

KIC 008092865

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})
008092865-01	OBS	No	0.671156	131.724725	16.2	1.720	9.8	5.3	2.52	7912	1.11	64611.84
008092865-02	OBS	No	0.553667	131.829808	1.0	5.271	9.0	0.4	2.52	7912	0.29	83511.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008092865-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008092865-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

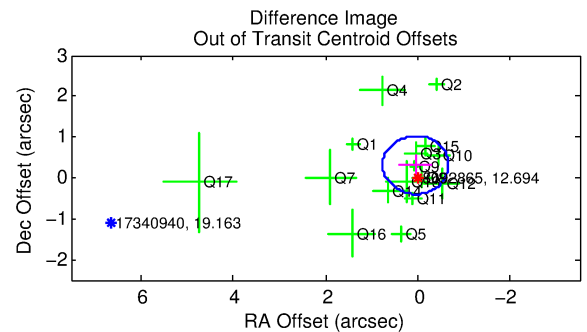
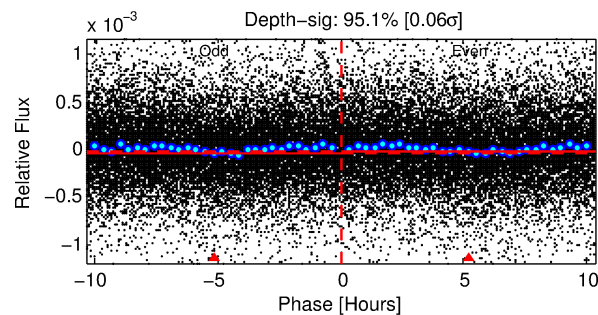
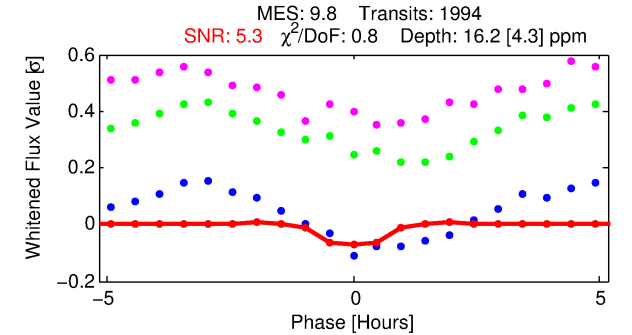
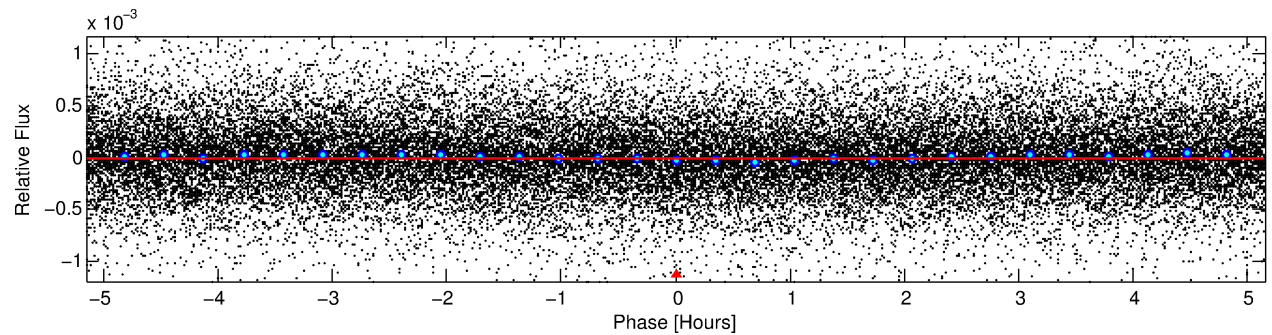
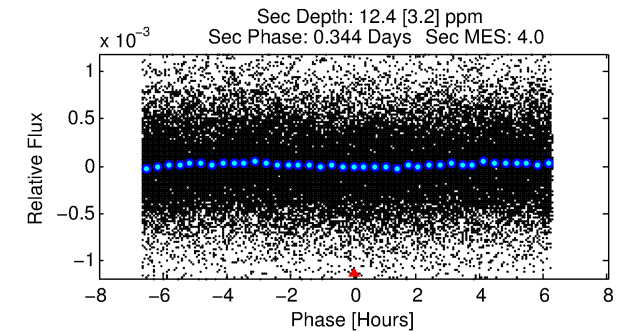
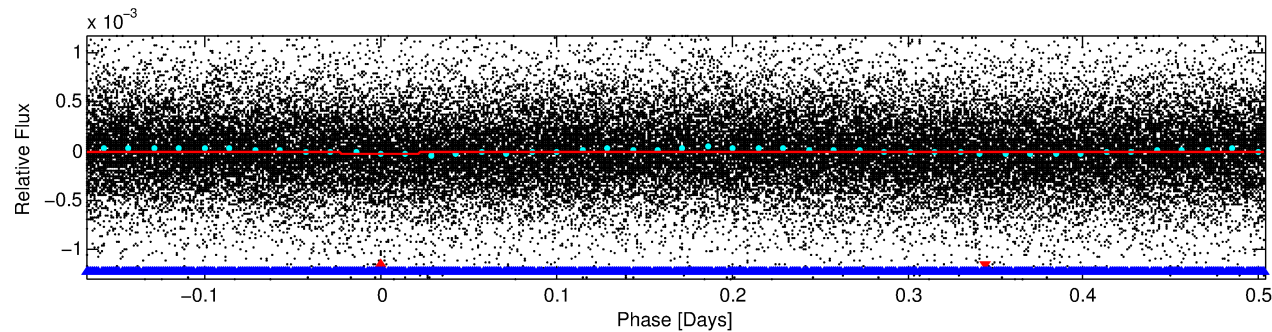
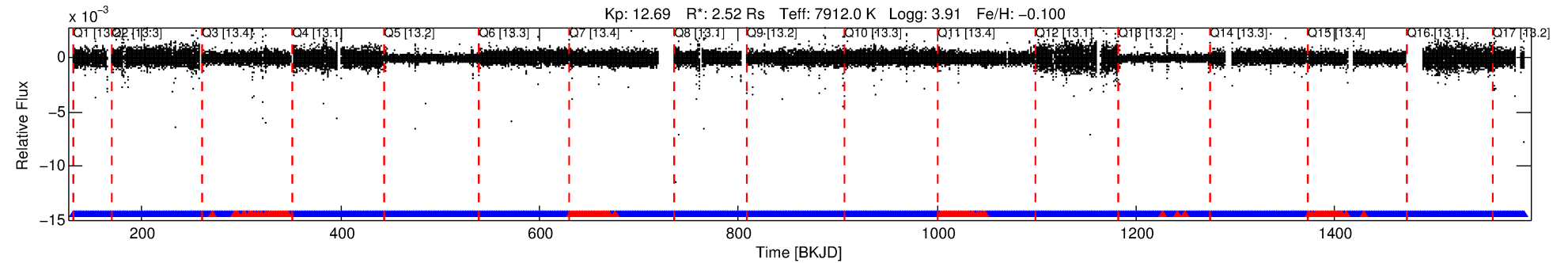
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008092865-01

No Significant Match Found

DV One-Page Summary

KIC: 8092865 Candidate: 1 of 2 Period: 0.671 d



DV Fit Results:

Period = 0.67116 [0.00002] d
Epoch = 131.7247 [0.0051] BKJD
Rp/R* = 0.0041 [0.0014]
a/R* = 2.06 [3.04]
b = 0.78 [0.95]
Seff = 64611.84 [32523.71]
Teq = 4065 [512] K
Rp = 1.11 [0.54] Re
a = 0.0186 [0.0057] AU
Ag = 1.89 [1.65] [0.54σ]
Teffp = 7366 [1387] K [2.23σ]

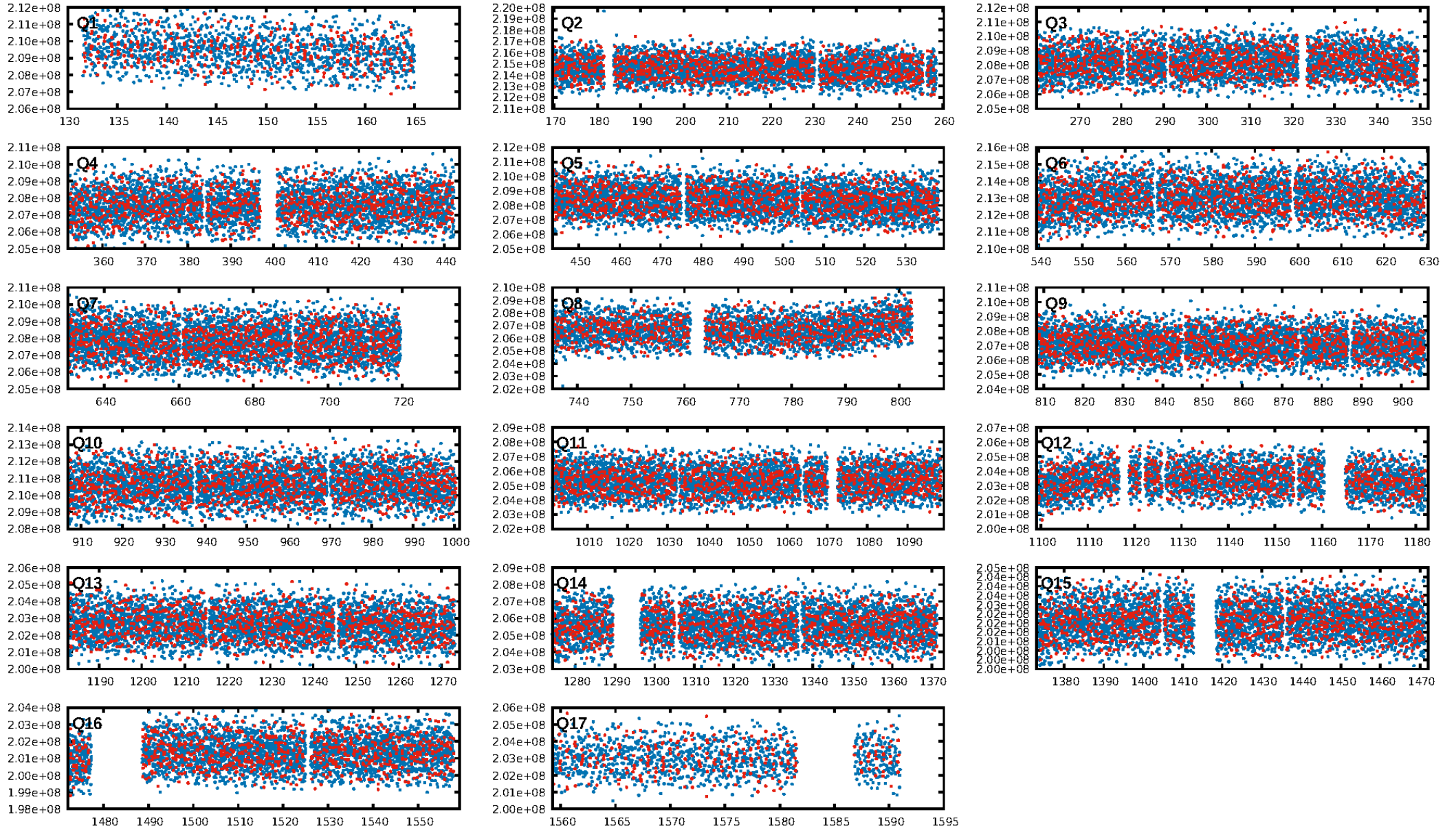
DV Diagnostic Results:

ShortPeriod-sig: 38.9% [0.51σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [1736/1903]
GhostDiagnostic-chr: 4.614
Centroid-sig: N/A
Centroid-so: 0.943 arcsec [0.86σ]
OotOffset-rm: 0.318 arcsec [1.34σ]
KicOffset-rm: 0.392 arcsec [1.65σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 0.00 [0/17]

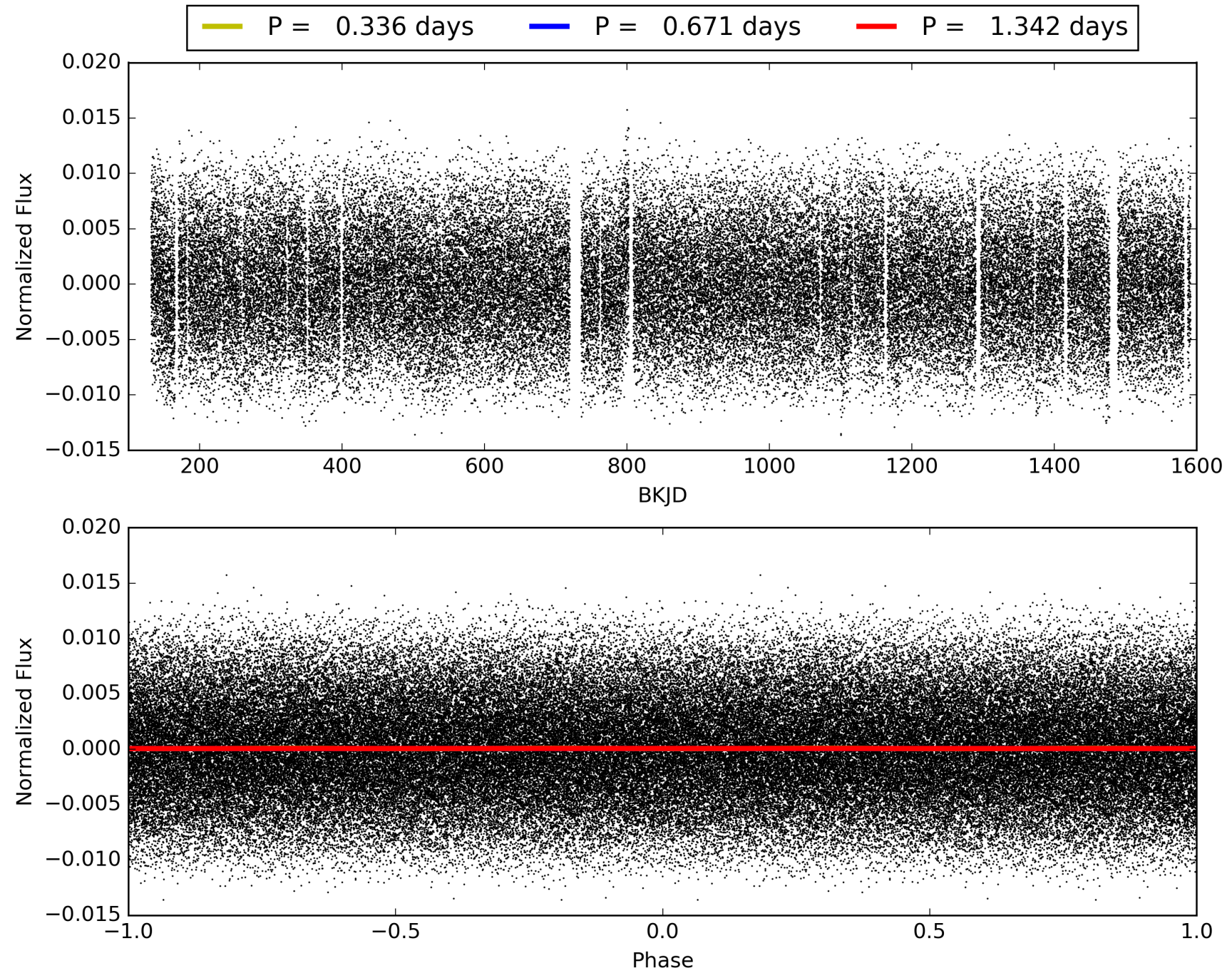
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:31:12 Z

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

TCE 008092865-01, PDC Light Curves

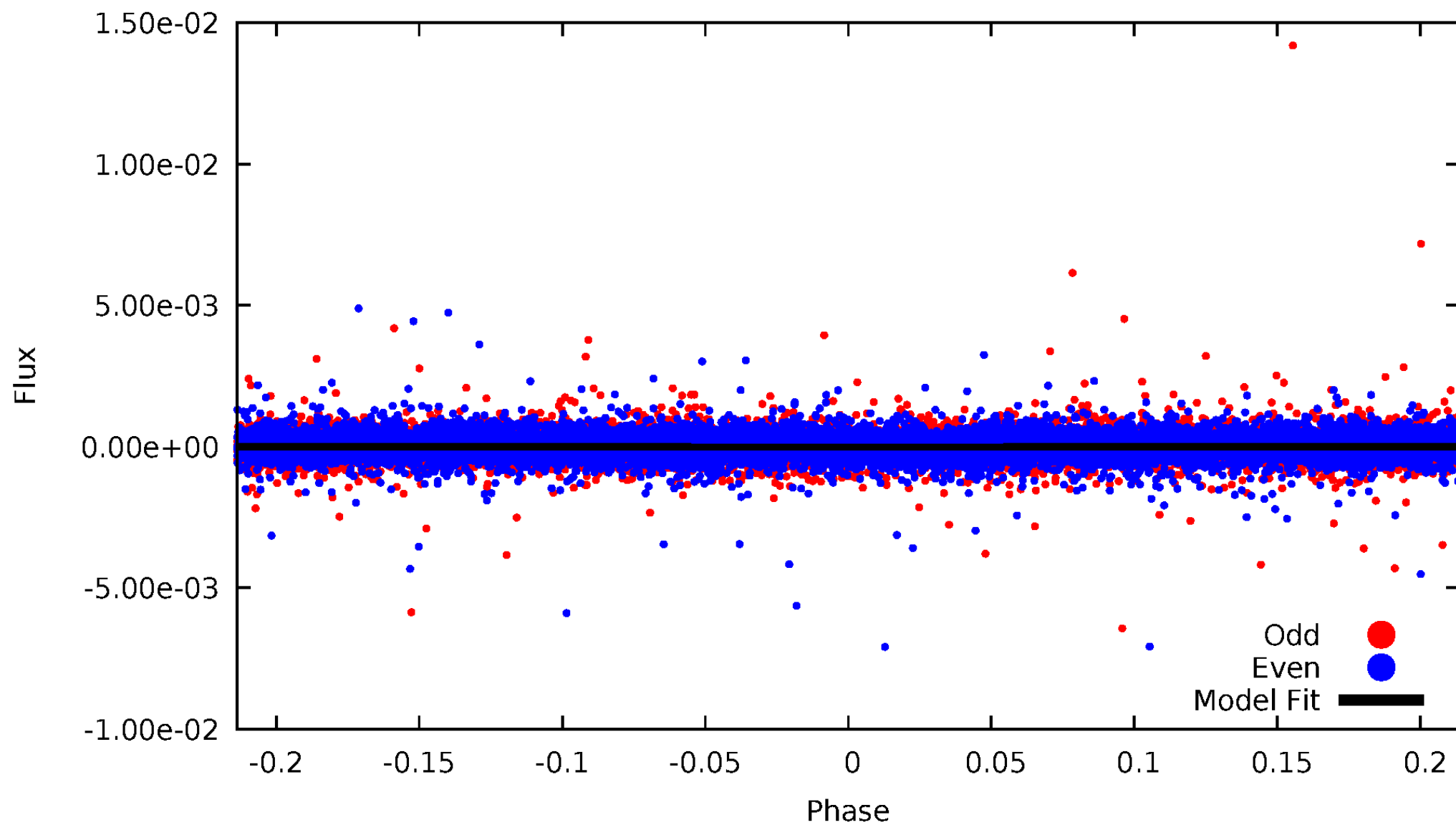


TCE 008092865-01



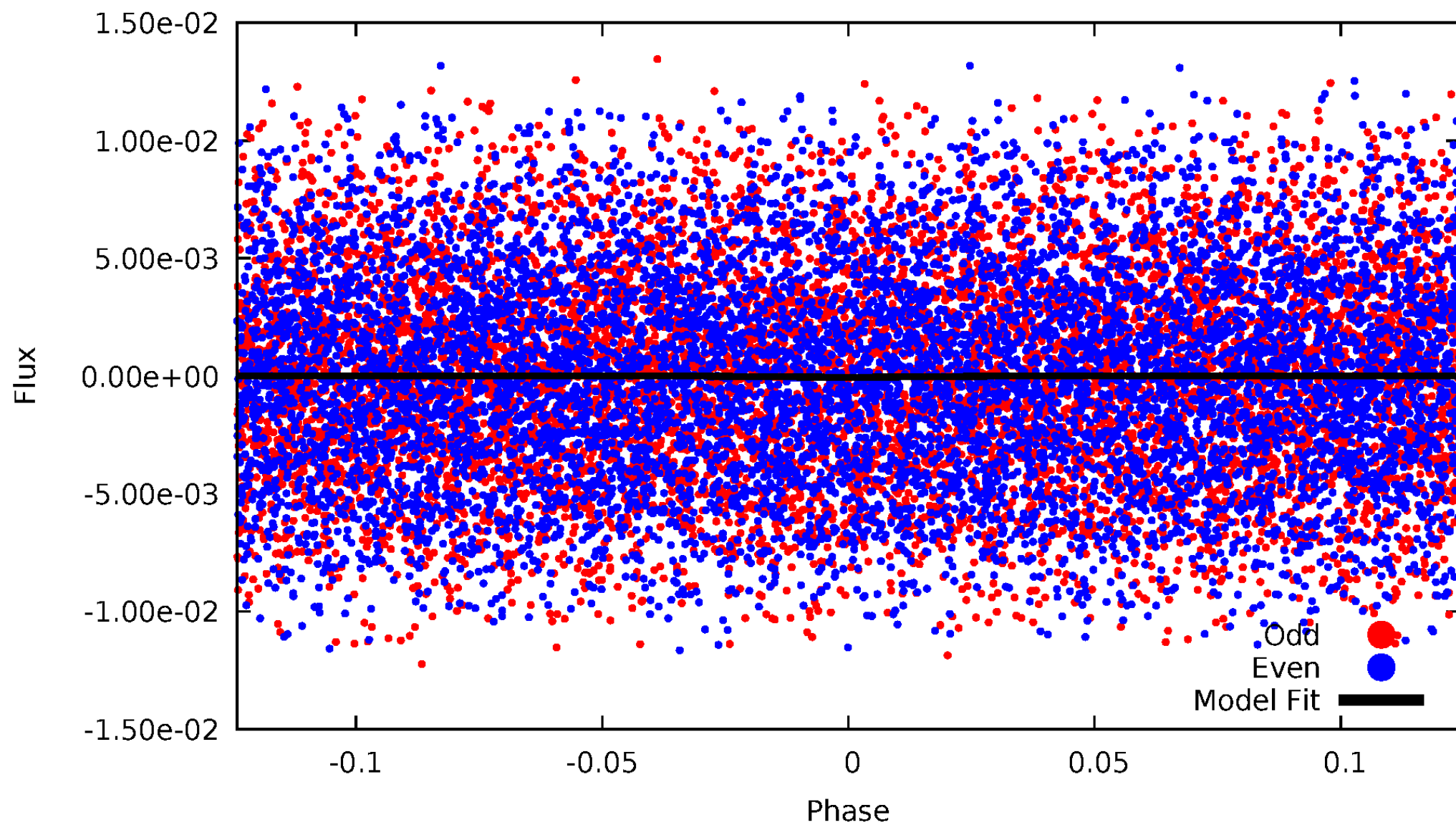
DV Odd/Even

TCE 008092865-01



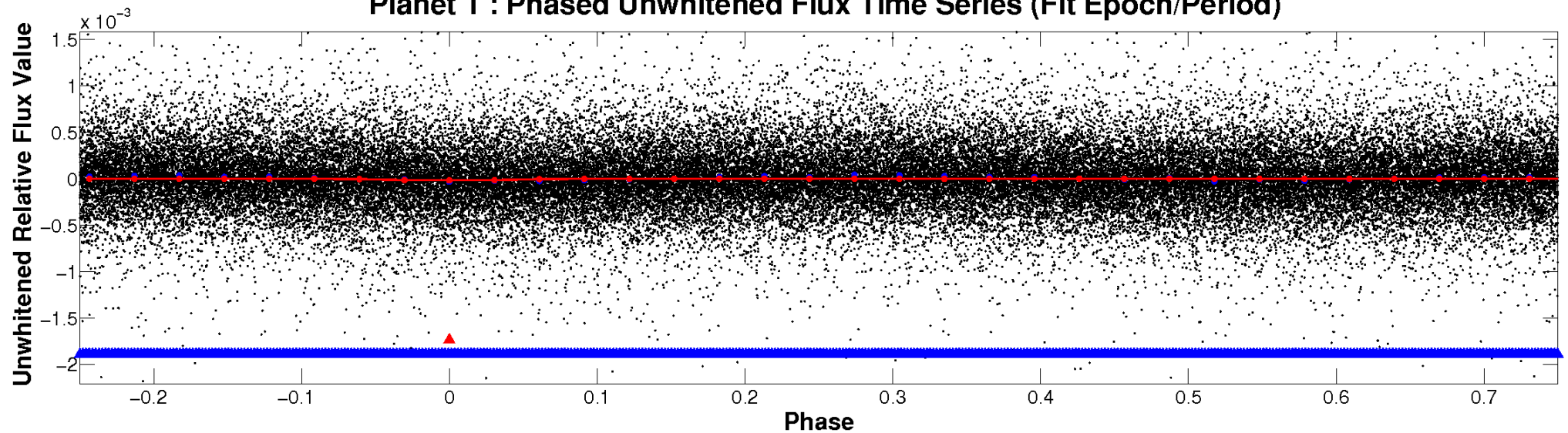
ALT Odd/Even

TCE 008092865-01

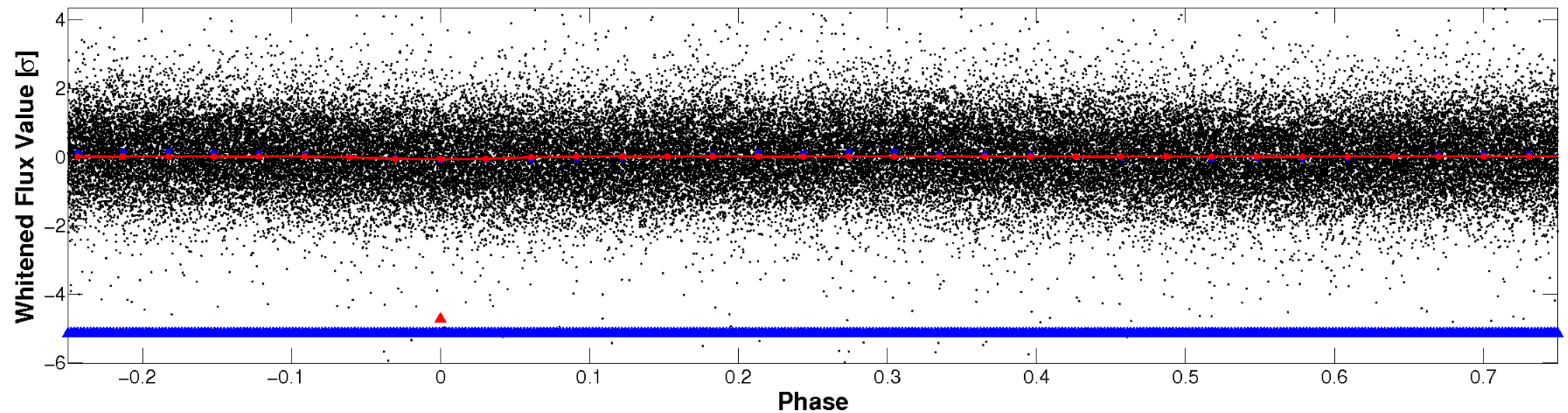


Non-Whitened Vs. Whitened Light Curve

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

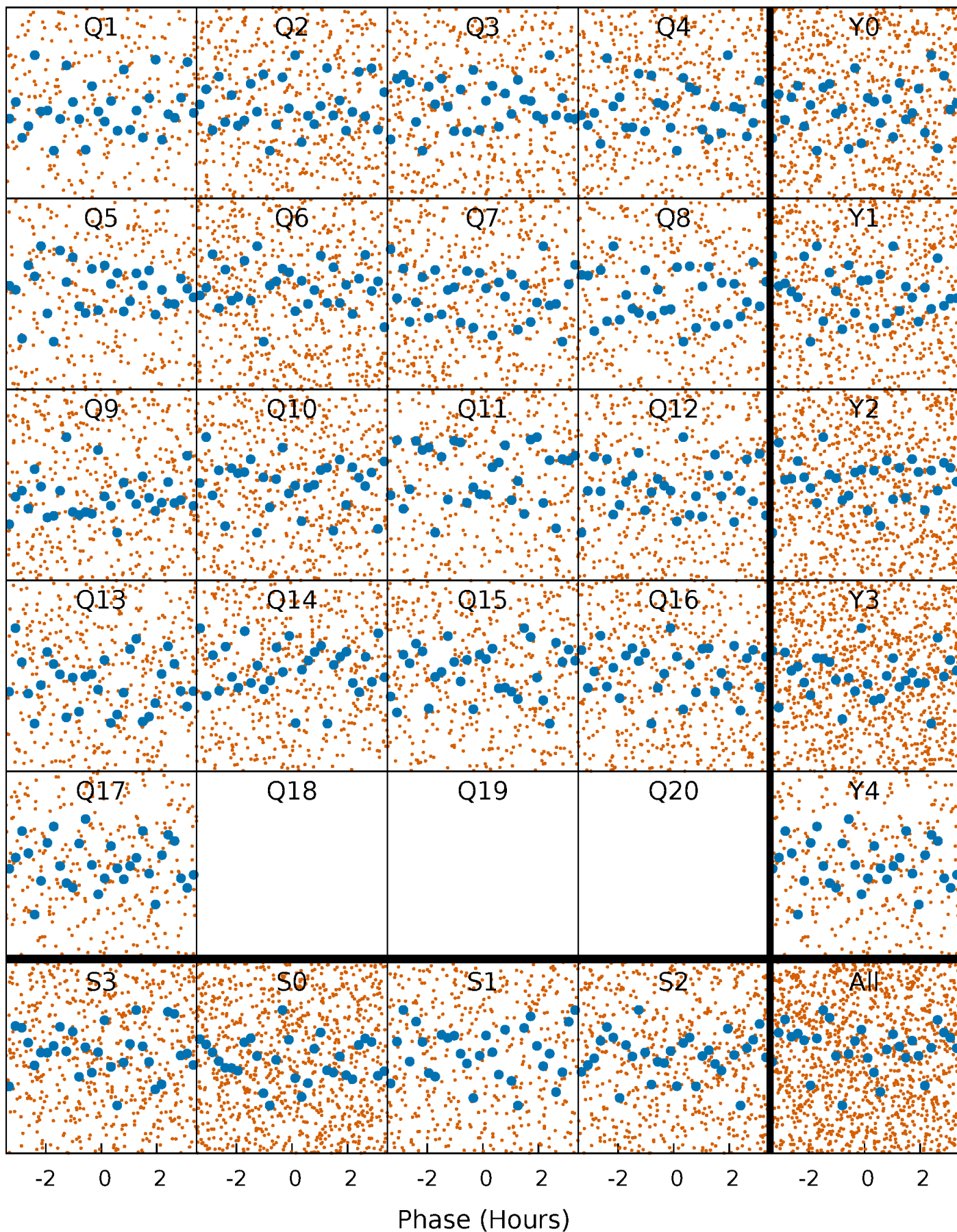


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



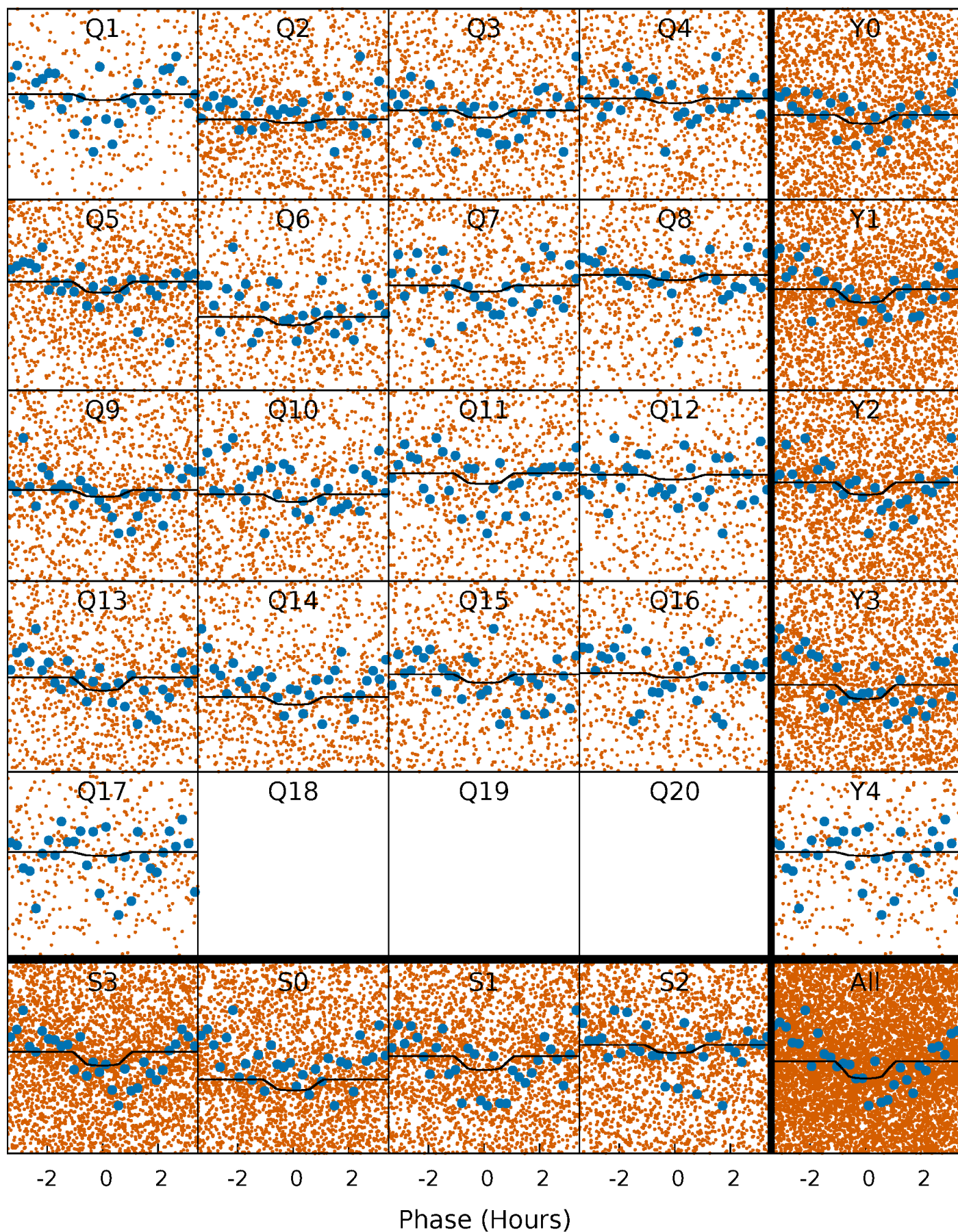
PDC Quarter-Phased Transit Curves

TCE 008092865-01 P= 0.671156 Days $T_0=131.724725$ (BKJD)



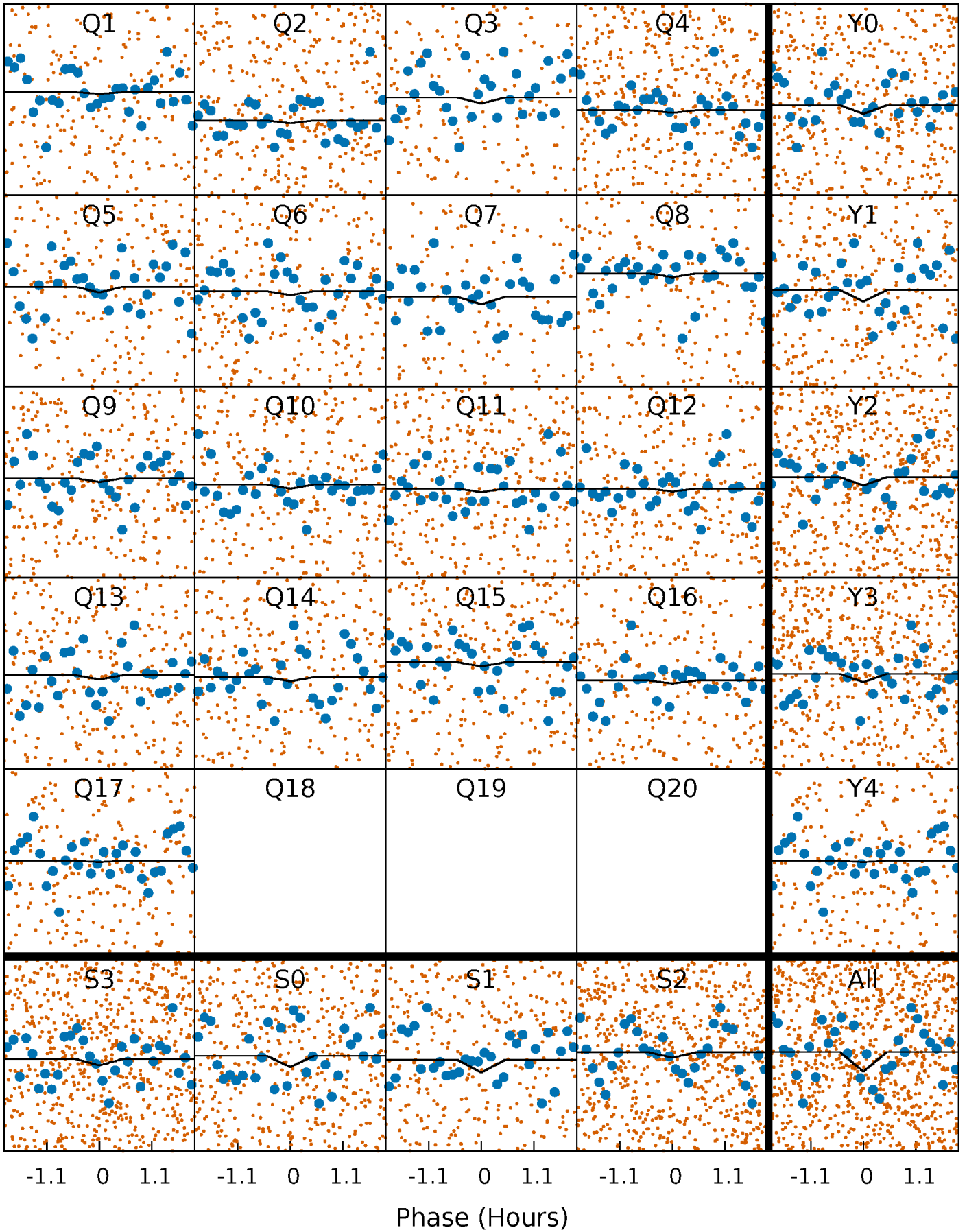
DV Quarter-Phased Transit Curves

TCE 008092865-01 P= 0.671156 Days $T_0=131.724725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

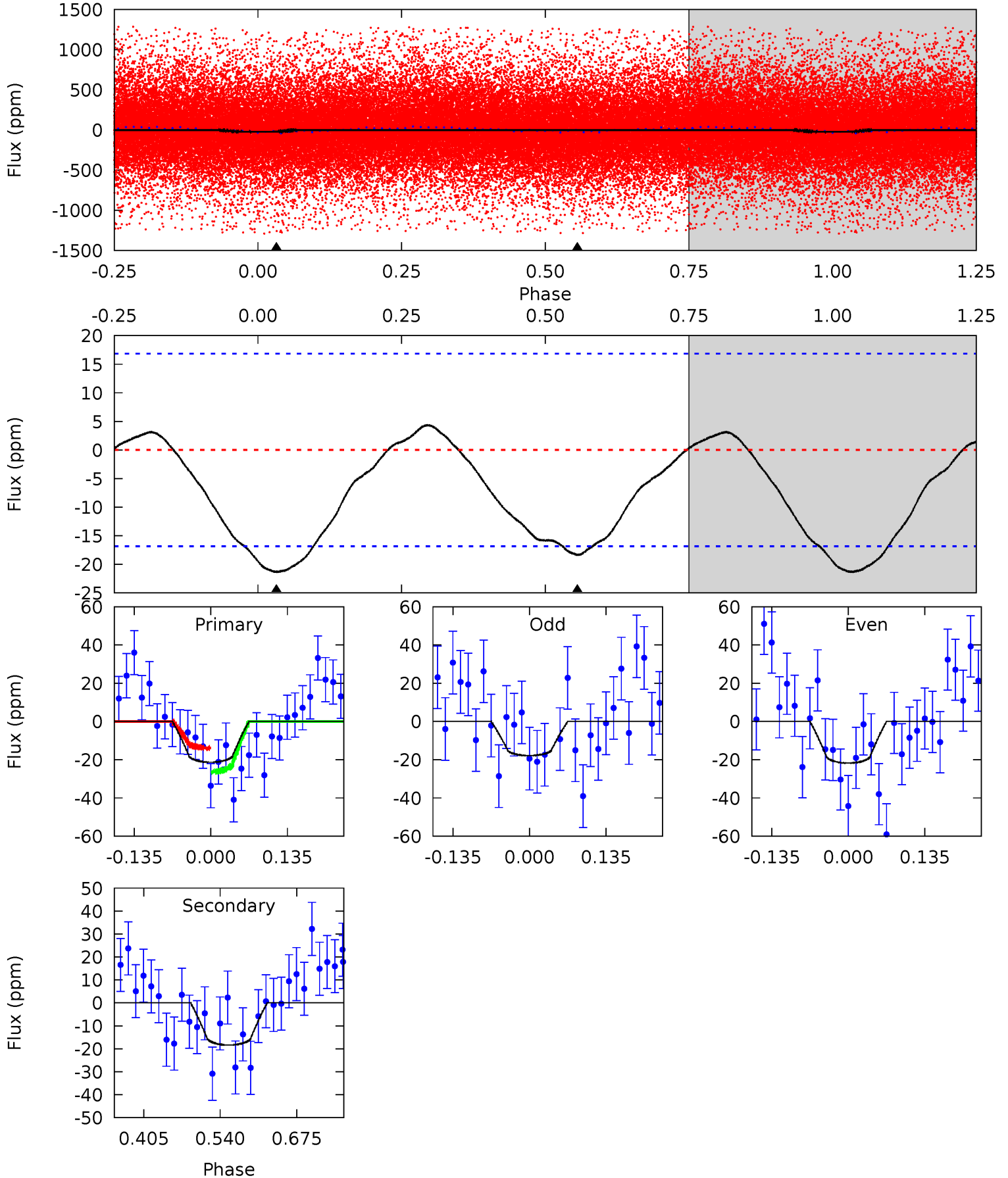
TCE 008092865-01 P= 0.671183 Days $T_0=131.701856$ (BKJD)



DV Model-Shift Uniqueness Test

008092865-01, P = 0.671156 Days, E = 131.053569 Days

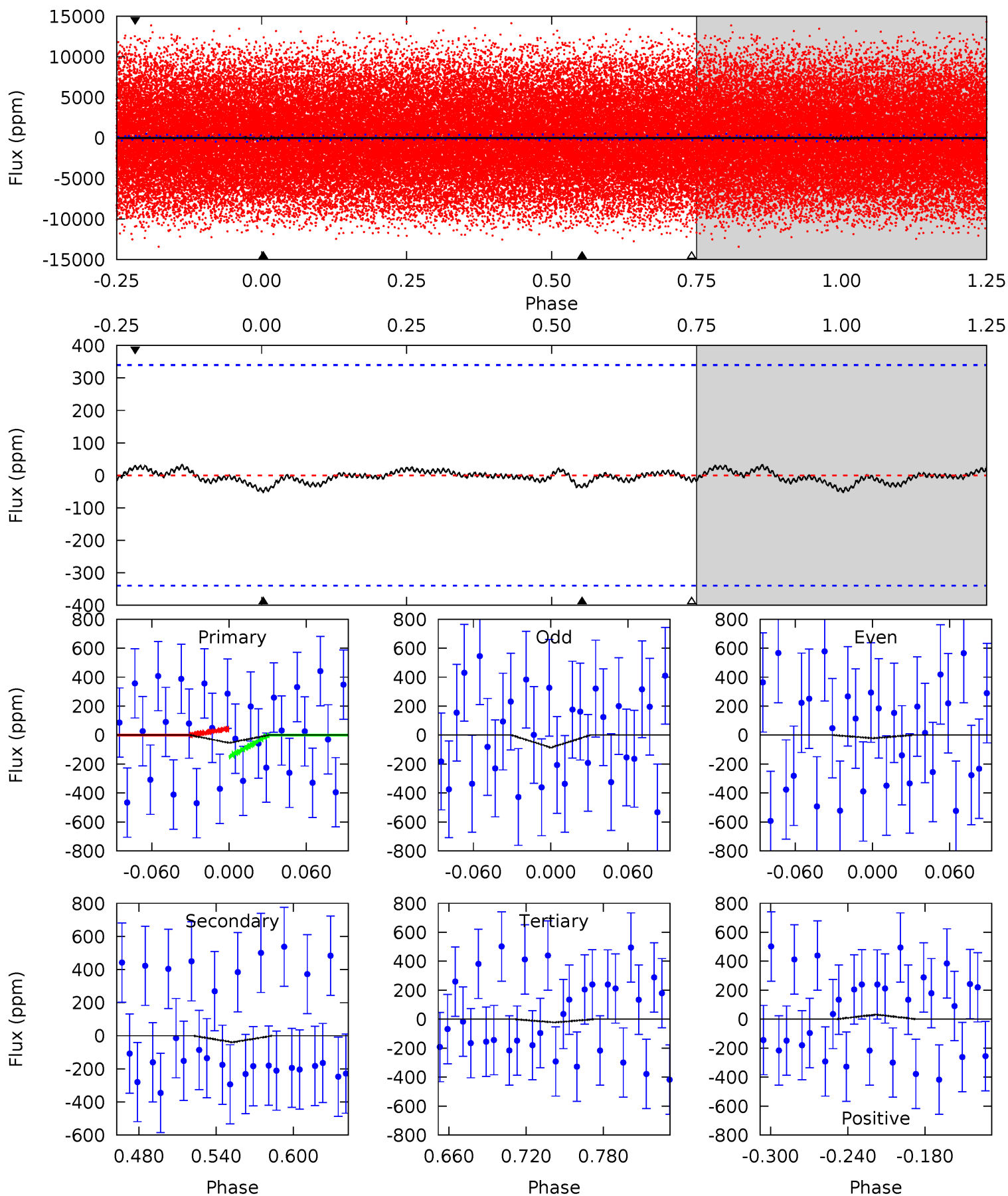
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.70	4.91	0	0	4.50	1.49	0.87	5.70	5.70	4.91	4.91	0.53	1.09	0.17	1.68



Alt Model-Shift Uniqueness Test

008092865-01, P = 0.671183 Days, E = 131.030673 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.73	0.54	0.30	0.43	4.67	1.88	0.18	0.43	0.30	0.23	0.10	0.44	0.36	0.39	0.72



Stellar Parameters For KIC 008092865

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7912^{+216}_{-325}	$3.913^{+0.273}_{-0.117}$	$-0.100^{+0.200}_{-0.350}$	$2.518^{+0.393}_{-0.851}$	$1.896^{+0.104}_{-0.416}$	$0.167^{+0.311}_{-0.061}$
	+3%/-4%	+7%/-3%	+200%/-350%	+16%/-34%	+5%/-22%	+186%/-36%
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 008092865-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 4	$1.06^{+0.41}_{-0.37}$	5587^{+347}_{-480}	7889^{+2623}_{-1498}	$3.114^{+3.827}_{-1.615}$
Alt.	-39 ± 73	$2.01^{+0.47}_{-0.52}$	5578^{+341}_{-513}	6654^{+3173}_{-13731}	$1.775^{+4.008}_{-3.449}$

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

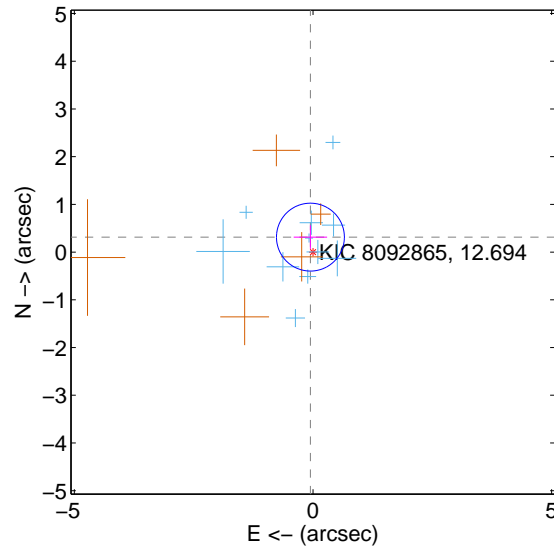
Supplemental centroid analysis for 008092865-01. Kepler magnitude: 12.69. Transit SNR 5.26

There are 11 quarters with good PRF difference image offsets

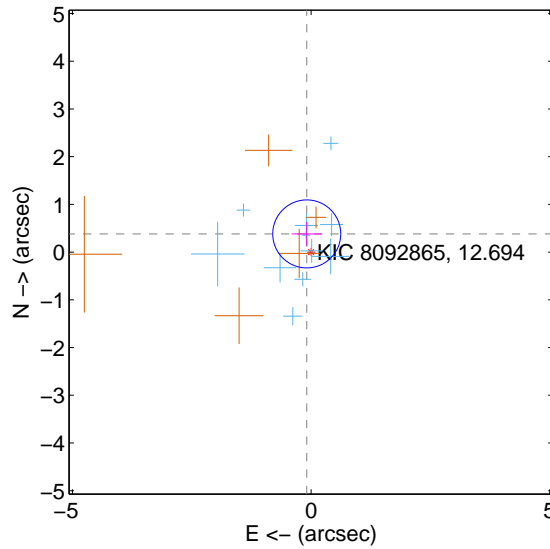
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.318 ± 0.237	1.34	0.053 ± 0.350	0.314 ± 0.247
PRF-fit source offset from KIC position	0.392 ± 0.238	1.65	0.090 ± 0.316	0.381 ± 0.249
photometric centroid source offset	0.94 ± 1.09	0.86	-0.86 ± 1.08	0.40 ± 1.17

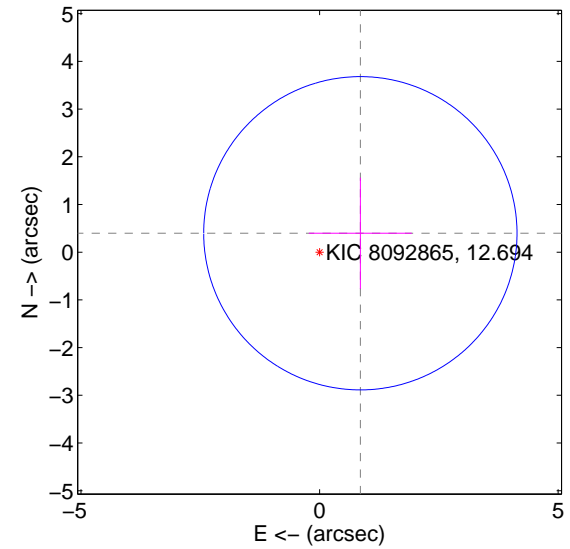
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

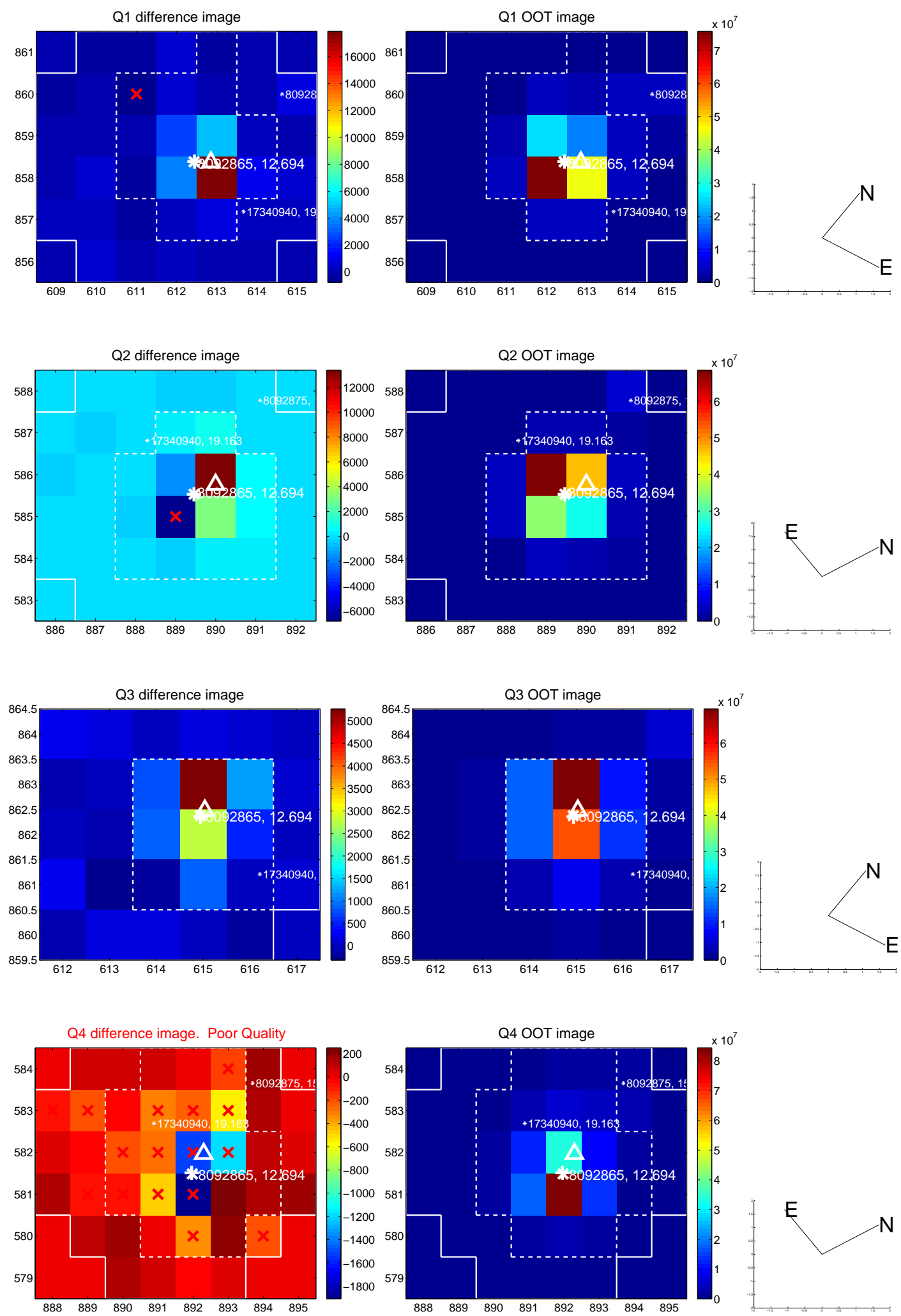


offset from photometric centroids

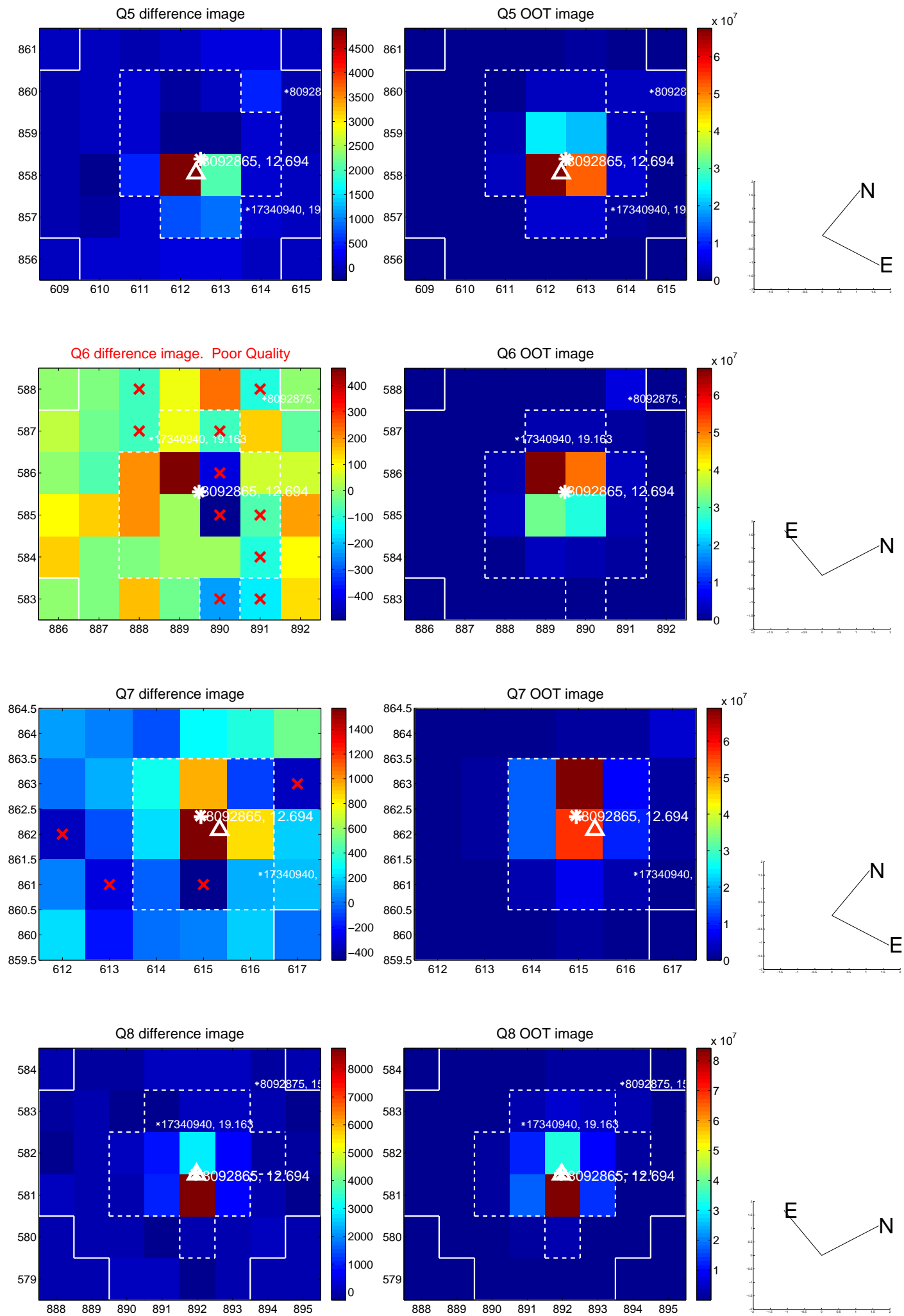


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

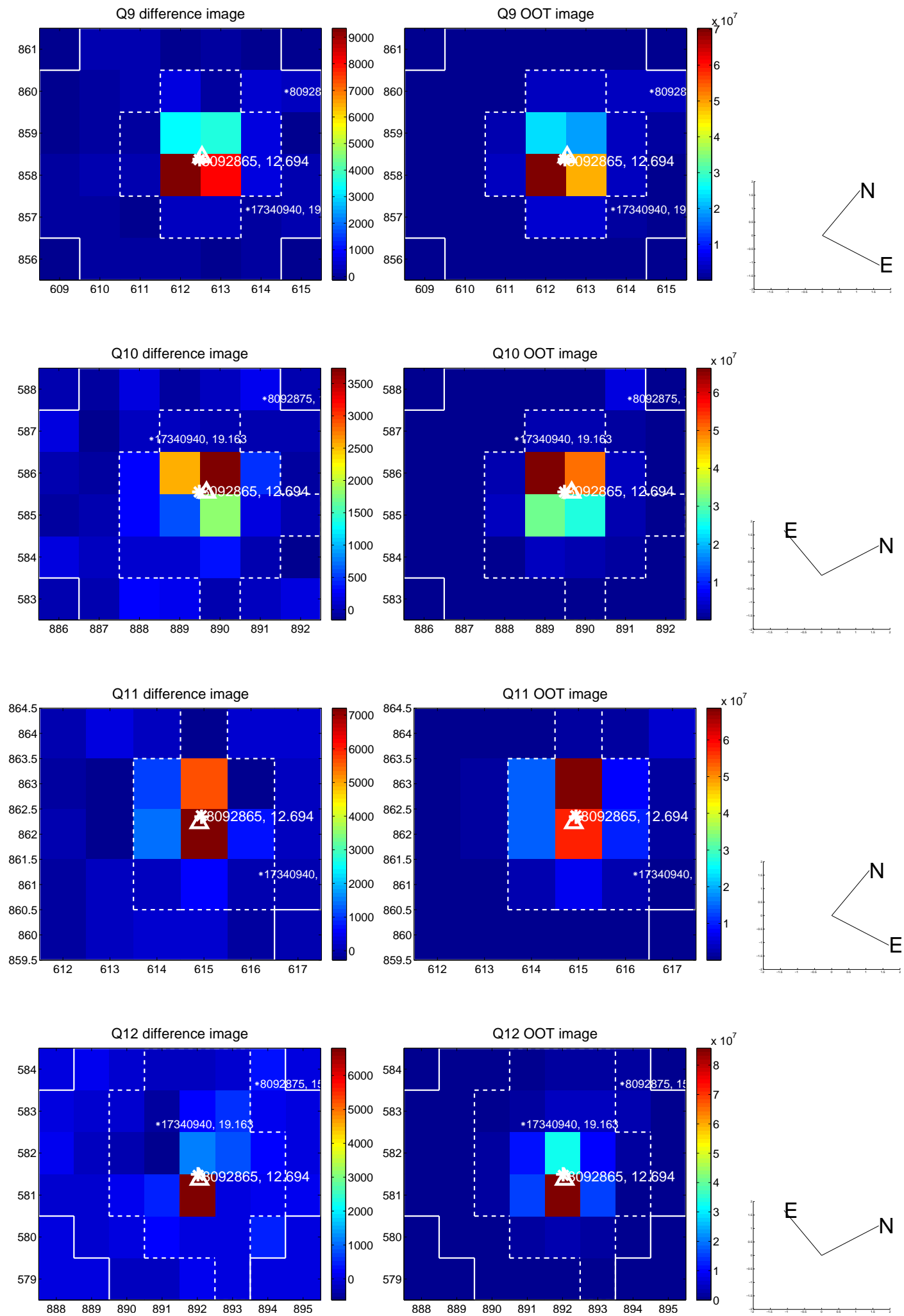
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



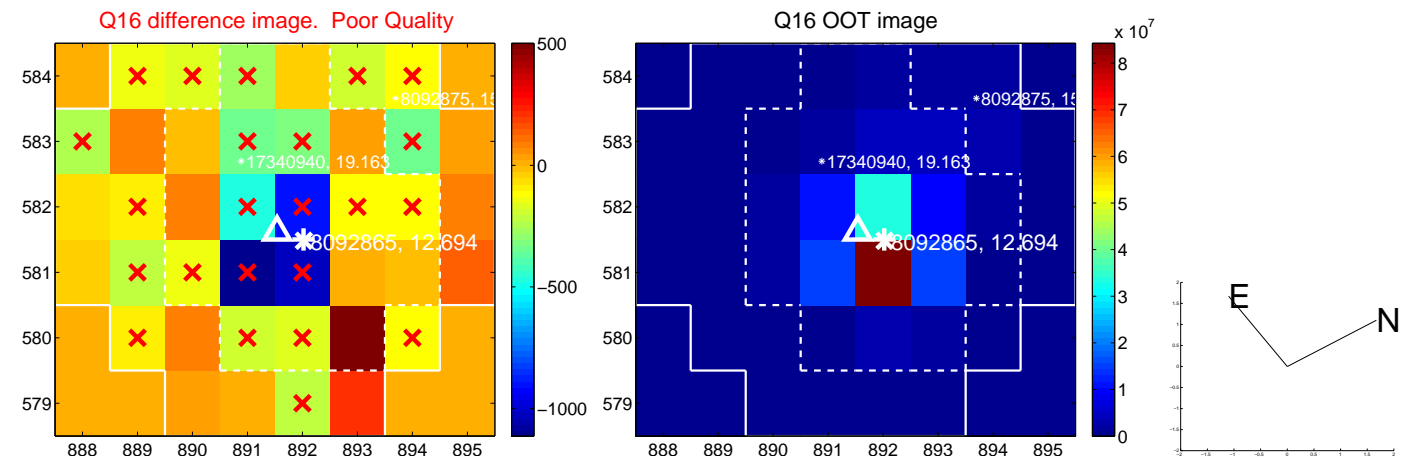
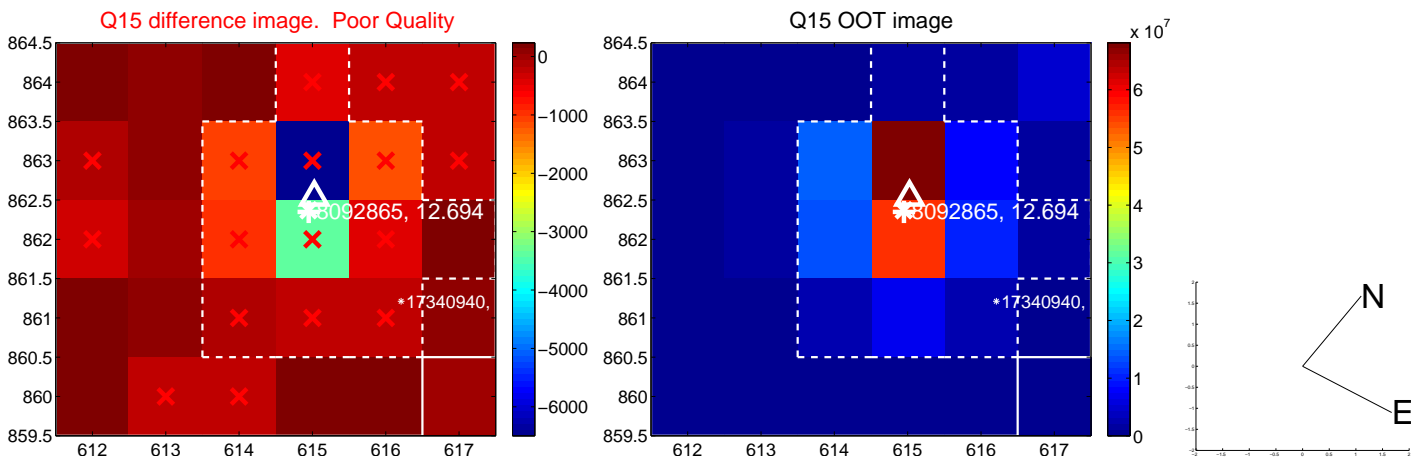
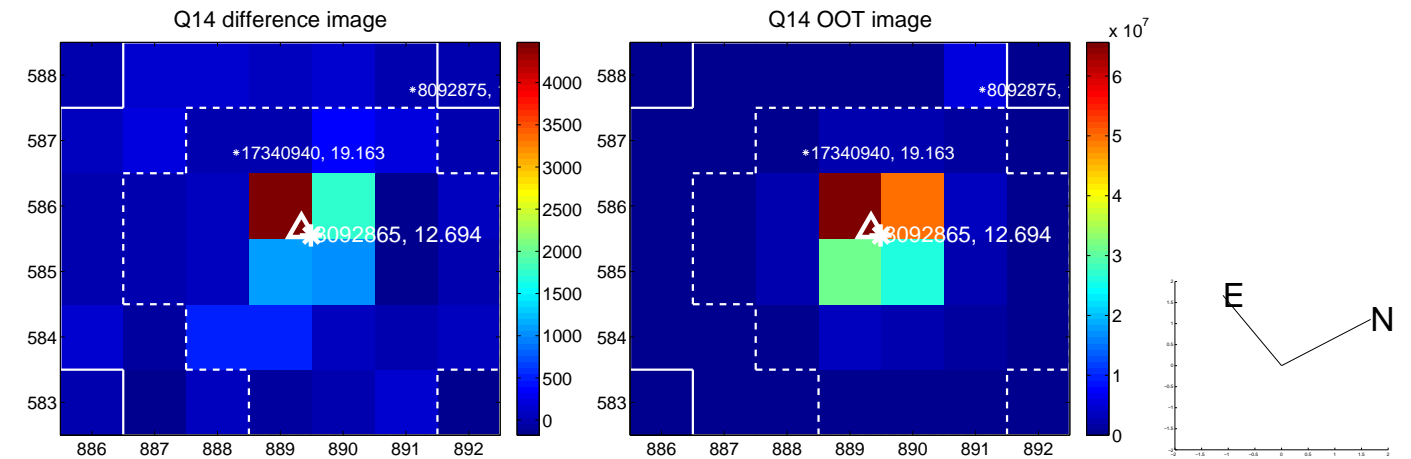
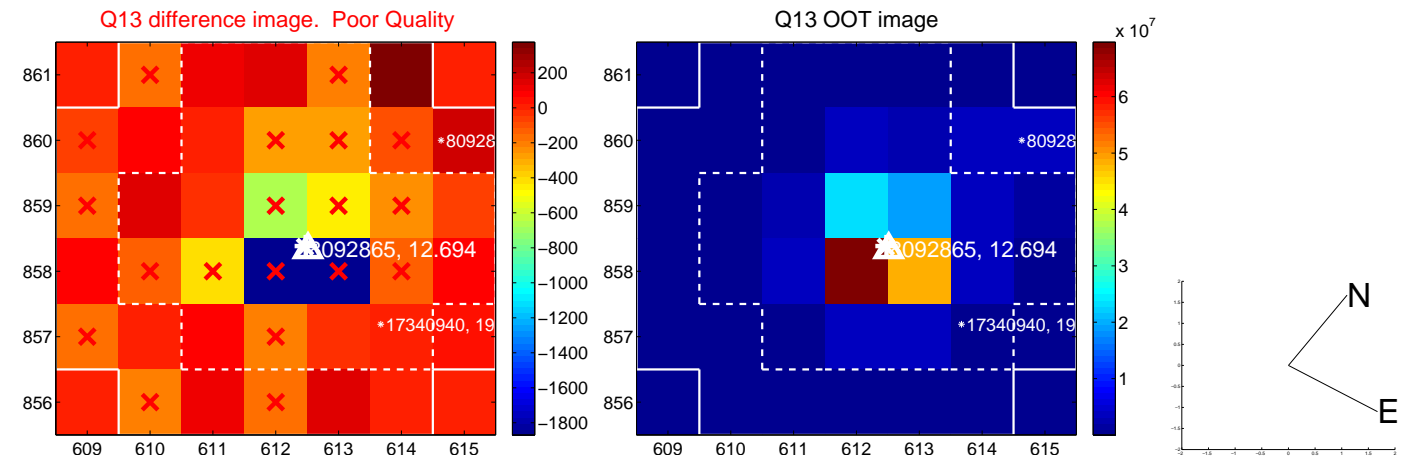
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



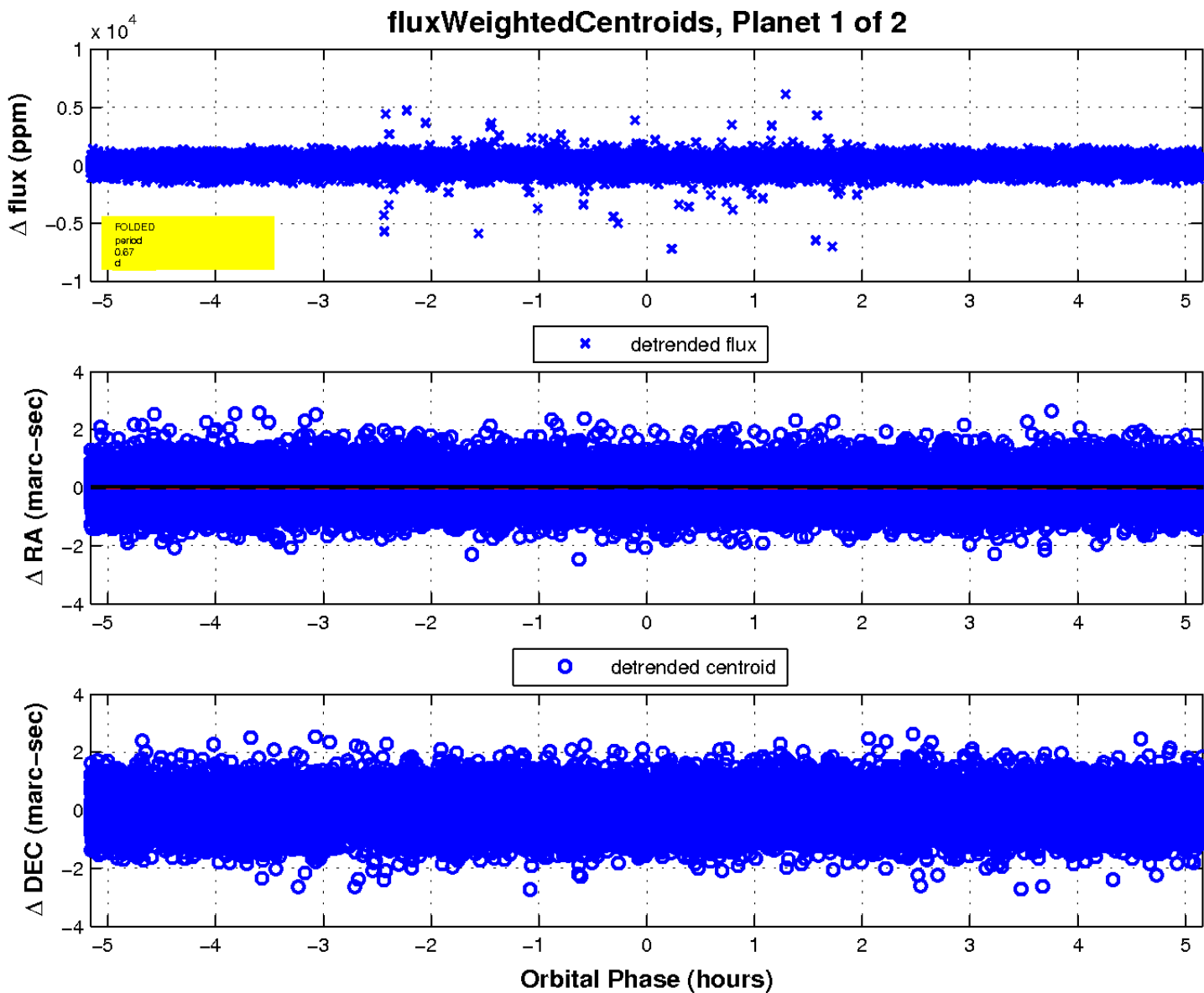
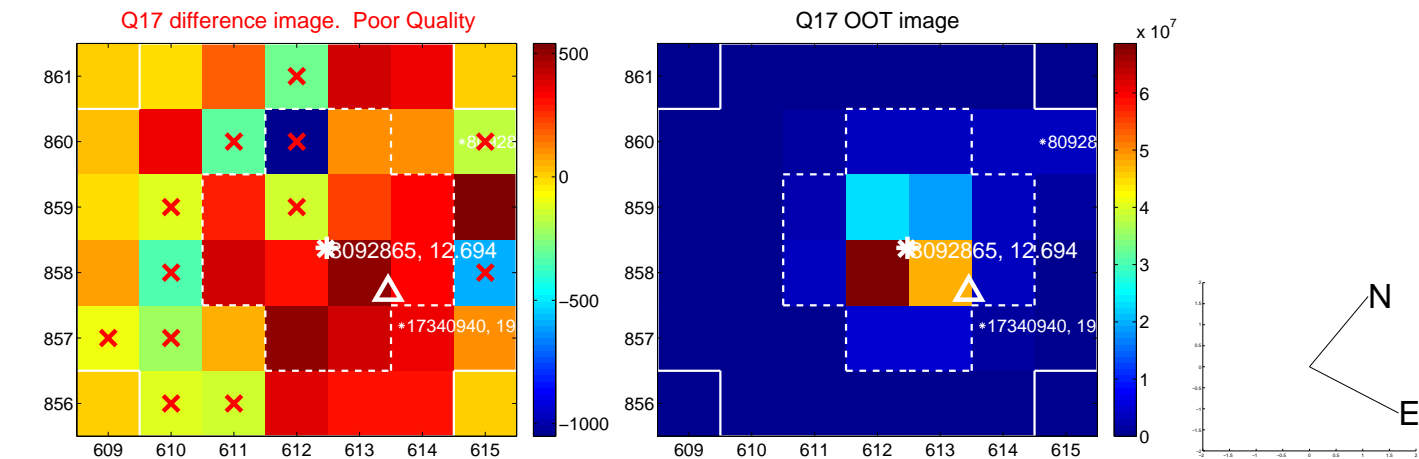
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

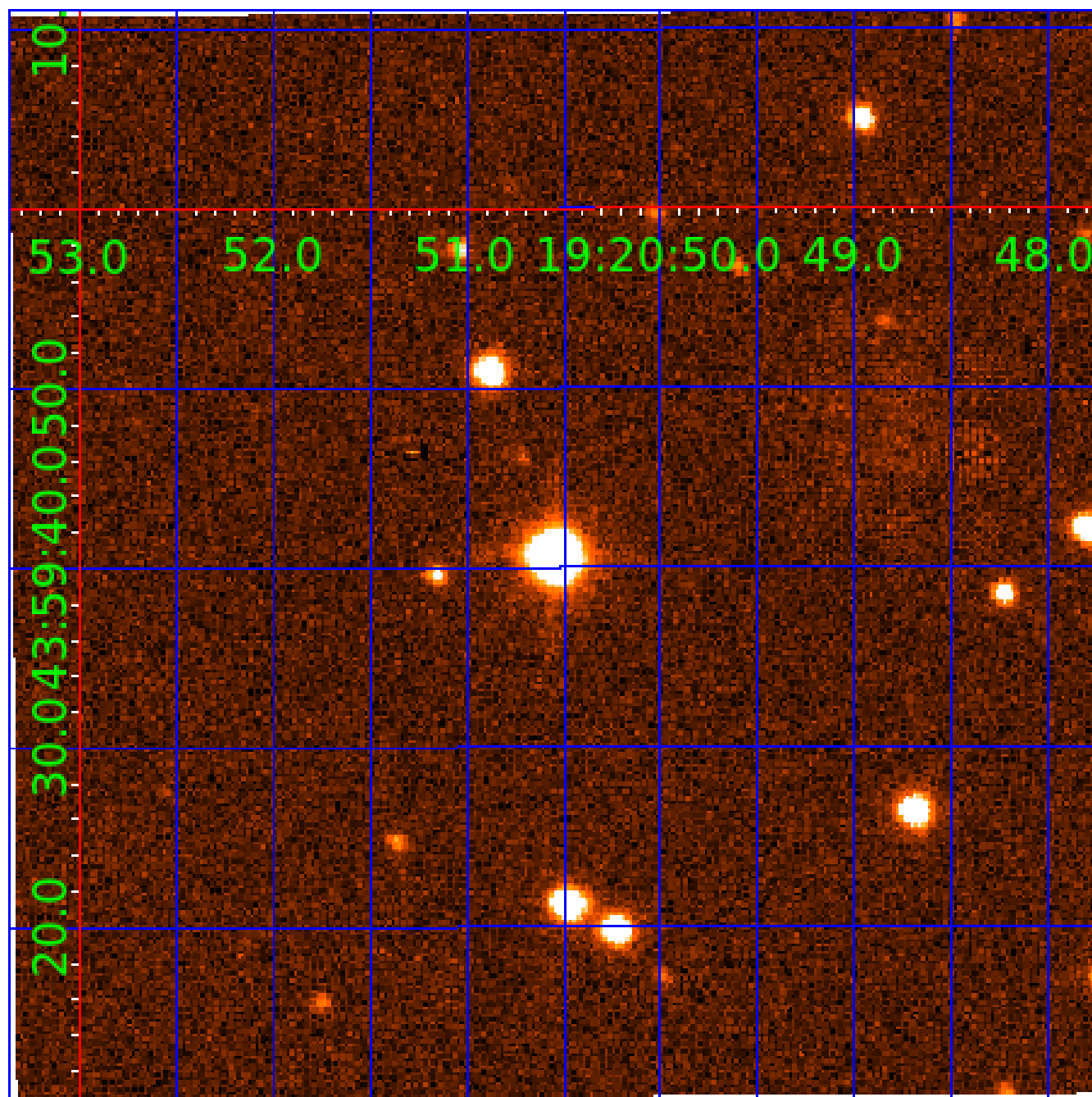


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008092865

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})
008092865-01	OBS	No	0.671156	131.724725	16.2	1.720	9.8	5.3	2.52	7912	1.11	64611.84
008092865-02	OBS	No	0.553667	131.829808	1.0	5.271	9.0	0.4	2.52	7912	0.29	83511.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008092865-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008092865-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFS

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

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

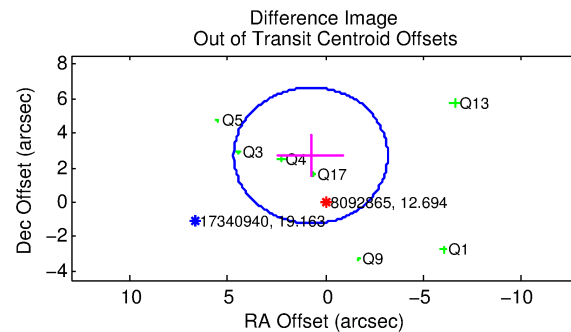
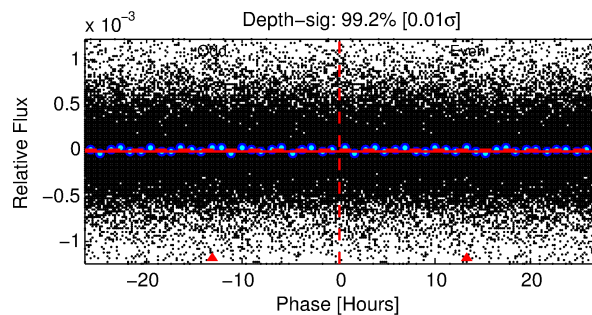
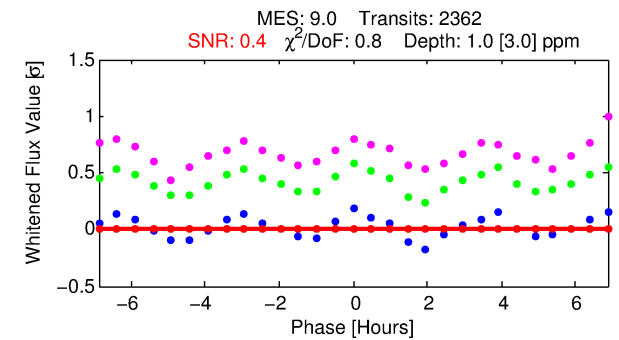
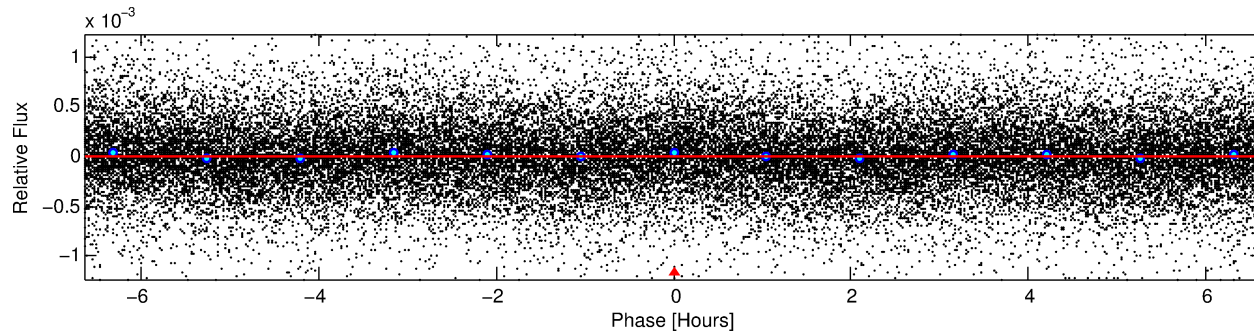
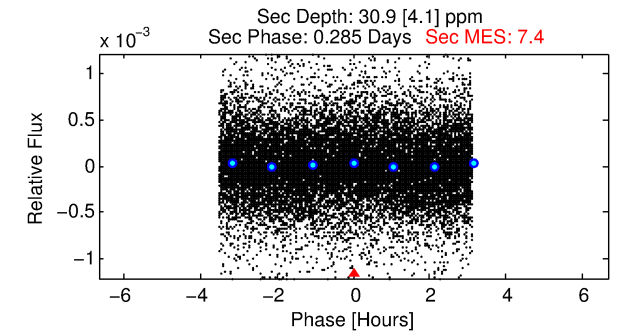
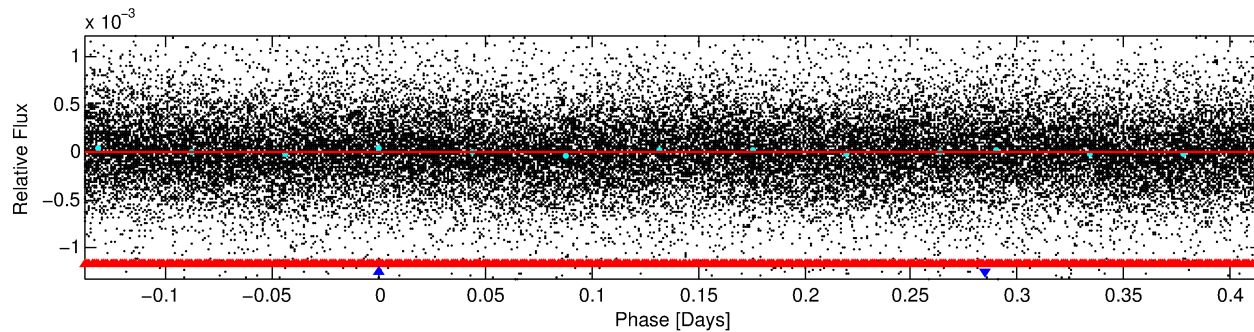
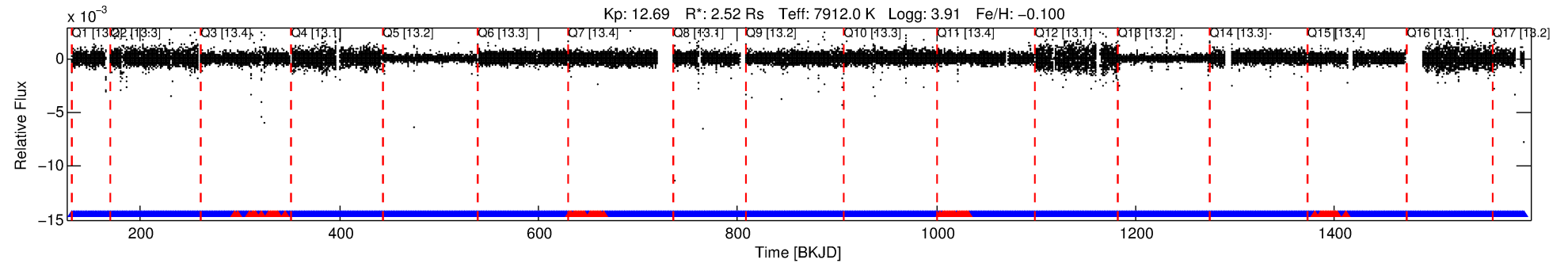
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008092865-02

No Significant Match Found

DV One-Page Summary

KIC: 8092865 Candidate: 2 of 2 Period: 0.554 d



DV Fit Results:

Period = 0.55367 [0.00024] d
Epoch = 131.8298 [0.1202] BKJD
Rp/R* = 0.0011 [0.0148]
a/R* = 1.01 [2.21]
b = 0.89 [20.92]
Seff = 83511.27 [42037.16]
Teff = 4335 [545] K
Rp = 0.29 [4.07] Re
a = 0.0163 [0.0050] AU
Ag = 53.17 [1484.24] [0.04σ]
Teffp = 18097 [126291] K [0.11σ]

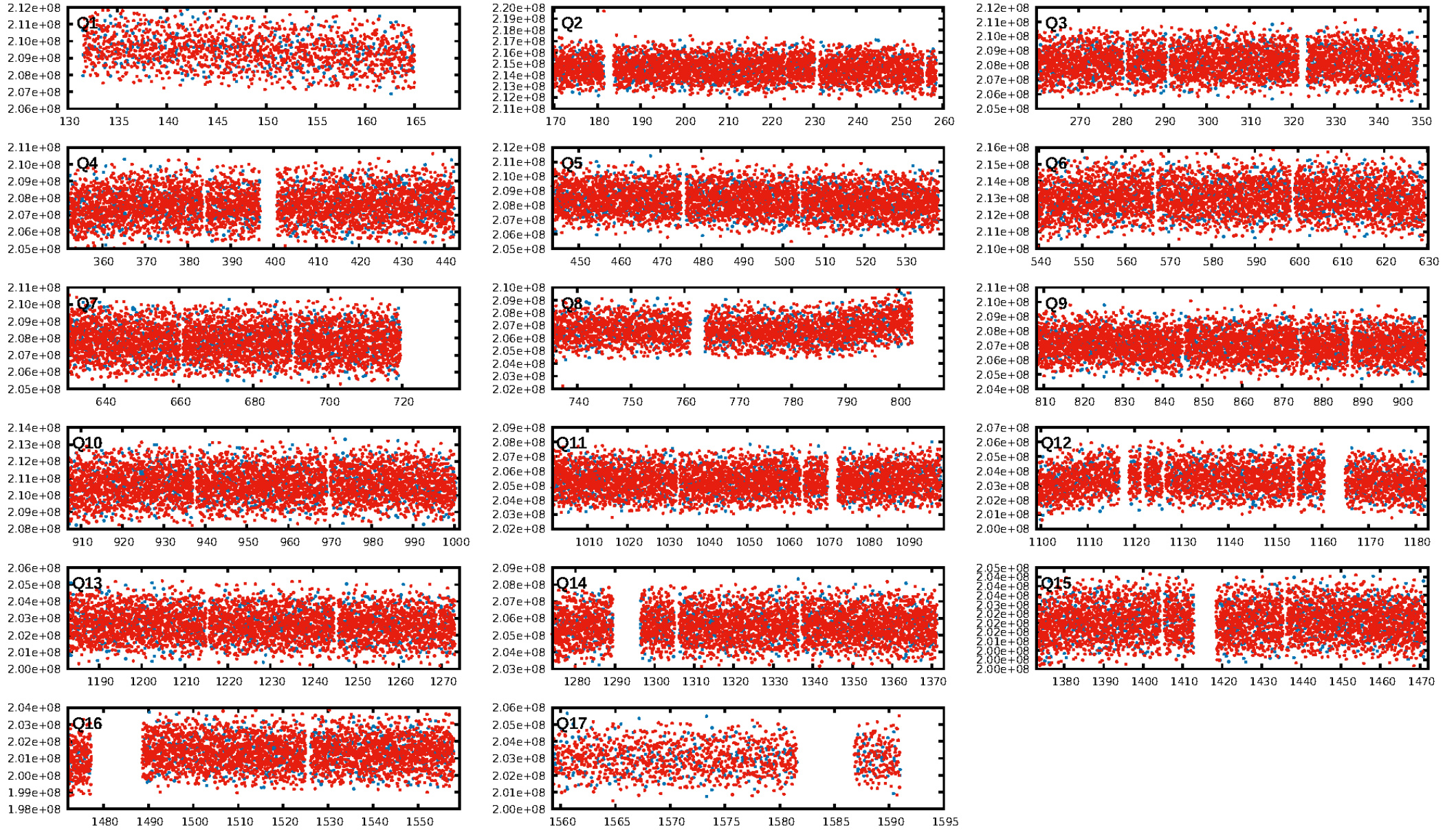
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 38.9% [0.51σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [2126/2256]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.804 arcsec [2.14σ]
KicOffset-rm: 2.824 arcsec [2.26σ]
OotOffset-st: 0/1/1/5 [7]
KicOffset-st: 0/1/1/5 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 0.00 [0/17]

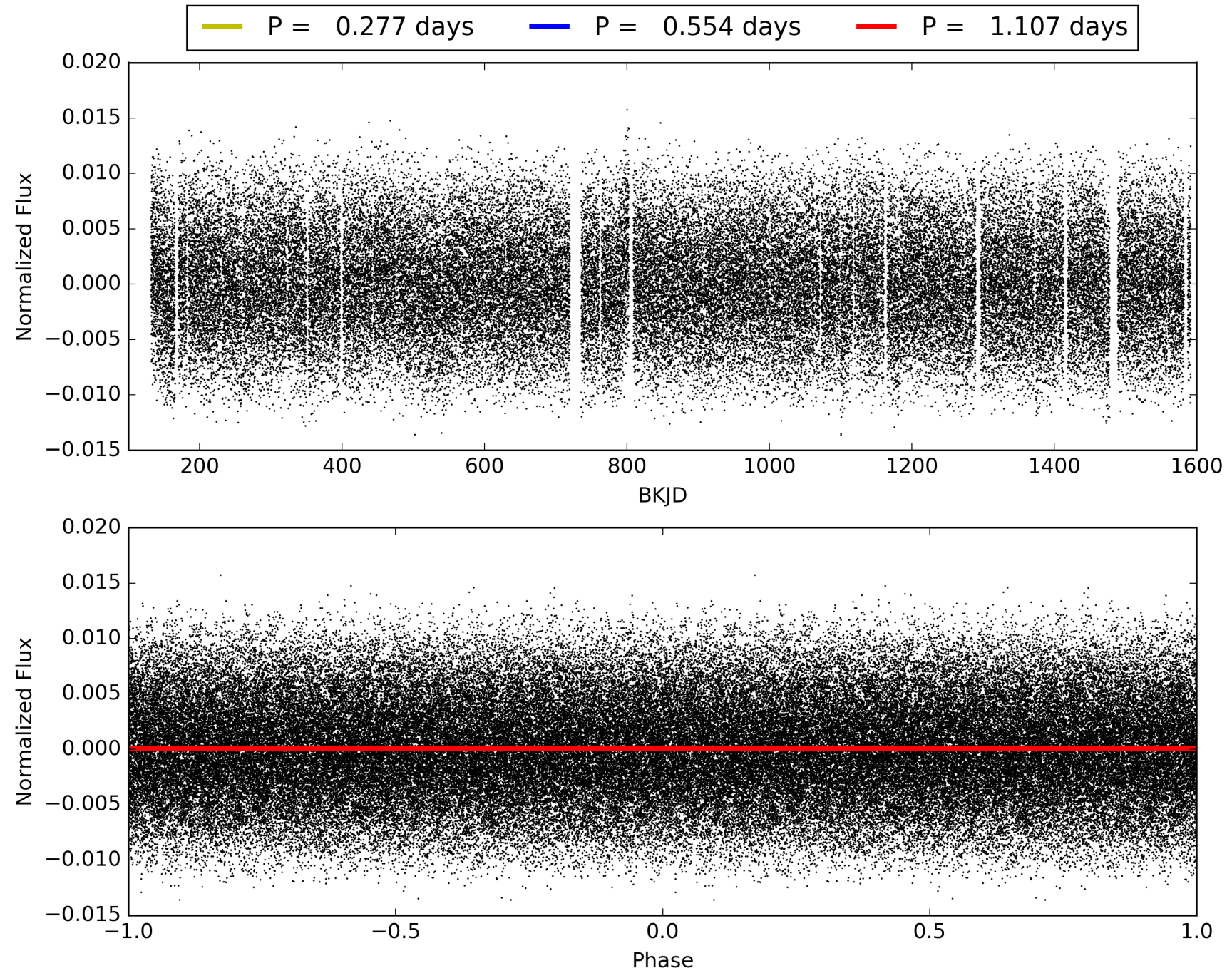
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:31:27 Z

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

TCE 008092865-02, PDC Light Curves

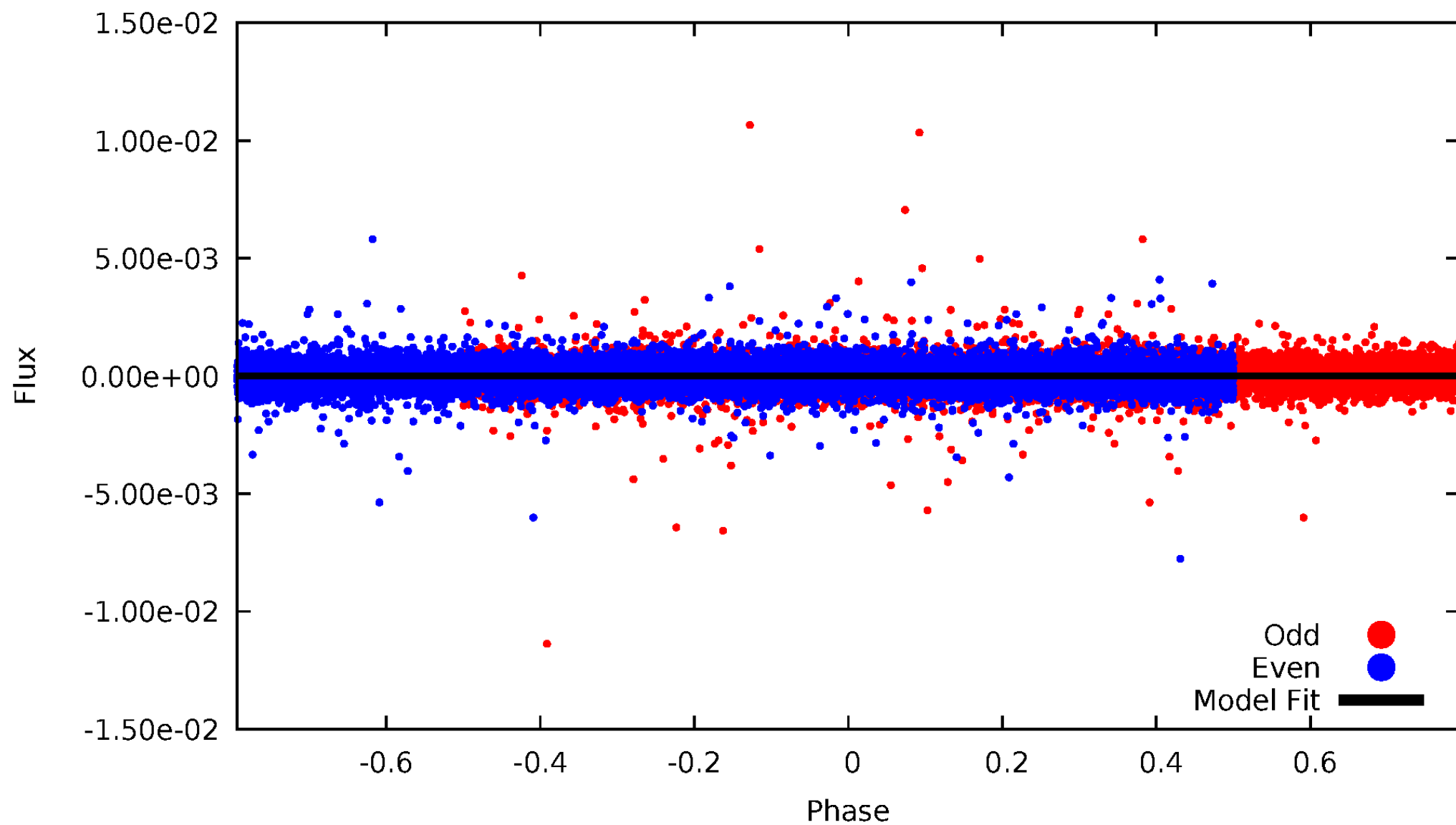


TCE 008092865-02



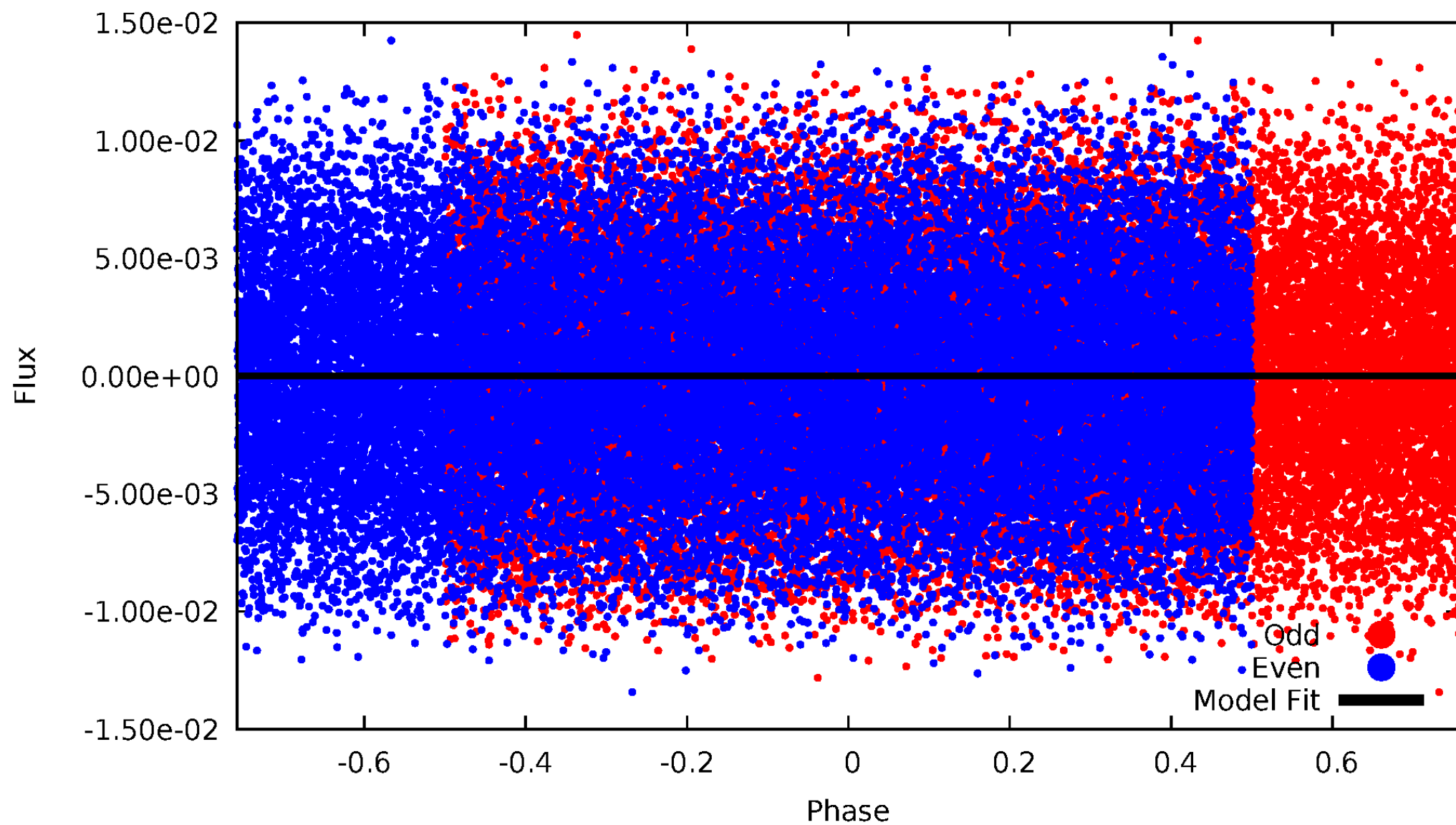
DV Odd/Even

TCE 008092865-02



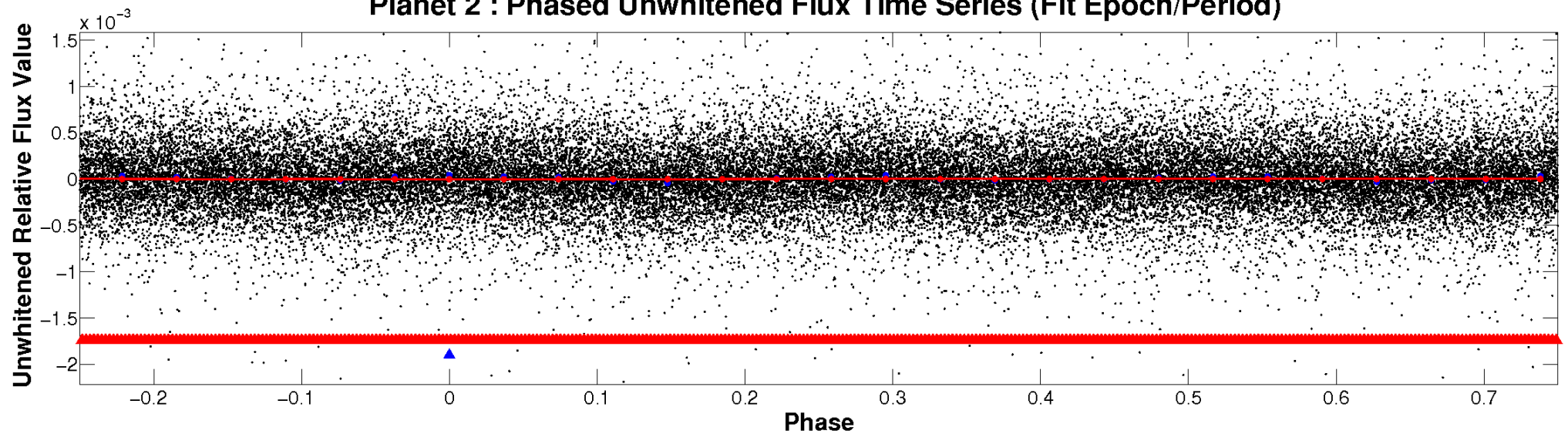
ALT Odd/Even

TCE 008092865-02

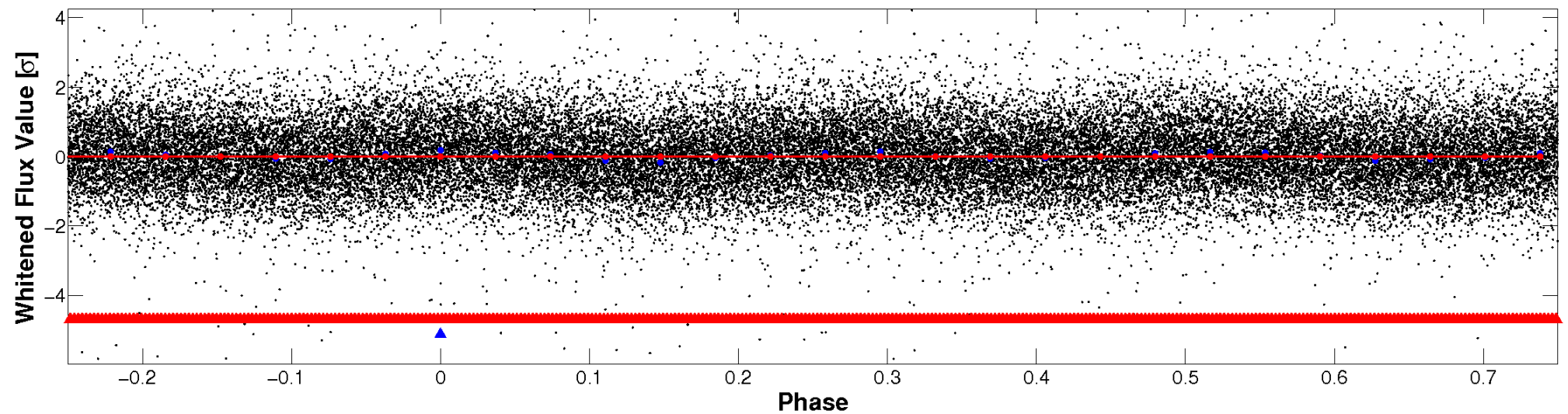


Non-Whitened Vs. Whitened Light Curve

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

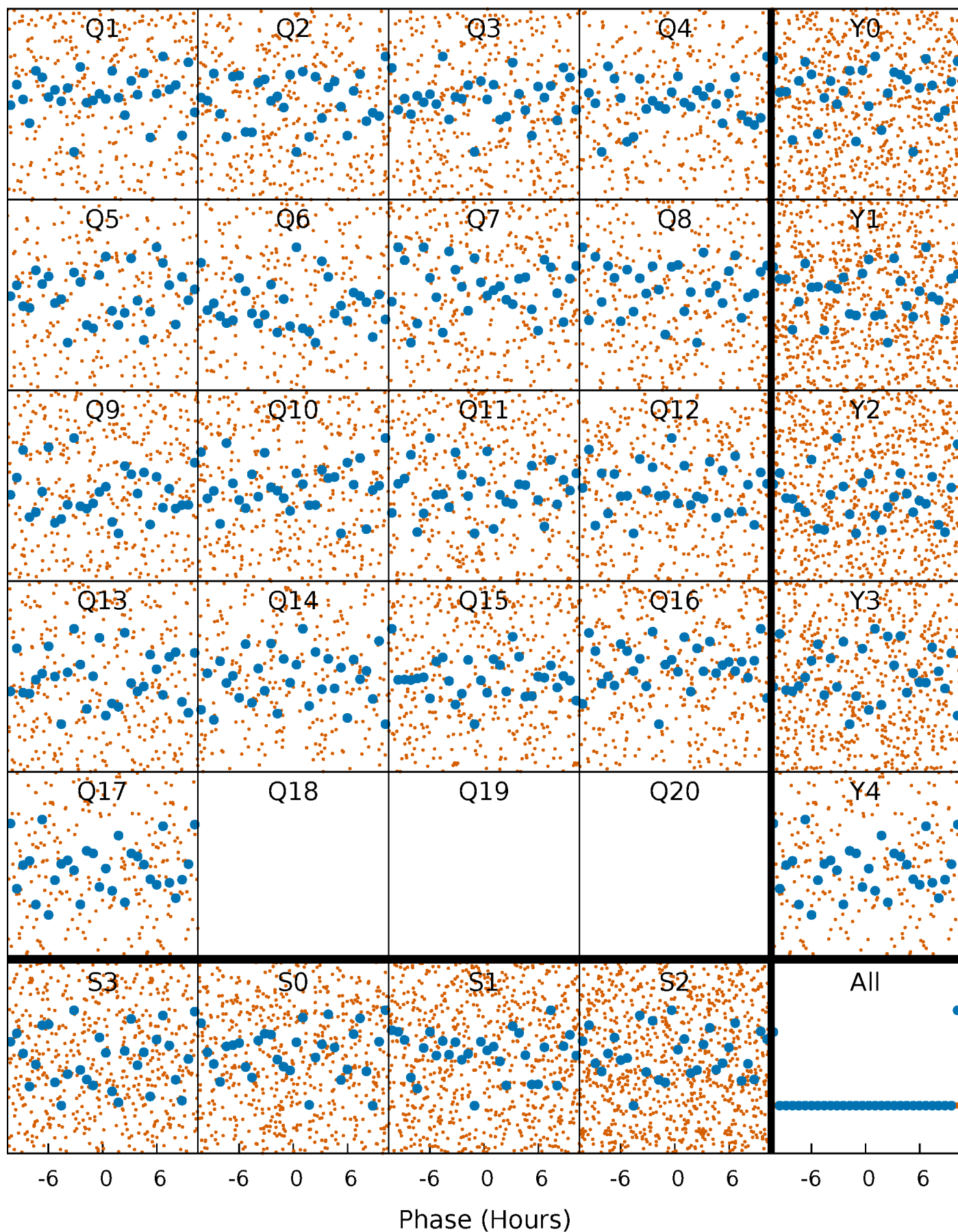


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



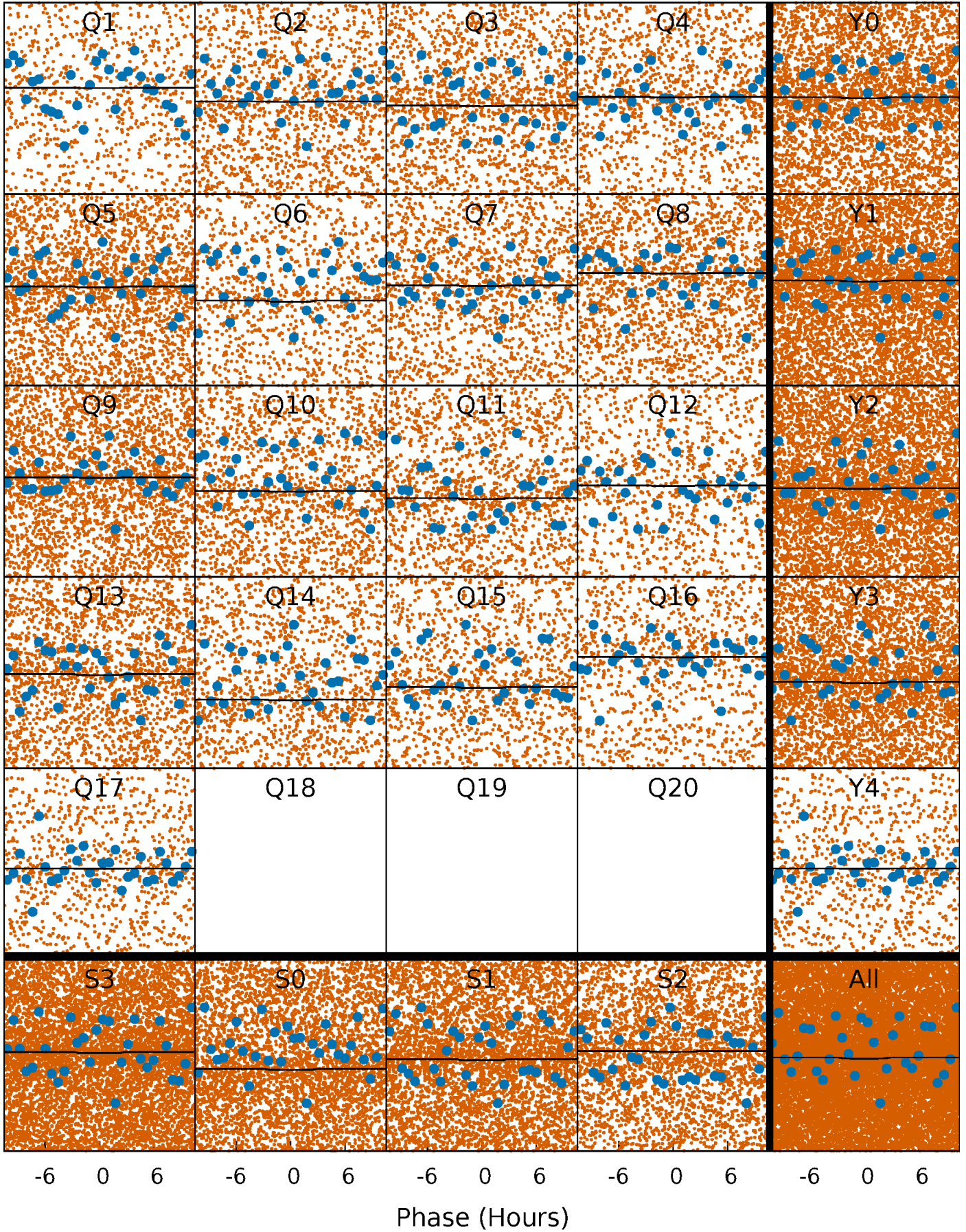
PDC Quarter-Phased Transit Curves

TCE 008092865-02 P= 0.553667 Days $T_0=131.829808$ (BKJD)



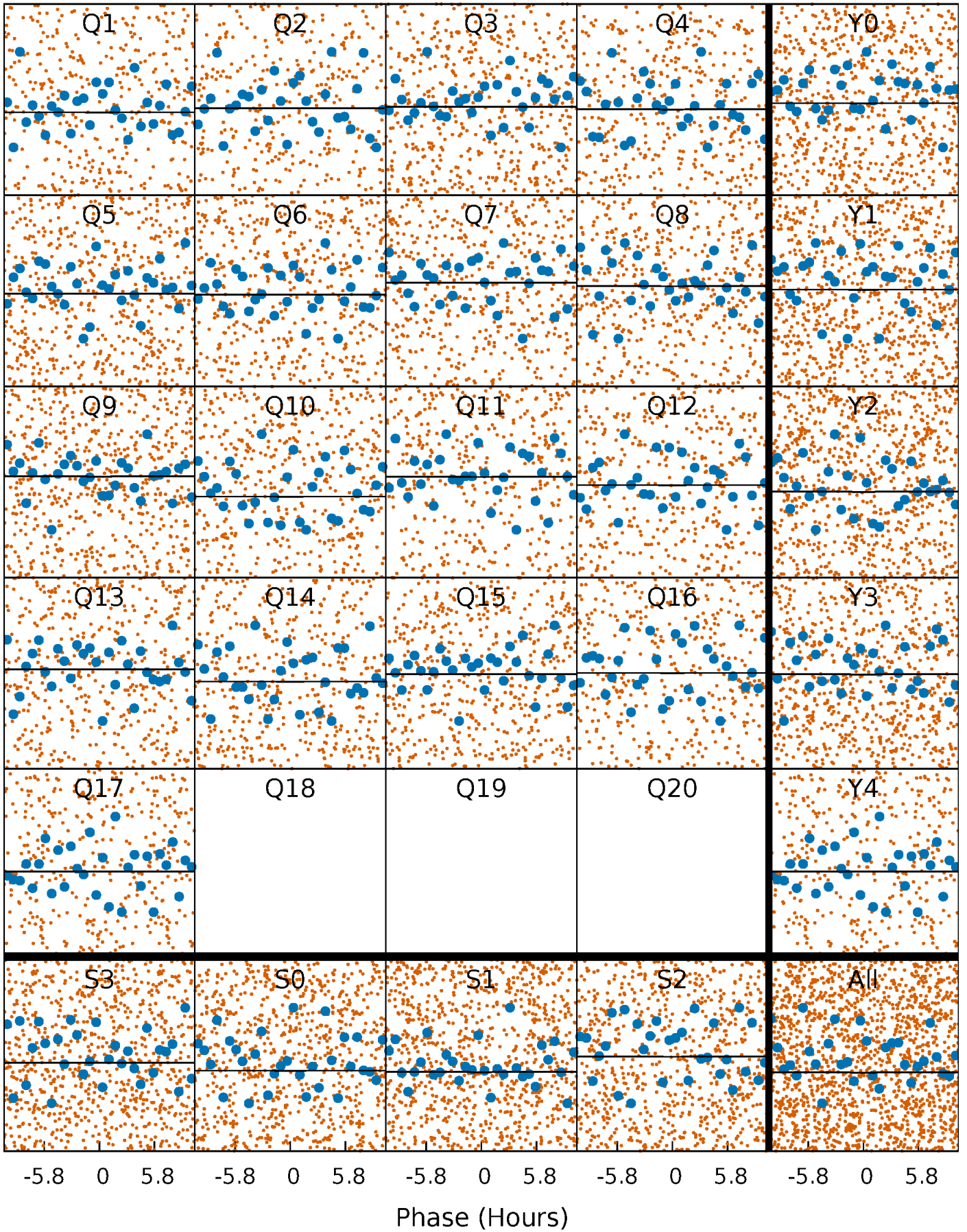
DV Quarter-Phased Transit Curves

TCE 008092865-02 P= 0.553667 Days $T_0=131.829808$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

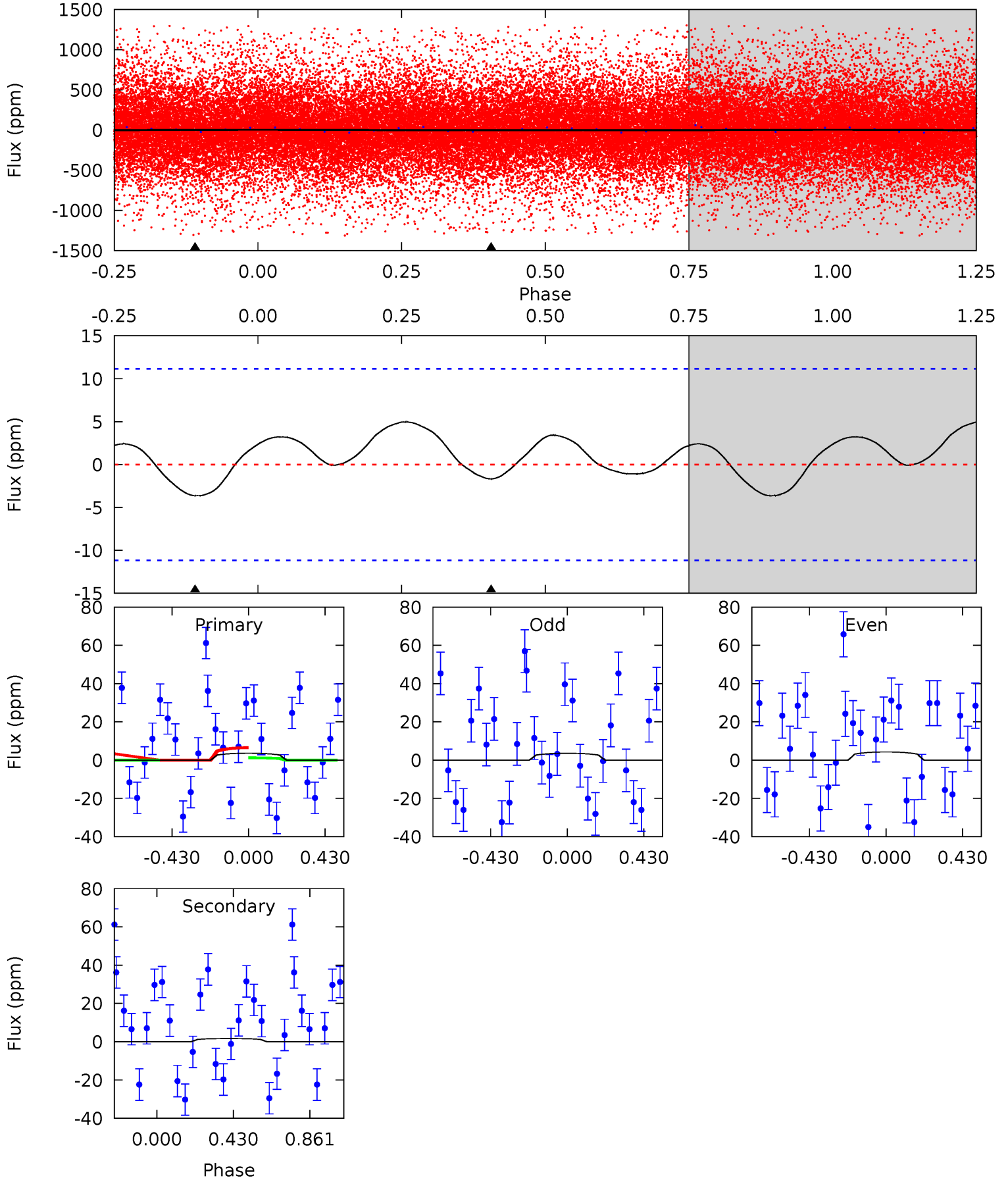
TCE 008092865-02 P= 0.553674 Days $T_0=131.816169$ (BKJD)



DV Model-Shift Uniqueness Test

008092865-02, P = 0.553667 Days, E = 131.276141 Days

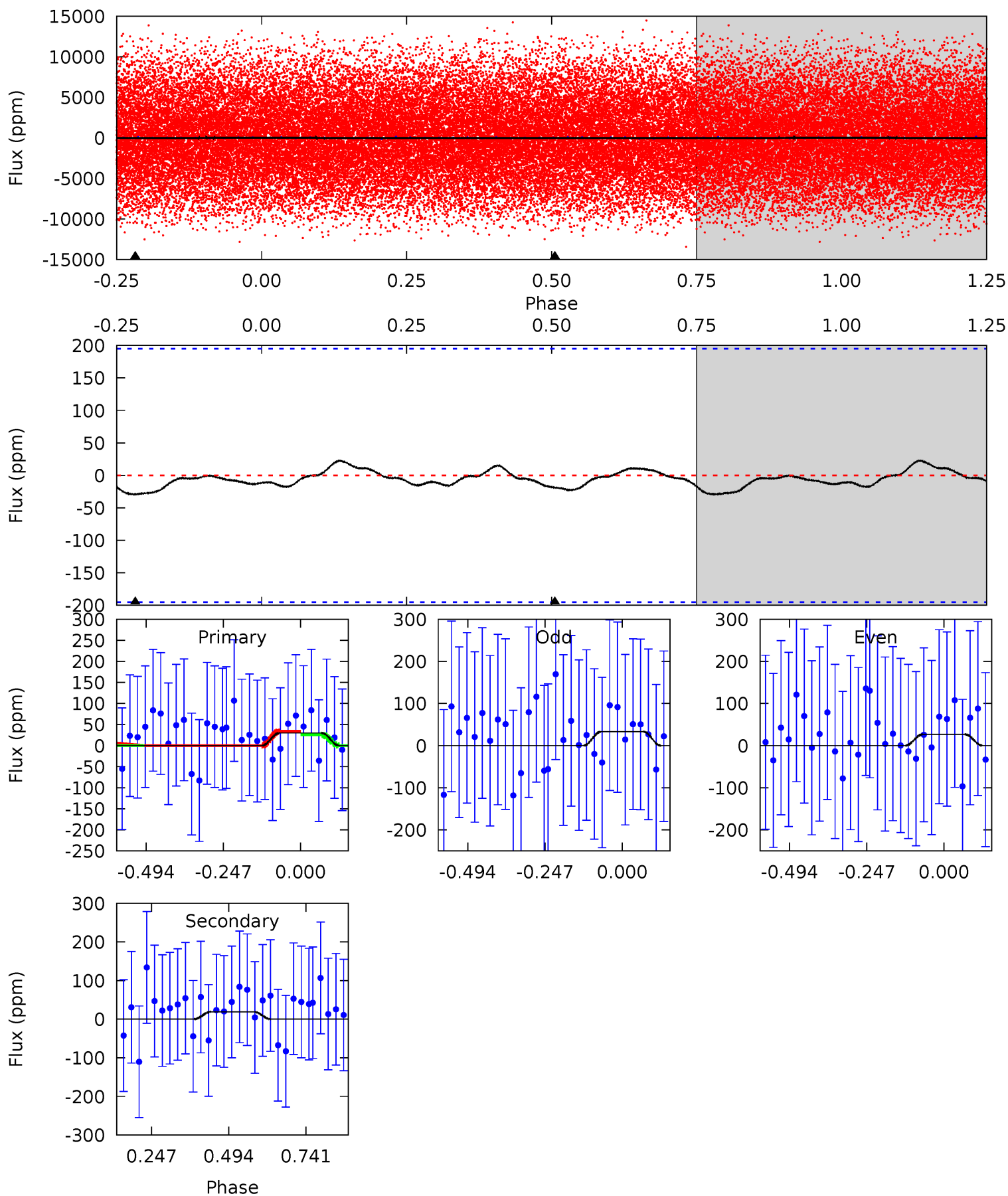
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.38	0.64	0	0	4.25	0.79	0.31	1.38	1.38	0.64	0.64	0.14	2.93	0.58	1.00



Alt Model-Shift Uniqueness Test

008092865-02, P = 0.553674 Days, E = 131.262495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.67	0.43	0	0	4.37	1.16	0.26	0.67	0.67	0.43	0.43	0.07	1.00	0.44	0.09



Stellar Parameters For KIC 008092865

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7912^{+216}_{-325}	$3.913^{+0.273}_{-0.117}$	$-0.100^{+0.200}_{-0.350}$	$2.518^{+0.393}_{-0.851}$	$1.896^{+0.104}_{-0.416}$	$0.167^{+0.311}_{-0.061}$
	+3%/-4%	+7%/-3%	+200%/-350%	+16%/-34%	+5%/-22%	+186%/-36%
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 008092865-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2 ± 3	$2.56^{+3.05}_{-1.75}$	5972^{+371}_{-529}	-4706^{+7942}_{-407}	$0.023^{+0.308}_{-0.037}$
Alt.	-19 ± 45	$2.64^{+3.01}_{-1.82}$	5983^{+398}_{-528}	-3844^{+12527}_{-2191}	$0.213^{+3.102}_{-0.724}$

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 $A_{obs} \gg 1.0$

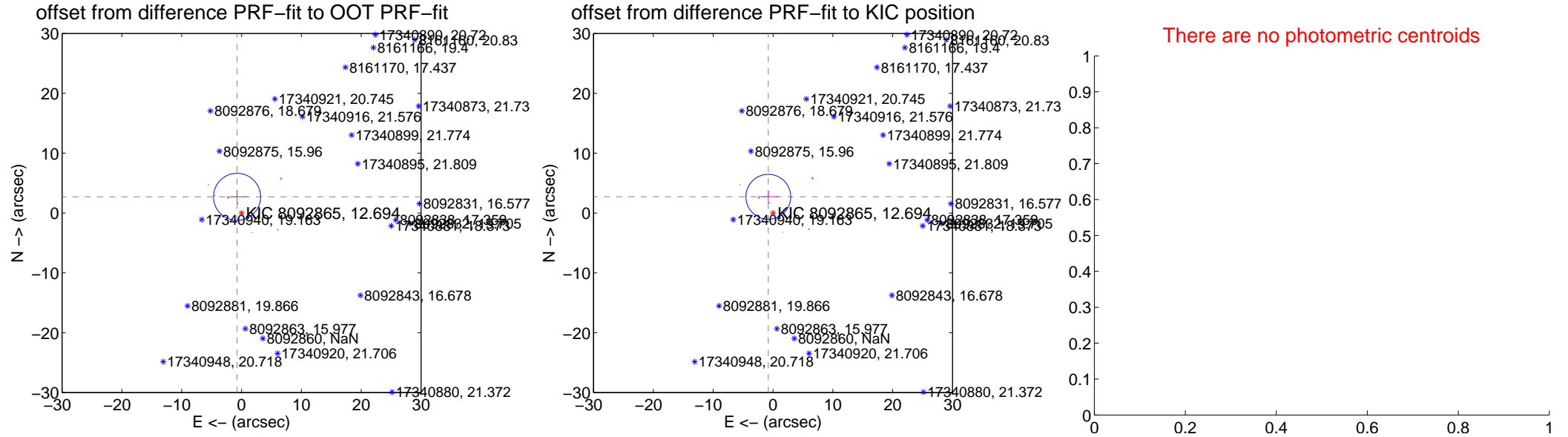
DV Centroid Data

Supplemental centroid analysis for 008092865-02. Kepler magnitude: 12.69. Transit SNR 0.42

There are 0 quarters with good PRF difference image offsets

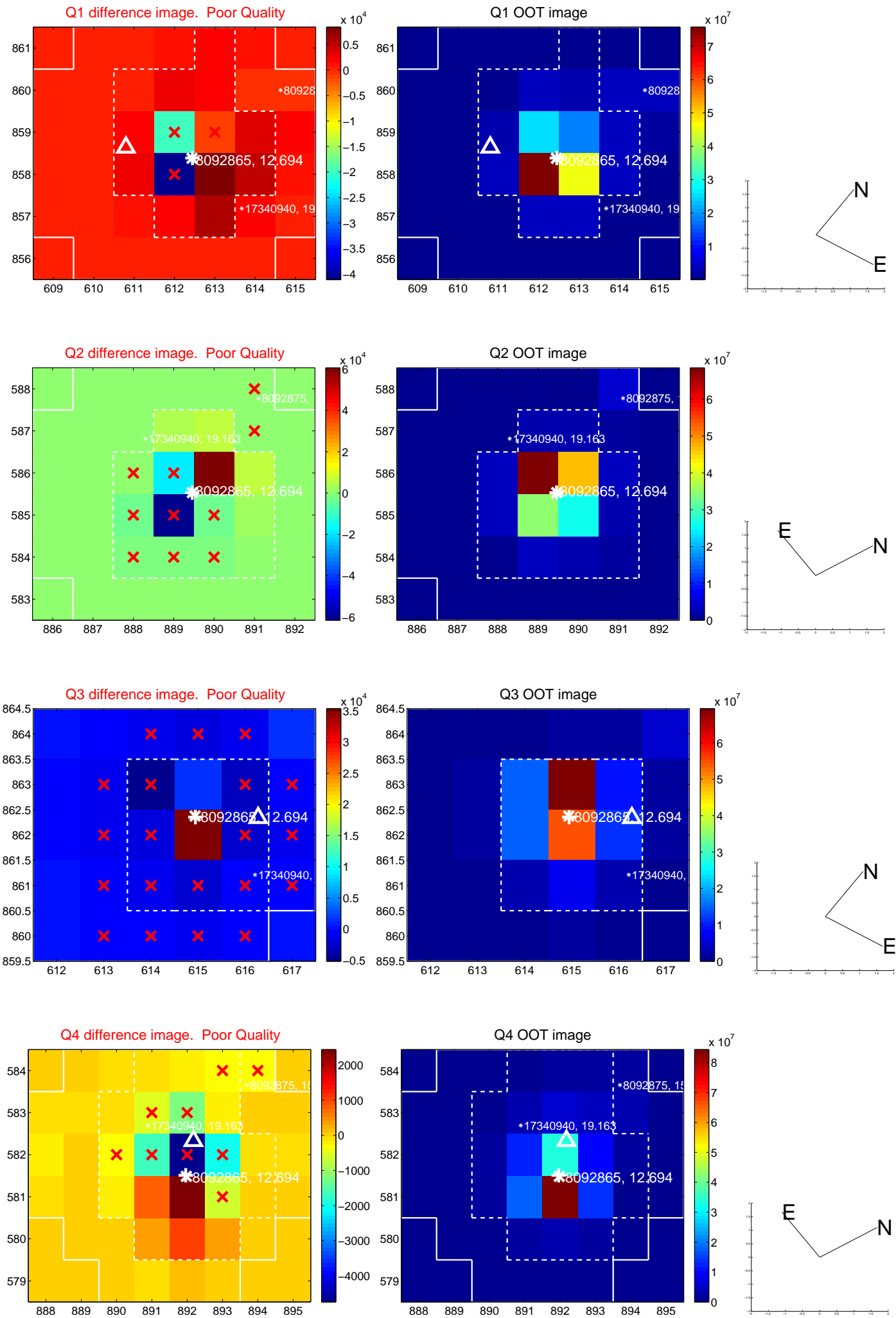
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.804 ± 1.312	2.14	0.751 ± 1.676	2.702 ± 1.155
PRF-fit source offset from KIC position	2.824 ± 1.249	2.26	0.785 ± 1.731	2.712 ± 1.087
photometric centroid source offset	—	—	—	—

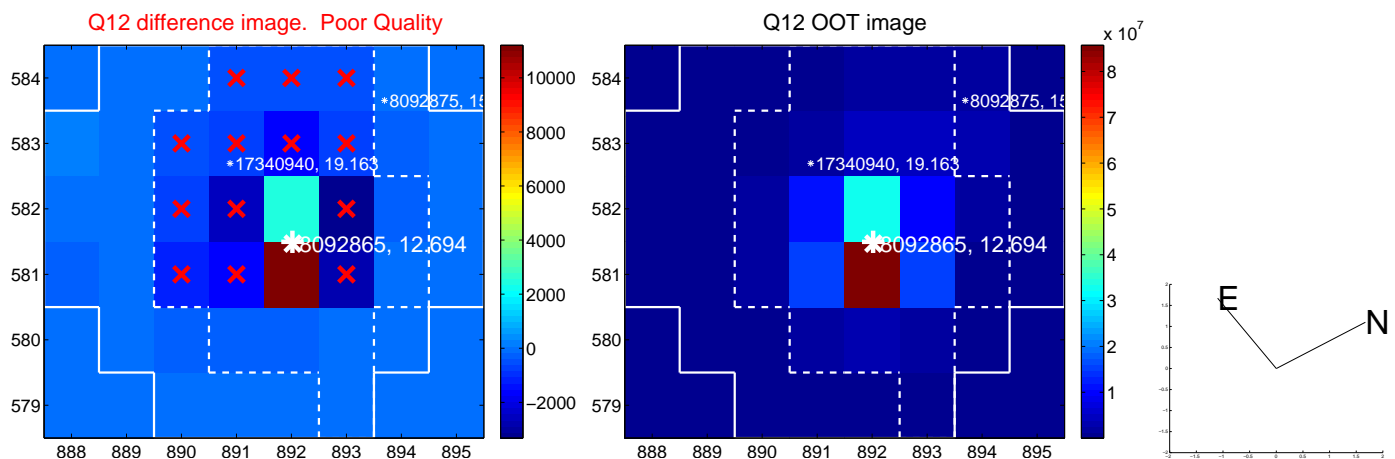
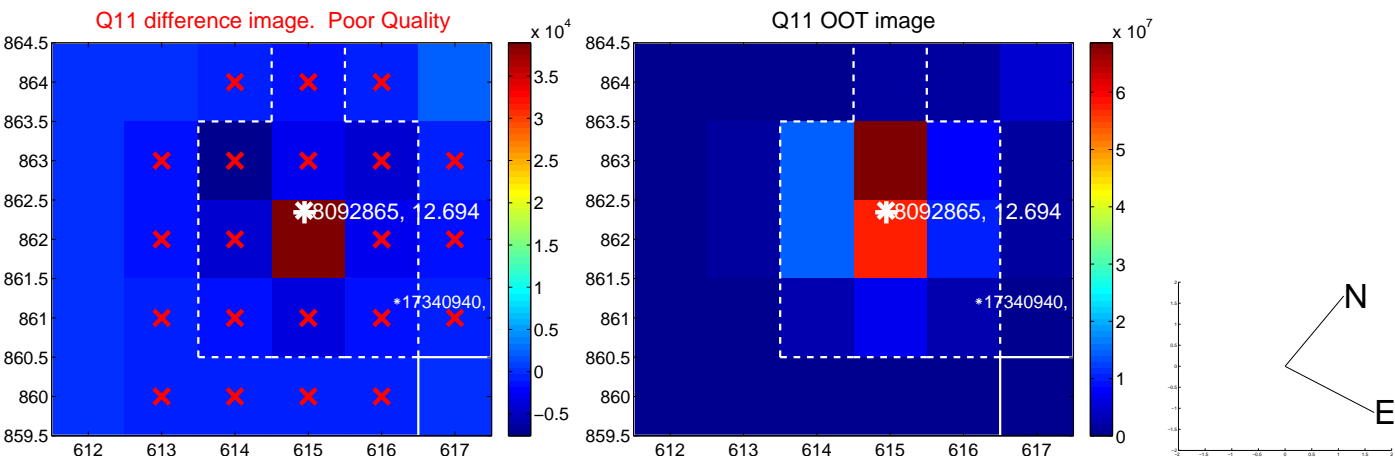
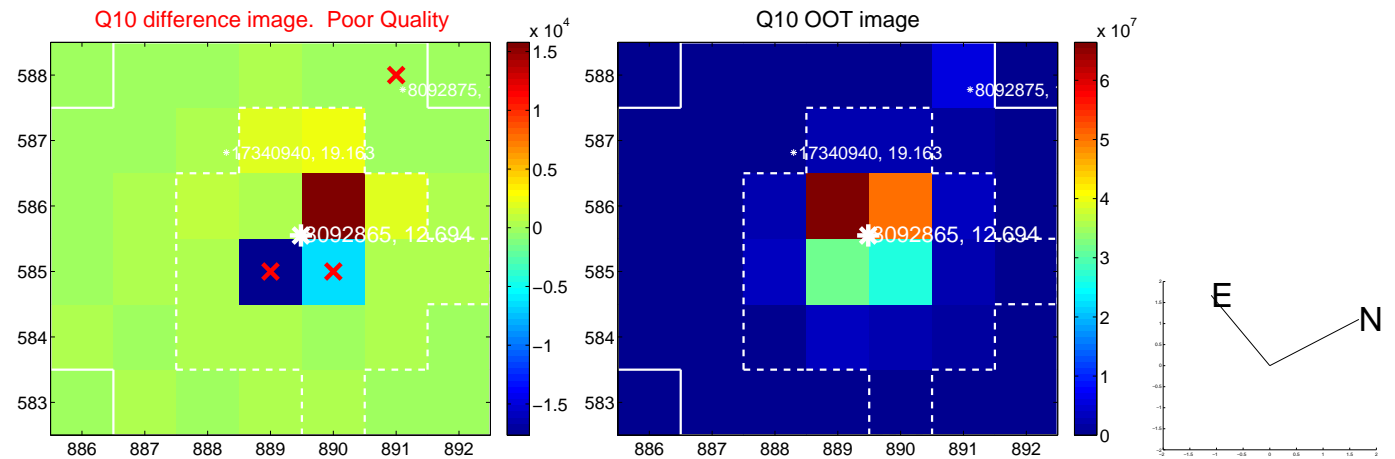
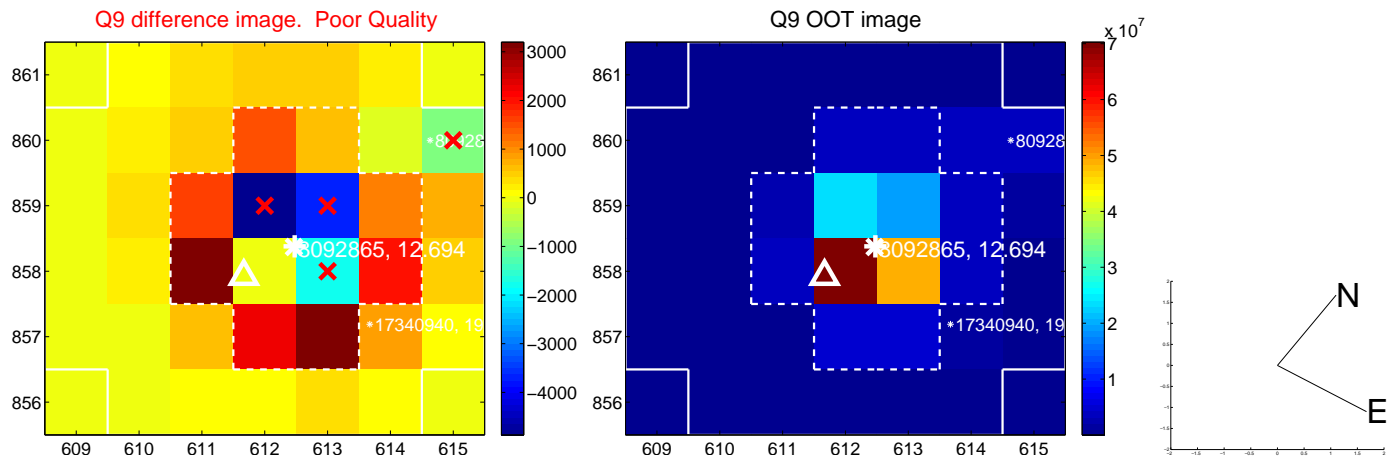


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

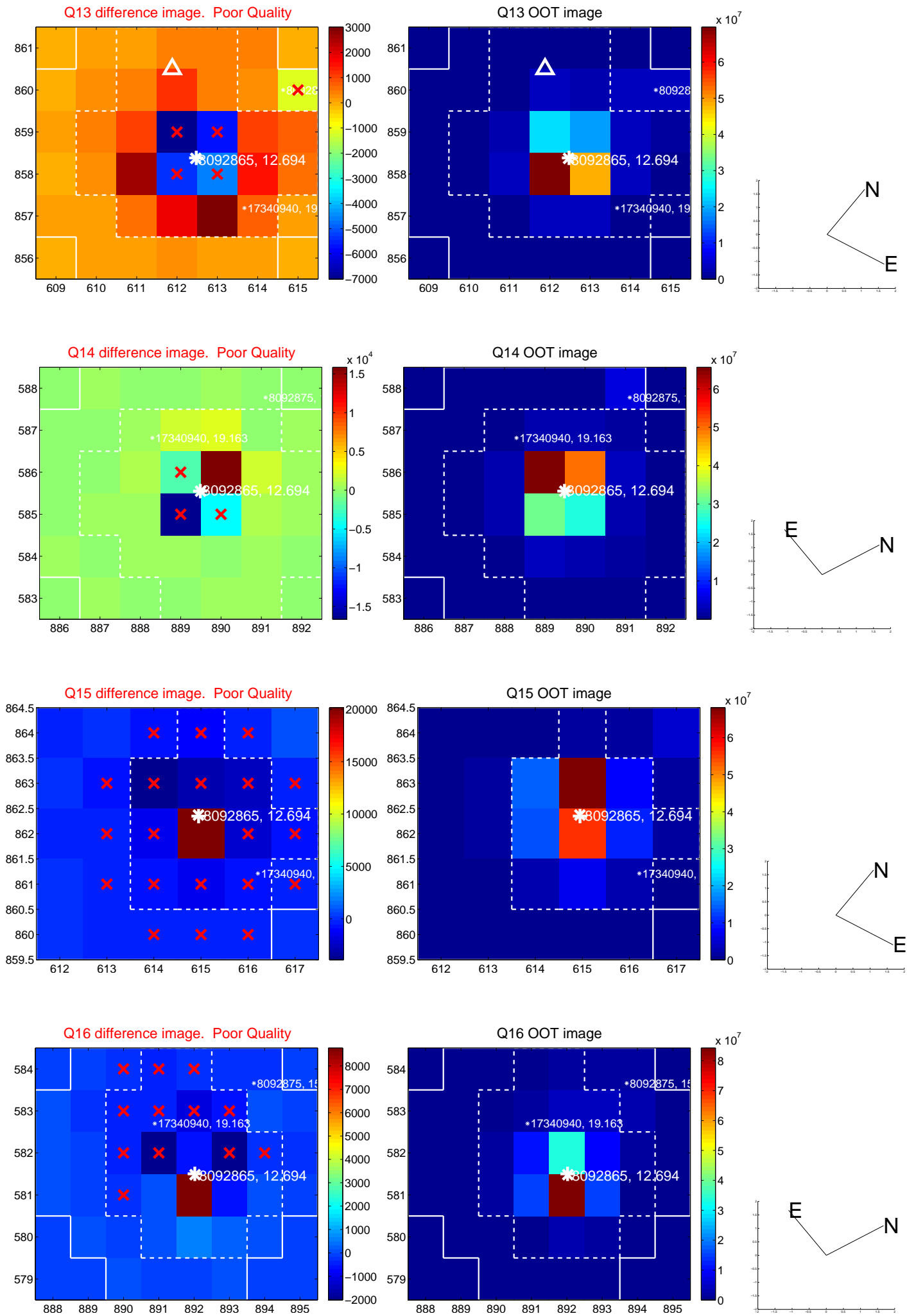
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



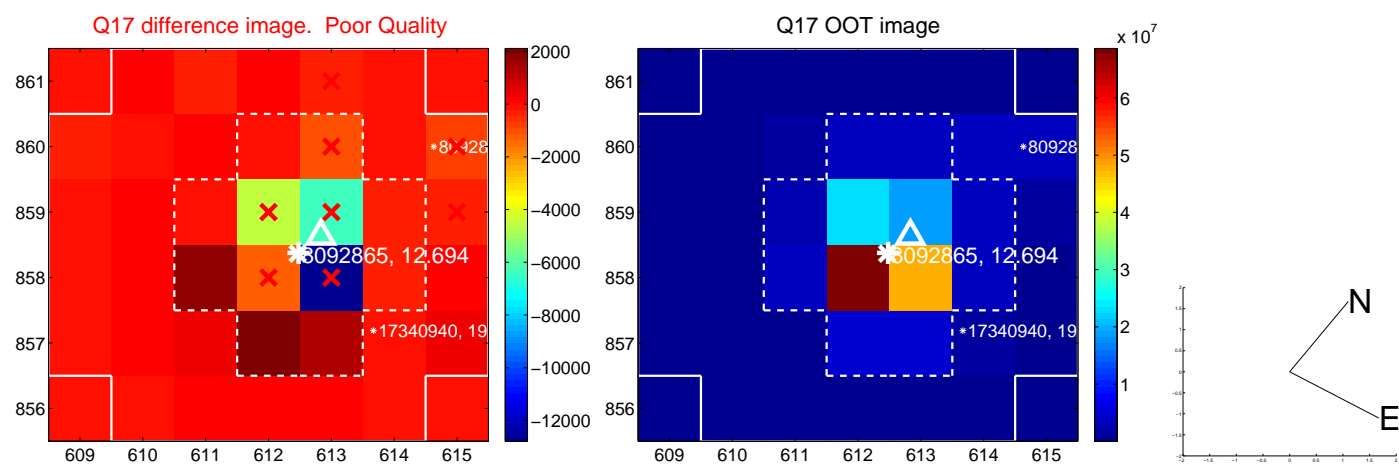
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

