

KIC 005892969

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})
005892969-01	OBS	No	1.096278	132.042239	163.9	2.835	9.5	9.2	3.07	7561	4.56	40522.14
005892969-02	OBS	No	1.233440	131.895810	168.1	6.674	8.0	8.9	3.07	7561	4.22	34628.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892969-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005892969-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

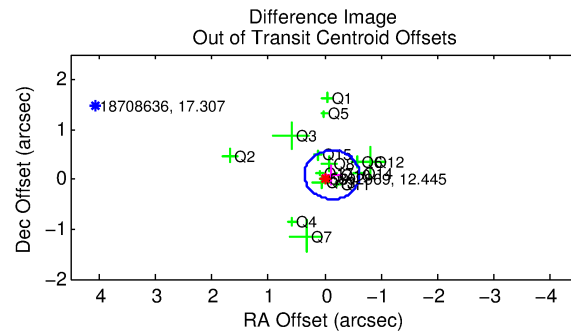
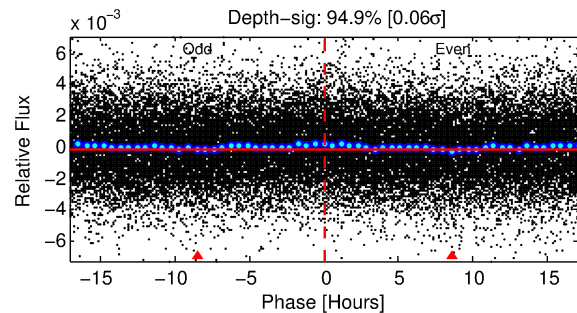
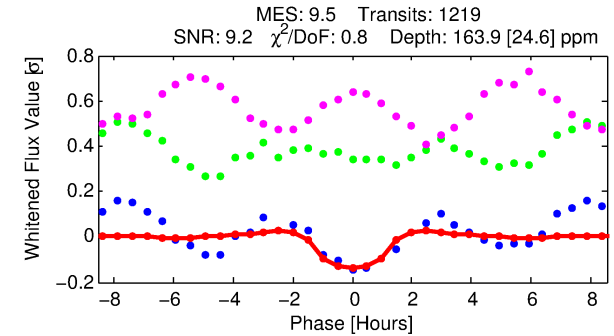
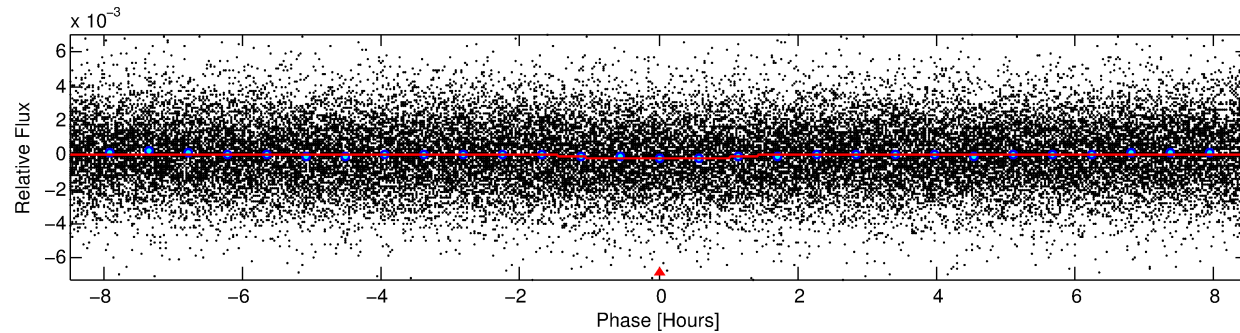
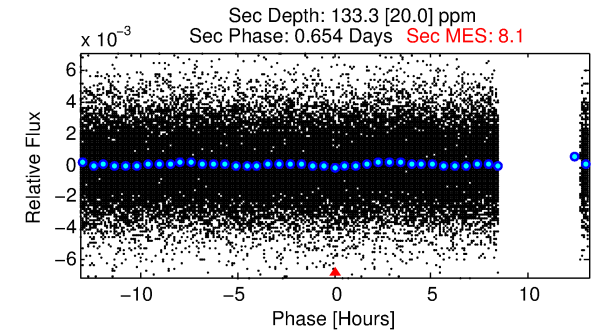
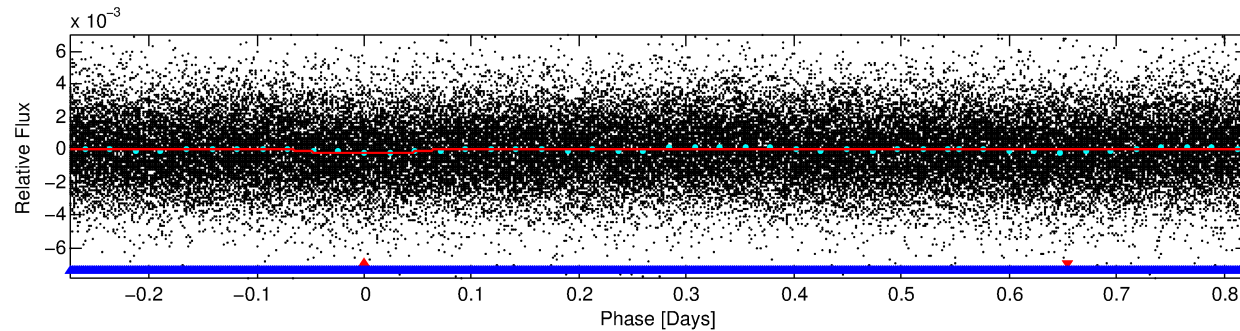
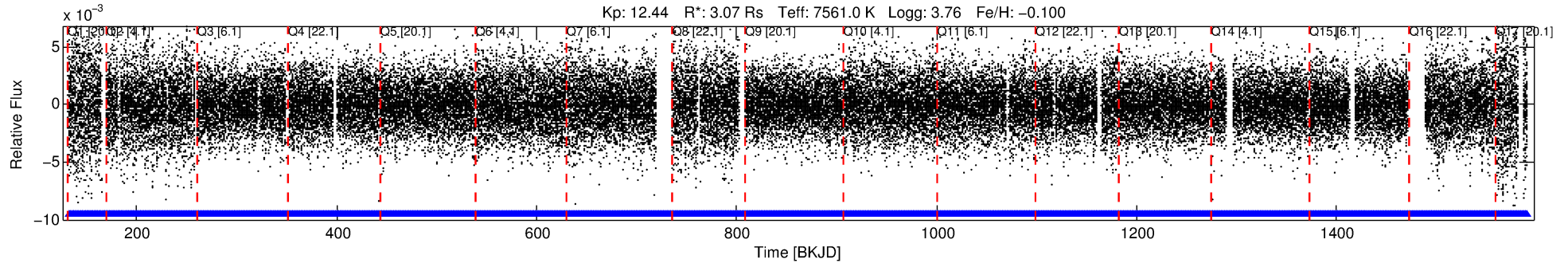
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892969-01

No Significant Match Found

DV One-Page Summary

KIC: 5892969 Candidate: 1 of 2 Period: 1.096 d



DV Fit Results:

Period = 1.09628 [0.00001] d
Epoch = 132.0422 [0.0043] BKJD
Rp/R* = 0.0136 [0.0100]
a/R* = 1.67 [4.99]
b = 0.90 [1.00]
Seff = 40522.14 [28460.17]
Teq = 3618 [635] K
Rp = 4.56 [3.93] Re
a = 0.0261 [0.0112] AU
Ag = 2.40 [3.90] [0.36σ]
Teffp = 6965 [2581] K [1.26σ]

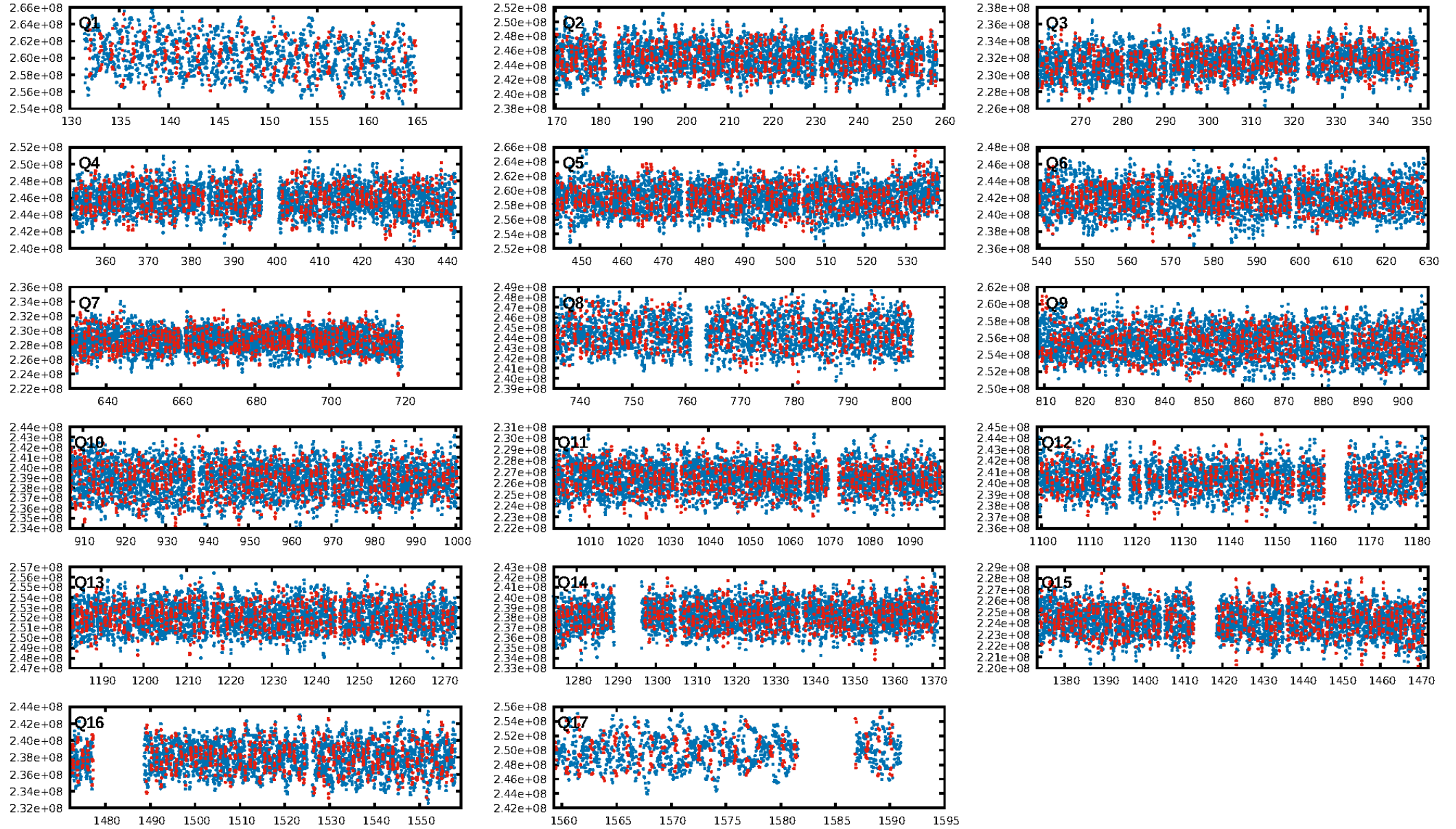
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 35.0% [0.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.39e-16
RollingBand-fgt: 1.00 [1163/1163]
GhostDiagnostic-chr: 1.518
Centroid-sig: 0.5%
Centroid-so: 0.132 arcsec [1.21σ]
OotOffset-rm: 0.153 arcsec [0.94σ]
KicOffset-rm: 0.134 arcsec [0.76σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

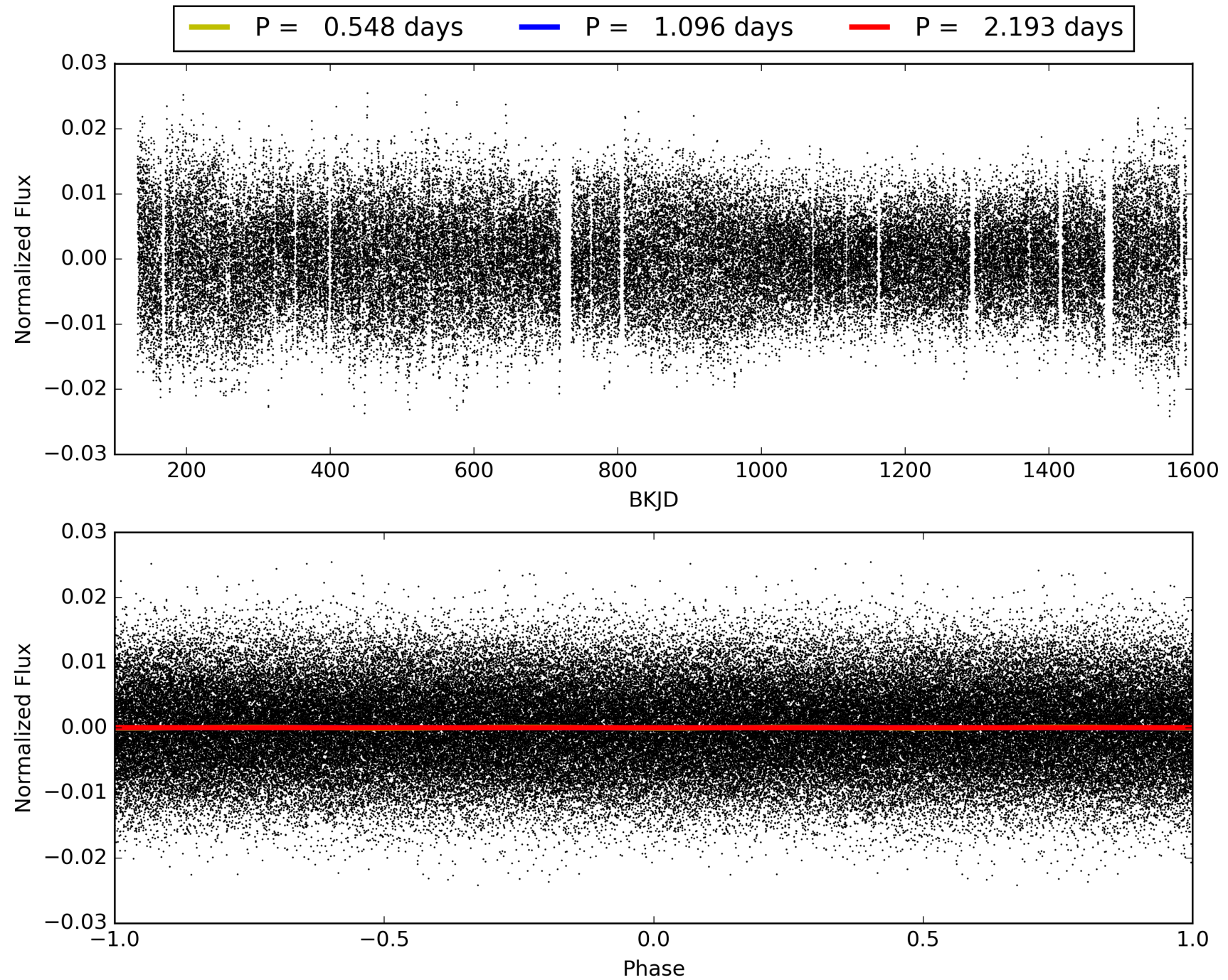
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:28:44 Z

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

TCE 005892969-01, PDC Light Curves

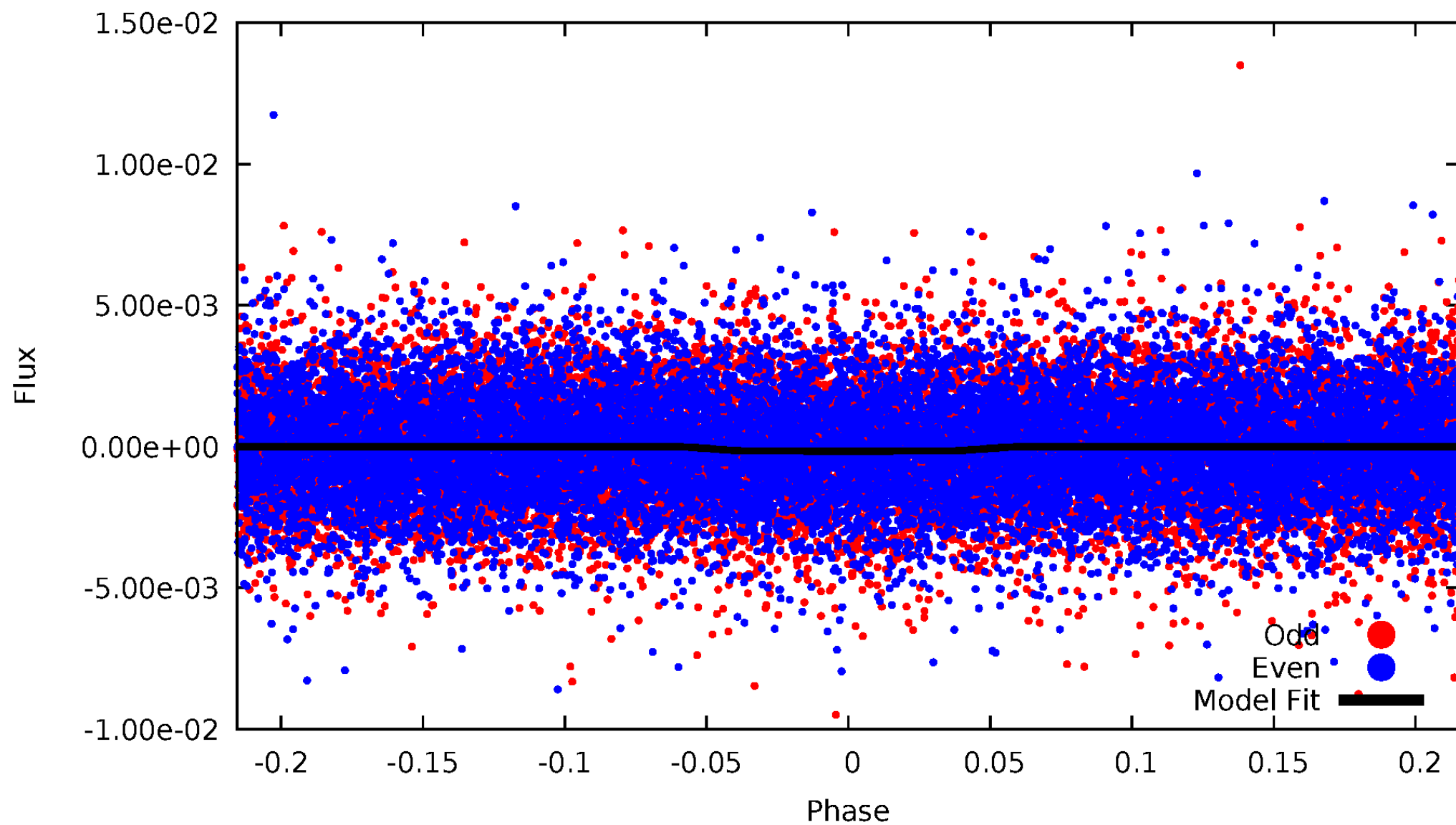


TCE 005892969-01



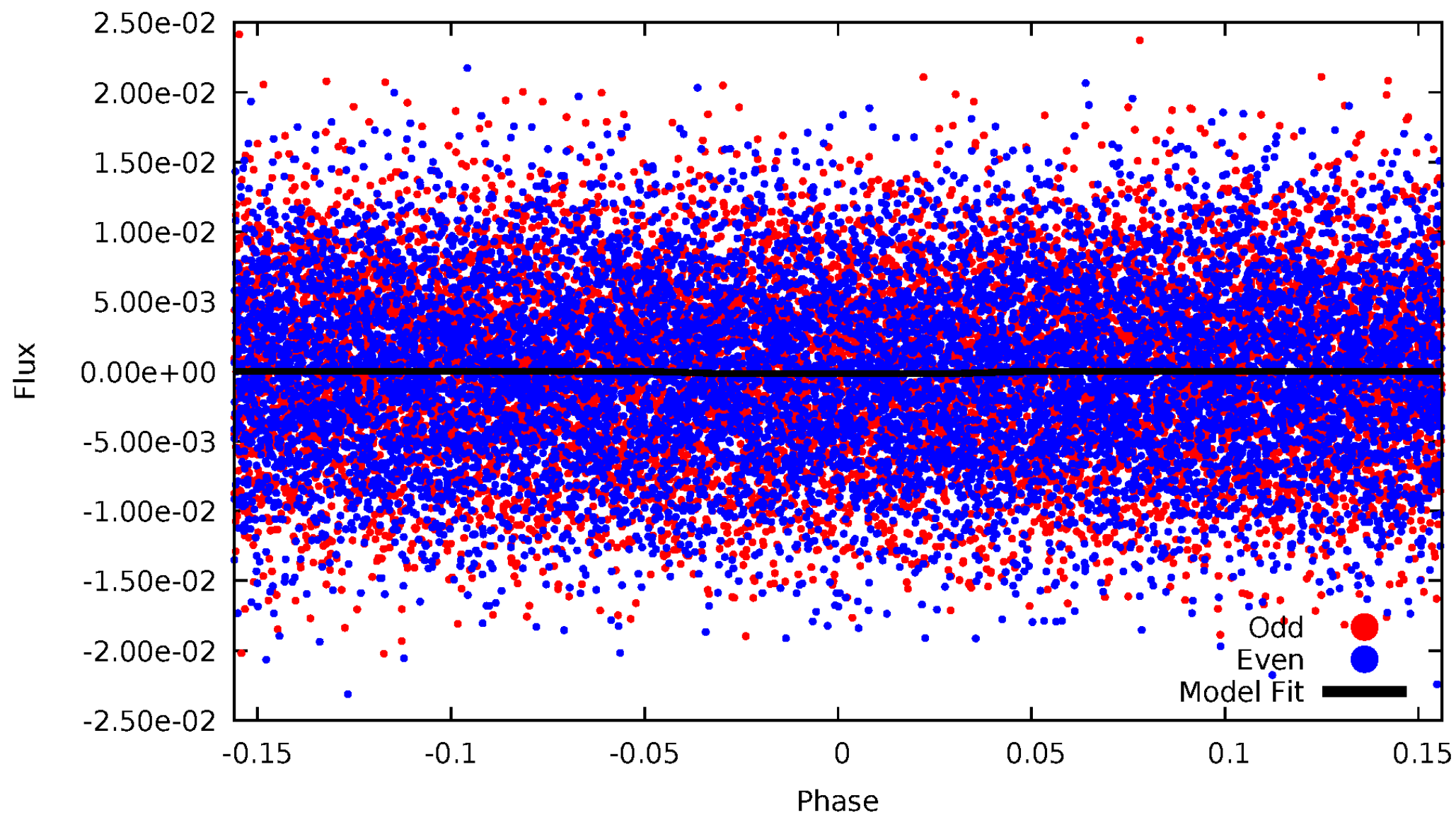
DV Odd/Even

TCE 005892969-01



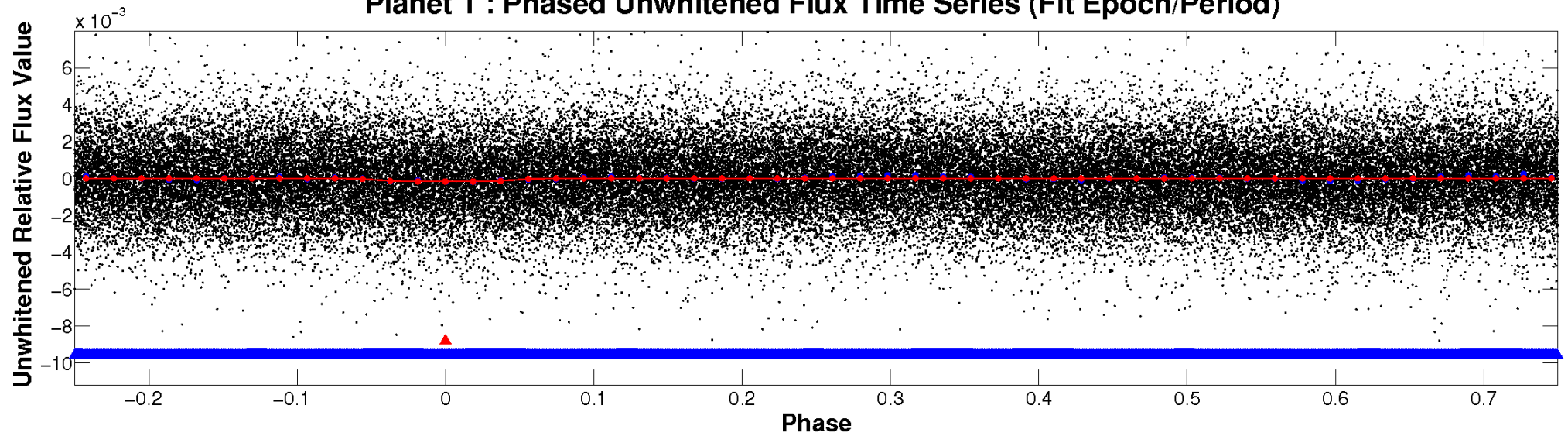
ALT Odd/Even

TCE 005892969-01

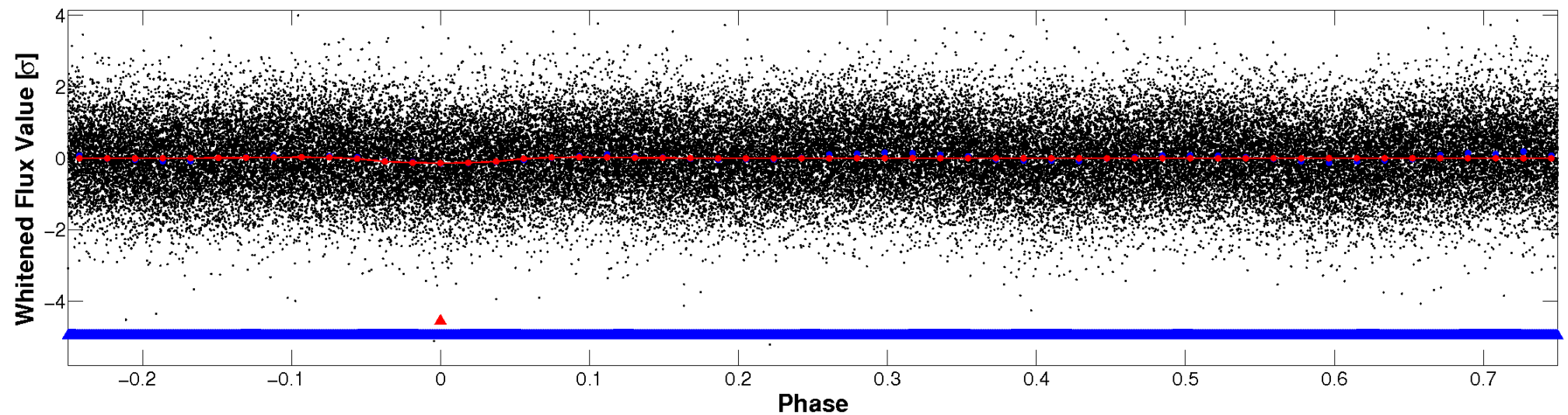


Non-Whitened Vs. Whitened Light Curve

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

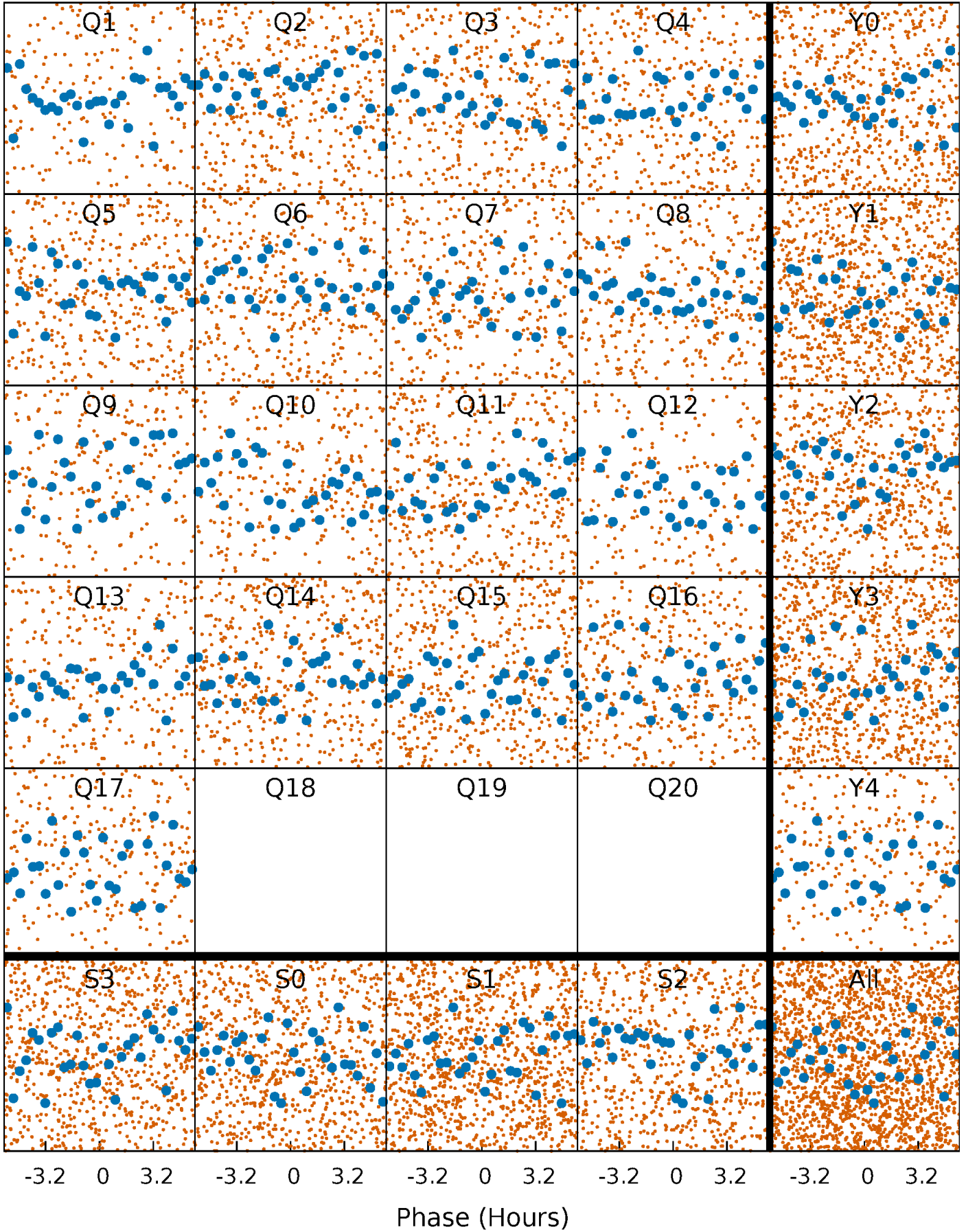


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



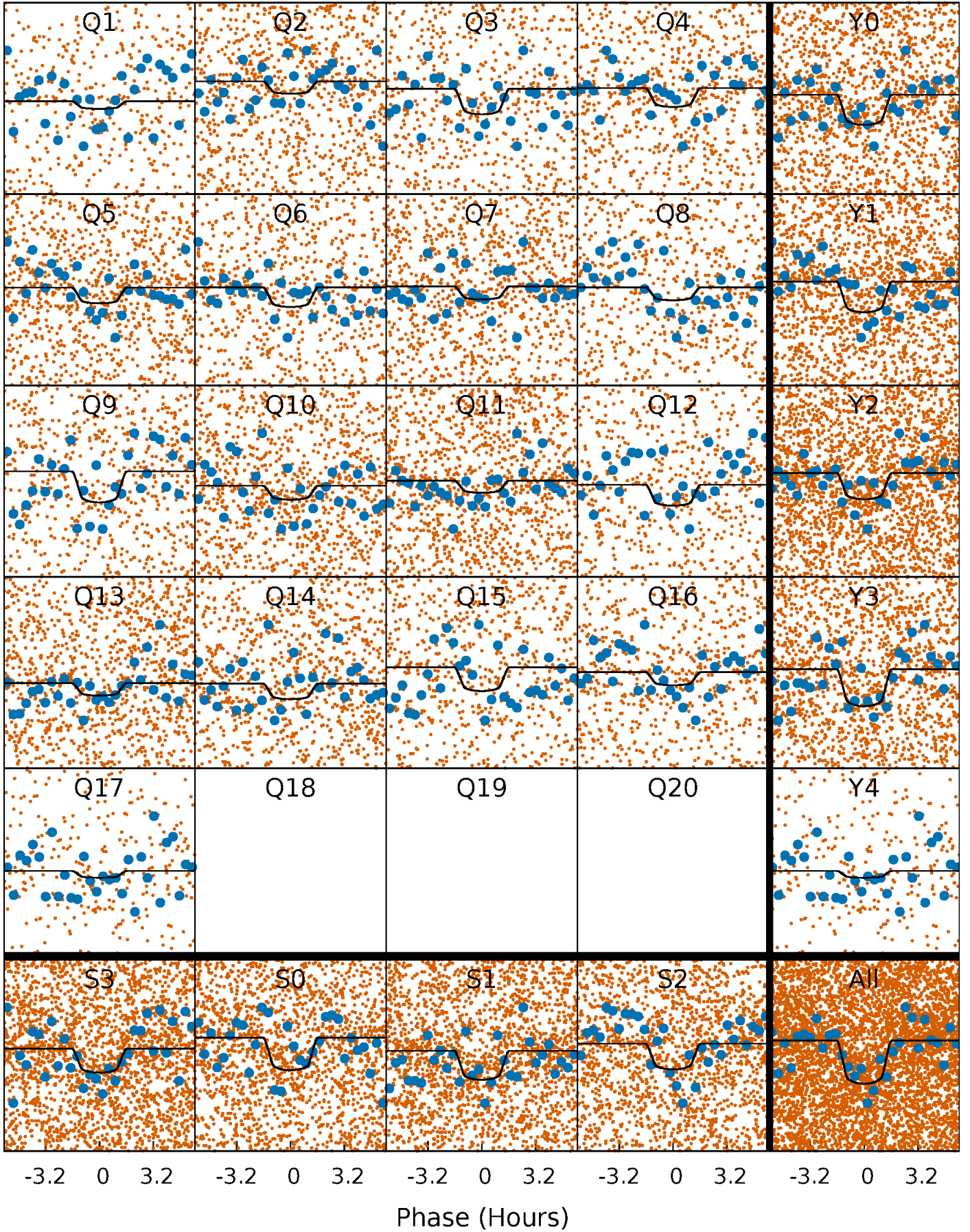
PDC Quarter-Phased Transit Curves

TCE 005892969-01 P= 1.096278 Days $T_0=132.042239$ (BKJD)



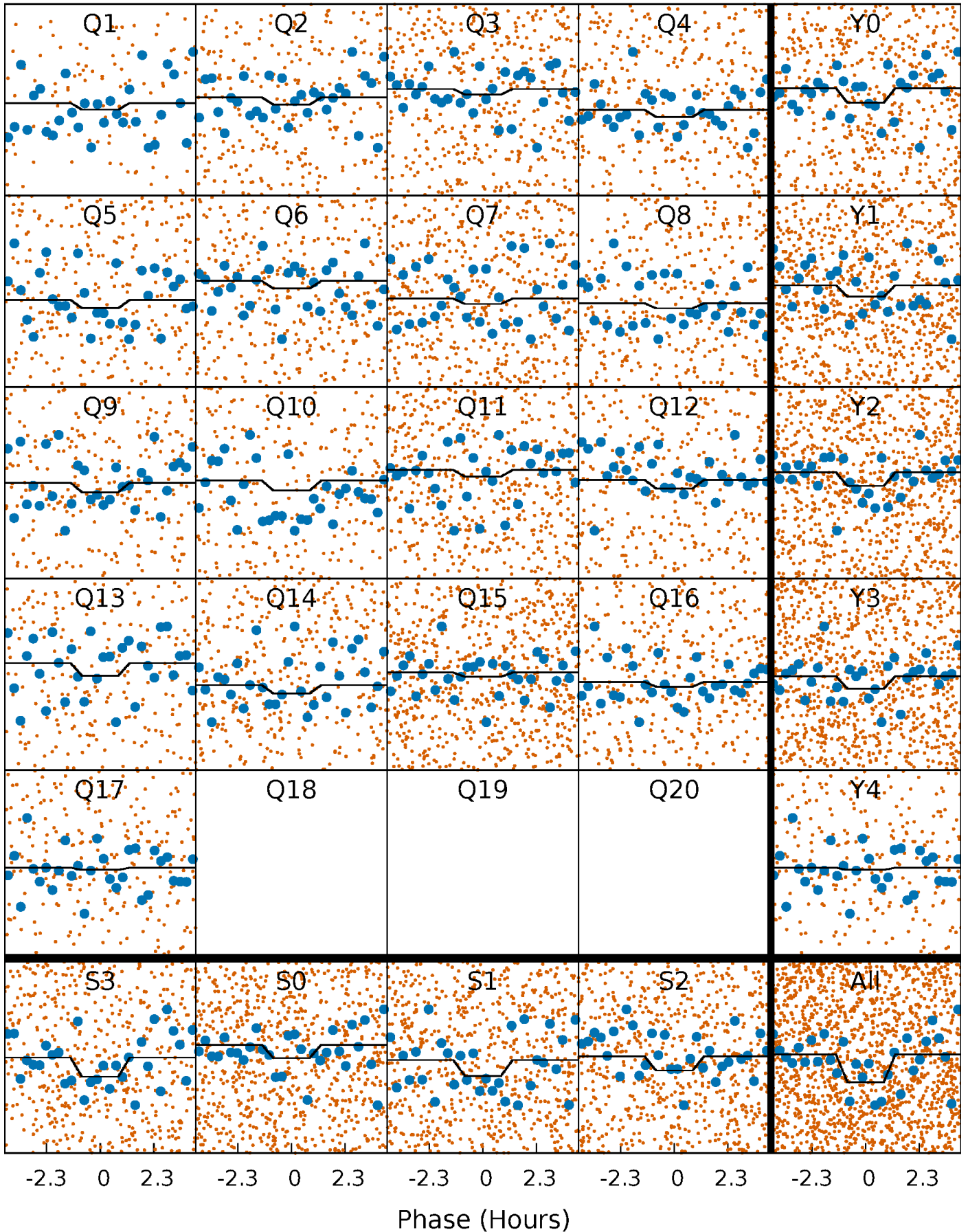
DV Quarter-Phased Transit Curves

TCE 005892969-01 P= 1.096278 Days $T_0=132.042239$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

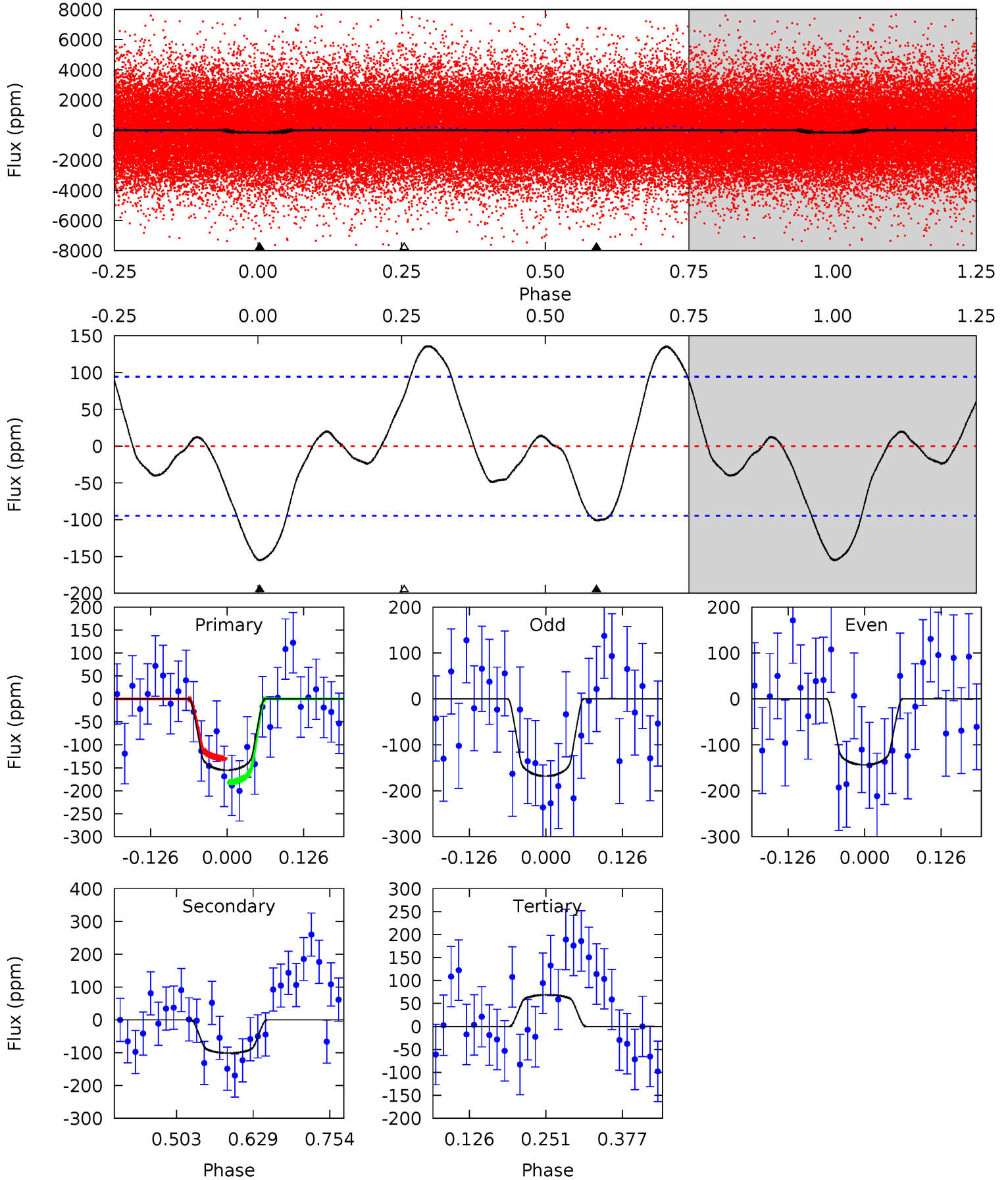
TCE 005892969-01 P= 1.096302 Days $T_0=132.021534$ (BKJD)



DV Model-Shift Uniqueness Test

005892969-01, P = 1.096278 Days, E = 130.945961 Days

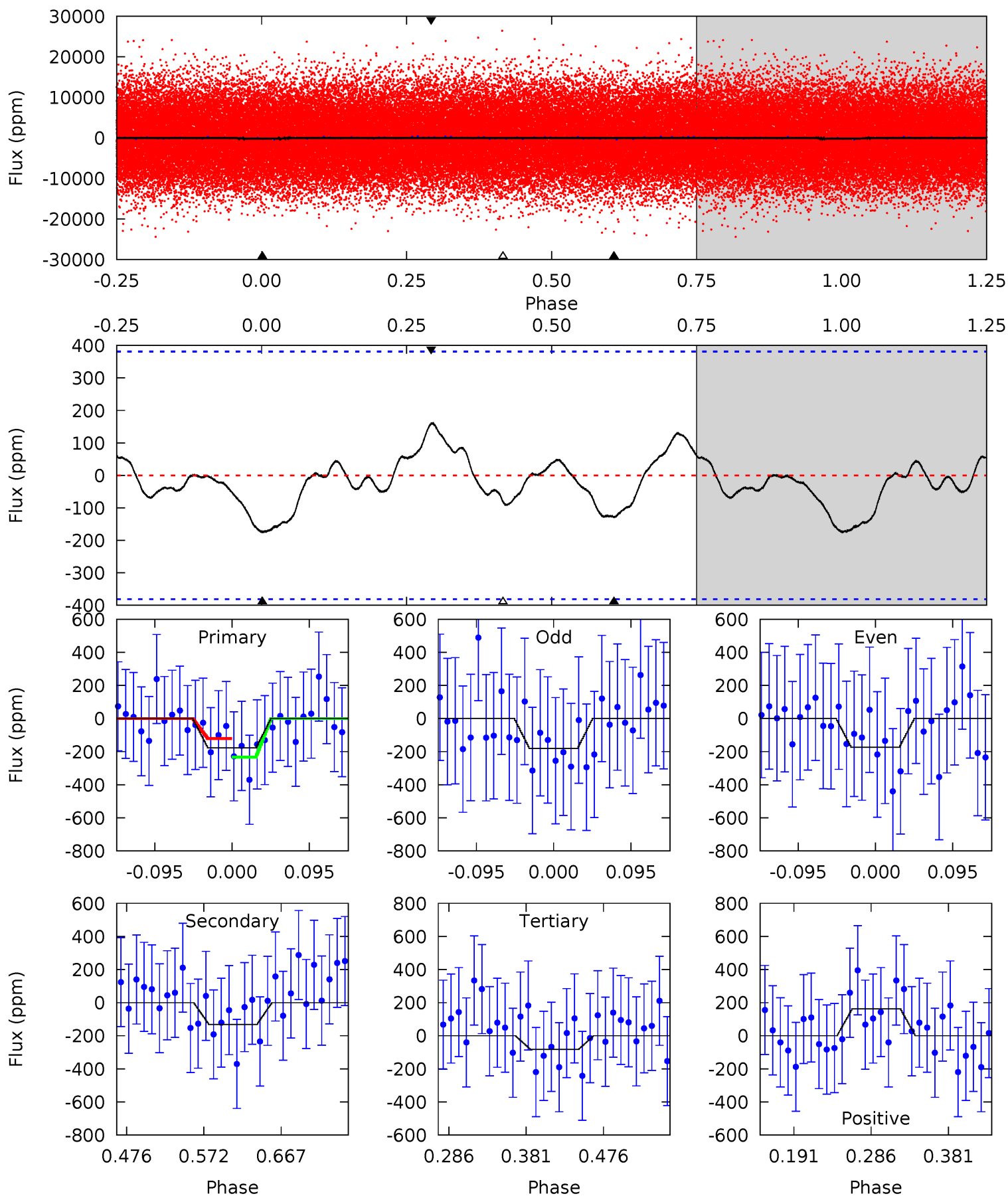
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.41	4.83	-3.29	0	4.52	1.53	2.87	10.7	7.41	8.12	4.83	0.59	1.06	0.47	1.25



Alt Model-Shift Uniqueness Test

005892969-01, P = 1.096302 Days, E = 130.925232 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.13	1.57	0.98	1.96	4.57	1.67	0.74	1.14	0.17	0.59	-0.38	0.04	0.91	0.48	0.68



Stellar Parameters For KIC 005892969

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7561^{+235}_{-314}	$3.759^{+0.399}_{-0.070}$	$-0.100^{+0.200}_{-0.350}$	$3.073^{+0.347}_{-1.387}$	$1.977^{+0.093}_{-0.525}$	$0.096^{+0.323}_{-0.023}$
	+3%/-4%	+11%/-2%	+200%/-350%	+11%/-45%	+5%/-27%	+336%/-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 005892969-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-101 ± 21	$4.50^{+2.77}_{-2.65}$	4909^{+303}_{-554}	5839^{+4174}_{-1465}	$1.847^{+8.873}_{-1.154}$
Alt.	-131 ± 83	$4.25^{+3.11}_{-2.38}$	4906^{+332}_{-530}	6286^{+4476}_{-2334}	$2.466^{+9.526}_{-1.950}$

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 $A_{obs} \gg 1.0$

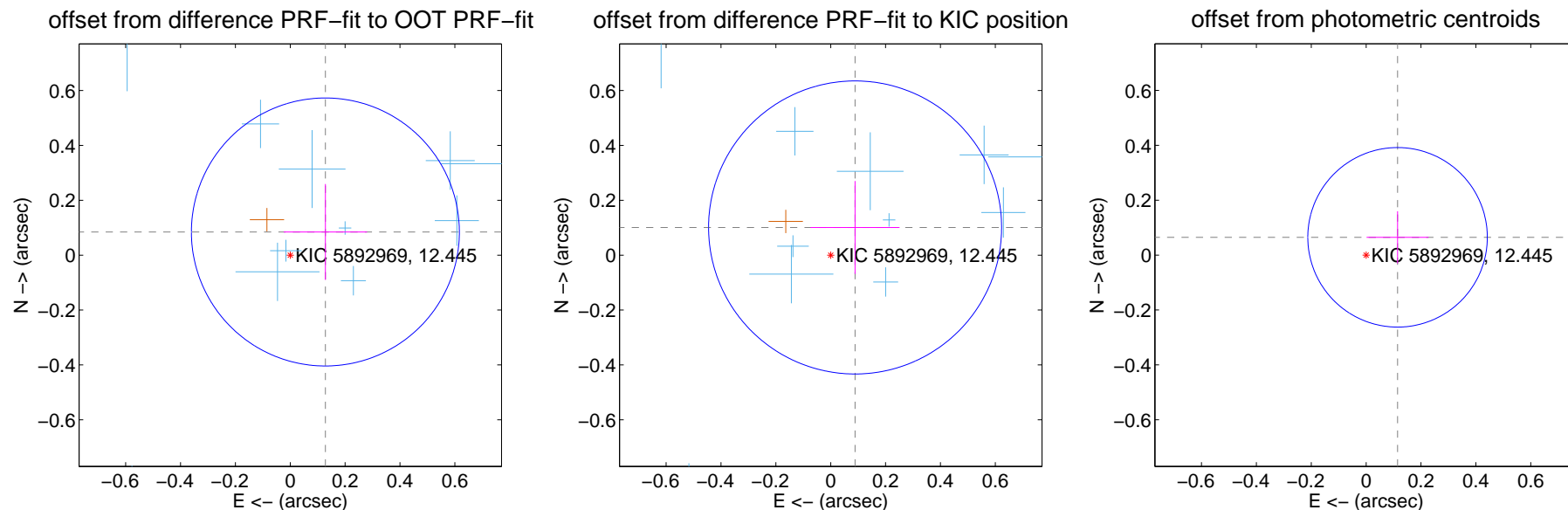
DV Centroid Data

Supplemental centroid analysis for 005892969-01. Kepler magnitude: 12.45. Transit SNR 9.15

There are 14 quarters with good PRF difference image offsets

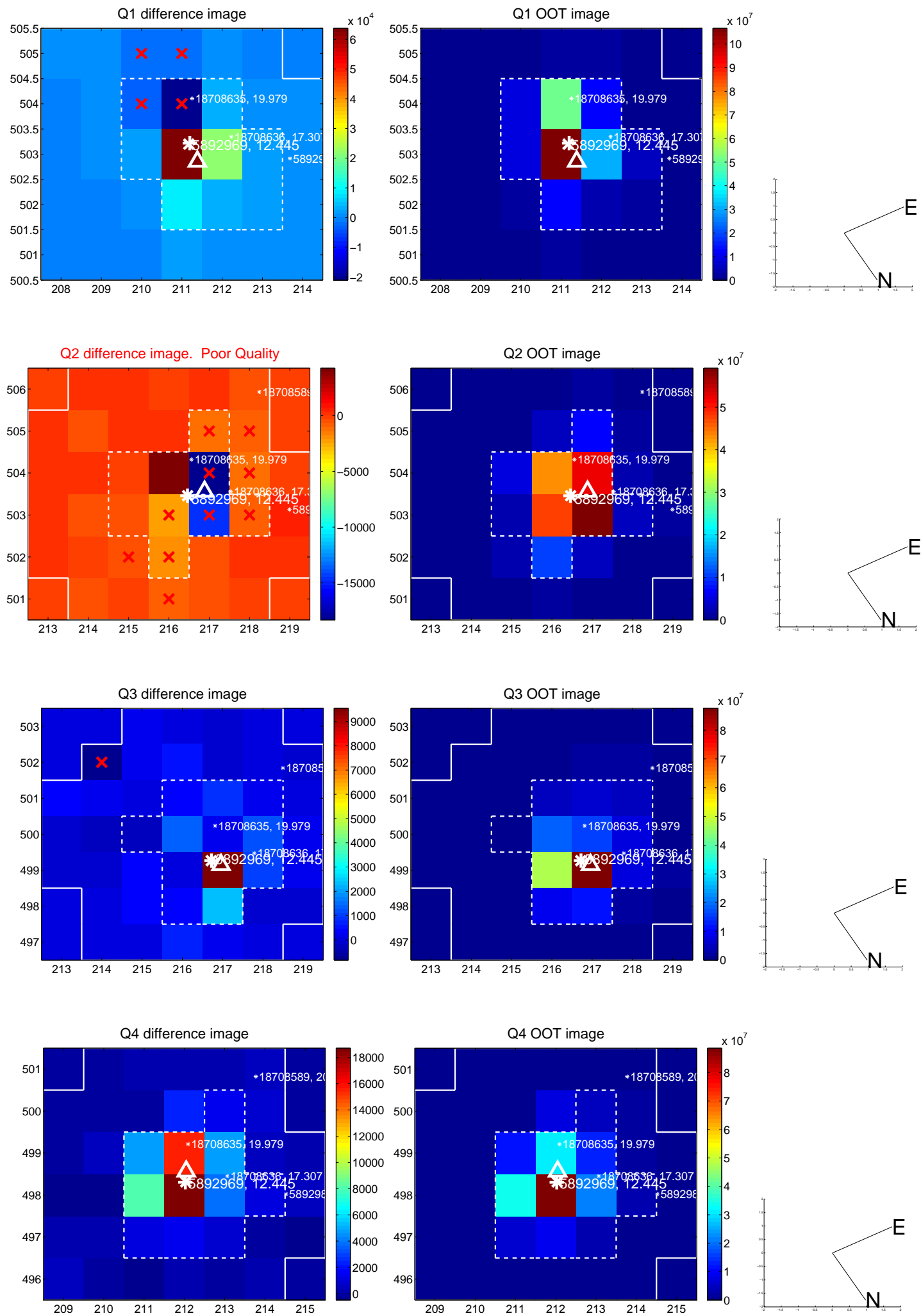
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.153 ± 0.163	0.94	-0.128 ± 0.152	0.084 ± 0.175
PRF-fit source offset from KIC position	0.134 ± 0.178	0.76	-0.089 ± 0.162	0.101 ± 0.169
photometric centroid source offset	0.13 ± 0.11	1.21	-0.11 ± 0.11	0.06 ± 0.10

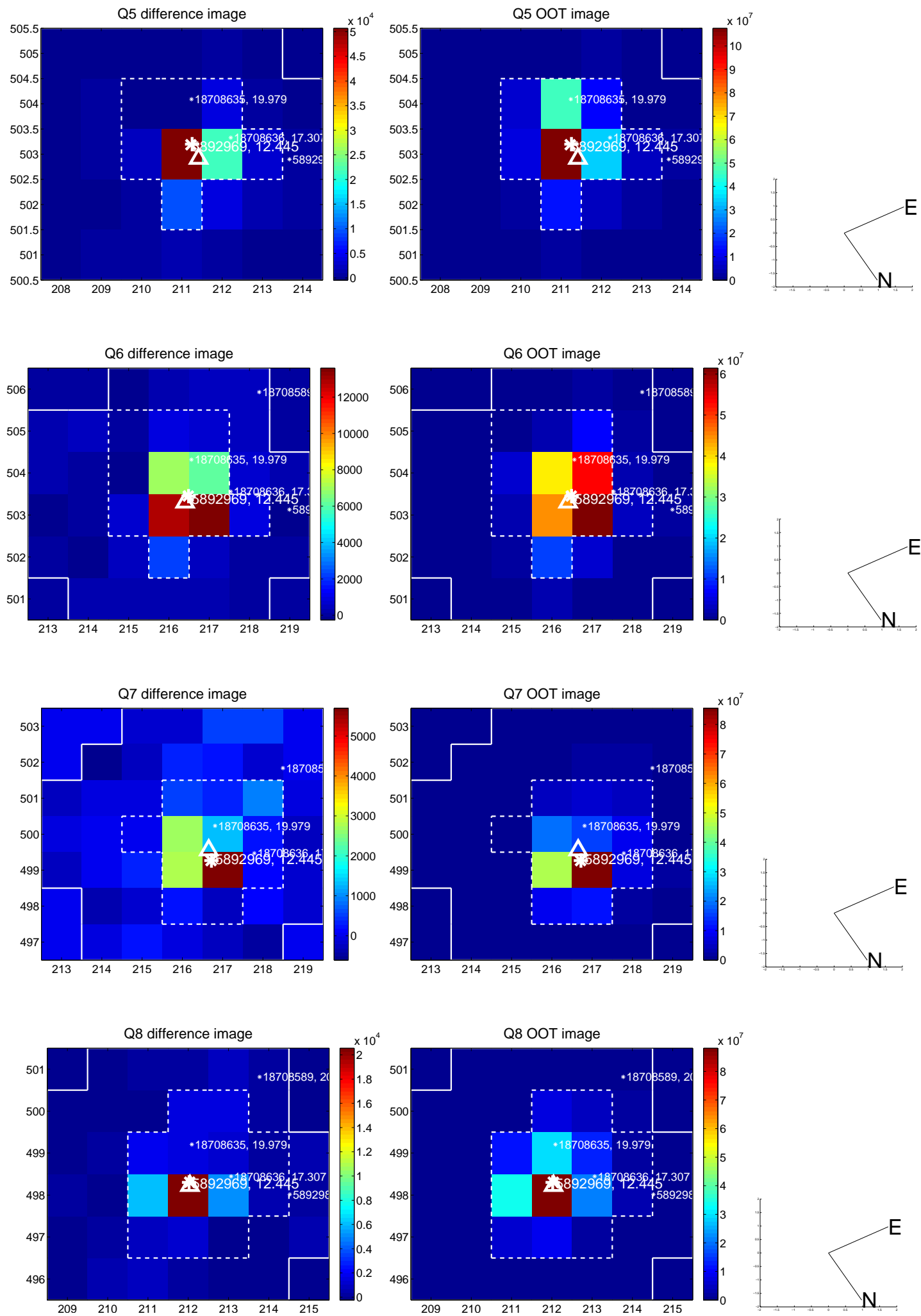


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

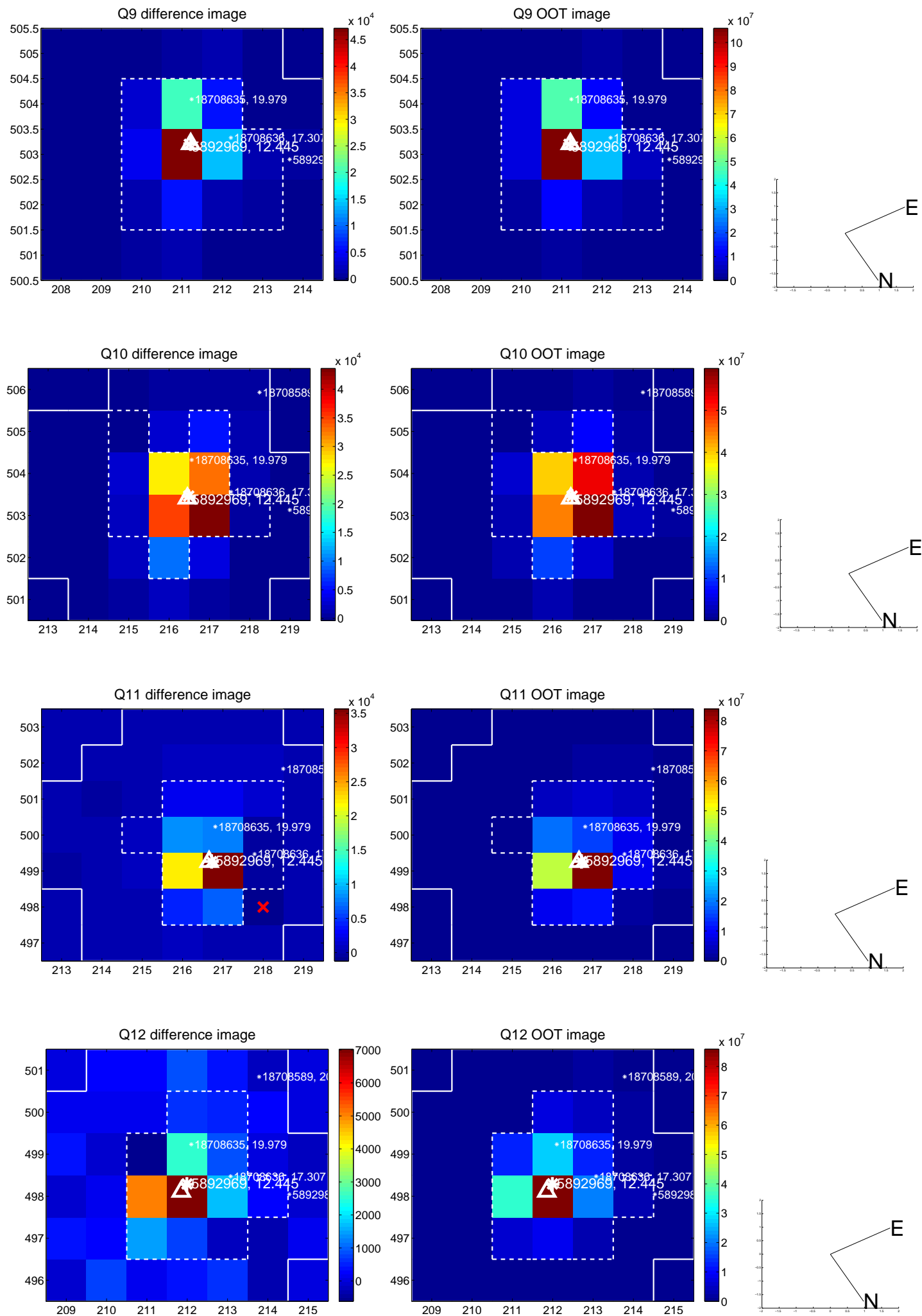
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



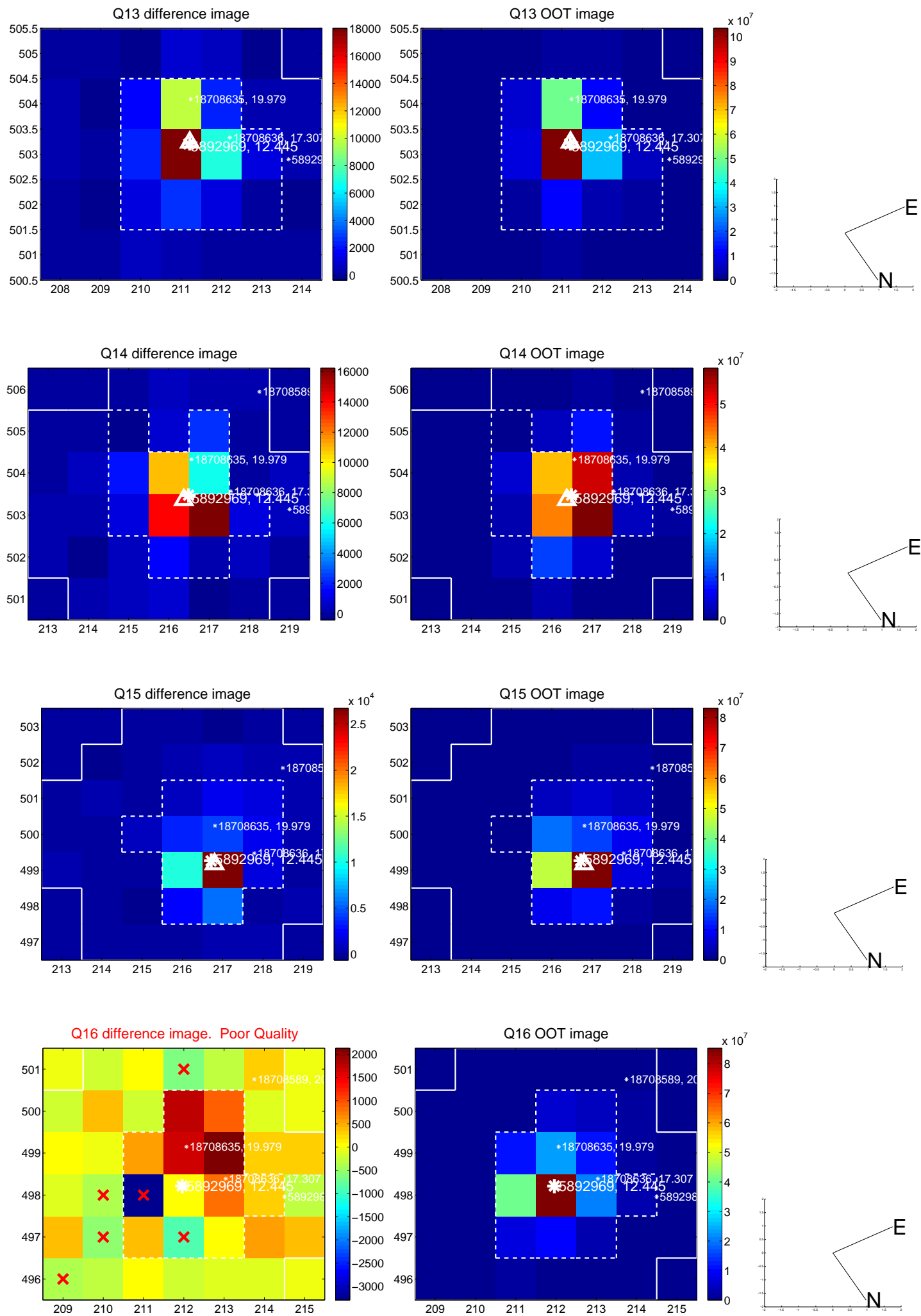
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



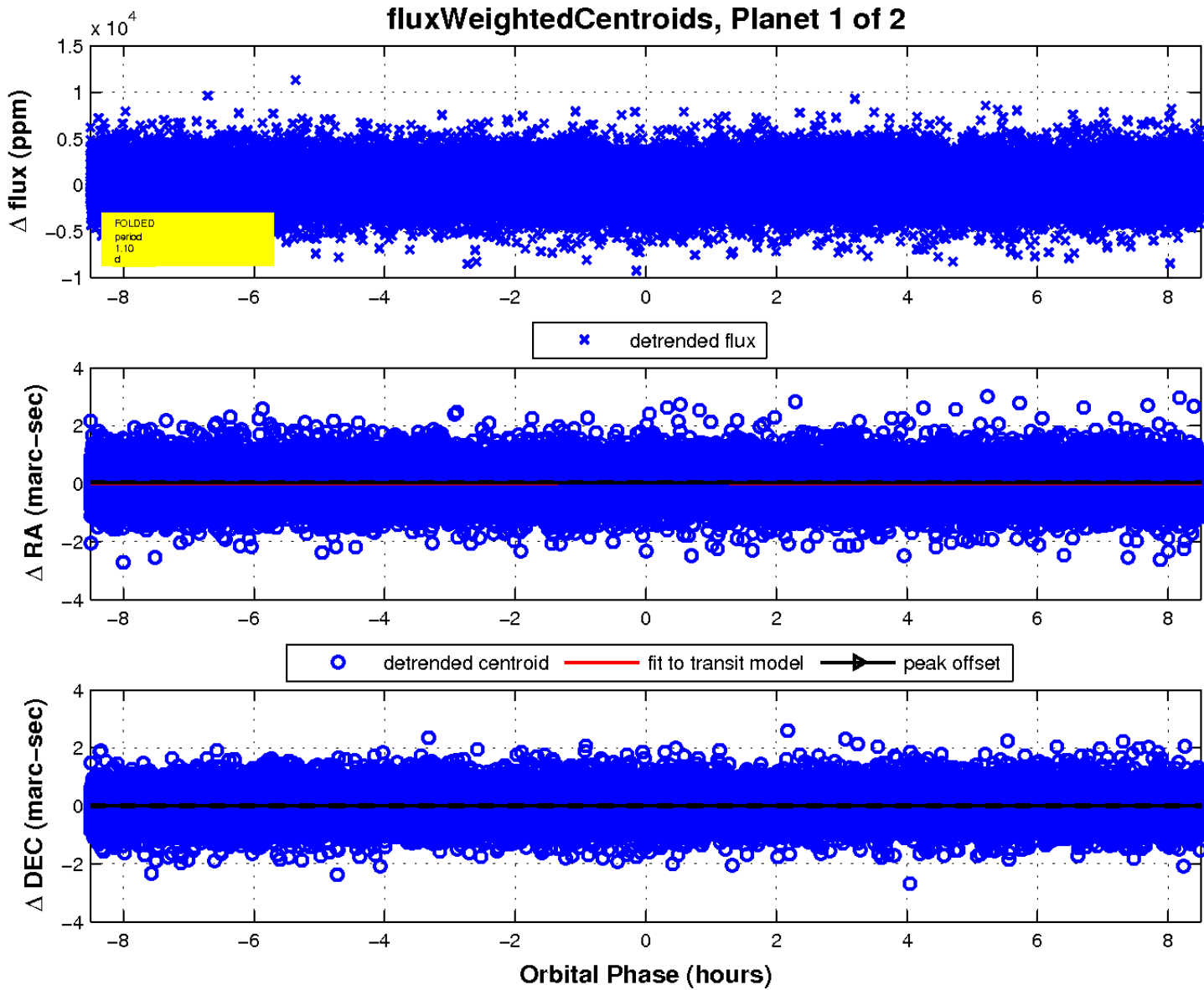
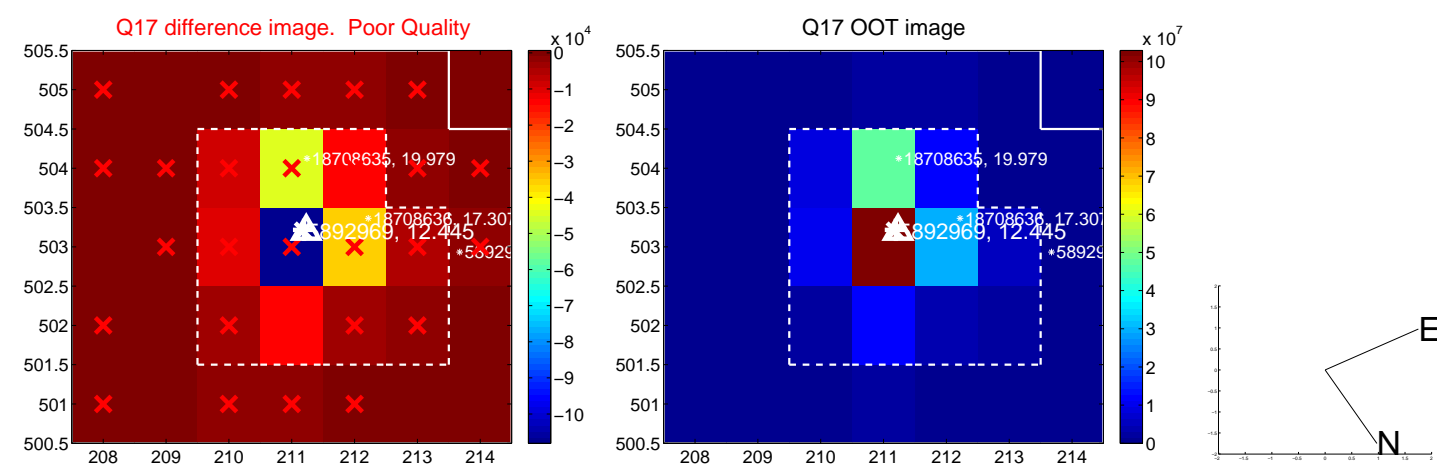
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

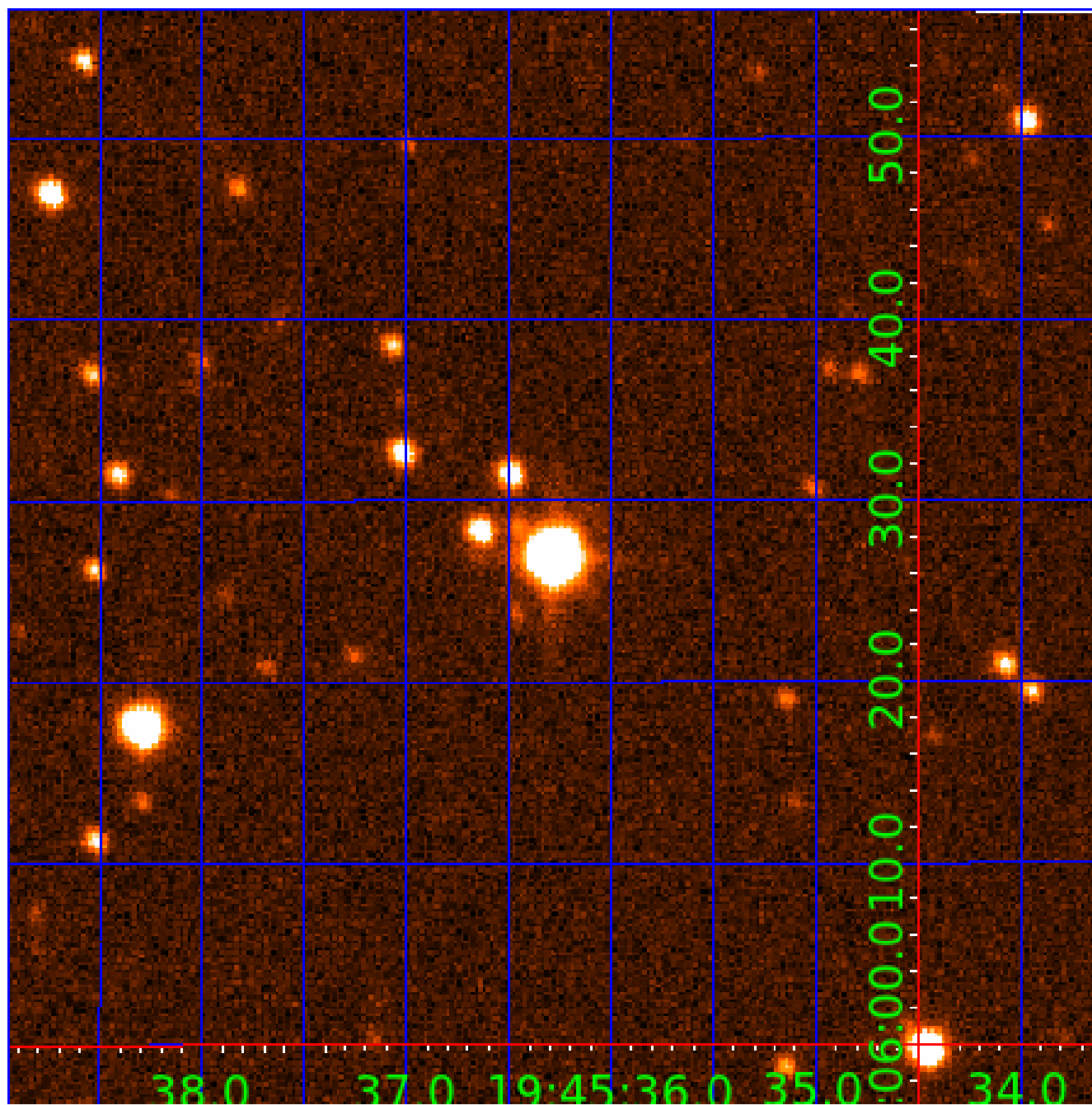


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005892969

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})
005892969-01	OBS	No	1.096278	132.042239	163.9	2.835	9.5	9.2	3.07	7561	4.56	40522.14
005892969-02	OBS	No	1.233440	131.895810	168.1	6.674	8.0	8.9	3.07	7561	4.22	34628.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892969-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005892969-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

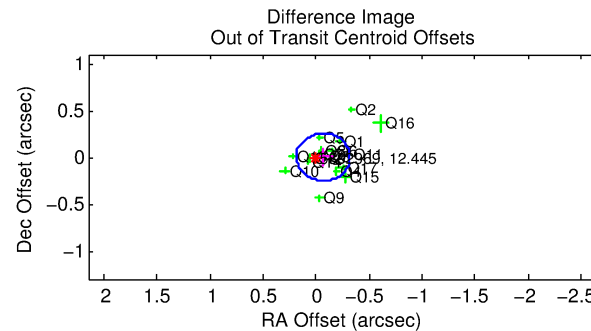
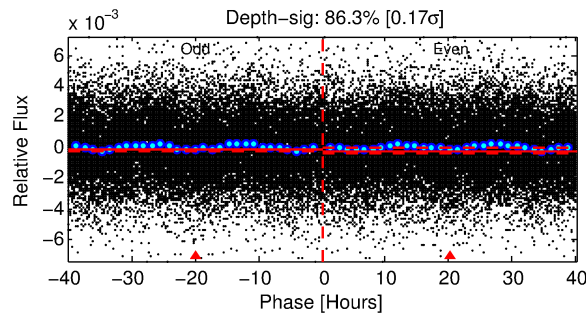
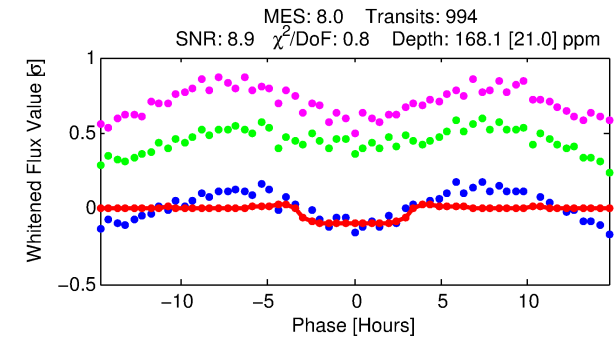
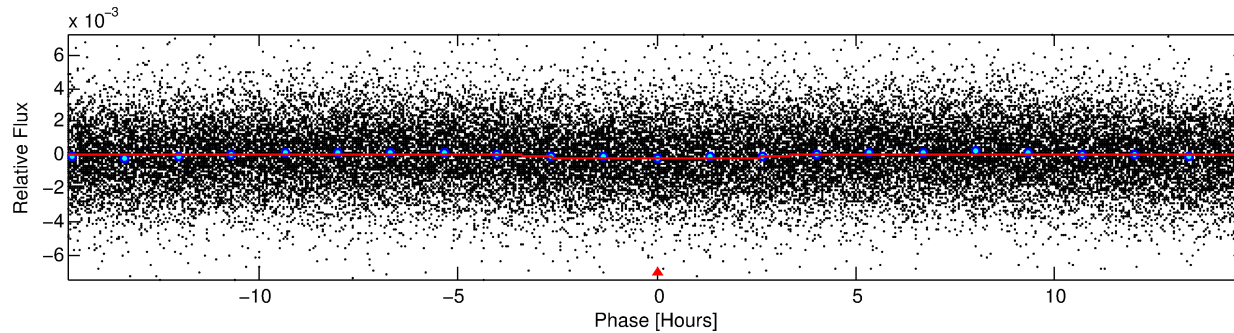
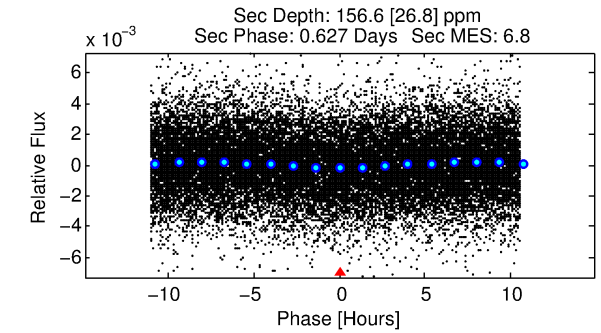
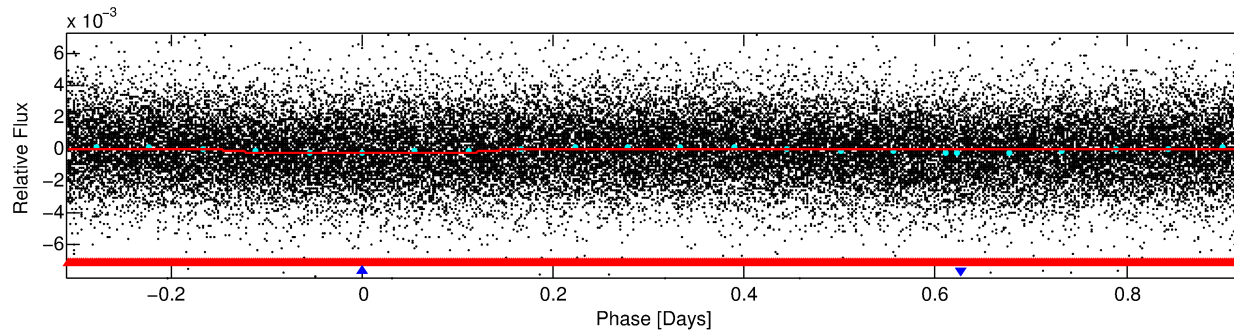
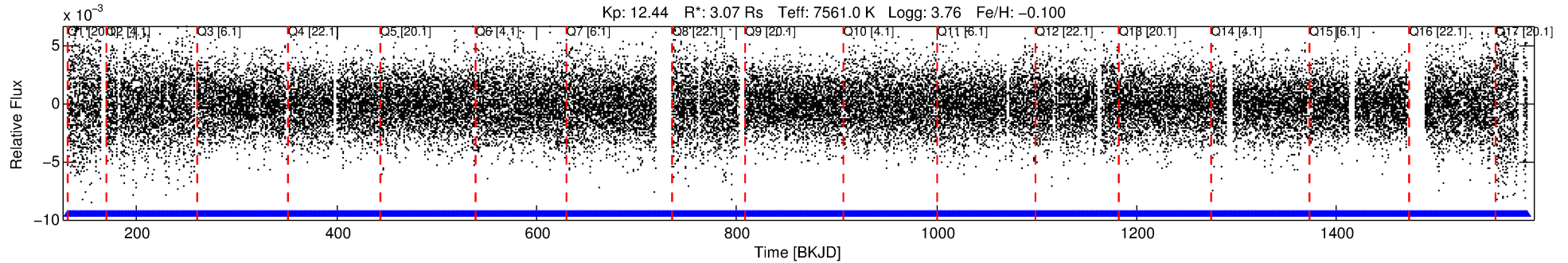
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005892969-02

No Significant Match Found

DV One-Page Summary

KIC: 5892969 Candidate: 2 of 2 Period: 1.233 d



DV Fit Results:

Period = 1.23344 [0.00002] d
Epoch = 131.8958 [0.0079] BKJD
Rp/R* = 0.0126 [0.0150]
a/R* = 1.37 [4.52]
b = 0.64 [6.66]
Seff = 34628.11 [24320.58]
Teff = 3478 [611] K
Rp = 4.22 [5.37] Re
a = 0.0283 [0.0121] AU
Ag = 3.87 [9.59] [0.30σ]
Teffp = 7541 [4507] K [0.89σ]

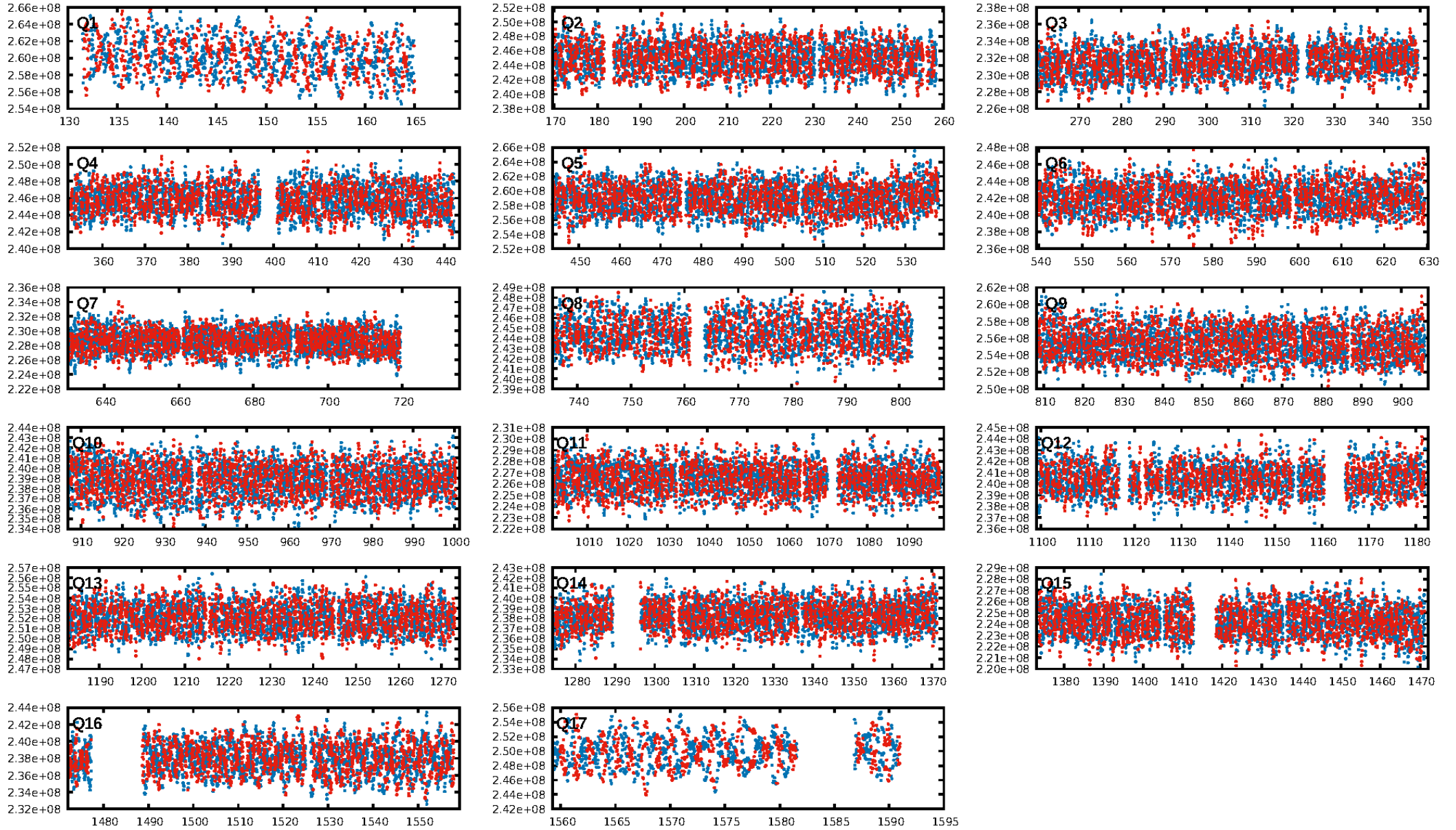
DV Diagnostic Results:

ShortPeriod-sig: 35.0% [0.45σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.00e-10
RollingBand-fgt: 1.00 [951/951]
GhostDiagnostic-chr: 0.9074
Centroid-sig: 0.0%
Centroid-so: 0.256 arcsec [3.08σ]
OotOffset-rm: 0.066 arcsec [0.78σ]
KicOffset-rm: 0.052 arcsec [0.58σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

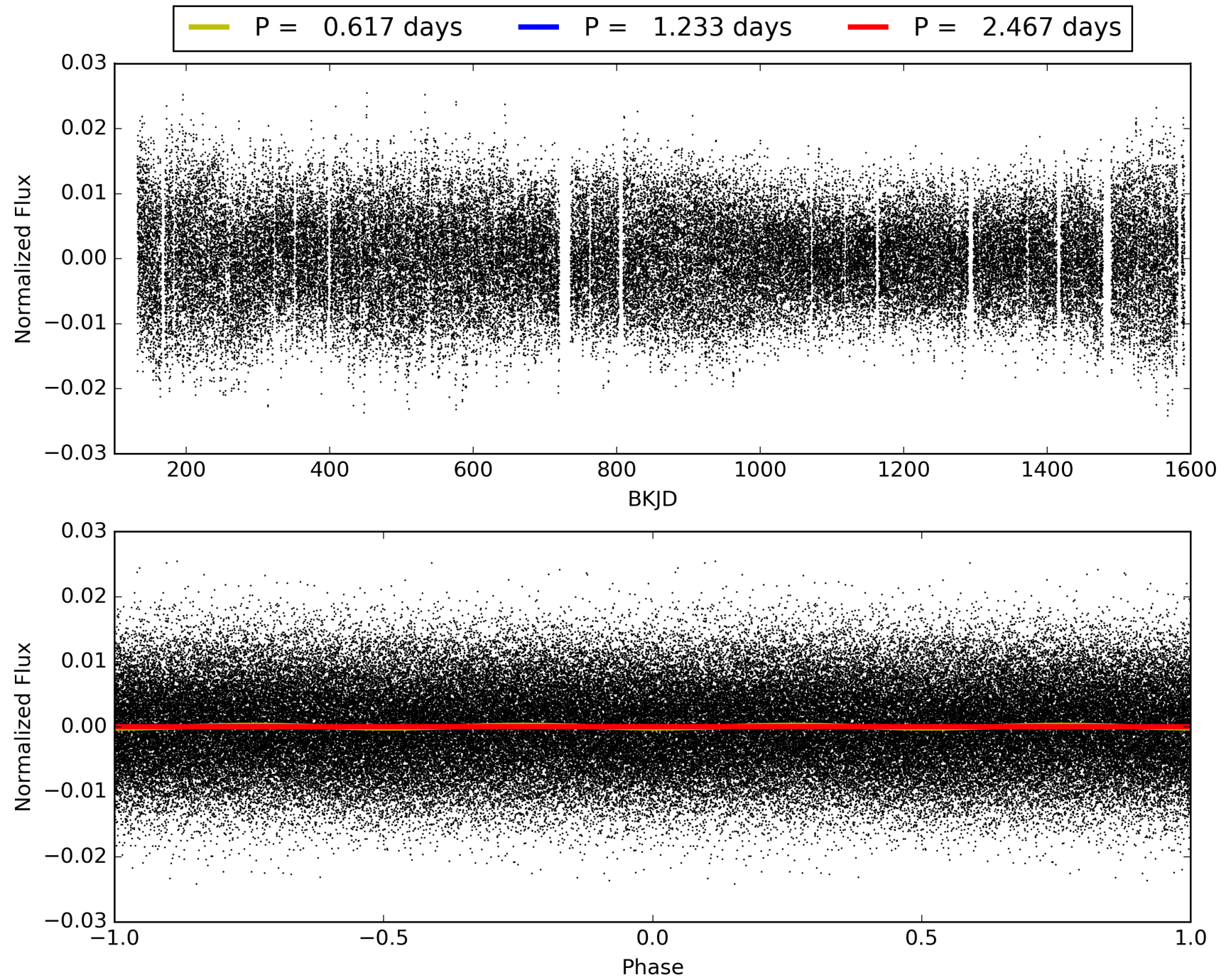
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:28:56 Z

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

TCE 005892969-02, PDC Light Curves

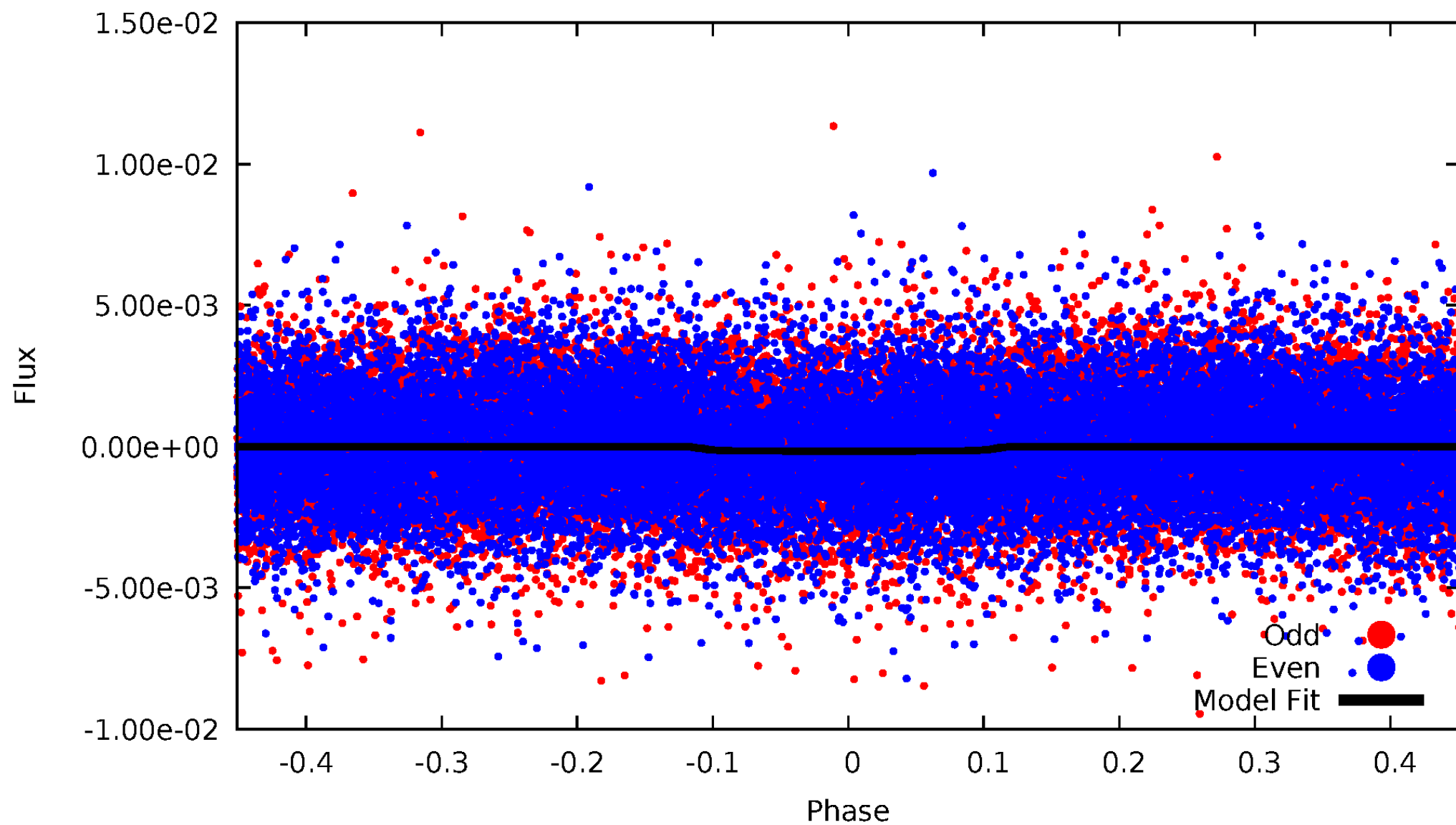


TCE 005892969-02



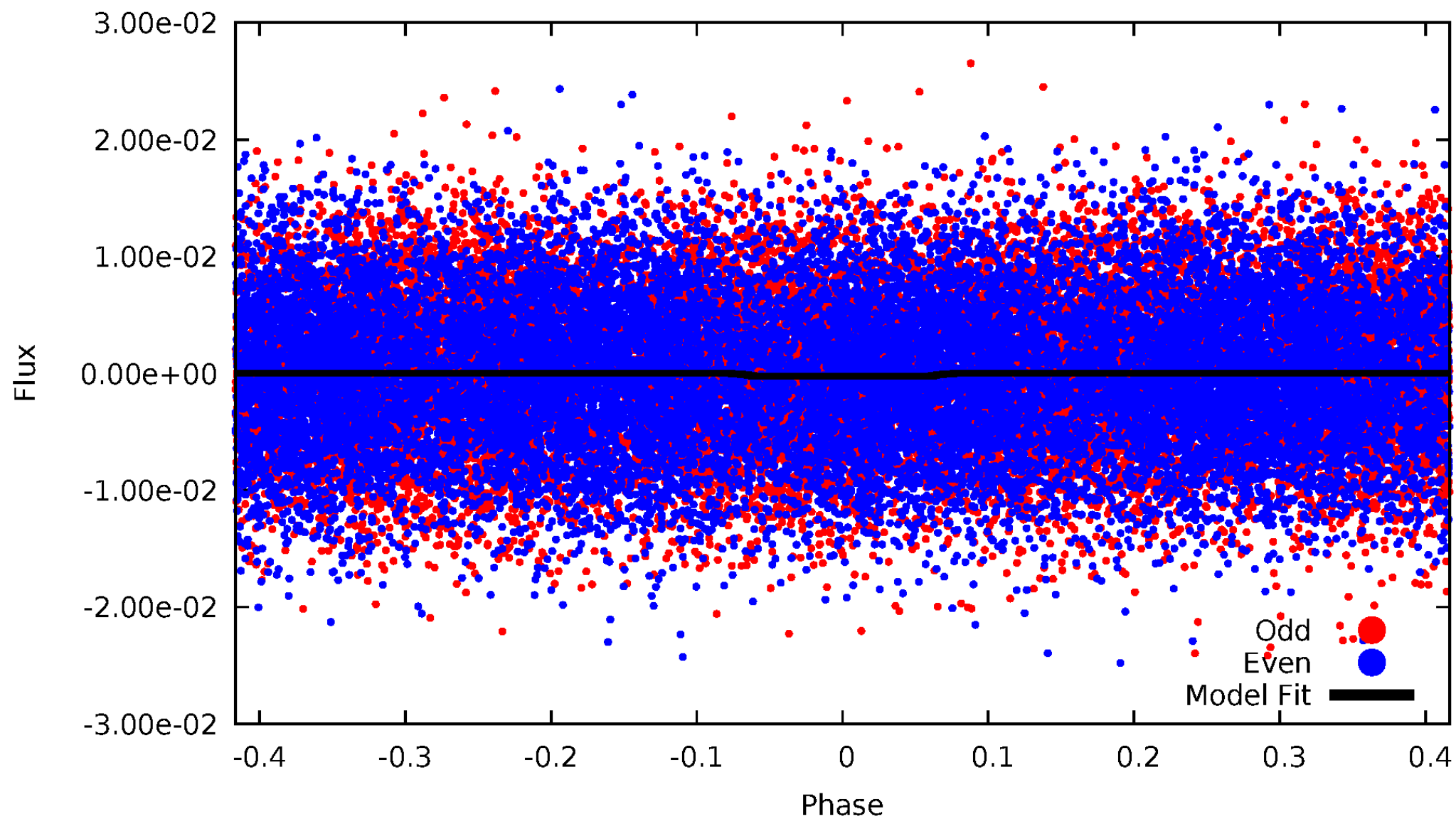
DV Odd/Even

TCE 005892969-02



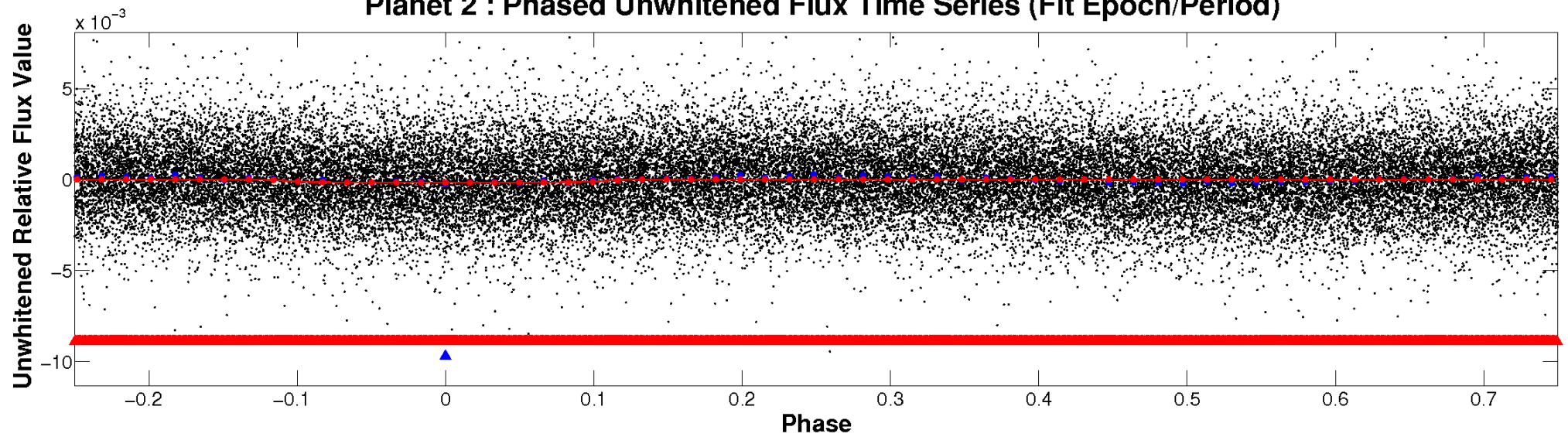
ALT Odd/Even

TCE 005892969-02

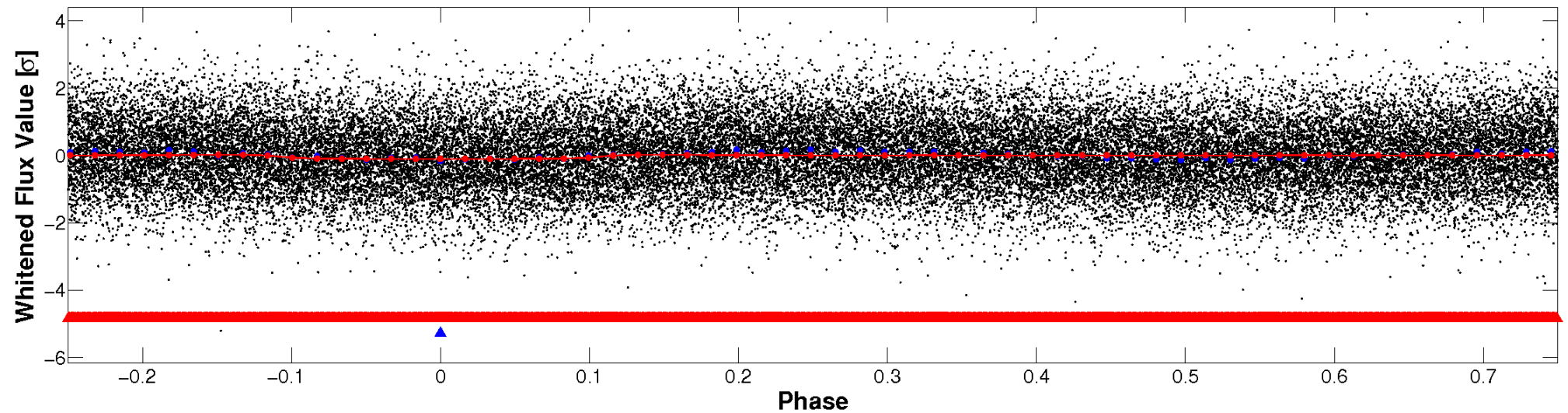


Non-Whitened Vs. Whitened Light Curve

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

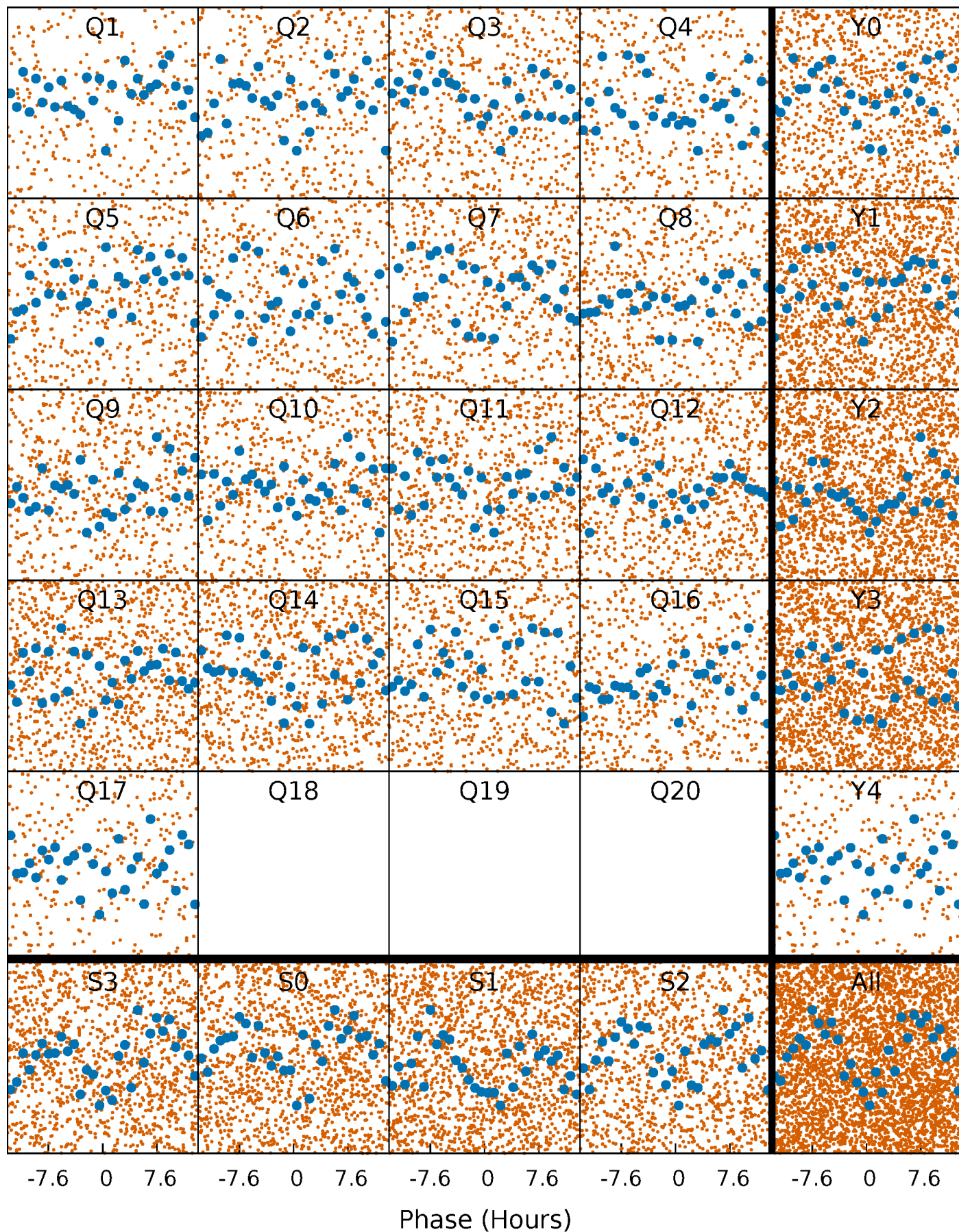


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



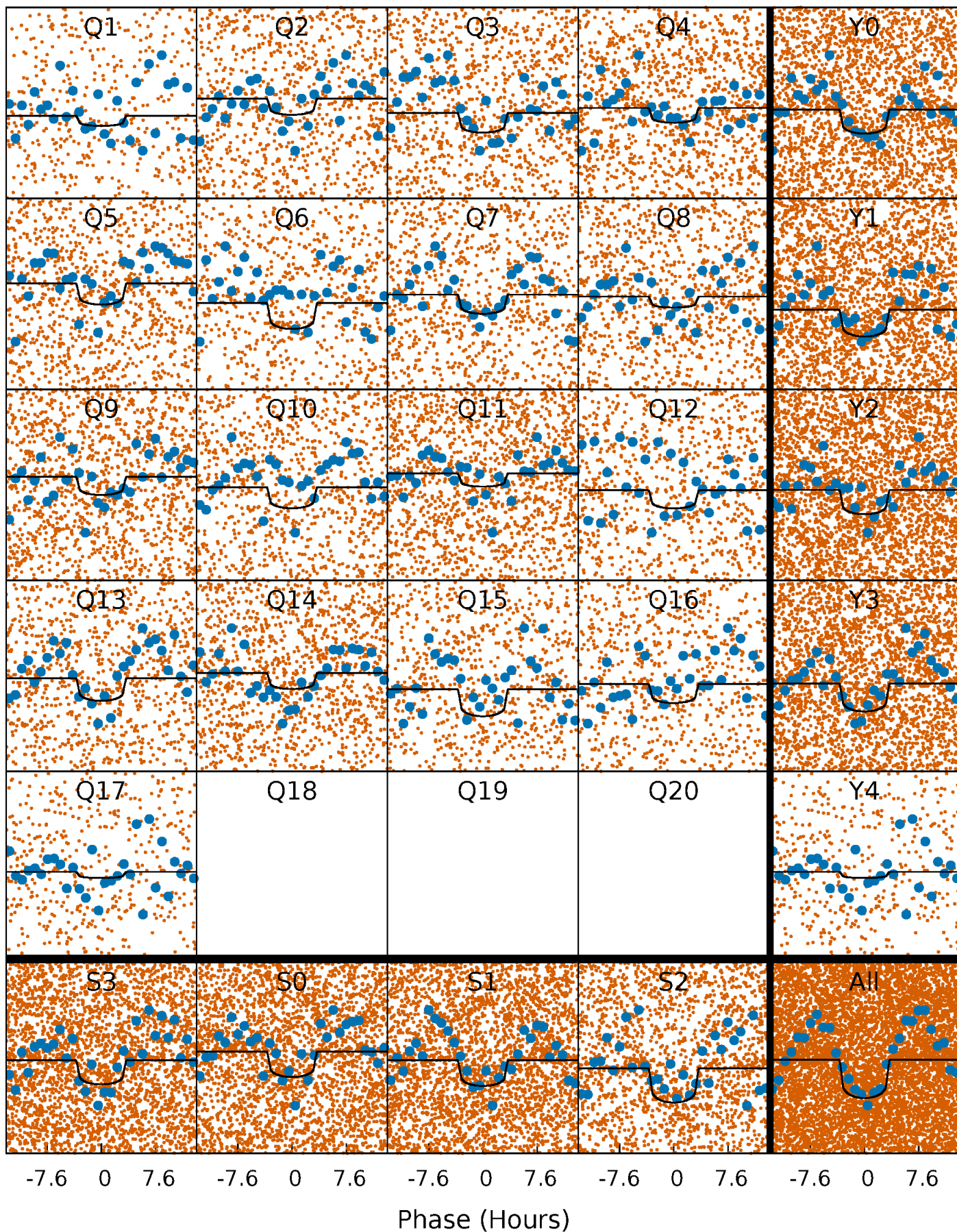
PDC Quarter-Phased Transit Curves

TCE 005892969-02 P= 1.233440 Days $T_0=131.895810$ (BKJD)



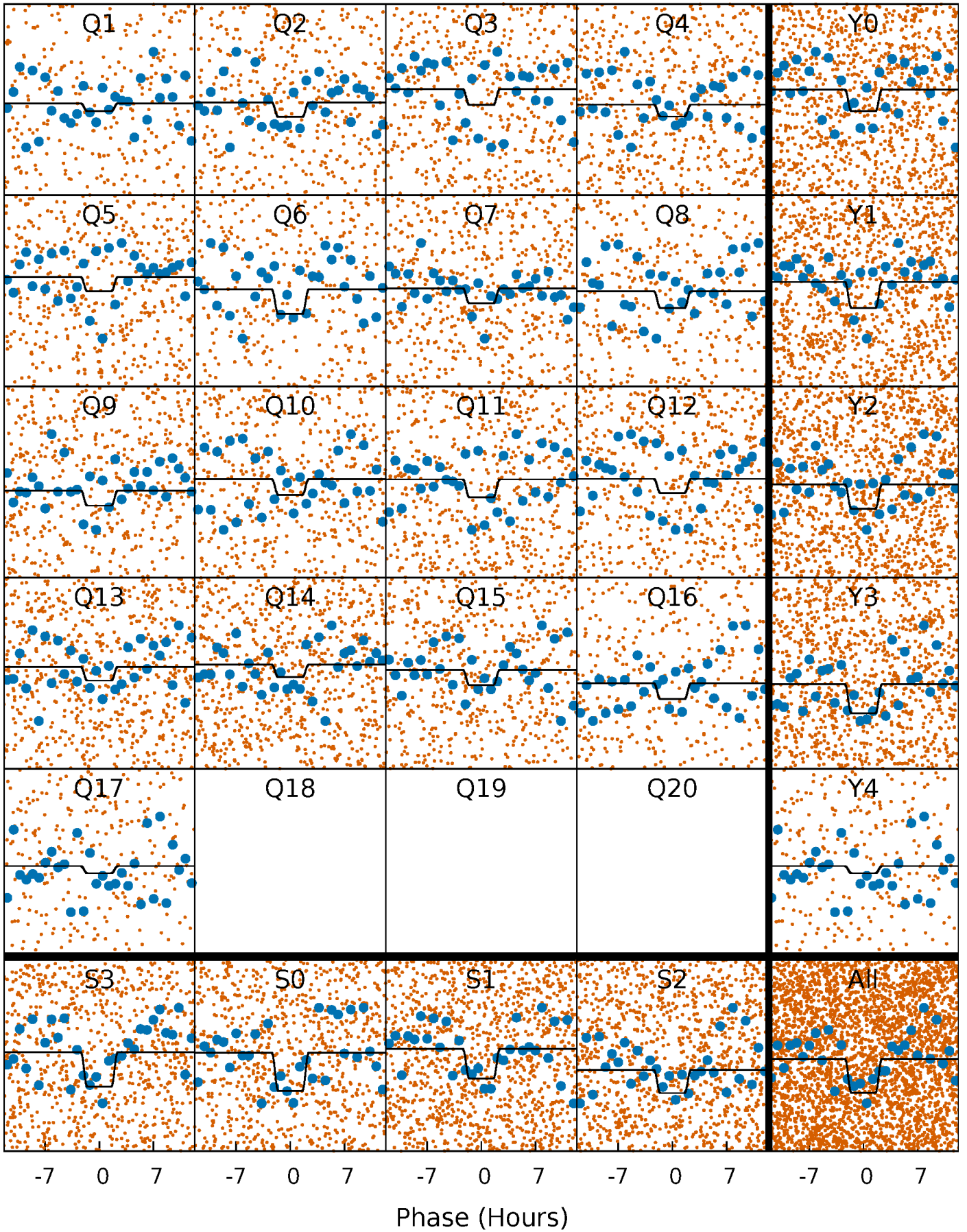
DV Quarter-Phased Transit Curves

TCE 005892969-02 P= 1.233440 Days $T_0=131.895810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

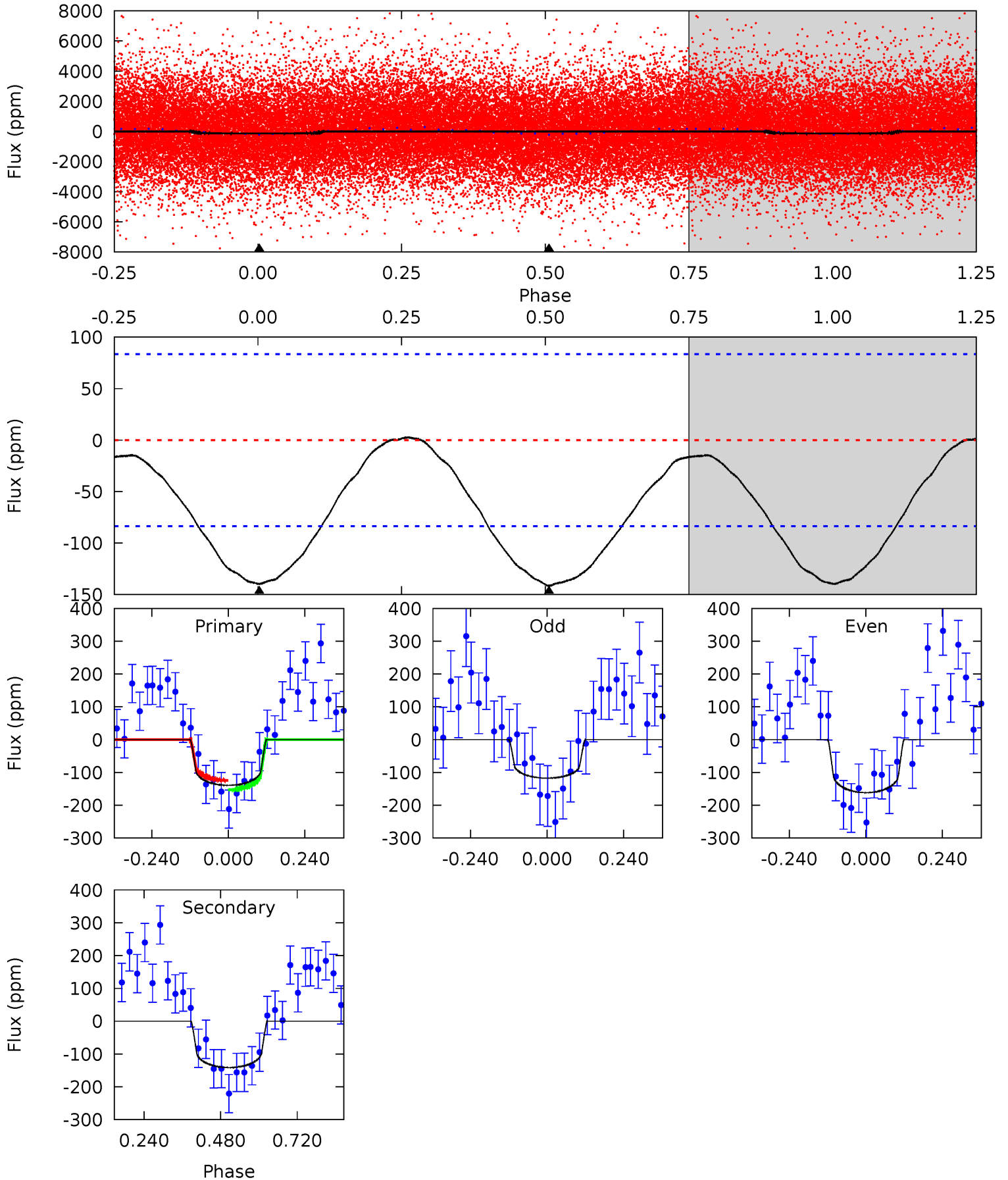
TCE 005892969-02 P= 1.233350 Days $T_0=131.953982$ (BKJD)



DV Model-Shift Uniqueness Test

005892969-02, P = 1.233440 Days, E = 130.662370 Days

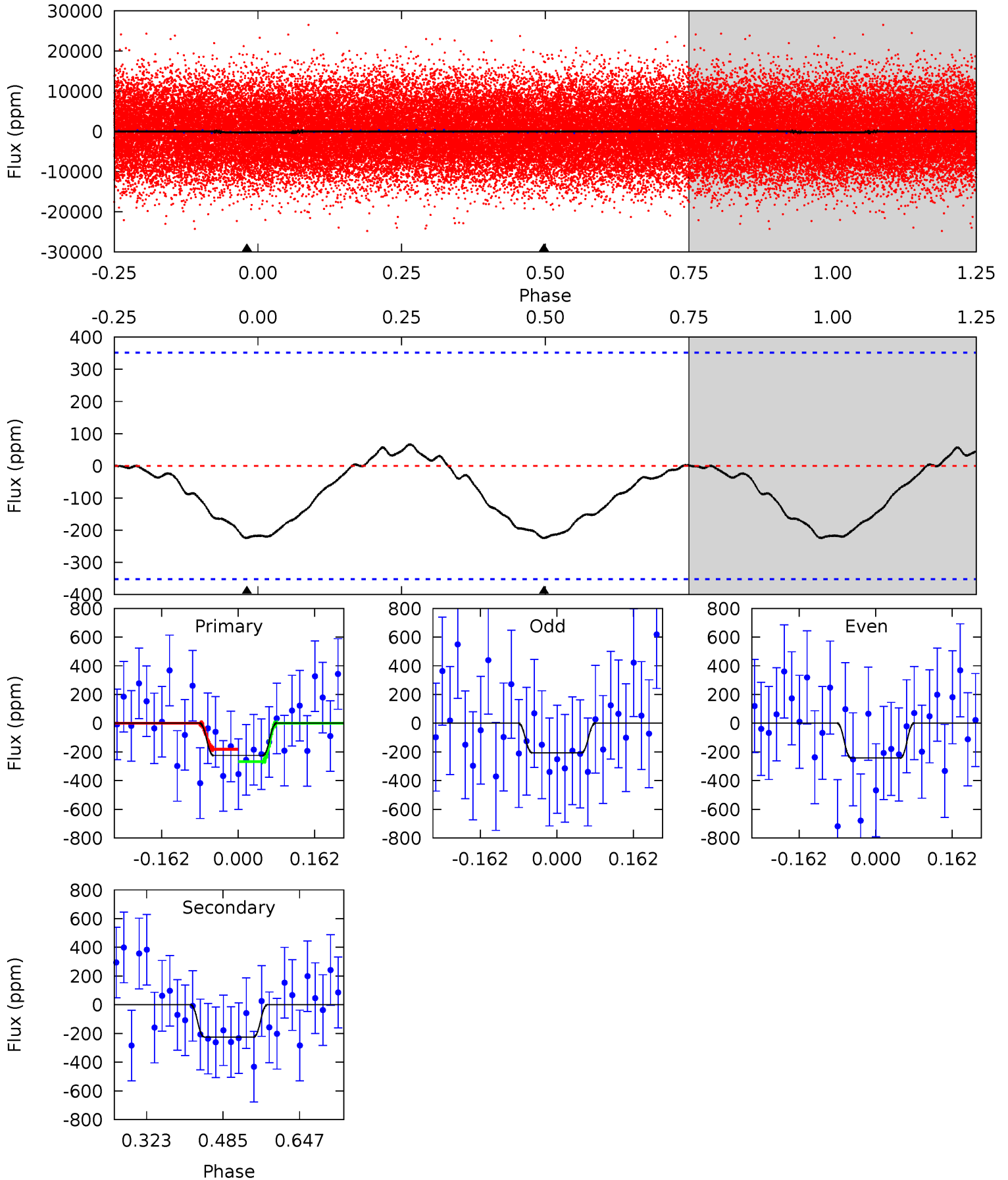
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.31	7.41	0	0	4.38	1.17	0.46	7.31	7.31	7.41	7.41	1.17	0.86	0.02	0.75



Alt Model-Shift Uniqueness Test

005892969-02, P = 1.233350 Days, E = 130.720632 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.84	2.84	0	0	4.46	1.40	0.37	2.84	2.84	2.84	2.84	0.23	1.09	0.23	0.54



Stellar Parameters For KIC 005892969

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7561^{+235}_{-314}	$3.759^{+0.399}_{-0.070}$	$-0.100^{+0.200}_{-0.350}$	$3.073^{+0.347}_{-1.387}$	$1.977^{+0.093}_{-0.525}$	$0.096^{+0.323}_{-0.023}$
	+3%/-4%	+11%/-2%	+200%/-350%	+11%/-45%	+5%/-27%	+336%/-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 005892969-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-141 ± 19	$4.75^{+4.42}_{-3.05}$	4715^{+308}_{-512}	6065^{+5588}_{-1843}	$2.636^{+16.653}_{-1.932}$
Alt.	-224 ± 79	$5.79^{+4.65}_{-3.49}$	4692^{+334}_{-498}	6223^{+5256}_{-1781}	$2.793^{+14.101}_{-2.020}$

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

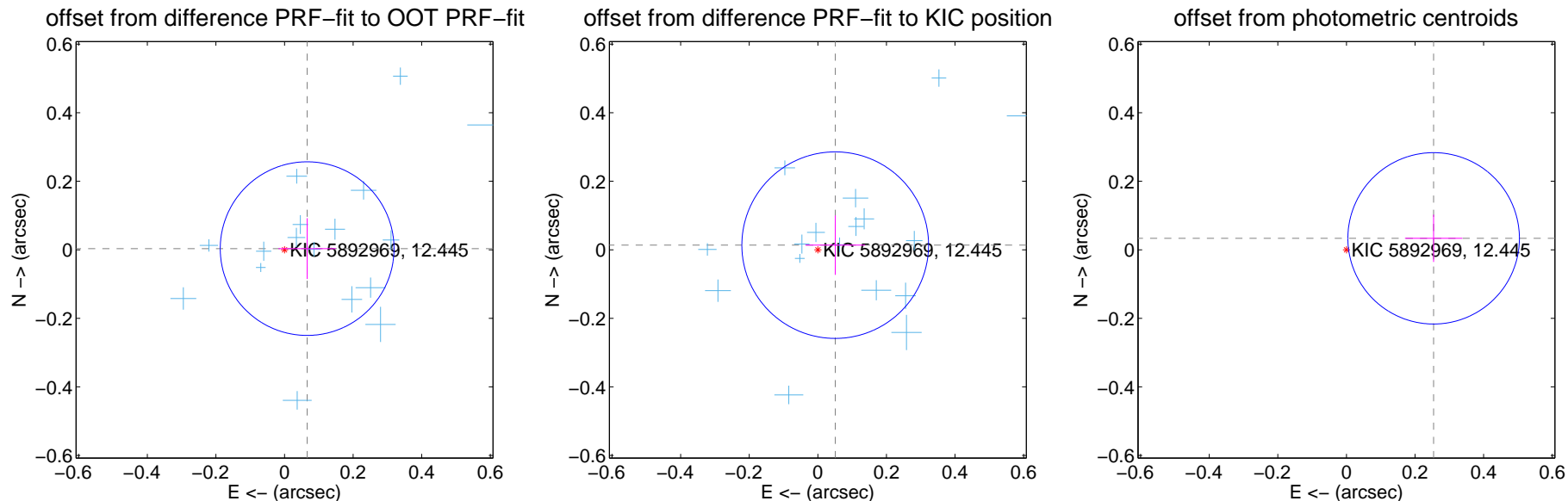
DV Centroid Data

Supplemental centroid analysis for 005892969-02. Kepler magnitude: 12.45. Transit SNR 8.85

There are 17 quarters with good PRF difference image offsets

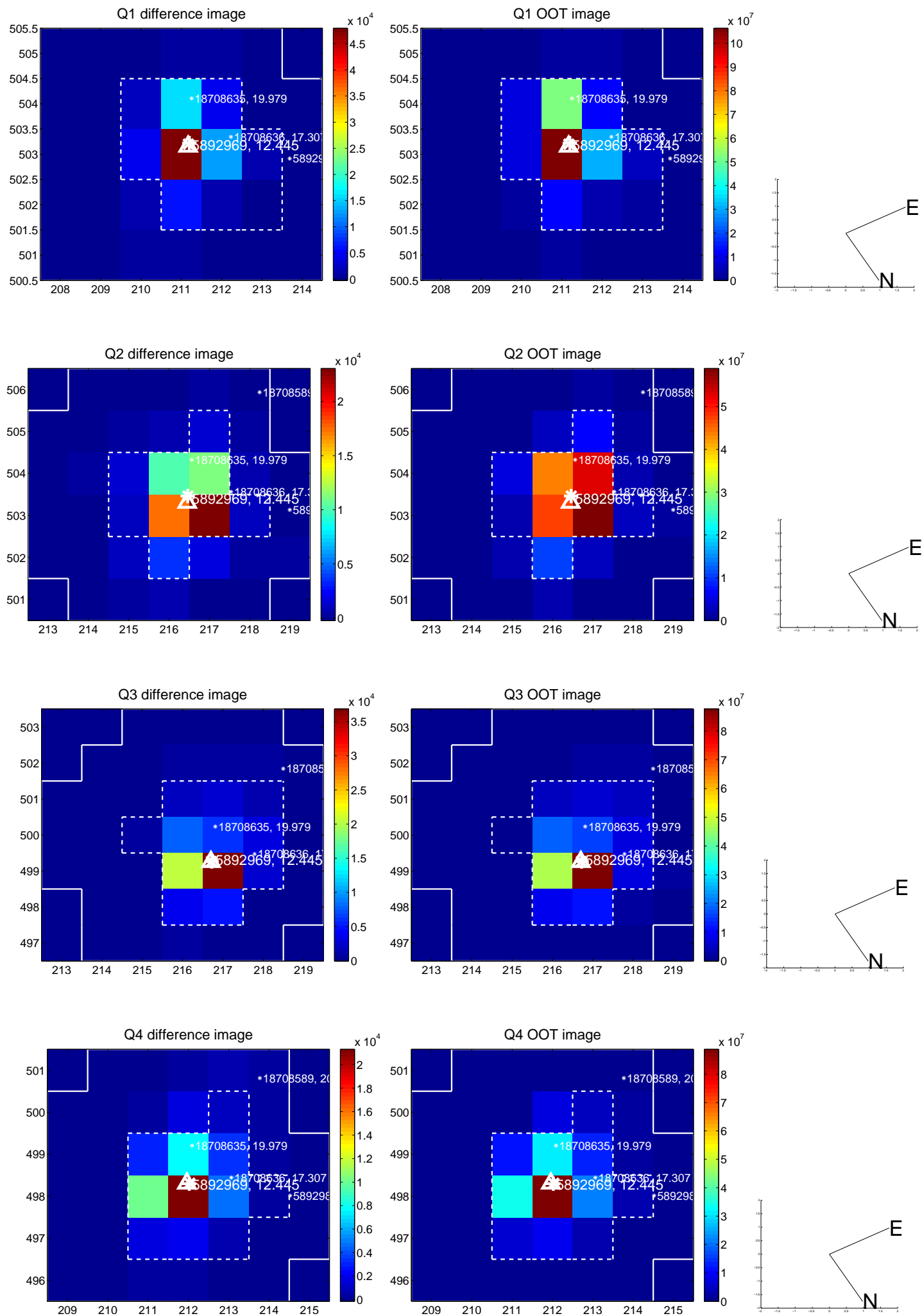
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.084	0.78	-0.066 ± 0.084	0.003 ± 0.089
PRF-fit source offset from KIC position	0.052 ± 0.091	0.58	-0.051 ± 0.087	0.014 ± 0.087
photometric centroid source offset	0.26 ± 0.08	3.08	-0.25 ± 0.08	0.03 ± 0.07

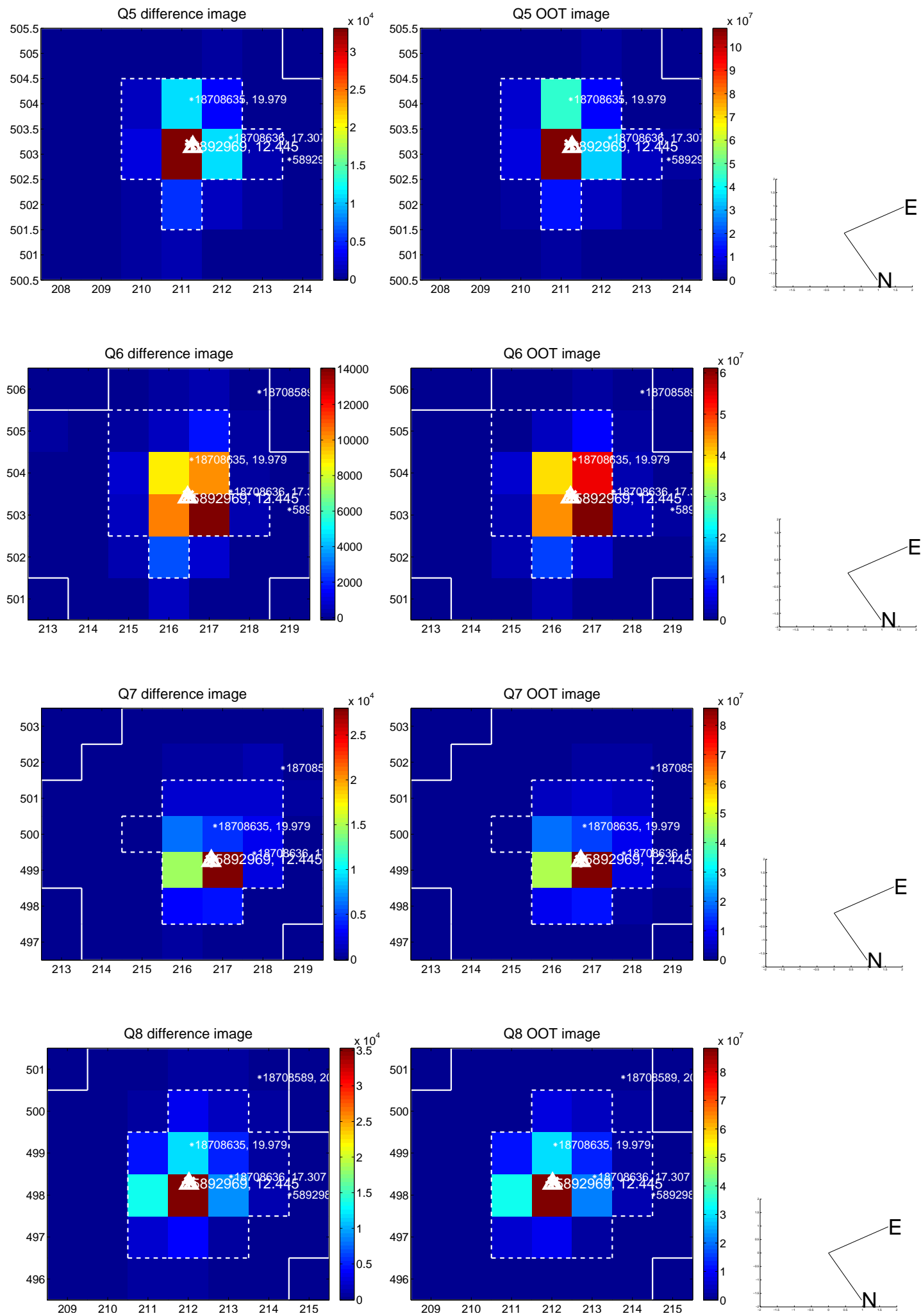


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

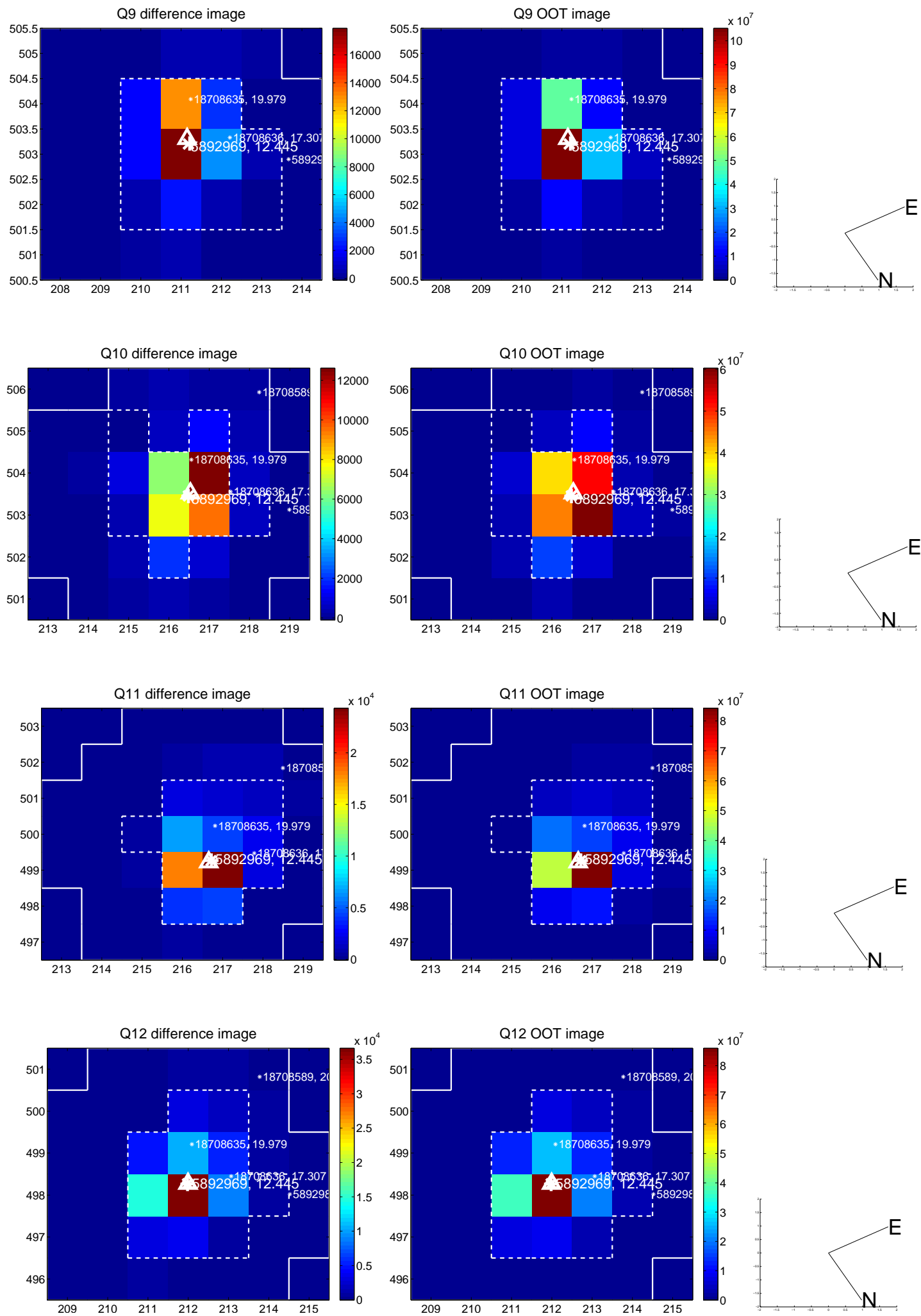
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



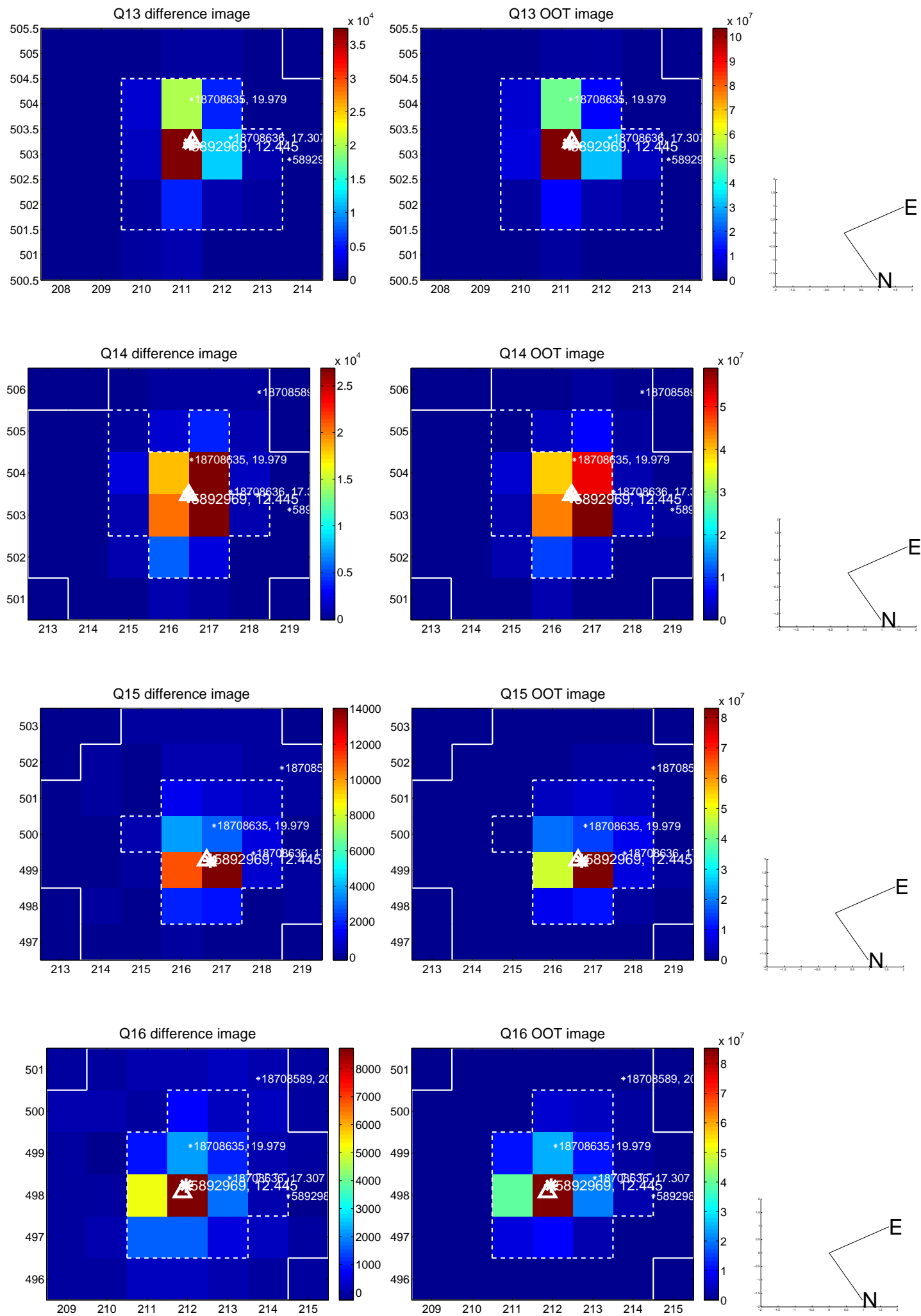
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



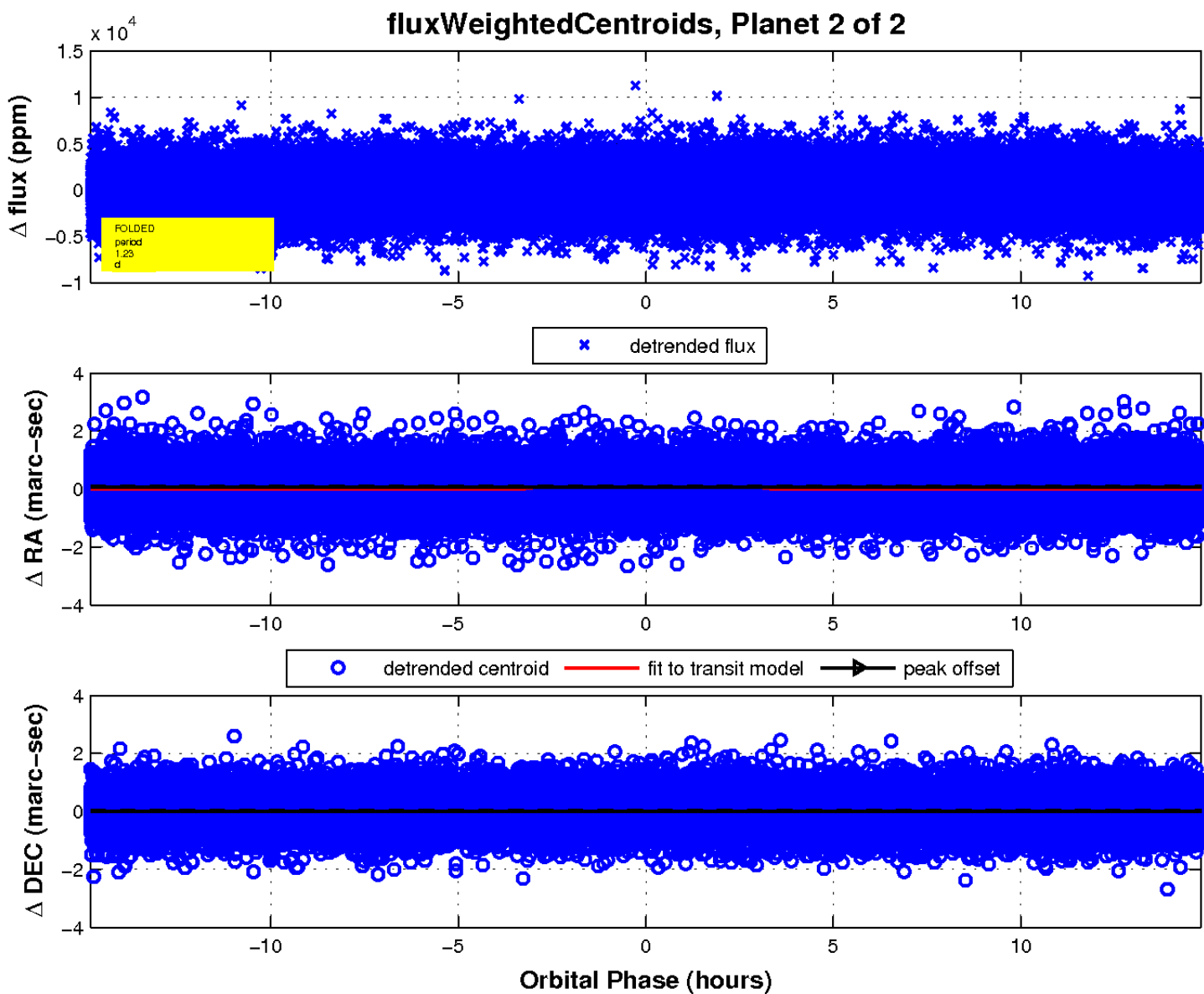
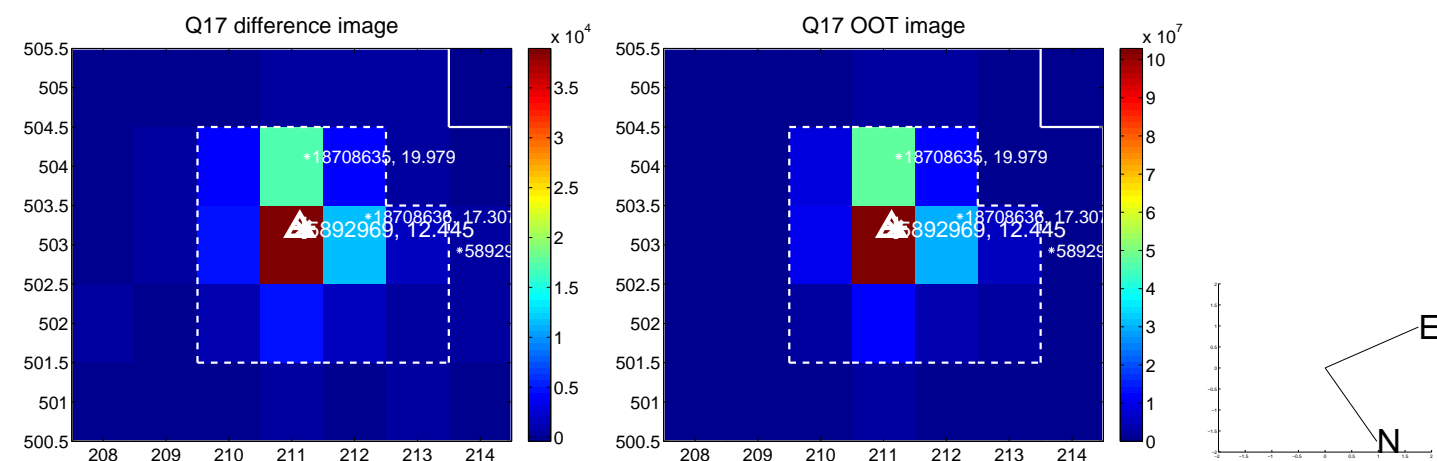
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

