

KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
010875937-03	OBS	No	220.884182	206.145978	1386.9	15.149	15.5	4.7	4.46	4878	16.30	21.61
010875937-04	OBS	No	337.010609	253.803101	1098.3	3.824	13.1	6.4	4.46	4878	15.92	12.30
010875937-05	OBS	No	348.841548	212.881353	1572.5	7.375	12.8	8.5	4.46	4878	18.34	11.75
010875937-06	OBS	No	254.367071	265.286259	1016.9	4.999	11.5	5.1	4.46	4878	14.87	17.90
010875937-07	OBS	8216.01	307.947372	316.019229	507.8	15.000	11.3	-1.0	4.46	4878	9.74	13.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

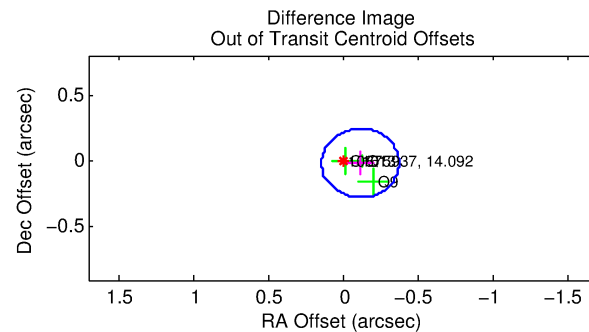
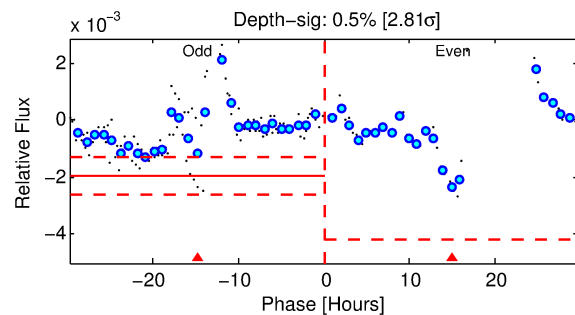
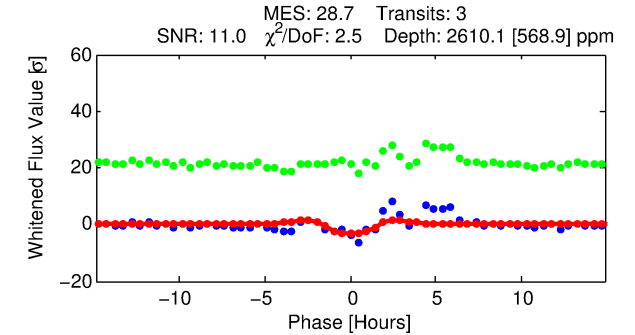
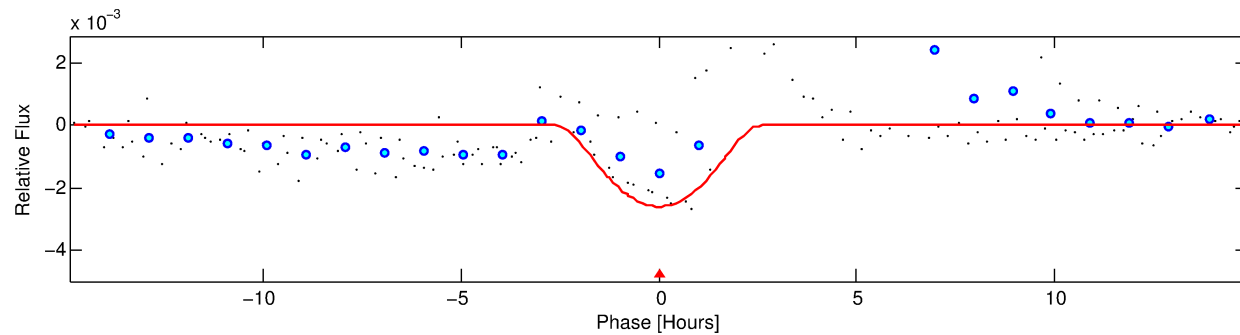
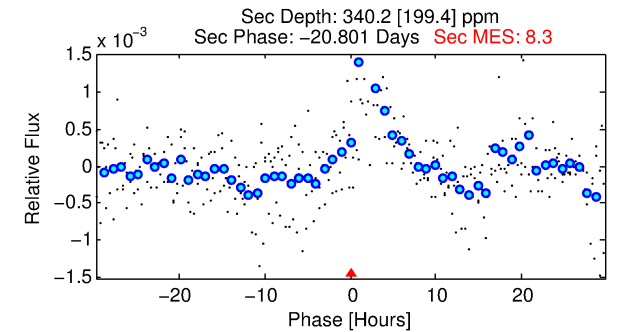
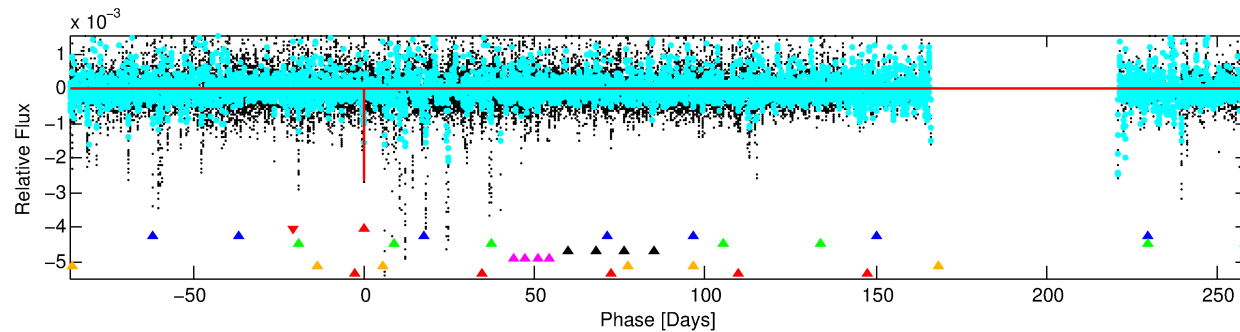
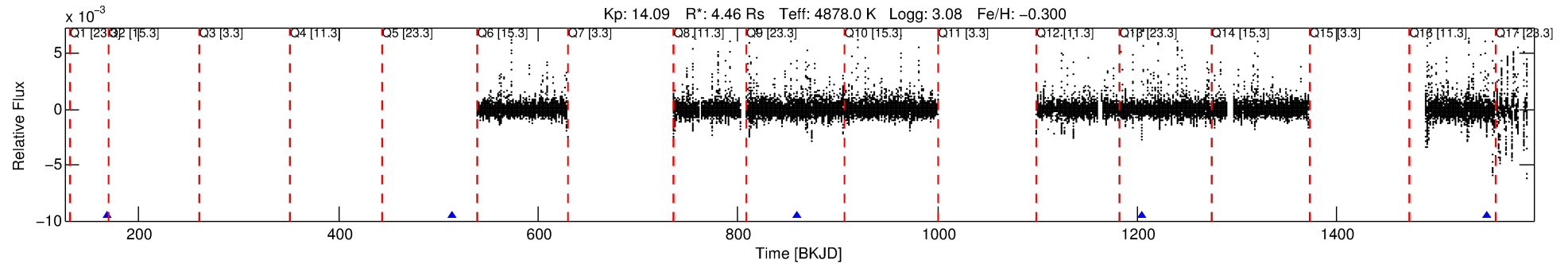
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-01

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 1 of 7 Period: 345.495 d



DV Fit Results:

Period = 345.49521 [0.00923] d
Epoch = 168.8172 [0.0282] BKJD
Rp/R* = 0.0703 [0.0783]
a/R* = 246.98 [102.58]
b = 0.96 [0.15]
Seff = 11.90 [9.12]
Teq = 474 [91] K
Rp = 34.24 [43.66] Re
a = 0.9210 [0.4800] AU
Ag = 135.44 [328.44] [0.41 σ]
Teffp = 2498 [1441] K [1.40 σ]

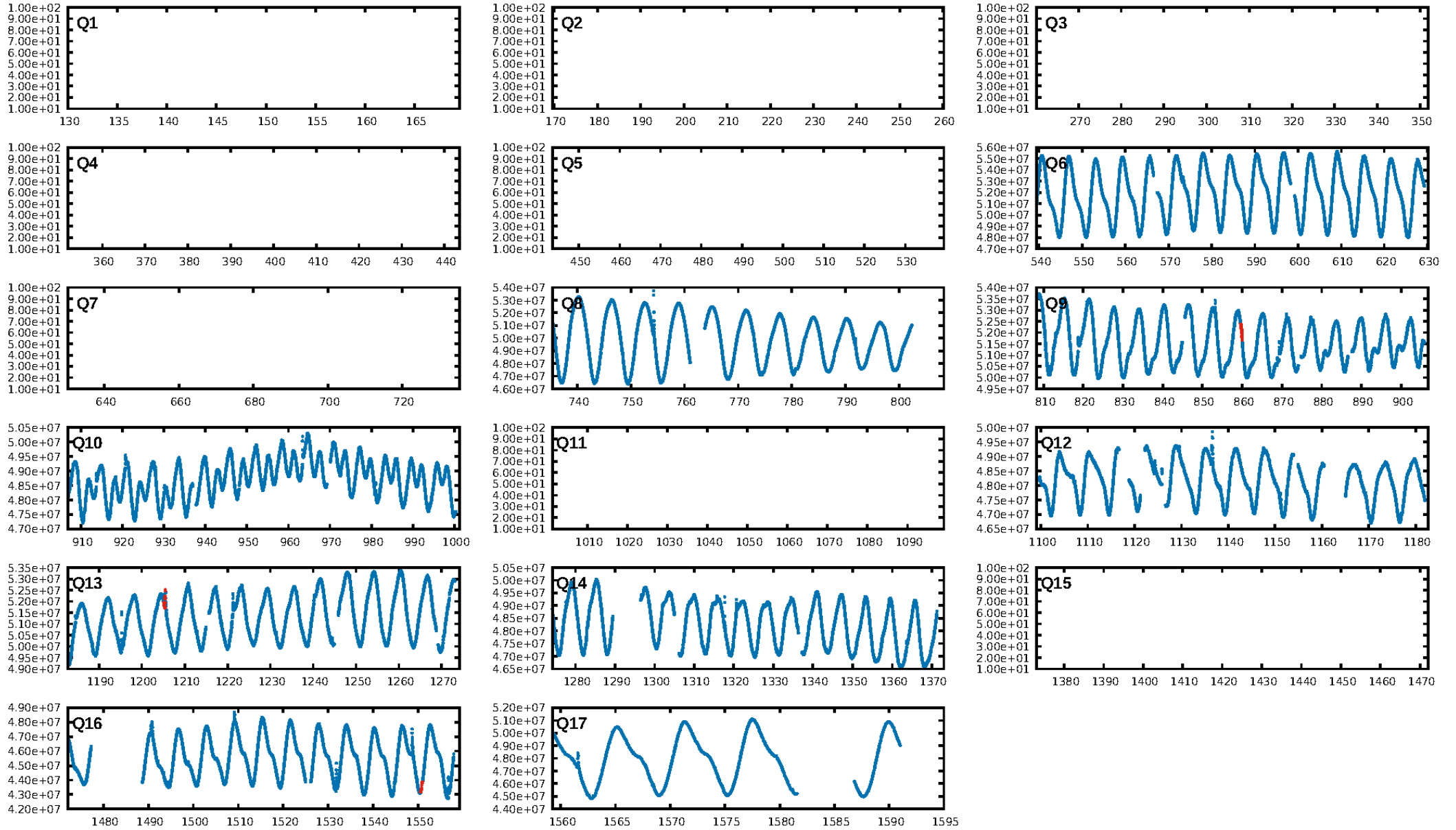
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.52 σ]
LongPeriod-sig: 100.0% [9.04 σ]
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 5.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4473
Centroid-sig: 11.0%
Centroid-so: 0.408 arcsec [1.15 σ]
OotOffset-rm: 0.119 arcsec [1.38 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: 0.070 arcsec [0.72 σ]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

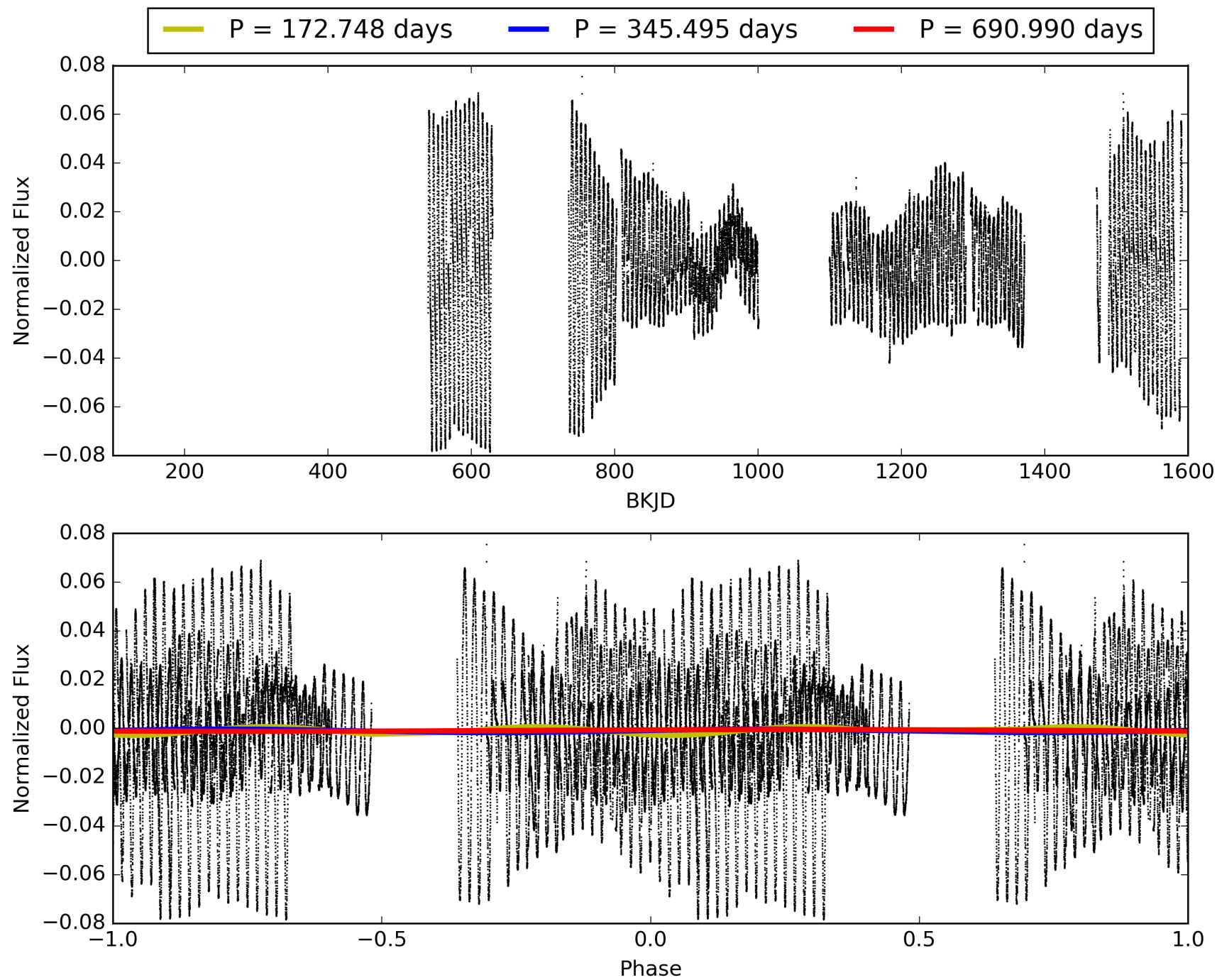
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010875937-01, PDC Light Curves

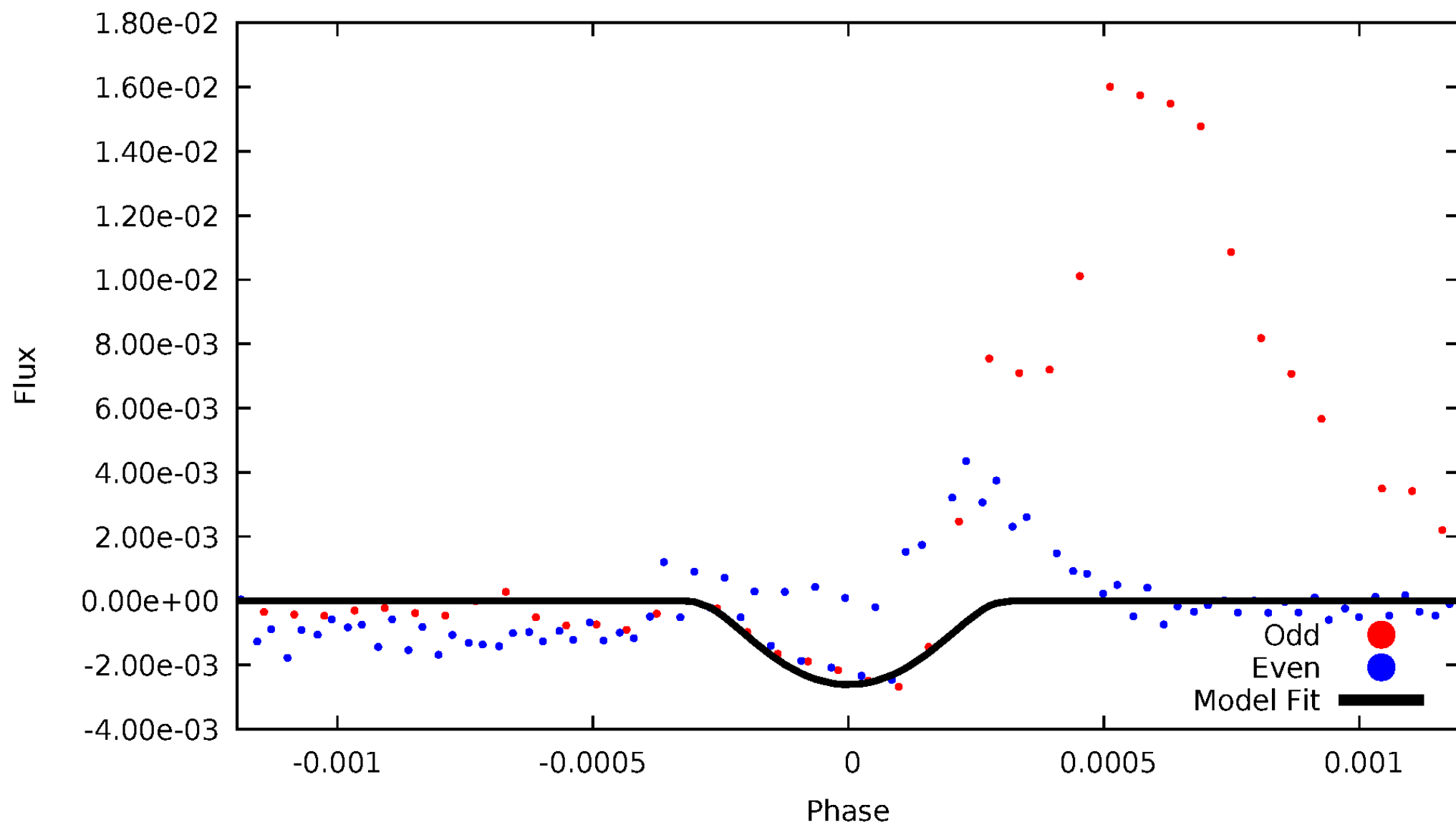


TCE 010875937-01



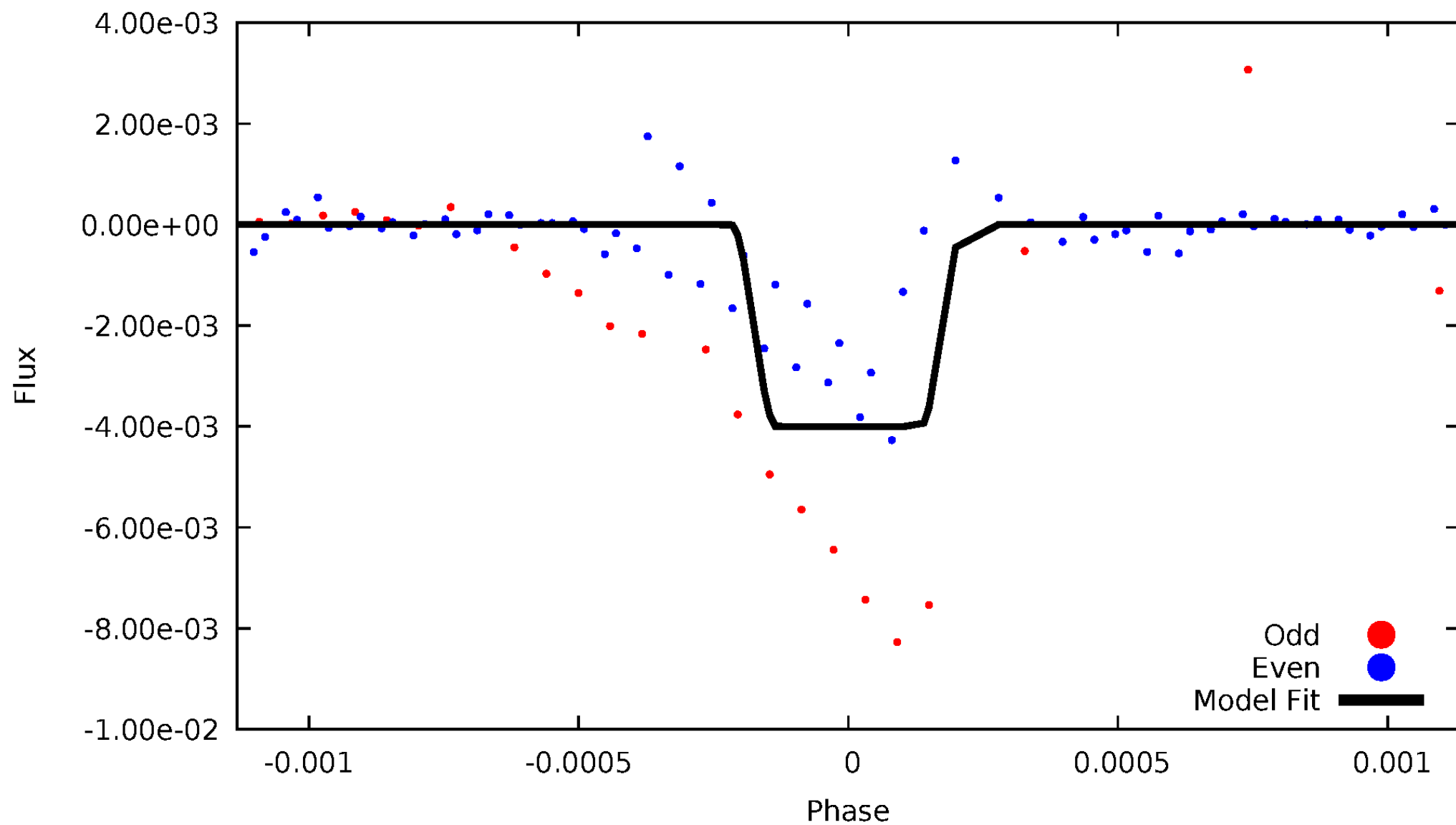
DV Odd/Even

TCE 010875937-01



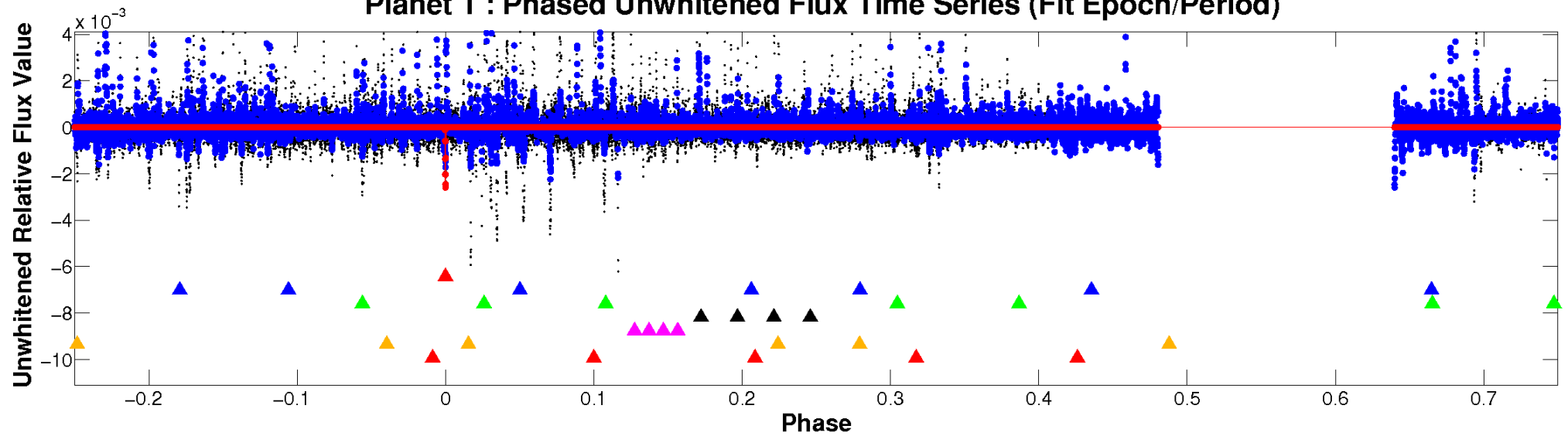
ALT Odd/Even

TCE 010875937-01

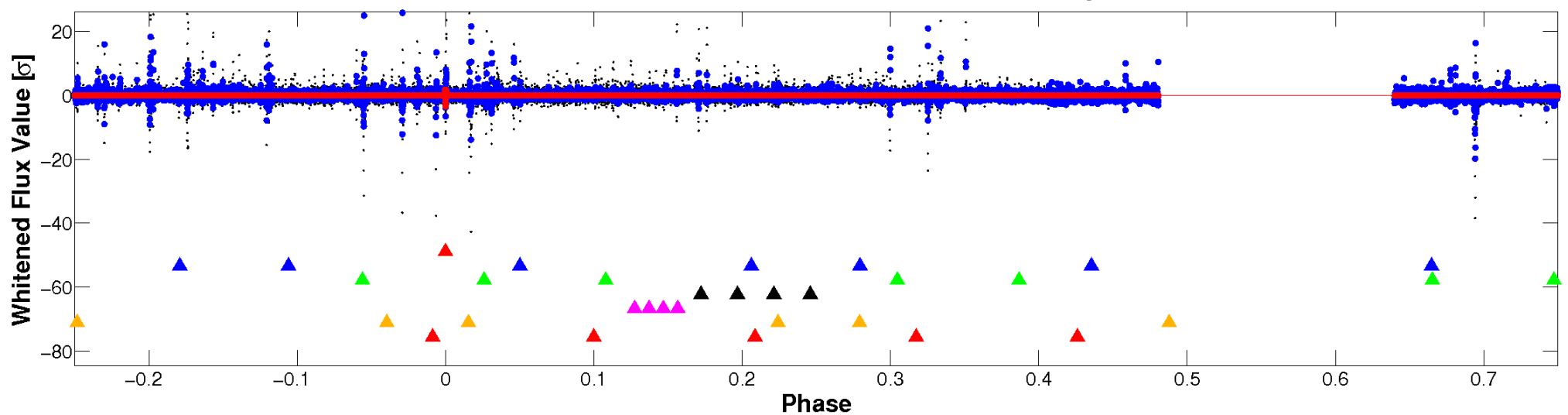


Non-Whitened Vs. Whitened Light Curve

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

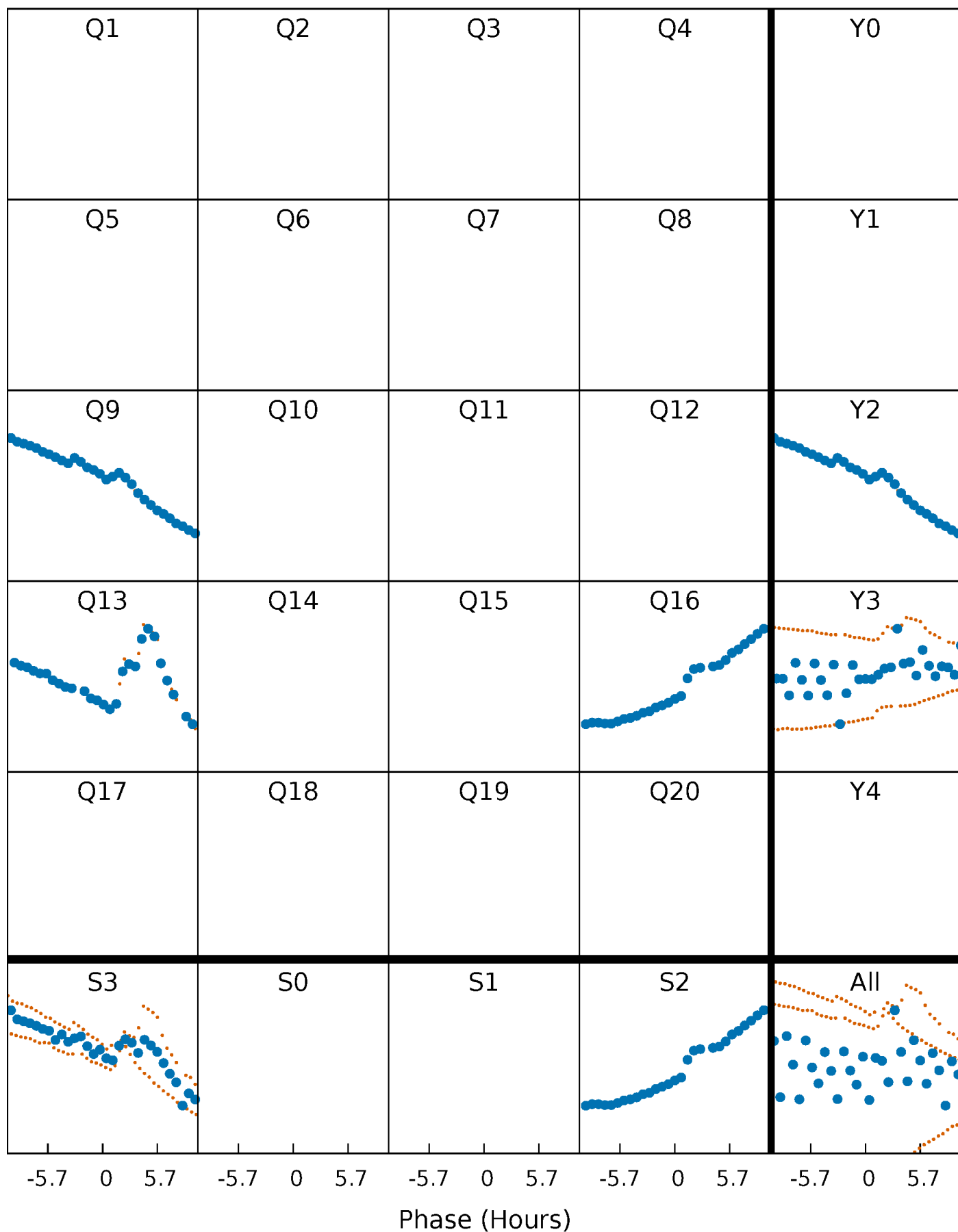


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



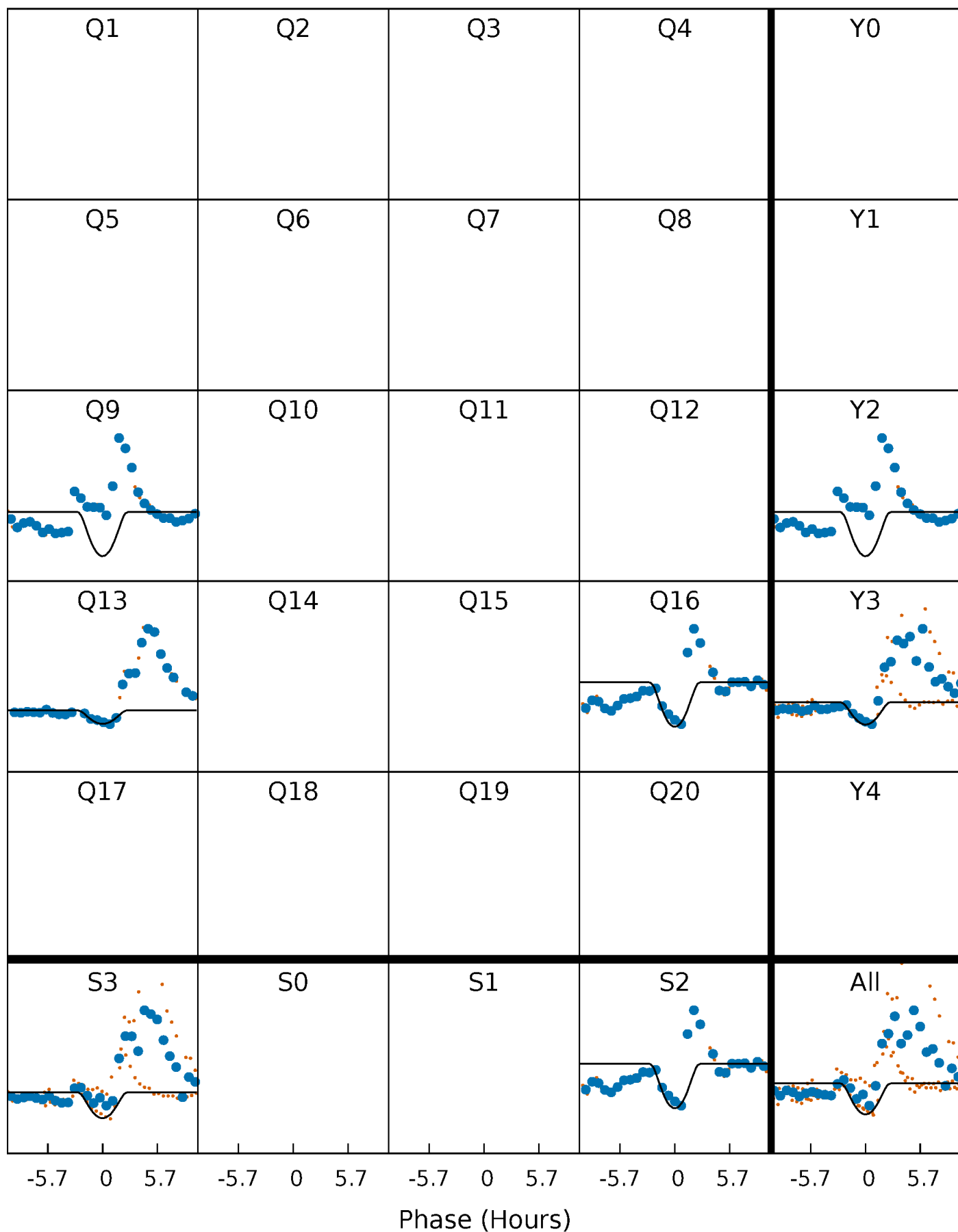
PDC Quarter-Phased Transit Curves

TCE 010875937-01 P=345.495212 Days $T_0=168.817211$ (BKJD)



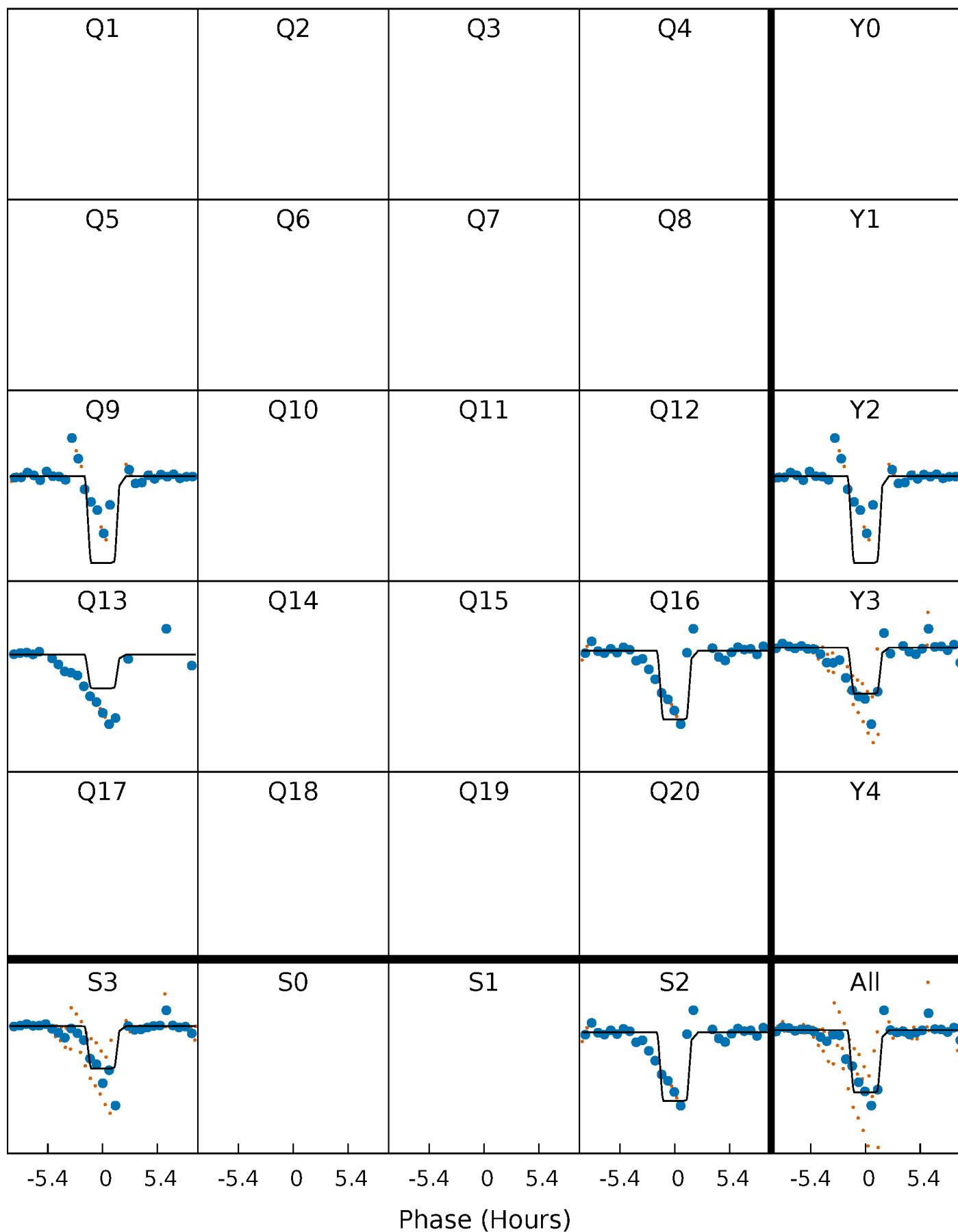
DV Quarter-Phased Transit Curves

TCE 010875937-01 $P=345.495212$ Days $T_0=168.817211$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

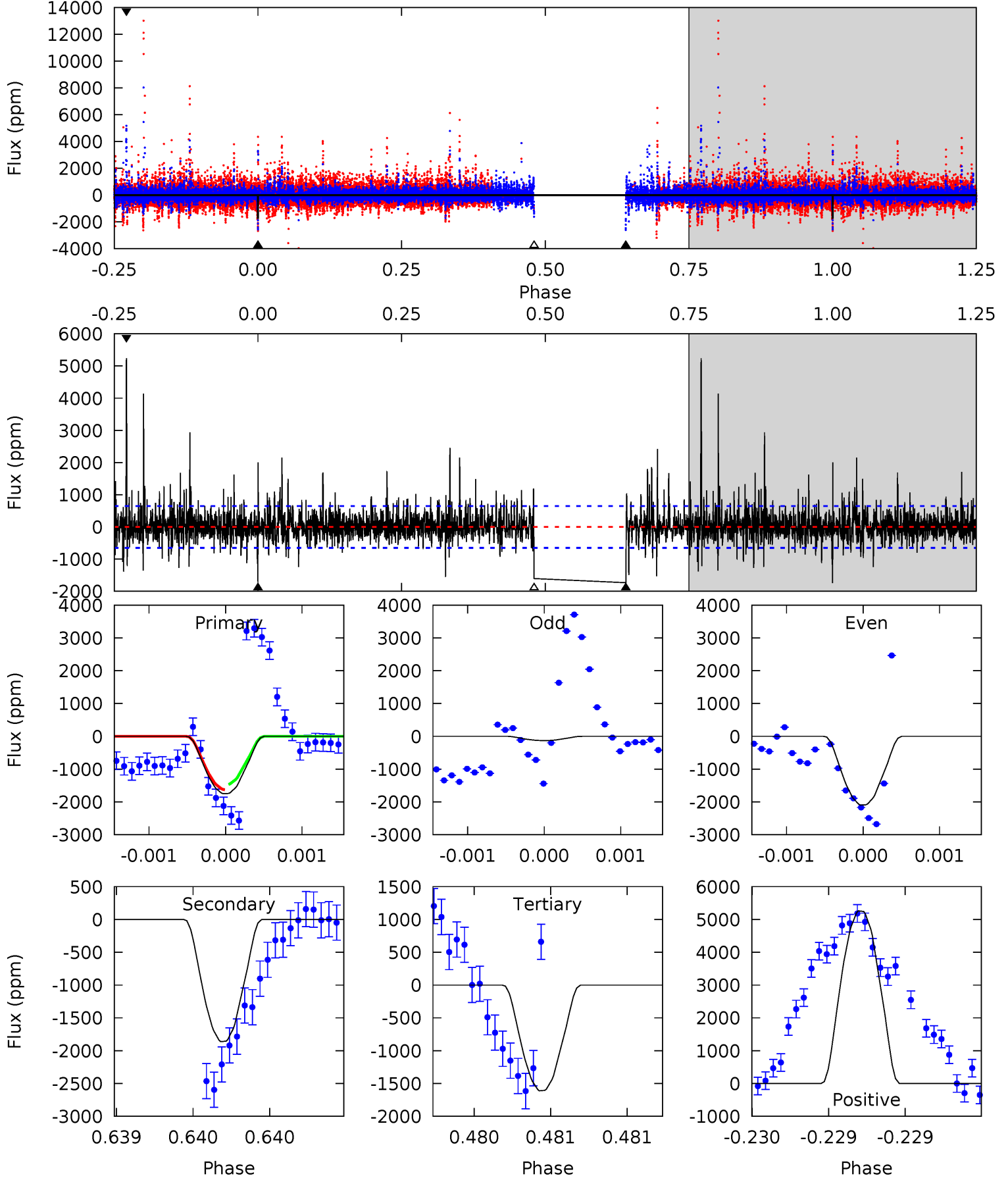
TCE 010875937-01 P=345.494076 Days $T_0=168.823247$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-01, P = 345.495212 Days, E = 168.817211 Days

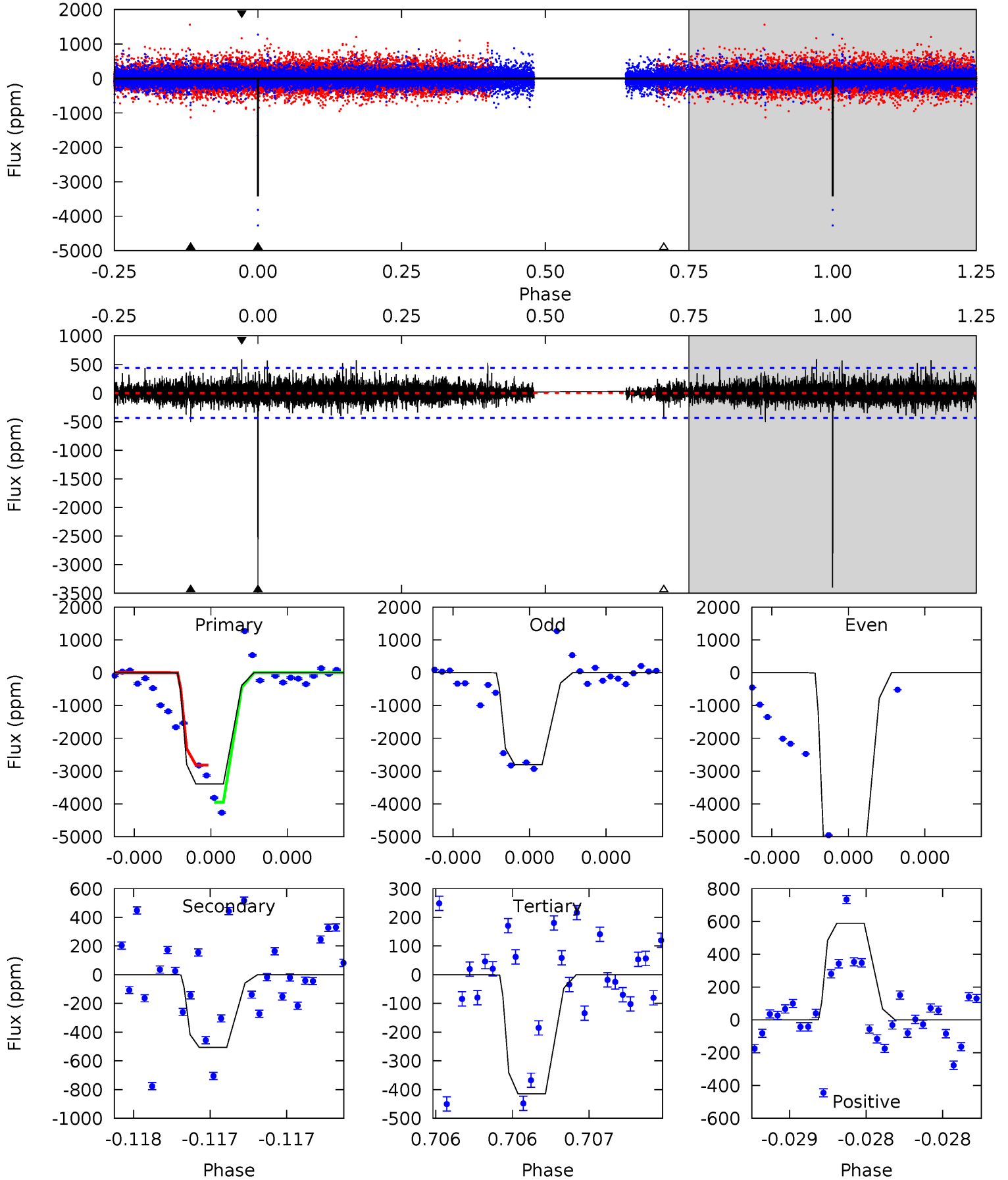
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	15.8	13.7	44.7	5.53	3.42	3.17	1.18	-29.8	2.13	-28.9	5.50	0.66	0.74	0.70



Alt Model-Shift Uniqueness Test

010875937-01, P = 345.494076 Days, E = 168.823247 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.3	6.45	5.28	7.49	5.58	3.48	1.16	38.0	35.8	1.17	-1.04	32.5	1.37	0.15	7.50



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1855 ± 117	$41.26^{+39.53}_{-27.07}$	657^{+93}_{-74}	3754^{+2143}_{-617}	517^{+3811}_{-383}
Alt.	-506 ± 78	$37.27^{+39.39}_{-24.05}$	660^{+97}_{-83}	3161^{+1219}_{-525}	165^{+1183}_{-126}

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

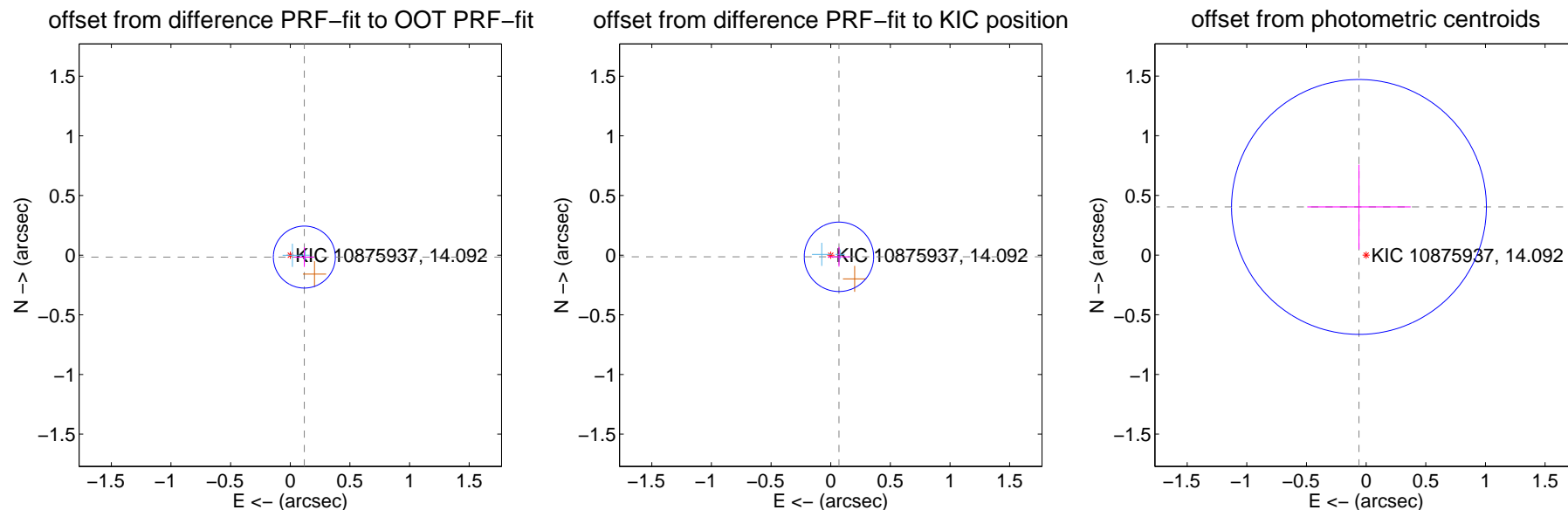
DV Centroid Data

Supplemental centroid analysis for 010875937-01. Kepler magnitude: 14.09. Transit SNR 10.96

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.087	1.38	-0.118 ± 0.084	-0.016 ± 0.083
PRF-fit source offset from KIC position	0.070 ± 0.097	0.72	-0.069 ± 0.092	-0.014 ± 0.082
photometric centroid source offset	0.41 ± 0.36	1.15	0.06 ± 0.43	0.40 ± 0.35



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.

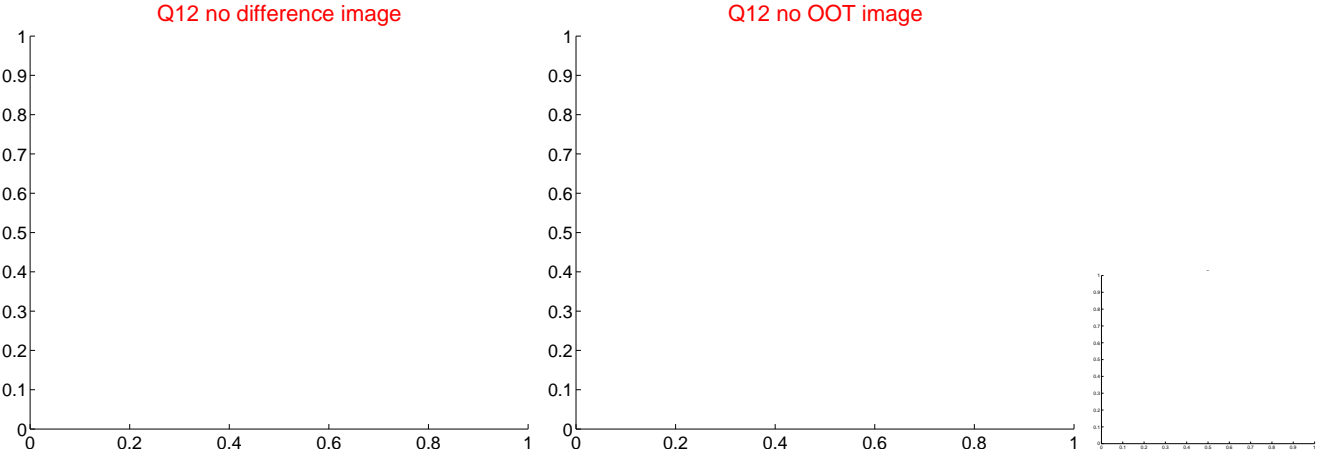
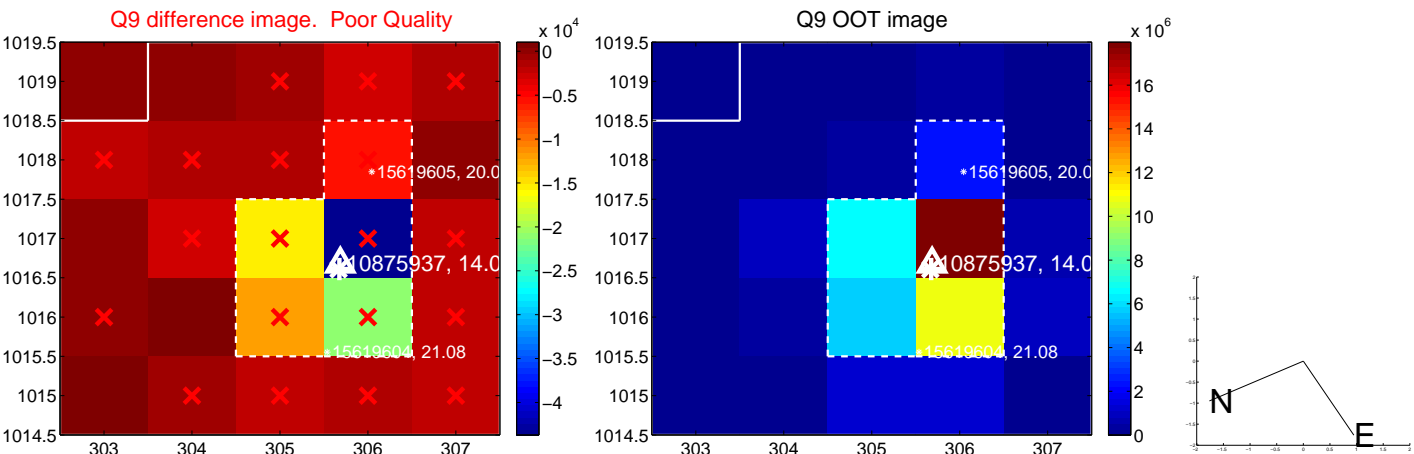
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



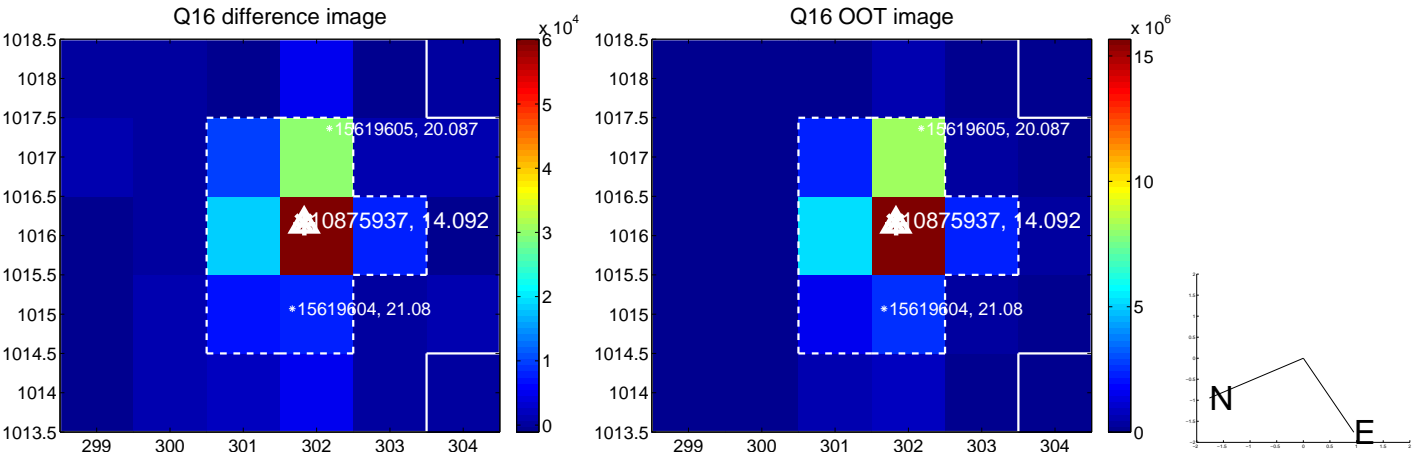
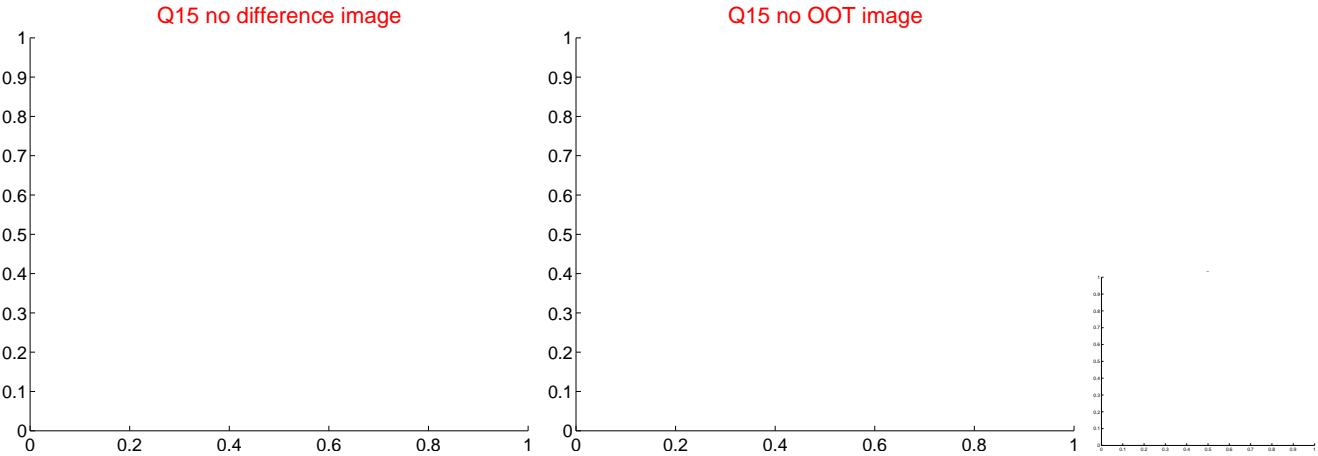
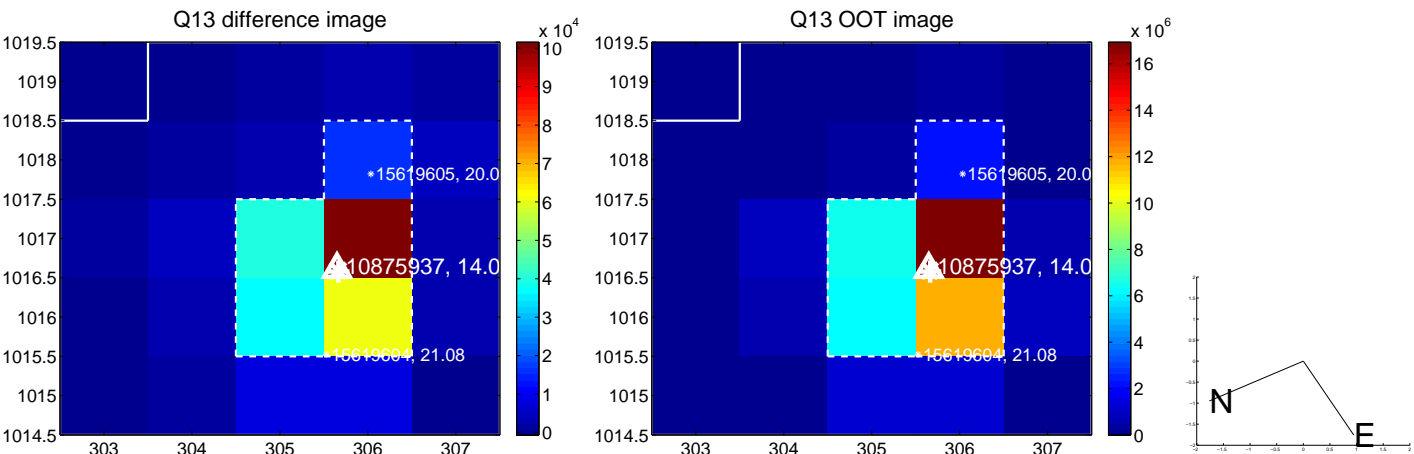
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



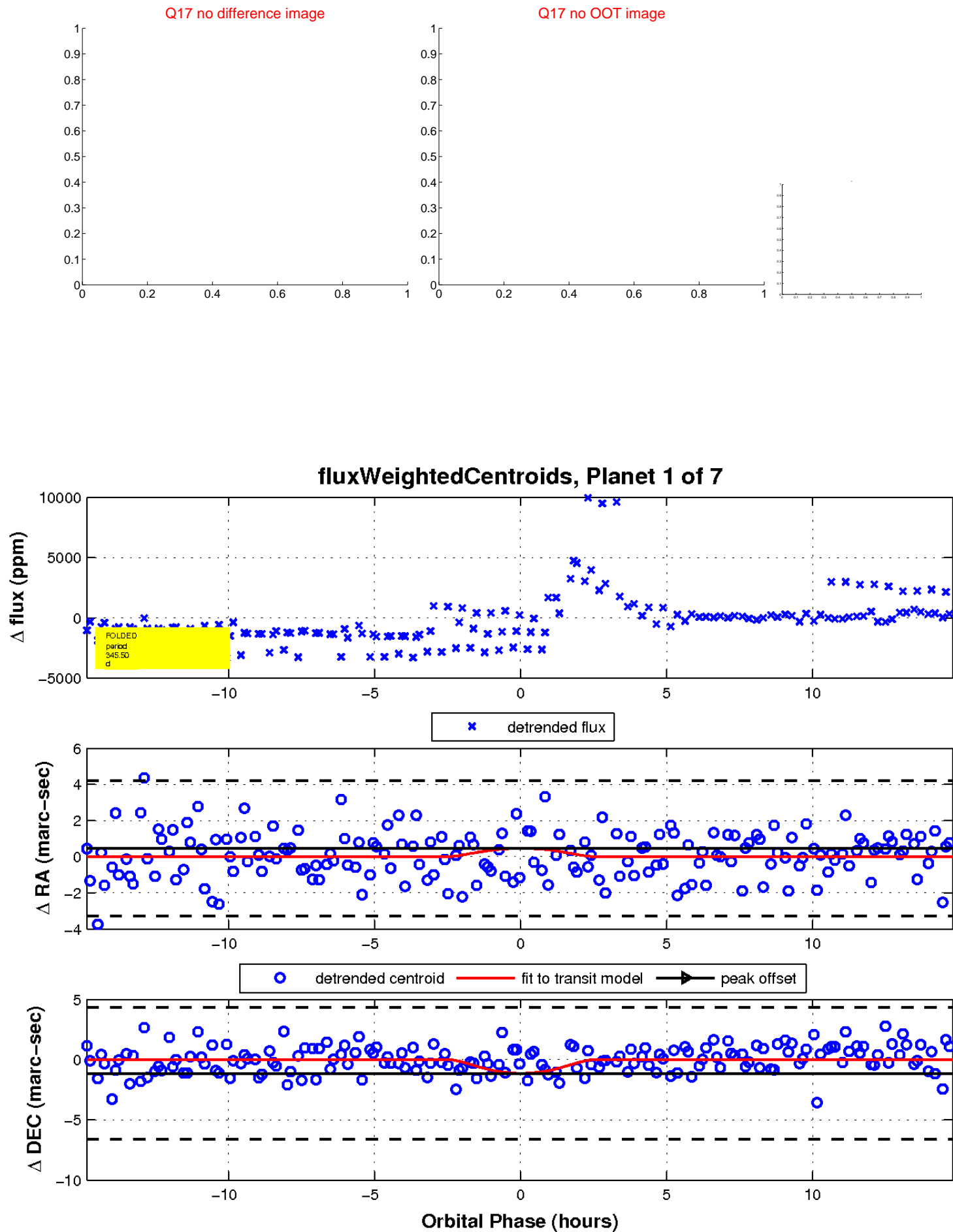
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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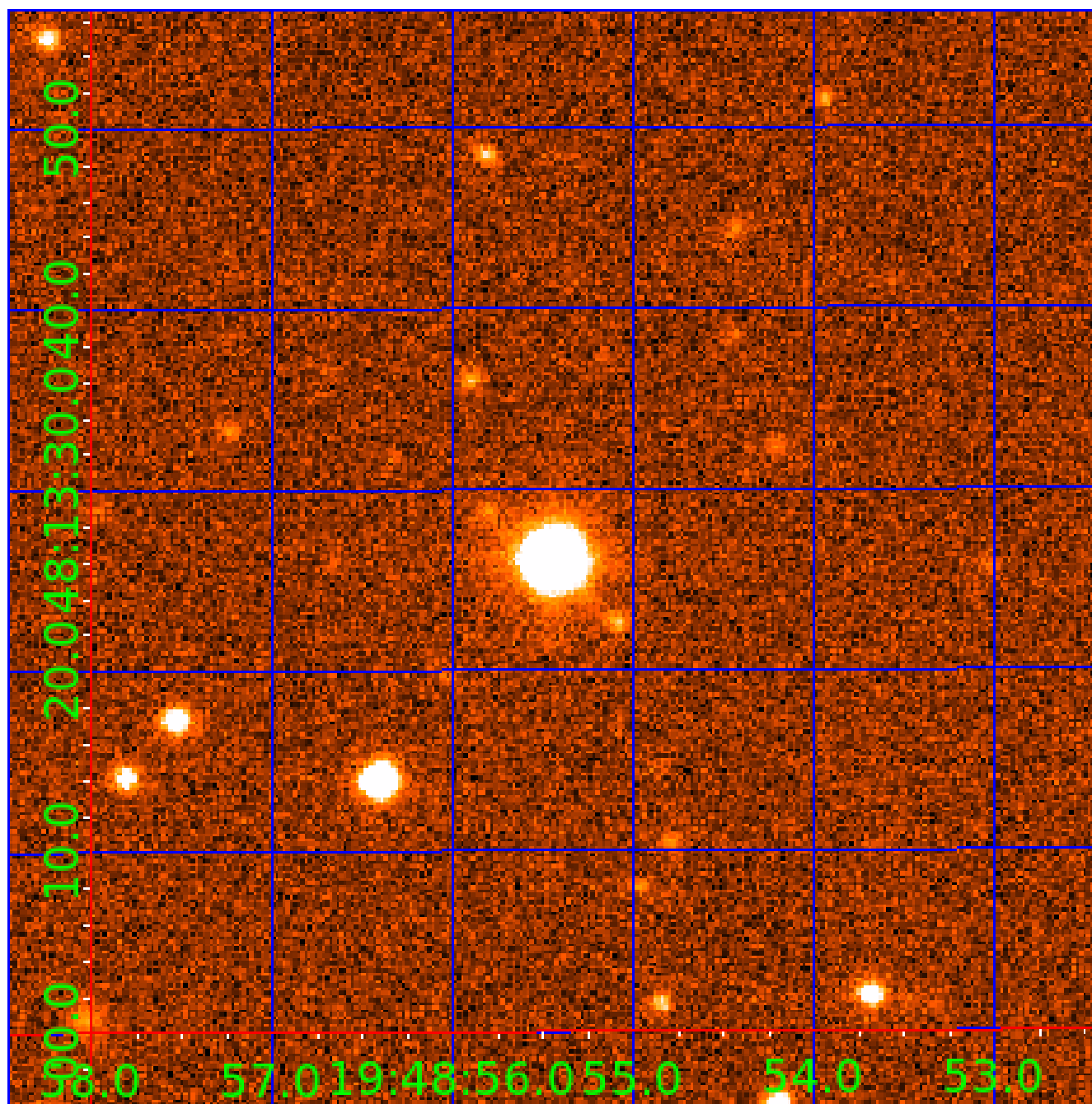


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

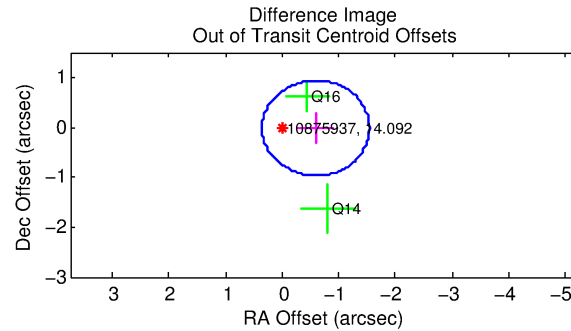
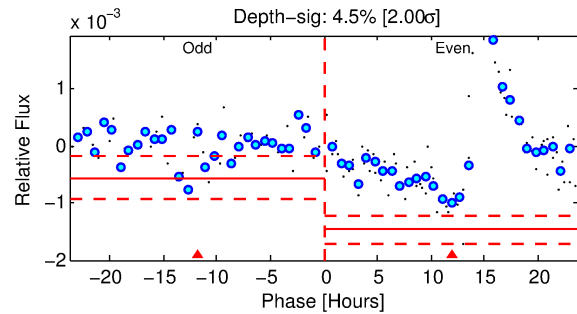
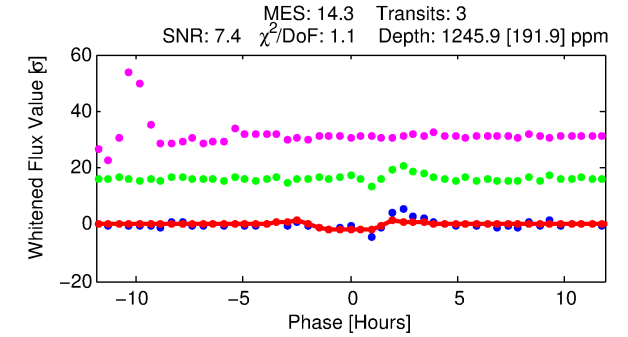
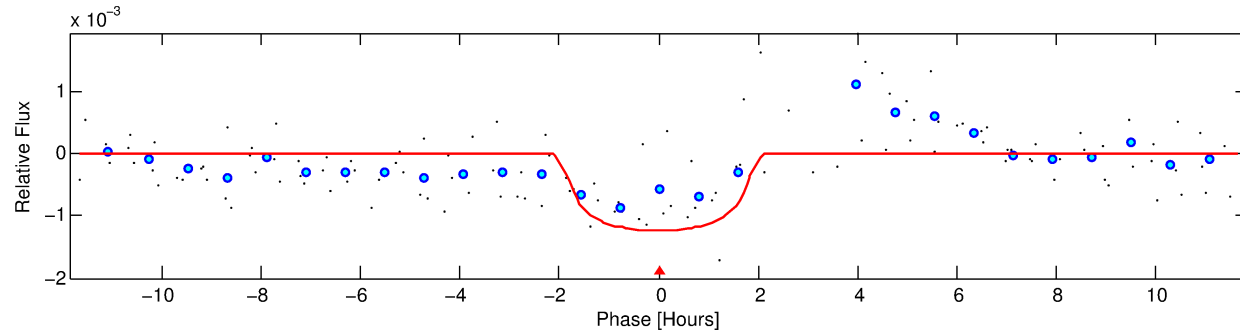
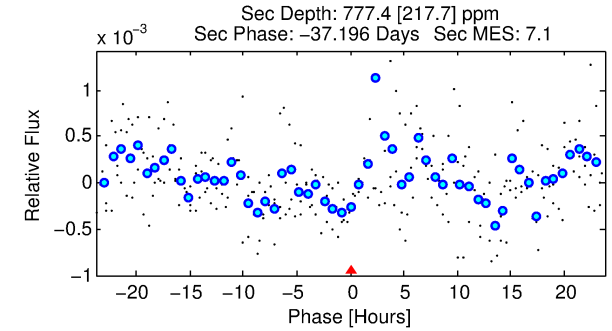
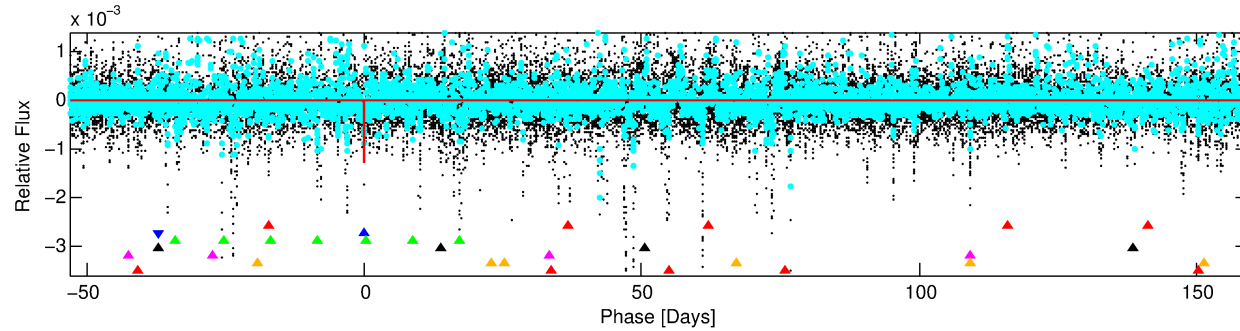
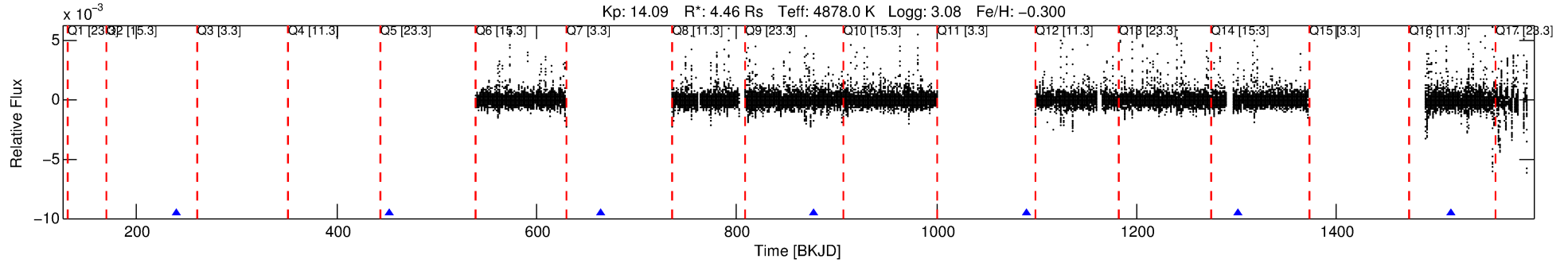
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-02

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 2 of 7 Period: 212.360 d



DV Fit Results:

Period = 212.35983 [0.00291] d
Epoch = 240.0649 [0.0140] BKJD
Rp/R* = 0.0350 [0.0241]
a/R* = 300.60 [715.89]
b = 0.73 [1.55]
Seff = 22.77 [17.45]
Teq = 557 [107] K
Rp = 17.02 [15.77] Re
a = 0.6658 [0.3470] AU
Ag = 654.25 [1043.85] [0.63 σ]
Teffp = 4356 [1535] K [2.47 σ]

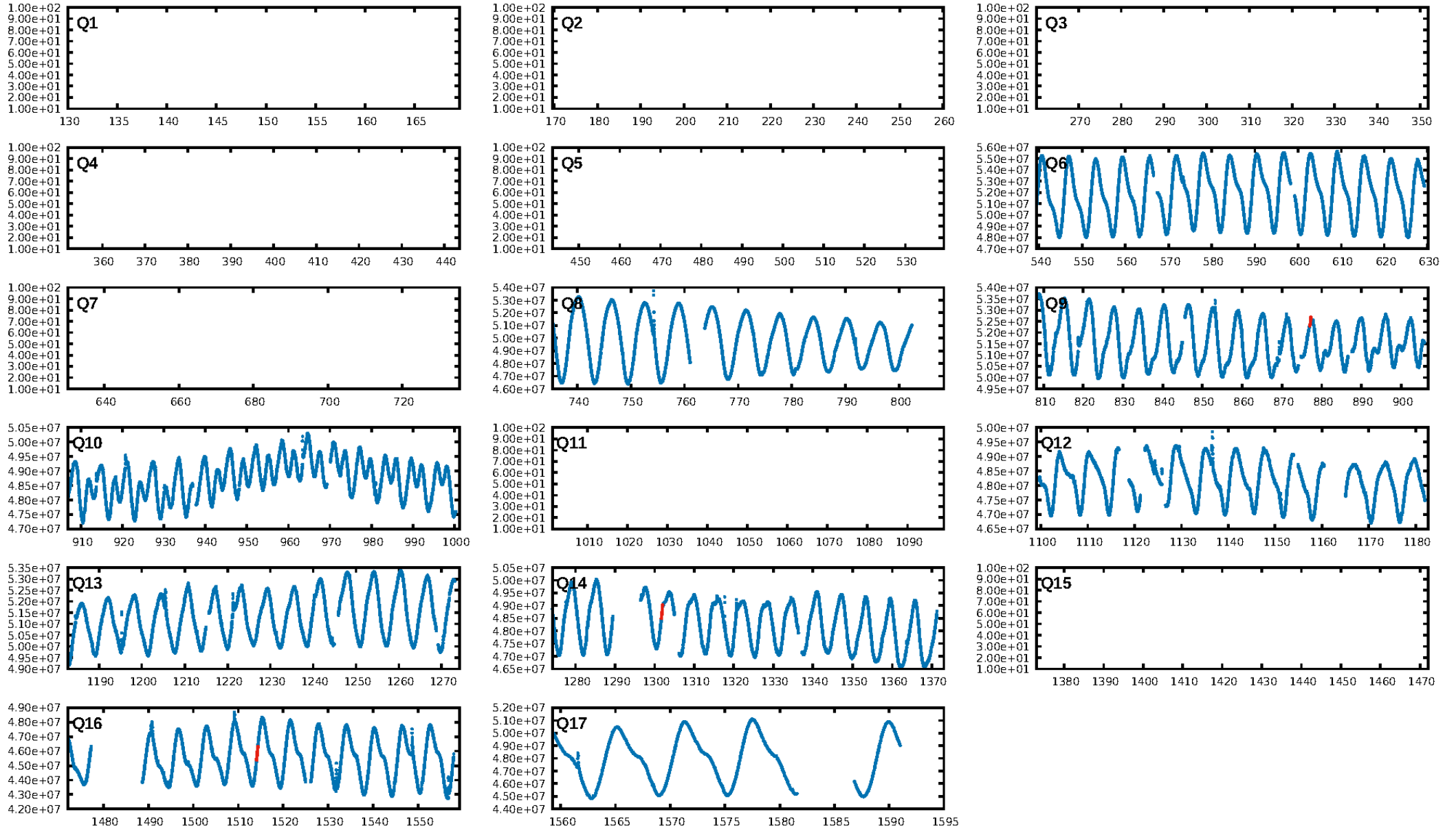
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [13.07 σ]
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 87.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9108
Centroid-sig: 58.1%
Centroid-so: 0.500 arcsec [0.70 σ]
OotOffset-rm: 0.594 arcsec [1.87 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 0.354 arcsec [1.12 σ]
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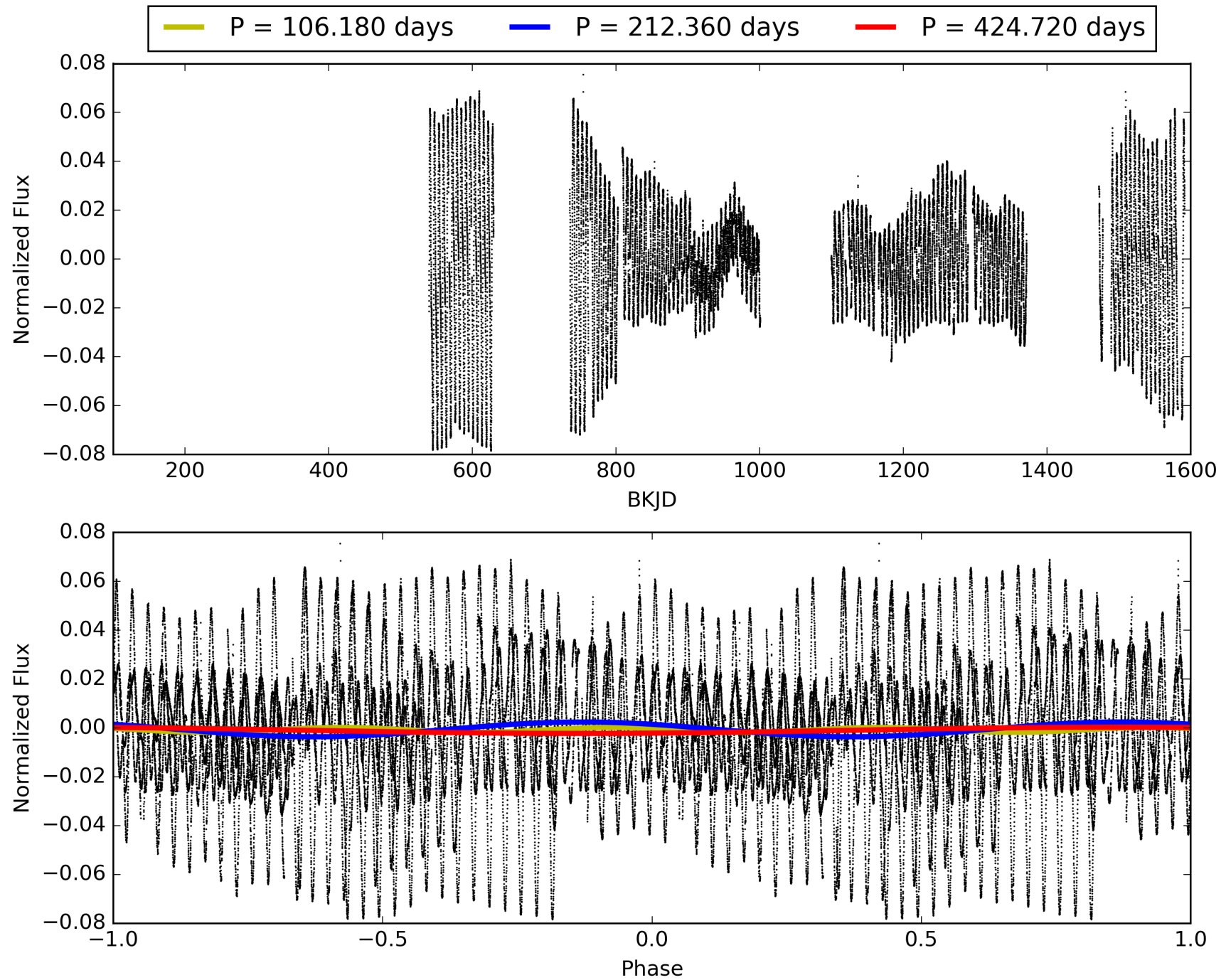
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010875937-02, PDC Light Curves

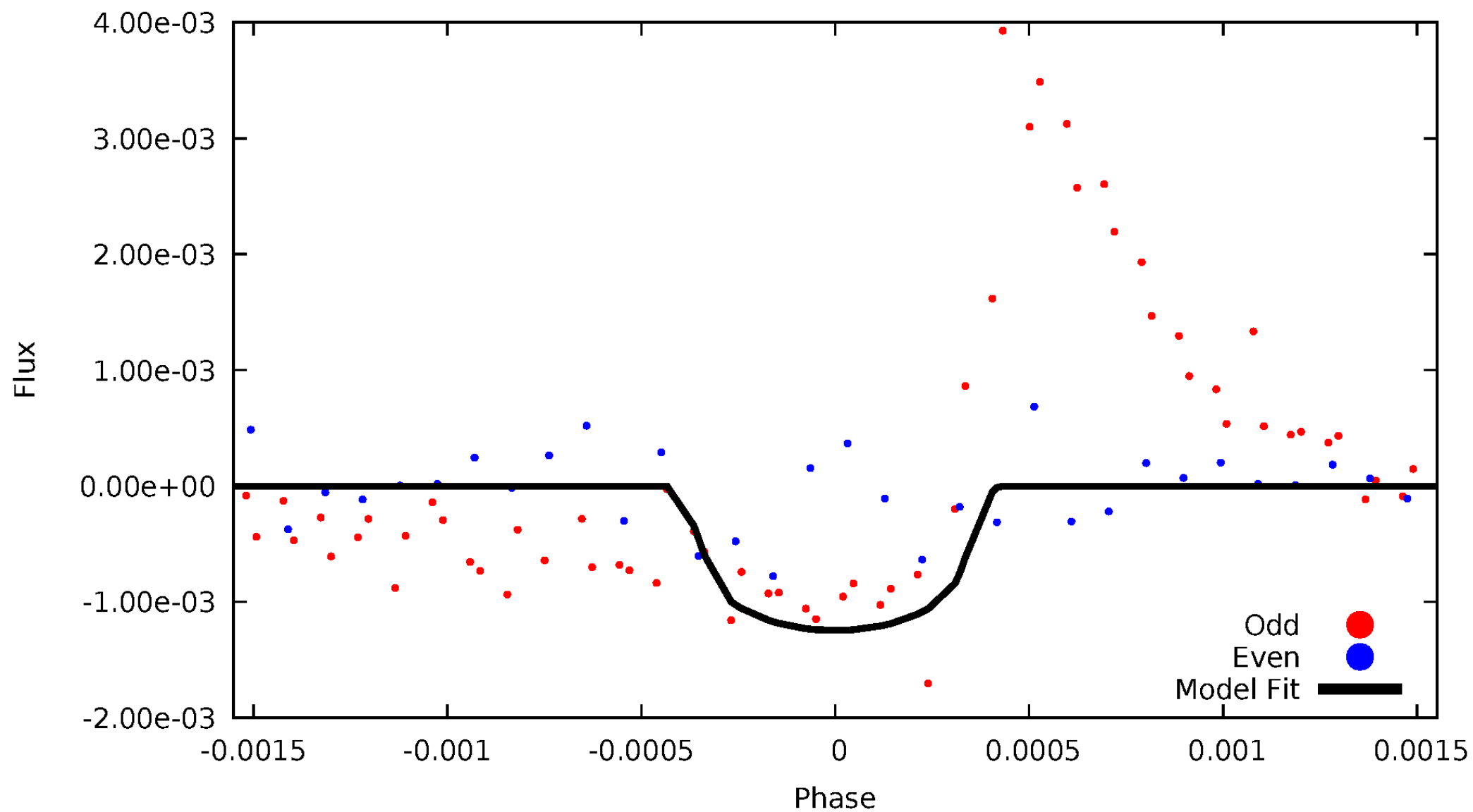


TCE 010875937-02



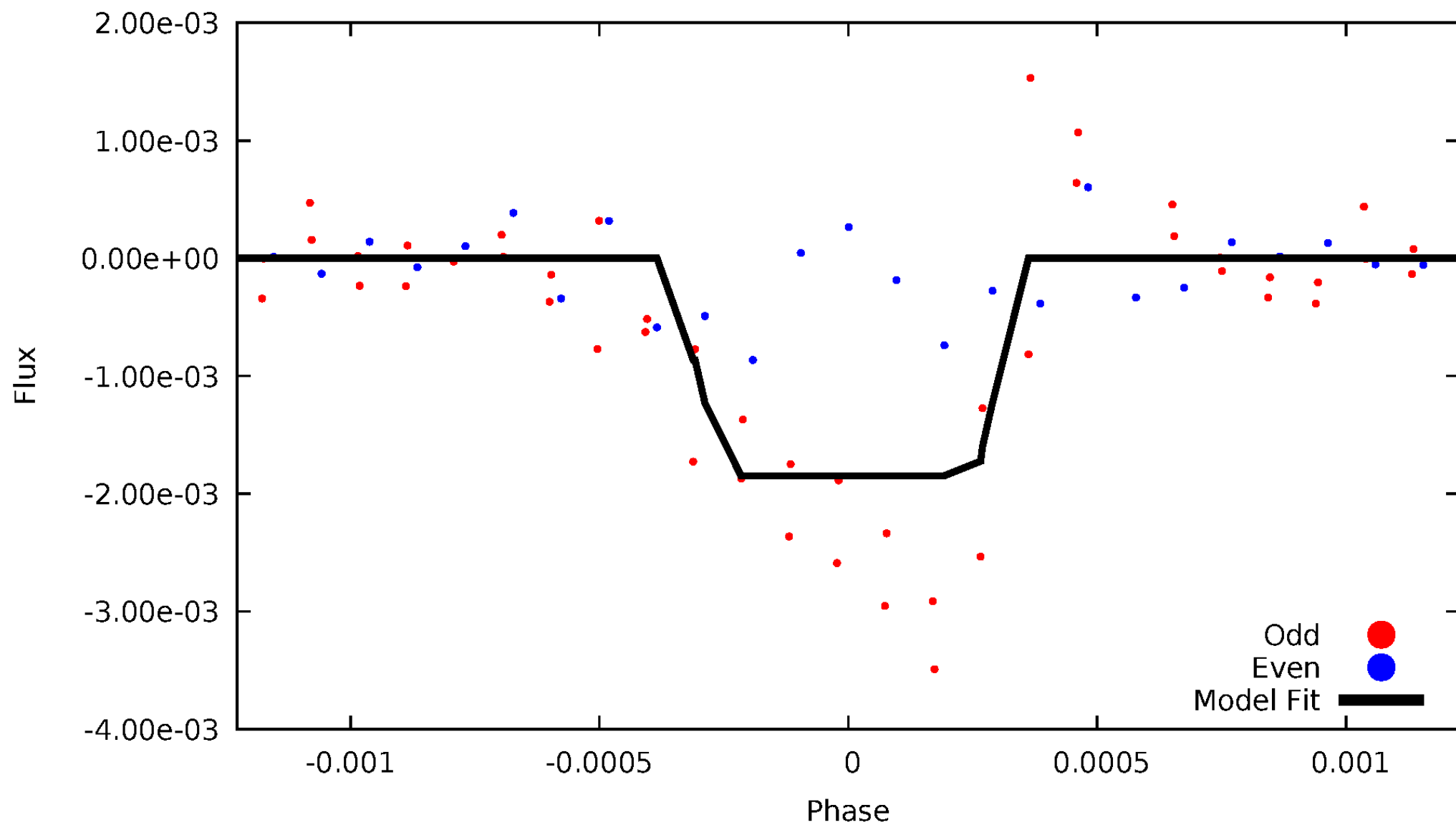
DV Odd/Even

TCE 010875937-02



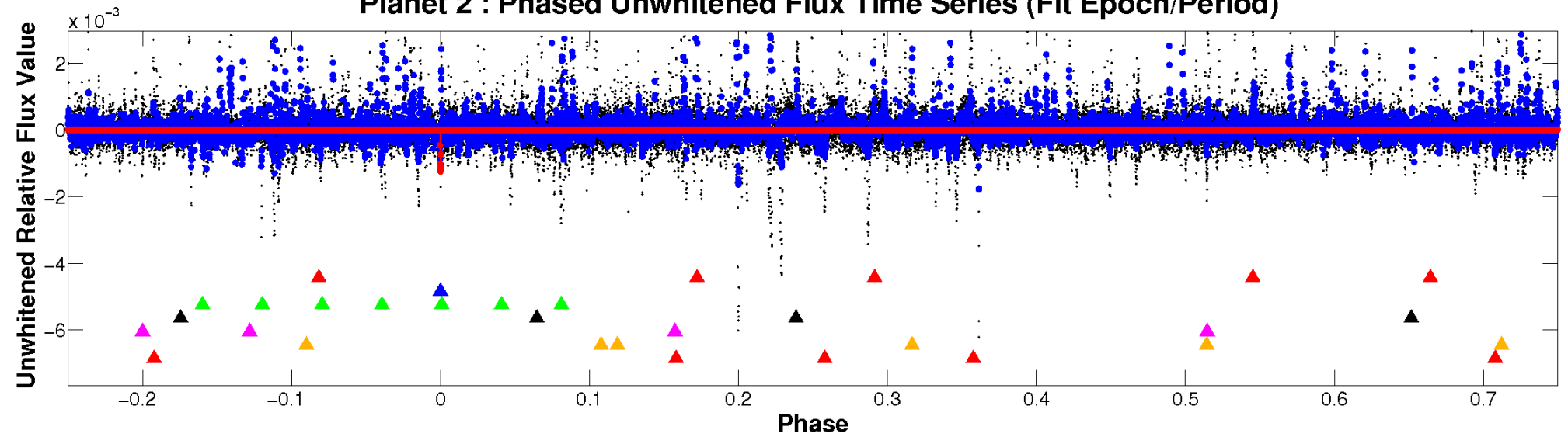
ALT Odd/Even

TCE 010875937-02

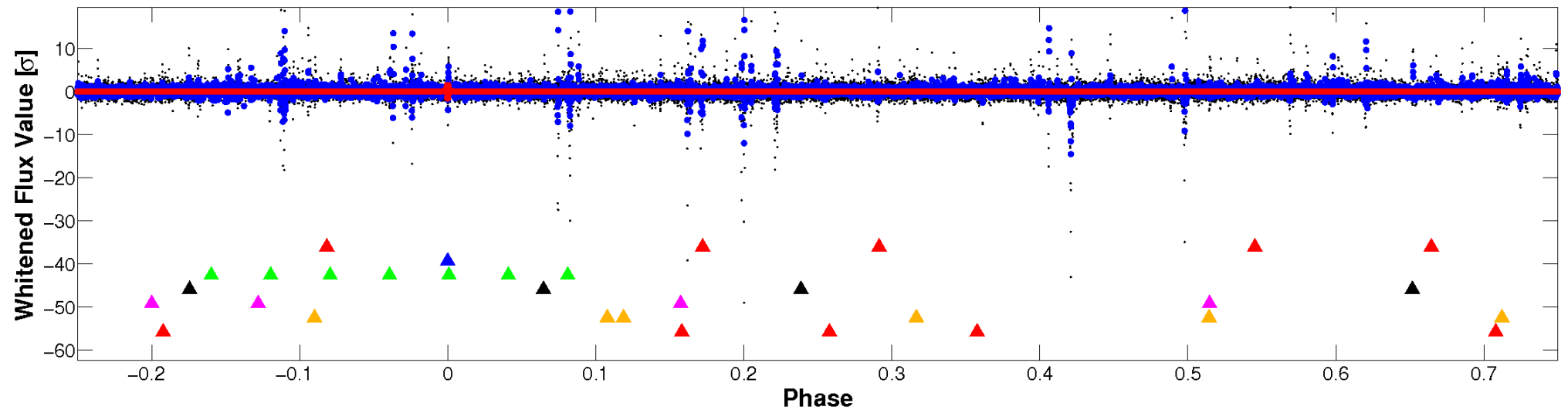


Non-Whitened Vs. Whitened Light Curve

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

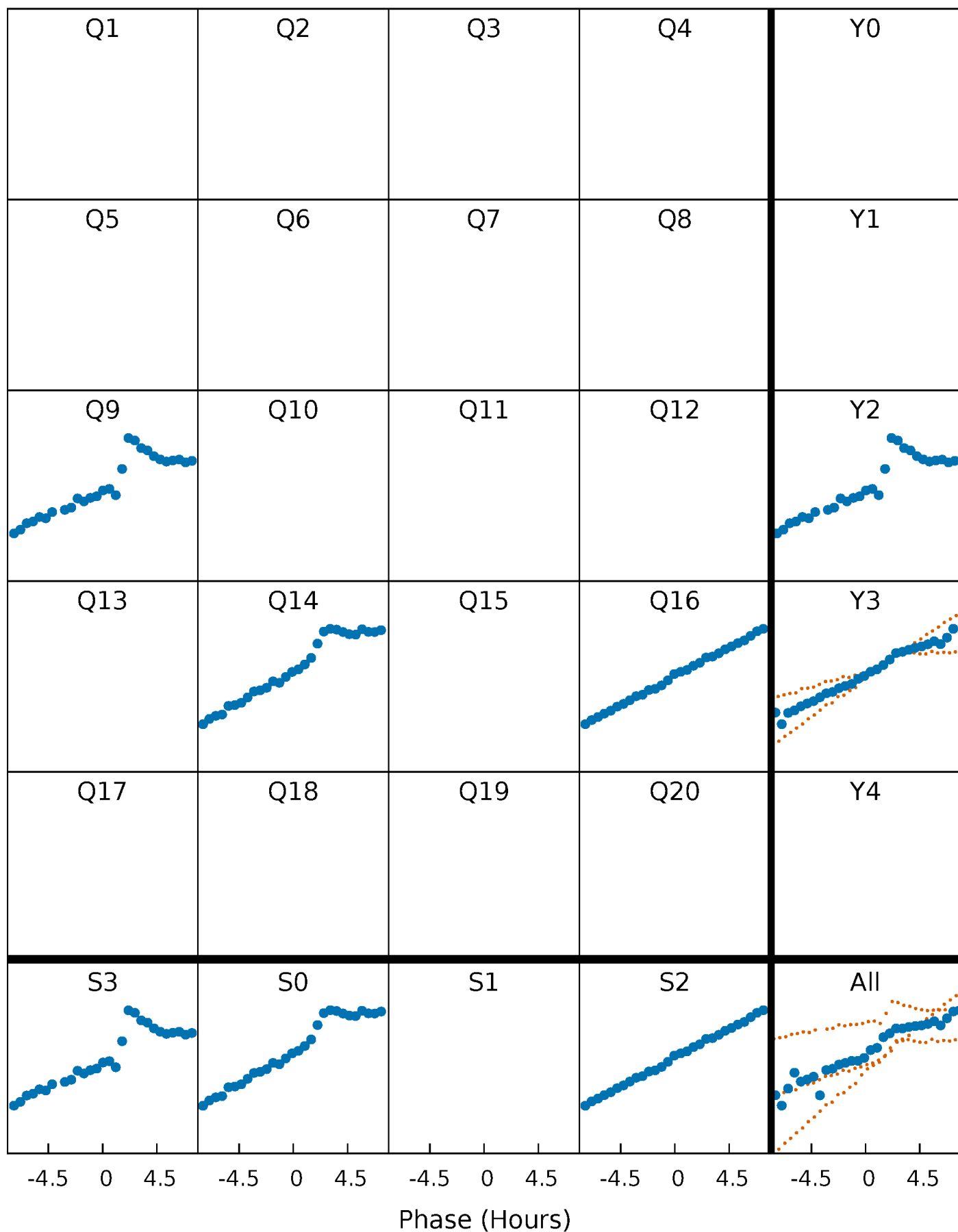


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



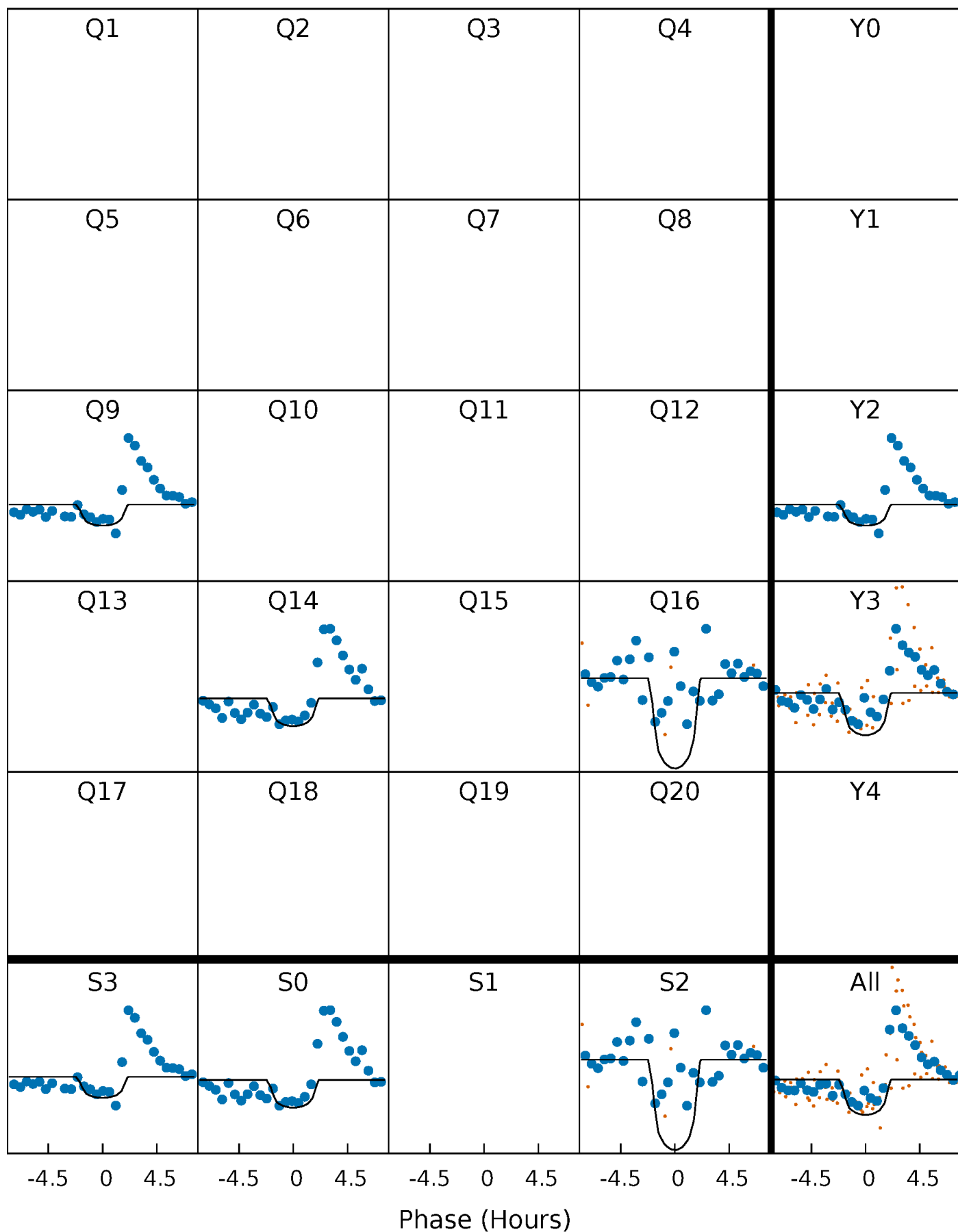
PDC Quarter-Phased Transit Curves

TCE 010875937-02 P=212.359829 Days $T_0=240.064916$ (BKJD)



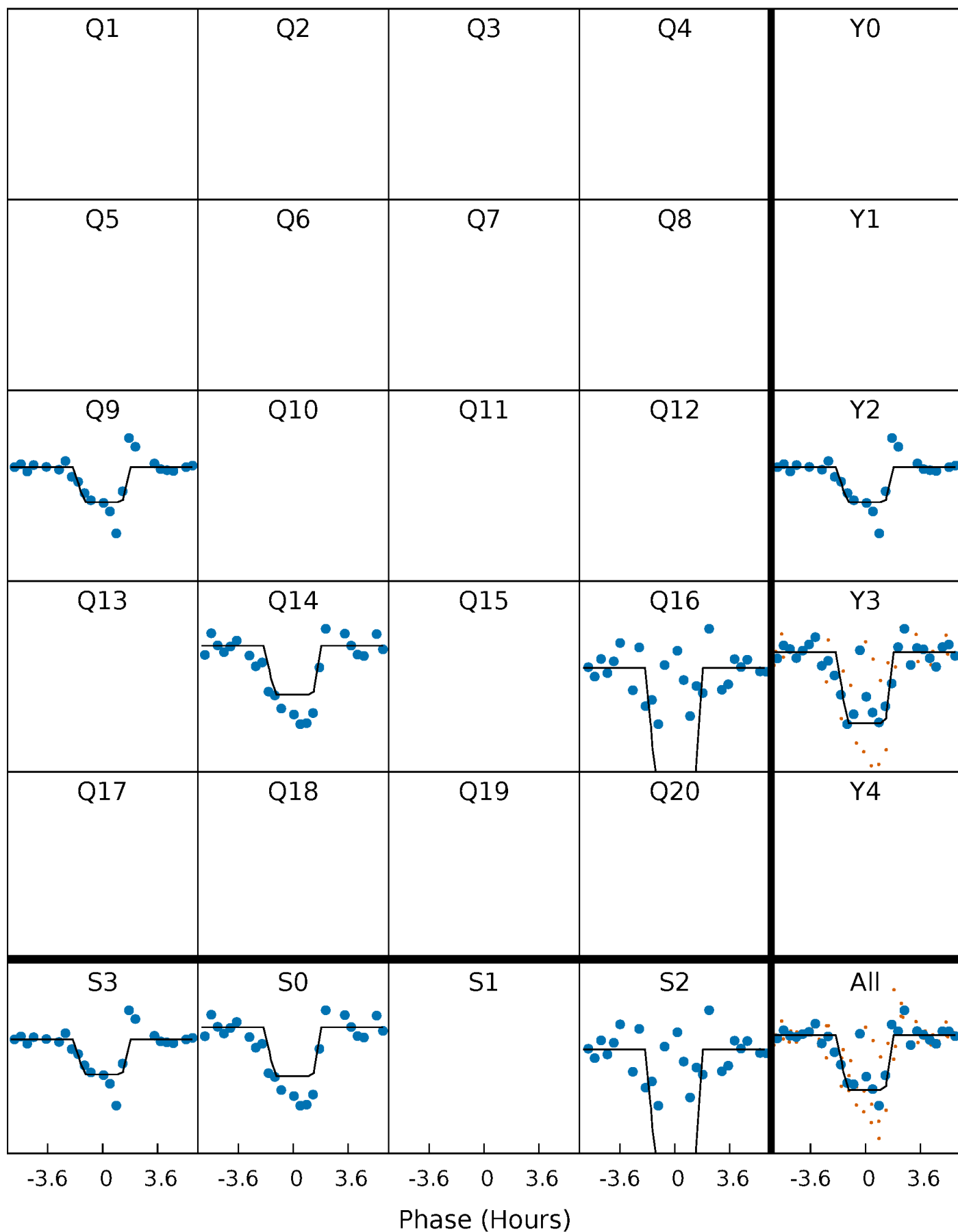
DV Quarter-Phased Transit Curves

TCE 010875937-02 $P=212.359829$ Days $T_0=240.064916$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

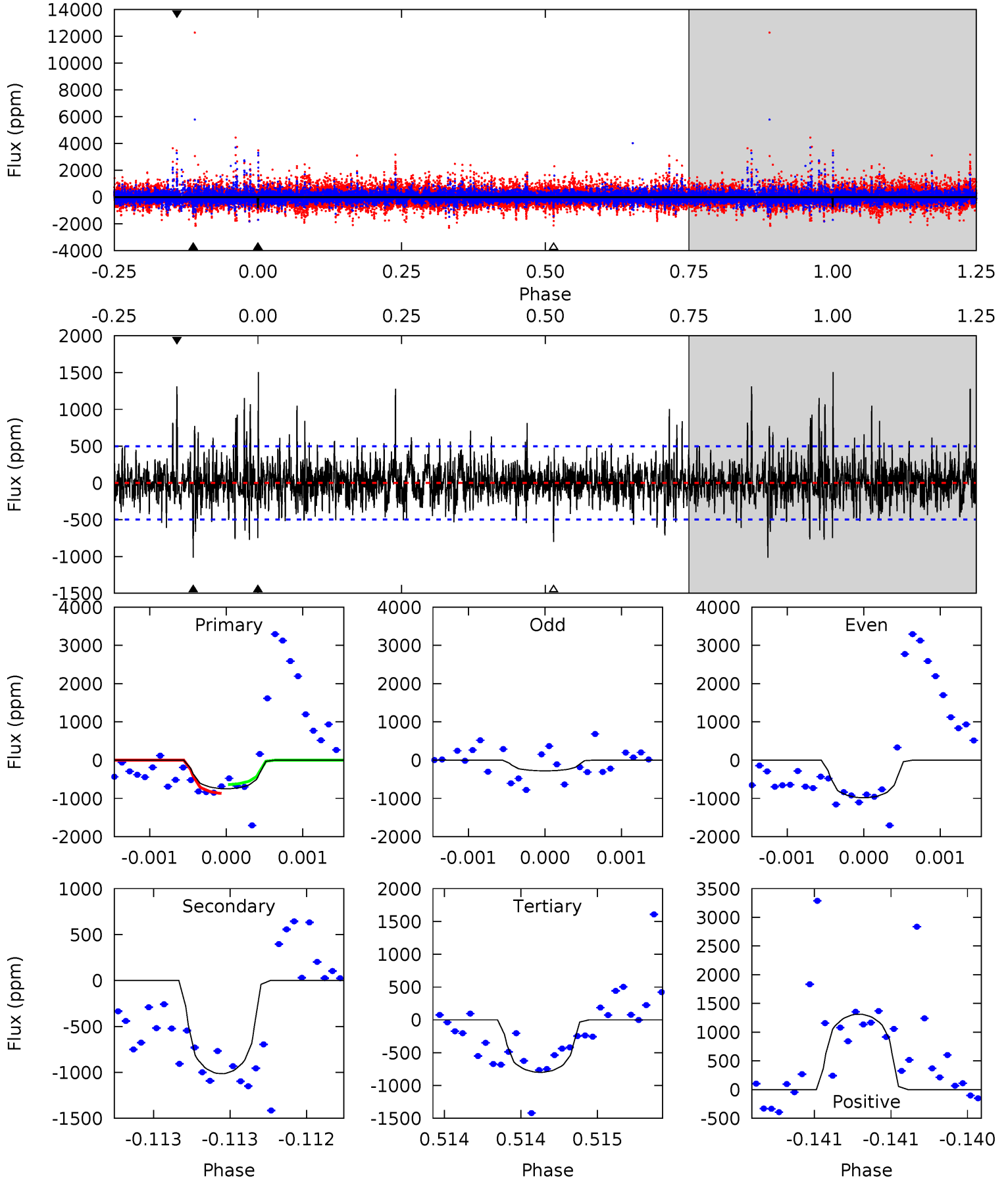
TCE 010875937-02 $P=212.357377$ Days $T_0=240.086313$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-02, P = 212.359829 Days, E = 240.064916 Days

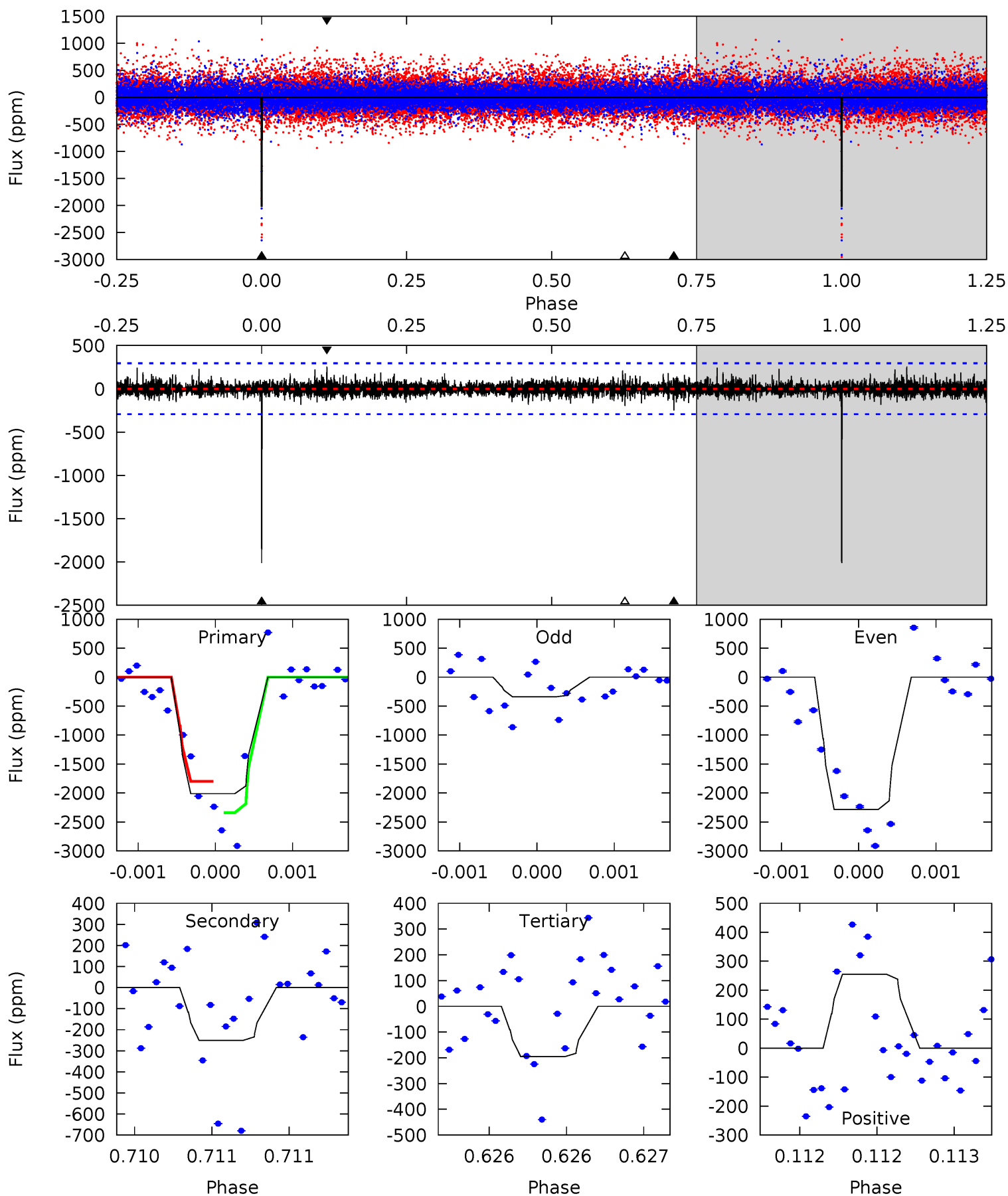
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	11.2	8.83	14.5	5.49	3.36	2.27	-0.56	-6.24	2.38	-3.29	2.37	0.76	0.60	1.31



Alt Model-Shift Uniqueness Test

010875937-02, P = 212.357377 Days, E = 240.086313 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.7	4.70	3.67	4.78	5.52	3.40	0.87	34.1	33.0	1.03	-0.08	18.5	0.81	0.11	5.00



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1015 ± 90	$17.96^{+13.98}_{-10.61}$	769^{+111}_{-87}	4557^{+2144}_{-748}	800^{+3833}_{-556}
Alt.	-251 ± 53	$21.91^{+13.10}_{-12.06}$	776^{+111}_{-82}	3394^{+861}_{-443}	134^{+496}_{-85}

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

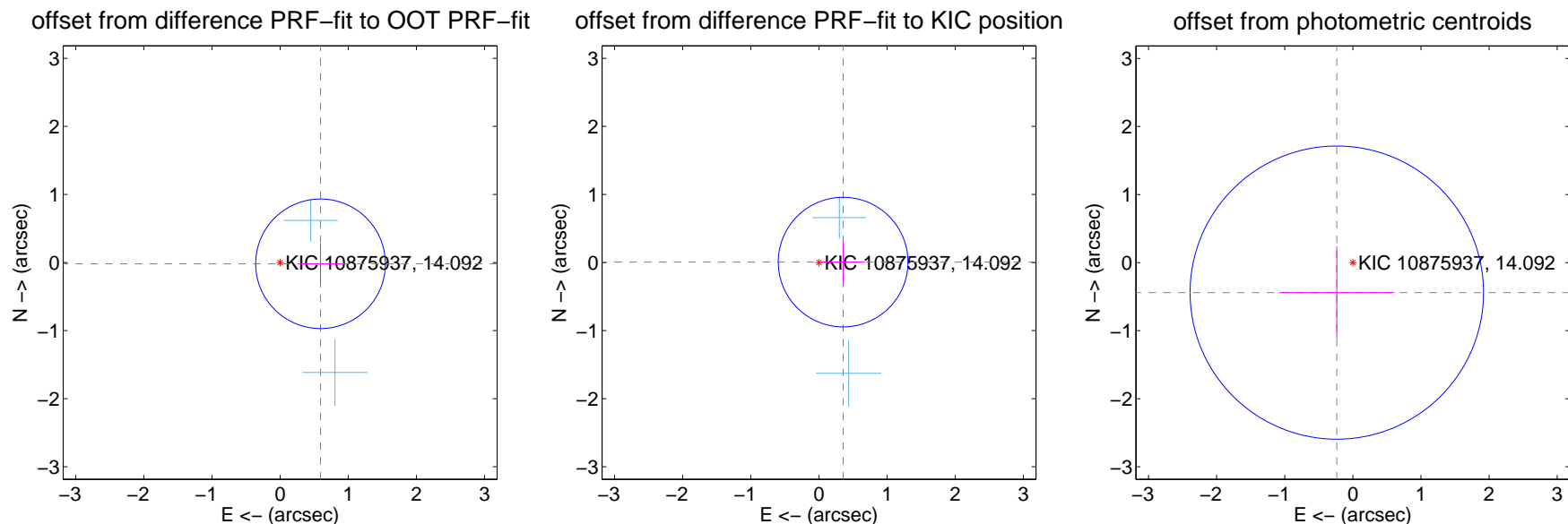
DV Centroid Data

Supplemental centroid analysis for 010875937-02. Kepler magnitude: 14.09. Transit SNR 7.40

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.594 ± 0.317	1.87	-0.593 ± 0.317	-0.018 ± 0.297
PRF-fit source offset from KIC position	0.354 ± 0.317	1.12	-0.354 ± 0.317	0.007 ± 0.297
photometric centroid source offset	0.50 ± 0.72	0.70	0.24 ± 0.84	-0.44 ± 0.68



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.

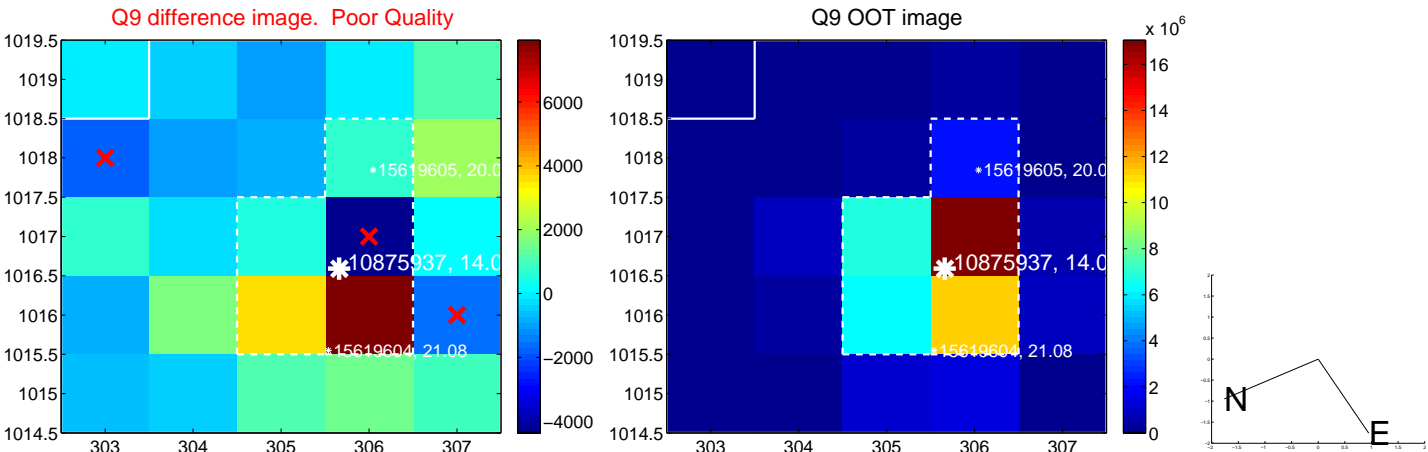
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

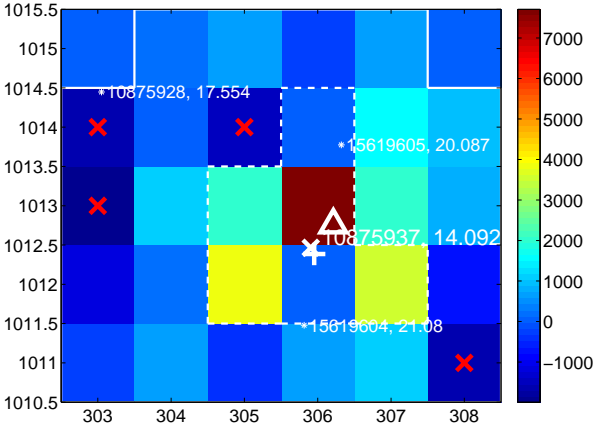
Q13 no difference image



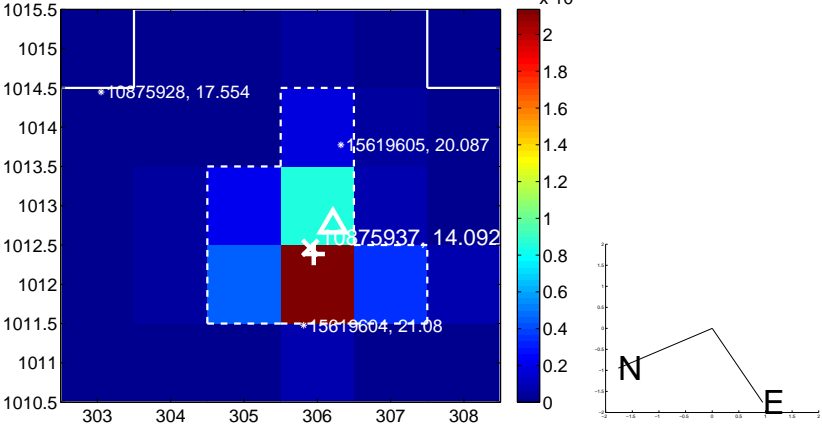
Q13 no OOT image



Q14 difference image



Q14 OOT image



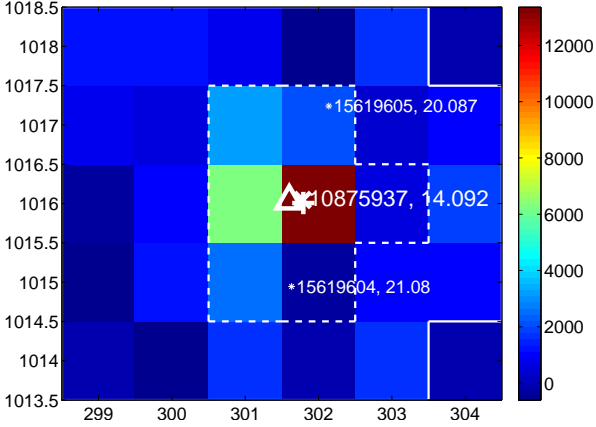
Q15 no difference image



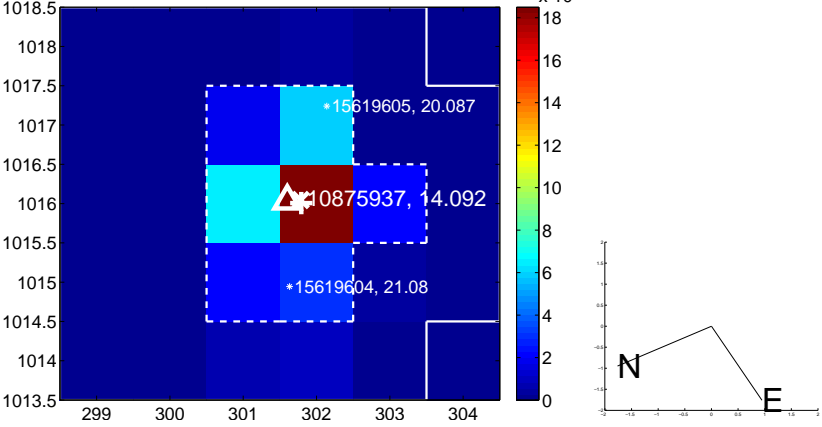
Q15 no OOT image



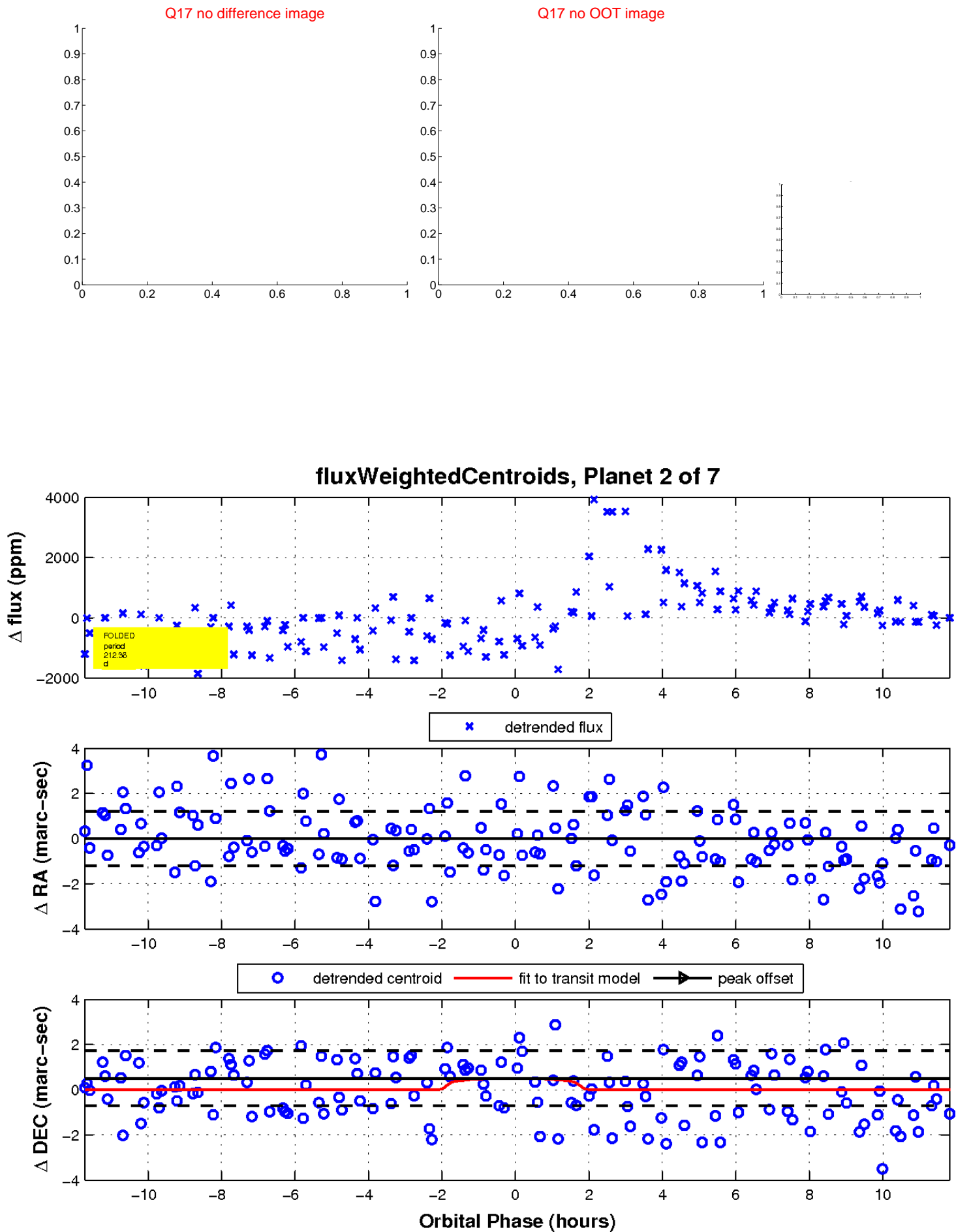
Q16 difference image



Q16 OOT image

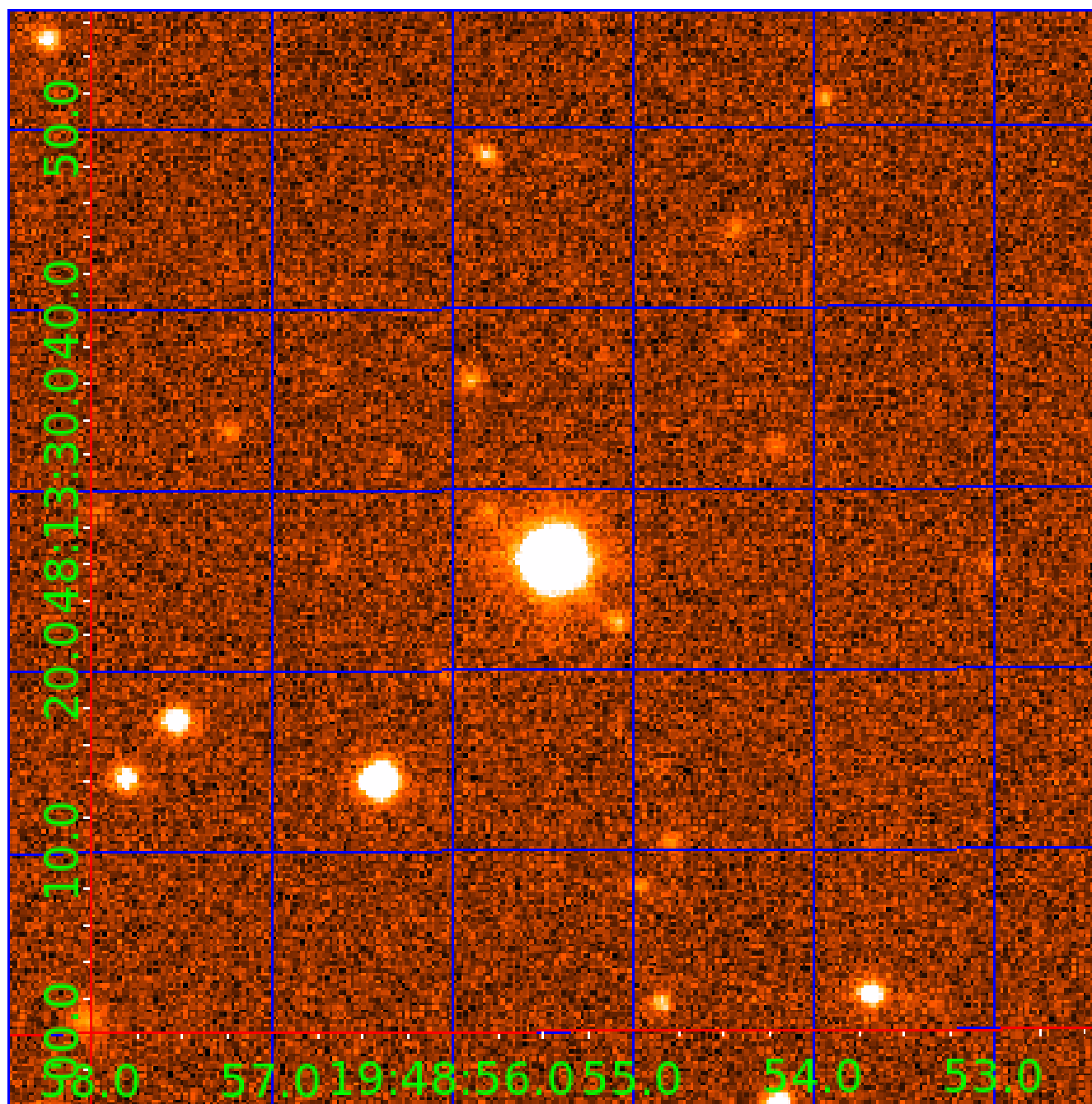


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
010875937-03	OBS	No	220.884182	206.145978	1386.9	15.149	15.5	4.7	4.46	4878	16.30	21.61
010875937-04	OBS	No	337.010609	253.803101	1098.3	3.824	13.1	6.4	4.46	4878	15.92	12.30
010875937-05	OBS	No	348.841548	212.881353	1572.5	7.375	12.8	8.5	4.46	4878	18.34	11.75
010875937-06	OBS	No	254.367071	265.286259	1016.9	4.999	11.5	5.1	4.46	4878	14.87	17.90
010875937-07	OBS	8216.01	307.947372	316.019229	507.8	15.000	11.3	-1.0	4.46	4878	9.74	13.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

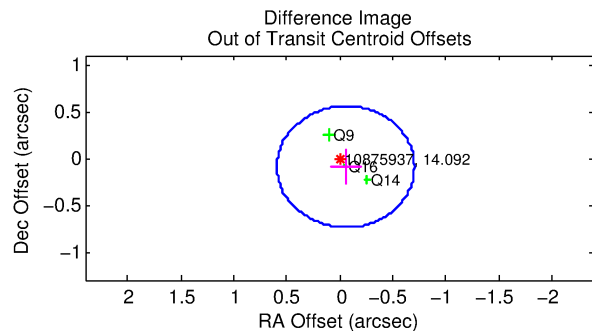
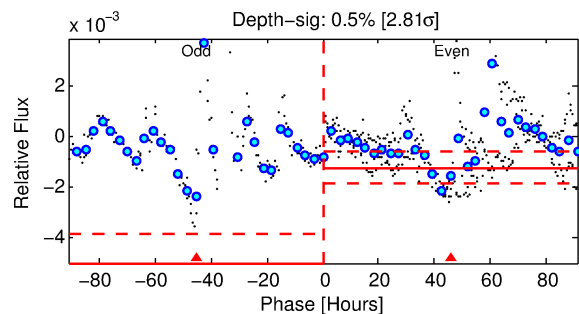
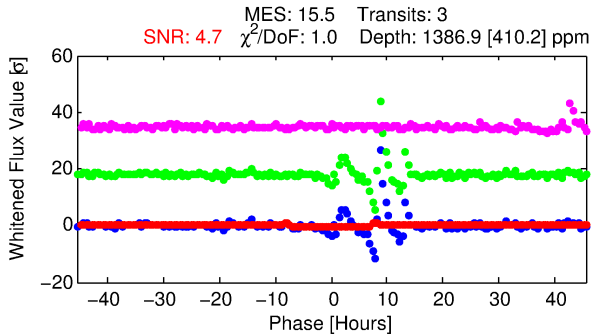
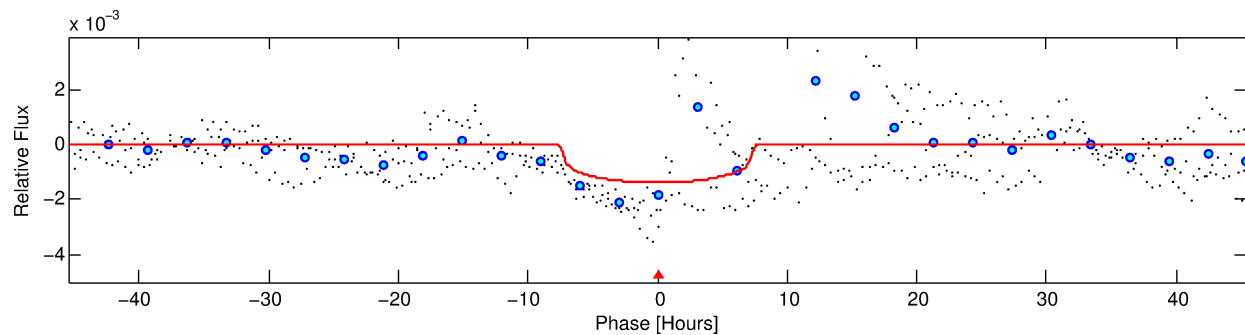
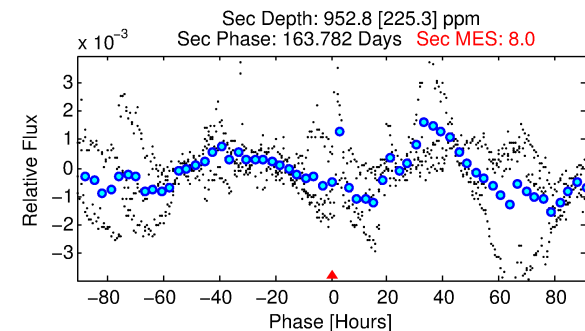
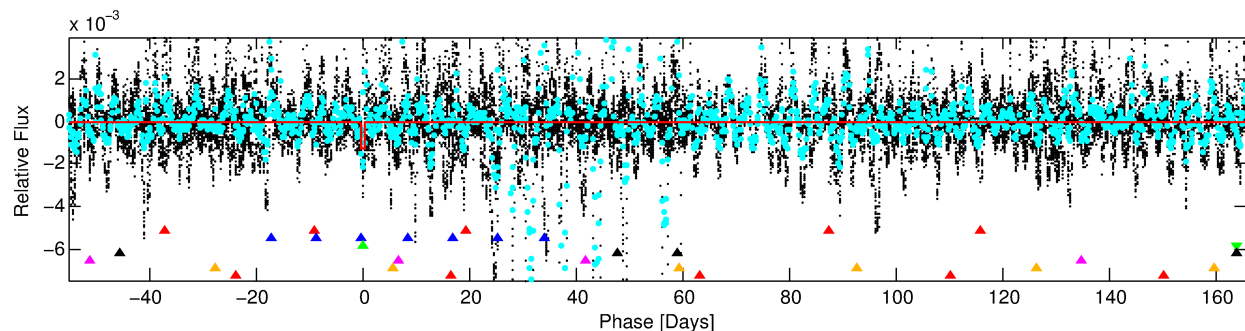
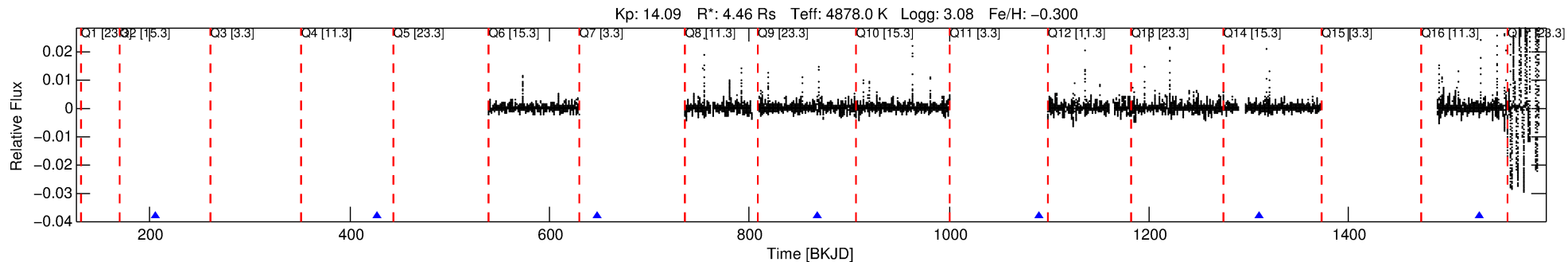
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-03

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 3 of 7 Period: 220.884 d



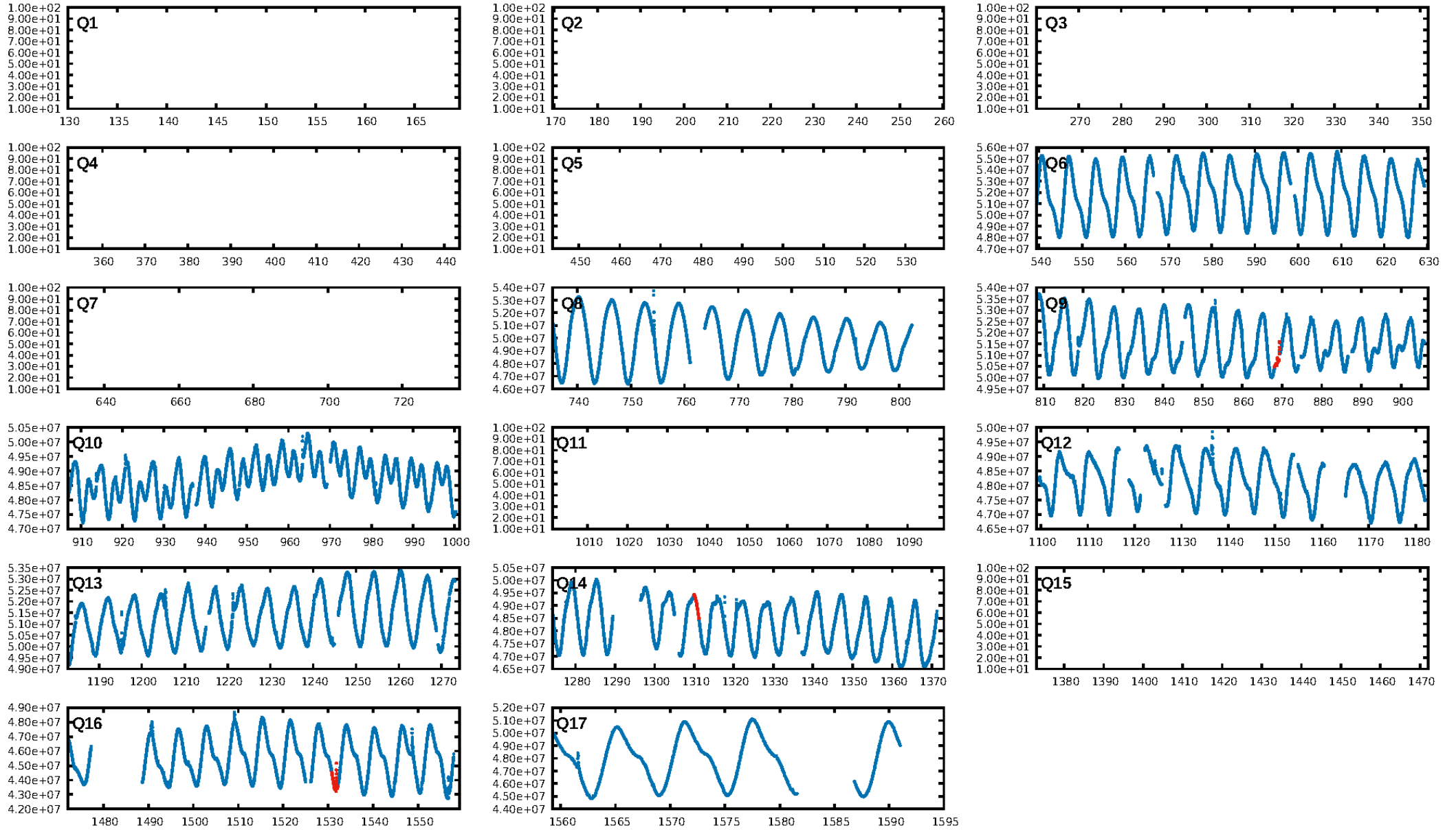
DV Fit Results:

Period = 220.88418 [0.00530] d
Epoch = 206.1460 [0.0253] BKJD
Rp/R* = 0.0335 [0.0136]
a/R* = 109.93 [135.52]
b = 0.31 [3.67]
Seff = 21.61 [16.56]
Teff = 550 [105] K
Rp = 16.30 [12.08] Re
a = 0.6835 [0.3562] AU
Ag = 921.36 [1044.16] [0.88σ]
Teffp = 4683 [997] K [4.12σ]

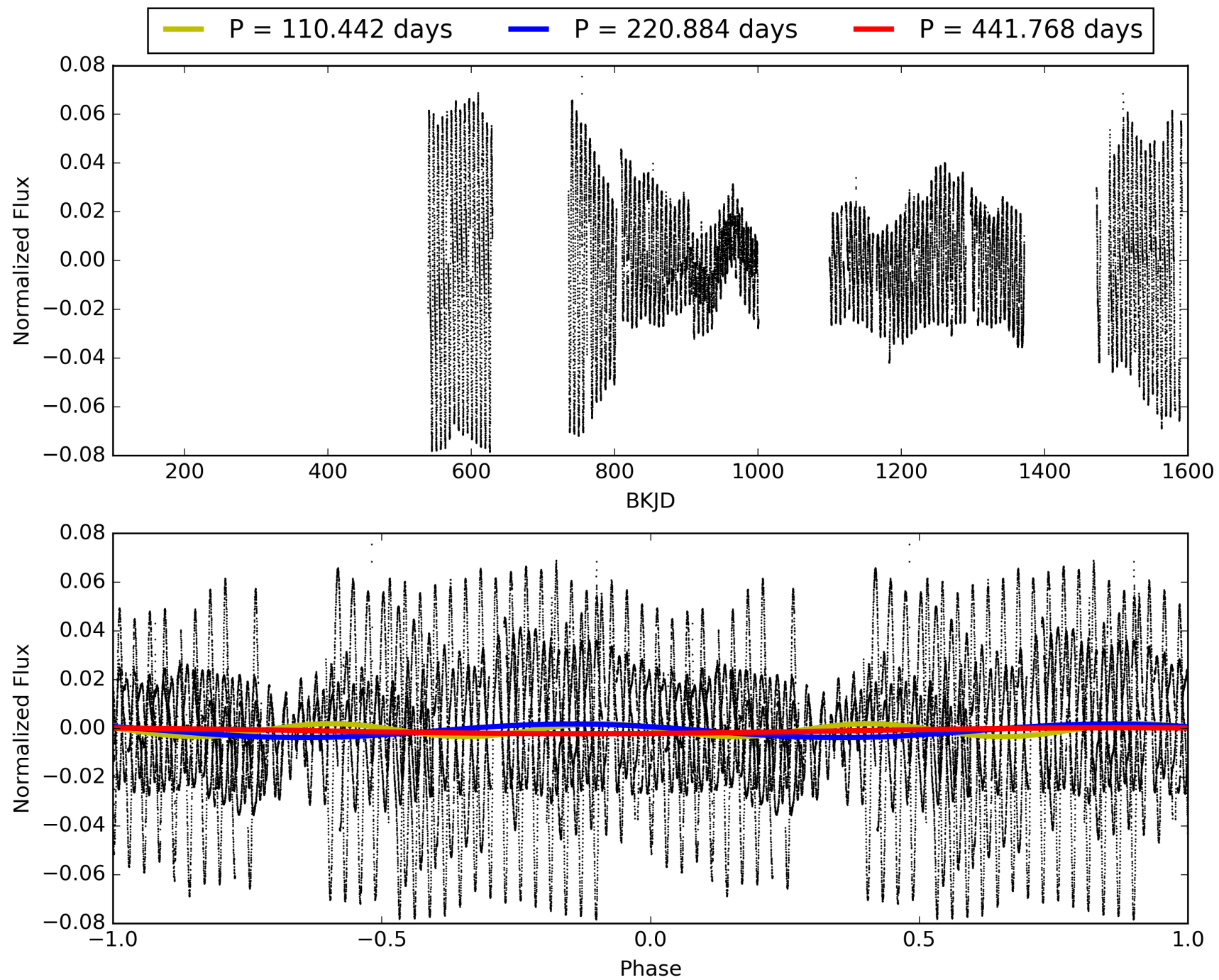
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.07σ]
LongPeriod-sig: 100.0% [50.37σ]
ModelChiSquare2-sig: 39.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.298
Centroid-sig: 0.1%
Centroid-so: 1.324 arcsec [2.51σ]
OotOffset-rm: 0.108 arcsec [0.50σ]
KicOffset-rm: 0.112 arcsec [1.04σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 010875937-03, PDC Light Curves

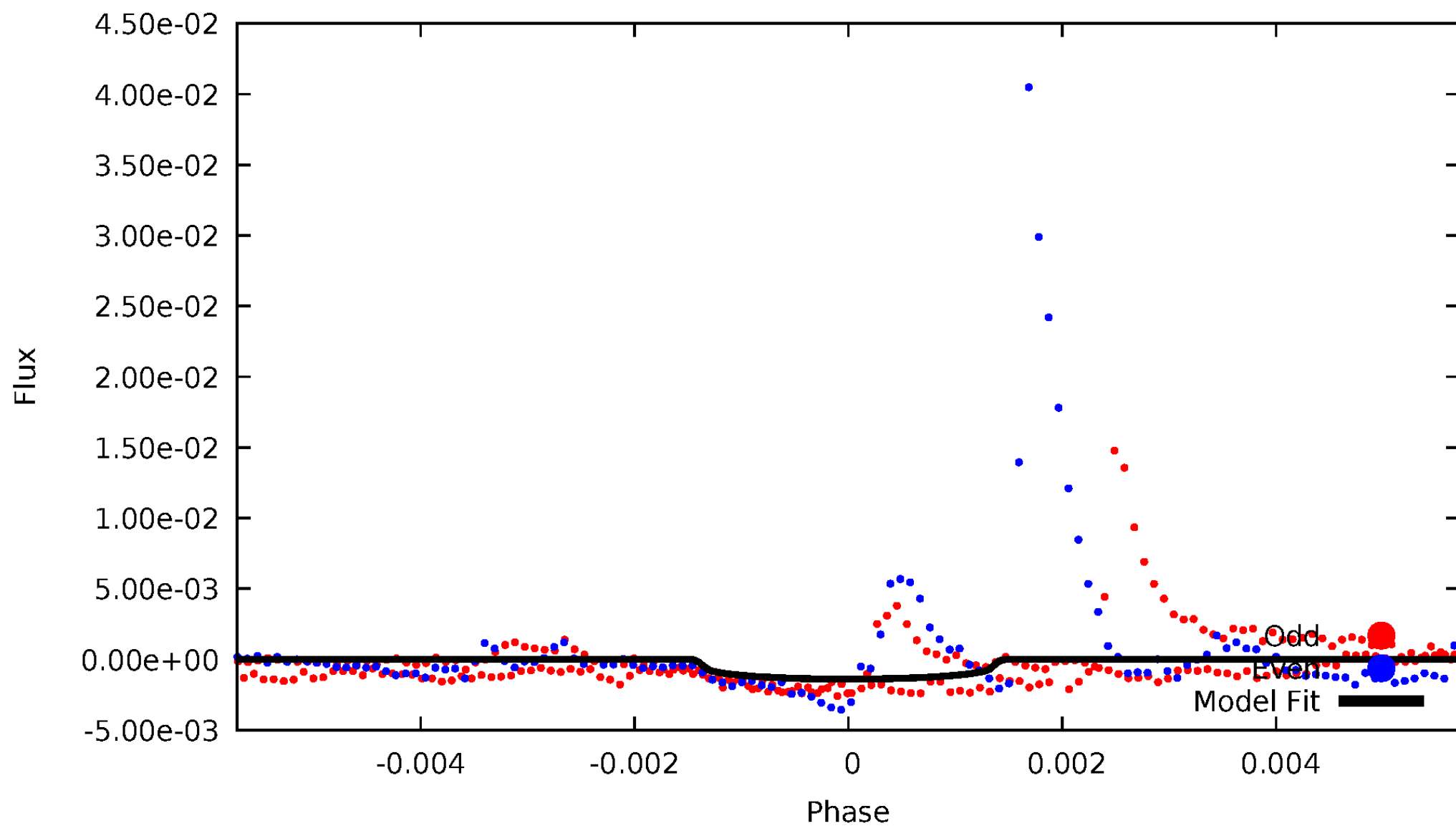


TCE 010875937-03



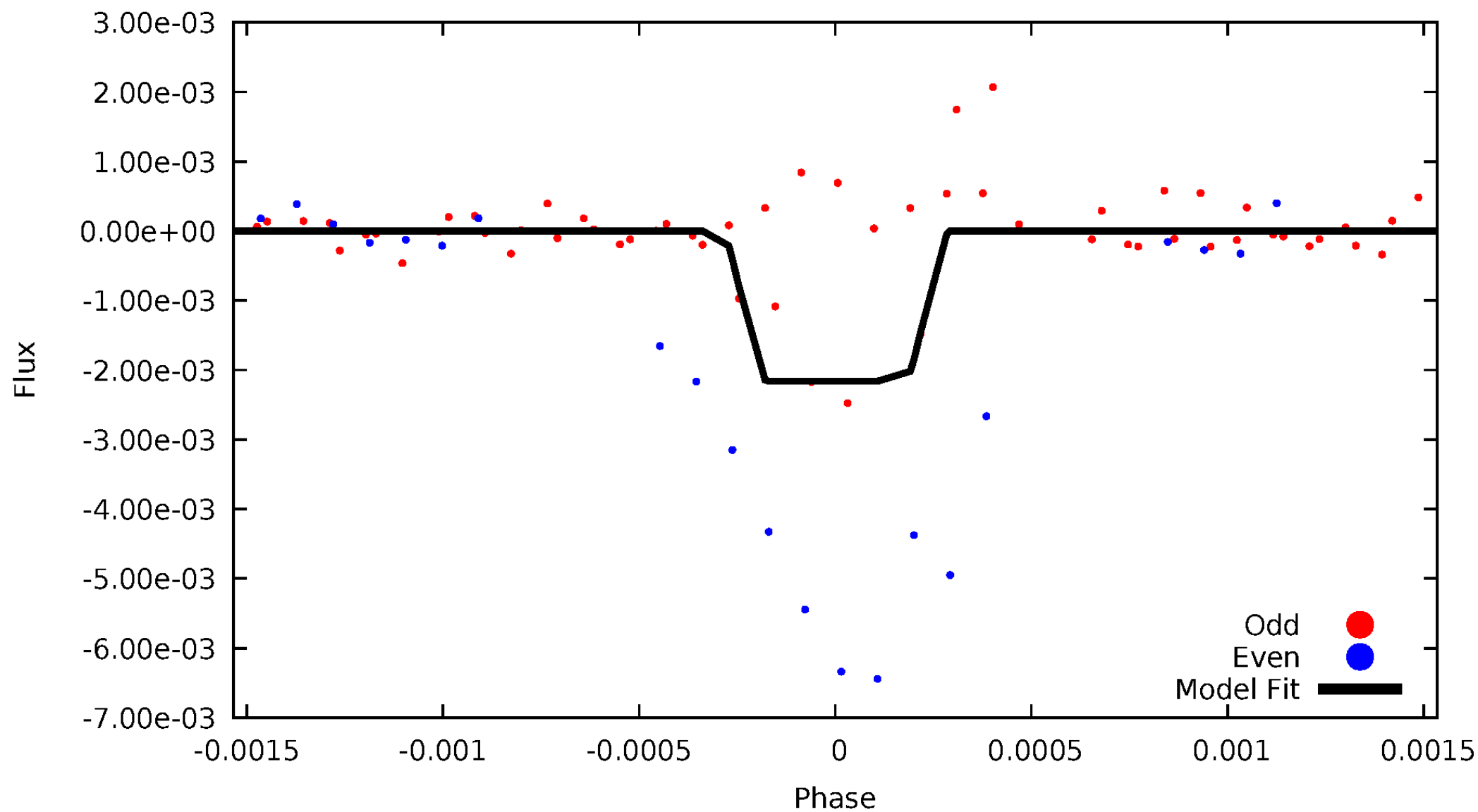
DV Odd/Even

TCE 010875937-03



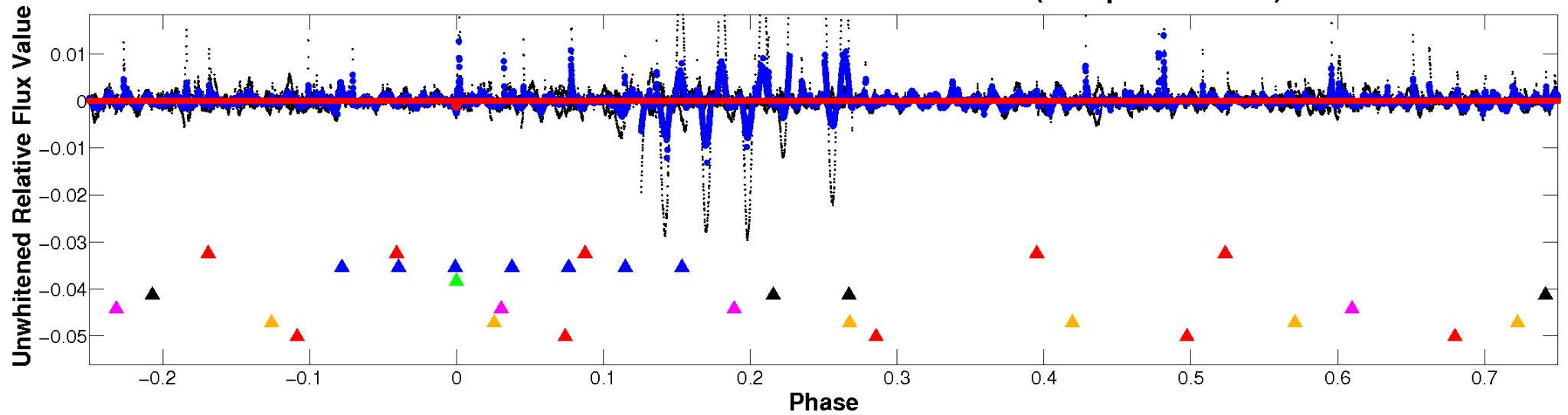
ALT Odd/Even

TCE 010875937-03

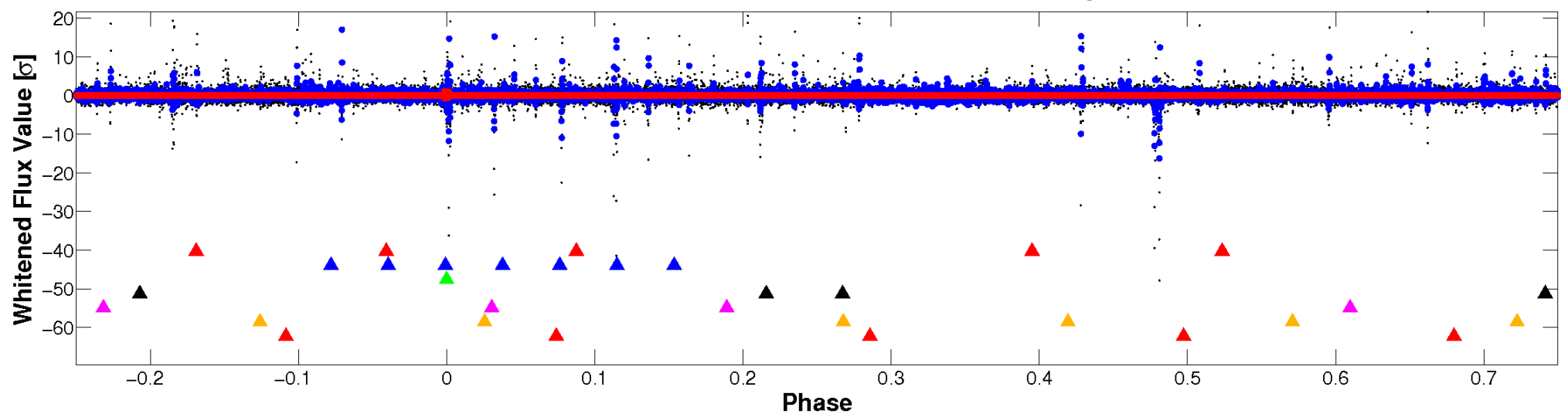


Non-Whitened Vs. Whitened Light Curve

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

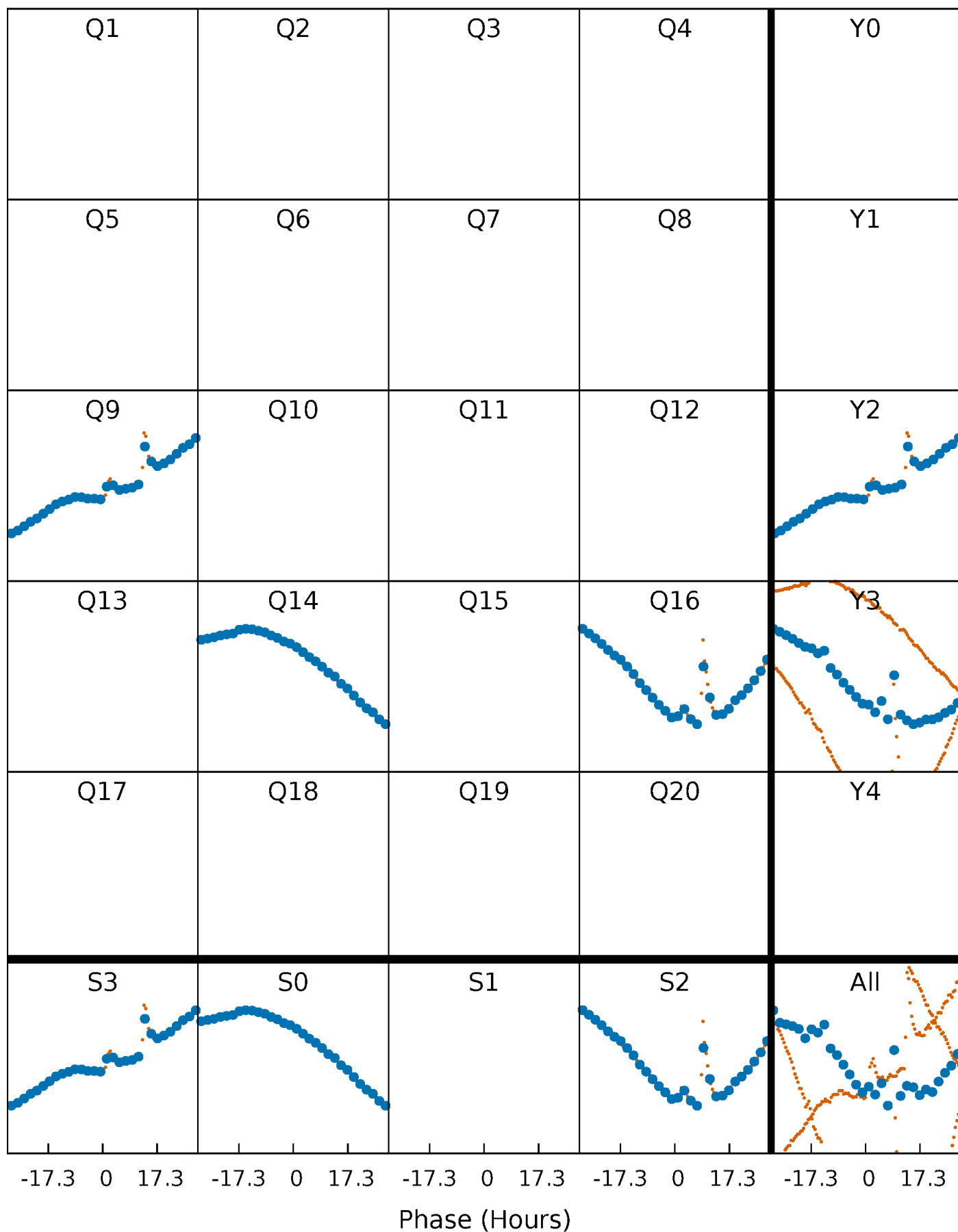


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



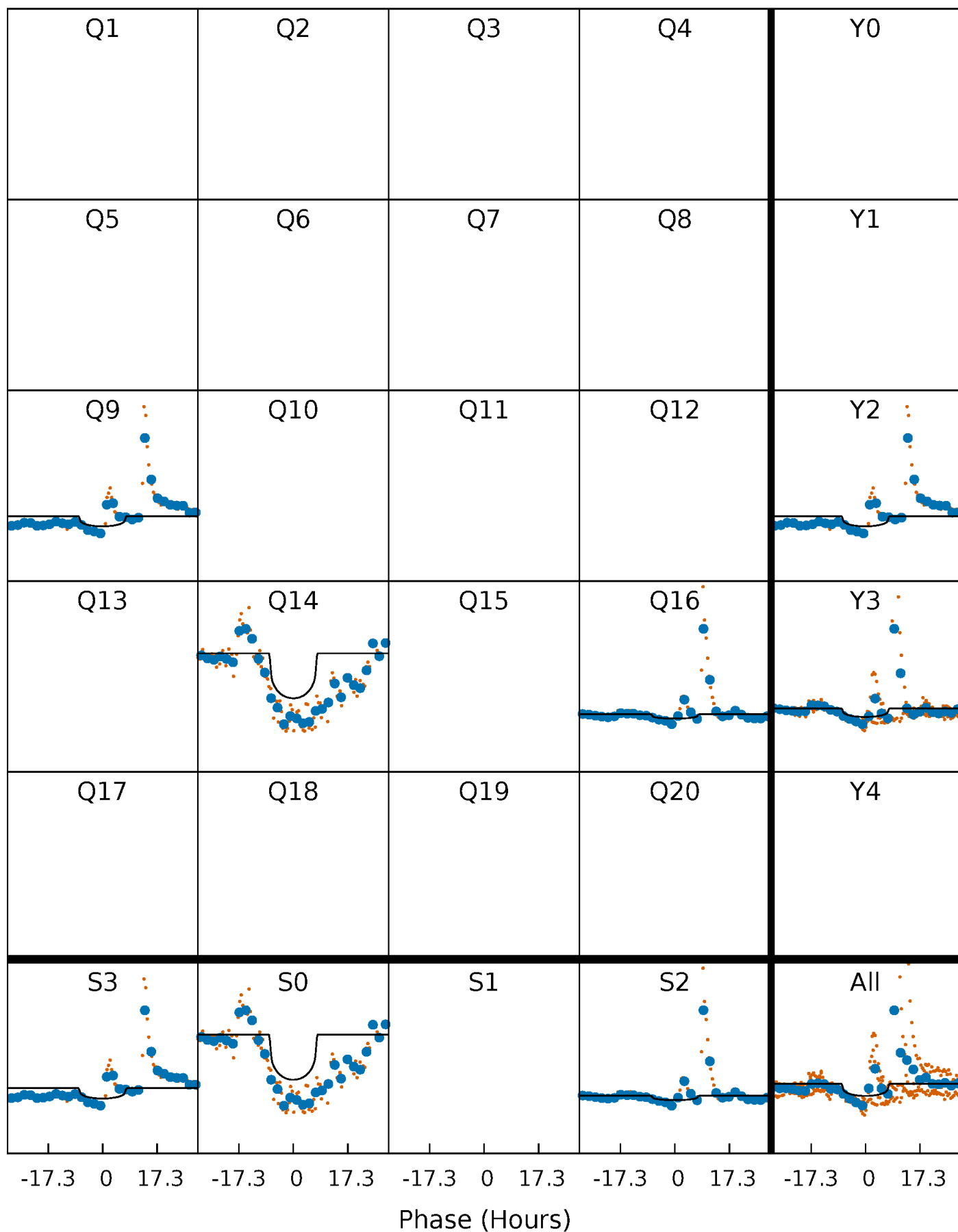
PDC Quarter-Phased Transit Curves

TCE 010875937-03 $P=220.884182$ Days $T_0=206.145977$ (BKJD)



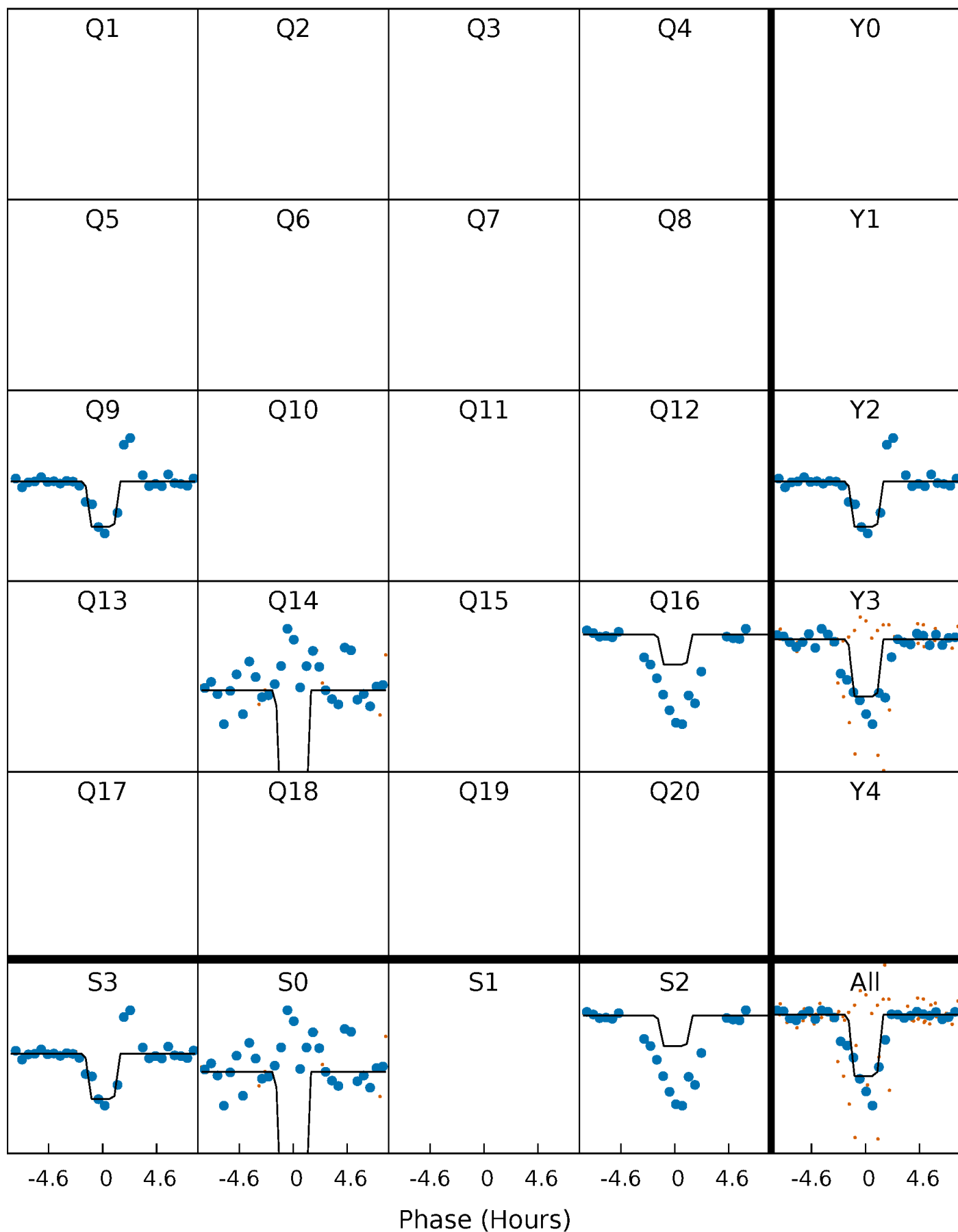
DV Quarter-Phased Transit Curves

TCE 010875937-03 $P=220.884182$ Days $T_0=206.145977$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

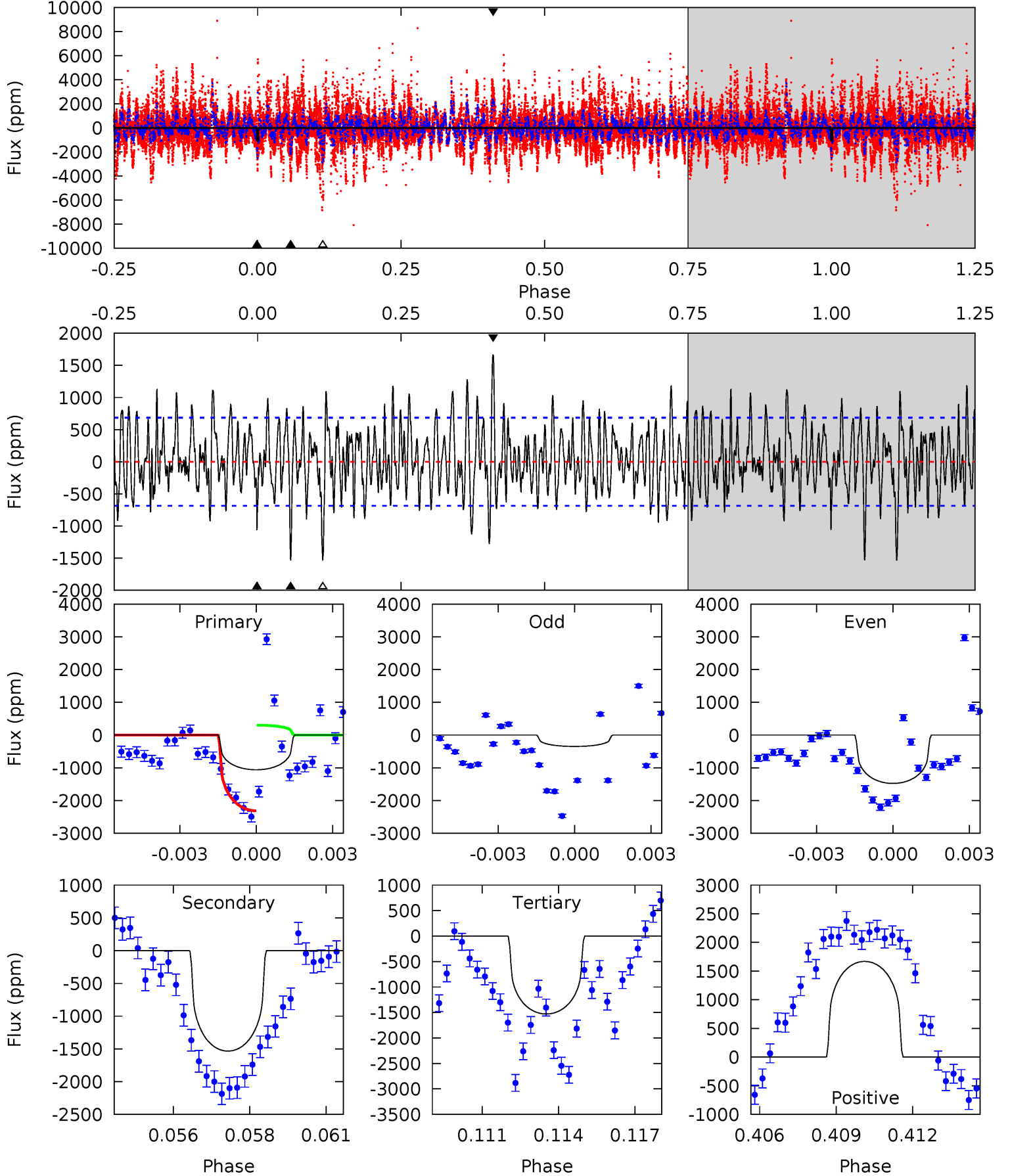
TCE 010875937-03 P=220.880910 Days $T_0=206.146898$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-03, P = 220.884182 Days, E = 206.145977 Days

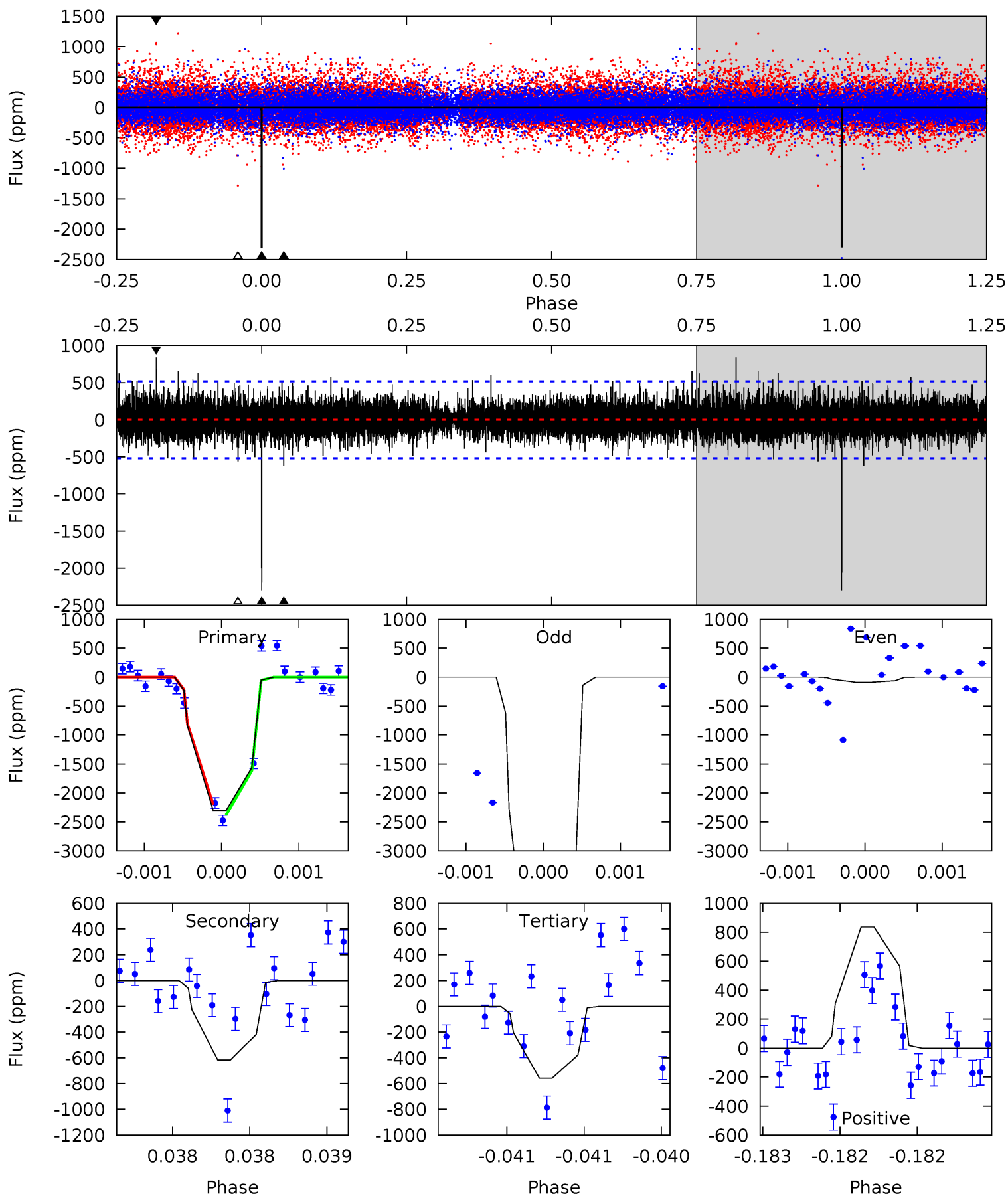
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.15	11.8	11.7	12.8	5.26	2.98	3.36	-3.59	-4.67	0.04	-1.04	1.46	1.64	0.52	7.74



Alt Model-Shift Uniqueness Test

010875937-03, P = 220.880910 Days, E = 206.146898 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	6.62	6.00	8.99	5.56	3.45	1.38	18.7	15.7	0.62	-2.38	36.5	1.21	0.27	0.93



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1534 ± 130	$15.93^{+8.68}_{-6.50}$	764^{+103}_{-89}	5207^{+1262}_{-675}	1535^{+2804}_{-882}
Alt.	-616 ± 93	$22.48^{+10.02}_{-8.17}$	763^{+119}_{-85}	3871^{+509}_{-351}	327^{+471}_{-172}

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

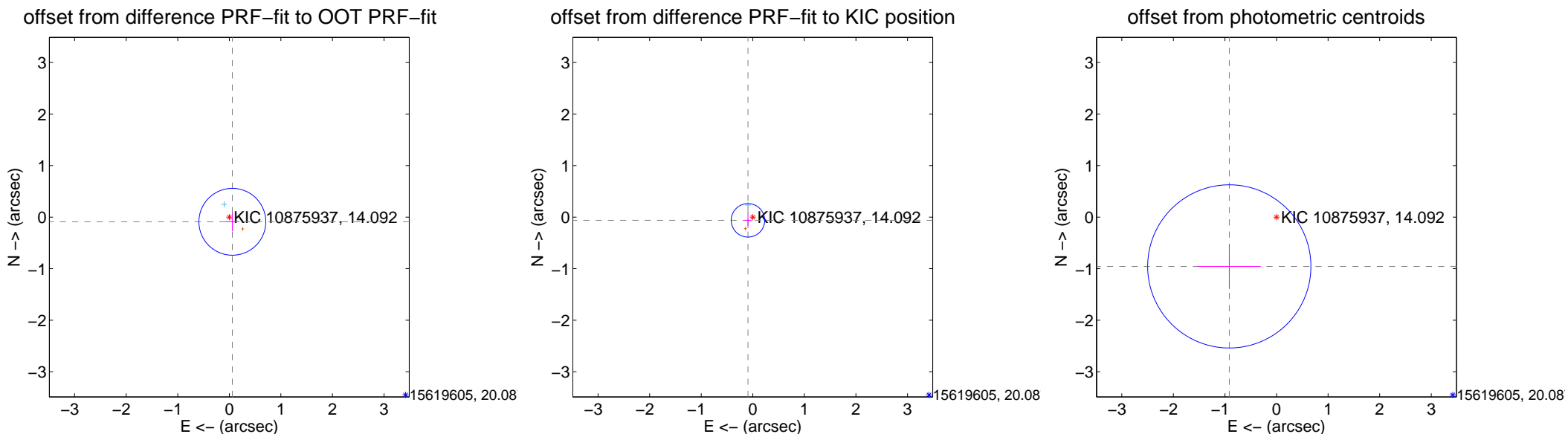
DV Centroid Data

Supplemental centroid analysis for 010875937-03. Kepler magnitude: 14.09. Transit SNR 4.72

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.216	0.50	-0.059 ± 0.137	-0.090 ± 0.181
PRF-fit source offset from KIC position	0.112 ± 0.108	1.04	0.093 ± 0.069	-0.062 ± 0.146
photometric centroid source offset	1.32 ± 0.53	2.51	0.92 ± 0.61	-0.96 ± 0.44



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.

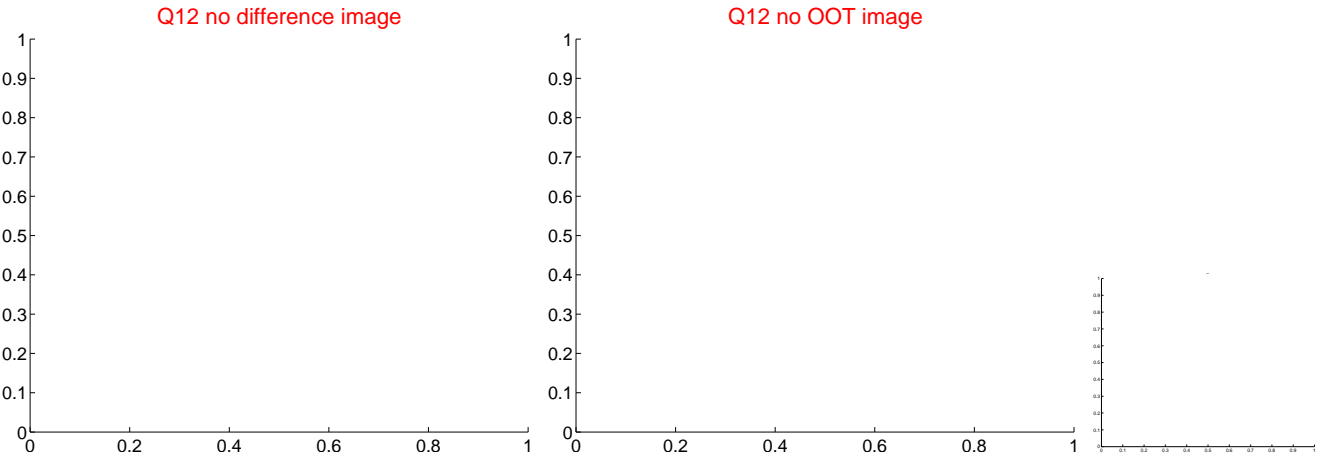
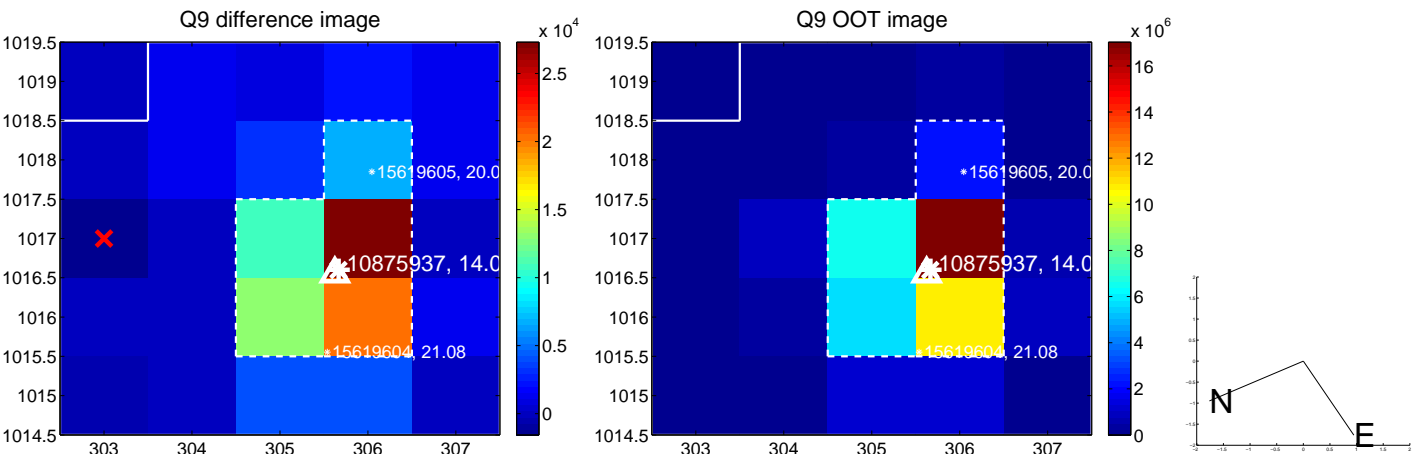
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



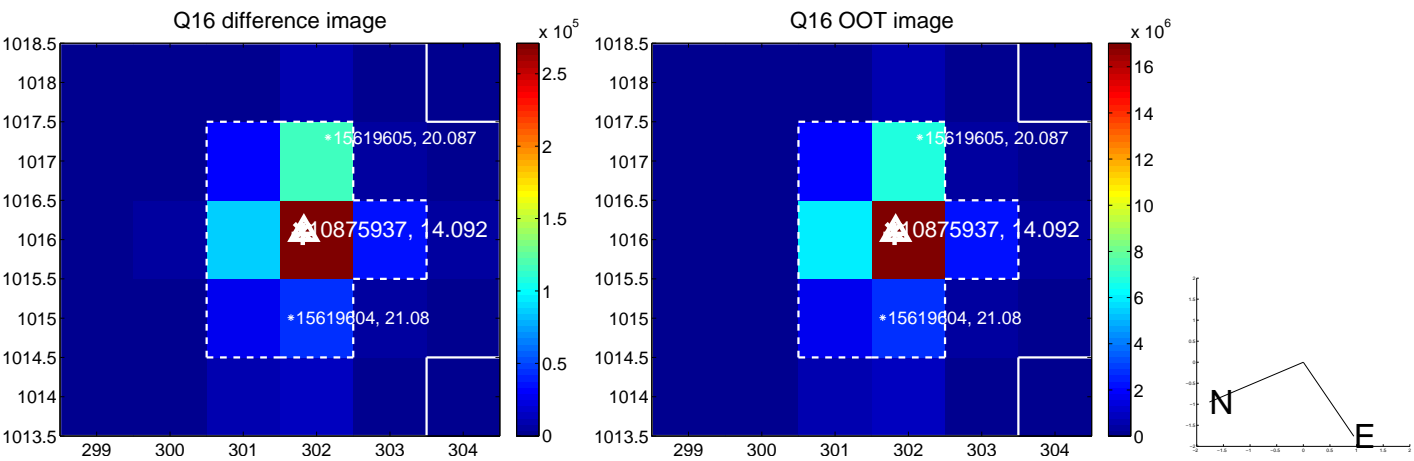
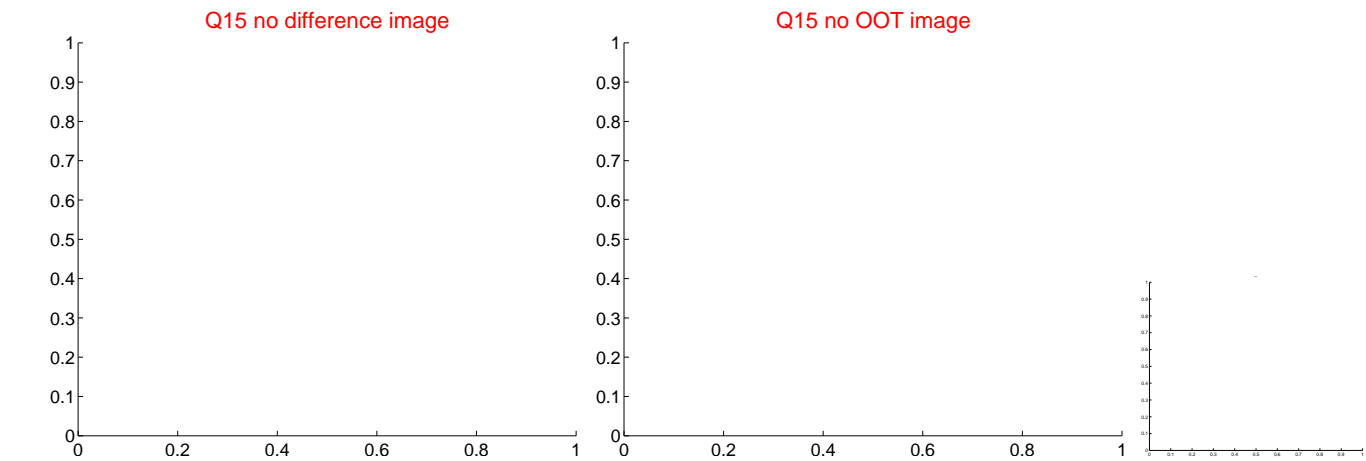
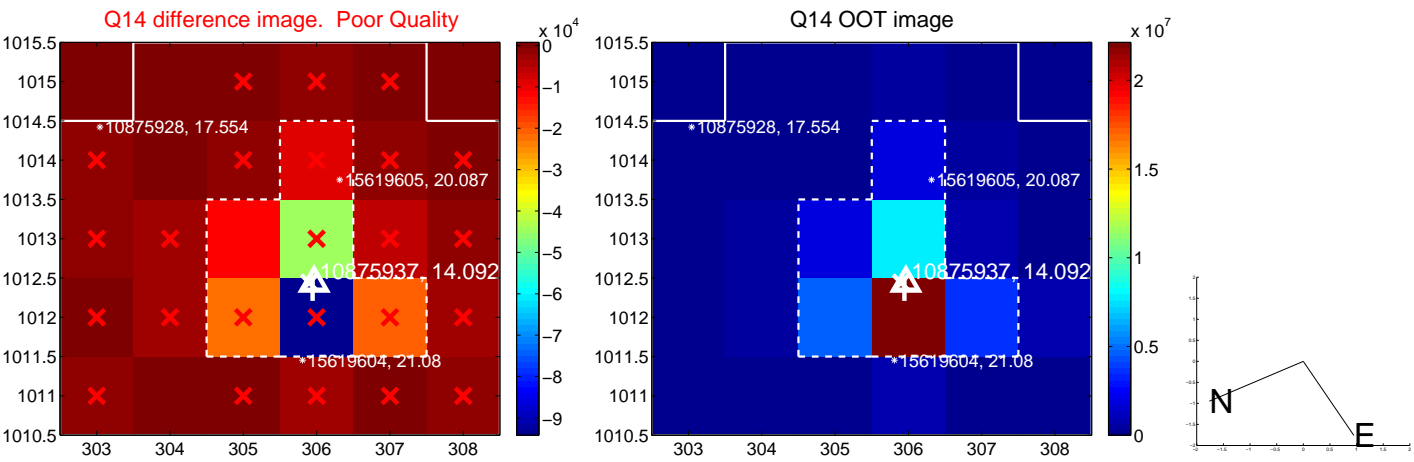
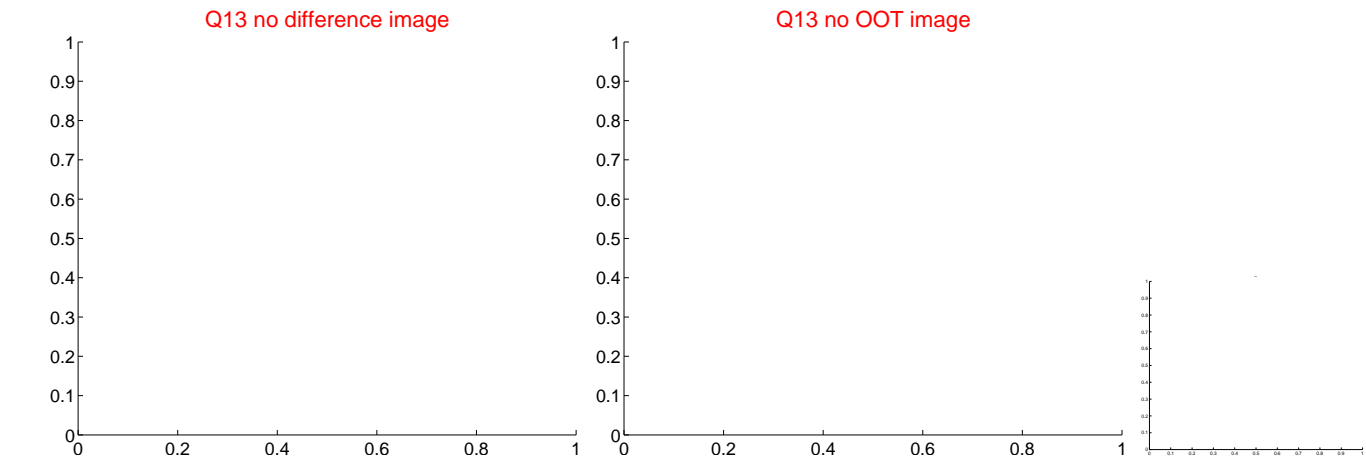
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



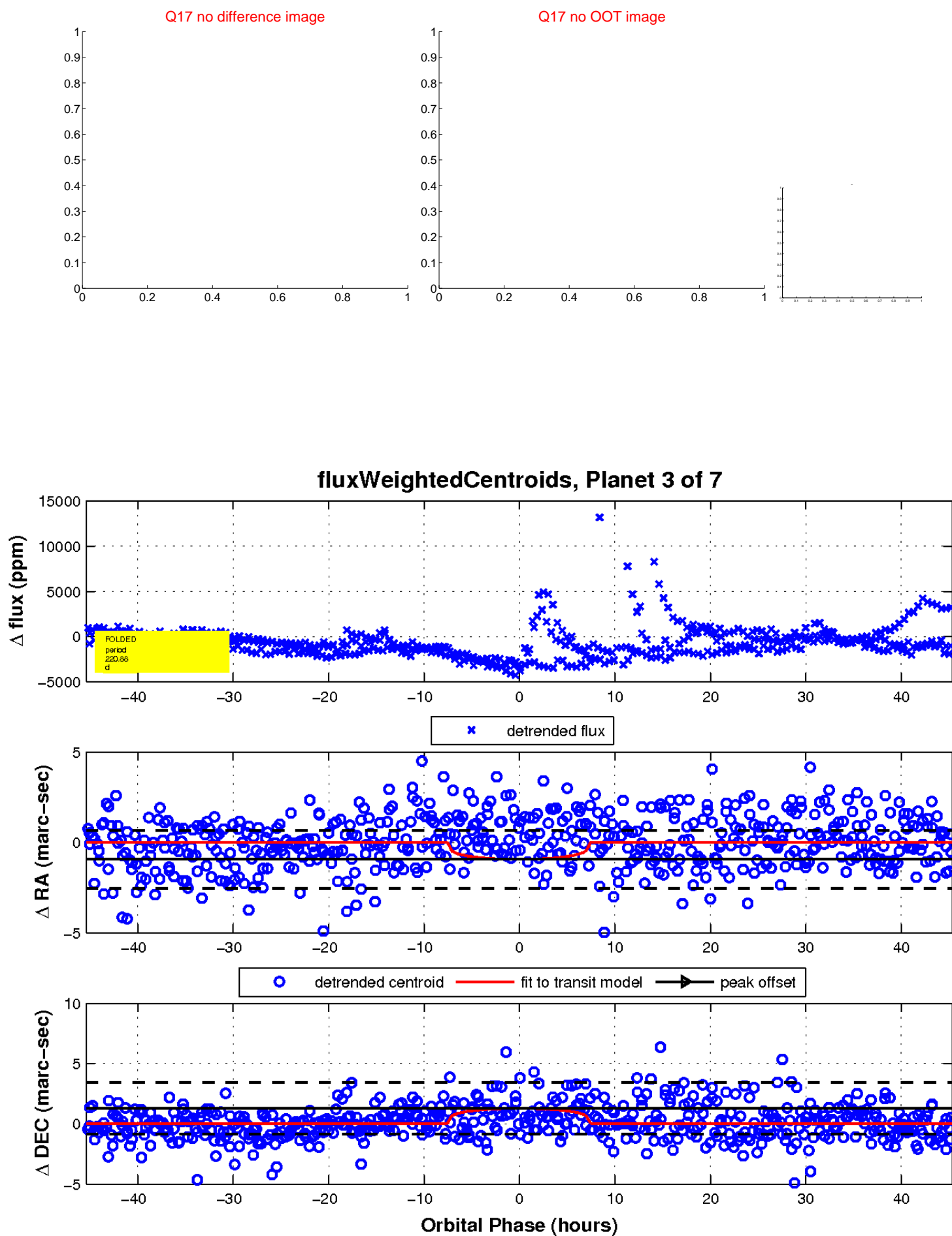
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

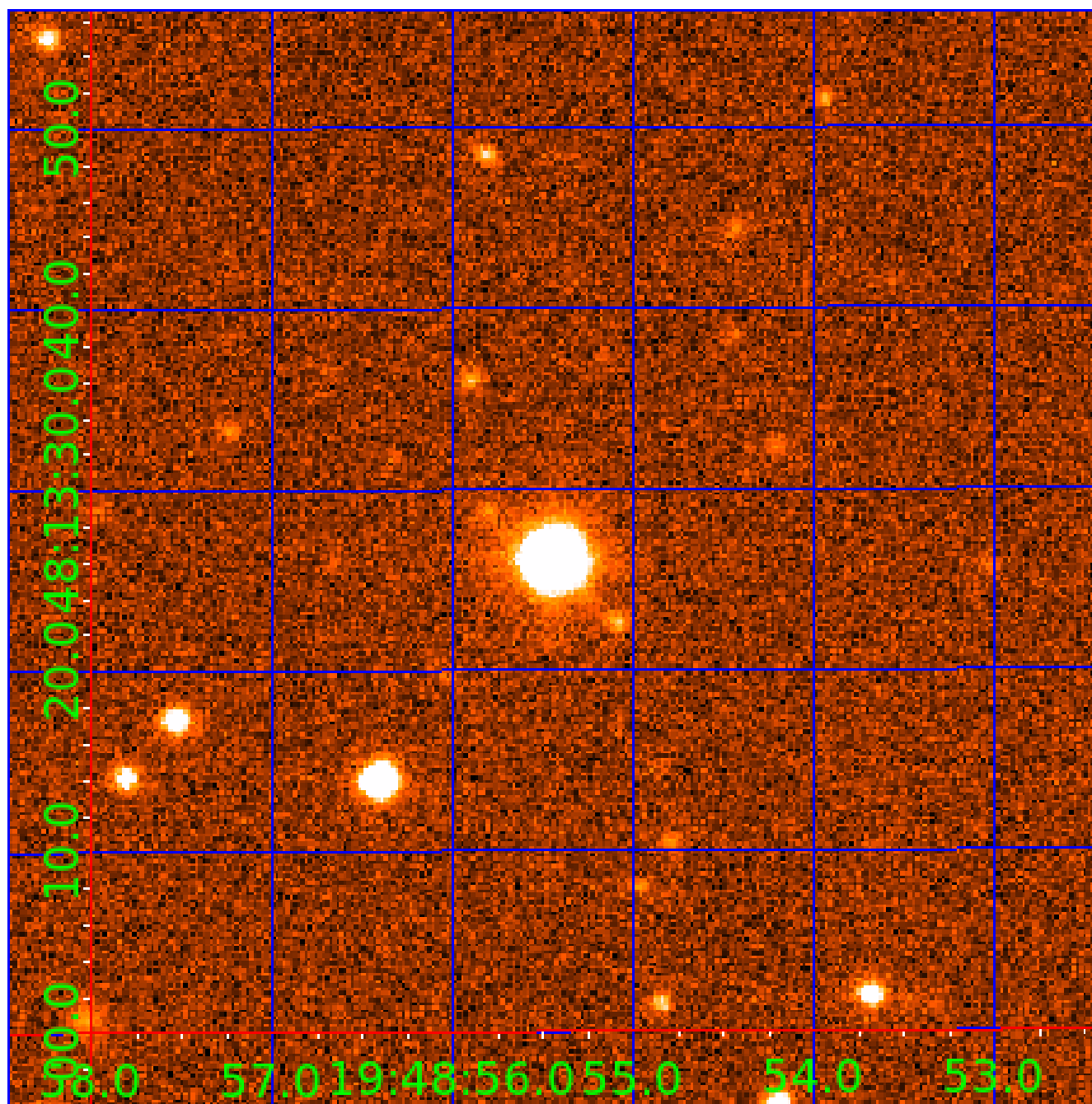


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
010875937-03	OBS	No	220.884182	206.145978	1386.9	15.149	15.5	4.7	4.46	4878	16.30	21.61
010875937-04	OBS	No	337.010609	253.803101	1098.3	3.824	13.1	6.4	4.46	4878	15.92	12.30
010875937-05	OBS	No	348.841548	212.881353	1572.5	7.375	12.8	8.5	4.46	4878	18.34	11.75
010875937-06	OBS	No	254.367071	265.286259	1016.9	4.999	11.5	5.1	4.46	4878	14.87	17.90
010875937-07	OBS	8216.01	307.947372	316.019229	507.8	15.000	11.3	-1.0	4.46	4878	9.74	13.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

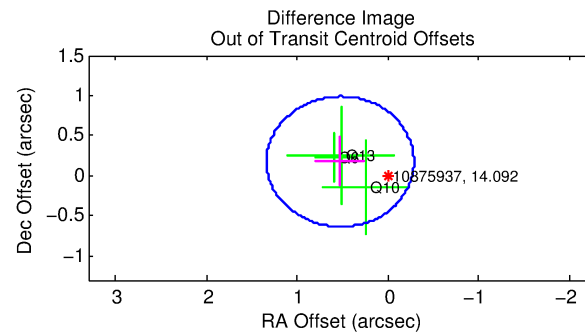
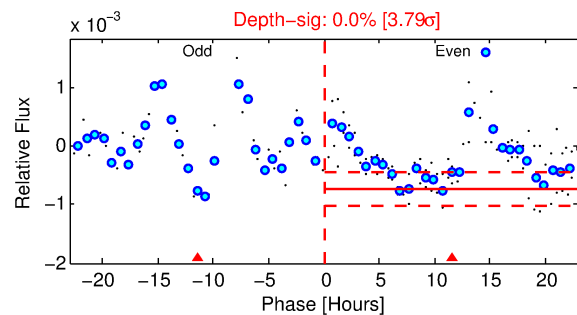
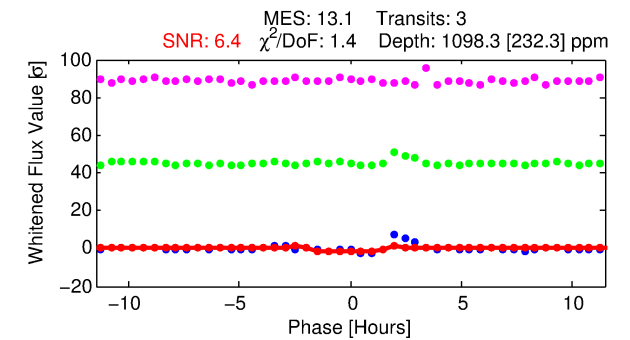
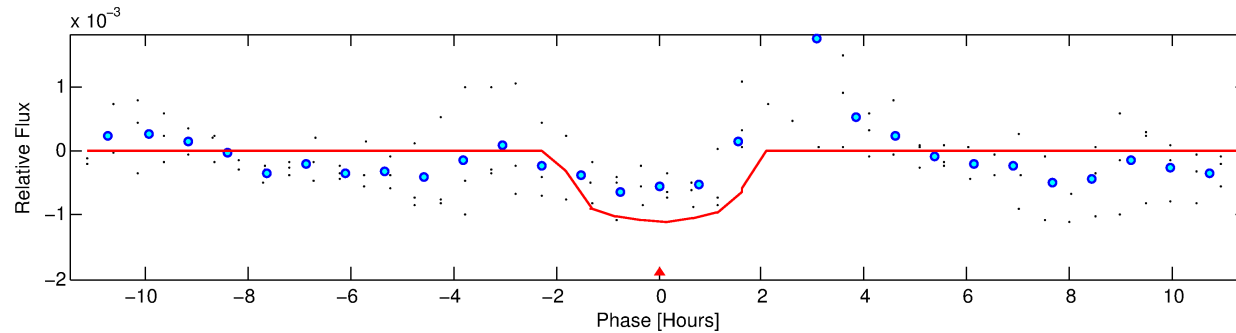
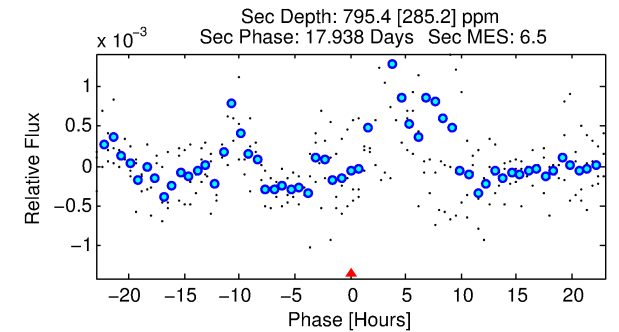
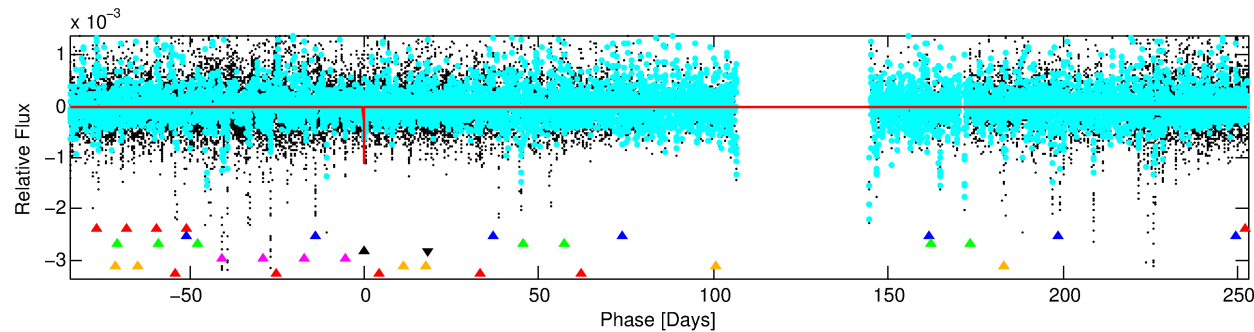
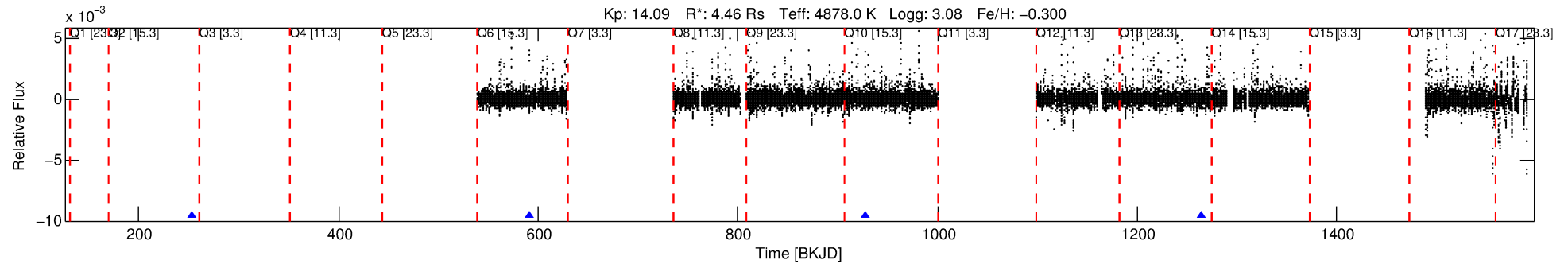
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-04

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 4 of 7 Period: 337.011 d



DV Fit Results:

Period = 337.01061 [0.00417] d
Epoch = 253.8031 [0.0108] BKJD
Rp/R* = 0.0327 [0.0446]
a/R* = 497.65 [2388.19]
b = 0.72 [3.25]
Seff = 12.30 [9.43]
Teq = 478 [92] K
Rp = 15.92 [23.87] Re
a = 0.9059 [0.4721] AU
Ag = 1416.29 [4043.13] [0.35] σ
Teffp = 4529 [3120] K [1.30] σ

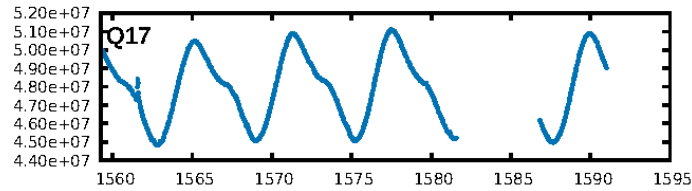
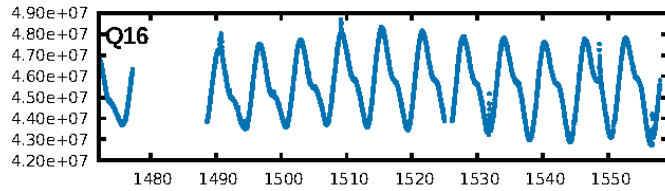
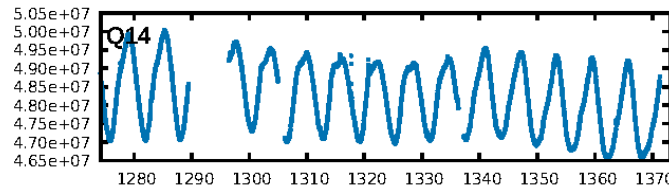
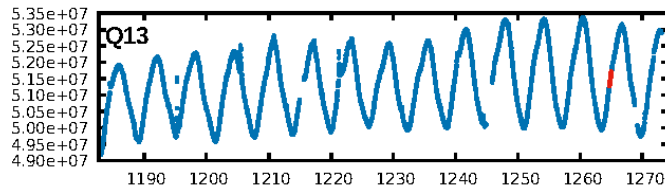
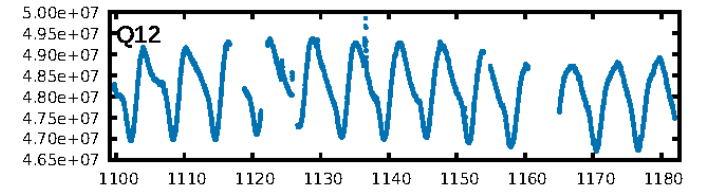
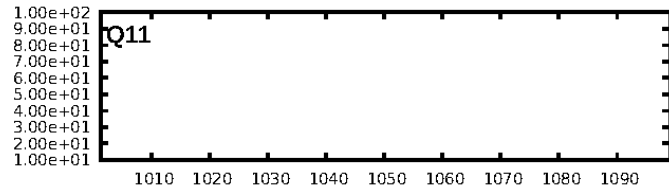
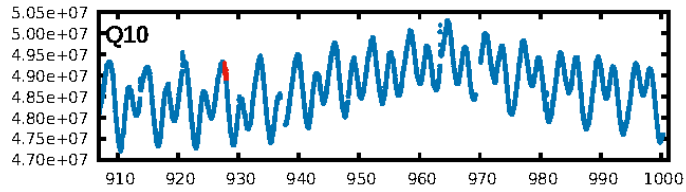
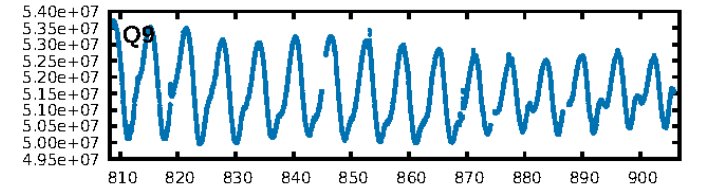
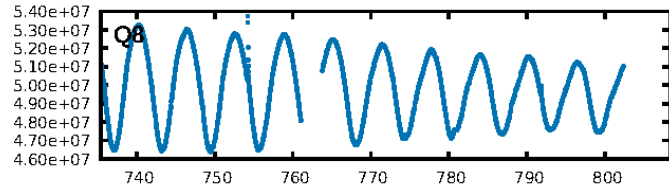
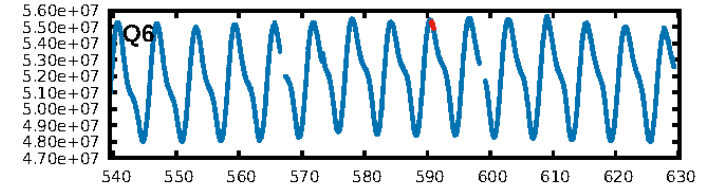
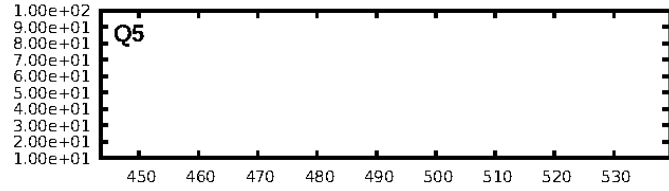
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [45.06] σ
LongPeriod-sig: 100.0% [32.52] σ
ModelChiSquare2-sig: 37.0%
ModelChiSquareGof-sig: 66.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.424
Centroid-sig: 77.6%
Centroid-so: 0.337 arcsec [0.45] σ
OotOffset-rm: 0.554 arcsec [2.05] σ
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.886 arcsec [3.29] σ
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

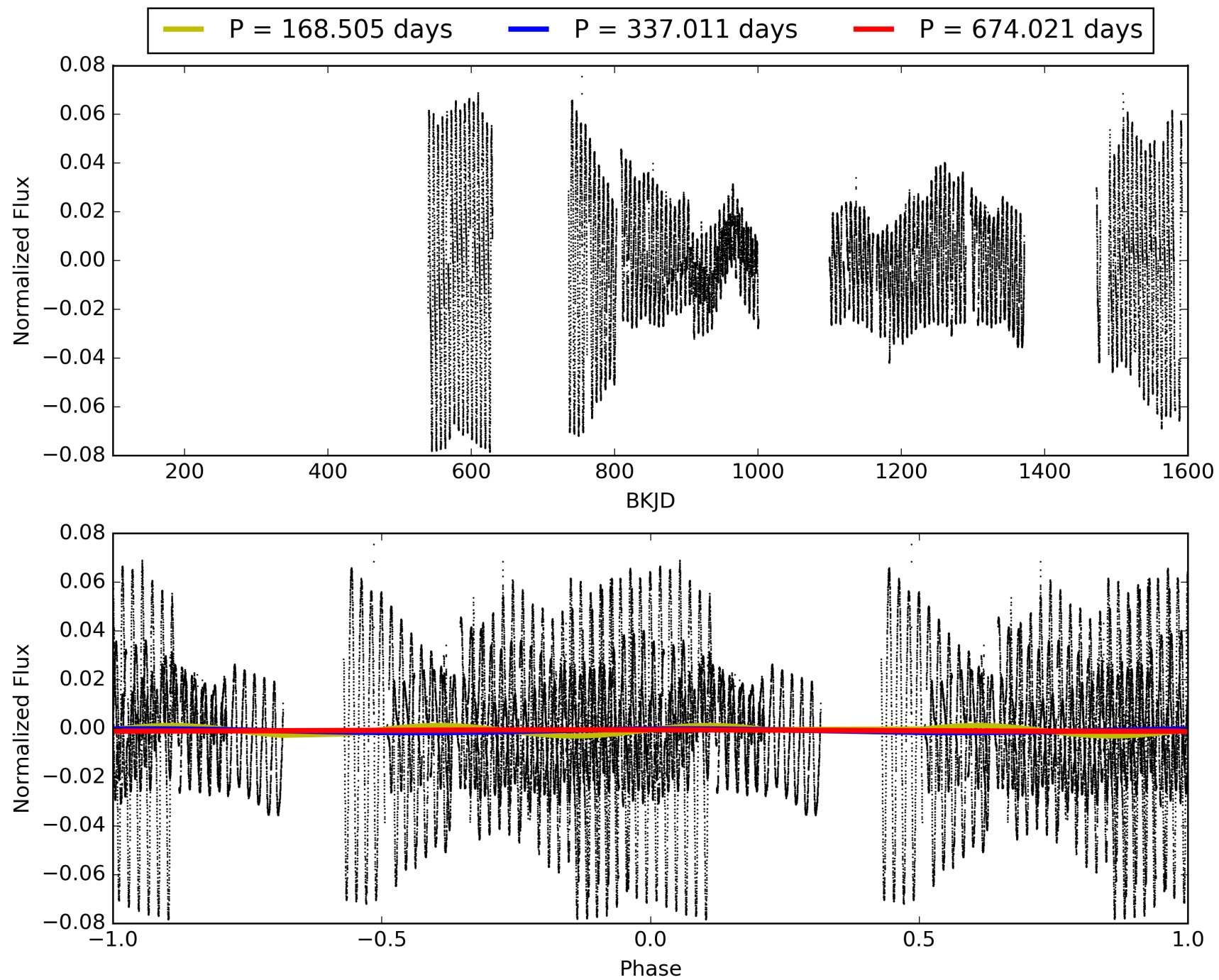
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:02:05 Z

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

TCE 010875937-04, PDC Light Curves

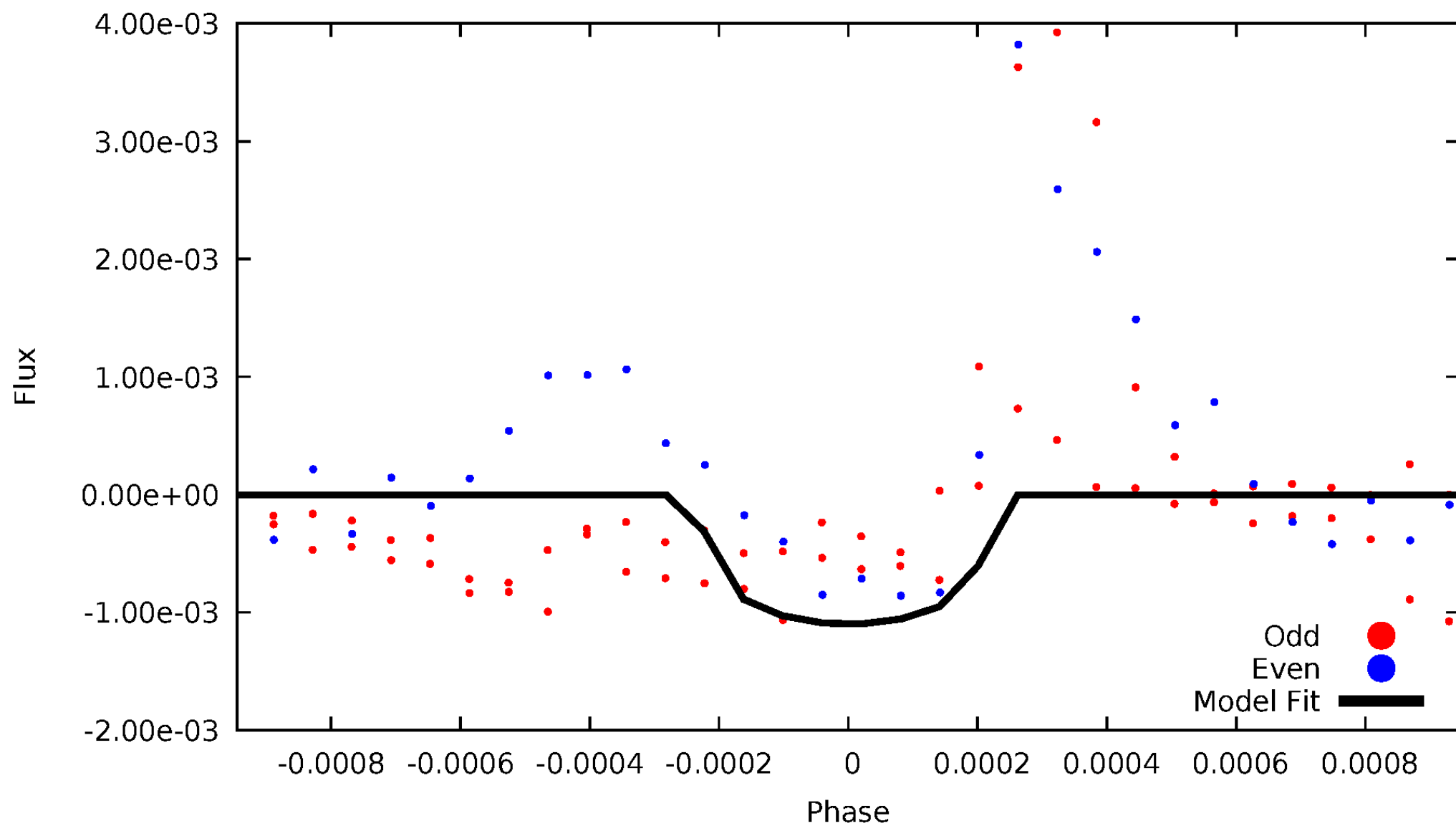


TCE 010875937-04



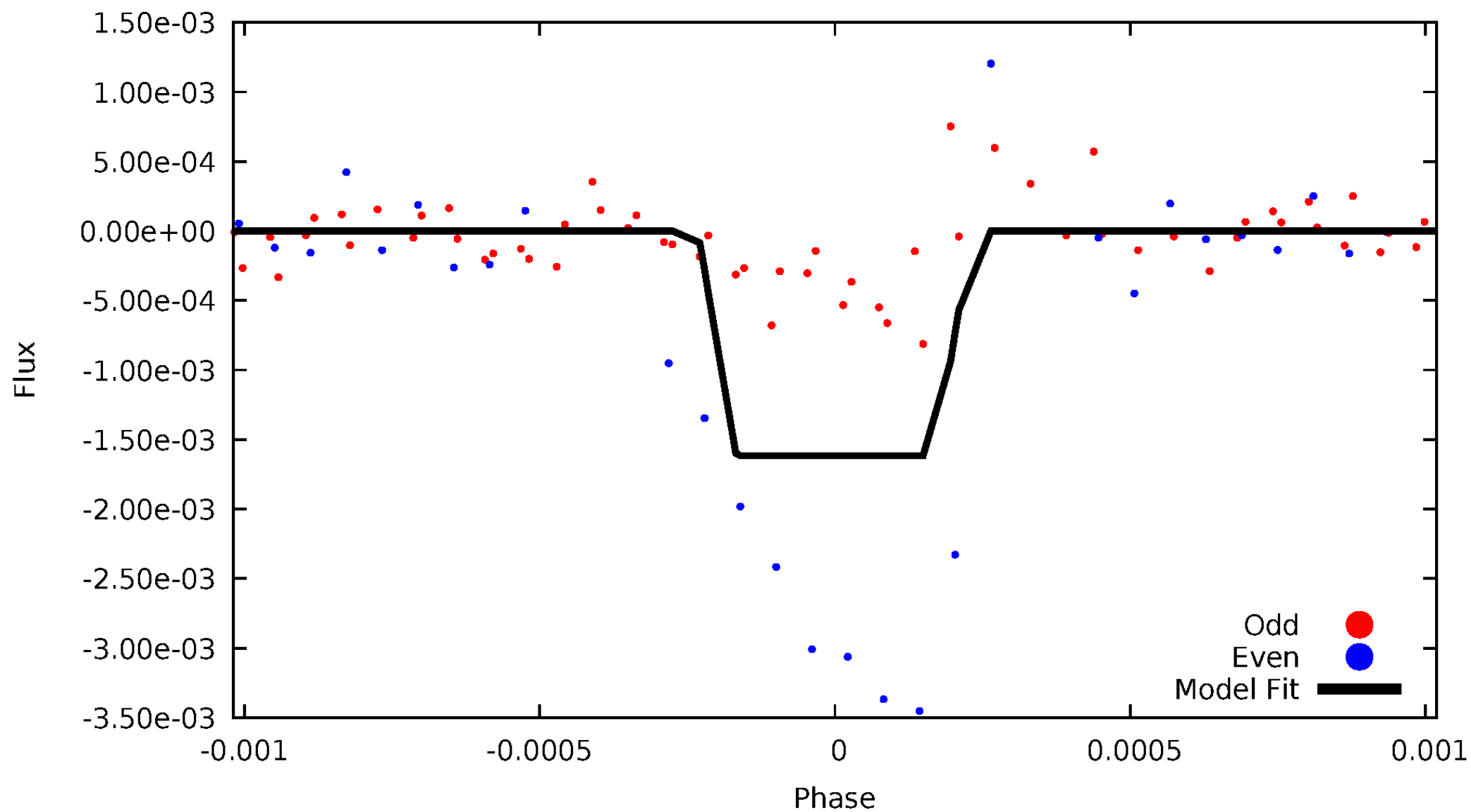
DV Odd/Even

TCE 010875937-04



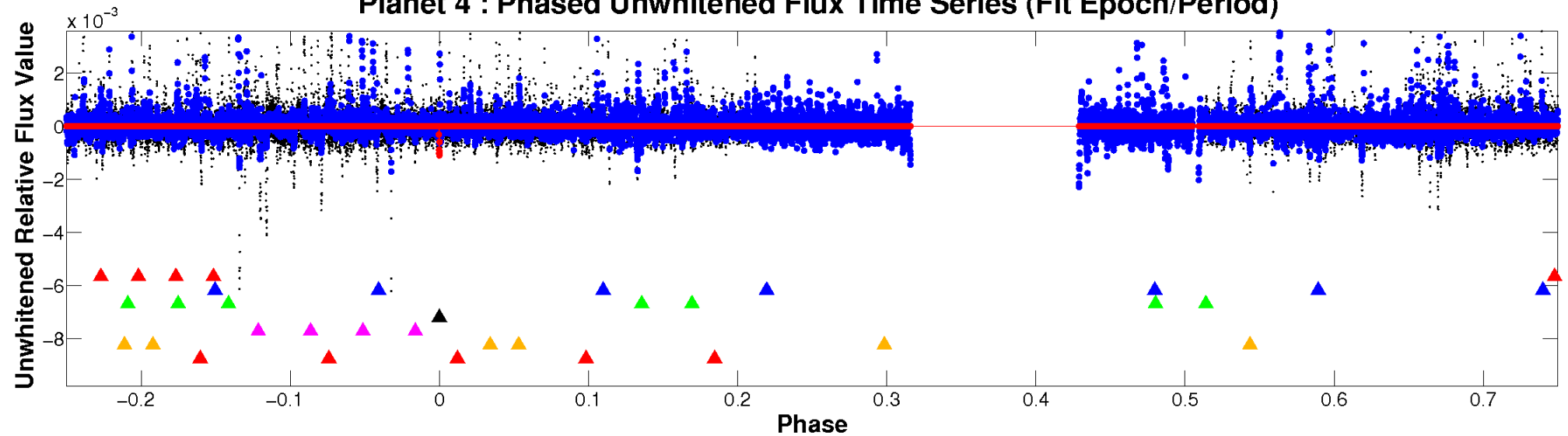
ALT Odd/Even

TCE 010875937-04

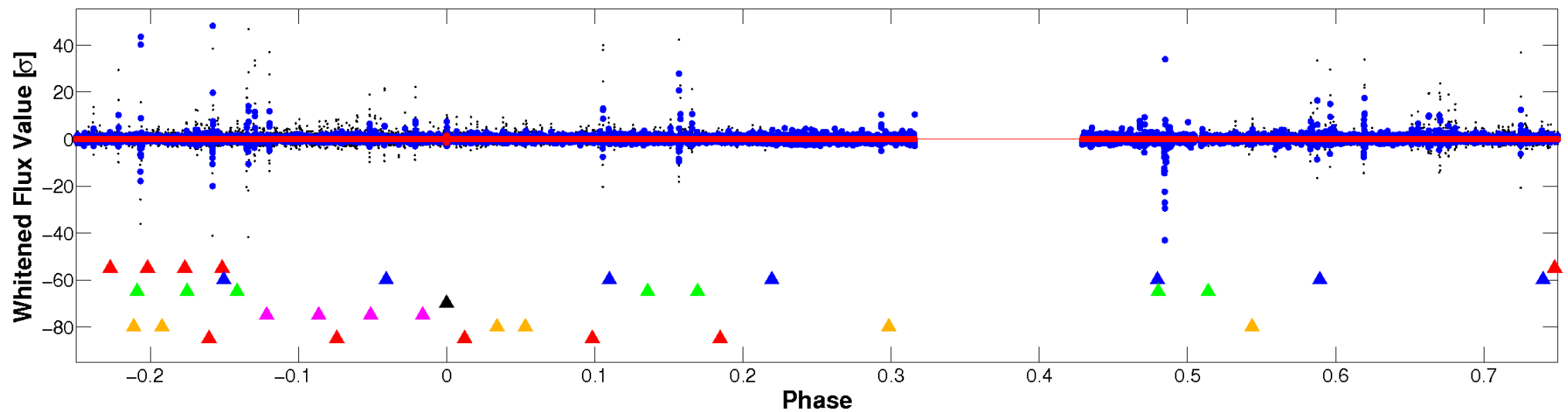


Non-Whitened Vs. Whitened Light Curve

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

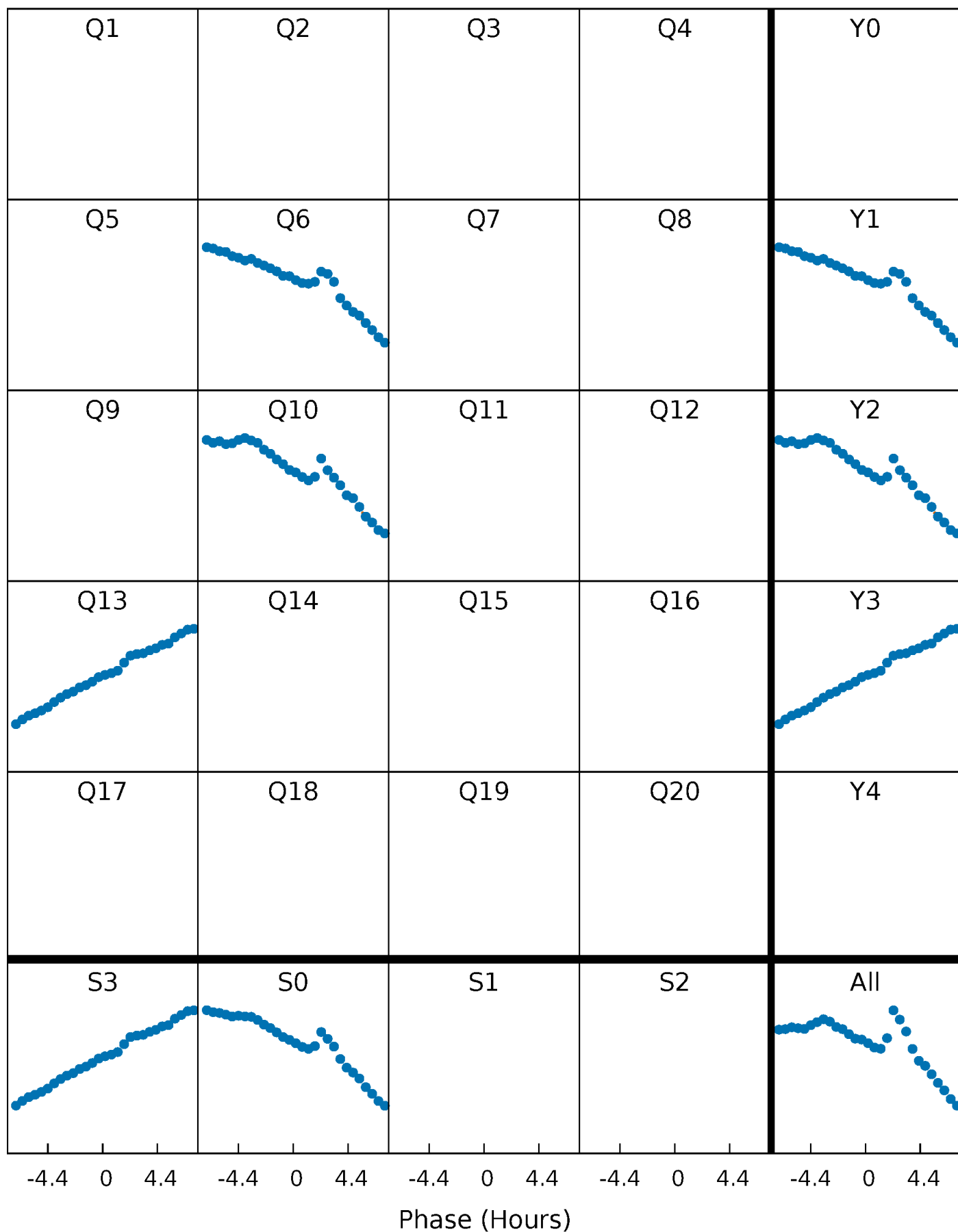


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



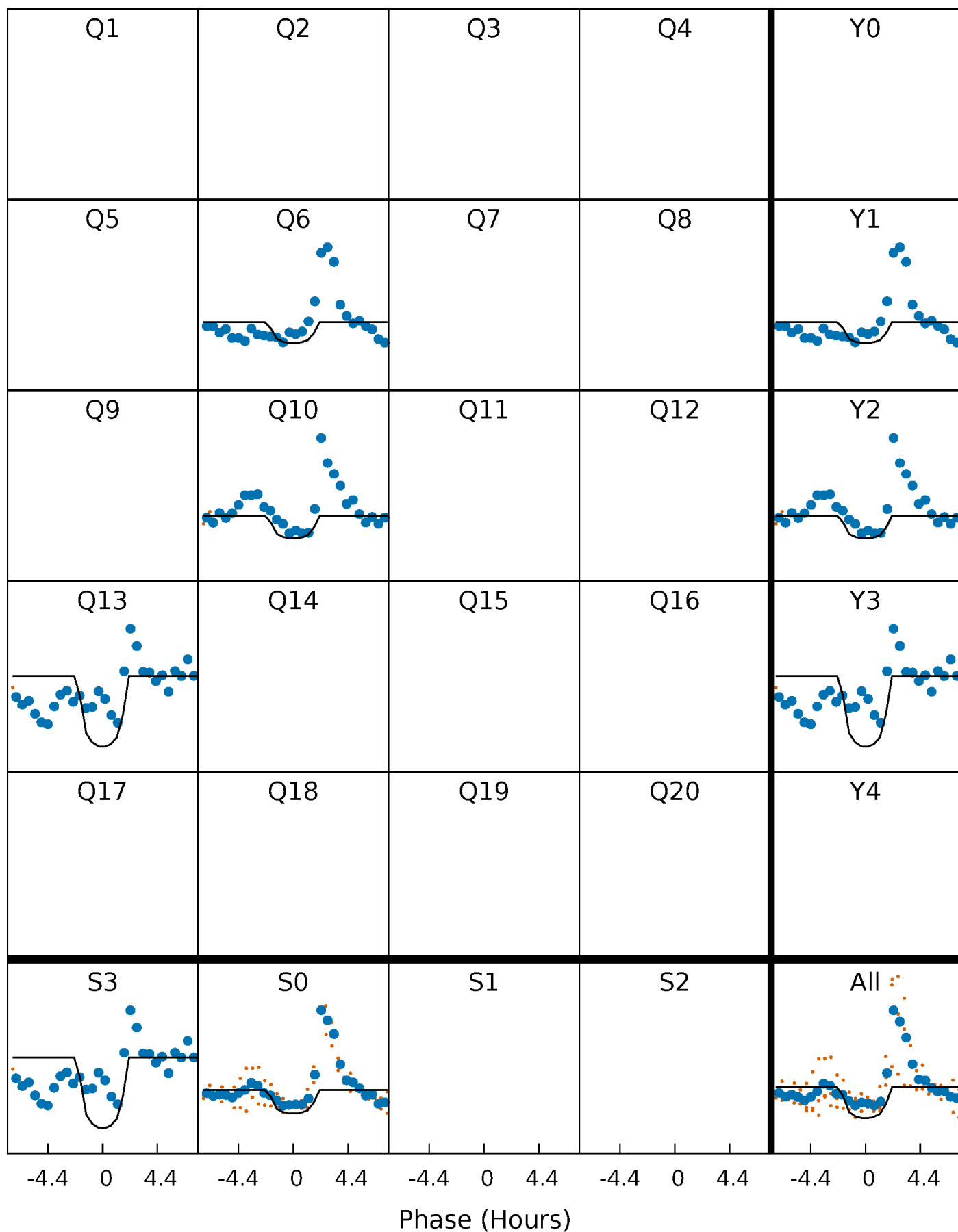
PDC Quarter-Phased Transit Curves

TCE 010875937-04 $P=337.010609$ Days $T_0=253.803101$ (BKJD)



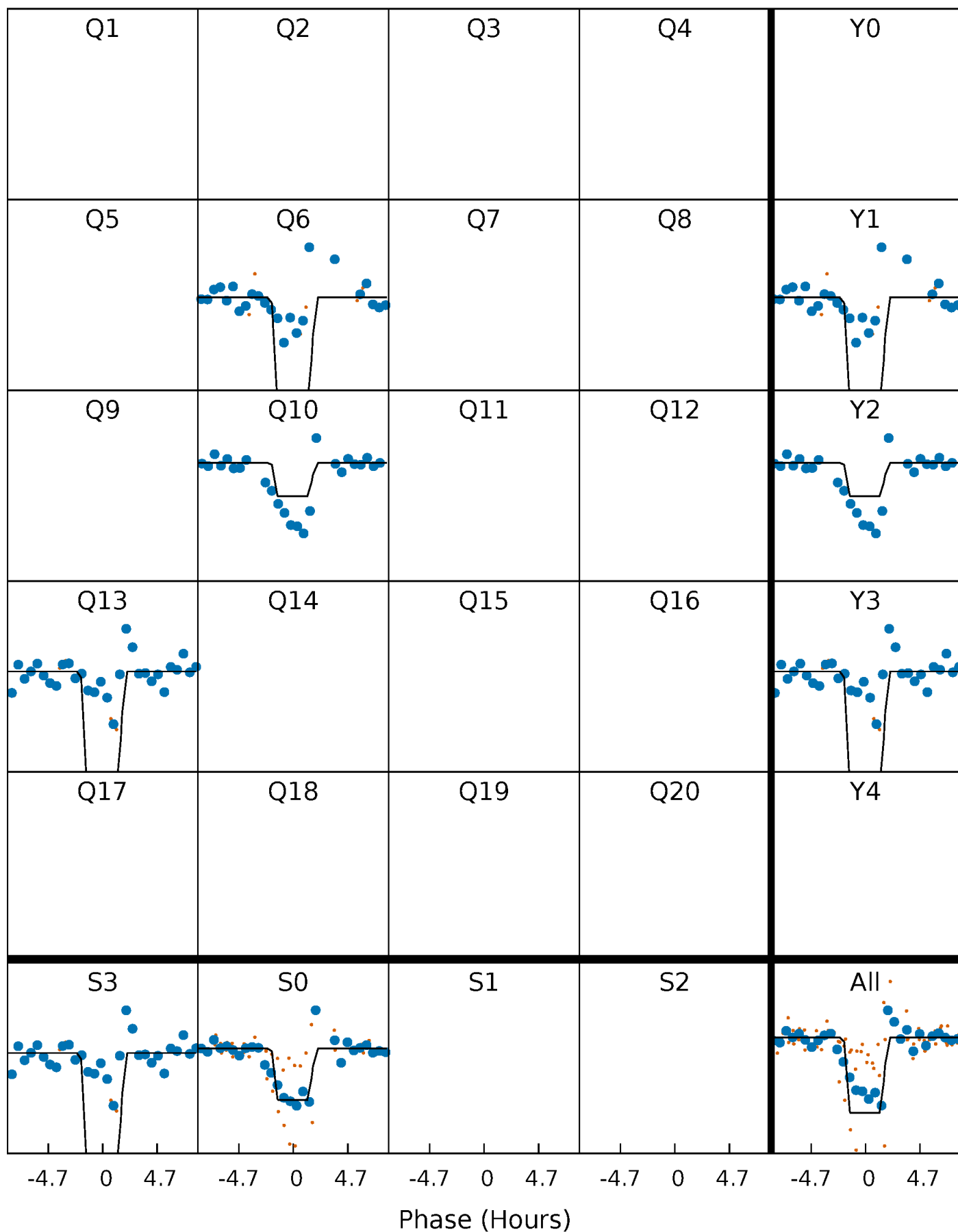
DV Quarter-Phased Transit Curves

TCE 010875937-04 P=337.010609 Days $T_0=253.803101$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

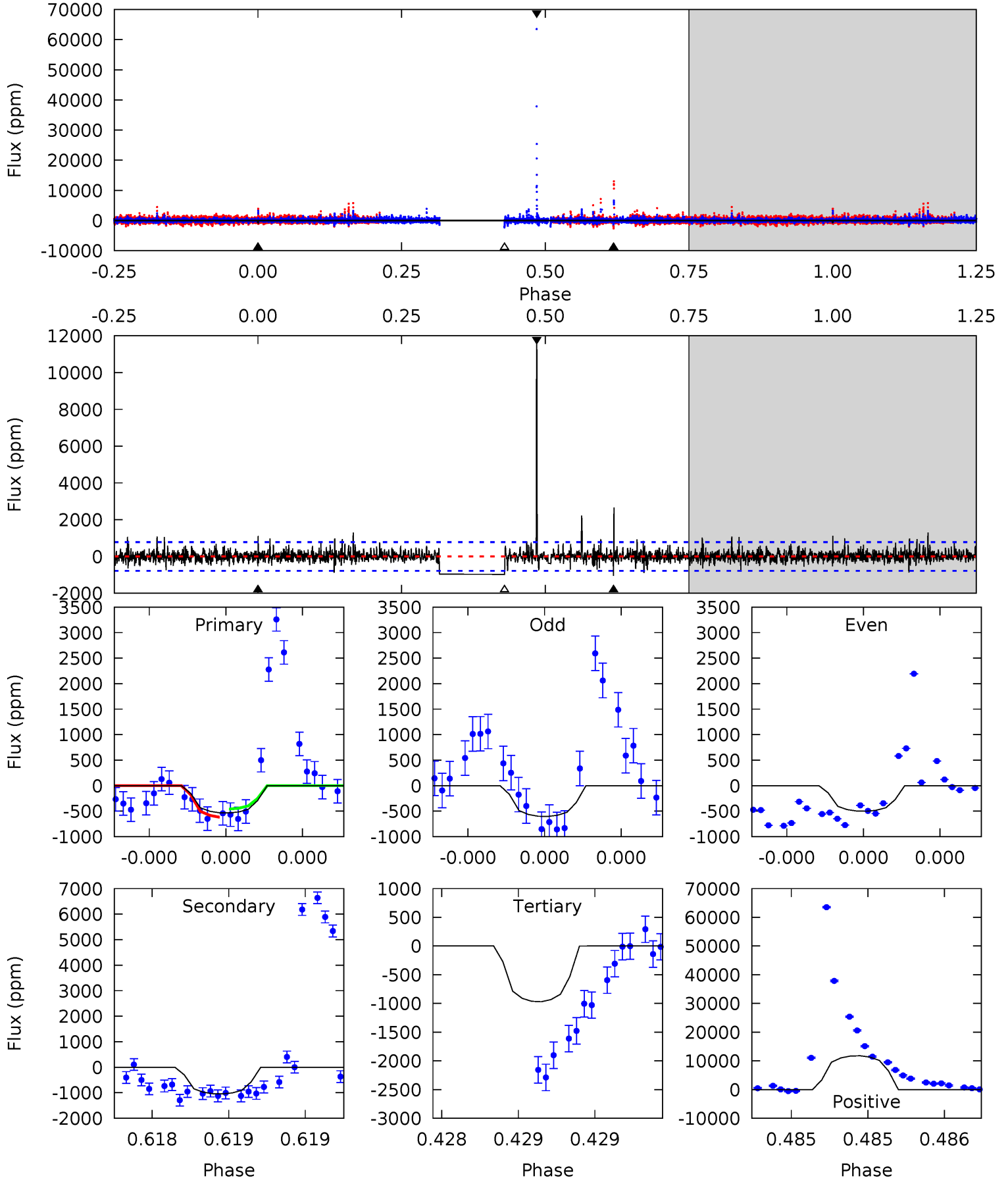
TCE 010875937-04 $P=337.008180$ Days $T_0=253.807598$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-04, P = 337.010609 Days, E = 253.803101 Days

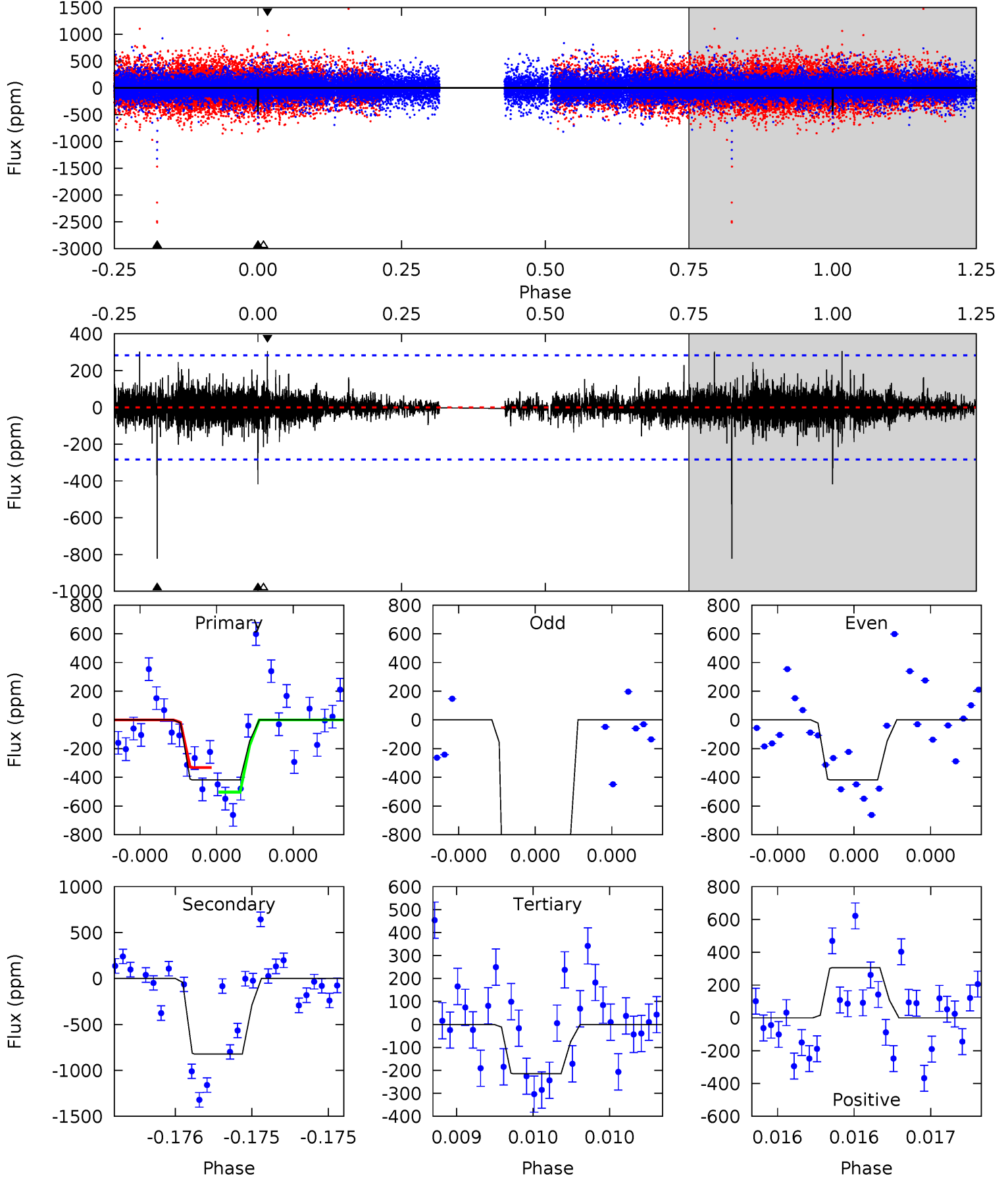
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.84	7.49	6.96	84.4	5.58	3.49	2.43	-3.12	-80.6	0.53	-76.9	0.27	1.03	0.92	0.53



Alt Model-Shift Uniqueness Test

010875937-04, P = 337.008180 Days, E = 253.807598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.23	16.2	4.23	6.01	5.58	3.49	0.84	4.00	2.22	12.0	10.2	28.7	3.00	0.27	1.73



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1044 ± 139	$21.83^{+21.67}_{-14.29}$	668^{+92}_{-74}	4316^{+2457}_{-819}	1000^{+7127}_{-726}
Alt.	-822 ± 51	$24.79^{+22.68}_{-15.76}$	659^{+92}_{-71}	3847^{+1957}_{-617}	601^{+4344}_{-430}

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

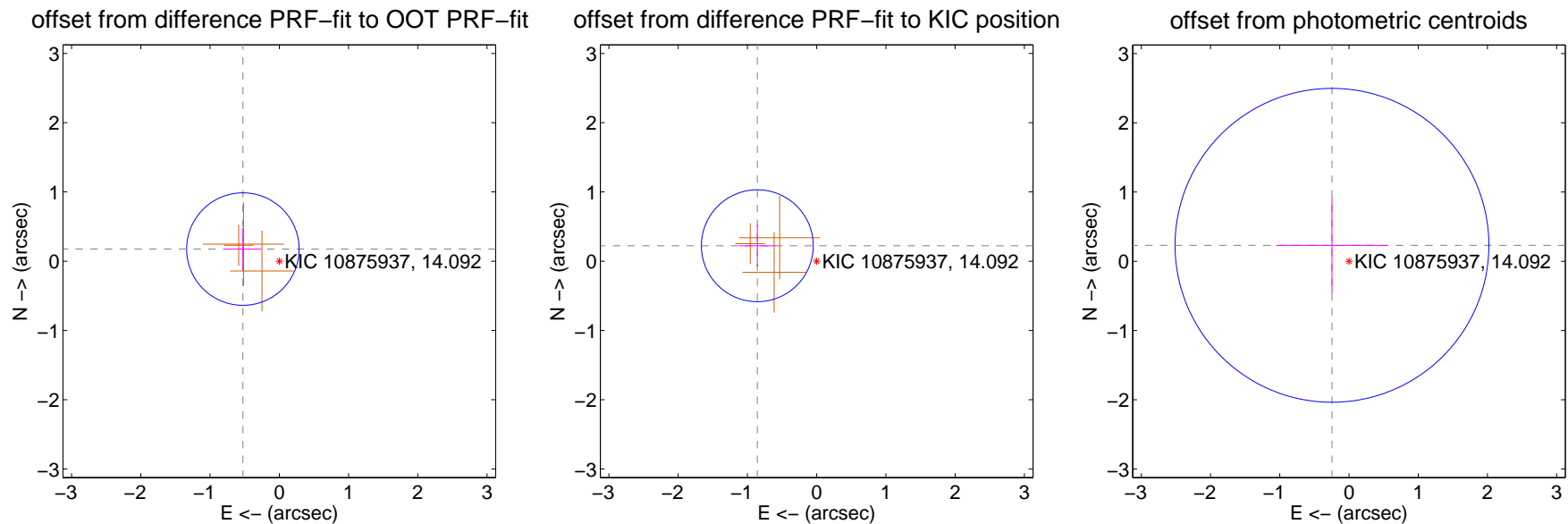
DV Centroid Data

Supplemental centroid analysis for 010875937-04. Kepler magnitude: 14.09. Transit SNR 6.36

There are 0 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	0.554 ± 0.271	2.05	0.526 ± 0.267	0.175 ± 0.304
PRF-fit source offset from KIC position	0.886 ± 0.269	3.29	0.857 ± 0.267	0.223 ± 0.304
photometric centroid source offset	0.34 ± 0.76	0.45	0.25 ± 0.81	0.23 ± 0.69

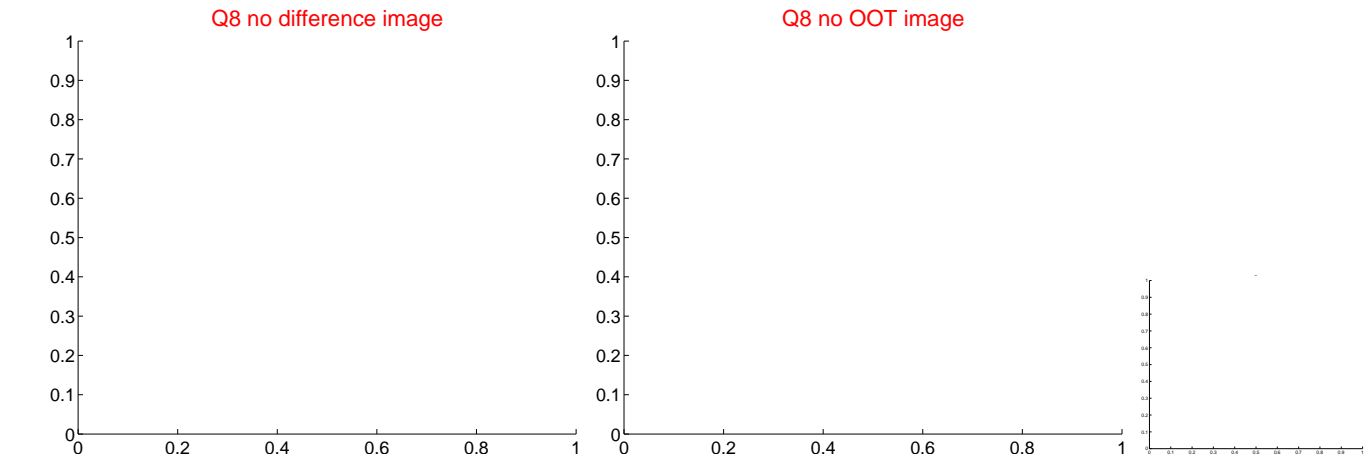
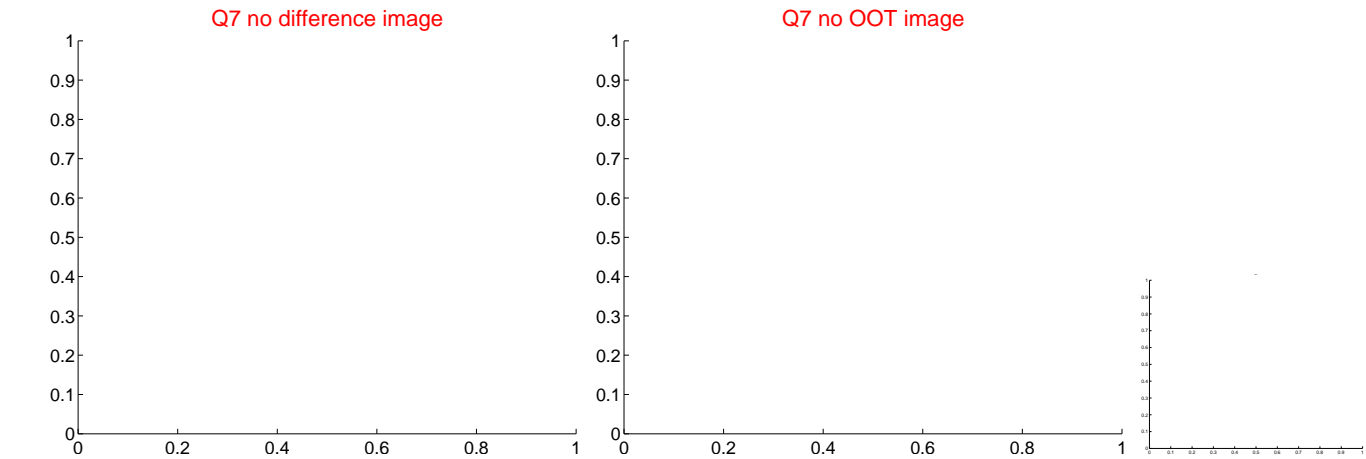
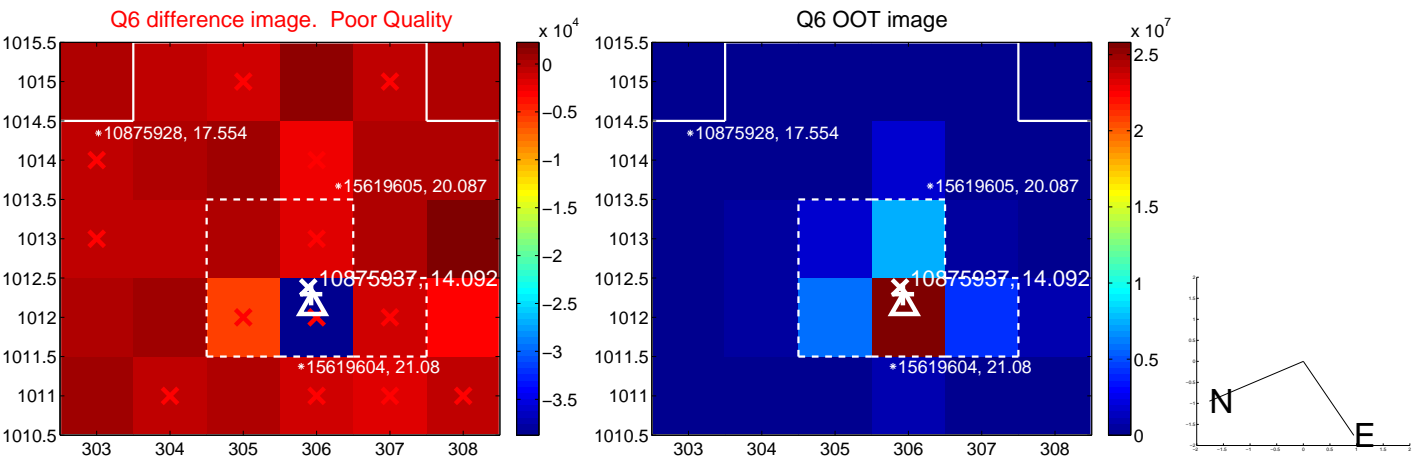
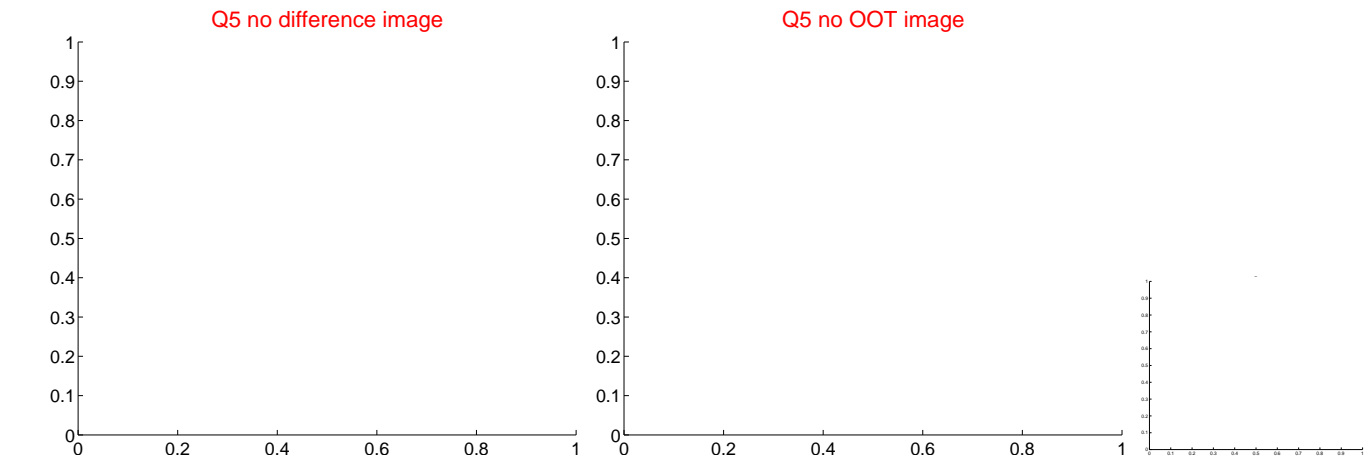


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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

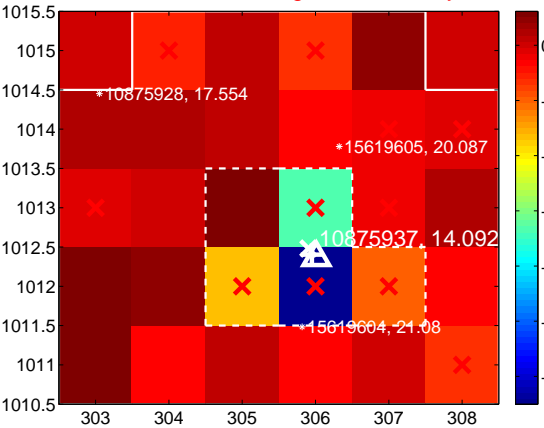
Q9 no difference image



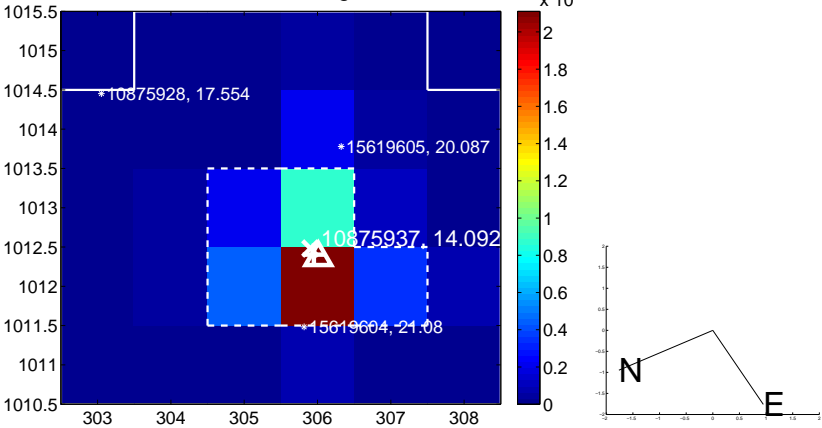
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



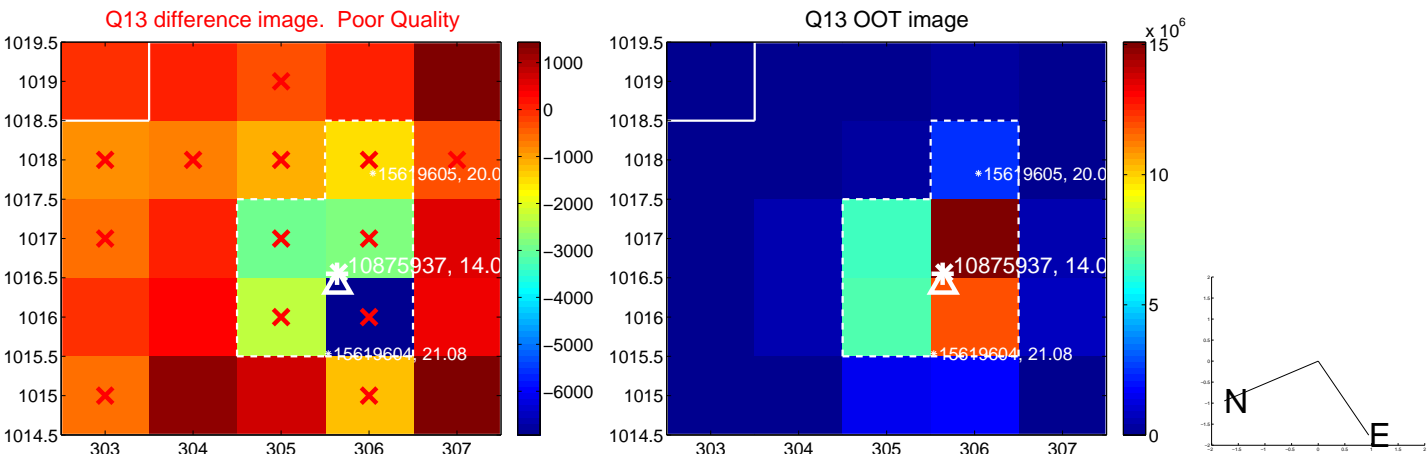
Q12 no difference image



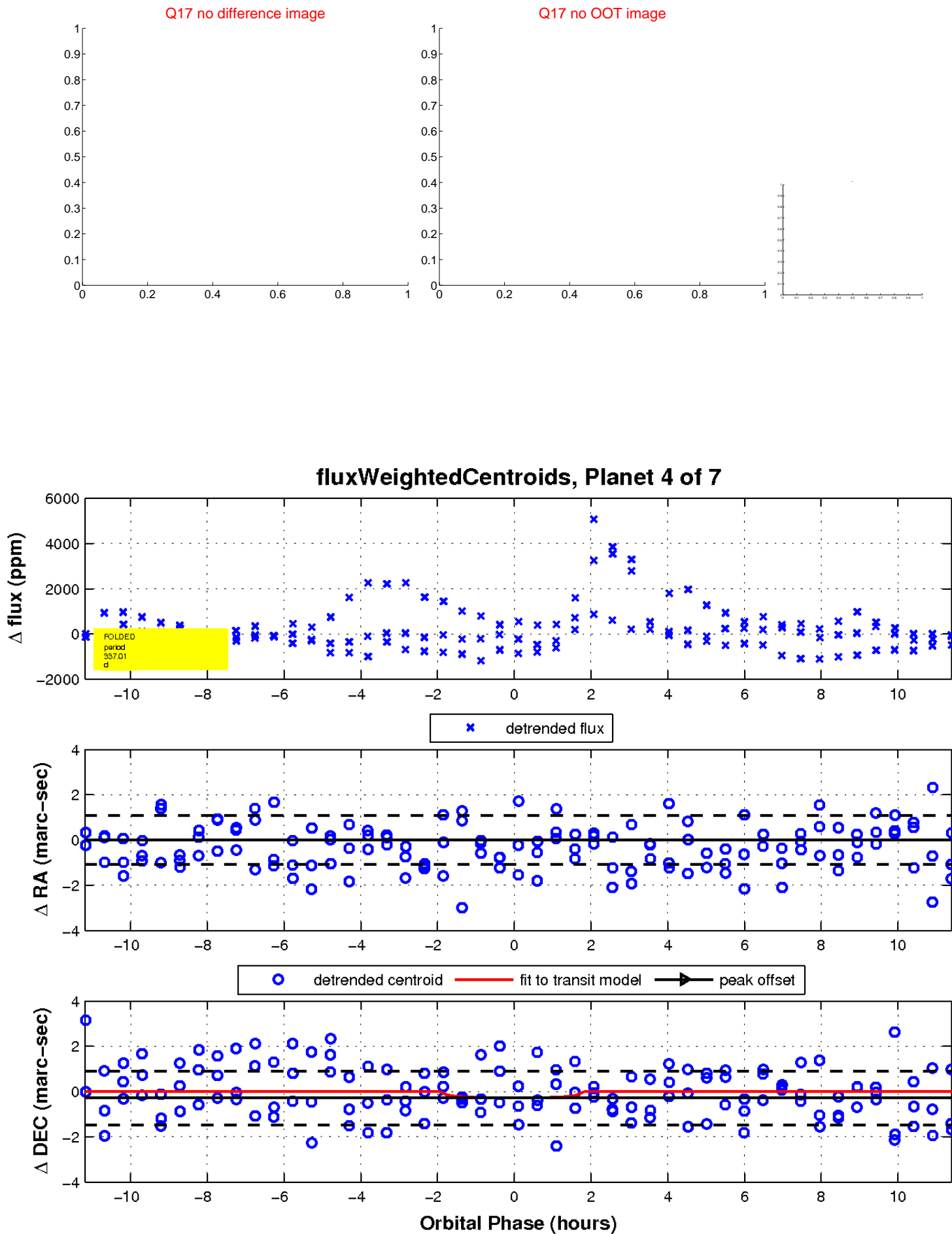
Q12 no OOT image



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

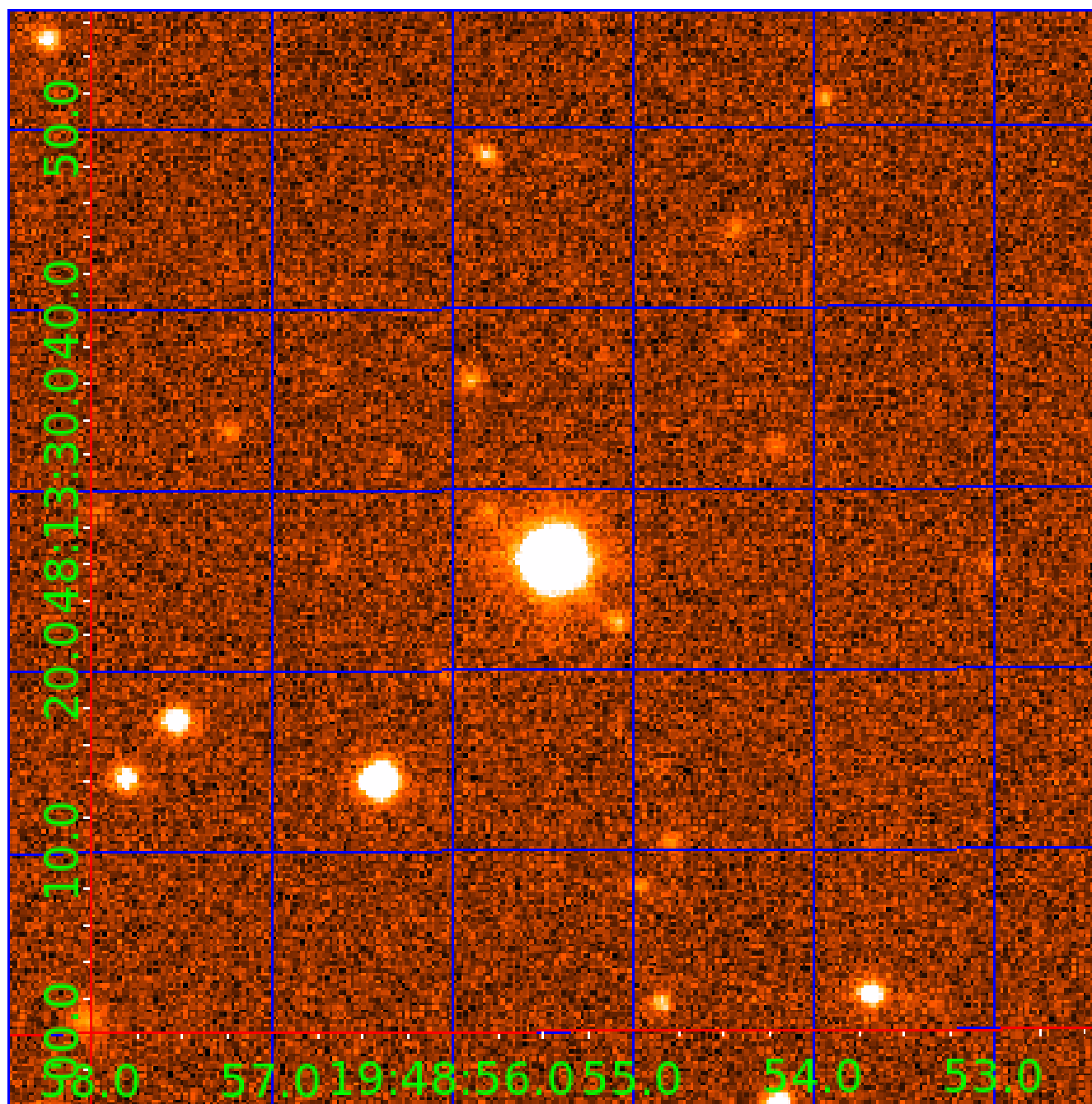


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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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Robovetter Results

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010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

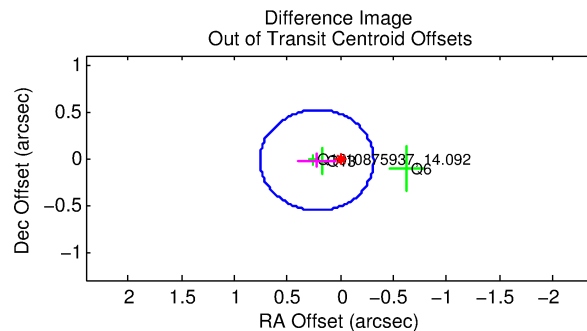
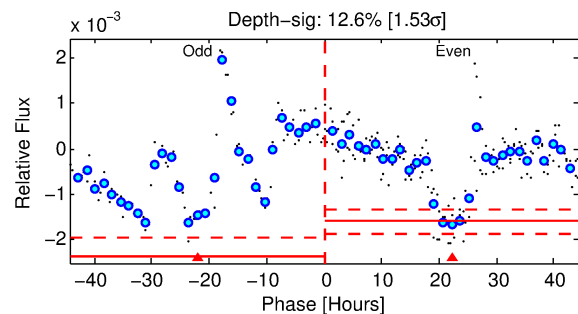
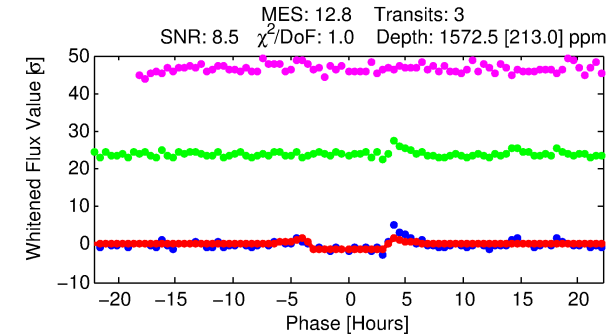
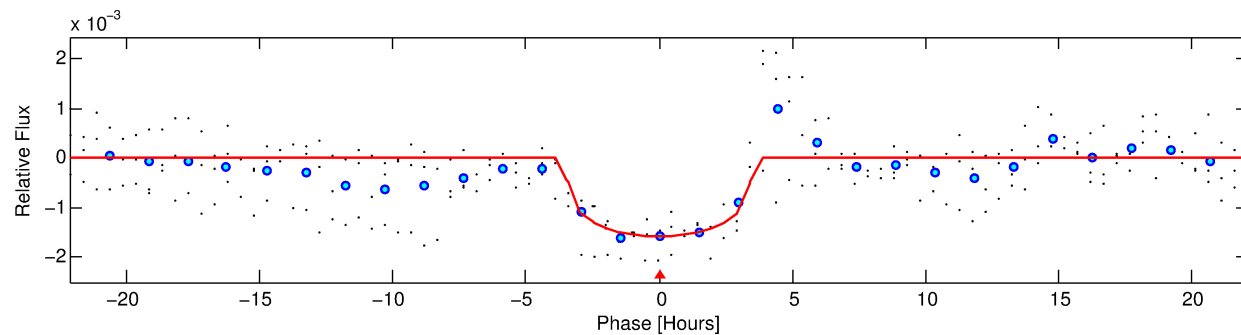
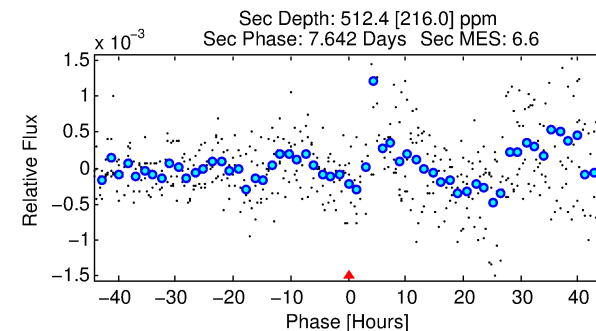
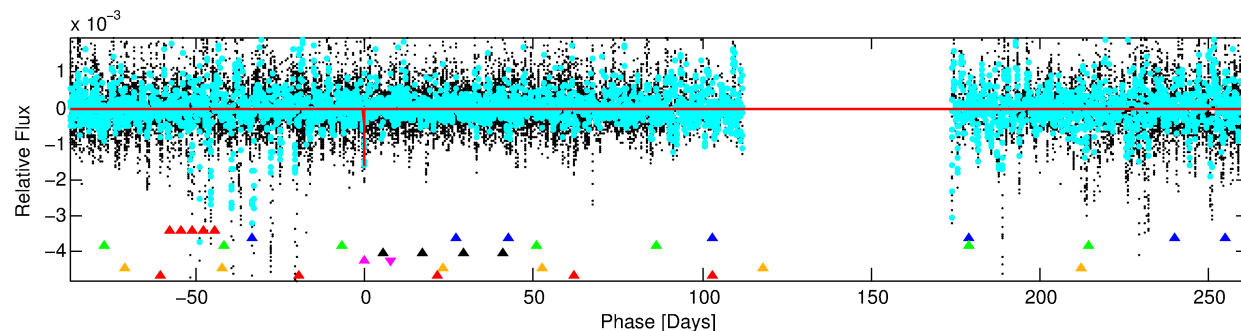
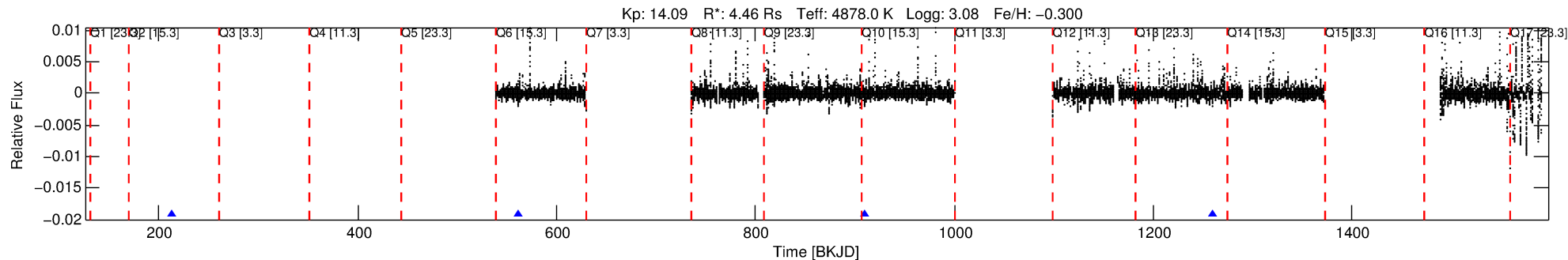
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-05

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 5 of 7 Period: 348.842 d



DV Fit Results:

Period = 348.84155 [0.00429] d
Epoch = 212.8814 [0.0084] BKJD
Rp/R* = 0.0377 [0.0335]
a/R* = 301.79 [942.81]
b = 0.62 [3.21]
Seff = 11.75 [9.01]
Teq = 472 [90] K
Rp = 18.34 [19.87] Re
a = 0.9270 [0.4831] AU
Ag = 720.20 [1423.47] [0.51σ]
Teff = 3781 [1730] K [1.91σ]

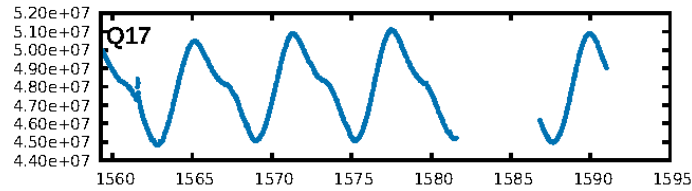
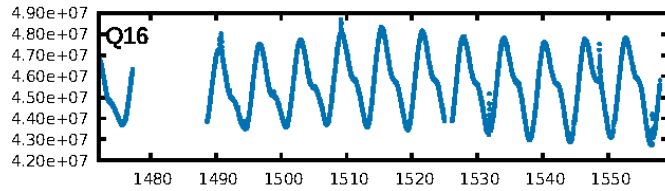
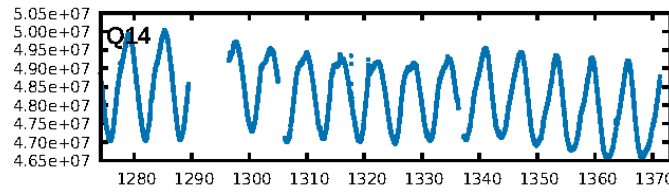
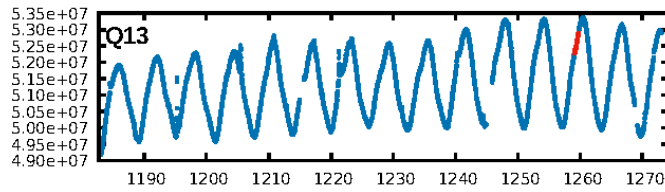
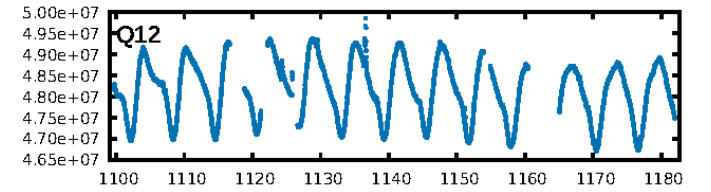
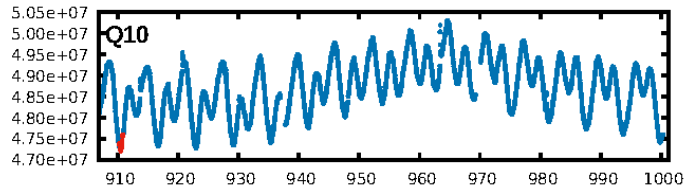
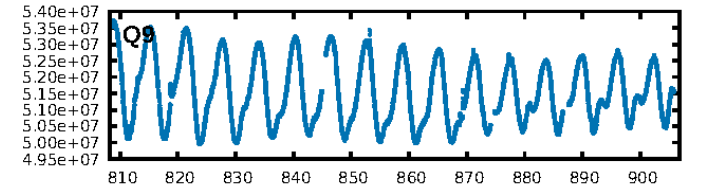
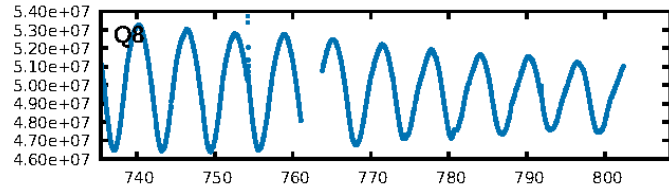
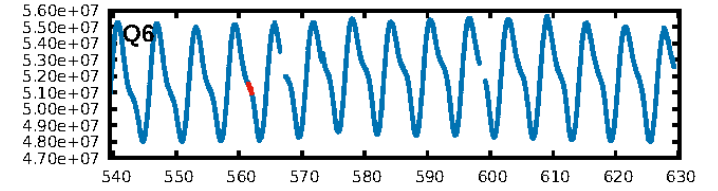
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.2%
ModelChiSquareGof-sig: 97.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.59
Centroid-sig: 24.6%
Centroid-so: 0.348 arcsec [0.79σ]
OotOffset-rm: 0.220 arcsec [1.23σ]
KicOffset-rm: 0.443 arcsec [1.88σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

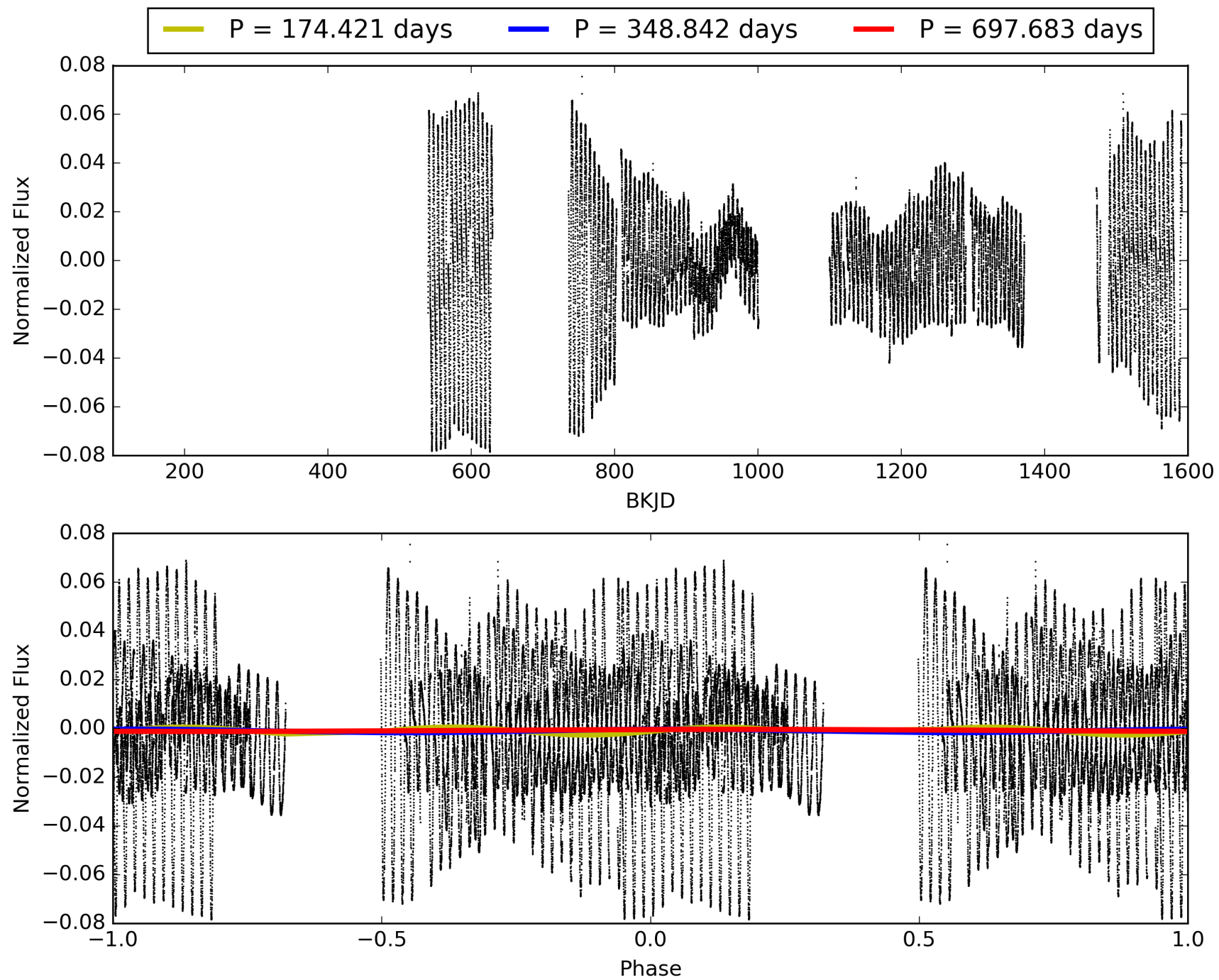
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:02:12 Z

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

TCE 010875937-05, PDC Light Curves

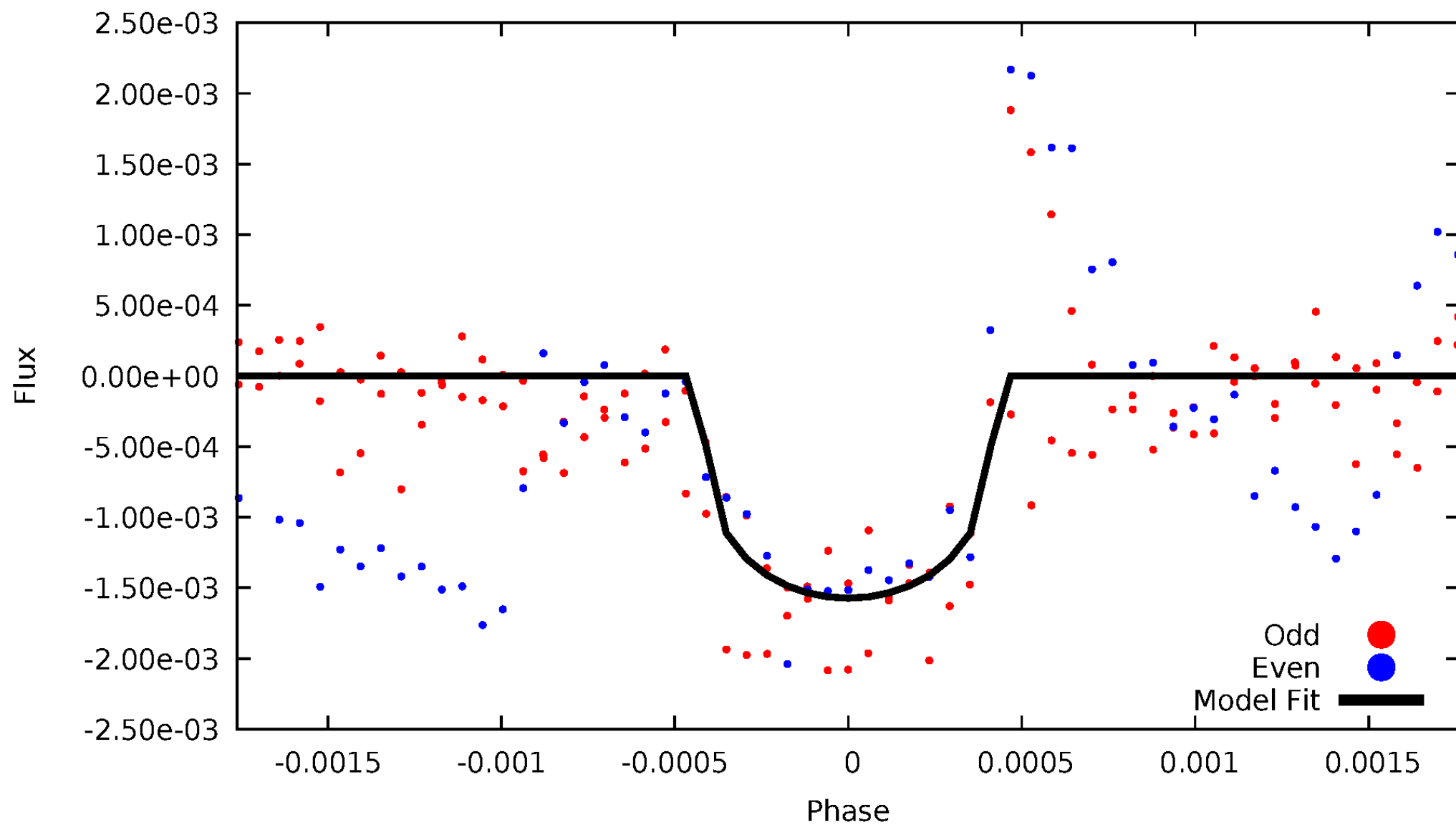


TCE 010875937-05



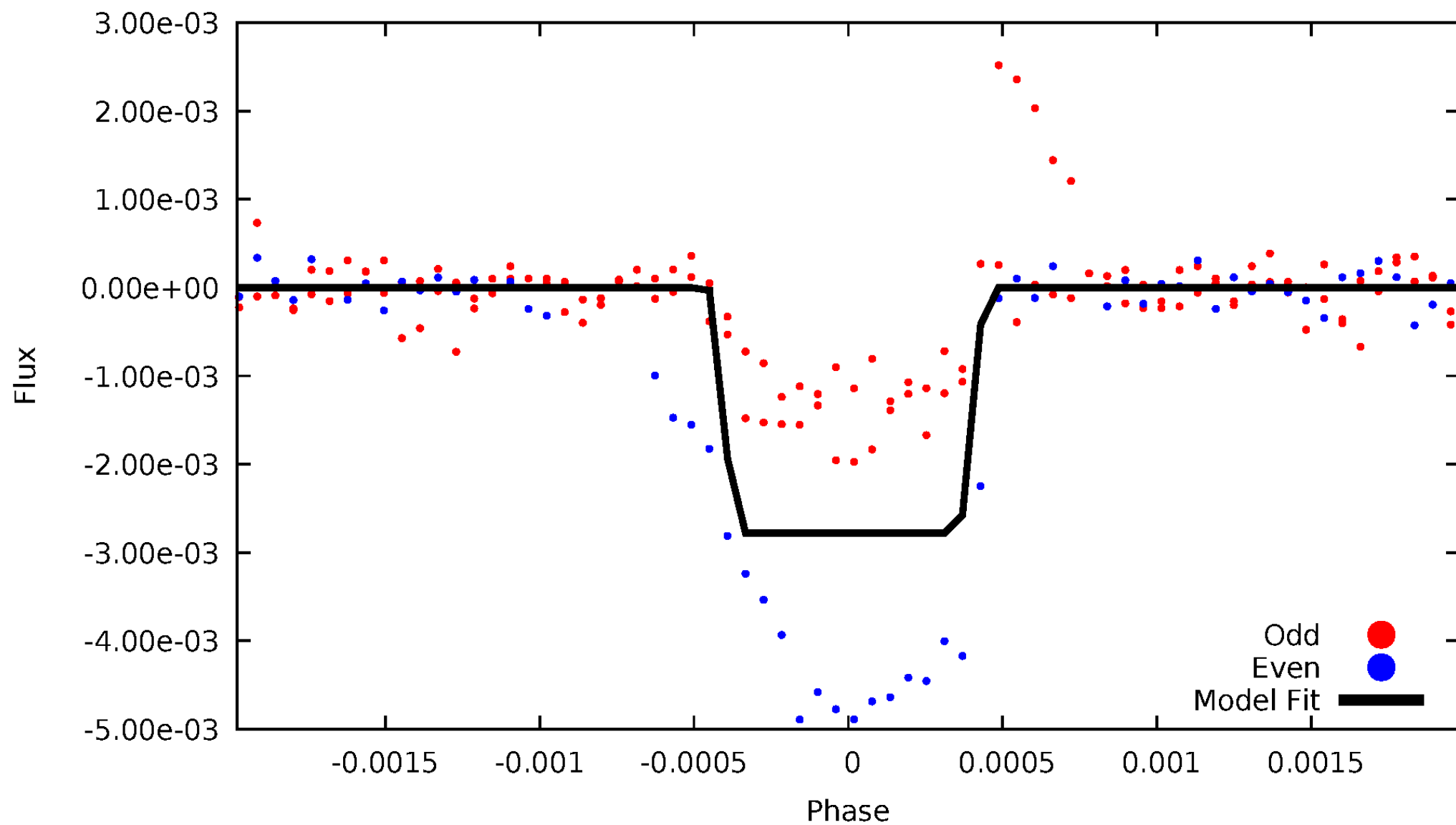
DV Odd/Even

TCE 010875937-05



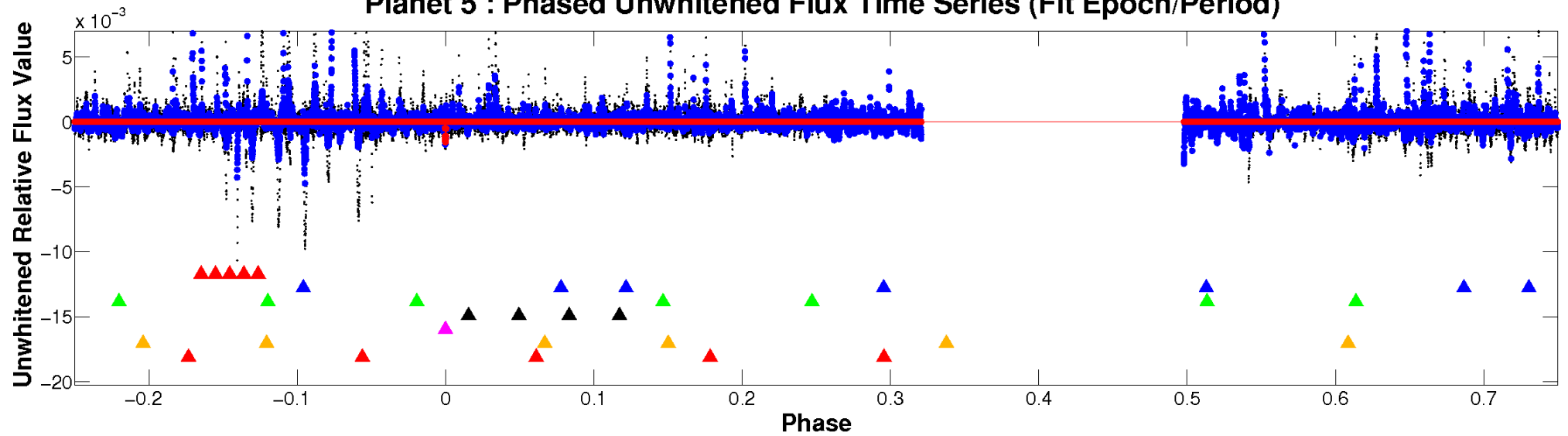
ALT Odd/Even

TCE 010875937-05

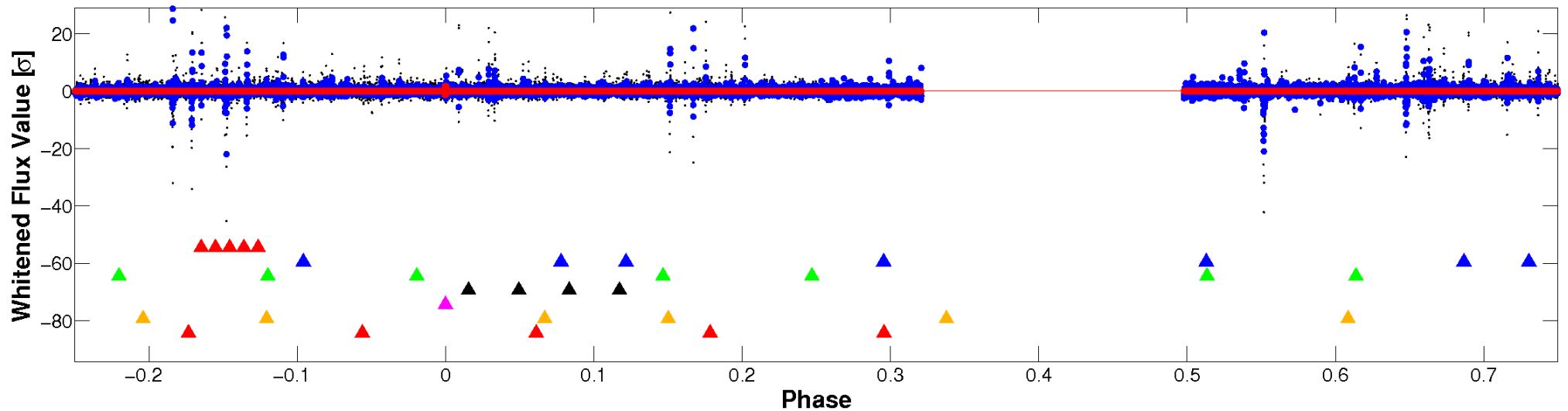


Non-Whitened Vs. Whitened Light Curve

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

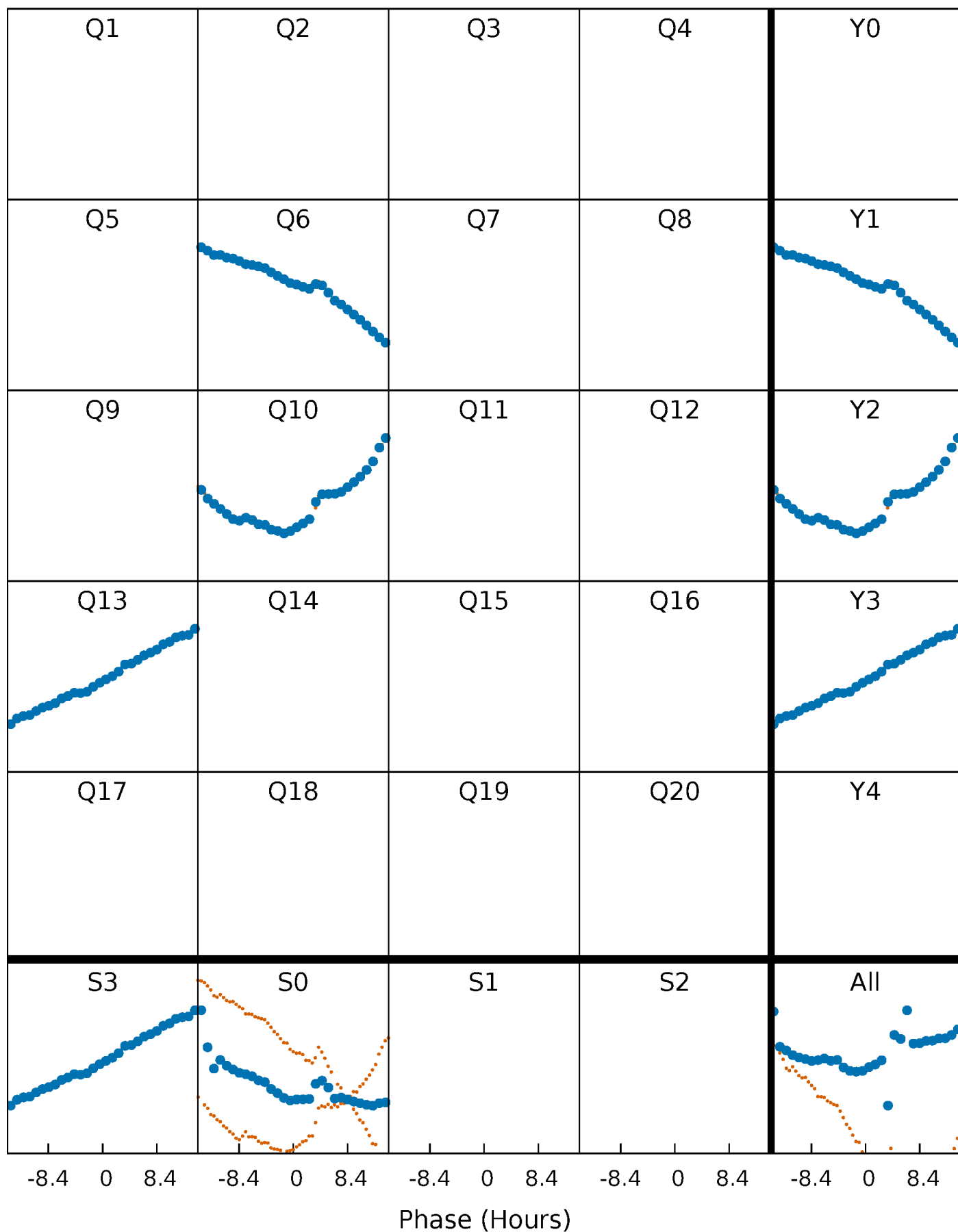


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



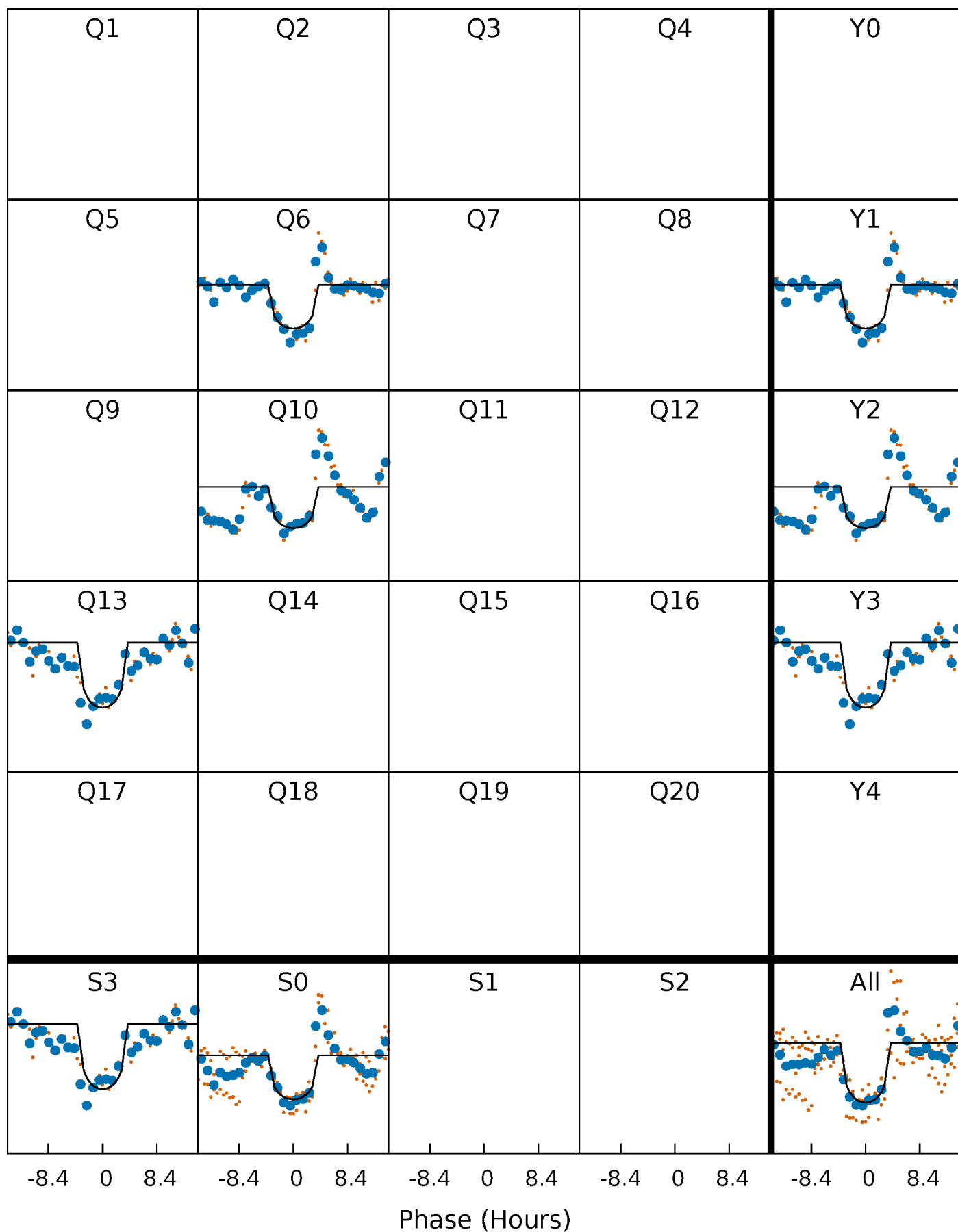
PDC Quarter-Phased Transit Curves

TCE 010875937-05 $P=348.841548$ Days $T_0=212.881353$ (BKJD)



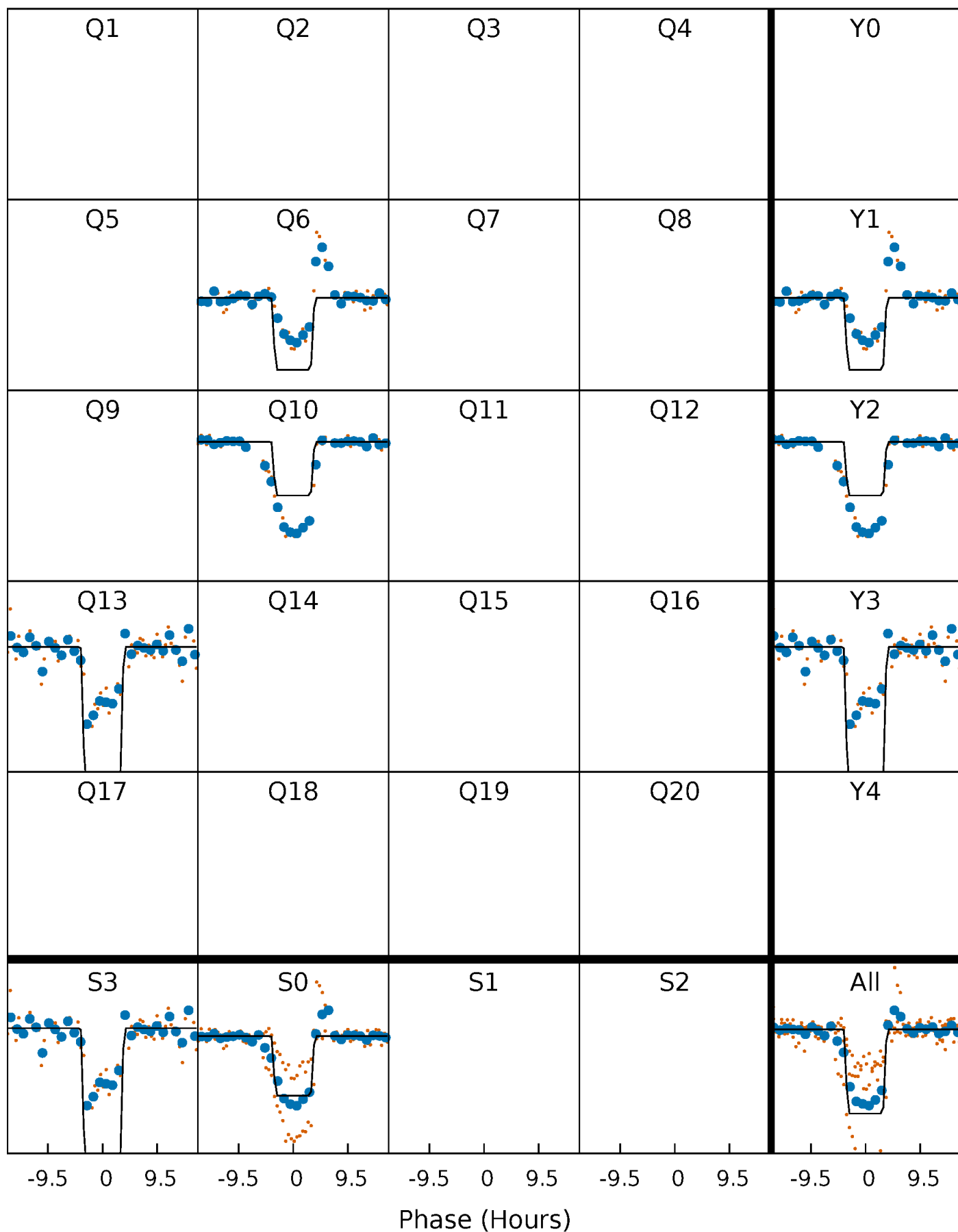
DV Quarter-Phased Transit Curves

TCE 010875937-05 $P=348.841548$ Days $T_0=212.881353$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

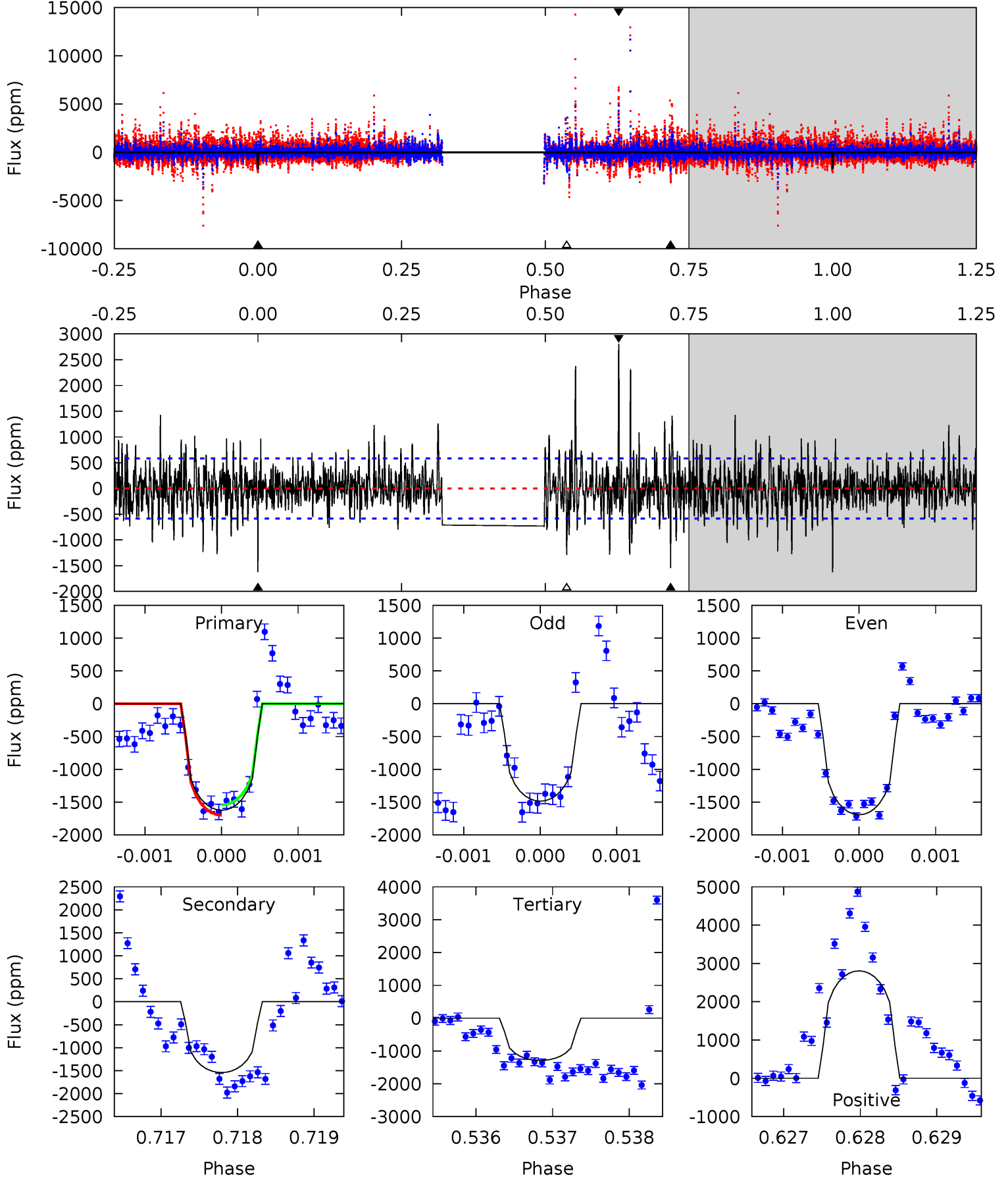
TCE 010875937-05 $P=348.841736$ Days $T_0=212.874479$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-05, P = 348.841548 Days, E = 212.881353 Days

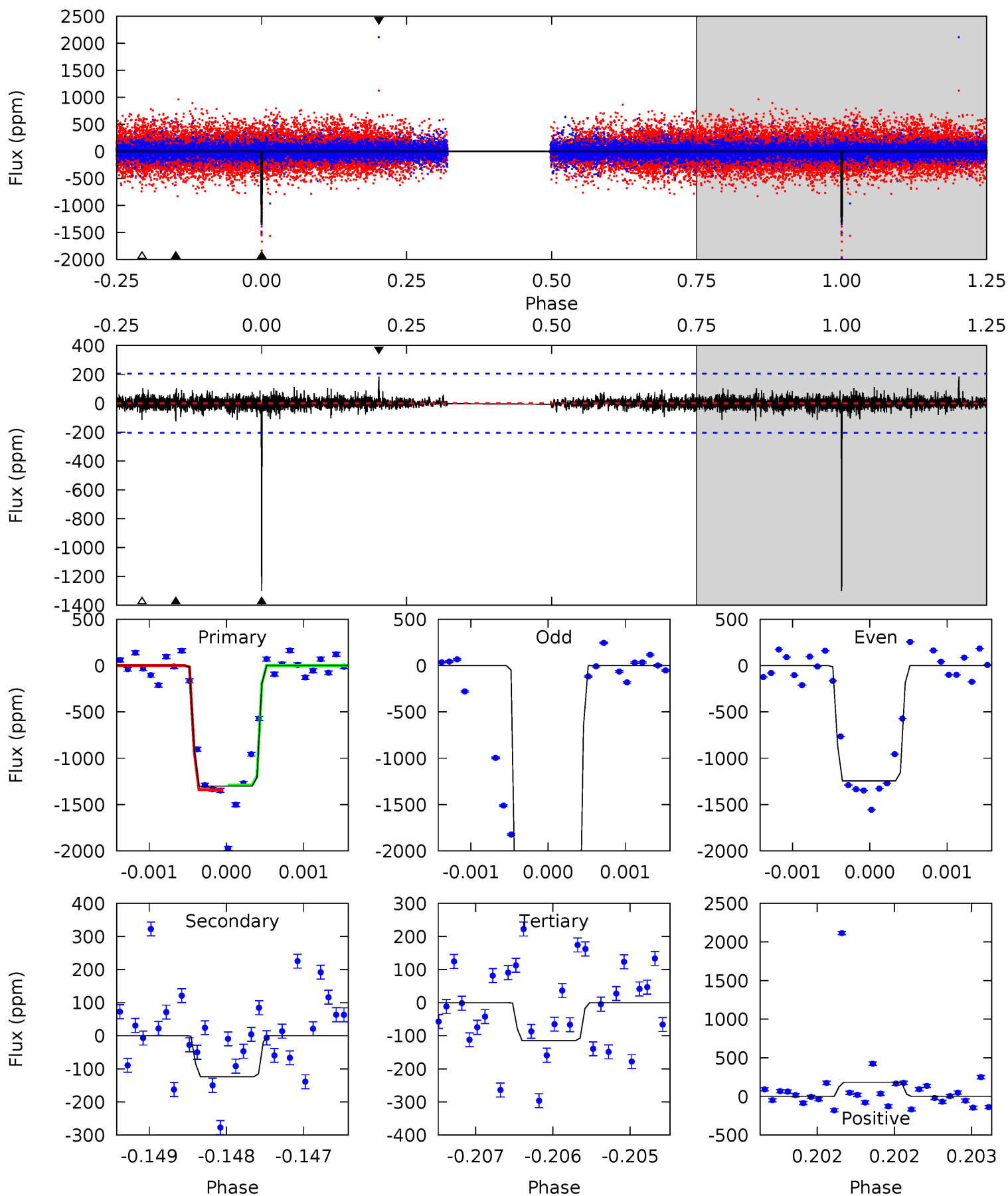
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	14.5	12.1	26.3	5.47	3.33	3.39	3.14	-11.1	2.37	-11.9	0.50	1.00	0.63	0.76



Alt Model-Shift Uniqueness Test

010875937-05, P = 348.841736 Days, E = 212.874479 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	3.31	3.07	4.89	5.46	3.31	0.63	31.6	29.8	0.23	-1.59	51.3	1.69	0.12	0



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1542 ± 107	$20.88^{+18.31}_{-13.46}$	652^{+94}_{-75}	4684^{+2581}_{-880}	1744^{+11435}_{-1260}
Alt.	-124 ± 38	$25.22^{+18.22}_{-14.13}$	655^{+89}_{-79}	2906^{+752}_{-386}	92^{+369}_{-63}

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

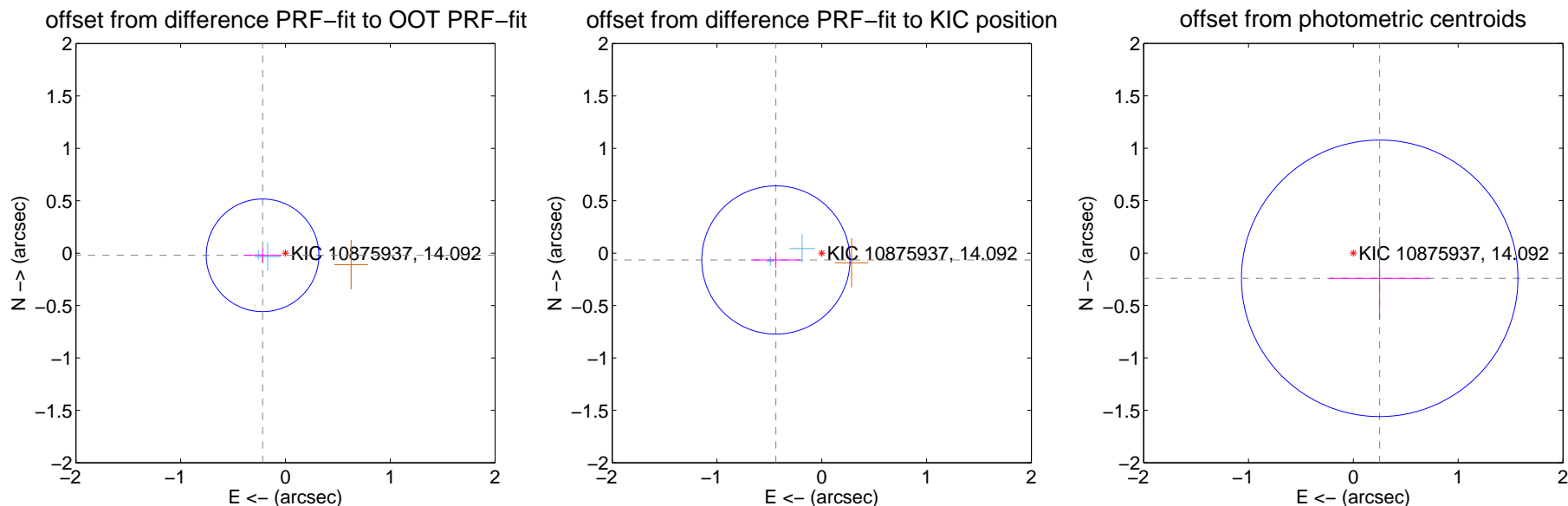
DV Centroid Data

Supplemental centroid analysis for 010875937-05. Kepler magnitude: 14.09. Transit SNR 8.50

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.220 ± 0.179	1.23	0.219 ± 0.181	-0.021 ± 0.069
PRF-fit source offset from KIC position	0.443 ± 0.236	1.88	0.438 ± 0.238	-0.065 ± 0.074
photometric centroid source offset	0.35 ± 0.44	0.79	-0.25 ± 0.48	-0.24 ± 0.39



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.

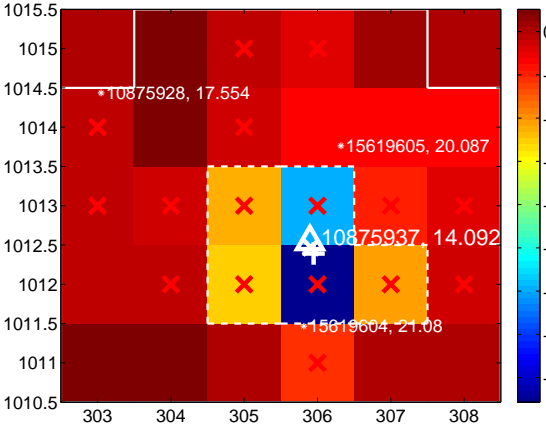
Q5 no difference image



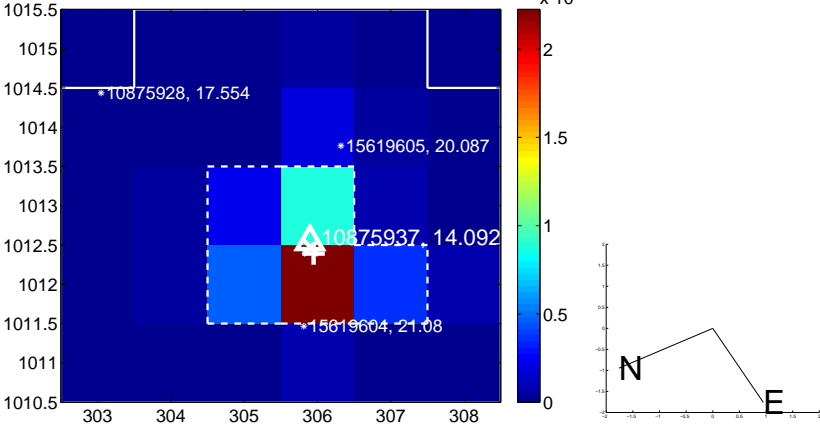
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image

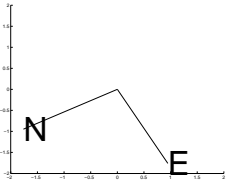
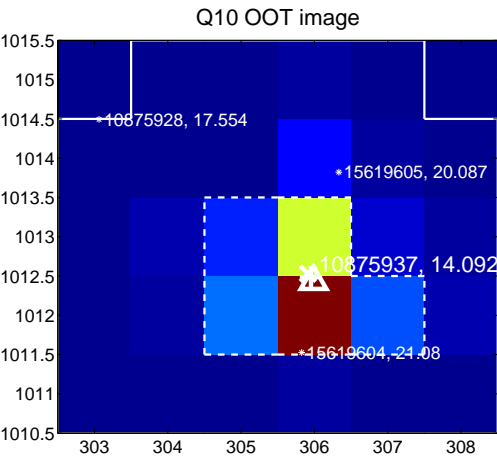
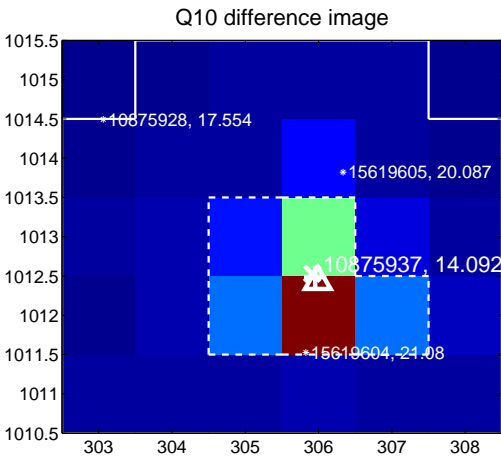


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

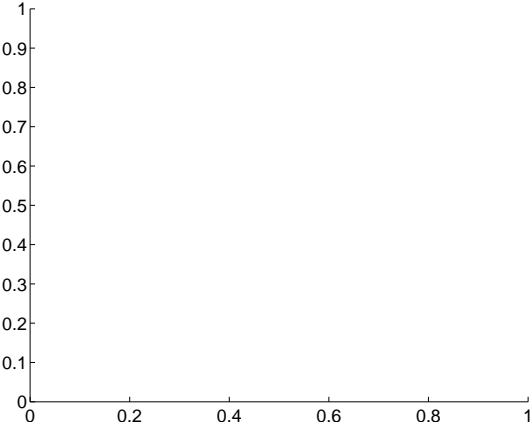
Q9 no difference image



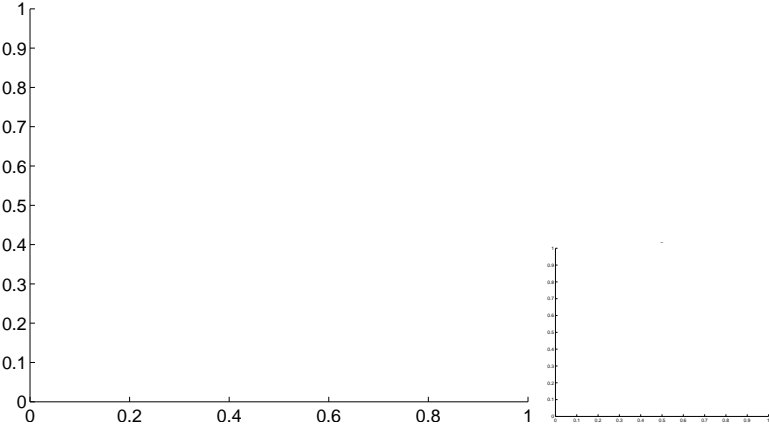
Q9 no OOT image



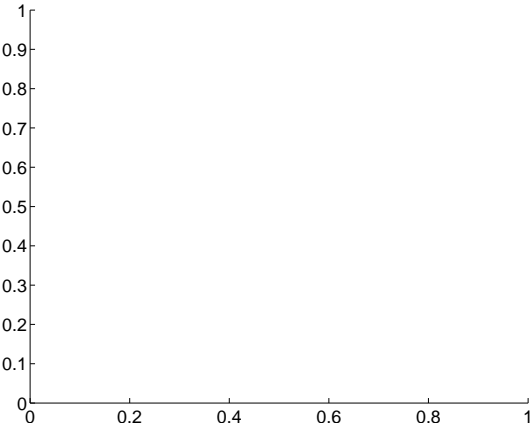
Q11 no difference image



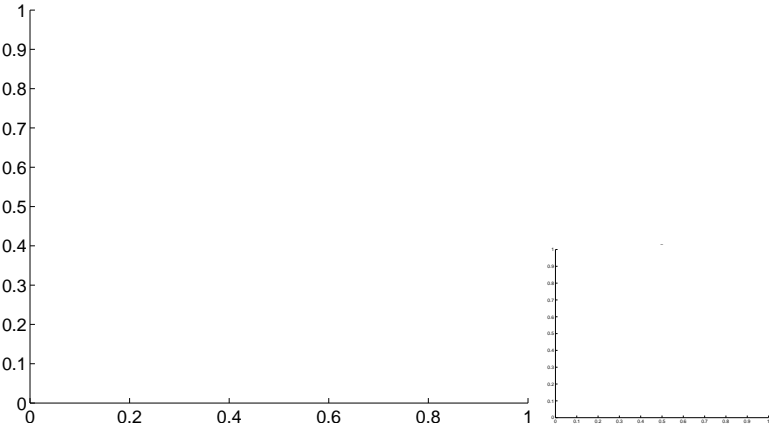
Q11 no OOT image



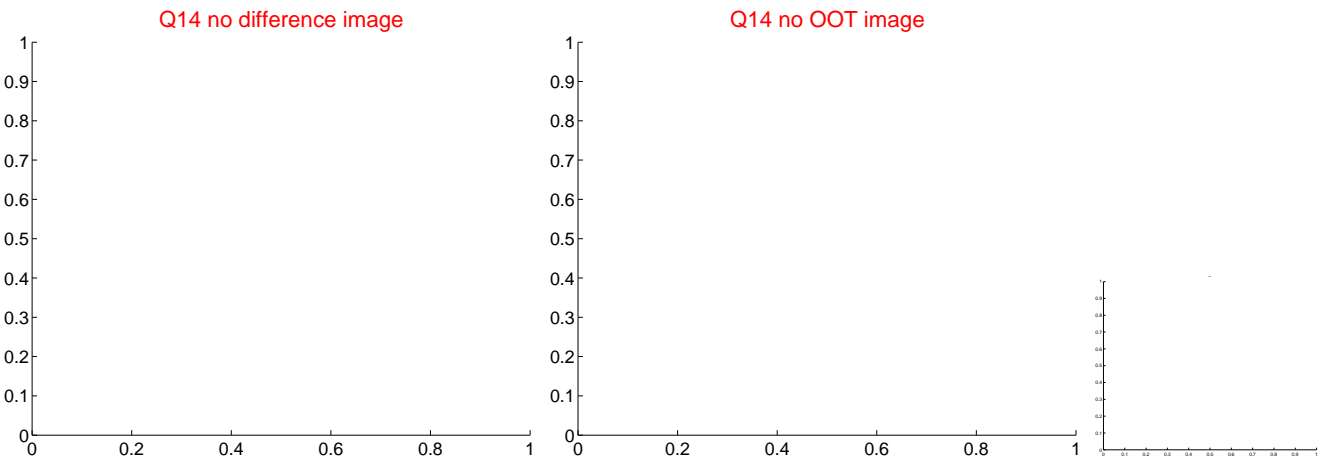
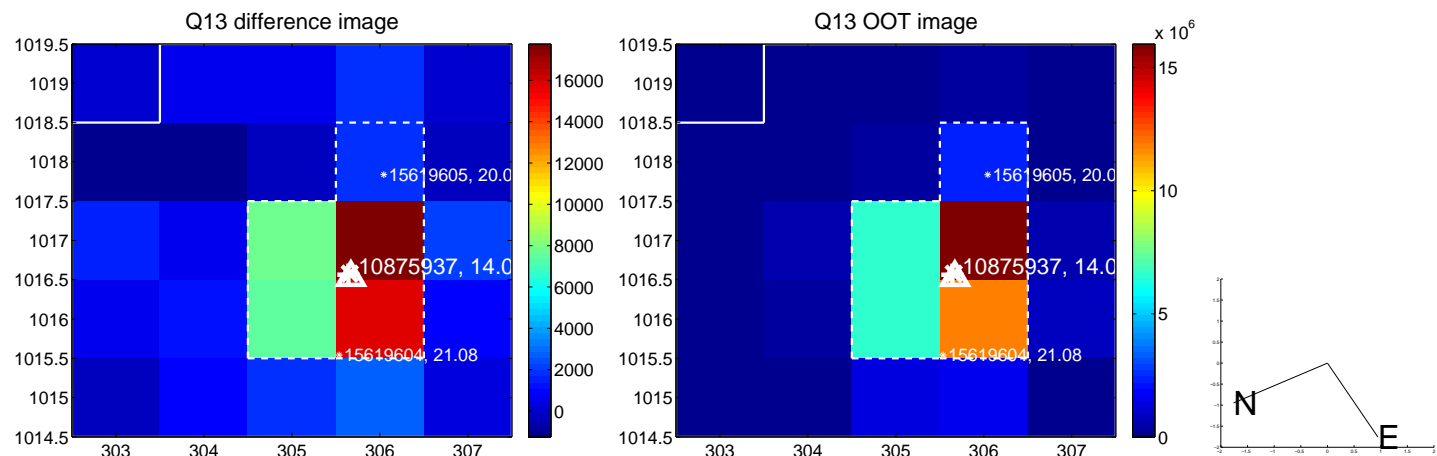
Q12 no difference image



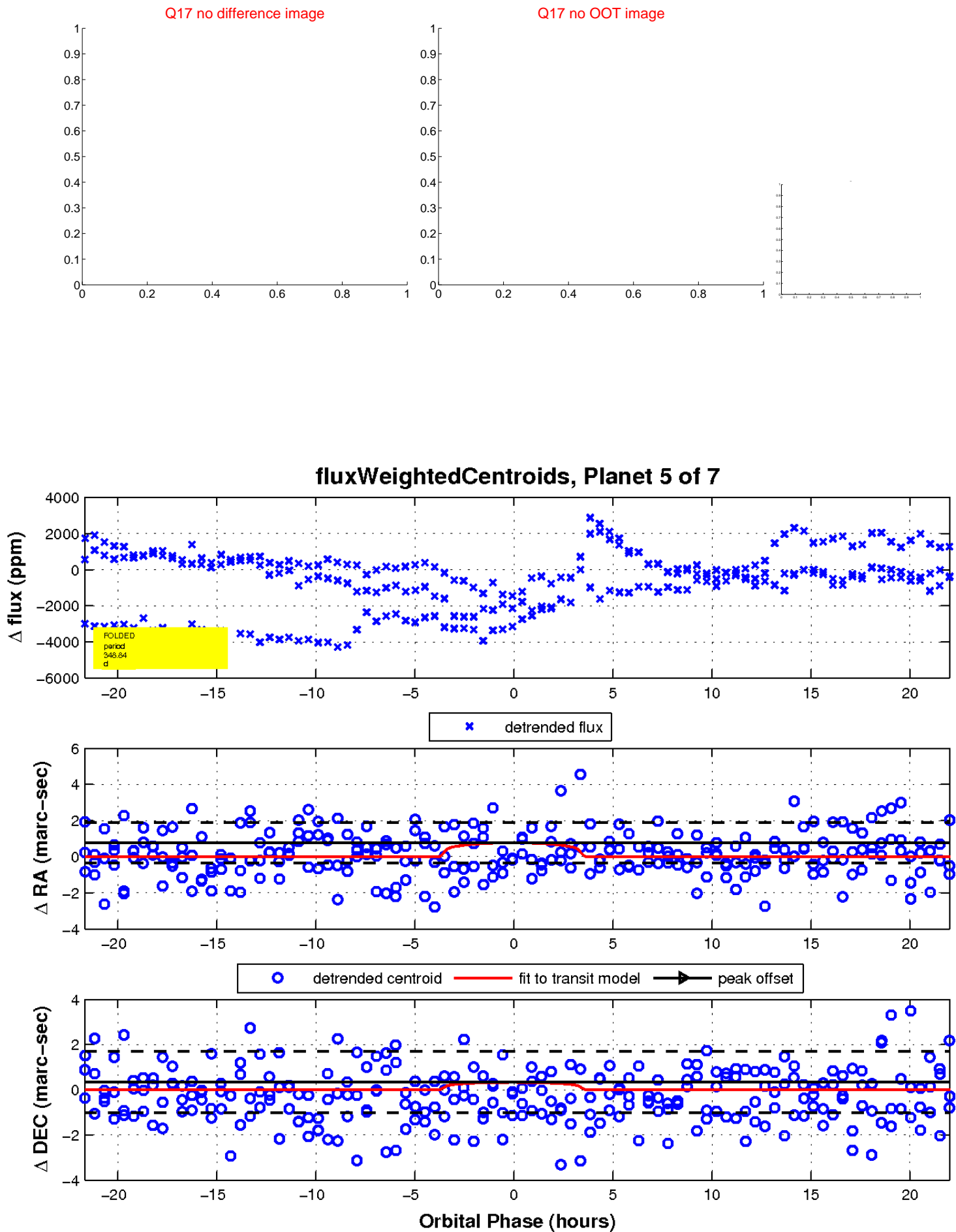
Q12 no OOT image



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

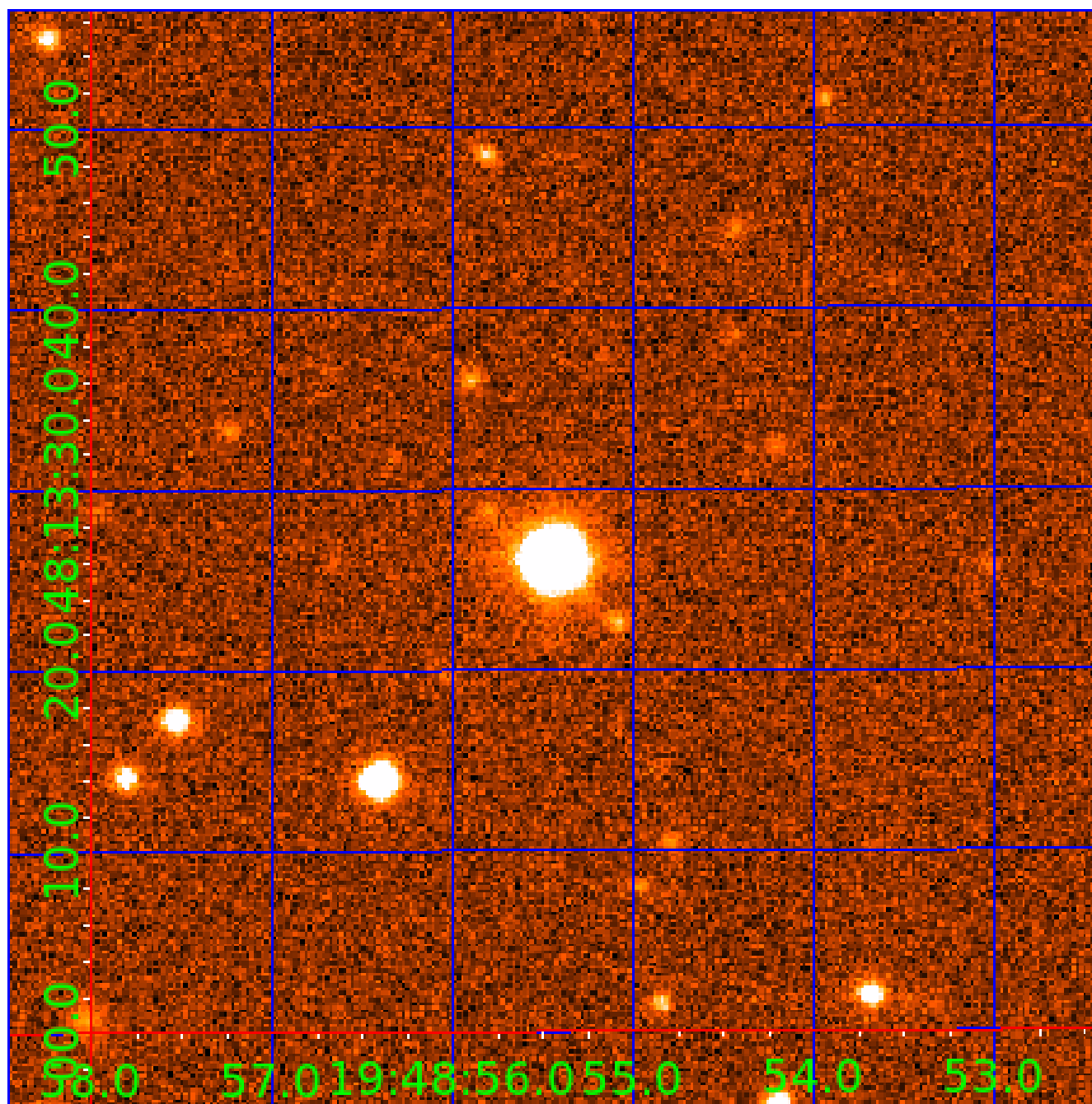


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
010875937-03	OBS	No	220.884182	206.145978	1386.9	15.149	15.5	4.7	4.46	4878	16.30	21.61
010875937-04	OBS	No	337.010609	253.803101	1098.3	3.824	13.1	6.4	4.46	4878	15.92	12.30
010875937-05	OBS	No	348.841548	212.881353	1572.5	7.375	12.8	8.5	4.46	4878	18.34	11.75
010875937-06	OBS	No	254.367071	265.286259	1016.9	4.999	11.5	5.1	4.46	4878	14.87	17.90
010875937-07	OBS	8216.01	307.947372	316.019229	507.8	15.000	11.3	-1.0	4.46	4878	9.74	13.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

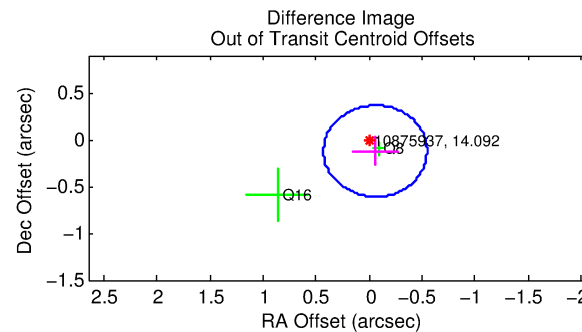
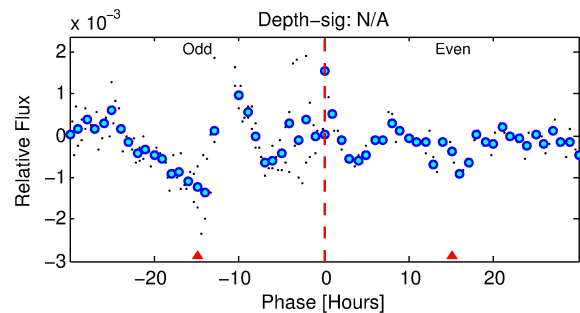
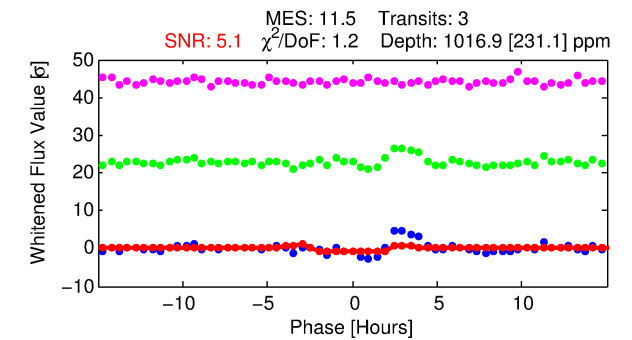
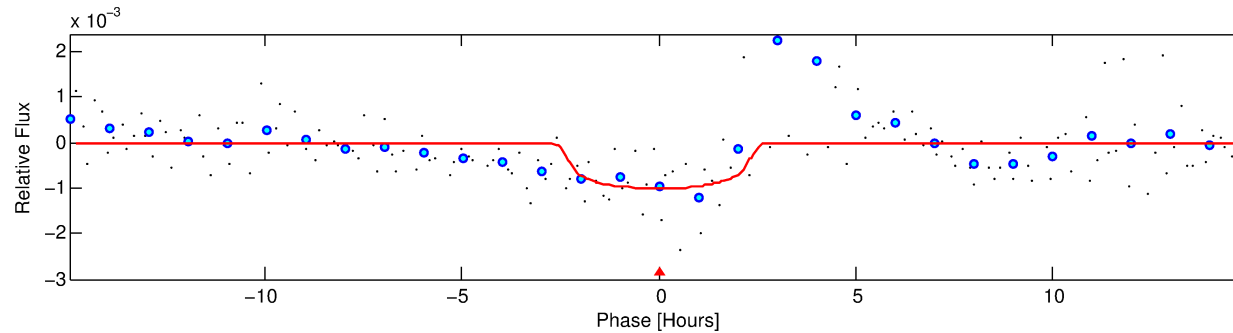
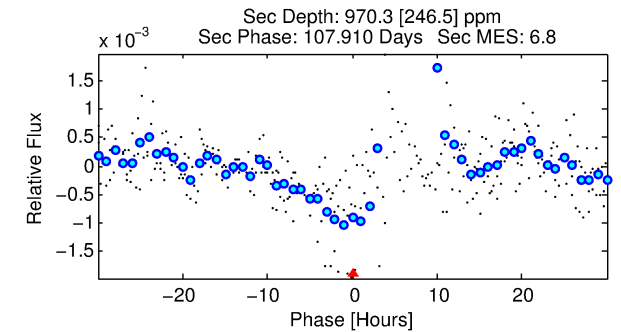
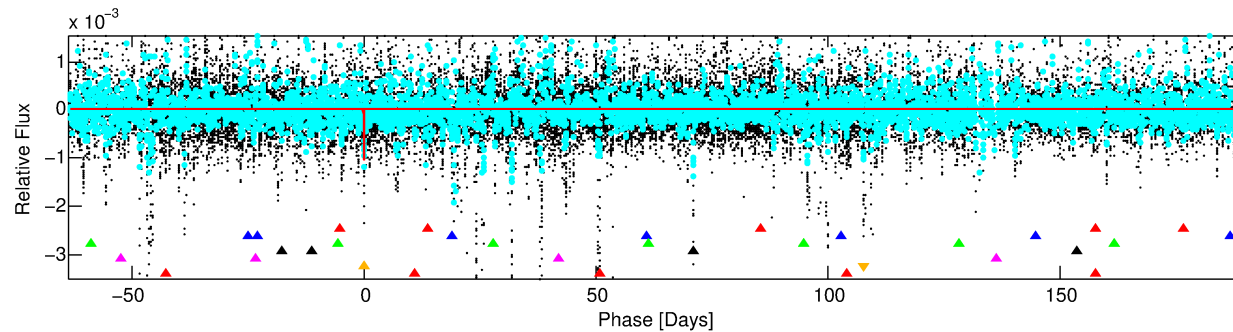
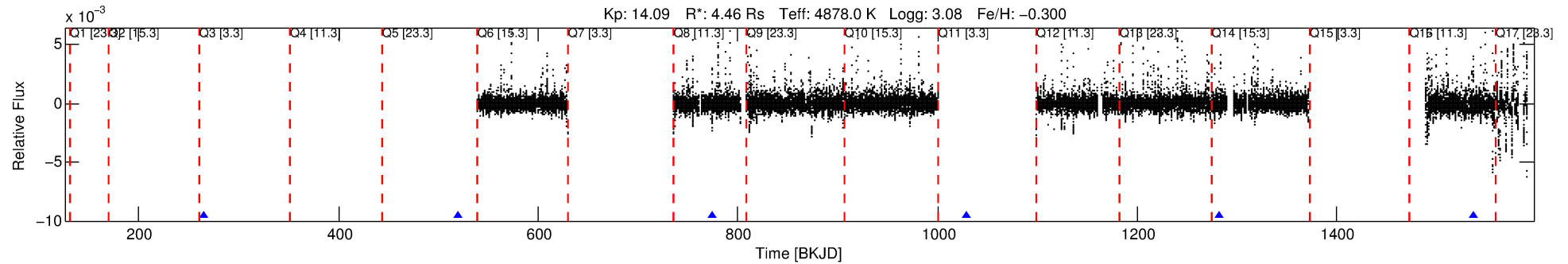
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-06

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 6 of 7 Period: 254.367 d



DV Fit Results:

Period = 254.36707 [0.00452] d
Epoch = 265.2863 [0.0169] BKJD
Rp/R* = 0.0306 [0.0348]
a/R* = 313.03 [1223.38]
b = 0.64 [3.63]
Seff = 17.90 [13.72]
Teq = 524 [101] K
Rp = 14.87 [19.29] Re
a = 0.7510 [0.3914] AU
Ag = 1360.76 [3284.11] [0.41] σ
Teffp = 4925 [2826] K [1.56] σ

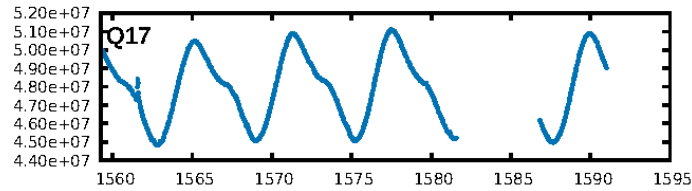
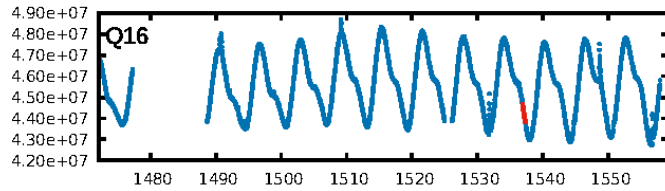
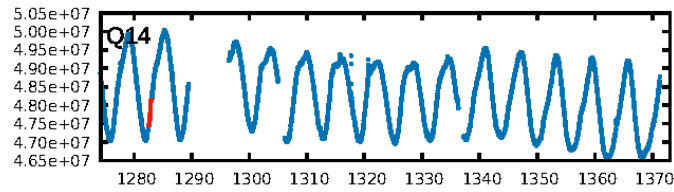
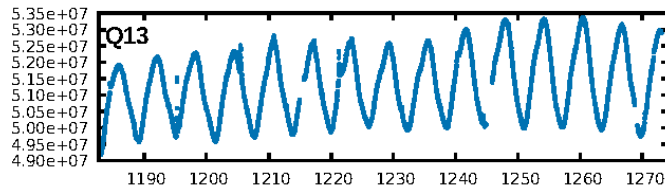
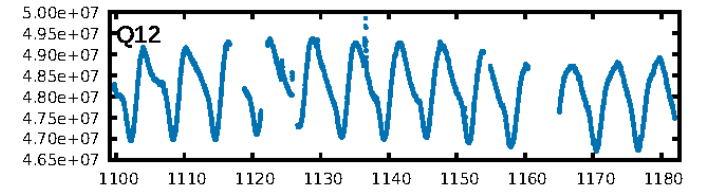
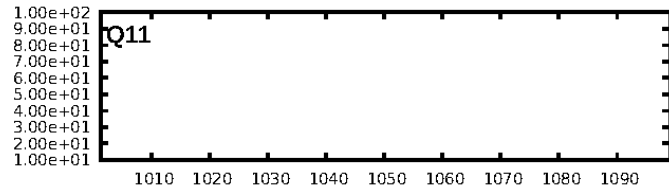
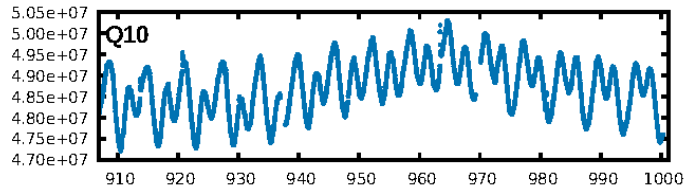
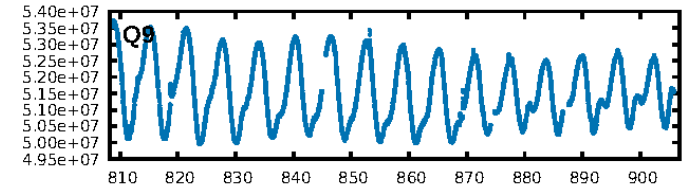
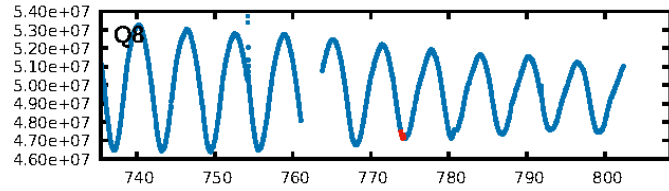
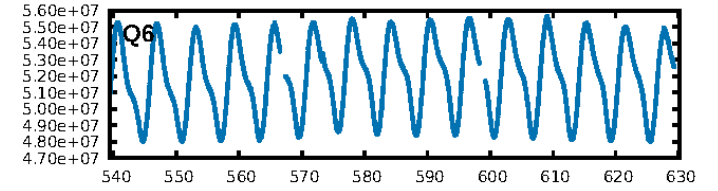
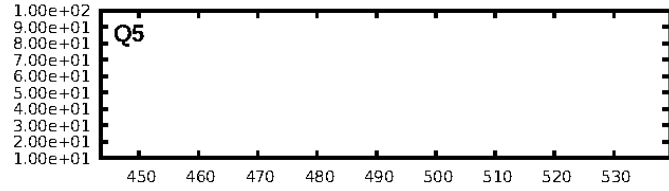
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.37] σ
LongPeriod-sig: 100.0% [81.33] σ
ModelChiSquare2-sig: 5.0%
ModelChiSquareGof-sig: 66.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.157
Centroid-sig: 49.4%
Centroid-so: 0.533 arcsec [0.53] σ
OotOffset-rm: 0.136 arcsec [0.84] σ
OotOffset-st: 0/0/2/0 [2]
KicOffset-rm: 0.159 arcsec [0.53] σ
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
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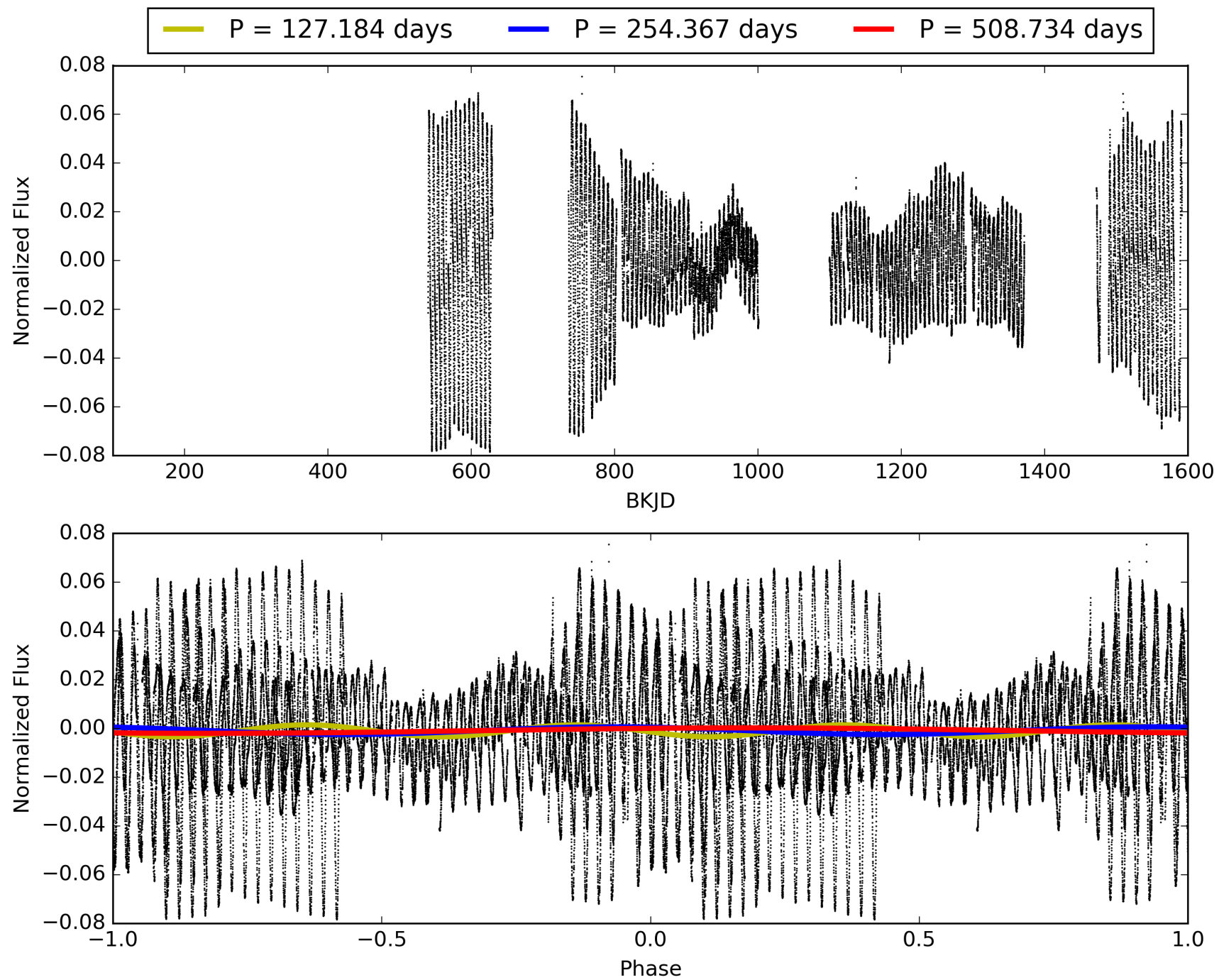
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:02:18 Z

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

TCE 010875937-06, PDC Light Curves

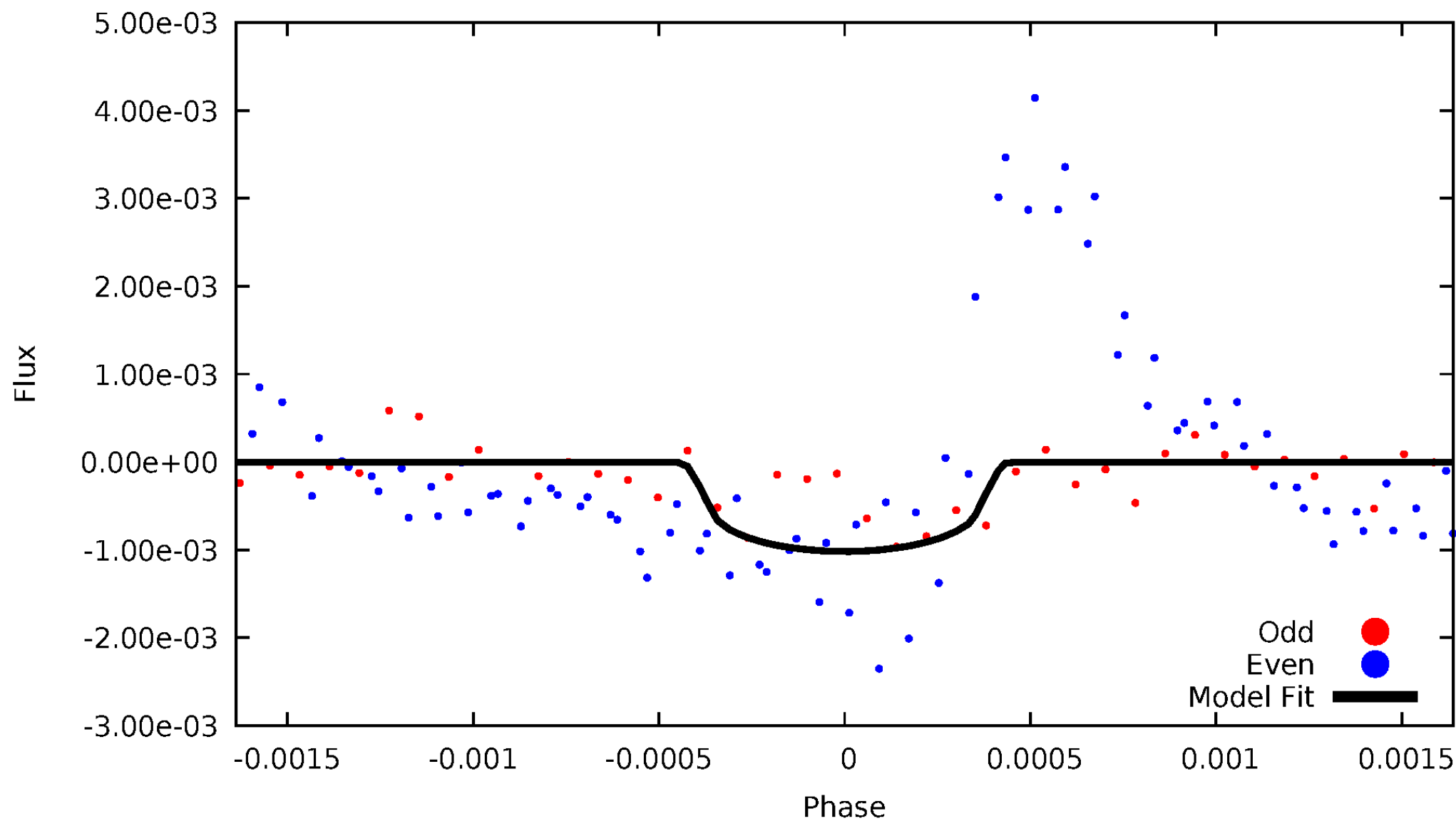


TCE 010875937-06



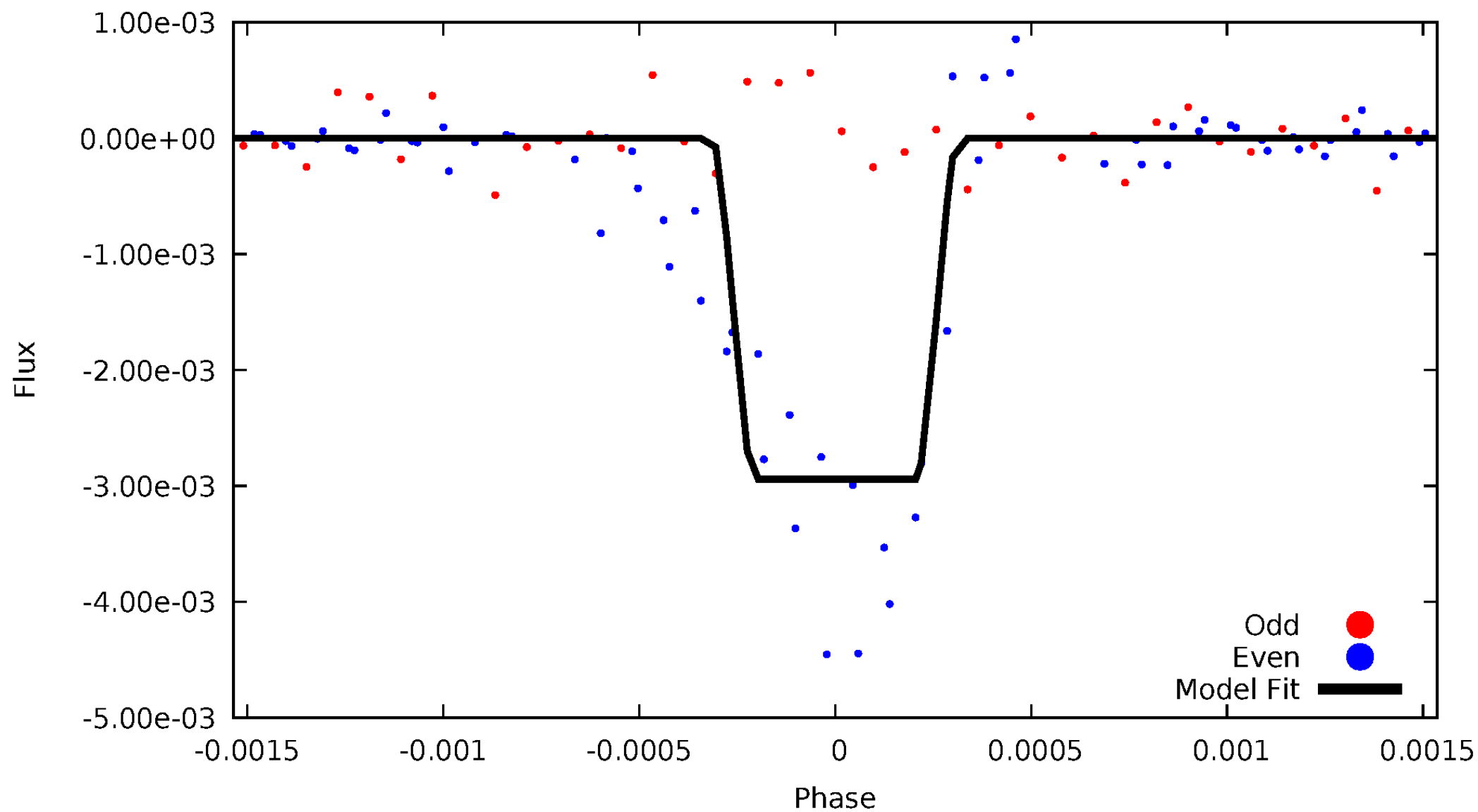
DV Odd/Even

TCE 010875937-06



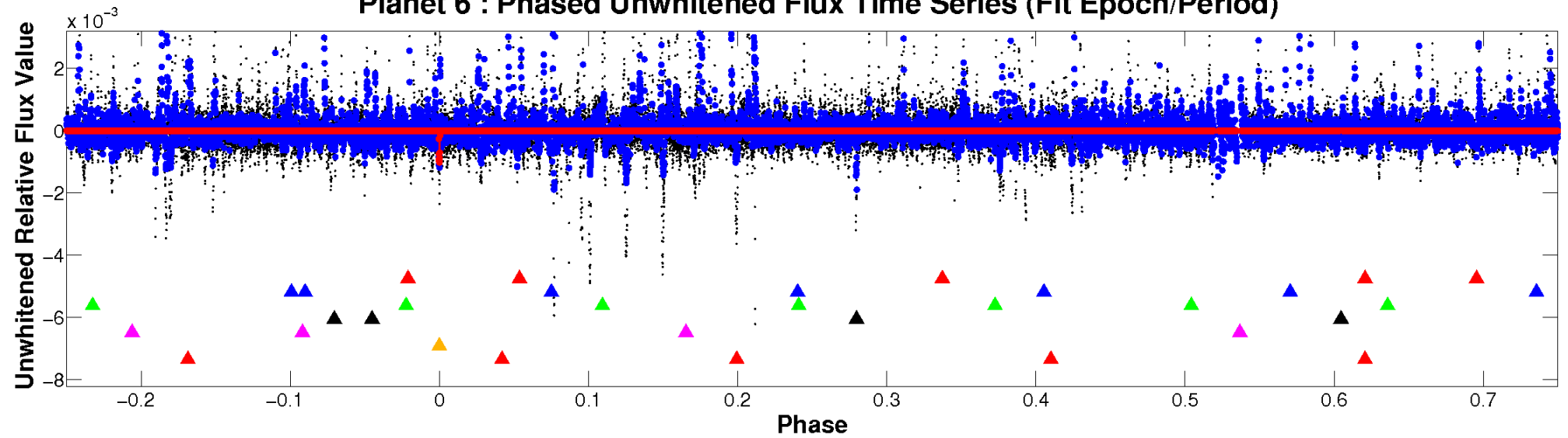
ALT Odd/Even

TCE 010875937-06

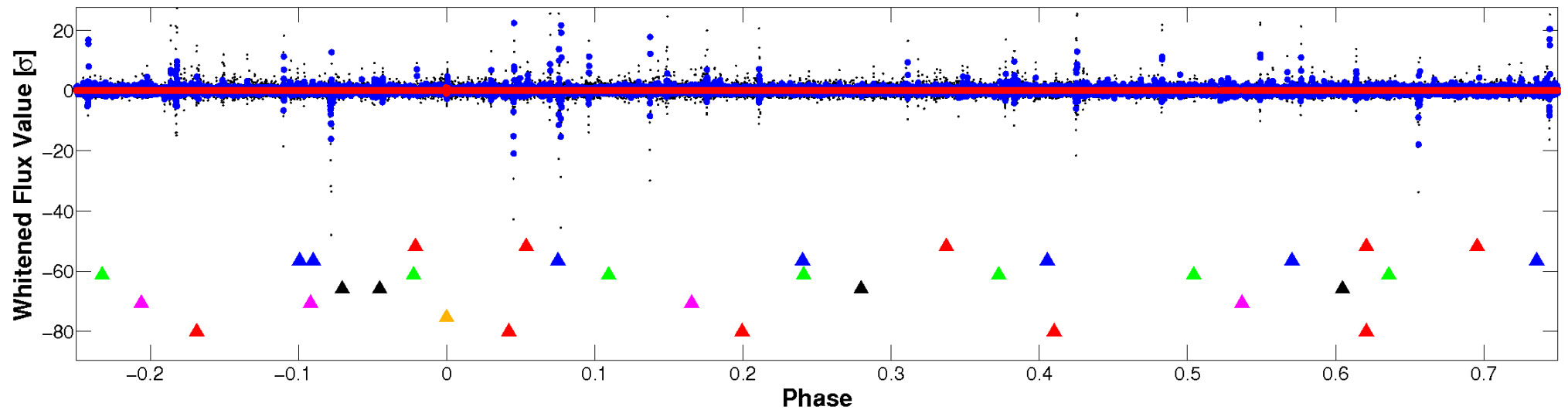


Non-Whitened Vs. Whitened Light Curve

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

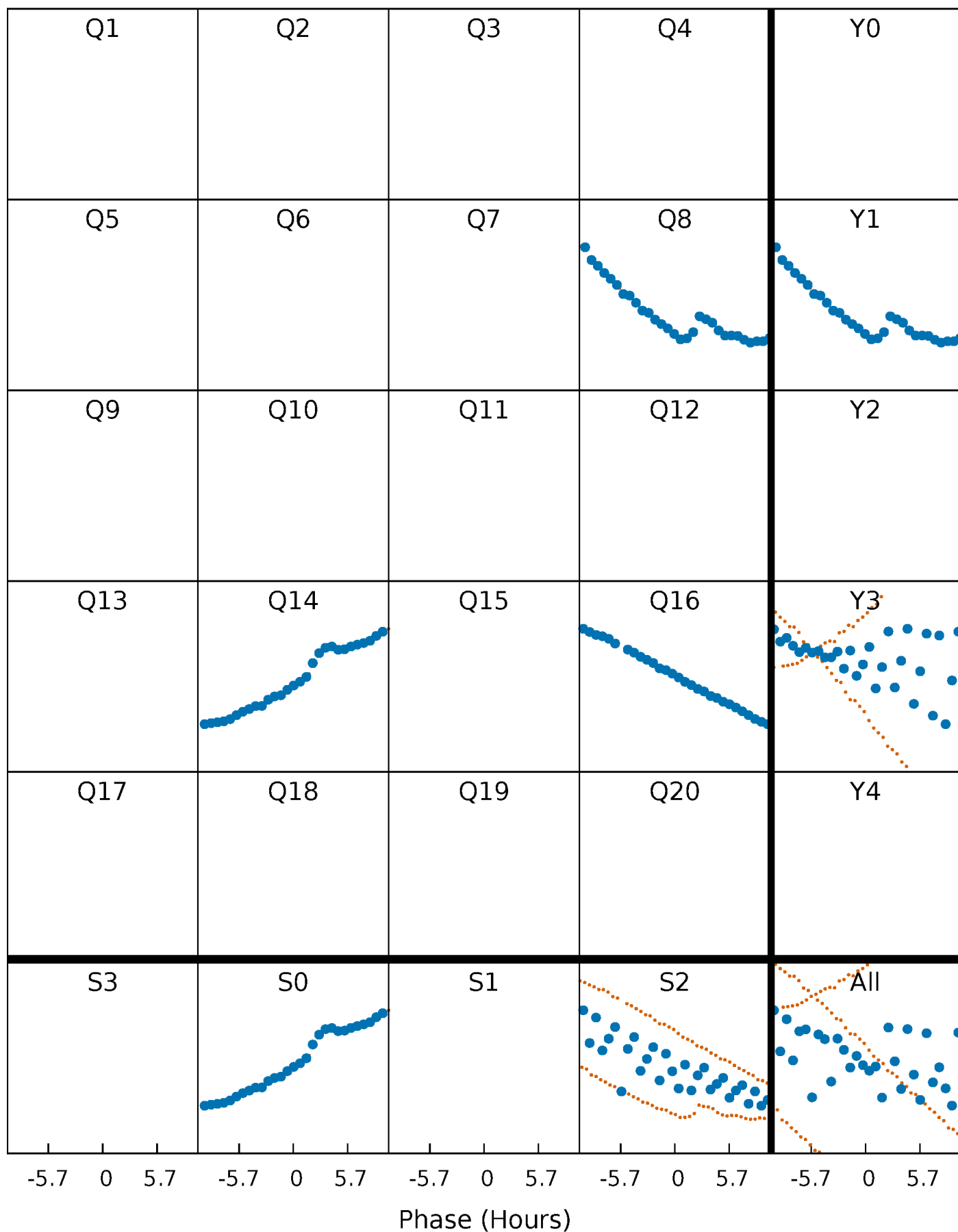


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



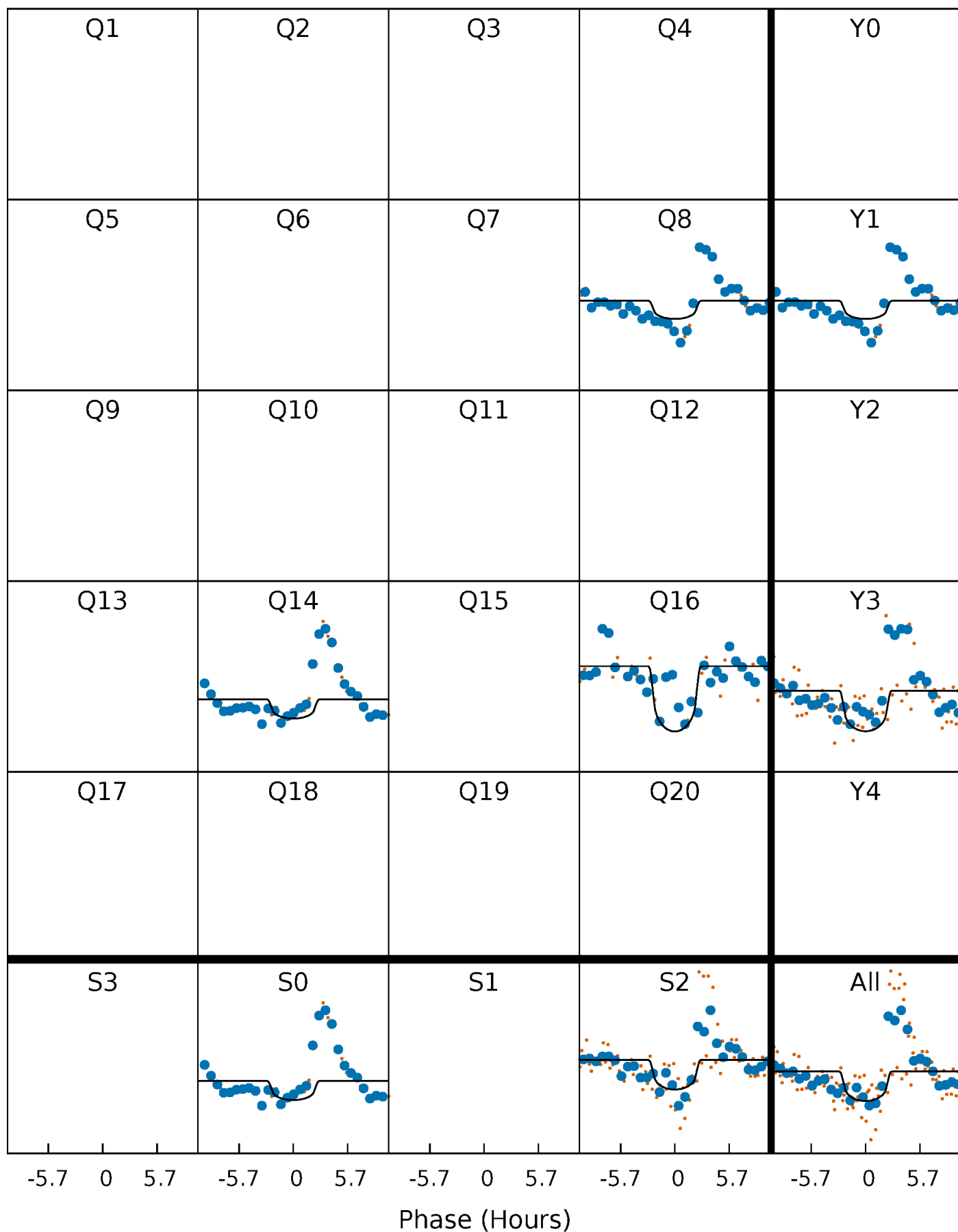
PDC Quarter-Phased Transit Curves

TCE 010875937-06 P=254.367071 Days $T_0=265.286259$ (BKJD)



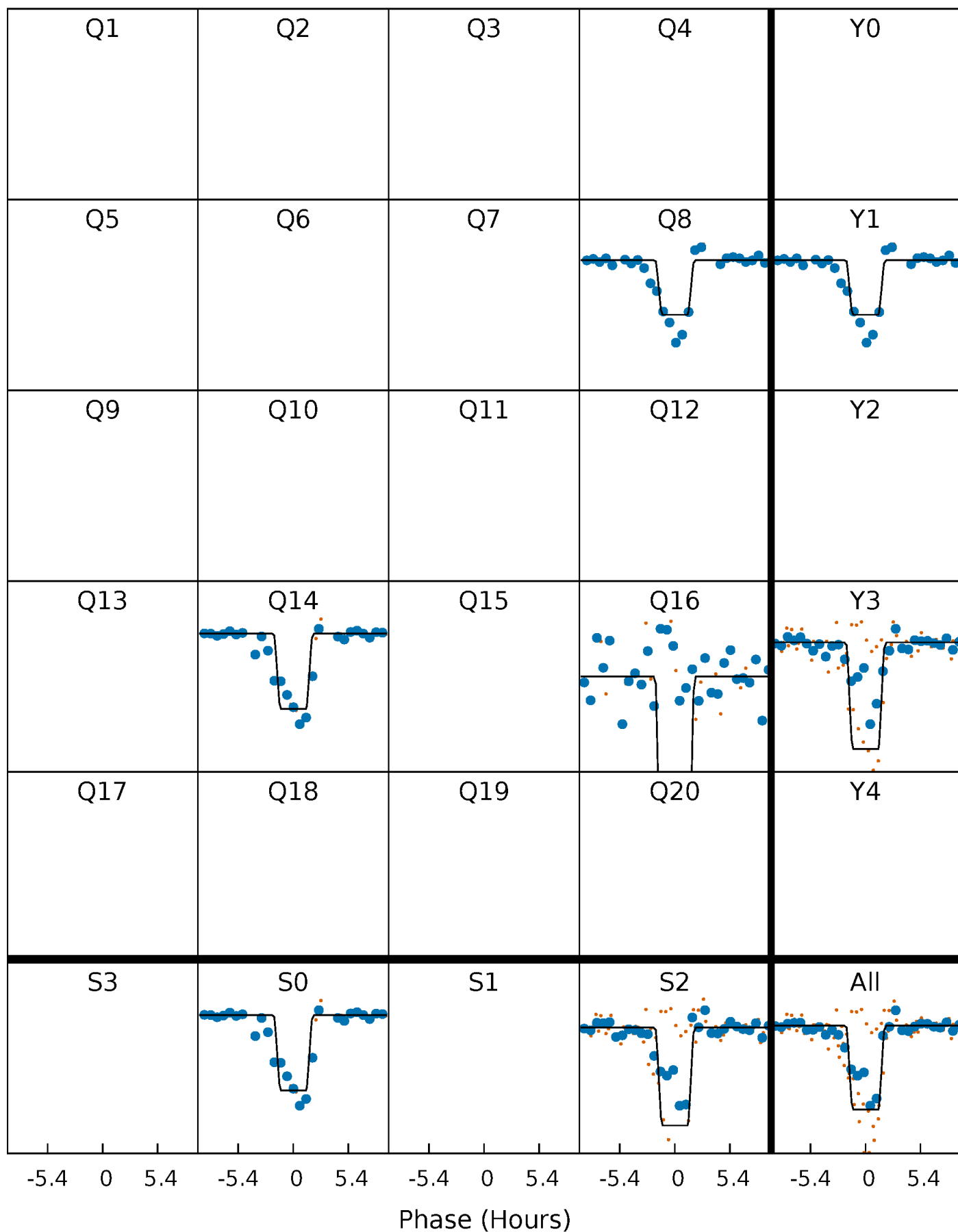
DV Quarter-Phased Transit Curves

TCE 010875937-06 $P=254.367071$ Days $T_0=265.286259$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

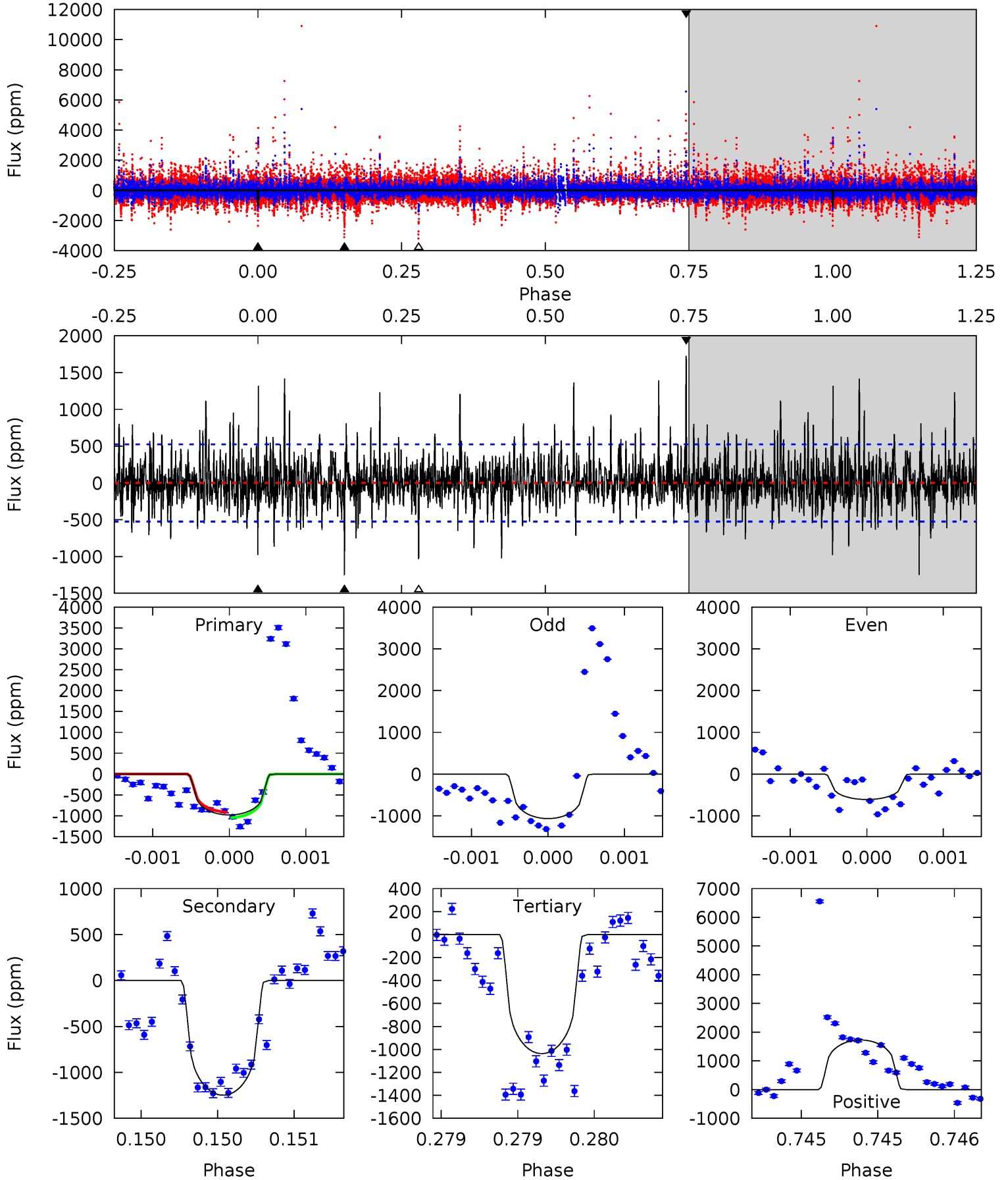
TCE 010875937-06 P=254.361046 Days $T_0=265.327385$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-06, P = 254.367071 Days, E = 265.286259 Days

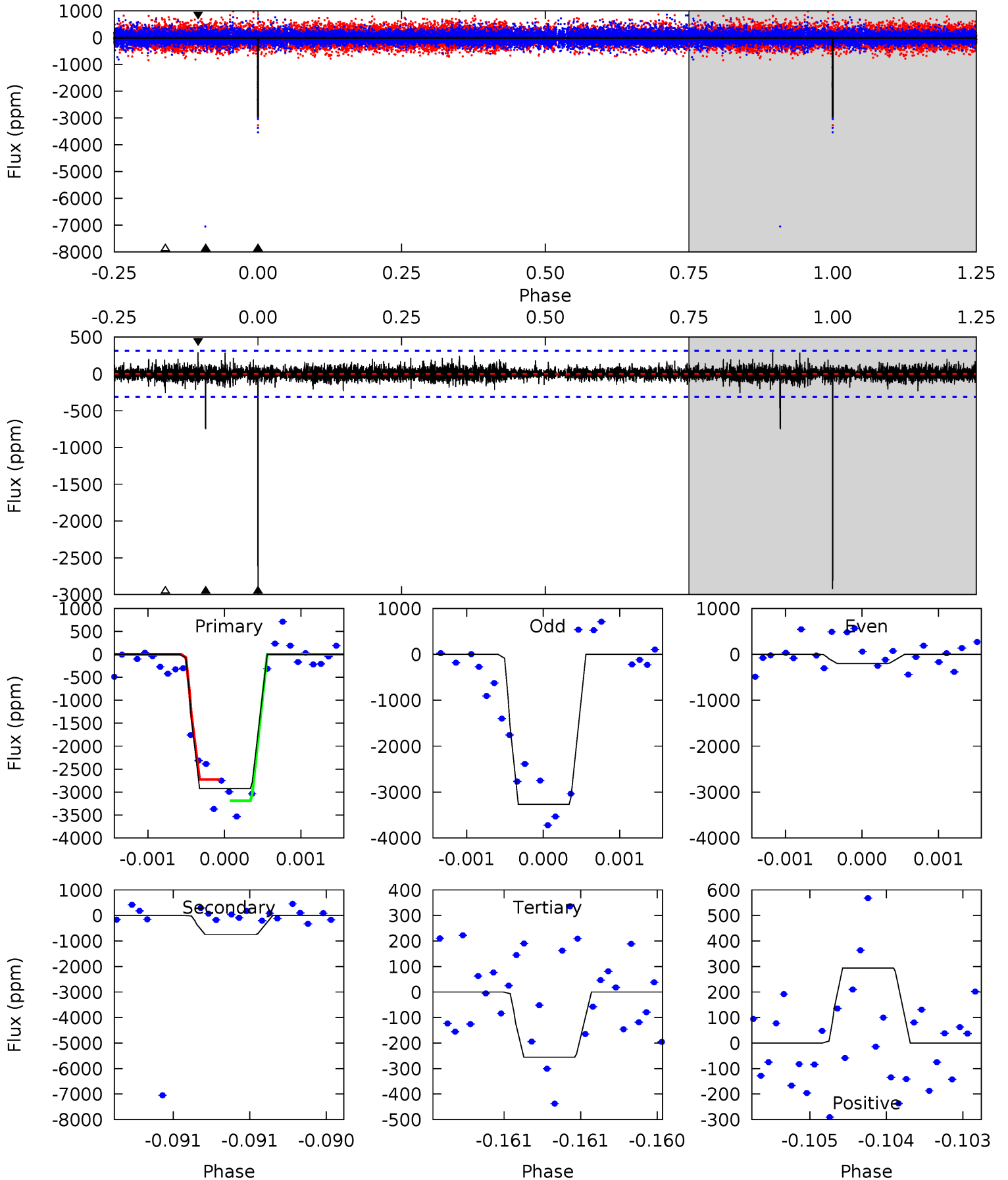
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	13.0	10.8	18.0	5.49	3.35	2.60	-0.60	-7.82	2.21	-5.01	1.33	1.50	0.58	0.71



Alt Model-Shift Uniqueness Test

010875937-06, P = 254.361046 Days, E = 265.327385 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.6	13.2	4.51	5.20	5.54	3.43	0.87	47.1	46.4	8.71	8.02	28.1	0.73	0.09	0



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1248 ± 96	$18.22^{+18.70}_{-11.56}$	730^{+116}_{-89}	4716^{+3113}_{-957}	1183^{+8013}_{-876}
Alt.	-748 ± 57	$27.00^{+19.97}_{-15.19}$	733^{+112}_{-87}	3756^{+1298}_{-543}	341^{+1304}_{-232}

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

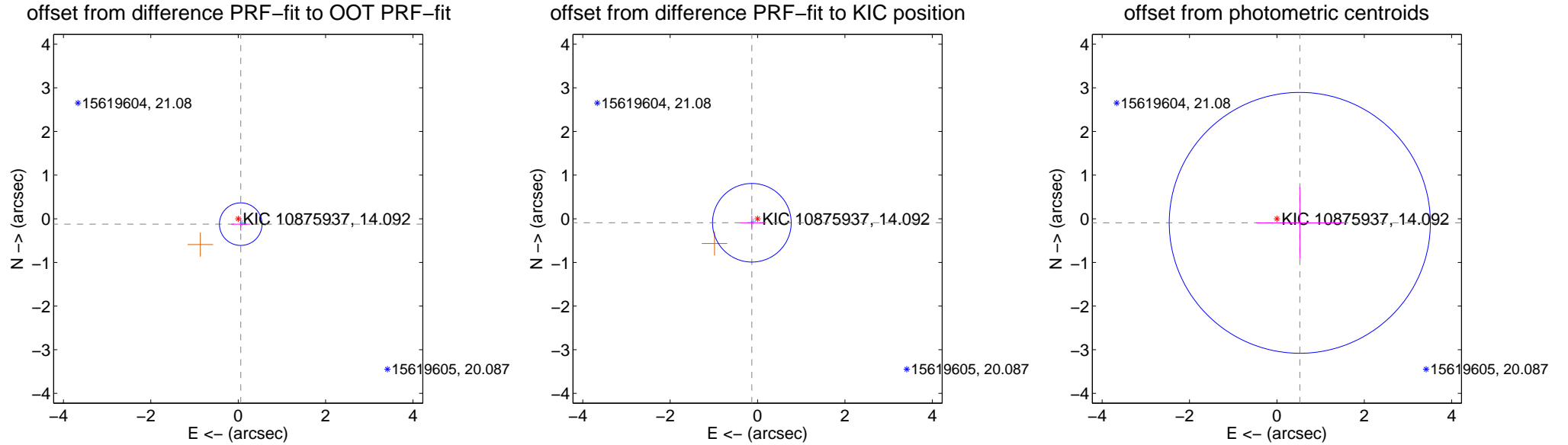
DV Centroid Data

Supplemental centroid analysis for 010875937-06. Kepler magnitude: 14.09. Transit SNR 5.12

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.136 ± 0.163	0.84	-0.058 ± 0.216	-0.123 ± 0.148
PRF-fit source offset from KIC position	0.159 ± 0.300	0.53	0.130 ± 0.264	-0.092 ± 0.160
photometric centroid source offset	0.53 ± 1.00	0.53	-0.52 ± 1.00	-0.09 ± 0.82

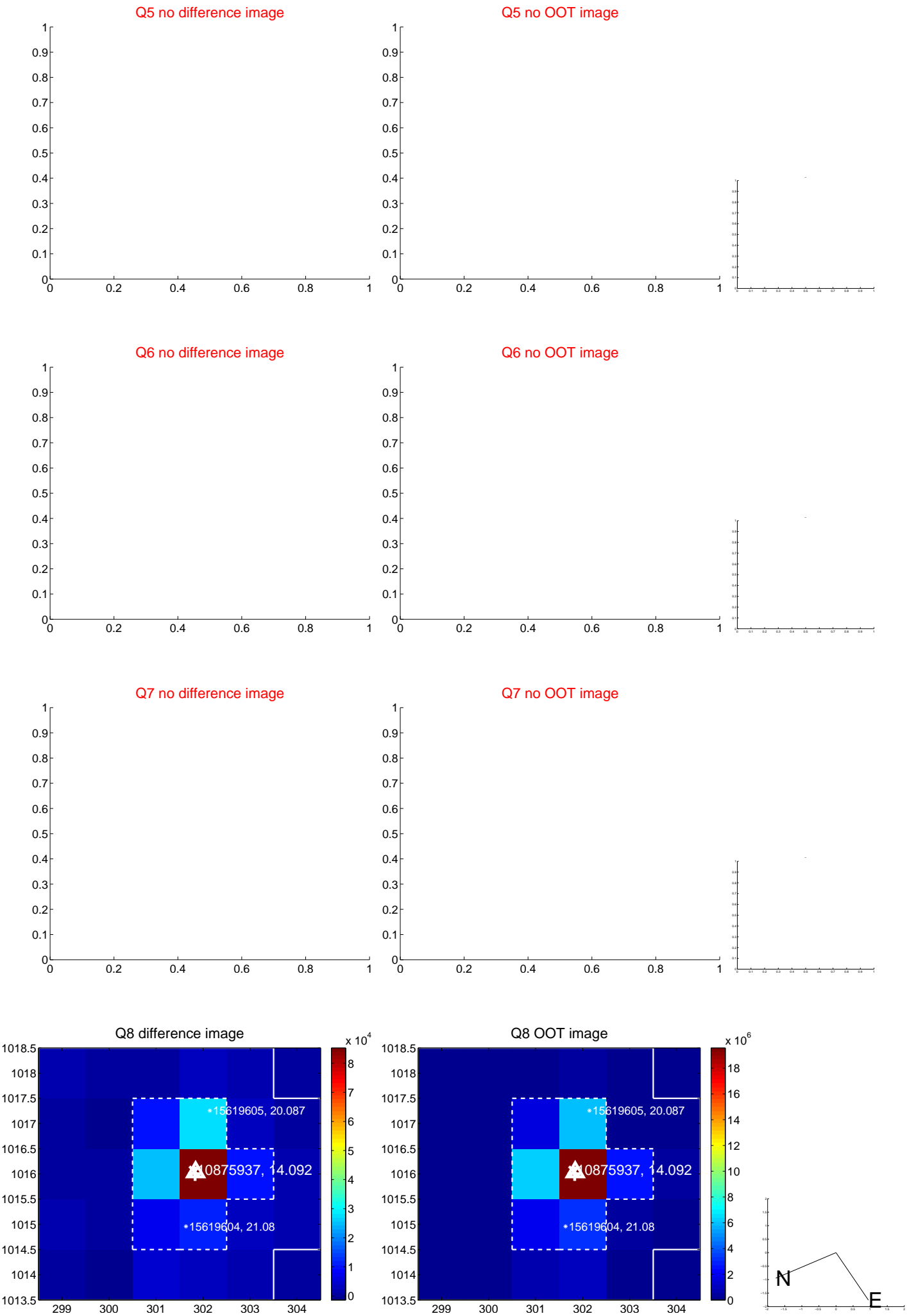


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q13 no difference image



Q13 no OOT image



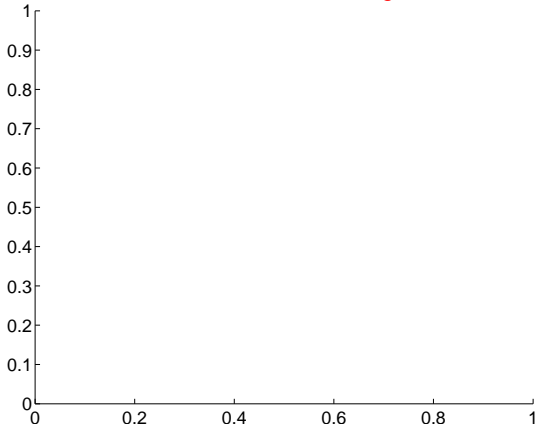
Q14 no difference image



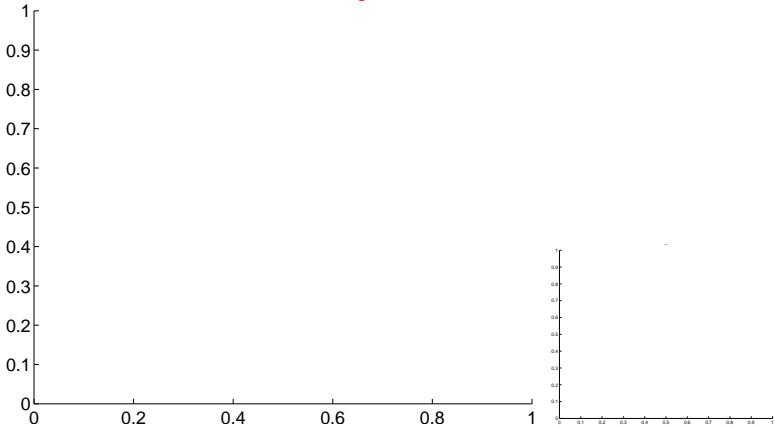
Q14 no OOT image



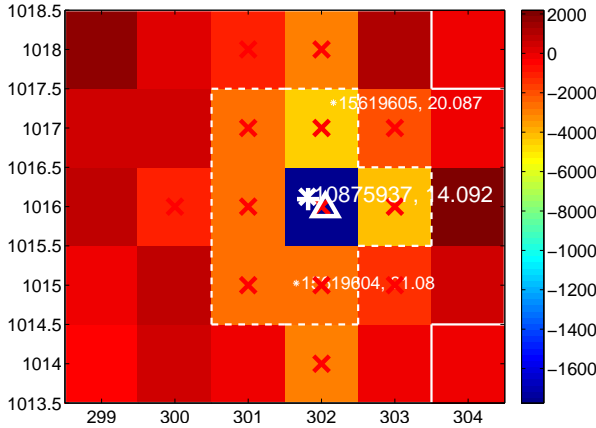
Q15 no difference image



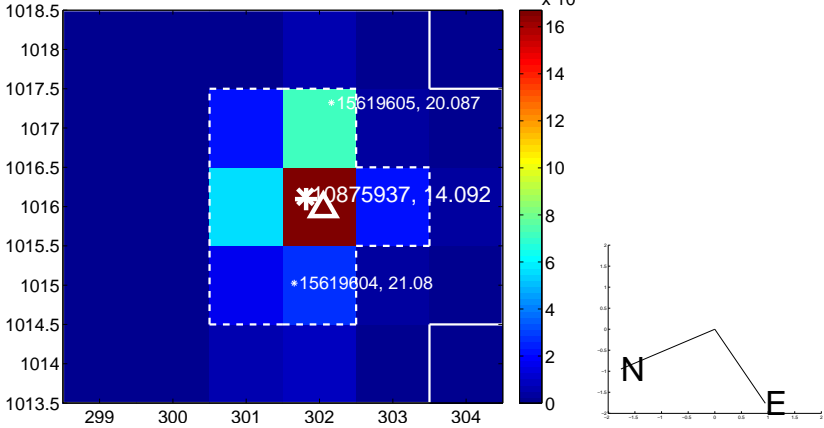
Q15 no OOT image



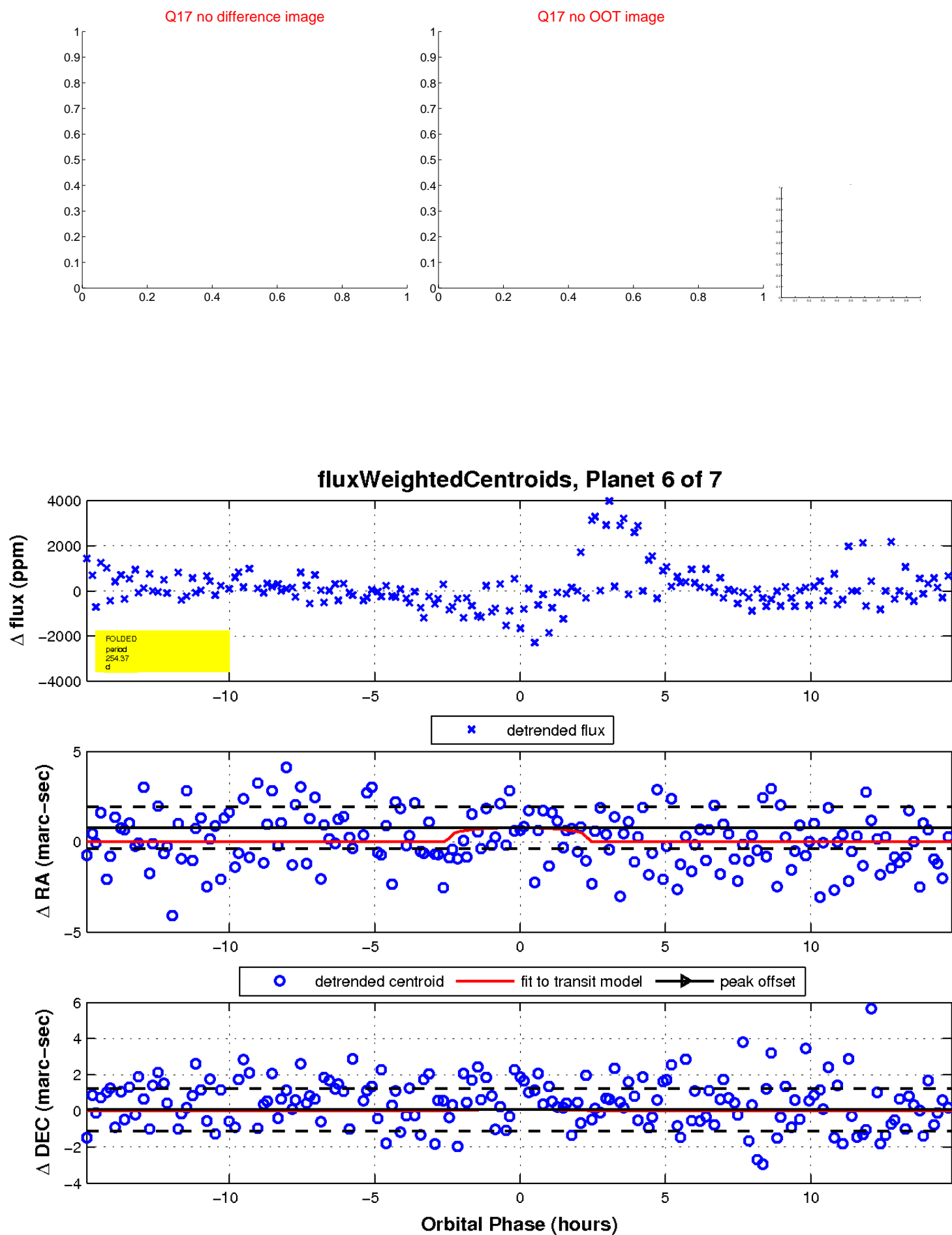
Q16 difference image. Poor Quality



Q16 OOT image

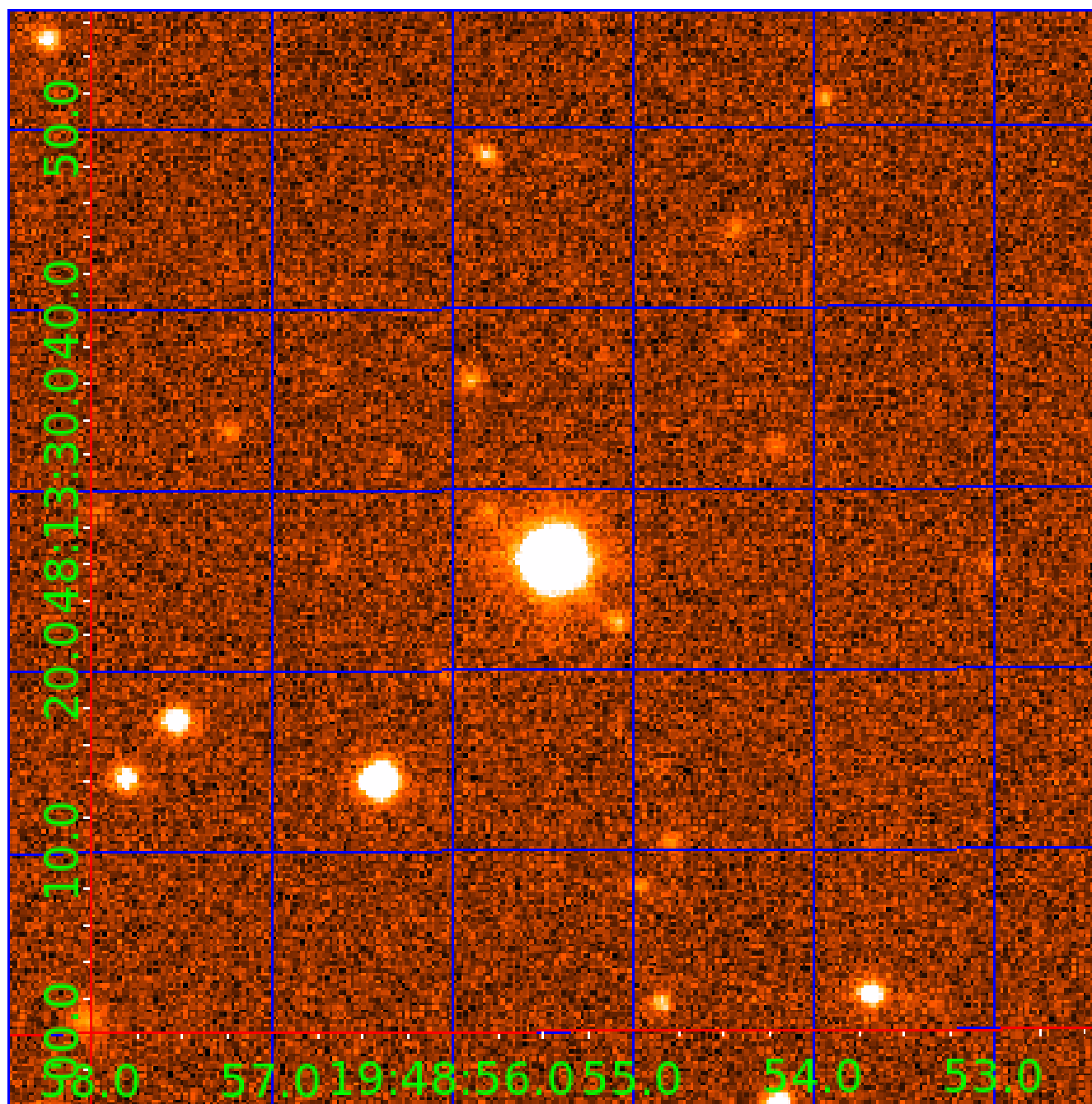


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010875937

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})
010875937-01	OBS	No	345.495212	168.817211	2610.1	4.959	28.7	11.0	4.46	4878	34.24	11.90
010875937-02	OBS	No	212.359829	240.064915	1245.9	3.954	14.3	7.4	4.46	4878	17.02	22.77
010875937-03	OBS	No	220.884182	206.145978	1386.9	15.149	15.5	4.7	4.46	4878	16.30	21.61
010875937-04	OBS	No	337.010609	253.803101	1098.3	3.824	13.1	6.4	4.46	4878	15.92	12.30
010875937-05	OBS	No	348.841548	212.881353	1572.5	7.375	12.8	8.5	4.46	4878	18.34	11.75
010875937-06	OBS	No	254.367071	265.286259	1016.9	4.999	11.5	5.1	4.46	4878	14.87	17.90
010875937-07	OBS	8216.01	307.947372	316.019229	507.8	15.000	11.3	-1.0	4.46	4878	9.74	13.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010875937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_FEW_DIFFS
010875937-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010875937-07	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

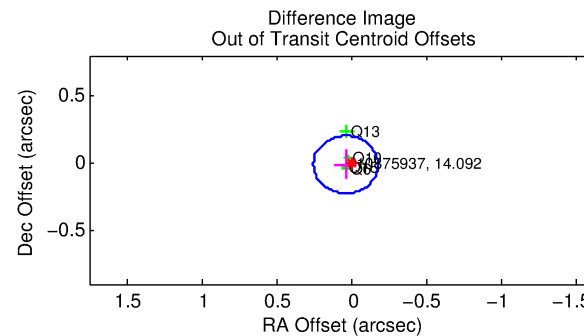
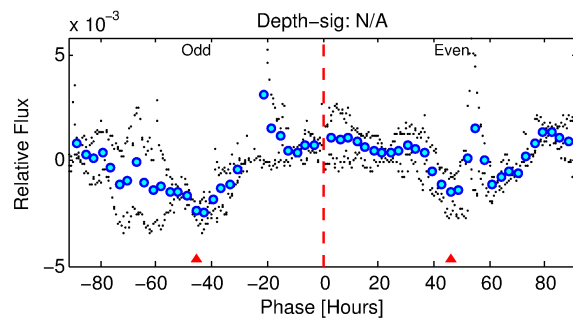
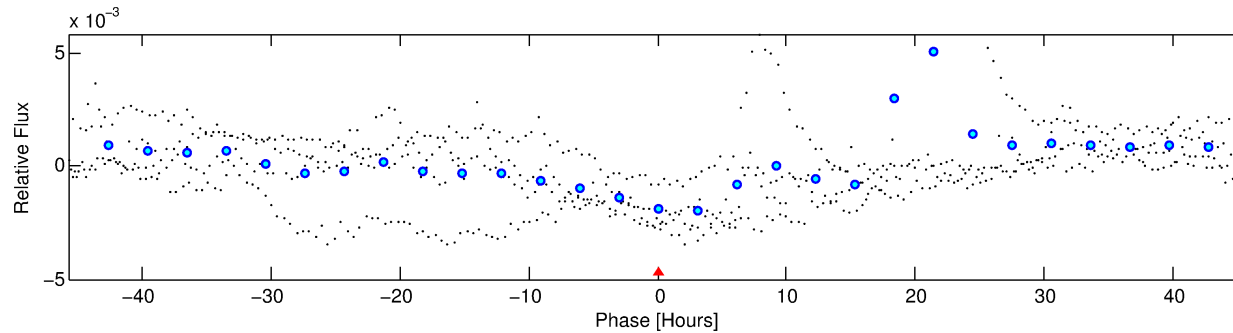
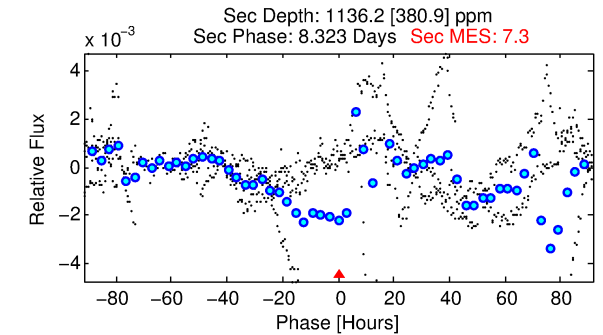
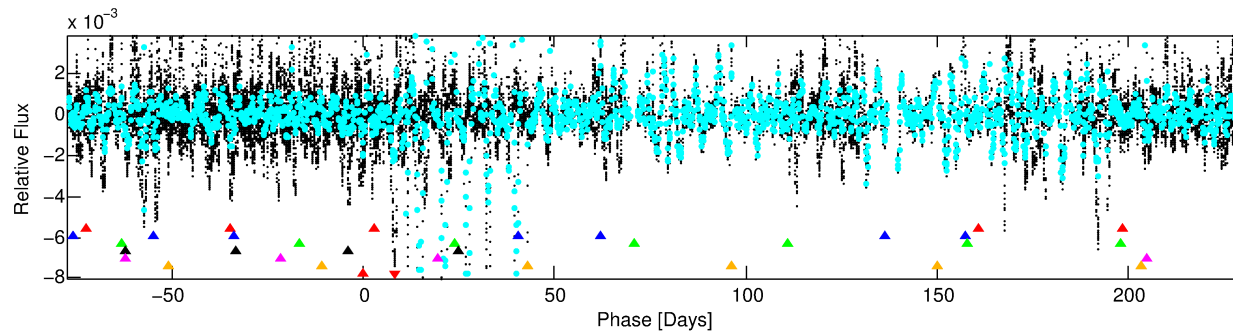
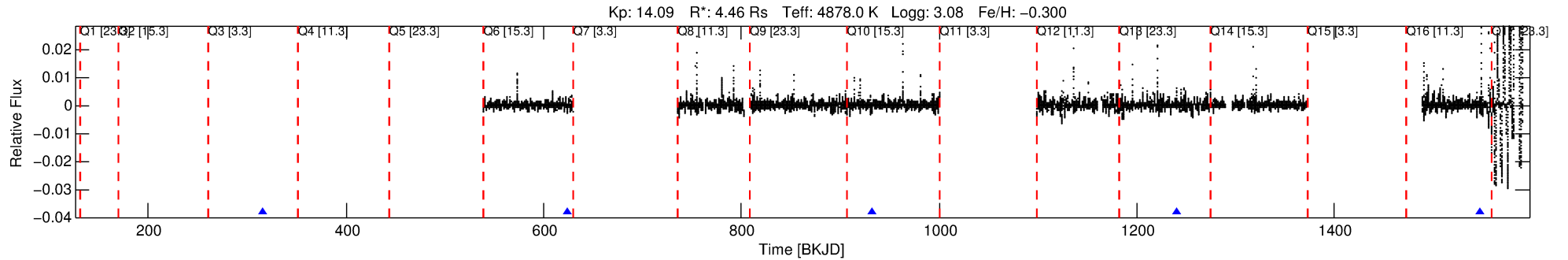
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010875937-07

No Significant Match Found

DV One-Page Summary

KIC: 10875937 Candidate: 7 of 7 Period: 307.947 d



TPS TCE Results:

Period = 307.94737 d
Epoch = 316.0192 BKJD

DV fit results are unavailable

DV Diagnostic Results:

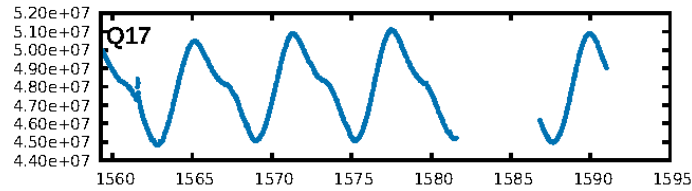
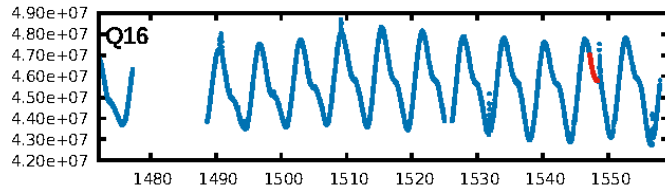
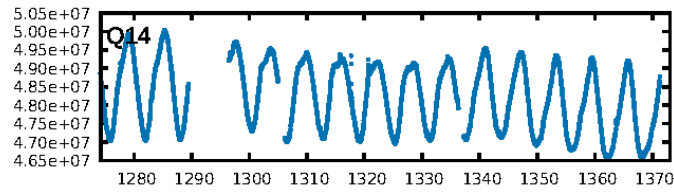
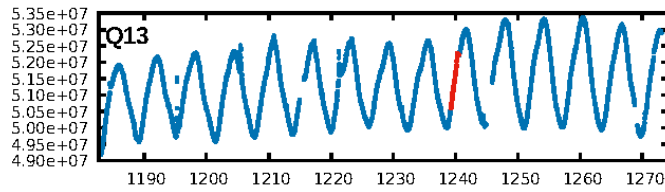
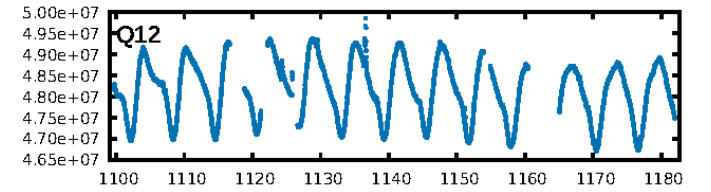
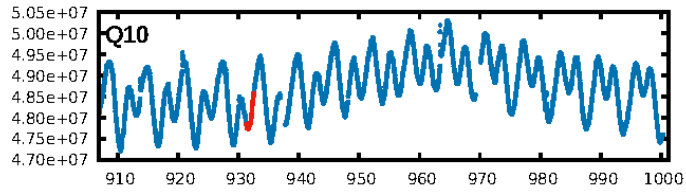
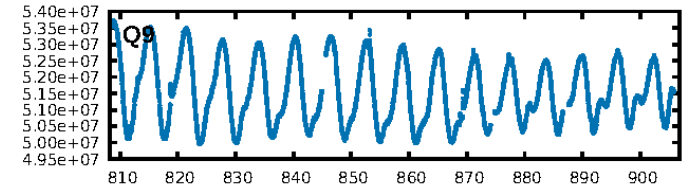
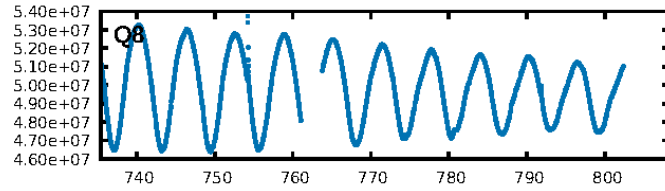
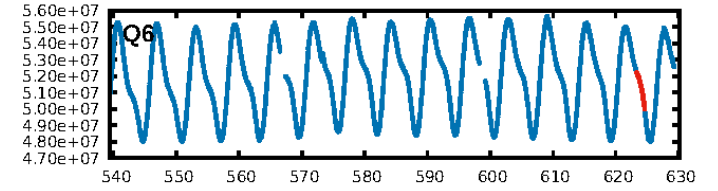
ShortPeriod-sig: 100.0% [81.33σ]
LongPeriod-sig: 100.0% [45.06σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.8484

Centroid-sig: 36.4%
Centroid-so: 0.248 arcsec [0.98σ]
OotOffset-rm: 0.038 arcsec [0.53σ]
KicOffset-rm: 0.253 arcsec [2.43σ]
OotOffset-st: 2/0/1/1 [4]
KicOffset-st: 2/0/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

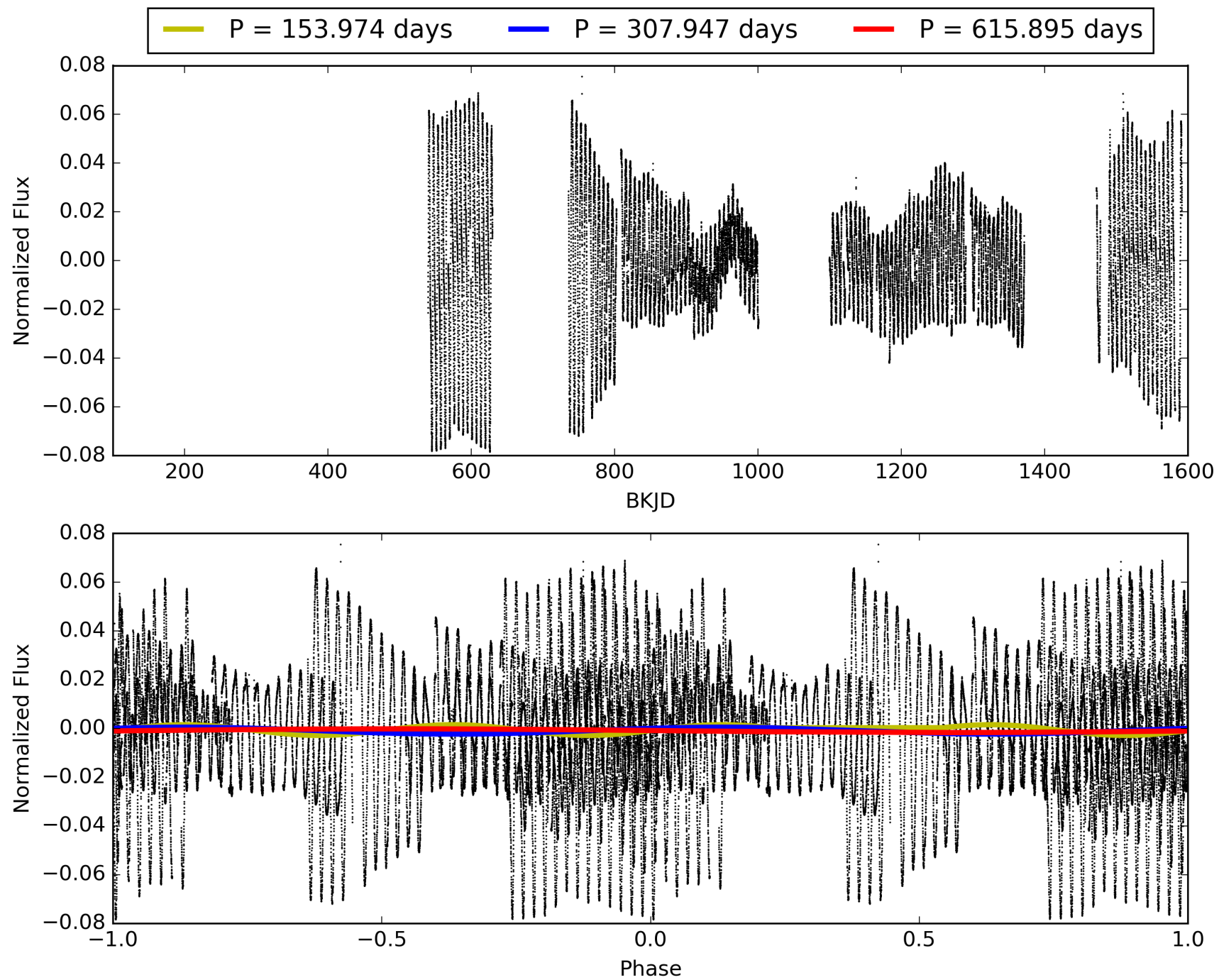
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:02:24 Z

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

TCE 010875937-07, PDC Light Curves

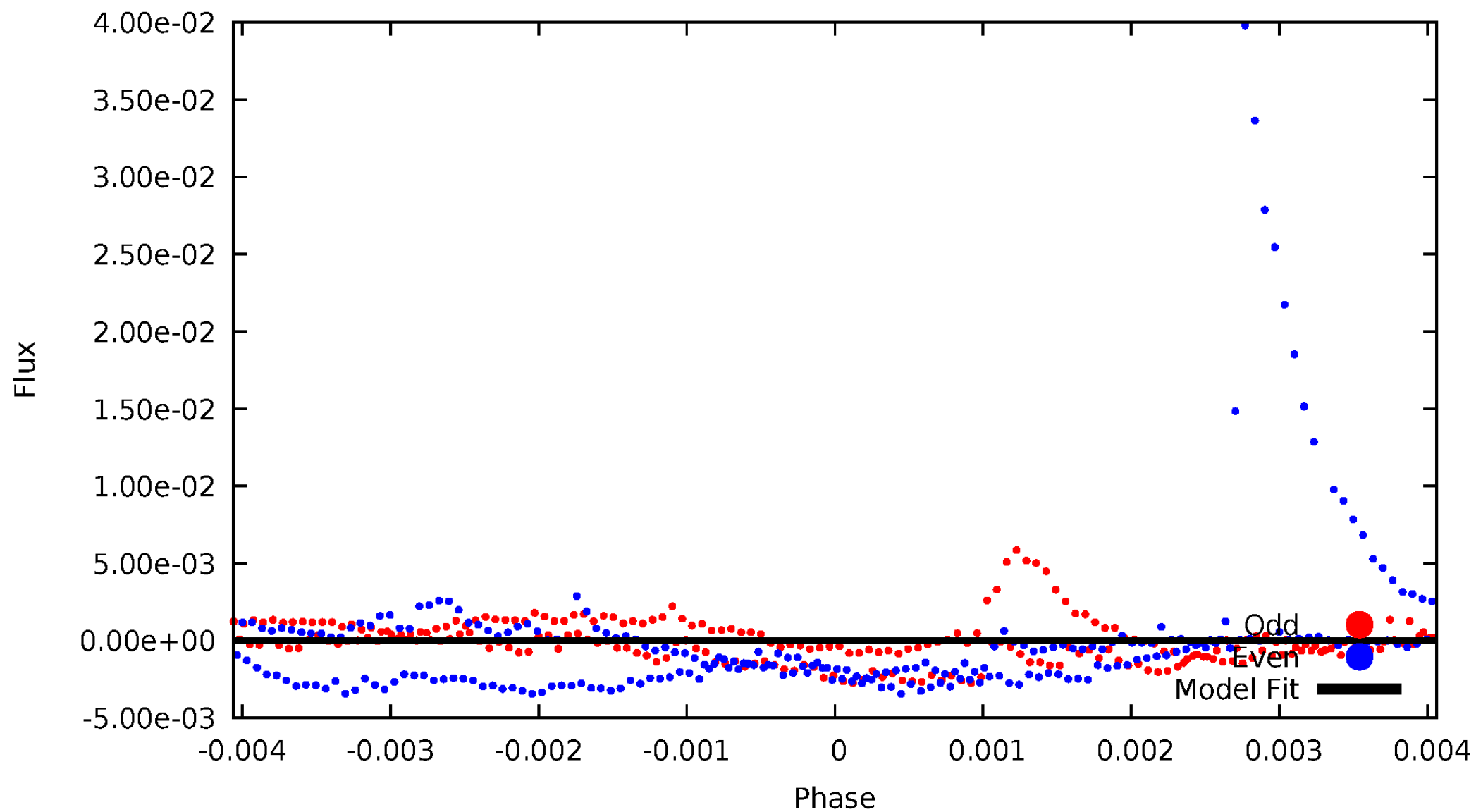


TCE 010875937-07



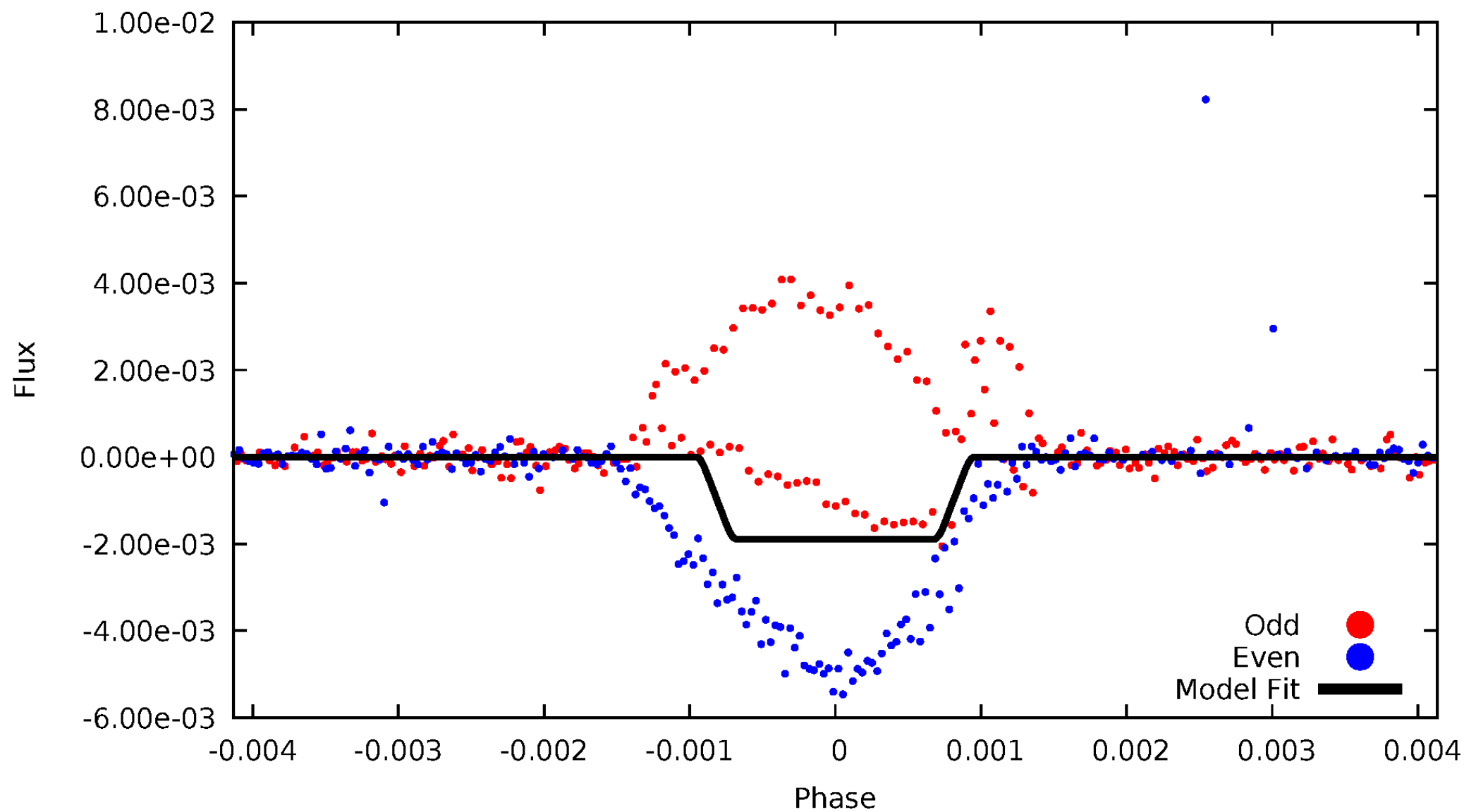
DV Odd/Even

TCE 010875937-07



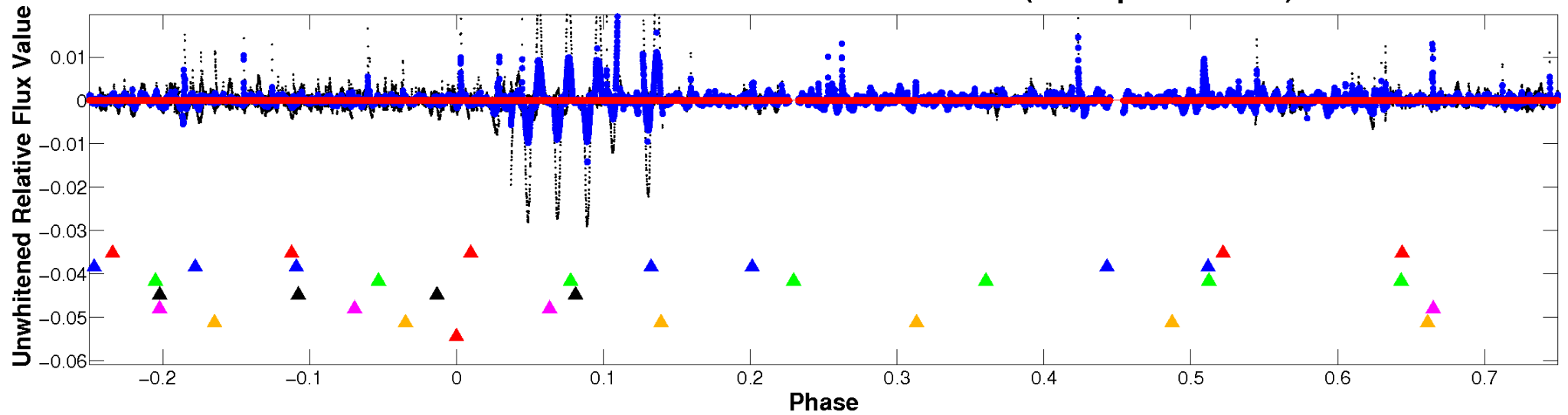
ALT Odd/Even

TCE 010875937-07



Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

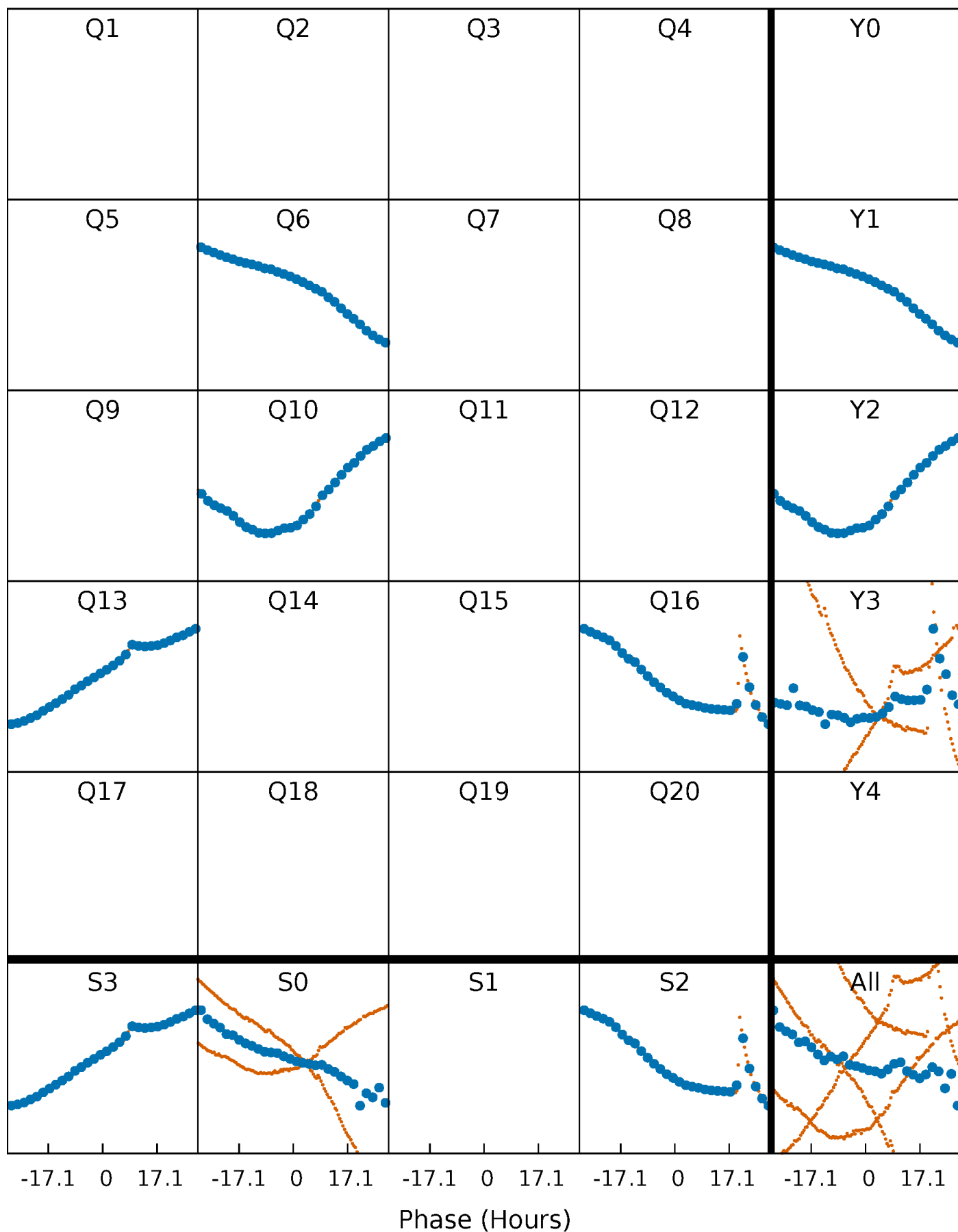


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



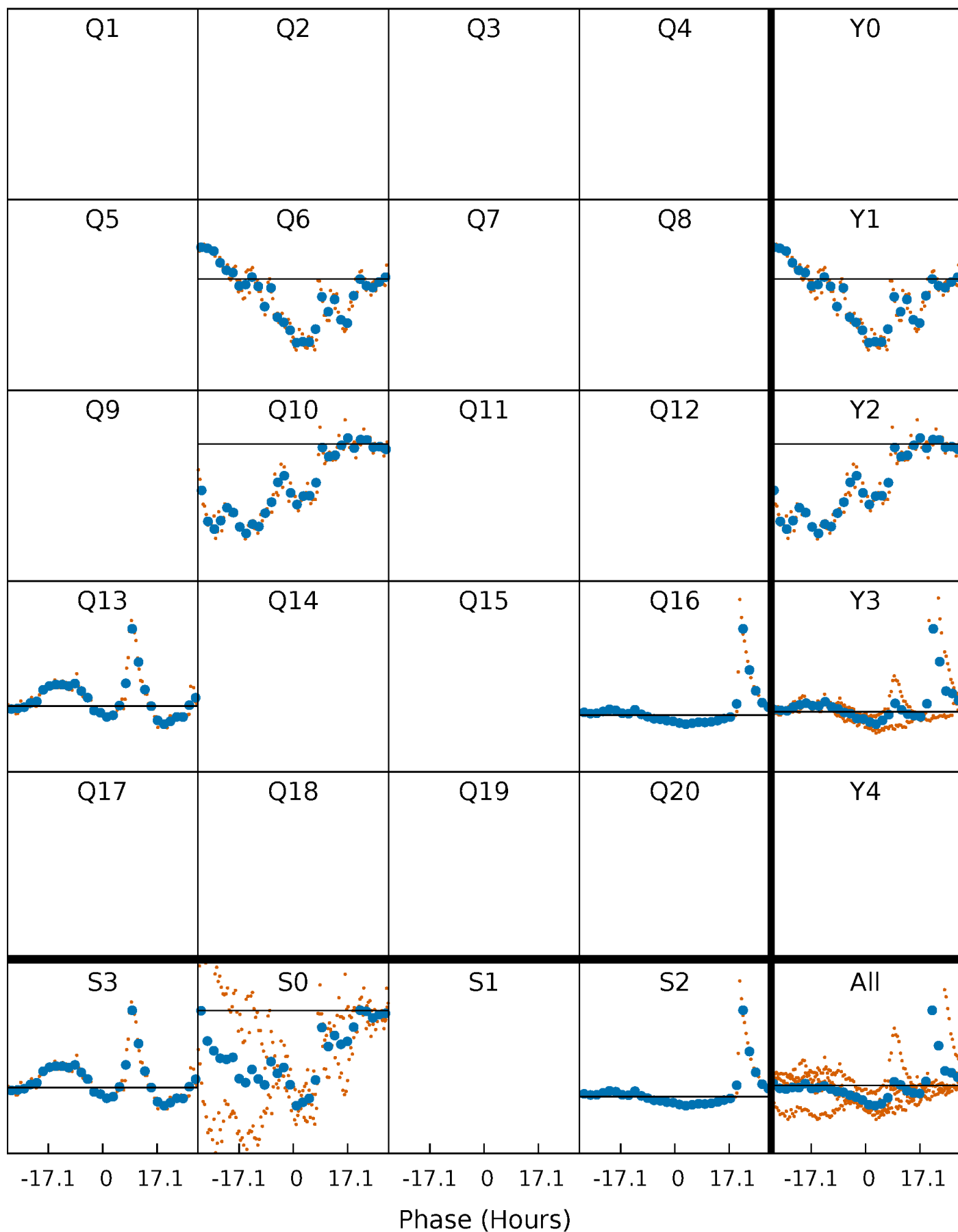
PDC Quarter-Phased Transit Curves

TCE 010875937-07 $P=307.947372$ Days $T_0=316.019229$ (BKJD)



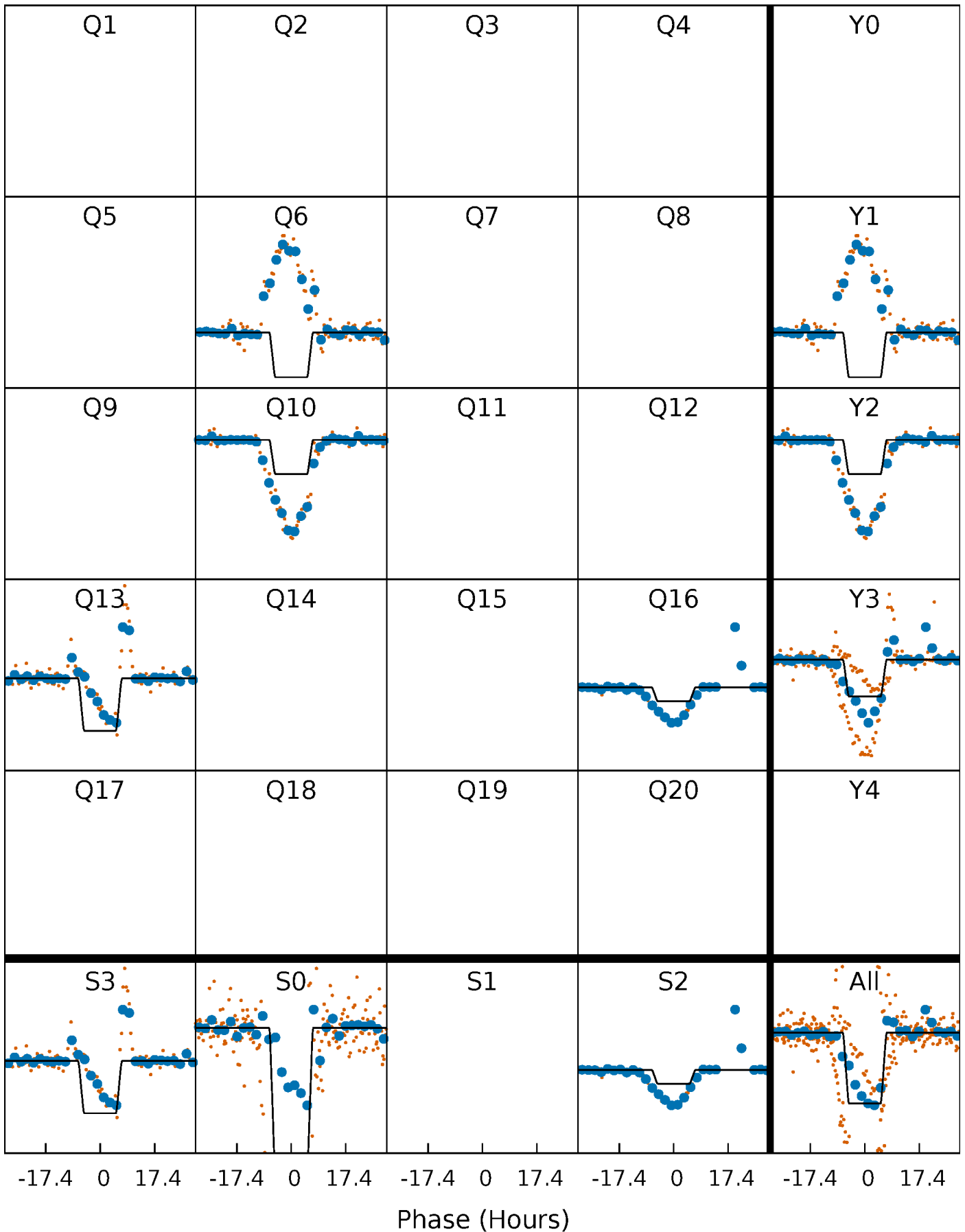
DV Quarter-Phased Transit Curves

TCE 010875937-07 $P=307.947372$ Days $T_0=316.019229$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

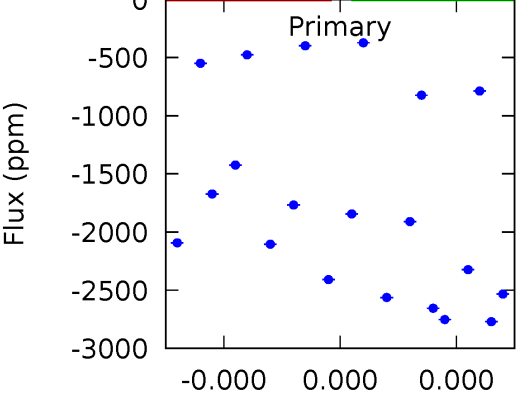
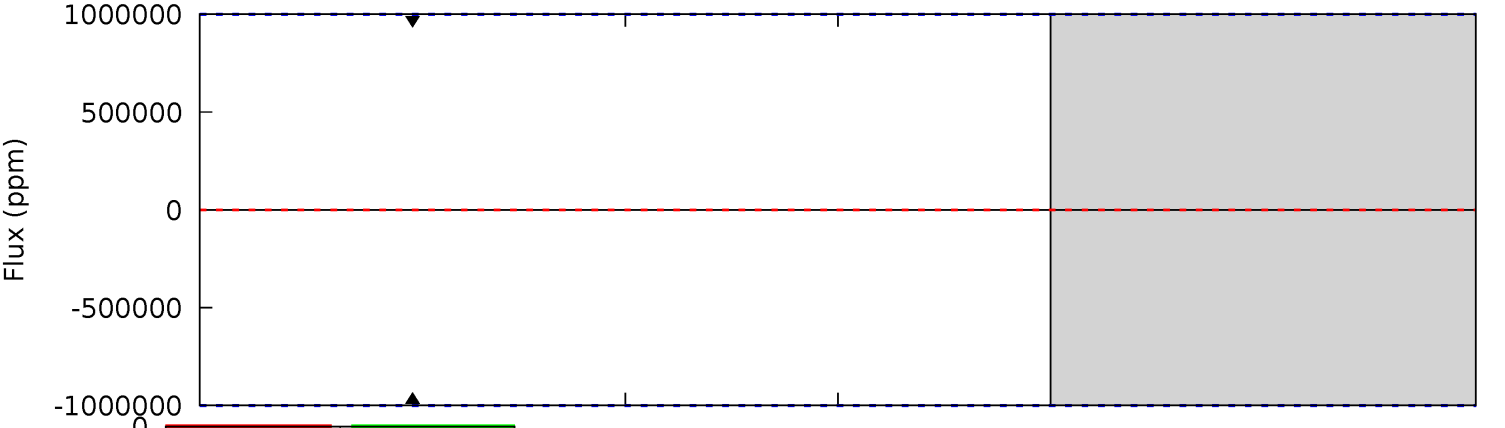
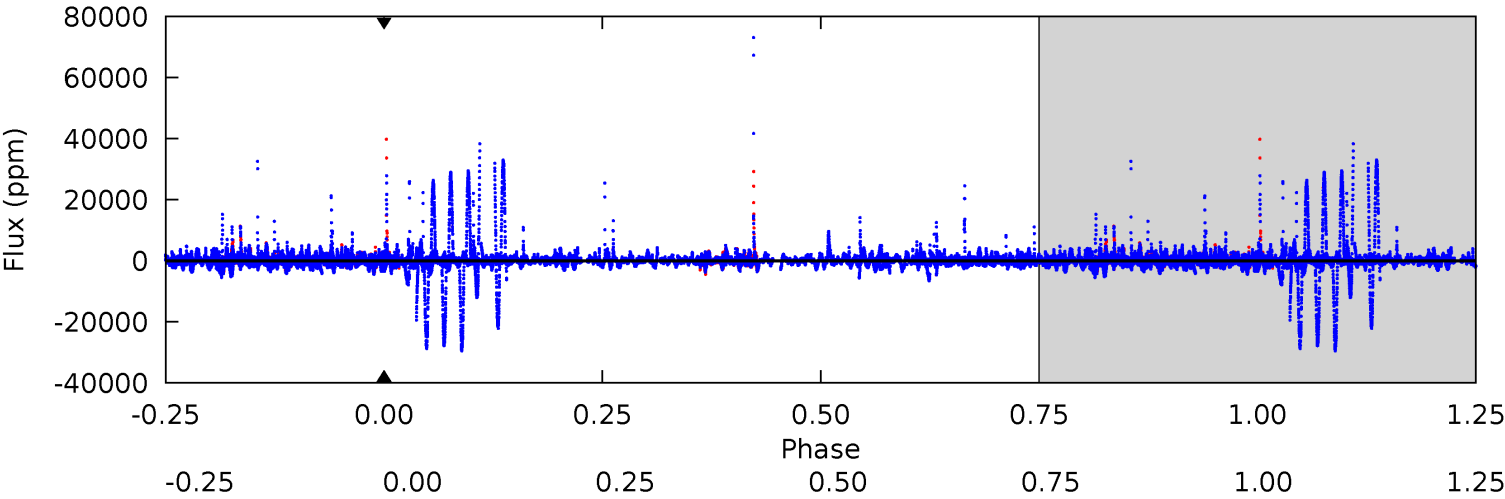
TCE 010875937-07 $P=307.947372$ Days $T_0=316.068507$ (BKJD)



DV Model-Shift Uniqueness Test

010875937-07, P = 307.947372 Days, E = 316.019229 Days

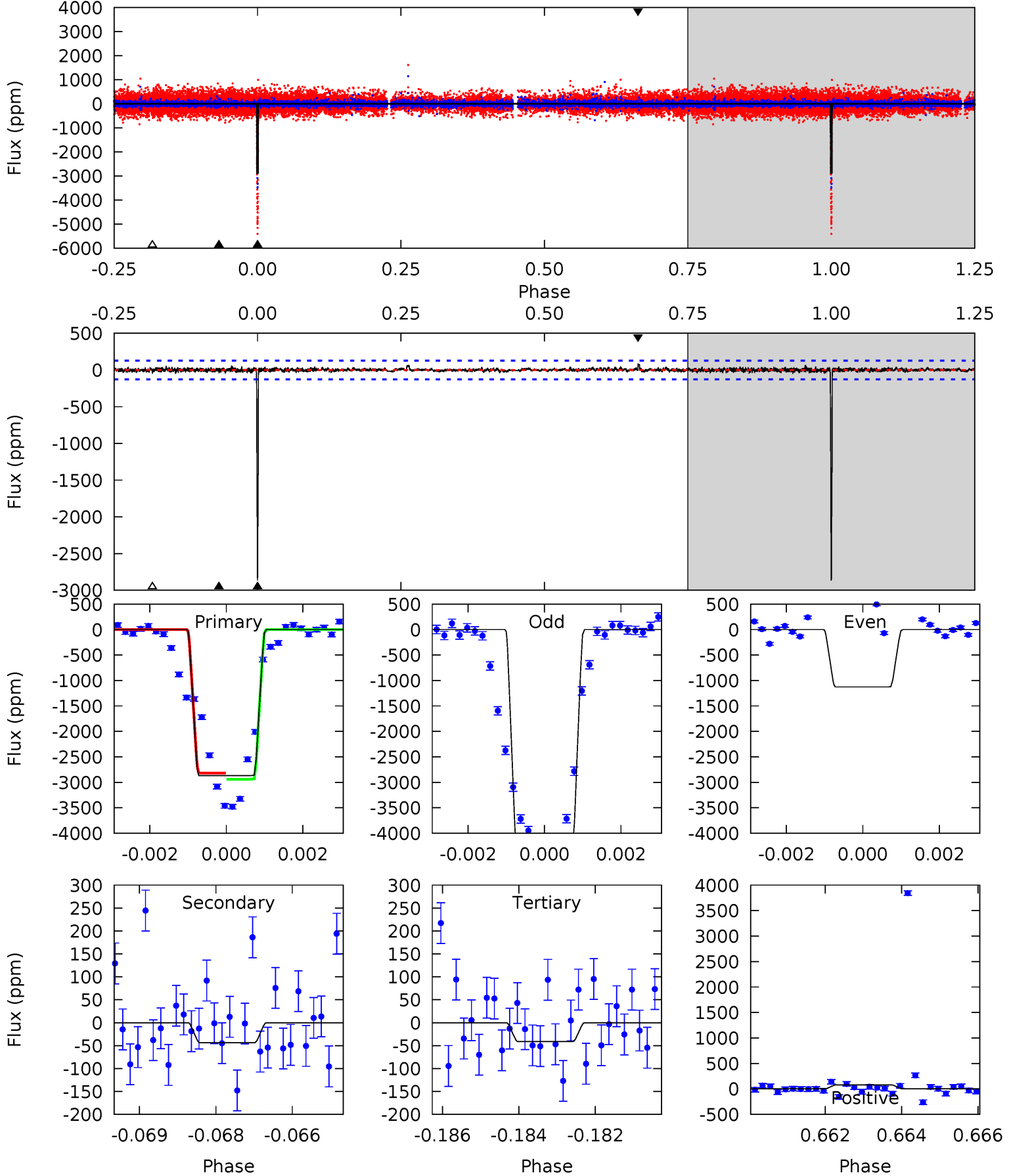
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010875937-07, P = 307.947372 Days, E = 316.068507 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.4	1.84	1.73	3.35	5.34	3.11	0.53	118.7	117.1	0.10	-1.51	83.3	0.64	0.03	2.54



Stellar Parameters For KIC 010875937

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4878^{+147}_{-117}	$3.080^{+0.413}_{-0.337}$	$-0.300^{+0.300}_{-0.200}$	$4.461^{+2.768}_{-1.490}$	$0.874^{+0.329}_{-0.164}$	$0.014^{+0.039}_{-0.010}$
	+3%/-2%	+13%/-11%	+100%/-67%	+62%/-33%	+38%/-19%	+280%/-75%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010875937-07 / KOI 8216.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$35.04^{+44.75}_{-24.45}$	684^{+99}_{-77}	-2792^{+18490}_{-11399}	$-42.766^{+64109.195}_{-54238.840}$
Alt.	-44 ± 24	$43.98^{+43.16}_{-31.05}$	686^{+93}_{-79}	2210^{+755}_{-362}	$8.477^{+87.314}_{-6.820}$

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

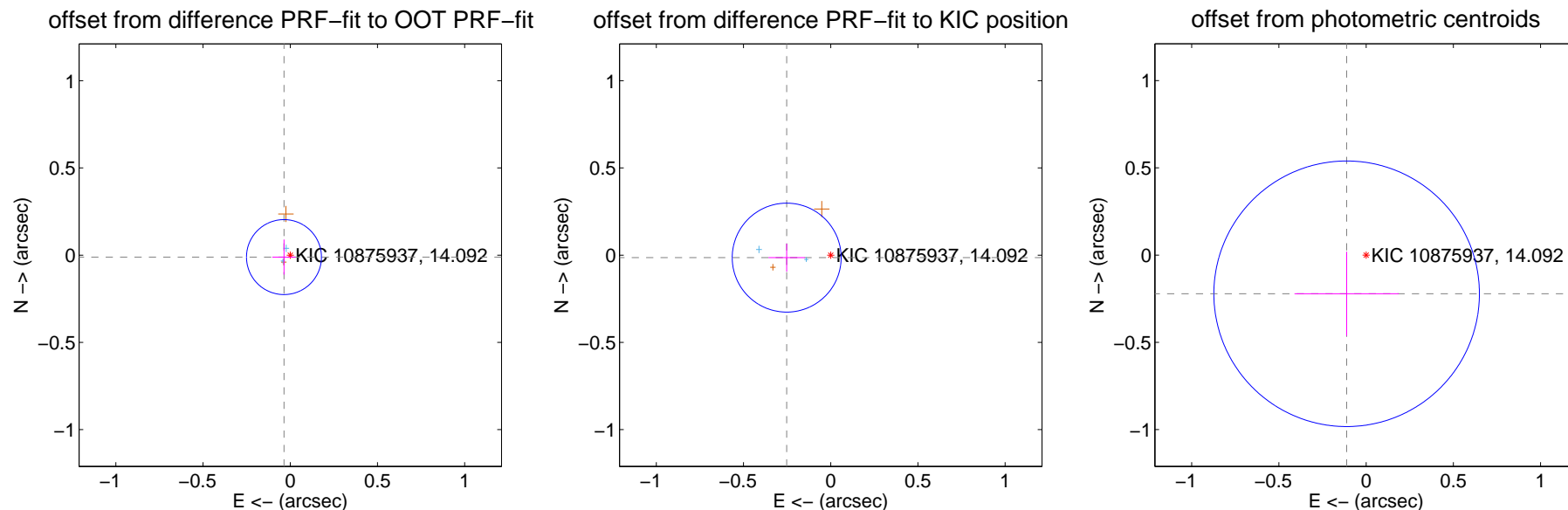
DV Centroid Data

Supplemental centroid analysis for 010875937-07. Kepler magnitude: 14.09. Transit SNR -1.00

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	0.038 ± 0.072	0.53	0.036 ± 0.067	-0.011 ± 0.101
PRF-fit source offset from KIC position	0.253 ± 0.104	2.43	0.253 ± 0.104	-0.014 ± 0.080
photometric centroid source offset	0.25 ± 0.25	0.98	0.11 ± 0.30	-0.22 ± 0.24

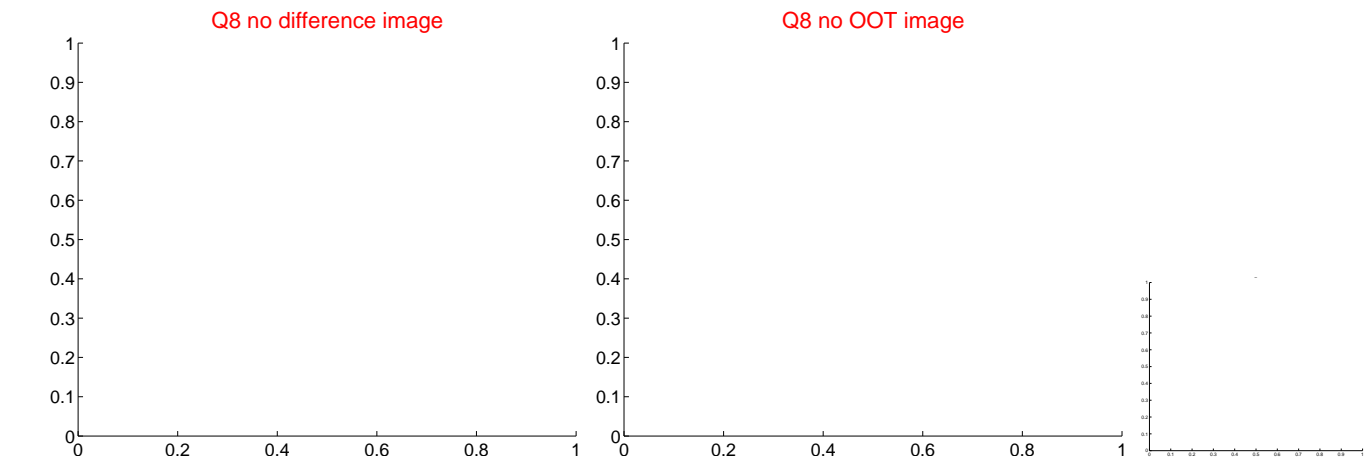
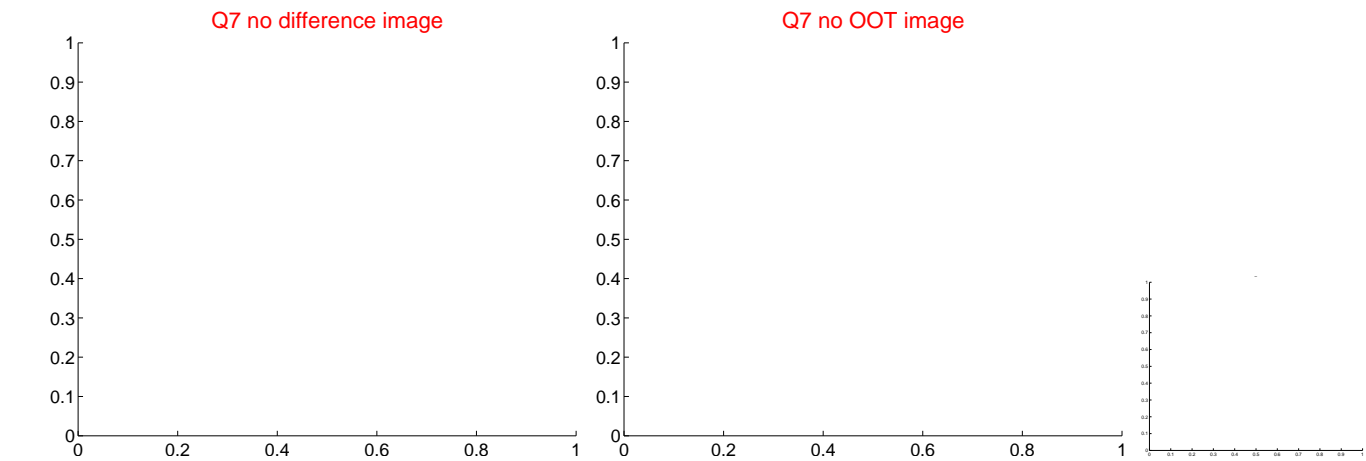
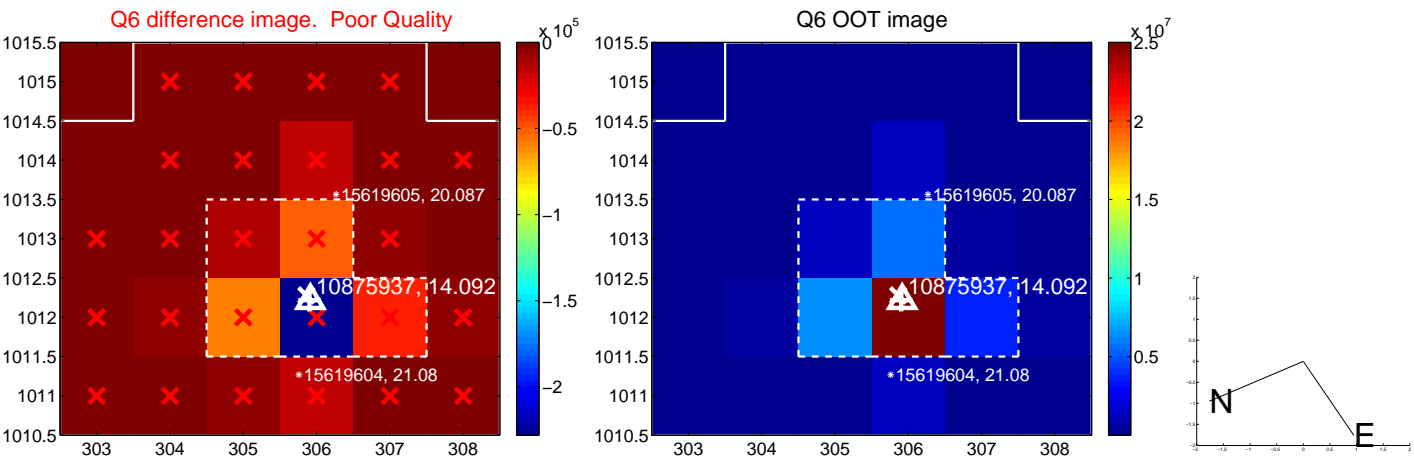
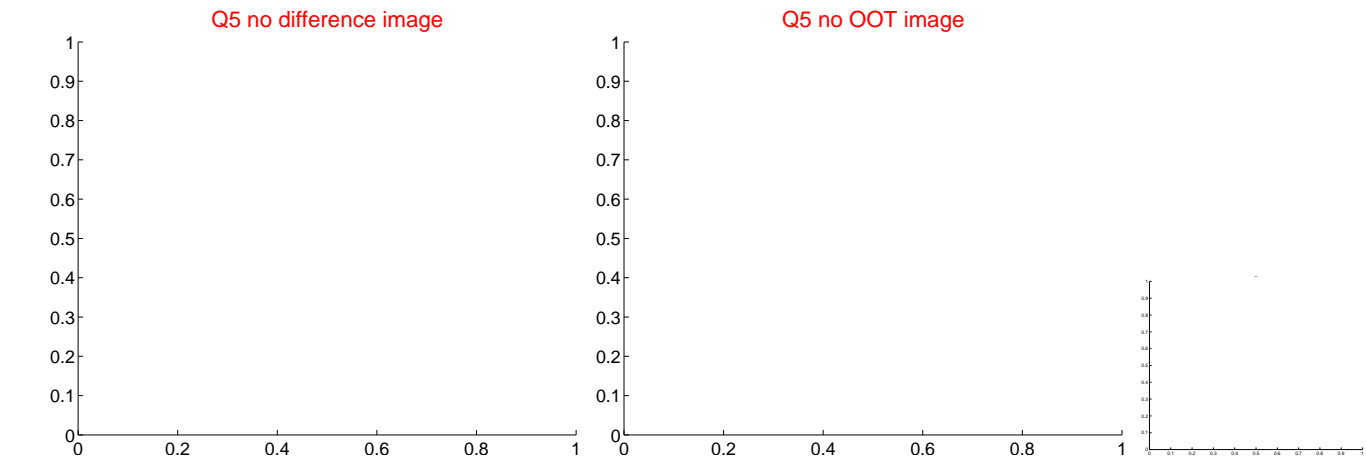


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

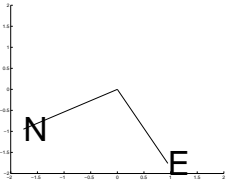
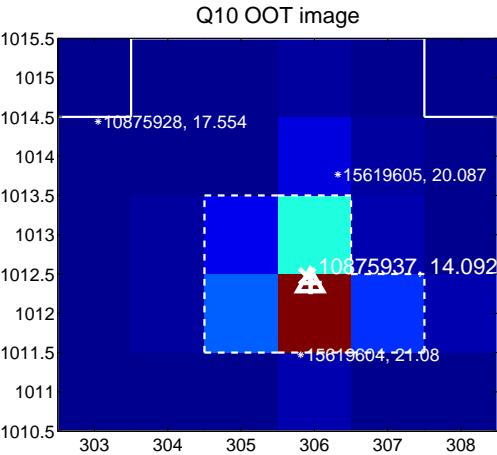
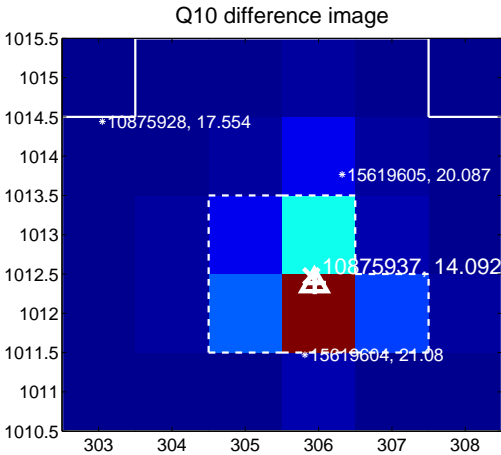


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

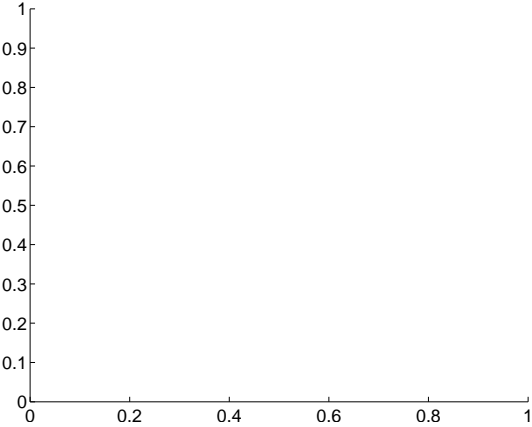
Q9 no difference image



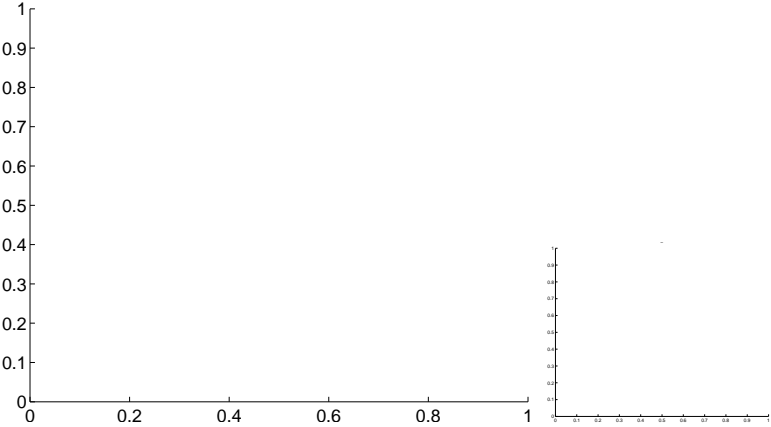
Q9 no OOT image



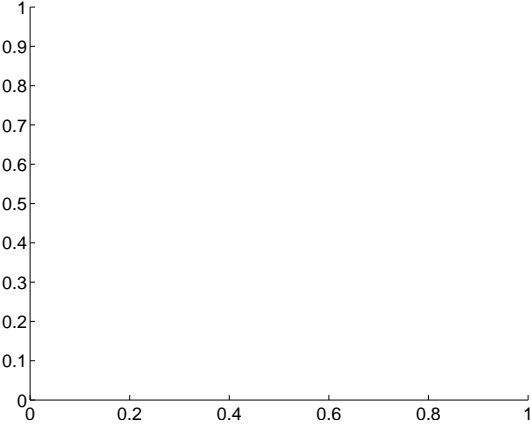
Q11 no difference image



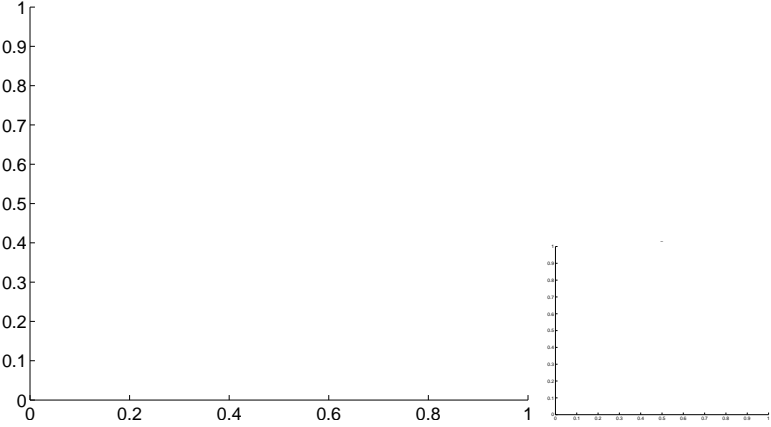
Q11 no OOT image



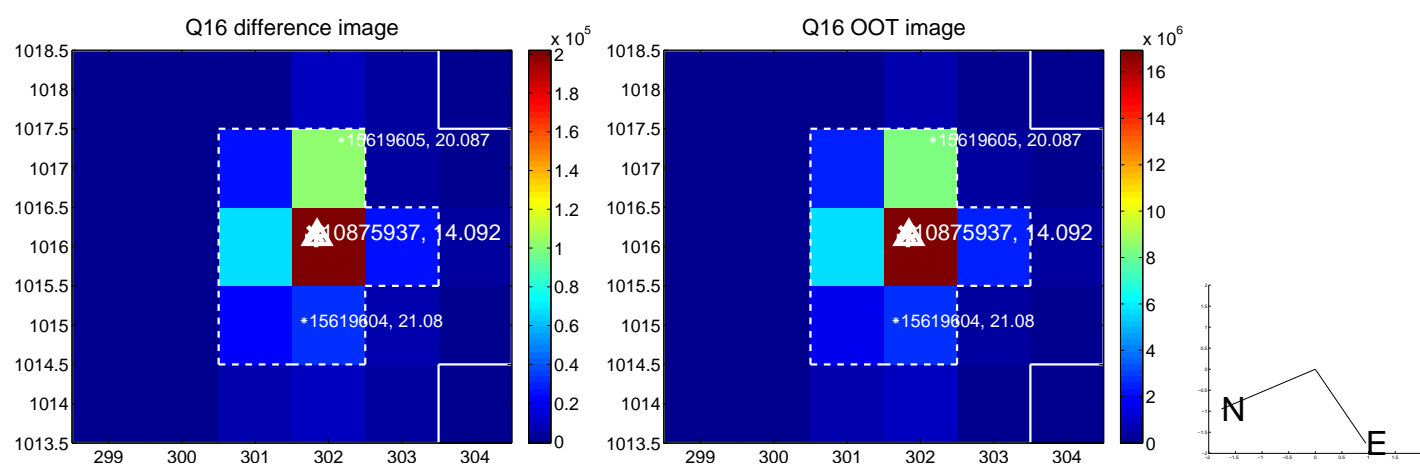
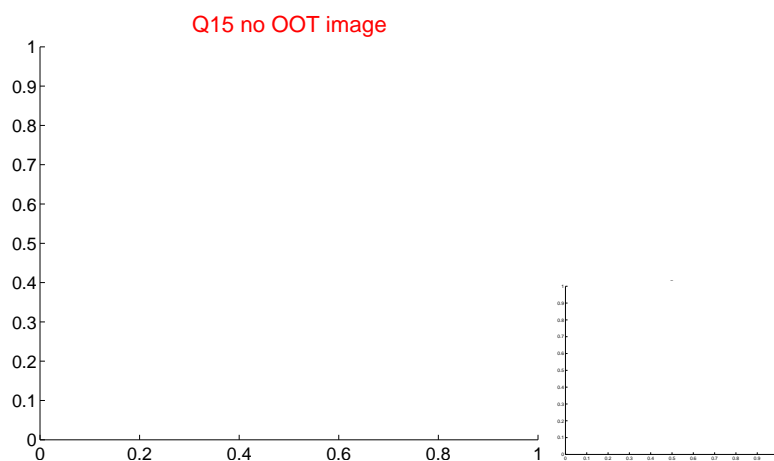
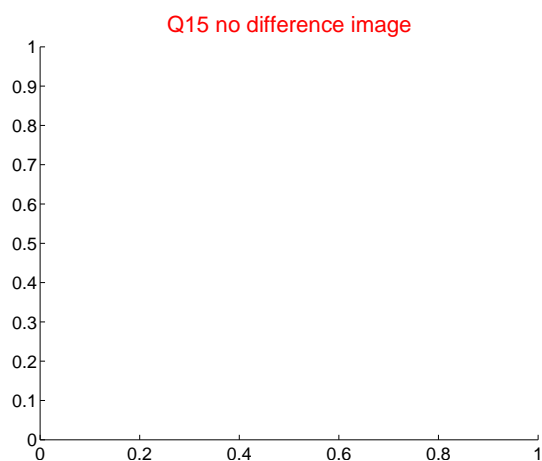
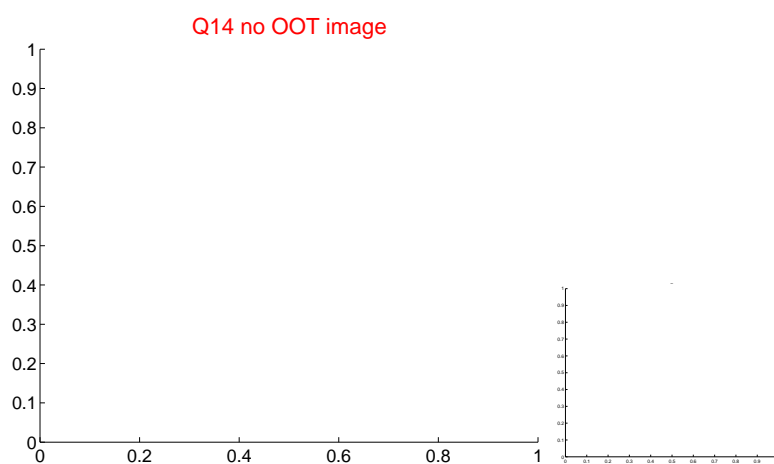
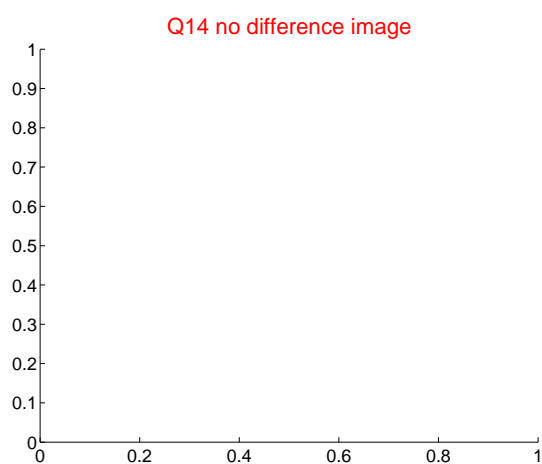
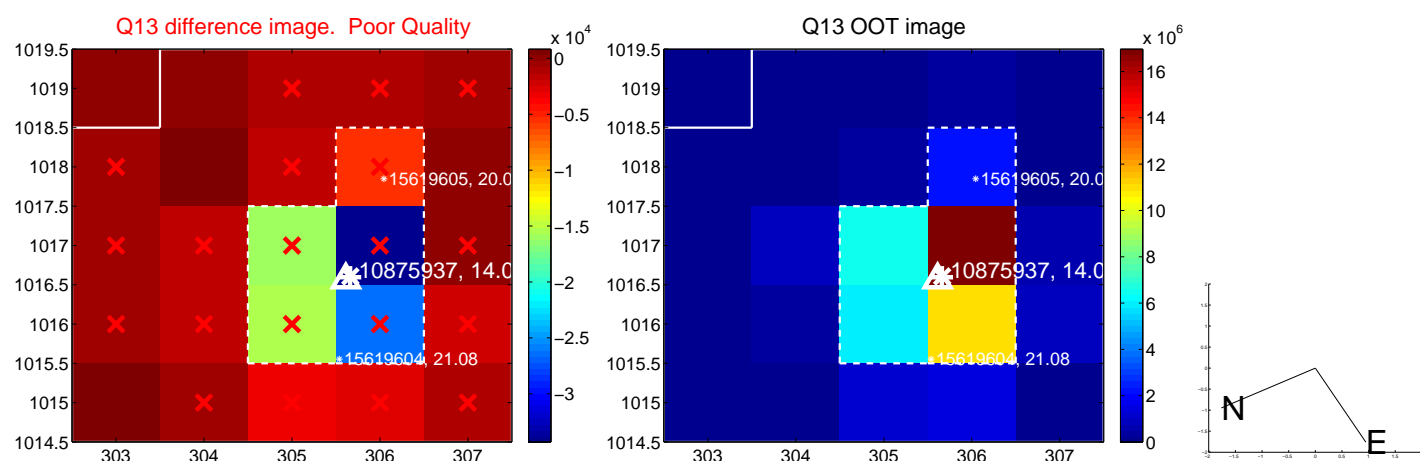
Q12 no difference image



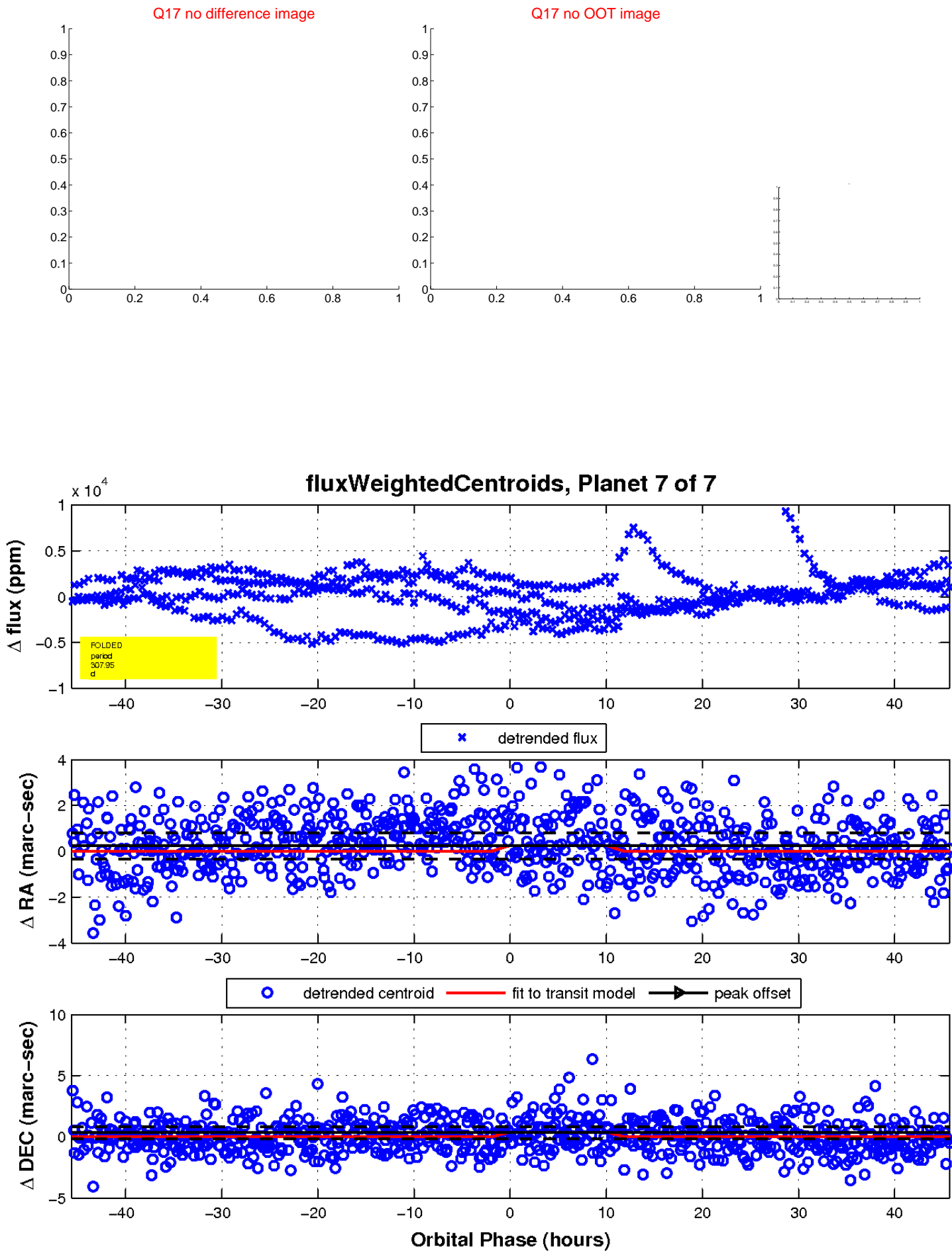
Q12 no OOT image



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

