

KIC 008087269

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})
008087269-01	OBS	No	0.627808	132.108984	39.4	1.537	12.6	12.0	4.91	11053	3.53	0.00
008087269-02	OBS	No	0.627851	131.820078	17.6	5.587	9.8	3.6	4.91	11053	2.13	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008087269-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008087269-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

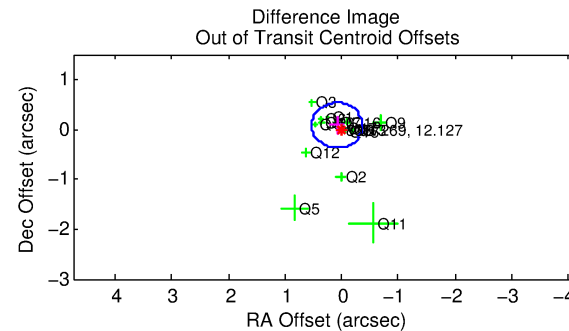
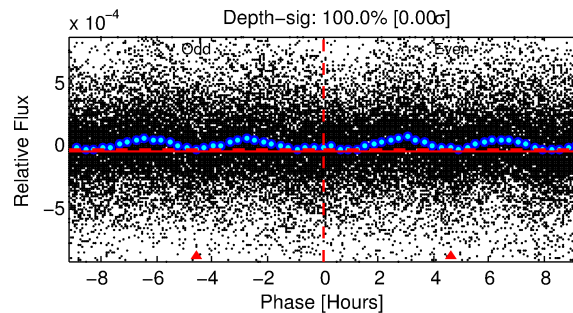
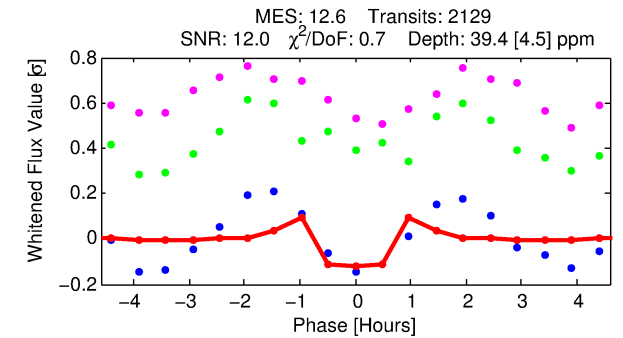
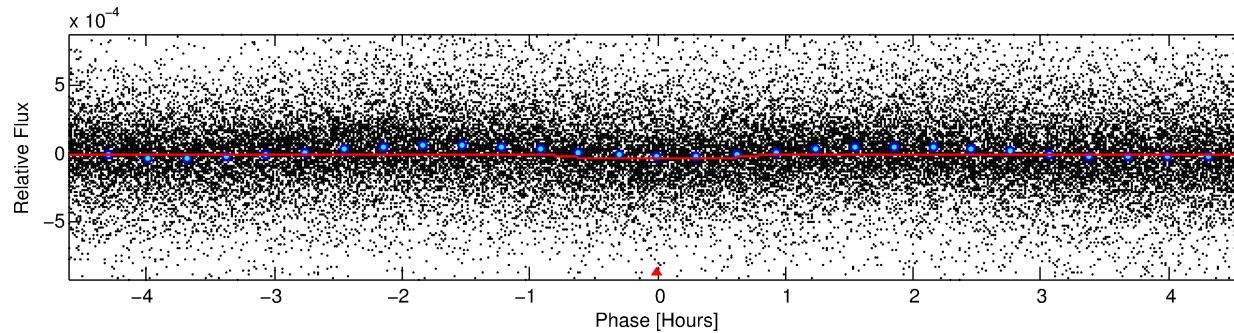
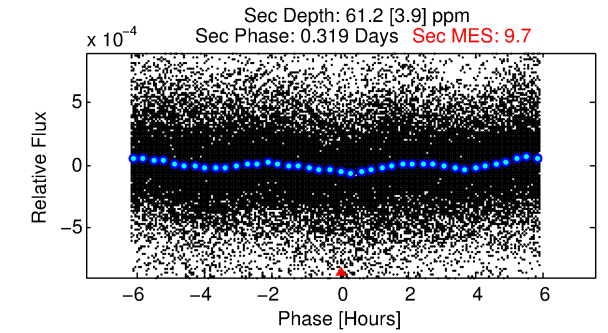
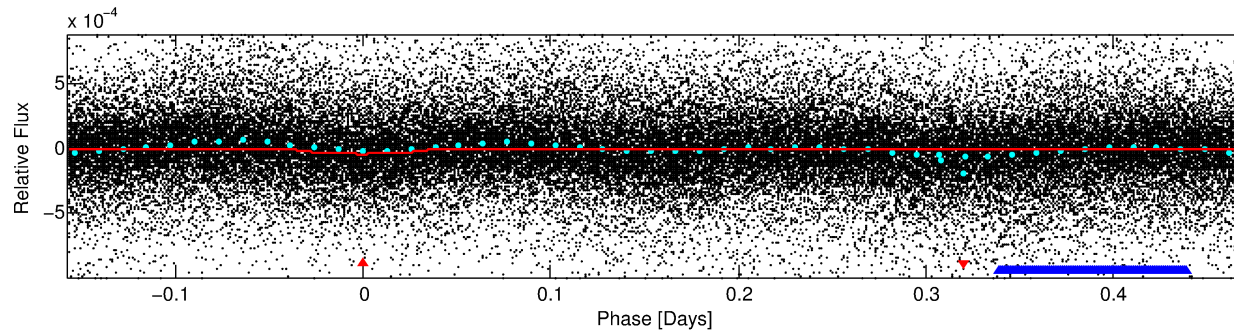
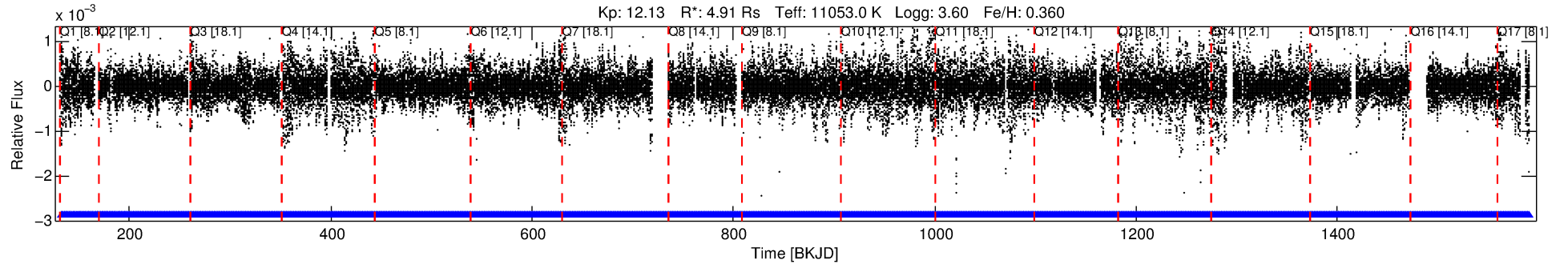
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008087269-01

No Significant Match Found

DV One-Page Summary

KIC: 8087269 Candidate: 1 of 2 Period: 0.628 d



DV Fit Results:

Period = 0.62781 [0.00001] d
Epoch = 132.1090 [0.0009] BKJD
Rp/R* = 0.0066 [0.0007]
a/R* = 1.69 [0.82]
b = 0.90 [0.16]
Seff = N/A
Teq = N/A
Rp = 3.53 [1.67] Re
a = N/A
Ag = N/A
Teffp = N/A

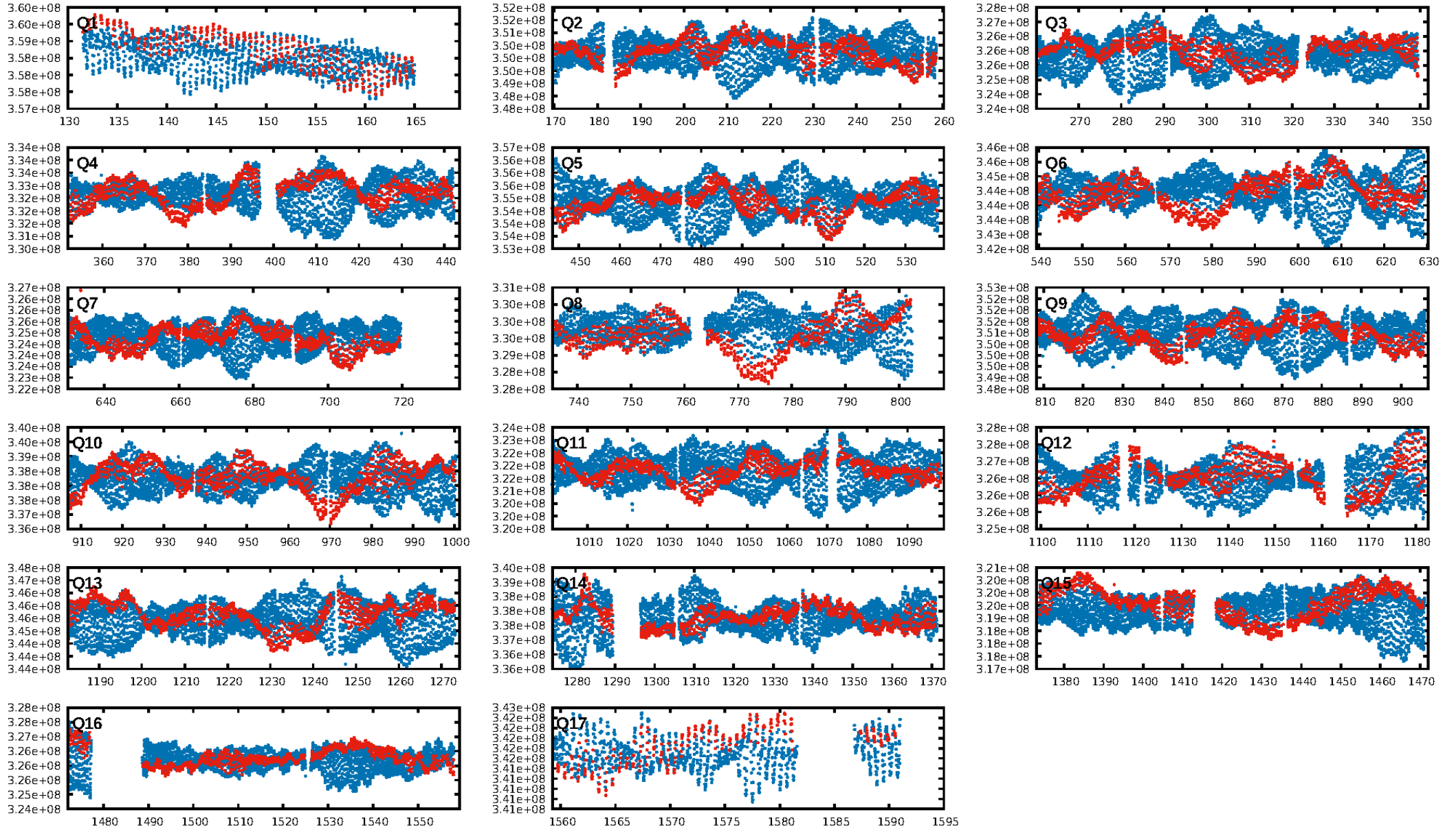
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2034/2034]
GhostDiagnostic-chr: -2.369
Centroid-sig: 15.2%
Centroid-so: 0.287 arcsec [0.91σ]
OotOffset-rm: 0.113 arcsec [0.75σ]
KicOffset-rm: 0.192 arcsec [1.00σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/17]

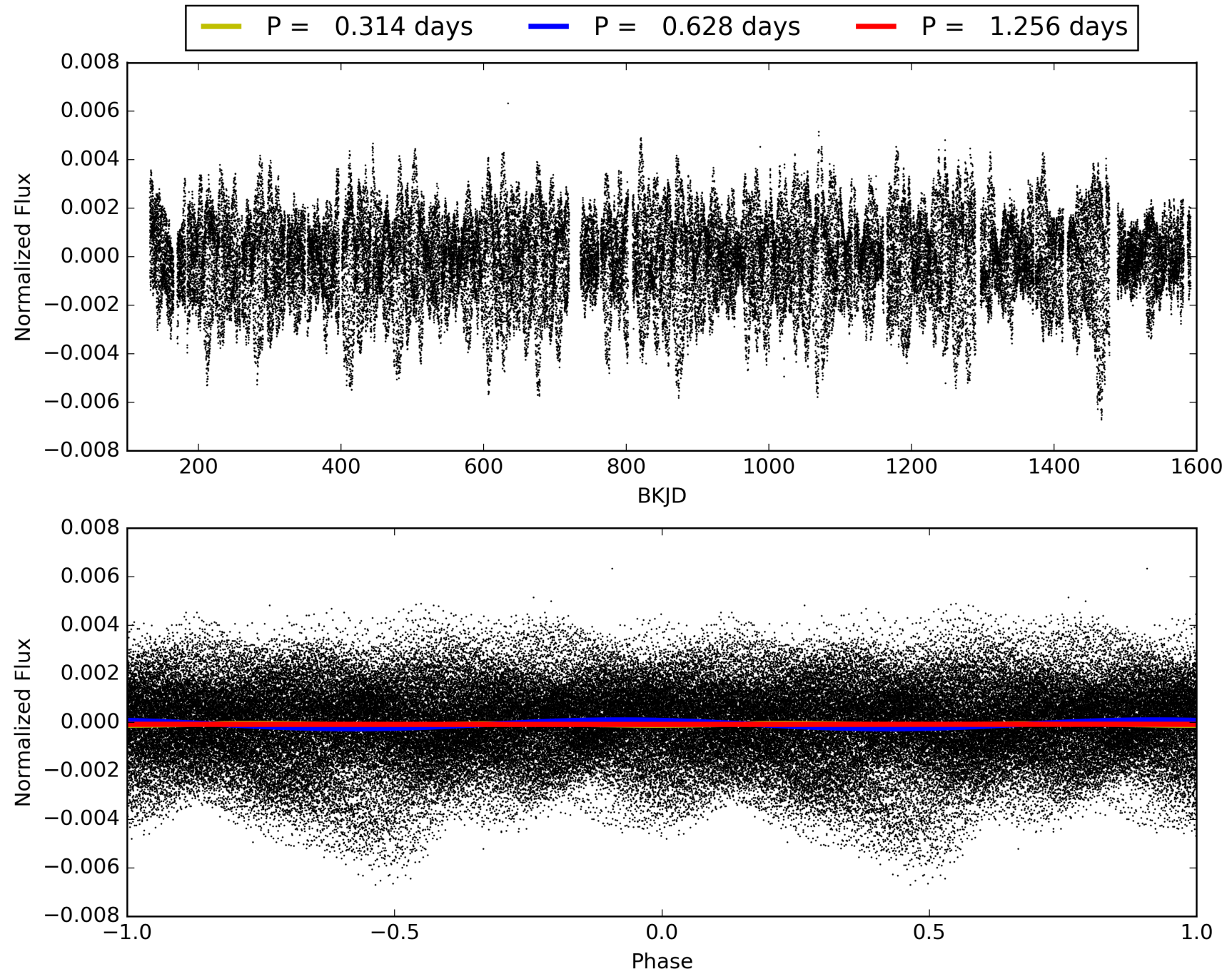
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 15:51:07 Z

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

TCE 008087269-01, PDC Light Curves

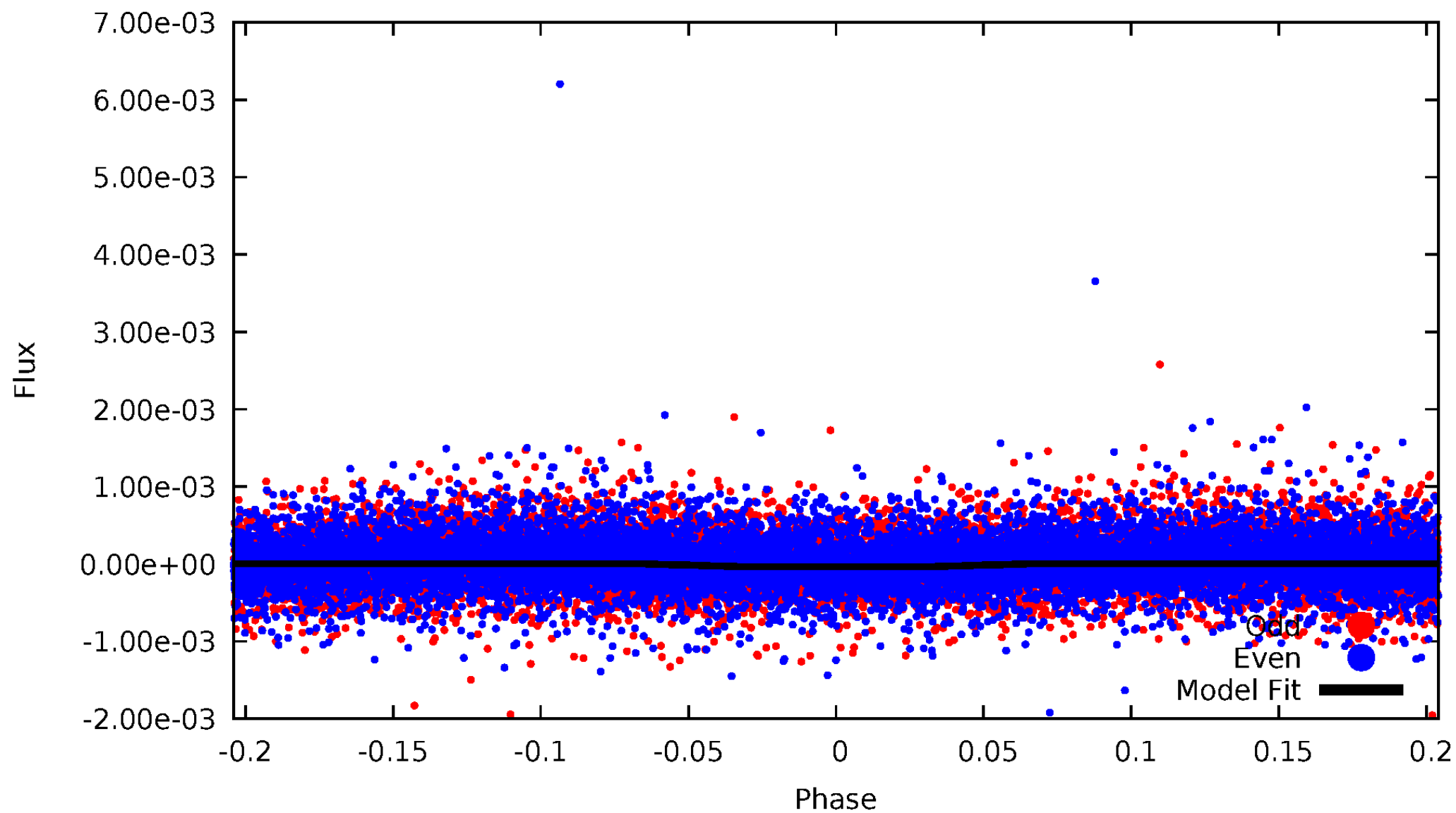


TCE 008087269-01



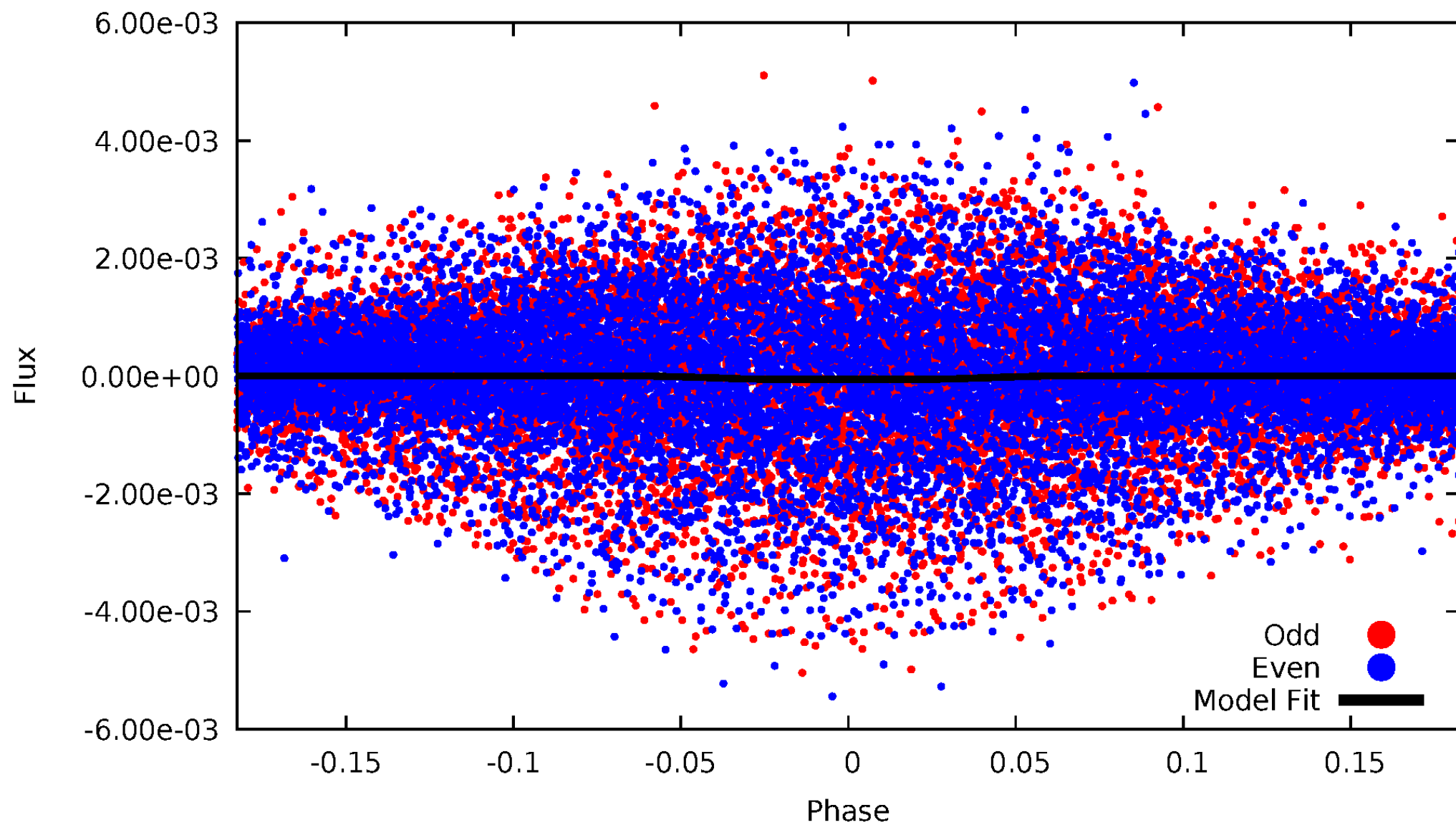
DV Odd/Even

TCE 008087269-01



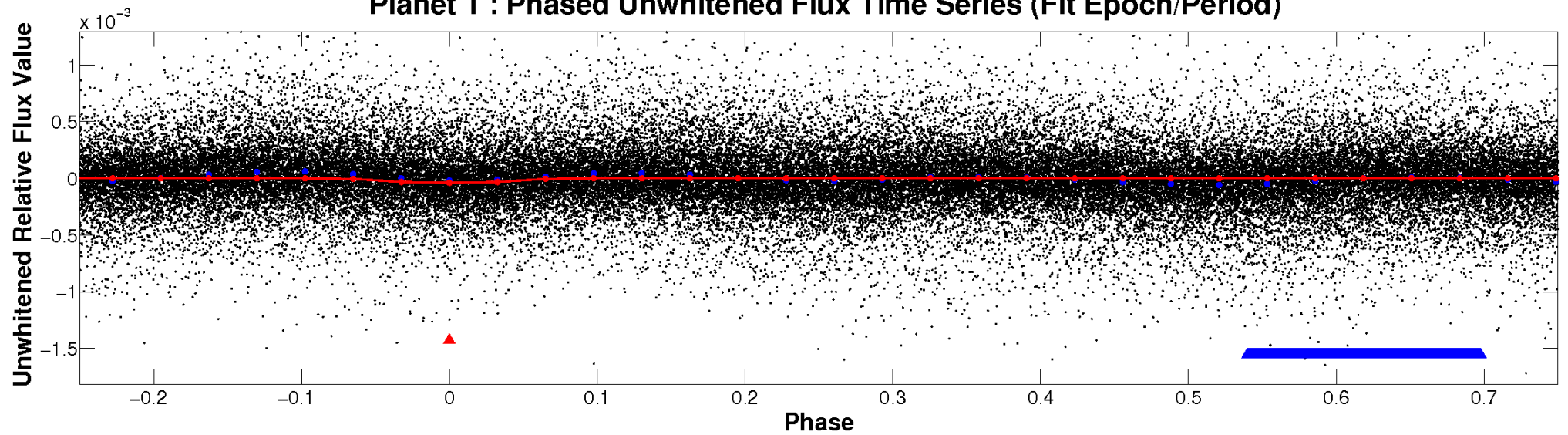
ALT Odd/Even

TCE 008087269-01

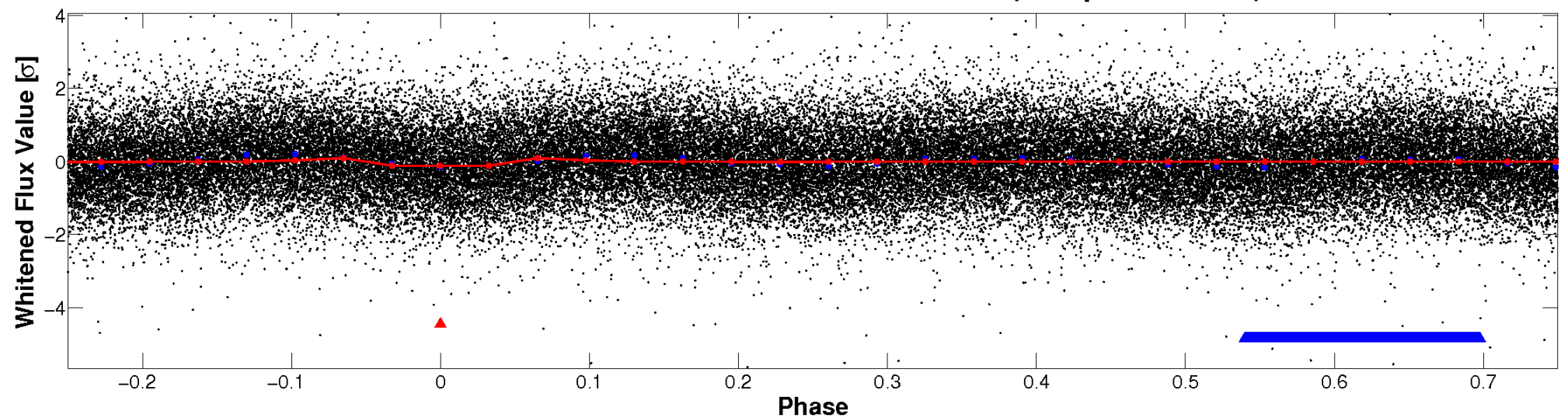


Non-Whitened Vs. Whitened Light Curve

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

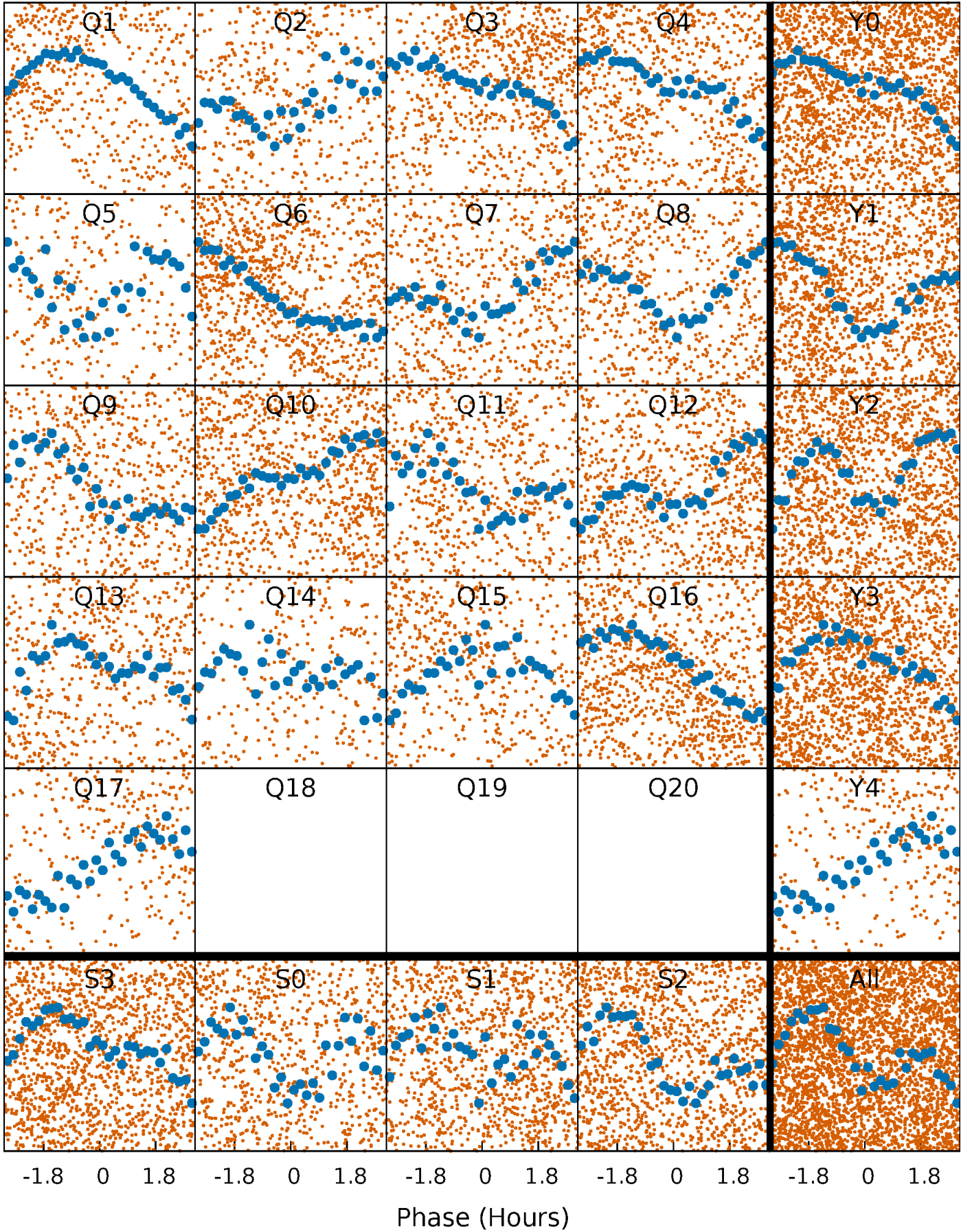


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



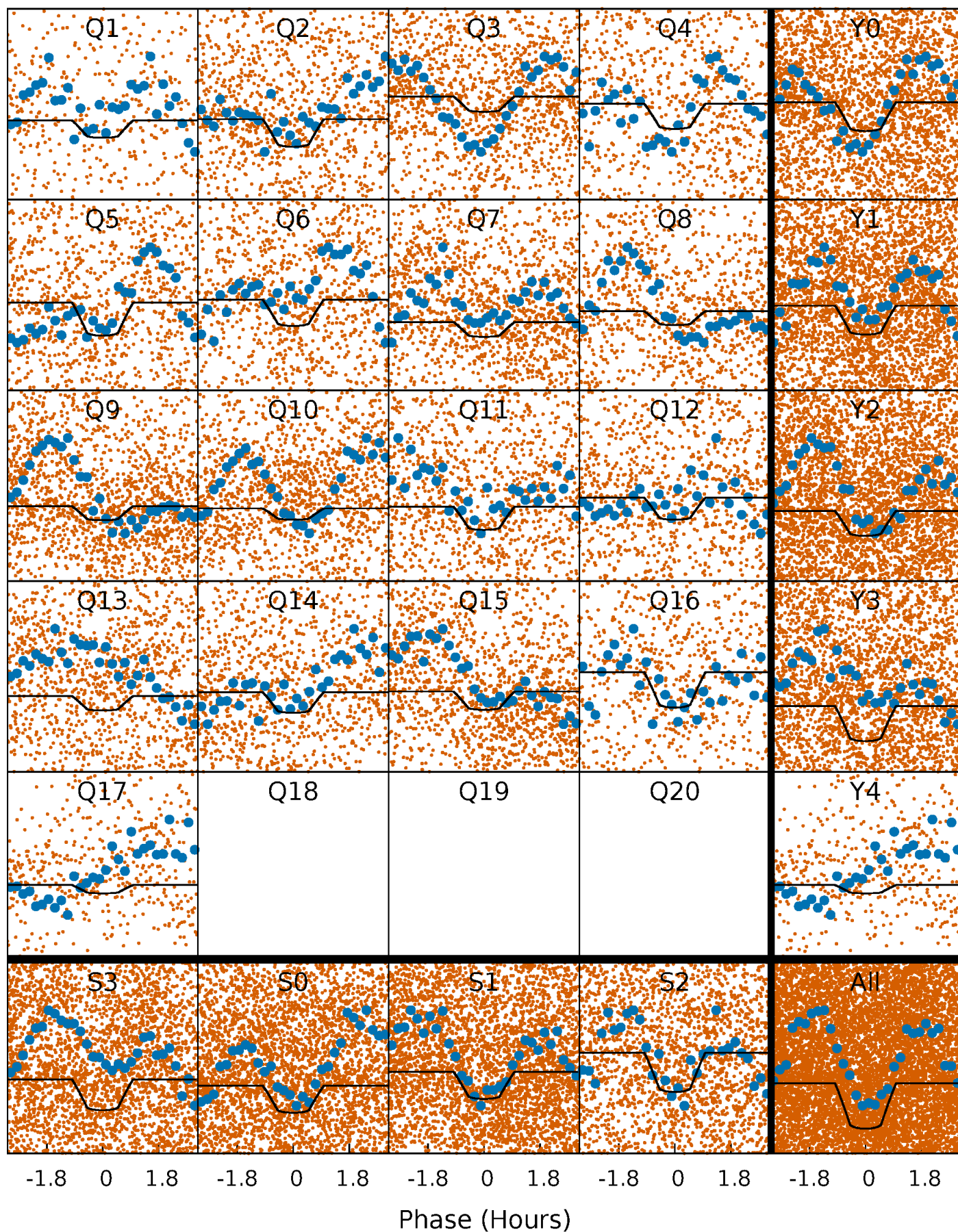
PDC Quarter-Phased Transit Curves

TCE 008087269-01 P= 0.627808 Days $T_0=132.108984$ (BKJD)



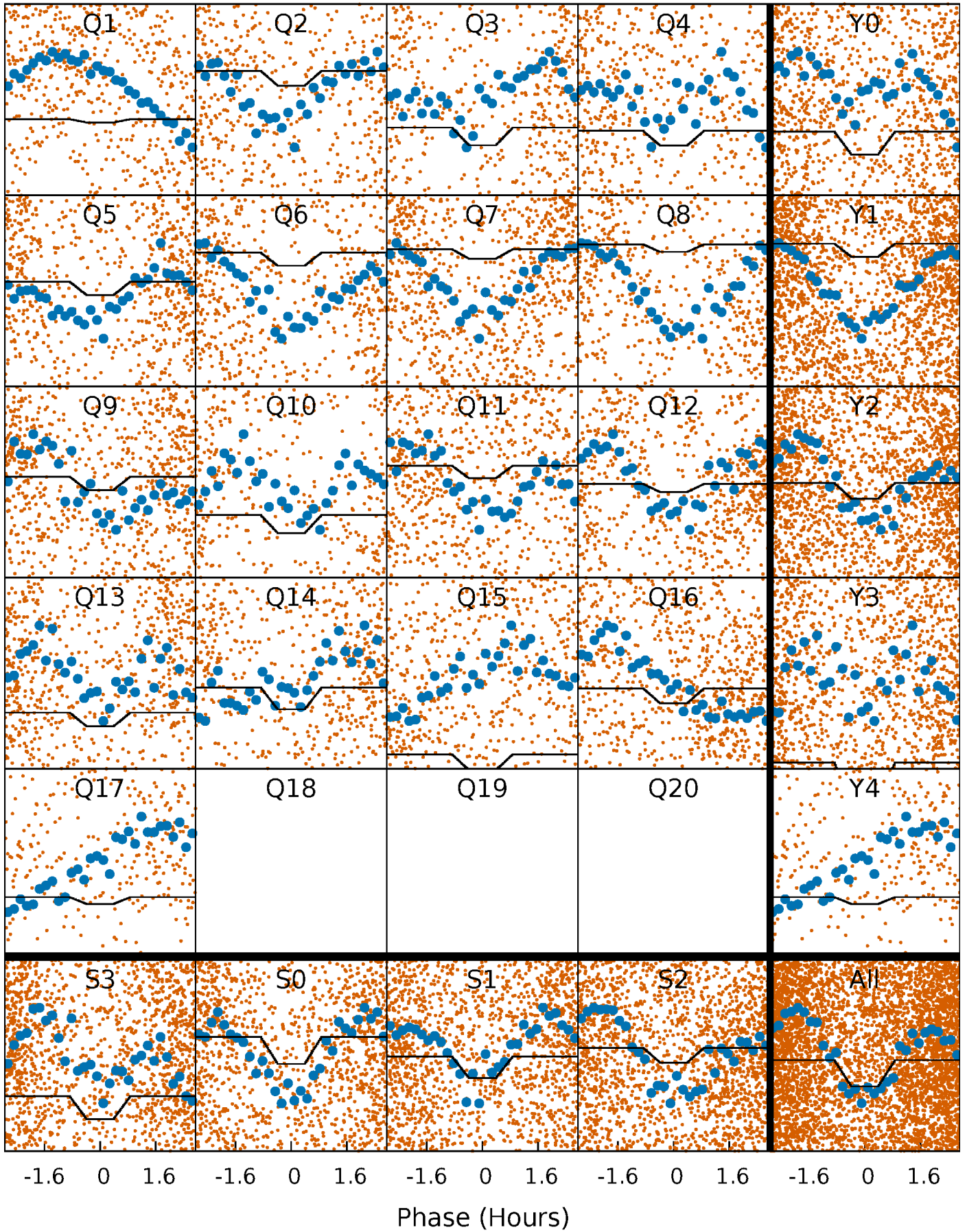
DV Quarter-Phased Transit Curves

TCE 008087269-01 P= 0.627808 Days $T_0=132.108984$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

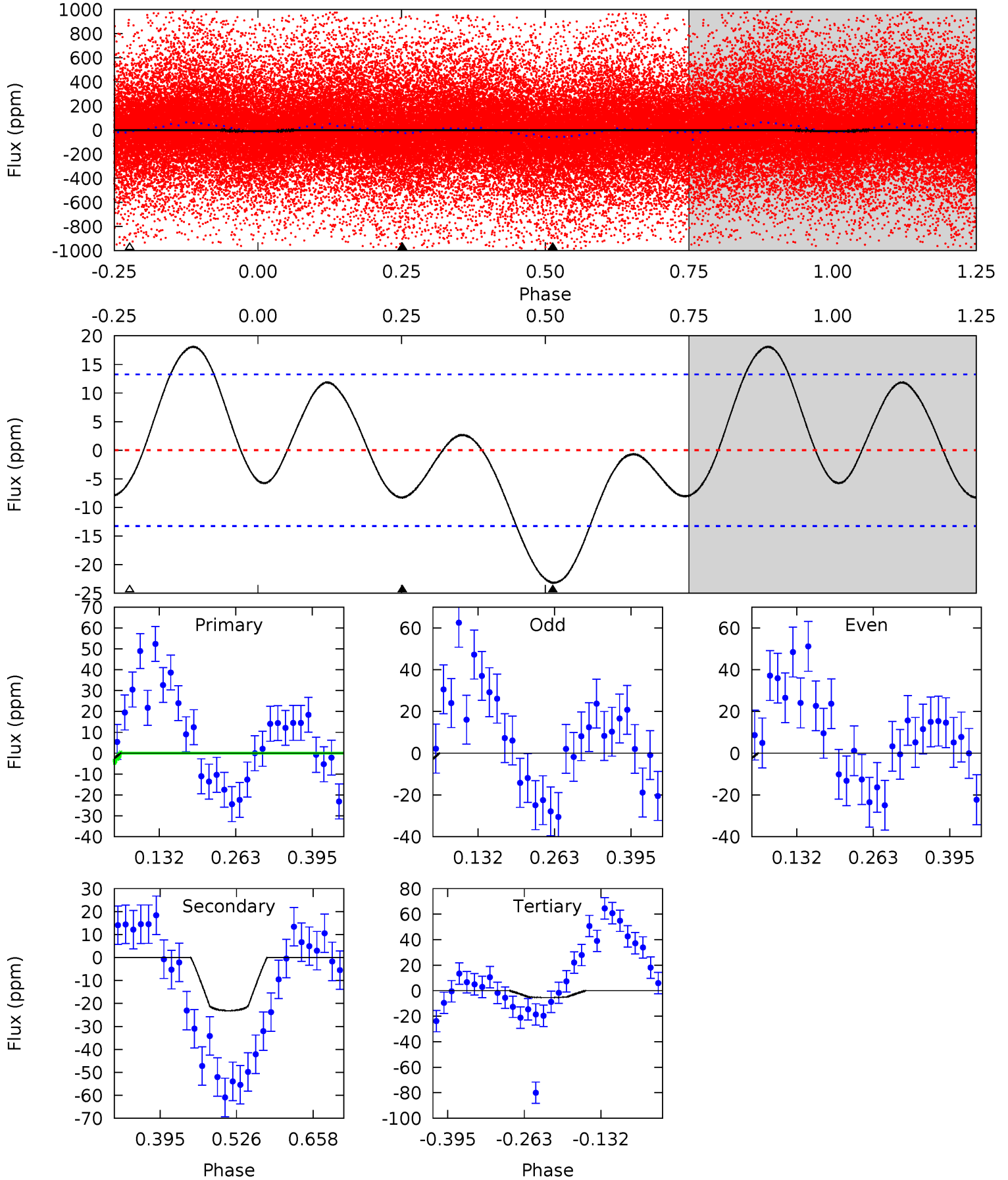
TCE 008087269-01 P= 0.627816 Days $T_0=132.108569$ (BKJD)



DV Model-Shift Uniqueness Test

008087269-01, P = 0.627808 Days, E = 131.481176 Days

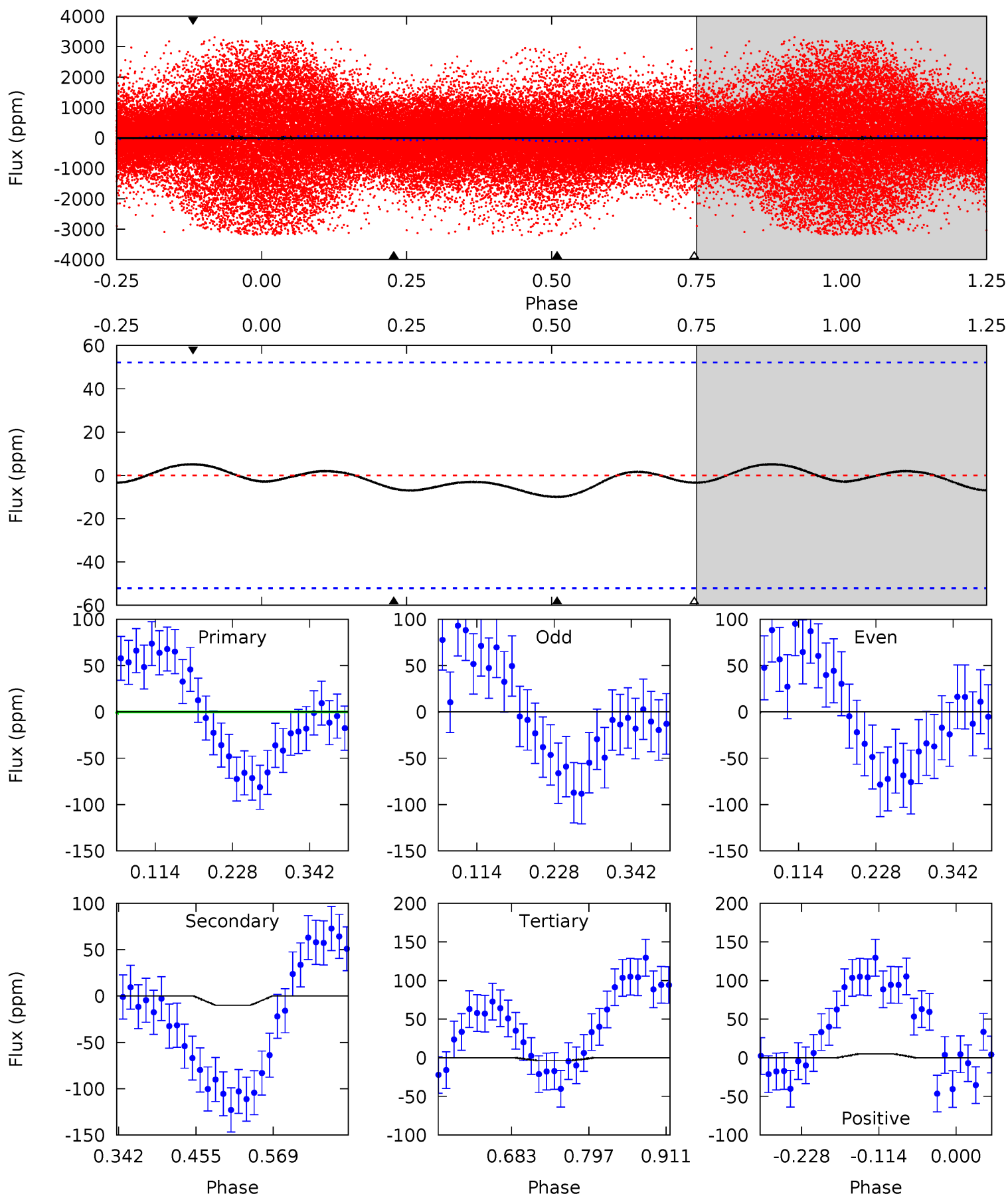
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.82	7.88	1.82	0	4.51	1.51	2.82	1.00	2.82	6.06	7.88	0.22	0.59	0.44	1.97



Alt Model-Shift Uniqueness Test

008087269-01, P = 0.627816 Days, E = 131.480753 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.53	0.87	0.29	0.45	4.54	1.58	0.23	0.24	0.08	0.58	0.42	0.53	-3.45	0.34	0.38



Stellar Parameters For KIC 008087269

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11053^{+519}_{-1558}	$3.603^{+0.425}_{-0.075}$	$0.360^{+0.050}_{-0.300}$	$4.909^{+0.400}_{-2.268}$	$3.520^{+0.070}_{-0.865}$	$0.042^{+0.158}_{-0.010}$
	+5%/-14%	+12%/-2%	+14%/-83%	+8%/-46%	+2%/-25%	+377%/-24%
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 008087269-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 \pm 3	$3.28^{+0.57}_{-0.79}$	9649^{+1008}_{-1530}	6848^{+1335}_{-1508}	$0.559^{+0.348}_{-0.167}$
Alt.	-10 \pm 11	$3.81^{+0.64}_{-0.85}$	9572^{+1087}_{-1478}	-5490^{+10999}_{-1908}	$0.173^{+0.249}_{-0.203}$

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

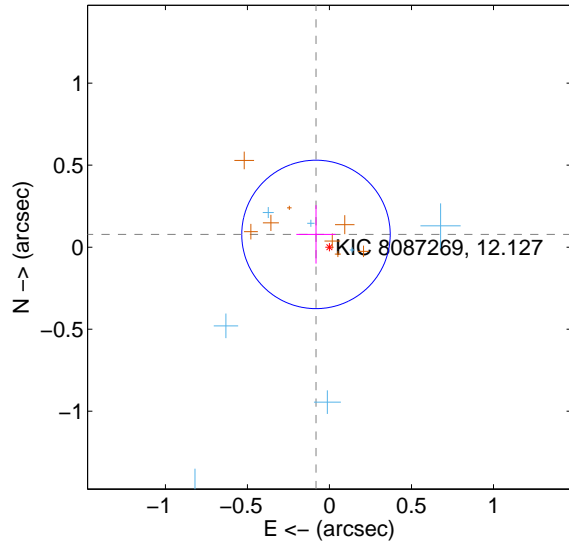
Supplemental centroid analysis for 008087269-01. Kepler magnitude: 12.13. Transit SNR 12.05

There are 7 quarters with good PRF difference image offsets

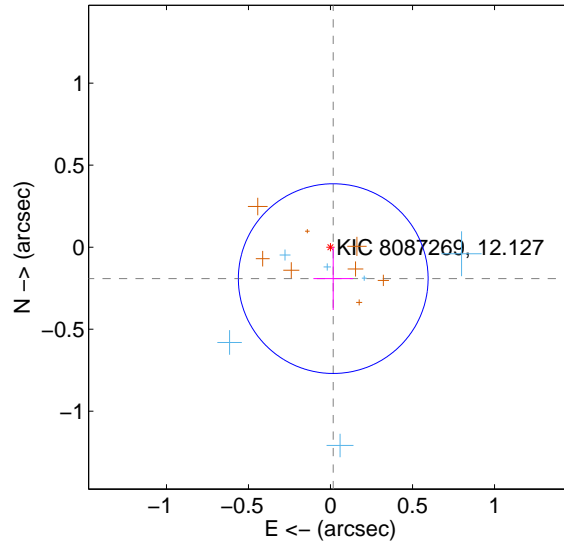
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.151	0.75	0.082 ± 0.120	0.078 ± 0.178
PRF-fit source offset from KIC position	0.192 ± 0.193	1.00	-0.017 ± 0.121	-0.192 ± 0.191
photometric centroid source offset	0.29 ± 0.31	0.91	-0.23 ± 0.30	0.17 ± 0.34

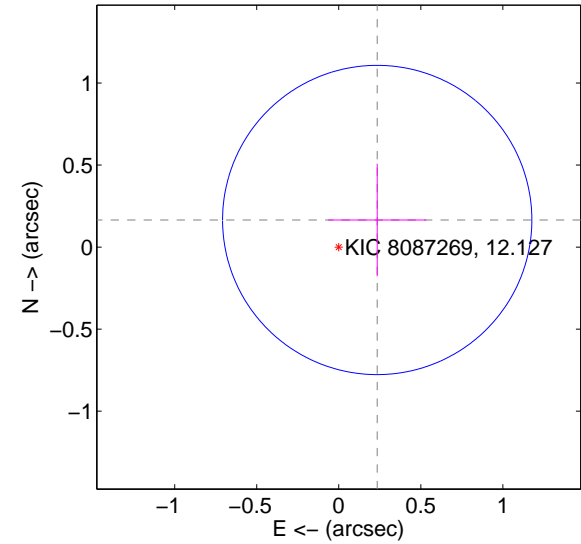
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

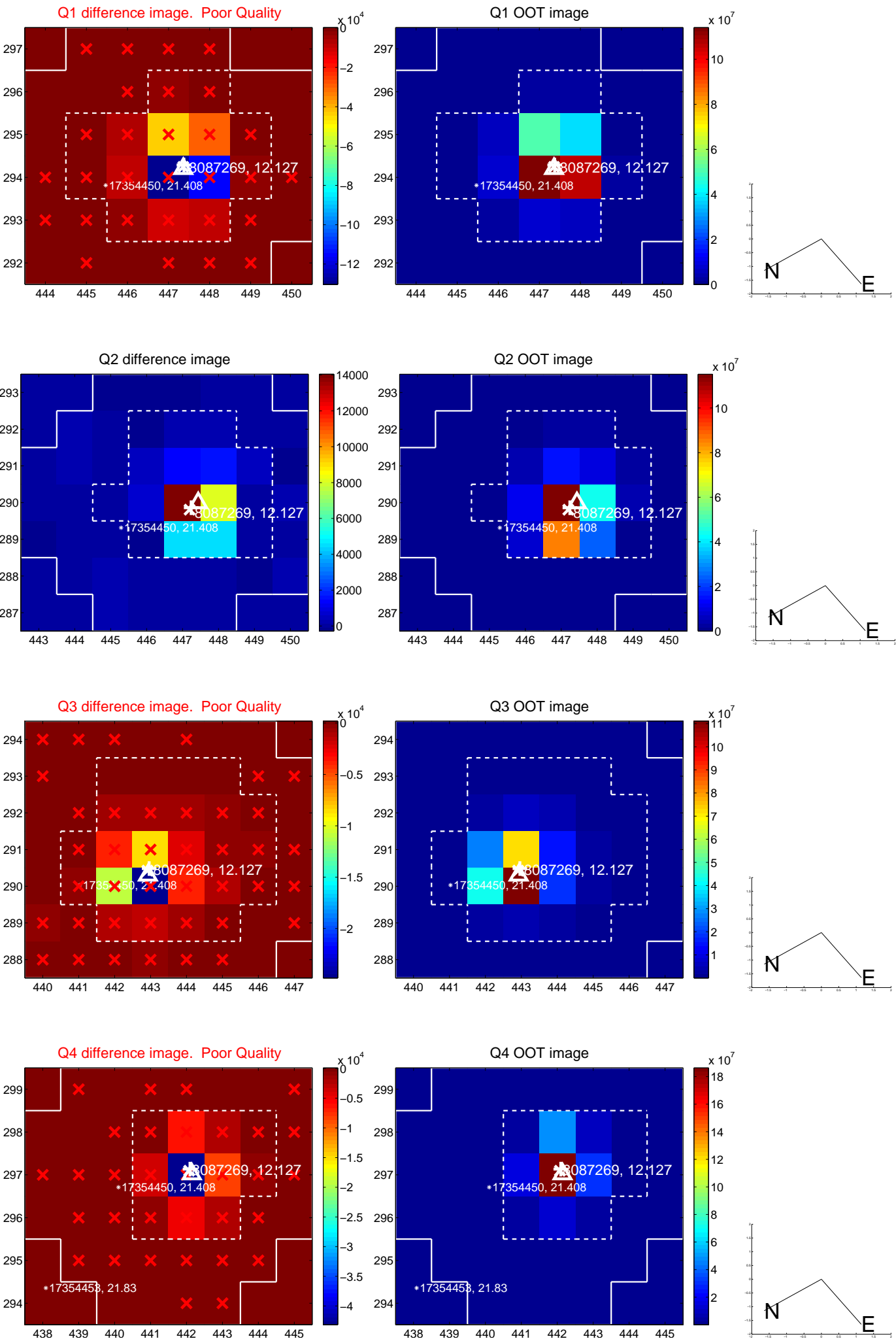


offset from photometric centroids

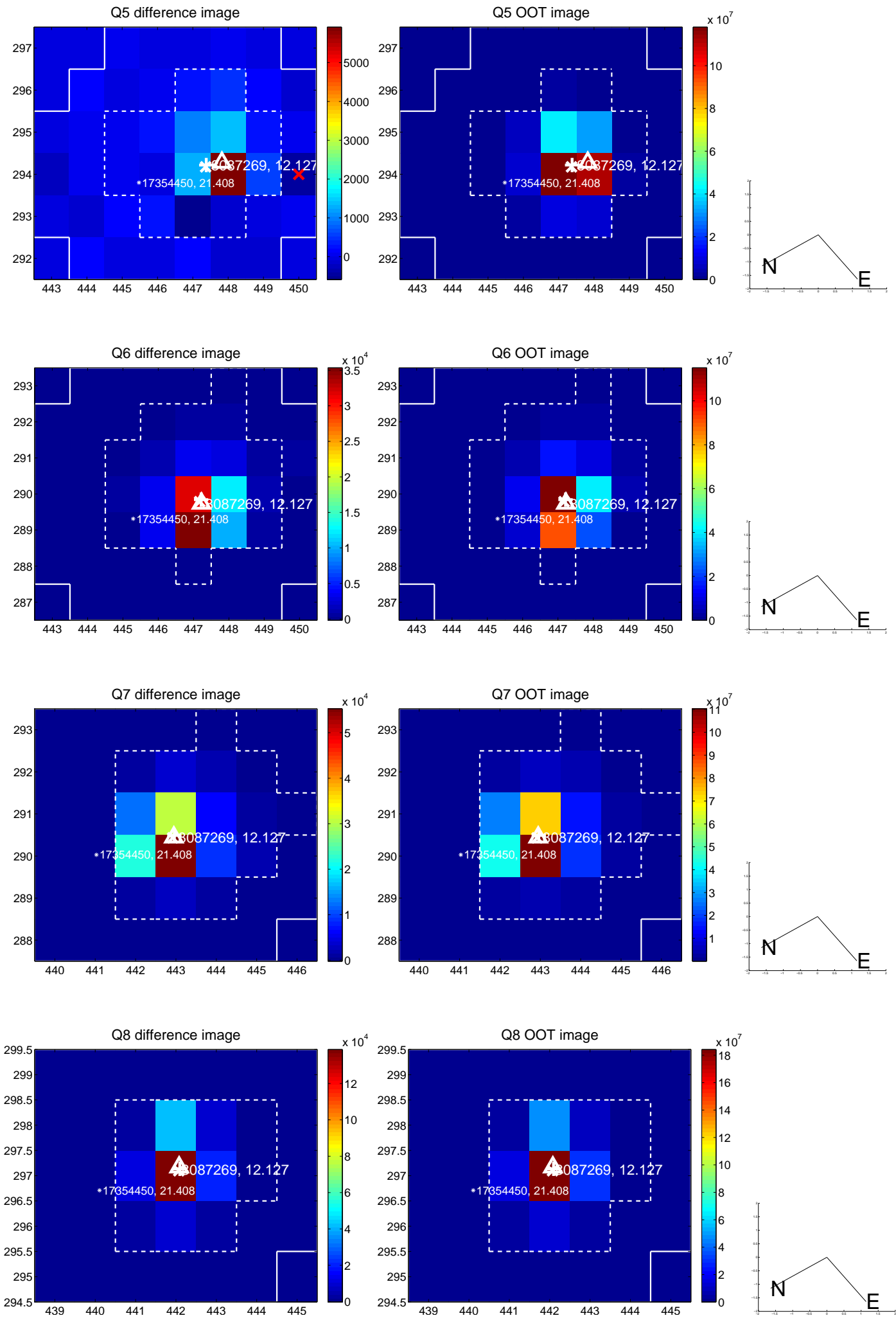


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

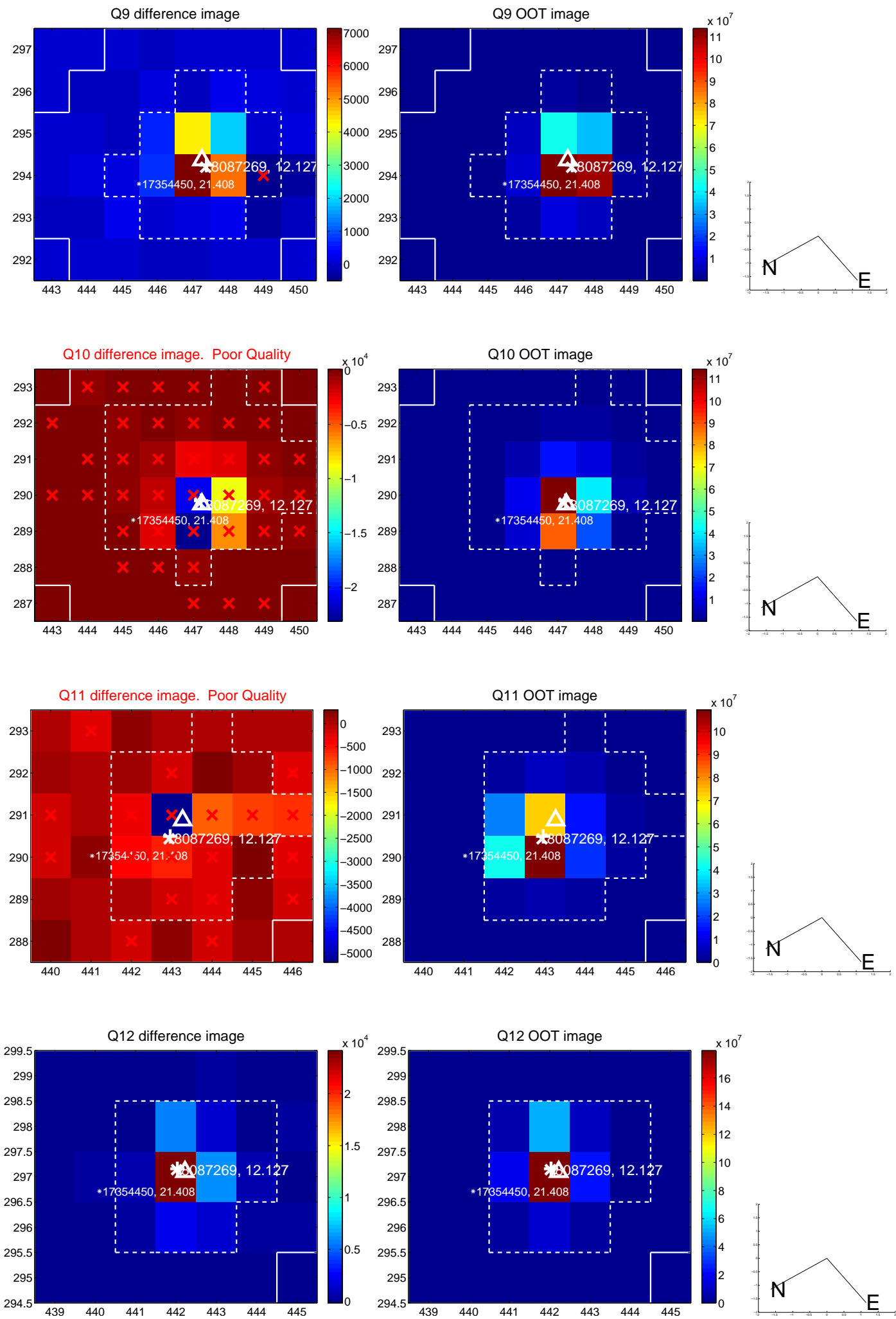
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



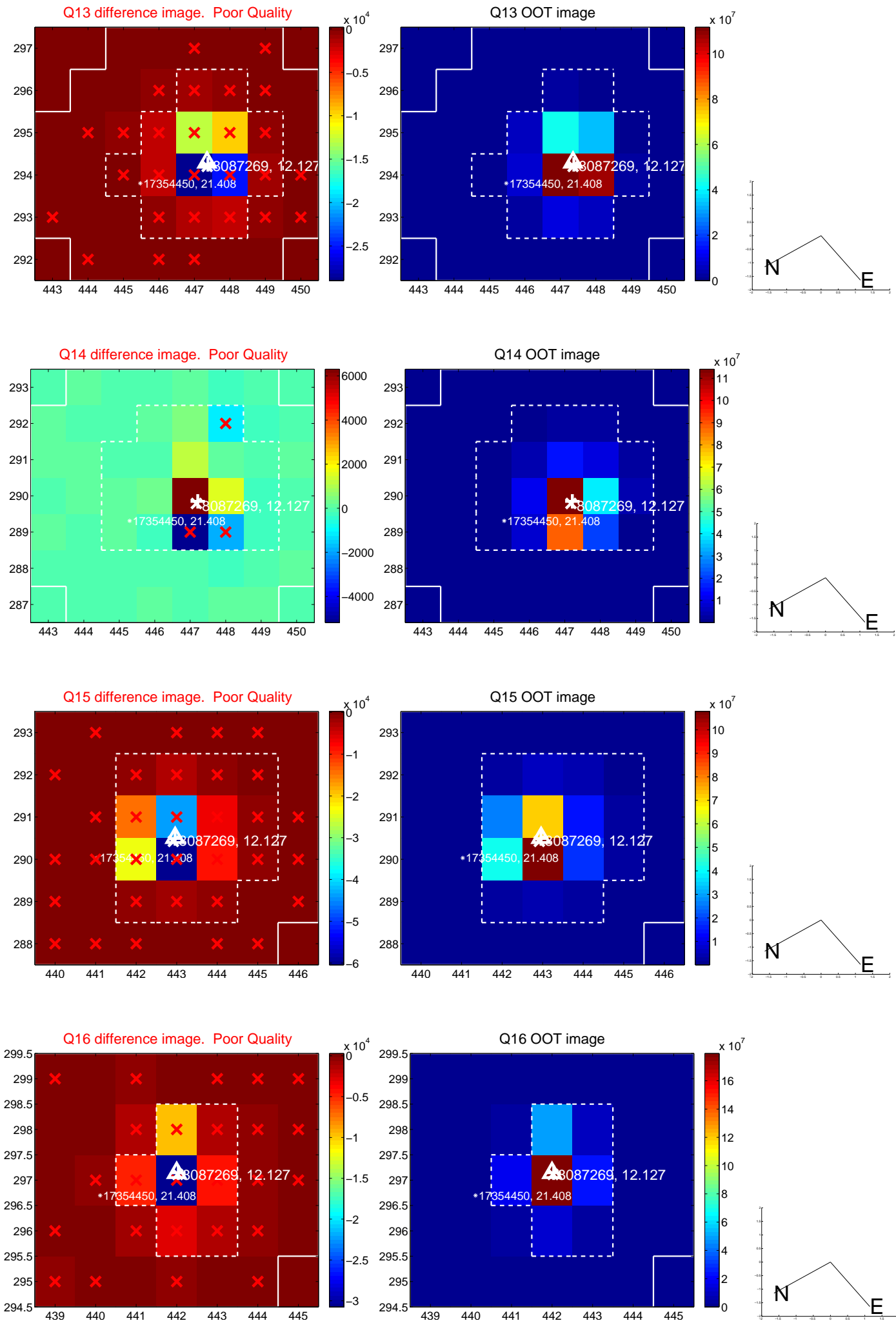
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



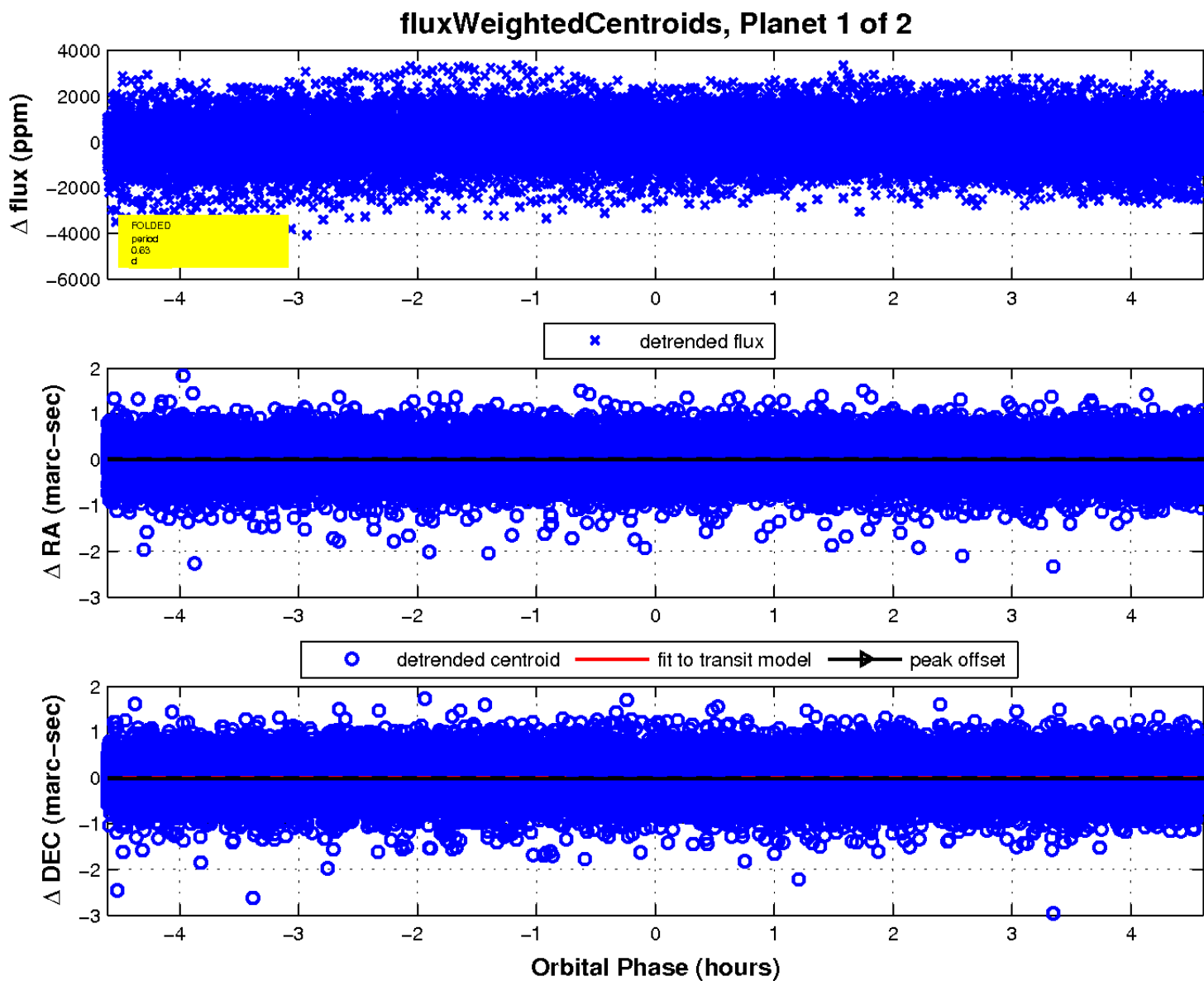
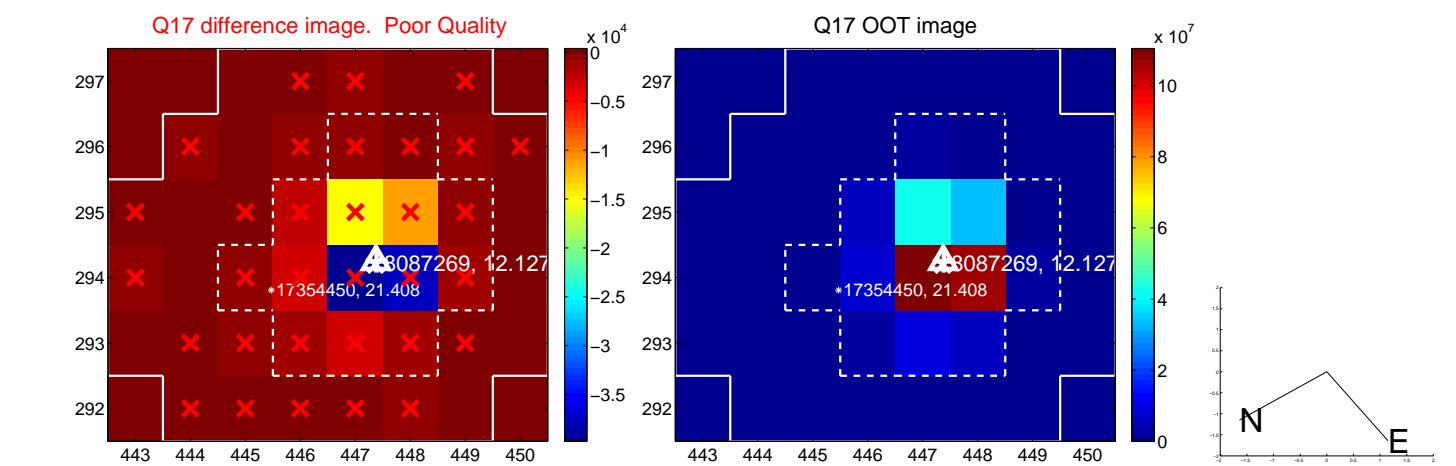
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

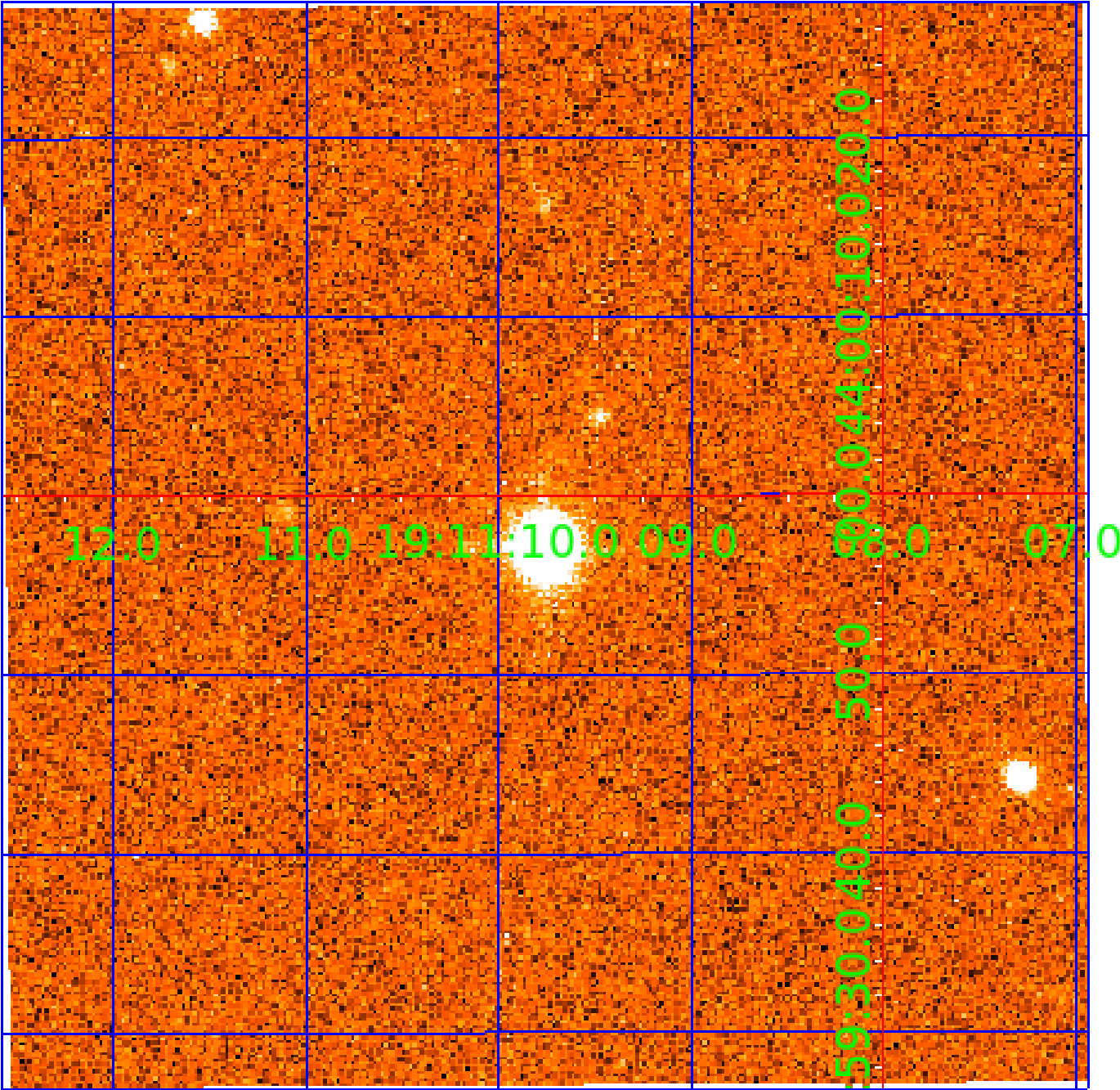


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008087269

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})
008087269-01	OBS	No	0.627808	132.108984	39.4	1.537	12.6	12.0	4.91	11053	3.53	0.00
008087269-02	OBS	No	0.627851	131.820078	17.6	5.587	9.8	3.6	4.91	11053	2.13	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008087269-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008087269-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

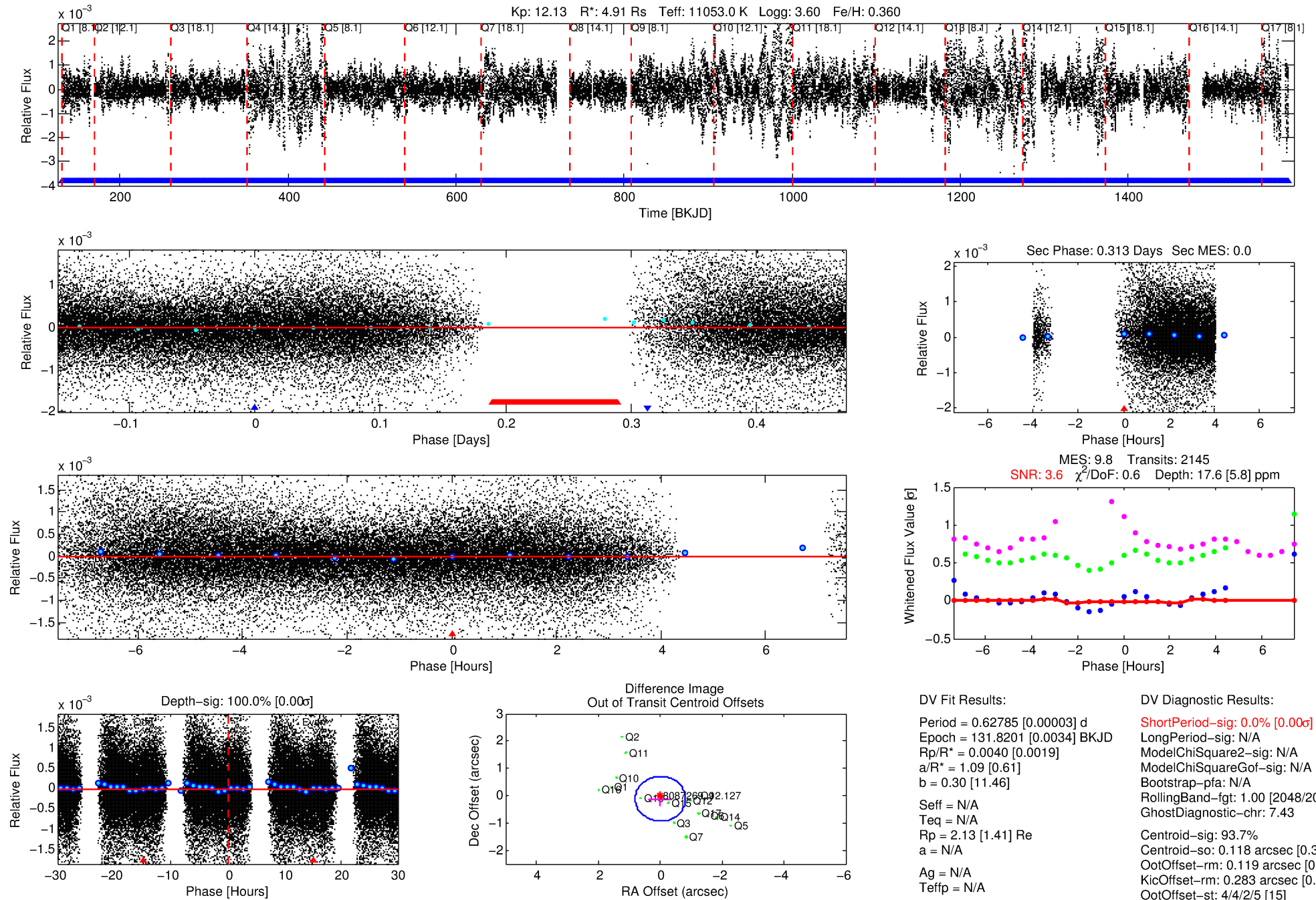
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008087269-02

No Significant Match Found

DV One-Page Summary

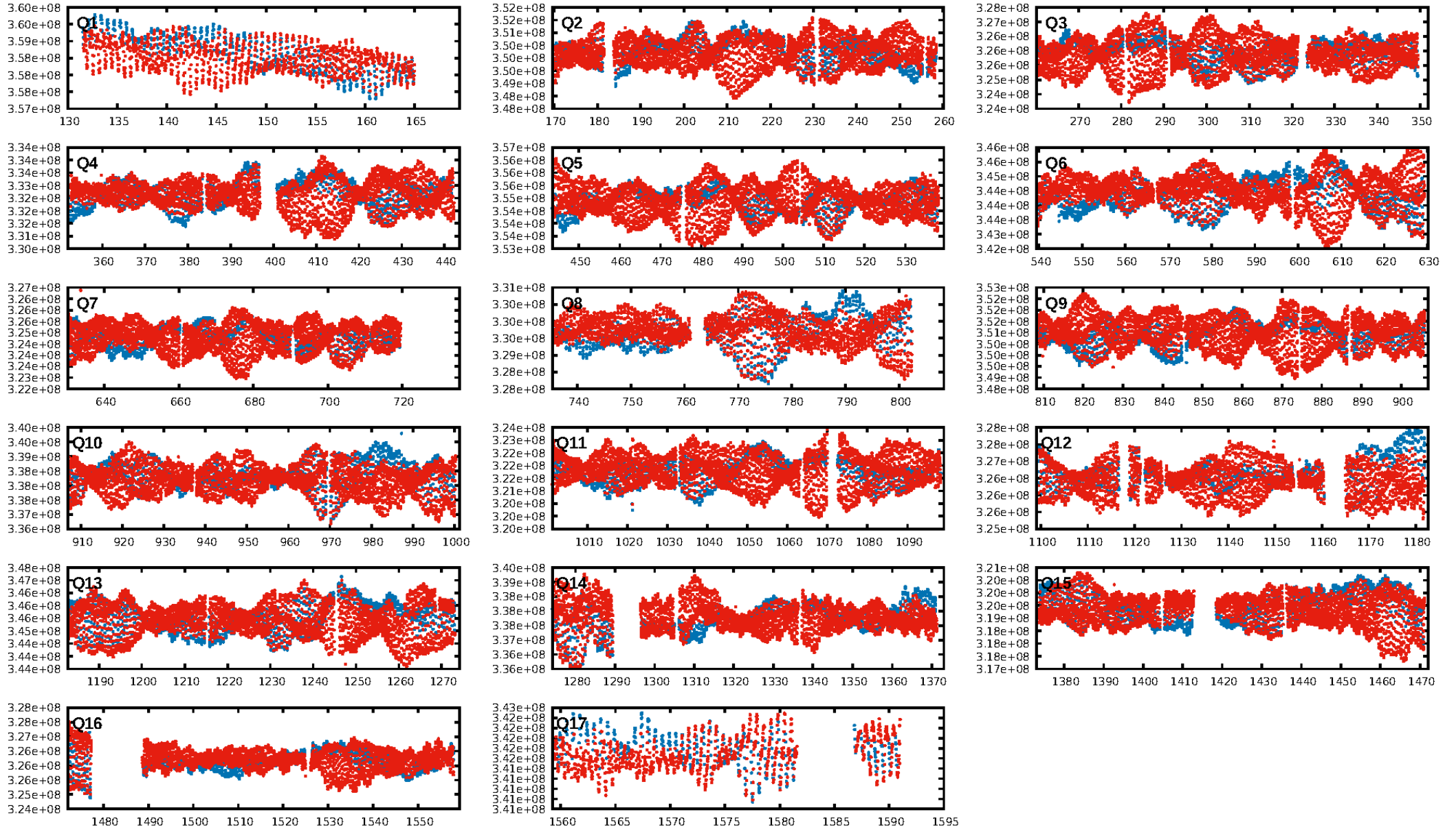
KIC: 8087269 Candidate: 2 of 2 Period: 0.628 d



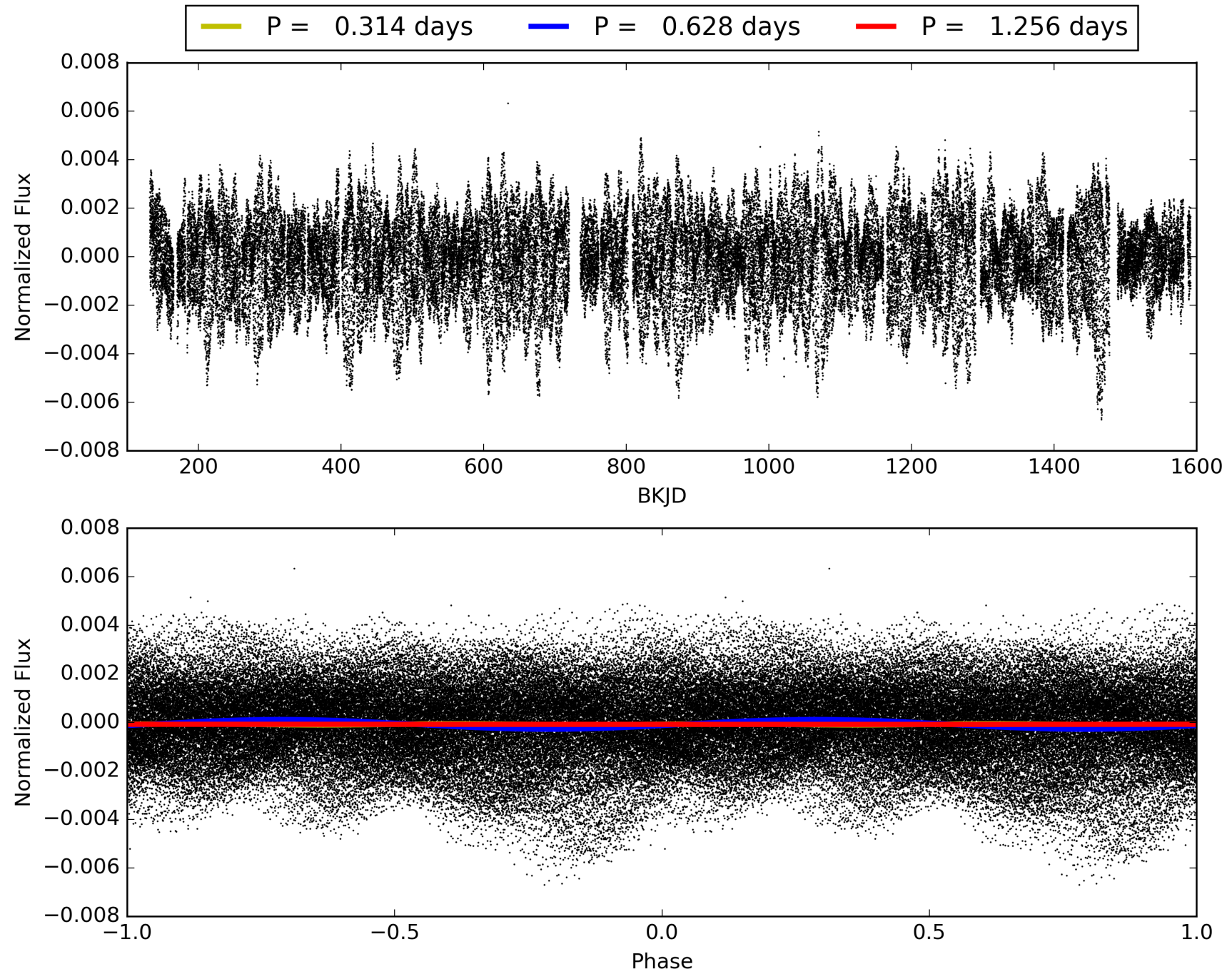
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 15:51:22 Z

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

TCE 008087269-02, PDC Light Curves

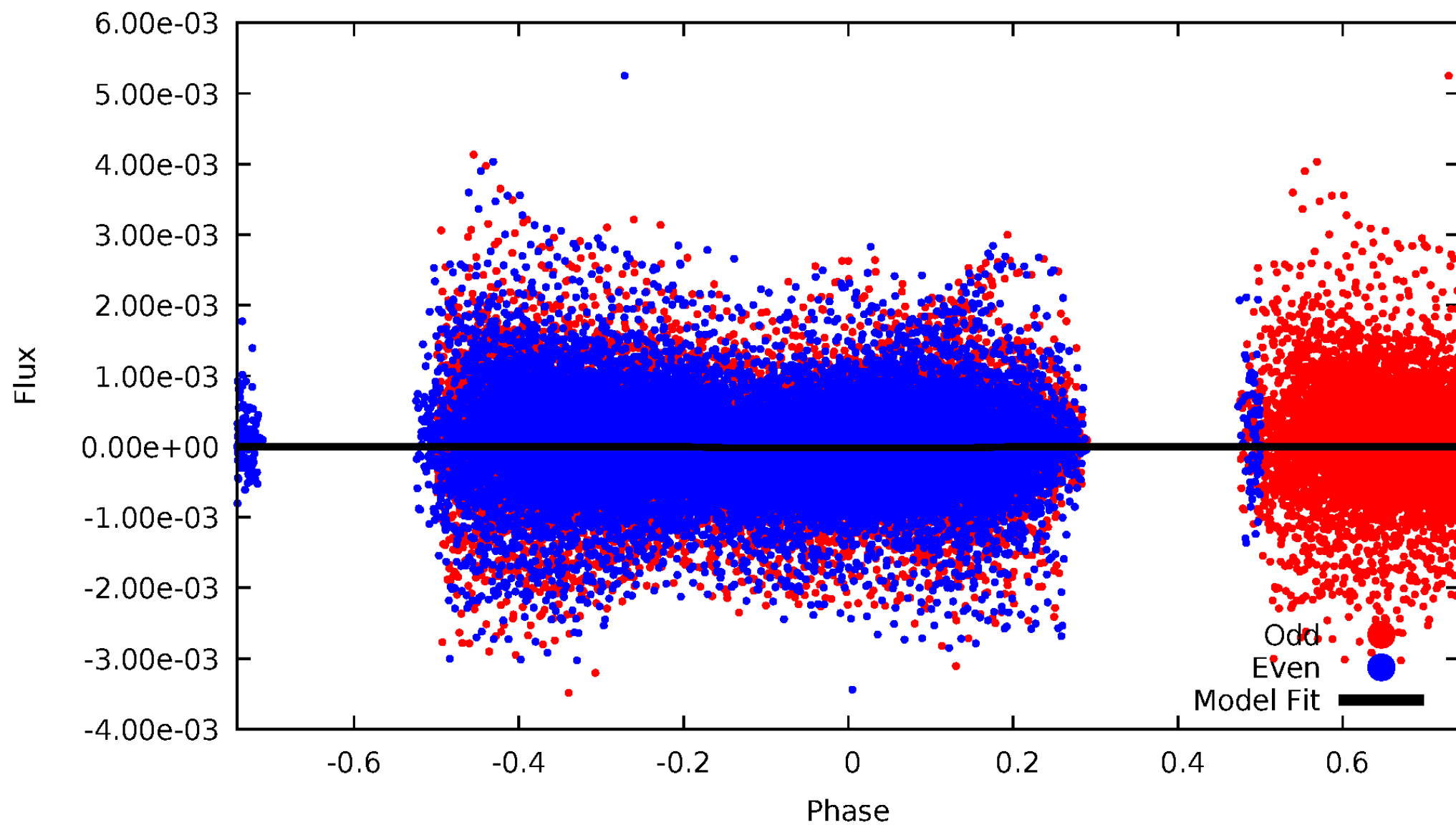


TCE 008087269-02



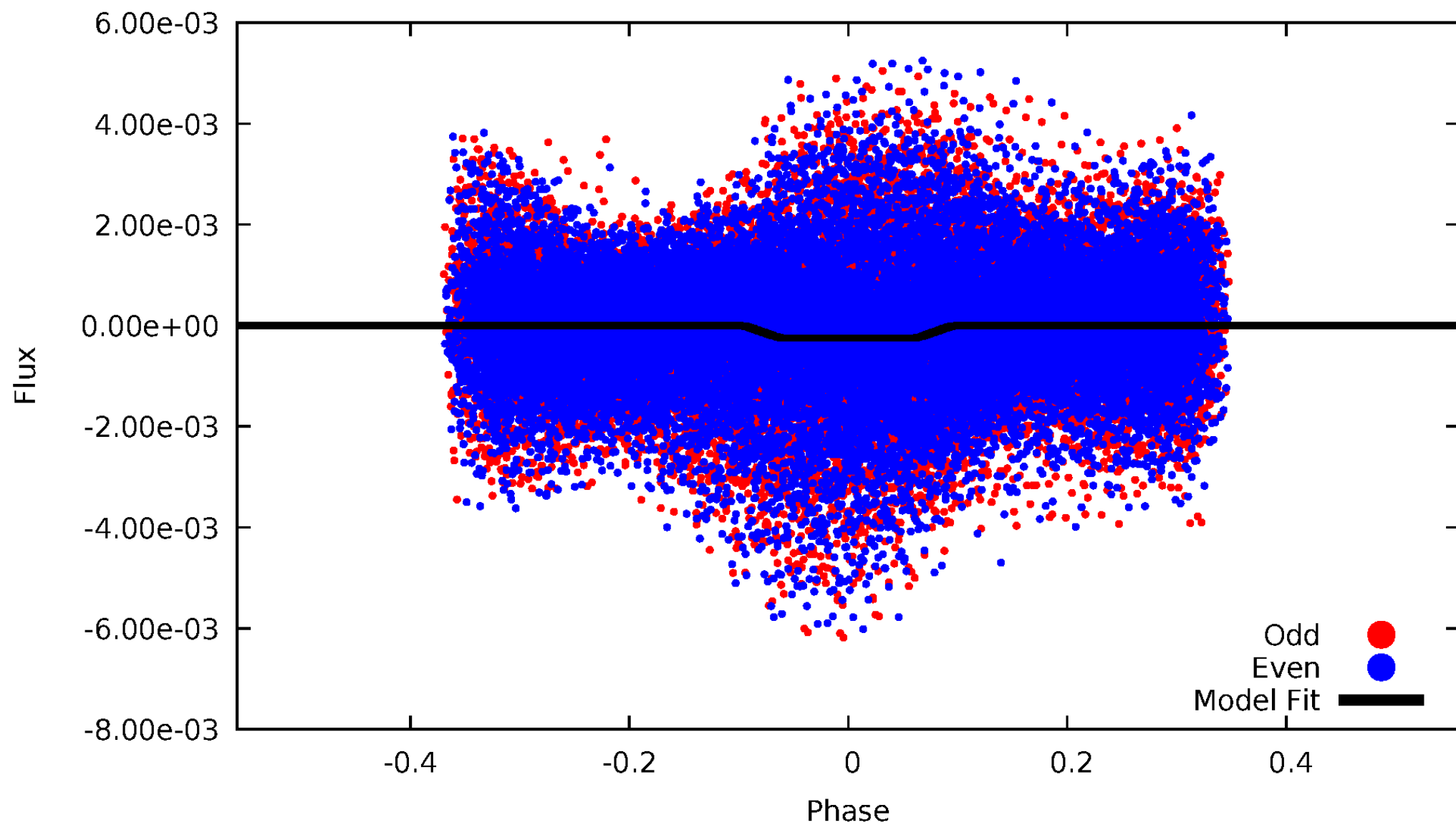
DV Odd/Even

TCE 008087269-02



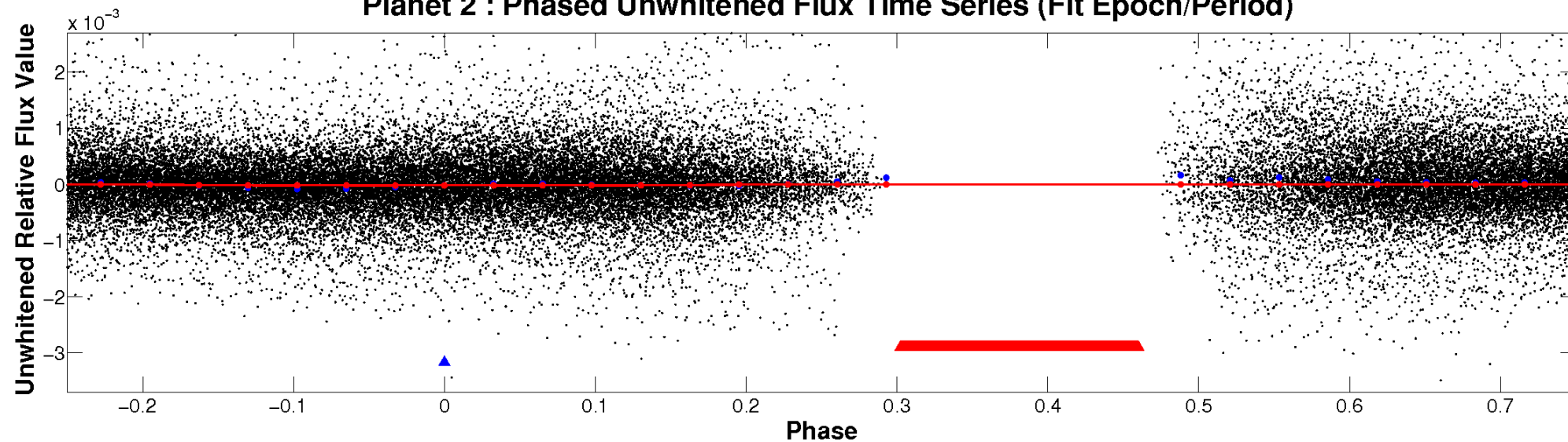
ALT Odd/Even

TCE 008087269-02

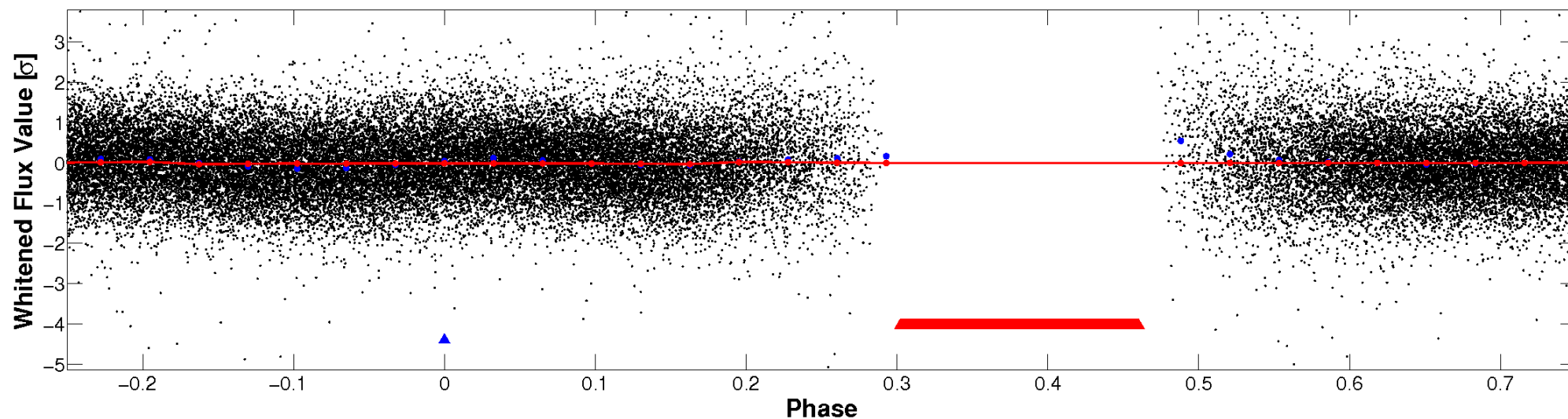


Non-Whitened Vs. Whitened Light Curve

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

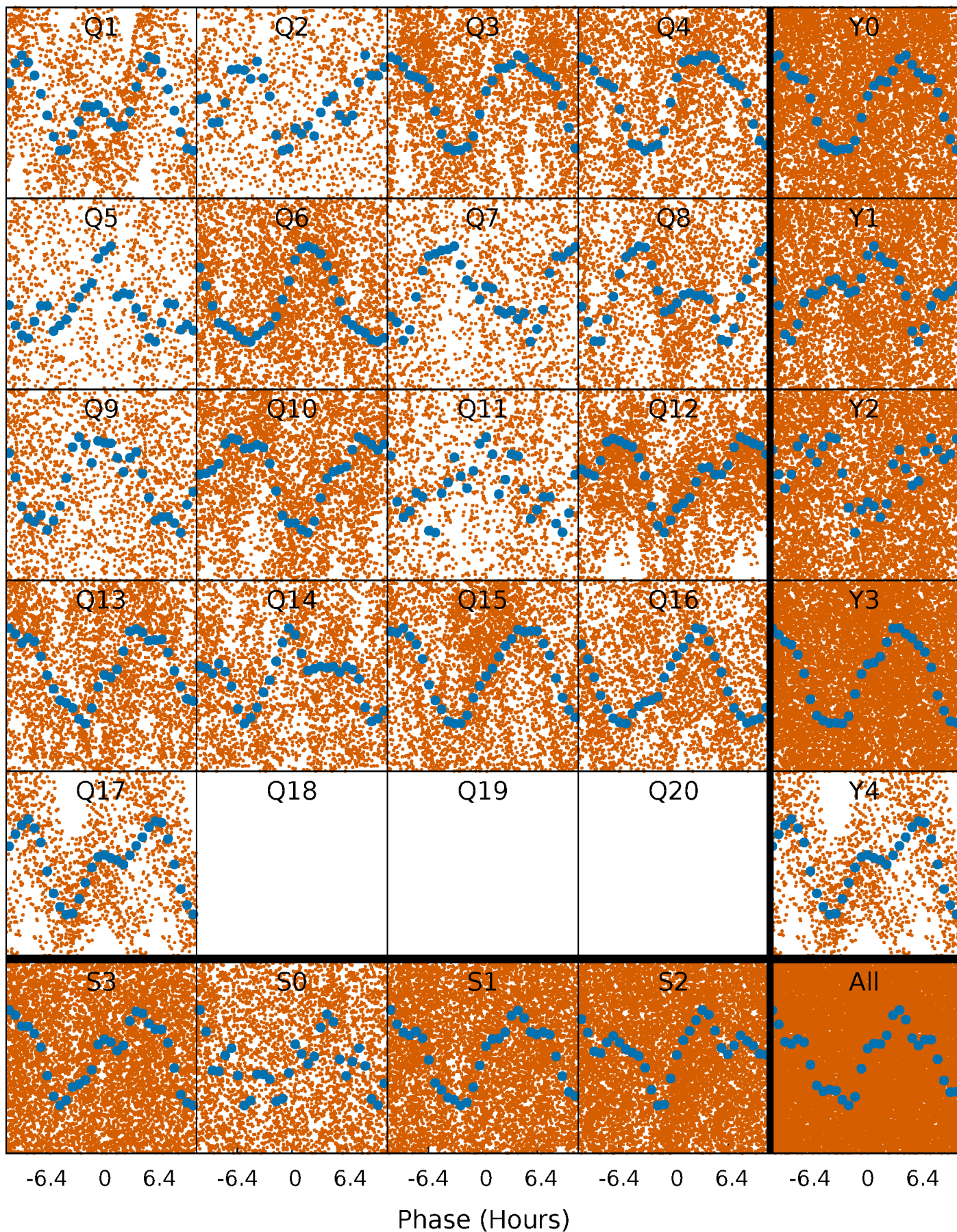


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



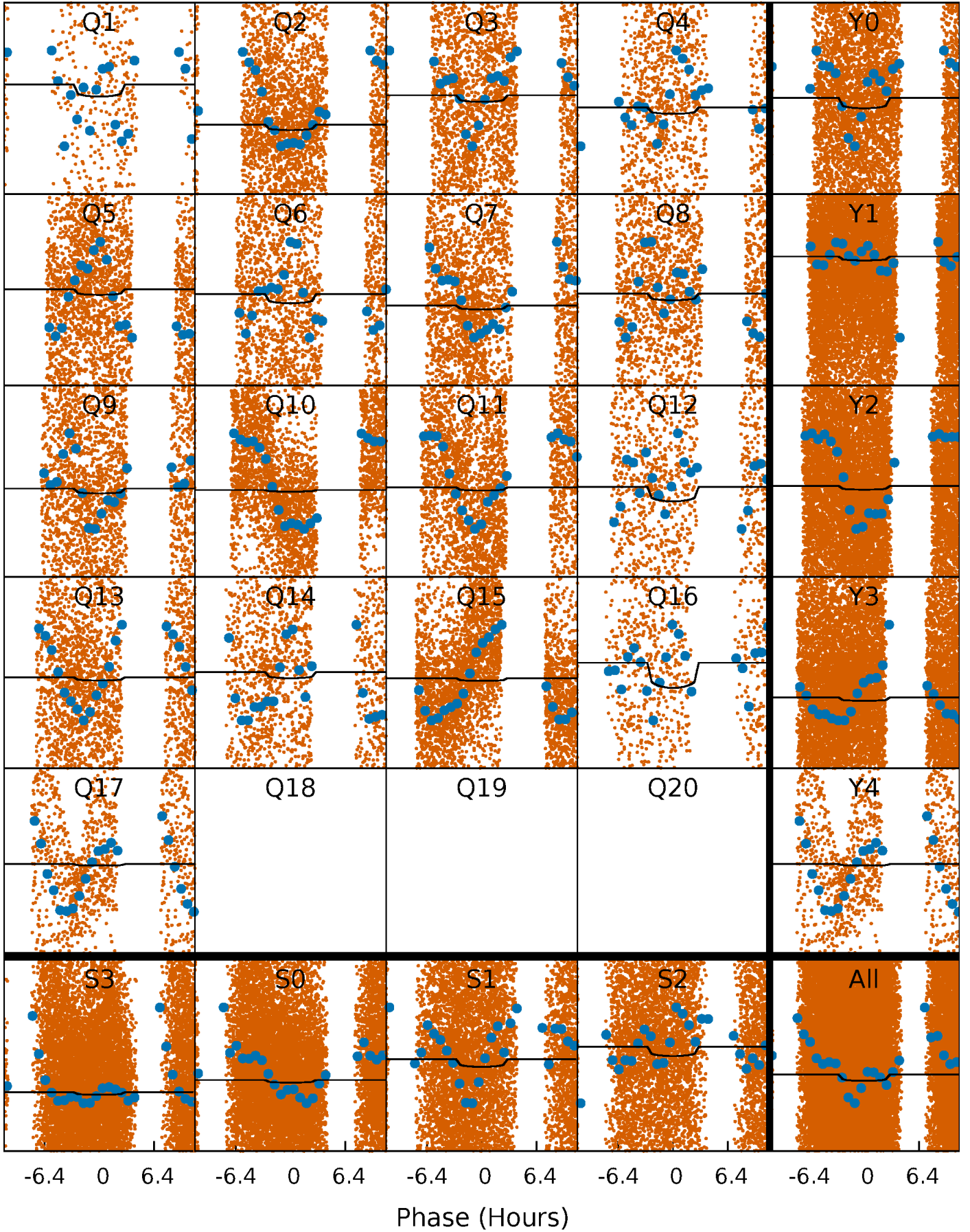
PDC Quarter-Phased Transit Curves

TCE 008087269-02 P= 0.627851 Days $T_0=131.820078$ (BKJD)



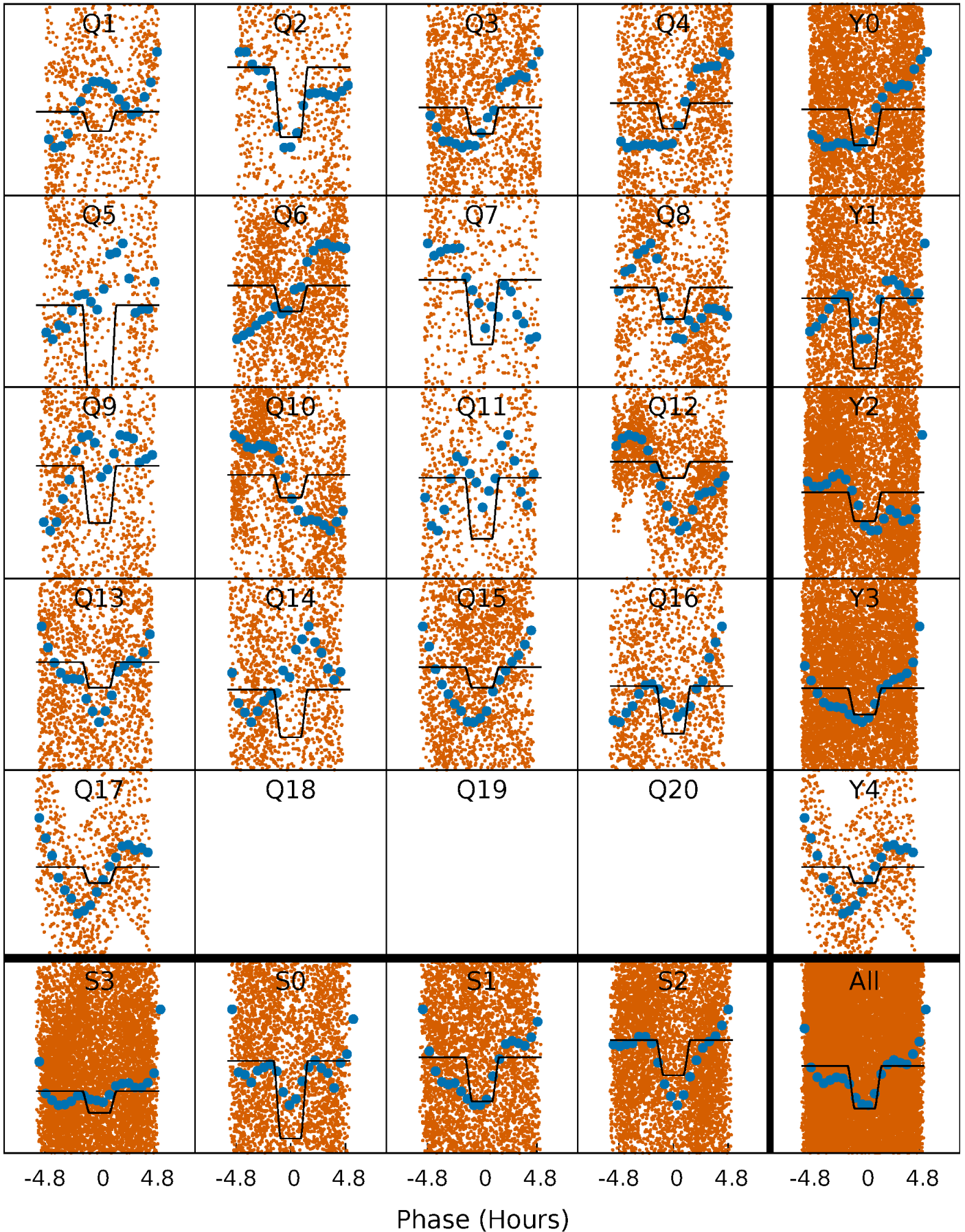
DV Quarter-Phased Transit Curves

TCE 008087269-02 $P = 0.627851$ Days $T_0 = 131.820078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

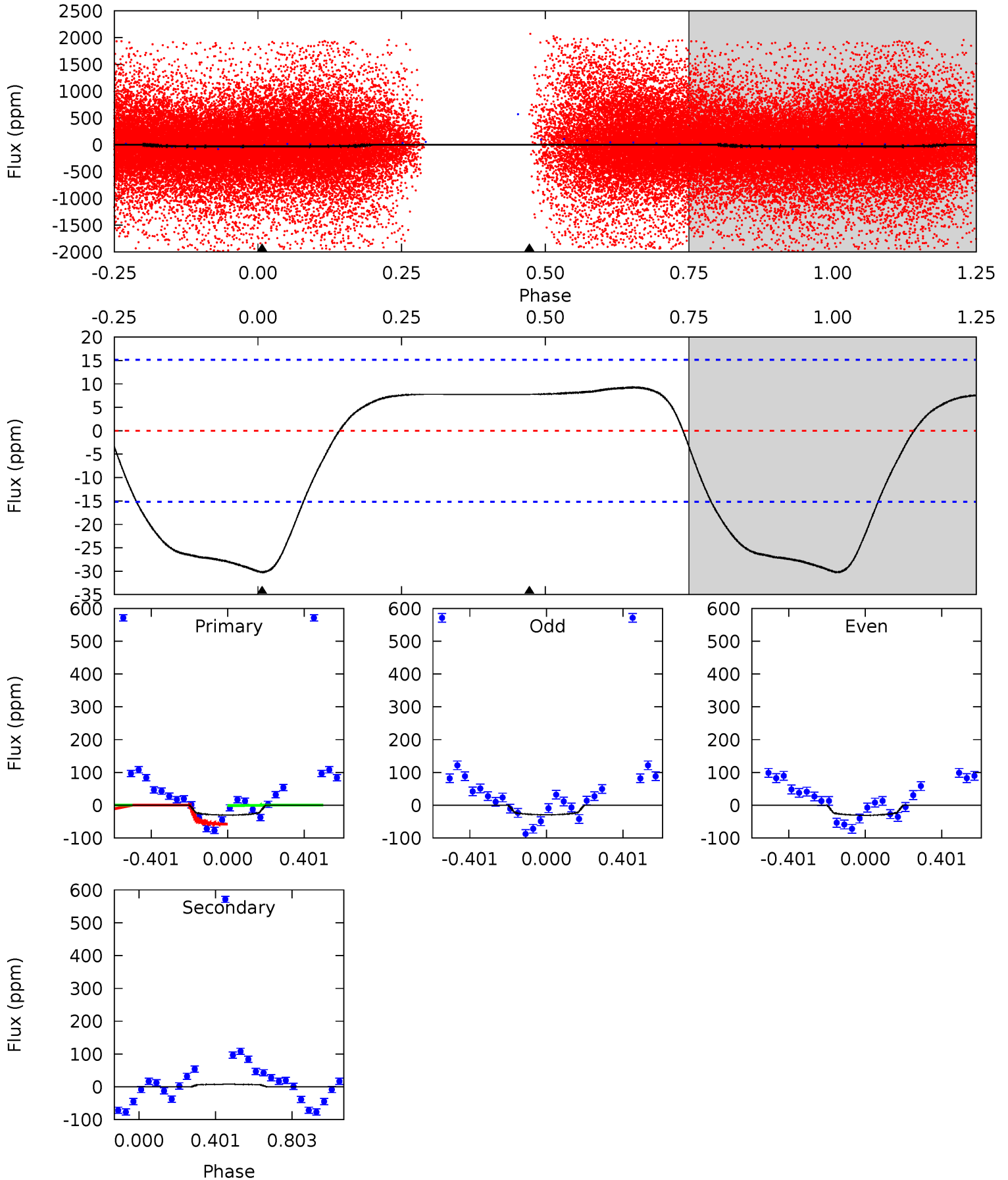
TCE 008087269-02 P= 0.627824 Days $T_0=131.784085$ (BKJD)



DV Model-Shift Uniqueness Test

008087269-02, P = 0.627851 Days, E = 131.192227 Days

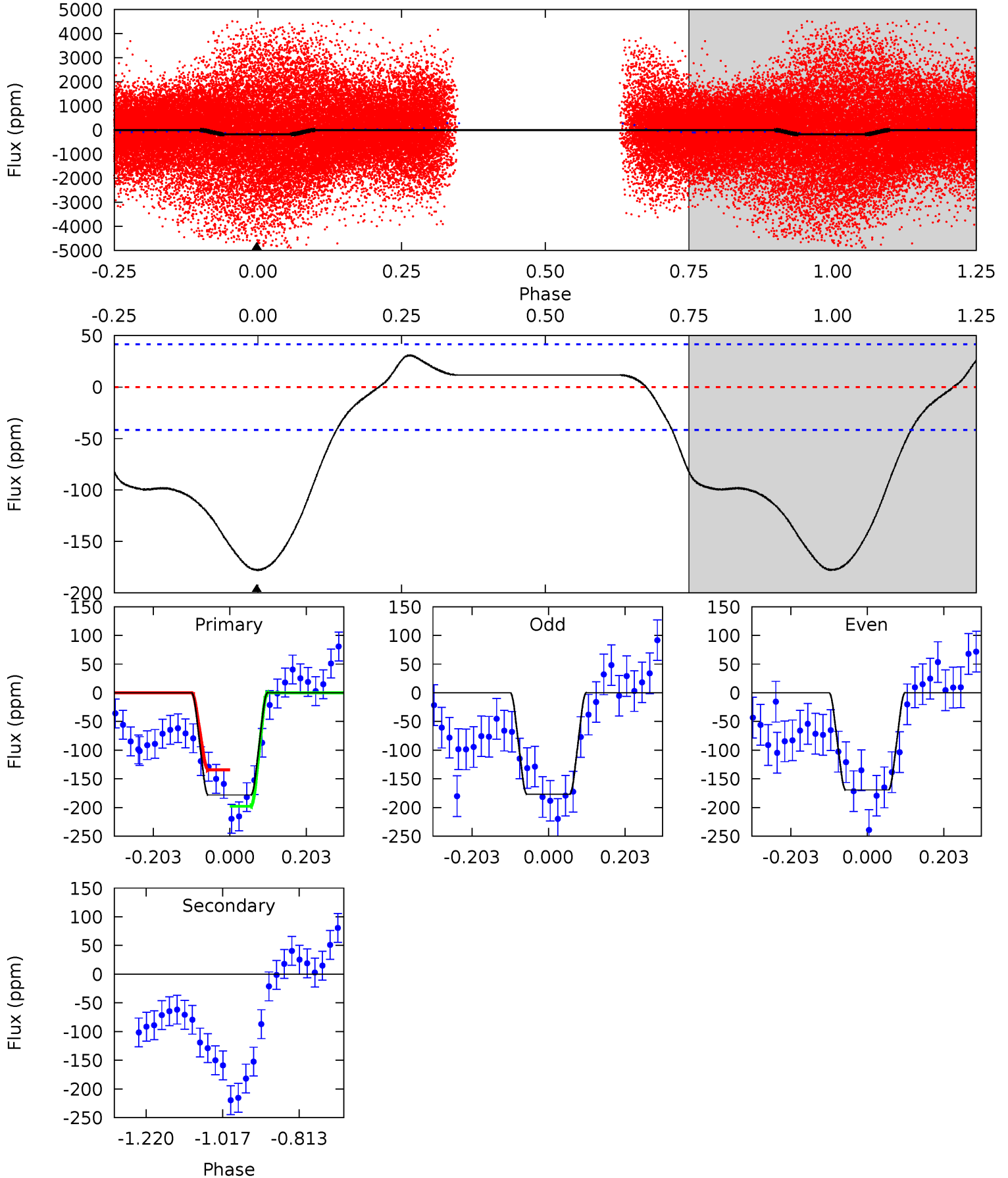
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.50	-2.18	0	0	4.26	0.84	1.62	8.50	8.50	-2.18	-2.18	0.21	1.65	0.24	8.50



Alt Model-Shift Uniqueness Test

008087269-02, P = 0.627824 Days, E = 131.156261 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	0	0	0	4.41	1.27	4.72	18.9	18.9	0	0	0.39	1.59	0.15	3.35



Stellar Parameters For KIC 008087269

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11053^{+519}_{-1558}	$3.603^{+0.425}_{-0.075}$	$0.360^{+0.050}_{-0.300}$	$4.909^{+0.400}_{-2.268}$	$3.520^{+0.070}_{-0.865}$	$0.042^{+0.158}_{-0.010}$
	+5%/-14%	+12%/-2%	+14%/-83%	+8%/-46%	+2%/-25%	+377%/-24%
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 008087269-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	8 ± 4	$1.92^{+1.13}_{-0.90}$	9620^{+1015}_{-1590}	-9595^{+1855}_{-4680}	$-0.514^{+0.356}_{-1.696}$
Alt.	0 ± 9	$7.89^{+1.47}_{-1.91}$	9646^{+1073}_{-1528}	-7151^{+1096}_{-776}	$-0.001^{+0.045}_{-0.043}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

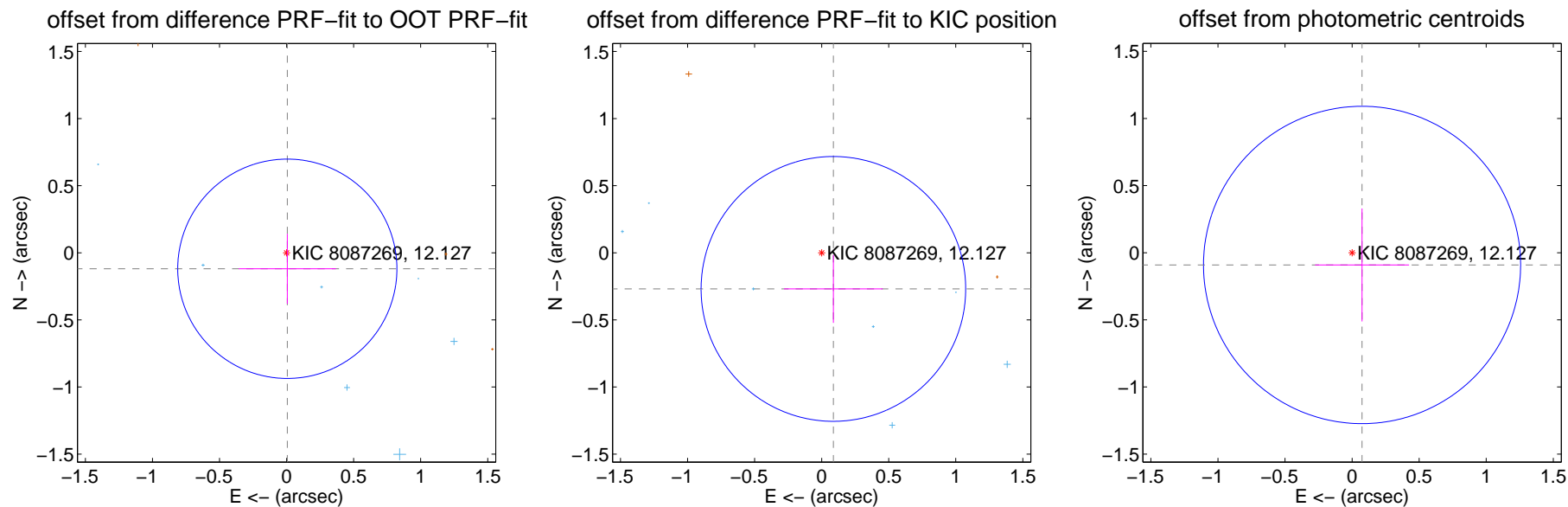
DV Centroid Data

Supplemental centroid analysis for 008087269-02. Kepler magnitude: 12.13. Transit SNR 3.56

There are 9 quarters with good PRF difference image offsets

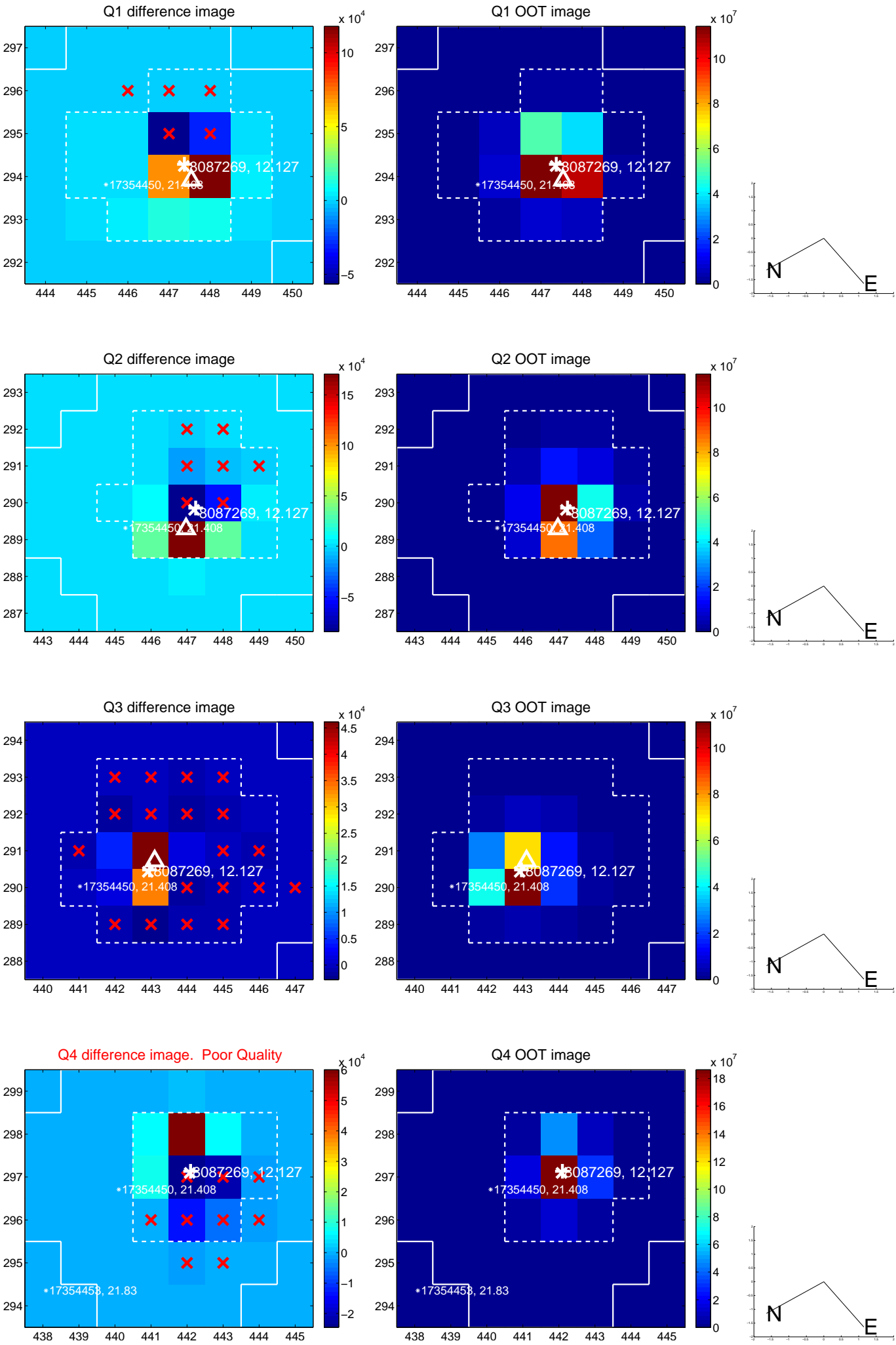
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.272	0.44	-0.006 ± 0.362	-0.119 ± 0.261
PRF-fit source offset from KIC position	0.283 ± 0.329	0.86	-0.087 ± 0.368	-0.269 ± 0.253
photometric centroid source offset	0.12 ± 0.39	0.30	-0.07 ± 0.35	-0.09 ± 0.42

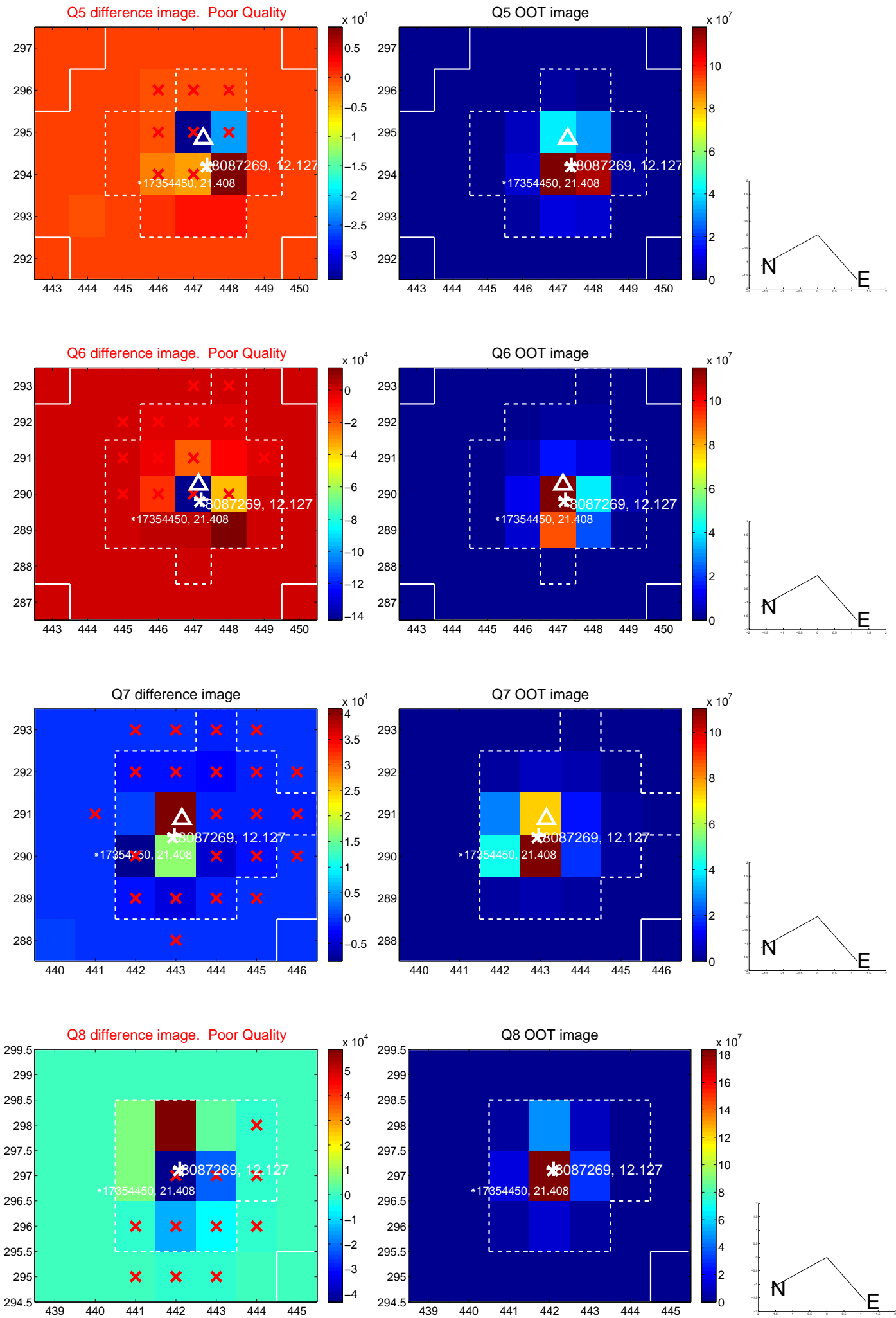


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

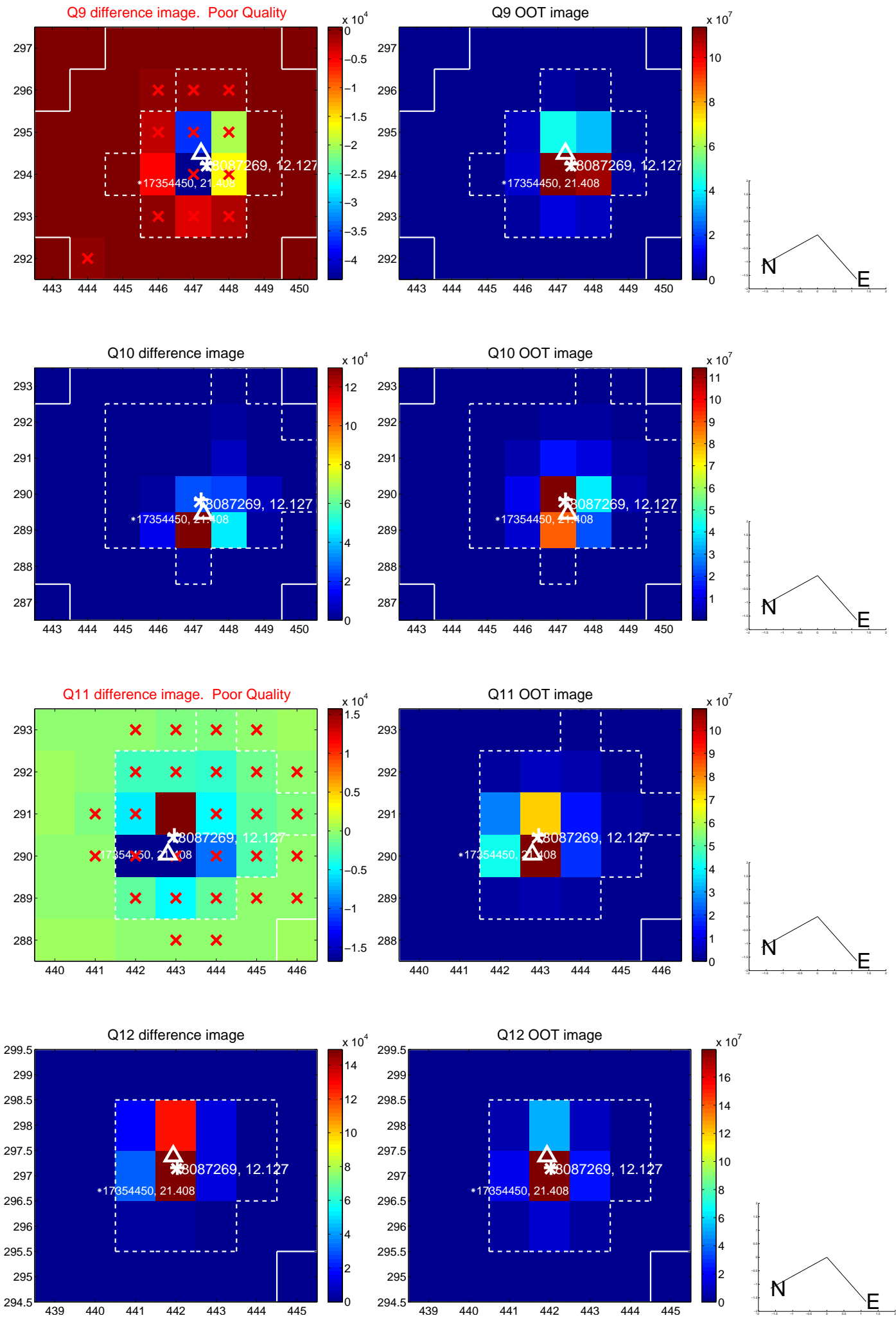
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



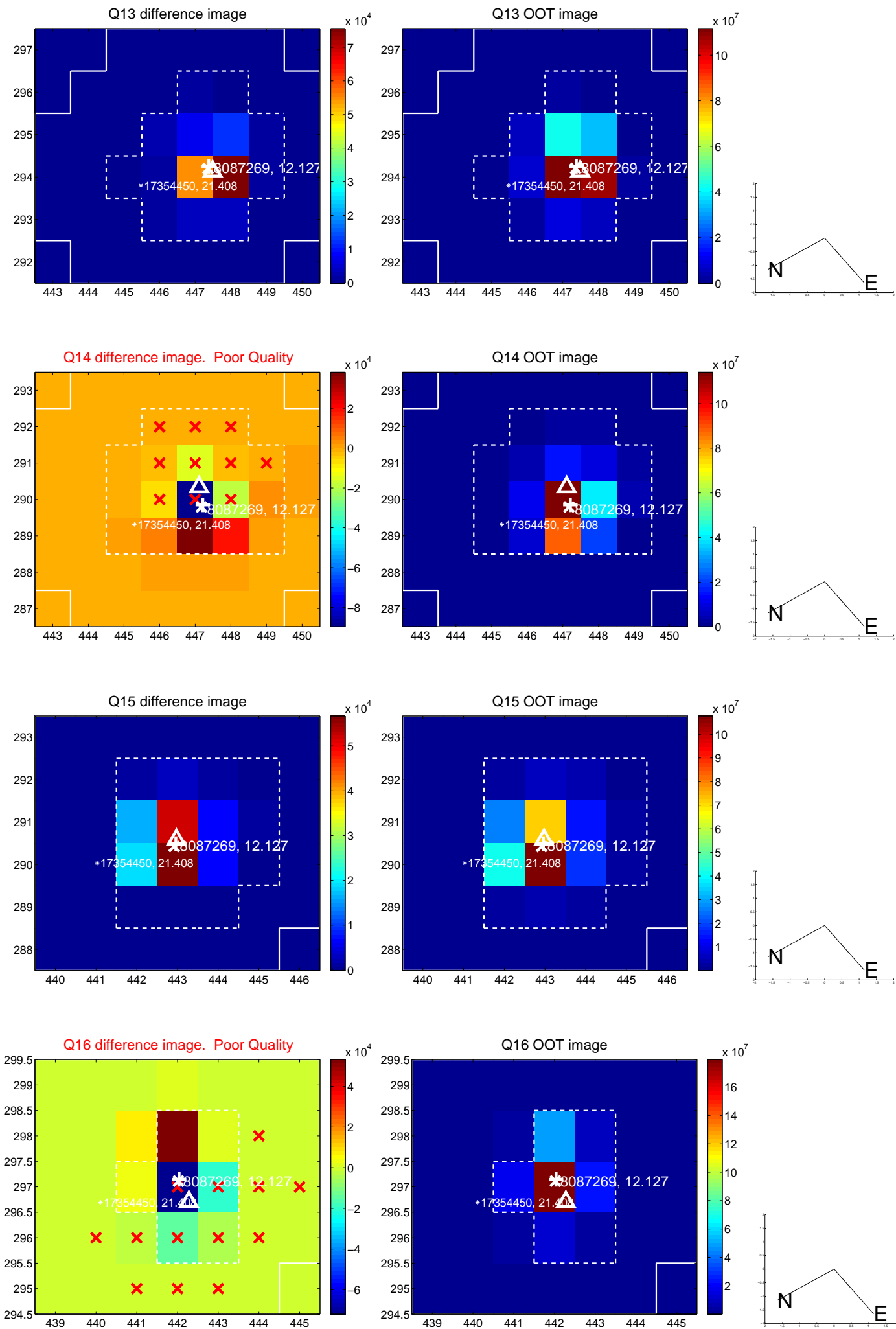
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



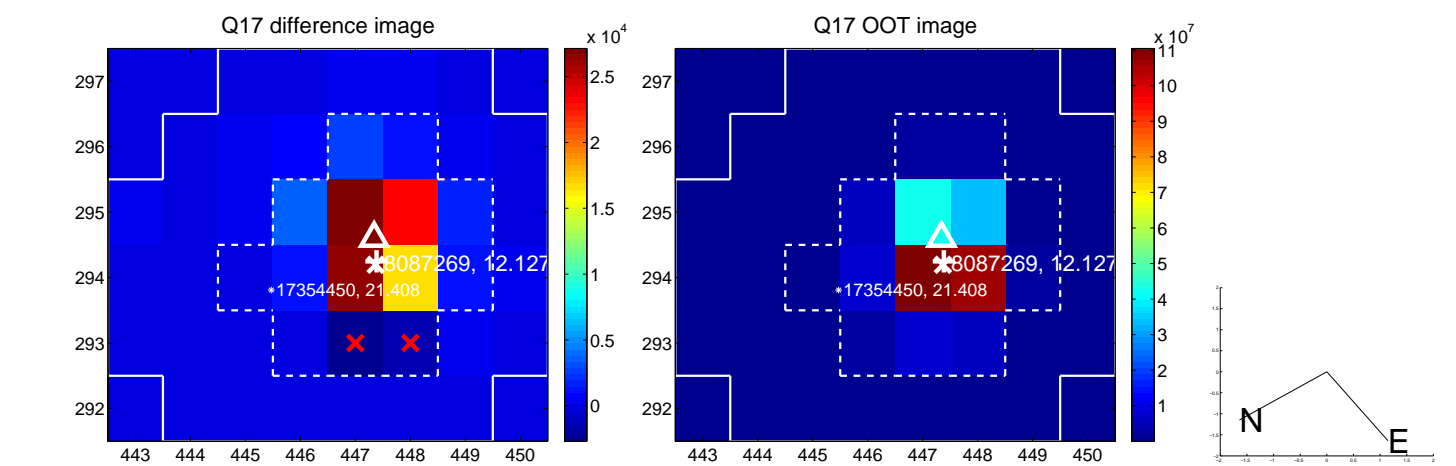
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



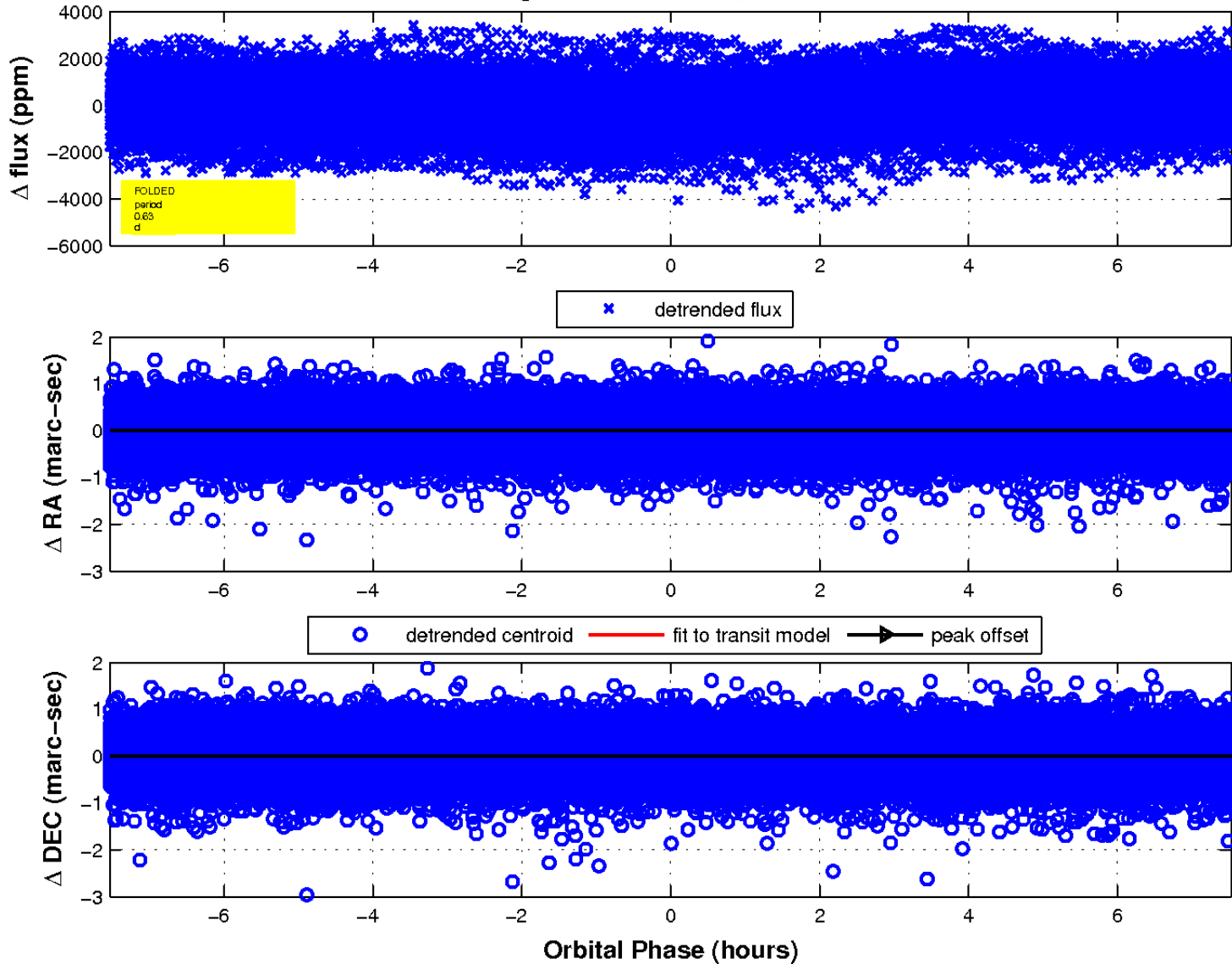
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

