

KIC 010480952

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})
010480952-01	OBS	5797.01	2.037465	131.544527	315835.6	3.000	23950.0	-1.0	2.06	6456	68.74	5754.10
010480952-02	OBS	No	2.038149	133.351619	32448.7	1.500	1093.7	-1.0	2.06	6456	37.47	5751.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010480952-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—CENT_NOFITS
010480952-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_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.

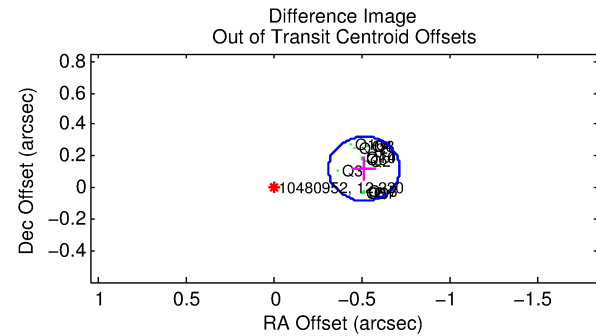
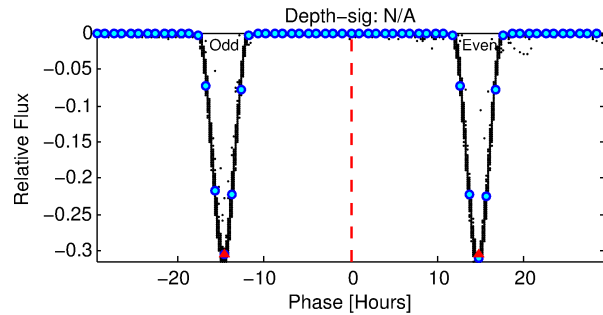
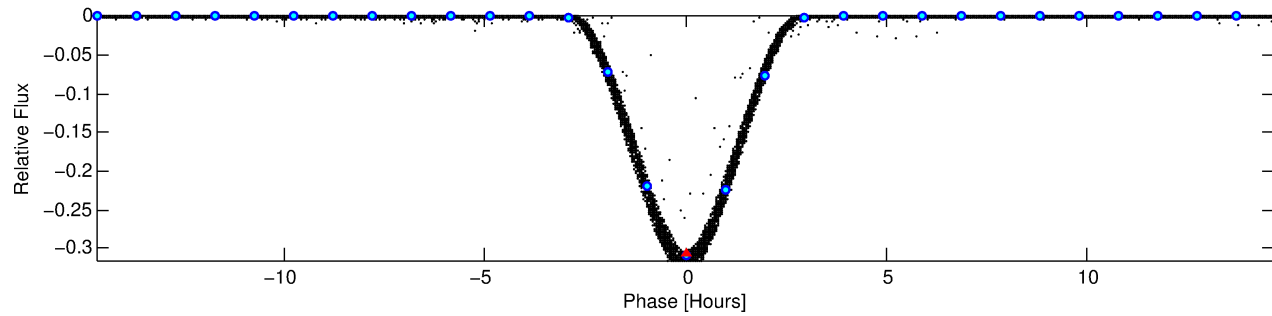
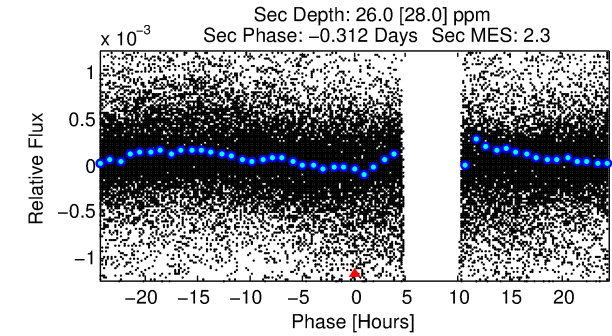
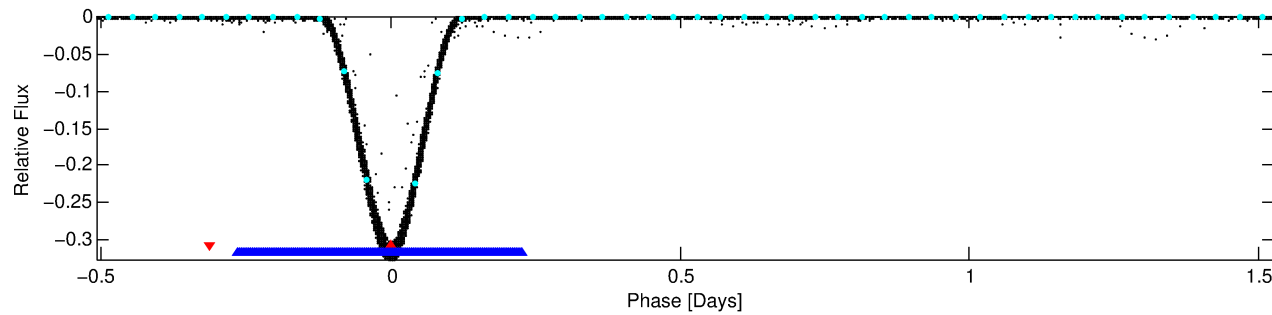
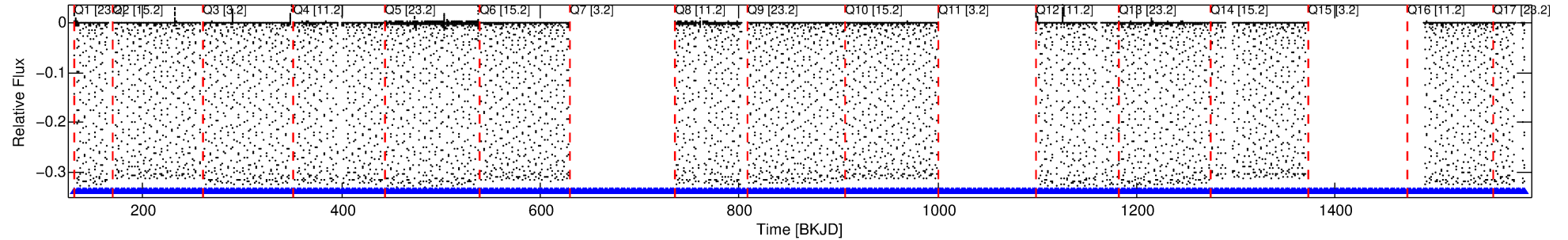
Ephemeris Match Information For 010480952-01

No Significant Match Found

DV One-Page Summary

KIC: 10480952 Candidate: 1 of 2 Period: 2.037 d
KOI: K05797 Corr: No Ephemeris Match

Kp: 12.22 R*: 2.06 Rs Teff: 6456.0 K Logg: 3.91 Fe/H: -0.280



TPS TCE Results:

Period = 2.03746 d
Epoch = 131.5445 BKJD

DV fit results are unavailable

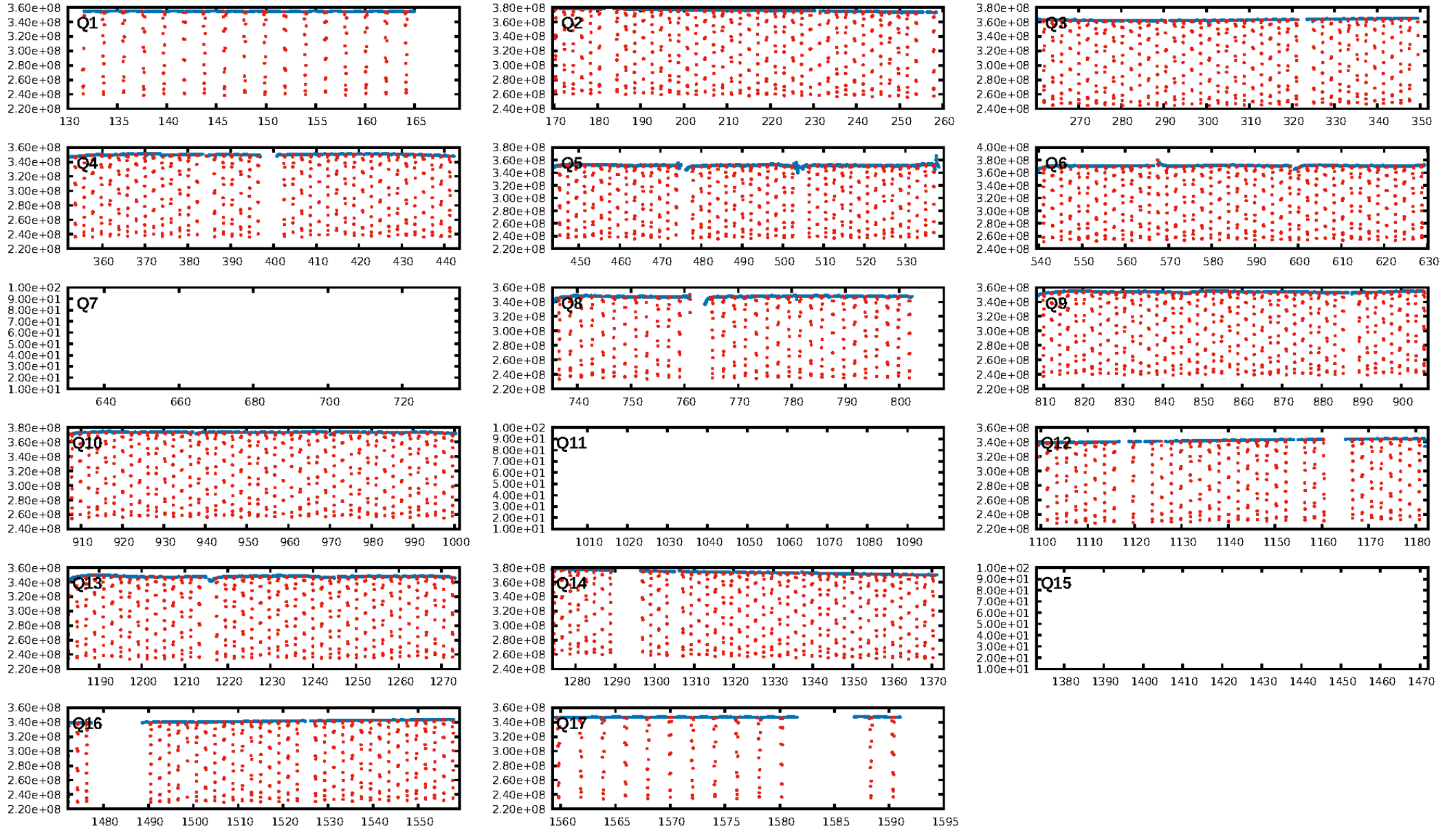
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.4% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [496/496]
GhostDiagnostic-chr: 1.834
Centroid-sig: N/A
Centroid-so: 0.102 arcsec [587.96σ]
OotOffset-rm: 0.525 arcsec [7.73σ]
KicOffset-rm: 0.046 arcsec [0.67σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

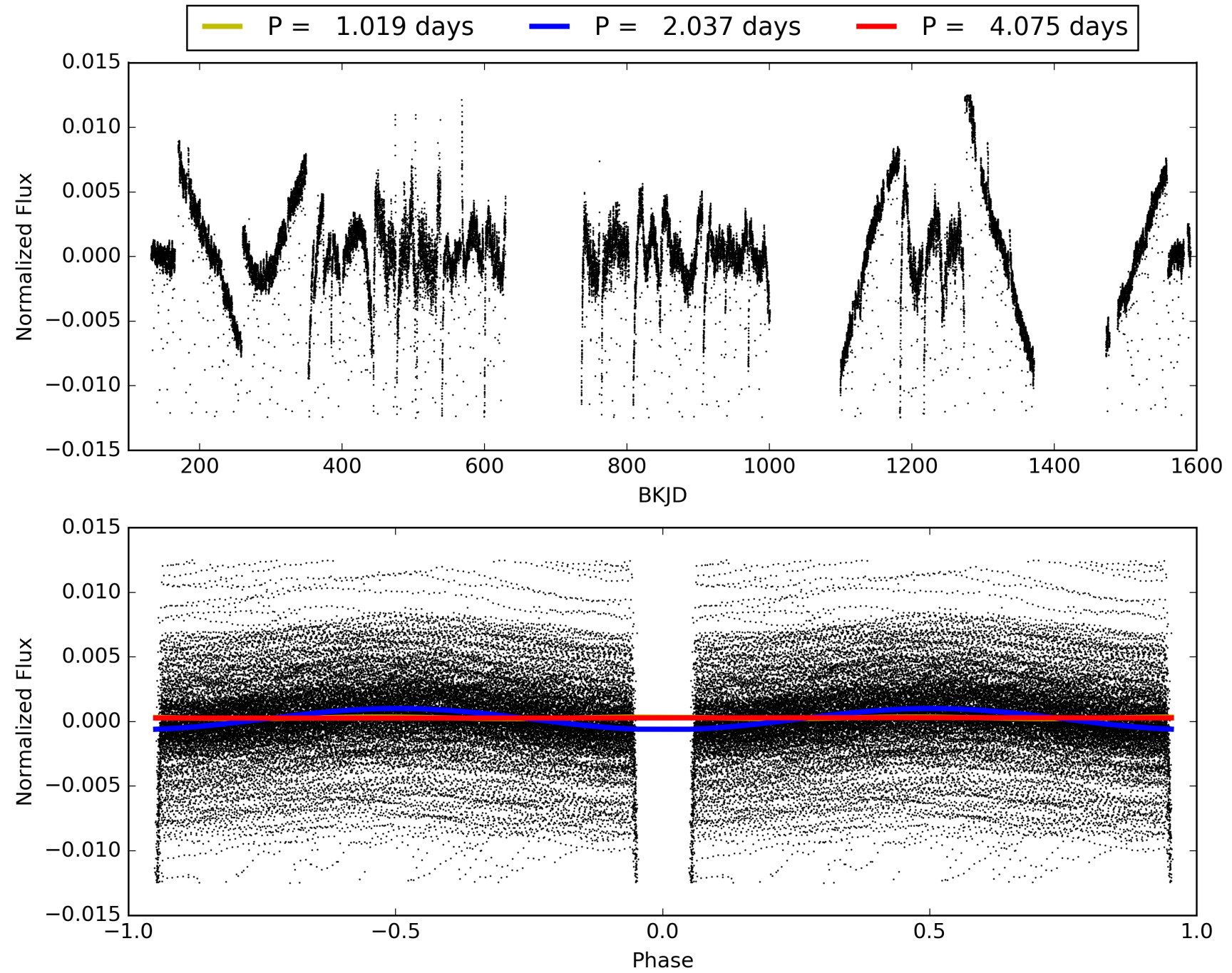
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:09:45 Z

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

TCE 010480952-01, PDC Light Curves

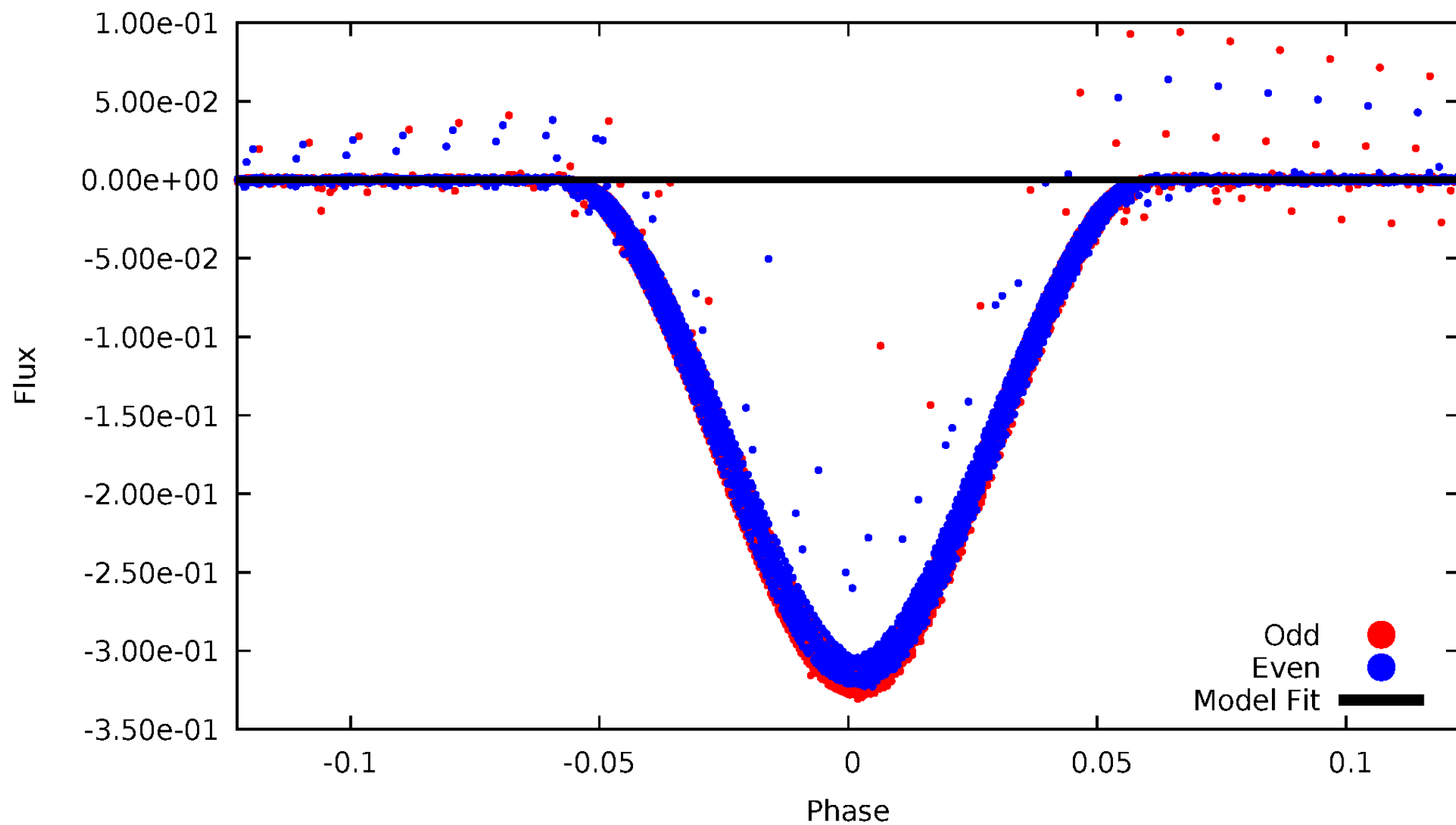


TCE 010480952-01



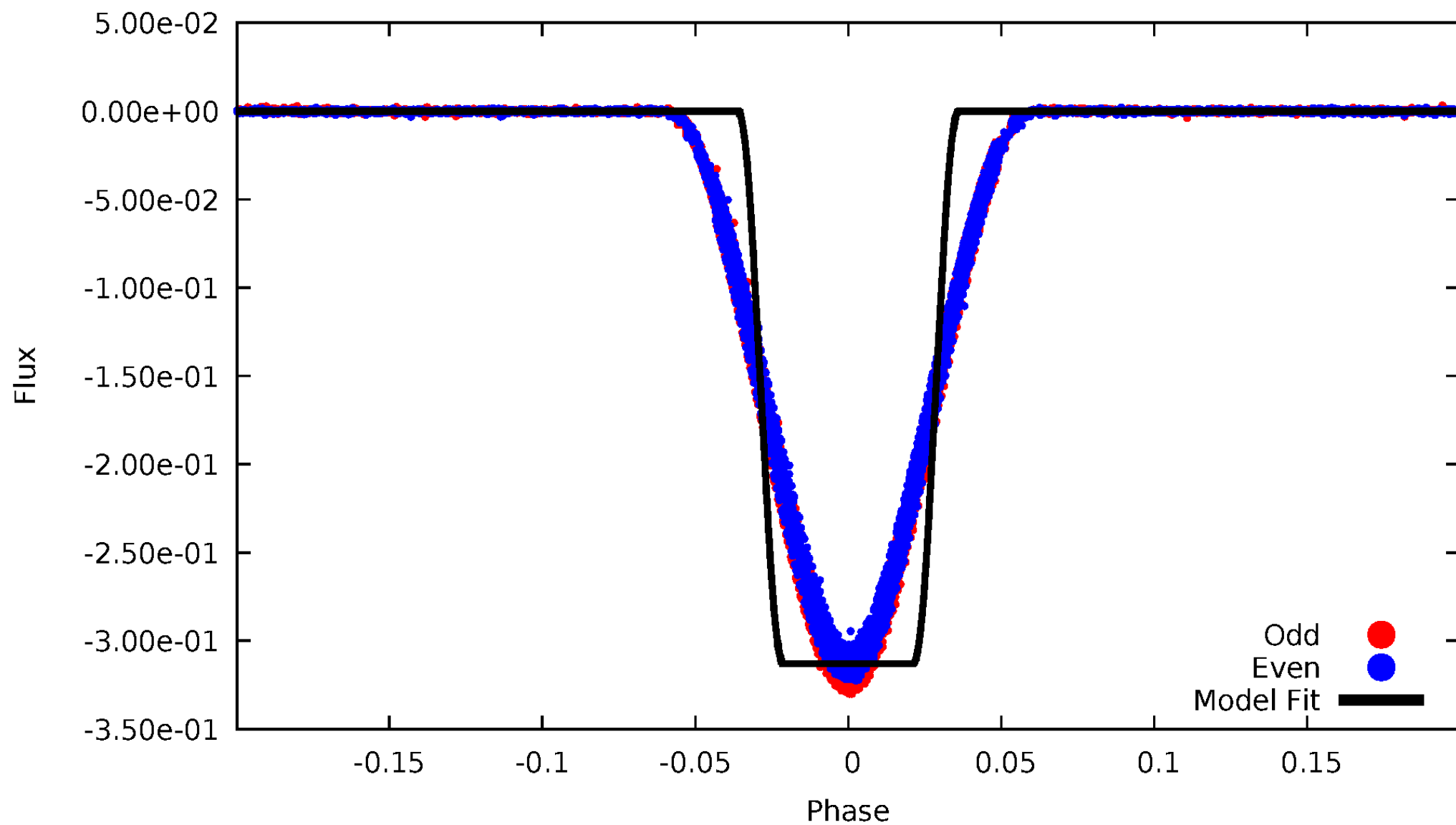
DV Odd/Even

TCE 010480952-01



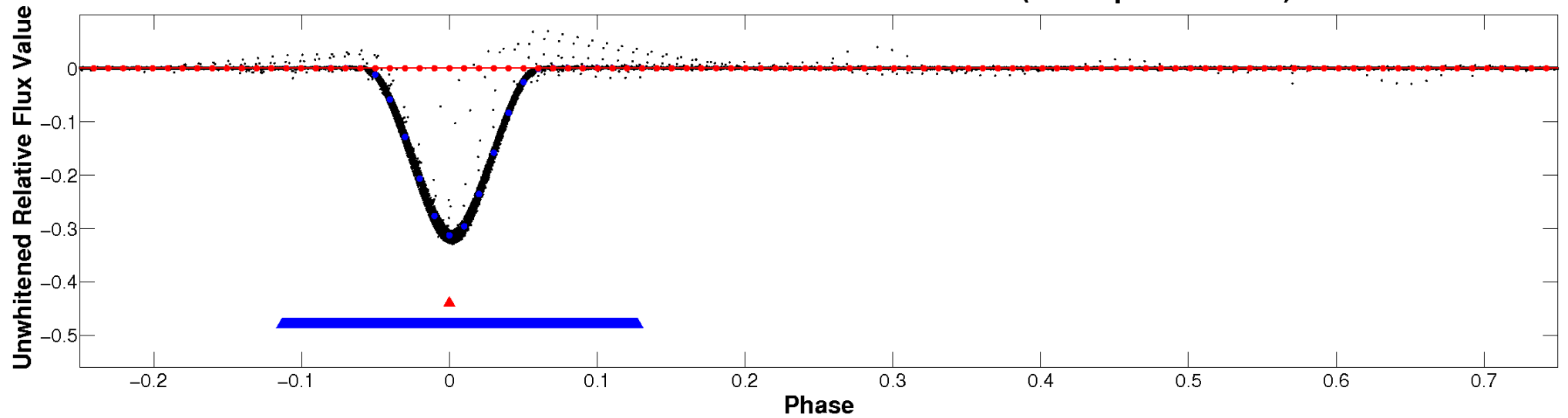
ALT Odd/Even

TCE 010480952-01



Non-Whitened Vs. Whitened Light Curve

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

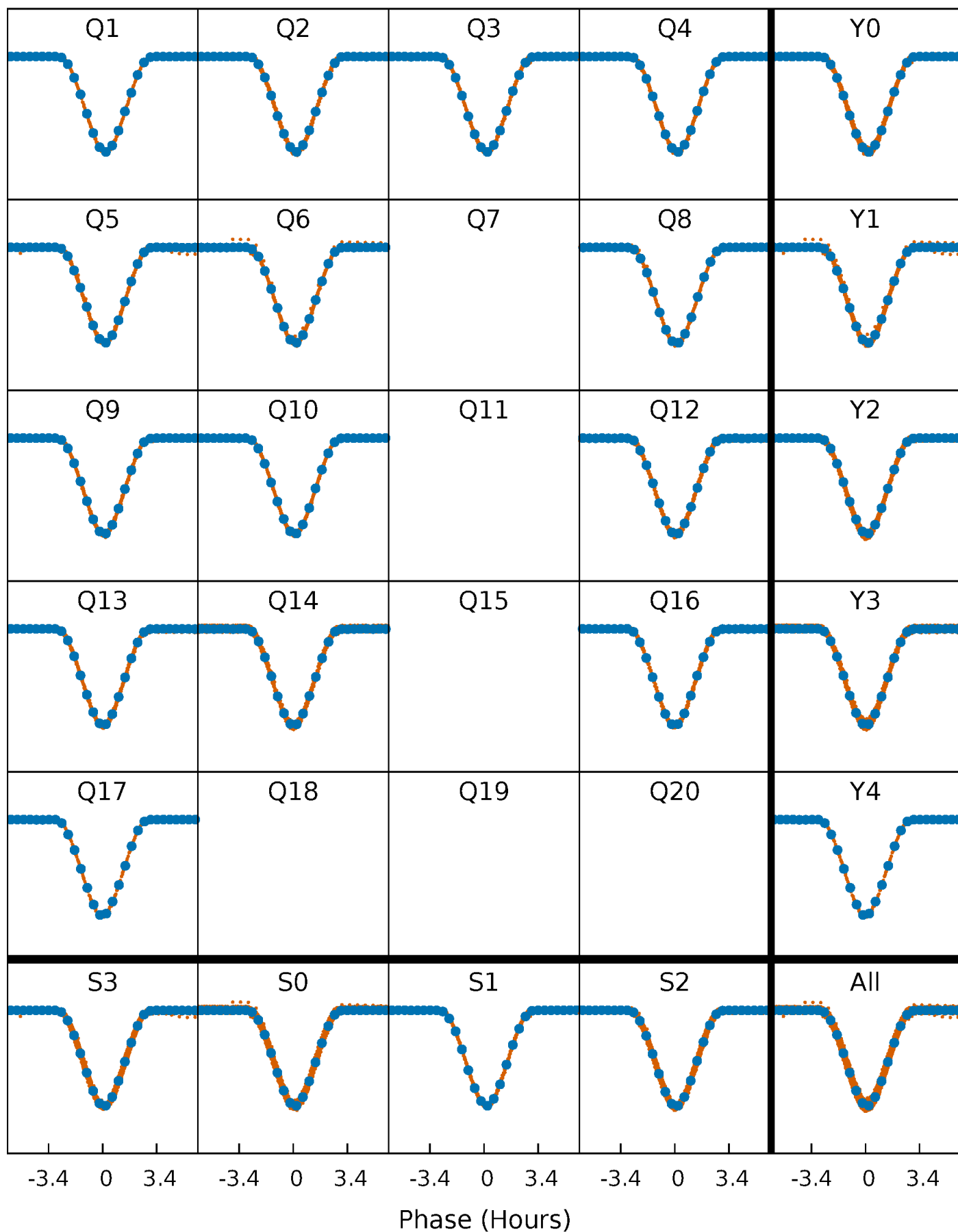


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



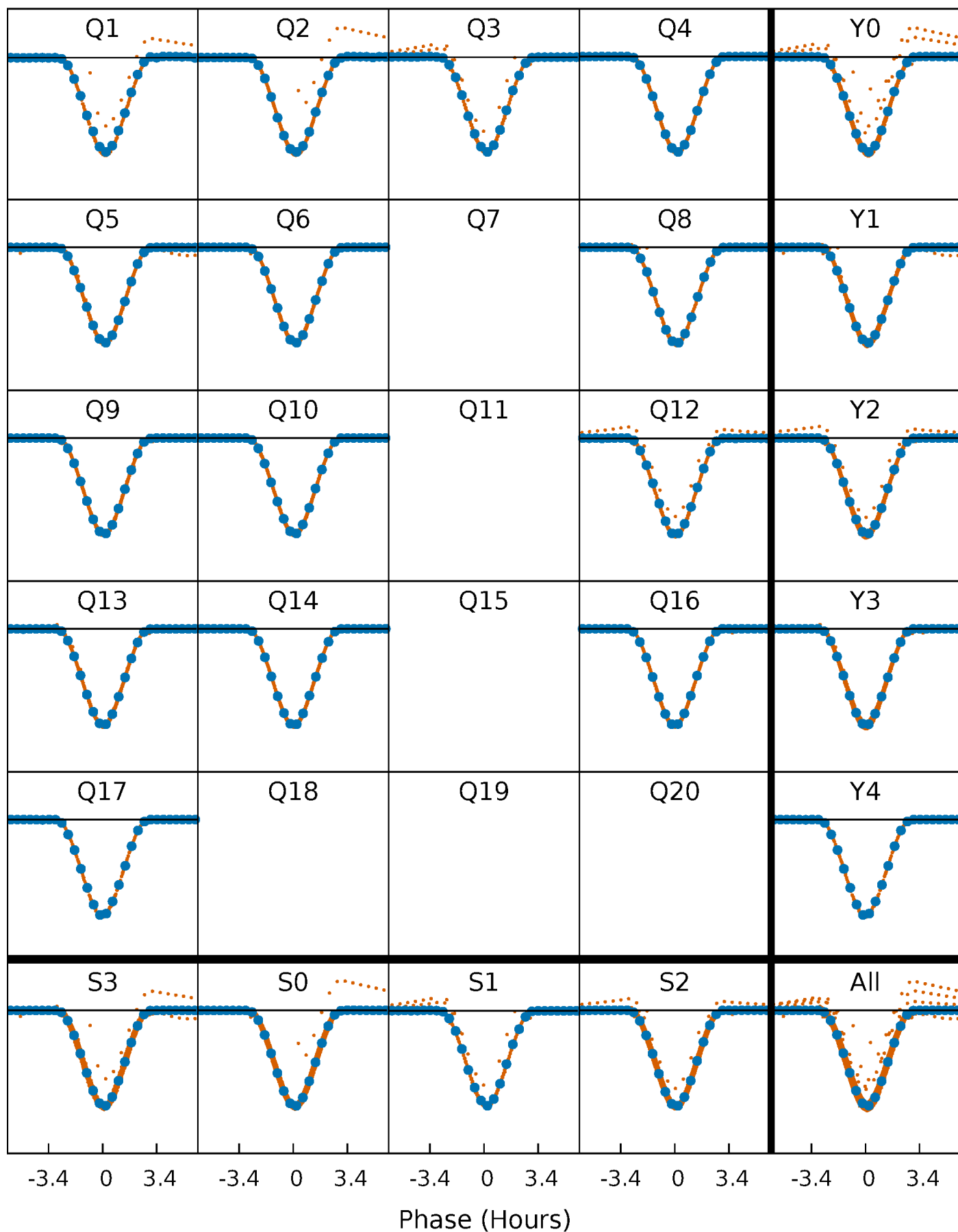
PDC Quarter-Phased Transit Curves

TCE 010480952-01 P= 2.037465 Days $T_0=131.544527$ (BKJD)



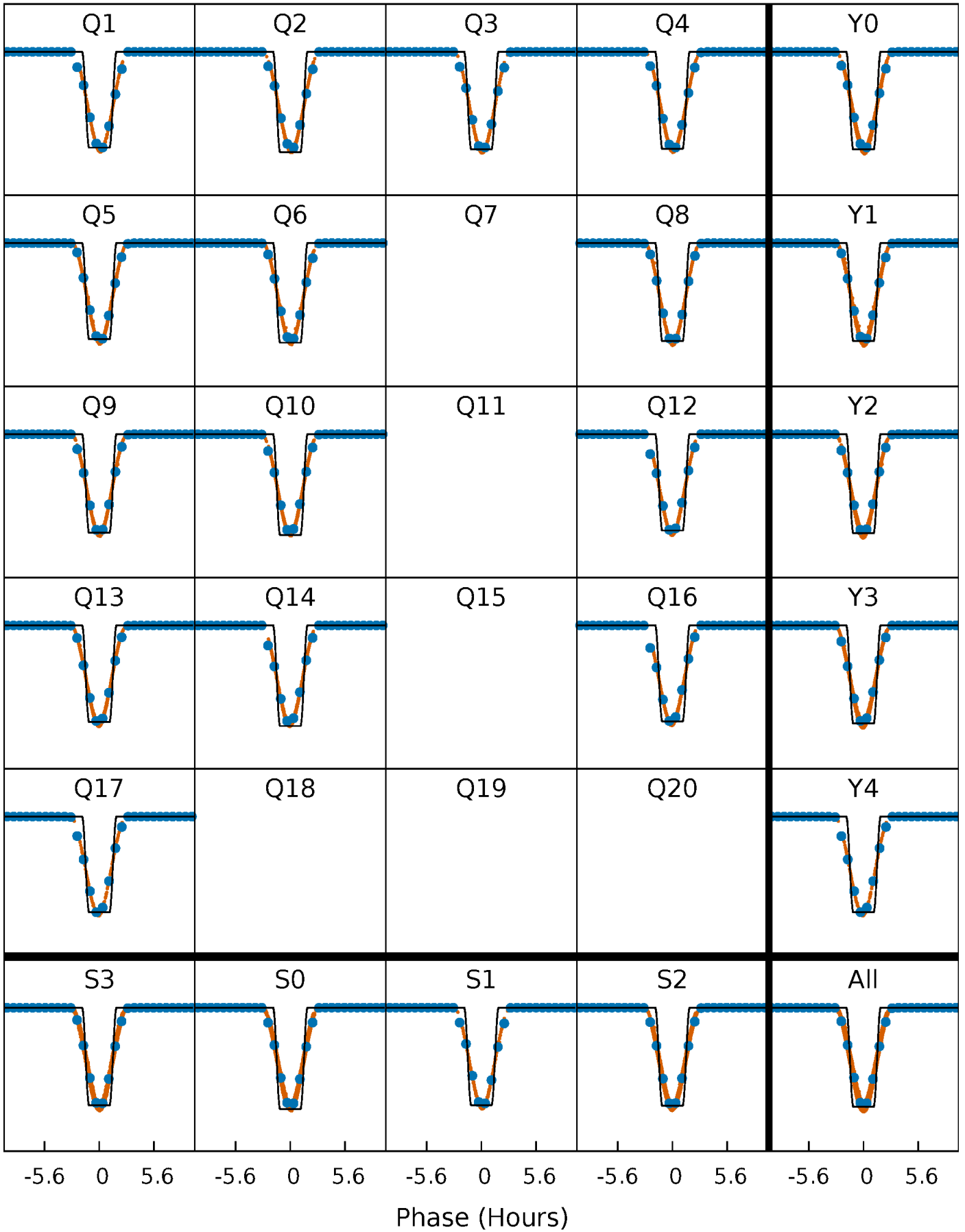
DV Quarter-Phased Transit Curves

TCE 010480952-01 P= 2.037465 Days $T_0=131.544527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

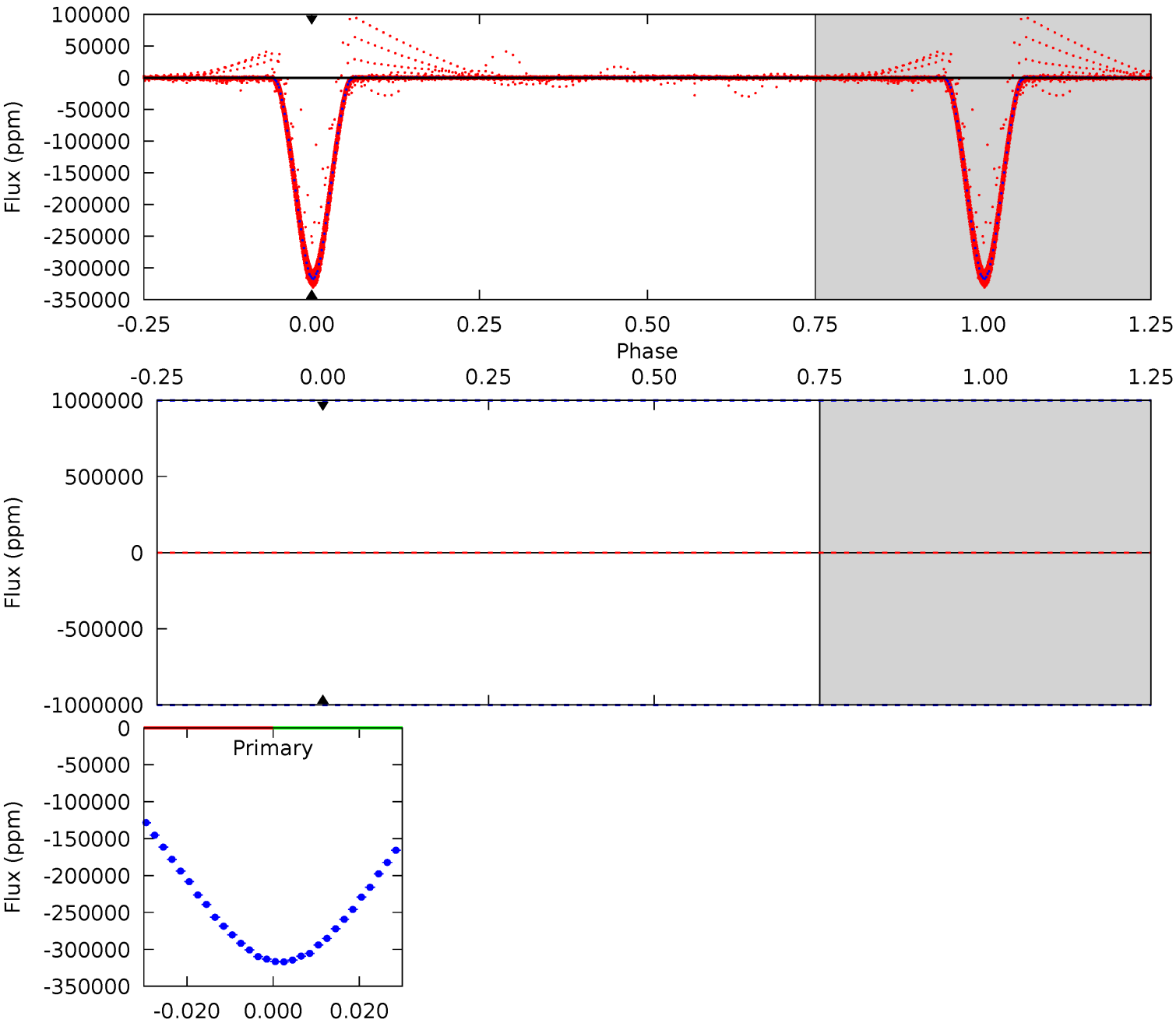
TCE 010480952-01 P= 2.037465 Days $T_0=131.547845$ (BKJD)



DV Model-Shift Uniqueness Test

010480952-01, P = 2.037465 Days, E = 129.507062 Days

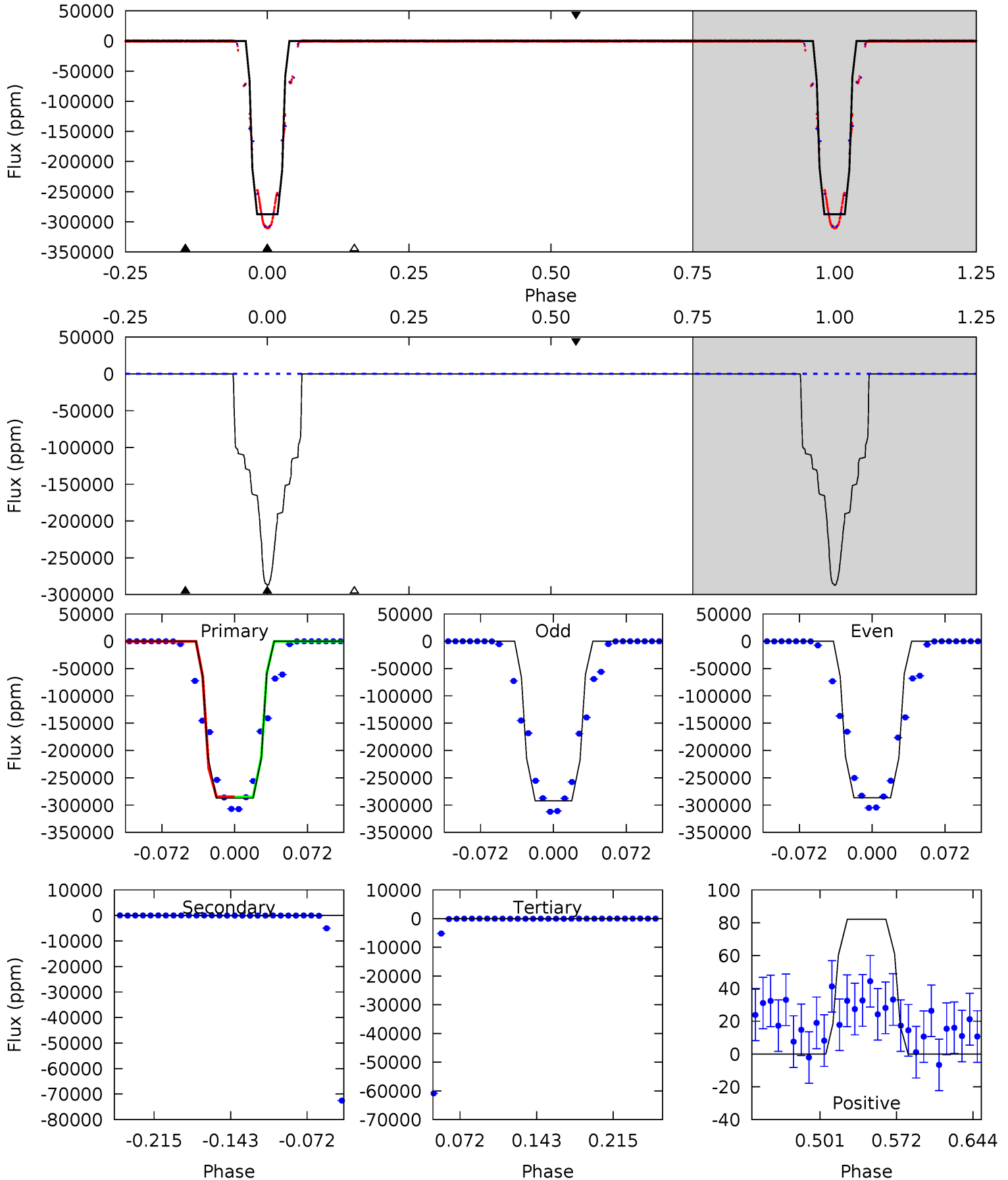
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010480952-01, P = 2.037465 Days, E = 129.510380 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14140	4.25	3.99	4.04	4.63	1.80	1.37	14136	14136	0.25	0.21	145.5	1.00	0.00	0



Stellar Parameters For KIC 010480952

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6456^{+181}_{-227}	$3.906^{+0.432}_{-0.135}$	$-0.280^{+0.250}_{-0.300}$	$2.056^{+0.486}_{-0.903}$	$1.244^{+0.193}_{-0.236}$	$0.202^{+0.754}_{-0.084}$
	+3%/-4%	+11%/-3%	+89%/-107%	+24%/-44%	+16%/-19%	+374%/-42%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010480952-01 / KOI 5797.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$63.39^{+27.06}_{-24.64}$	3036^{+242}_{-359}	-3230^{+10177}_{-3314}	$-0.091^{+20.470}_{-16.870}$
Alt.	-86 ± 20	$117.08^{+32.67}_{-31.85}$	3020^{+257}_{-373}	-3099^{+226}_{-150}	$0.004^{+0.003}_{-0.002}$

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

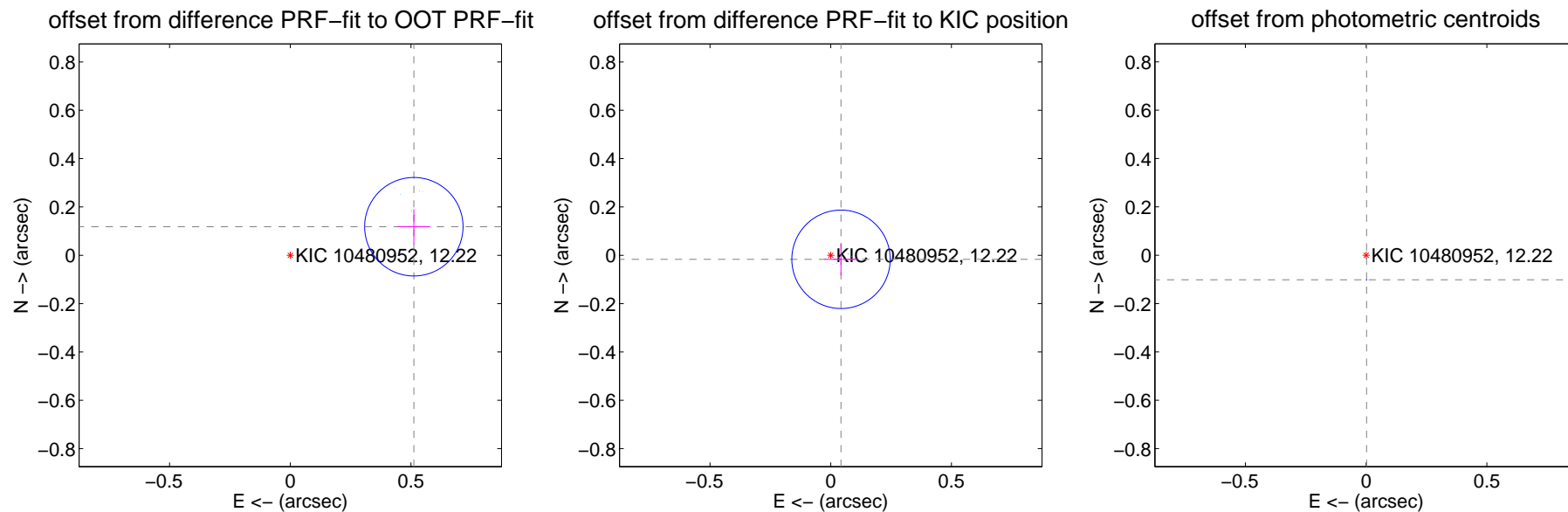
DV Centroid Data

Supplemental centroid analysis for 010480952-01. Kepler magnitude: 12.22. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

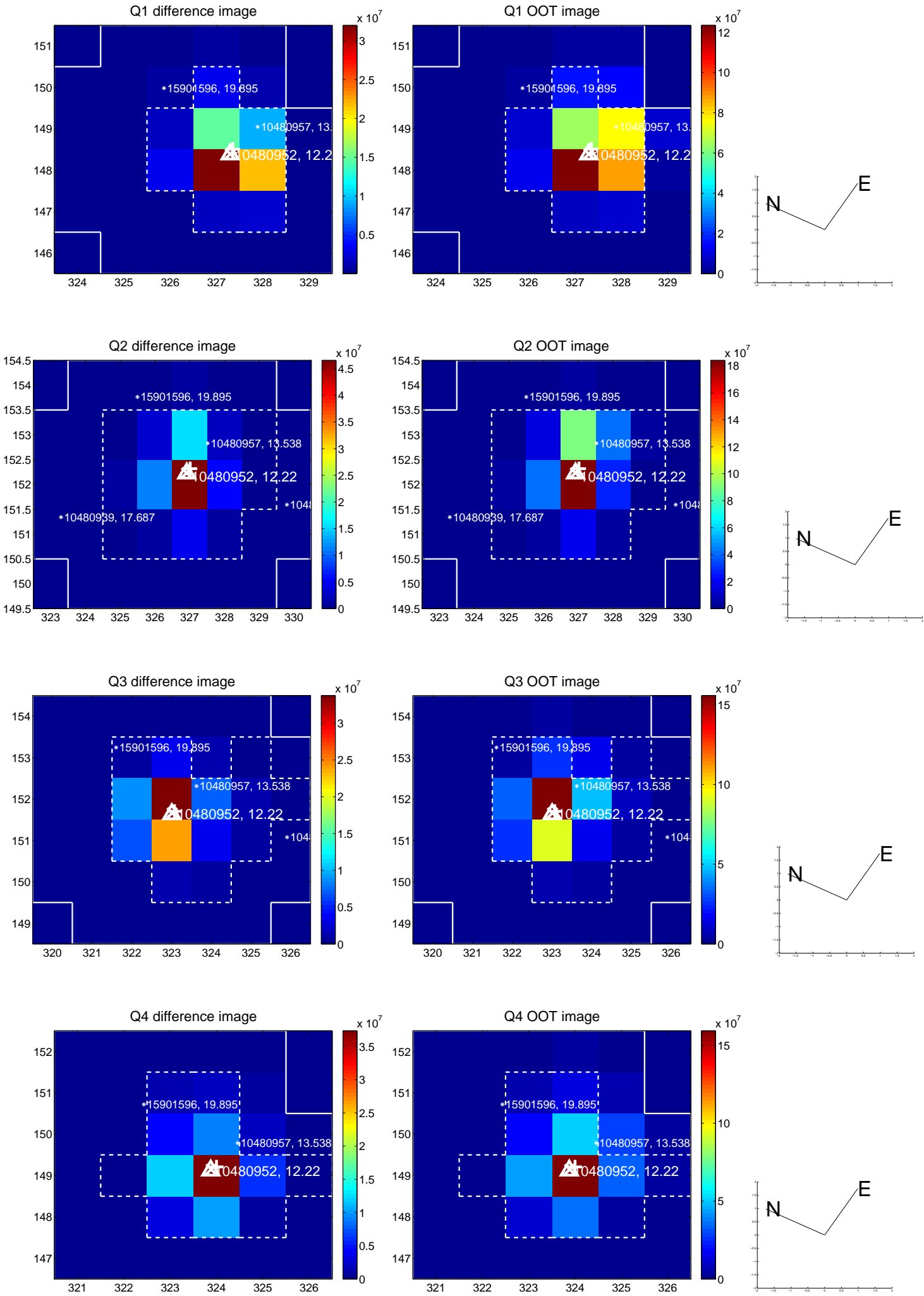
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.525 \pm 0.068	7.73	-0.512 \pm 0.068	0.118 \pm 0.073
PRF-fit source offset from KIC position	0.046 \pm 0.068	0.67	-0.043 \pm 0.068	-0.017 \pm 0.067
photometric centroid source offset	0.10 \pm 0.00	587.96	-0.00 \pm 0.00	-0.10 \pm 0.00

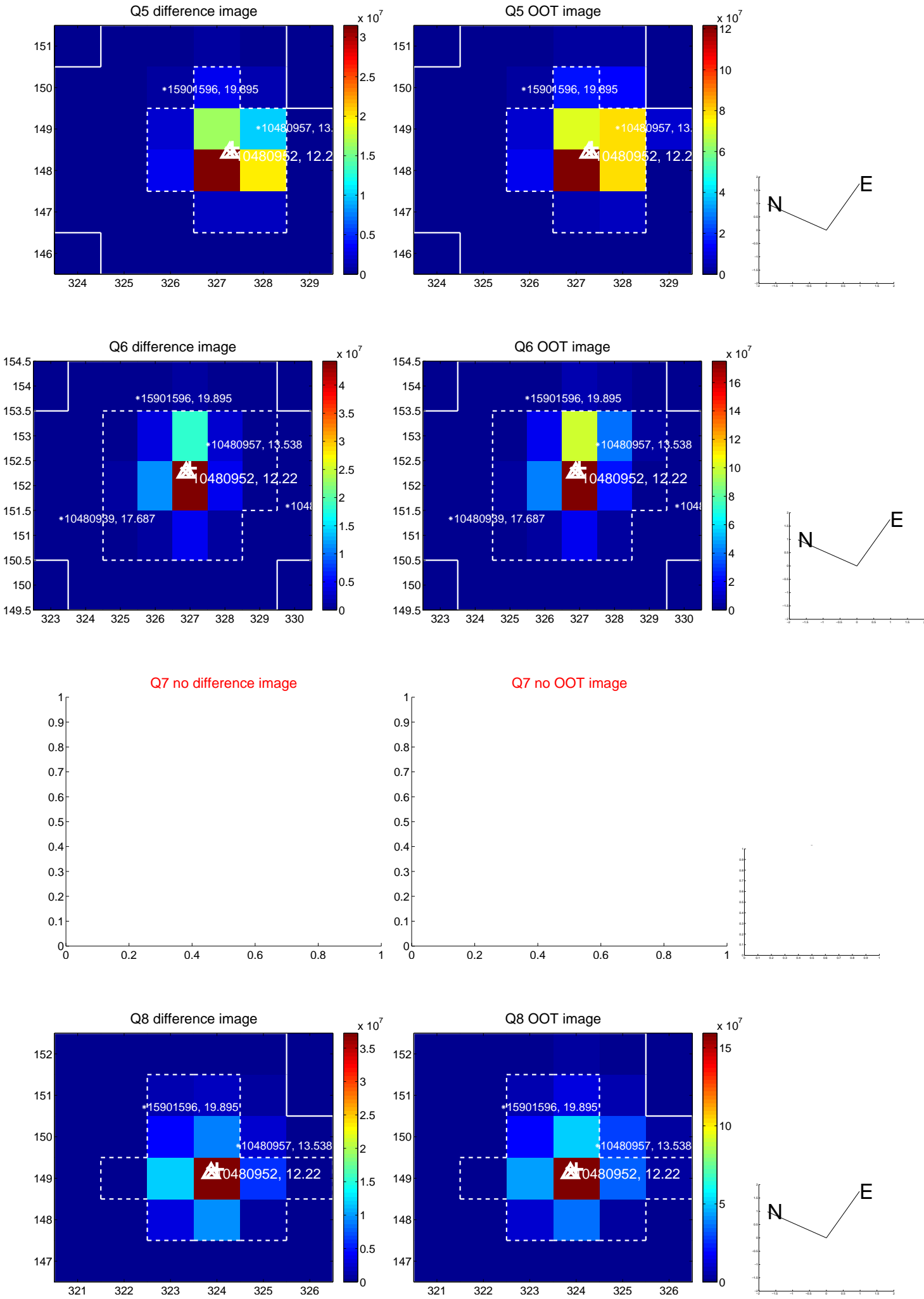


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

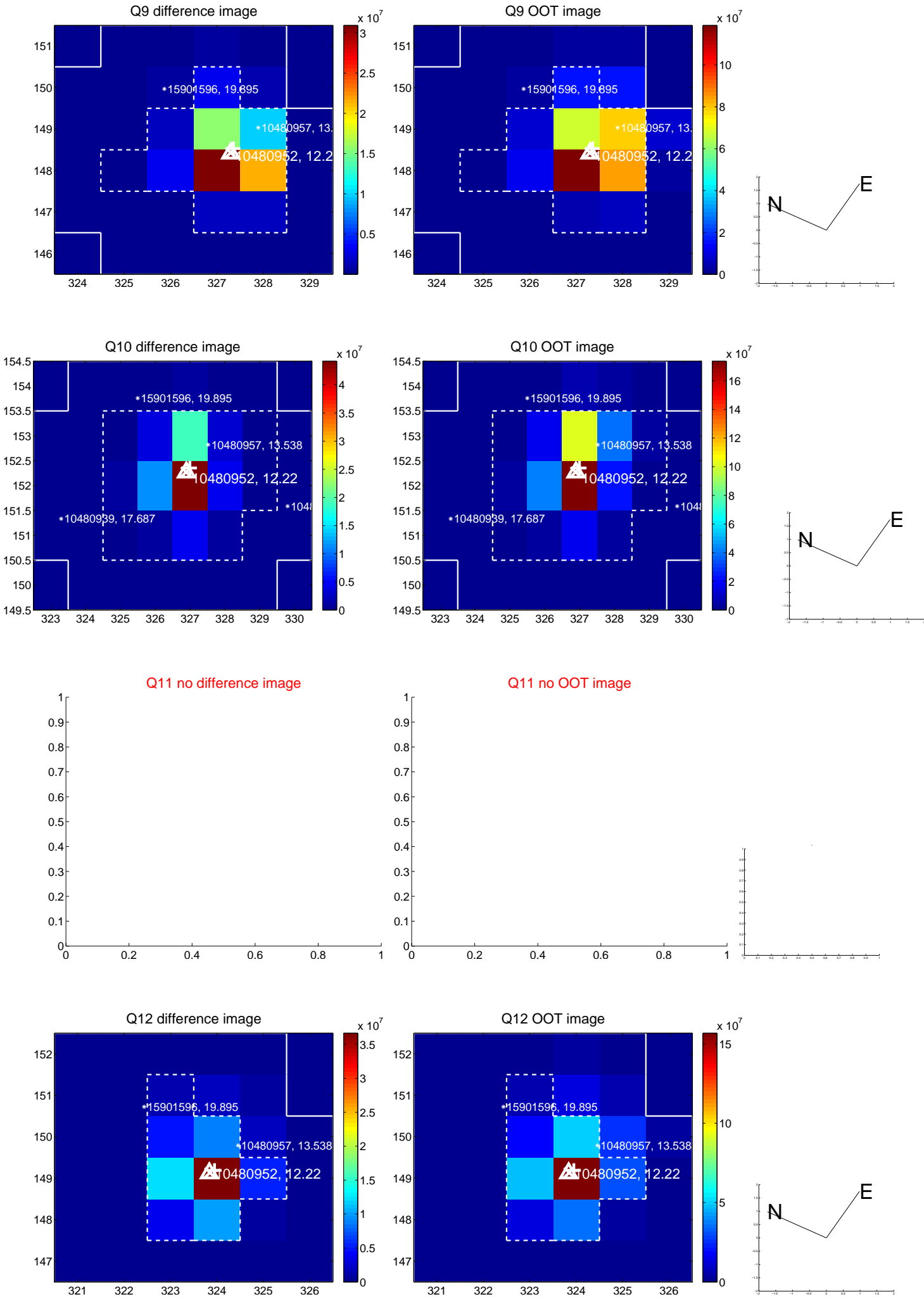
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



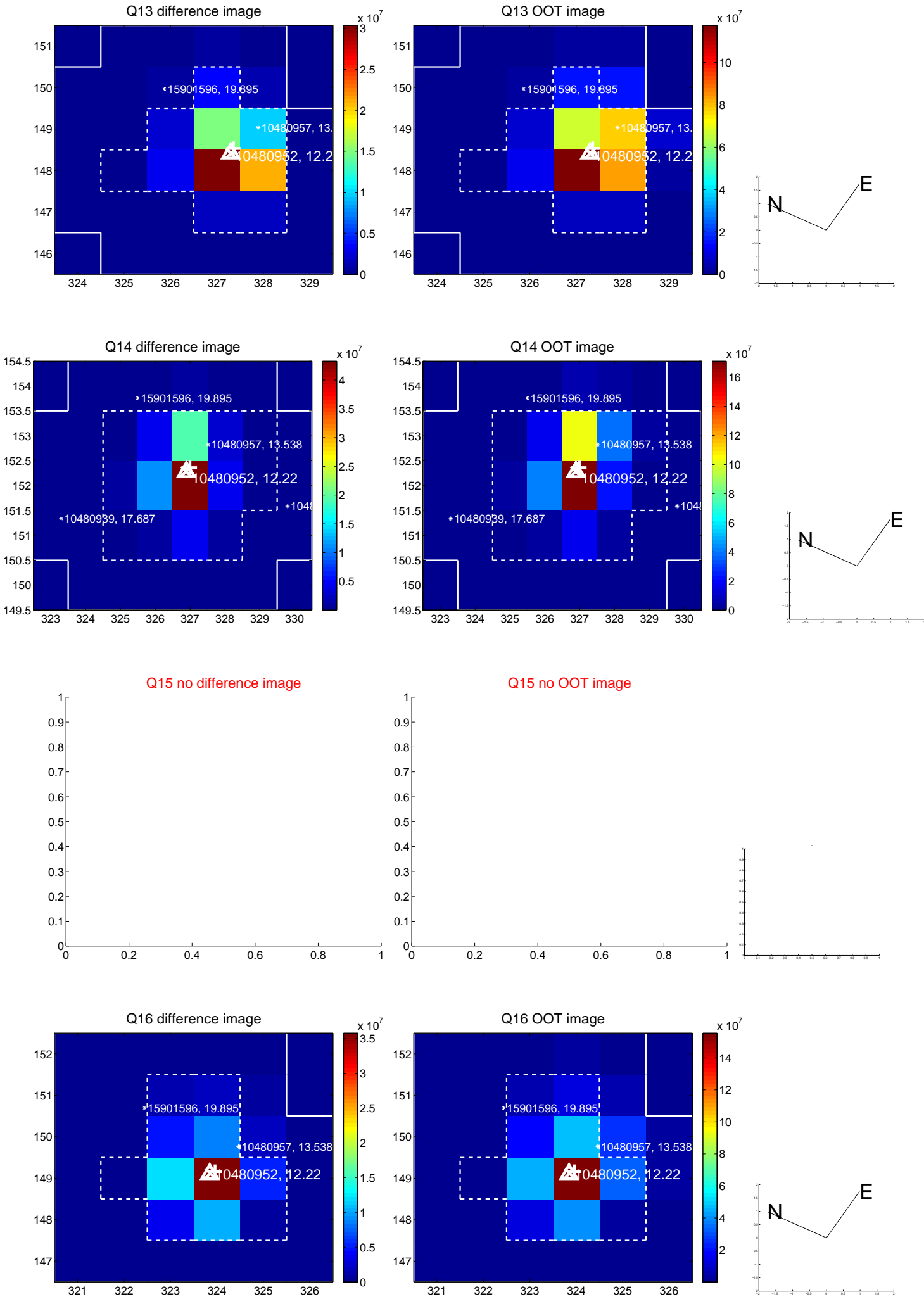
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



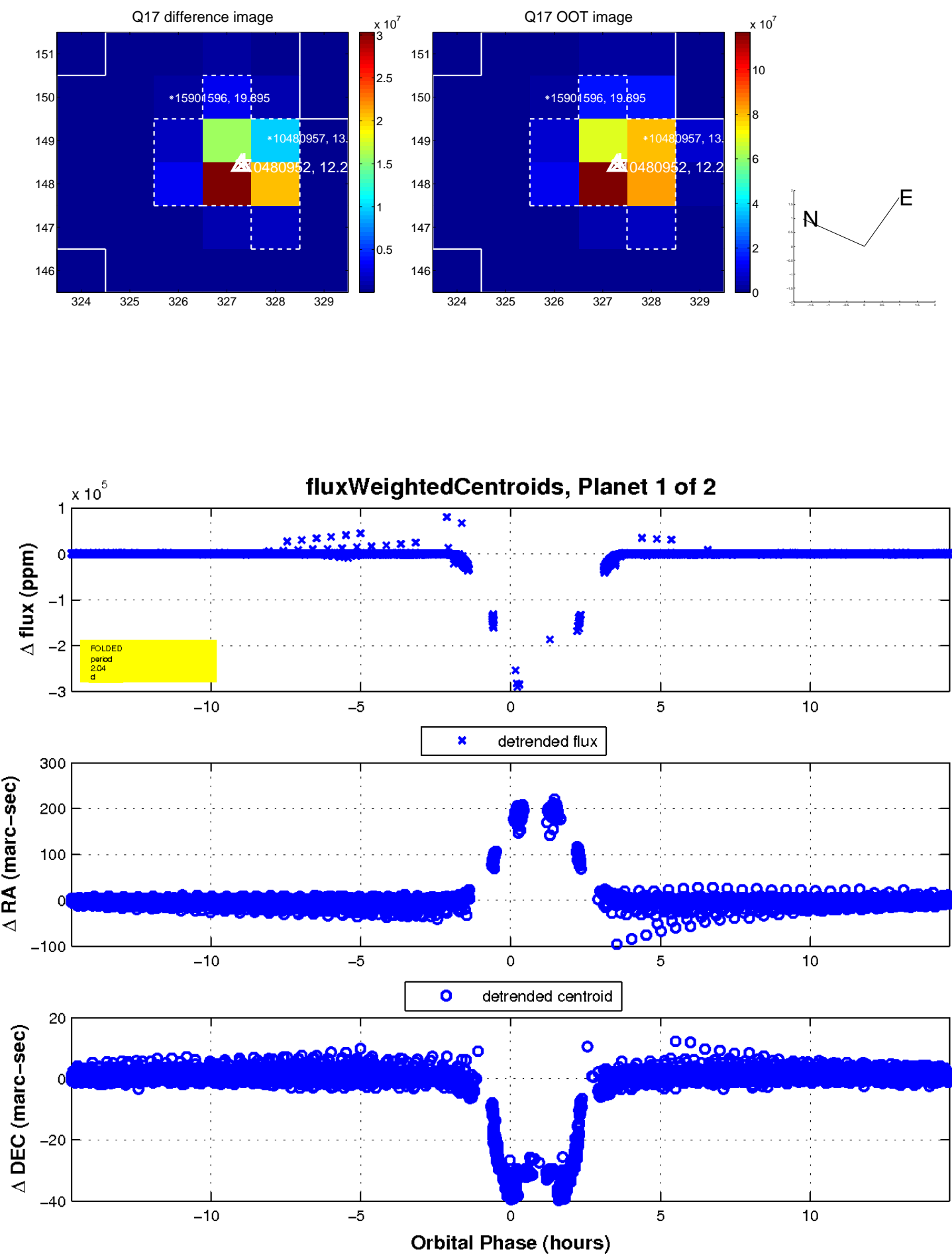
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

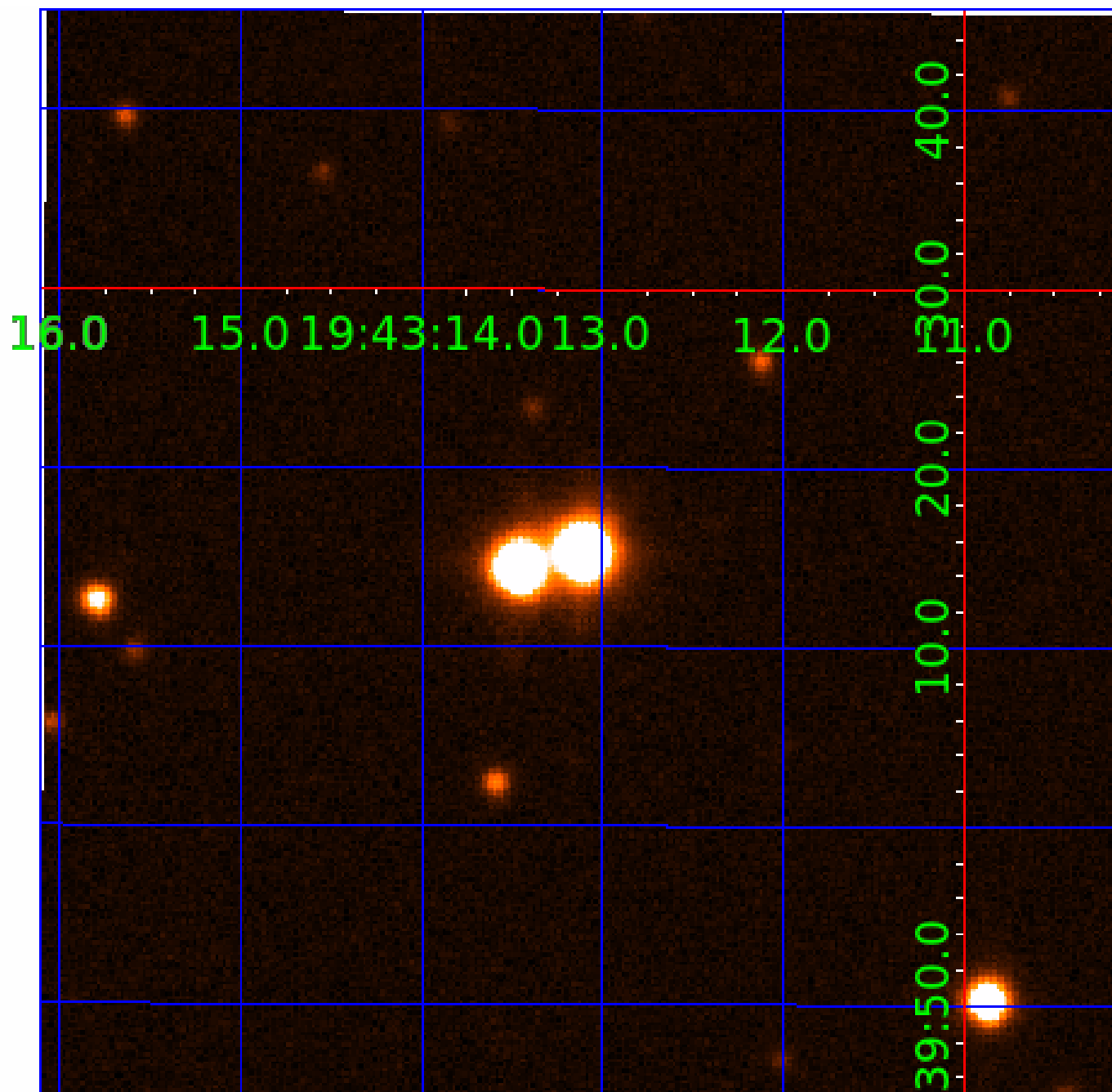


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010480952

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})
010480952-01	OBS	5797.01	2.037465	131.544527	315835.6	3.000	23950.0	-1.0	2.06	6456	68.74	5754.10
010480952-02	OBS	No	2.038149	133.351619	32448.7	1.500	1093.7	-1.0	2.06	6456	37.47	5751.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010480952-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—CENT_NOFITS
010480952-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_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 010480952-02

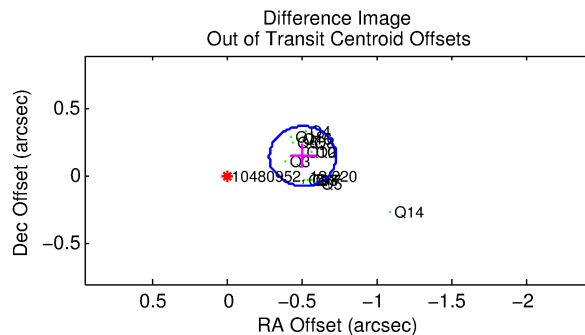
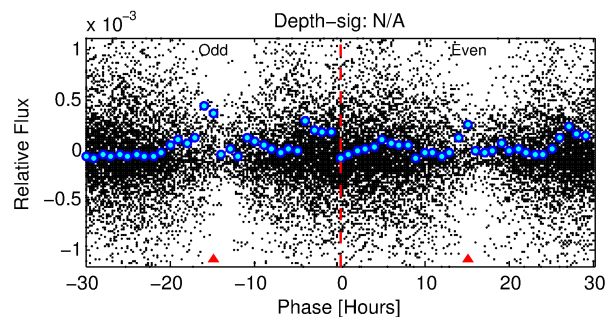
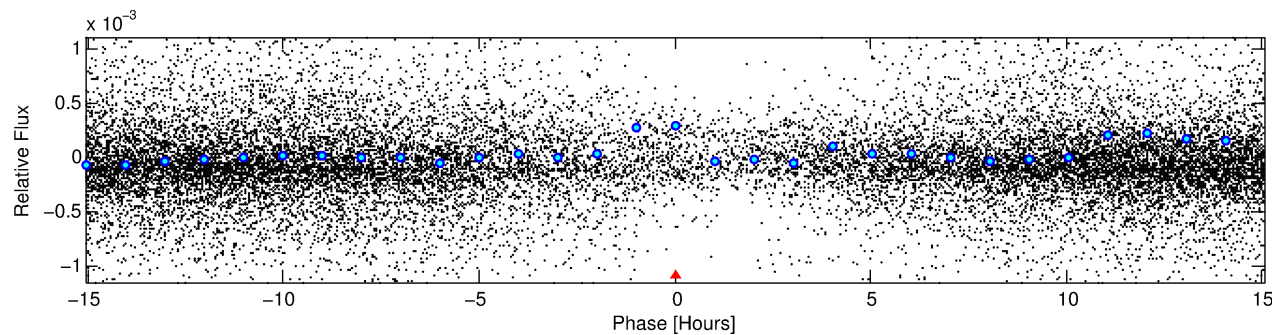
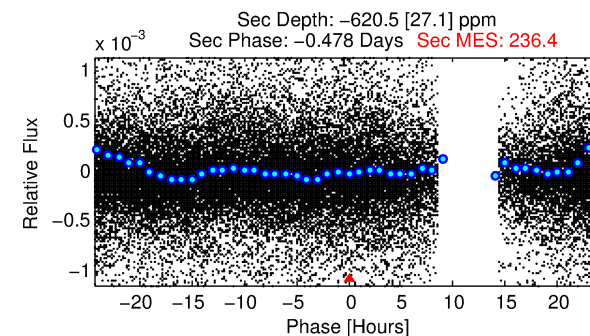
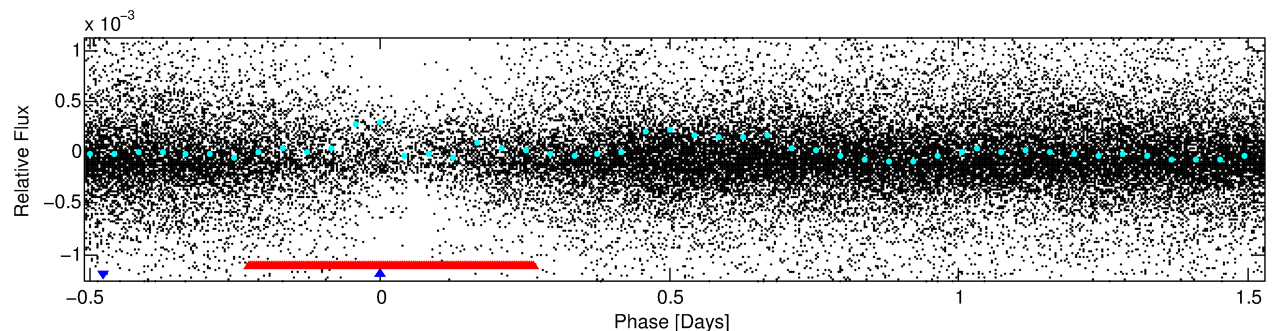
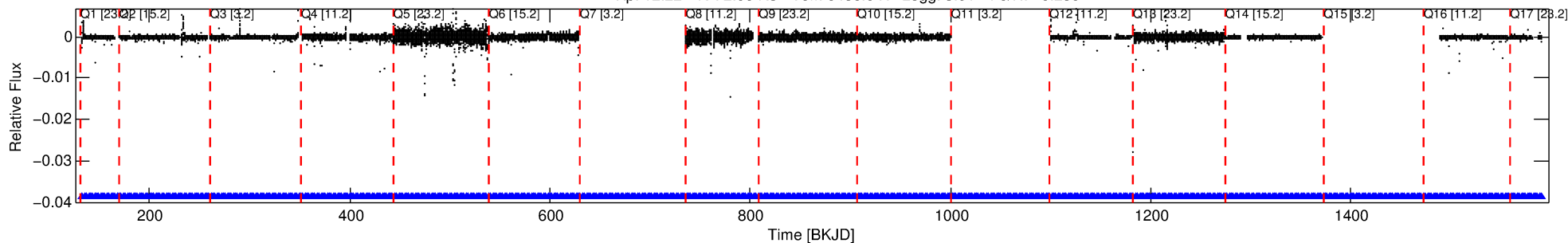
No Significant Match Found

DV One-Page Summary

KIC: 10480952 Candidate: 2 of 2 Period: 2.038 d

KOI: K05797 Corr: No Ephemeris Match

Kp: 12.22 R*: 2.06 Rs Teff: 6456.0 K Logg: 3.91 Fe/H: -0.280



TPS TCE Results:

Period = 2.03815 d
Epoch = 133.3516 BKJD

DV fit results are unavailable

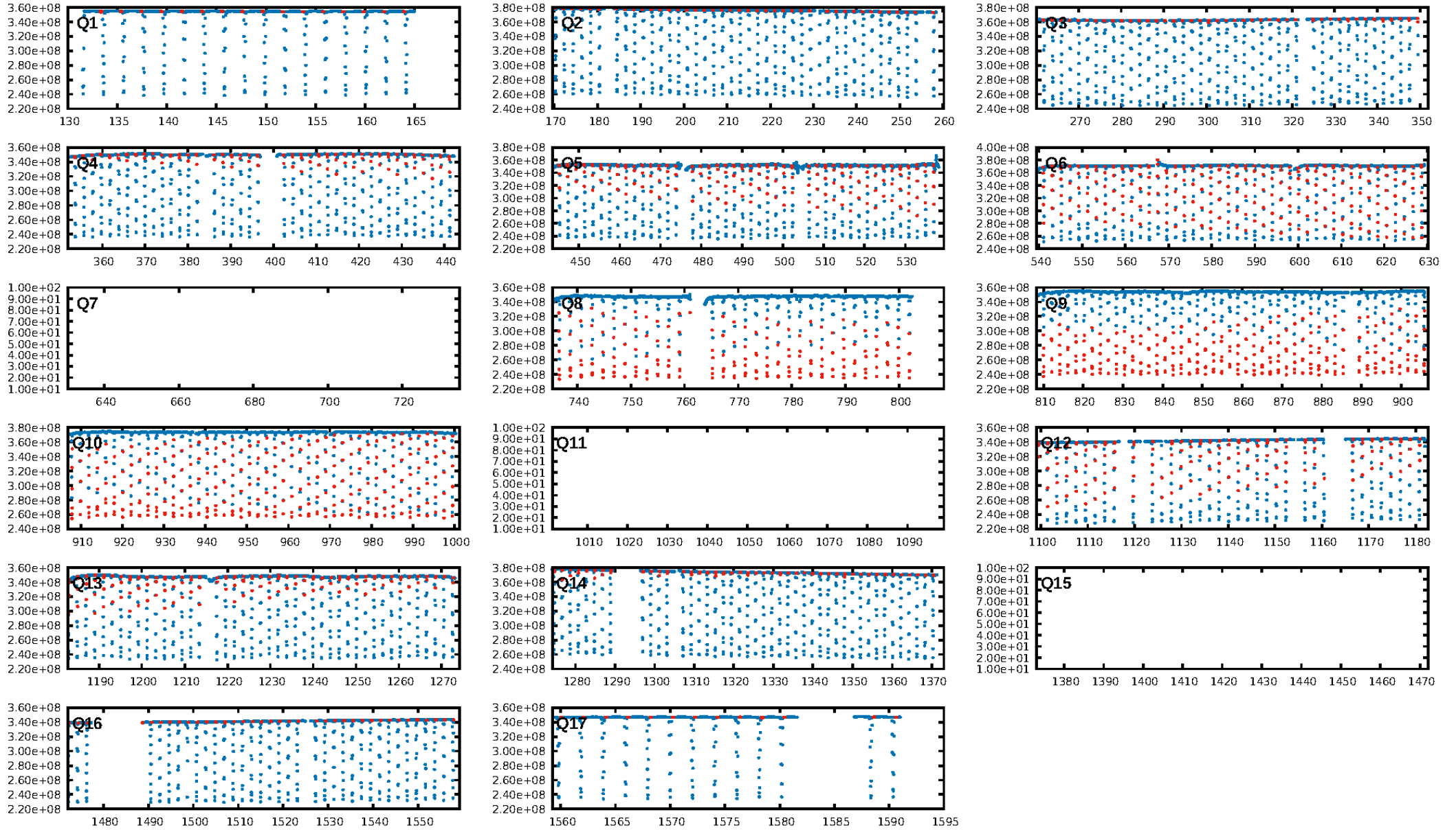
DV Diagnostic Results:

ShortPeriod-sig: 0.4% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [318/318]
GhostDiagnostic-chr: 0.9731
Centroid-sig: N/A
Centroid-so: 127.120 arcsec [66.22σ]
OotOffset-rm: 0.531 arcsec [7.16σ]
KicOffset-rm: 0.062 arcsec [0.75σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/14]

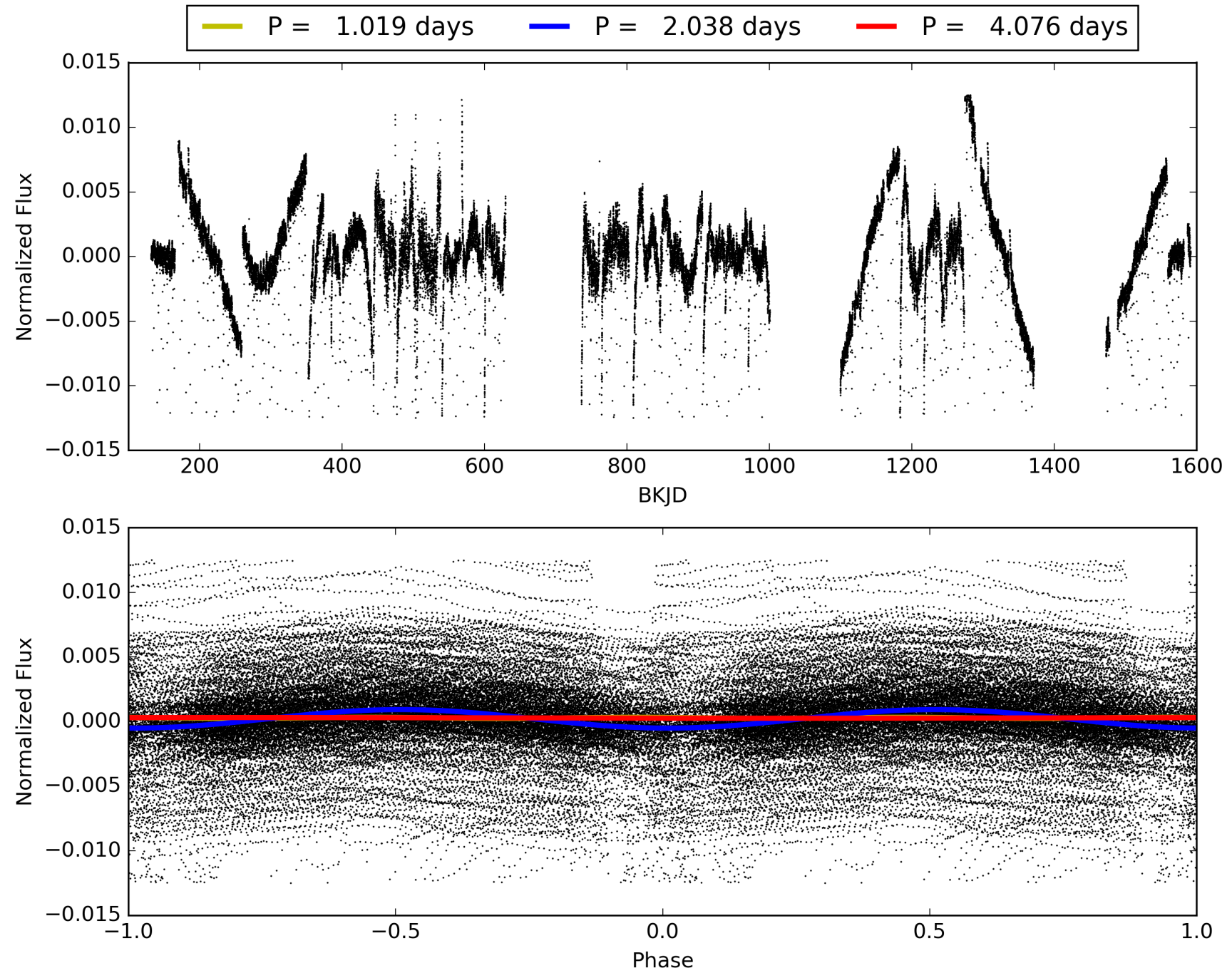
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:09:52 Z

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

TCE 010480952-02, PDC Light Curves

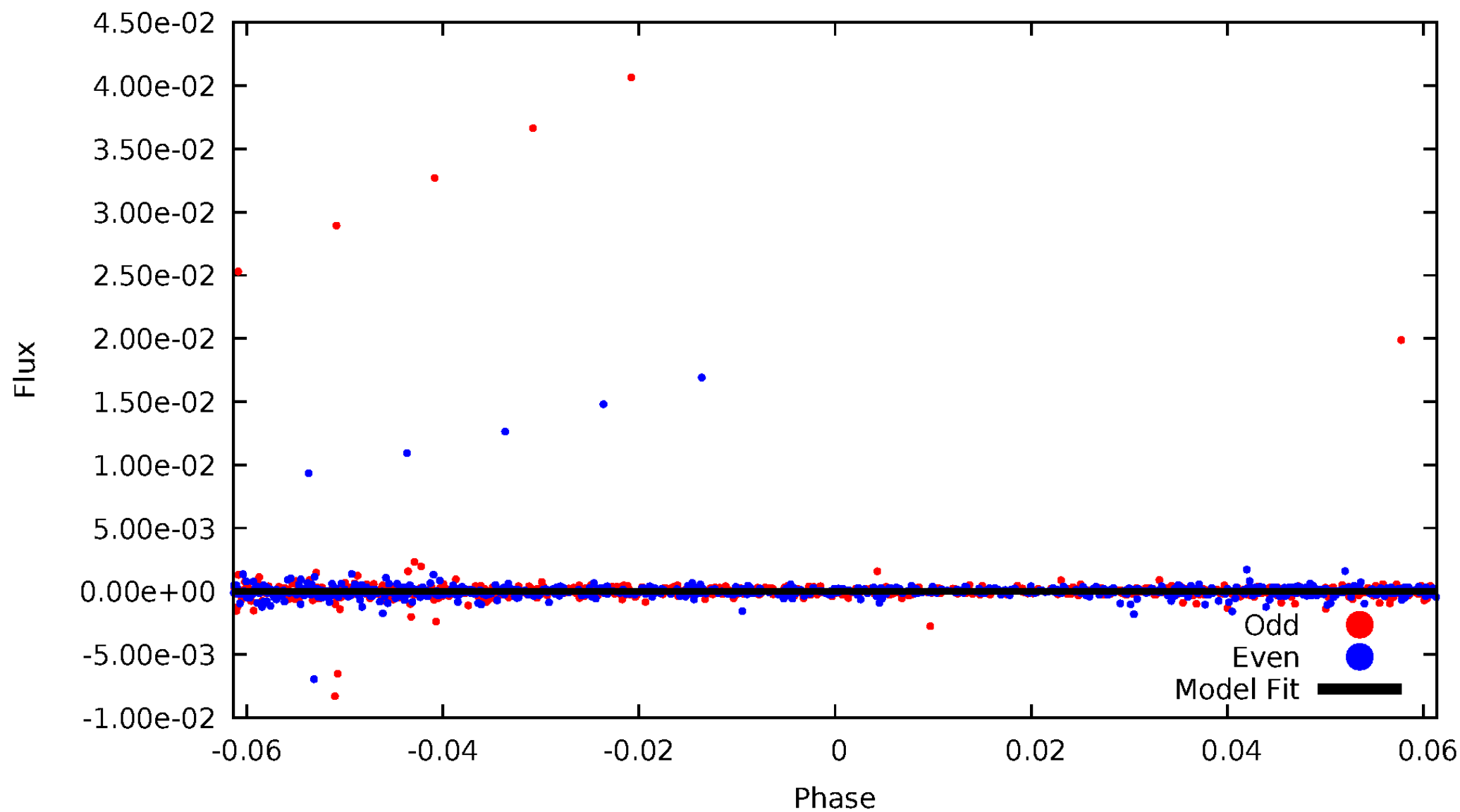


TCE 010480952-02



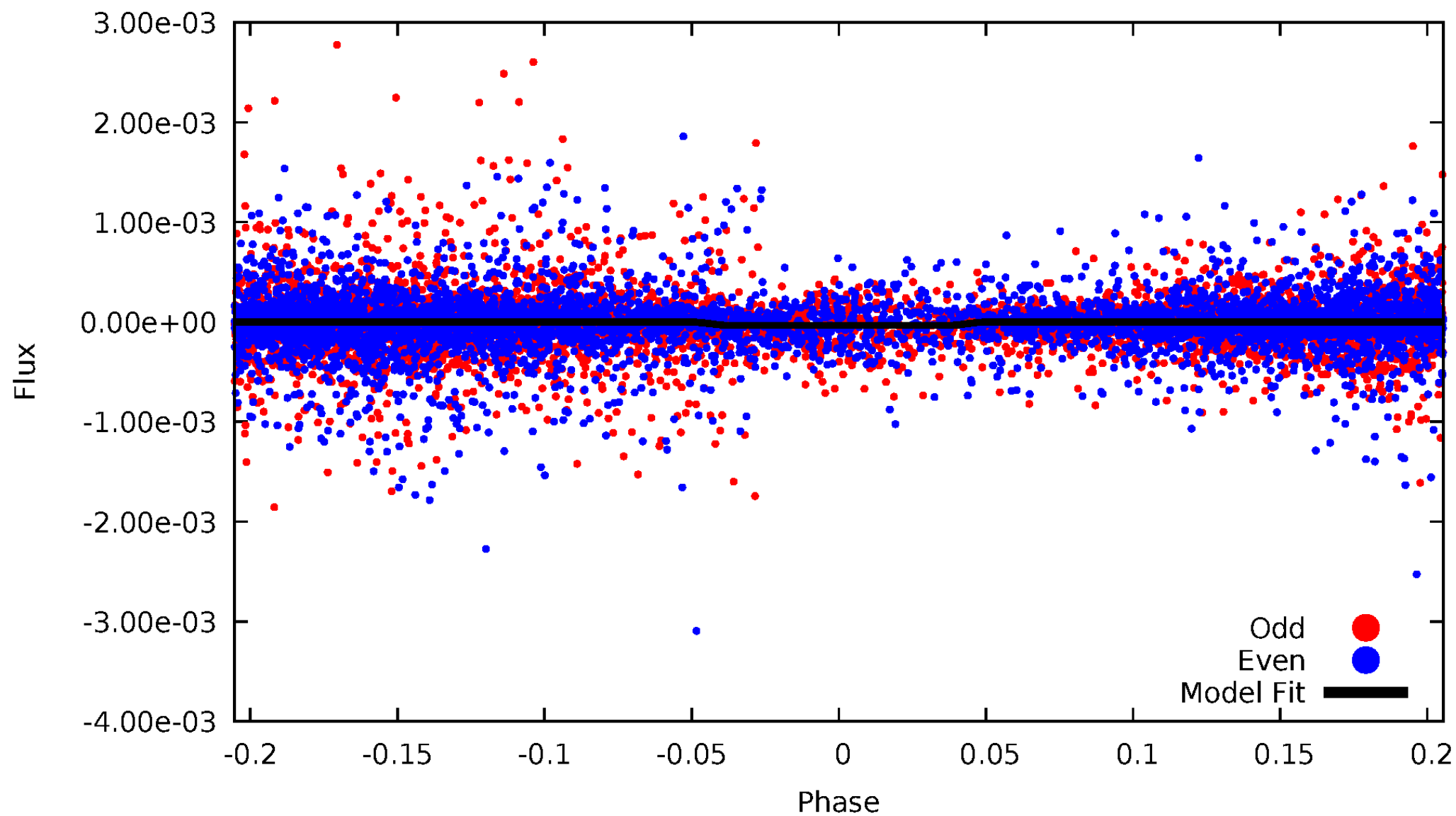
DV Odd/Even

TCE 010480952-02



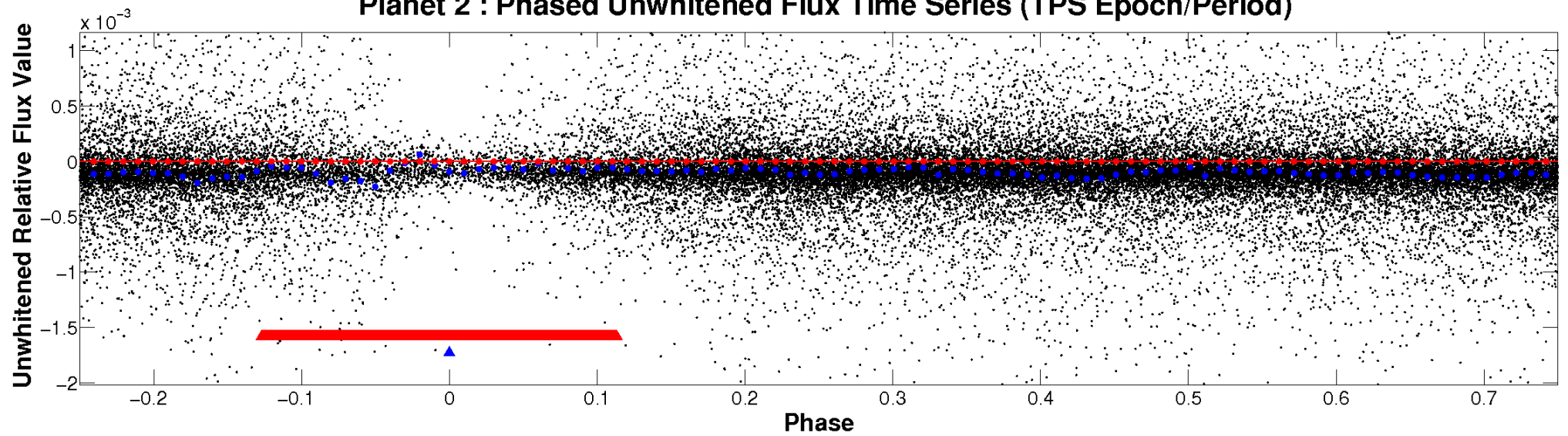
ALT Odd/Even

TCE 010480952-02



Non-Whitened Vs. Whitened Light Curve

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

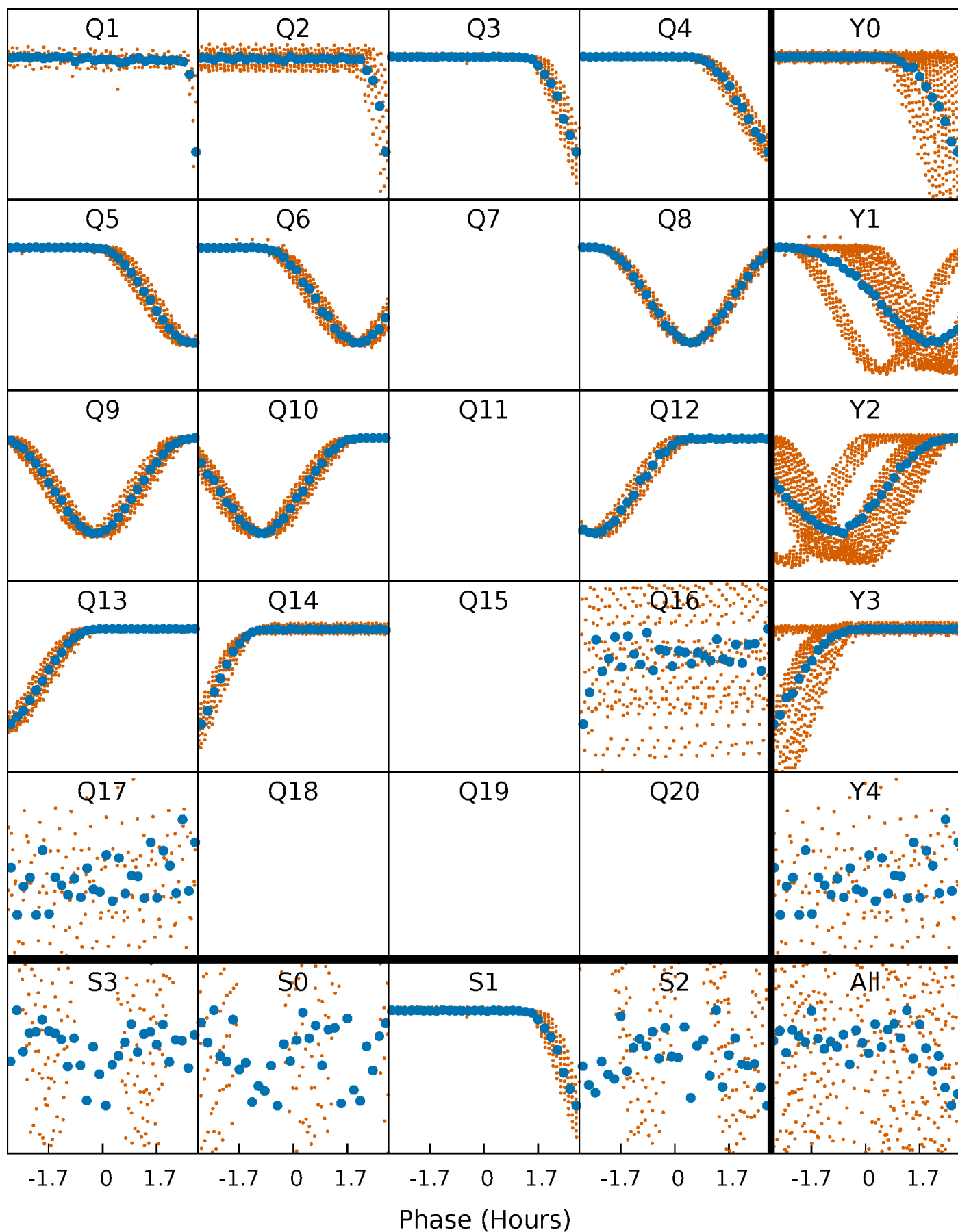


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



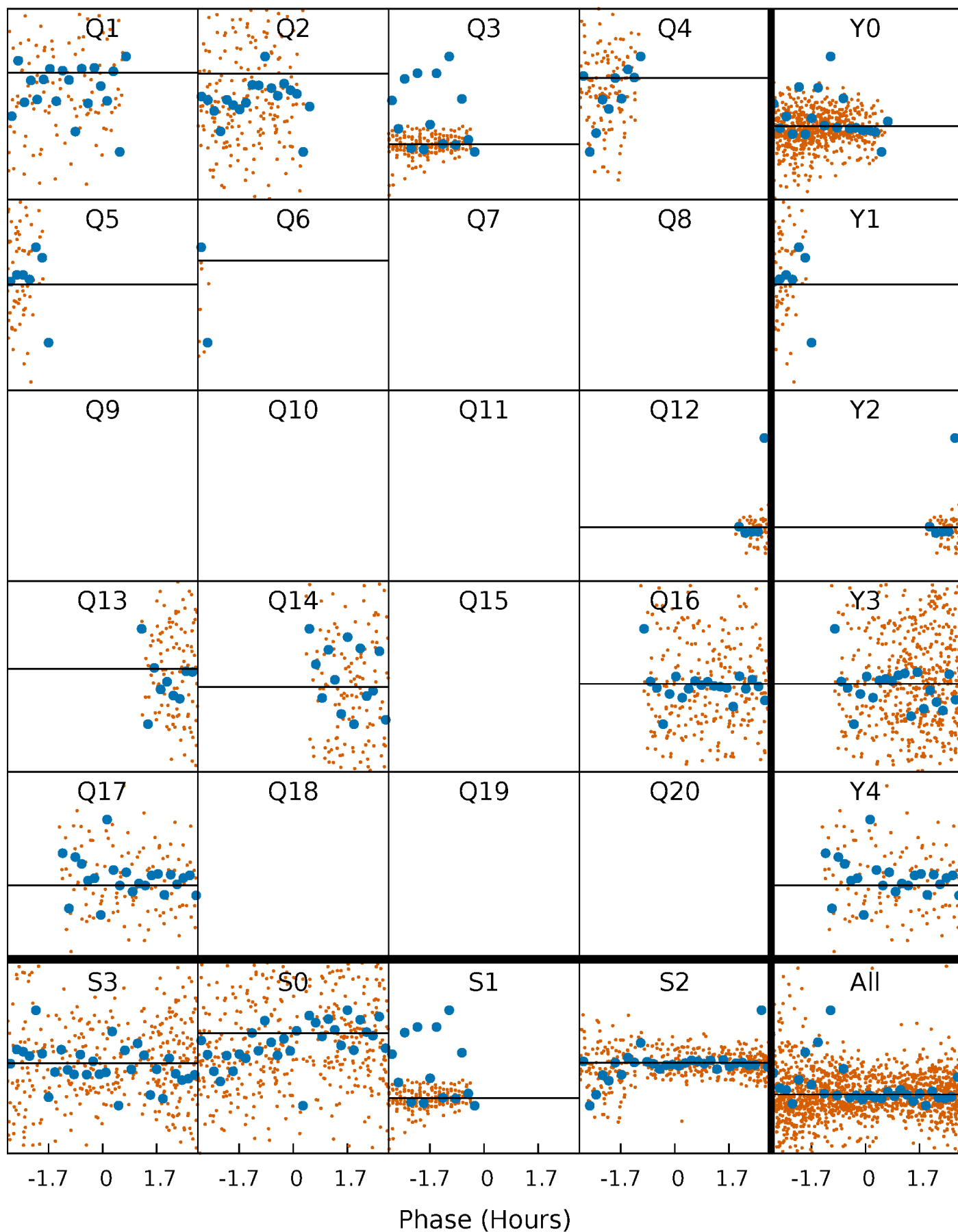
PDC Quarter-Phased Transit Curves

TCE 010480952-02 P= 2.038149 Days $T_0=133.351619$ (BKJD)



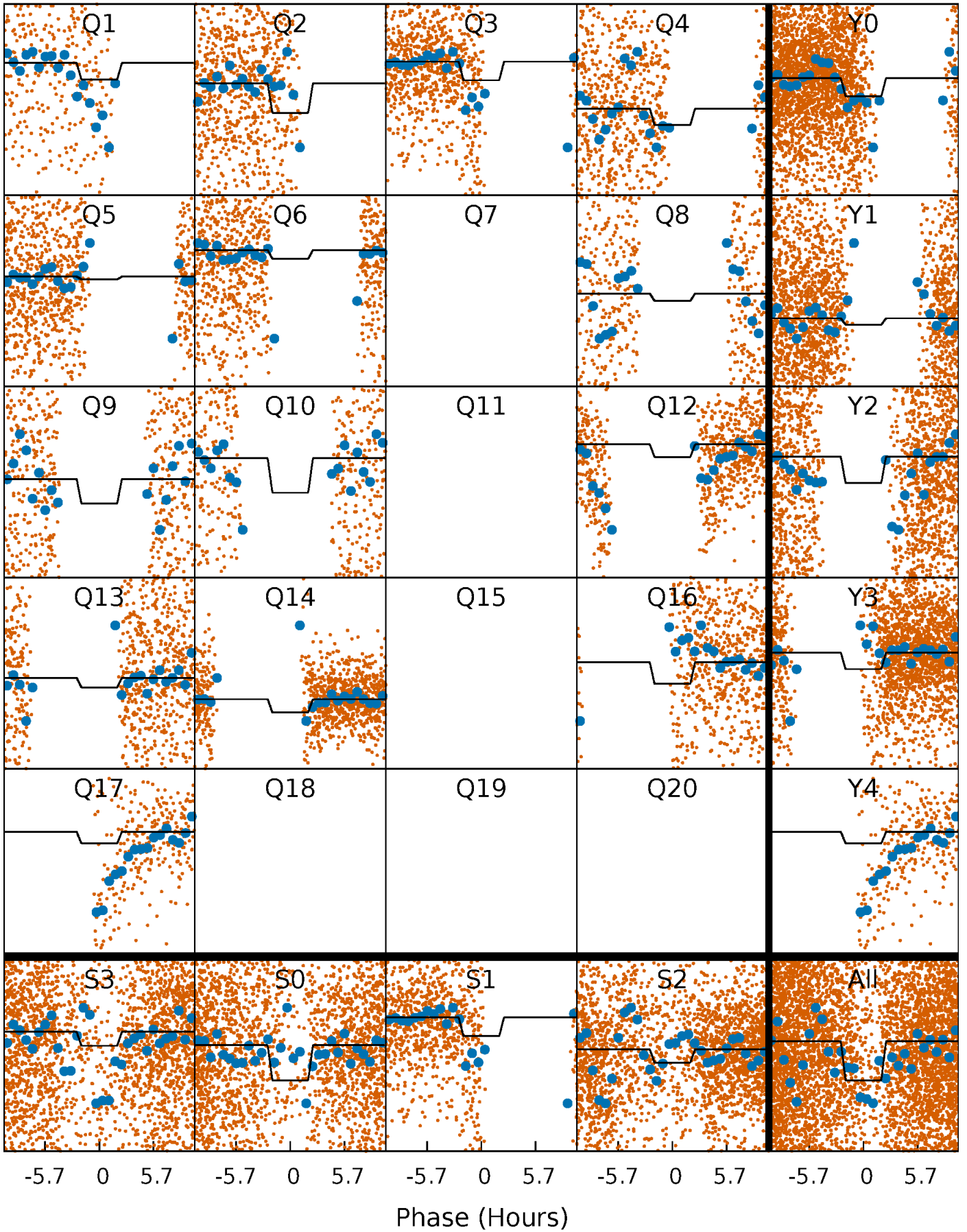
DV Quarter-Phased Transit Curves

TCE 010480952-02 P= 2.038149 Days $T_0=133.351619$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

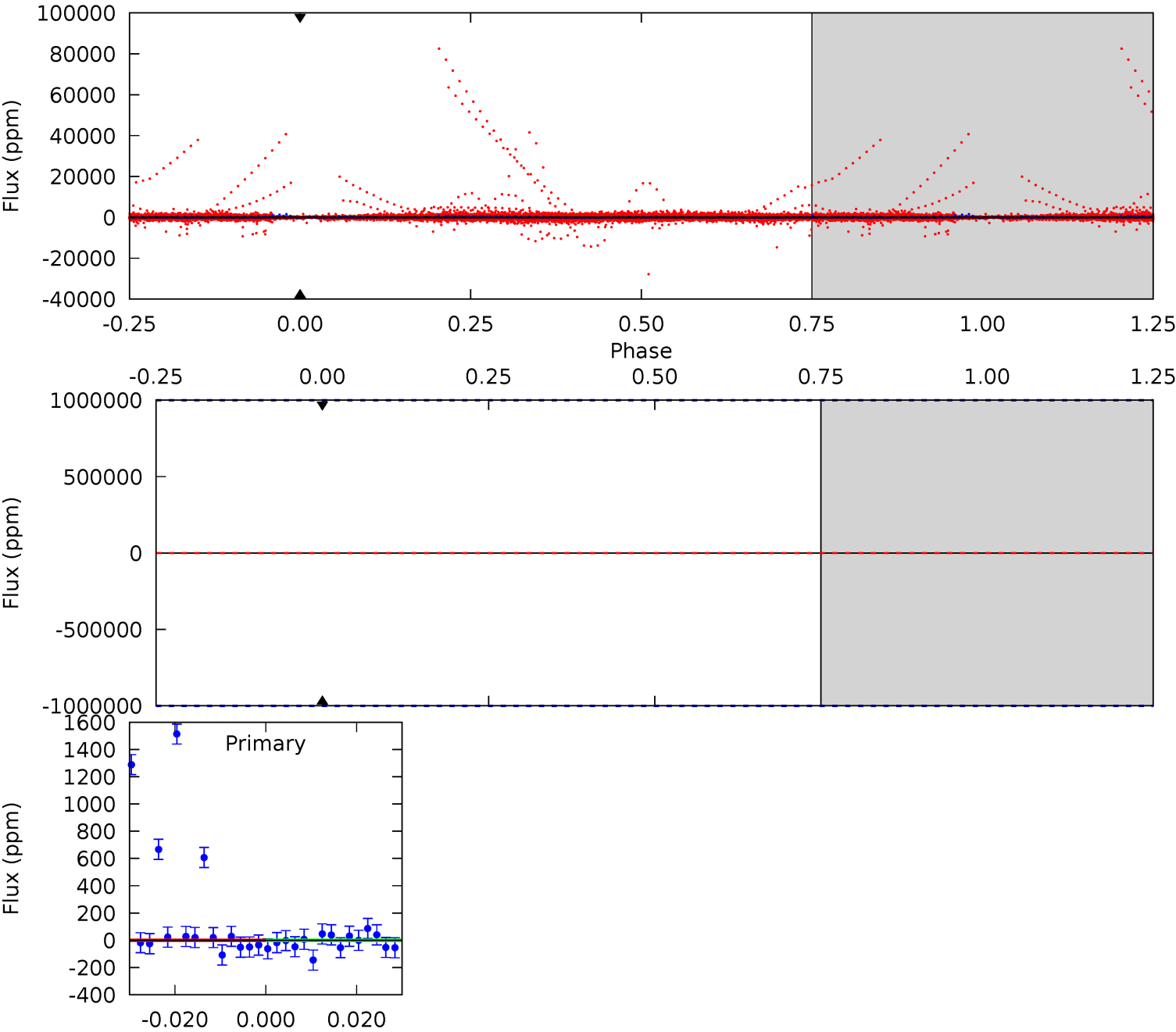
TCE 010480952-02 P= 2.038149 Days $T_0=133.321632$ (BKJD)



DV Model-Shift Uniqueness Test

010480952-02, P = 2.038149 Days, E = 131.313470 Days

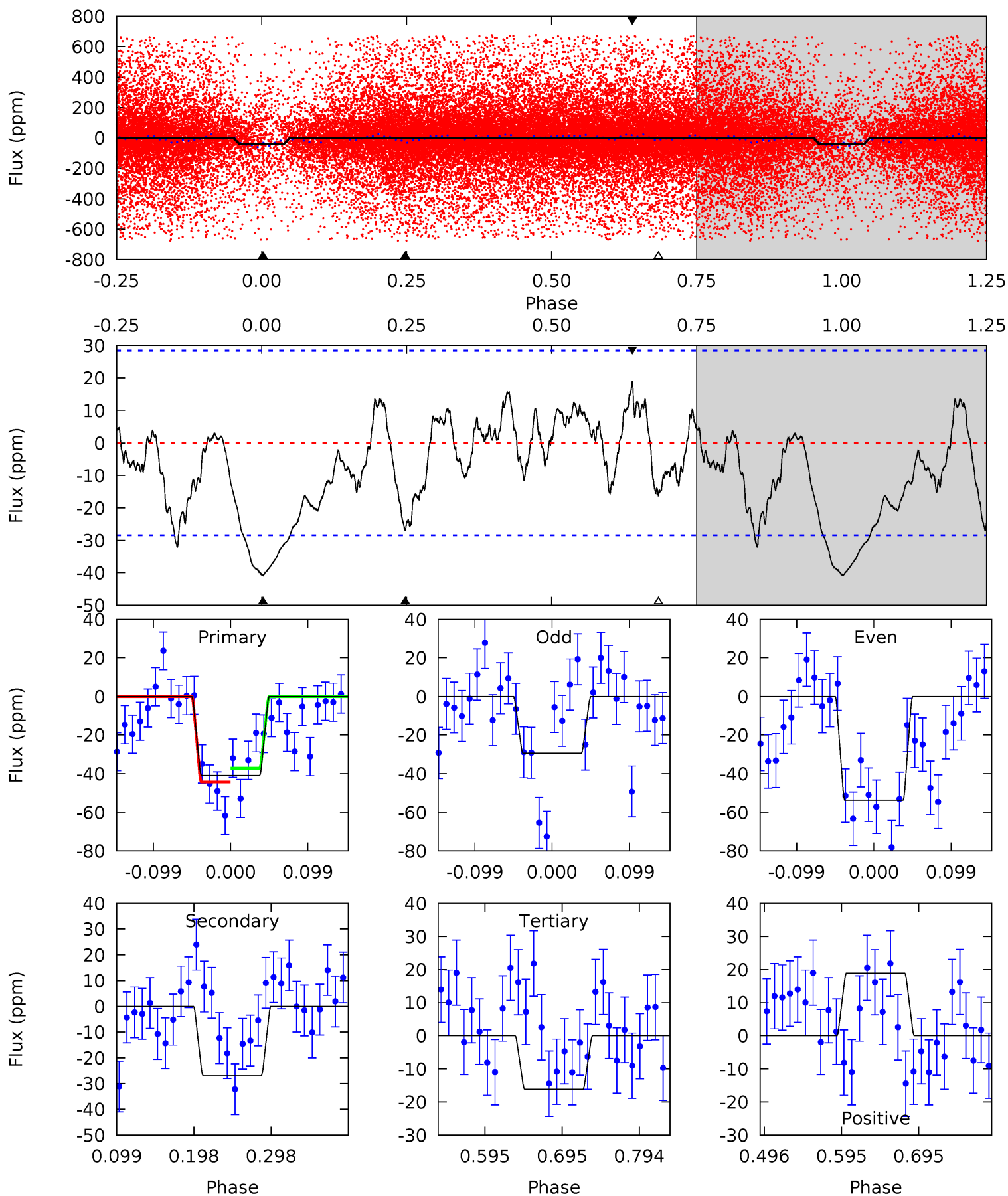
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010480952-02, P = 2.038149 Days, E = 131.283483 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.57	4.33	2.60	3.04	4.57	1.65	1.56	3.96	3.52	1.72	1.28	2.00	0.30	0.32	0.56



Stellar Parameters For KIC 010480952

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6456^{+181}_{-227}	$3.906^{+0.432}_{-0.135}$	$-0.280^{+0.250}_{-0.300}$	$2.056^{+0.486}_{-0.903}$	$1.244^{+0.193}_{-0.236}$	$0.202^{+0.754}_{-0.084}$
	+3%/-4%	+11%/-3%	+89%/-107%	+24%/-44%	+16%/-19%	+374%/-42%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010480952-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$35.29^{+24.60}_{-19.77}$	3033^{+244}_{-354}	-3611^{+14428}_{-6368}	$-0.439^{+80.696}_{-64.233}$
Alt.	-27 ± 6	$14.28^{+17.02}_{-10.57}$	3028^{+255}_{-356}	-2865^{+6433}_{-295}	$0.081^{+1.118}_{-0.064}$

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 $A_{obs} \gg 1.0$

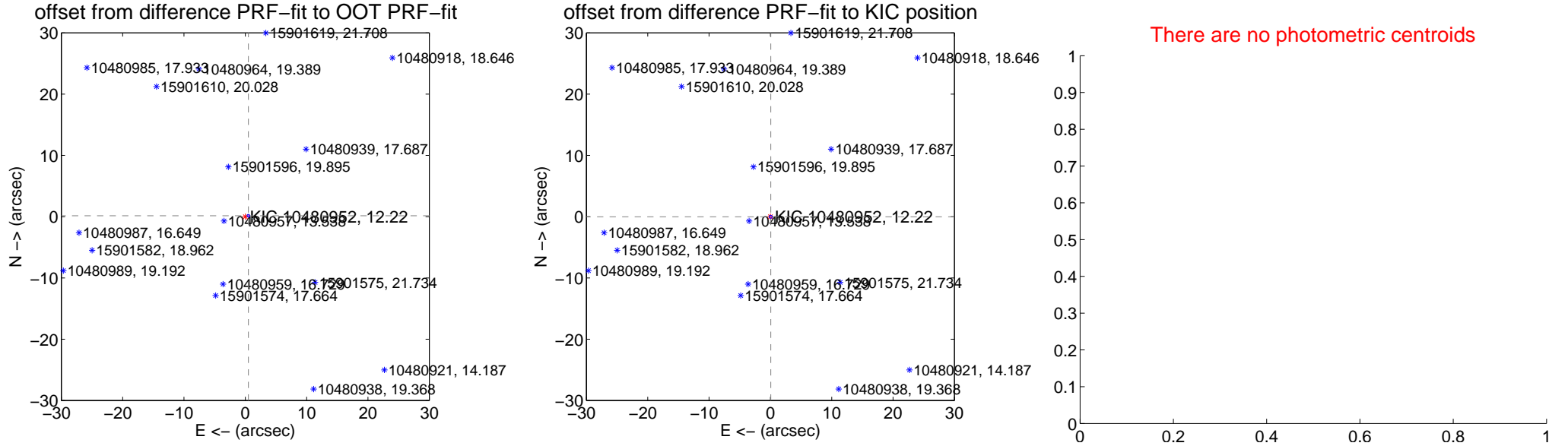
DV Centroid Data

Supplemental centroid analysis for 010480952-02. Kepler magnitude: 12.22. Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

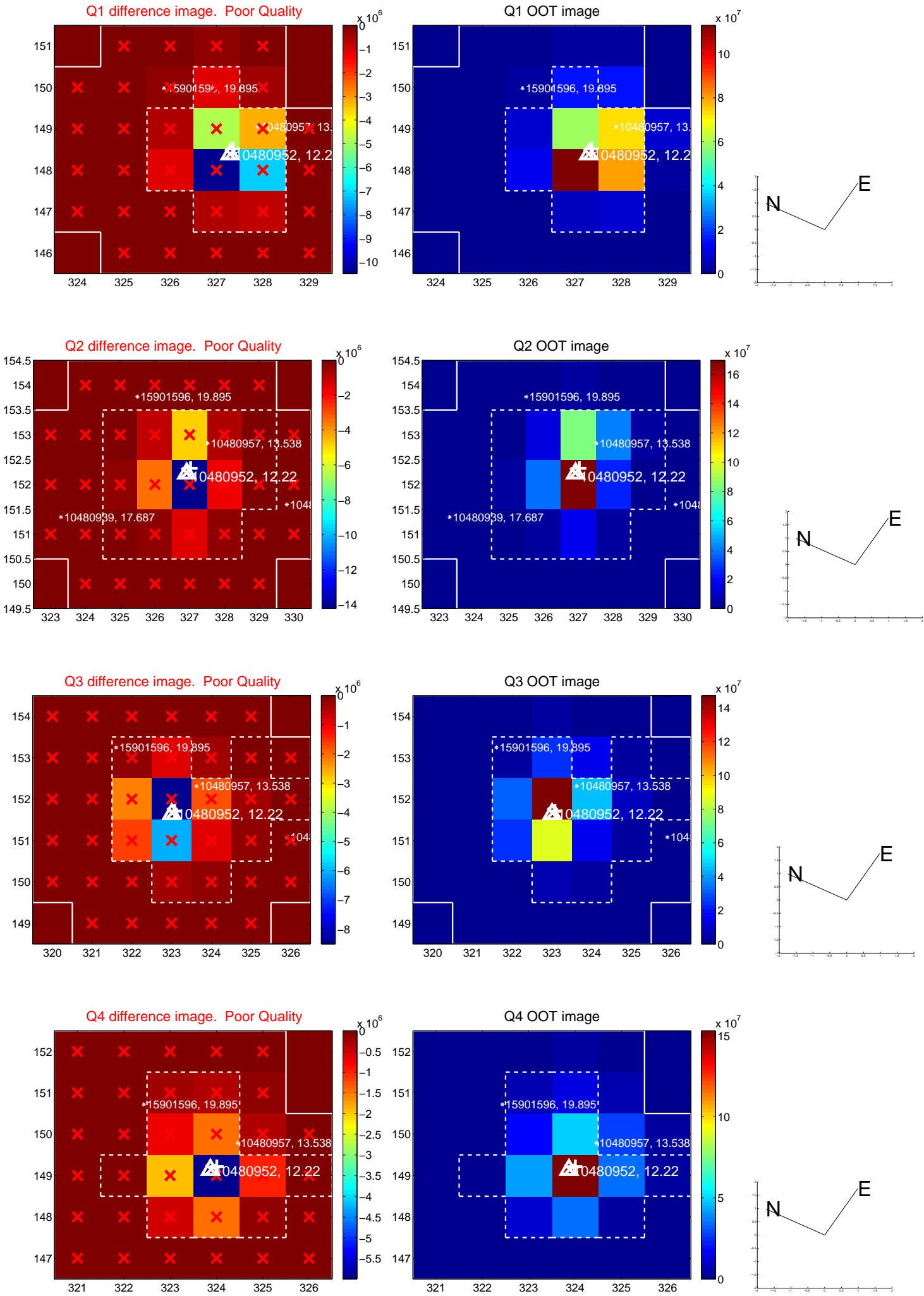
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.531 ± 0.074	7.16	-0.510 ± 0.078	0.151 ± 0.080
PRF-fit source offset from KIC position	0.062 ± 0.083	0.75	-0.058 ± 0.078	-0.021 ± 0.074
photometric centroid source offset	—	—	—	—

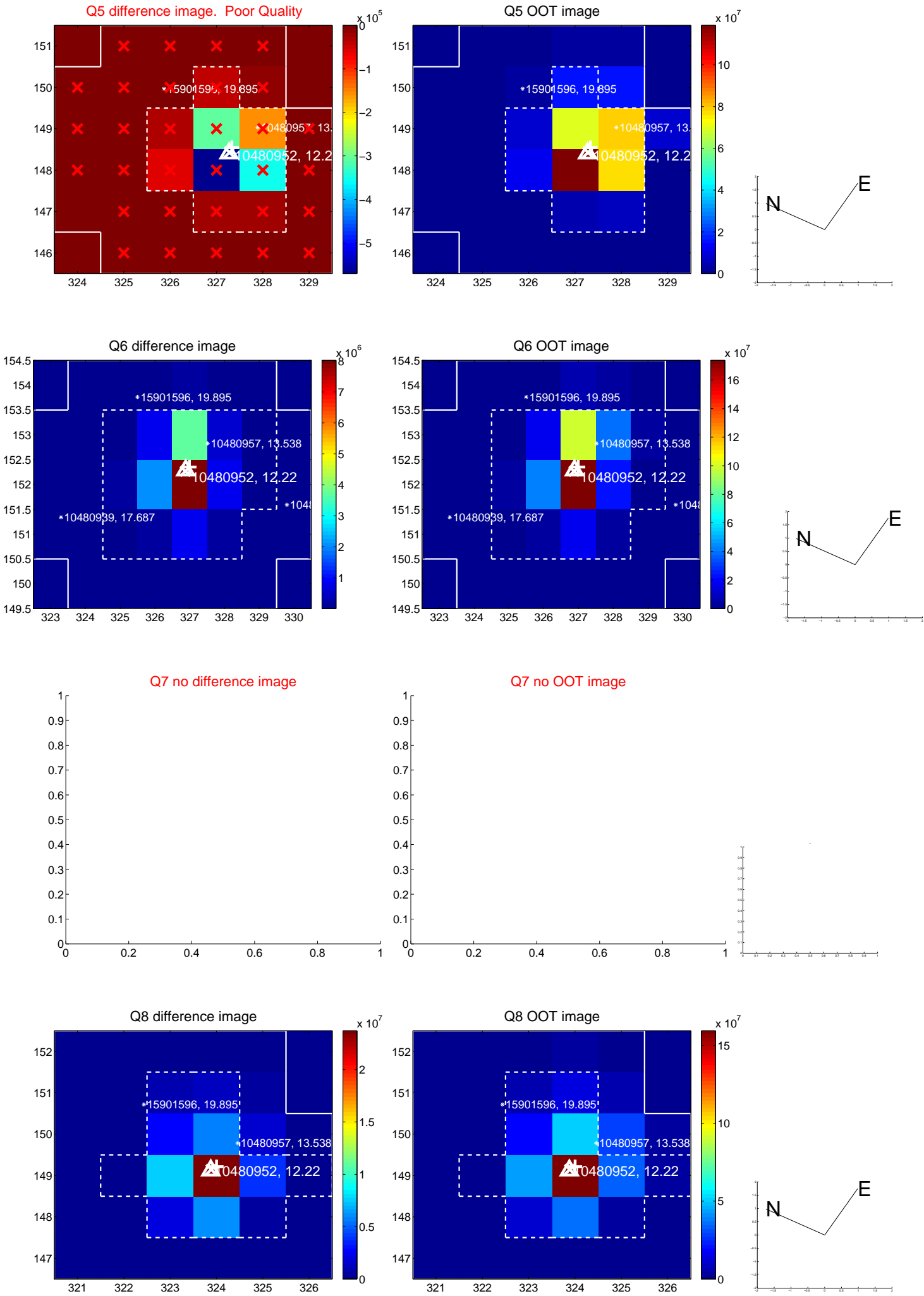


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

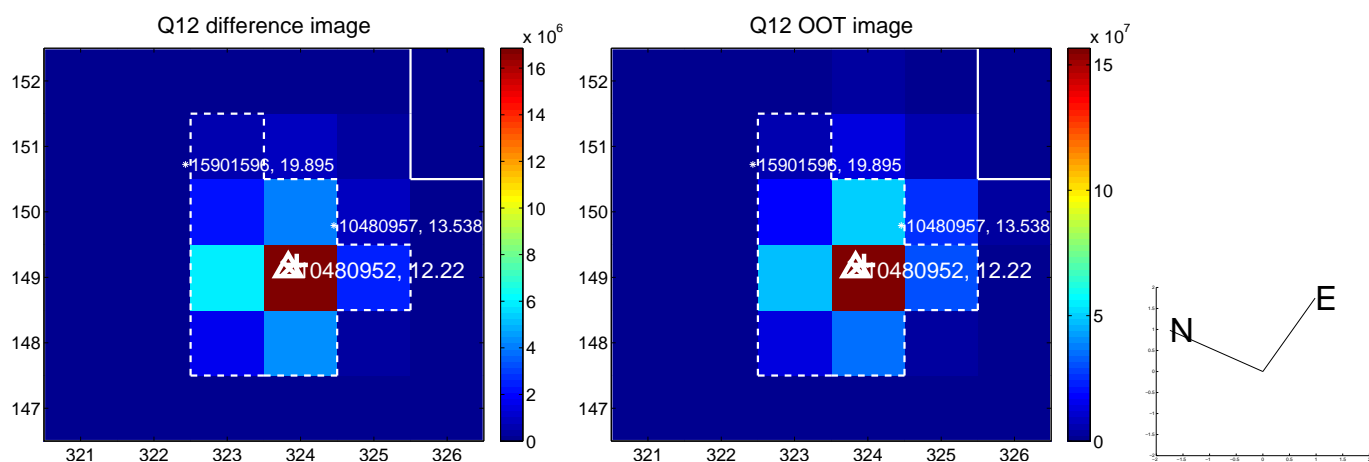
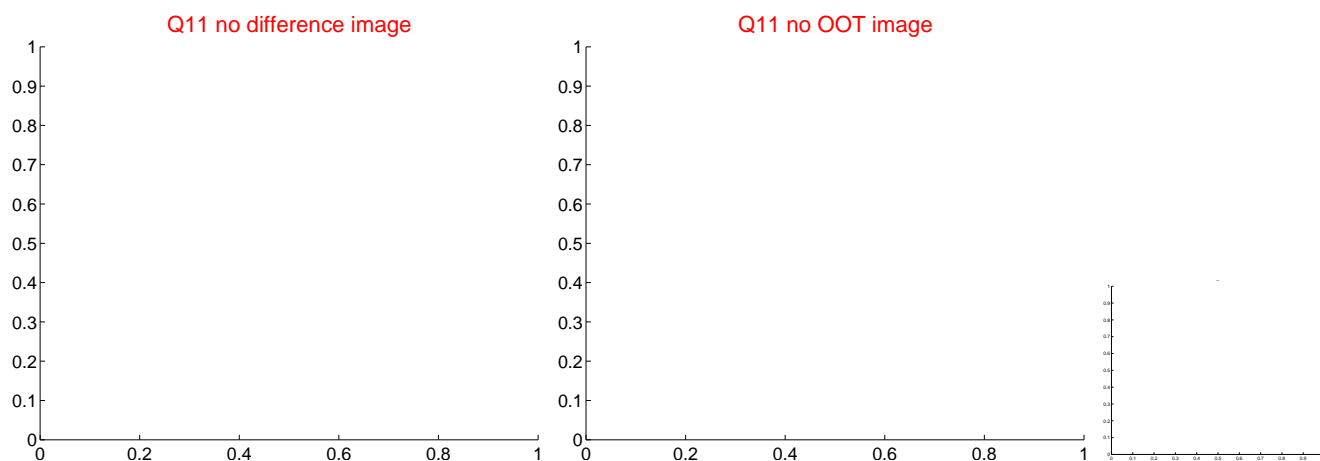
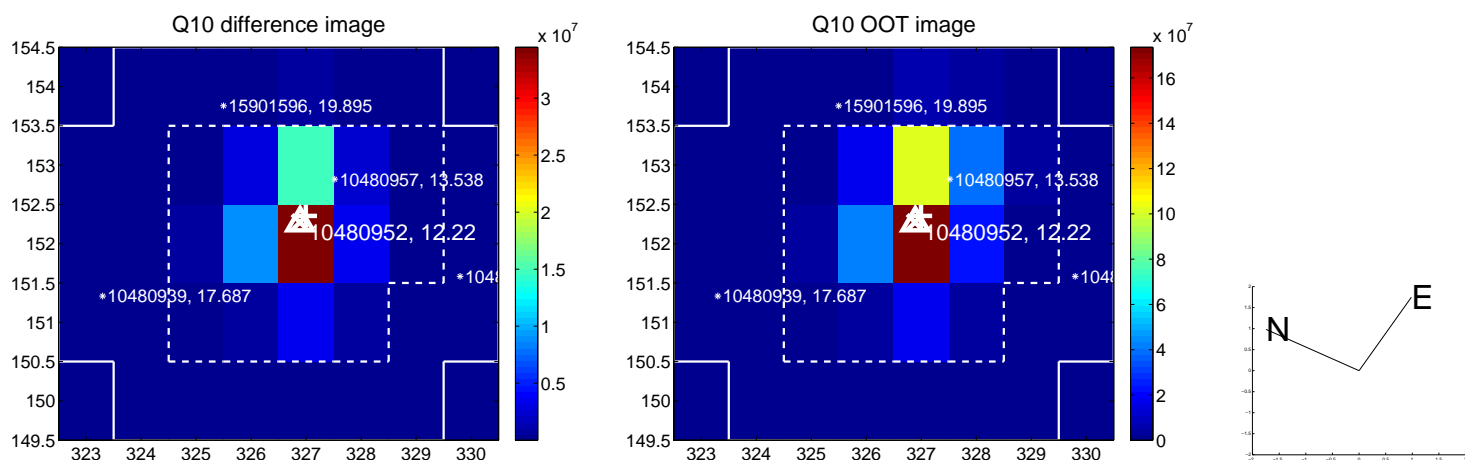
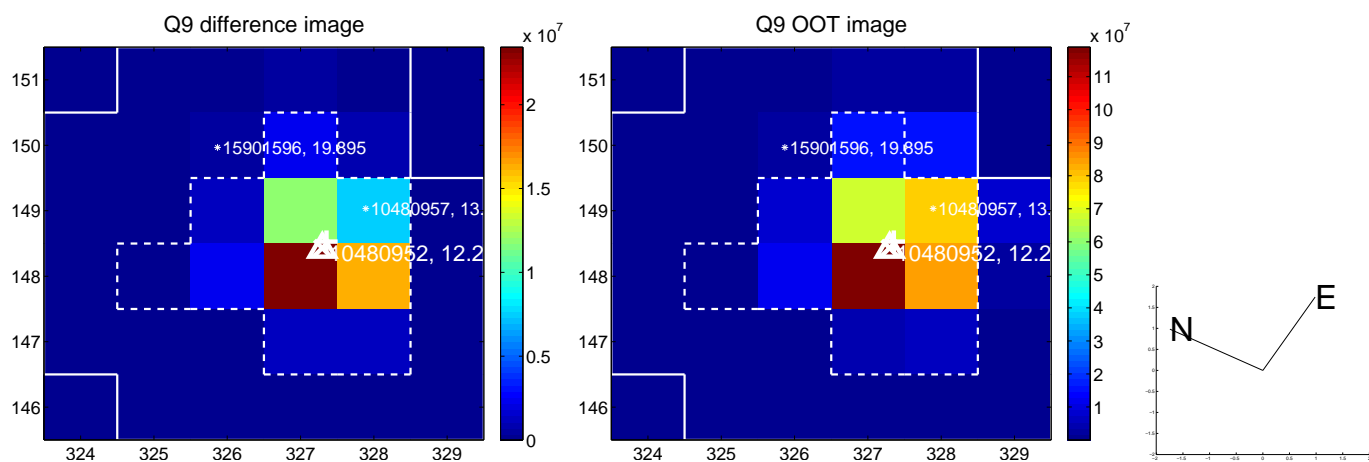
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



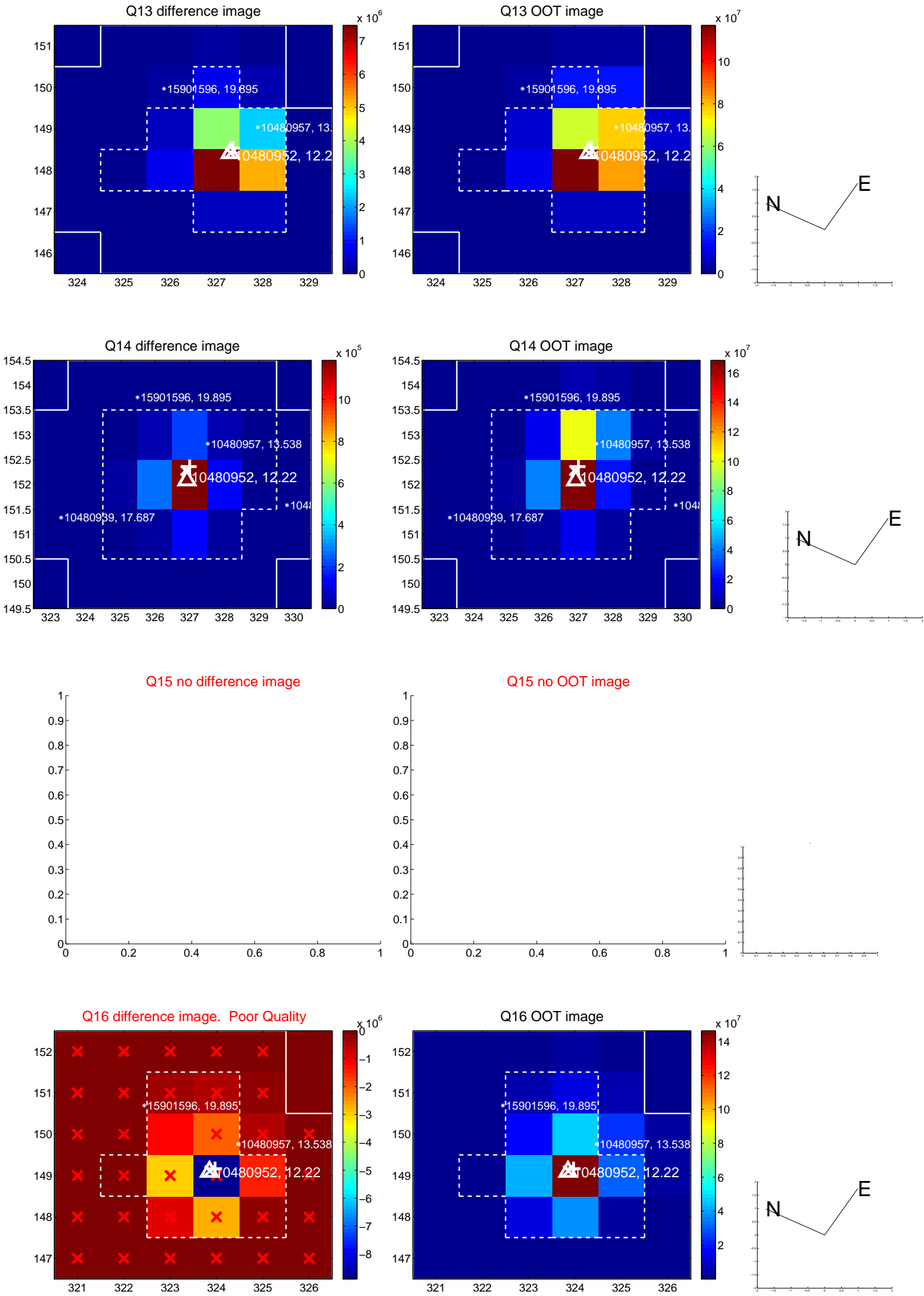
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



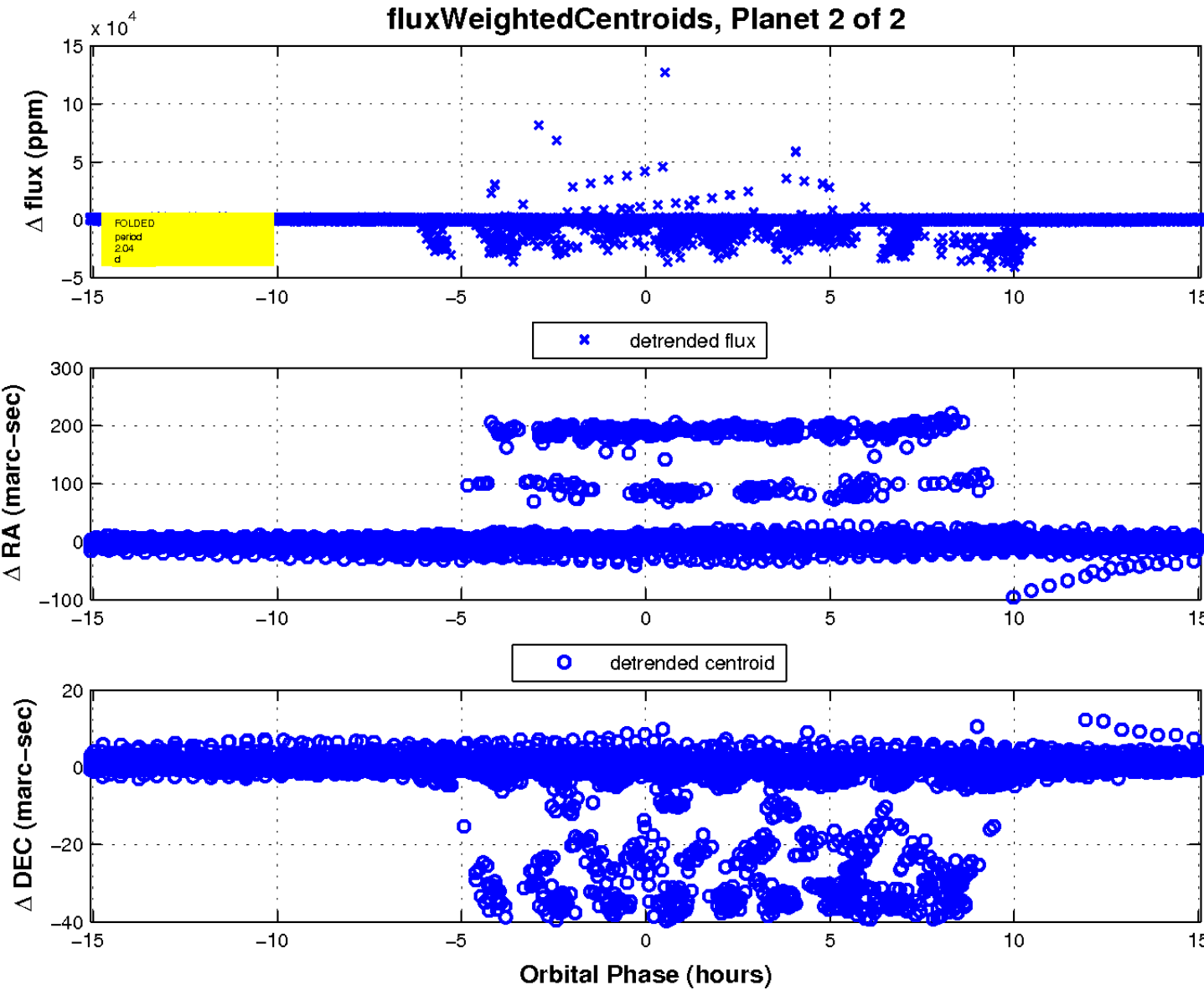
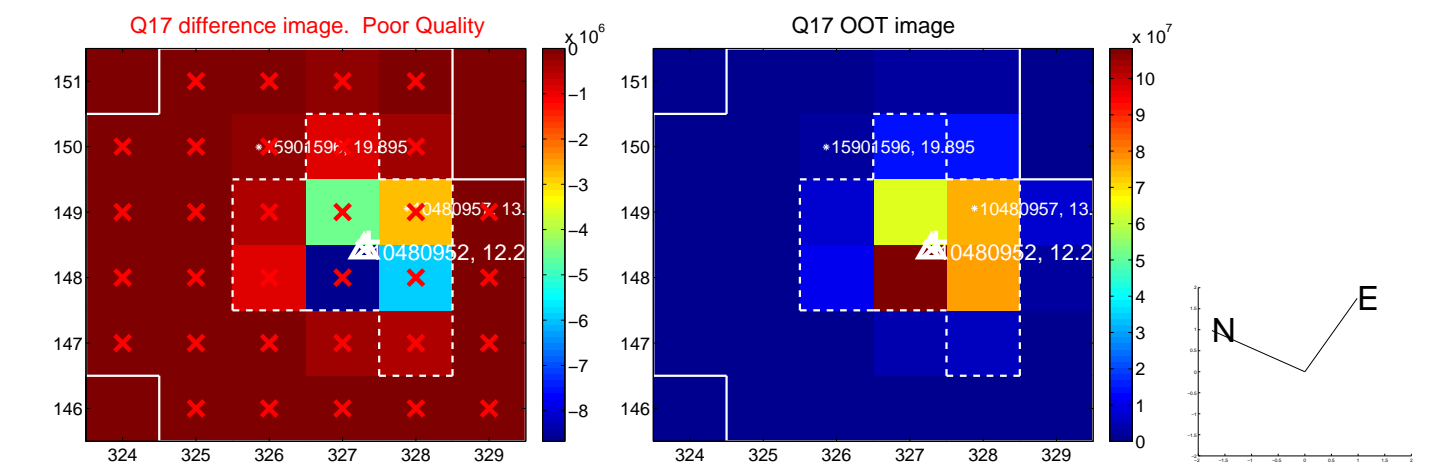
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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.



UKIRT Image

Declination

