

KIC 005308052

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})
005308052-01	OBS	No	1.237074	131.768867	50.4	4.666	10.2	12.3	1.88	6564	1.51	10038.28
005308052-02	OBS	No	0.532578	131.529344	70.4	1.175	8.9	11.9	1.88	6564	1.85	30879.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005308052-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005308052-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

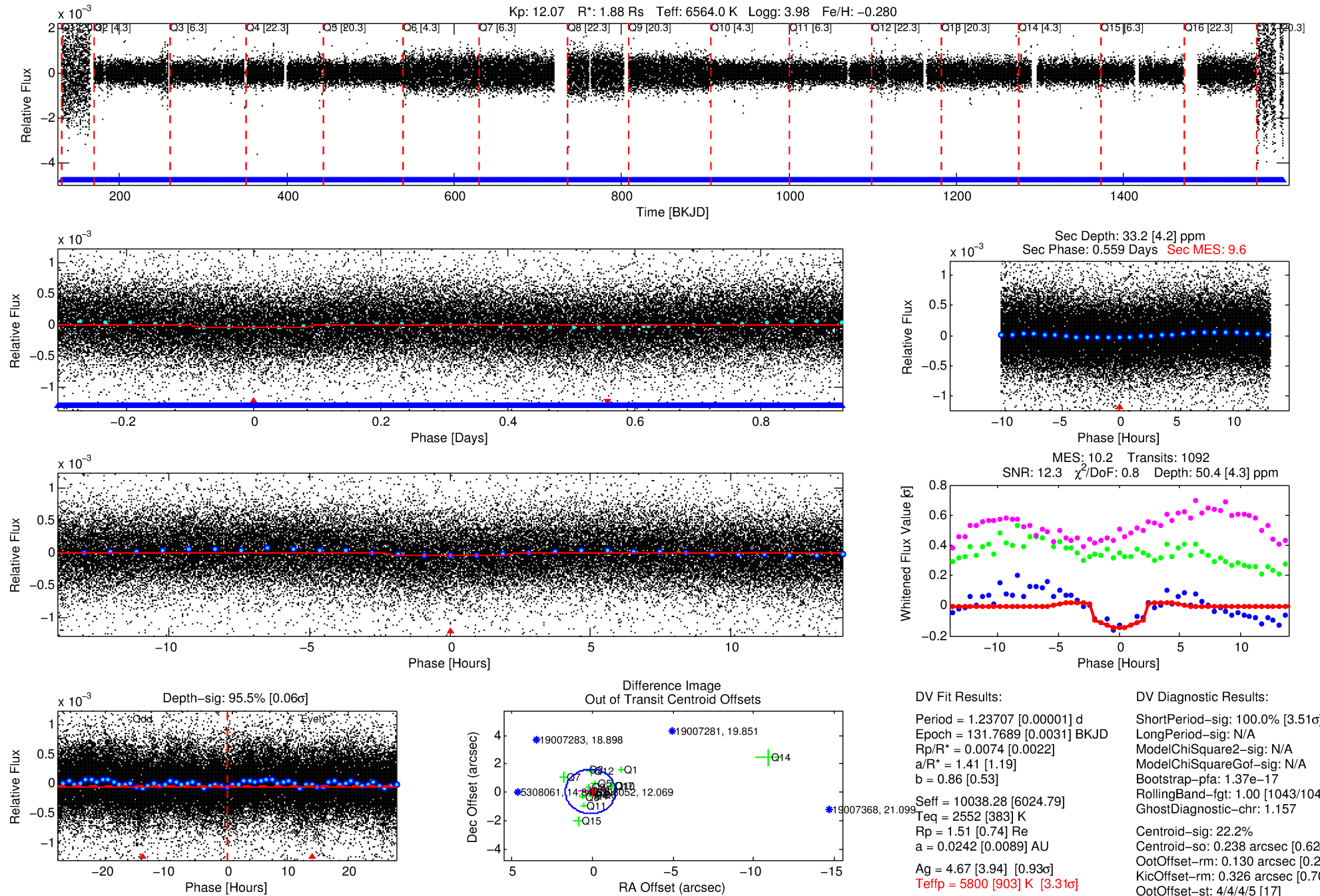
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005308052-01

No Significant Match Found

DV One-Page Summary

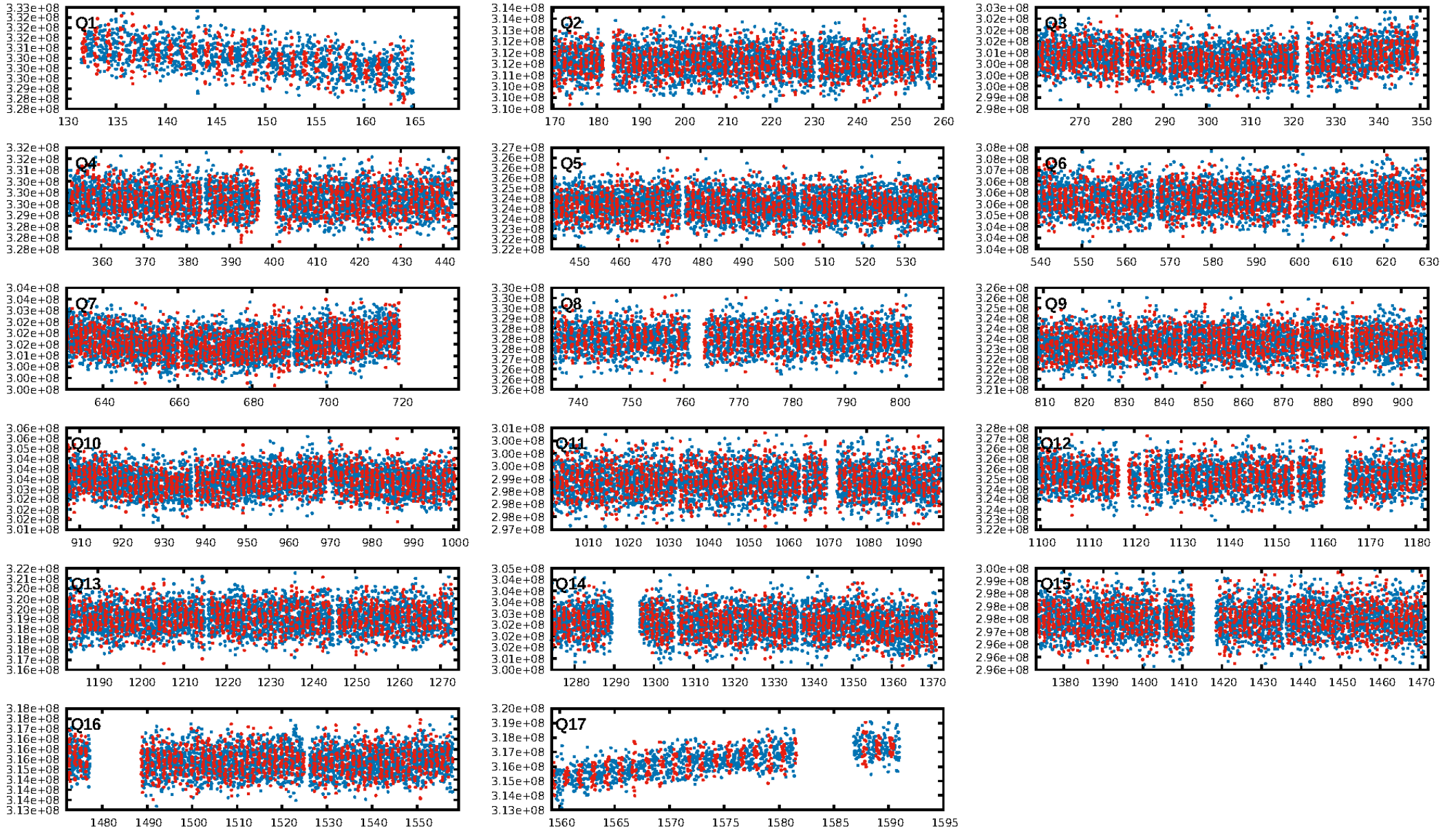
KIC: 5308052 Candidate: 1 of 2 Period: 1.237 d



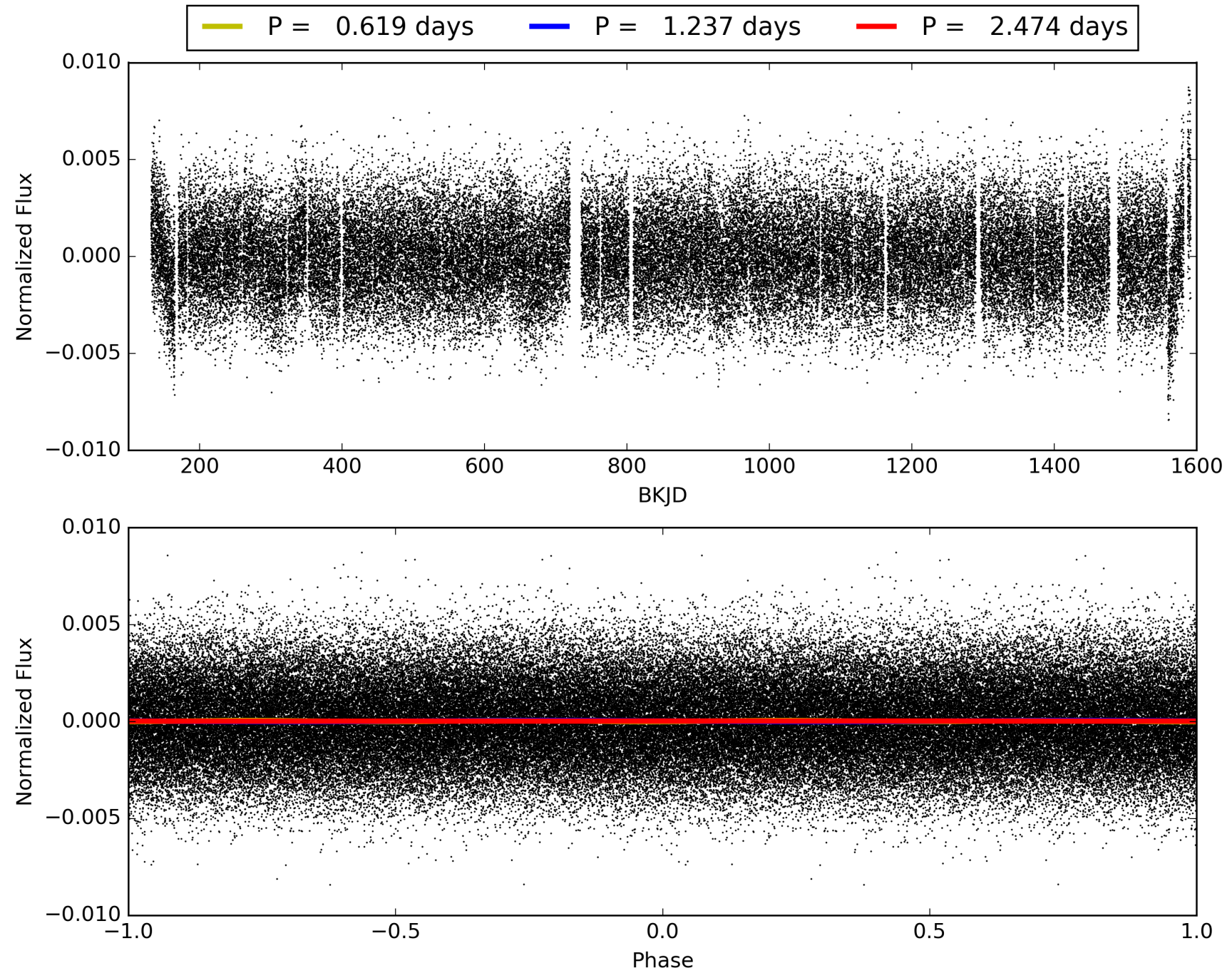
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:32:33 Z

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

TCE 005308052-01, PDC Light Curves

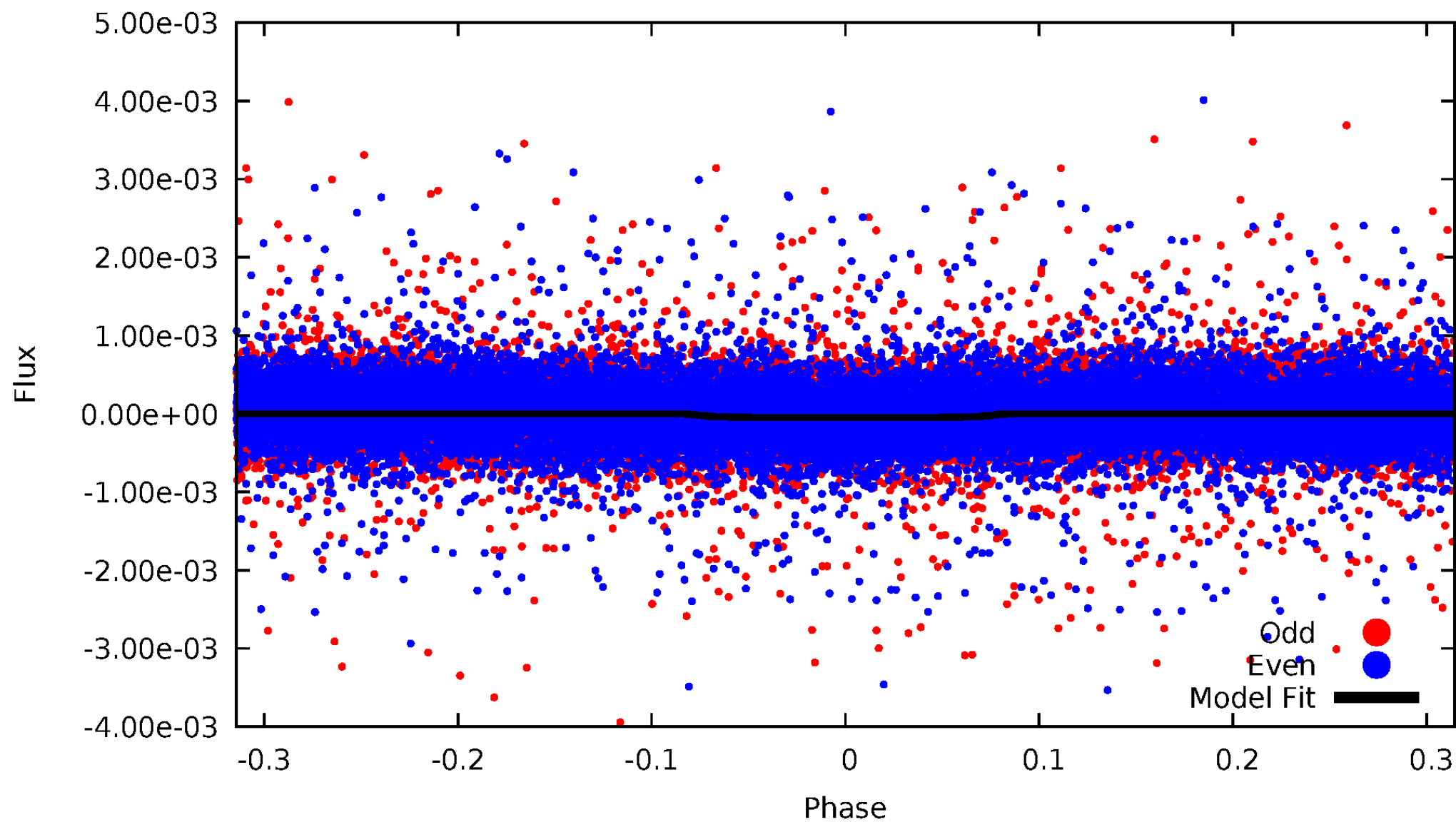


TCE 005308052-01



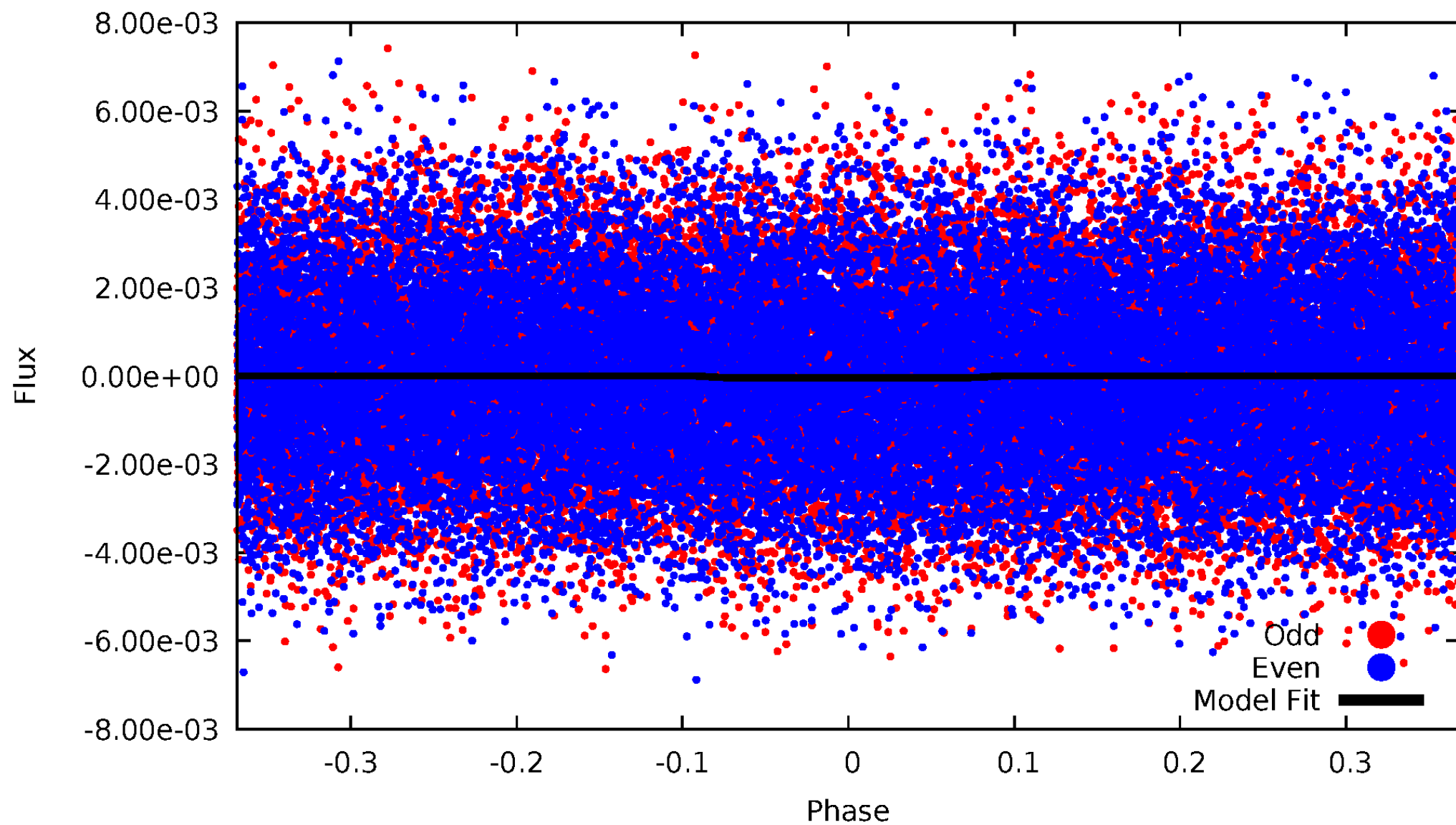
DV Odd/Even

TCE 005308052-01



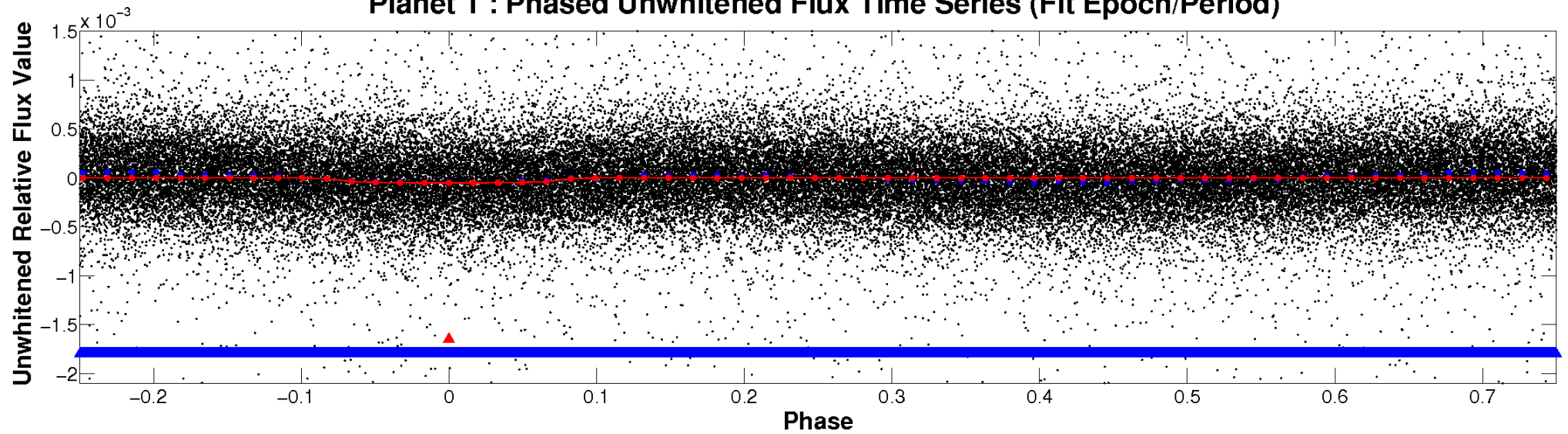
ALT Odd/Even

TCE 005308052-01

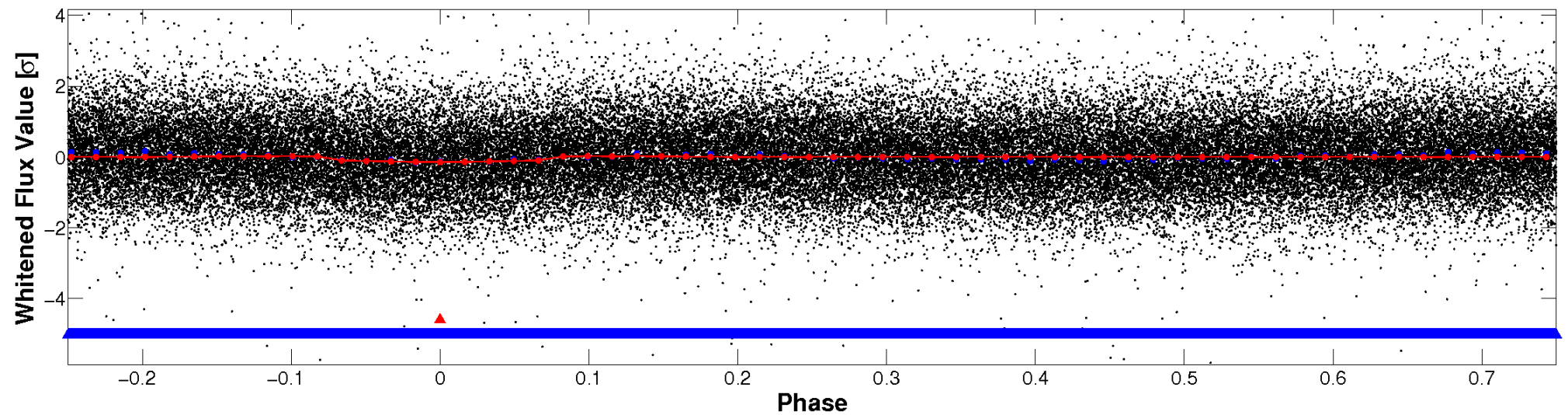


Non-Whitened Vs. Whitened Light Curve

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

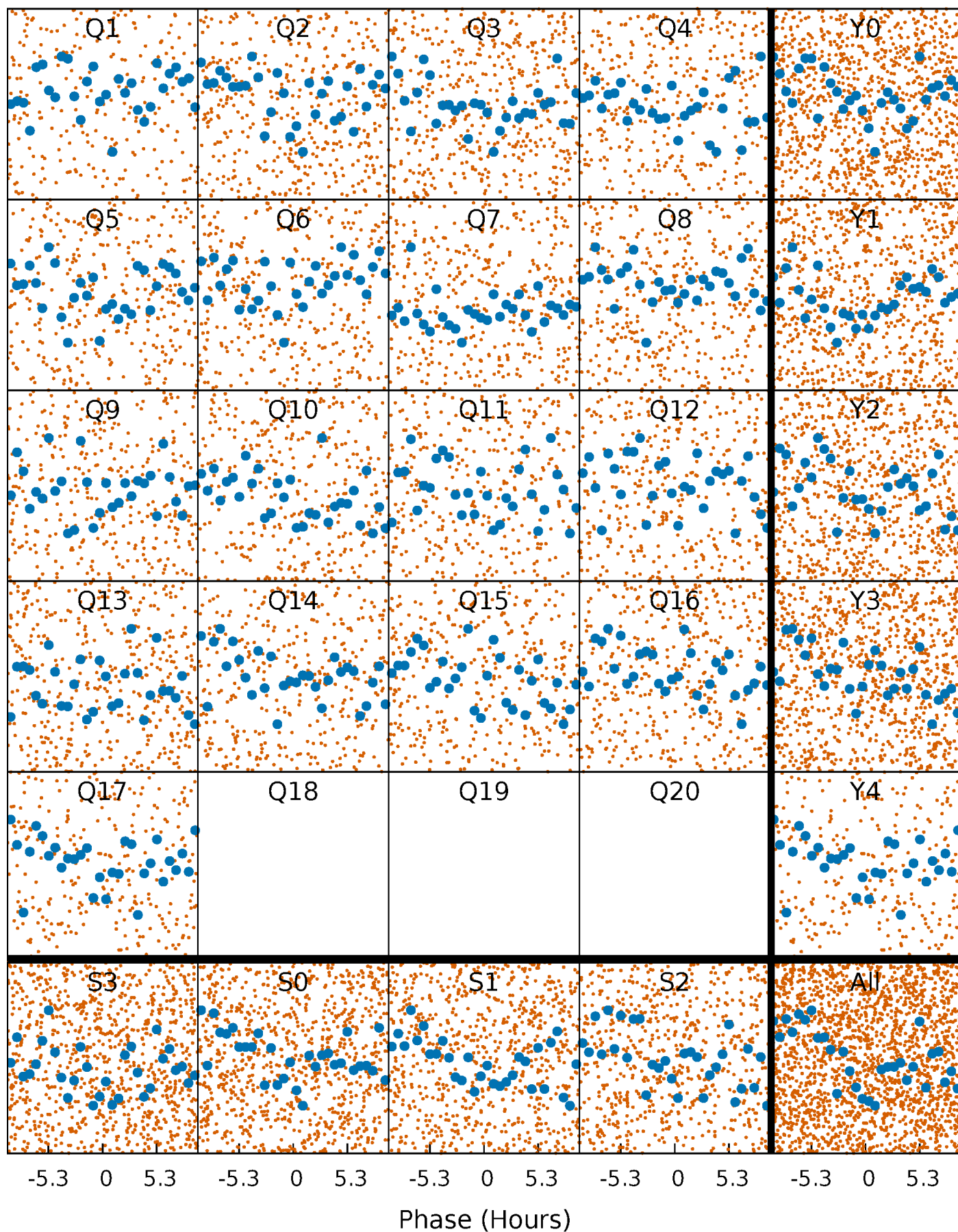


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



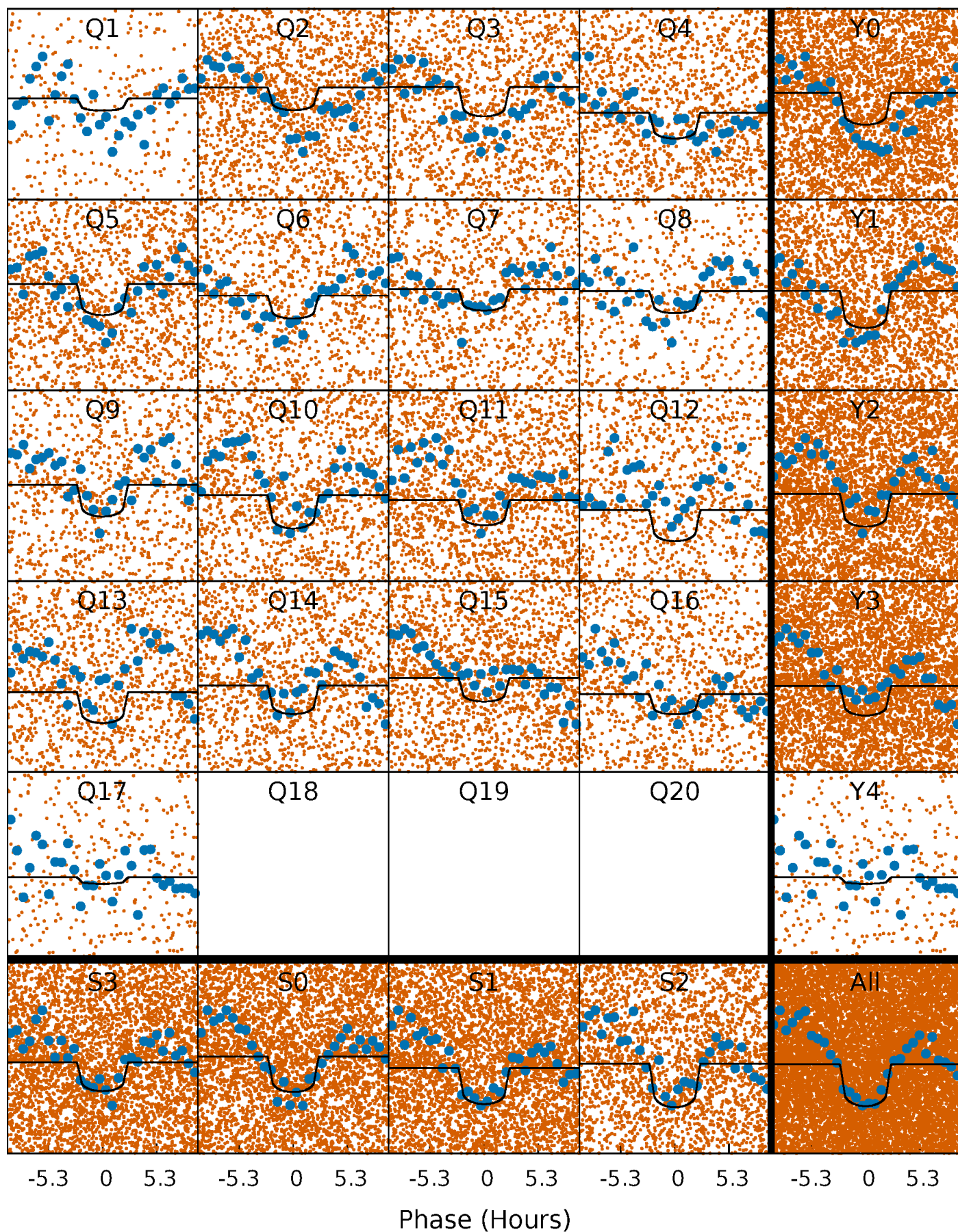
PDC Quarter-Phased Transit Curves

TCE 005308052-01 P= 1.237074 Days $T_0=131.768867$ (BKJD)



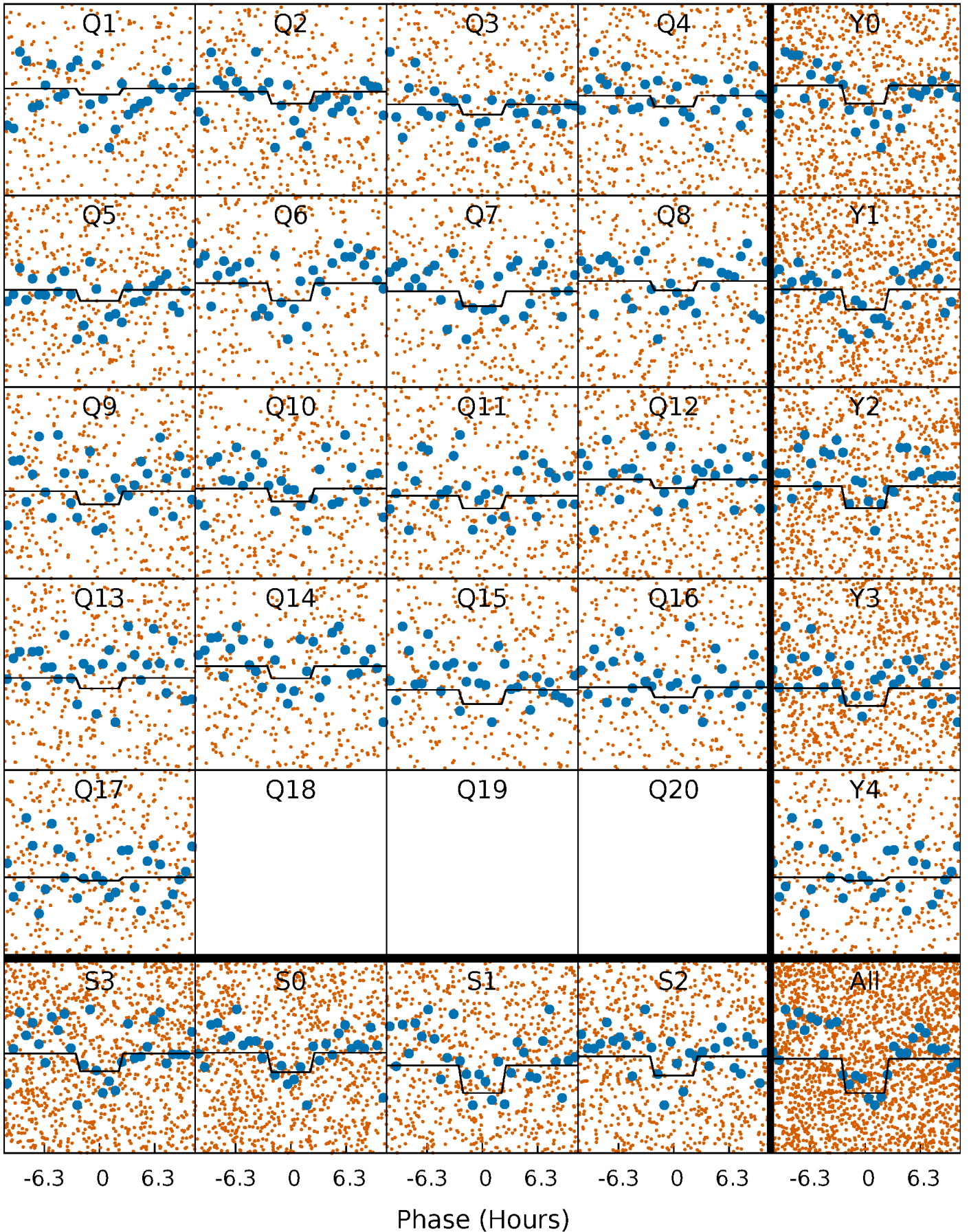
DV Quarter-Phased Transit Curves

TCE 005308052-01 P= 1.237074 Days $T_0=131.768867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

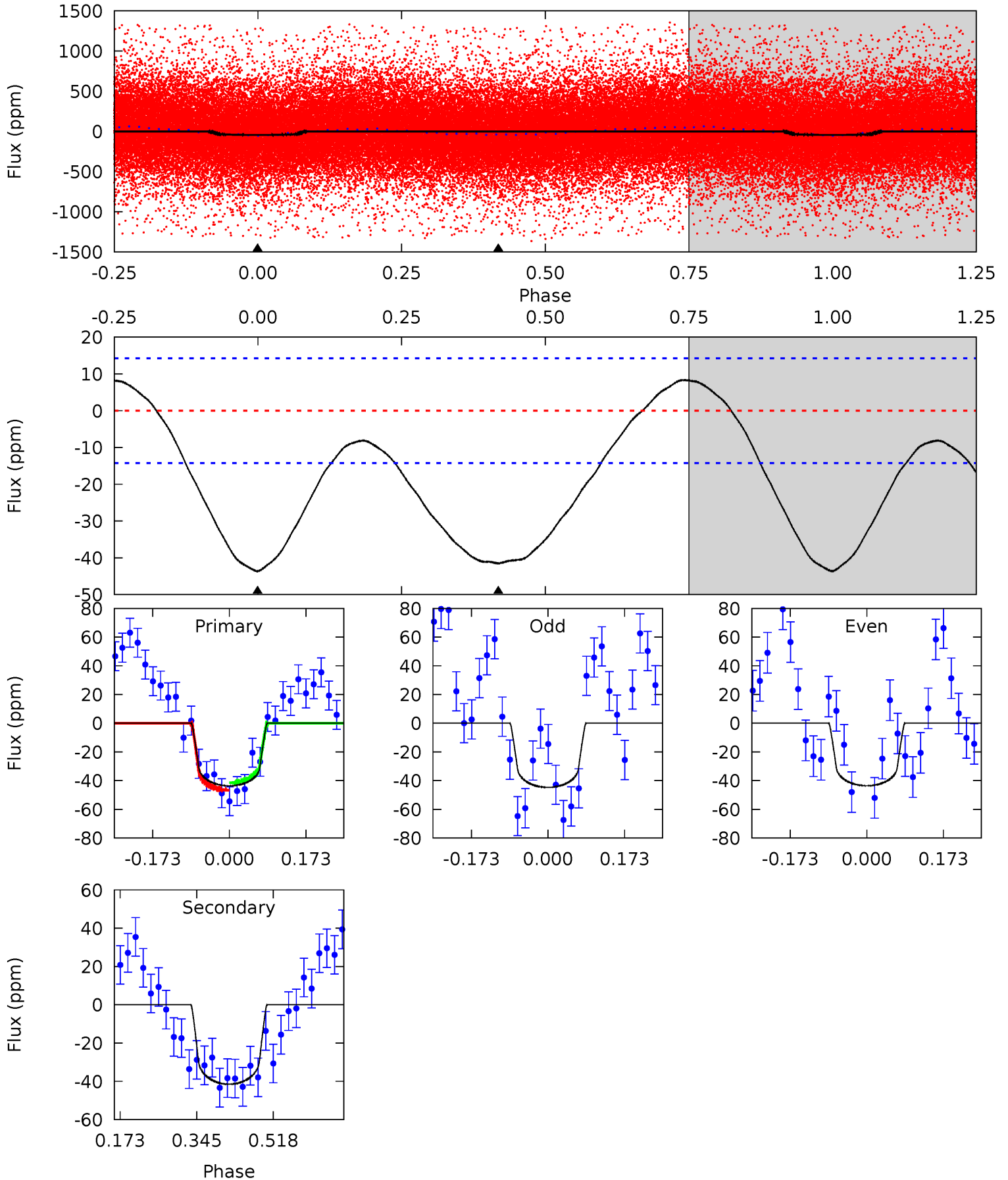
TCE 005308052-01 P= 1.237068 Days $T_0=131.736144$ (BKJD)



DV Model-Shift Uniqueness Test

005308052-01, P = 1.237074 Days, E = 130.531793 Days

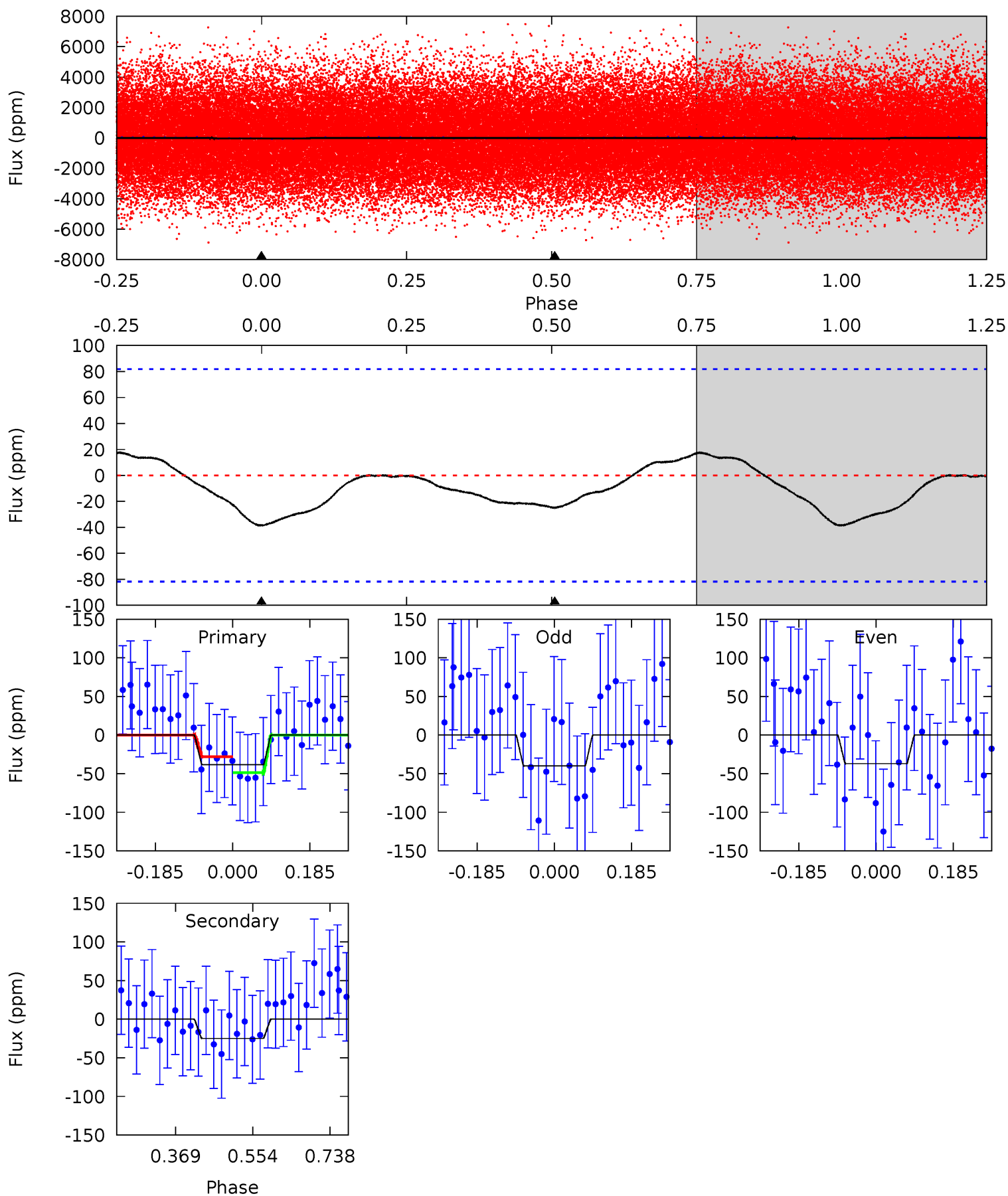
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	13.0	0	0	4.45	1.36	2.43	13.6	13.6	13.0	13.0	0.18	0.94	0.16	0.81



Alt Model-Shift Uniqueness Test

005308052-01, P = 1.237068 Days, E = 130.499076 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.08	1.35	0	0	4.43	1.33	0.47	2.08	2.08	1.35	1.35	0.08	0.77	0.31	0.56



Stellar Parameters For KIC 005308052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6564^{+155}_{-214}	$3.981^{+0.343}_{-0.147}$	$-0.280^{+0.250}_{-0.300}$	$1.879^{+0.543}_{-0.724}$	$1.231^{+0.201}_{-0.201}$	$0.261^{+0.607}_{-0.126}$
	+2%/-3%	+9%/-4%	+89%/-107%	+29%/-39%	+16%/-16%	+232%/-48%
Source	PHO1	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 005308052-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 3	$1.41^{+0.52}_{-0.52}$	3493^{+254}_{-358}	6040^{+1365}_{-733}	$6.661^{+9.701}_{-3.088}$
Alt.	-25 ± 18	$1.24^{+0.53}_{-0.46}$	3490^{+272}_{-361}	5572^{+1669}_{-1575}	$4.668^{+9.366}_{-3.654}$

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 $A_{obs} \gg 1.0$

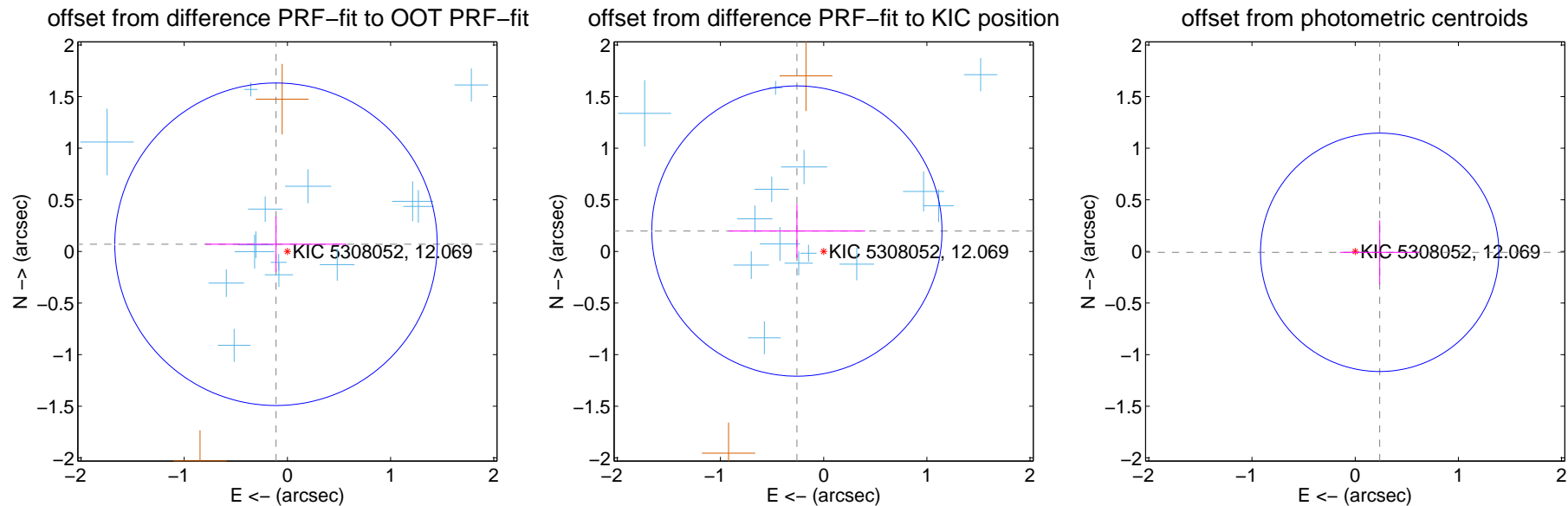
DV Centroid Data

Supplemental centroid analysis for 005308052-01. Kepler magnitude: 12.07. Transit SNR 12.32

There are 14 quarters with good PRF difference image offsets

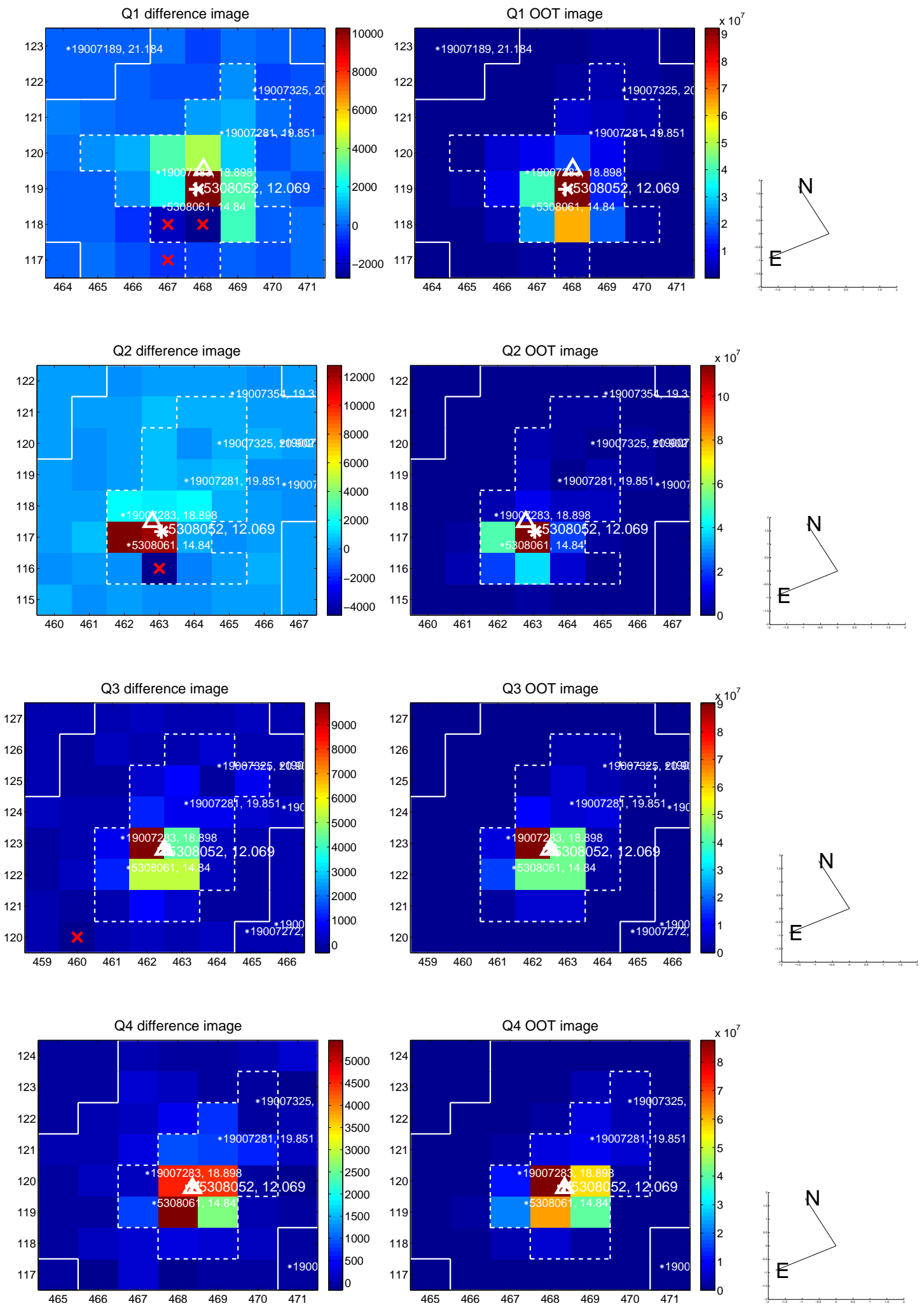
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 0.521	0.25	0.110 ± 0.682	0.069 ± 0.269
PRF-fit source offset from KIC position	0.326 ± 0.469	0.70	0.259 ± 0.662	0.197 ± 0.261
photometric centroid source offset	0.24 ± 0.38	0.62	-0.24 ± 0.39	-0.01 ± 0.31

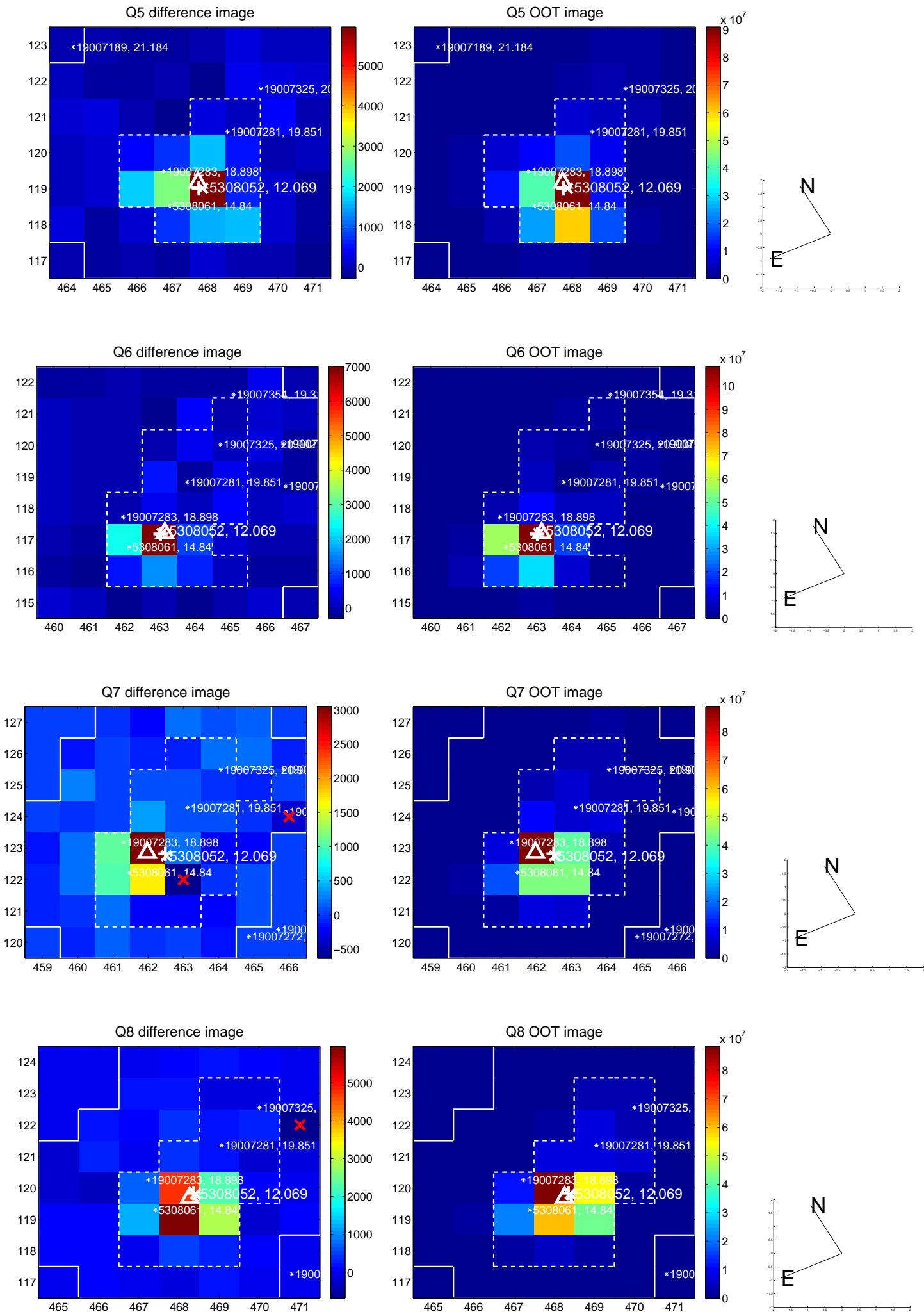


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

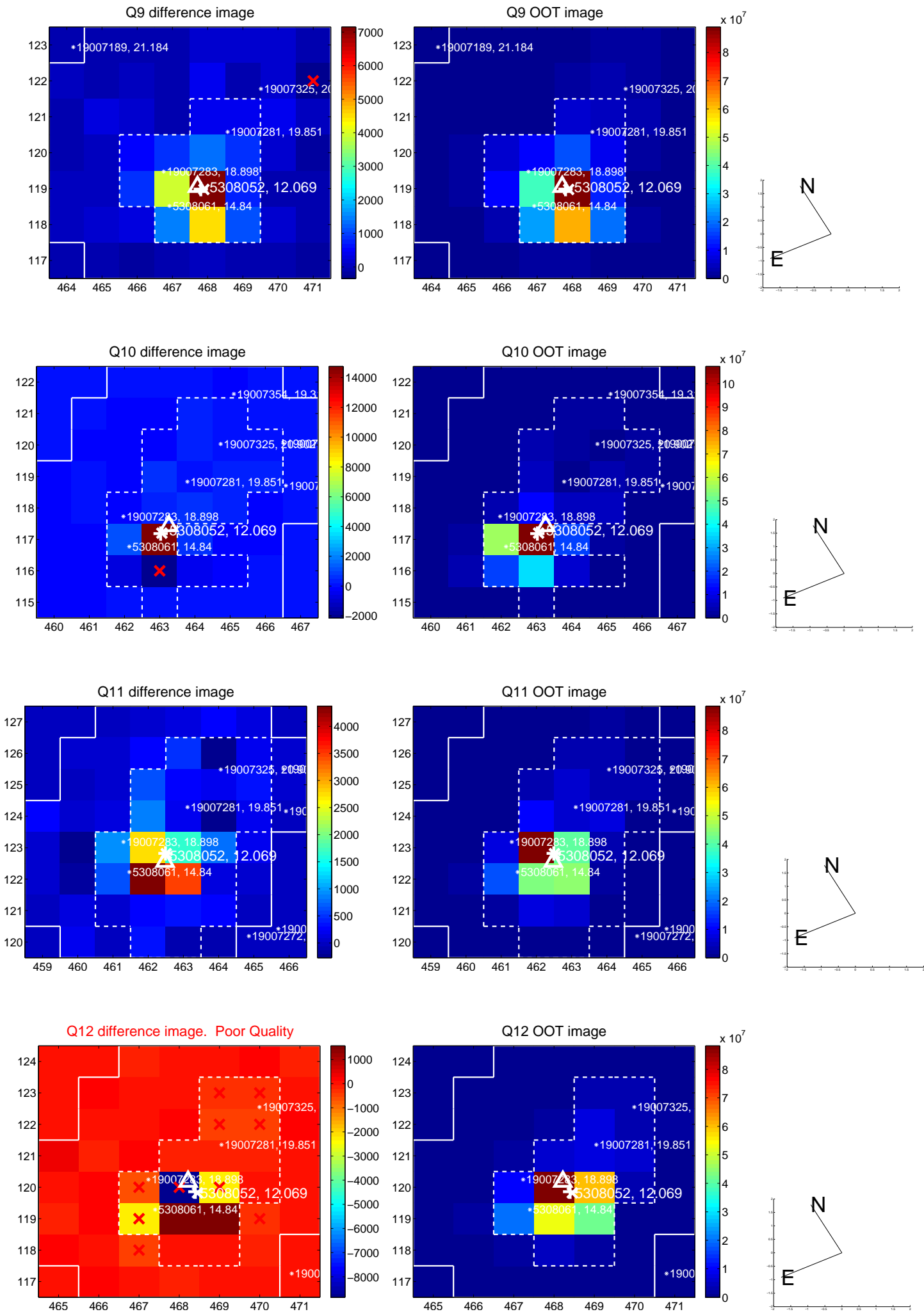
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



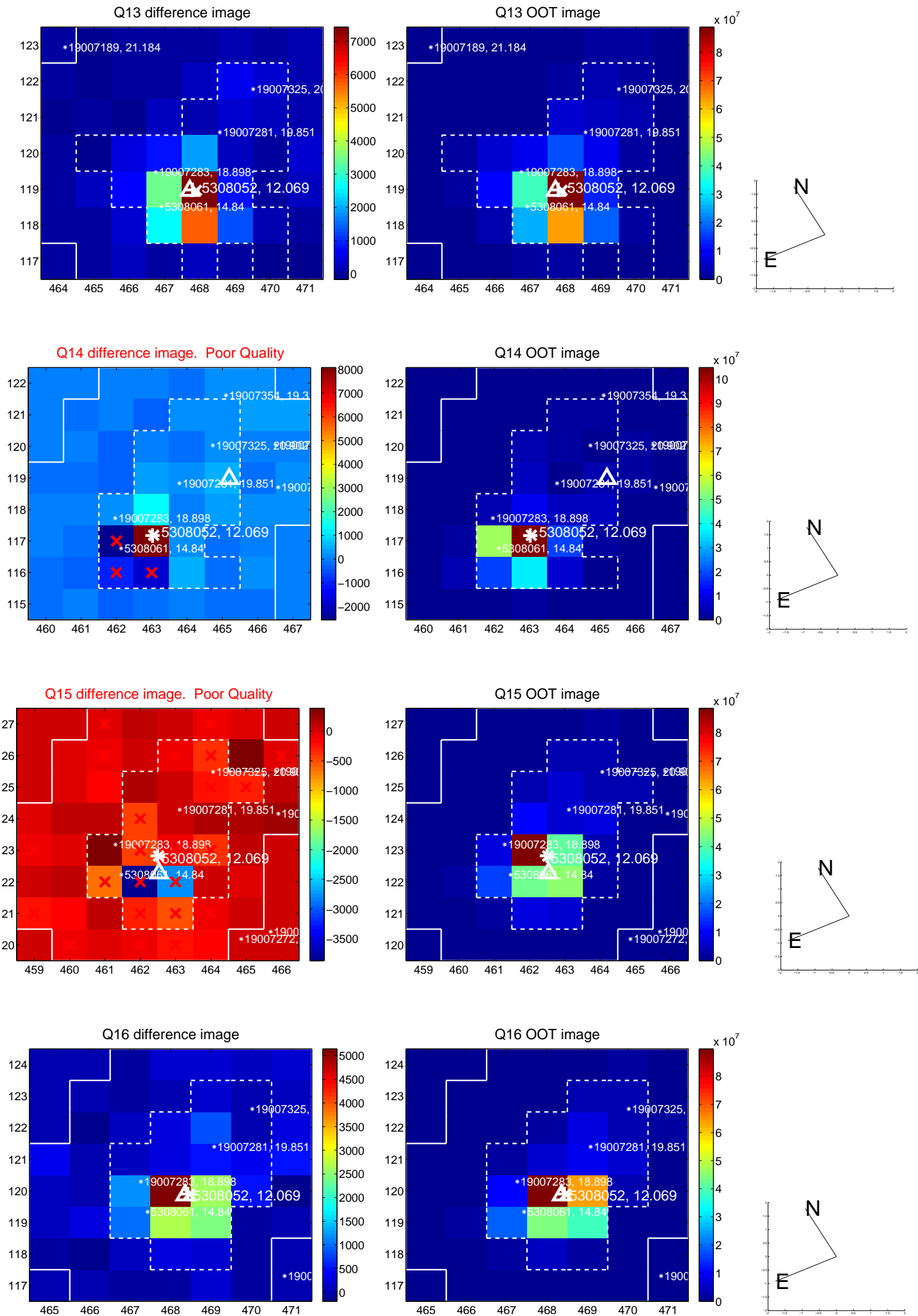
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



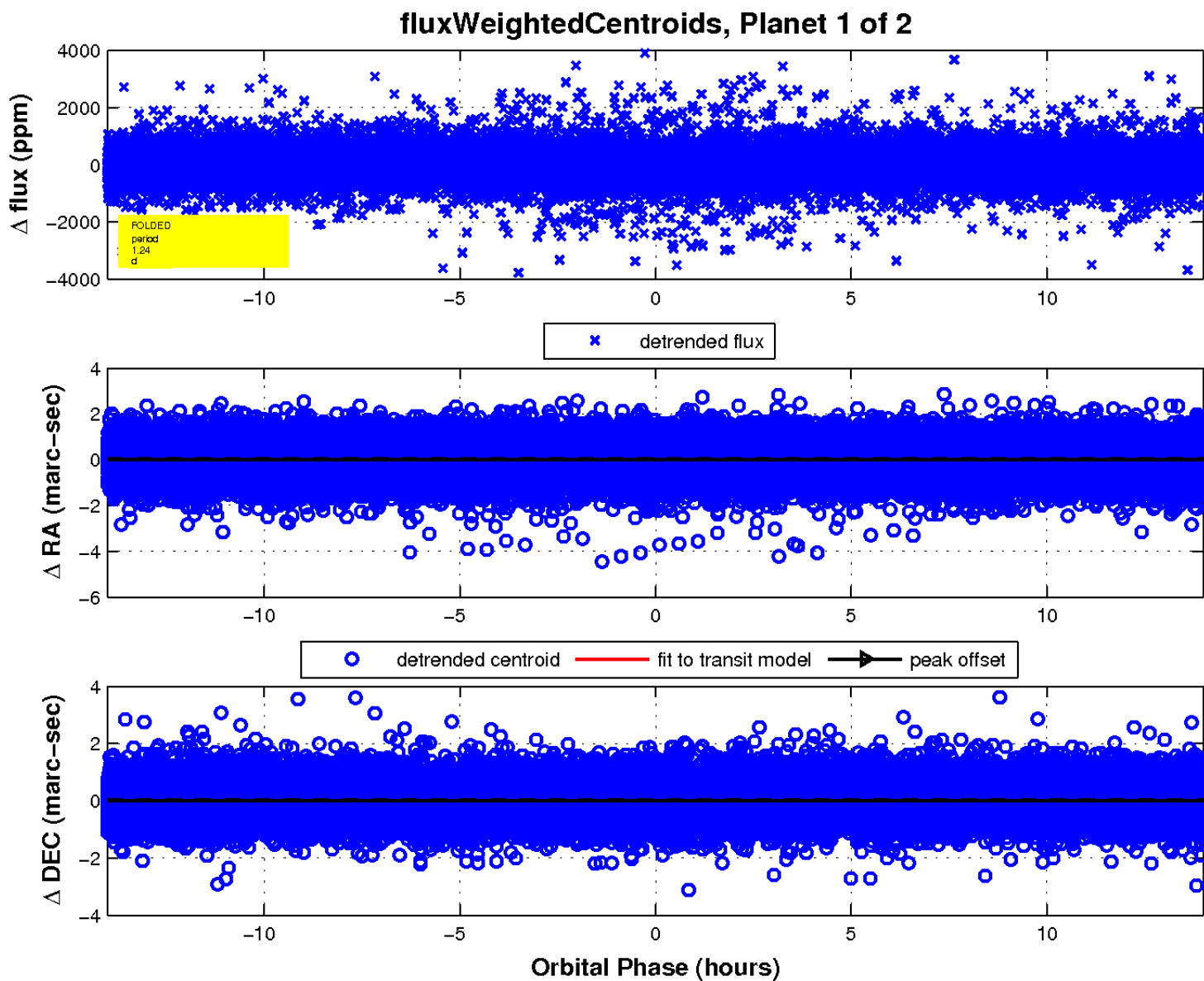
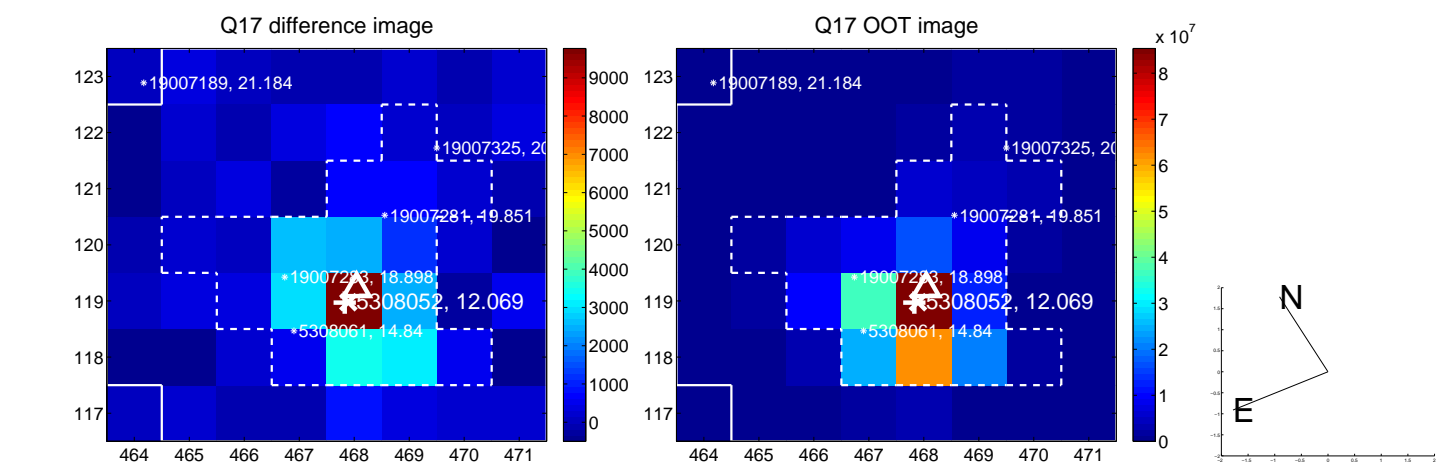
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



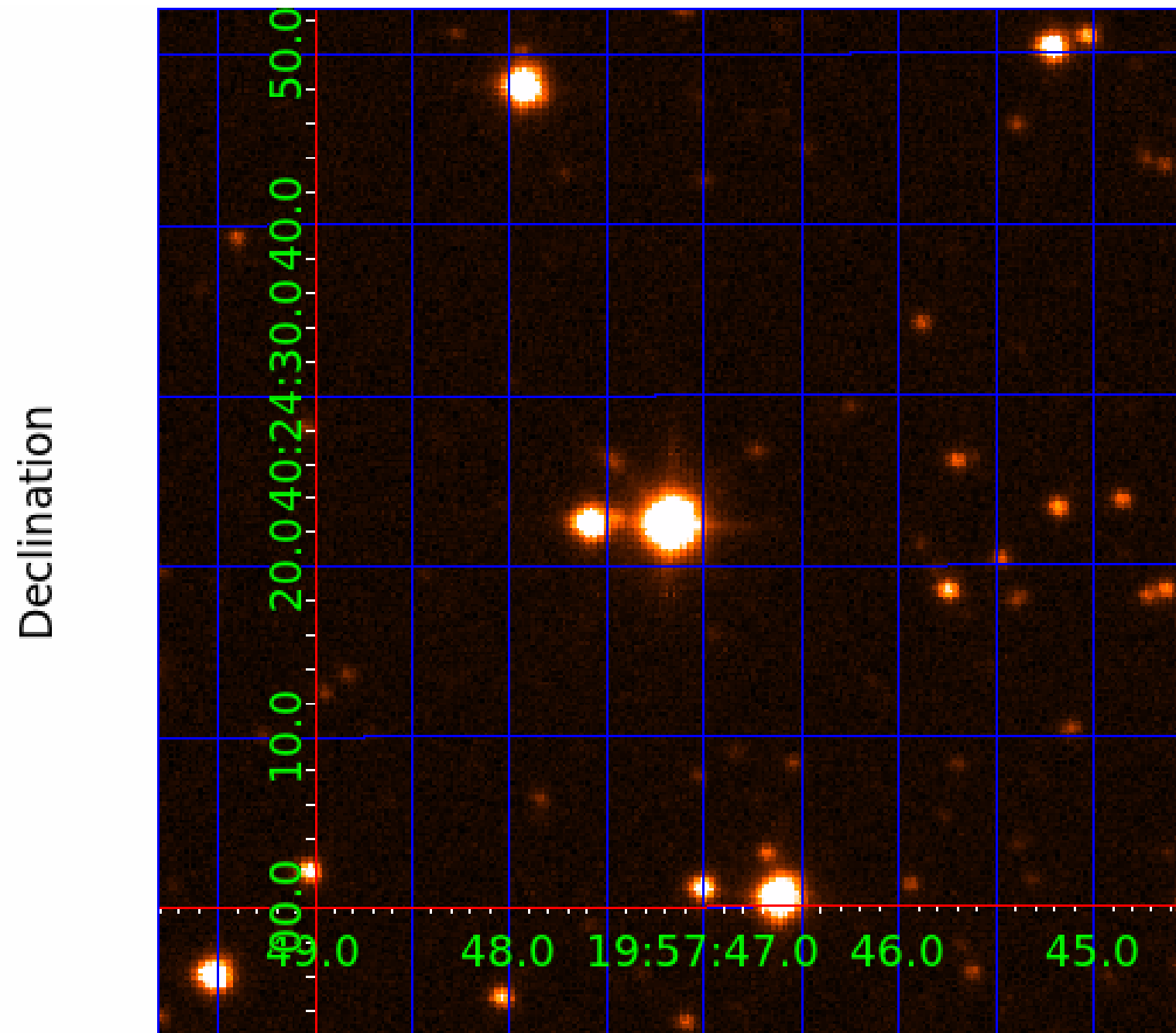
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005308052

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})
005308052-01	OBS	No	1.237074	131.768867	50.4	4.666	10.2	12.3	1.88	6564	1.51	10038.28
005308052-02	OBS	No	0.532578	131.529344	70.4	1.175	8.9	11.9	1.88	6564	1.85	30879.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005308052-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005308052-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

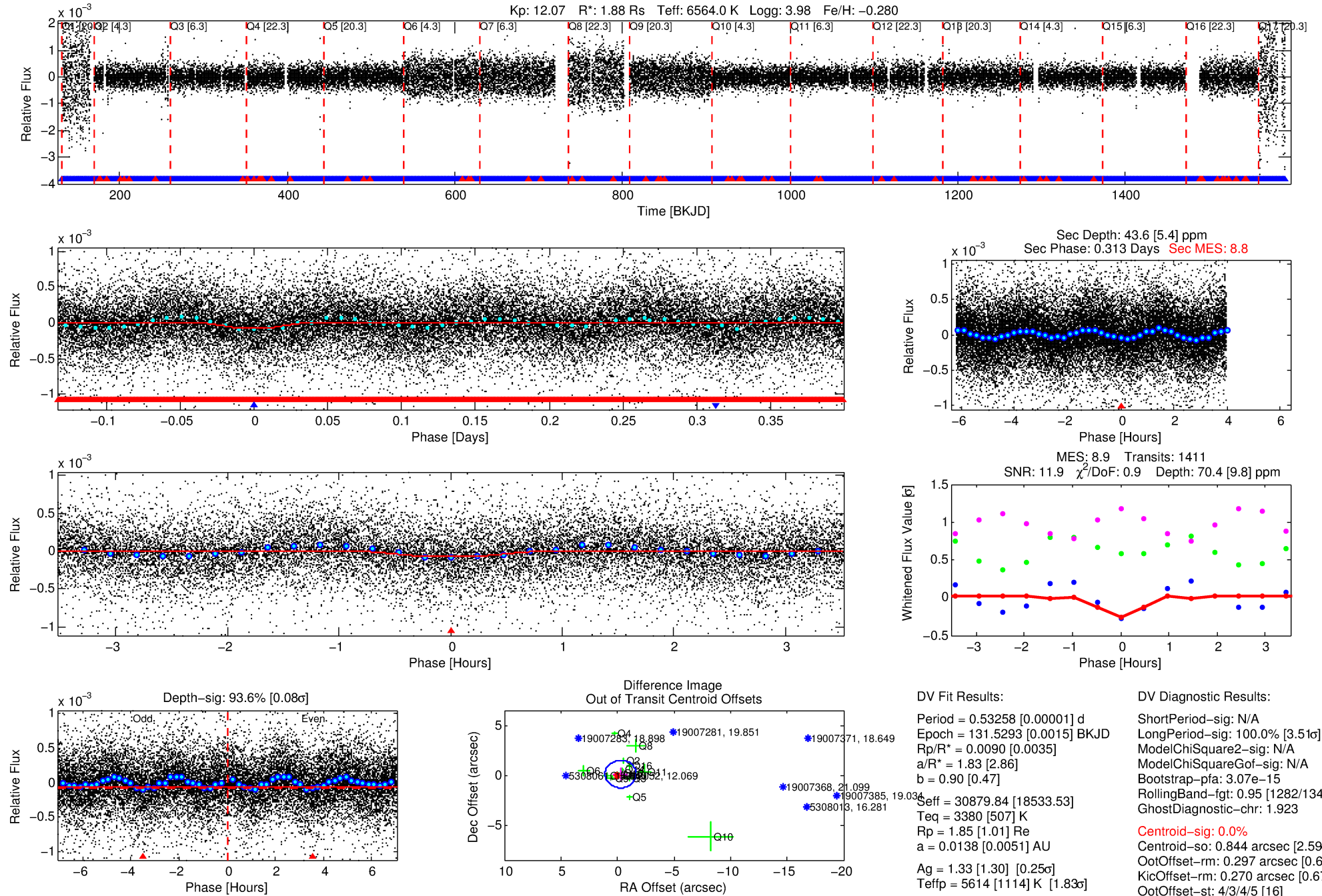
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005308052-02

No Significant Match Found

DV One-Page Summary

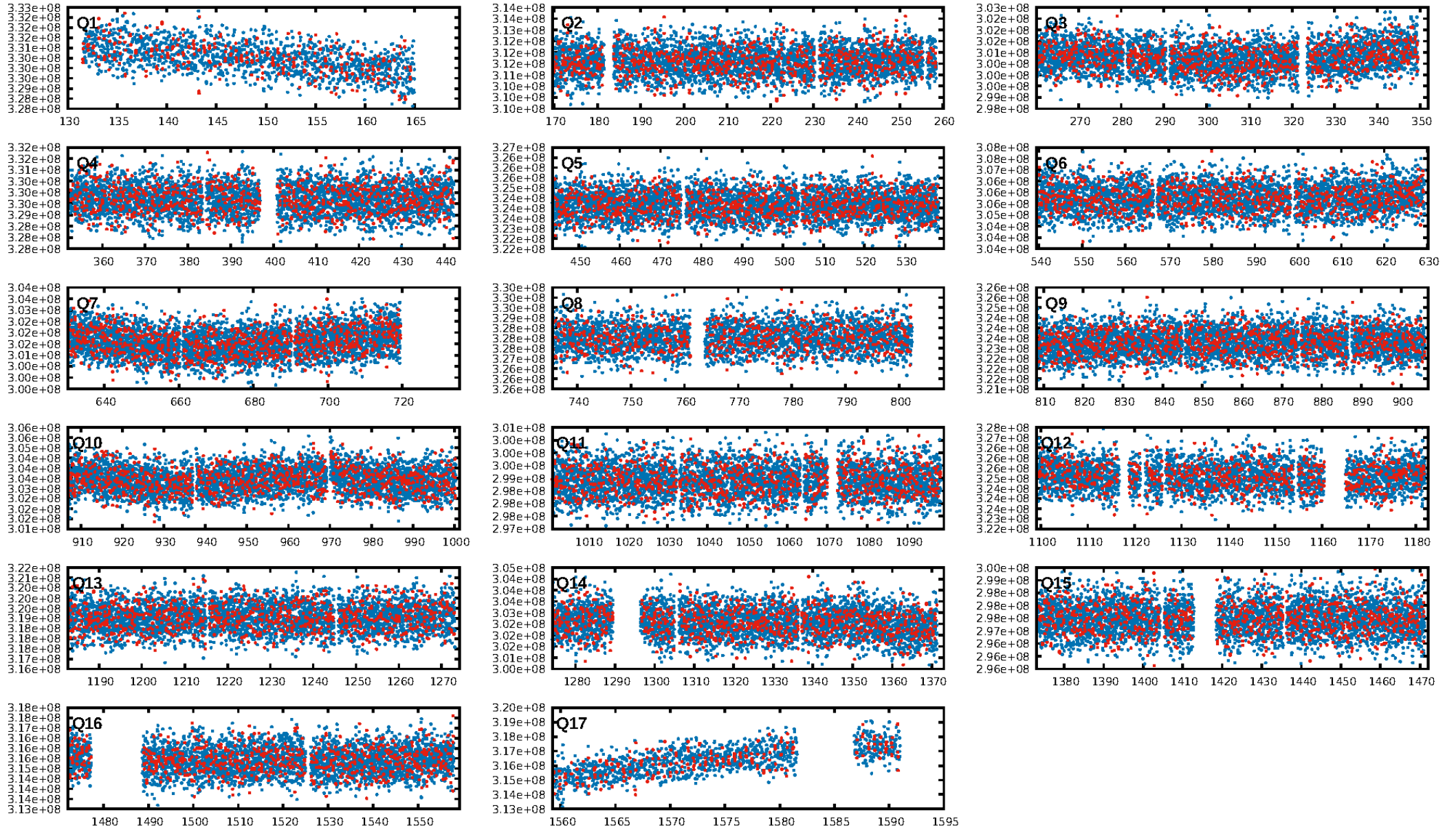
KIC: 5308052 Candidate: 2 of 2 Period: 0.533 d



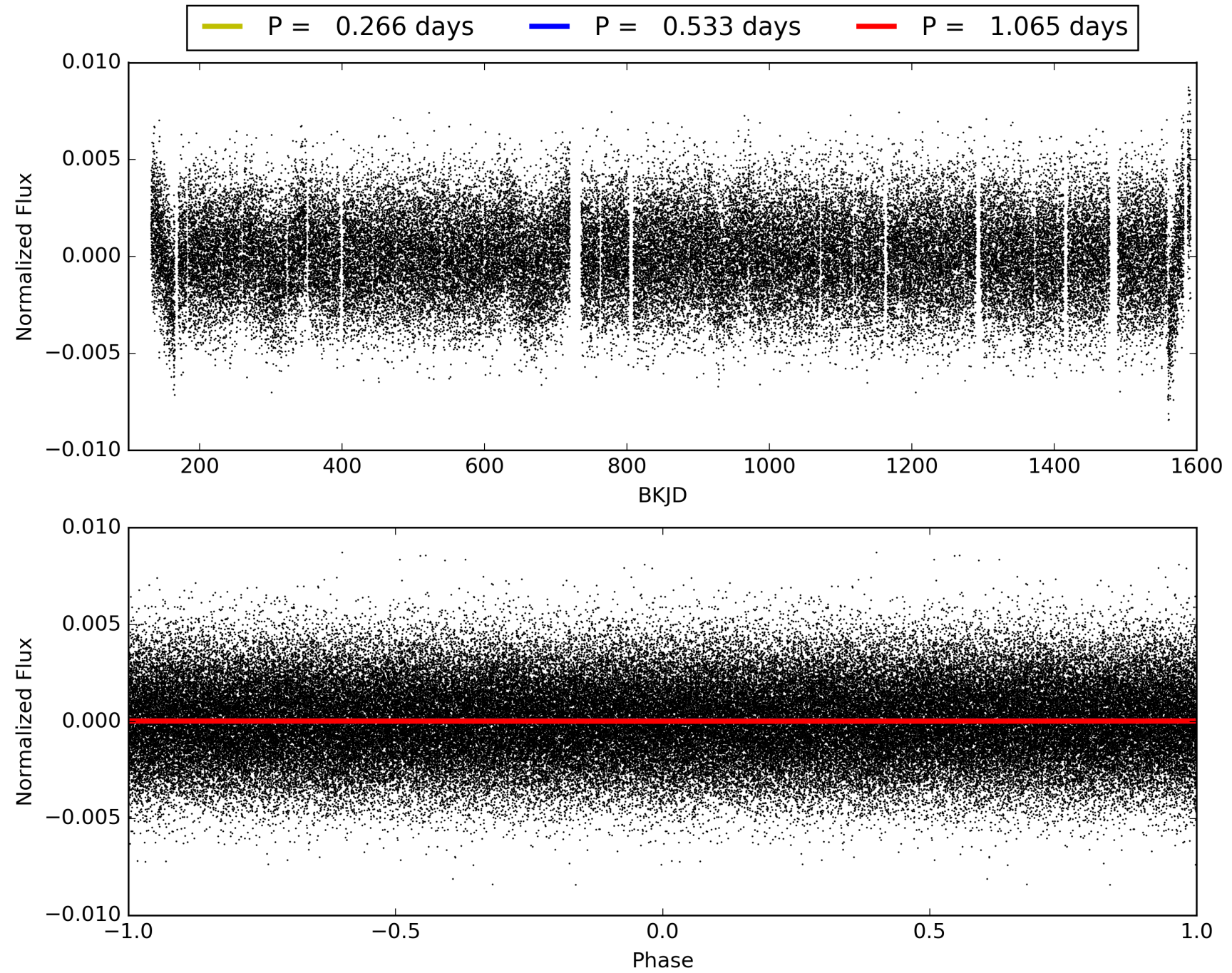
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:32:45 Z

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

TCE 005308052-02, PDC Light Curves

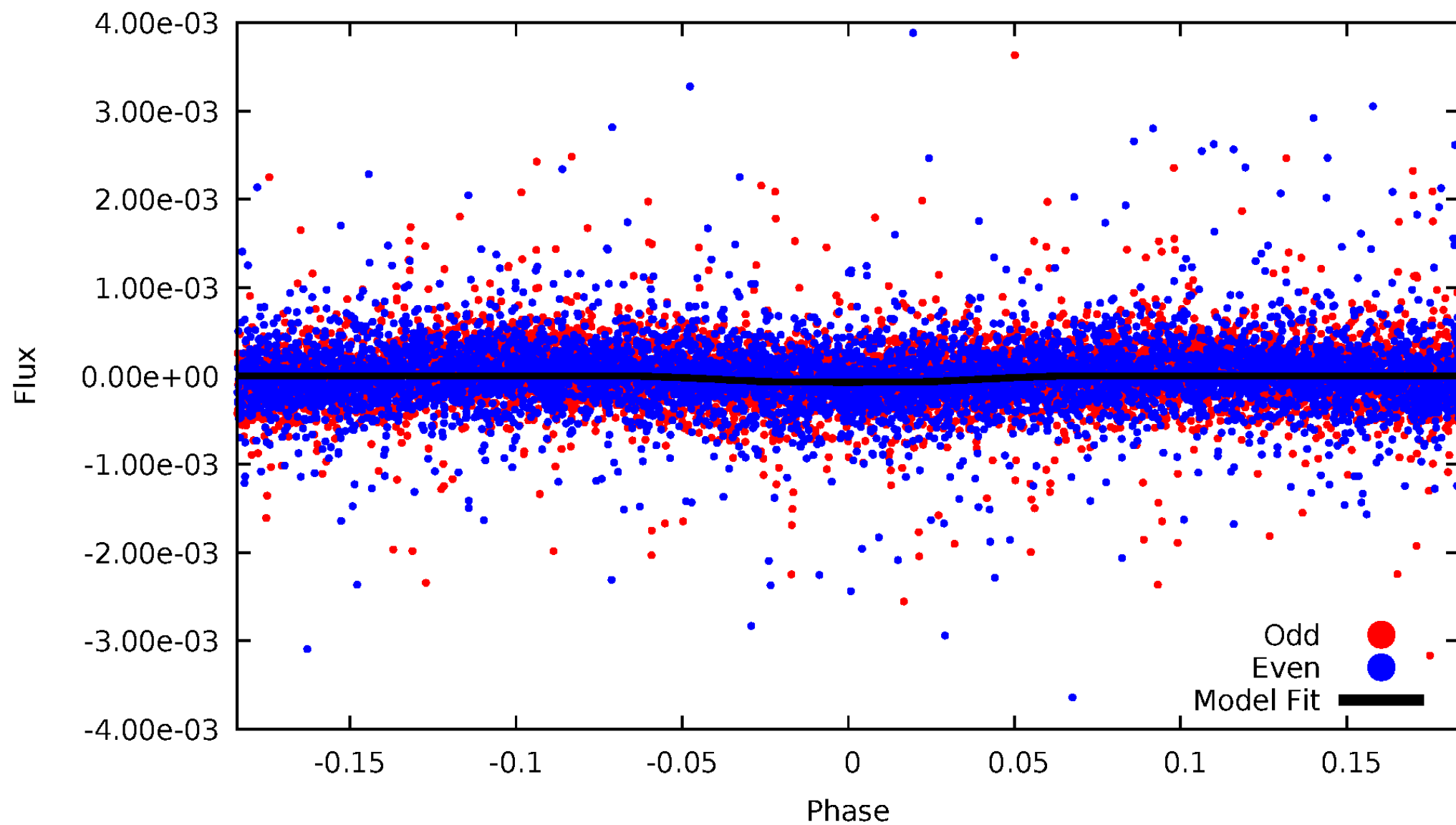


TCE 005308052-02



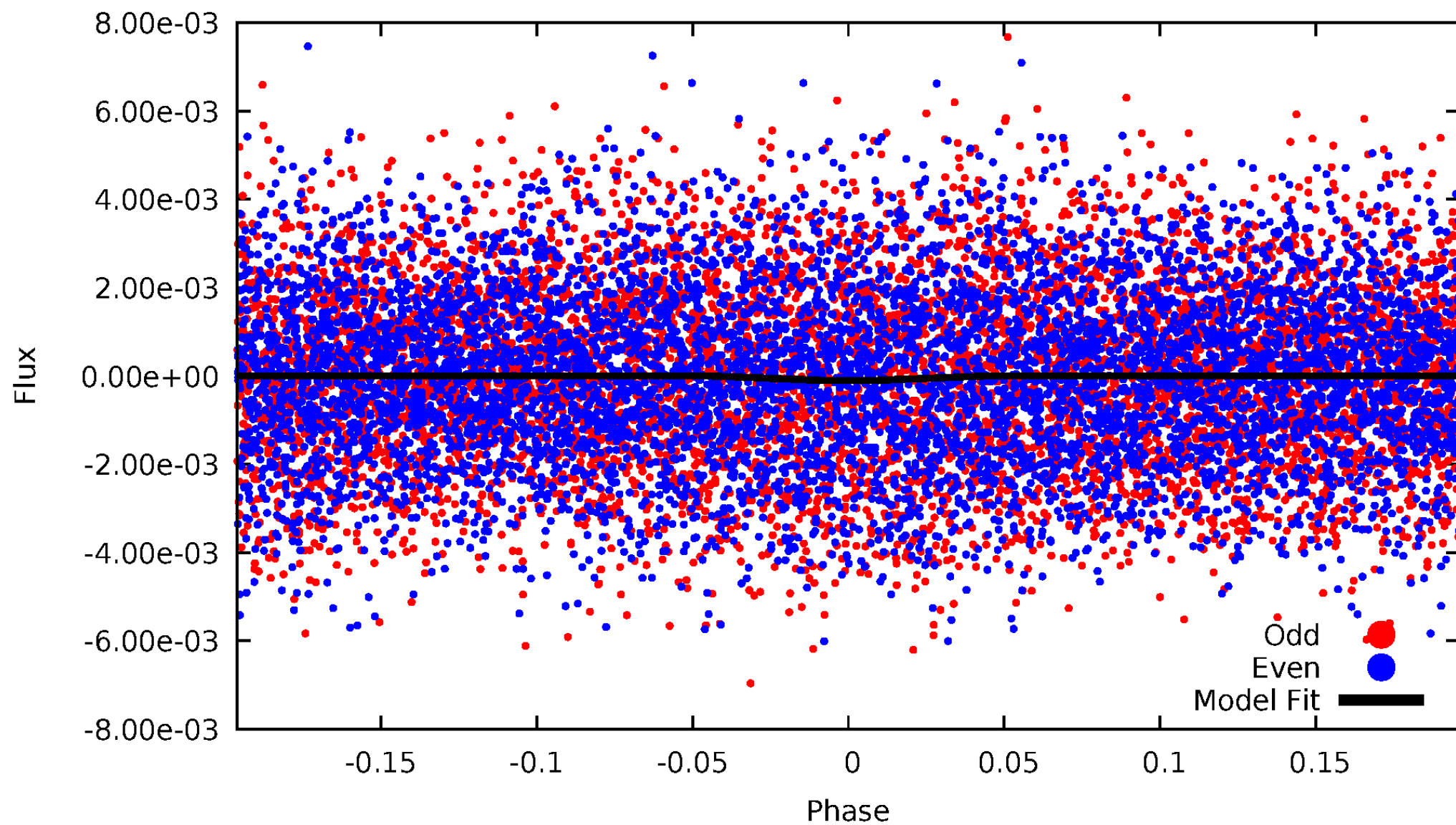
DV Odd/Even

TCE 005308052-02



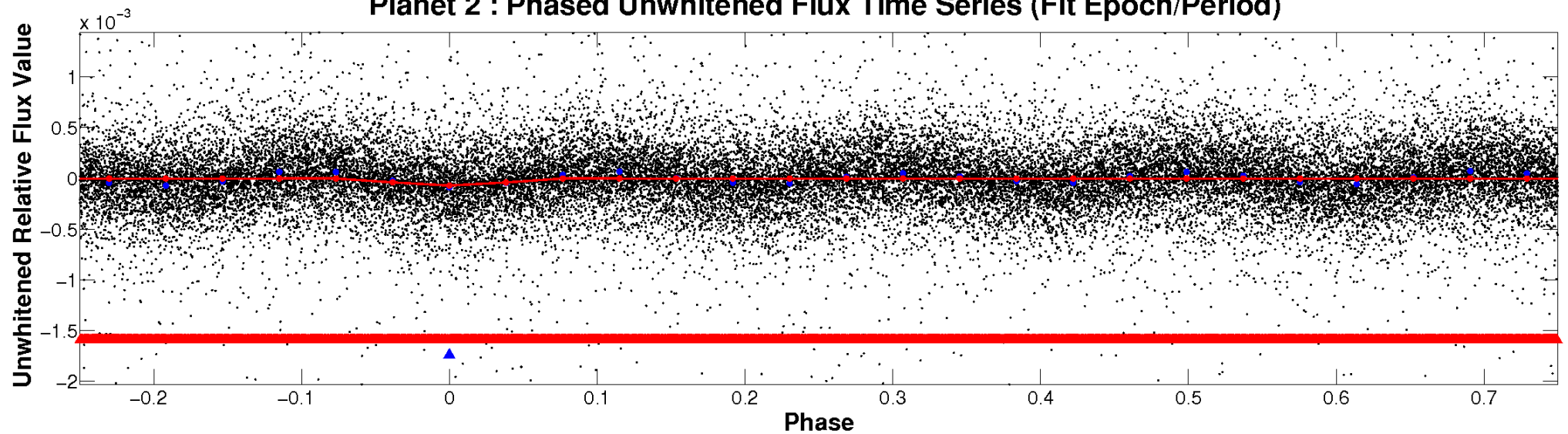
ALT Odd/Even

TCE 005308052-02

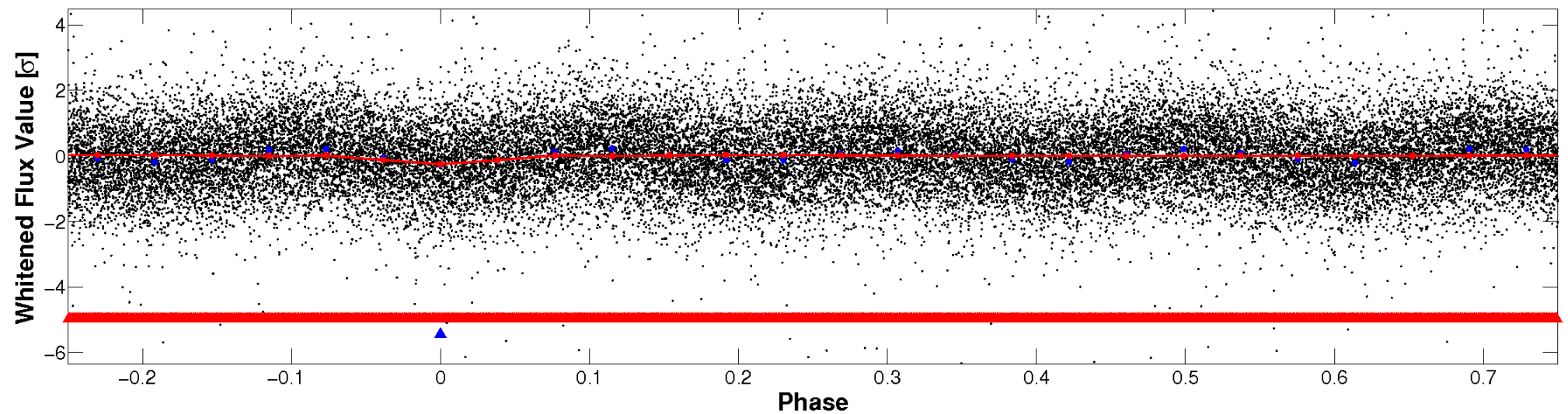


Non-Whitened Vs. Whitened Light Curve

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

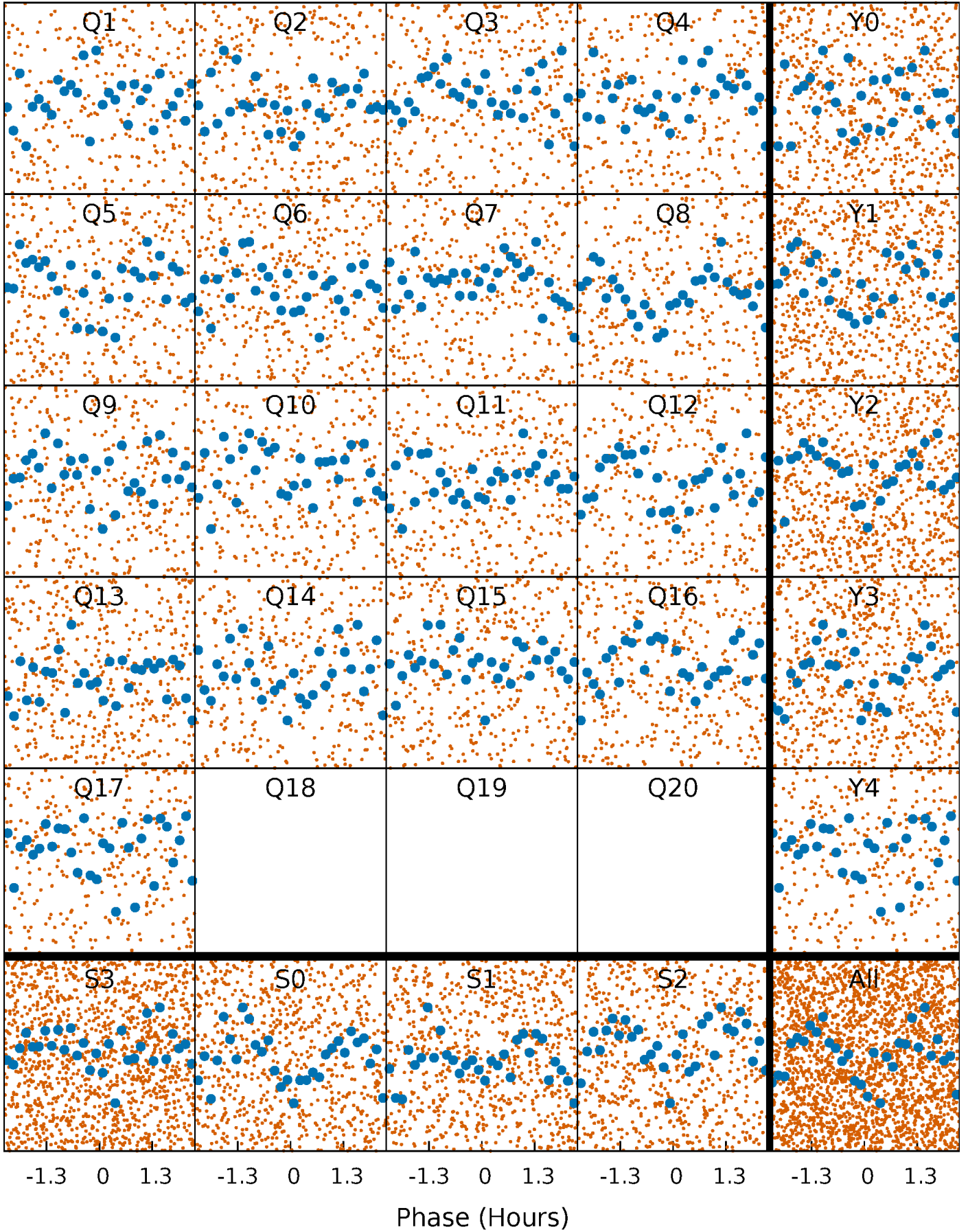


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



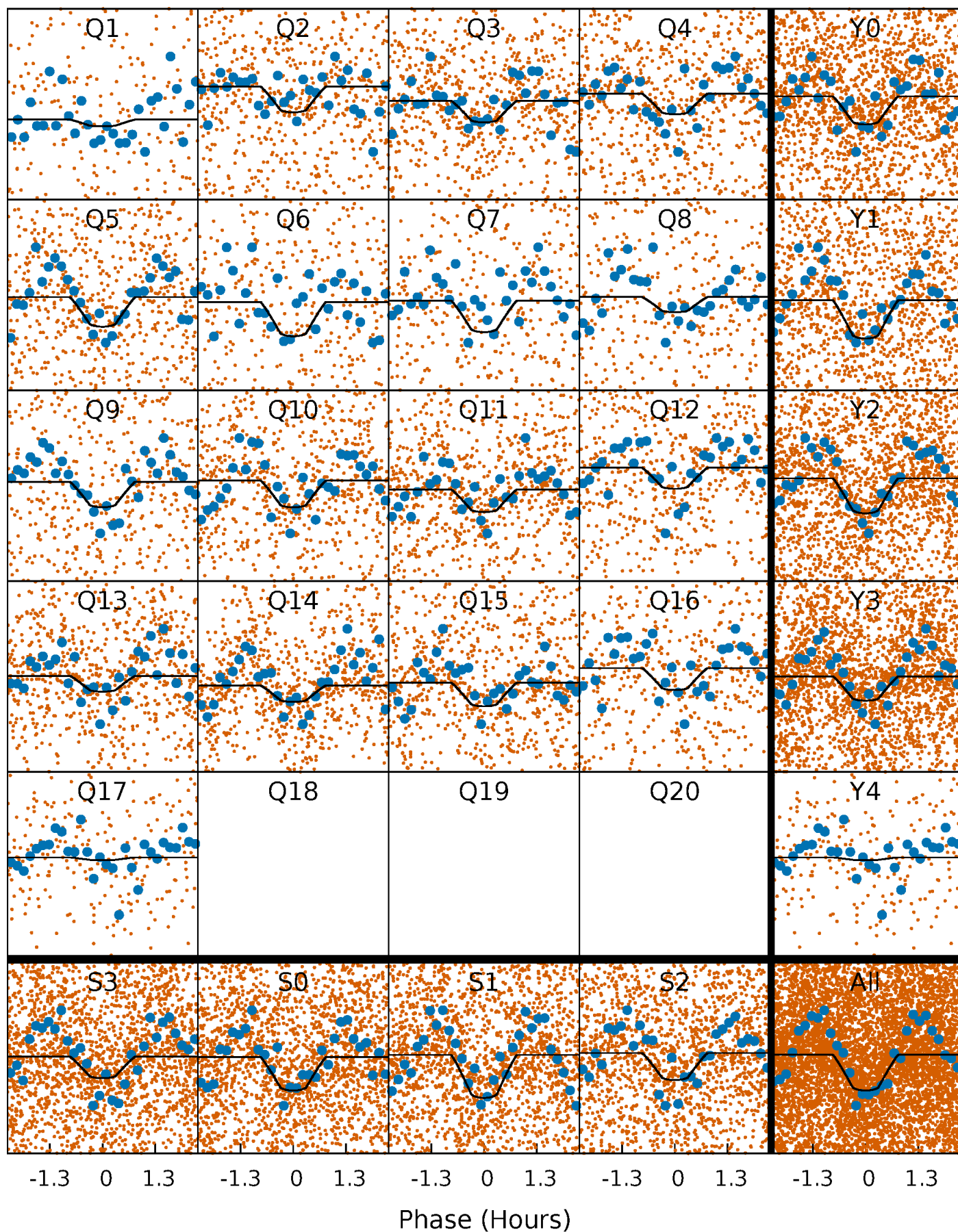
PDC Quarter-Phased Transit Curves

TCE 005308052-02 P= 0.532578 Days $T_0=131.529344$ (BKJD)



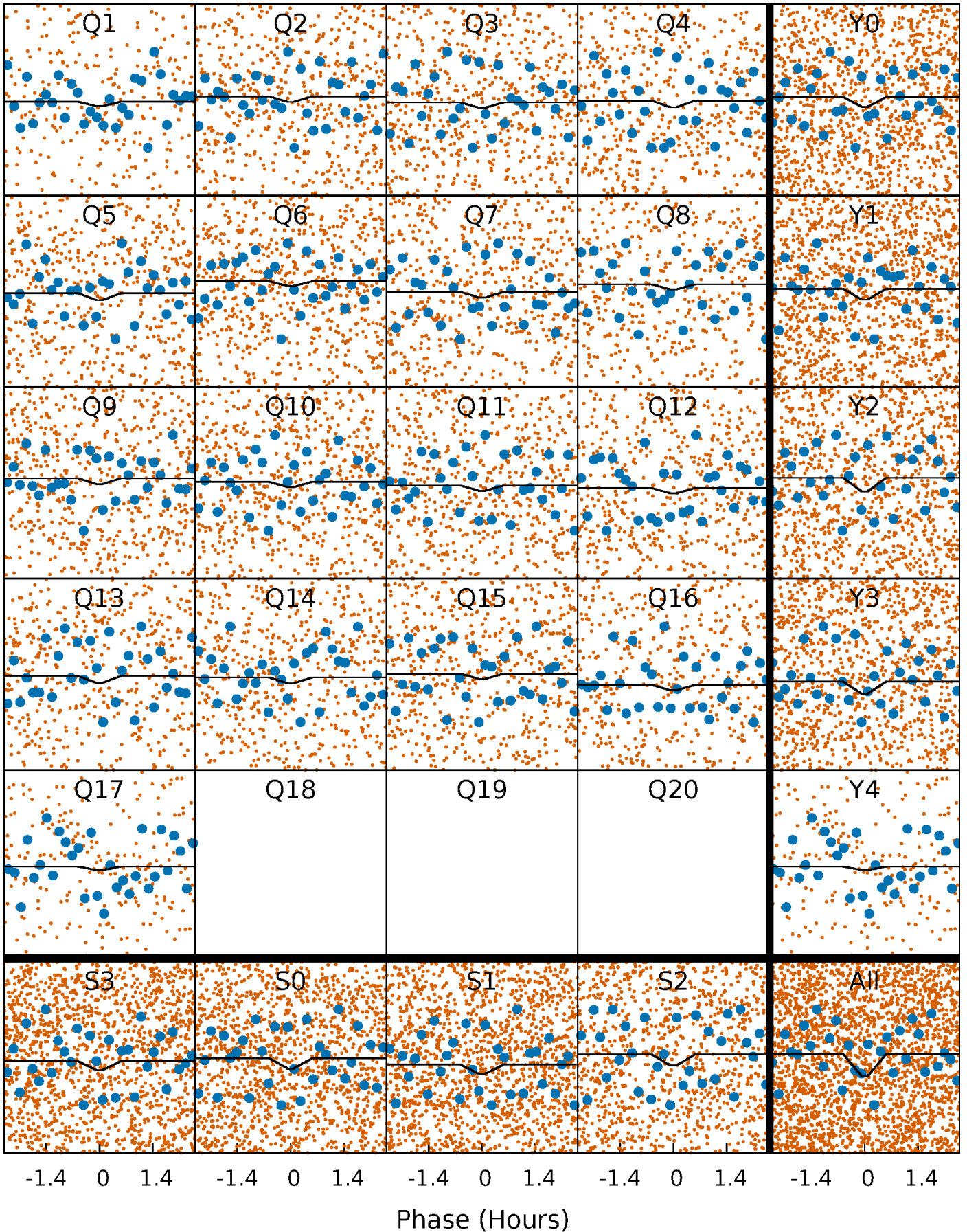
DV Quarter-Phased Transit Curves

TCE 005308052-02 P= 0.532578 Days $T_0=131.529344$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

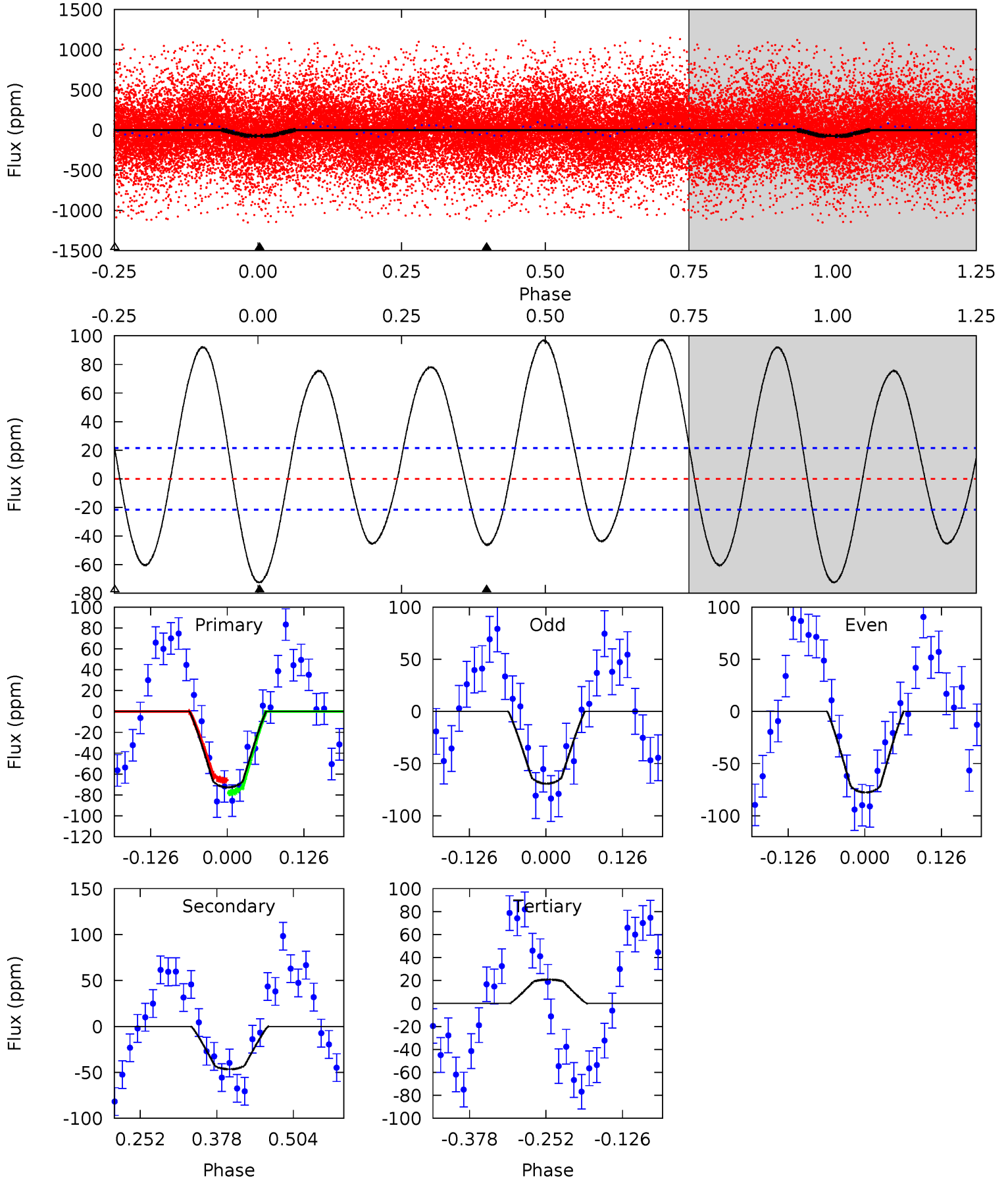
TCE 005308052-02 P= 0.532581 Days $T_0=131.528754$ (BKJD)



DV Model-Shift Uniqueness Test

005308052-02, P = 0.532578 Days, E = 131.529344 Days

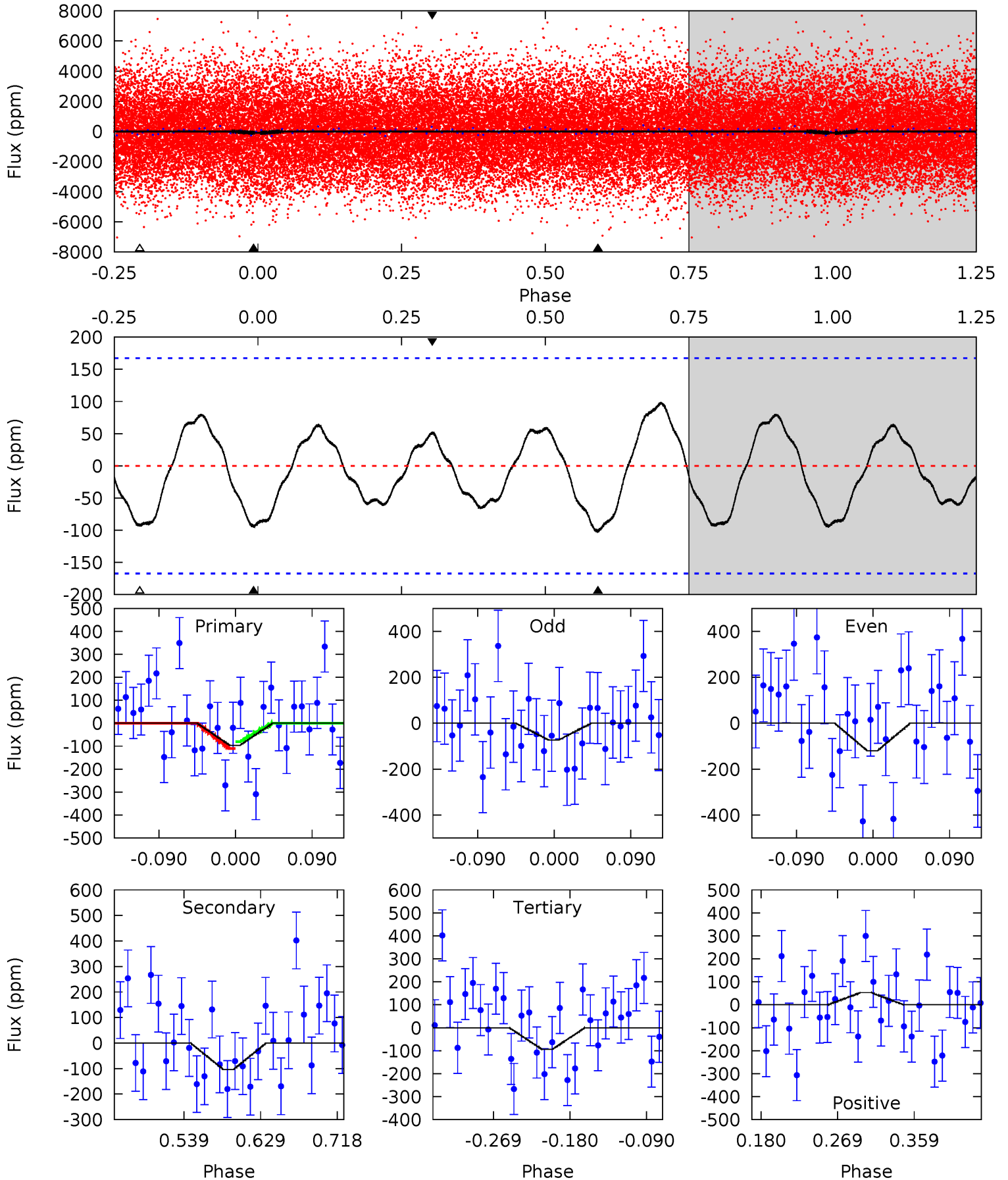
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	9.76	-4.36	0	4.52	1.53	9.59	19.6	15.2	14.1	9.76	0.91	1.13	0.57	1.26



Alt Model-Shift Uniqueness Test

005308052-02, P = 0.532581 Days, E = 131.528754 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.64	2.83	2.58	1.45	4.59	1.70	1.41	0.05	1.18	0.25	1.38	0.63	4.86	0.49	0.40



Stellar Parameters For KIC 005308052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6564^{+155}_{-214}	$3.981^{+0.343}_{-0.147}$	$-0.280^{+0.250}_{-0.300}$	$1.879^{+0.543}_{-0.724}$	$1.231^{+0.201}_{-0.201}$	$0.261^{+0.607}_{-0.126}$
	+2%/-3%	+9%/-4%	+89%/-107%	+29%/-39%	+16%/-16%	+232%/-48%
Source	PHO1	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 005308052-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 5	$1.73^{+0.80}_{-0.76}$	4631^{+386}_{-463}	5457^{+1811}_{-956}	$1.643^{+3.374}_{-0.838}$
Alt.	-103 ± 36	$1.99^{+0.72}_{-0.76}$	4623^{+362}_{-427}	6281^{+2024}_{-1122}	$2.688^{+4.749}_{-1.447}$

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 $A_{obs} \gg 1.0$

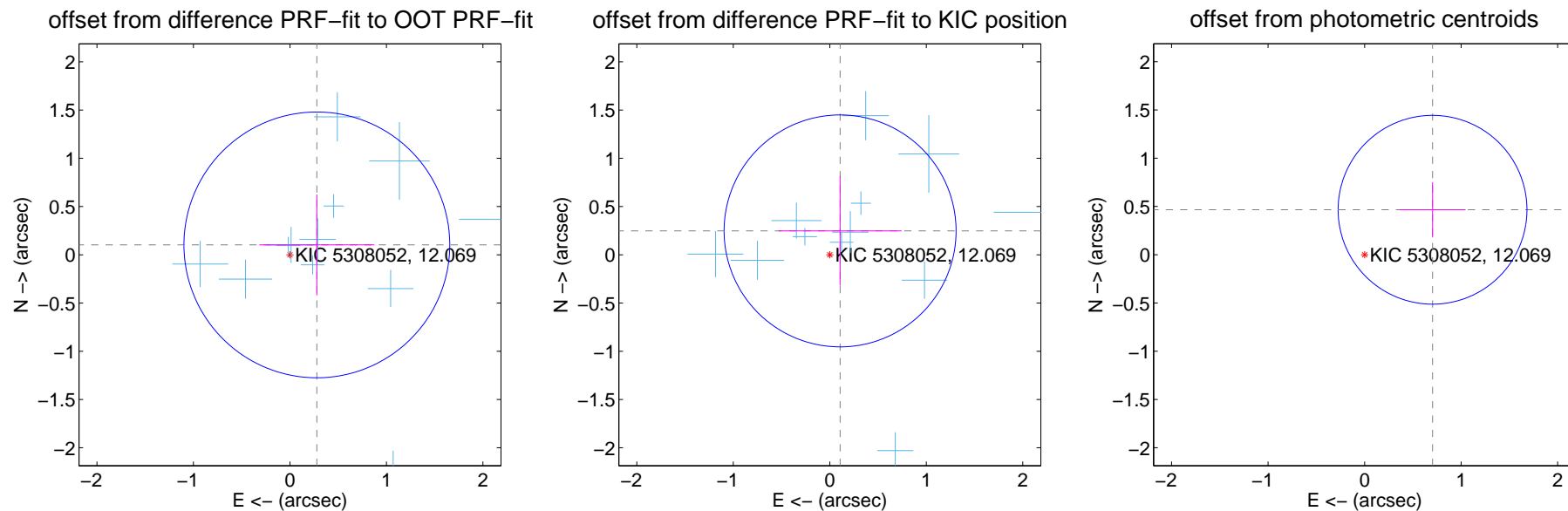
DV Centroid Data

Supplemental centroid analysis for 005308052-02. Kepler magnitude: 12.07. Transit SNR 11.89

There are 12 quarters with good PRF difference image offsets

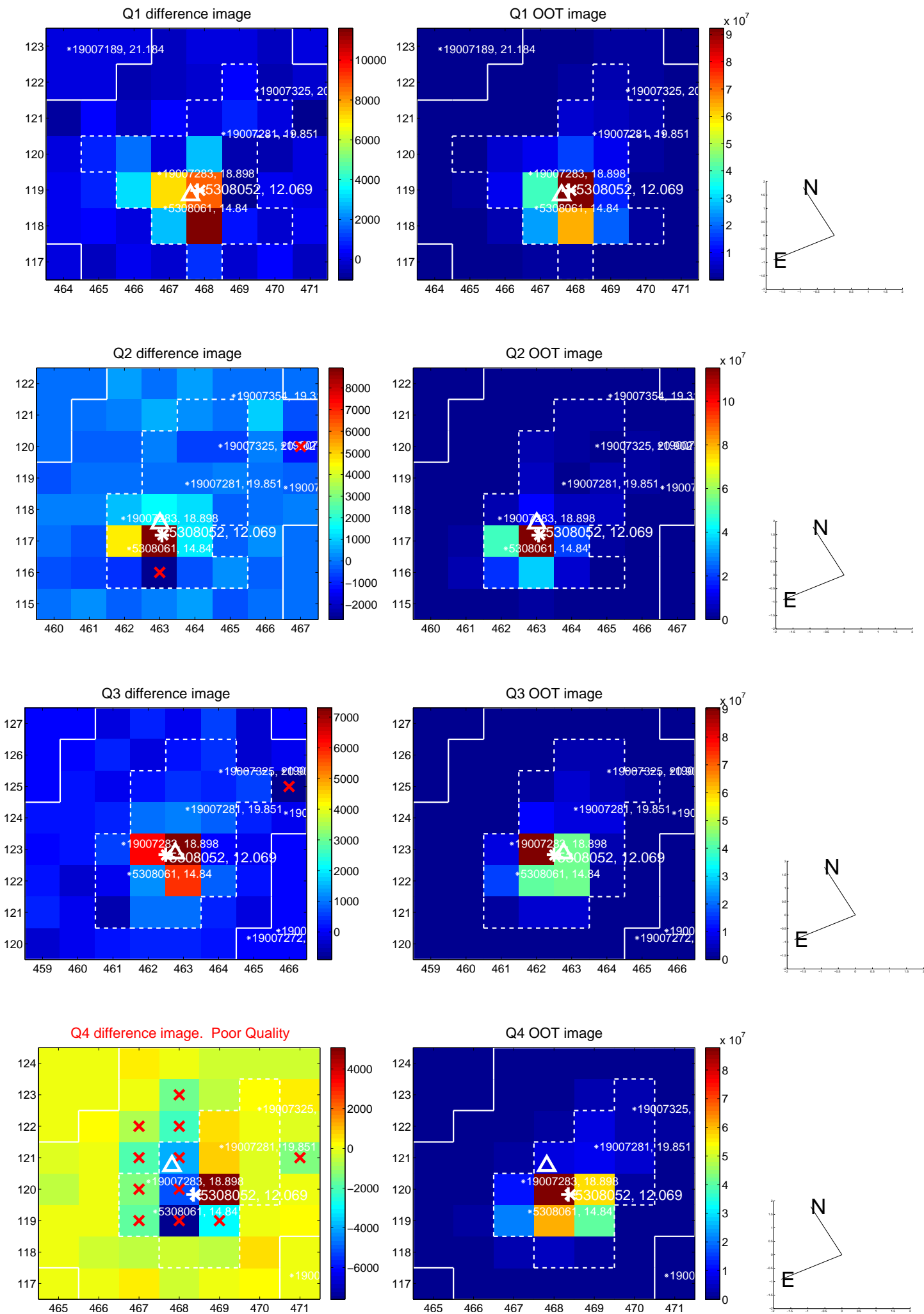
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.297 ± 0.459	0.65	-0.279 ± 0.597	0.102 ± 0.523
PRF-fit source offset from KIC position	0.270 ± 0.401	0.67	-0.107 ± 0.638	0.247 ± 0.568
photometric centroid source offset	0.84 ± 0.33	2.59	-0.70 ± 0.34	0.47 ± 0.29

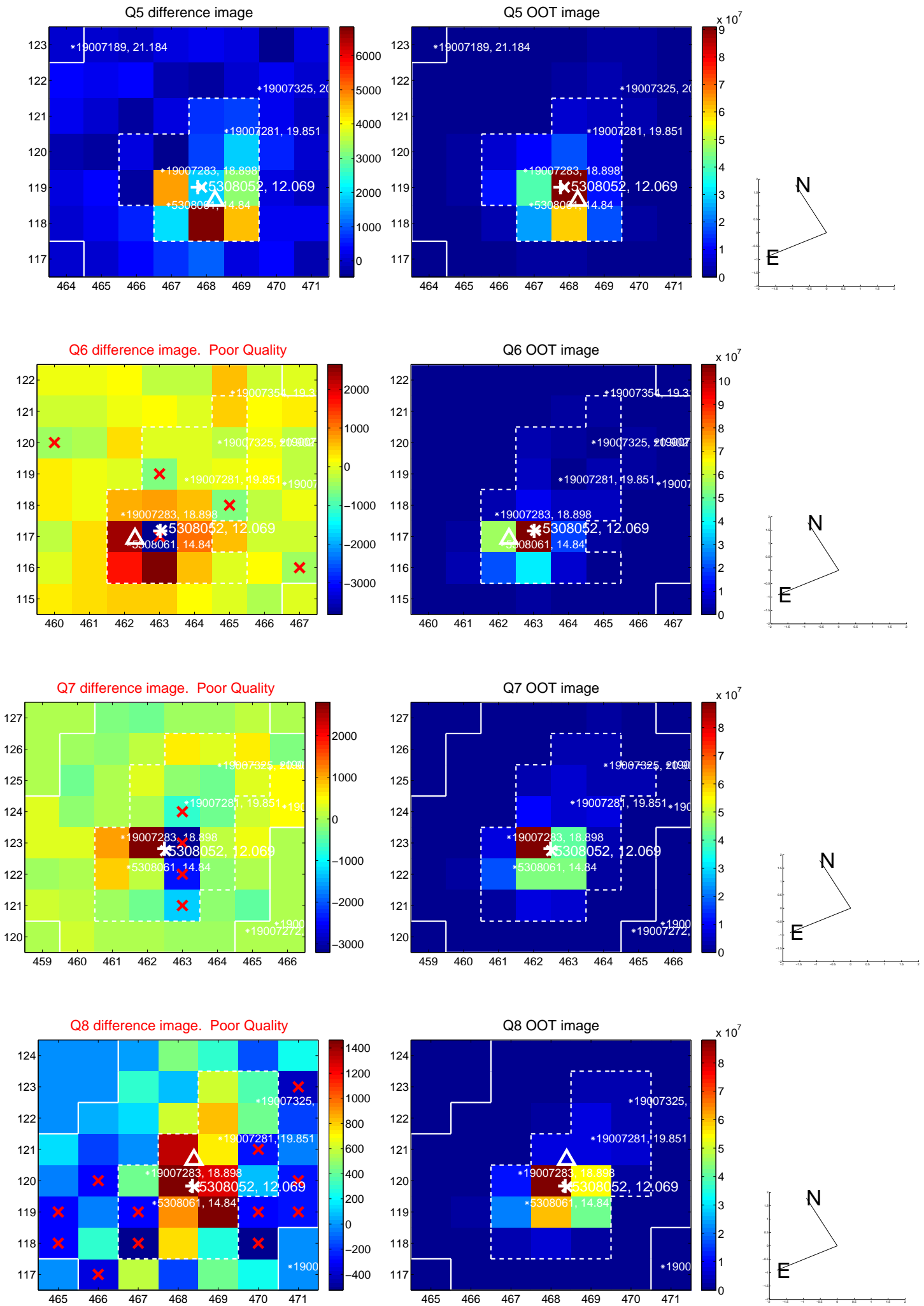


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

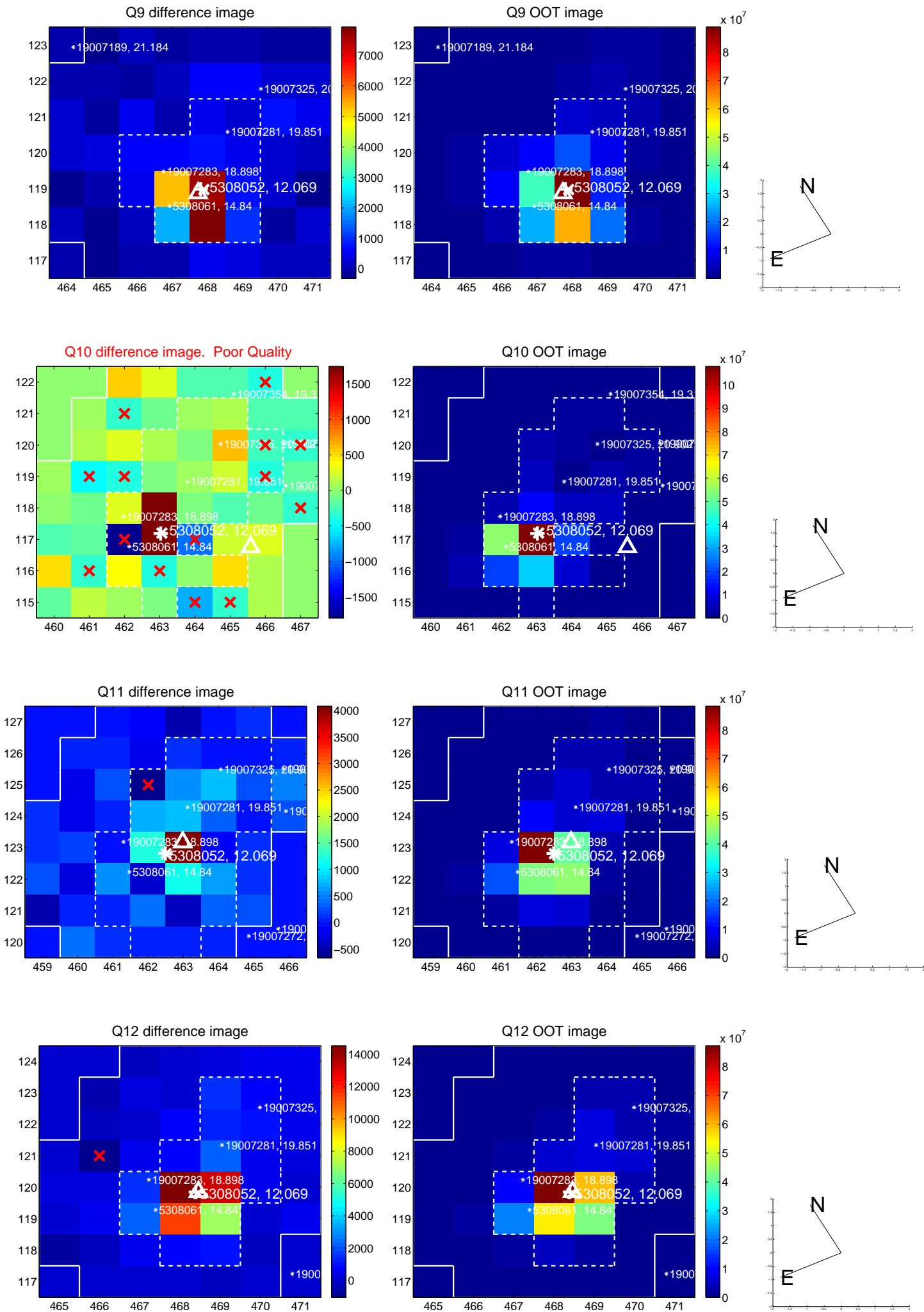
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



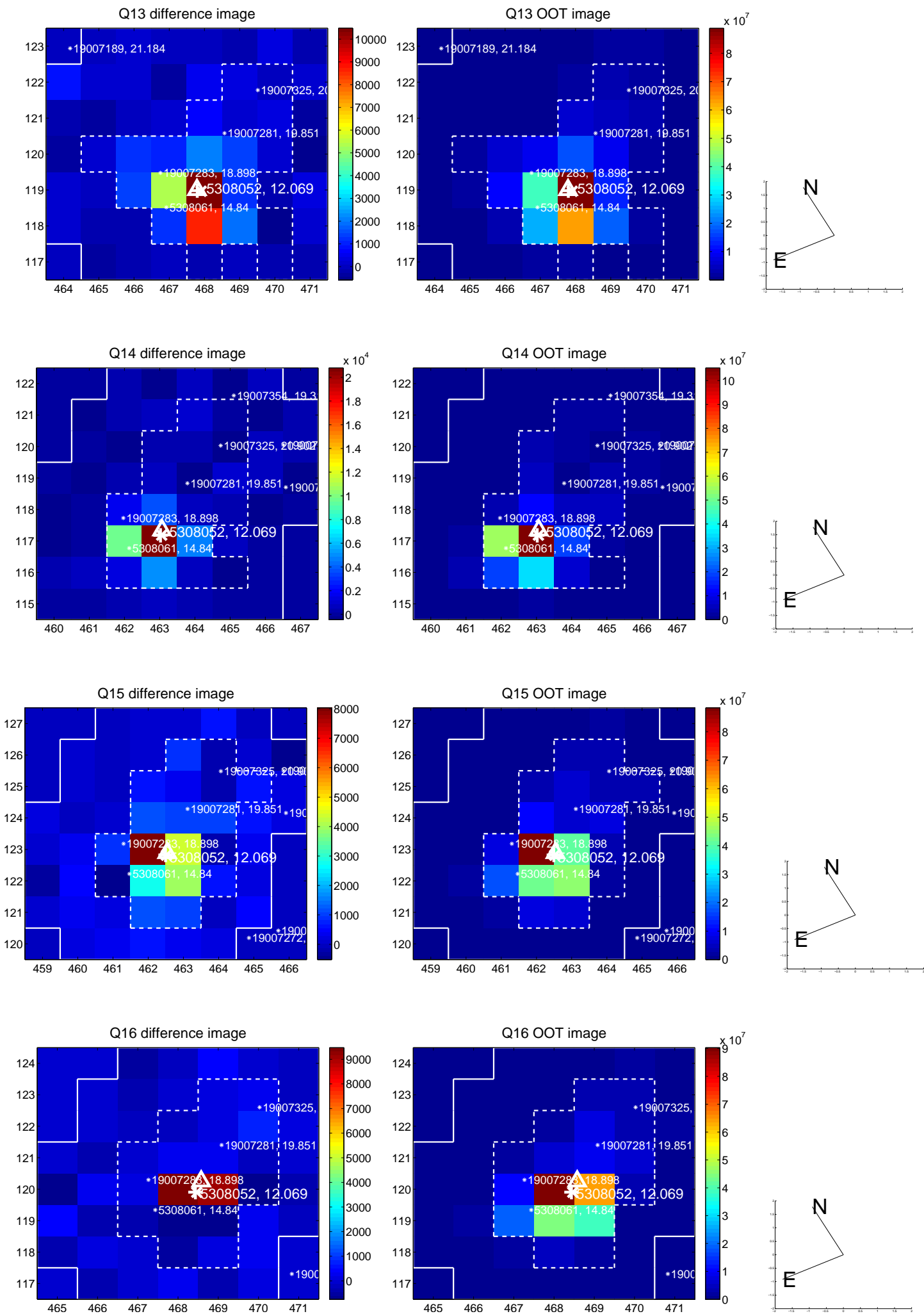
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



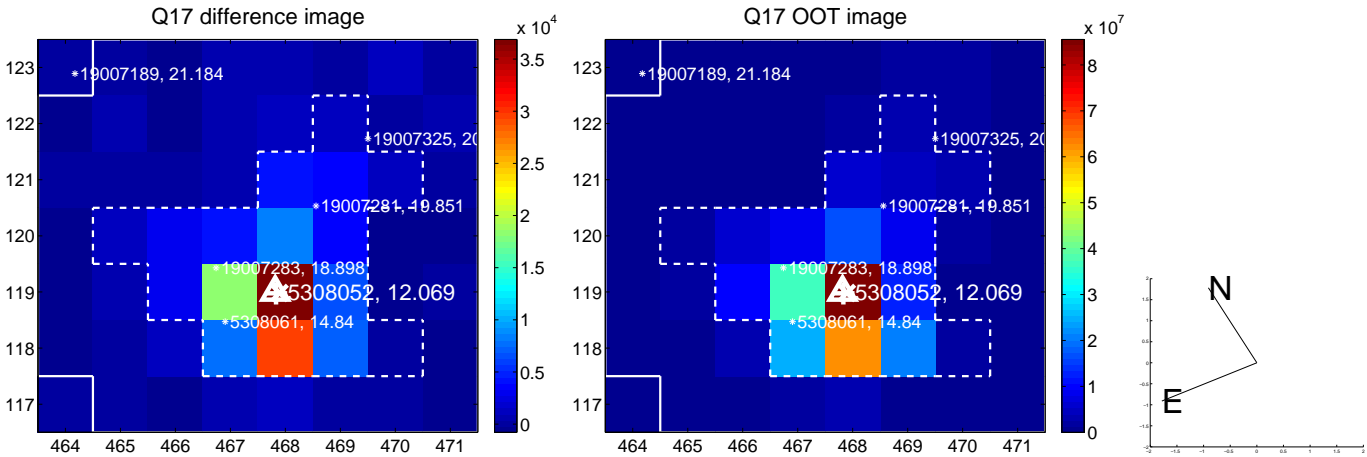
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



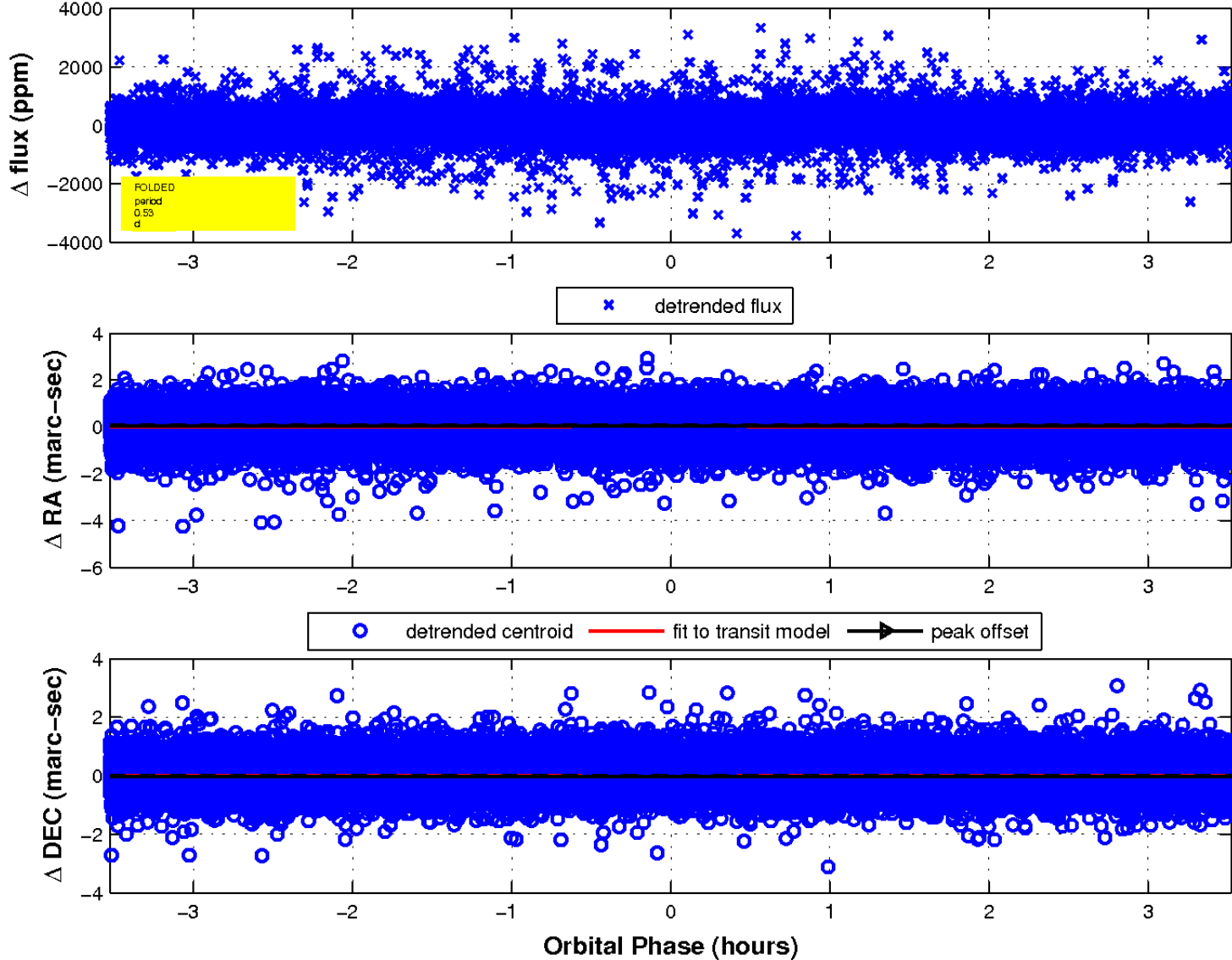
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

