

KIC 008669092

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})
008669092-01	OBS	No	1.000707	131.871610	1873.7	2.000	42.6	-1.0	3.18	6287	13.85	30451.16
008669092-02	OBS	No	0.997343	131.864136	0.0	2.311	16.0	0.0	3.18	6287	0.01	30588.18
008669092-03	OBS	0068.01	0.500468	131.795555	80.9	0.804	10.9	14.4	3.18	6287	3.39	0.00
008669092-04	OBS	No	0.995480	132.110378	161.7	3.500	9.6	-1.0	3.18	6287	4.06	30664.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008669092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008669092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008669092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008669092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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 008669092-01

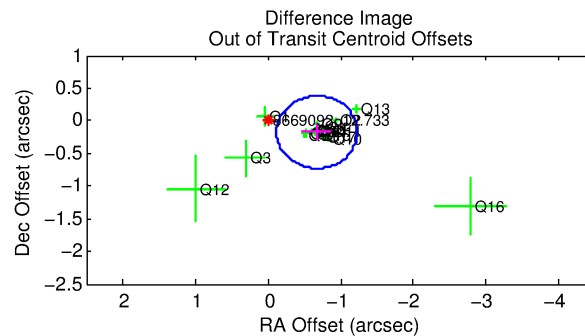
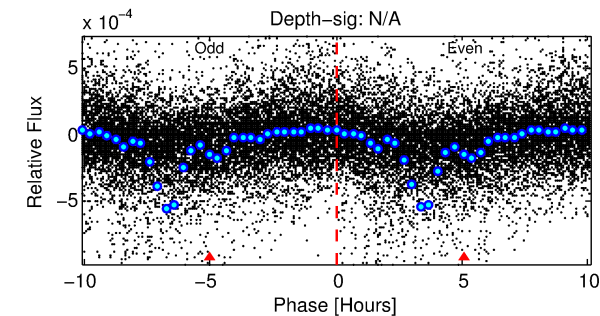
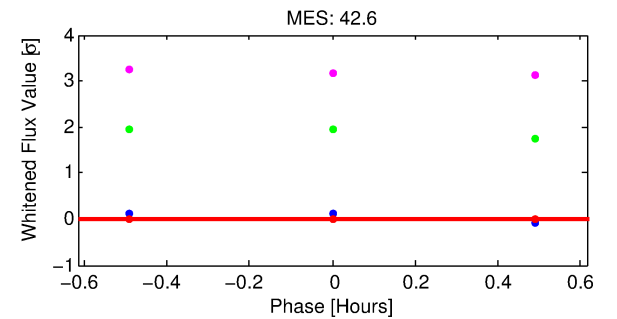
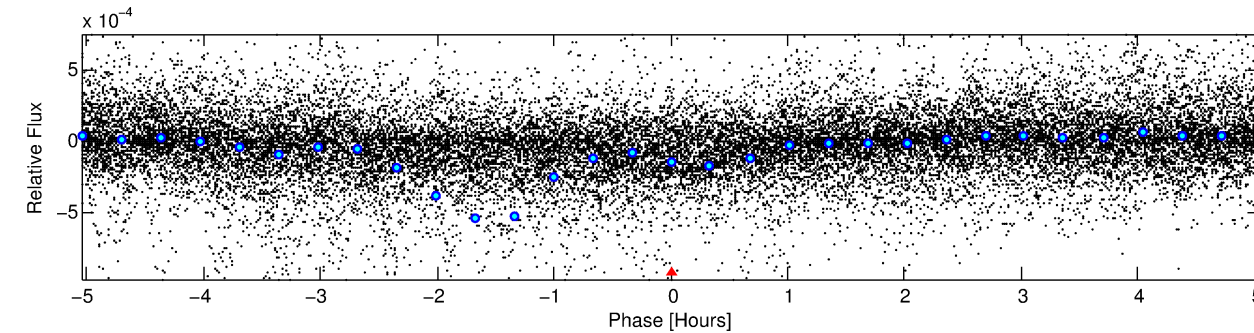
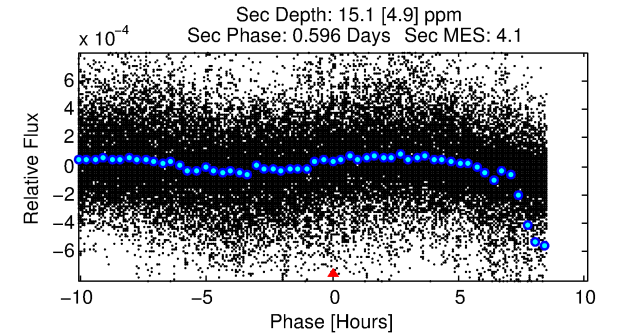
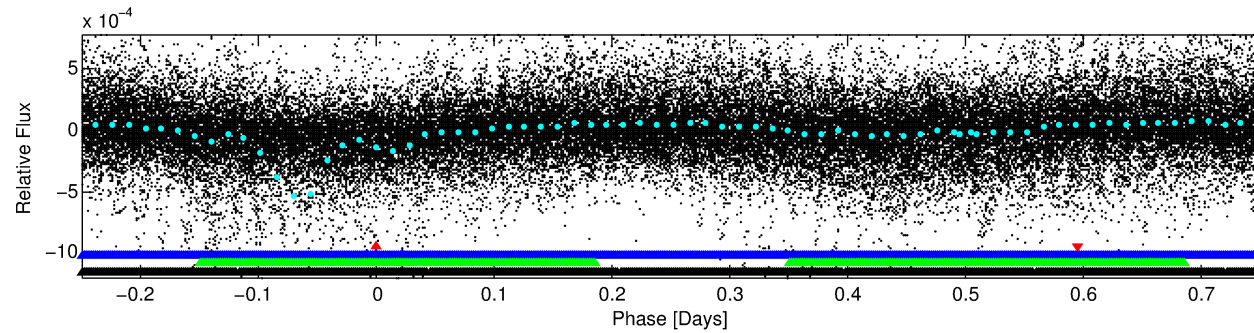
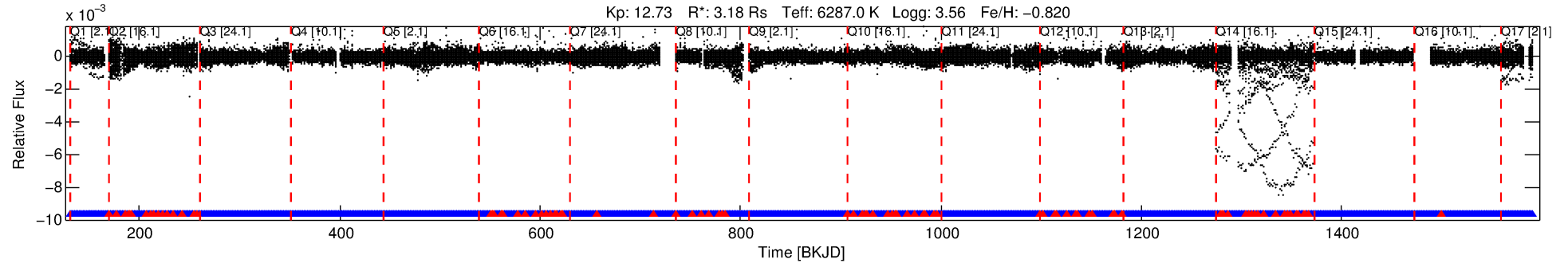
No Significant Match Found

DV One-Page Summary

KIC: 8669092 Candidate: 1 of 4 Period: 1.001 d

KOI: K00068 Corr: No Ephemeris Match

Kp: 12.73 R*: 3.18 Rs Teff: 6287.0 K Logg: 3.56 Fe/H: -0.820



TPS TCE Results:

Period = 1.00071 d
Epoch = 131.8716 BKJD

DV fit results are unavailable

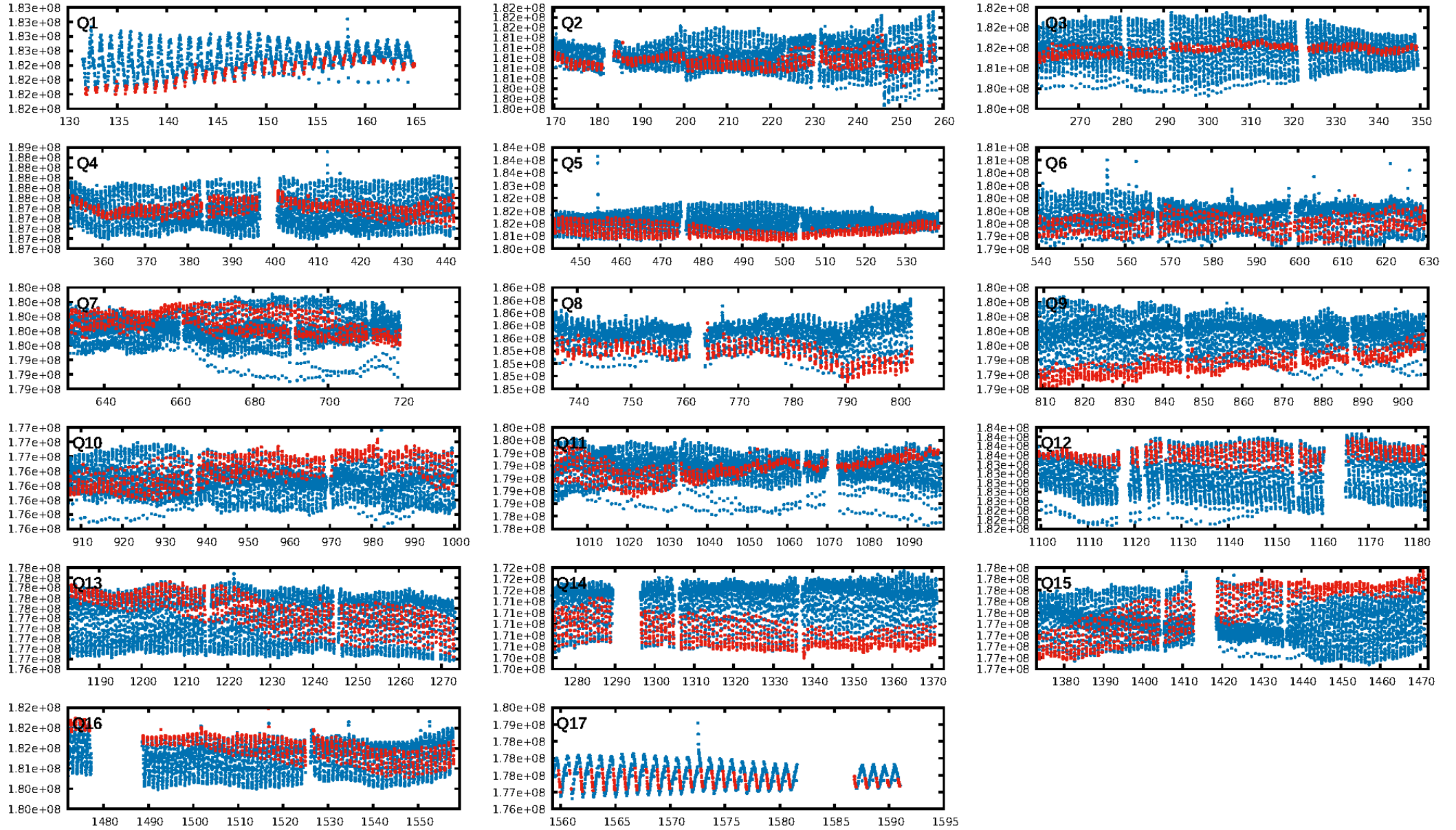
DV Diagnostic Results:

ShortPeriod-sig: 2.1% [0.03σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1178/1271]
GhostDiagnostic-chr: -1.096
Centroid-sig: 0.4%
Centroid-so: 0.163 arcsec [1.02σ]
OotOffset-rm: 0.695 arcsec [3.76σ]
KicOffset-rm: 0.858 arcsec [4.65σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

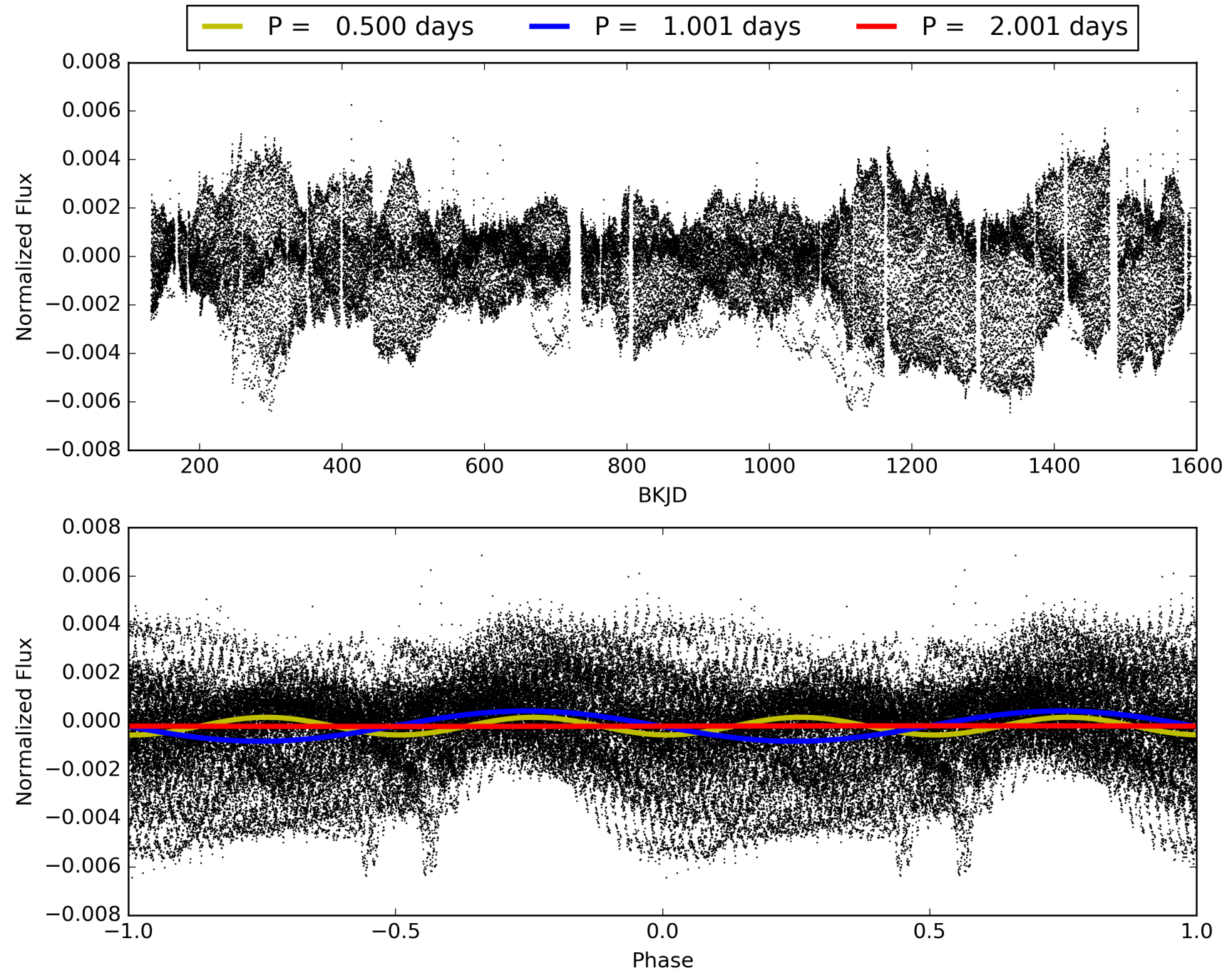
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:27:55 Z

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

TCE 008669092-01, PDC Light Curves

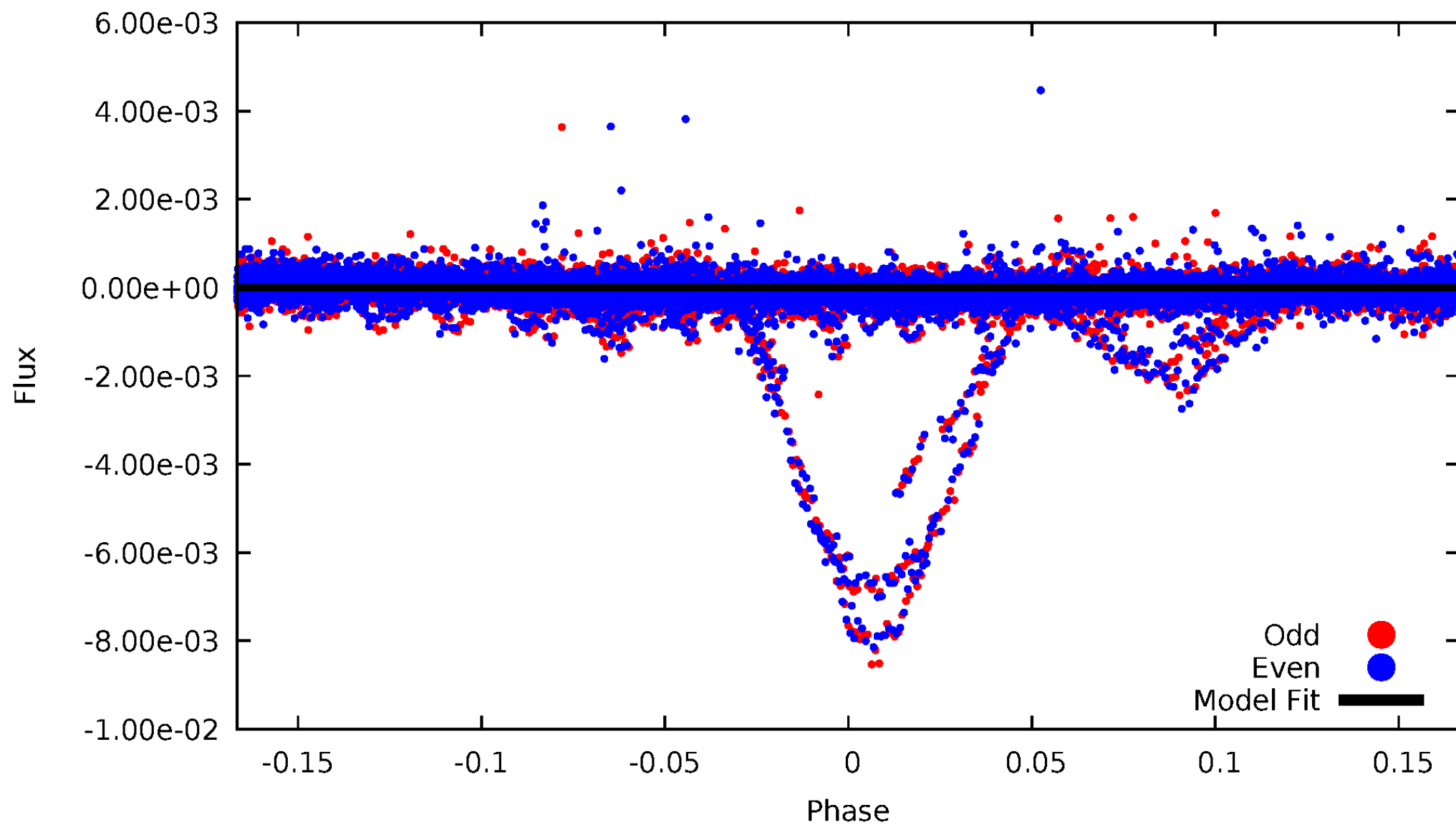


TCE 008669092-01



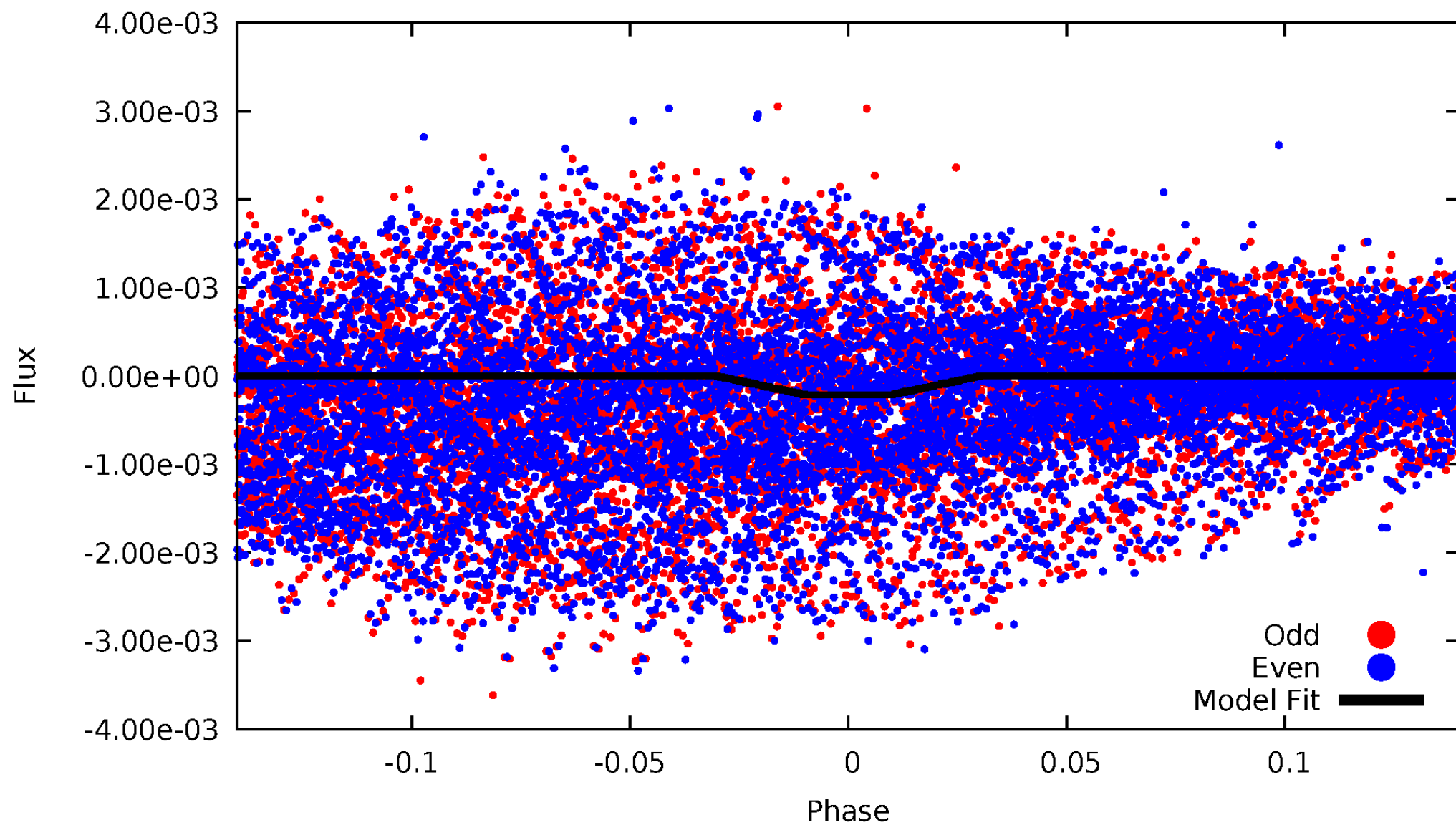
DV Odd/Even

TCE 008669092-01

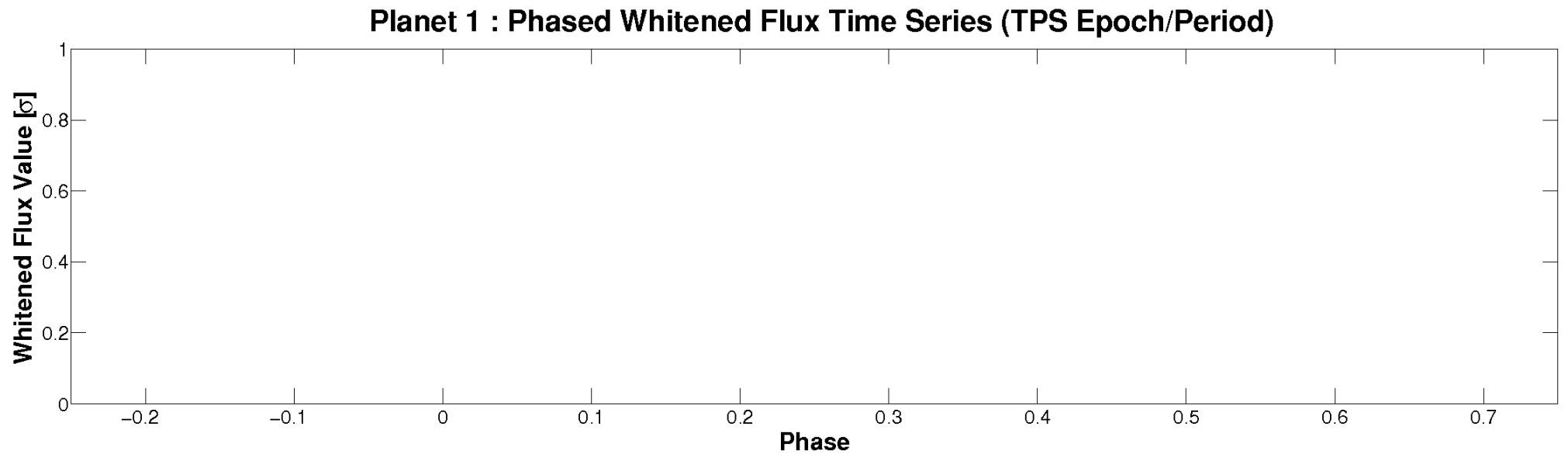
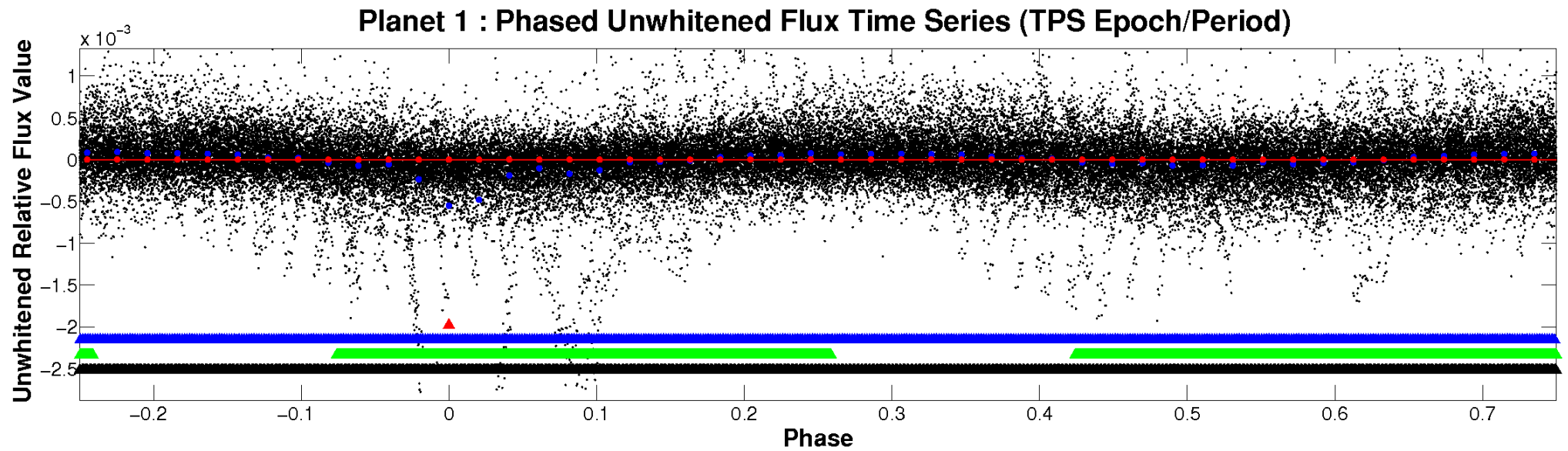


ALT Odd/Even

TCE 008669092-01

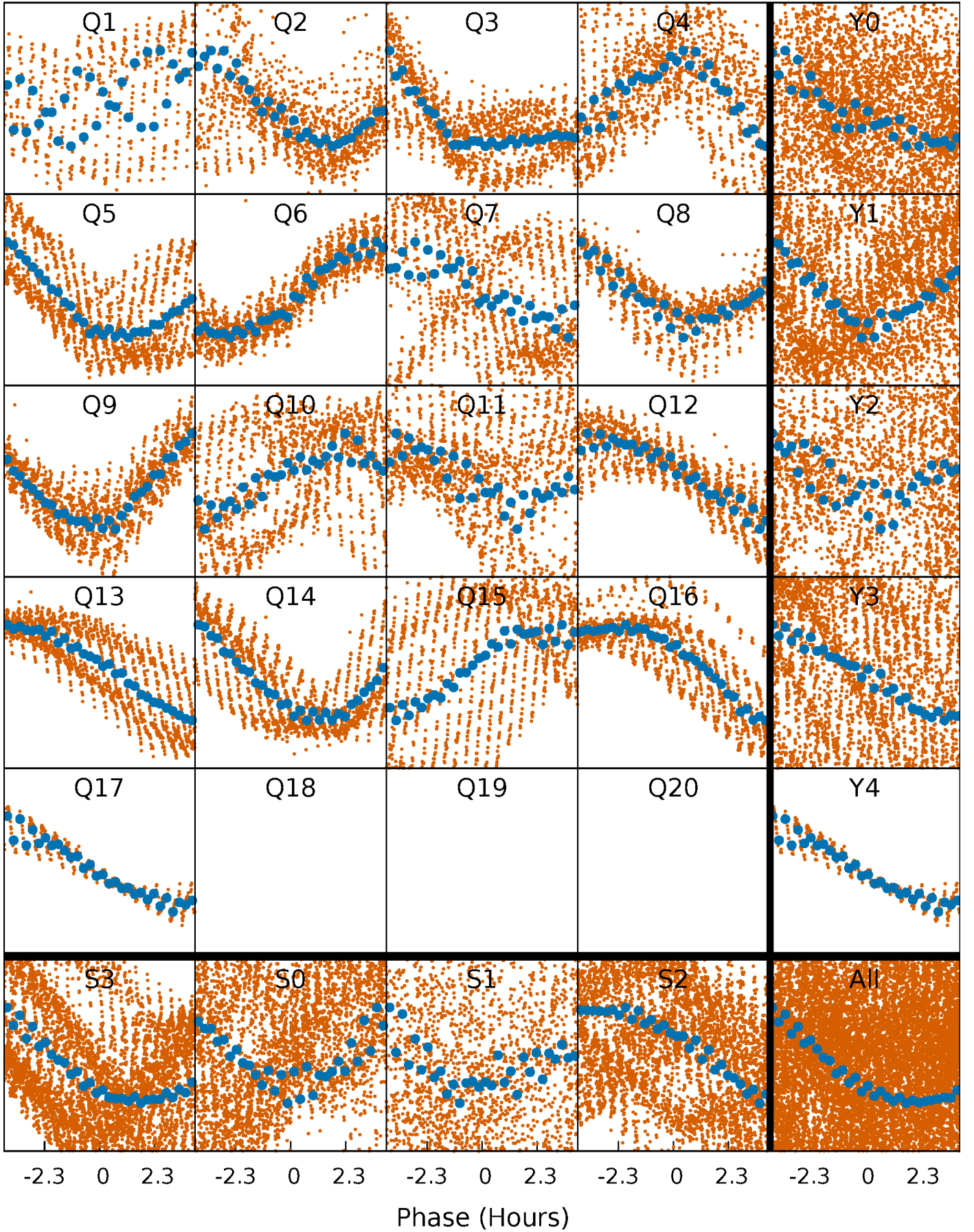


Non-Whitened Vs. Whitened Light Curve



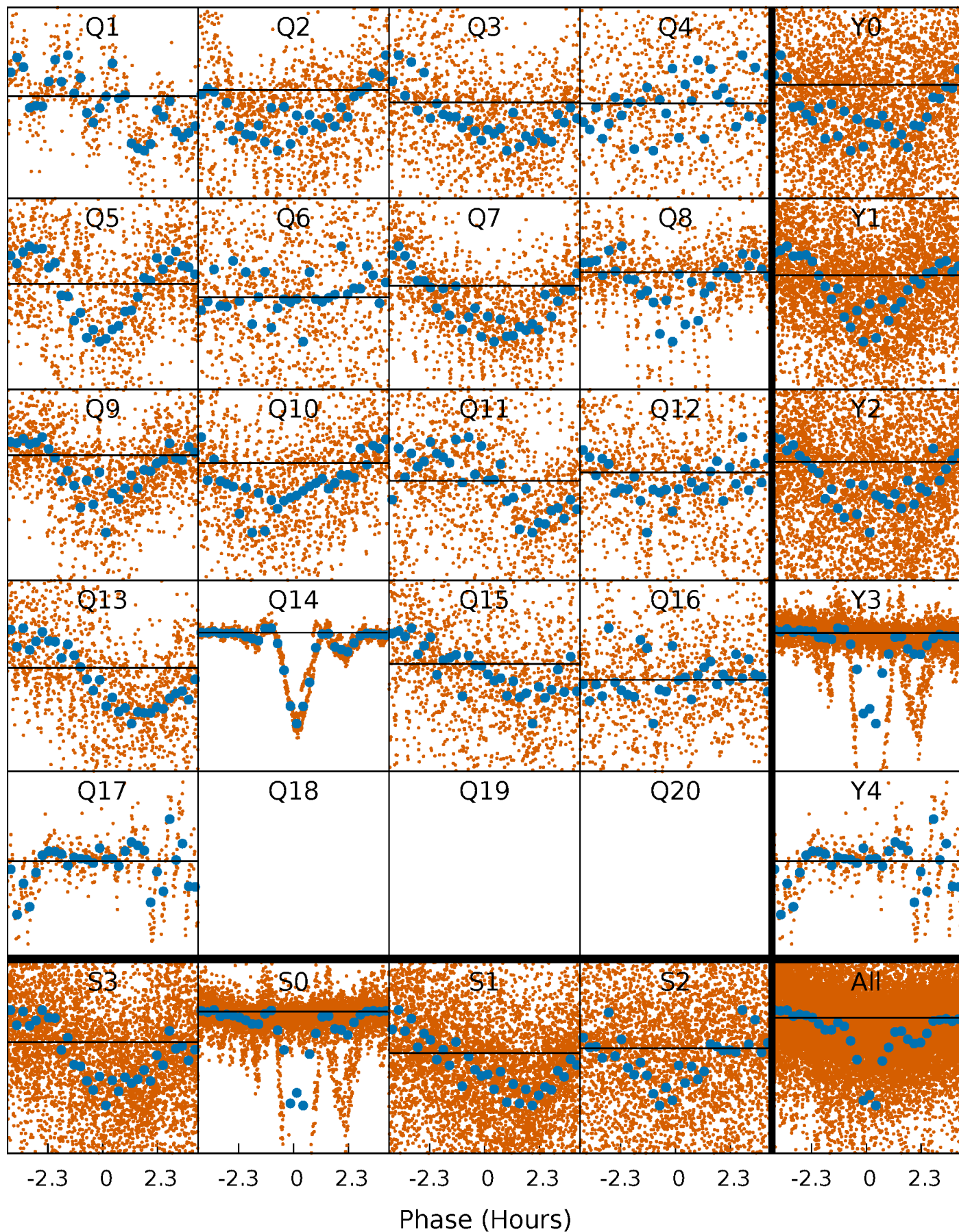
PDC Quarter-Phased Transit Curves

TCE 008669092-01 P= 1.000707 Days $T_0=131.871611$ (BKJD)



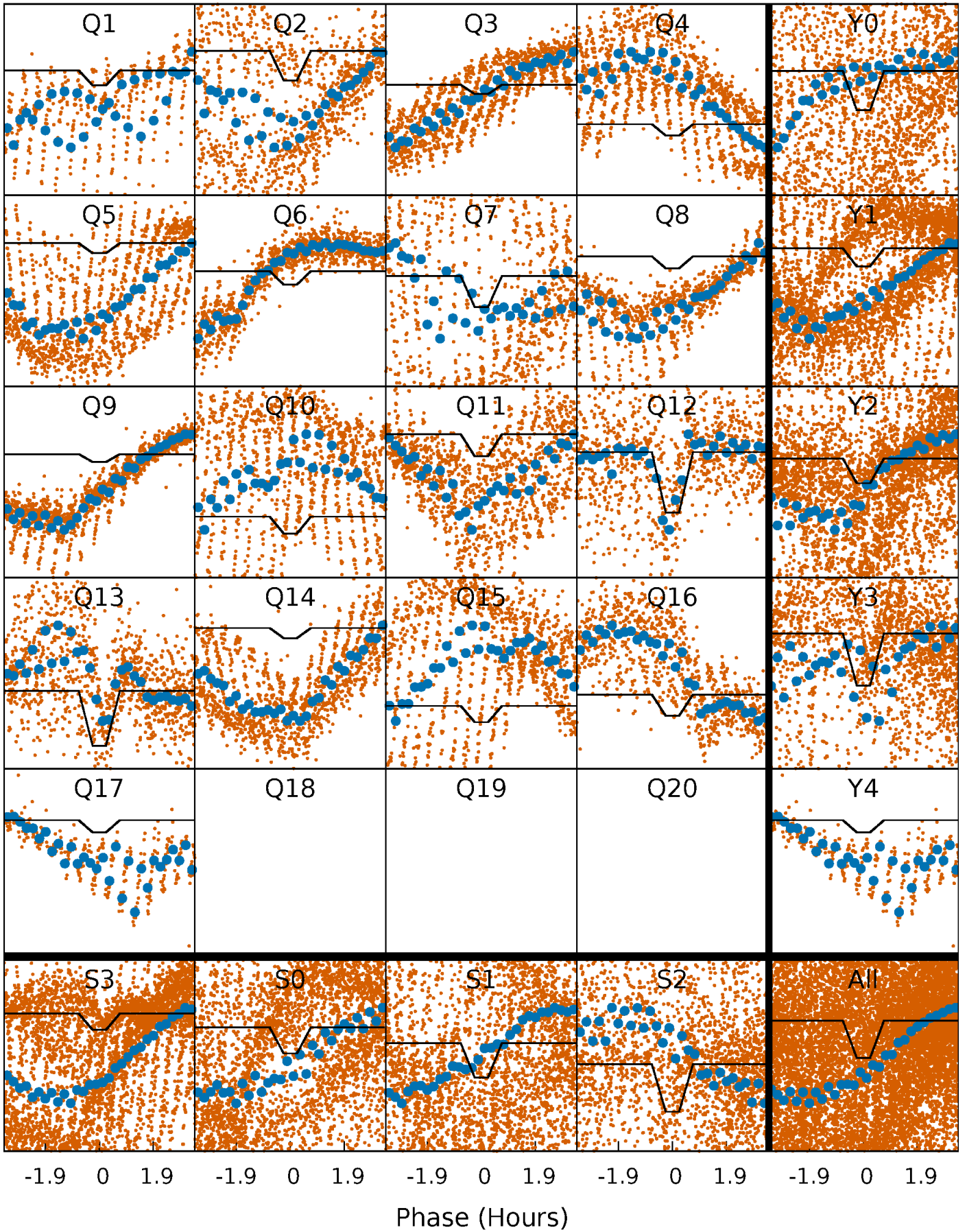
DV Quarter-Phased Transit Curves

TCE 008669092-01 P= 1.000707 Days $T_0=131.871611$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

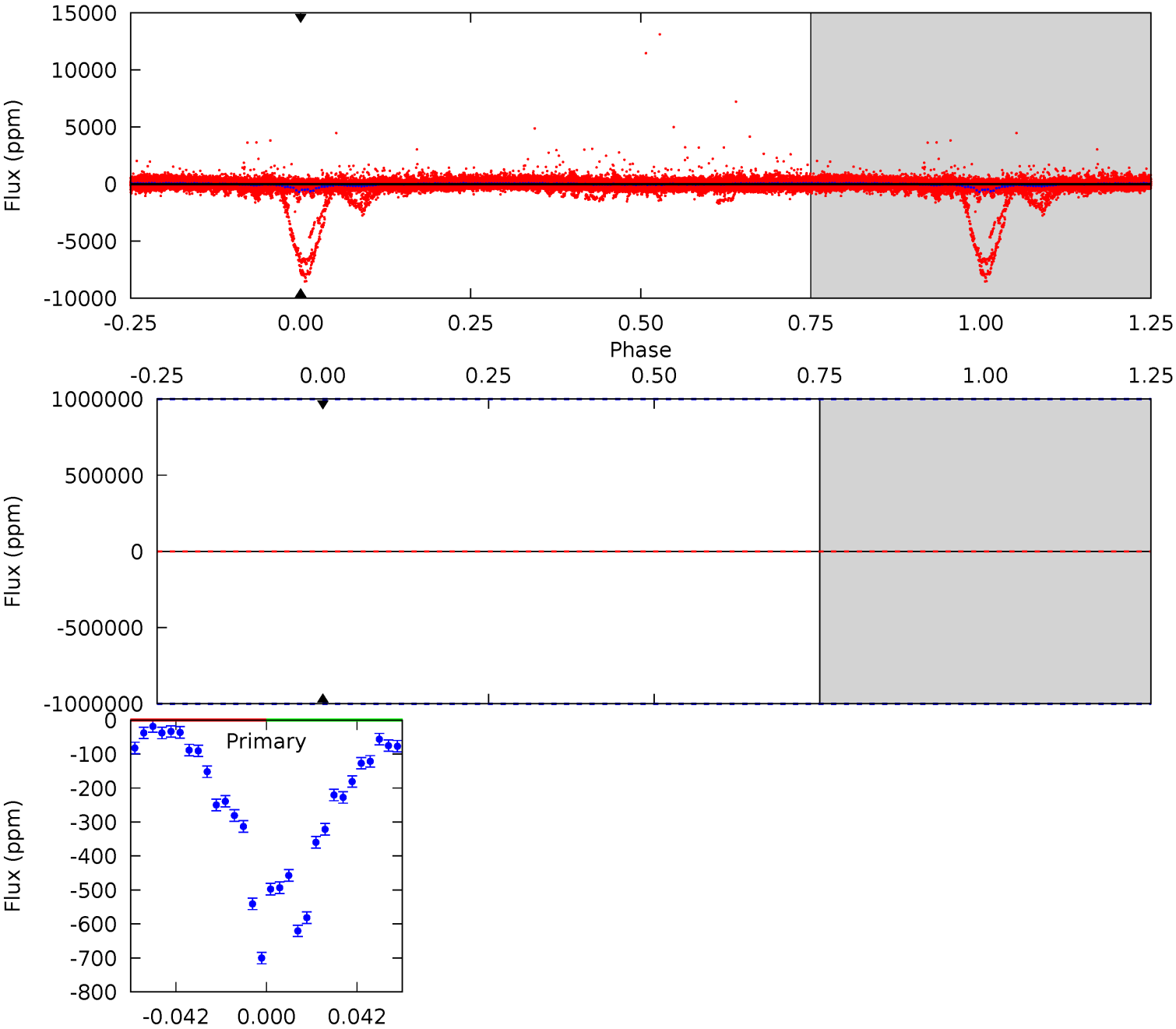
TCE 008669092-01 P= 1.000707 Days $T_0=131.944995$ (BKJD)



DV Model-Shift Uniqueness Test

008669092-01, P = 1.000707 Days, E = 130.870904 Days

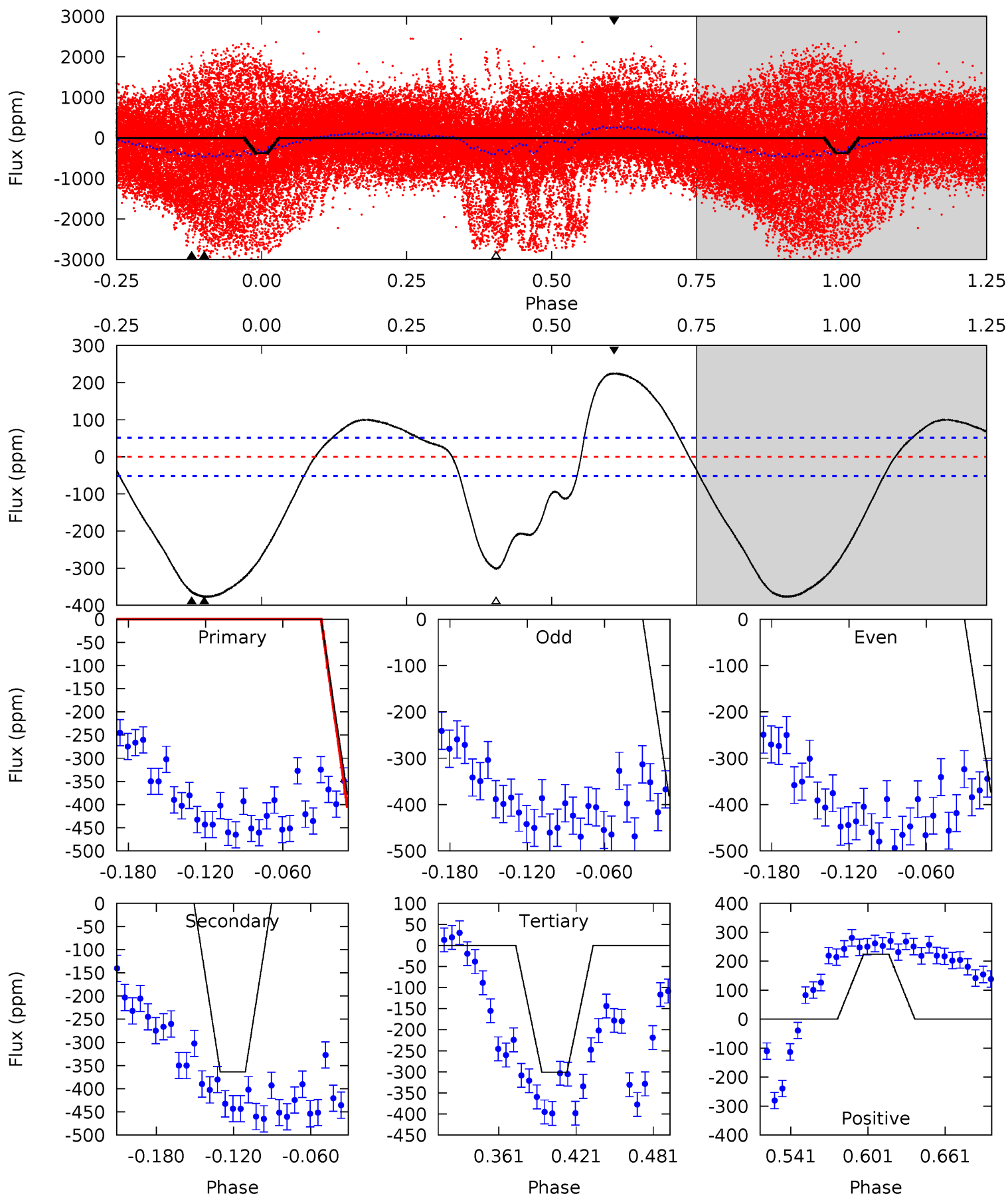
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008669092-01, P = 1.000707 Days, E = 130.944288 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	33.1	27.4	20.4	4.67	1.88	14.2	6.88	13.9	5.72	12.7	0.39	1.36	0.37	4.28



Stellar Parameters For KIC 008669092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6287^{+170}_{-189}	$3.558^{+0.353}_{-0.118}$	$-0.820^{+0.350}_{-0.300}$	$3.177^{+0.588}_{-1.372}$	$1.328^{+0.159}_{-0.345}$	$0.058^{+0.160}_{-0.020}$
	+3%/-3%	+10%/-3%	+43%/-37%	+19%/-43%	+12%/-26%	+274%/-35%
Source	PHO1	FLK73	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 008669092-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$26.77^{+28.50}_{-17.52}$	4651^{+280}_{-477}	-4165^{+26719}_{-16928}	$-0.106^{+68.637}_{-54.253}$
Alt.	-364 ± 11	$22.65^{+25.57}_{-16.07}$	4628^{+290}_{-474}	-3368^{+9112}_{-665}	$0.173^{+1.877}_{-0.133}$

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 $A_{obs} \gg 1.0$

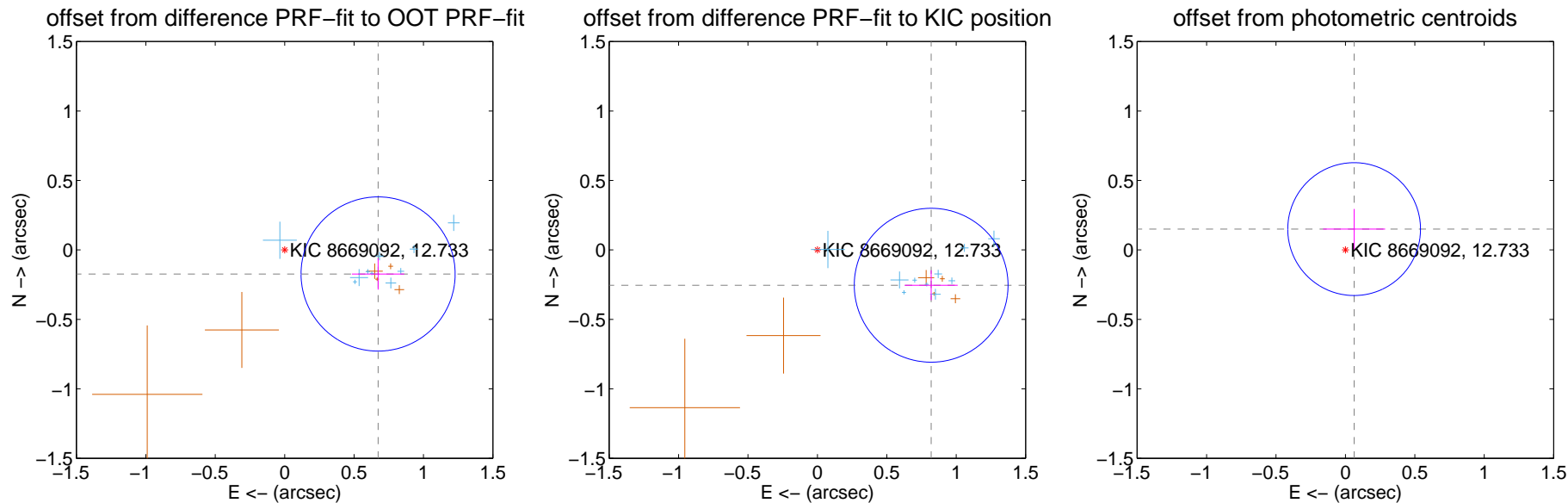
DV Centroid Data

Supplemental centroid analysis for 008669092-01. Kepler magnitude: 12.73. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

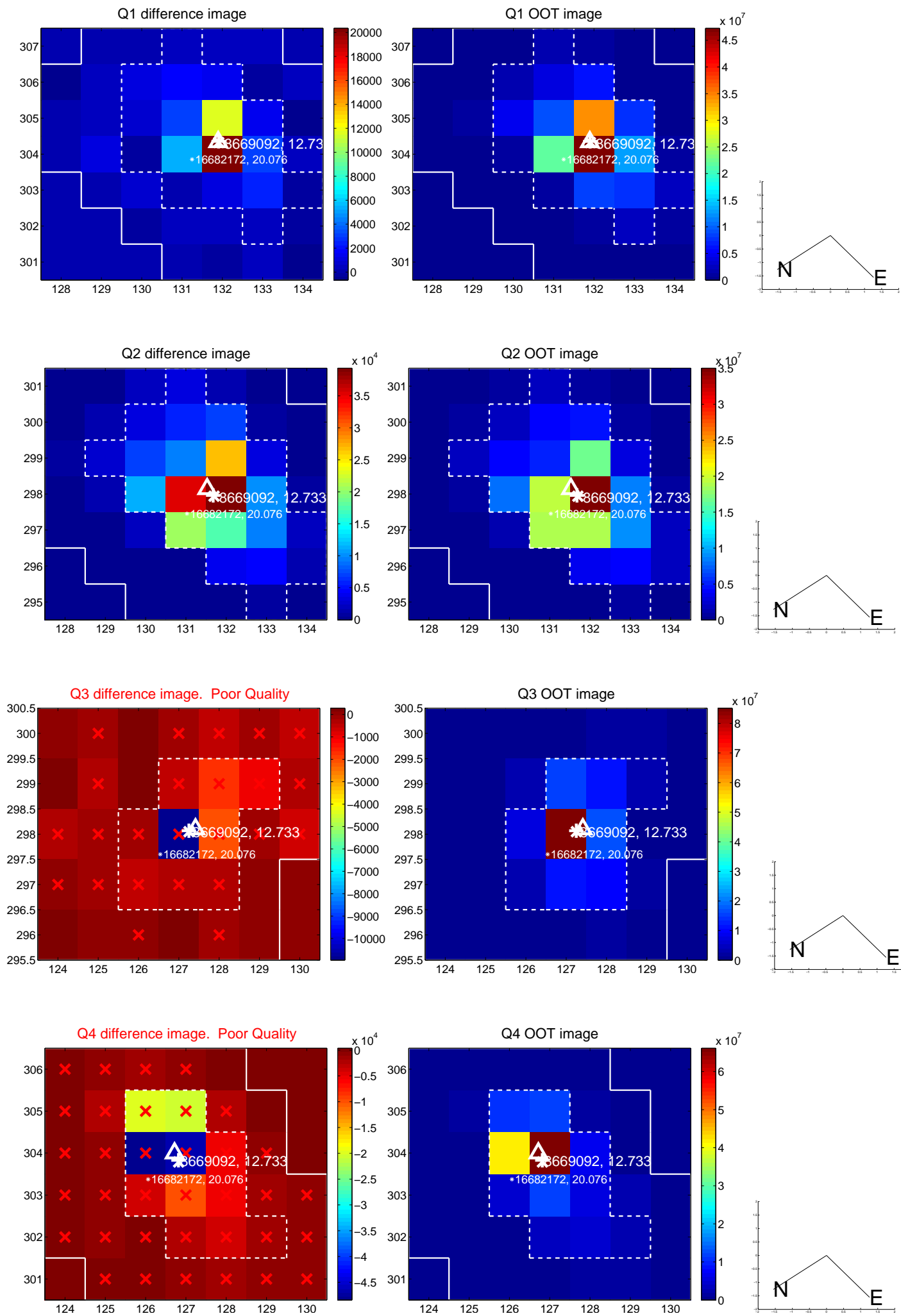
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.695 ± 0.185	3.76	-0.673 ± 0.189	-0.173 ± 0.112
PRF-fit source offset from KIC position	0.858 ± 0.185	4.65	-0.820 ± 0.191	-0.254 ± 0.108
photometric centroid source offset	0.16 ± 0.16	1.02	-0.06 ± 0.22	0.15 ± 0.15

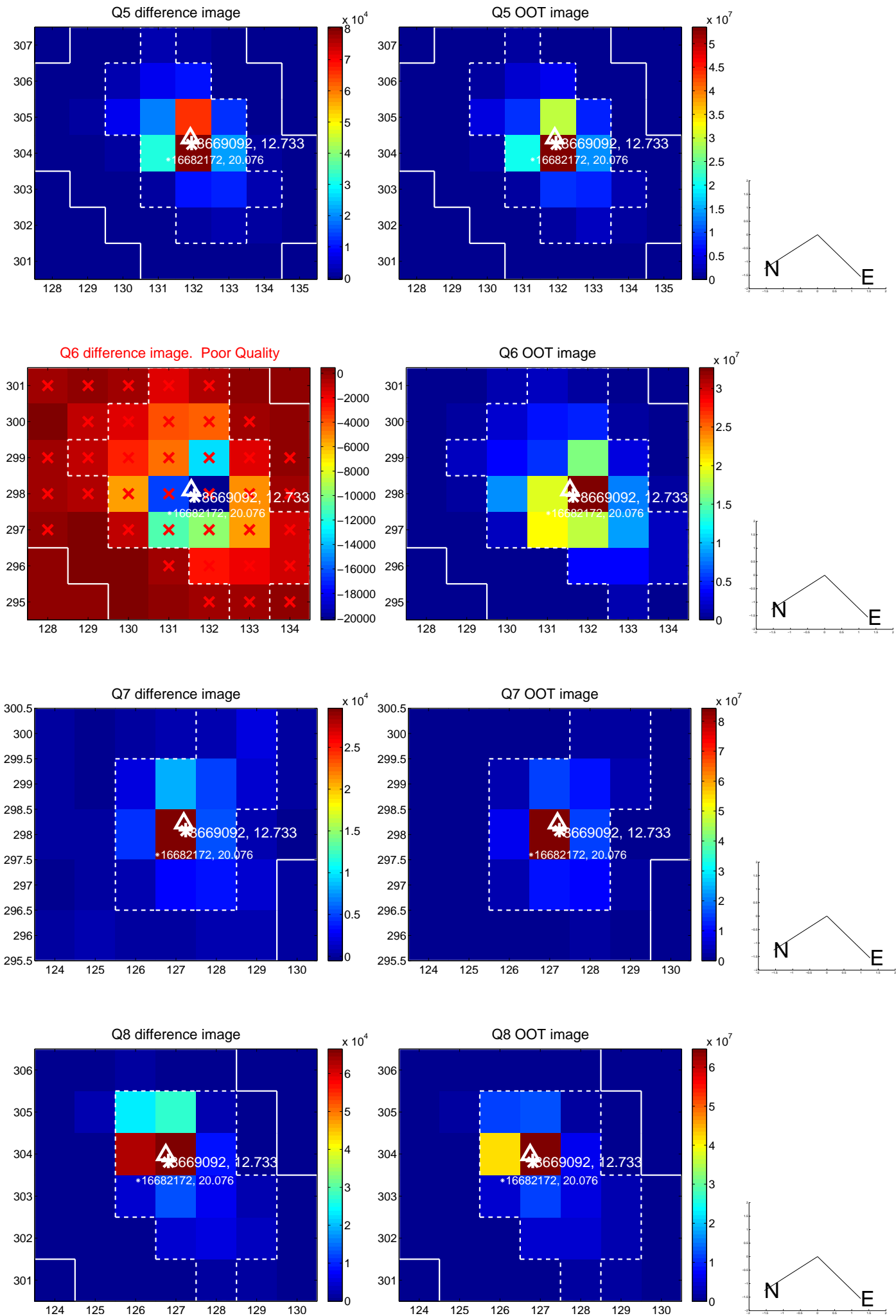


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

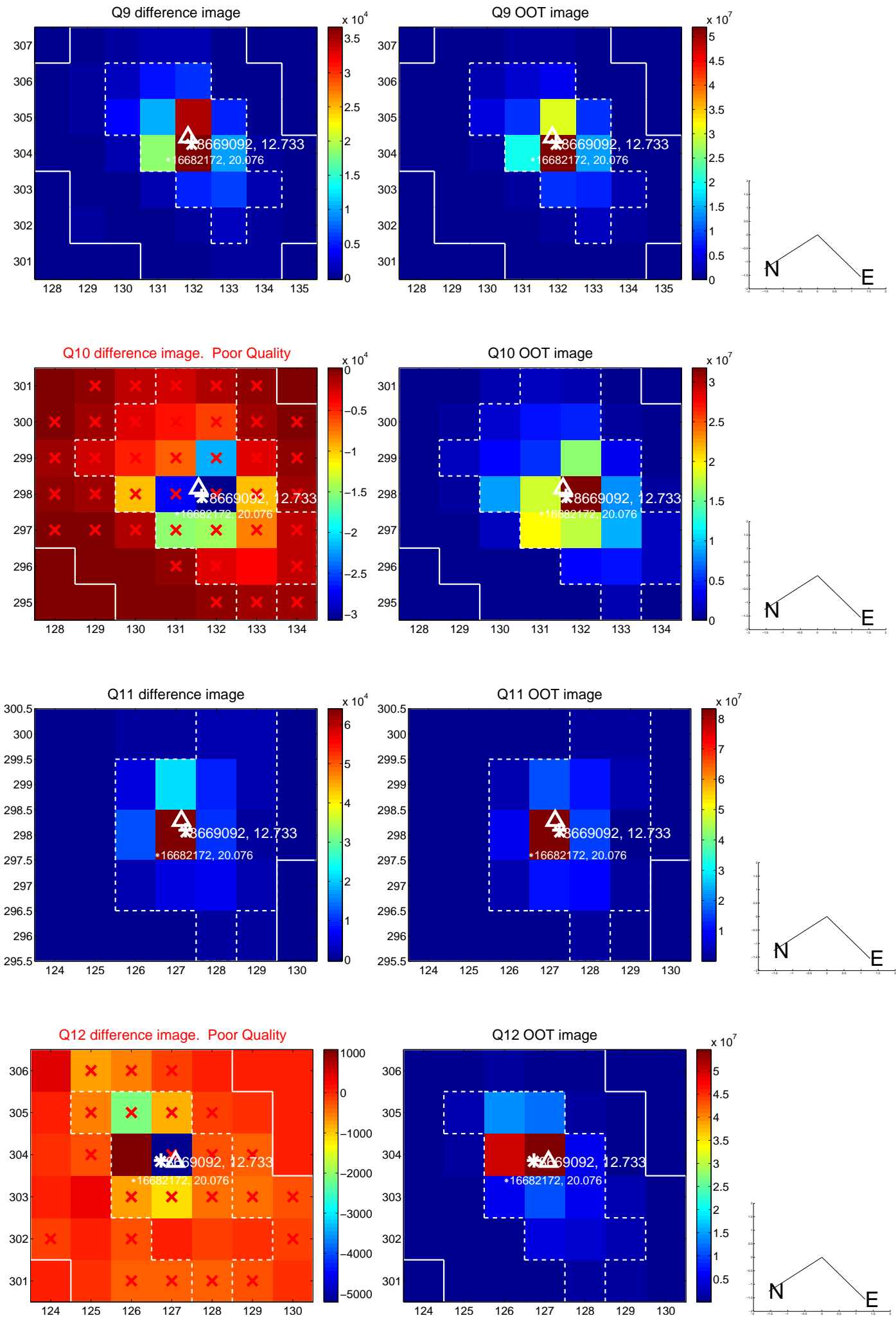
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



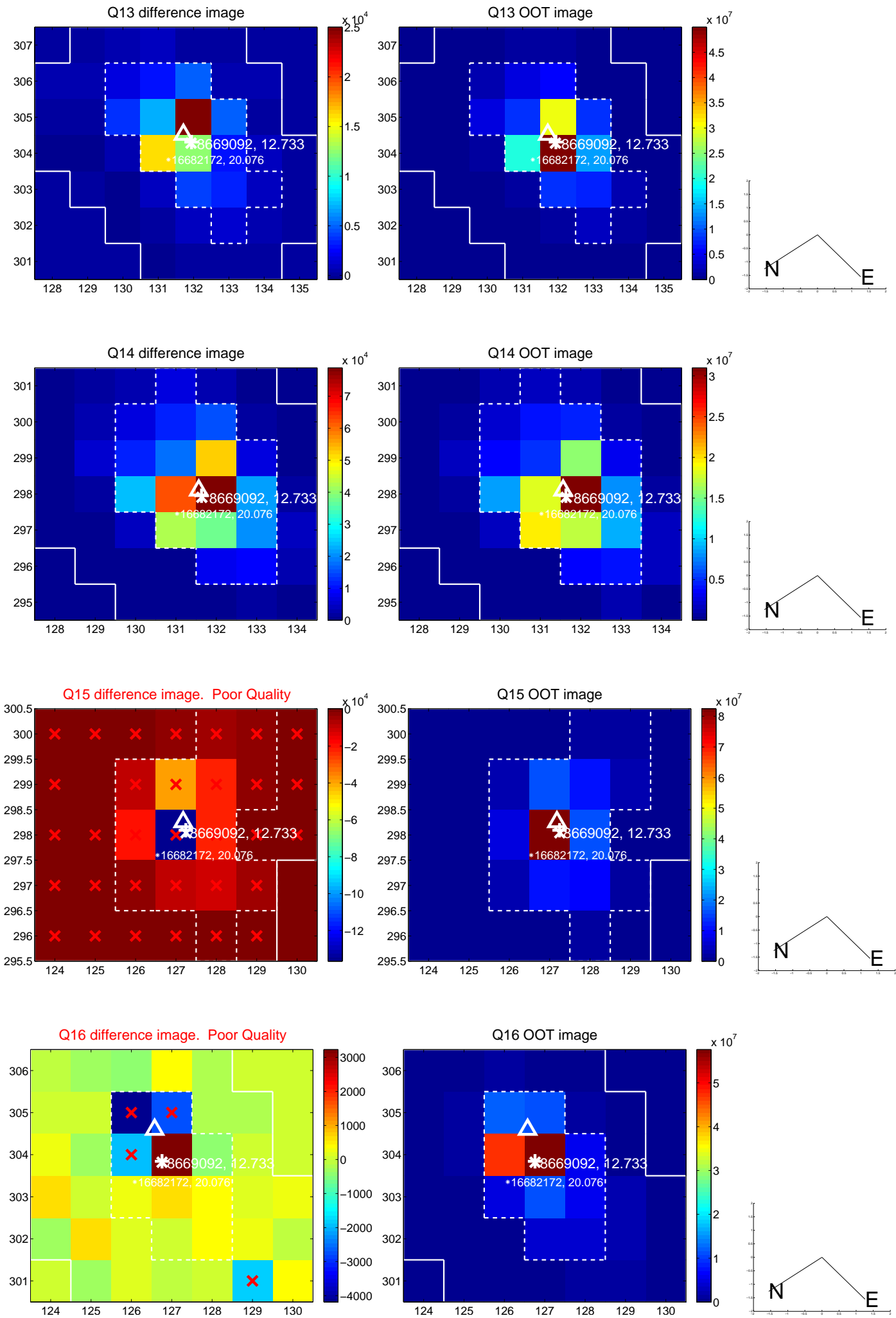
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



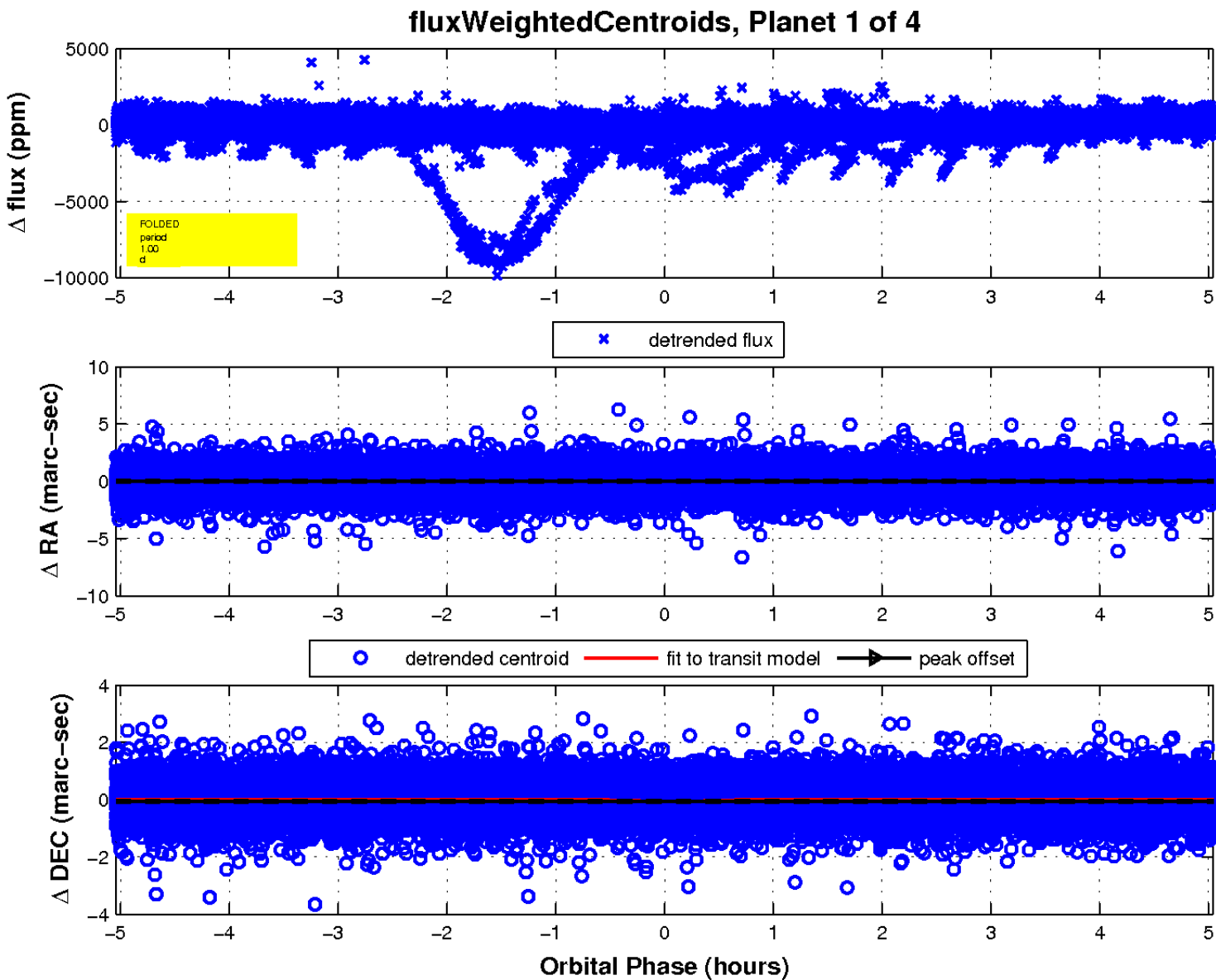
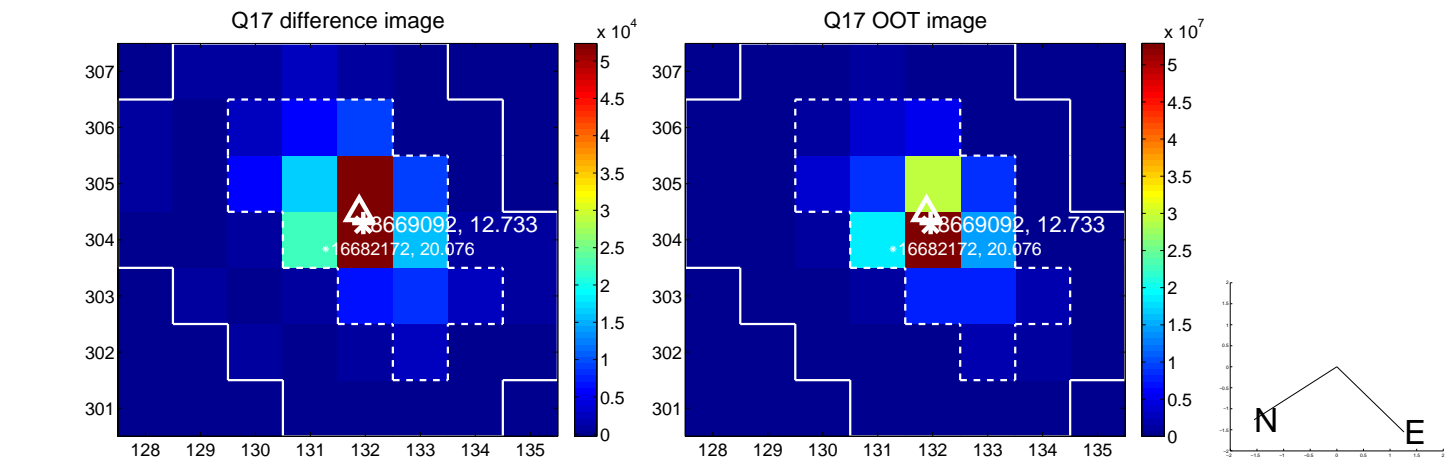
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

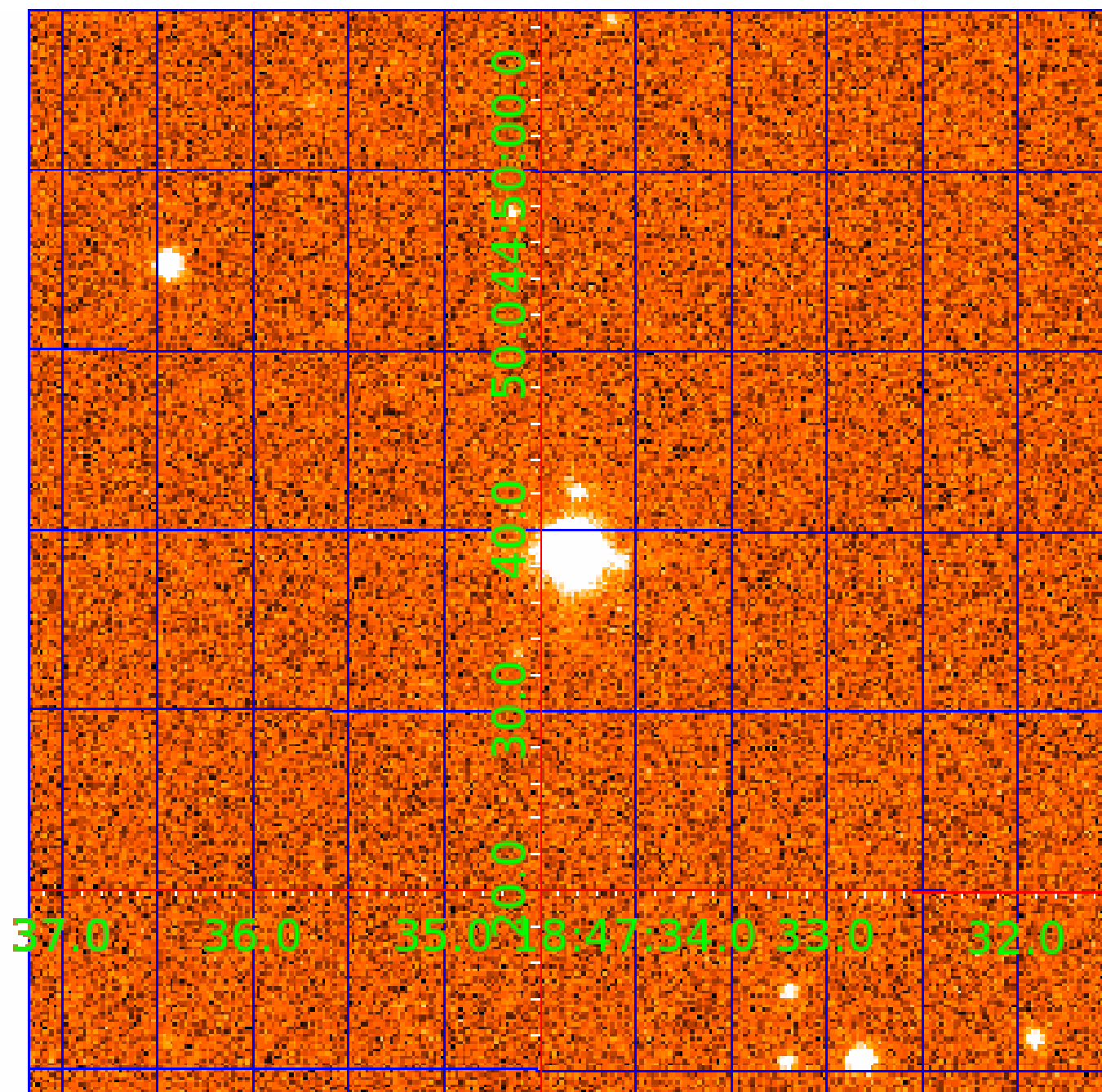


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008669092

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})
008669092-01	OBS	No	1.000707	131.871610	1873.7	2.000	42.6	-1.0	3.18	6287	13.85	30451.16
008669092-02	OBS	No	0.997343	131.864136	0.0	2.311	16.0	0.0	3.18	6287	0.01	30588.18
008669092-03	OBS	0068.01	0.500468	131.795555	80.9	0.804	10.9	14.4	3.18	6287	3.39	0.00
008669092-04	OBS	No	0.995480	132.110378	161.7	3.500	9.6	-1.0	3.18	6287	4.06	30664.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008669092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008669092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008669092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008669092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

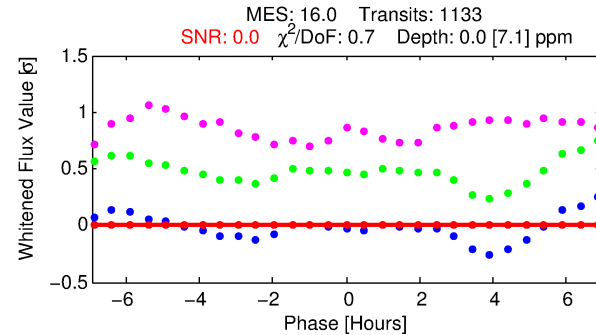
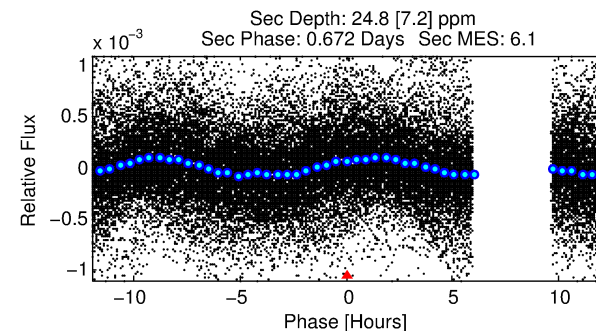
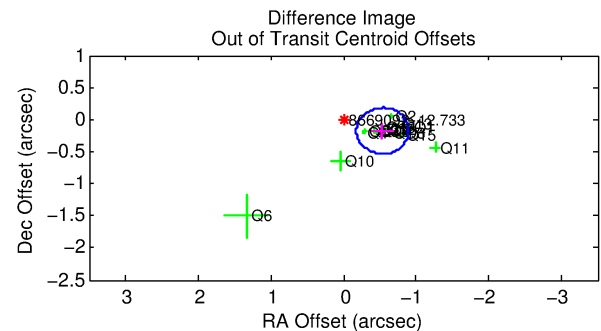
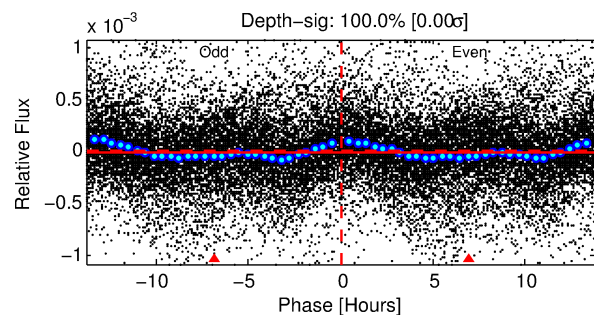
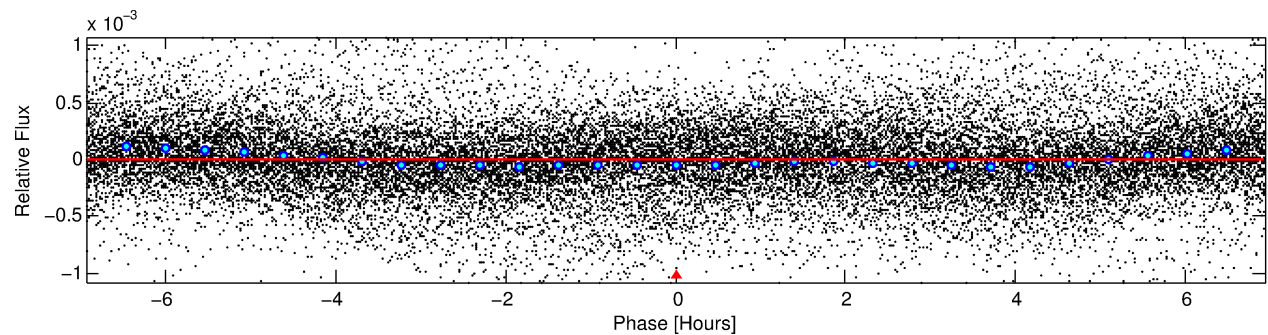
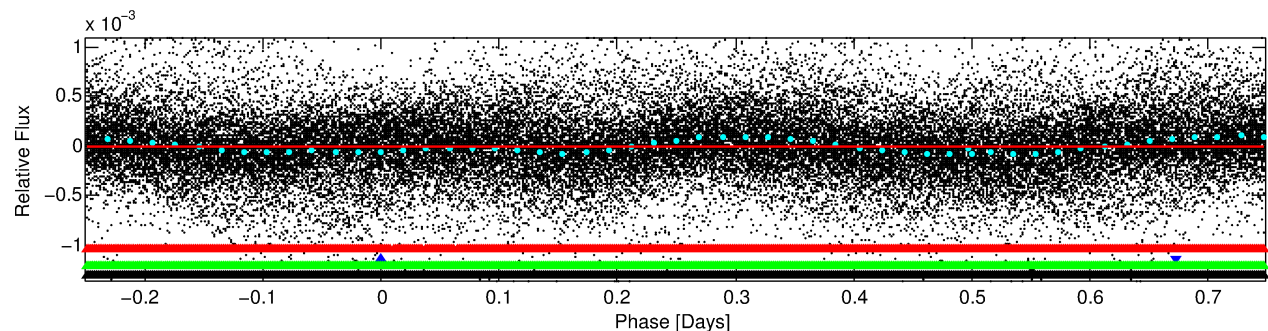
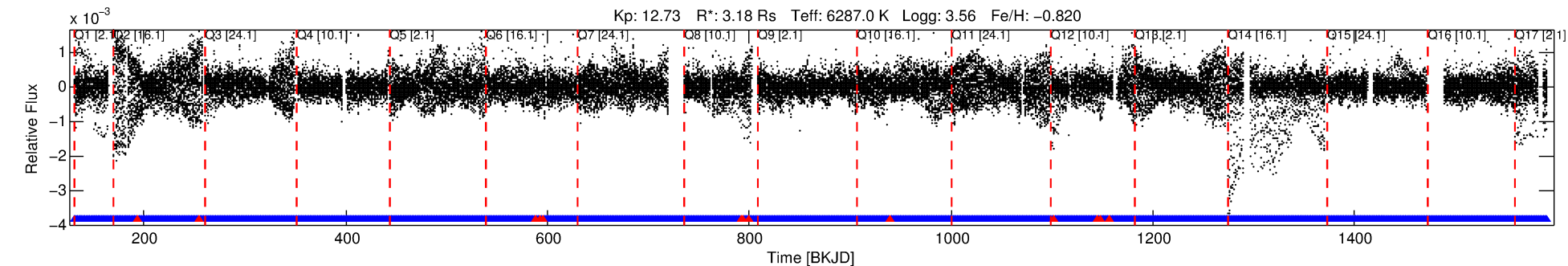
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008669092-02

No Significant Match Found

DV One-Page Summary

KIC: 8669092 Candidate: 2 of 4 Period: 0.997 d
KOI: K00068 Corr: No Ephemeris Match



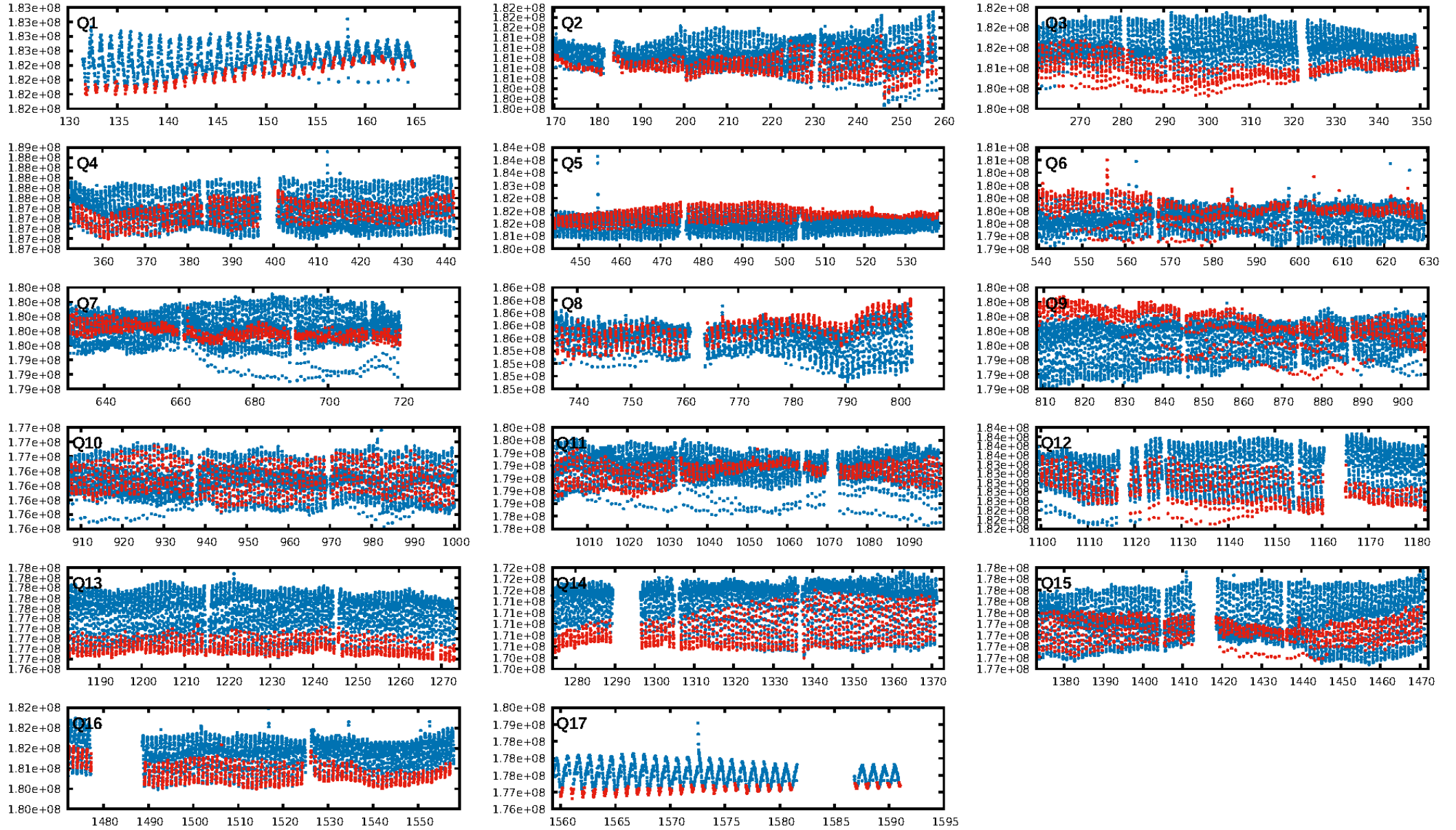
DV Fit Results:

Period = 0.99734 [0.93804] d
Epoch = 131.8641 [162.1892] BKJD
Rp/R* = 0.0000 [0.1682]
a/R* = 1.66 [492.23]
b = 0.91 [244.30]
Seff = 30588.18 [42863.01]
Teff = 3372 [1181] K
Rp = 0.01 [58.32] Re
a = 0.0215 [0.0159] AU
Ag = 84193.06 [1134909125.88] [0.00σ]
Teffp = 88813 [299314777] K [0.00σ]

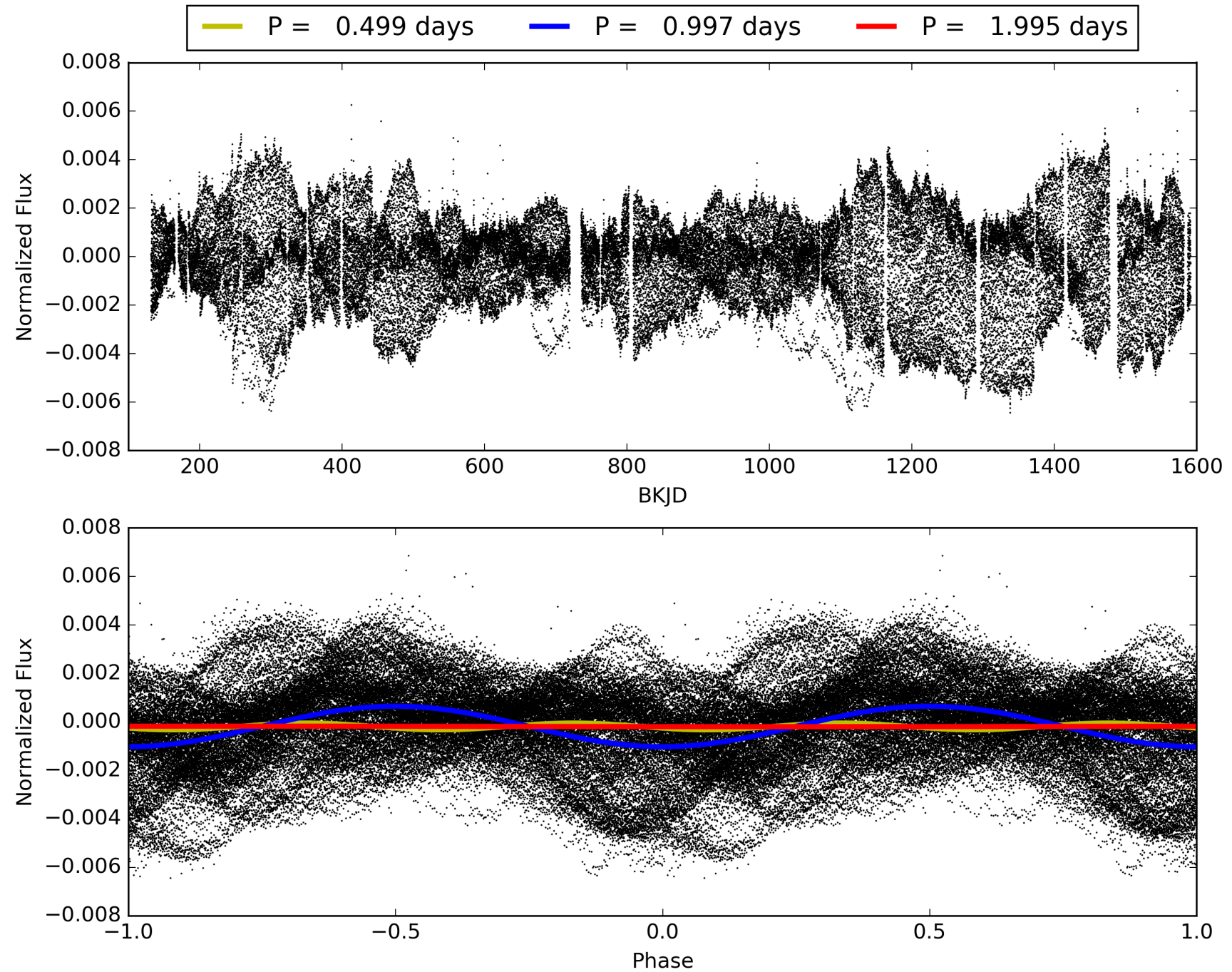
DV Diagnostic Results:

ShortPeriod-sig: 0.9% [0.01σ]
LongPeriod-sig: 2.1% [0.03σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1084/1097]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OptOffset-rm: 0.565 arcsec [4.71σ]
KicOffset-rm: 0.694 arcsec [5.78σ]
OptOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008669092-02, PDC Light Curves

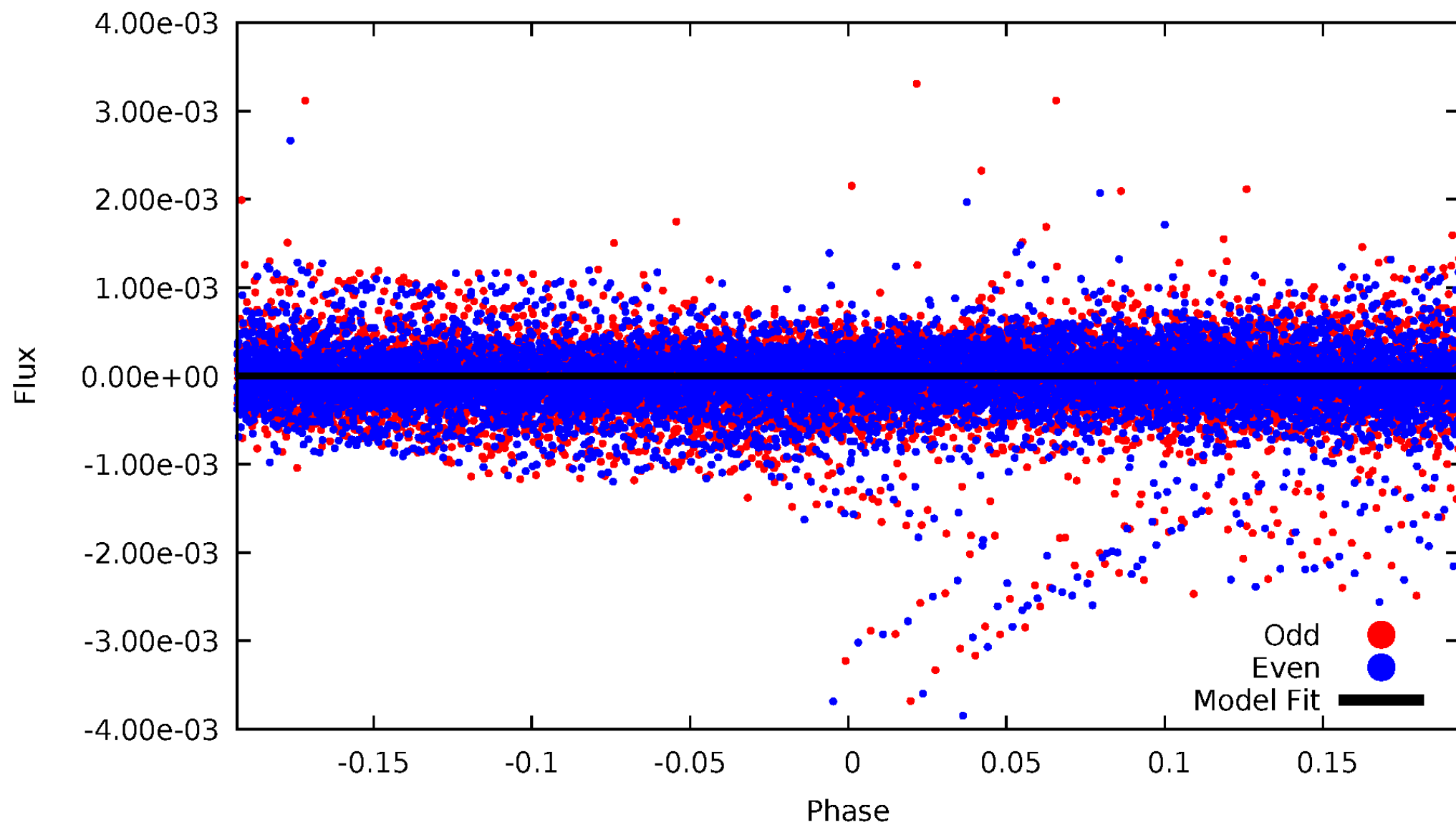


TCE 008669092-02



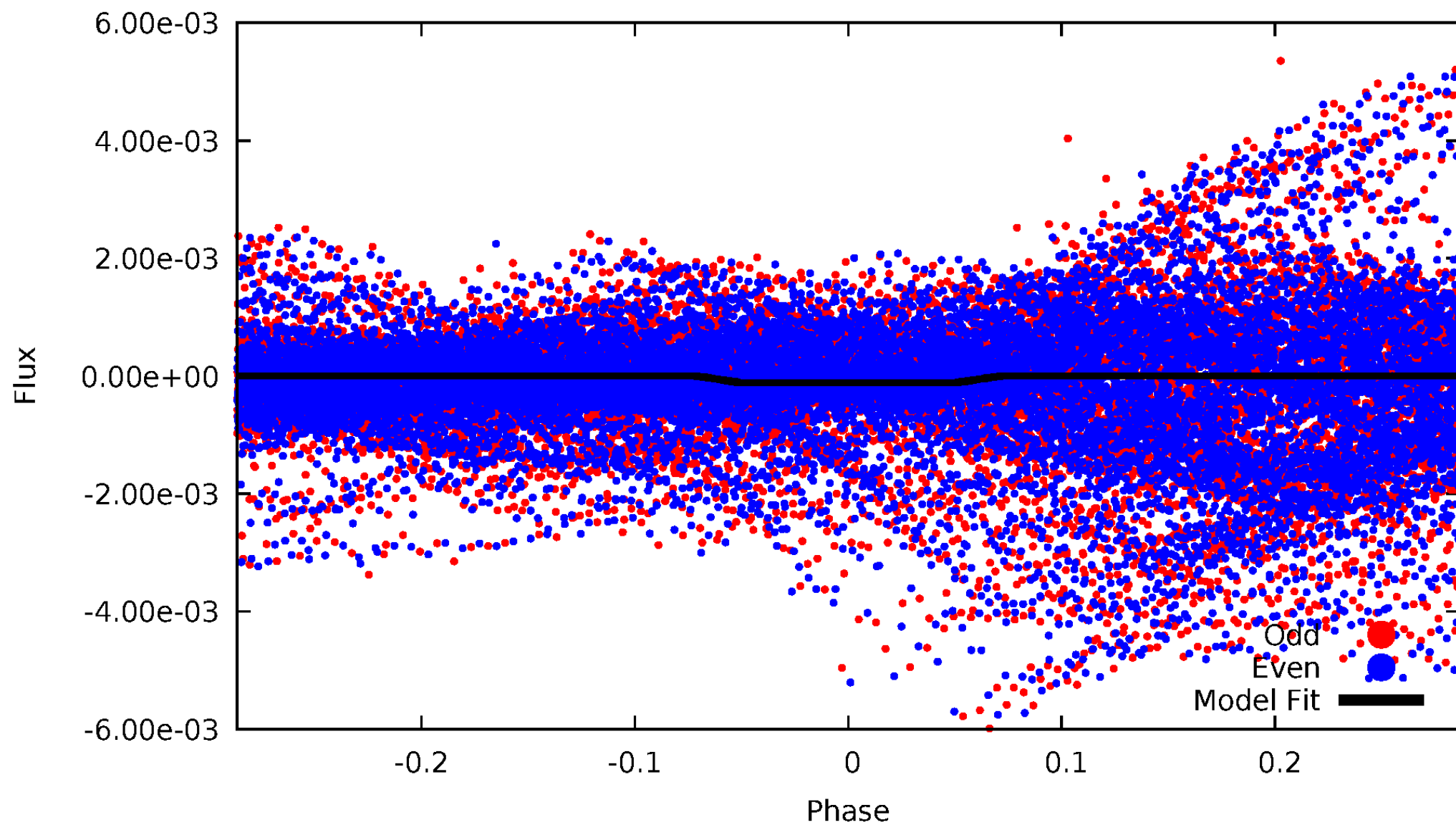
DV Odd/Even

TCE 008669092-02



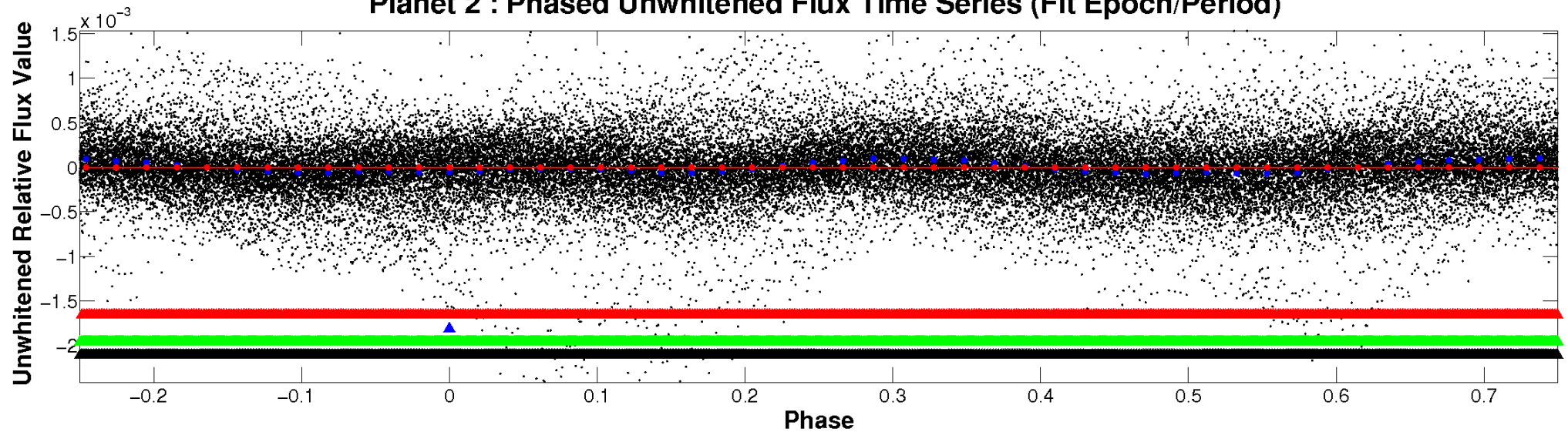
ALT Odd/Even

TCE 008669092-02

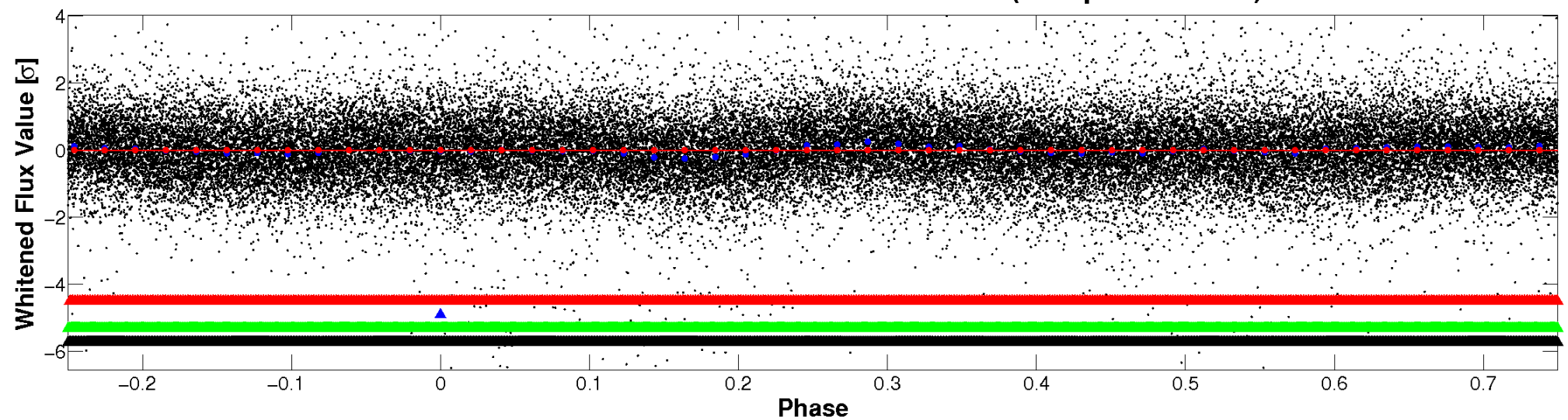


Non-Whitened Vs. Whitened Light Curve

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

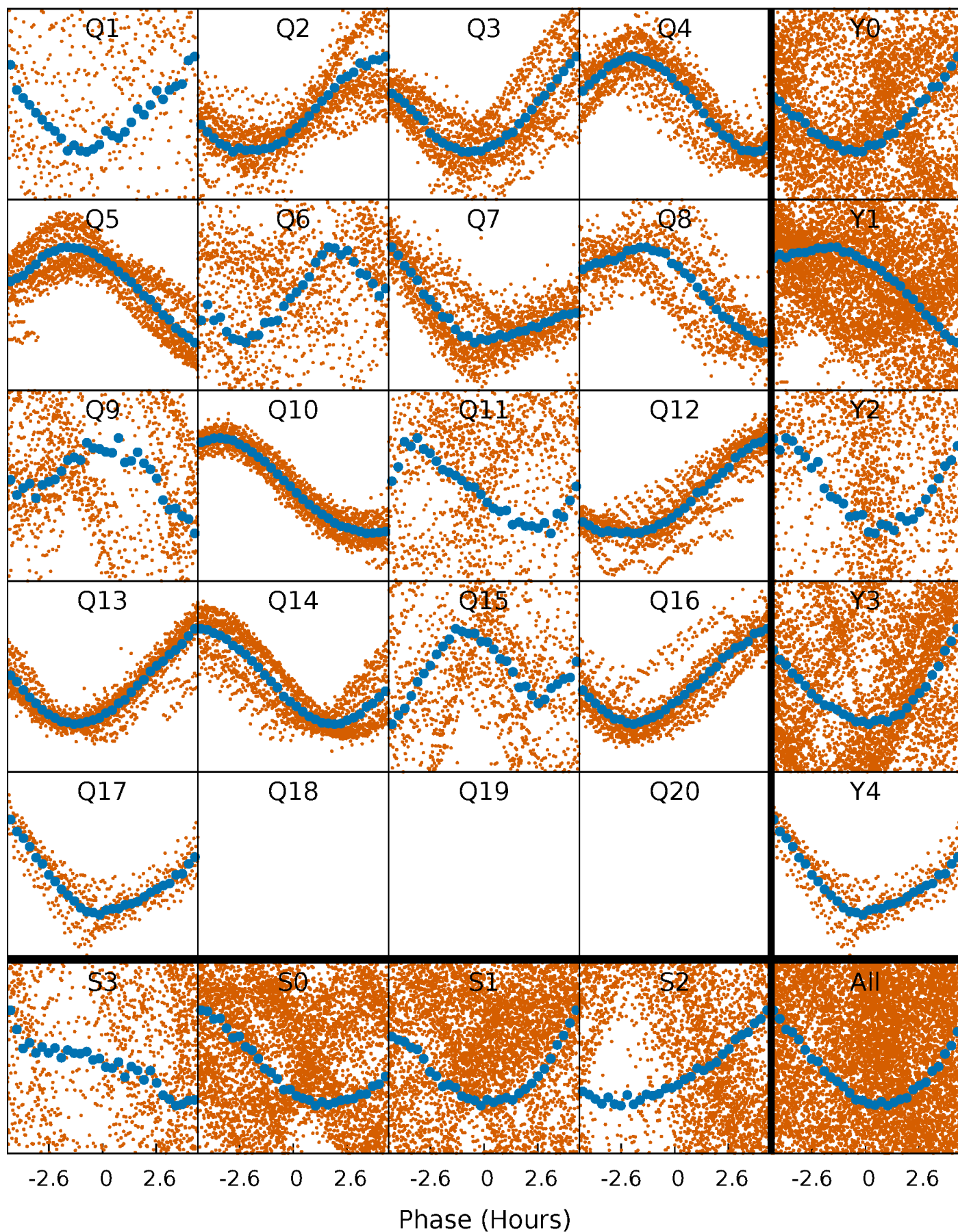


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



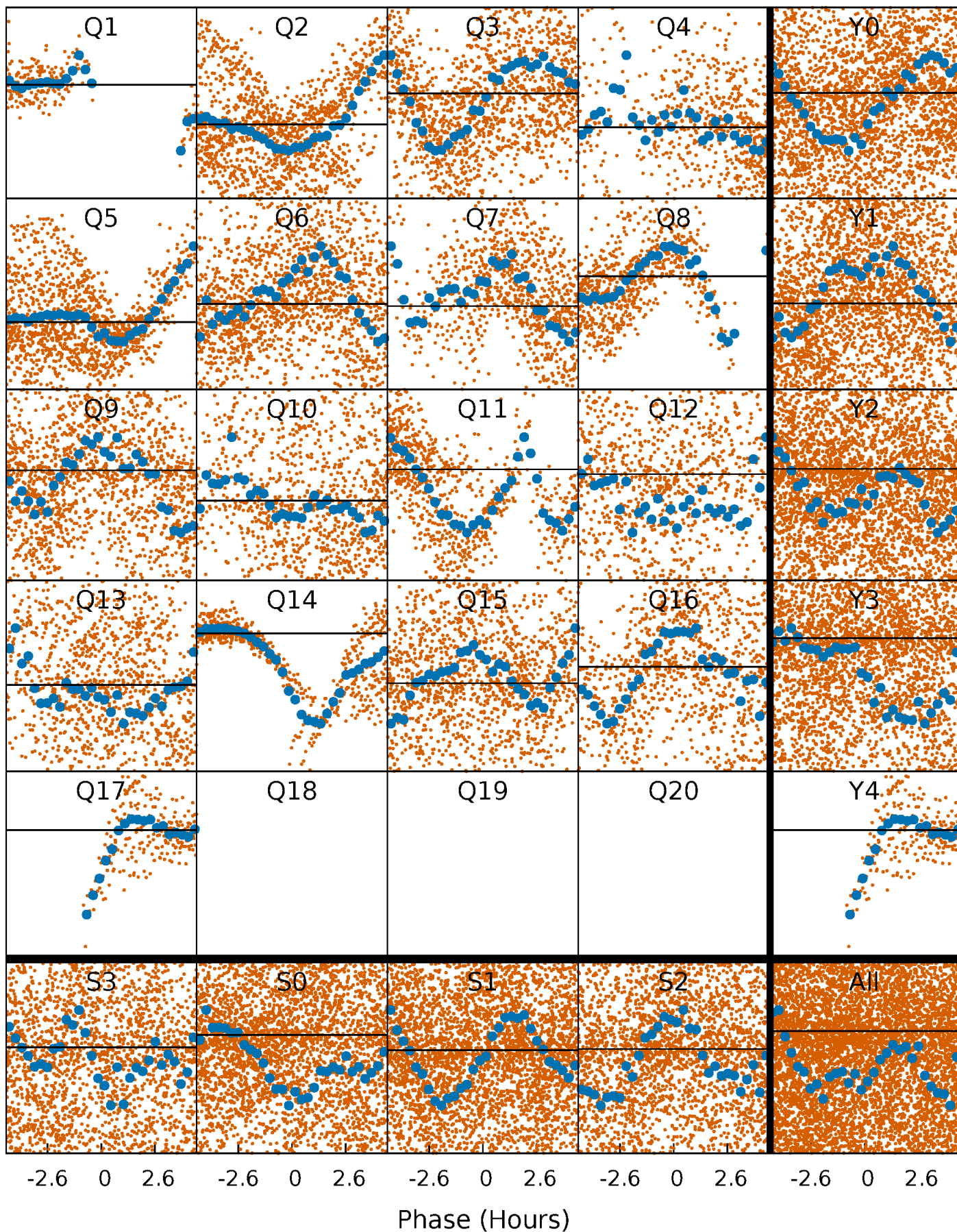
PDC Quarter-Phased Transit Curves

TCE 008669092-02 P= 0.997343 Days $T_0=131.864136$ (BKJD)



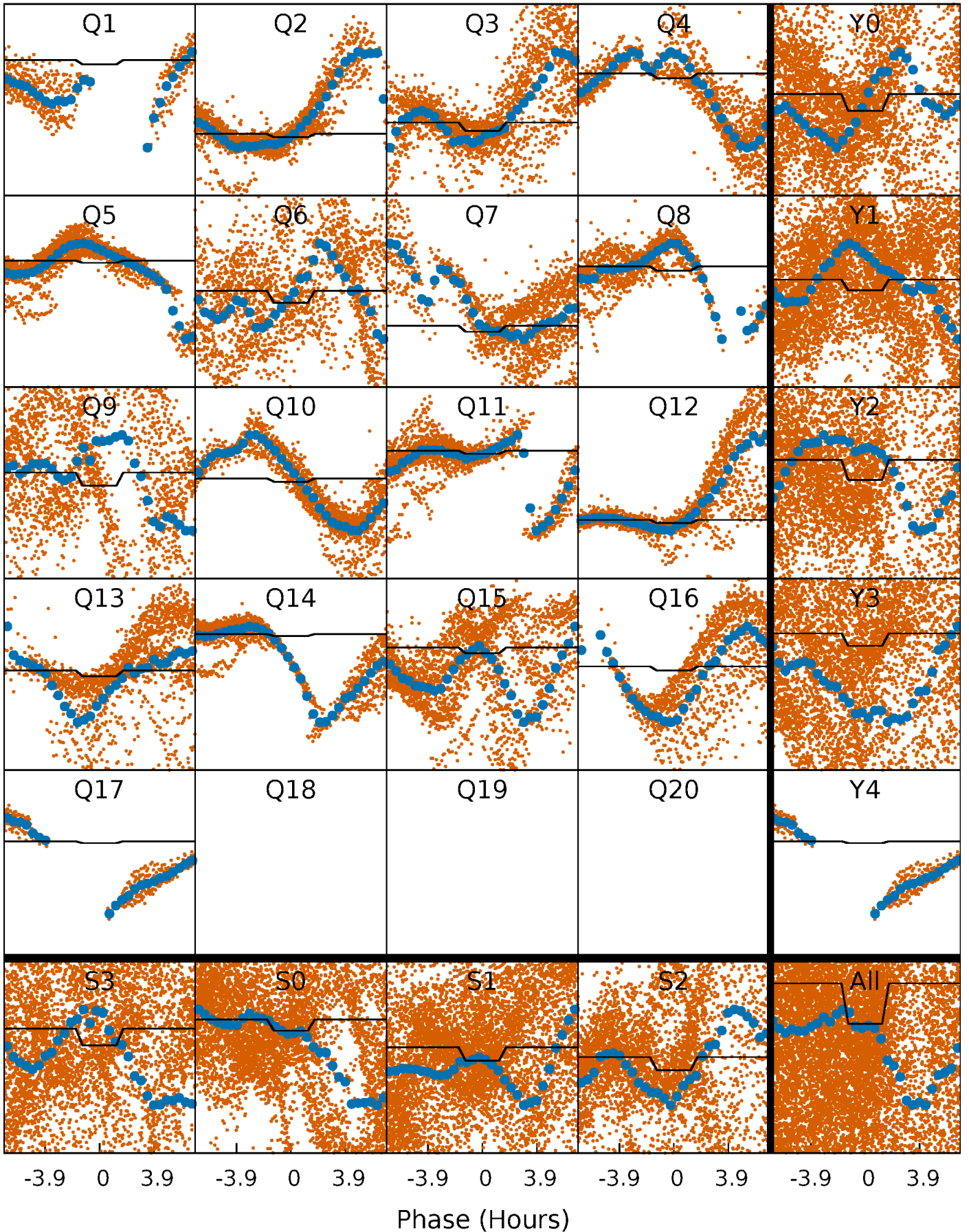
DV Quarter-Phased Transit Curves

TCE 008669092-02 P= 0.997343 Days $T_0=131.864136$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

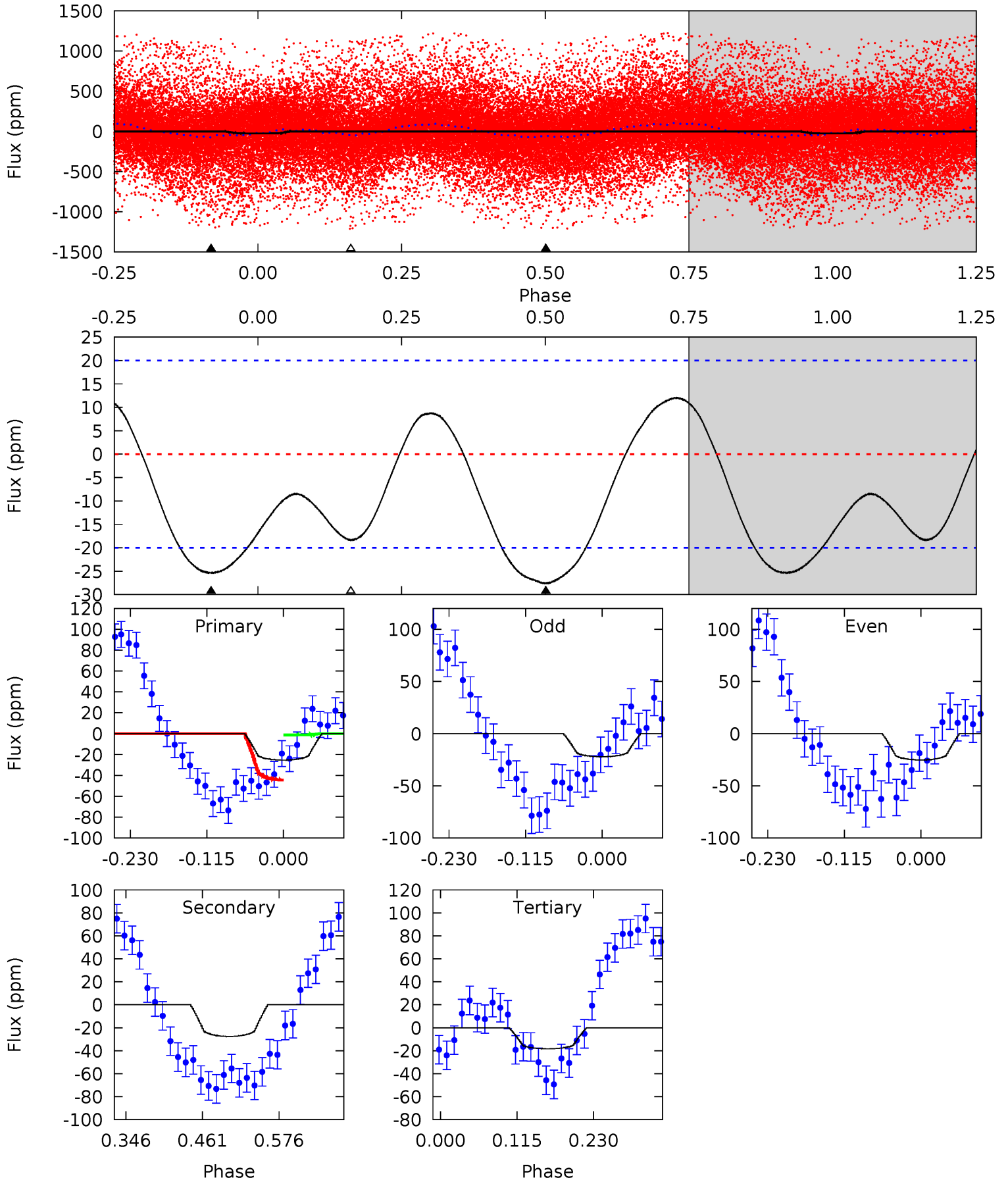
TCE 008669092-02 P= 0.997294 Days $T_0=131.874163$ (BKJD)



DV Model-Shift Uniqueness Test

008669092-02, P = 0.997343 Days, E = 130.866793 Days

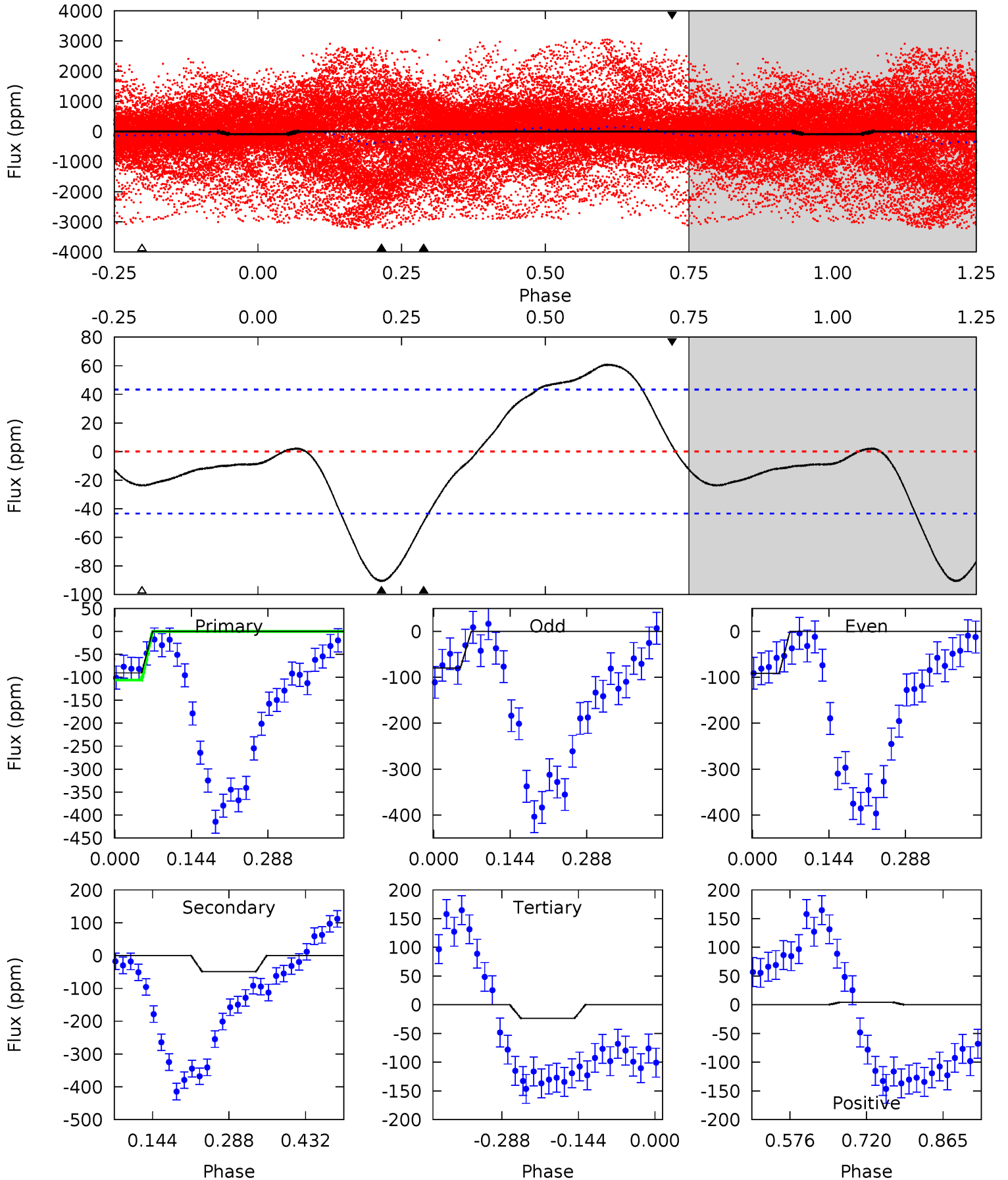
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	6.26	4.16	0	4.54	1.58	2.20	1.59	5.75	2.10	6.26	0.36	-7.91	0.30	5.16



Alt Model-Shift Uniqueness Test

008669092-02, P = 0.997294 Days, E = 130.876869 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.38	5.10	2.45	0.43	4.49	1.46	3.10	6.93	8.94	2.65	4.67	0.61	1.38	0.40	2.26



Stellar Parameters For KIC 008669092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6287^{+170}_{-189}	$3.558^{+0.353}_{-0.118}$	$-0.820^{+0.350}_{-0.300}$	$3.177^{+0.588}_{-1.372}$	$1.328^{+0.159}_{-0.345}$	$0.058^{+0.160}_{-0.020}$
	+3%/-3%	+10%/-3%	+43%/-37%	+19%/-43%	+12%/-26%	+274%/-35%
Source	PHO1	FLK73	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 008669092-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 4	$36.62^{+42.38}_{-26.25}$	4432^{+1530}_{-890}	-3870^{+645}_{-1022}	$0.005^{+0.070}_{-0.005}$
Alt.	-49 ± 10	$36.44^{+43.37}_{-24.74}$	4345^{+1793}_{-776}	-3807^{+696}_{-1218}	$0.010^{+0.099}_{-0.009}$

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 $A_{obs} \gg 1.0$

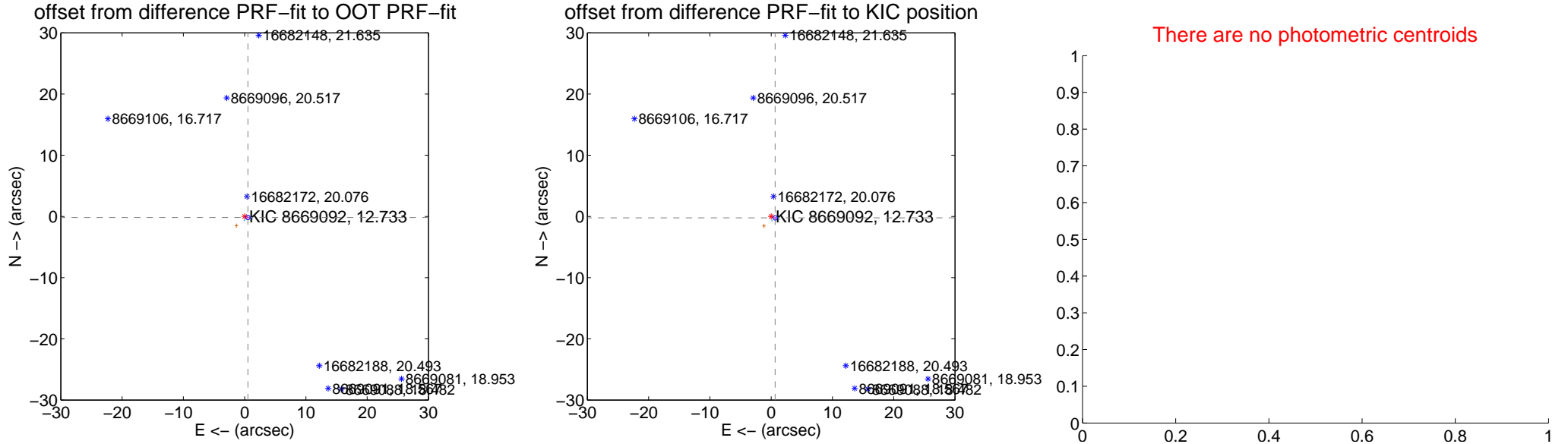
DV Centroid Data

Supplemental centroid analysis for 008669092-02. Kepler magnitude: 12.73. Transit SNR 0.00

There are 11 quarters with good PRF difference image offsets

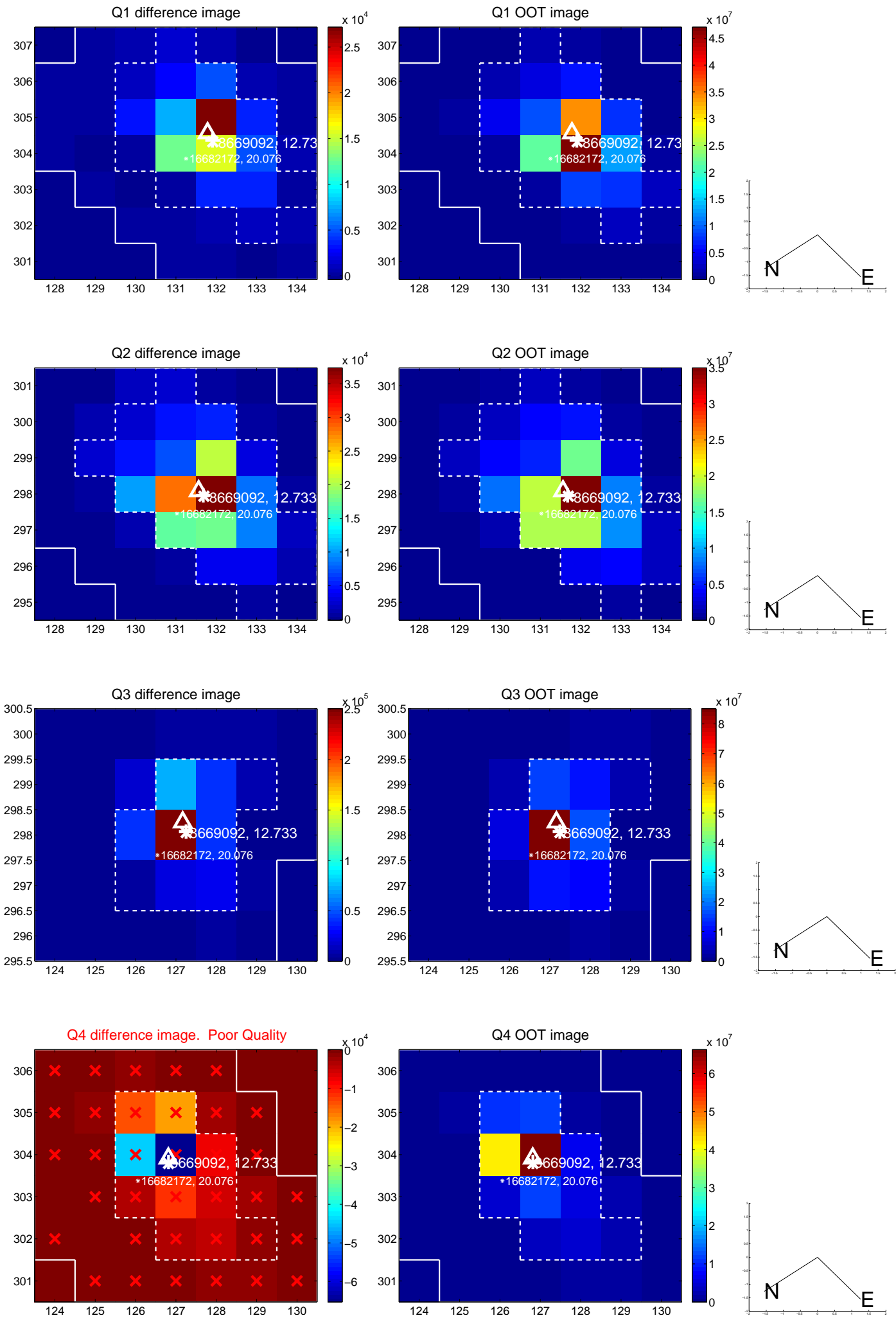
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.565 ± 0.120	4.71	-0.537 ± 0.143	-0.176 ± 0.108
PRF-fit source offset from KIC position	0.694 ± 0.120	5.78	-0.652 ± 0.145	-0.237 ± 0.107
photometric centroid source offset	—	—	—	—

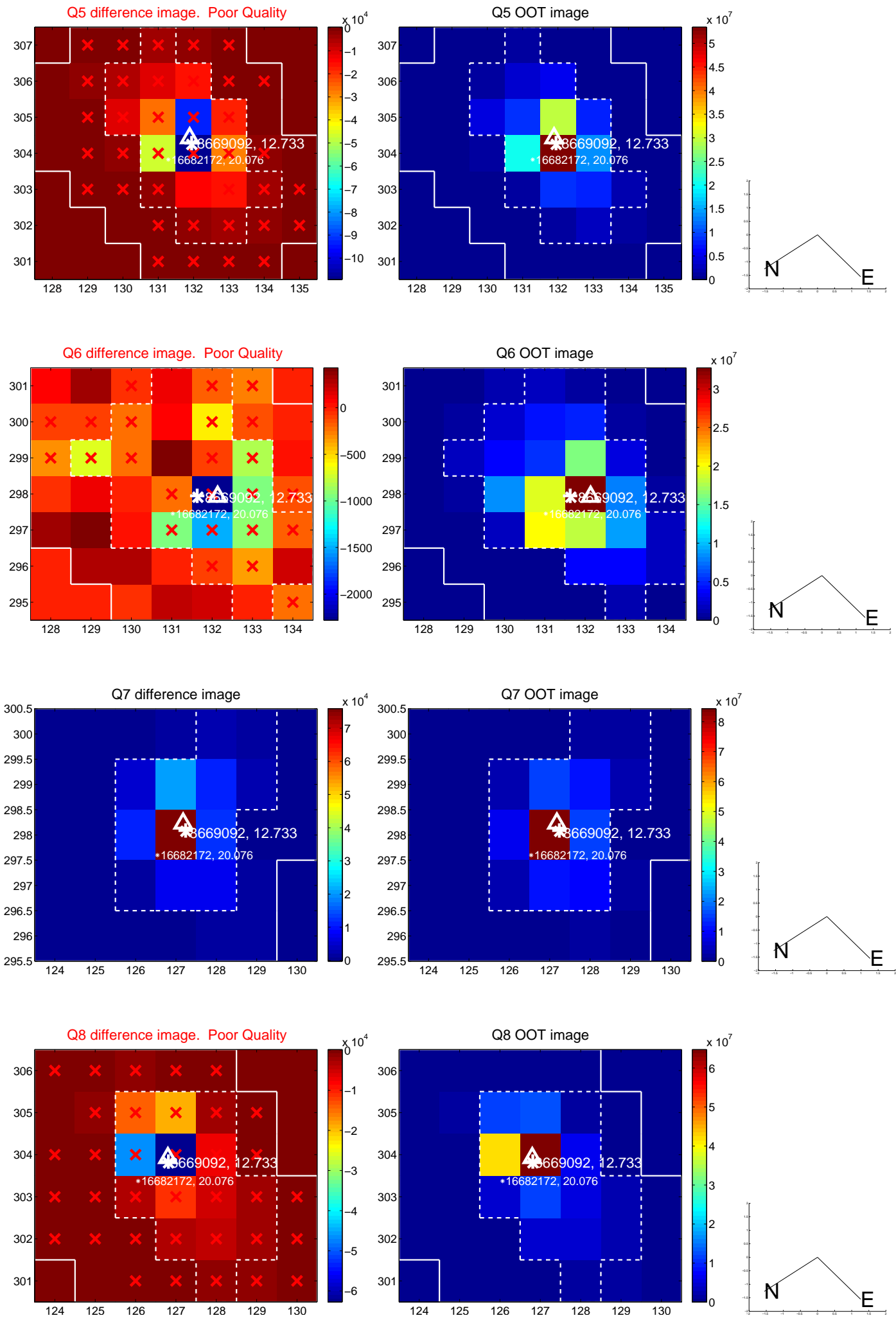


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

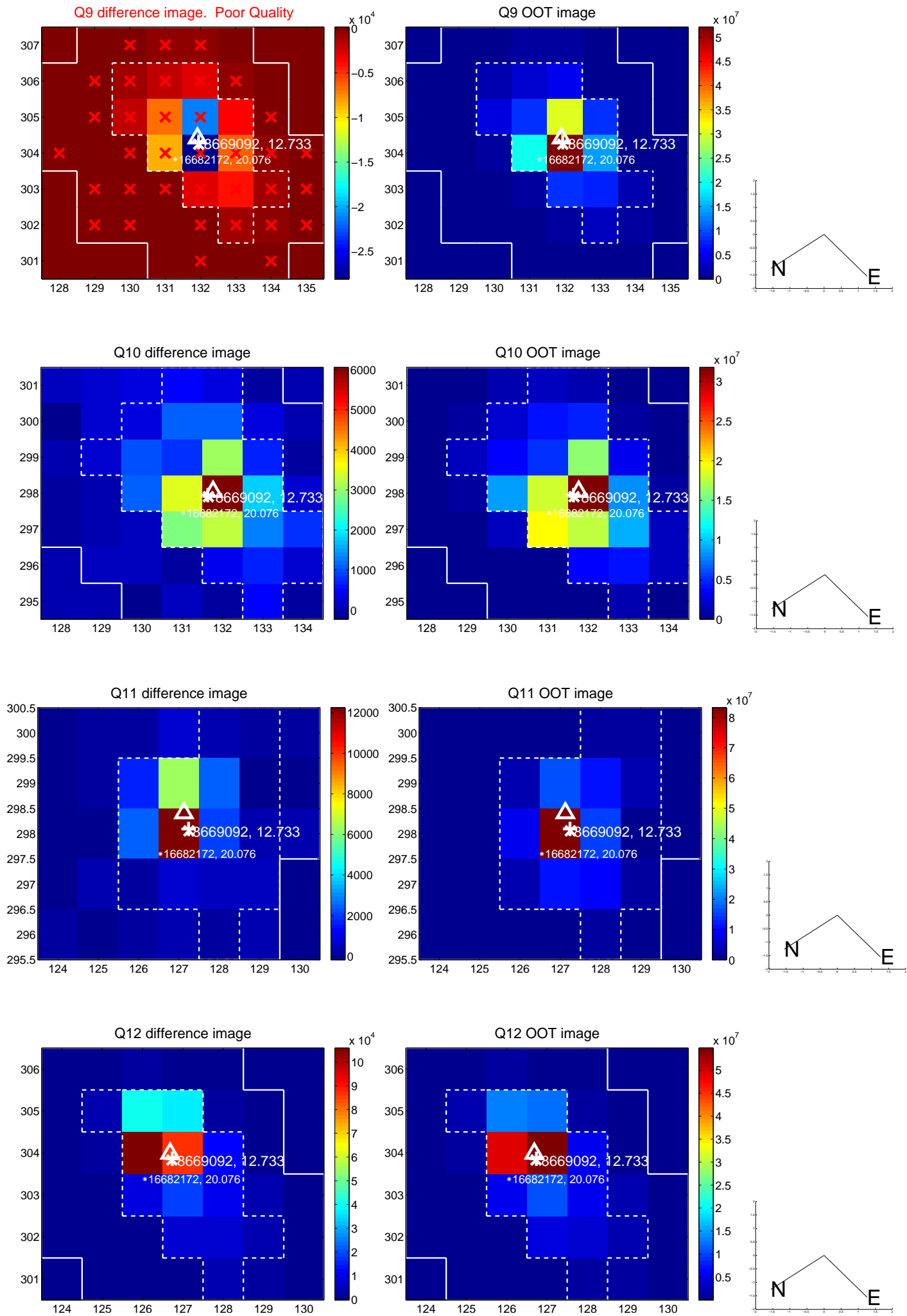
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



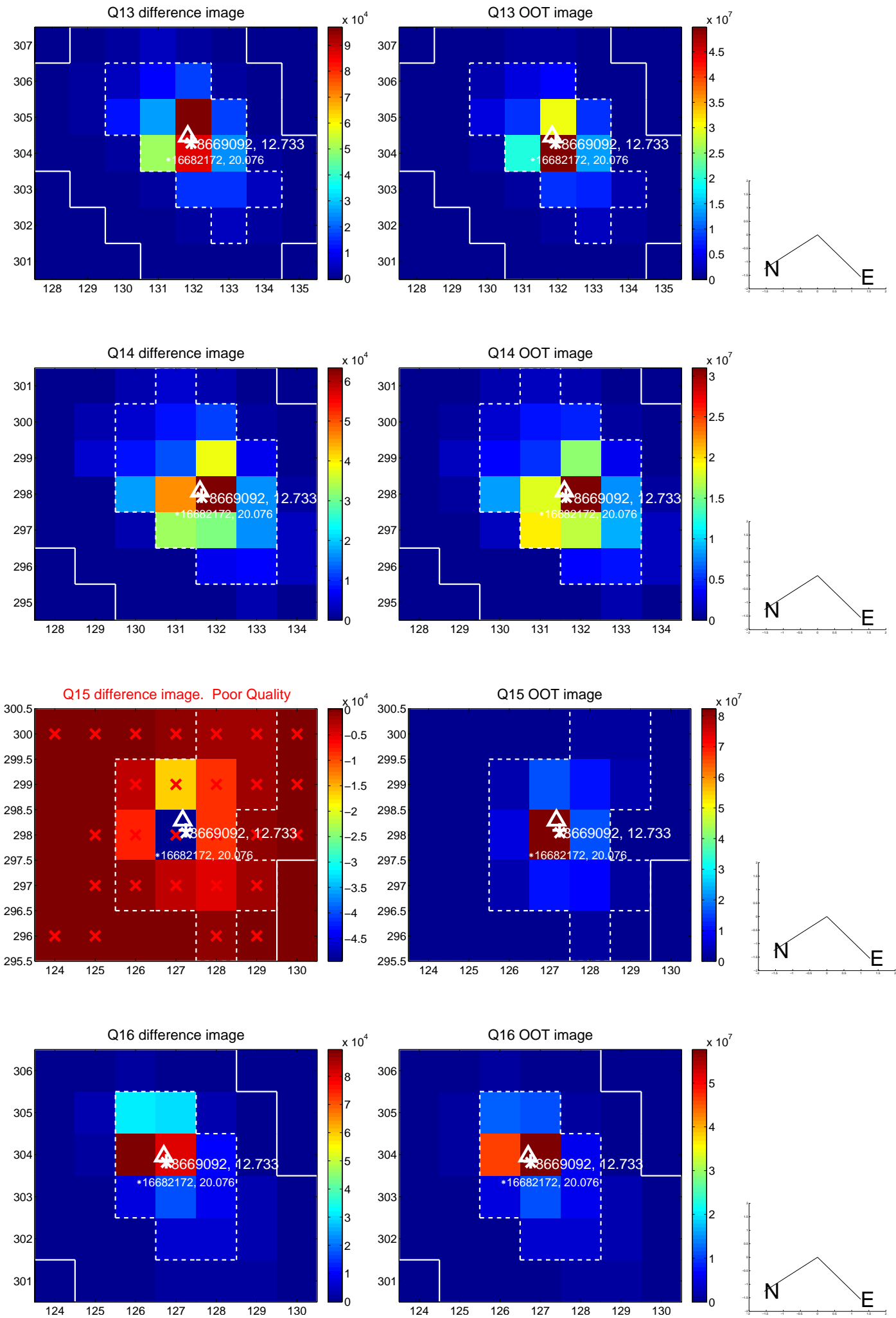
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



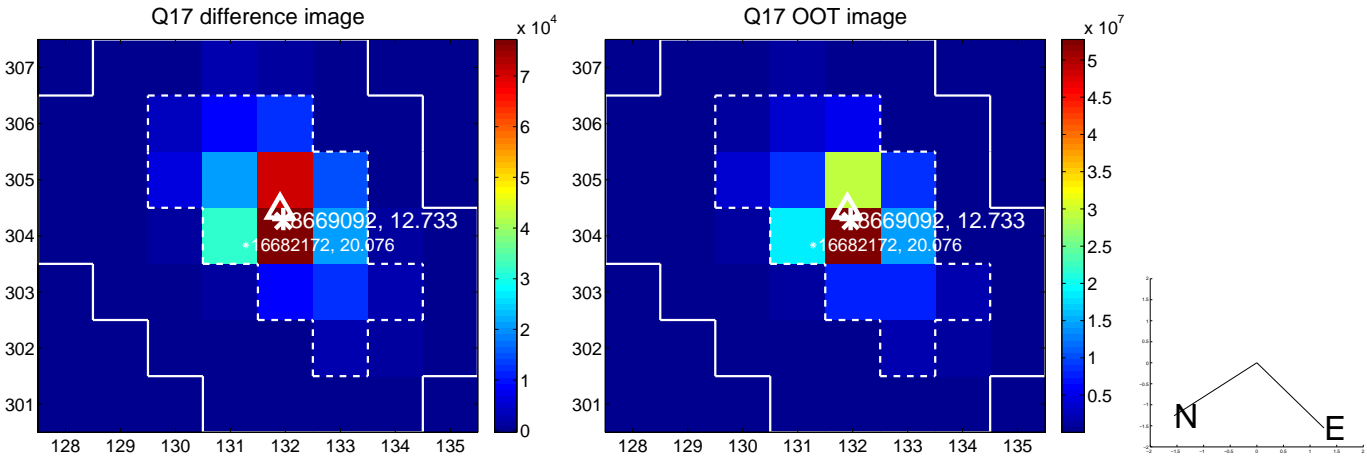
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



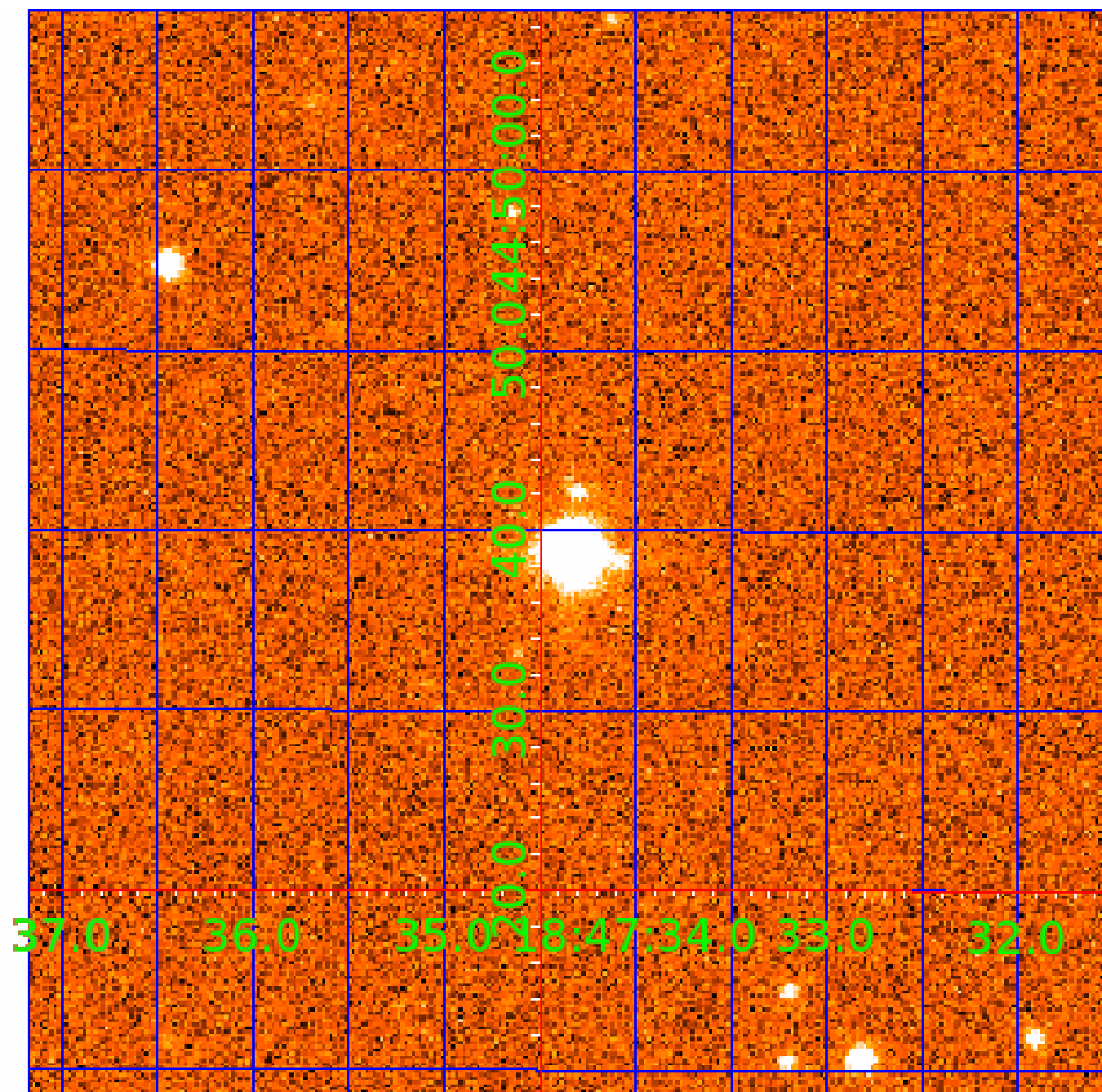
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008669092

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})
008669092-01	OBS	No	1.000707	131.871610	1873.7	2.000	42.6	-1.0	3.18	6287	13.85	30451.16
008669092-02	OBS	No	0.997343	131.864136	0.0	2.311	16.0	0.0	3.18	6287	0.01	30588.18
008669092-03	OBS	0068.01	0.500468	131.795555	80.9	0.804	10.9	14.4	3.18	6287	3.39	0.00
008669092-04	OBS	No	0.995480	132.110378	161.7	3.500	9.6	-1.0	3.18	6287	4.06	30664.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008669092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008669092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008669092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008669092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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 008669092-03

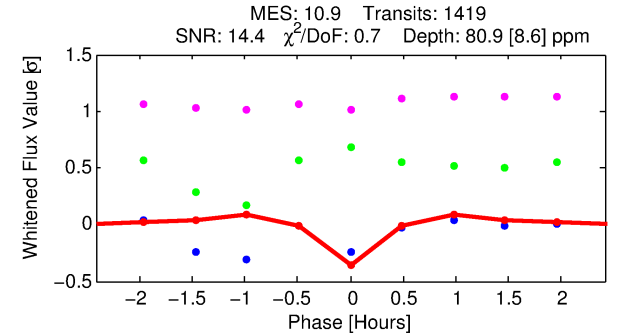
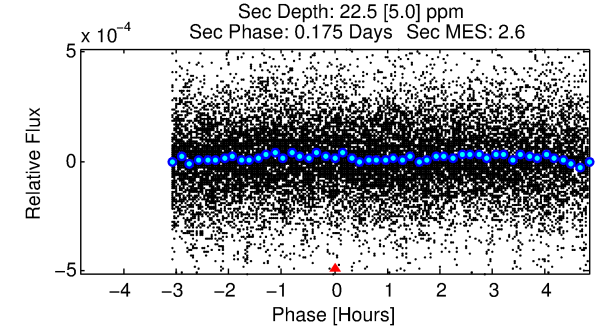
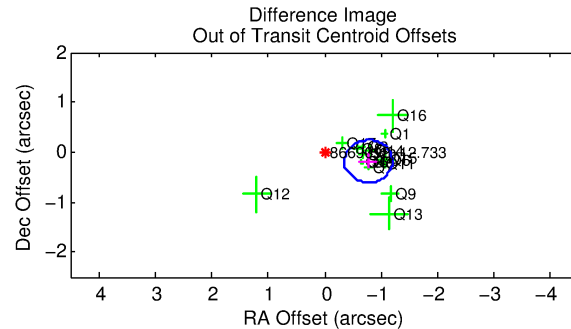
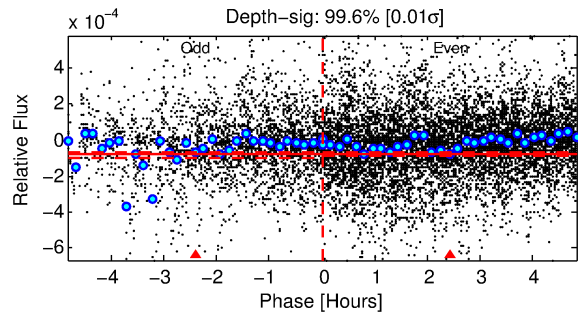
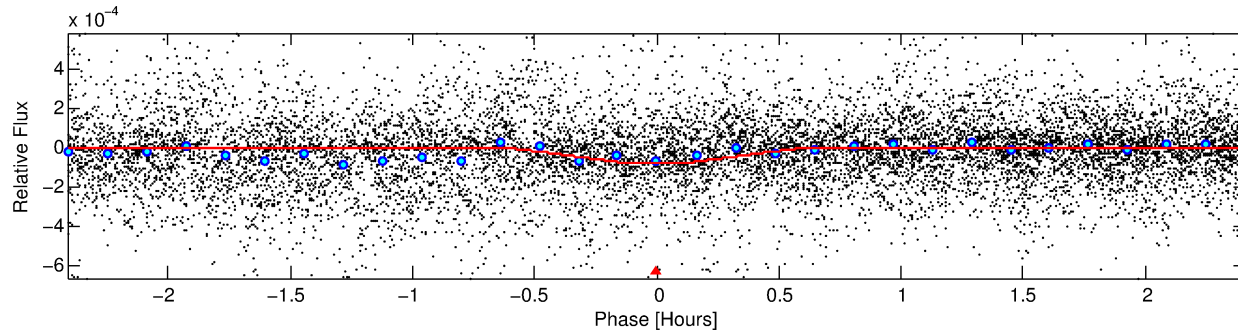
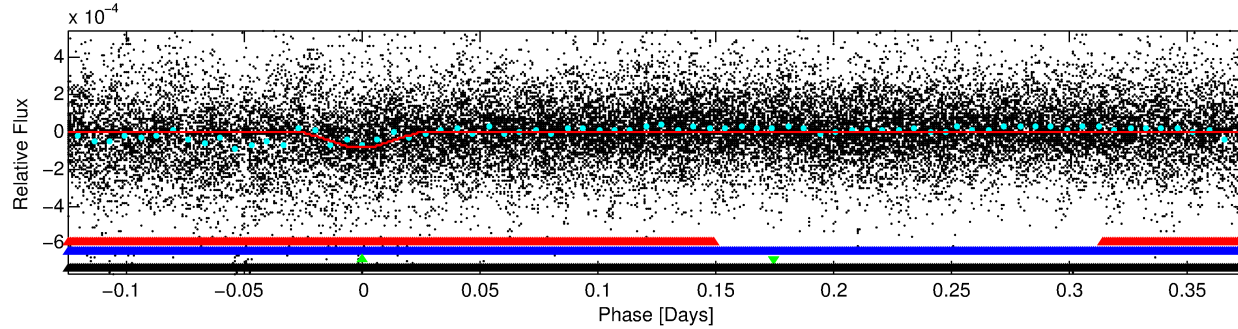
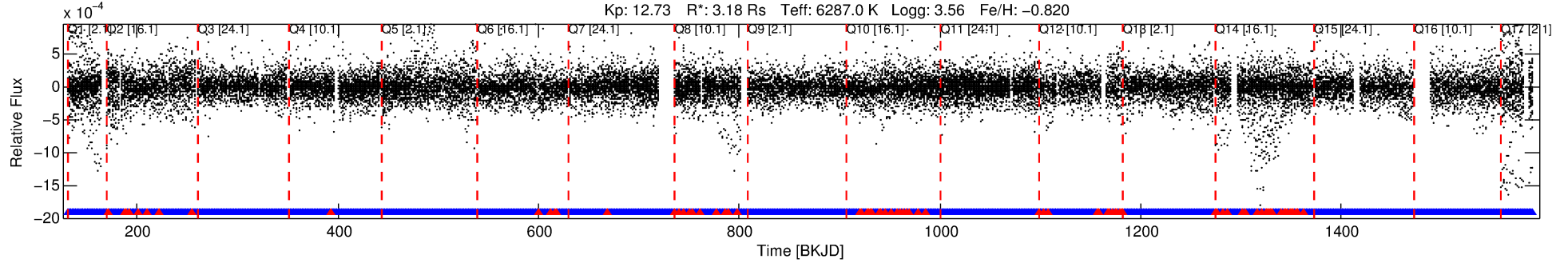
No Significant Match Found

DV One-Page Summary

KIC: 8669092 Candidate: 3 of 4 Period: 0.500 d

KOI: K00068 Corr: No Ephemeris Match

Kp: 12.73 R*: 3.18 Rs Teff: 6287.0 K Logg: 3.56 Fe/H: -0.820



DV Fit Results:

Period = 0.50047 [0.00001] d
Epoch = 131.7956 [0.0008] BKJD
Rp/R* = 0.0098 [0.0017]
a/R* = 2.36 [1.80]
b = 0.90 [0.20]
Seff = N/A
Teq = N/A
Rp = 3.39 [1.57] Re
a = N/A
Ag = N/A
Teffp = N/A

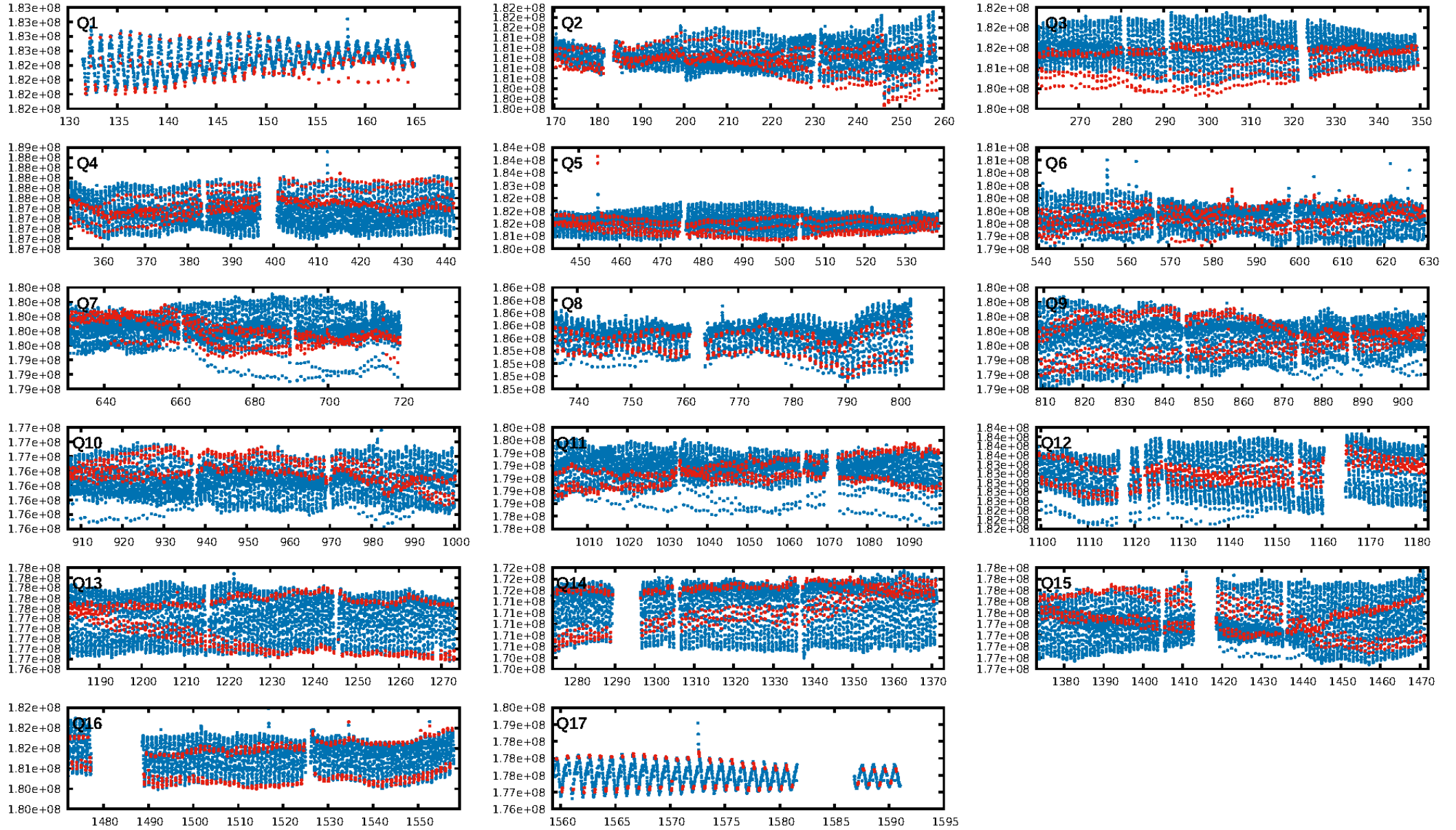
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.31σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [1263/1346]
GhostDiagnostic-chr: 0.2772
Centroid-sig: 51.9%
Centroid-so: 0.492 arcsec [1.02σ]
OotOffset-rm: 0.794 arcsec [5.62σ]
KicOffset-rm: 0.886 arcsec [5.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.53 [9/17]

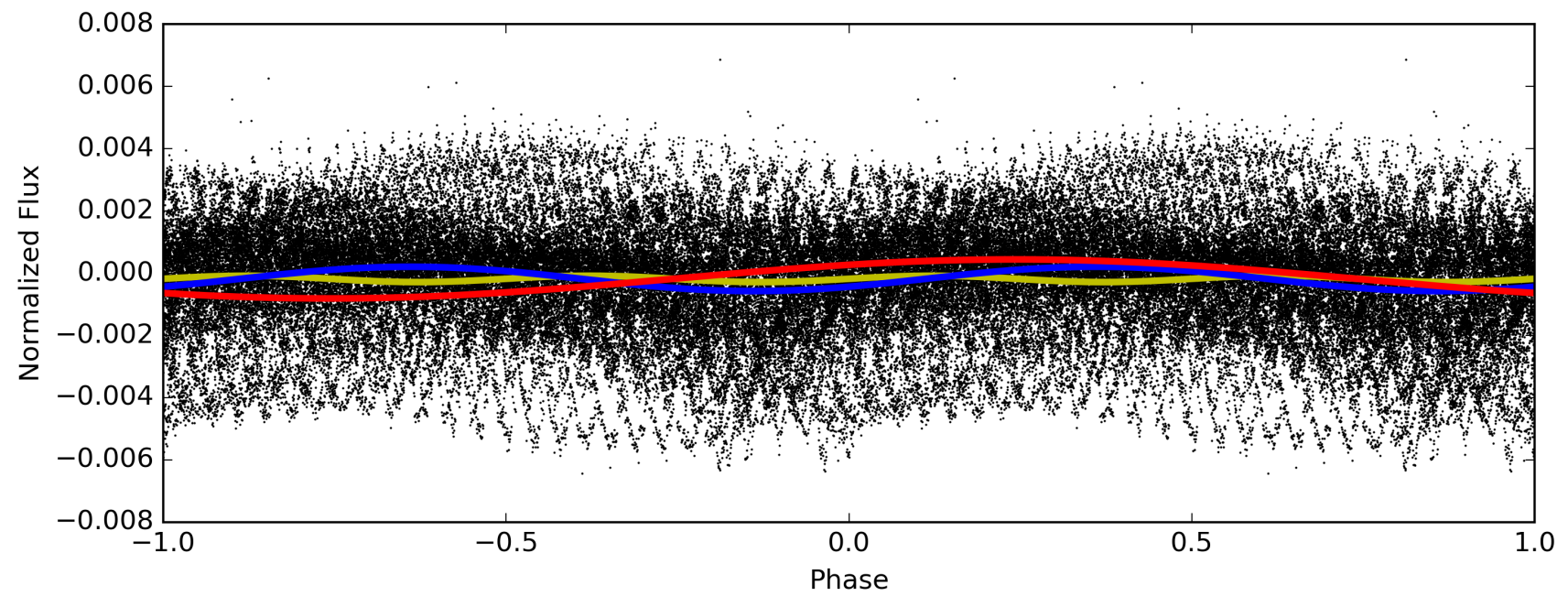
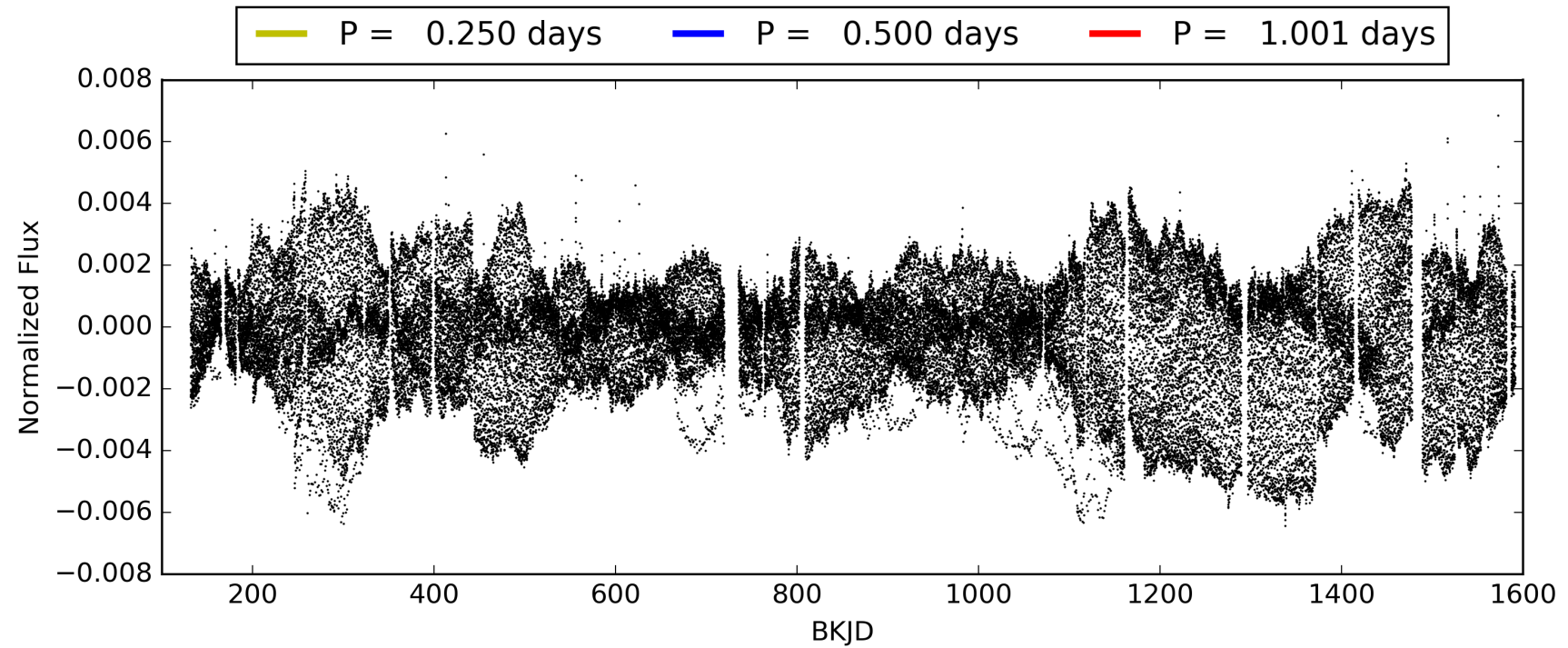
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:28:14 Z

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

TCE 008669092-03, PDC Light Curves

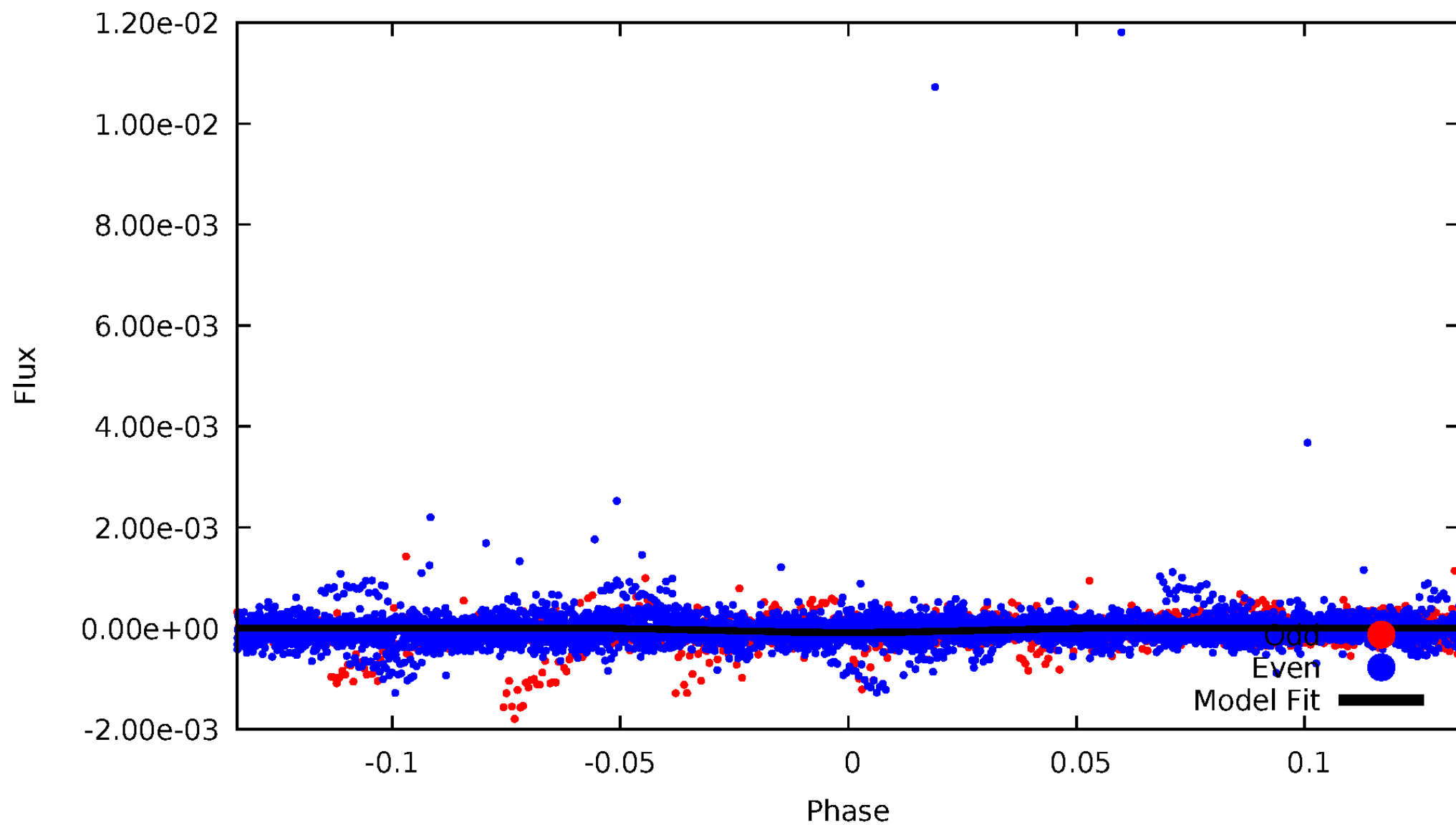


TCE 008669092-03



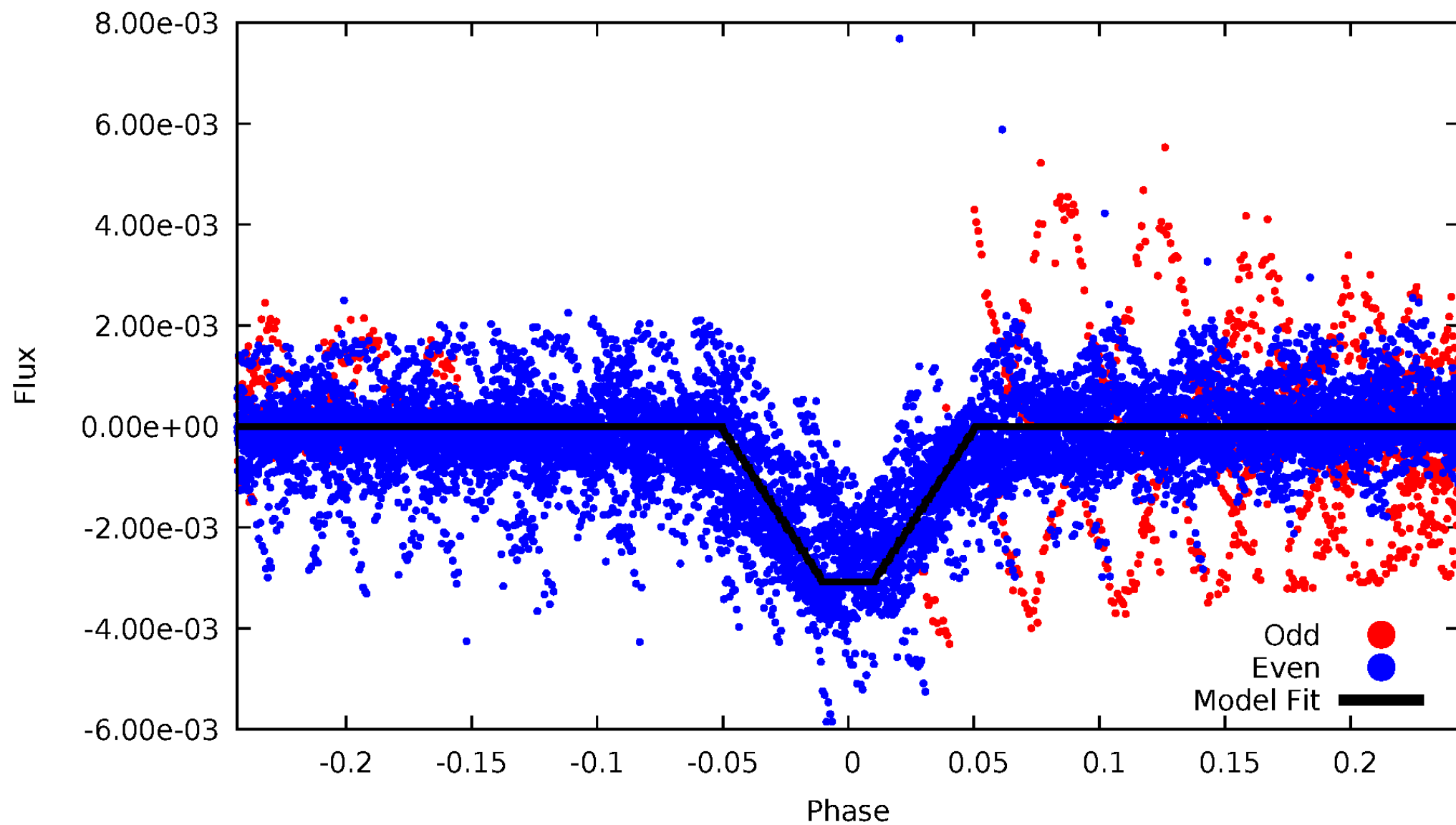
DV Odd/Even

TCE 008669092-03

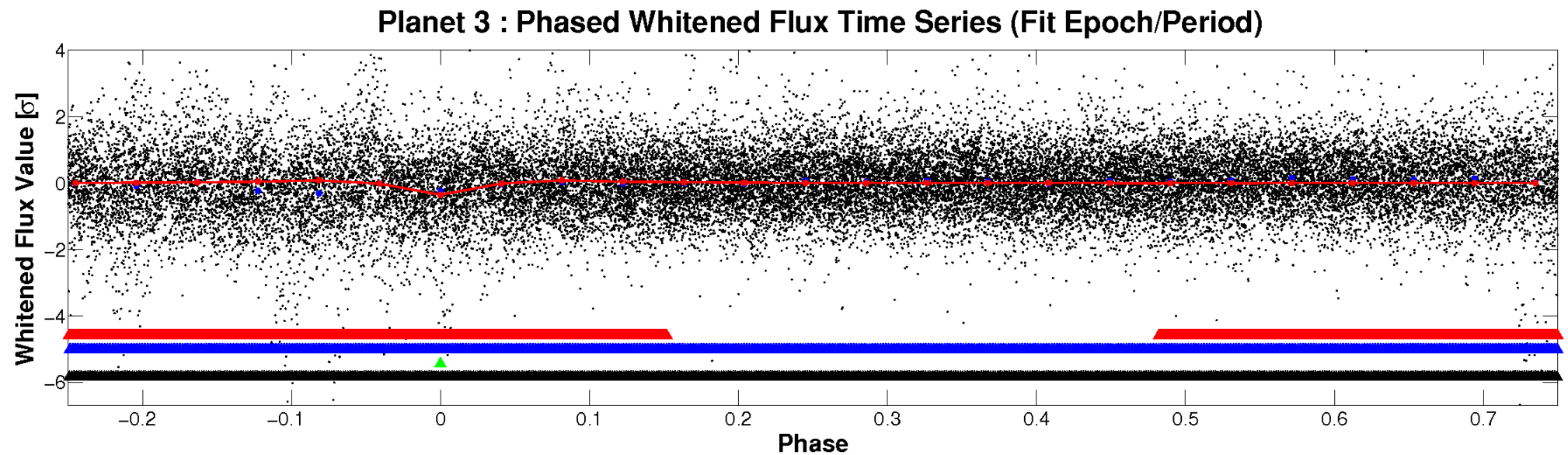
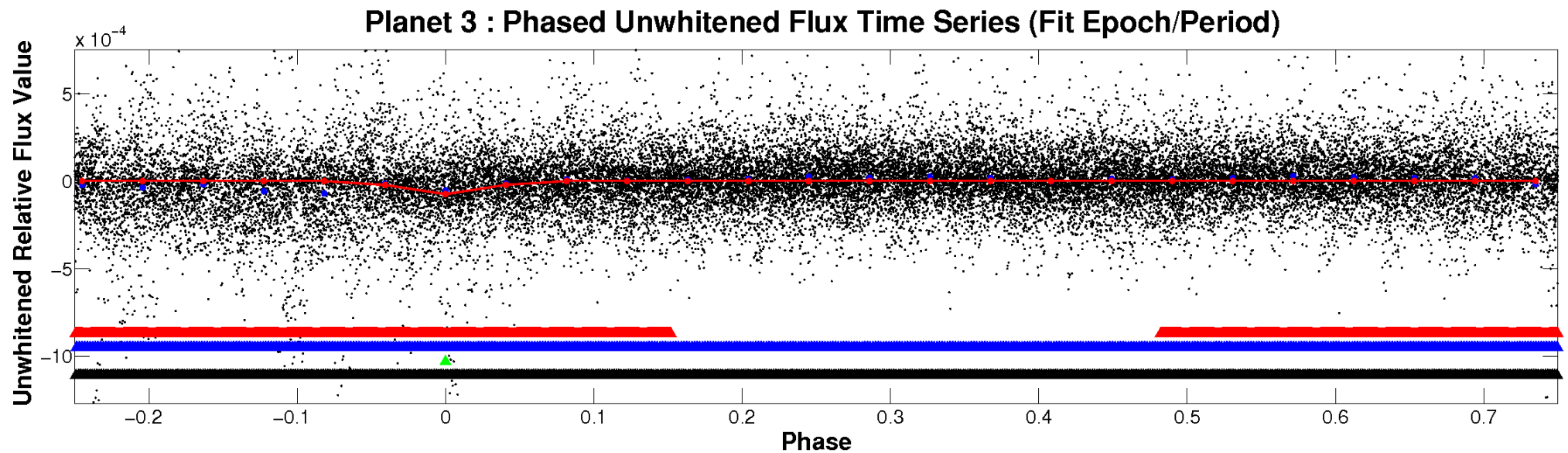


ALT Odd/Even

TCE 008669092-03

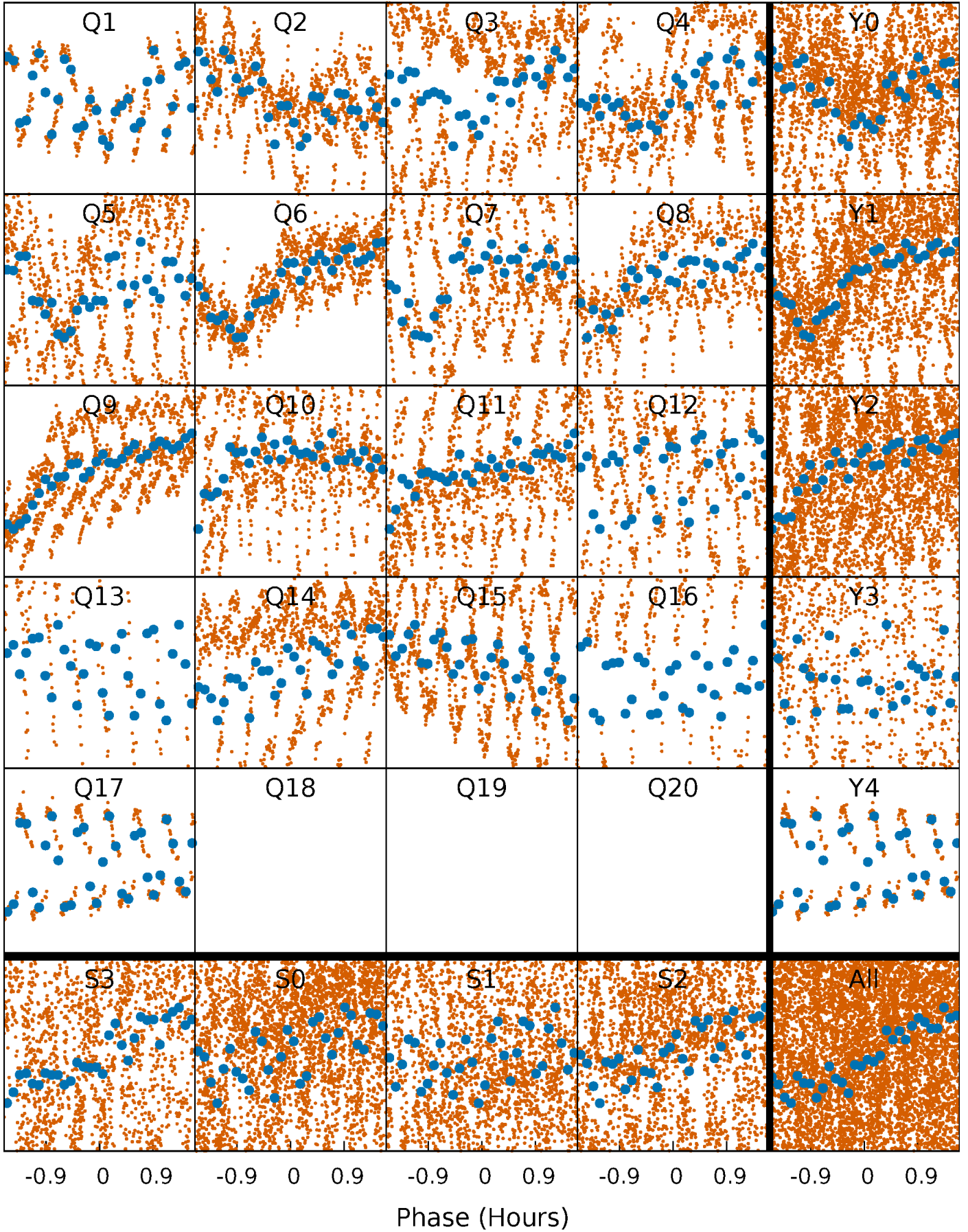


Non-Whitened Vs. Whitened Light Curve



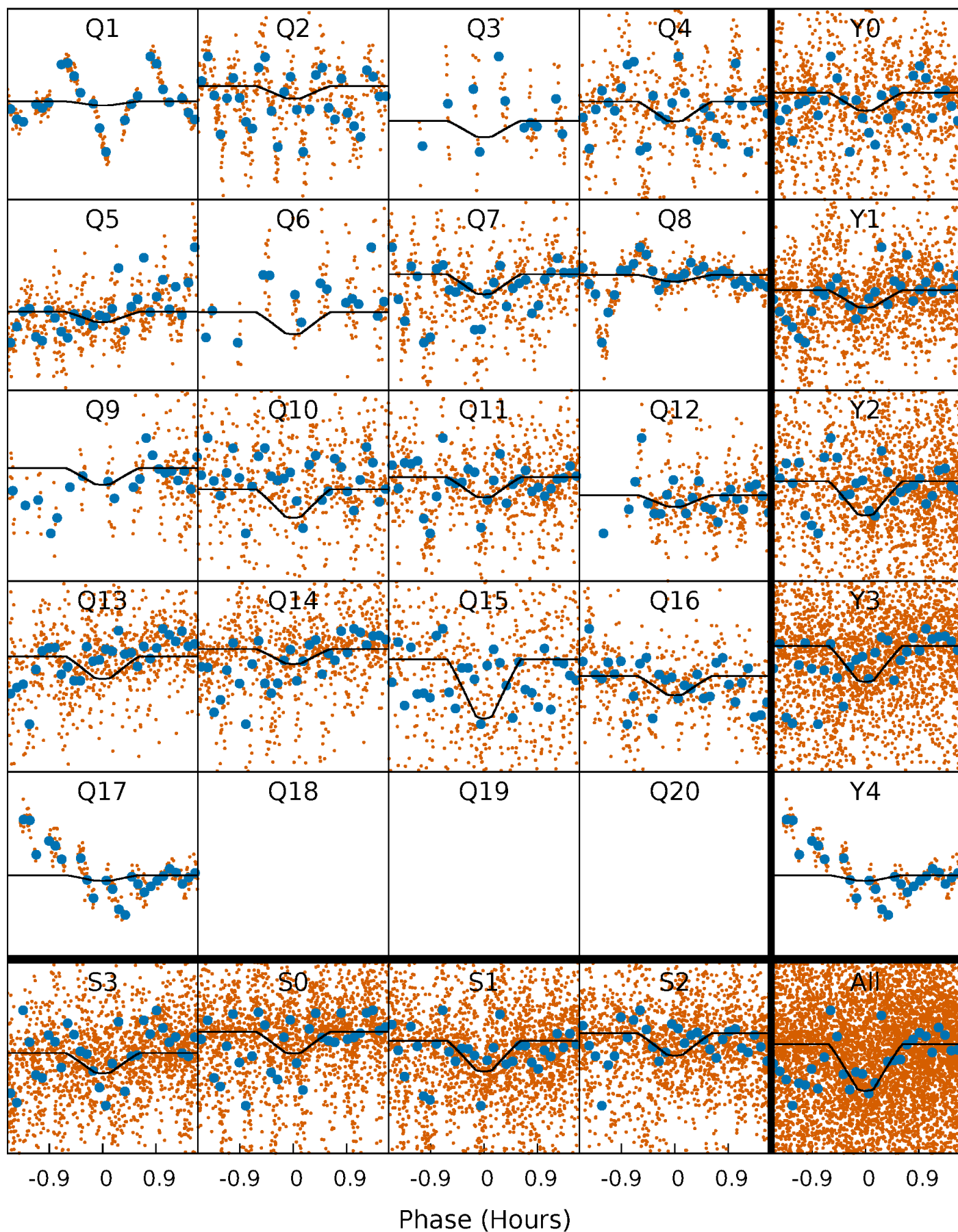
PDC Quarter-Phased Transit Curves

TCE 008669092-03 P= 0.500468 Days $T_0=131.795555$ (BKJD)



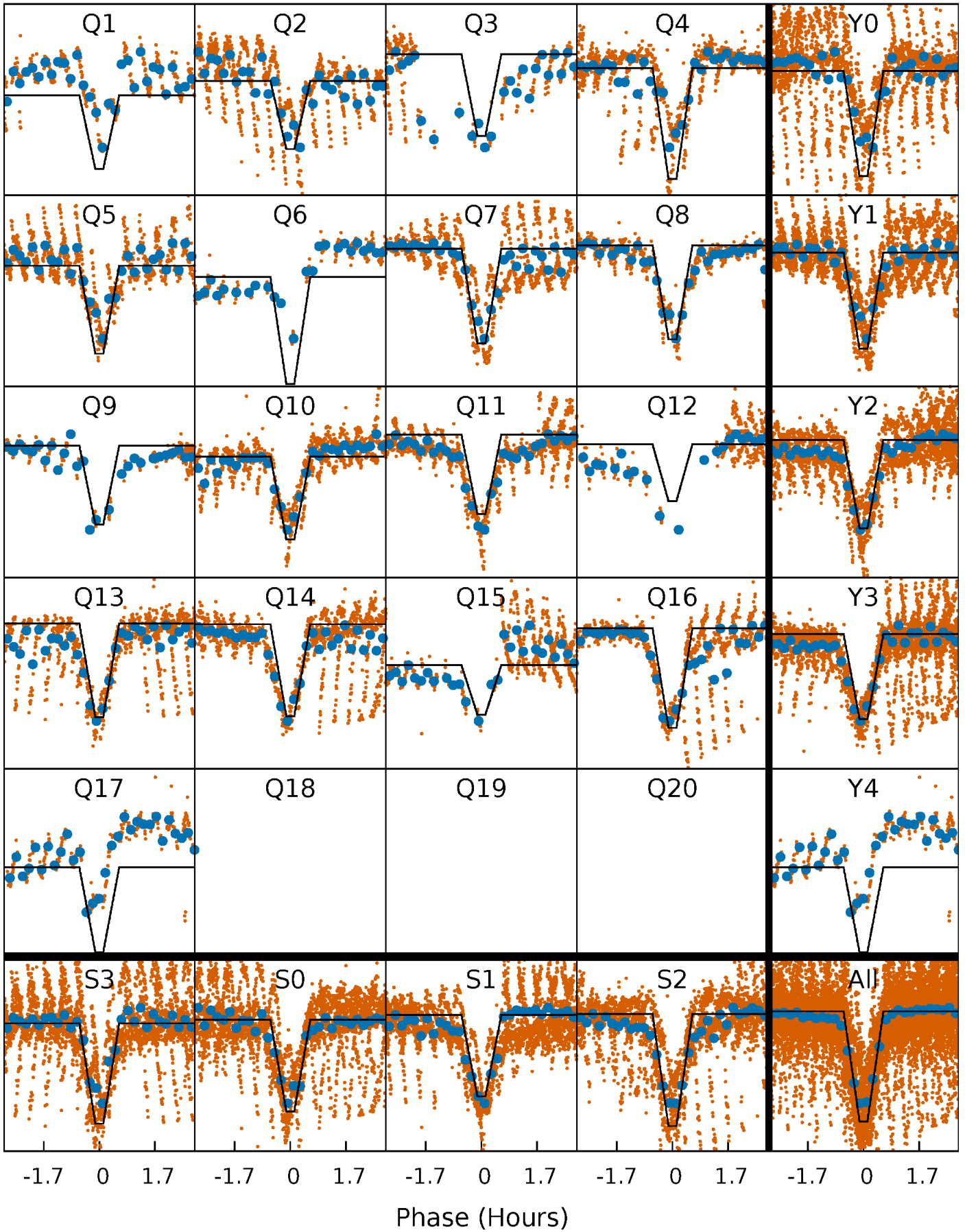
DV Quarter-Phased Transit Curves

TCE 008669092-03 $P = 0.500468$ Days $T_0 = 131.795555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

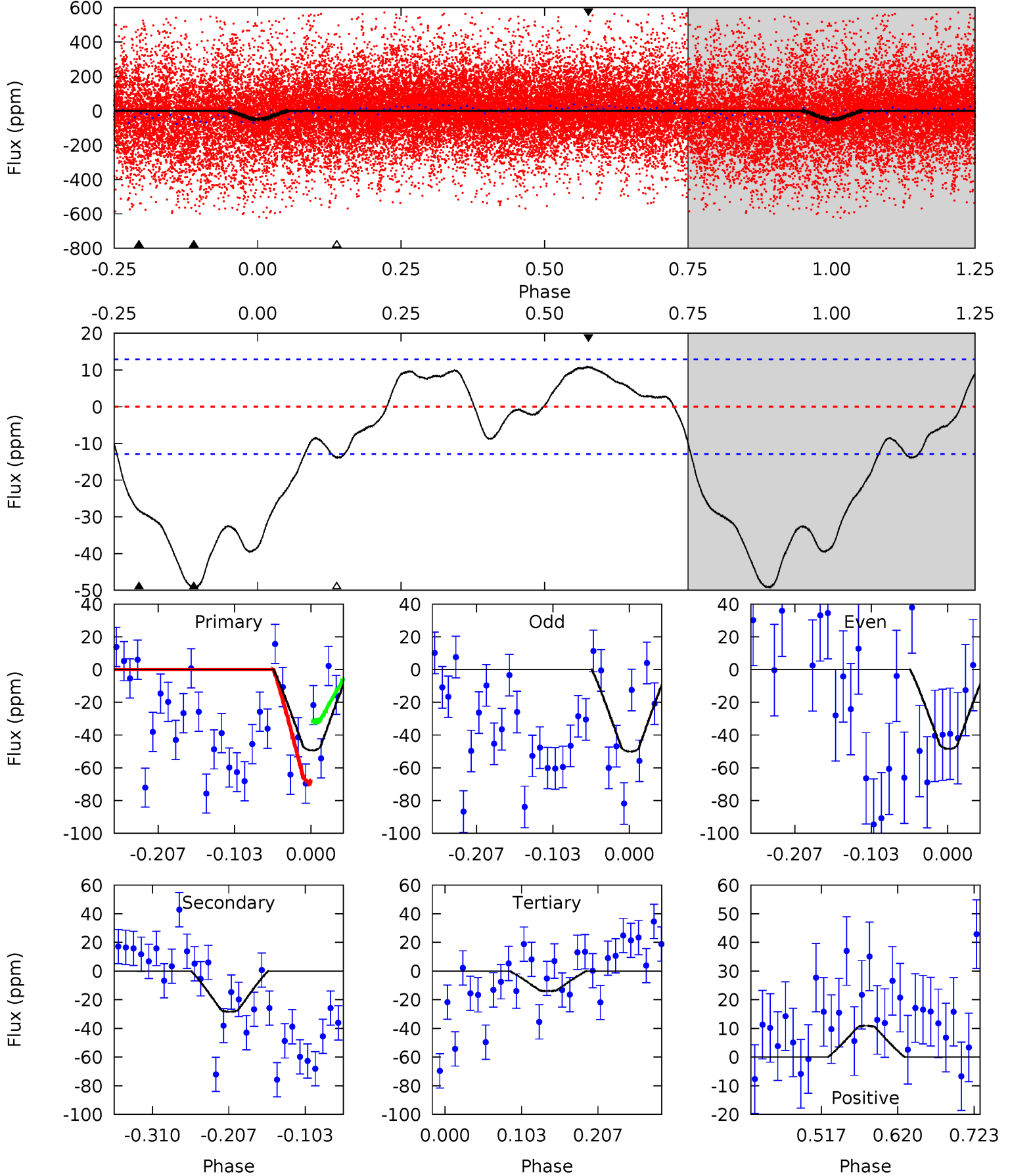
TCE 008669092-03 P= 0.500424 Days $T_0=131.798304$ (BKJD)



DV Model-Shift Uniqueness Test

008669092-03, P = 0.500468 Days, E = 131.295087 Days

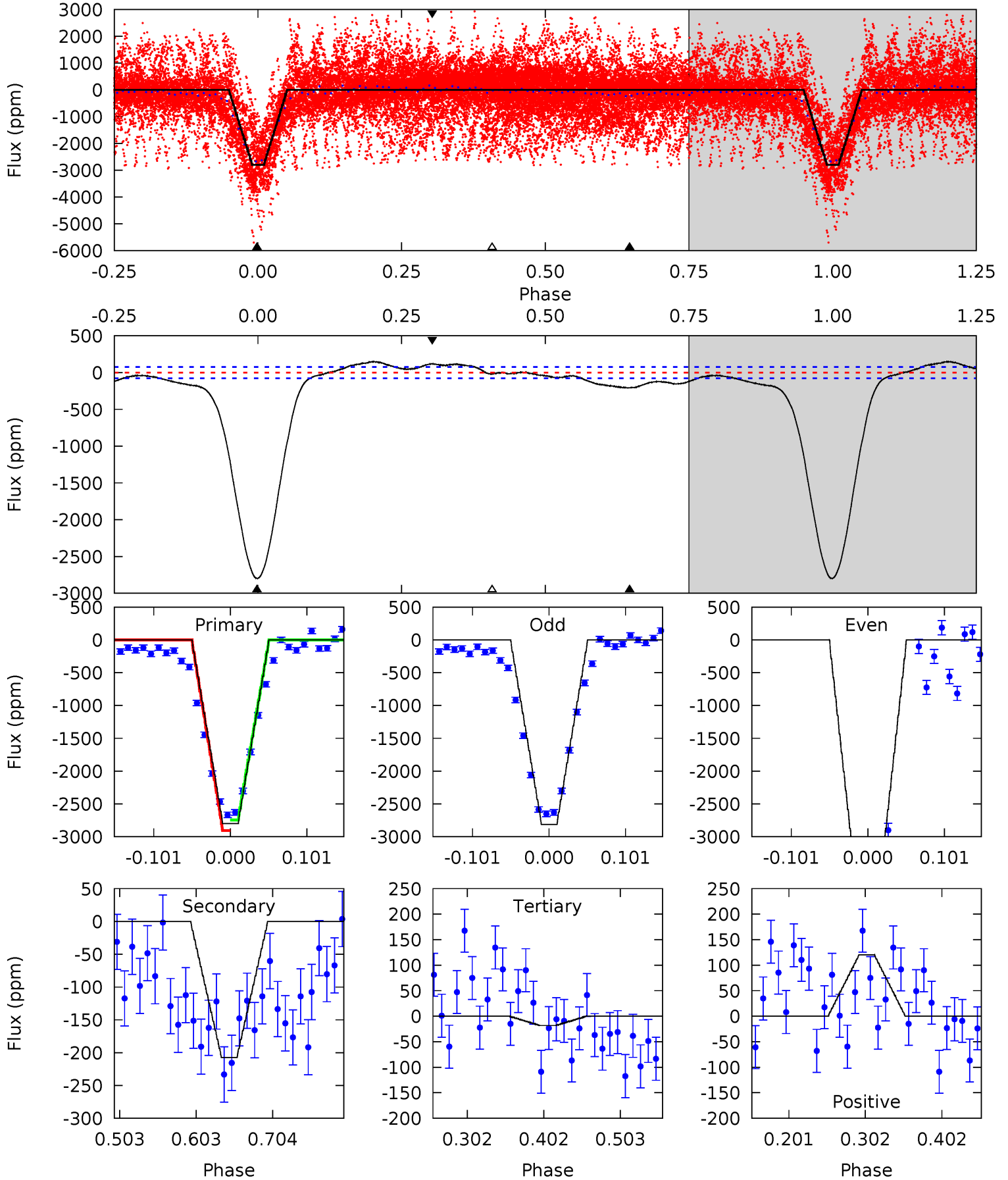
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	10.0	4.94	3.86	4.56	1.63	3.92	12.5	13.6	5.07	6.15	0.27	1.18	0.18	6.37



Alt Model-Shift Uniqueness Test

008669092-03, P = 0.500424 Days, E = 131.297880 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
167.2	12.4	1.09	7.18	4.56	1.64	4.79	166.1	160.1	11.3	5.22	5.44	0.95	0.05	4.92



Stellar Parameters For KIC 008669092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6287^{+170}_{-189}	$3.558^{+0.353}_{-0.118}$	$-0.820^{+0.350}_{-0.300}$	$3.177^{+0.588}_{-1.372}$	$1.328^{+0.159}_{-0.345}$	$0.058^{+0.160}_{-0.020}$
	+3%/-3%	+10%/-3%	+43%/-37%	+19%/-43%	+12%/-26%	+274%/-35%
Source	PHO1	FLK73	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 008669092-03 / KOI 0068.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 3	$3.21^{+0.83}_{-0.81}$	5848^{+362}_{-591}	-3164^{+7313}_{-1075}	$0.275^{+0.201}_{-0.102}$
Alt.	-207 ± 17	$18.69^{+2.59}_{-4.24}$	5794^{+444}_{-570}	-4636^{+454}_{-341}	$0.061^{+0.032}_{-0.014}$

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

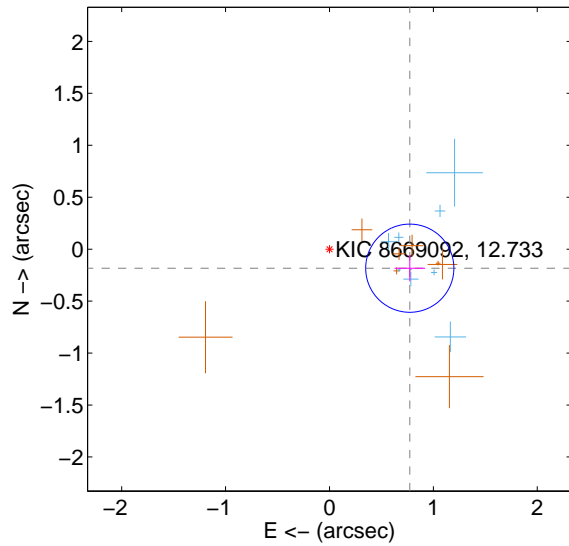
Supplemental centroid analysis for 008669092-03. Kepler magnitude: 12.73. Transit SNR 14.44

There are 9 quarters with good PRF difference image offsets

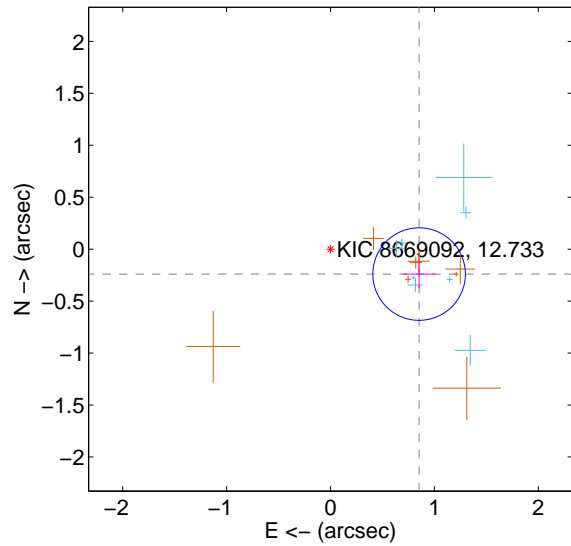
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.794 ± 0.141	5.62	-0.773 ± 0.148	-0.183 ± 0.127
PRF-fit source offset from KIC position	0.886 ± 0.148	5.97	-0.853 ± 0.155	-0.240 ± 0.135
photometric centroid source offset	0.49 ± 0.48	1.02	-0.48 ± 0.49	-0.10 ± 0.32

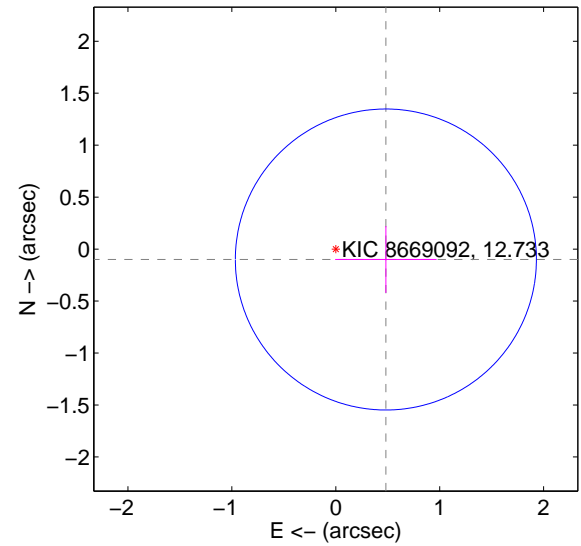
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

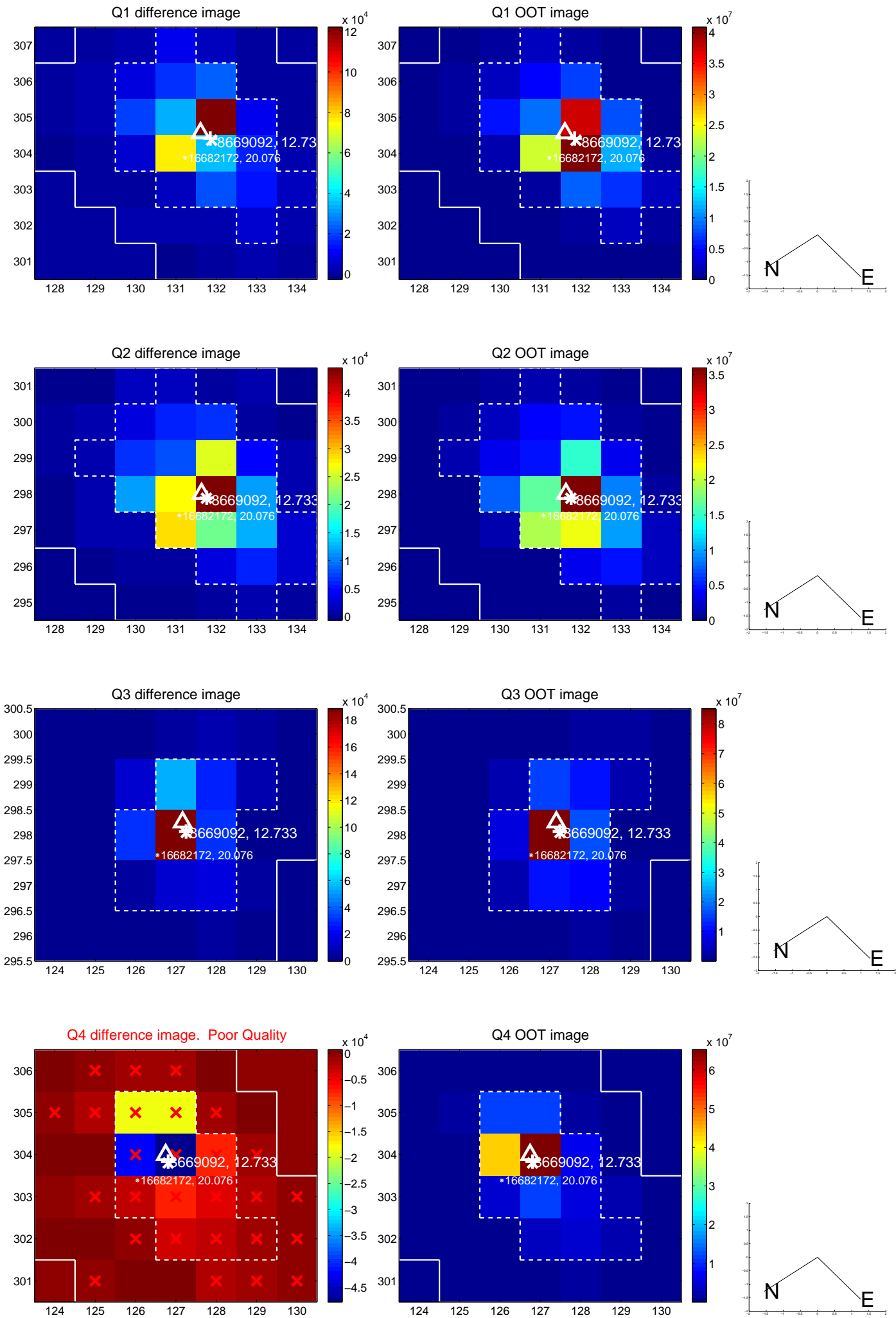


offset from photometric centroids

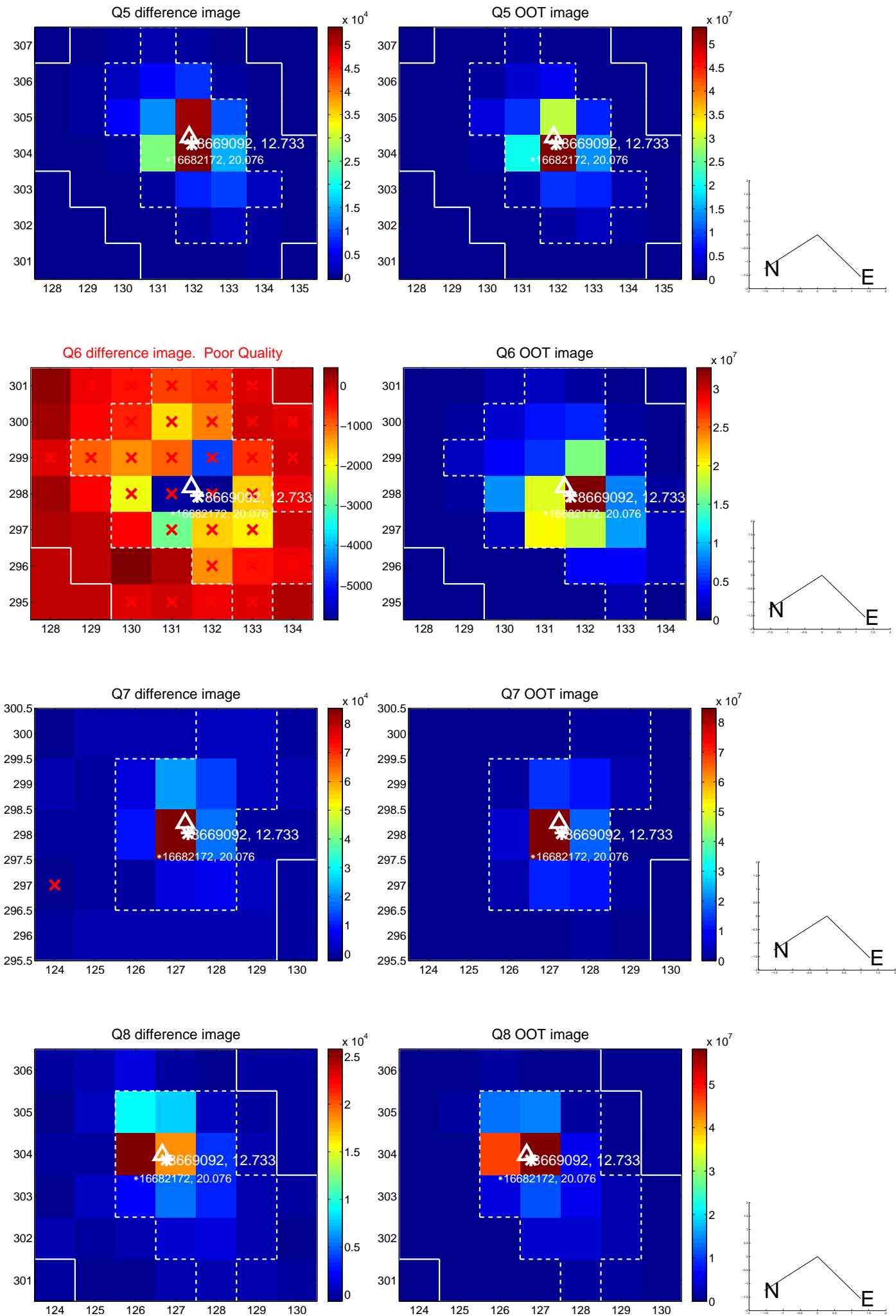


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

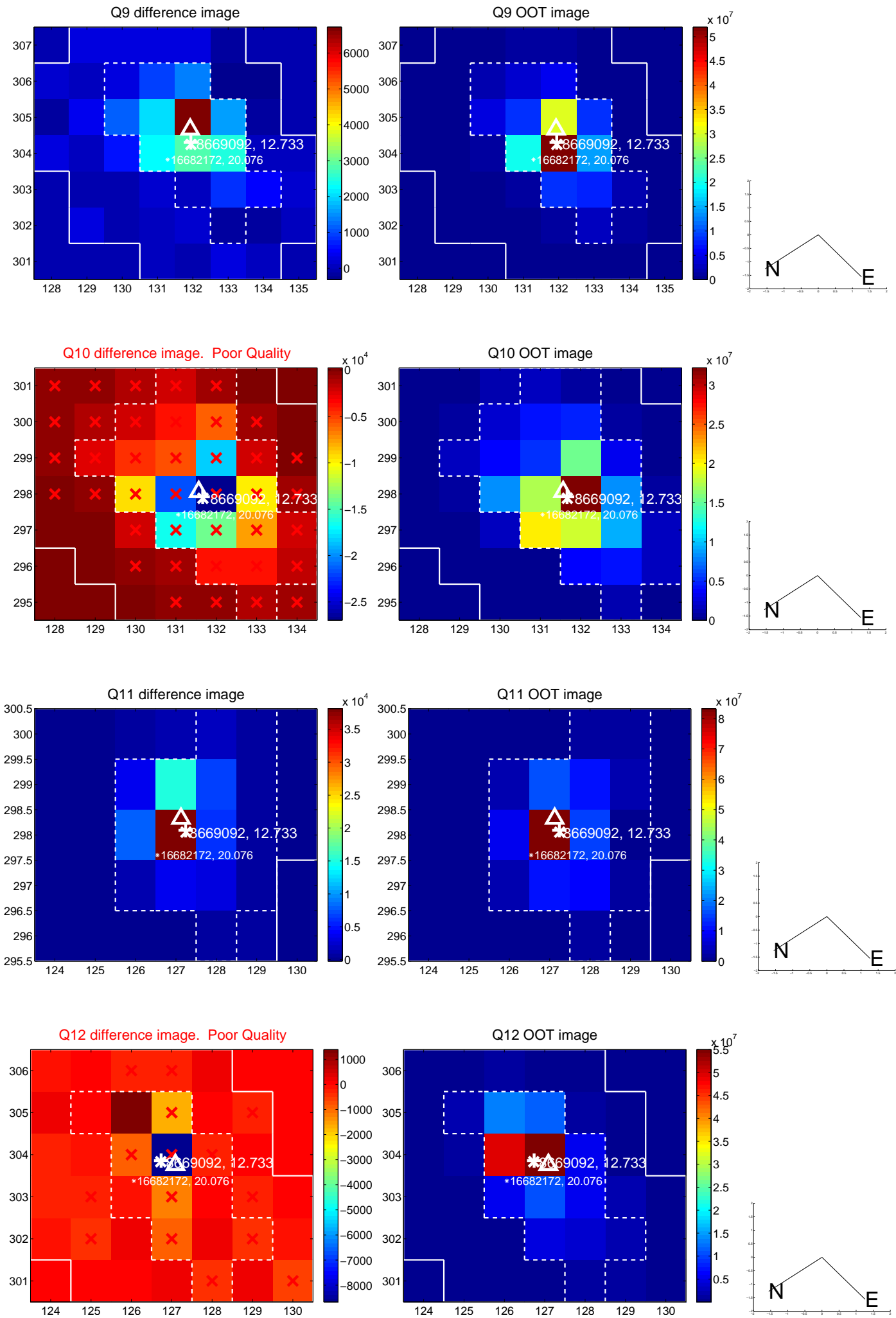
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



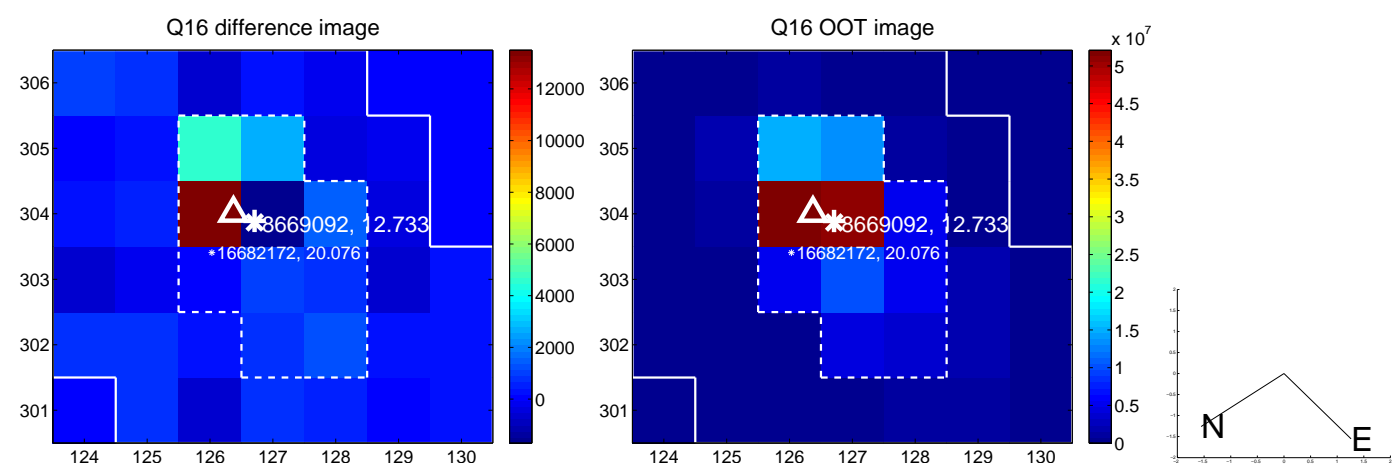
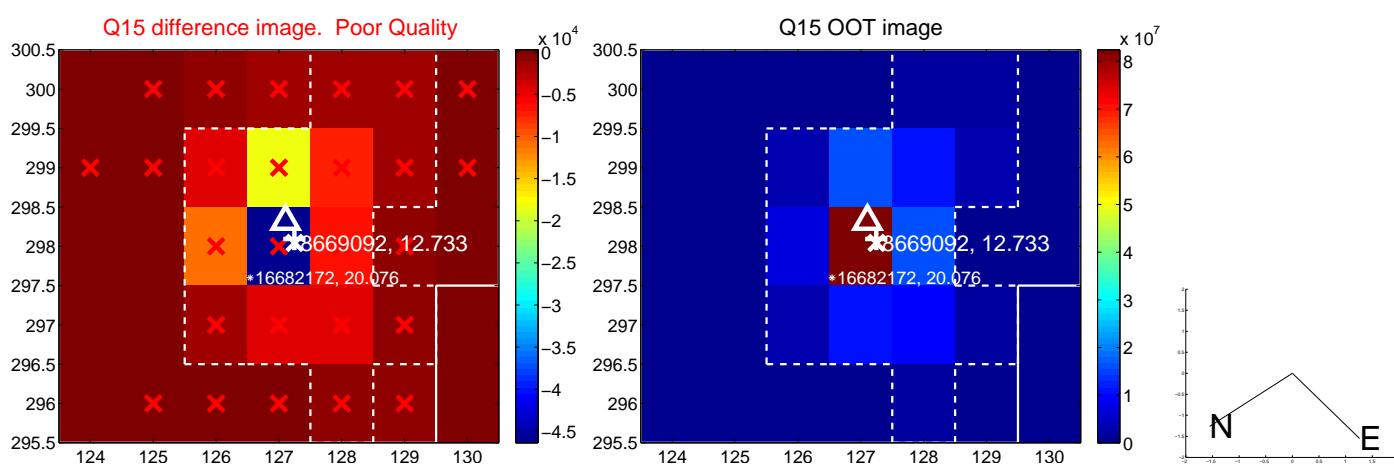
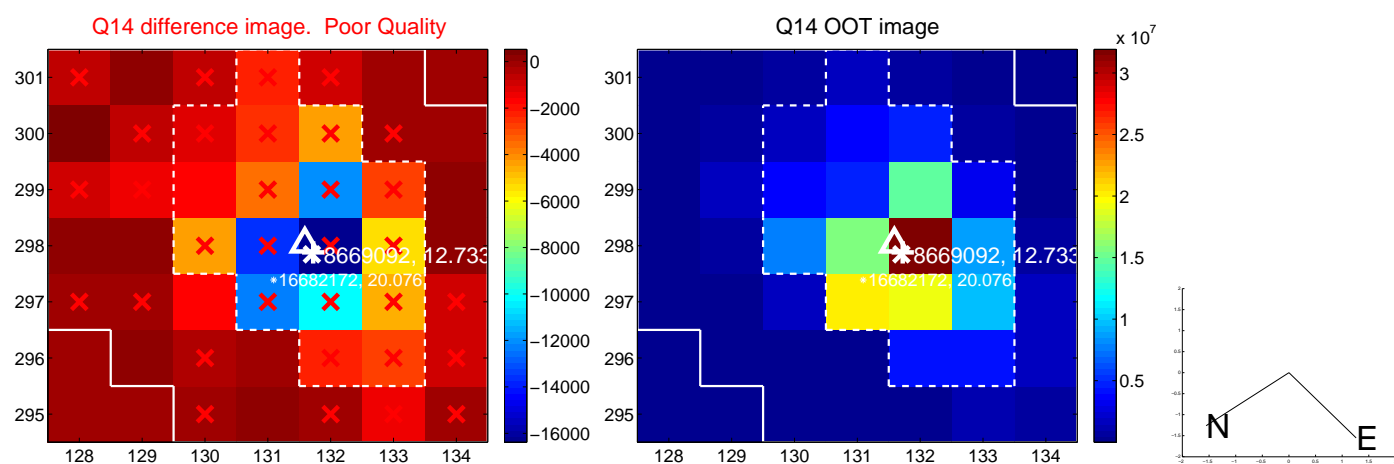
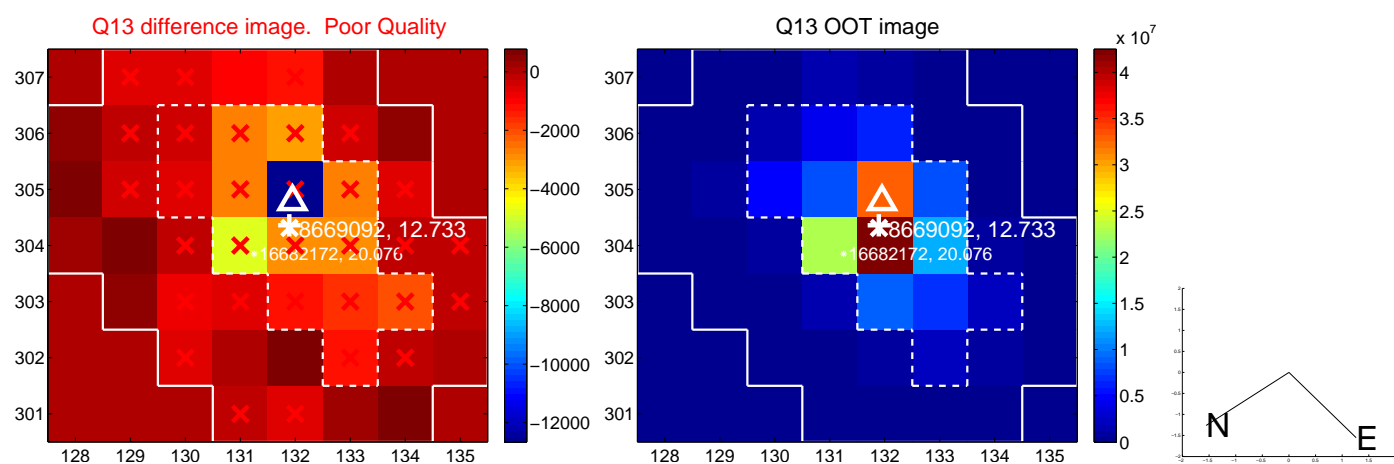
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



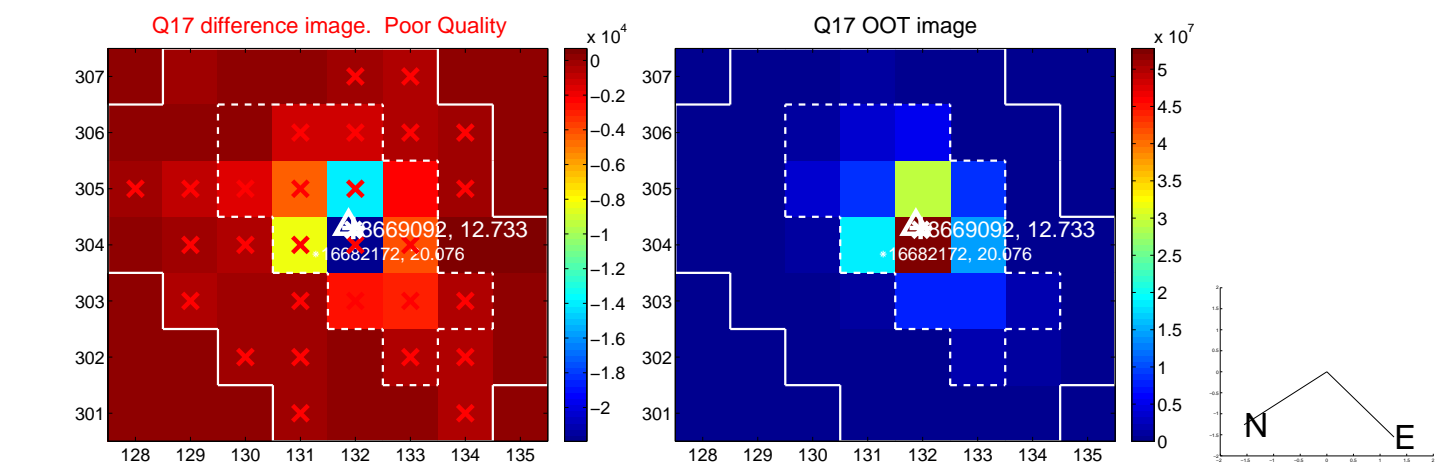
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



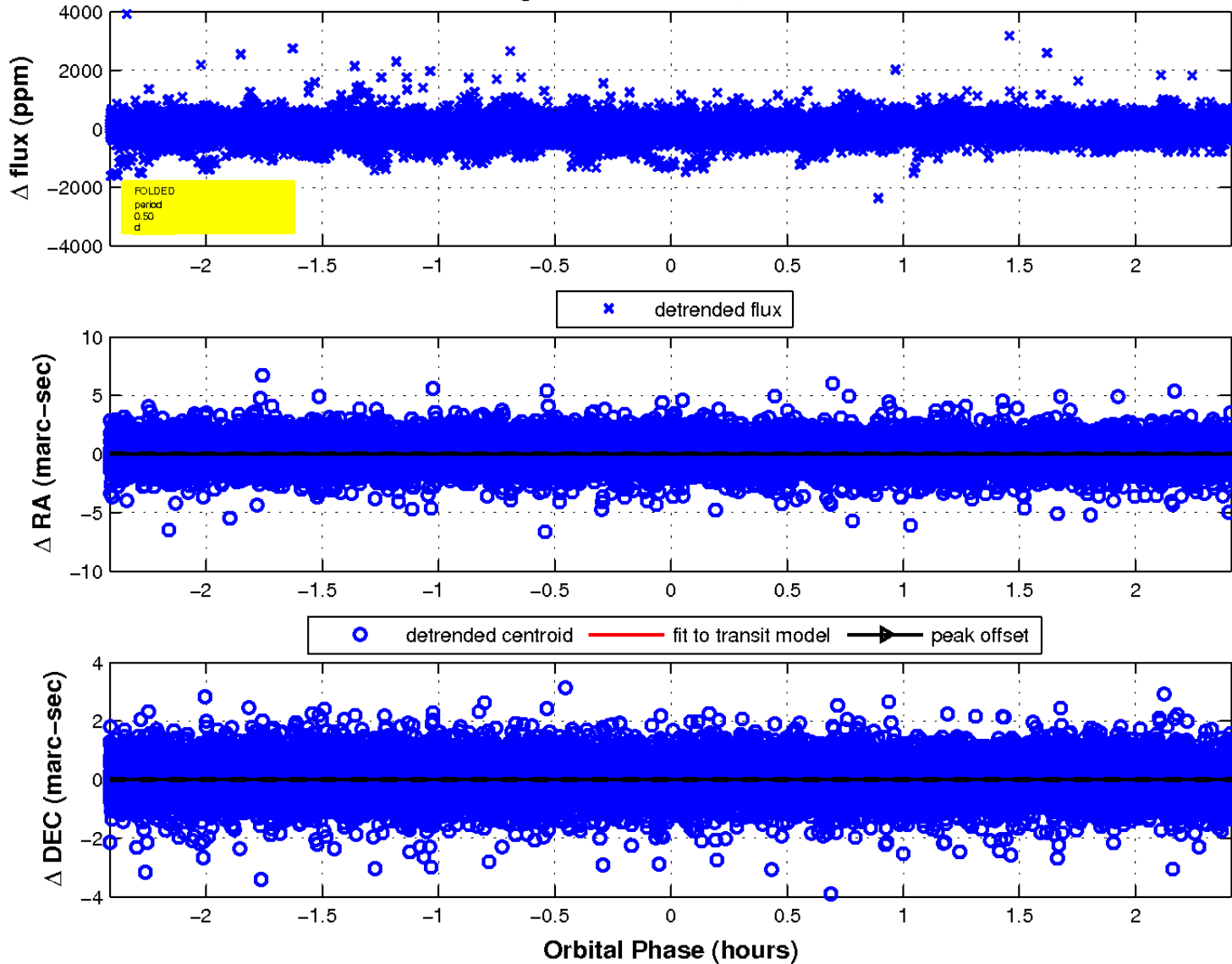
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

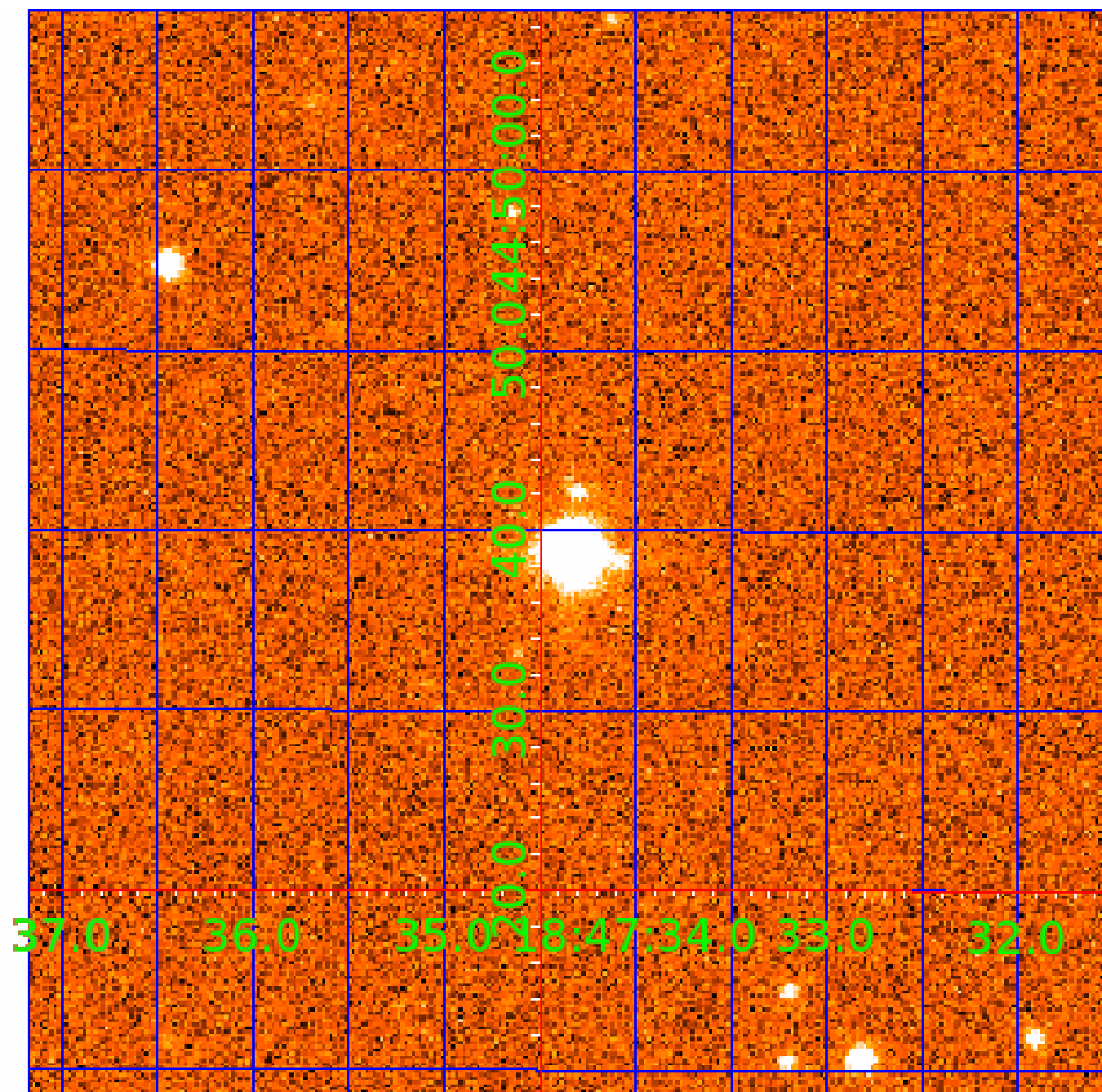


fluxWeightedCentroids, Planet 3 of 4



UKIRT Image

Declination



KIC 008669092

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})
008669092-01	OBS	No	1.000707	131.871610	1873.7	2.000	42.6	-1.0	3.18	6287	13.85	30451.16
008669092-02	OBS	No	0.997343	131.864136	0.0	2.311	16.0	0.0	3.18	6287	0.01	30588.18
008669092-03	OBS	0068.01	0.500468	131.795555	80.9	0.804	10.9	14.4	3.18	6287	3.39	0.00
008669092-04	OBS	No	0.995480	132.110378	161.7	3.500	9.6	-1.0	3.18	6287	4.06	30664.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008669092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008669092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008669092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
008669092-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

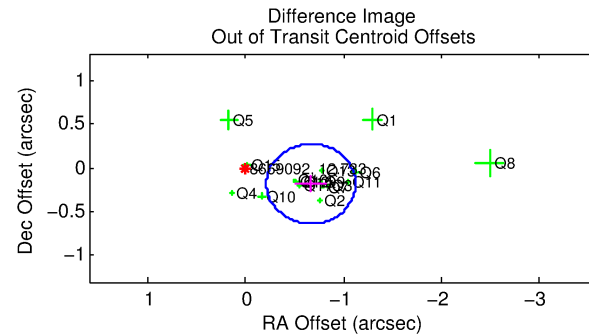
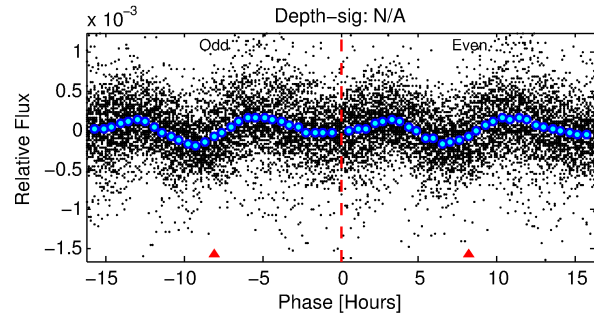
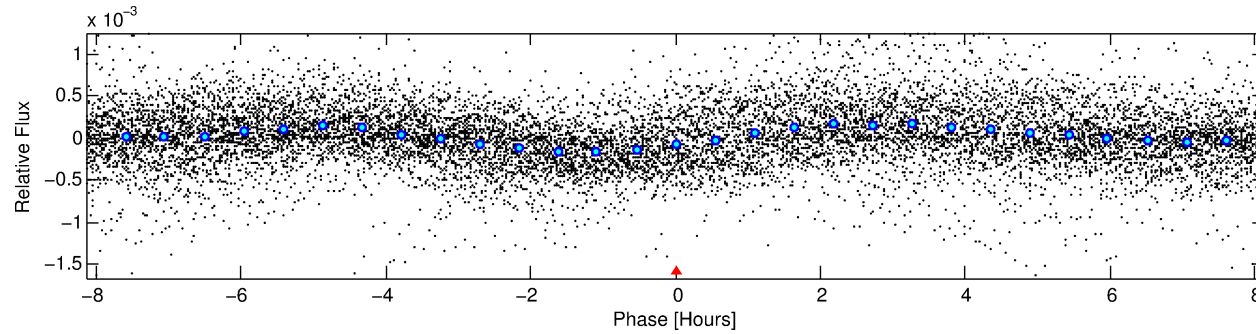
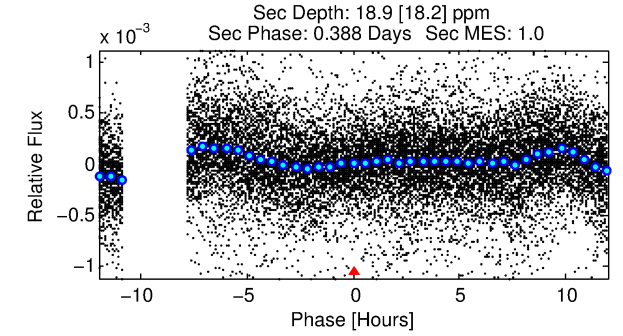
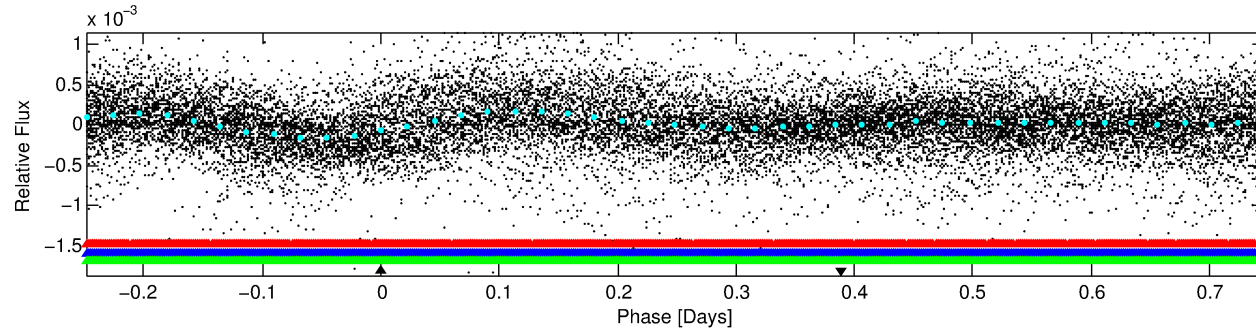
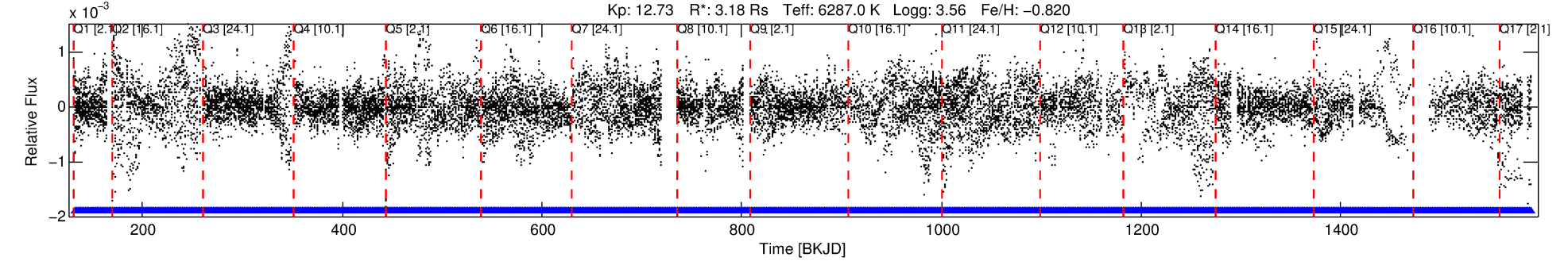
Ephemeris Match Information For 008669092-04

No Significant Match Found

DV One-Page Summary

KIC: 8669092 Candidate: 4 of 4 Period: 0.995 d
KOI: K00068 Corr: No Ephemeris Match

Kp: 12.73 R*: 3.18 Rs Teff: 6287.0 K Logg: 3.56 Fe/H: -0.820



TPS TCE Results:

Period = 0.99548 d
Epoch = 132.1104 BKJD

DV fit results are unavailable

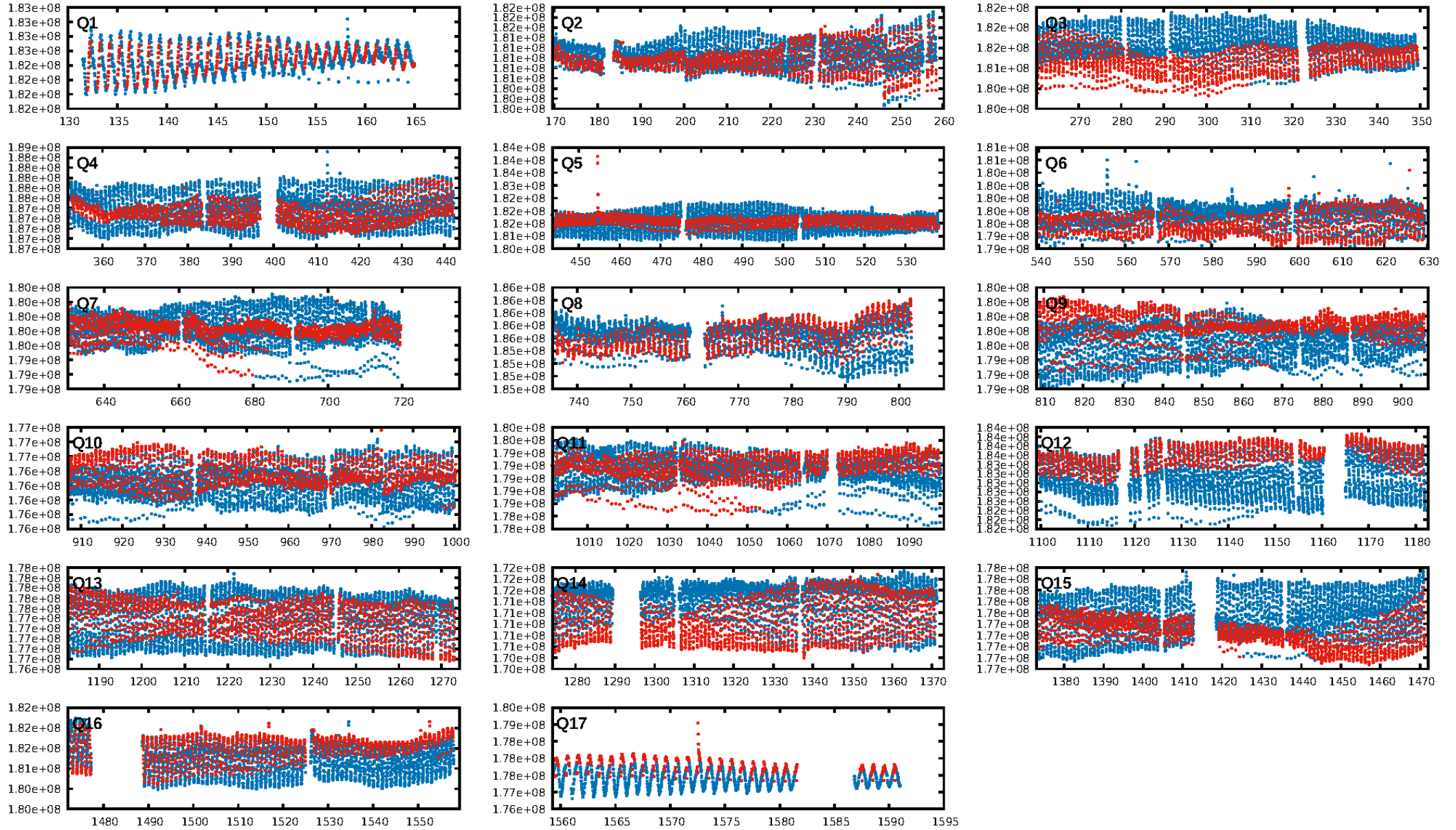
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.31 σ]
LongPeriod-sig: 0.9% [0.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [573/573]
GhostDiagnostic-chr: 7.878
Centroid-sig: 2.6%
Centroid-so: 0.143 arcsec [1.53 σ]
OotOffset-rm: 0.693 arcsec [4.57 σ]
KicOffset-rm: 0.811 arcsec [5.66 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 0.00 [0/17]

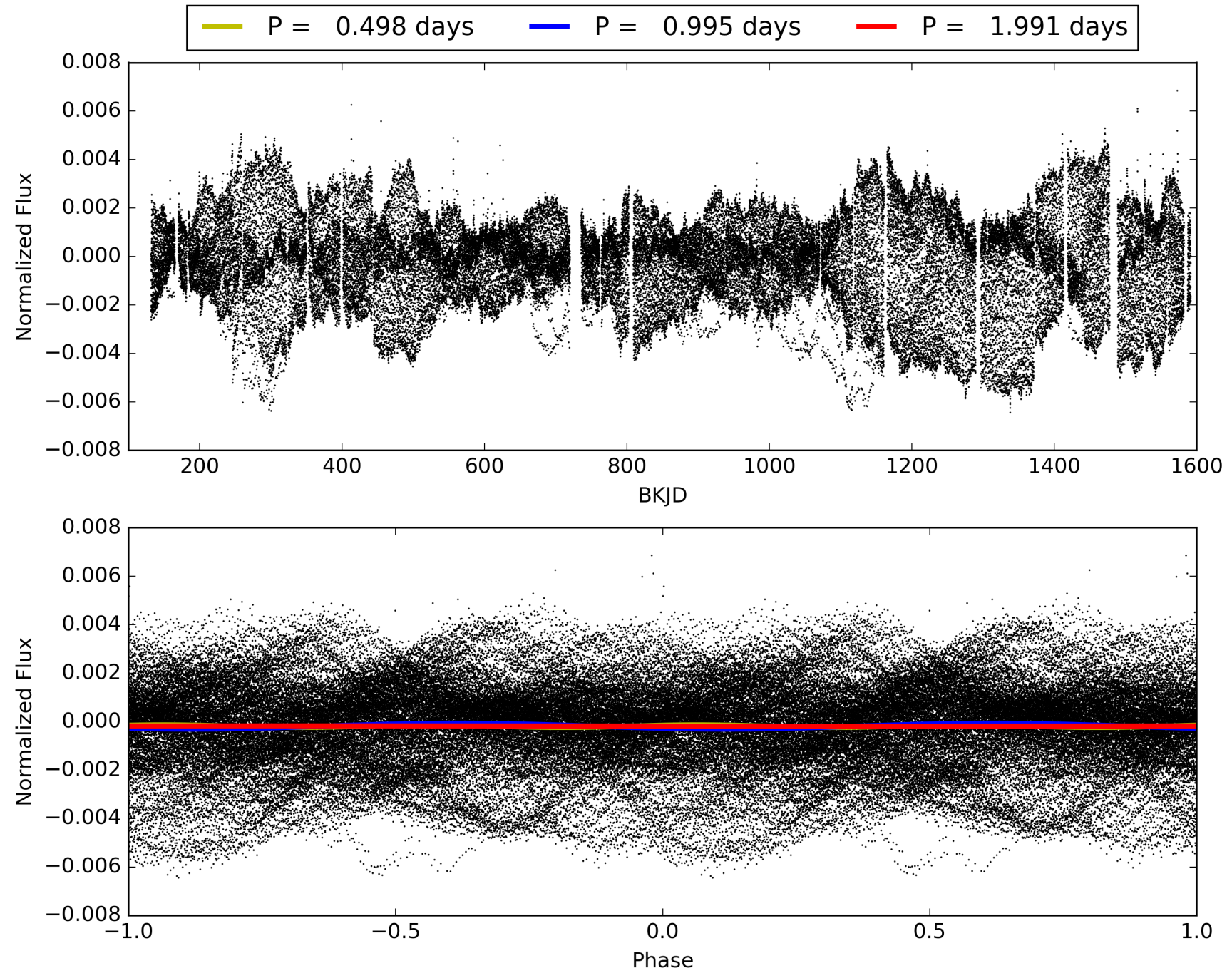
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:28:20 Z

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

TCE 008669092-04, PDC Light Curves

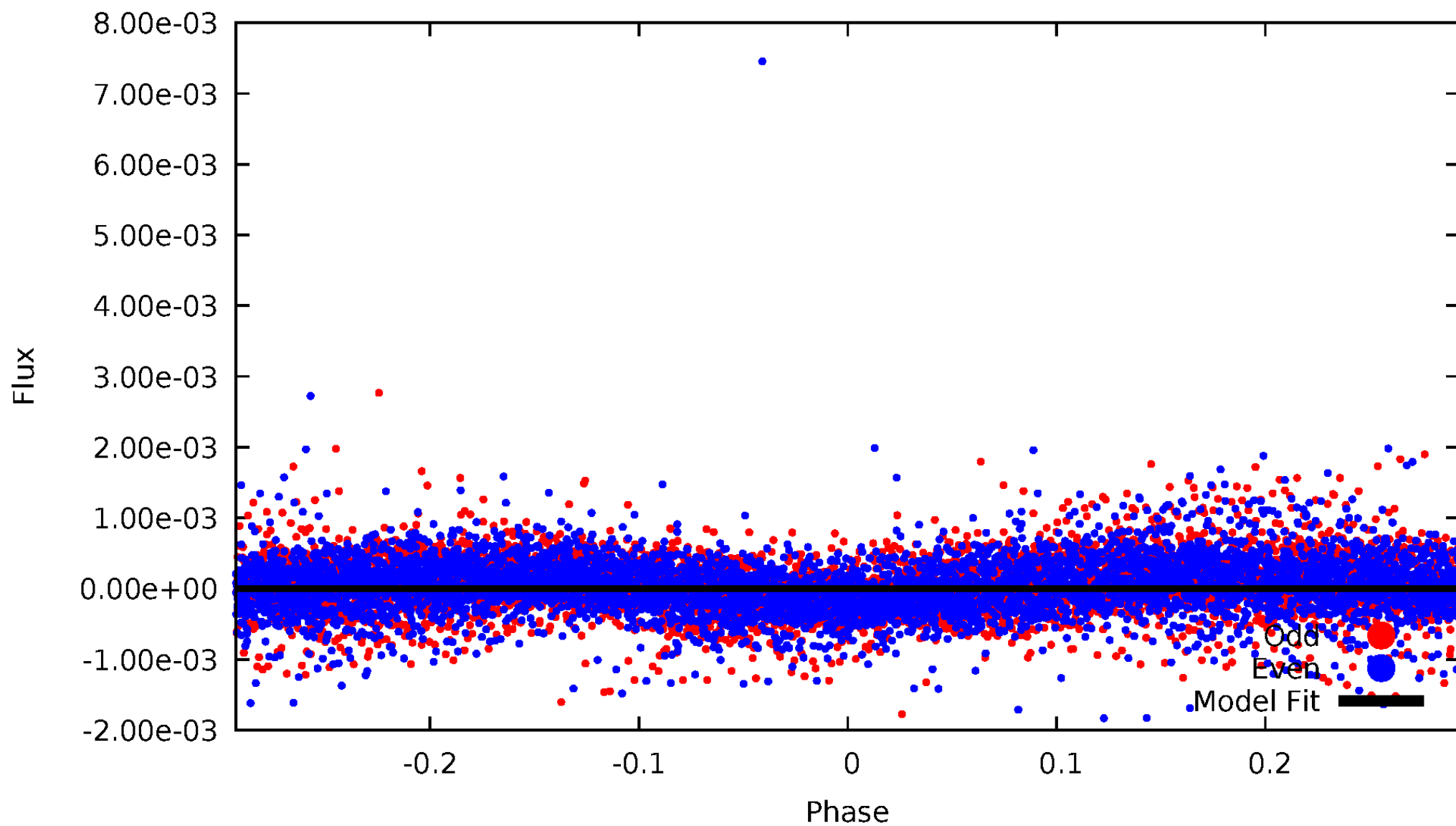


TCE 008669092-04



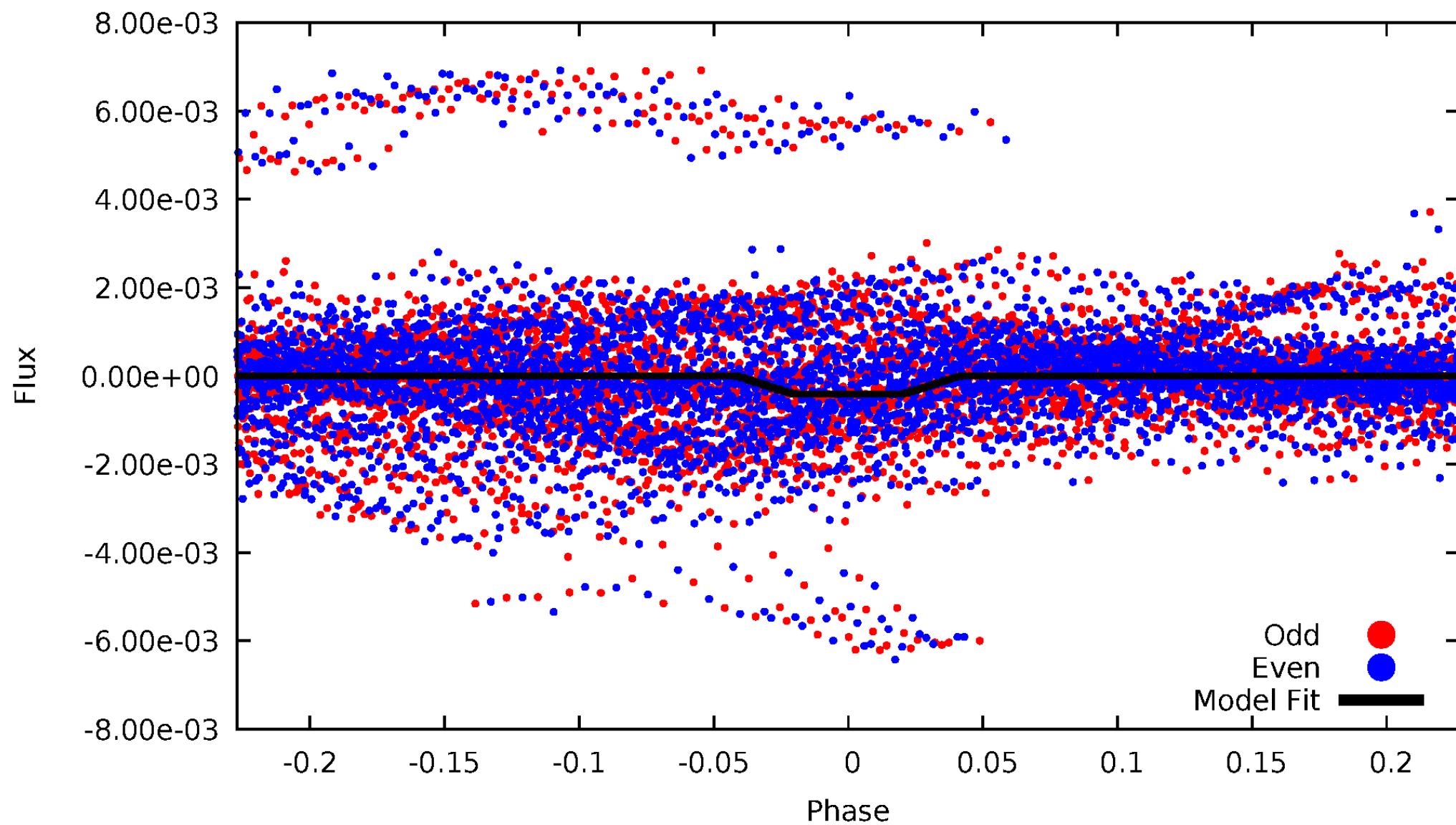
DV Odd/Even

TCE 008669092-04



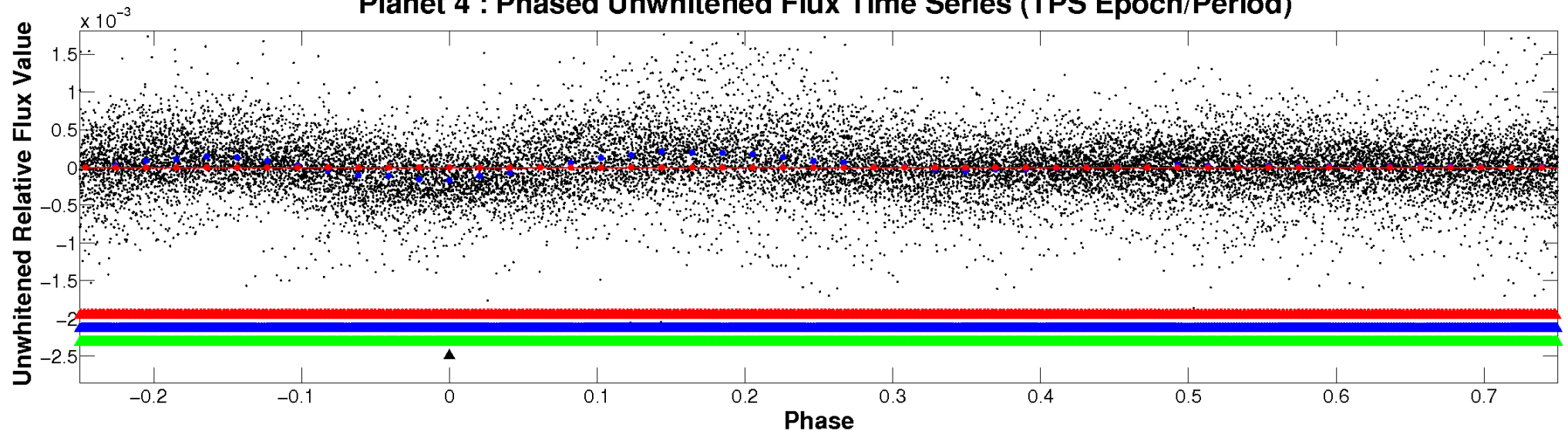
ALT Odd/Even

TCE 008669092-04

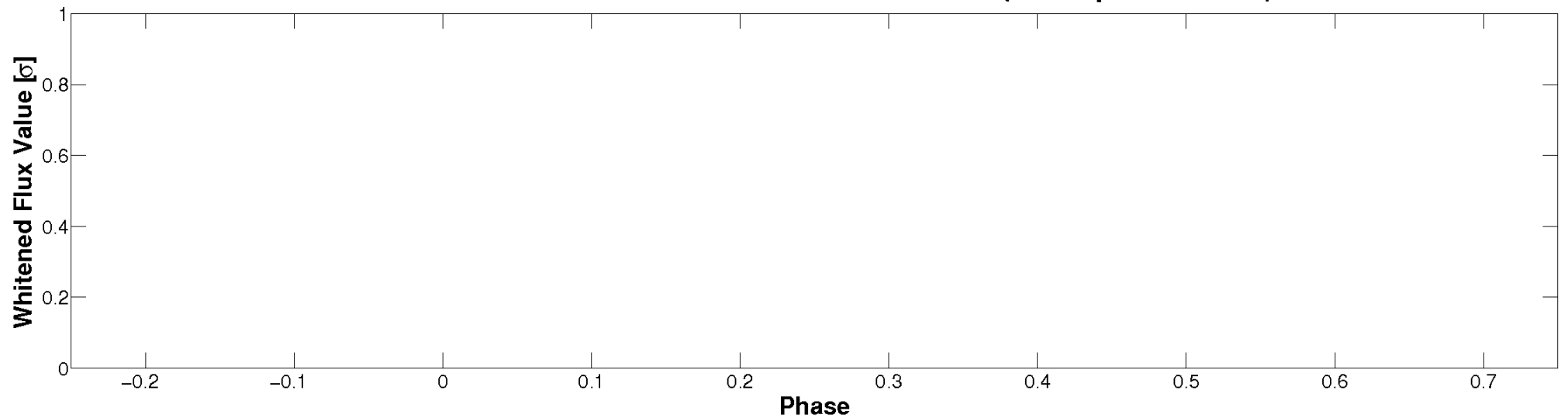


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

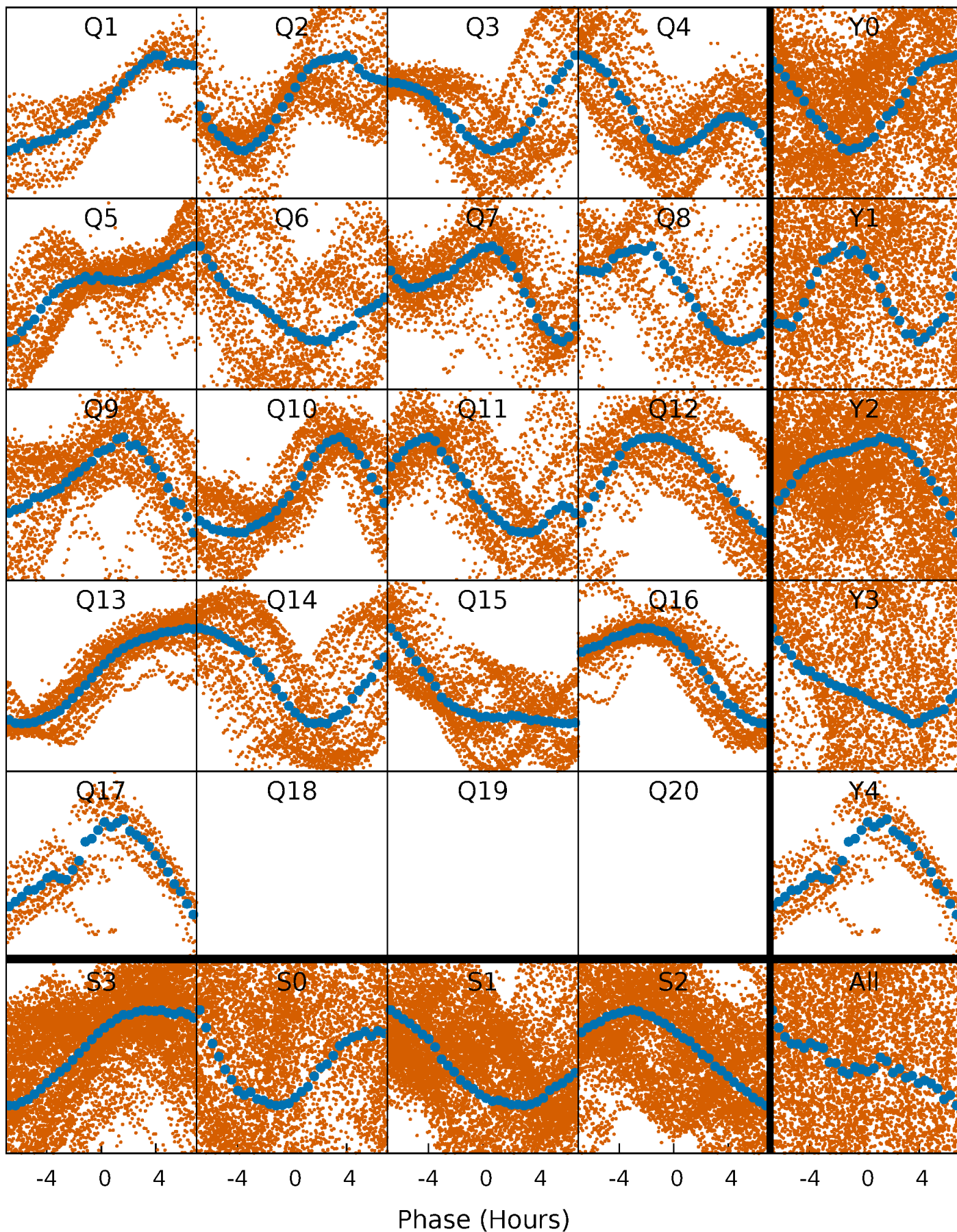


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



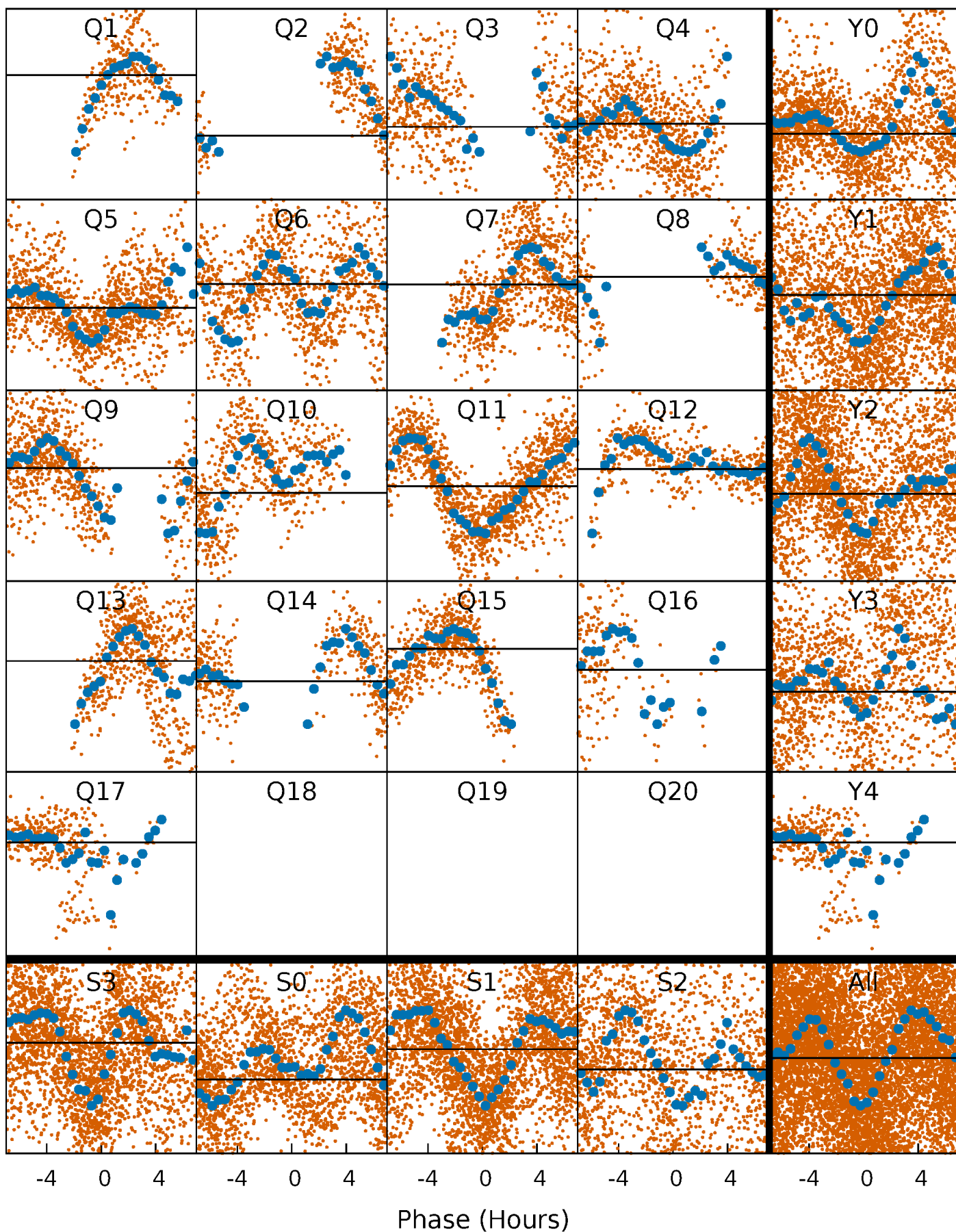
PDC Quarter-Phased Transit Curves

TCE 008669092-04 P= 0.995480 Days $T_0=132.110378$ (BKJD)



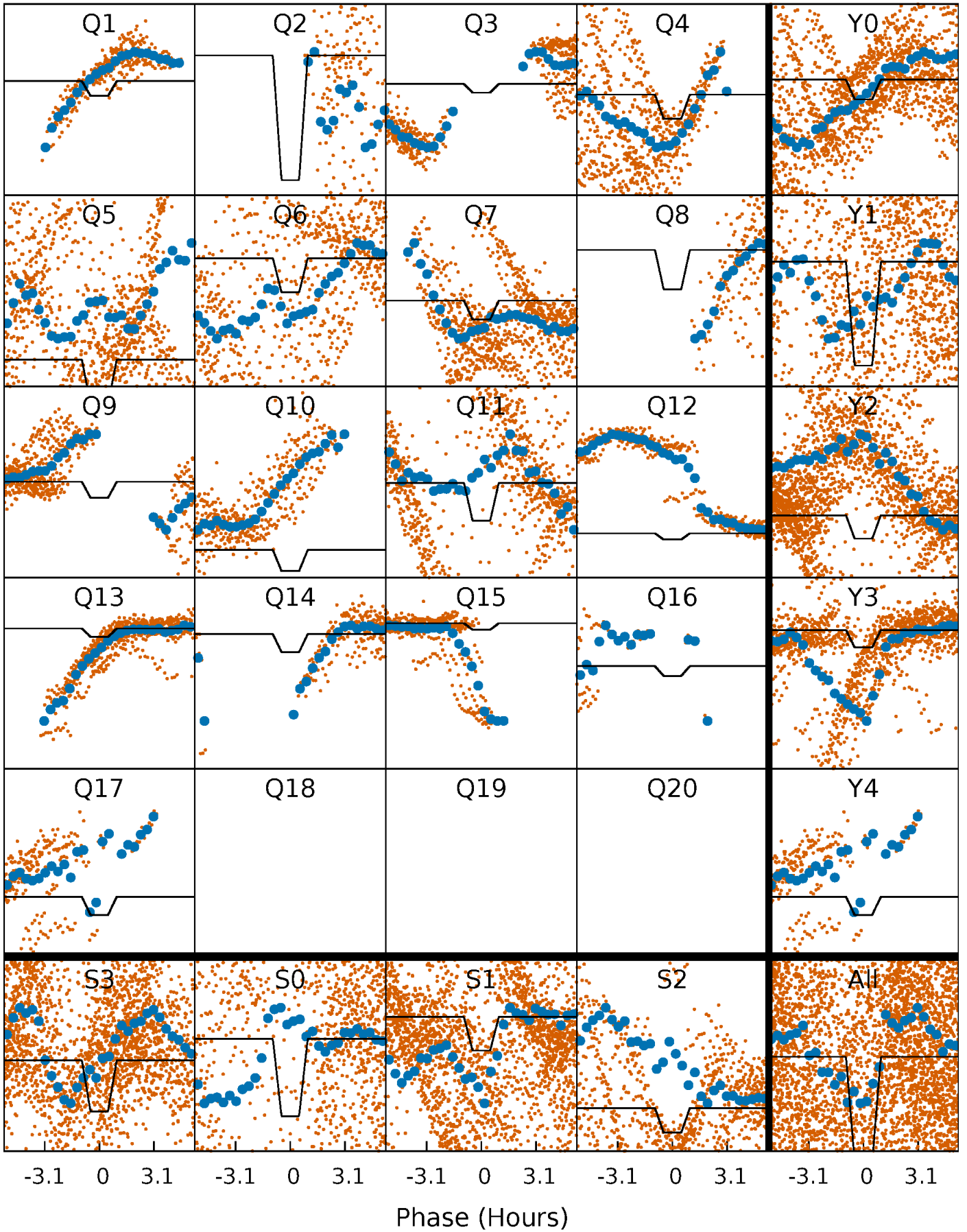
DV Quarter-Phased Transit Curves

TCE 008669092-04 P= 0.995480 Days $T_0=132.110378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

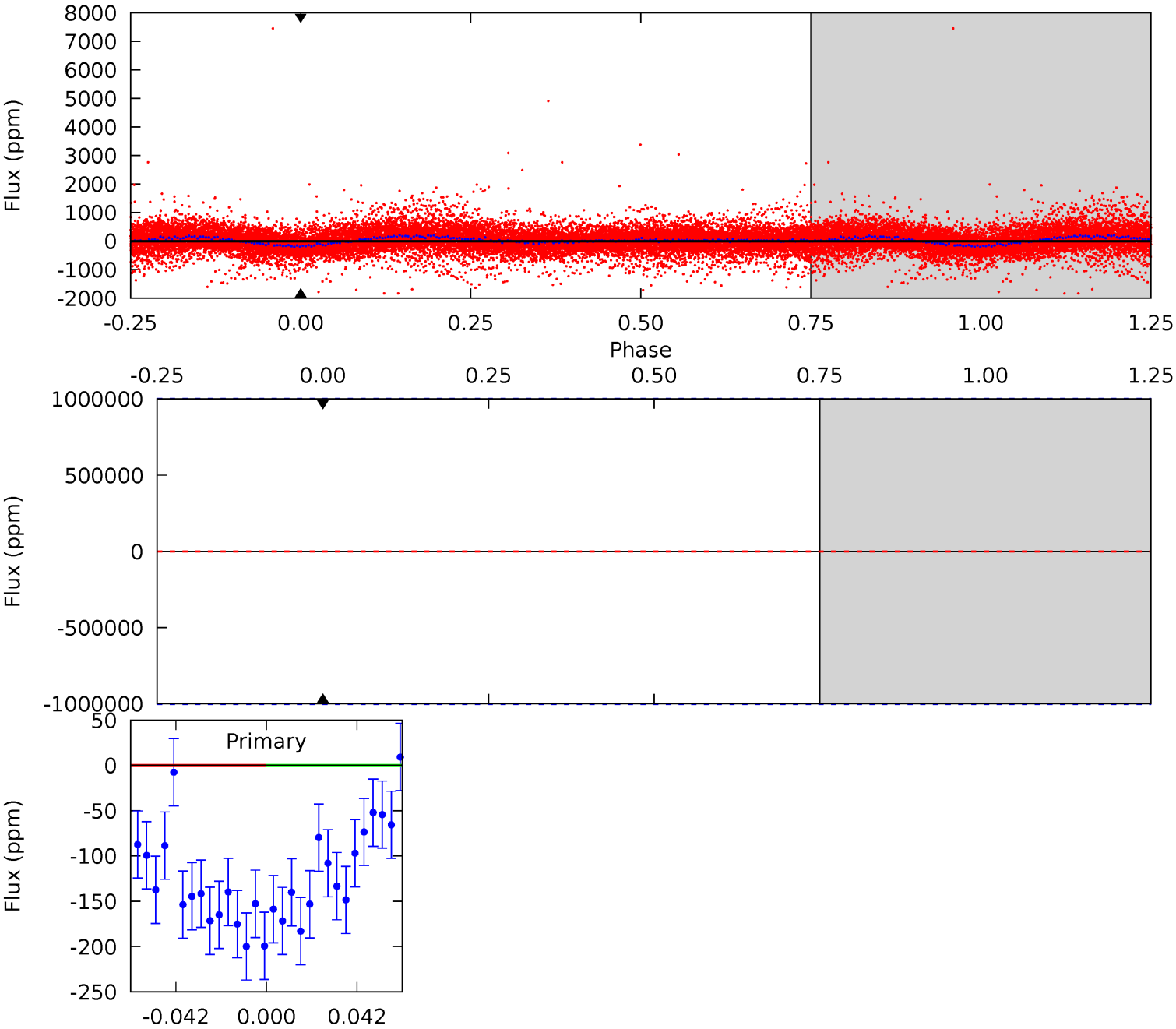
TCE 008669092-04 $P = 0.995480$ Days $T_0 = 132.158728$ (BKJD)



DV Model-Shift Uniqueness Test

008669092-04, P = 0.995480 Days, E = 131.114898 Days

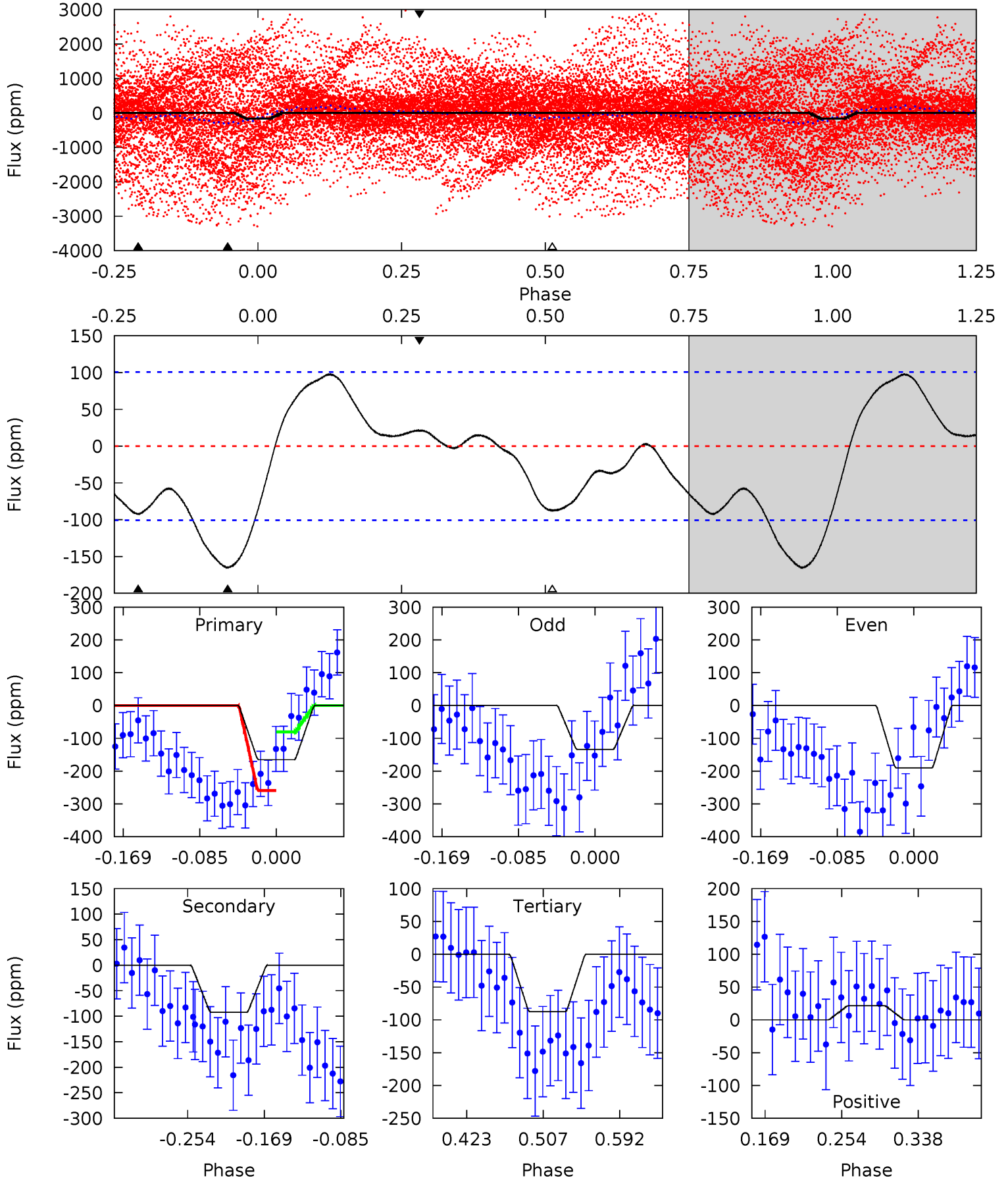
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008669092-04, P = 0.995480 Days, E = 131.163248 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	4.21	4.00	0.98	4.60	1.72	2.20	3.55	6.56	0.22	3.23	1.27	0.79	0.37	3.88



Stellar Parameters For KIC 008669092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6287^{+170}_{-189}	$3.558^{+0.353}_{-0.118}$	$-0.820^{+0.350}_{-0.300}$	$3.177^{+0.588}_{-1.372}$	$1.328^{+0.159}_{-0.345}$	$0.058^{+0.160}_{-0.020}$
	+3%/-3%	+10%/-3%	+43%/-37%	+19%/-43%	+12%/-26%	+274%/-35%
Source	PHO1	FLK73	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 008669092-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$24.58^{+25.29}_{-18.52}$	4650^{+284}_{-443}	-3322^{+34641}_{-19787}	$0.220^{+104.533}_{-67.853}$
Alt.	-92 ± 22	$23.51^{+24.81}_{-16.47}$	4611^{+331}_{-429}	-3870^{+7471}_{-308}	$0.040^{+0.430}_{-0.031}$

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 $A_{obs} \gg 1.0$

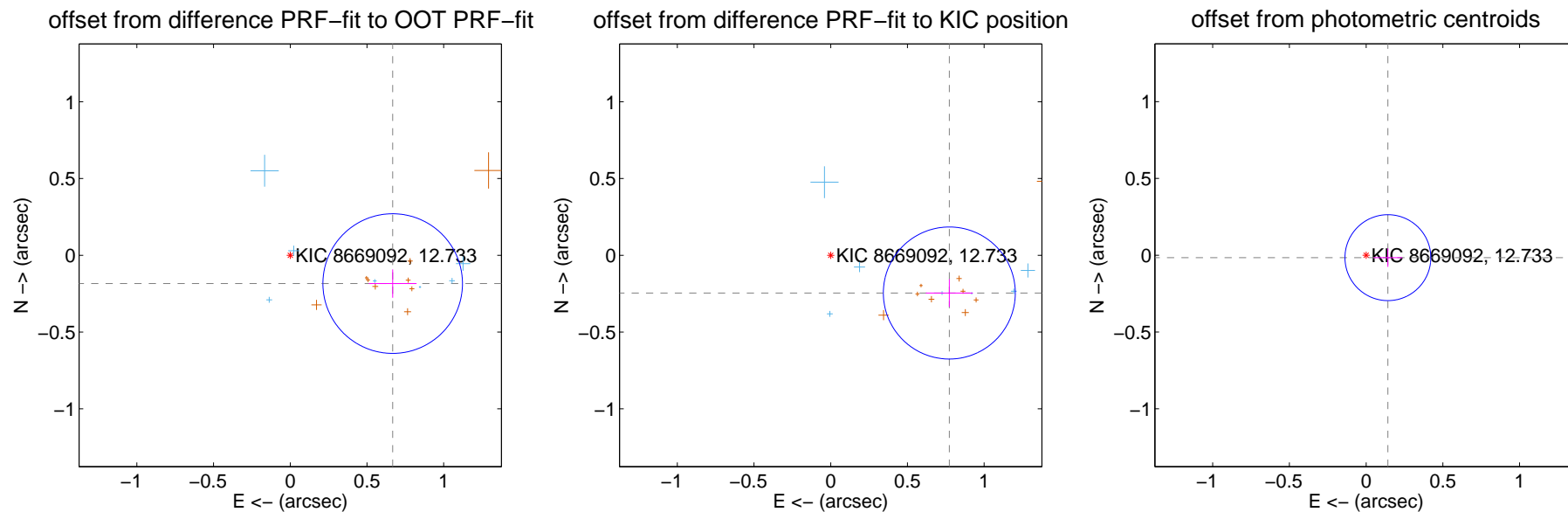
DV Centroid Data

Supplemental centroid analysis for 008669092-04. Kepler magnitude: 12.73. Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

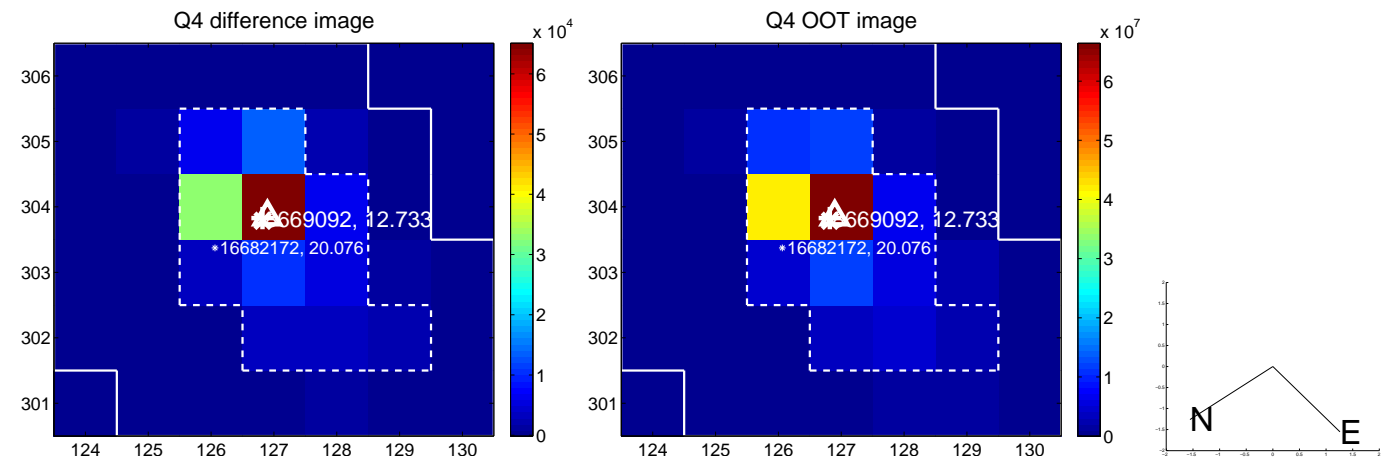
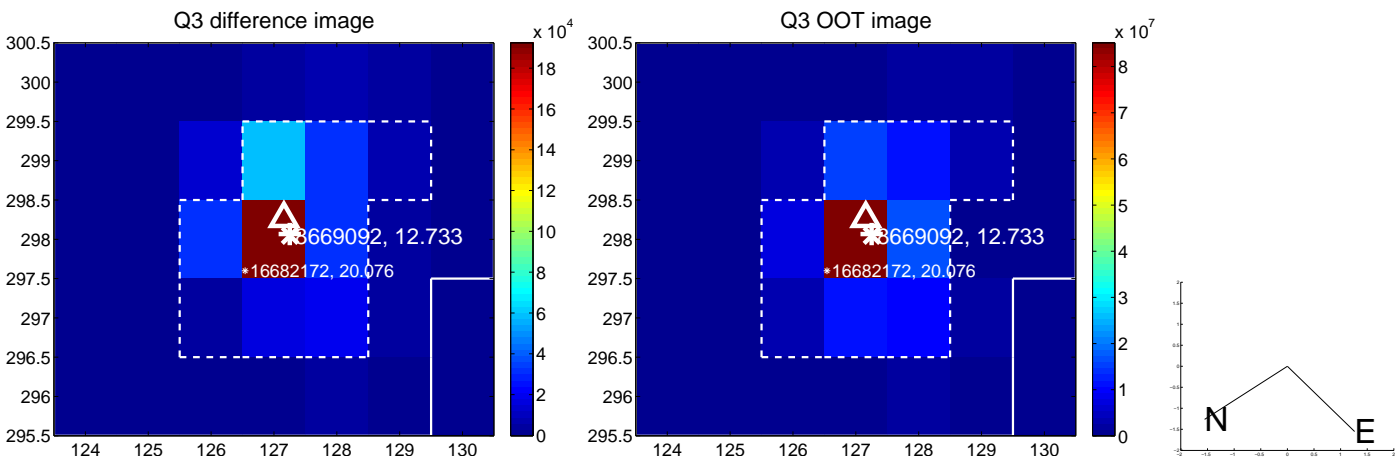
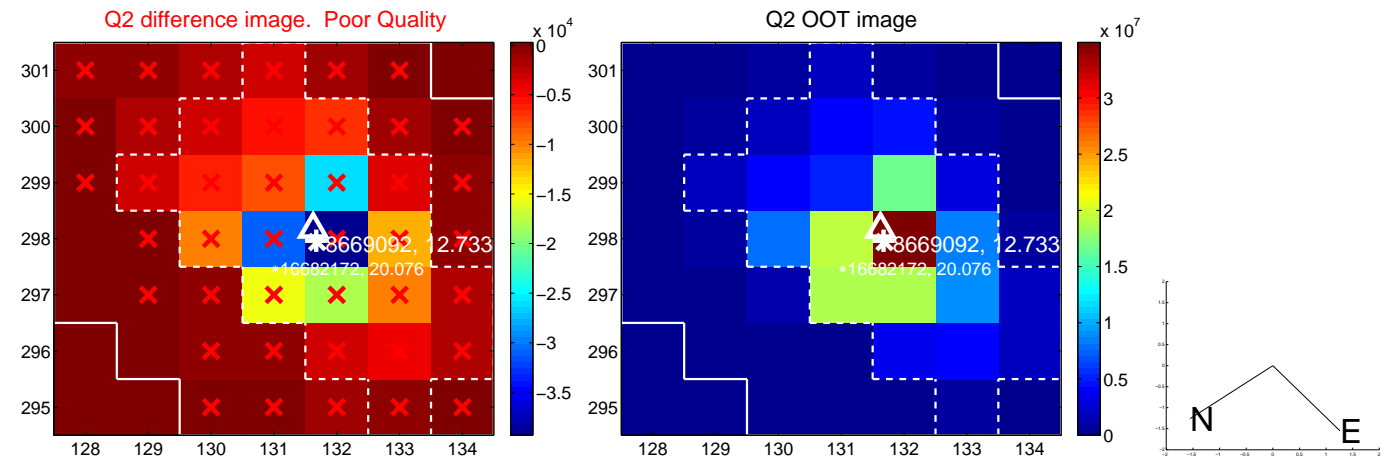
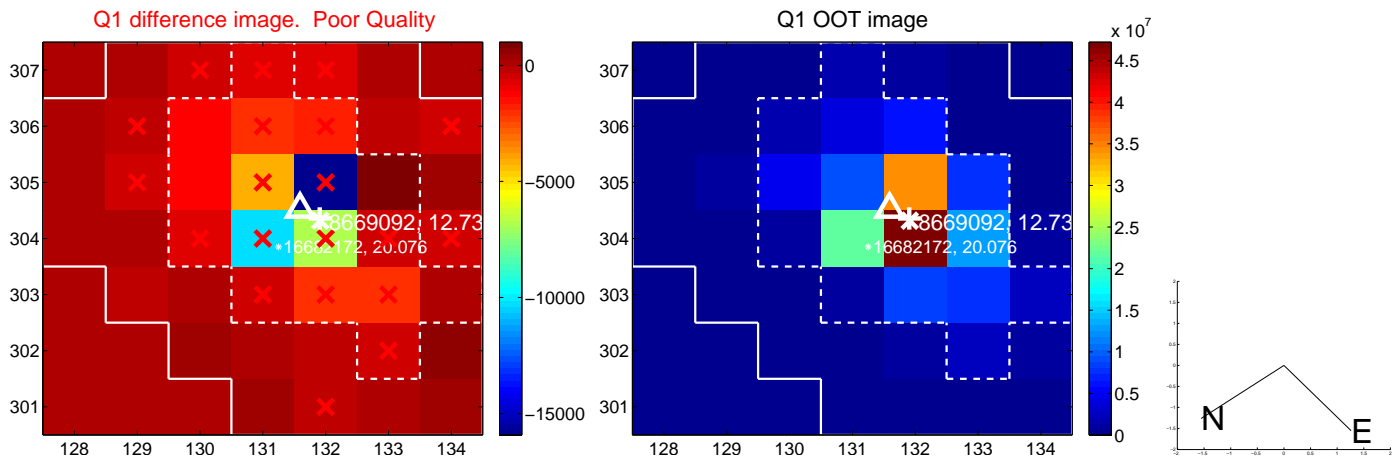
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.693 ± 0.152	4.57	-0.668 ± 0.156	-0.184 ± 0.092
PRF-fit source offset from KIC position	0.811 ± 0.143	5.66	-0.773 ± 0.153	-0.246 ± 0.090
photometric centroid source offset	0.14 ± 0.09	1.53	-0.14 ± 0.09	-0.02 ± 0.06

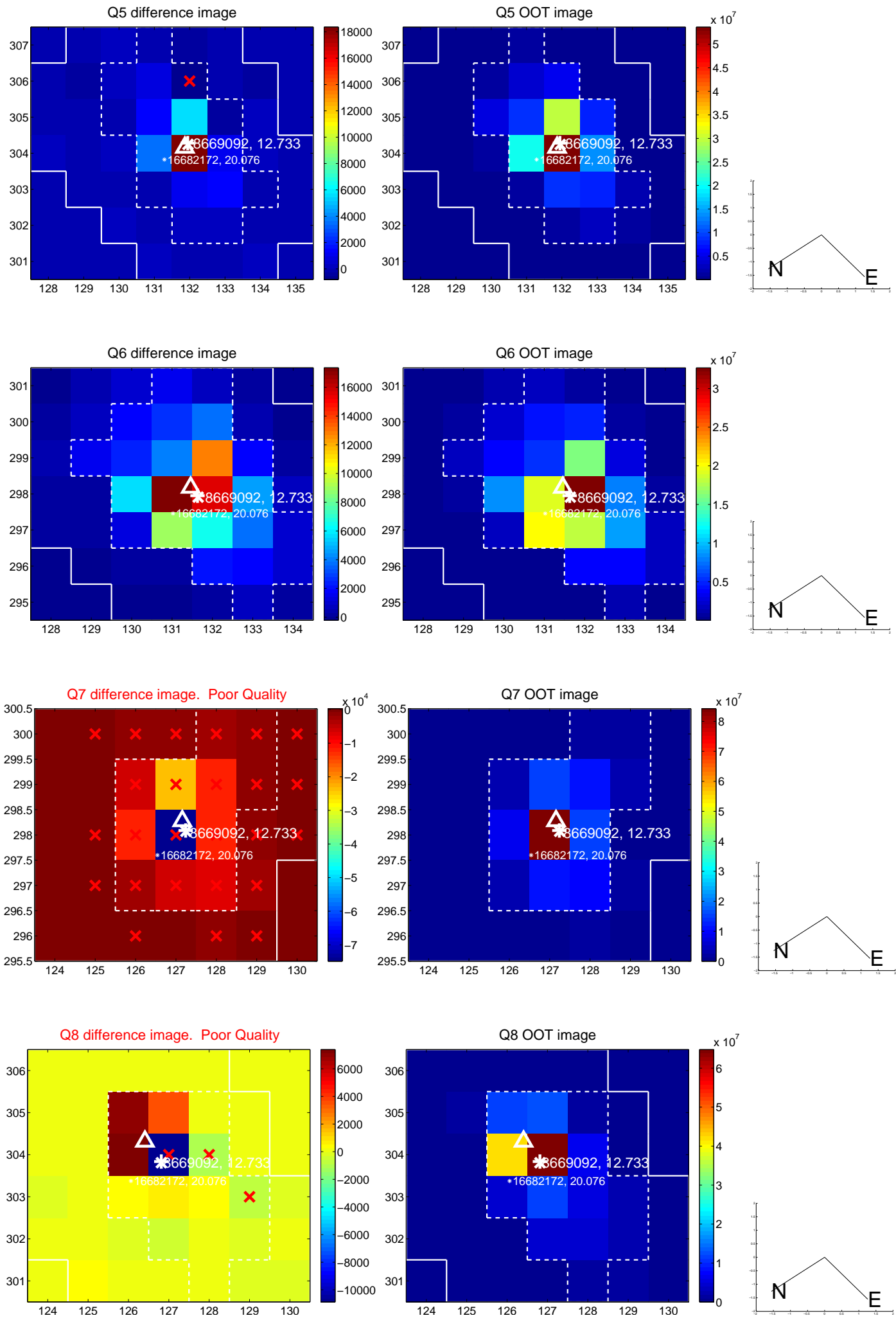


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

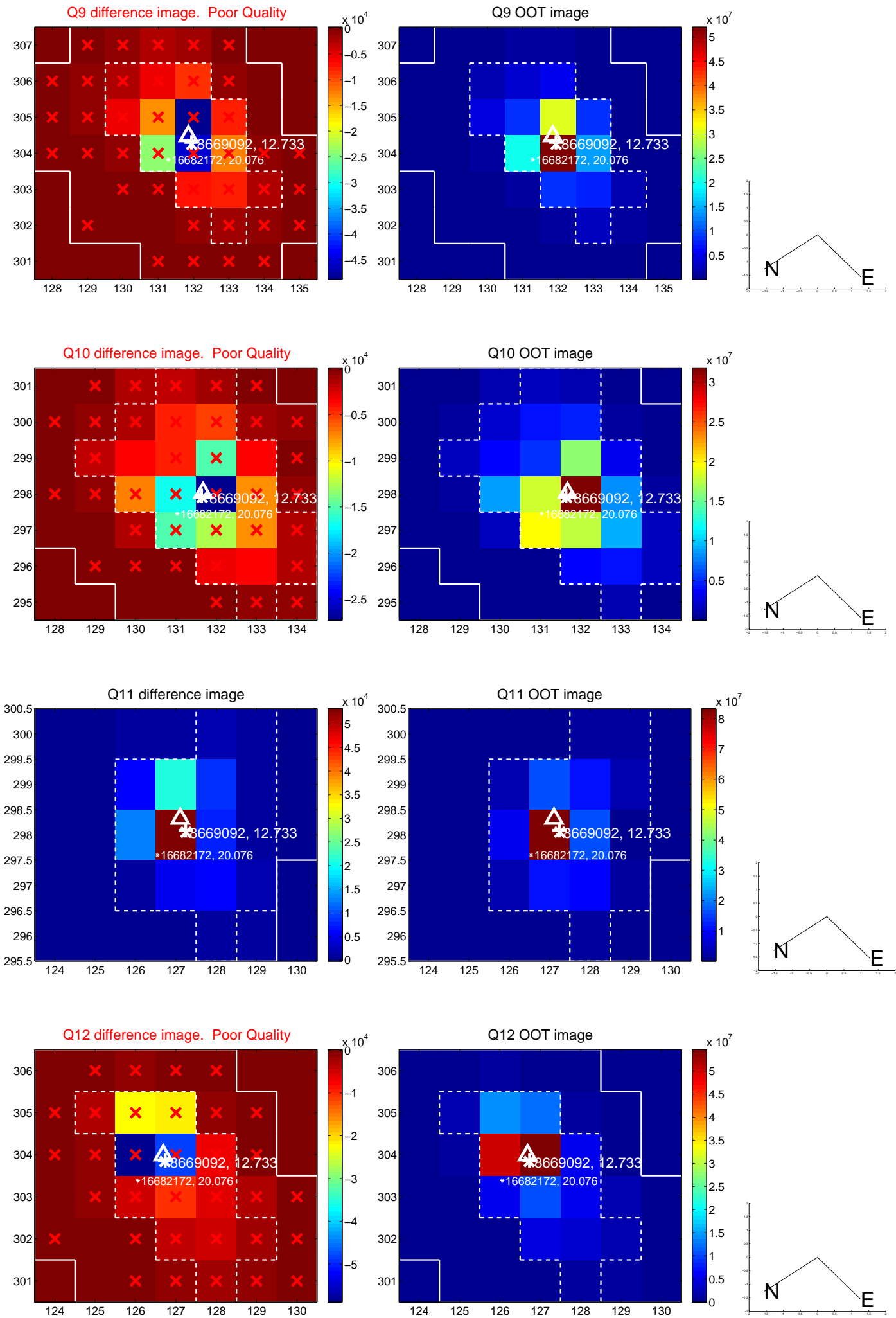
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



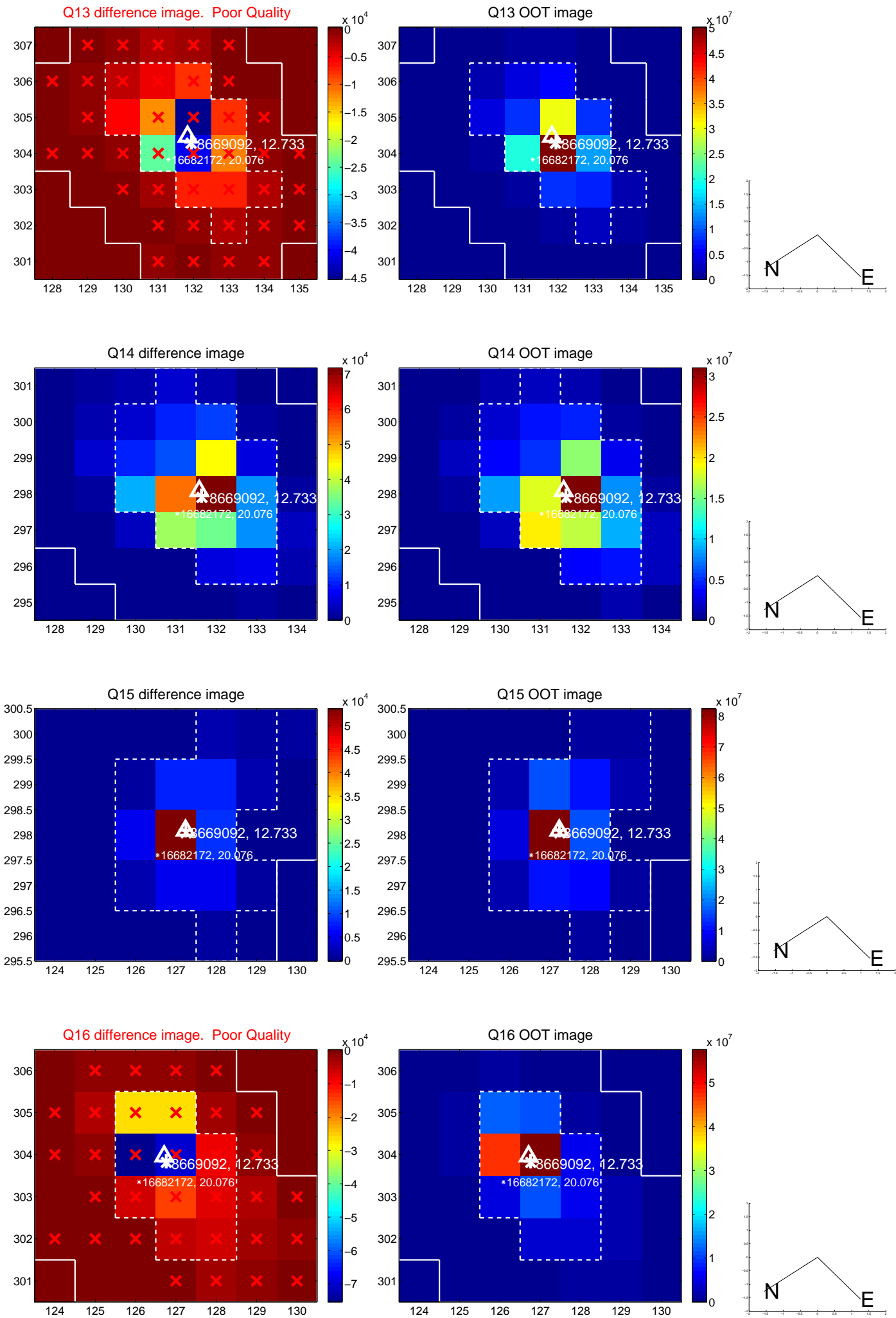
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



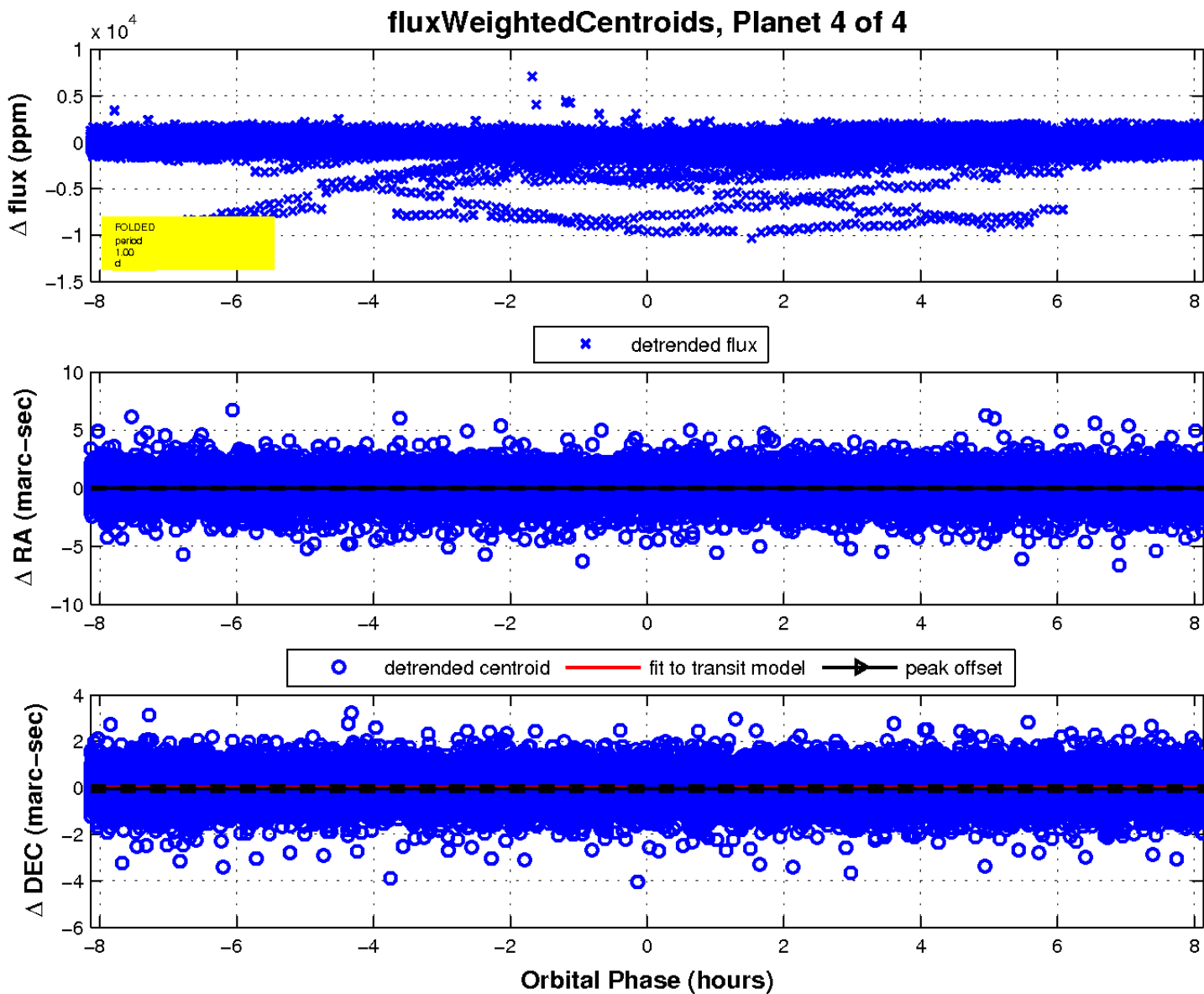
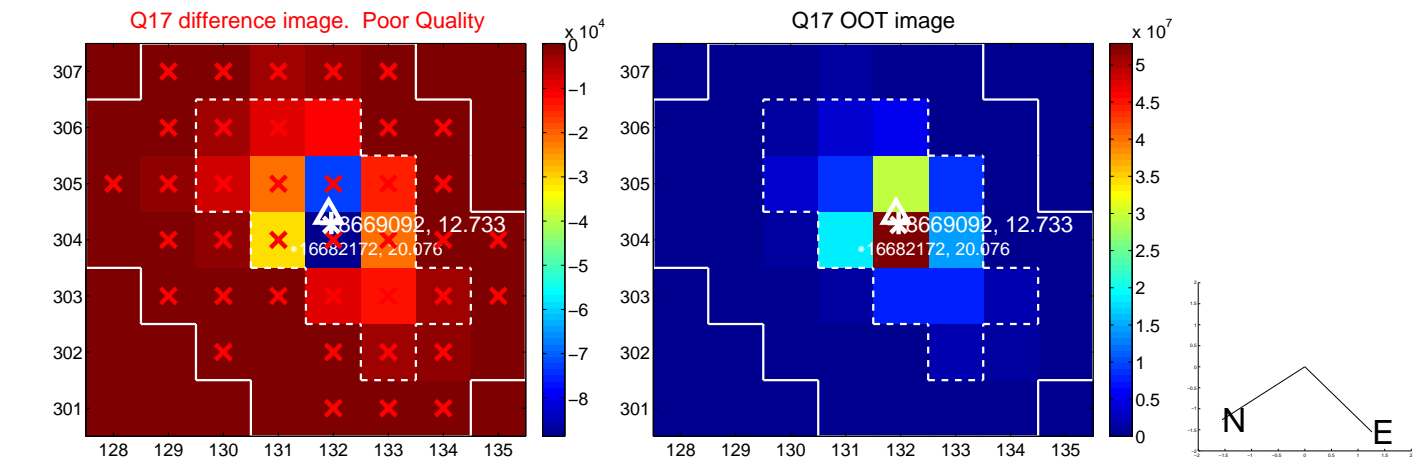
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

