

KIC 008360354

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})
008360354-01	OBS	No	211.297575	336.063126	689.8	2.500	27.0	-1.0	2.71	7411	7.21	25.35
008360354-02	OBS	No	135.065386	175.630690	340.9	1.077	17.5	22.6	2.71	7411	5.21	46.04
008360354-03	OBS	No	352.442291	373.636900	2513.4	14.555	12.7	12.5	2.71	7411	17.40	12.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008360354-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008360354-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_DV—INCONSISTENT_TRANS—CENT_SATURATED
008360354-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

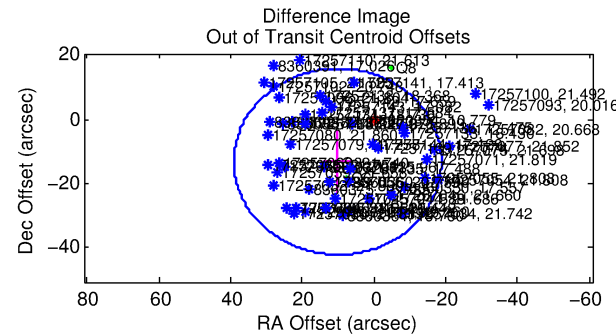
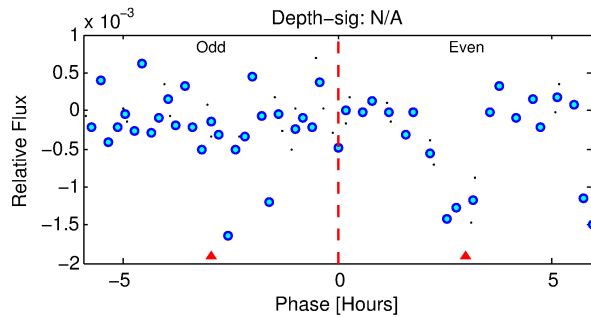
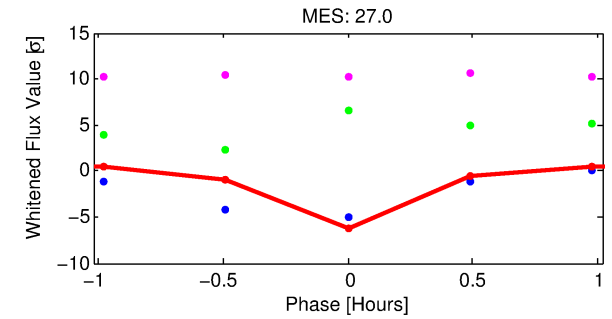
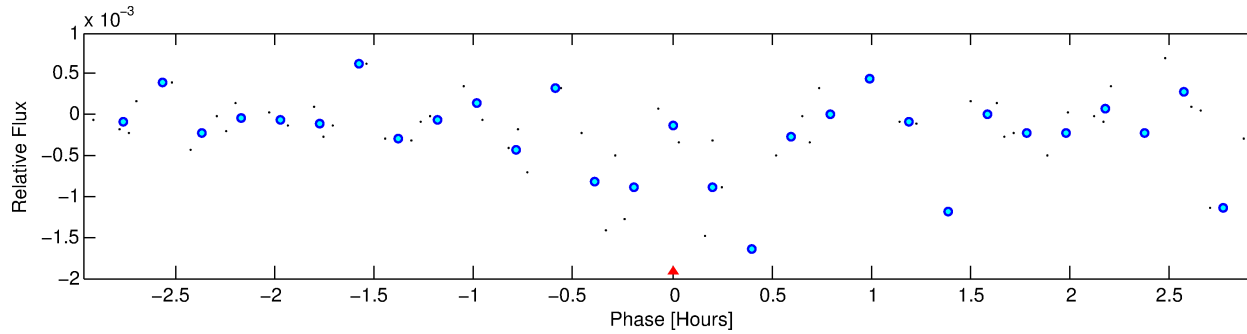
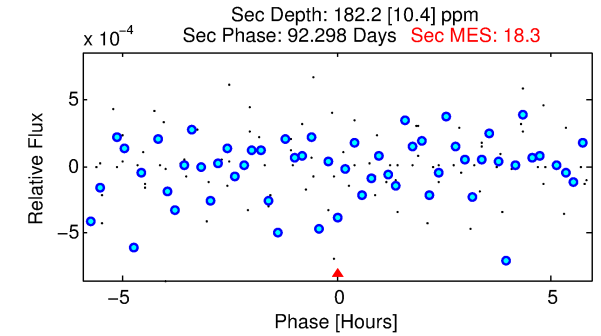
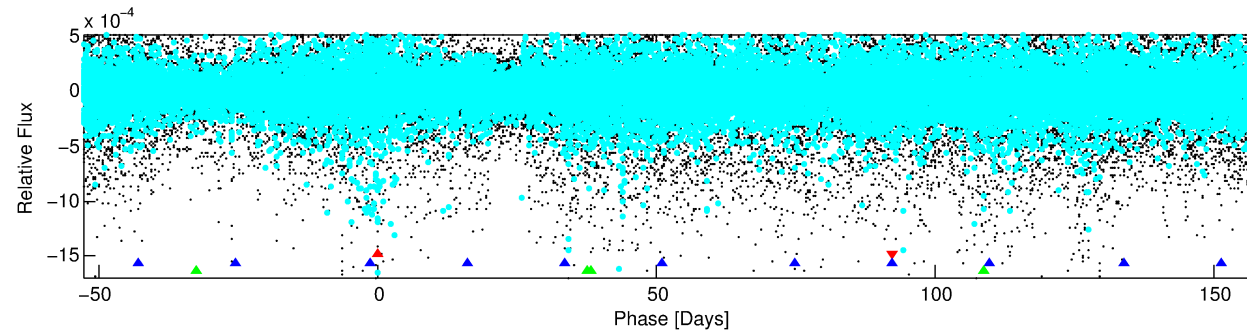
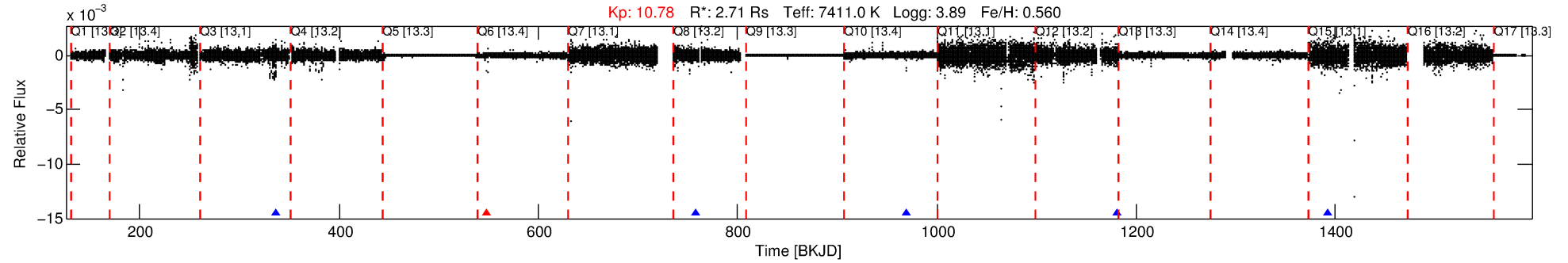
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008360354-01

No Significant Match Found

DV One-Page Summary

KIC: 8360354 Candidate: 1 of 3 Period: 211.298 d



TPS TCE Results:

Period = 211.29757 d
Epoch = 336.0631 BKJD

DV fit results are unavailable

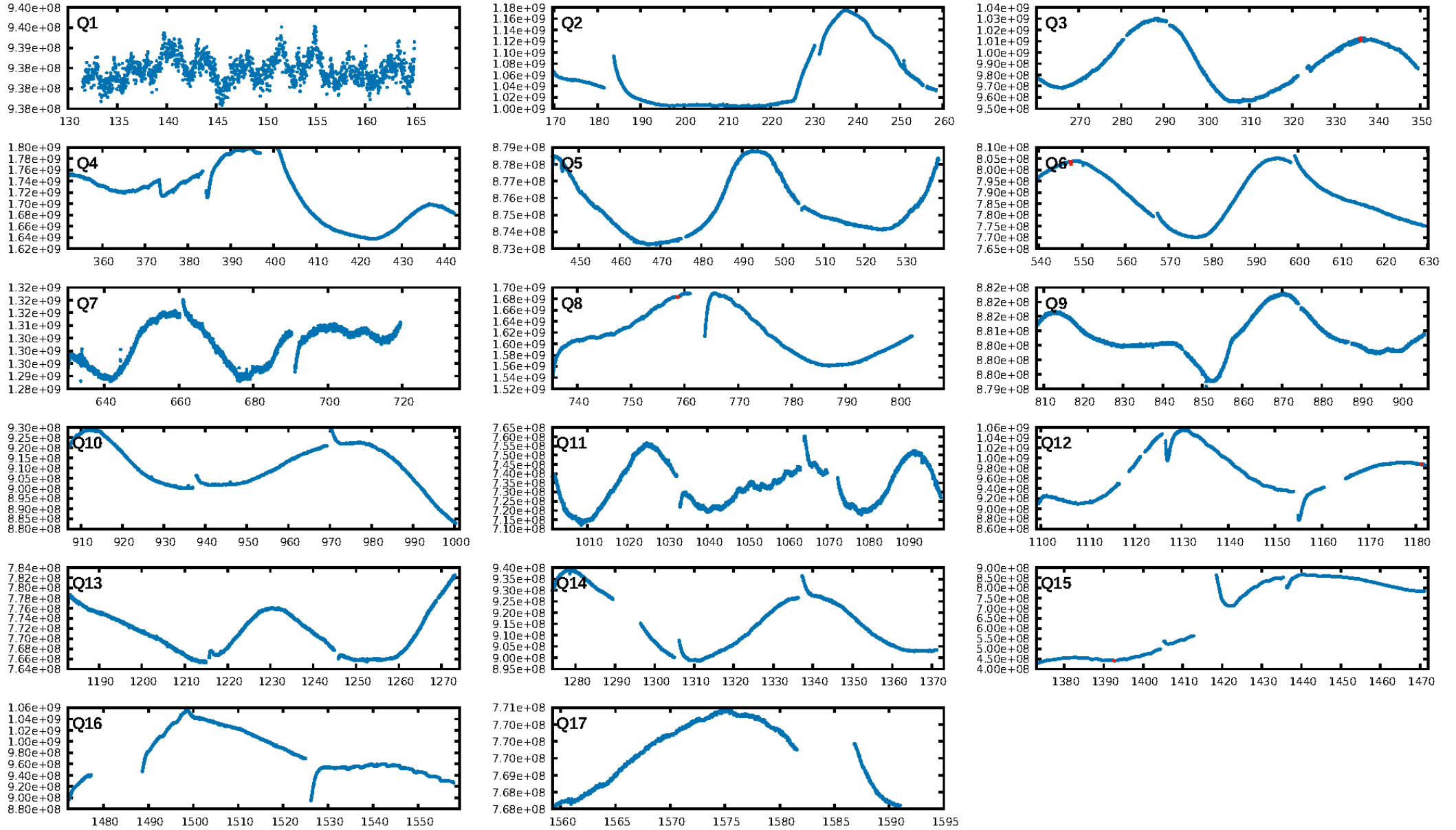
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [672.11 σ]
LongPeriod-sig: 100.0% [229.38 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.25e-12
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: N/A
Centroid-sig: 70.3%
Centroid-so: 0.549 arcsec [0.85 σ]
OotOffset-rm: 16.573 arcsec [1.72 σ]
KicOffset-rm: 18.935 arcsec [2.71 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [5/5]

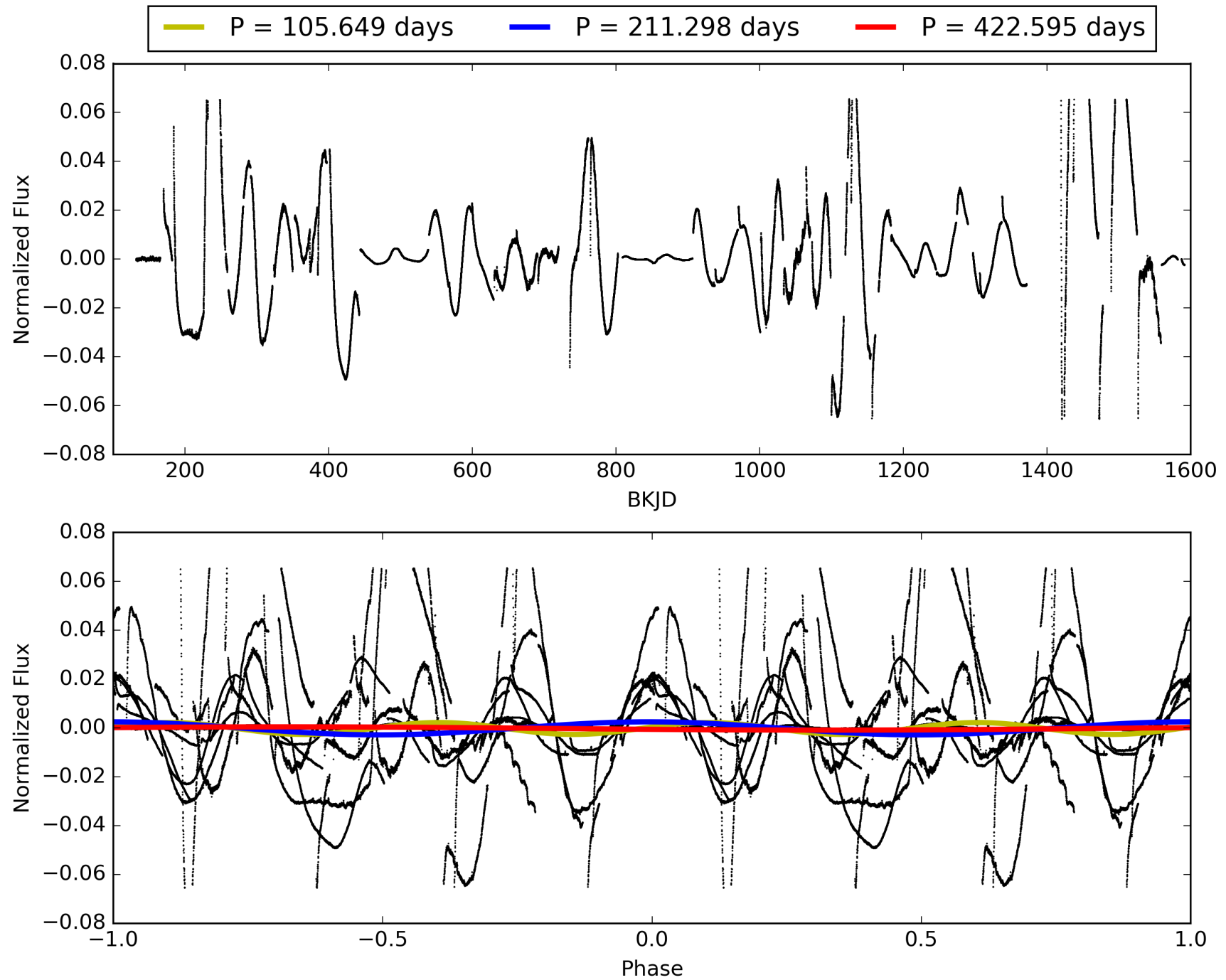
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:24:11 Z

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

TCE 008360354-01, PDC Light Curves

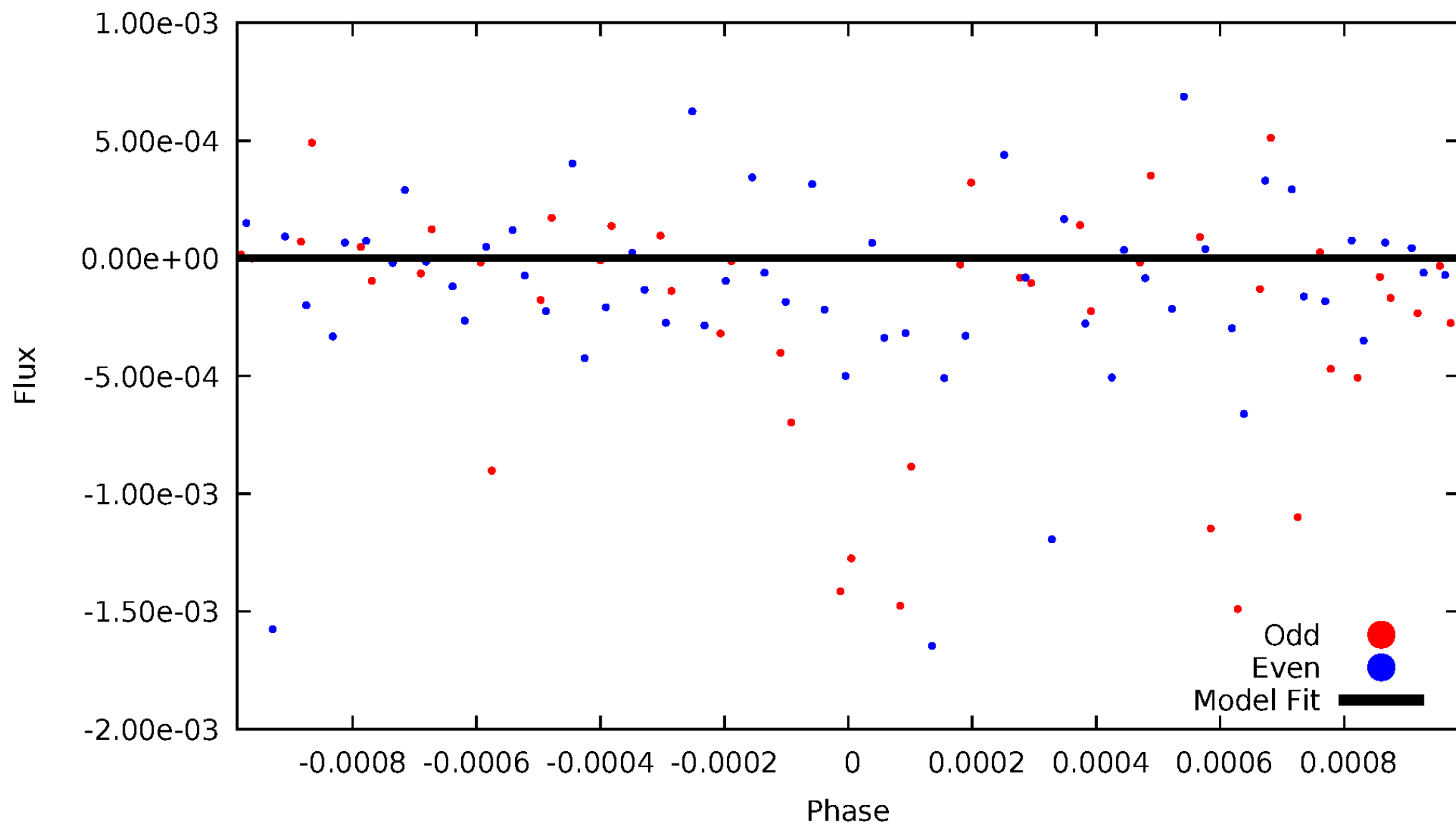


TCE 008360354-01



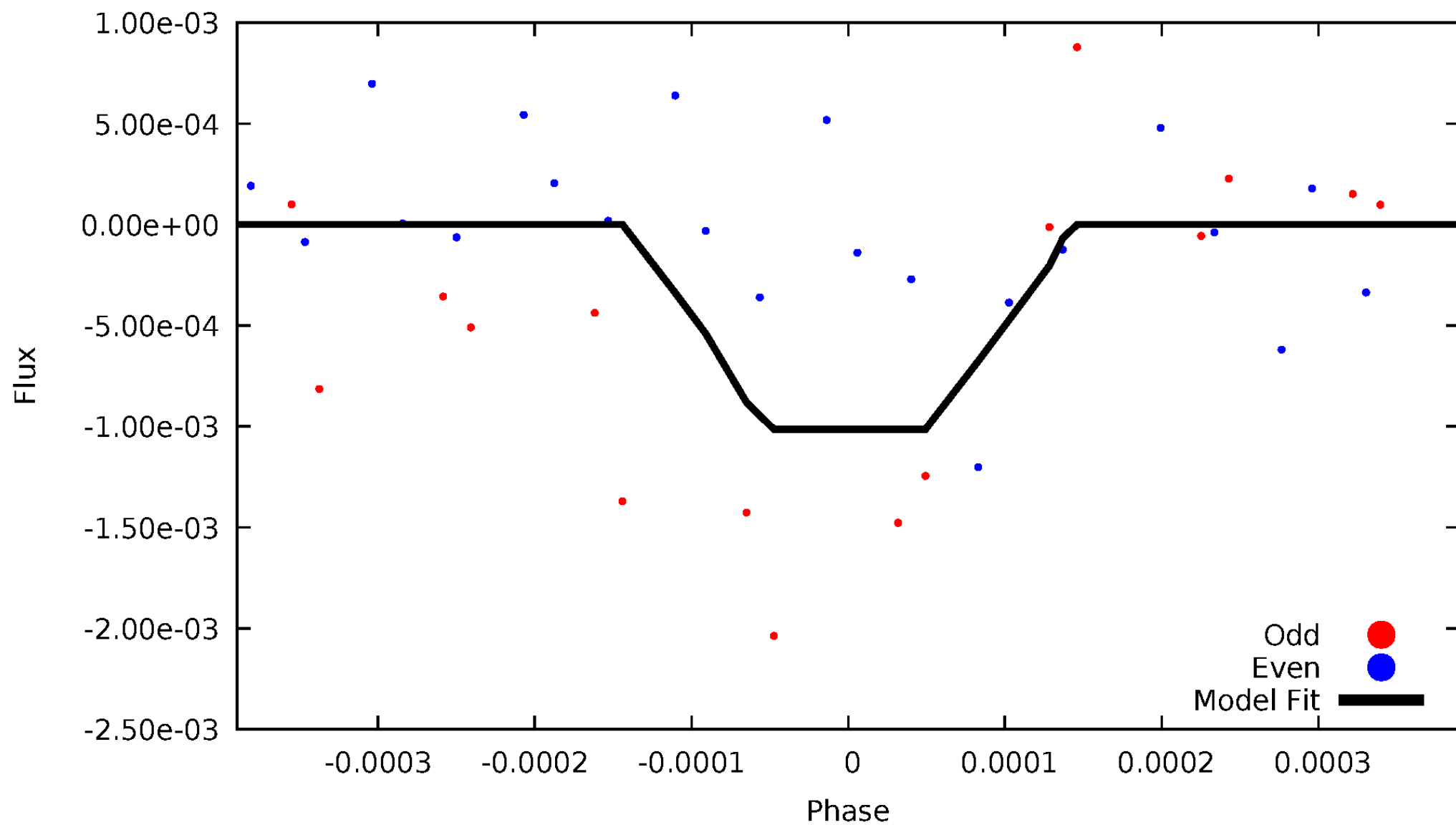
DV Odd/Even

TCE 008360354-01

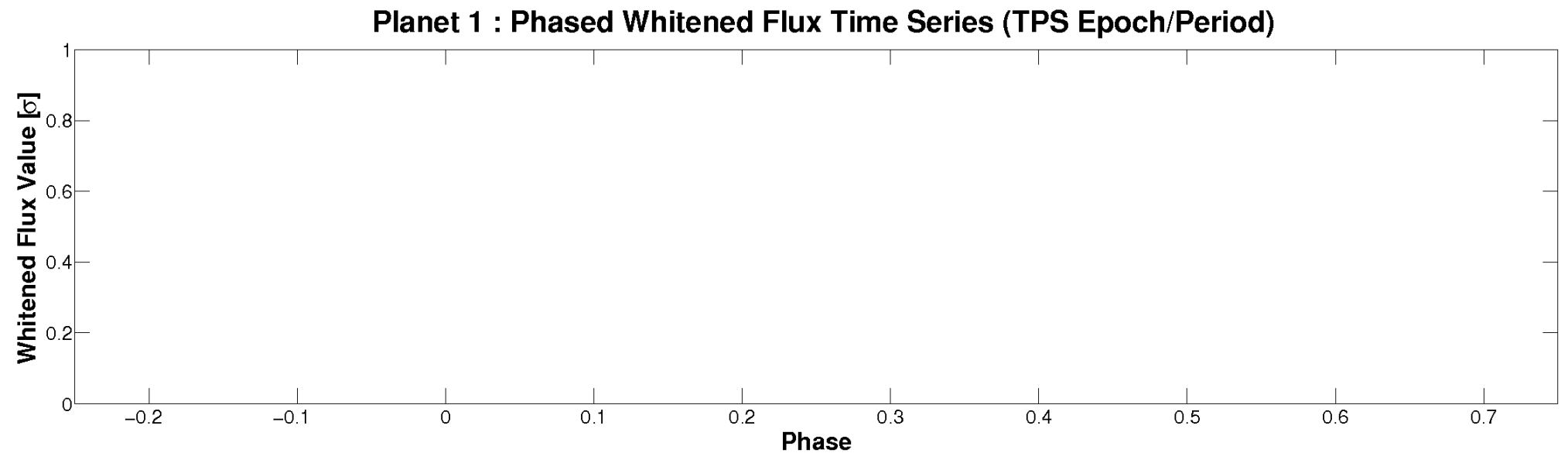
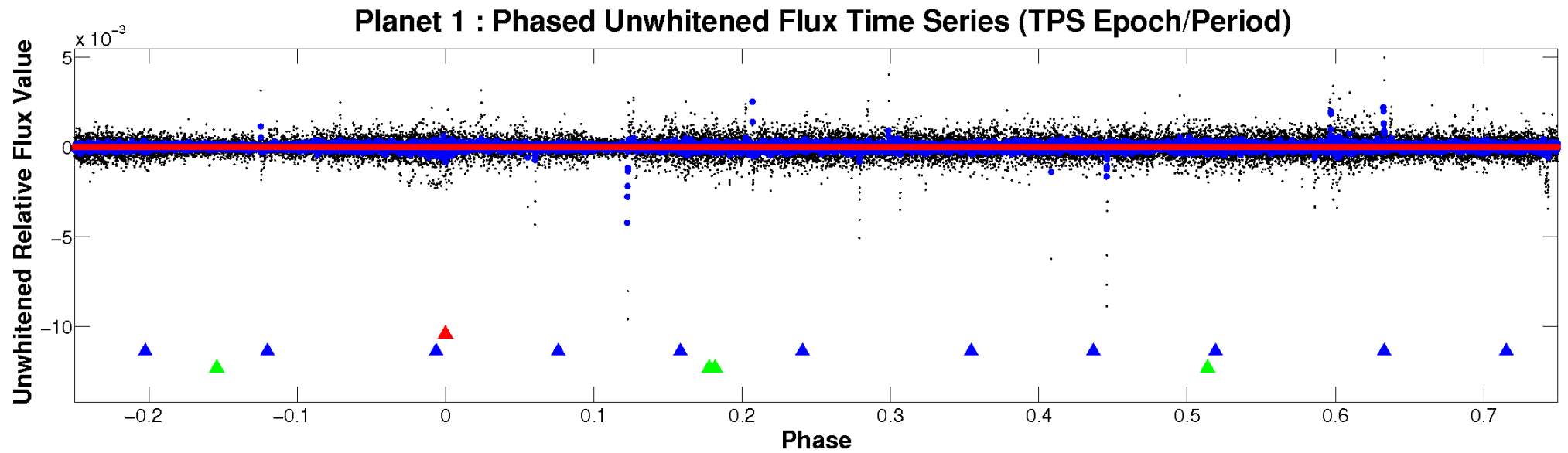


ALT Odd/Even

TCE 008360354-01

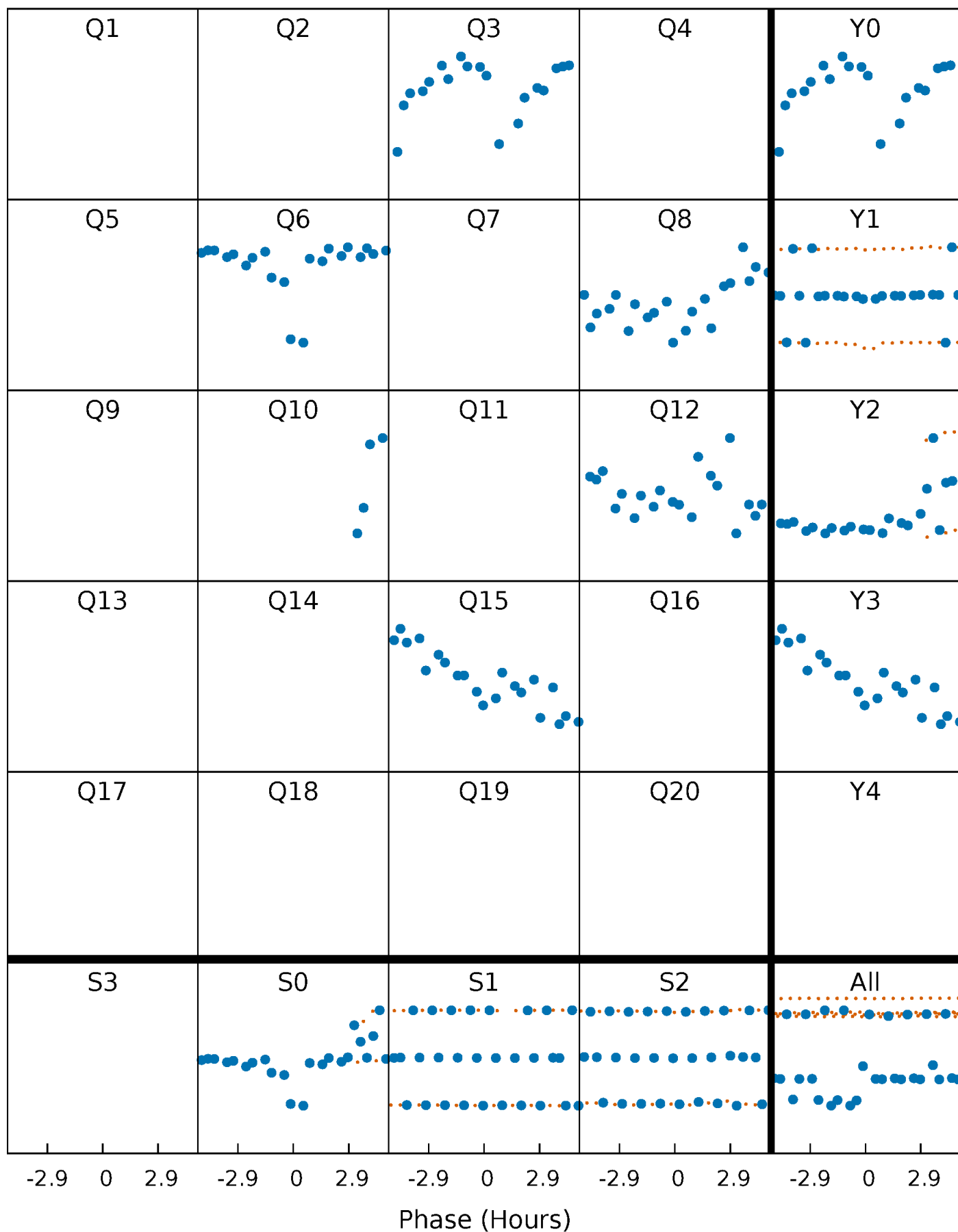


Non-Whitened Vs. Whitened Light Curve



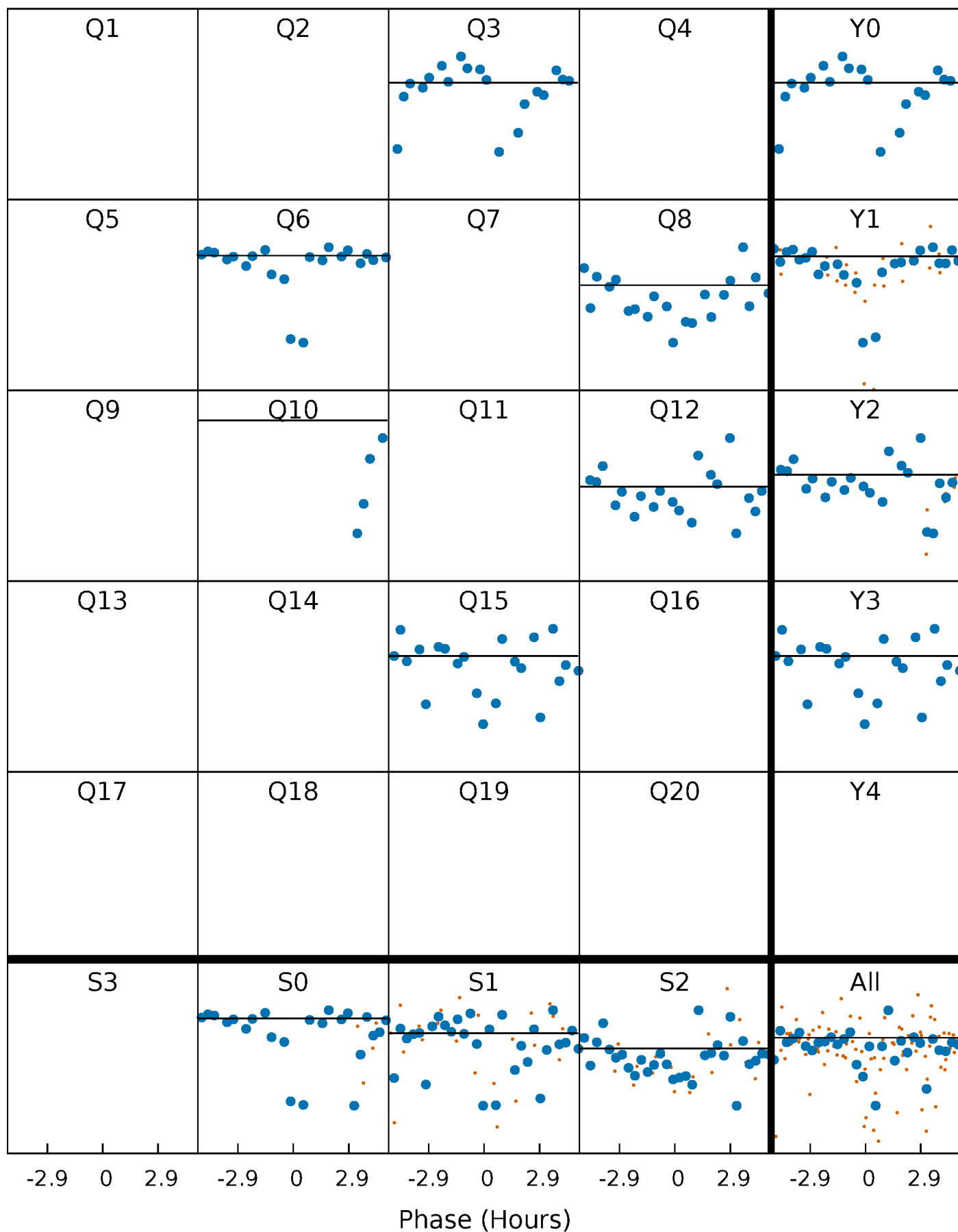
PDC Quarter-Phased Transit Curves

TCE 008360354-01 P=211.297574 Days $T_0=336.063126$ (BKJD)



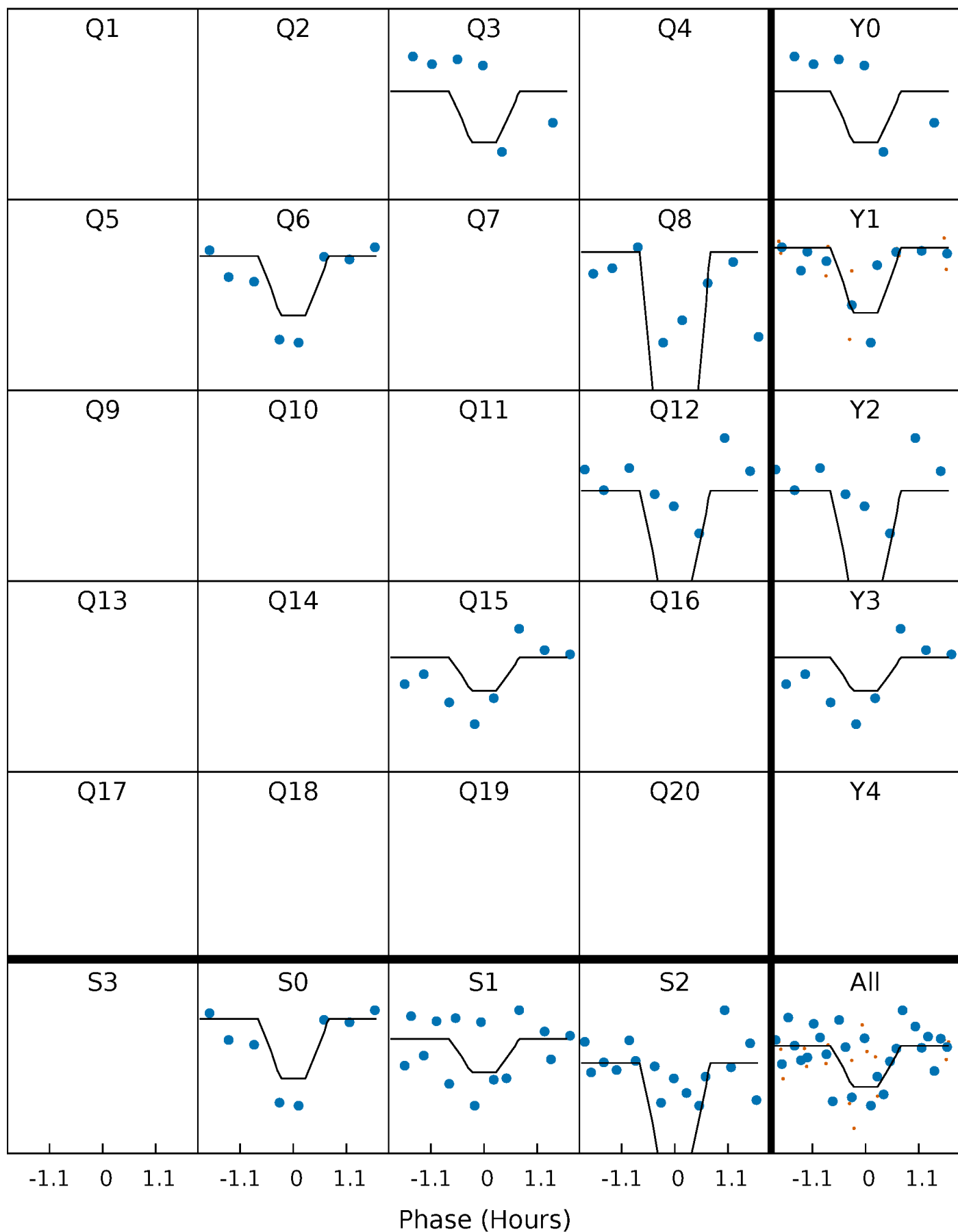
DV Quarter-Phased Transit Curves

TCE 008360354-01 P=211.297574 Days $T_0=336.063126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

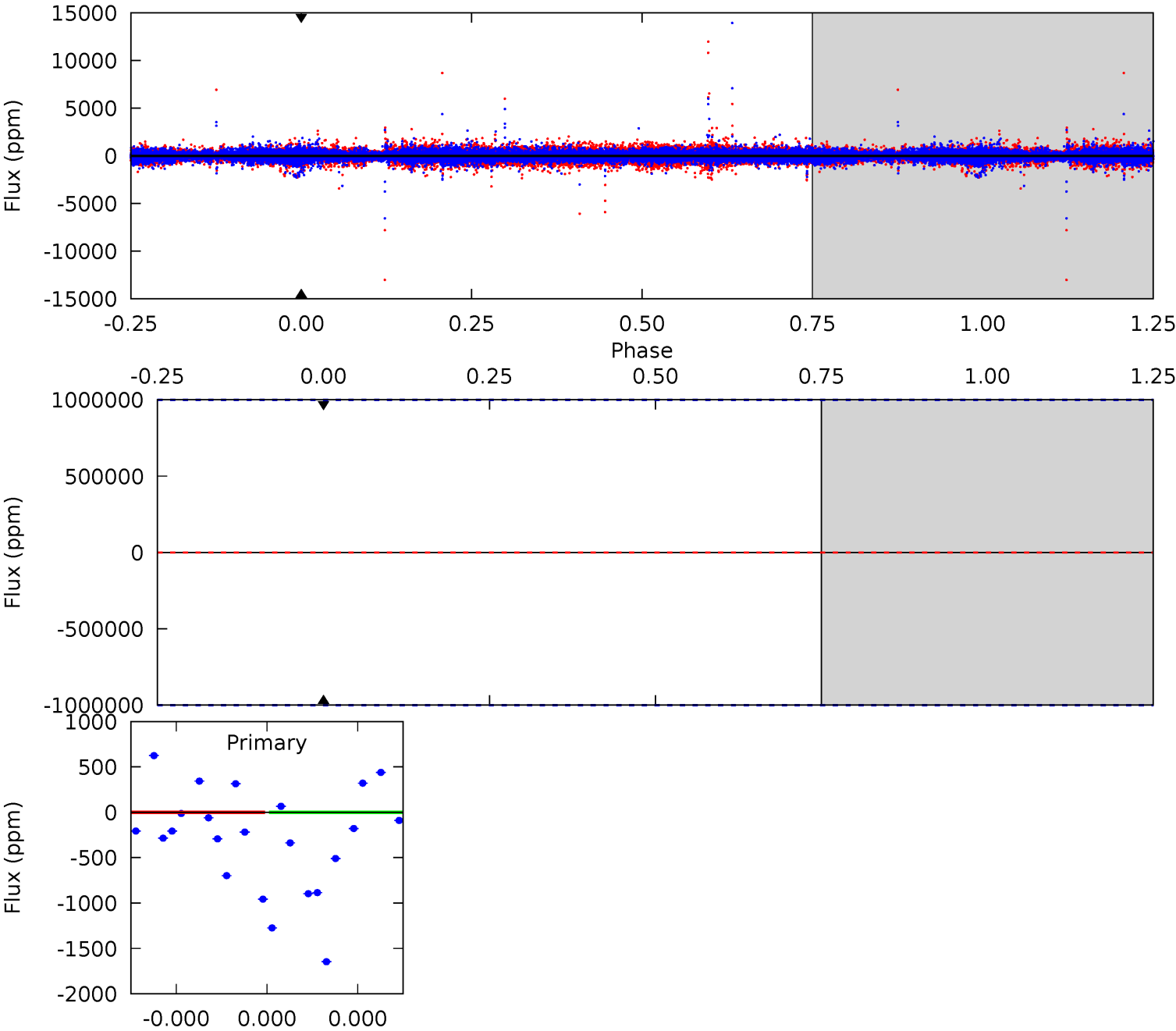
TCE 008360354-01 P=211.297574 Days $T_0=336.074166$ (BKJD)



DV Model-Shift Uniqueness Test

008360354-01, P = 211.297574 Days, E = 124.765552 Days

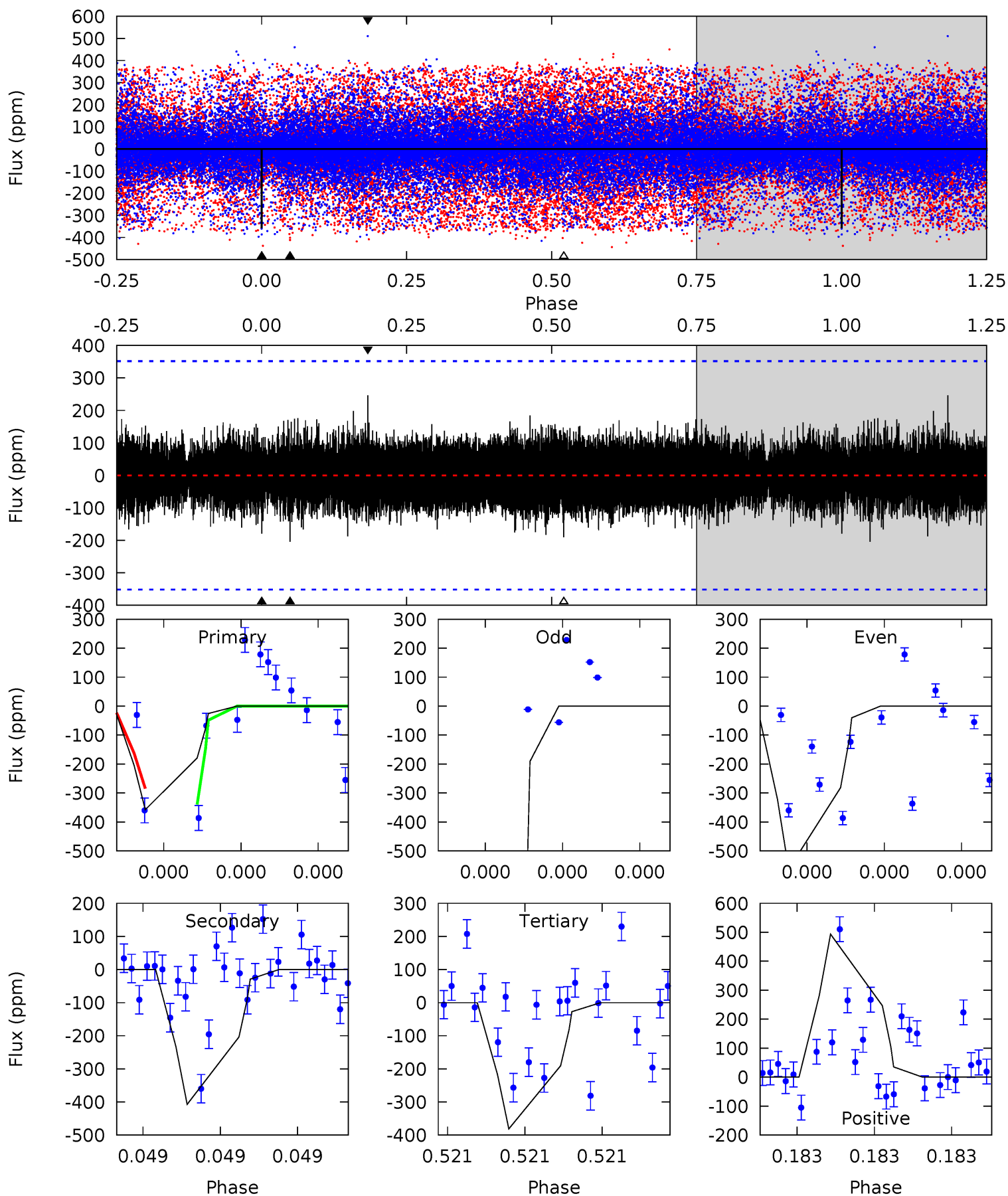
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008360354-01, P = 211.297574 Days, E = 124.776592 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.90	3.30	3.09	4.00	5.70	3.68	0.75	-0.19	-1.10	0.21	-0.70	11.8	2.29	0.55	0



Stellar Parameters For KIC 008360354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7411^{+96}_{-67}	$3.888^{+0.156}_{-0.104}$	$0.560^{+0.050}_{-0.300}$	$2.711^{+0.463}_{-0.566}$	$2.068^{+0.157}_{-0.209}$	$0.146^{+0.119}_{-0.048}$
	+1%/-1%	+4%/-3%	+9%/-54%	+17%/-21%	+8%/-10%	+81%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008360354-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$23.62^{+22.32}_{-15.99}$	799^{+36}_{-43}	-4203^{+41570}_{-25076}	$-366.976^{+153604.373}_{-112742.195}$
Alt.	-204 ± 62	$25.27^{+22.54}_{-18.18}$	799^{+38}_{-44}	3482^{+2124}_{-651}	144^{+1488}_{-109}

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

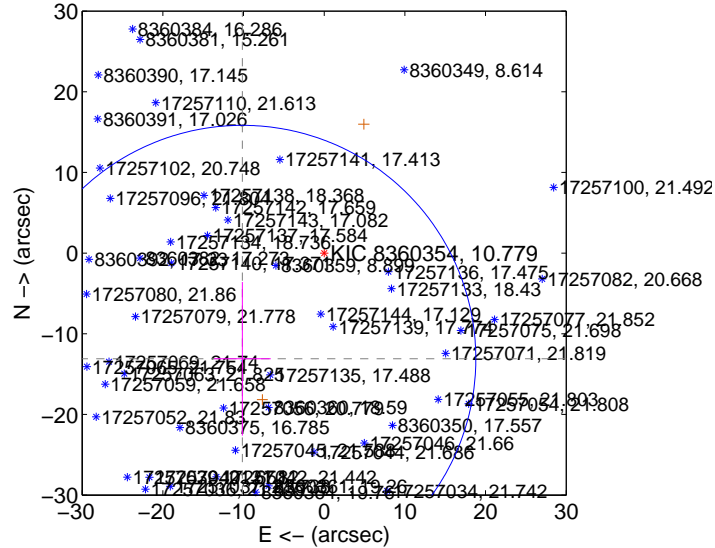
Supplemental centroid analysis for 008360354-01. **Kepler magnitude: 10.78.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

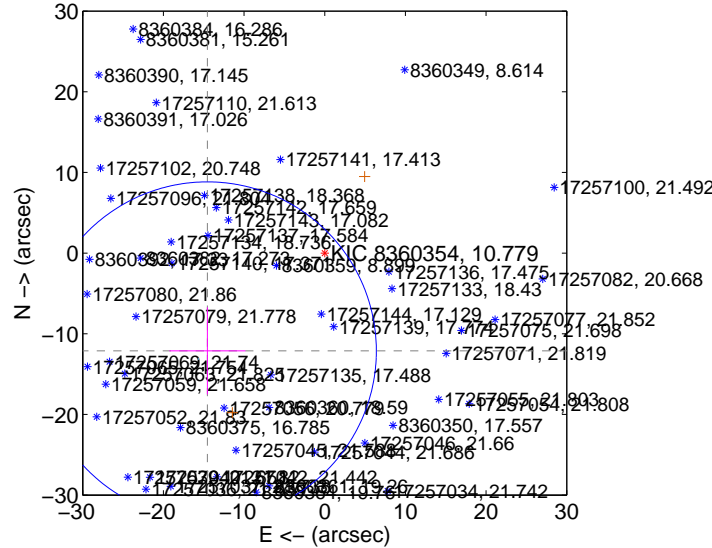
The OOT PRF centroid is offset from the target star catalog position by about 6.49 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	16.573 ± 9.647	1.72	10.146 ± 3.522	-13.104 ± 9.521
PRF-fit source offset from KIC position	18.935 ± 6.983	2.71	14.548 ± 4.711	-12.119 ± 5.395
photometric centroid source offset	0.55 ± 0.65	0.85	-0.17 ± 0.79	-0.52 ± 0.63

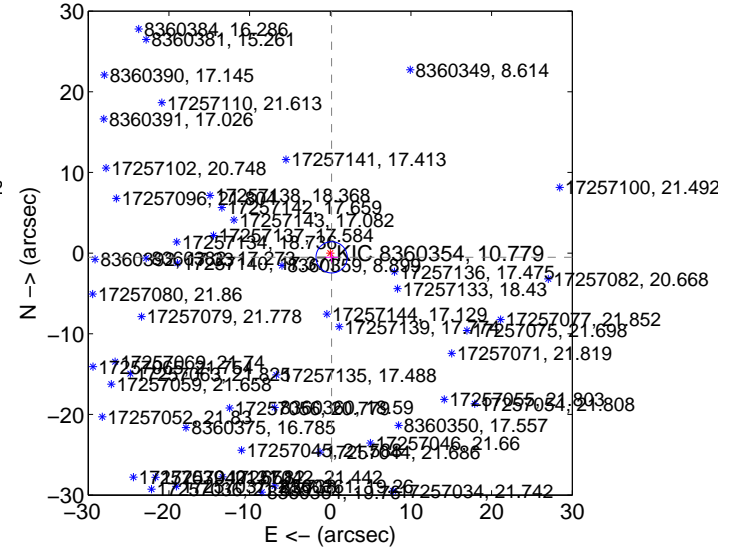
offset from difference PRF-fit to OOT PRF-fit



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



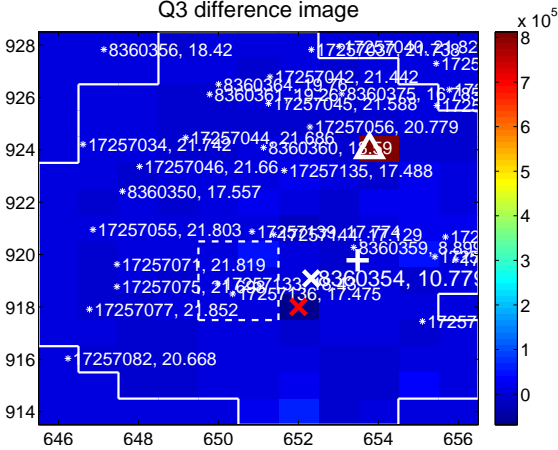
Q2 no difference image



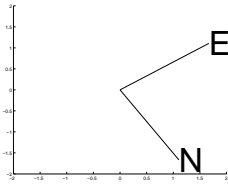
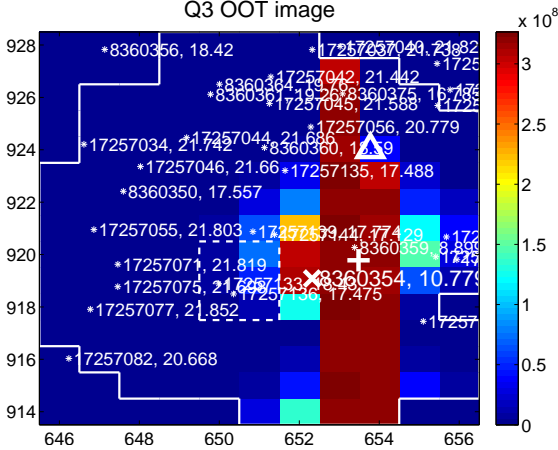
Q2 no OOT image



Q3 difference image



Q3 OOT image



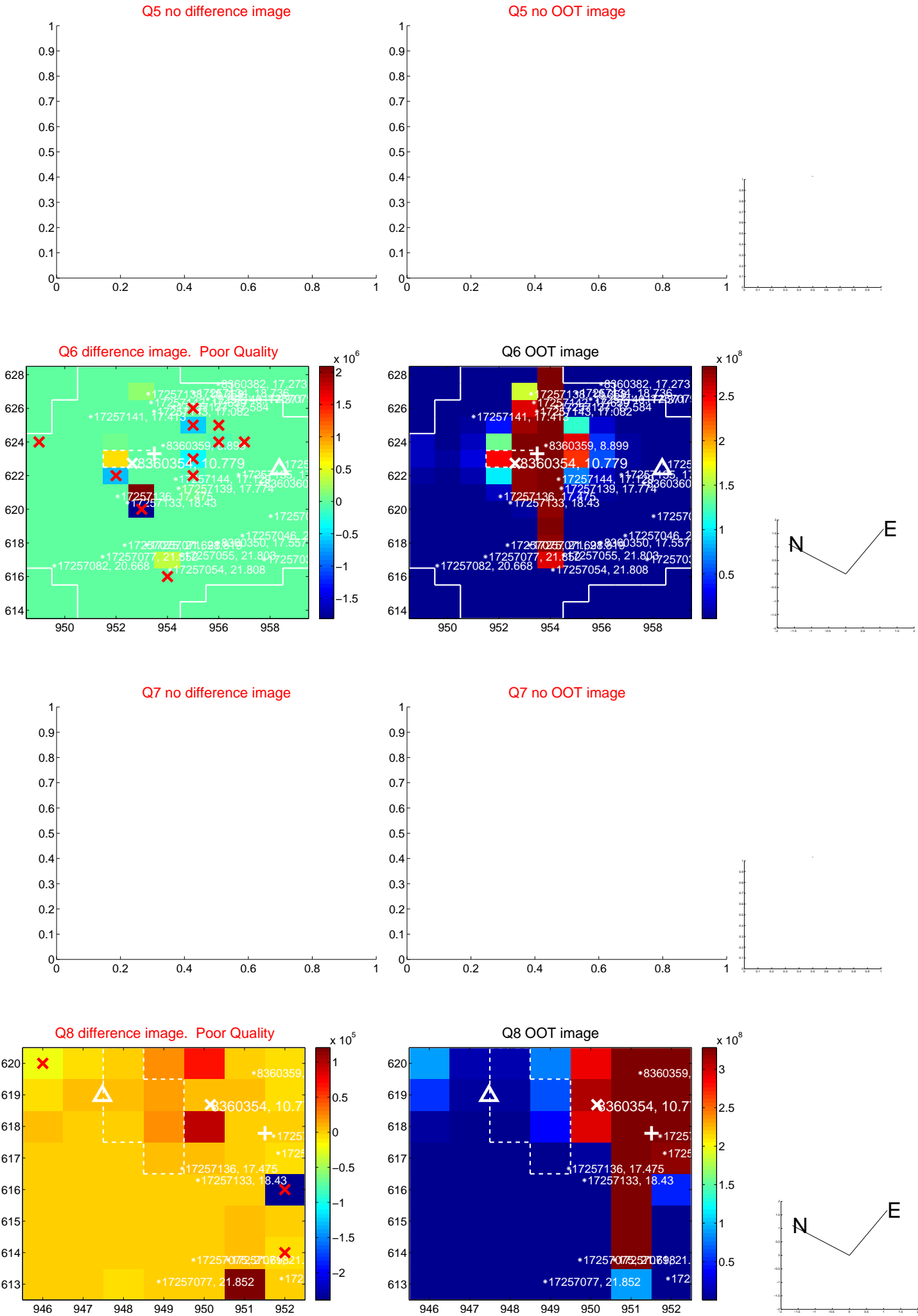
Q4 no difference image



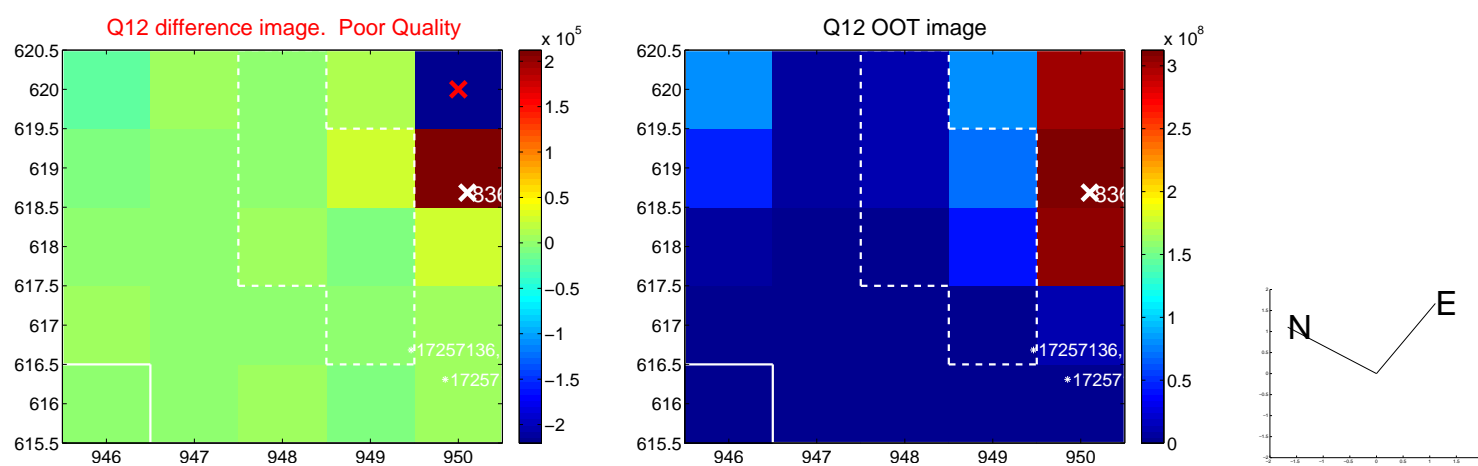
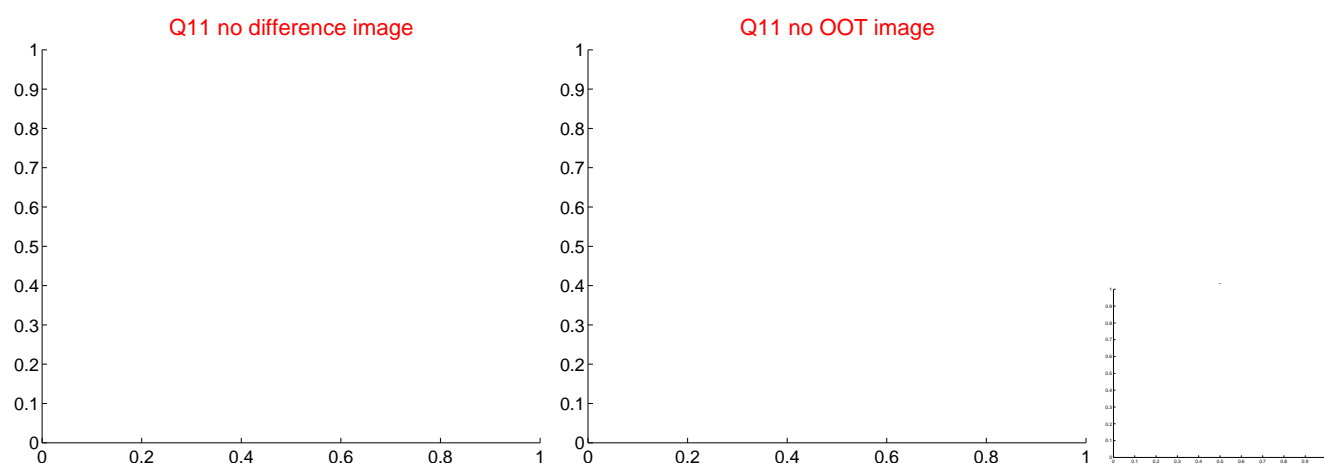
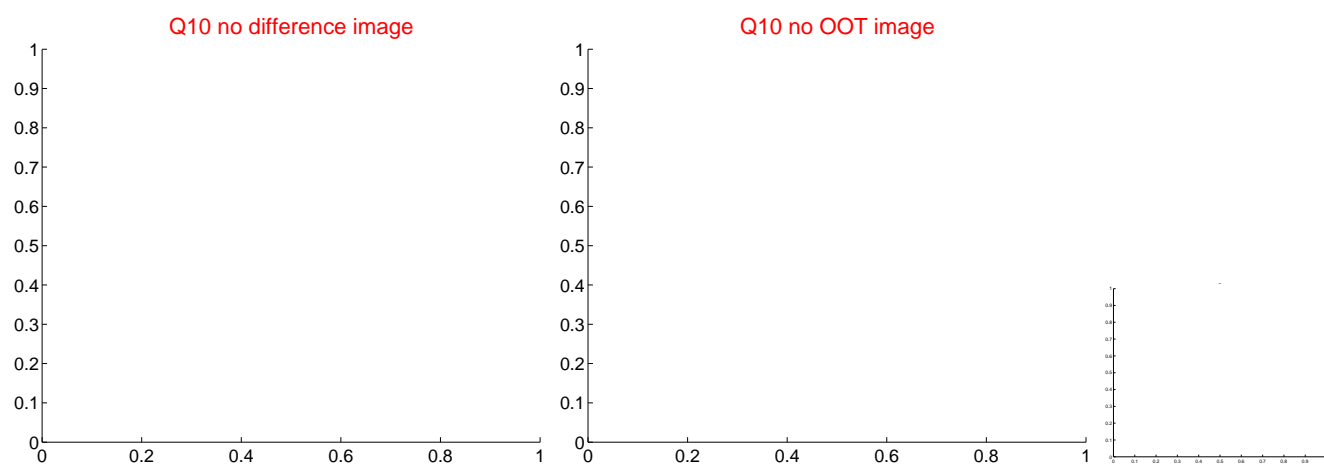
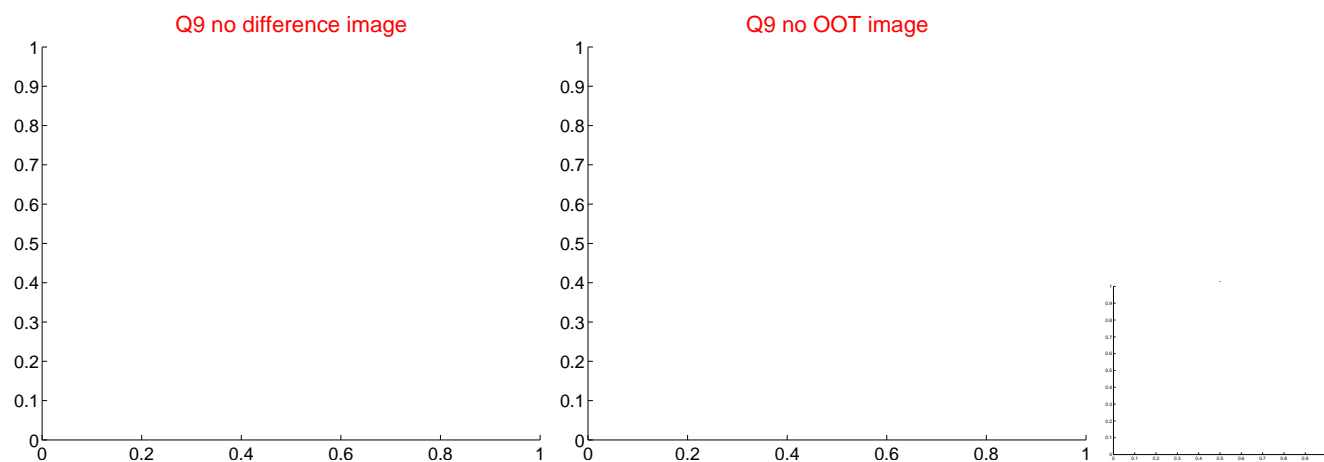
Q4 no OOT image



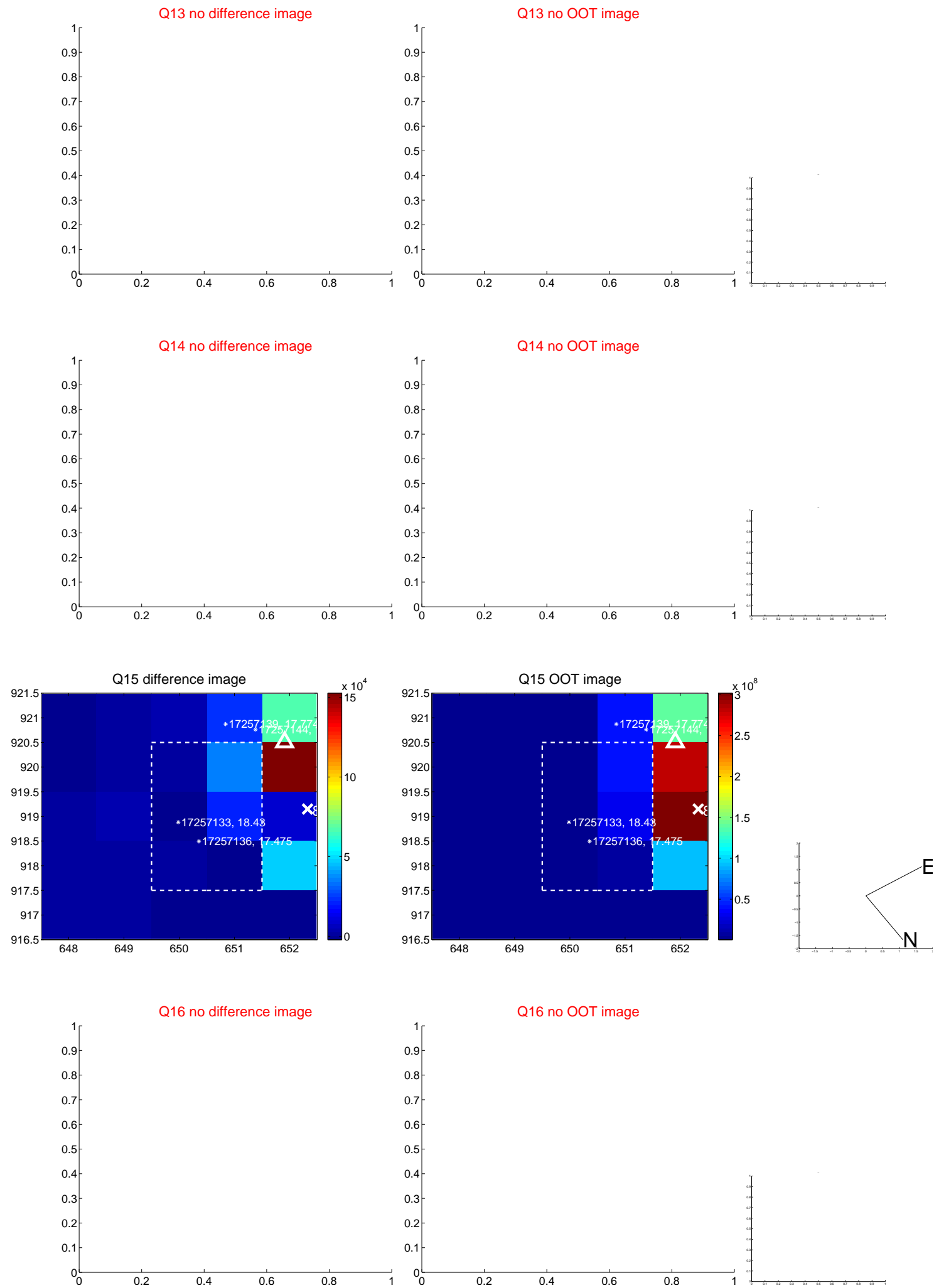
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



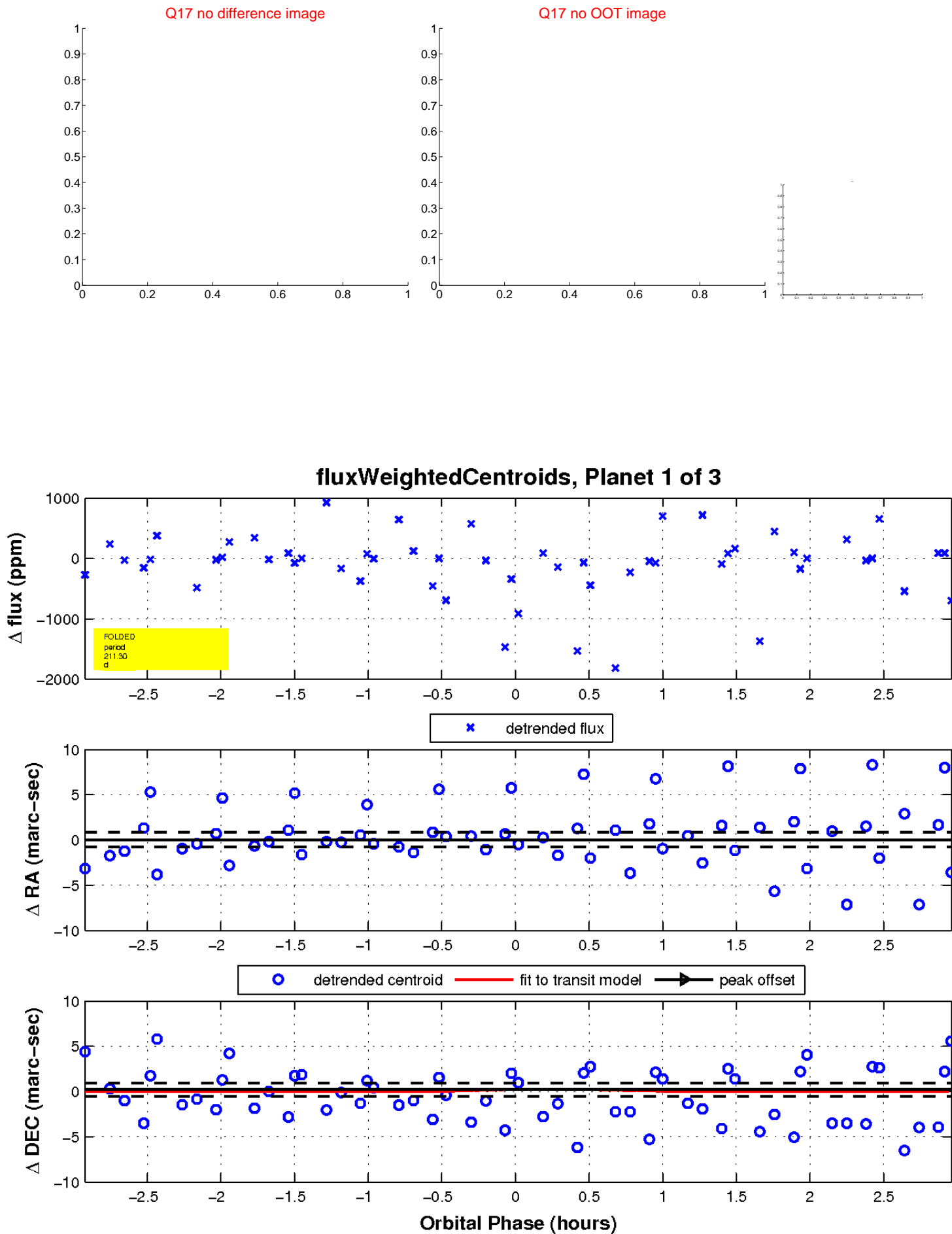
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

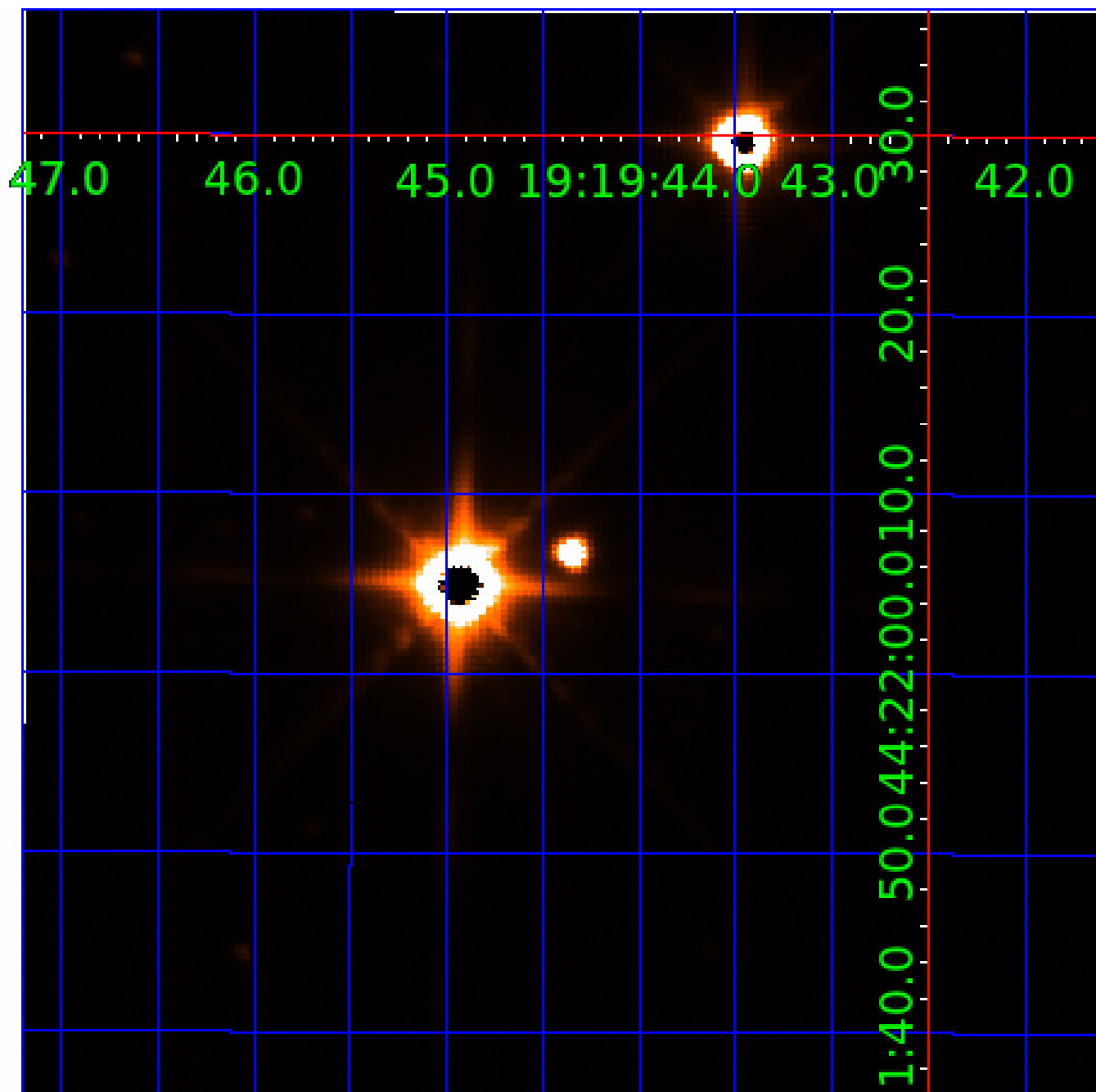


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008360354

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})
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008360354-03	OBS	No	352.442291	373.636900	2513.4	14.555	12.7	12.5	2.71	7411	17.40	12.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008360354-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008360354-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_DV—INCONSISTENT_TRANS—CENT_SATURATED
008360354-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

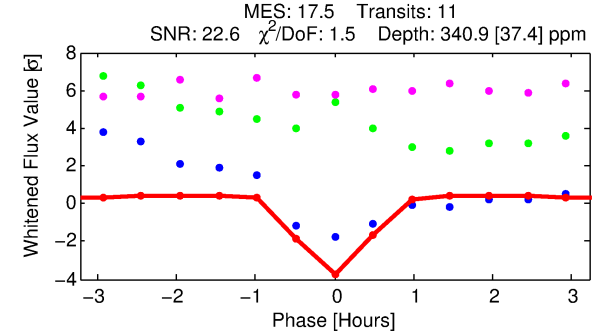
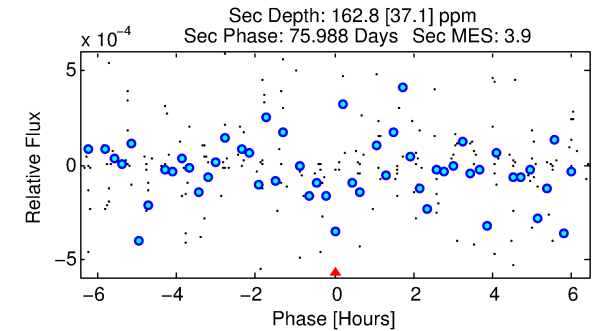
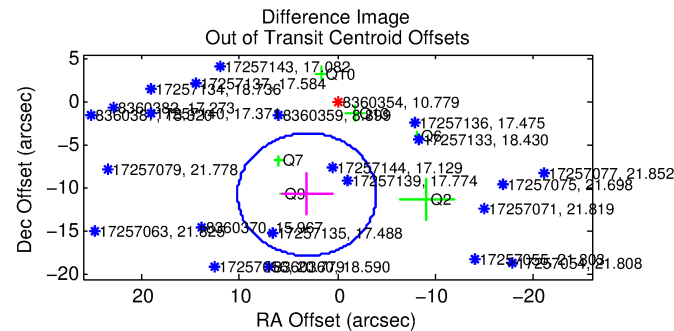
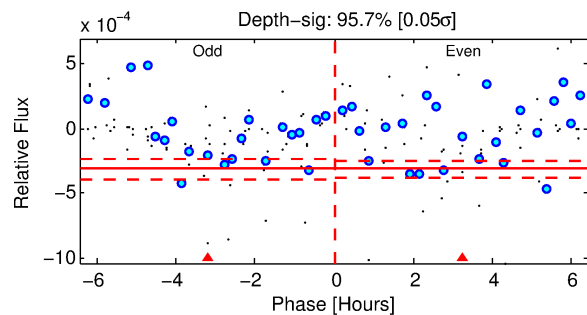
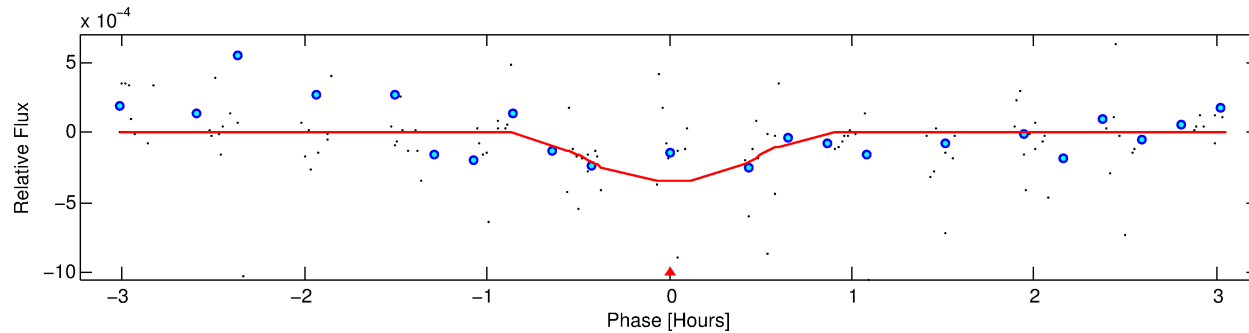
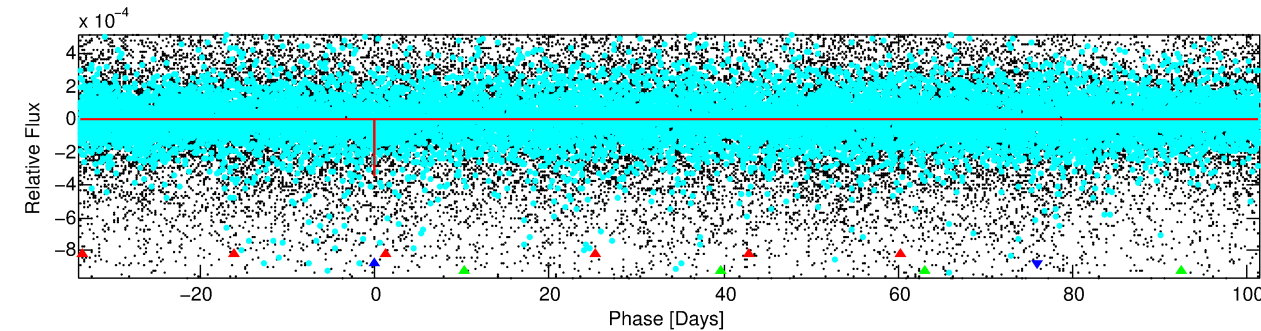
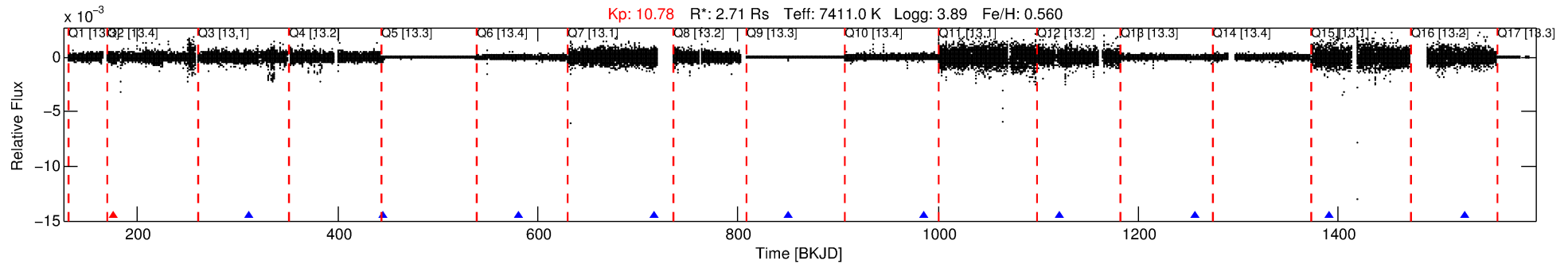
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008360354-02

No Significant Match Found

DV One-Page Summary

KIC: 8360354 Candidate: 2 of 3 Period: 135.065 d



DV Fit Results:

Period = 135.06539 [0.00079] d
Epoch = 175.6307 [0.0038] BKJD
Rp/R* = 0.0176 [0.0150]
a/R* = 859.52 [4235.73]
b = 0.48 [7.97]
Seff = 46.04 [12.97]
Teq = 664 [47] K
Rp = 5.21 [4.57] Re
a = 0.6569 [0.1206] AU
Ag = 1423.79 [2481.24] [0.57 σ]
Teffp = 6308 [2715] K [2.08 σ]

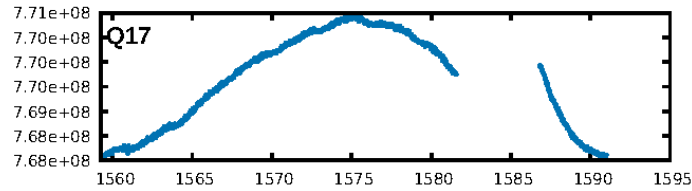
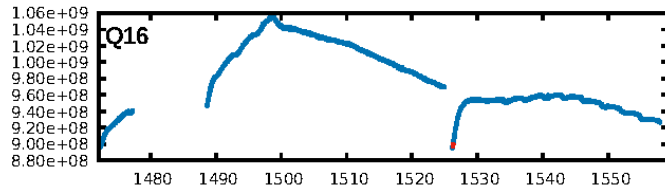
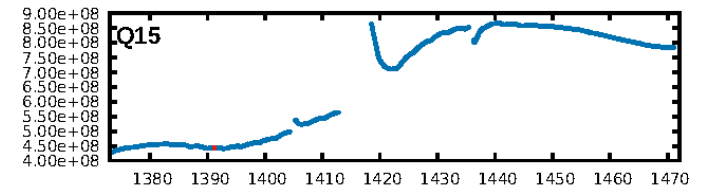
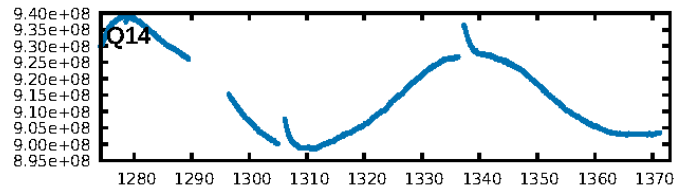
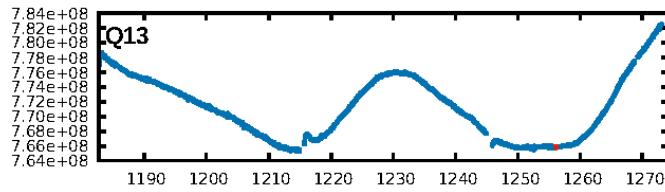
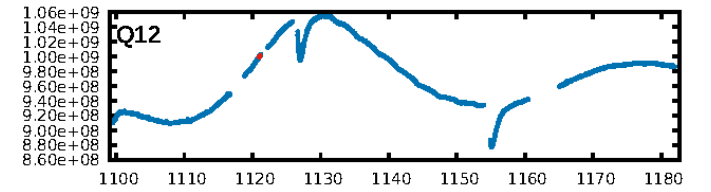
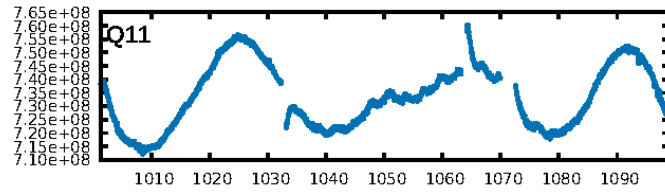
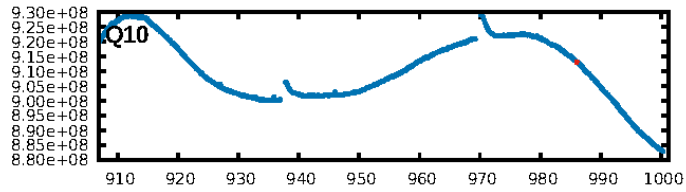
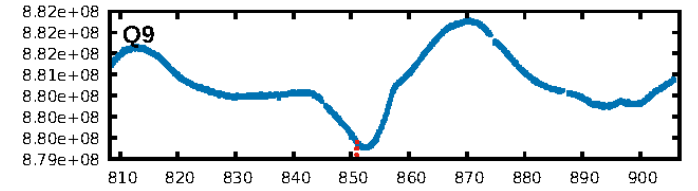
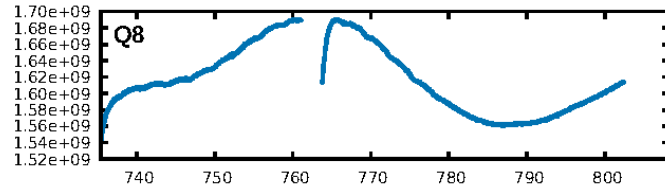
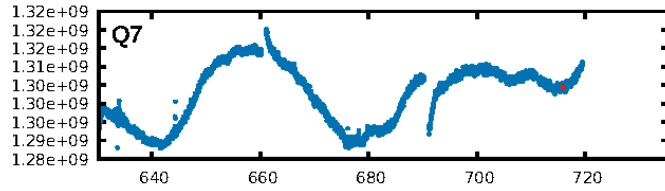
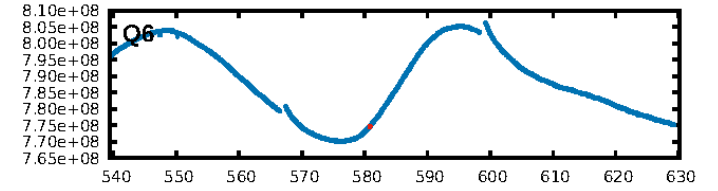
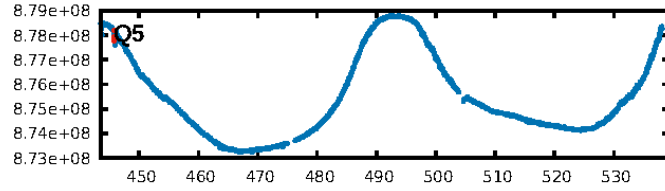
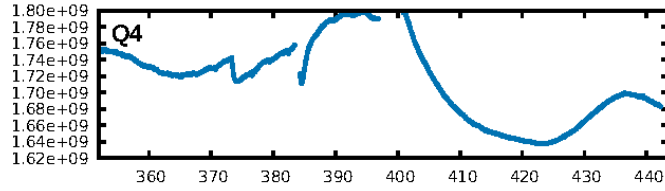
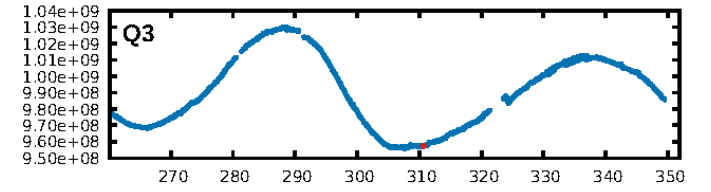
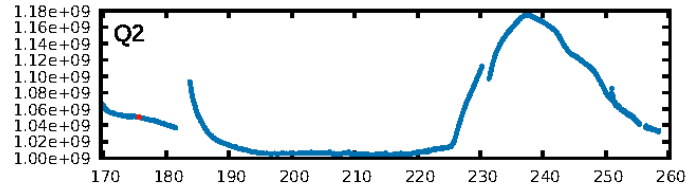
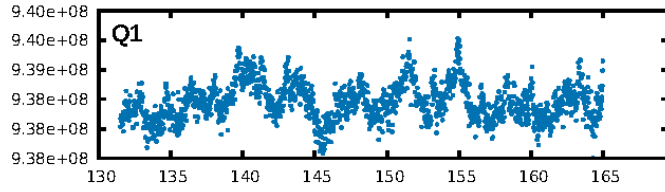
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [672.11 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 17.6%
Bootstrap-pfa: 1.52e-09
RollingBand-fgt: 0.91 [10/11]
GhostDiagnostic-chr: N/A
Centroid-sig: 41.5%
Centroid-so: 1.165 arcsec [1.25 σ]
OotOffset-rm: 11.157 arcsec [4.72 σ]
KicOffset-rm: 9.195 arcsec [4.90 σ]
OotOffset-st: 3/1/0/2 [6]
KicOffset-st: 3/2/0/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [10/10]

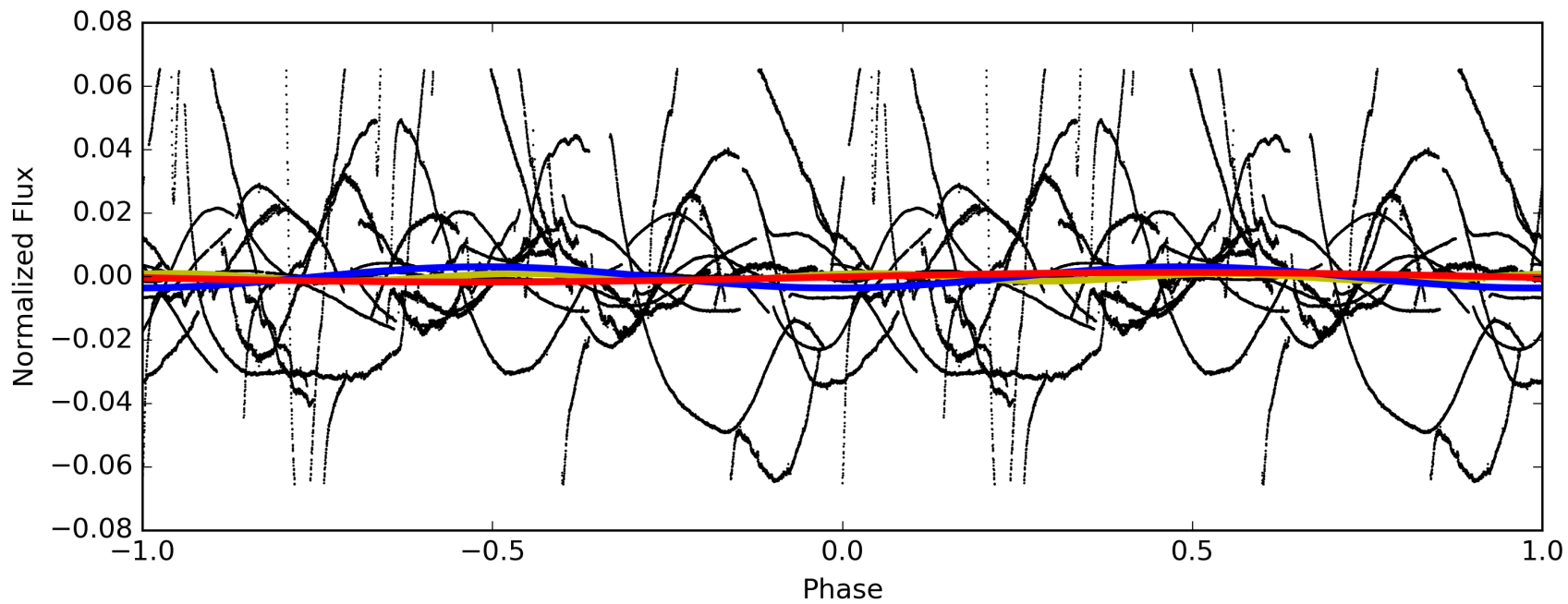
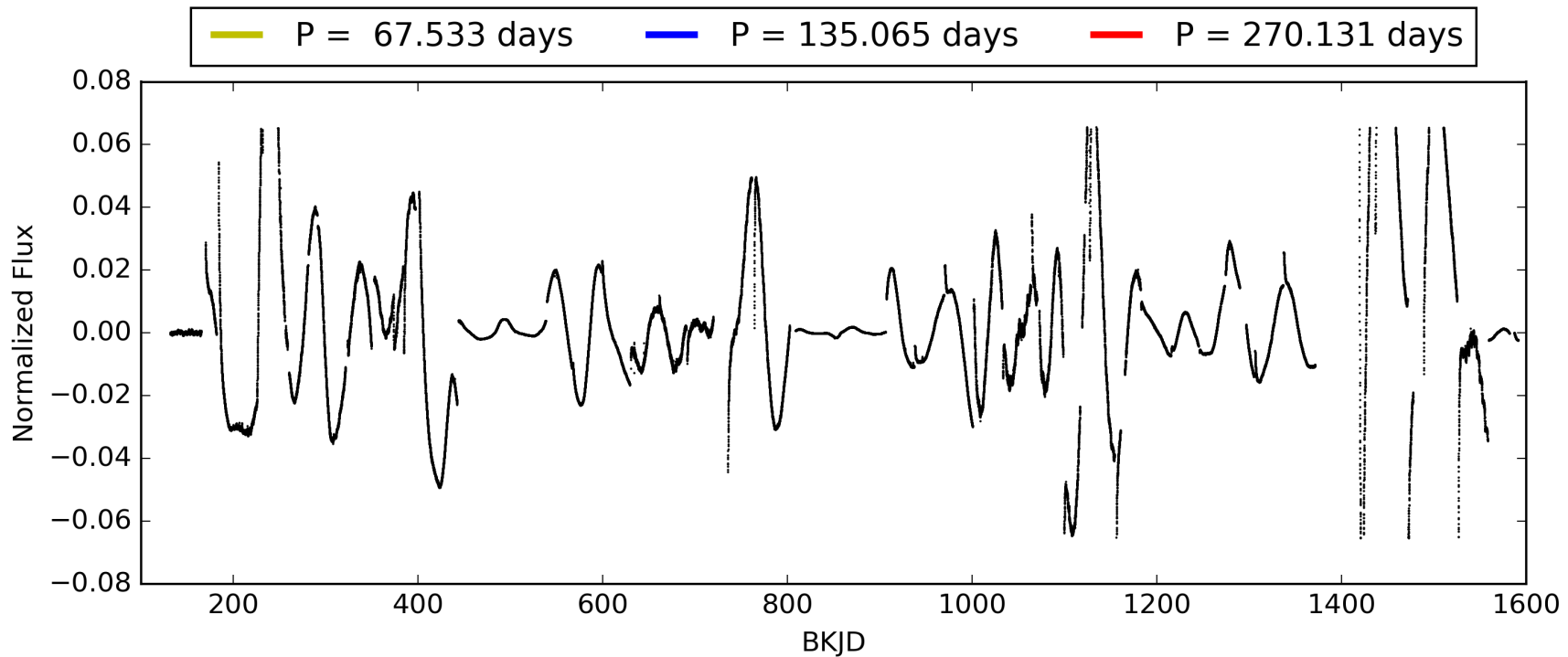
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:24:31 Z

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

TCE 008360354-02, PDC Light Curves

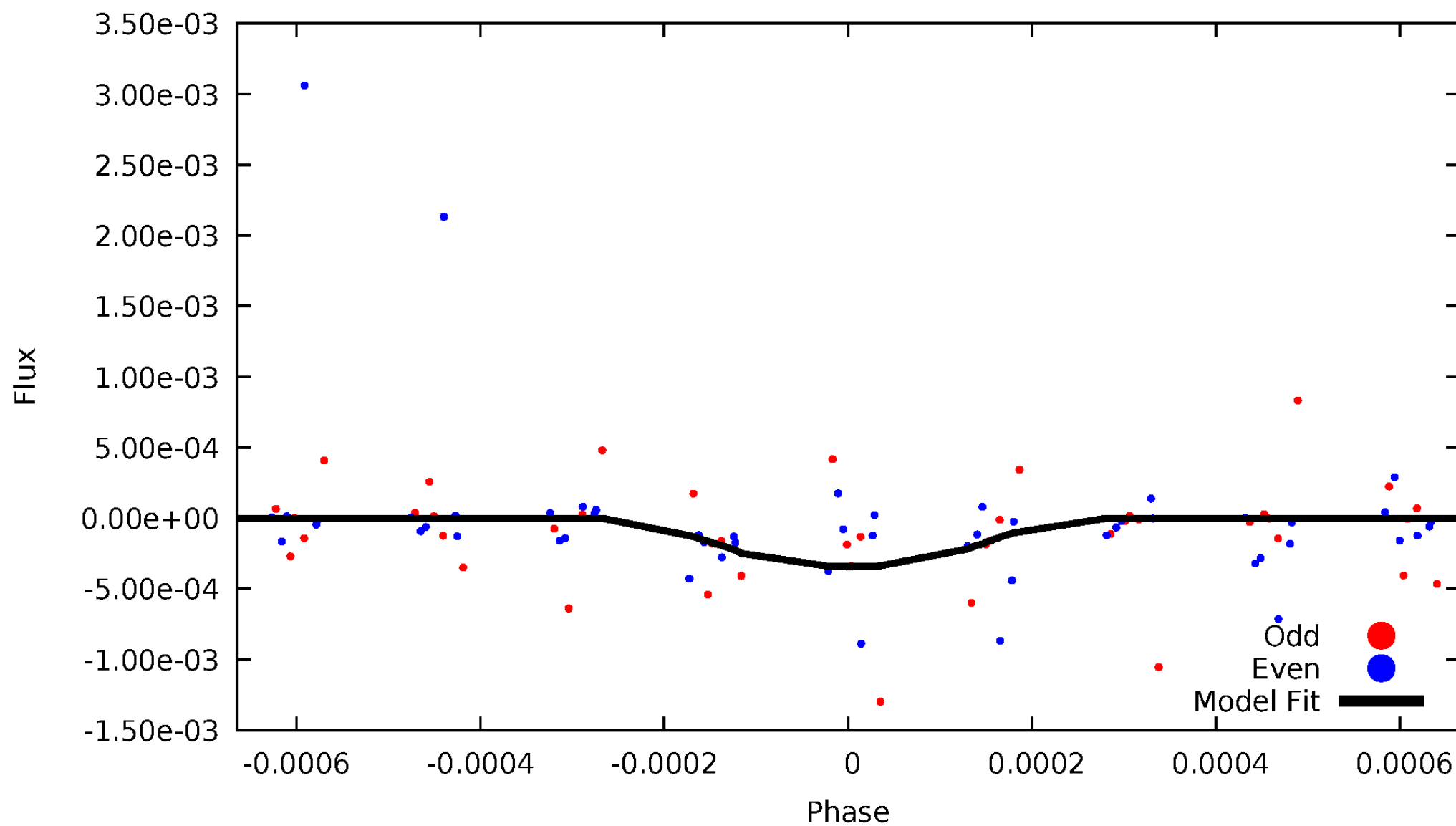


TCE 008360354-02



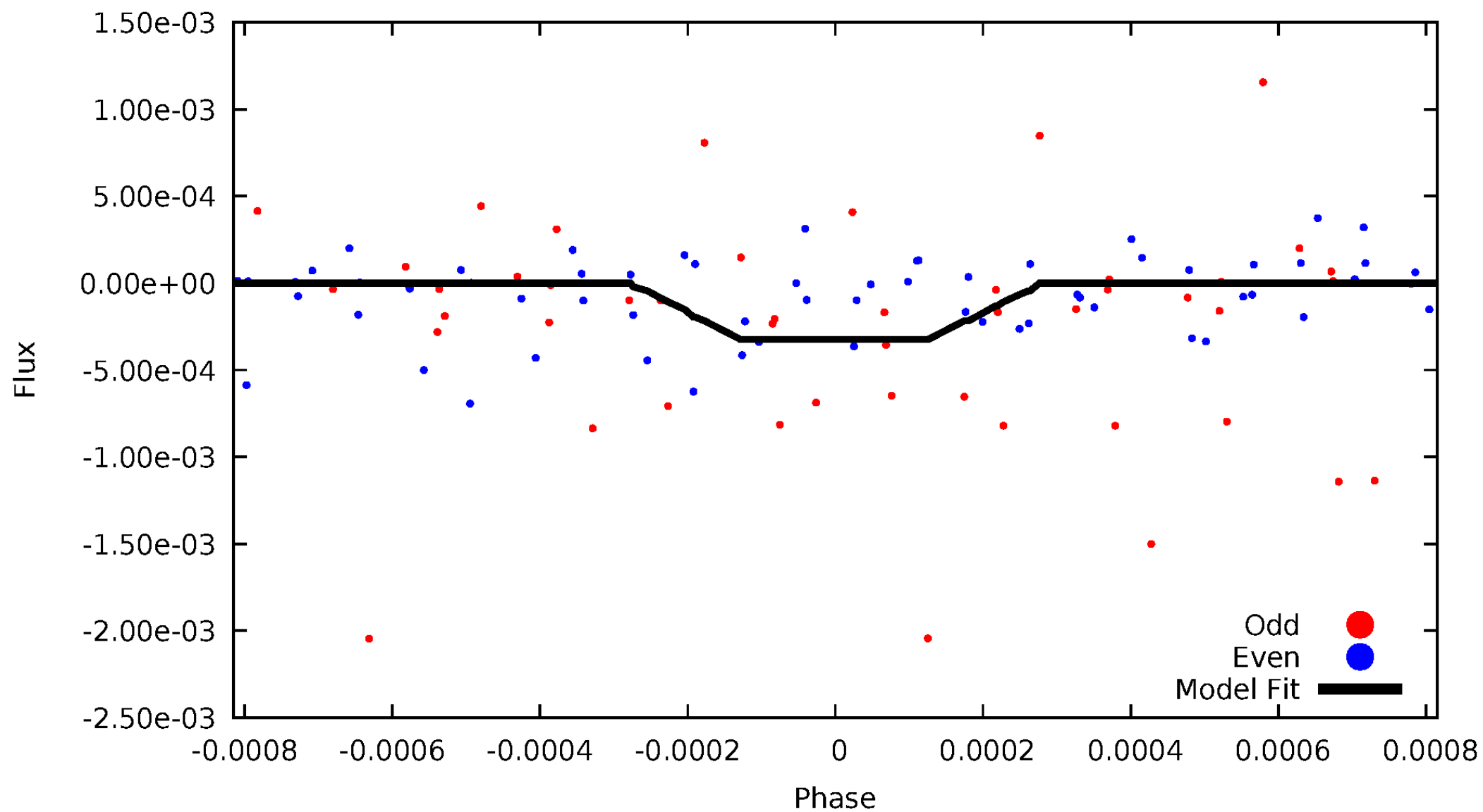
DV Odd/Even

TCE 008360354-02



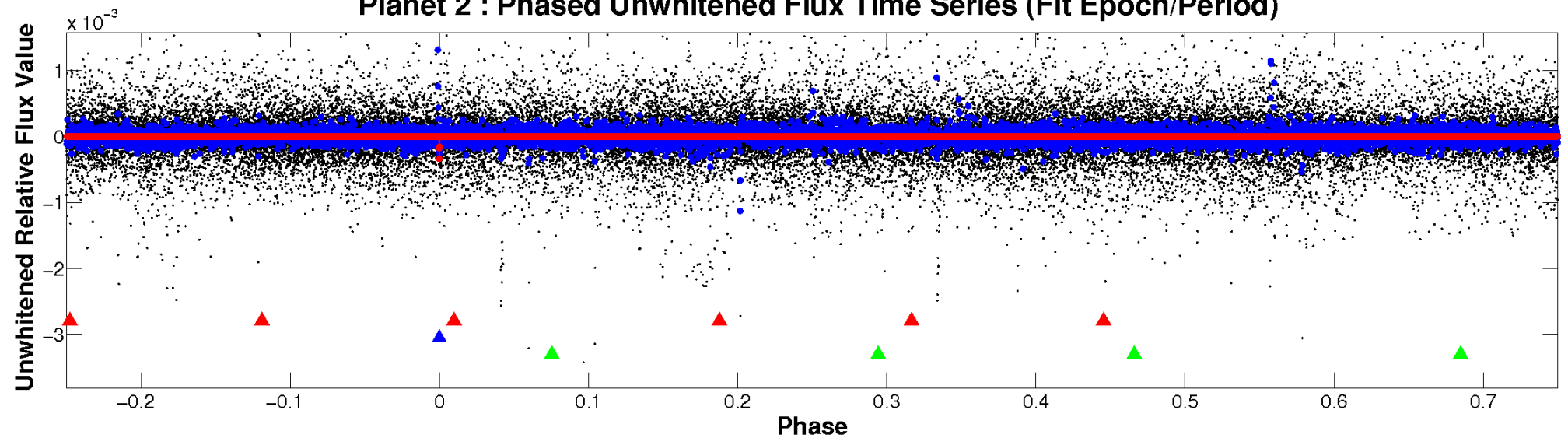
ALT Odd/Even

TCE 008360354-02

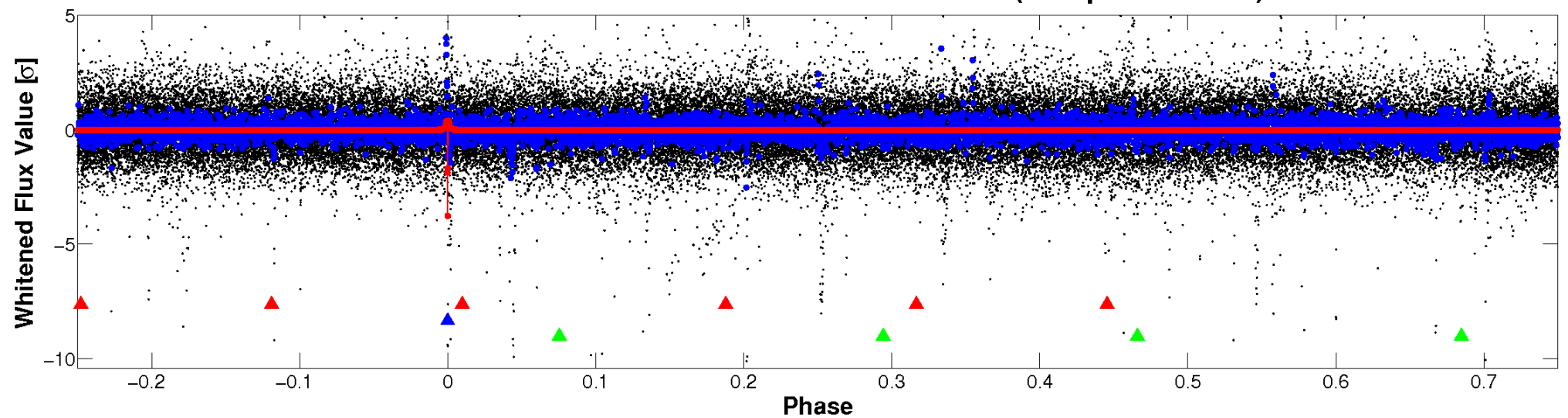


Non-Whitened Vs. Whitened Light Curve

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

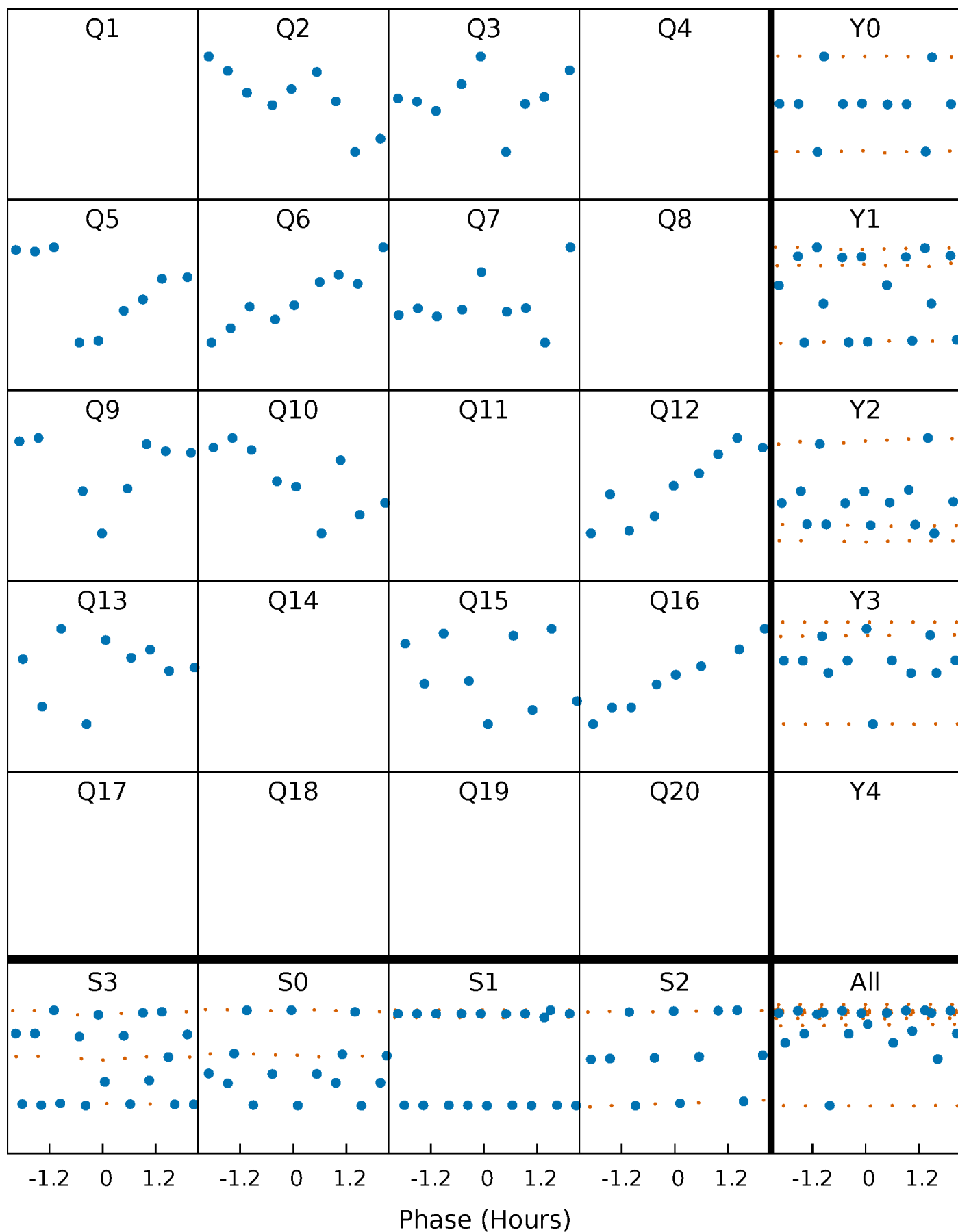


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



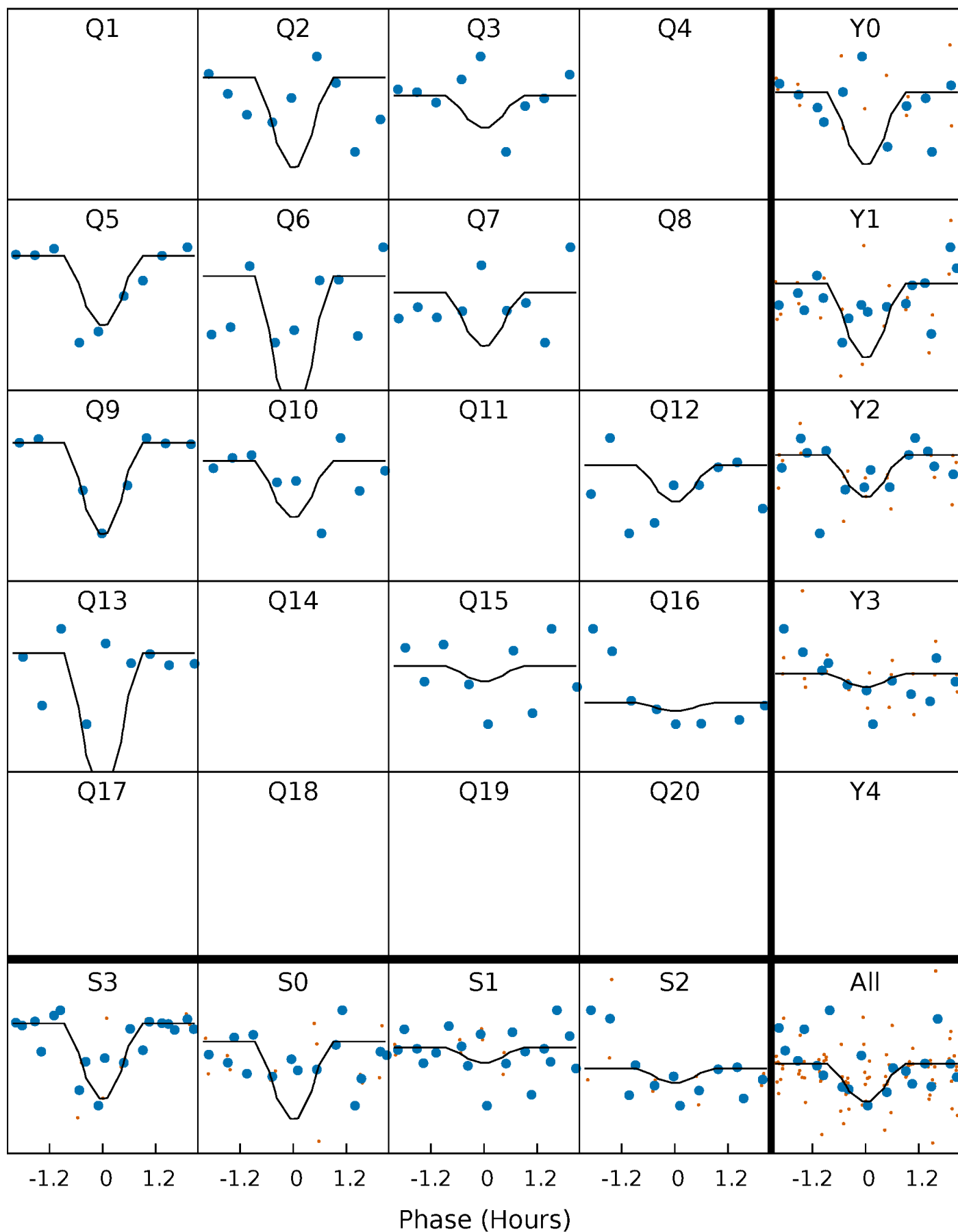
PDC Quarter-Phased Transit Curves

TCE 008360354-02 P=135.065386 Days $T_0=175.630690$ (BKJD)



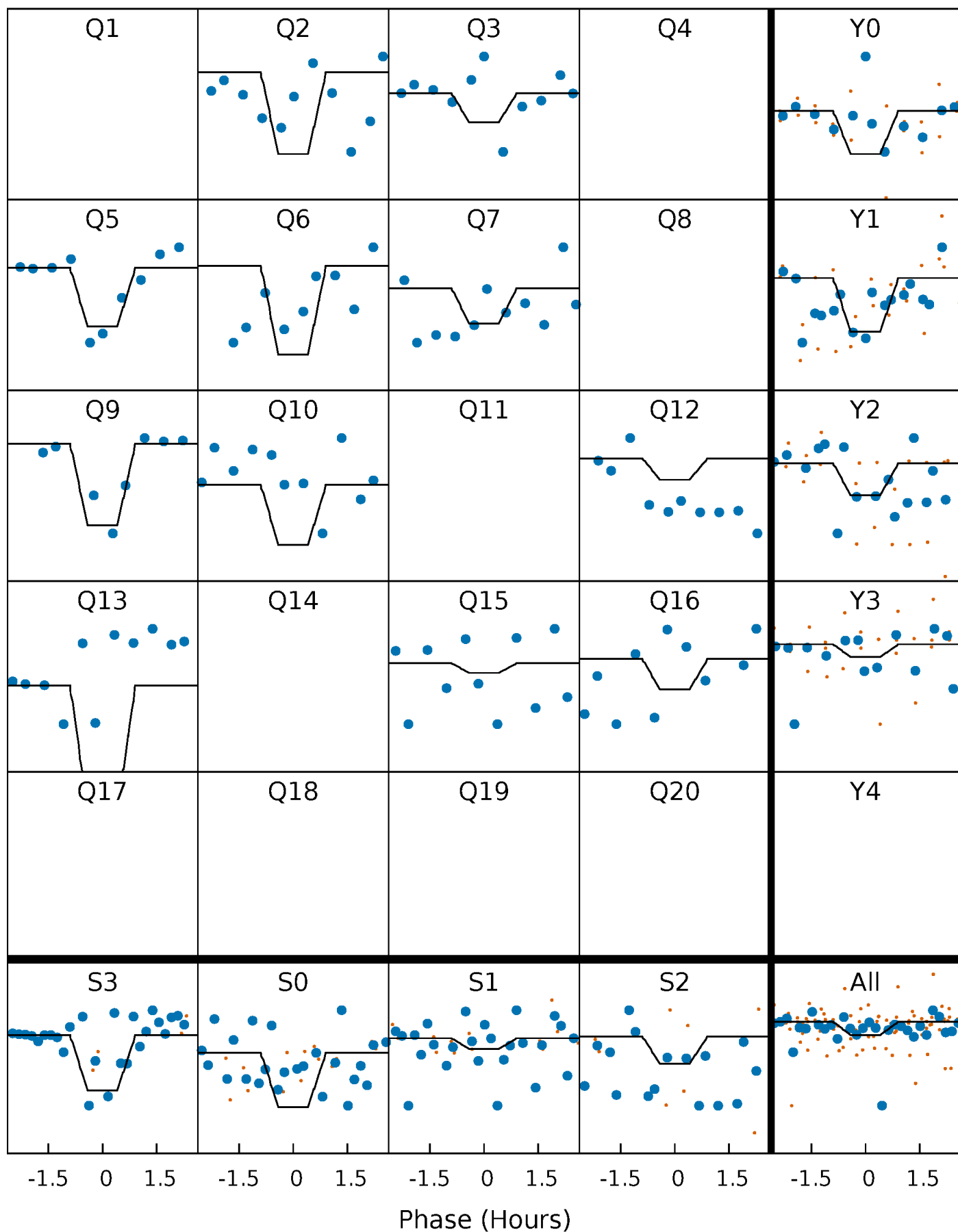
DV Quarter-Phased Transit Curves

TCE 008360354-02 $P=135.065386$ Days $T_0=175.630690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

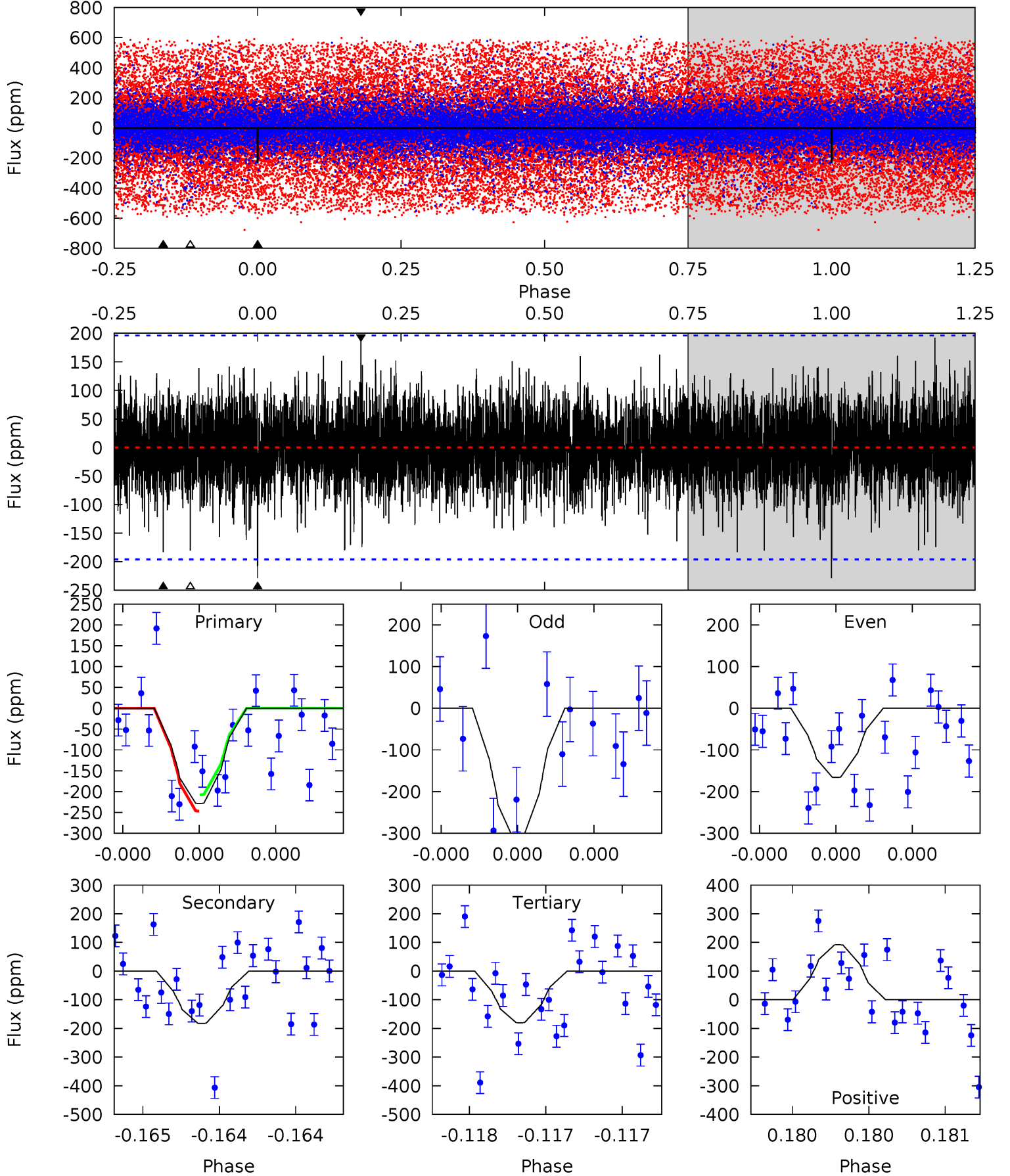
TCE 008360354-02 P=135.064546 Days $T_0=175.626043$ (BKJD)



DV Model-Shift Uniqueness Test

008360354-02, P = 135.065386 Days, E = 40.565304 Days

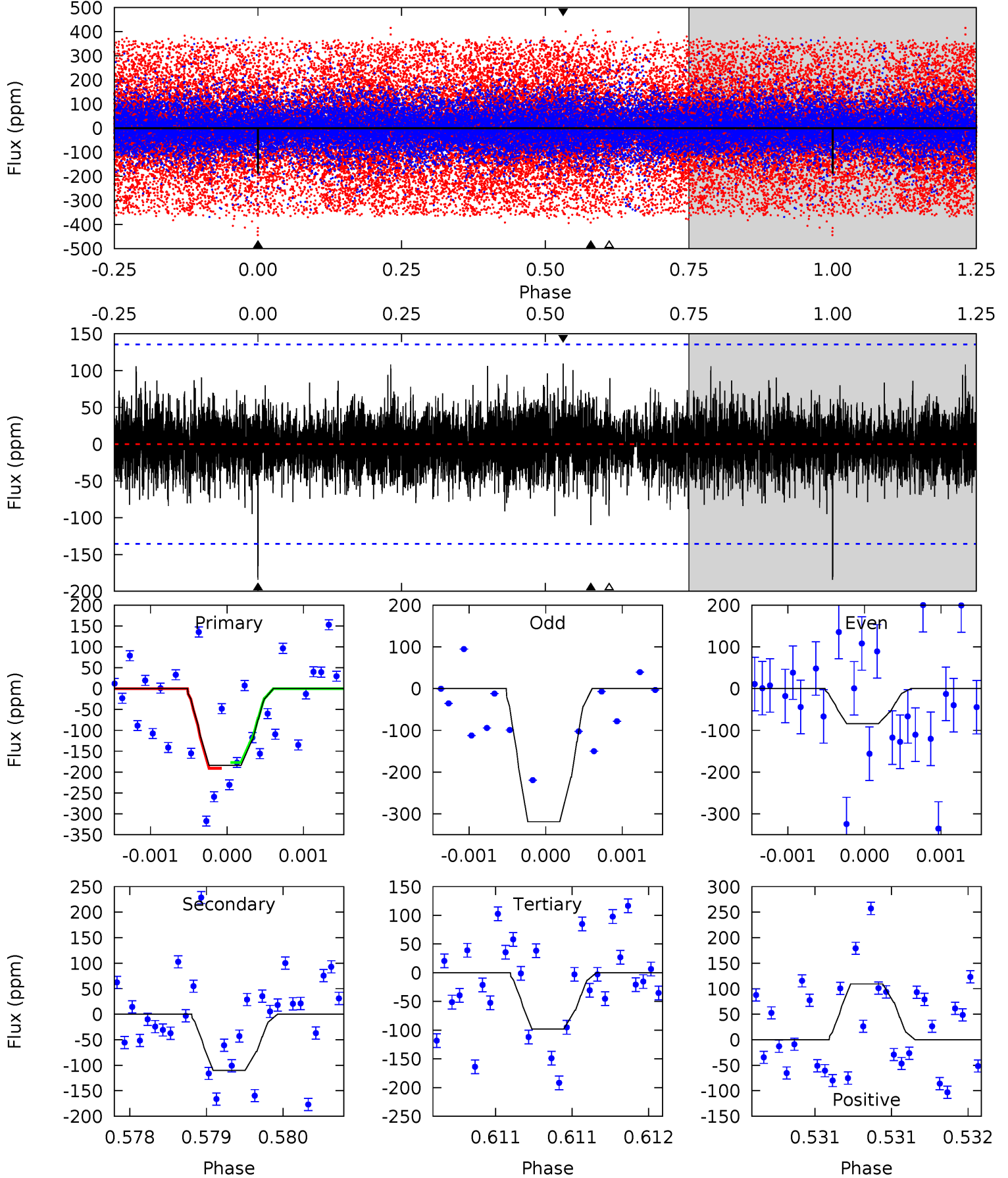
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.52	5.21	5.15	5.48	5.59	3.51	1.27	1.37	1.04	0.06	-0.27	2.20	1.36	0.46	0.58



Alt Model-Shift Uniqueness Test

008360354-02, $P = 135.064546$ Days, $E = 40.561497$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	4.51	4.01	4.49	5.56	3.46	1.07	3.54	3.07	0.49	0.02	5.83	1.31	0.37	0



Stellar Parameters For KIC 008360354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7411^{+96}_{-67}	$3.888^{+0.156}_{-0.104}$	$0.560^{+0.050}_{-0.300}$	$2.711^{+0.463}_{-0.566}$	$2.068^{+0.157}_{-0.209}$	$0.146^{+0.119}_{-0.048}$
	+1%/-1%	+4%/-3%	+9%/-54%	+17%/-21%	+8%/-10%	+81%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008360354-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-183 ± 35	$5.77^{+4.11}_{-3.45}$	927^{+40}_{-49}	6048^{+4266}_{-1341}	1276^{+6368}_{-858}
Alt.	-110 ± 24	$5.89^{+4.12}_{-3.61}$	926^{+42}_{-47}	5350^{+3149}_{-1087}	781^{+3882}_{-536}

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

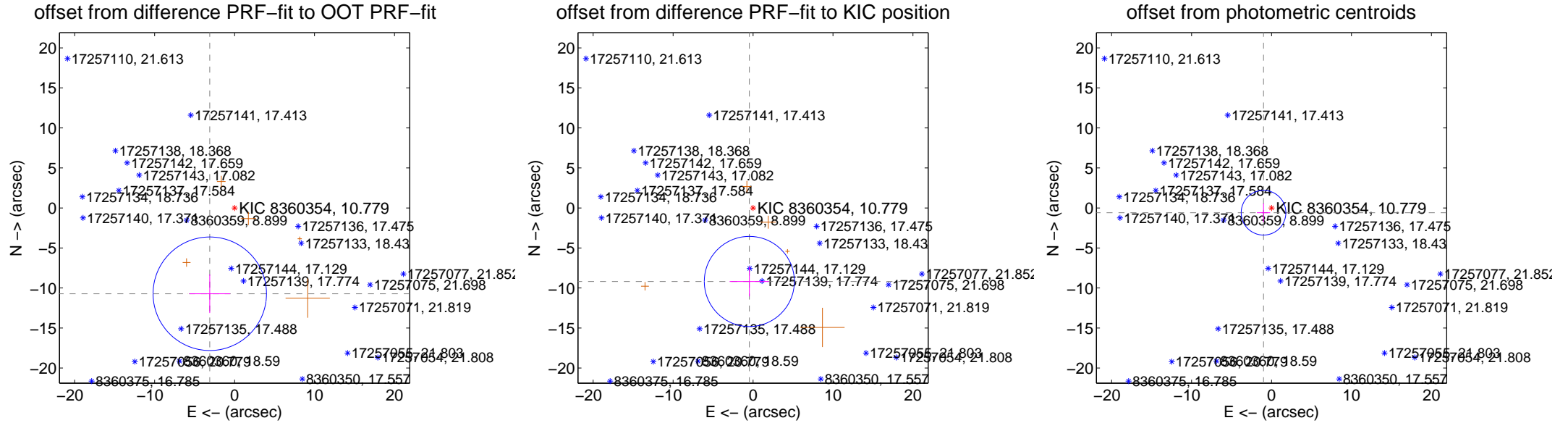
DV Centroid Data

Supplemental centroid analysis for 008360354-02. **Kepler magnitude: 10.78.** Transit SNR 22.64

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.157 ± 2.364	4.72	3.101 ± 2.552	-10.718 ± 2.413
PRF-fit source offset from KIC position	9.195 ± 1.877	4.90	0.465 ± 2.461	-9.184 ± 1.856
photometric centroid source offset	1.16 ± 0.93	1.25	1.00 ± 0.83	-0.60 ± 1.17



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

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

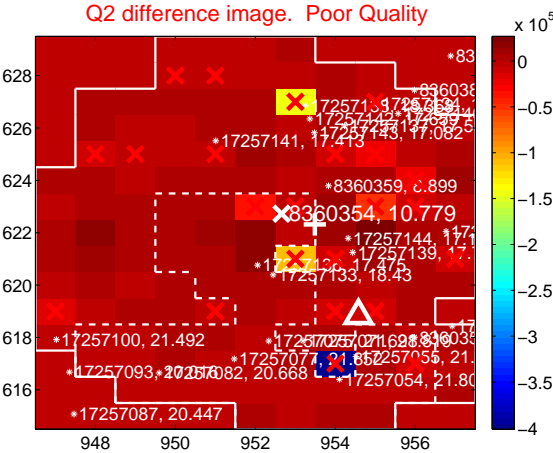
Q1 no difference image



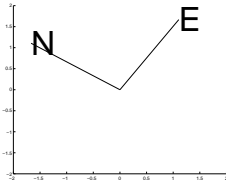
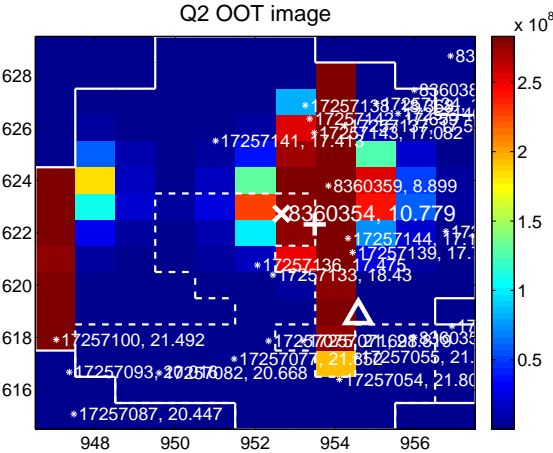
Q1 no OOT image



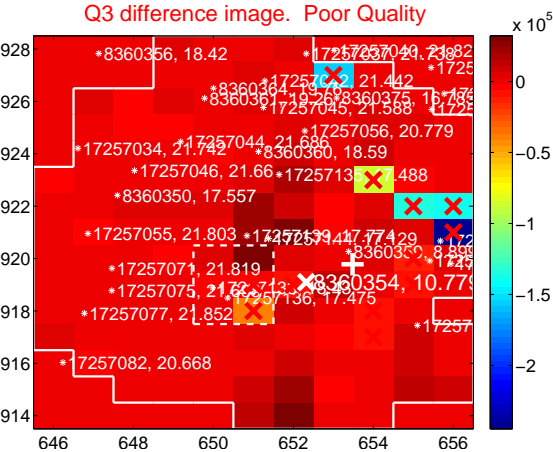
Q2 difference image. Poor Quality



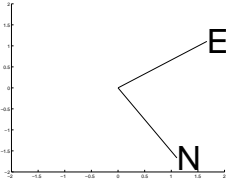
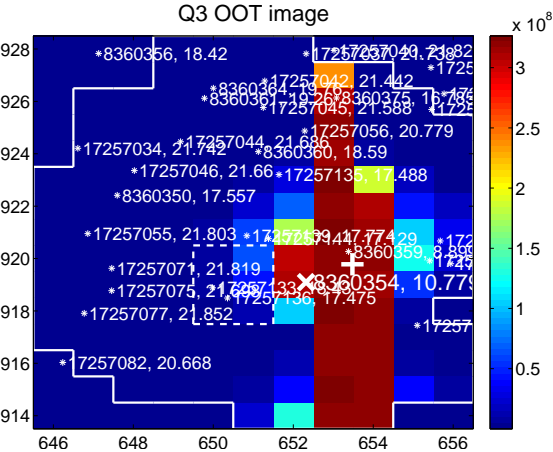
Q2 OOT image



Q3 difference image. Poor Quality



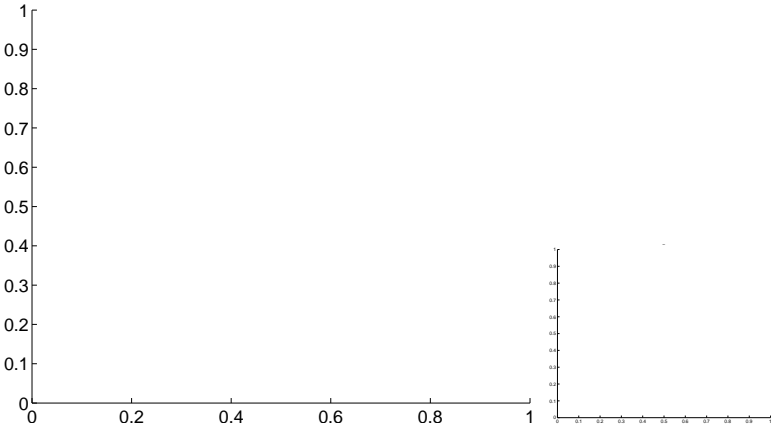
Q3 OOT image



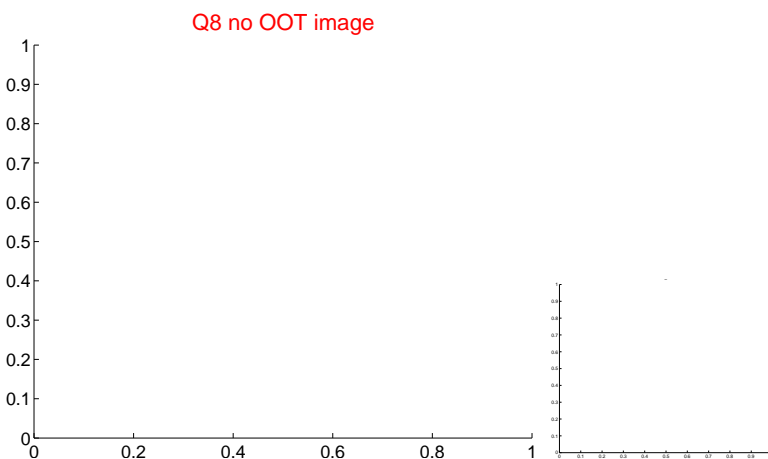
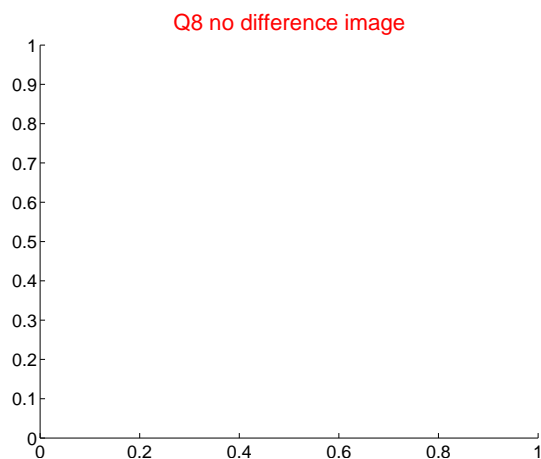
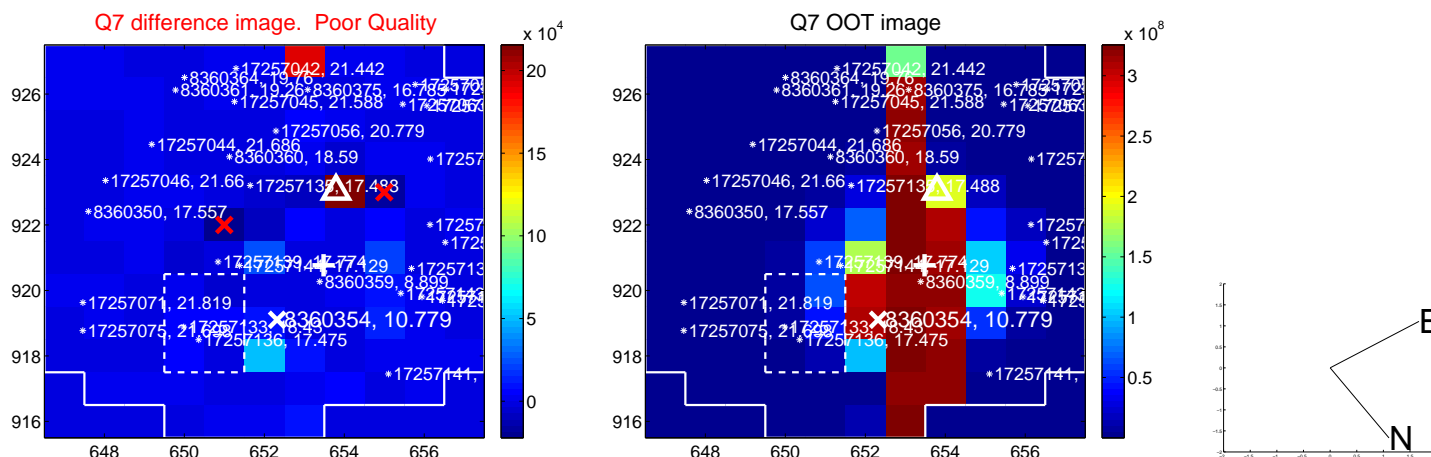
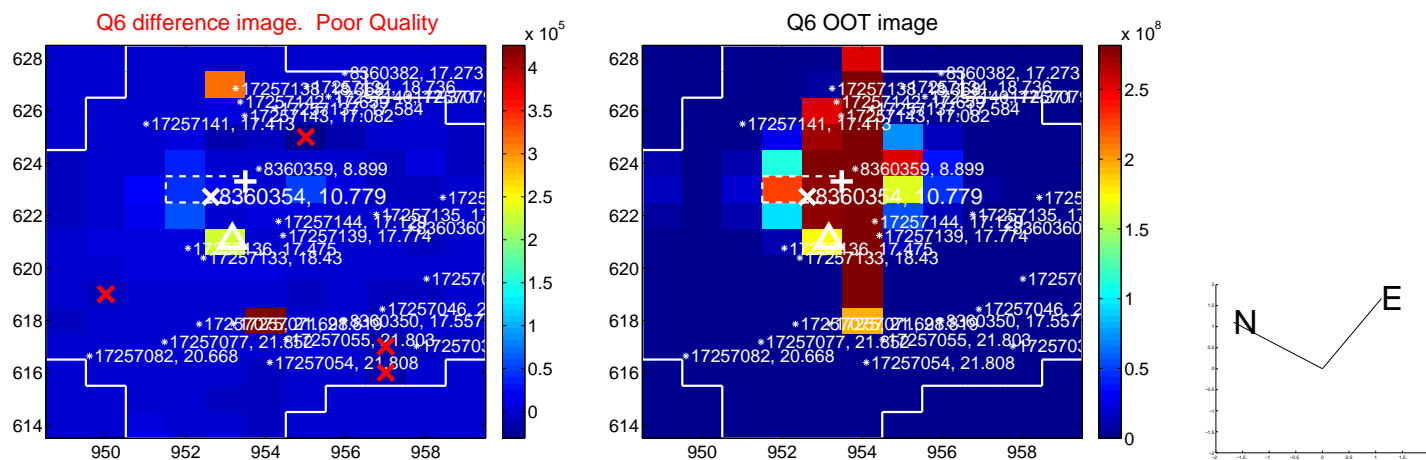
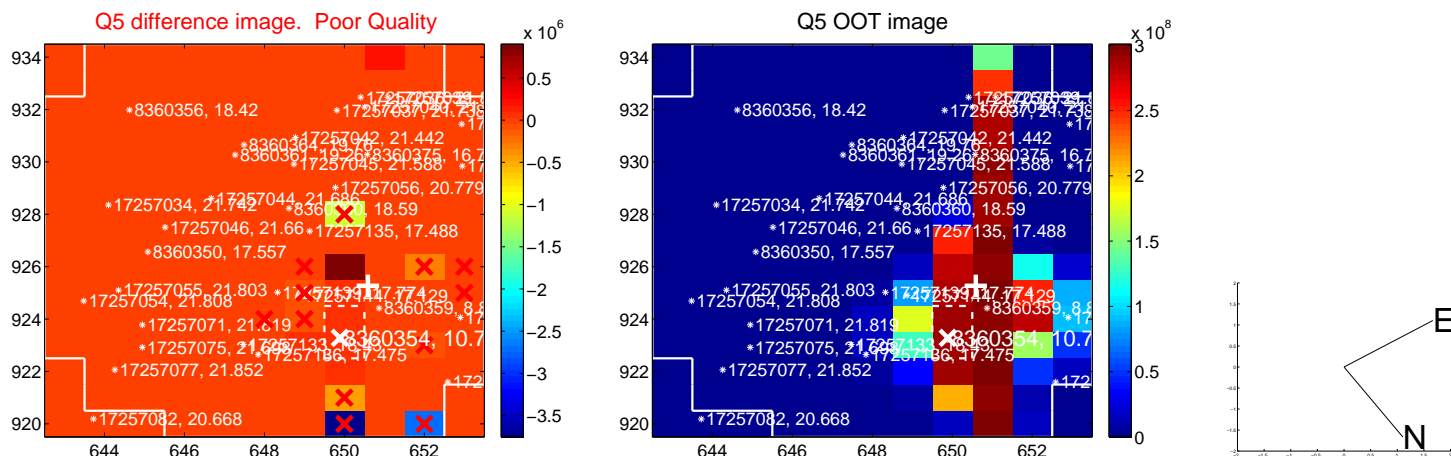
Q4 no difference image



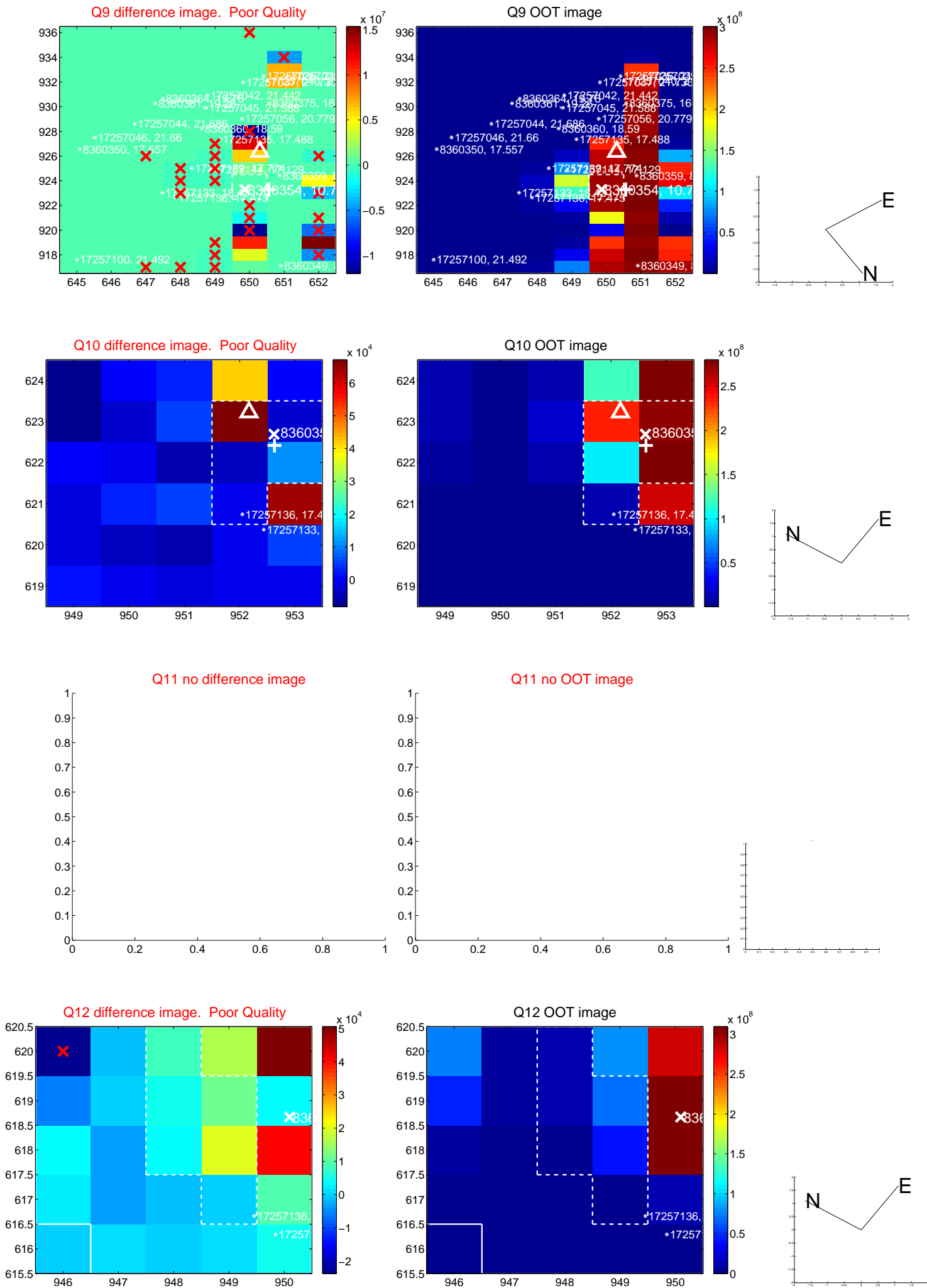
Q4 no OOT image



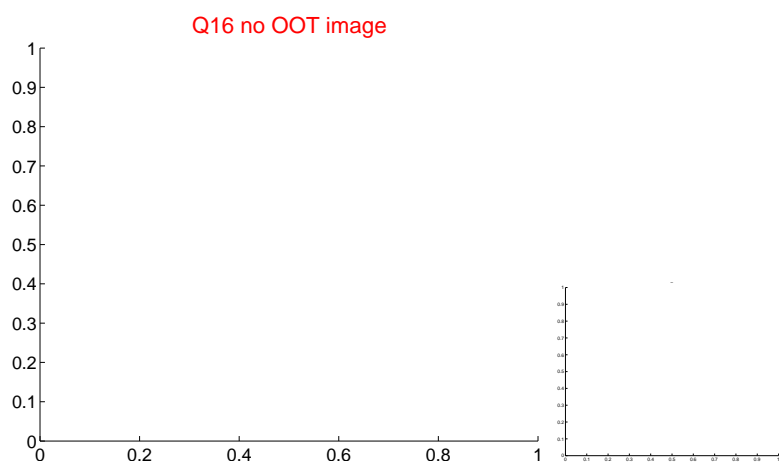
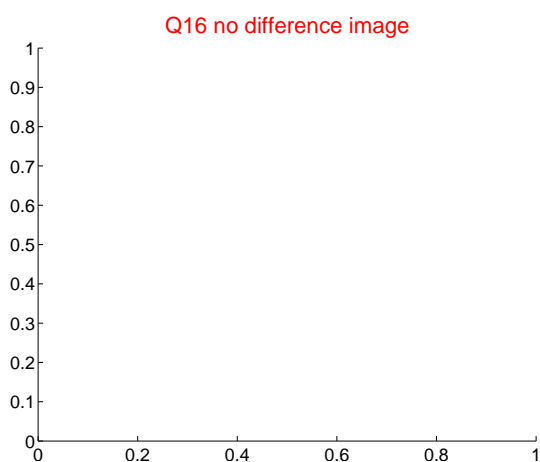
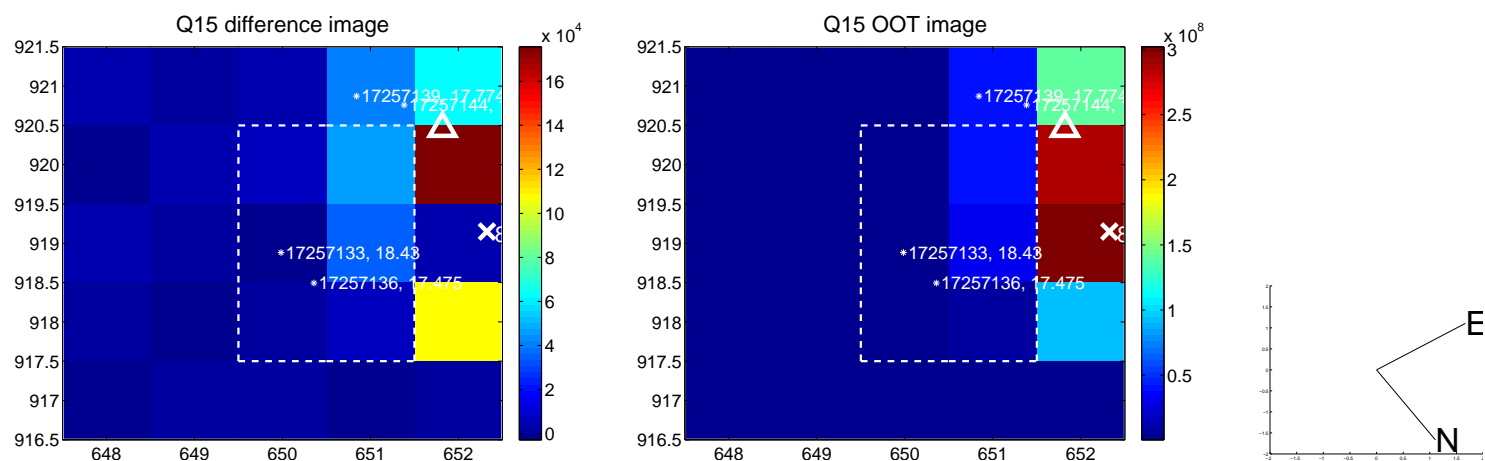
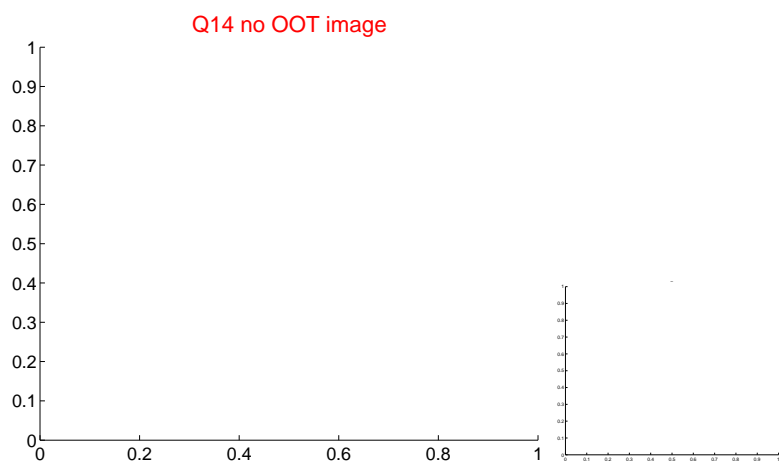
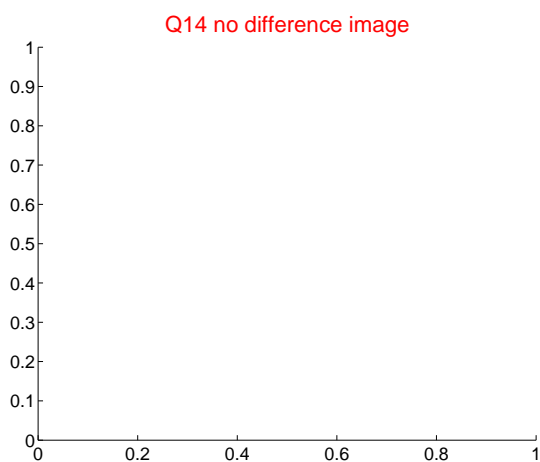
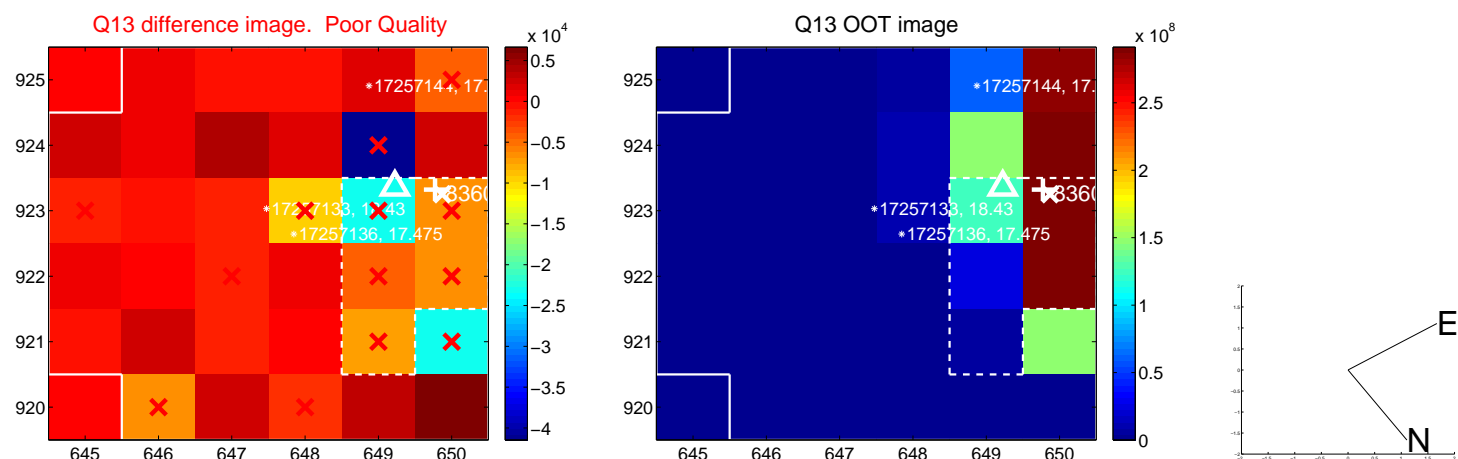
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



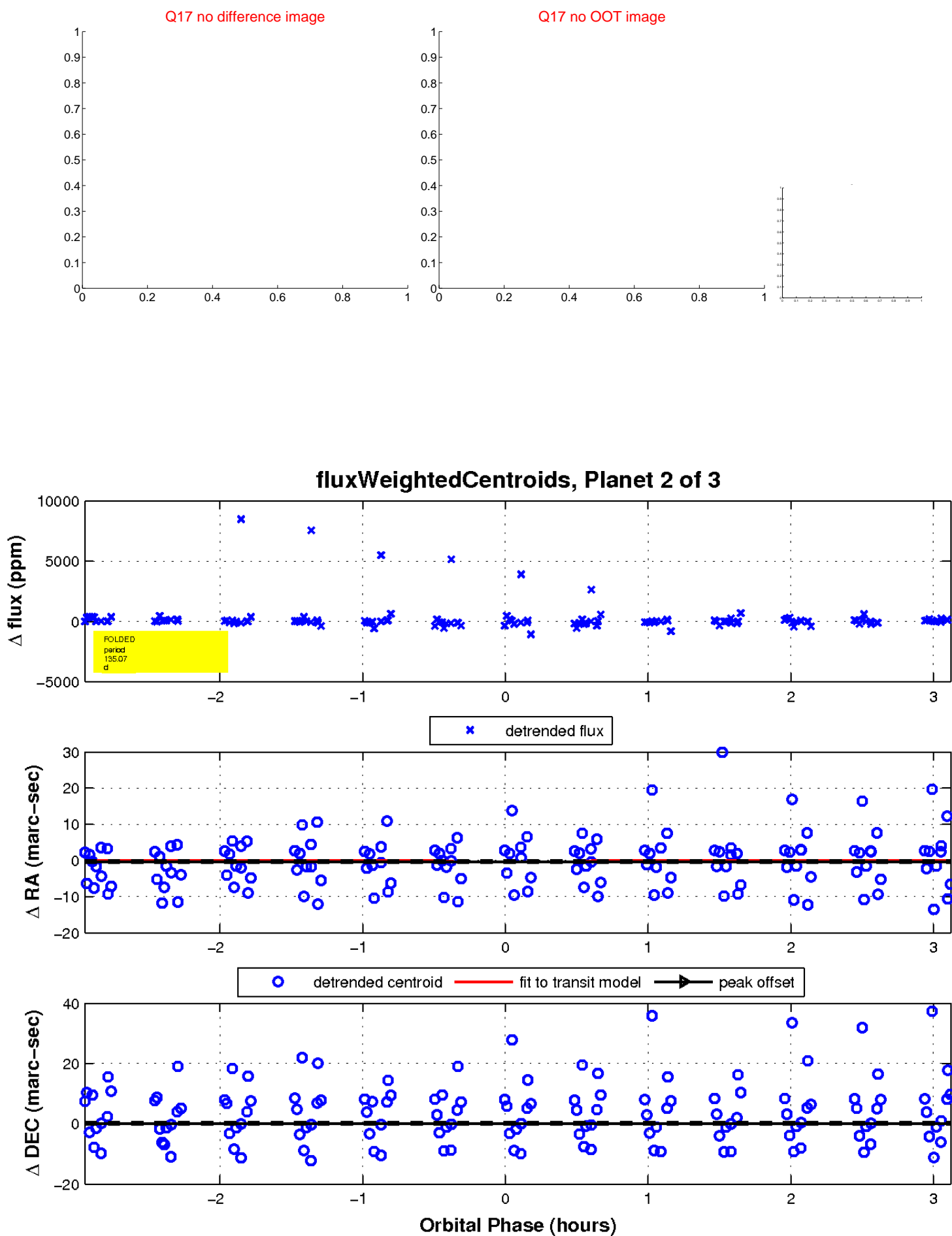
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

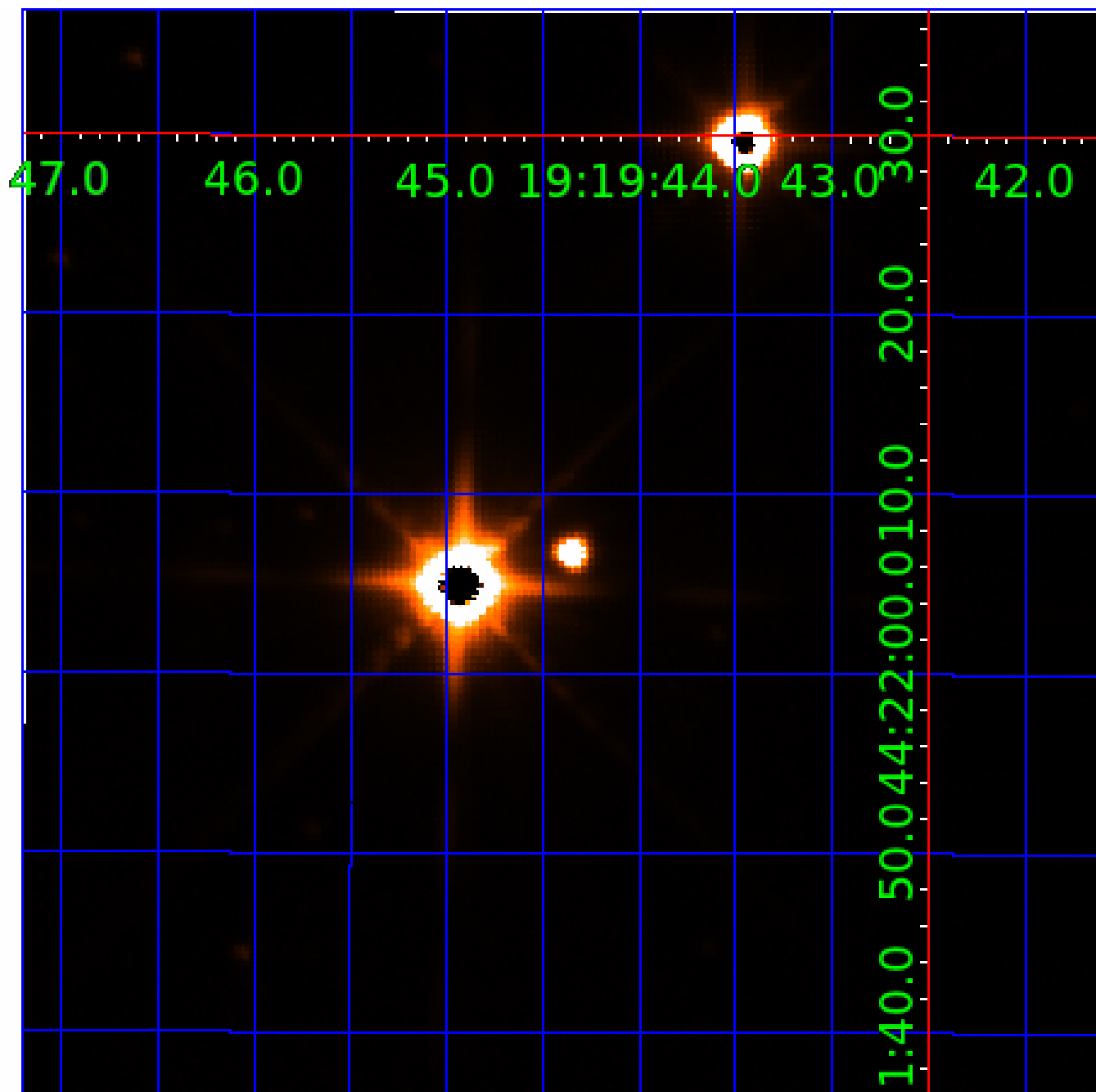


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008360354

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})
008360354-01	OBS	No	211.297575	336.063126	689.8	2.500	27.0	-1.0	2.71	7411	7.21	25.35
008360354-02	OBS	No	135.065386	175.630690	340.9	1.077	17.5	22.6	2.71	7411	5.21	46.04
008360354-03	OBS	No	352.442291	373.636900	2513.4	14.555	12.7	12.5	2.71	7411	17.40	12.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008360354-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008360354-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_TER_DV—INCONSISTENT_TRANS—CENT_SATURATED
008360354-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

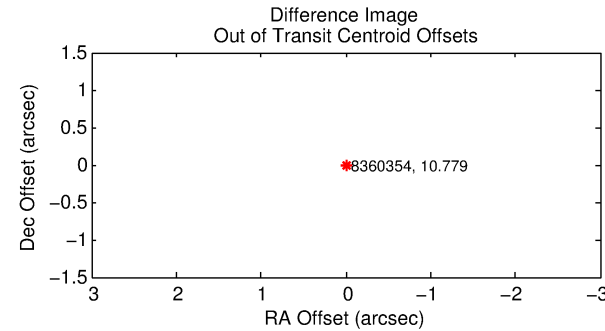
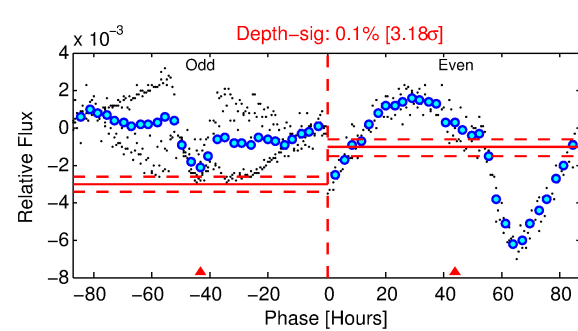
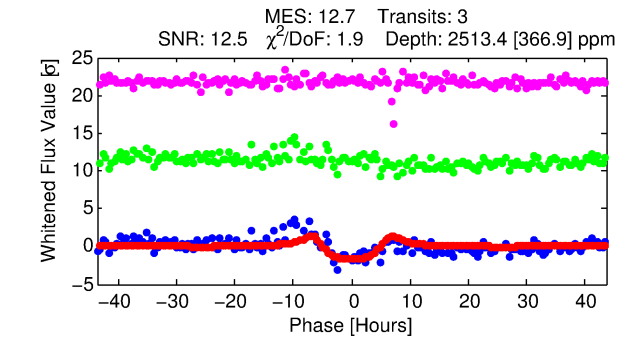
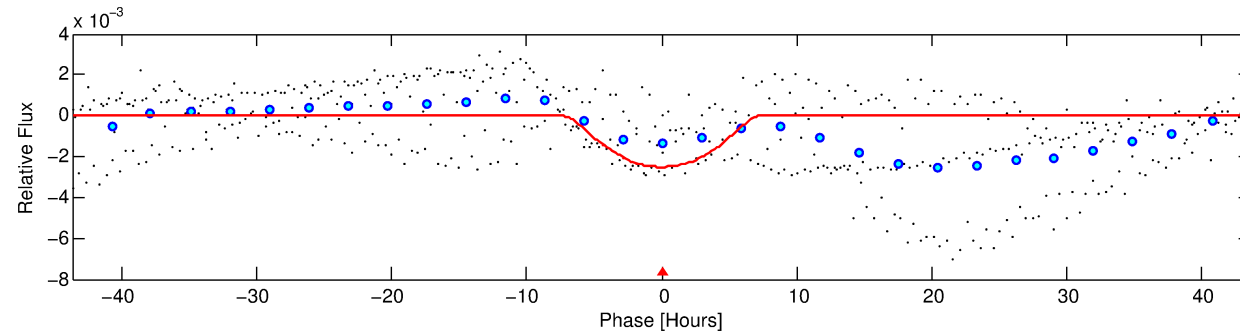
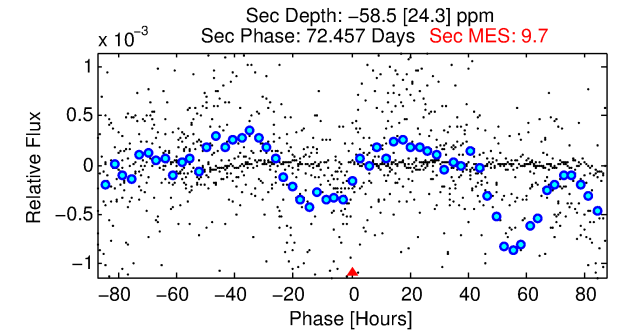
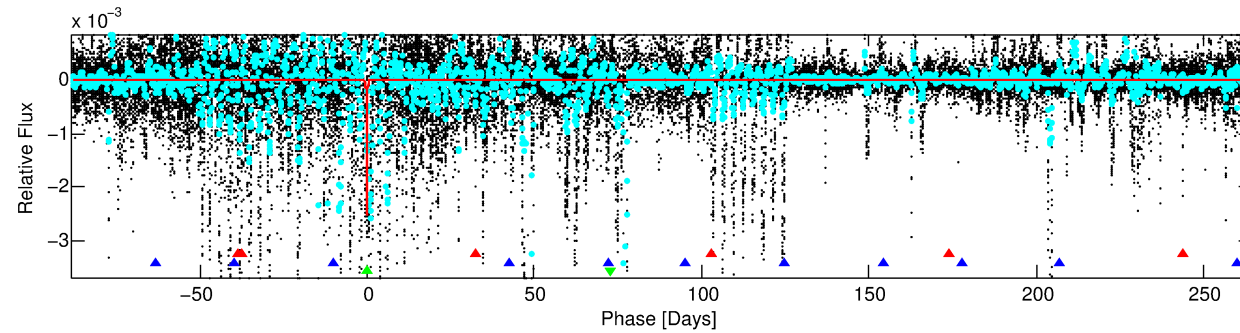
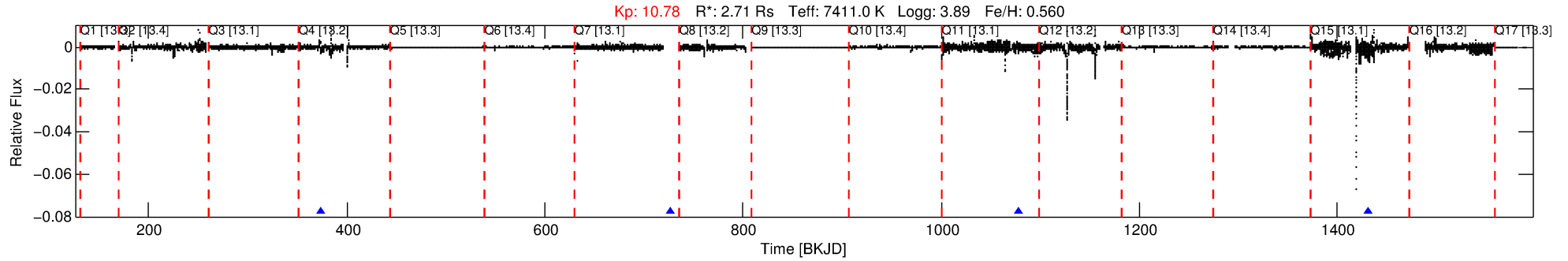
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008360354-03

No Significant Match Found

DV One-Page Summary

KIC: 8360354 Candidate: 3 of 3 Period: 352.442 d



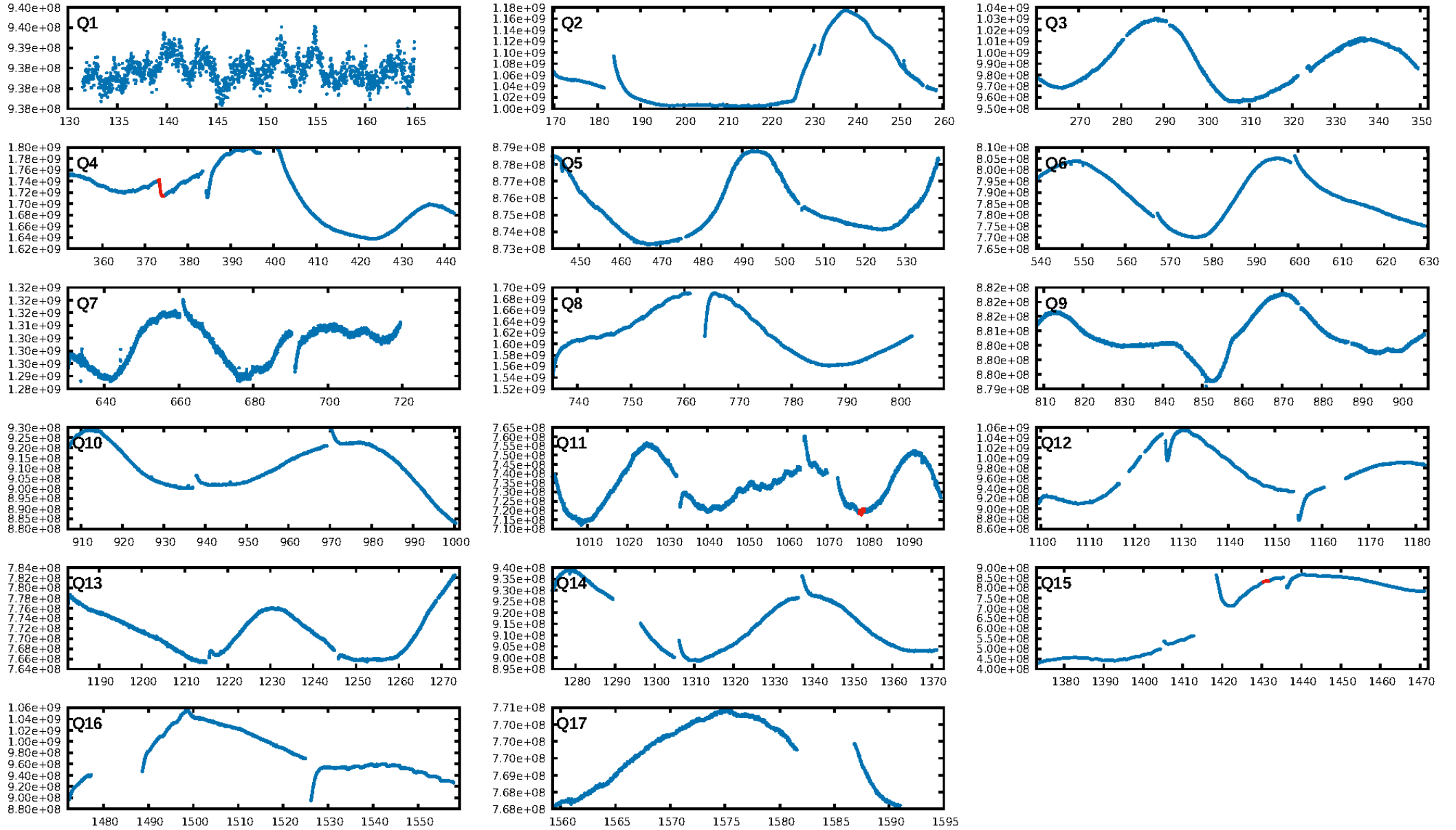
DV Fit Results:

Period = 352.44229 [0.00920] d
Epoch = 373.6369 [0.0166] BKJD
Rp/R* = 0.0588 [0.0123]
a/R* = 84.94 [10.51]
b = 0.95 [0.03]
Seff = 12.81 [3.61]
Teq = 482 [34] K
Rp = 17.40 [5.14] Re
a = 1.2450 [0.2286] AU
Ag = N/A
Teffp = N/A

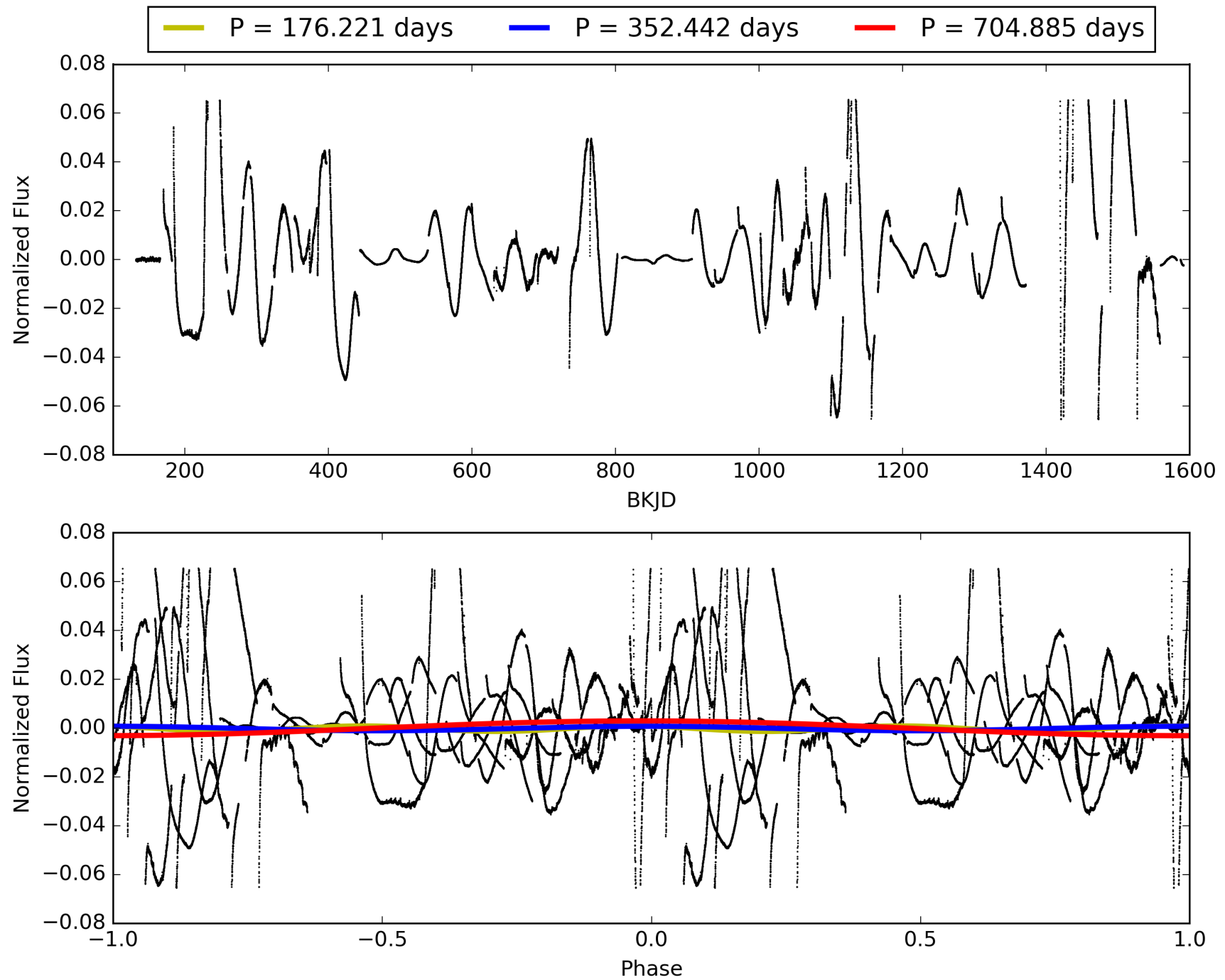
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [229.38 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 0.0%
Bootstrap-pfa: 9.92e-05
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 5.5%
Centroid-so: 0.823 arcsec [2.01 σ]
OotOffset-rm: N/A
KicOffset-rm: 4.966 arcsec [62.49 σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 008360354-03, PDC Light Curves

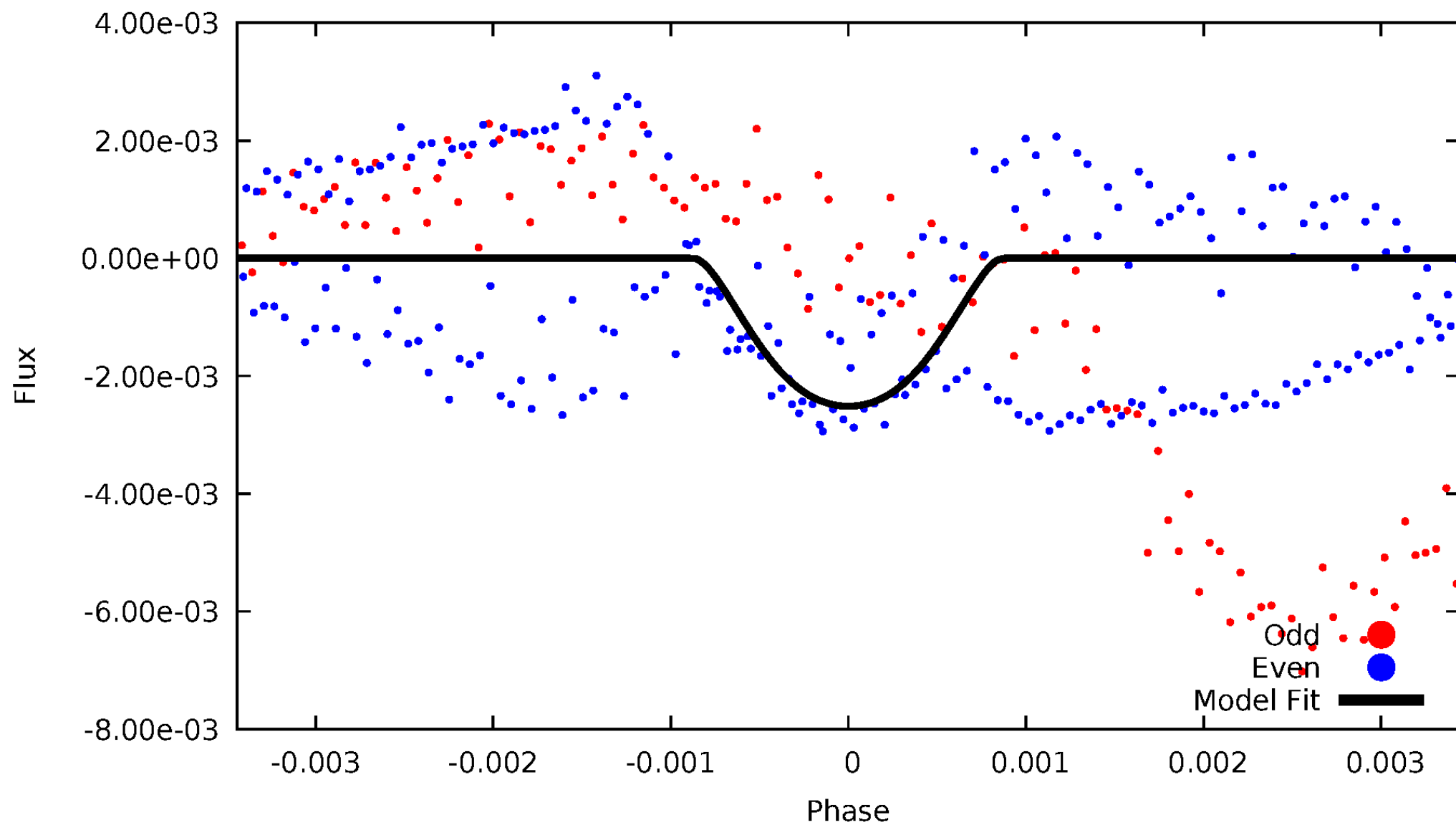


TCE 008360354-03



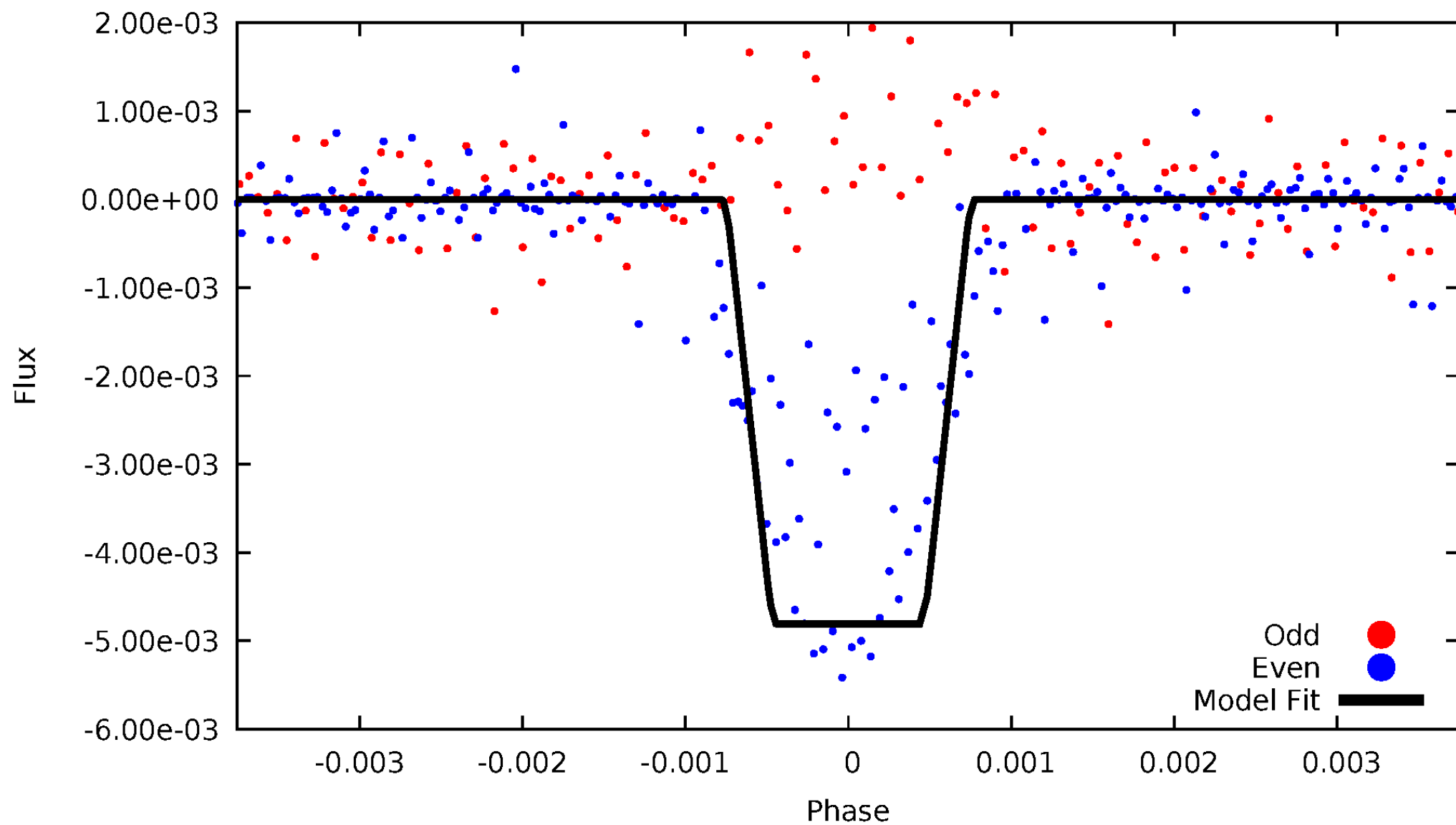
DV Odd/Even

TCE 008360354-03



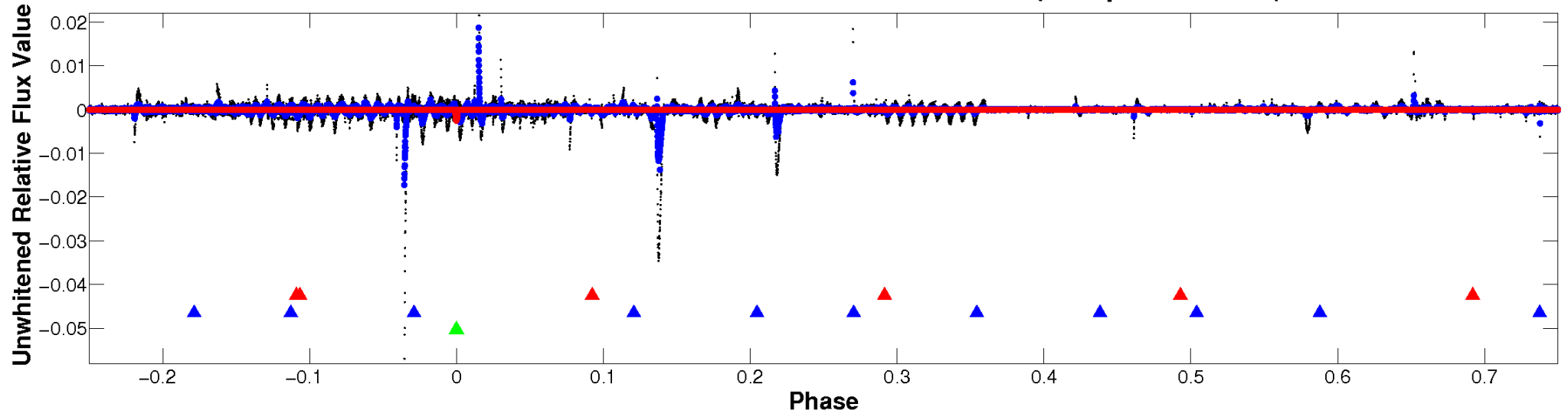
ALT Odd/Even

TCE 008360354-03

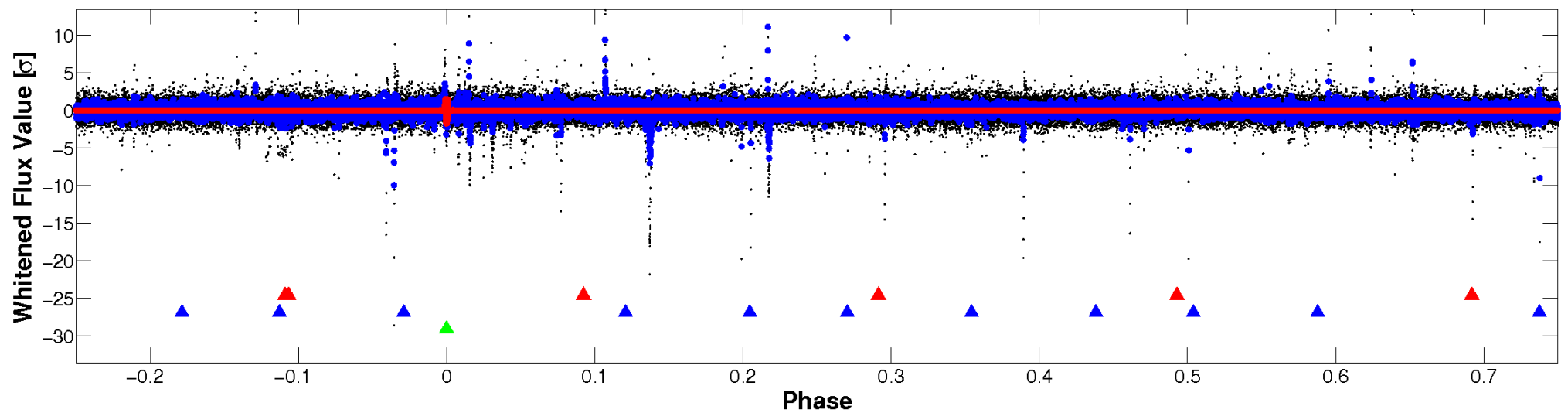


Non-Whitened Vs. Whitened Light Curve

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

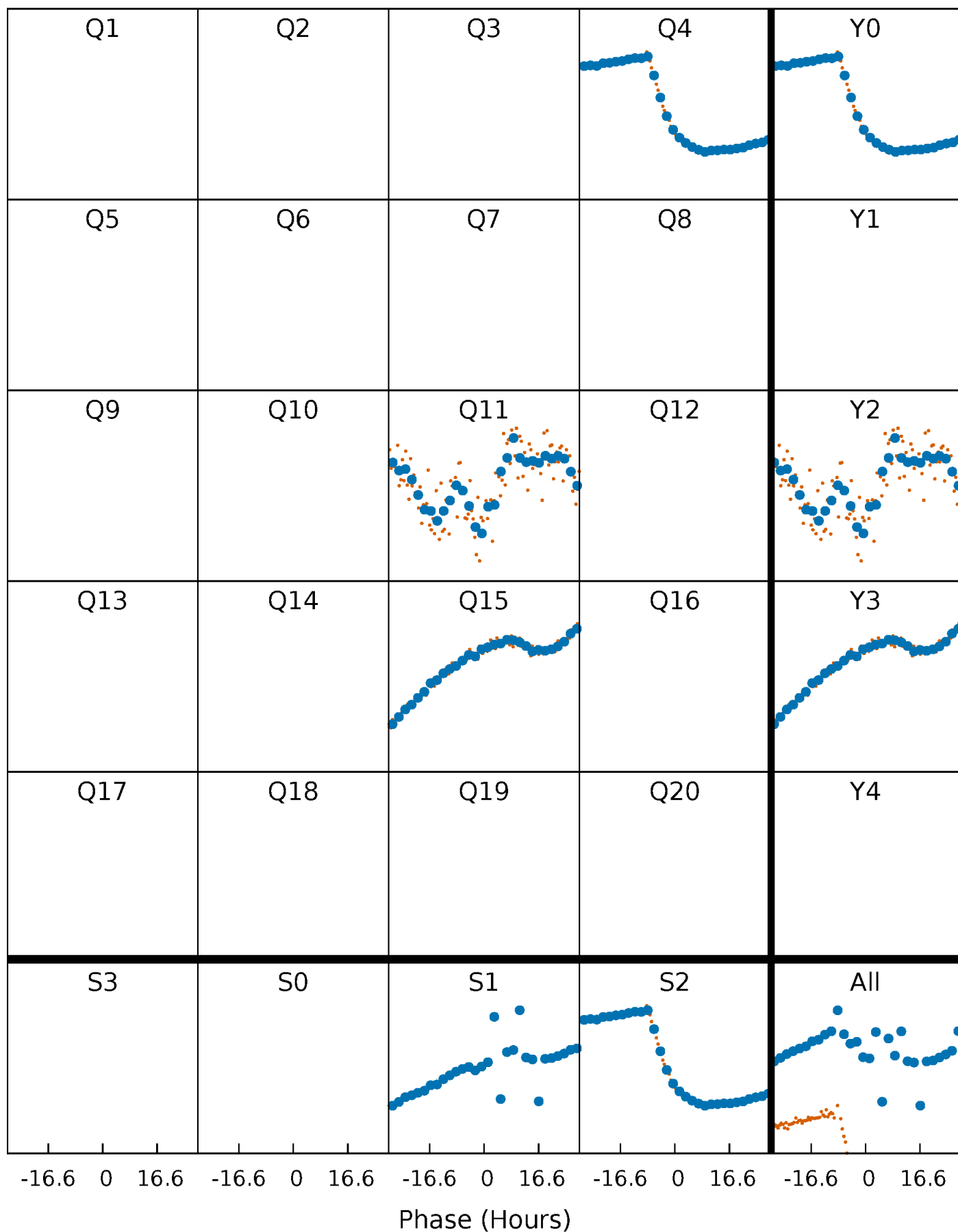


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



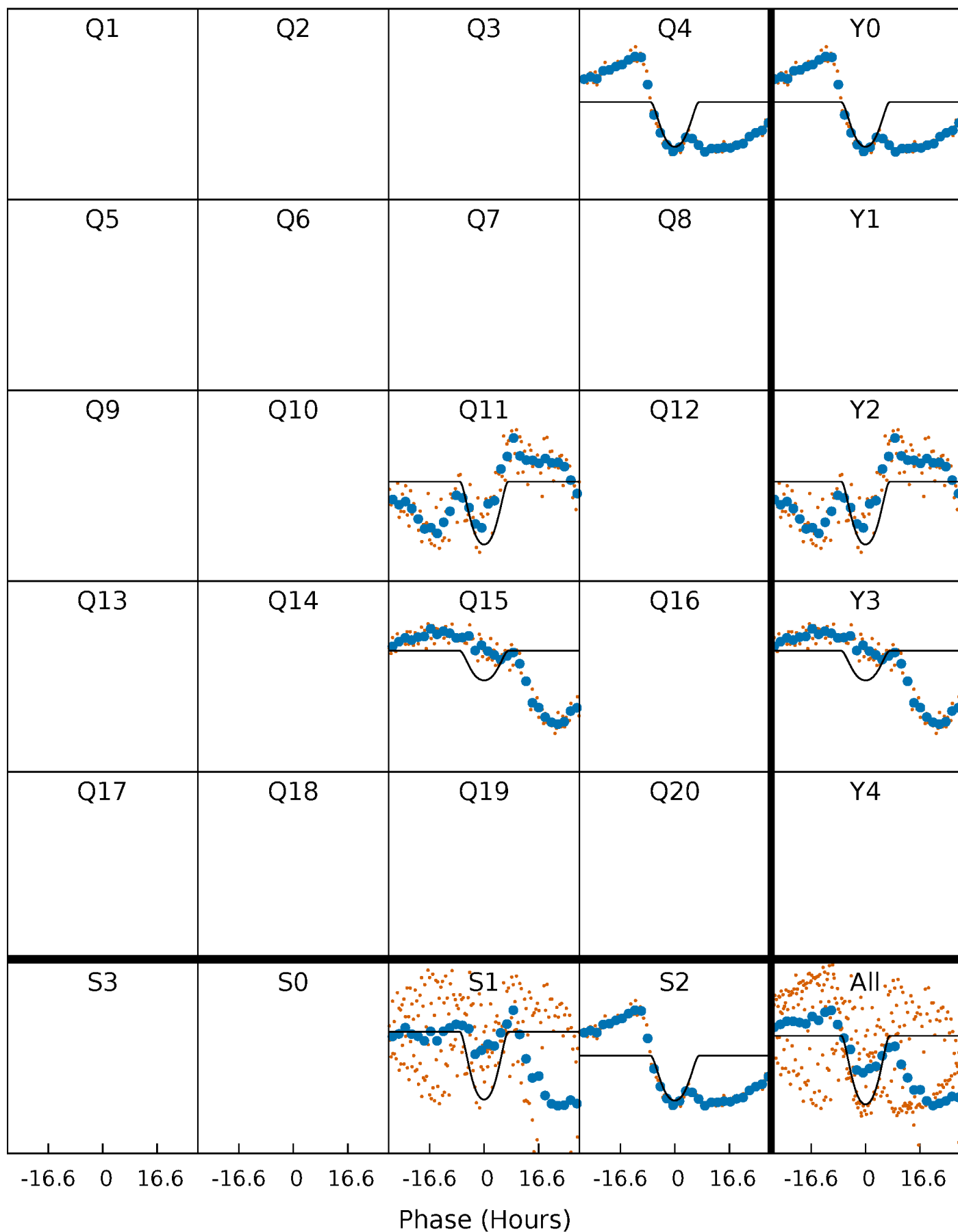
PDC Quarter-Phased Transit Curves

TCE 008360354-03 P=352.442291 Days $T_0=373.636900$ (BKJD)



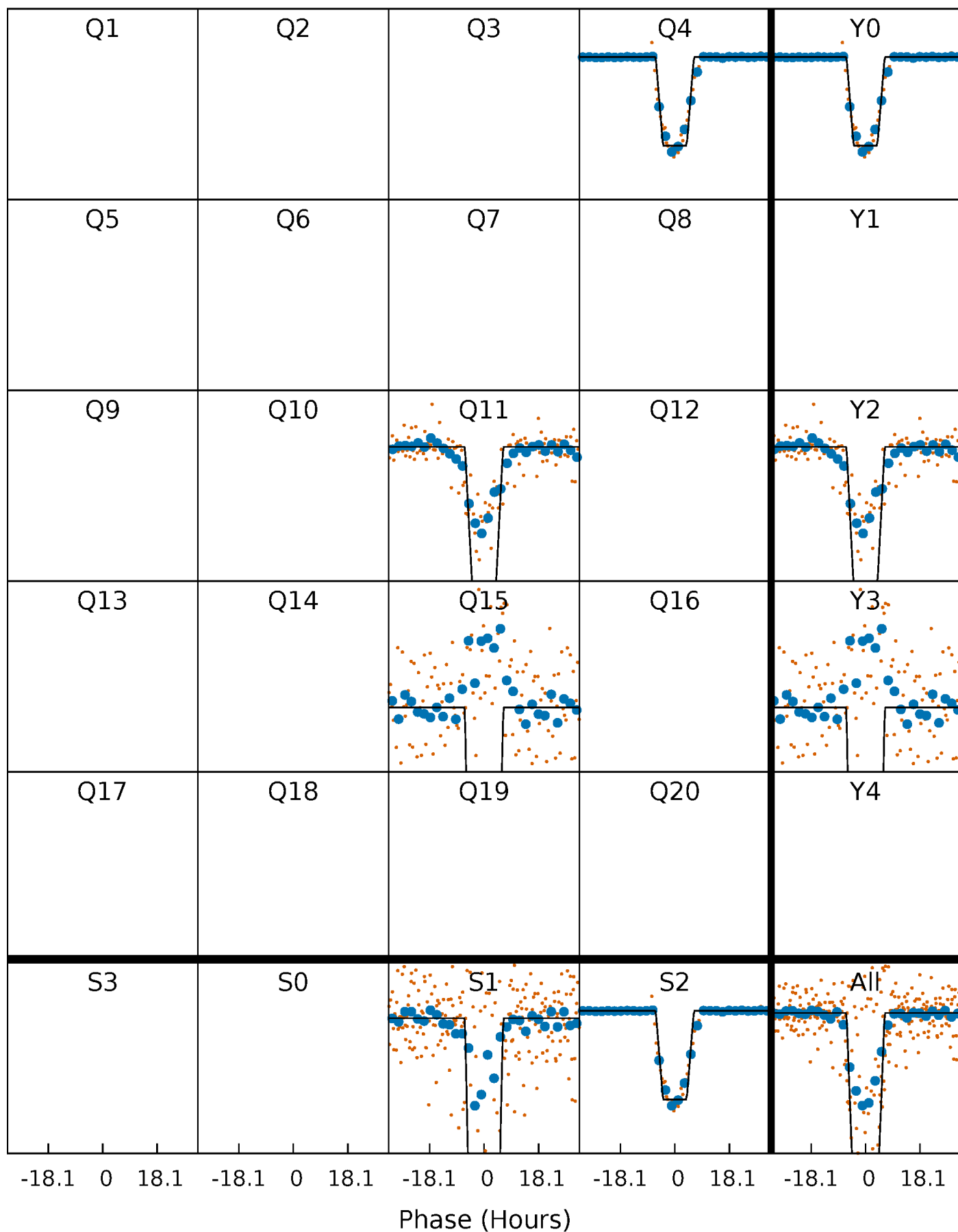
DV Quarter-Phased Transit Curves

TCE 008360354-03 $P=352.442291$ Days $T_0=373.636900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

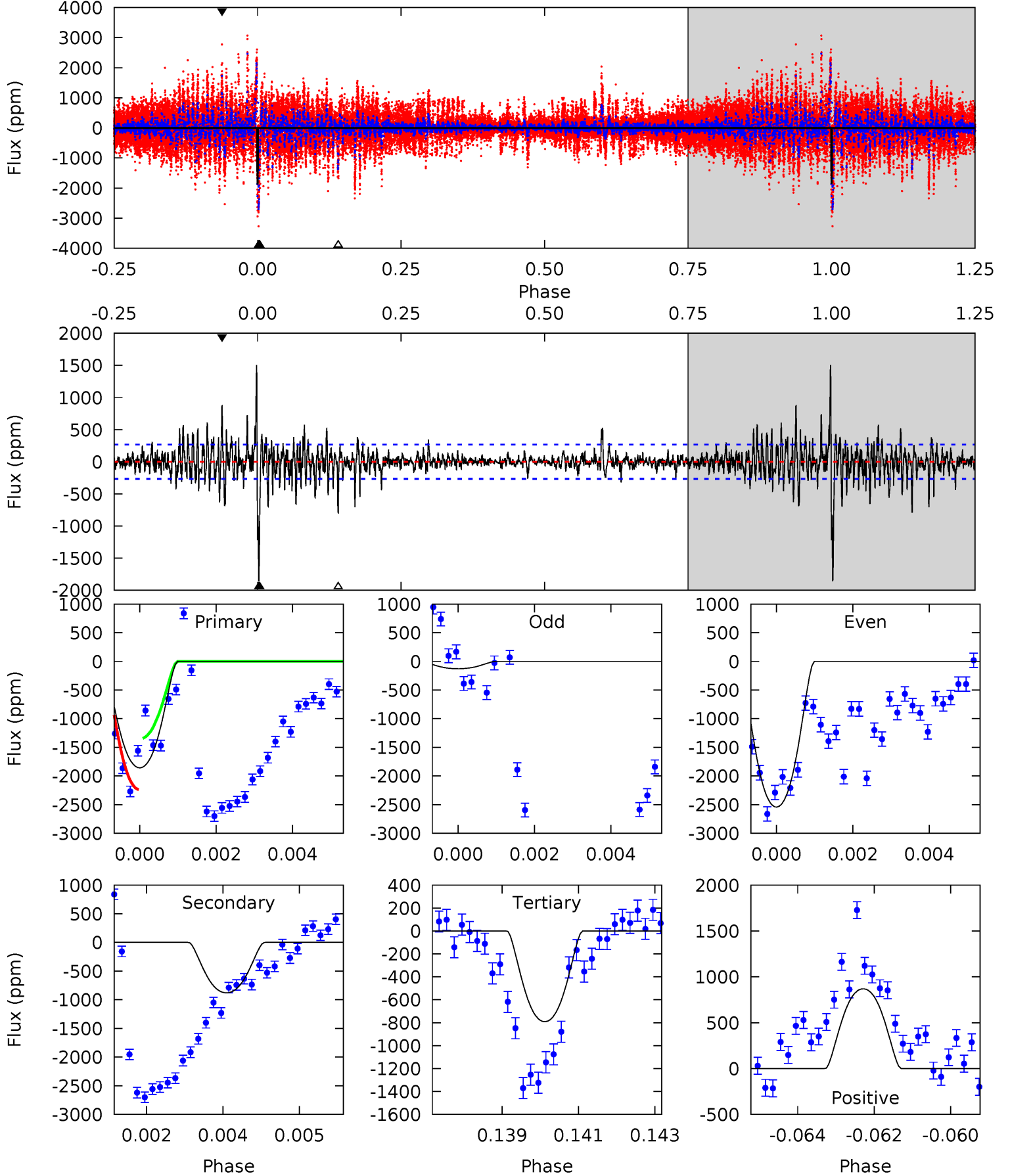
TCE 008360354-03 P=352.465288 Days $T_0=373.599617$ (BKJD)



DV Model-Shift Uniqueness Test

008360354-03, $P = 352.442291$ Days, $E = 21.194609$ Days

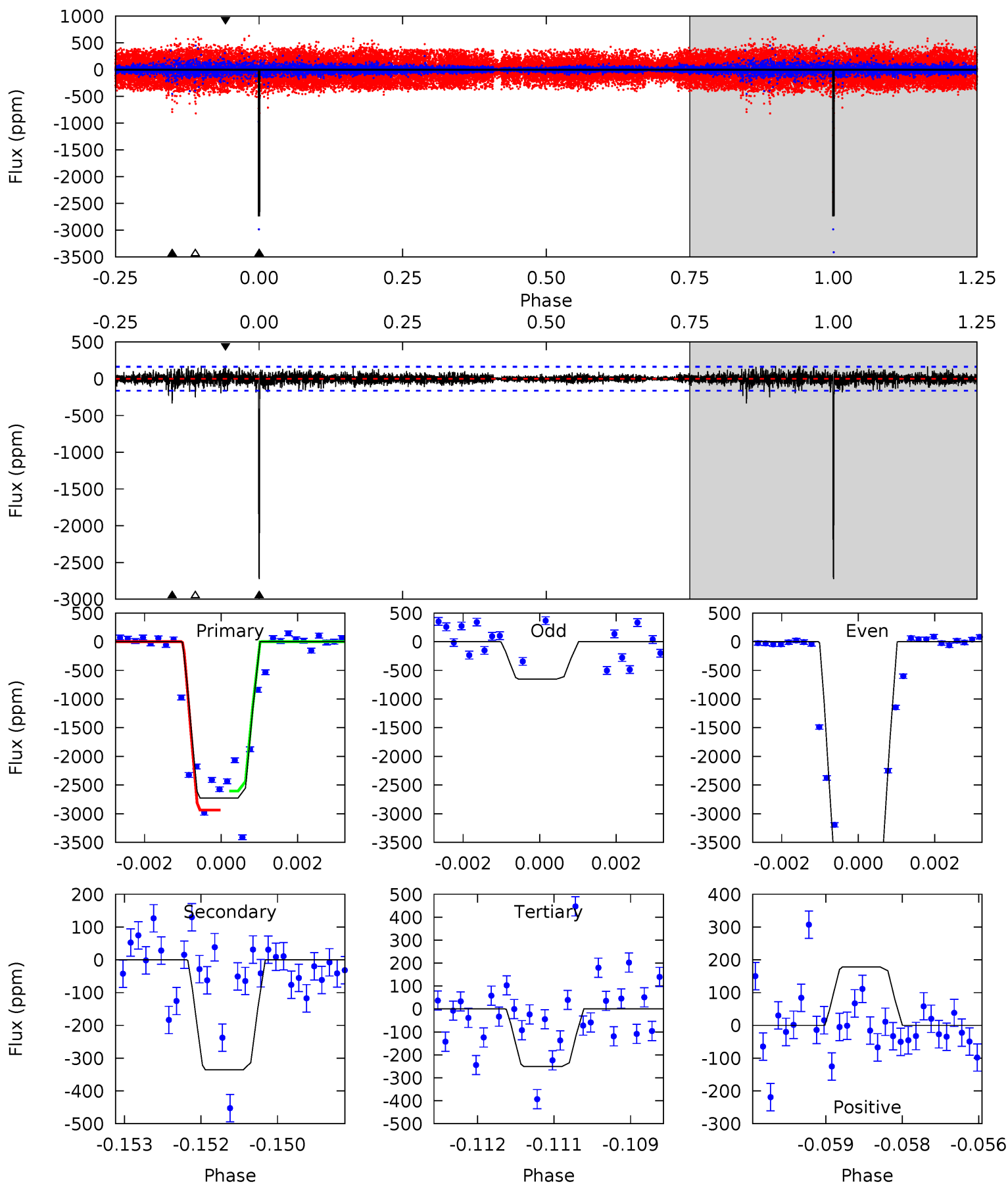
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	17.6	15.9	17.4	5.35	3.13	2.88	21.4	19.8	1.75	0.18	13.9	0.96	0.45	9.12



Alt Model-Shift Uniqueness Test

008360354-03, P = 352.465288 Days, E = 21.134329 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.3	11.1	8.31	5.89	5.38	3.17	1.08	81.9	84.4	2.79	5.21	75.7	0.84	0.06	5.75



Stellar Parameters For KIC 008360354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7411^{+96}_{-67}	$3.888^{+0.156}_{-0.104}$	$0.560^{+0.050}_{-0.300}$	$2.711^{+0.463}_{-0.566}$	$2.068^{+0.157}_{-0.209}$	$0.146^{+0.119}_{-0.048}$
	+1%/-1%	+4%/-3%	+9%/-54%	+17%/-21%	+8%/-10%	+81%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008360354-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-879 ± 50	$17.02^{+4.16}_{-3.74}$	674^{+30}_{-34}	5269^{+573}_{-435}	2577^{+1719}_{-917}
Alt.	-335 ± 30	$20.06^{+4.09}_{-4.11}$	672^{+29}_{-34}	4089^{+295}_{-252}	716^{+397}_{-219}

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 $A_{obs} \gg 1.0$

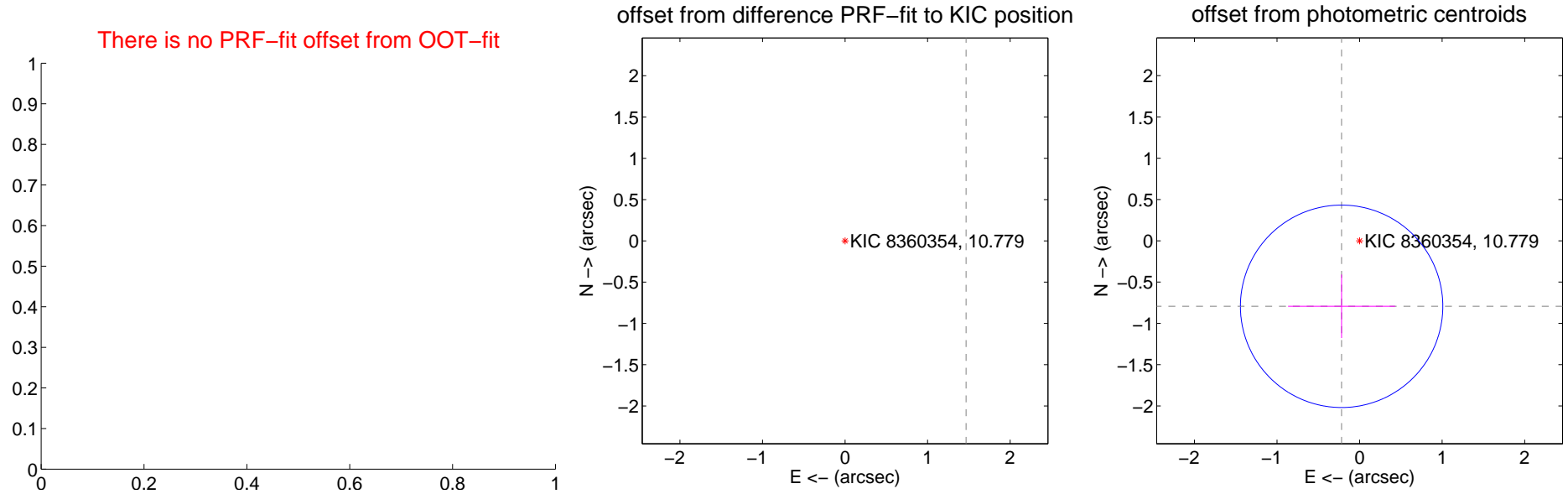
DV Centroid Data

Supplemental centroid analysis for 008360354-03. **Kepler magnitude: 10.78.** Transit SNR 12.48

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	4.966 \pm 0.079	62.49	-1.467 \pm 0.086	-4.745 \pm 0.079
photometric centroid source offset	0.82 \pm 0.41	2.01	0.22 \pm 0.65	-0.79 \pm 0.38



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.

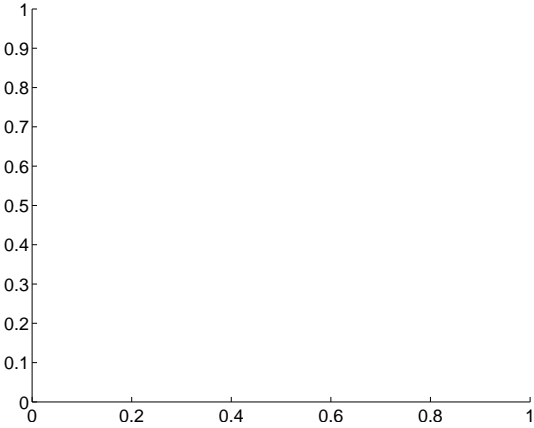


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

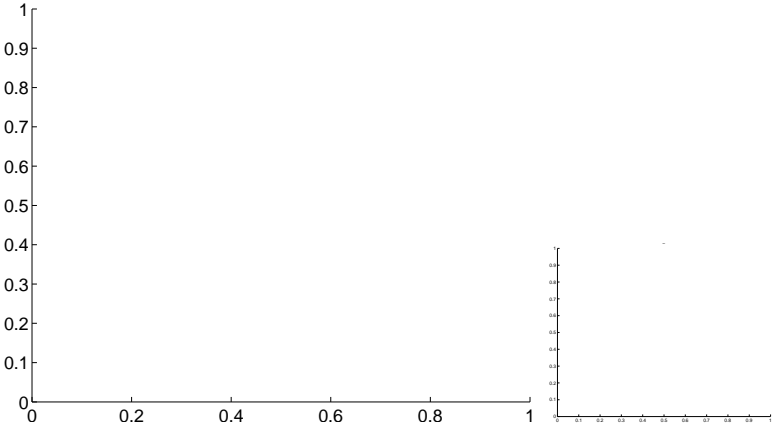


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q9 no difference image



Q9 no OOT image



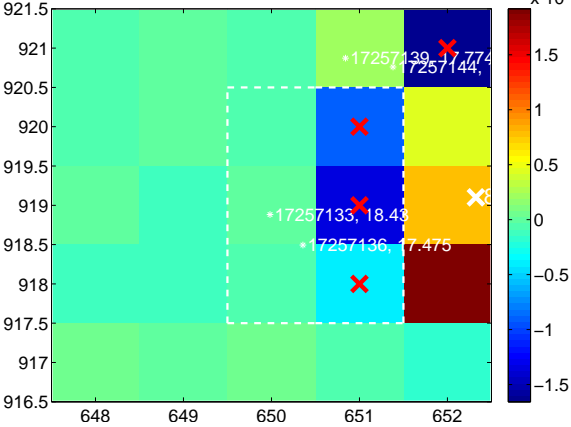
Q10 no difference image



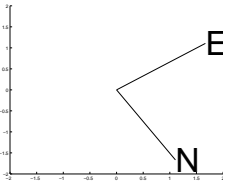
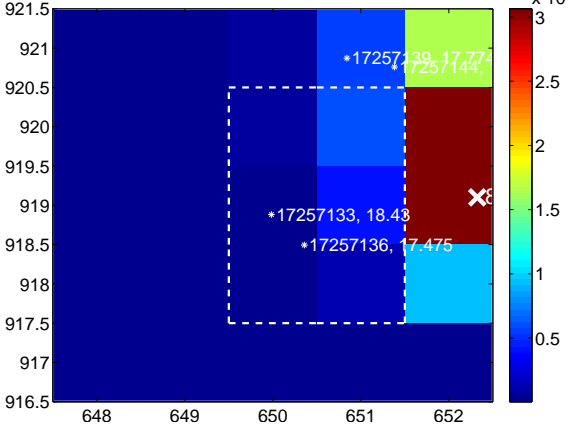
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



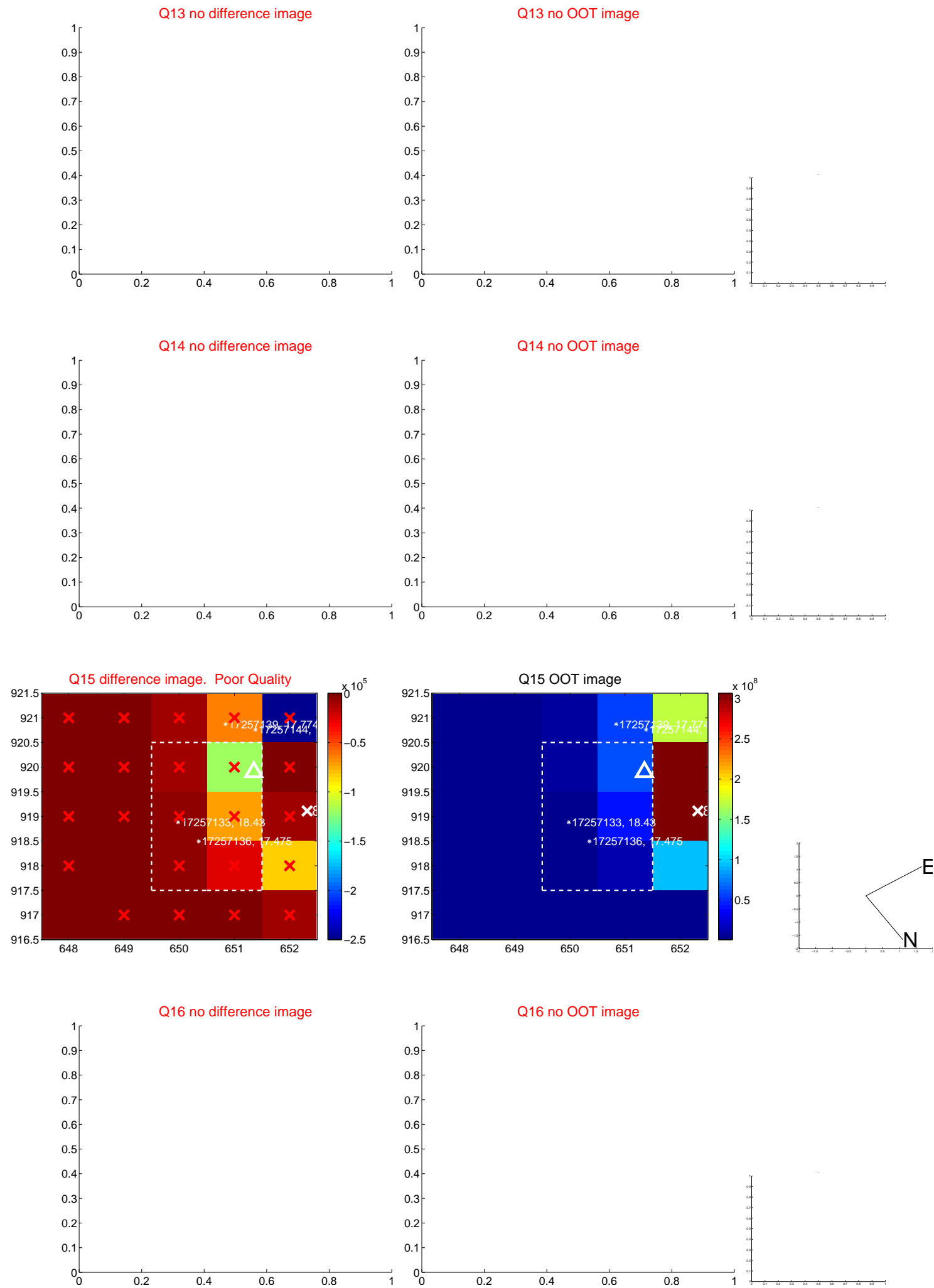
Q12 no difference image



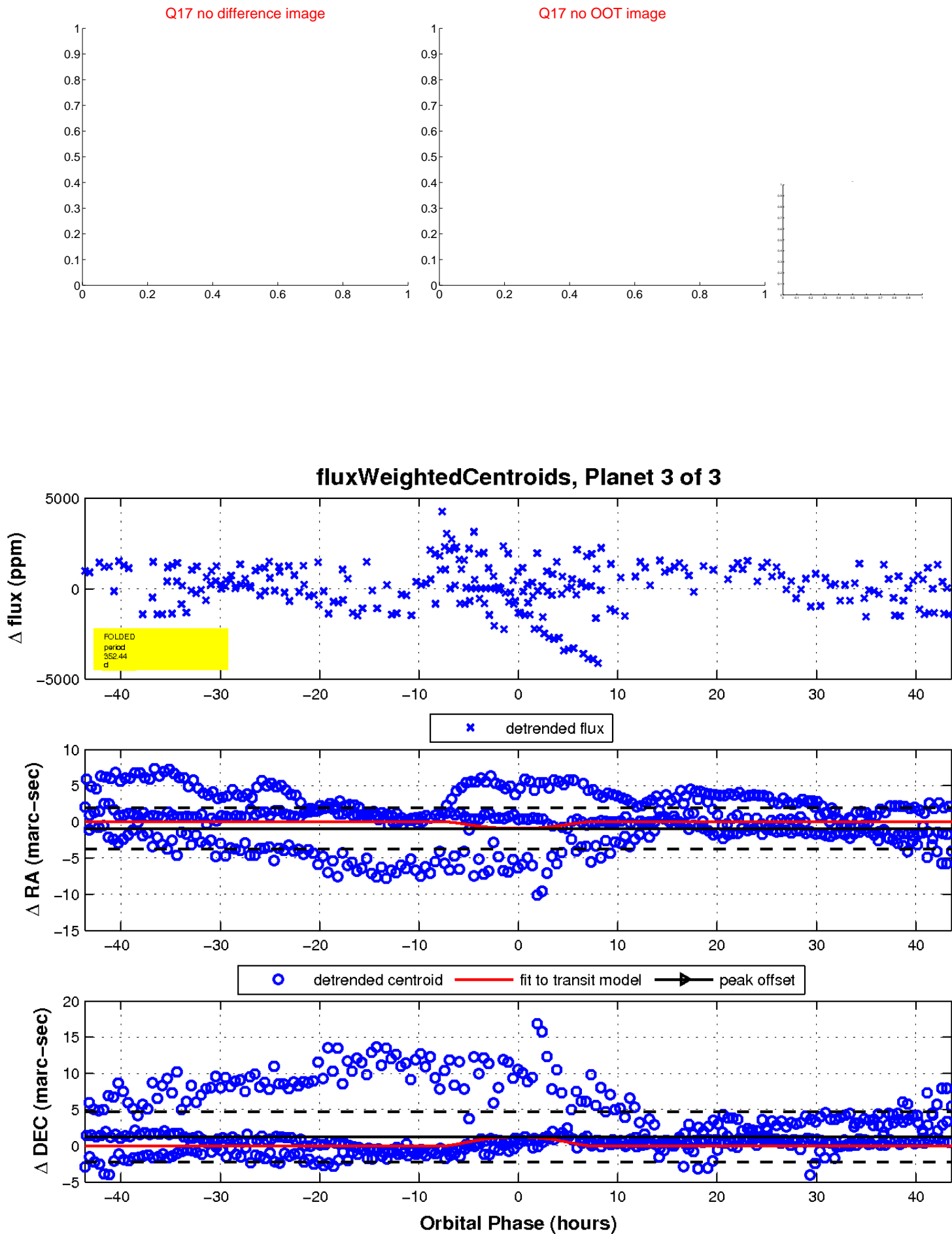
Q12 no OOT image



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



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



UKIRT Image

Declination

