

KIC 003952623

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})
003952623-01	OBS	No	1.910689	132.101759	88.0	8.009	8.1	6.9	1.64	7046	1.70	5013.38
003952623-02	OBS	No	0.736624	132.119424	102.4	2.873	8.3	8.1	1.64	7046	1.93	17867.18
003952623-03	OBS	No	170.847884	146.269979	1555.2	10.959	8.4	7.4	1.64	7046	6.73	12.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003952623-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003952623-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003952623-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

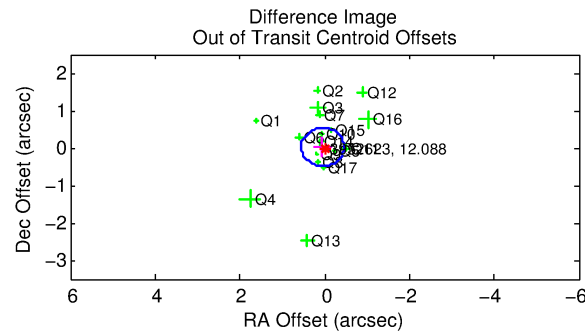
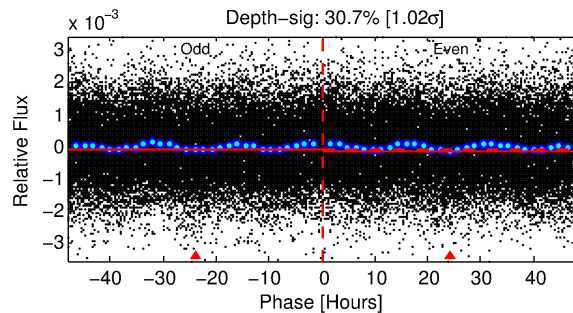
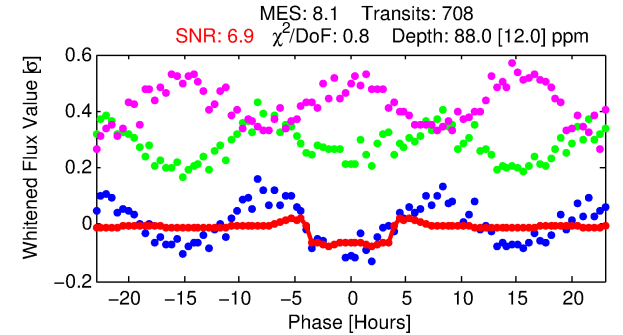
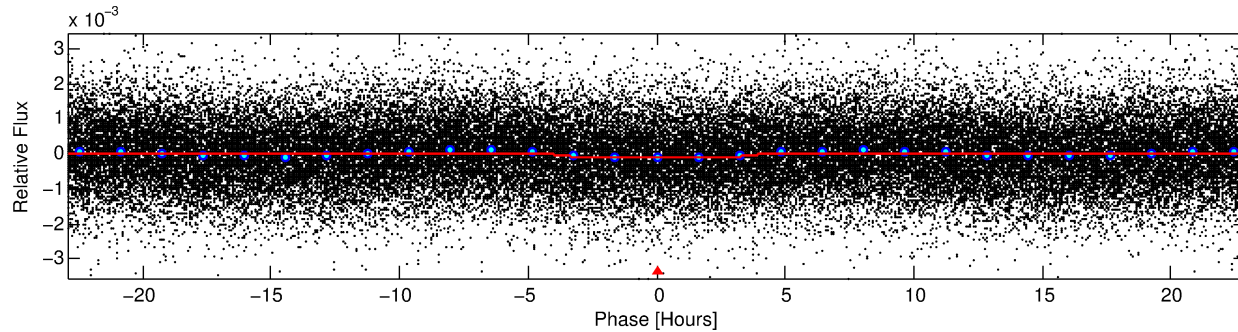
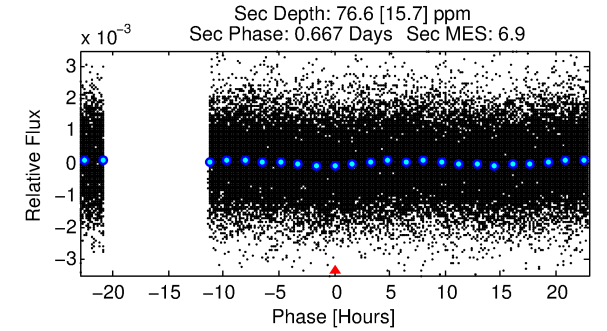
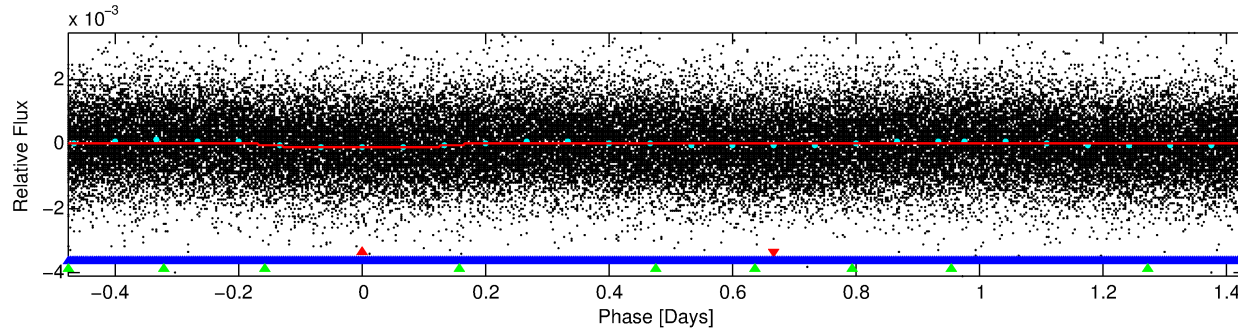
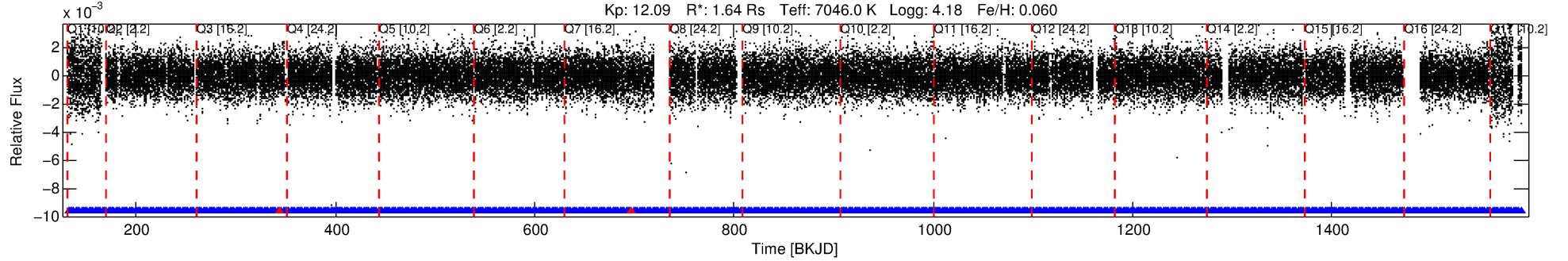
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003952623-01

No Significant Match Found

DV One-Page Summary

KIC: 3952623 Candidate: 1 of 3 Period: 1.911 d



DV Fit Results:

Period = 1.91069 [0.00003] d
Epoch = 132.1018 [0.0066] BKJD
Rp/R* = 0.0095 [0.0033]
a/R* = 1.41 [1.44]
b = 0.81 [0.88]
Seff = 5013.38 [2099.57]
Teq = 2146 [225] K
Rp = 1.70 [0.82] Re
a = 0.0344 [0.0093] AU
Ag = 17.20 [14.03] [1.15σ]
Teffp = 6756 [1266] K [3.59σ]

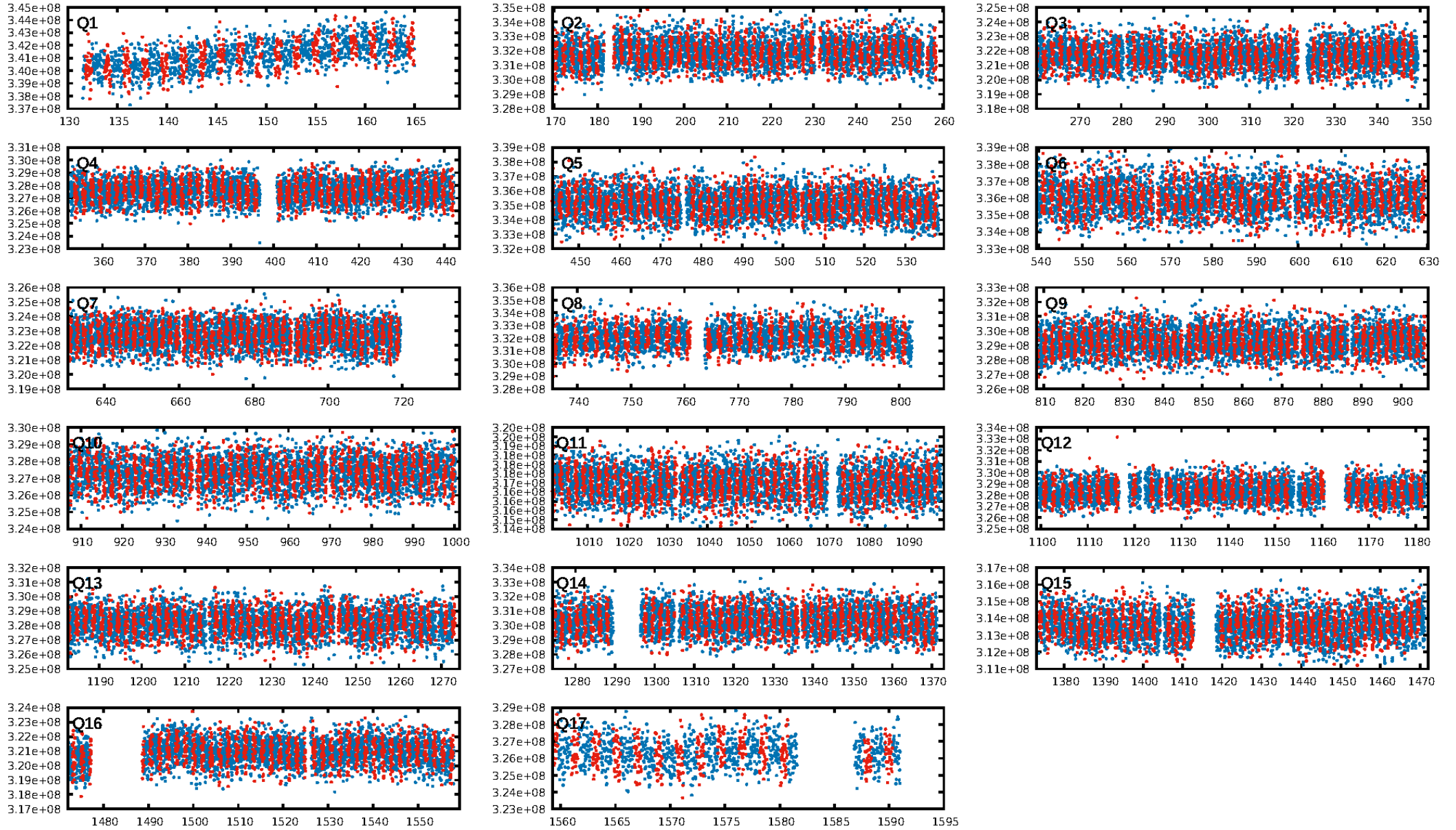
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.31σ]
LongPeriod-sig: 100.0% [298.71σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.19e-11
RollingBand-fgt: 1.00 [674/676]
GhostDiagnostic-chr: 1.458
Centroid-sig: 6.8%
Centroid-so: 0.293 arcsec [1.80σ]
OotOffset-rm: 0.056 arcsec [0.33σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.112 arcsec [0.45σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

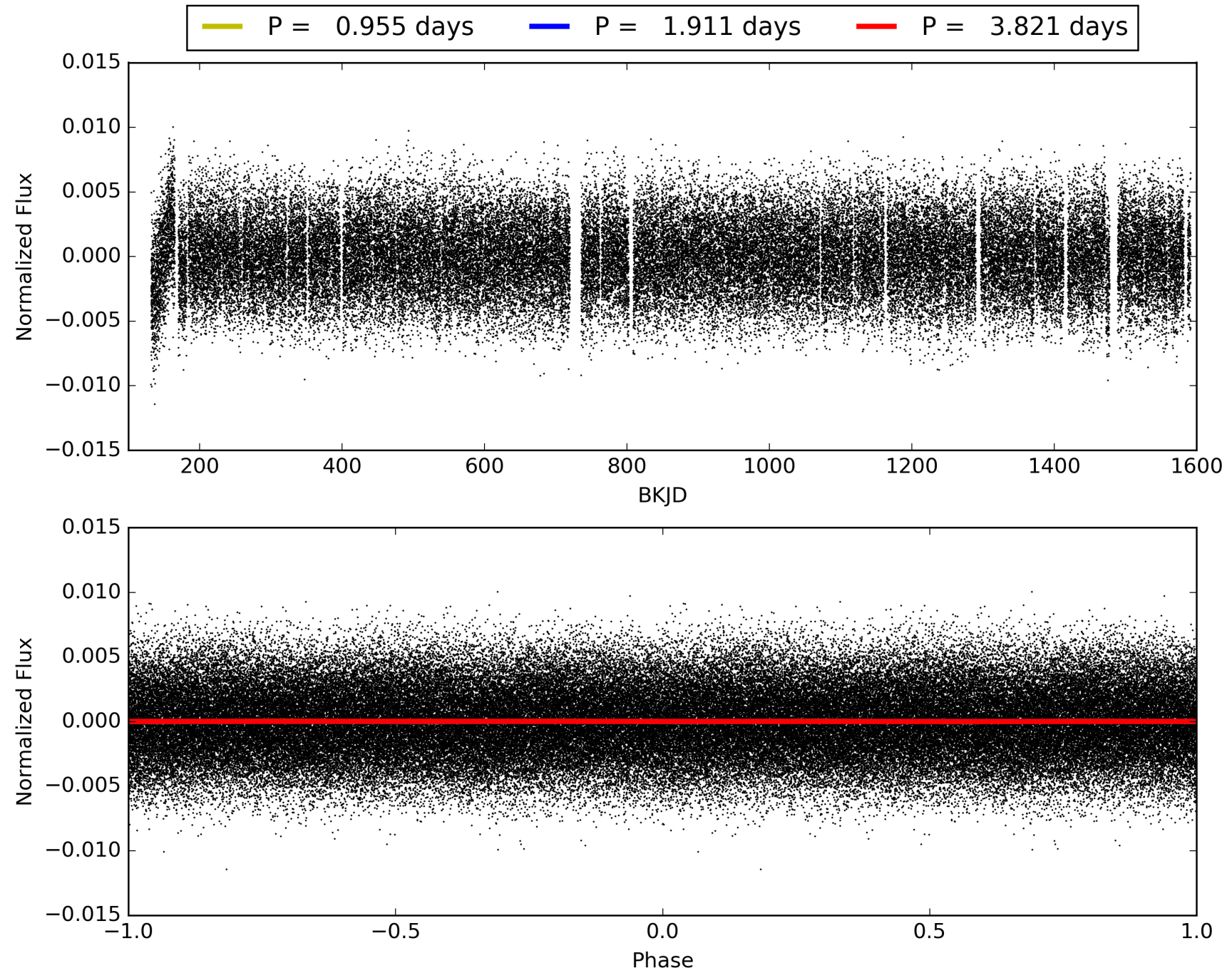
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:06:02 Z

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

TCE 003952623-01, PDC Light Curves

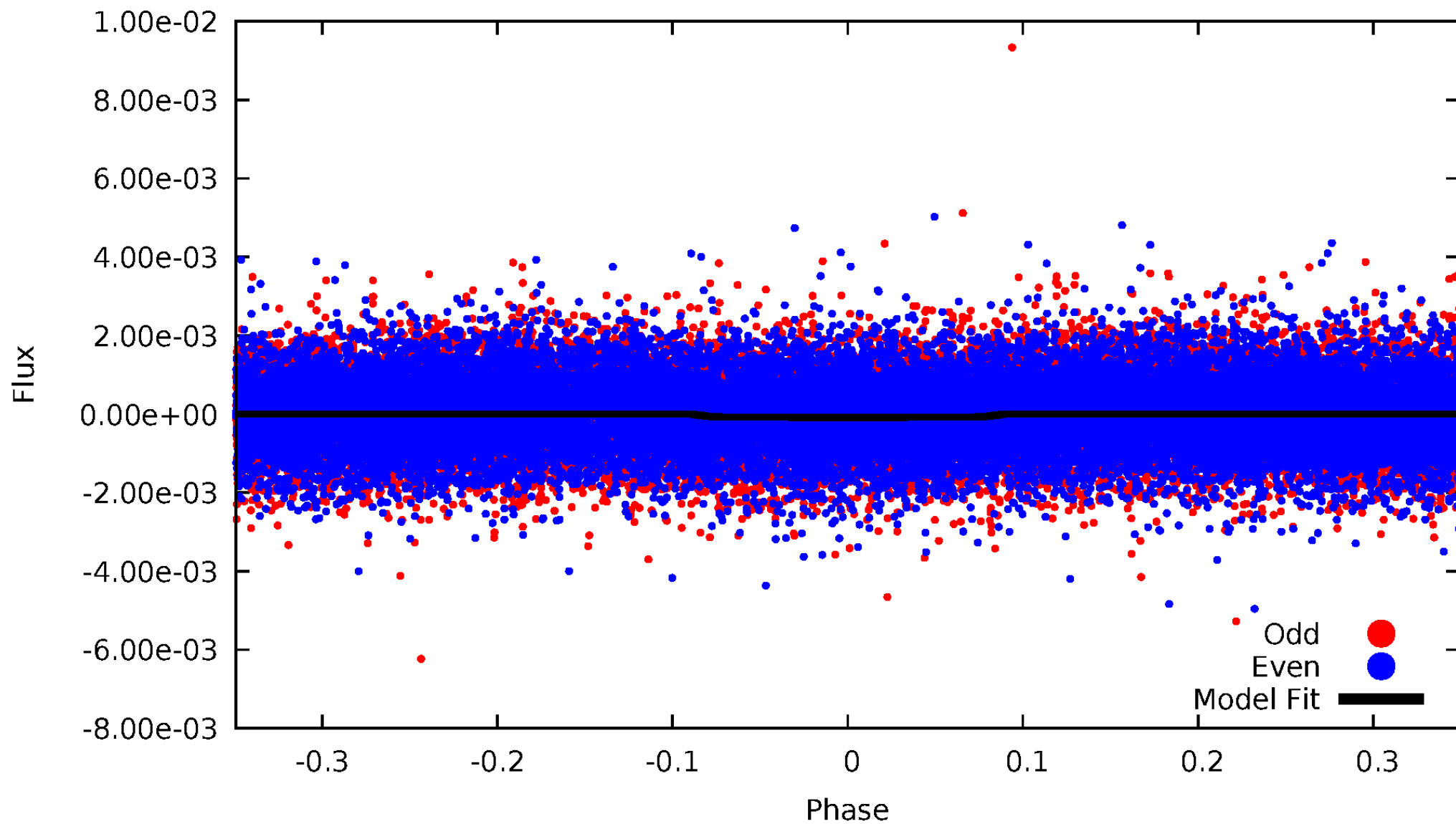


TCE 003952623-01



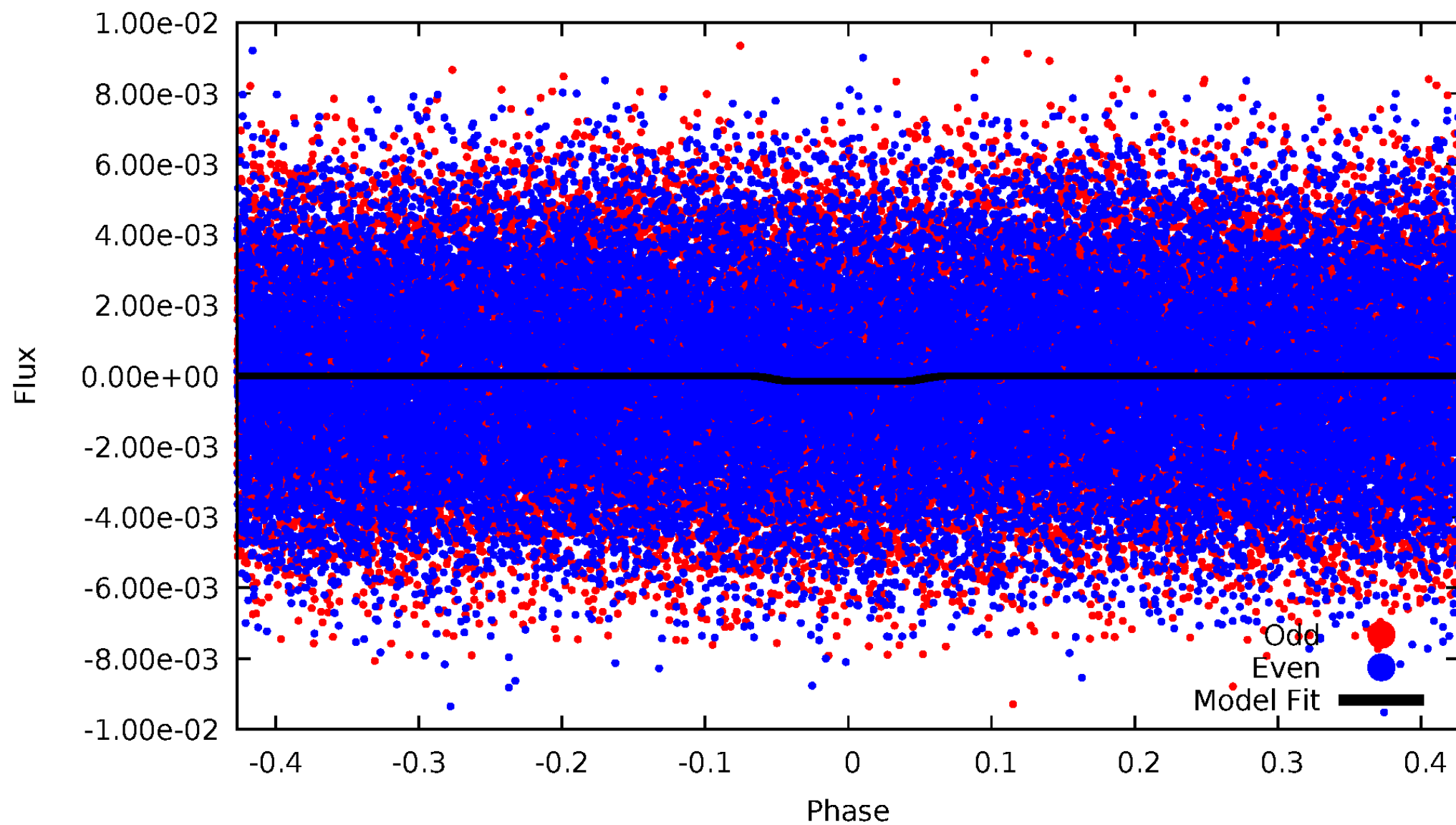
DV Odd/Even

TCE 003952623-01



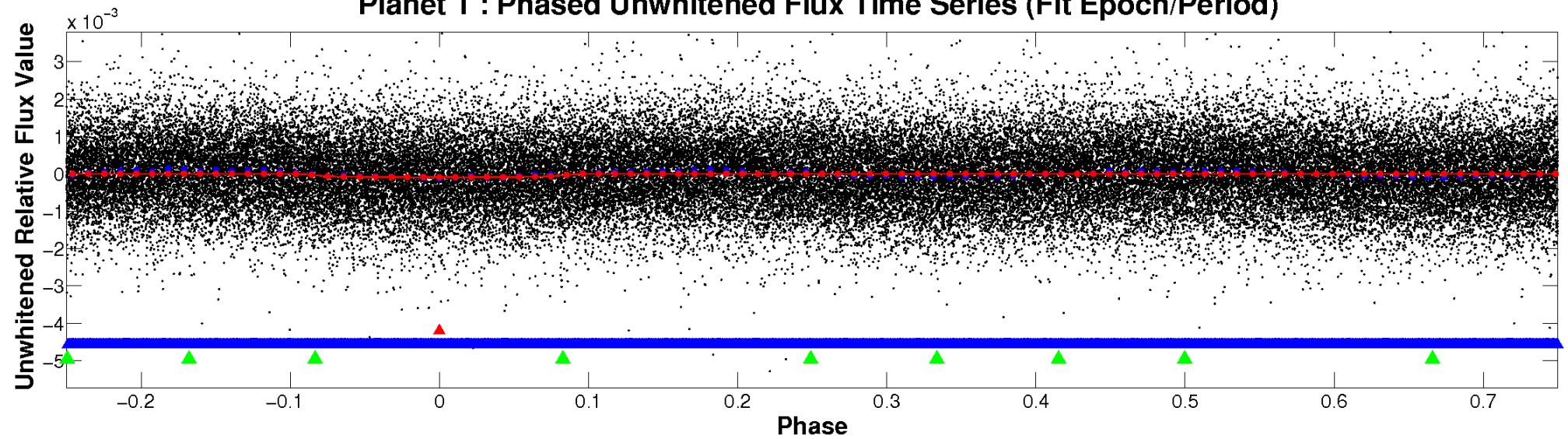
ALT Odd/Even

TCE 003952623-01

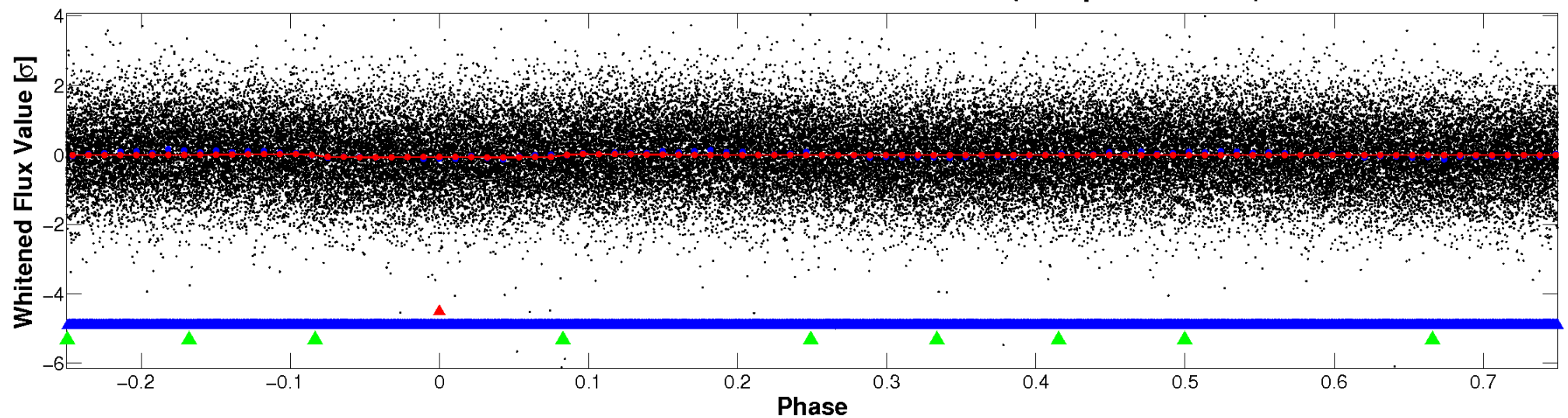


Non-Whitened Vs. Whitened Light Curve

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

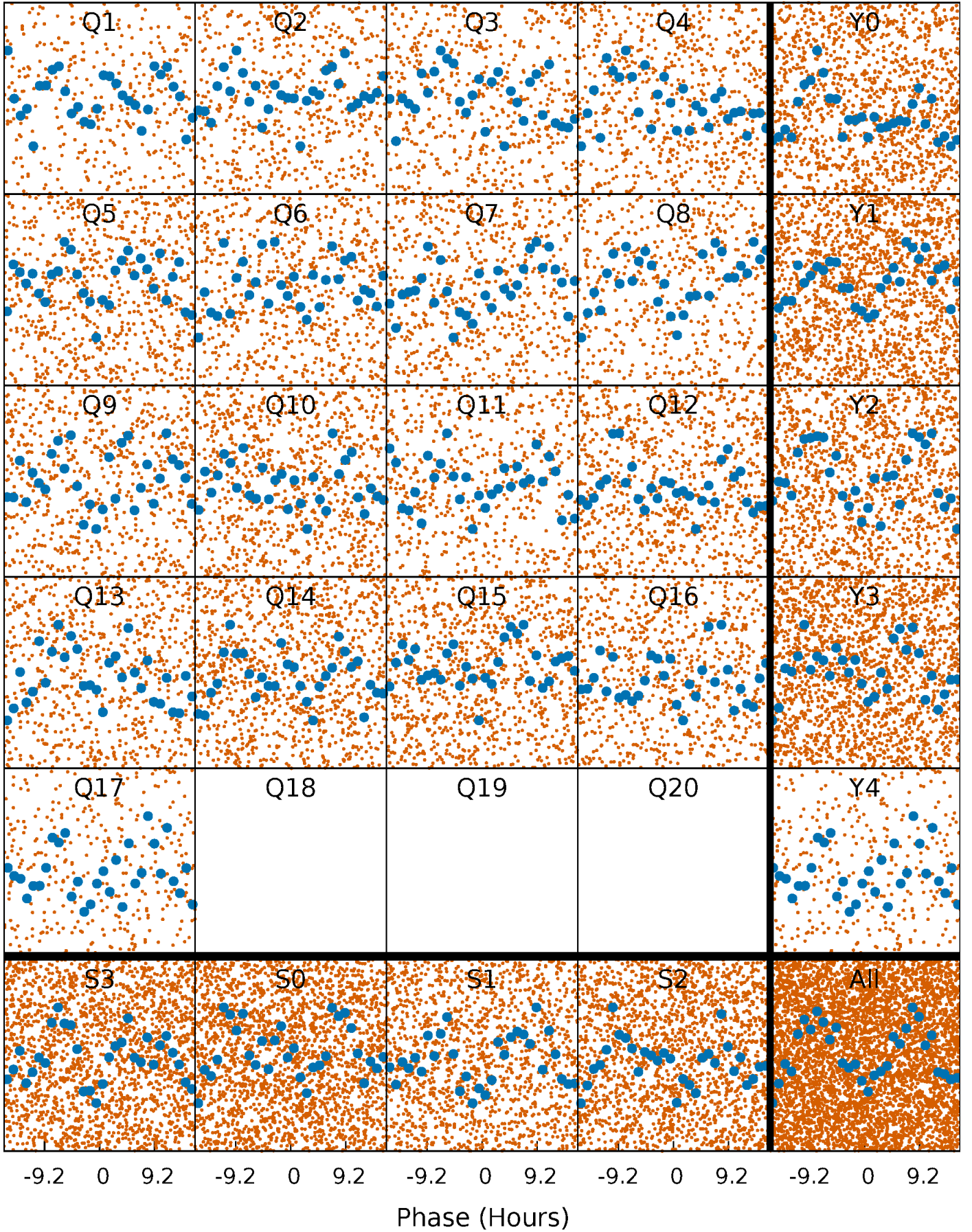


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



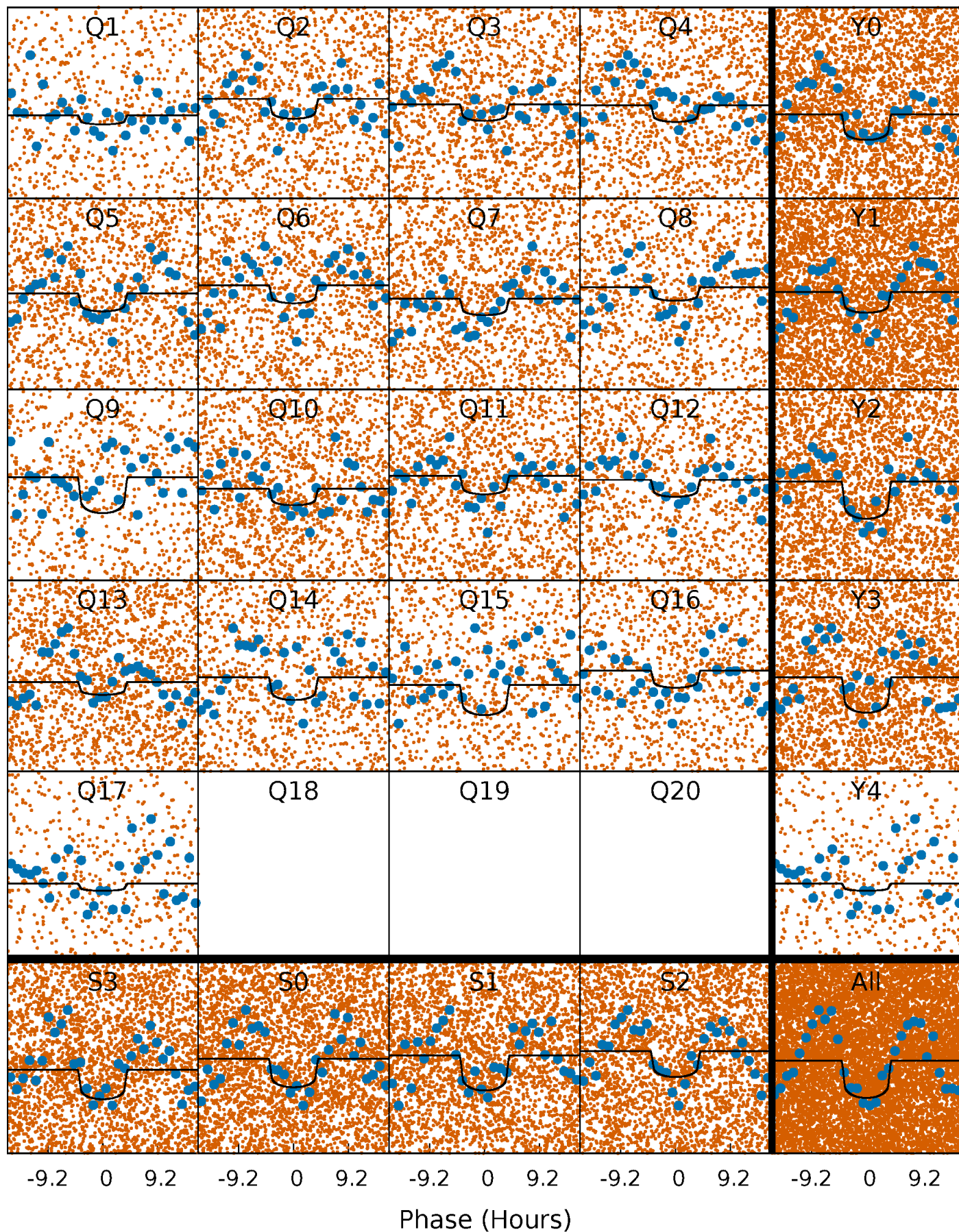
PDC Quarter-Phased Transit Curves

TCE 003952623-01 P= 1.910689 Days $T_0=132.101759$ (BKJD)



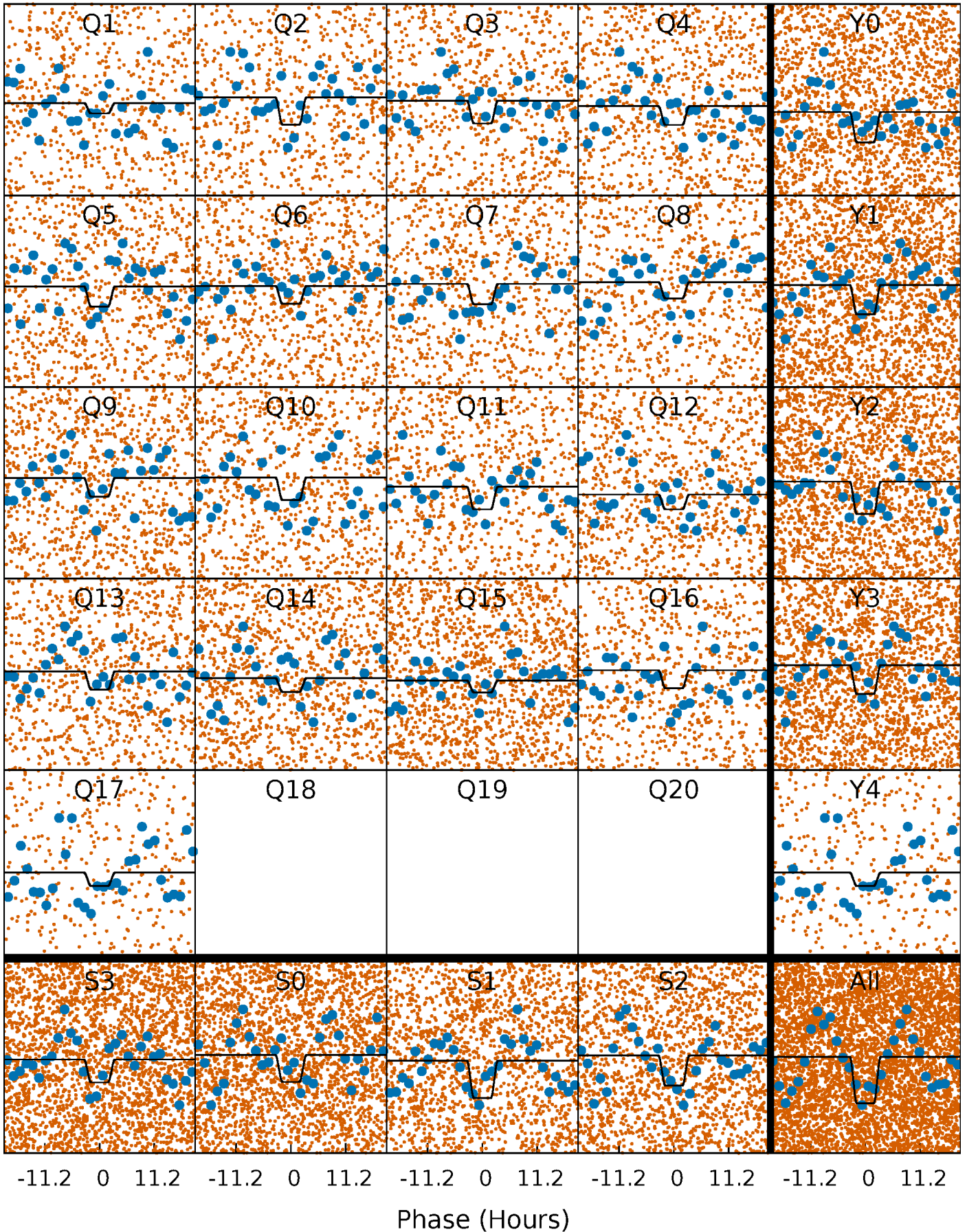
DV Quarter-Phased Transit Curves

TCE 003952623-01 P= 1.910689 Days $T_0=132.101759$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

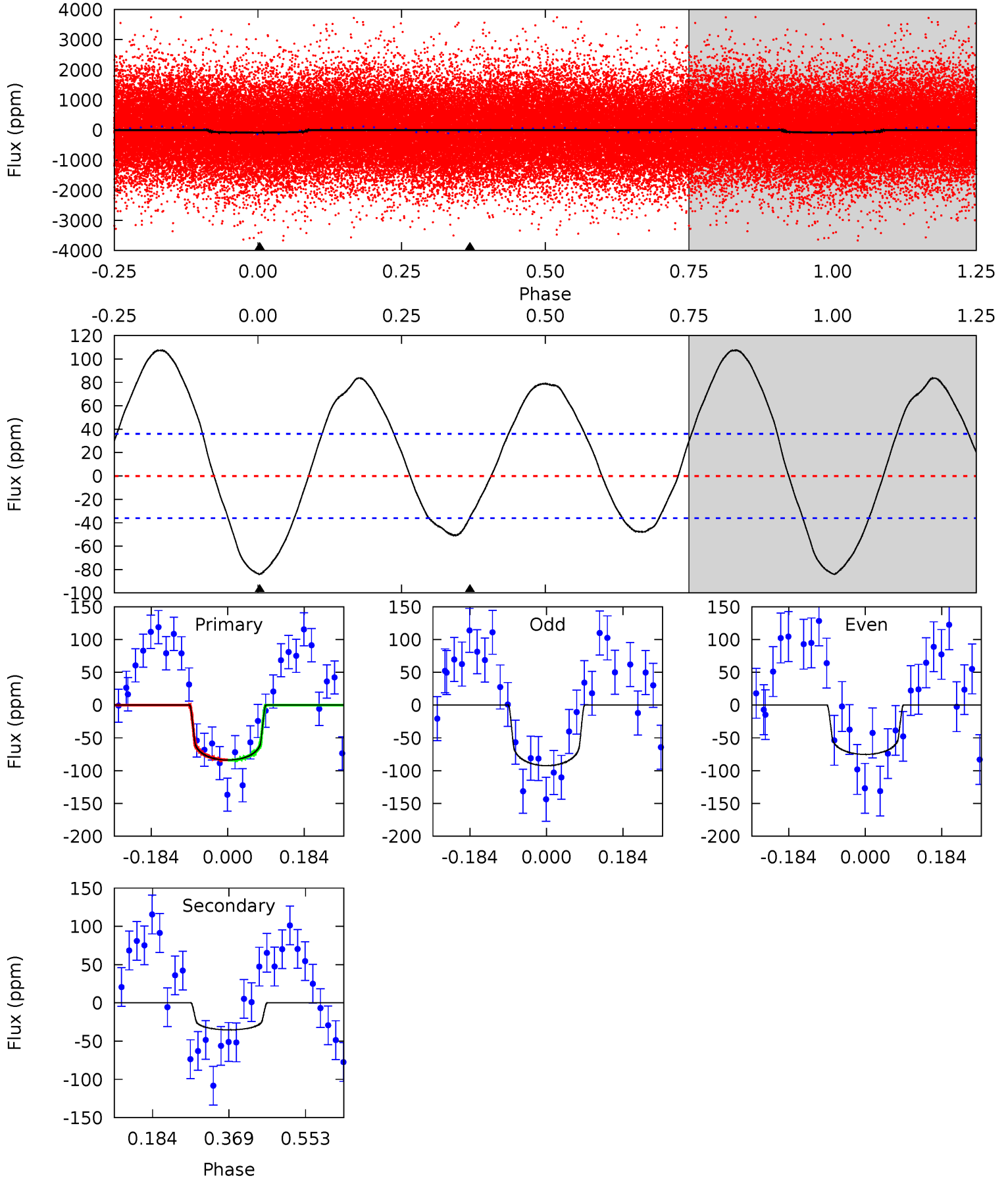
TCE 003952623-01 P= 1.910626 Days $T_0=132.140950$ (BKJD)



DV Model-Shift Uniqueness Test

003952623-01, P = 1.910689 Days, E = 130.191070 Days

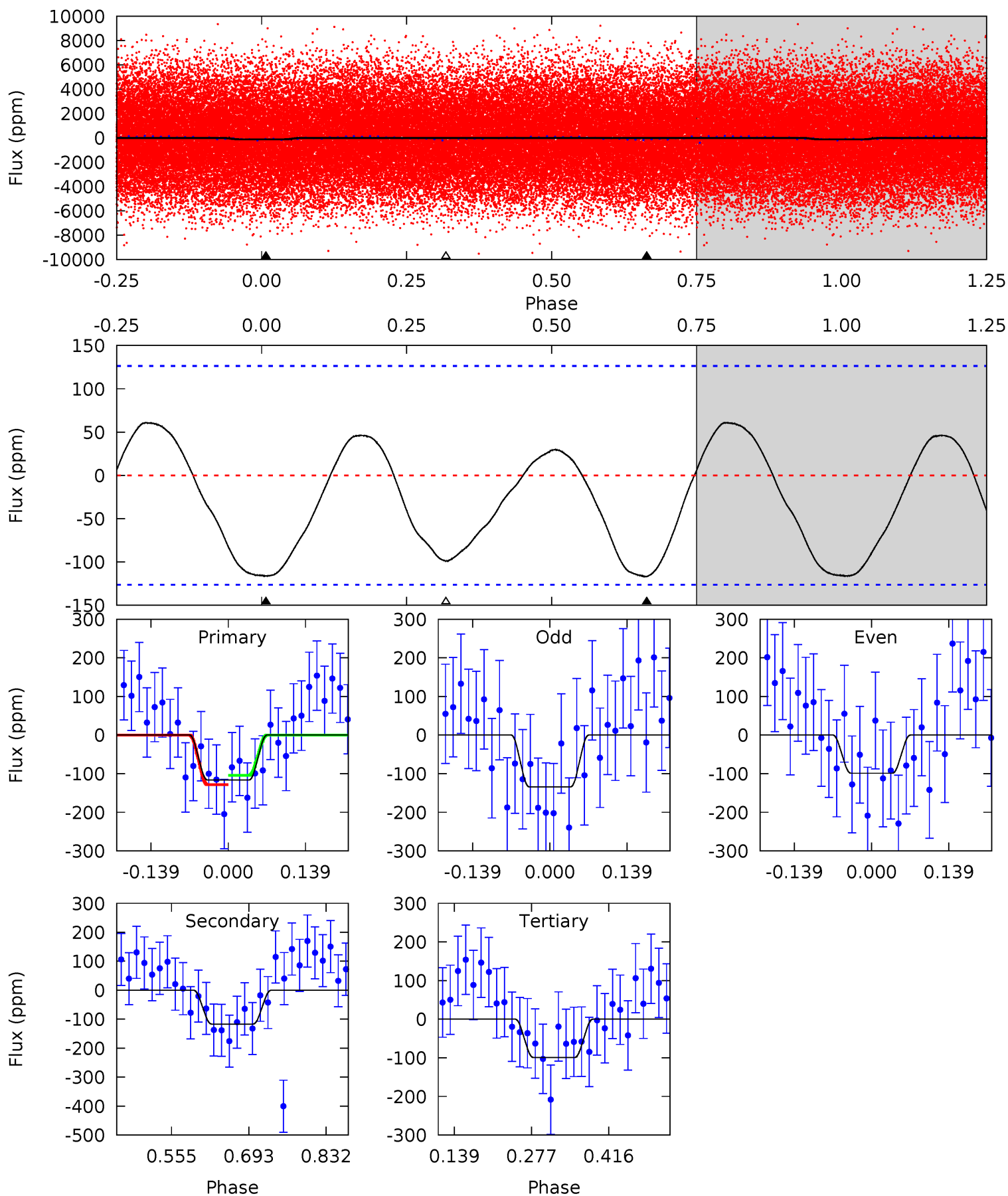
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	4.34	0	0	4.43	1.33	5.76	10.3	10.3	4.34	4.34	1.05	1.24	0.56	0.04



Alt Model-Shift Uniqueness Test

003952623-01, P = 1.910626 Days, E = 130.230324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.14	4.16	3.52	0	4.50	1.48	1.86	0.62	4.14	0.64	4.16	0.62	0.90	0.34	0.43



Stellar Parameters For KIC 003952623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7046^{+194}_{-333}	$4.181^{+0.105}_{-0.195}$	$0.060^{+0.200}_{-0.350}$	$1.639^{+0.550}_{-0.296}$	$1.488^{+0.216}_{-0.216}$	$0.476^{+0.278}_{-0.234}$
	+3%/-5%	+3%/-5%	+333%/-583%	+34%/-18%	+15%/-15%	+58%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003952623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 8	$1.71^{+0.67}_{-0.64}$	3019^{+232}_{-199}	5506^{+1479}_{-813}	$7.588^{+11.832}_{-3.898}$
Alt.	-117 ± 28	$2.26^{+0.69}_{-0.69}$	3020^{+241}_{-191}	6468^{+1493}_{-873}	14^{+17}_{-6}

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

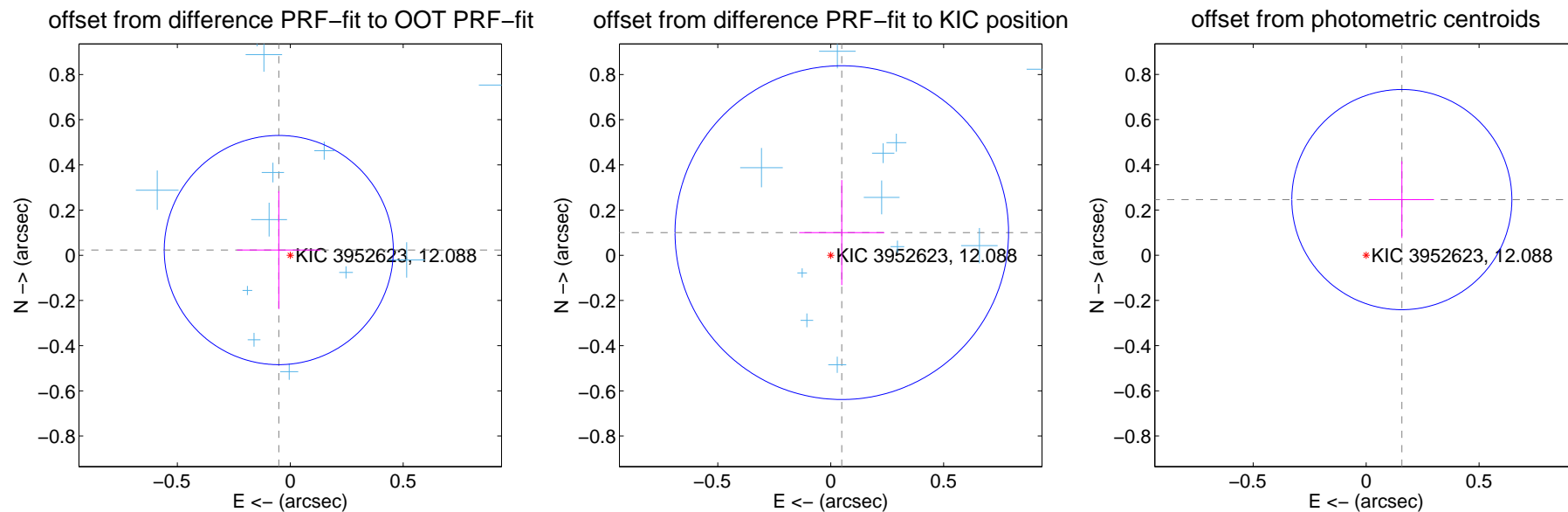
DV Centroid Data

Supplemental centroid analysis for 003952623-01. Kepler magnitude: 12.09. Transit SNR 6.93

There are 16 quarters with good PRF difference image offsets

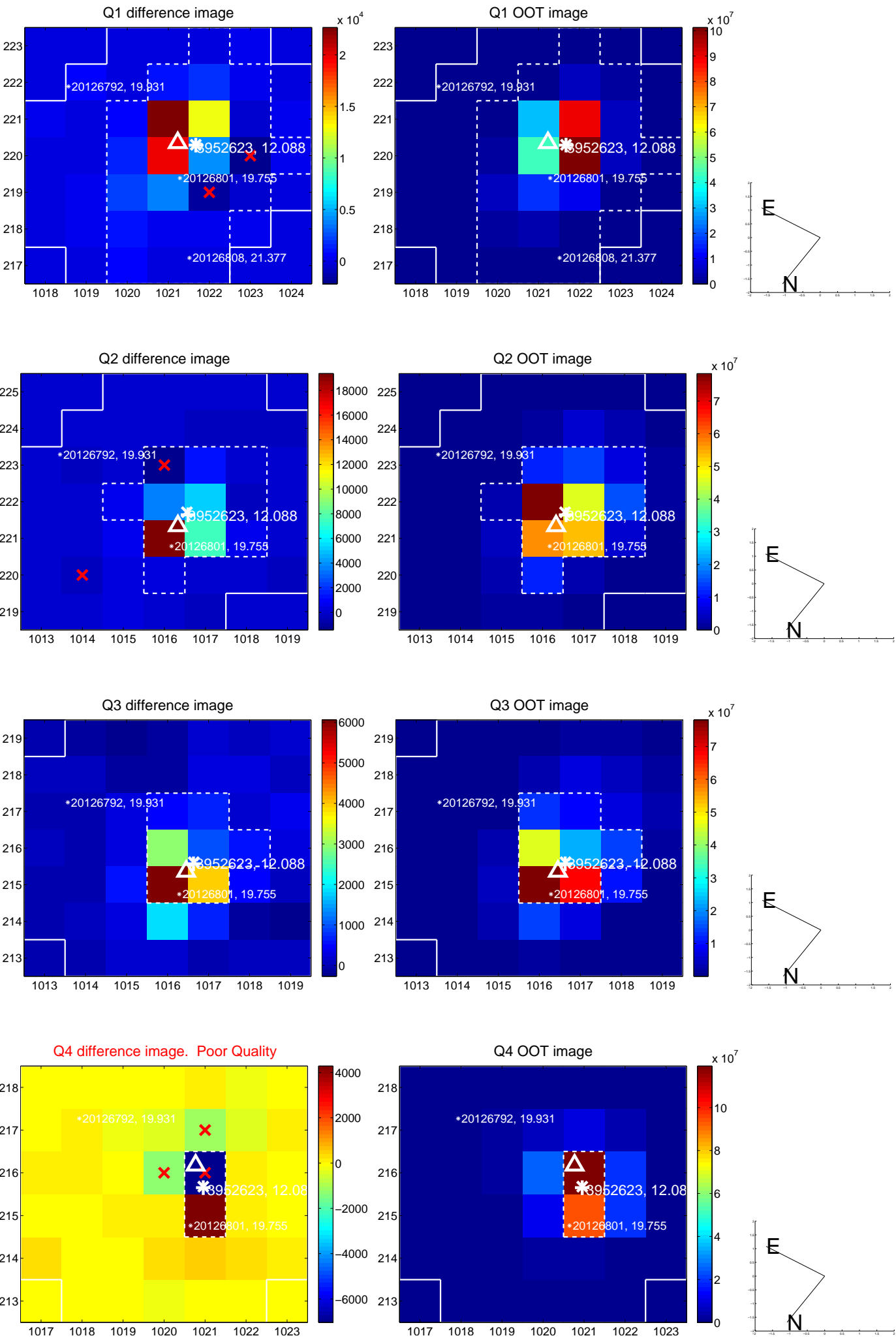
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.169	0.33	0.051 ± 0.186	0.023 ± 0.261
PRF-fit source offset from KIC position	0.112 ± 0.246	0.45	-0.049 ± 0.189	0.100 ± 0.233
photometric centroid source offset	0.29 ± 0.16	1.80	-0.16 ± 0.14	0.25 ± 0.17

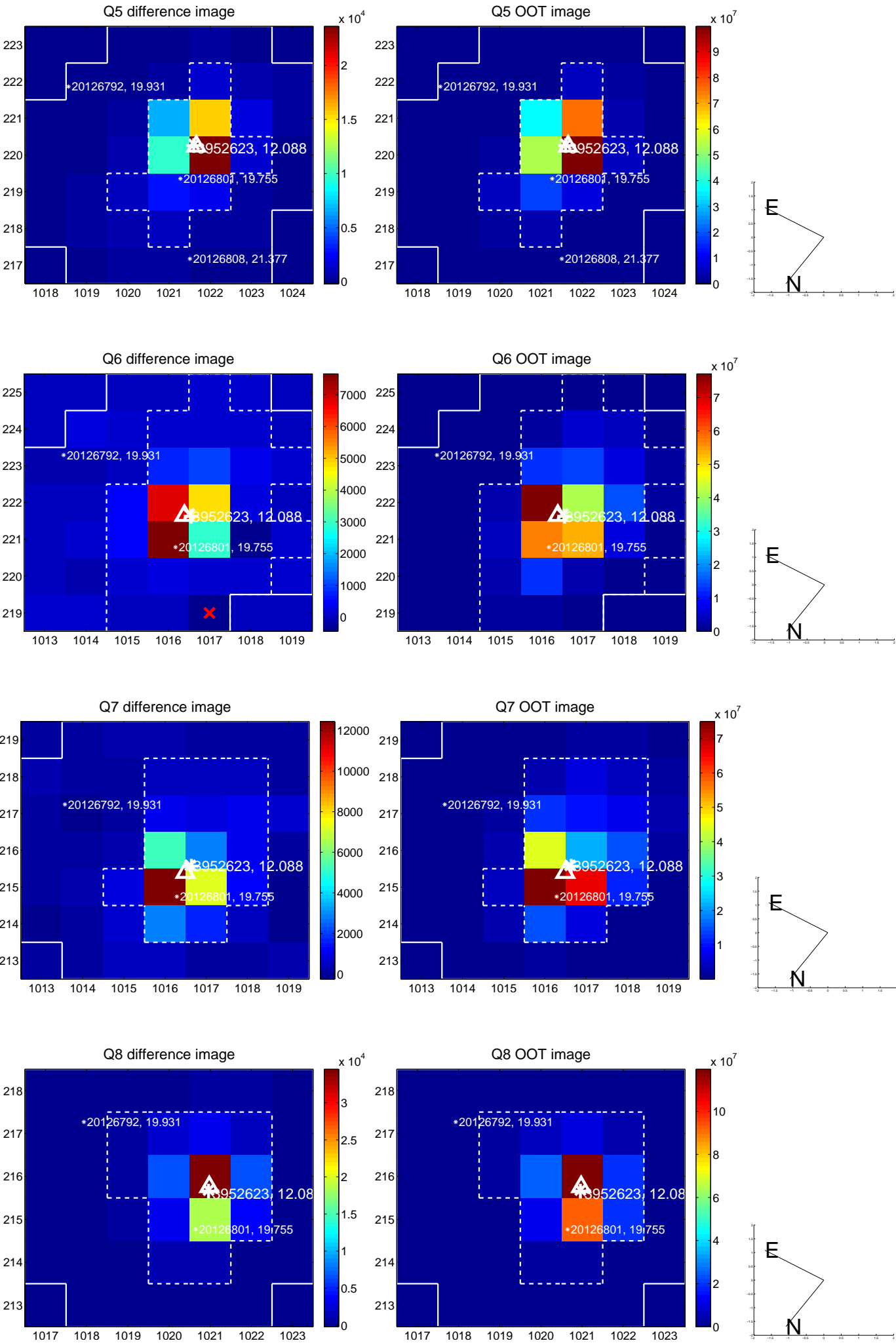


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

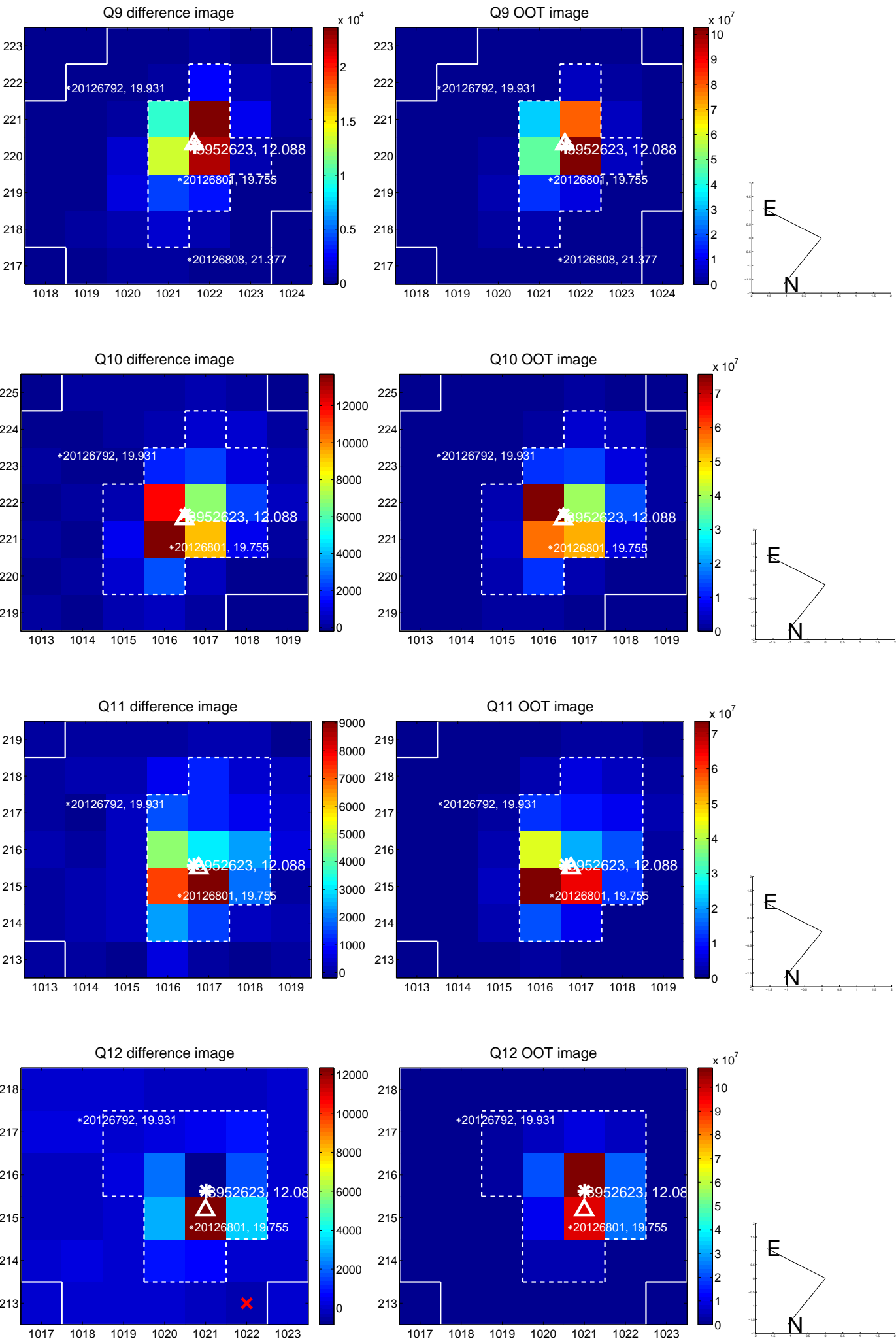
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



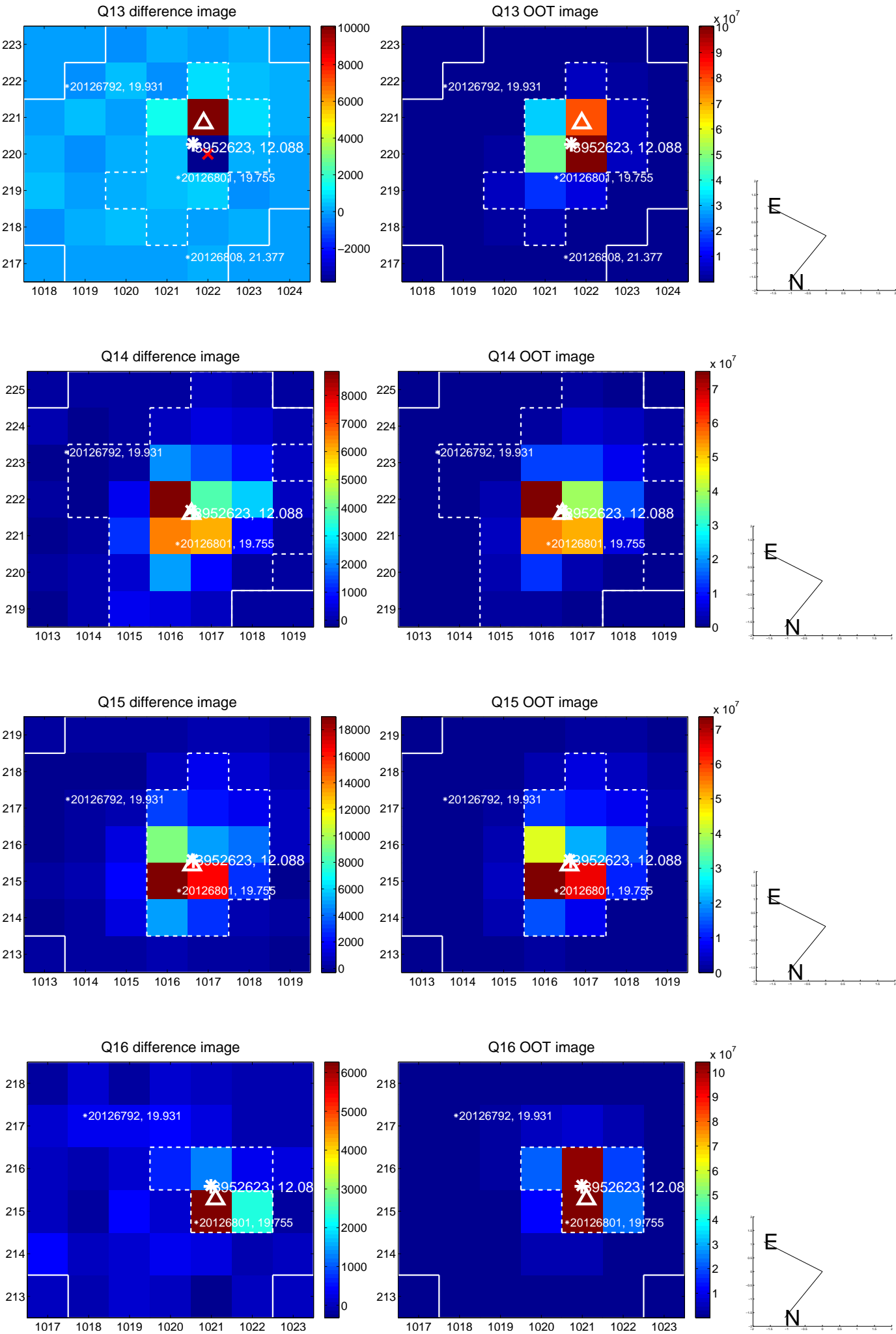
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



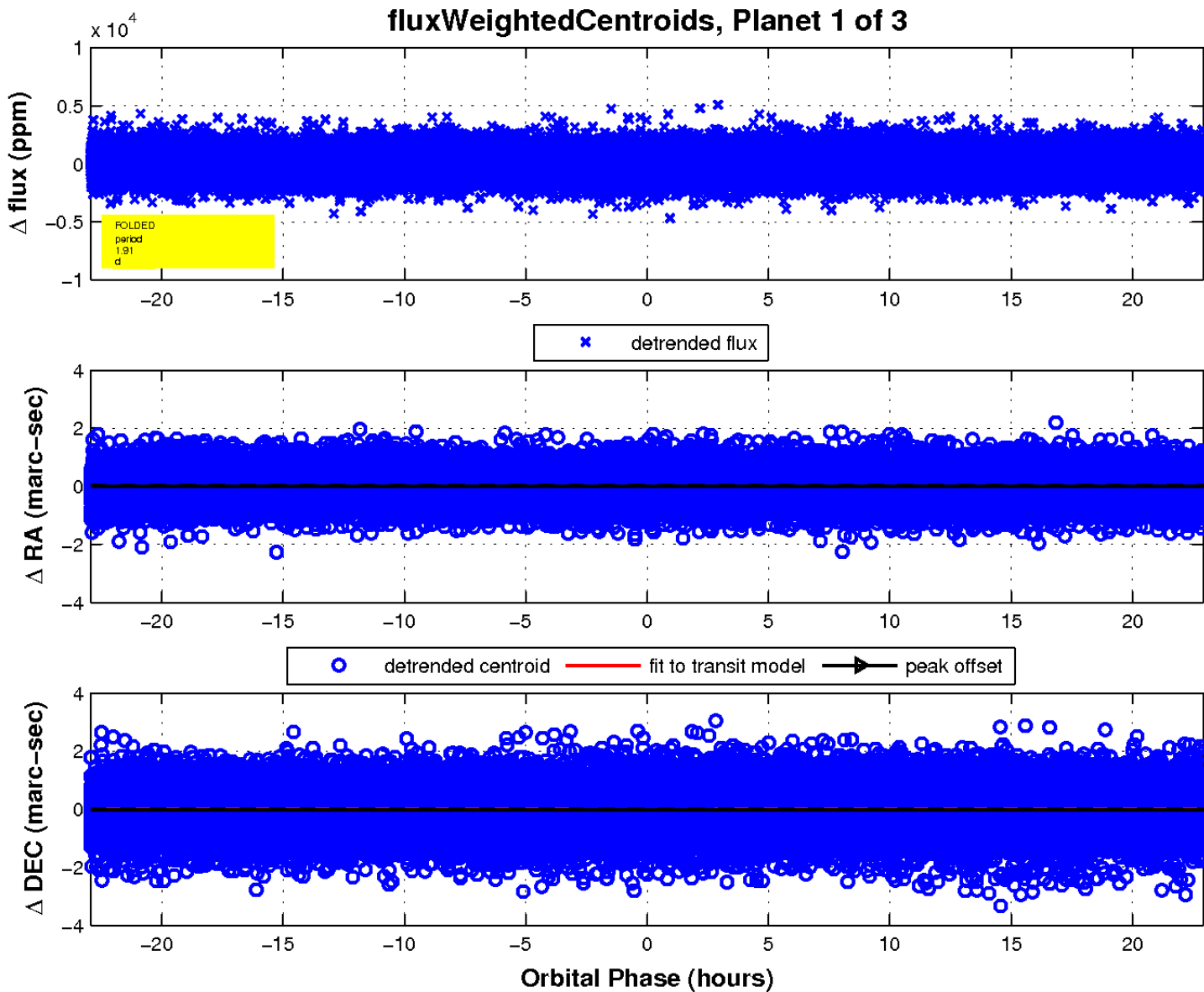
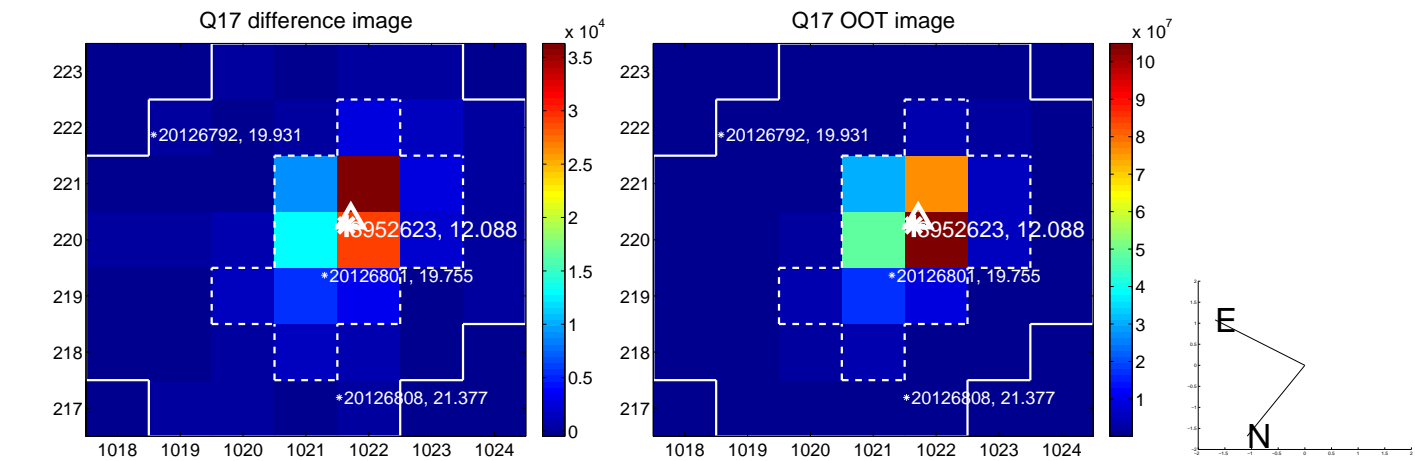
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

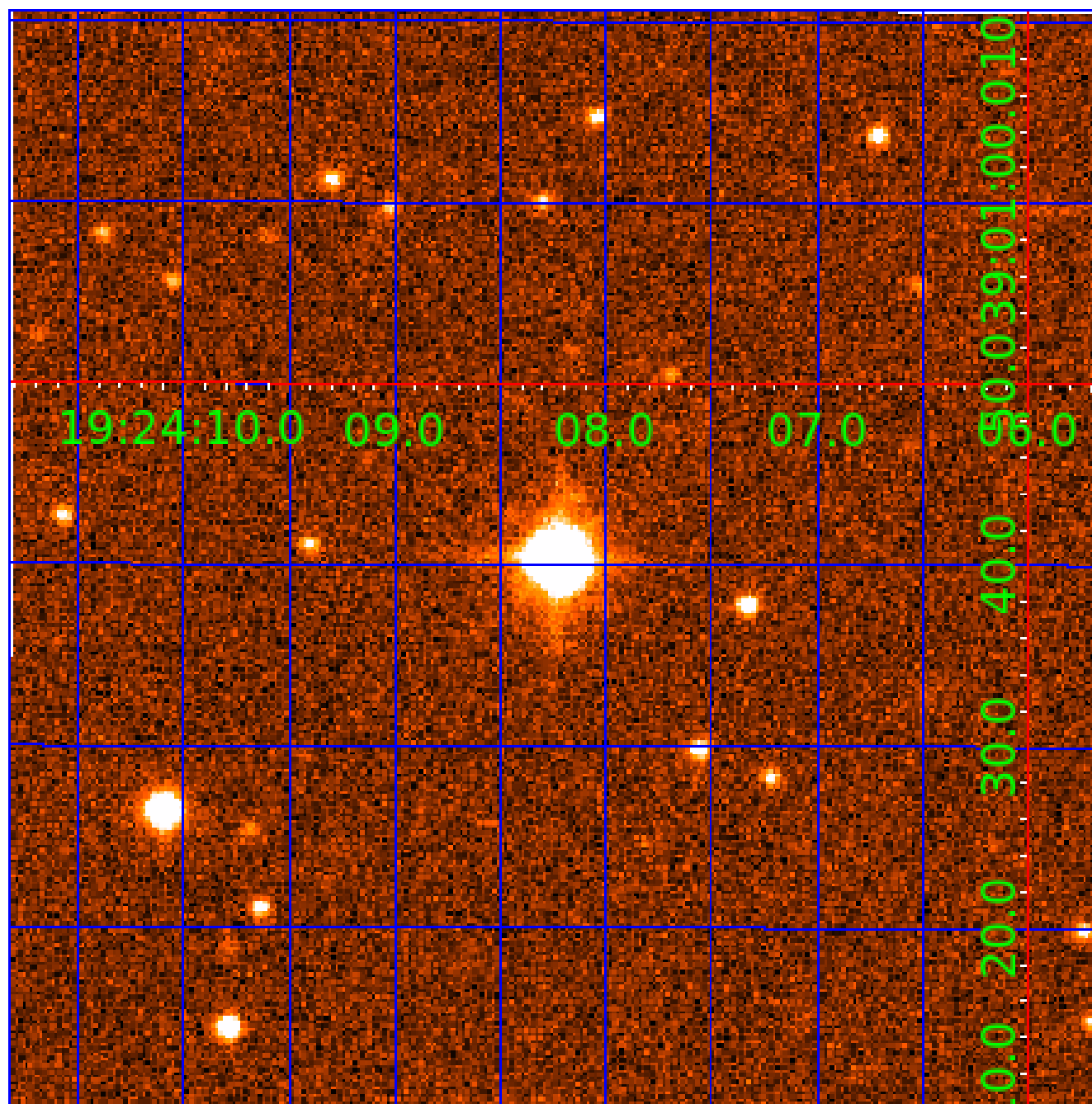


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003952623

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})
003952623-01	OBS	No	1.910689	132.101759	88.0	8.009	8.1	6.9	1.64	7046	1.70	5013.38
003952623-02	OBS	No	0.736624	132.119424	102.4	2.873	8.3	8.1	1.64	7046	1.93	17867.18
003952623-03	OBS	No	170.847884	146.269979	1555.2	10.959	8.4	7.4	1.64	7046	6.73	12.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003952623-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003952623-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003952623-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

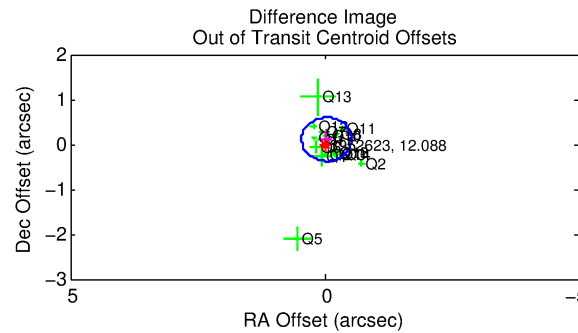
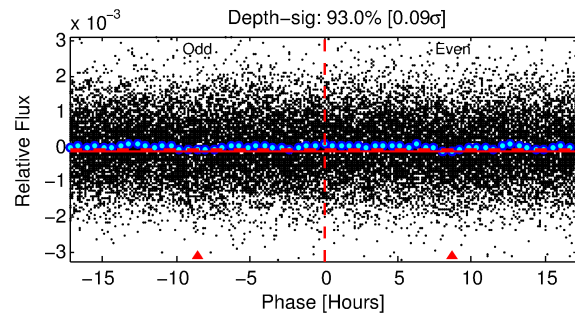
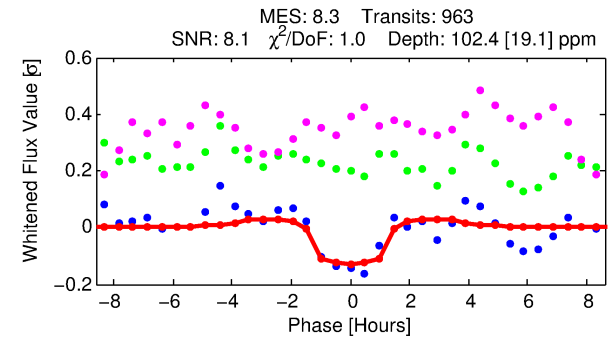
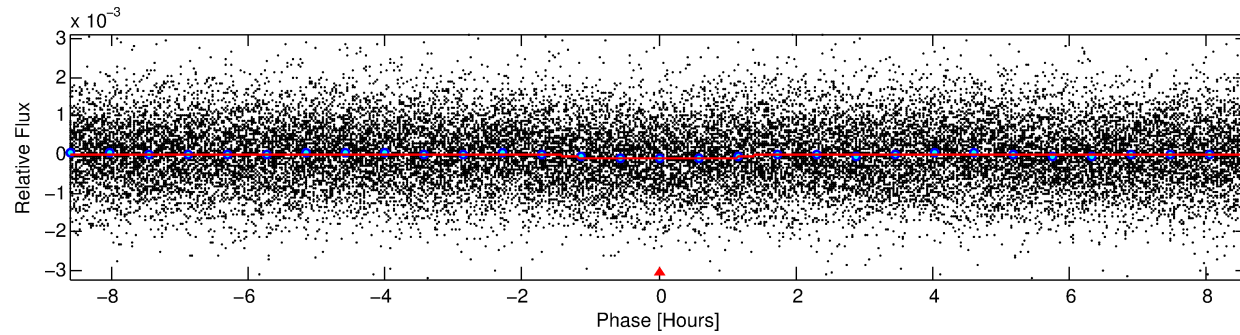
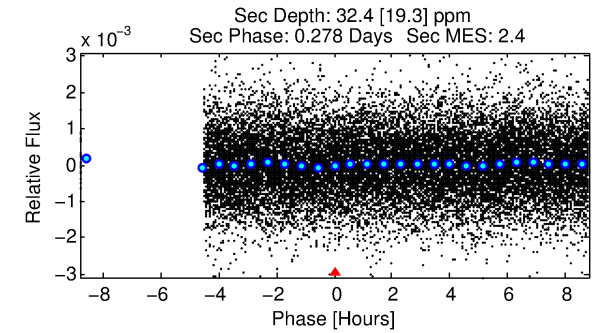
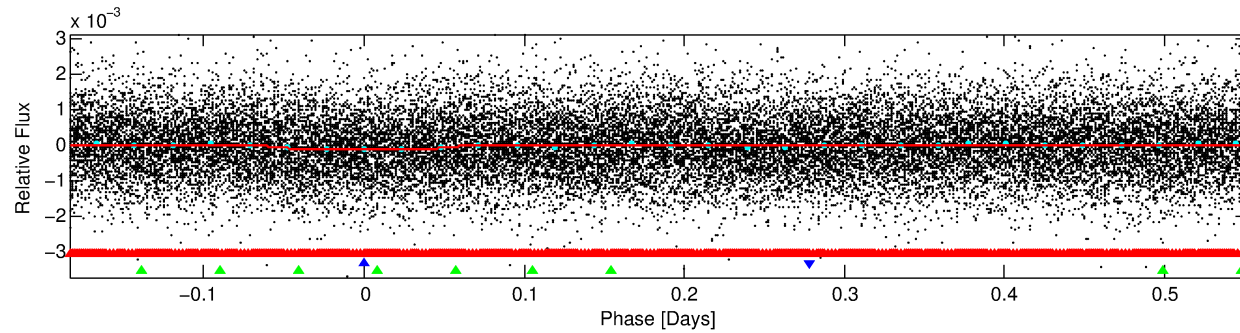
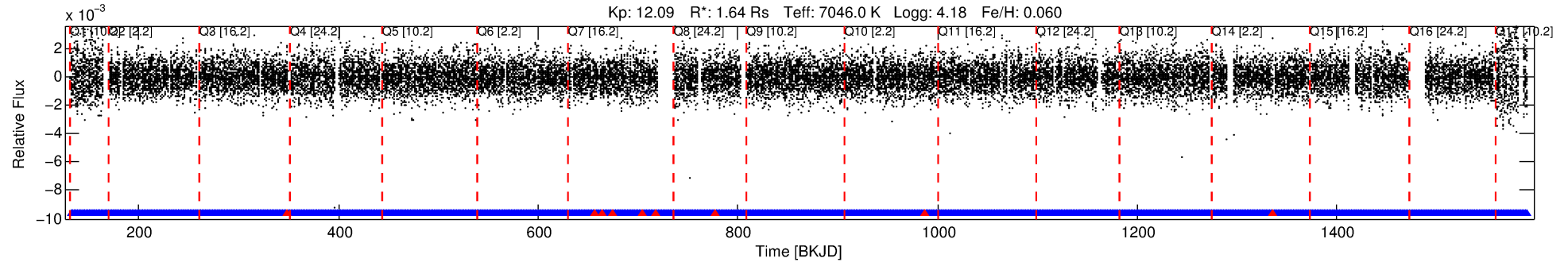
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003952623-02

No Significant Match Found

DV One-Page Summary

KIC: 3952623 Candidate: 2 of 3 Period: 0.737 d



DV Fit Results:

Period = 0.73662 [0.00001] d
Epoch = 132.1194 [0.0040] BKJD
Rp/R* = 0.0108 [0.0063]
a/R* = 1.30 [1.90]
b = 0.90 [0.76]
Seff = 17867.18 [7482.64]
Teff = 2948 [309] K
Rp = 1.93 [1.30] Re
a = 0.0182 [0.0049] AU
Ag = 1.59 [2.17] [0.27σ]
Teffp = 5122 [1696] K [1.26σ]

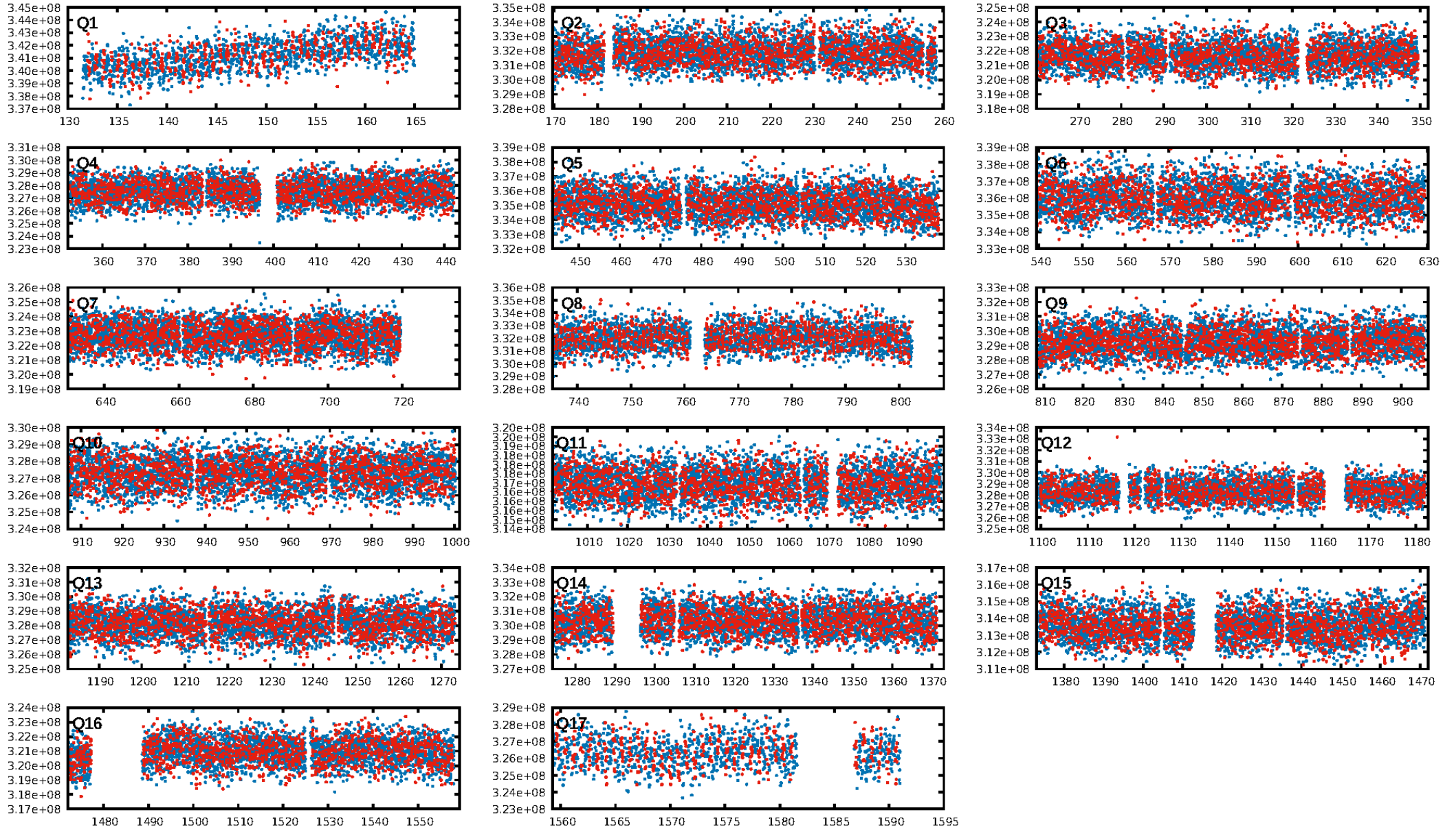
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.31σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.45e-12
RollingBand-fgt: 0.99 [912/921]
GhostDiagnostic-chr: 2.926
Centroid-sig: 10.3%
Centroid-so: 0.277 arcsec [2.46σ]
OotOffset-rm: 0.113 arcsec [0.70σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-rm: 0.235 arcsec [1.59σ]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

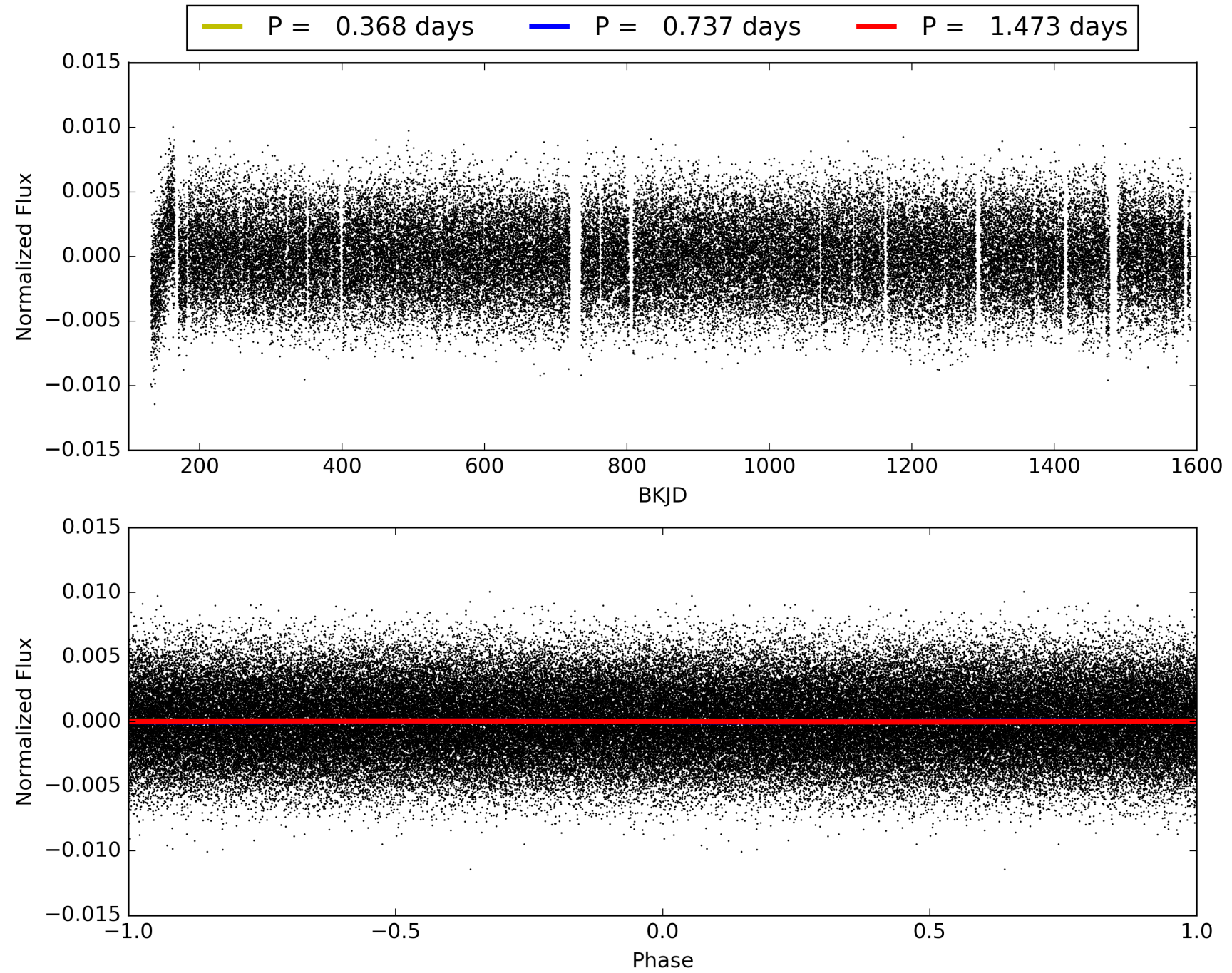
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:06:14 Z

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

TCE 003952623-02, PDC Light Curves

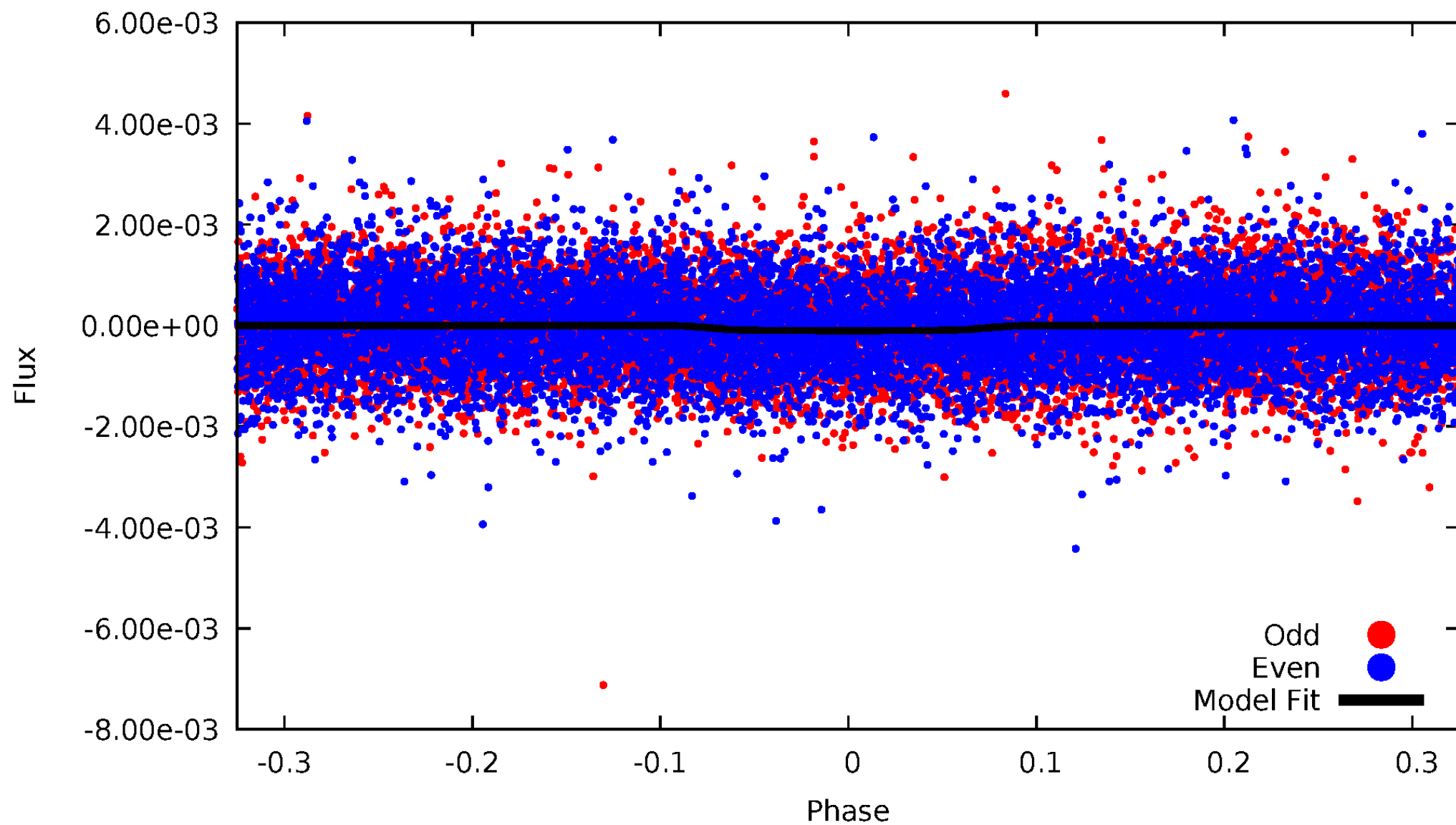


TCE 003952623-02



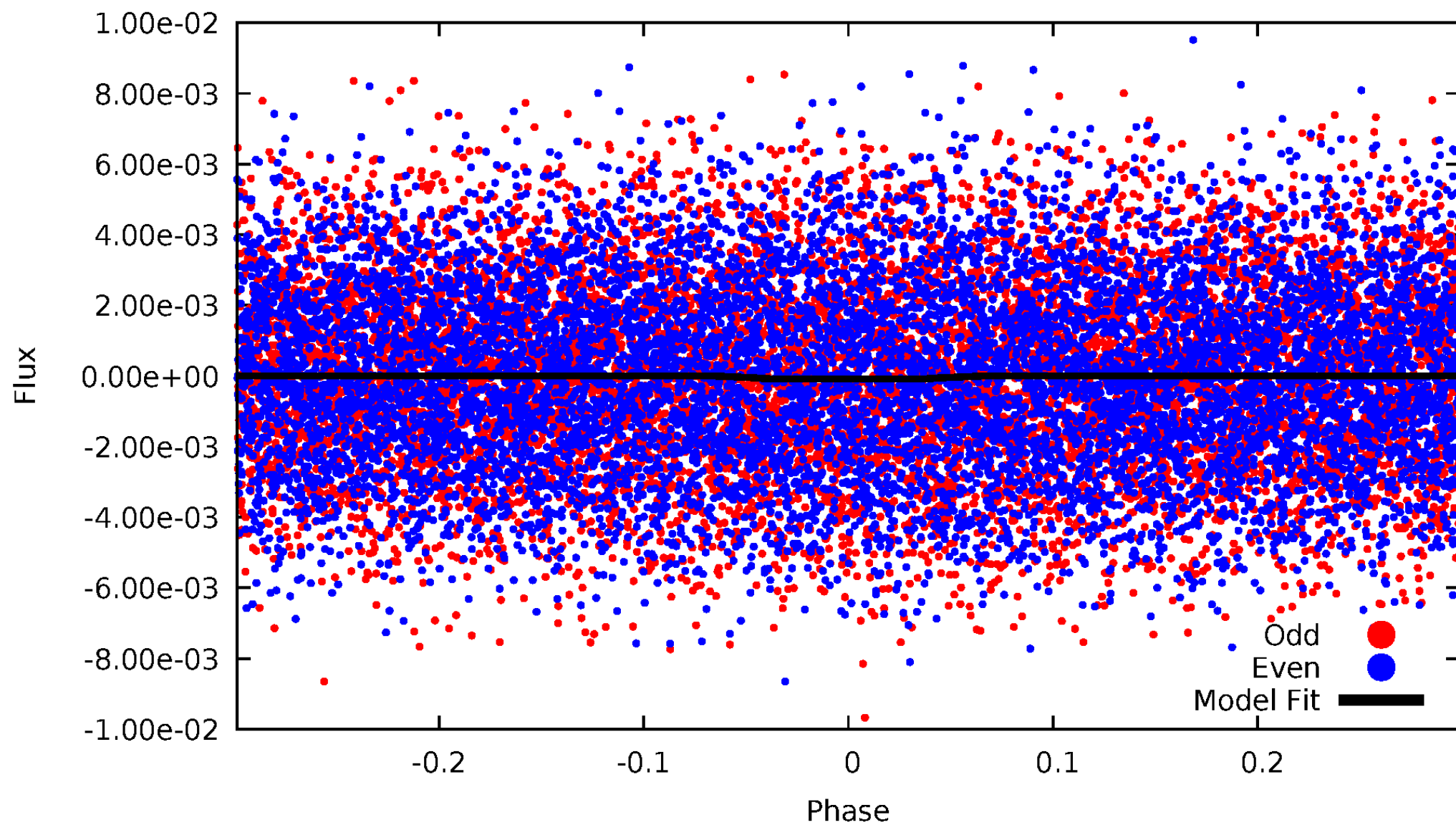
DV Odd/Even

TCE 003952623-02



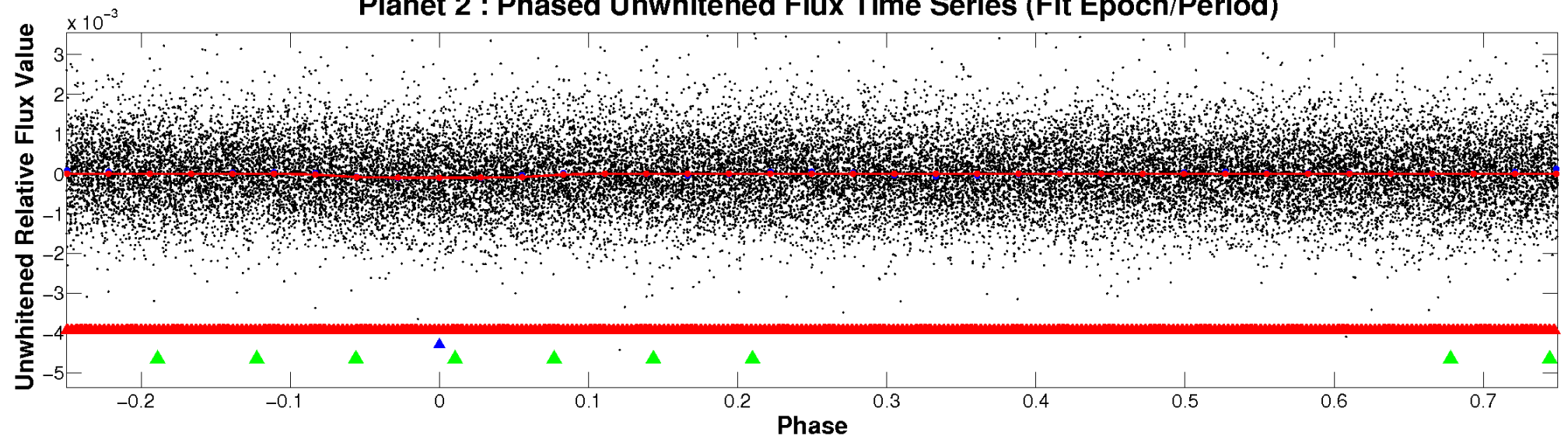
ALT Odd/Even

TCE 003952623-02

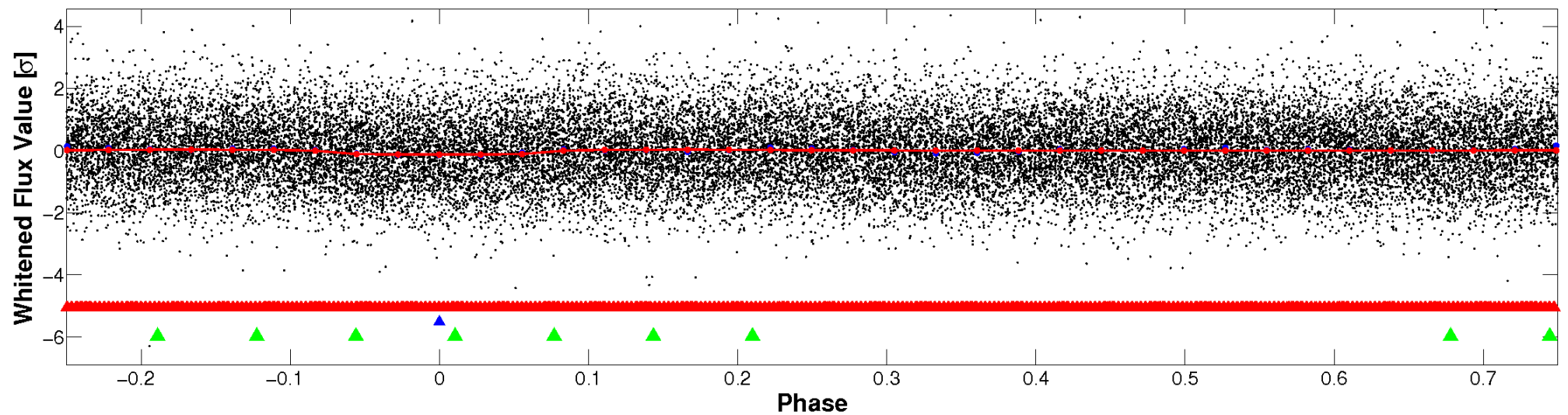


Non-Whitened Vs. Whitened Light Curve

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

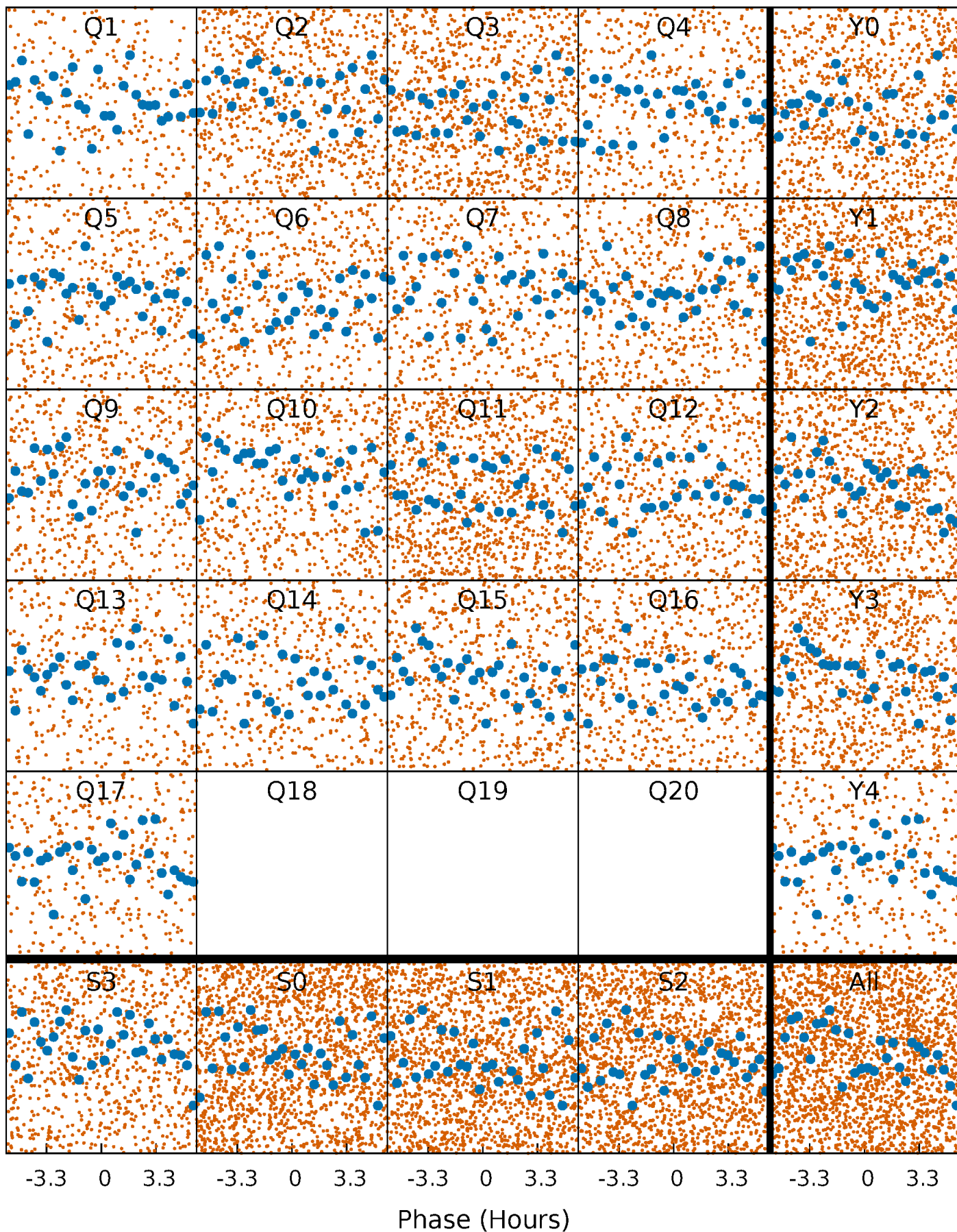


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



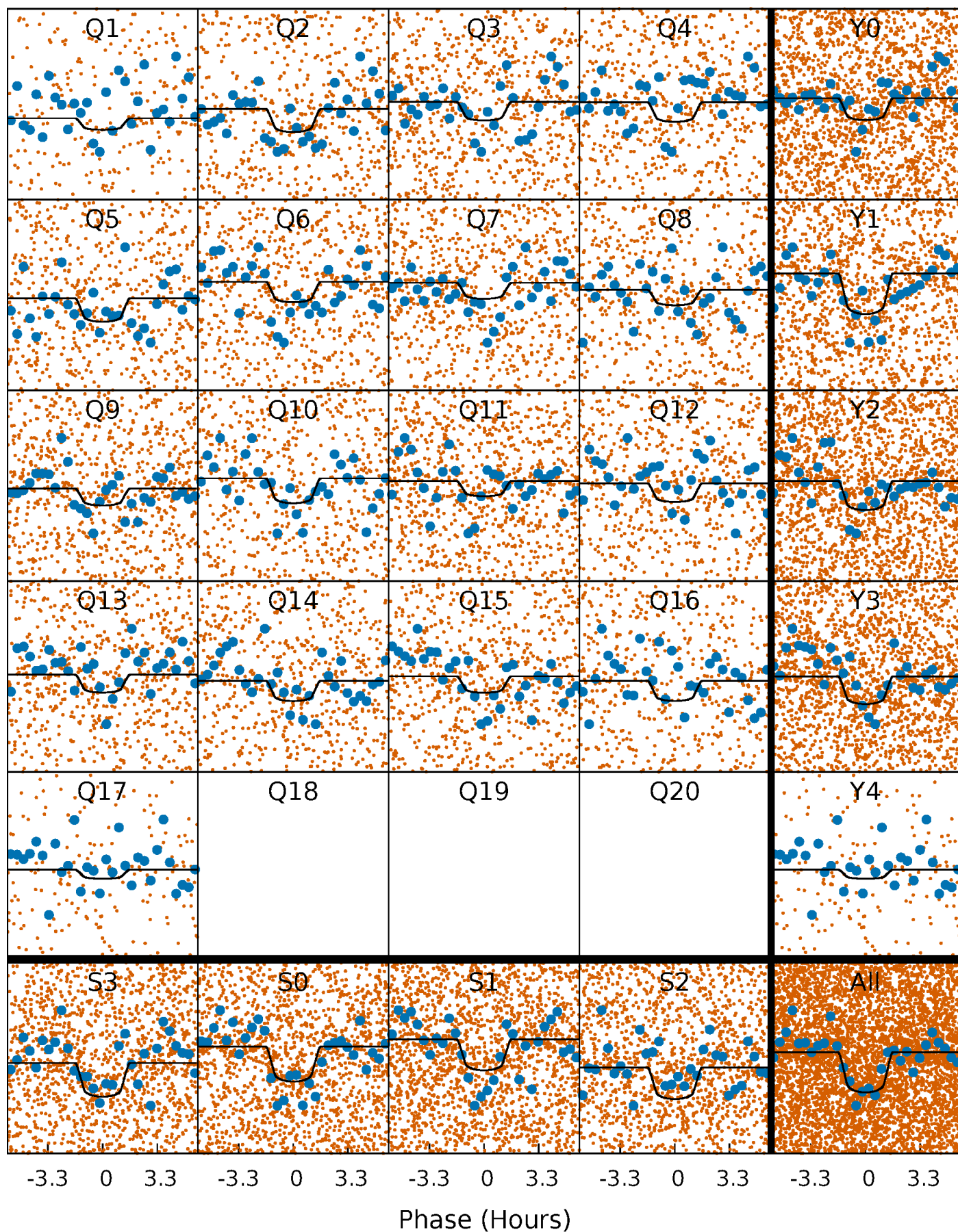
PDC Quarter-Phased Transit Curves

TCE 003952623-02 P= 0.736624 Days $T_0=132.119424$ (BKJD)



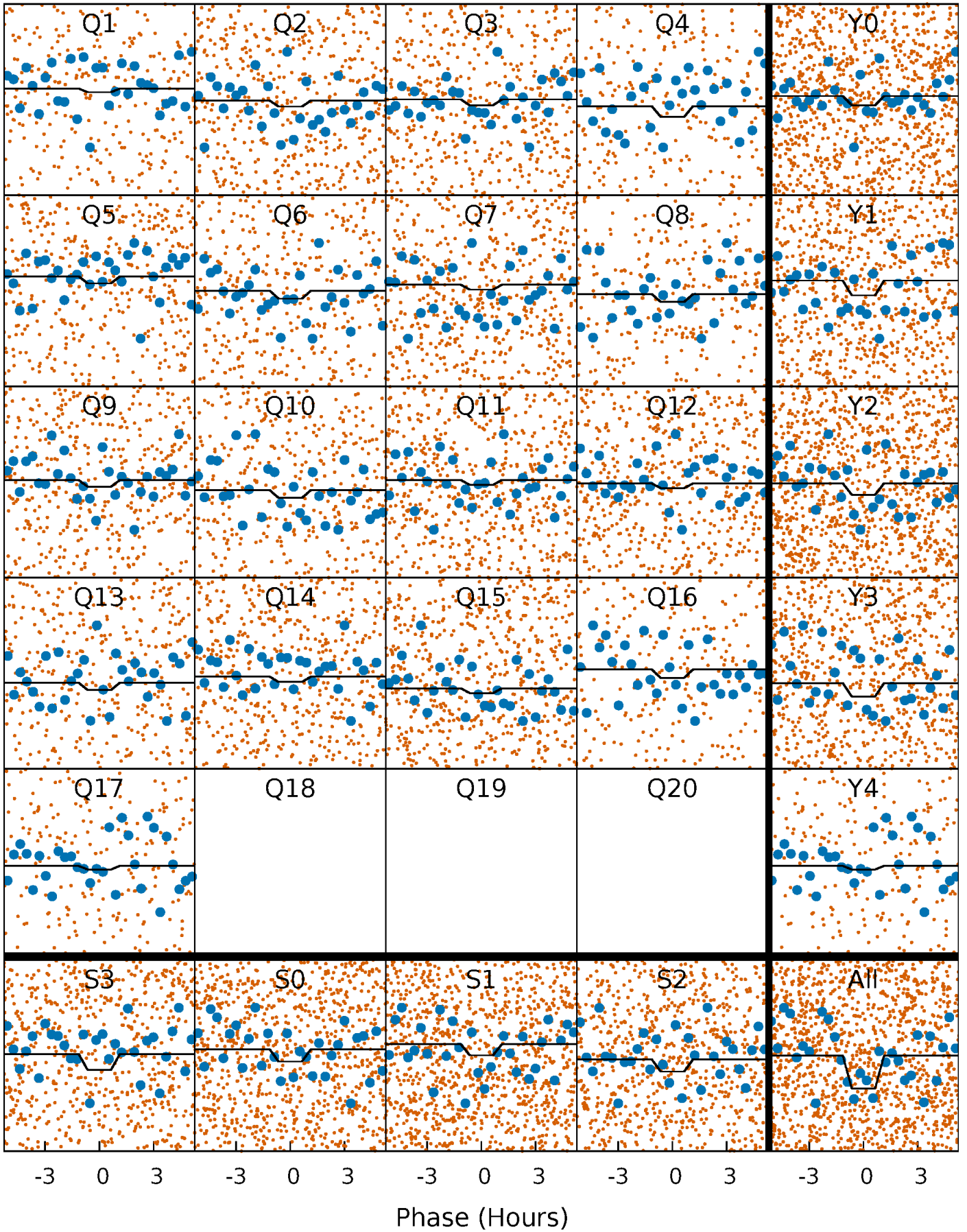
DV Quarter-Phased Transit Curves

TCE 003952623-02 P= 0.736624 Days $T_0=132.119424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

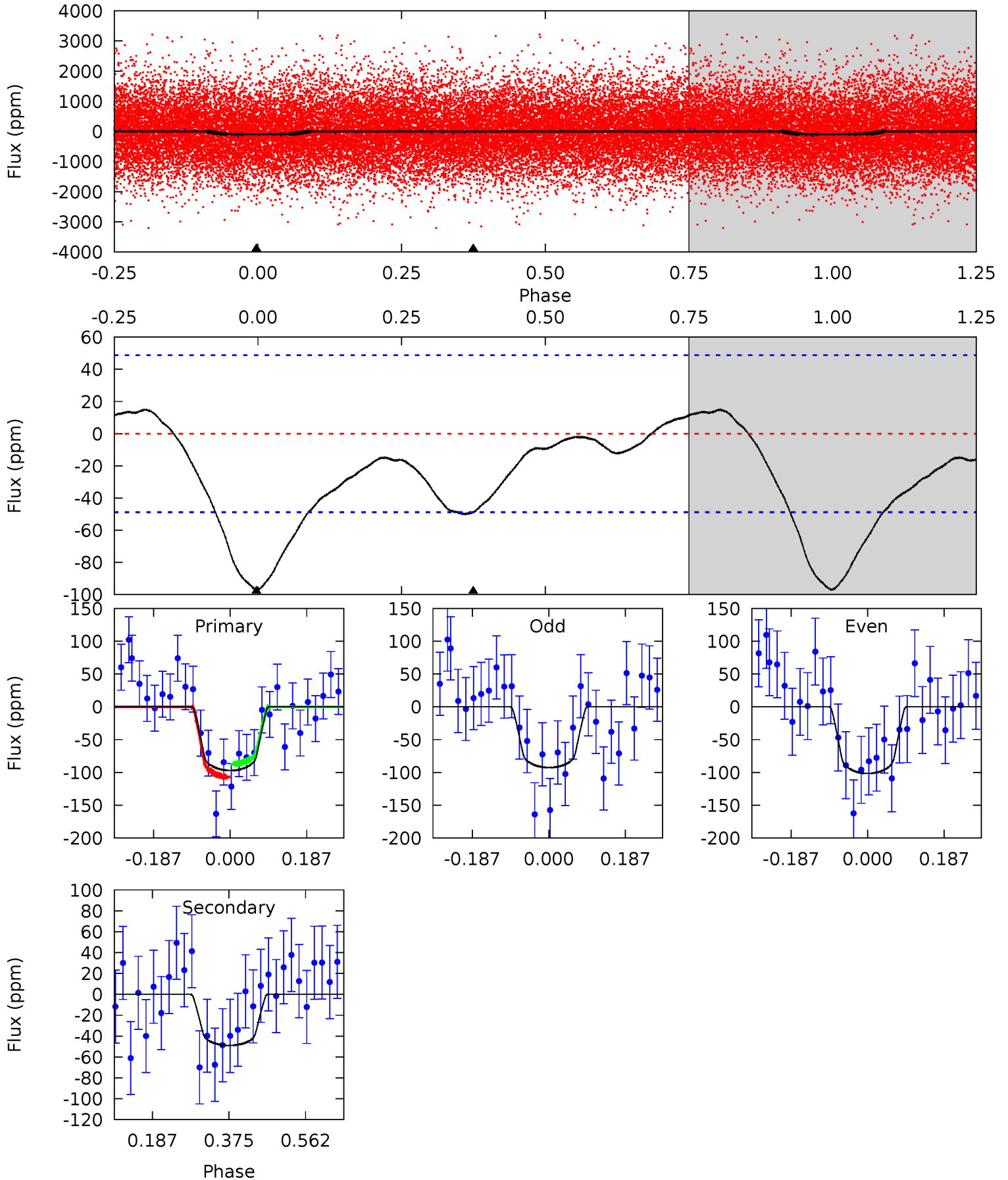
TCE 003952623-02 P= 0.736620 Days $T_0=132.118393$ (BKJD)



DV Model-Shift Uniqueness Test

003952623-02, P = 0.736624 Days, E = 131.382800 Days

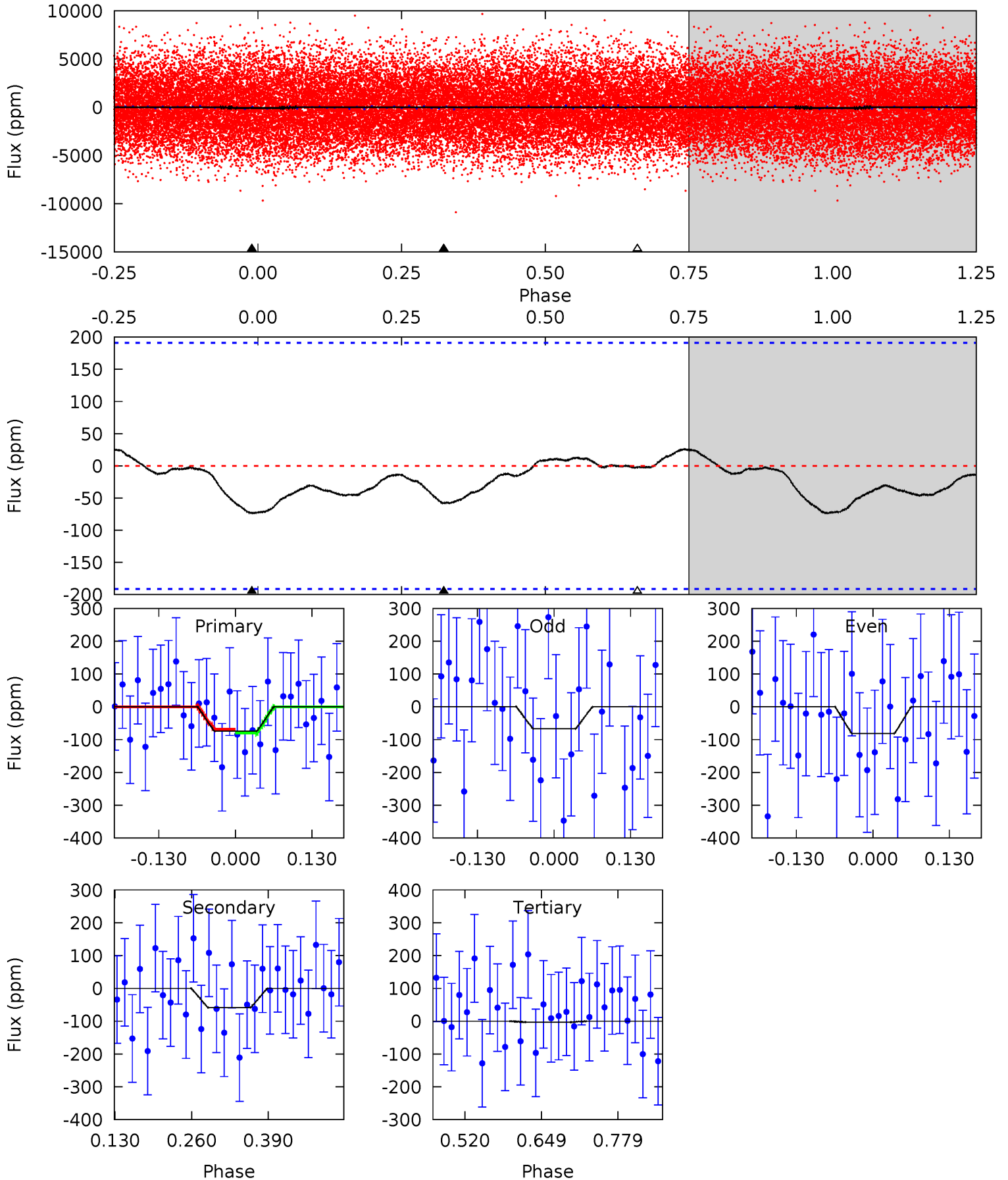
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.83	4.45	0	0	4.43	1.32	0.87	8.83	8.83	4.45	4.45	0.41	0.90	0.13	0.90



Alt Model-Shift Uniqueness Test

003952623-02, P = 0.736620 Days, E = 131.381773 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	1.38	0.08	0	4.51	1.51	0.46	1.67	1.75	1.30	1.38	0.17	1.78	0.26	0.14



Stellar Parameters For KIC 003952623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7046^{+194}_{-333}	$4.181^{+0.105}_{-0.195}$	$0.060^{+0.200}_{-0.350}$	$1.639^{+0.550}_{-0.296}$	$1.488^{+0.216}_{-0.216}$	$0.476^{+0.278}_{-0.234}$
	+3%/-5%	+3%/-5%	+333%/-583%	+34%/-18%	+15%/-15%	+58%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003952623-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-49 ± 11	$2.12^{+1.10}_{-1.08}$	4139^{+312}_{-244}	5182^{+2657}_{-999}	$1.928^{+6.530}_{-1.089}$
Alt.	-58 ± 42	$1.68^{+1.15}_{-0.97}$	4138^{+312}_{-268}	5923^{+4269}_{-2237}	$3.157^{+14.826}_{-2.617}$

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

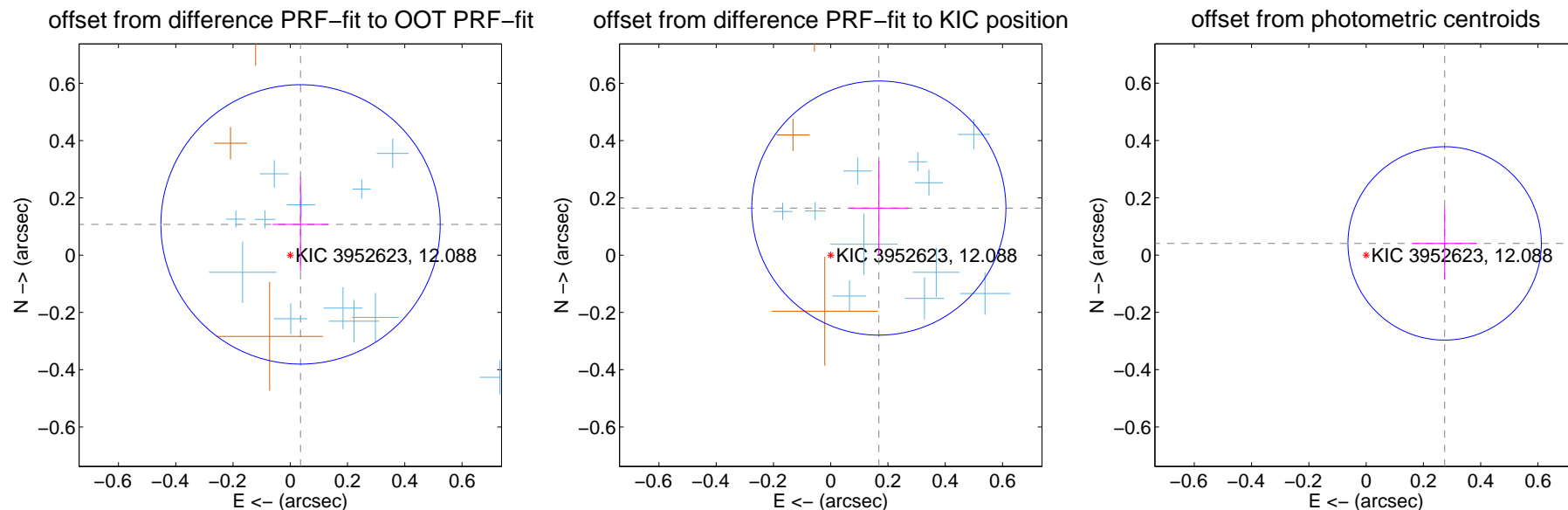
DV Centroid Data

Supplemental centroid analysis for 003952623-02. Kepler magnitude: 12.09. Transit SNR 8.10

There are 13 quarters with good PRF difference image offsets

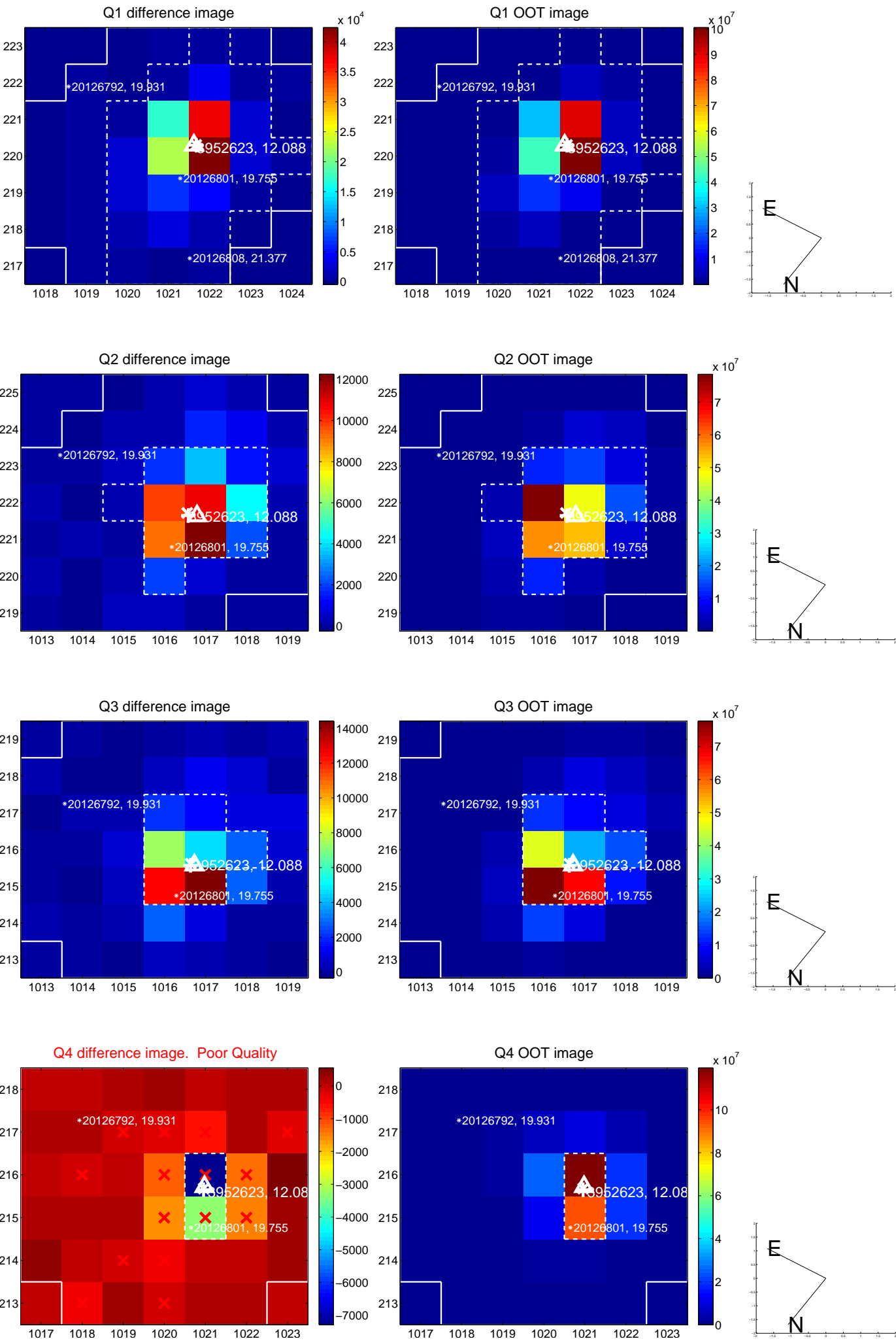
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.163	0.70	-0.036 ± 0.098	0.107 ± 0.164
PRF-fit source offset from KIC position	0.235 ± 0.148	1.59	-0.168 ± 0.104	0.164 ± 0.165
photometric centroid source offset	0.28 ± 0.11	2.46	-0.27 ± 0.11	0.04 ± 0.13

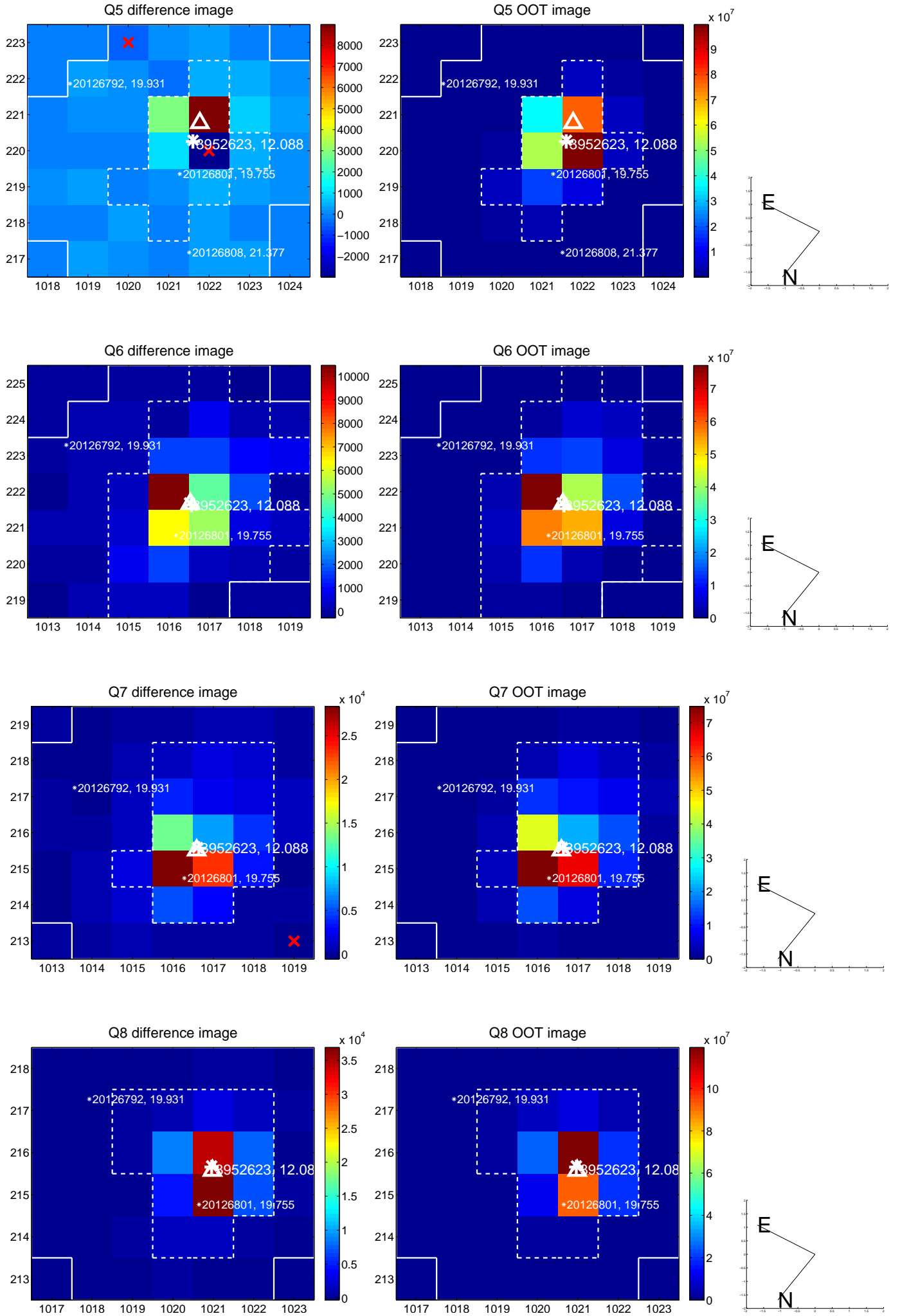


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

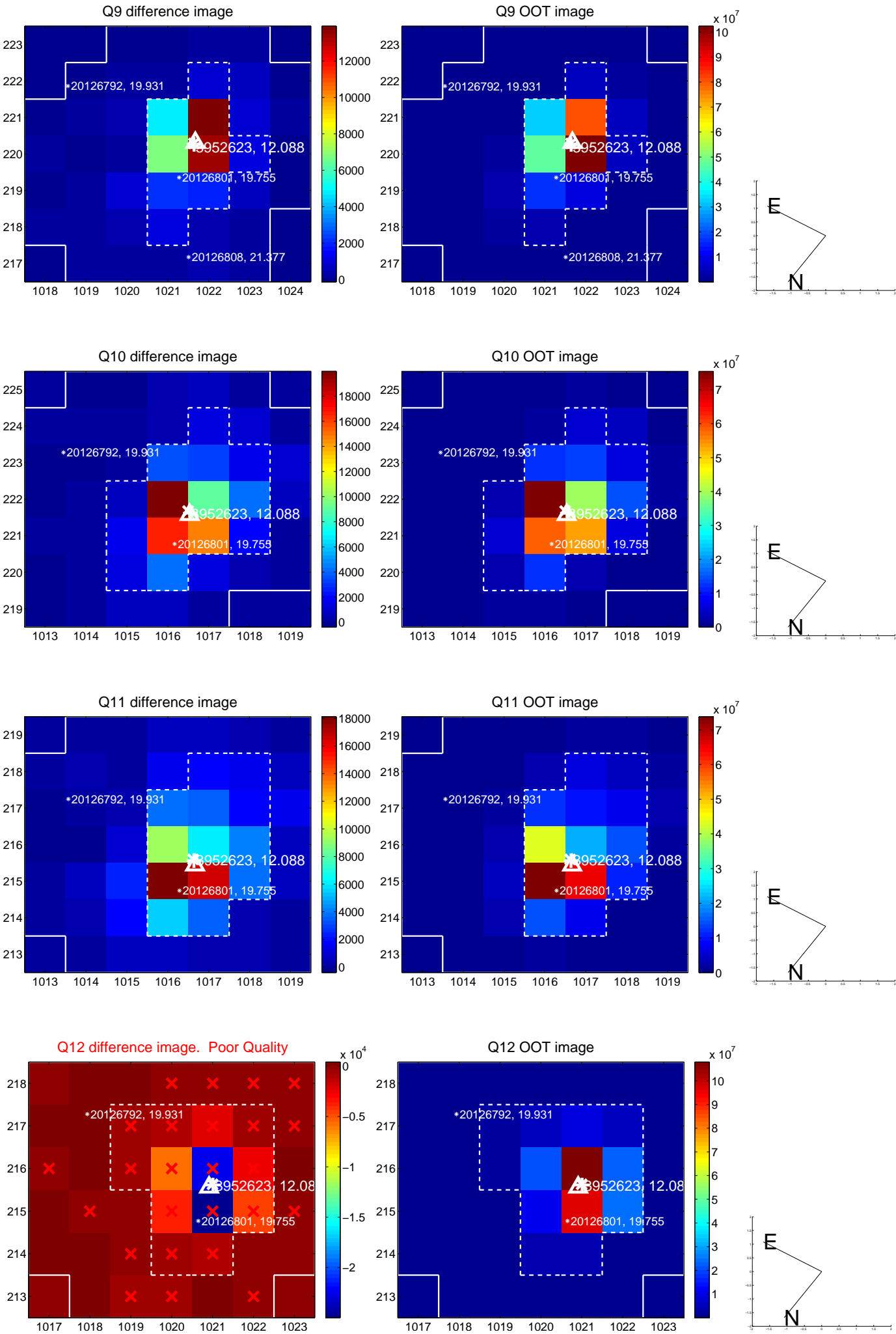
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



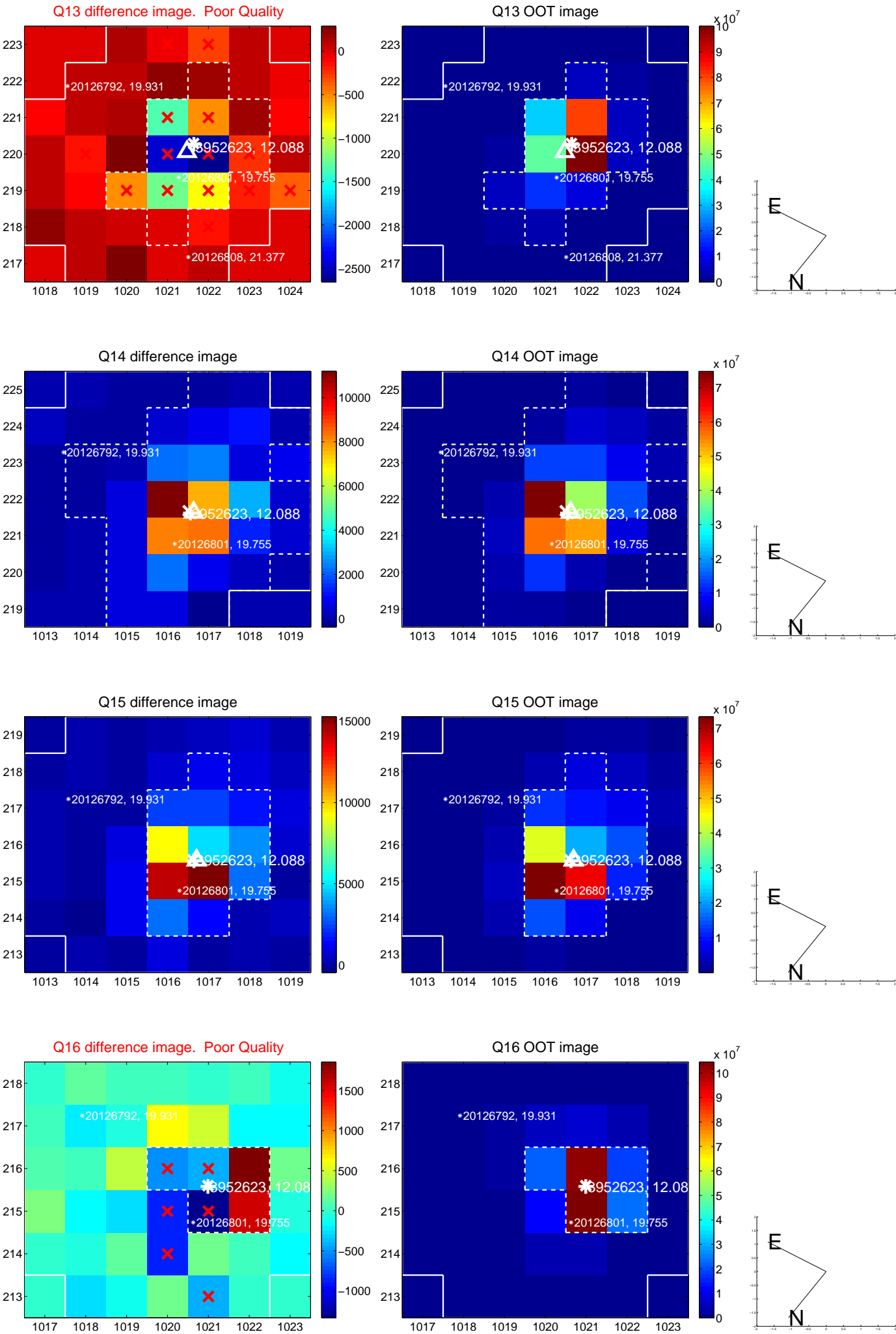
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



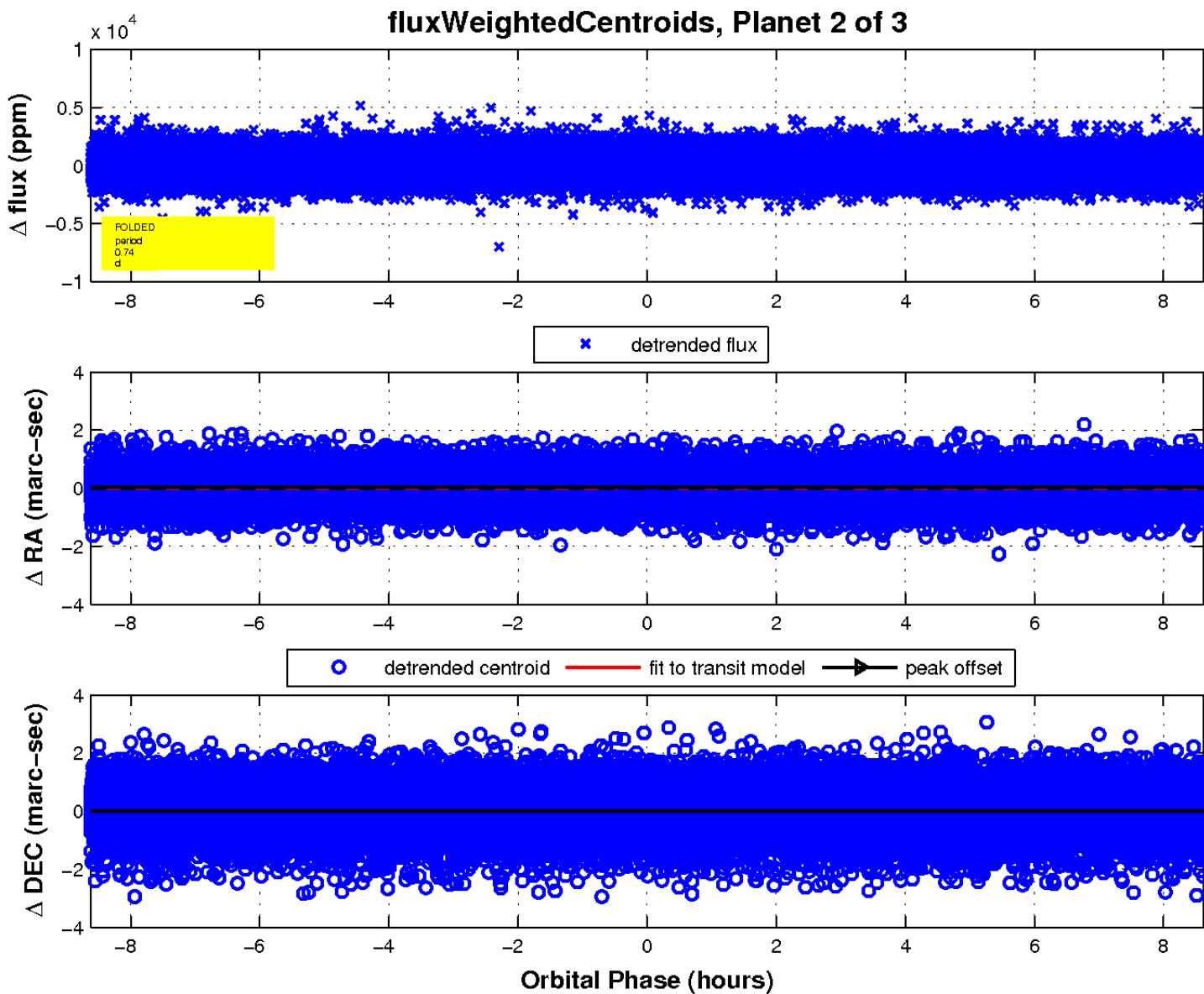
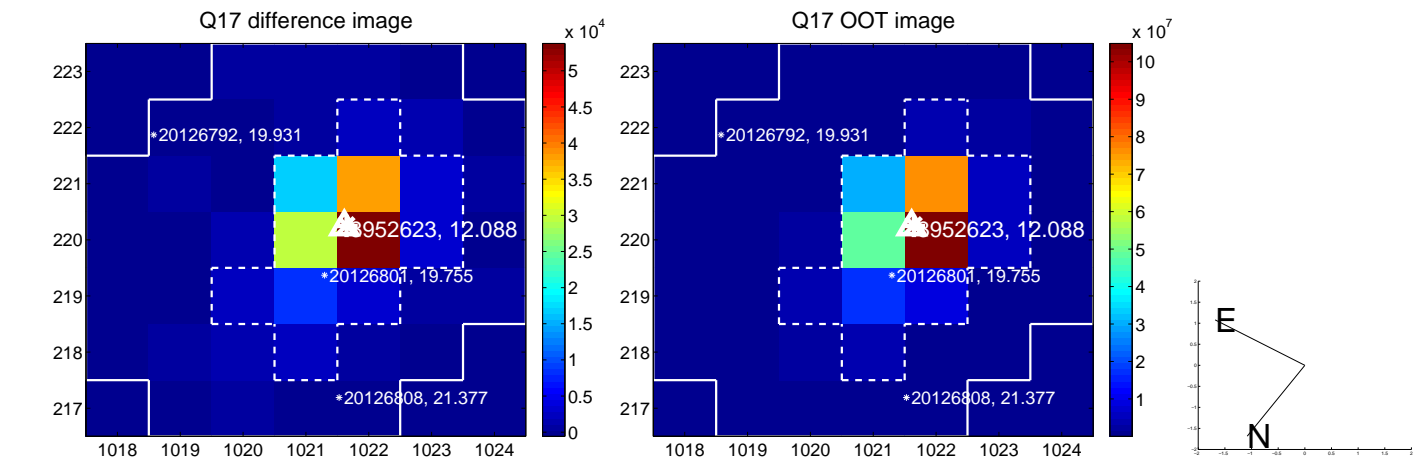
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

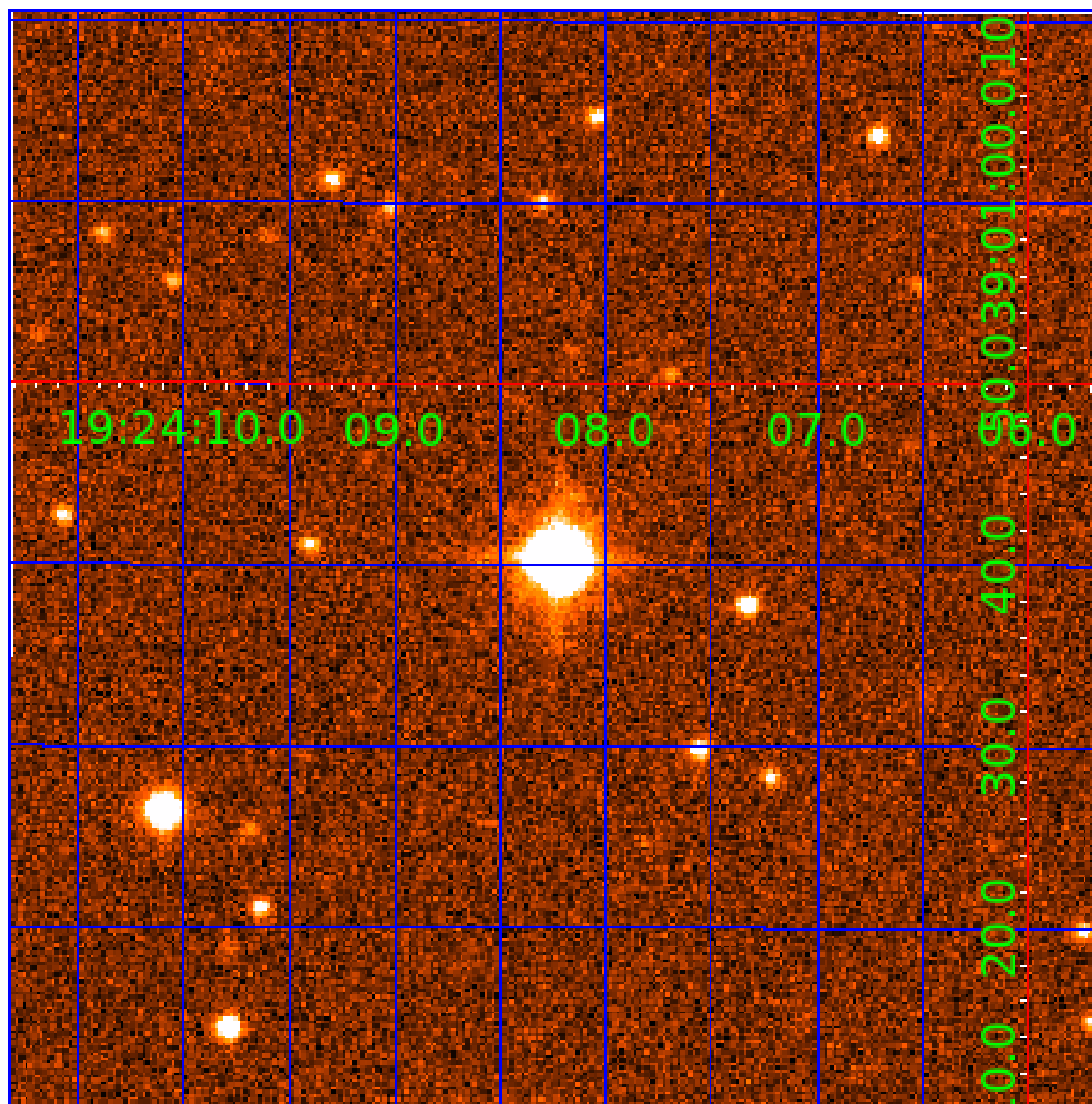


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003952623

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})
003952623-01	OBS	No	1.910689	132.101759	88.0	8.009	8.1	6.9	1.64	7046	1.70	5013.38
003952623-02	OBS	No	0.736624	132.119424	102.4	2.873	8.3	8.1	1.64	7046	1.93	17867.18
003952623-03	OBS	No	170.847884	146.269979	1555.2	10.959	8.4	7.4	1.64	7046	6.73	12.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003952623-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003952623-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003952623-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS

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

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

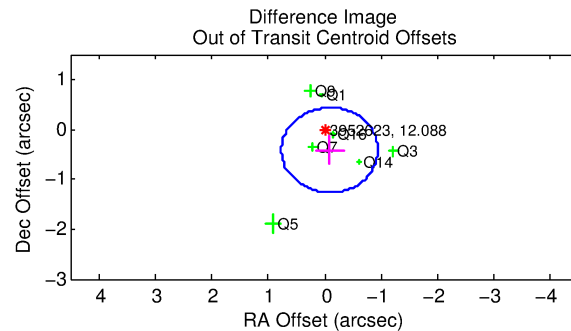
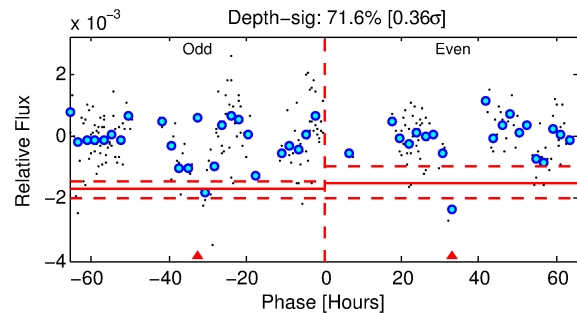
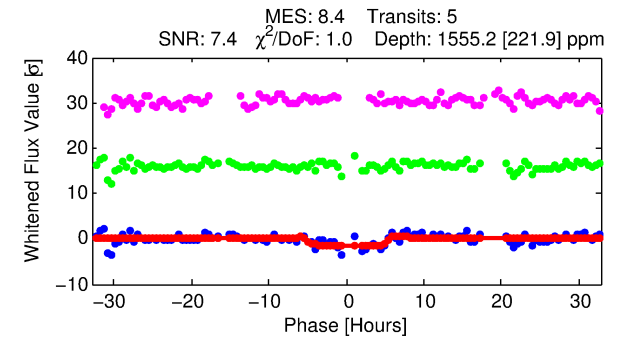
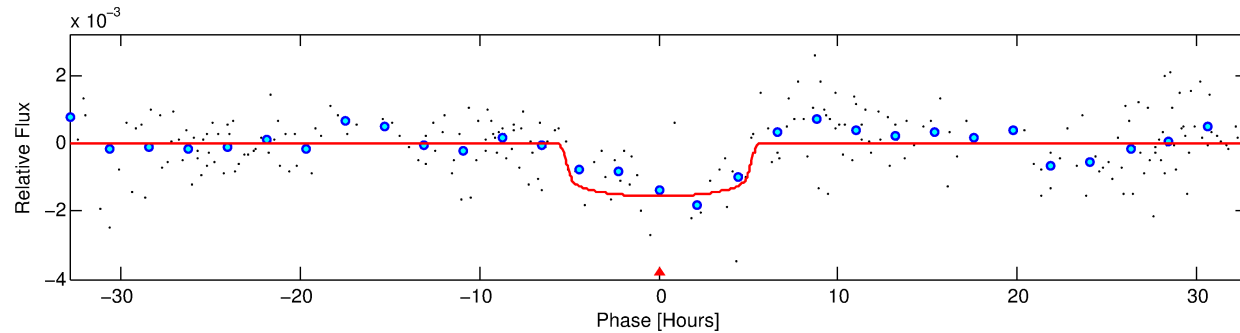
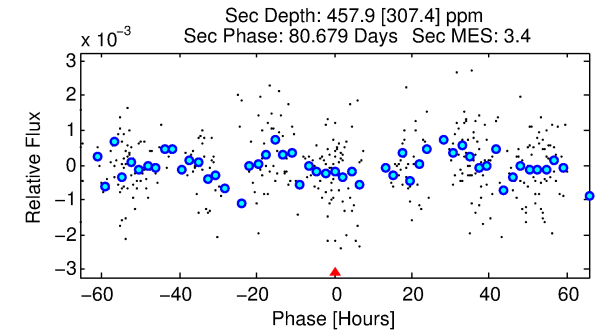
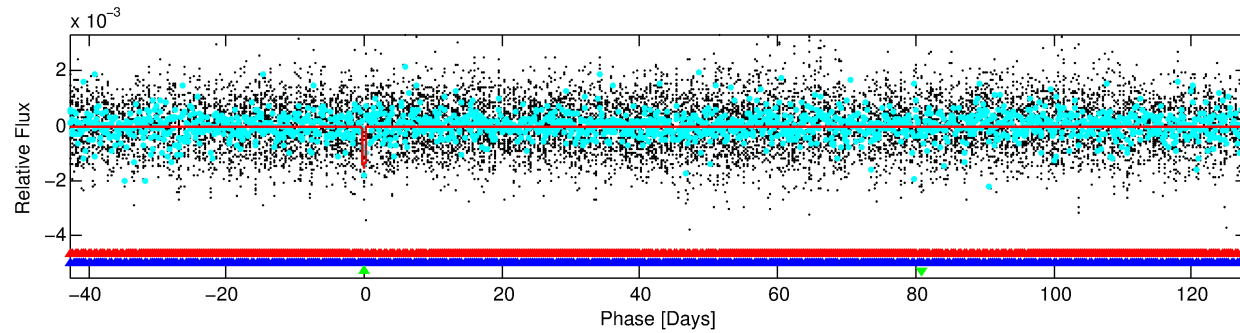
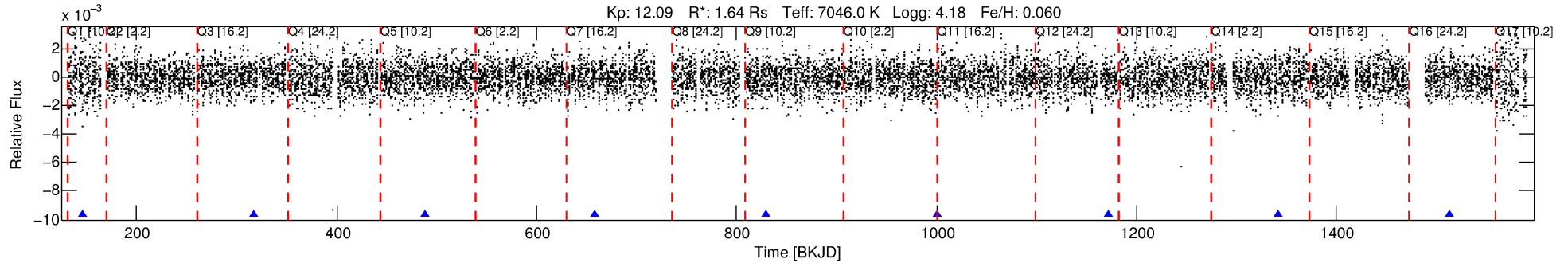
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003952623-03

No Significant Match Found

DV One-Page Summary

KIC: 3952623 Candidate: 3 of 3 Period: 170.848 d



DV Fit Results:

Period = 170.84788 [0.00392] d
Epoch = 146.2700 [0.0146] BKJD
Rp/R* = 0.0376 [0.0161]
a/R* = 105.38 [255.45]
b = 0.54 [3.16]
Seff = 12.54 [5.25]
Teff = 480 [50] K
Rp = 6.73 [3.66] Re
a = 0.6878 [0.1851] AU
Ag = 2629.51 [3023.81] [0.87 σ]
Teffp = 5312 [1466] K [3.29 σ]

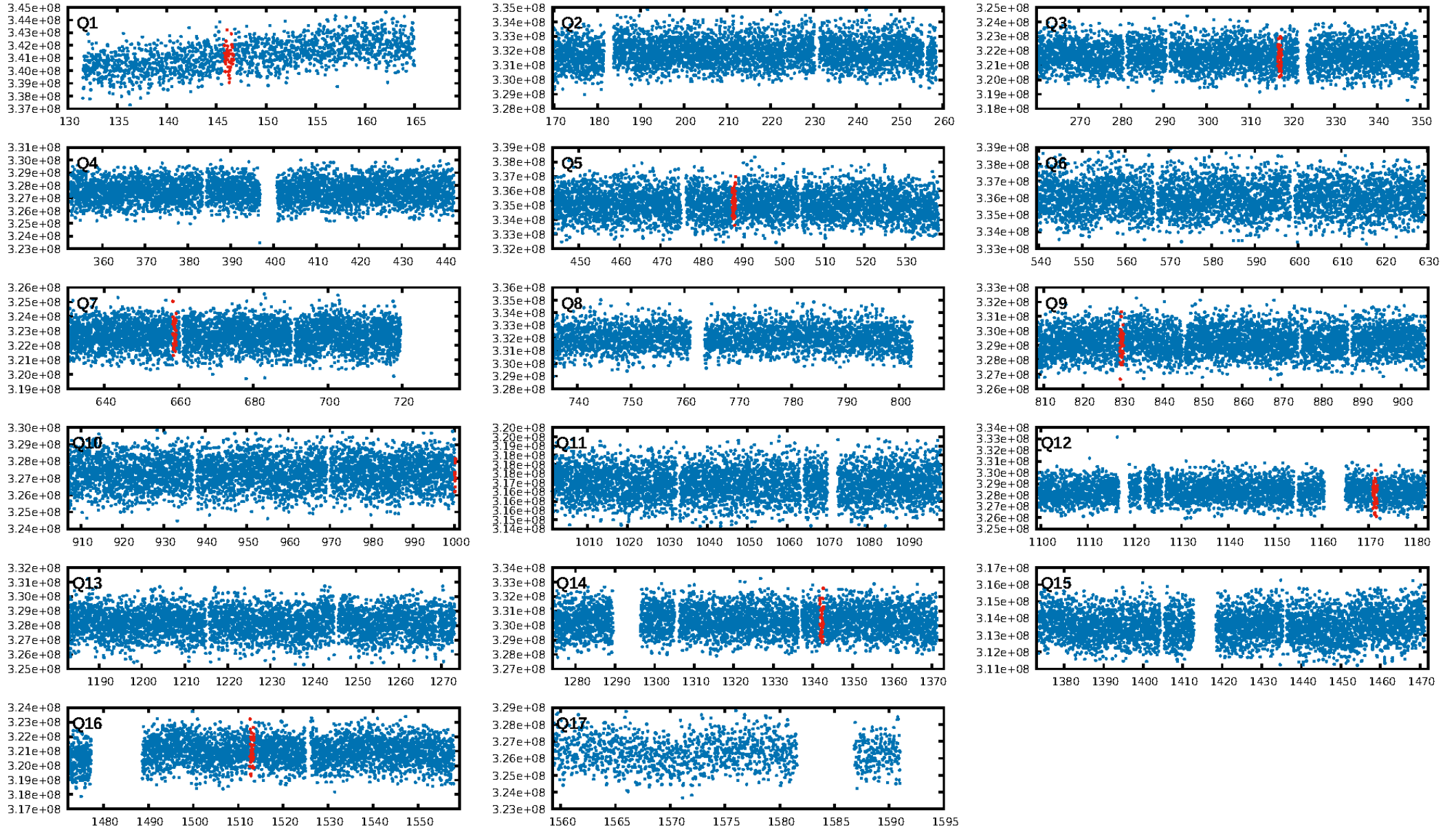
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [298.71 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 69.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.73e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.3606
Centroid-sig: 5.9%
Centroid-so: 0.178 arcsec [2.14 σ]
OotOffset-rm: 0.428 arcsec [1.51 σ]
KicOffset-rm: 0.376 arcsec [1.39 σ]
OotOffset-st: 1/2/1/3 [7]
KicOffset-st: 1/2/1/3 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.00 [0/7]

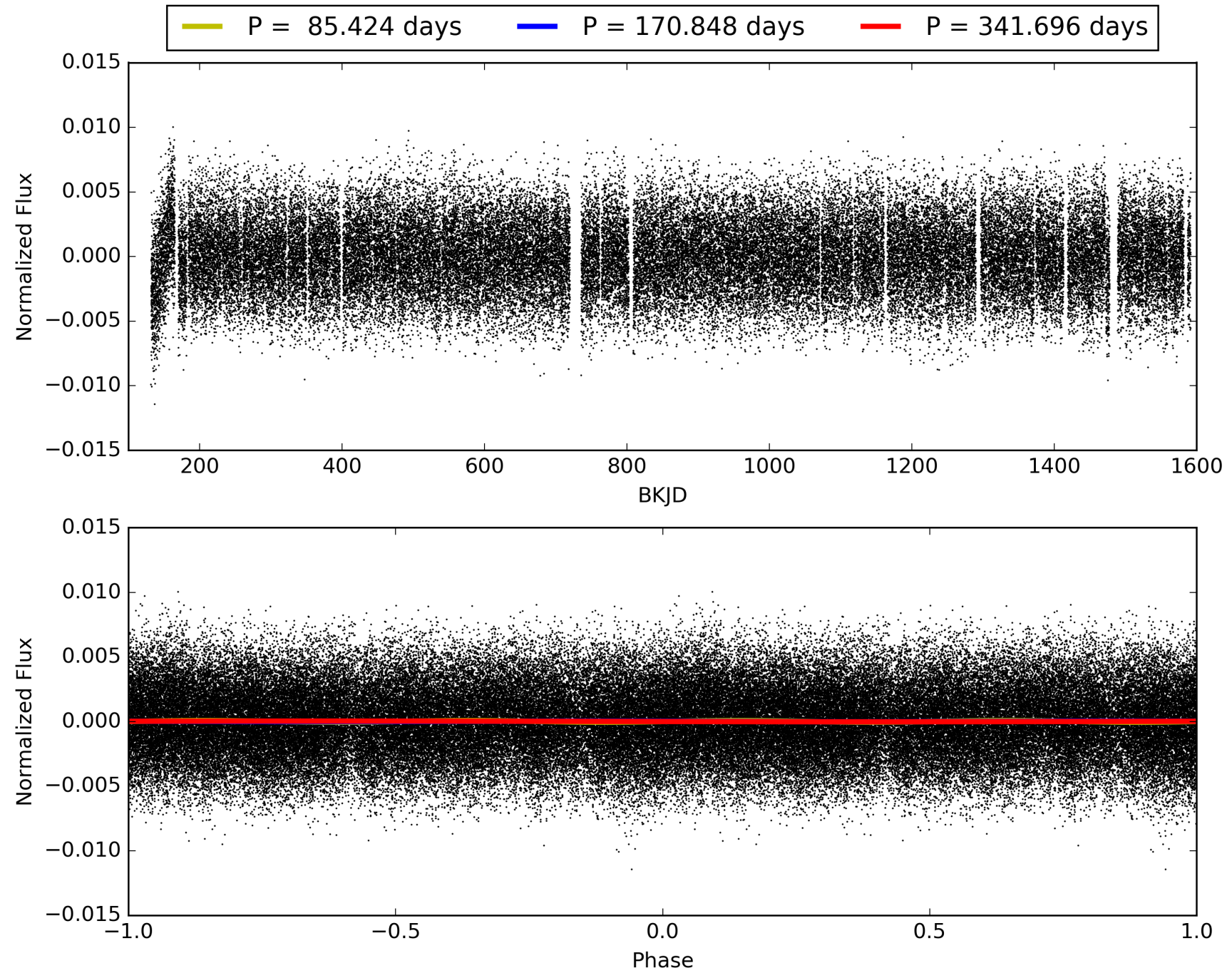
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:06:22 Z

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

TCE 003952623-03, PDC Light Curves

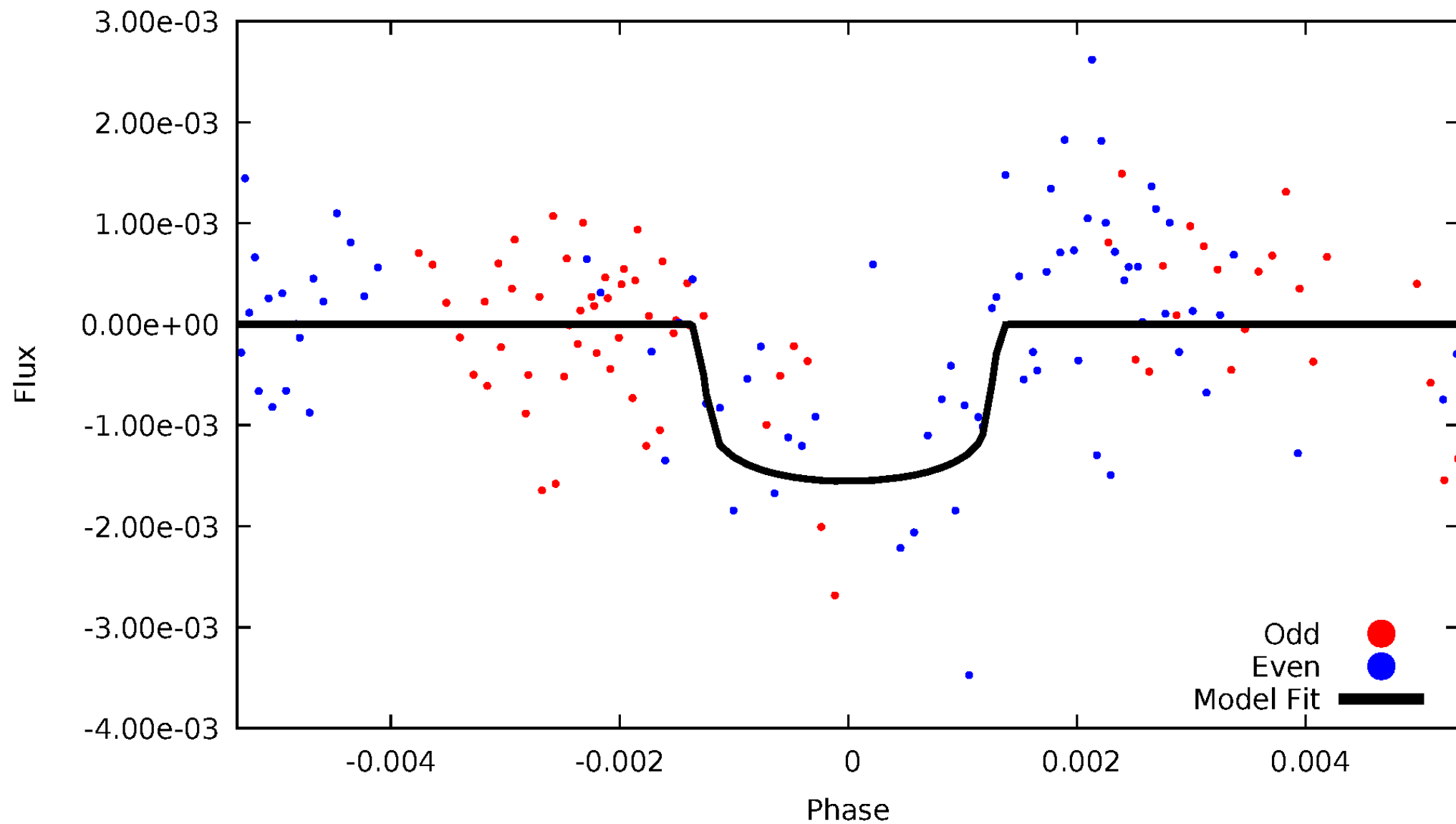


TCE 003952623-03



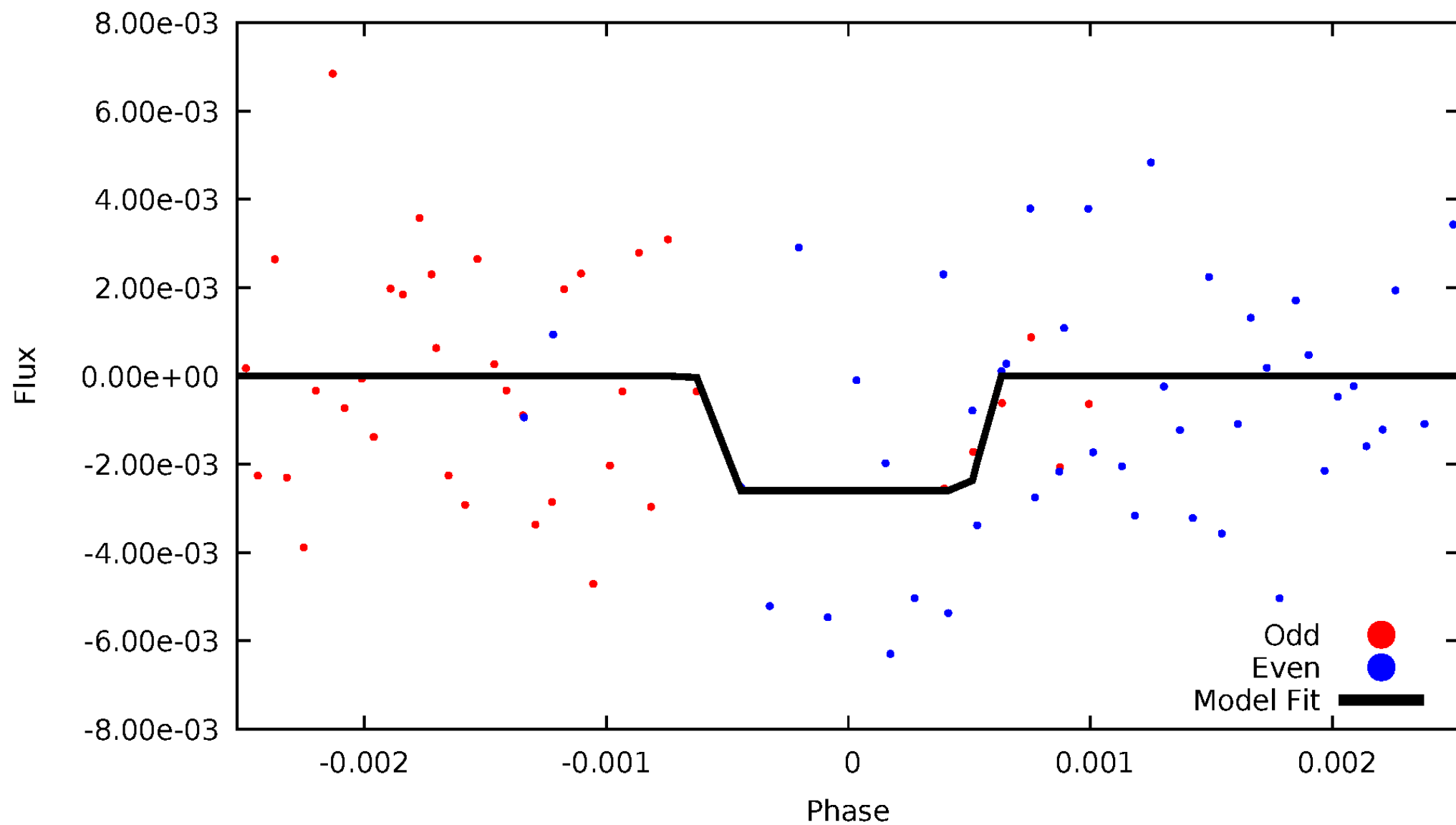
DV Odd/Even

TCE 003952623-03

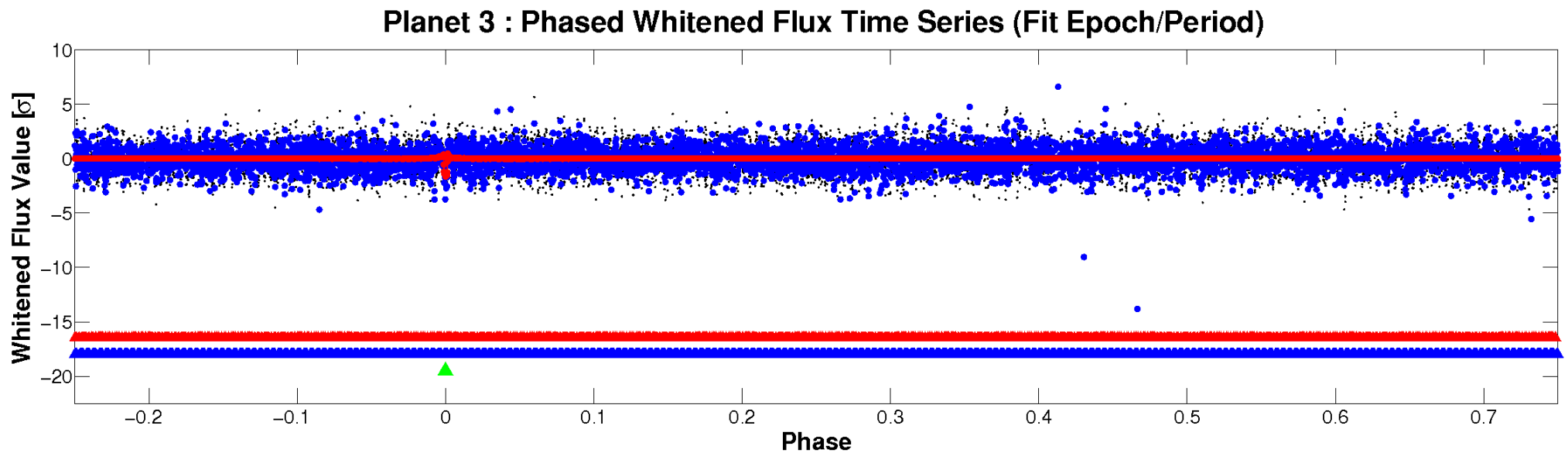
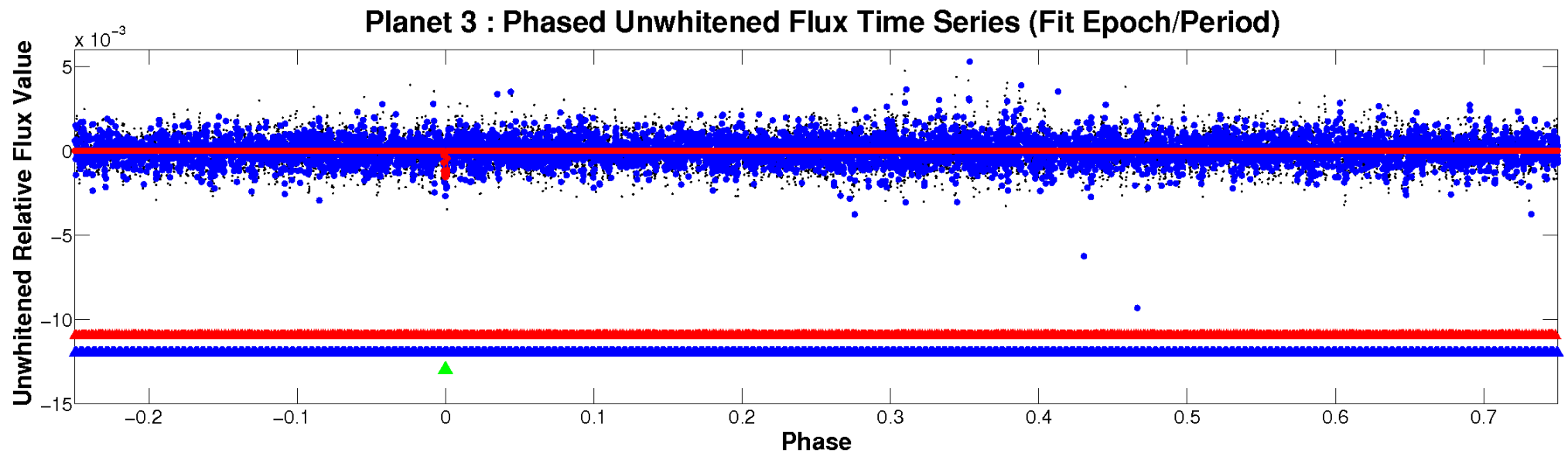


ALT Odd/Even

TCE 003952623-03

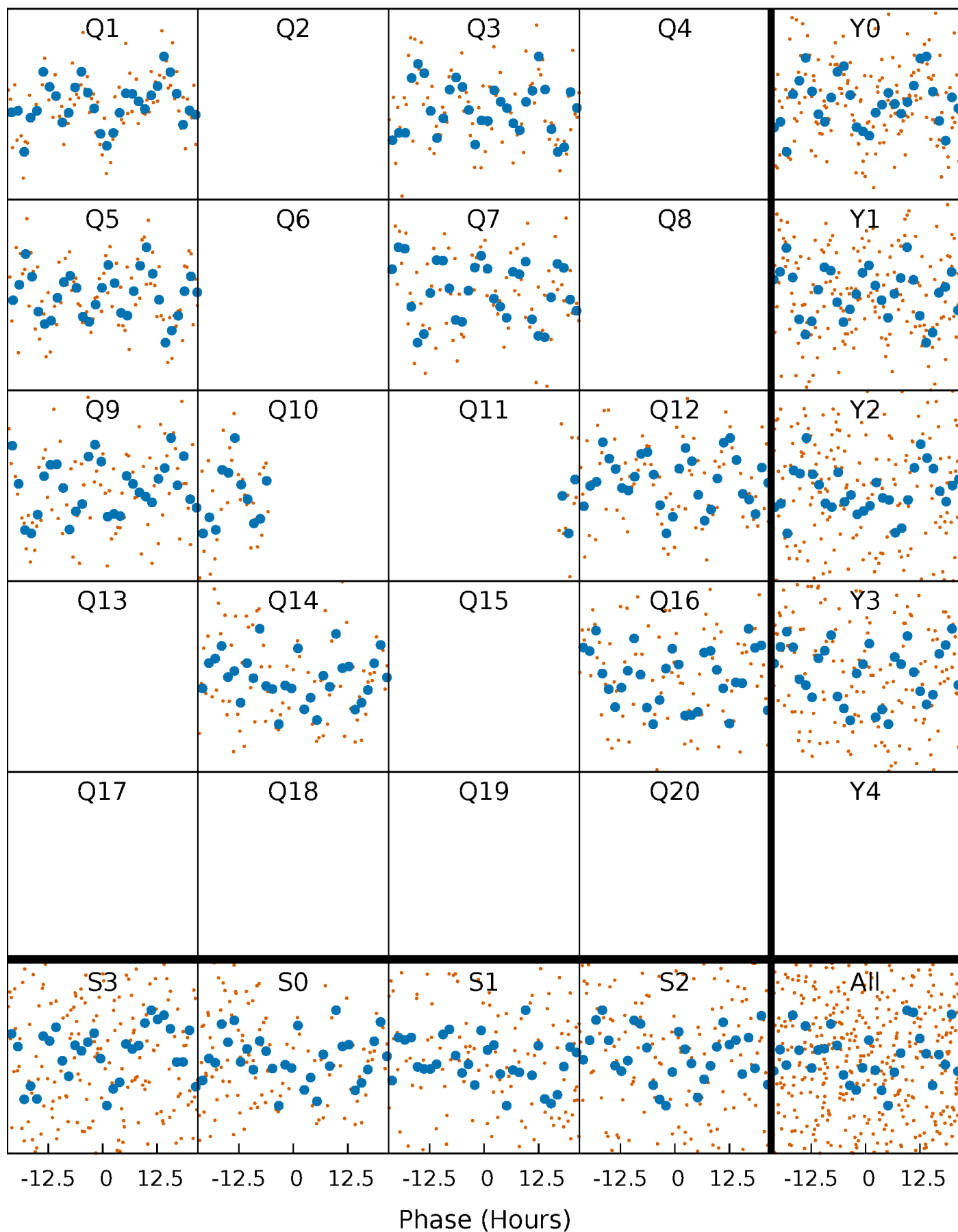


Non-Whitened Vs. Whitened Light Curve



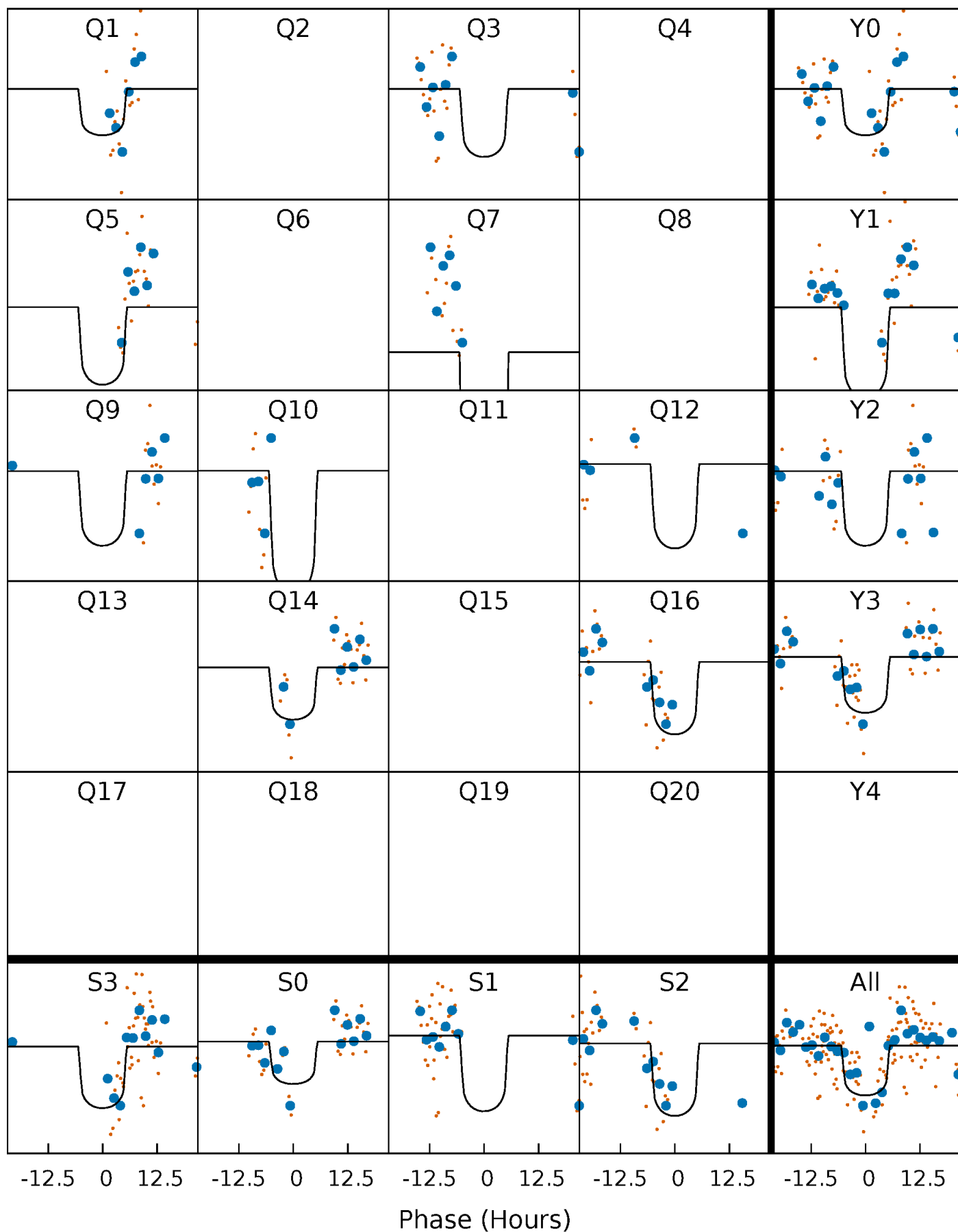
PDC Quarter-Phased Transit Curves

TCE 003952623-03 P=170.847884 Days $T_0=146.269979$ (BKJD)



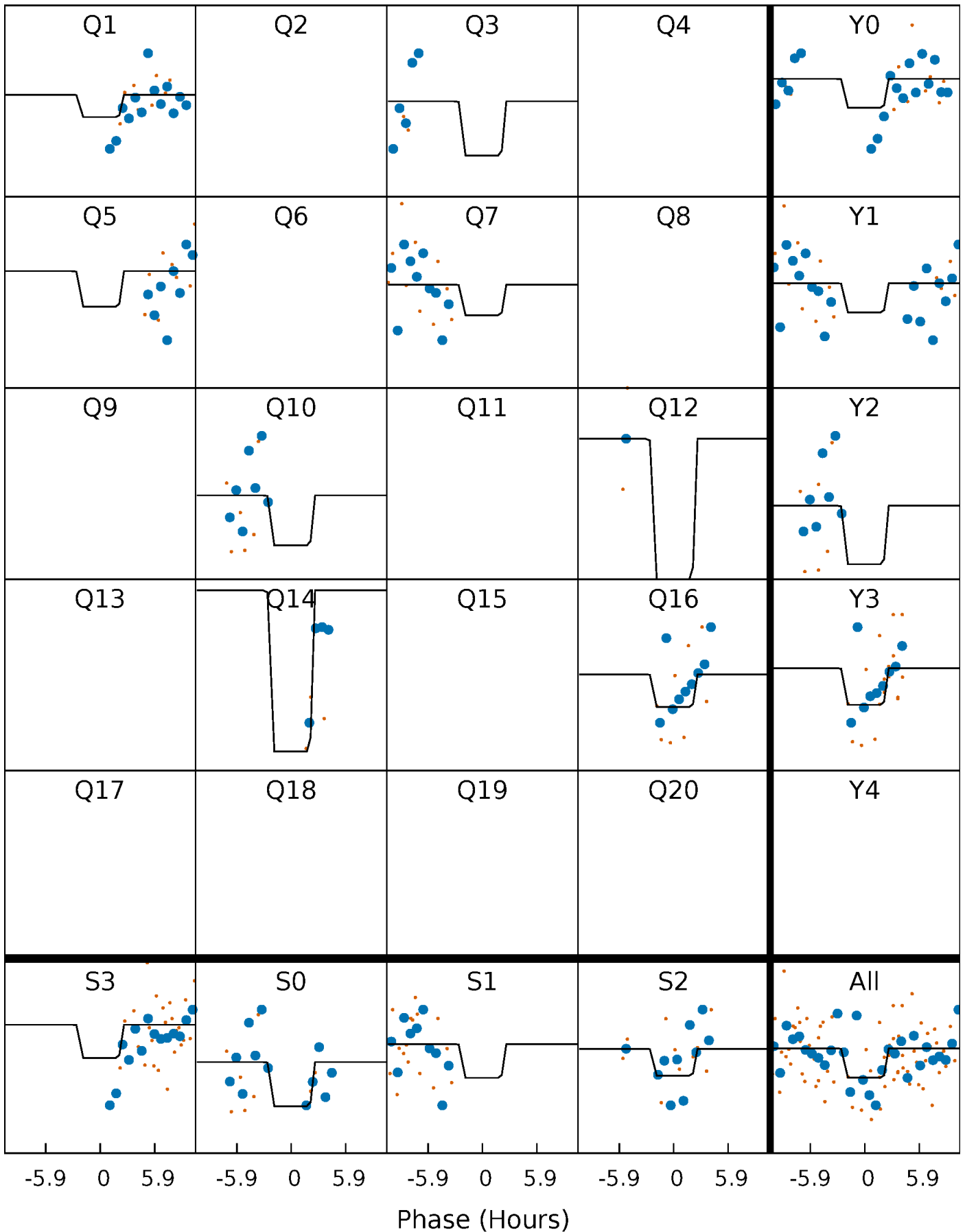
DV Quarter-Phased Transit Curves

TCE 003952623-03 P=170.847884 Days $T_0=146.269979$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

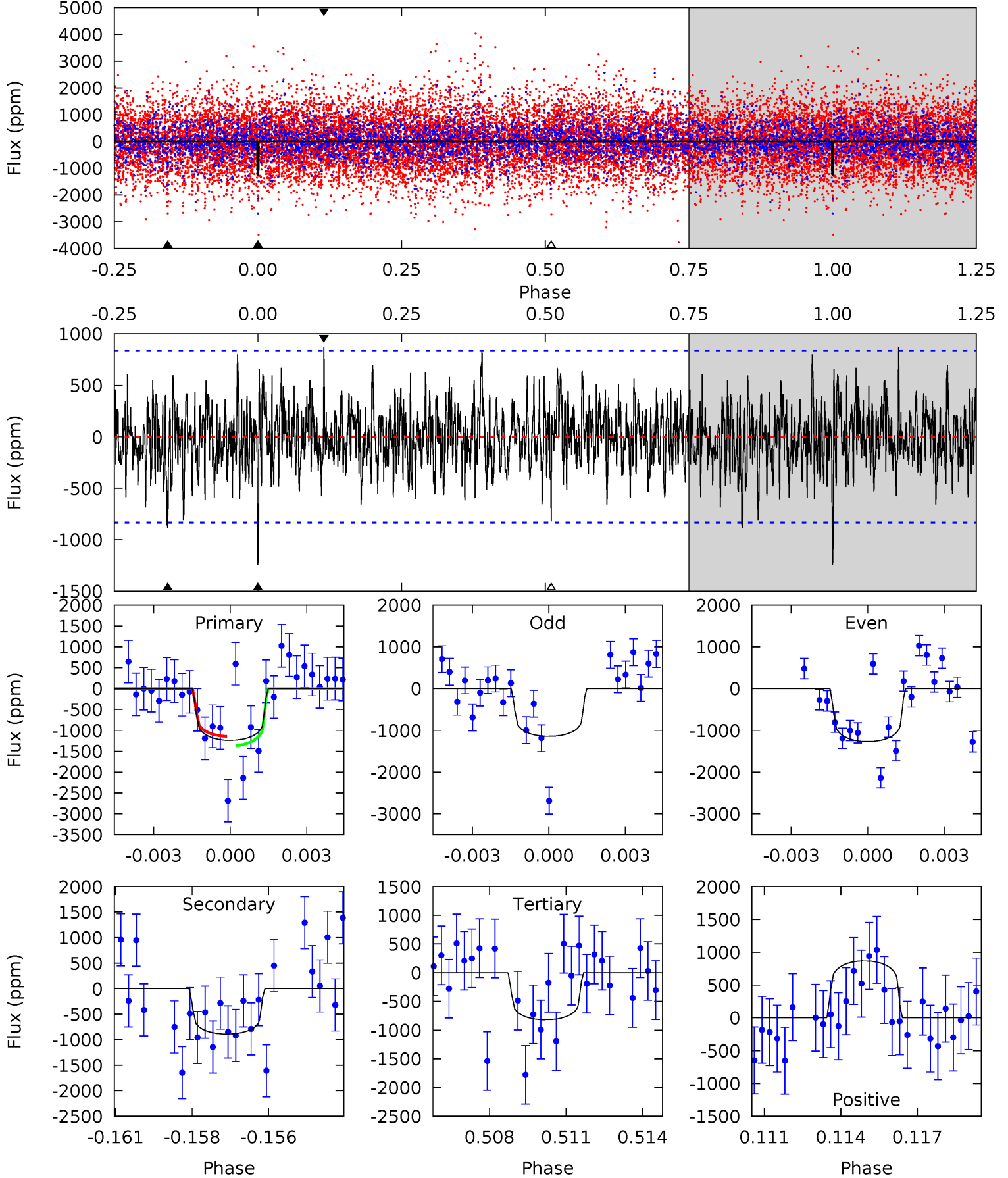
TCE 003952623-03 P=170.819658 Days $T_0=146.277476$ (BKJD)



DV Model-Shift Uniqueness Test

003952623-03, P = 170.847884 Days, E = 146.269979 Days

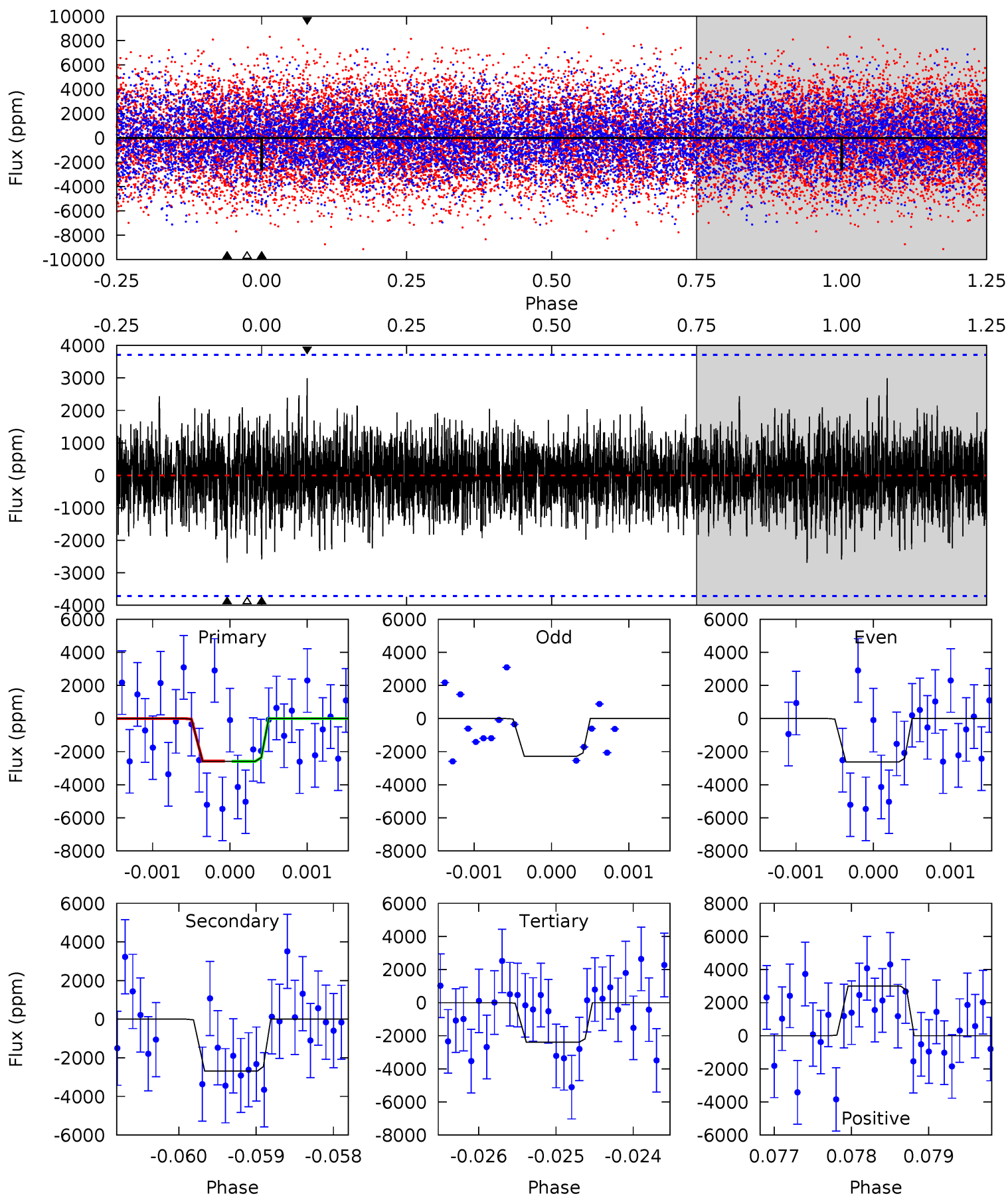
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.83	5.61	5.17	5.48	5.27	2.99	1.54	2.66	2.35	0.43	0.12	0.35	0.77	0.41	0.70



Alt Model-Shift Uniqueness Test

003952623-03, P = 170.819658 Days, E = 146.277476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.77	3.91	3.49	4.36	5.41	3.23	1.05	0.27	-0.60	0.42	-0.45	0.18	1.41	0.53	0.01



Stellar Parameters For KIC 003952623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7046^{+194}_{-333}	$4.181^{+0.105}_{-0.195}$	$0.060^{+0.200}_{-0.350}$	$1.639^{+0.550}_{-0.296}$	$1.488^{+0.216}_{-0.216}$	$0.476^{+0.278}_{-0.234}$
	+3%/-5%	+3%/-5%	+333%/-583%	+34%/-18%	+15%/-15%	+58%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003952623-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-888 ± 158	$6.70^{+3.30}_{-2.74}$	679^{+52}_{-44}	6251^{+2212}_{-977}	4994^{+9823}_{-2681}
Alt.	-2687 ± 686	$9.13^{+3.58}_{-3.04}$	676^{+51}_{-43}	7096^{+1933}_{-1136}	8117^{+10308}_{-4145}

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 $A_{obs} \gg 1.0$

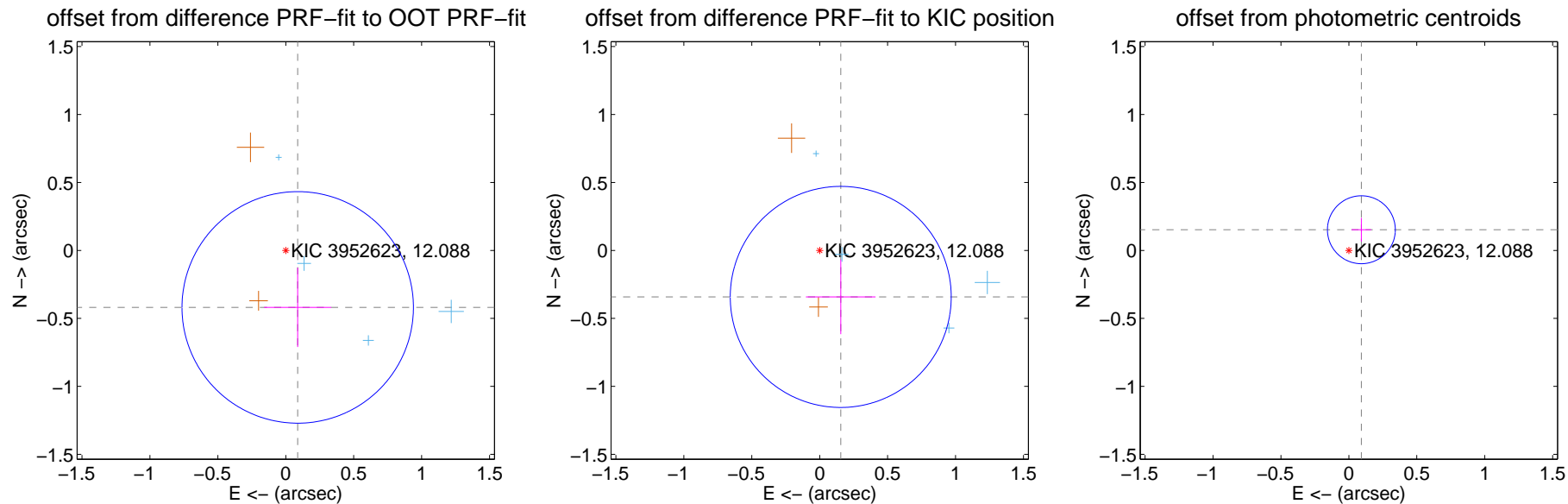
DV Centroid Data

Supplemental centroid analysis for 003952623-03. Kepler magnitude: 12.09. Transit SNR 7.42

There are 5 quarters with good PRF difference image offsets

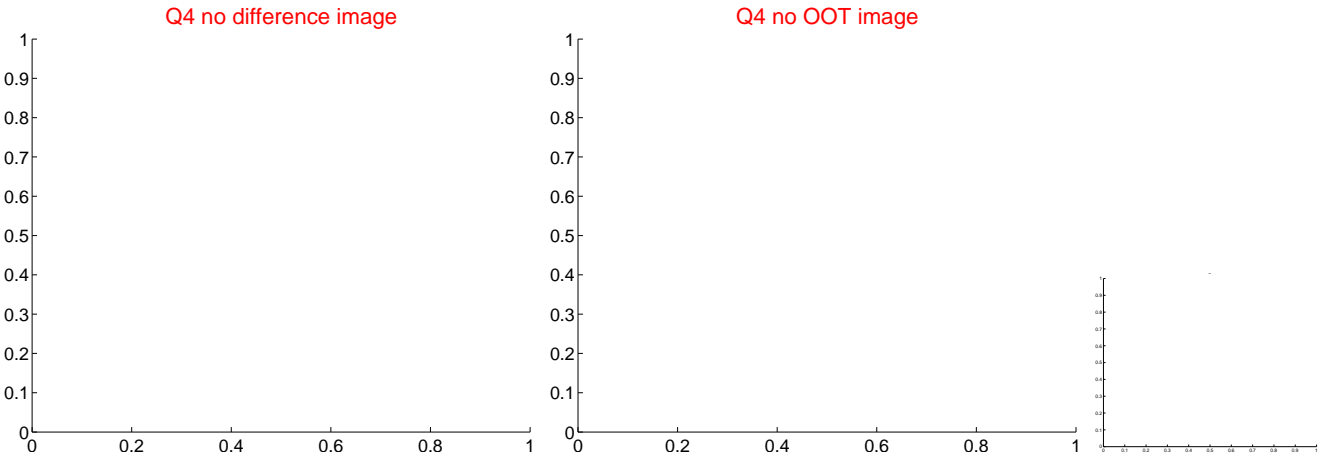
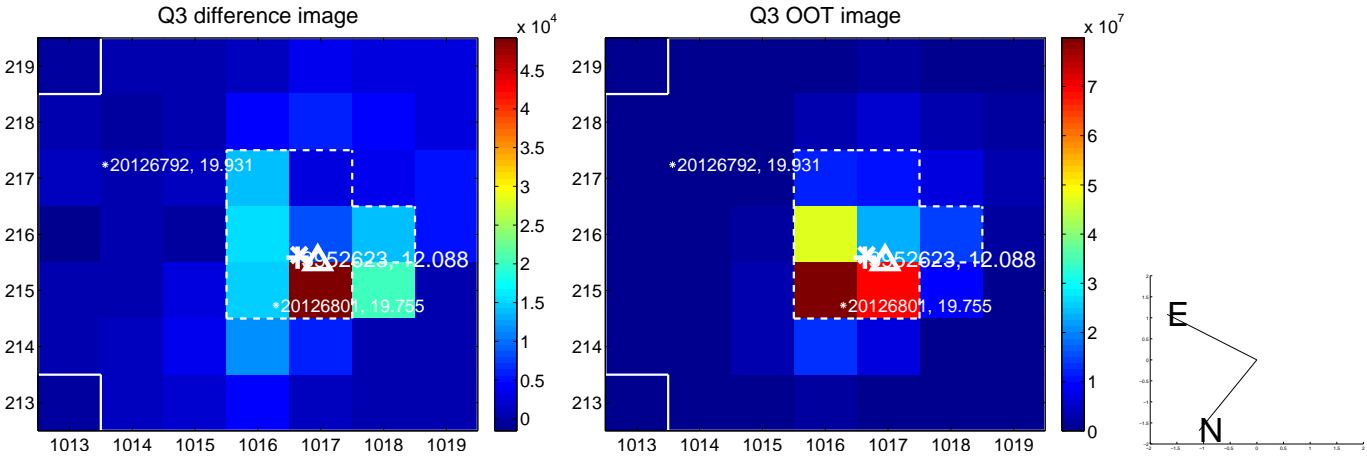
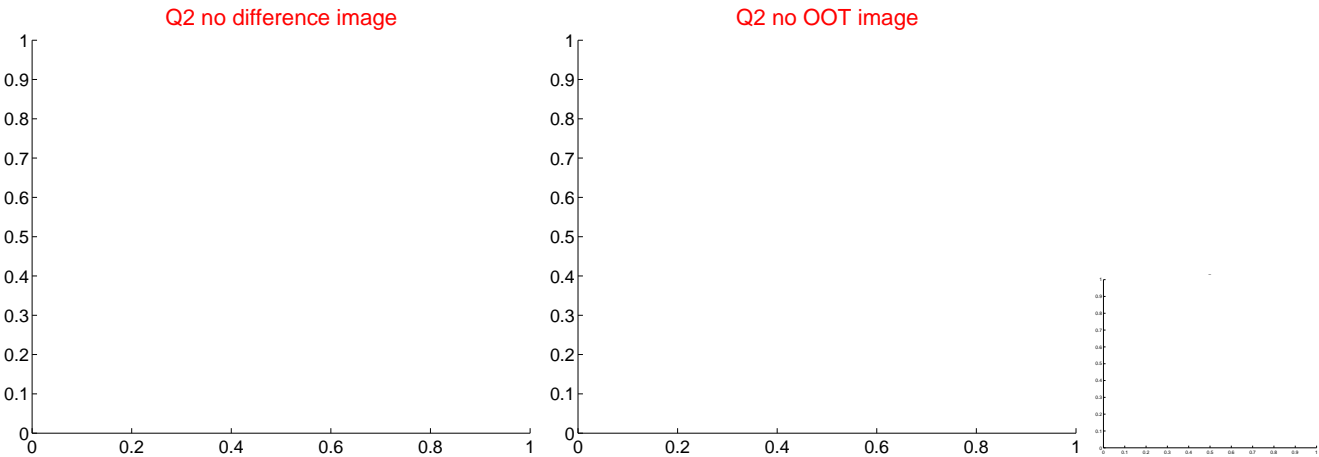
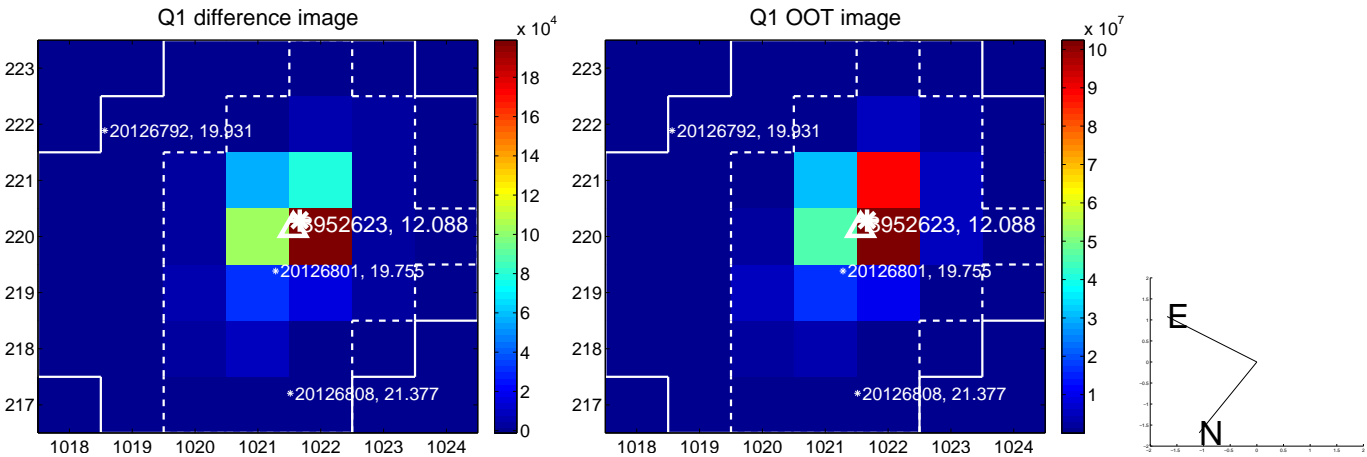
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.428 ± 0.284	1.51	-0.088 ± 0.247	-0.419 ± 0.291
PRF-fit source offset from KIC position	0.376 ± 0.271	1.39	-0.155 ± 0.256	-0.342 ± 0.274
photometric centroid source offset	0.18 ± 0.08	2.14	-0.09 ± 0.07	0.15 ± 0.09

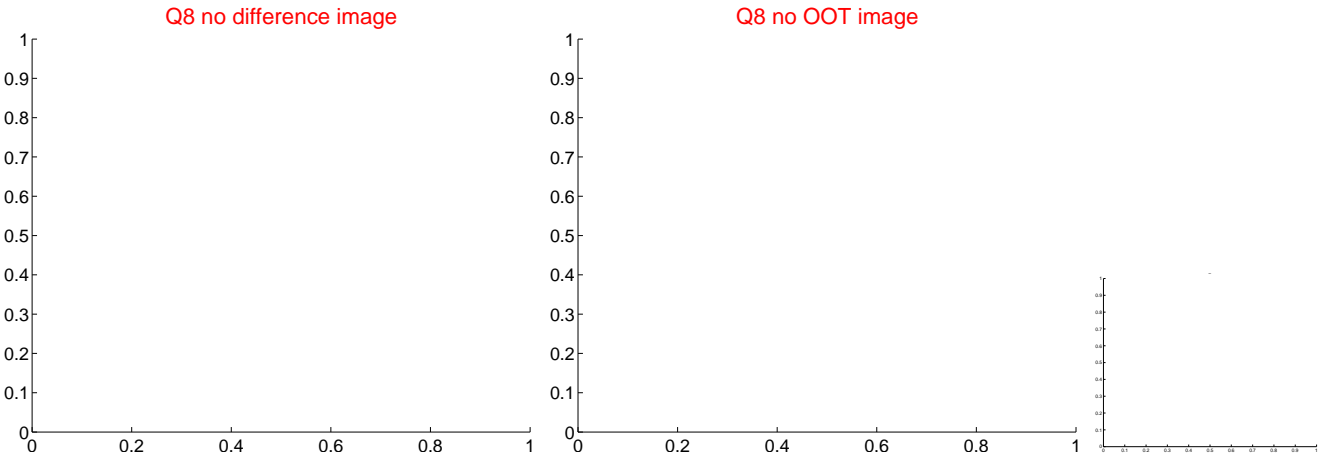
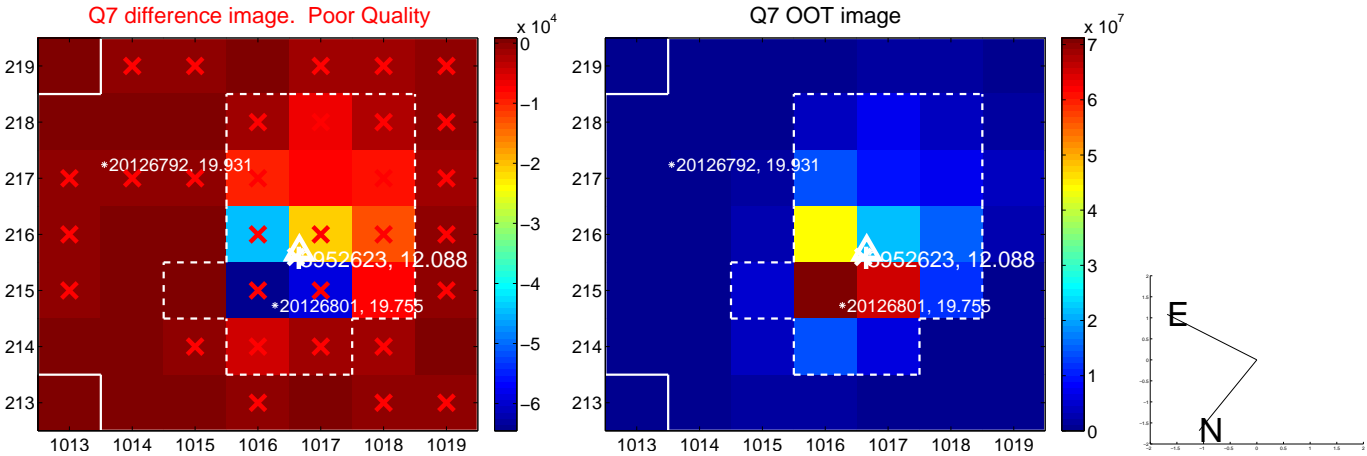
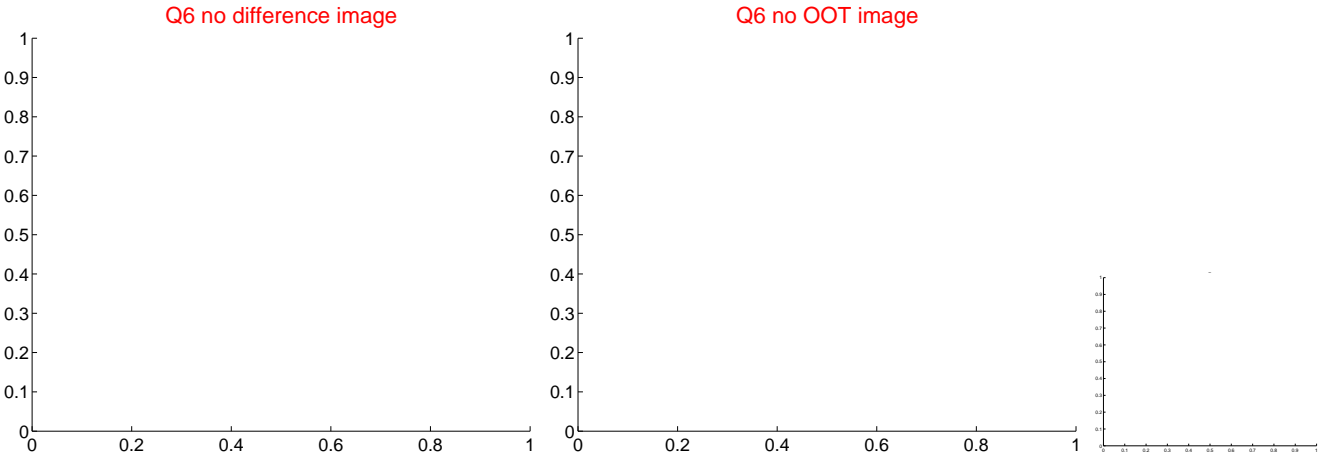
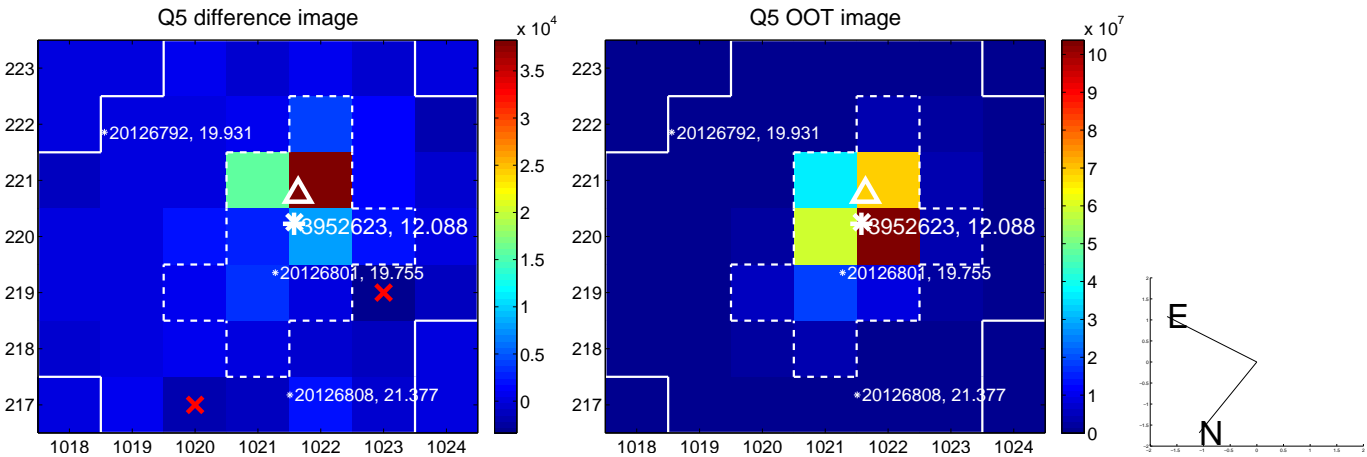


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

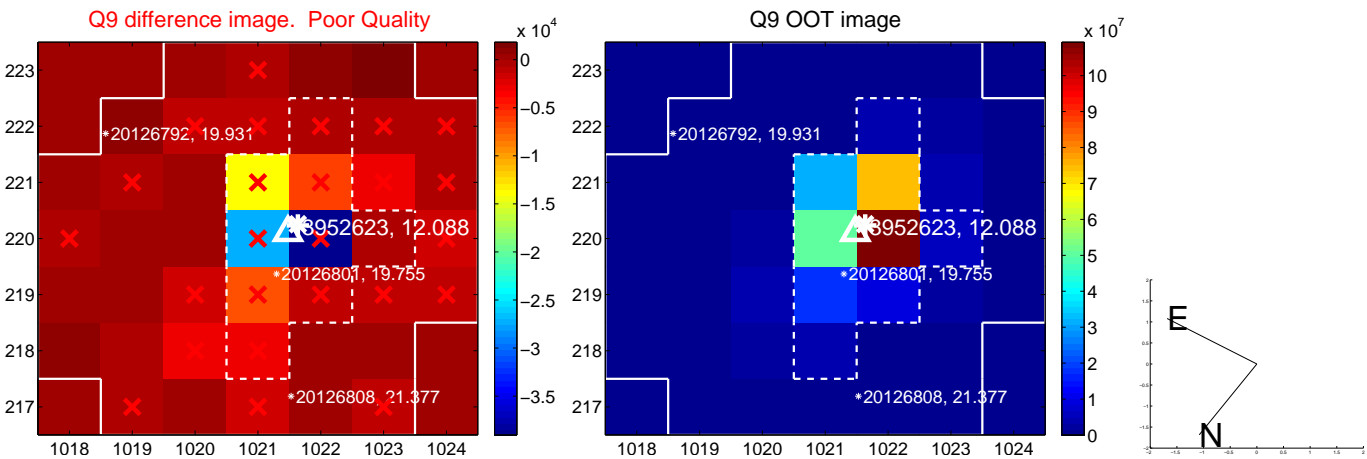
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



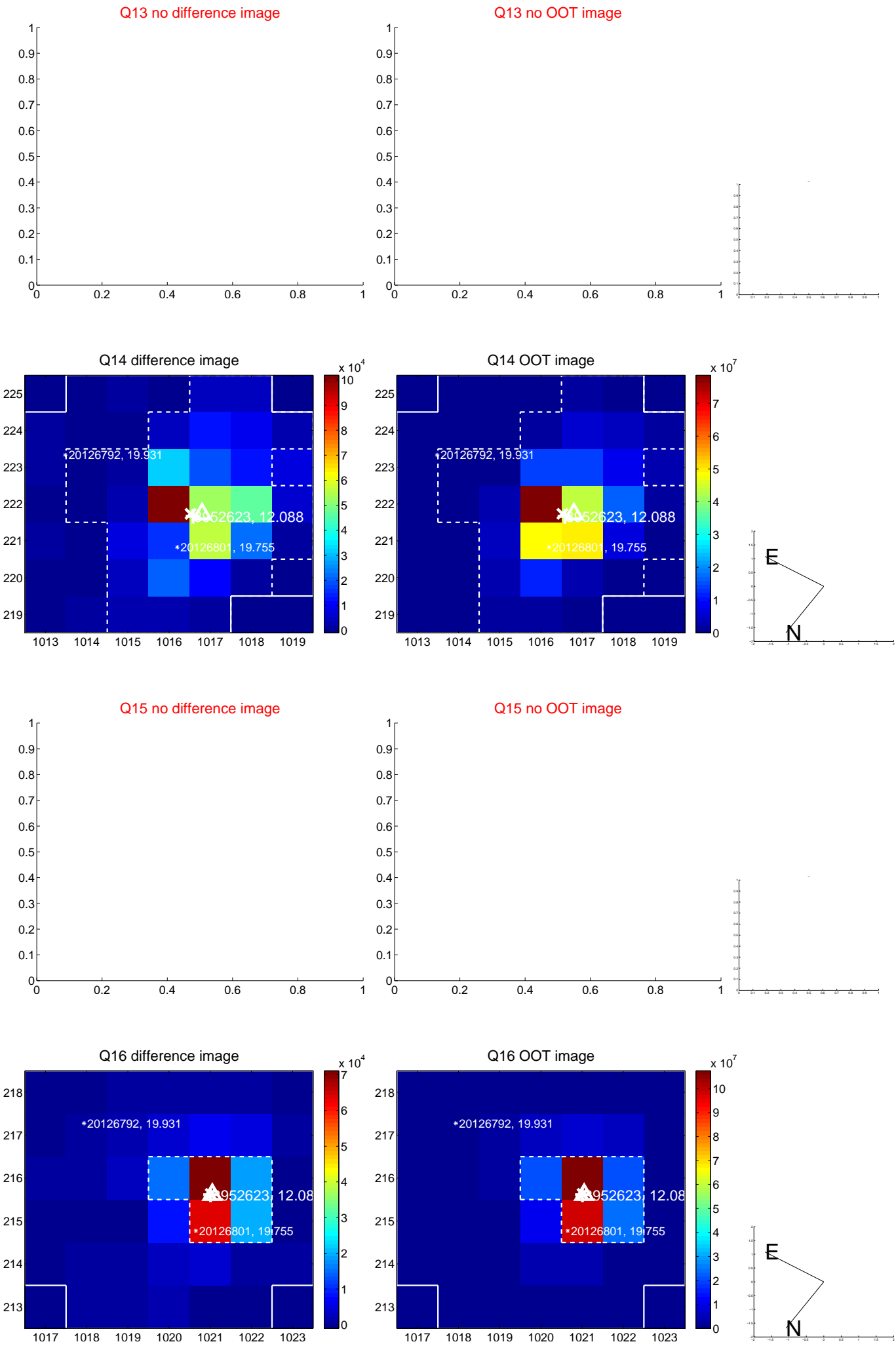
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



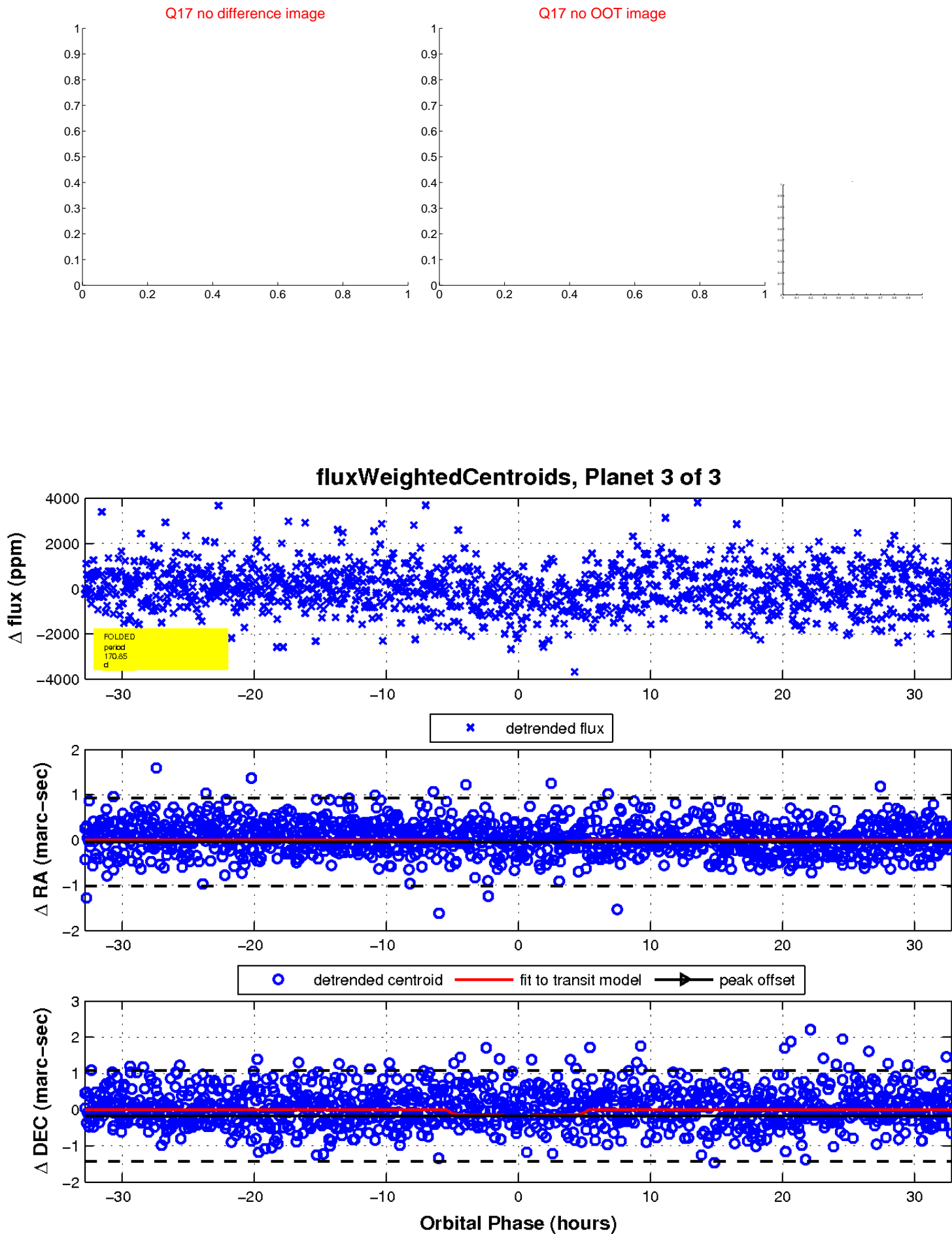
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

