

KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

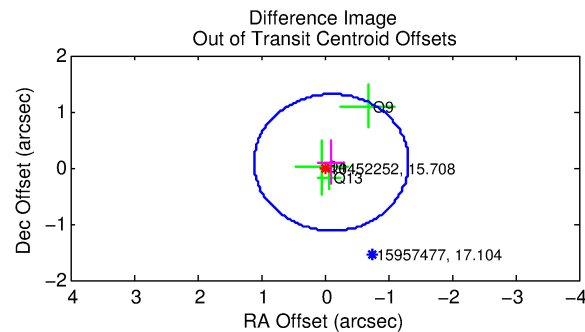
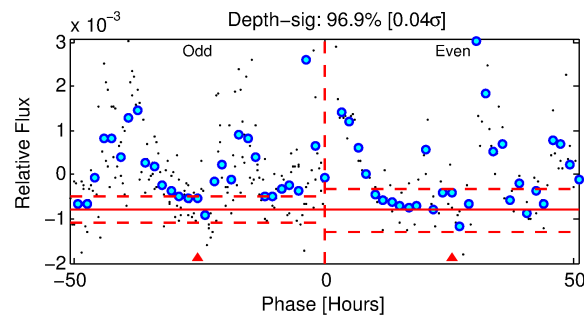
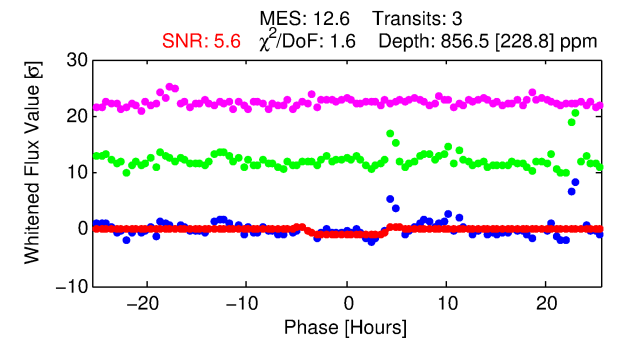
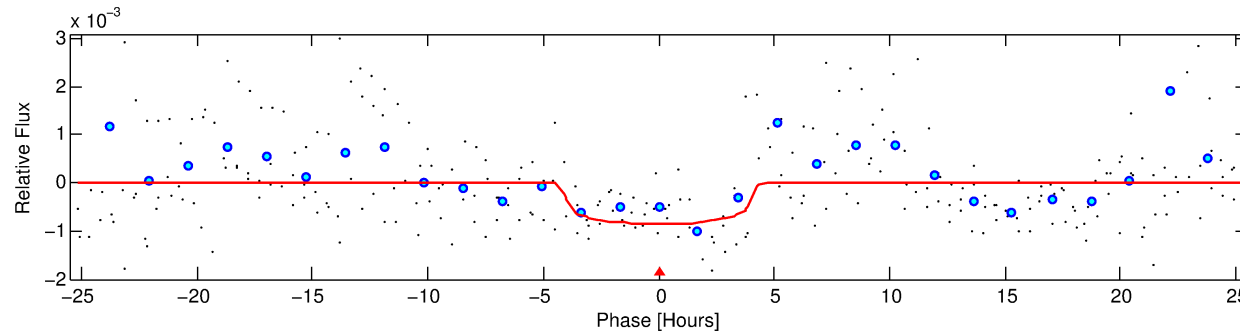
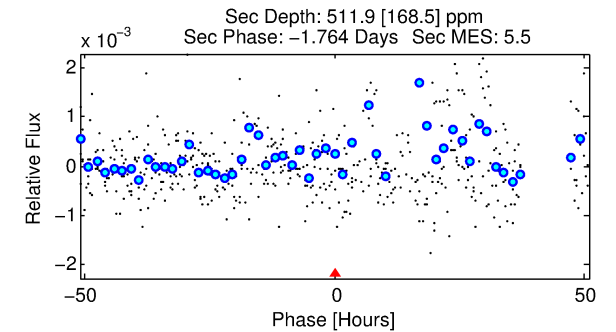
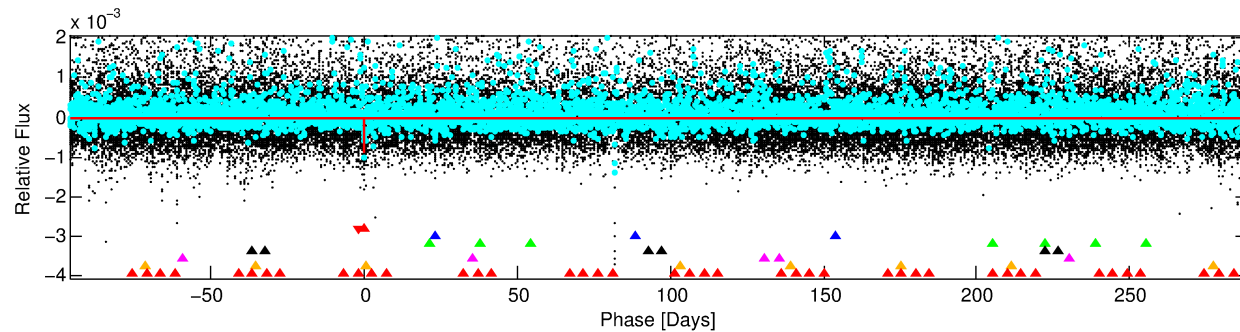
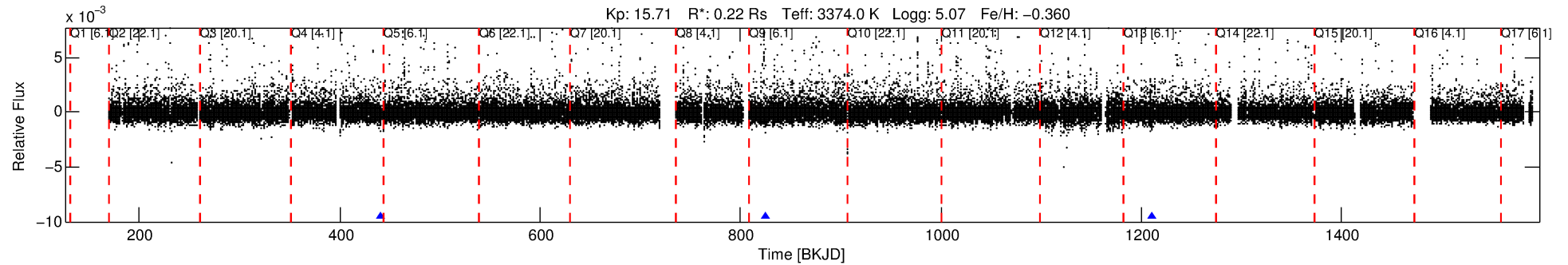
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-01

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 1 of 7 Period: 384.926 d



DV Fit Results:

Period = 384.92638 [0.01489] d
Epoch = 440.1671 [0.0199] BKJD
Rp/R* = 0.0277 [0.0224]
a/R* = 296.12 [1097.49]
b = 0.57 [4.44]
Seff = 0.01 [0.01]
Teq = 89 [8] K
Rp = 0.66 [0.60] Re
a = 0.6076 [0.1772] AU
Ag = 238531.13 [401067.34] [0.59 σ]
Teffp = 3047 [1259] K [2.35 σ]

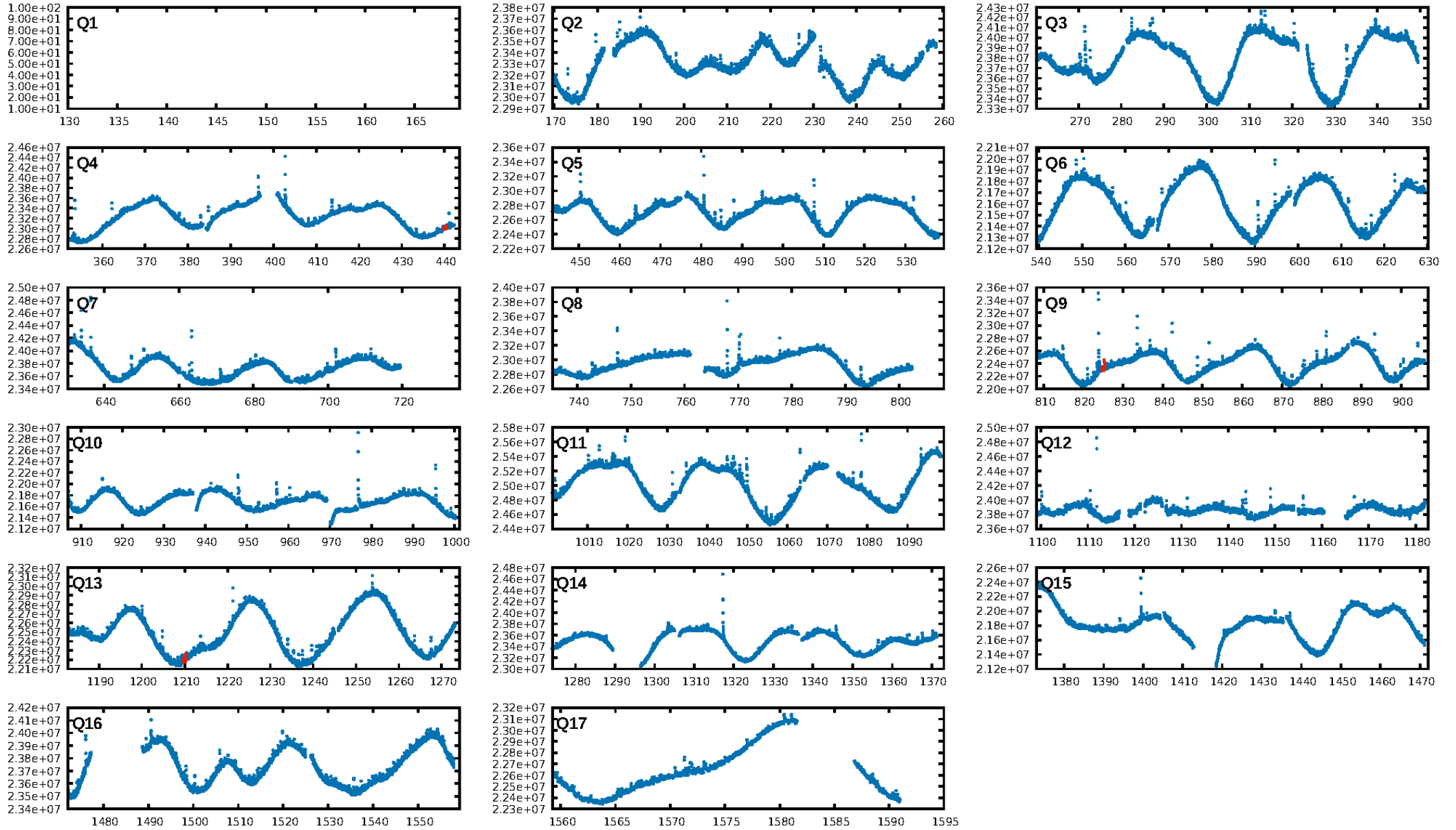
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [172.55 σ]
LongPeriod-sig: 100.0% [116.43 σ]
ModelChiSquare2-sig: 67.4%
ModelChiSquareGof-sig: 97.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 14.26
Centroid-sig: 23.8%
Centroid-so: 2.107 arcsec [1.48 σ]
OotOffset-rm: 0.141 arcsec [0.35 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: 1.574 arcsec [3.82 σ]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

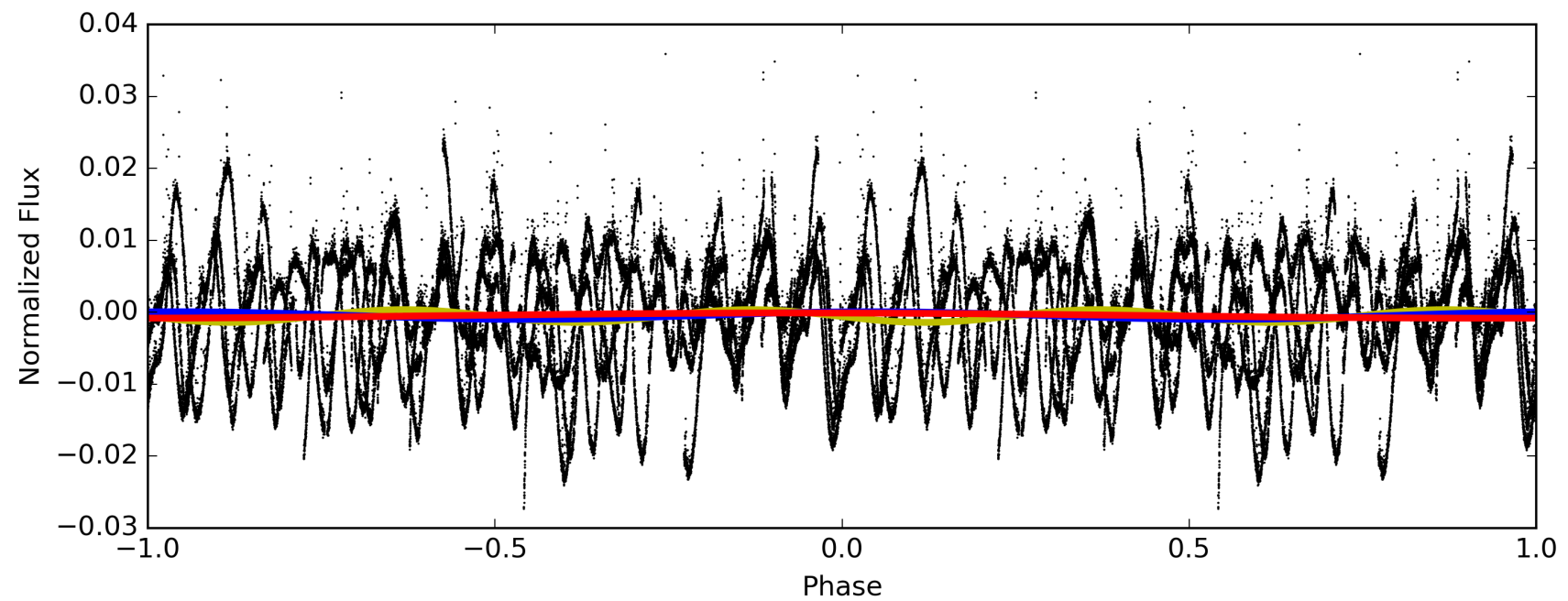
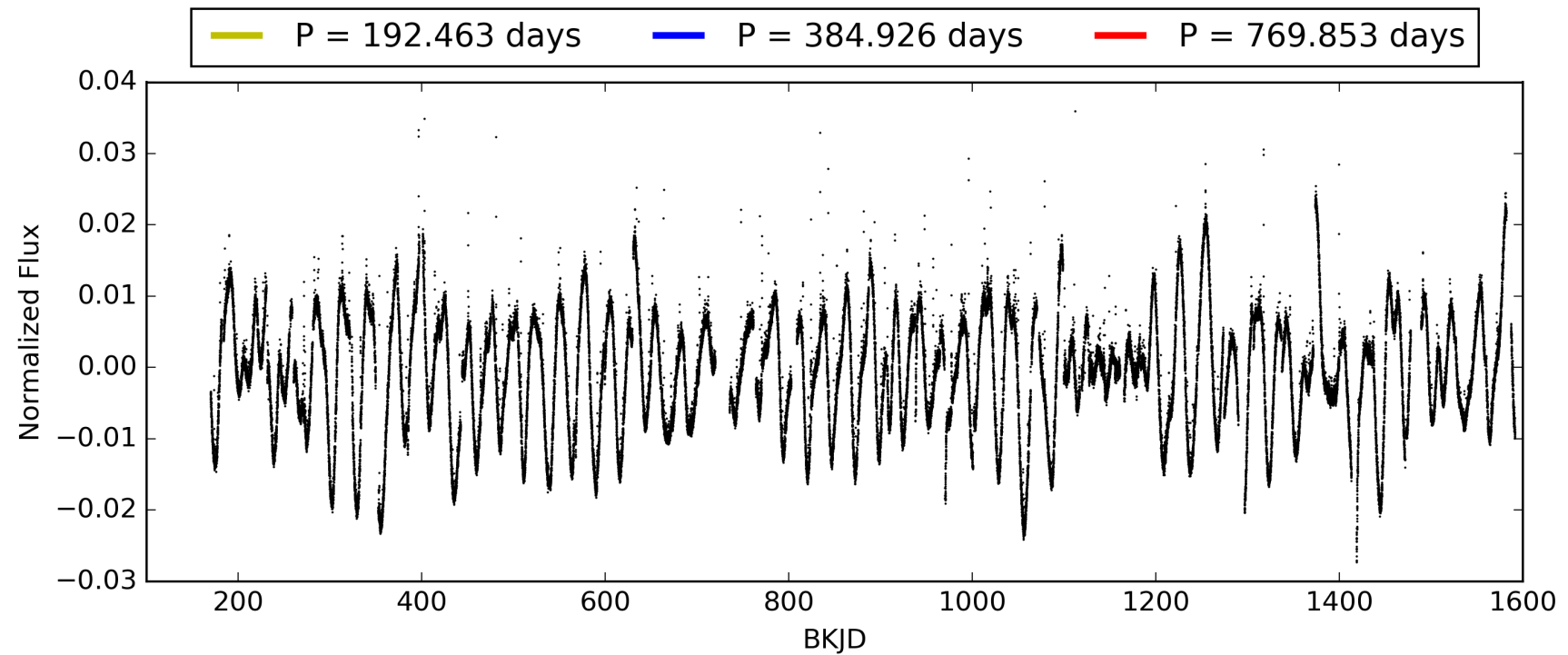
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:30 Z

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

TCE 010452252-01, PDC Light Curves

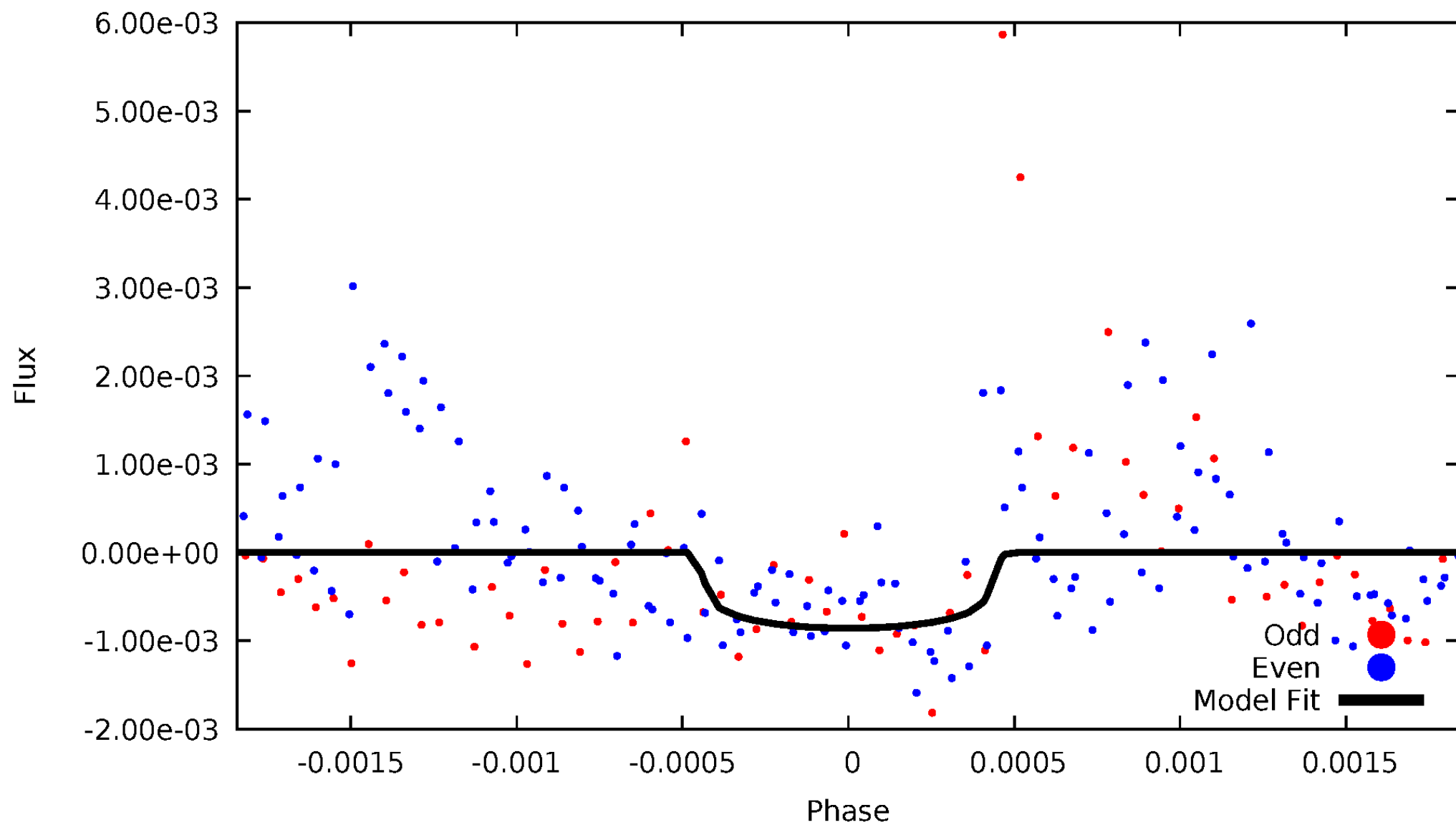


TCE 010452252-01



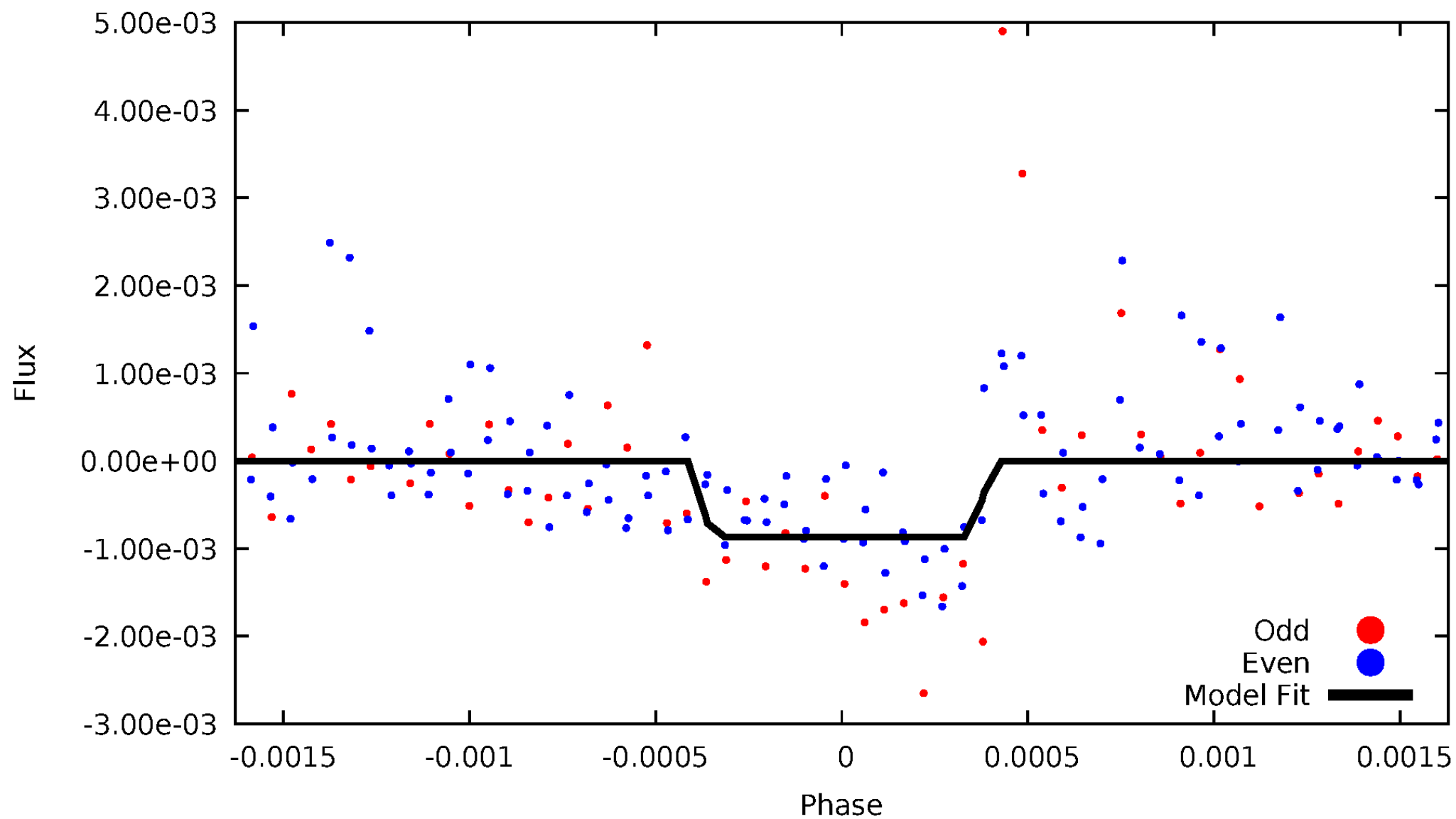
DV Odd/Even

TCE 010452252-01



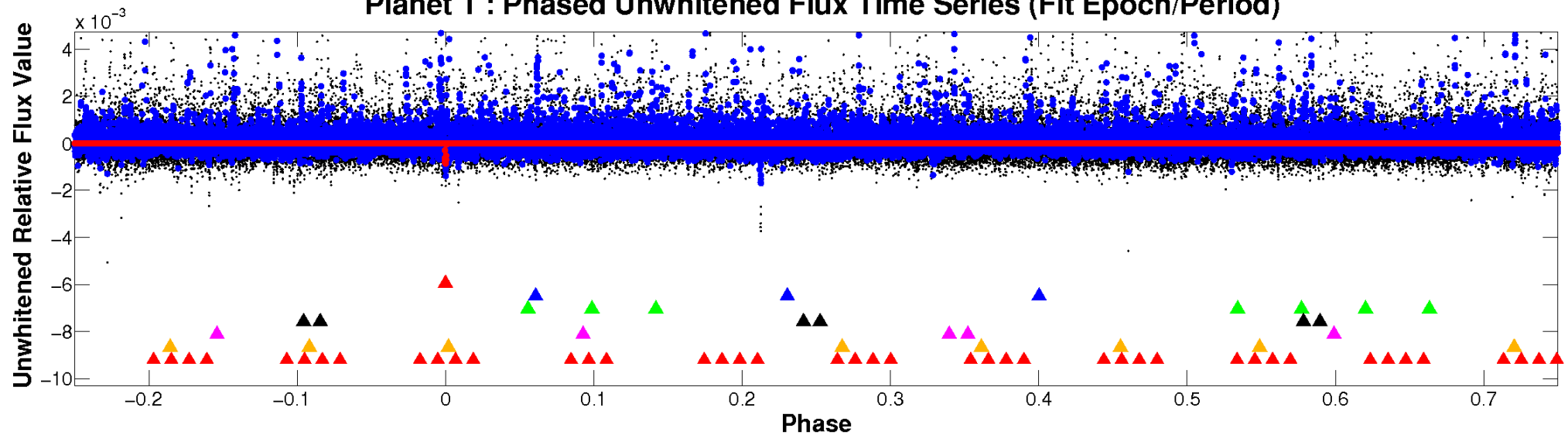
ALT Odd/Even

TCE 010452252-01

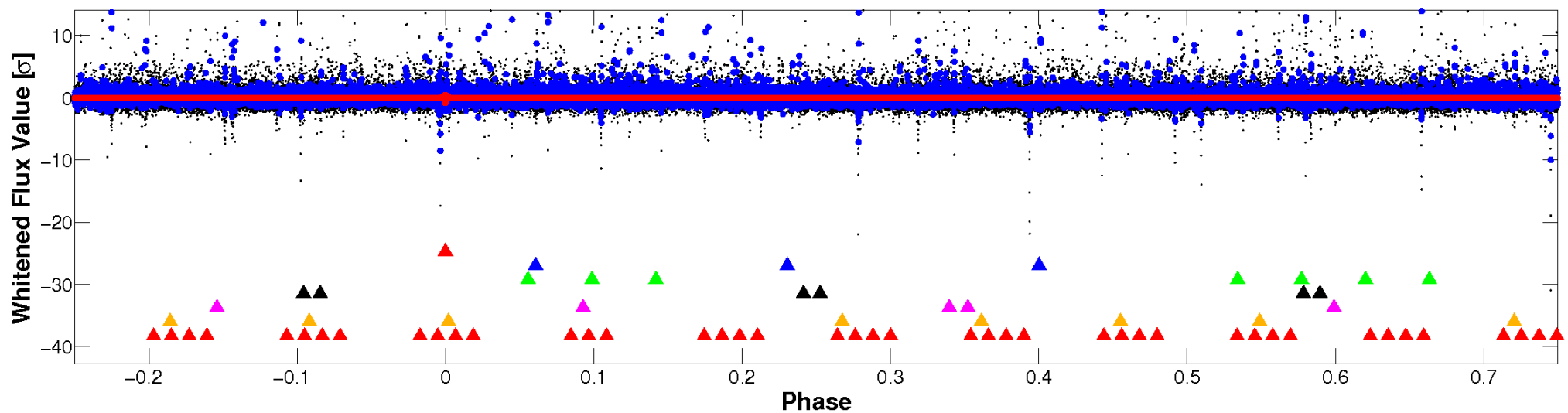


Non-Whitened Vs. Whitened Light Curve

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

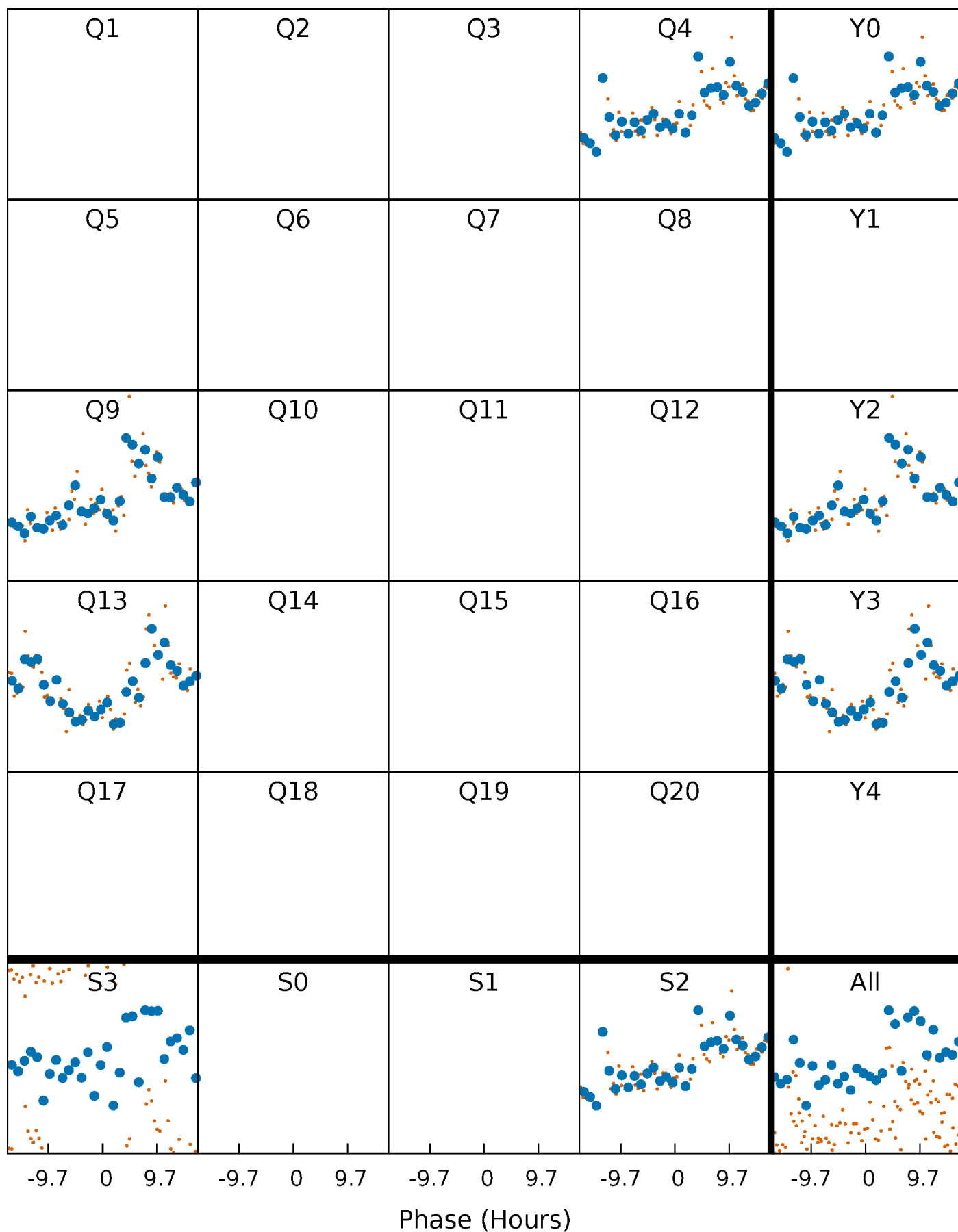


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



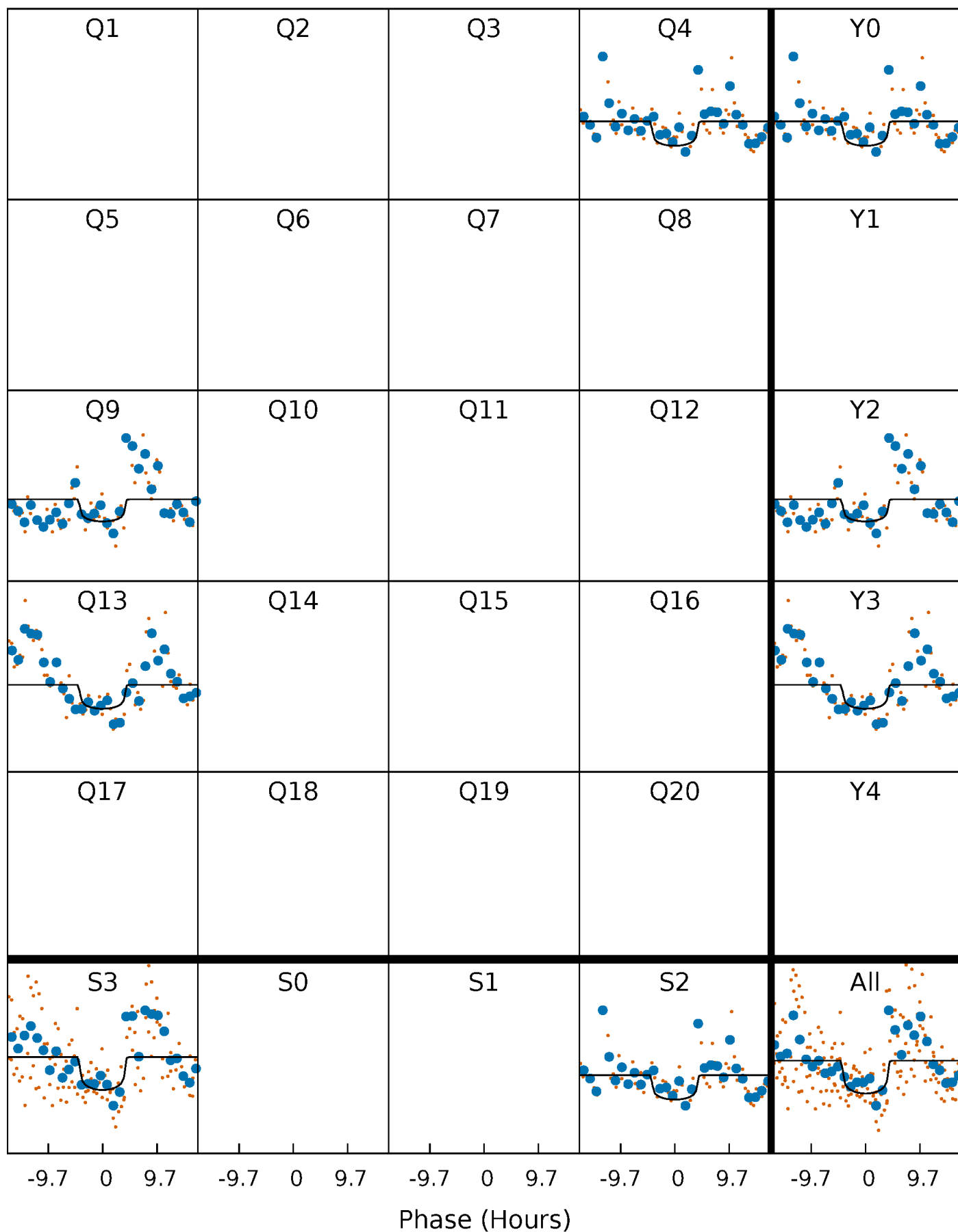
PDC Quarter-Phased Transit Curves

TCE 010452252-01 $P=384.926385$ Days $T_0=440.167064$ (BKJD)



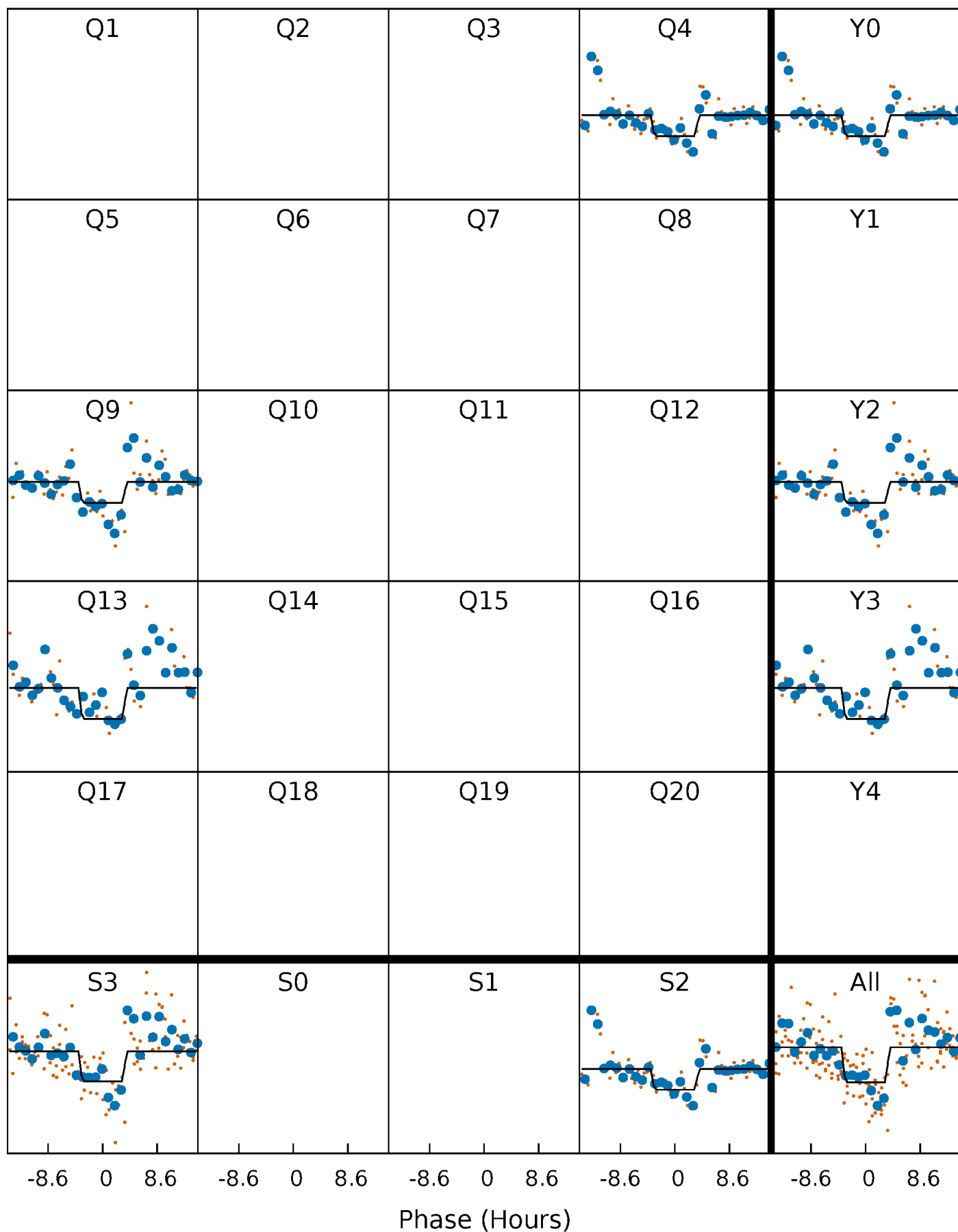
DV Quarter-Phased Transit Curves

TCE 010452252-01 $P=384.926385$ Days $T_0=440.167064$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

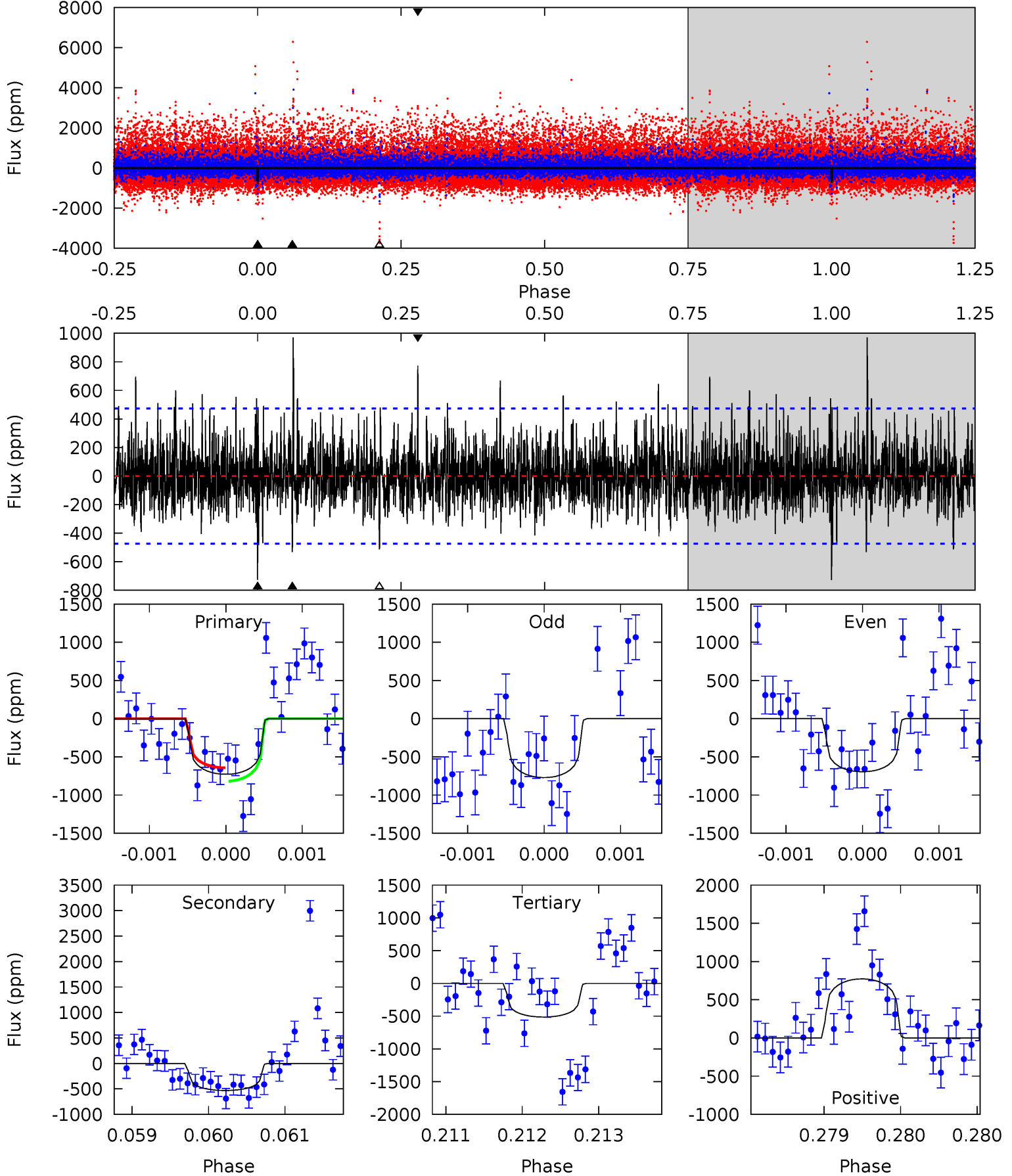
TCE 010452252-01 $P=384.947837$ Days $T_0=440.158224$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-01, P = 384.926385 Days, E = 55.240679 Days

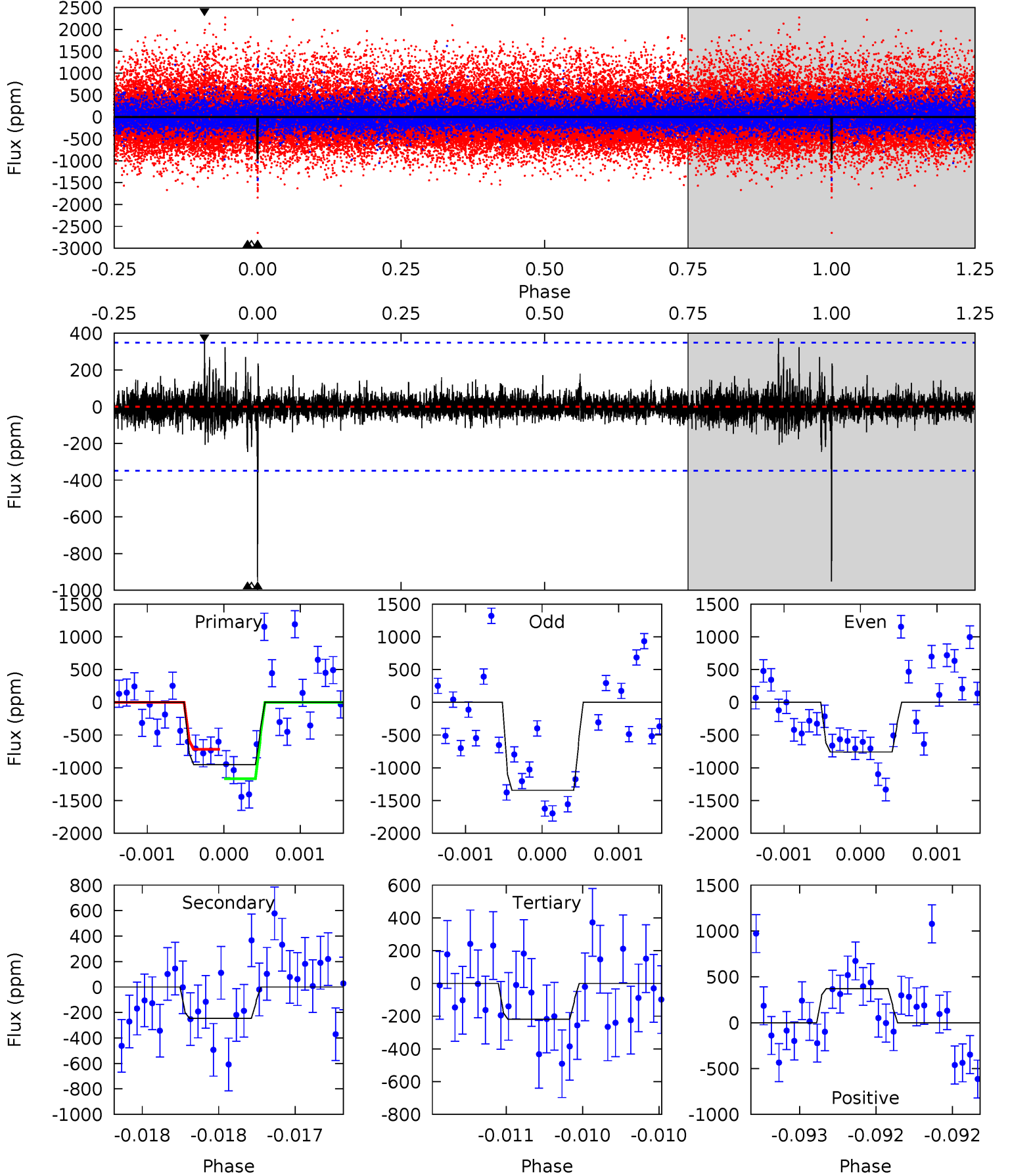
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.41	6.13	5.93	8.93	5.47	3.32	1.79	2.47	-0.52	0.20	-2.79	0.31	0.93	0.57	1.02



Alt Model-Shift Uniqueness Test

010452252-01, P = 384.947837 Days, E = 55.210387 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	3.87	3.45	5.86	5.49	3.35	0.66	11.5	9.13	0.42	-1.99	4.11	1.06	0.28	3.56



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-531 ± 87	$0.74^{+0.55}_{-0.44}$	126^{+8}_{-7}	3097^{+1053}_{-423}	$194917^{+998802}_{-127051}$
Alt.	-246 ± 63	$0.76^{+0.56}_{-0.44}$	126^{+8}_{-7}	2773^{+804}_{-360}	$85156^{+395062}_{-55987}$

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

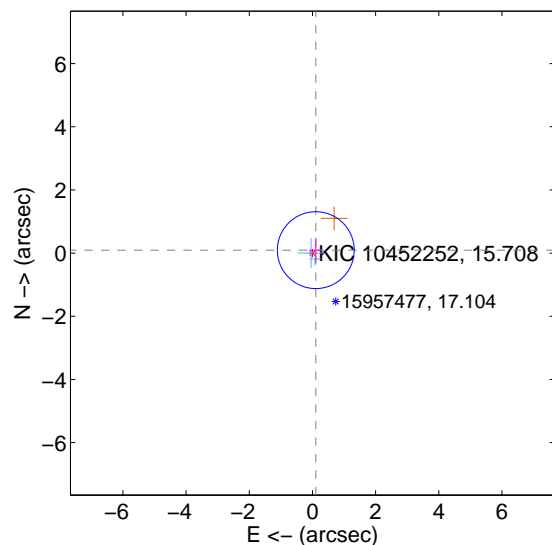
Supplemental centroid analysis for 010452252-01. Kepler magnitude: 15.71. Transit SNR 5.64

There are 2 quarters with good PRF difference image offsets

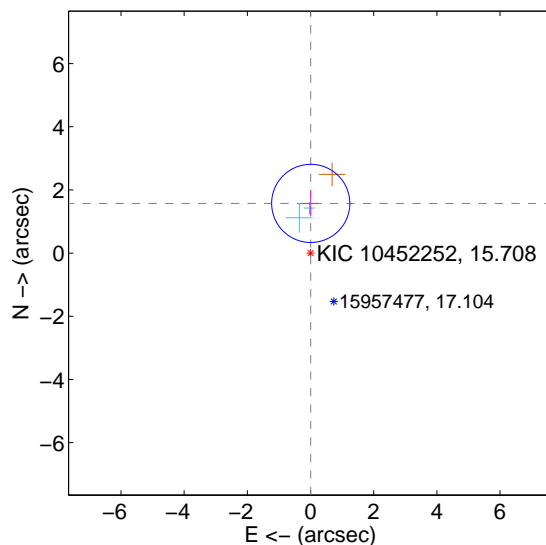
The direct PRF centroid is offset from the target star catalog position by about 1.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.141 ± 0.406	0.35	-0.106 ± 0.211	0.093 ± 0.393
PRF-fit source offset from KIC position	1.574 ± 0.412	3.82	-0.007 ± 0.241	1.574 ± 0.412
photometric centroid source offset	2.11 ± 1.43	1.48	-1.81 ± 1.42	1.07 ± 1.44

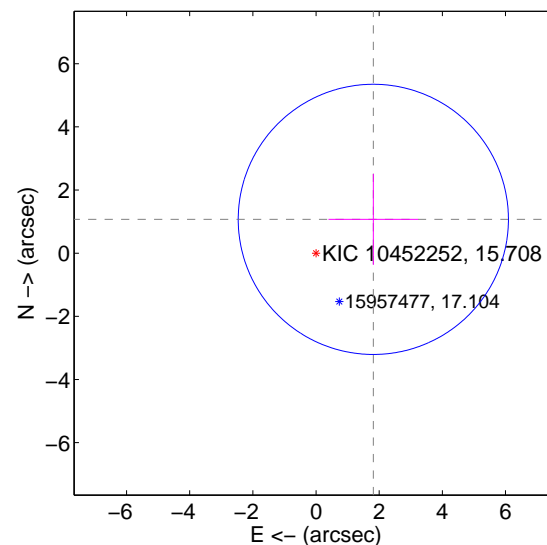
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



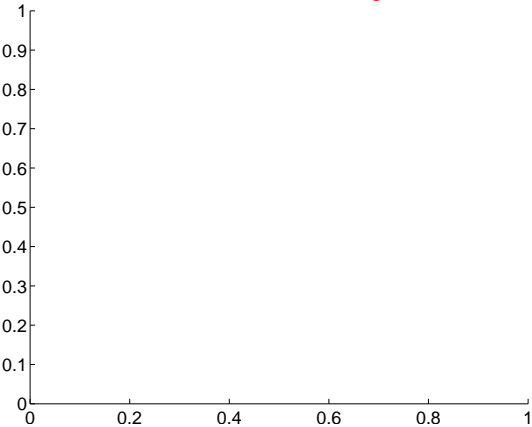
Q2 no difference image



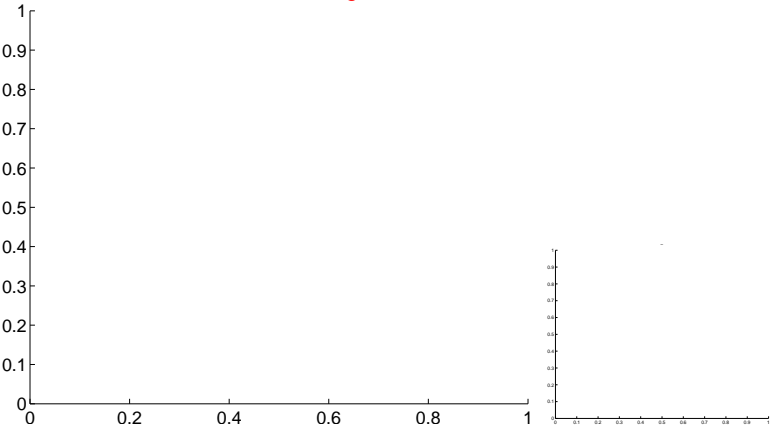
Q2 no OOT image



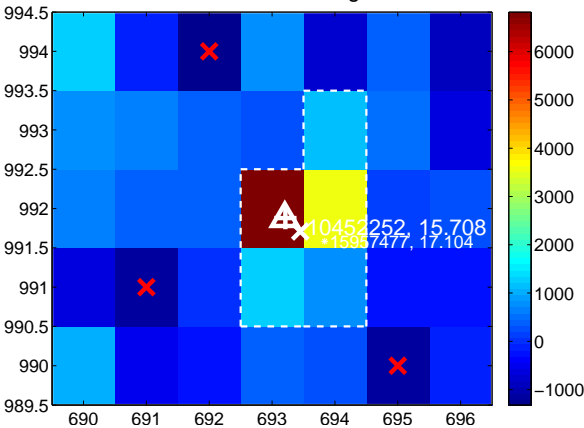
Q3 no difference image



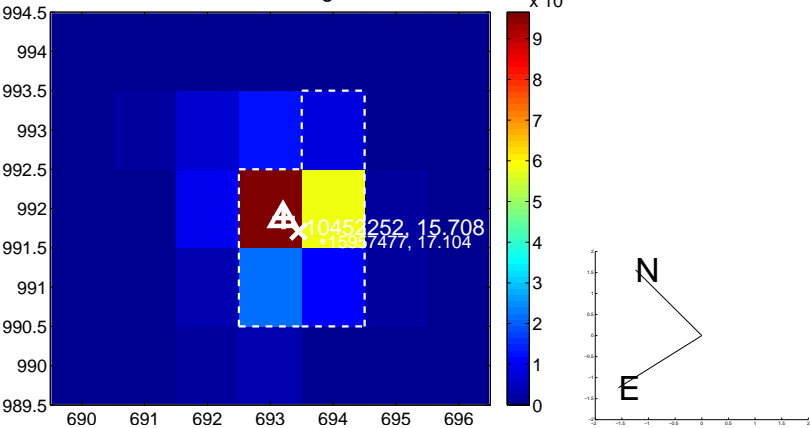
Q3 no OOT image



Q4 difference image



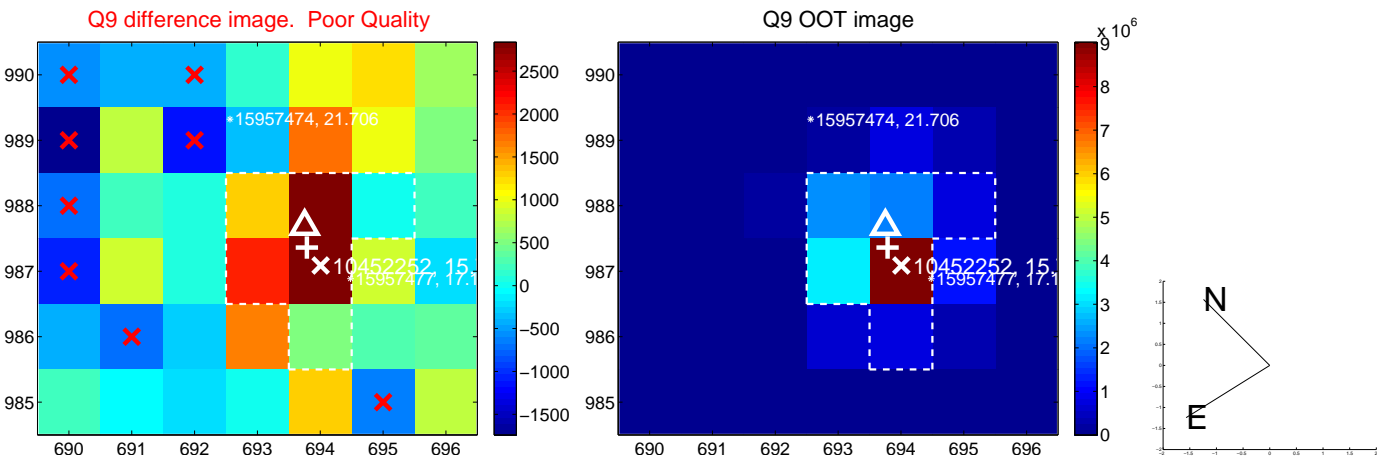
Q4 OOT image



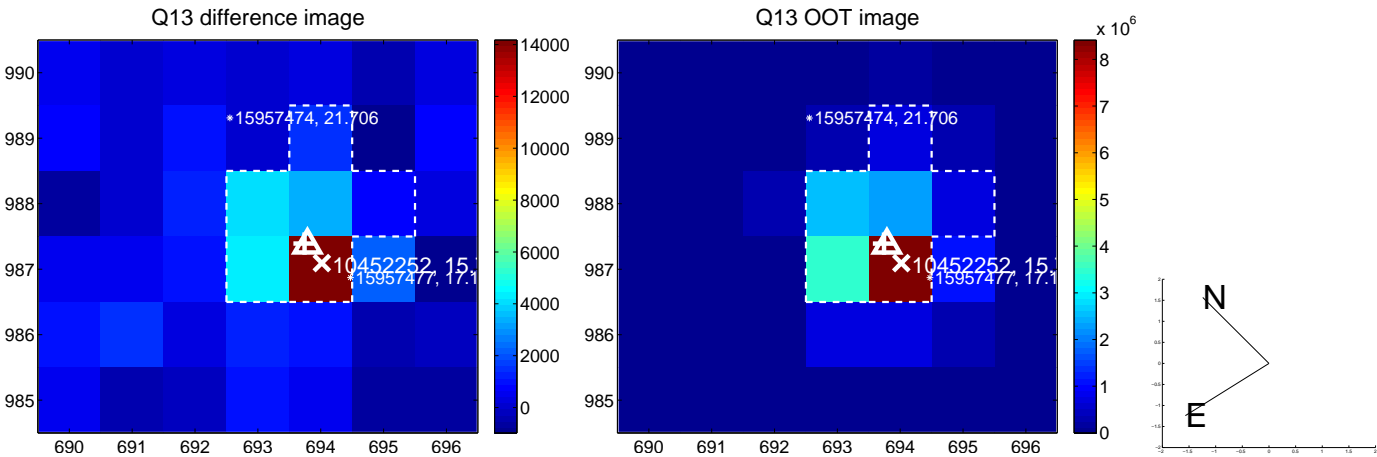
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



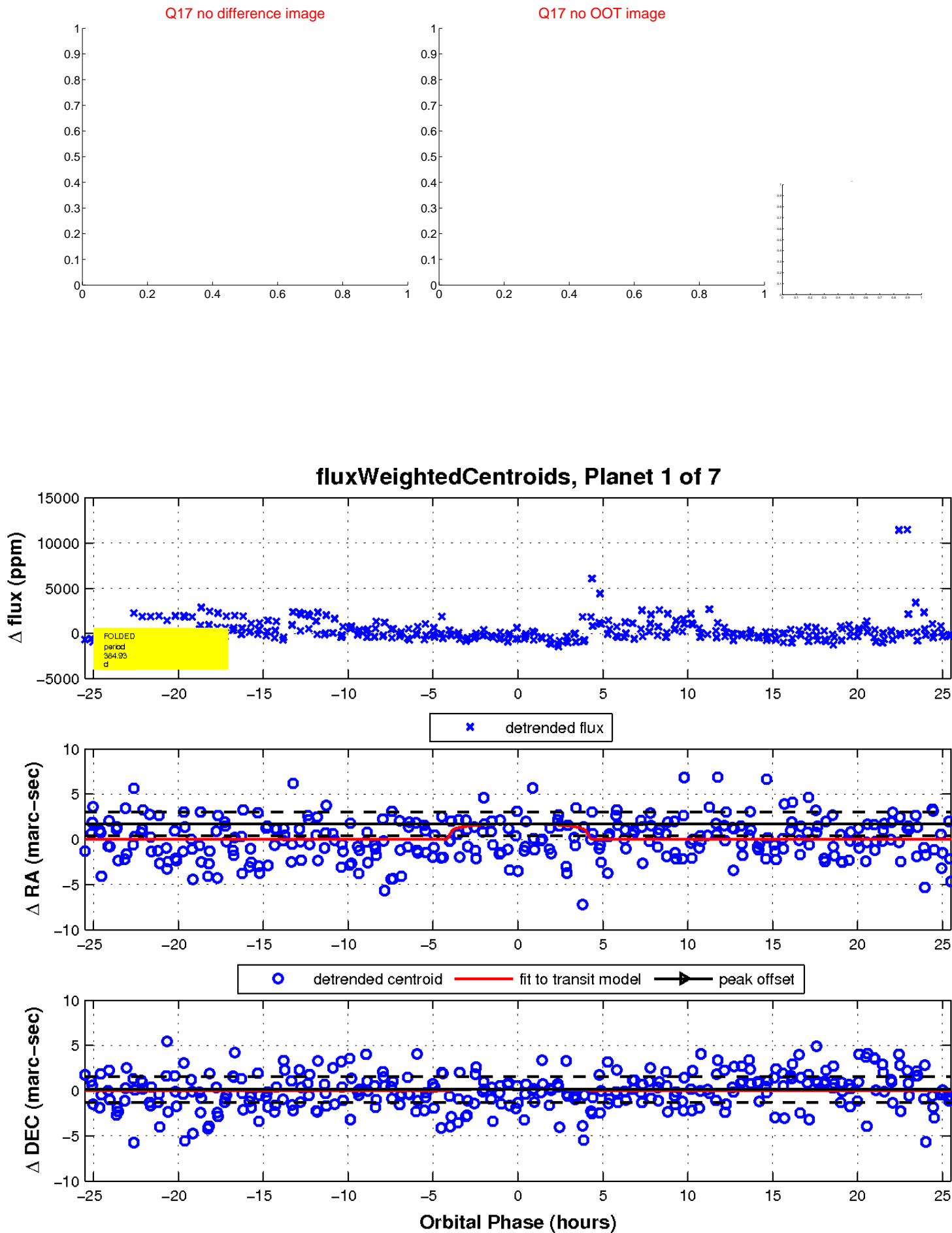
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

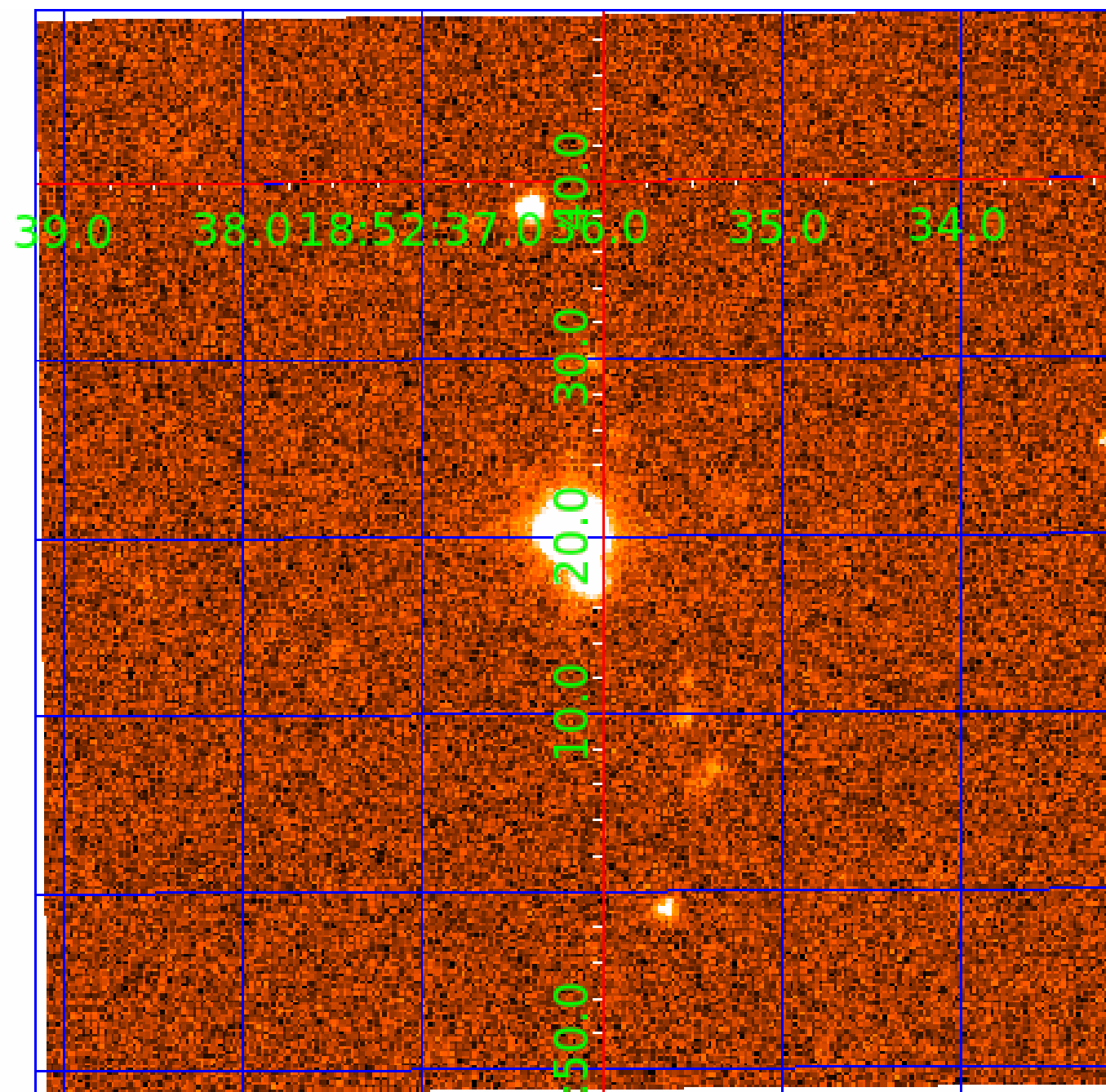


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
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010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

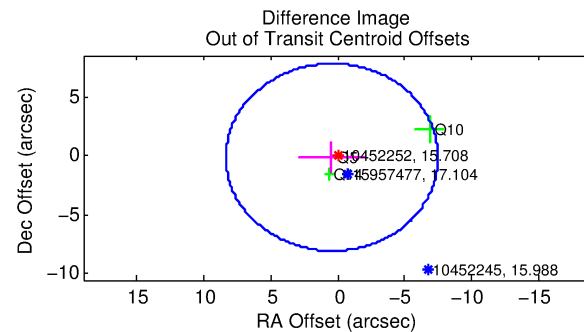
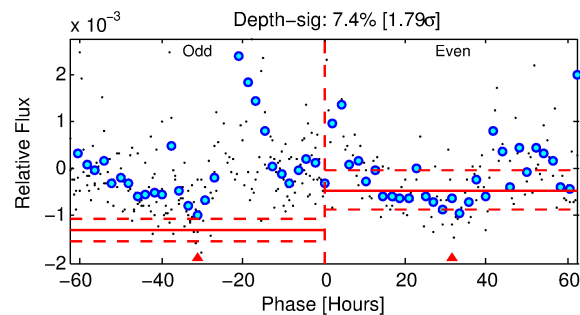
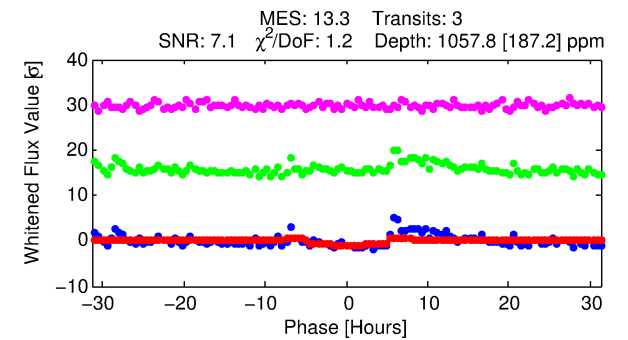
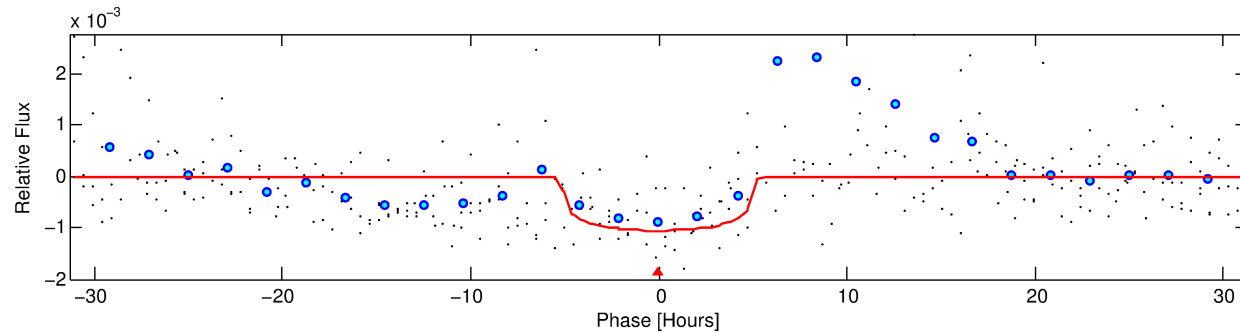
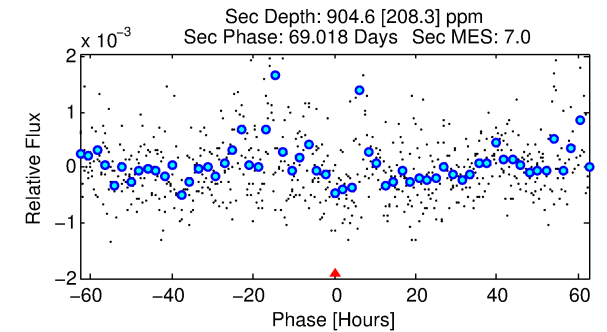
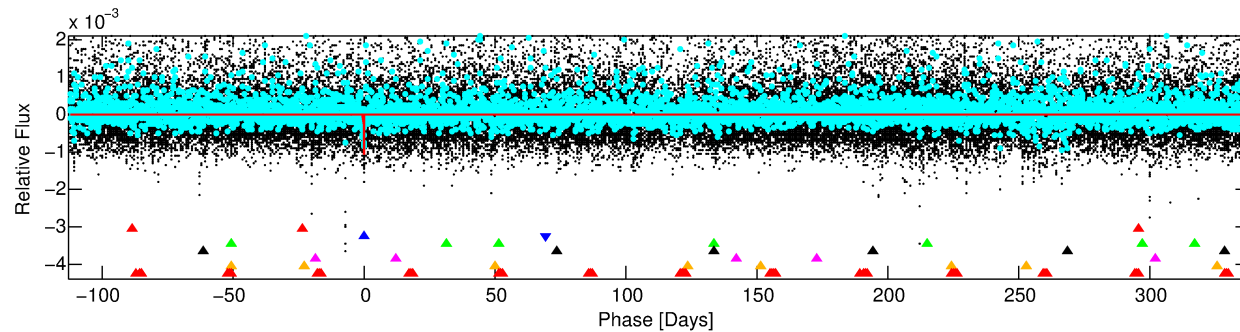
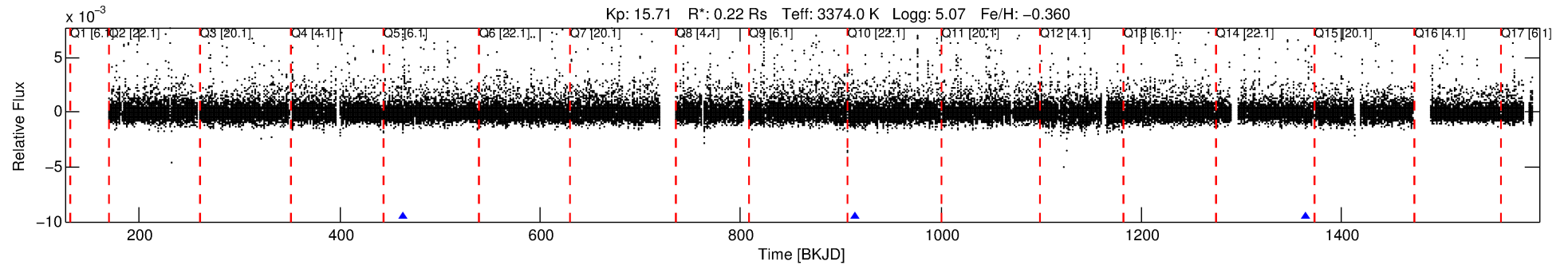
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-02

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 2 of 7 Period: 450.255 d



DV Fit Results:

Period = 450.25545 [0.01134] d
Epoch = 463.5643 [0.0147] BKJD
Rp/R* = 0.0297 [0.0240]
a/R* = 334.21 [1268.73]
b = 0.18 [20.59]
Seff = 0.01 [0.00]
Teq = 85 [8] K
Rp = 0.71 [0.64] Re
a = 0.6745 [0.1968] AU
Ag = 452672.99 [753646.08] [0.60 σ]
Teffp = 3394 [1388] K [2.38 σ]

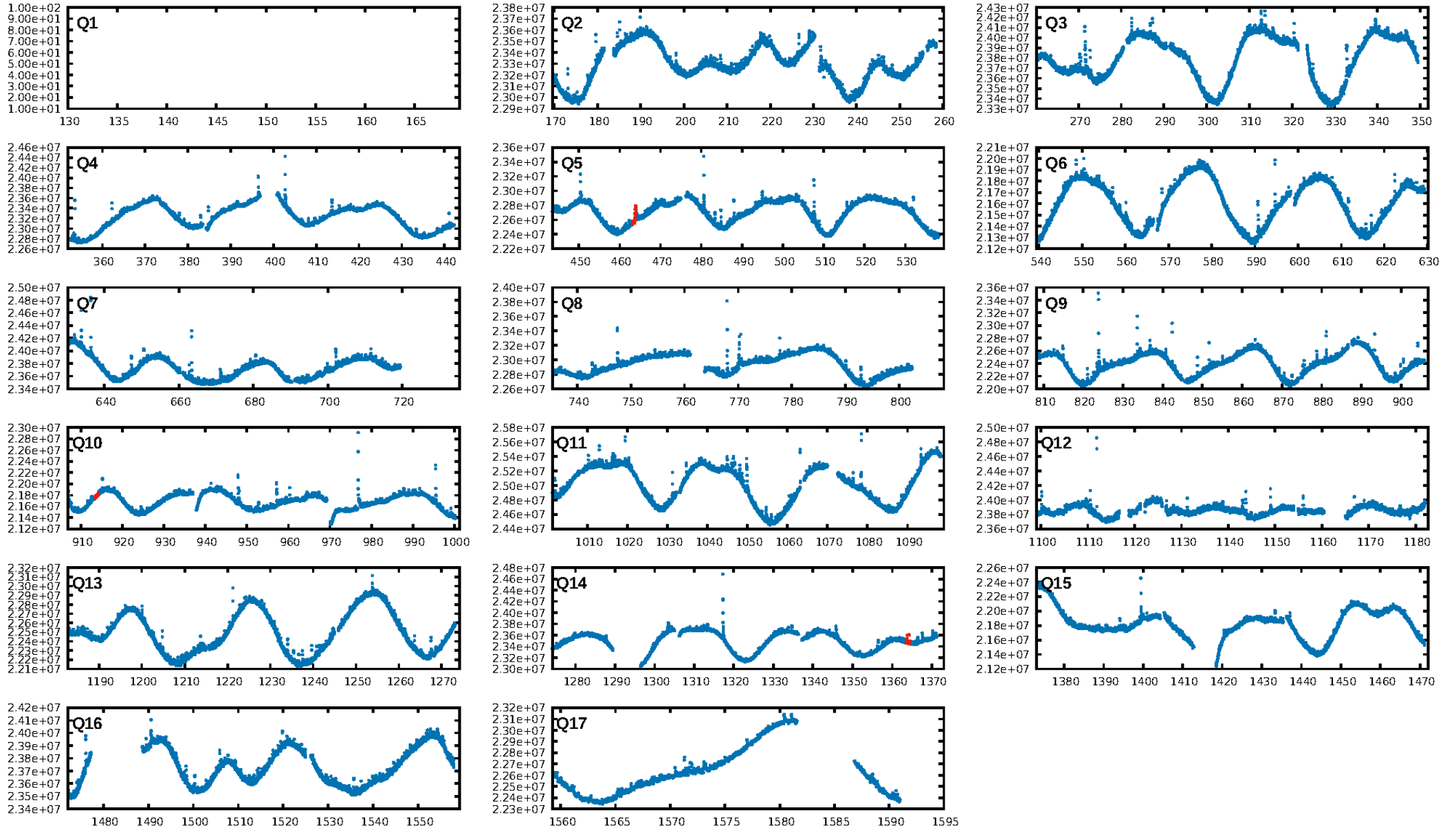
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [116.43 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.037
Centroid-sig: 78.3%
Centroid-so: 1.323 arcsec [1.31 σ]
OotOffset-rm: 0.441 arcsec [0.17 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 1.275 arcsec [3.26 σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

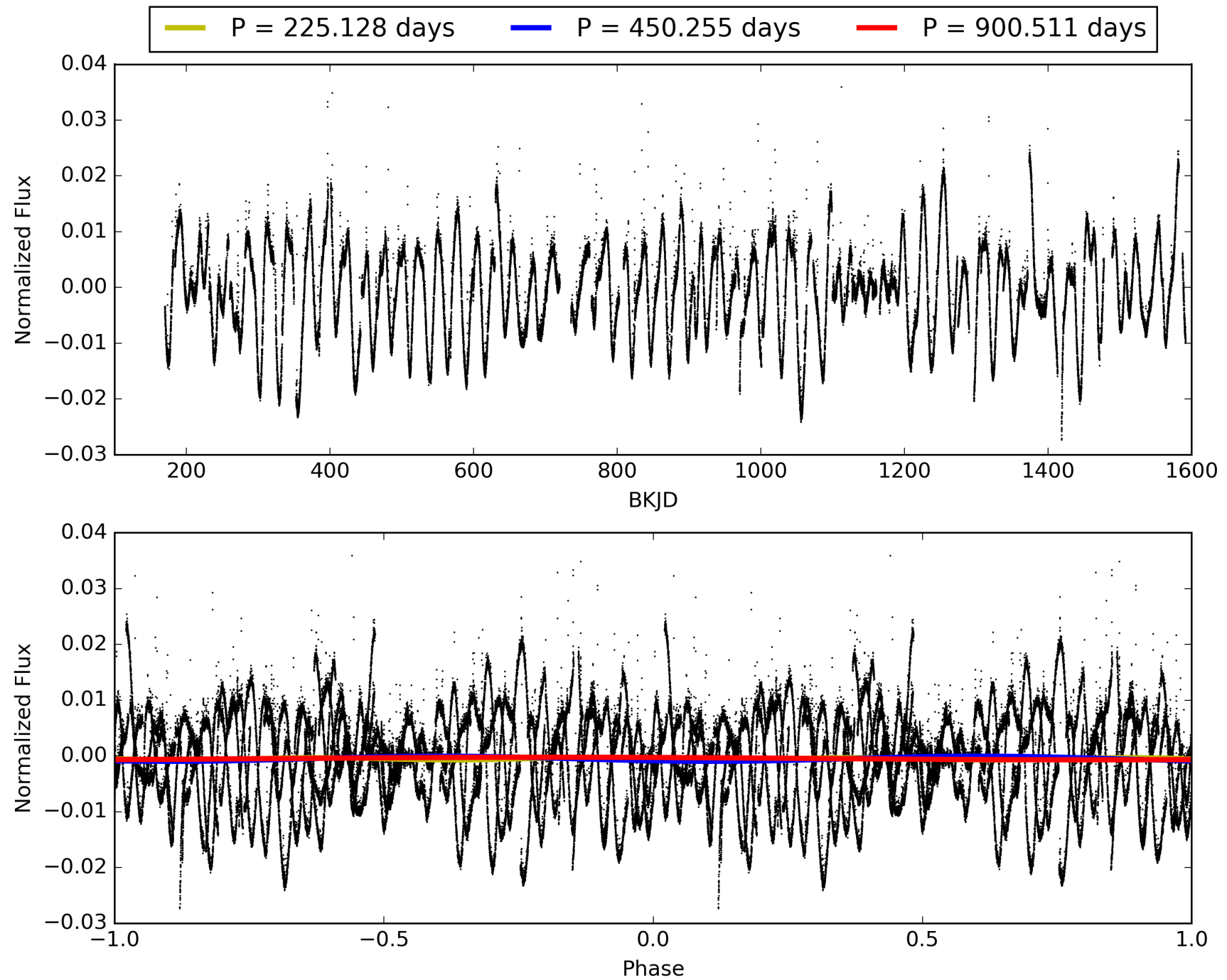
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:40 Z

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

TCE 010452252-02, PDC Light Curves

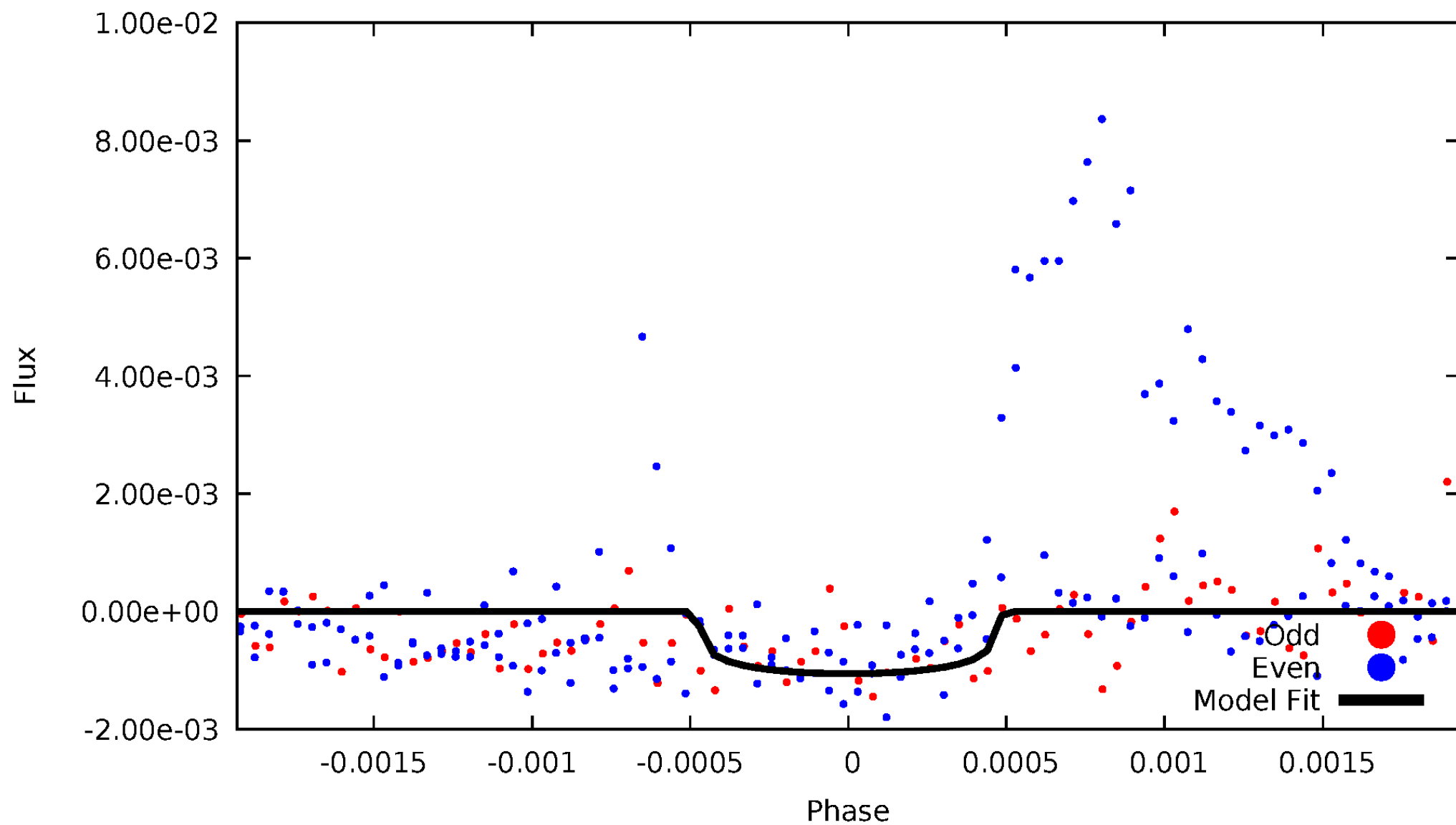


TCE 010452252-02



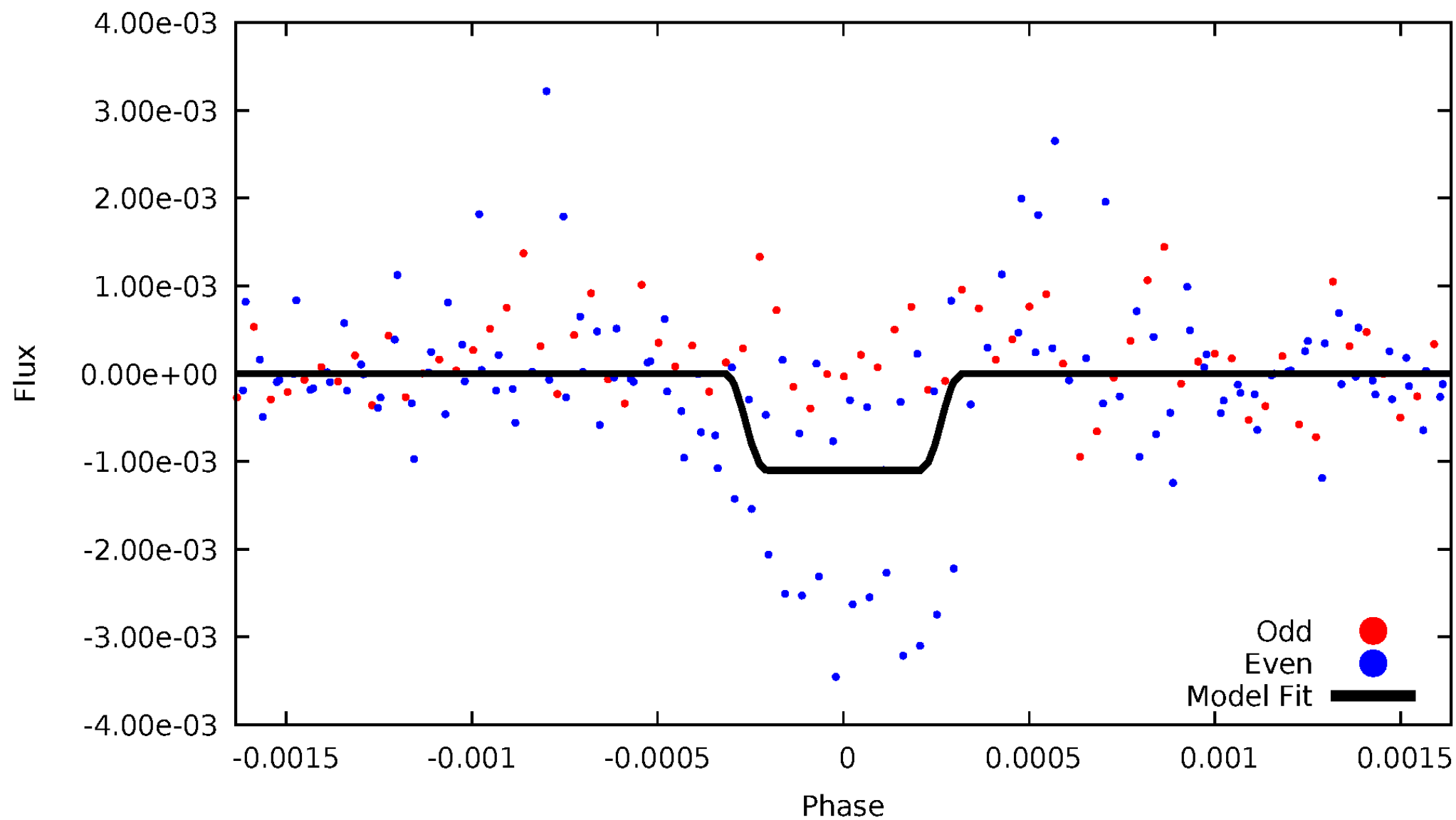
DV Odd/Even

TCE 010452252-02



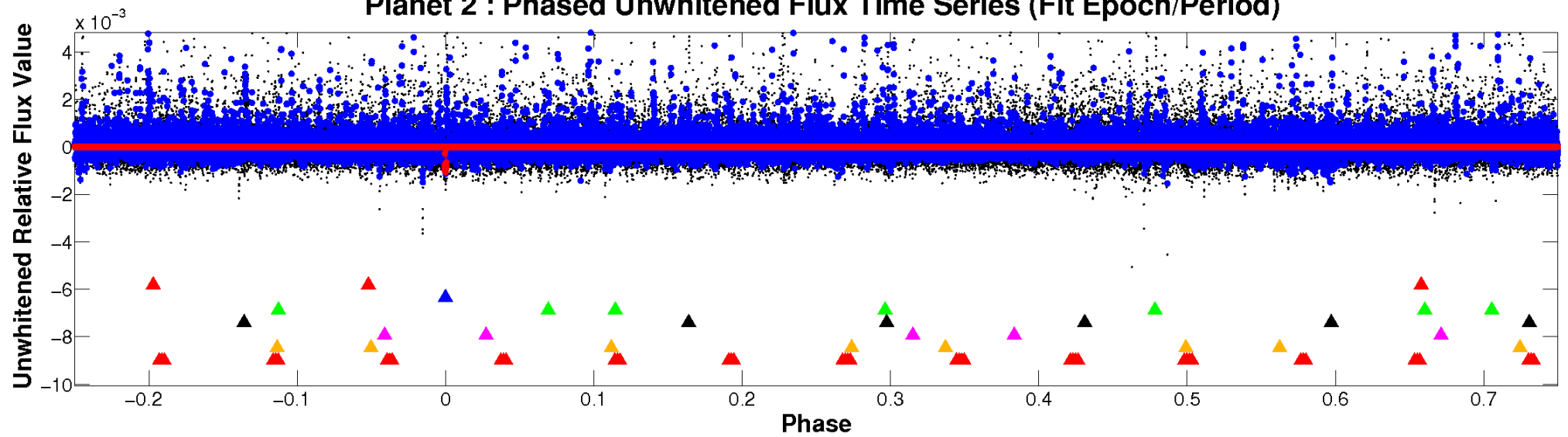
ALT Odd/Even

TCE 010452252-02

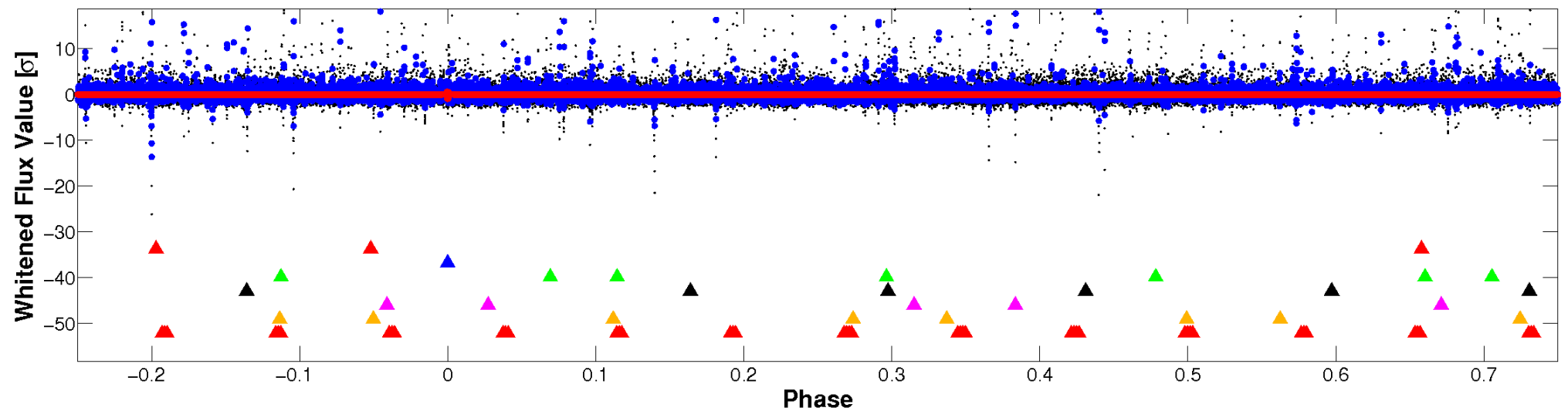


Non-Whitened Vs. Whitened Light Curve

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

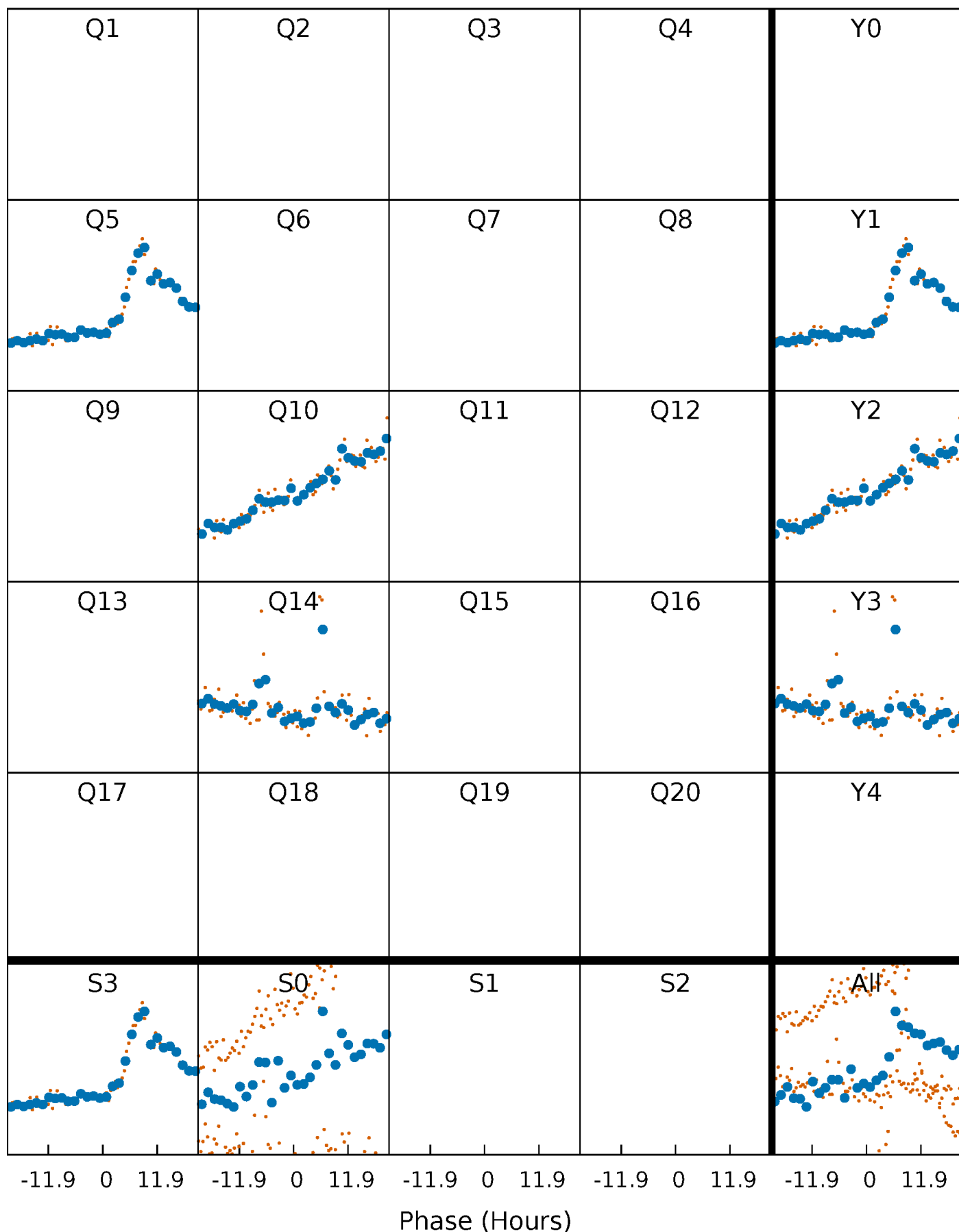


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010452252-02 $P=450.255445$ Days $T_0=463.564288$ (BKJD)



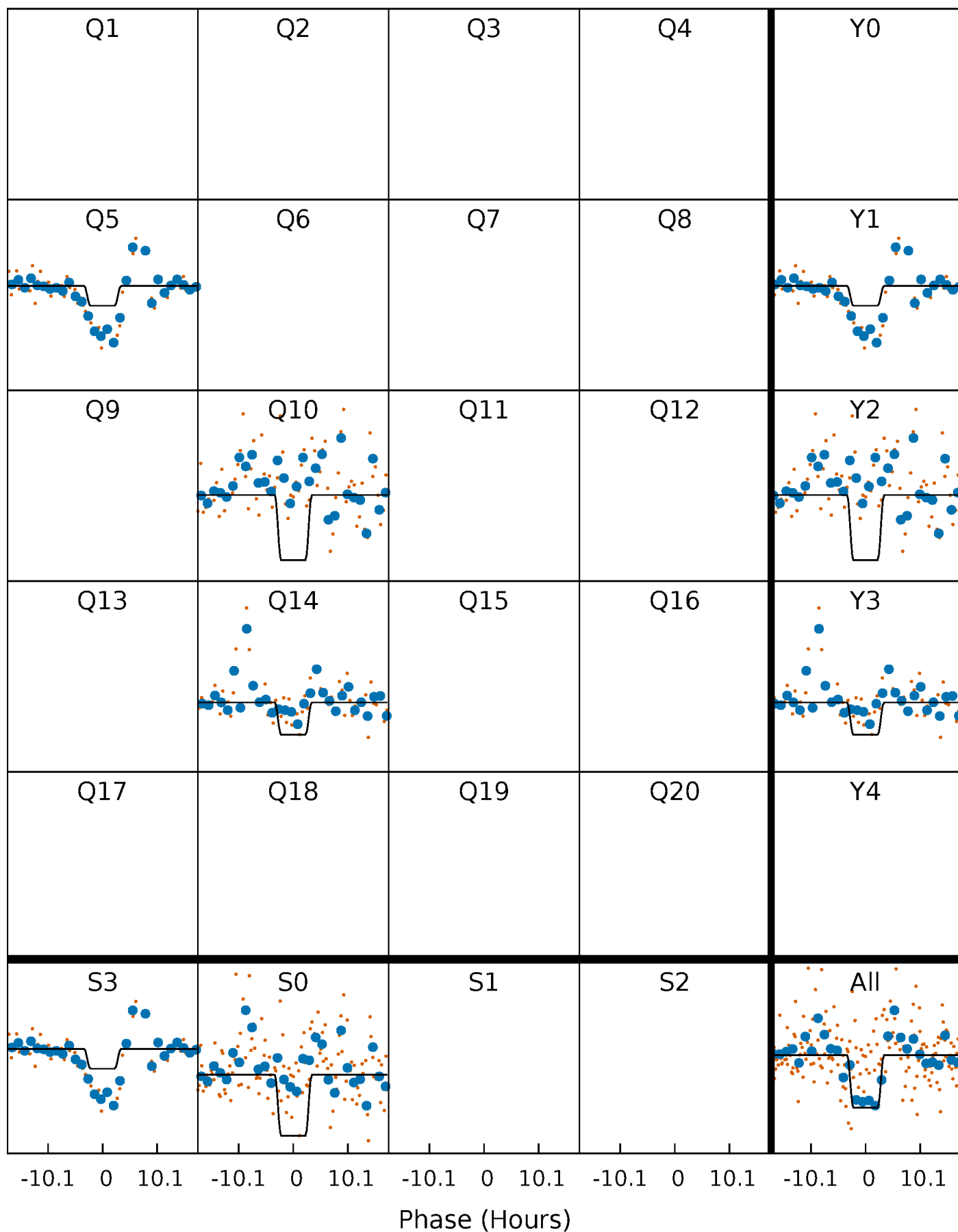
DV Quarter-Phased Transit Curves

TCE 010452252-02 $P=450.255445$ Days $T_0=463.564288$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

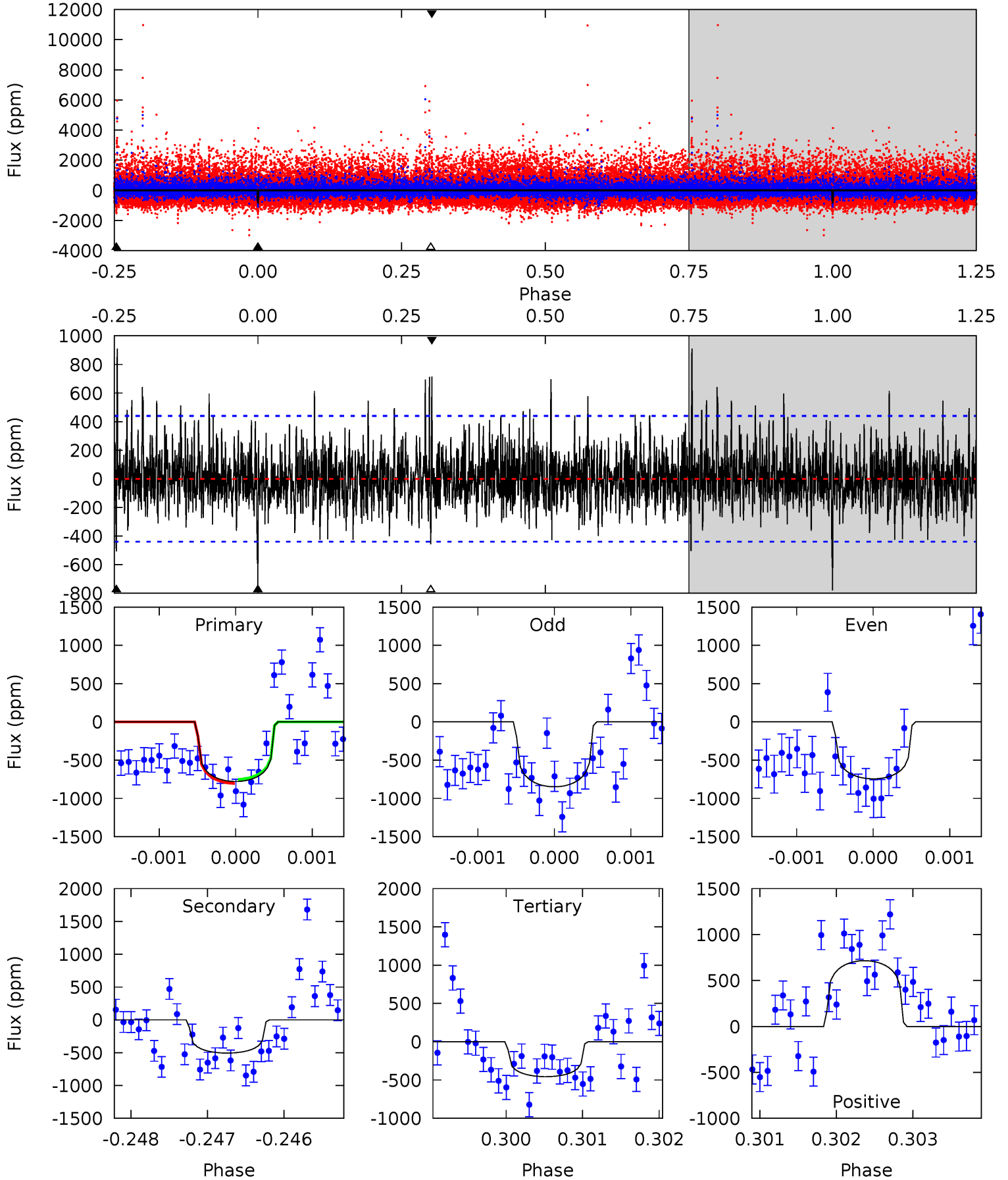
TCE 010452252-02 P=450.267117 Days $T_0=463.627777$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-02, $P = 450.255445$ Days, $E = 13.308843$ Days

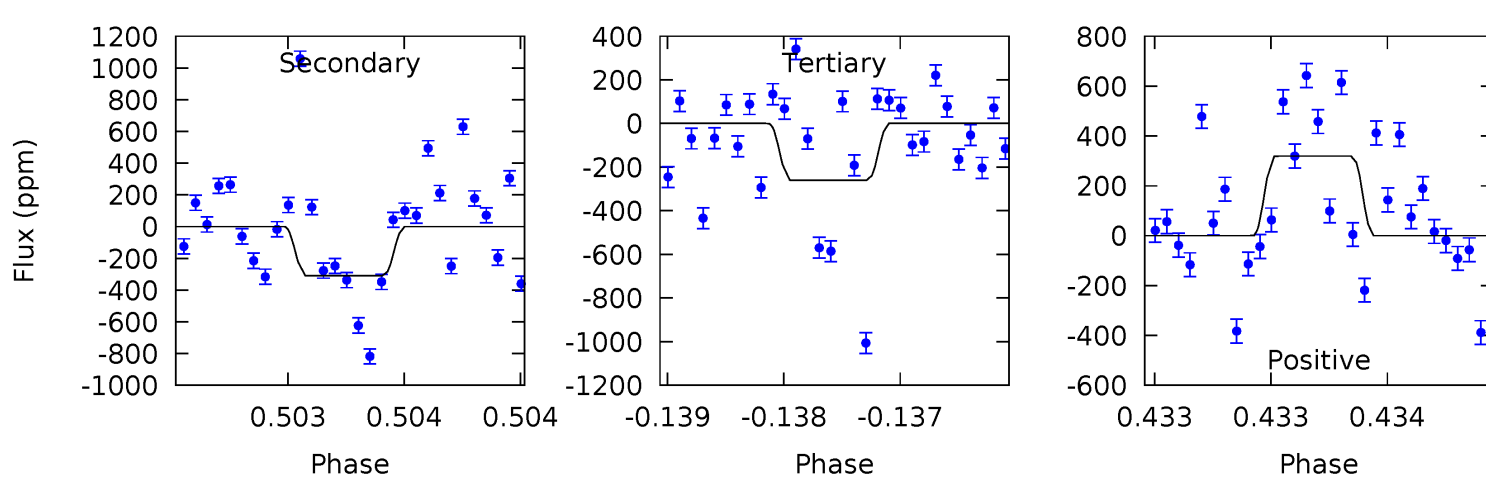
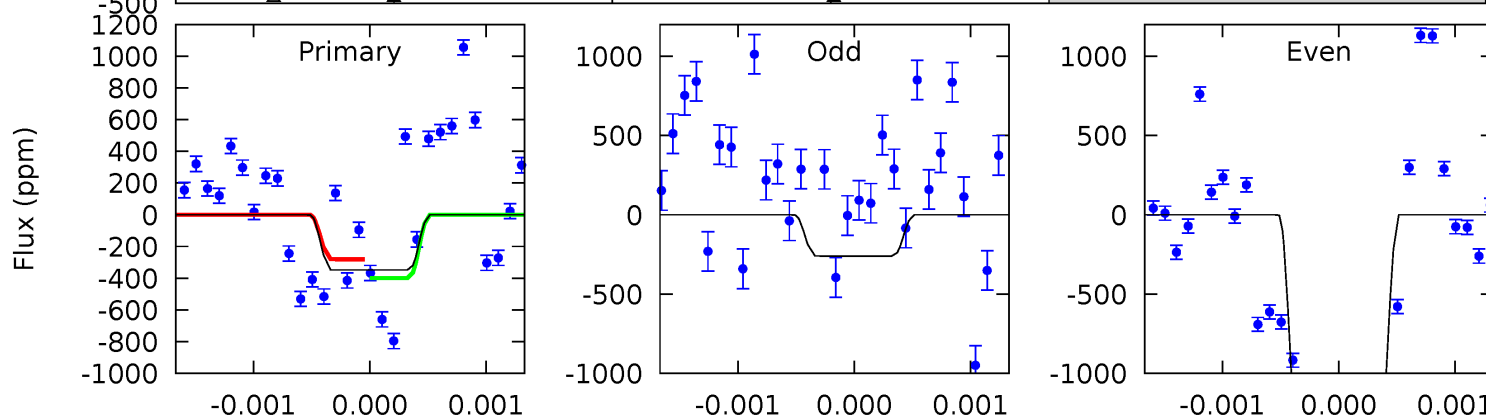
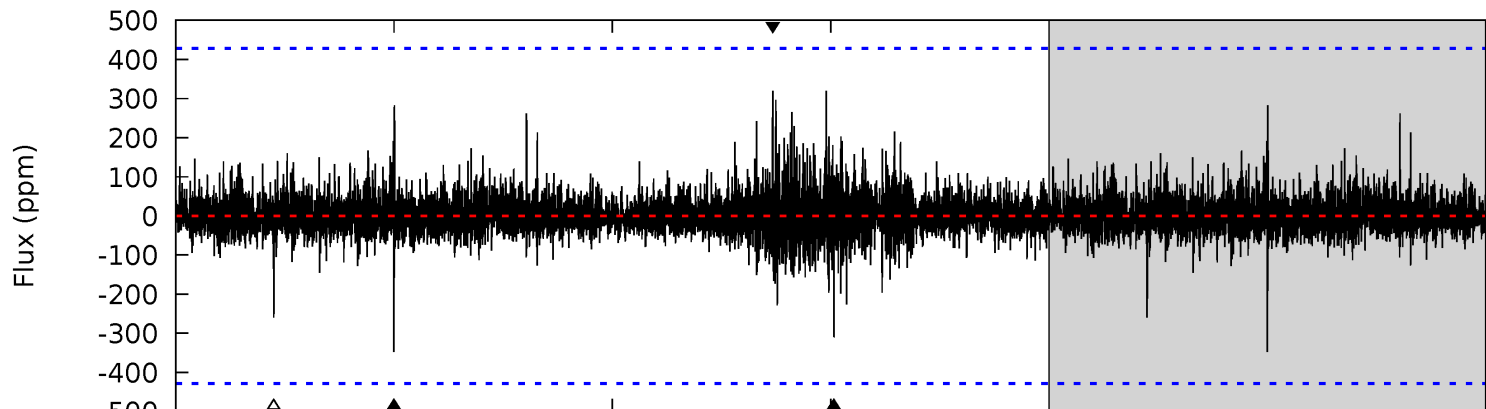
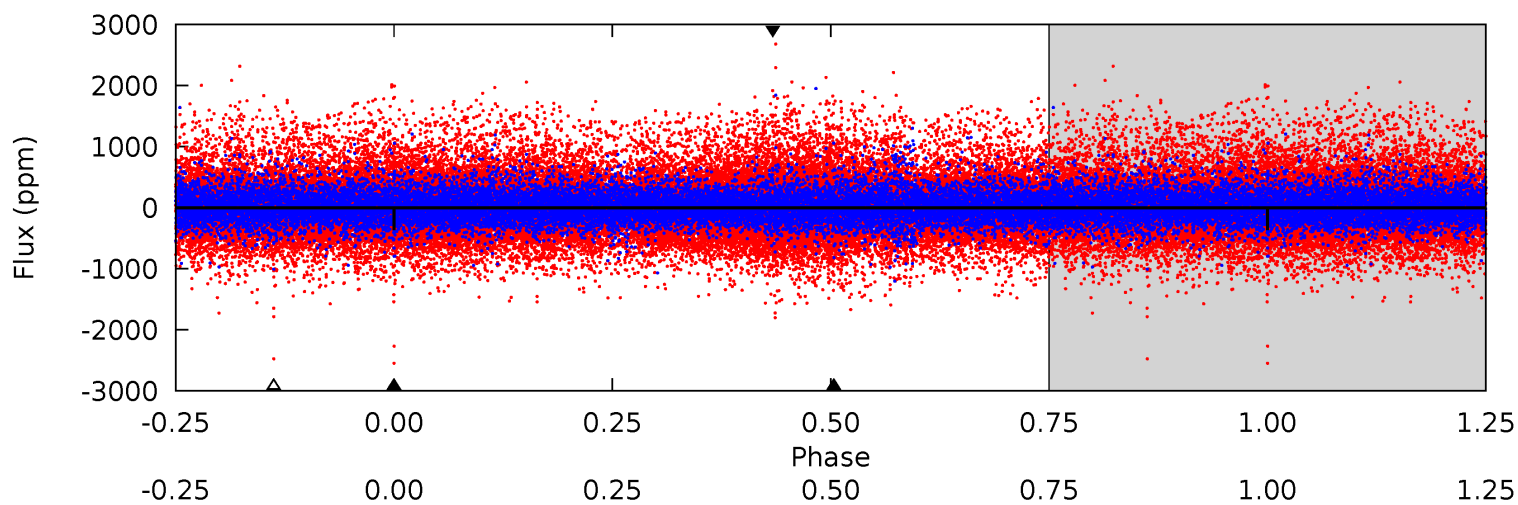
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.67	6.28	5.67	8.89	5.46	3.30	1.86	4.00	0.78	0.62	-2.60	0.36	0.97	0.54	0.32



Alt Model-Shift Uniqueness Test

010452252-02, P = 450.267117 Days, E = 13.360660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	4.00	3.36	4.12	5.54	3.42	0.56	1.14	0.38	0.64	-0.12	8.43	2.75	0.48	0



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-506 ± 81	$0.79^{+0.66}_{-0.46}$	120^{+8}_{-7}	3010^{+950}_{-421}	$197027^{+994250}_{-136347}$
Alt.	-310 ± 77	$0.88^{+0.58}_{-0.52}$	120^{+8}_{-7}	2754^{+789}_{-338}	$99975^{+475283}_{-64815}$

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

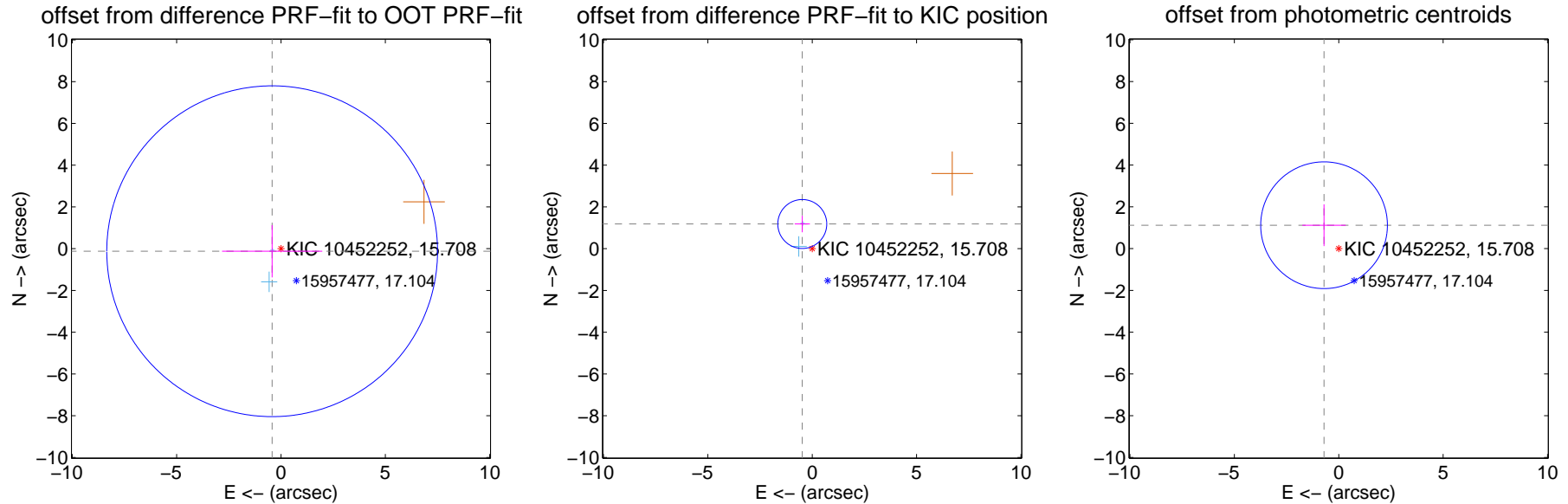
DV Centroid Data

Supplemental centroid analysis for 010452252-02. Kepler magnitude: 15.71. Transit SNR 7.13

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.441 ± 2.641	0.17	0.423 ± 2.400	-0.122 ± 1.252
PRF-fit source offset from KIC position	1.275 ± 0.391	3.26	0.476 ± 0.364	1.183 ± 0.395
photometric centroid source offset	1.32 ± 1.01	1.31	0.70 ± 1.04	1.12 ± 1.00

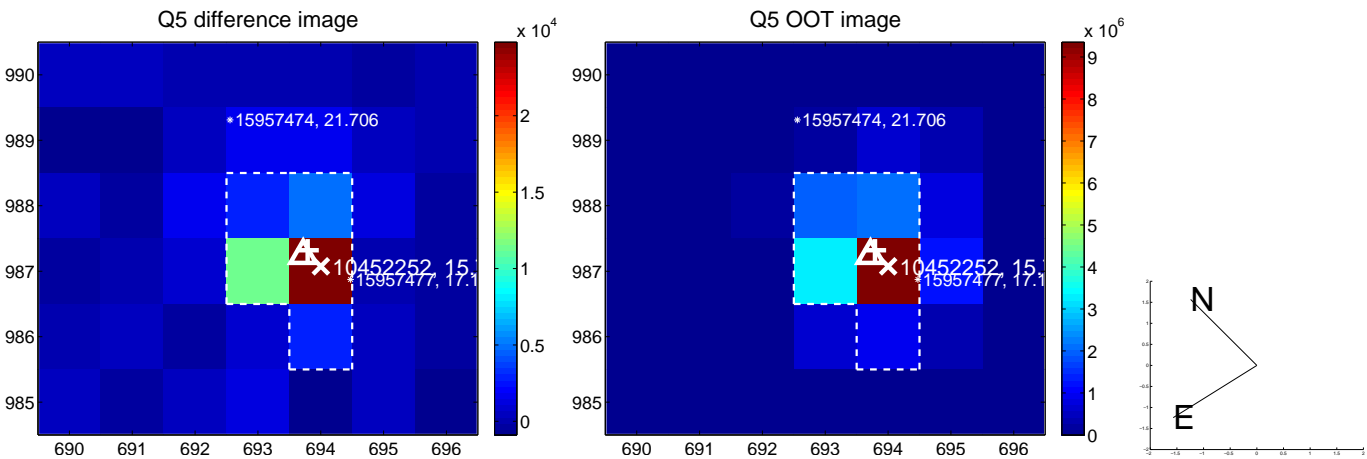


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

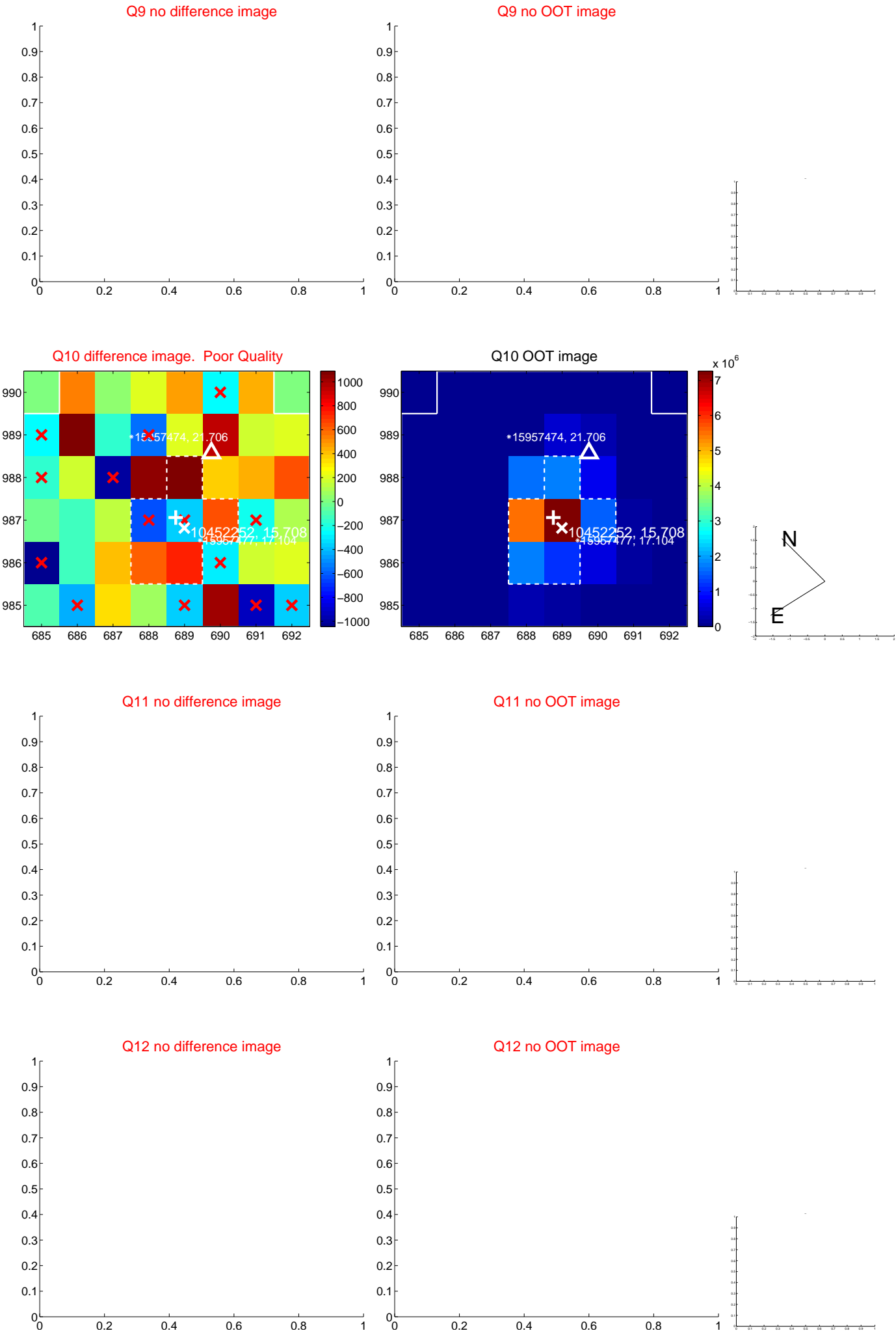
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



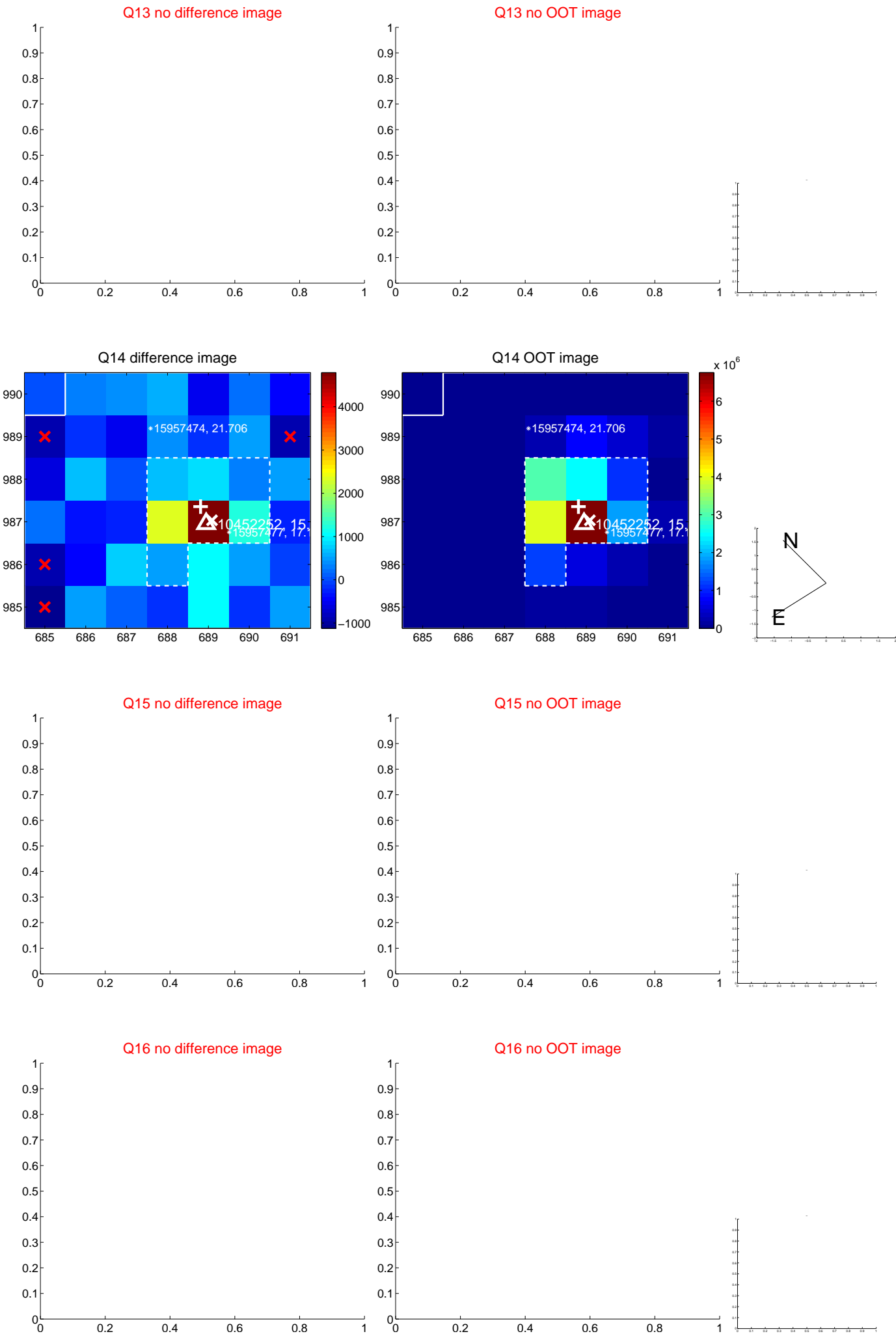
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



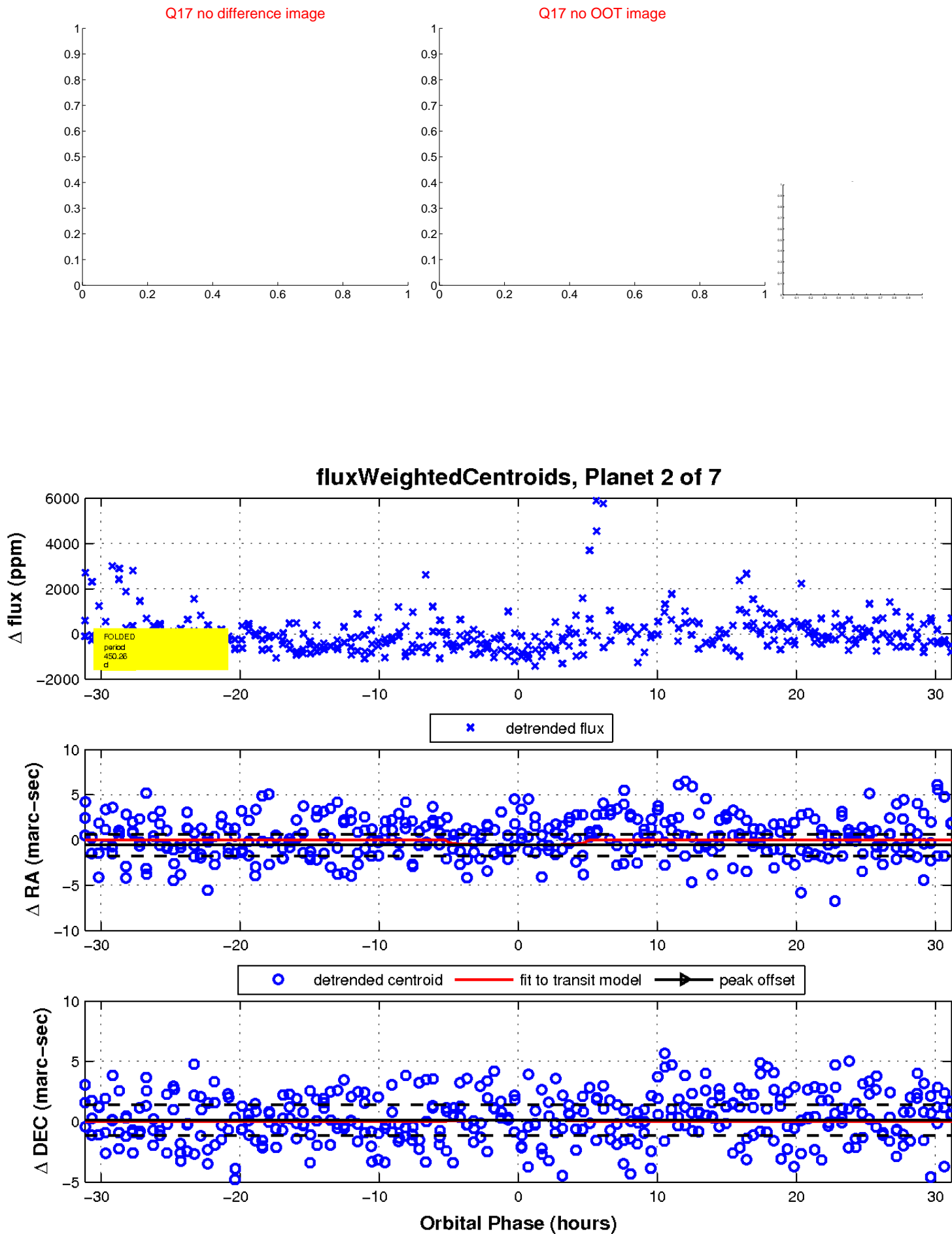
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

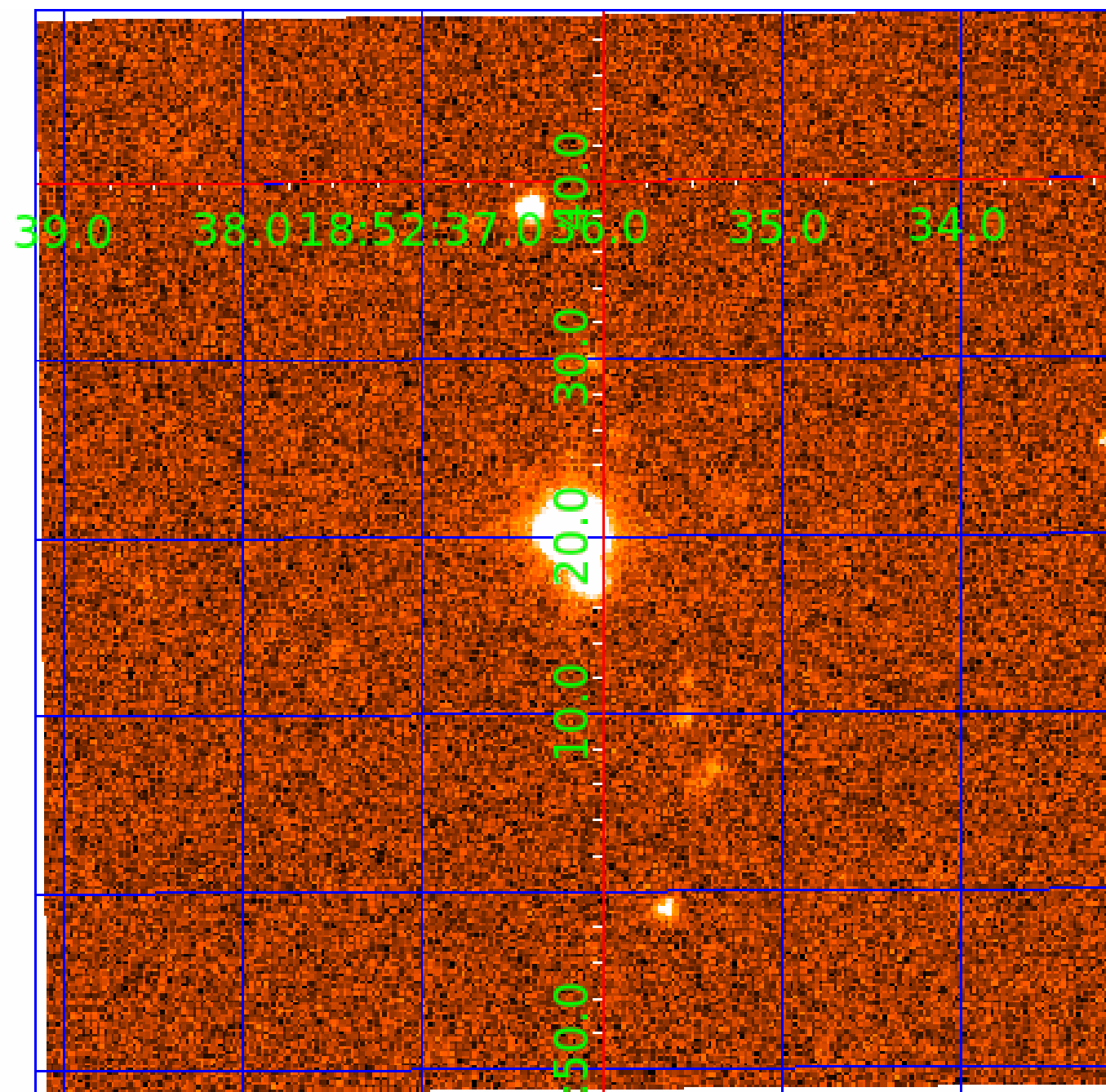


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

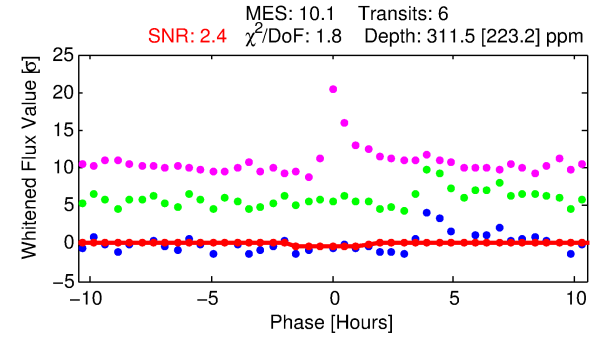
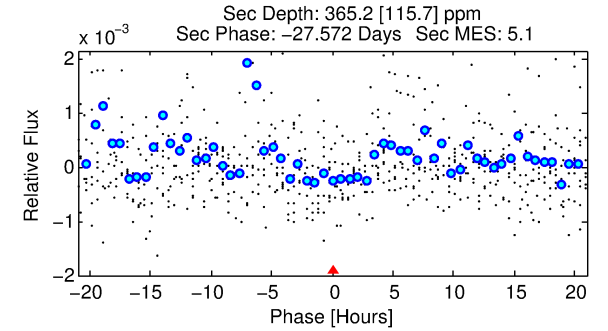
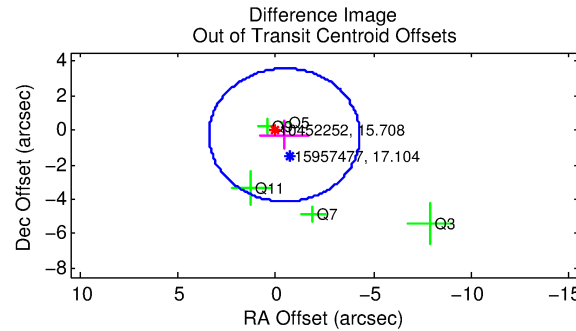
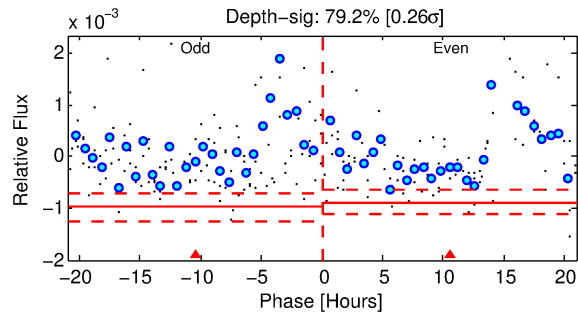
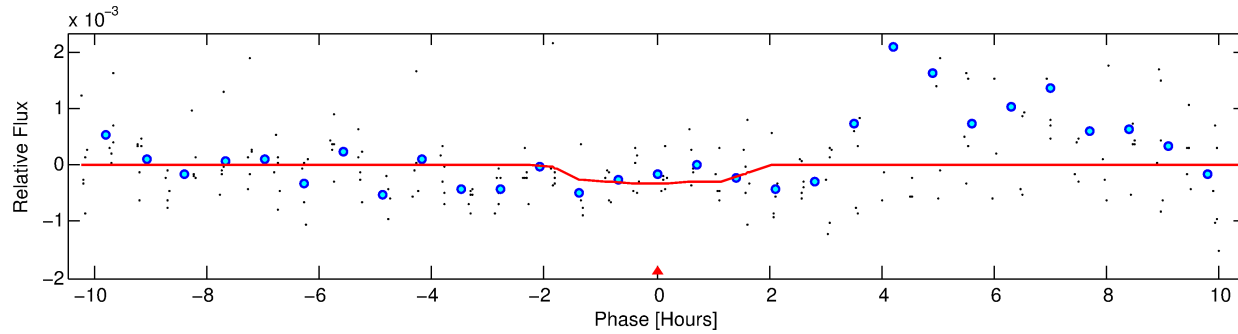
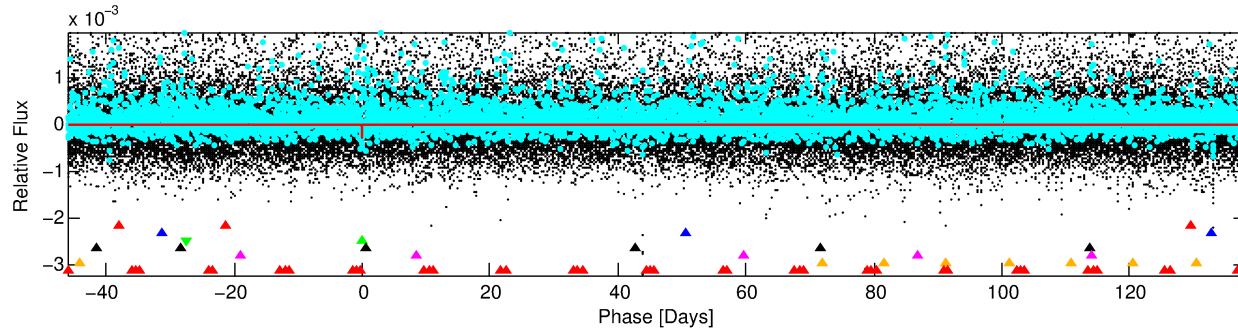
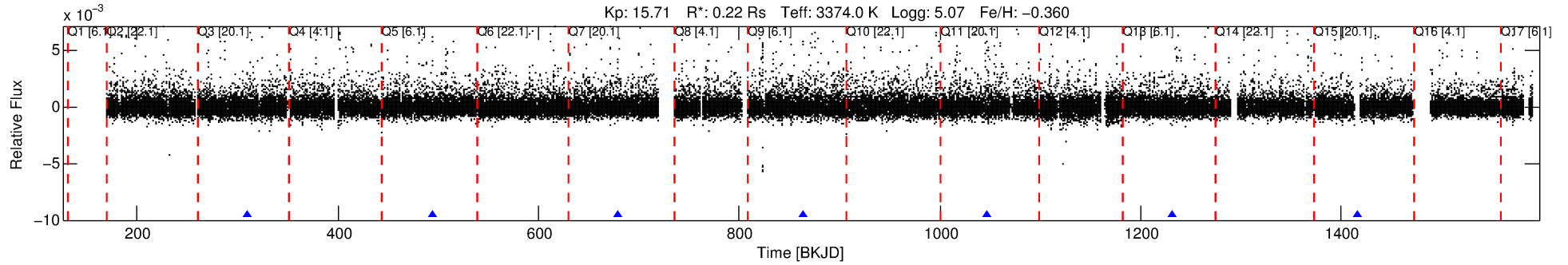
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-03

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 3 of 7 Period: 184.167 d



DV Fit Results:

Period = 184.16748 [0.01115] d
Epoch = 310.6084 [0.0379] BKJD
Rp/R* = 0.0176 [0.1140]
a/R* = 272.36 [8352.62]
b = 0.76 [17.04]
Seff = 0.04 [0.01]
Teq = 114 [10] K
Rp = 0.42 [2.72] Re
a = 0.3717 [0.1084] AU
Ag = 158435.69 [2054915.31] [0.08σ]
Teffp = 3516 [11399] K [0.30σ]

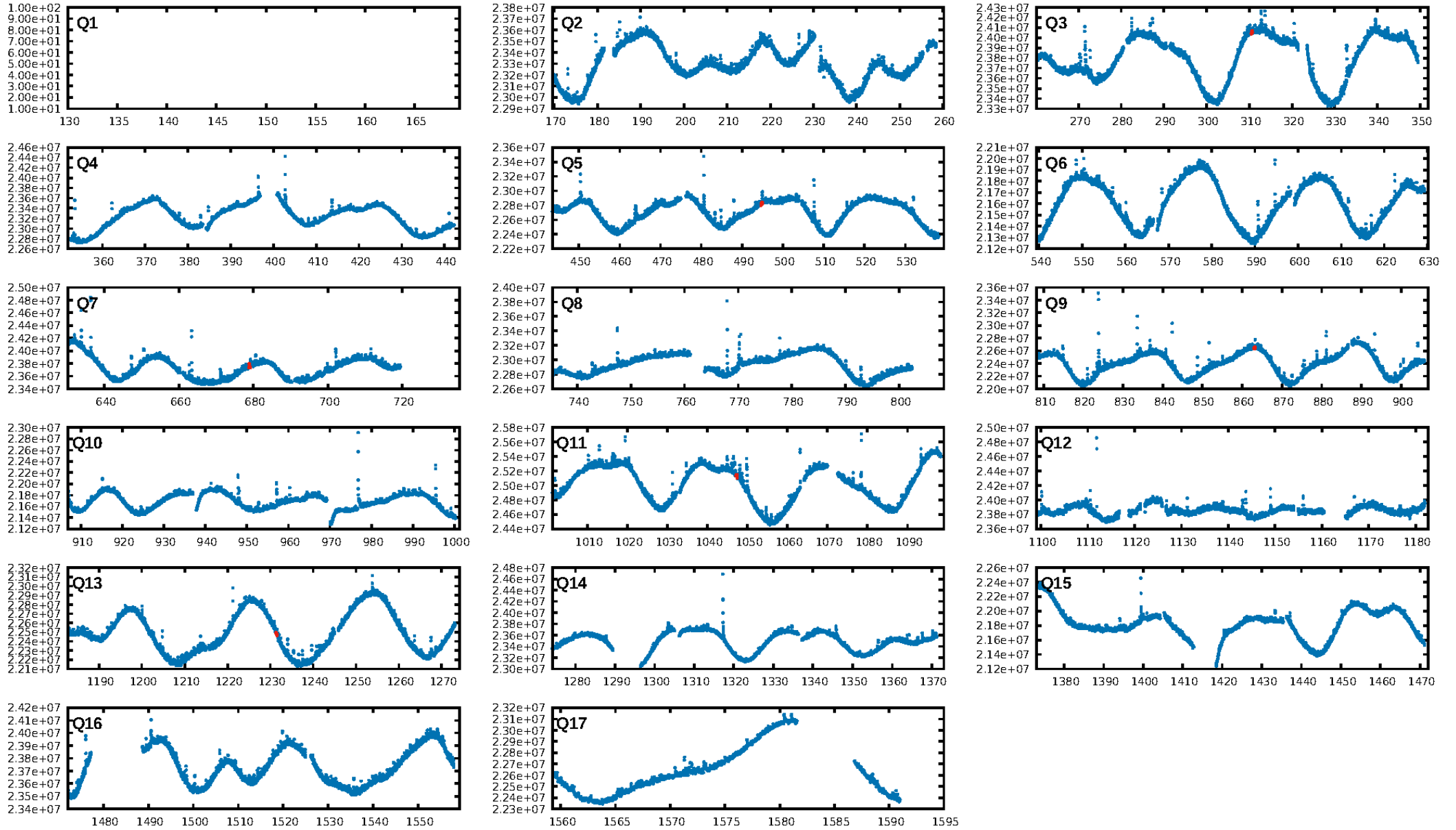
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.49σ]
LongPeriod-sig: 100.0% [133.39σ]
ModelChiSquare2-sig: 60.6%
ModelChiSquareGof-sig: 97.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.2551
Centroid-sig: 94.7%
Centroid-so: 1.306 arcsec [0.35σ]
OotOffset-rm: 0.529 arcsec [0.41σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-rm: 1.100 arcsec [1.10σ]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.80 [4/5]

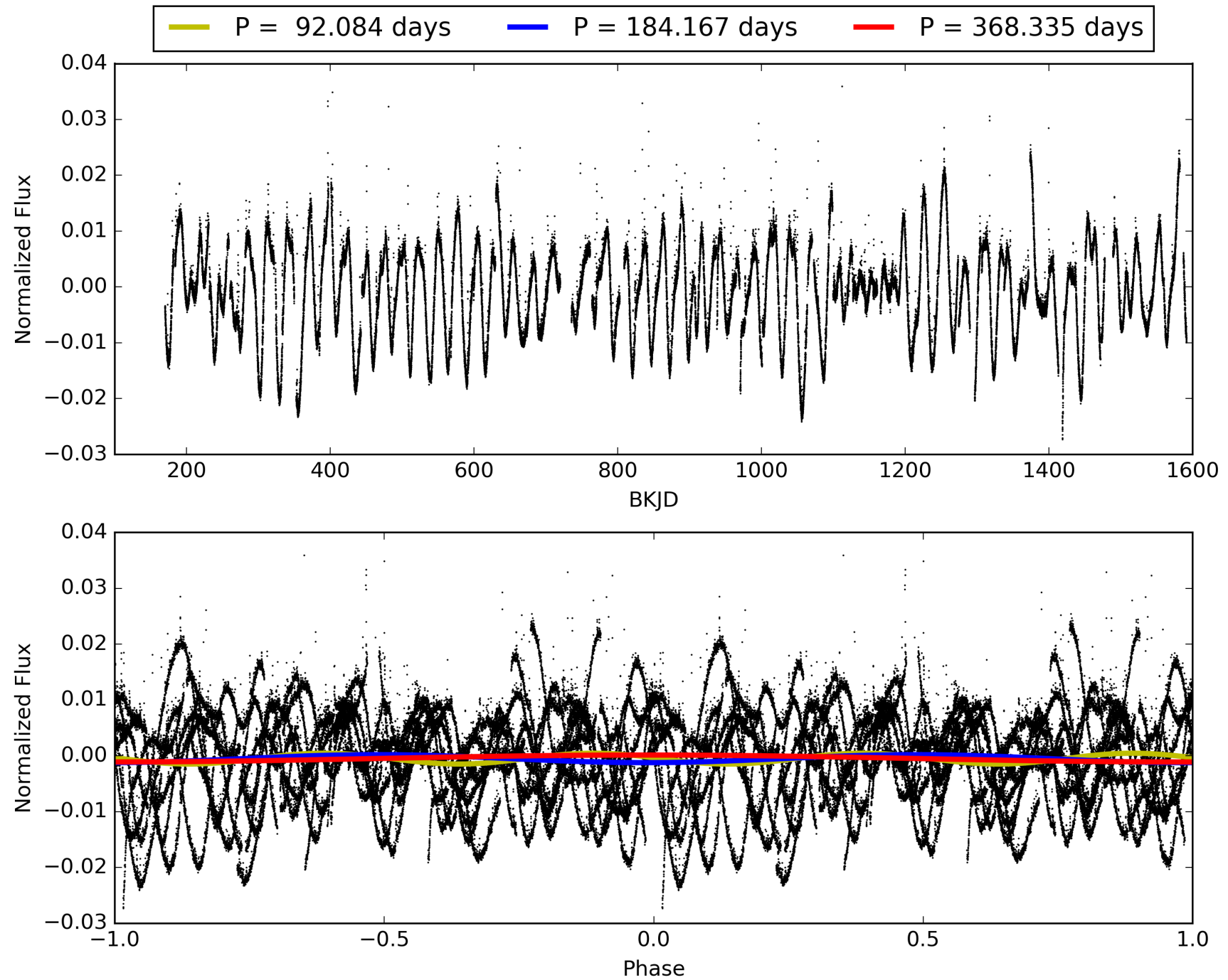
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:51 Z

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

TCE 010452252-03, PDC Light Curves

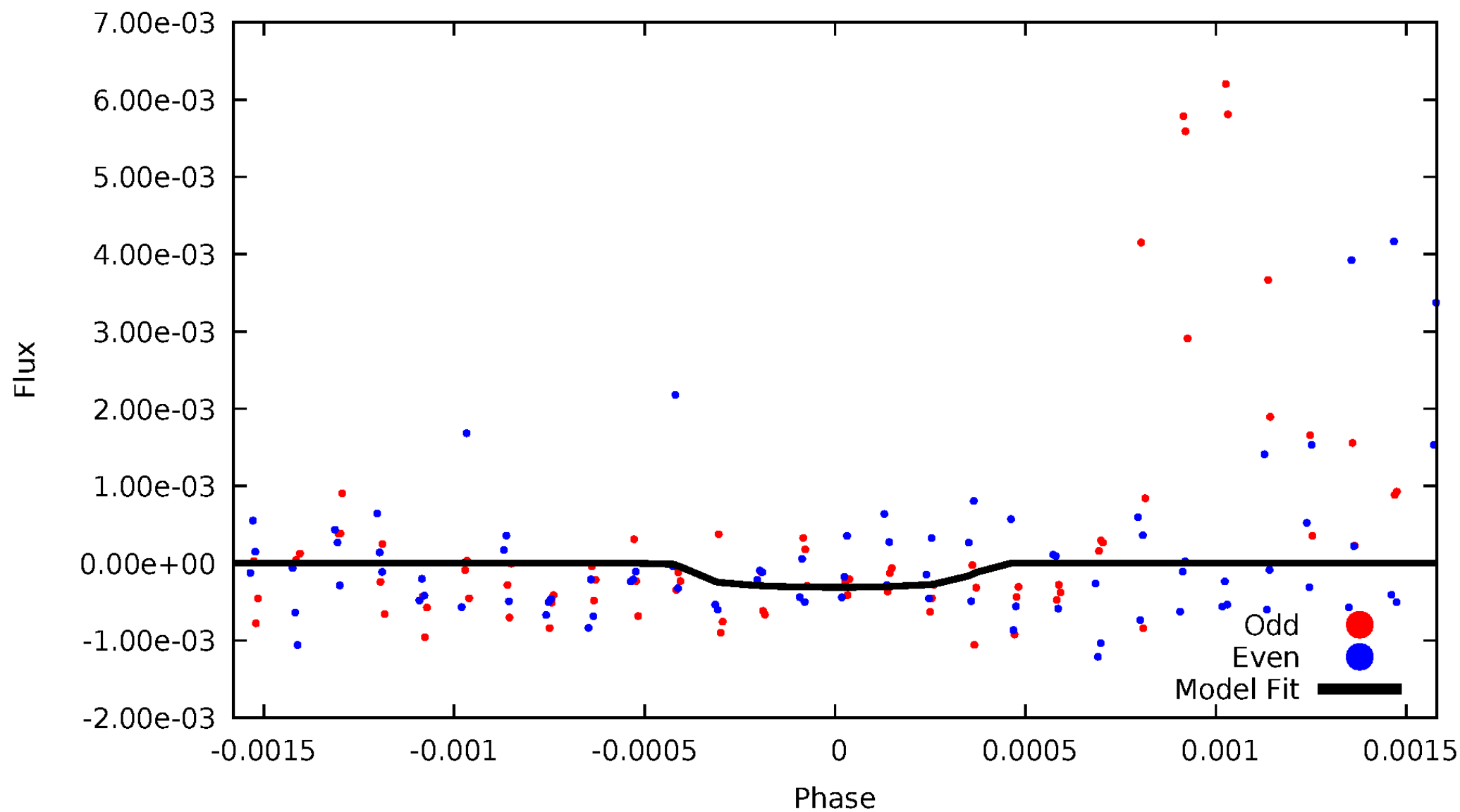


TCE 010452252-03



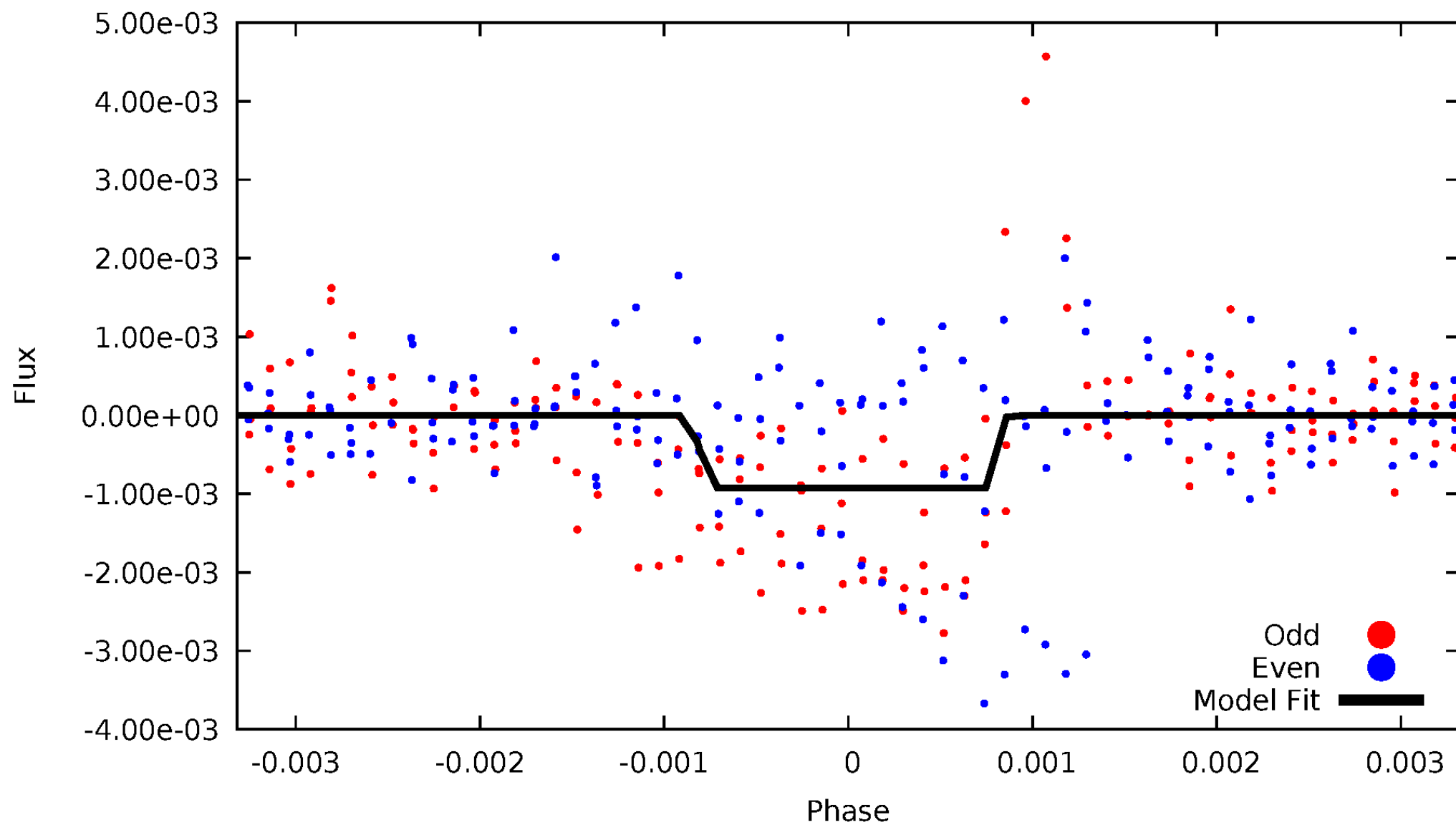
DV Odd/Even

TCE 010452252-03



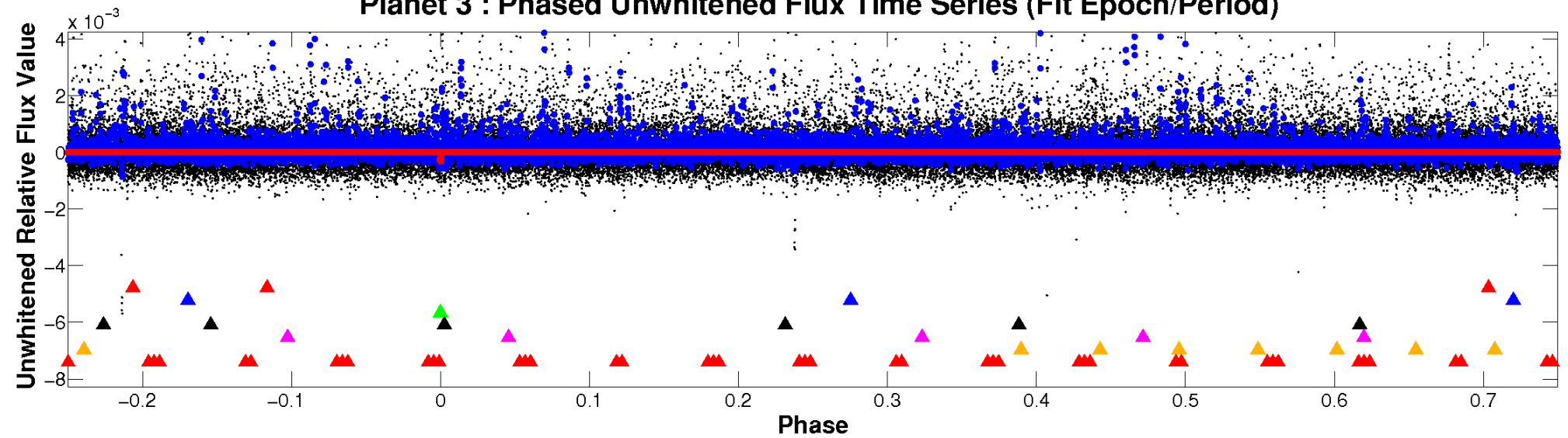
ALT Odd/Even

TCE 010452252-03

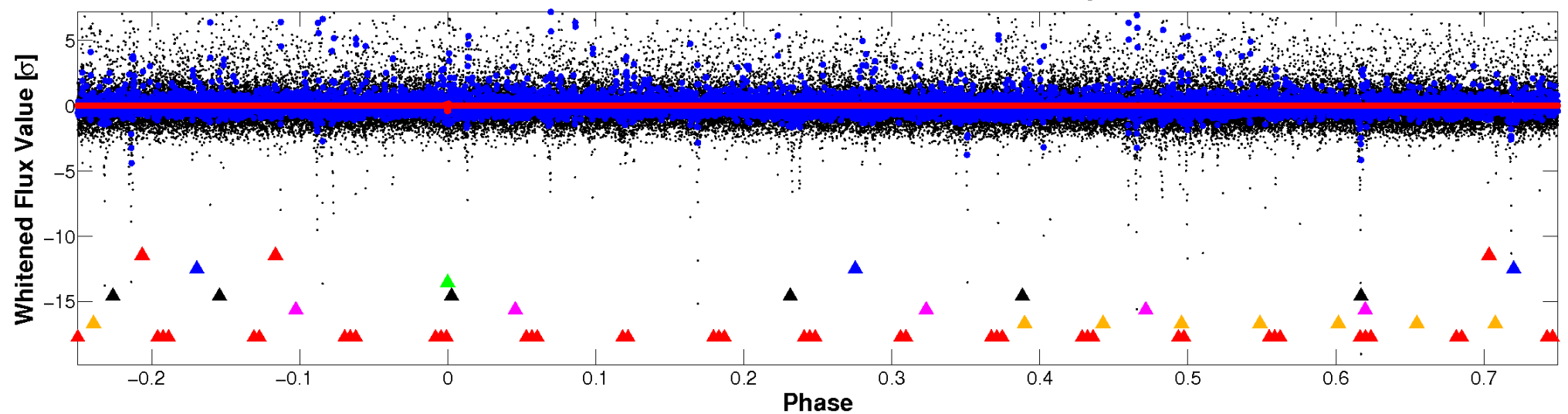


Non-Whitened Vs. Whitened Light Curve

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

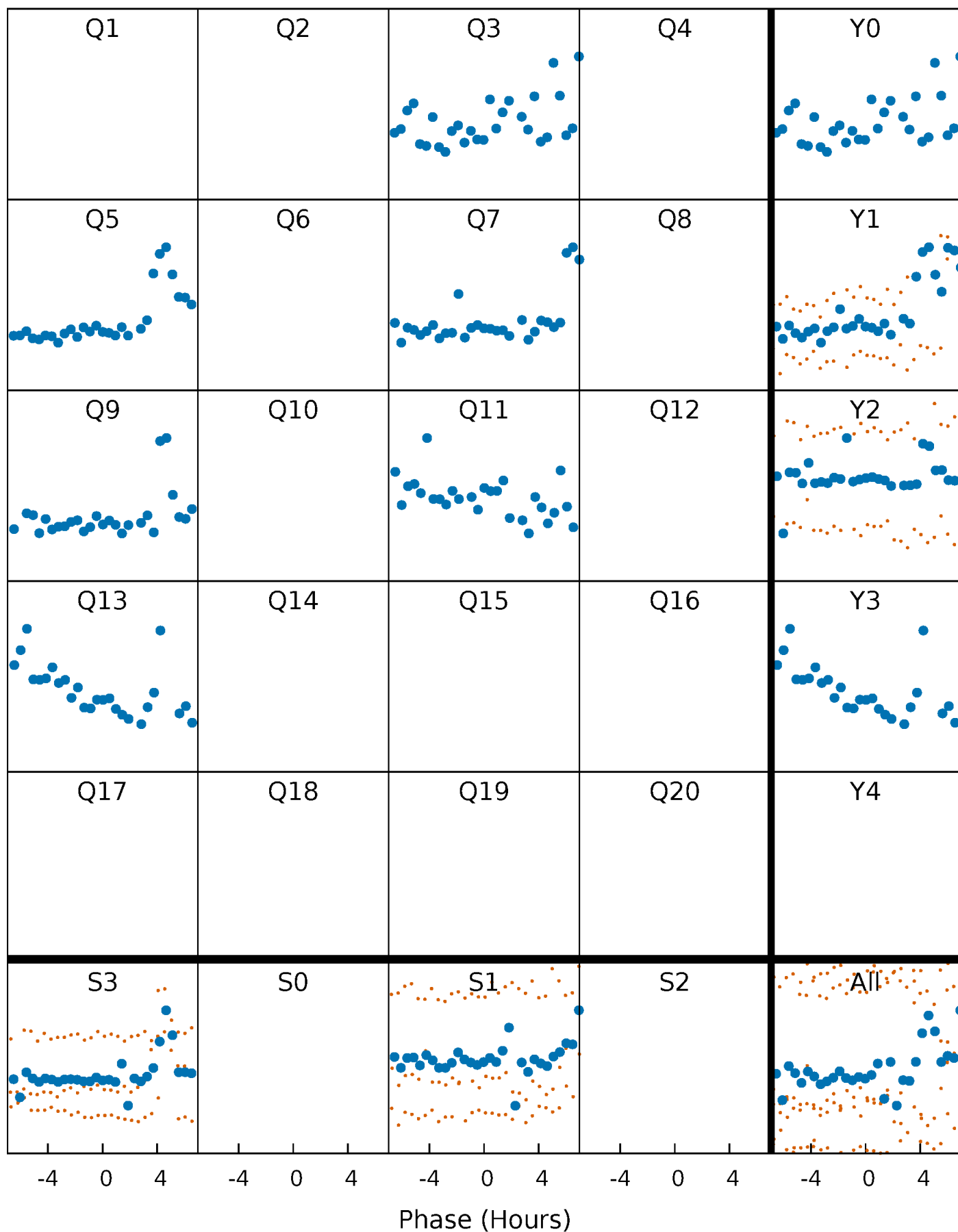


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



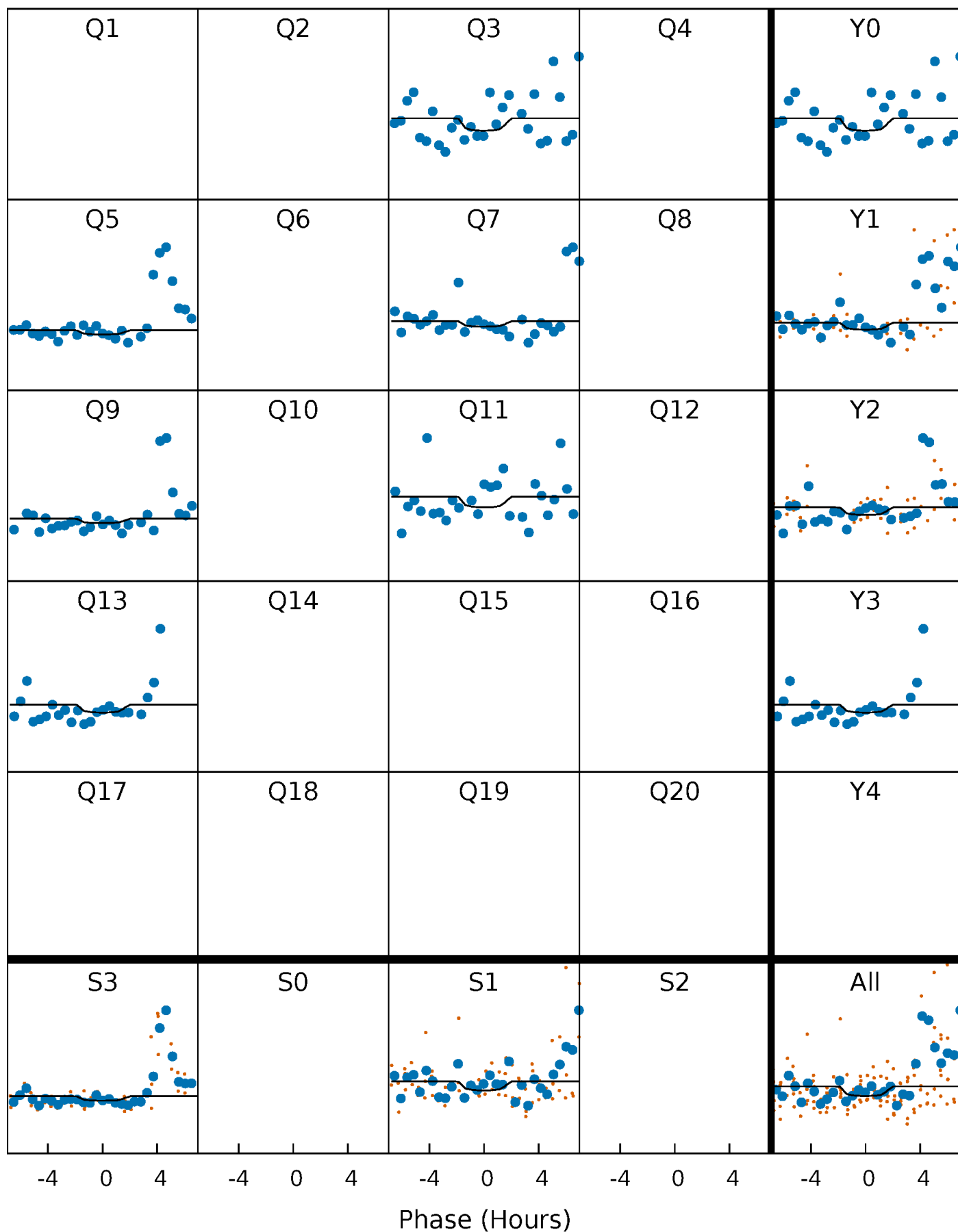
PDC Quarter-Phased Transit Curves

TCE 010452252-03 P=184.167485 Days $T_0=310.608379$ (BKJD)



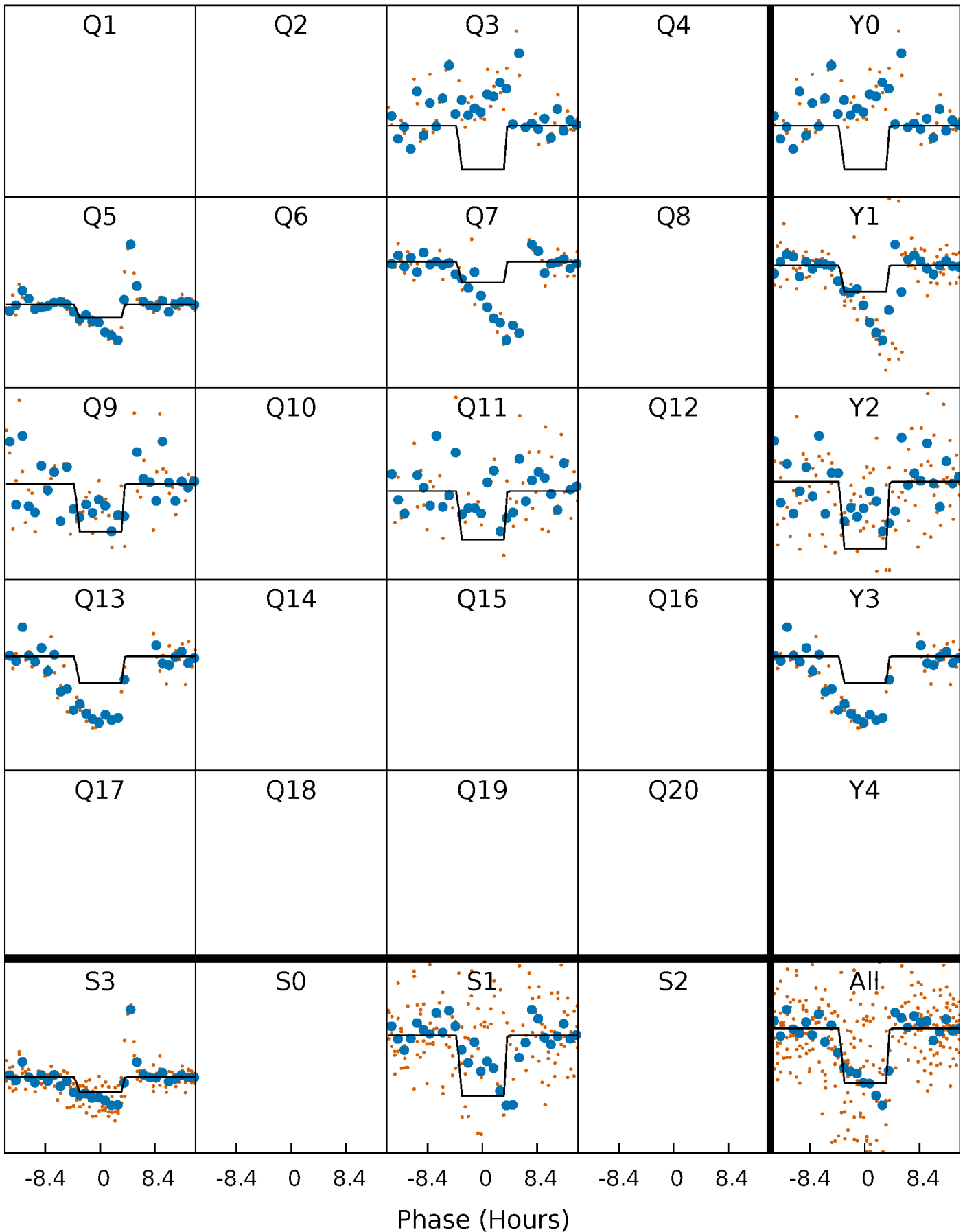
DV Quarter-Phased Transit Curves

TCE 010452252-03 $P=184.167485$ Days $T_0=310.608379$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

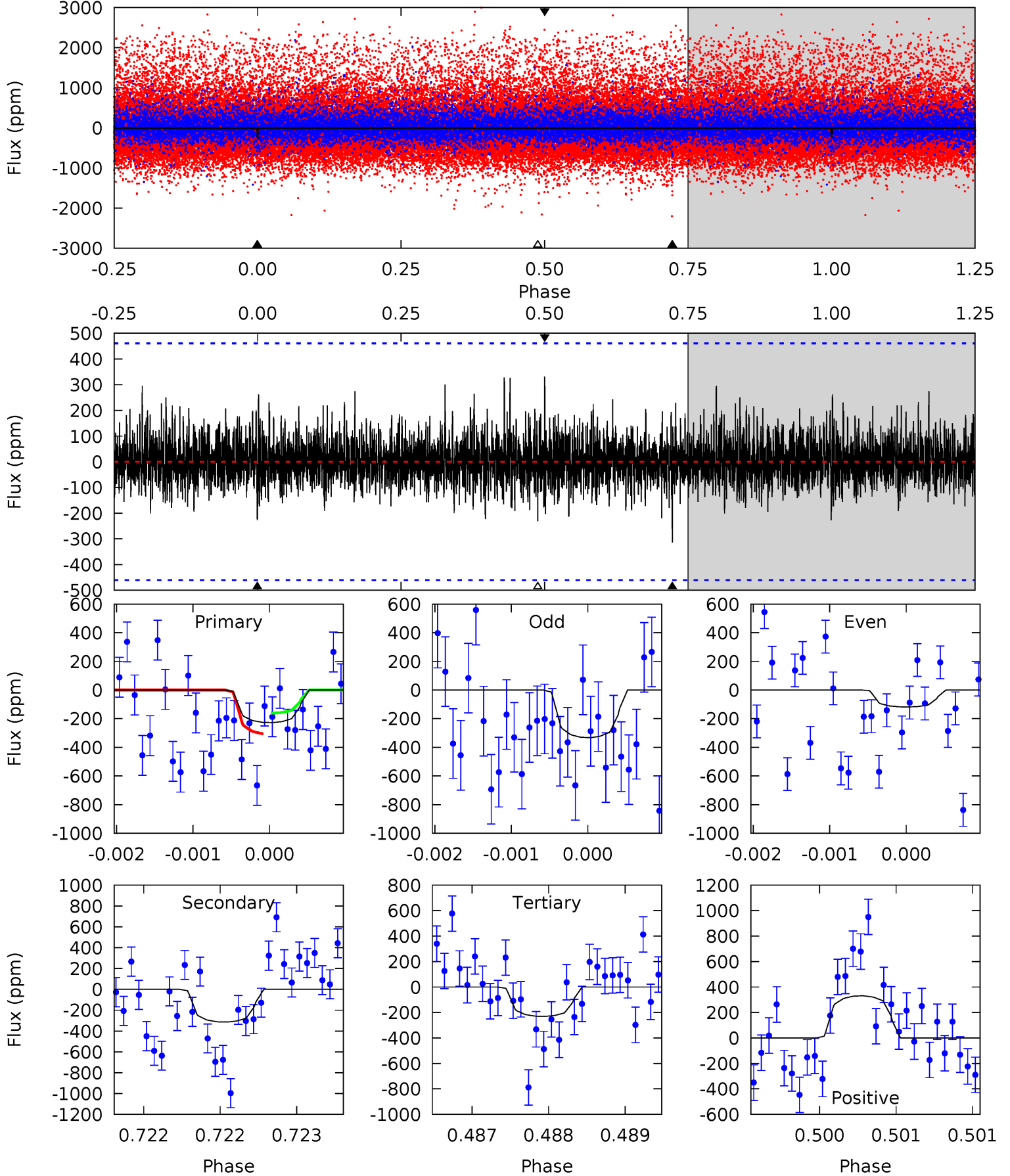
TCE 010452252-03 P=184.167676 Days $T_0=310.599410$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-03, P = 184.167485 Days, E = 126.440894 Days

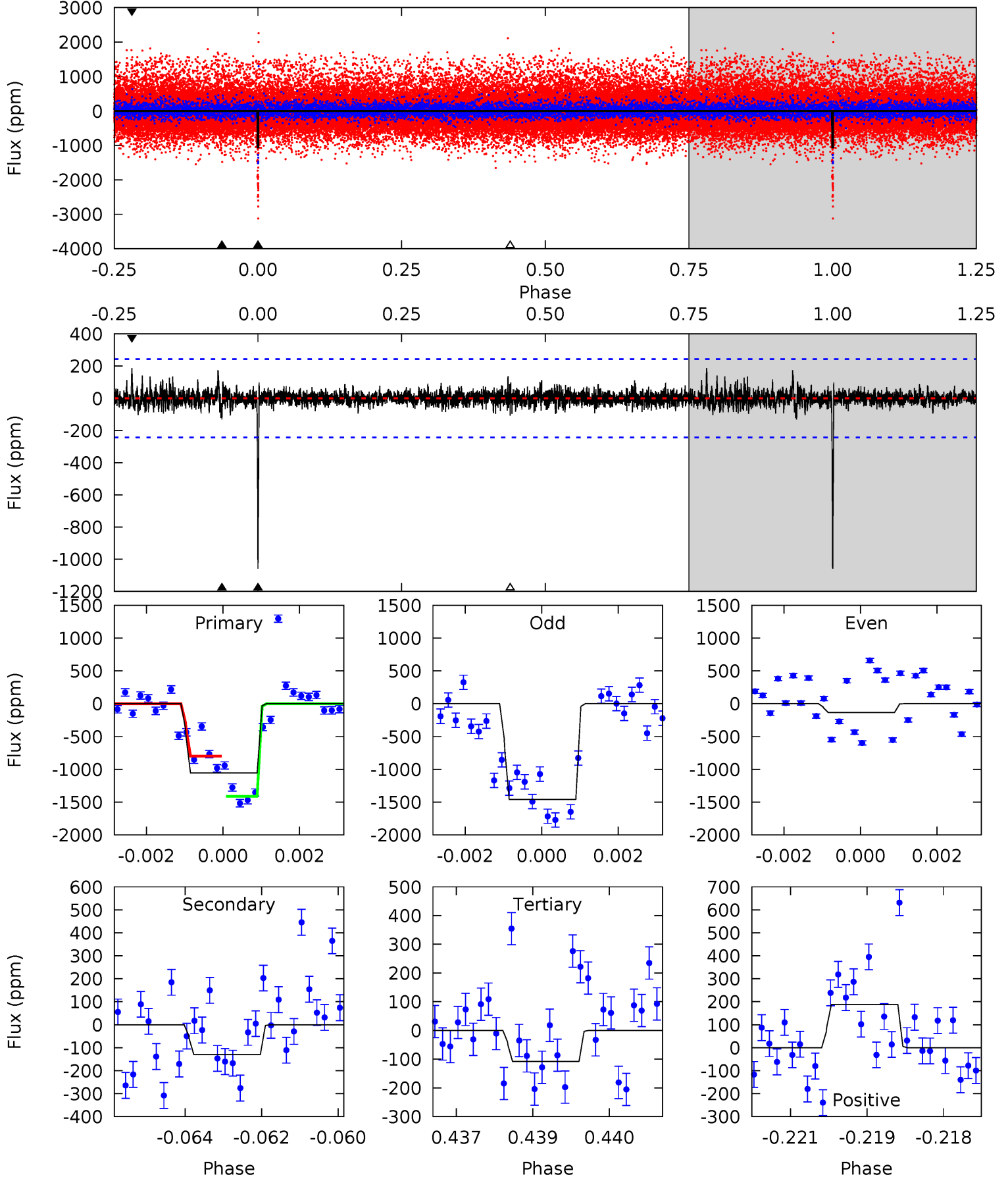
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.70	3.73	2.74	3.94	5.47	3.32	0.85	-0.04	-1.23	0.99	-0.20	1.24	1.02	0.51	0.87



Alt Model-Shift Uniqueness Test

010452252-03, P = 184.167676 Days, E = 126.431734 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	2.87	2.37	4.14	5.36	3.14	0.67	20.9	19.2	0.50	-1.27	14.5	0.91	0.15	6.74



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-314 ± 84	$2.11^{+2.41}_{-1.56}$	161^{+11}_{-9}	2215^{+857}_{-303}	4904^{+66665}_{-3696}
Alt.	-130 ± 45	$2.21^{+2.00}_{-1.58}$	161^{+11}_{-9}	2017^{+615}_{-251}	2049^{+19481}_{-1543}

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 $A_{obs} \gg 1.0$

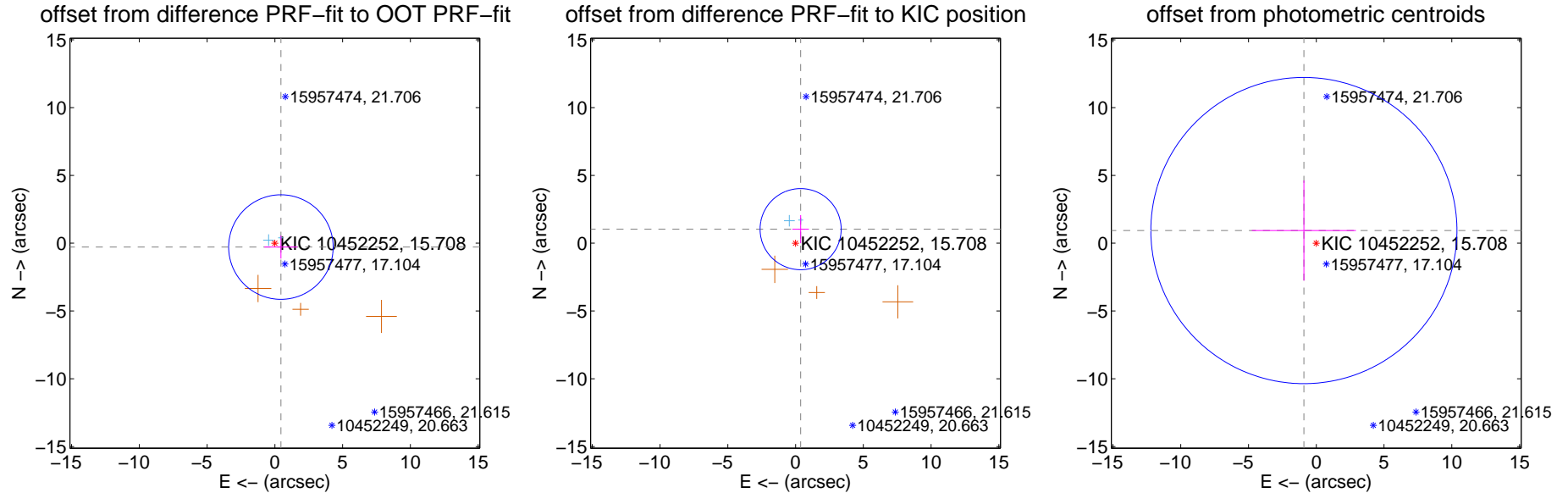
DV Centroid Data

Supplemental centroid analysis for 010452252-03. Kepler magnitude: 15.71. Transit SNR 2.45

There are 2 quarters with good PRF difference image offsets

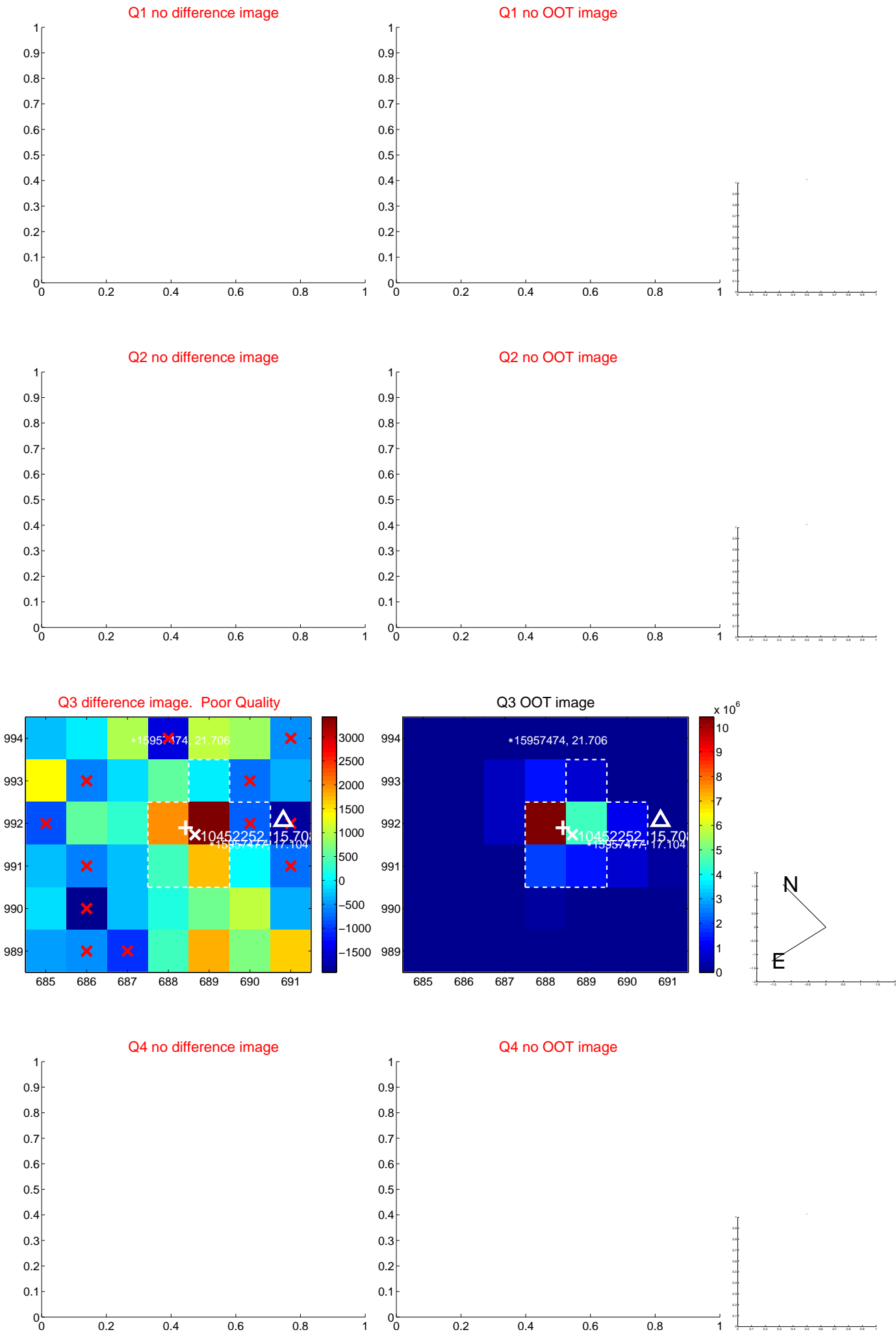
The direct PRF centroid is offset from the target star catalog position by about 1.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.529 ± 1.285	0.41	-0.445 ± 1.218	-0.285 ± 0.848
PRF-fit source offset from KIC position	1.100 ± 0.997	1.10	-0.372 ± 0.610	1.035 ± 1.037
photometric centroid source offset	1.31 ± 3.76	0.35	0.91 ± 3.84	0.93 ± 3.69

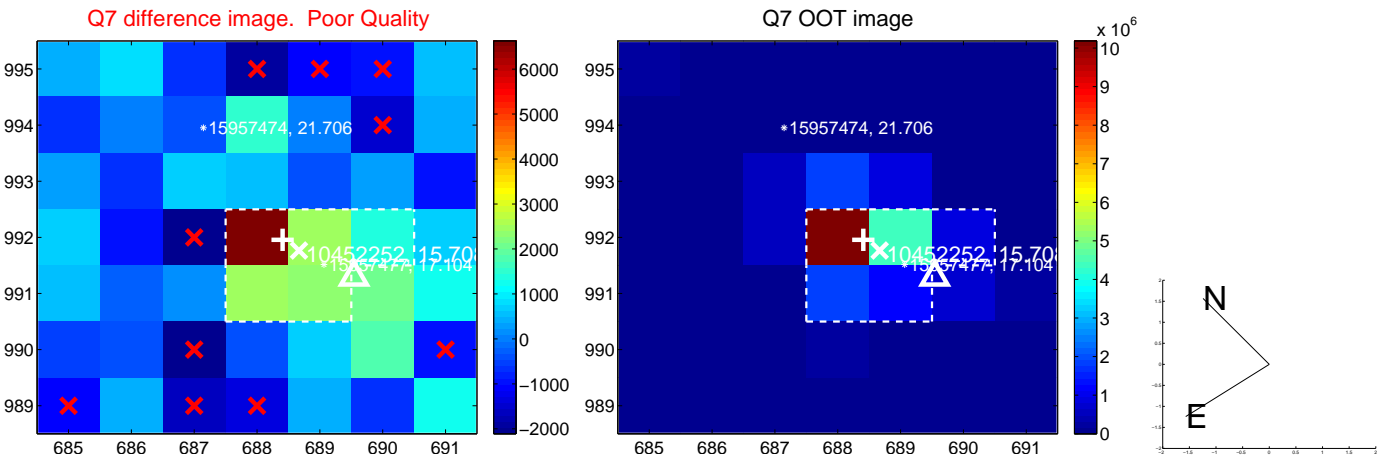
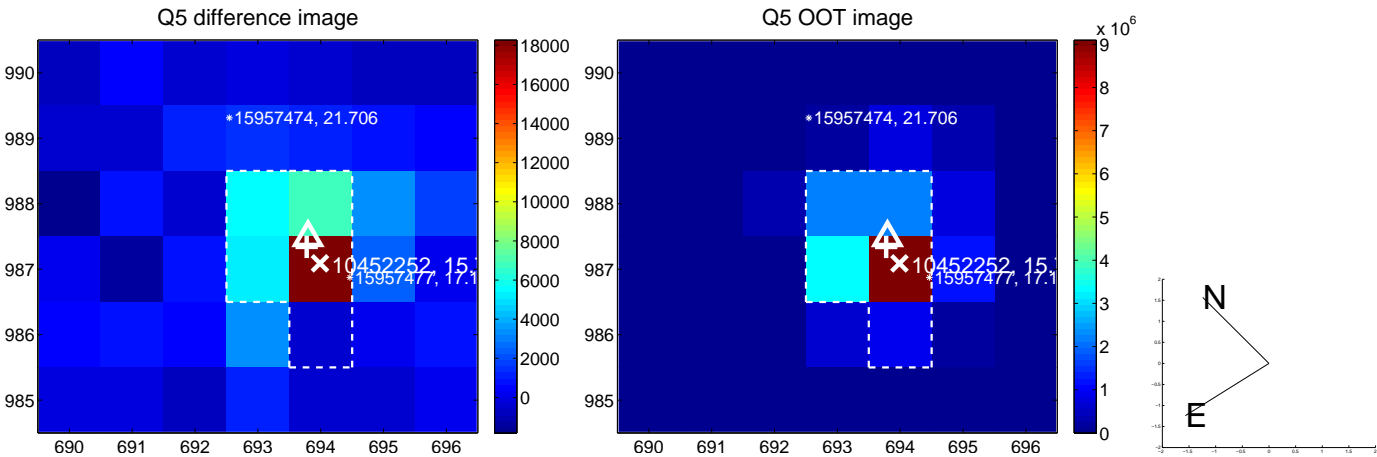


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

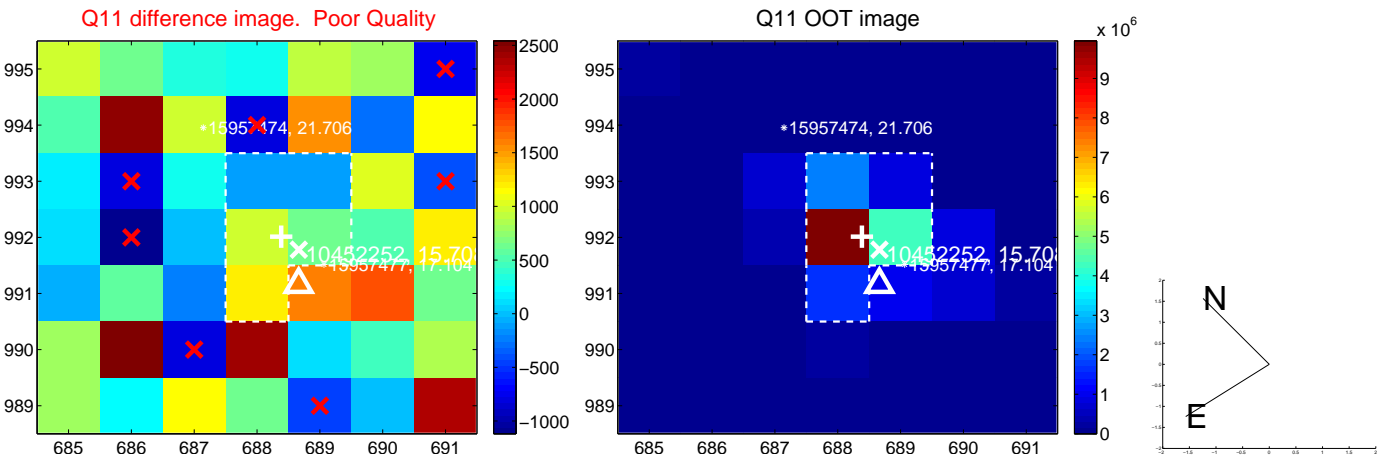
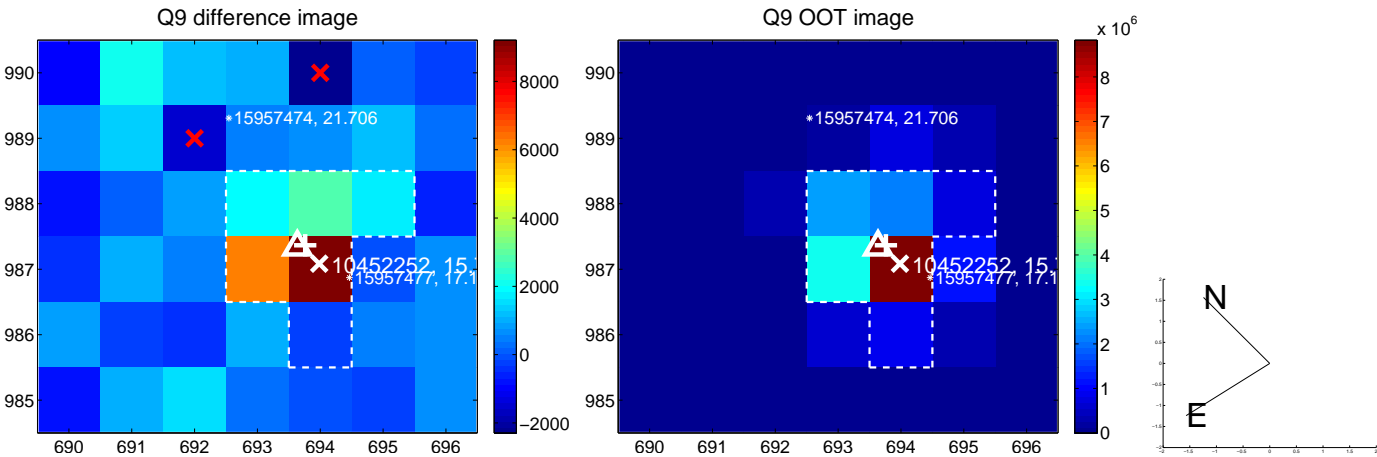
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



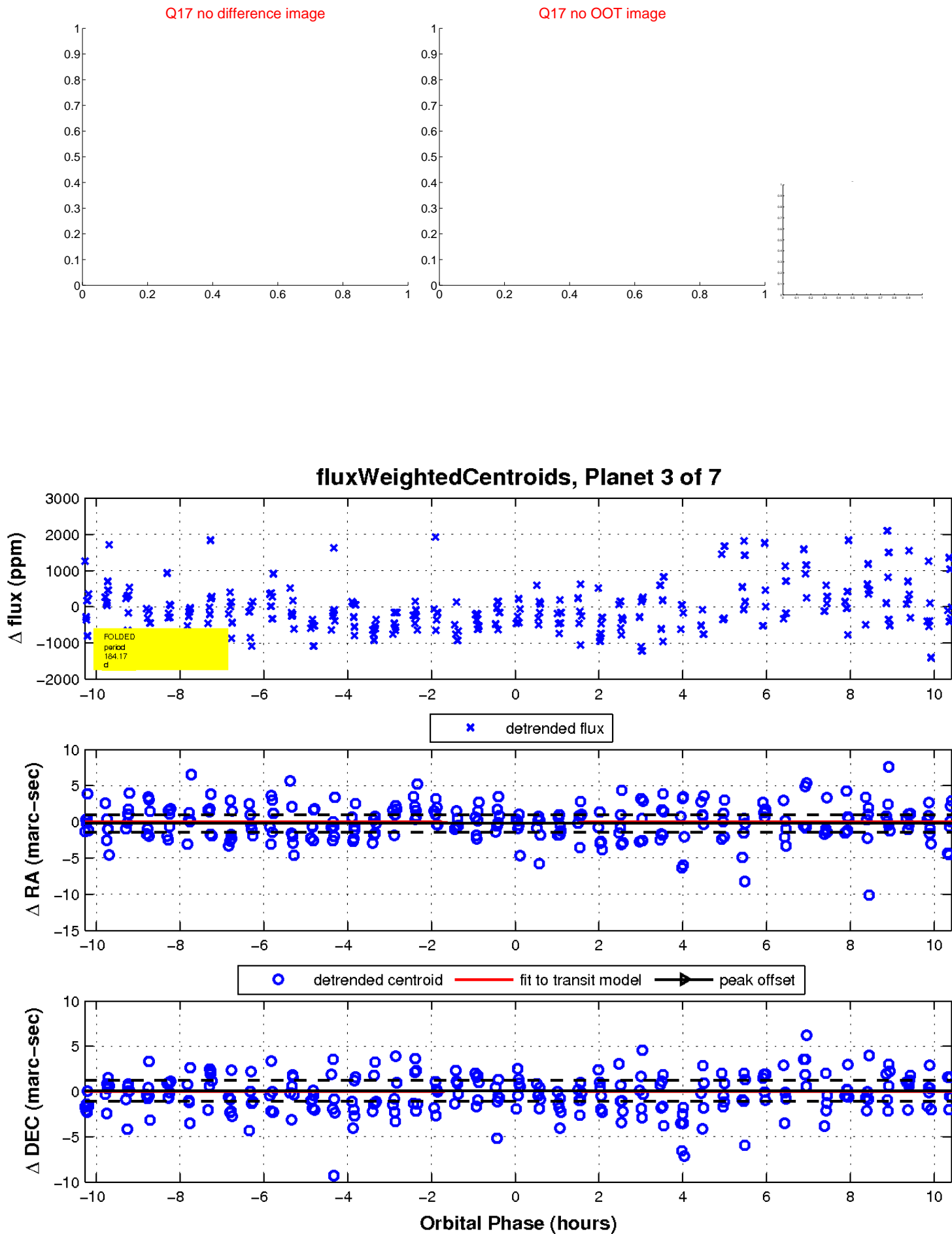
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

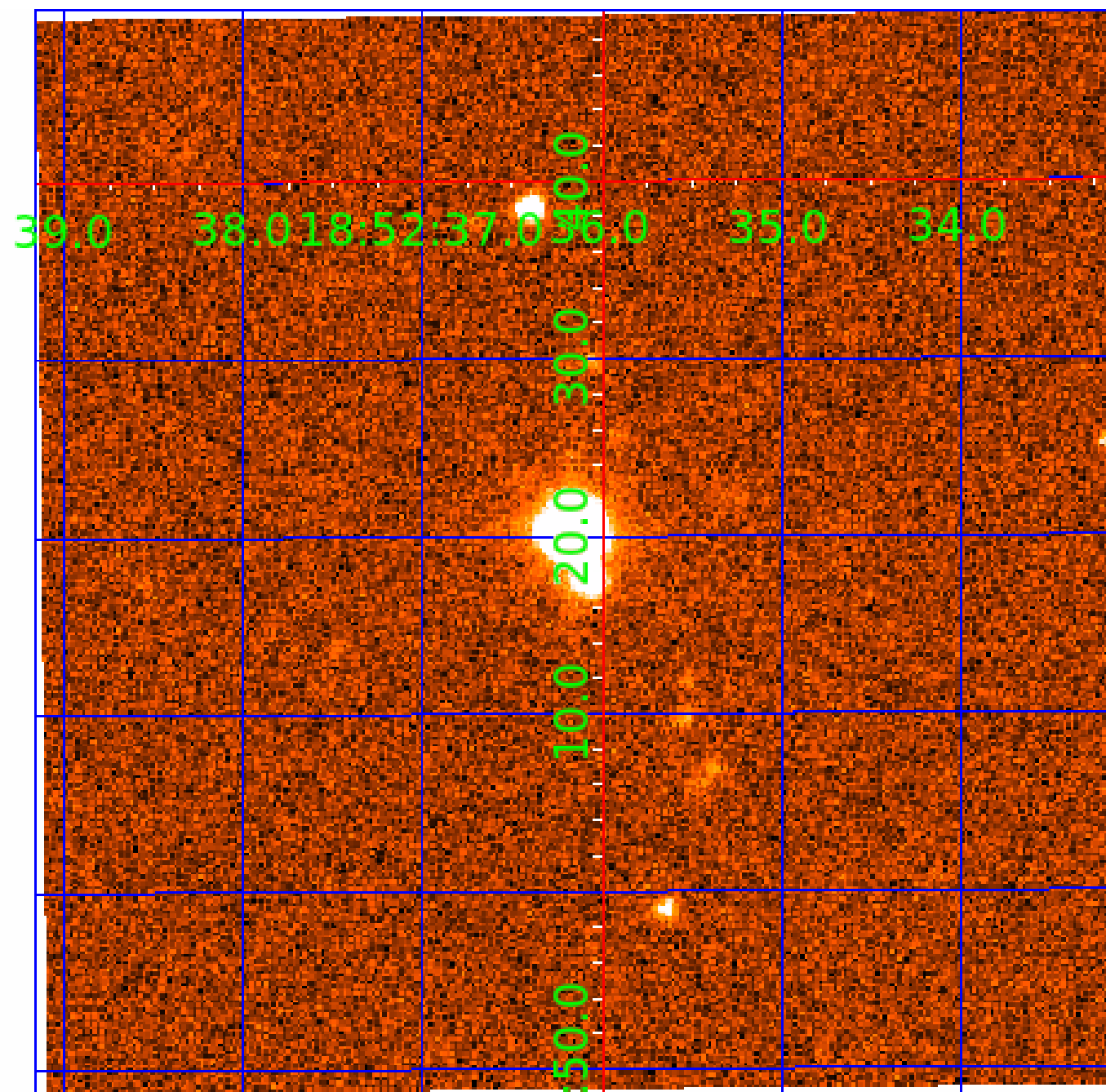


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

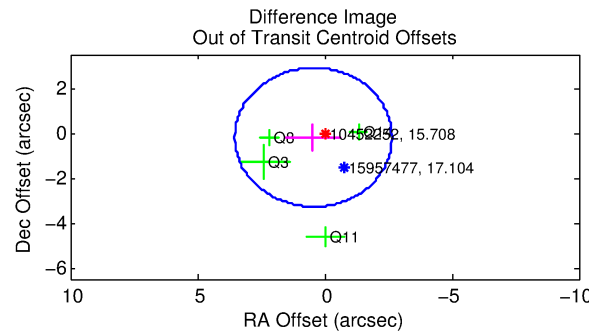
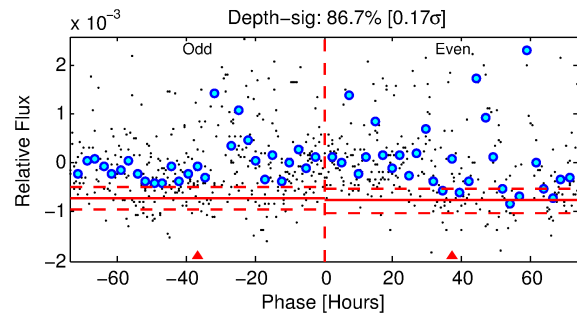
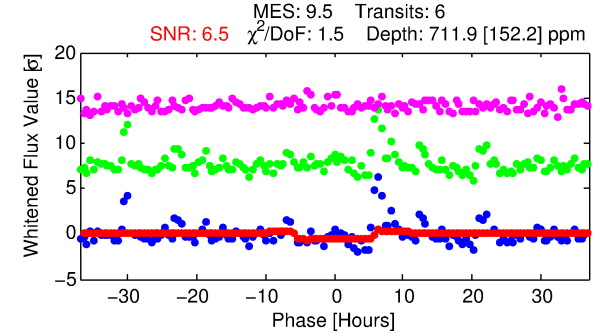
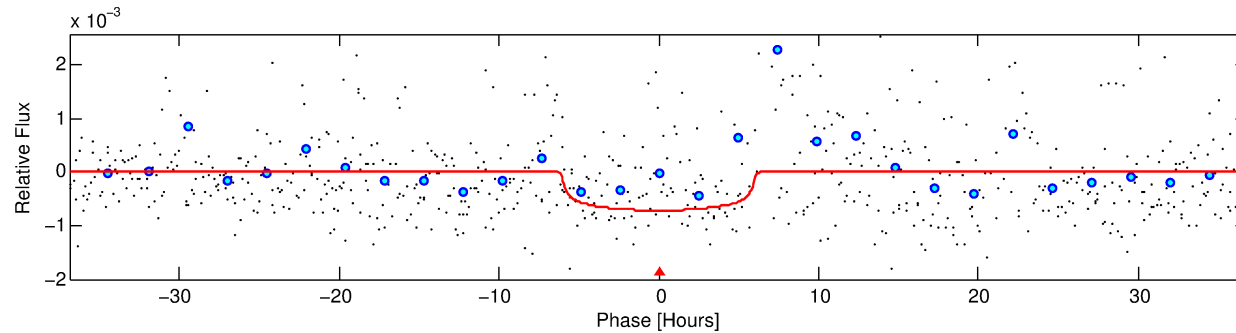
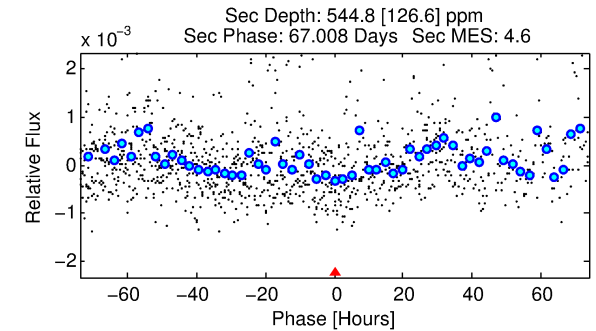
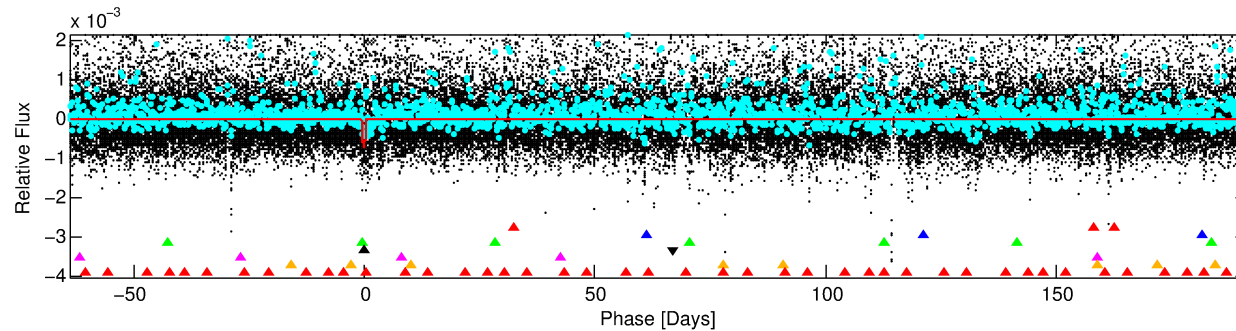
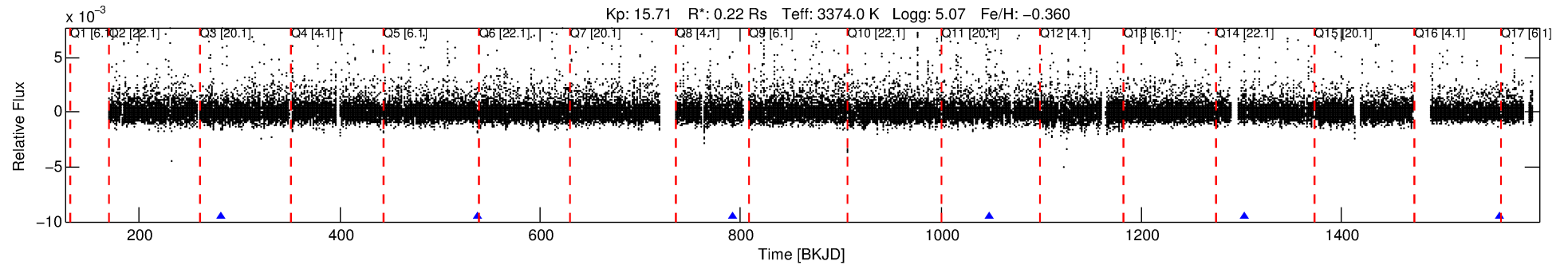
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-04

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 4 of 7 Period: 255.183 d



DV Fit Results:

Period = 255.18326 [0.00697] d
Epoch = 282.2106 [0.0202] BKJD
Rp/R* = 0.0250 [0.0162]
a/R* = 142.80 [427.60]
b = 0.49 [4.66]
Seff = 0.03 [0.01]
Teq = 102 [9] K
Rp = 0.59 [0.46] Re
a = 0.4619 [0.1348] AU
Ag = 180811.77 [246261.54] [0.73σ]
Teffp = 3260 [1081] K [2.92σ]

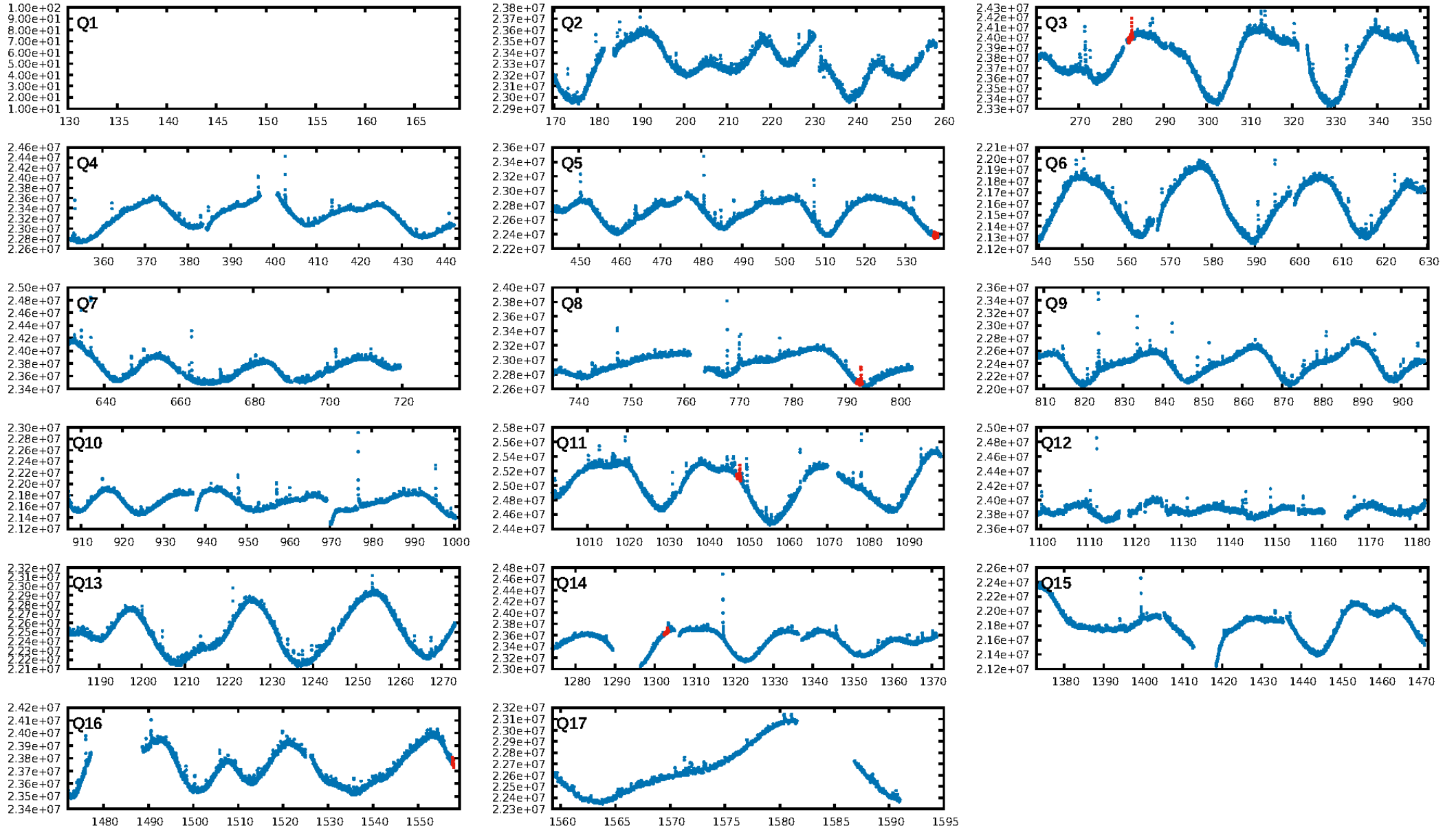
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [133.39σ]
LongPeriod-sig: 100.0% [52.35σ]
ModelChiSquare2-sig: 3.4%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -3.111
Centroid-sig: 1.6%
Centroid-so: 2.931 arcsec [2.68σ]
OotOffset-rm: 0.484 arcsec [0.47σ]
OotOffset-st: 1/2/1/0 [4]
KicOffset-rm: 0.715 arcsec [0.60σ]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.50 [2/4]

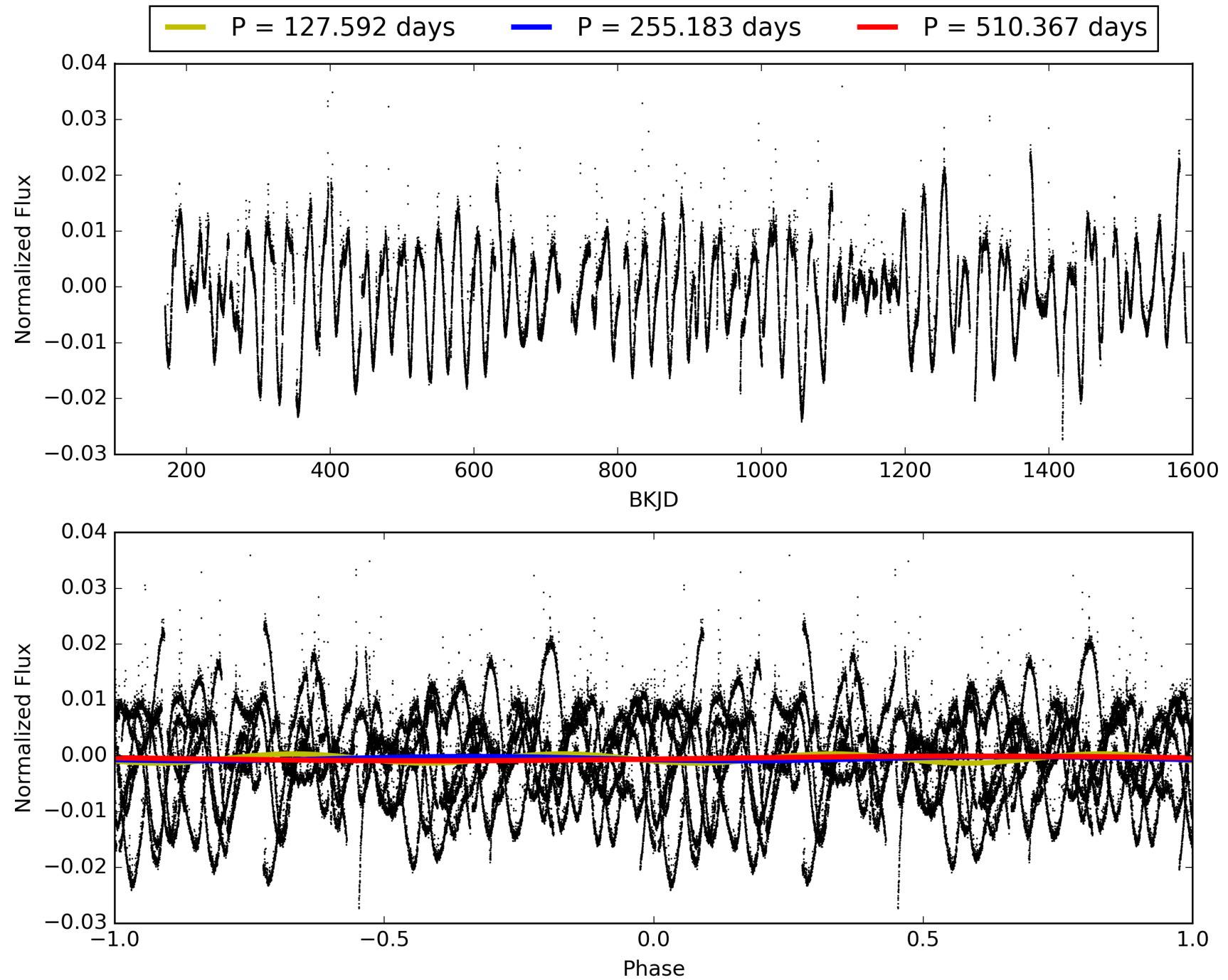
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:58 Z

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

TCE 010452252-04, PDC Light Curves

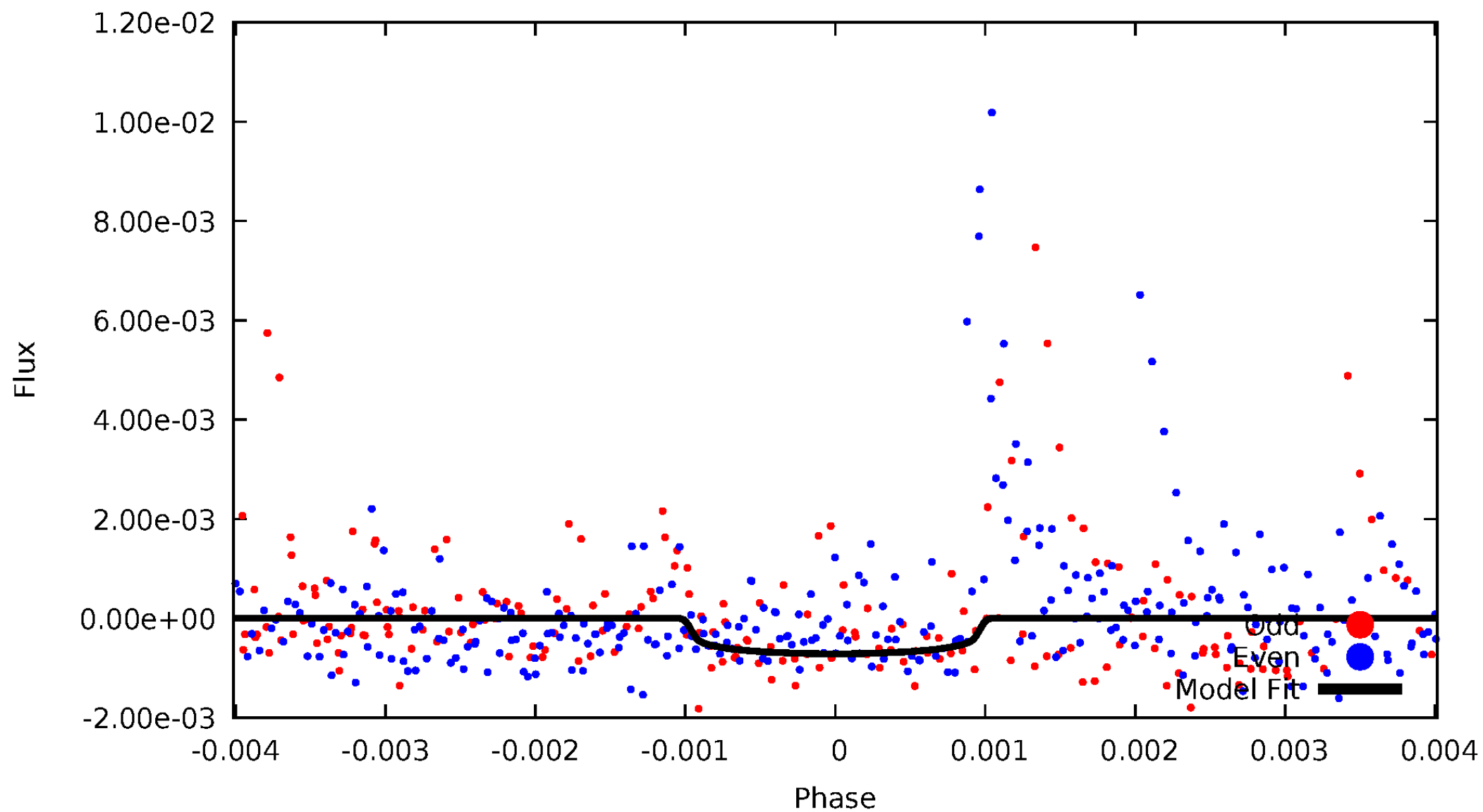


TCE 010452252-04



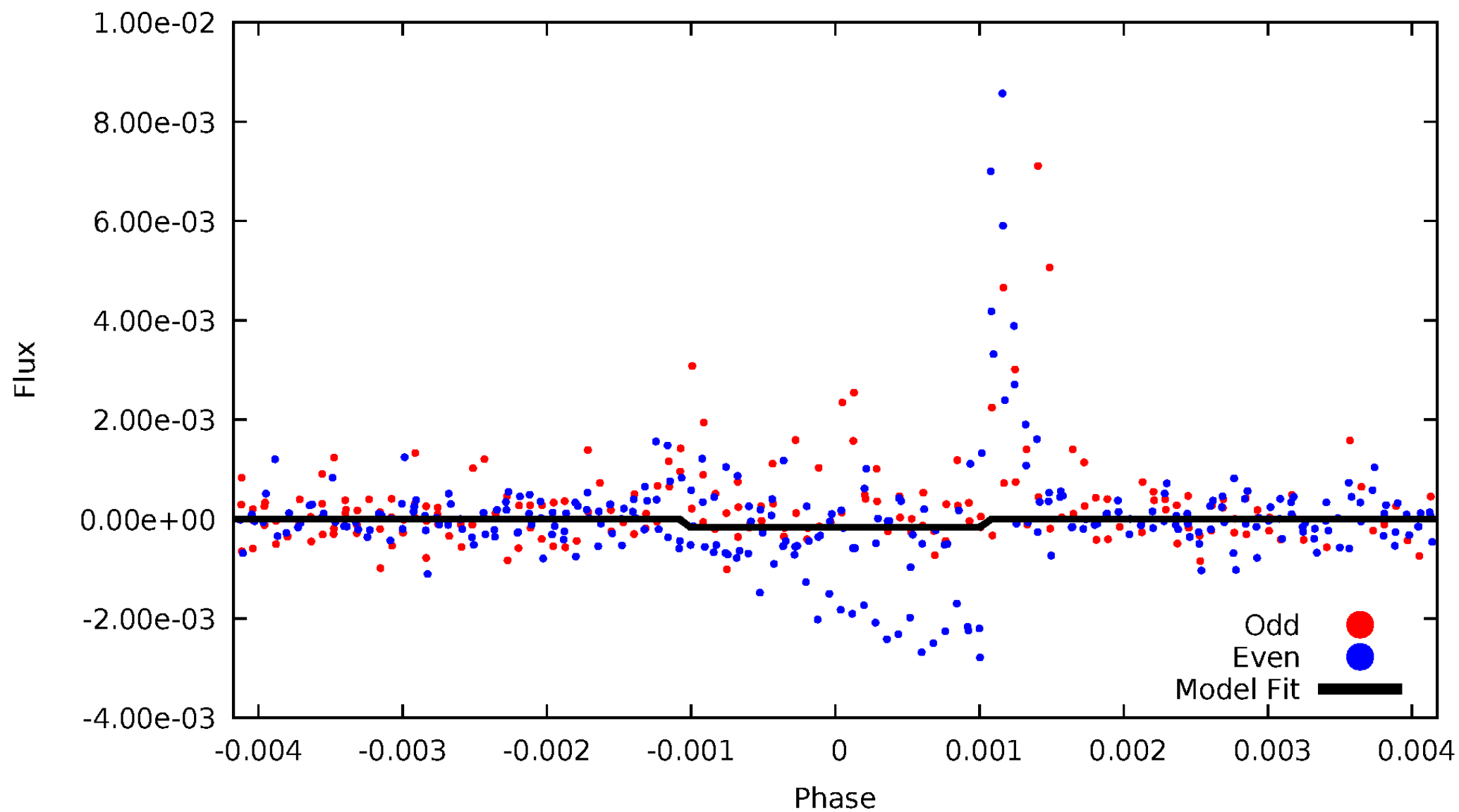
DV Odd/Even

TCE 010452252-04



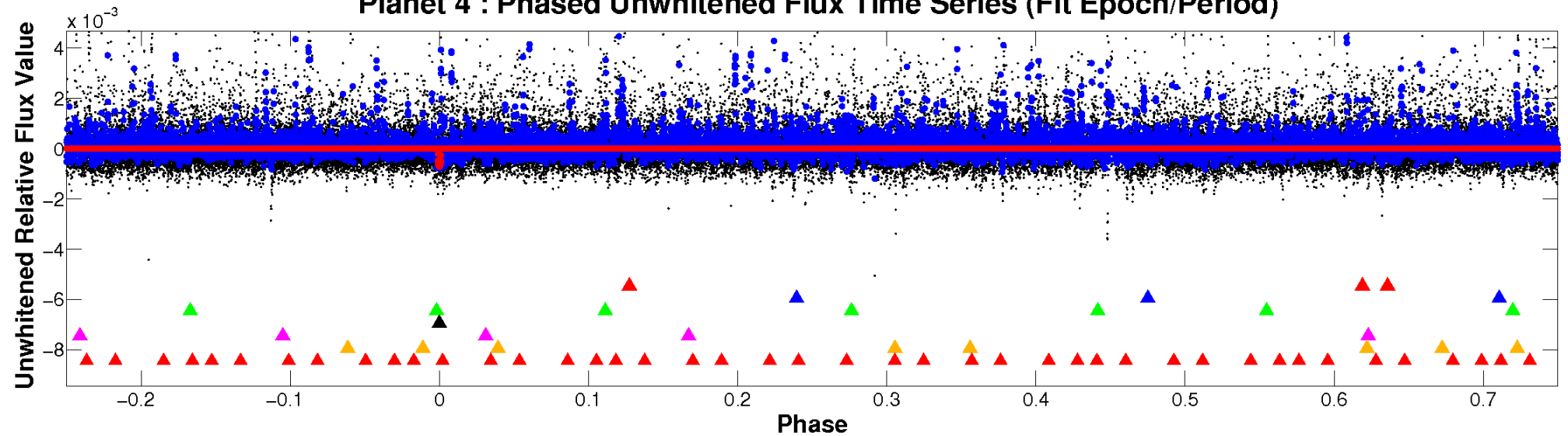
ALT Odd/Even

TCE 010452252-04

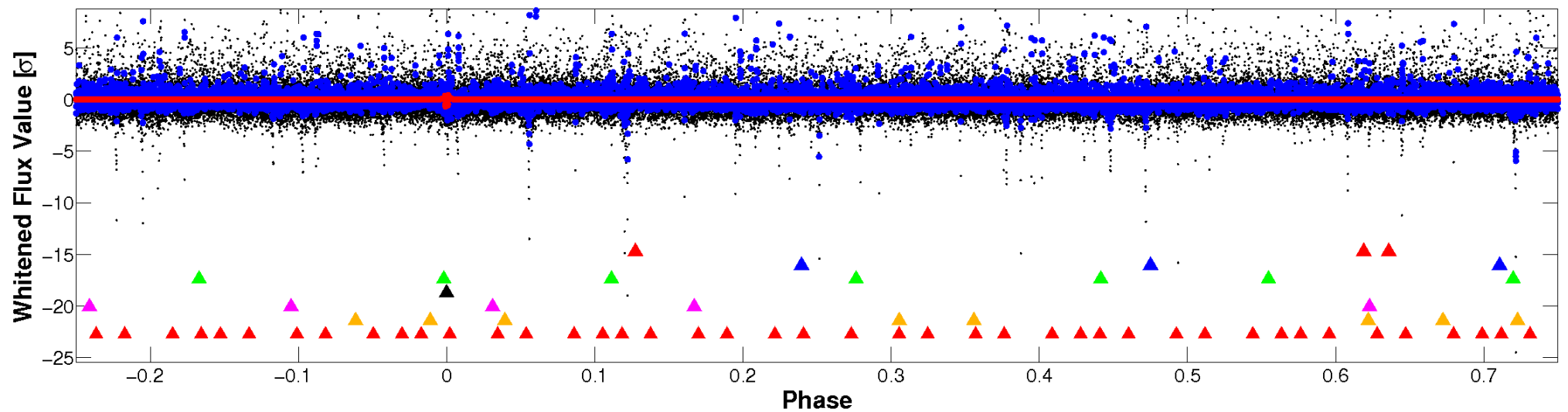


Non-Whitened Vs. Whitened Light Curve

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

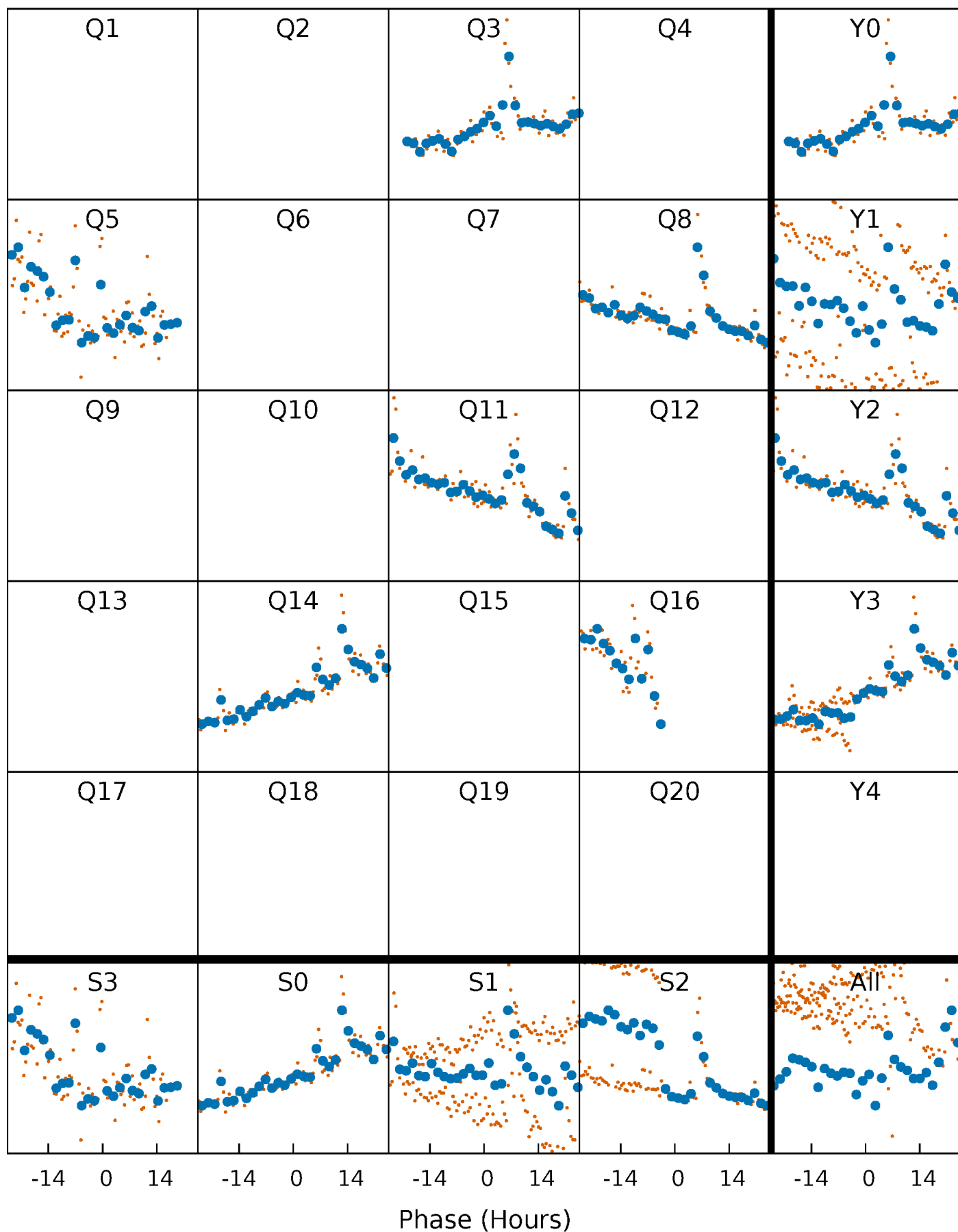


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



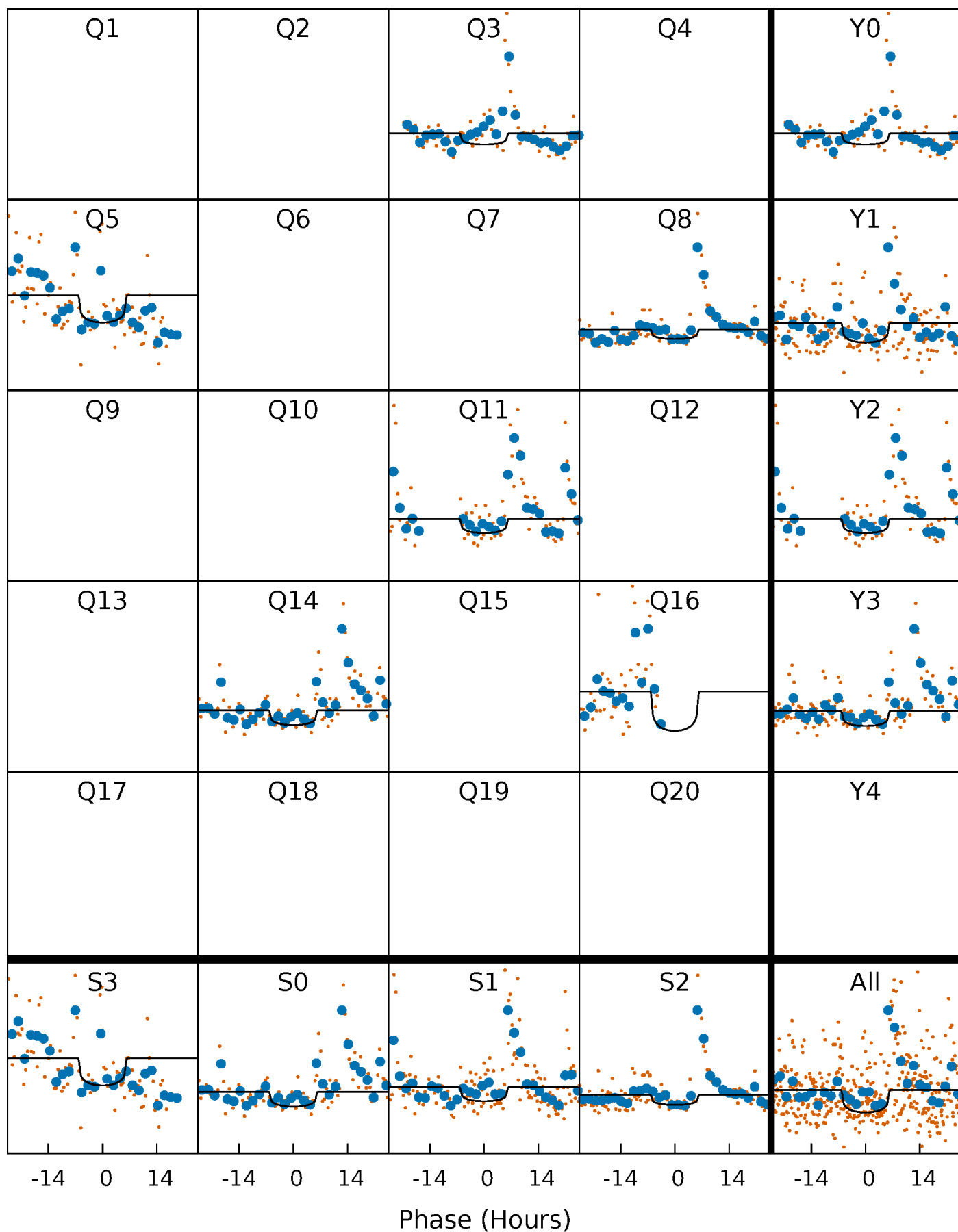
PDC Quarter-Phased Transit Curves

TCE 010452252-04 $P=255.183256$ Days $T_0=282.210643$ (BKJD)



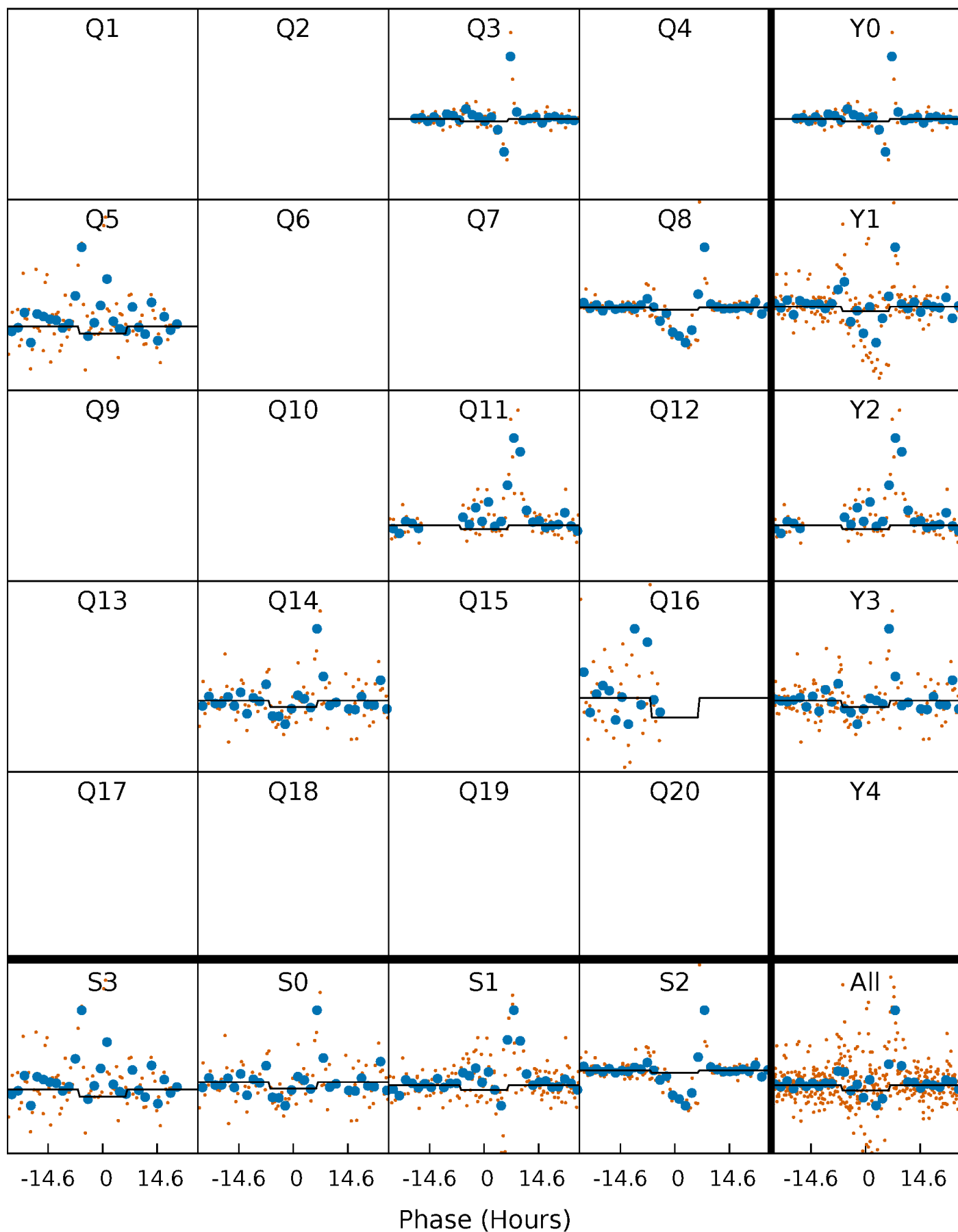
DV Quarter-Phased Transit Curves

TCE 010452252-04 $P=255.183256$ Days $T_0=282.210643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

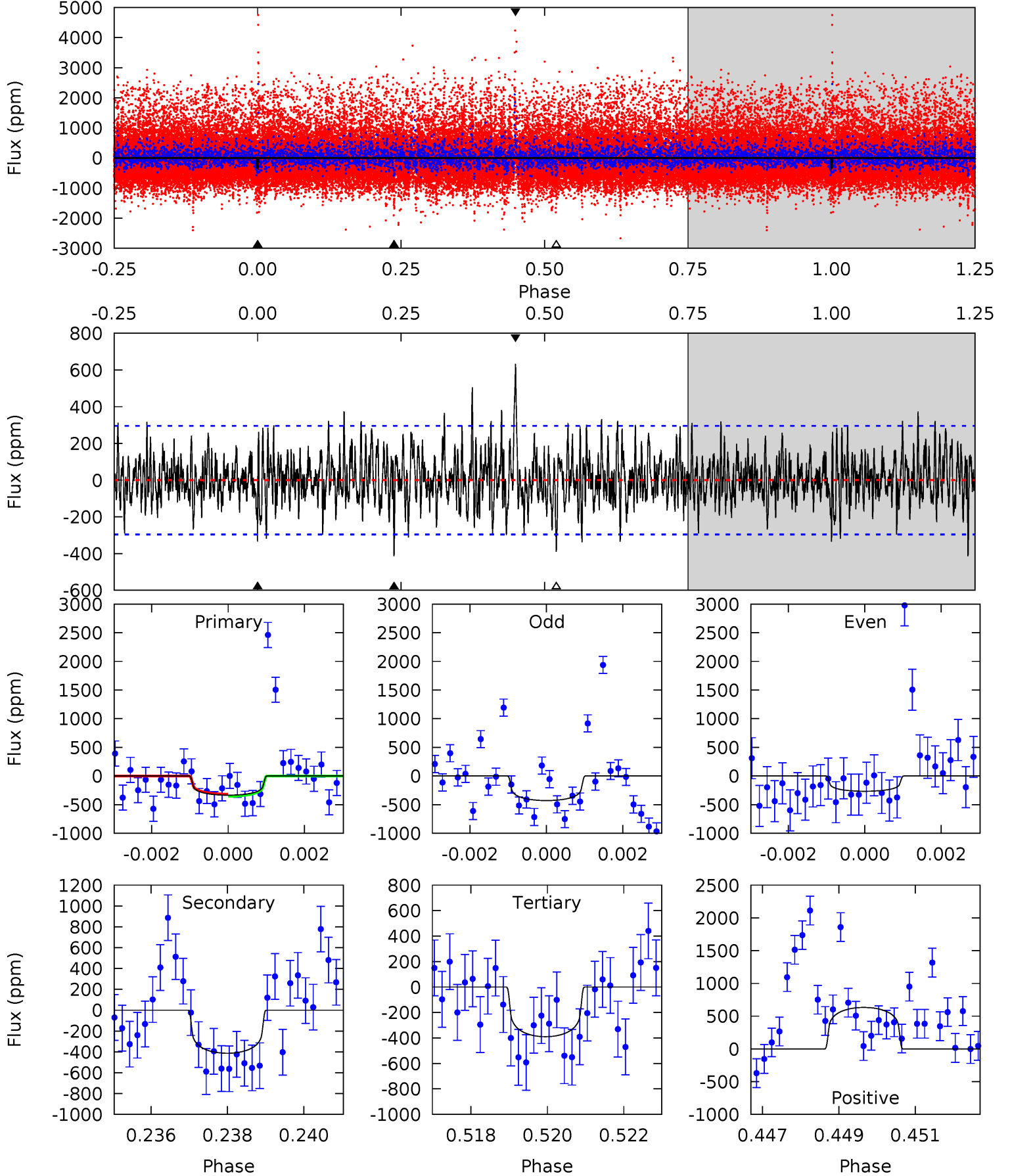
TCE 010452252-04 $P=255.194731$ Days $T_0=282.158360$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-04, $P = 255.183256$ Days, $E = 27.027387$ Days

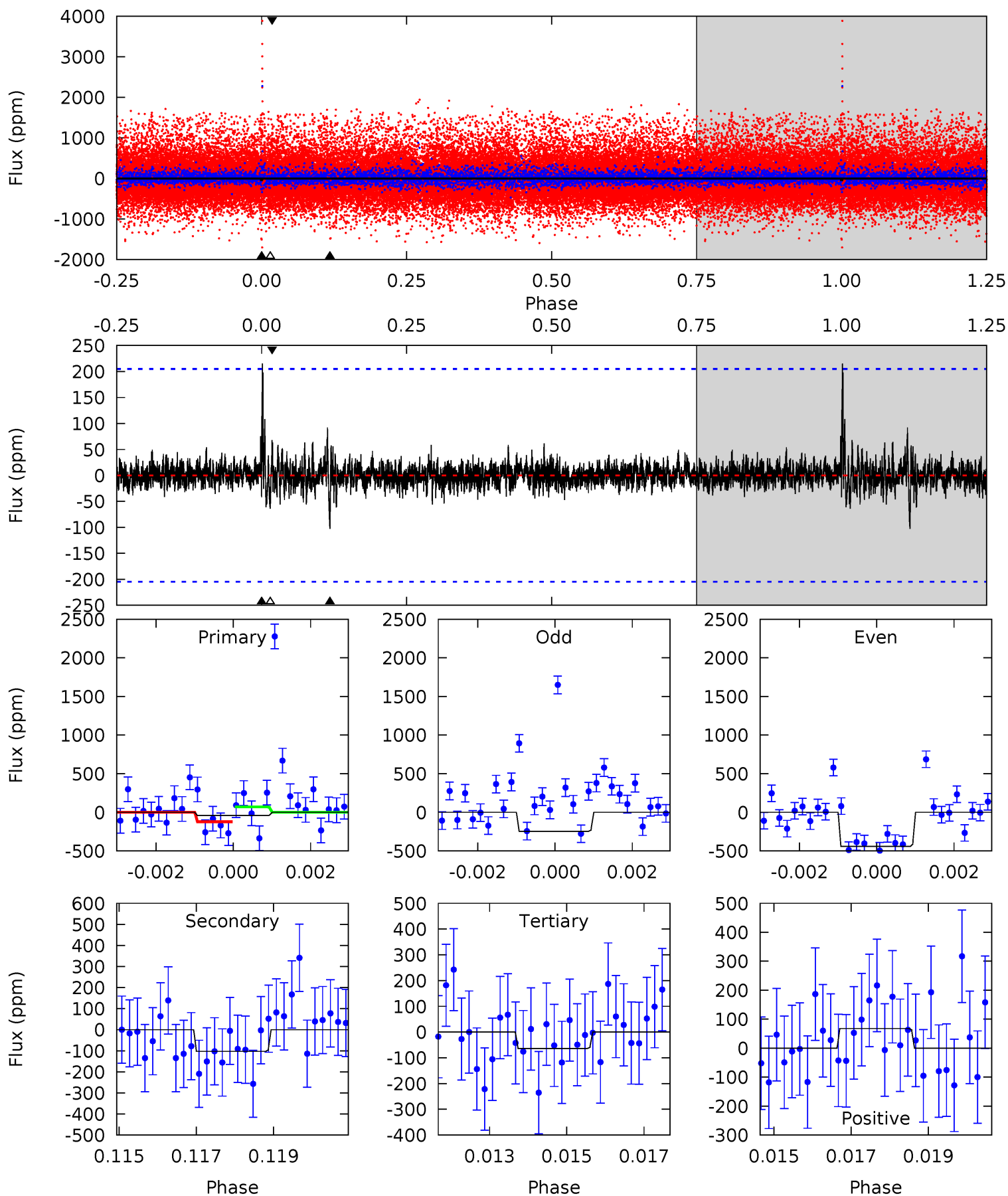
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.03	7.44	7.03	11.4	5.32	3.08	2.09	-0.99	-5.36	0.42	-3.95	1.31	0.68	0.60	0.34



Alt Model-Shift Uniqueness Test

010452252-04, P = 255.194731 Days, E = 26.963629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.08	2.67	1.65	1.75	5.31	3.07	0.42	-0.57	-0.67	1.02	0.92	2.57	2.01	0.68	0.67



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-413 ± 56	$0.64^{+0.42}_{-0.35}$	144^{+10}_{-9}	3123^{+914}_{-381}	$122807^{+495615}_{-77541}$
Alt.	-103 ± 39	$0.41^{+0.36}_{-0.27}$	144^{+9}_{-9}	2937^{+1030}_{-474}	$72214^{+473841}_{-53481}$

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

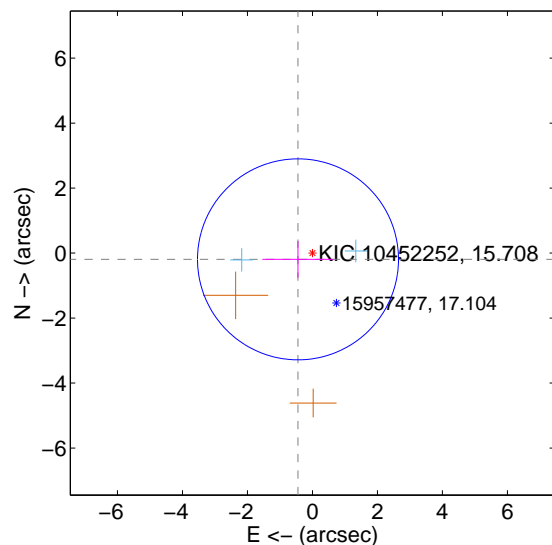
Supplemental centroid analysis for 010452252-04. Kepler magnitude: 15.71. Transit SNR 6.51

There are 2 quarters with good PRF difference image offsets

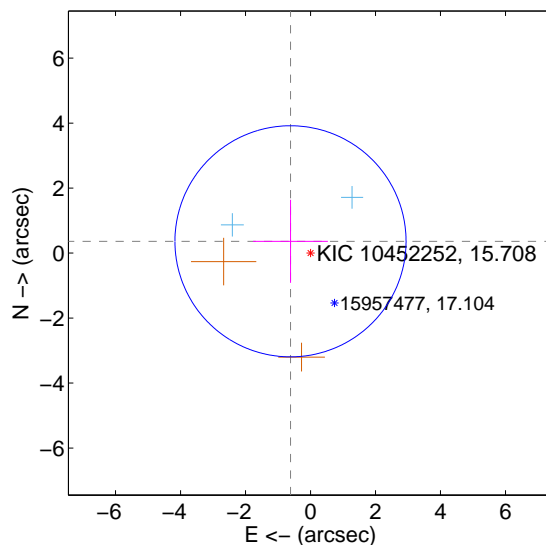
The direct PRF centroid is offset from the target star catalog position by about 1.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.484 ± 1.031	0.47	0.444 ± 1.097	-0.193 ± 0.562
PRF-fit source offset from KIC position	0.715 ± 1.185	0.60	0.616 ± 1.152	0.363 ± 1.277
photometric centroid source offset	2.93 ± 1.09	2.68	1.17 ± 1.06	2.69 ± 1.10

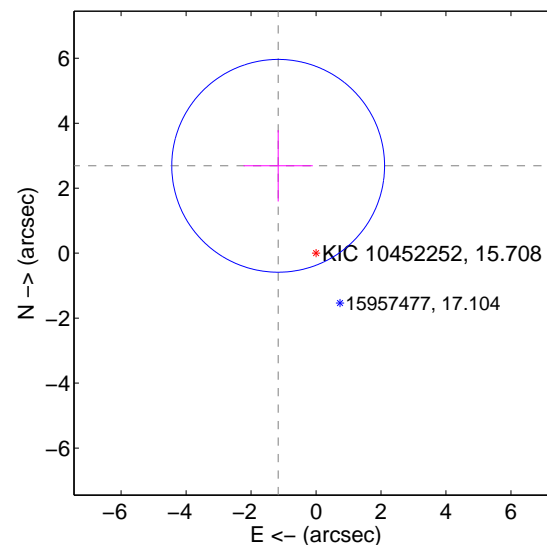
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

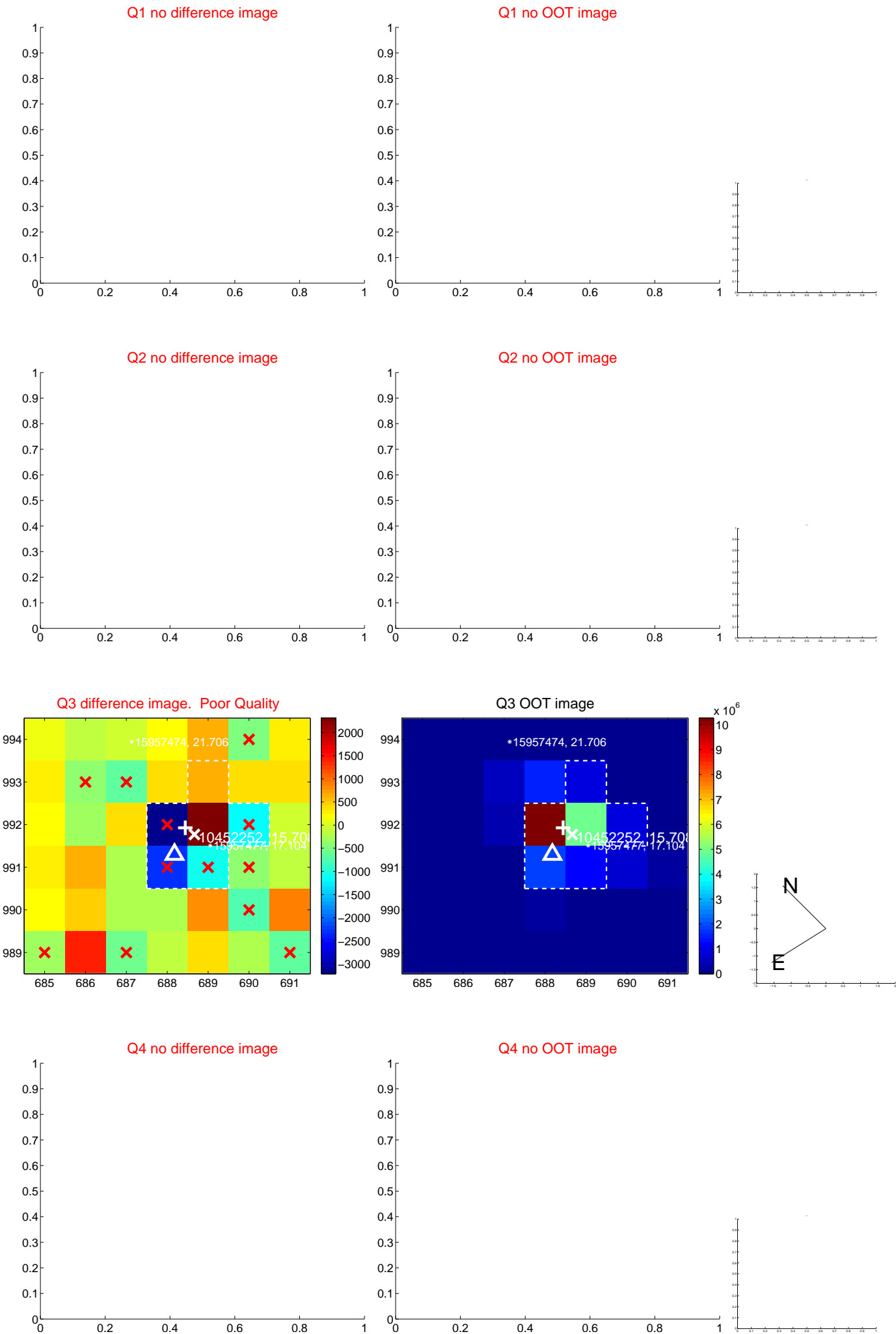


offset from photometric centroids

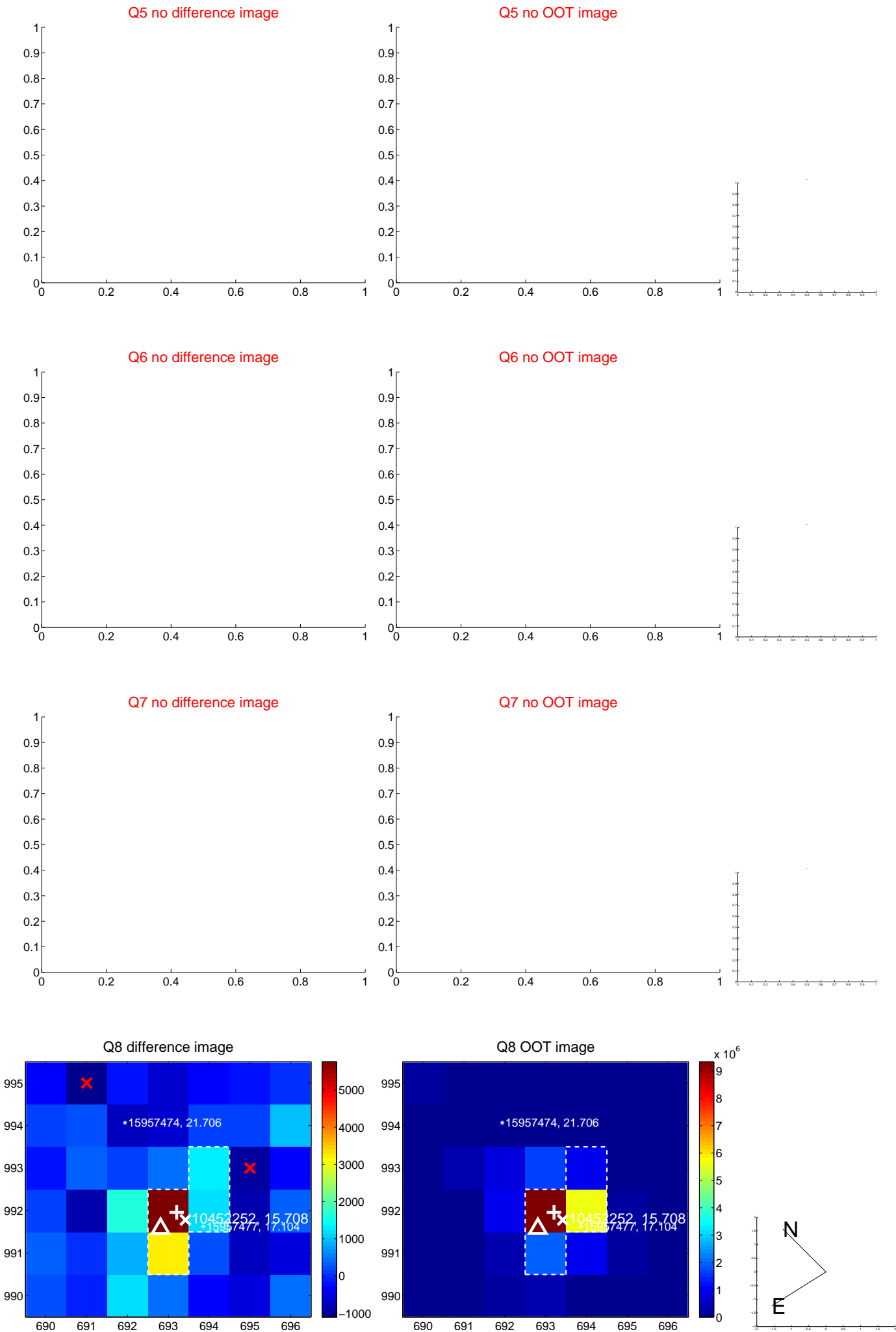


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

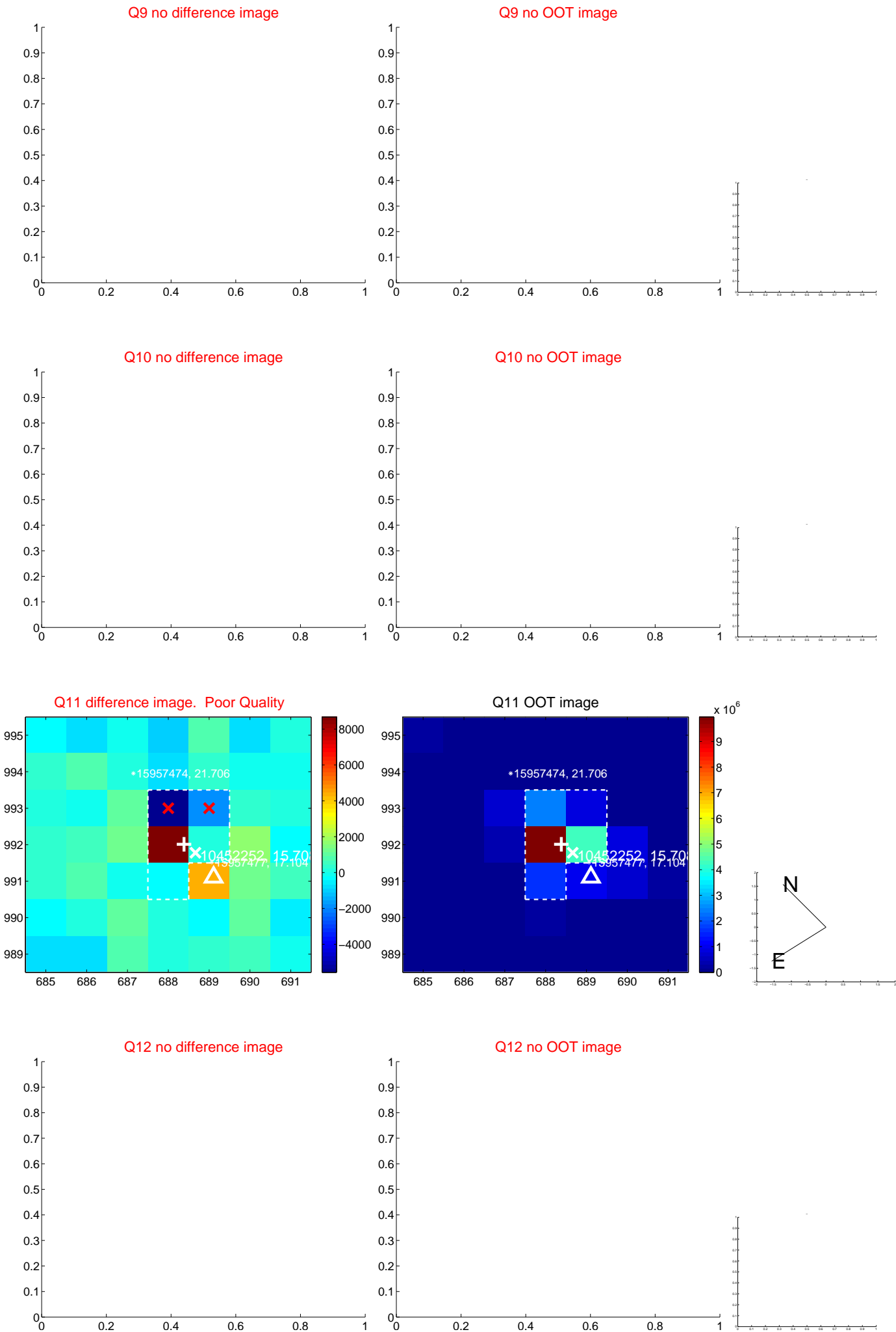
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



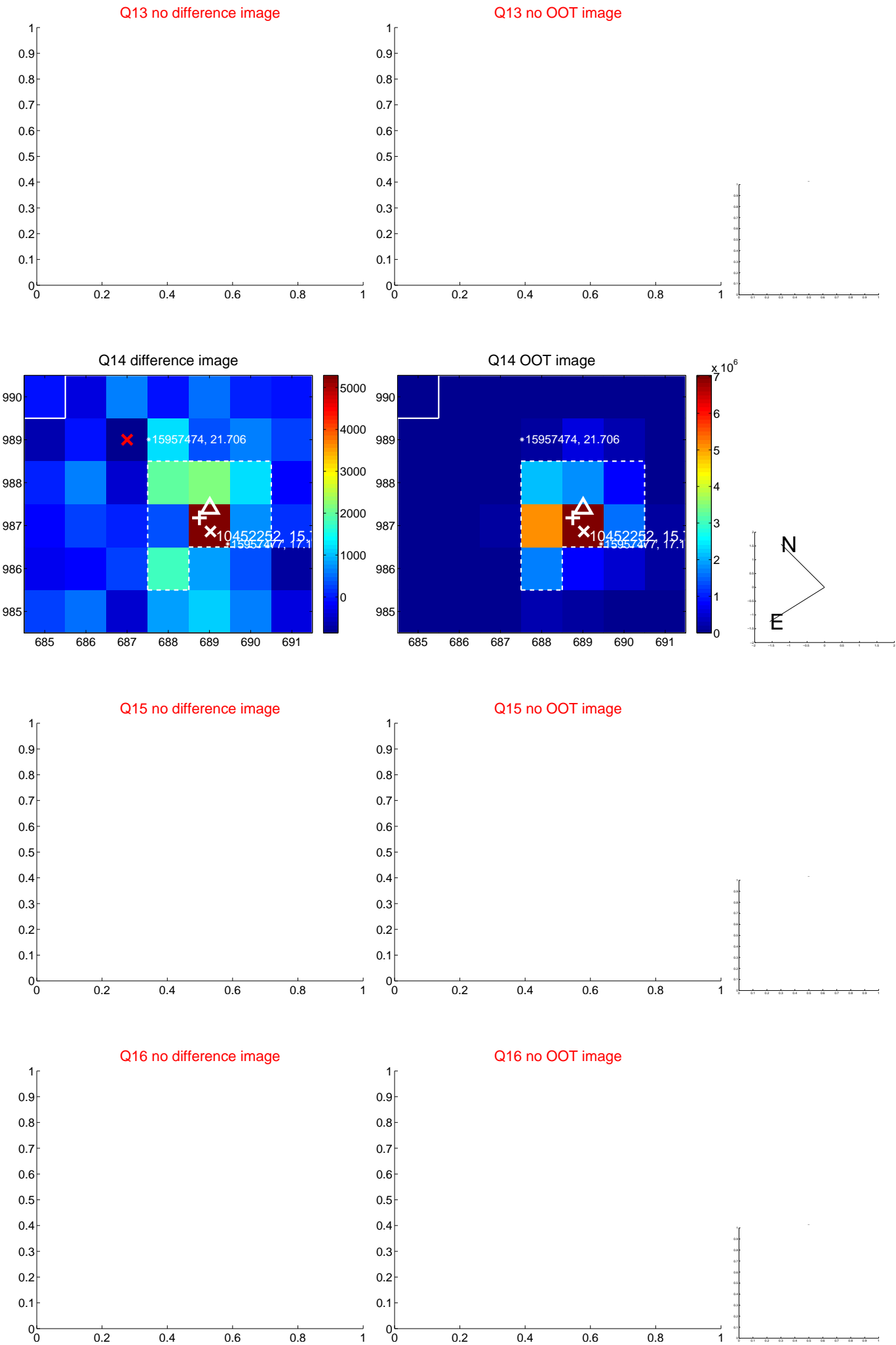
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



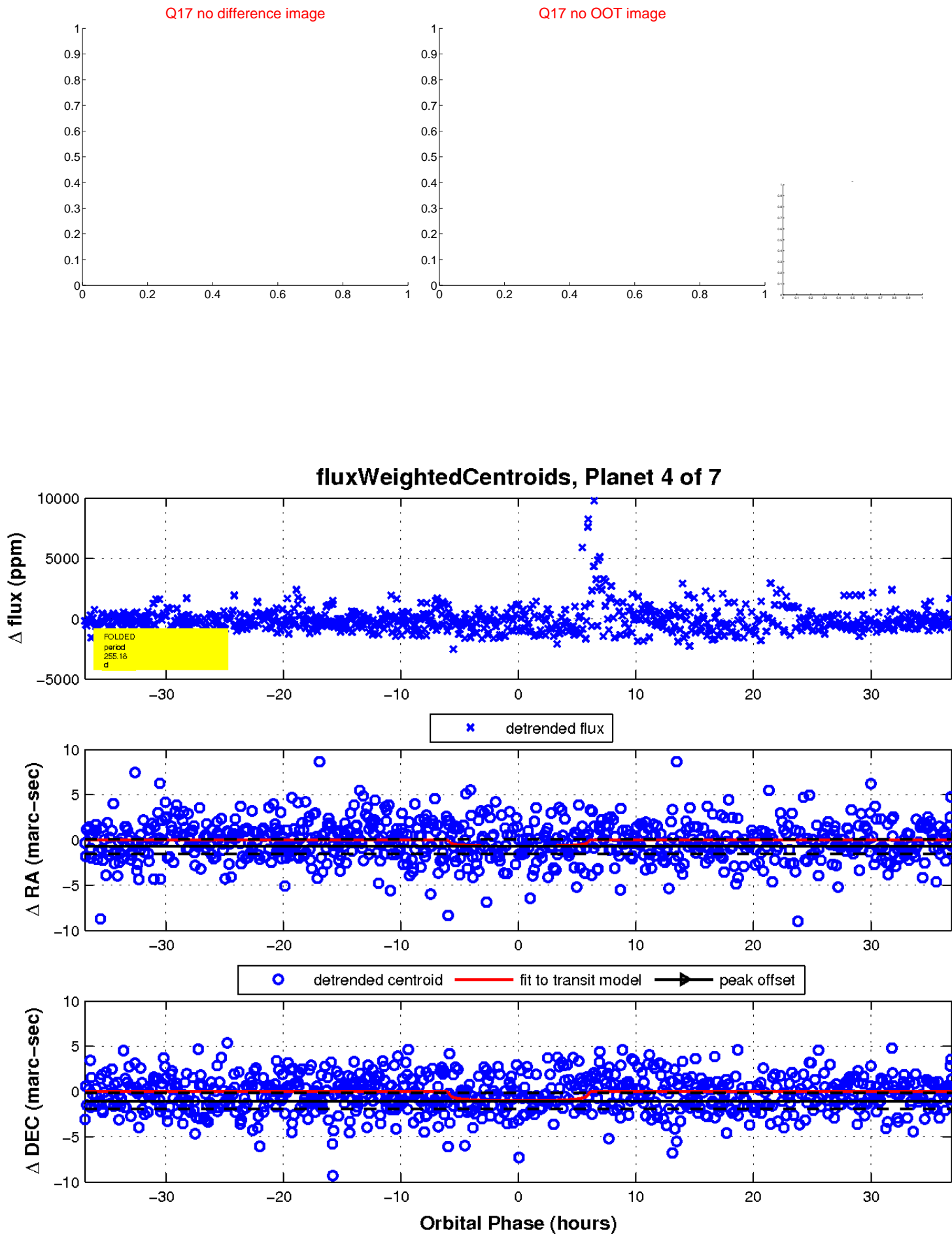
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

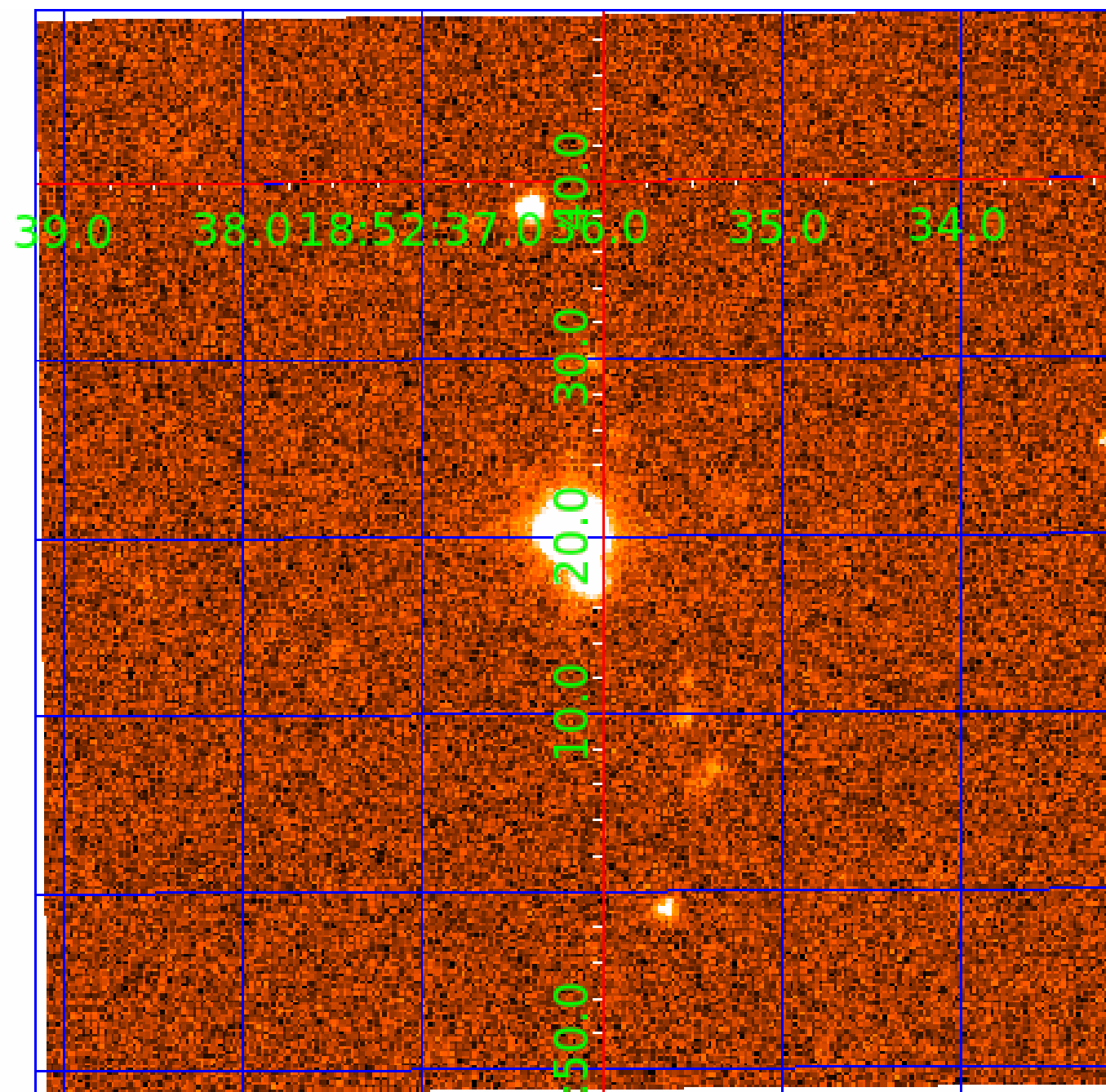


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

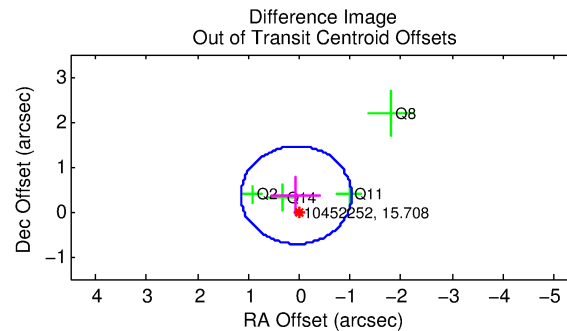
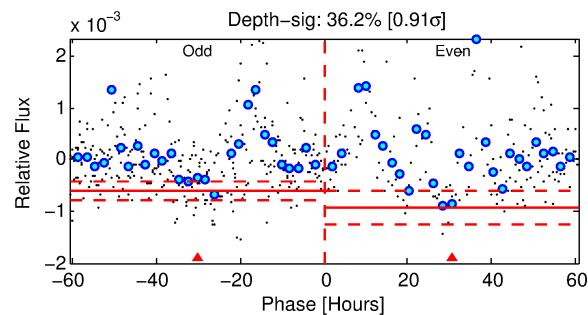
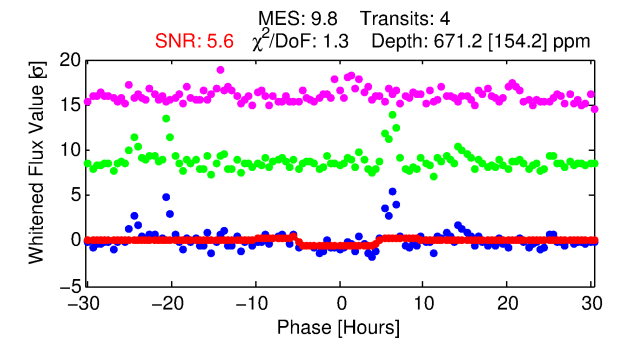
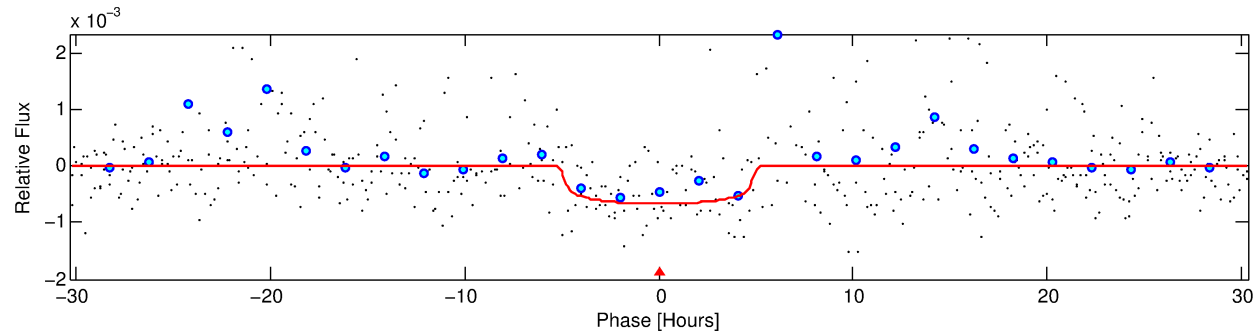
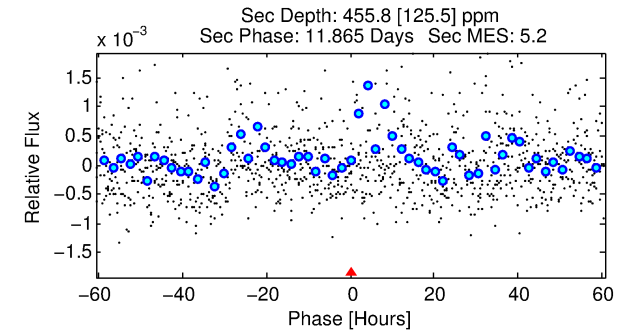
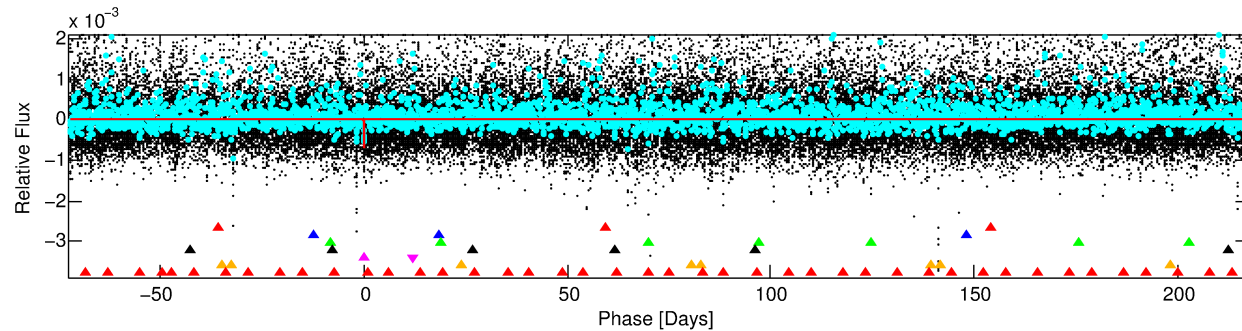
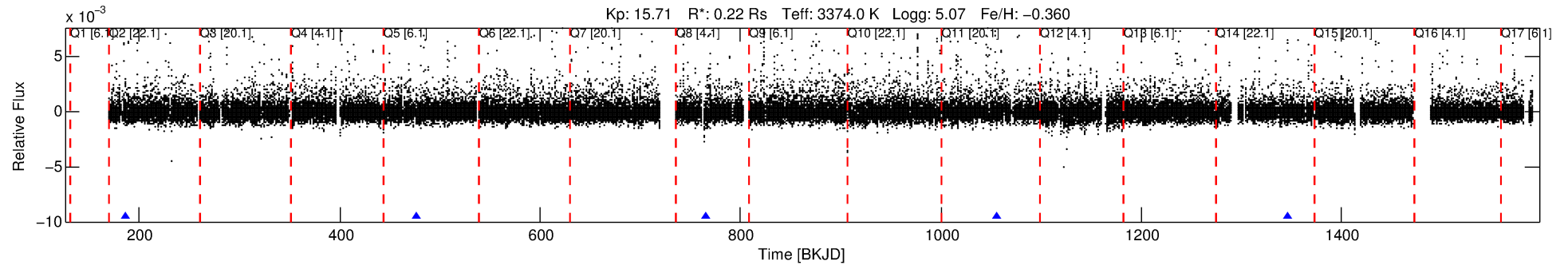
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-05

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 5 of 7 Period: 289.905 d



DV Fit Results:

Period = 289.90492 [0.00818] d
Epoch = 185.9805 [0.0236] BKJD
Rp/R* = 0.0242 [0.0242]
a/R* = 198.08 [929.35]
b = 0.48 [7.52]
Seff = 0.02 [0.01]
Teq = 98 [9] K
Rp = 0.58 [0.62] Re
a = 0.5029 [0.1467] AU
Ag = 190652.32 [389398.49] [0.49σ]
Teffp = 3166 [1598] K [1.92σ]

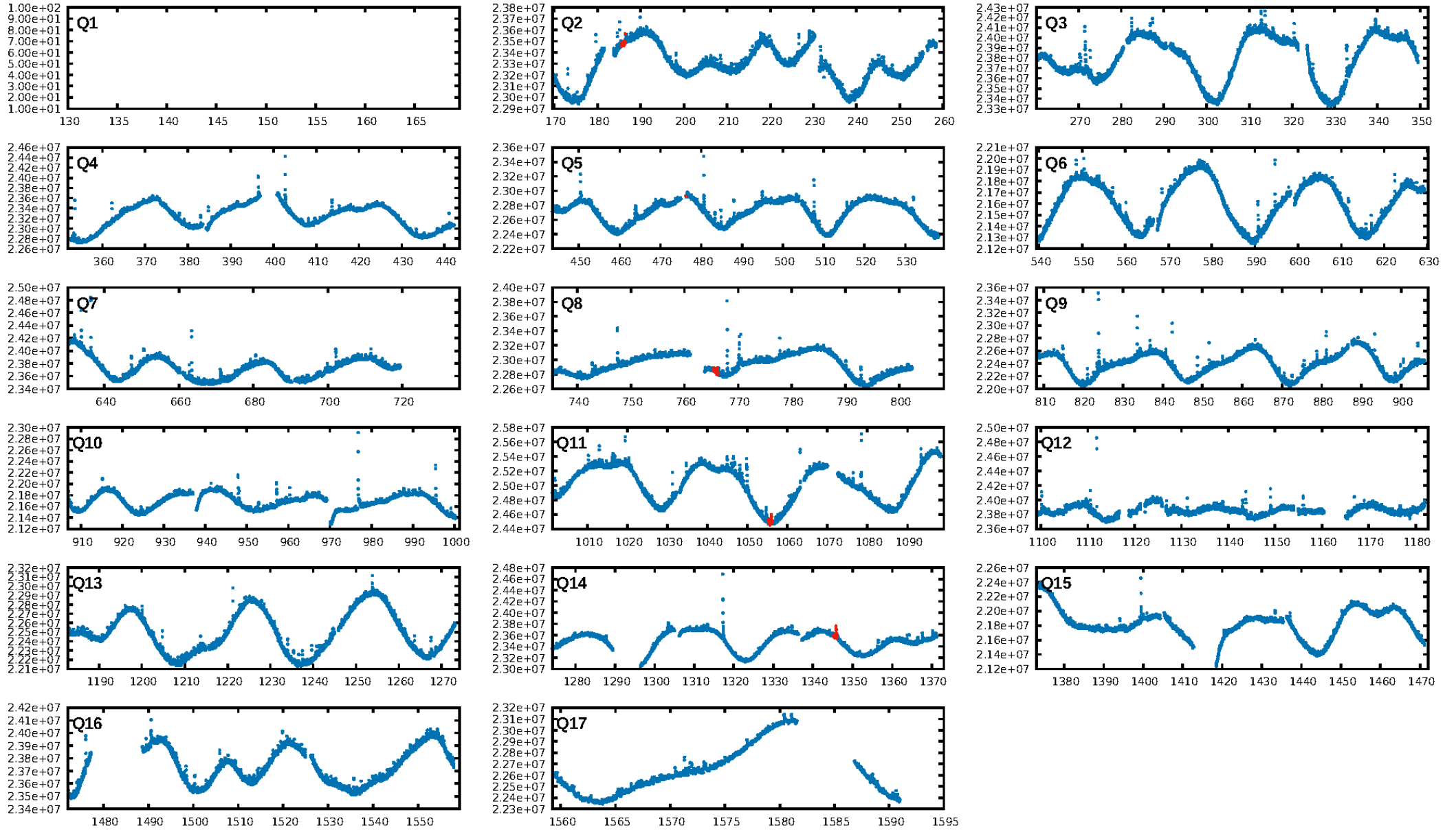
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [52.35σ]
LongPeriod-sig: 100.0% [172.55σ]
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.4747
Centroid-sig: 0.1%
Centroid-so: 4.374 arcsec [3.19σ]
OotOffset-rm: 0.372 arcsec [1.03σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-rm: 1.808 arcsec [5.70σ]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.75 [3/4]

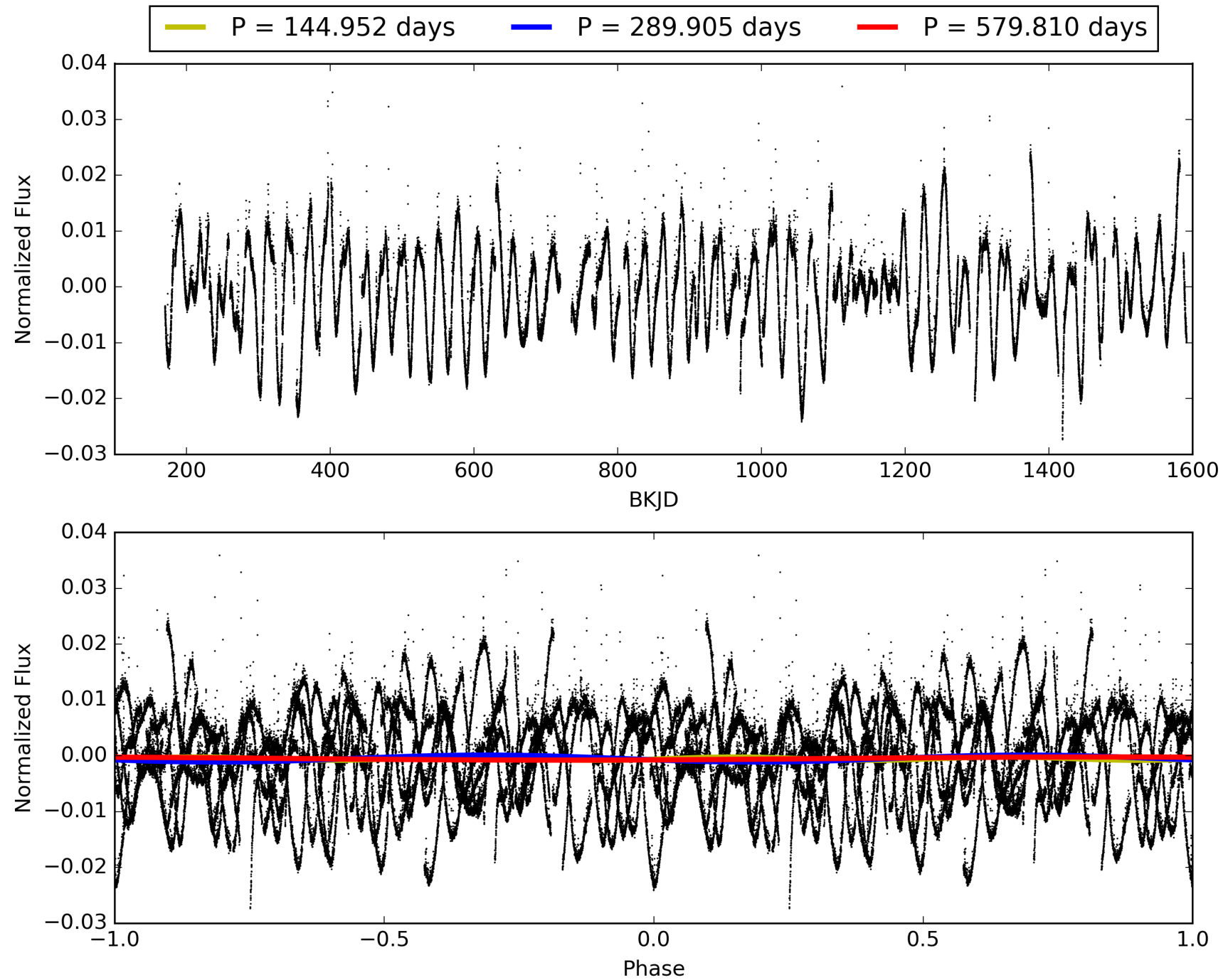
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:10:07 Z

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

TCE 010452252-05, PDC Light Curves

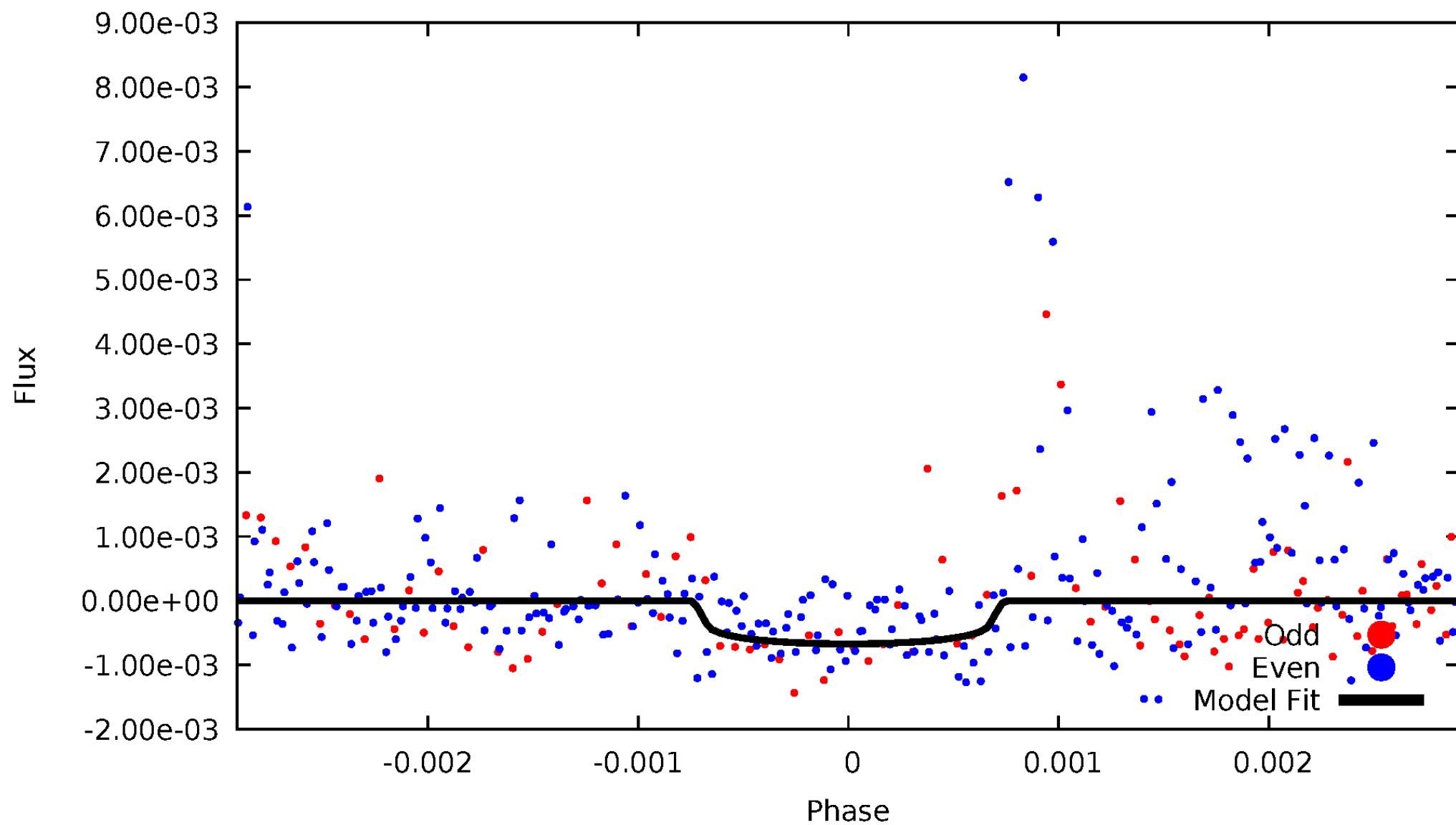


TCE 010452252-05



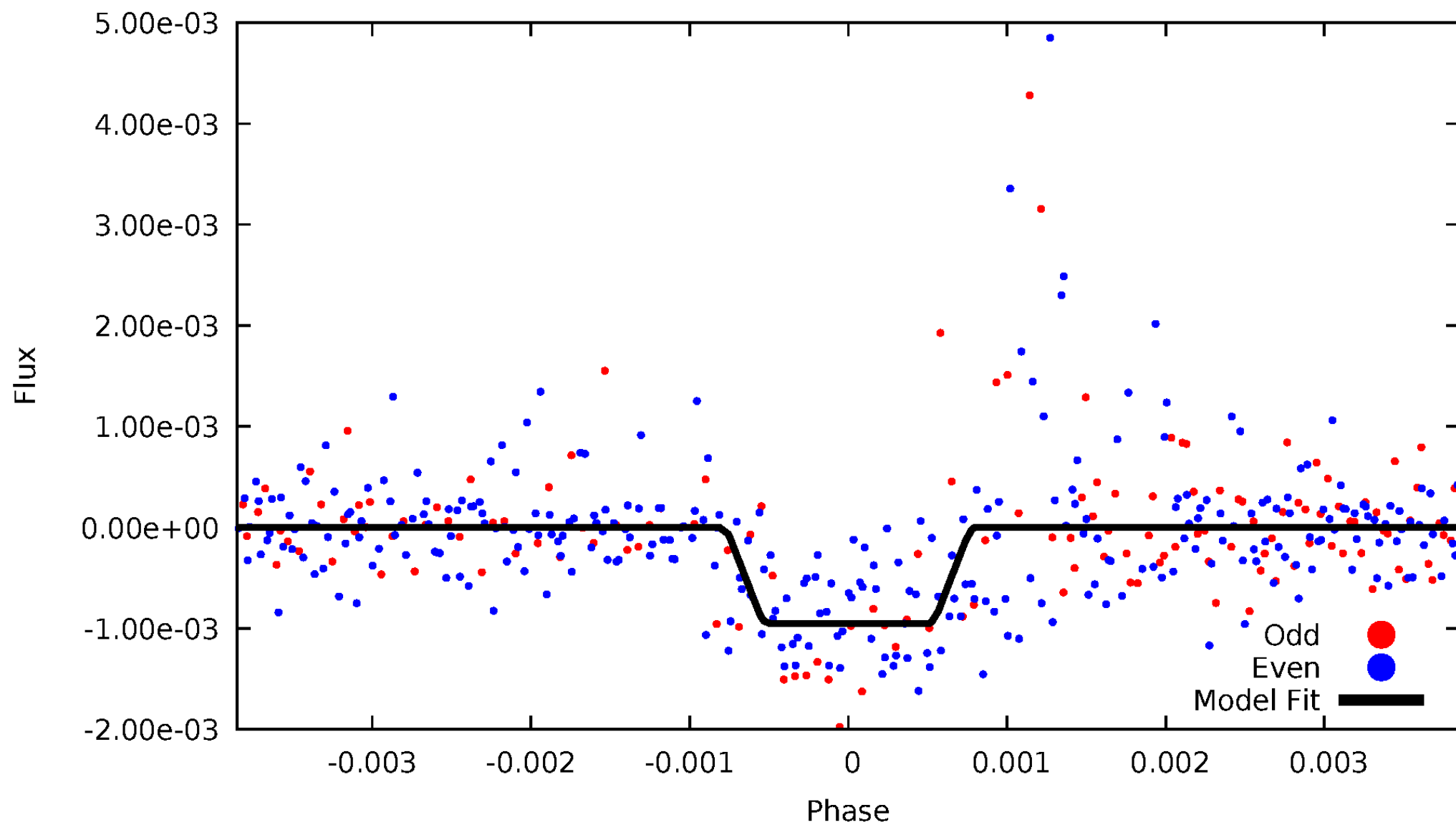
DV Odd/Even

TCE 010452252-05



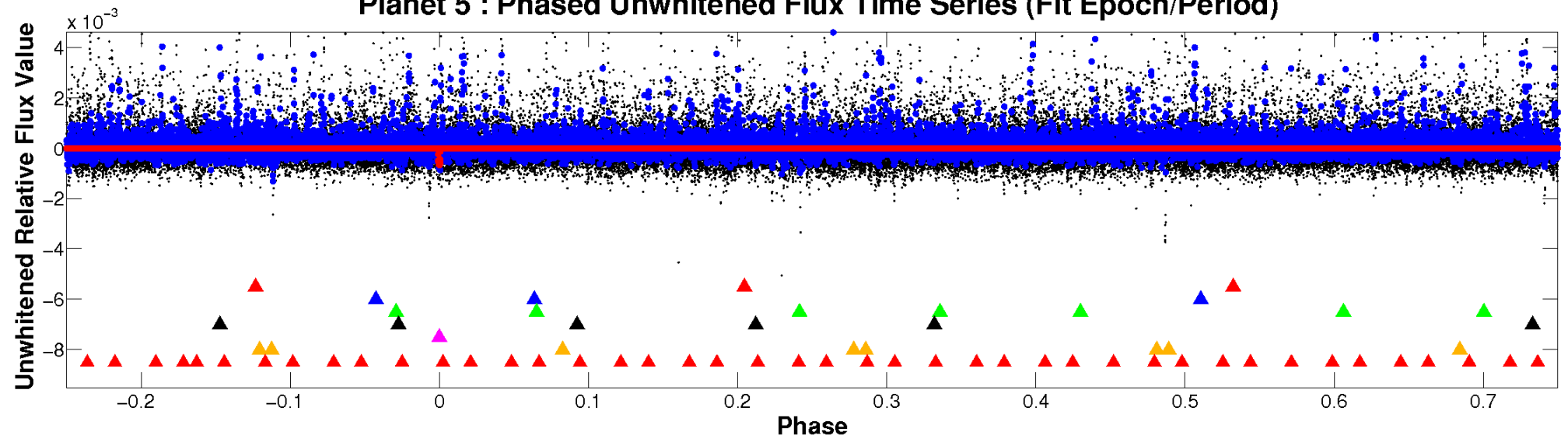
ALT Odd/Even

TCE 010452252-05

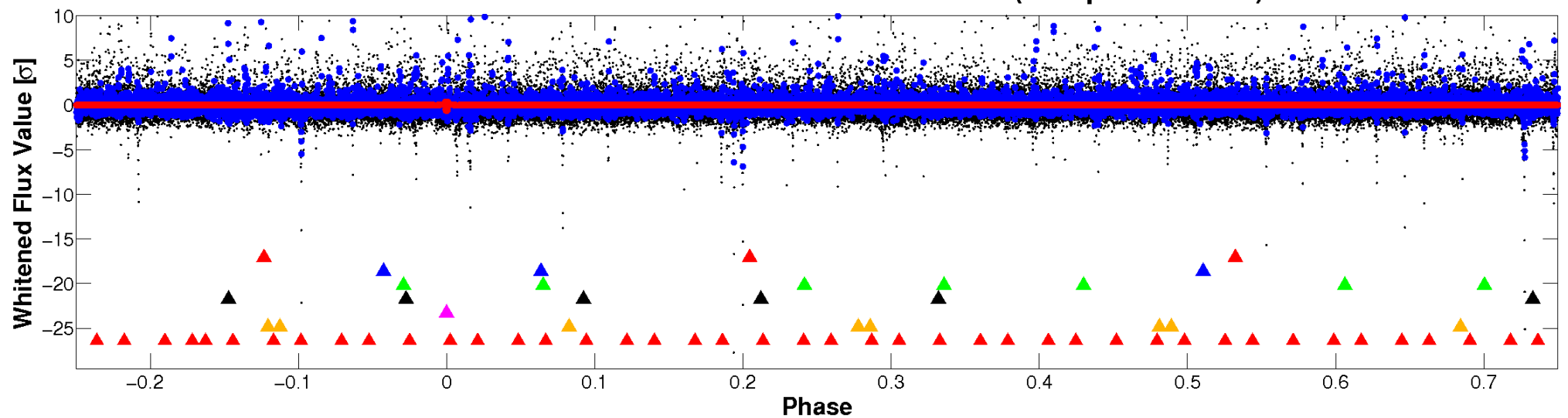


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

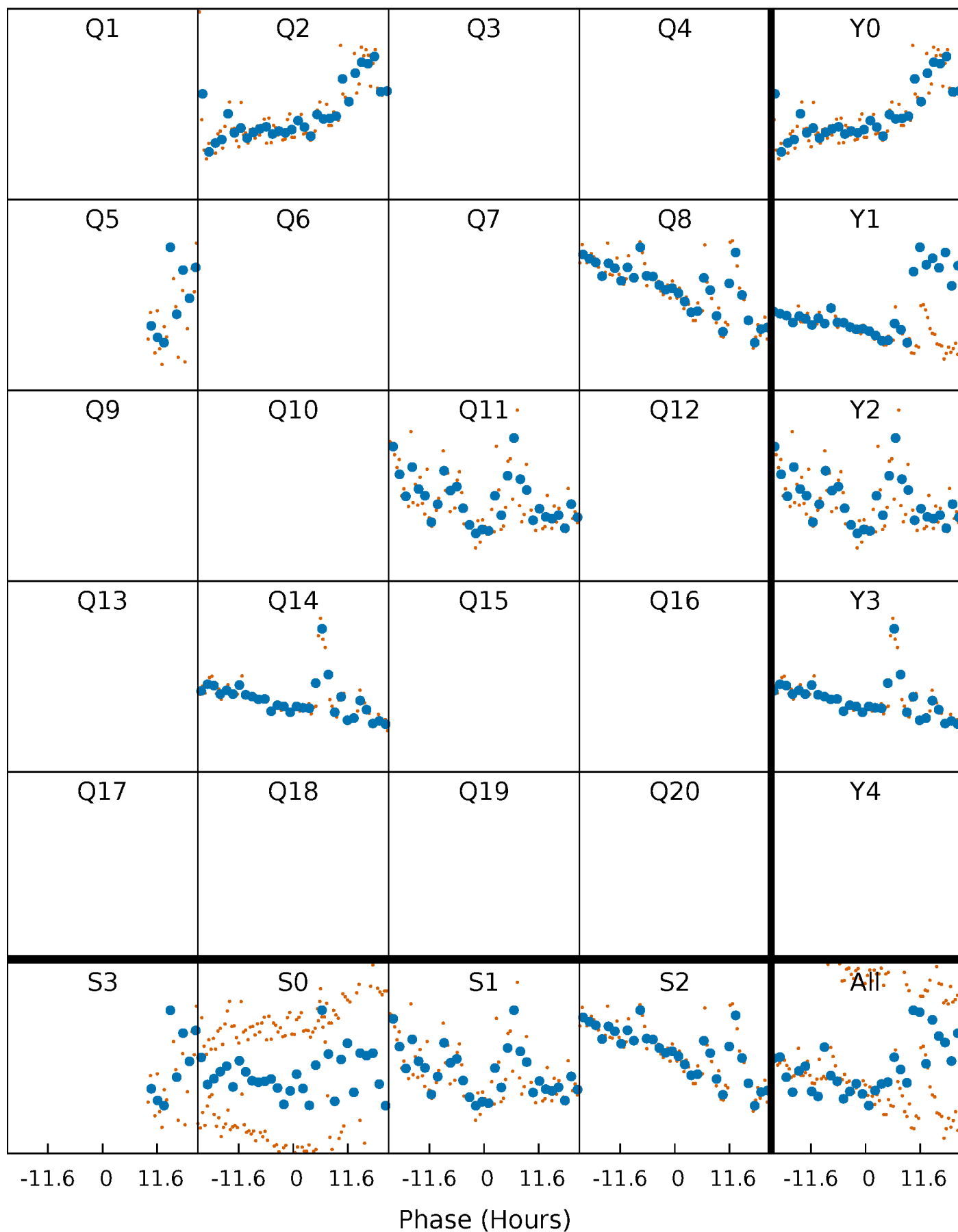


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



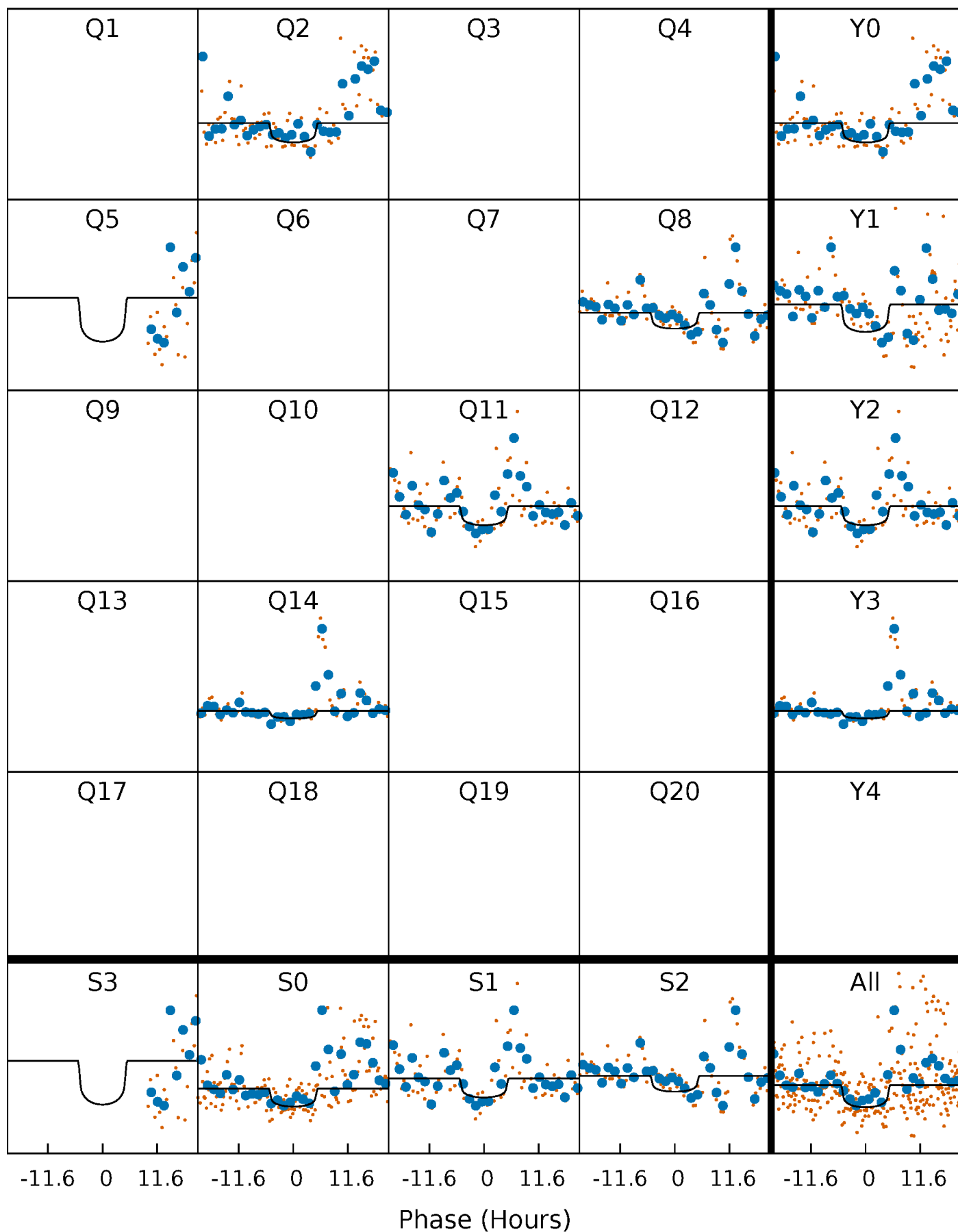
PDC Quarter-Phased Transit Curves

TCE 010452252-05 $P=289.904924$ Days $T_0=185.980496$ (BKJD)



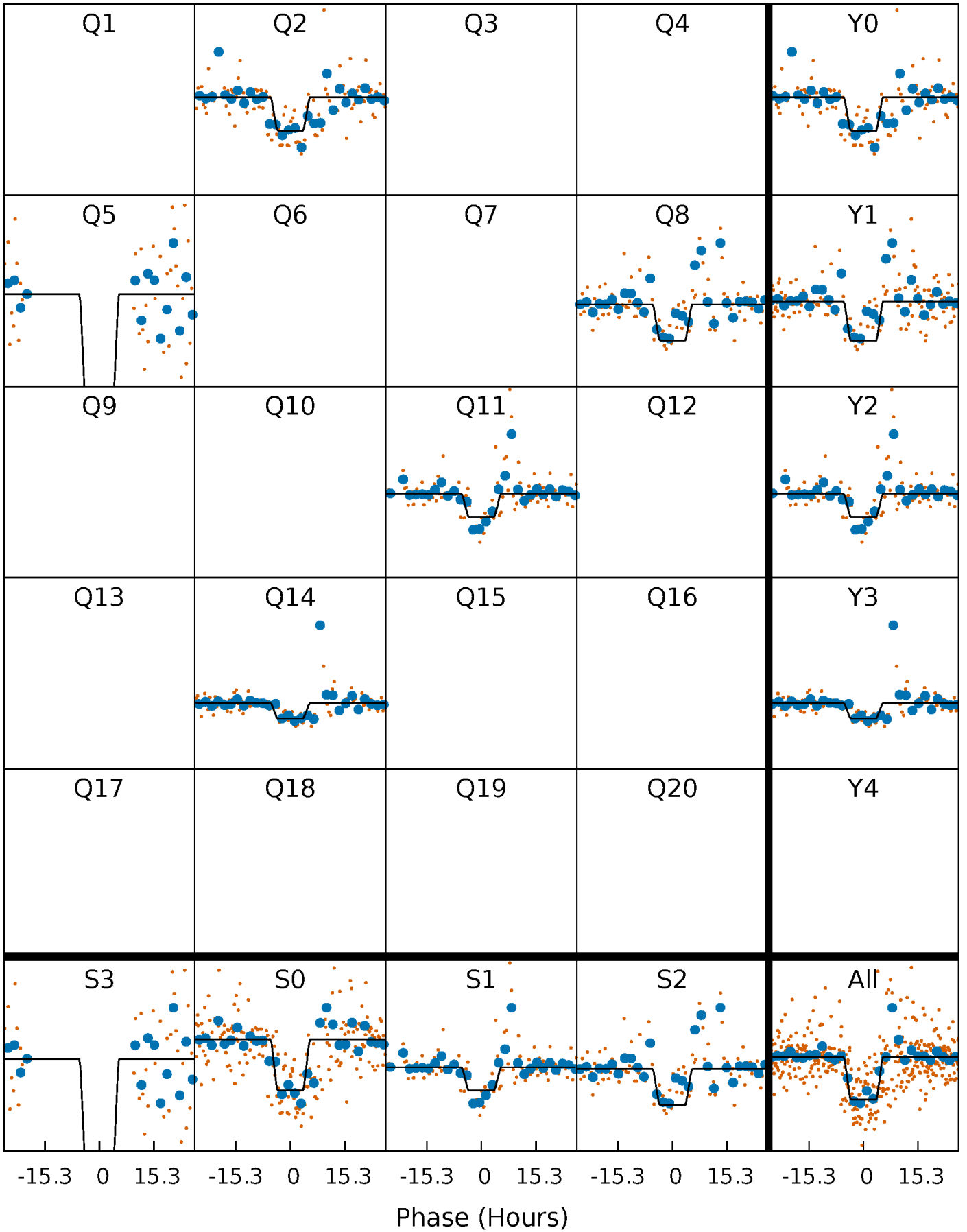
DV Quarter-Phased Transit Curves

TCE 010452252-05 $P=289.904924$ Days $T_0=185.980496$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

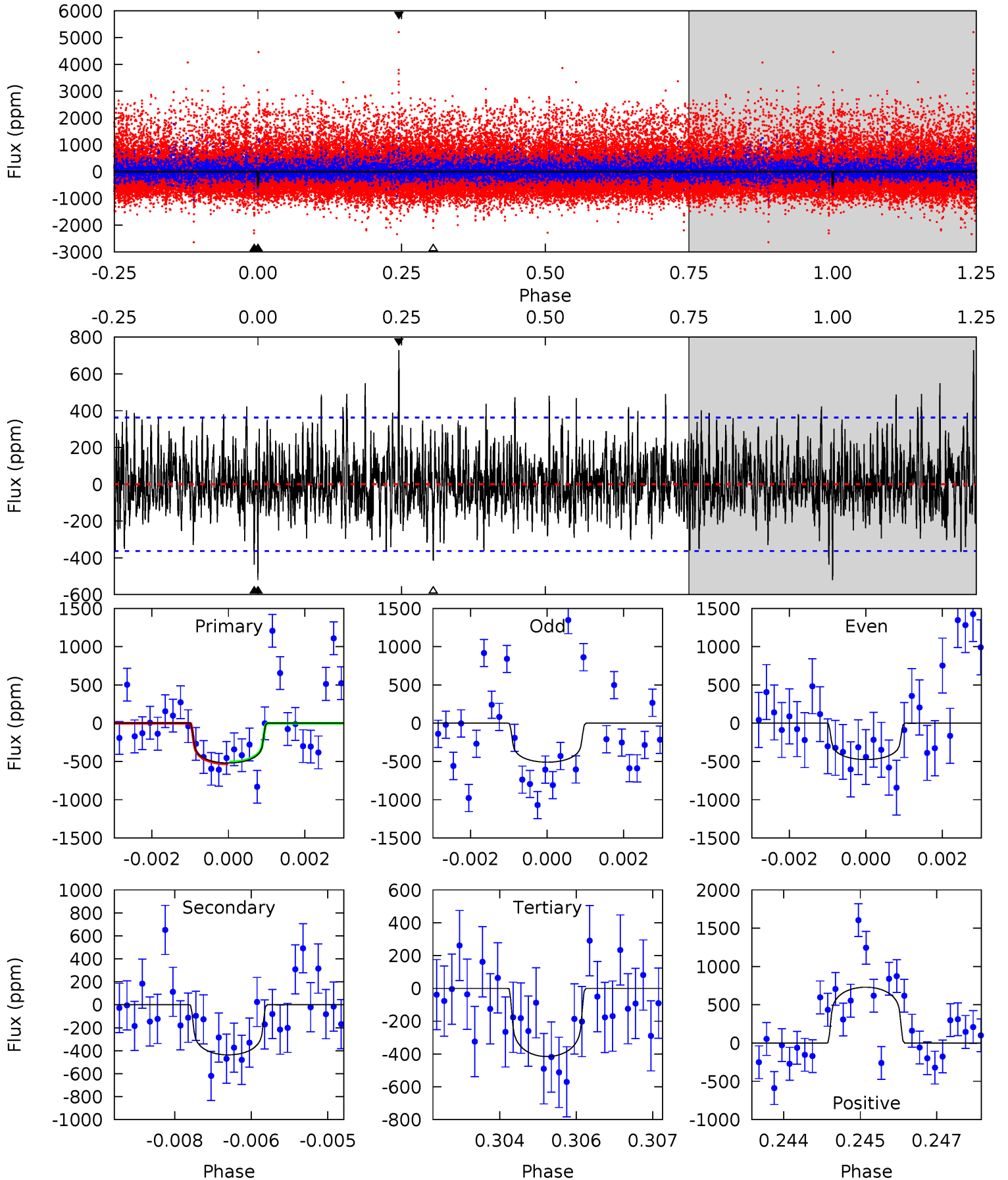
TCE 010452252-05 $P=289.877293$ Days $T_0=186.004525$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-05, P = 289.904924 Days, E = 185.980496 Days

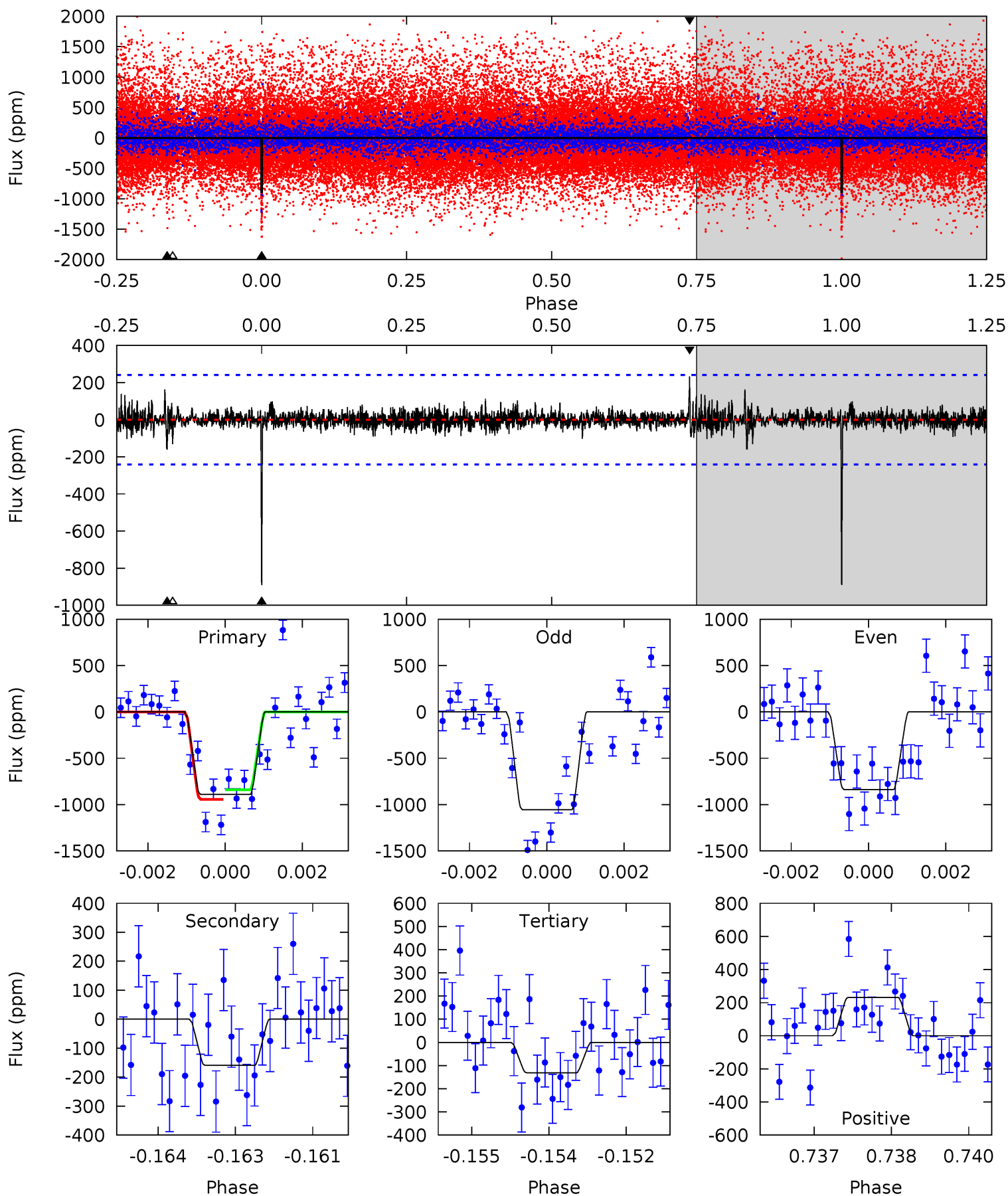
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.71	6.47	6.16	10.8	5.38	3.17	1.95	1.55	-3.09	0.31	-4.34	0.20	0.94	0.58	0.16



Alt Model-Shift Uniqueness Test

010452252-05, $P = 289.877293$ Days, $E = 186.004525$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	3.55	2.93	5.17	5.37	3.17	0.65	16.9	14.7	0.63	-1.62	2.05	0.96	0.21	1.17



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-436 ± 68	$0.70^{+0.59}_{-0.43}$	139^{+9}_{-8}	3073^{+1095}_{-431}	$128658^{+668524}_{-91425}$
Alt.	-160 ± 45	$0.84^{+0.56}_{-0.49}$	139^{+9}_{-8}	2559^{+625}_{-300}	$30660^{+135833}_{-19859}$

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

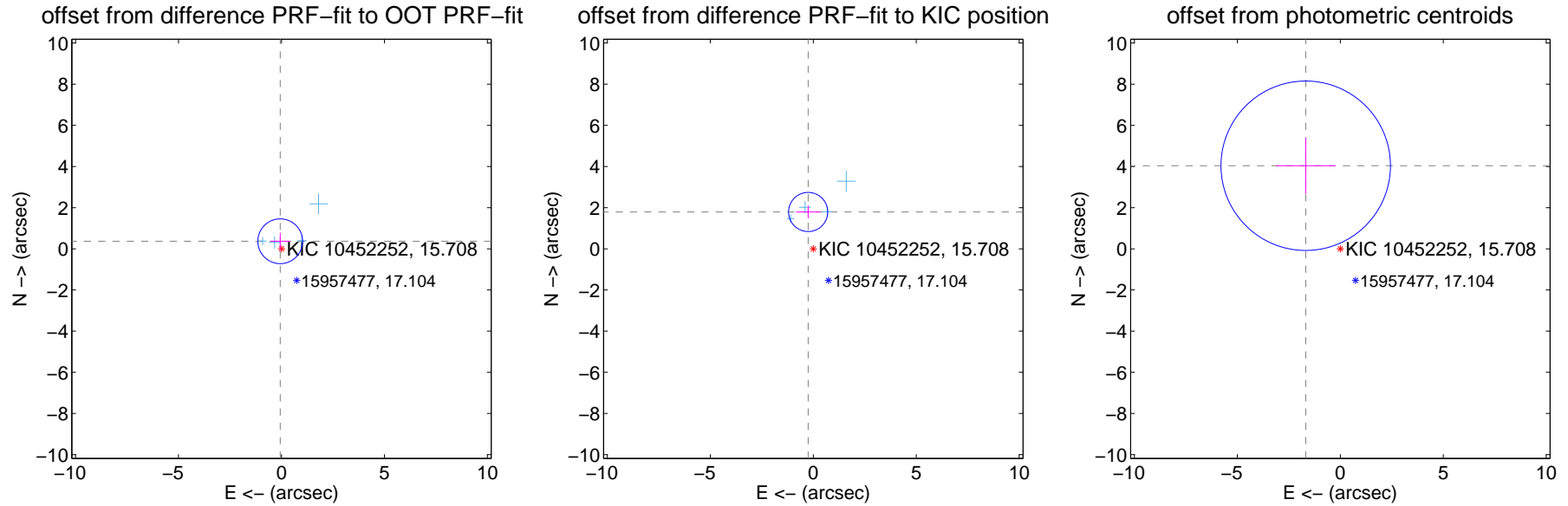
DV Centroid Data

Supplemental centroid analysis for 010452252-05. Kepler magnitude: 15.71. Transit SNR 5.59

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.71 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.372 ± 0.362	1.03	0.060 ± 0.472	0.367 ± 0.412
PRF-fit source offset from KIC position	1.808 ± 0.317	5.70	0.249 ± 0.589	1.791 ± 0.309
photometric centroid source offset	4.37 ± 1.37	3.19	1.68 ± 1.44	4.04 ± 1.36



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; Δ : difference centroid. red \times : large negative pixel value.

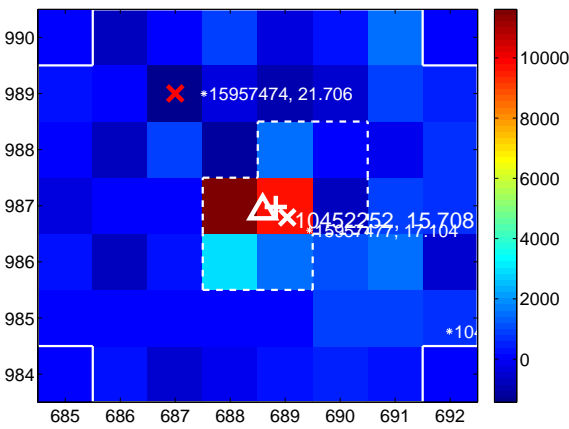
Q1 no difference image



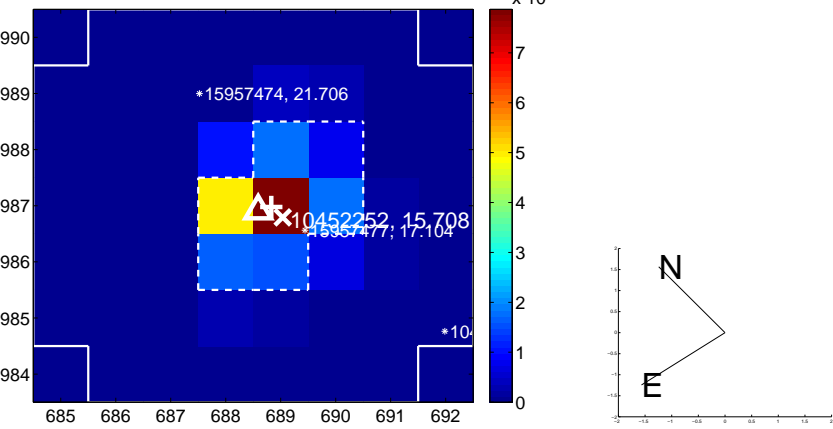
Q1 no OOT image



Q2 difference image



Q2 OOT image



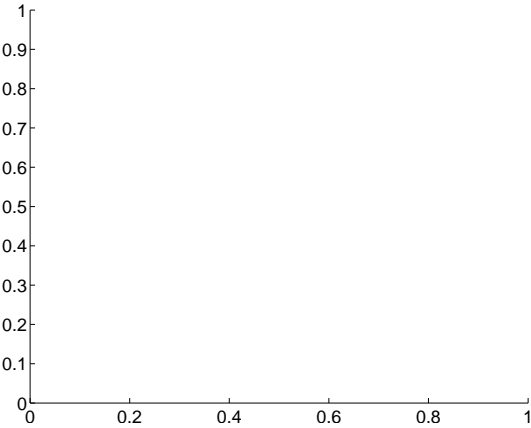
Q3 no difference image



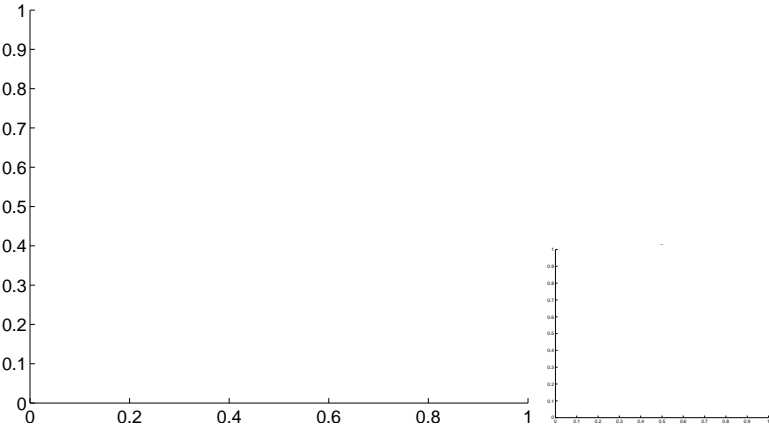
Q3 no OOT image



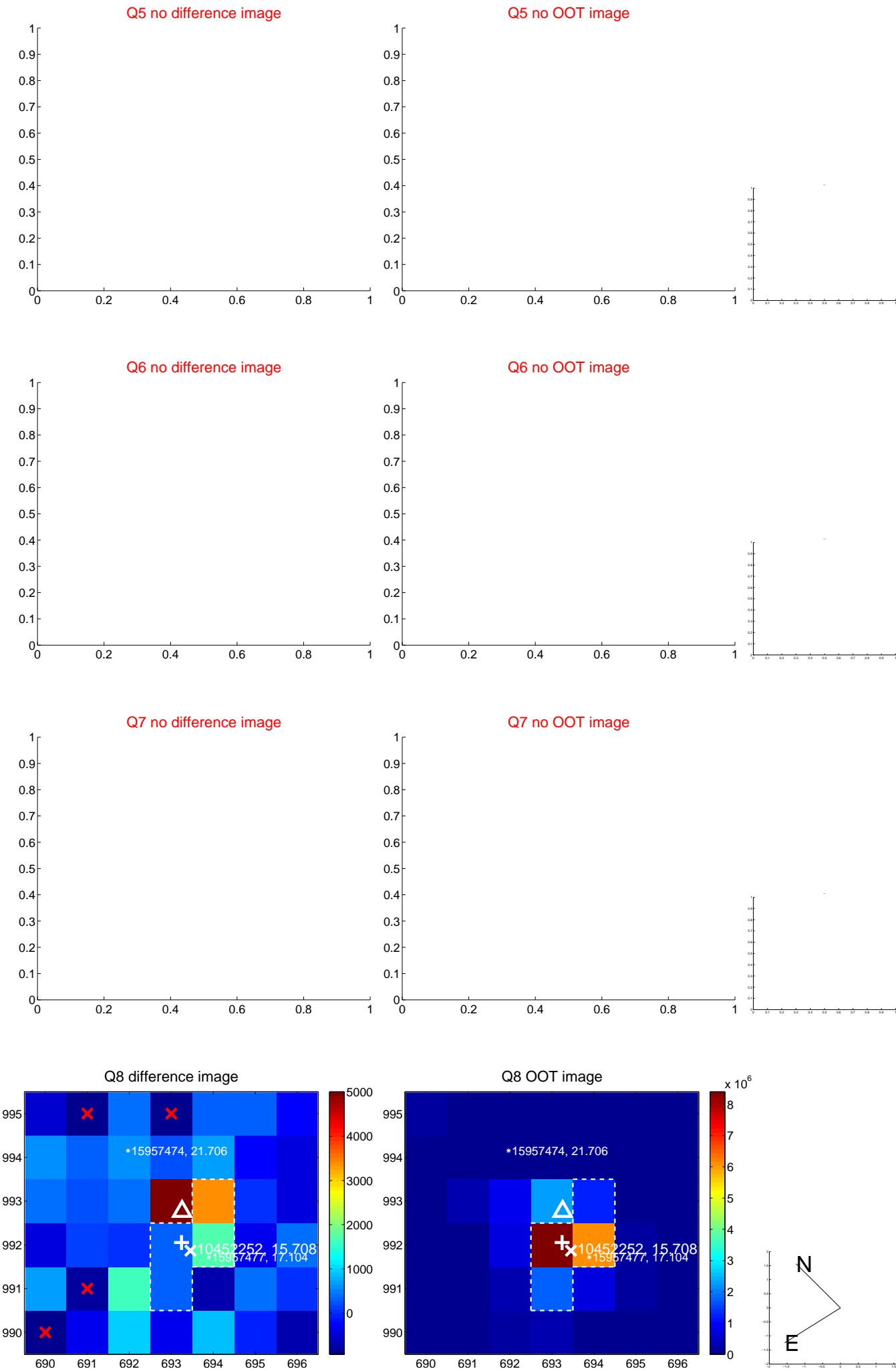
Q4 no difference image



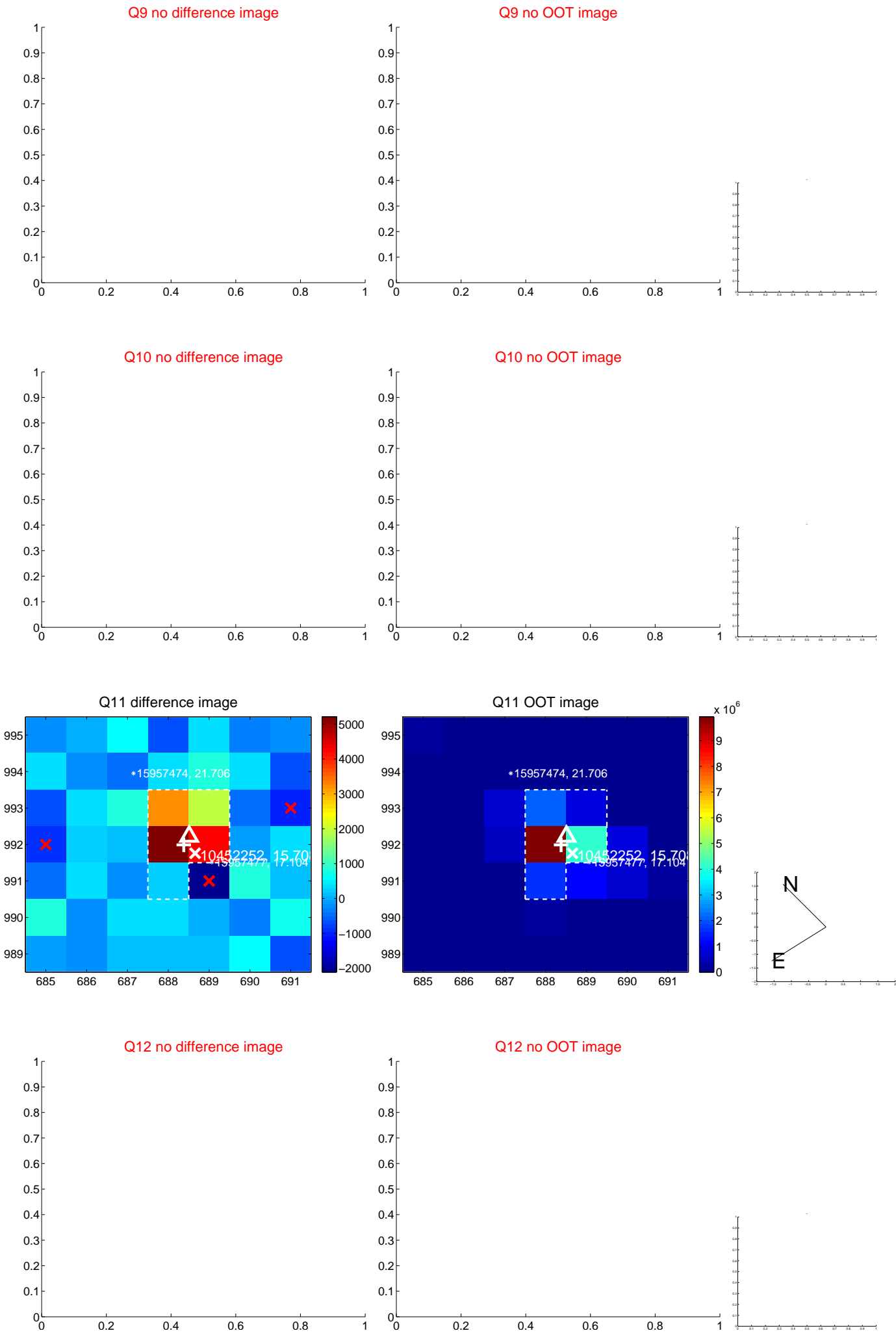
Q4 no OOT image



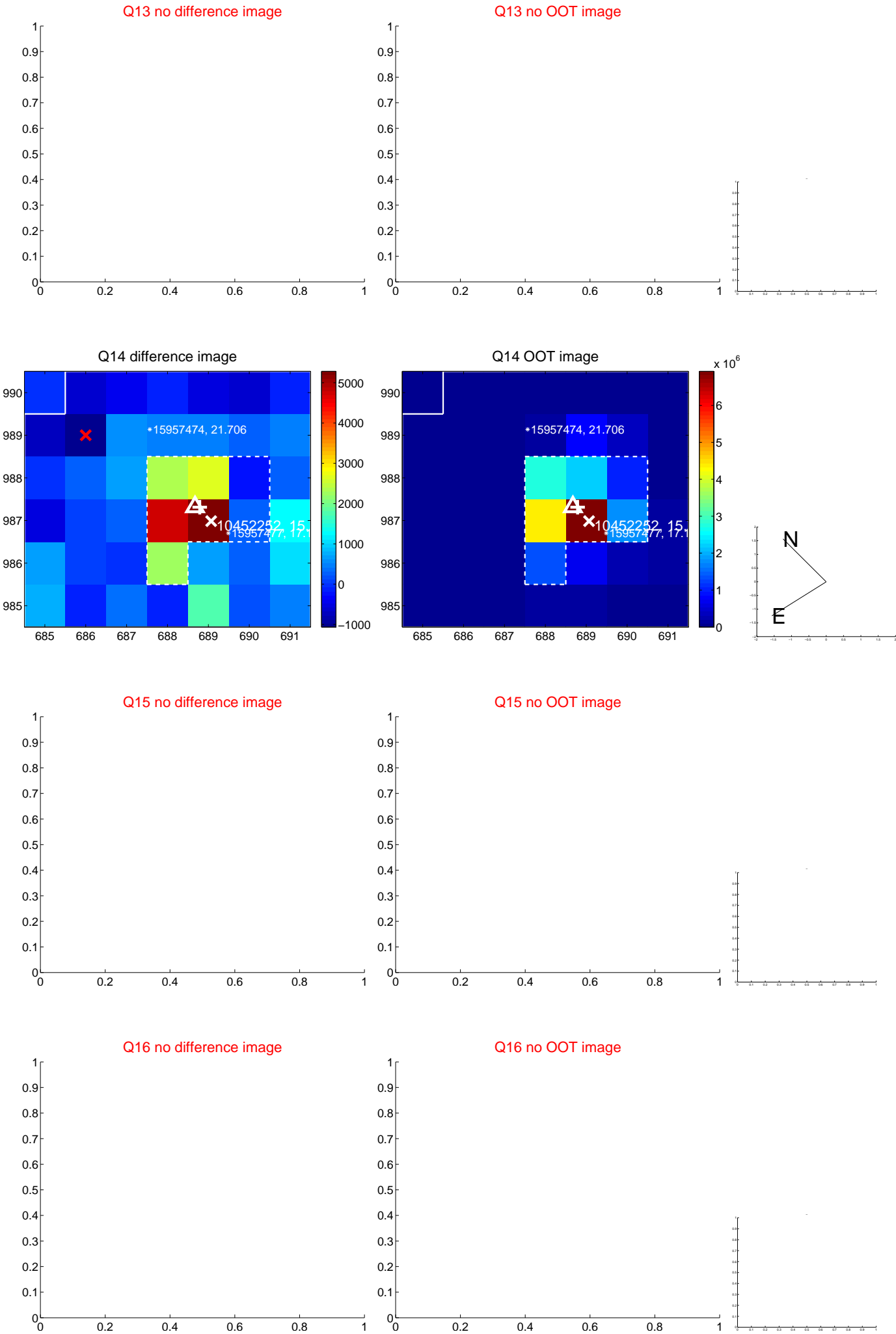
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



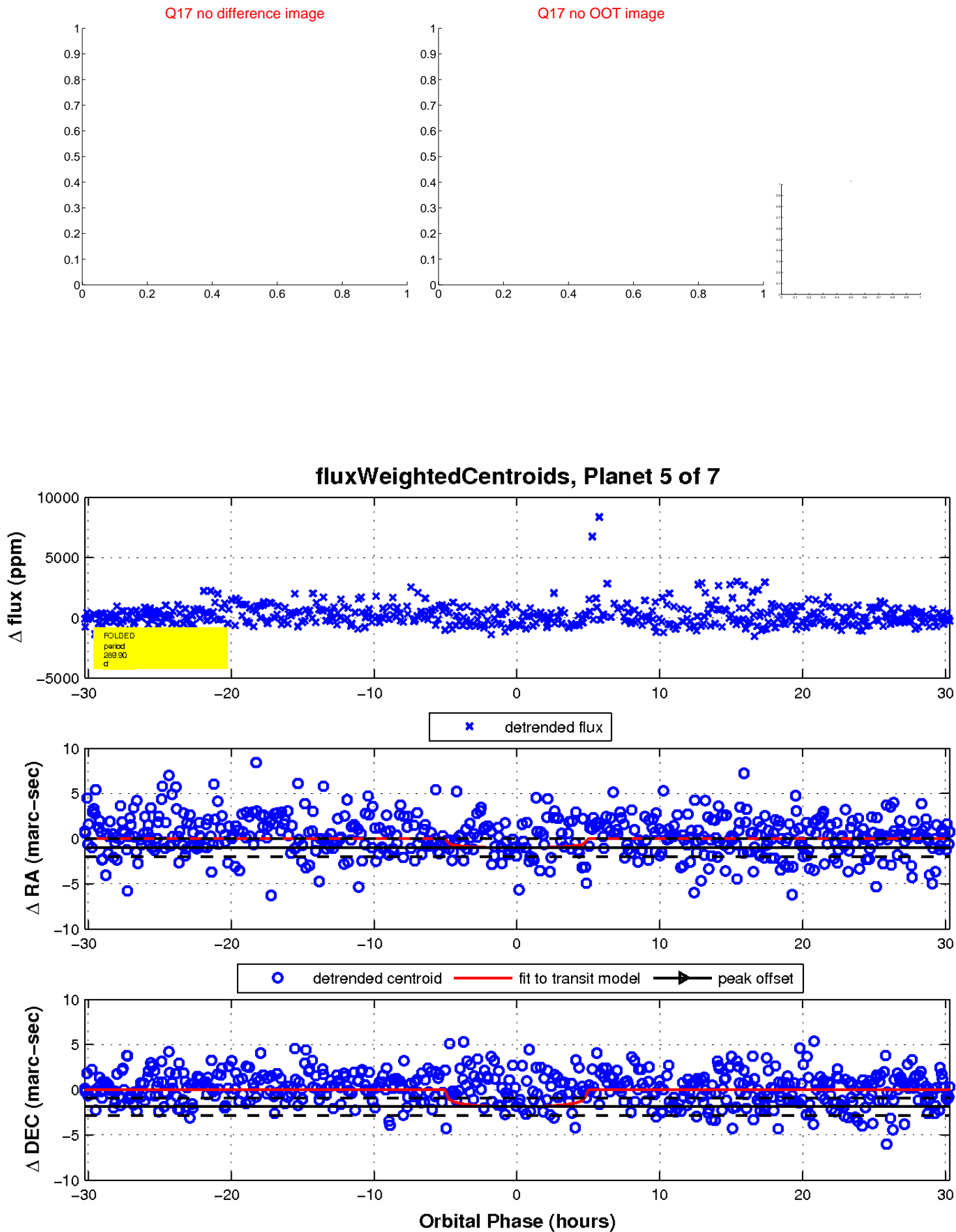
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

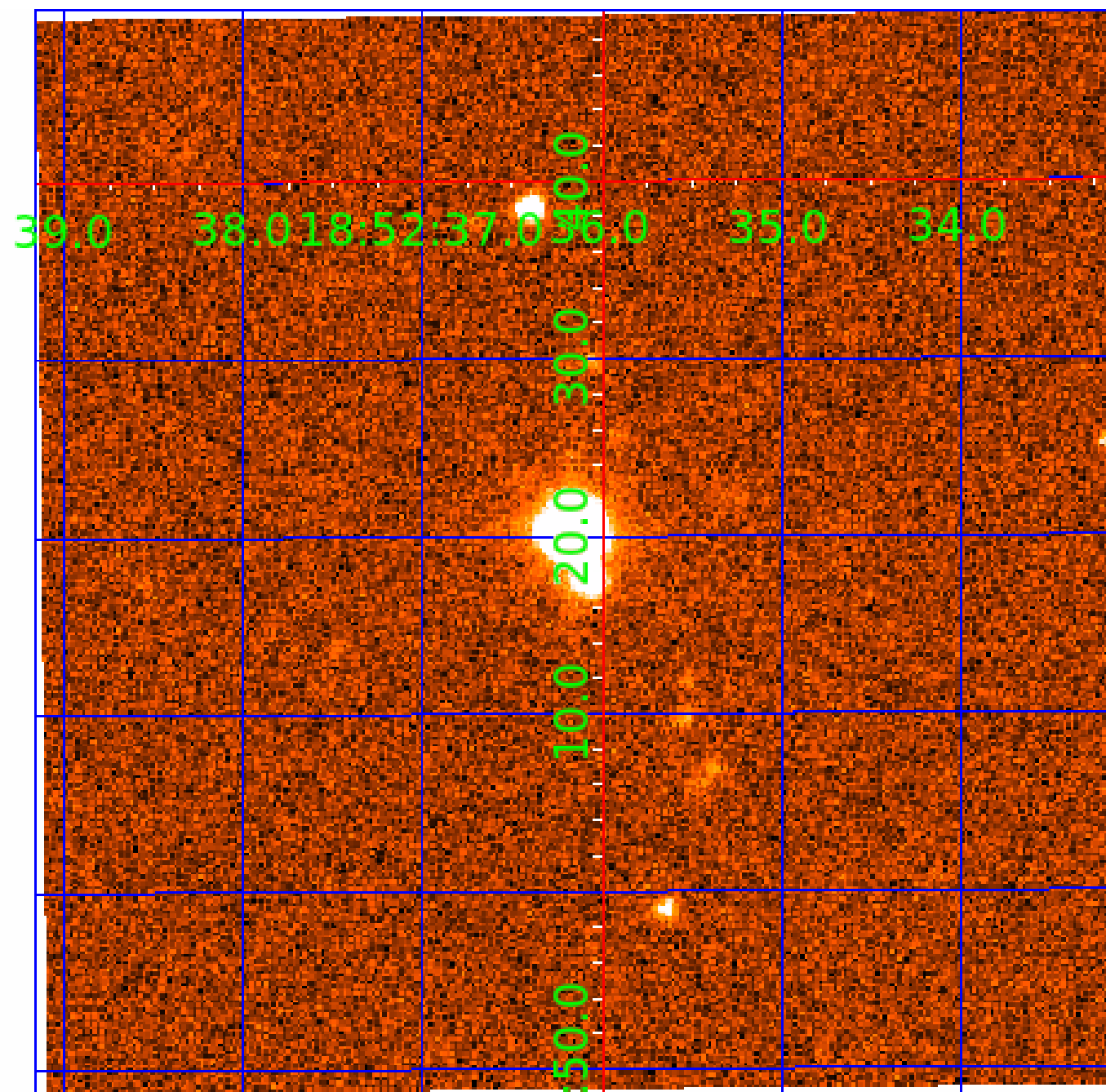


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

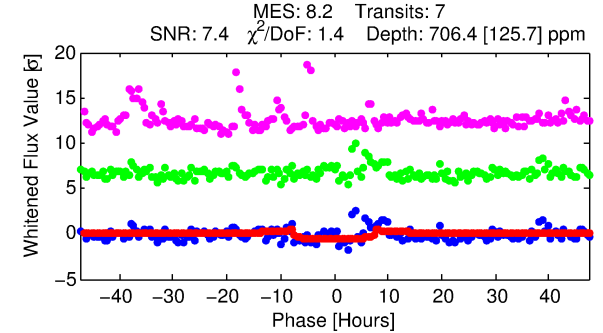
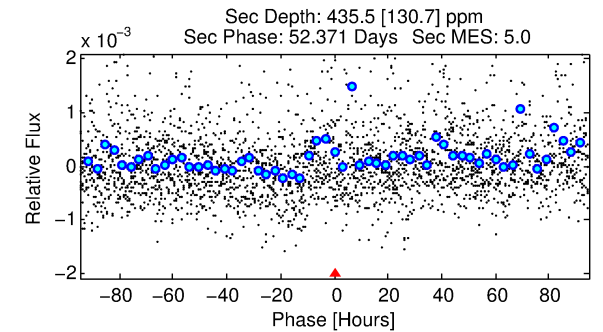
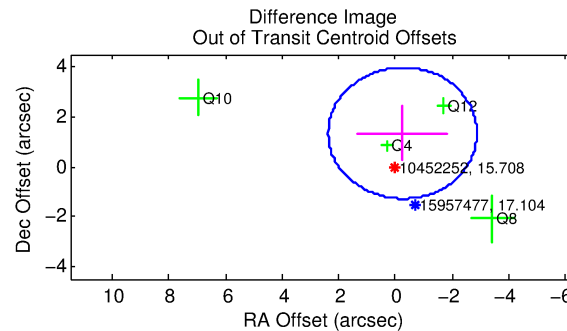
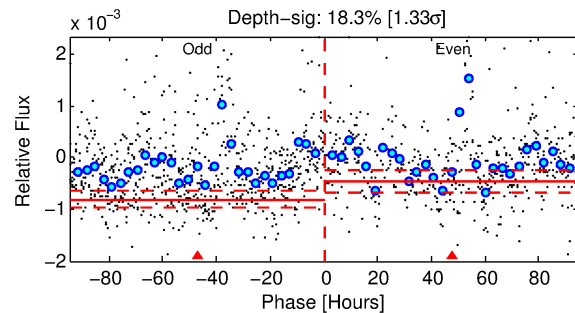
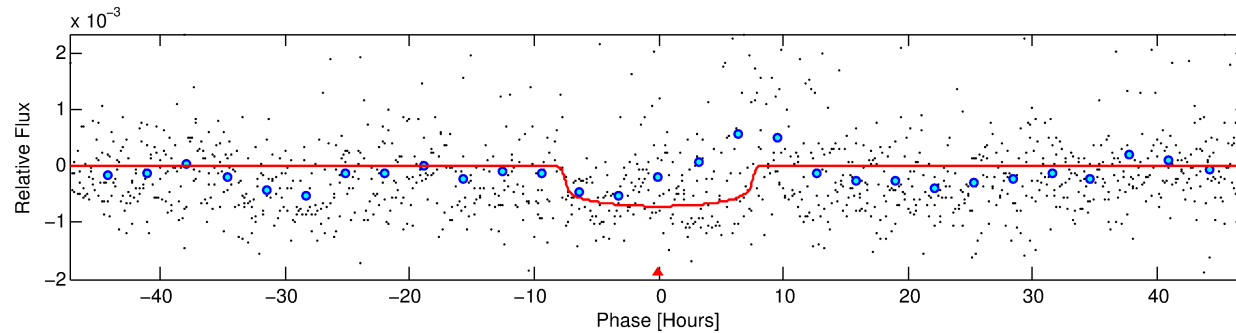
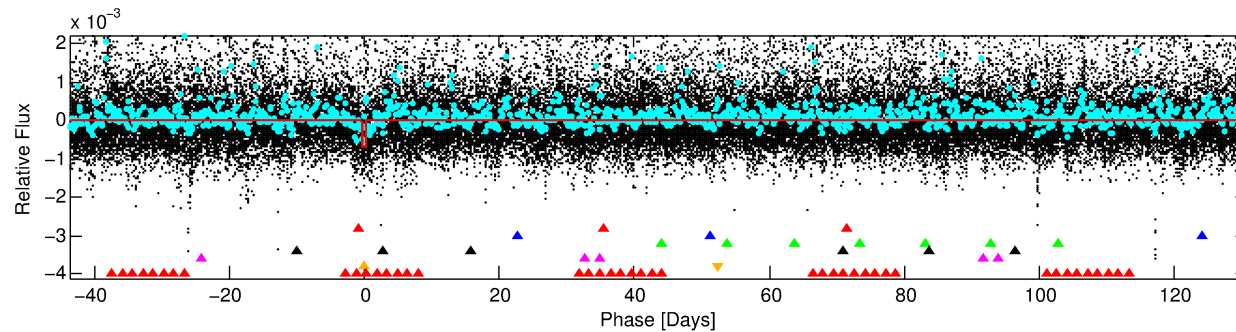
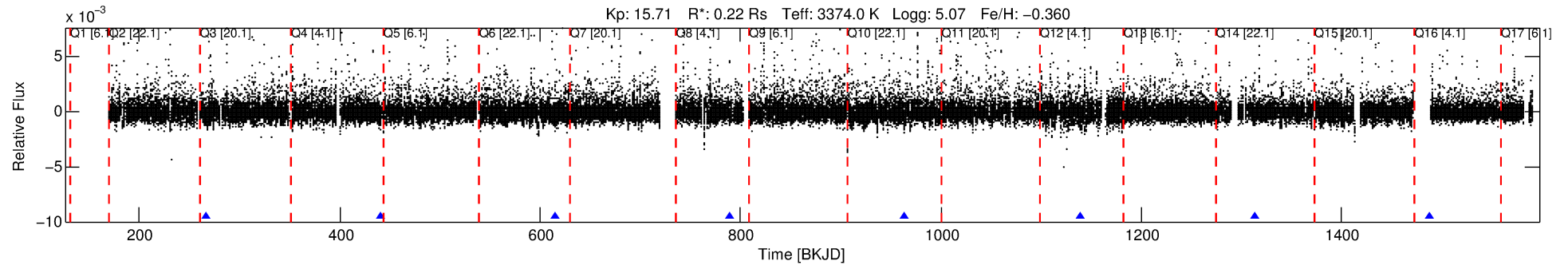
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-06

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 6 of 7 Period: 174.407 d



DV Fit Results:

Period = 174.40689 [0.00597] d
Epoch = 266.5413 [0.0217] BKJD
Rp/R* = 0.0250 [0.0083]
a/R* = 74.04 [109.77]
b = 0.53 [2.00]
Seff = 0.04 [0.02]
Teq = 116 [10] K
Rp = 0.60 [0.32] Re
a = 0.3584 [0.1046] AU
Ag = 86688.67 [69594.54] [1.25 σ]
Teffp = 3080 [570] K [5.19 σ]

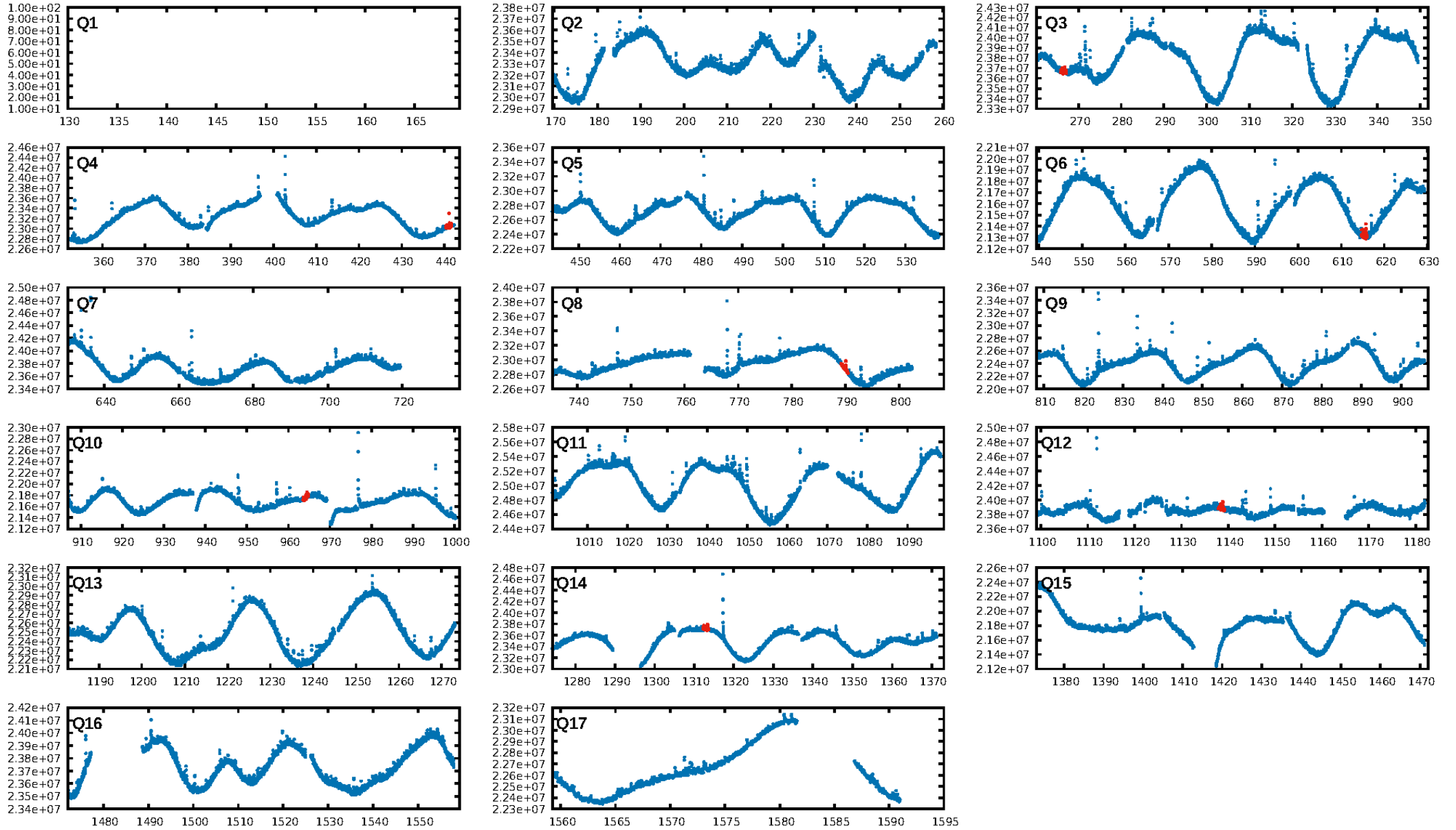
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [211.70 σ]
LongPeriod-sig: 100.0% [14.49 σ]
ModelChiSquare2-sig: 64.2%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.3651
Centroid-sig: 34.6%
Centroid-so: 1.856 arcsec [2.07 σ]
OotOffset-rm: 1.369 arcsec [1.56 σ]
OotOffset-st: 1/0/3/0 [4]
KicOffset-rm: 2.529 arcsec [2.74 σ]
KicOffset-st: 1/0/3/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.67 [4/6]

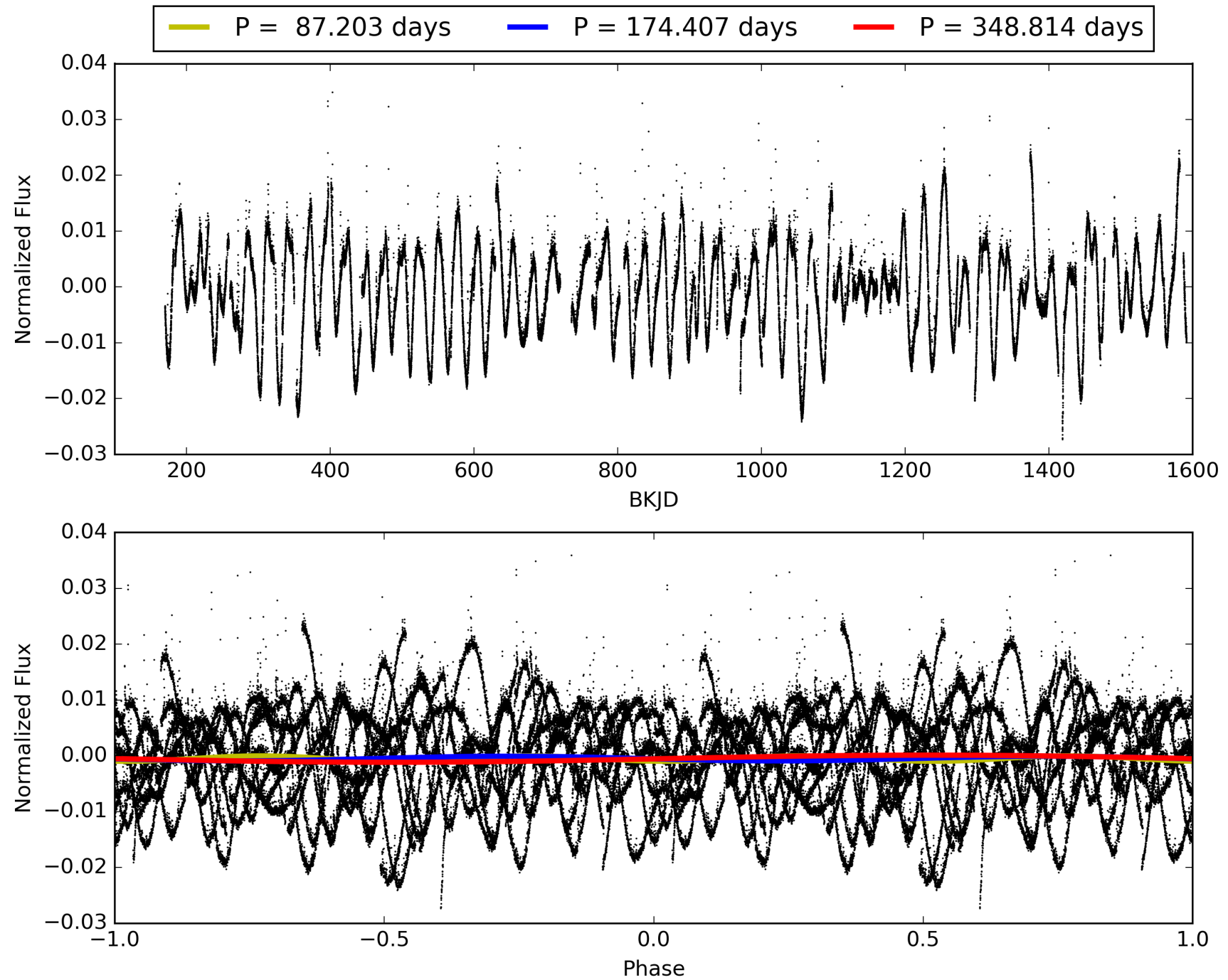
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:10:14 Z

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

TCE 010452252-06, PDC Light Curves

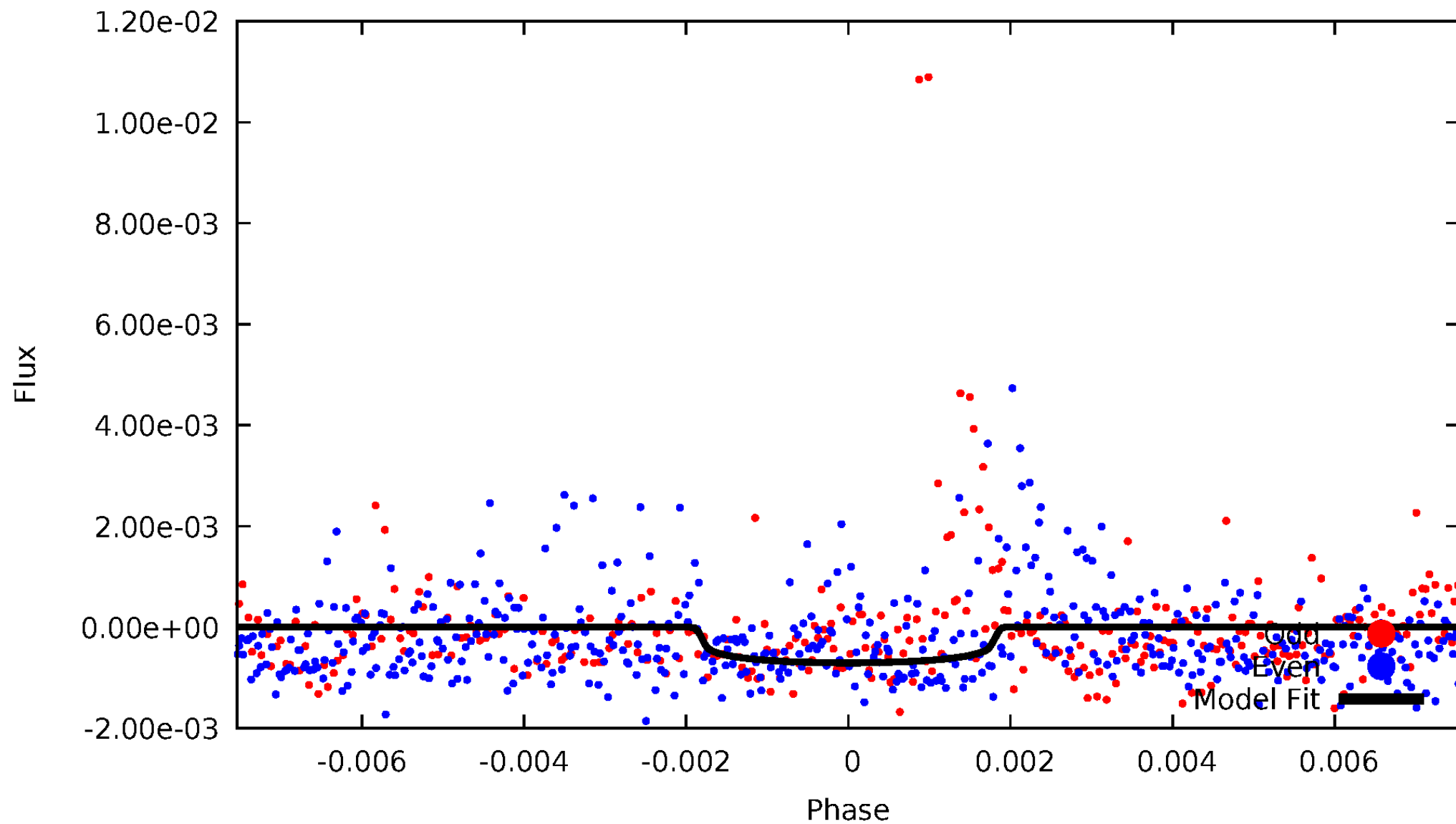


TCE 010452252-06



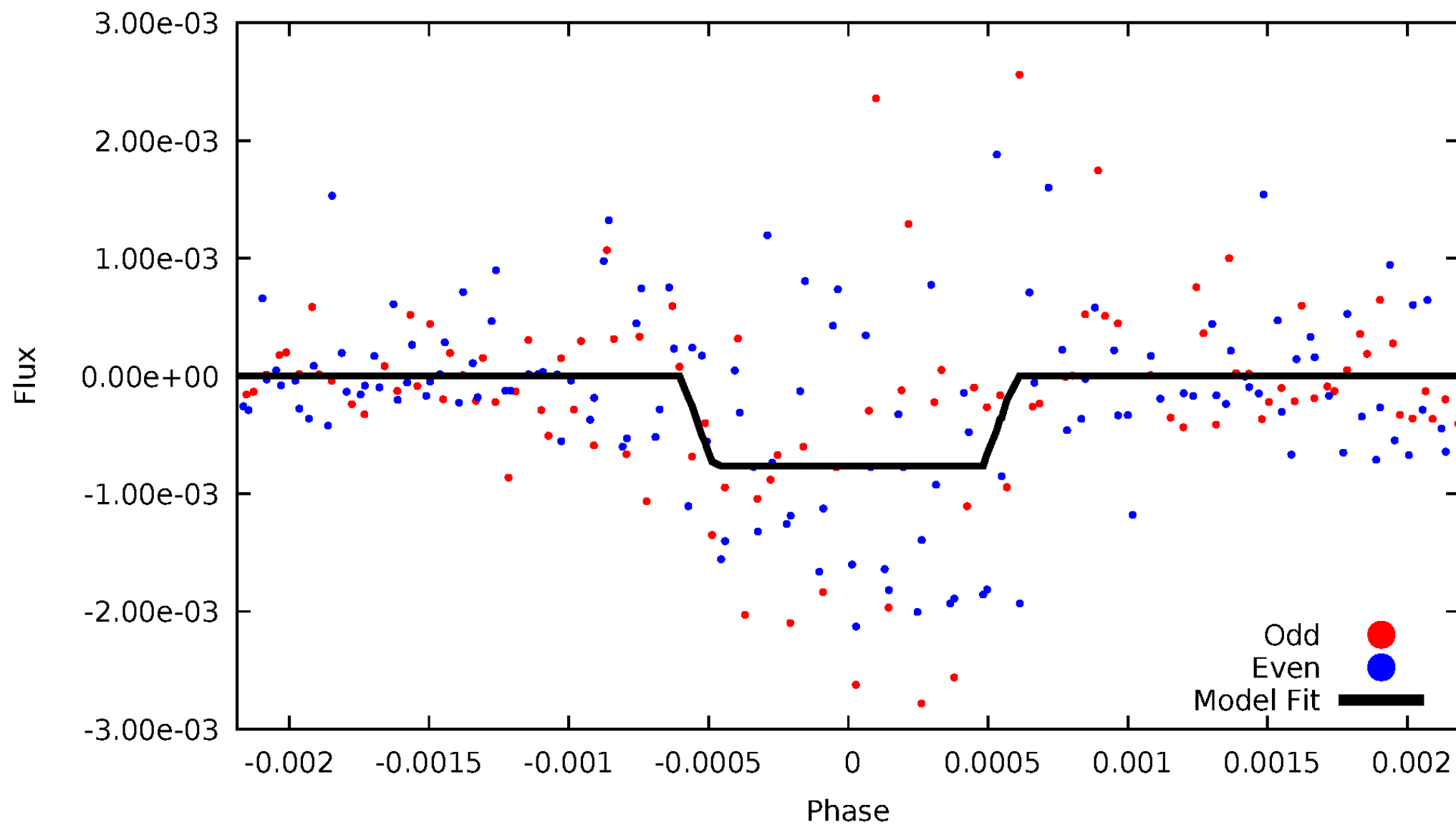
DV Odd/Even

TCE 010452252-06



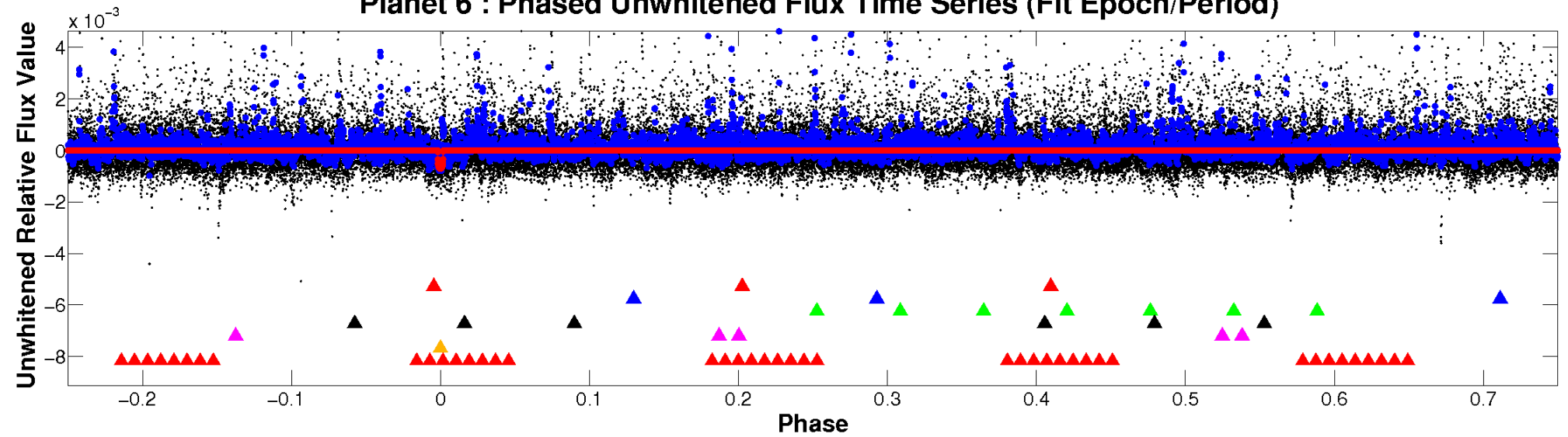
ALT Odd/Even

TCE 010452252-06

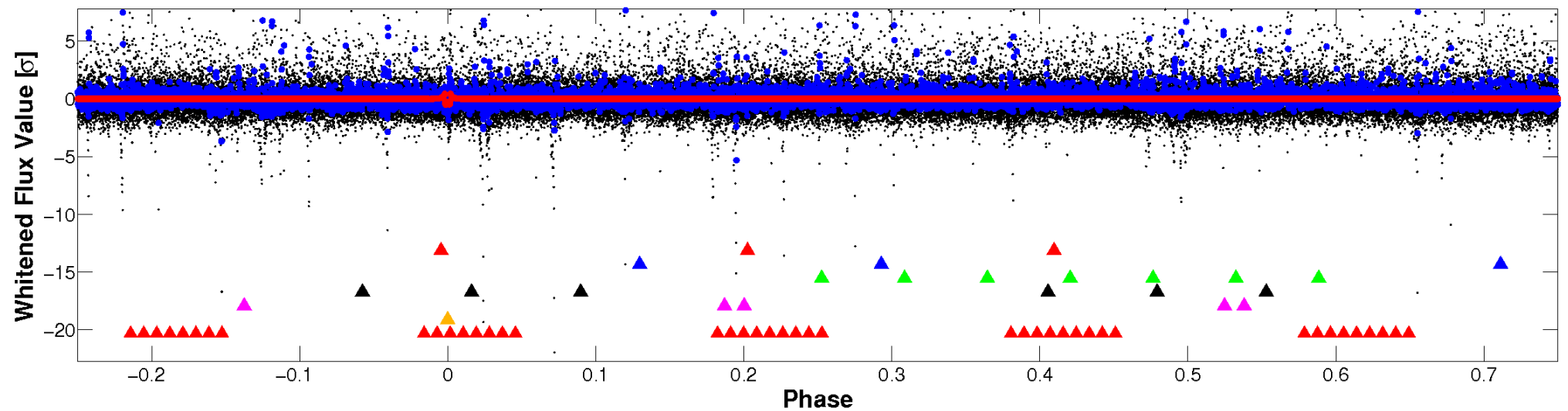


Non-Whitened Vs. Whitened Light Curve

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

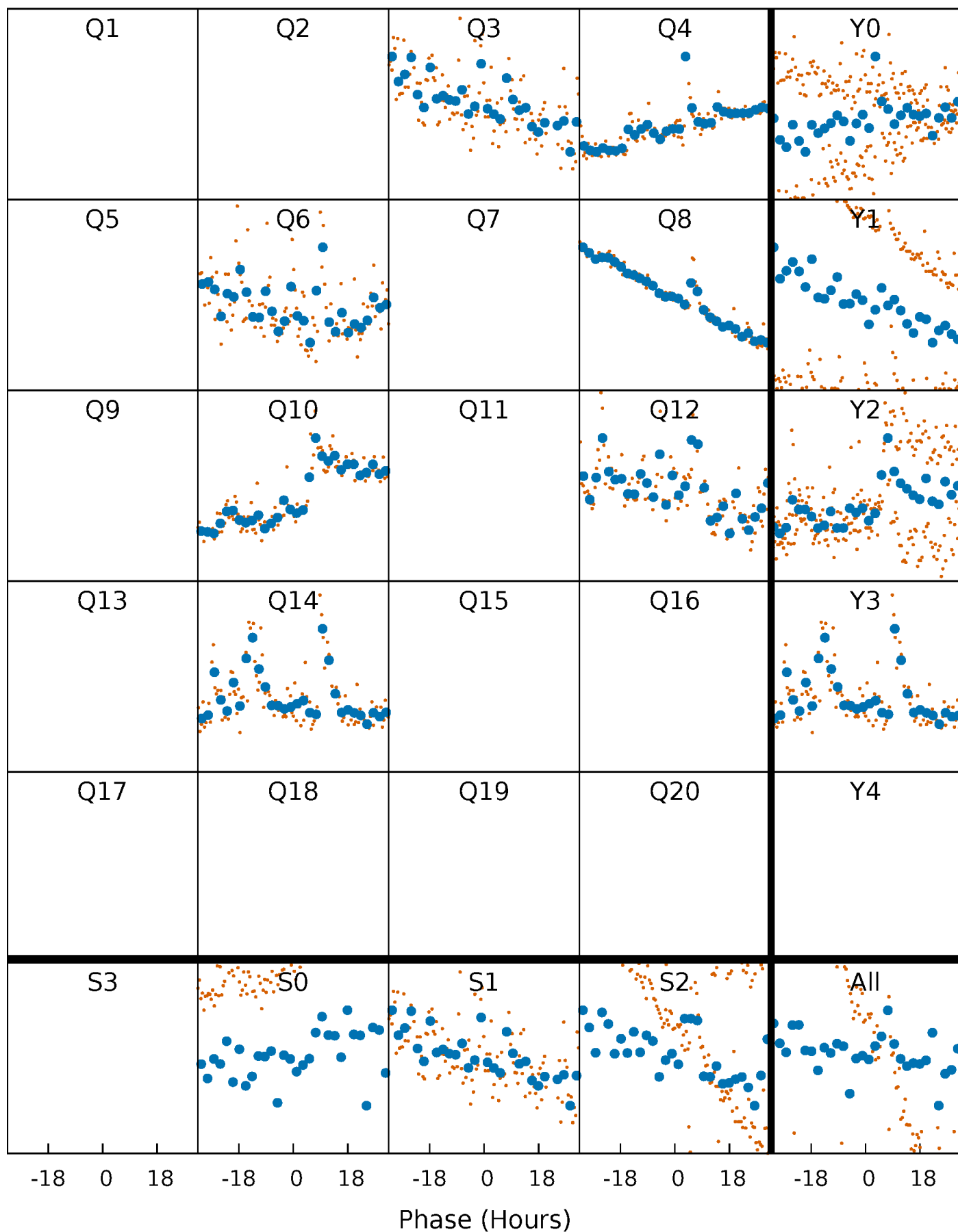


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



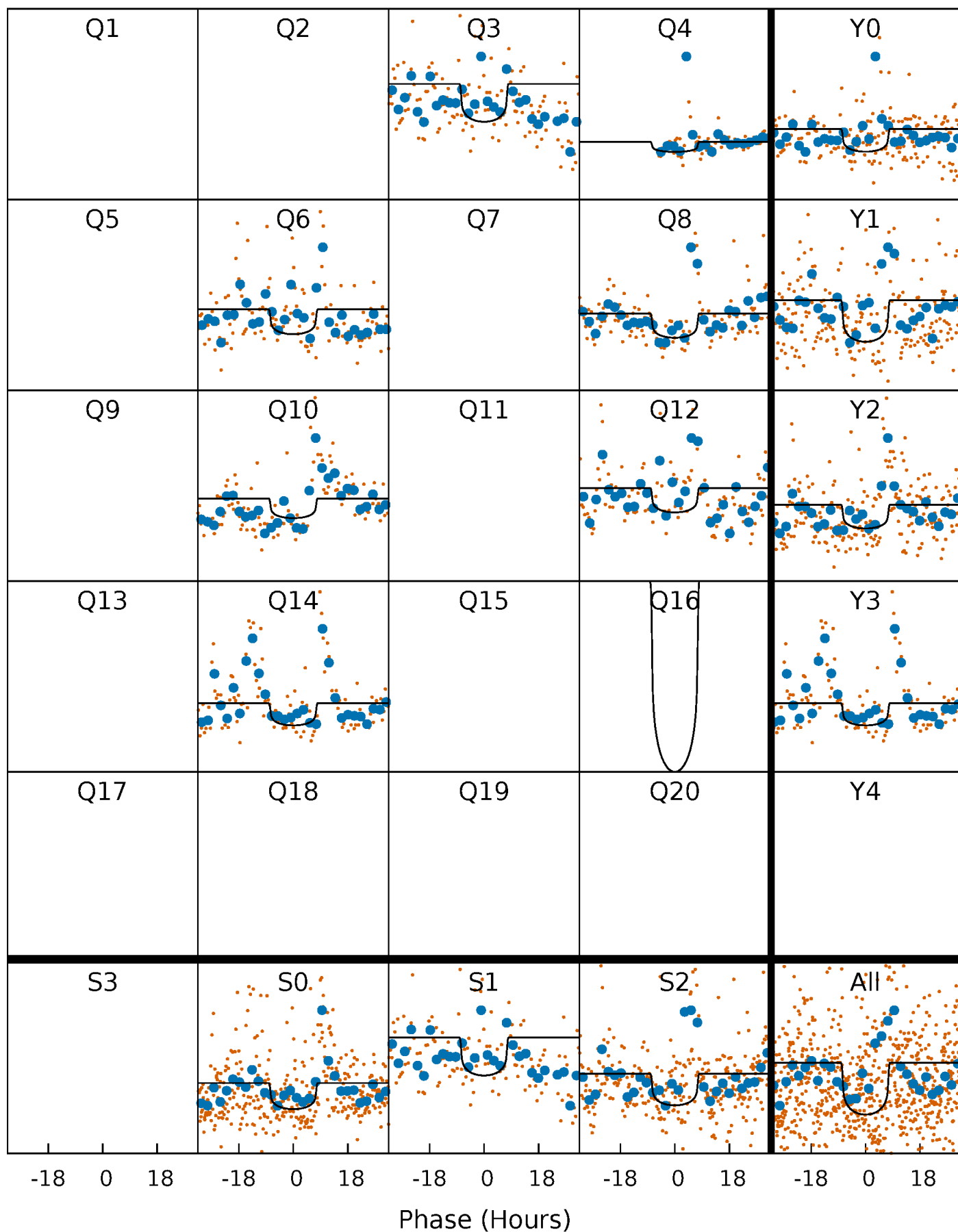
PDC Quarter-Phased Transit Curves

TCE 010452252-06 P=174.406892 Days $T_0=266.541267$ (BKJD)



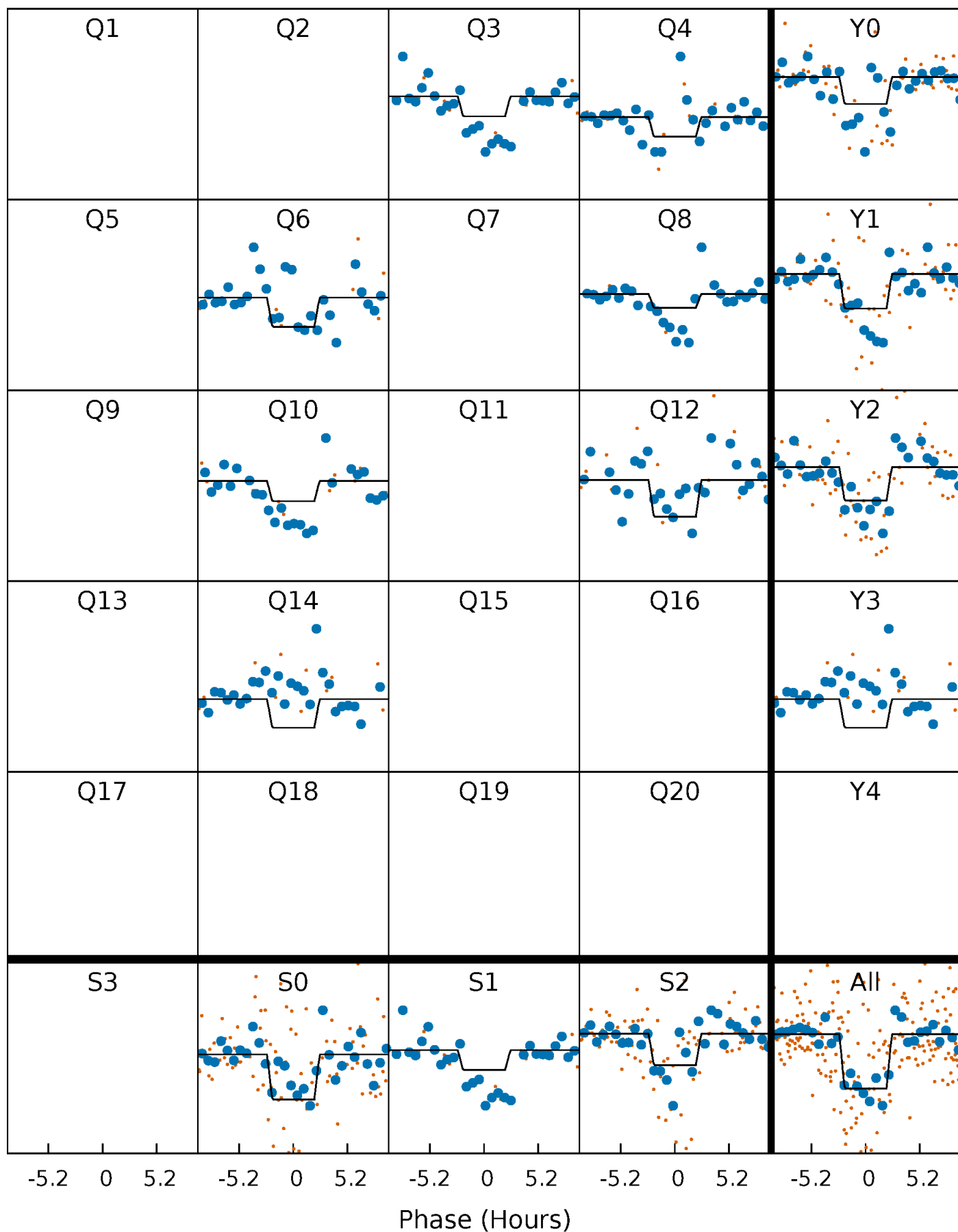
DV Quarter-Phased Transit Curves

TCE 010452252-06 P=174.406892 Days $T_0=266.541267$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

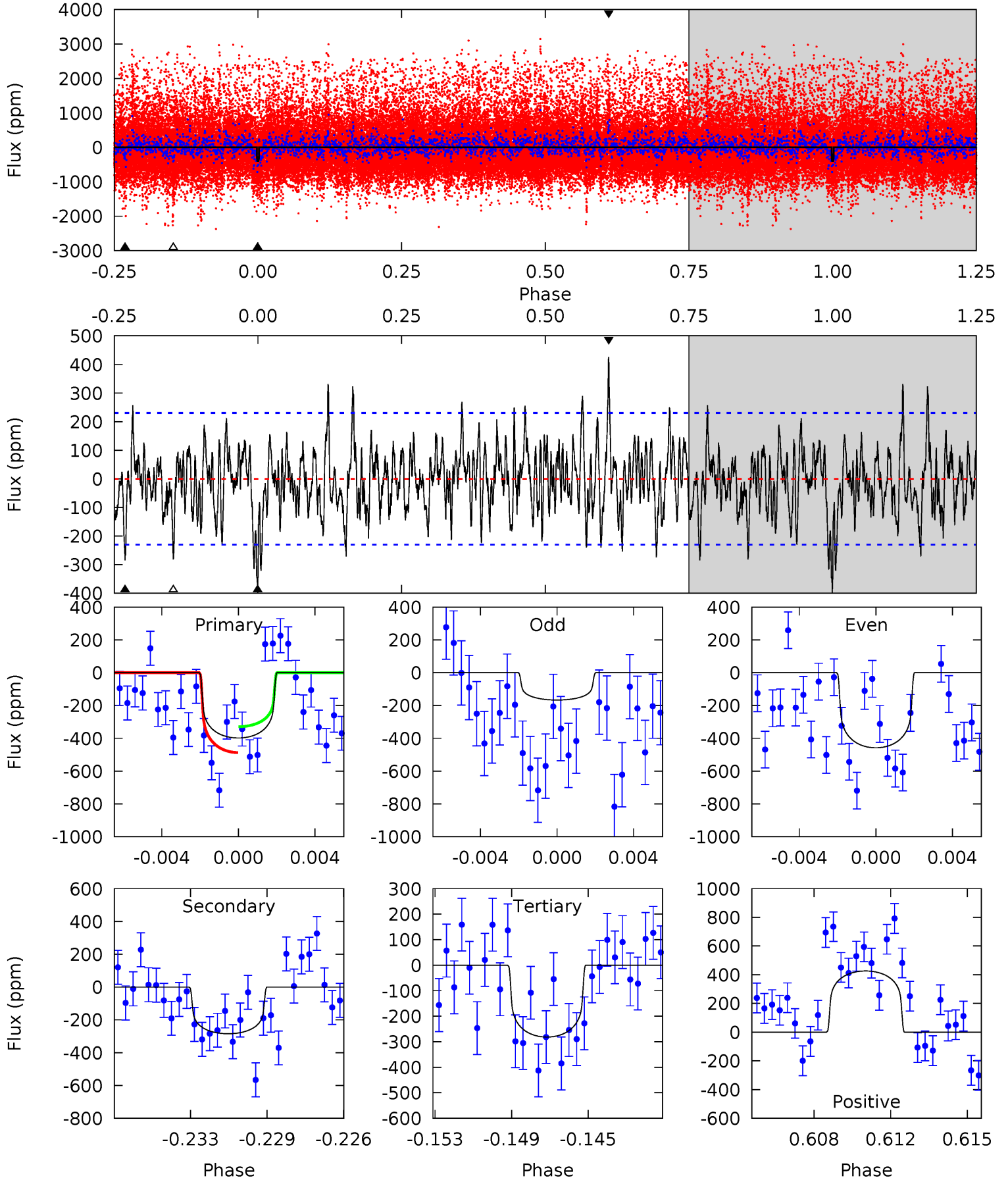
TCE 010452252-06 P=174.386325 Days $T_0=266.737419$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-06, P = 174.406892 Days, E = 92.134375 Days

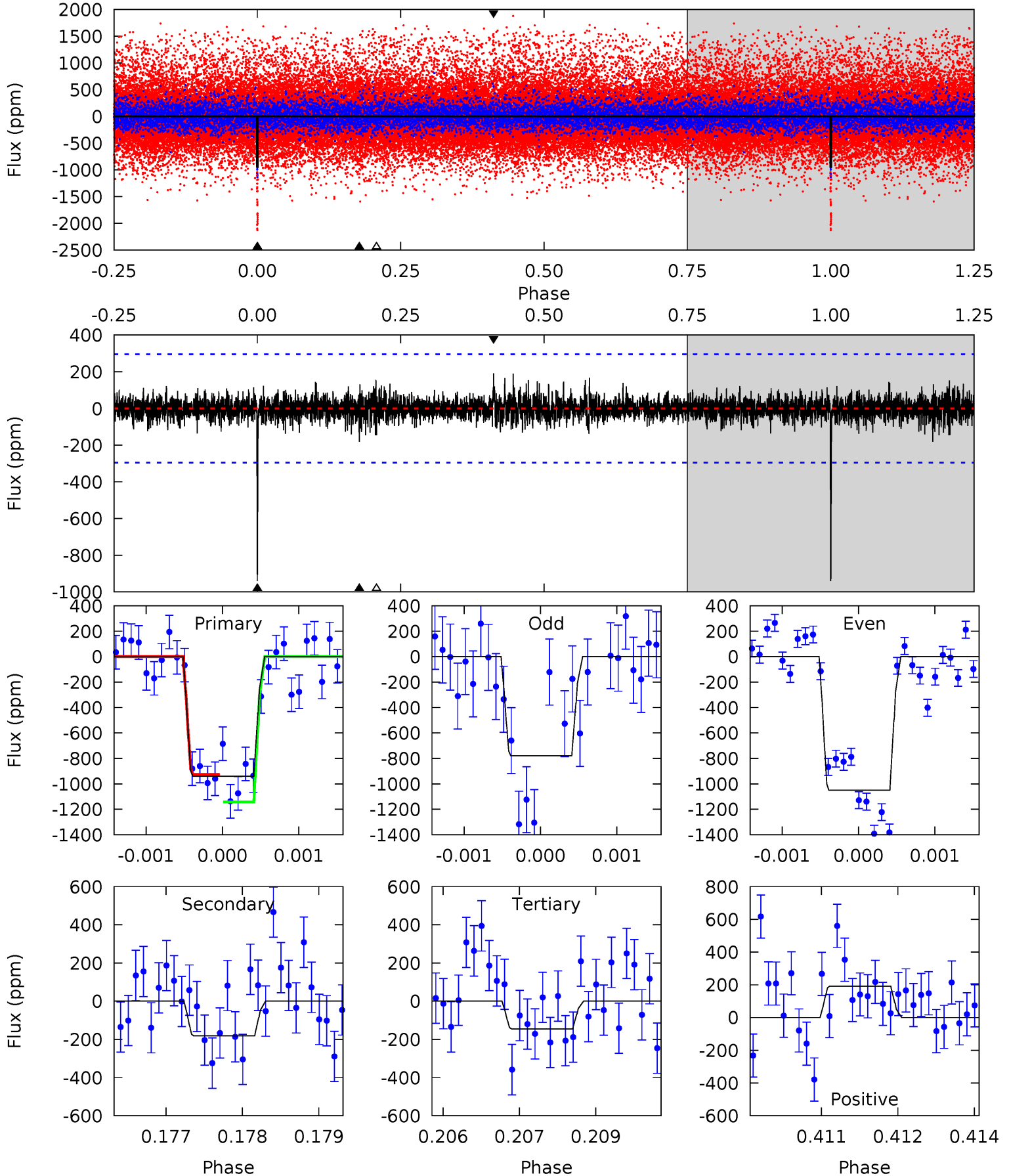
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	6.44	6.37	9.64	5.21	2.89	2.27	2.64	-0.63	0.06	-3.20	3.18	0.46	0.52	1.80



Alt Model-Shift Uniqueness Test

010452252-06, $P = 174.386325$ Days, $E = 92.351094$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	3.33	2.67	3.51	5.42	3.25	0.75	14.6	13.7	0.67	-0.18	2.44	1.71	0.17	0



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-285 ± 44	$0.60^{+0.27}_{-0.20}$	164^{+11}_{-9}	3000^{+394}_{-250}	53657^{+73195}_{-26167}
Alt.	-182 ± 55	$0.67^{+0.27}_{-0.22}$	164^{+11}_{-9}	2739^{+315}_{-231}	27486^{+33400}_{-13870}

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

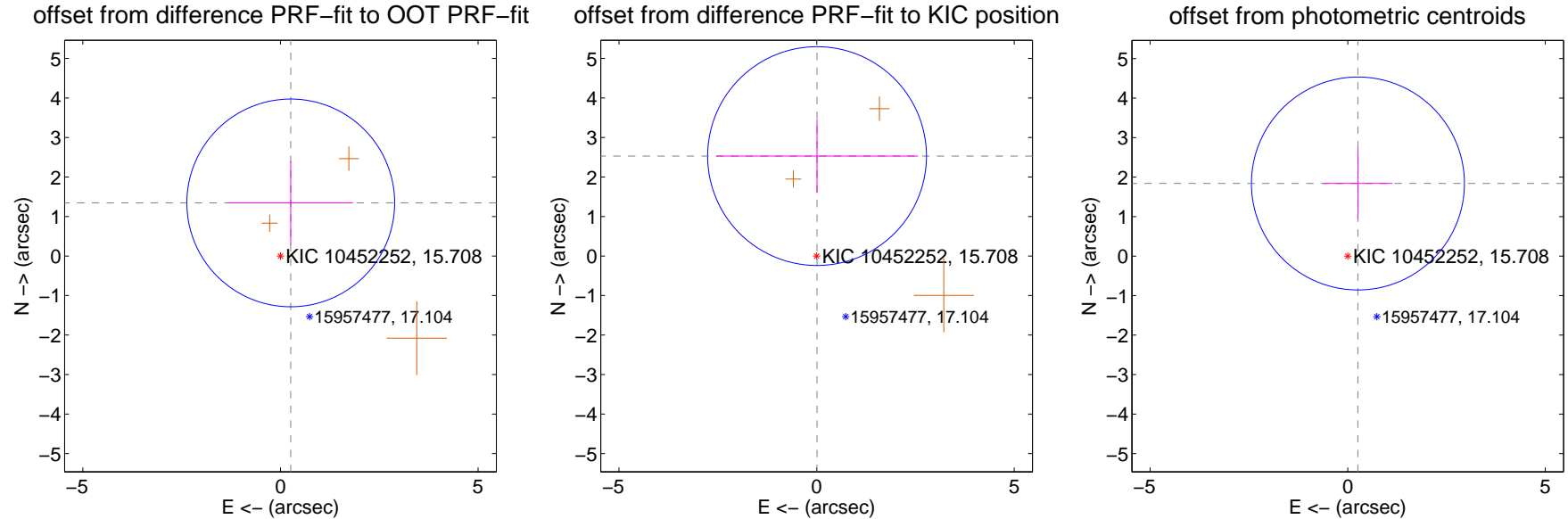
DV Centroid Data

Supplemental centroid analysis for 010452252-06. Kepler magnitude: 15.71. Transit SNR 7.35

There are 0 quarters with good PRF difference image offsets

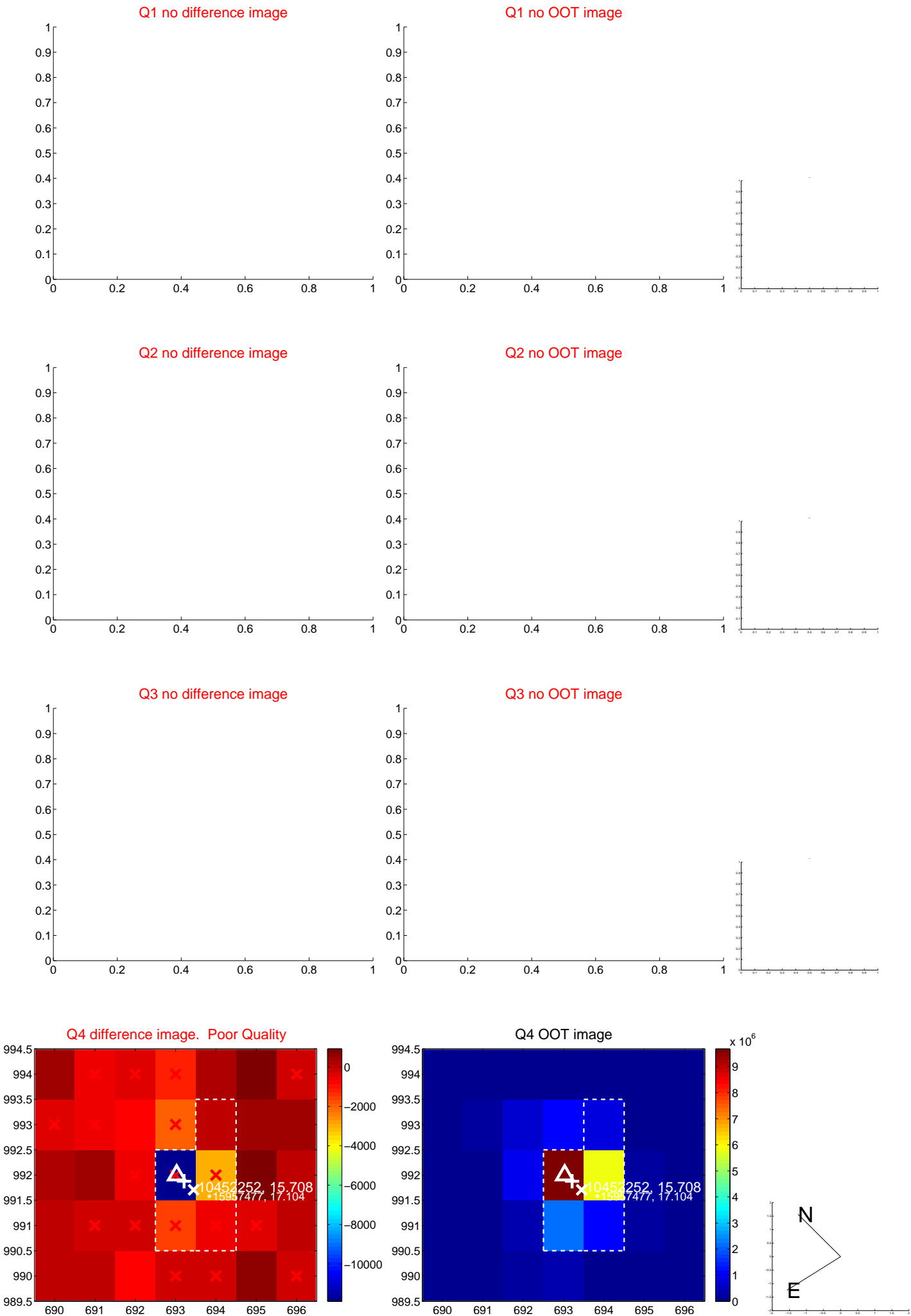
The direct PRF centroid is offset from the target star catalog position by about 1.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.369 ± 0.876	1.56	-0.260 ± 1.570	1.344 ± 1.060
PRF-fit source offset from KIC position	2.529 ± 0.923	2.74	-0.012 ± 2.556	2.529 ± 0.931
photometric centroid source offset	1.86 ± 0.90	2.07	-0.26 ± 0.87	1.84 ± 0.90

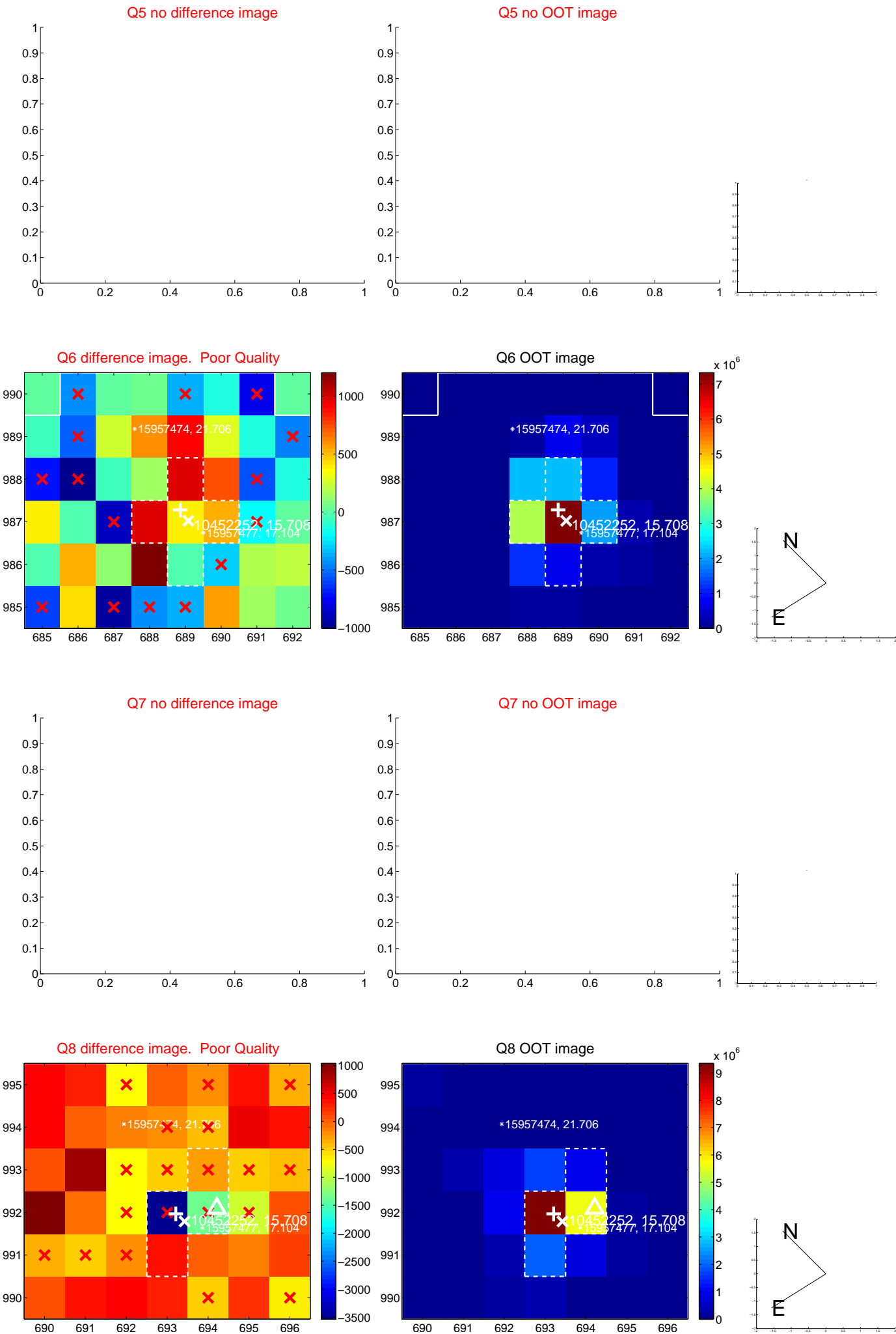


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

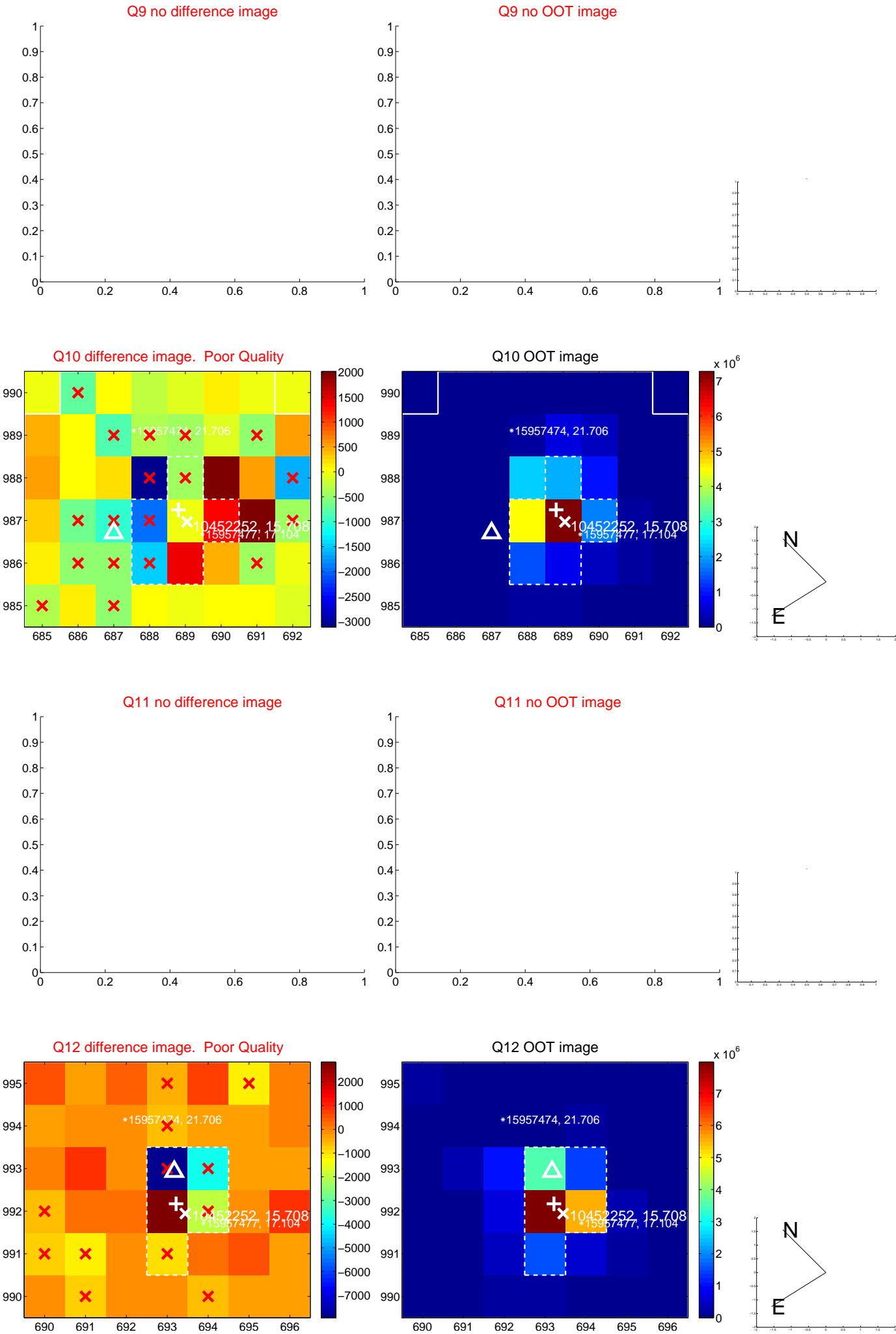
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



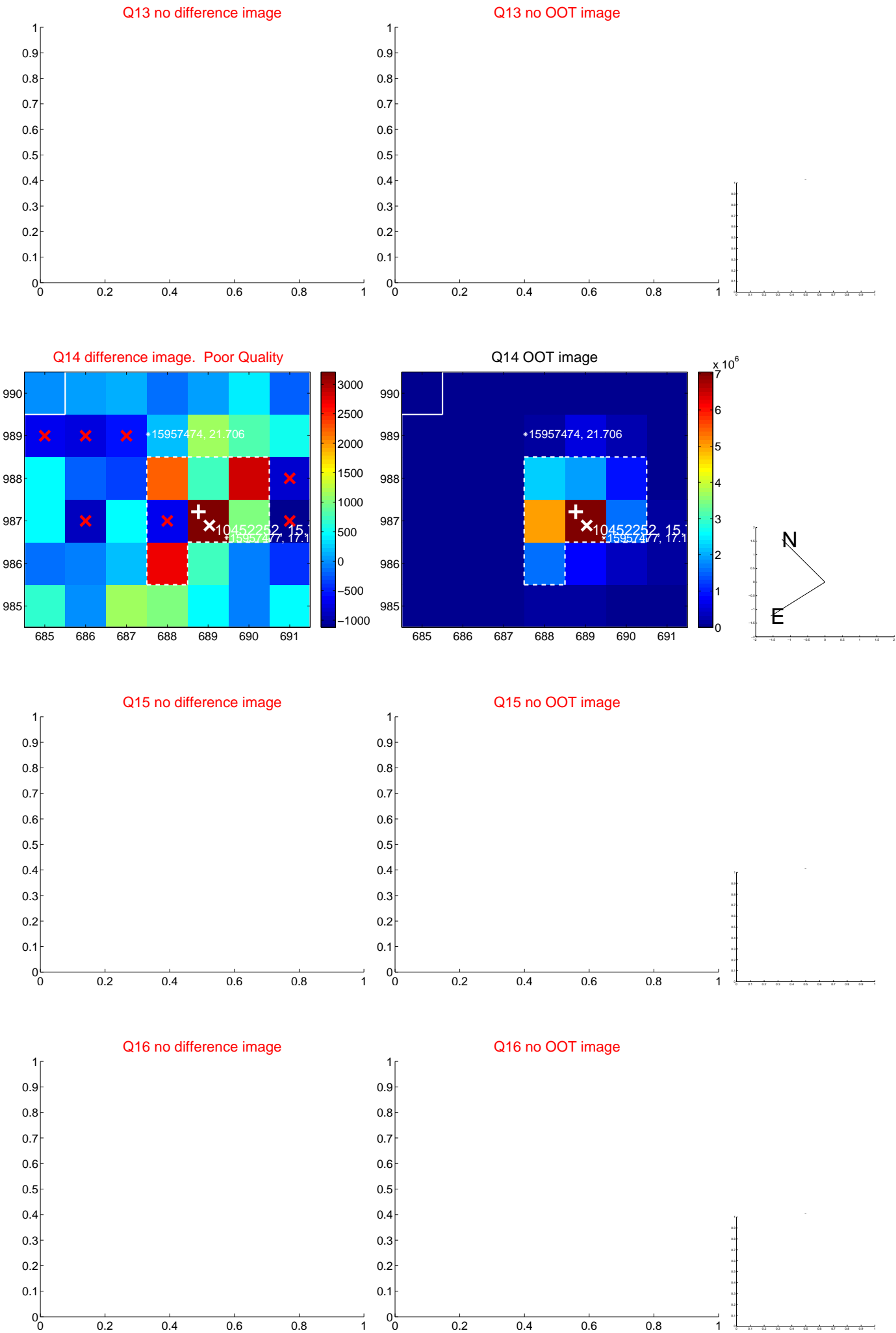
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



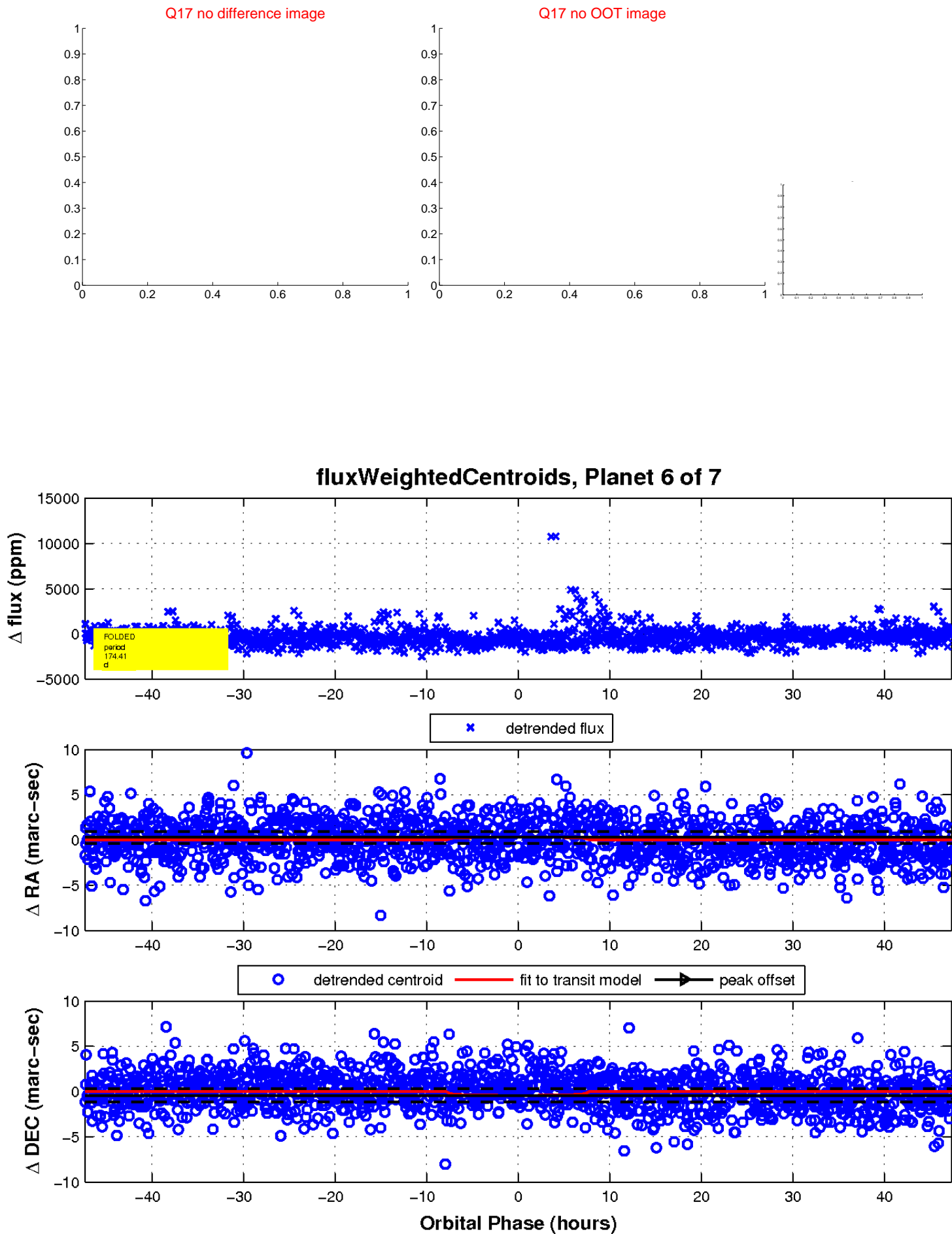
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

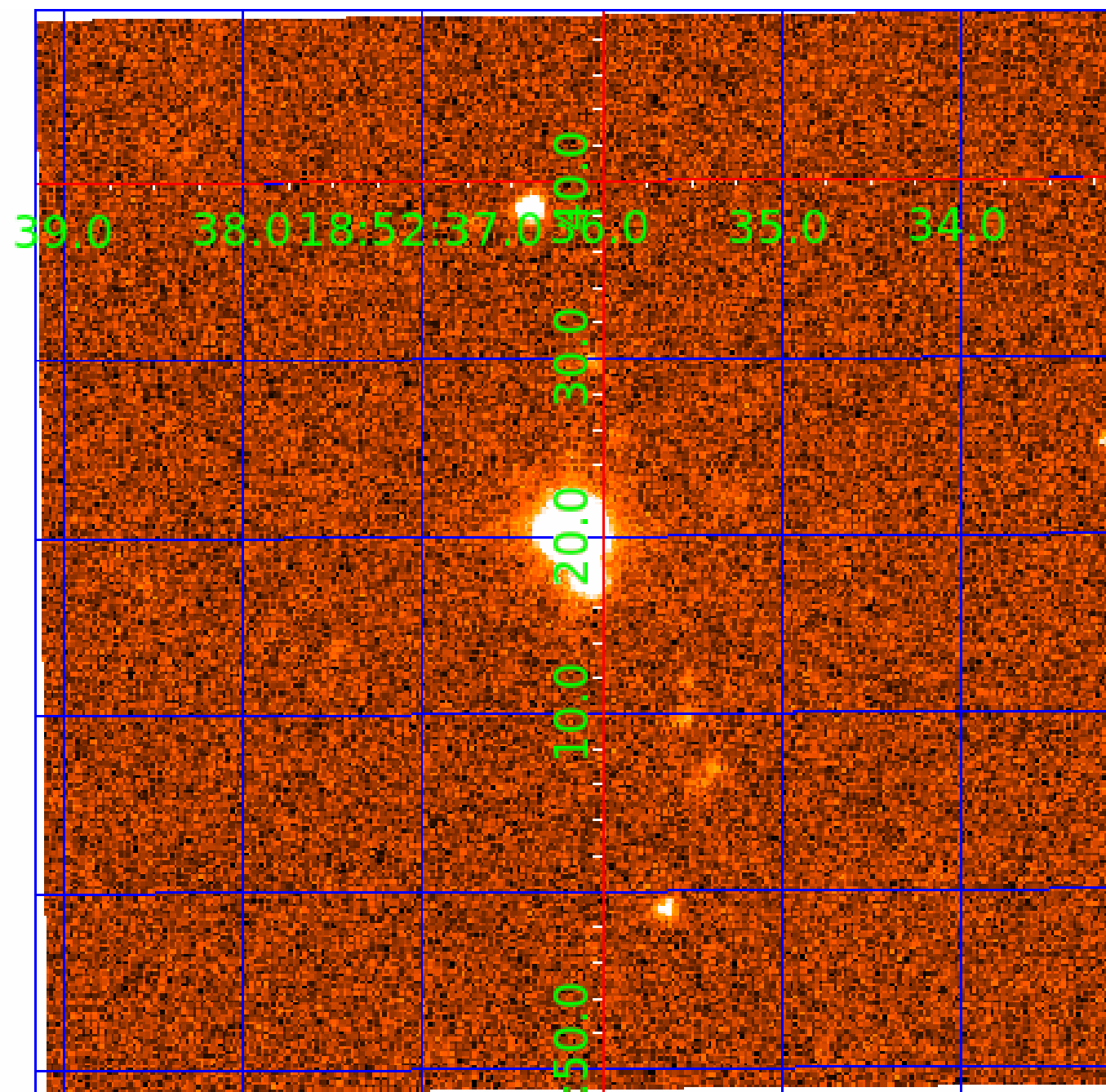


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010452252

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})
010452252-01	OBS	No	384.926385	440.167064	856.5	8.509	12.6	5.6	0.22	3374	0.66	0.01
010452252-02	OBS	No	450.255445	463.564288	1057.8	10.437	13.3	7.1	0.22	3374	0.71	0.01
010452252-03	OBS	No	184.167485	310.608379	311.5	3.490	10.1	2.4	0.22	3374	0.42	0.04
010452252-04	OBS	No	255.183257	282.210643	711.9	12.291	9.5	6.5	0.22	3374	0.59	0.03
010452252-05	OBS	No	289.904924	185.980496	671.2	10.113	9.8	5.6	0.22	3374	0.58	0.02
010452252-06	OBS	No	174.406892	266.541266	706.4	15.781	8.2	7.4	0.22	3374	0.60	0.04
010452252-07	OBS	8012.01	34.573970	136.226620	1097.4	1.500	7.7	-1.0	0.22	3374	0.72	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010452252-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—CENT_KIC_POS
010452252-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010452252-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010452252-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
010452252-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
010452252-07	OBS	PC	0.99	0	0	0	0	CENT_NOFITS

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

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

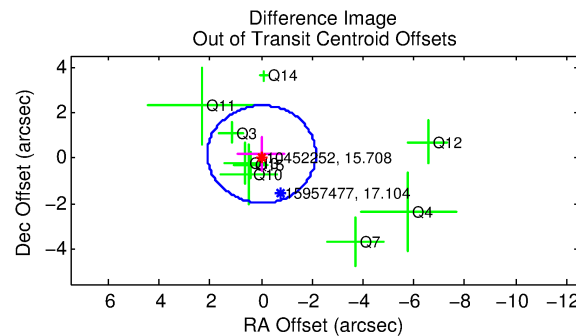
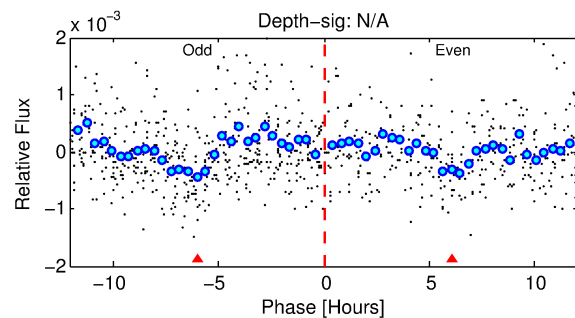
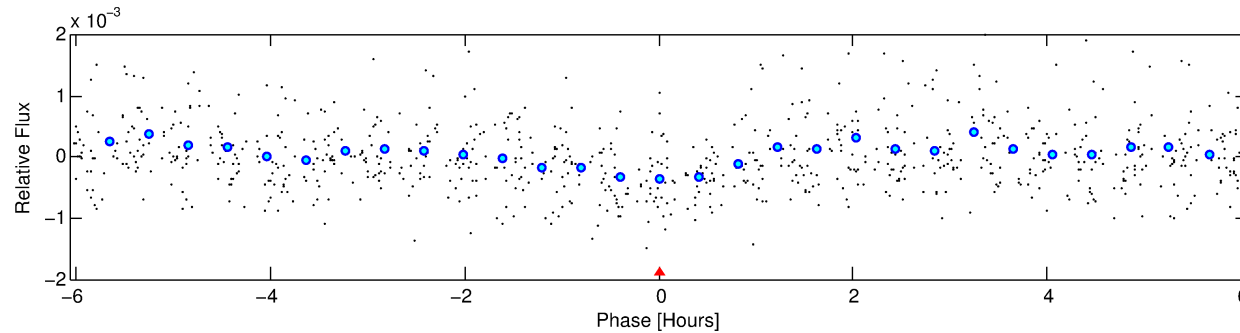
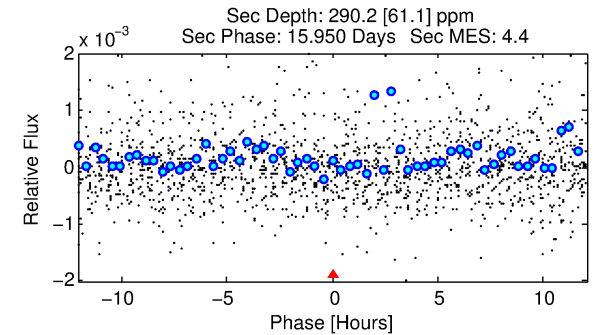
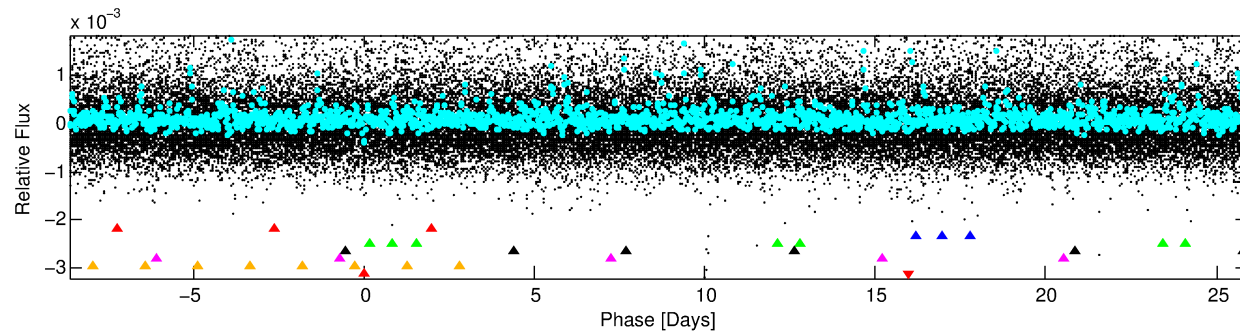
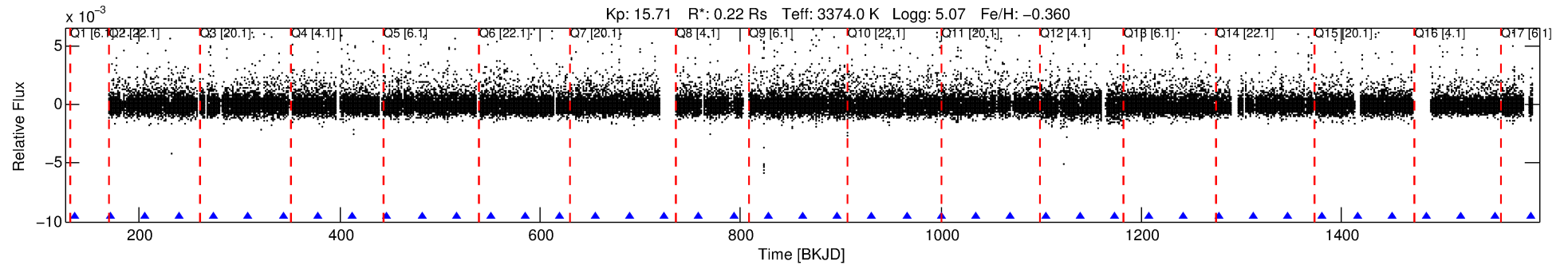
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010452252-07

No Significant Match Found

DV One-Page Summary

KIC: 10452252 Candidate: 7 of 7 Period: 34.574 d



TPS TCE Results:

Period = 34.57397 d
Epoch = 136.2266 BKJD

DV fit results are unavailable

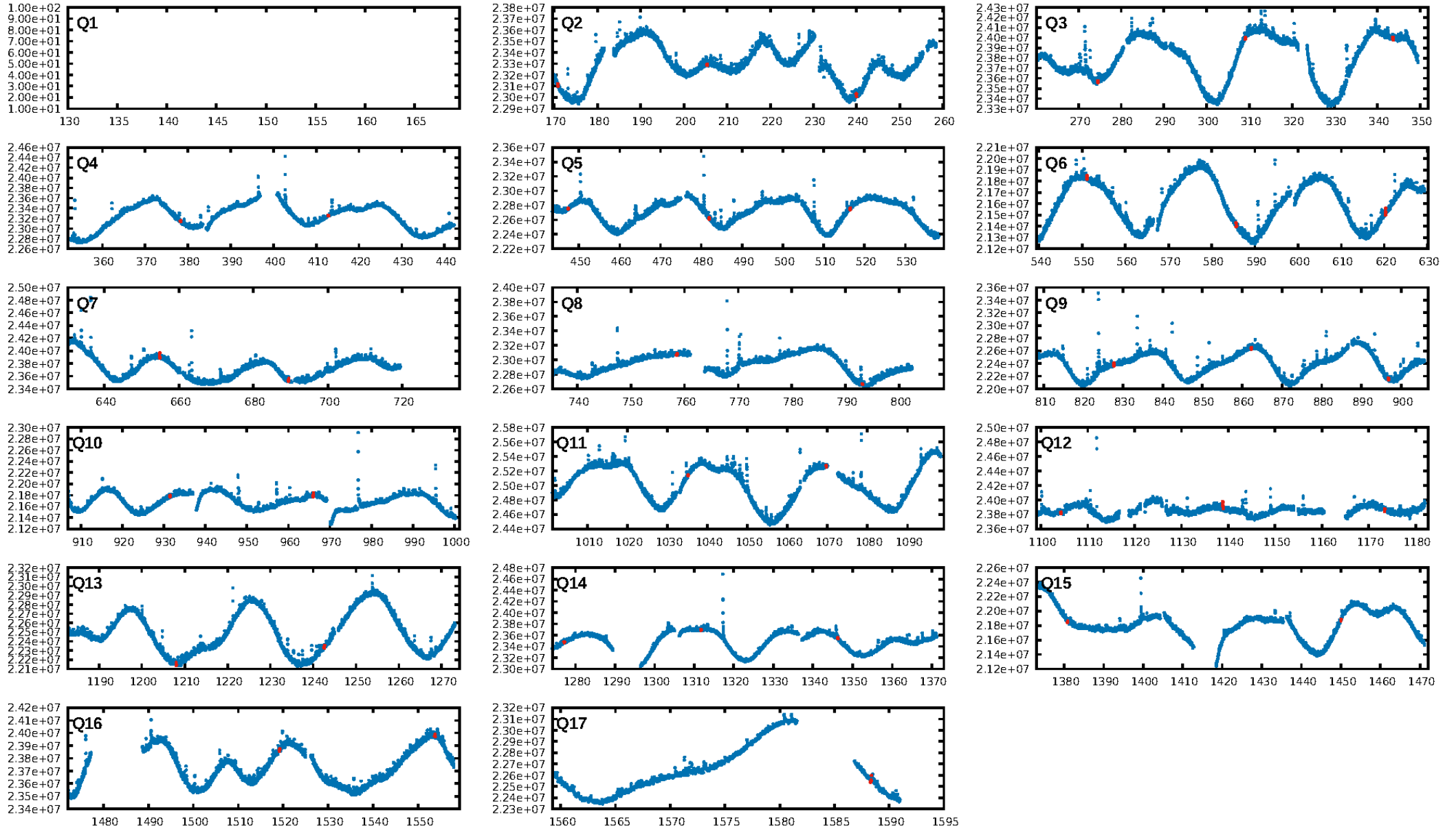
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [211.70 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: -1.565
Centroid-sig: 60.8%
Centroid-so: 1.579 arcsec [1.09 σ]
OotOffset-rm: 0.181 arcsec [0.25 σ]
KicOffset-rm: 1.506 arcsec [2.13 σ]
OotOffset-st: 2/4/2/1 [9]
KicOffset-st: 2/4/2/1 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [16/16]

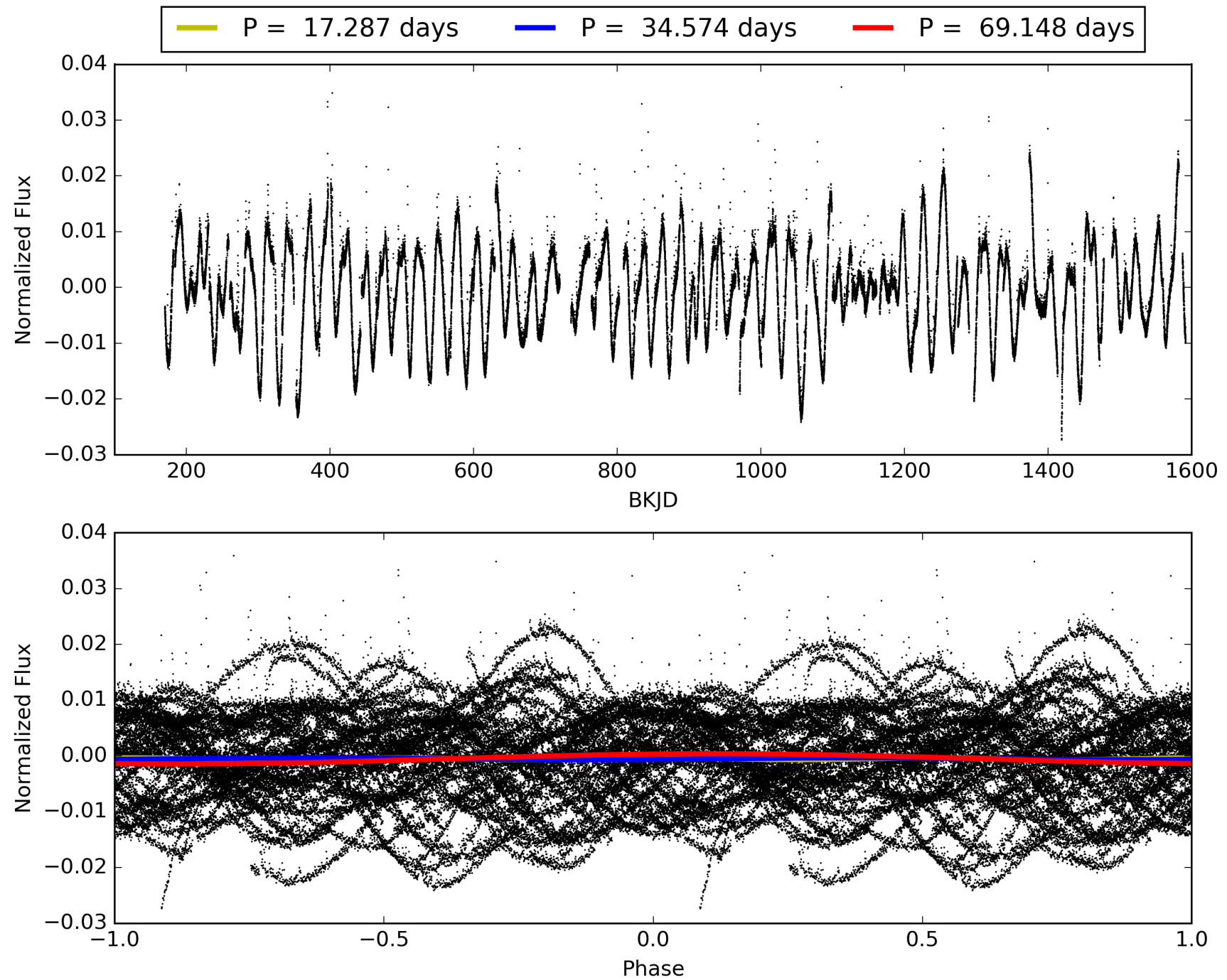
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:10:21 Z

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

TCE 010452252-07, PDC Light Curves

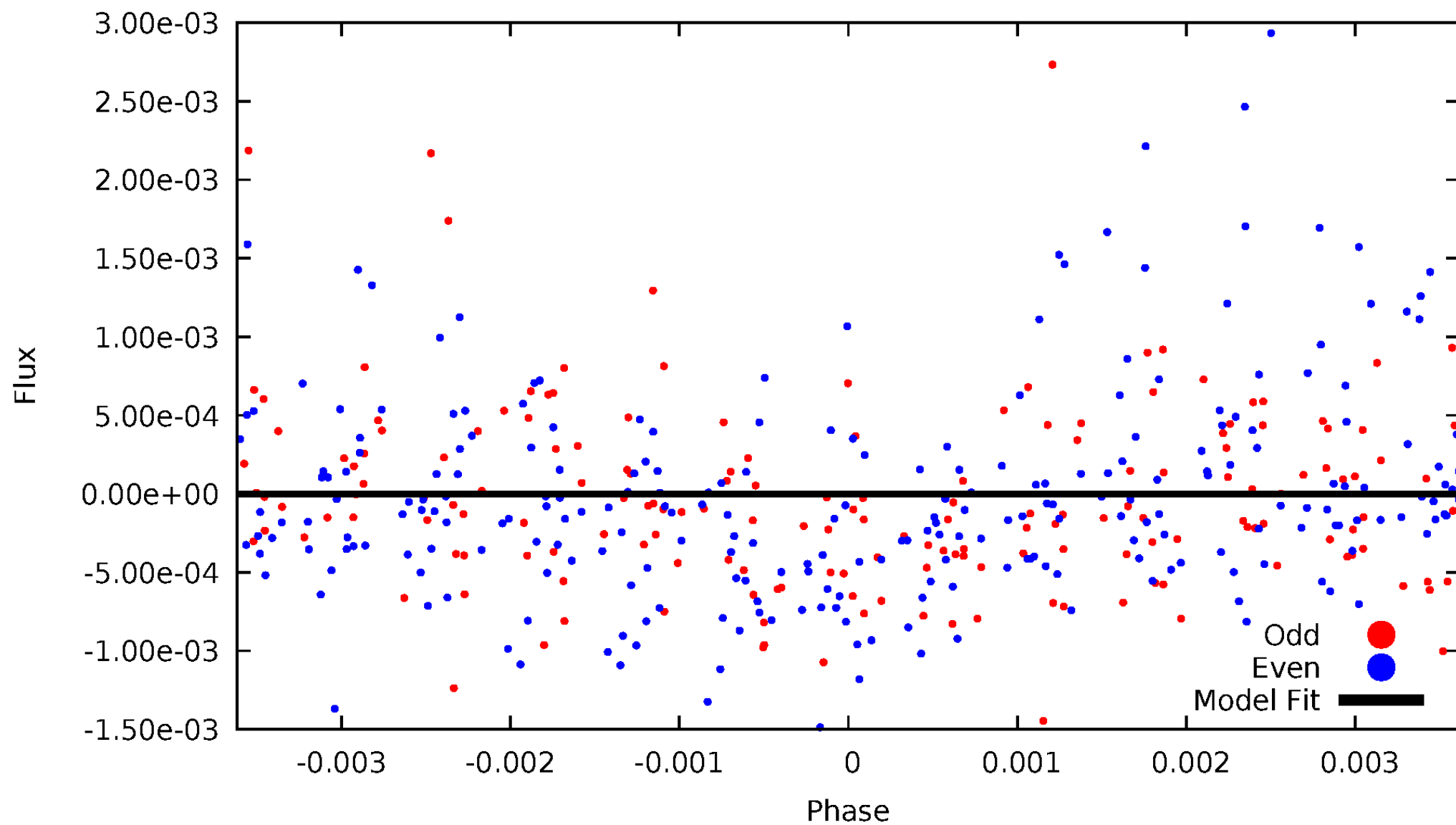


TCE 010452252-07



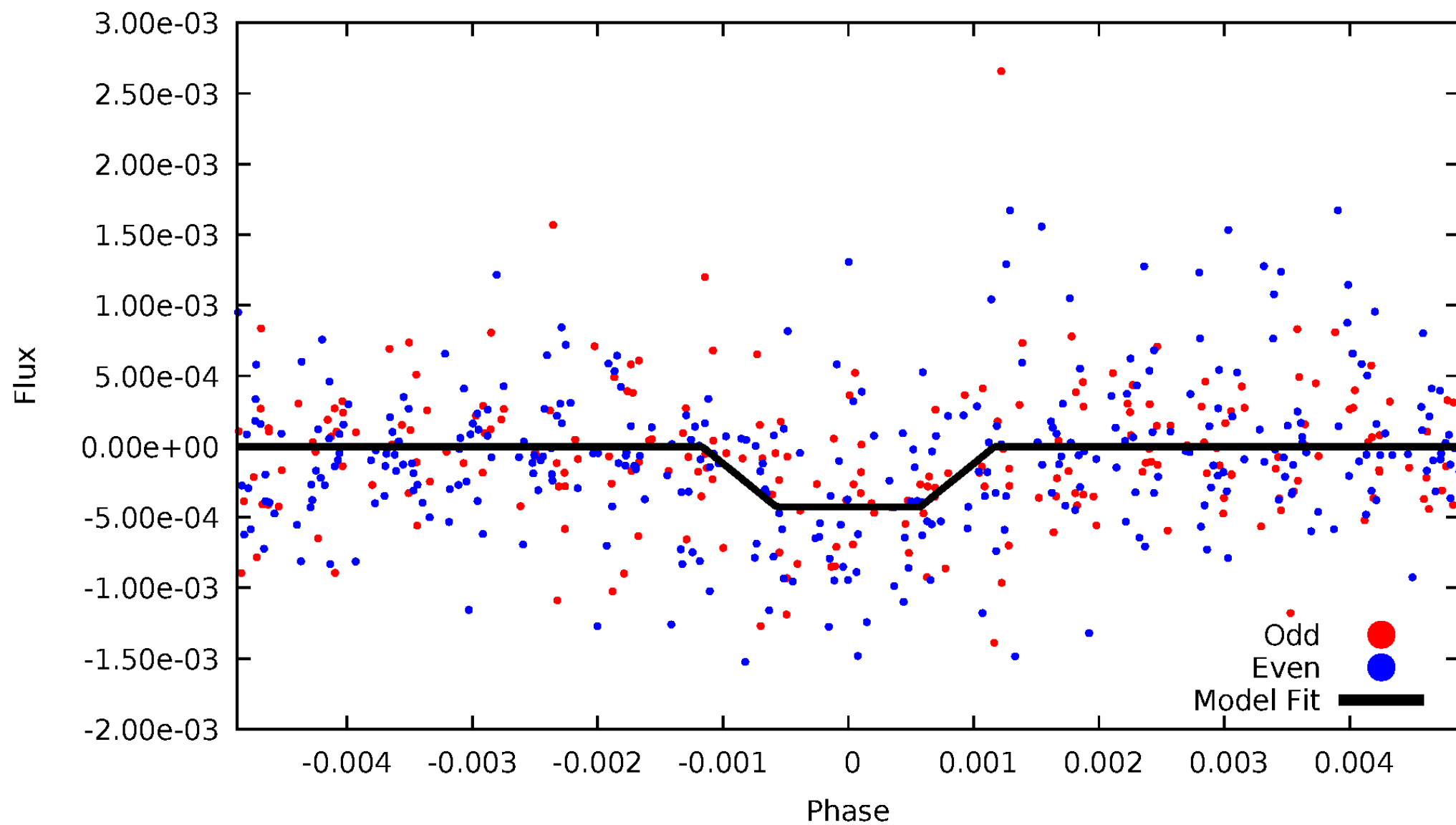
DV Odd/Even

TCE 010452252-07

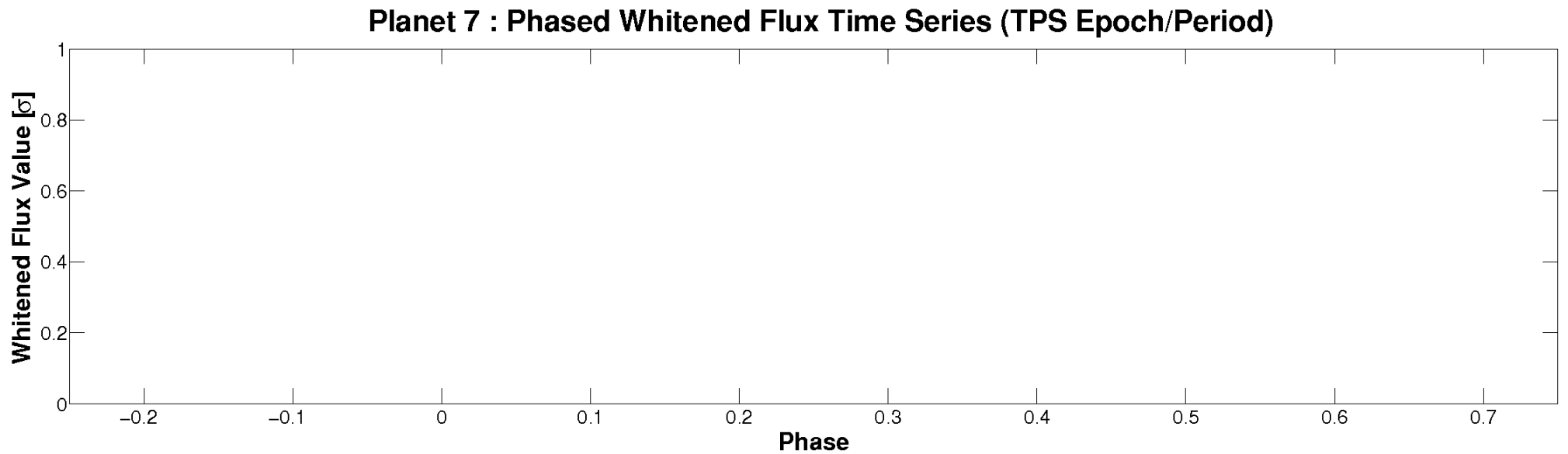
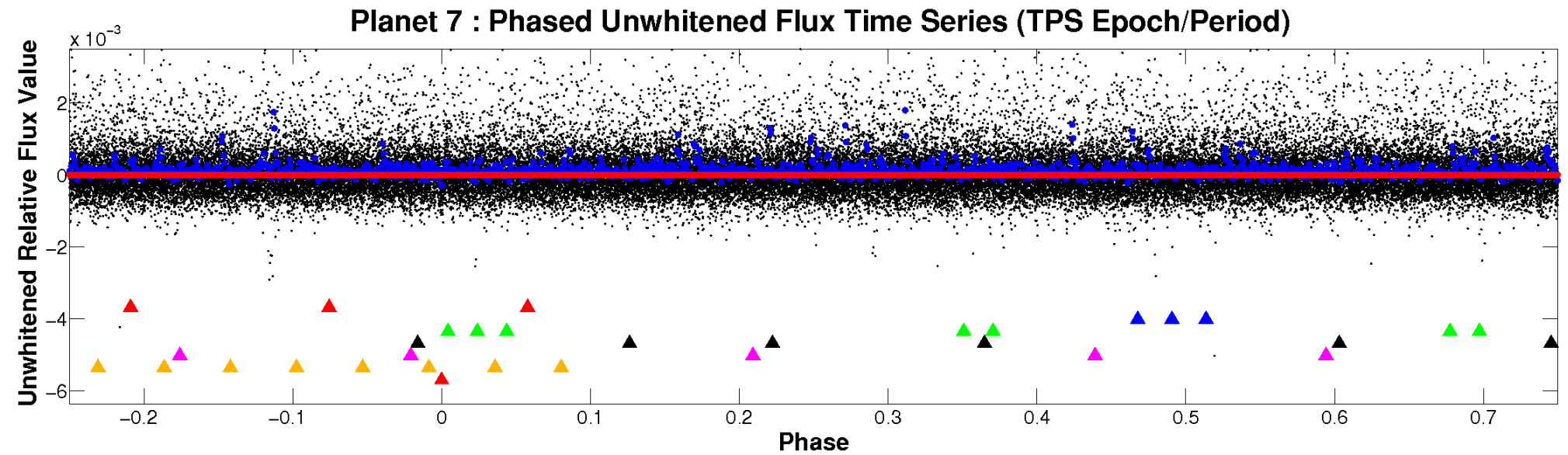


ALT Odd/Even

TCE 010452252-07

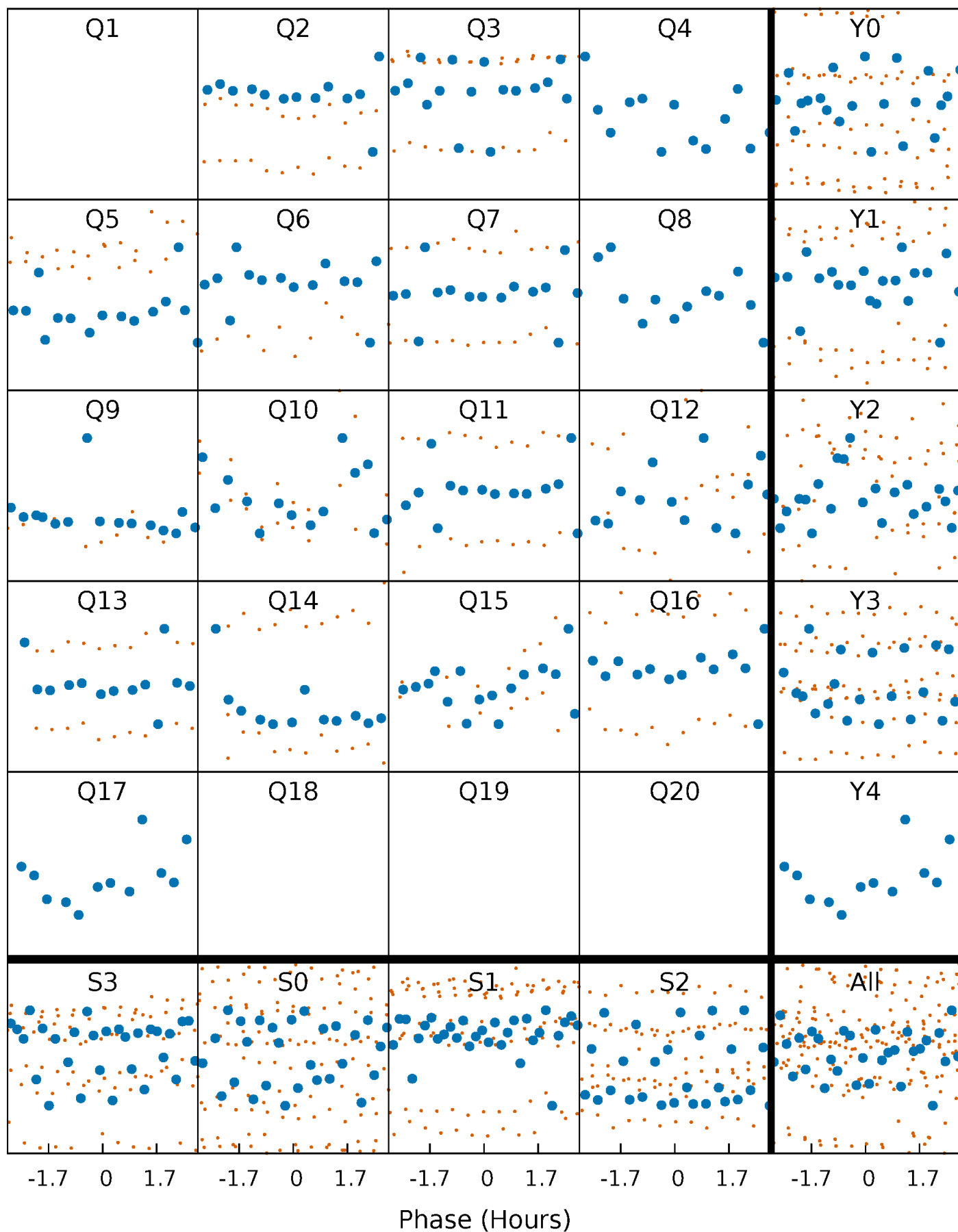


Non-Whitened Vs. Whitened Light Curve



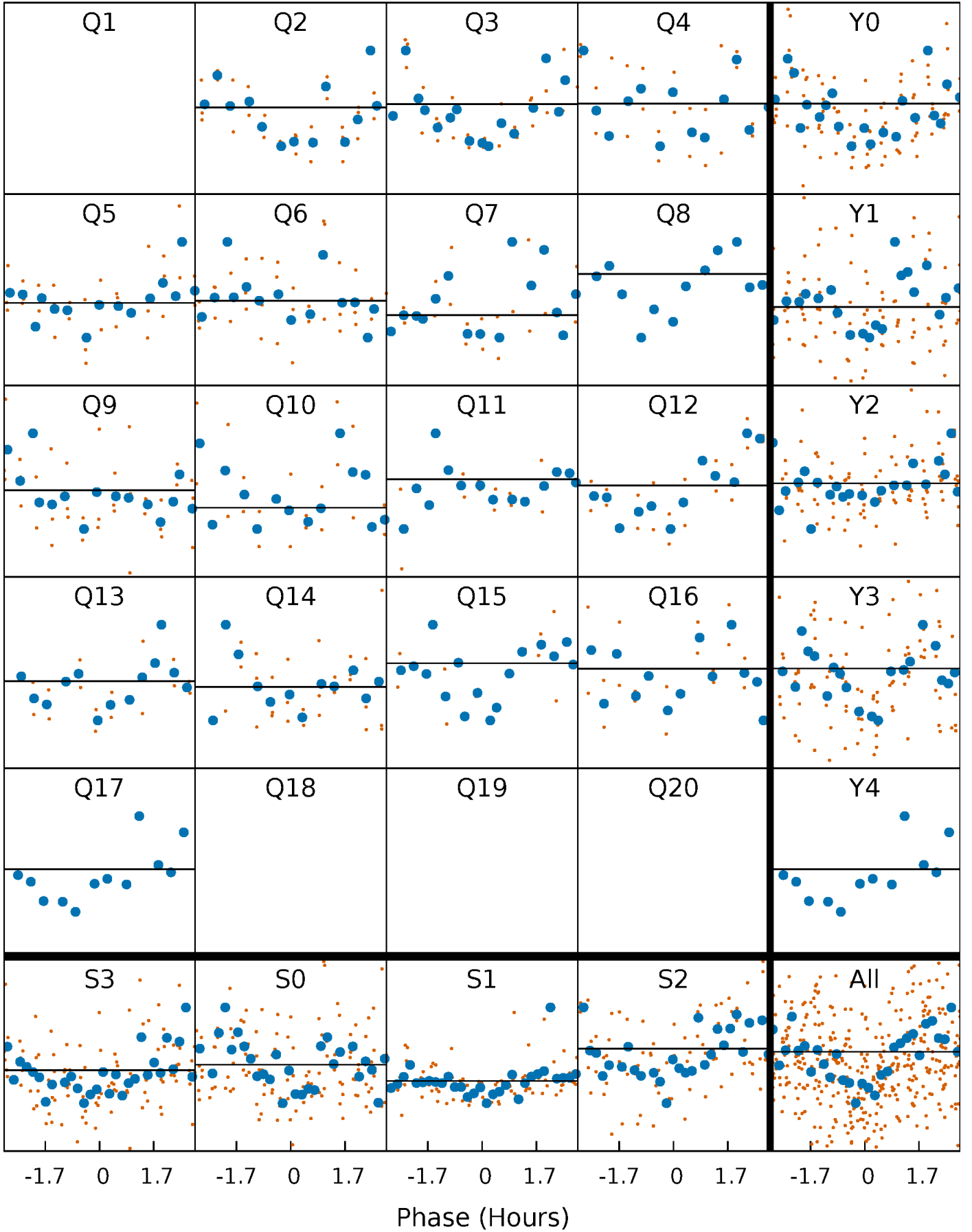
PDC Quarter-Phased Transit Curves

TCE 010452252-07 P= 34.573970 Days $T_0=136.226620$ (BKJD)



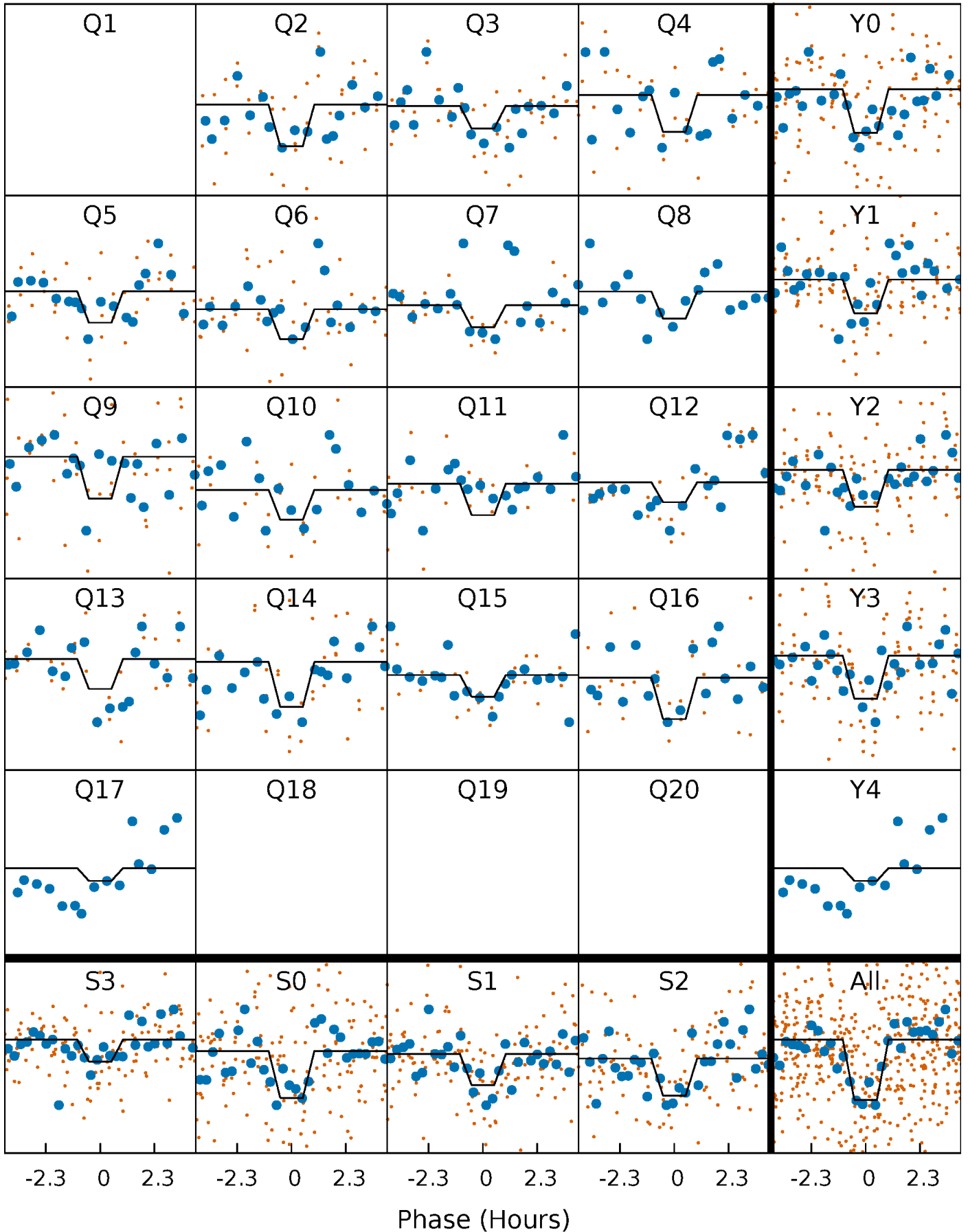
DV Quarter-Phased Transit Curves

TCE 010452252-07 $P = 34.573970$ Days $T_0 = 136.226620$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

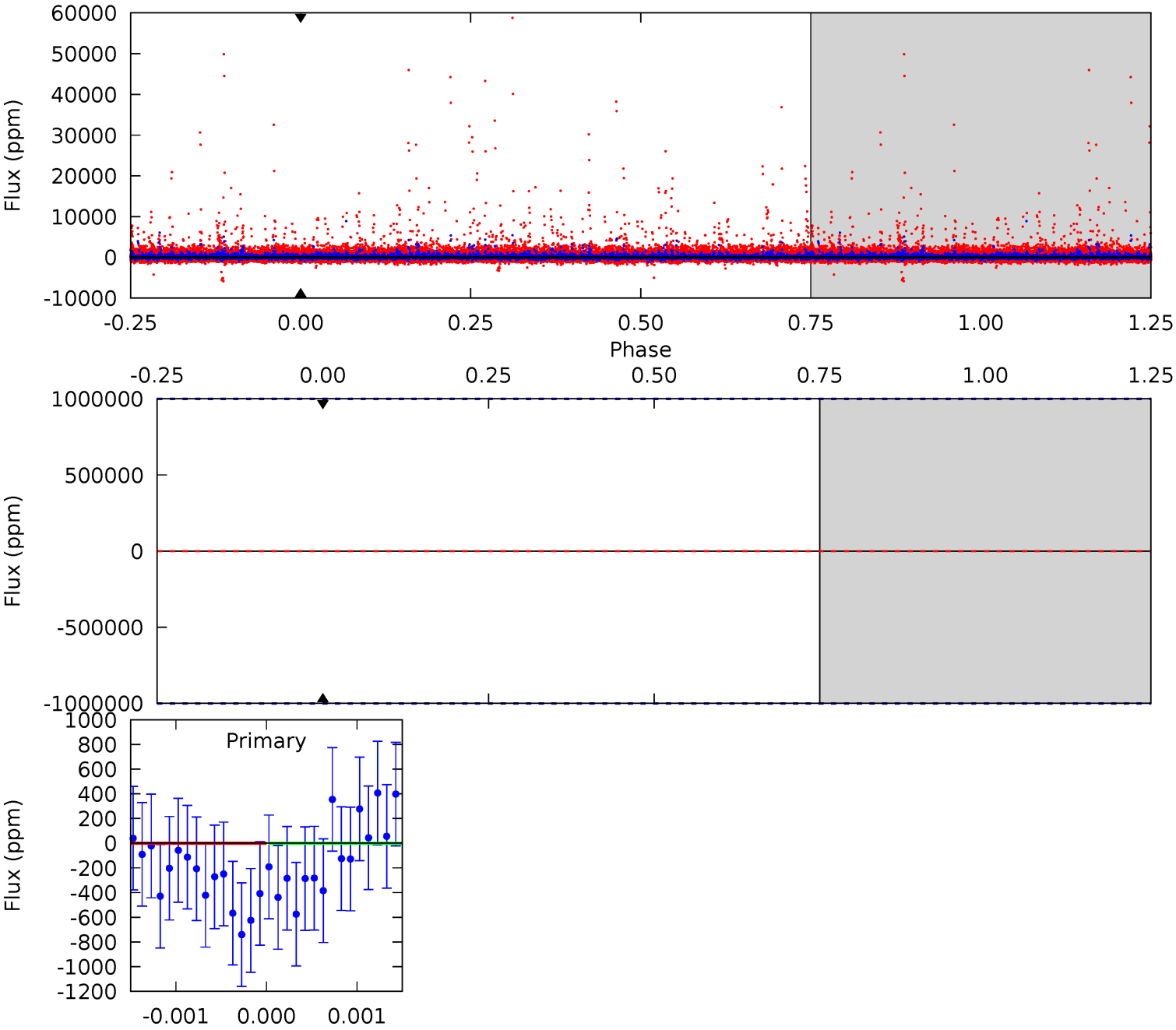
TCE 010452252-07 $P = 34.573970$ Days $T_0 = 136.226247$ (BKJD)



DV Model-Shift Uniqueness Test

010452252-07, P = 34.573970 Days, E = 136.226620 Days

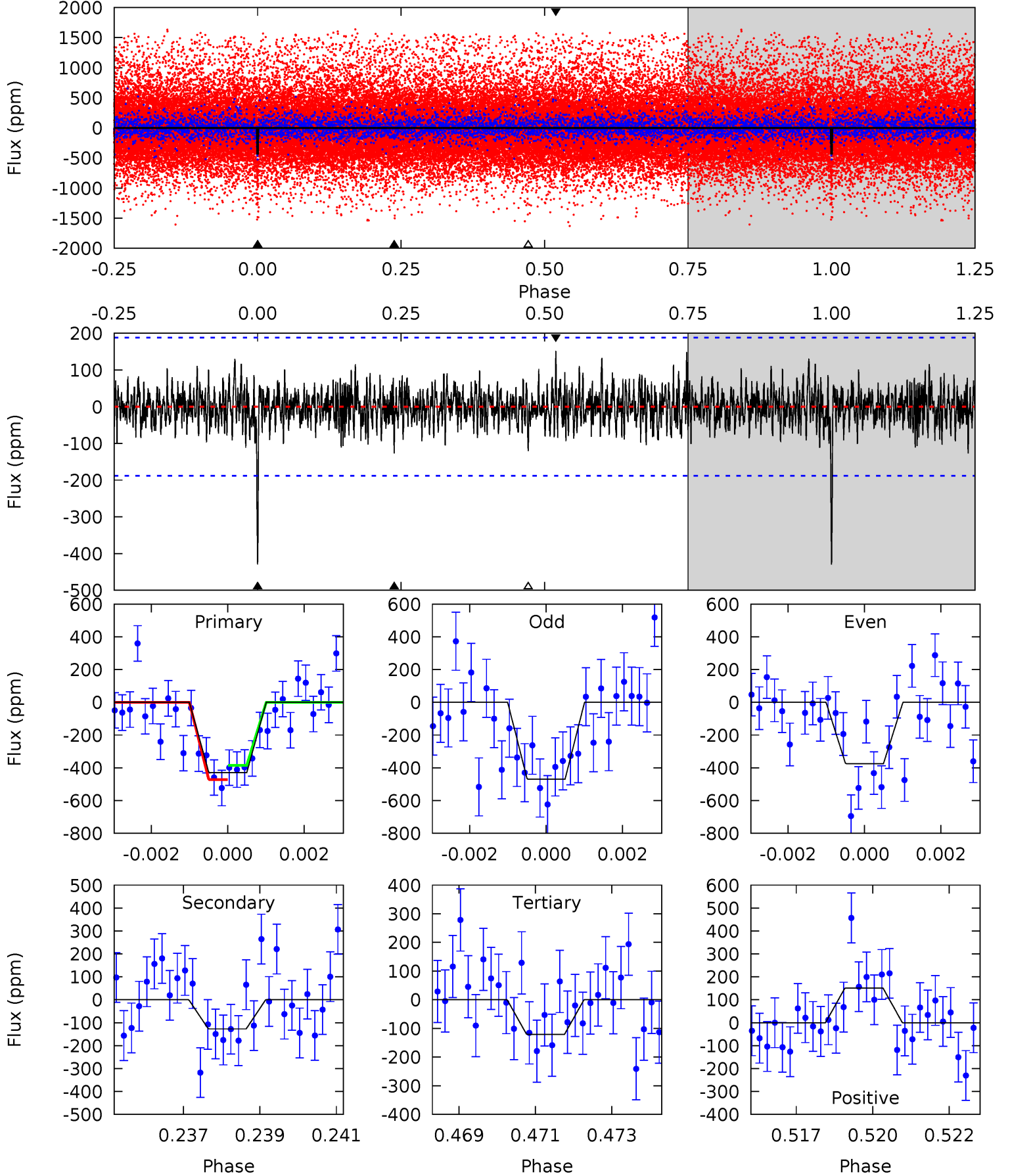
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010452252-07, P = 34.573970 Days, E = 136.226247 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	3.57	3.40	4.27	5.30	3.05	1.12	8.70	7.83	0.18	-0.69	1.33	0.85	0.26	1.23



Stellar Parameters For KIC 010452252

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3374^{+112}_{-82}	$5.066^{+0.103}_{-0.126}$	$-0.360^{+0.300}_{-0.250}$	$0.218^{+0.090}_{-0.060}$	$0.202^{+0.111}_{-0.060}$	$27.460^{+19.290}_{-13.180}$
	+3%/-2%	+2%/-2%	+83%/-69%	+41%/-28%	+55%/-30%	+70%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010452252-07 / KOI 8012.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$1.96^{+2.01}_{-1.33}$	281^{+20}_{-17}	-2745^{+9530}_{-3403}	$-2832.821^{+490125.721}_{-328377.577}$
Alt.	-127 ± 36	$1.88^{+1.94}_{-1.38}$	282^{+18}_{-17}	2071^{+781}_{-273}	295^{+4185}_{-224}

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

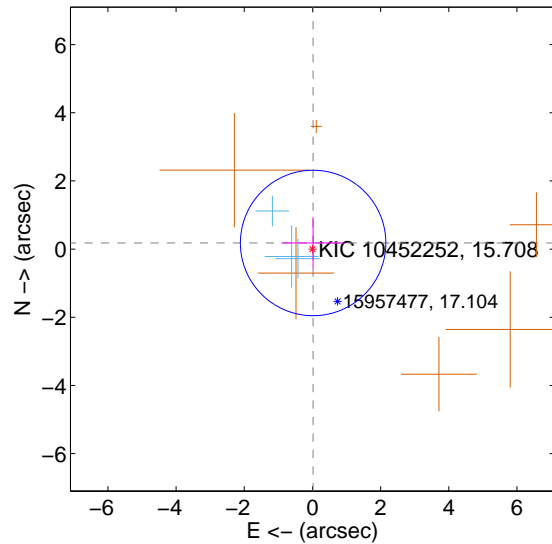
Supplemental centroid analysis for 010452252-07. Kepler magnitude: 15.71. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

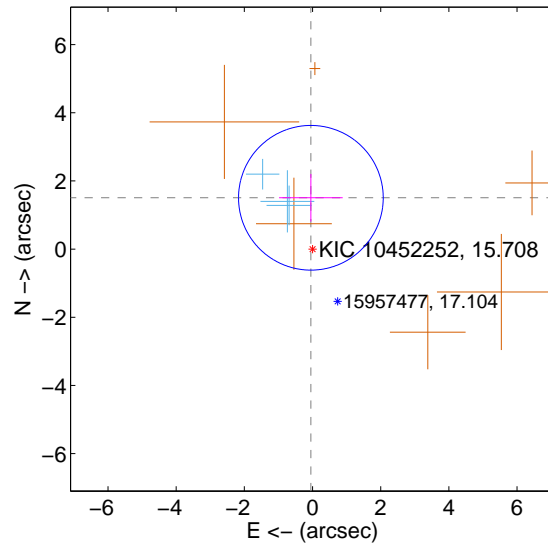
The direct PRF centroid is offset from the target star catalog position by about 1.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.181 ± 0.711	0.25	-0.020 ± 0.933	0.180 ± 0.756
PRF-fit source offset from KIC position	1.506 ± 0.708	2.13	0.048 ± 0.934	1.506 ± 0.696
photometric centroid source offset	1.58 ± 1.45	1.09	1.24 ± 1.46	0.98 ± 1.42

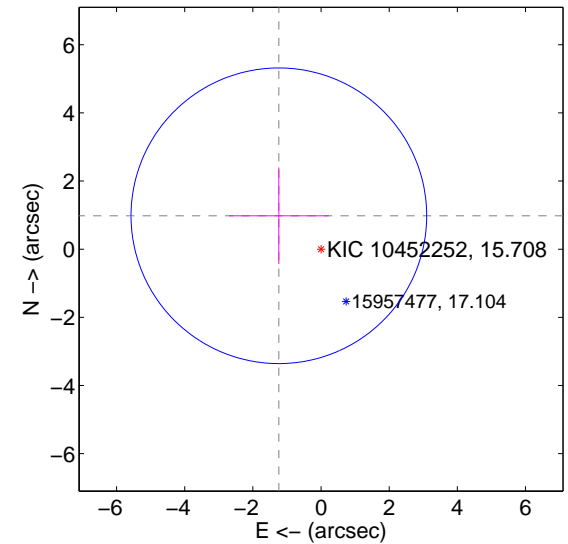
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

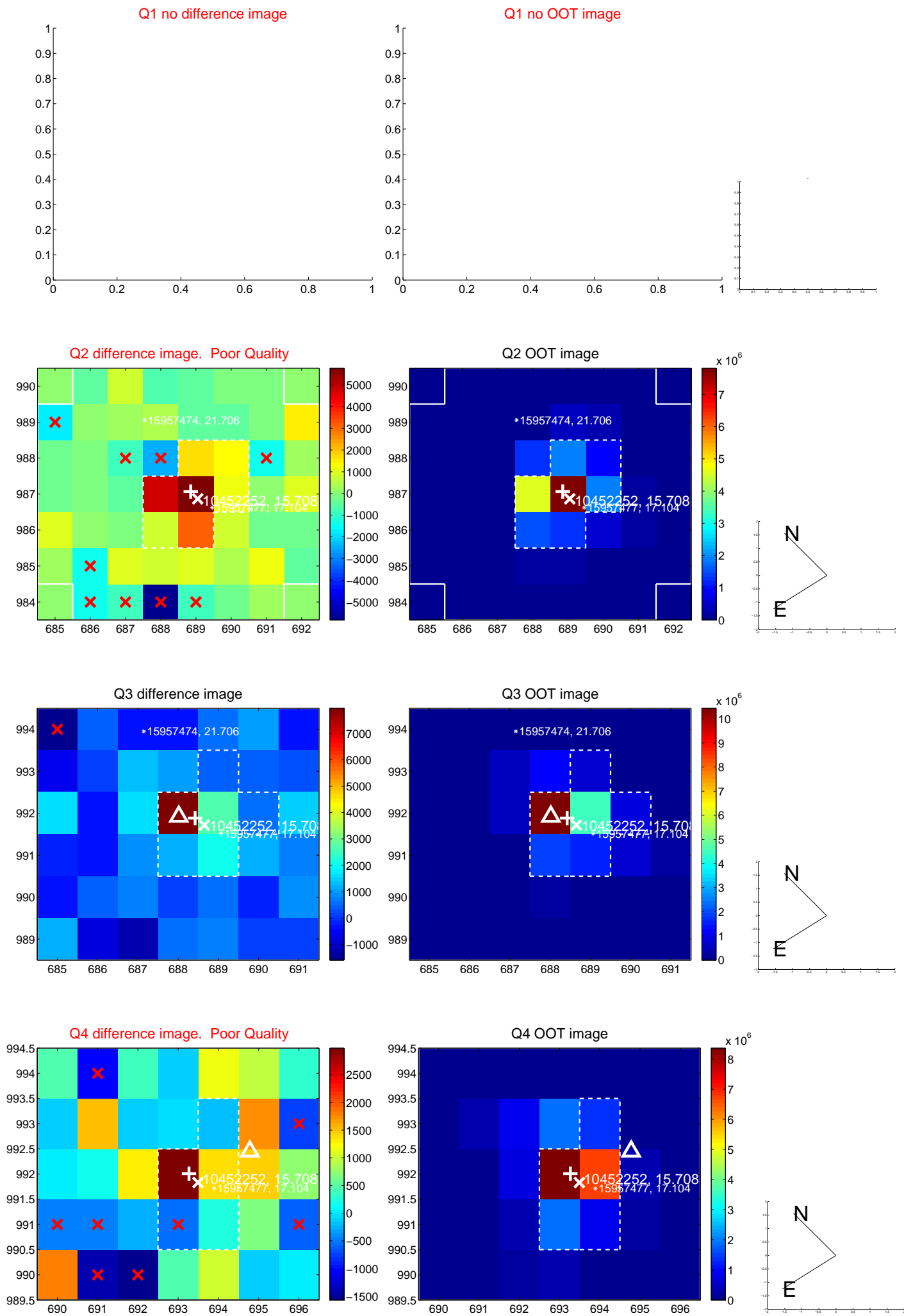


offset from photometric centroids

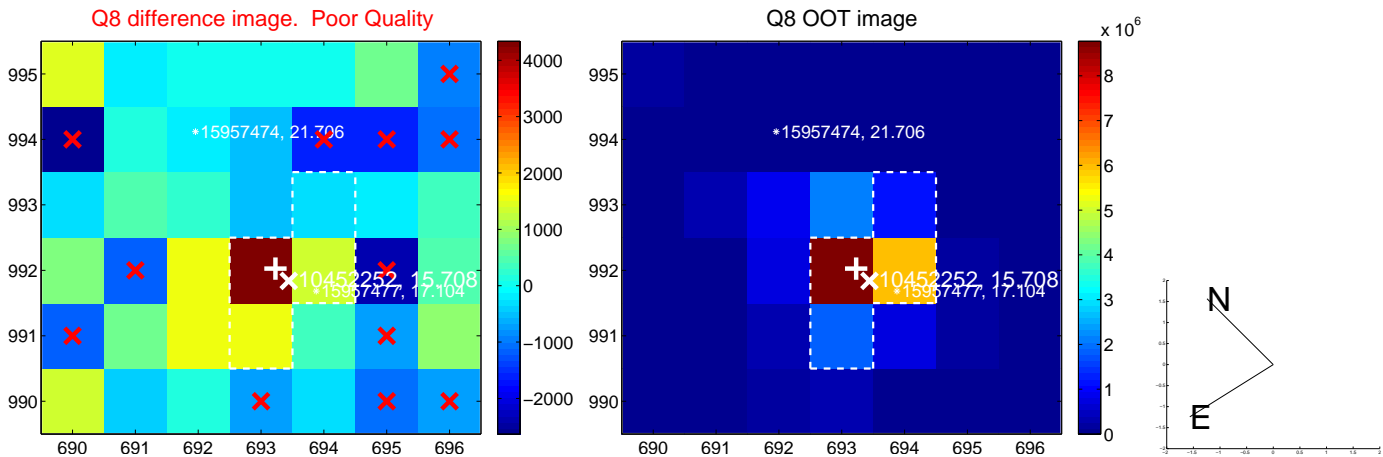
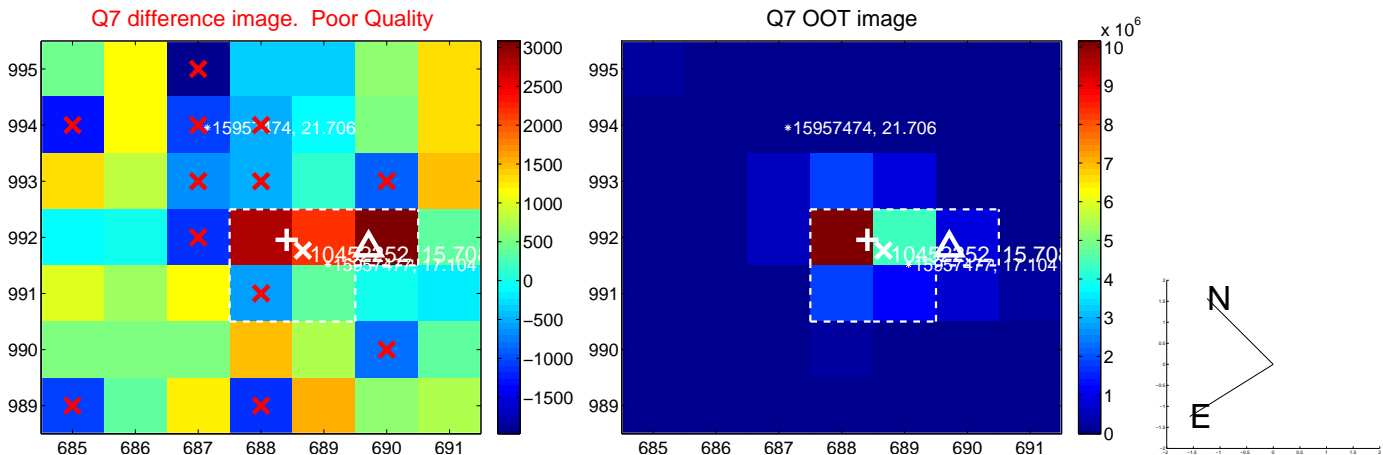
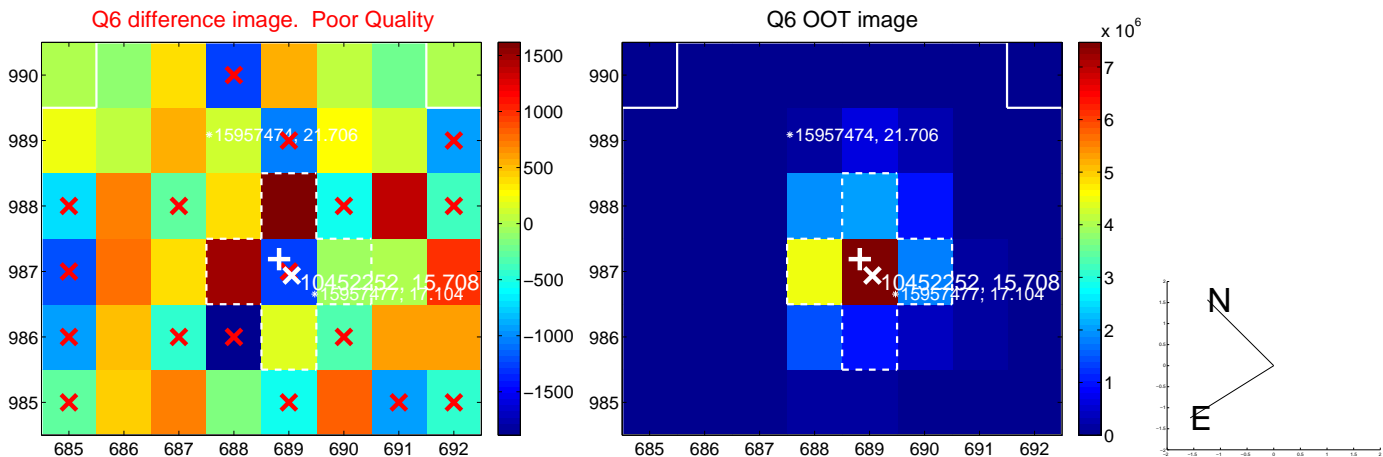
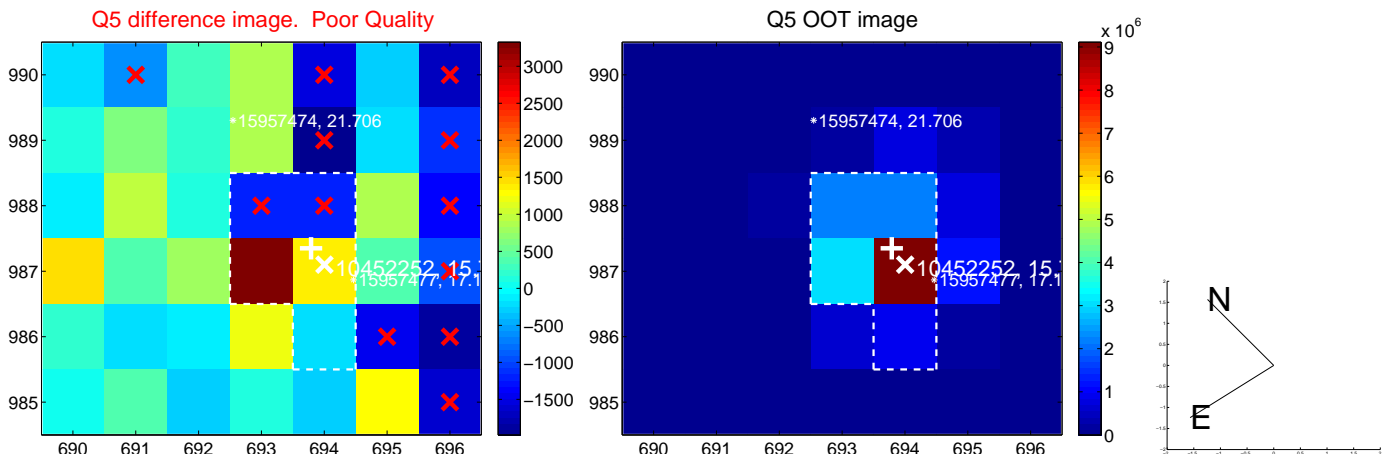


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

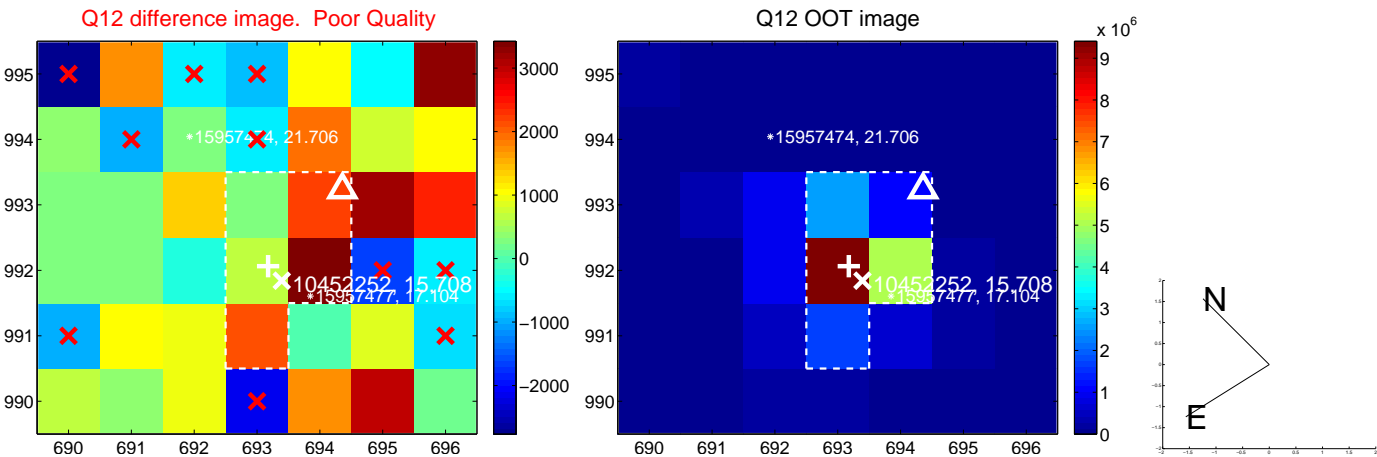
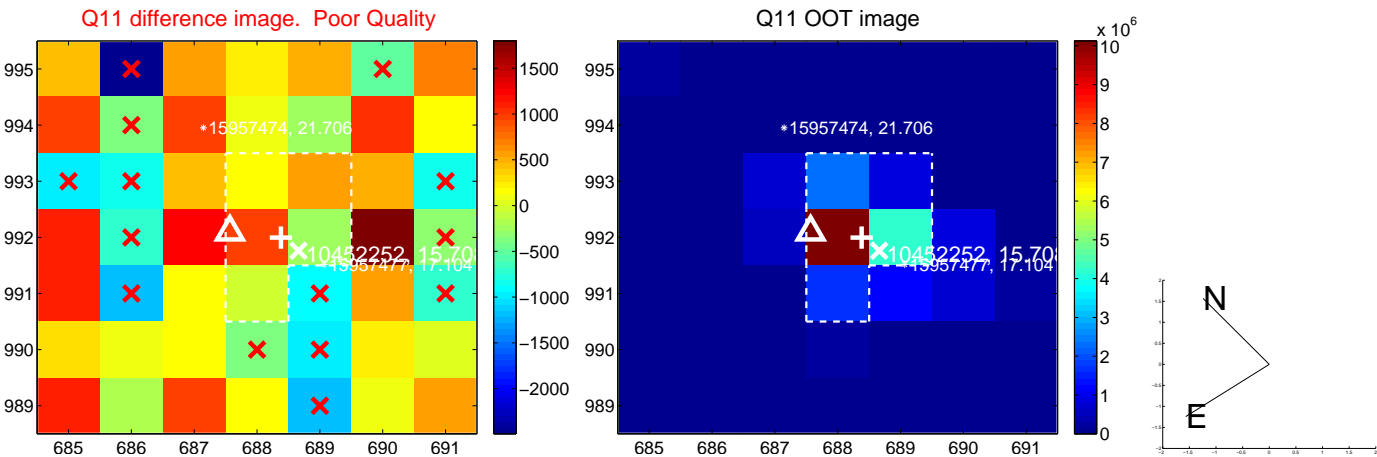
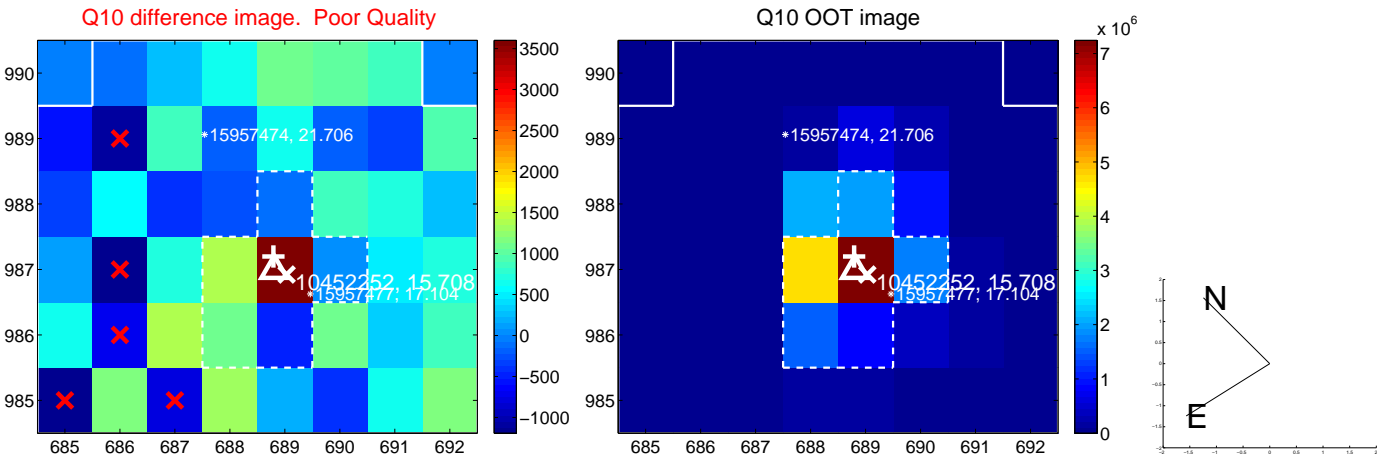
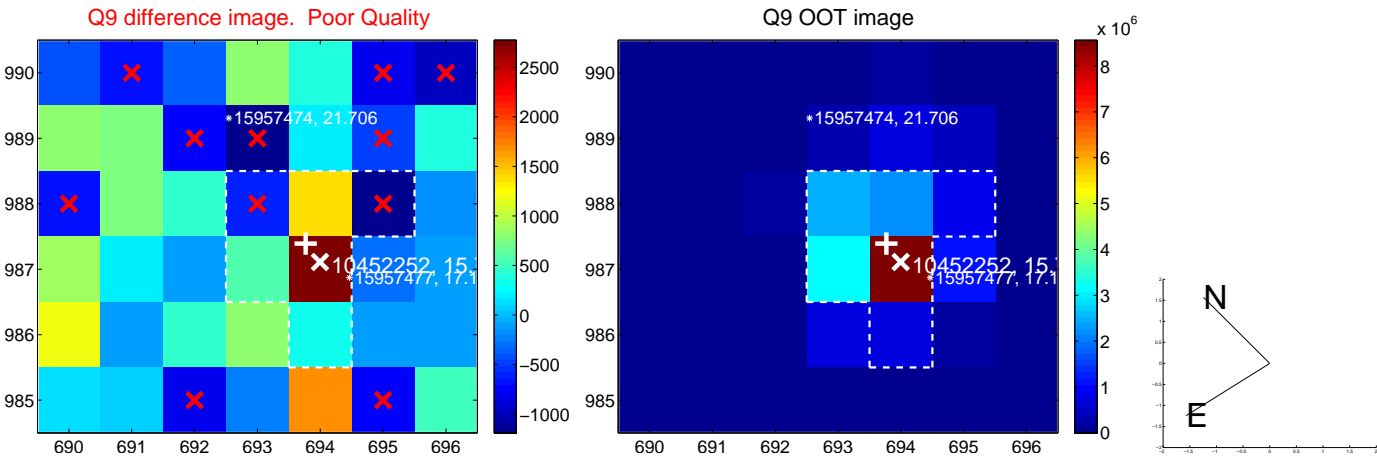
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



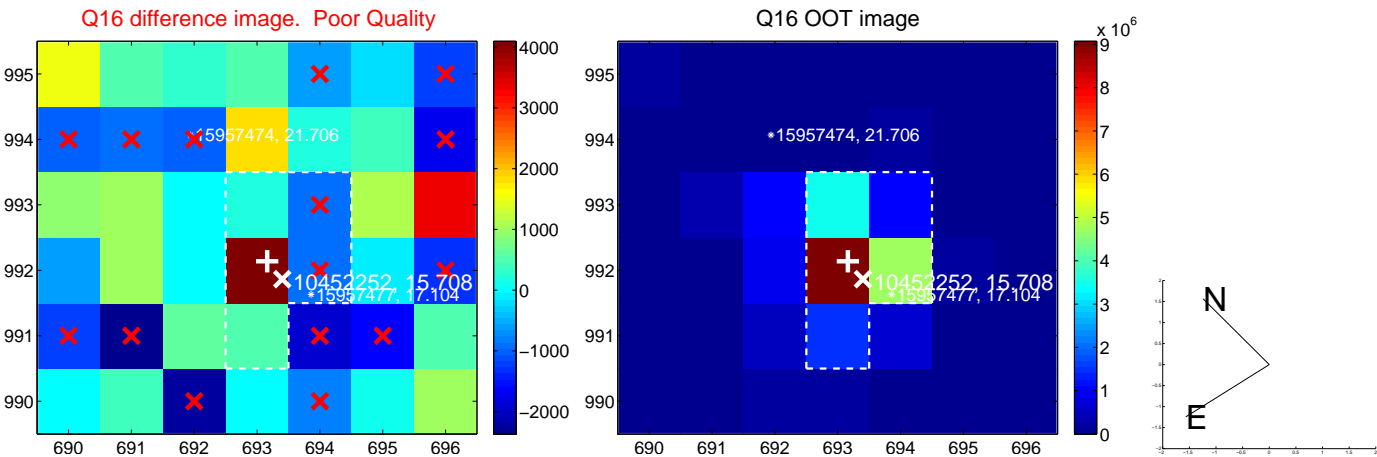
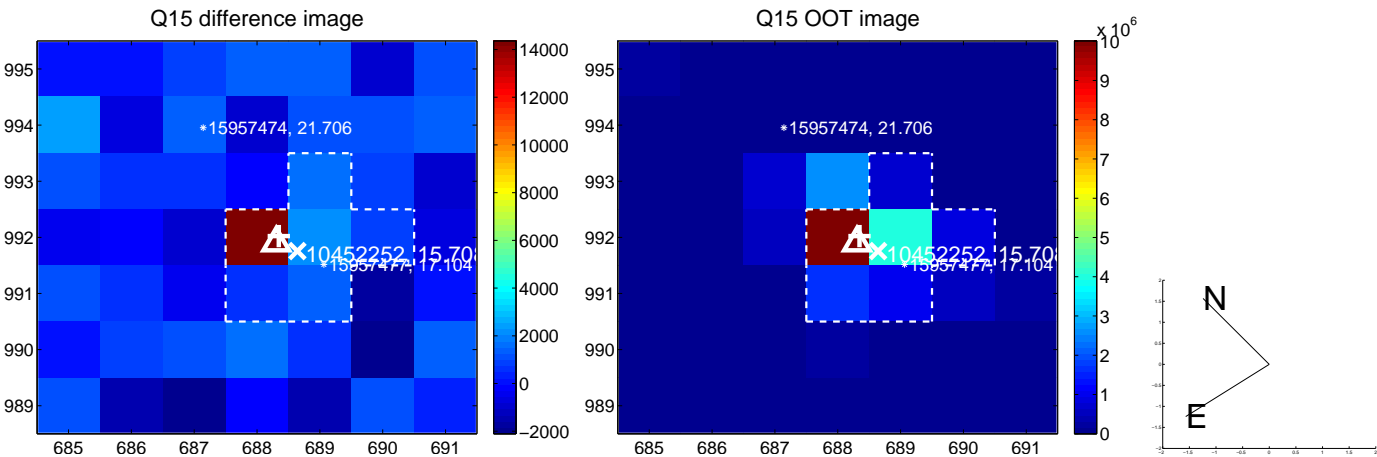
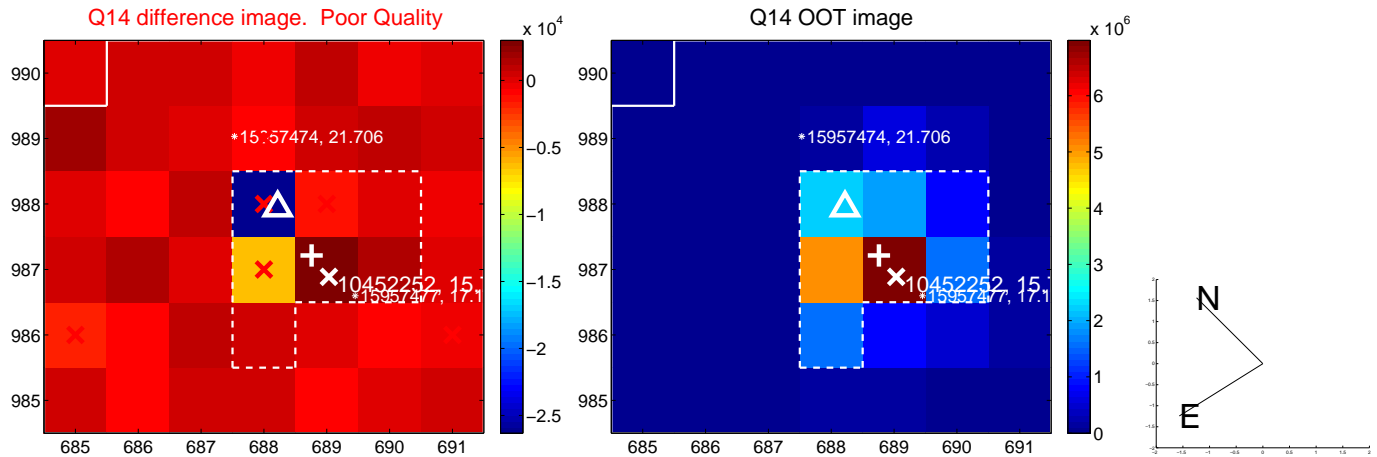
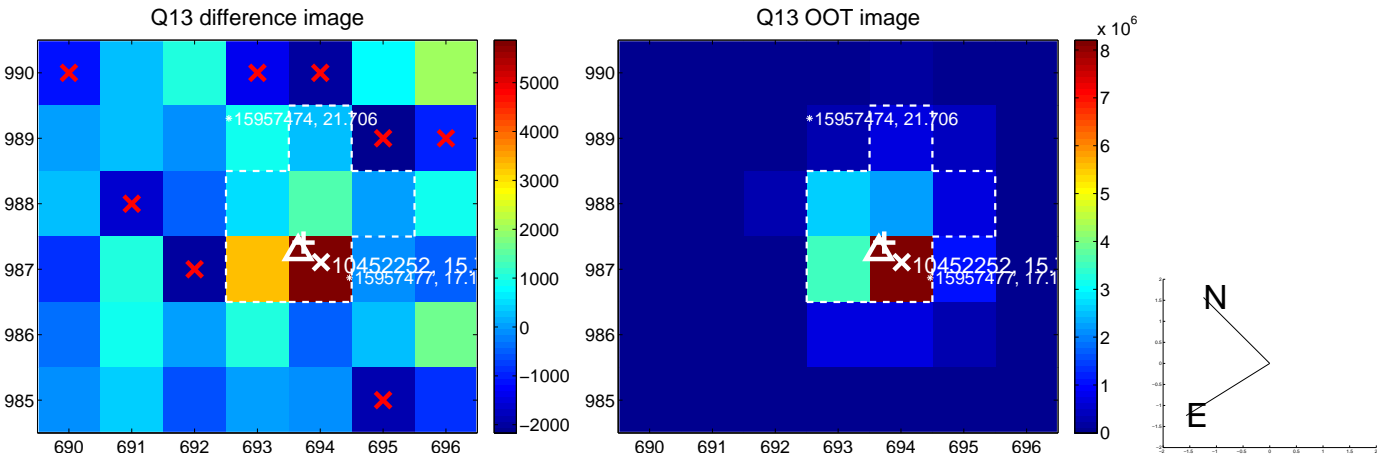
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



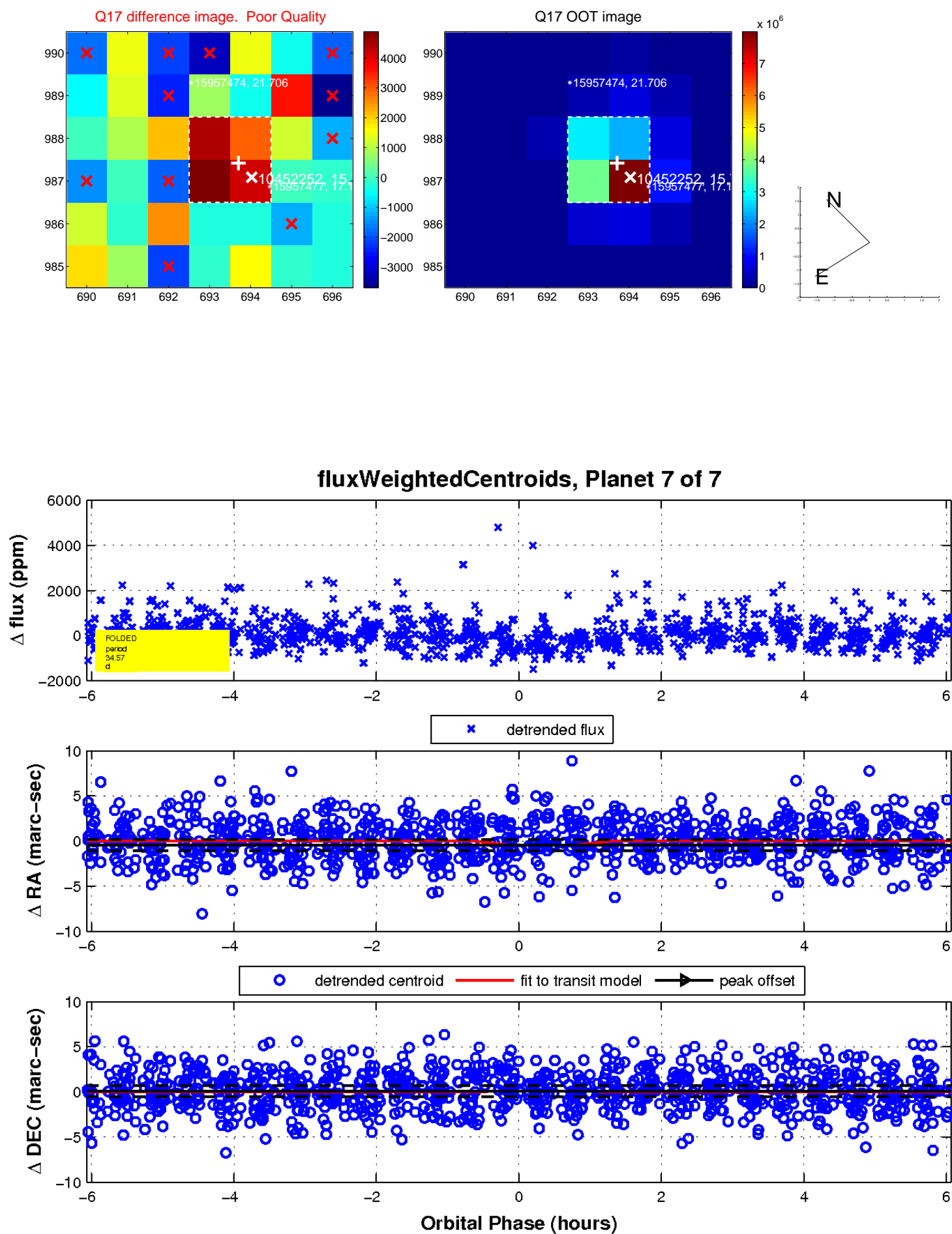
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

