

KIC 010253943

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})
010253943-01	OBS	No	2.727300	132.180501	38.0	19.661	7.8	4.4	3.38	7968	2.10	17698.06
010253943-02	OBS	No	74.489524	152.651982	4120.5	8.493	37.6	29.0	3.38	7968	33.22	215.17
010253943-03	OBS	No	460.926402	518.159328	1251.2	9.750	17.1	11.0	3.38	7968	12.35	18.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010253943-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
010253943-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
010253943-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

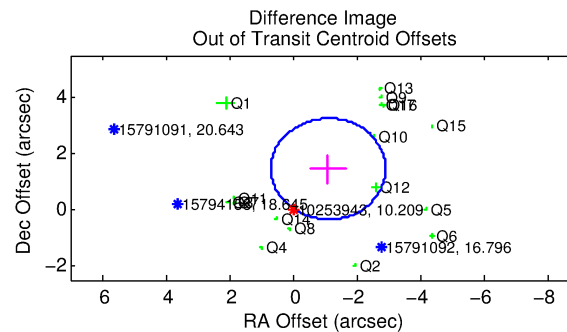
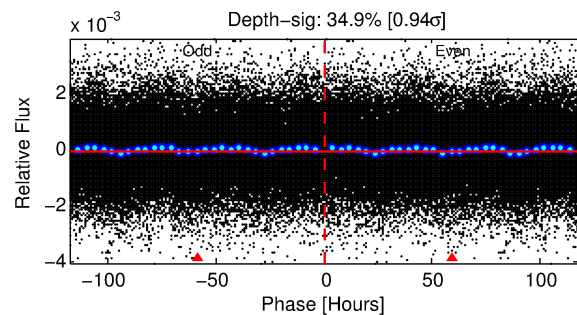
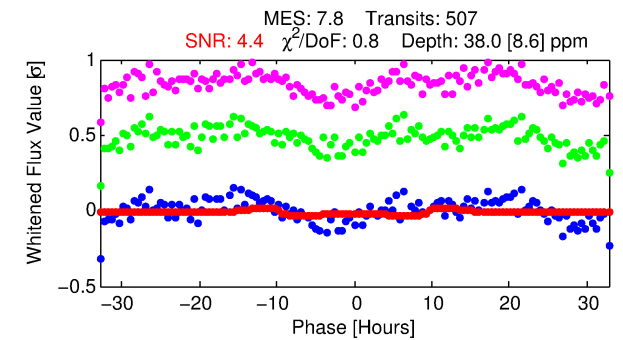
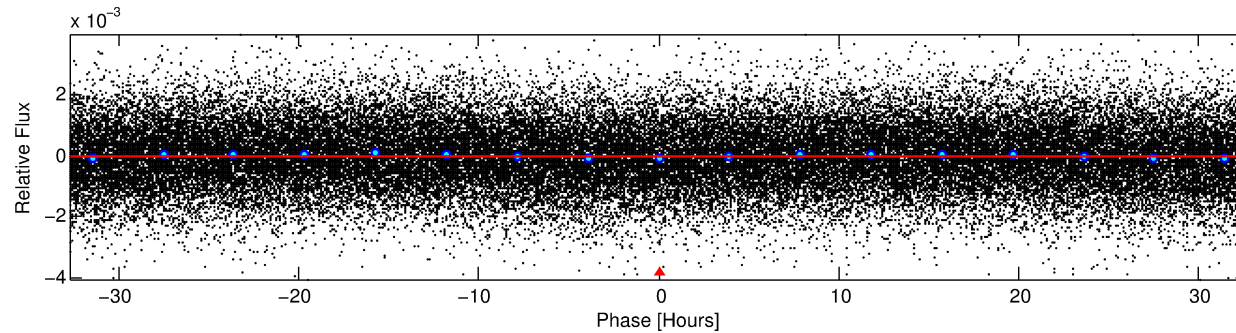
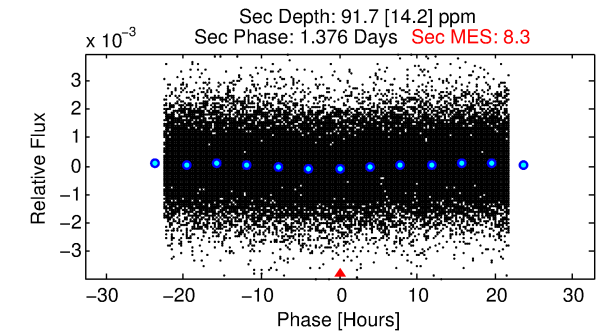
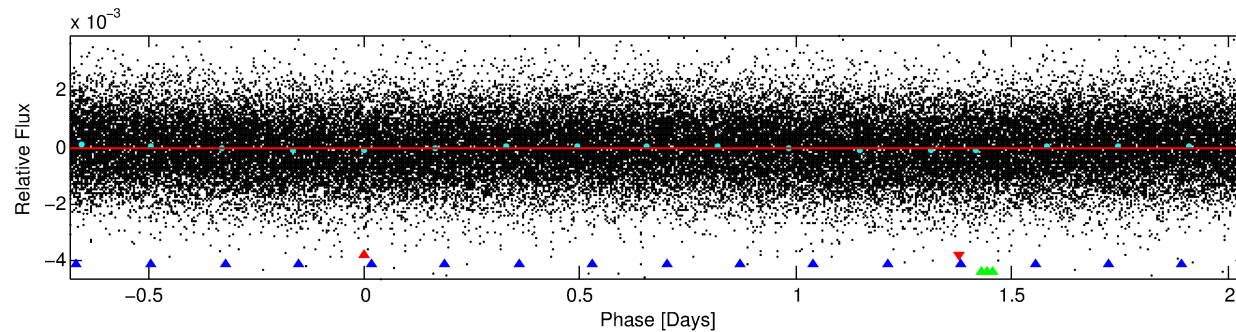
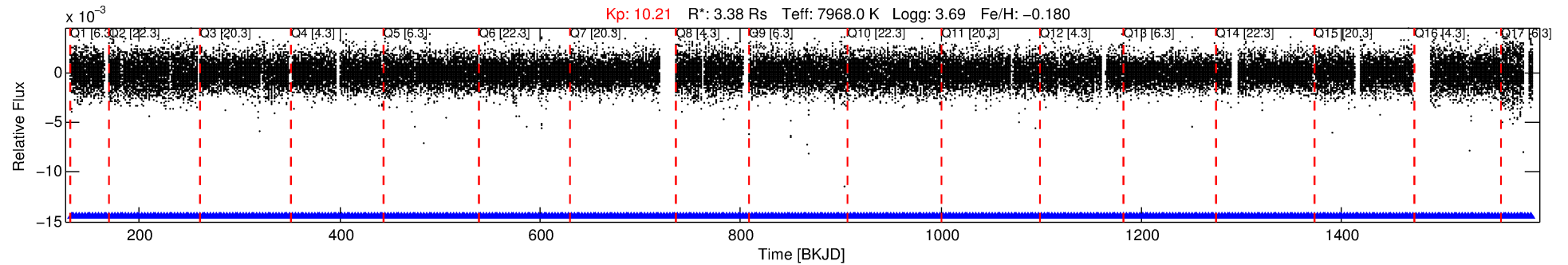
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010253943-01

No Significant Match Found

DV One-Page Summary

KIC: 10253943 Candidate: 1 of 3 Period: 2.727 d



DV Fit Results:

Period = 2.72730 [0.00012] d
Epoch = 132.1805 [0.0312] BKJD
Rp/R* = 0.0057 [0.0108]
a/R* = 1.24 [4.59]
b = 0.00 [9523.28]
Seff = 17698.06 [14604.14]
Teq = 2941 [607] K
Rp = 2.10 [4.12] Re
a = 0.0483 [0.0243] AU
Ag = 26.64 [103.14] [0.25σ]
Teffp = 10331 [9787] K [0.75σ]

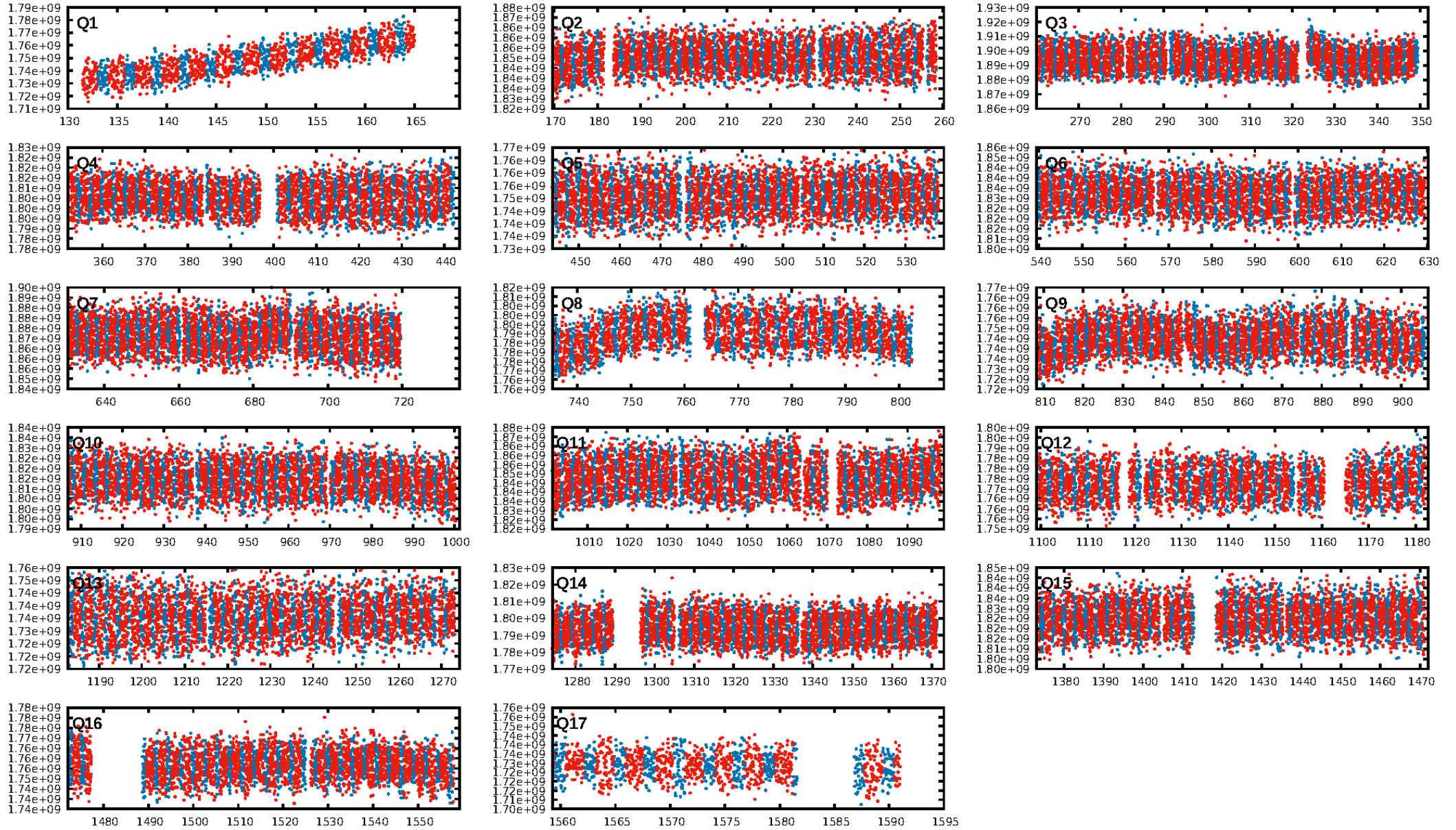
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [80.42σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.10e-15
RollingBand-fgt: 1.00 [484/484]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.2%
Centroid-so: 1.465 arcsec [2.70σ]
OotOffset-rm: 1.834 arcsec [3.06σ]
KicOffset-rm: 2.046 arcsec [3.30σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

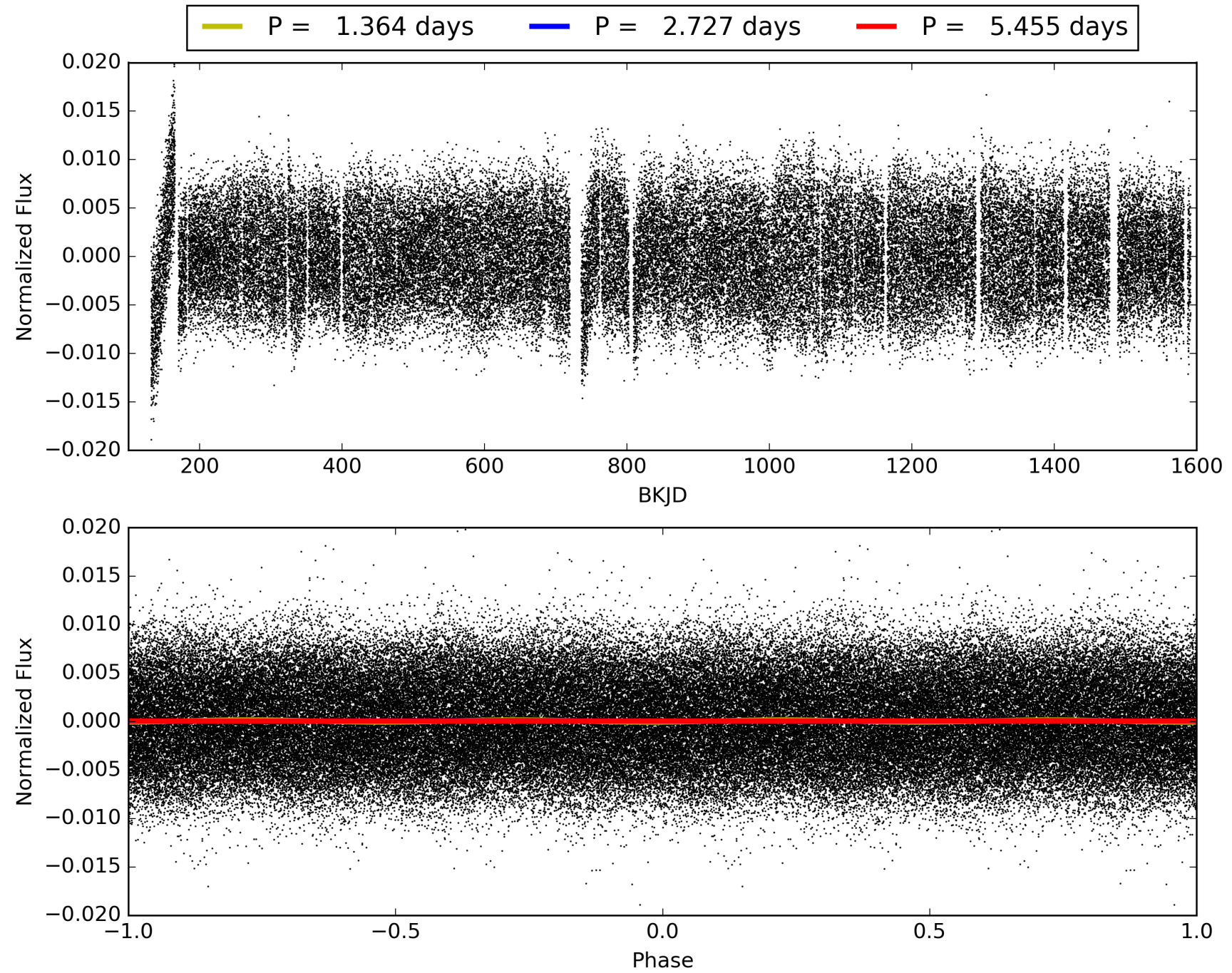
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010253943-01, PDC Light Curves

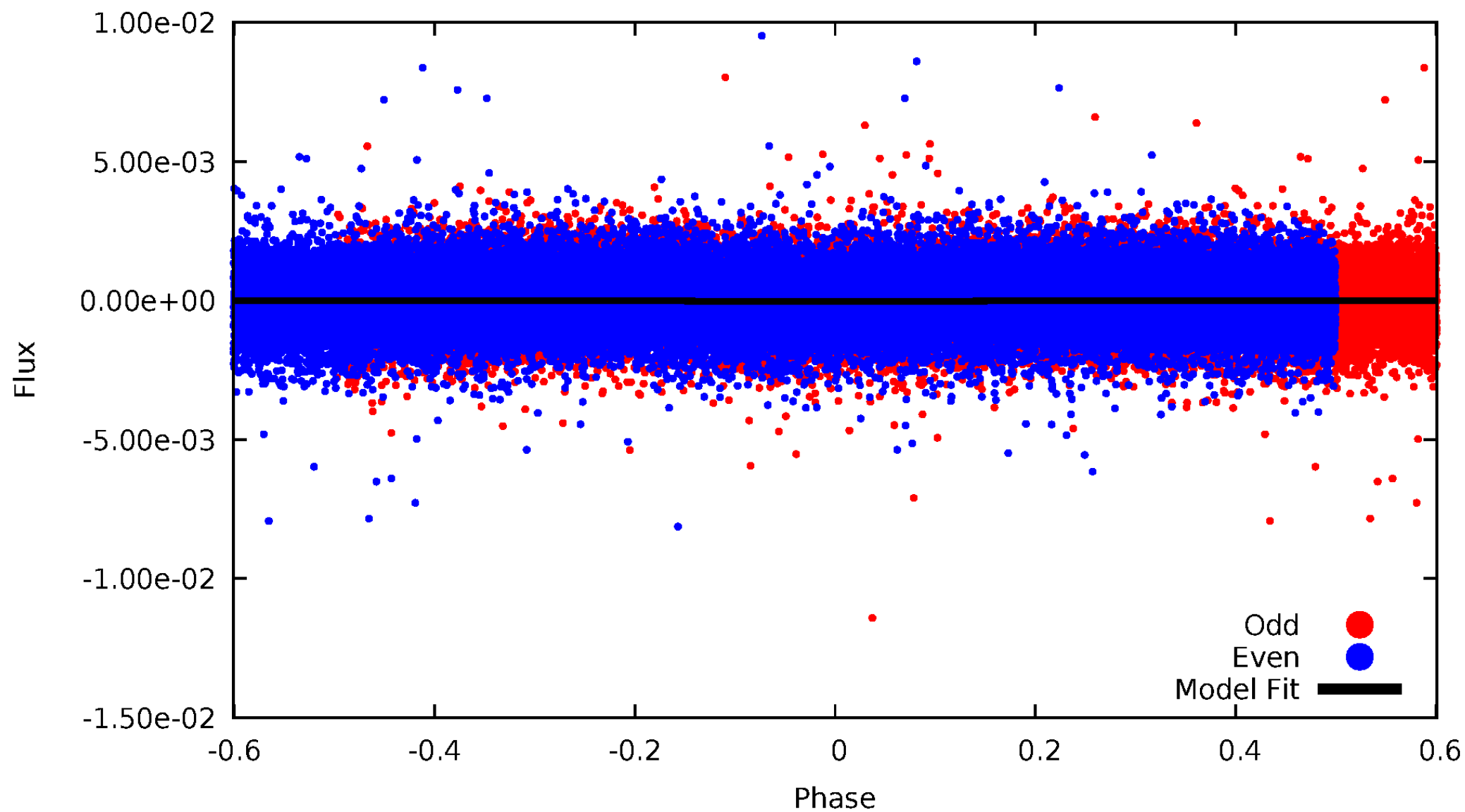


TCE 010253943-01



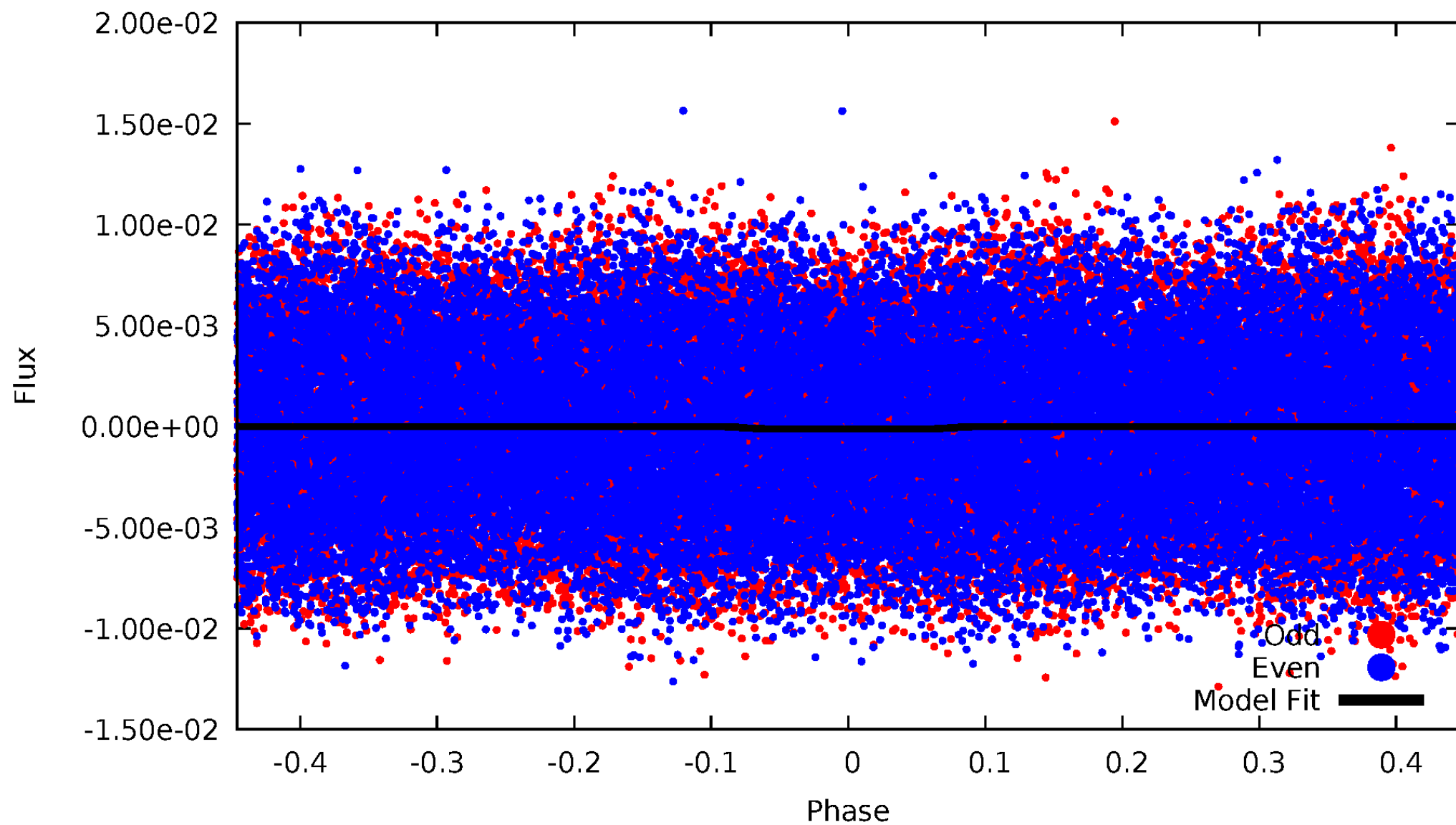
DV Odd/Even

TCE 010253943-01

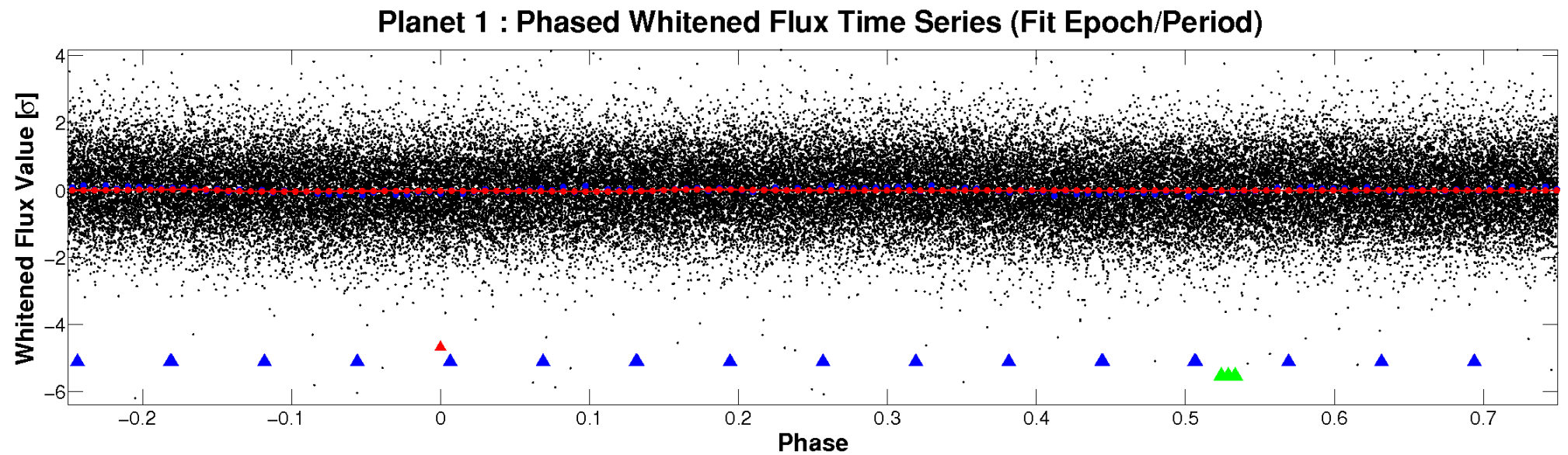
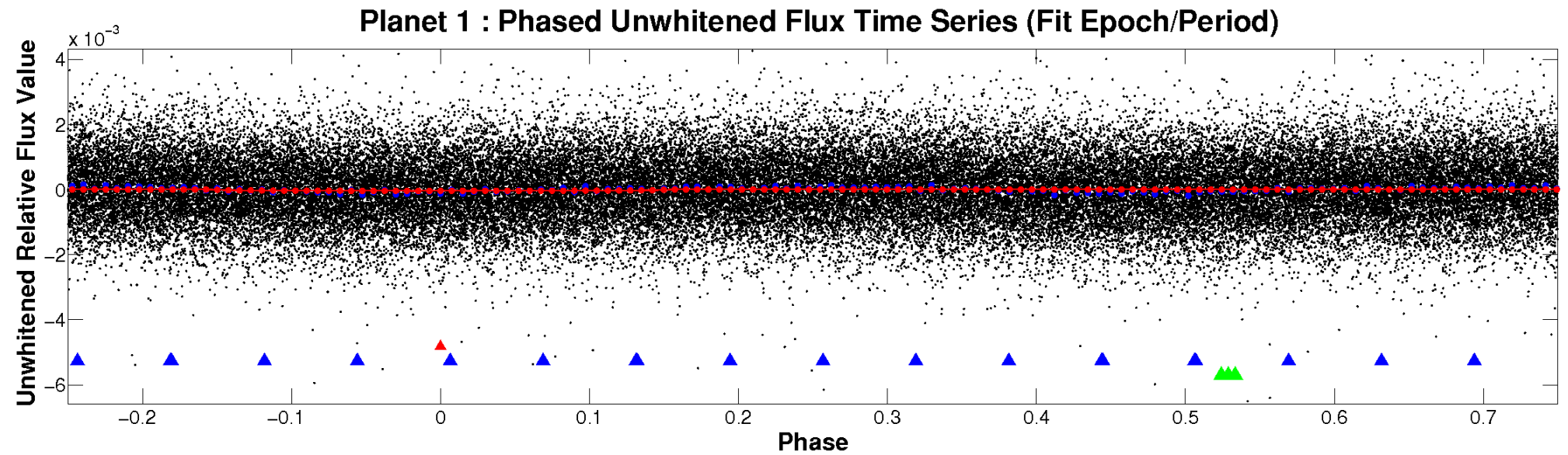


ALT Odd/Even

TCE 010253943-01

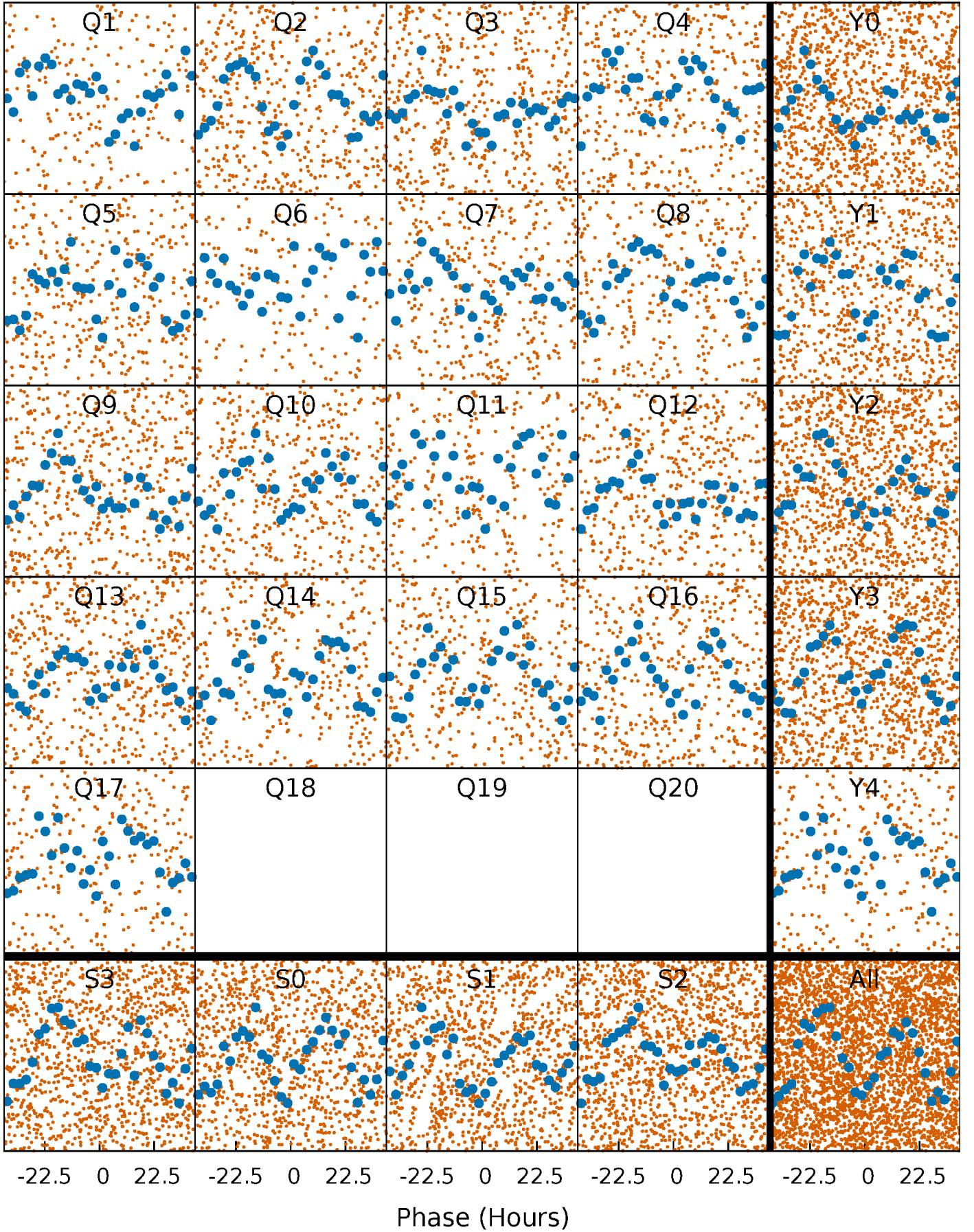


Non-Whitened Vs. Whitened Light Curve



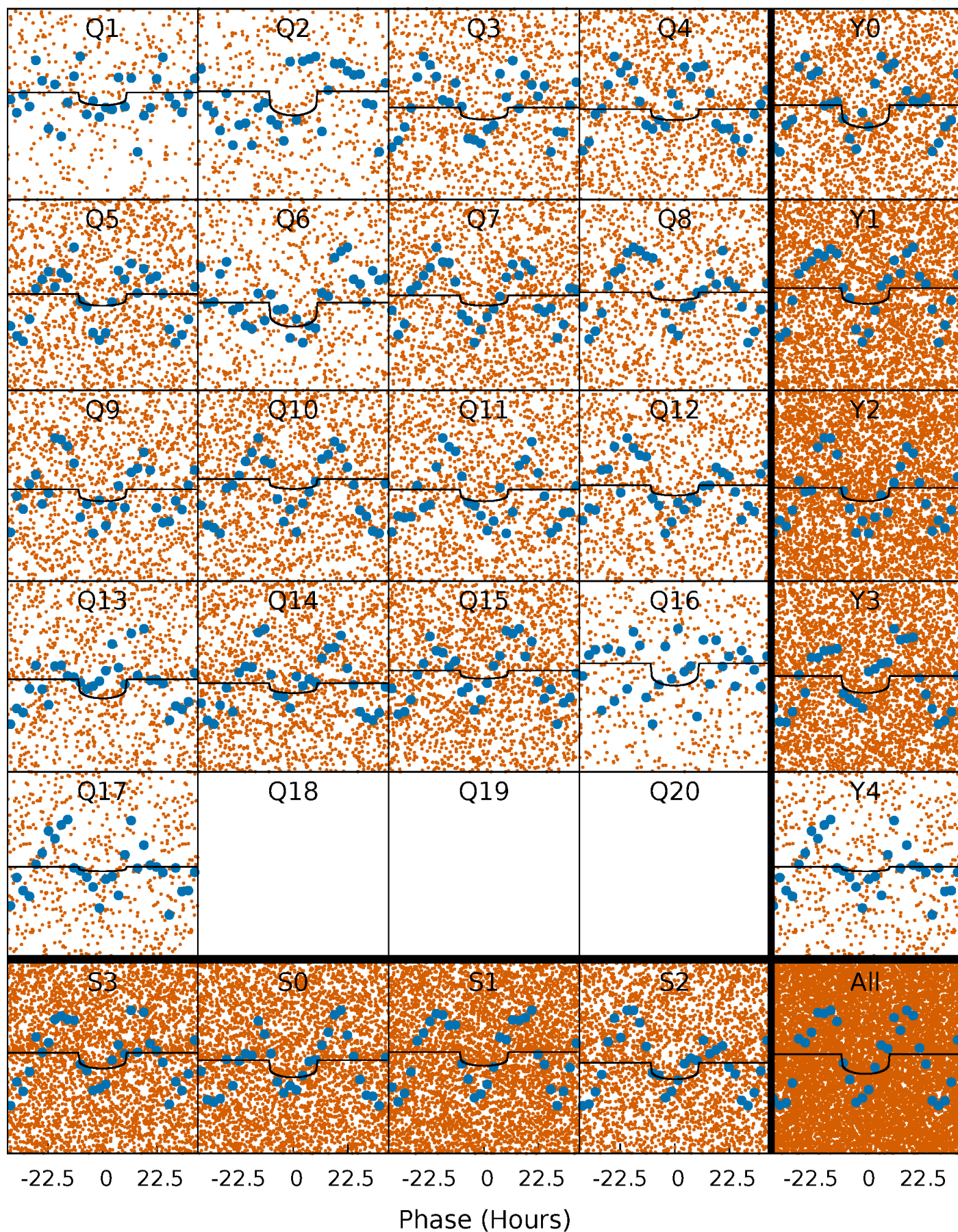
PDC Quarter-Phased Transit Curves

TCE 010253943-01 P= 2.727300 Days $T_0=132.180501$ (BKJD)



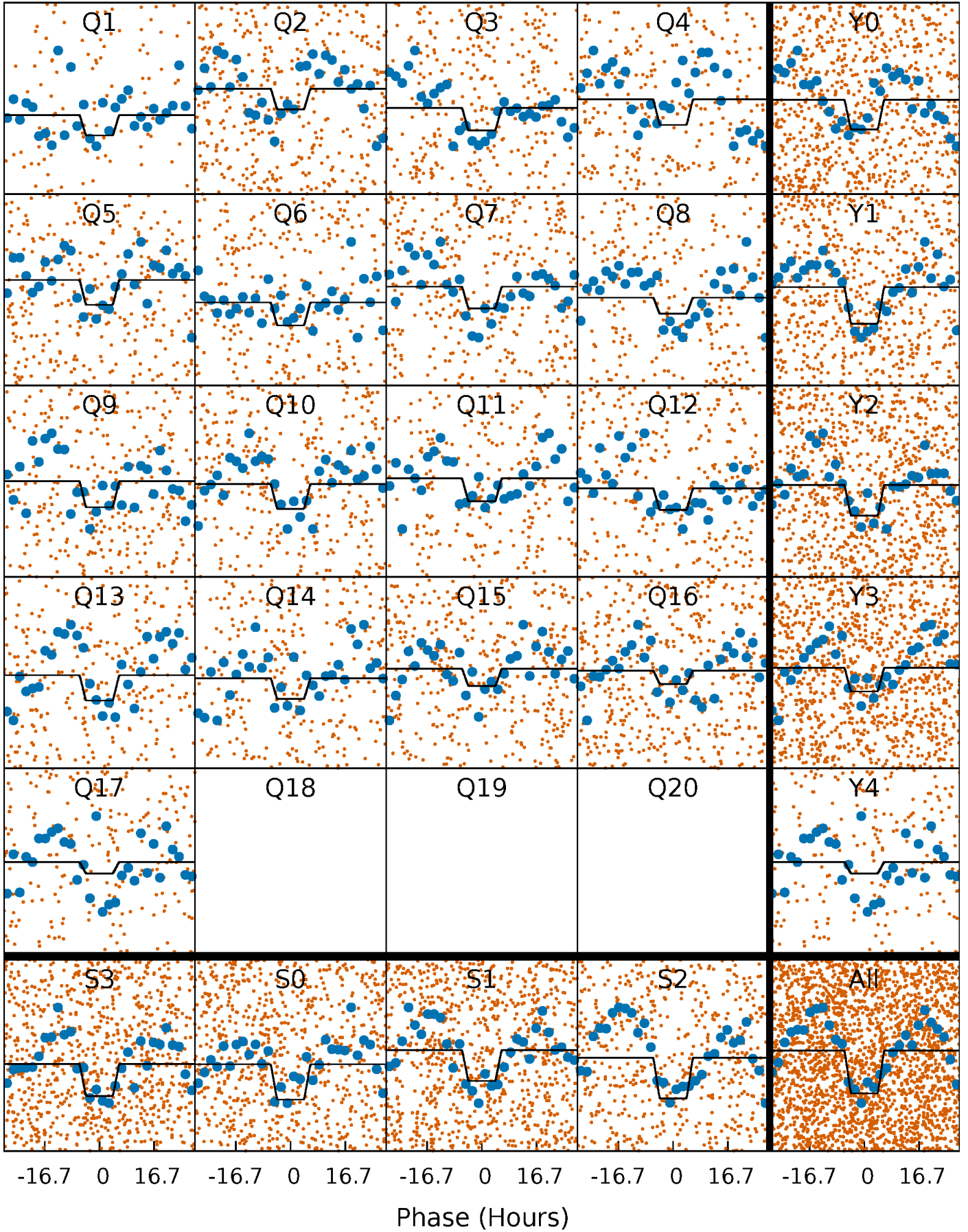
DV Quarter-Phased Transit Curves

TCE 010253943-01 P= 2.727300 Days $T_0=132.180501$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

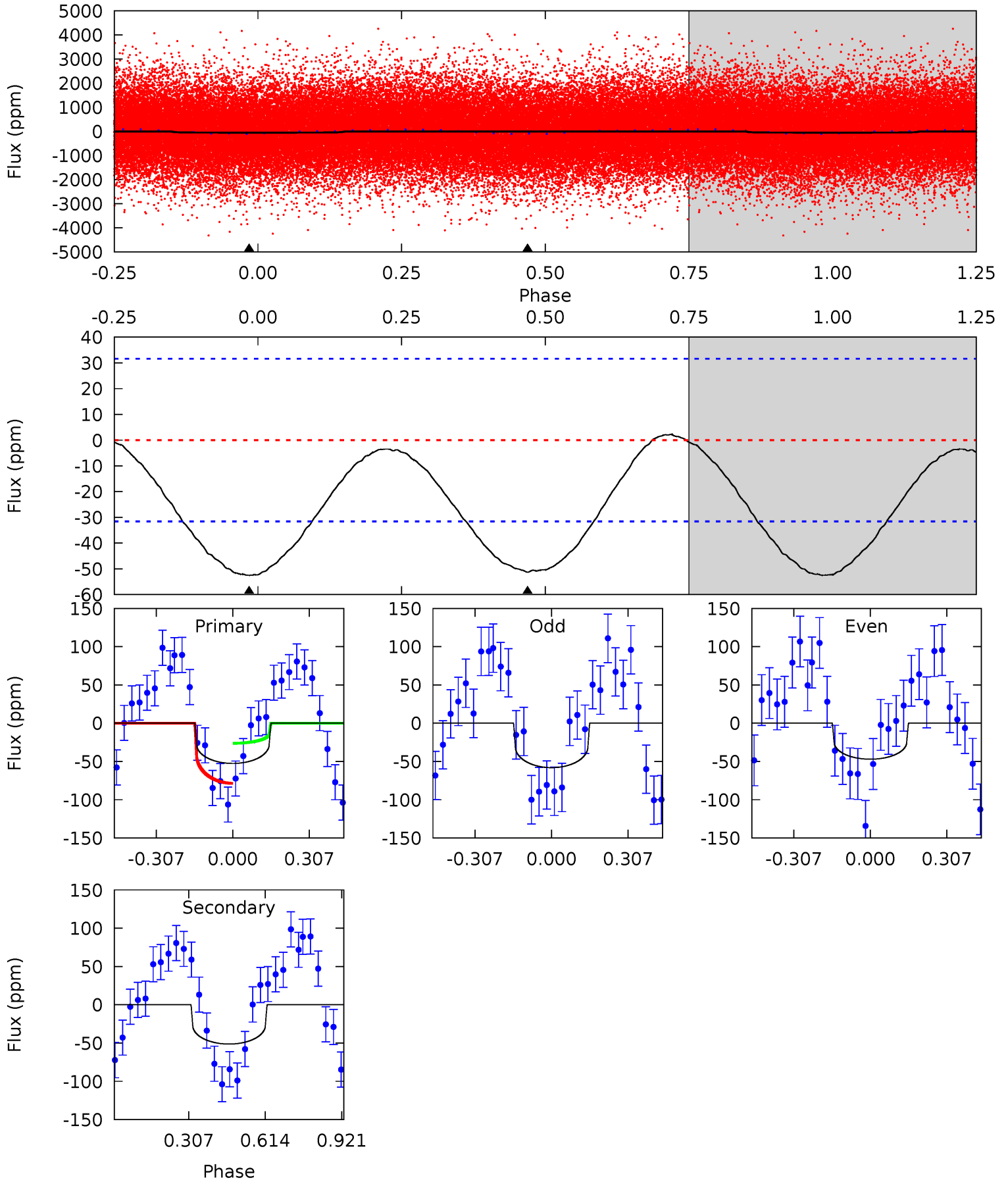
TCE 010253943-01 P= 2.726879 Days $T_0=132.213659$ (BKJD)



DV Model-Shift Uniqueness Test

010253943-01, P = 2.727300 Days, E = 129.453201 Days

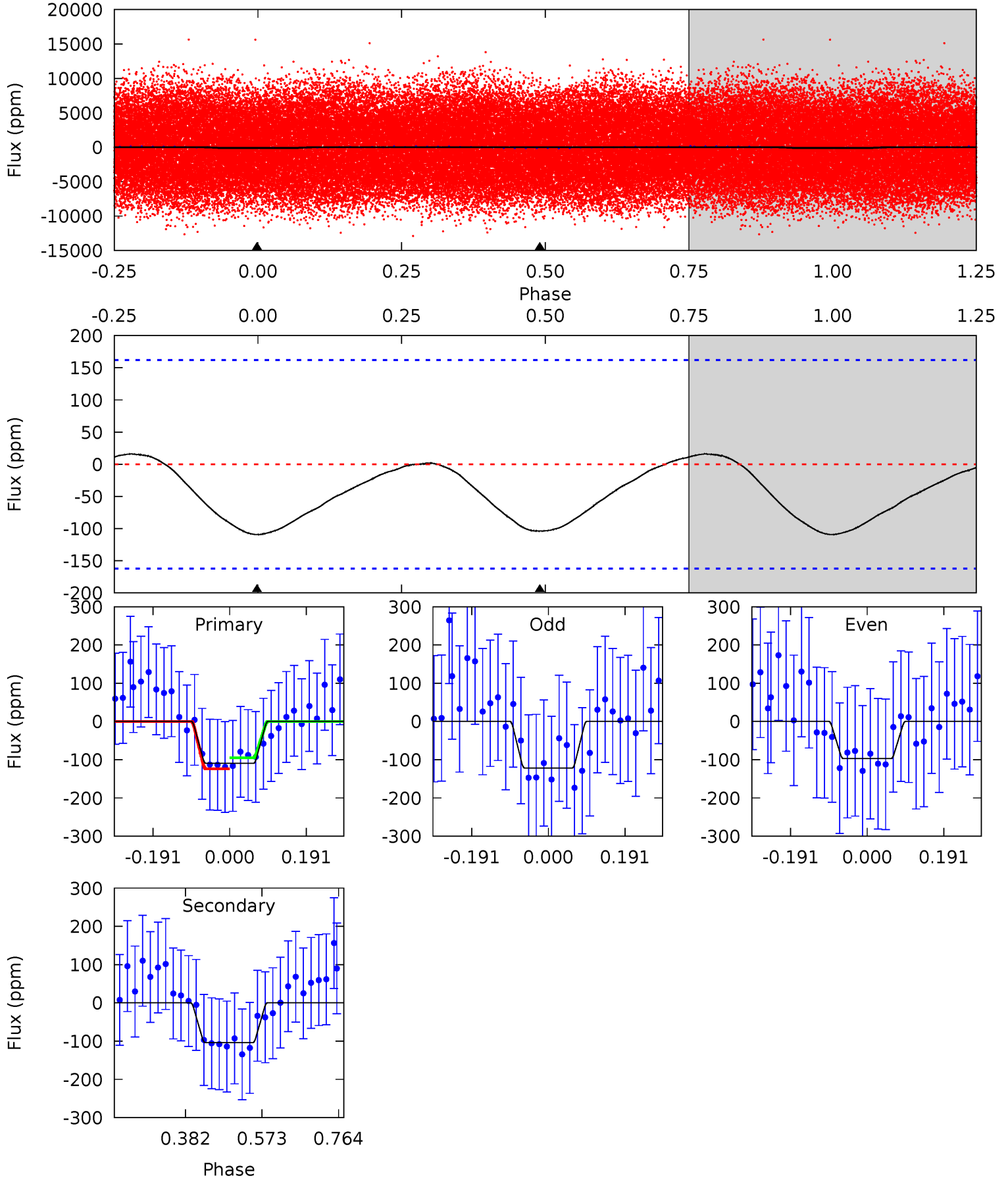
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	7.02	0	0	4.32	1.02	0.33	7.19	7.19	7.02	7.02	0.76	1.68	0.04	3.64



Alt Model-Shift Uniqueness Test

010253943-01, P = 2.726879 Days, E = 129.486780 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.99	2.84	0	0	4.43	1.31	0.31	2.99	2.99	2.84	2.84	0.33	1.47	0.13	0.39



Stellar Parameters For KIC 010253943

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7968^{+220}_{-331}	$3.685^{+0.476}_{-0.084}$	$-0.180^{+0.200}_{-0.300}$	$3.380^{+0.701}_{-1.752}$	$2.017^{+0.339}_{-0.509}$	$0.074^{+0.365}_{-0.025}$
	+3%/-4%	+13%/-2%	+111%/-167%	+21%/-52%	+17%/-25%	+497%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010253943-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 7	$3.30^{+3.32}_{-2.10}$	3930^{+323}_{-462}	6342^{+6979}_{-1688}	$5.929^{+41.017}_{-4.362}$
Alt.	-104 ± 37	$4.06^{+3.49}_{-2.55}$	3914^{+321}_{-504}	6790^{+7420}_{-1913}	$7.722^{+53.076}_{-5.616}$

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 $A_{obs} \gg 1.0$

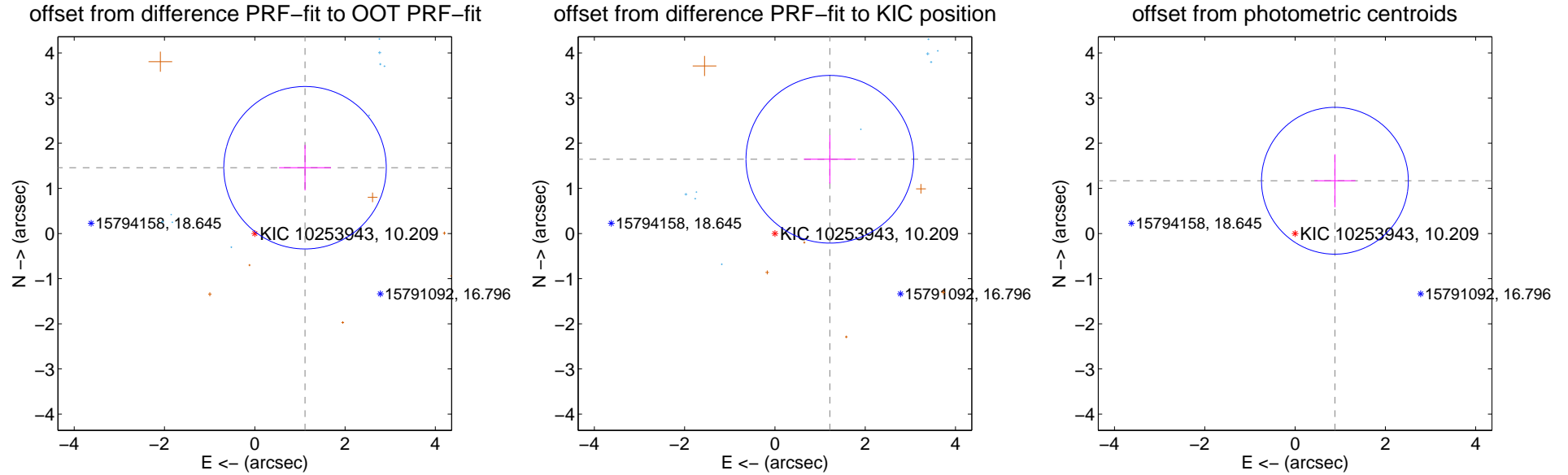
DV Centroid Data

Supplemental centroid analysis for 010253943-01. **Kepler magnitude: 10.21.** Transit SNR 4.40

There are 10 quarters with good PRF difference image offsets

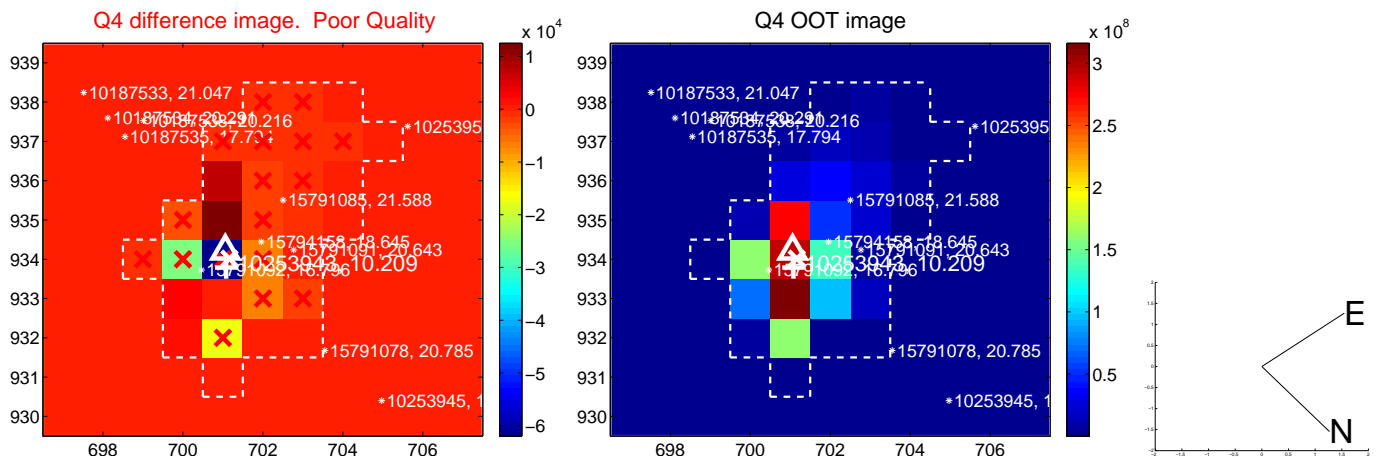
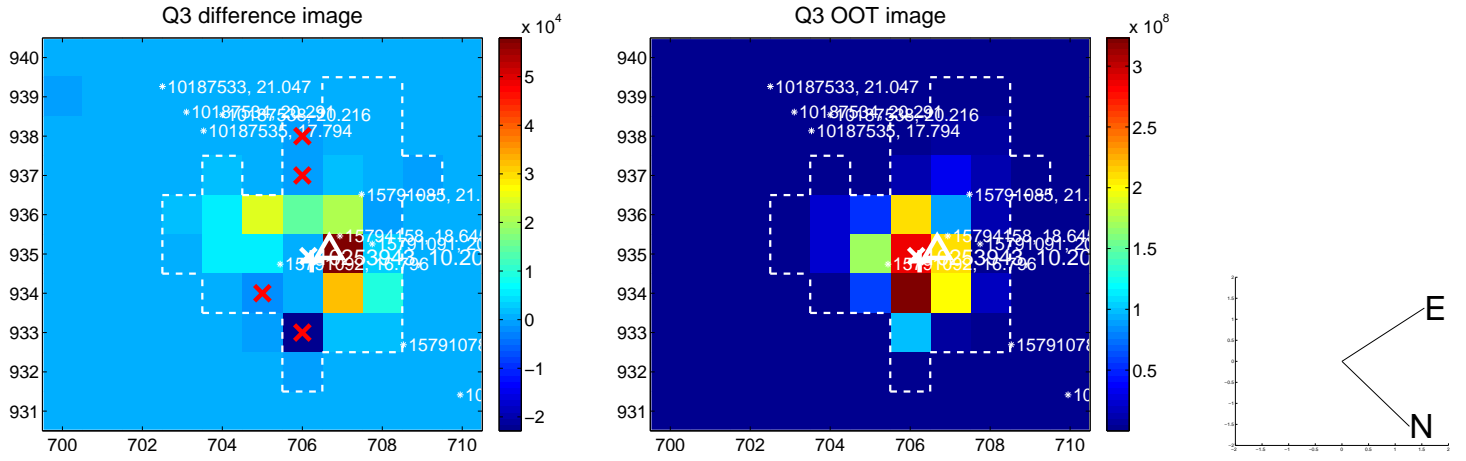
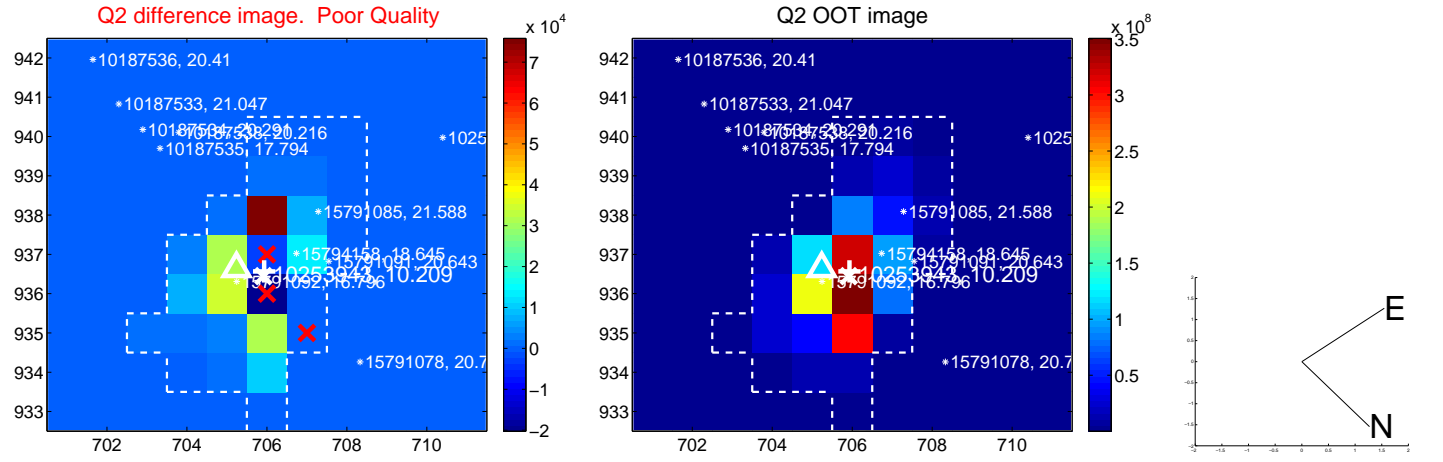
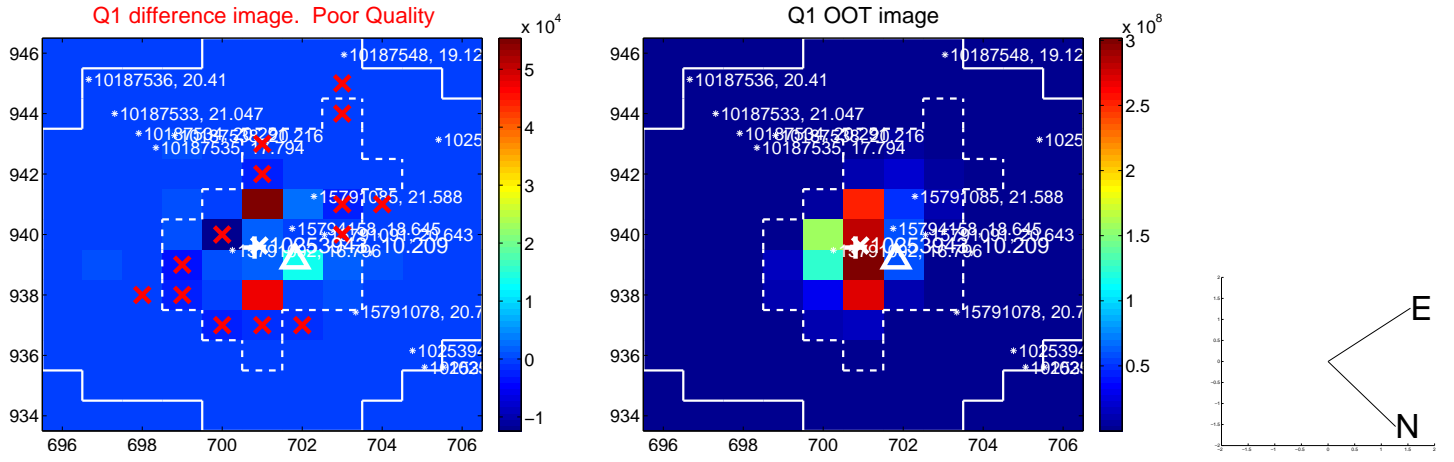
The direct PRF centroid is offset from the target star catalog position by about 0.68 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.834 ± 0.600	3.06	-1.114 ± 0.575	1.458 ± 0.503
PRF-fit source offset from KIC position	2.046 ± 0.619	3.30	-1.216 ± 0.573	1.645 ± 0.538
photometric centroid source offset	1.46 ± 0.54	2.70	-0.88 ± 0.45	1.17 ± 0.59

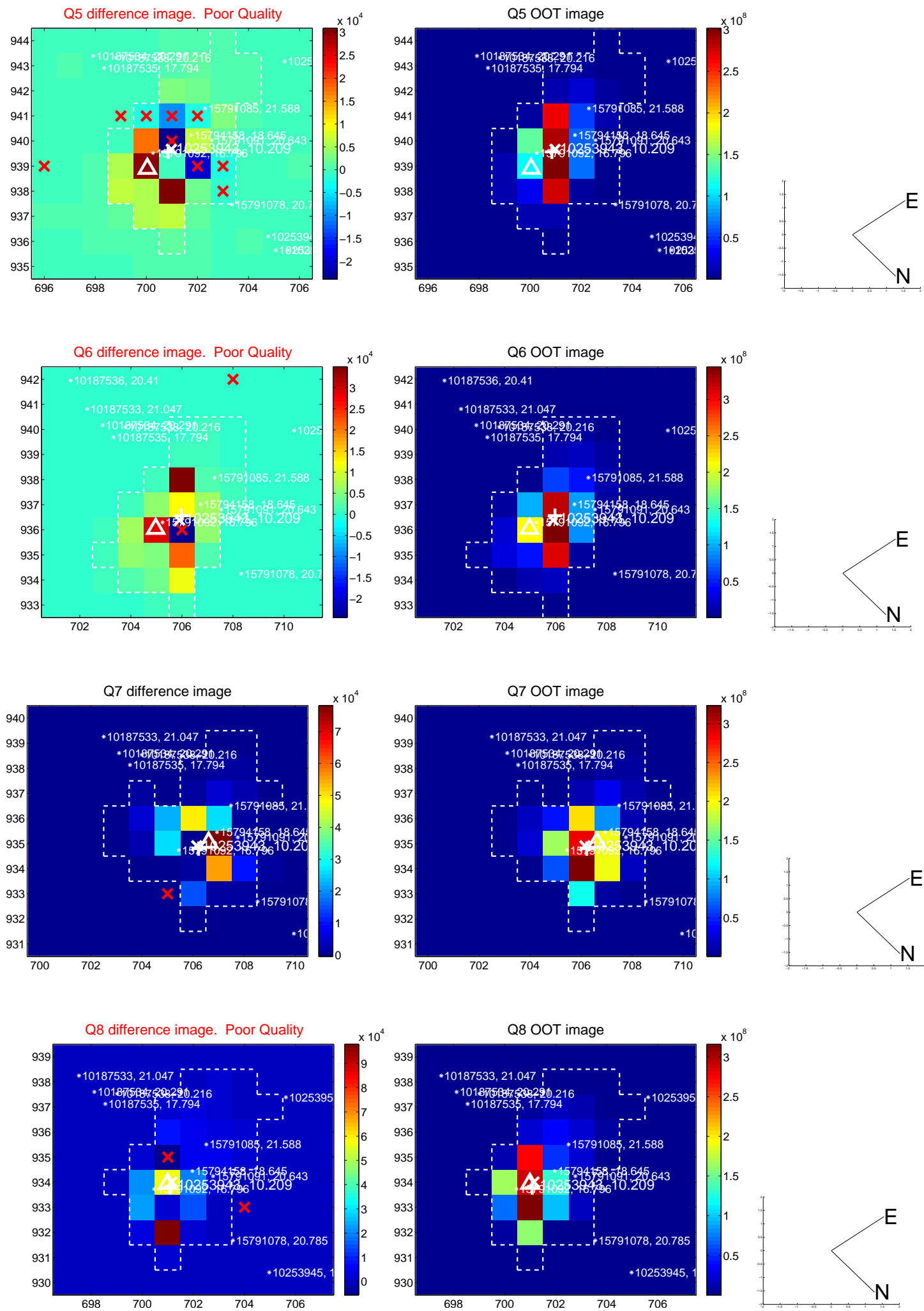


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

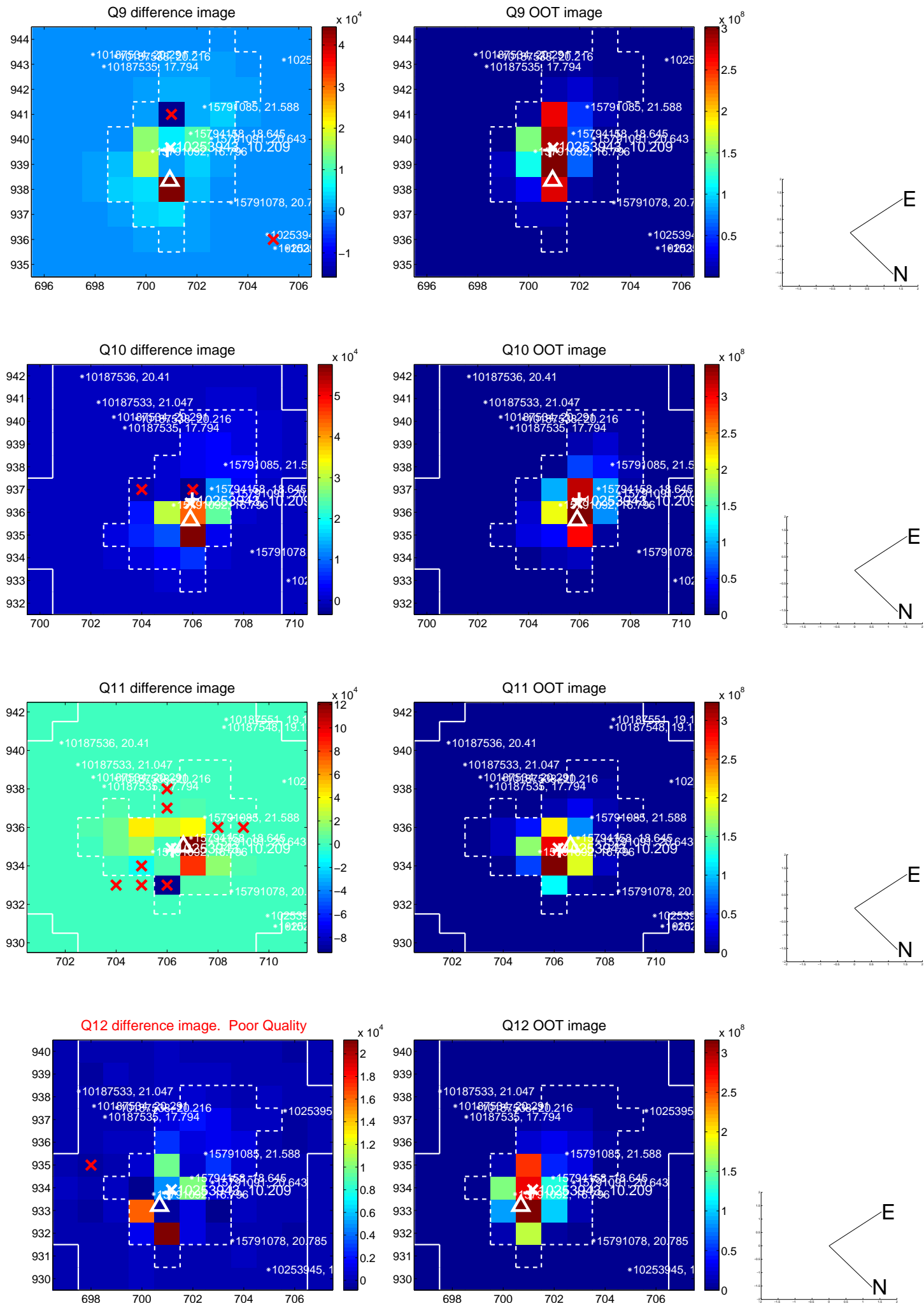
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



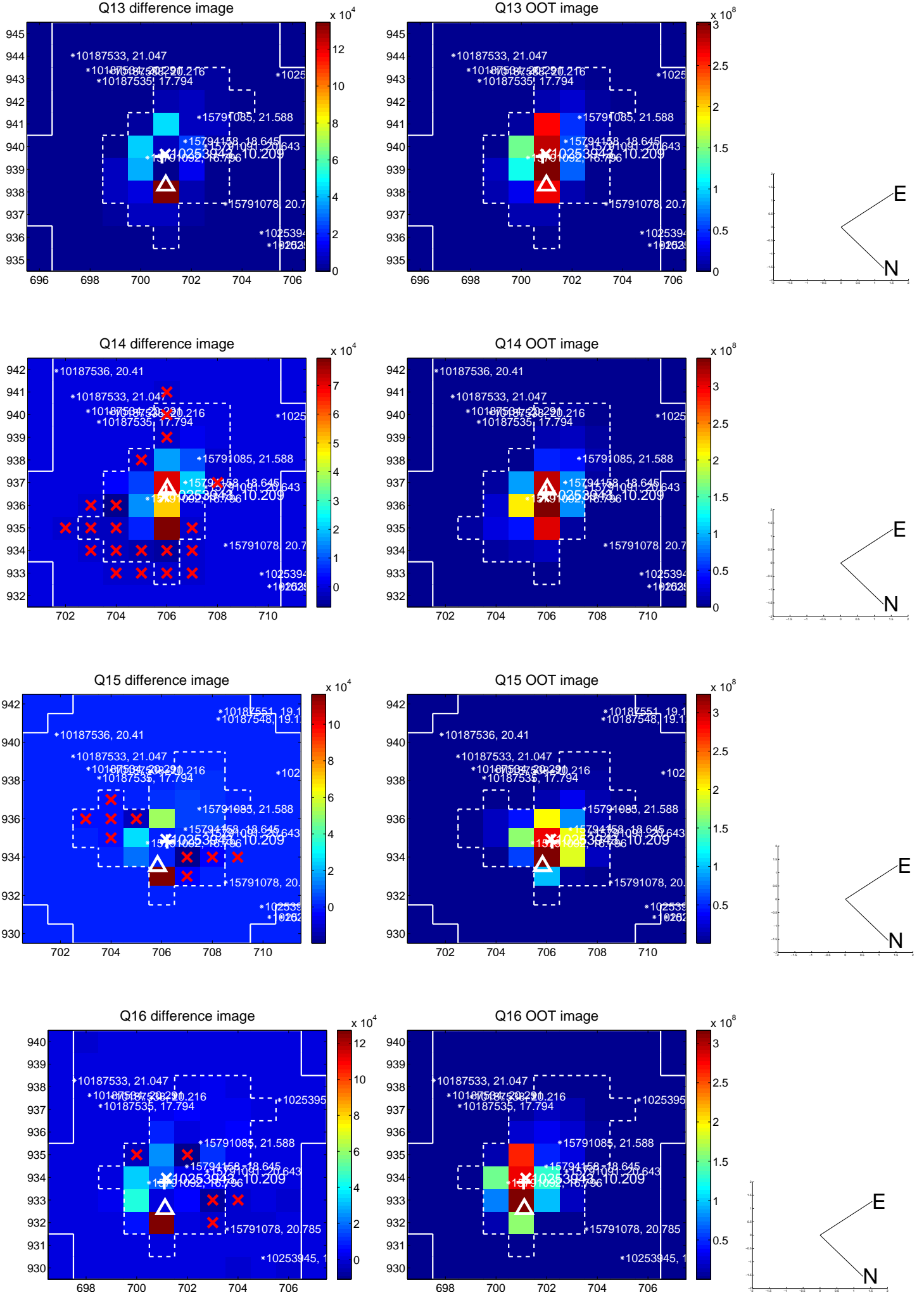
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



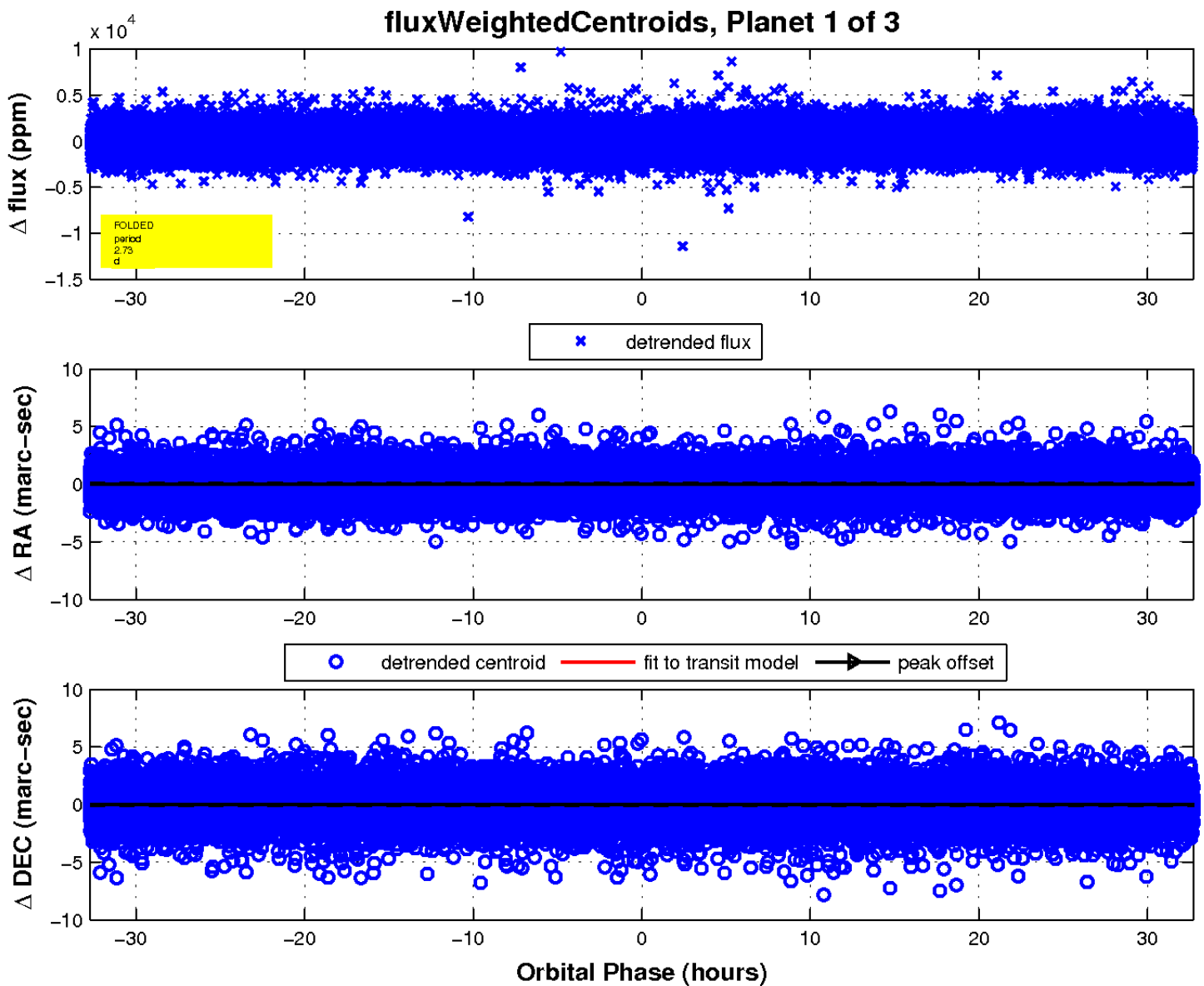
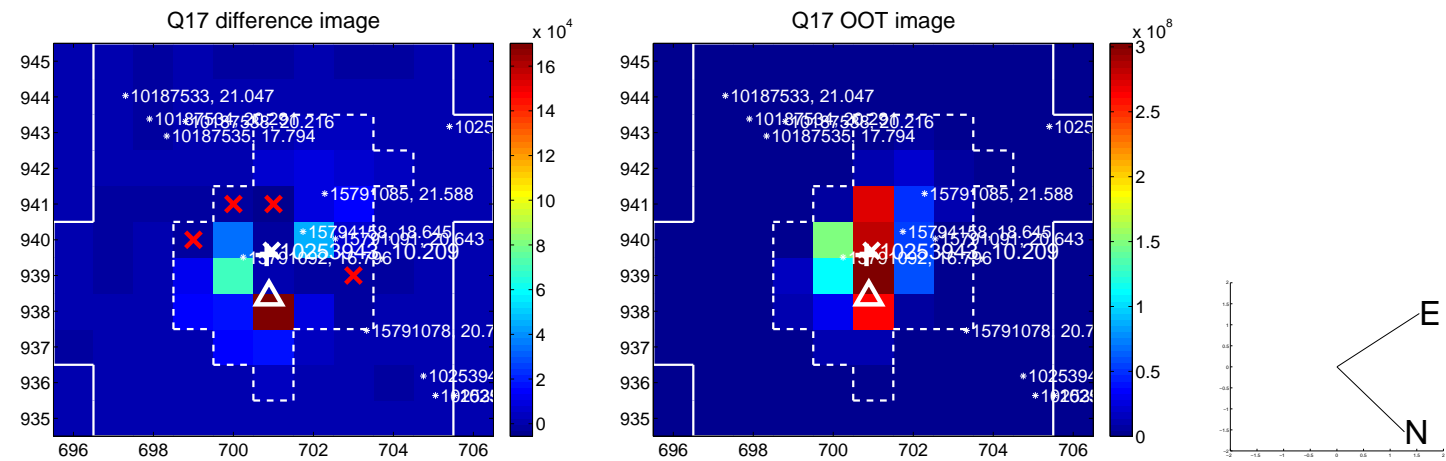
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

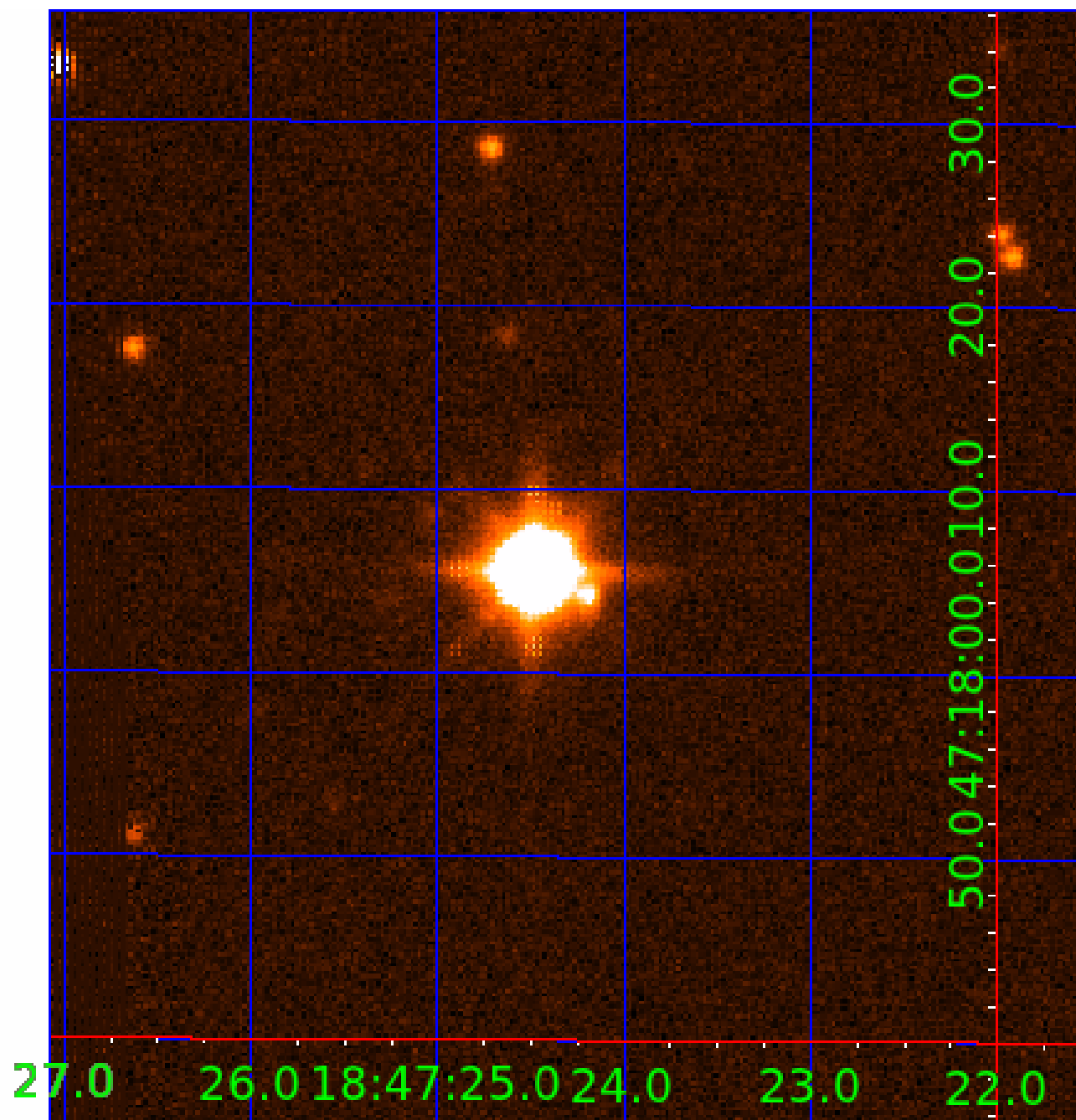


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010253943

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})
010253943-01	OBS	No	2.727300	132.180501	38.0	19.661	7.8	4.4	3.38	7968	2.10	17698.06
010253943-02	OBS	No	74.489524	152.651982	4120.5	8.493	37.6	29.0	3.38	7968	33.22	215.17
010253943-03	OBS	No	460.926402	518.159328	1251.2	9.750	17.1	11.0	3.38	7968	12.35	18.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010253943-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
010253943-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
010253943-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

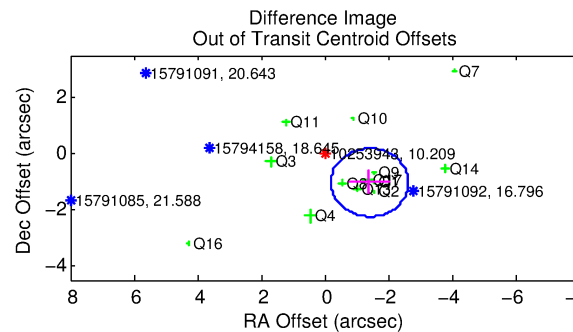
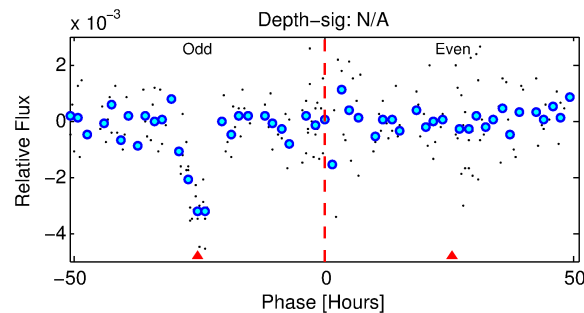
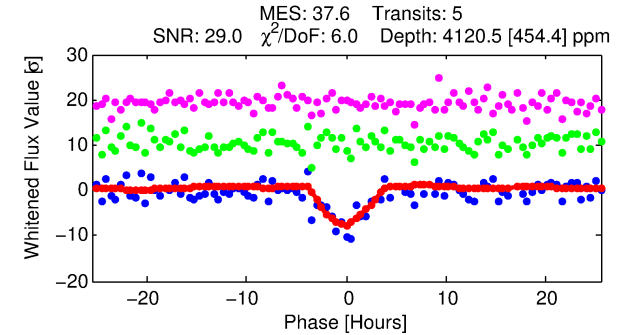
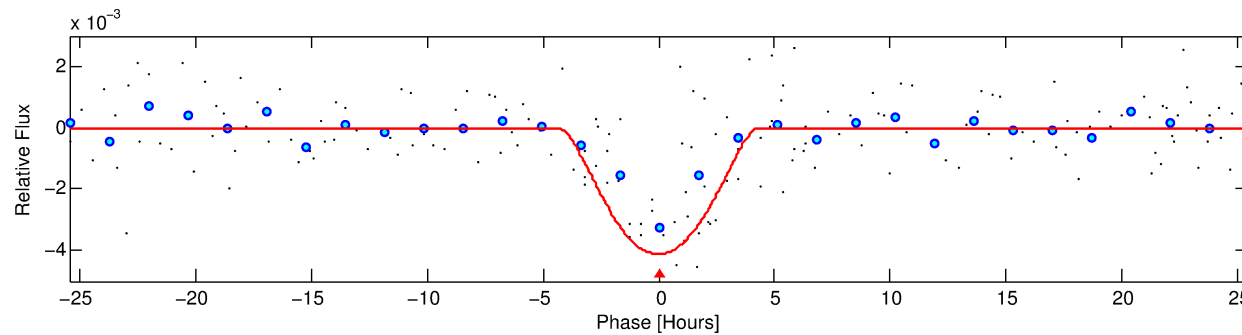
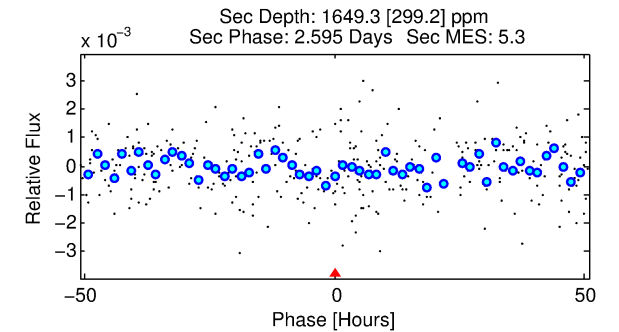
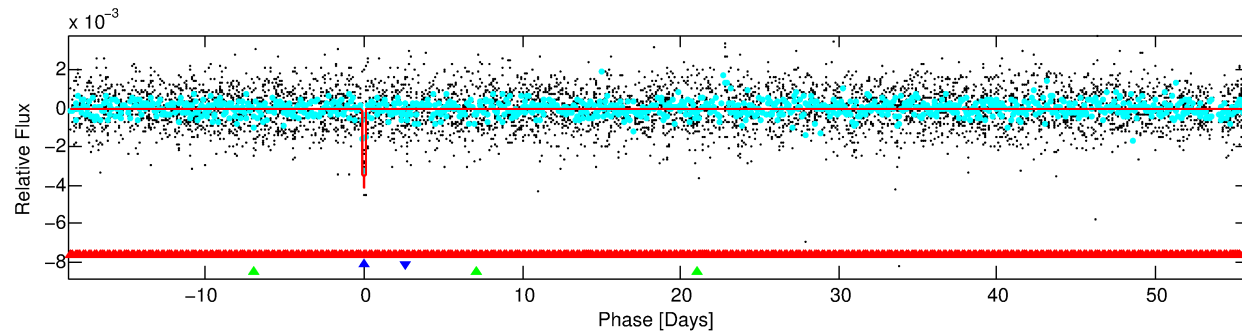
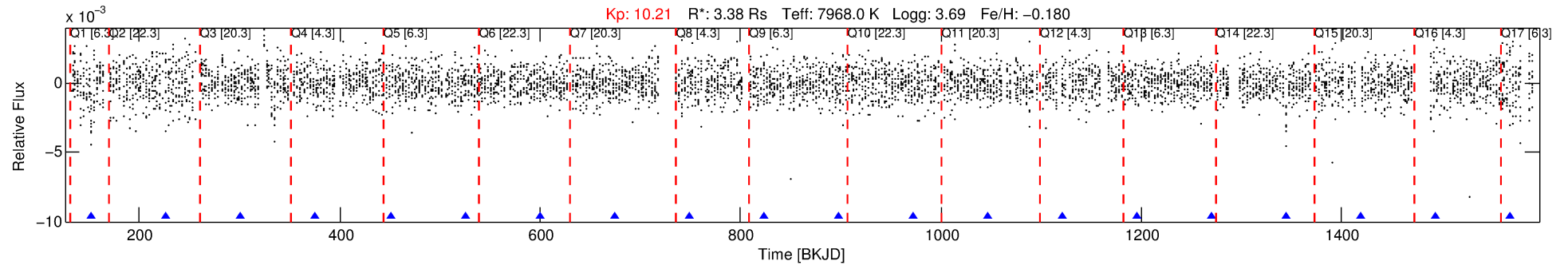
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010253943-02

No Significant Match Found

DV One-Page Summary

KIC: 10253943 Candidate: 2 of 3 Period: 74.490 d



DV Fit Results:

Period = 74.48952 [0.00104] d
Epoch = 152.6520 [0.0128] BKJD
Rp/R* = 0.0901 [0.1564]
a/R* = 32.64 [16.59]
b = 0.98 [0.26]
Seff = 215.17 [177.55]
Teq = 977 [201] K
Rp = 33.22 [60.21] Re
a = 0.4379 [0.2202] AU
Ag = 157.63 [562.86] [0.28 σ]
Teffp = 5350 [4657] K [0.94 σ]

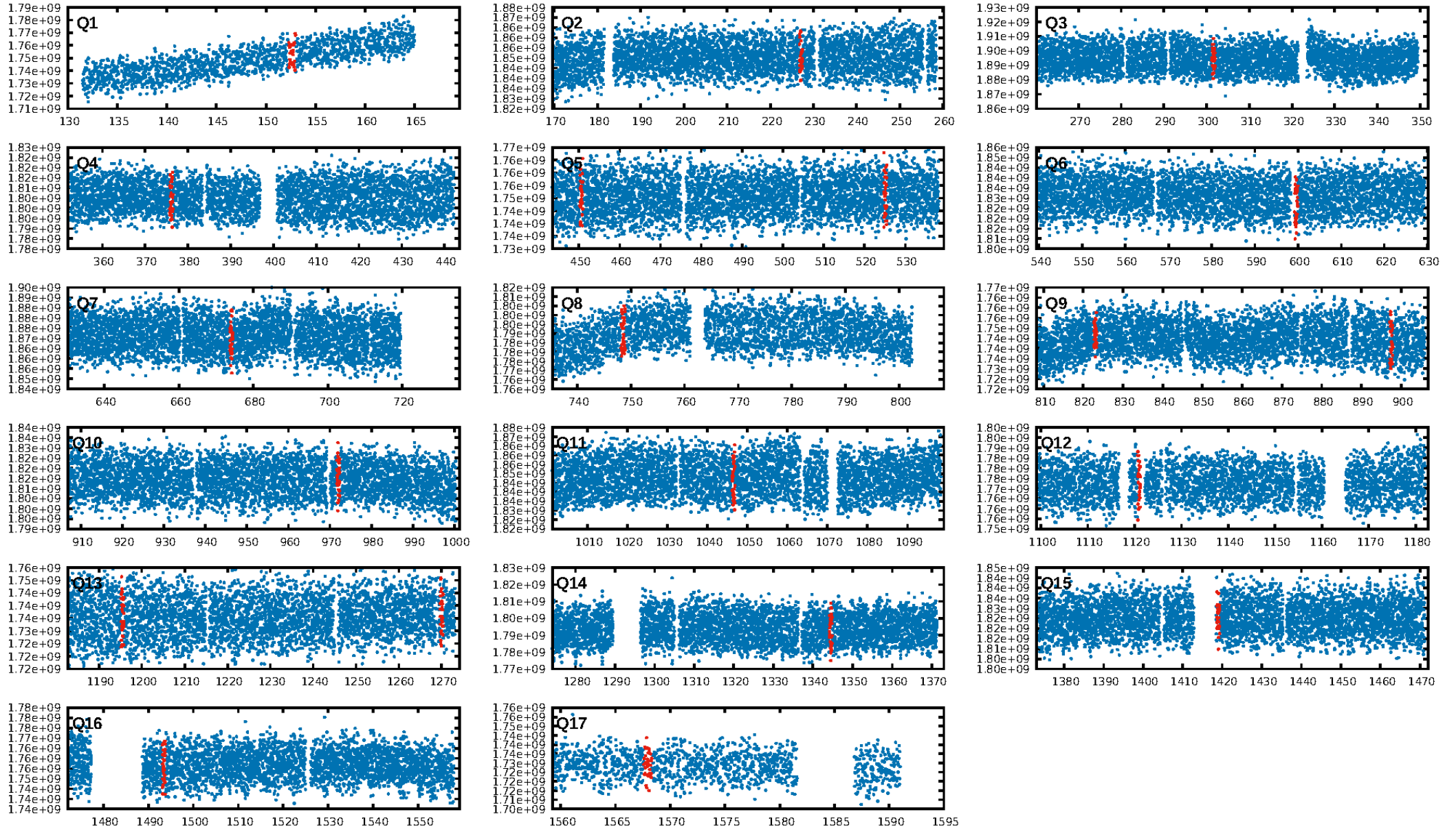
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.42 σ]
LongPeriod-sig: 100.0% [717.24 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 23.9%
Centroid-so: 0.372 arcsec [12.46 σ]
OotOffset-rm: 1.747 arcsec [4.32 σ]
KicOffset-rm: 2.011 arcsec [4.48 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.29 [4/14]

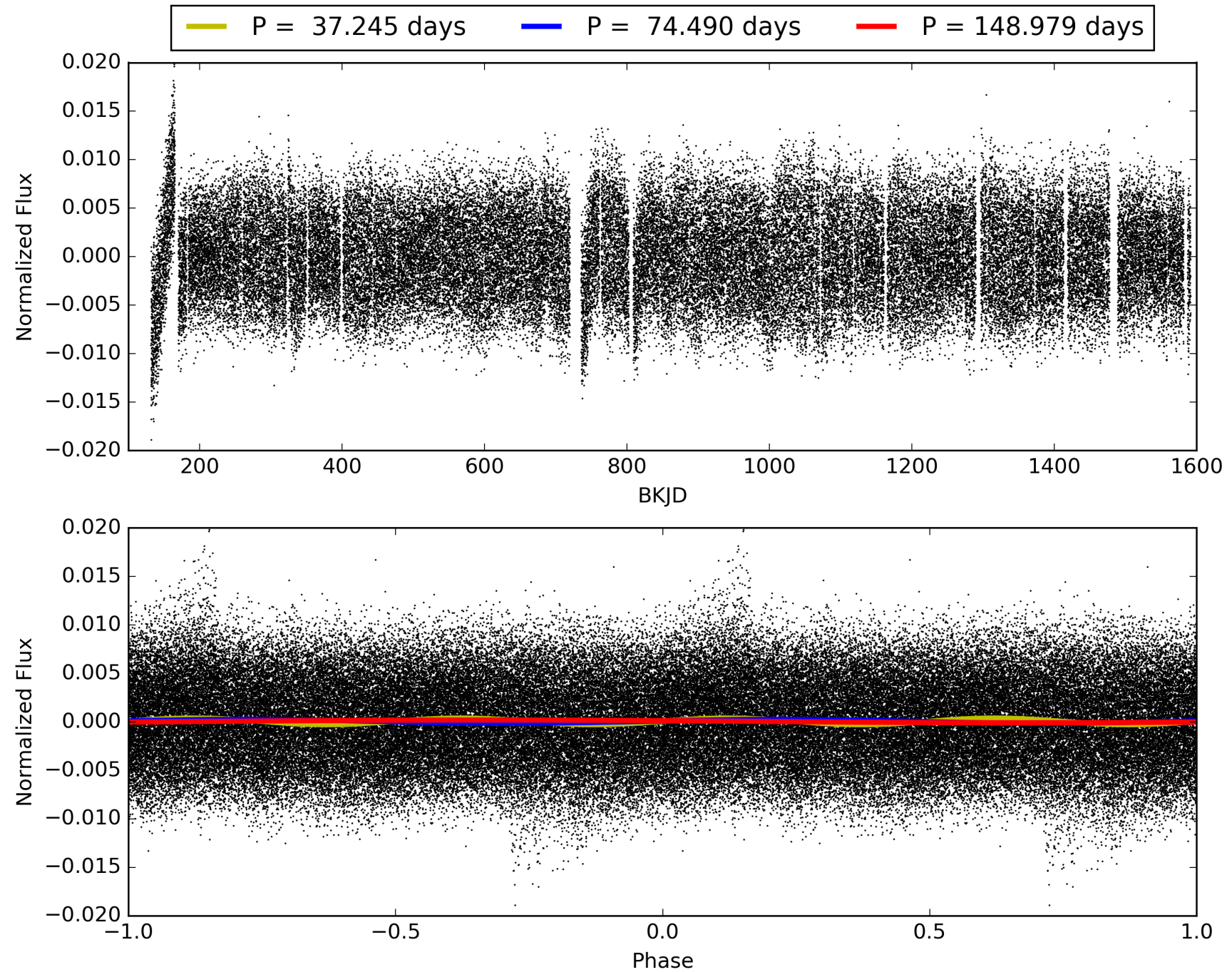
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:36:28 Z

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

TCE 010253943-02, PDC Light Curves

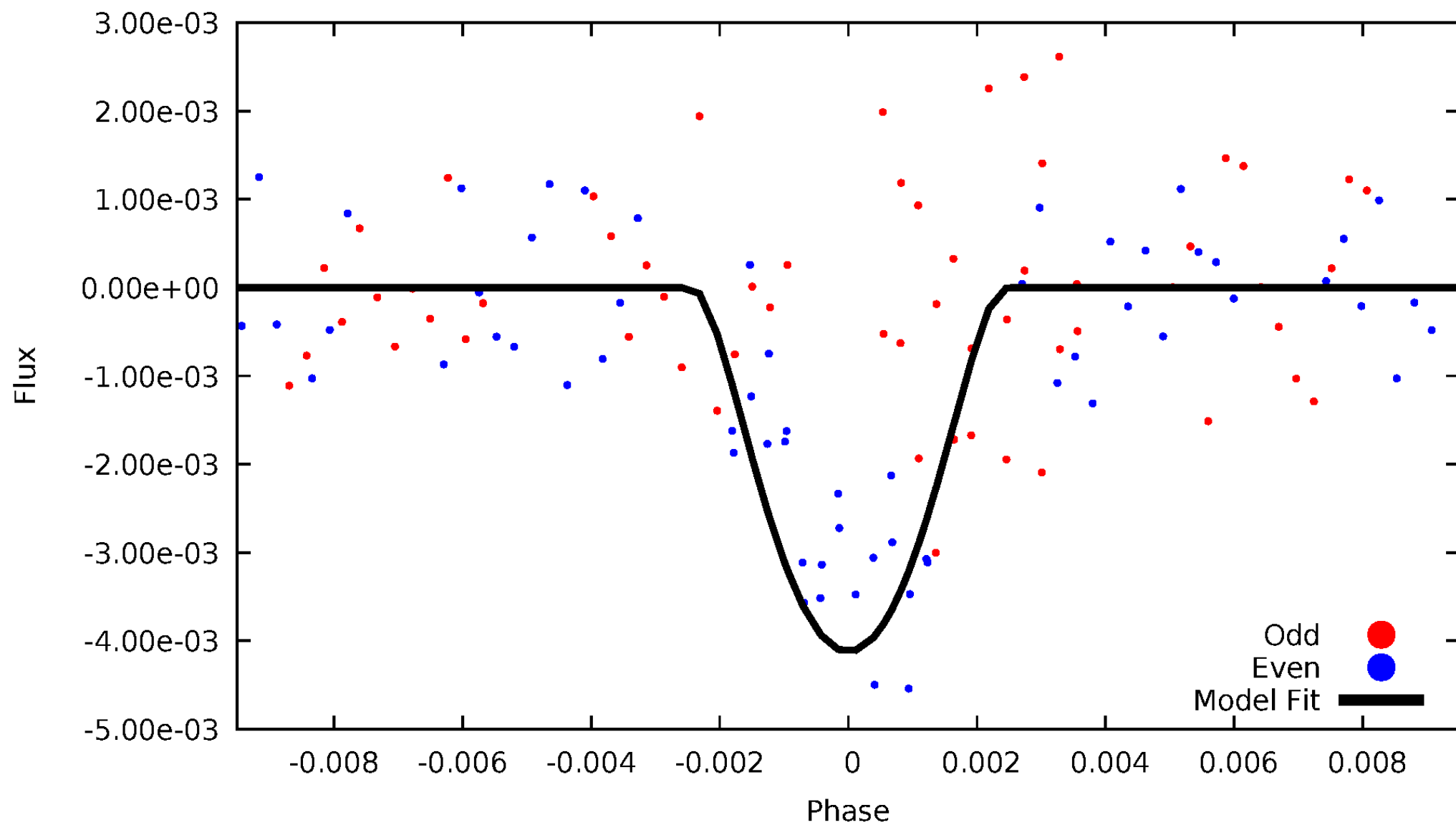


TCE 010253943-02



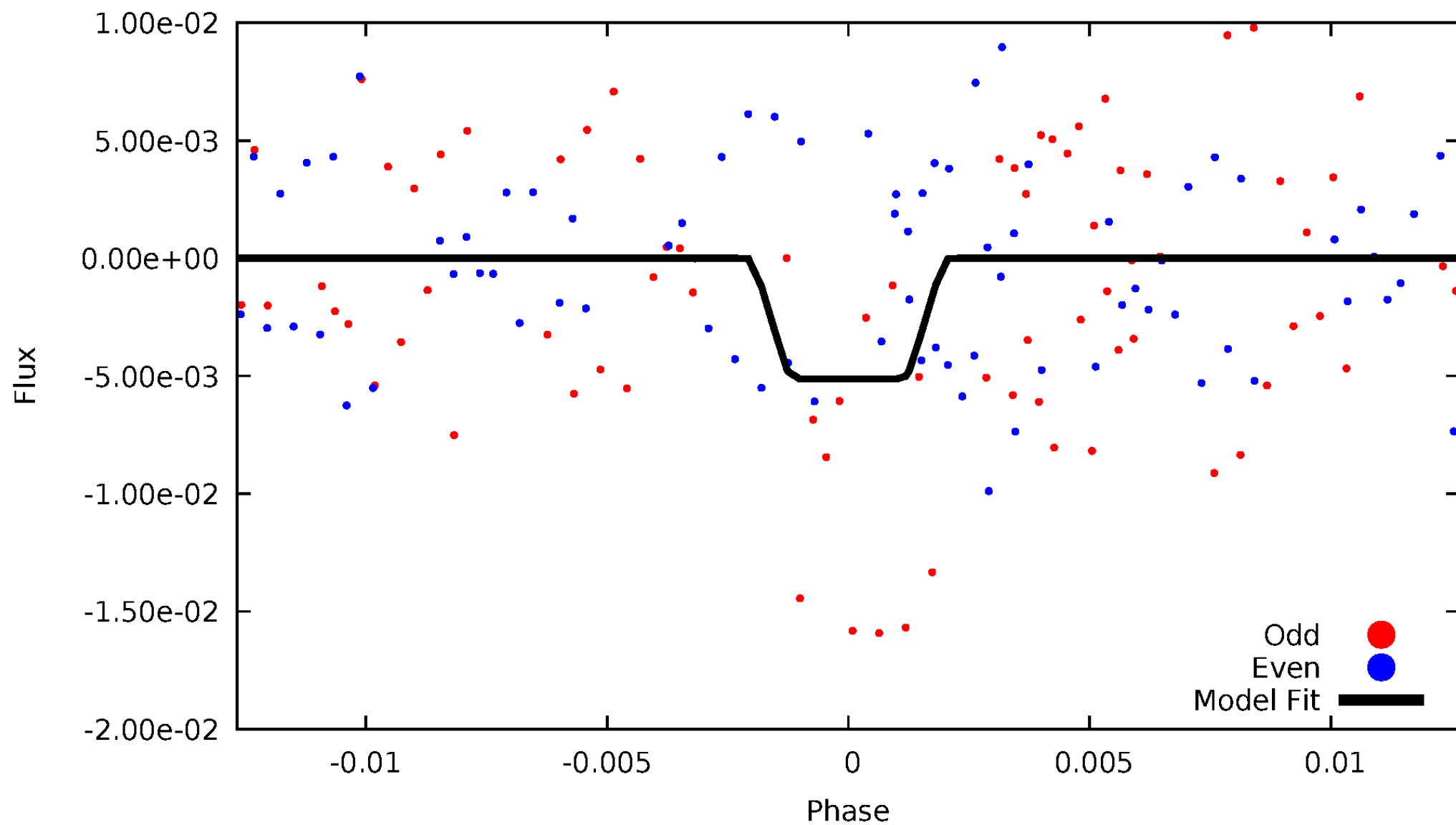
DV Odd/Even

TCE 010253943-02



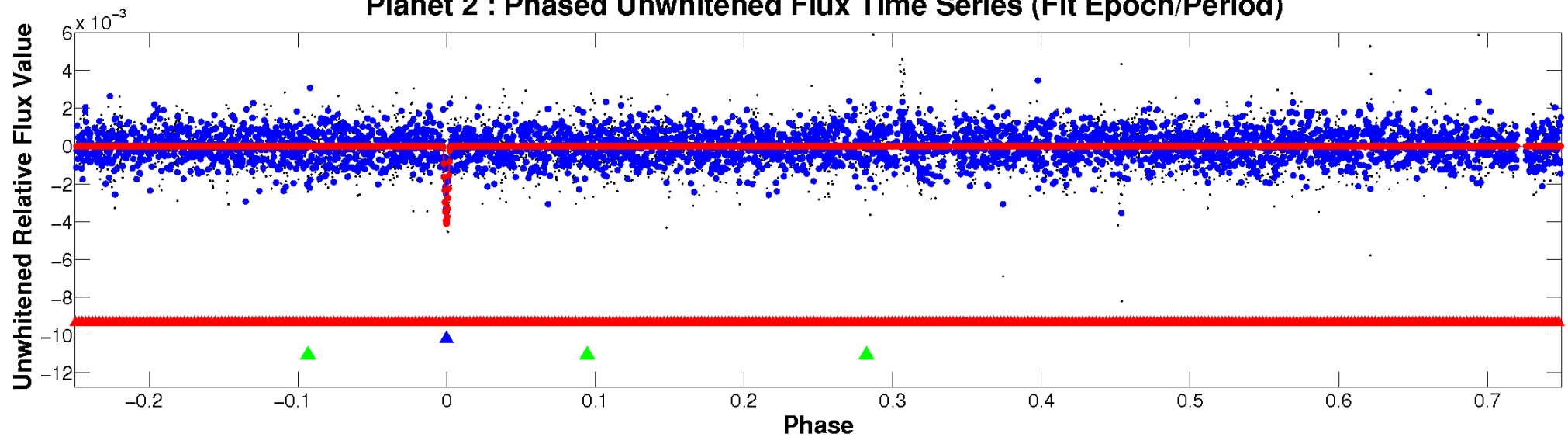
ALT Odd/Even

TCE 010253943-02

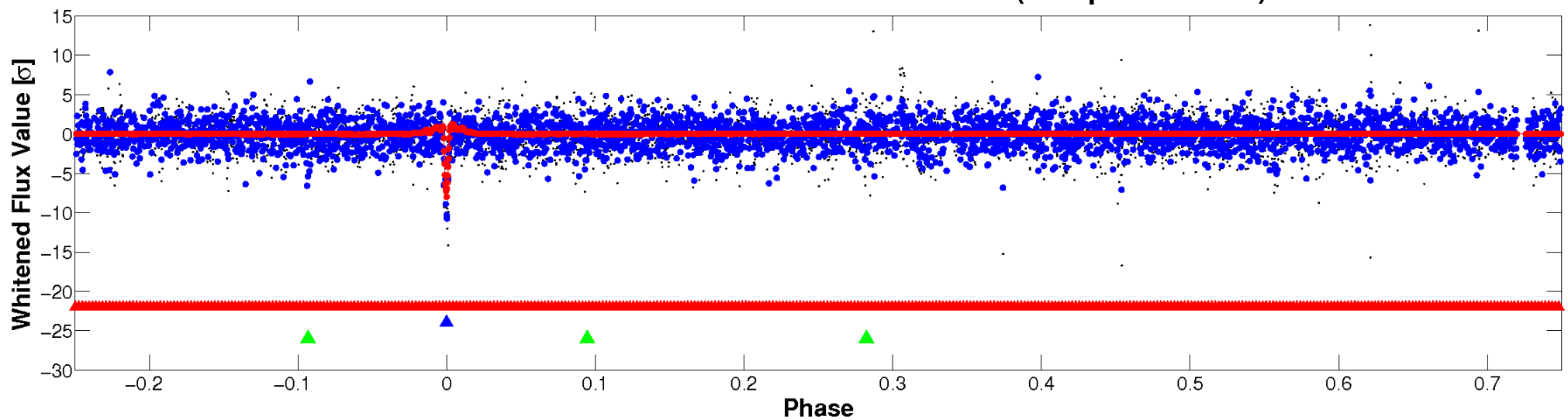


Non-Whitened Vs. Whitened Light Curve

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

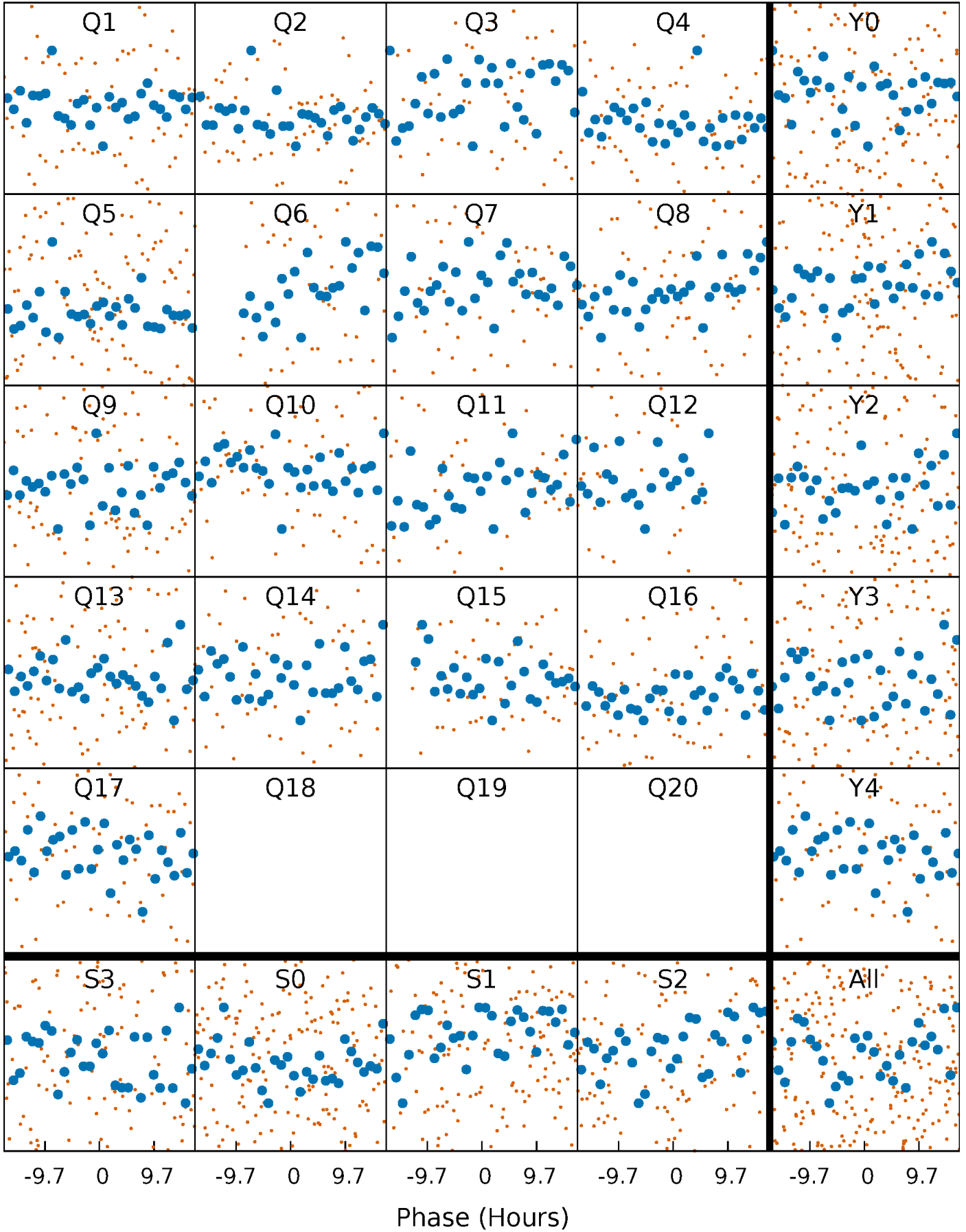


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



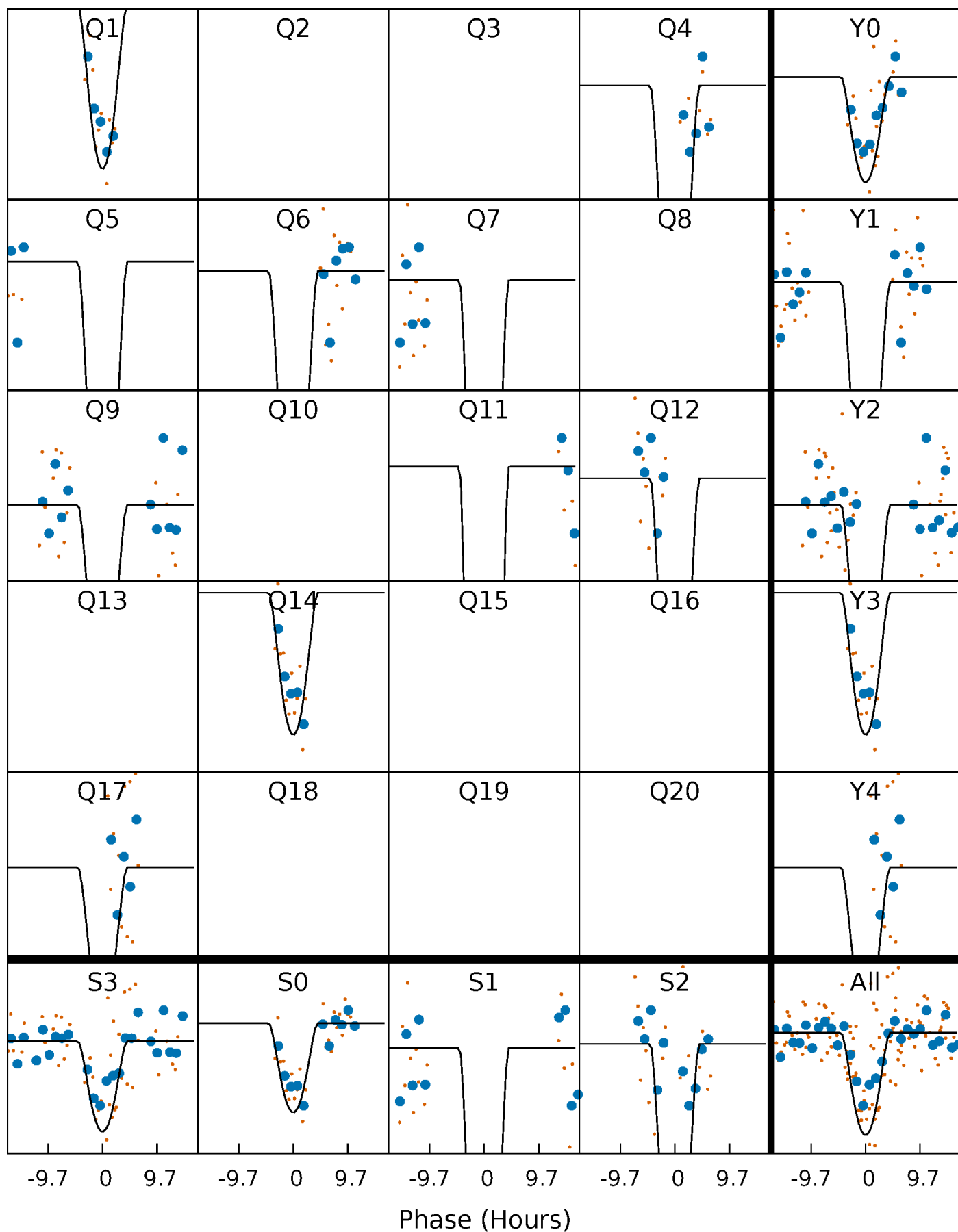
PDC Quarter-Phased Transit Curves

TCE 010253943-02 P= 74.489524 Days $T_0=152.651982$ (BKJD)



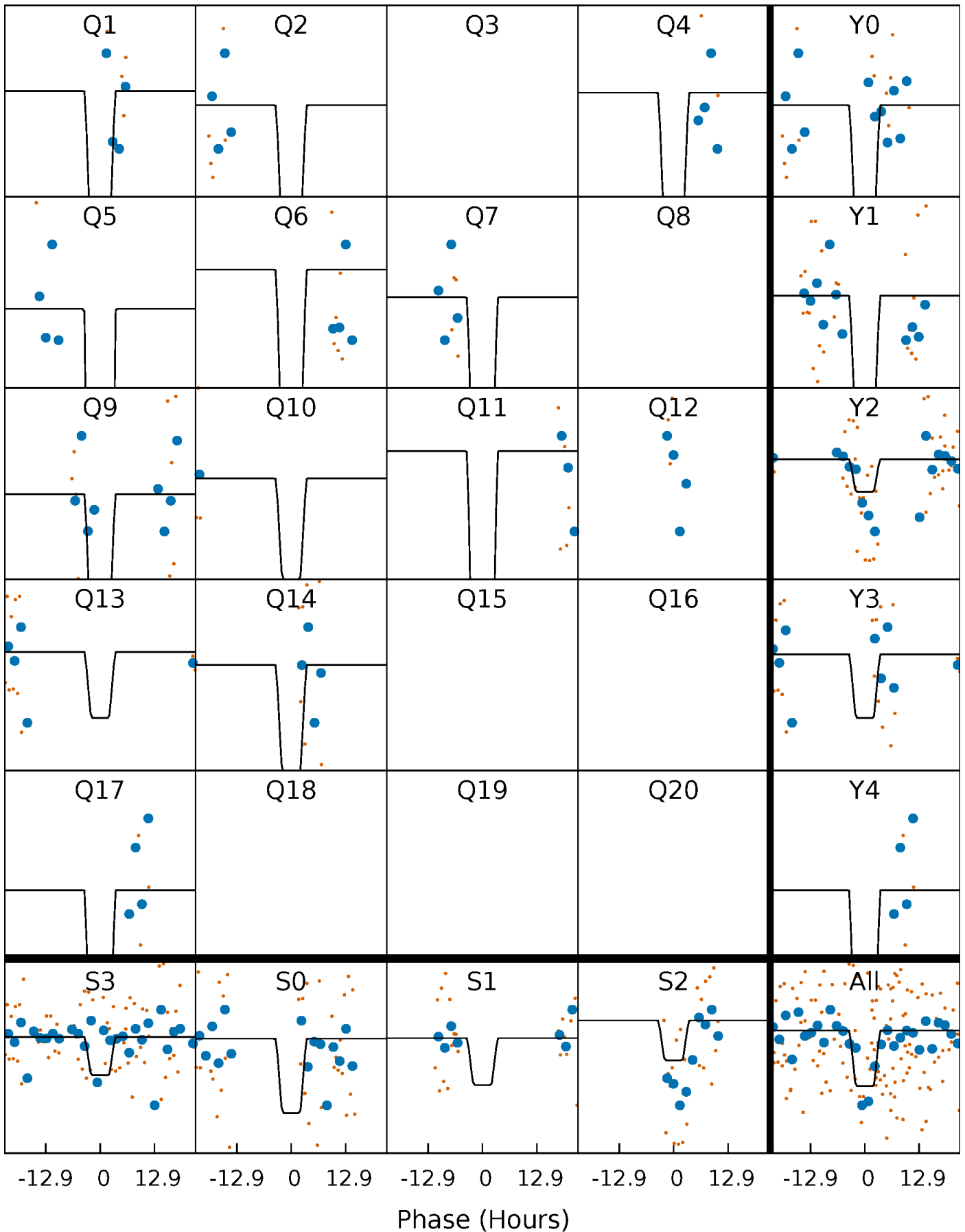
DV Quarter-Phased Transit Curves

TCE 010253943-02 $P = 74.489524$ Days $T_0 = 152.651982$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

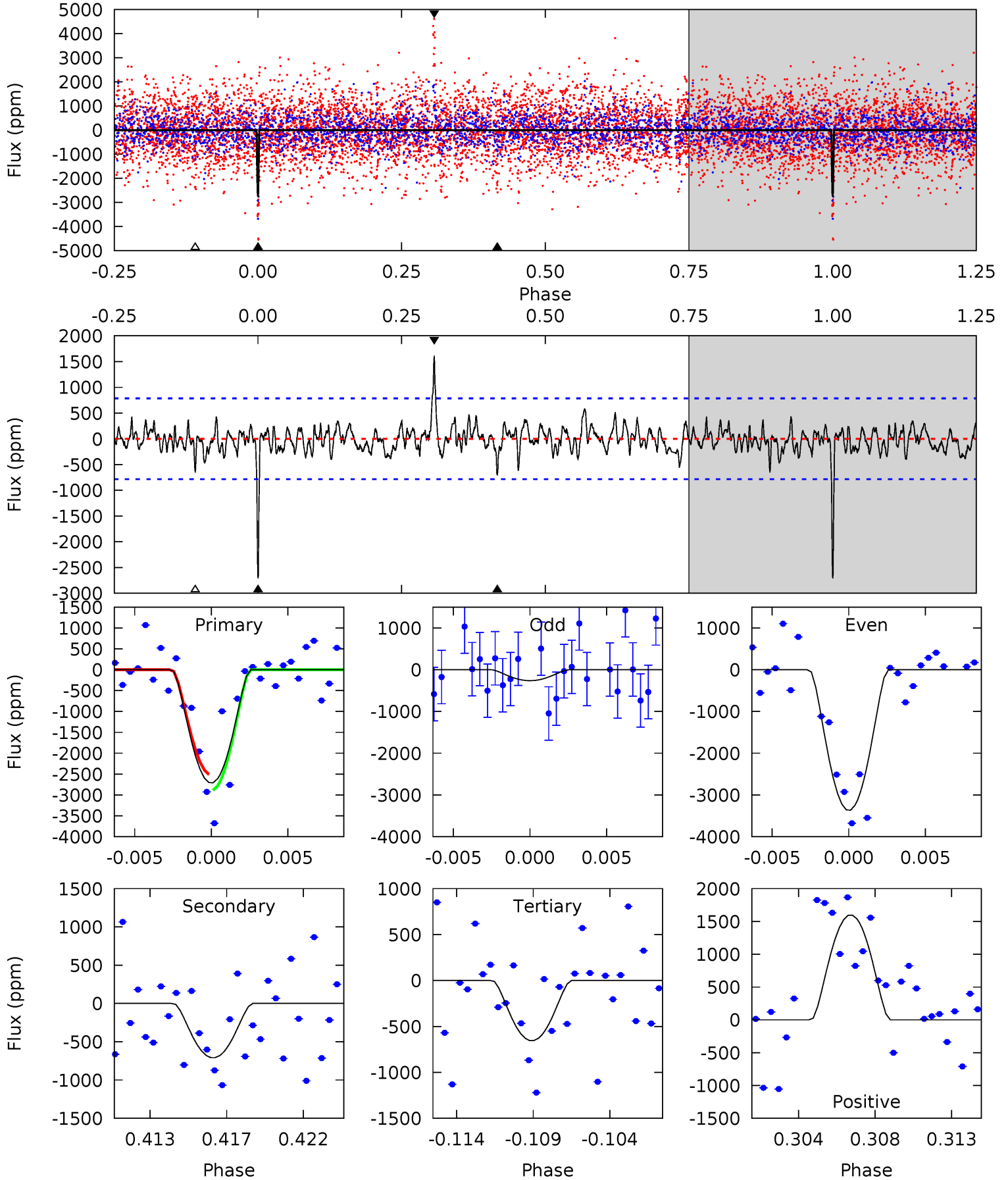
TCE 010253943-02 P= 74.486751 Days $T_0=152.488149$ (BKJD)



DV Model-Shift Uniqueness Test

010253943-02, P = 74.489524 Days, E = 78.162458 Days

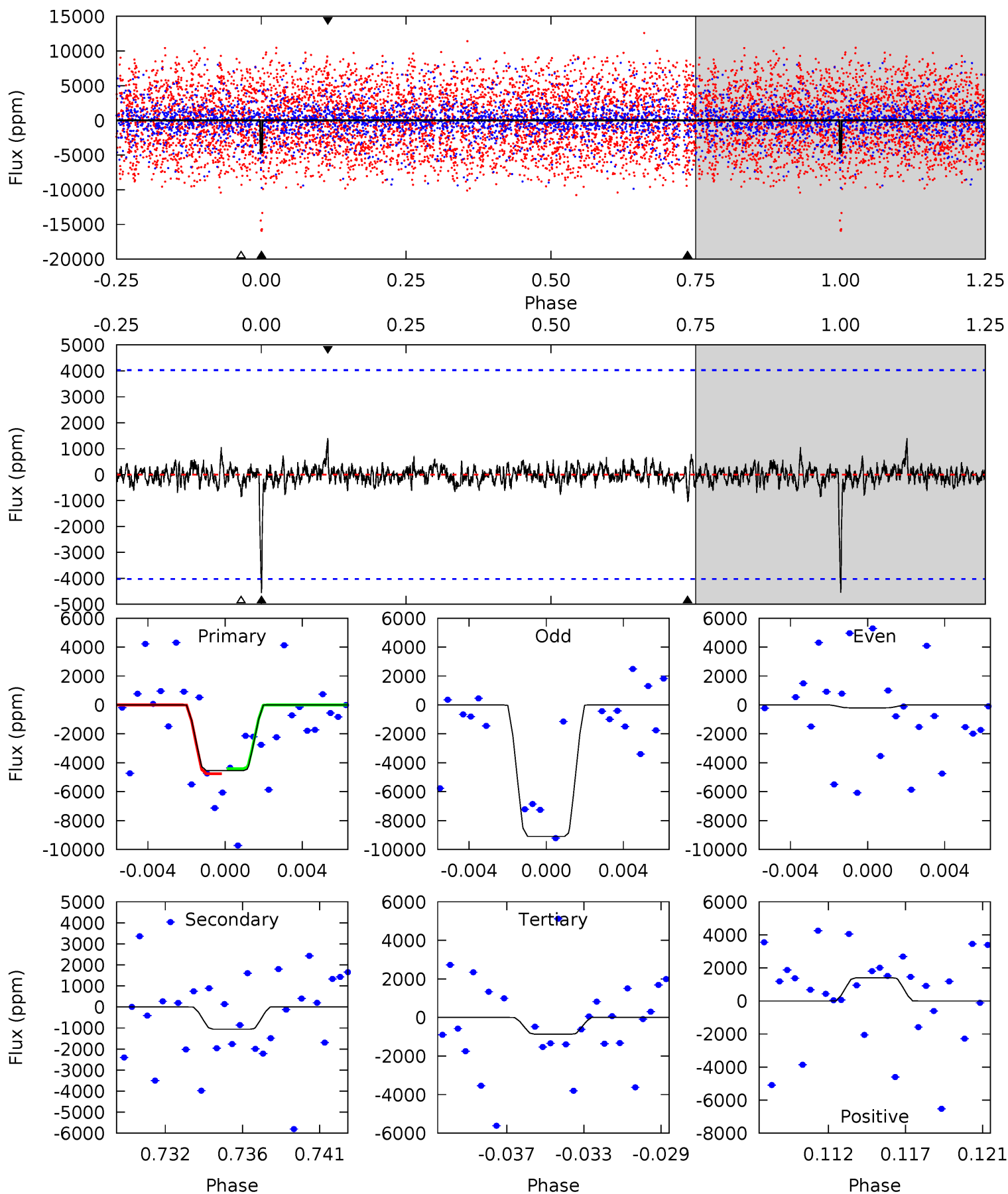
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	4.67	4.31	10.5	5.17	2.82	1.43	13.5	7.32	0.36	-5.84	10.5	2.20	0.37	1.25



Alt Model-Shift Uniqueness Test

010253943-02, P = 74.486751 Days, E = 78.001398 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.87	1.36	1.11	1.81	5.19	2.87	0.35	4.76	4.06	0.25	-0.44	5.81	21.4	0.24	0.22



Stellar Parameters For KIC 010253943

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7968^{+220}_{-331}	$3.685^{+0.476}_{-0.084}$	$-0.180^{+0.200}_{-0.300}$	$3.380^{+0.701}_{-1.752}$	$2.017^{+0.339}_{-0.509}$	$0.074^{+0.365}_{-0.025}$
	+3%/-4%	+13%/-2%	+111%/-167%	+21%/-52%	+17%/-25%	+497%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010253943-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-709 \pm 152	$46.86^{+48.94}_{-31.15}$	1311^{+96}_{-181}	3679^{+1975}_{-654}	33^{+256}_{-25}
Alt.	-1057 \pm 775	$42.08^{+49.14}_{-28.67}$	1315^{+98}_{-172}	3905^{+2281}_{-1205}	45^{+433}_{-41}

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

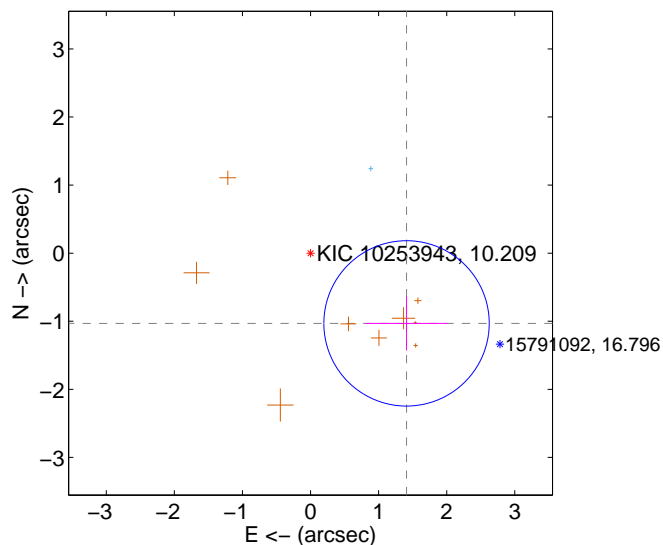
Supplemental centroid analysis for 010253943-02. **Kepler magnitude: 10.21.** Transit SNR 29.02

There are 3 quarters with good PRF difference image offsets

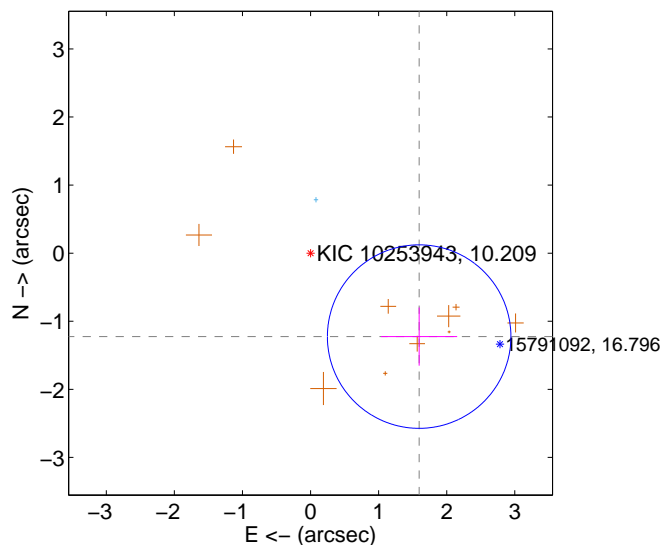
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.747 ± 0.405	4.32	-1.410 ± 0.601	-1.031 ± 0.399
PRF-fit source offset from KIC position	2.011 ± 0.449	4.48	-1.595 ± 0.558	-1.225 ± 0.427
photometric centroid source offset	0.37 ± 0.03	12.46	-0.25 ± 0.03	0.28 ± 0.03

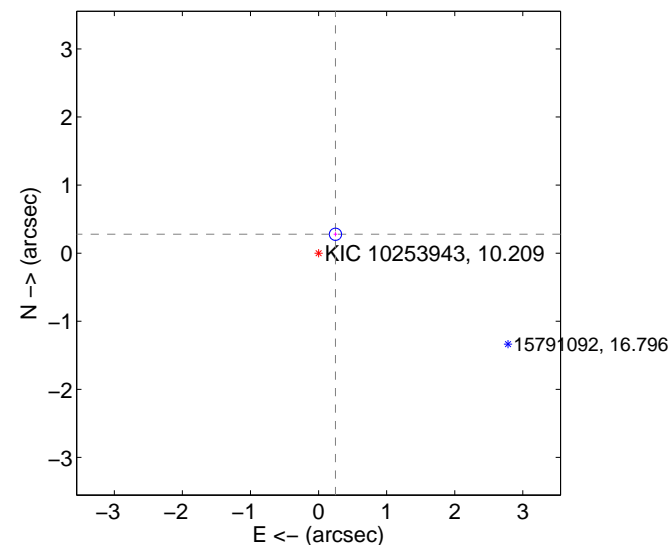
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

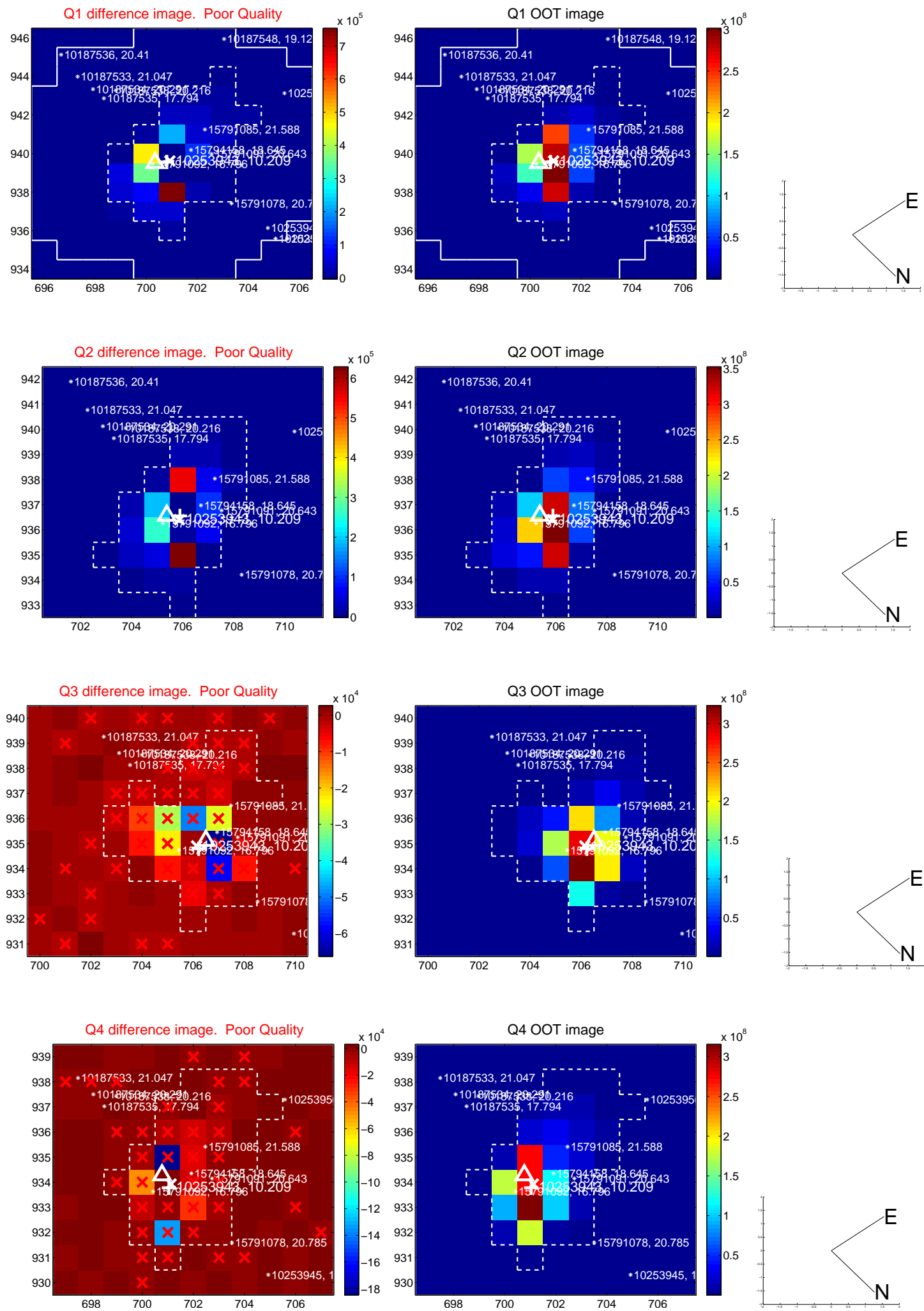


offset from photometric centroids

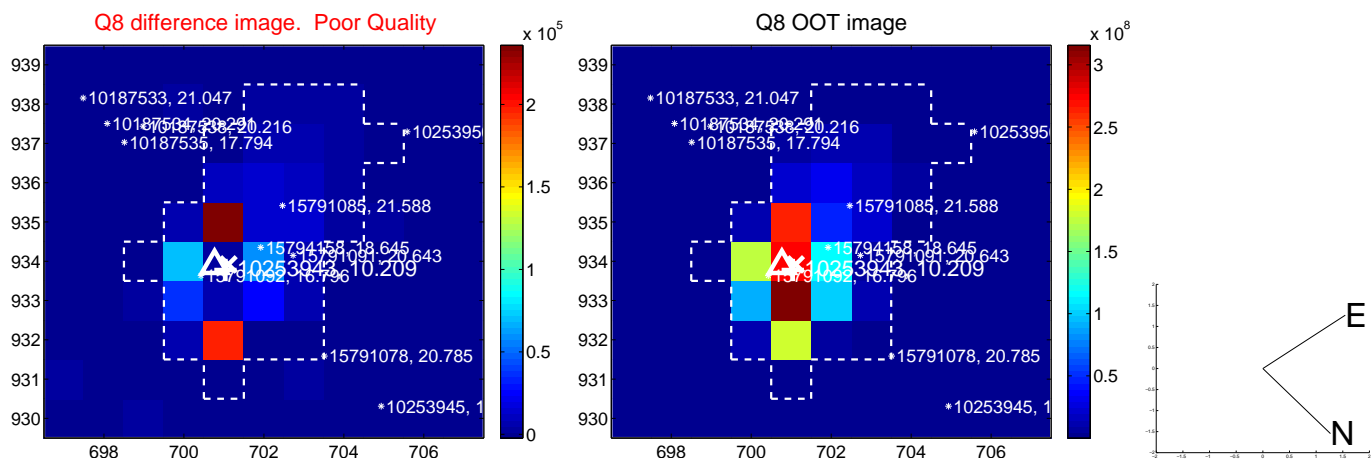
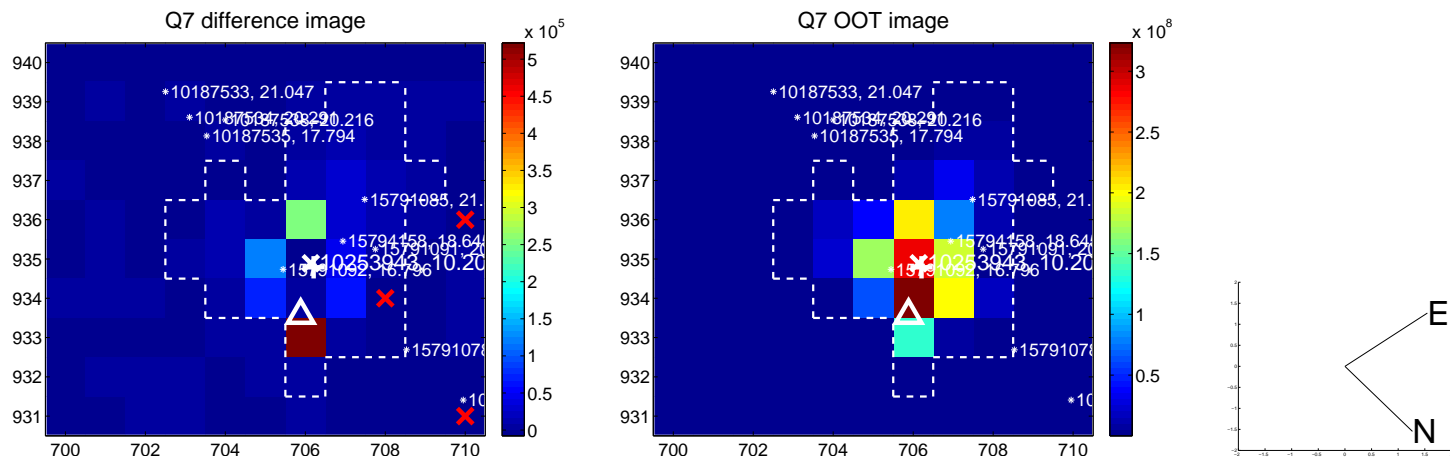
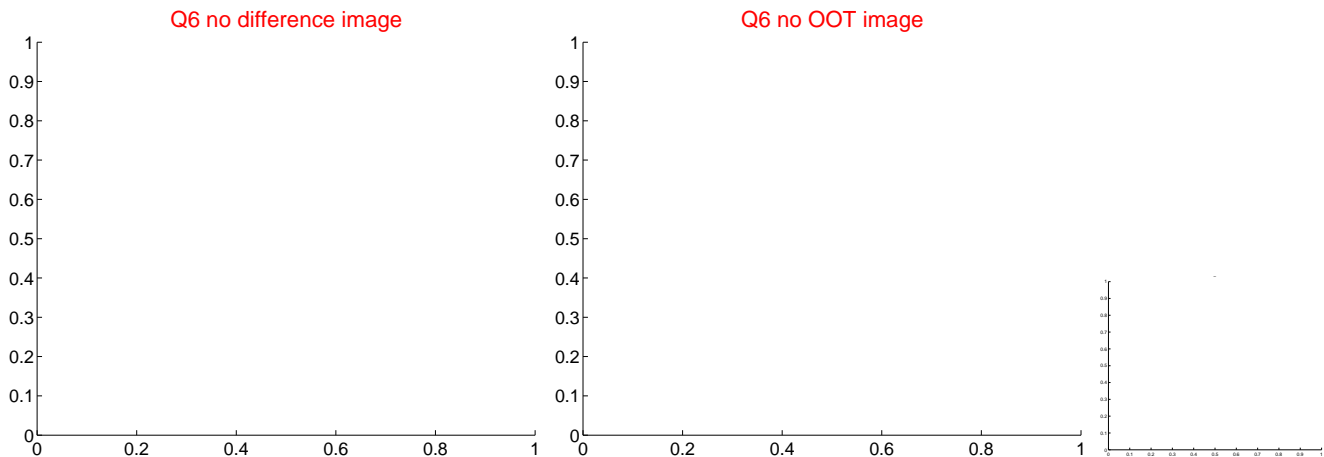
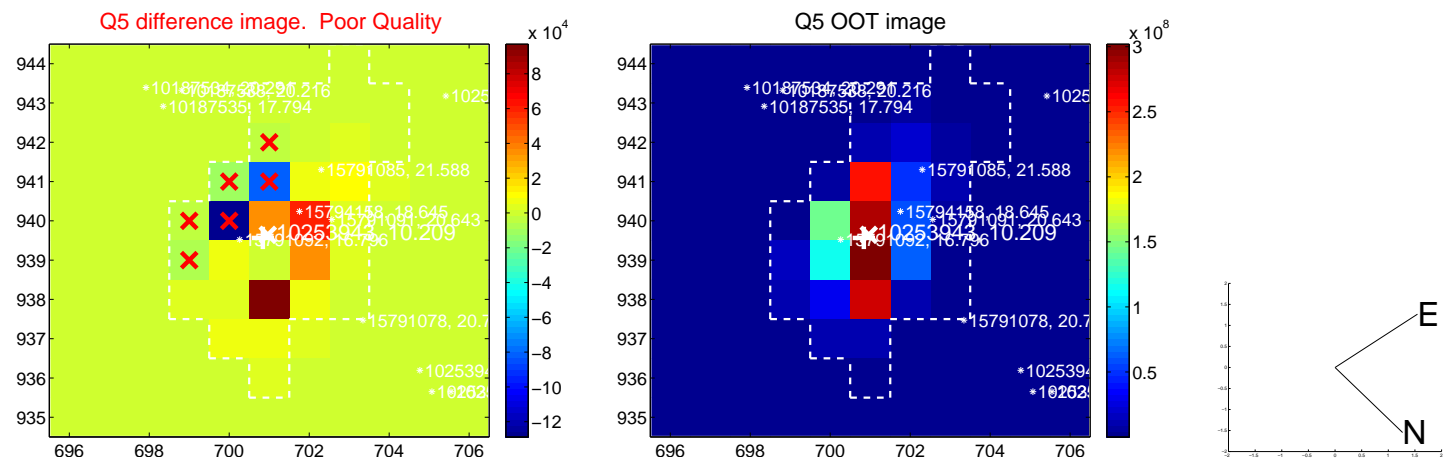


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

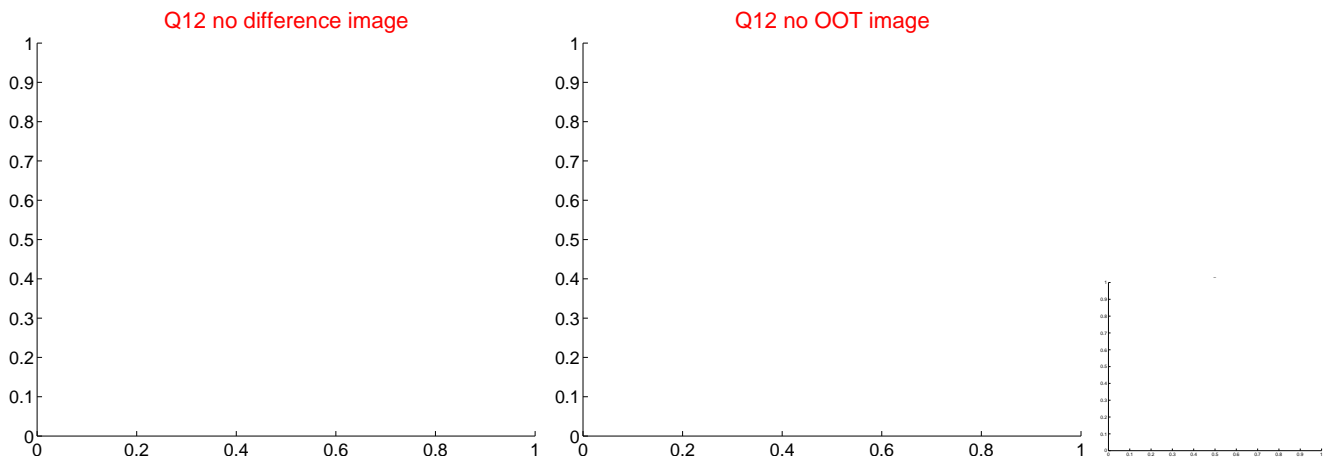
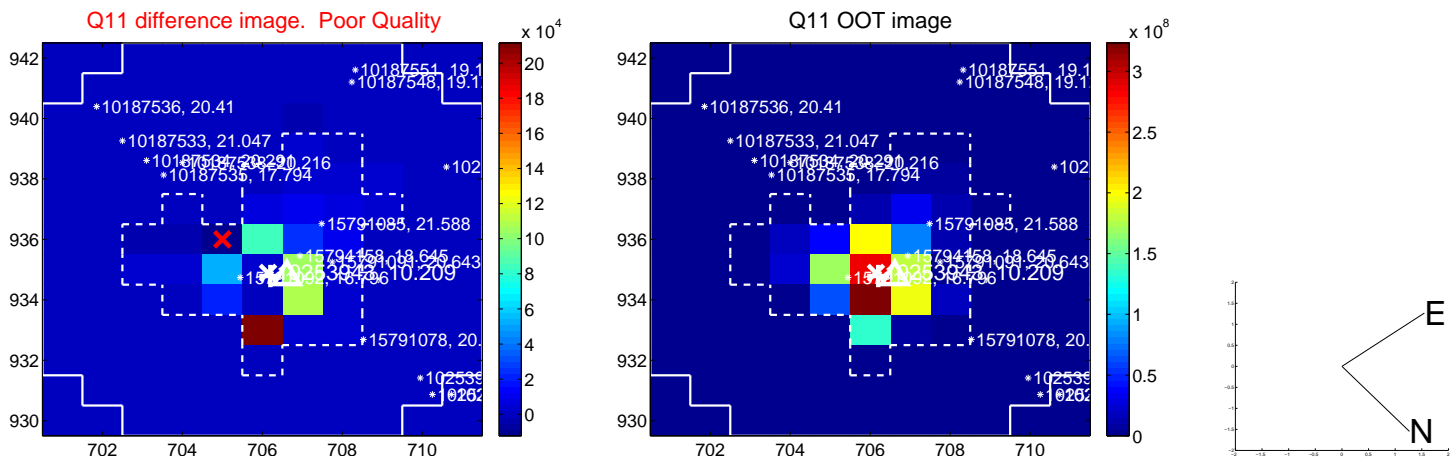
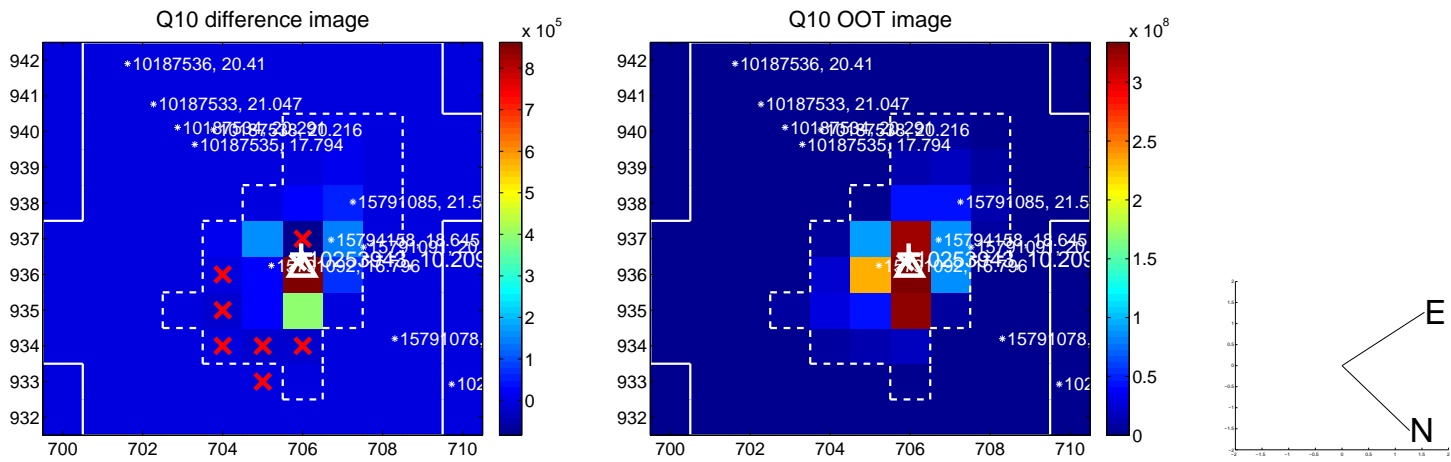
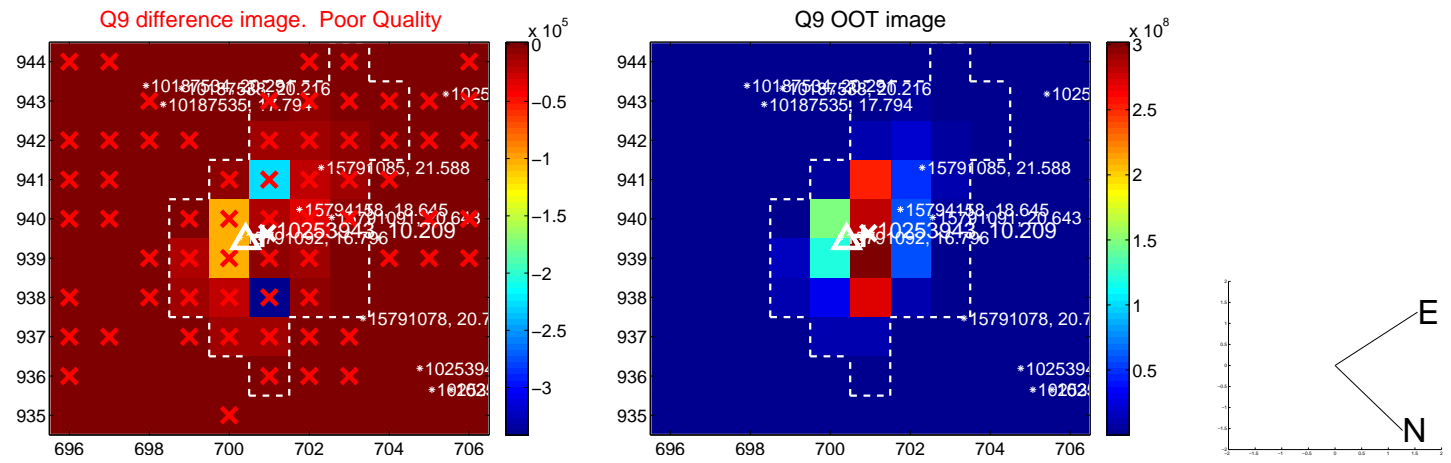
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



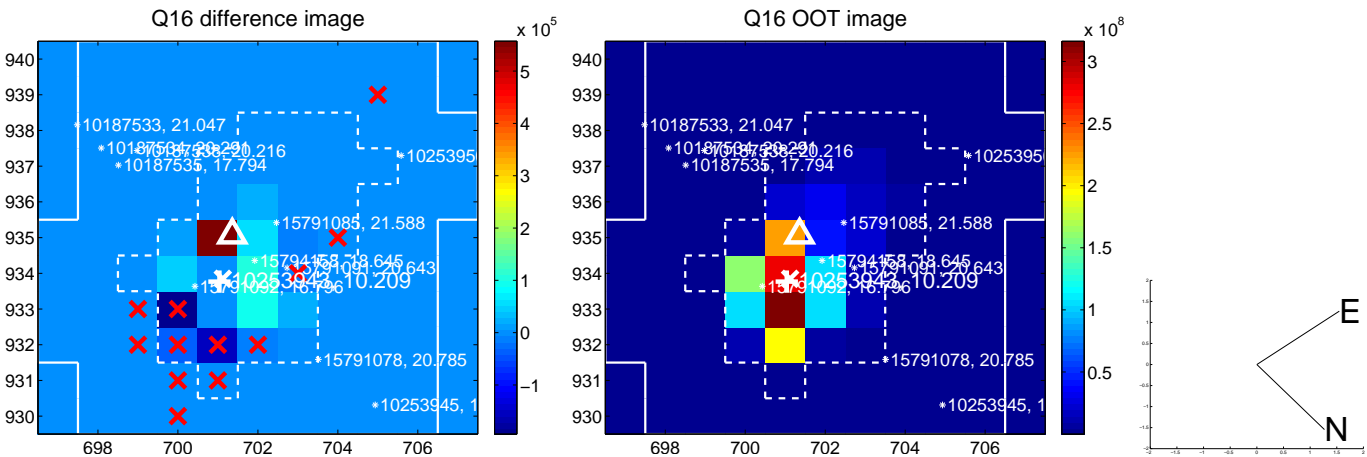
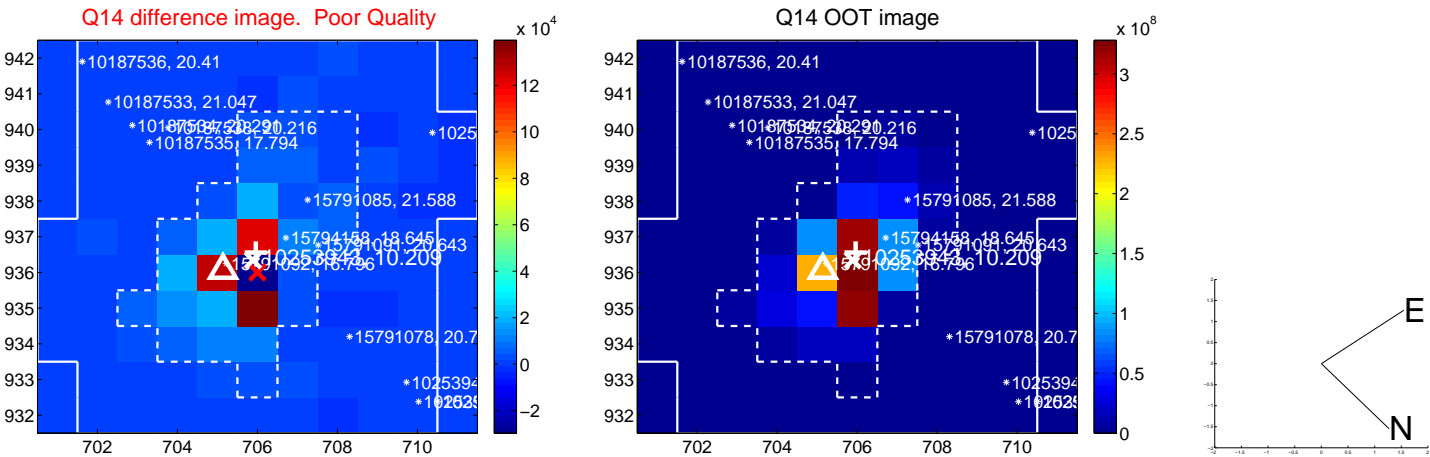
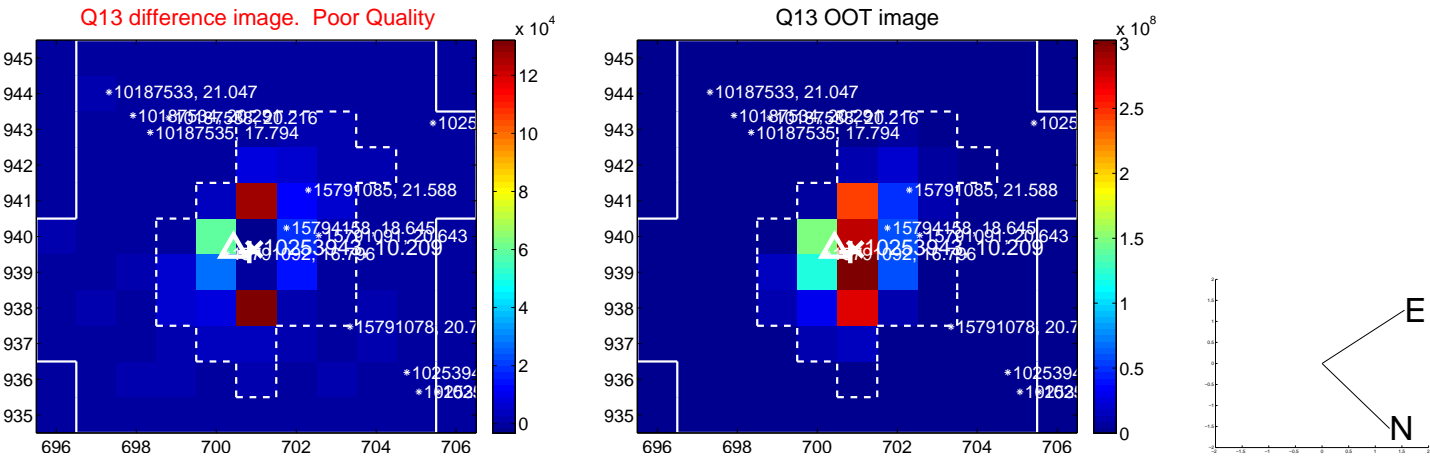
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



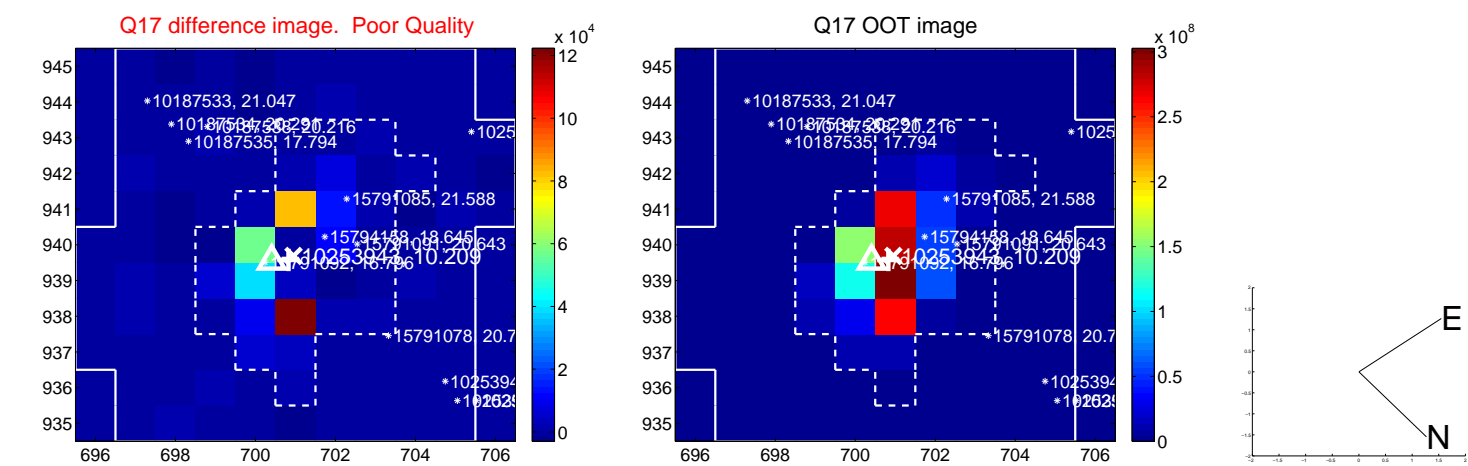
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



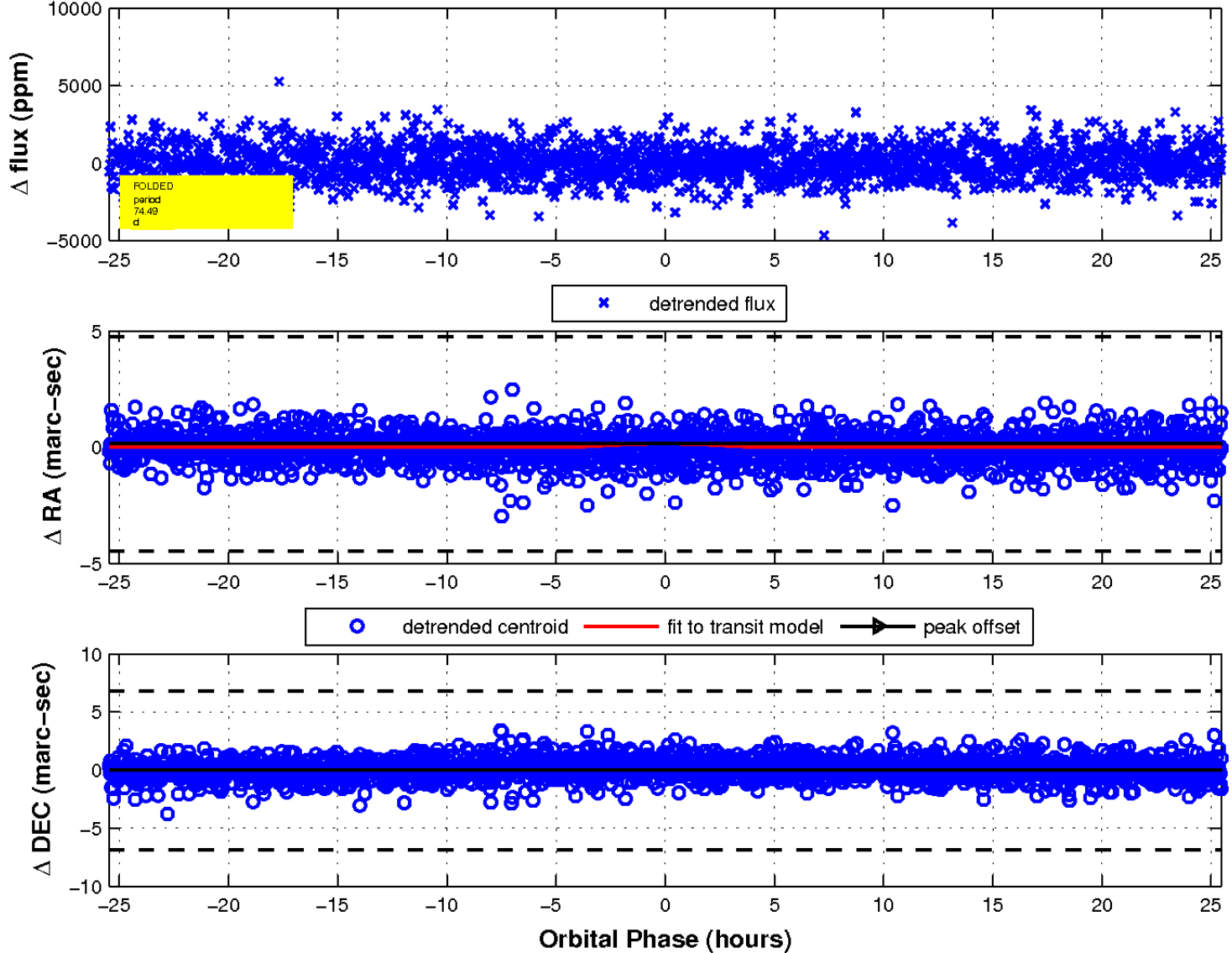
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

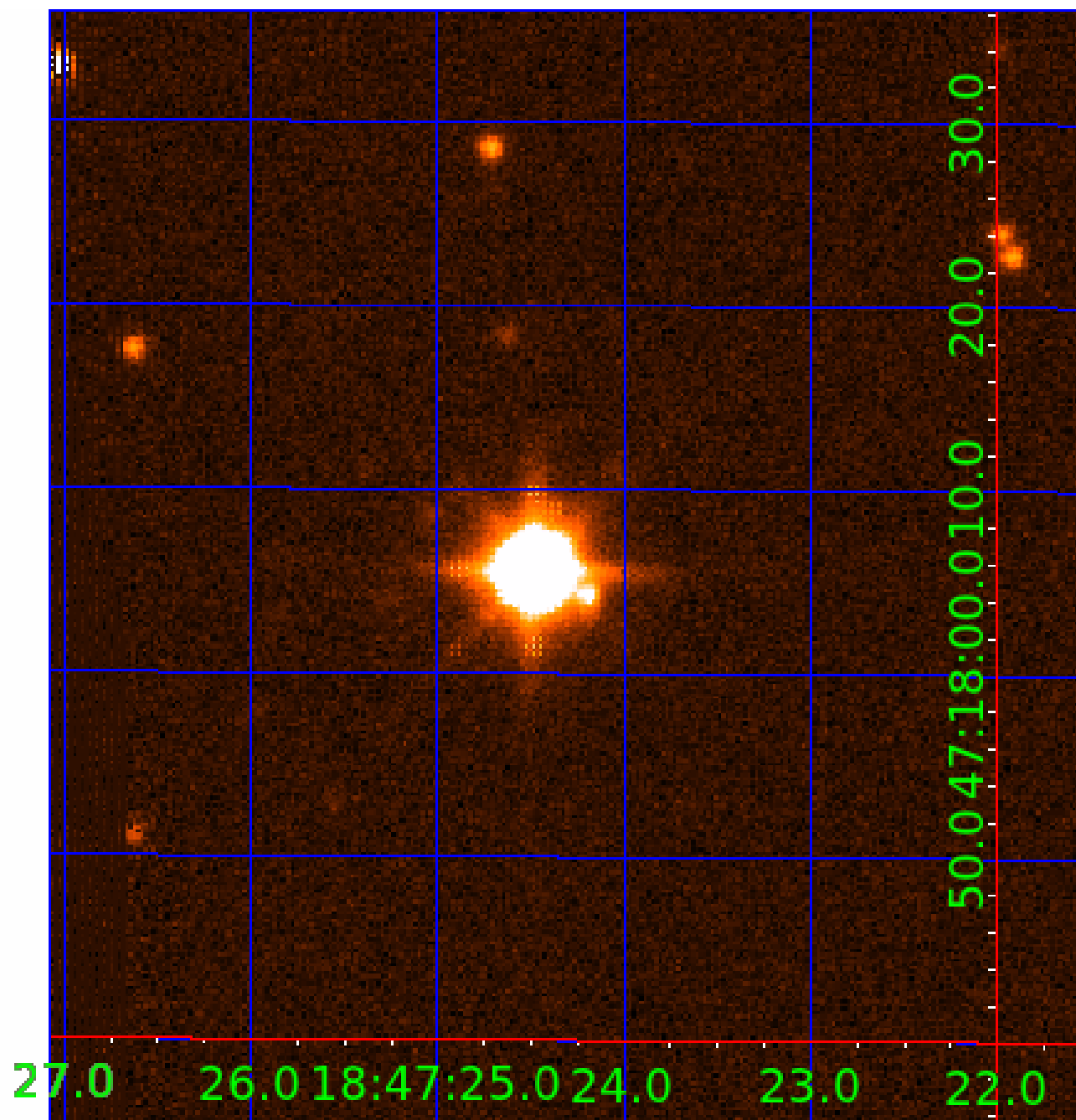


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 010253943

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})
010253943-01	OBS	No	2.727300	132.180501	38.0	19.661	7.8	4.4	3.38	7968	2.10	17698.06
010253943-02	OBS	No	74.489524	152.651982	4120.5	8.493	37.6	29.0	3.38	7968	33.22	215.17
010253943-03	OBS	No	460.926402	518.159328	1251.2	9.750	17.1	11.0	3.38	7968	12.35	18.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010253943-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
010253943-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_SATURATED
010253943-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

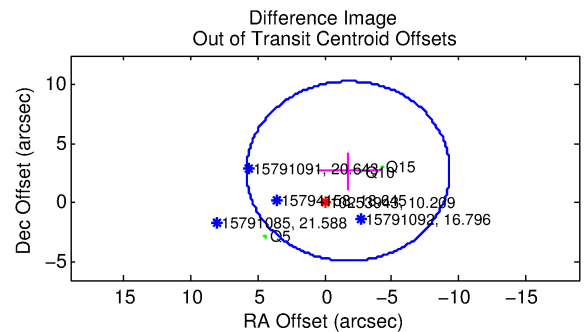
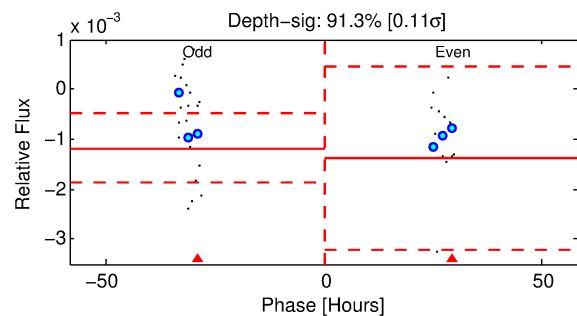
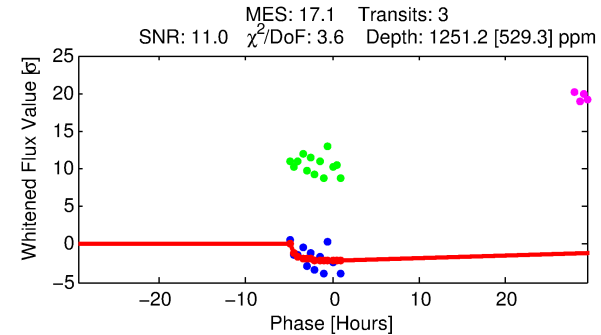
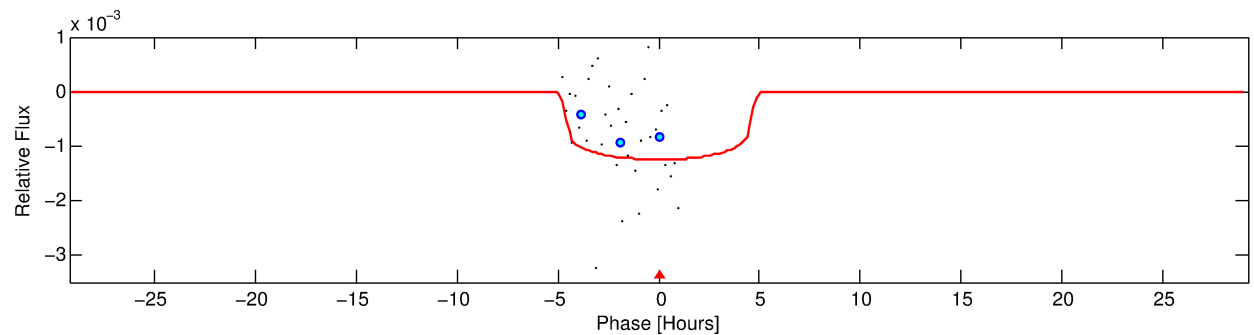
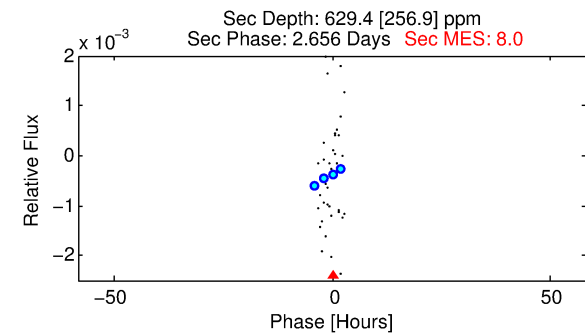
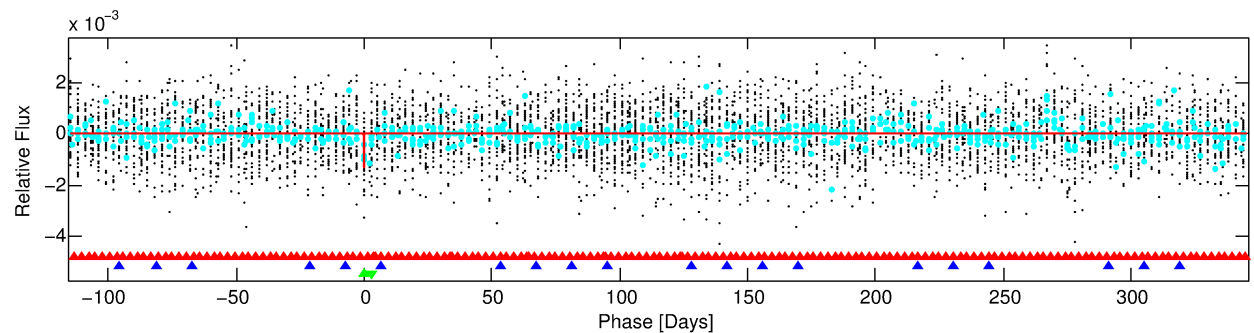
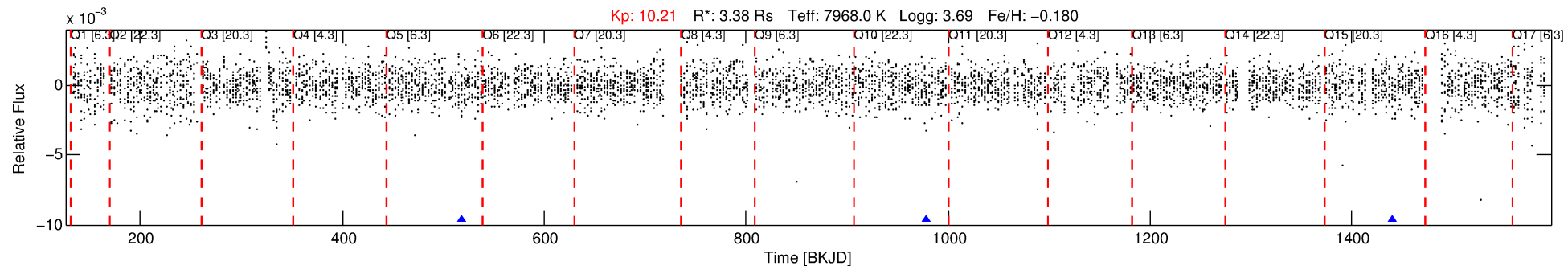
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010253943-03

No Significant Match Found

DV One-Page Summary

KIC: 10253943 Candidate: 3 of 3 Period: 460.926 d



DV Fit Results:

Period = 460.92640 [0.03101] d
Epoch = 518.1593 [0.2085] BKJD
Rp/R* = 0.0335 [0.0776]
a/R* = 328.32 [4169.30]
b = 0.49 [20.87]
Seff = 18.94 [15.63]
Teq = 532 [110] K
Rp = 12.35 [29.34] Re
a = 1.4759 [0.7422] AU
Ag = 4943.26 [23347.31] [0.21σ]
Teffp = 6896 [8028] K [0.79σ]

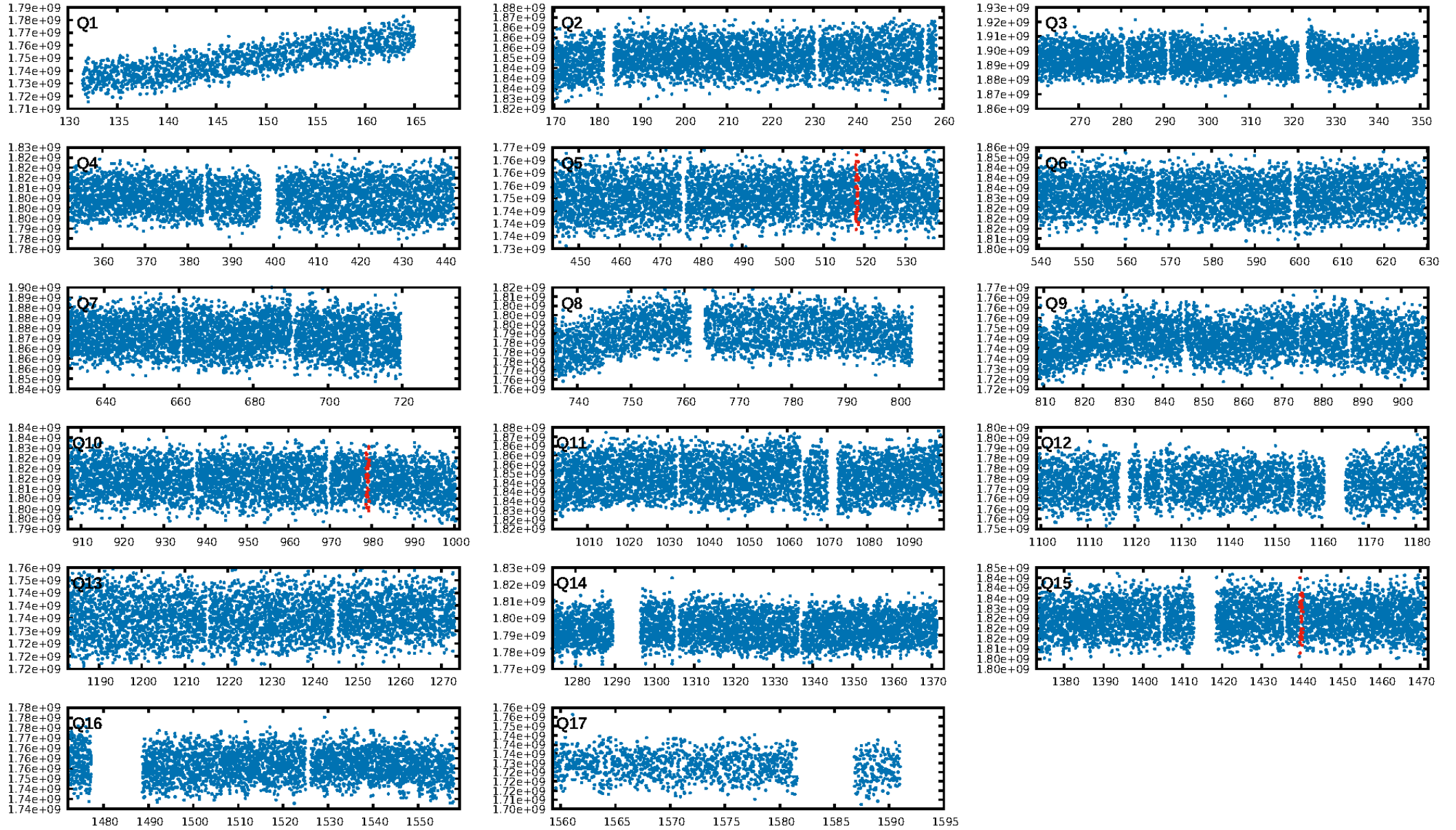
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [717.24σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.3%
ModelChiSquareGof-sig: 12.0%
Bootstrap-pfa: 2.03e-68
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 64.5%
Centroid-so: 0.227 arcsec [0.88σ]
OotOffset-rm: 3.223 arcsec [1.27σ]
KicOffset-rm: 2.364 arcsec [1.13σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

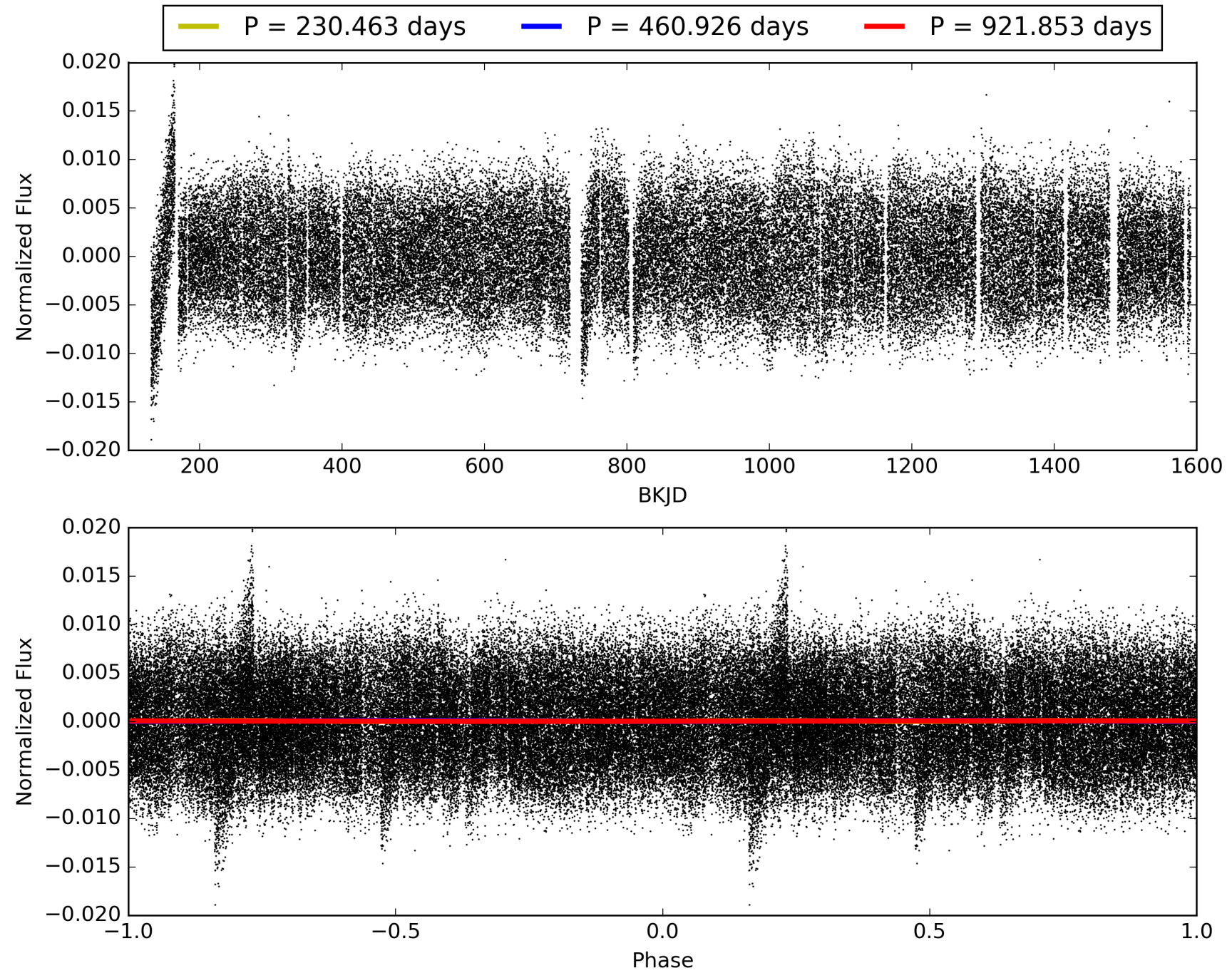
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:36:32 Z

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

TCE 010253943-03, PDC Light Curves

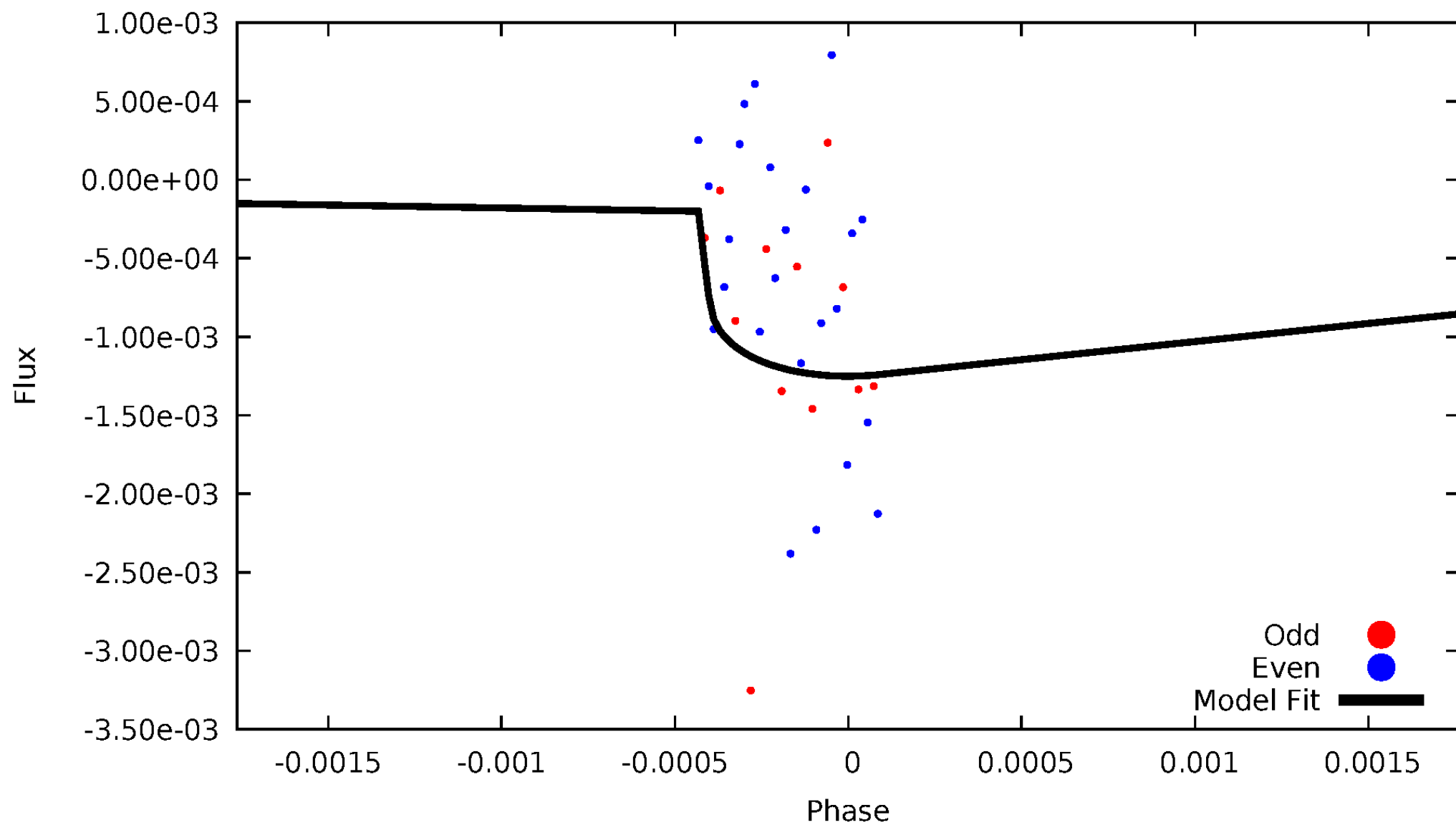


TCE 010253943-03



DV Odd/Even

TCE 010253943-03

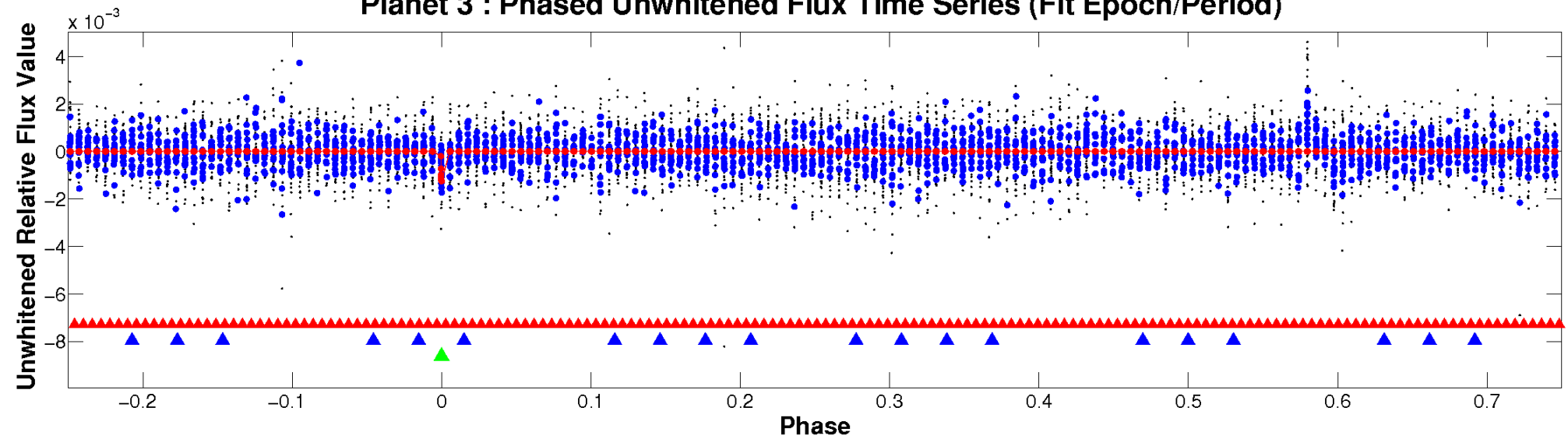


ALT Odd/Even

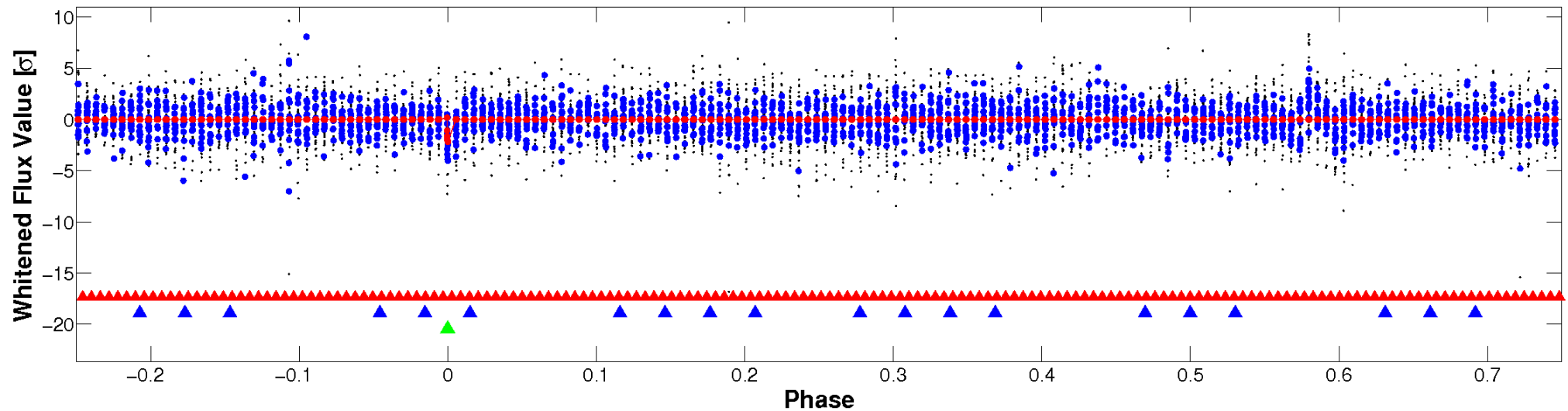
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

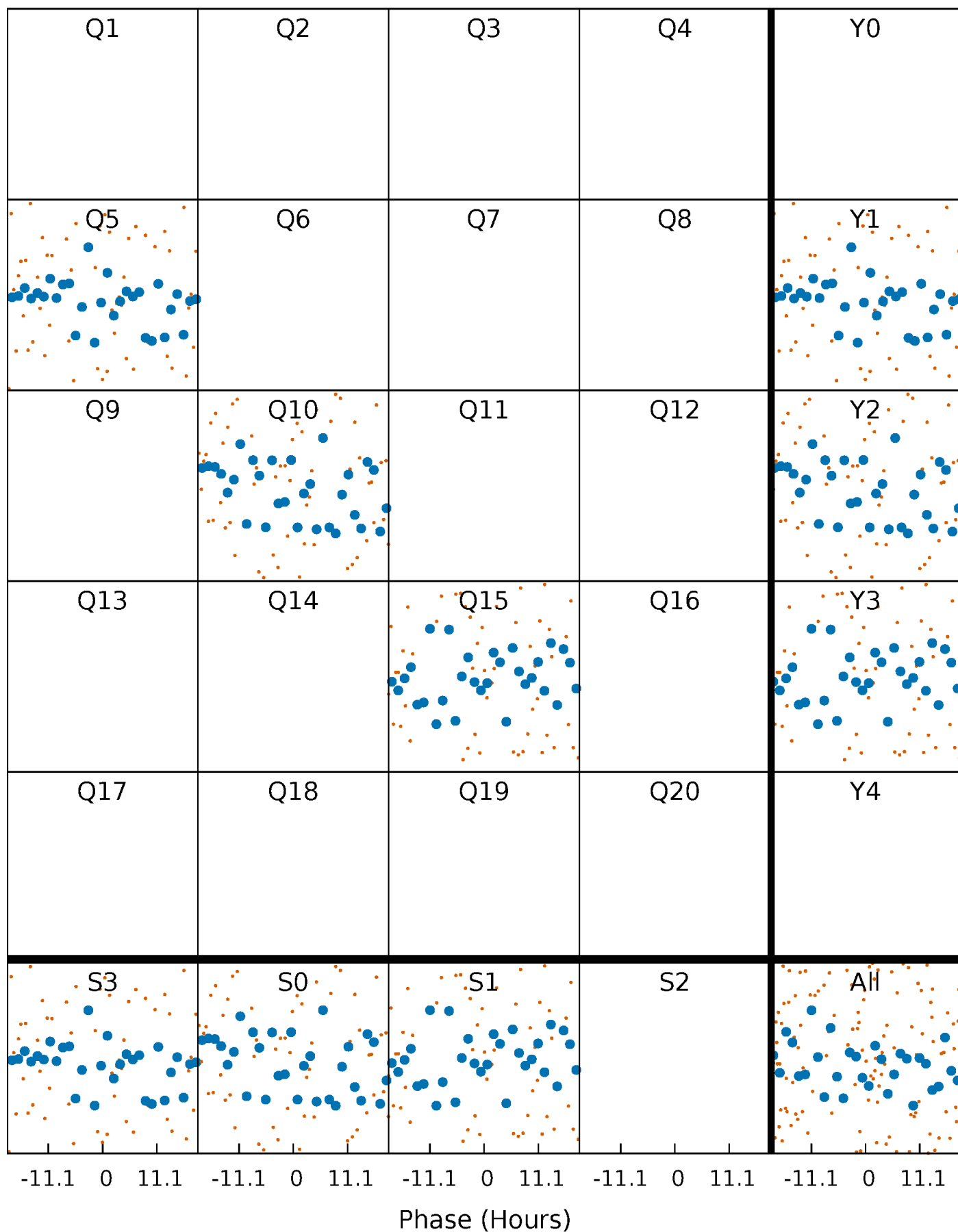


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



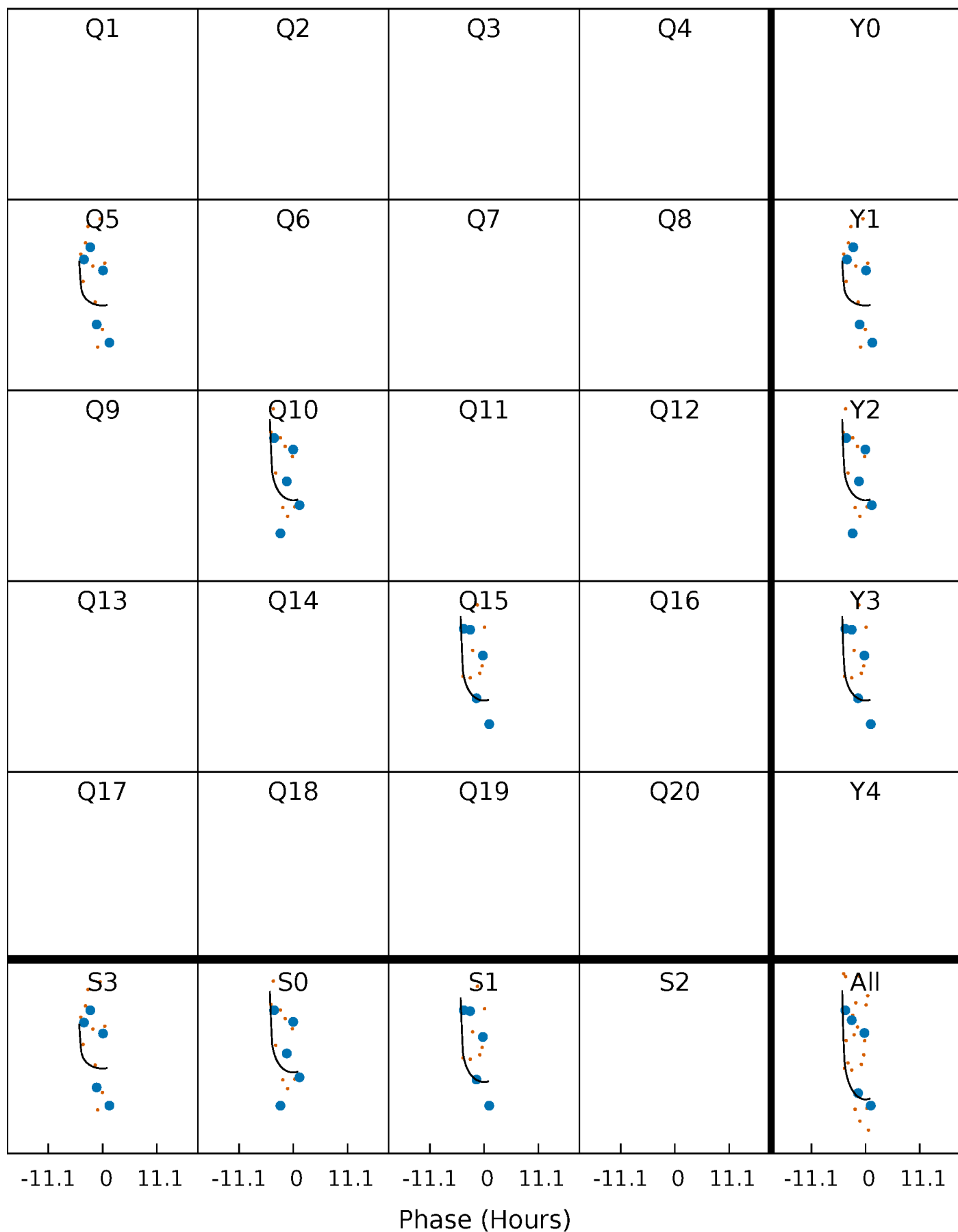
PDC Quarter-Phased Transit Curves

TCE 010253943-03 $P=460.926402$ Days $T_0=518.159328$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010253943-03 $P=460.926402$ Days $T_0=518.159328$ (BKJD)

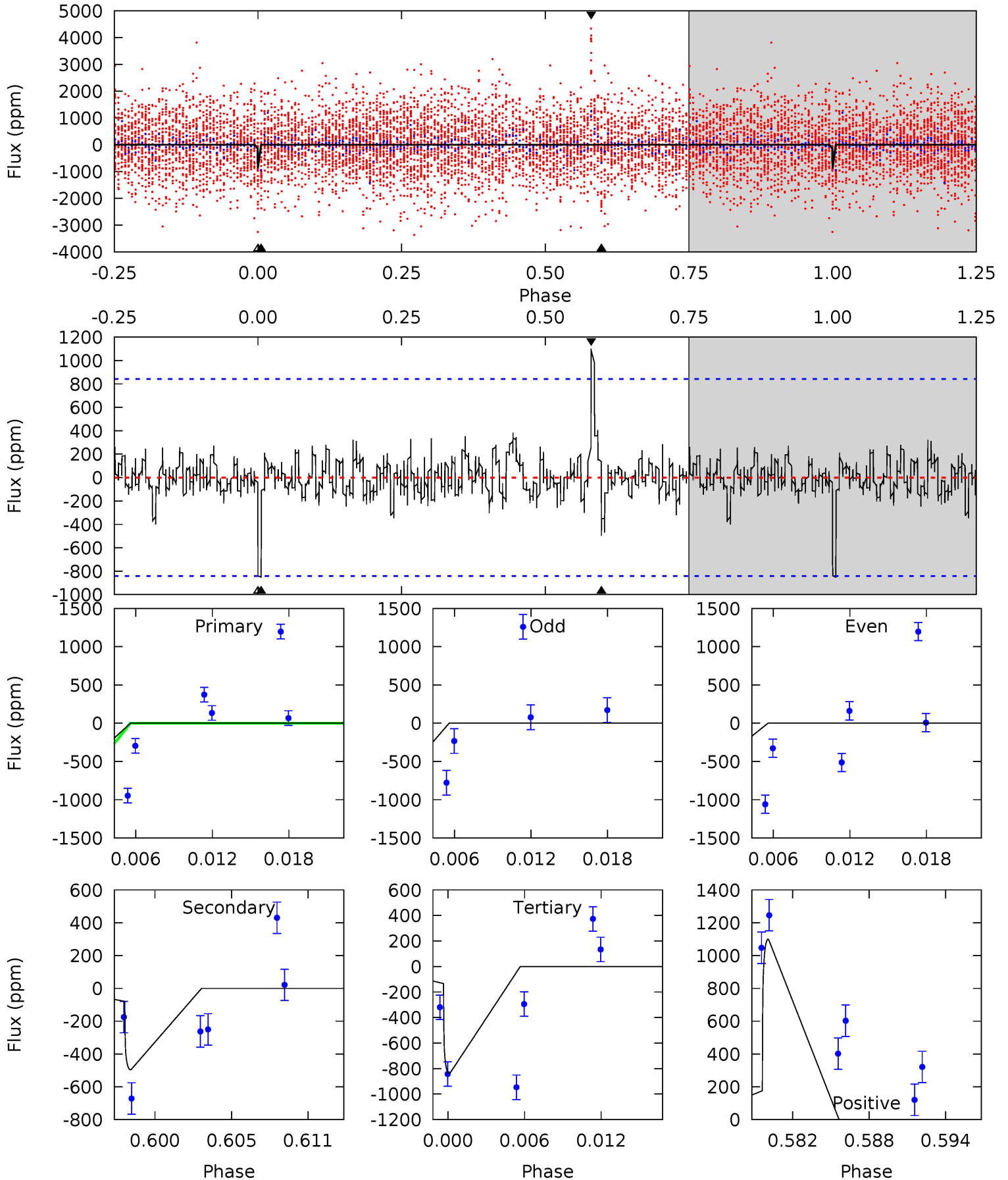


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

010253943-03, P = 460.926402 Days, E = 57.232926 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	3.02	5.11	6.70	5.13	2.75	0.88	0.07	-1.52	-2.09	-3.68	0.92	1.03	0.56	0.88



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 010253943

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7968^{+220}_{-331}	$3.685^{+0.476}_{-0.084}$	$-0.180^{+0.200}_{-0.300}$	$3.380^{+0.701}_{-1.752}$	$2.017^{+0.339}_{-0.509}$	$0.074^{+0.365}_{-0.025}$
	+3%/-4%	+13%/-2%	+111%/-167%	+21%/-52%	+17%/-25%	+497%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010253943-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-496 ± 164	$21.64^{+21.78}_{-14.99}$	712^{+52}_{-92}	4560^{+3573}_{-971}	1284^{+11408}_{-1002}
Alt.	N/A	N/A	N/A	N/A	N/A

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

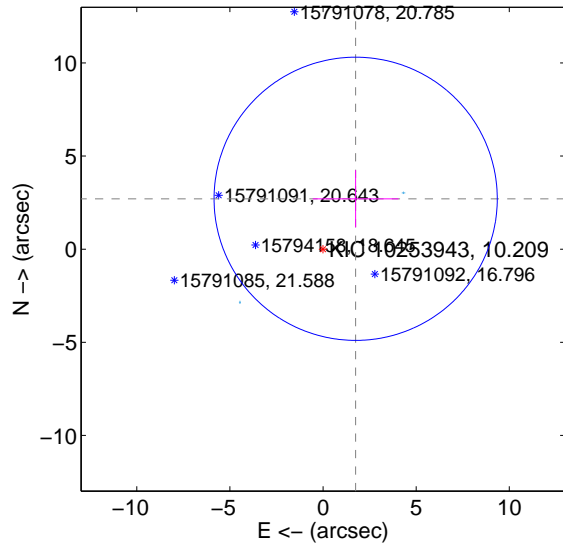
Supplemental centroid analysis for 010253943-03. **Kepler magnitude: 10.21.** Transit SNR 10.96

There are 3 quarters with good PRF difference image offsets

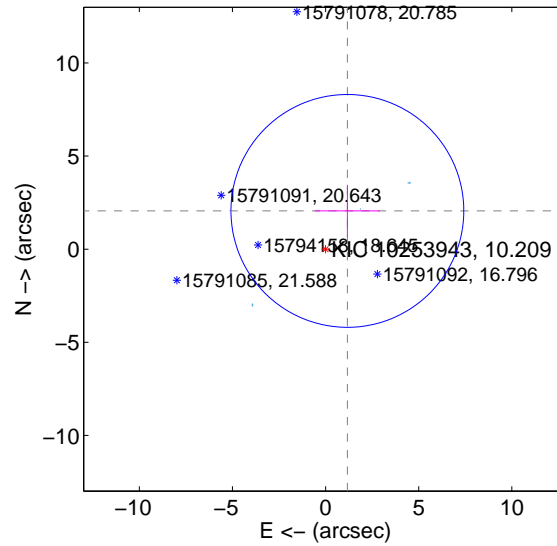
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.223 ± 2.534	1.27	-1.752 ± 2.302	2.705 ± 1.533
PRF-fit source offset from KIC position	2.364 ± 2.084	1.13	-1.170 ± 1.748	2.055 ± 1.406
photometric centroid source offset	0.23 ± 0.26	0.88	-0.08 ± 0.21	0.21 ± 0.26

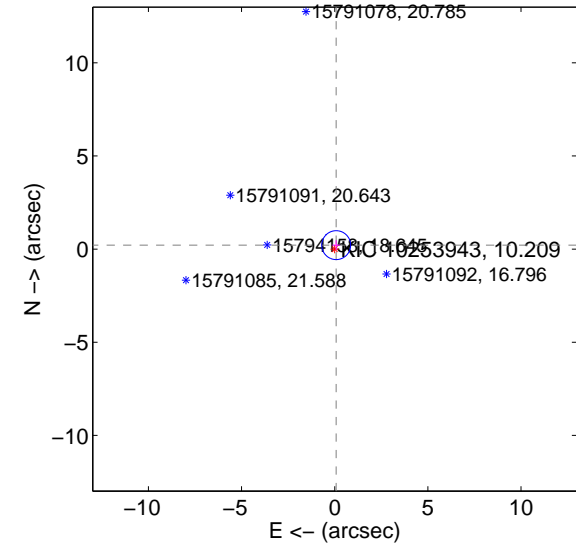
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

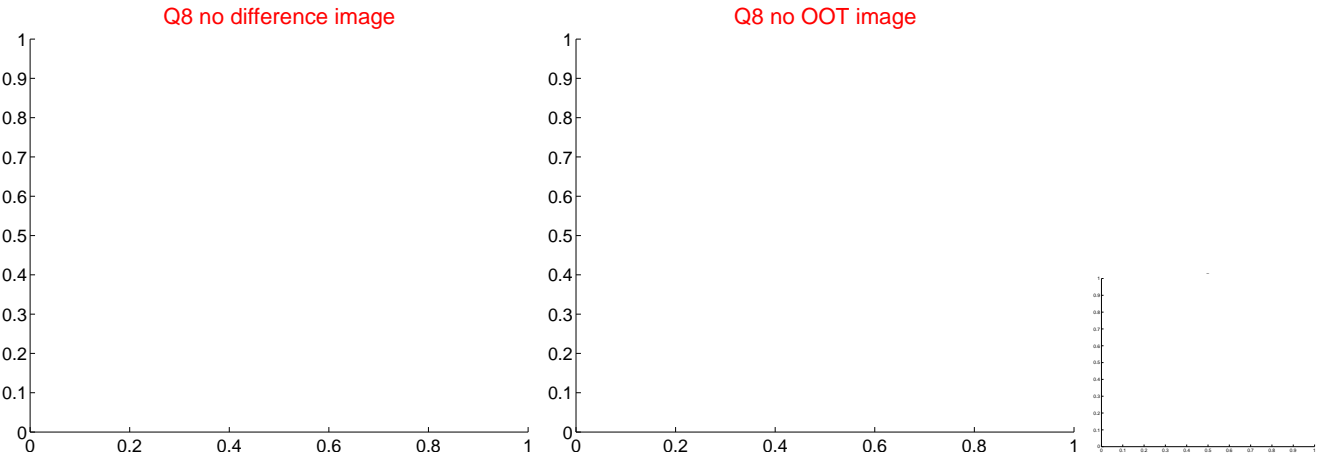
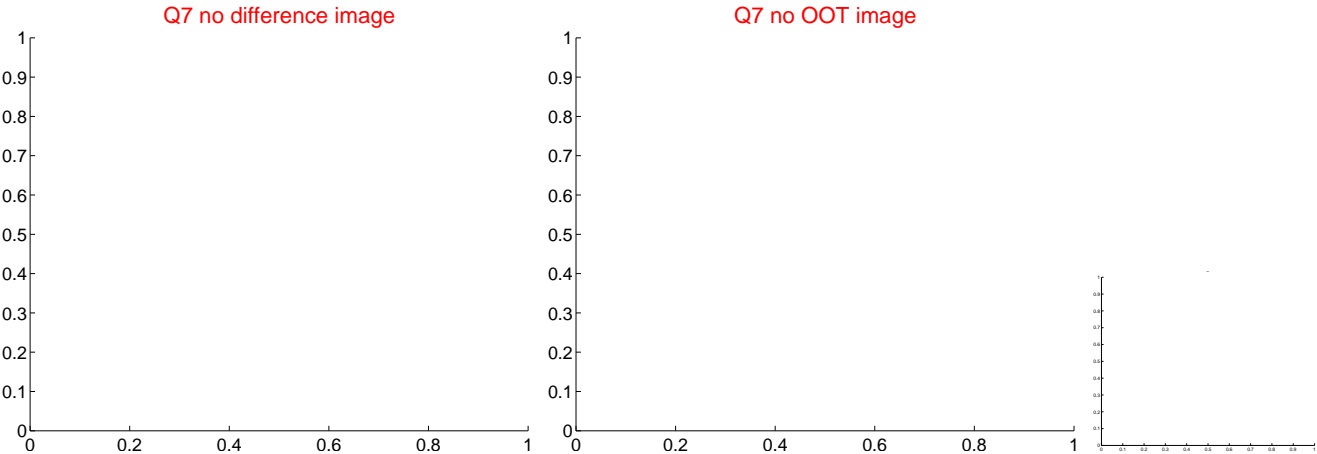
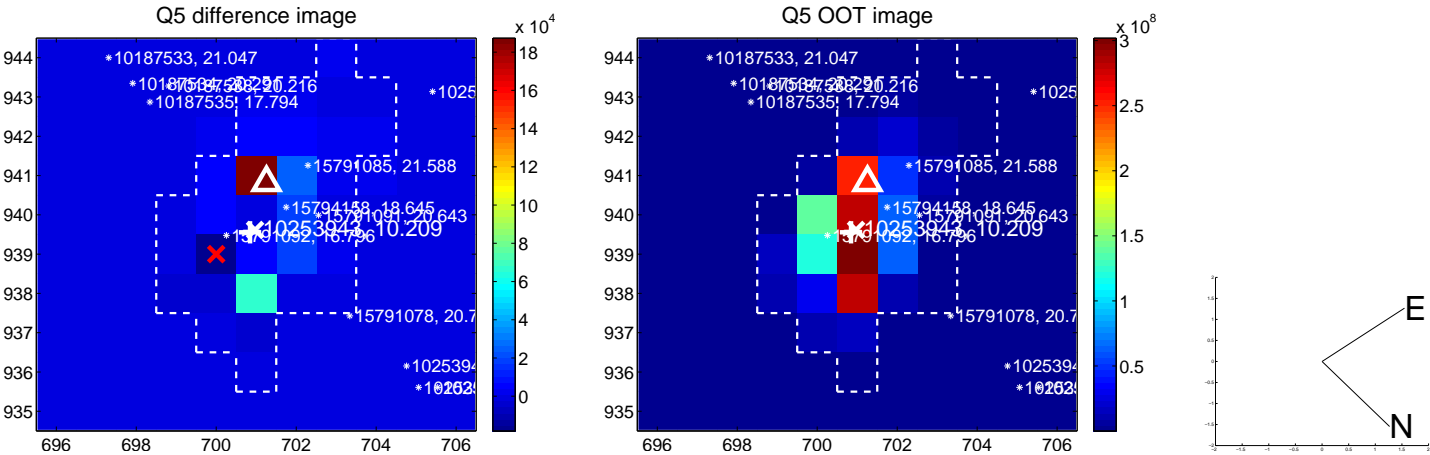


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

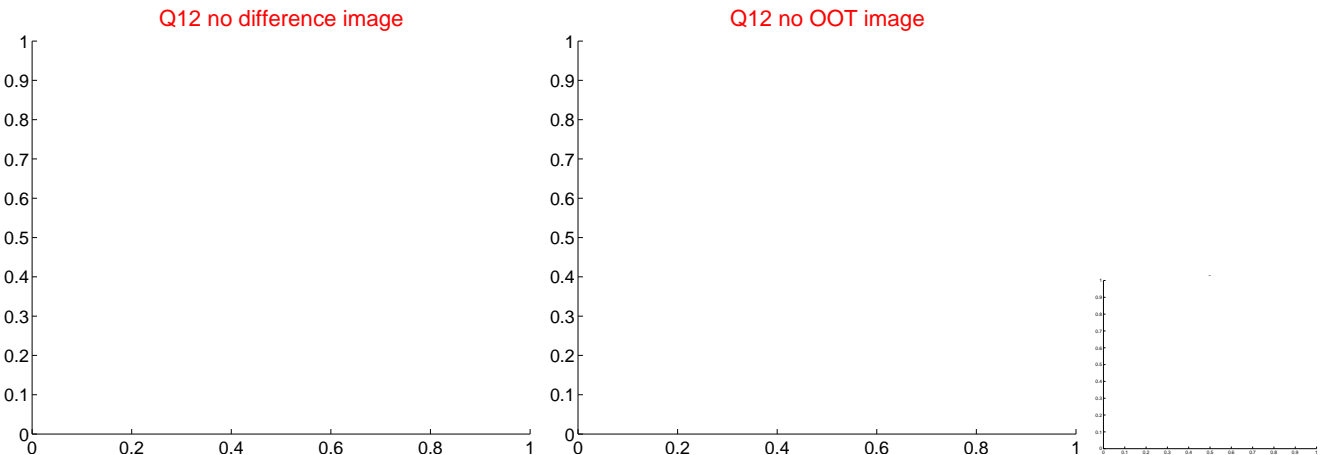
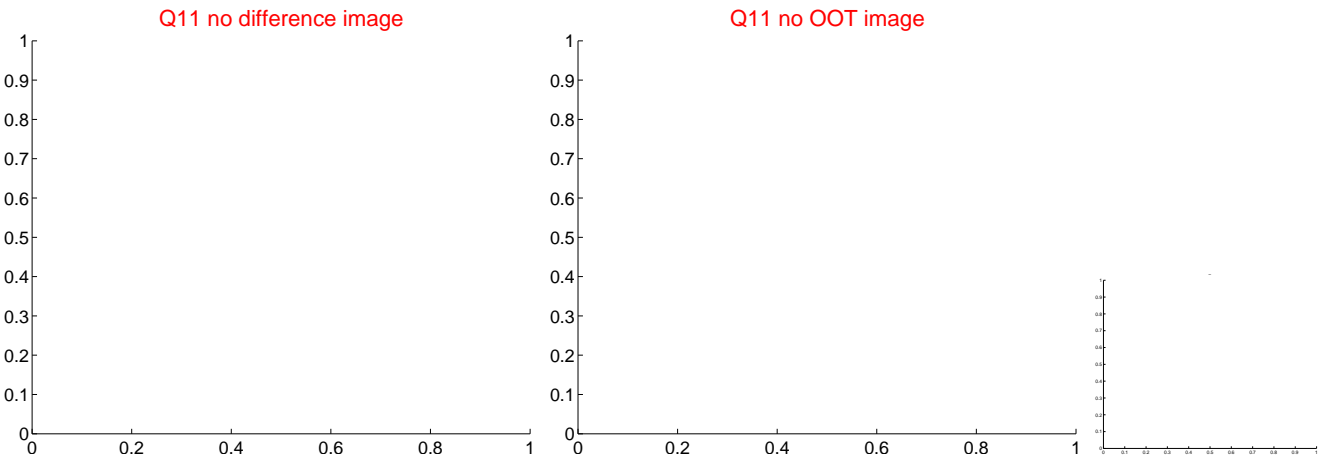
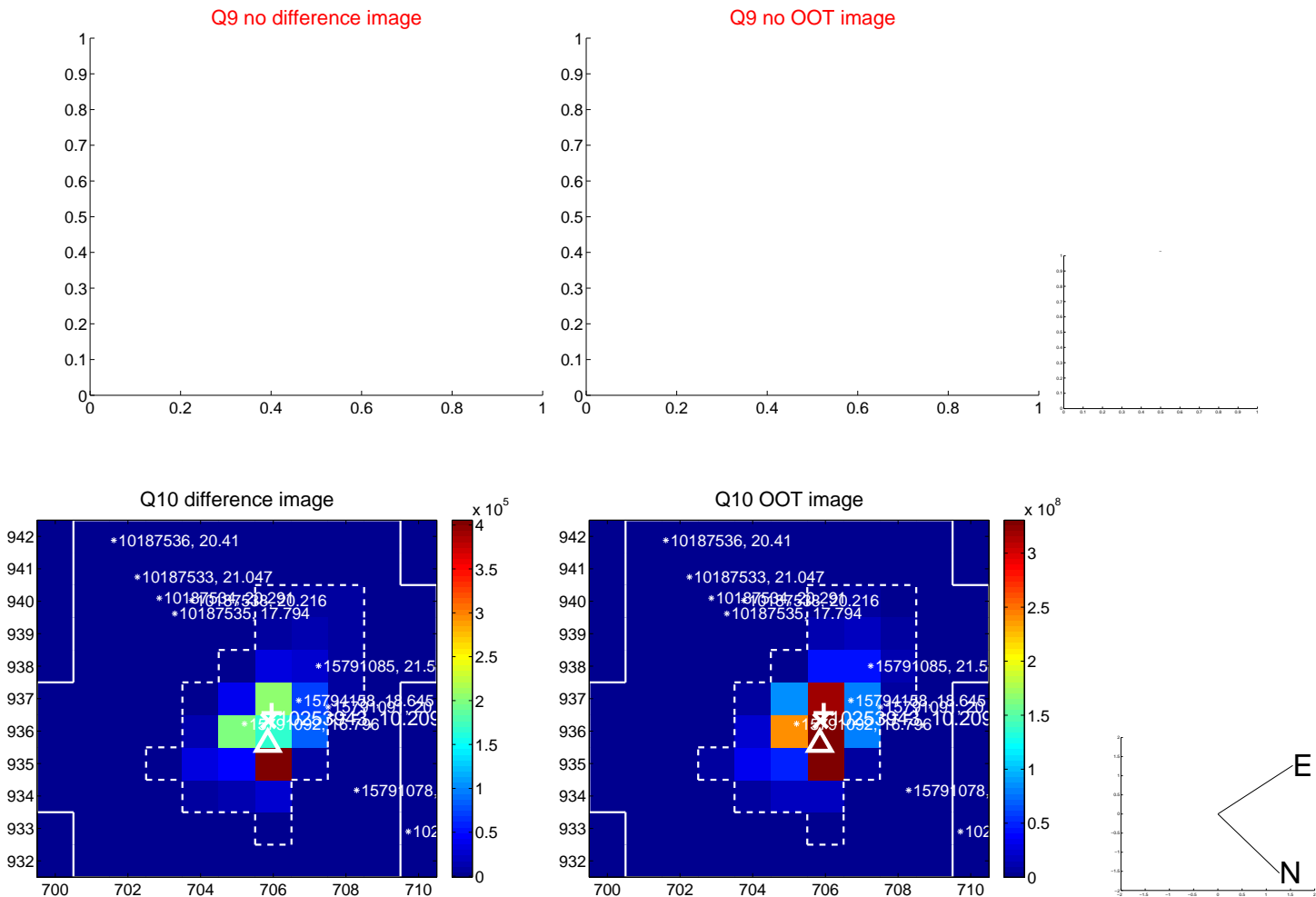
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



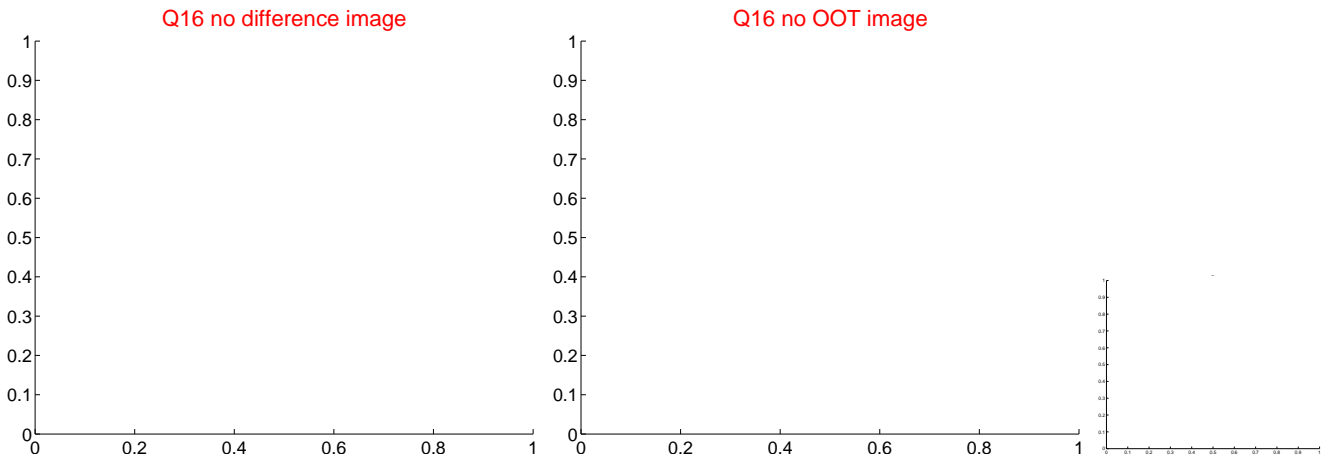
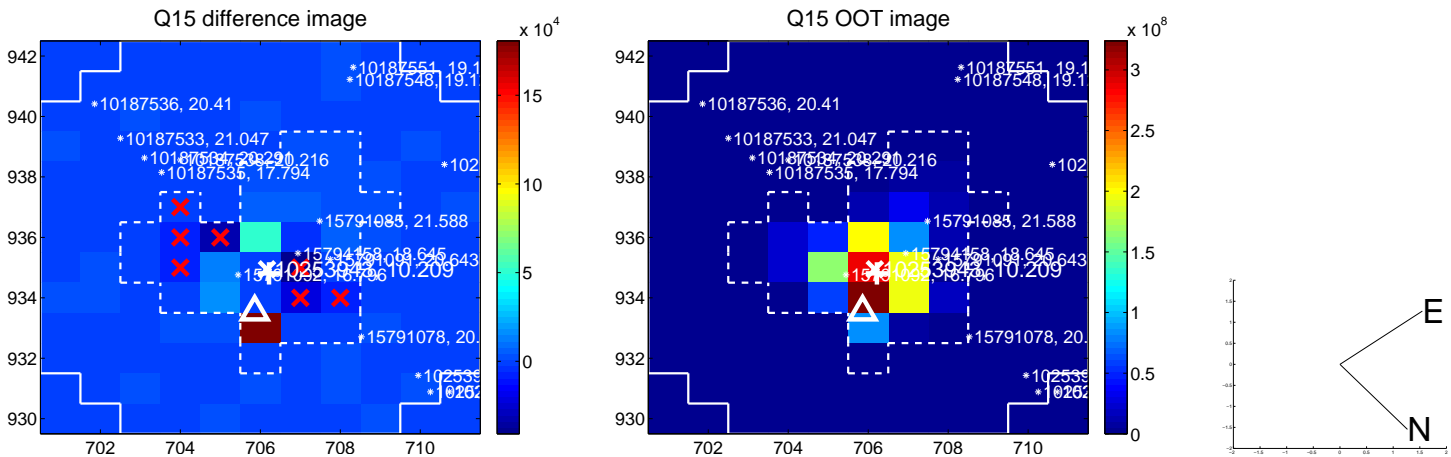
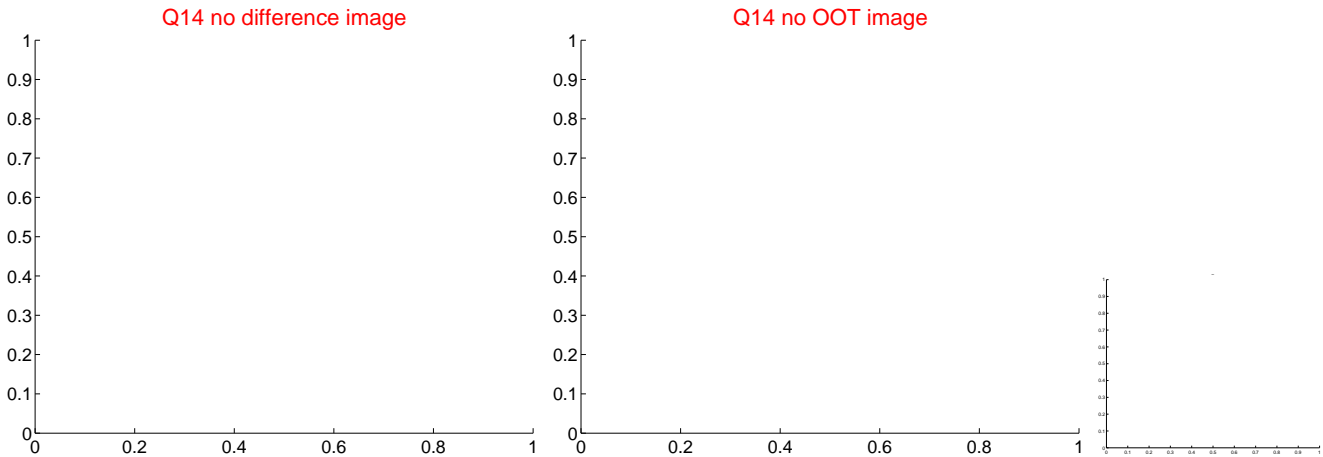
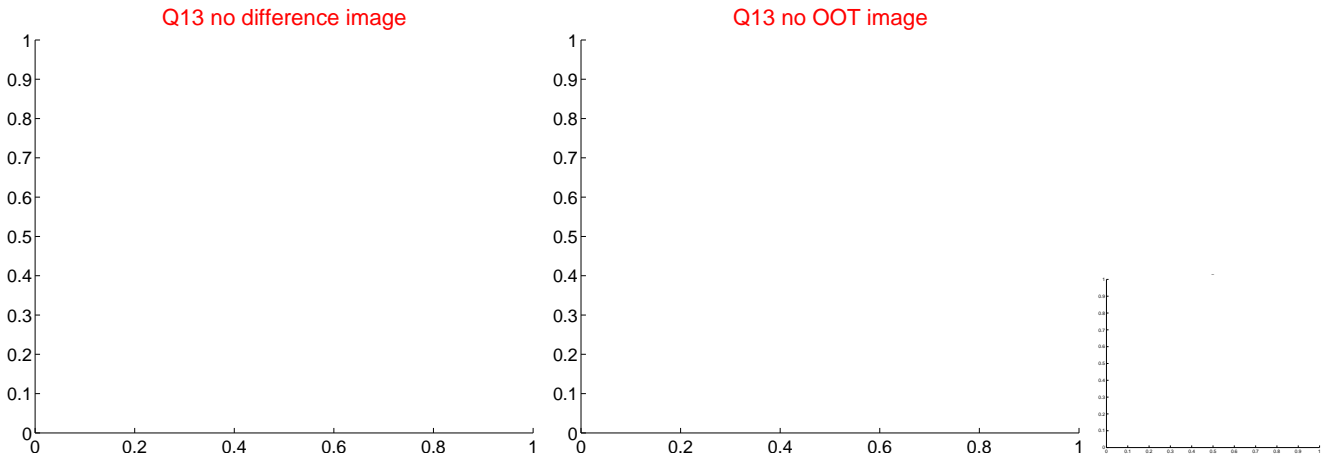
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



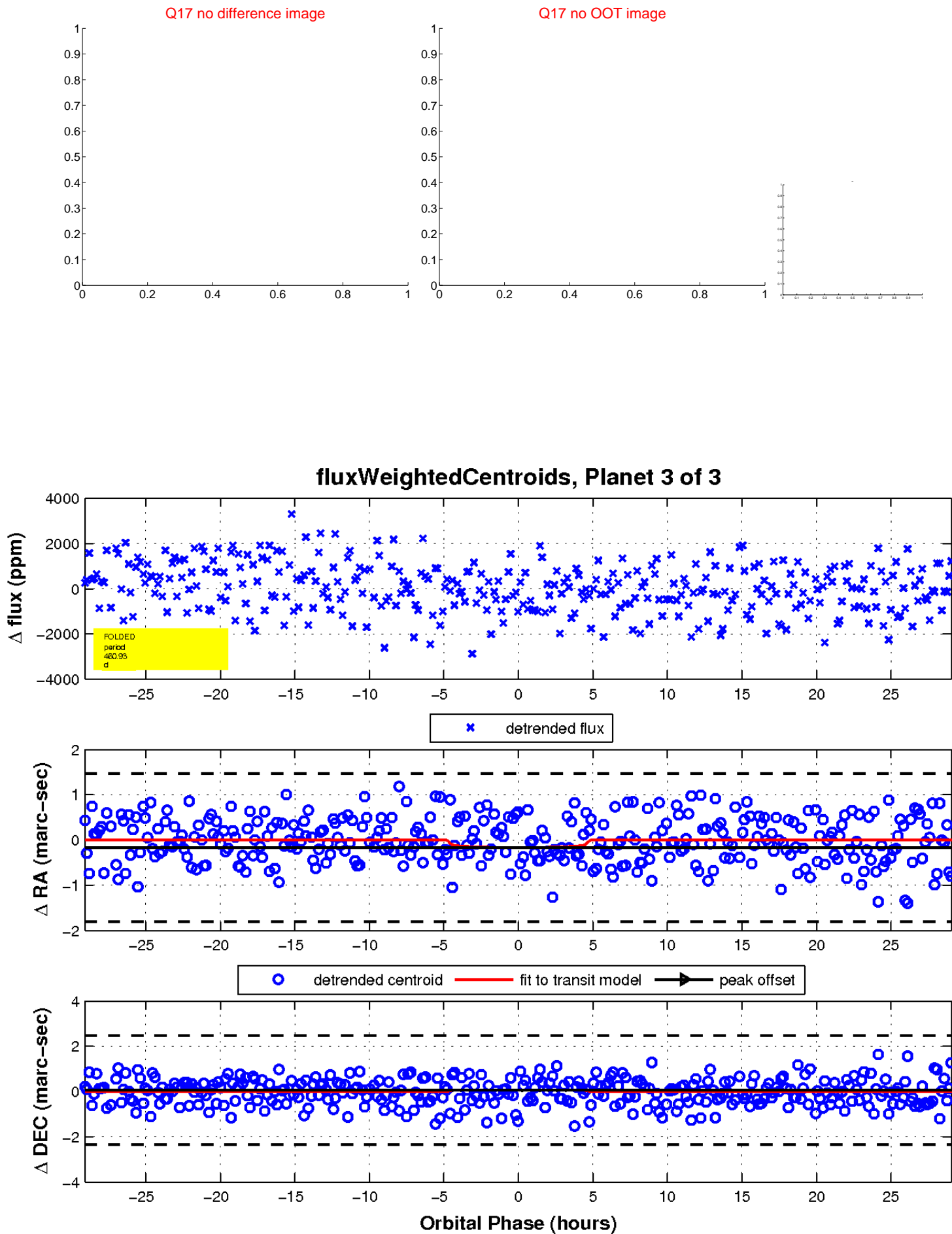
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

