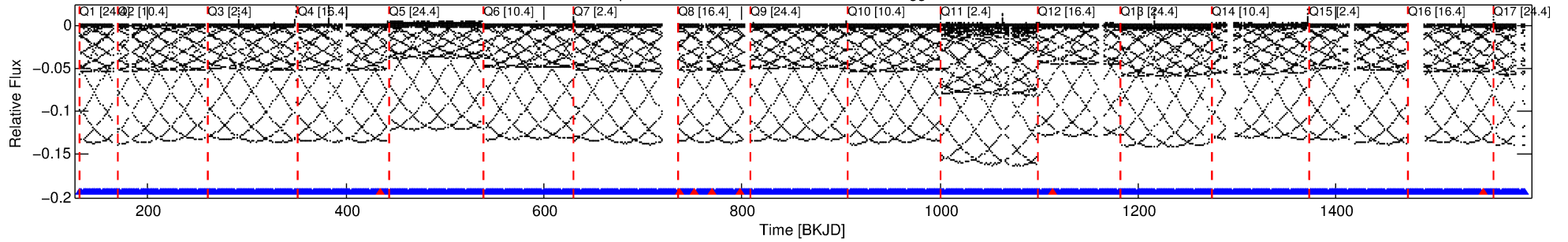
Ephemeris Match Information For 008262223-01

No Significant Match Found

DV One-Page Summary

KIC: 8262223 Candidate: 1 of 2 Period: 1.613 d
KOI: K07004.01 Corr: 0.945

Kp: 12.15 R*: 2.78 Rs Teff: 7832.0 K Logg: 3.84 Fe/H: -0.160



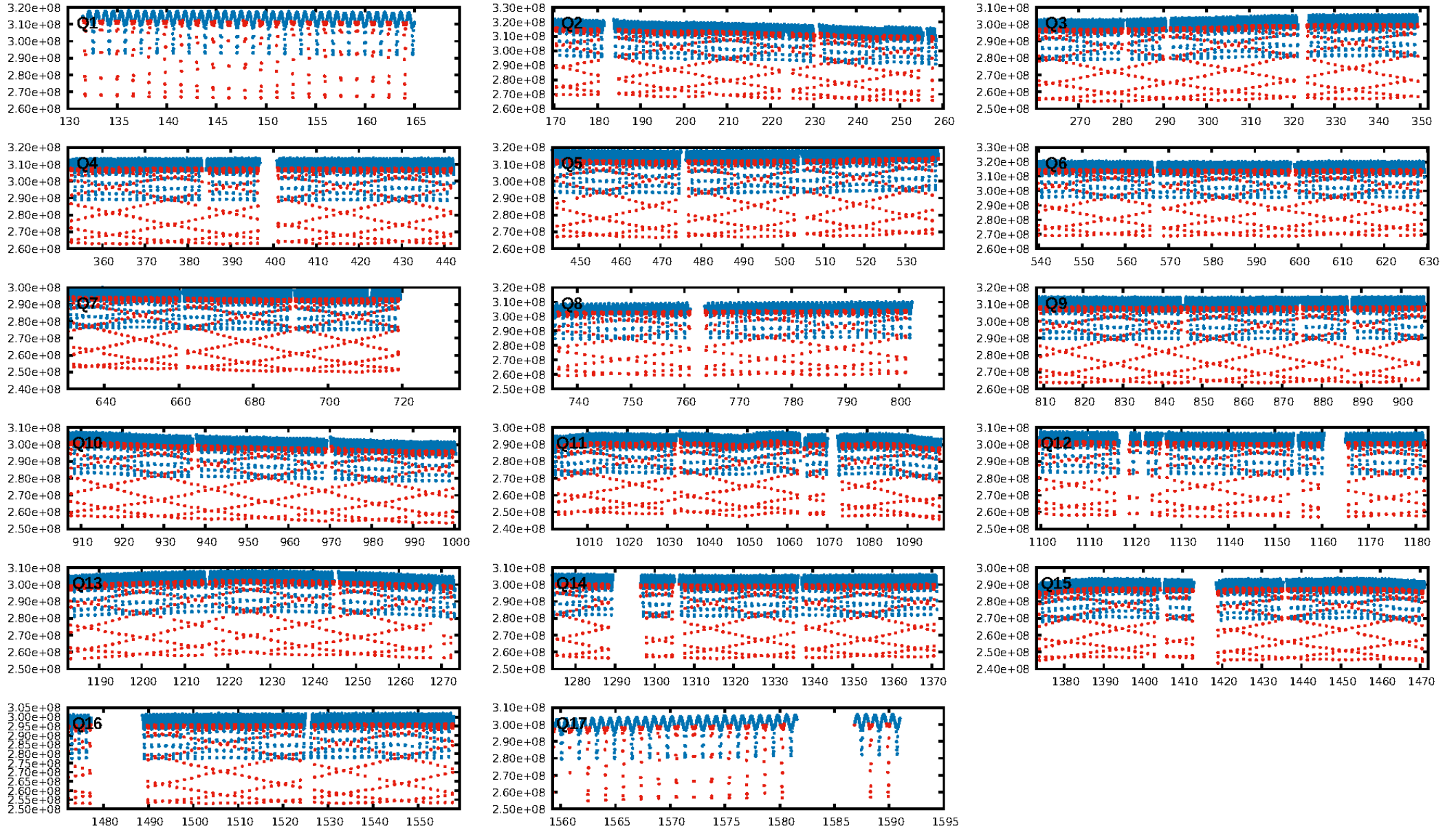
DV Fit Results:

Period = 1.61302 [0.00000] d
Epoch = 131.7482 [0.0000] BKJD
Rp/R* = 0.4538 [0.0048]
a/R* = 3.92 [0.00]
b = 0.83 [0.01]
Seff = 23162.90 [14569.21]
Teq = 3146 [495] K
Rp = 137.63 [56.97] Re
a = 0.0335 [0.0129] AU
Ag = 1.28 [0.78] [0.36σ]
Teffp = 5170 [217] K [3.75σ]

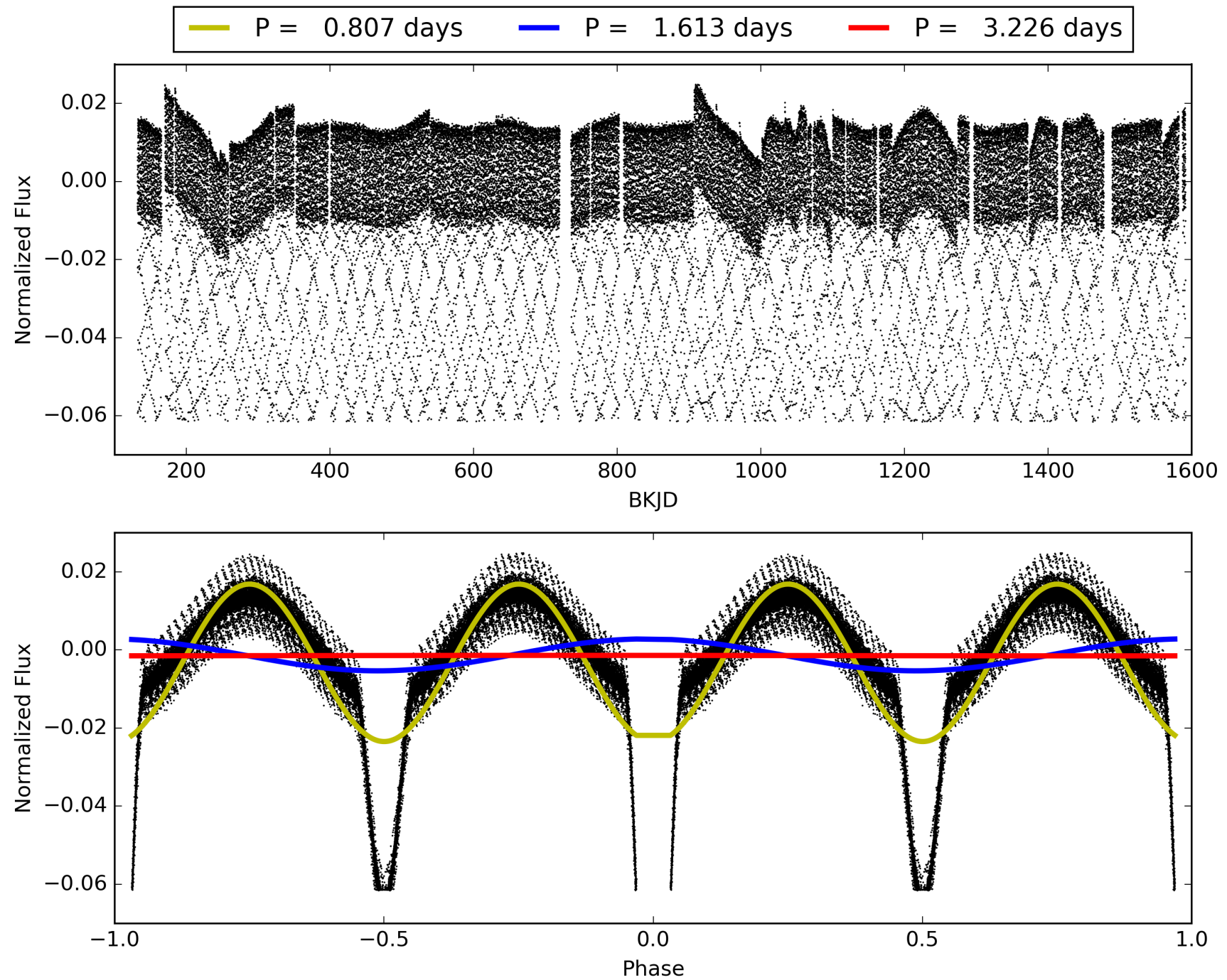
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [790/797]
GhostDiagnostic-chr: 1.964
Centroid-sig: 0.0%
Centroid-so: 0.211 arcsec [583.33σ]
OotOffset-rm: 0.011 arcsec [0.17σ]
KicOffset-rm: 0.206 arcsec [3.01σ]
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 008262223-01, PDC Light Curves

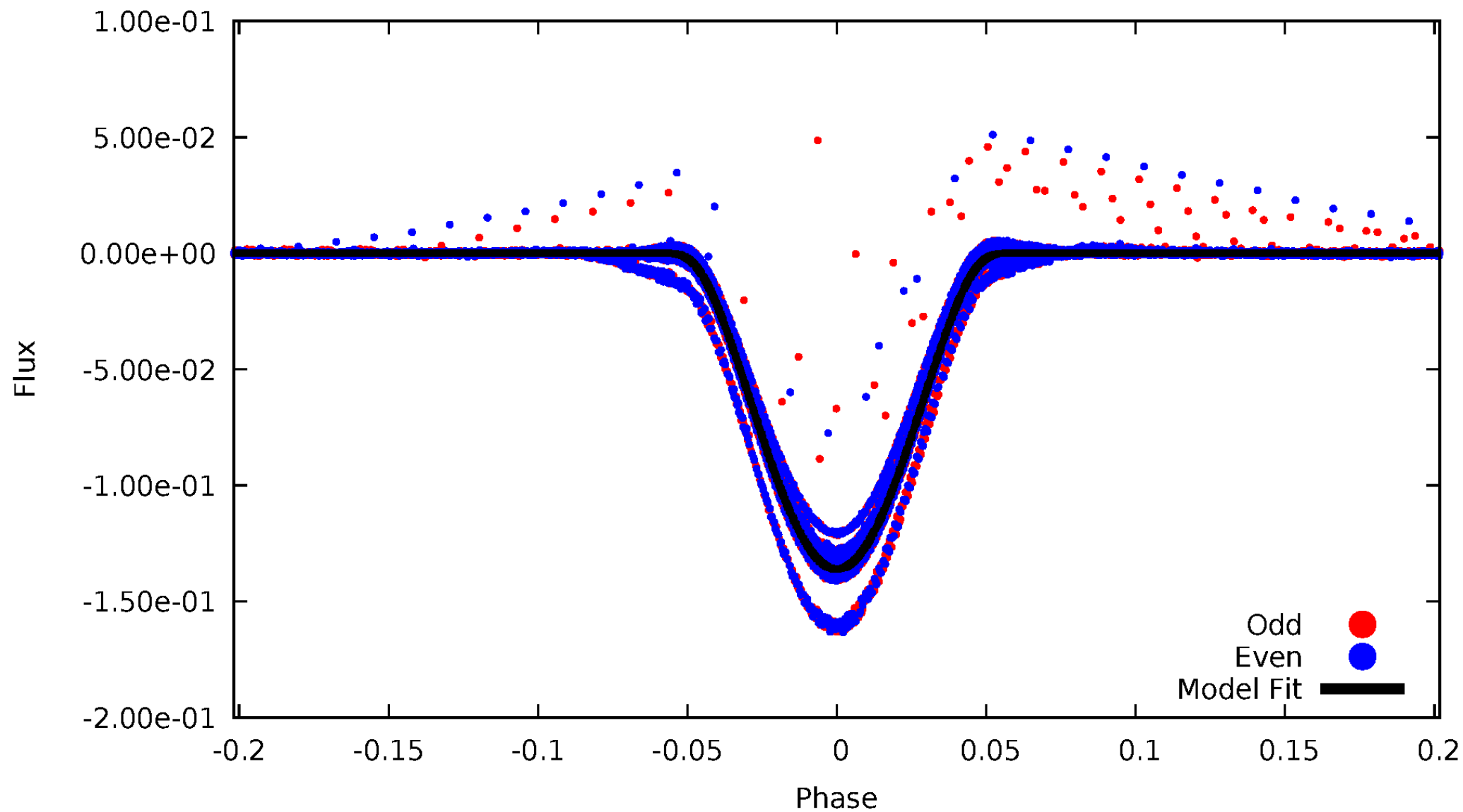


TCE 008262223-01



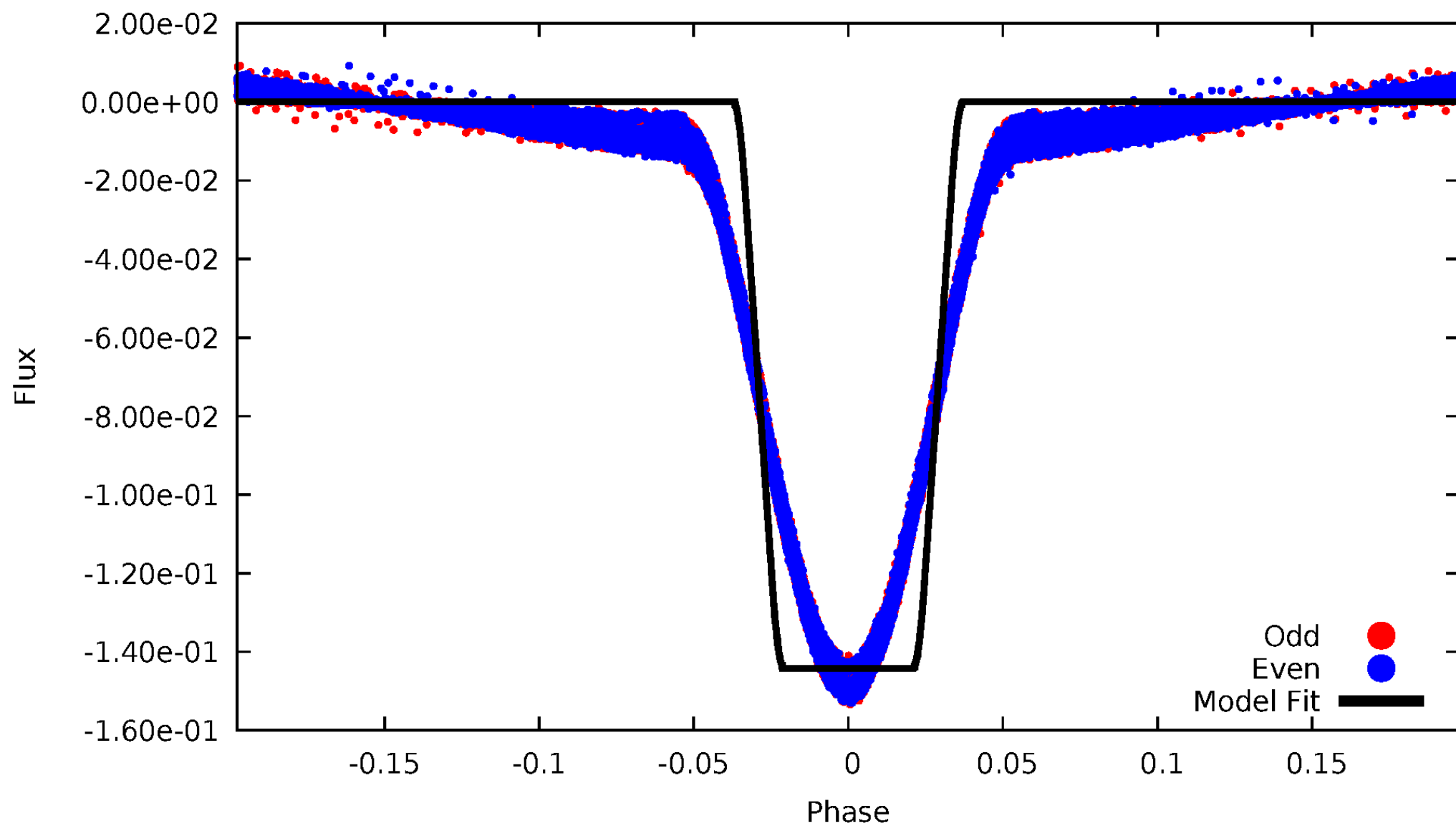
DV Odd/Even

TCE 008262223-01



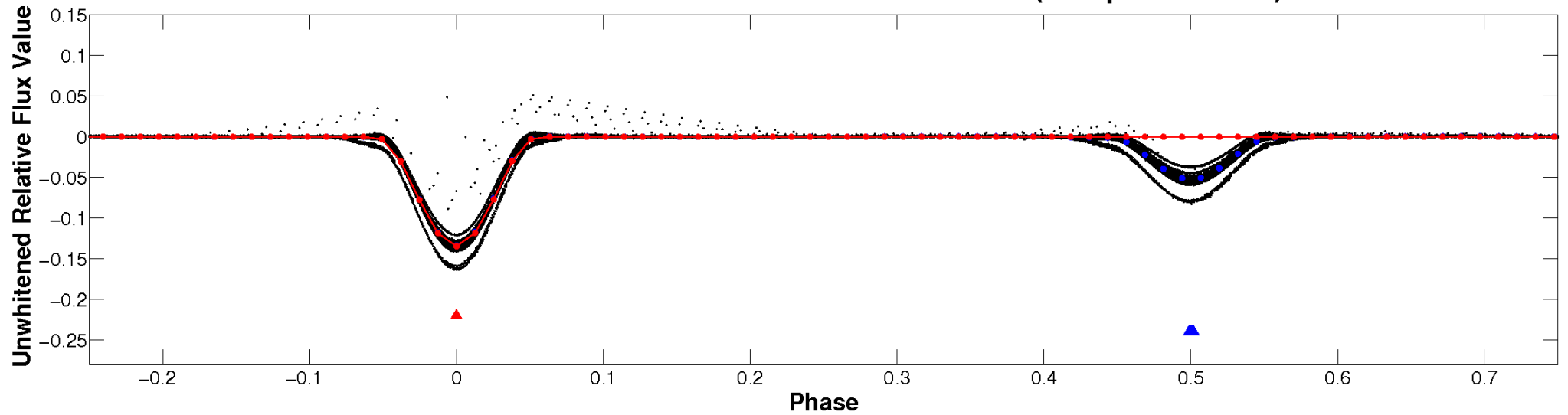
ALT Odd/Even

TCE 008262223-01

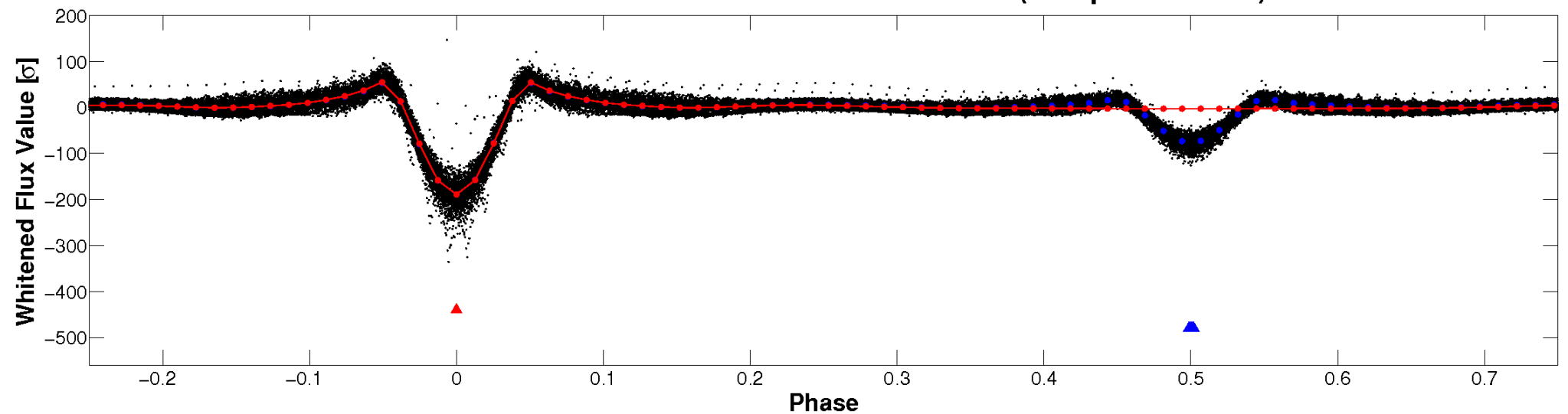


Non-Whitened Vs. Whitened Light Curve

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

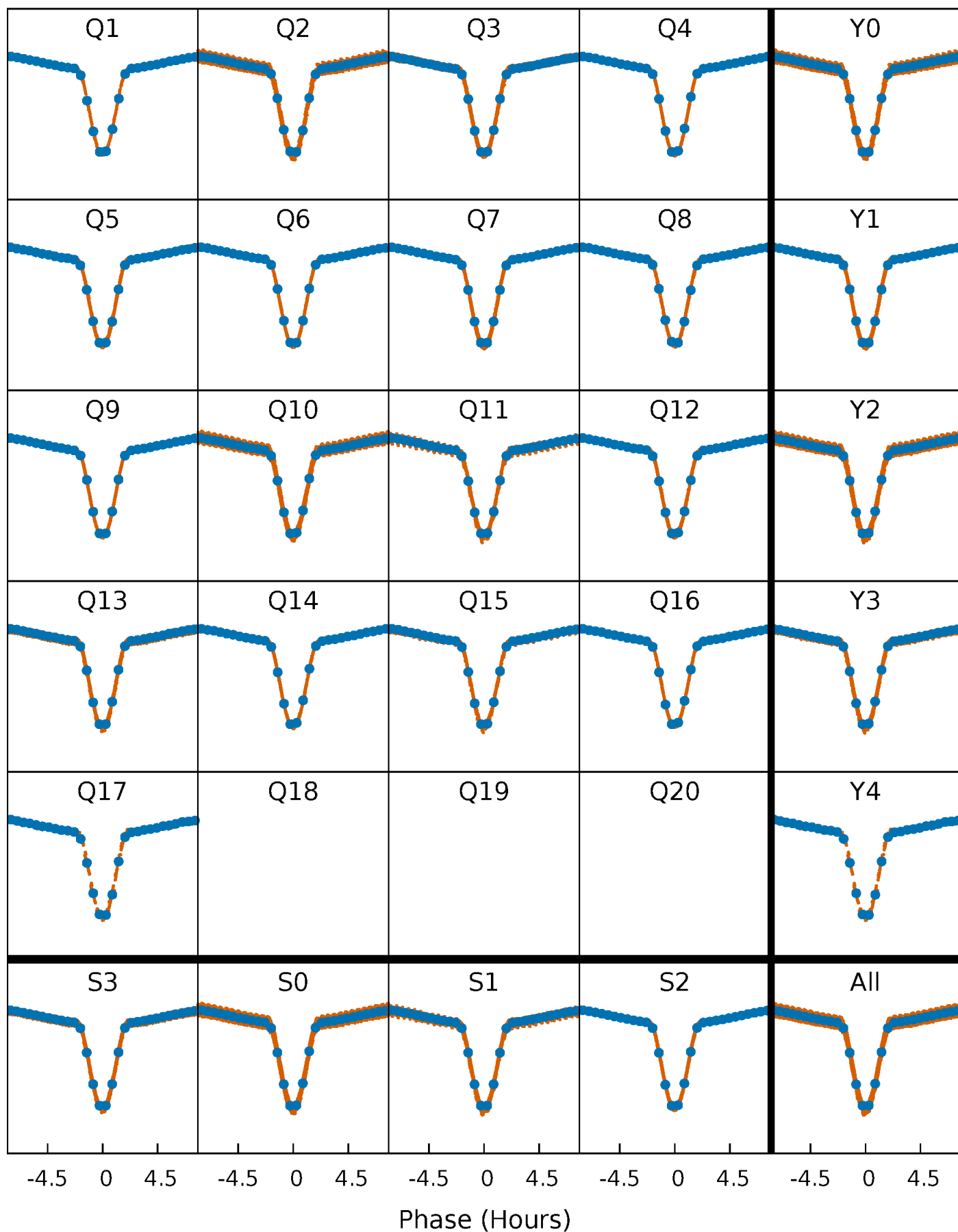


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



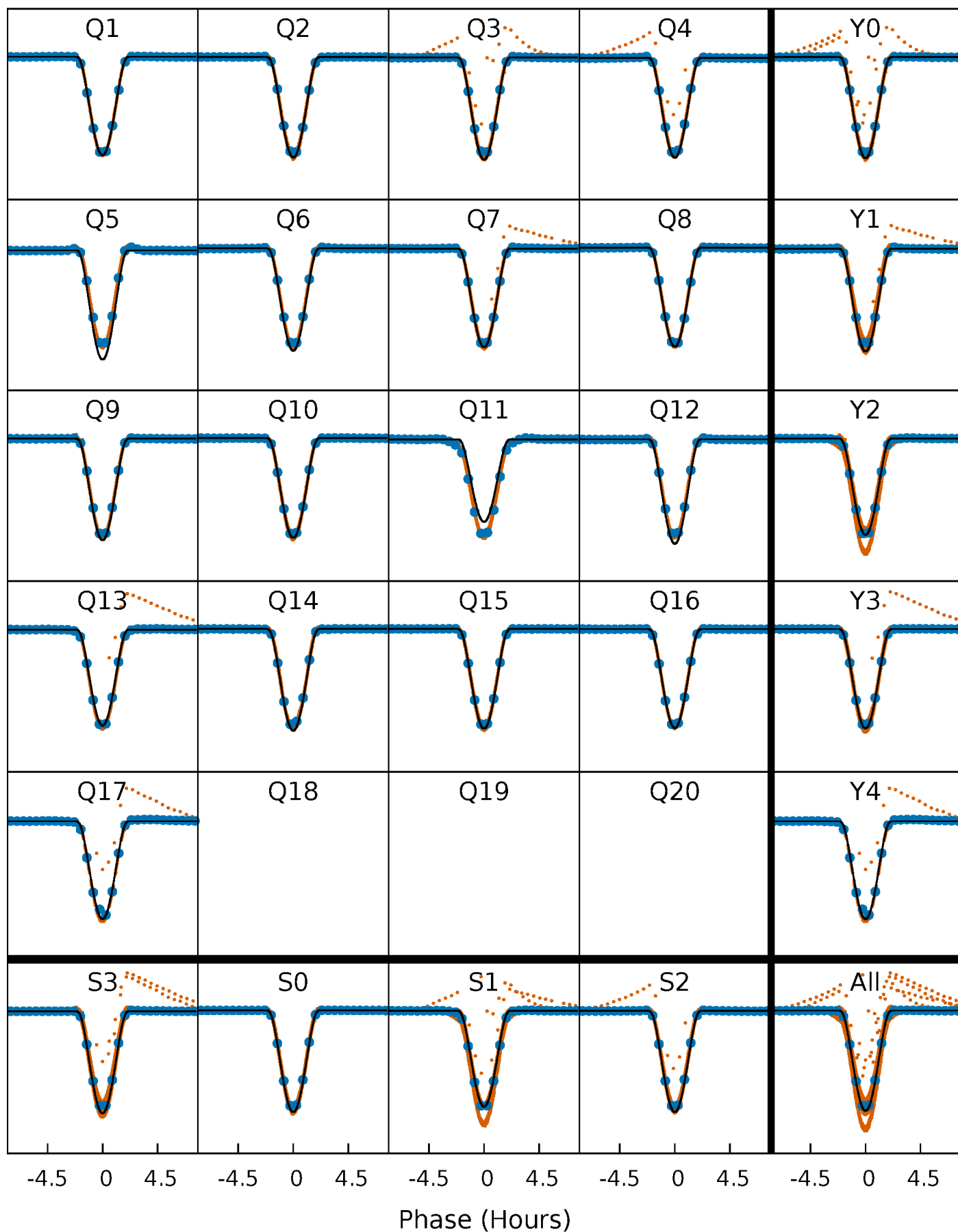
PDC Quarter-Phased Transit Curves

TCE 008262223-01 P= 1.613015 Days $T_0=131.748188$ (BKJD)



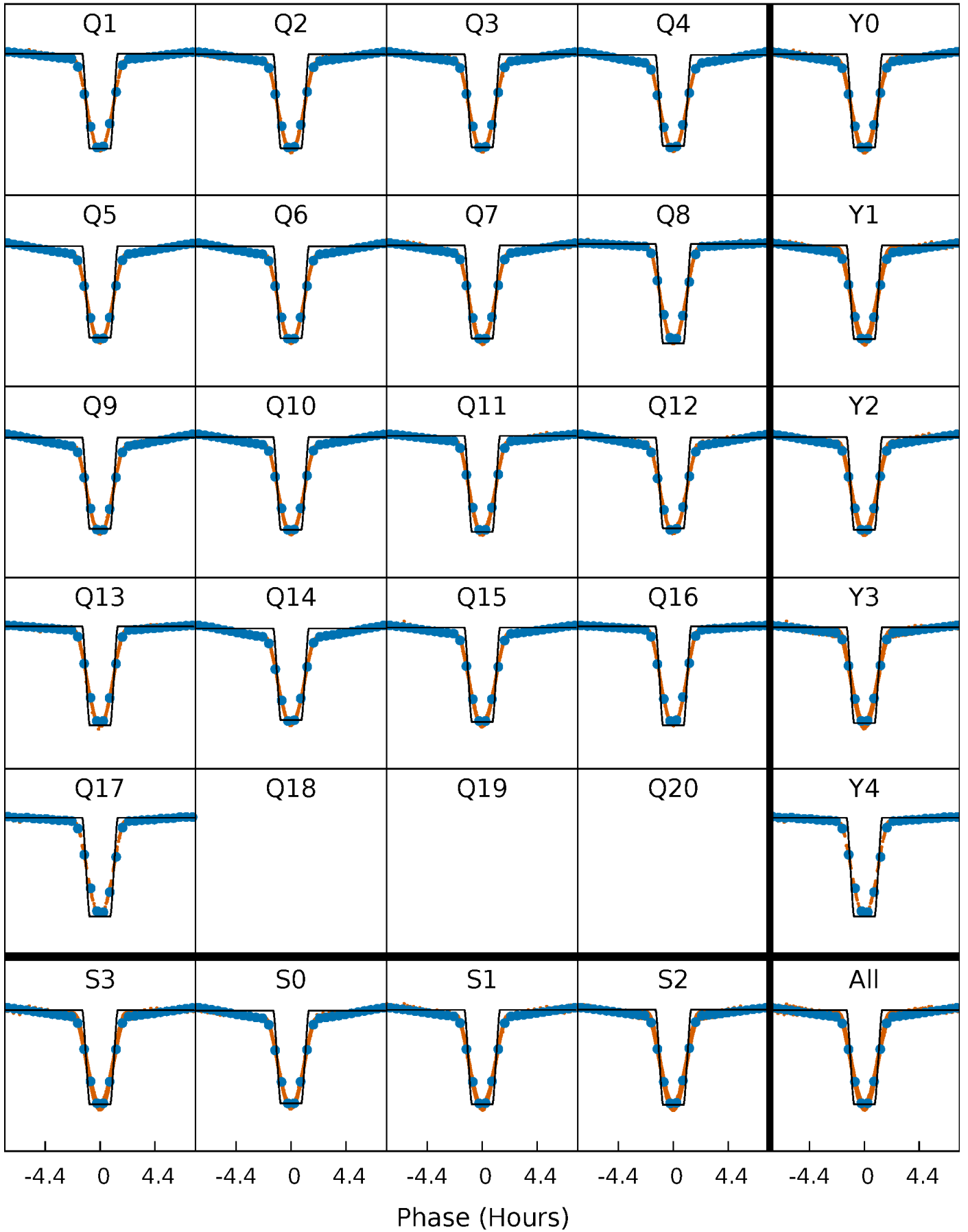
DV Quarter-Phased Transit Curves

TCE 008262223-01 P= 1.613015 Days $T_0=131.748188$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

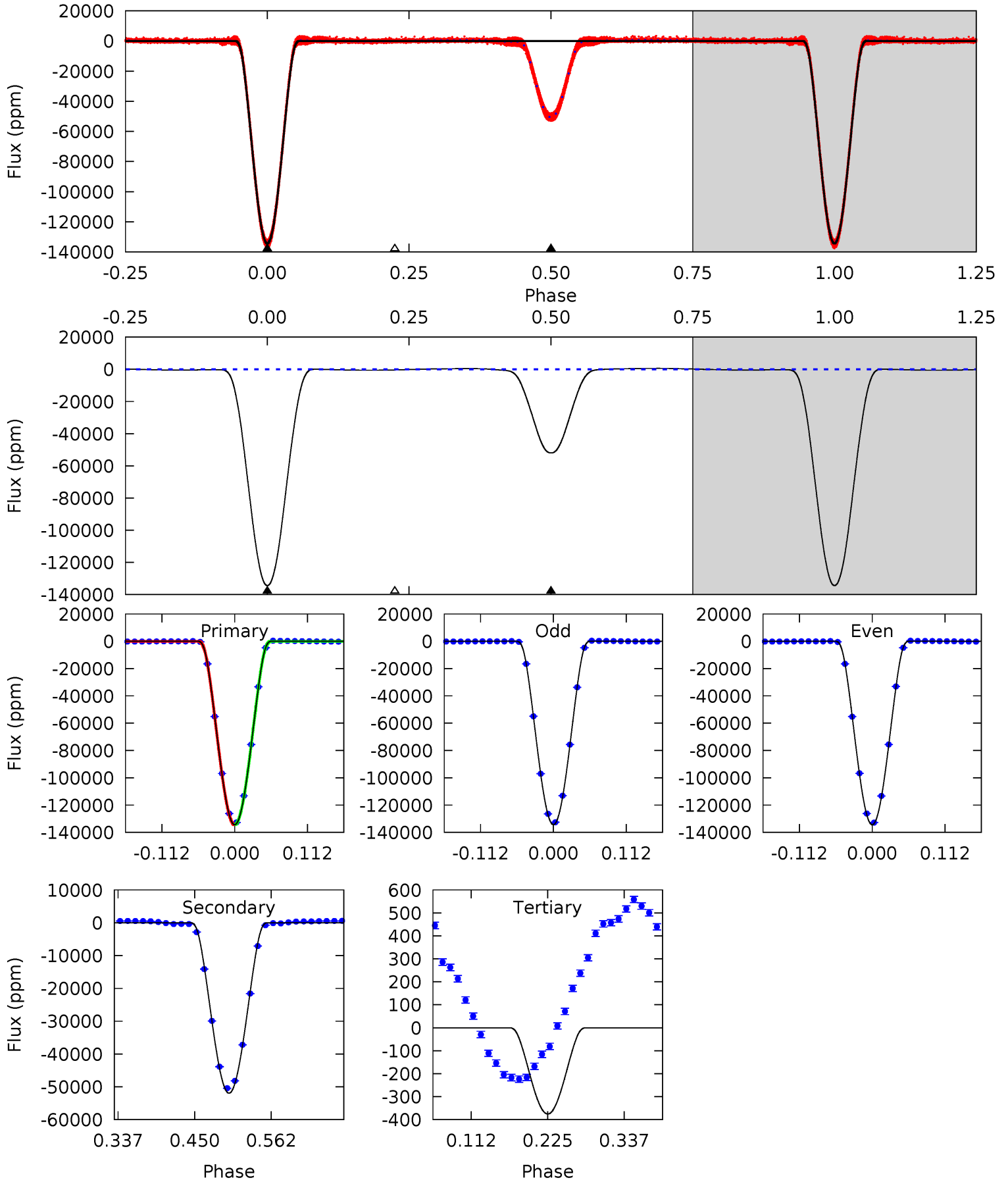
TCE 008262223-01 P= 1.613014 Days $T_0=131.748481$ (BKJD)



DV Model-Shift Uniqueness Test

008262223-01, P = 1.613015 Days, E = 130.135173 Days

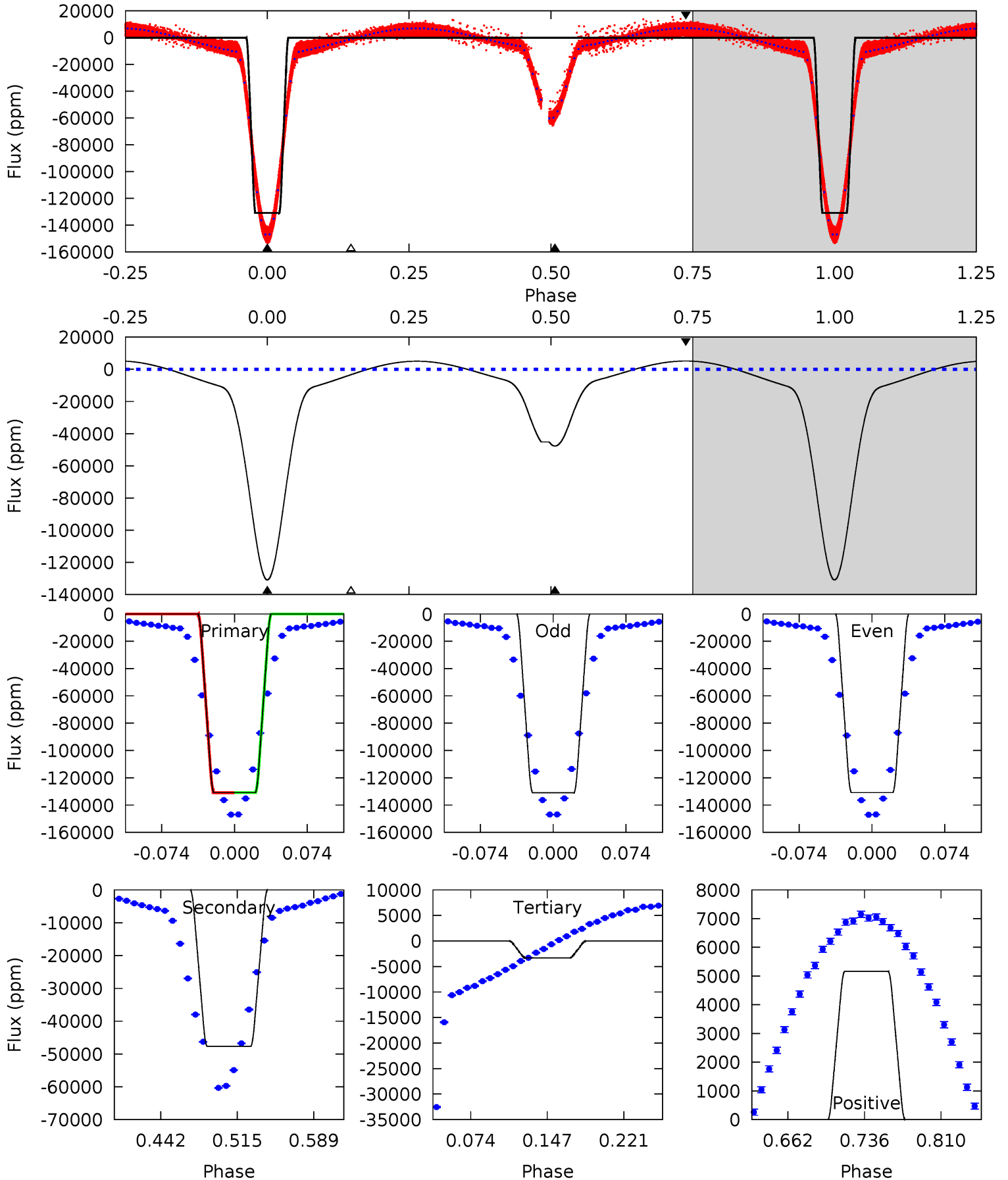
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18422	7124	51.5	0	4.54	1.59	53.2	18370	18422	7072	7124	5.94	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008262223-01, P = 1.613014 Days, E = 130.135467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1744	635.6	44.4	68.8	4.63	1.79	65.0	1699	1675	591.2	566.8	0.27	0.99	0.04	0.94



Stellar Parameters For KIC 008262223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7832^{+216}_{-325}	$3.836^{+0.352}_{-0.088}$	$-0.160^{+0.200}_{-0.350}$	$2.779^{+0.383}_{-1.150}$	$1.930^{+0.082}_{-0.467}$	$0.127^{+0.351}_{-0.035}$
	+3%/-4%	+9%/-2%	+125%/-219%	+14%/-41%	+4%/-24%	+278%/-28%
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 008262223-01 / KOI 7004.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51962 ± 7	$130.59^{+15.15}_{-28.57}$	4270^{+273}_{-487}	5307^{+147}_{-150}	$1.928^{+1.129}_{-0.329}$
Alt.	-47704 ± 75	$110.17^{+12.31}_{-25.18}$	4274^{+273}_{-481}	5702^{+147}_{-181}	$2.495^{+1.510}_{-0.439}$

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 $A_{obs} \gg 1.0$

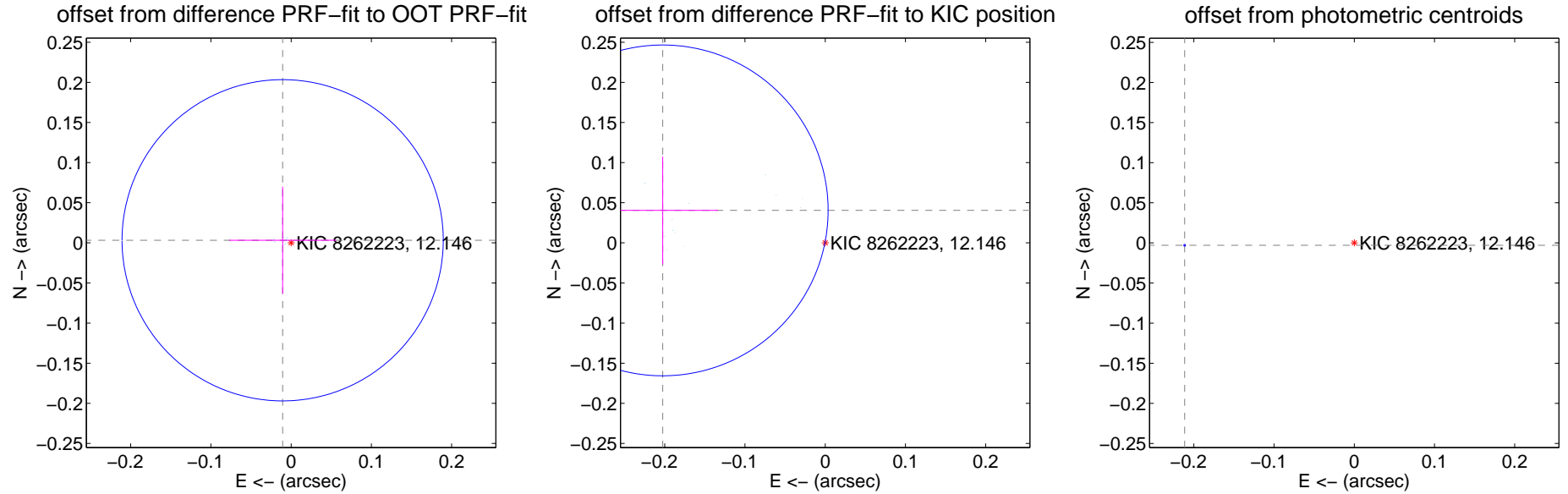
DV Centroid Data

Supplemental centroid analysis for 008262223-01. Kepler magnitude: 12.15. Transit SNR 8106.12

There are 17 quarters with good PRF difference image offsets

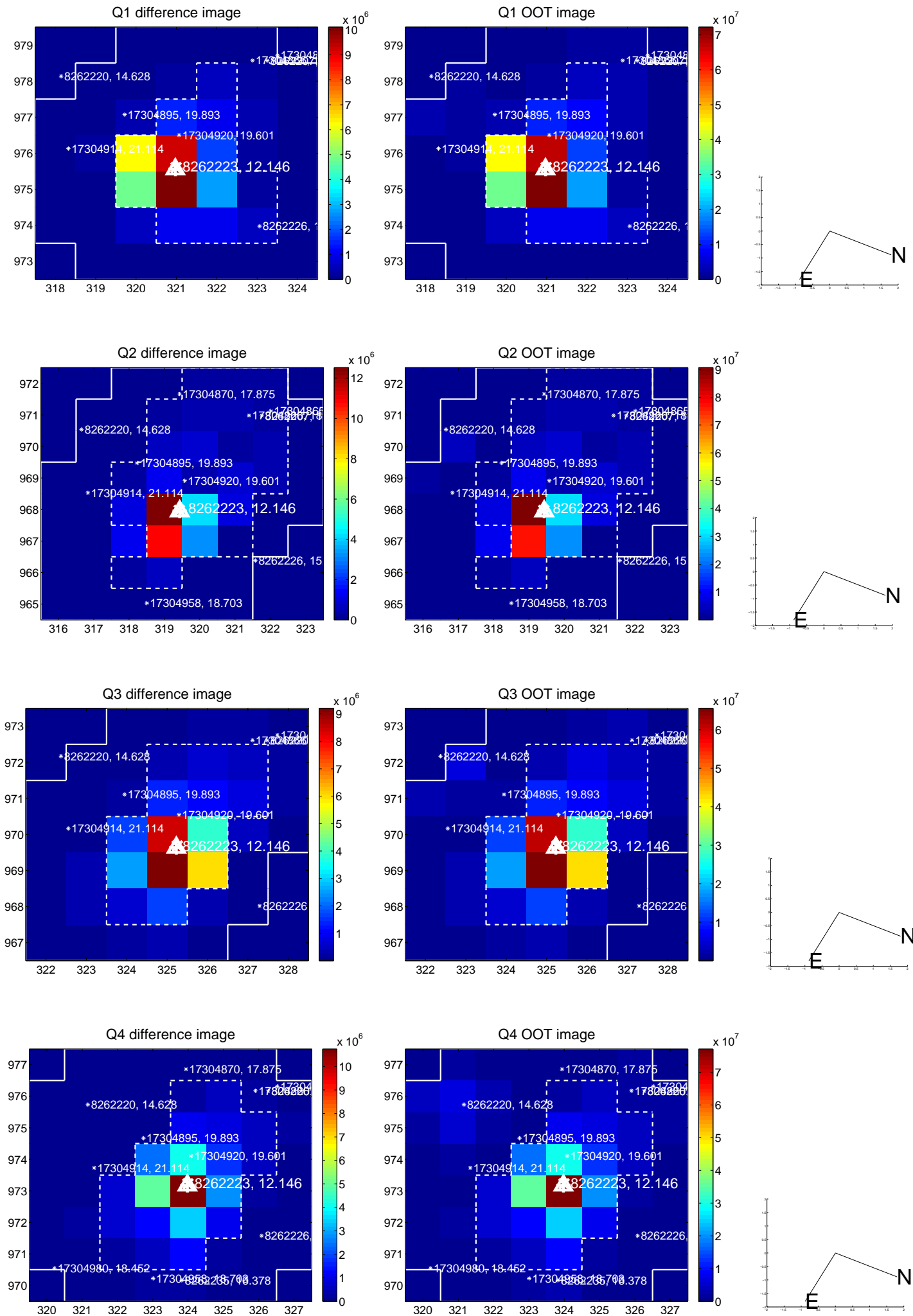
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.011 ± 0.067	0.17	0.011 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.206 ± 0.069	3.01	0.202 ± 0.069	0.040 ± 0.067
photometric centroid source offset	0.21 ± 0.00	583.33	0.21 ± 0.00	-0.00 ± 0.00

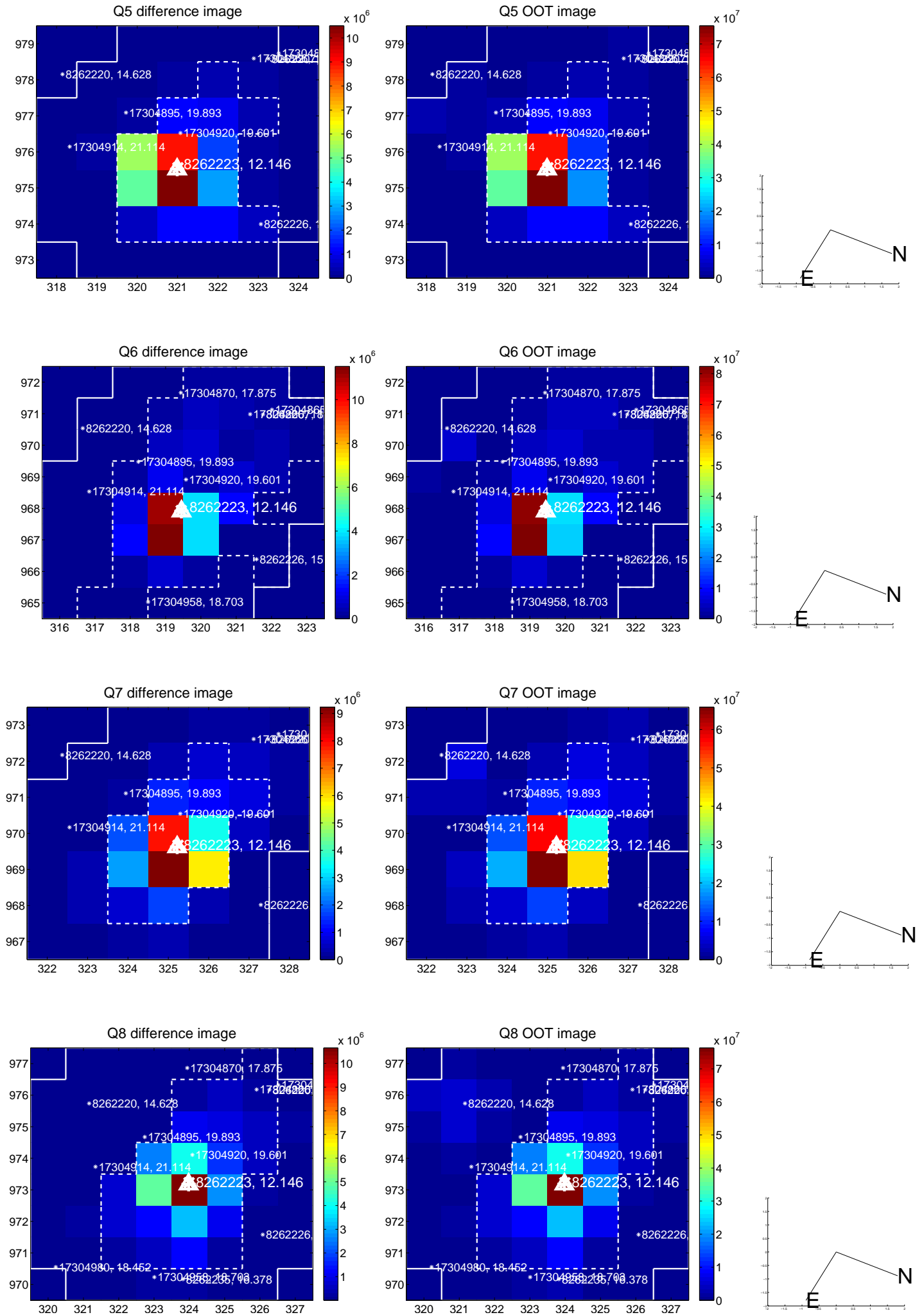


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

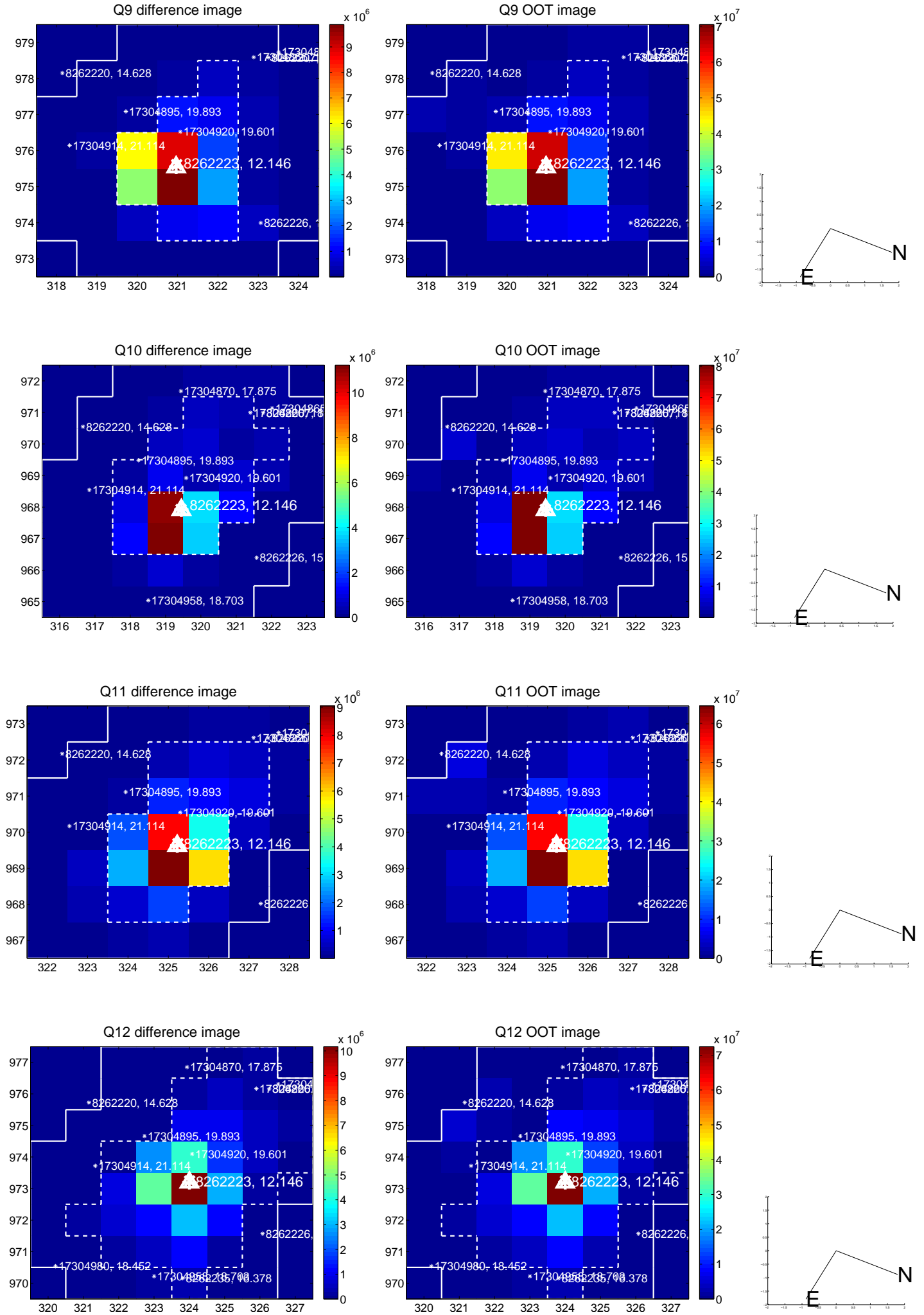
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



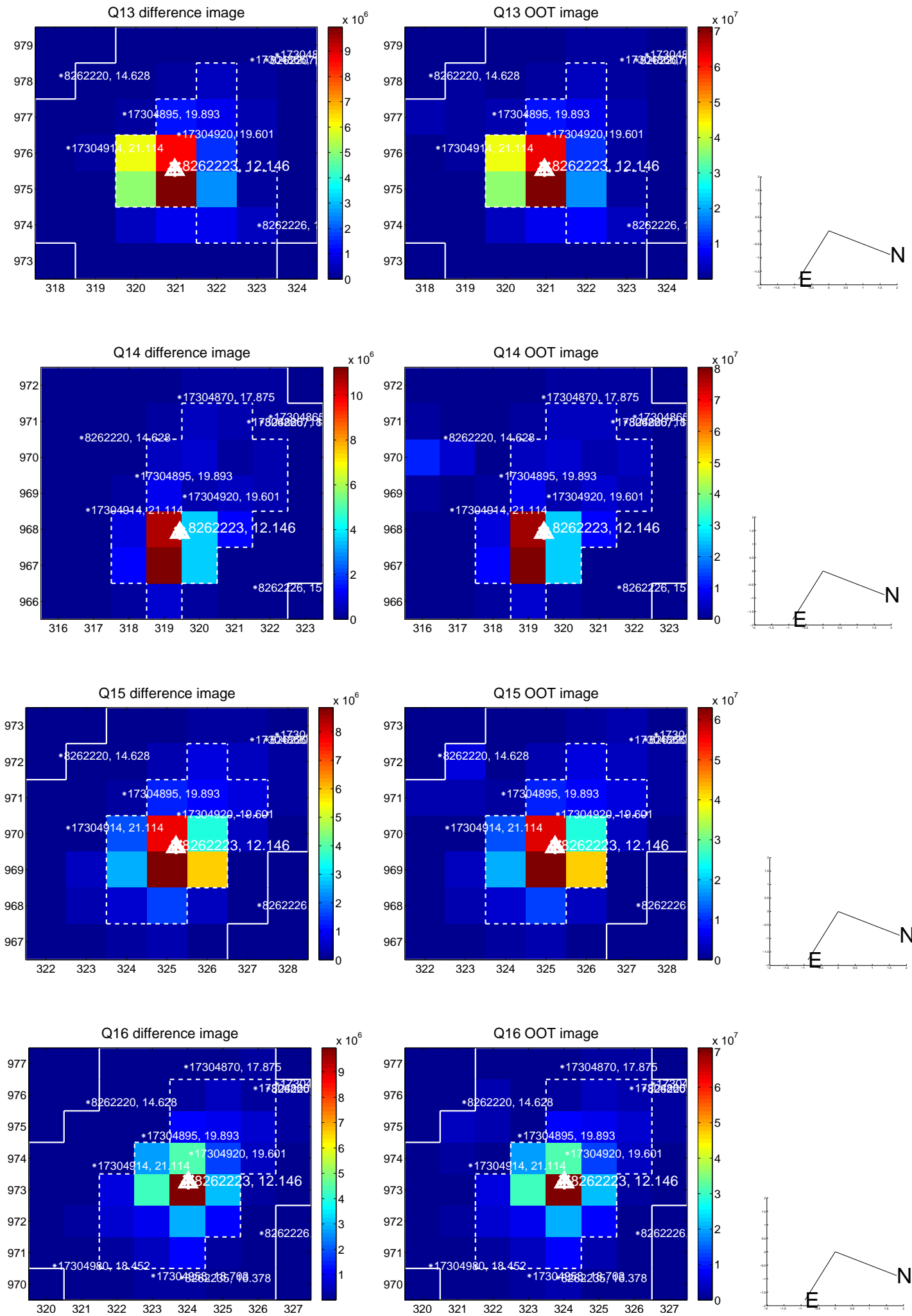
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



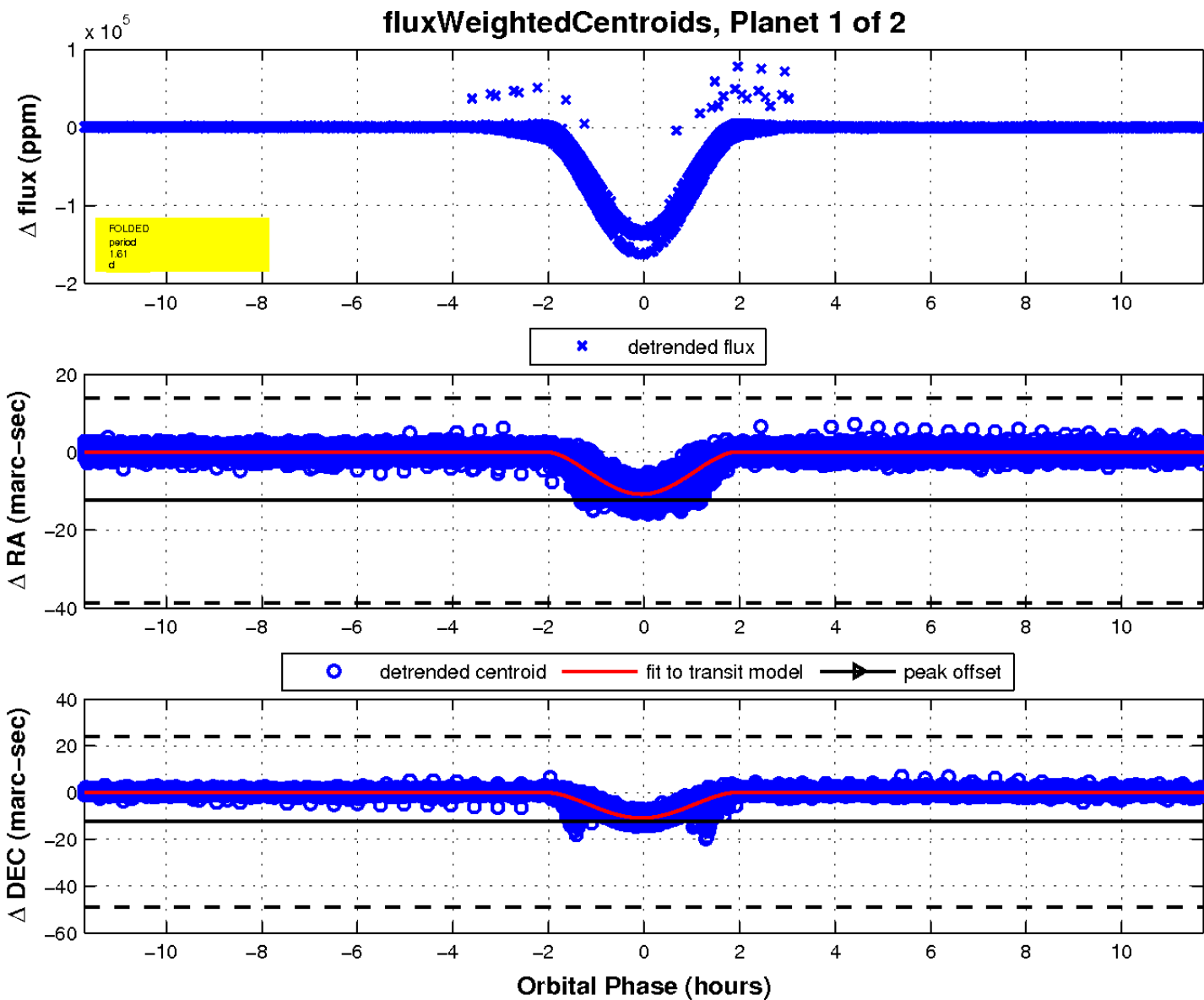
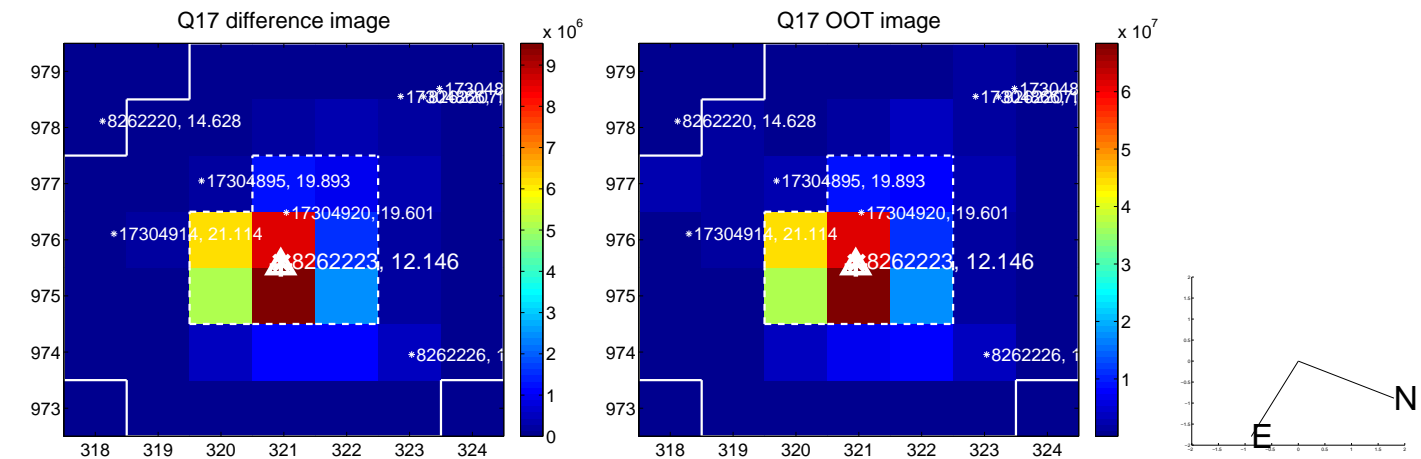
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

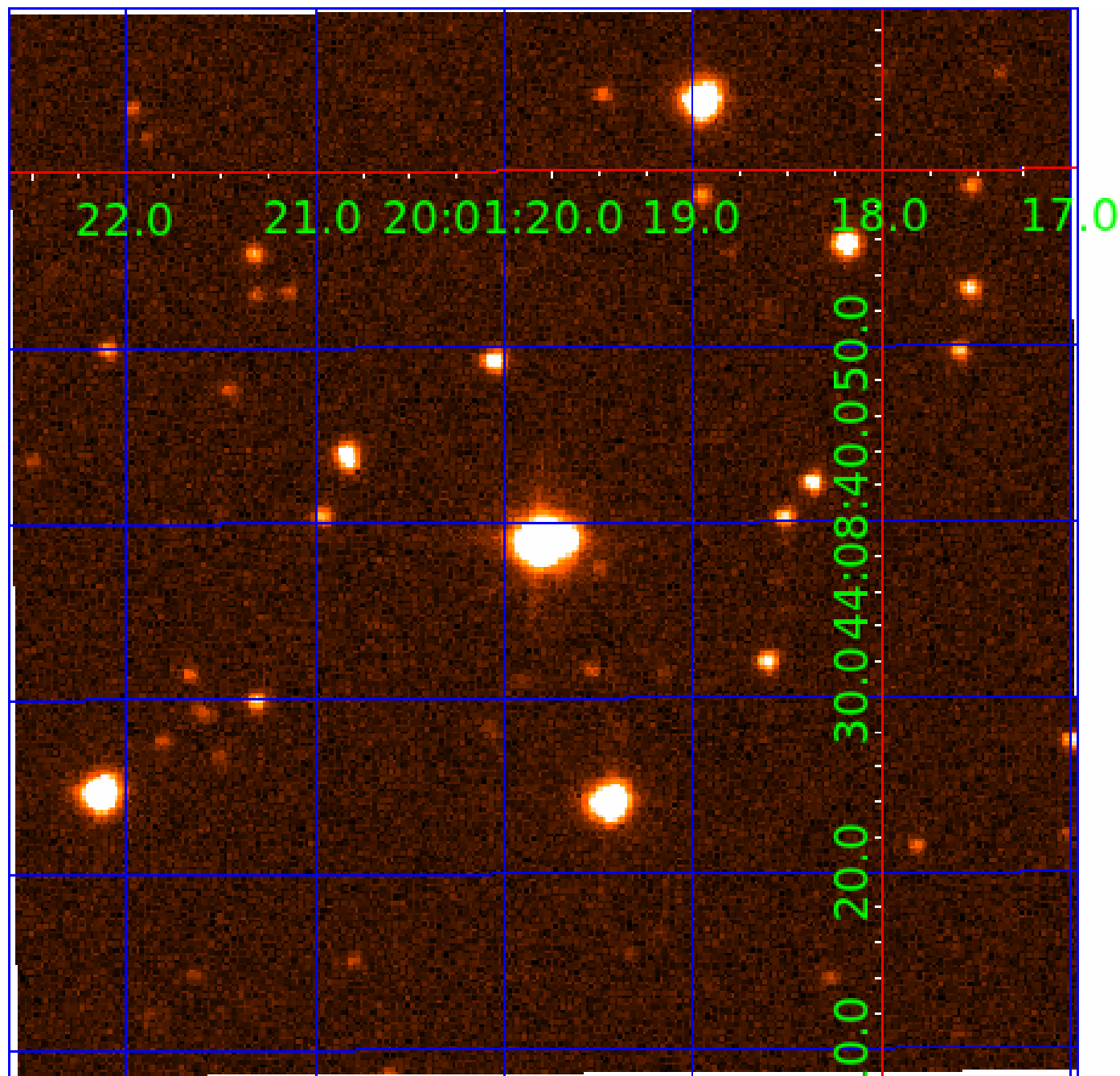


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008262223

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})
008262223-01	OBS	7004.01	1.613015	131.748188	136048.6	3.905	9171.0	8106.1	2.78	7832	137.63	23162.90
008262223-02	OBS	No	1.613021	132.552661	11446.6	2.500	4615.8	-1.0	2.78	7832	30.07	23162.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008262223-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008262223-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

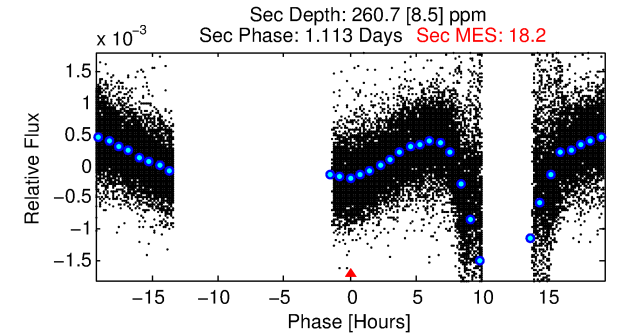
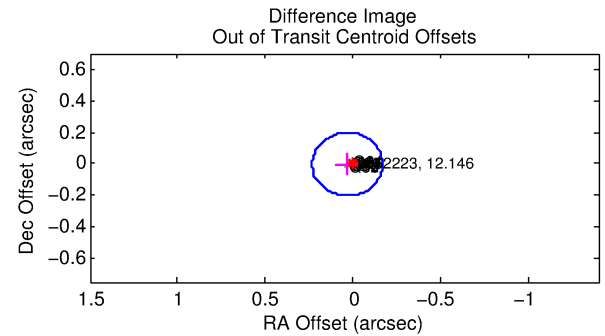
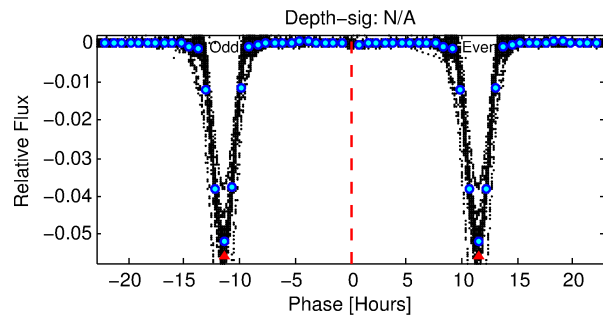
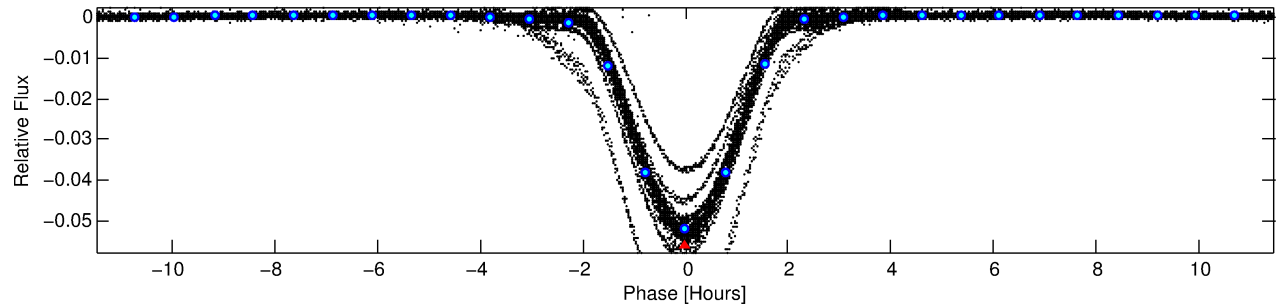
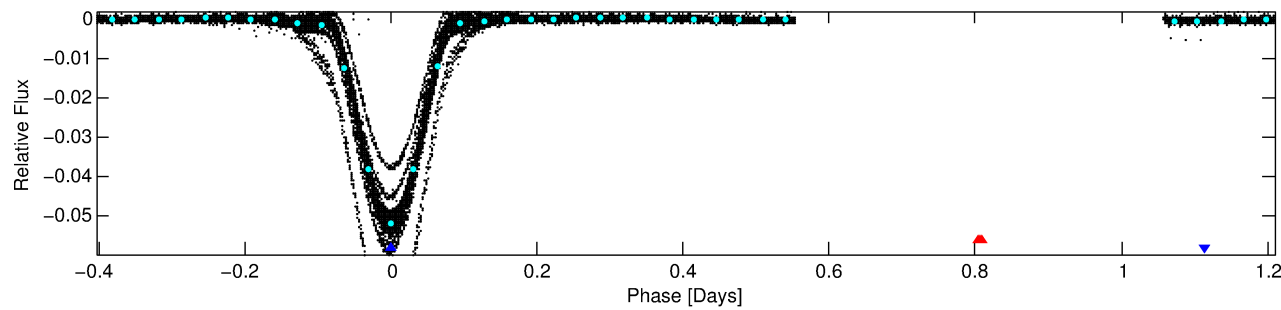
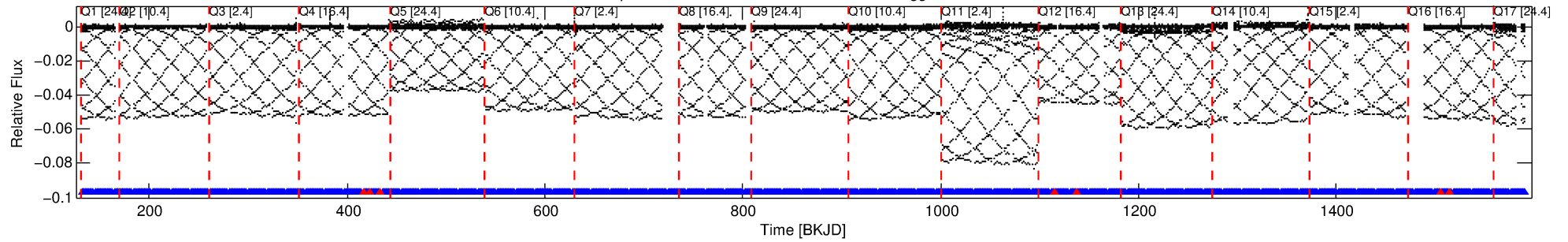
Ephemeris Match Information For 008262223-02

No Significant Match Found

DV One-Page Summary

KIC: 8262223 Candidate: 2 of 2 Period: 1.613 d
KOI: K07004 Corr: No Ephemeris Match

Kp: 12.15 R*: 2.78 Rs Teff: 7832.0 K Logg: 3.84 Fe/H: -0.160



TPS TCE Results:

Period = 1.61302 d
Epoch = 132.5527 BKJD

DV fit results are unavailable

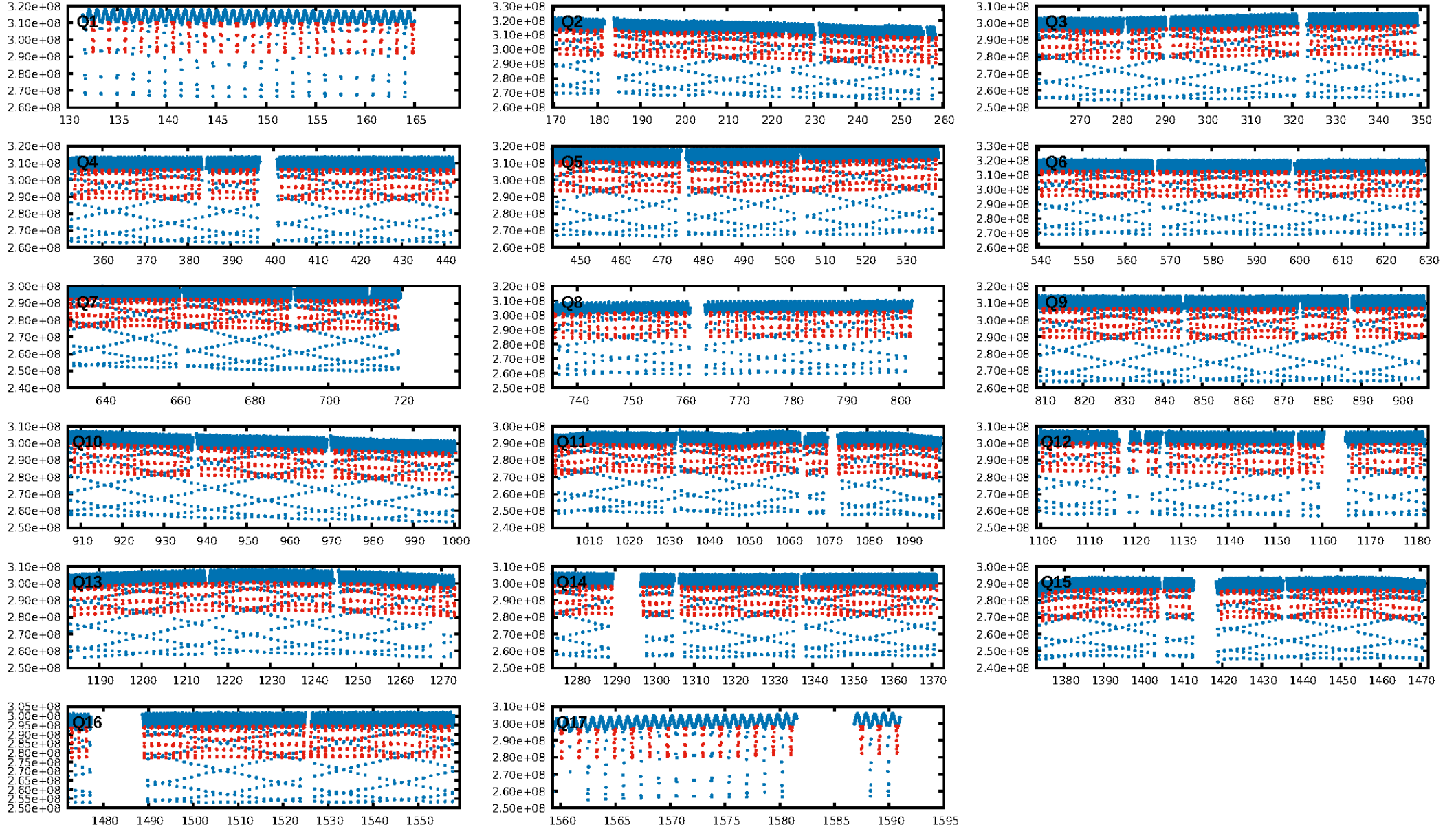
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [785/792]
GhostDiagnostic-chr: 1.332
Centroid-sig: 0.0%
Centroid-so: 0.260 arcsec [402.87 σ]
OotOffset-rm: 0.033 arcsec [0.50 σ]
KicOffset-rm: 0.226 arcsec [3.28 σ]
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]

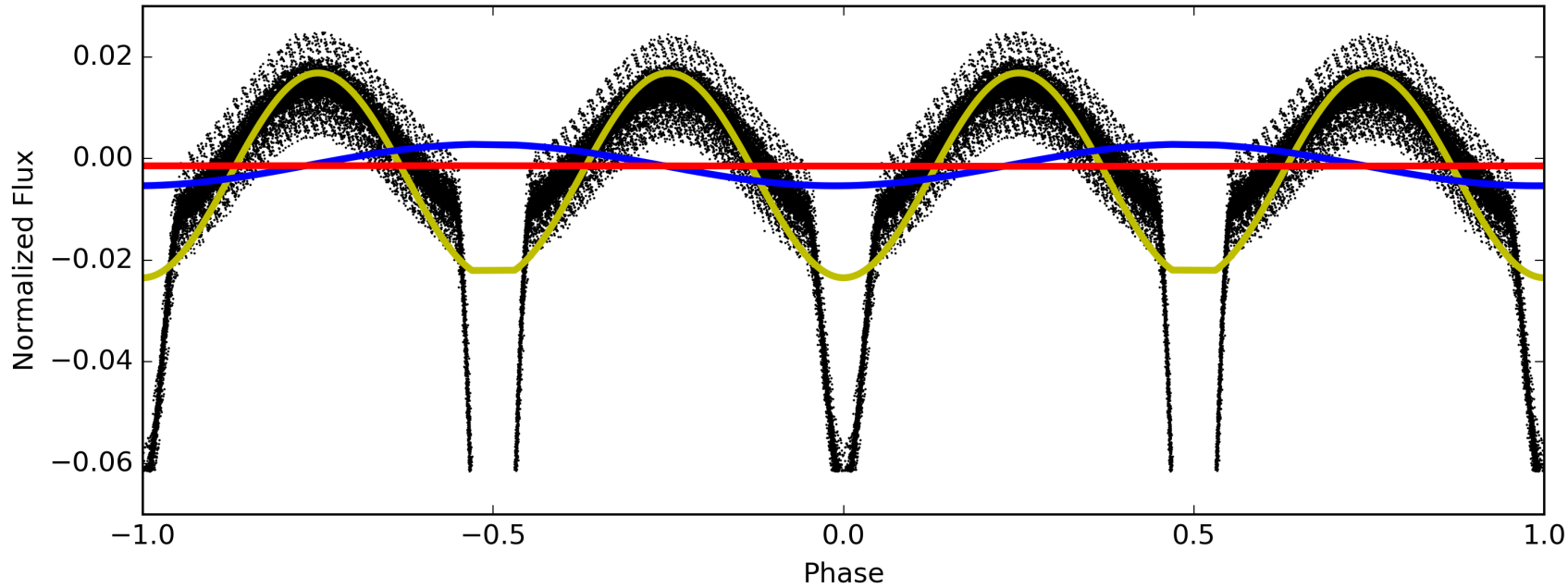
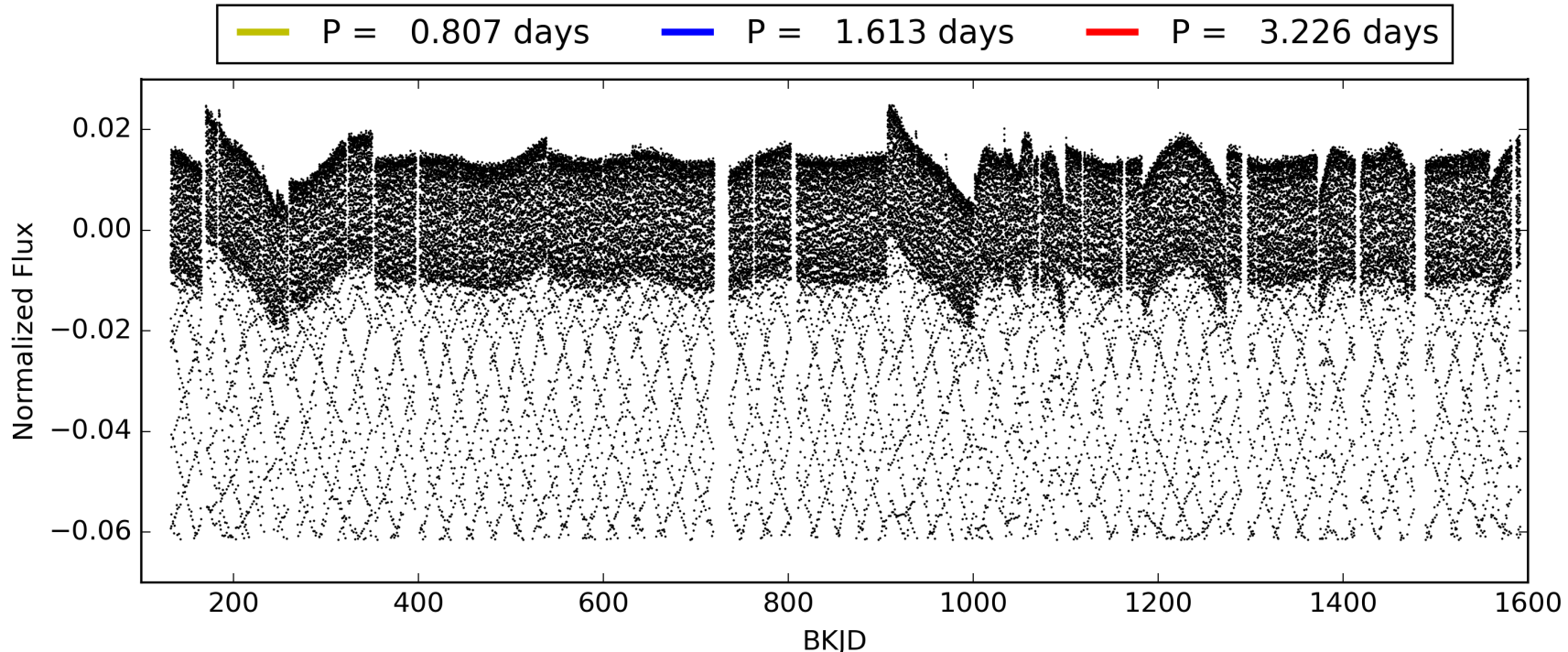
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:55:57 Z

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

TCE 008262223-02, PDC Light Curves

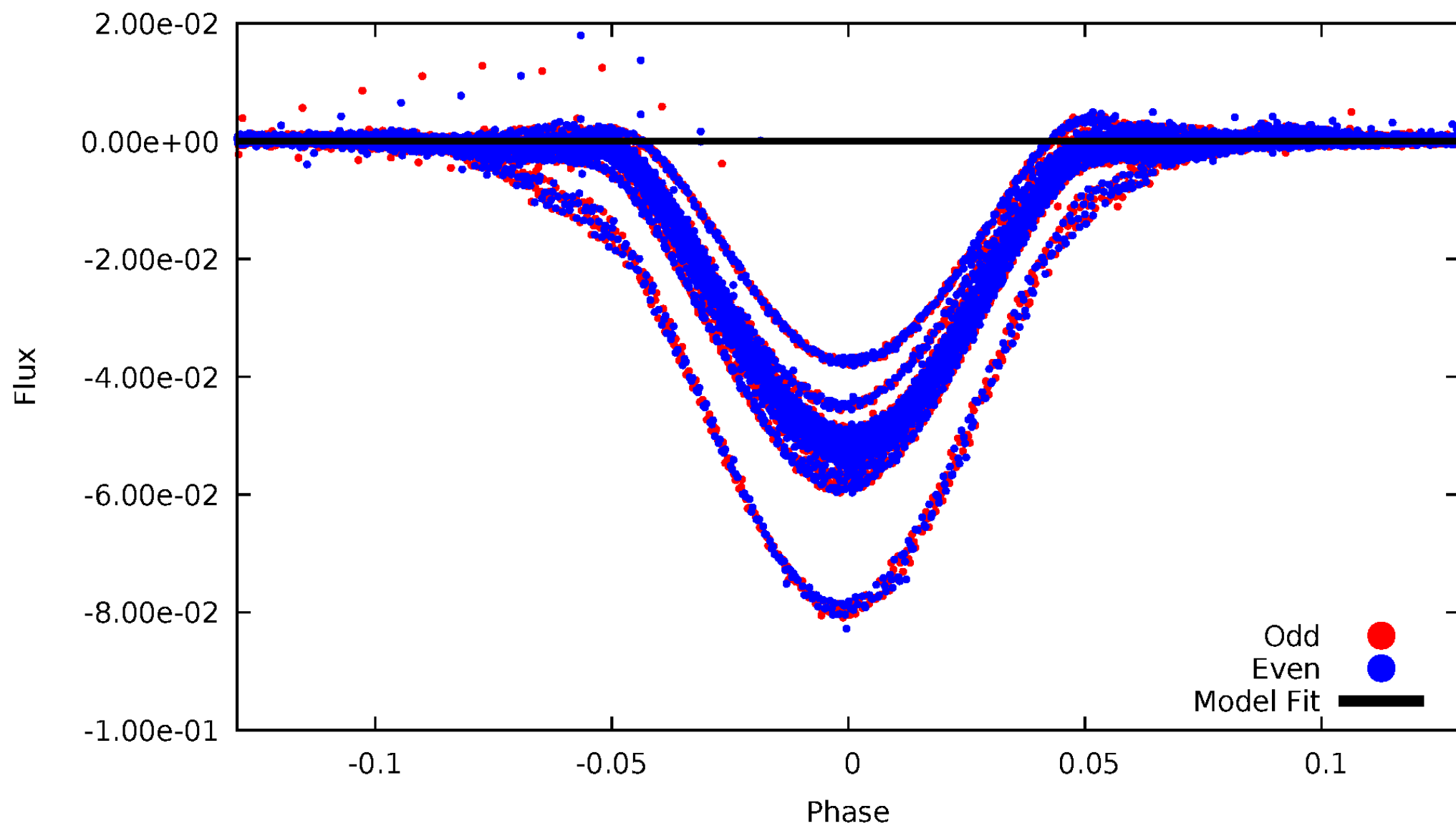


TCE 008262223-02



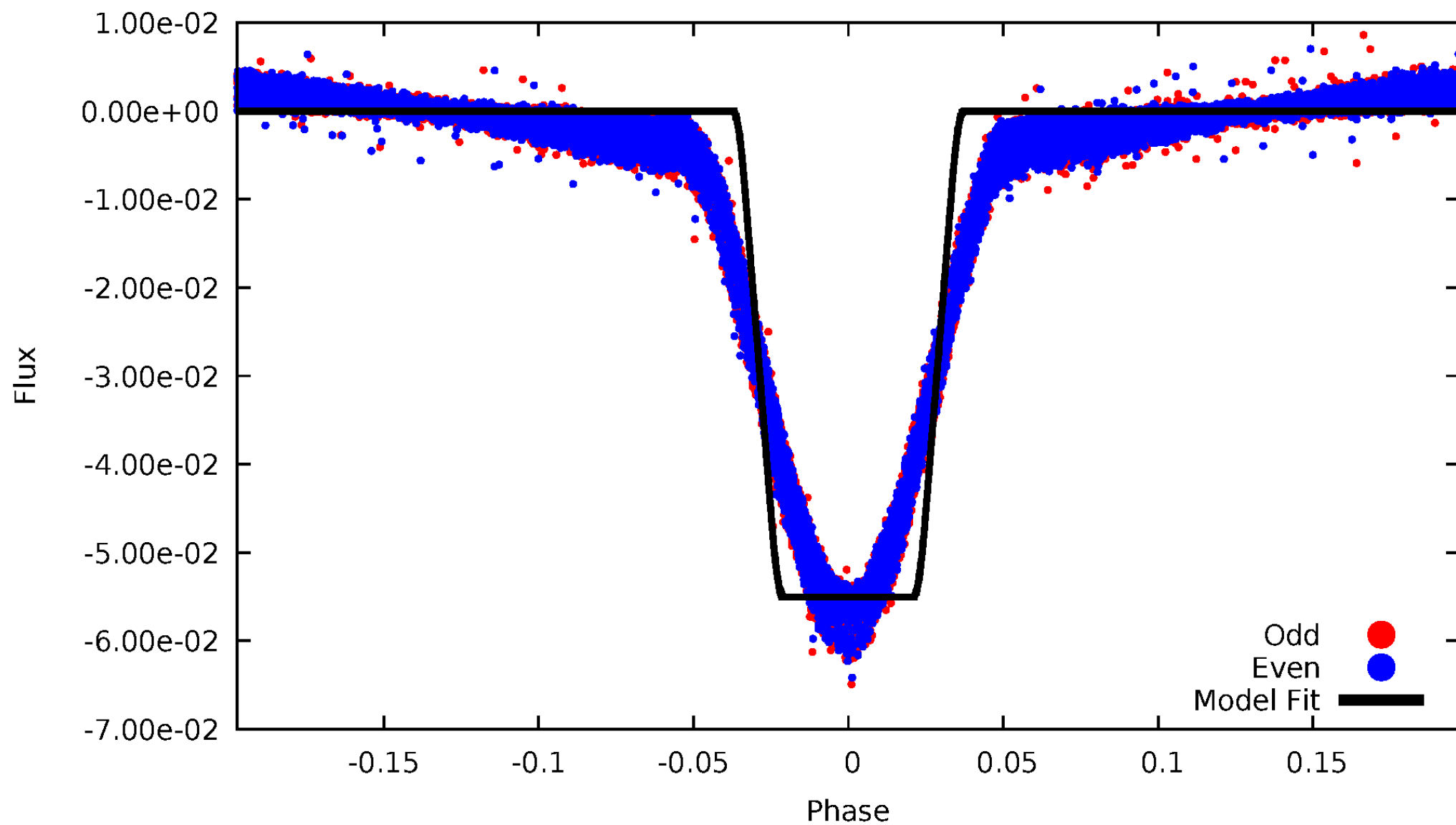
DV Odd/Even

TCE 008262223-02



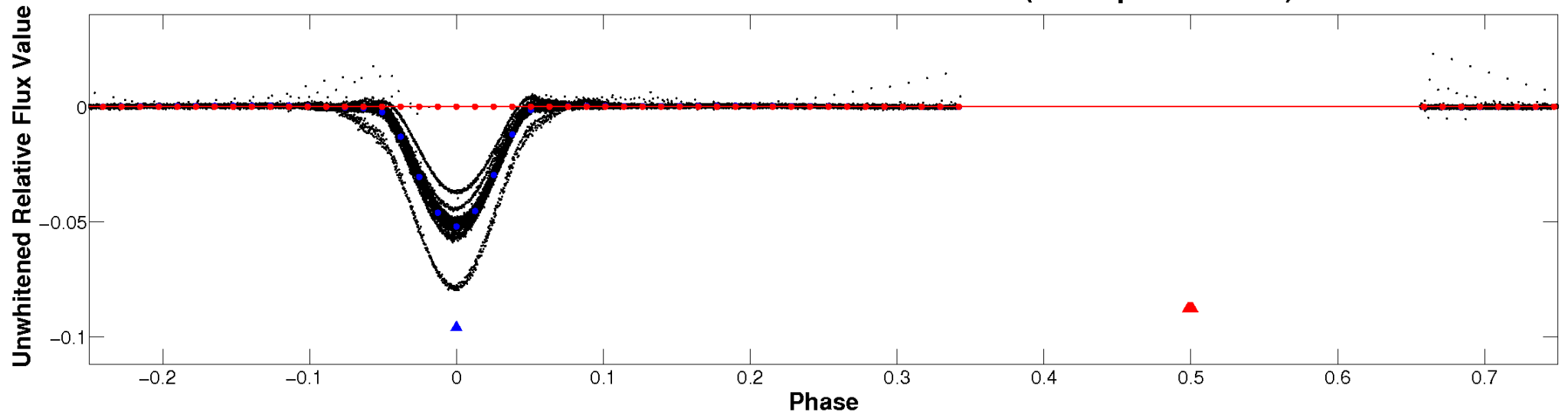
ALT Odd/Even

TCE 008262223-02



Non-Whitened Vs. Whitened Light Curve

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

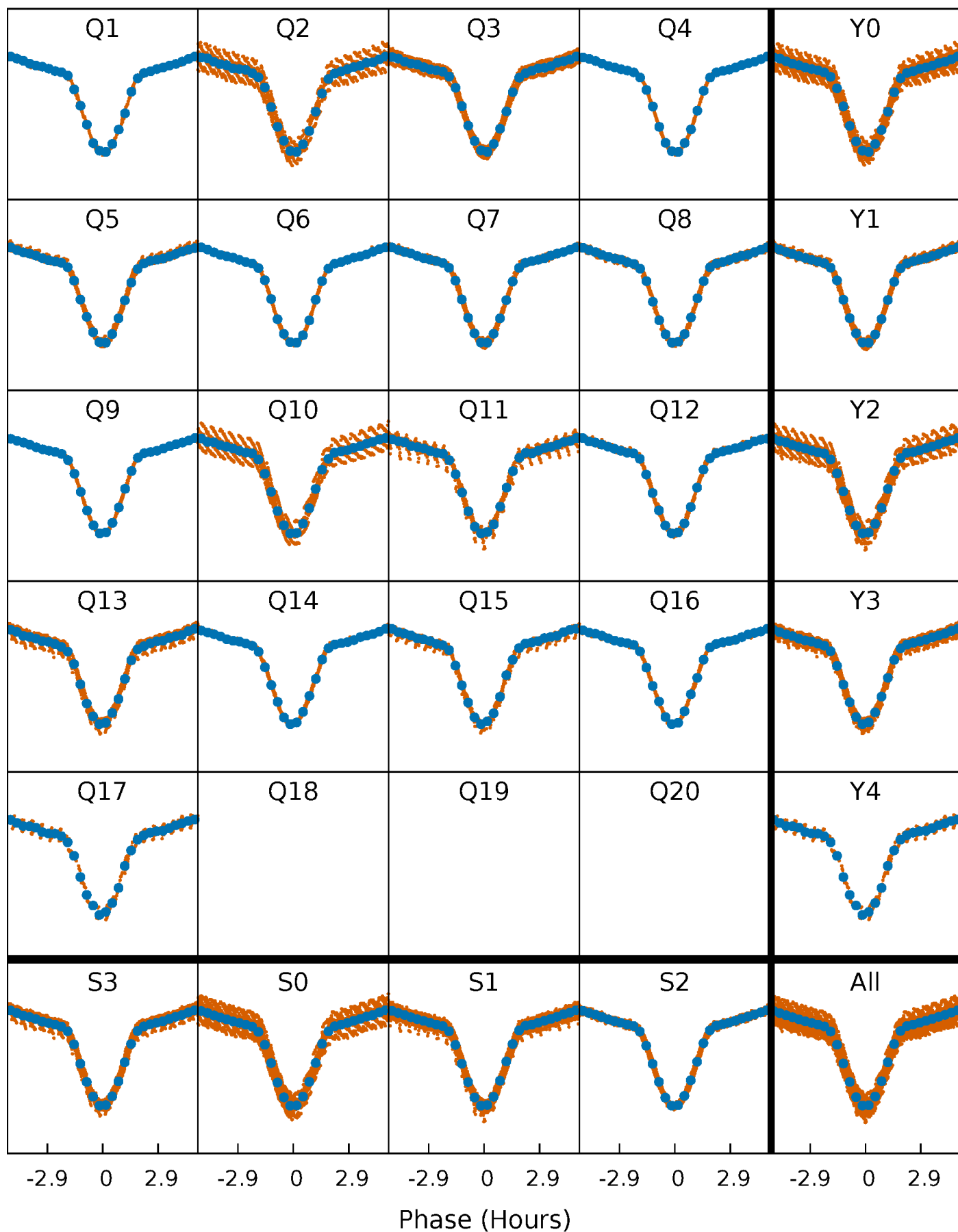


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



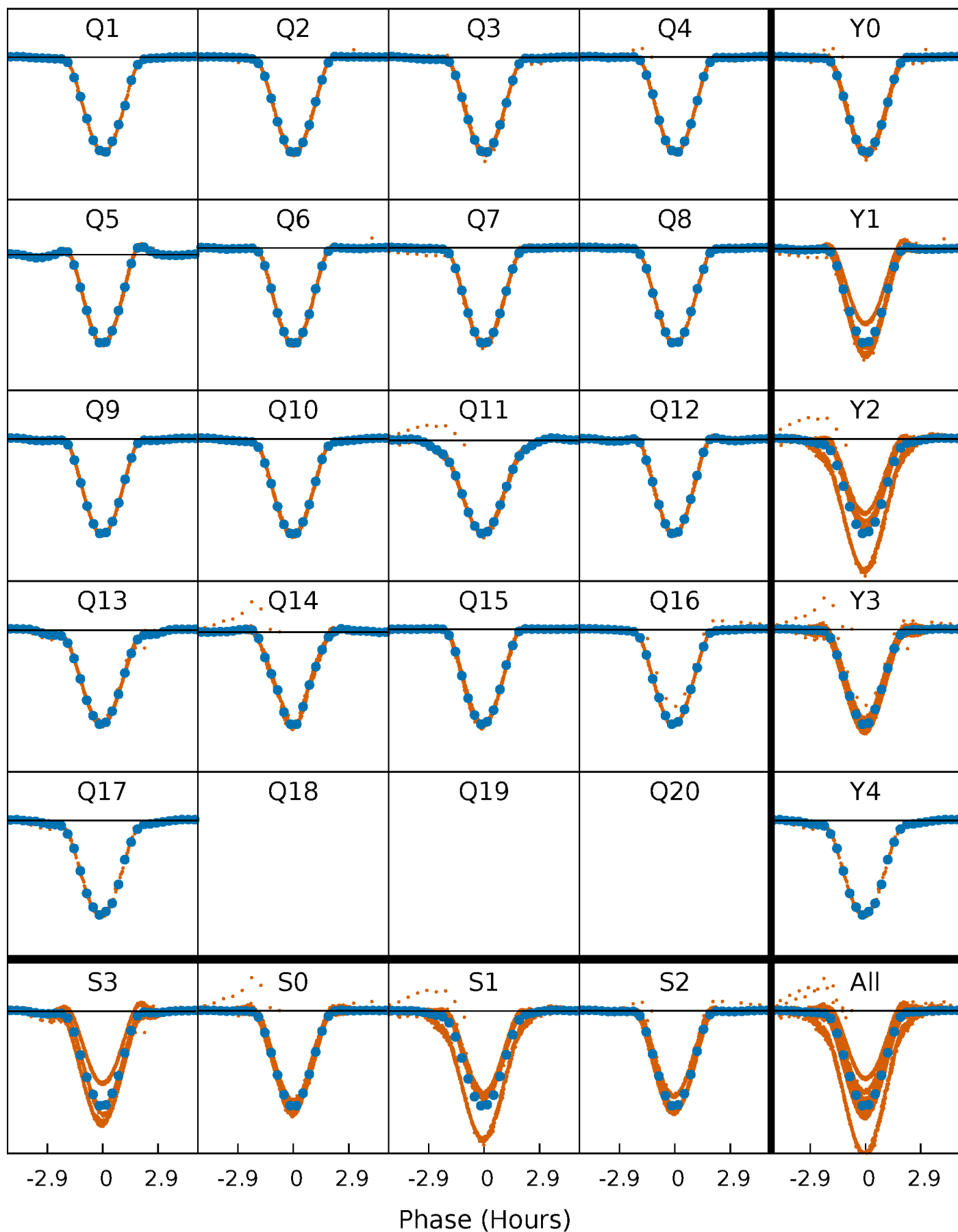
PDC Quarter-Phased Transit Curves

TCE 008262223-02 P= 1.613021 Days $T_0=132.552661$ (BKJD)



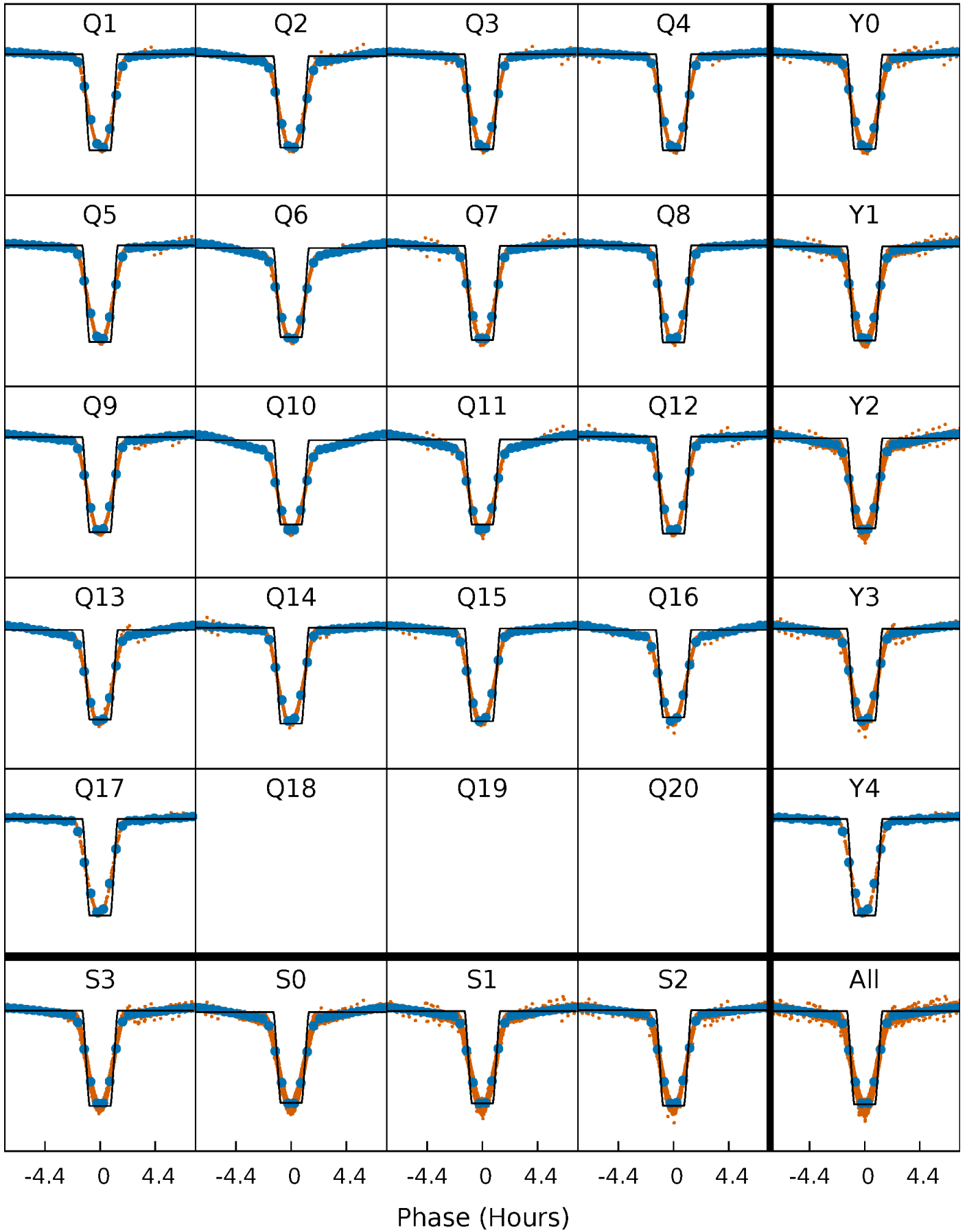
DV Quarter-Phased Transit Curves

TCE 008262223-02 P= 1.613021 Days $T_0=132.552661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

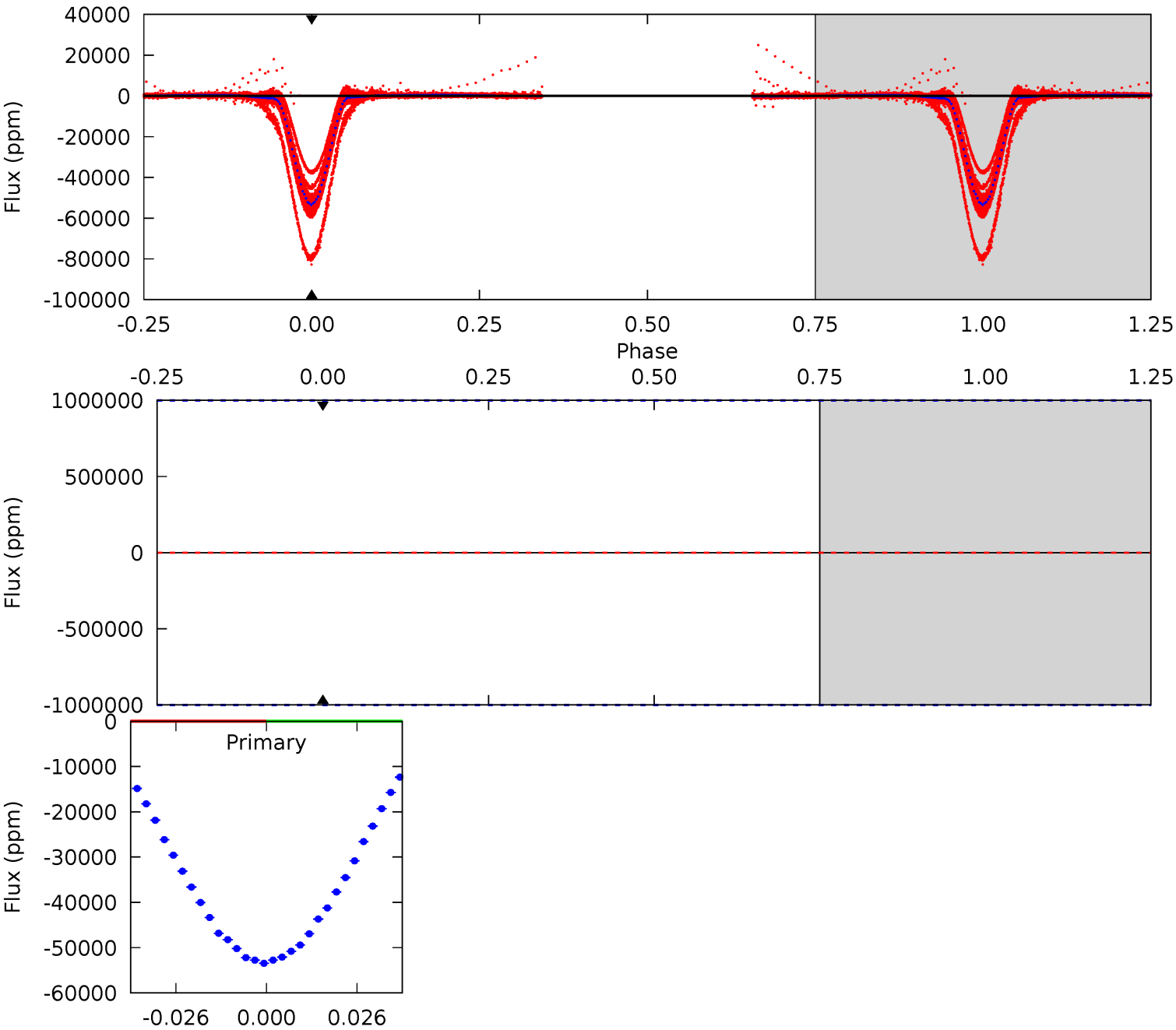
TCE 008262223-02 P= 1.613021 Days $T_0=132.552375$ (BKJD)



DV Model-Shift Uniqueness Test

008262223-02, P = 1.613021 Days, E = 130.939640 Days

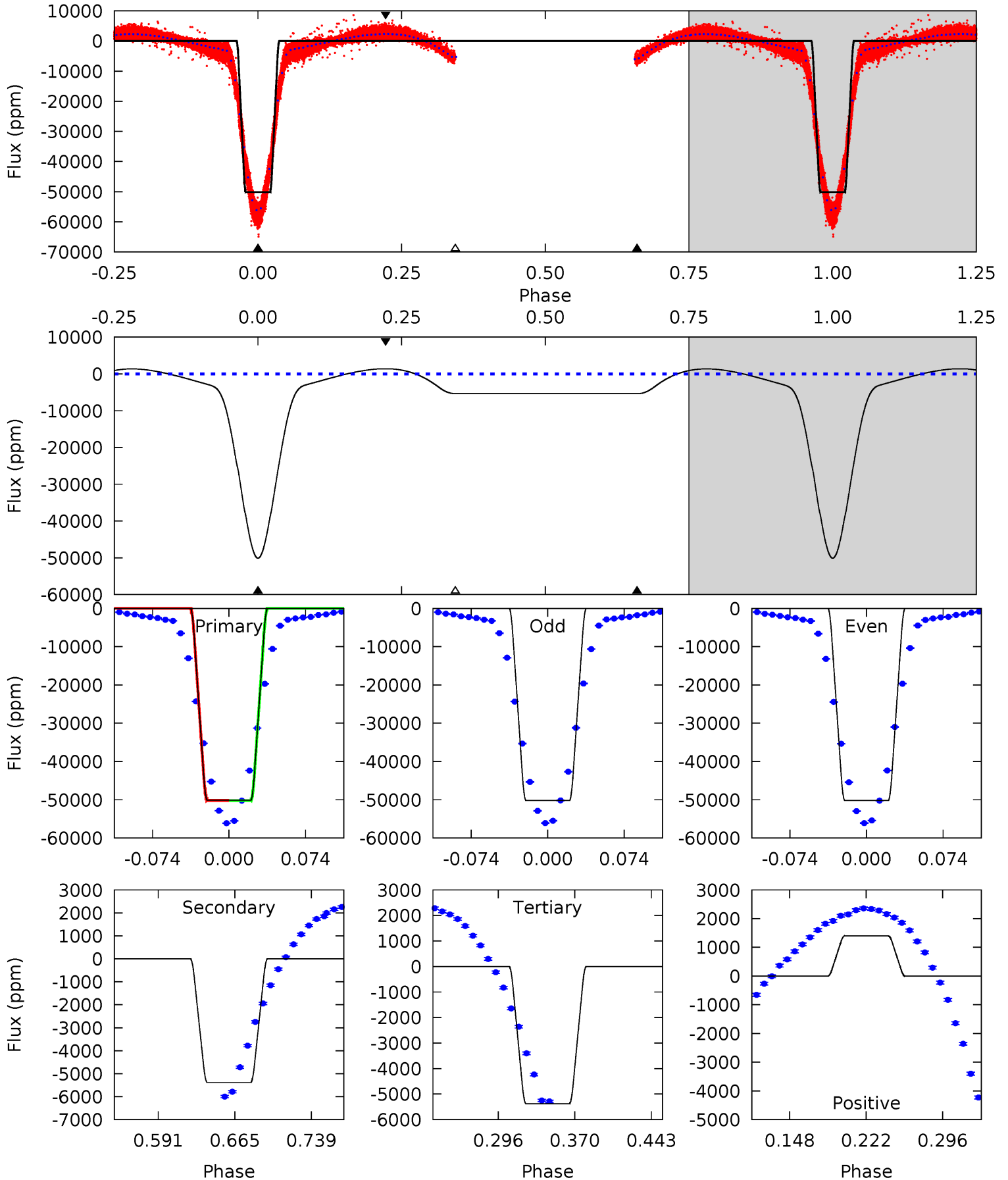
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008262223-02, P = 1.613021 Days, E = 130.939354 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1636	175.8	175.6	45.8	4.63	1.79	58.7	1461	1591	0.23	130.1	0.40	1.01	0.03	0.95



Stellar Parameters For KIC 008262223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7832^{+216}_{-325}	$3.836^{+0.352}_{-0.088}$	$-0.160^{+0.200}_{-0.350}$	$2.779^{+0.383}_{-1.150}$	$1.930^{+0.082}_{-0.467}$	$0.127^{+0.351}_{-0.035}$
	+3%/-4%	+9%/-2%	+125%/-219%	+14%/-41%	+4%/-24%	+278%/-28%
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 008262223-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$33.73^{+26.23}_{-21.94}$	4300^{+267}_{-449}	-4742^{+27540}_{-18331}	$-0.696^{+92.079}_{-104.146}$
Alt.	-5384 ± 31	$64.89^{+32.05}_{-29.79}$	4239^{+322}_{-418}	4026^{+1360}_{-1137}	$0.767^{+1.870}_{-0.415}$

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

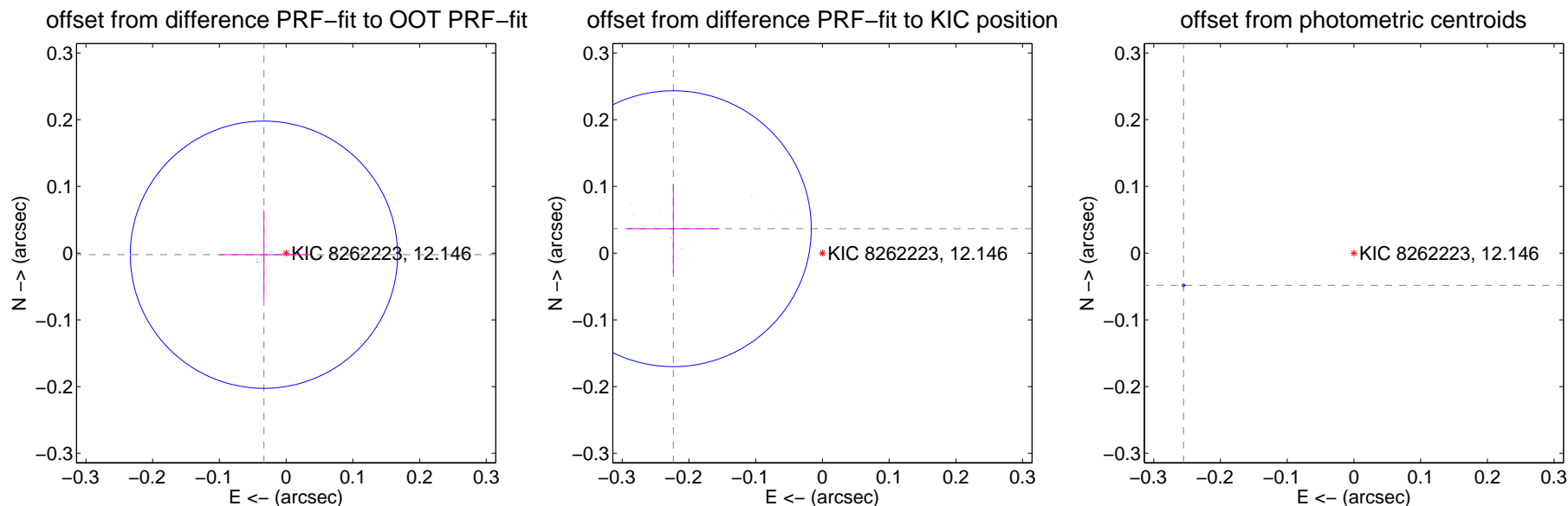
DV Centroid Data

Supplemental centroid analysis for 008262223-02. Kepler magnitude: 12.15. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

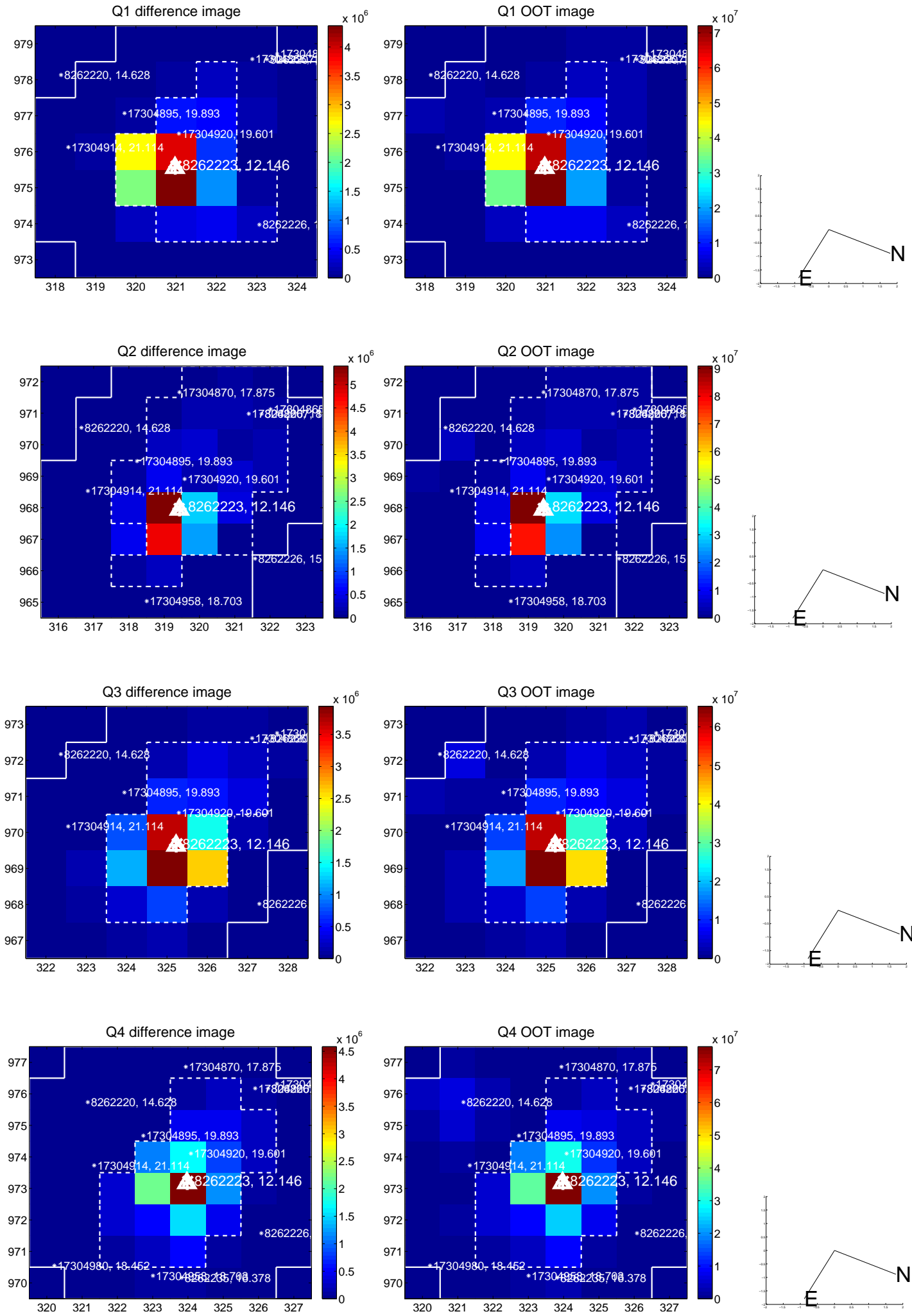
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.067	0.50	0.033 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.226 ± 0.069	3.28	0.223 ± 0.069	0.037 ± 0.067
photometric centroid source offset	0.26 ± 0.00	402.87	0.26 ± 0.00	-0.05 ± 0.00

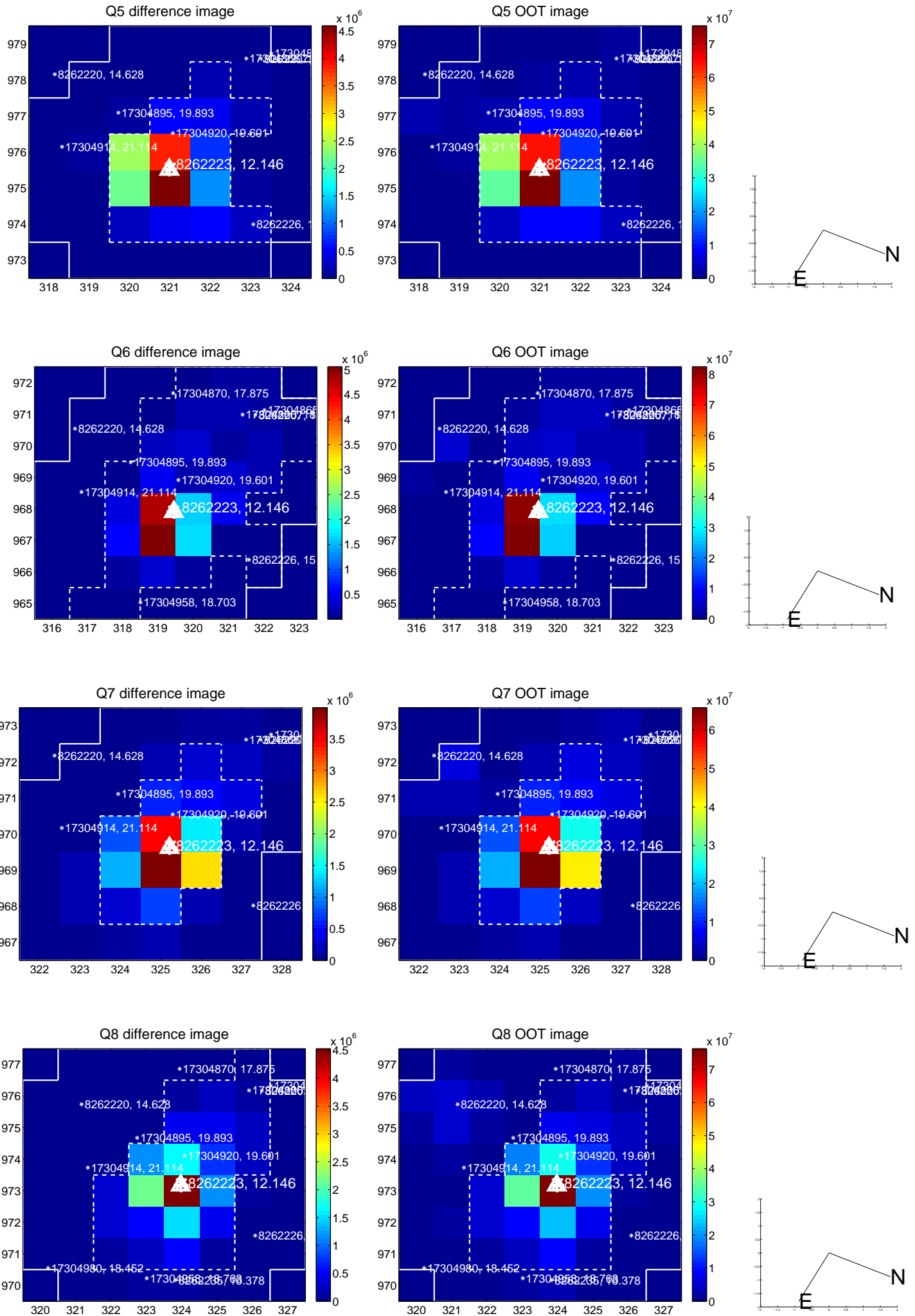


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

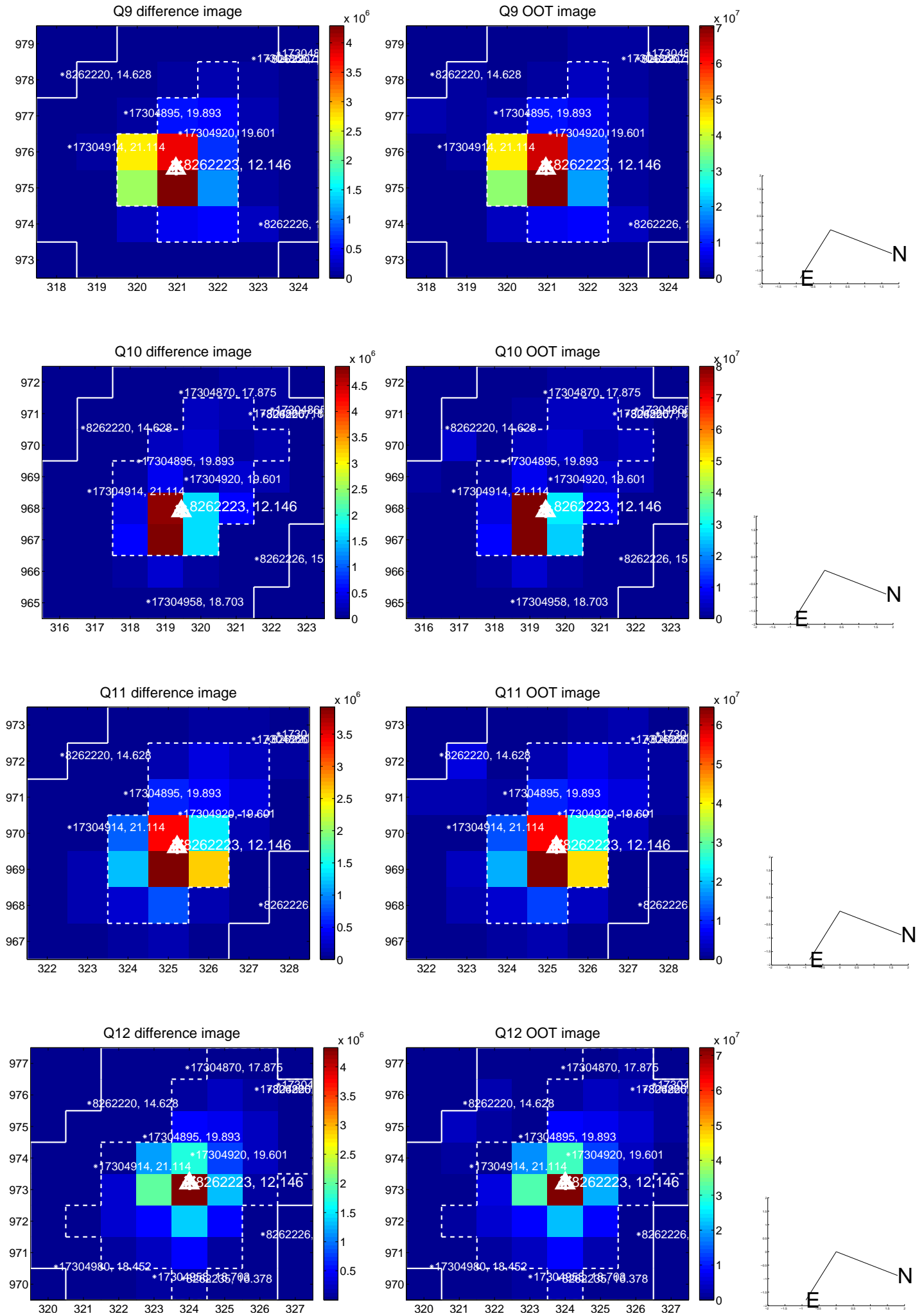
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



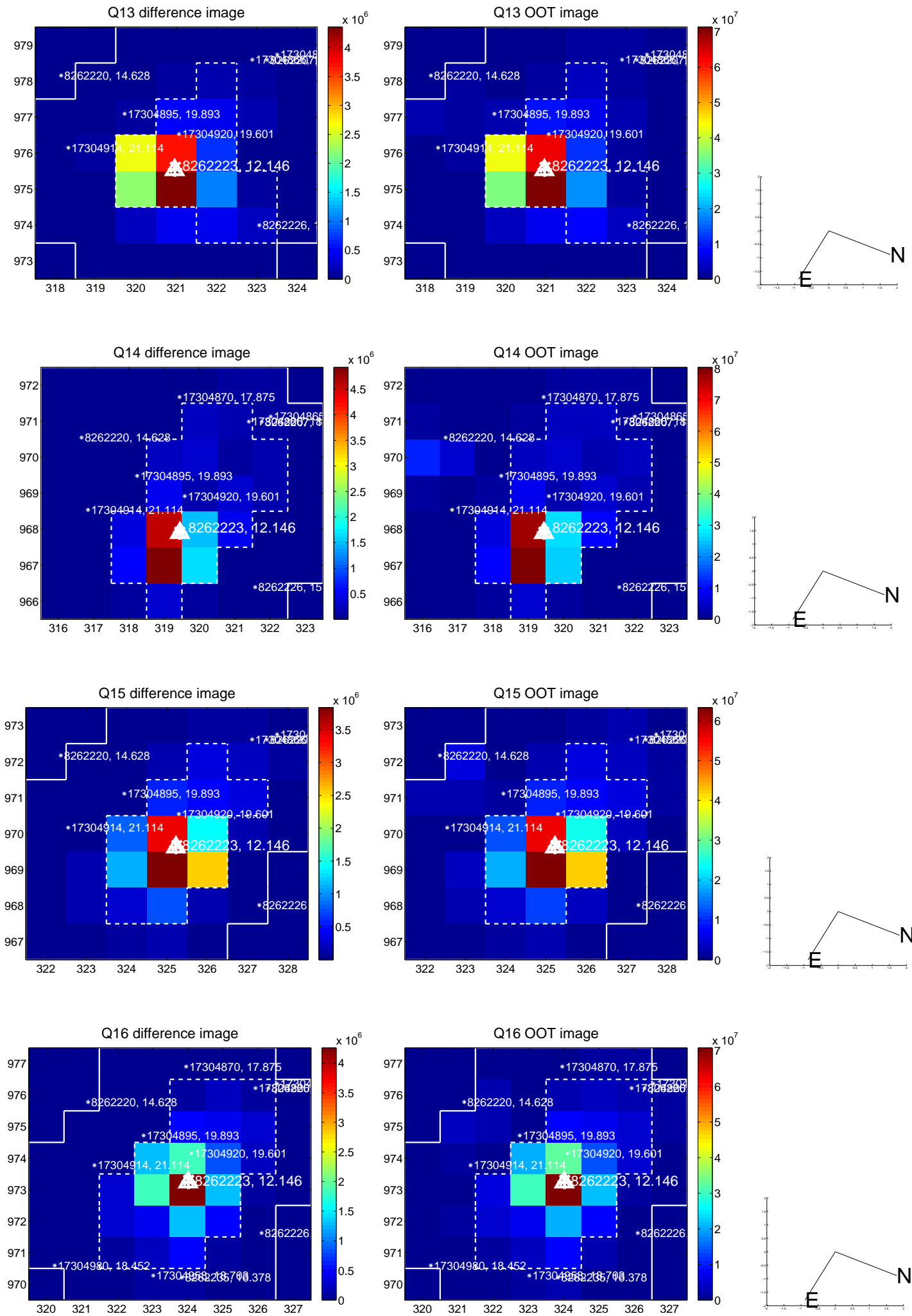
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



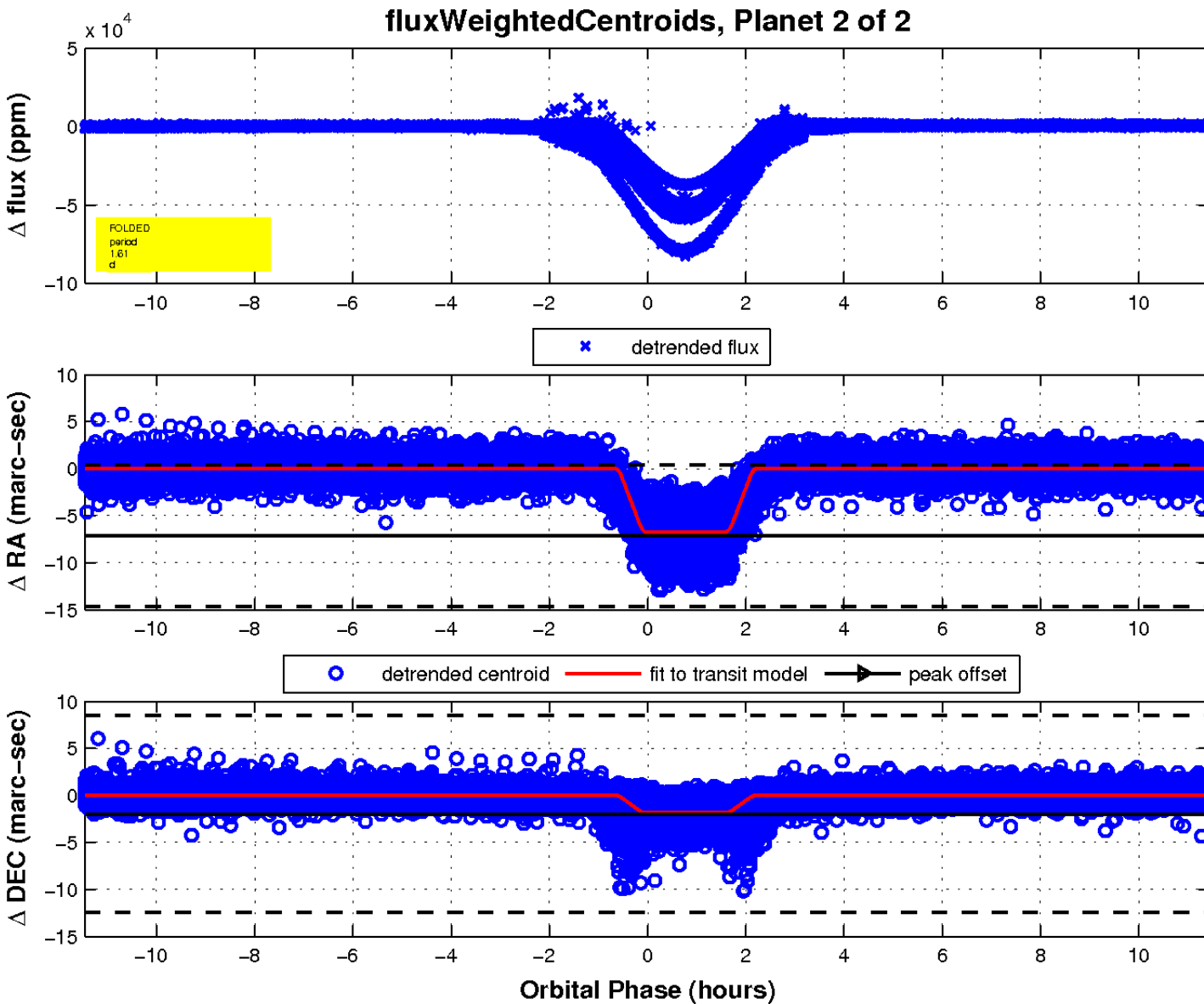
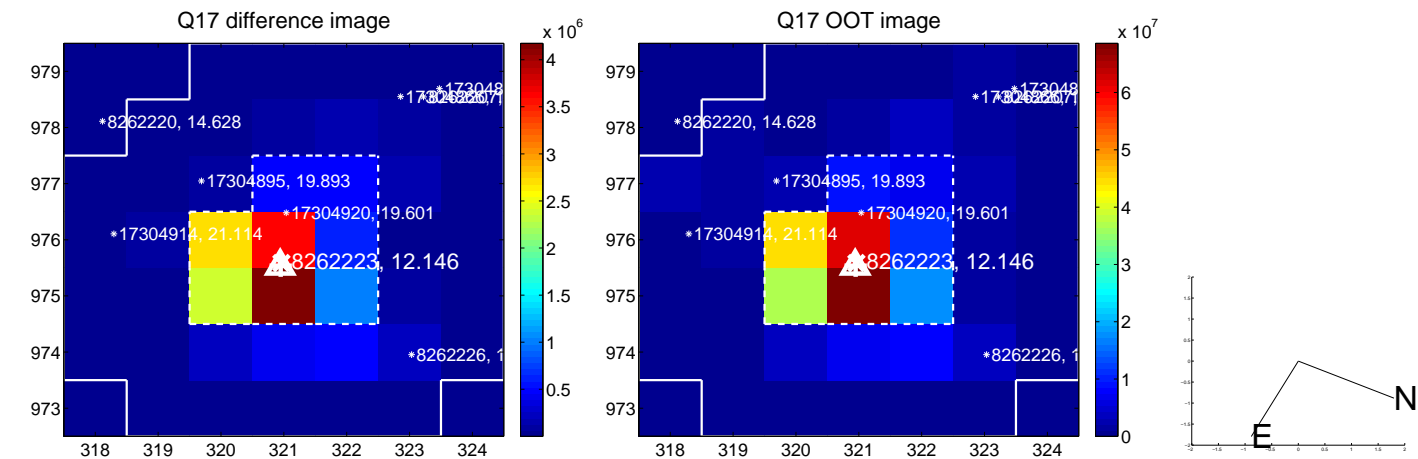
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

