

KIC 006037612

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})
006037612-01	OBS	No	2.520648	132.467356	25.6	10.537	10.4	8.4	2.30	6065	1.37	3980.10
006037612-02	OBS	No	138.586274	168.855663	197.2	3.021	9.9	8.9	2.30	6065	6.58	19.04
006037612-03	OBS	No	577.335084	254.139178	252.0	8.167	9.4	8.2	2.30	6065	4.33	2.84
006037612-04	OBS	No	107.743749	229.633432	224.0	2.969	8.9	9.1	2.30	6065	3.68	26.63
006037612-06	OBS	No	5.041872	135.935814	17.3	14.455	8.7	4.4	2.30	6065	1.11	1579.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037612-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006037612-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006037612-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006037612-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006037612-06	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

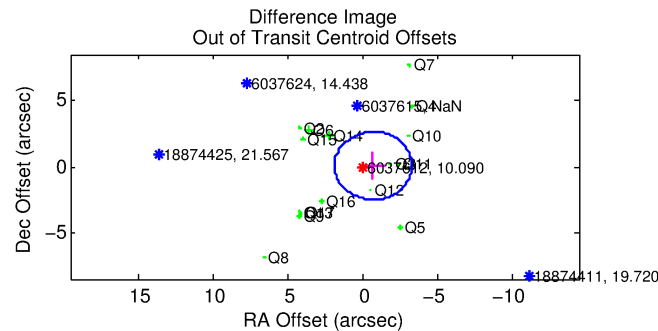
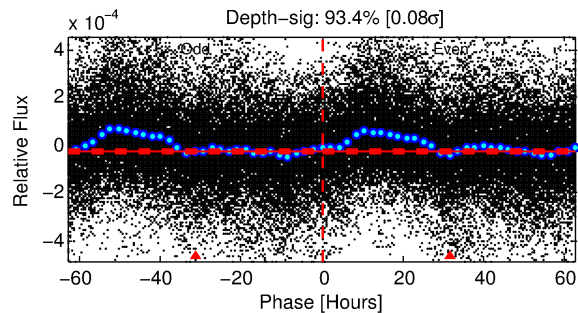
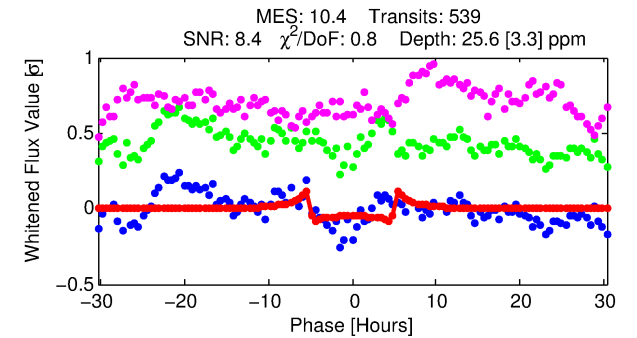
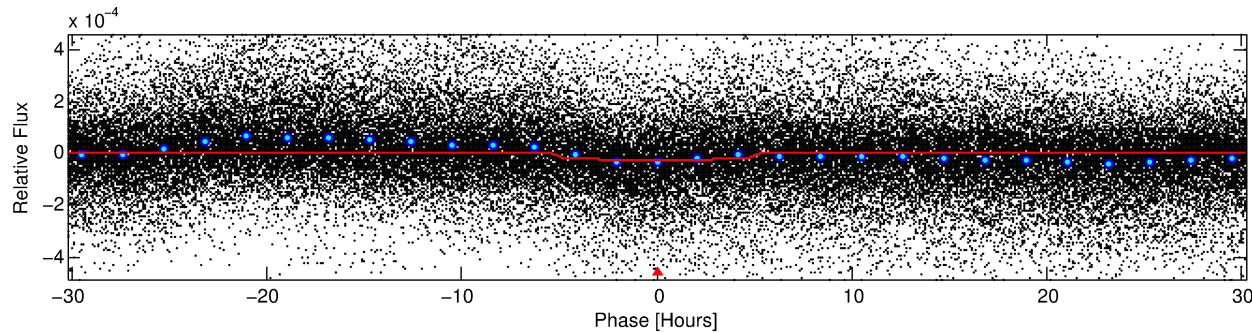
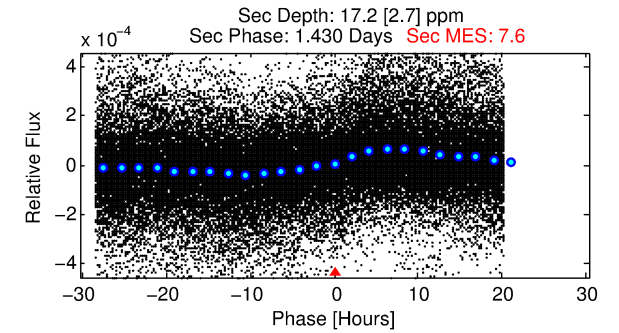
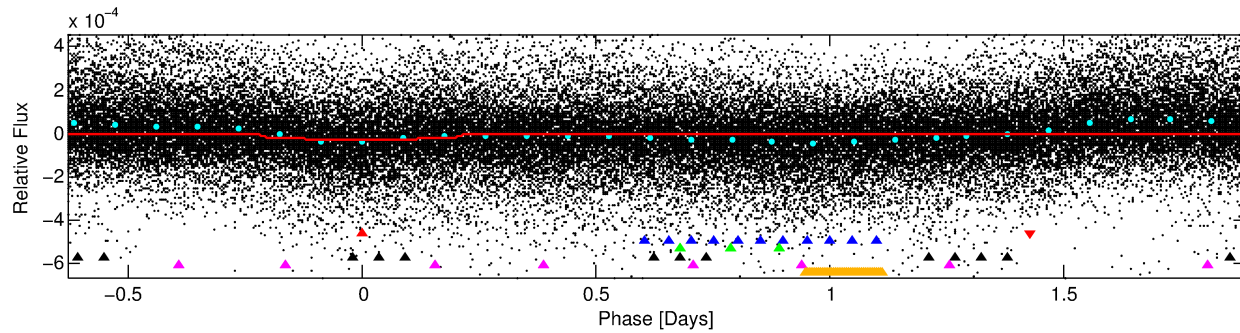
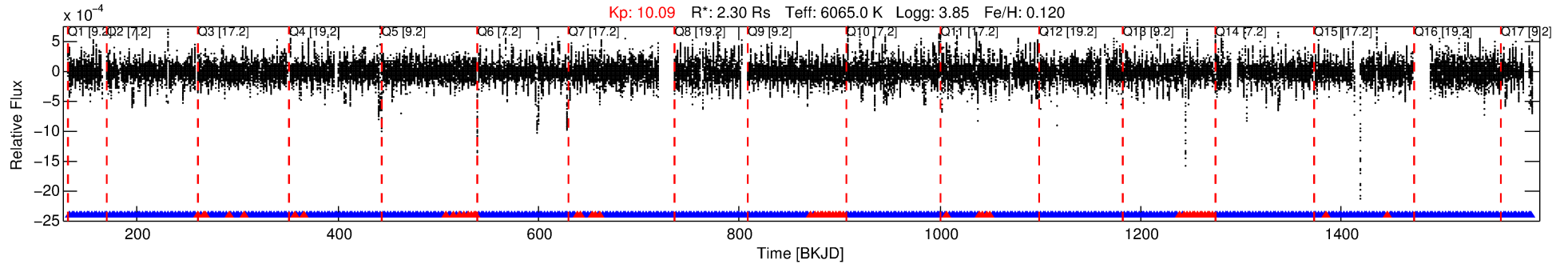
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037612-01

No Significant Match Found

DV One-Page Summary

KIC: 6037612 Candidate: 1 of 6 Period: 2.521 d



DV Fit Results:

Period = 2.52065 [0.00002] d
Epoch = 132.4674 [0.0030] BKJD
Rp/R* = 0.0055 [0.0006]
a/R* = 1.25 [0.19]
b = 0.90 [0.09]
Seff = 3980.10 [1480.90]
Teq = 2025 [188] K
Rp = 1.37 [0.40] Re
a = 0.0401 [0.0096] AU
Ag = 8.10 [3.71] [1.91σ]
Teffp = 5282 [367] K [7.90σ]

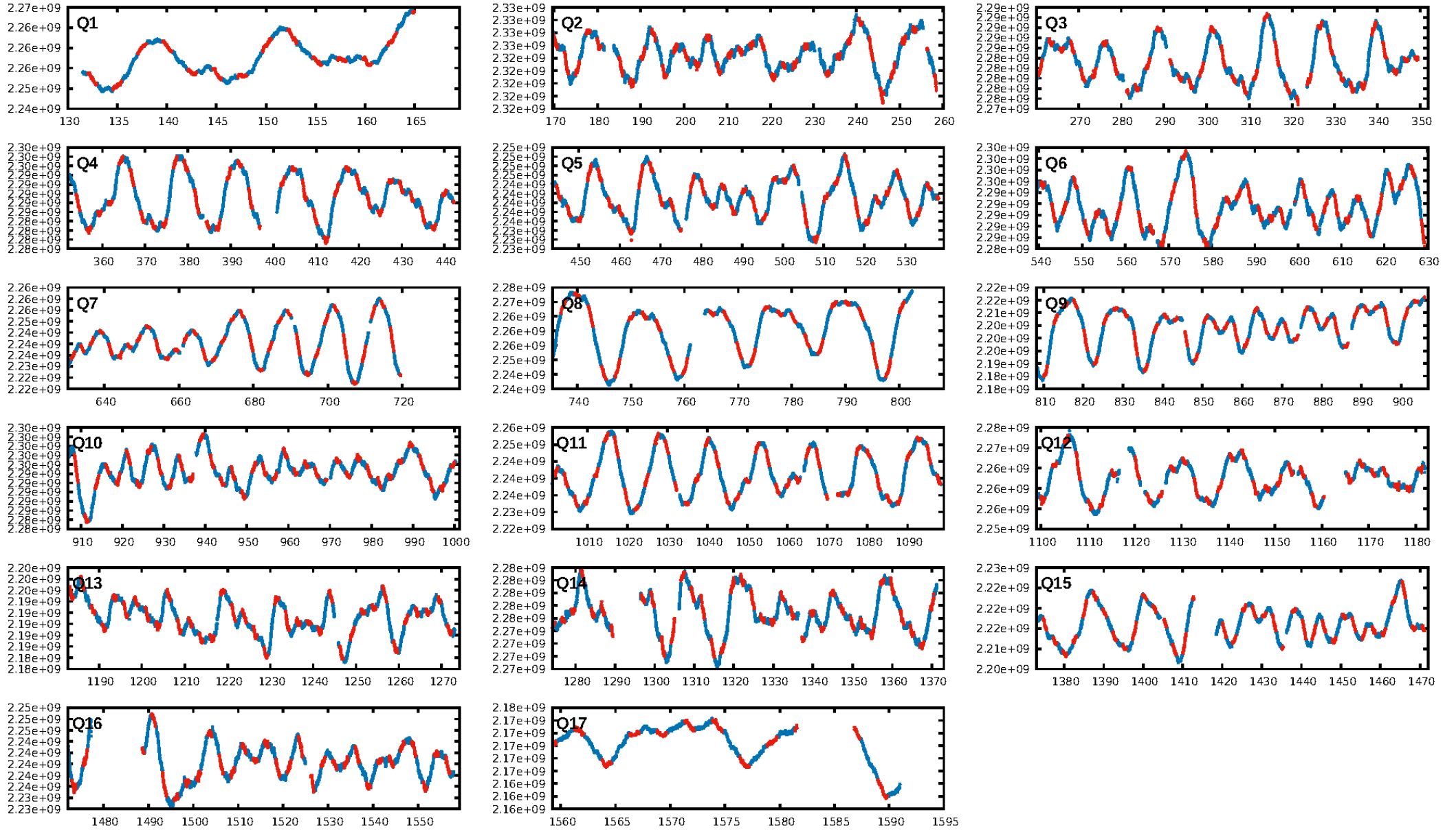
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.38σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.82e-10
RollingBand-fgt: 0.90 [462/515]
GhostDiagnostic-chr: N/A
Centroid-sig: 96.1%
Centroid-so: 0.133 arcsec [0.13σ]
OotOffset-rm: 0.734 arcsec [0.85σ]
KicOffset-rm: 1.266 arcsec [1.56σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

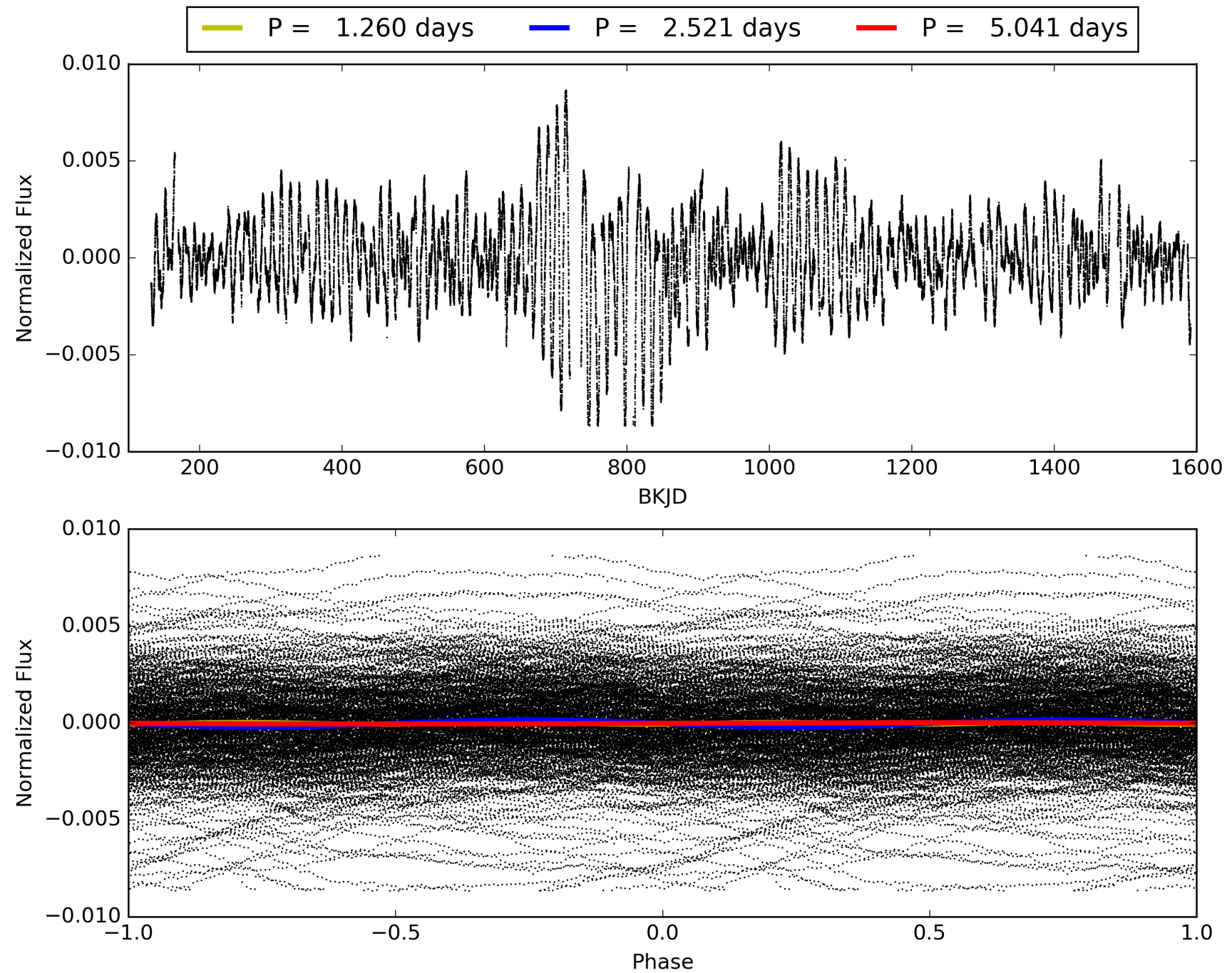
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:00:48 Z

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

TCE 006037612-01, PDC Light Curves

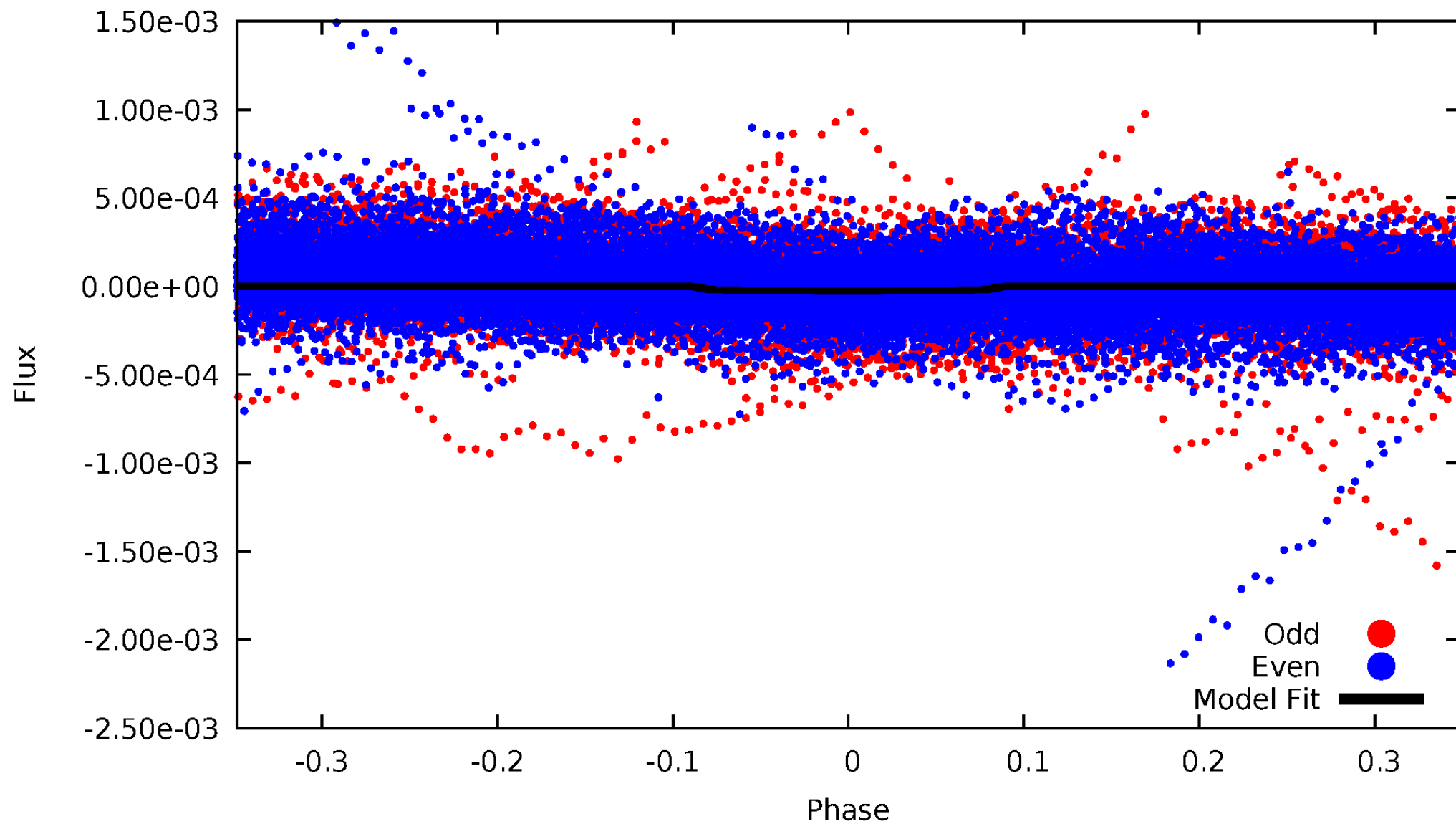


TCE 006037612-01



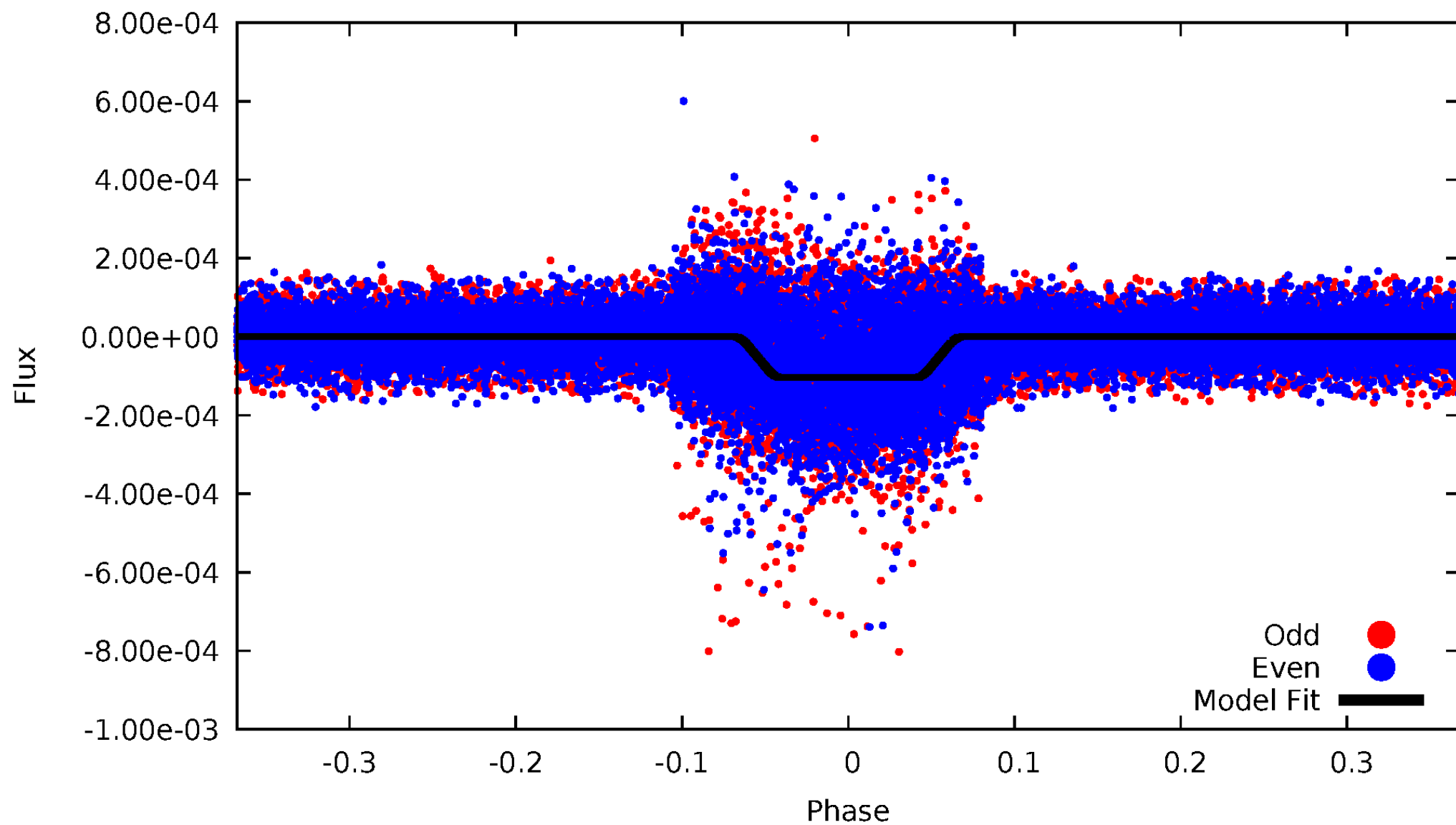
DV Odd/Even

TCE 006037612-01

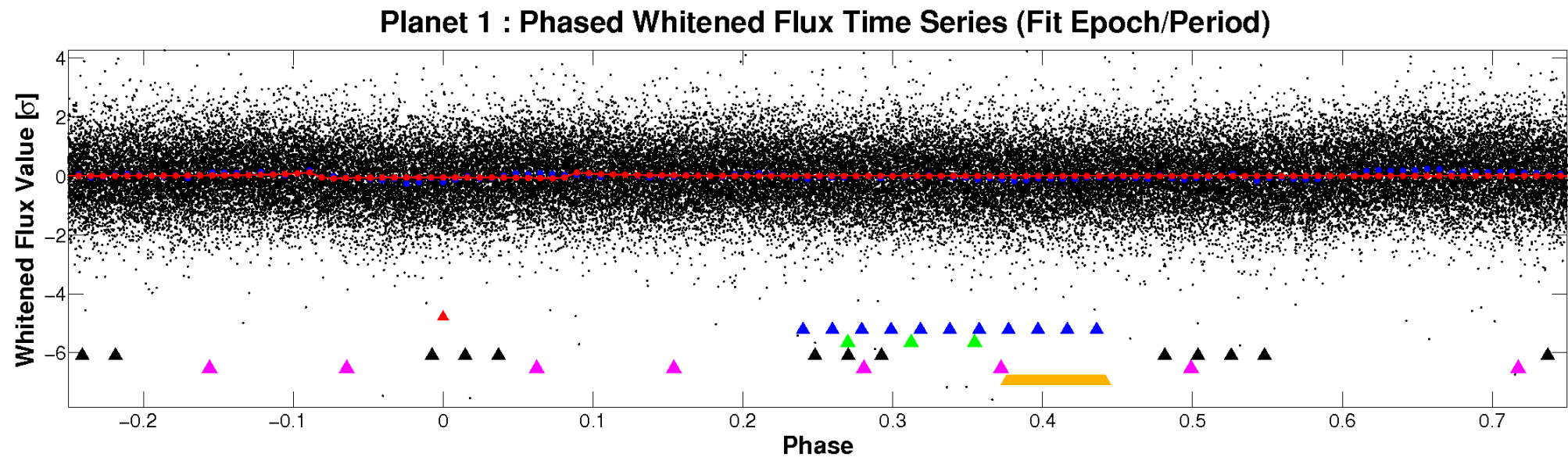
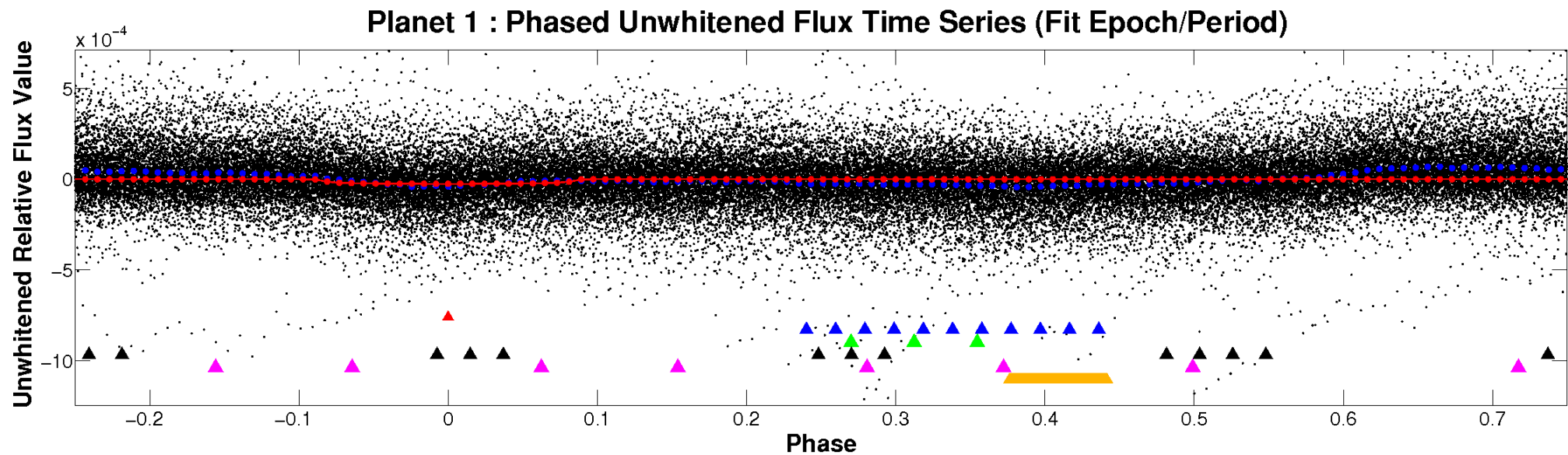


ALT Odd/Even

TCE 006037612-01

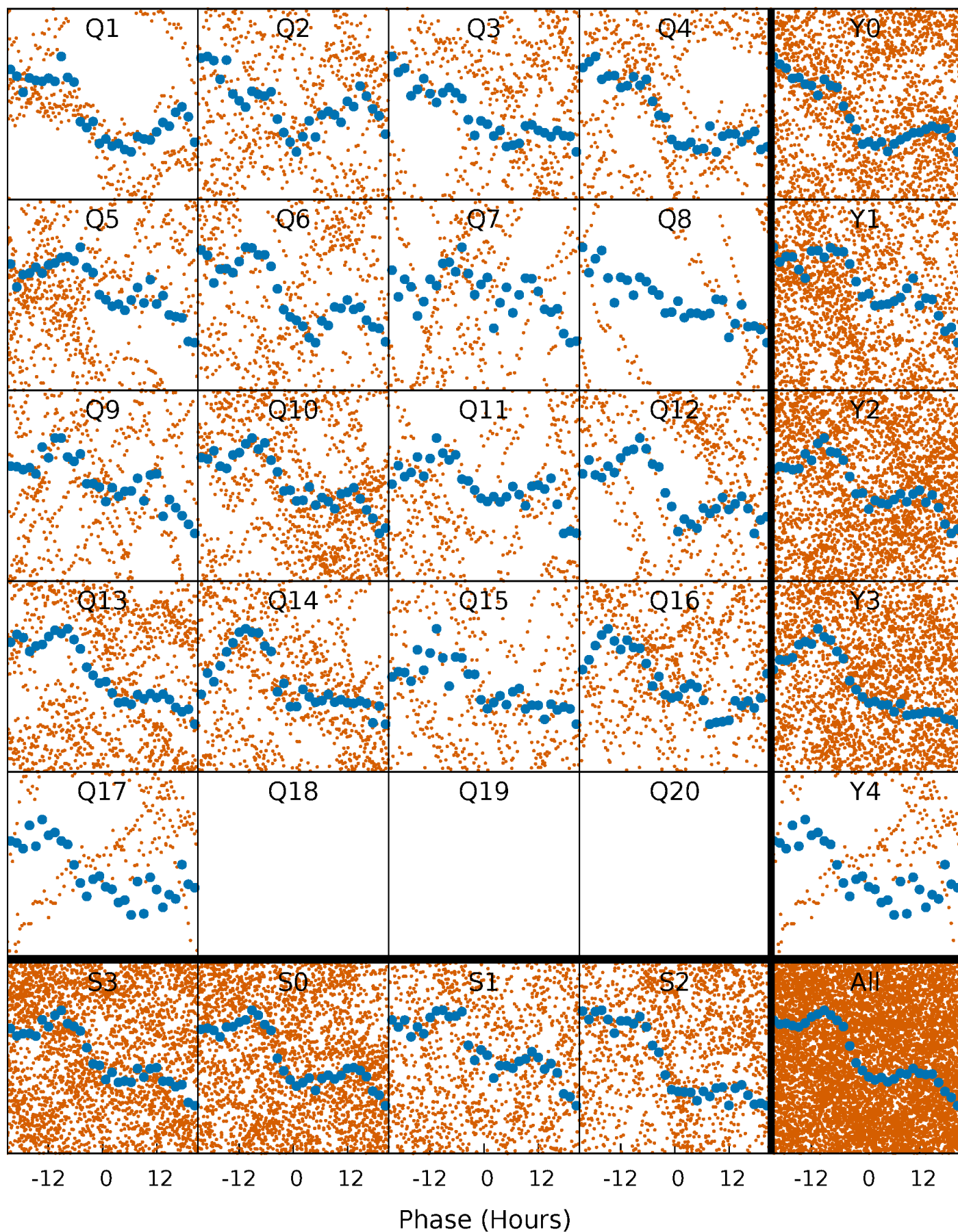


Non-Whitened Vs. Whitened Light Curve



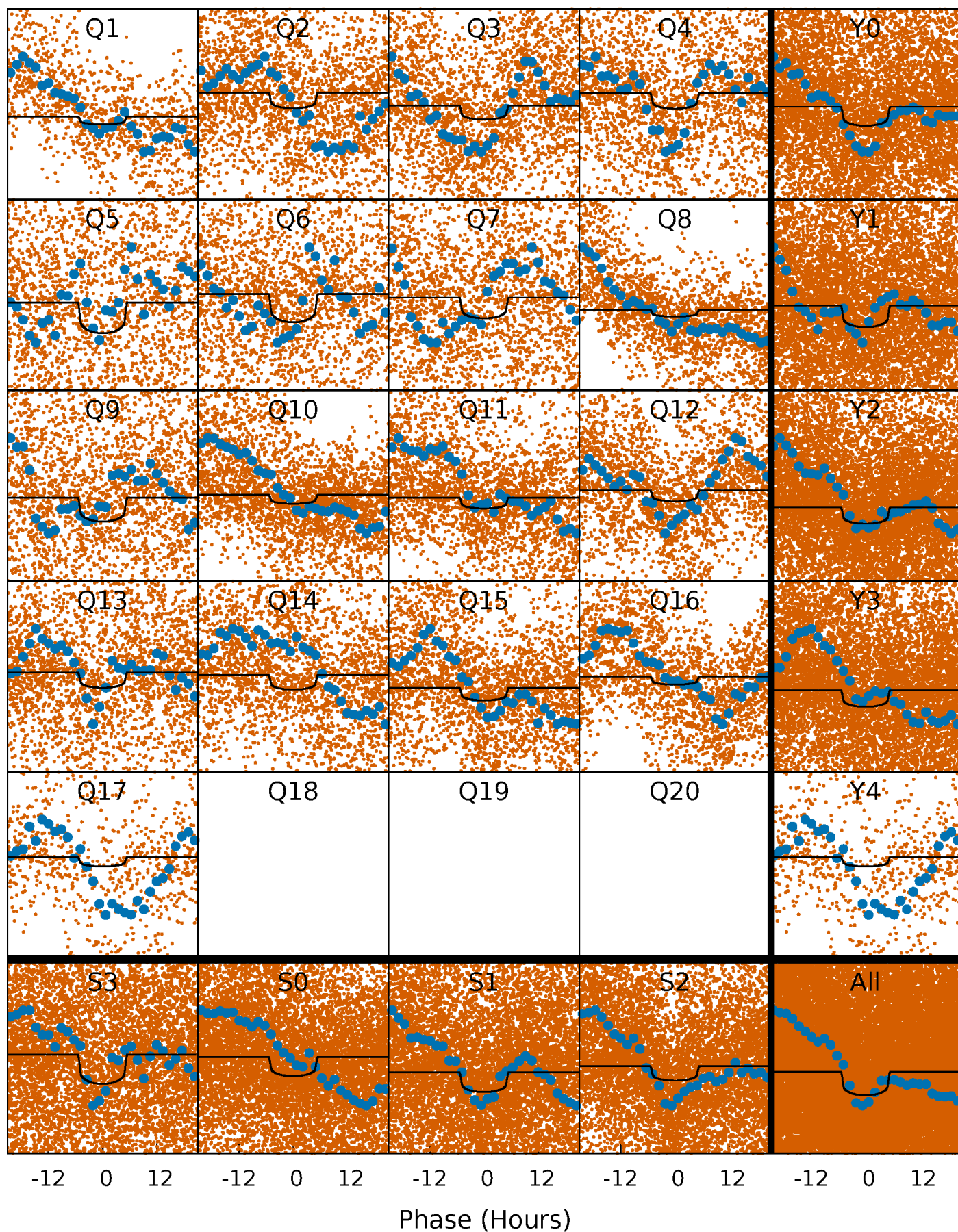
PDC Quarter-Phased Transit Curves

TCE 006037612-01 P= 2.520648 Days $T_0=132.467356$ (BKJD)



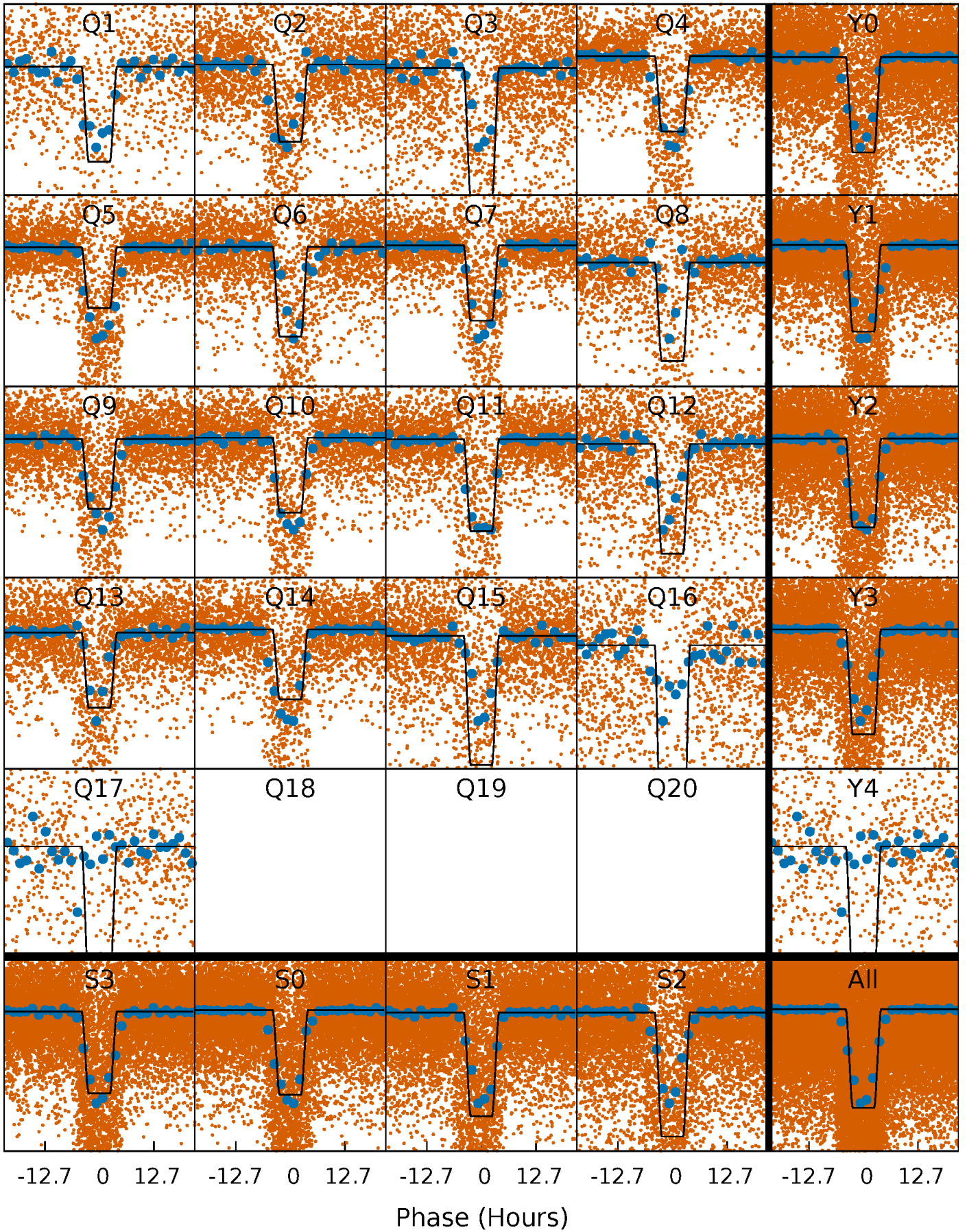
DV Quarter-Phased Transit Curves

TCE 006037612-01 P= 2.520648 Days $T_0=132.467356$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

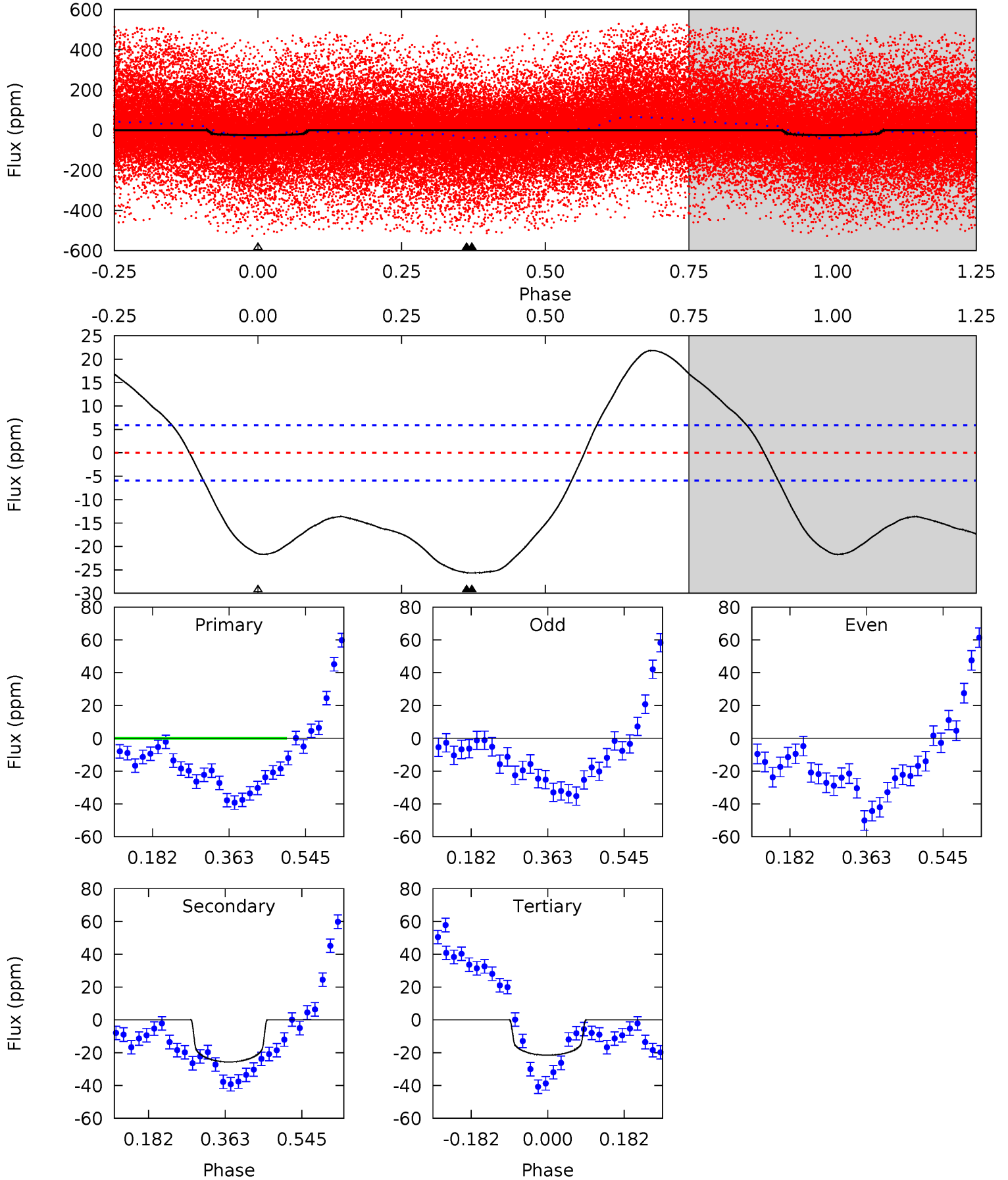
TCE 006037612-01 P= 2.520599 Days $T_0=132.463720$ (BKJD)



DV Model-Shift Uniqueness Test

006037612-01, P = 2.520648 Days, E = 129.946708 Days

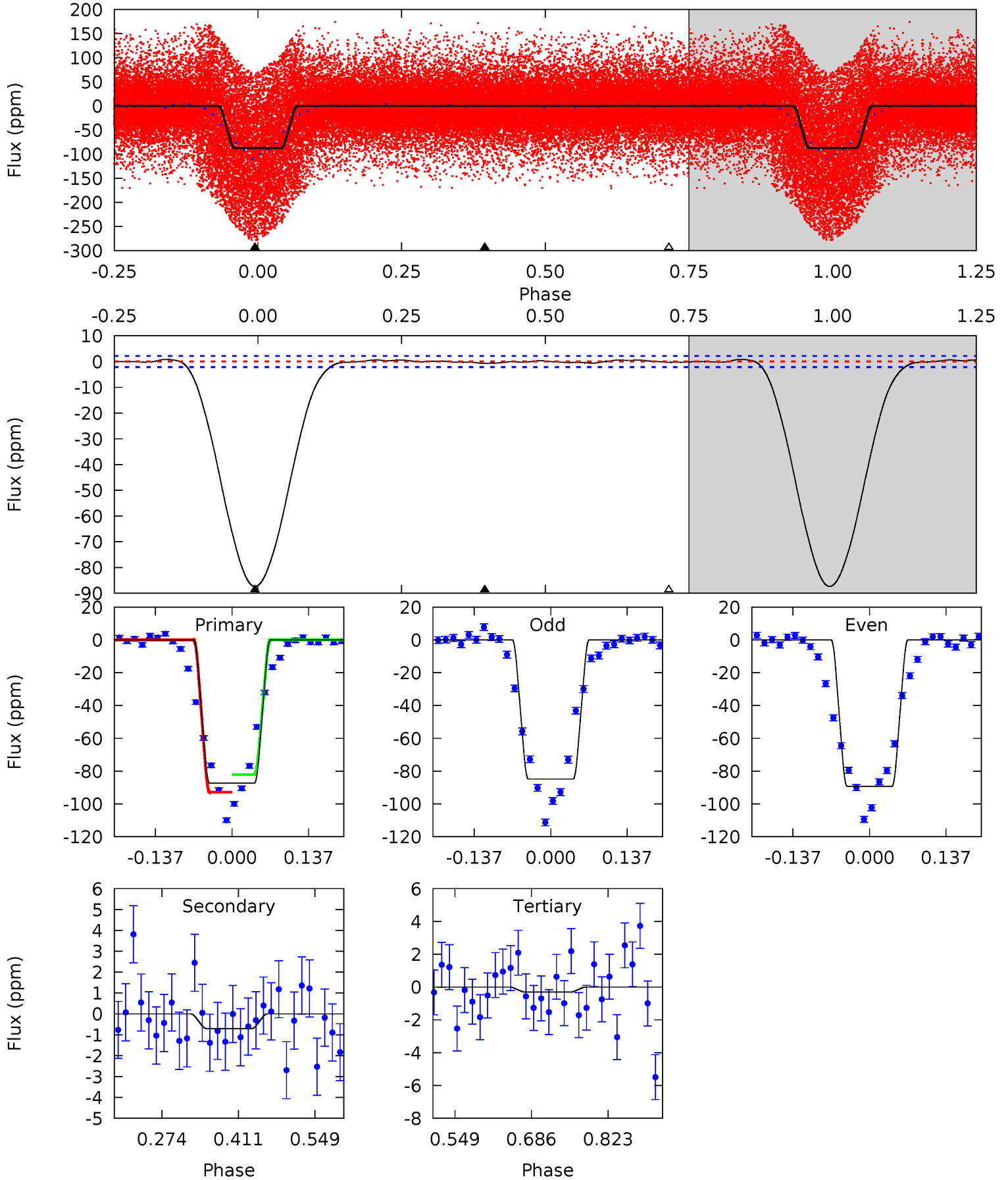
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	19.2	16.1	0	4.44	1.34	11.4	3.02	19.1	3.08	19.2	3.55	0.91	0.46	2.35



Alt Model-Shift Uniqueness Test

006037612-01, P = 2.520599 Days, E = 129.943121 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
181.2	1.46	0.64	0	4.50	1.49	0.83	180.5	181.2	0.83	1.46	4.57	1.07	0.01	11.0



Stellar Parameters For KIC 006037612

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+82}_{-72}	$3.847^{+0.210}_{-0.070}$	$0.120^{+0.150}_{-0.150}$	$2.299^{+0.263}_{-0.613}$	$1.356^{+0.144}_{-0.176}$	$0.157^{+0.195}_{-0.037}$
	+1%/-1%	+5%/-2%	+125%/-125%	+11%/-27%	+11%/-13%	+124%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006037612-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 1	$1.32^{+0.21}_{-0.20}$	2802^{+106}_{-178}	5828^{+362}_{-289}	13^{+5}_{-3}
Alt.	-1 ± 0	$2.50^{+0.28}_{-0.36}$	2805^{+103}_{-190}	-2807^{+225}_{-143}	$0.100^{+0.078}_{-0.065}$

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 $A_{obs} \gg 1.0$

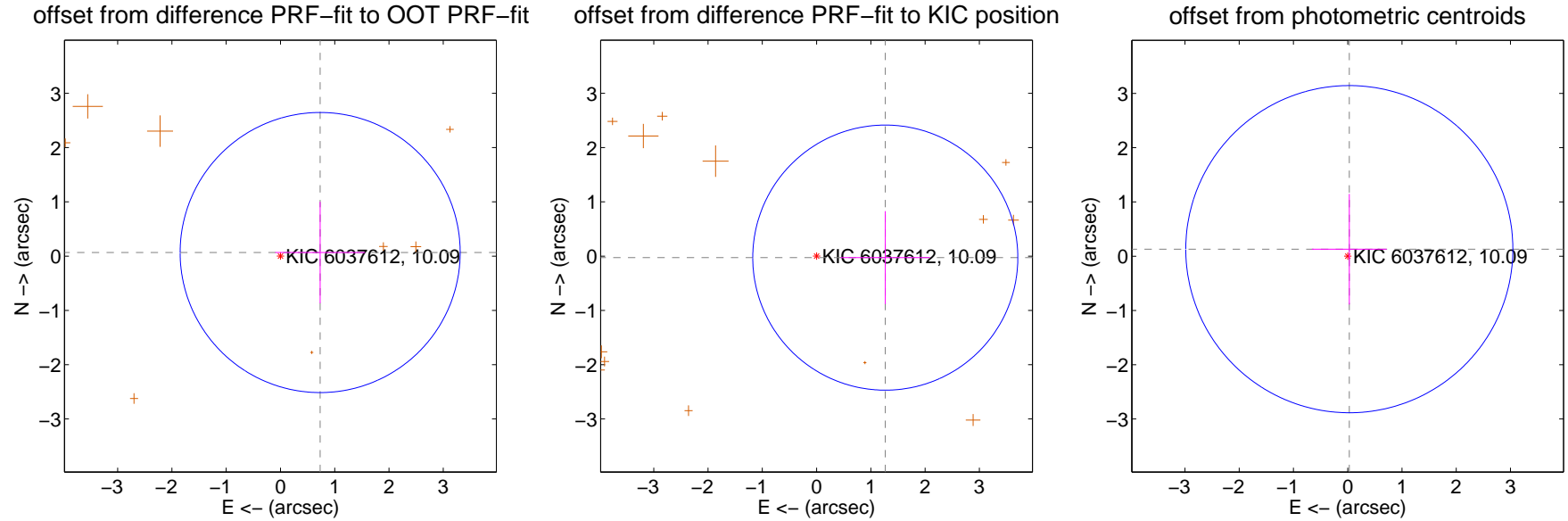
DV Centroid Data

Supplemental centroid analysis for 006037612-01. **Kepler magnitude: 10.09.** Transit SNR 8.37

There are 1 quarters with good PRF difference image offsets

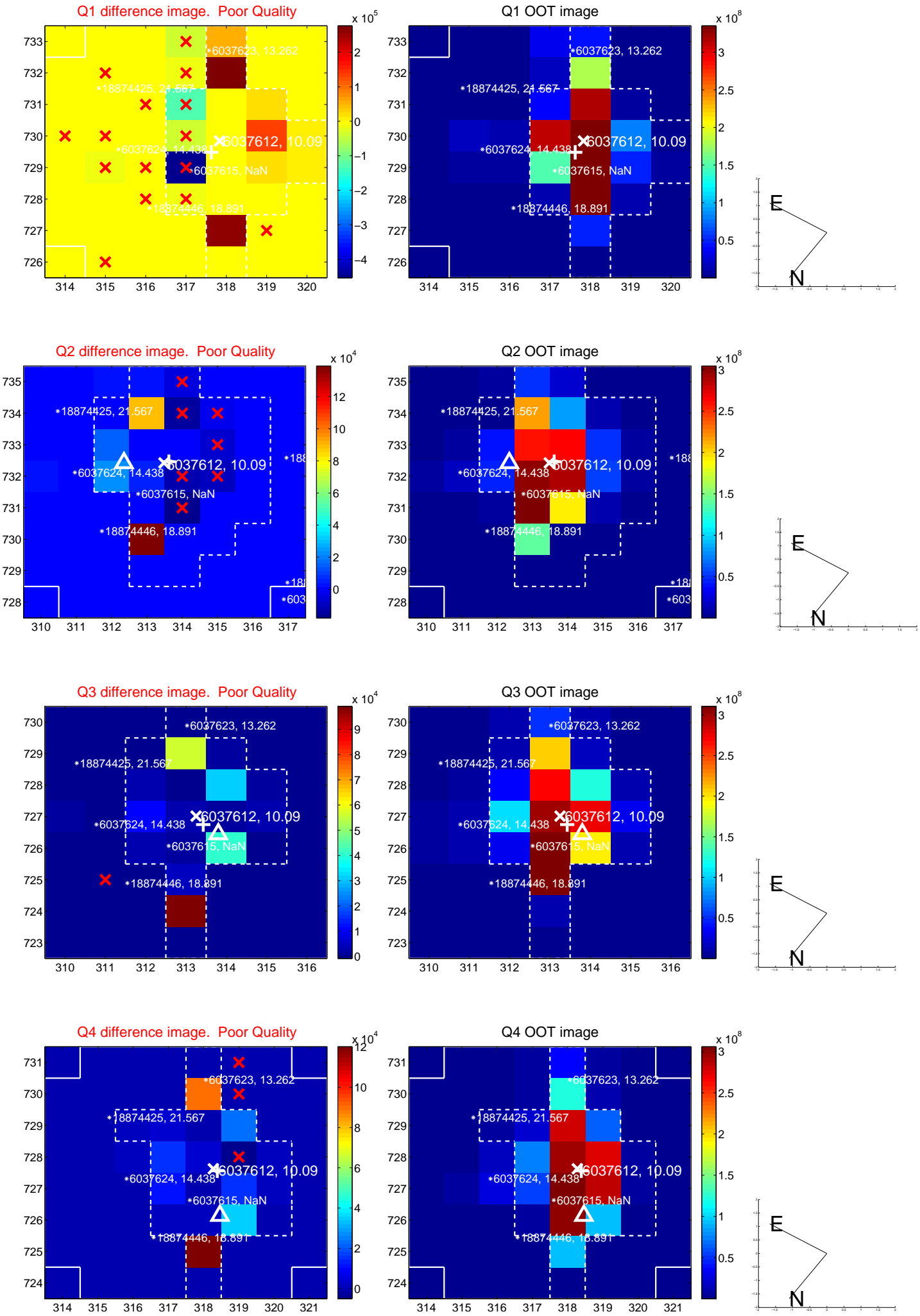
The direct PRF centroid is offset from the target star catalog position by about 1.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.734 ± 0.860	0.85	-0.731 ± 0.829	0.066 ± 0.934
PRF-fit source offset from KIC position	1.266 ± 0.814	1.56	-1.266 ± 0.823	-0.028 ± 0.856
photometric centroid source offset	0.13 ± 1.00	0.13	-0.03 ± 0.69	0.13 ± 1.02

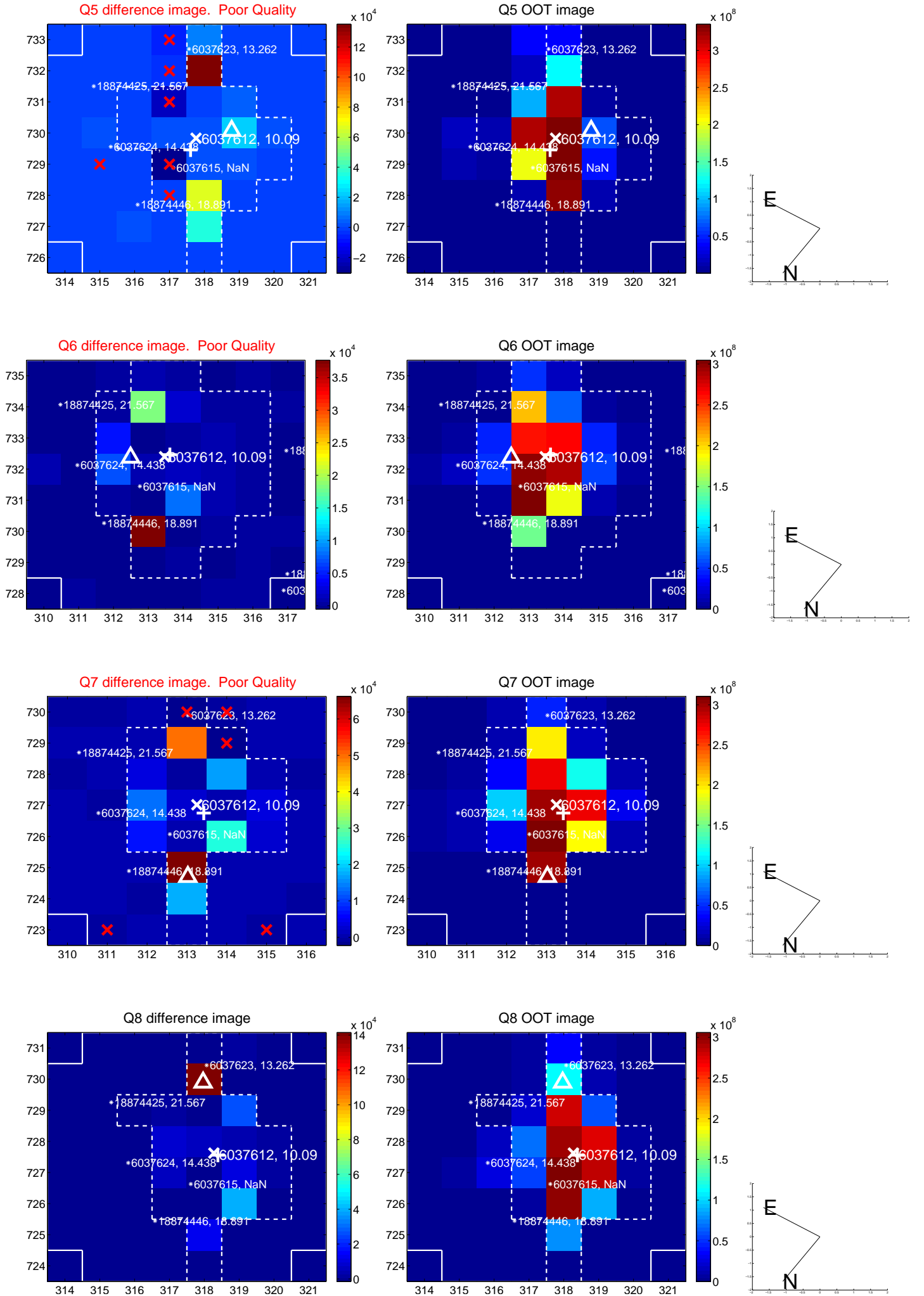


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

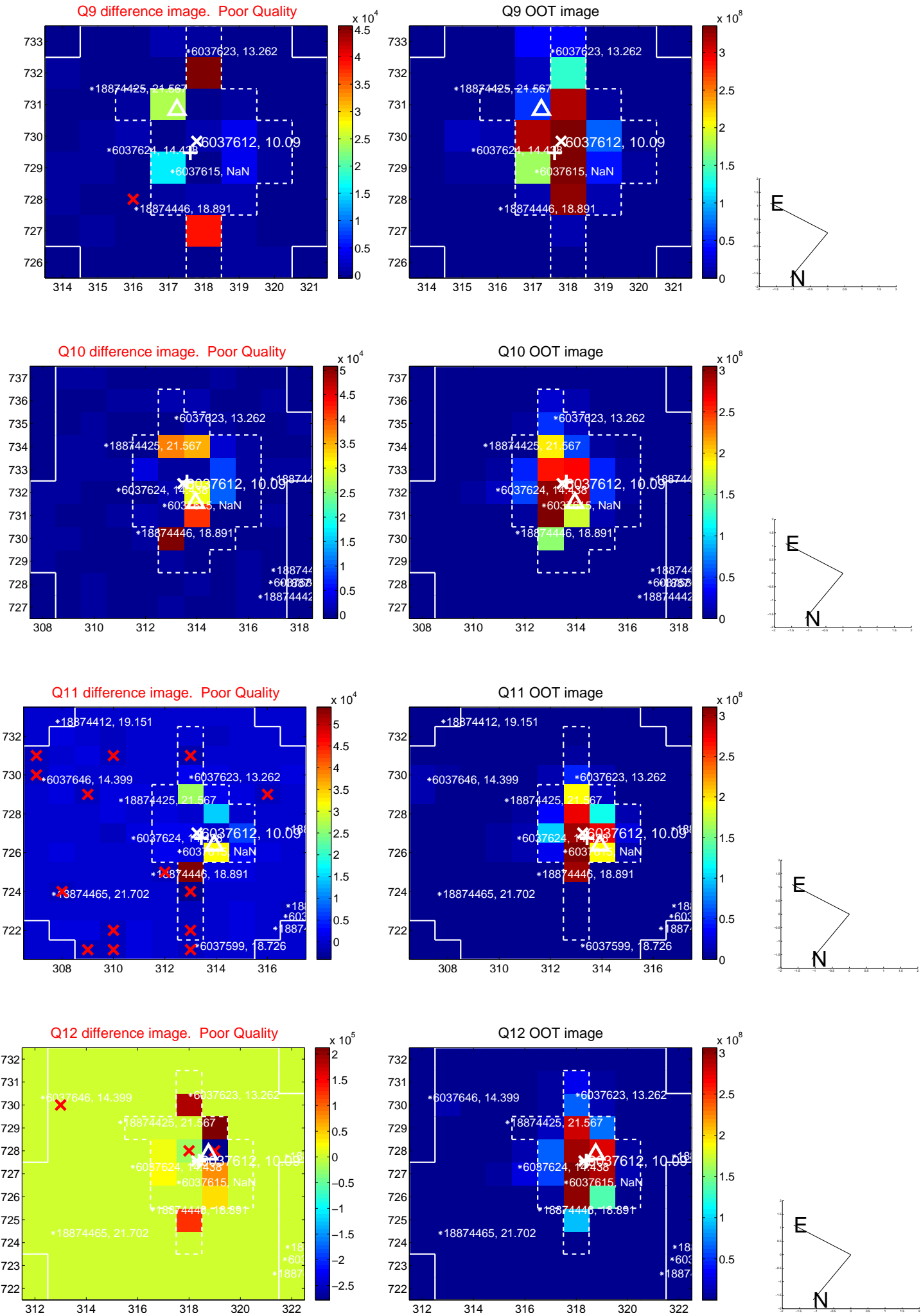
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



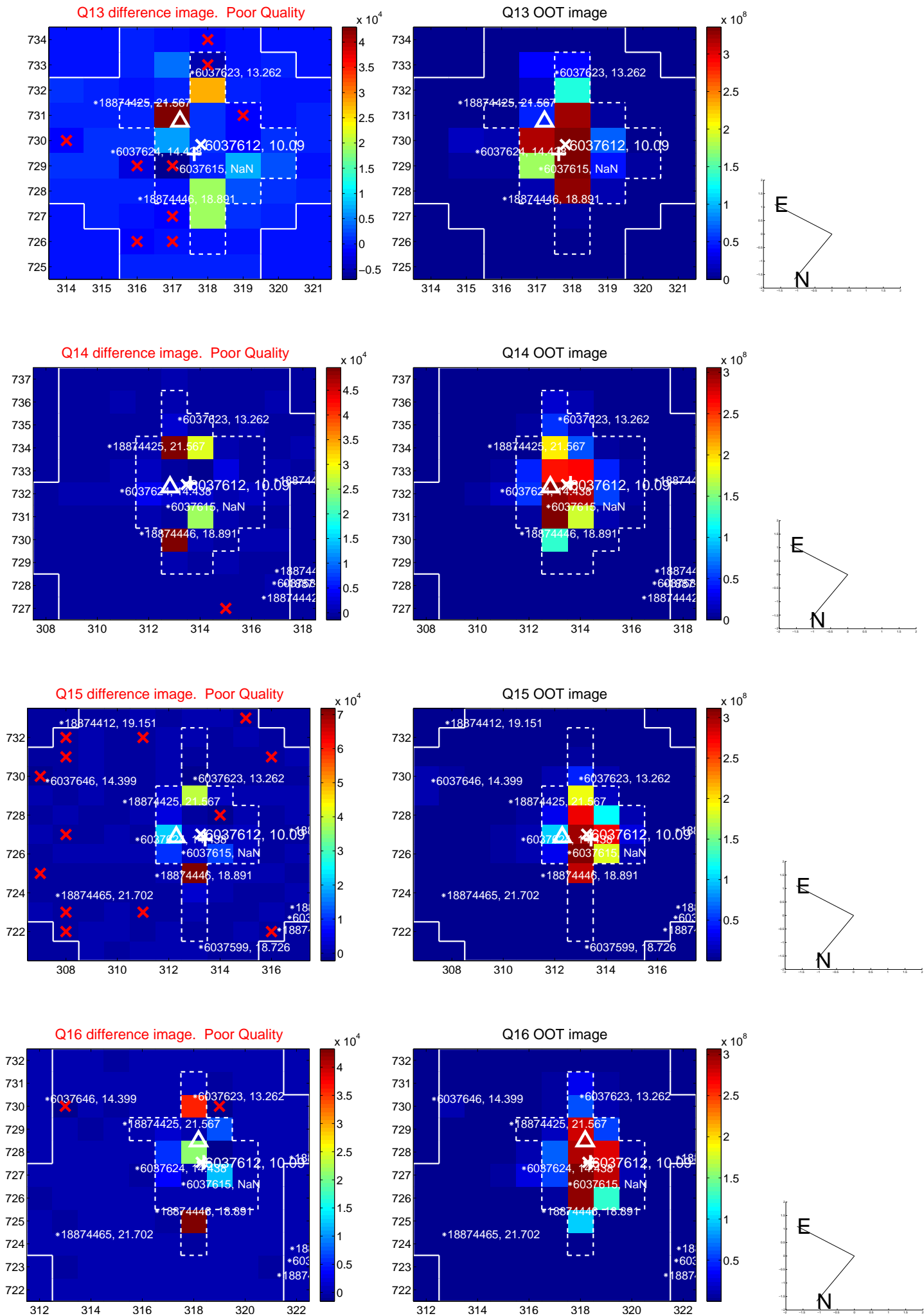
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



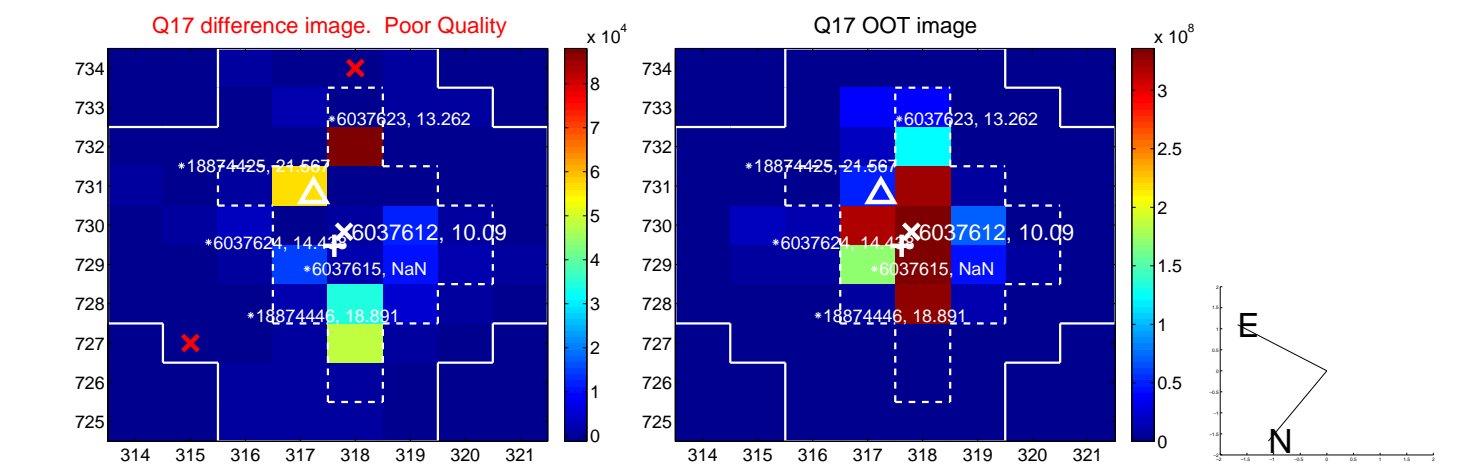
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



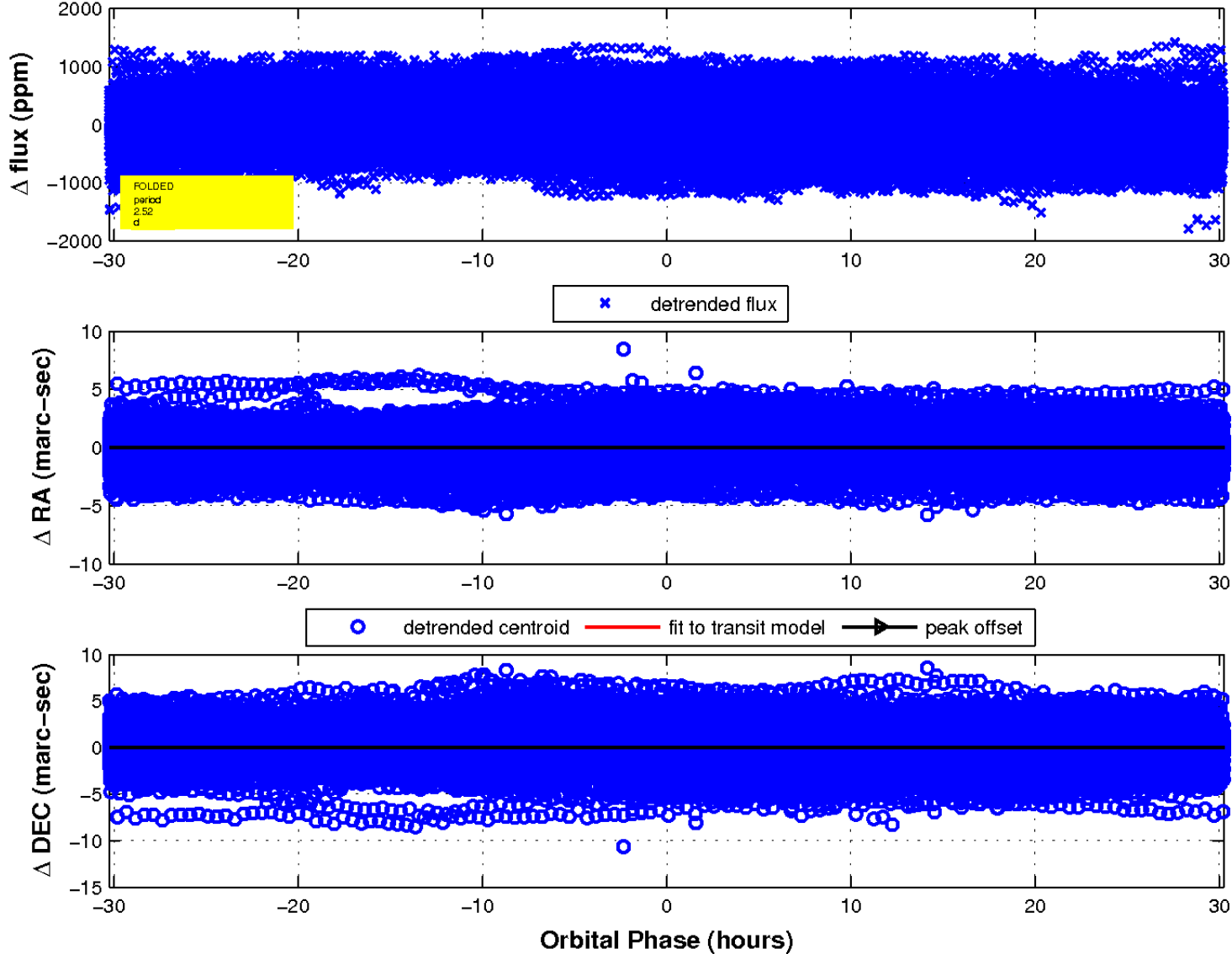
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 6



Declination

KIC 006037612

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})
006037612-01	OBS	No	2.520648	132.467356	25.6	10.537	10.4	8.4	2.30	6065	1.37	3980.10
006037612-02	OBS	No	138.586274	168.855663	197.2	3.021	9.9	8.9	2.30	6065	6.58	19.04
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006037612-04	OBS	No	107.743749	229.633432	224.0	2.969	8.9	9.1	2.30	6065	3.68	26.63
006037612-06	OBS	No	5.041872	135.935814	17.3	14.455	8.7	4.4	2.30	6065	1.11	1579.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037612-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006037612-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006037612-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006037612-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006037612-06	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

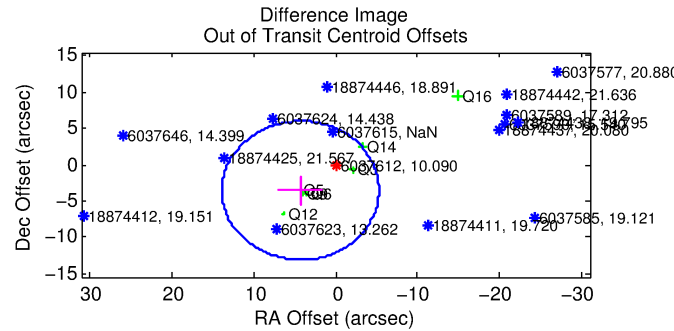
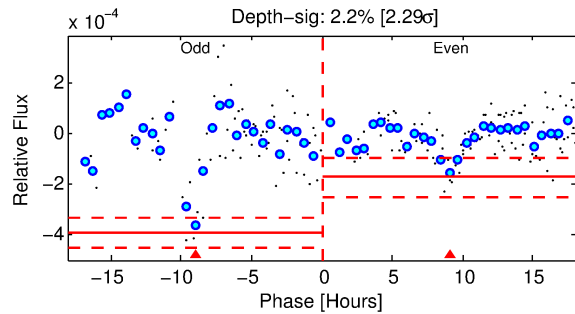
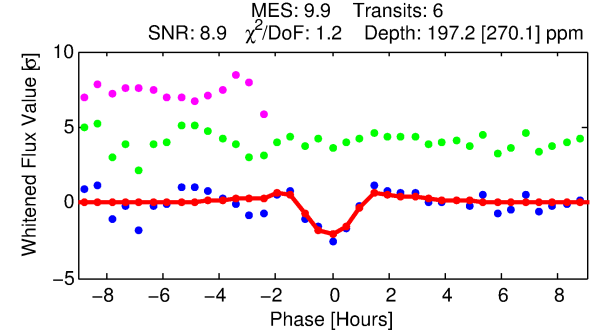
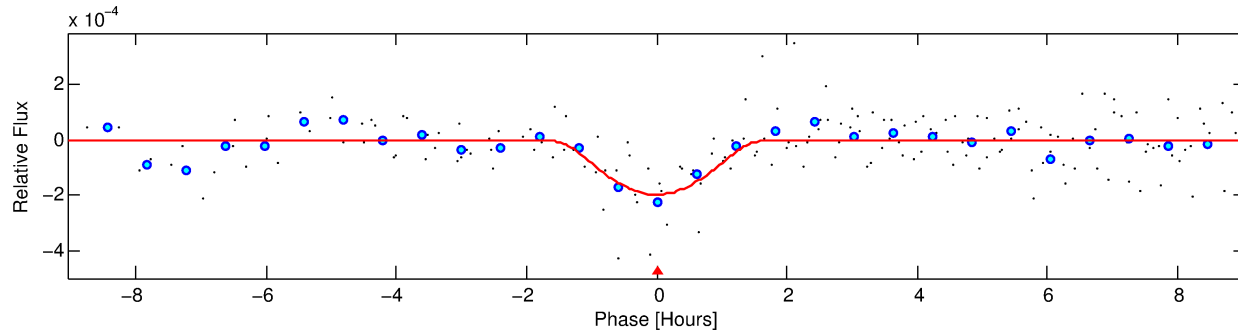
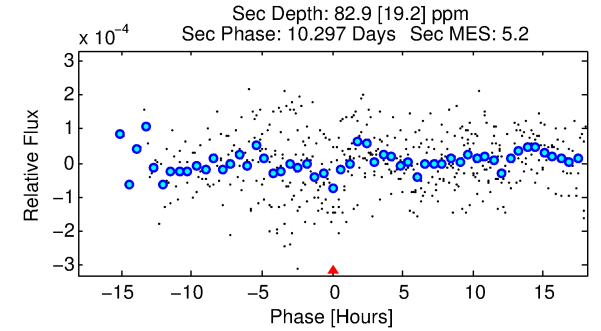
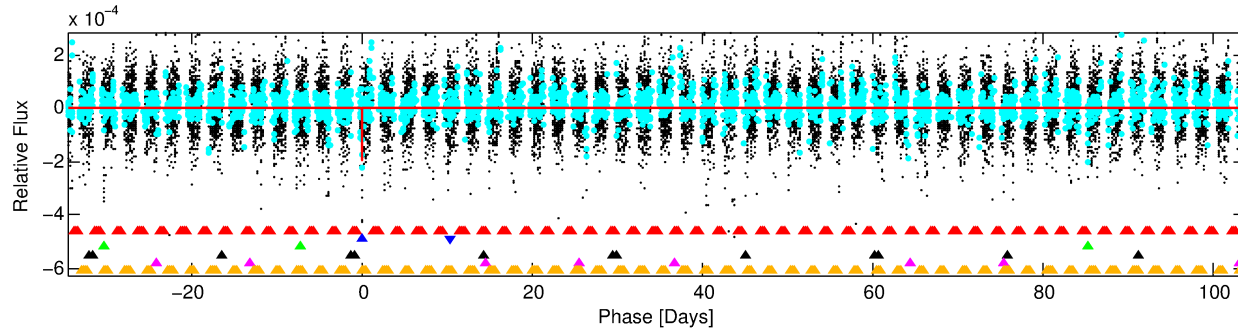
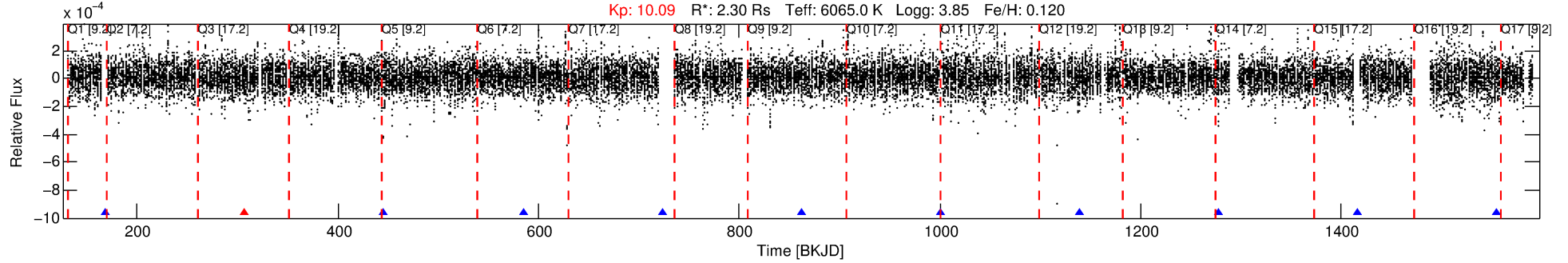
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037612-02

No Significant Match Found

DV One-Page Summary

KIC: 6037612 Candidate: 2 of 6 Period: 138.586 d



DV Fit Results:

Period = 138.58627 [0.00156] d
Epoch = 168.8557 [0.0085] BKJD
Rp/R* = 0.0262 [0.1060]
a/R* = 80.80 [88.98]
b = 1.00 [0.18]
Seff = 19.04 [7.08]
Teq = 533 [50] K
Rp = 6.58 [26.66] Re
a = 0.5801 [0.1392] AU
Ag = 354.82 [2875.10] [0.12σ]
Teffp = 3574 [7233] K [0.42σ]

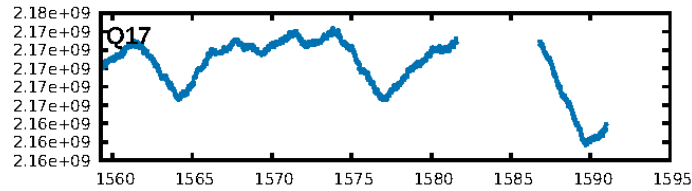
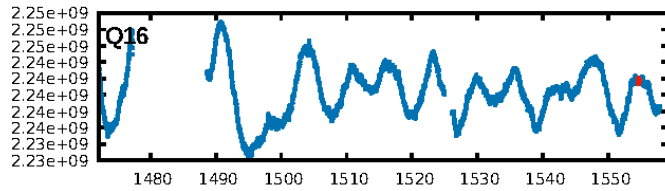
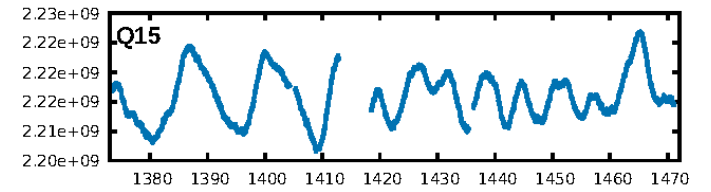
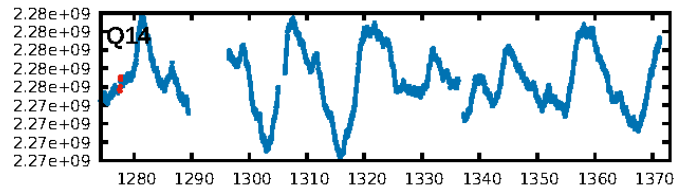
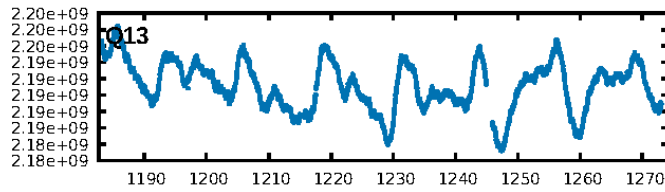
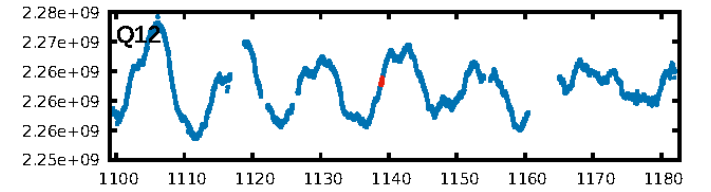
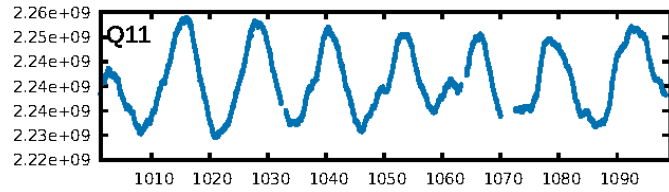
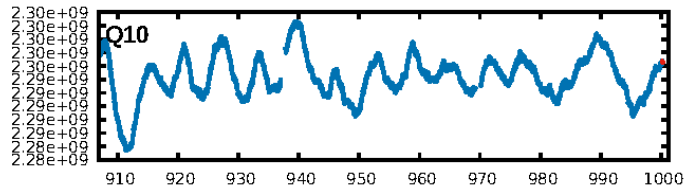
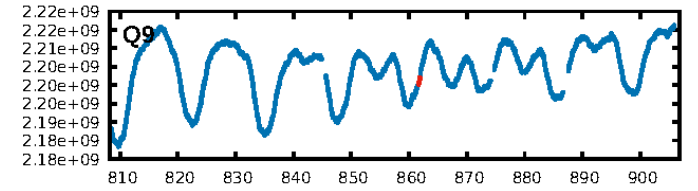
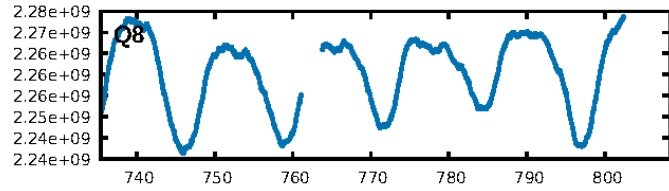
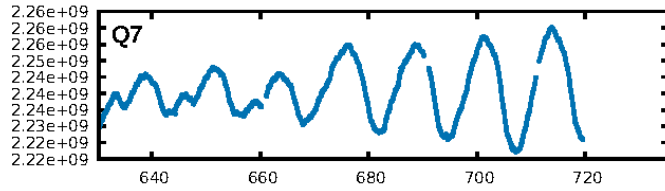
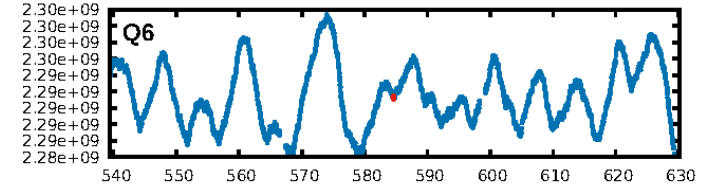
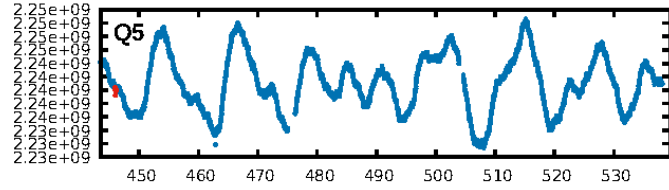
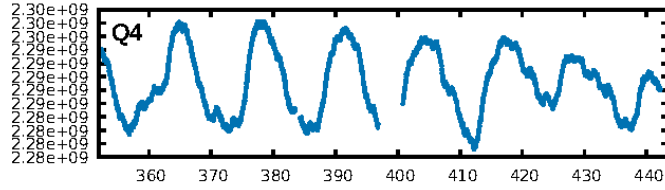
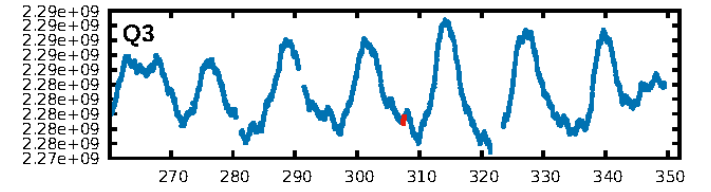
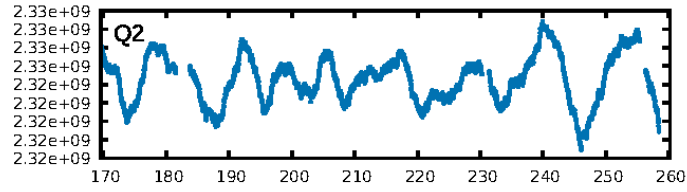
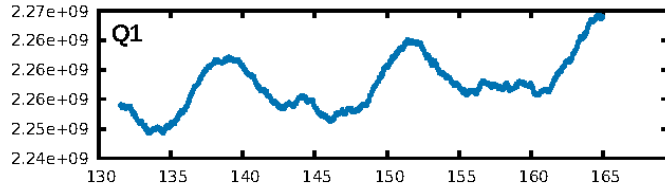
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [174.76σ]
LongPeriod-sig: 100.0% [283.60σ]
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 47.5%
Bootstrap-pfa: 3.14e-10
RollingBand-fgt: 0.83 [5/6]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 3.250 arcsec [3.20σ]
OotOffset-rm: 5.575 arcsec [1.75σ]
KicOffset-rm: 4.544 arcsec [1.55σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-st: 2/1/2/2 [7]
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DiffImageOverlap-fno: 0.43 [3/7]

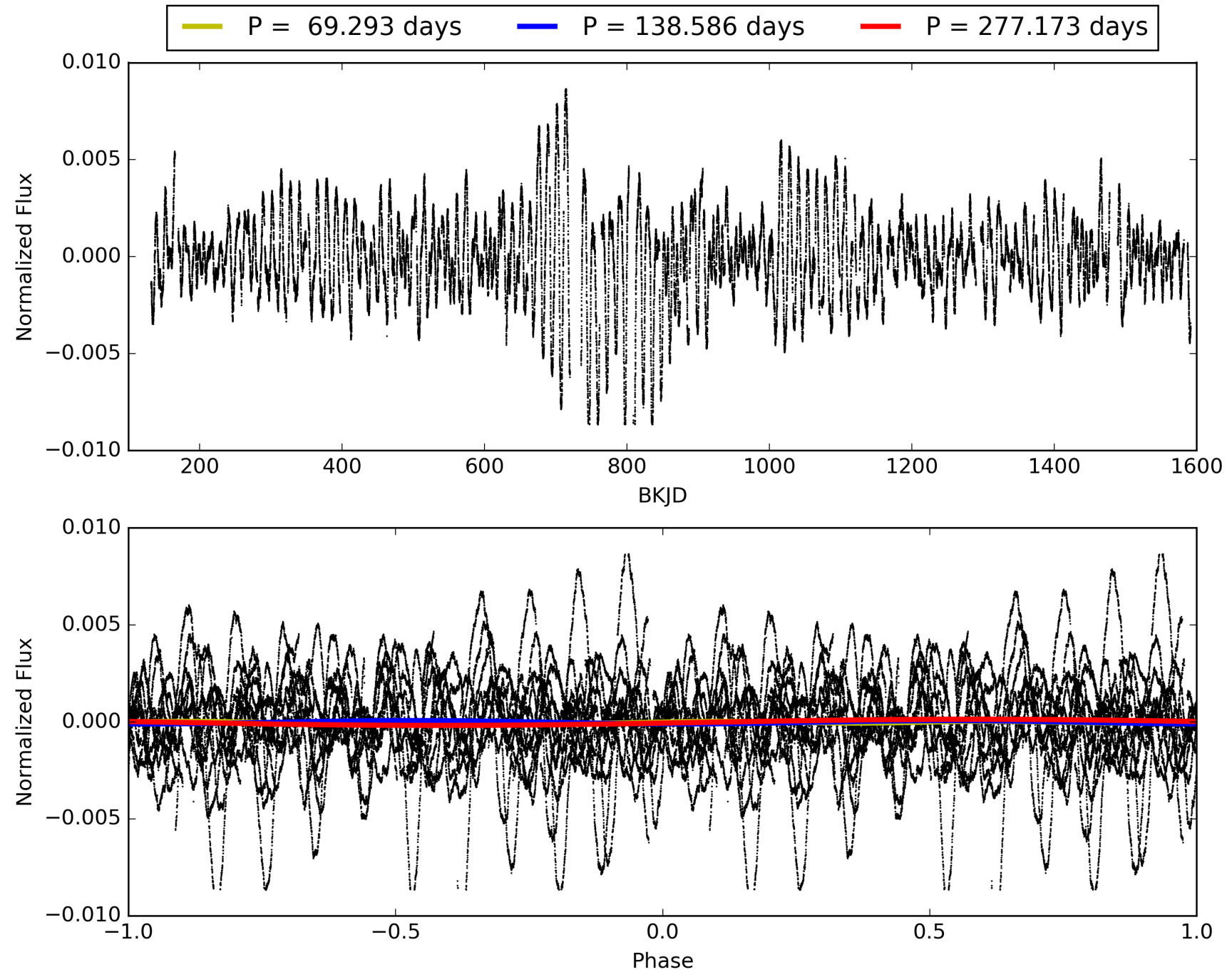
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006037612-02, PDC Light Curves

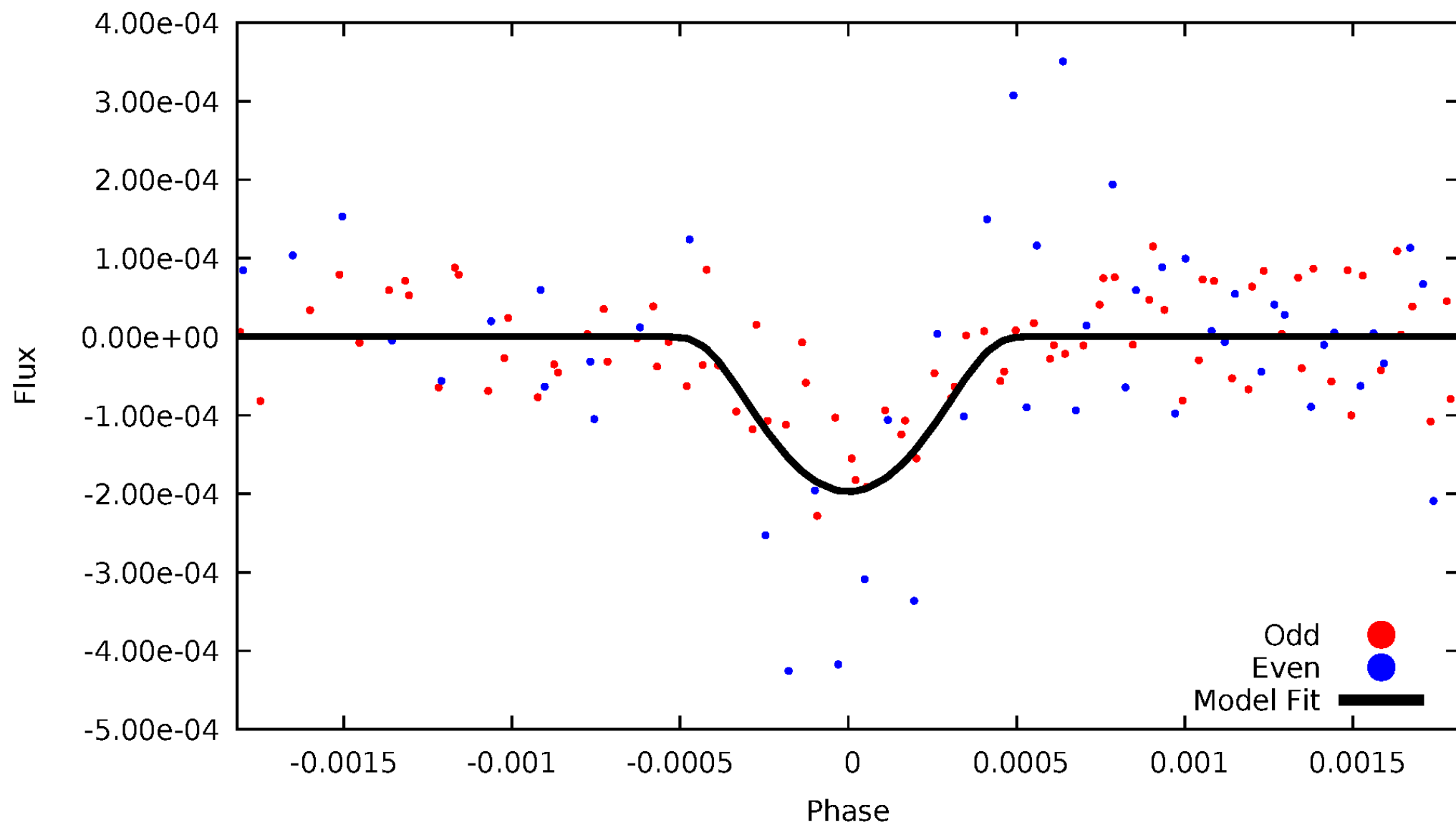


TCE 006037612-02



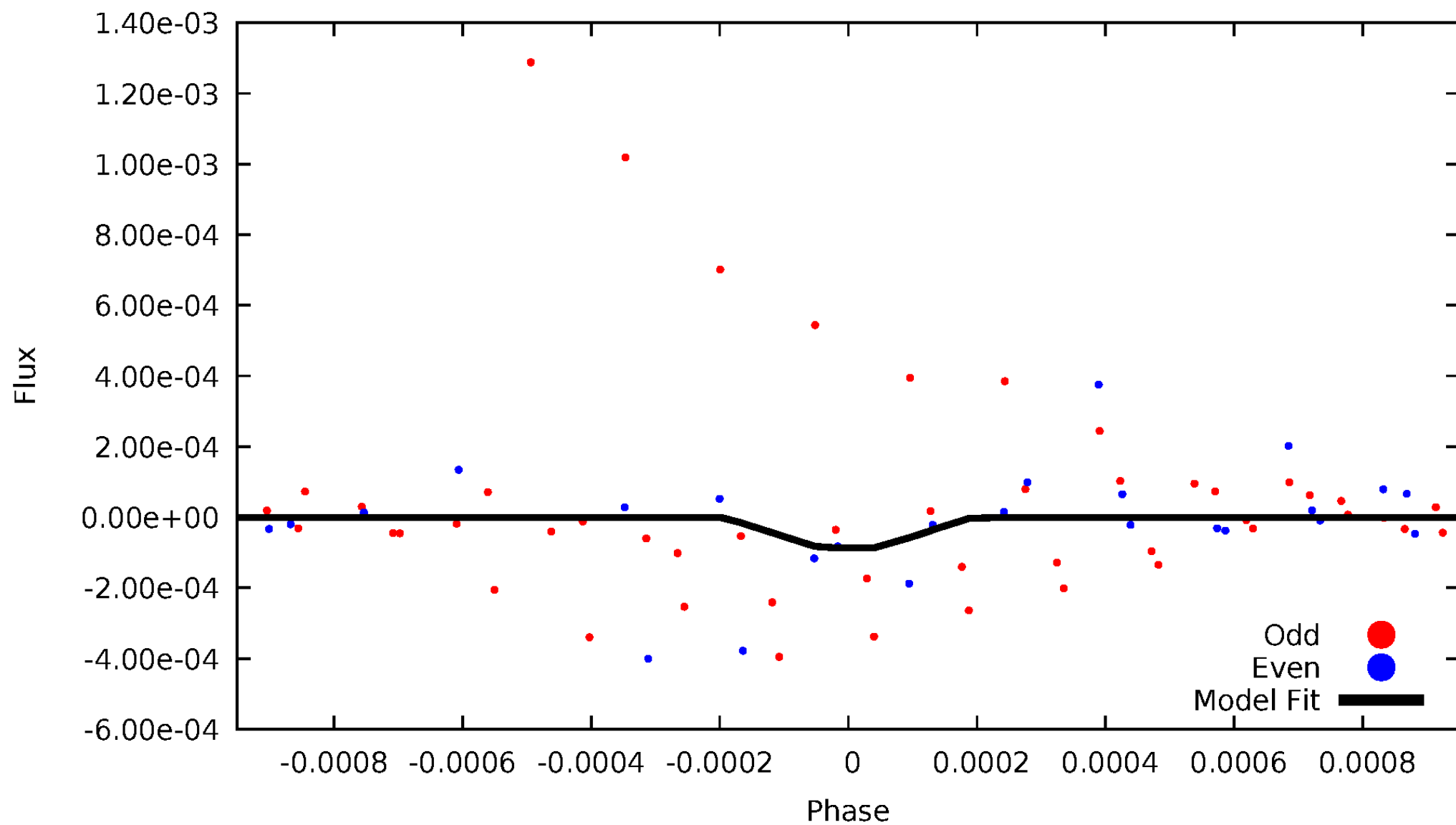
DV Odd/Even

TCE 006037612-02



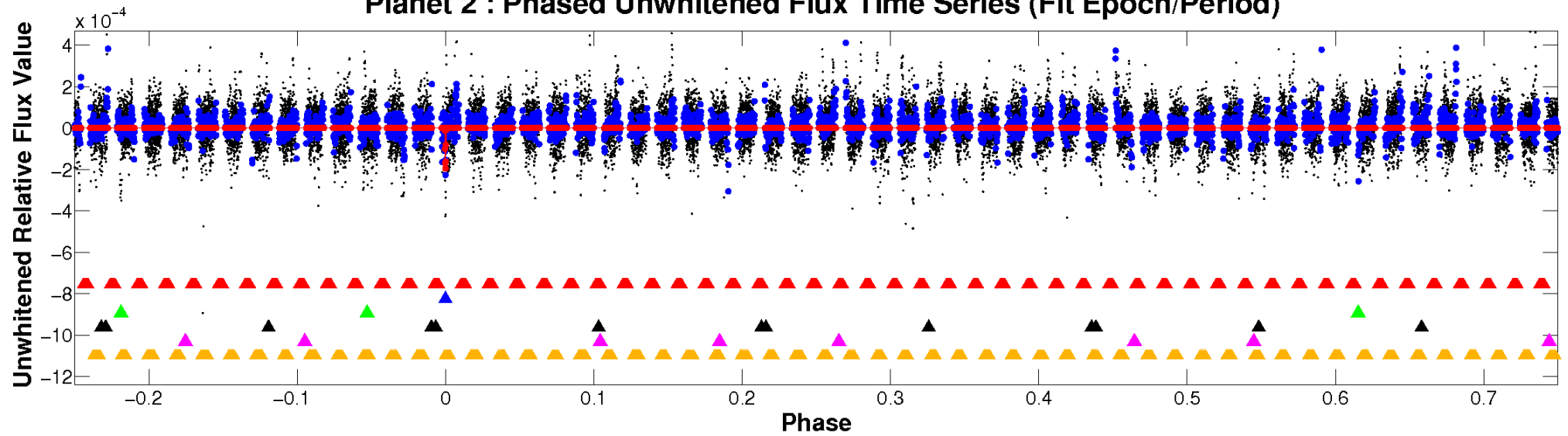
ALT Odd/Even

TCE 006037612-02

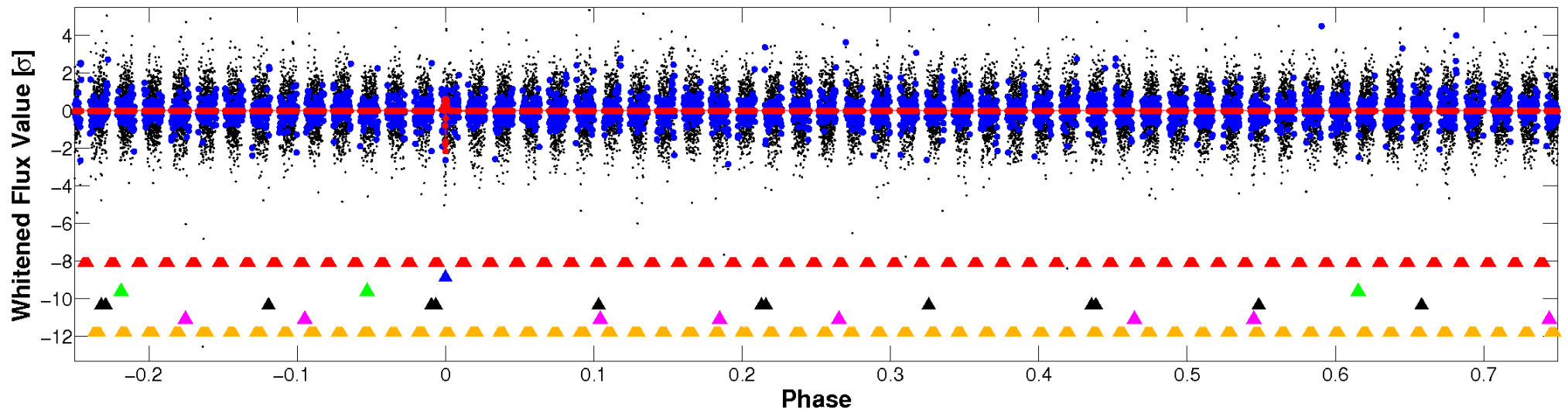


Non-Whitened Vs. Whitened Light Curve

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

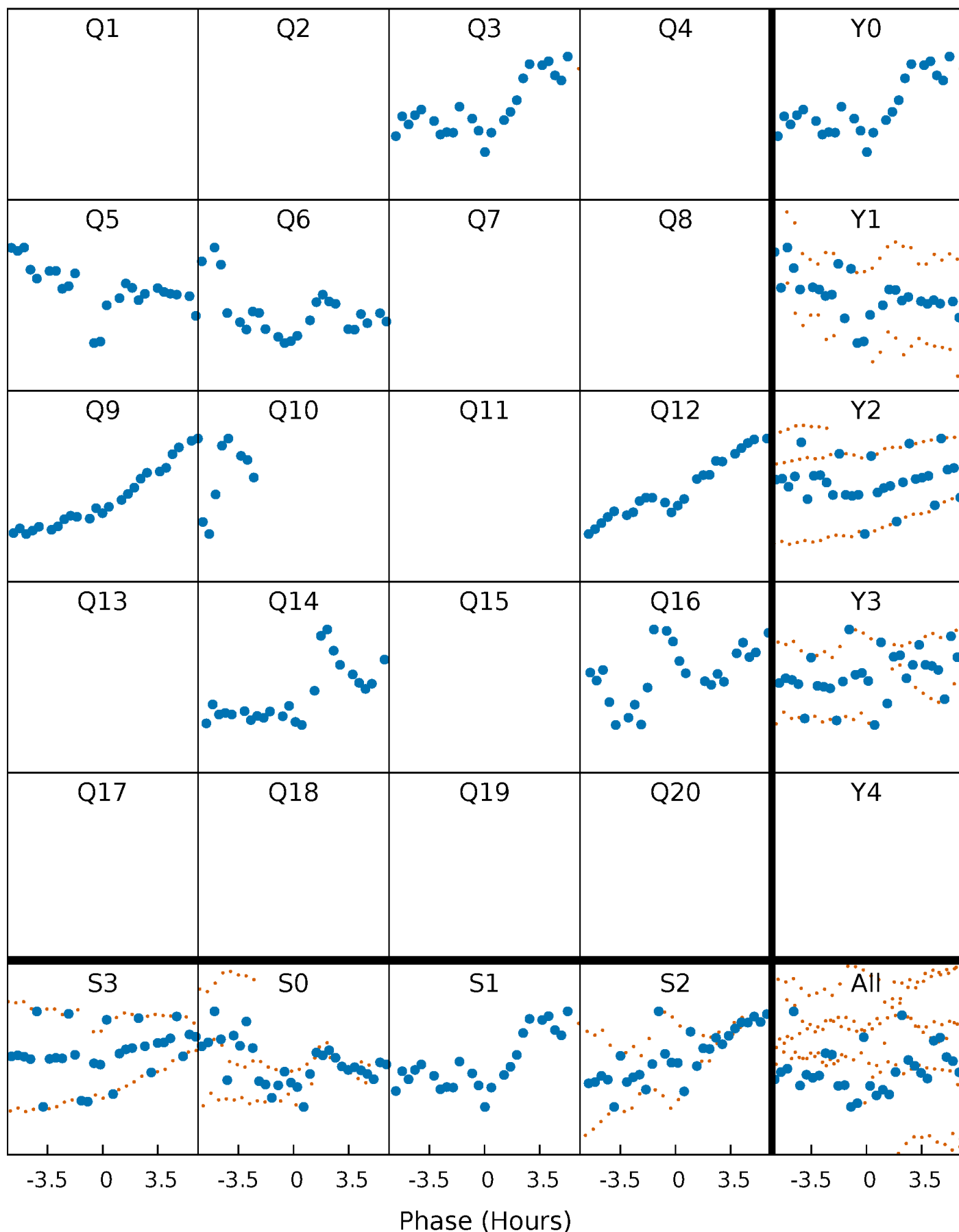


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



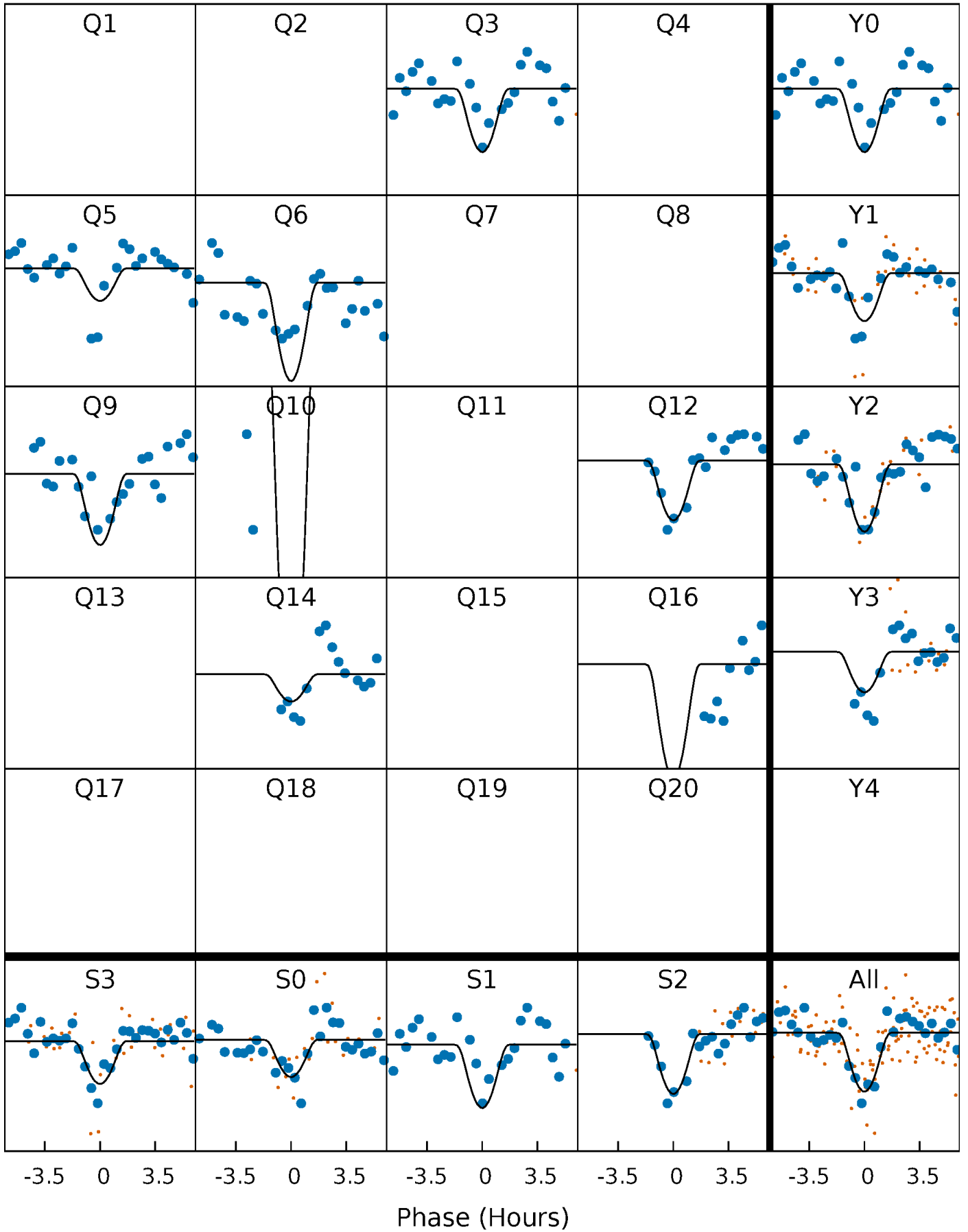
PDC Quarter-Phased Transit Curves

TCE 006037612-02 P=138.586274 Days $T_0=168.855663$ (BKJD)



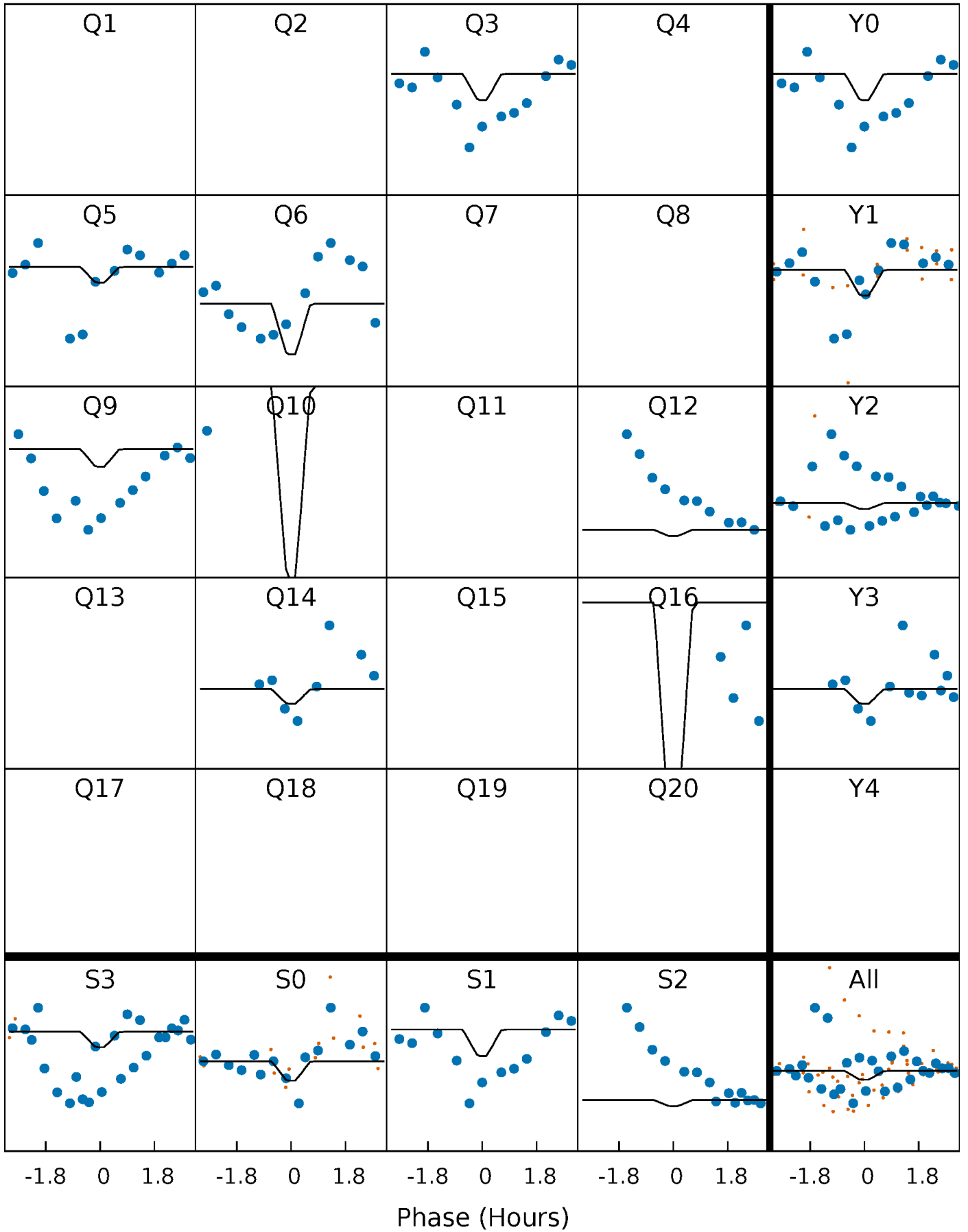
DV Quarter-Phased Transit Curves

TCE 006037612-02 P=138.586274 Days $T_0=168.855663$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

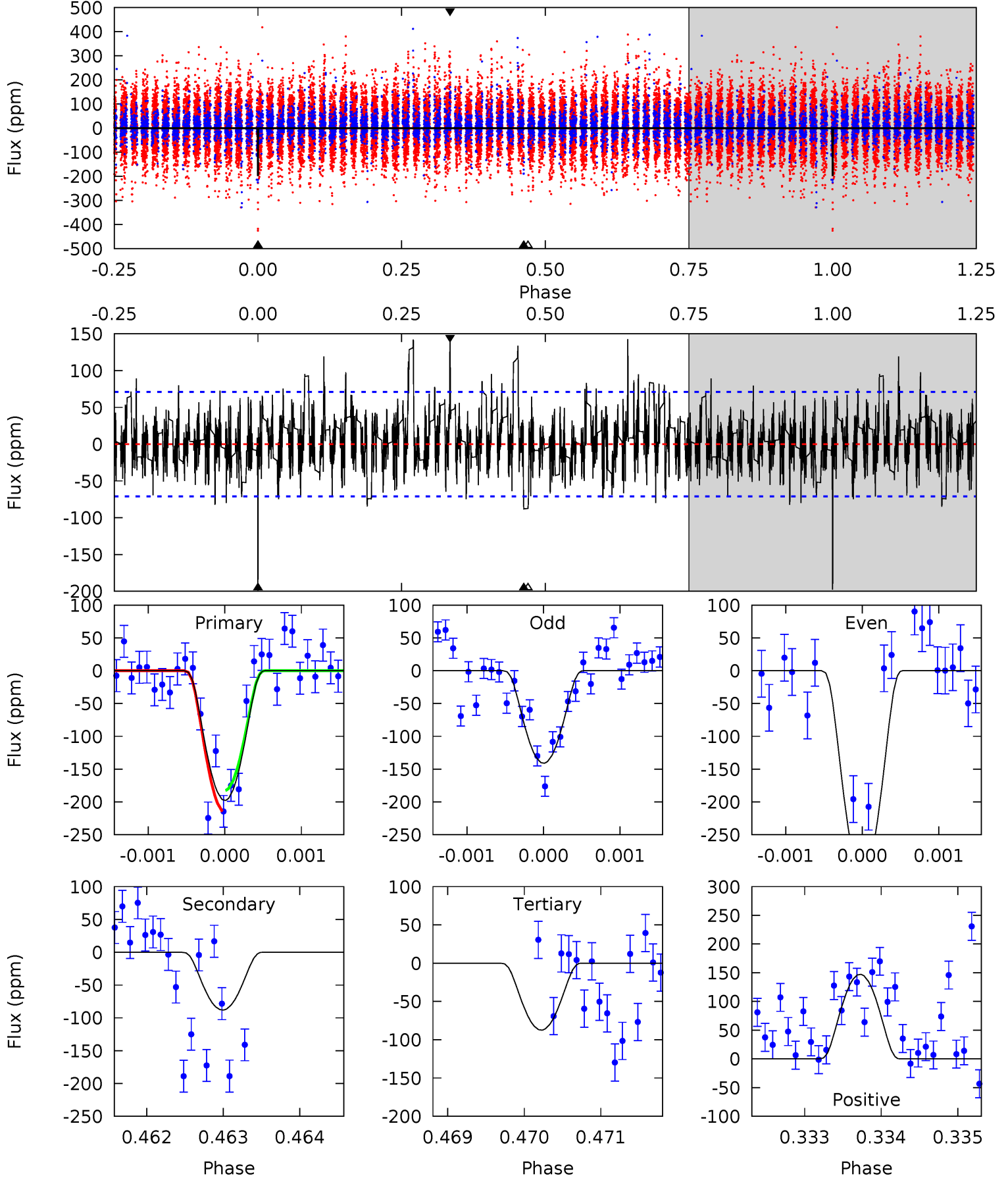
TCE 006037612-02 P=138.585518 Days $T_0=168.875731$ (BKJD)



DV Model-Shift Uniqueness Test

006037612-02, P = 138.586274 Days, E = 30.269389 Days

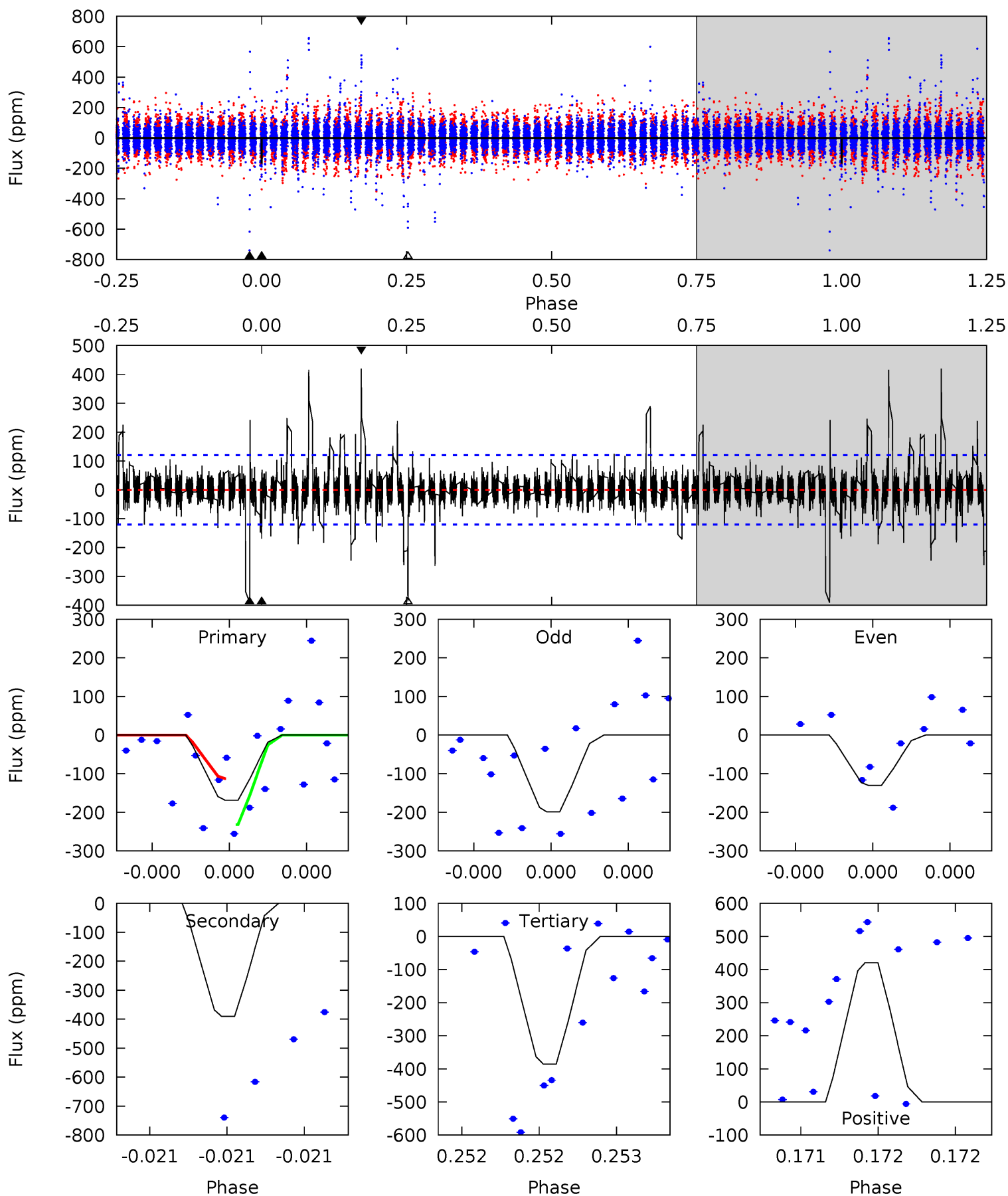
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	6.75	6.70	11.3	5.45	3.29	2.18	8.45	3.87	0.05	-4.53	5.83	1.20	0.43	1.20



Alt Model-Shift Uniqueness Test

006037612-02, P = 138.585518 Days, E = 30.290213 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.92	18.3	18.1	19.7	5.63	3.57	1.58	-10.2	-11.8	0.22	-1.40	1.41	0.47	0.52	2.80



Stellar Parameters For KIC 006037612

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+82}_{-72}	$3.847^{+0.210}_{-0.070}$	$0.120^{+0.150}_{-0.150}$	$2.299^{+0.263}_{-0.613}$	$1.356^{+0.144}_{-0.176}$	$0.157^{+0.195}_{-0.037}$
	+1%/-1%	+5%/-2%	+125%/-125%	+11%/-27%	+11%/-13%	+124%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006037612-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-88 ± 13	$18.85^{+19.67}_{-12.63}$	737^{+27}_{-48}	2818^{+1128}_{-429}	47^{+389}_{-35}
Alt.	-391 ± 21	$17.59^{+19.65}_{-12.78}$	739^{+27}_{-45}	3621^{+2370}_{-735}	240^{+2936}_{-190}

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

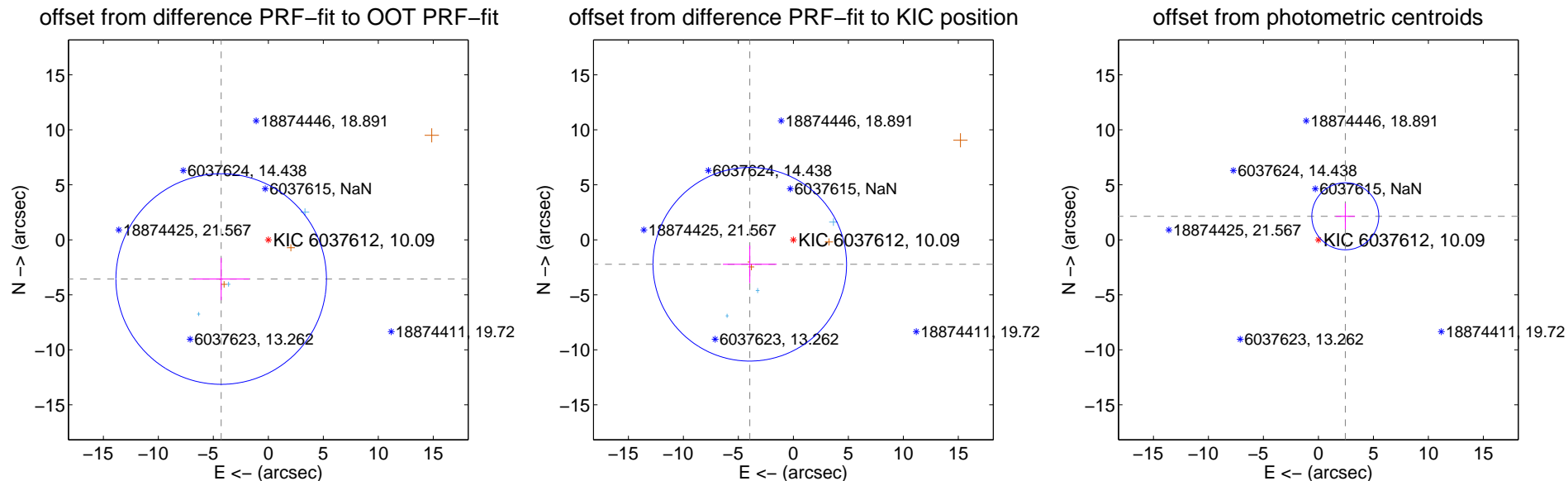
DV Centroid Data

Supplemental centroid analysis for 006037612-02. **Kepler magnitude: 10.09.** Transit SNR 8.92

There are 3 quarters with good PRF difference image offsets

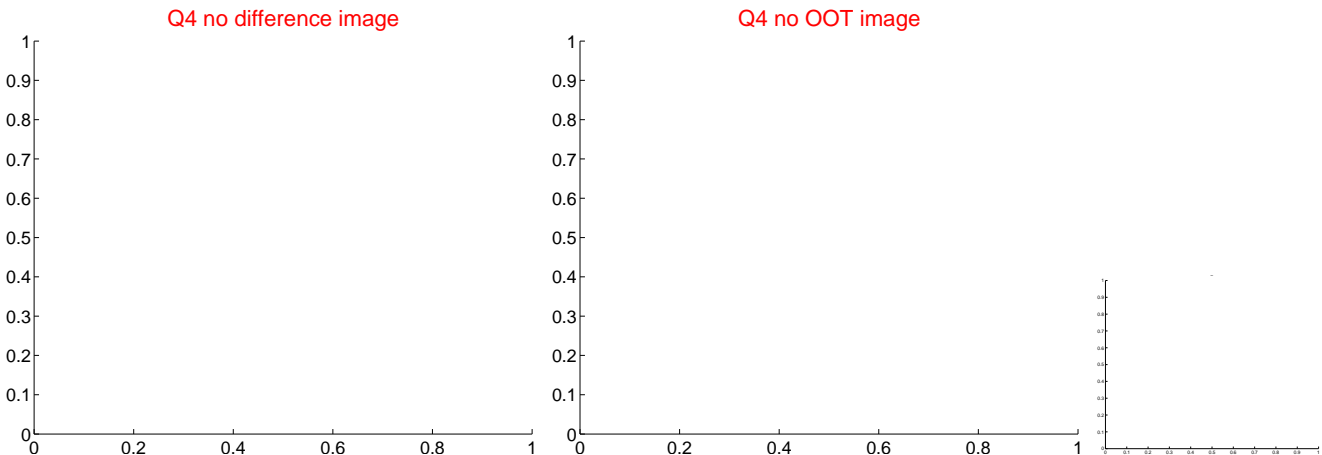
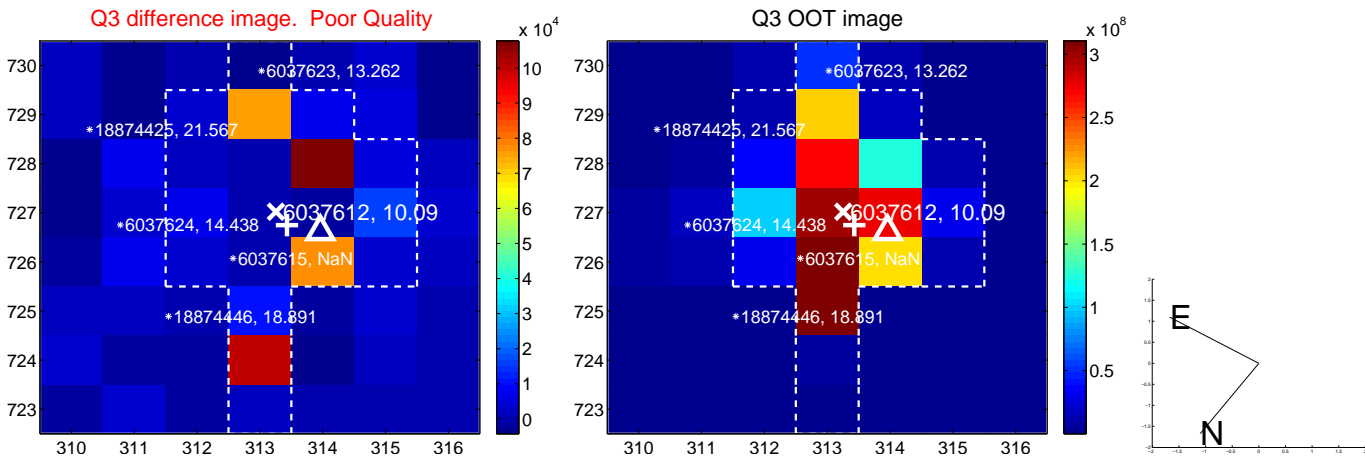
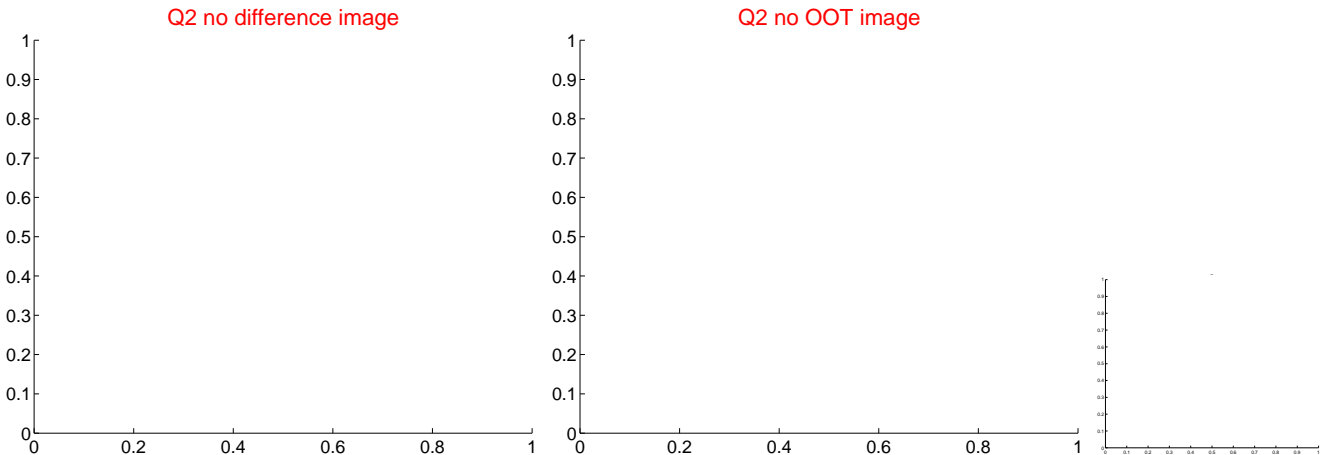
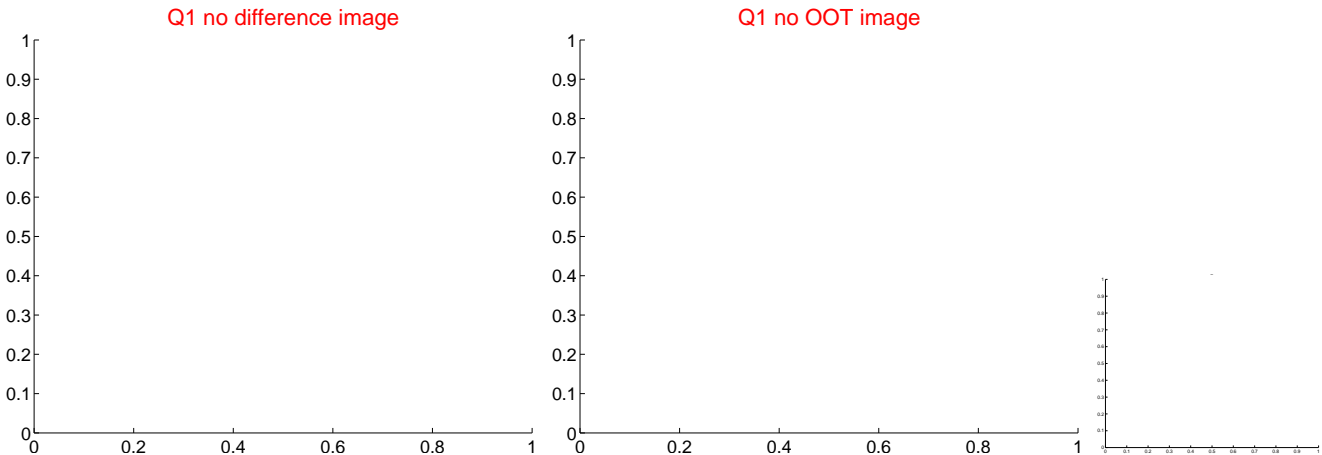
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.575 ± 3.191	1.75	4.287 ± 2.565	-3.564 ± 1.921
PRF-fit source offset from KIC position	4.544 ± 2.933	1.55	3.963 ± 2.440	-2.223 ± 1.700
photometric centroid source offset	3.25 ± 1.01	3.20	-2.45 ± 0.88	2.14 ± 1.17

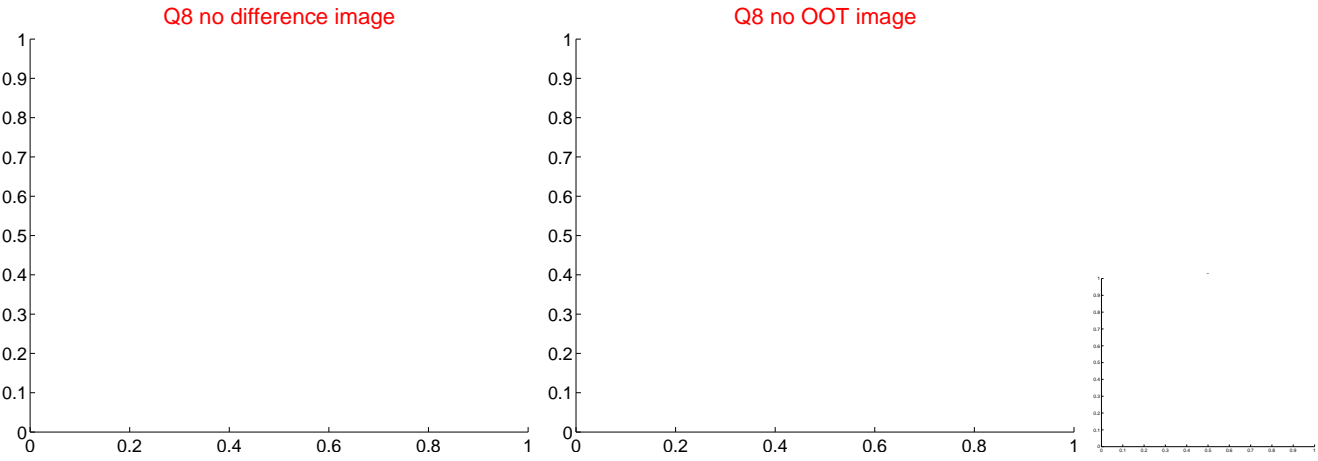
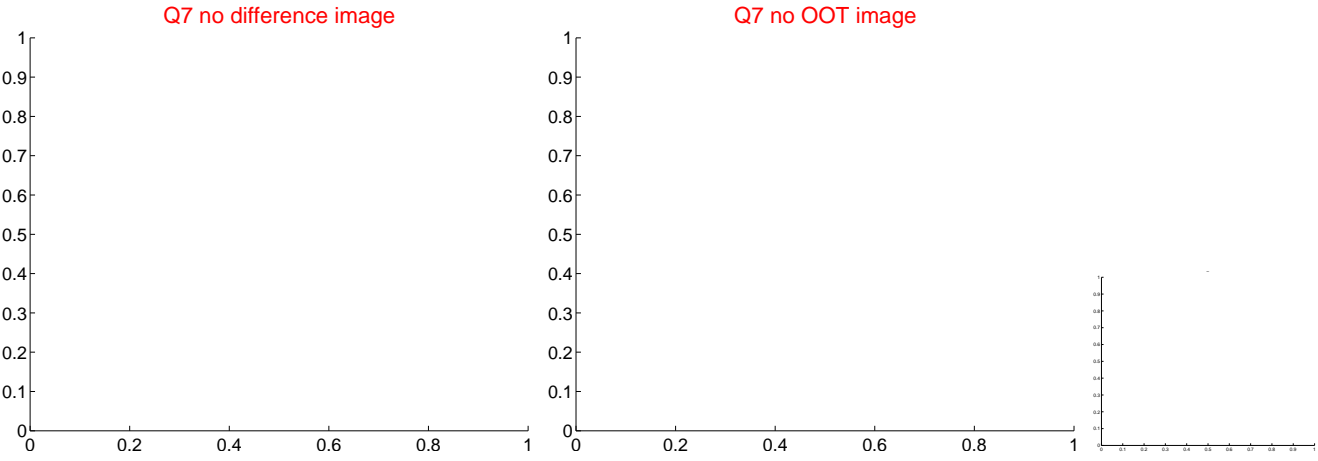
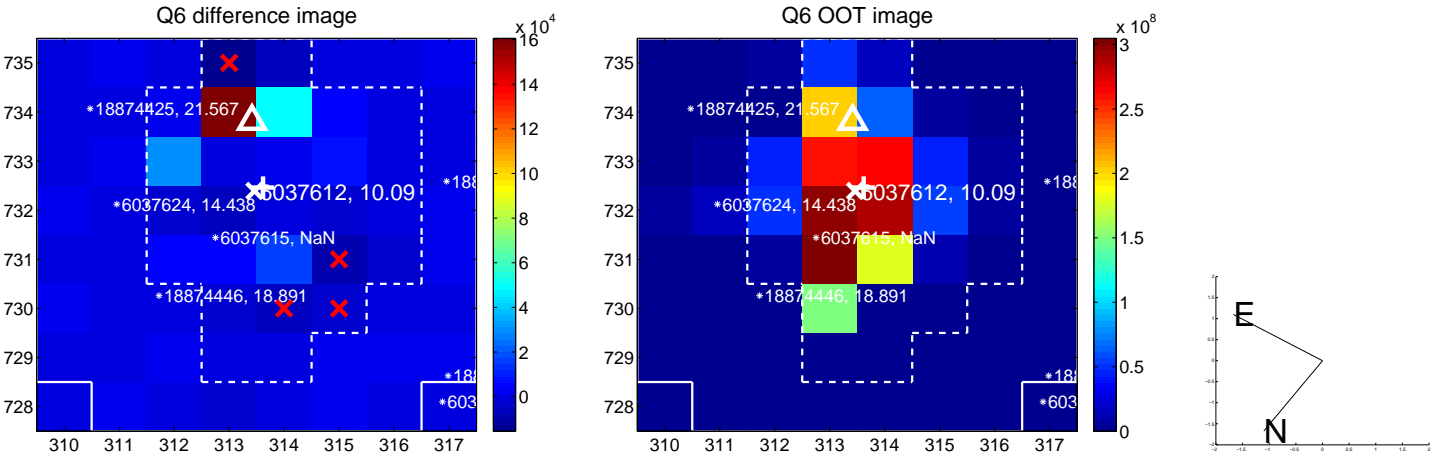
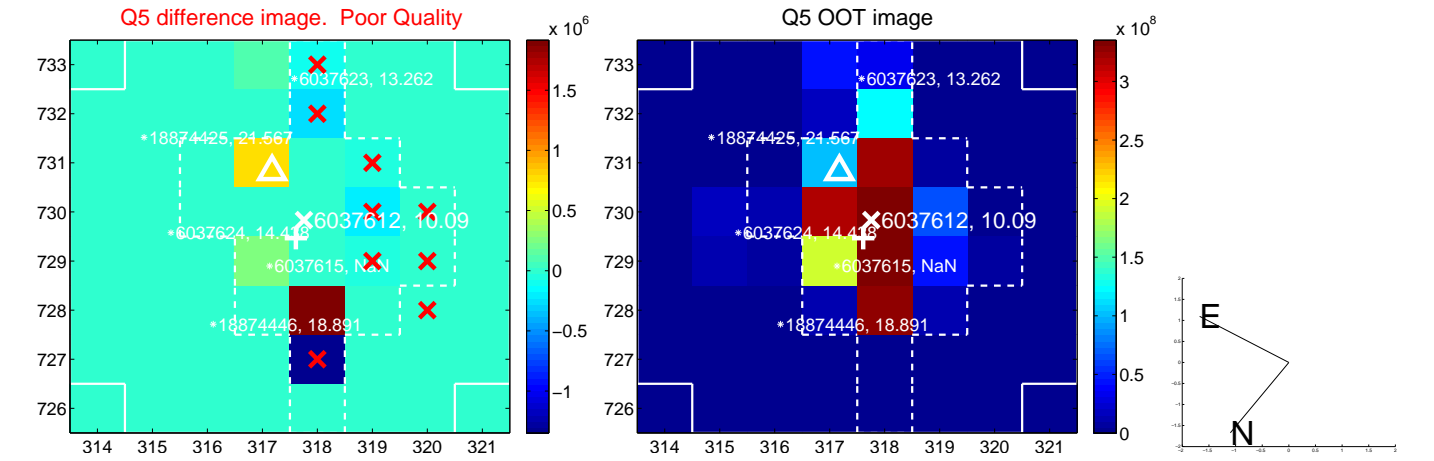


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

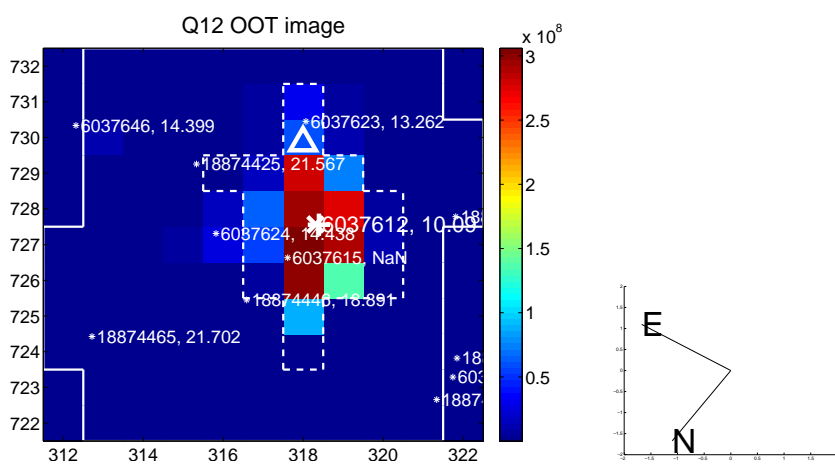
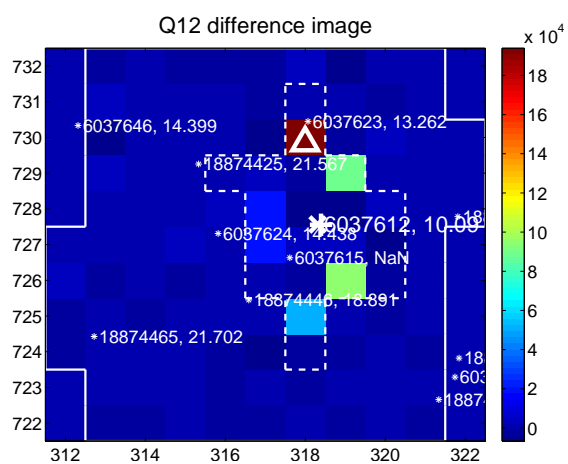
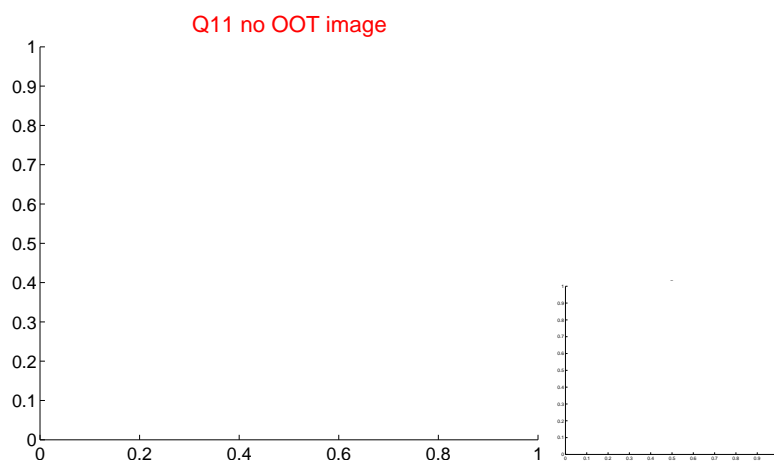
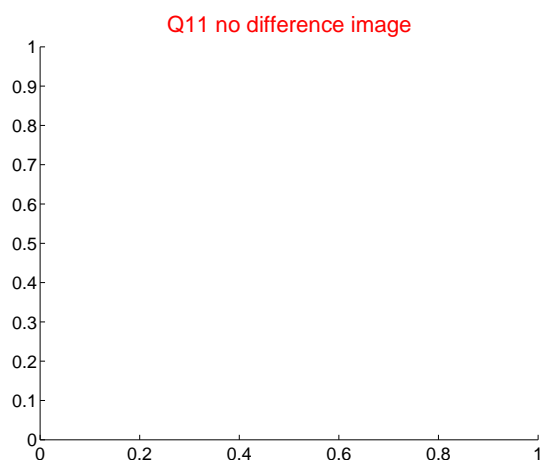
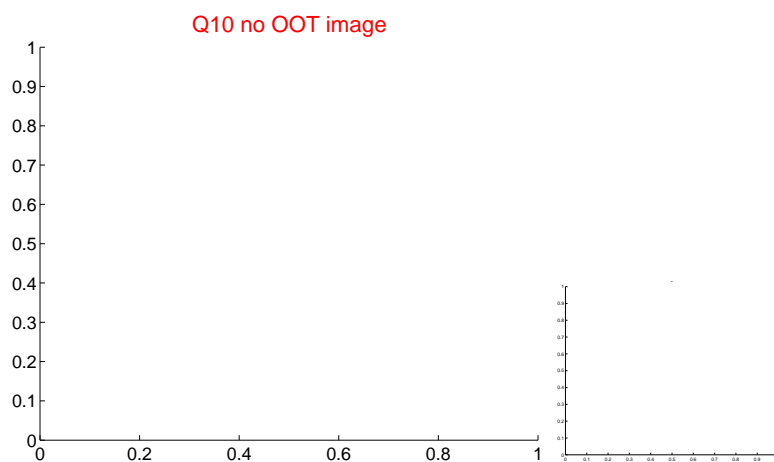
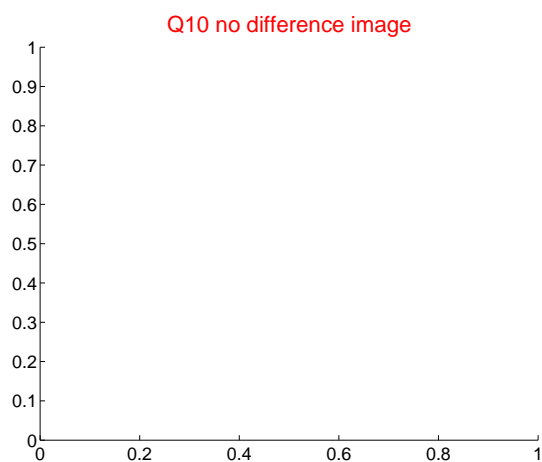
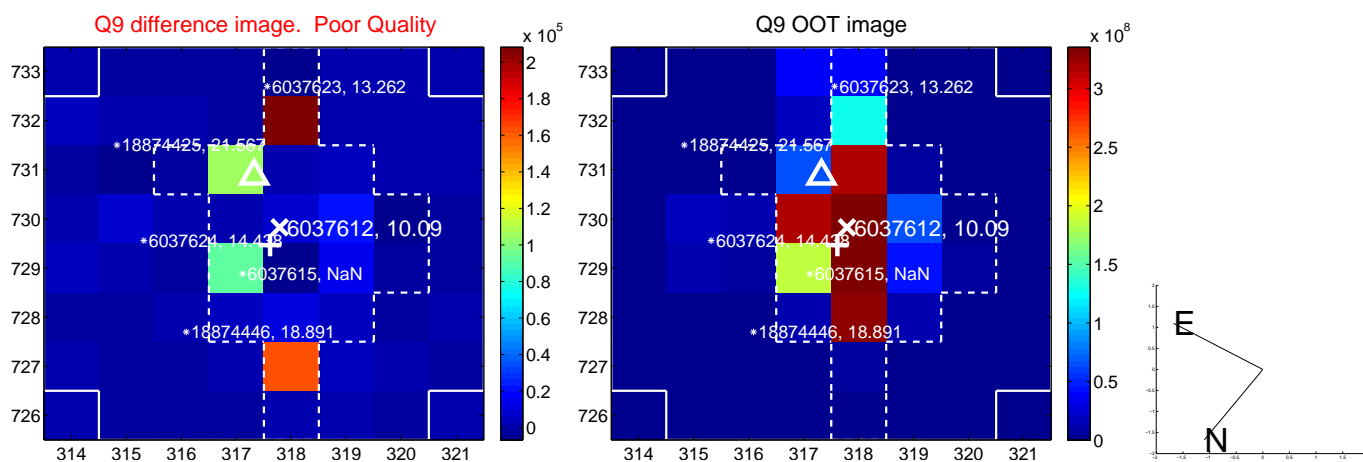
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



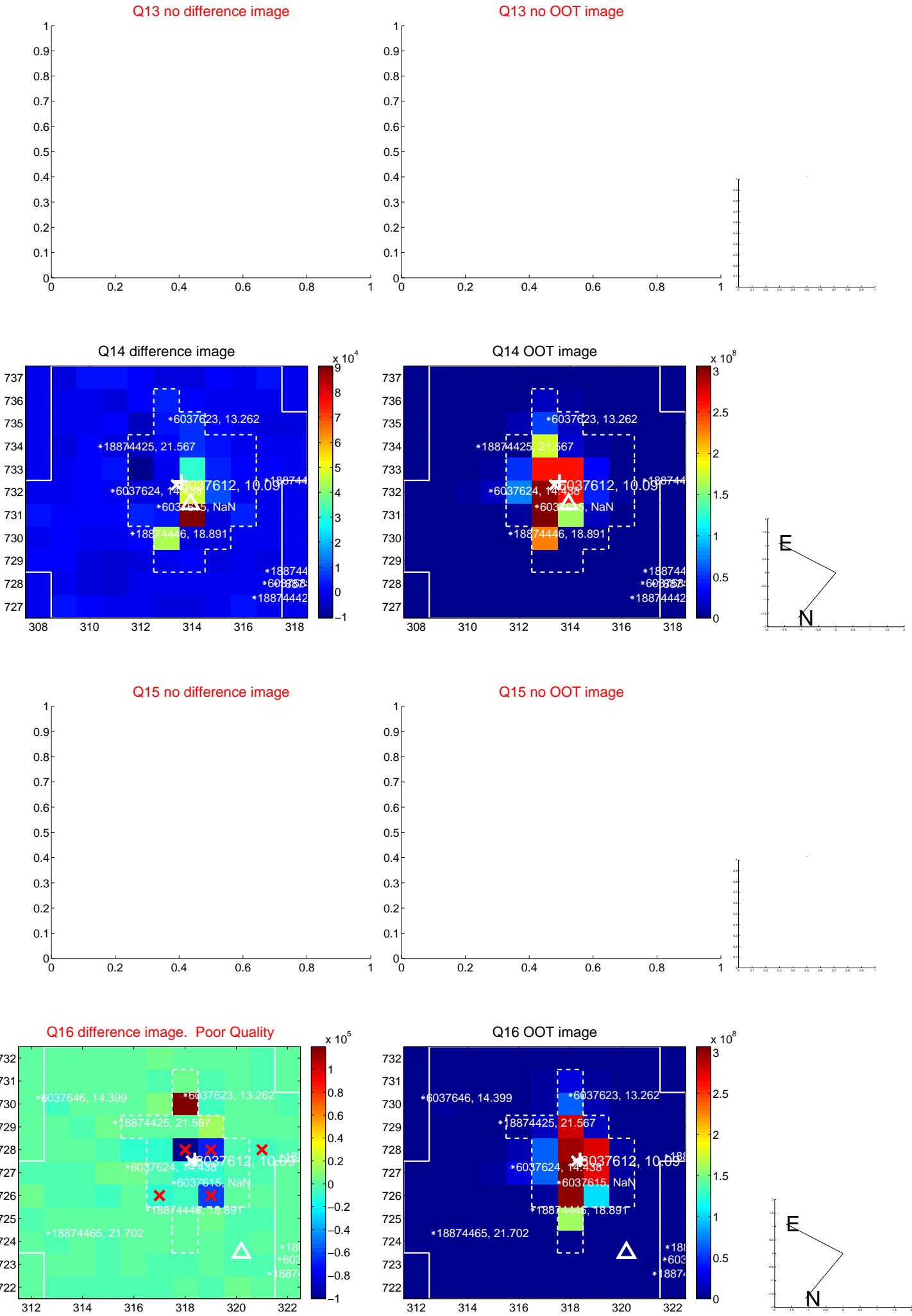
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



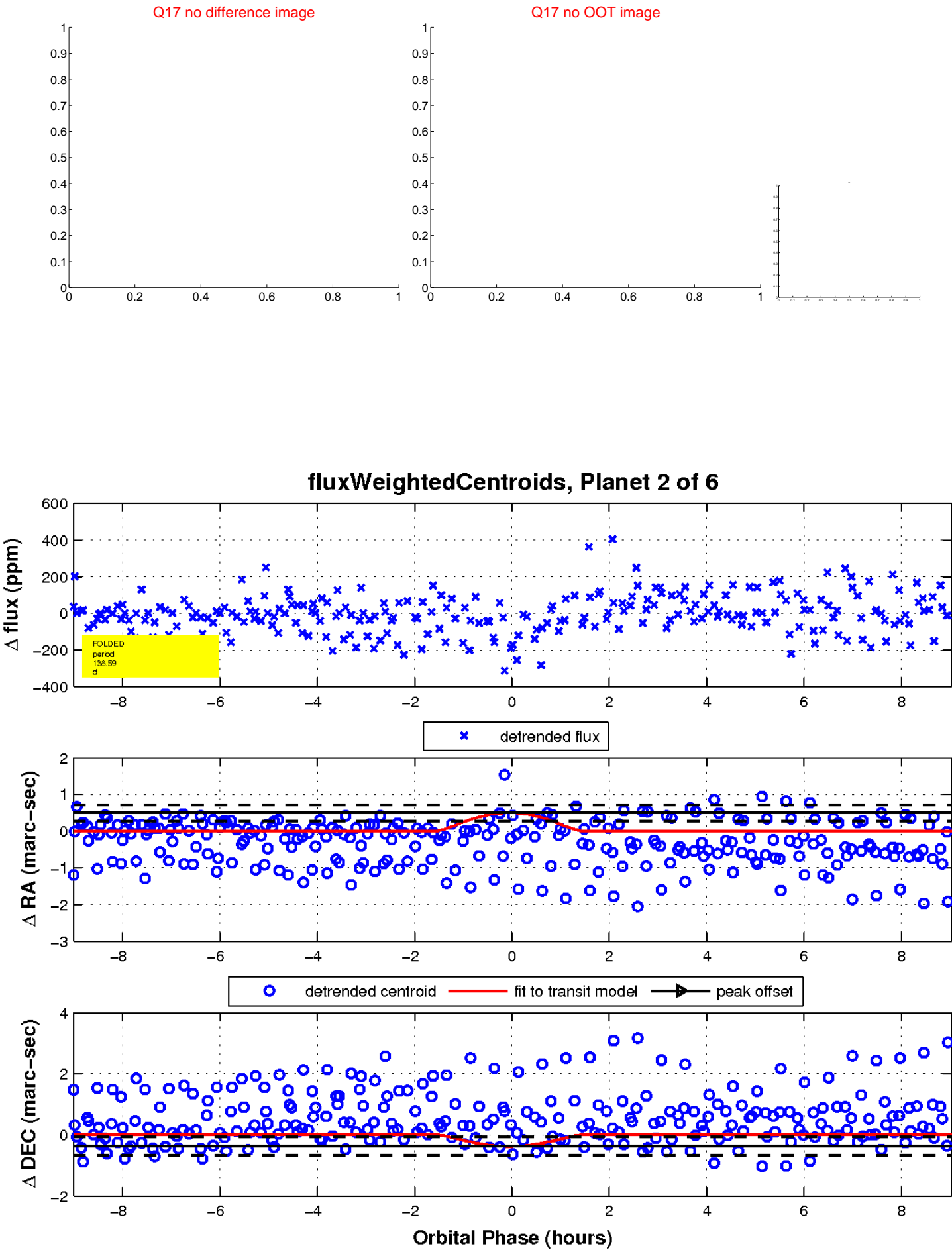
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



Declination

KIC 006037612

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})
006037612-01	OBS	No	2.520648	132.467356	25.6	10.537	10.4	8.4	2.30	6065	1.37	3980.10
006037612-02	OBS	No	138.586274	168.855663	197.2	3.021	9.9	8.9	2.30	6065	6.58	19.04
006037612-03	OBS	No	577.335084	254.139178	252.0	8.167	9.4	8.2	2.30	6065	4.33	2.84
006037612-04	OBS	No	107.743749	229.633432	224.0	2.969	8.9	9.1	2.30	6065	3.68	26.63
006037612-06	OBS	No	5.041872	135.935814	17.3	14.455	8.7	4.4	2.30	6065	1.11	1579.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037612-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006037612-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006037612-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006037612-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006037612-06	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

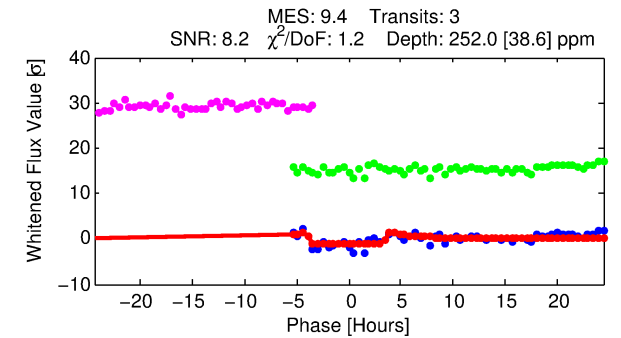
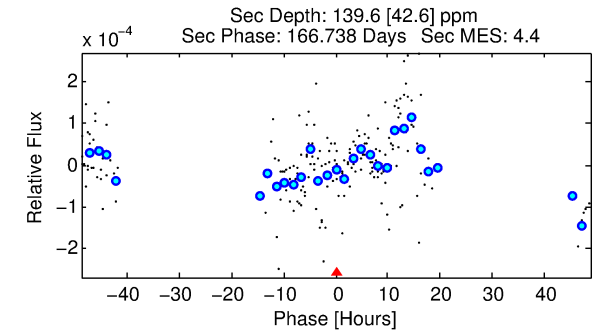
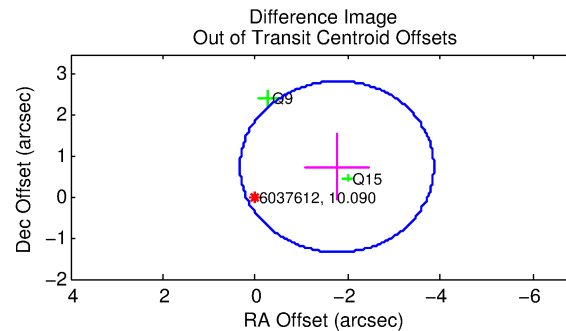
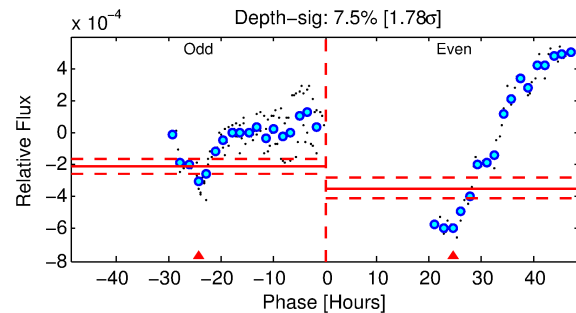
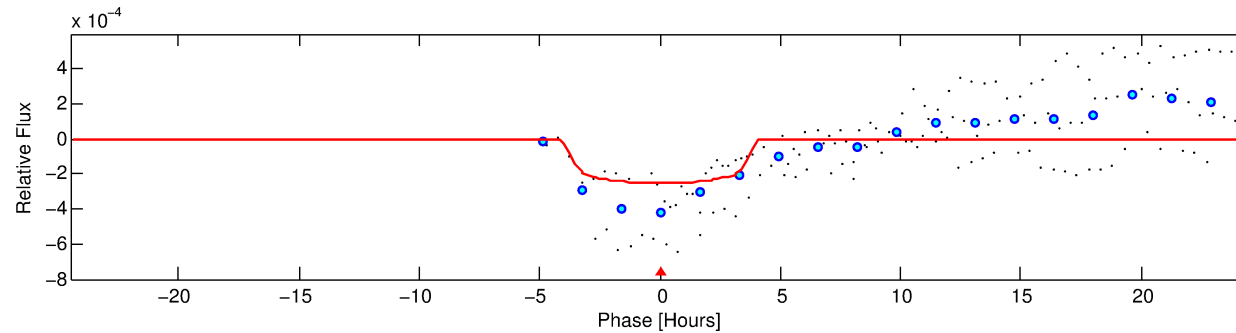
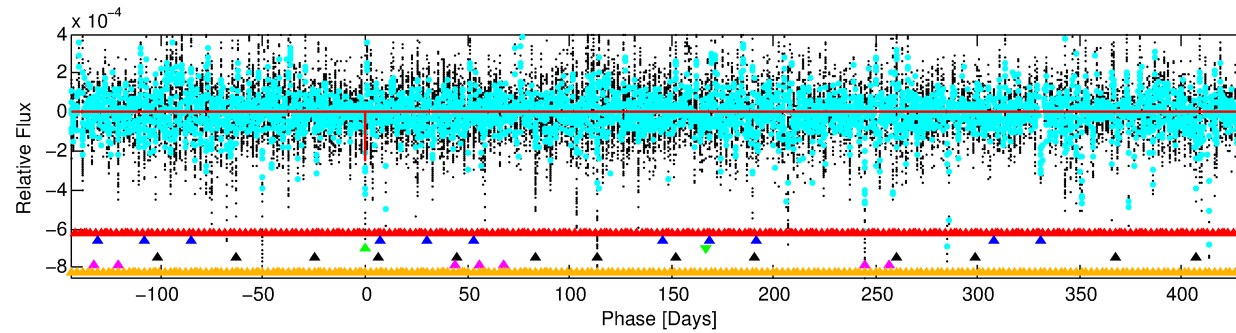
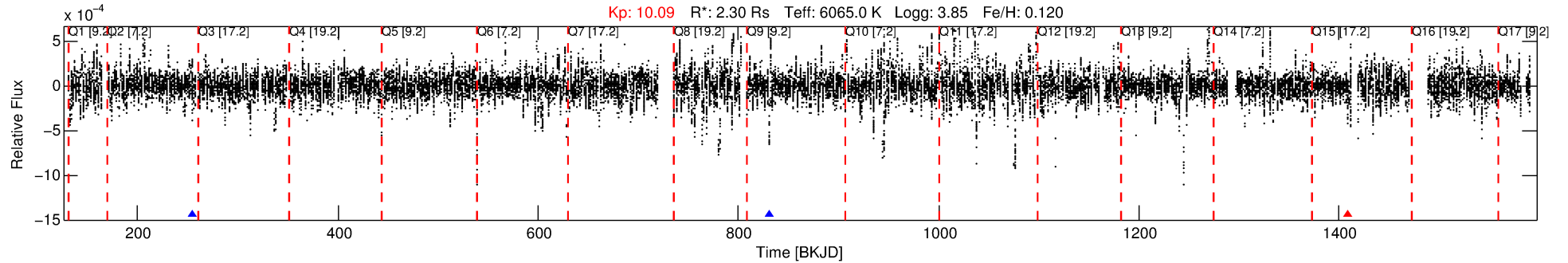
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037612-03

No Significant Match Found

DV One-Page Summary

KIC: 6037612 Candidate: 3 of 6 Period: 577.335 d



DV Fit Results:

Period = 577.33508 [0.00832] d
Epoch = 254.1392 [0.0135] BKJD
Rp/R* = 0.0173 [0.0026]
a/R* = 249.22 [150.37]
b = 0.91 [0.12]
Seff = 2.84 [1.06]
Teq = 331 [31] K
Rp = 4.33 [1.33] Re
a = 1.5020 [0.3604] AU
Ag = 9234.10 [5230.93] [1.77 σ]
Teffp = 5017 [544] K [8.60 σ]

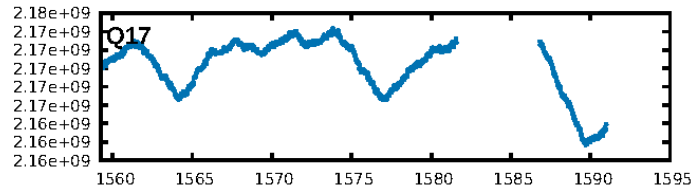
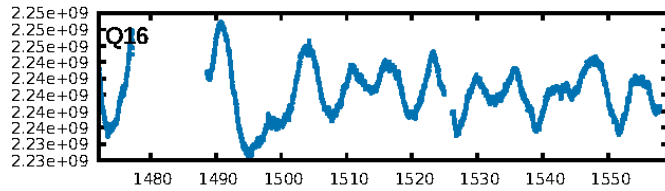
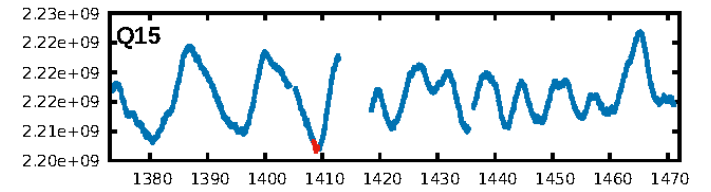
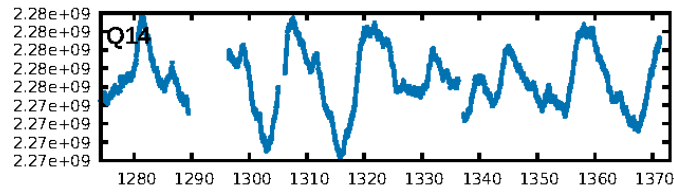
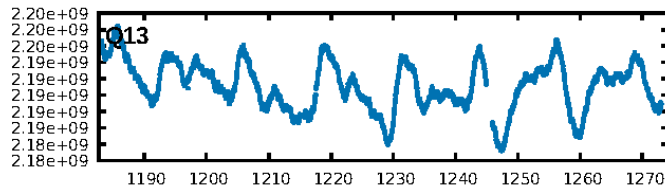
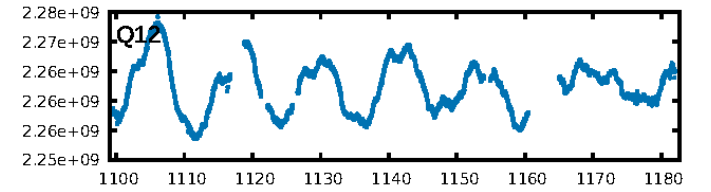
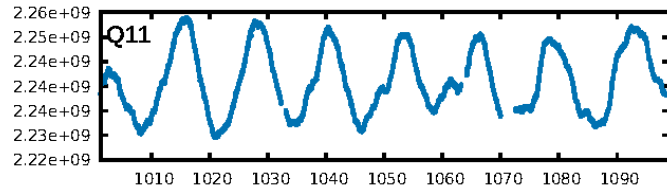
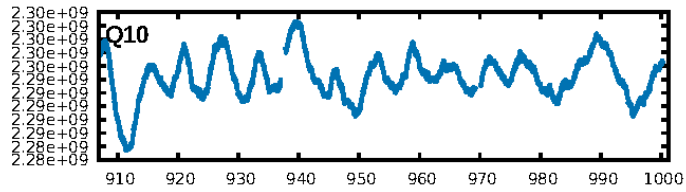
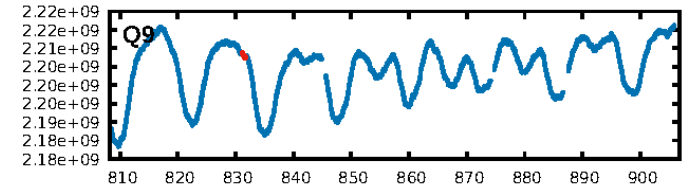
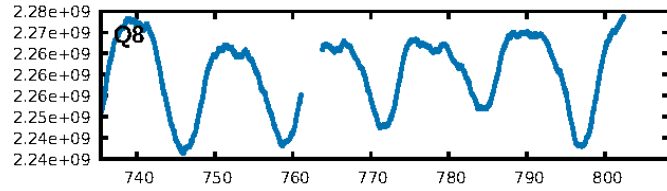
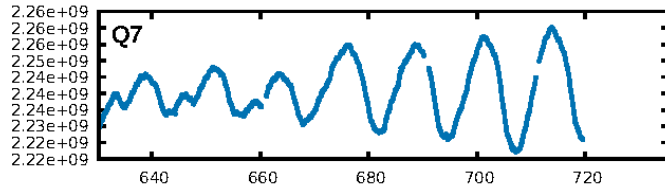
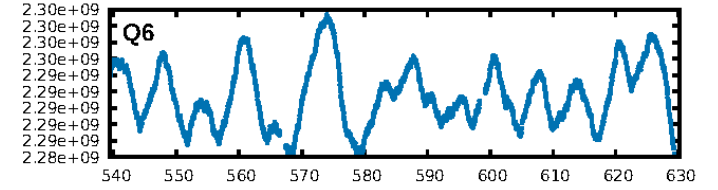
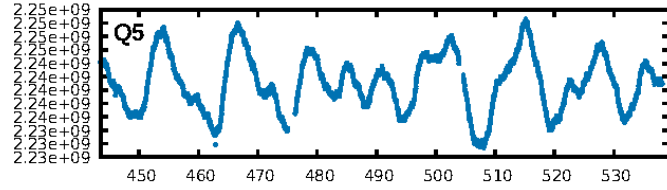
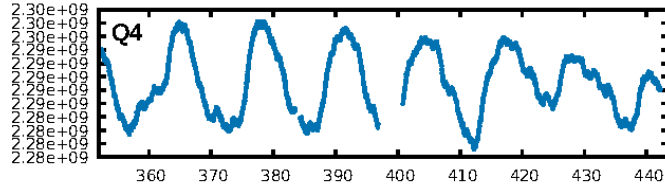
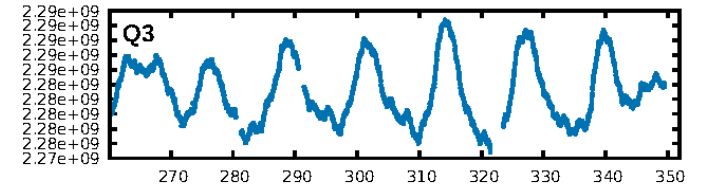
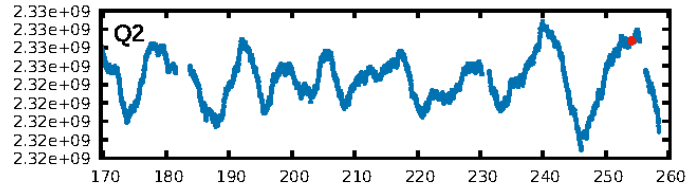
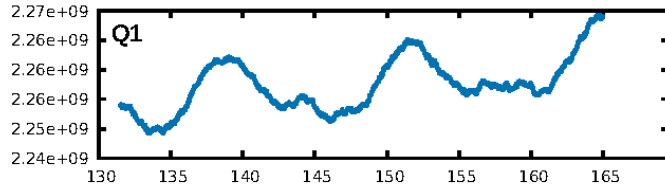
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1074.60 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 85.0%
Bootstrap-pfa: 2.02e-07
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 68.0%
Centroid-so: 0.773 arcsec [0.62 σ]
OotOffset-rm: 1.913 arcsec [2.74 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 3.141 arcsec [2.90 σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.33 [1/3]

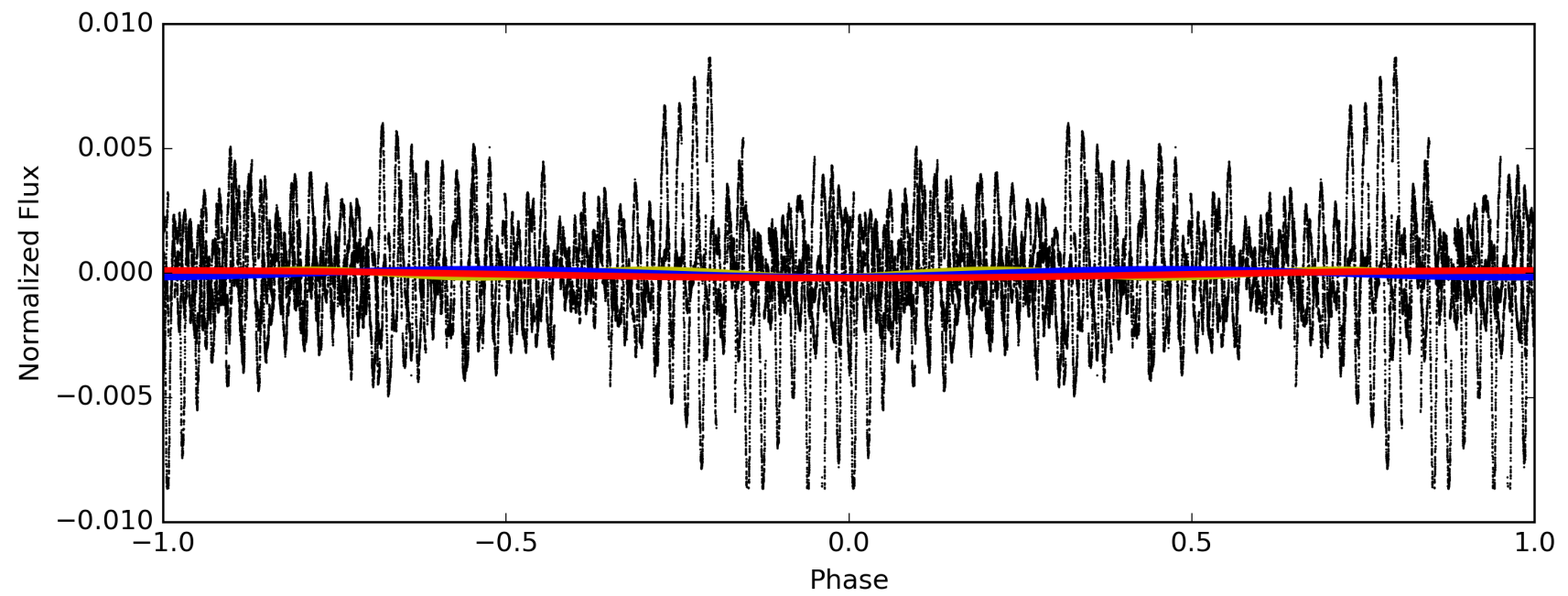
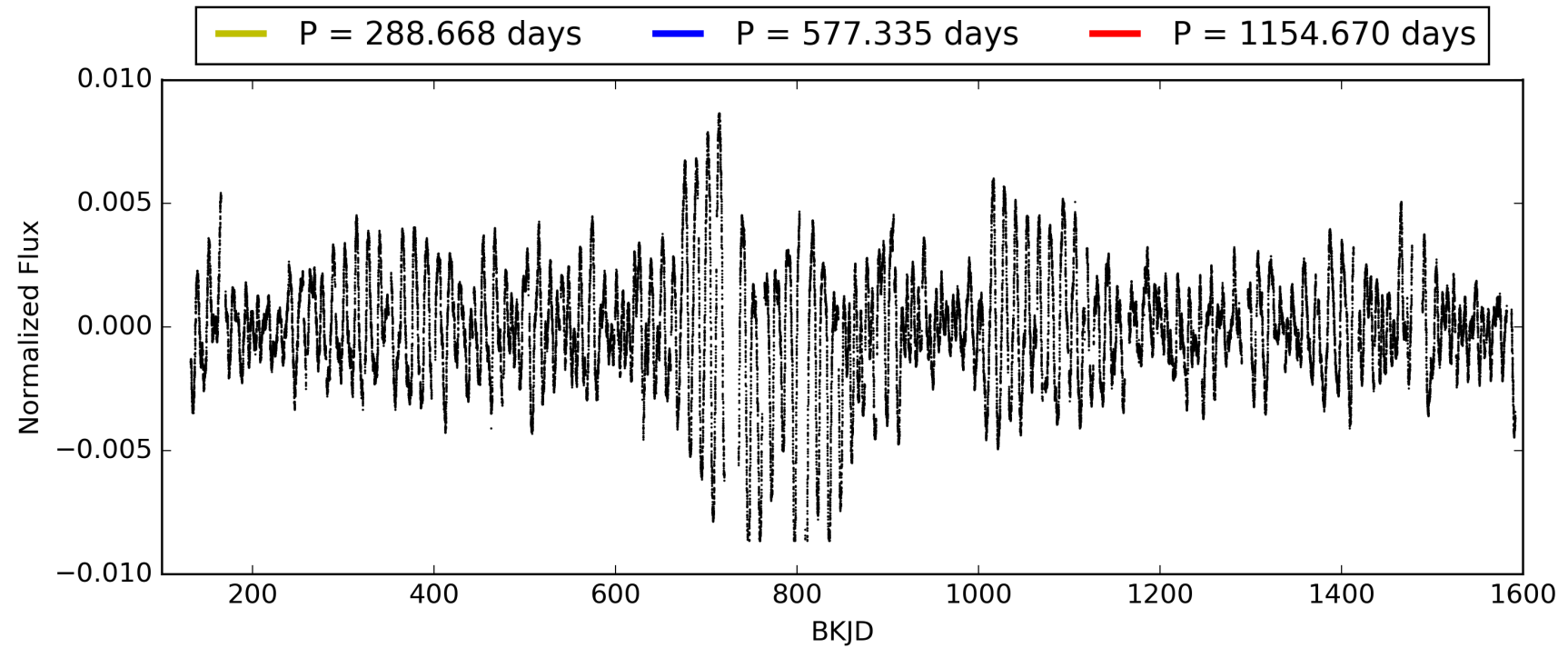
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:01:08 Z

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

TCE 006037612-03, PDC Light Curves

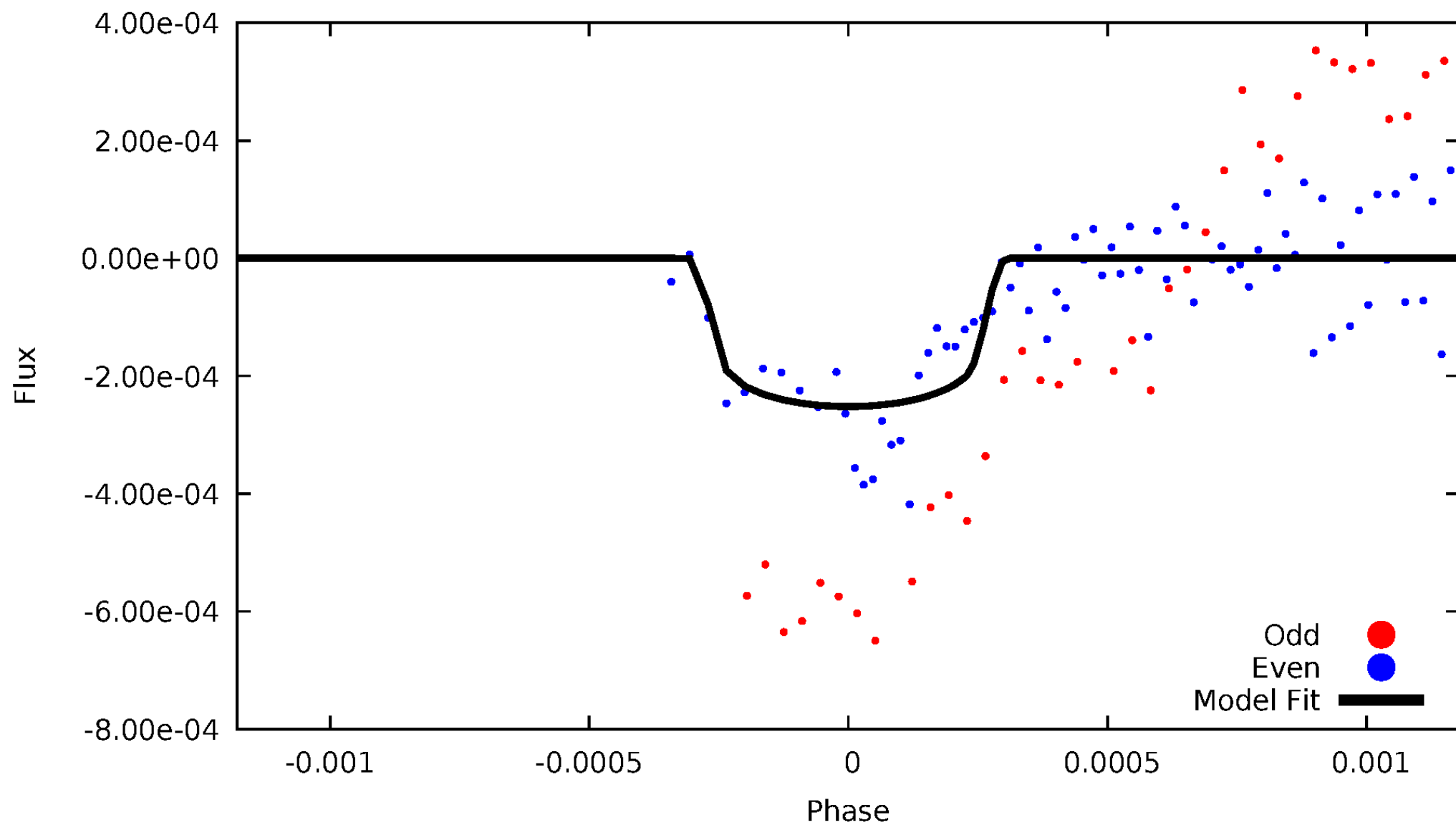


TCE 006037612-03



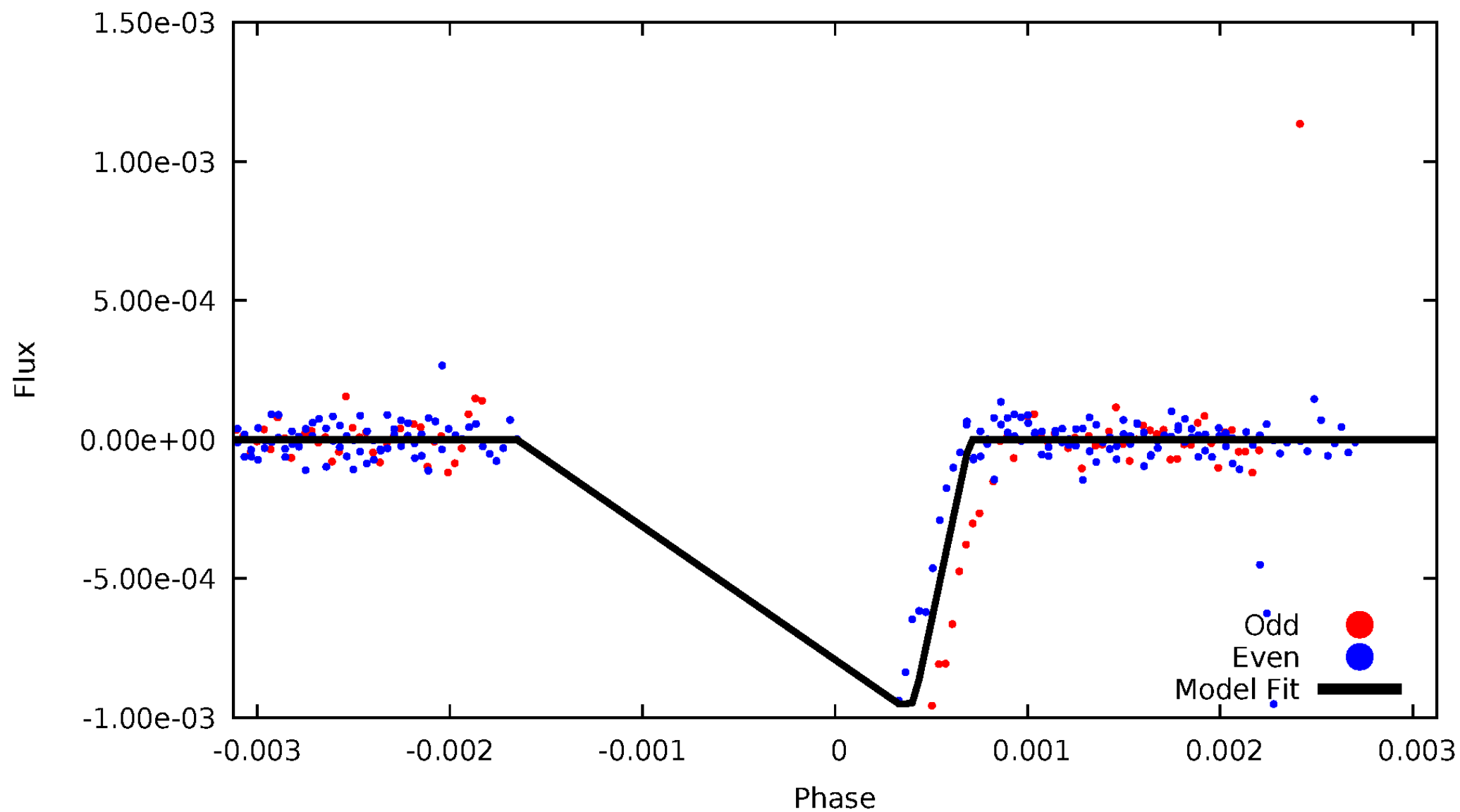
DV Odd/Even

TCE 006037612-03



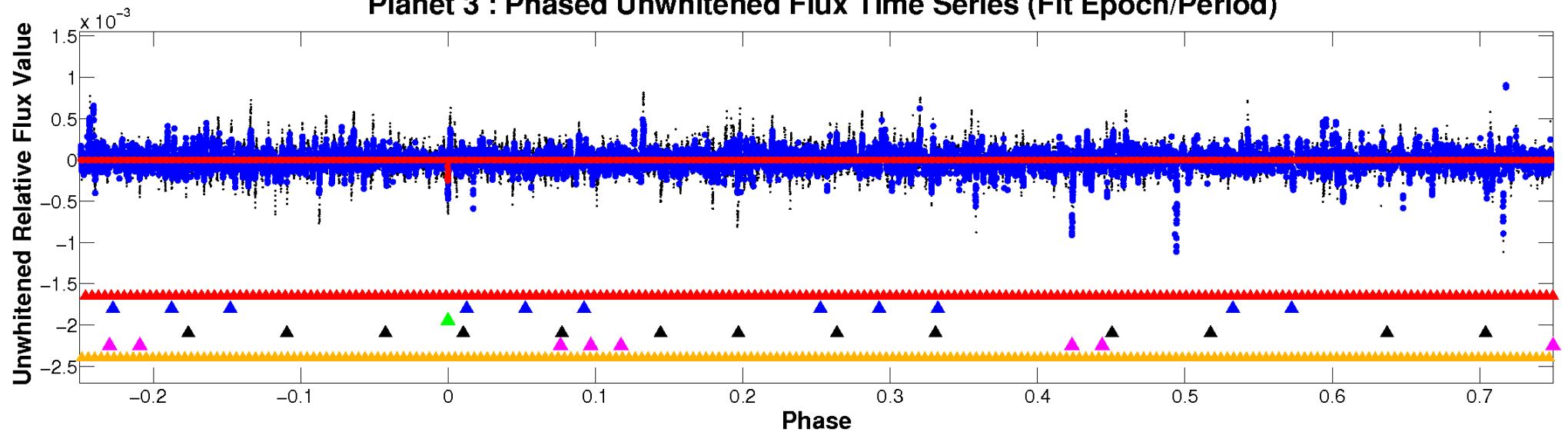
ALT Odd/Even

TCE 006037612-03

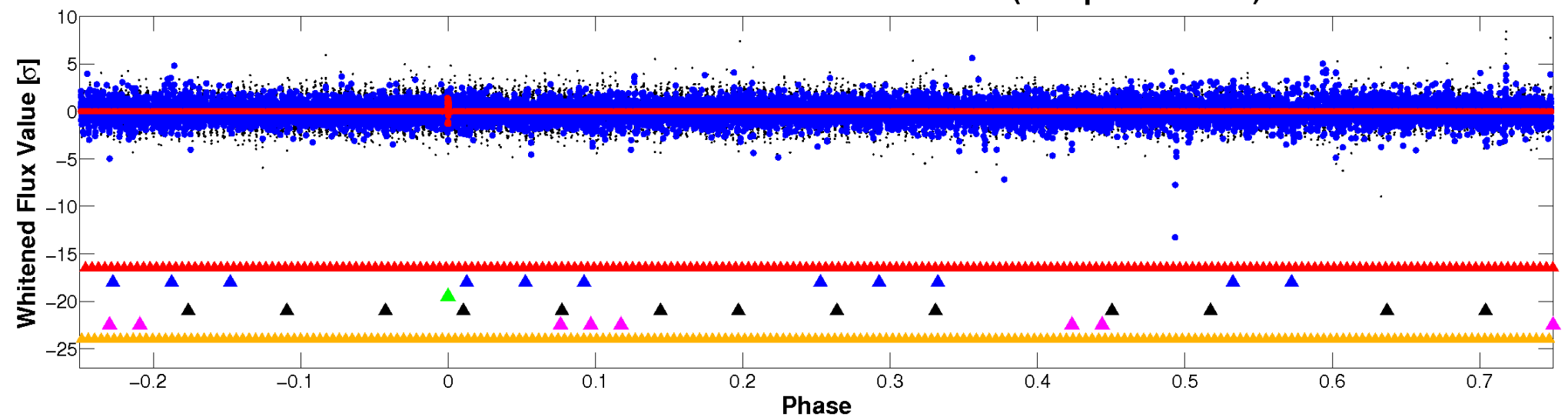


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

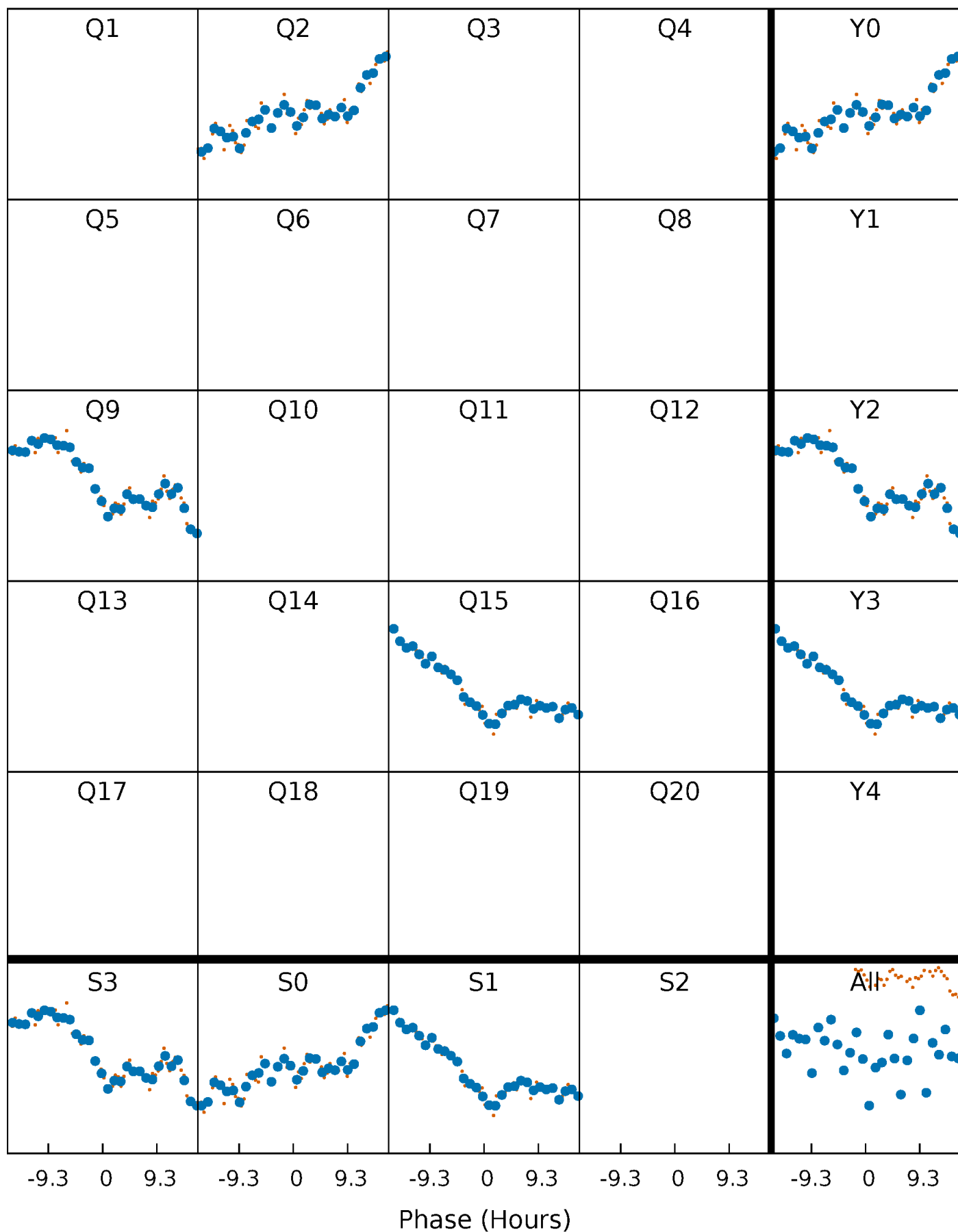


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



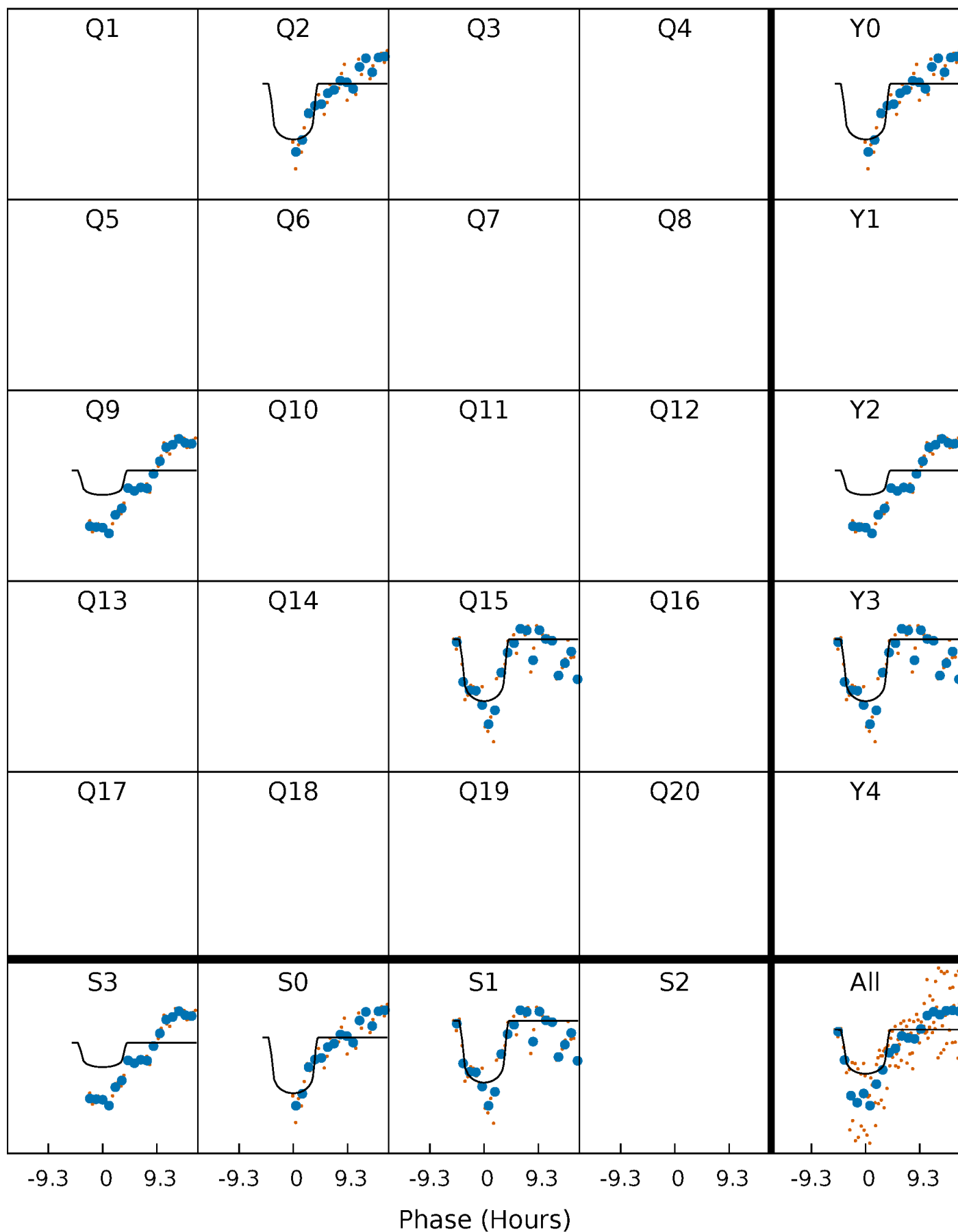
PDC Quarter-Phased Transit Curves

TCE 006037612-03 $P=577.335084$ Days $T_0=254.139178$ (BKJD)



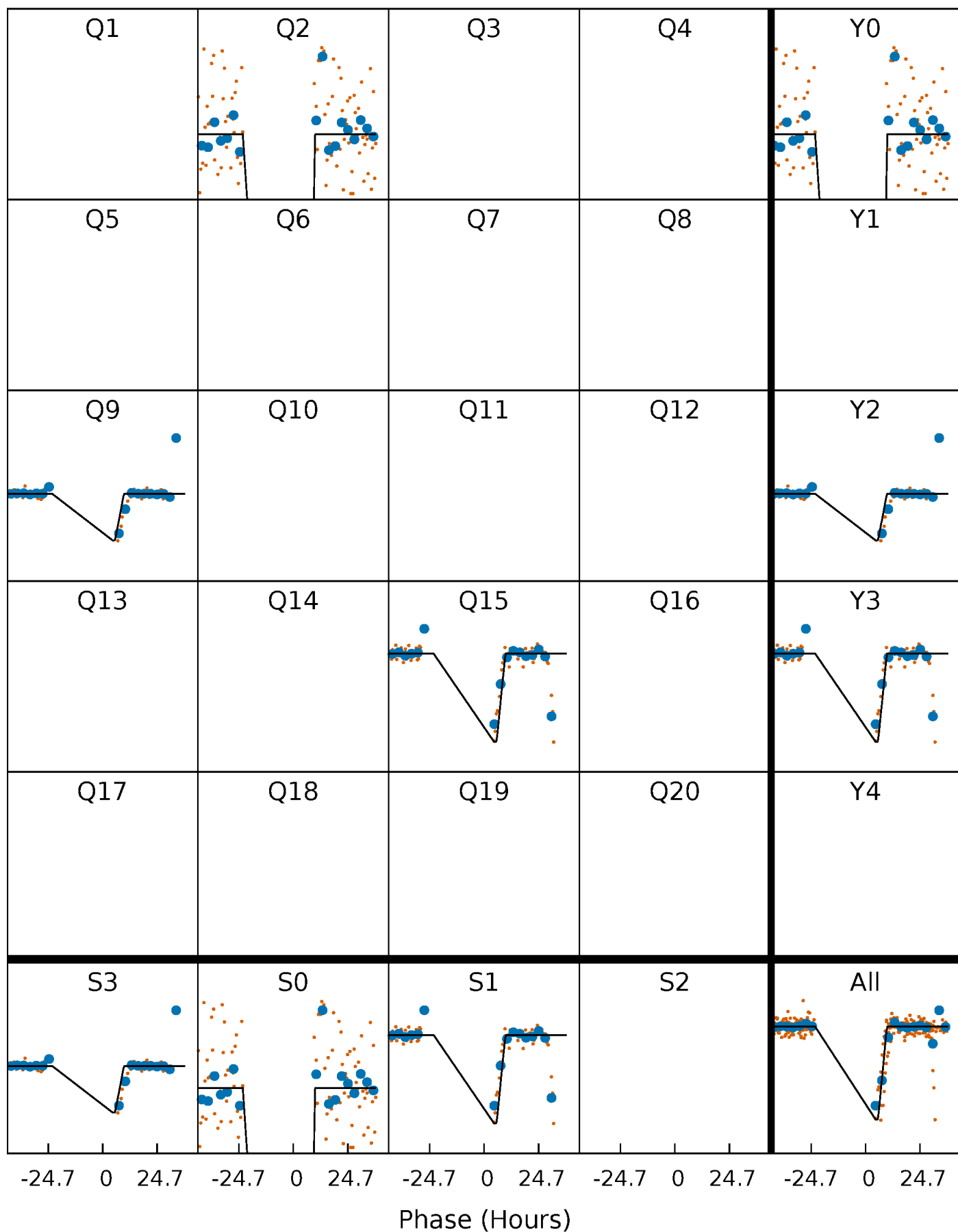
DV Quarter-Phased Transit Curves

TCE 006037612-03 P=577.335084 Days $T_0=254.139178$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

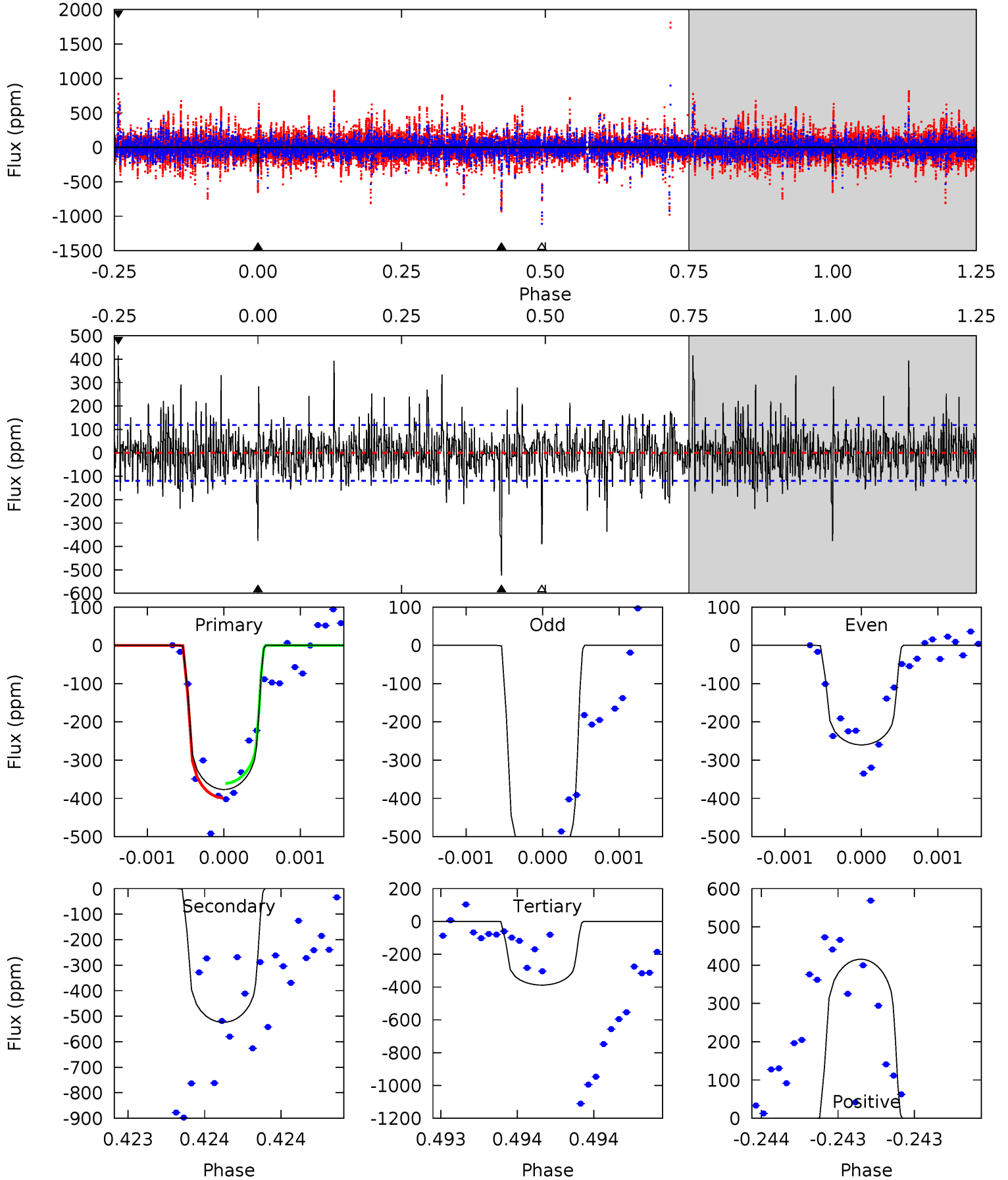
TCE 006037612-03 $P=577.329804$ Days $T_0=253.741248$ (BKJD)



DV Model-Shift Uniqueness Test

006037612-03, P = 577.335084 Days, E = 254.139178 Days

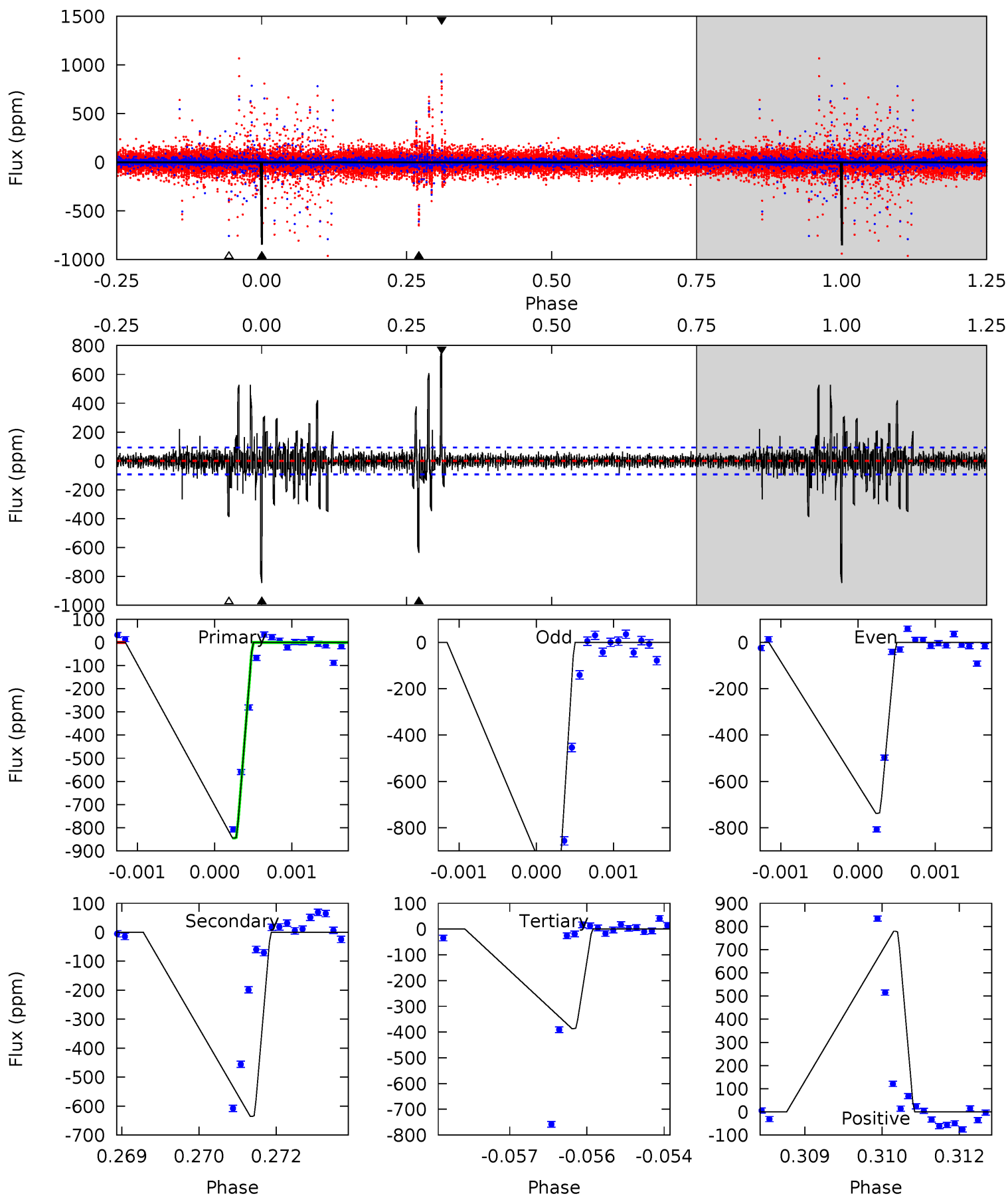
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	24.4	18.0	19.3	5.55	3.45	3.52	-0.53	-1.80	6.31	5.04	6.68	1.39	0.44	0.86



Alt Model-Shift Uniqueness Test

006037612-03, P = 577.329804 Days, E = 253.741248 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.9	36.8	22.4	45.1	5.39	3.19	2.34	26.5	3.79	14.4	-8.32	9.22	1.00	0.48	0



Stellar Parameters For KIC 006037612

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+82}_{-72}	$3.847^{+0.210}_{-0.070}$	$0.120^{+0.150}_{-0.150}$	$2.299^{+0.263}_{-0.613}$	$1.356^{+0.144}_{-0.176}$	$0.157^{+0.195}_{-0.037}$
	+1%/-1%	+5%/-2%	+125%/-125%	+11%/-27%	+11%/-13%	+124%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006037612-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-524 ± 22	$4.17^{+0.83}_{-0.80}$	459^{+17}_{-30}	7057^{+703}_{-524}	38002^{+19504}_{-11261}
Alt.	-636 ± 17	$7.46^{+1.04}_{-1.09}$	458^{+18}_{-28}	5530^{+256}_{-226}	14276^{+4885}_{-3022}

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

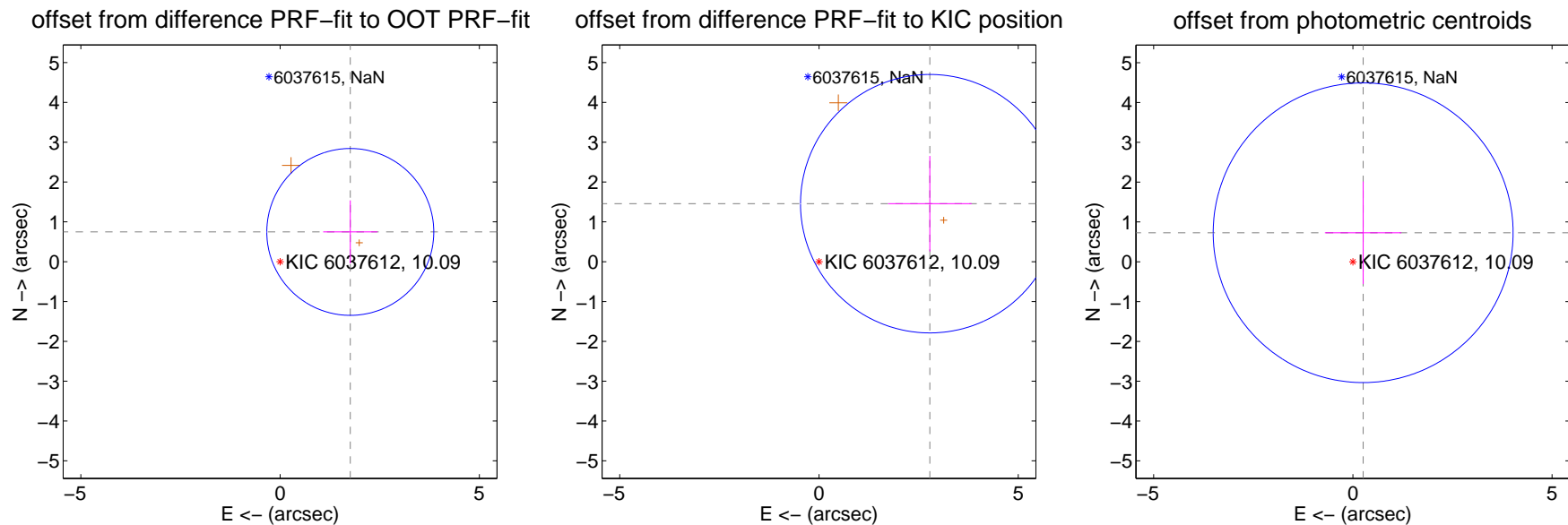
DV Centroid Data

Supplemental centroid analysis for 006037612-03. **Kepler magnitude: 10.09.** Transit SNR 8.21

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.913 ± 0.698	2.74	-1.761 ± 0.680	0.748 ± 0.792
PRF-fit source offset from KIC position	3.141 ± 1.082	2.90	-2.782 ± 1.047	1.457 ± 1.200
photometric centroid source offset	0.77 ± 1.25	0.62	-0.26 ± 0.96	0.73 ± 1.29



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.

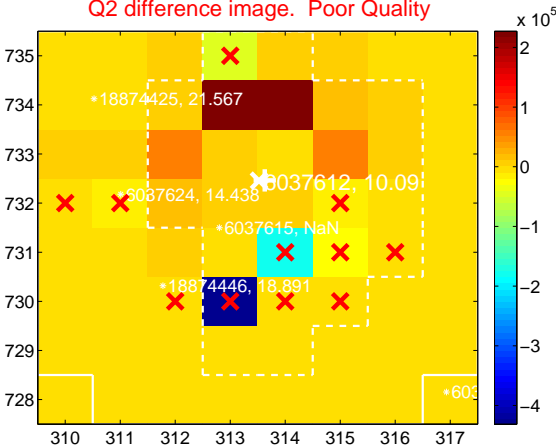
Q1 no difference image



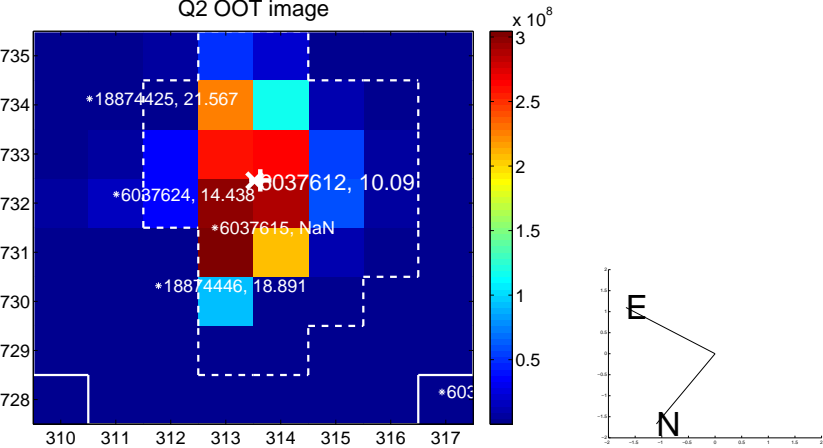
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



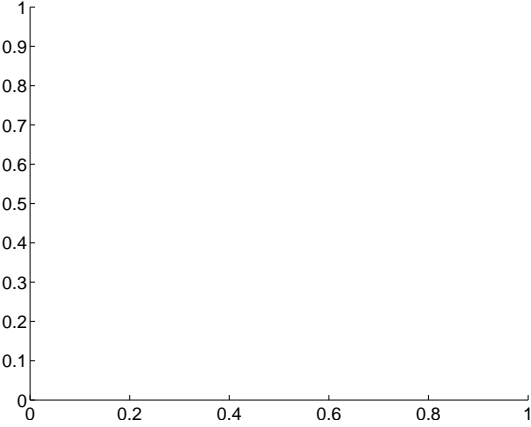
Q3 no difference image



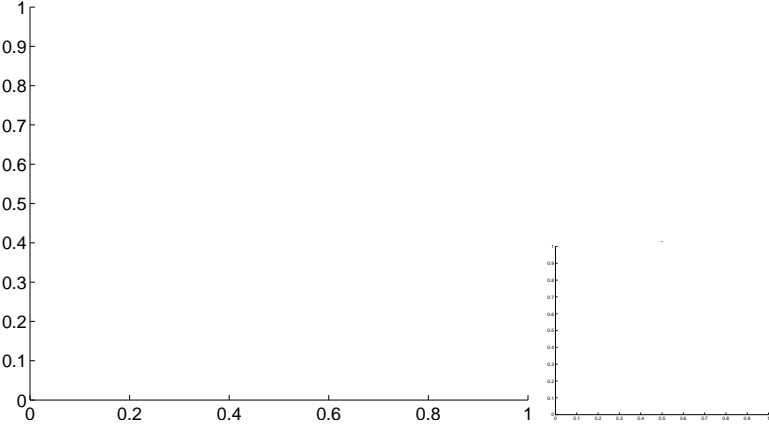
Q3 no OOT image



Q4 no difference image



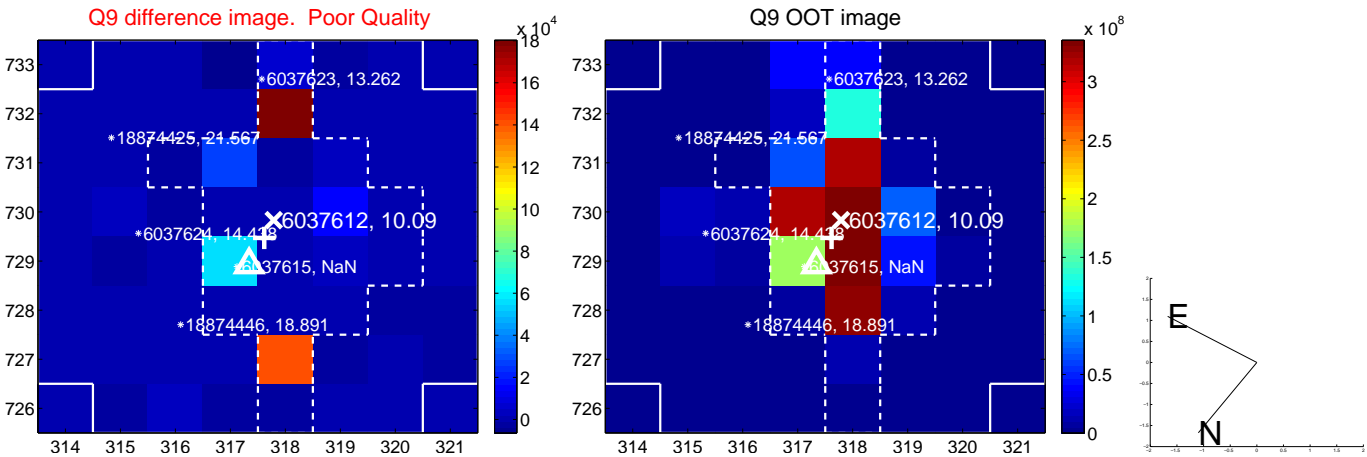
Q4 no OOT image



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

Q13 no difference image



Q13 no OOT image



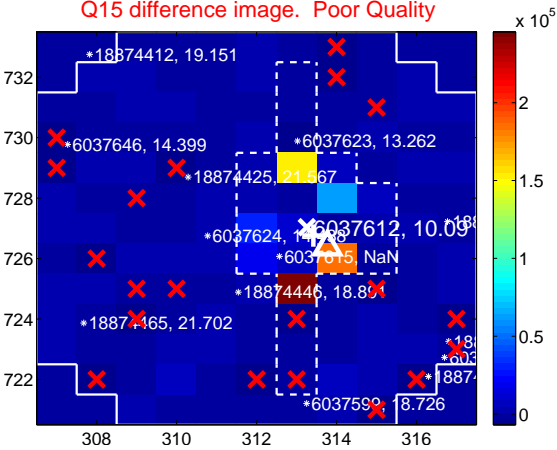
Q14 no difference image



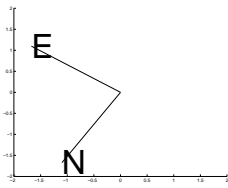
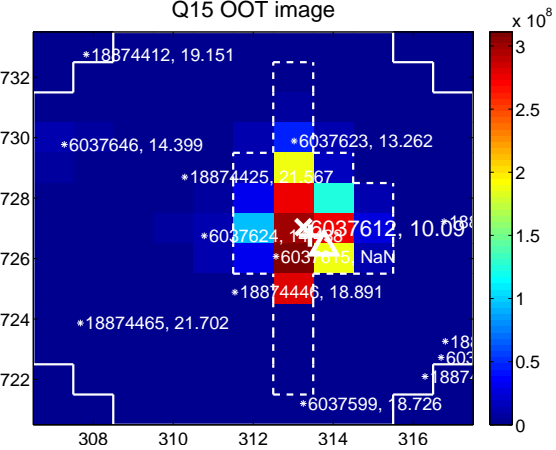
Q14 no OOT image



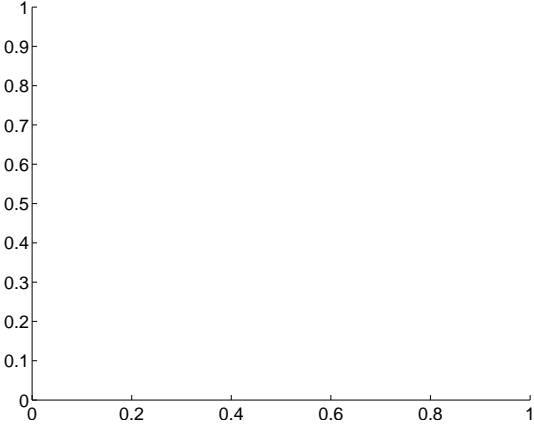
Q15 difference image. Poor Quality



Q15 OOT image



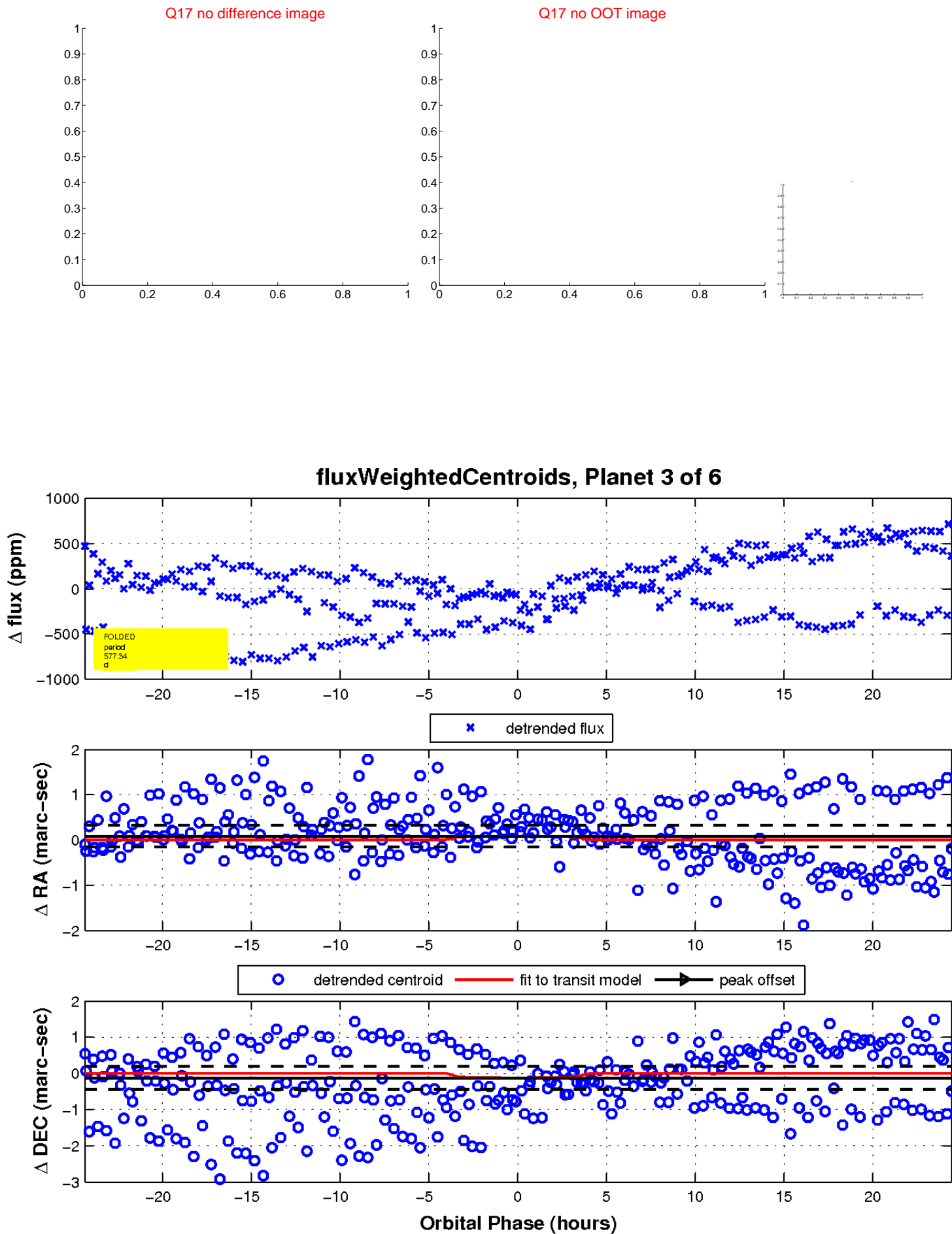
Q16 no difference image



Q16 no OOT image

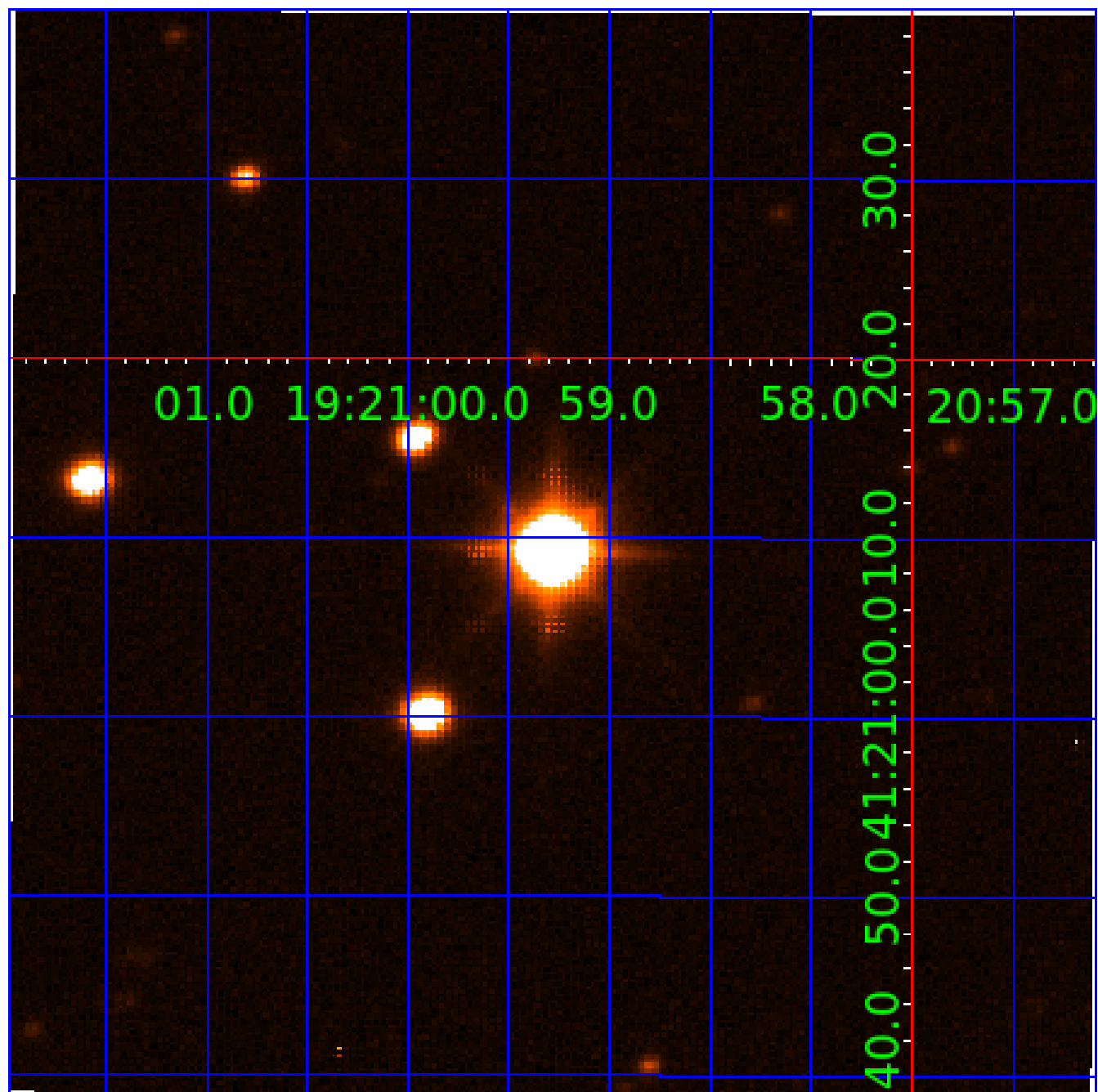


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006037612

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})
006037612-01	OBS	No	2.520648	132.467356	25.6	10.537	10.4	8.4	2.30	6065	1.37	3980.10
006037612-02	OBS	No	138.586274	168.855663	197.2	3.021	9.9	8.9	2.30	6065	6.58	19.04
006037612-03	OBS	No	577.335084	254.139178	252.0	8.167	9.4	8.2	2.30	6065	4.33	2.84
006037612-04	OBS	No	107.743749	229.633432	224.0	2.969	8.9	9.1	2.30	6065	3.68	26.63
006037612-06	OBS	No	5.041872	135.935814	17.3	14.455	8.7	4.4	2.30	6065	1.11	1579.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037612-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006037612-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006037612-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006037612-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006037612-06	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

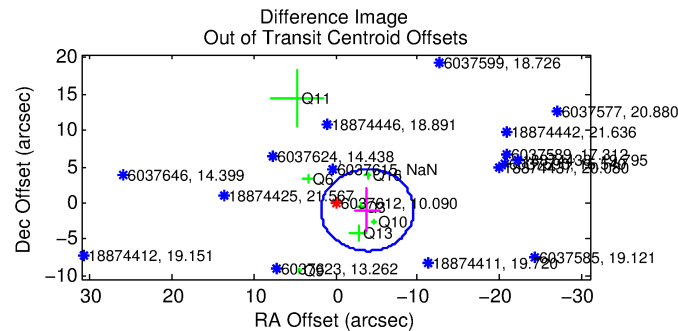
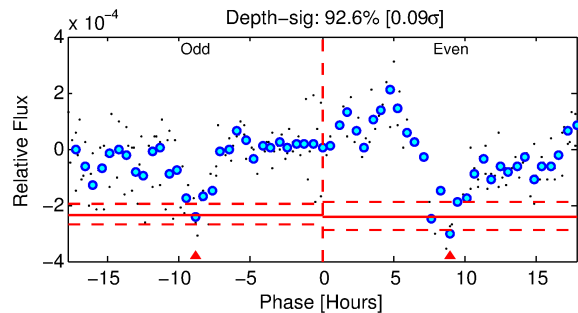
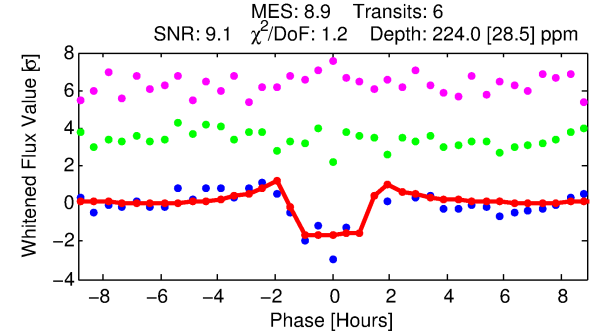
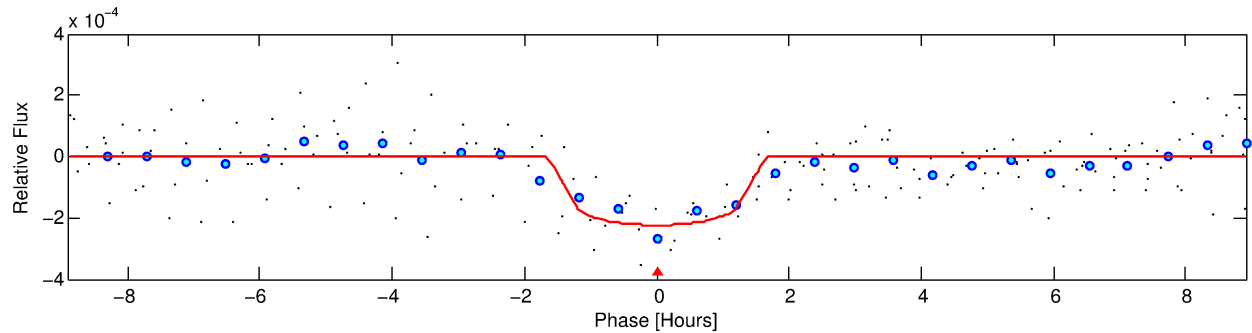
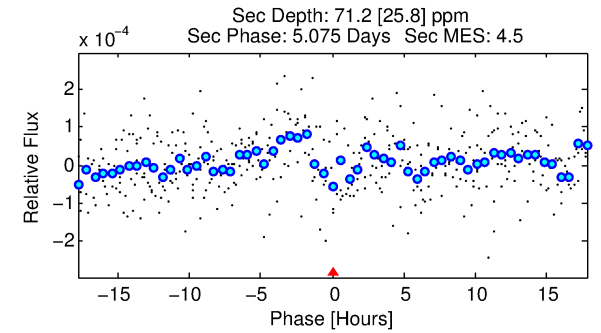
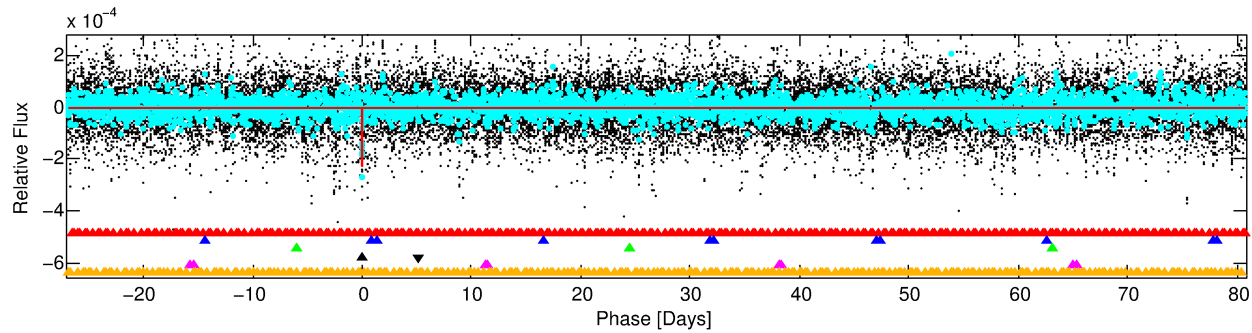
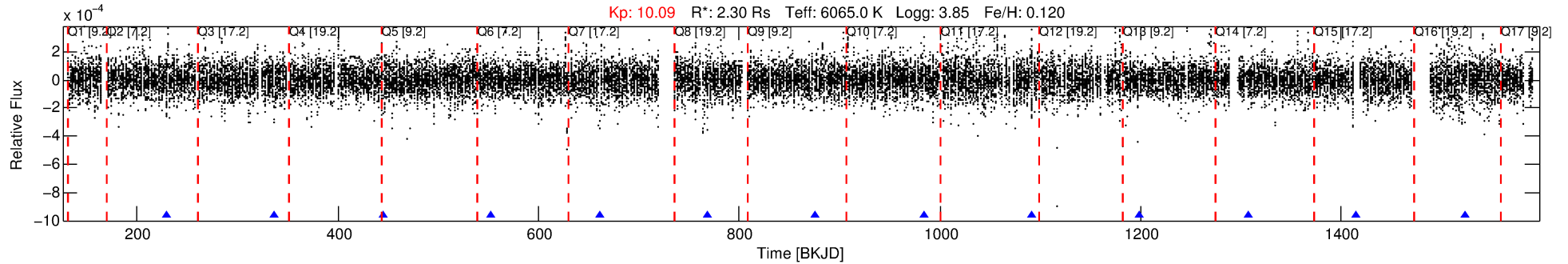
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037612-04

No Significant Match Found

DV One-Page Summary

KIC: 6037612 Candidate: 4 of 6 Period: 107.744 d



DV Fit Results:

Period = 107.74375 [0.00055] d
Epoch = 229.6334 [0.0046] BKJD
Rp/R* = 0.0147 [0.0074]
a/R* = 203.61 [483.56]
b = 0.70 [1.75]
Seff = 26.63 [9.91]
Teq = 579 [54] K
Rp = 3.68 [2.09] Re
a = 0.4905 [0.1177] AU
Ag = 695.92 [786.07] [0.88σ]
Teff = 4600 [1230] K [3.27σ]

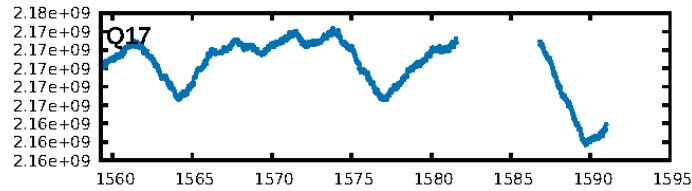
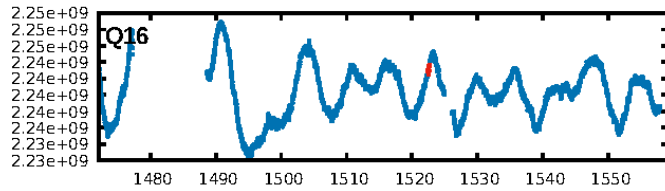
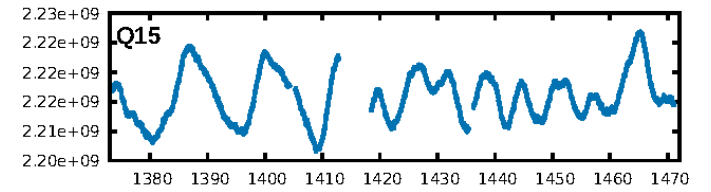
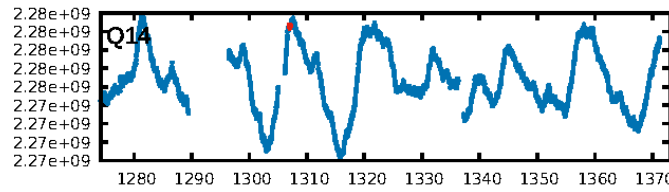
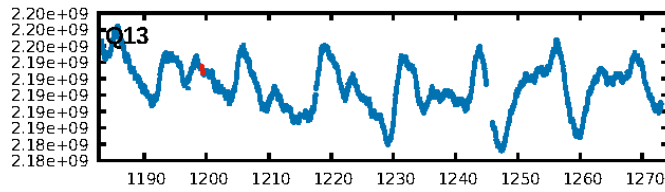
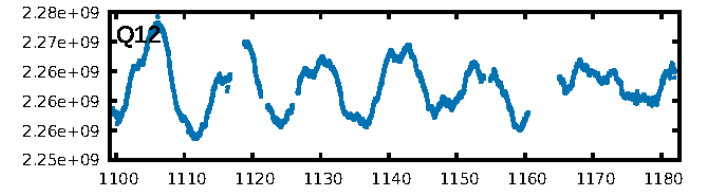
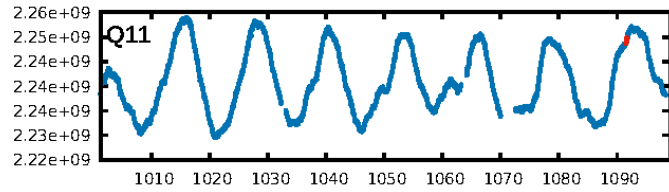
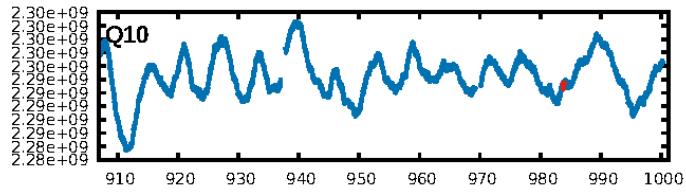
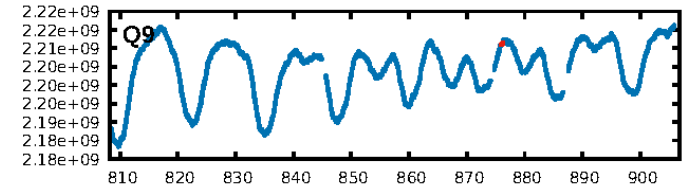
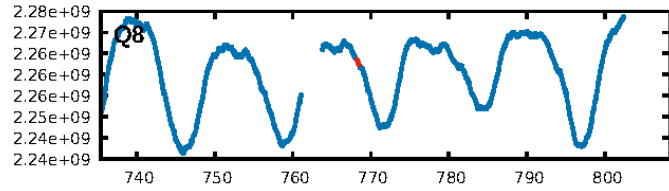
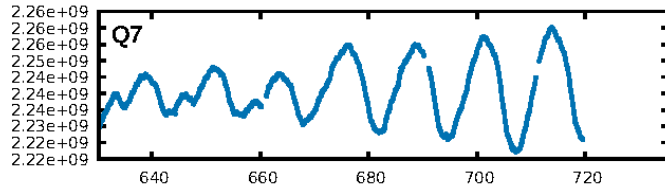
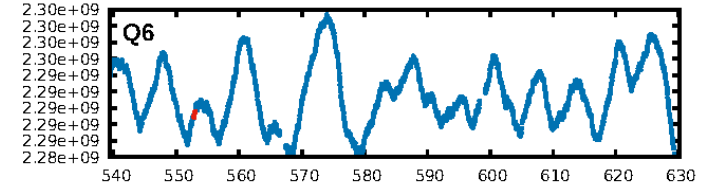
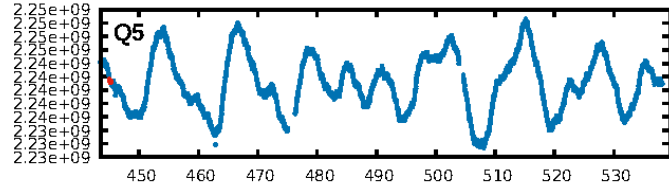
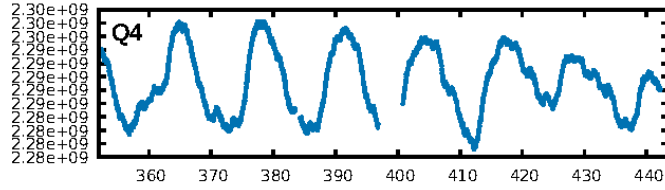
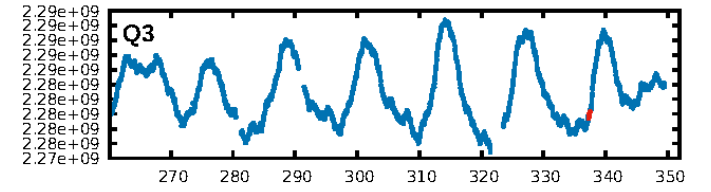
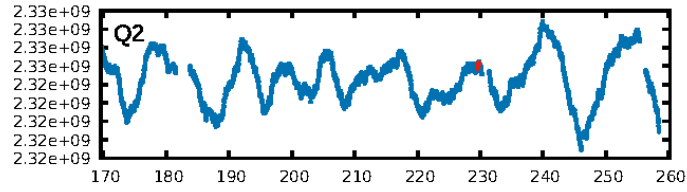
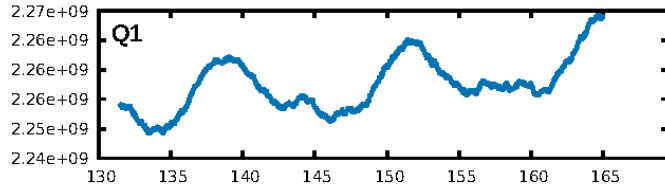
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [167.03σ]
LongPeriod-sig: 100.0% [174.76σ]
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 72.8%
Bootstrap-pfa: 1.13e-07
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: N/A
Centroid-sig: 63.6%
Centroid-so: 0.292 arcsec [0.53σ]
OotOffset-rm: 3.984 arcsec [2.12σ]
KicOffset-rm: 4.794 arcsec [2.26σ]
OotOffset-st: 2/2/1/2 [7]
KicOffset-st: 2/2/1/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.50 [5/10]

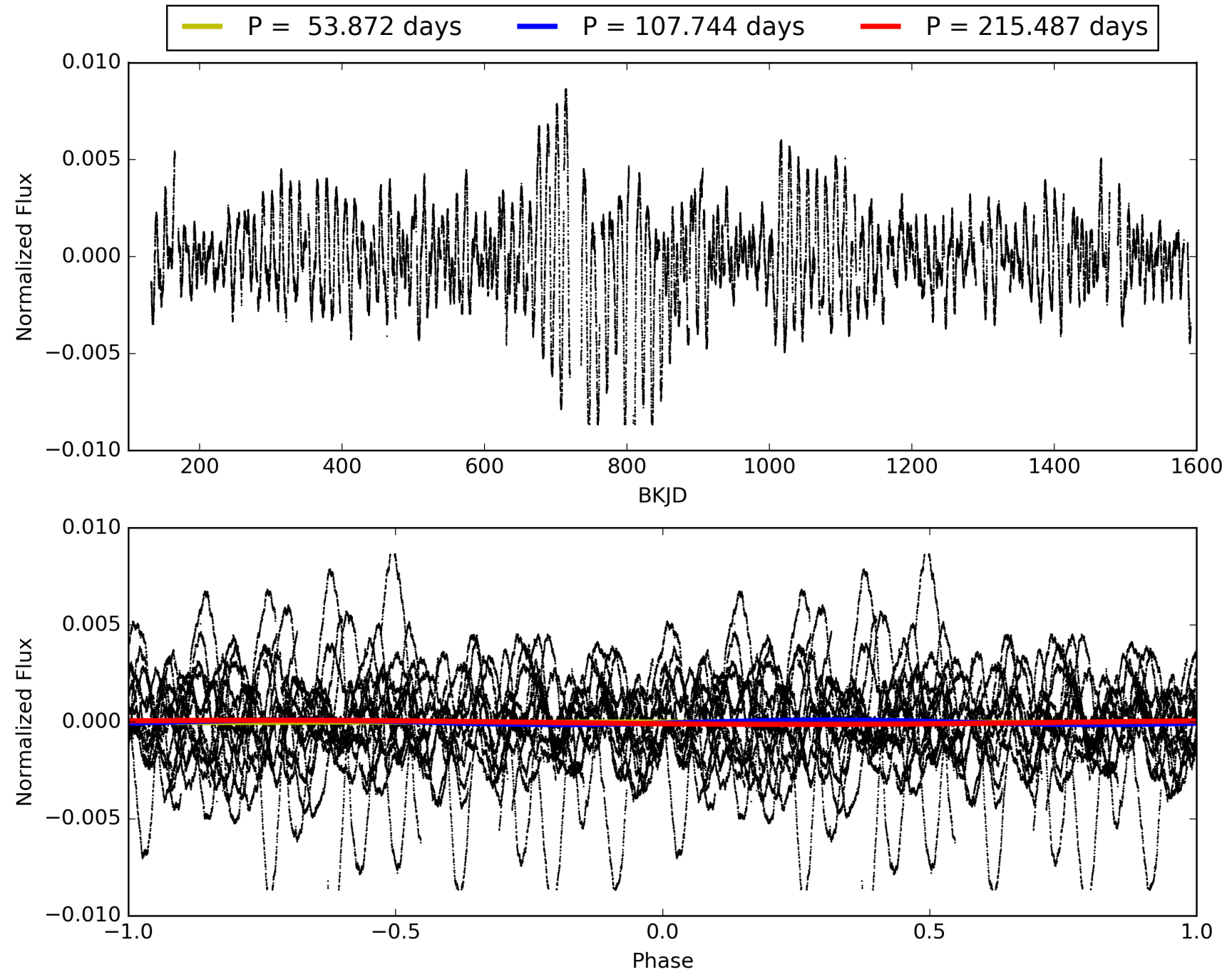
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:01:14 Z

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

TCE 006037612-04, PDC Light Curves

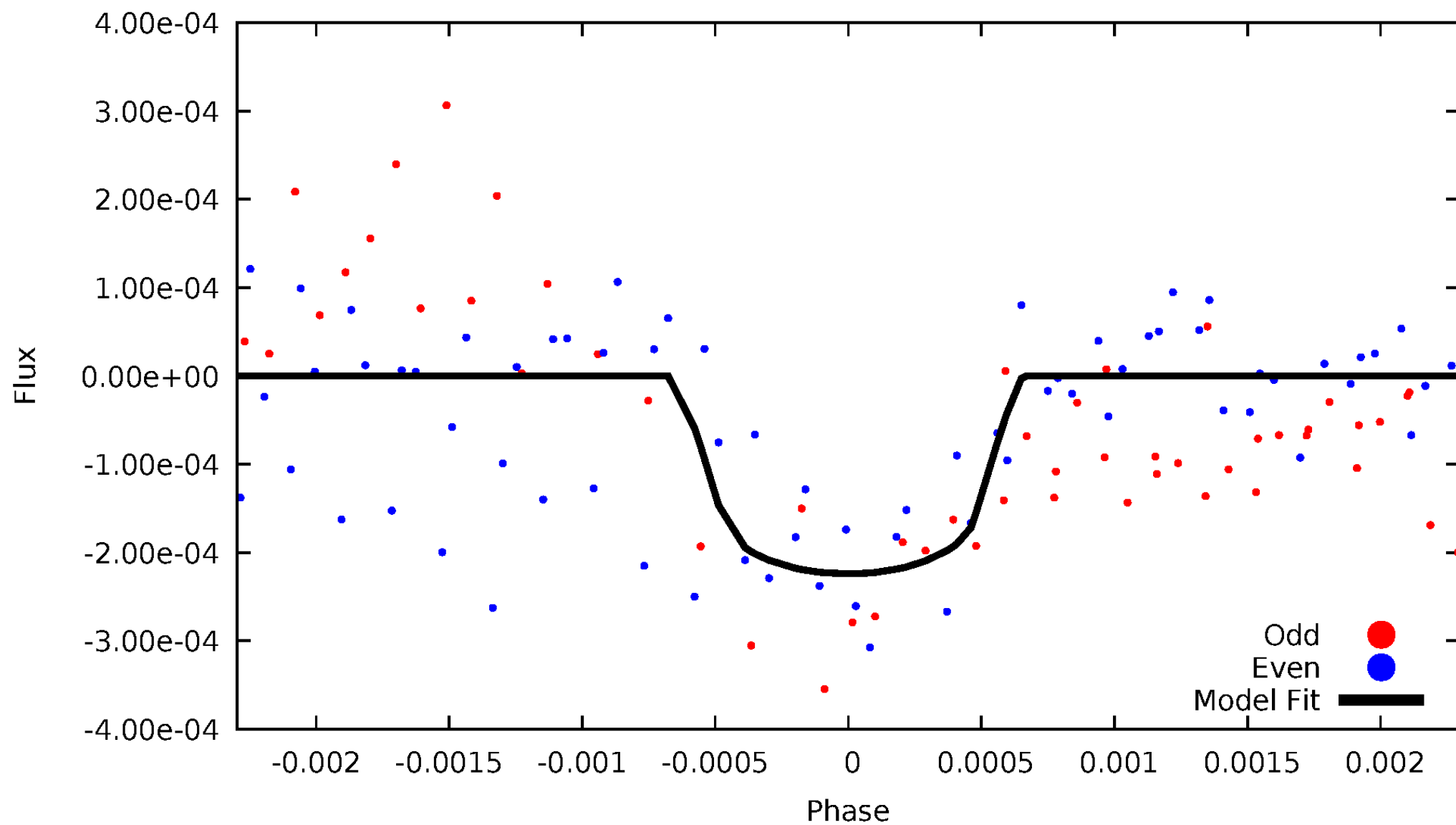


TCE 006037612-04



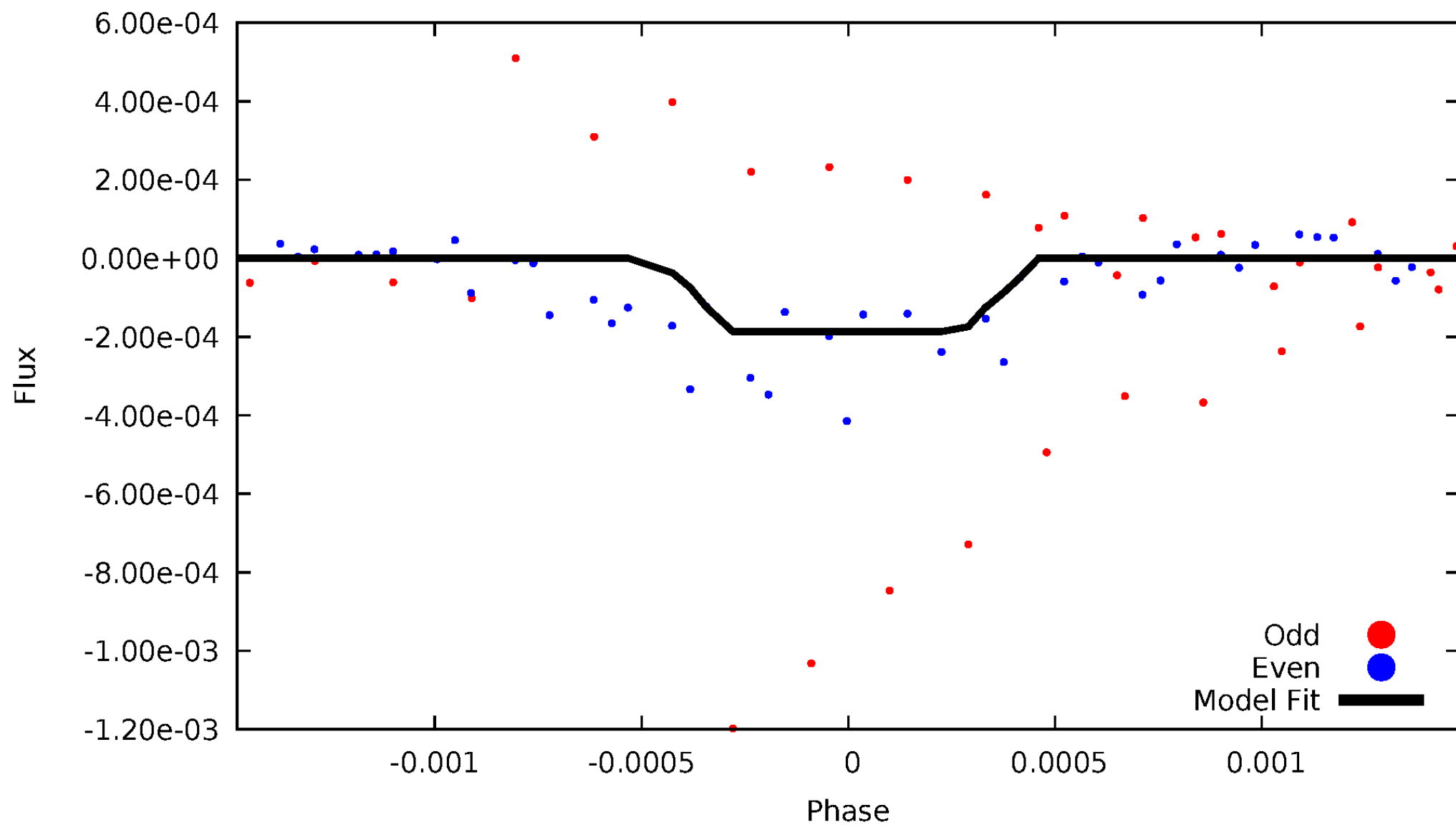
DV Odd/Even

TCE 006037612-04



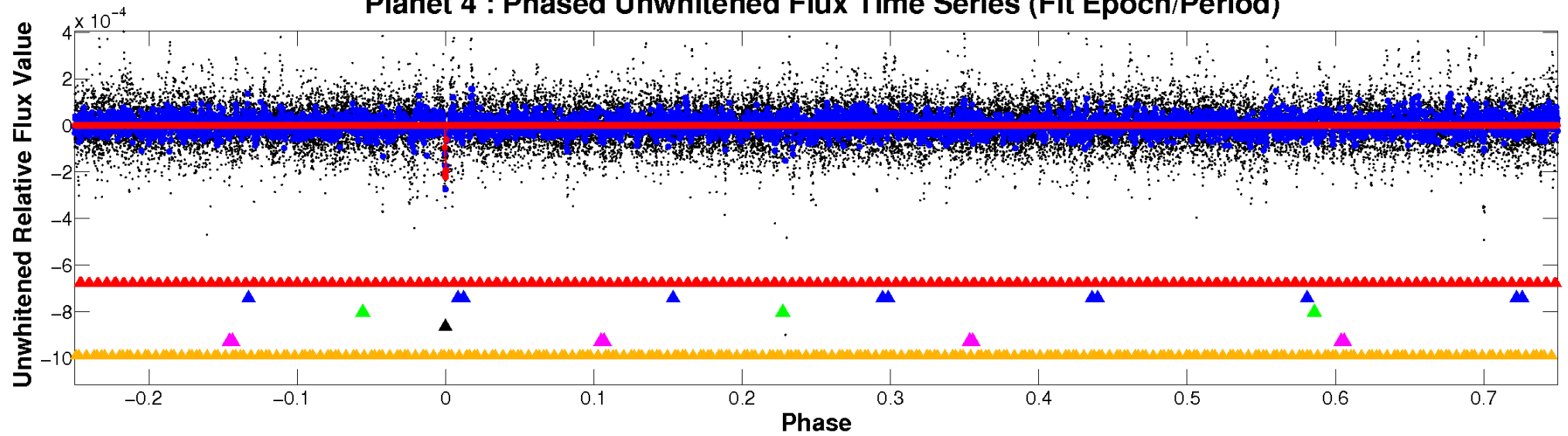
ALT Odd/Even

TCE 006037612-04

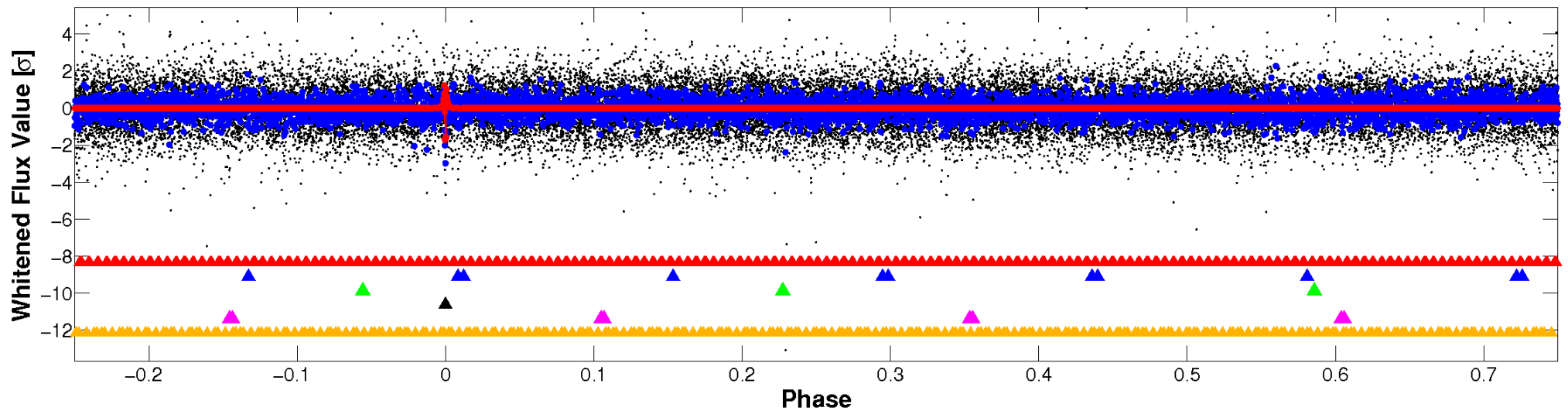


Non-Whitened Vs. Whitened Light Curve

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

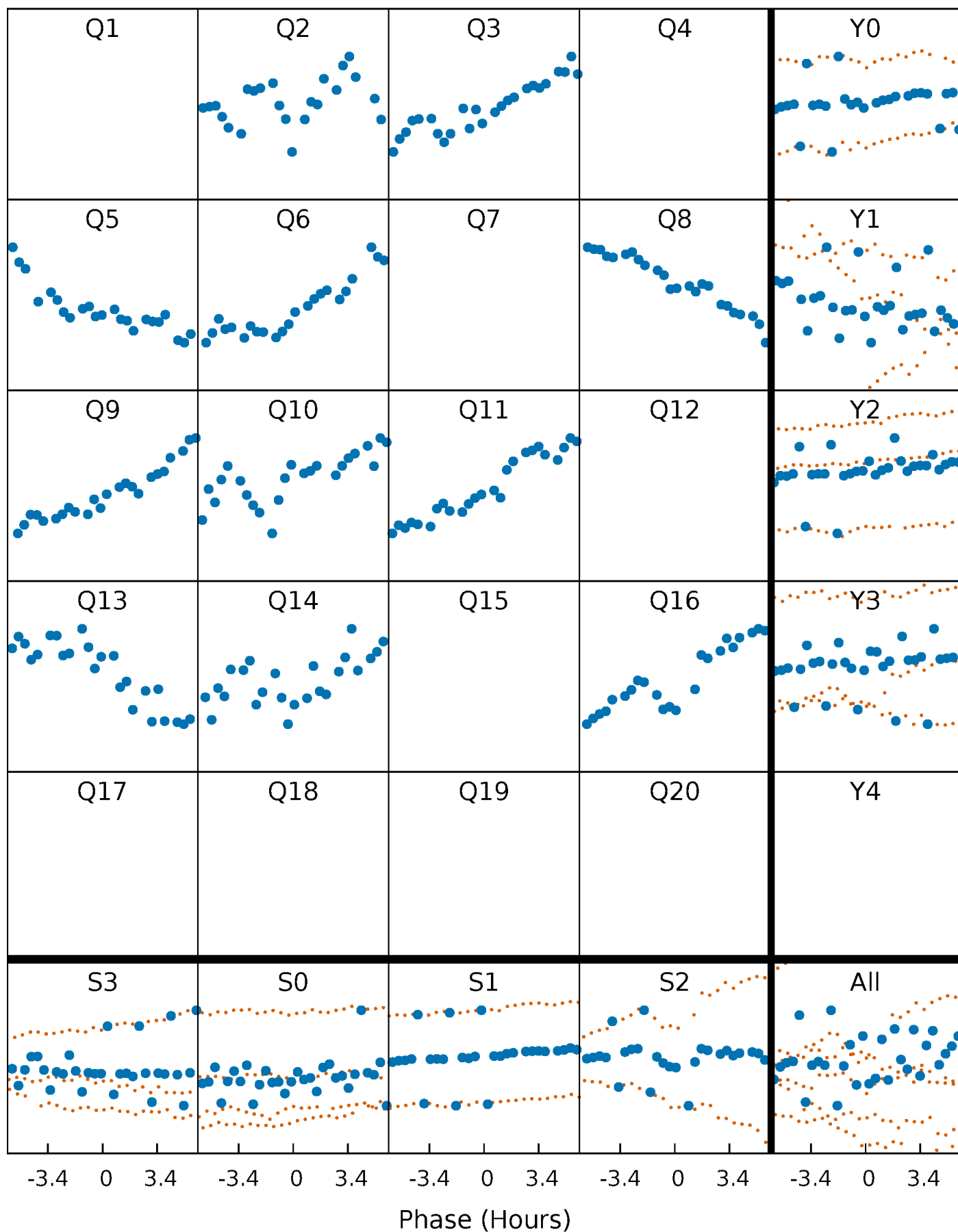


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



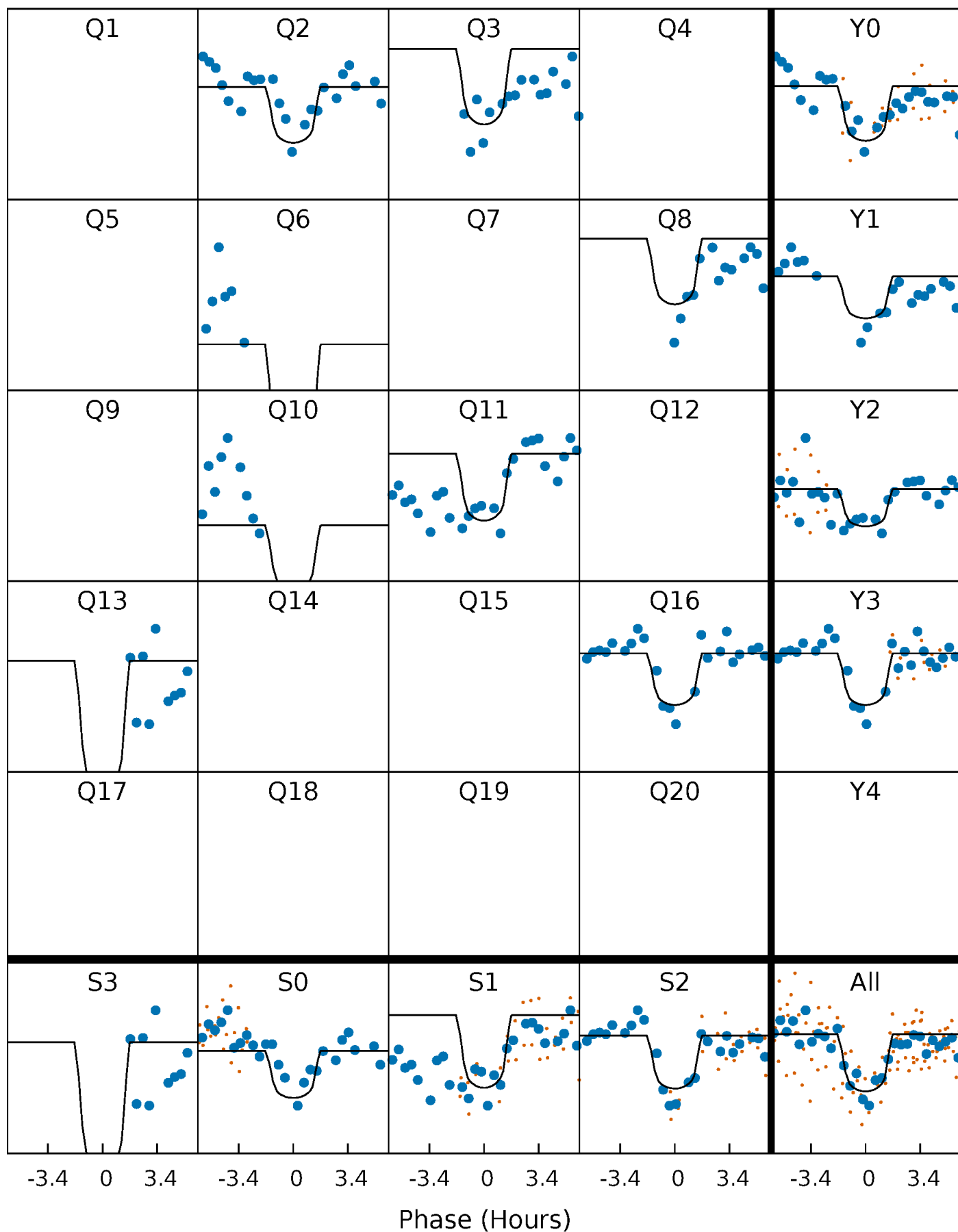
PDC Quarter-Phased Transit Curves

TCE 006037612-04 P=107.743749 Days $T_0=229.633432$ (BKJD)



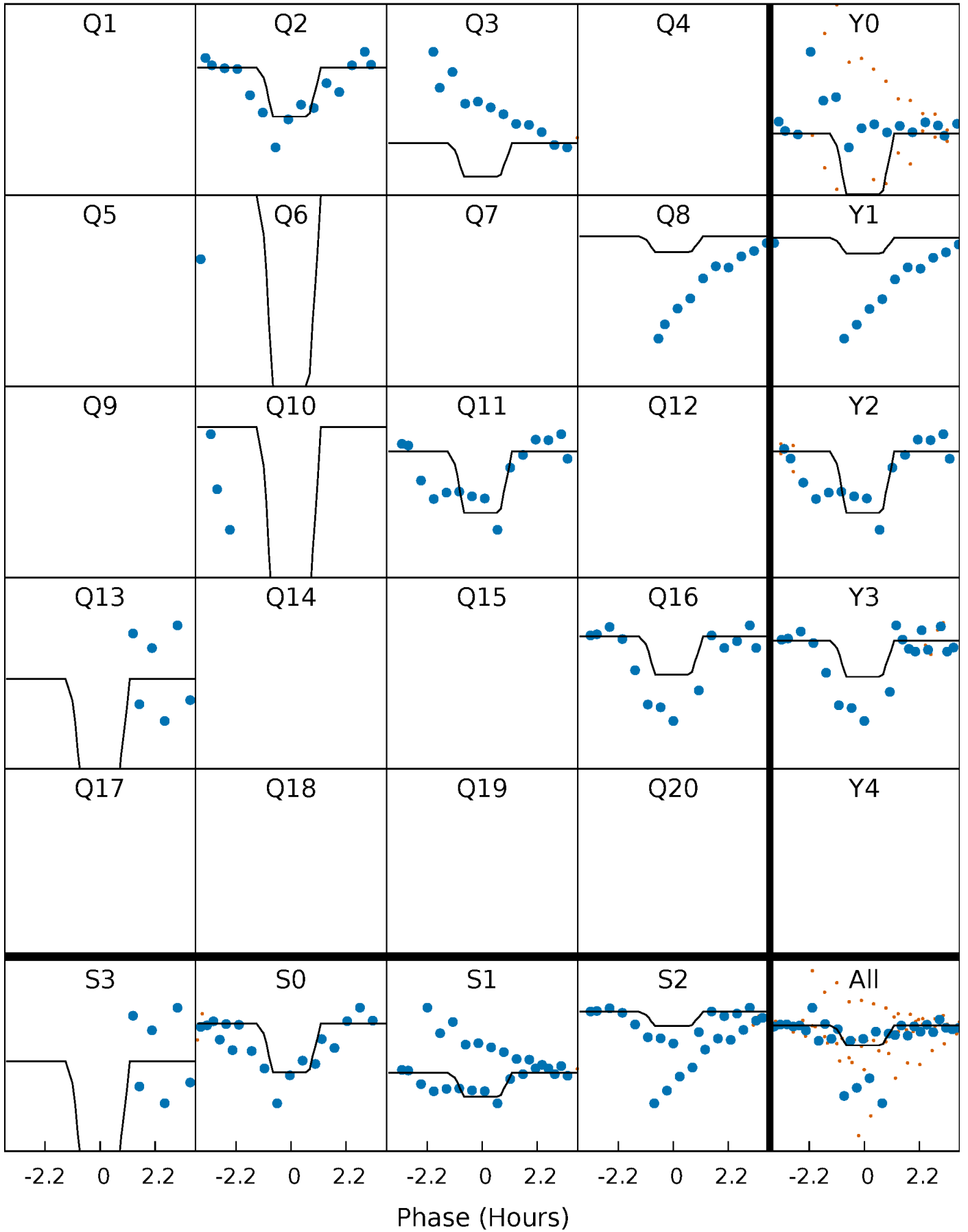
DV Quarter-Phased Transit Curves

TCE 006037612-04 P=107.743749 Days $T_0=229.633432$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

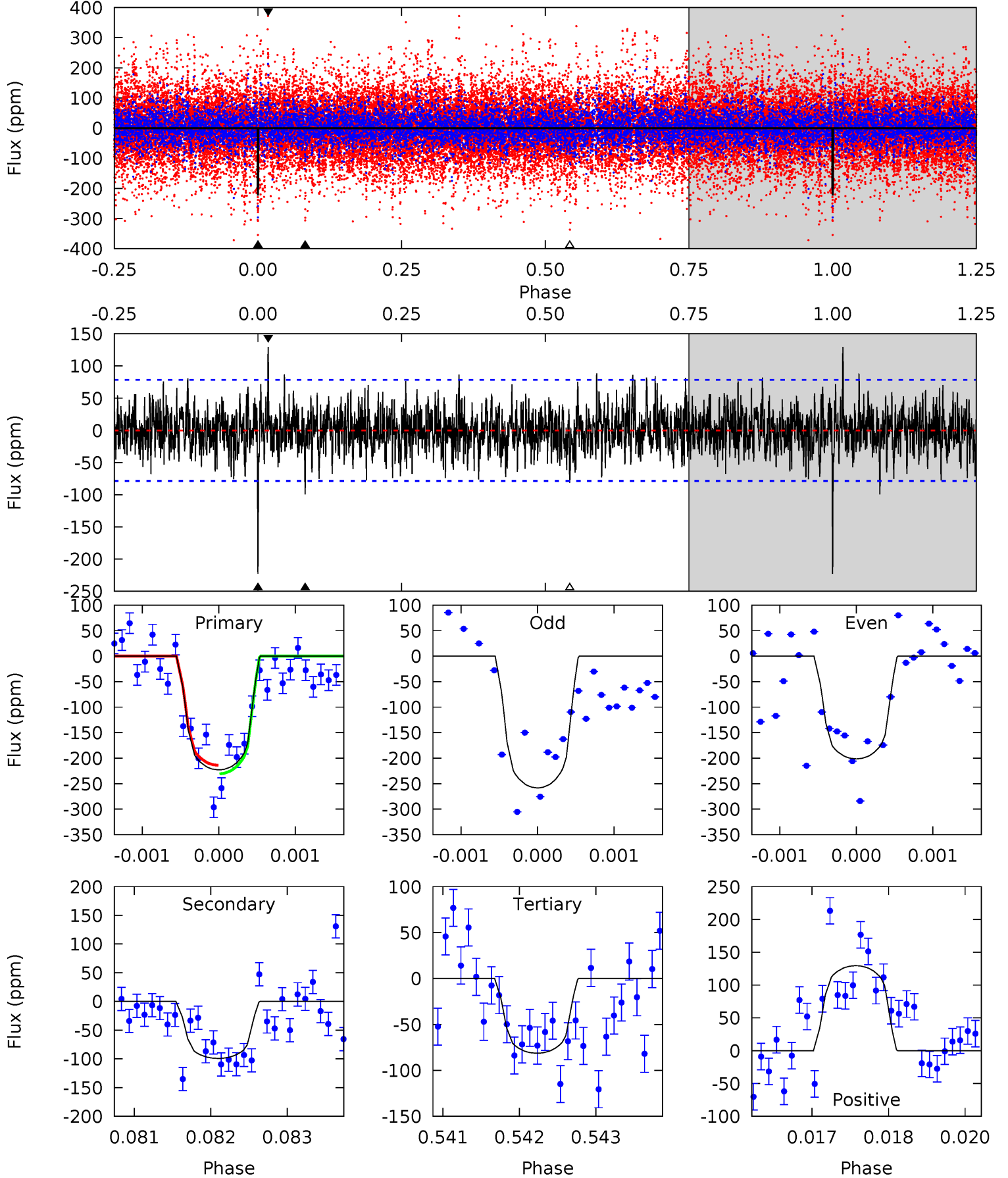
TCE 006037612-04 P=107.742131 Days $T_0=229.662014$ (BKJD)



DV Model-Shift Uniqueness Test

006037612-04, P = 107.743749 Days, E = 121.889683 Days

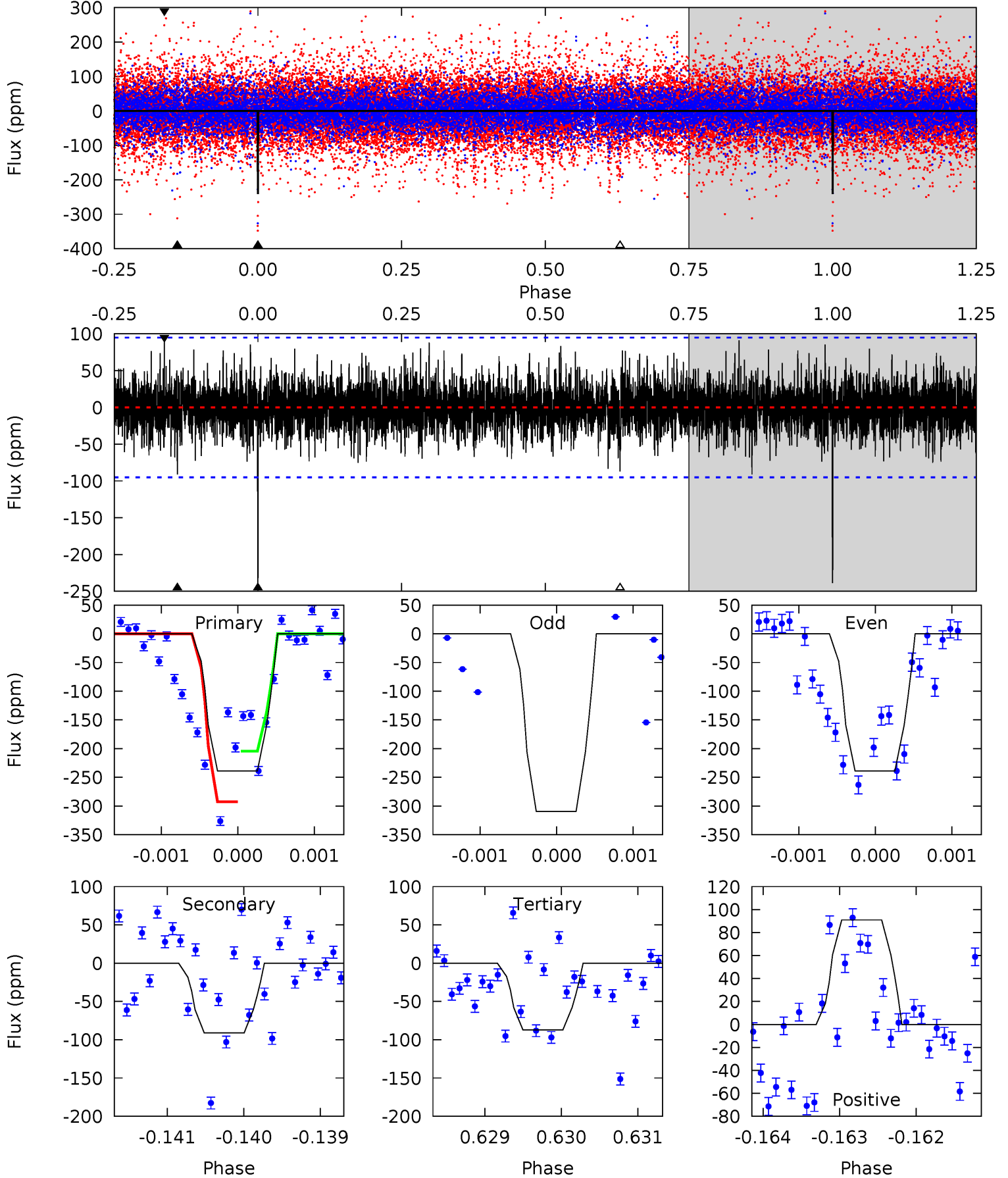
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	6.85	5.61	8.94	5.42	3.23	1.83	9.77	6.45	1.23	-2.09	1.88	0.94	0.37	0.57



Alt Model-Shift Uniqueness Test

006037612-04, P = 107.742131 Days, E = 121.919883 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	5.25	5.02	5.24	5.47	3.32	1.33	8.74	8.52	0.22	0.00	2.25	1.39	0.28	2.66



Stellar Parameters For KIC 006037612

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+82}_{-72}	$3.847^{+0.210}_{-0.070}$	$0.120^{+0.150}_{-0.150}$	$2.299^{+0.263}_{-0.613}$	$1.356^{+0.144}_{-0.176}$	$0.157^{+0.195}_{-0.037}$
	+1%/-1%	+5%/-2%	+125%/-125%	+11%/-27%	+11%/-13%	+124%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006037612-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-99 ± 14	$3.52^{+1.88}_{-1.71}$	803^{+30}_{-47}	5058^{+1926}_{-761}	1066^{+2847}_{-623}
Alt.	-91 ± 17	$3.34^{+1.98}_{-1.58}$	803^{+29}_{-48}	5066^{+1810}_{-823}	1064^{+2789}_{-656}

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

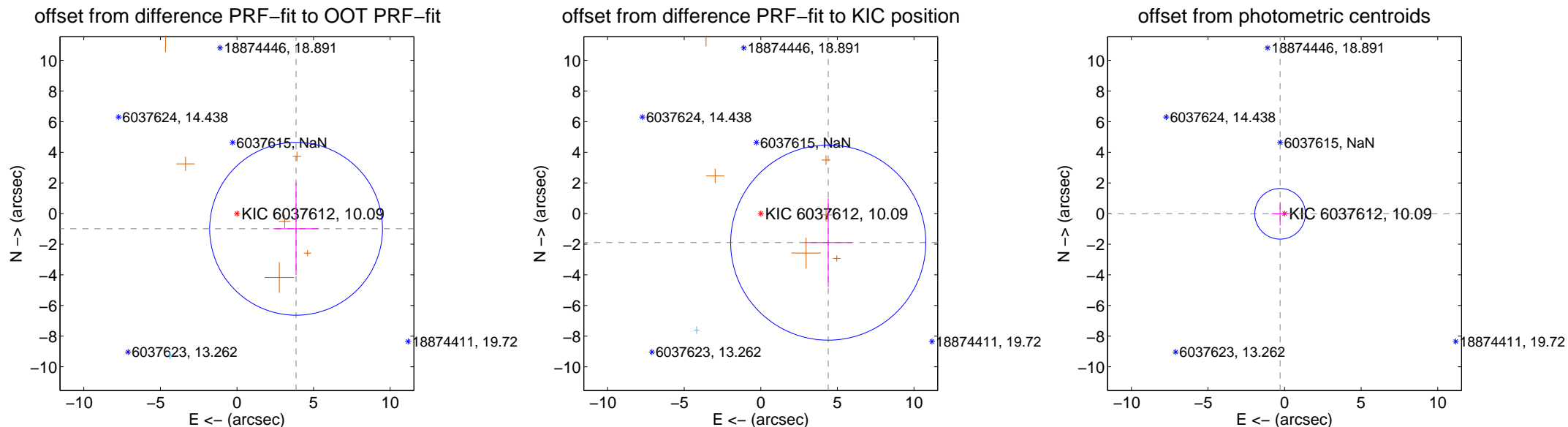
DV Centroid Data

Supplemental centroid analysis for 006037612-04. **Kepler magnitude: 10.09.** Transit SNR 9.05

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.984 ± 1.880	2.12	-3.858 ± 1.495	-0.994 ± 3.012
PRF-fit source offset from KIC position	4.794 ± 2.122	2.26	-4.403 ± 1.538	-1.894 ± 2.890
photometric centroid source offset	0.29 ± 0.55	0.53	0.29 ± 0.55	-0.02 ± 0.77



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.

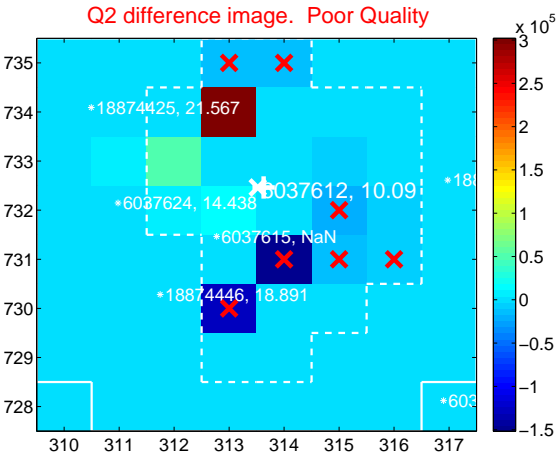
Q1 no difference image



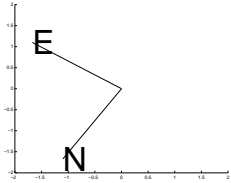
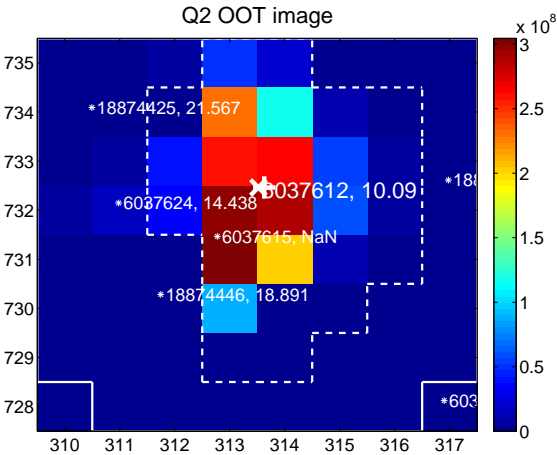
Q1 no OOT image



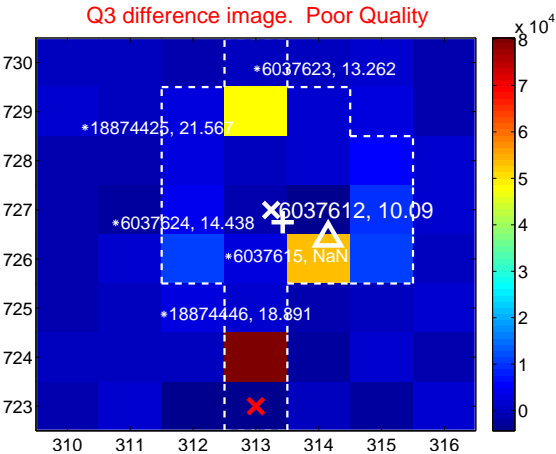
Q2 difference image. Poor Quality



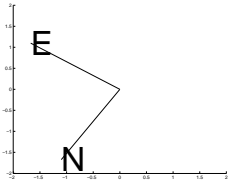
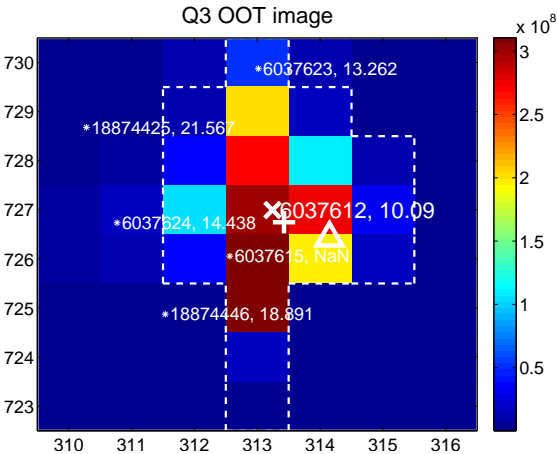
Q2 OOT image



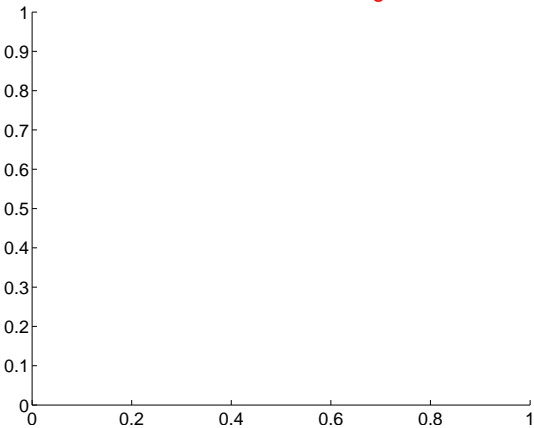
Q3 difference image. Poor Quality



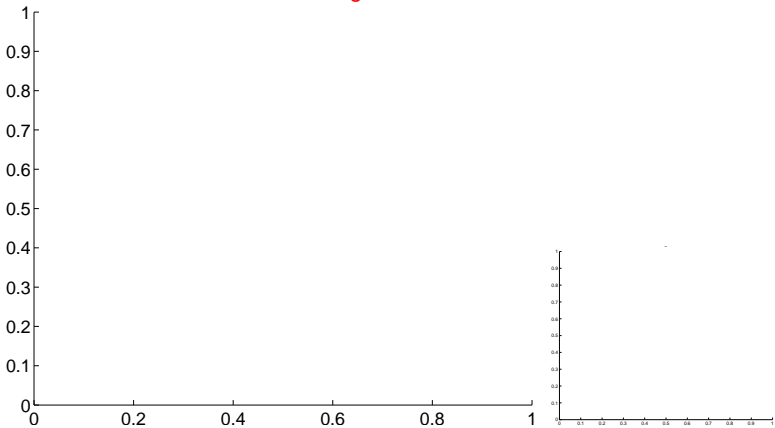
Q3 OOT image



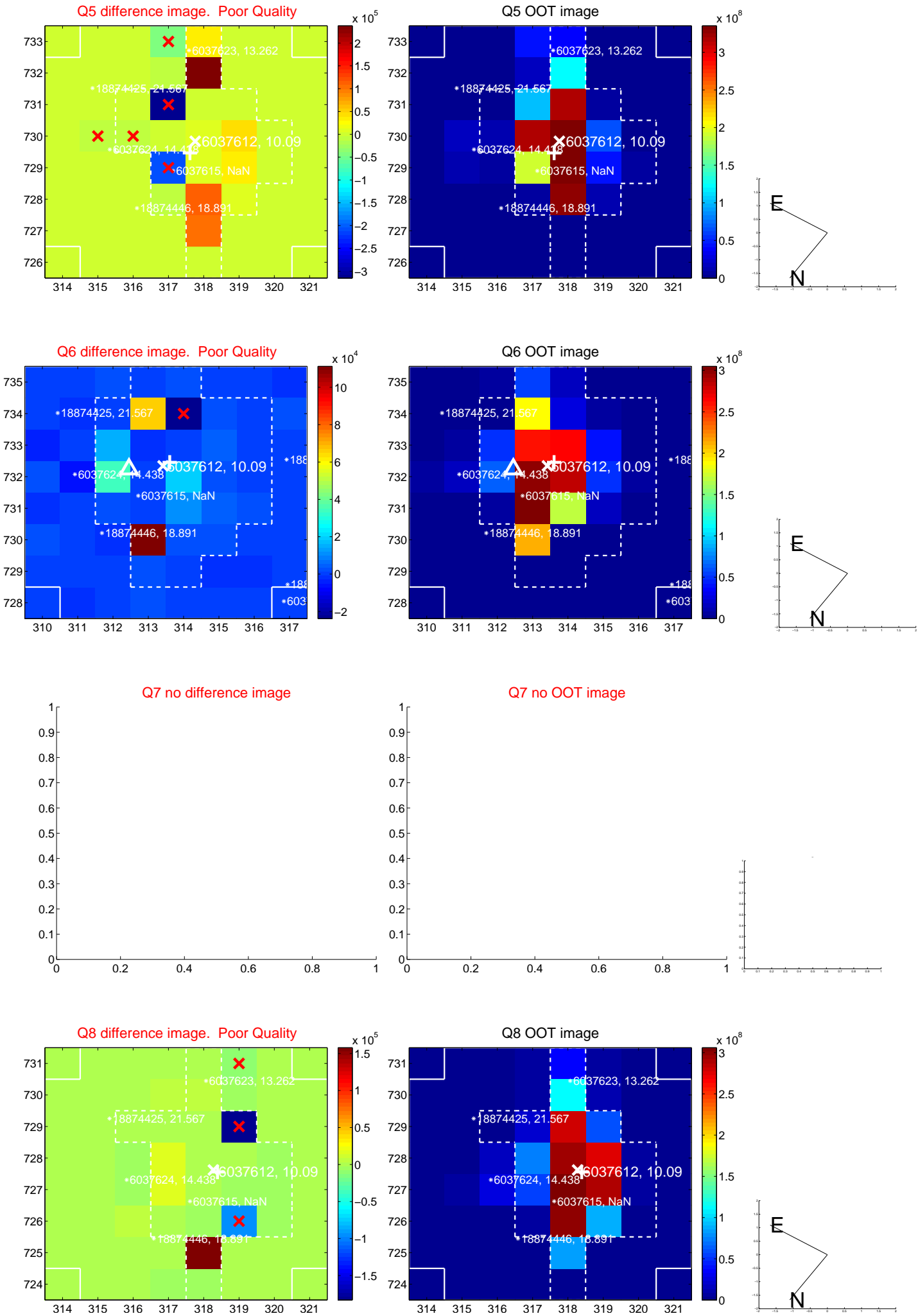
Q4 no difference image



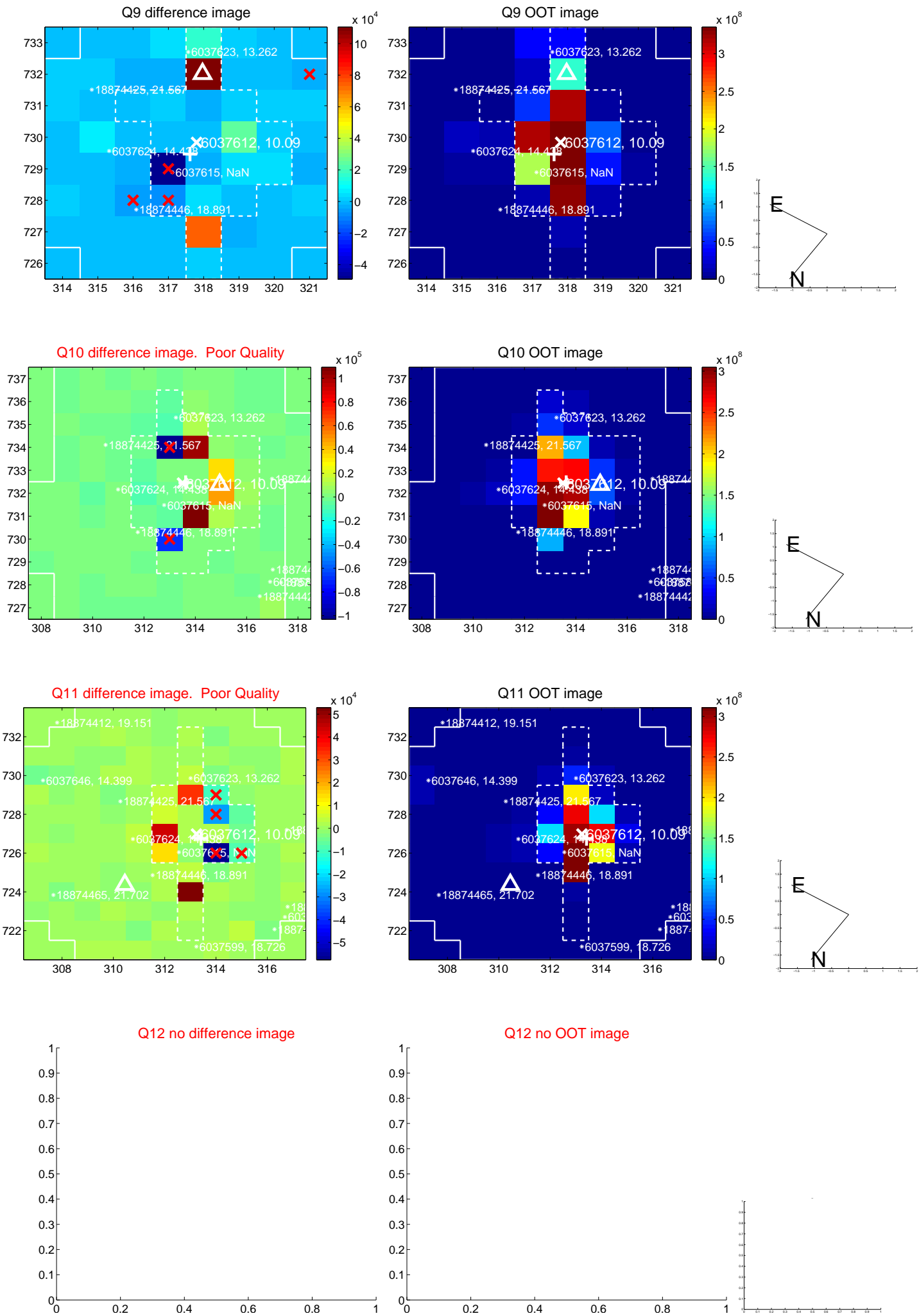
Q4 no OOT image



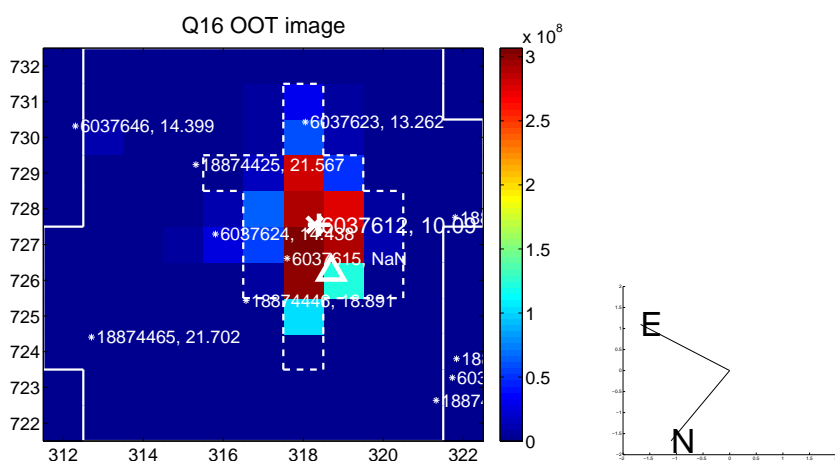
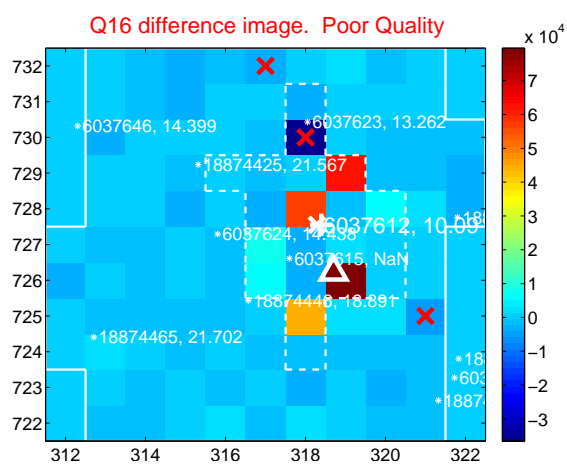
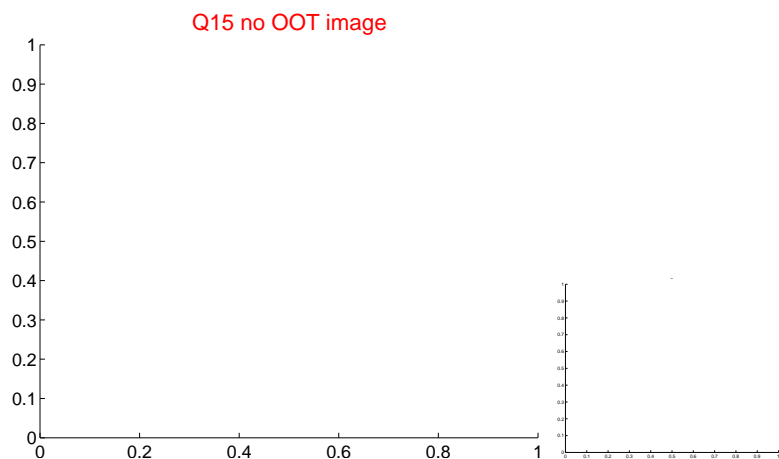
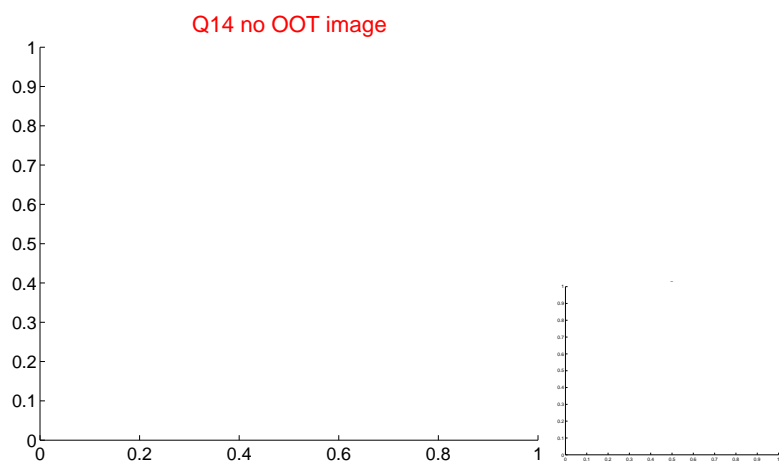
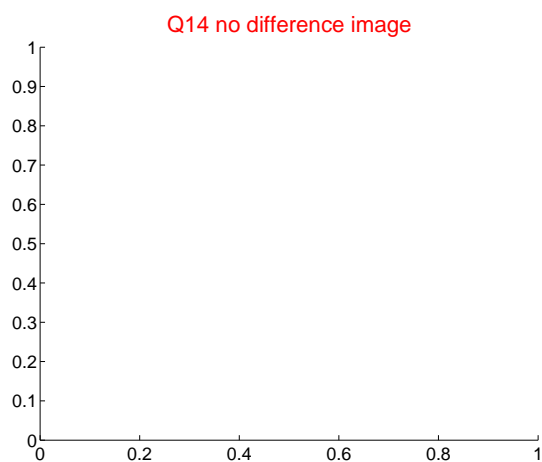
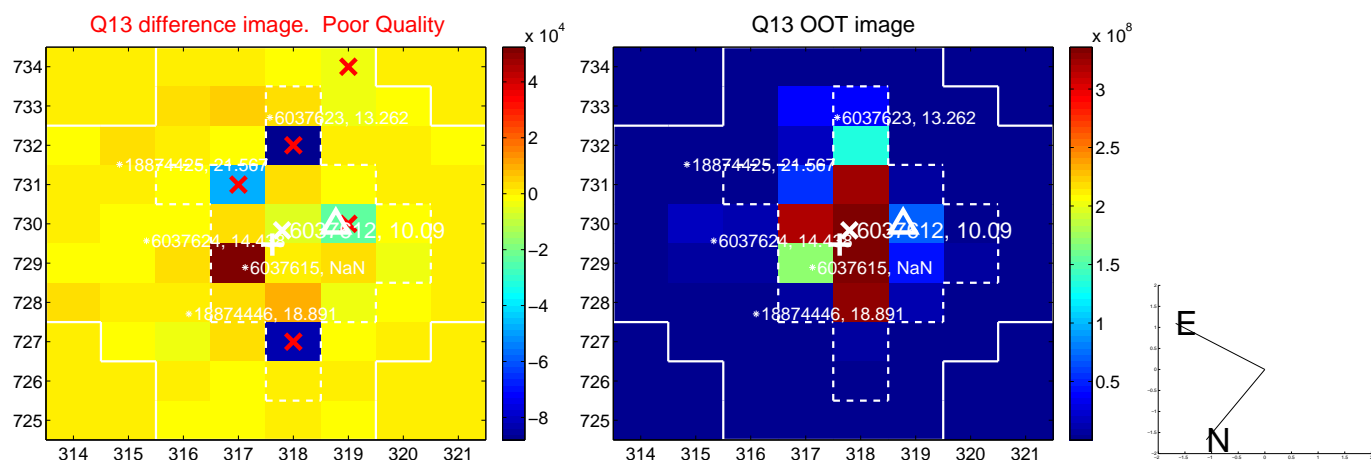
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



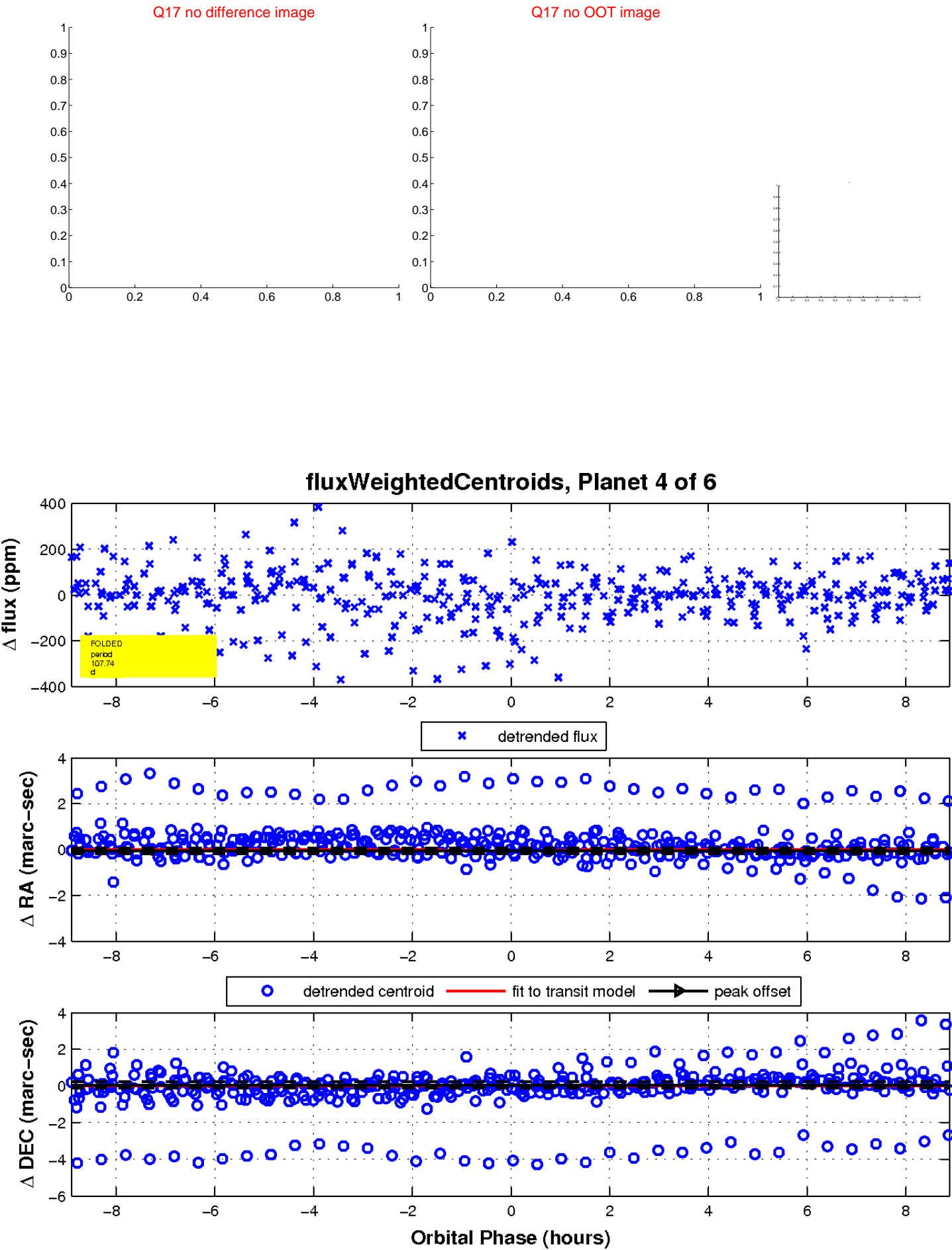
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

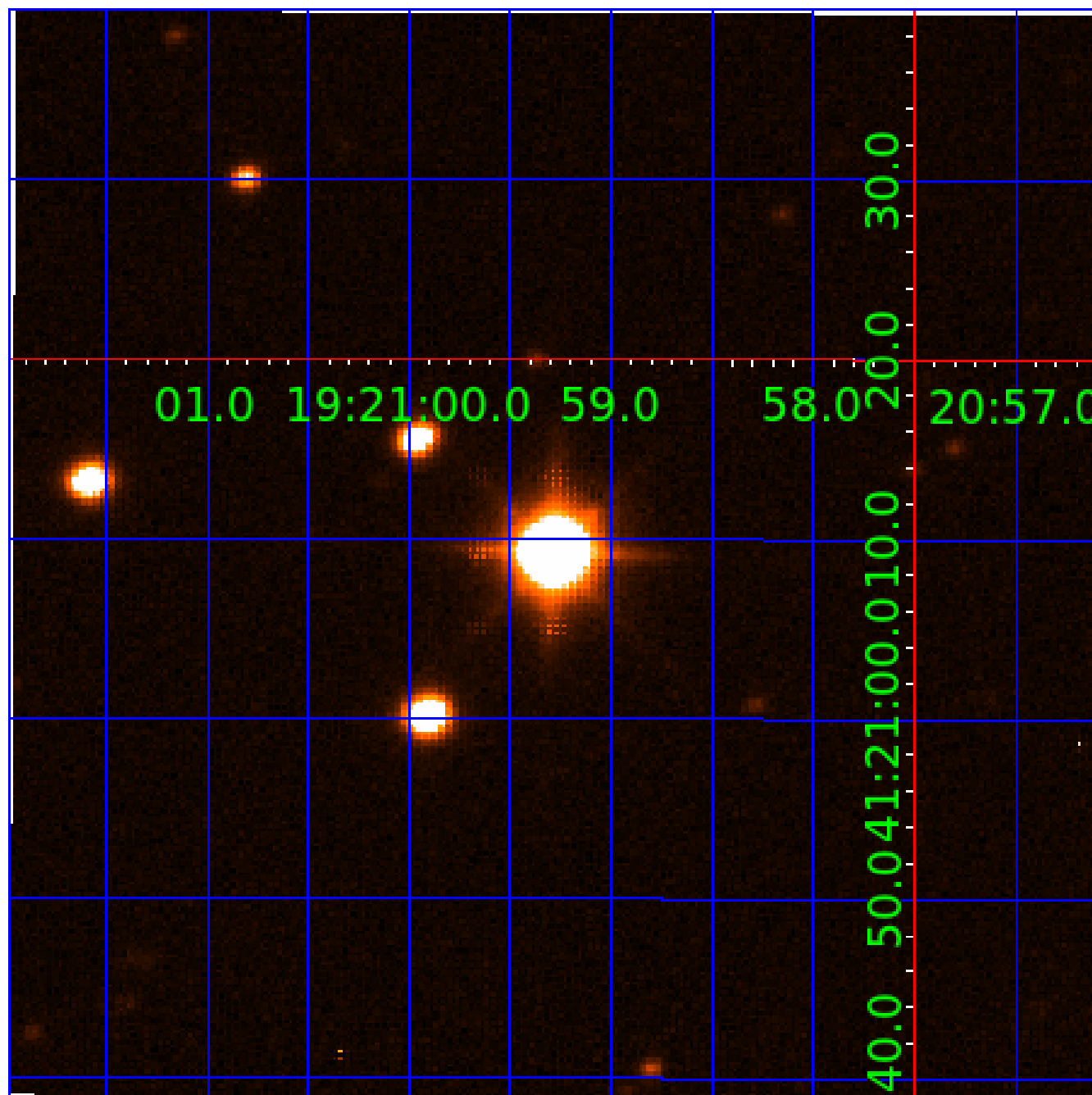


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006037612

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})
006037612-01	OBS	No	2.520648	132.467356	25.6	10.537	10.4	8.4	2.30	6065	1.37	3980.10
006037612-02	OBS	No	138.586274	168.855663	197.2	3.021	9.9	8.9	2.30	6065	6.58	19.04
006037612-03	OBS	No	577.335084	254.139178	252.0	8.167	9.4	8.2	2.30	6065	4.33	2.84
006037612-04	OBS	No	107.743749	229.633432	224.0	2.969	8.9	9.1	2.30	6065	3.68	26.63
006037612-06	OBS	No	5.041872	135.935814	17.3	14.455	8.7	4.4	2.30	6065	1.11	1579.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037612-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006037612-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006037612-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006037612-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006037612-06	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

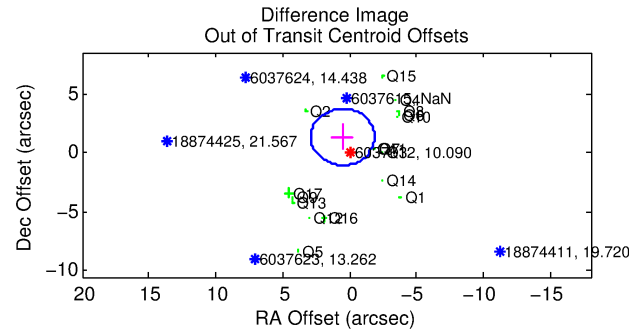
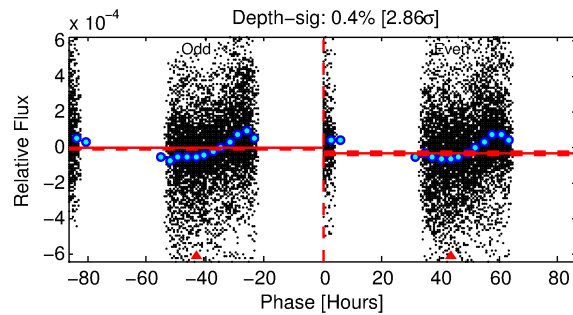
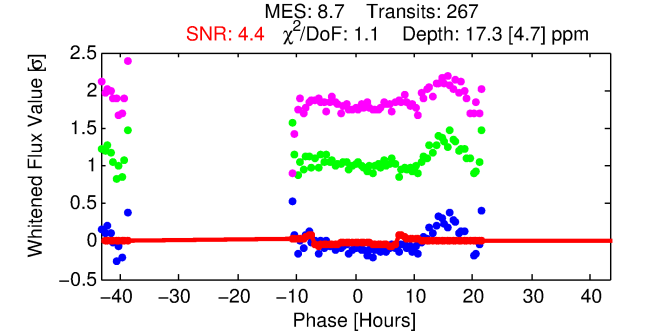
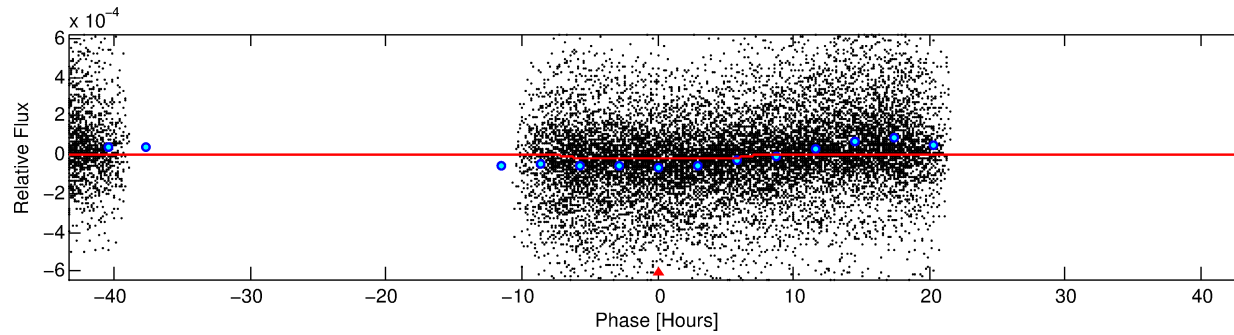
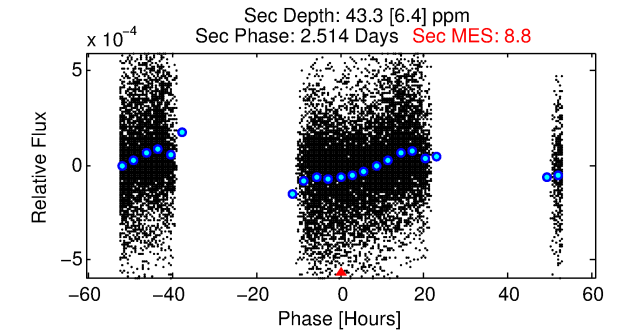
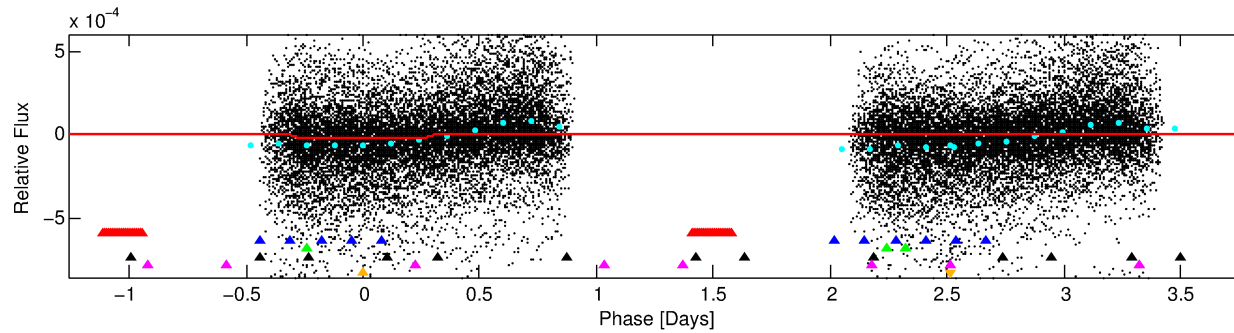
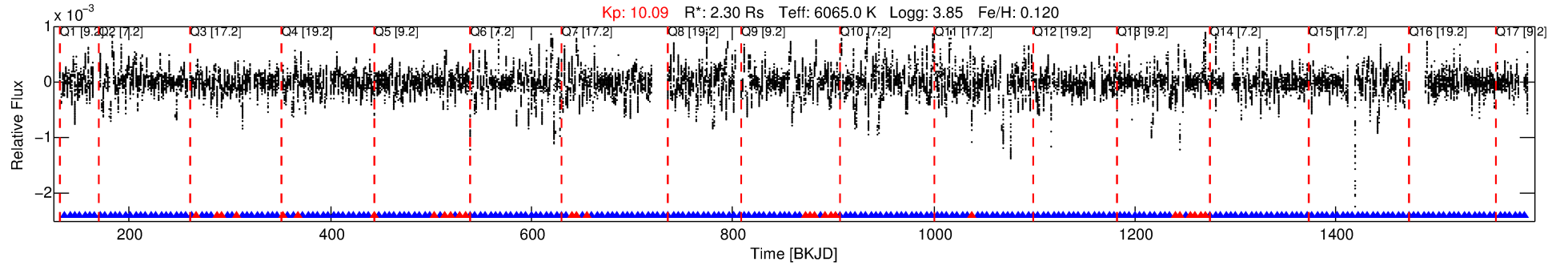
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037612-06

No Significant Match Found

DV One-Page Summary

KIC: 6037612 Candidate: 6 of 6 Period: 5.042 d



DV Fit Results:

Period = 5.04187 [0.00007] d
Epoch = 135.9358 [0.0094] BKJD
 $R_p/R^* = 0.0044$ [0.0009]
 $a/R^* = 1.59$ [0.70]
 $b = 0.88$ [0.19]
 $\text{Seff} = 1579.26$ [587.60]
 $T_{\text{eq}} = 1607$ [150] K
 $R_p = 1.11$ [0.37] R_e
 $a = 0.0637$ [0.0153] AU
 $A_g = 78.86$ [45.13] [1.73 σ]
 $T_{\text{eff}} = 7406$ [817] K [6.98 σ]

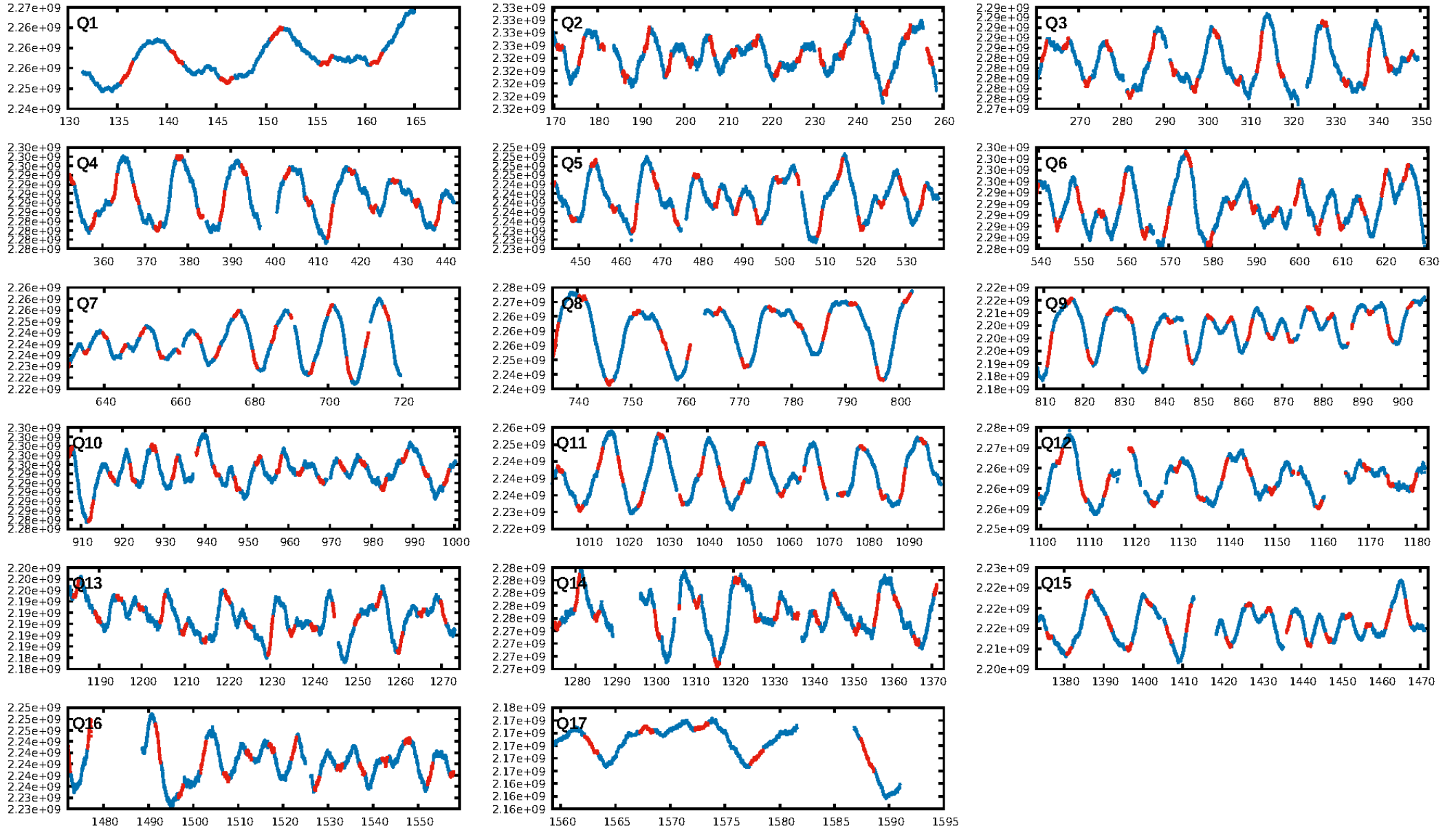
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.38 σ]
LongPeriod-sig: 100.0% [167.03 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.78e-07
RollingBand-fgt: 0.89 [228/256]
GhostDiagnostic-chr: N/A
Centroid-sig: 16.2%
Centroid-so: 1.878 arcsec [1.18 σ]
OotOffset-rm: 1.442 arcsec [1.81 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 1.551 arcsec [1.73 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 0.00 [0/17]

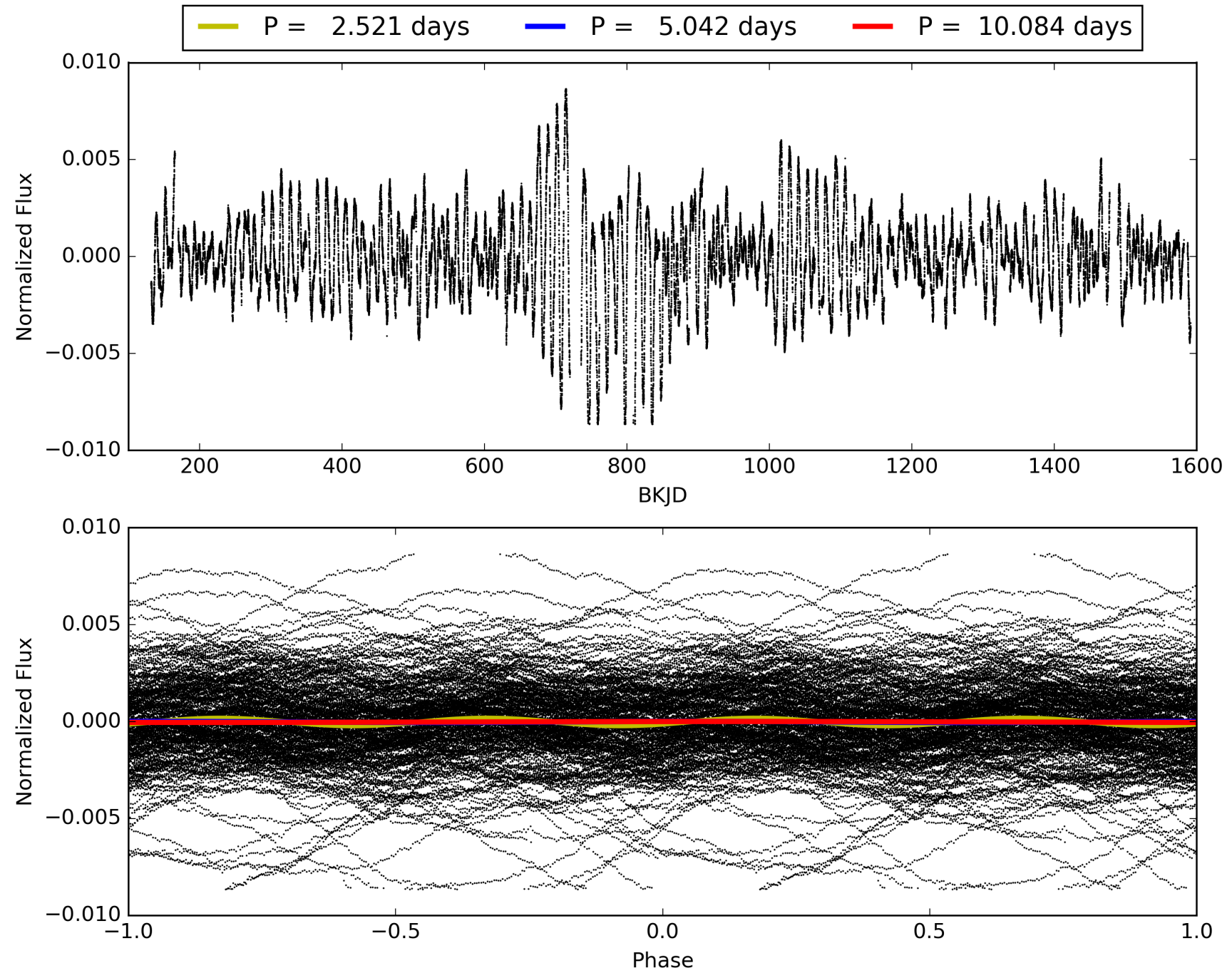
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:01:28 Z

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

TCE 006037612-06, PDC Light Curves

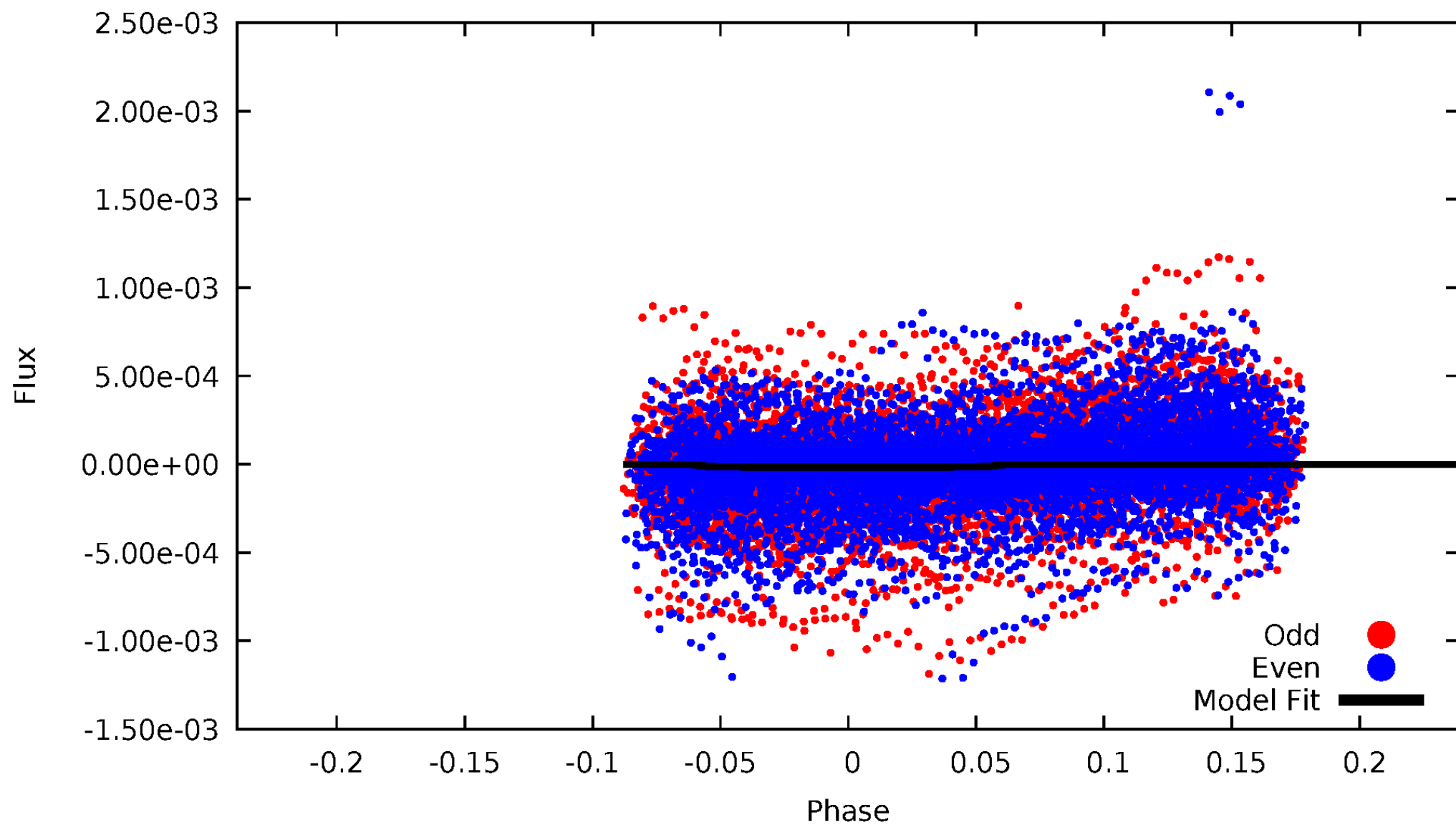


TCE 006037612-06



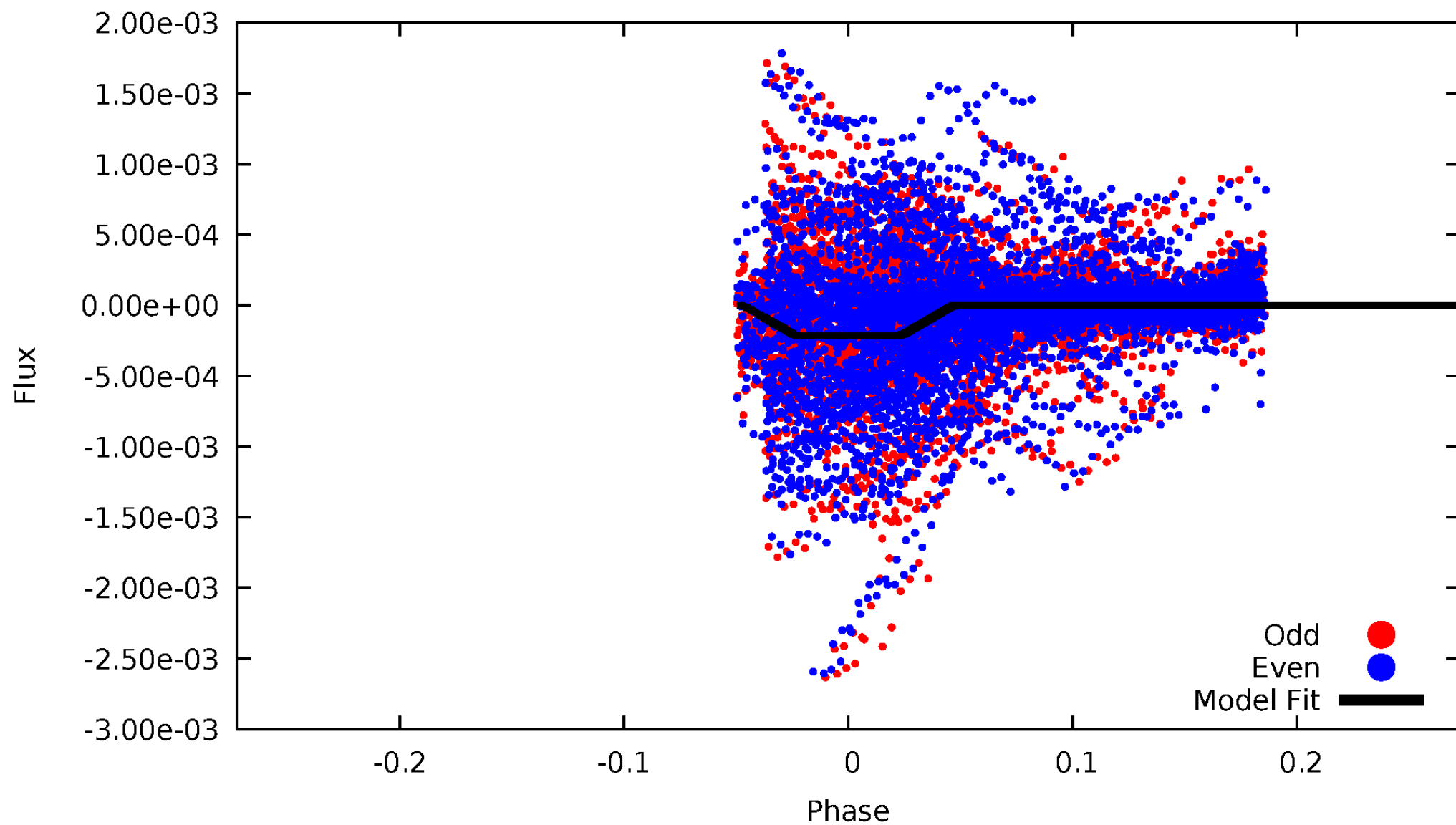
DV Odd/Even

TCE 006037612-06



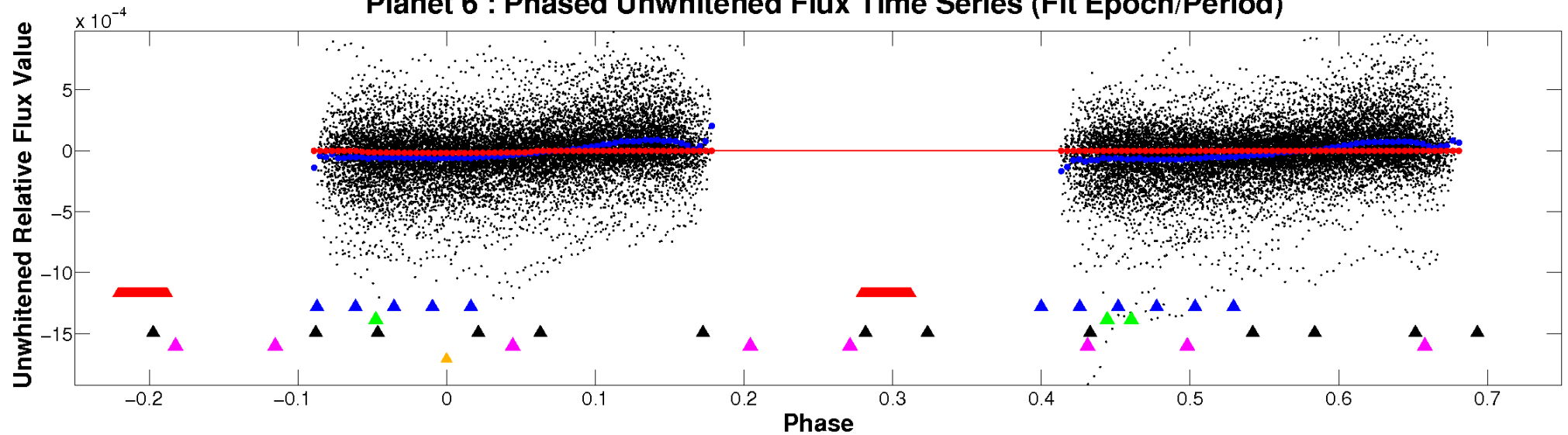
ALT Odd/Even

TCE 006037612-06

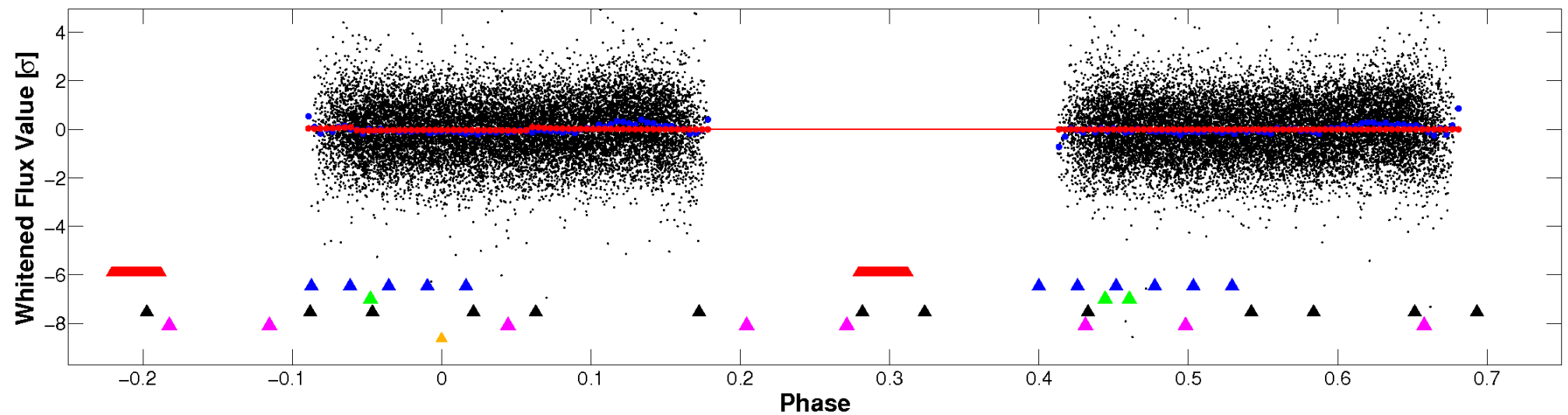


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

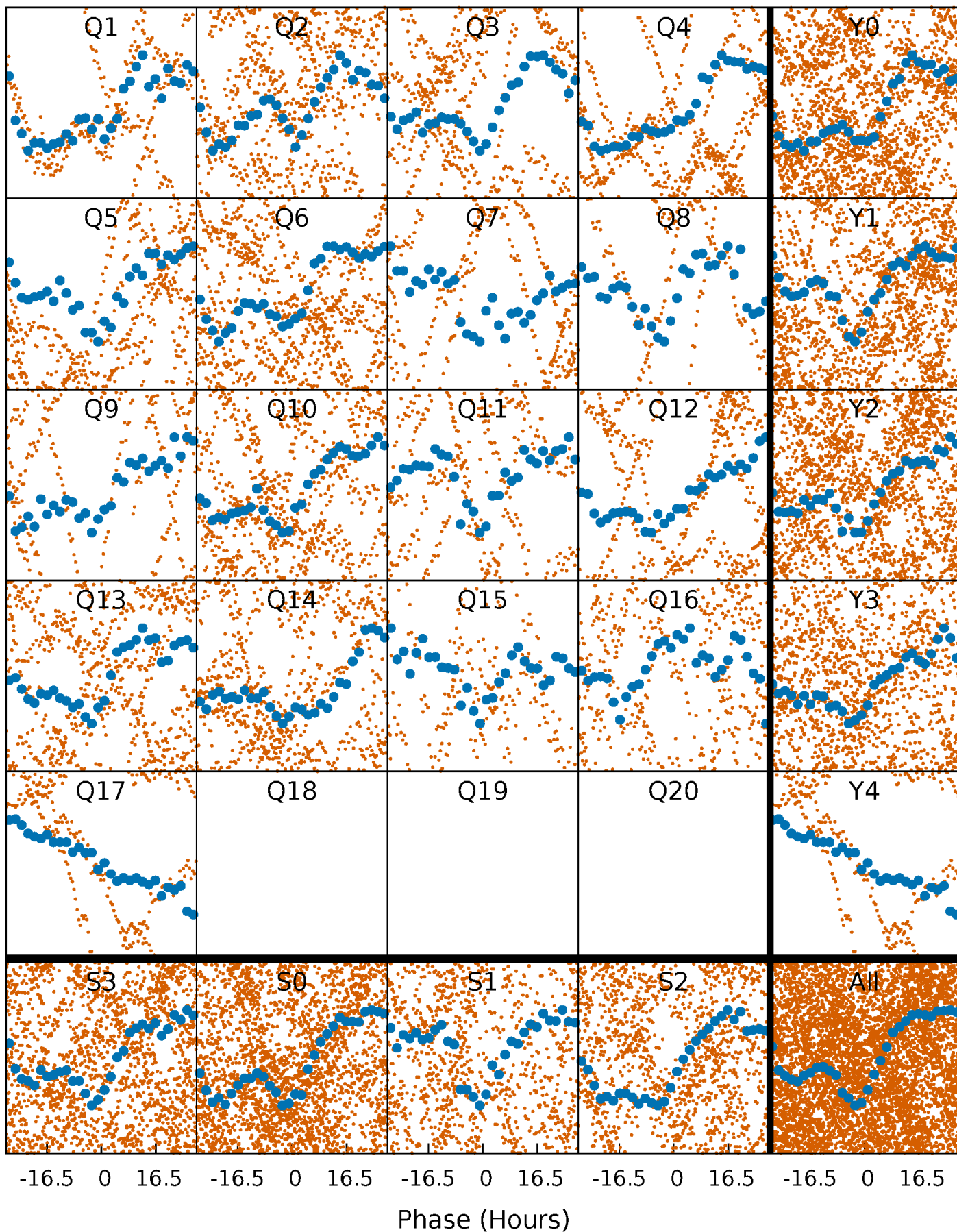


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



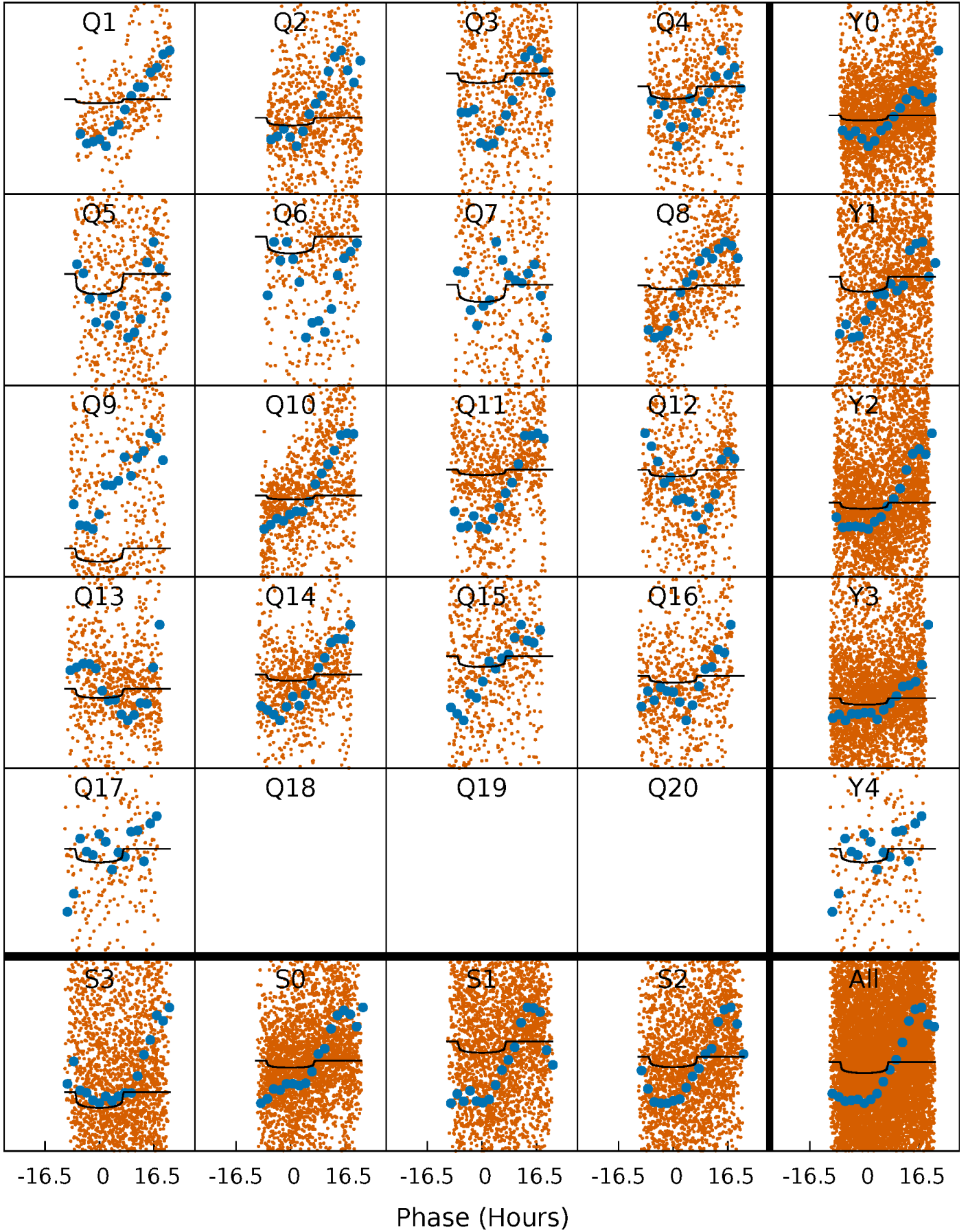
PDC Quarter-Phased Transit Curves

TCE 006037612-06 P= 5.041872 Days $T_0=135.935814$ (BKJD)



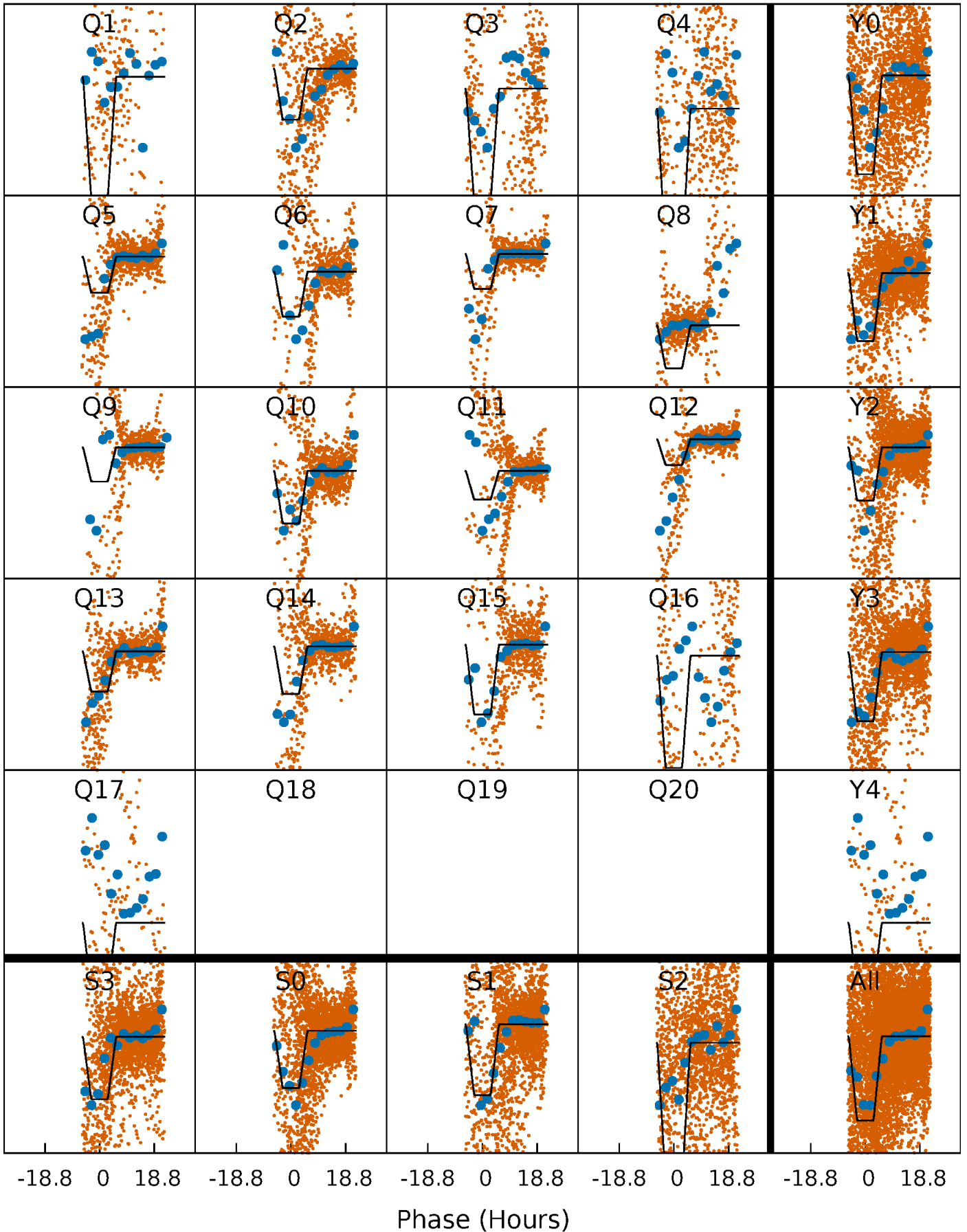
DV Quarter-Phased Transit Curves

TCE 006037612-06 P= 5.041872 Days $T_0=135.935814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

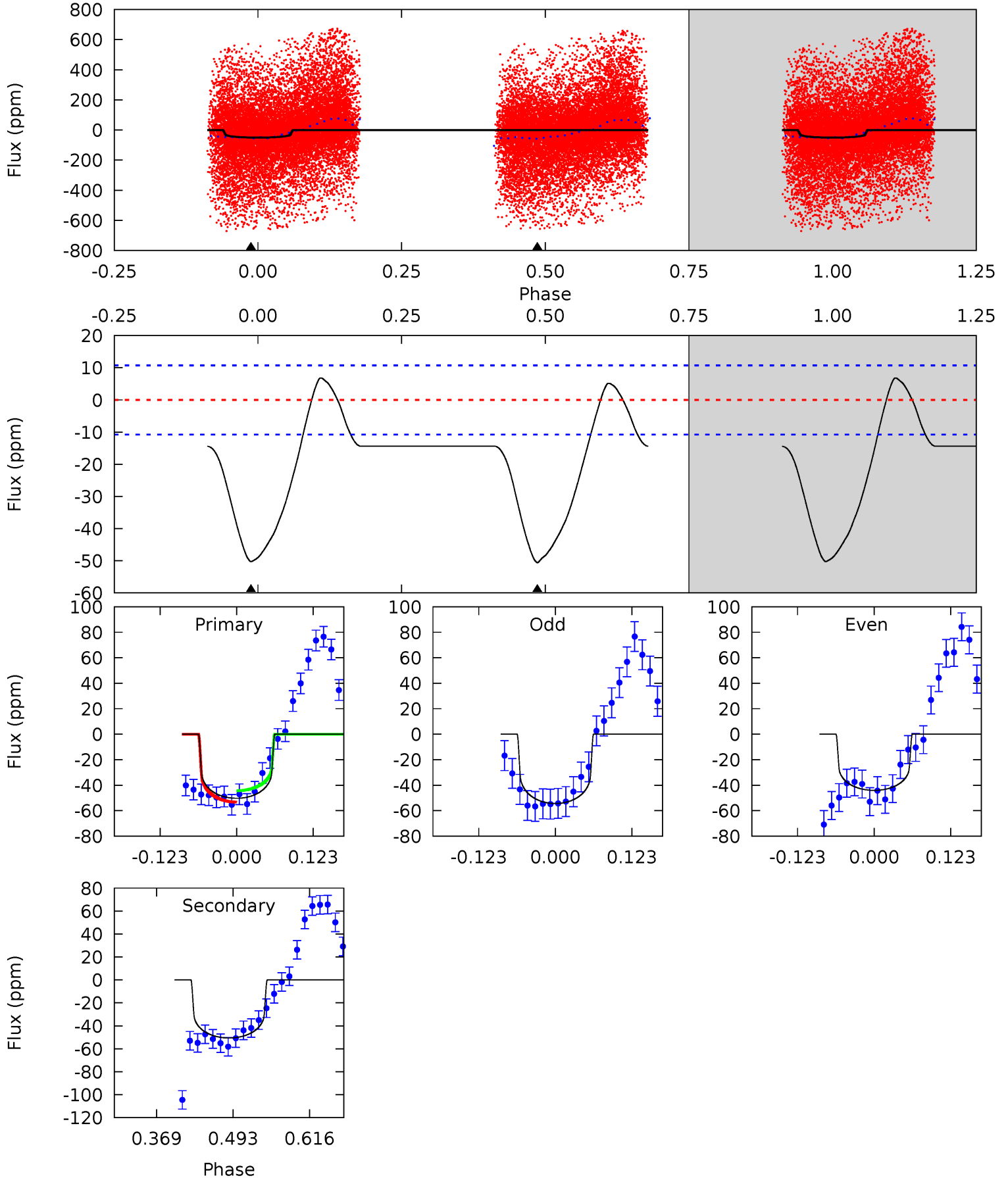
TCE 006037612-06 P= 5.041267 Days $T_0=135.910137$ (BKJD)



DV Model-Shift Uniqueness Test

006037612-06, P = 5.041872 Days, E = 130.893942 Days

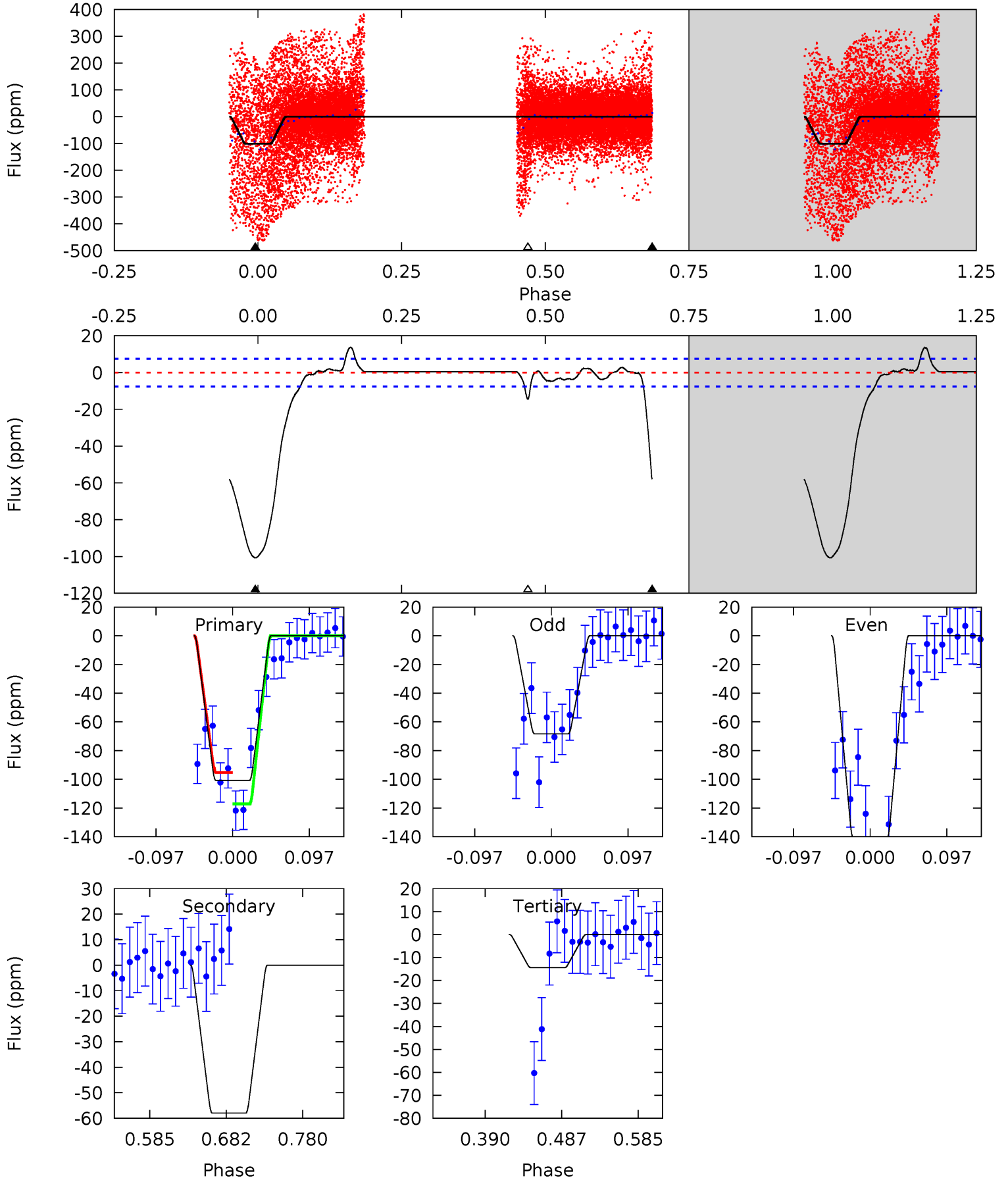
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	21.3	0	0	4.52	1.54	2.54	21.2	21.2	21.3	21.3	2.22	2.25	0.12	2.07



Alt Model-Shift Uniqueness Test

006037612-06, P = 5.041267 Days, E = 130.868870 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.1	35.1	8.73	0	4.57	1.66	2.92	52.3	61.1	26.4	35.1	21.9	1.89	0.12	0



Stellar Parameters For KIC 006037612

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+82}_{-72}	$3.847^{+0.210}_{-0.070}$	$0.120^{+0.150}_{-0.150}$	$2.299^{+0.263}_{-0.613}$	$1.356^{+0.144}_{-0.176}$	$0.157^{+0.195}_{-0.037}$
	+1%/-1%	+5%/-2%	+125%/-125%	+11%/-27%	+11%/-13%	+124%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006037612-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 2	$1.04^{+0.30}_{-0.24}$	2227^{+84}_{-140}	7962^{+1318}_{-918}	105^{+72}_{-41}
Alt.	-58 ± 2	$3.61^{+0.39}_{-0.54}$	2228^{+85}_{-149}	4528^{+120}_{-132}	10^{+3}_{-2}

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

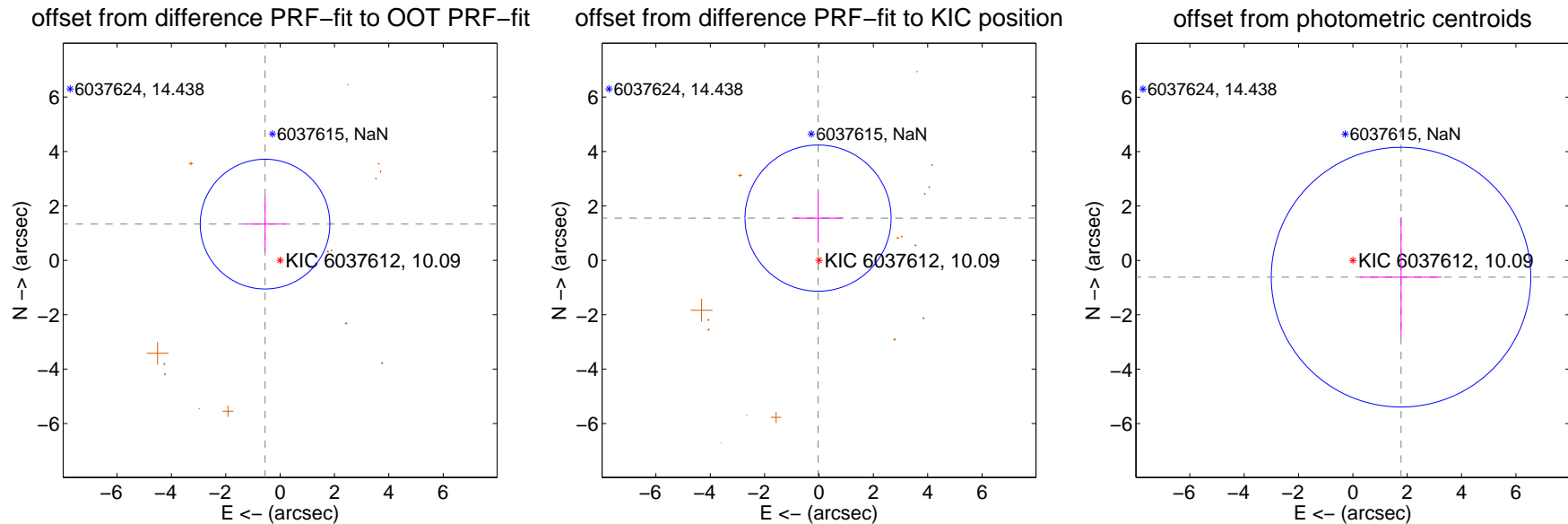
DV Centroid Data

Supplemental centroid analysis for 006037612-06. **Kepler magnitude: 10.09.** Transit SNR 4.38

There are 2 quarters with good PRF difference image offsets

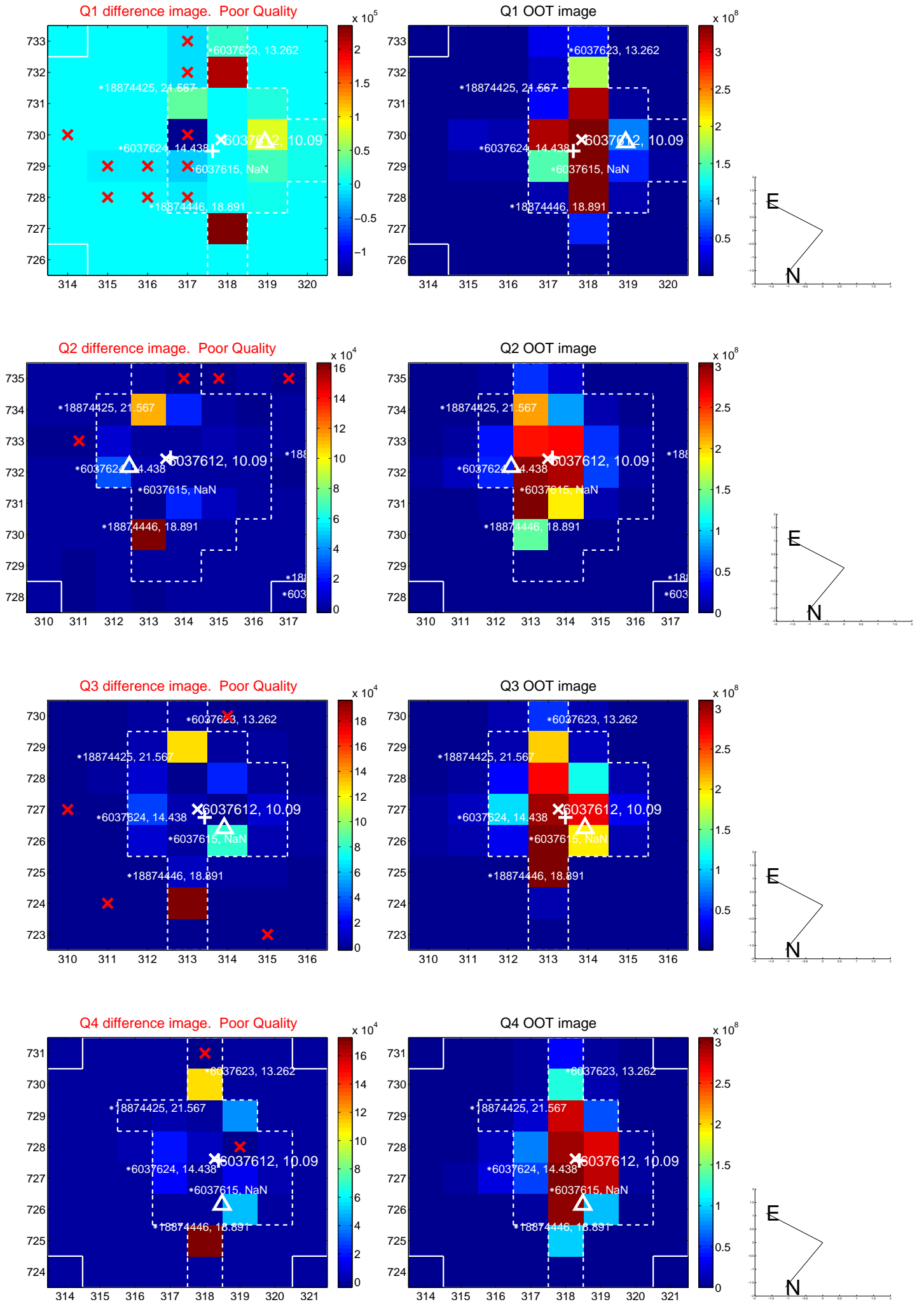
The direct PRF centroid is offset from the target star catalog position by about 1.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.442 ± 0.795	1.81	0.554 ± 0.740	1.331 ± 1.016
PRF-fit source offset from KIC position	1.551 ± 0.896	1.73	0.034 ± 0.901	1.551 ± 0.909
photometric centroid source offset	1.88 ± 1.59	1.18	-1.77 ± 1.50	-0.62 ± 2.21

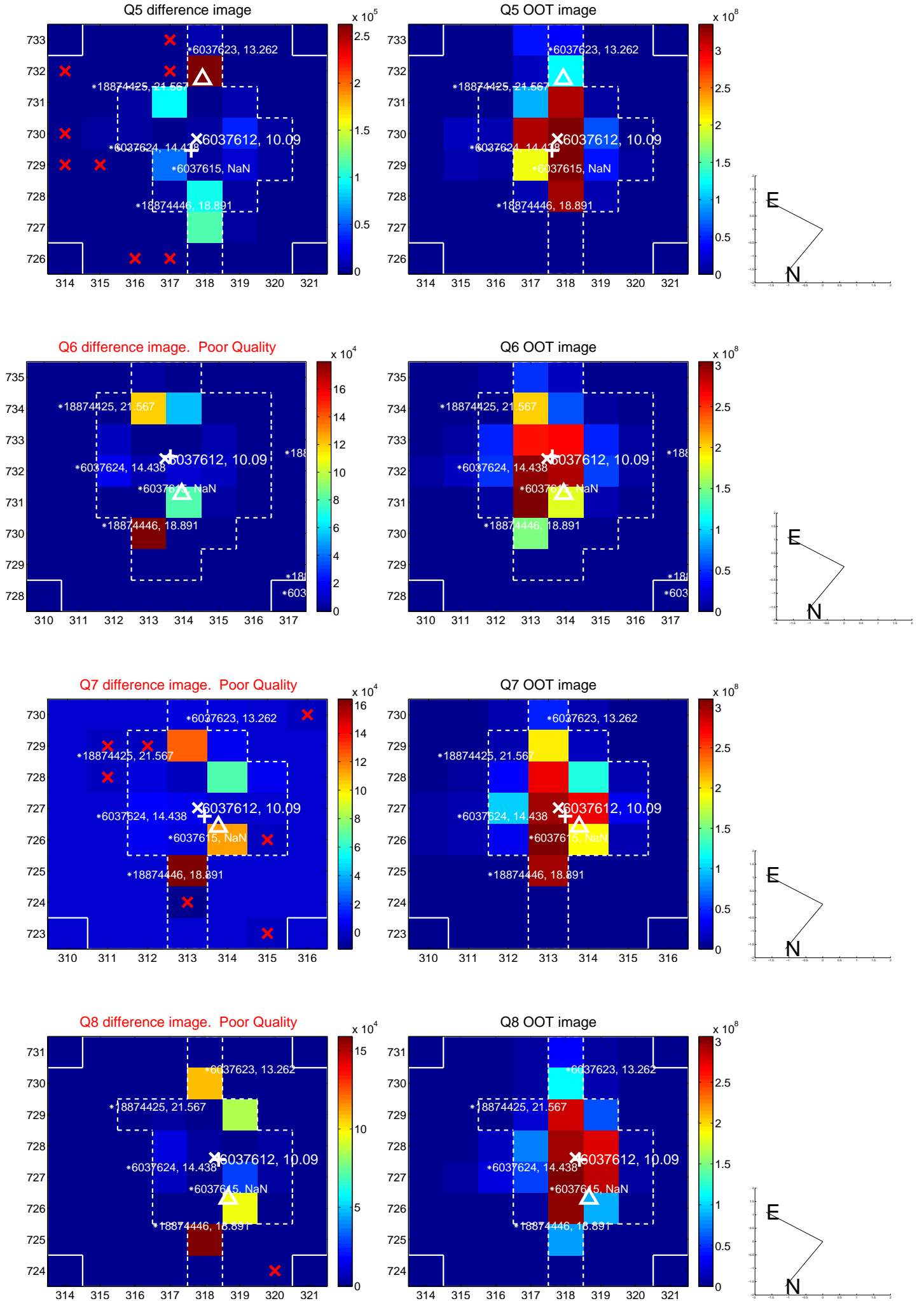


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

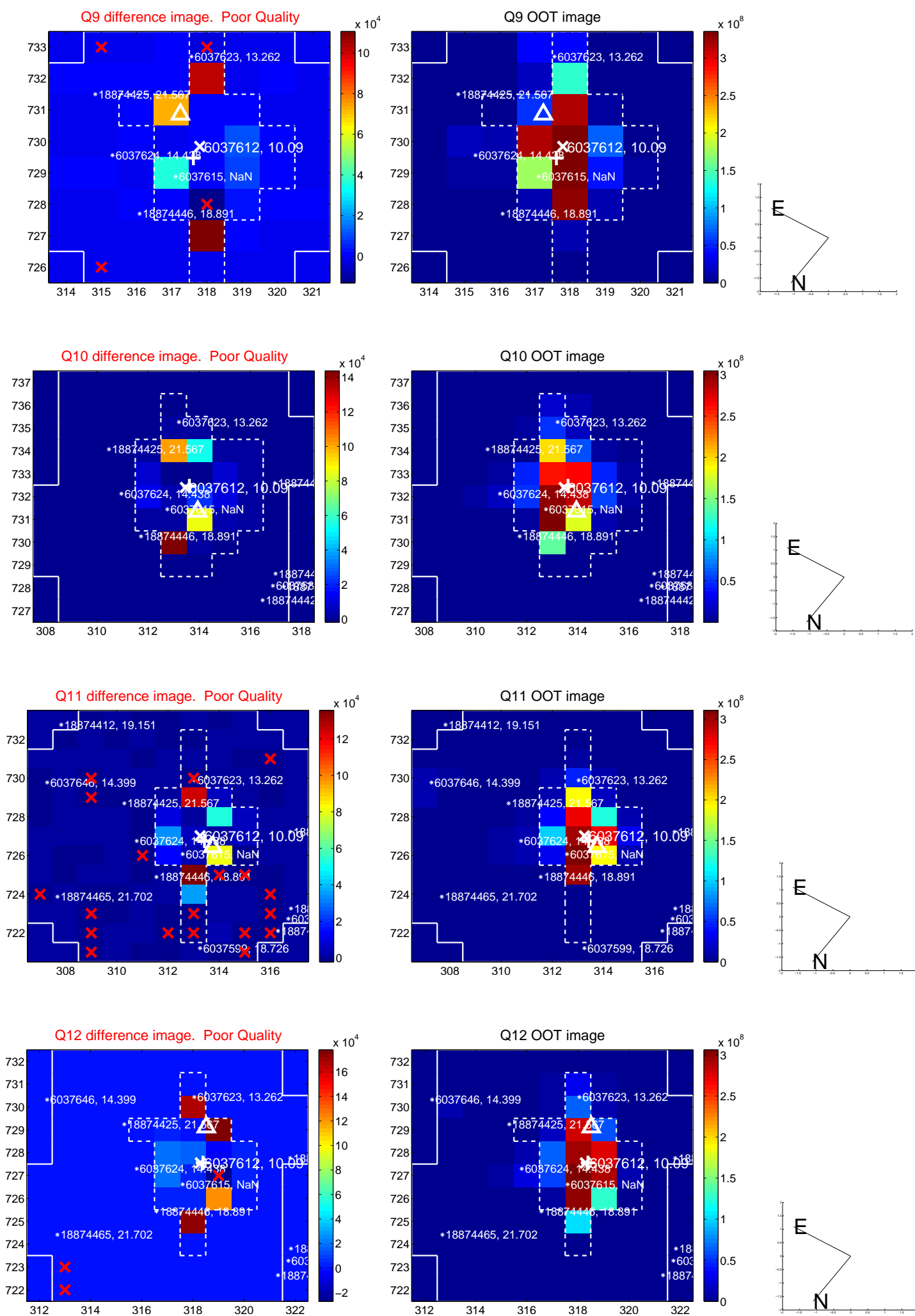
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



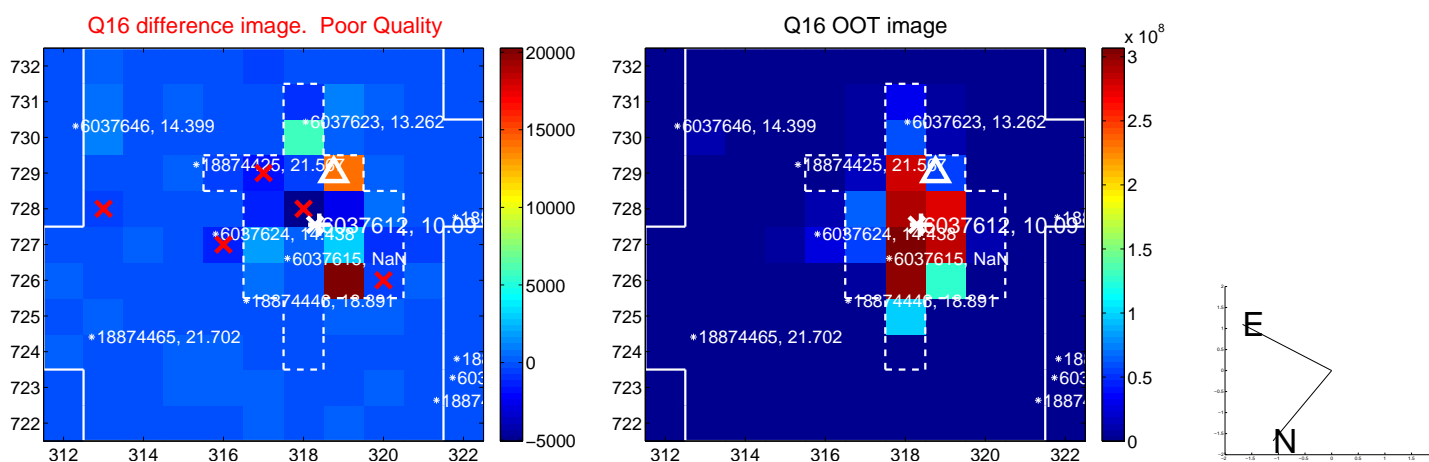
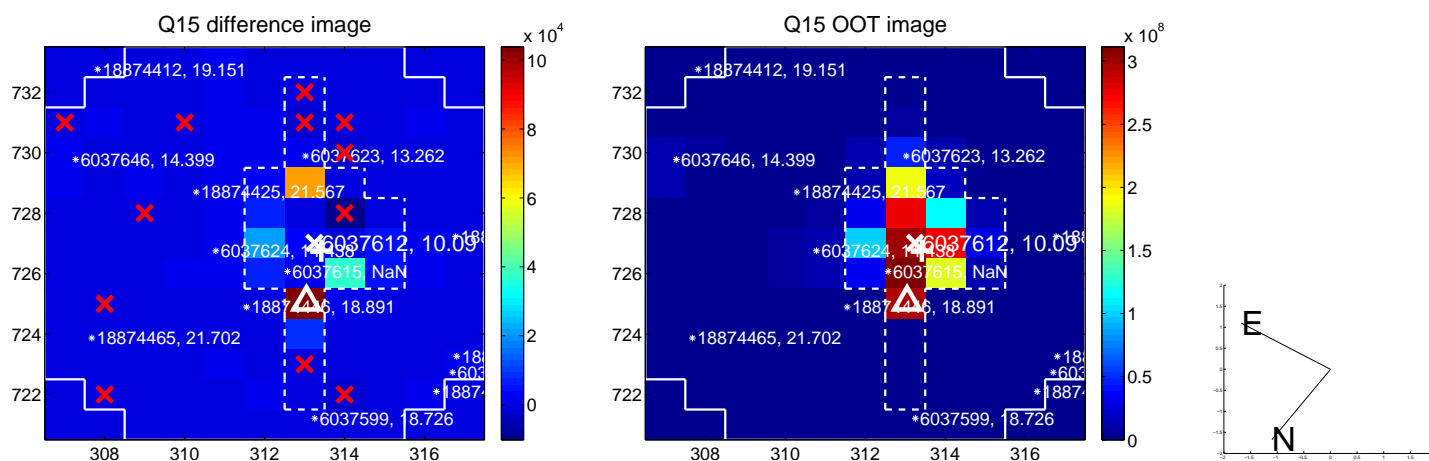
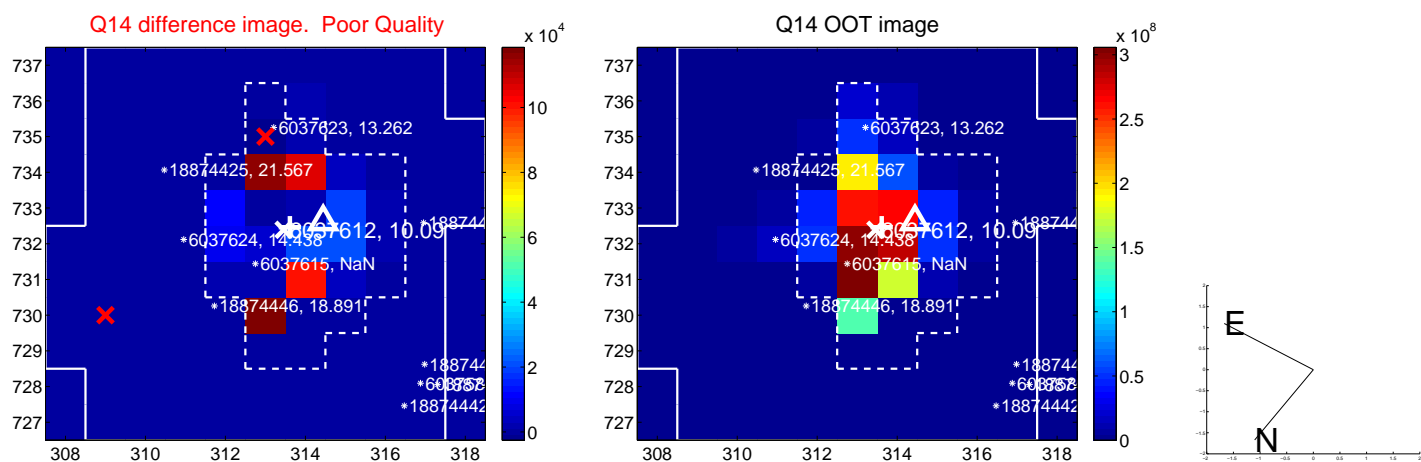
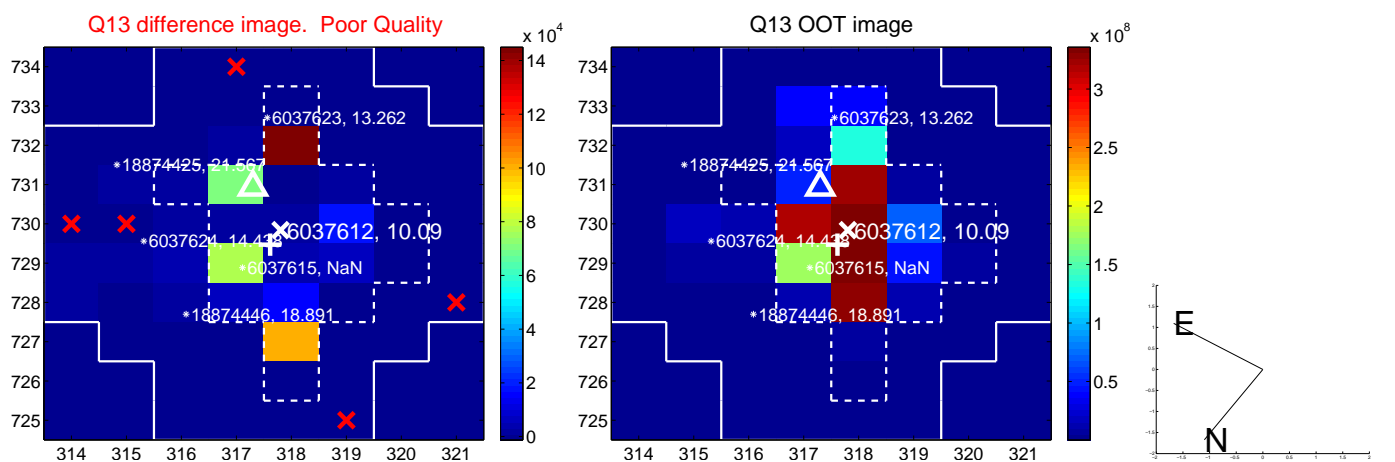
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



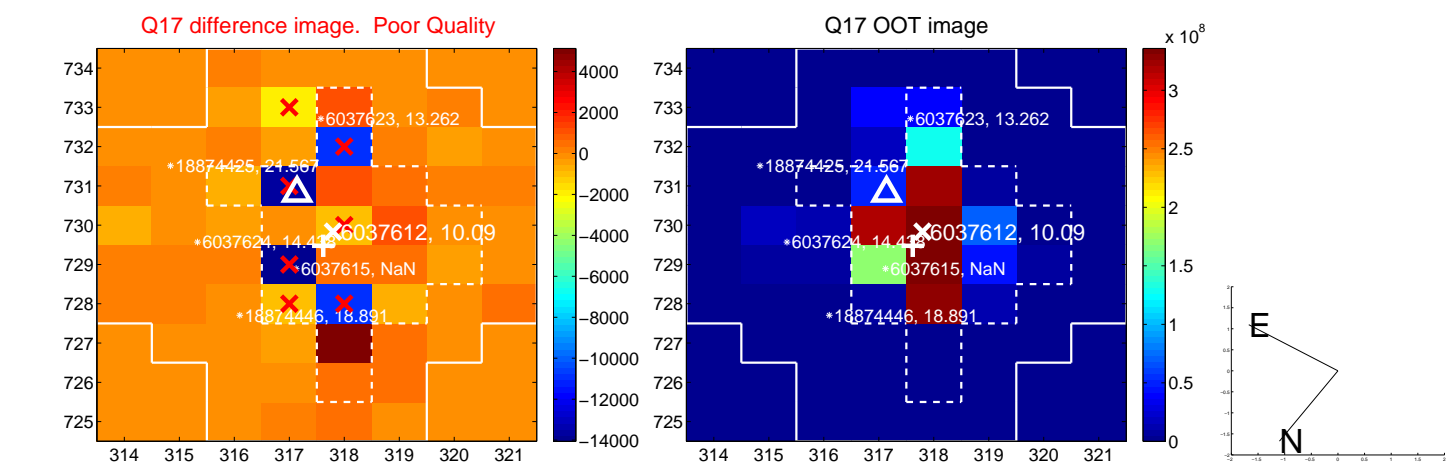
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



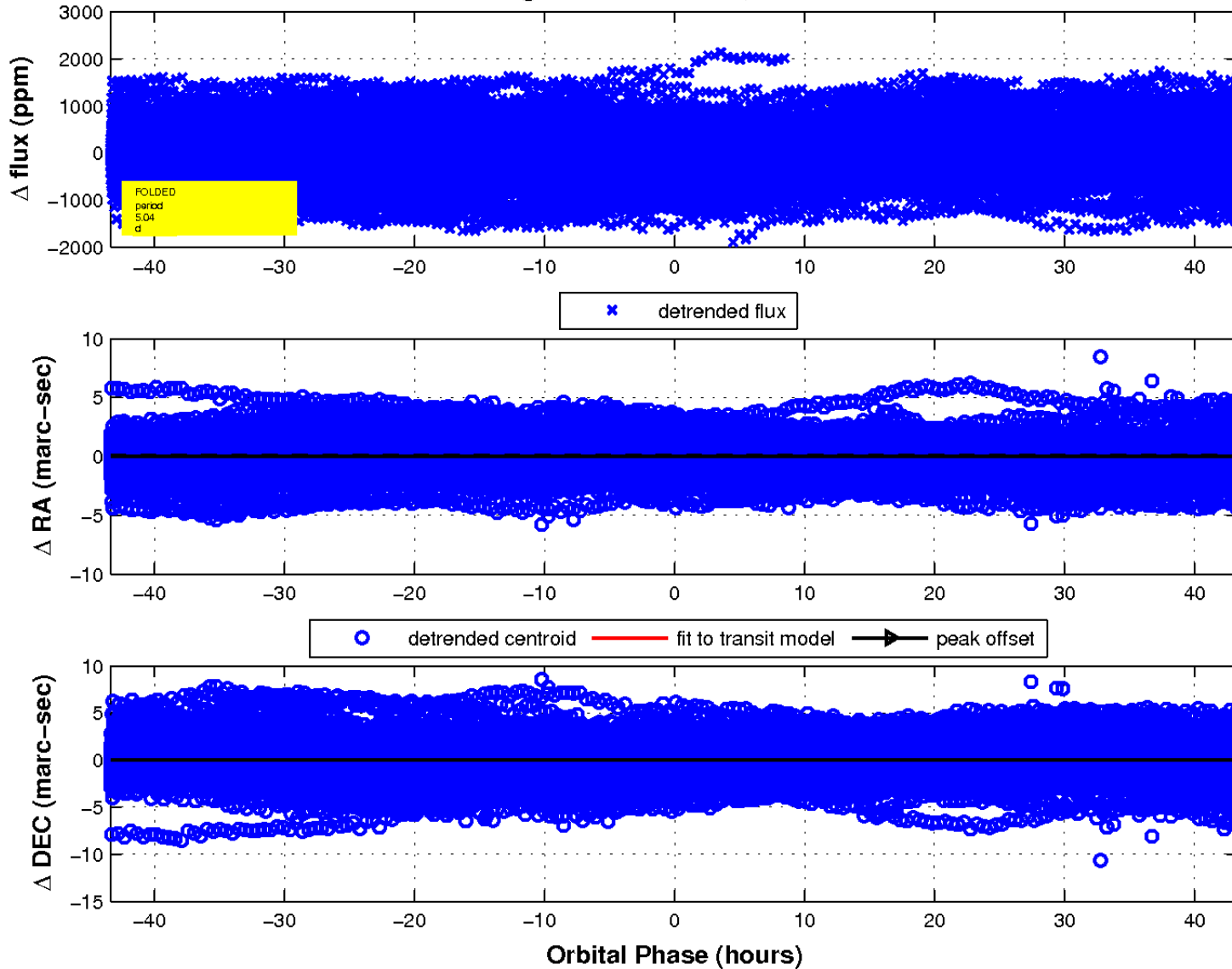
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

