

KIC 009459362

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})
009459362-01	OBS	No	200.482889	167.935712	347.1	8.096	10.9	6.1	0.68	5533	1.37	1.14
009459362-02	OBS	No	500.338179	388.040024	625.8	7.356	10.5	7.5	0.68	5533	2.02	0.34
009459362-03	OBS	No	605.909836	136.769203	574.1	4.288	8.4	7.0	0.68	5533	1.81	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009459362-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
009459362-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009459362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

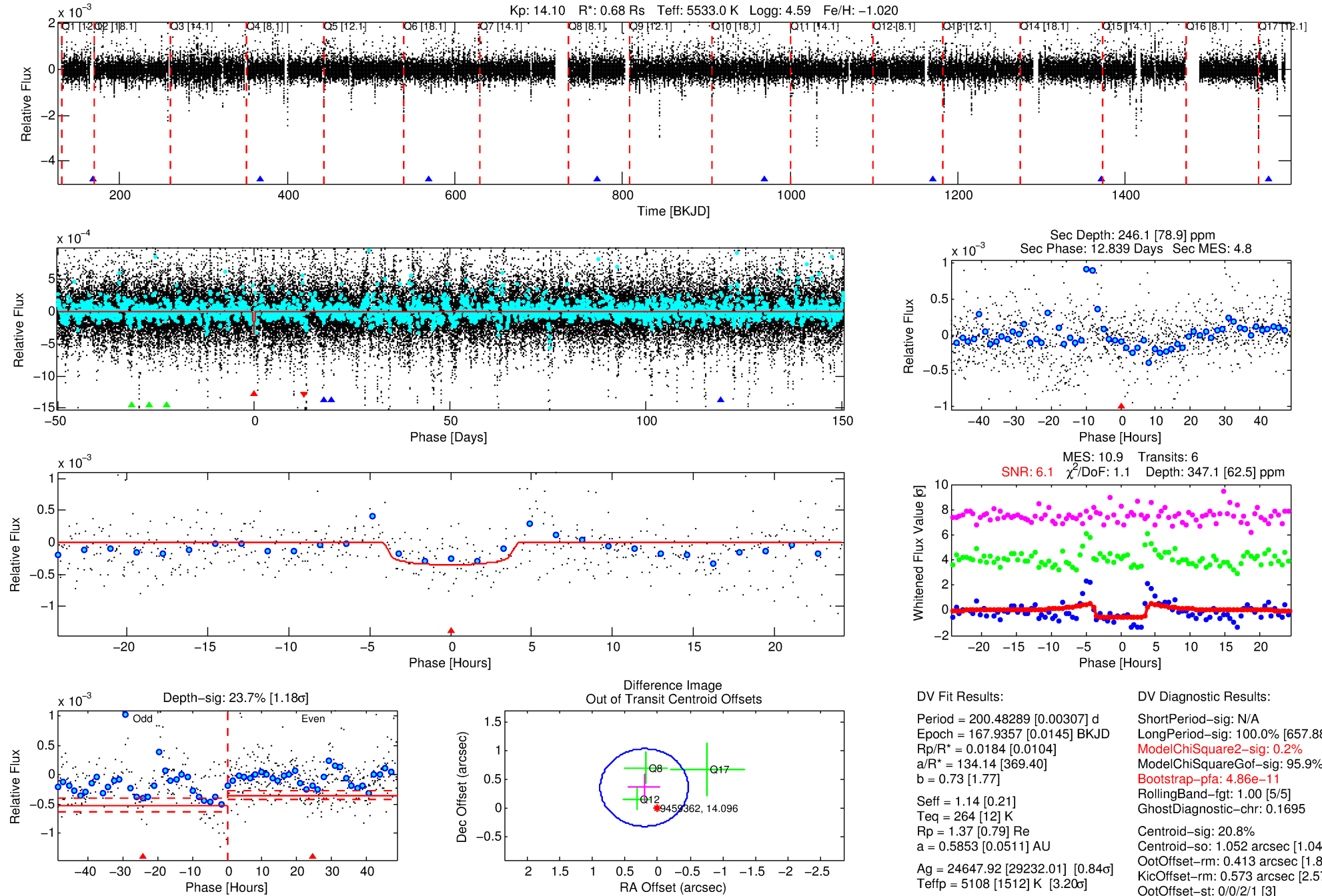
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009459362-01

No Significant Match Found

DV One-Page Summary

KIC: 9459362 Candidate: 1 of 3 Period: 200.483 d



DV Fit Results:

Period = 200.48289 [0.00307] d
Epoch = 167.9357 [0.0145] BKJD
Rp/R* = 0.0184 [0.0104]
a/R* = 134.14 [369.40]
b = 0.73 [1.77]
Seff = 1.14 [0.21]
Teq = 264 [12] K
Rp = 1.37 [0.79] Re
a = 0.5853 [0.0511] AU
Ag = 24647.92 [29232.01] [0.84 σ]
Teffp = 5108 [1512] K [3.20 σ]

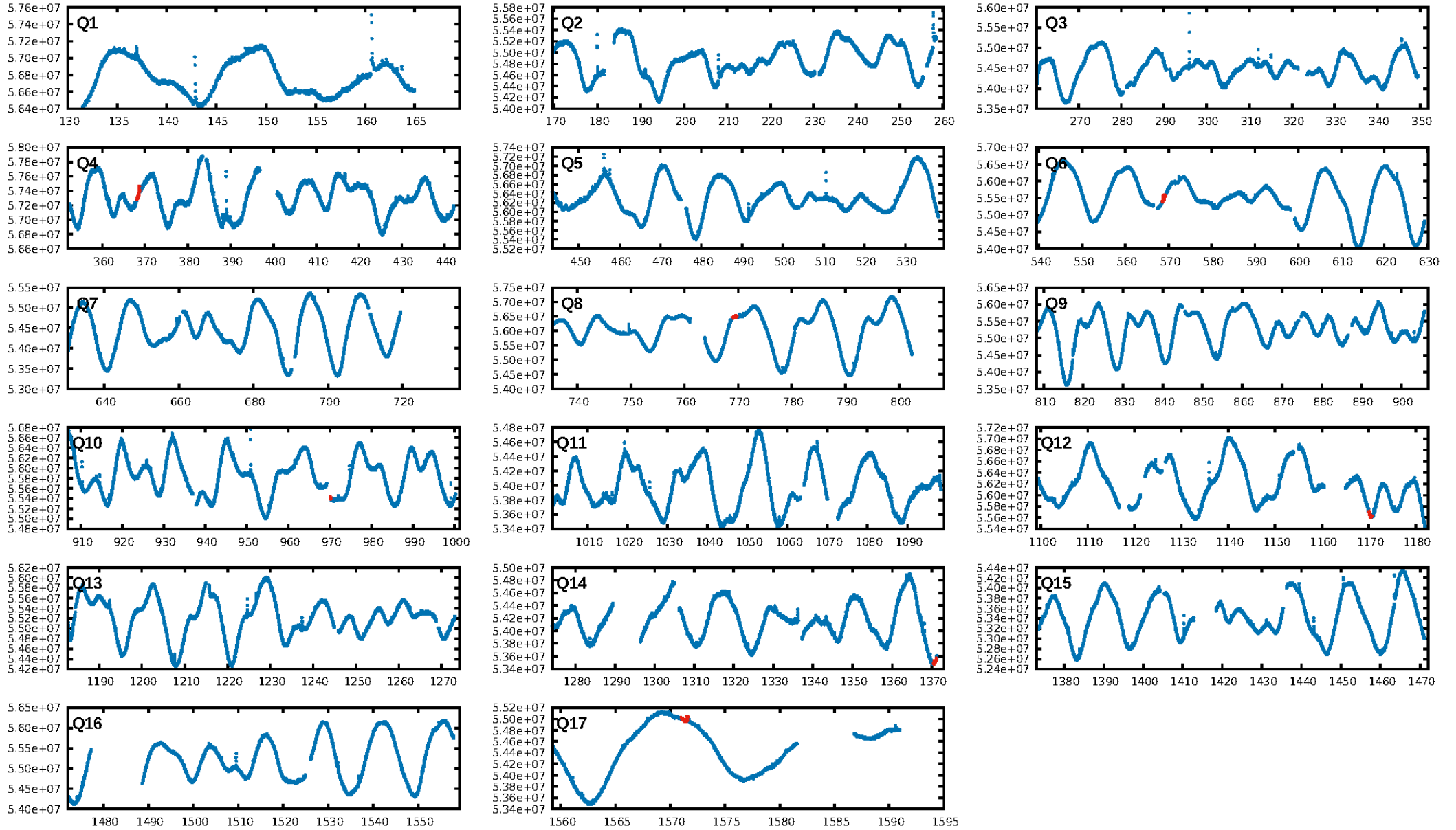
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [657.88 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 4.86e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.1695
Centroid-sig: 20.8%
Centroid-so: 1.052 arcsec [1.04 σ]
OotOffset-rm: 0.413 arcsec [1.84 σ]
KicOffset-rm: 0.573 arcsec [2.57 σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

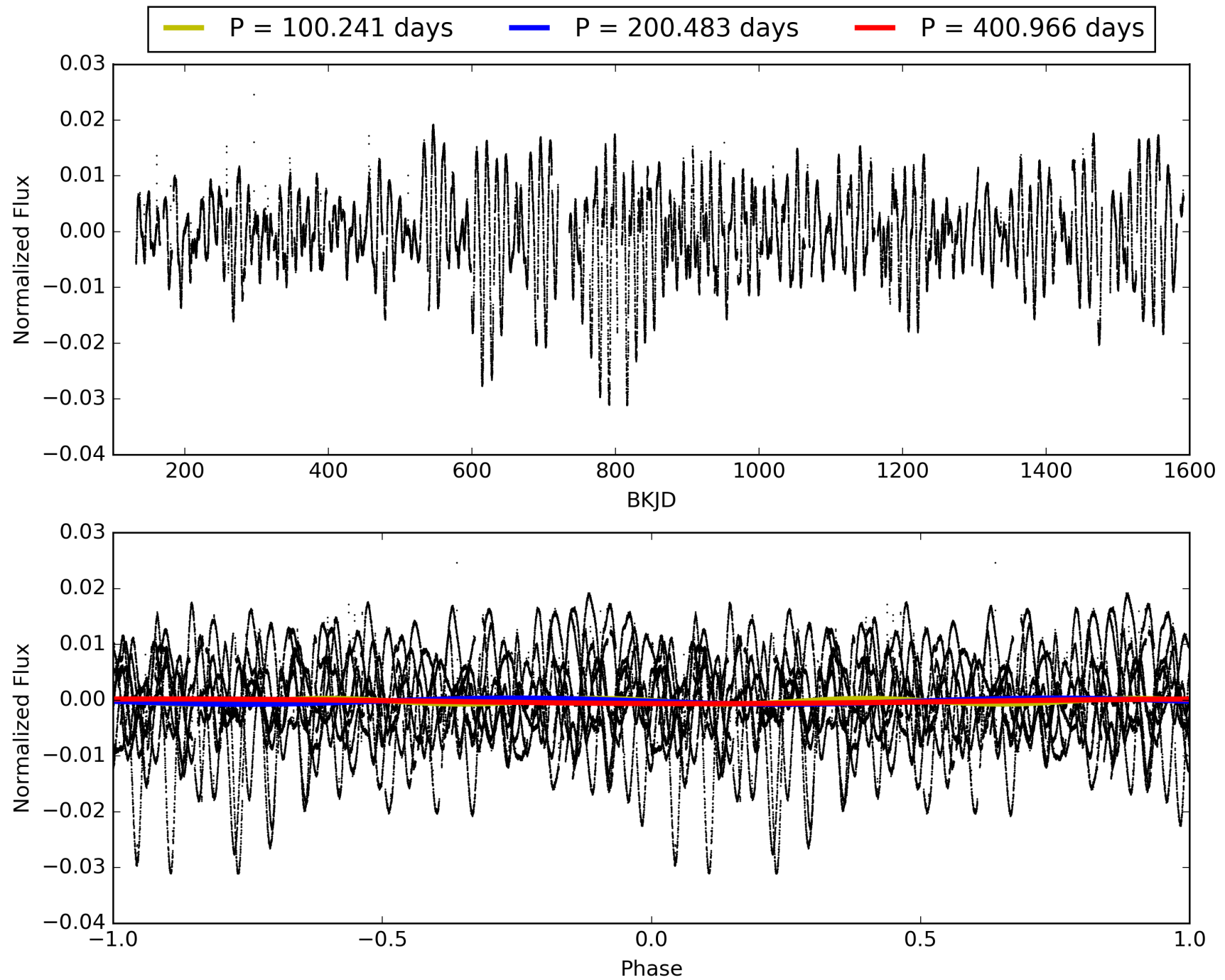
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:49:39 Z

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

TCE 009459362-01, PDC Light Curves

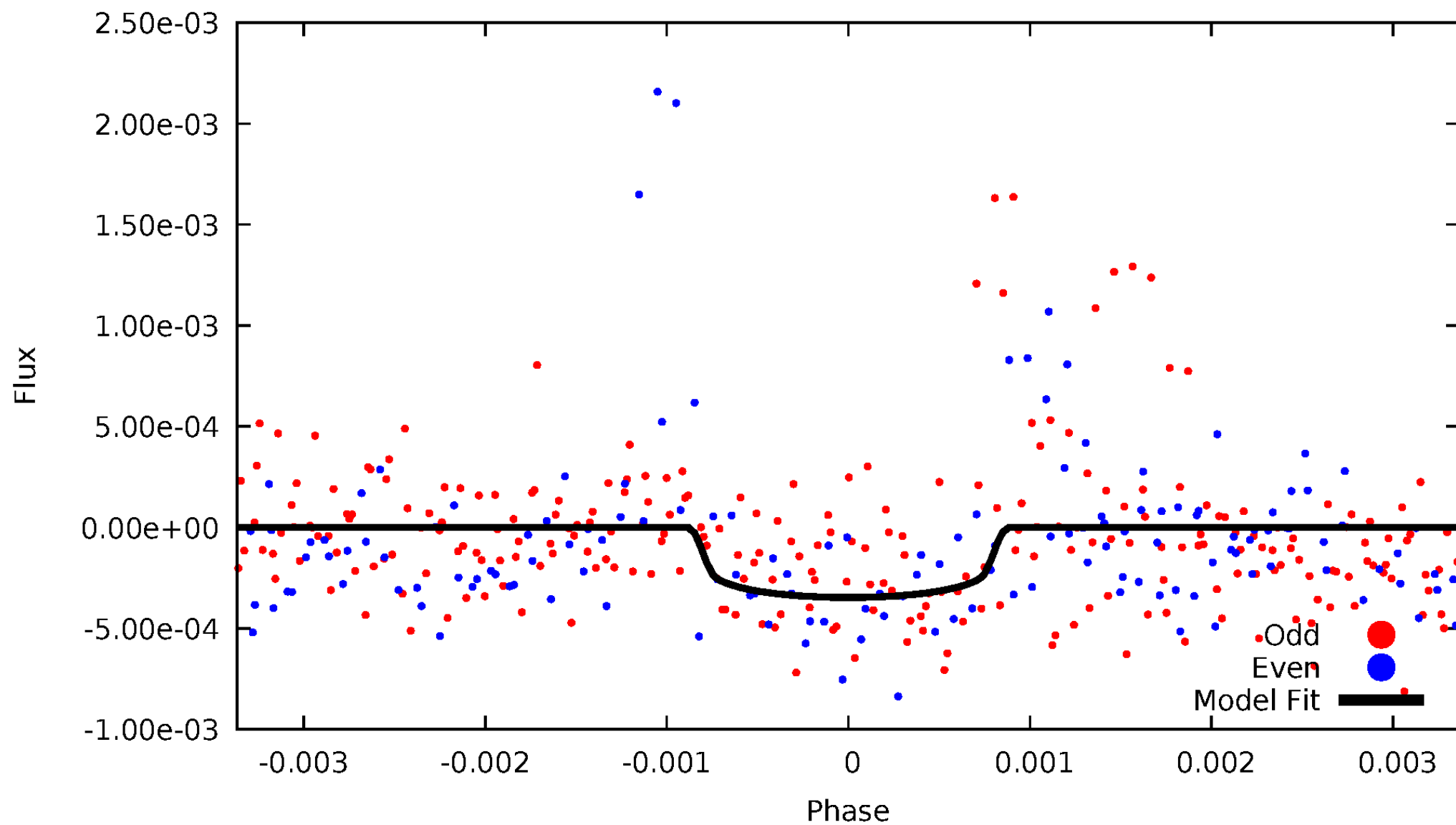


TCE 009459362-01



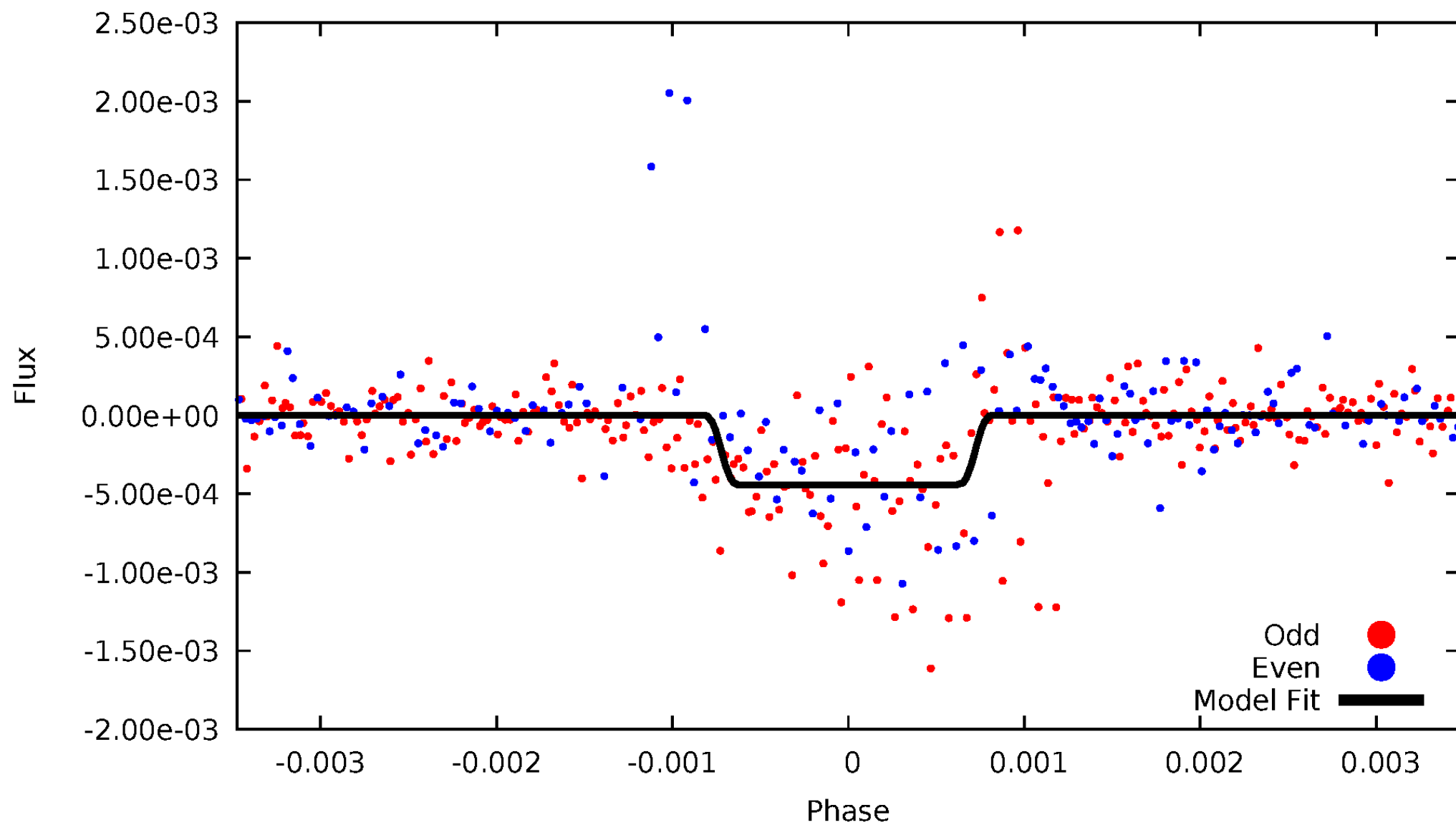
DV Odd/Even

TCE 009459362-01



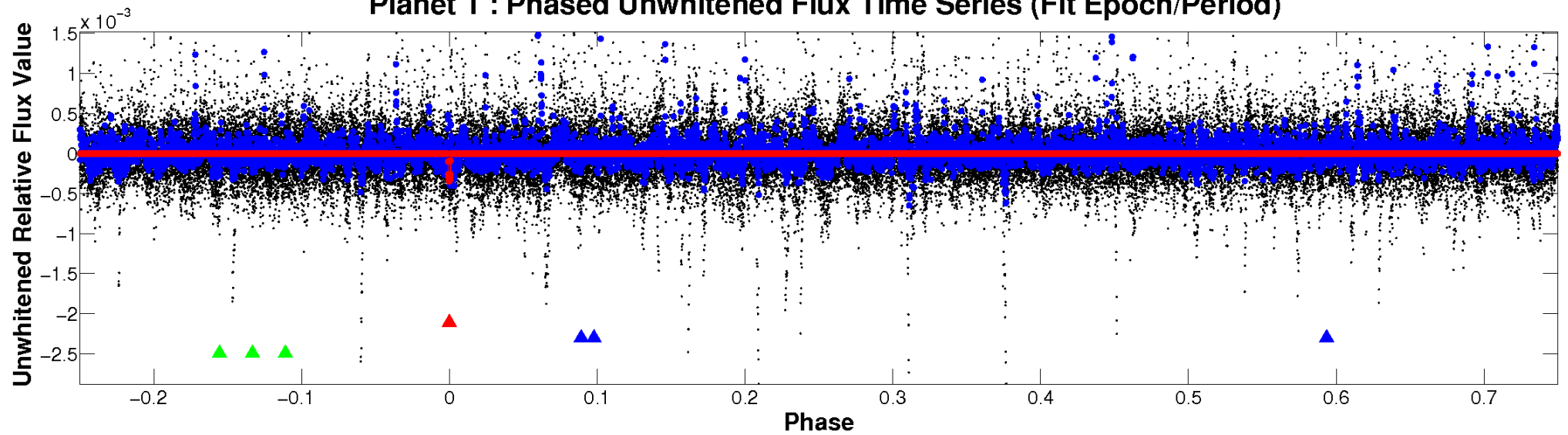
ALT Odd/Even

TCE 009459362-01

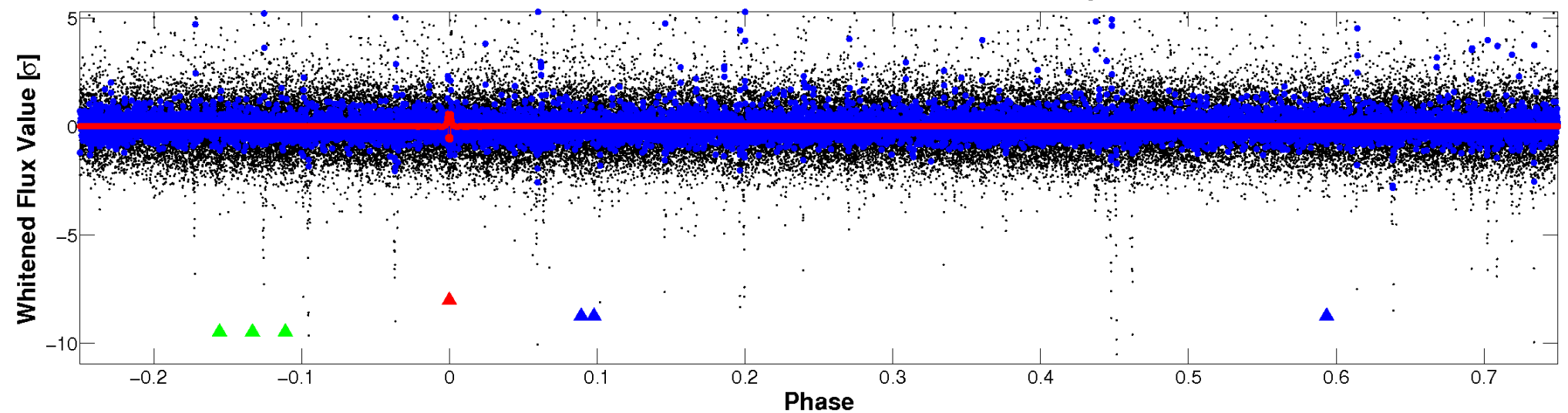


Non-Whitened Vs. Whitened Light Curve

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

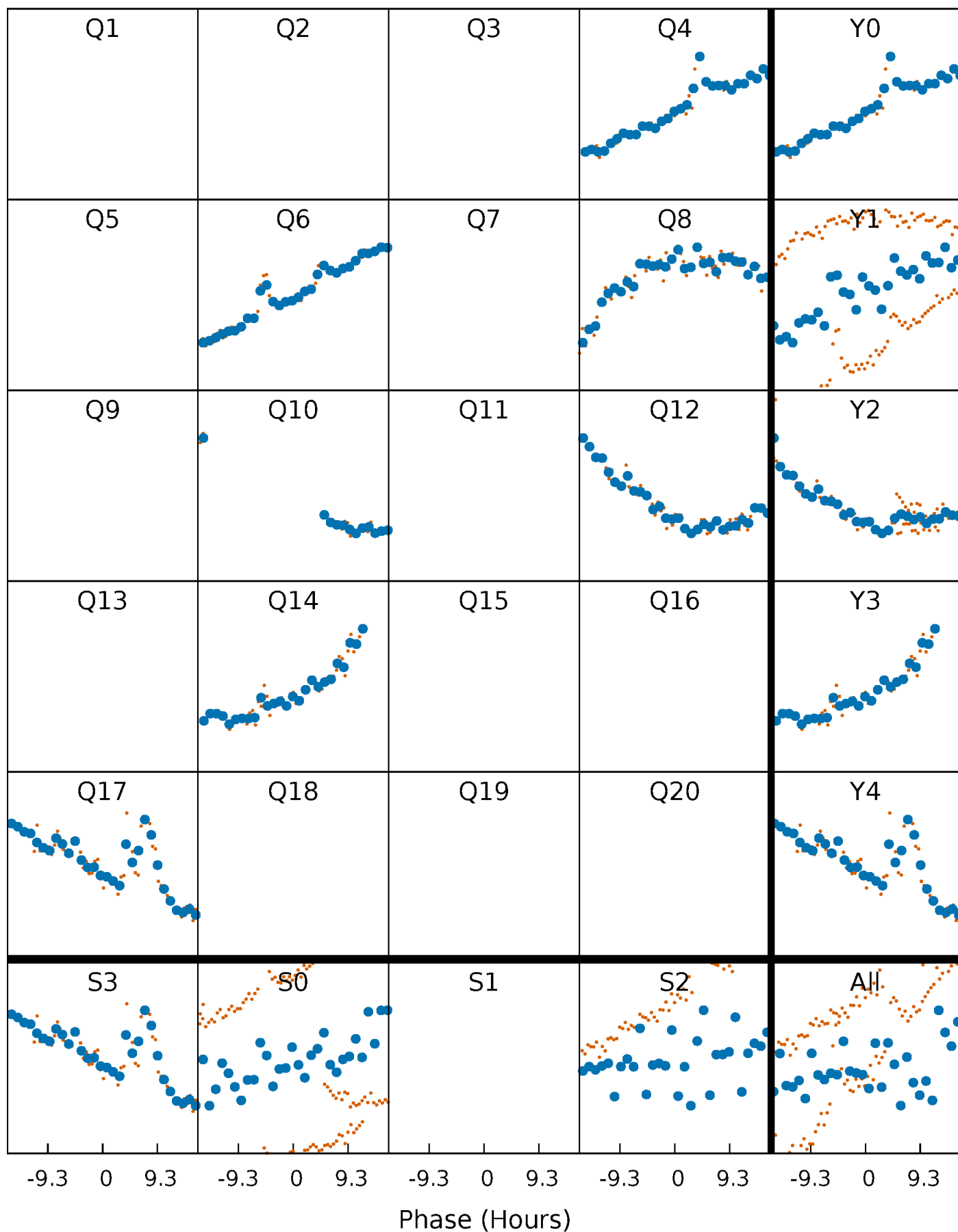


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



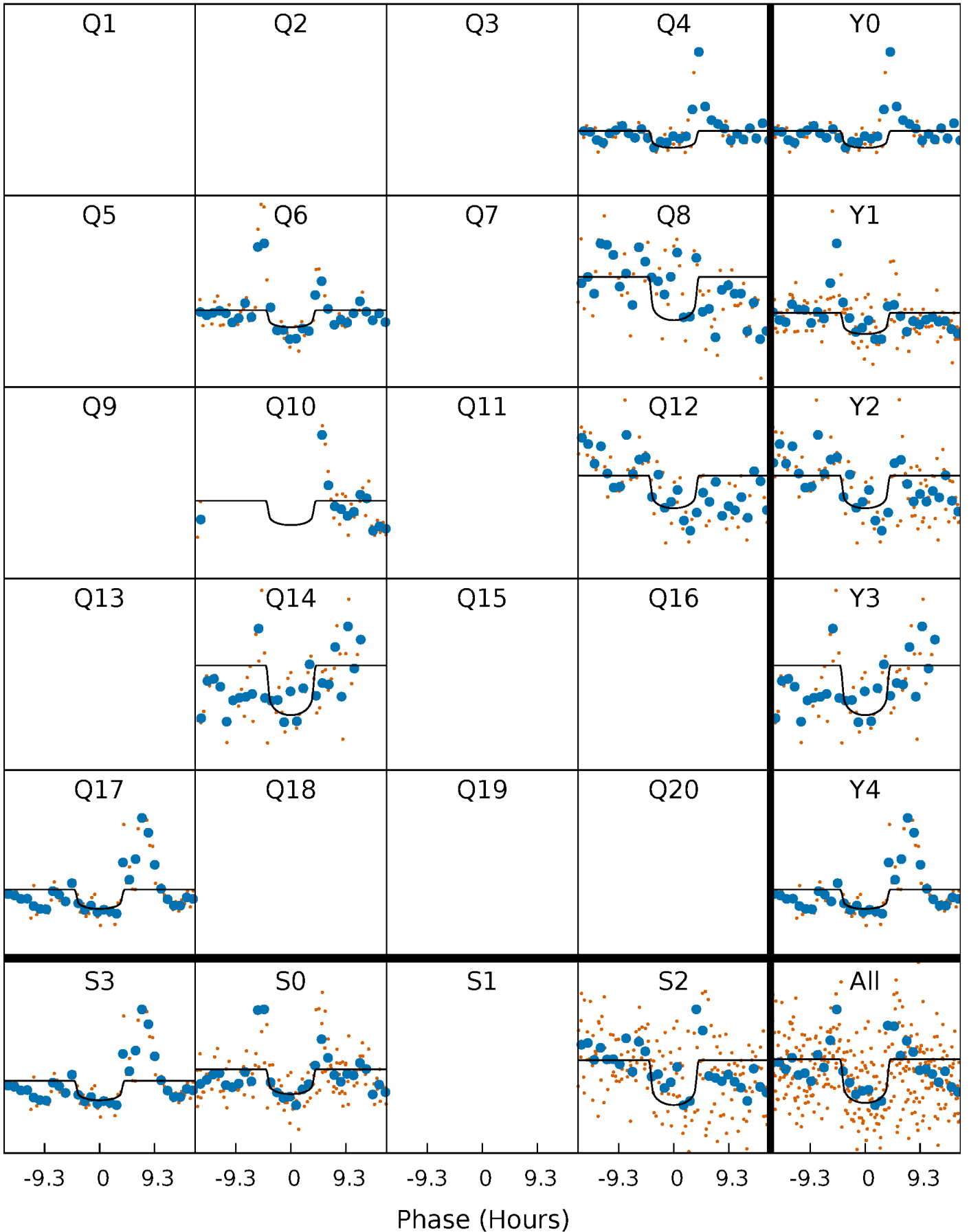
PDC Quarter-Phased Transit Curves

TCE 009459362-01 P=200.482889 Days $T_0=167.935712$ (BKJD)



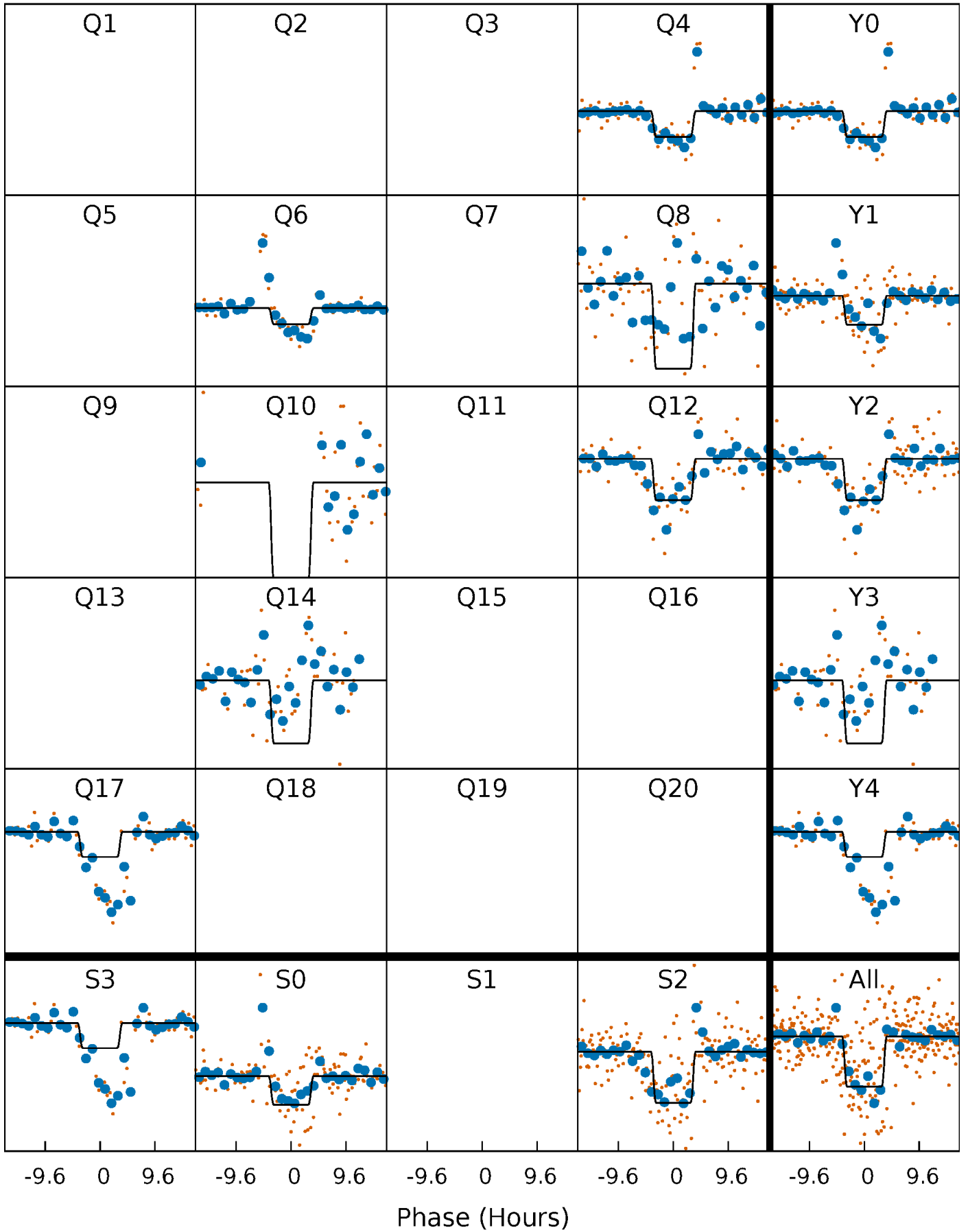
DV Quarter-Phased Transit Curves

TCE 009459362-01 P=200.482889 Days $T_0=167.935712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

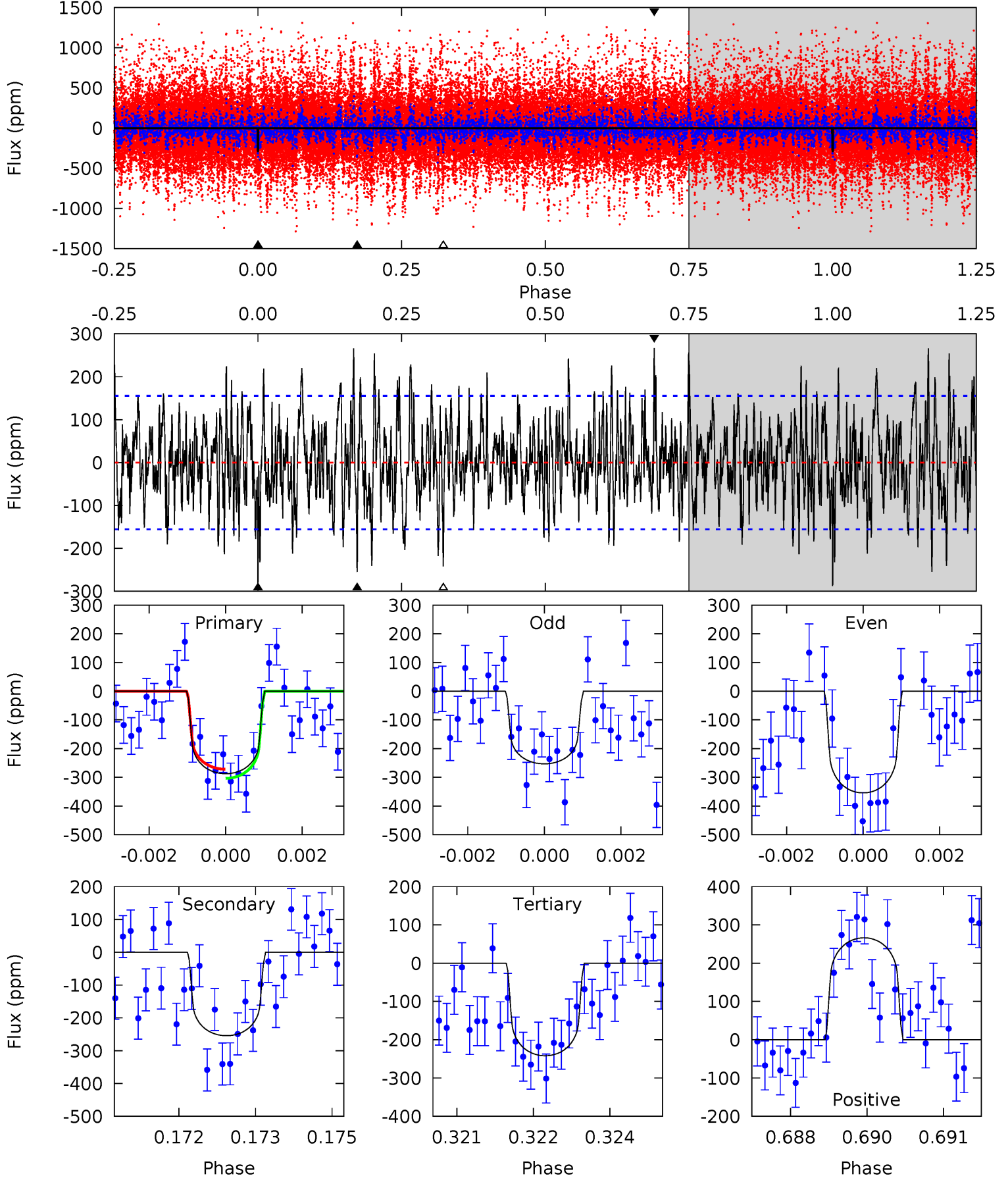
TCE 009459362-01 P=200.487279 Days $T_0=167.920387$ (BKJD)



DV Model-Shift Uniqueness Test

009459362-01, P = 200.482889 Days, E = 167.935712 Days

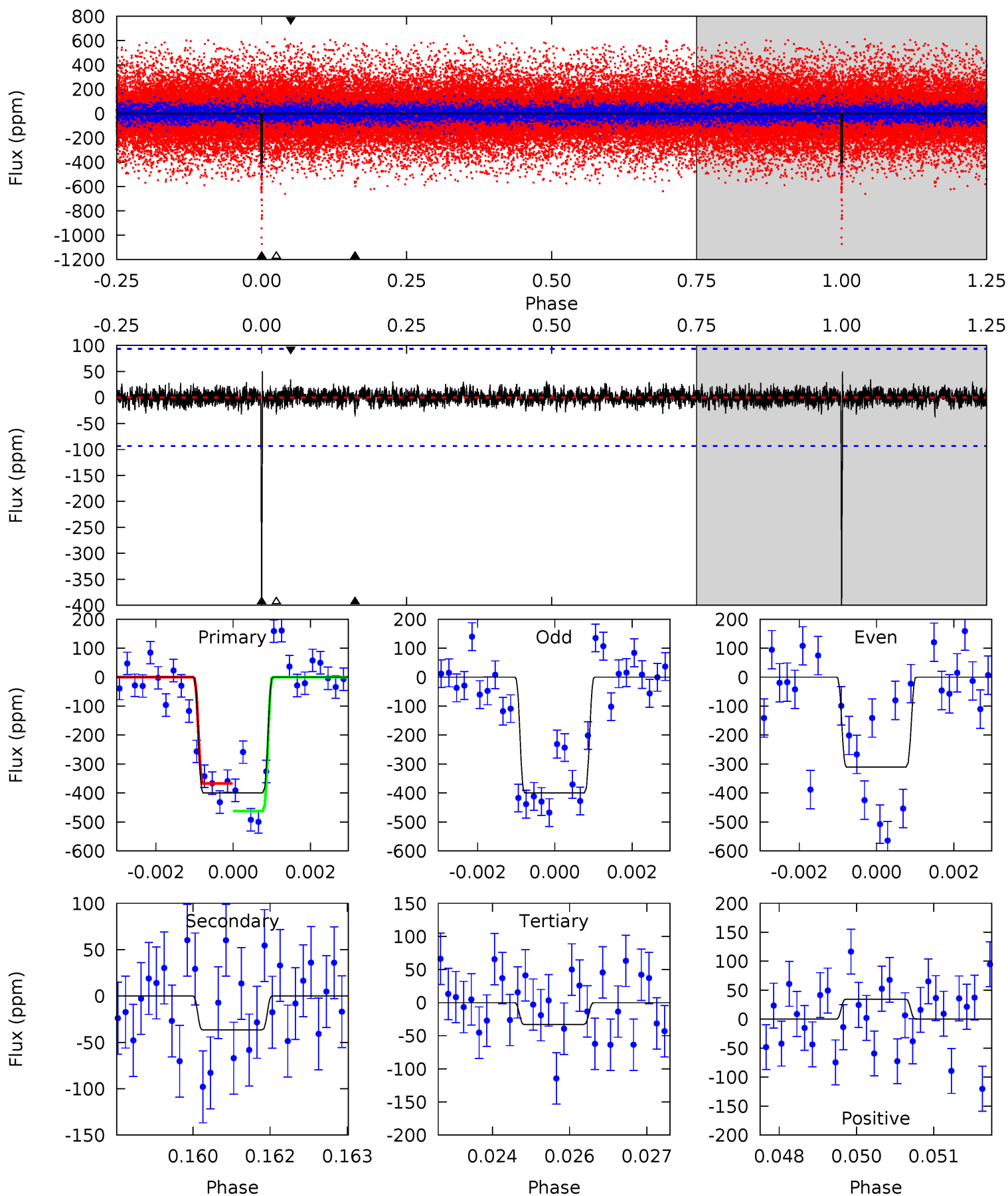
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	8.75	8.32	9.16	5.35	3.13	2.78	1.57	0.73	0.43	-0.41	1.63	0.88	0.48	0.55



Alt Model-Shift Uniqueness Test

009459362-01, P = 200.487279 Days, E = 167.920387 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	2.10	1.90	1.98	5.37	3.16	0.49	21.0	20.9	0.20	0.11	2.57	0.95	0.11	2.66



Stellar Parameters For KIC 009459362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5533^{+164}_{-164}	$4.592^{+0.078}_{-0.058}$	$-1.020^{+0.300}_{-0.300}$	$0.683^{+0.065}_{-0.058}$	$0.665^{+0.063}_{-0.024}$	$2.939^{+0.893}_{-0.573}$
	+3%/-3%	+2%/-1%	+29%/-29%	+10%/-8%	+9%/-4%	+30%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009459362-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-254 ± 29	$1.40^{+0.77}_{-0.74}$	368^{+13}_{-14}	5125^{+2388}_{-833}	24416^{+83632}_{-13964}
Alt.	-37 ± 17	$1.58^{+0.77}_{-0.71}$	367^{+13}_{-14}	3412^{+827}_{-478}	2557^{+7060}_{-1612}

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

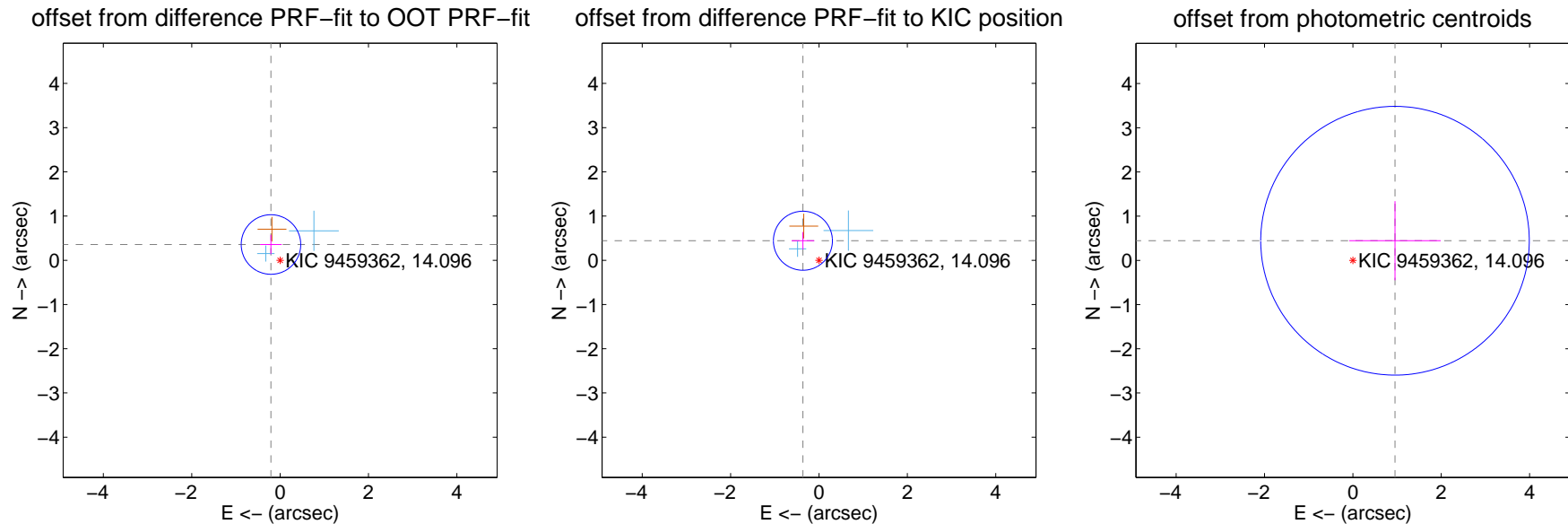
DV Centroid Data

Supplemental centroid analysis for 009459362-01. Kepler magnitude: 14.10. Transit SNR 6.13

There are 2 quarters with good PRF difference image offsets

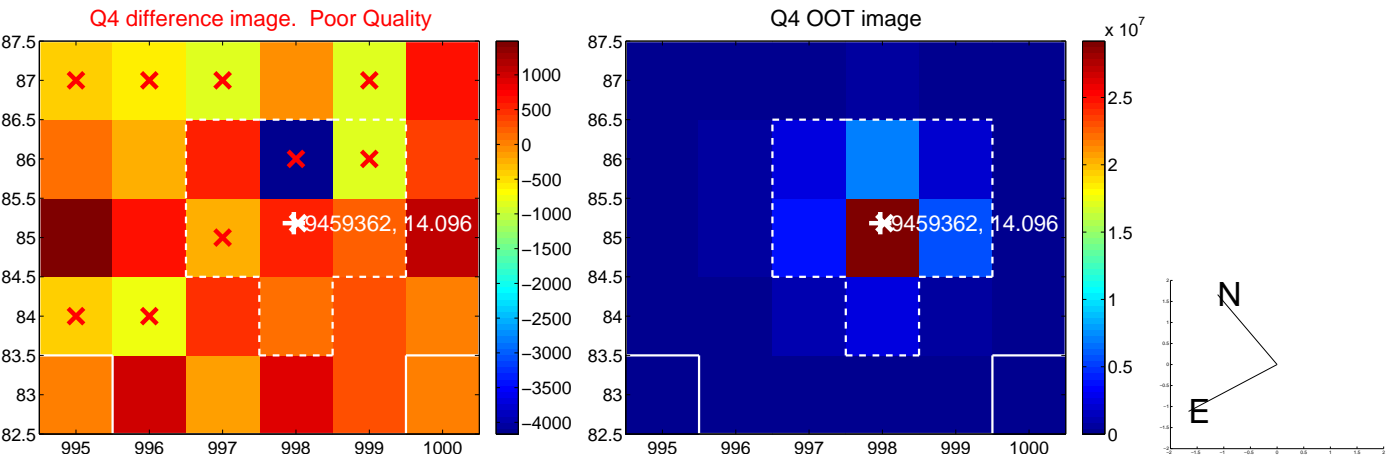
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.413 ± 0.224	1.84	0.207 ± 0.243	0.357 ± 0.218
PRF-fit source offset from KIC position	0.573 ± 0.223	2.57	0.364 ± 0.256	0.442 ± 0.197
photometric centroid source offset	1.05 ± 1.01	1.04	-0.95 ± 1.04	0.44 ± 0.89

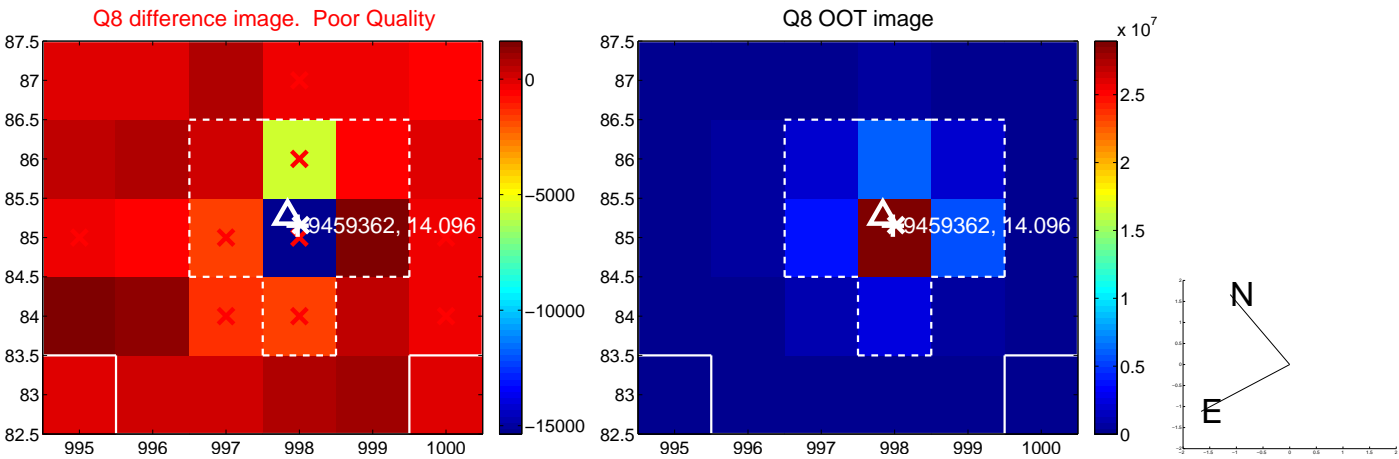


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

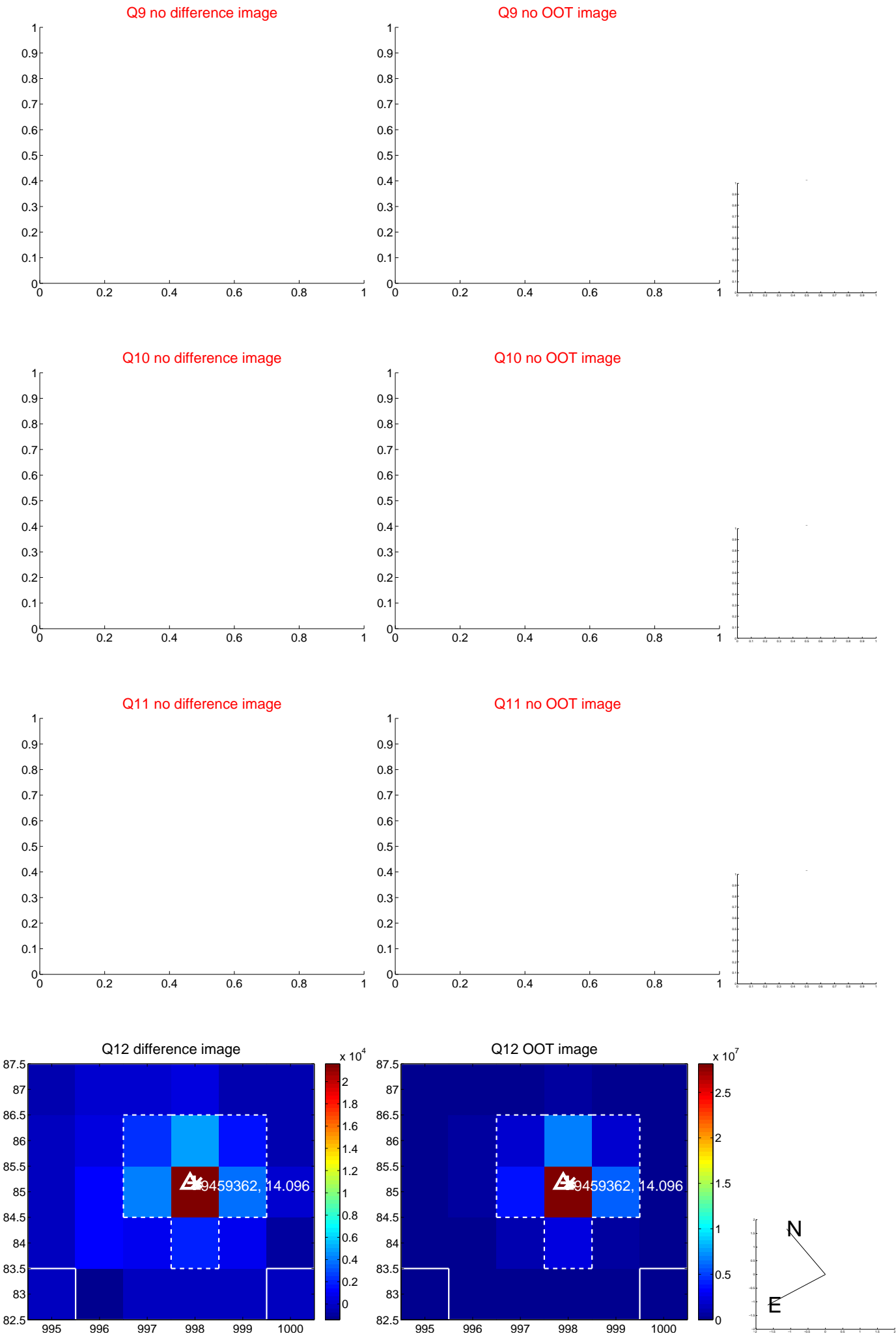
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



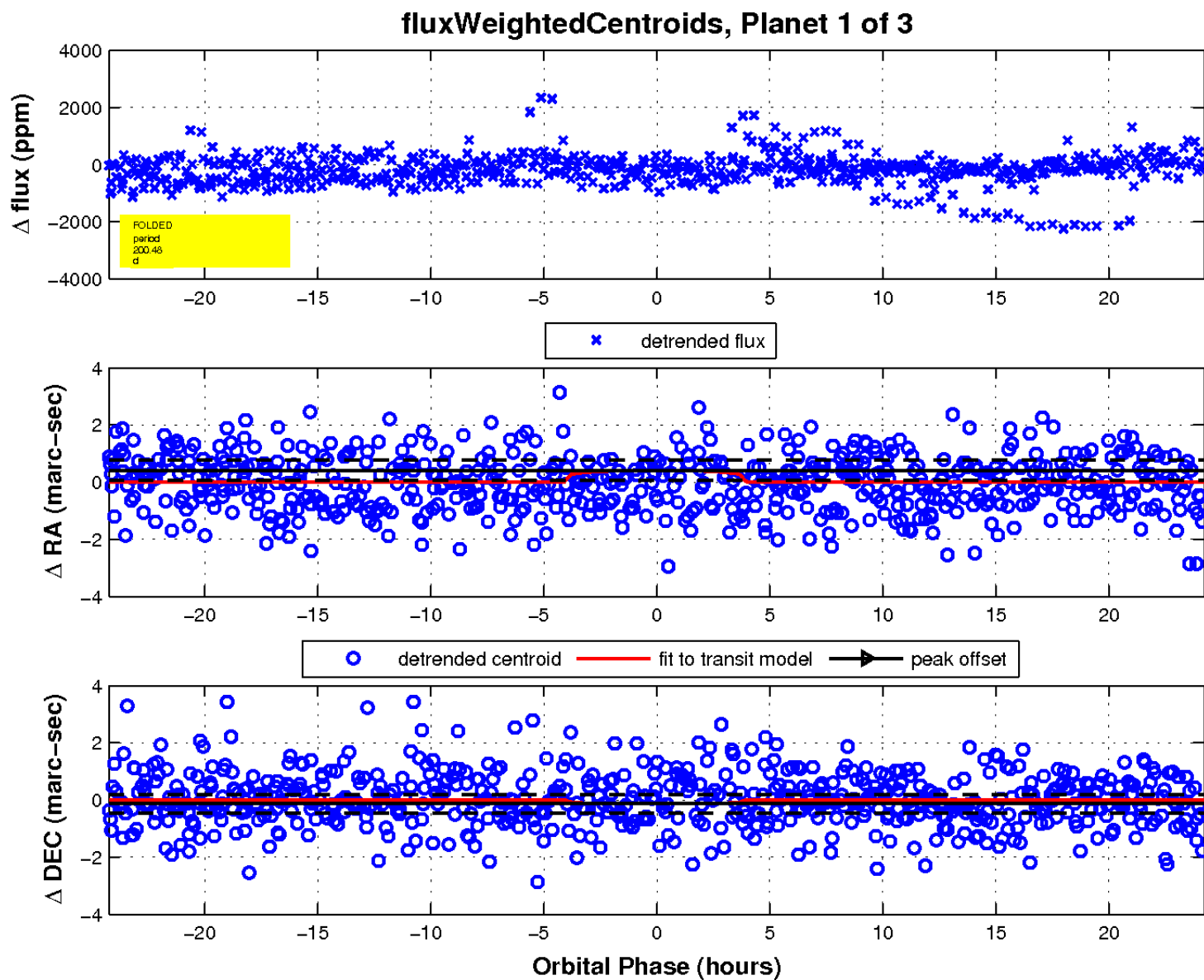
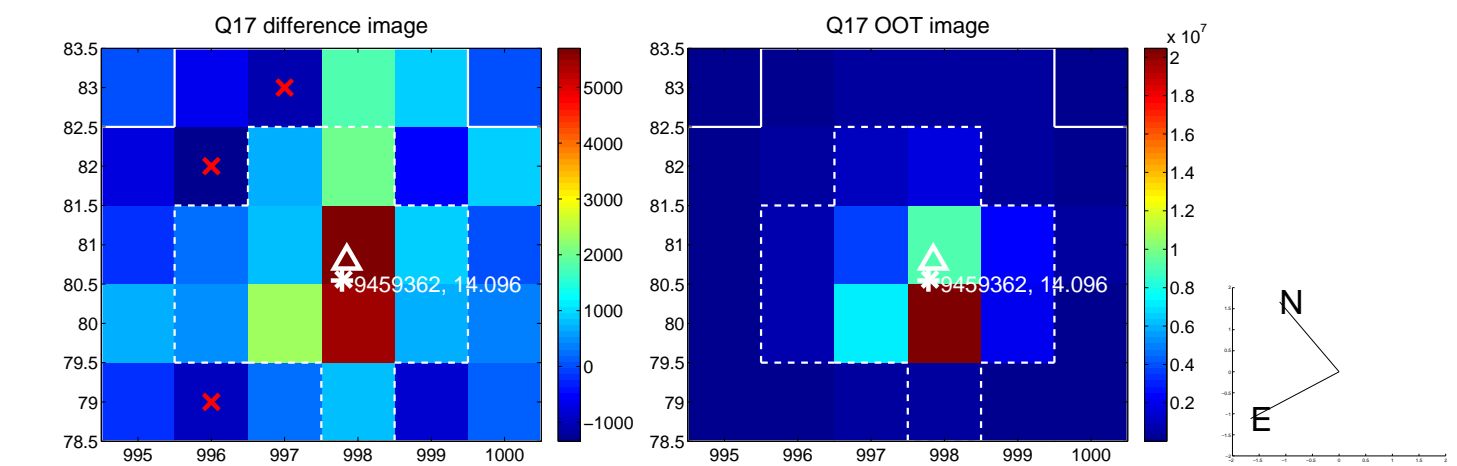
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

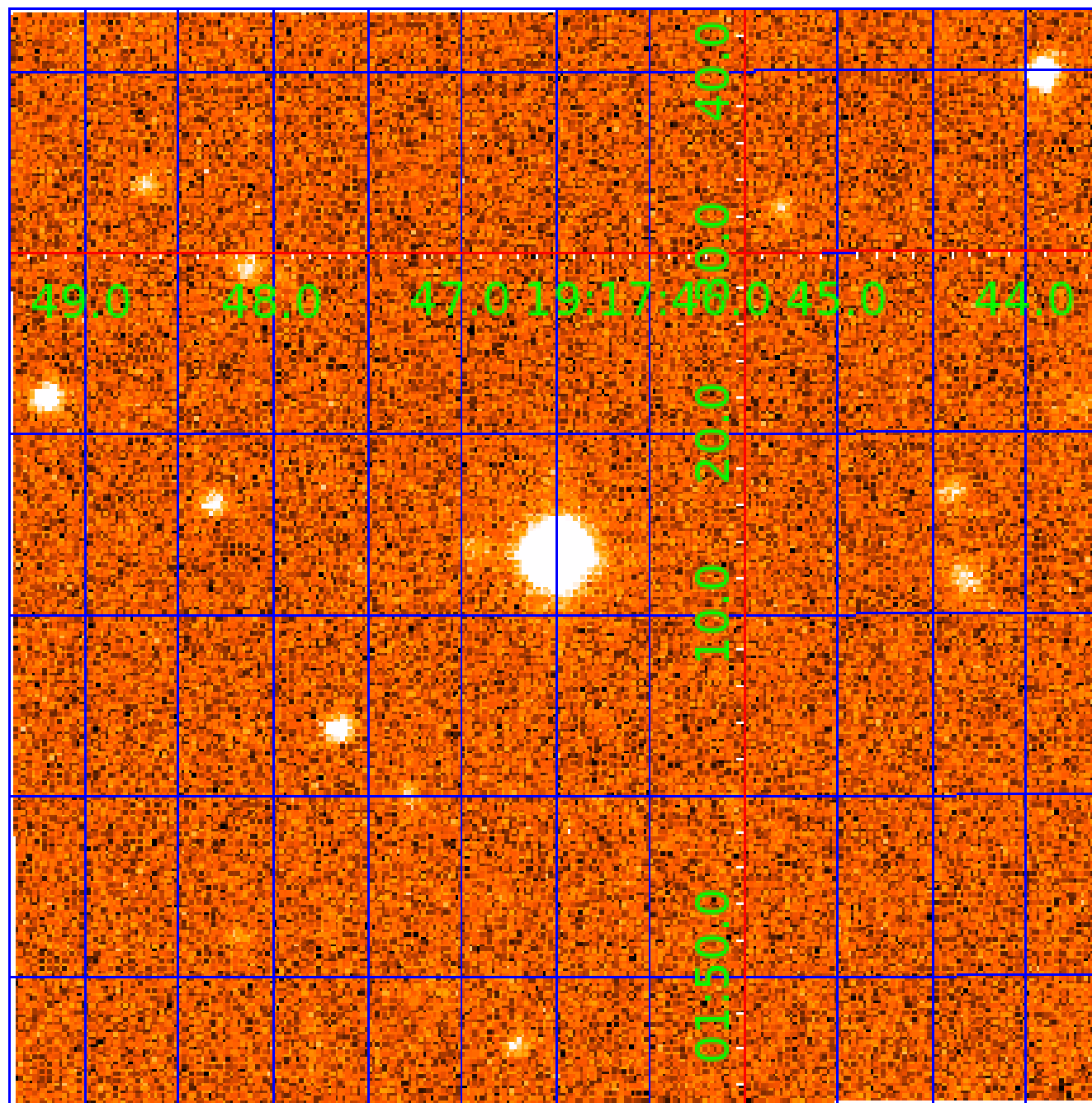


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009459362

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})
009459362-01	OBS	No	200.482889	167.935712	347.1	8.096	10.9	6.1	0.68	5533	1.37	1.14
009459362-02	OBS	No	500.338179	388.040024	625.8	7.356	10.5	7.5	0.68	5533	2.02	0.34
009459362-03	OBS	No	605.909836	136.769203	574.1	4.288	8.4	7.0	0.68	5533	1.81	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009459362-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
009459362-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009459362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

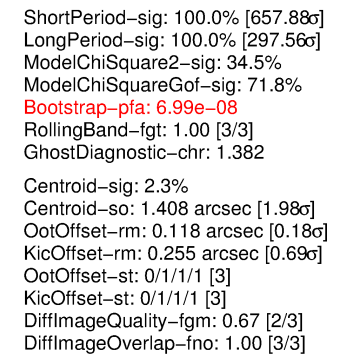
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 009459362-02

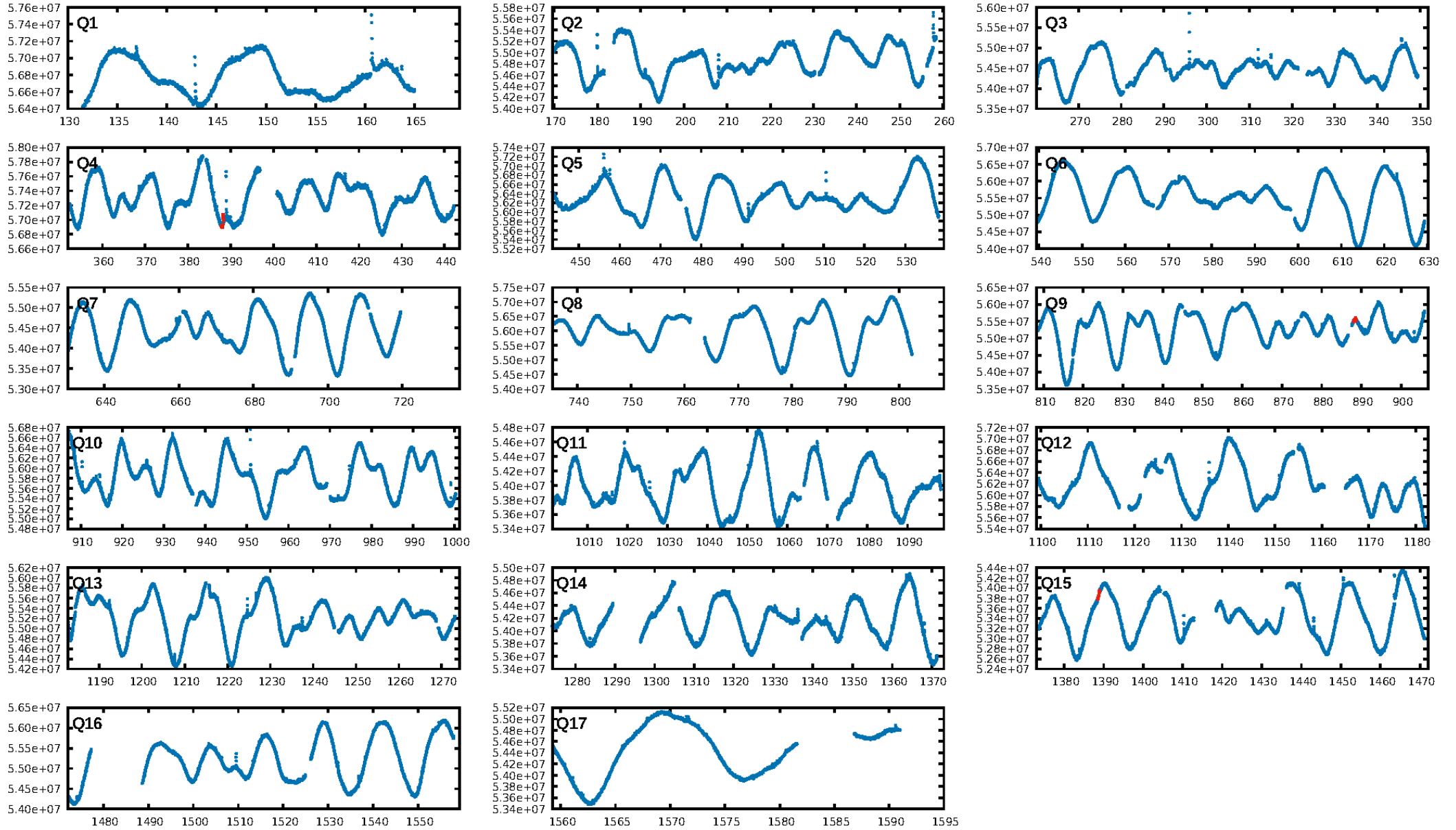
No Significant Match Found

KIC: 9459362 Candidate: 2 of 3 Period: 500.338 d

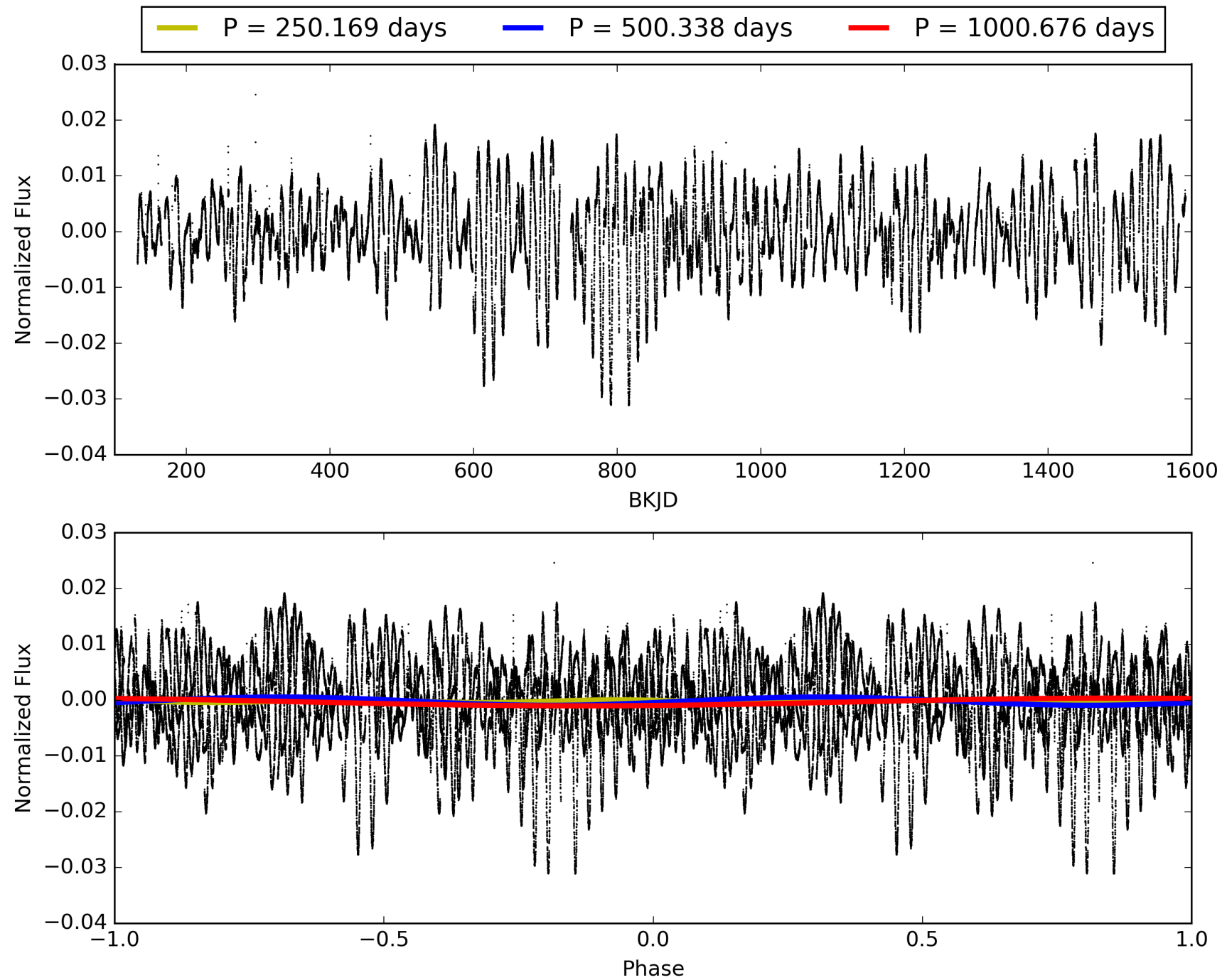


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009459362-02, PDC Light Curves

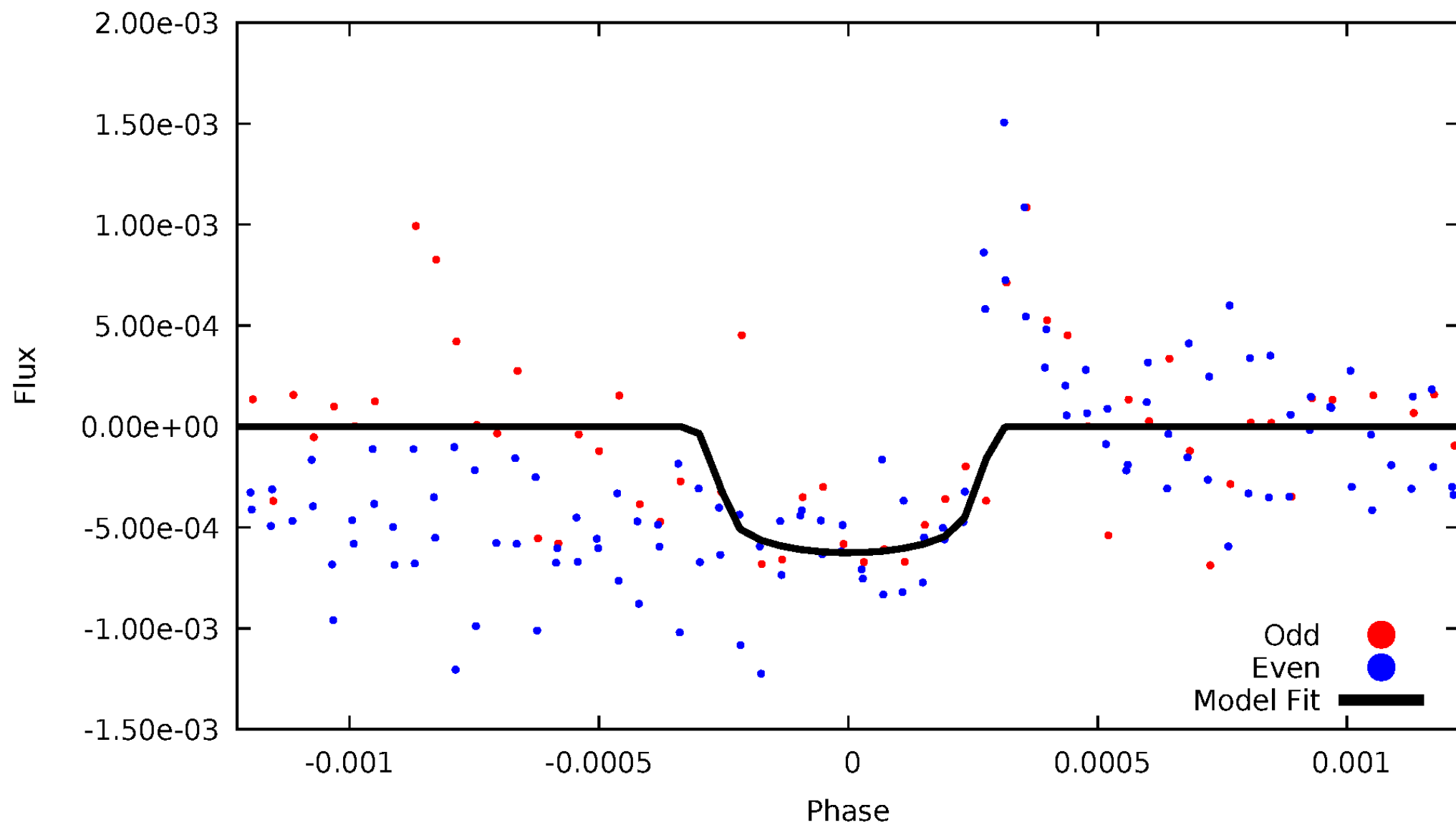


TCE 009459362-02



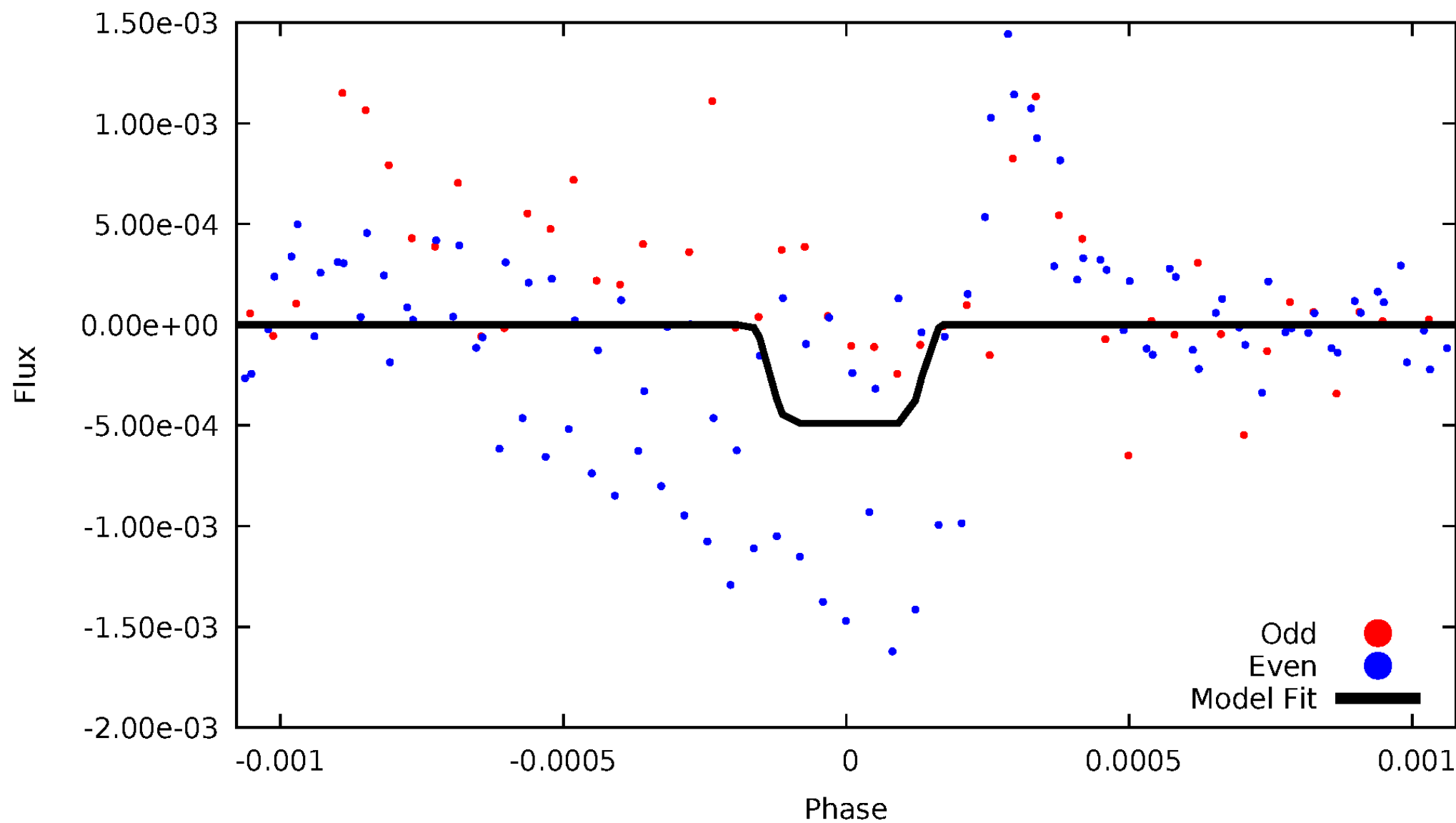
DV Odd/Even

TCE 009459362-02



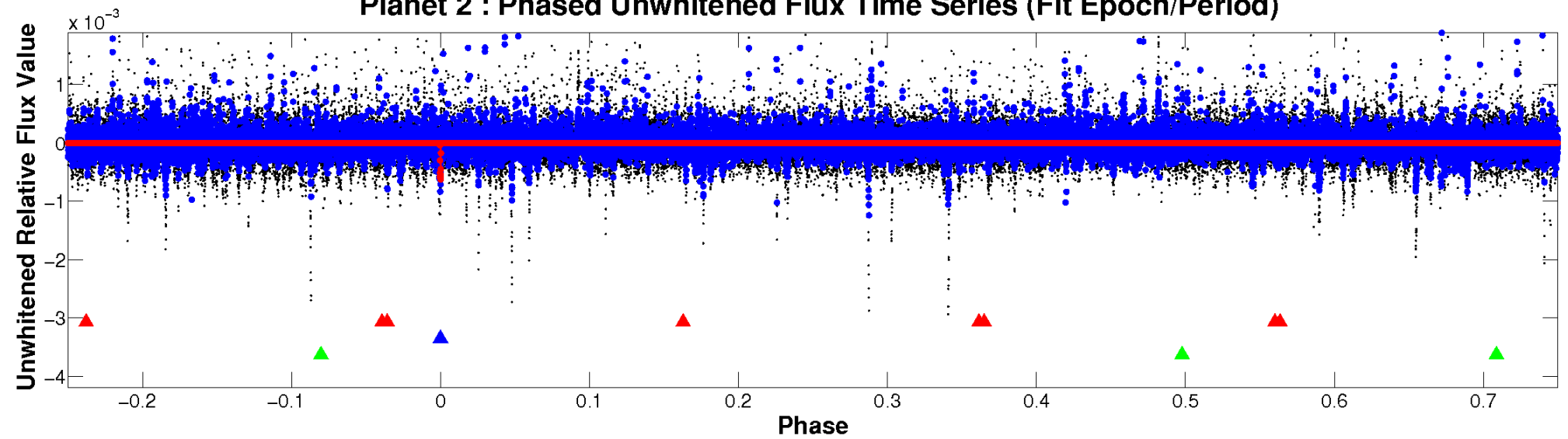
ALT Odd/Even

TCE 009459362-02

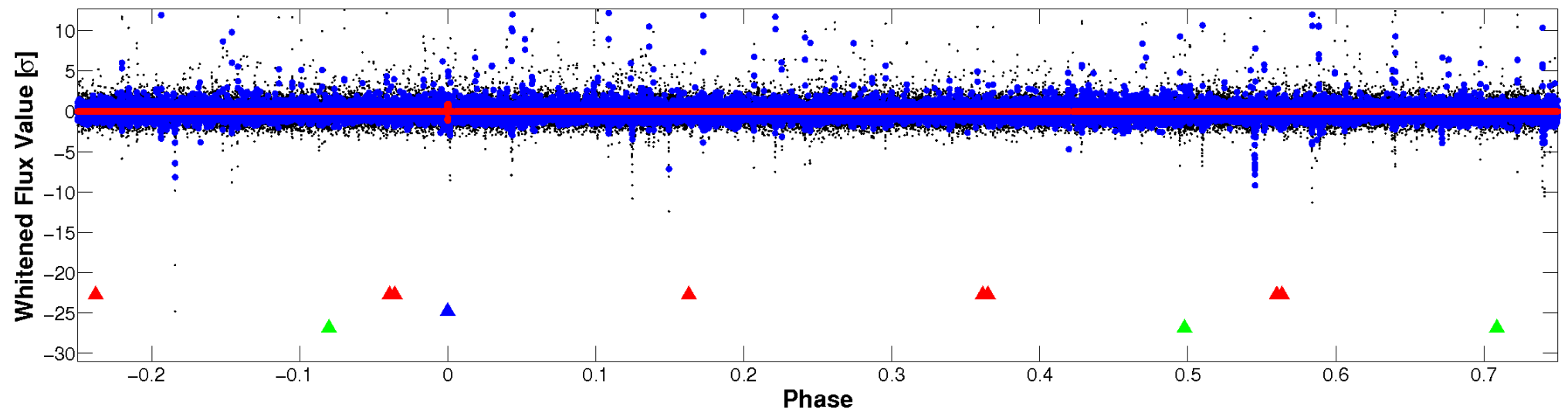


Non-Whitened Vs. Whitened Light Curve

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

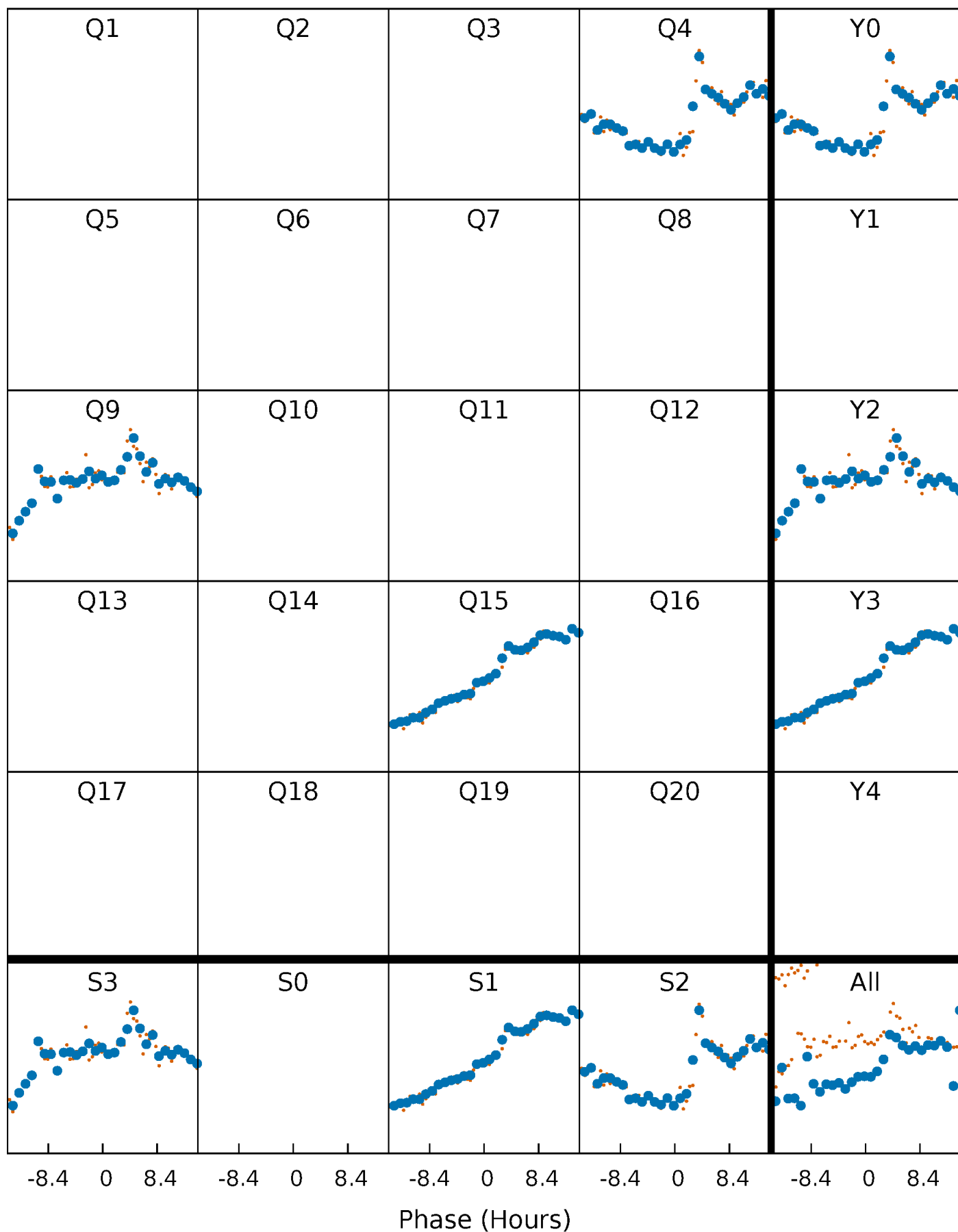


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 009459362-02 $P=500.338179$ Days $T_0=388.040024$ (BKJD)



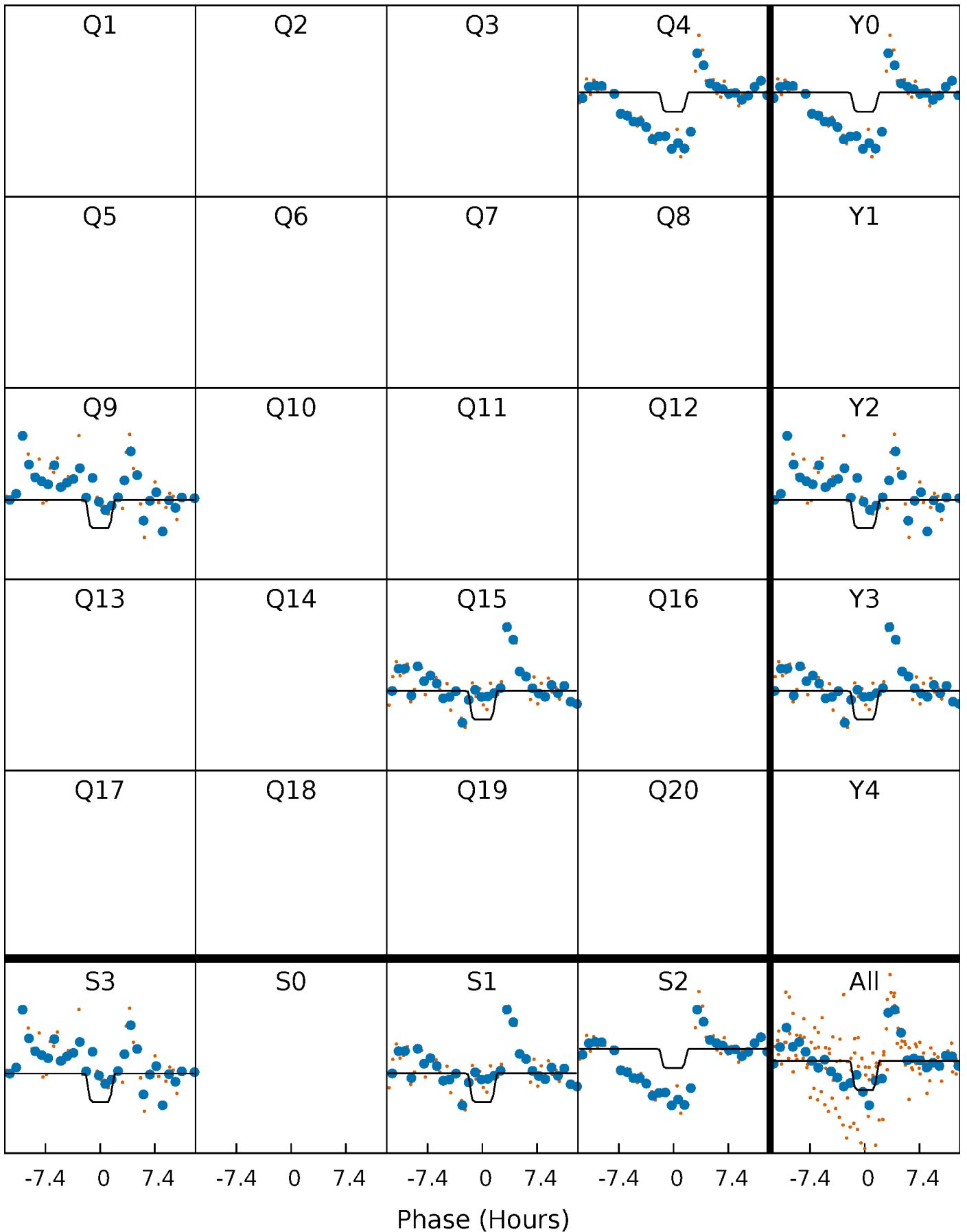
DV Quarter-Phased Transit Curves

TCE 009459362-02 $P=500.338179$ Days $T_0=388.040024$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

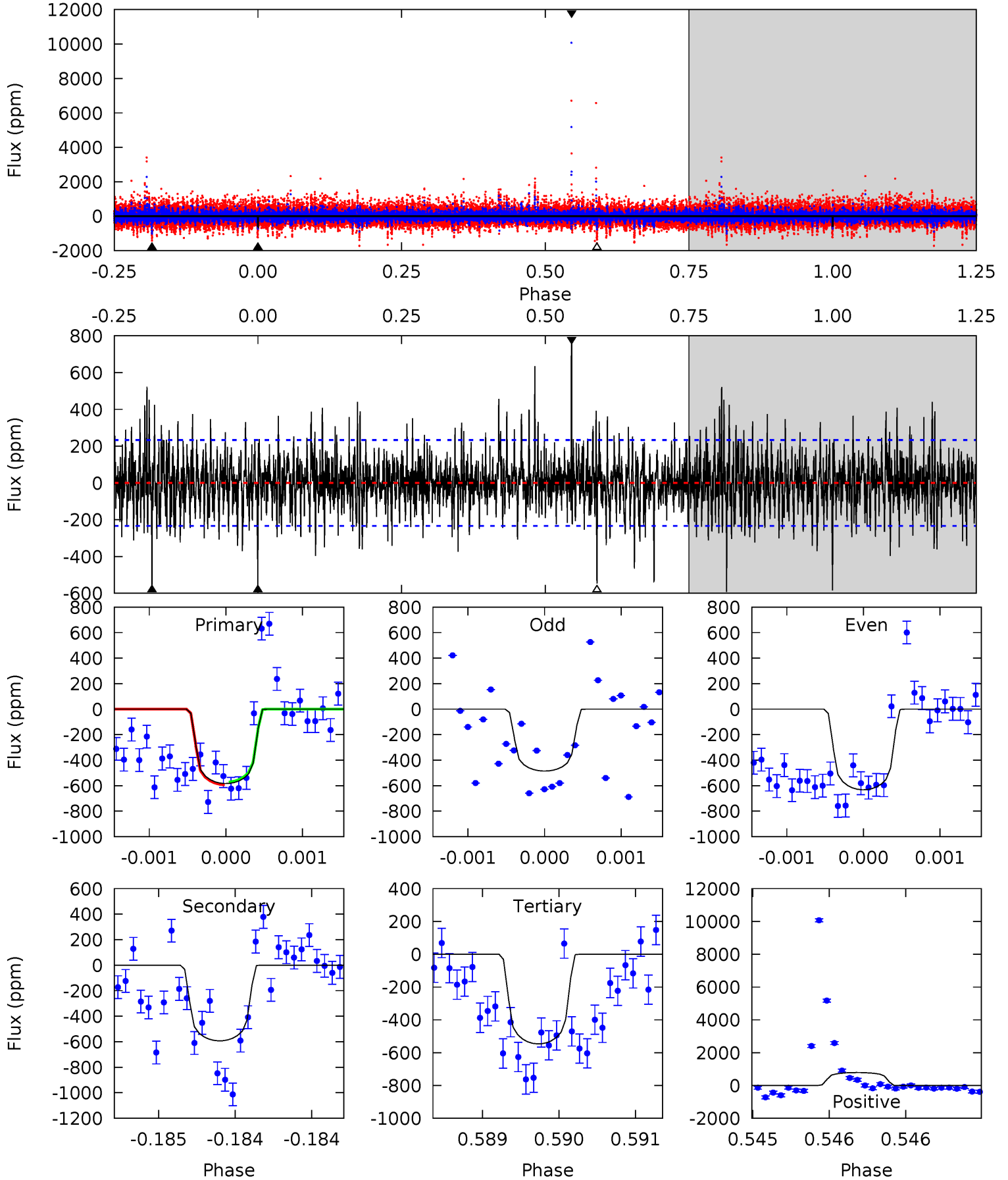
TCE 009459362-02 P=500.336150 Days $T_0=388.053425$ (BKJD)



DV Model-Shift Uniqueness Test

009459362-02, P = 500.338179 Days, E = 388.040024 Days

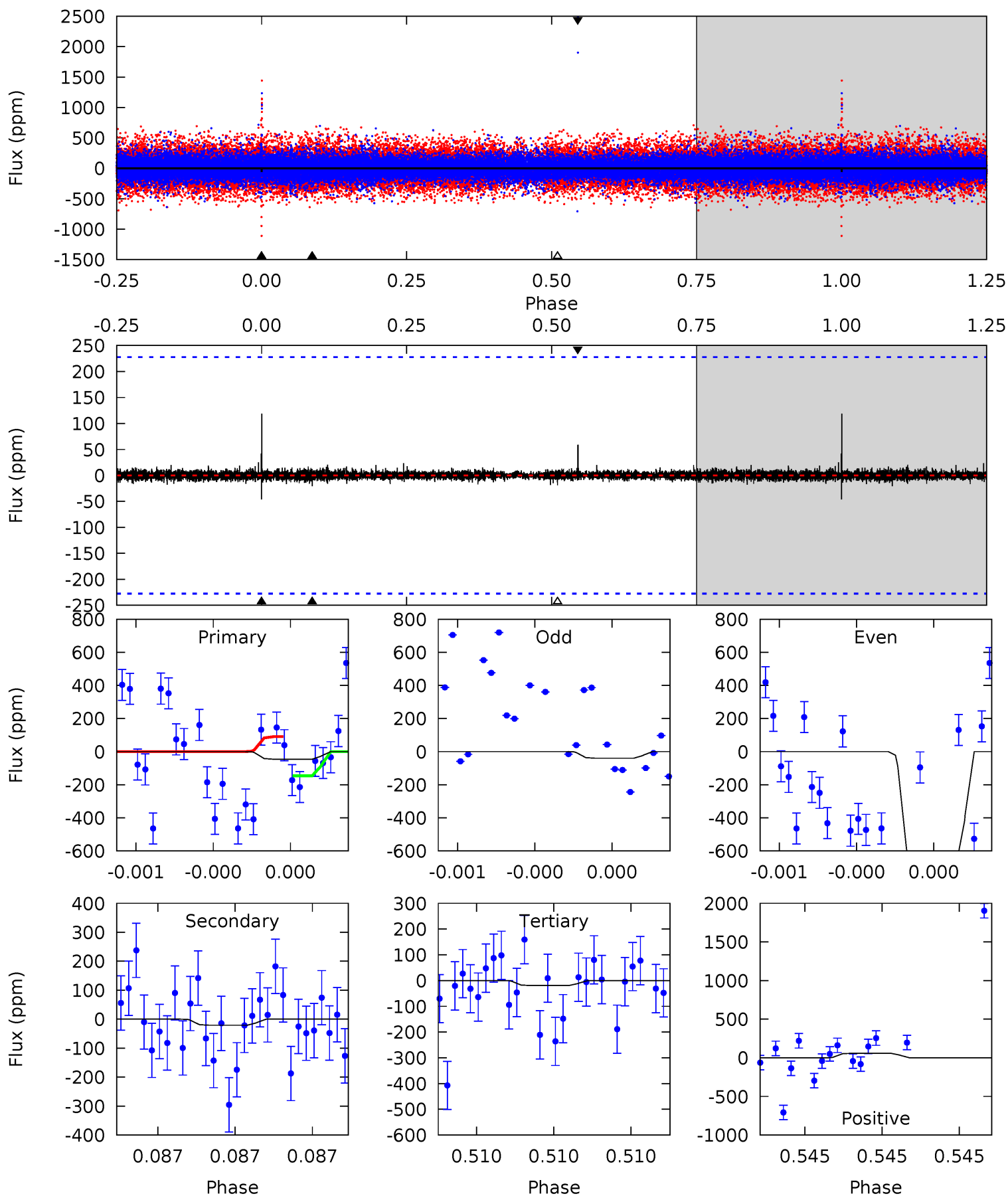
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	14.0	12.9	18.7	5.53	3.41	2.73	0.88	-4.88	1.10	-4.66	1.39	1.05	0.57	0.25



Alt Model-Shift Uniqueness Test

009459362-02, P = 500.336150 Days, E = 388.053425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.14	0.52	0.47	1.46	5.65	3.59	0.11	0.67	-0.32	0.05	-0.94	9.98	7.06	0.72	0



Stellar Parameters For KIC 009459362

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5533^{+164}_{-164}	$4.592^{+0.078}_{-0.058}$	$-1.020^{+0.300}_{-0.300}$	$0.683^{+0.065}_{-0.058}$	$0.665^{+0.063}_{-0.024}$	$2.939^{+0.893}_{-0.573}$
	+3%/-3%	+2%/-1%	+29%/-29%	+10%/-8%	+9%/-4%	+30%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009459362-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-593 ± 42	$1.99^{+0.37}_{-0.34}$	270^{+11}_{-10}	5279^{+498}_{-382}	95643^{+46570}_{-27442}
Alt.	-21 ± 40	$1.64^{+0.37}_{-0.35}$	270^{+10}_{-10}	3029^{+684}_{-6176}	4108^{+11619}_{-9589}

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

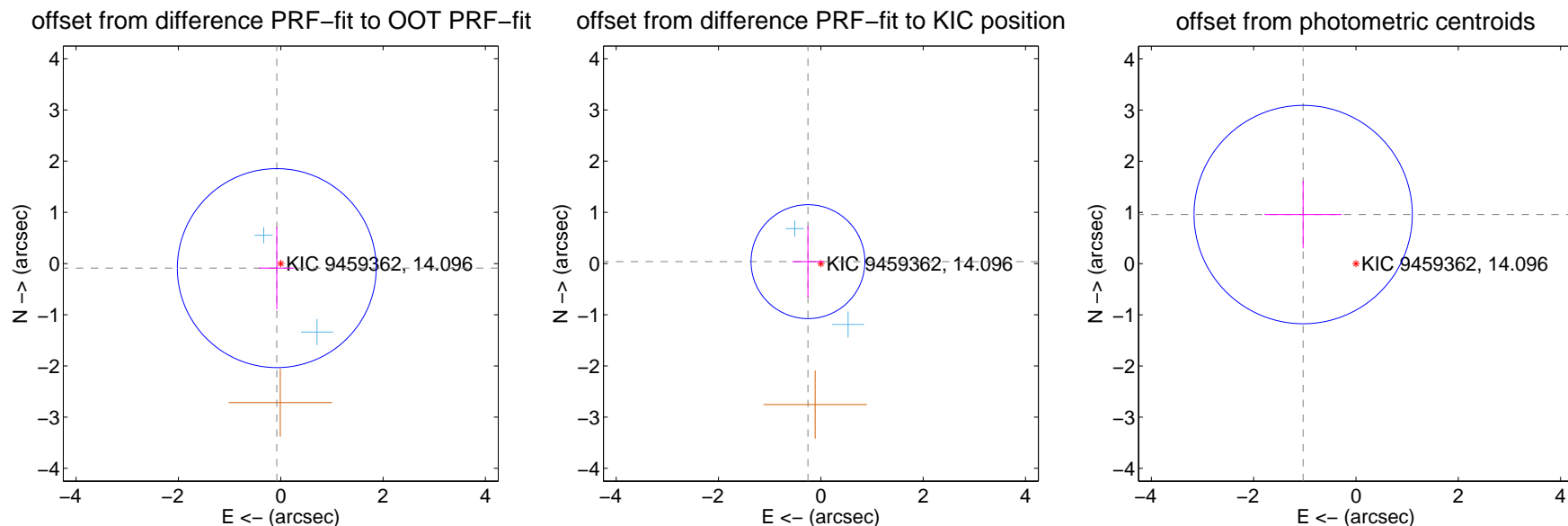
DV Centroid Data

Supplemental centroid analysis for 009459362-02. Kepler magnitude: 14.10. Transit SNR 7.51

There are 2 quarters with good PRF difference image offsets

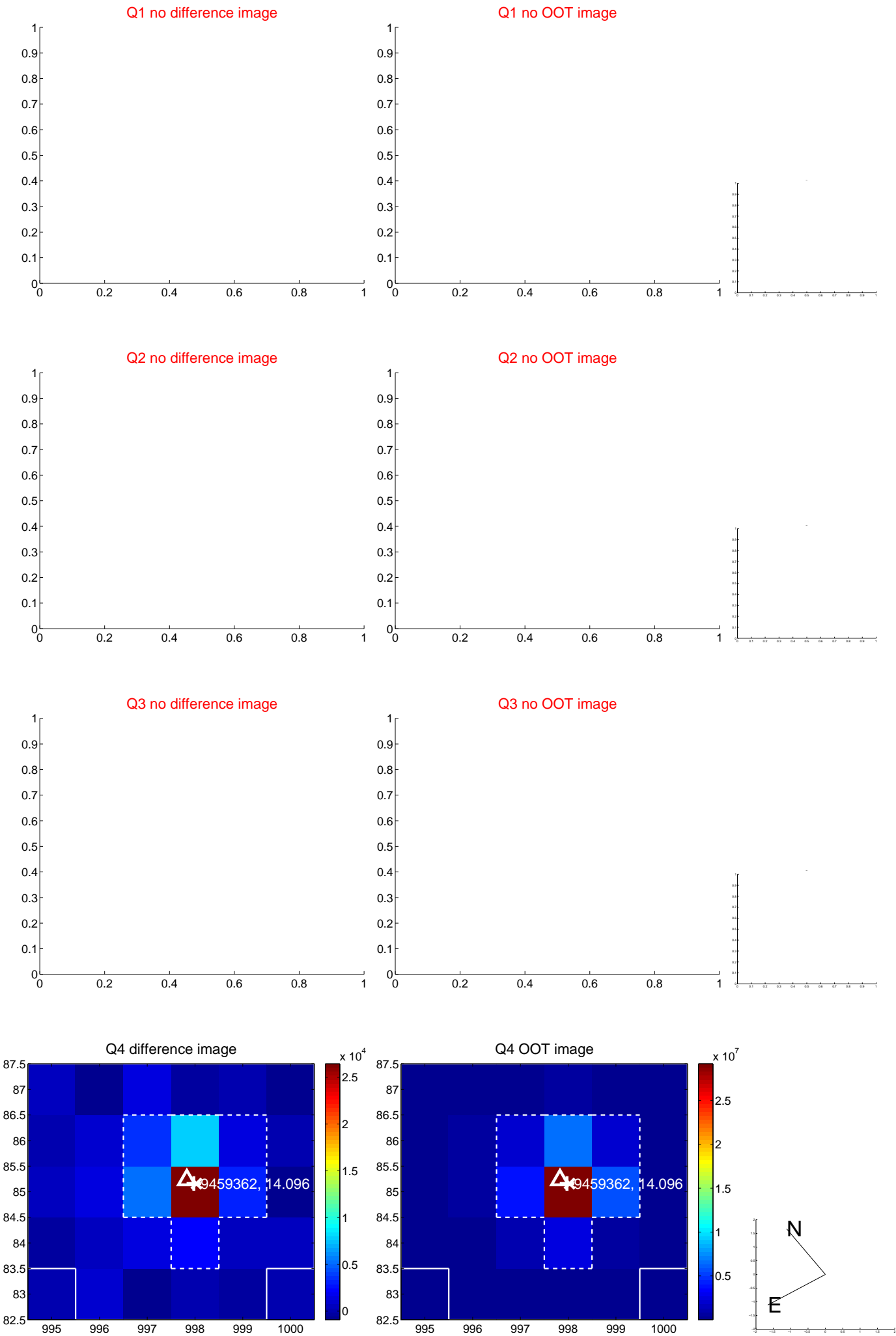
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.648	0.18	0.078 ± 0.343	-0.089 ± 0.805
PRF-fit source offset from KIC position	0.255 ± 0.371	0.69	0.252 ± 0.305	0.037 ± 0.690
photometric centroid source offset	1.41 ± 0.71	1.98	1.03 ± 0.75	0.96 ± 0.66



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.

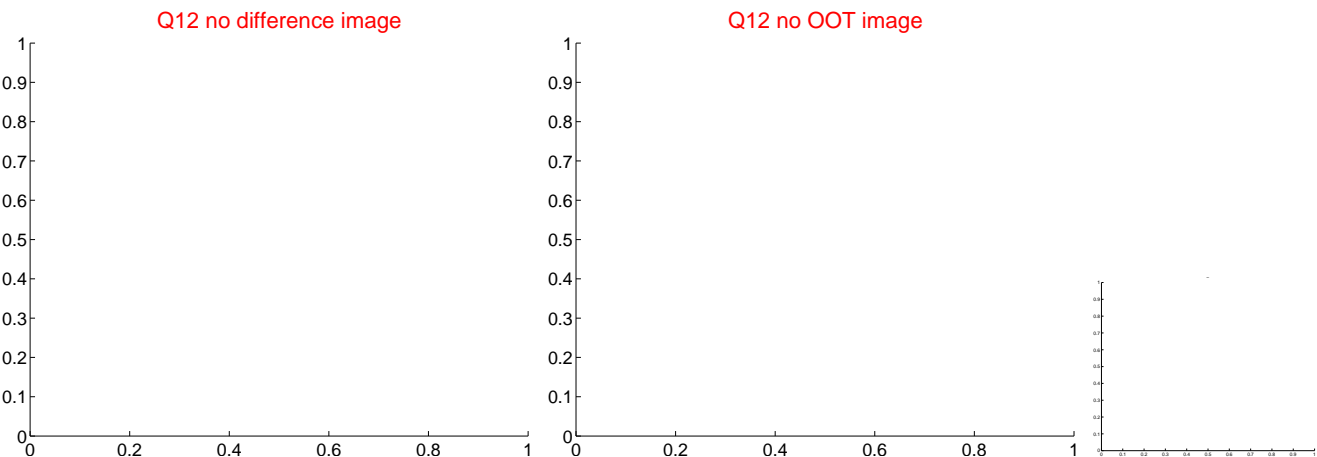
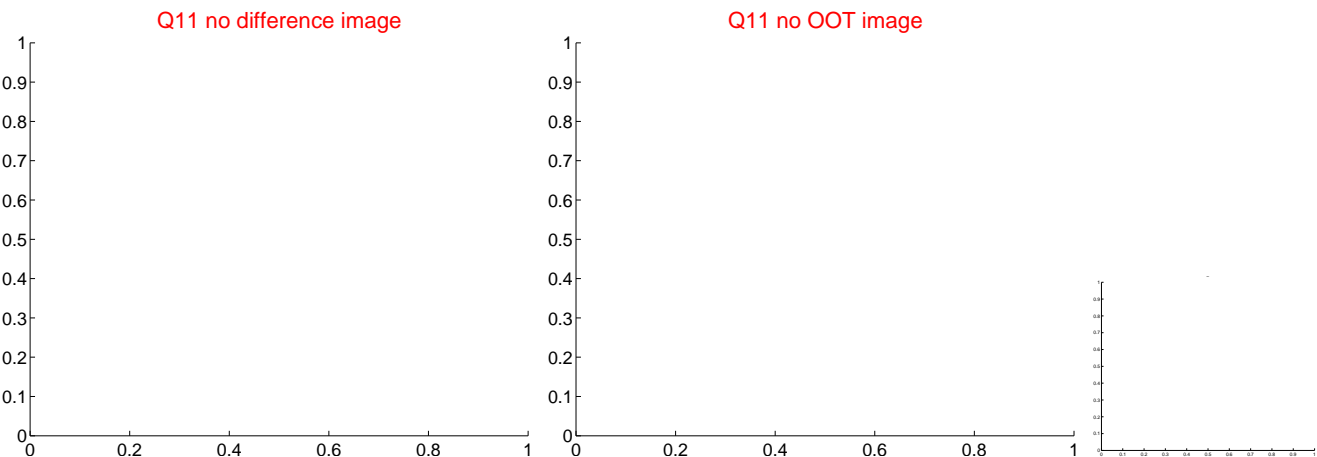
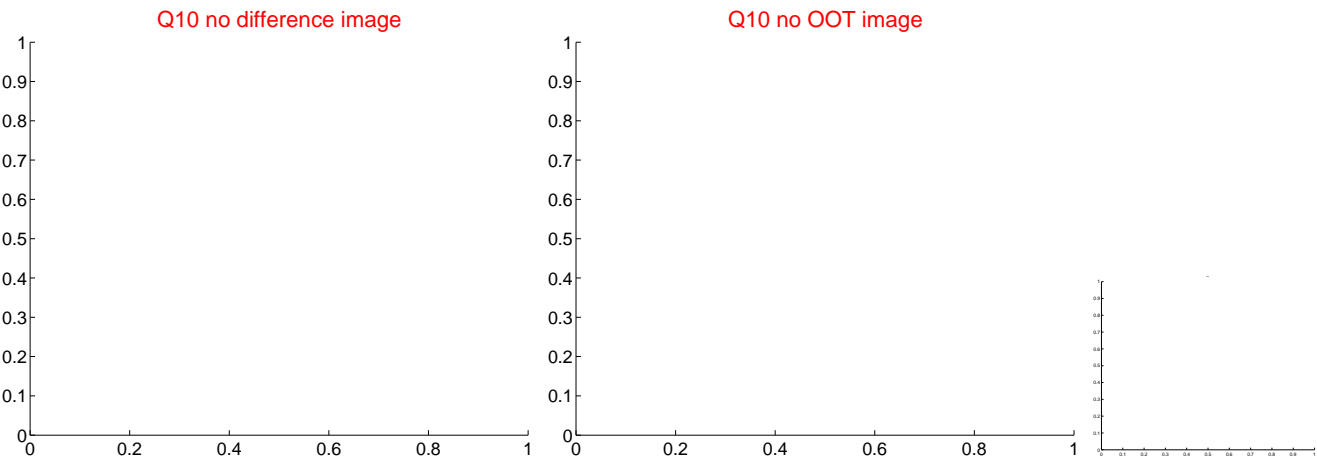
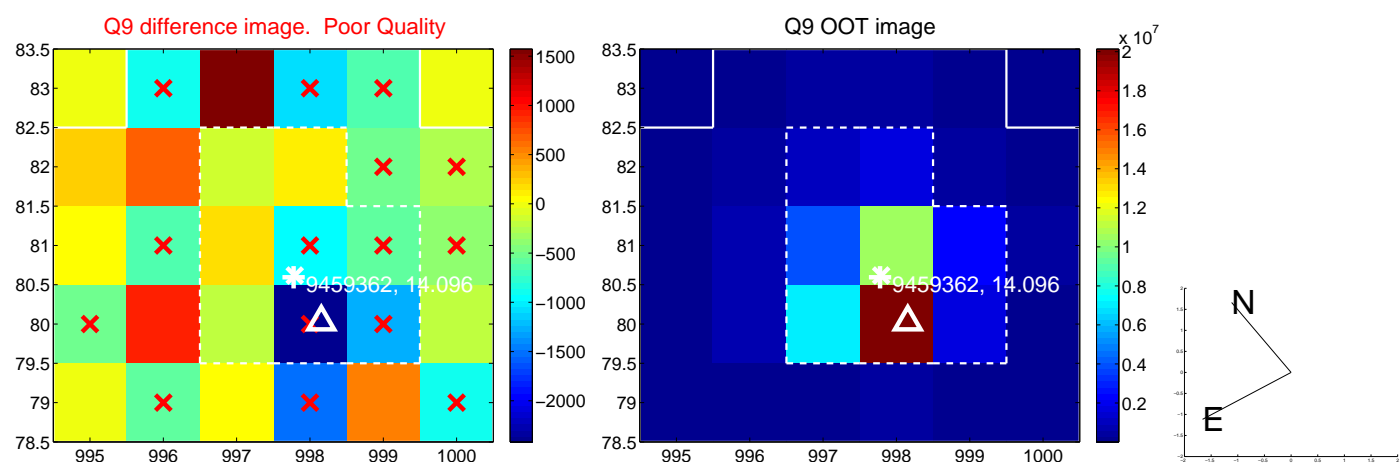
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



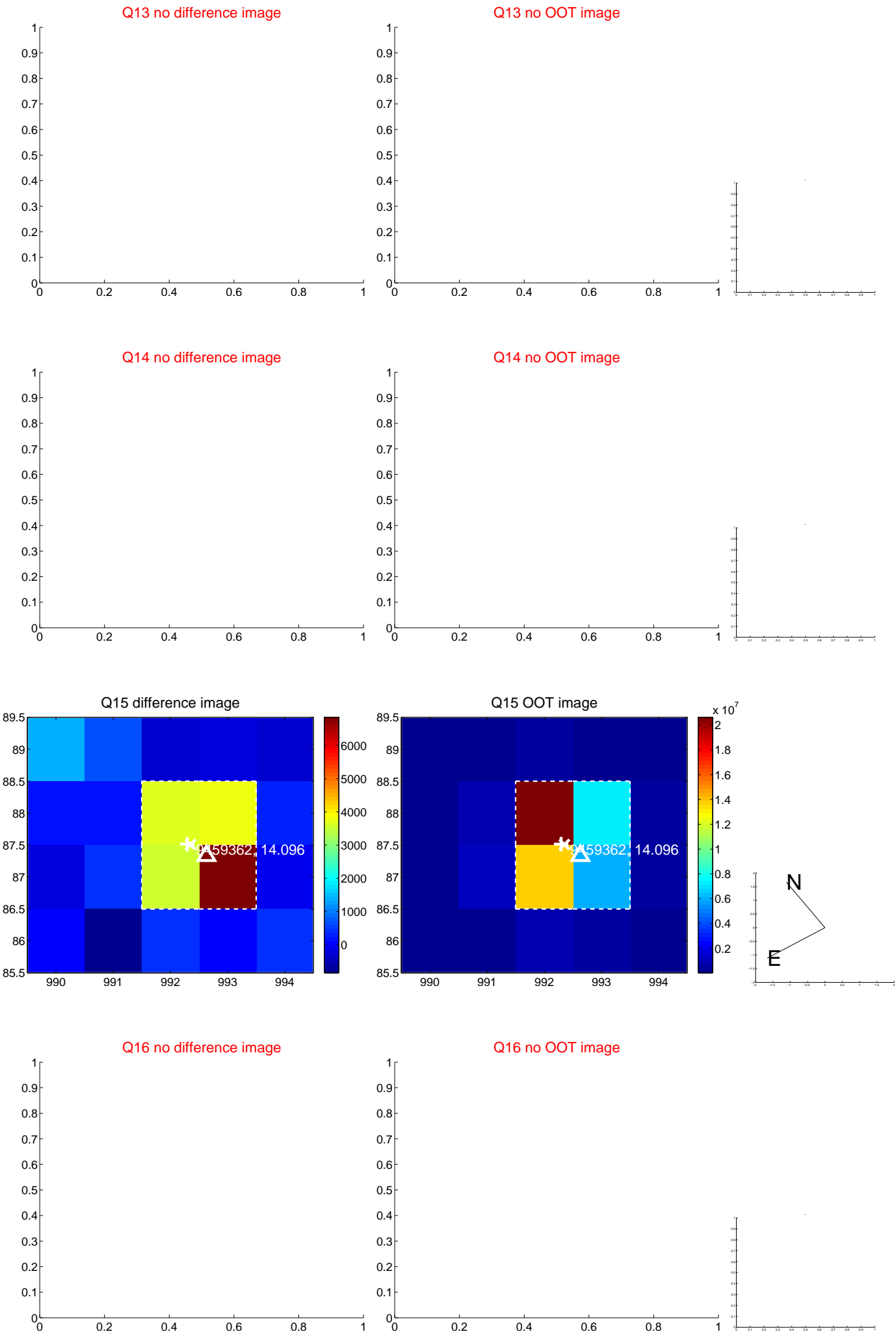
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



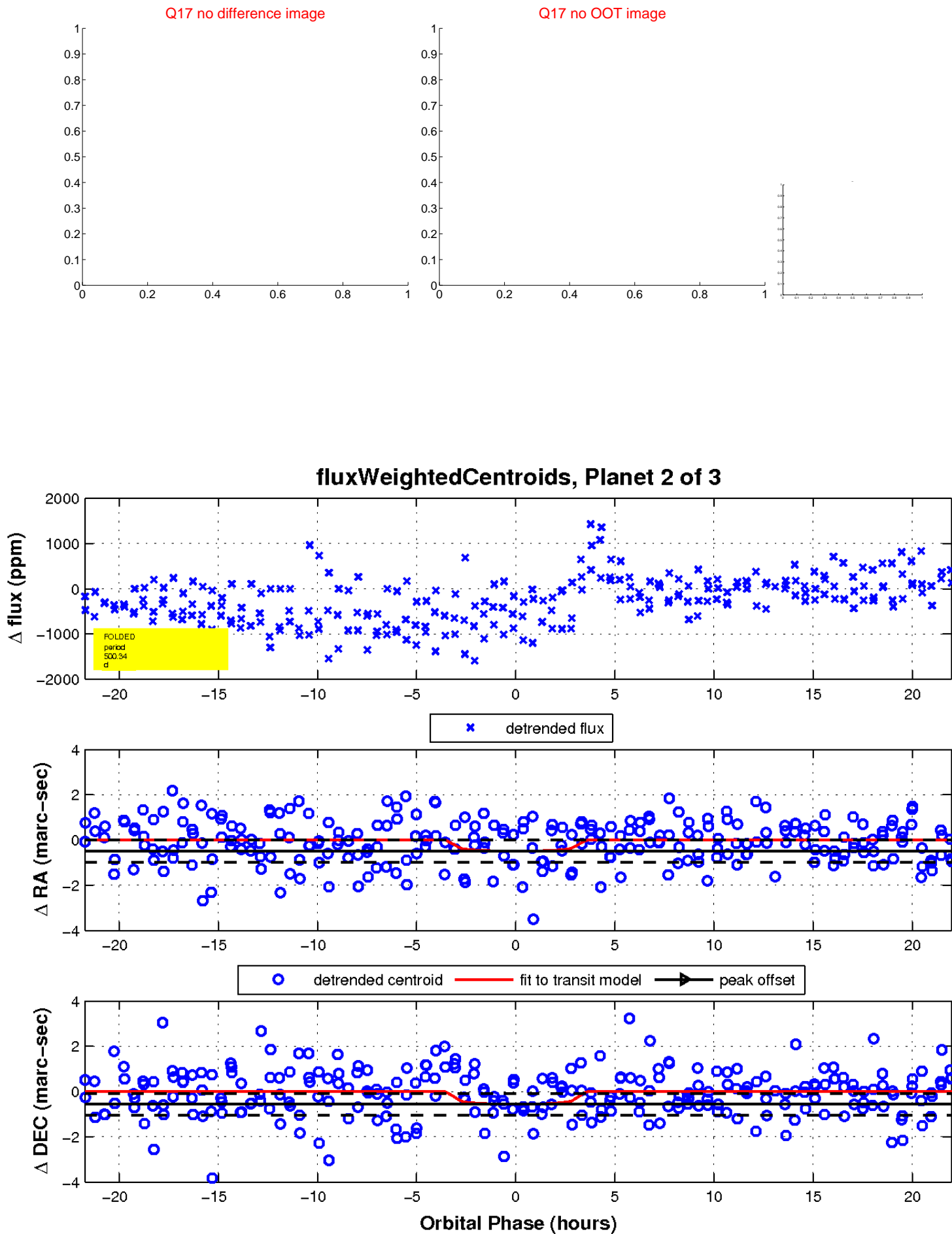
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

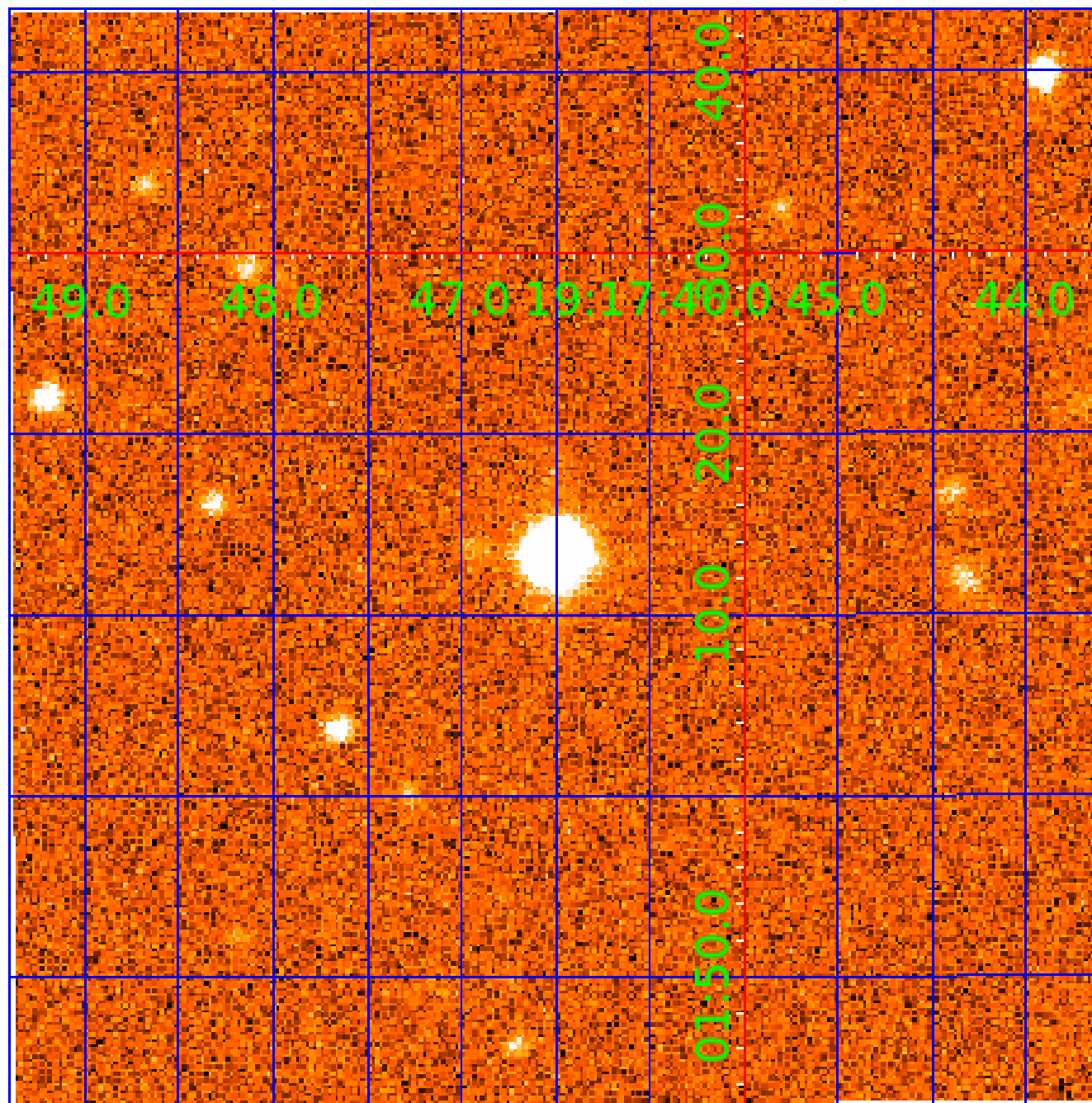


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009459362

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})
009459362-01	OBS	No	200.482889	167.935712	347.1	8.096	10.9	6.1	0.68	5533	1.37	1.14
009459362-02	OBS	No	500.338179	388.040024	625.8	7.356	10.5	7.5	0.68	5533	2.02	0.34
009459362-03	OBS	No	605.909836	136.769203	574.1	4.288	8.4	7.0	0.68	5533	1.81	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009459362-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
009459362-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009459362-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

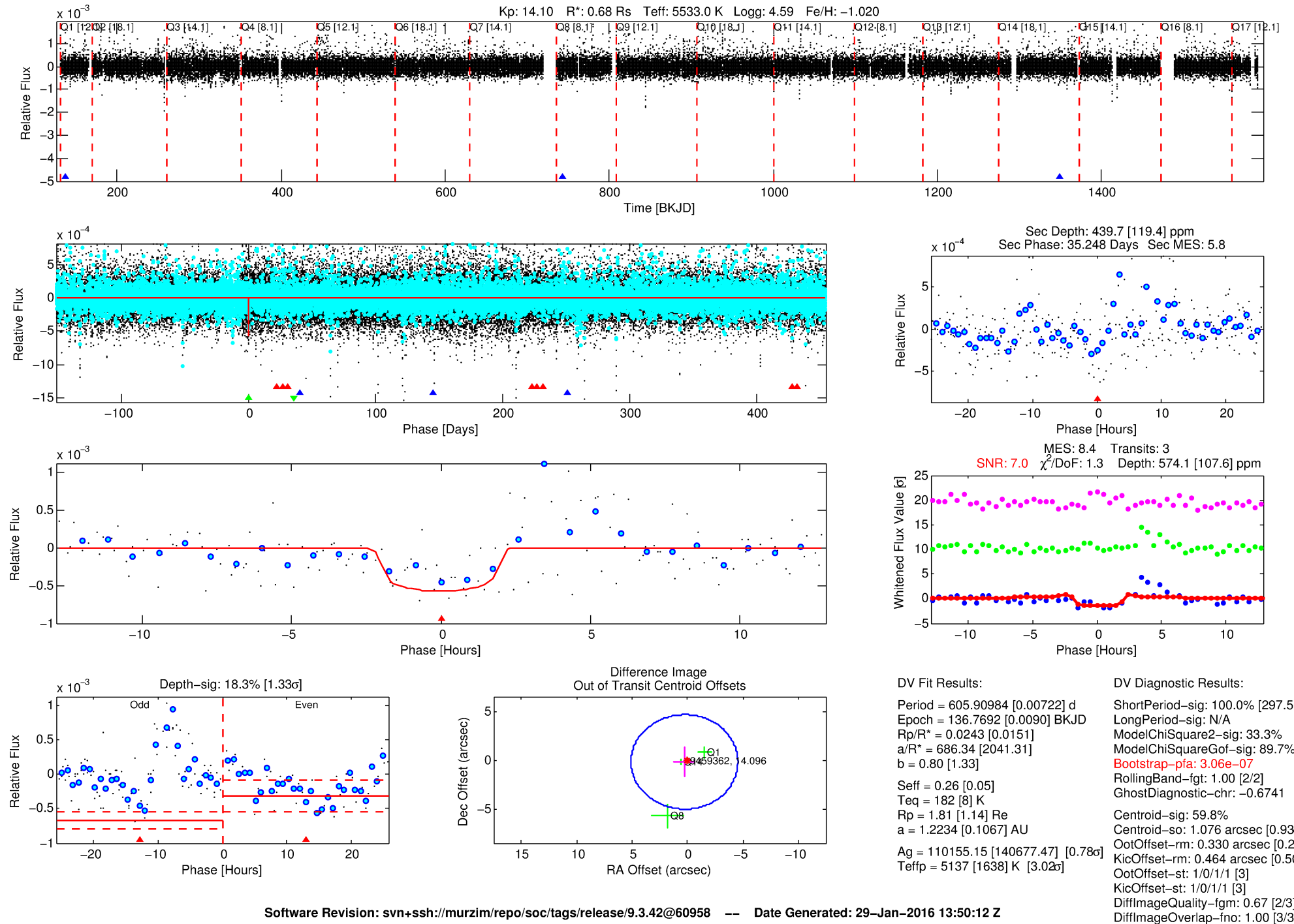
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009459362-03

No Significant Match Found

DV One-Page Summary

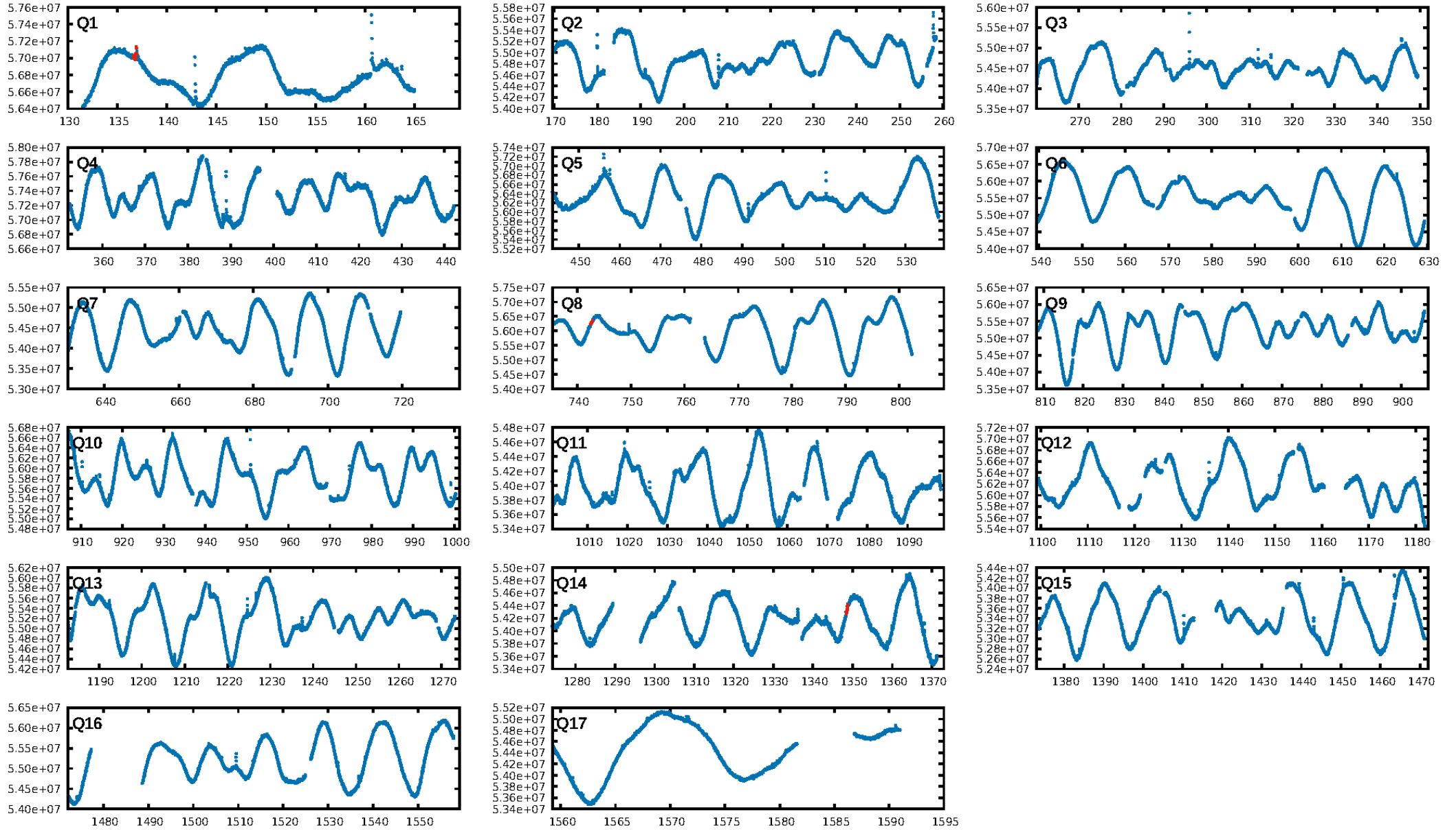
KIC: 9459362 Candidate: 3 of 3 Period: 605.910 d



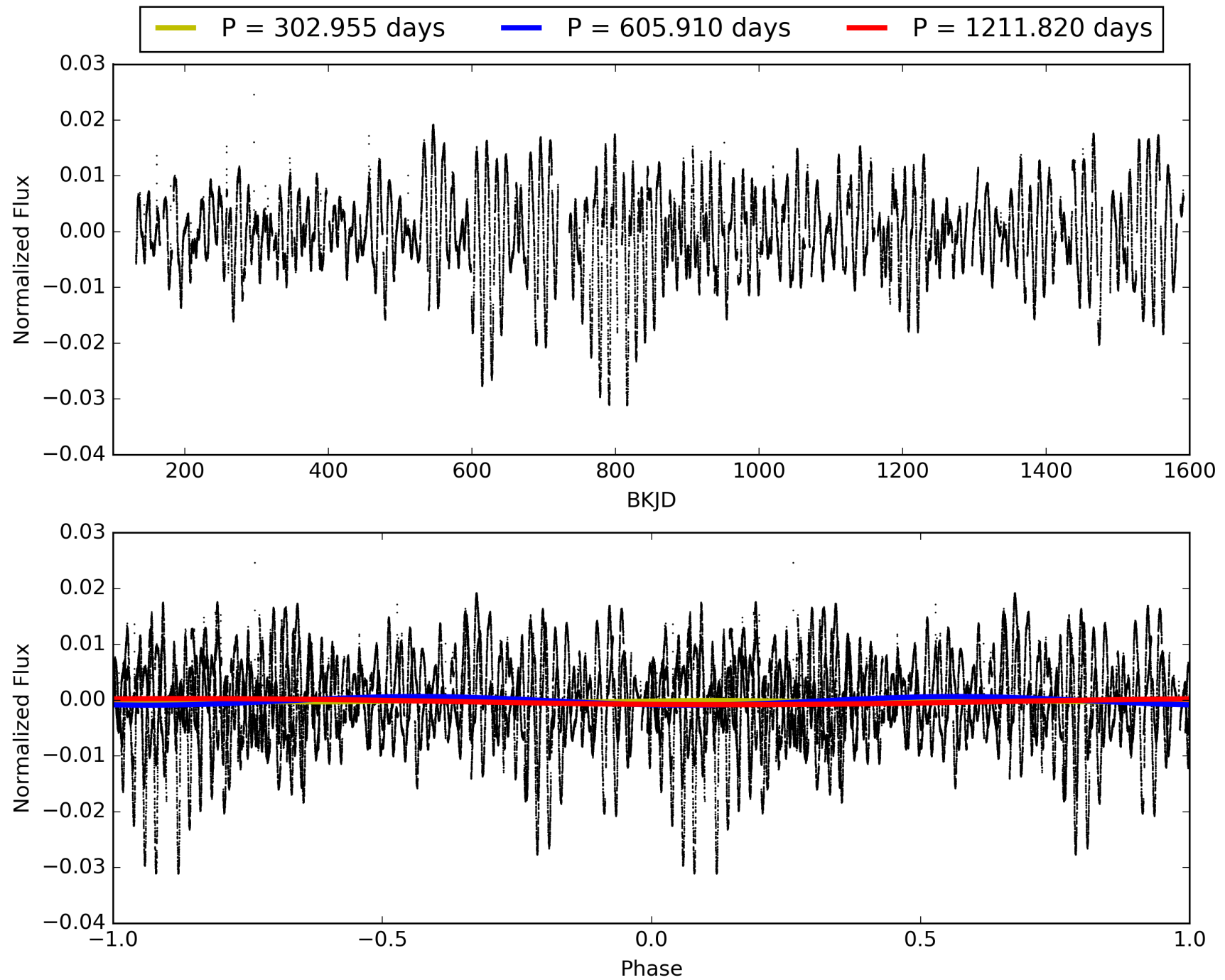
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:50:12 Z

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

TCE 009459362-03, PDC Light Curves

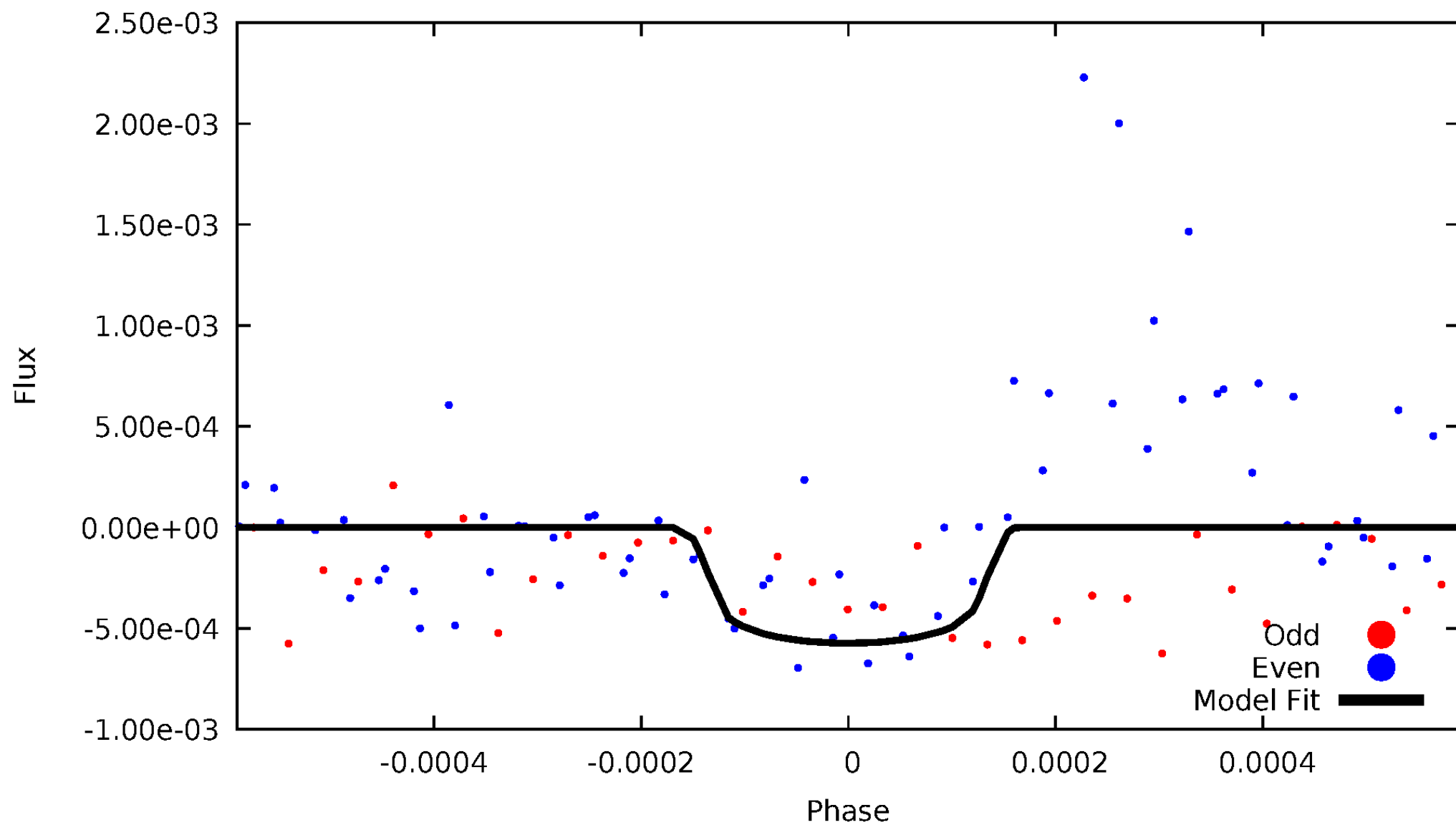


TCE 009459362-03



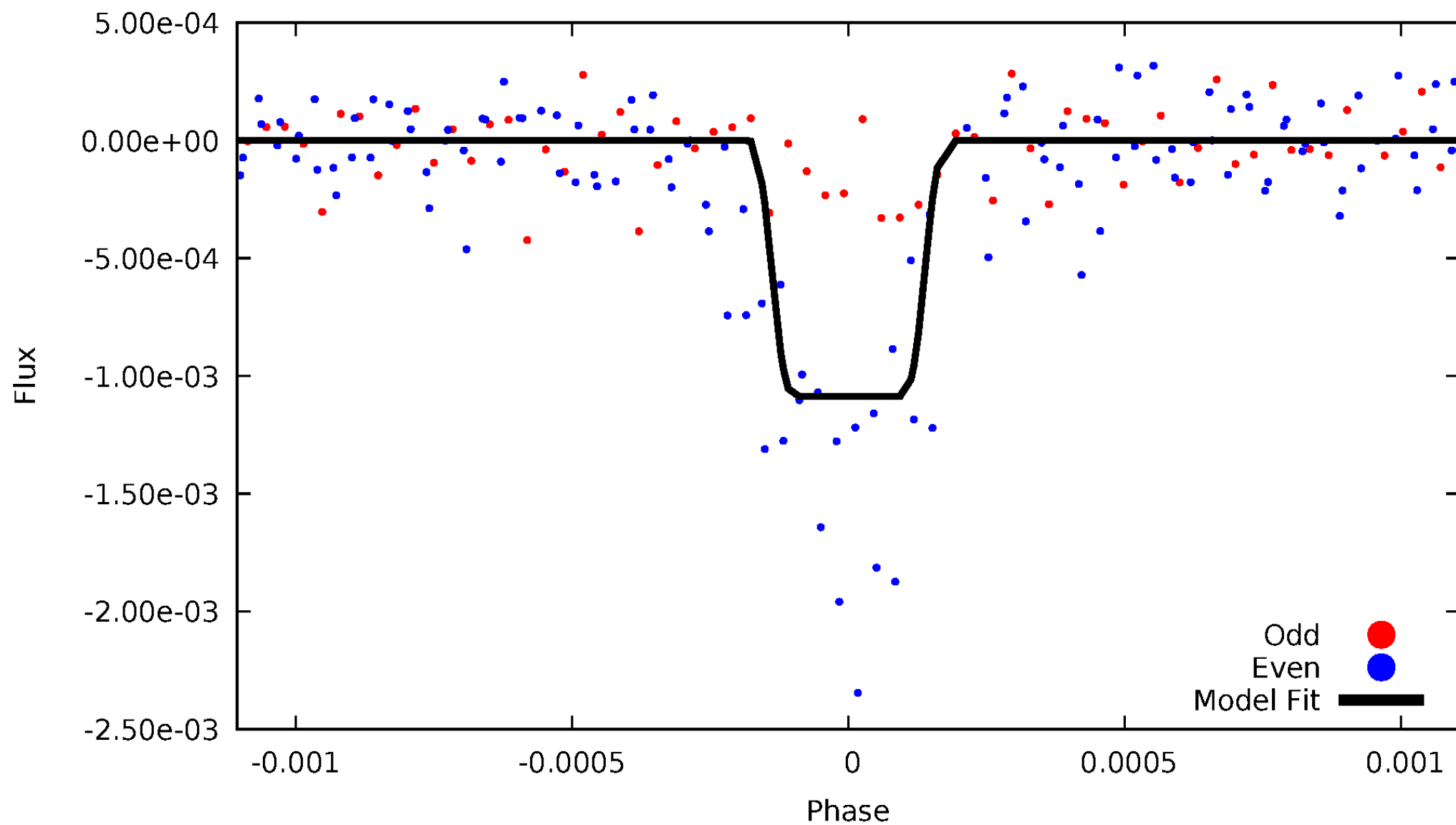
DV Odd/Even

TCE 009459362-03



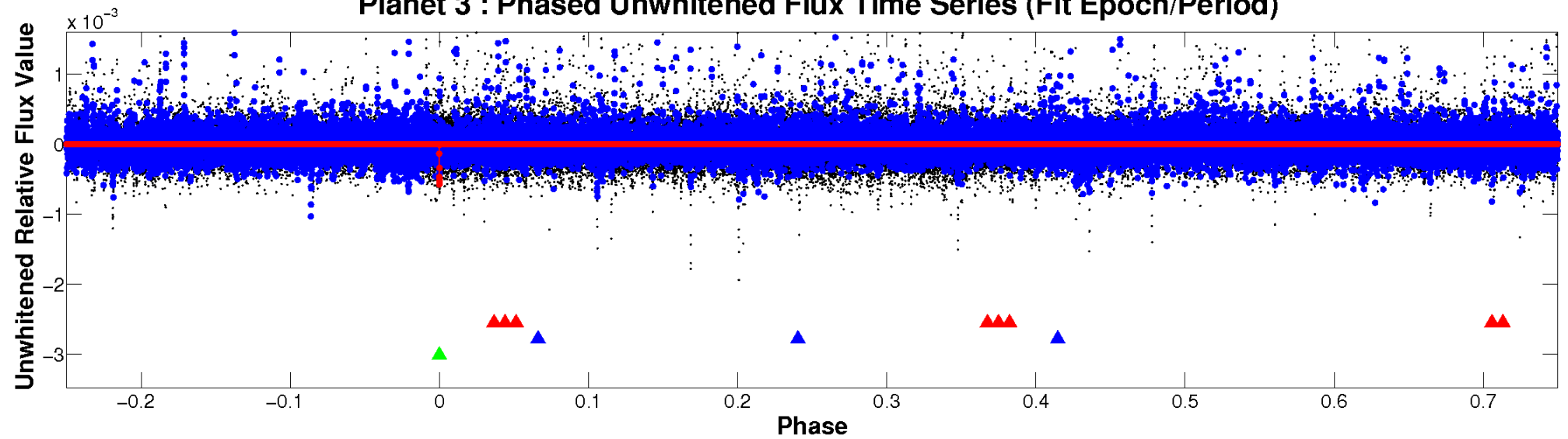
ALT Odd/Even

TCE 009459362-03

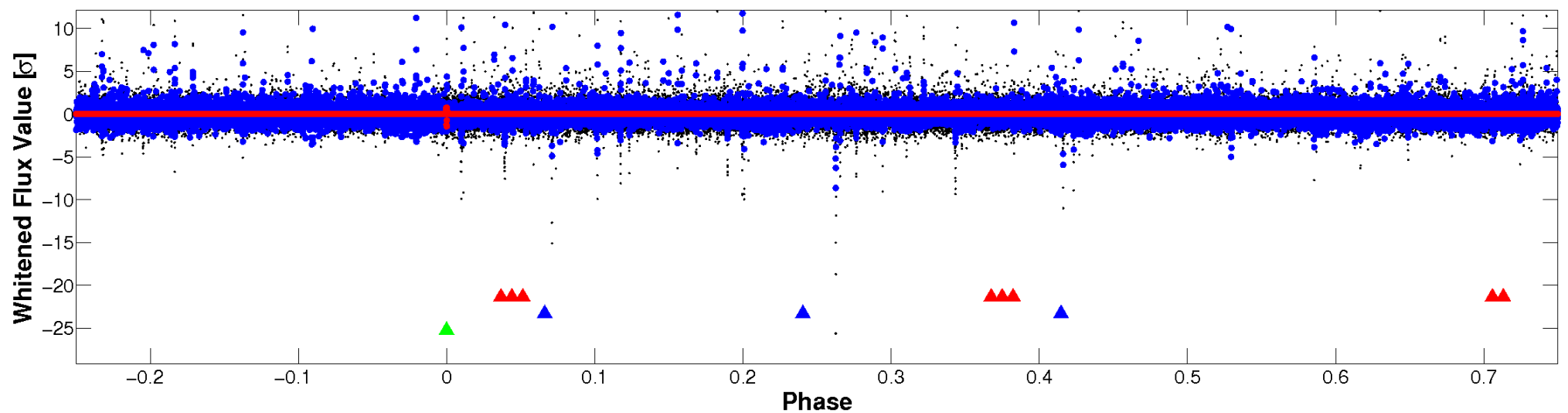


Non-Whitened Vs. Whitened Light Curve

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

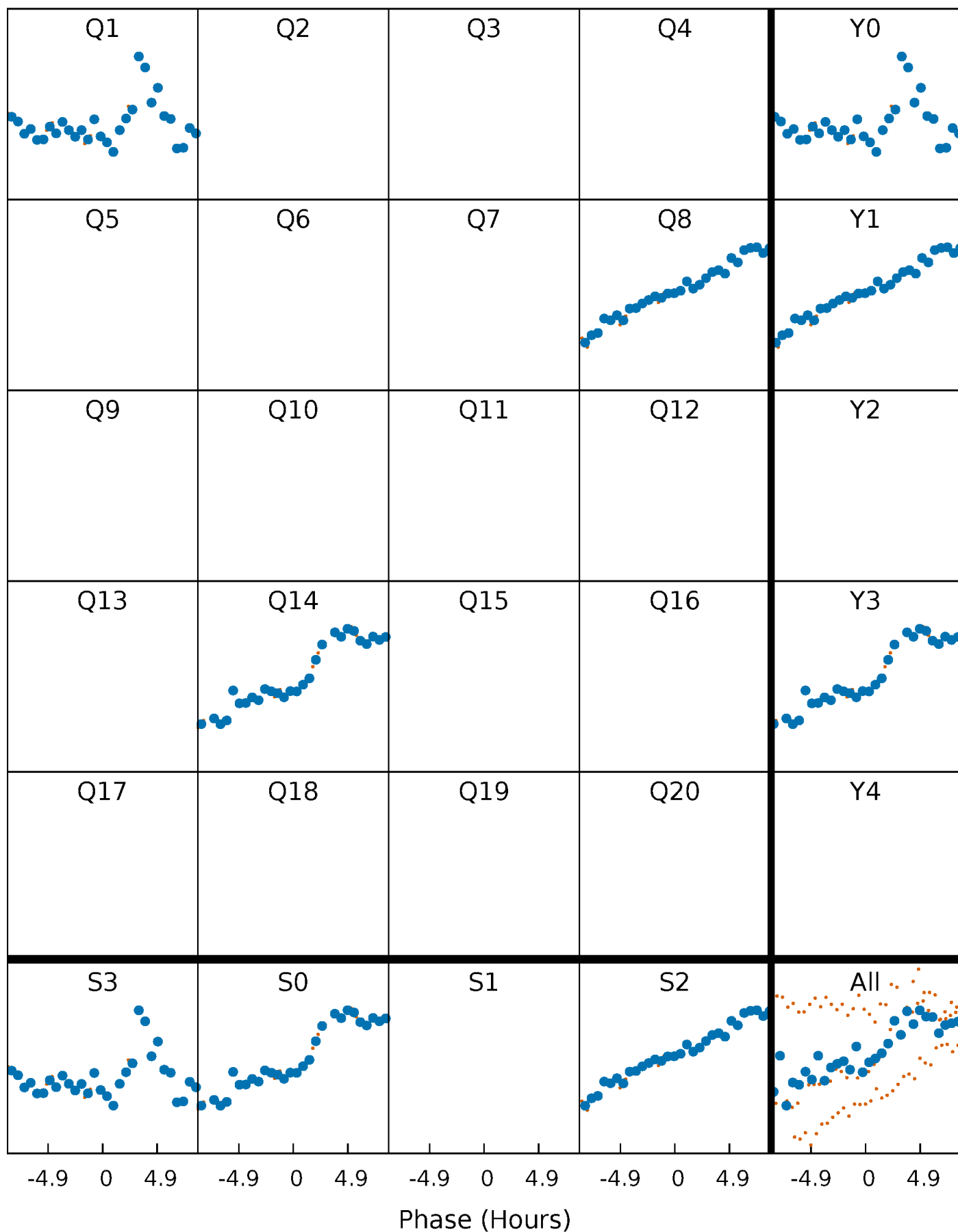


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



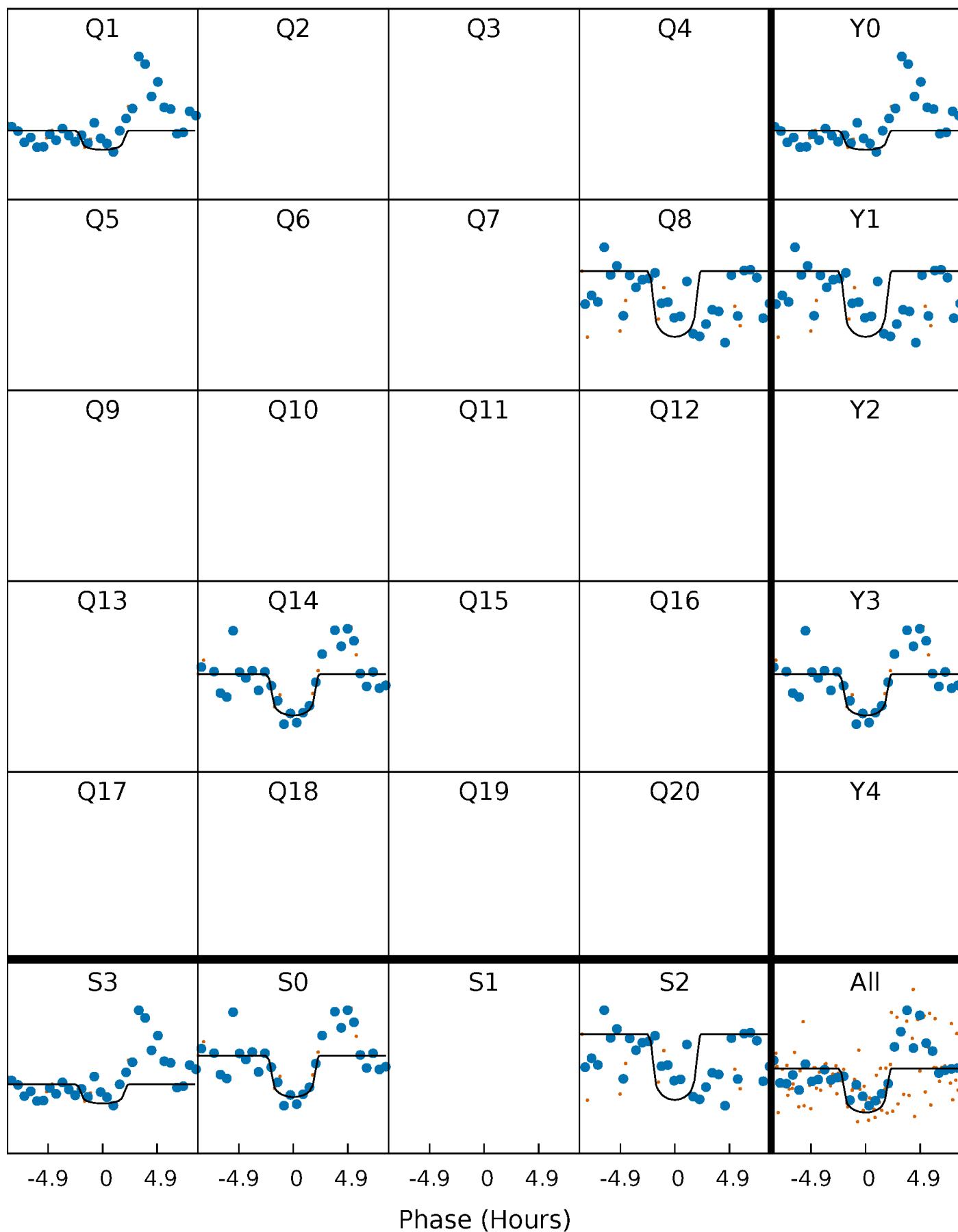
PDC Quarter-Phased Transit Curves

TCE 009459362-03 $P=605.909836$ Days $T_0=136.769203$ (BKJD)



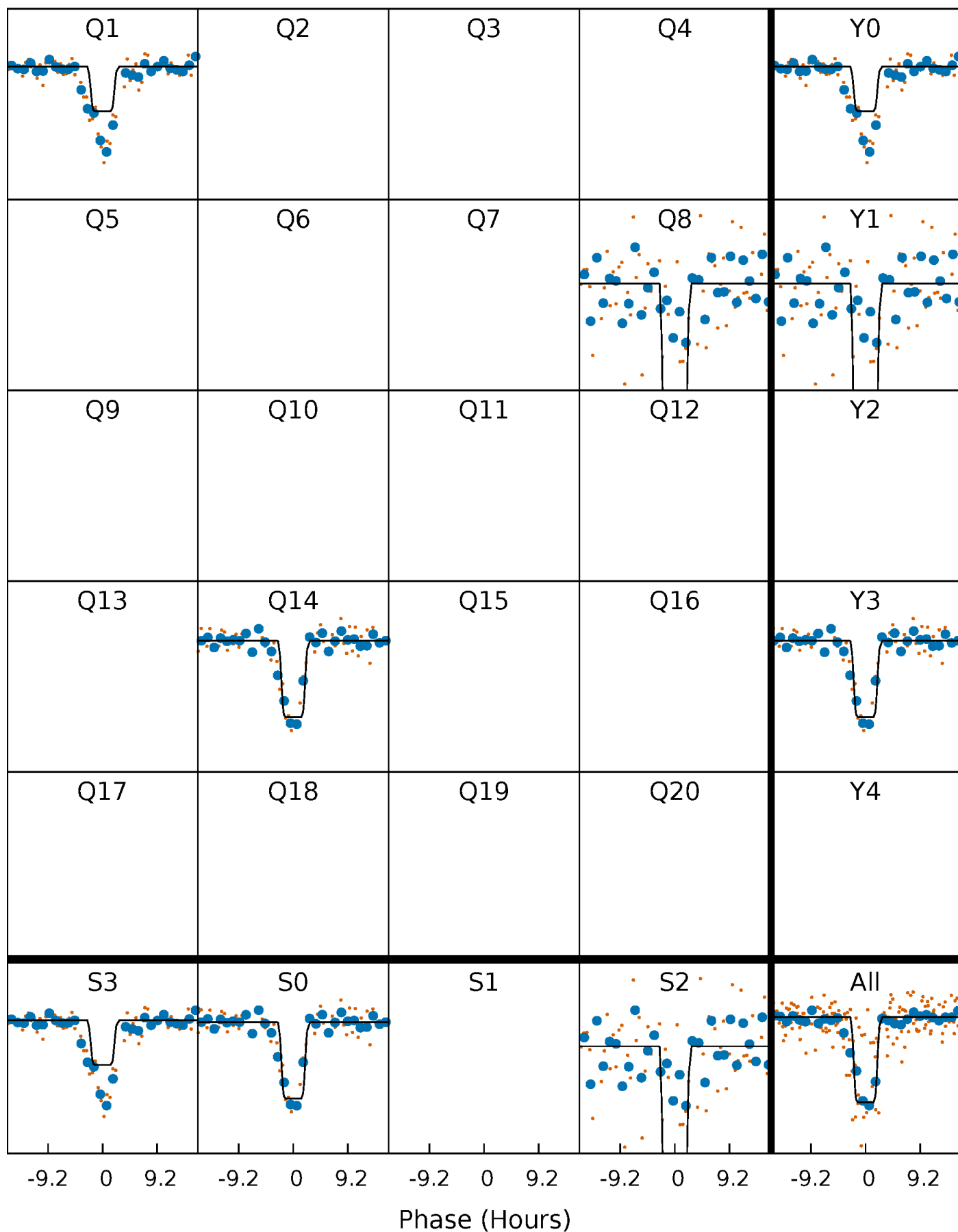
DV Quarter-Phased Transit Curves

TCE 009459362-03 $P=605.909836$ Days $T_0=136.769203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

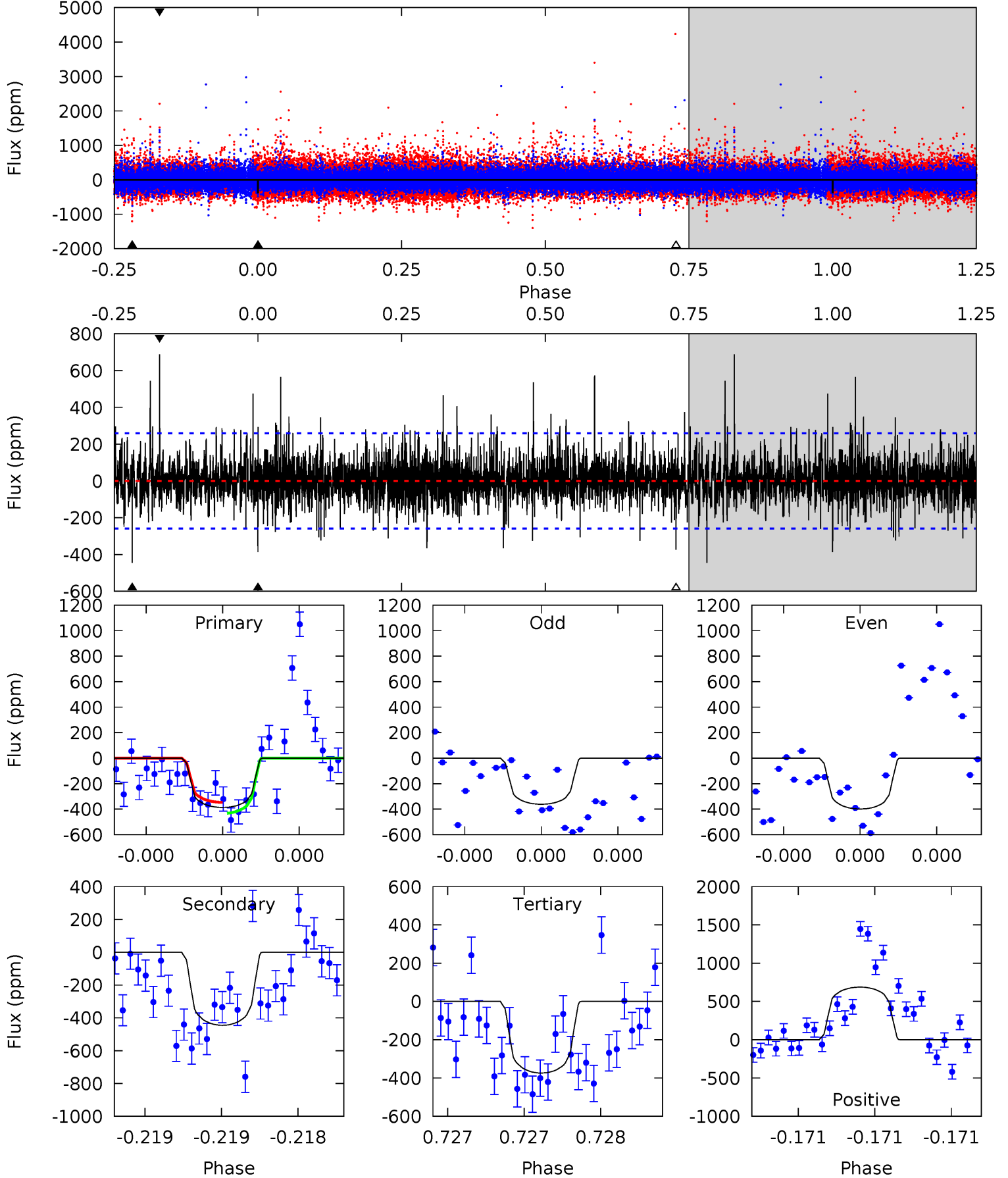
TCE 009459362-03 $P=605.909544$ Days $T_0=136.794248$ (BKJD)



DV Model-Shift Uniqueness Test

009459362-03, P = 605.909836 Days, E = 136.769203 Days

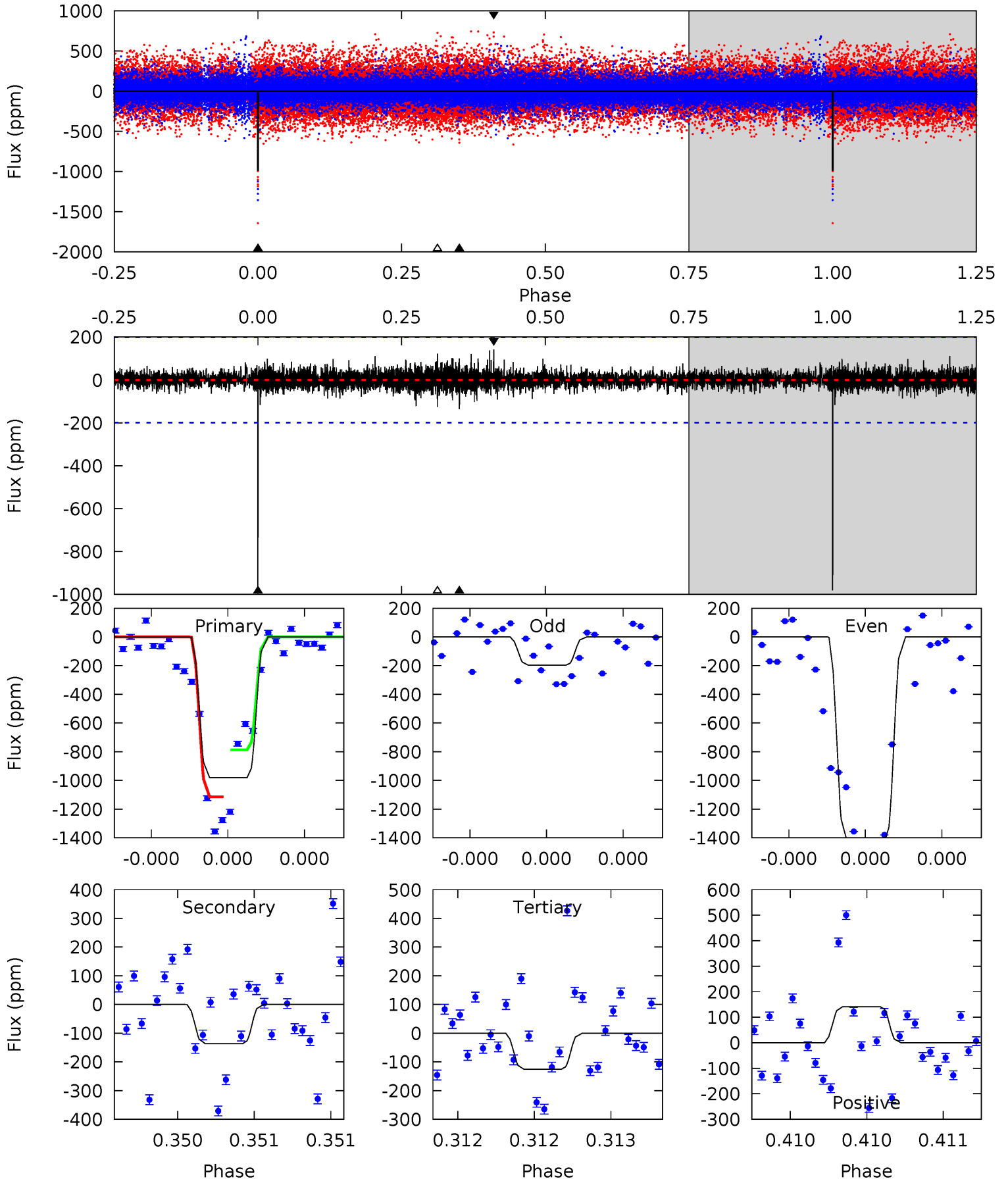
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	9.73	8.18	15.0	5.65	3.60	1.82	0.27	-6.58	1.56	-5.30	0.31	1.07	0.61	0.94



Alt Model-Shift Uniqueness Test

009459362-03, P = 605.909544 Days, E = 136.794248 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	3.85	3.55	3.99	5.63	3.56	0.62	24.2	23.7	0.30	-0.15	20.6	0.96	0.13	0



Stellar Parameters For KIC 009459362

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5533^{+164}_{-164}	$4.592^{+0.078}_{-0.058}$	$-1.020^{+0.300}_{-0.300}$	$0.683^{+0.065}_{-0.058}$	$0.665^{+0.063}_{-0.024}$	$2.939^{+0.893}_{-0.573}$
	+3%/-3%	+2%/-1%	+29%/-29%	+10%/-8%	+9%/-4%	+30%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009459362-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-445 ± 46	$1.92^{+1.09}_{-1.04}$	254^{+10}_{-10}	5043^{+2301}_{-816}	$98953^{+369268}_{-58863}$
Alt.	-136 ± 35	$2.52^{+1.15}_{-1.09}$	254^{+10}_{-10}	3664^{+809}_{-449}	17618^{+37216}_{-9809}

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

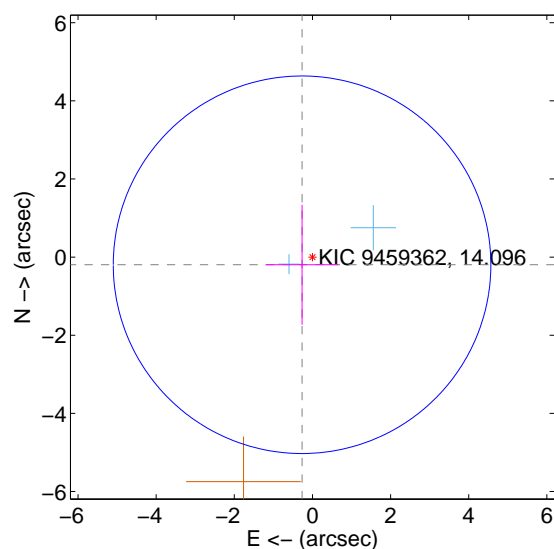
Supplemental centroid analysis for 009459362-03. Kepler magnitude: 14.10. Transit SNR 7.02

There are 2 quarters with good PRF difference image offsets

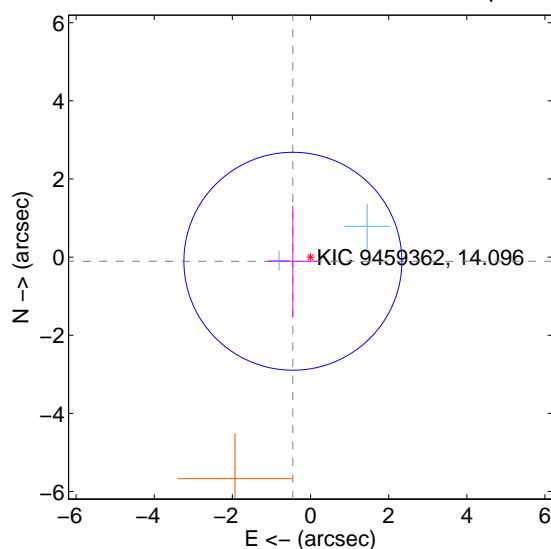
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.330 ± 1.611	0.20	0.266 ± 0.932	-0.196 ± 1.535
PRF-fit source offset from KIC position	0.464 ± 0.930	0.50	0.452 ± 0.648	-0.106 ± 1.428
photometric centroid source offset	1.08 ± 1.15	0.93	1.08 ± 1.15	0.03 ± 1.07

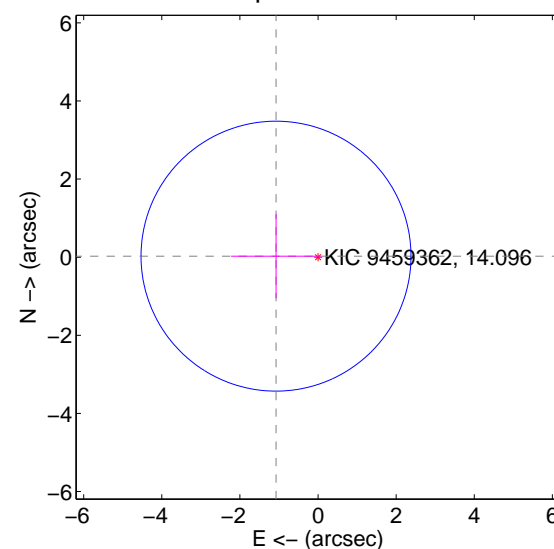
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

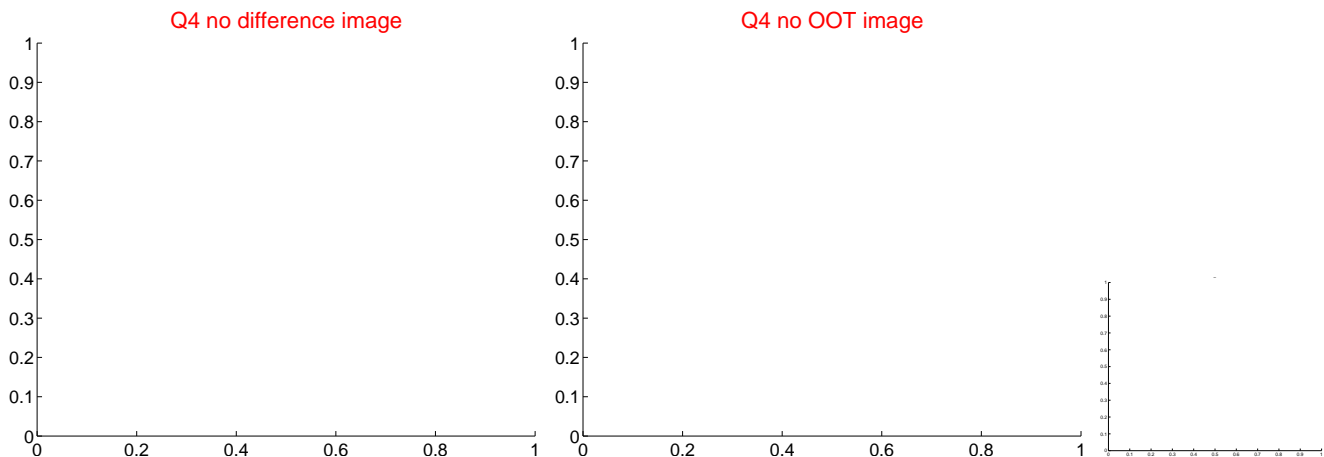
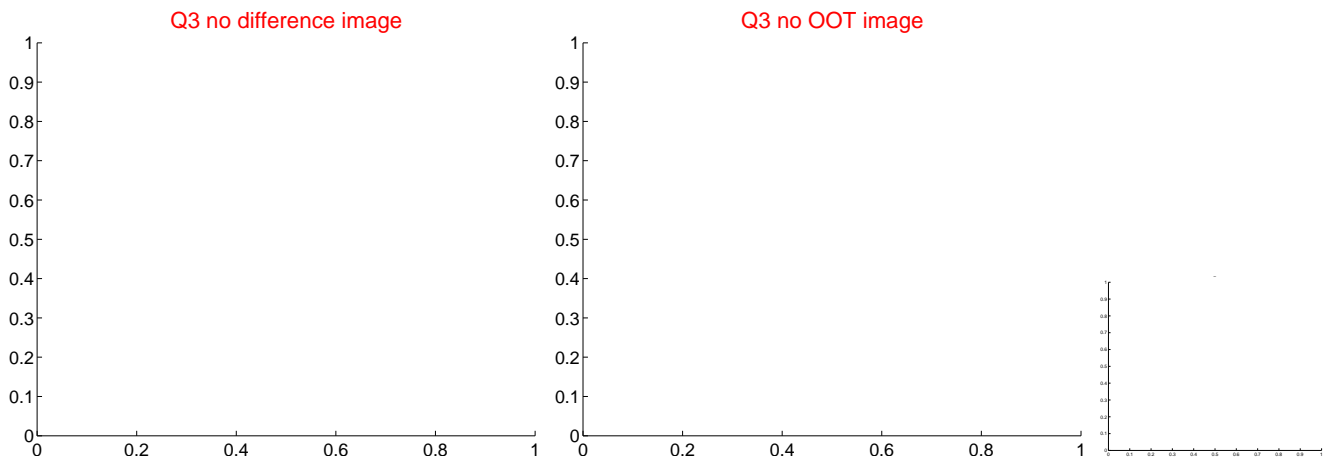
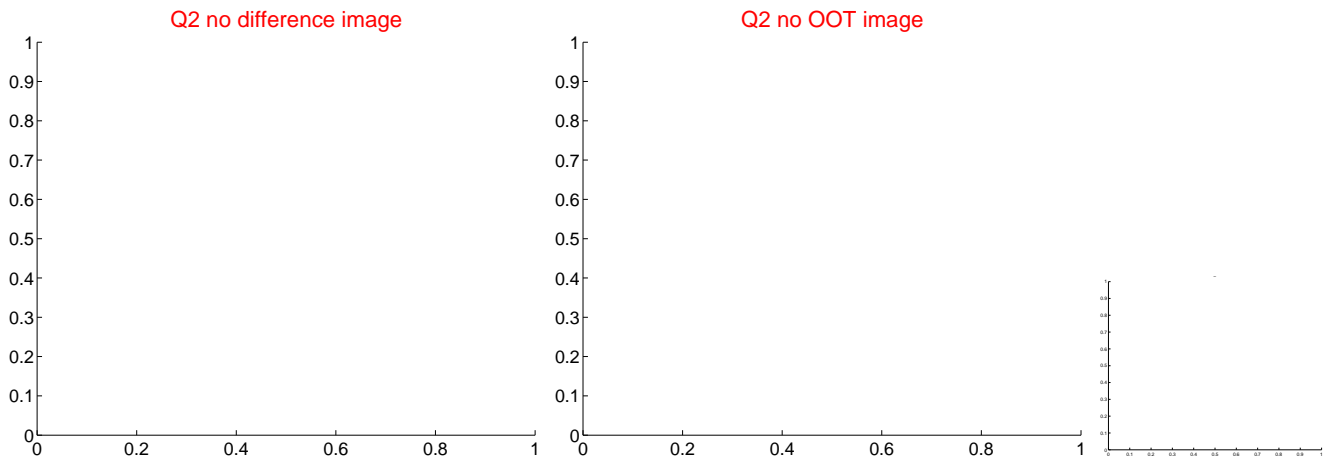
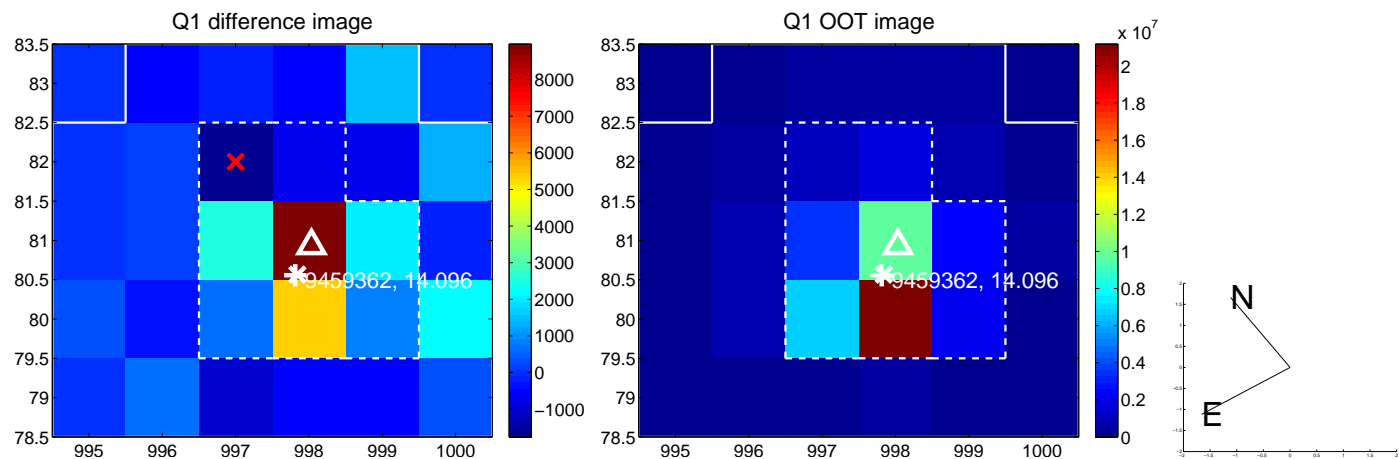


offset from photometric centroids

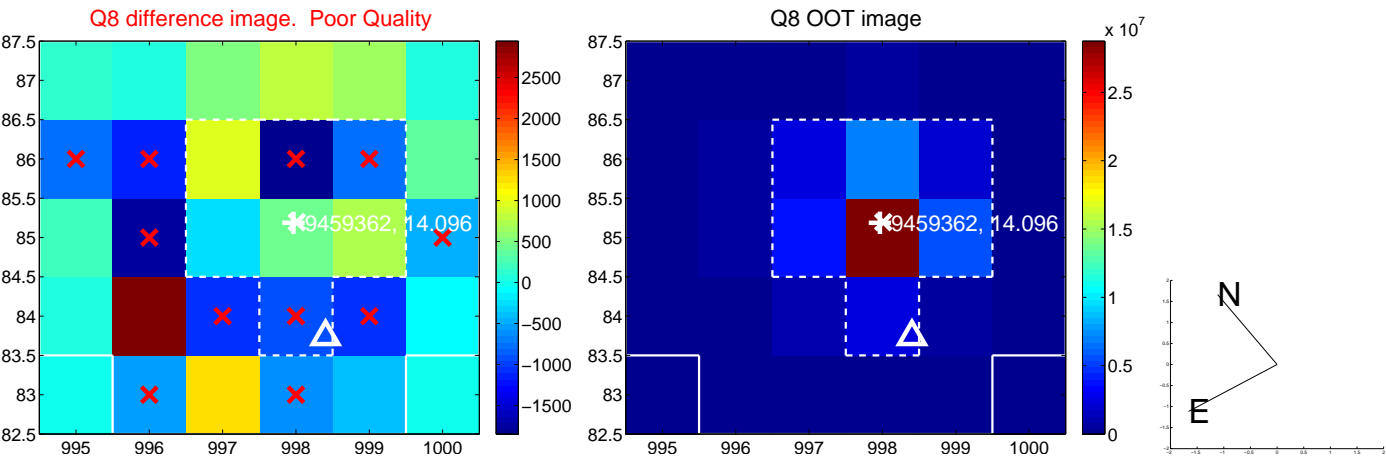


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



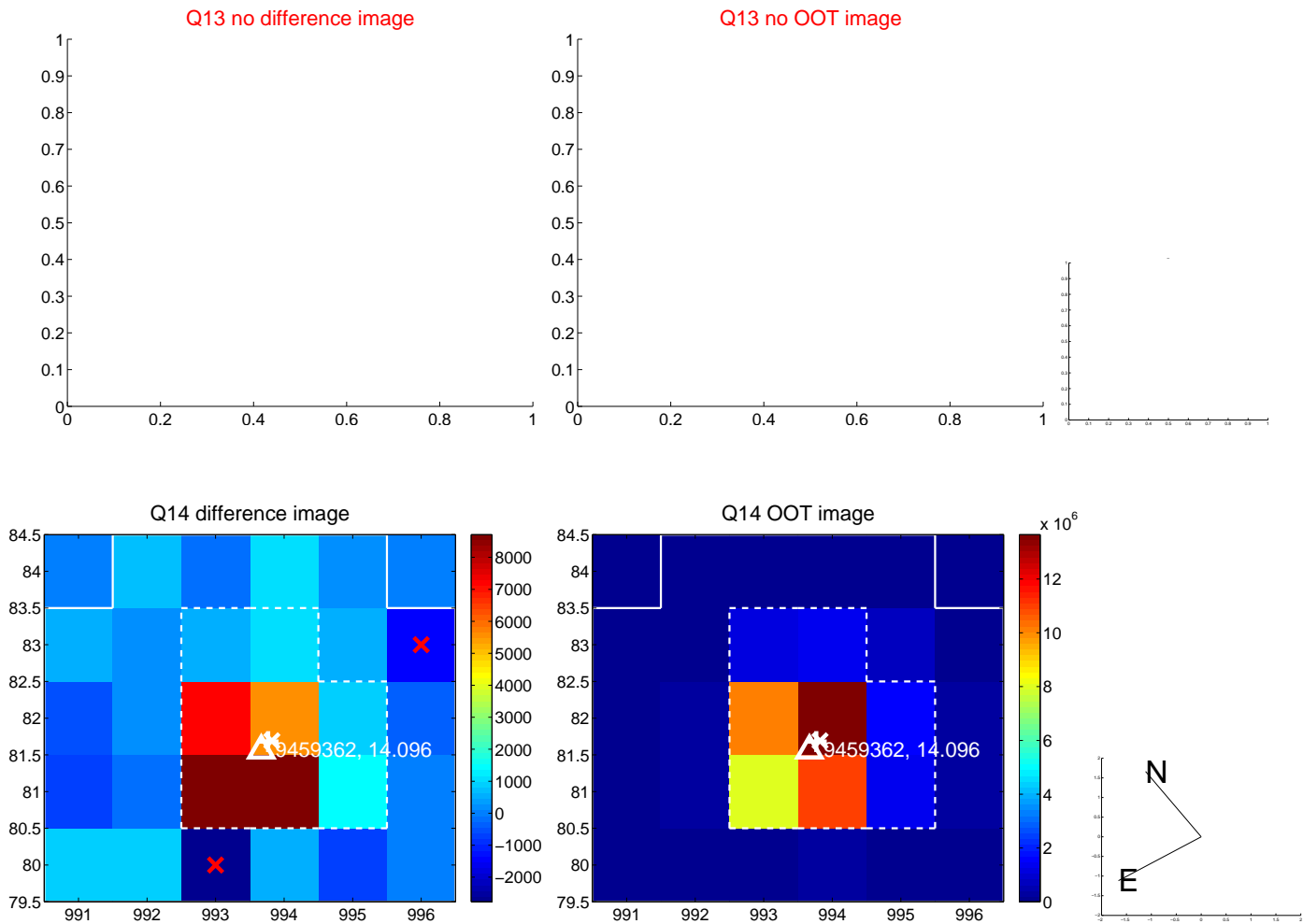
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



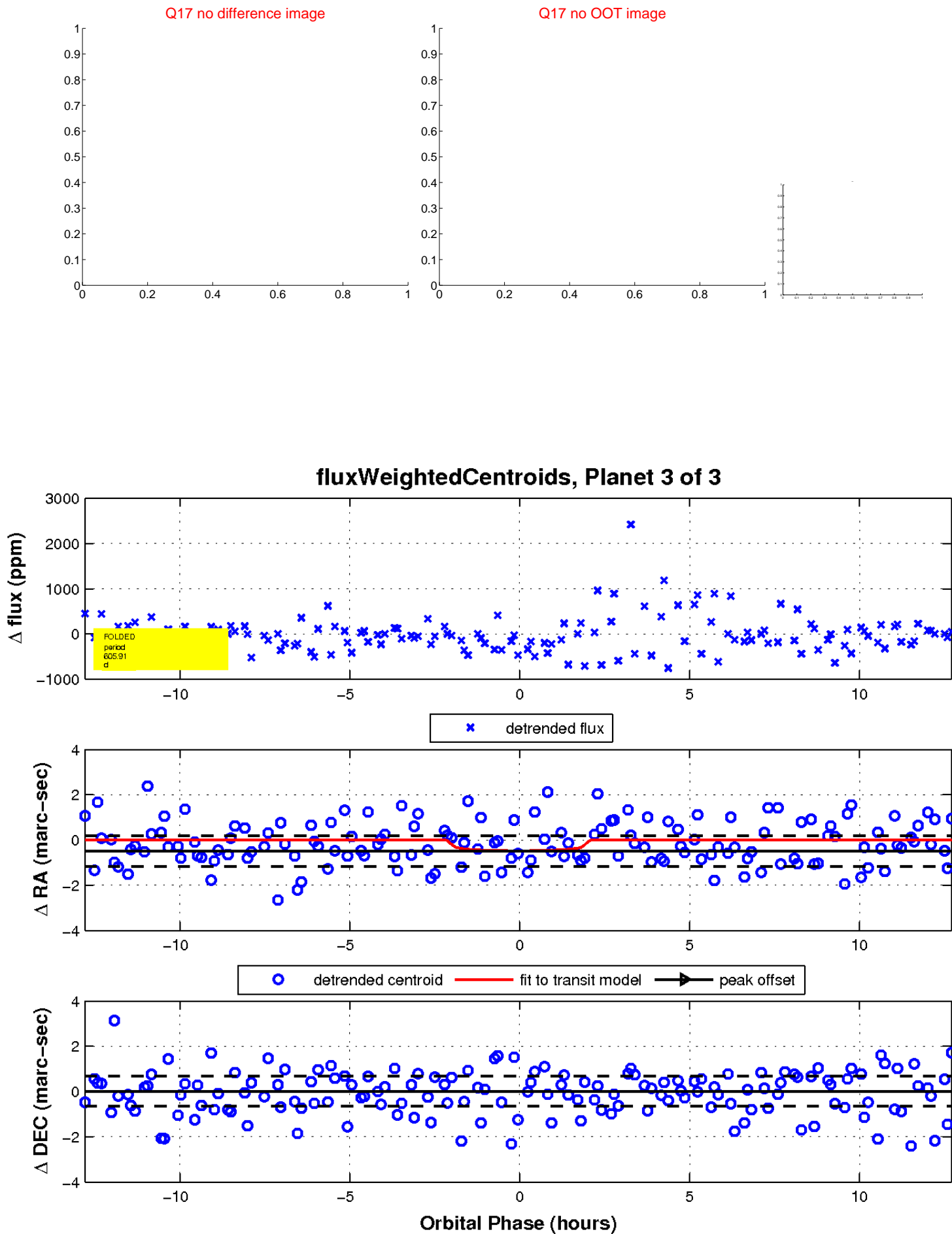
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

