

KIC 006033873

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})
006033873-01	OBS	No	703.252767	136.039810	2901.3	3.048	14.1	8.4	0.93	5693	5.50	0.40
006033873-02	OBS	No	510.048627	546.178486	3322.7	5.013	12.1	8.2	0.93	5693	6.68	0.61
006033873-03	OBS	No	463.542658	355.915483	2860.2	3.715	12.8	7.3	0.93	5693	4.95	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006033873-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006033873-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006033873-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

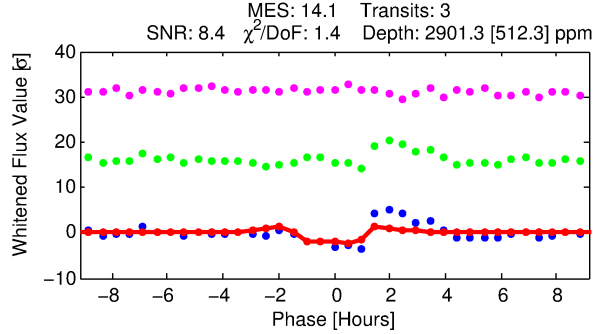
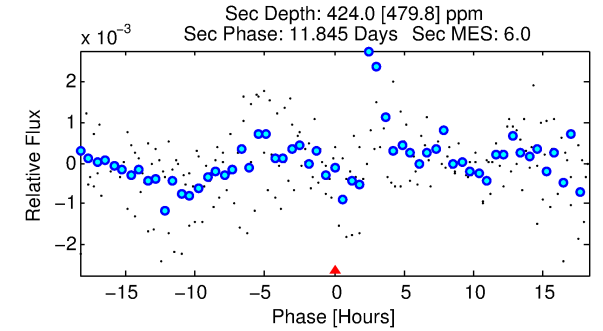
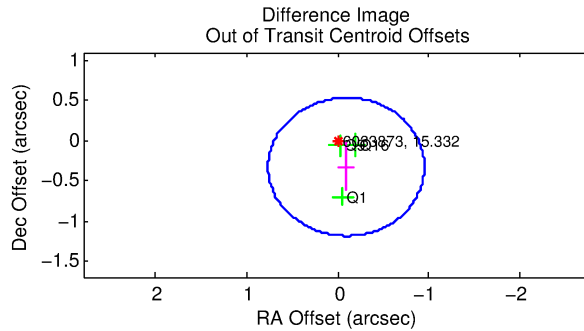
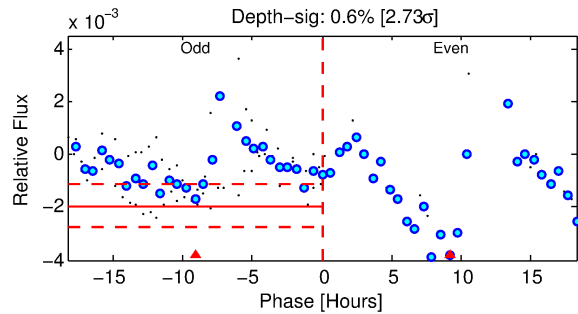
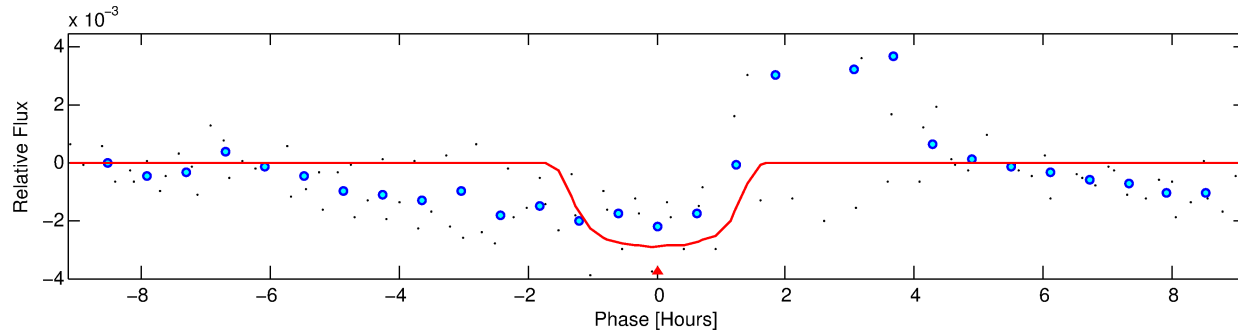
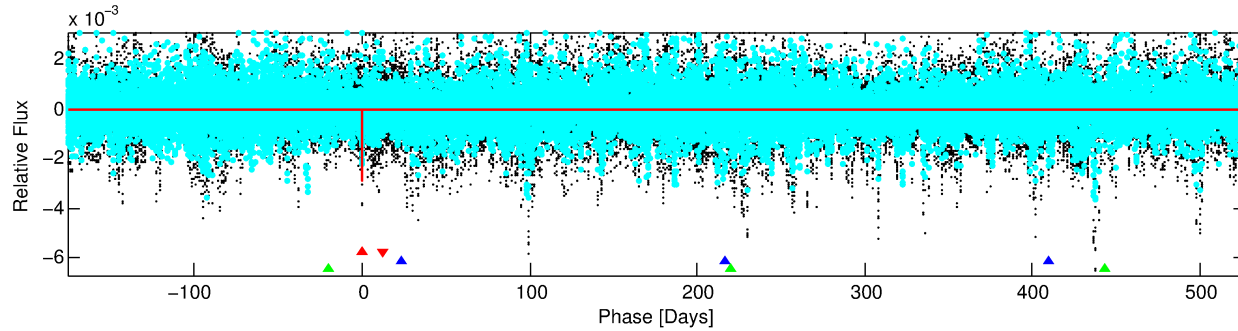
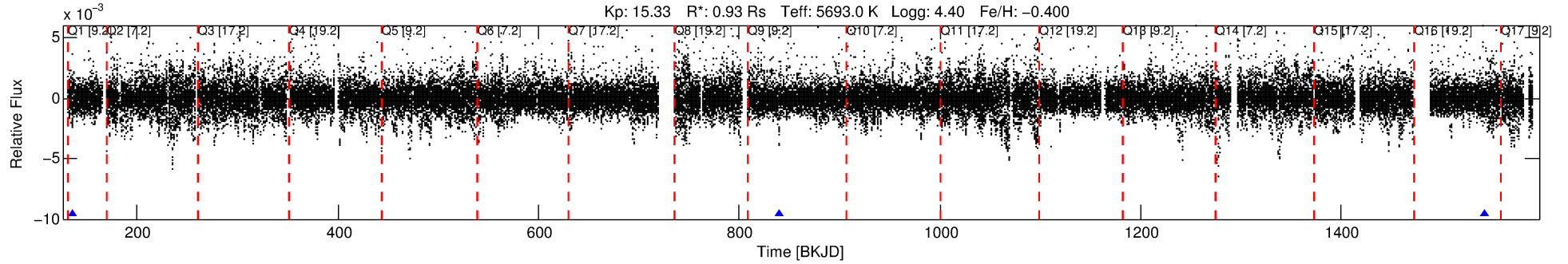
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006033873-01

No Significant Match Found

DV One-Page Summary

KIC: 6033873 Candidate: 1 of 3 Period: 703.253 d



DV Fit Results:

Period = 703.25277 [0.00404] d
Epoch = 136.0398 [0.0052] BKJD
Rp/R* = 0.0541 [0.0179]
a/R* = 1270.03 [1699.82]
b = 0.77 [0.71]
Seff = 0.40 [0.14]
Teq = 202 [18] K
Rp = 5.50 [2.32] Re
a = 1.4357 [0.3244] AU
Ag = 15886.73 [21500.10] [0.74 σ]
Teffp = 3513 [1156] K [2.86 σ]

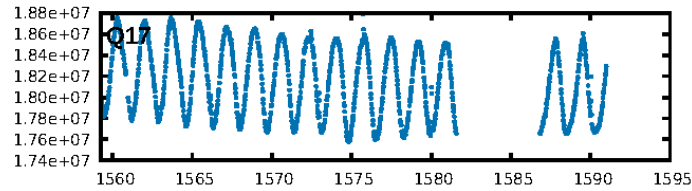
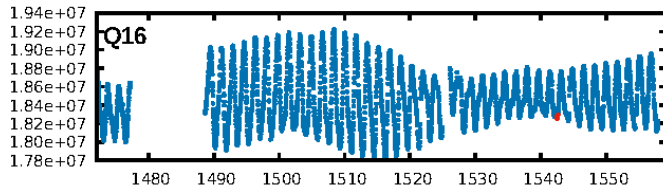
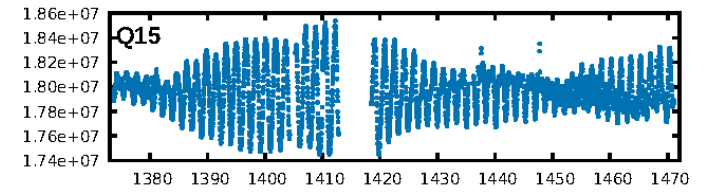
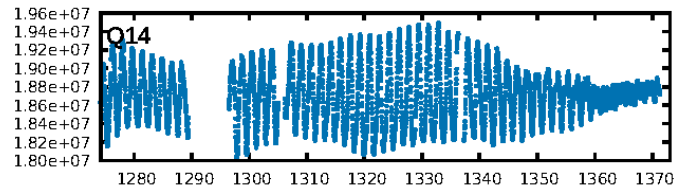
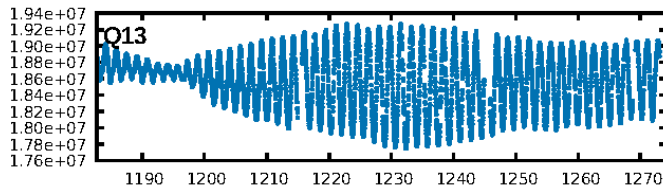
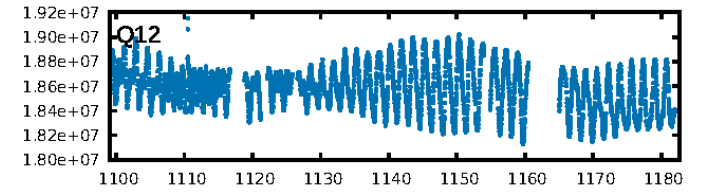
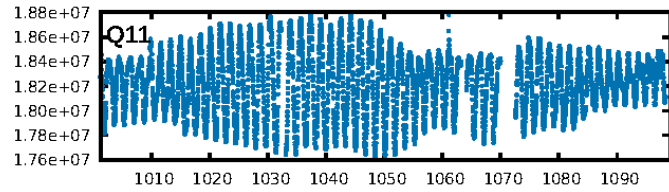
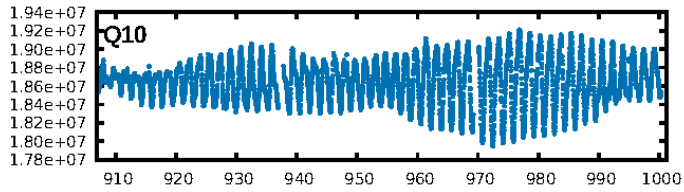
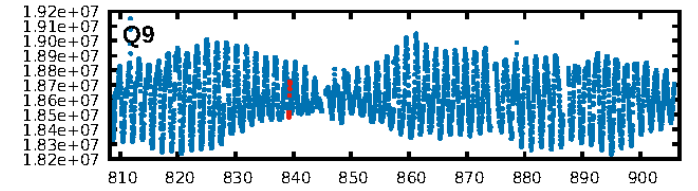
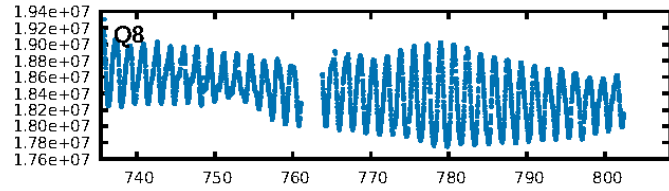
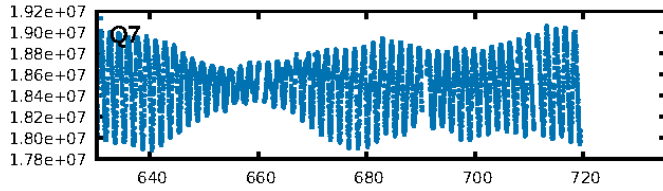
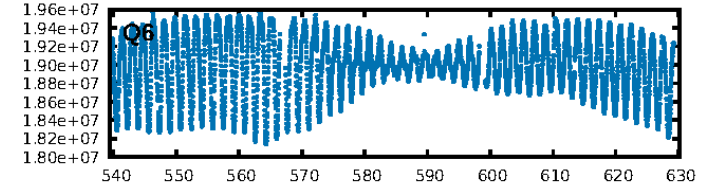
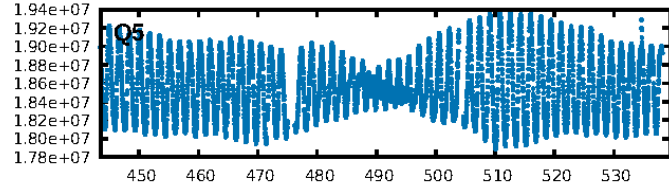
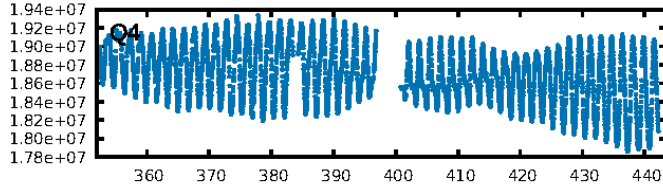
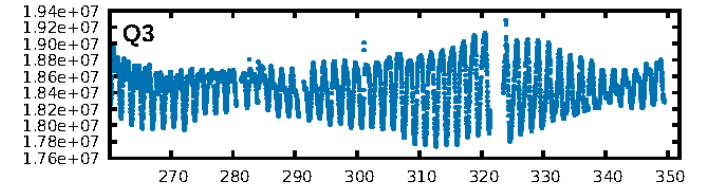
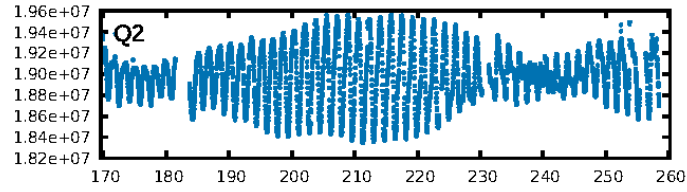
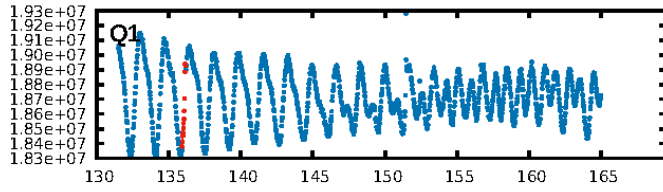
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [790.40 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 24.5%
Bootstrap-pfa: 5.00e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.6237
Centroid-sig: 7.6%
Centroid-so: 0.788 arcsec [1.30 σ]
OotOffset-rm: 0.341 arcsec [1.19 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: 0.451 arcsec [1.88 σ]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

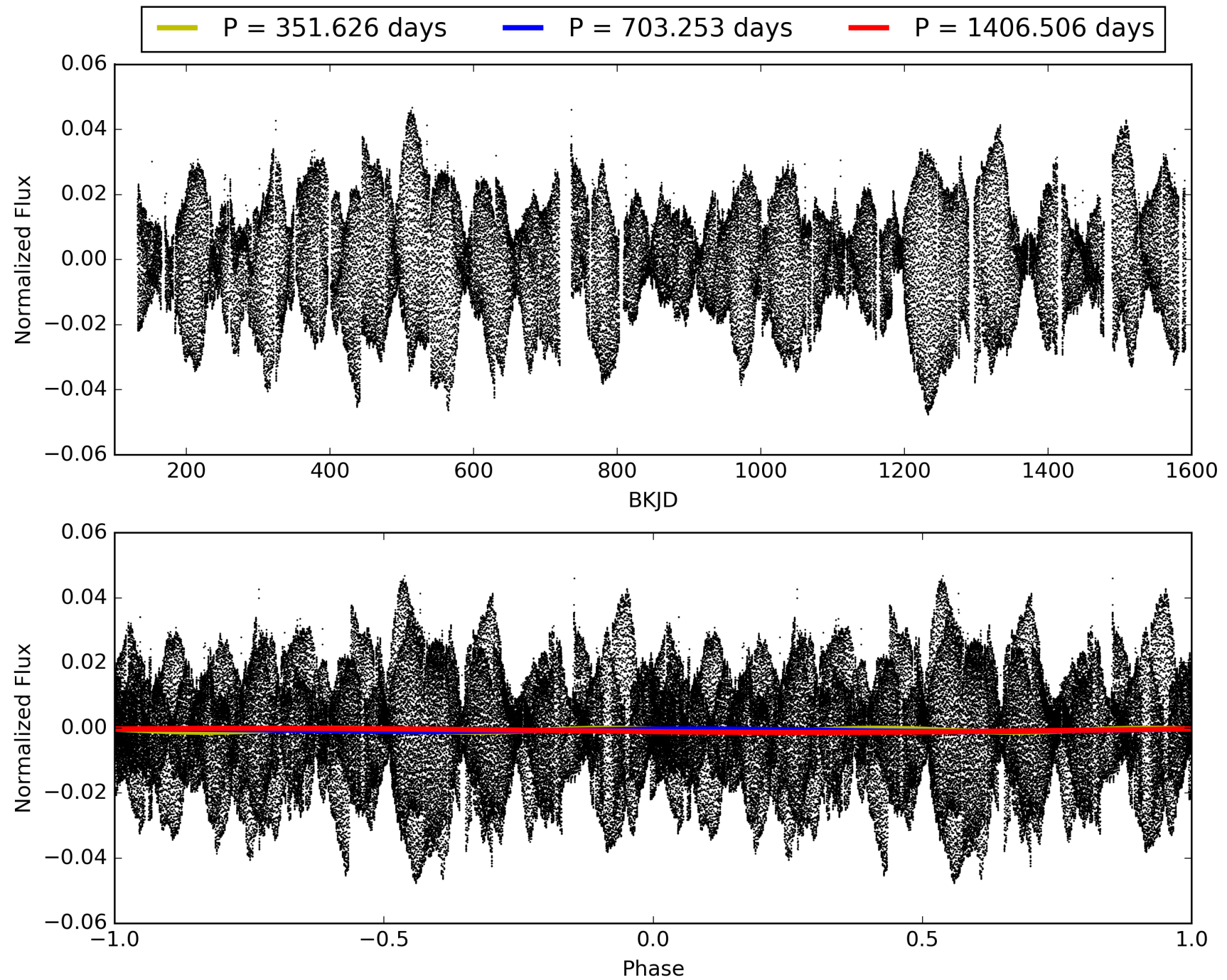
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006033873-01, PDC Light Curves

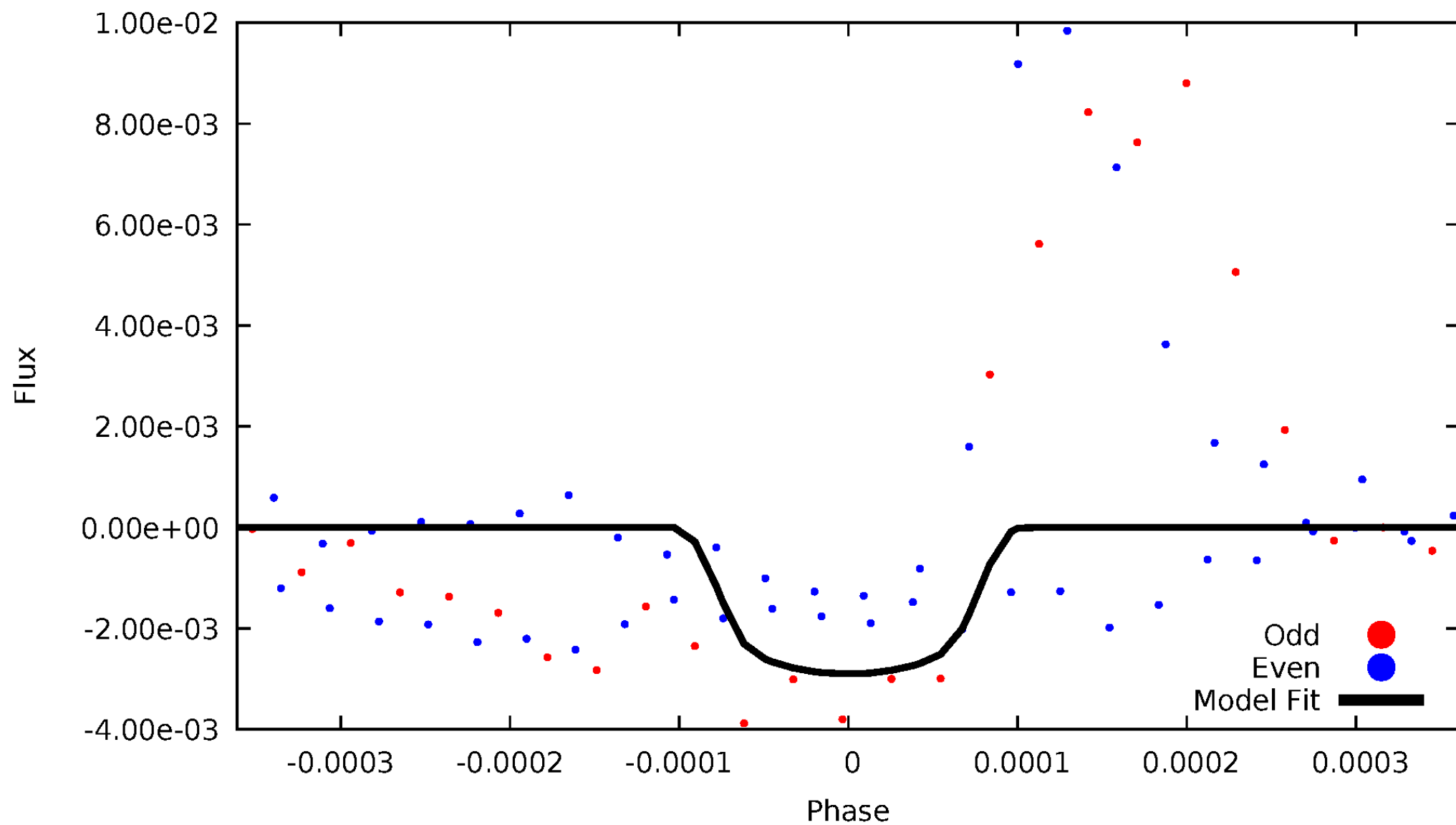


TCE 006033873-01



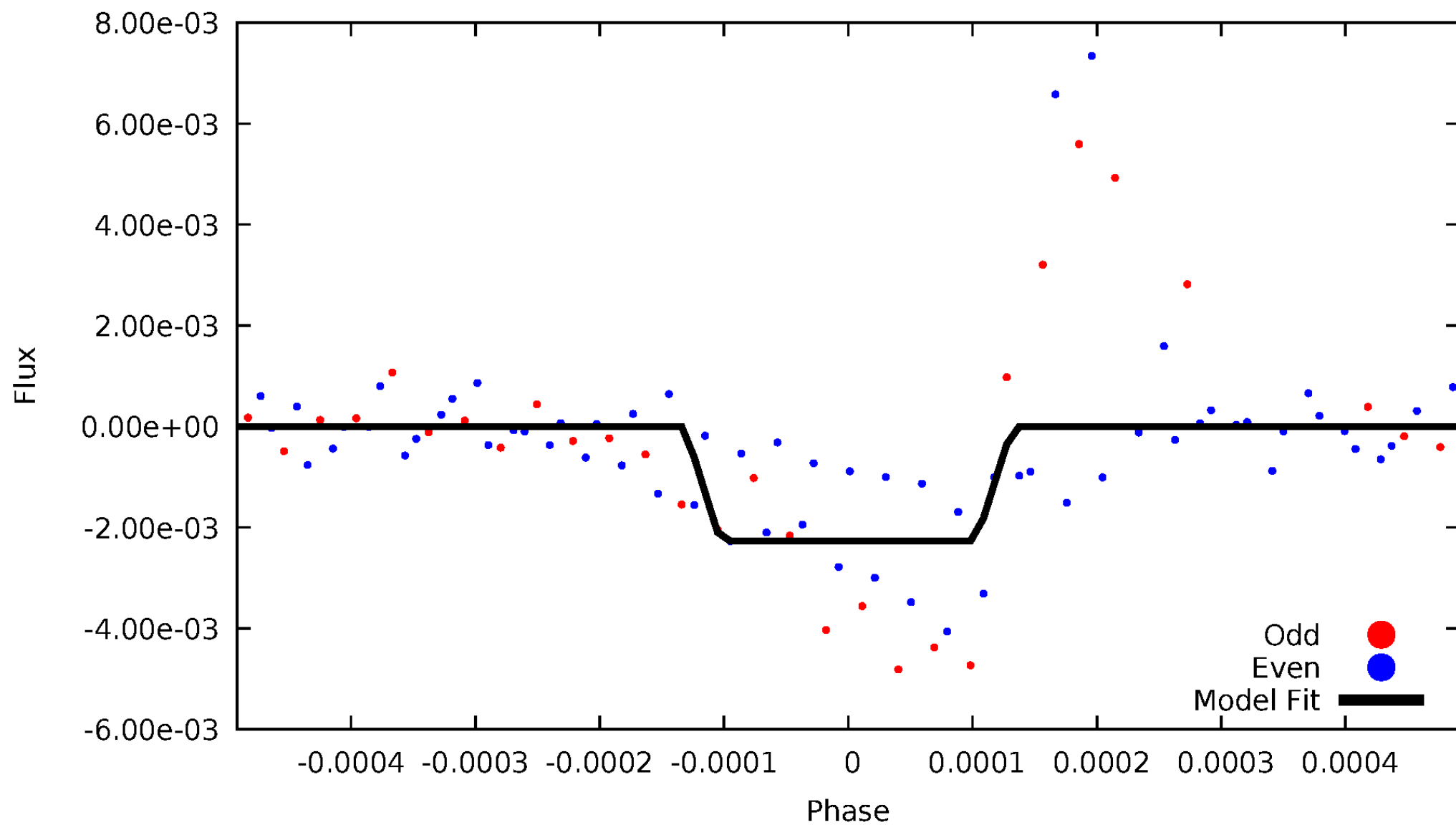
DV Odd/Even

TCE 006033873-01



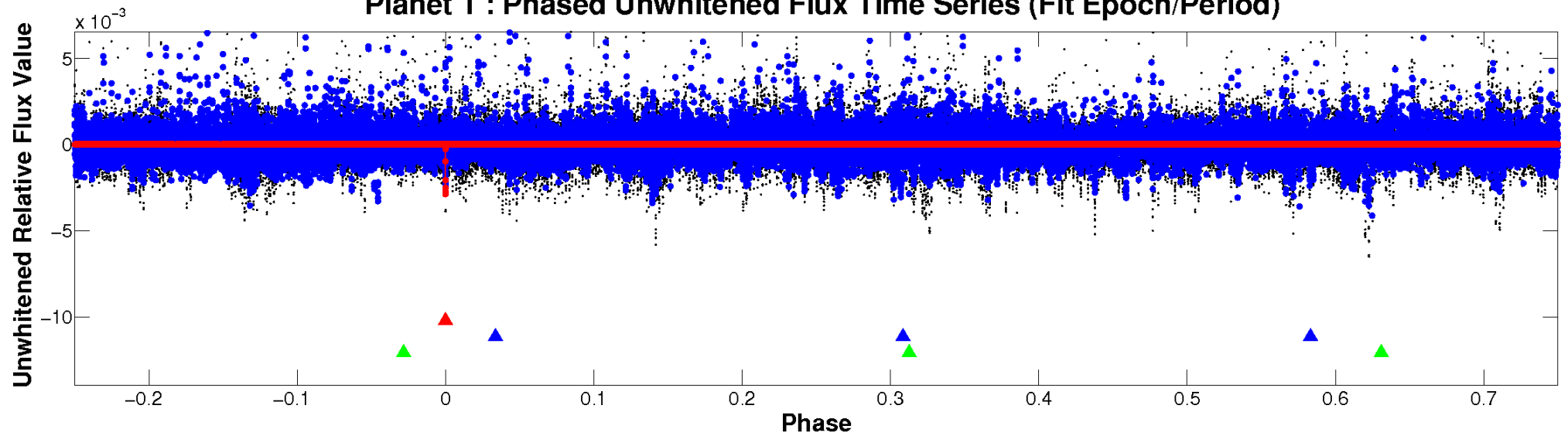
ALT Odd/Even

TCE 006033873-01

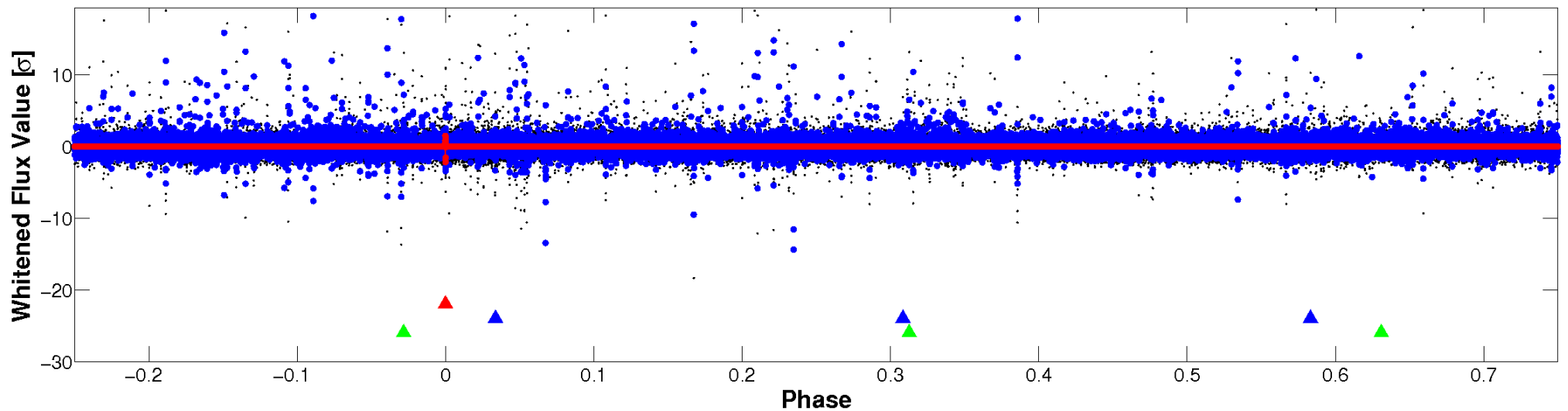


Non-Whitened Vs. Whitened Light Curve

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

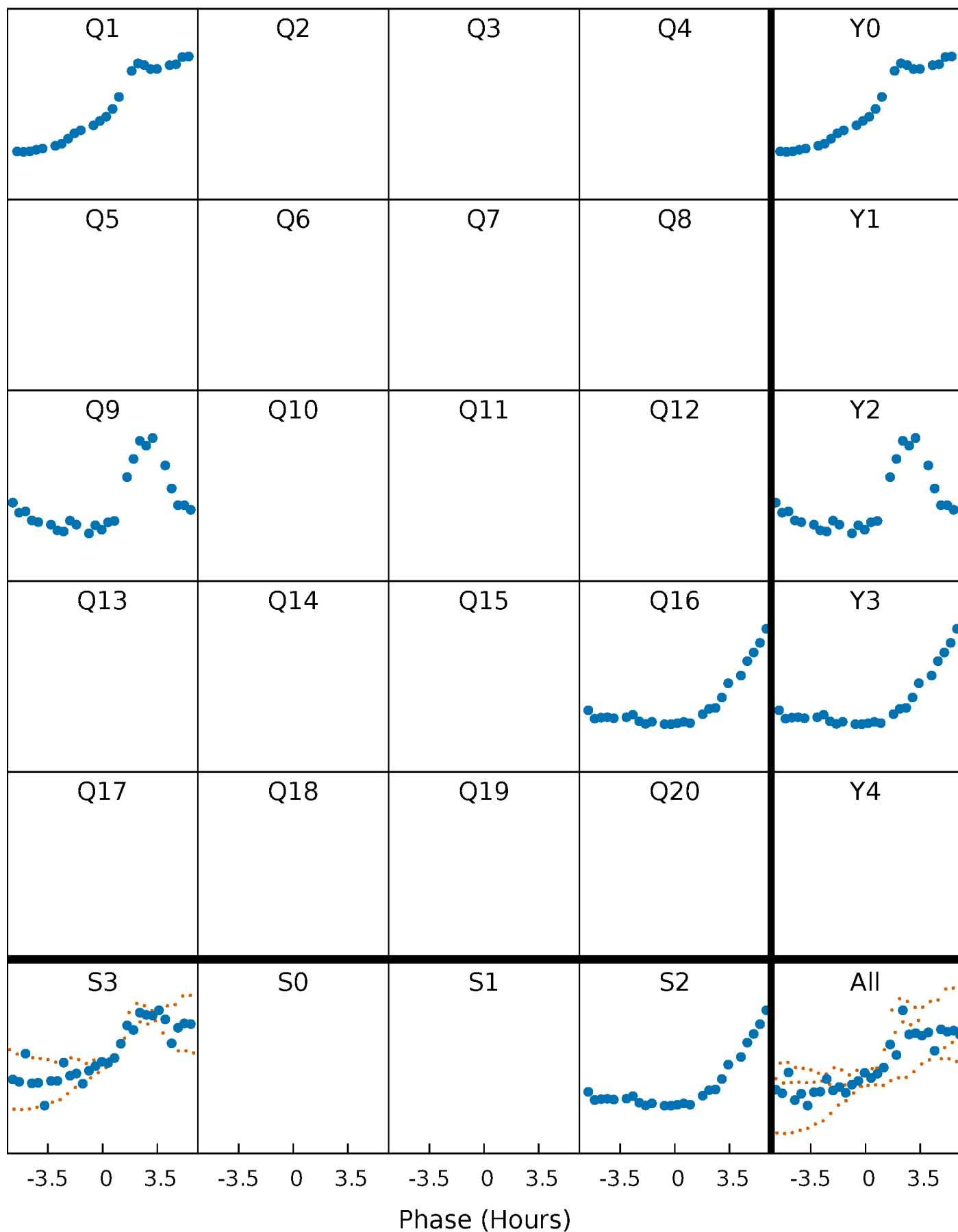


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



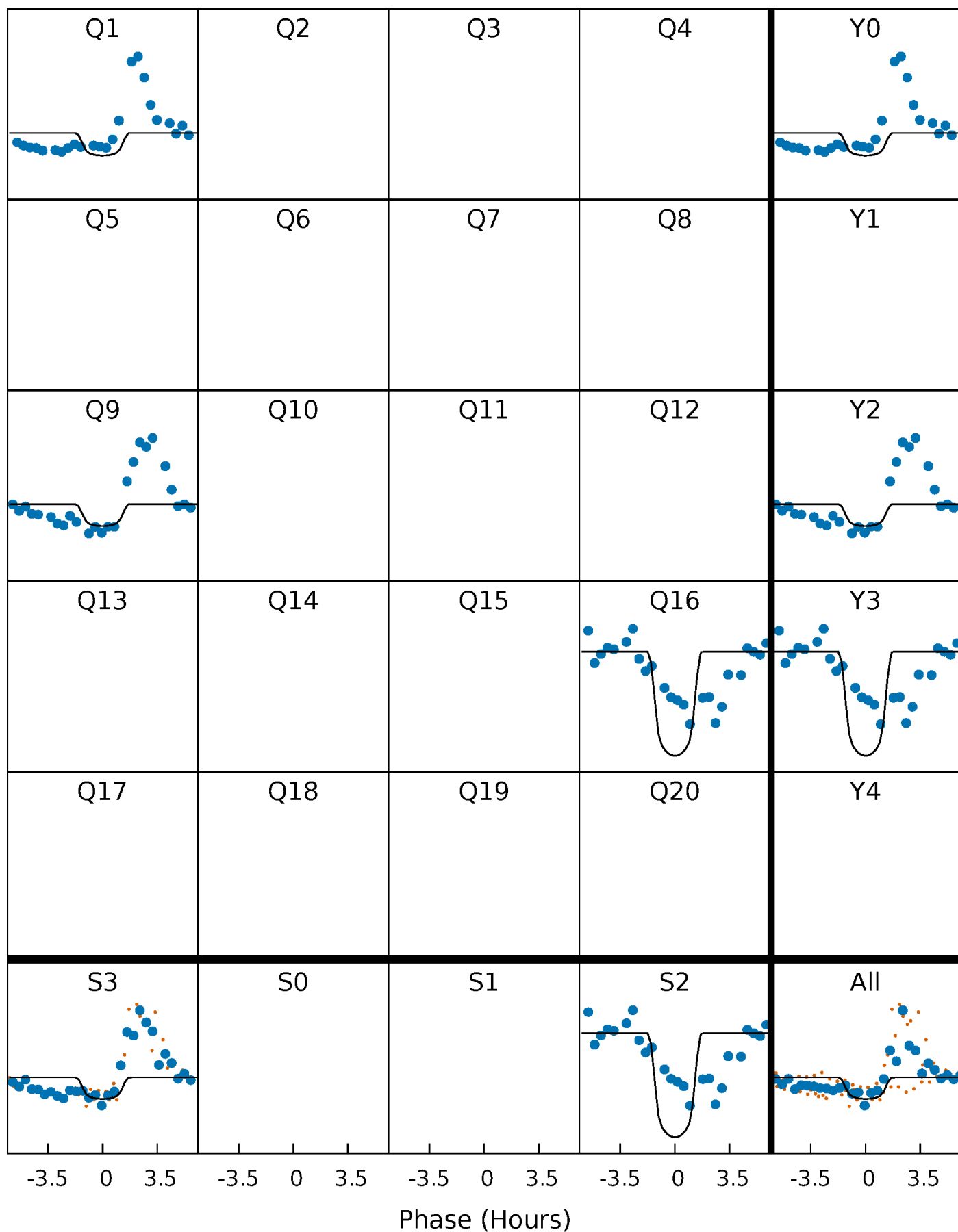
PDC Quarter-Phased Transit Curves

TCE 006033873-01 P=703.252768 Days $T_0=136.039810$ (BKJD)



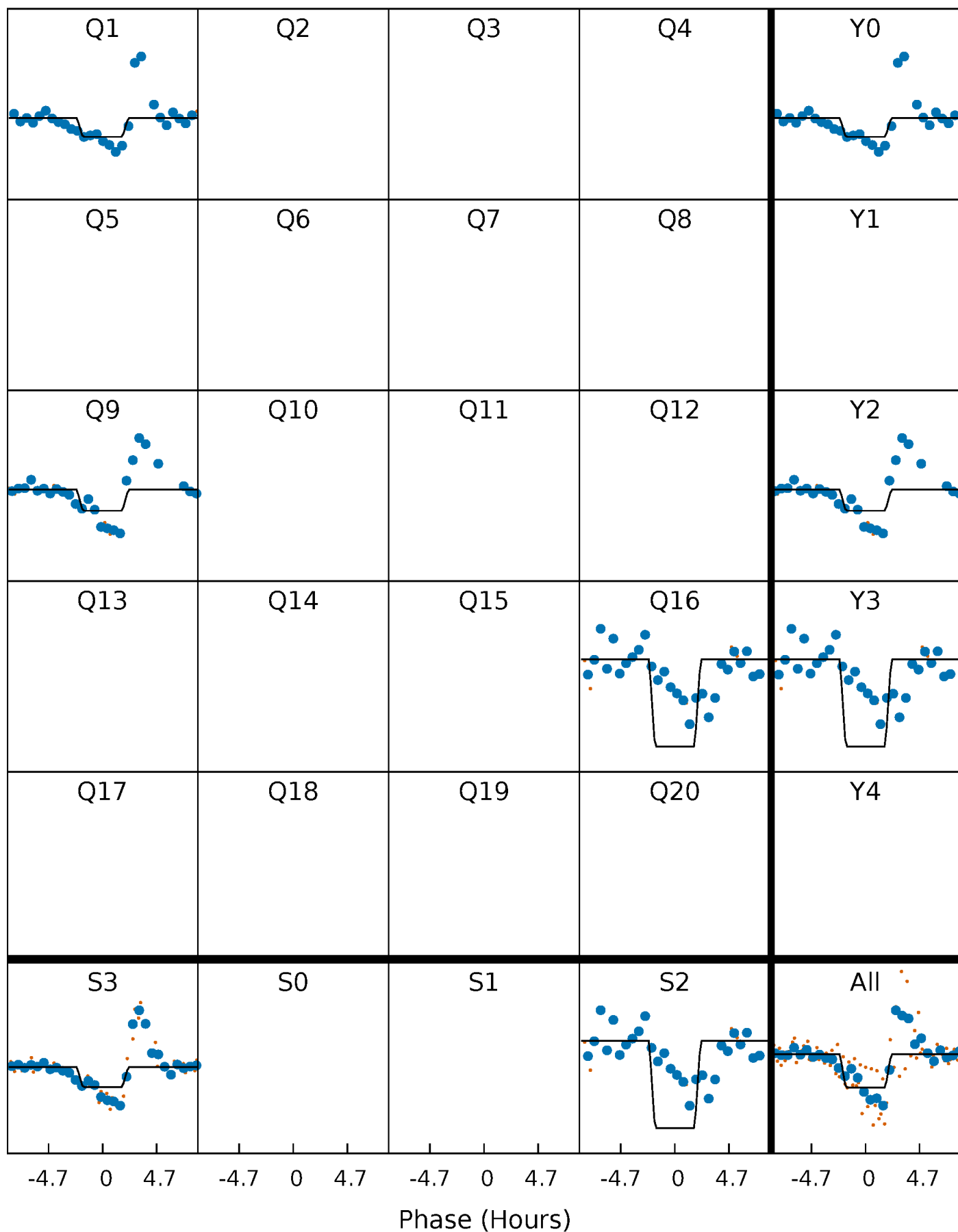
DV Quarter-Phased Transit Curves

TCE 006033873-01 P=703.252768 Days $T_0=136.039810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

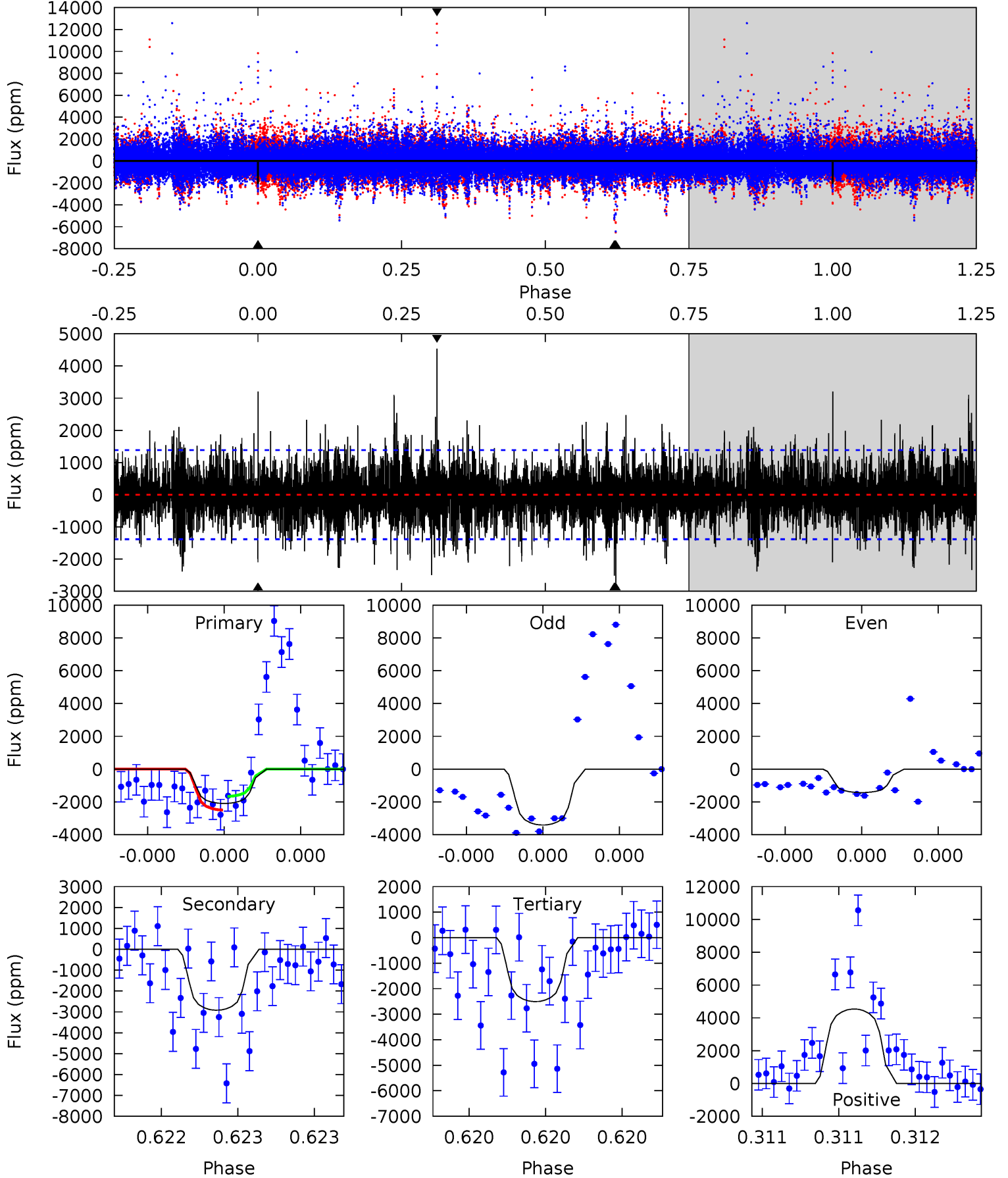
TCE 006033873-01 P=703.268646 Days $T_0=135.993209$ (BKJD)



DV Model-Shift Uniqueness Test

006033873-01, P = 703.252768 Days, E = 136.039810 Days

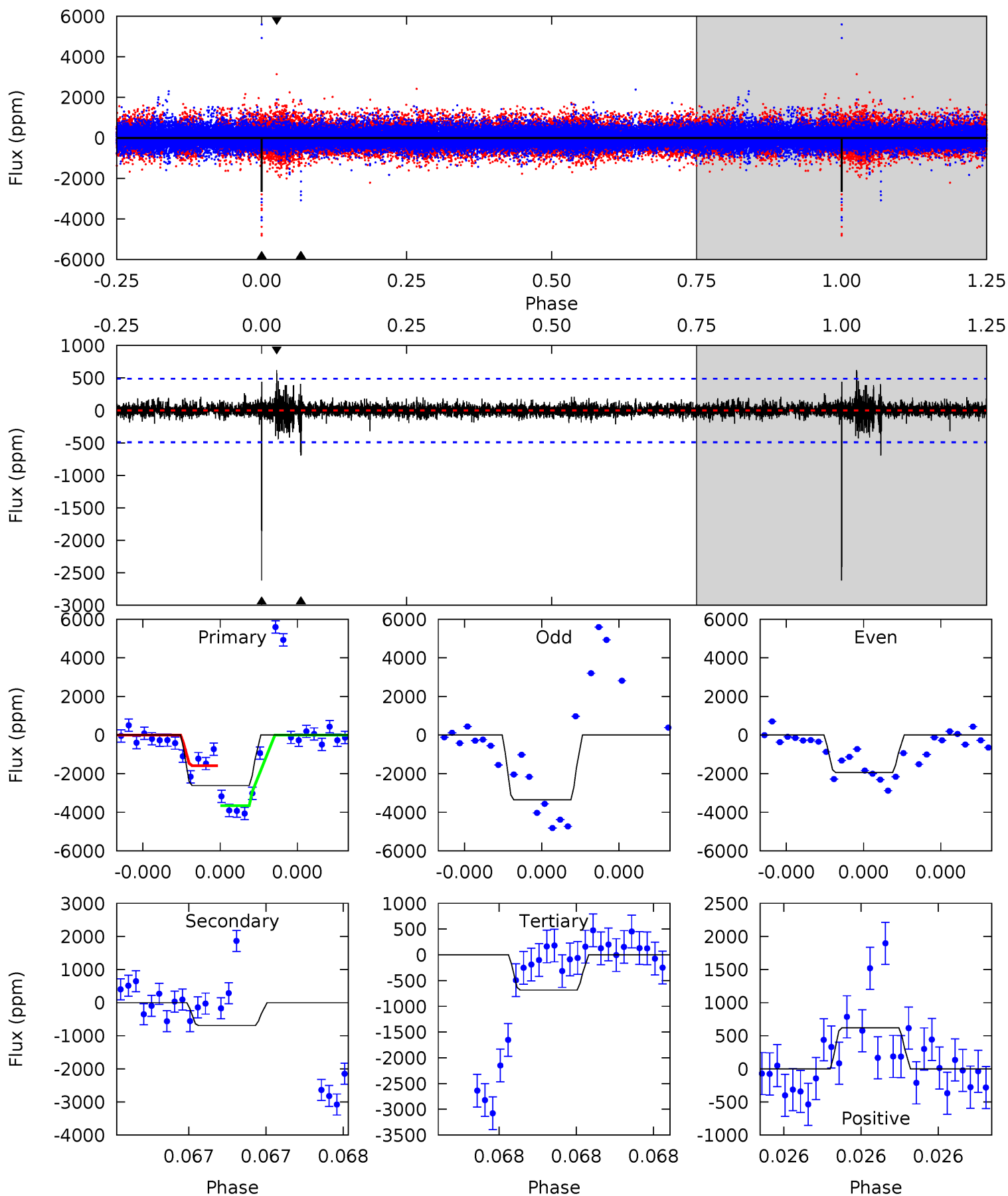
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.67	12.1	10.4	18.8	5.73	3.71	2.43	-1.70	-10.1	1.71	-6.70	3.60	1.38	0.61	1.72



Alt Model-Shift Uniqueness Test

006033873-01, P = 703.268646 Days, E = 135.993209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	8.06	7.96	7.21	5.69	3.65	0.66	22.5	23.2	0.09	0.84	9.01	0.82	0.19	12.0



Stellar Parameters For KIC 006033873

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+172}_{-172}	$4.401^{+0.153}_{-0.187}$	$-0.400^{+0.300}_{-0.300}$	$0.932^{+0.244}_{-0.162}$	$0.797^{+0.116}_{-0.062}$	$1.387^{+1.008}_{-0.681}$
	+3%/-3%	+3%/-4%	+75%/-75%	+26%/-17%	+15%/-8%	+73%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006033873-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2920 ± 242	$5.61^{+2.15}_{-2.01}$	283^{+21}_{-19}	5653^{+1391}_{-692}	$106891^{+151614}_{-51142}$
Alt.	-692 ± 86	$4.82^{+1.92}_{-1.83}$	283^{+19}_{-18}	4437^{+988}_{-502}	33892^{+55638}_{-16777}

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

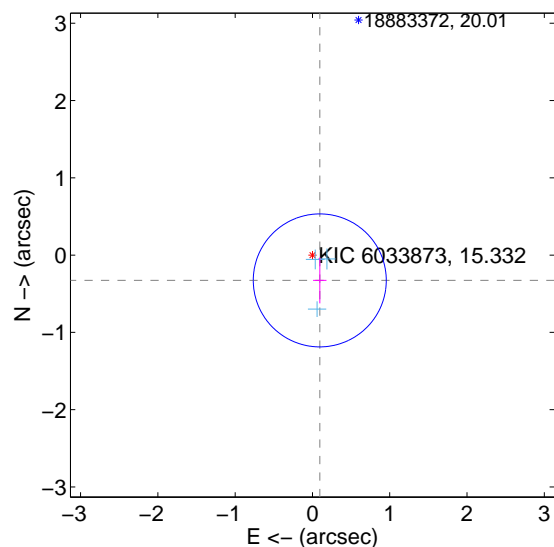
Supplemental centroid analysis for 006033873-01. Kepler magnitude: 15.33. Transit SNR 8.38

There are 3 quarters with good PRF difference image offsets

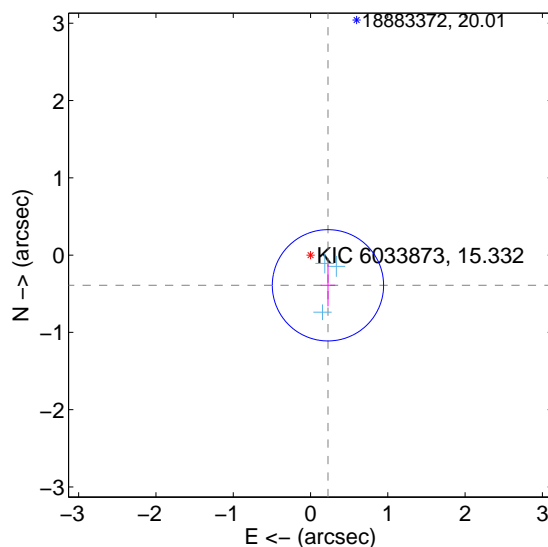
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.341 ± 0.287	1.19	-0.095 ± 0.087	-0.327 ± 0.297
PRF-fit source offset from KIC position	0.451 ± 0.240	1.88	-0.225 ± 0.094	-0.391 ± 0.272
photometric centroid source offset	0.79 ± 0.61	1.30	0.24 ± 0.62	-0.75 ± 0.61

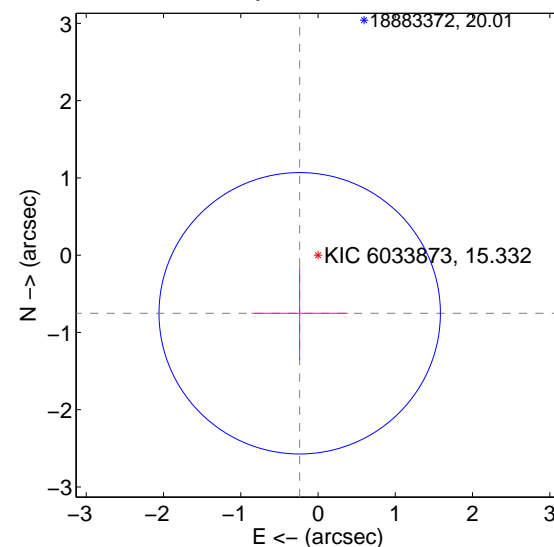
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

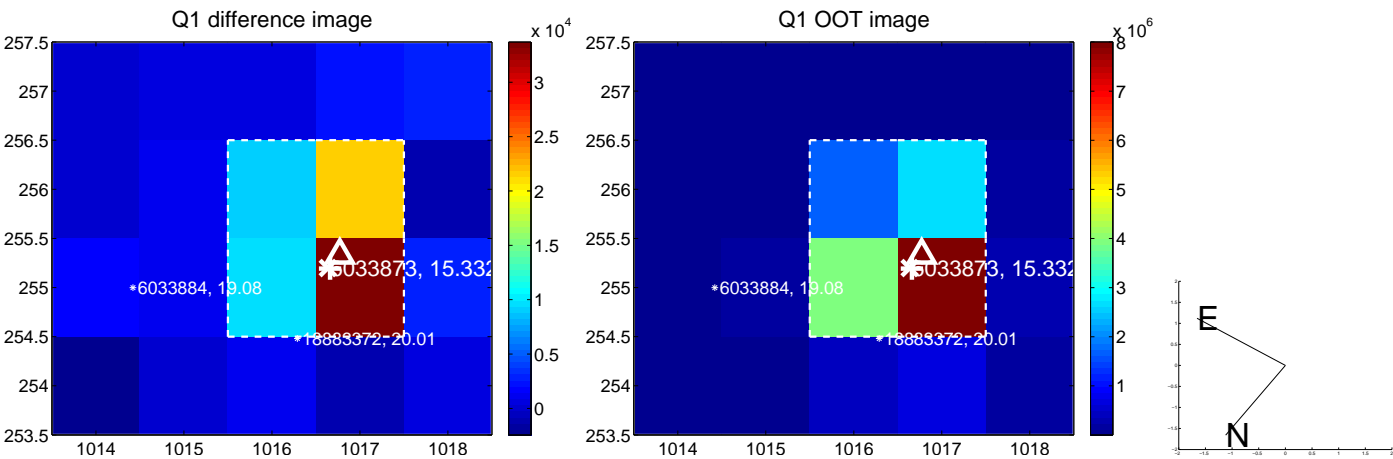


offset from photometric centroids



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

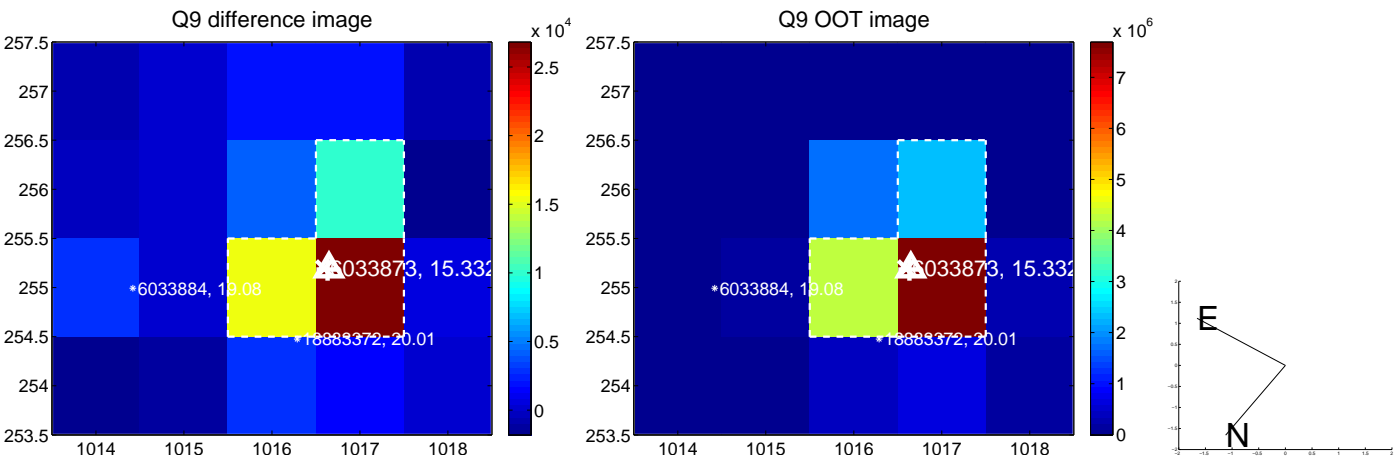
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



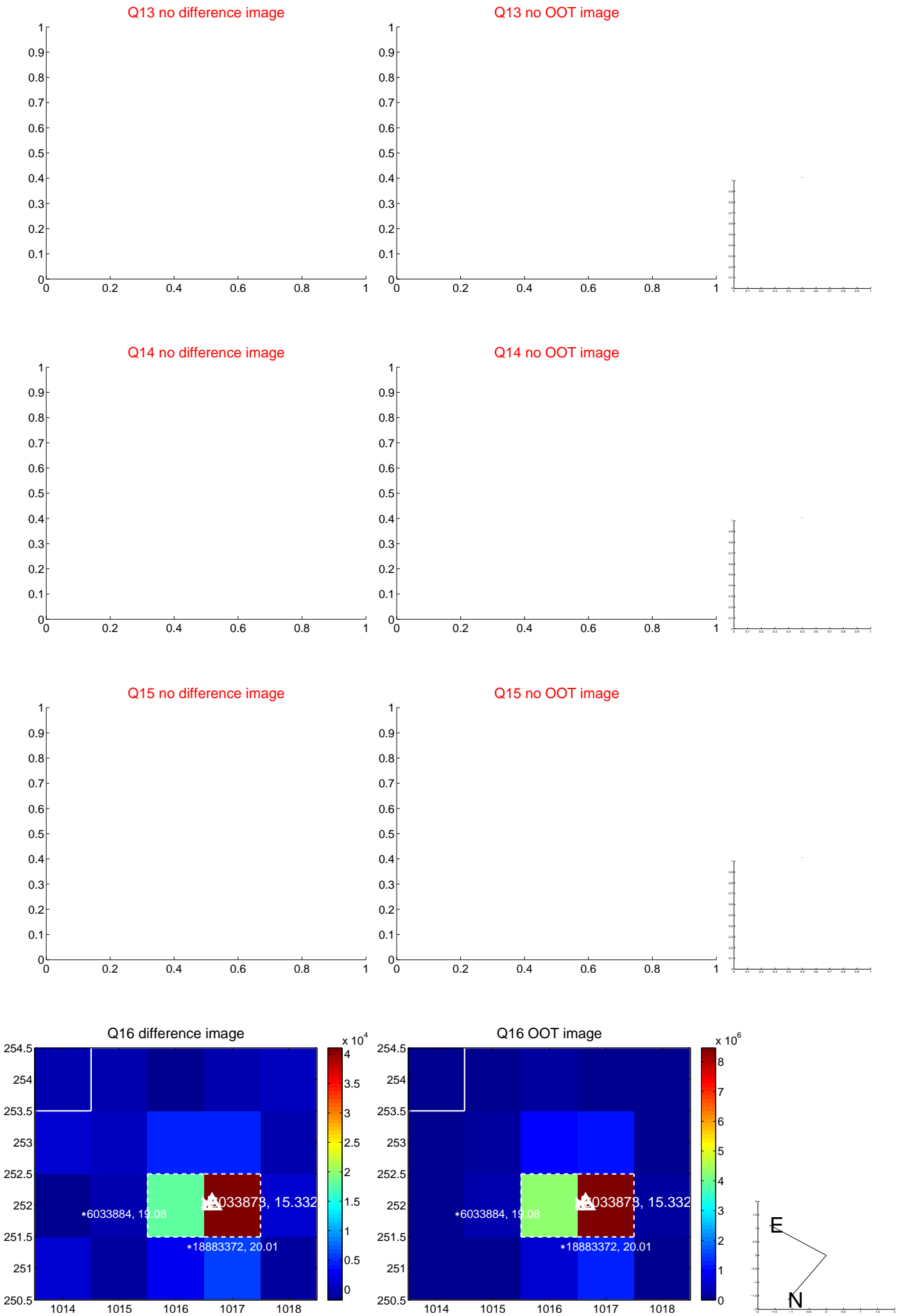
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



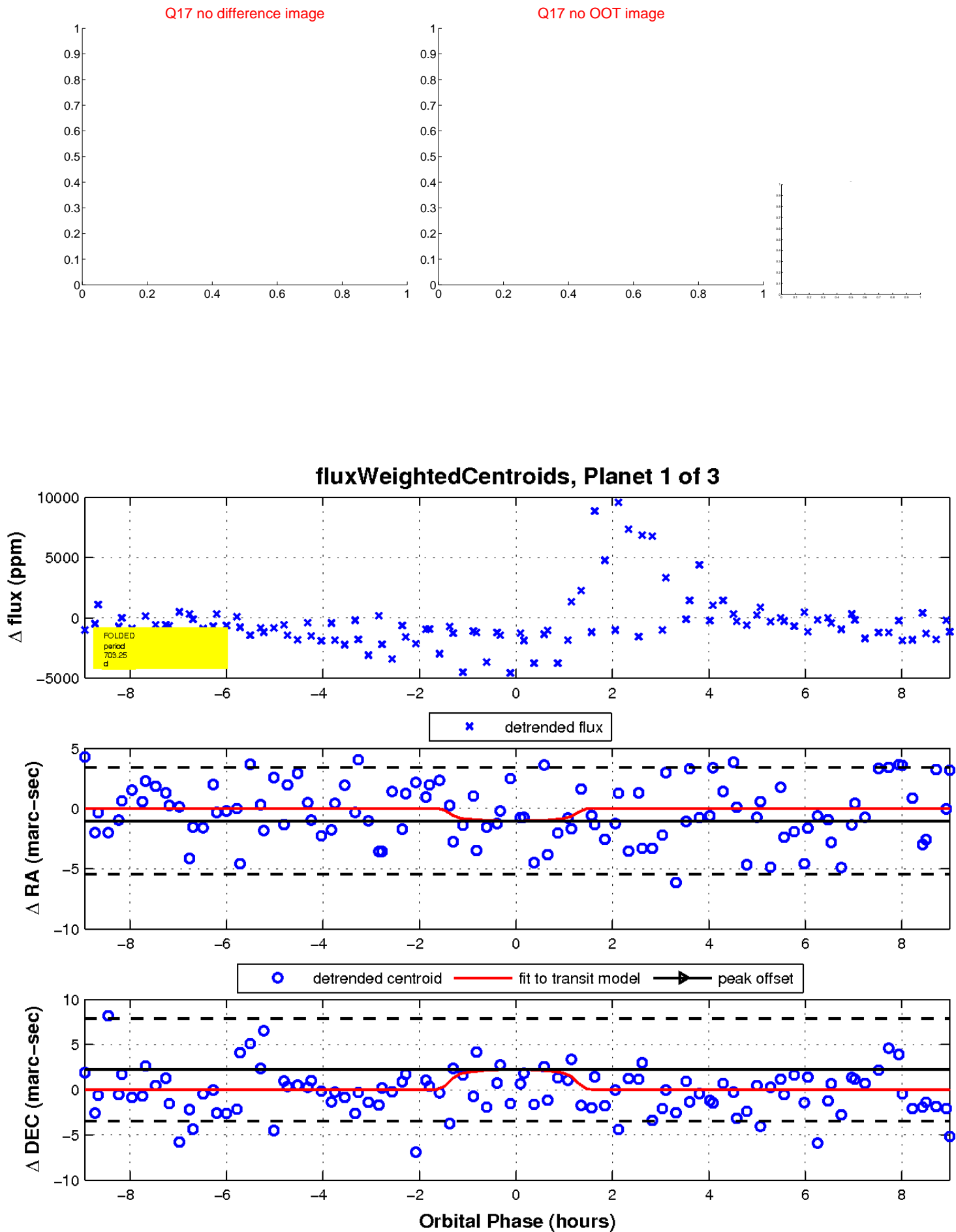
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

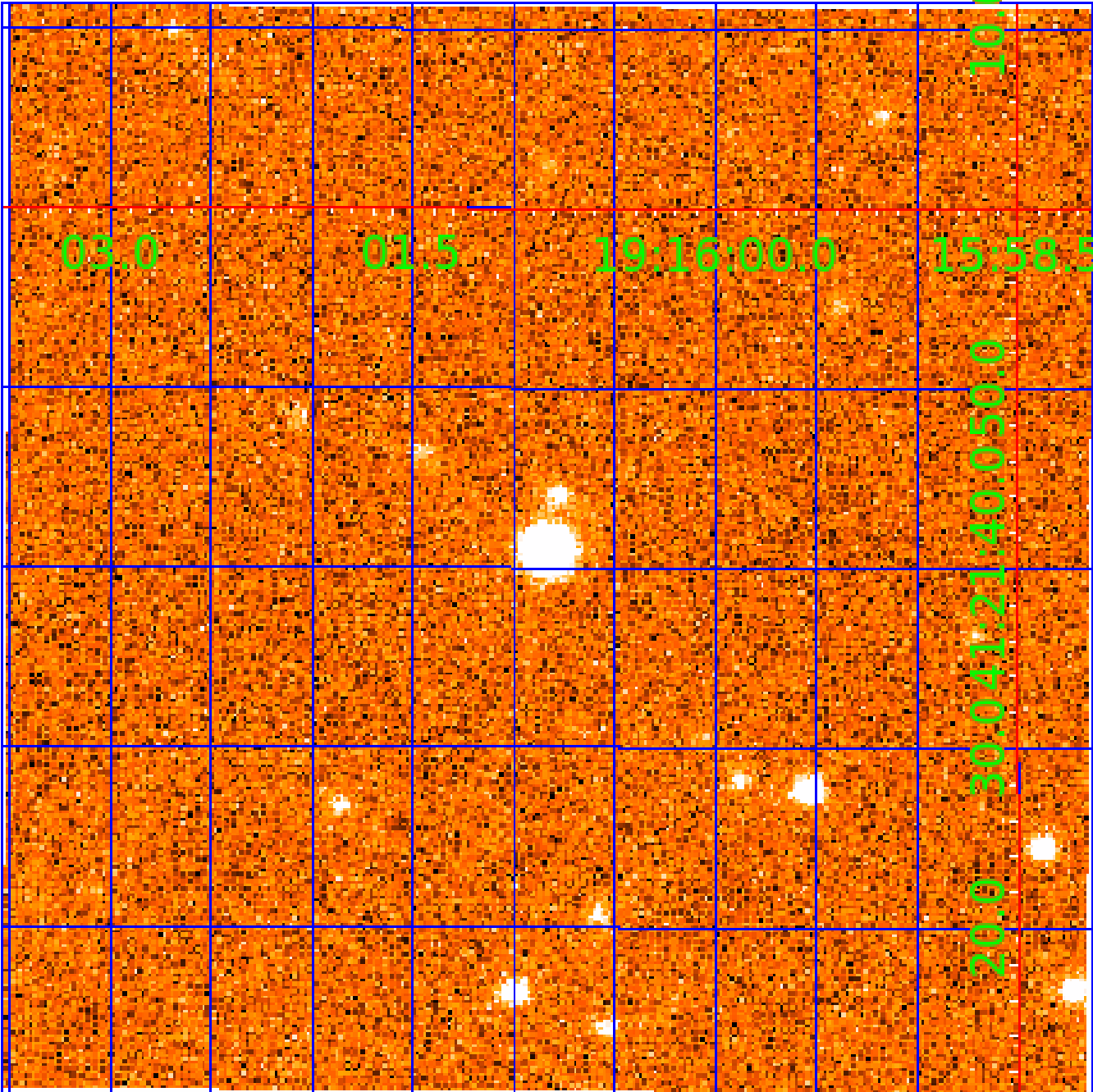


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006033873

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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006033873-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006033873-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

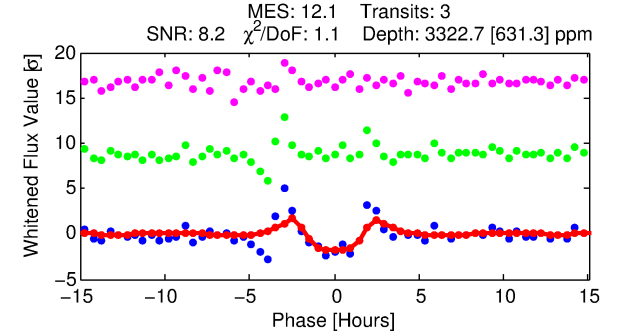
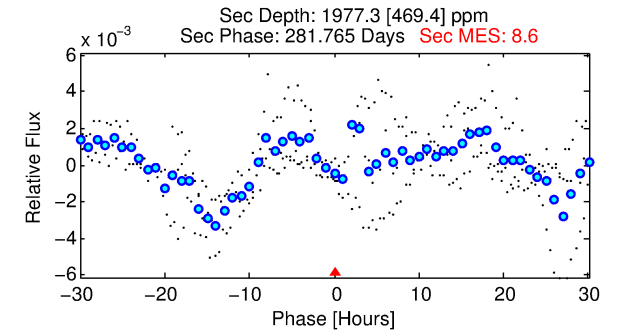
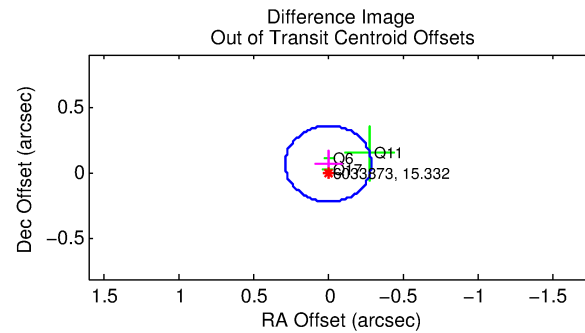
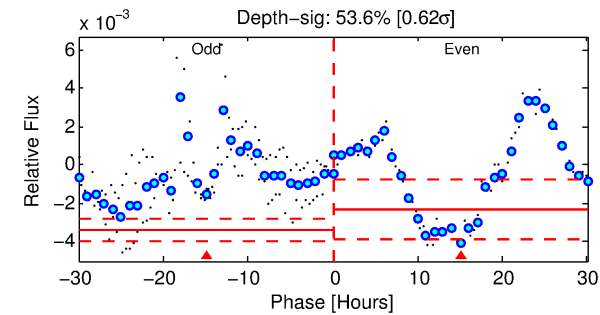
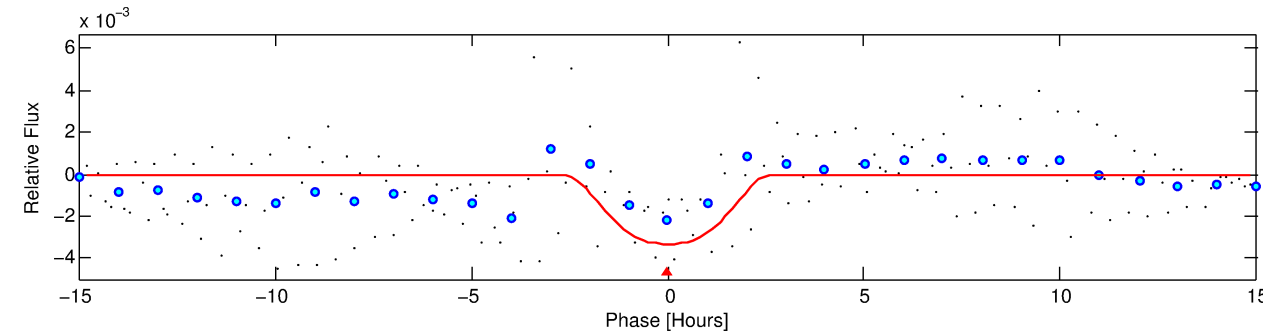
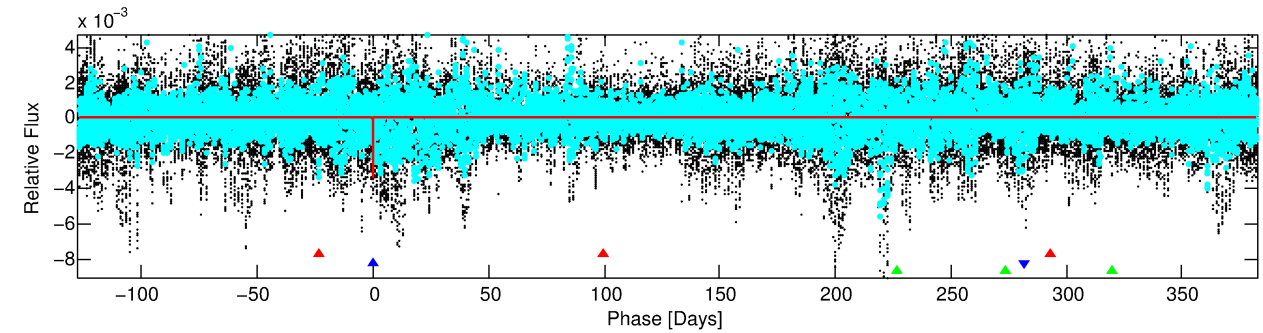
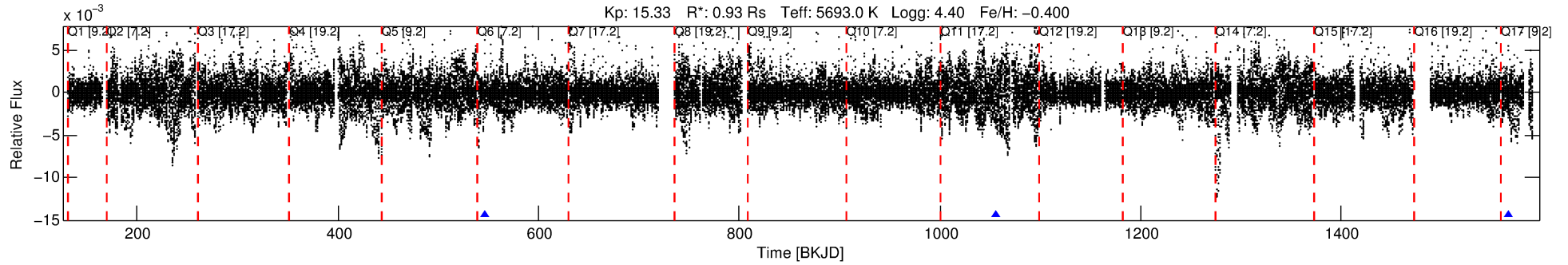
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006033873-02

No Significant Match Found

DV One-Page Summary

KIC: 6033873 Candidate: 2 of 3 Period: 510.049 d



DV Fit Results:

Period = 510.04863 [0.00614] d
Epoch = 546.1785 [0.0078] BKJD
Rp/R* = 0.0656 [0.0081]
a/R* = 400.65 [55.66]
b = 0.93 [0.03]
Seff = 0.61 [0.22]
Teq = 225 [20] K
Rp = 6.68 [1.93] Re
a = 1.1589 [0.2619] AU
Ag = 32775.21 [15734.06] [2.08 σ]
Teffp = 4685 [426] K [10.46 σ]

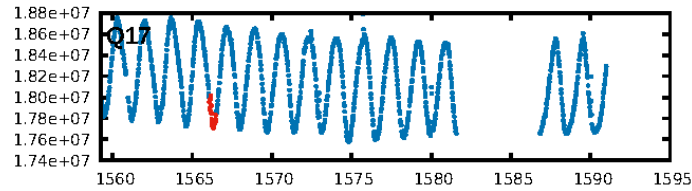
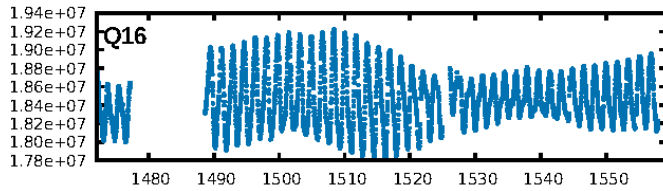
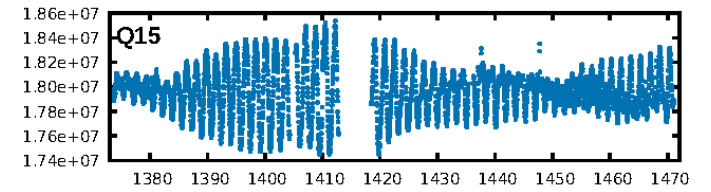
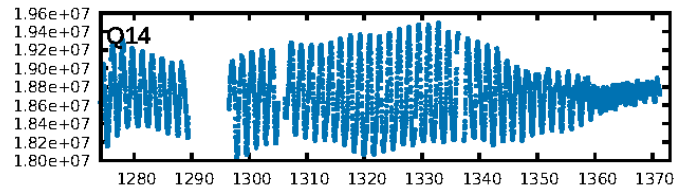
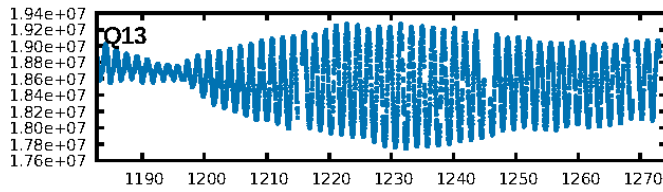
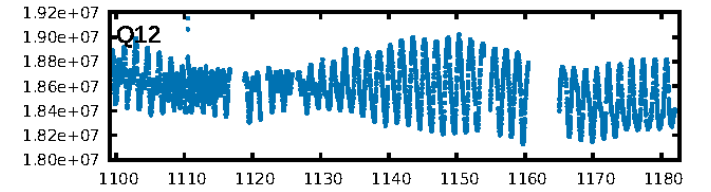
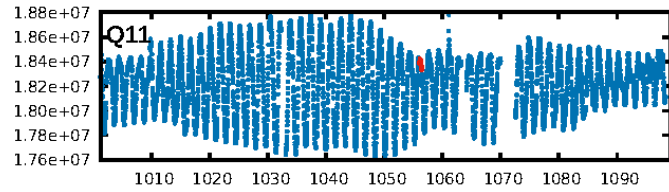
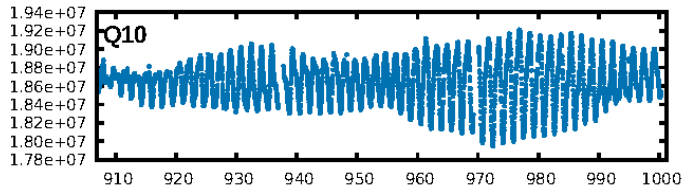
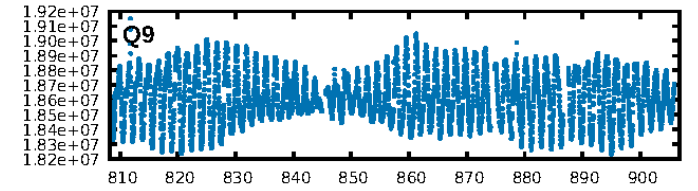
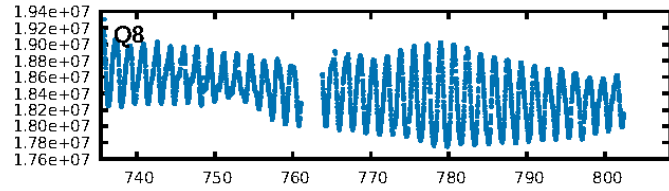
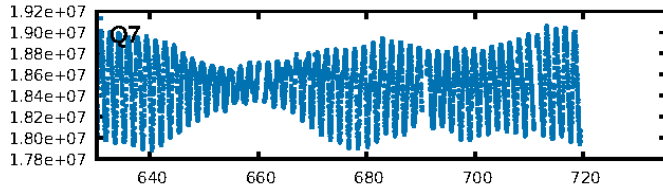
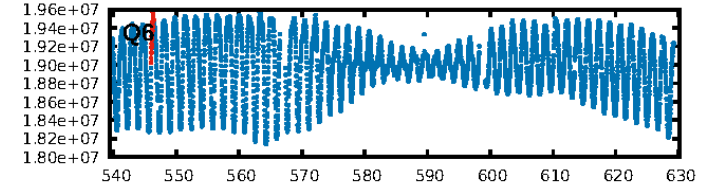
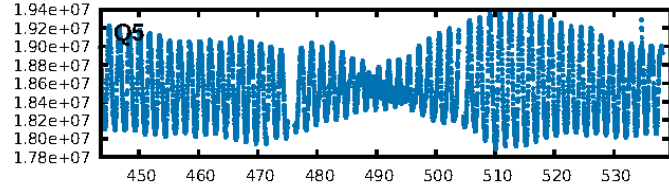
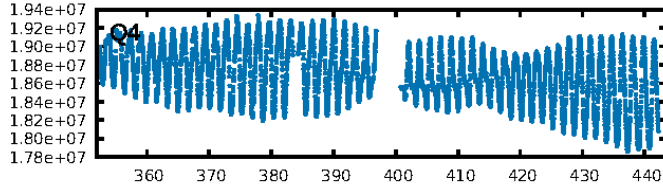
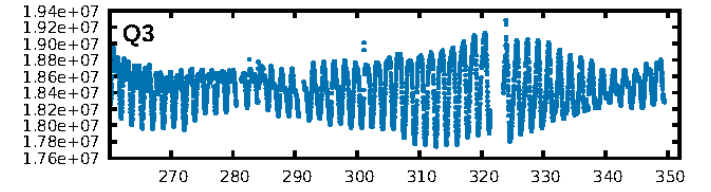
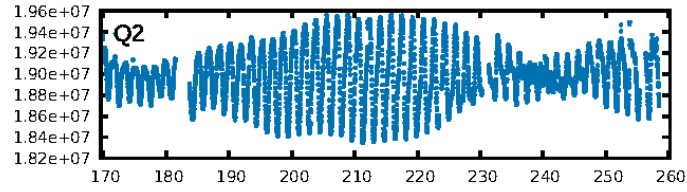
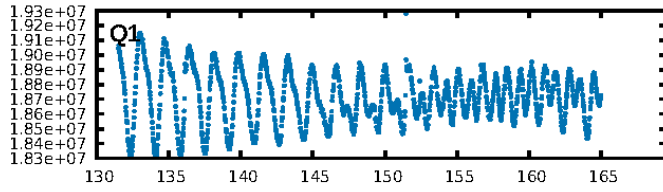
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [178.89 σ]
LongPeriod-sig: 100.0% [790.40 σ]
ModelChiSquare2-sig: 21.8%
ModelChiSquareGof-sig: 88.1%
Bootstrap-pfa: 1.83e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -4.773
Centroid-sig: 87.2%
Centroid-so: 0.145 arcsec [0.27 σ]
OotOffset-rm: 0.071 arcsec [0.74 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.120 arcsec [1.22 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

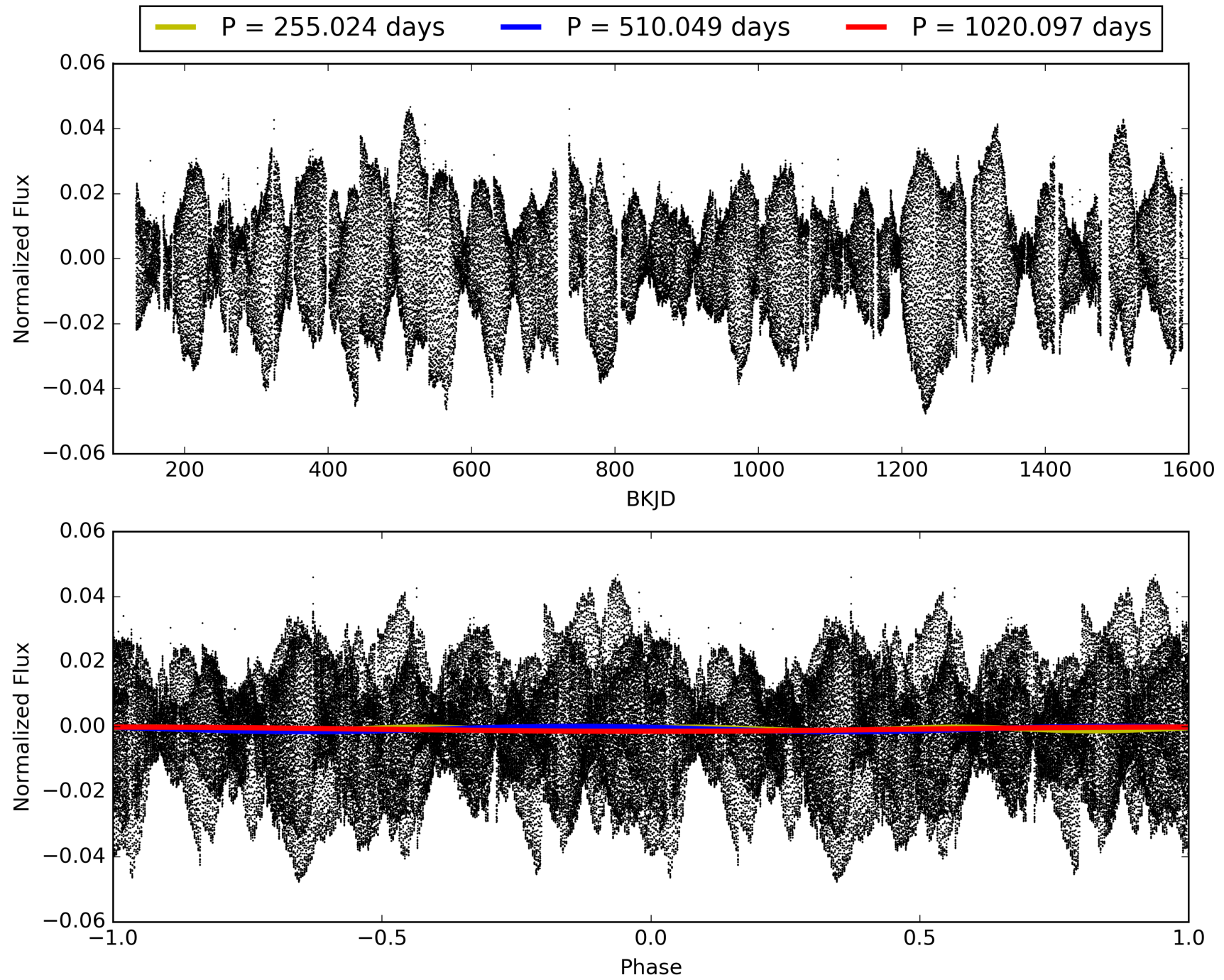
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:11:00 Z

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

TCE 006033873-02, PDC Light Curves

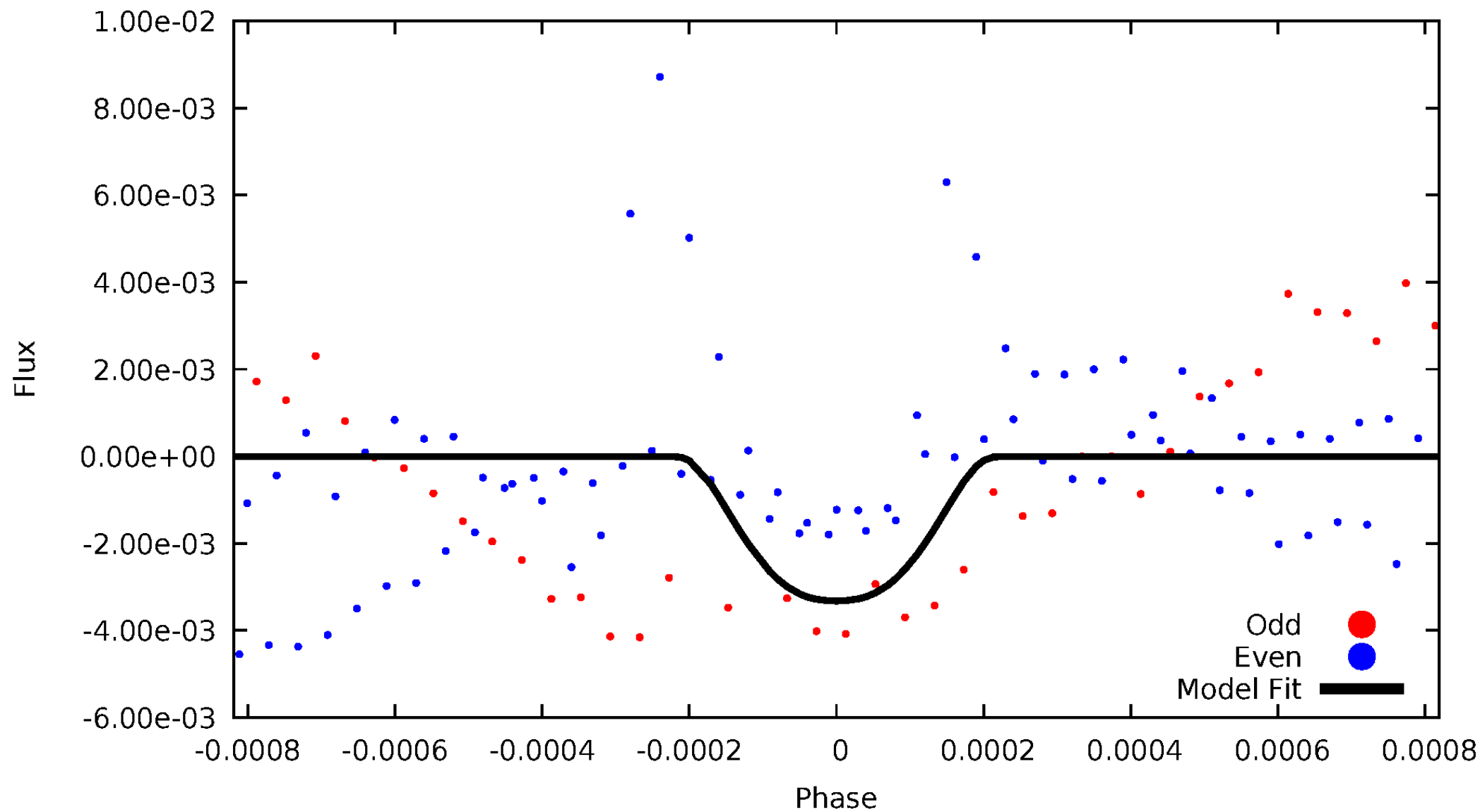


TCE 006033873-02



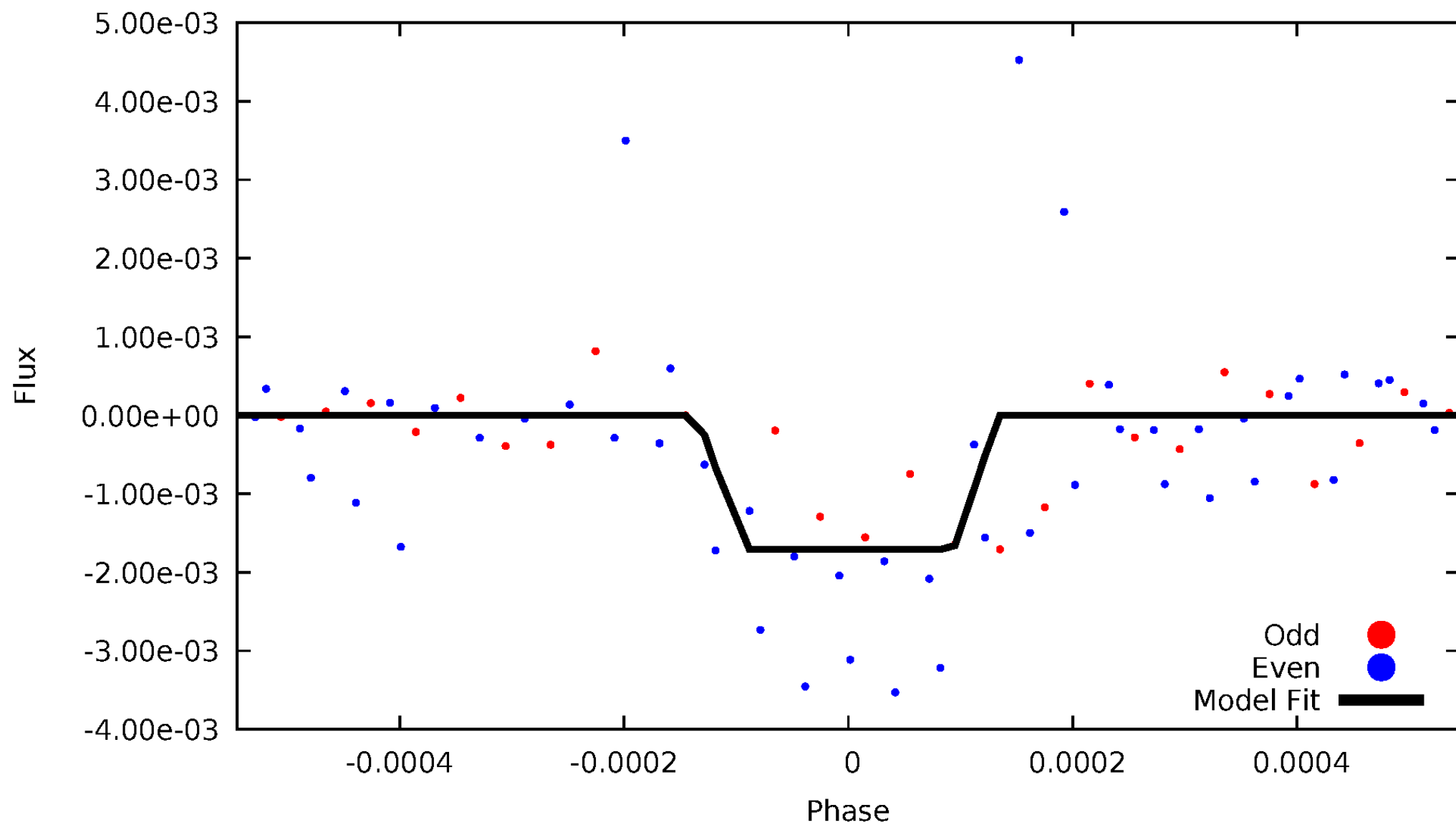
DV Odd/Even

TCE 006033873-02



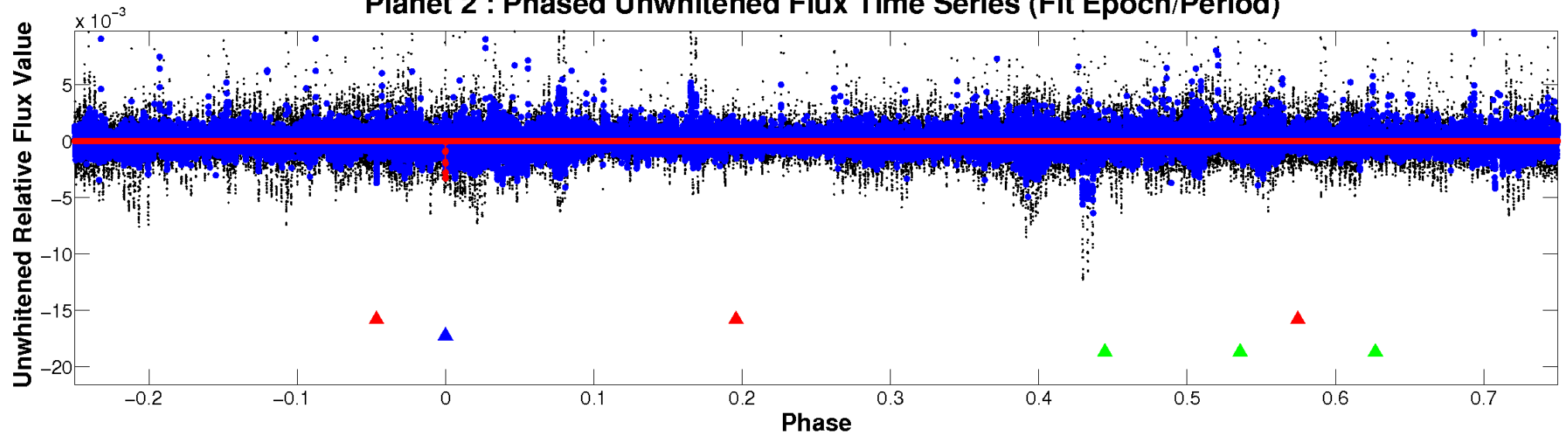
ALT Odd/Even

TCE 006033873-02

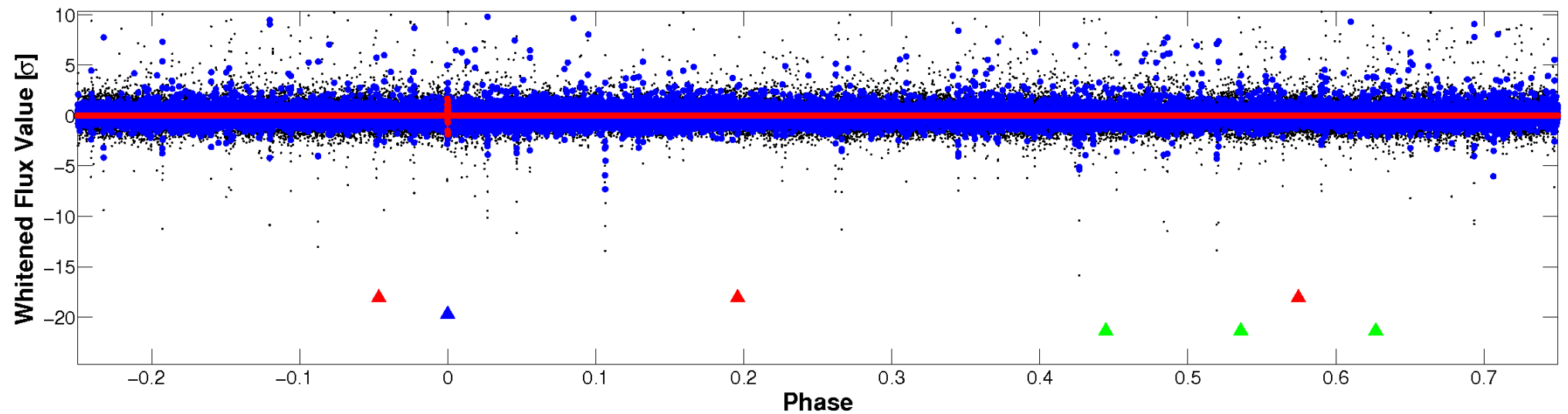


Non-Whitened Vs. Whitened Light Curve

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

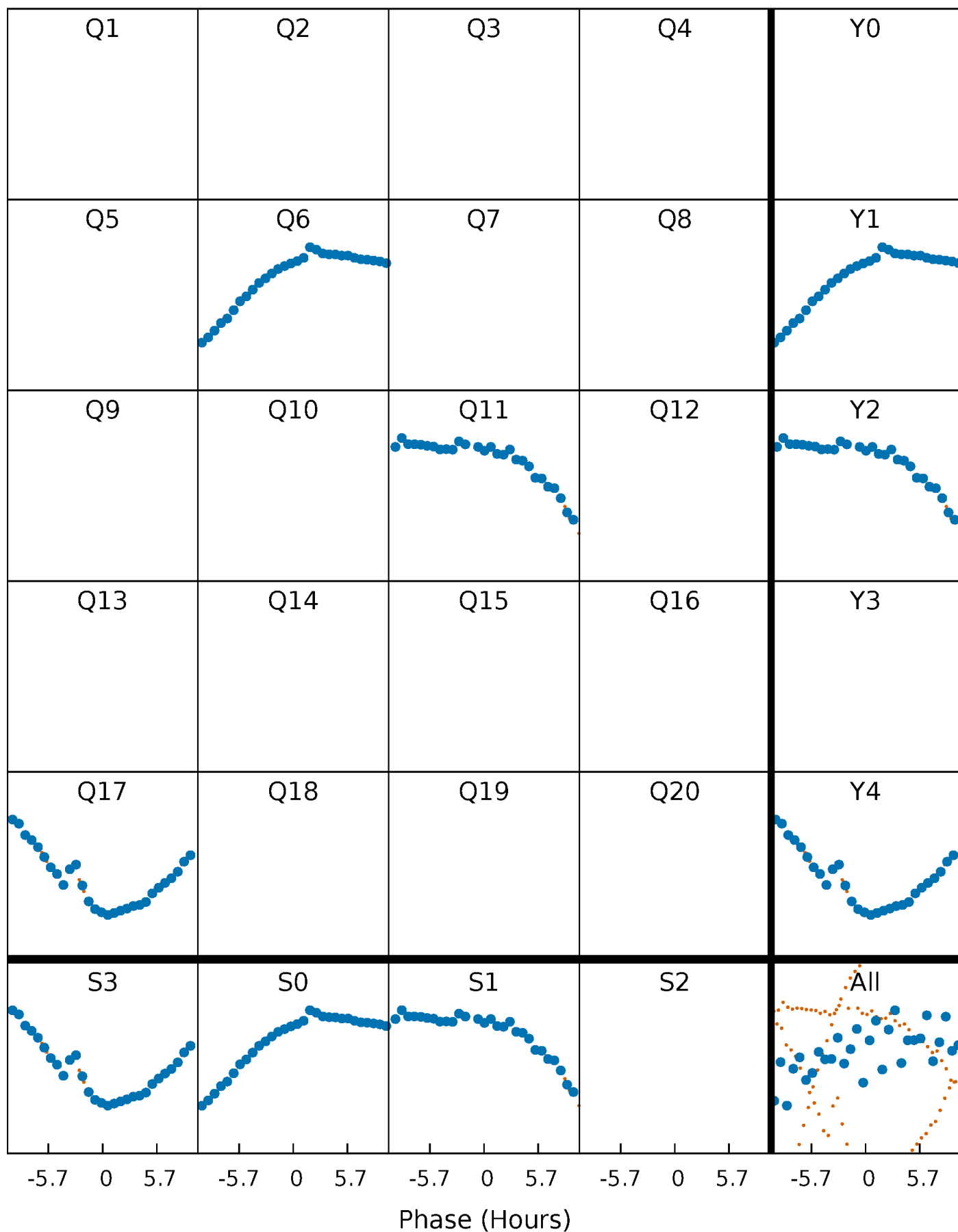


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



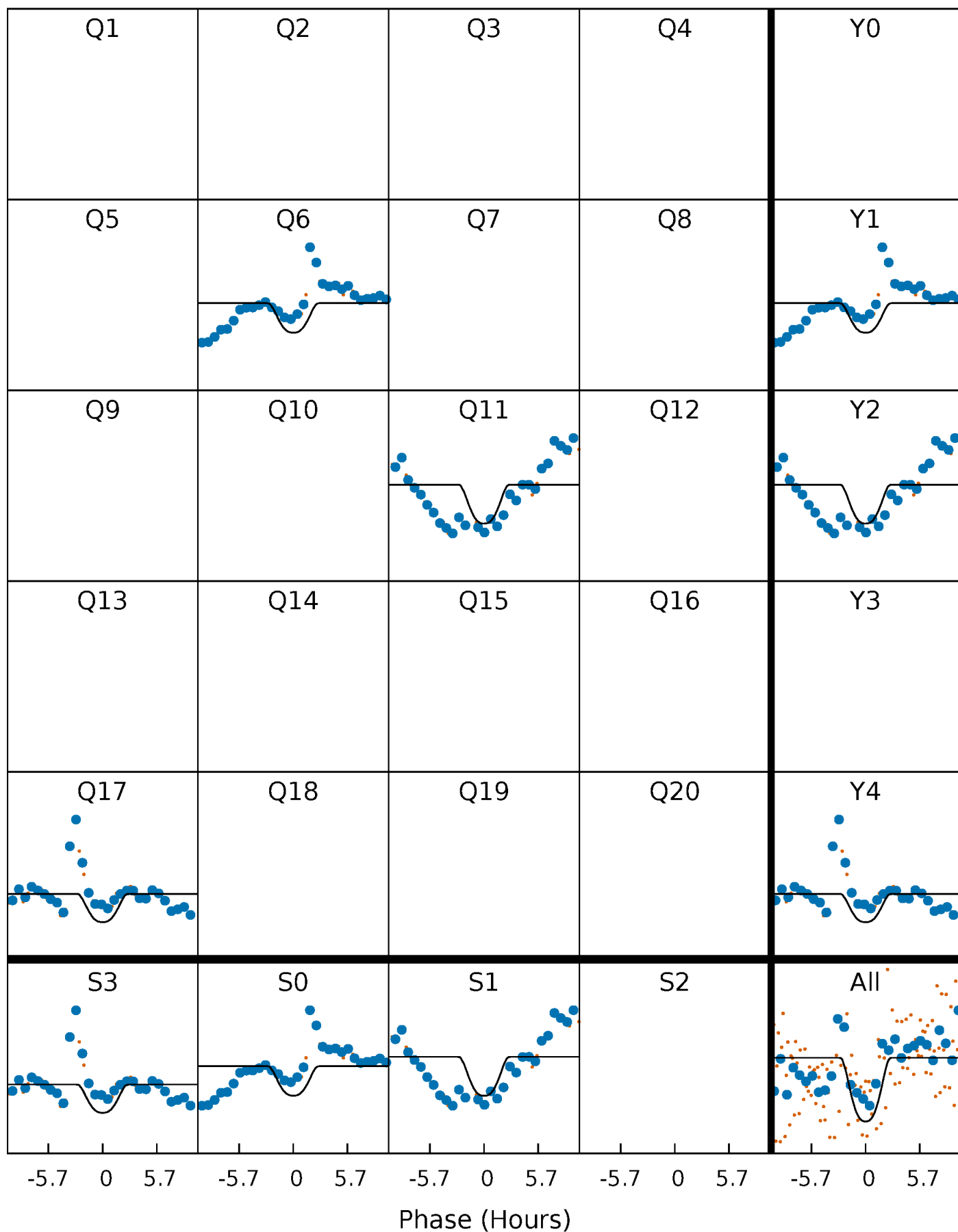
PDC Quarter-Phased Transit Curves

TCE 006033873-02 P=510.048627 Days $T_0=546.178486$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006033873-02 P=510.048627 Days $T_0=546.178486$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

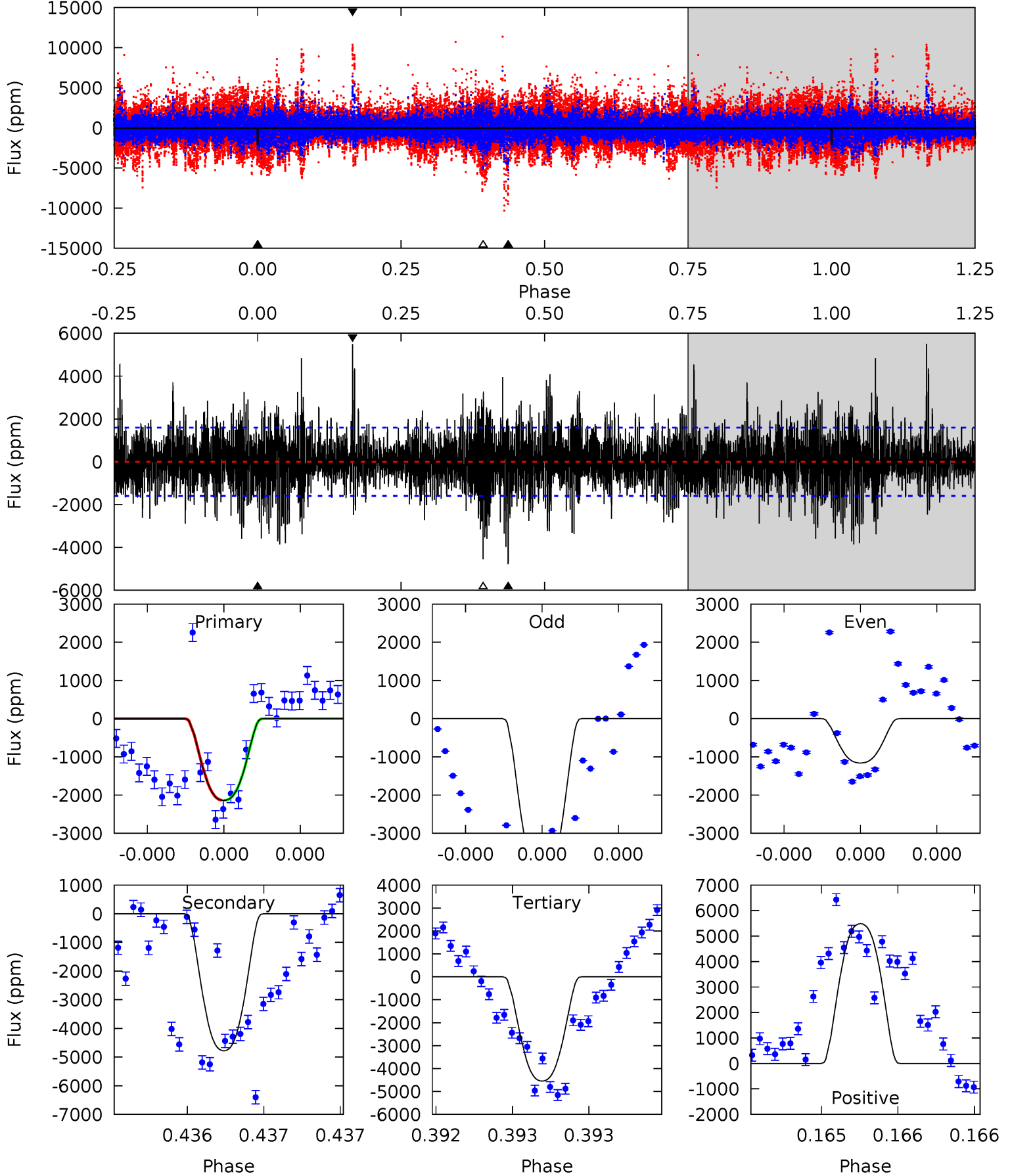
TCE 006033873-02 P=510.048902 Days $T_0=546.177239$ (BKJD)



DV Model-Shift Uniqueness Test

006033873-02, P = 510.048627 Days, E = 36.129859 Days

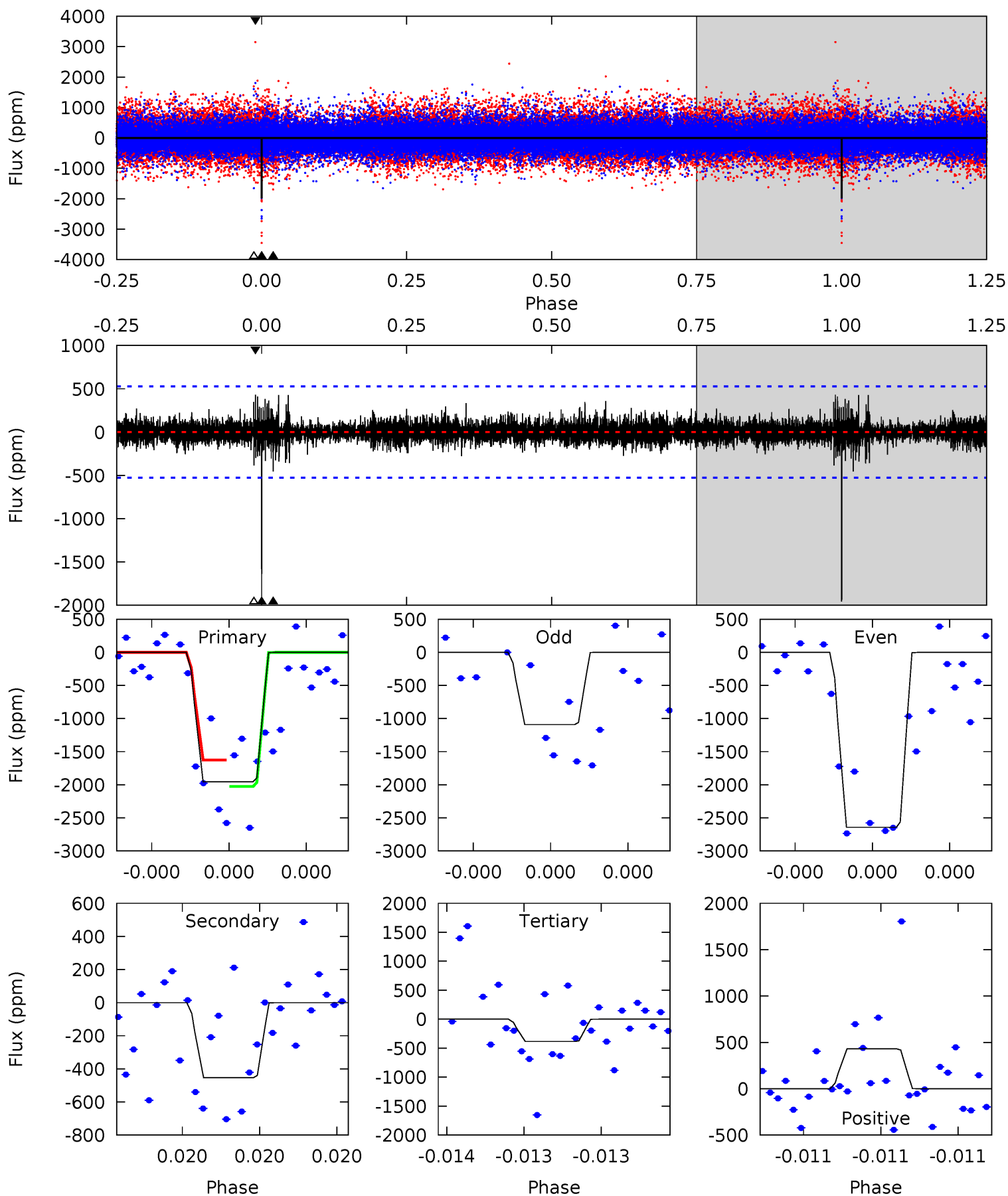
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.52	16.8	16.0	19.3	5.60	3.51	3.60	-8.47	-11.8	0.83	-2.48	4.70	1.96	0.53	0.00



Alt Model-Shift Uniqueness Test

006033873-02, P = 510.048902 Days, E = 36.128337 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	4.89	4.15	4.64	5.68	3.65	0.75	17.0	16.5	0.74	0.25	7.53	1.17	0.18	2.08



Stellar Parameters For KIC 006033873

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+172}_{-172}	$4.401^{+0.153}_{-0.187}$	$-0.400^{+0.300}_{-0.300}$	$0.932^{+0.244}_{-0.162}$	$0.797^{+0.116}_{-0.062}$	$1.387^{+1.008}_{-0.681}$
	+3%/-3%	+3%/-4%	+75%/-75%	+26%/-17%	+15%/-8%	+73%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006033873-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4782 ± 284	$6.82^{+1.17}_{-1.17}$	314^{+23}_{-18}	5818^{+421}_{-362}	77461^{+34483}_{-21642}
Alt.	-453 ± 93	$4.33^{+1.02}_{-0.99}$	316^{+23}_{-19}	4292^{+448}_{-330}	18140^{+13443}_{-7178}

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

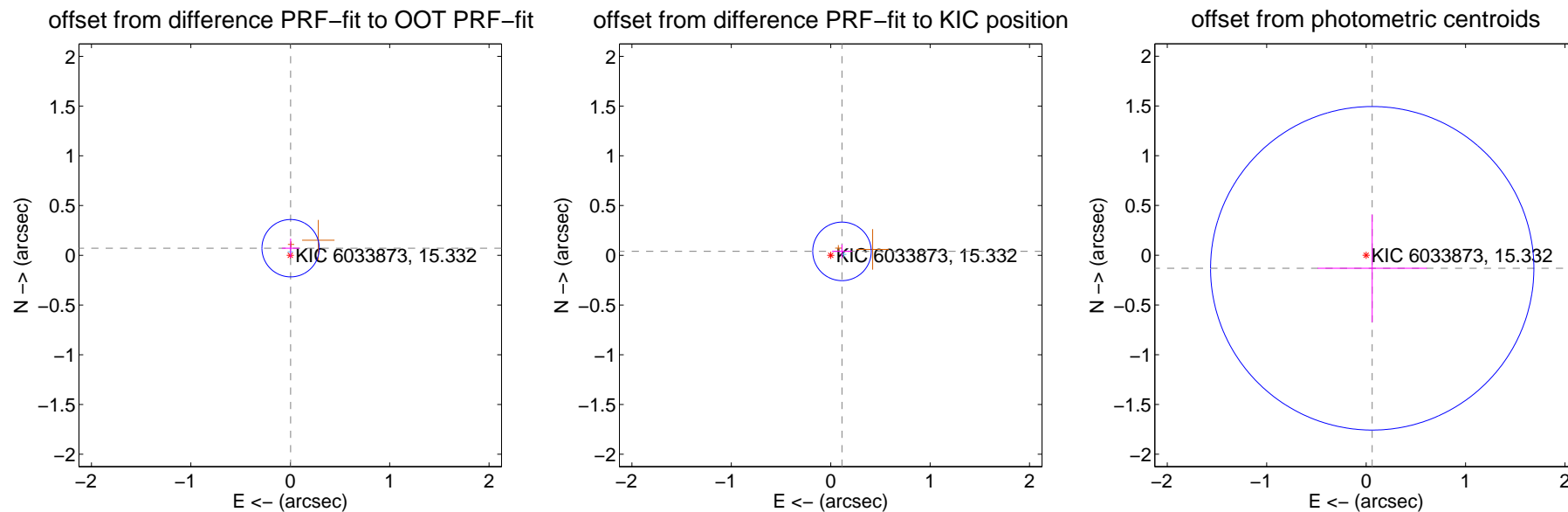
DV Centroid Data

Supplemental centroid analysis for 006033873-02. Kepler magnitude: 15.33. Transit SNR 8.21

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.071 ± 0.096	0.74	-0.003 ± 0.087	0.071 ± 0.096
PRF-fit source offset from KIC position	0.120 ± 0.098	1.22	-0.113 ± 0.100	0.039 ± 0.068
photometric centroid source offset	0.15 ± 0.54	0.27	-0.06 ± 0.55	-0.13 ± 0.54

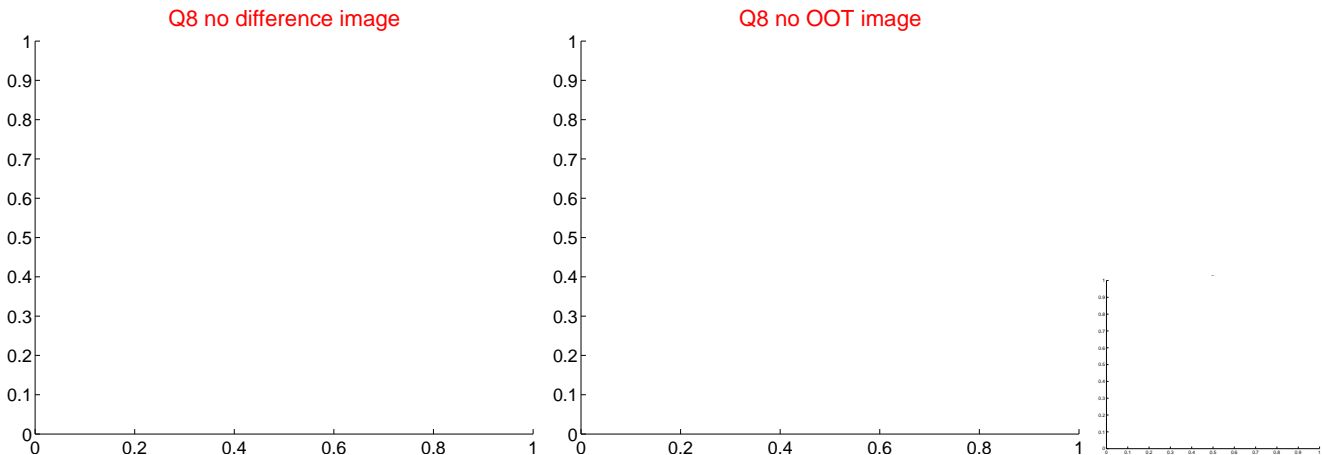
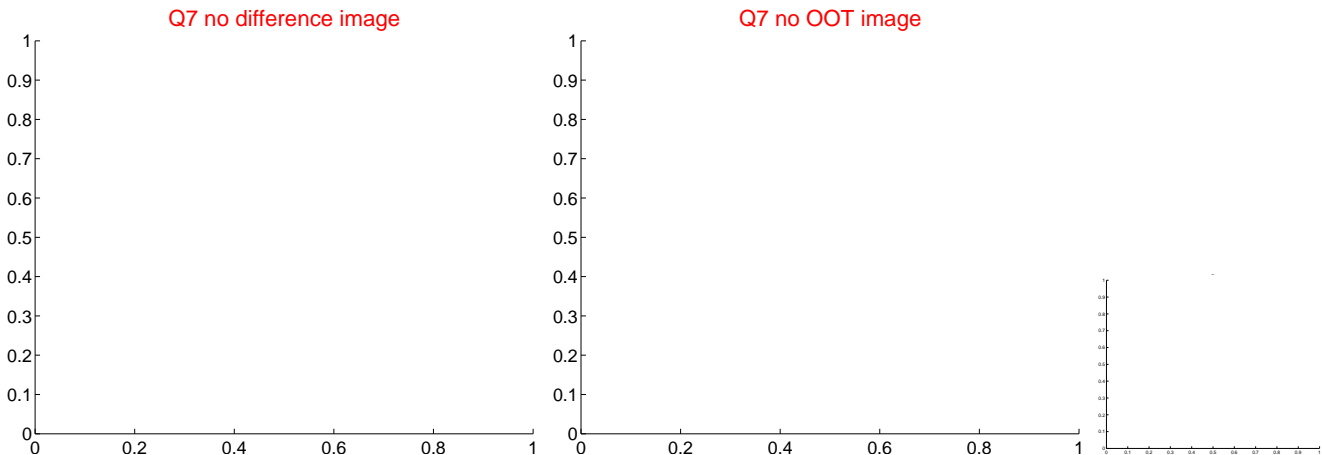
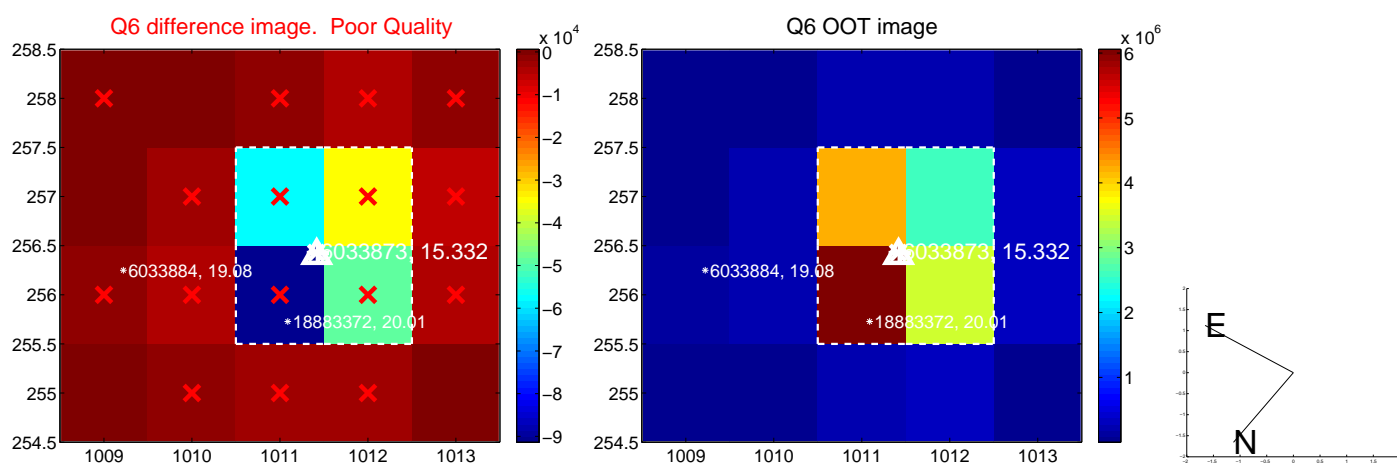
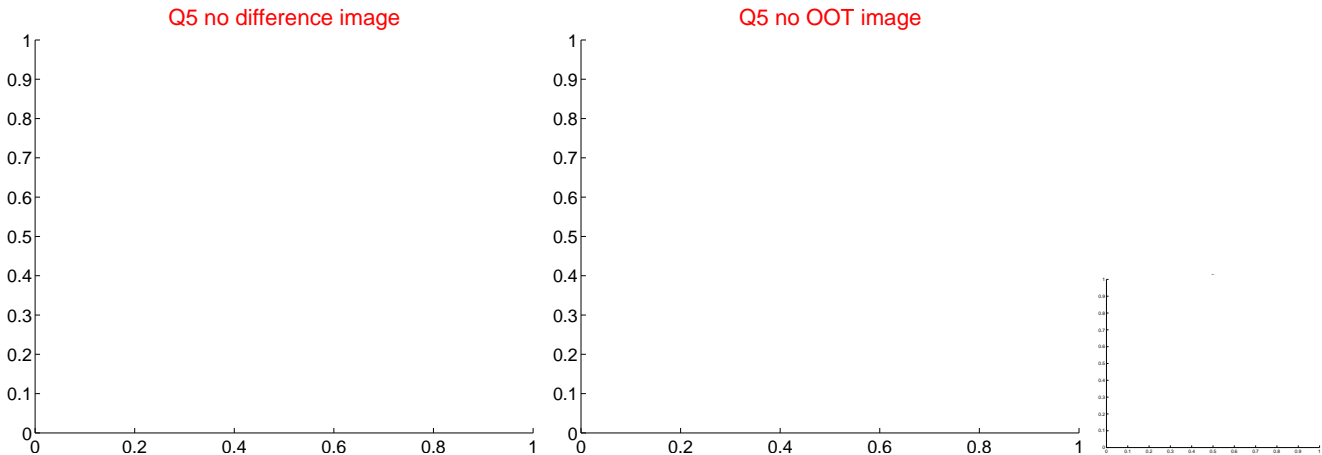


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

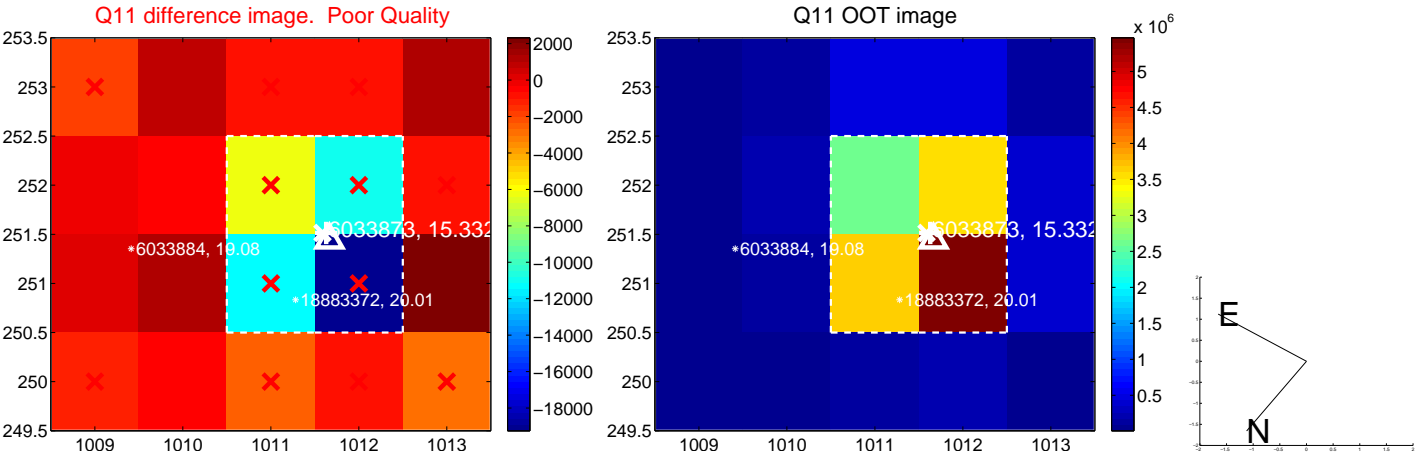
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



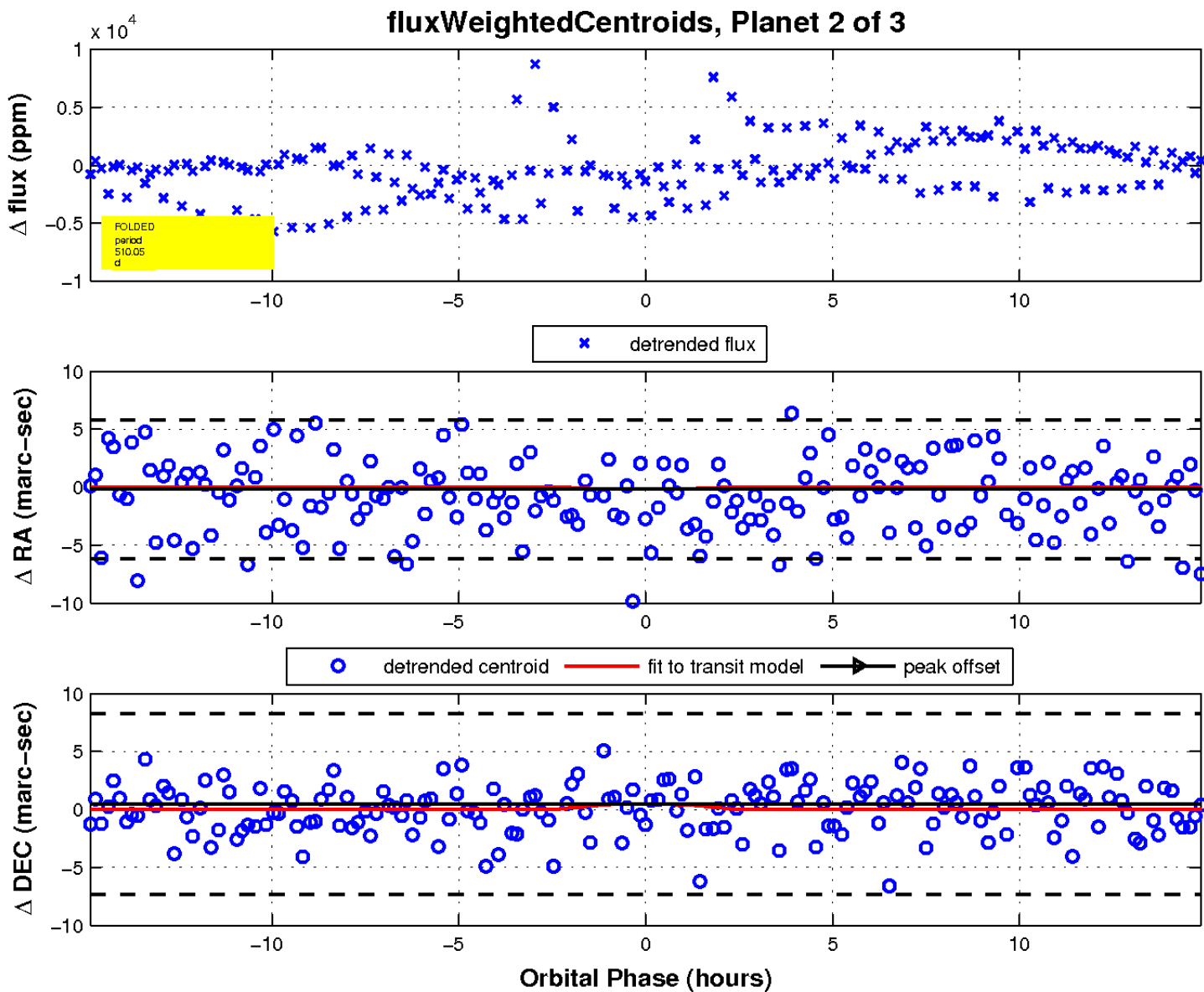
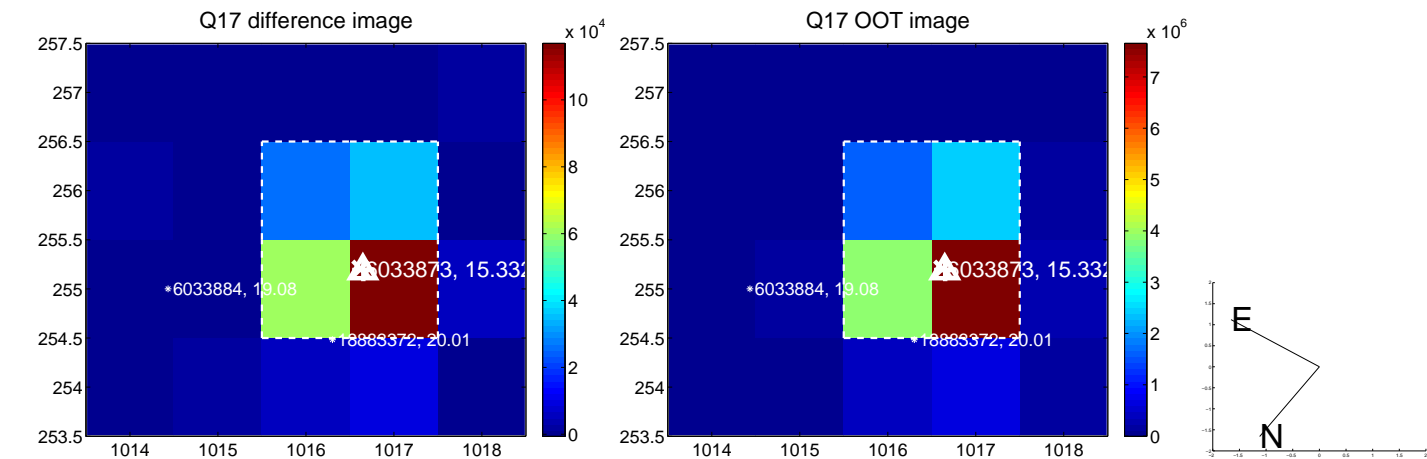
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

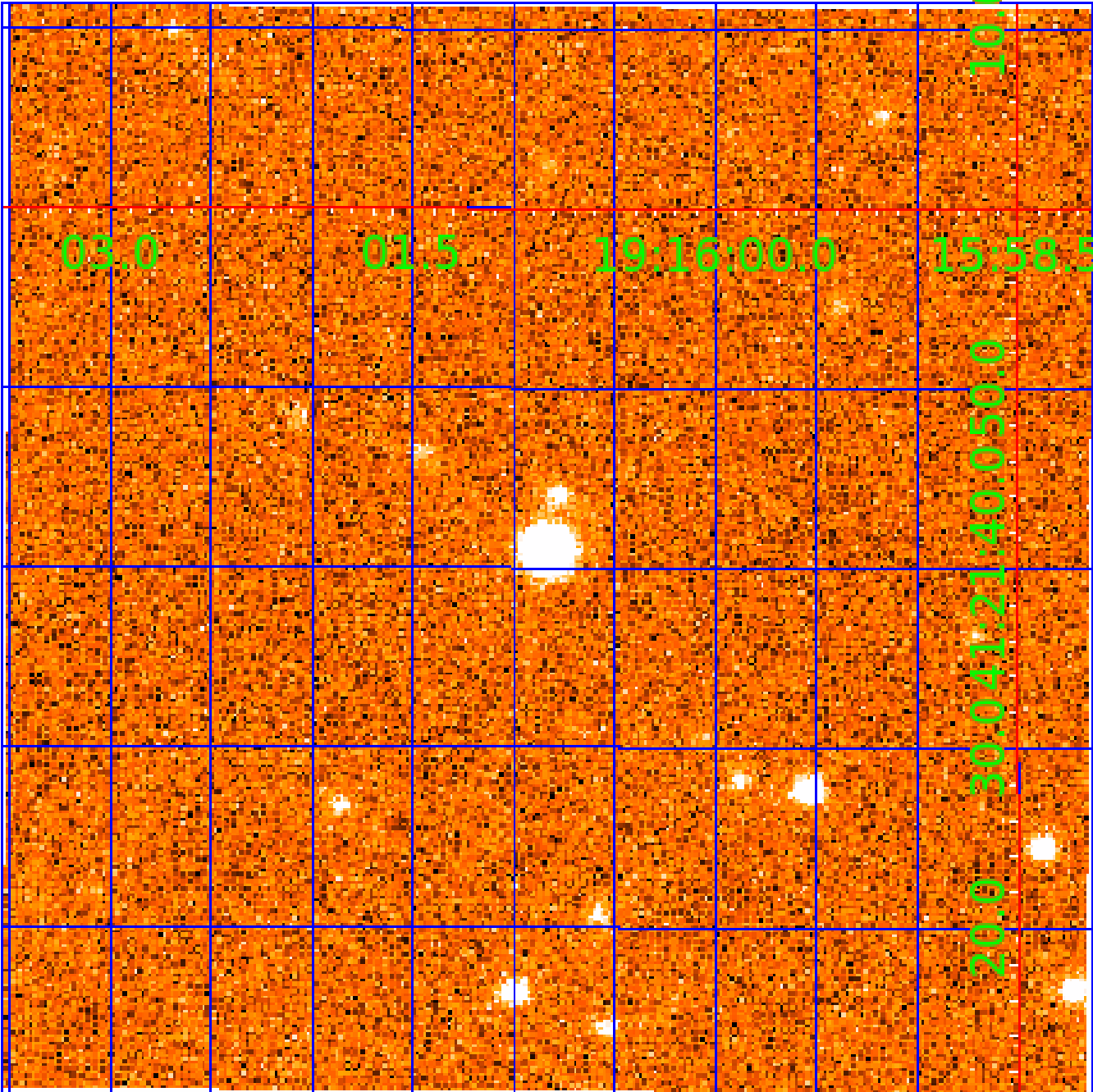


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006033873

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})
006033873-01	OBS	No	703.252767	136.039810	2901.3	3.048	14.1	8.4	0.93	5693	5.50	0.40
006033873-02	OBS	No	510.048627	546.178486	3322.7	5.013	12.1	8.2	0.93	5693	6.68	0.61
006033873-03	OBS	No	463.542658	355.915483	2860.2	3.715	12.8	7.3	0.93	5693	4.95	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006033873-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006033873-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006033873-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

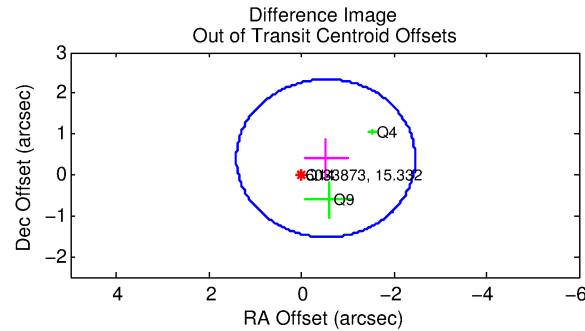
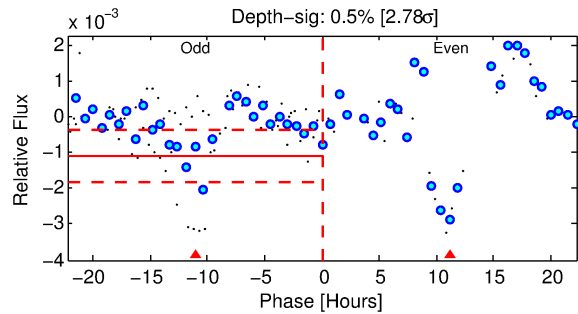
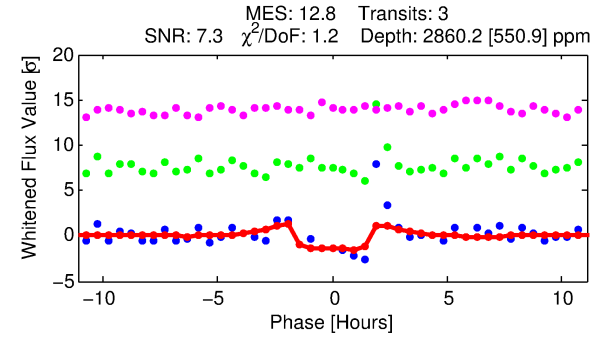
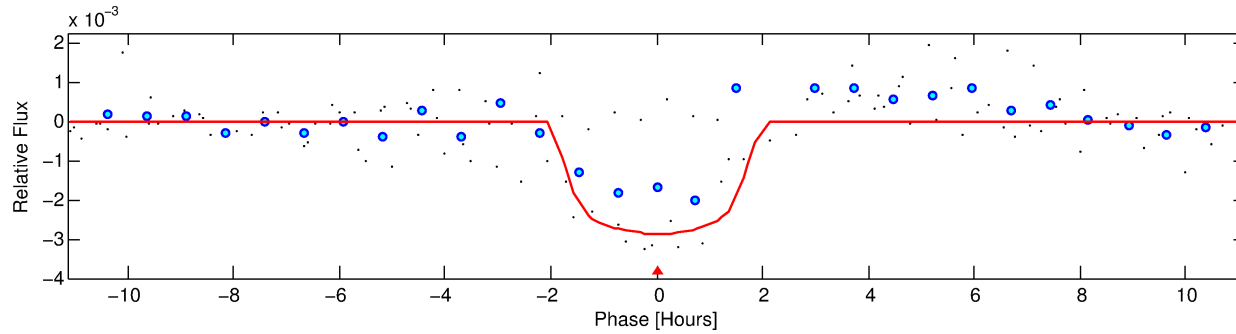
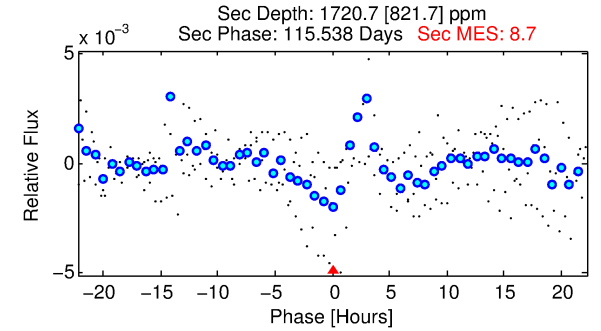
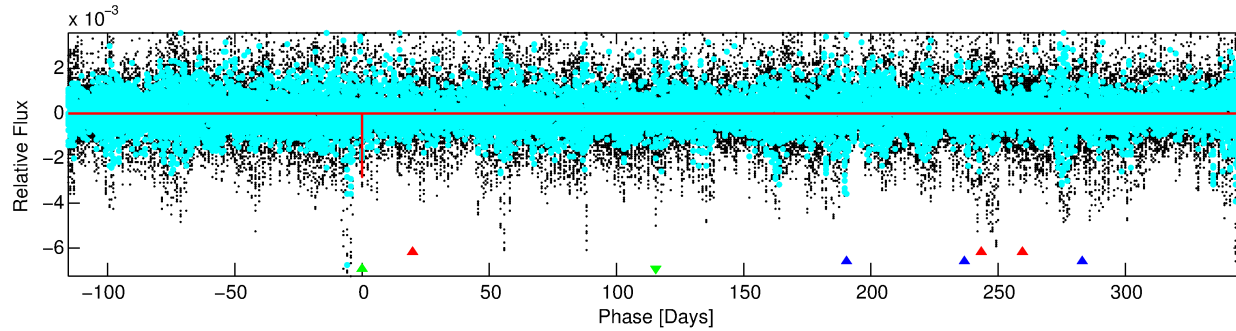
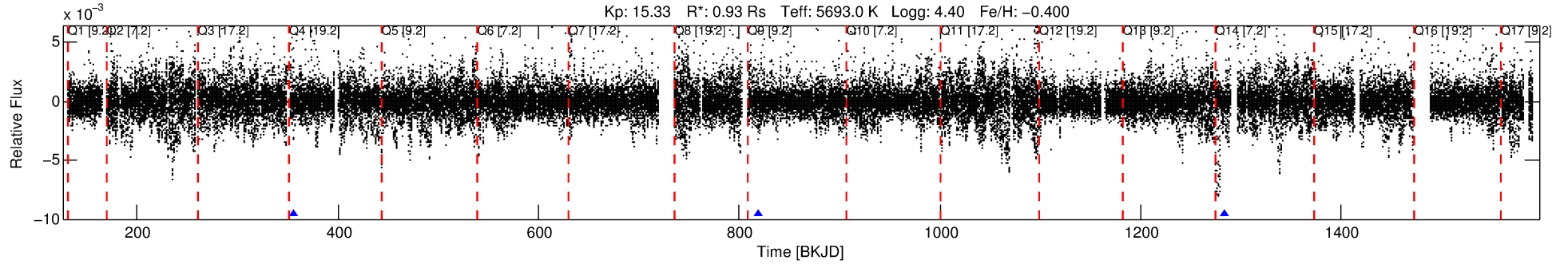
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006033873-03

No Significant Match Found

DV One-Page Summary

KIC: 6033873 Candidate: 3 of 3 Period: 463.543 d



DV Fit Results:

Period = 463.54266 [0.00390] d
Epoch = 355.9155 [0.0059] BKJD
Rp/R* = 0.0487 [0.0793]
a/R* = 999.46 [7319.98]
b = 0.01 [623.88]
Seff = 0.69 [0.25]
Teq = 233 [21] K
Rp = 4.95 [8.17] Re
a = 1.0873 [0.2457] AU
Ag = 45647.89 [151020.41] [0.30σ]
Teffp = 5255 [4327] K [1.16σ]

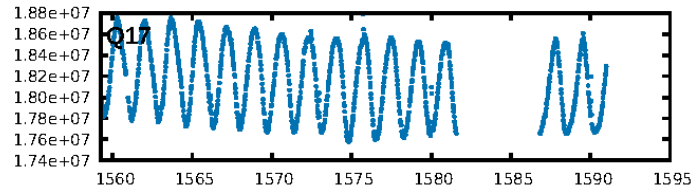
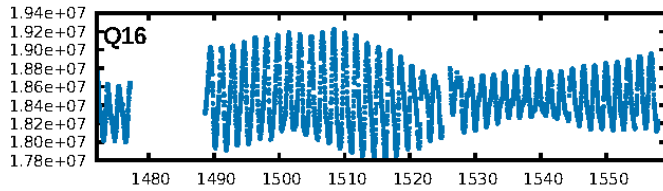
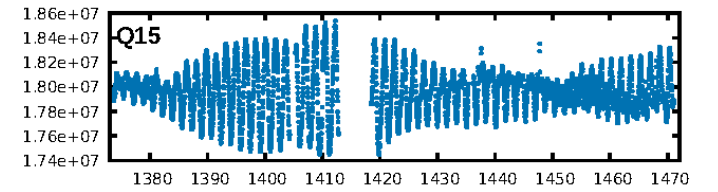
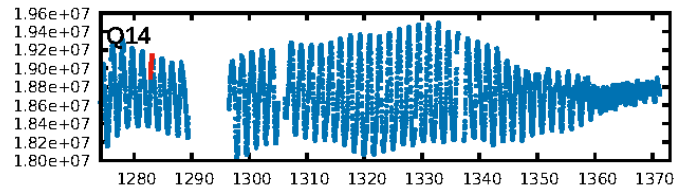
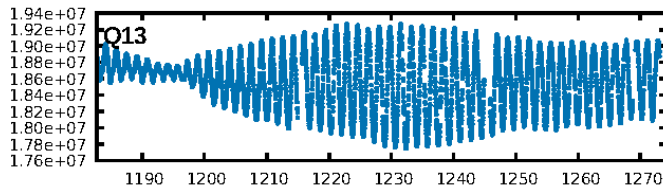
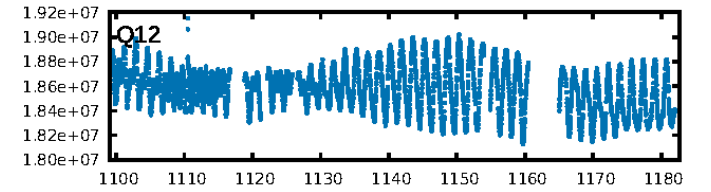
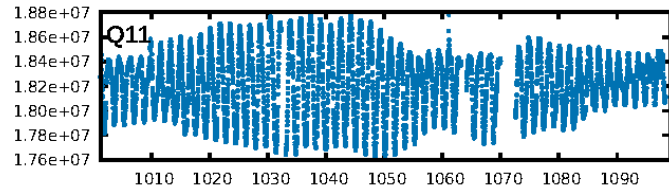
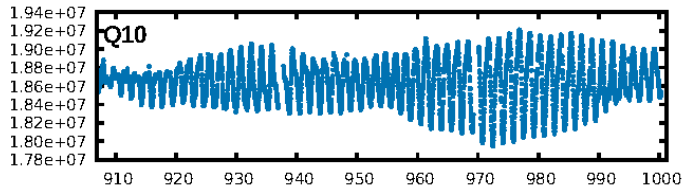
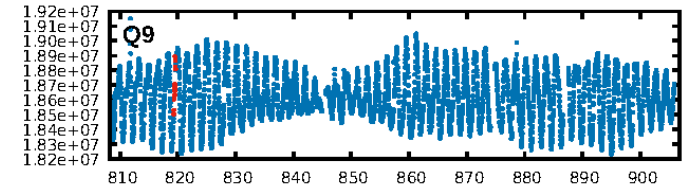
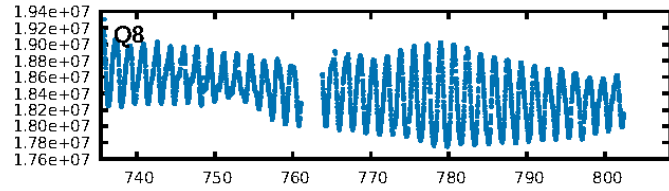
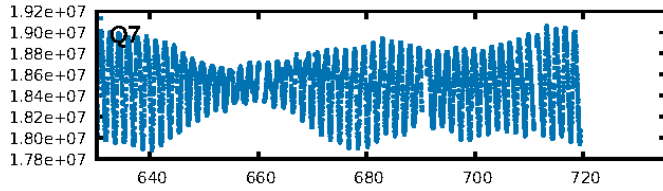
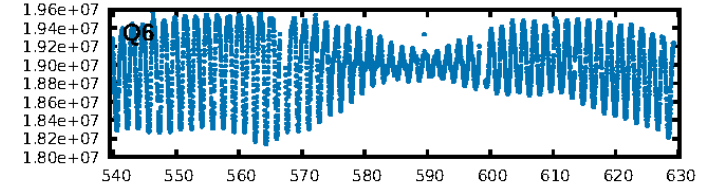
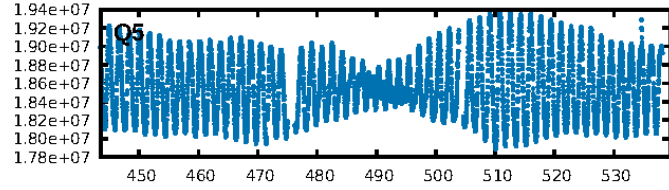
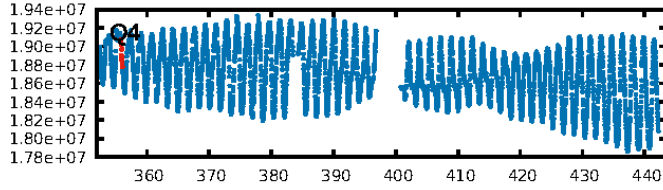
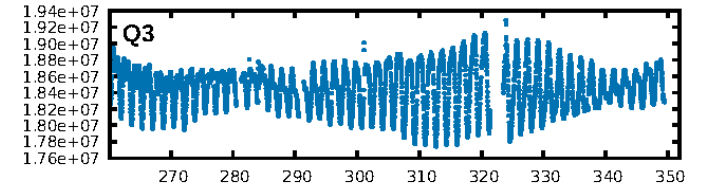
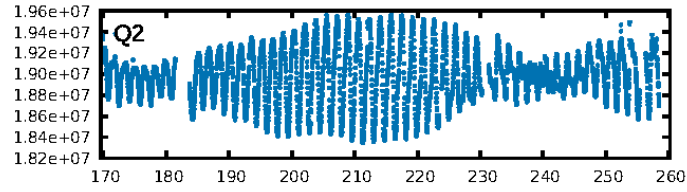
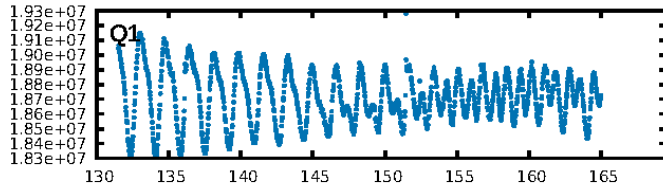
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [178.89σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 44.4%
Bootstrap-pfa: 3.71e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.821
Centroid-sig: 0.3%
Centroid-so: 1.066 arcsec [1.83σ]
OotOffset-rm: 0.665 arcsec [1.03σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.760 arcsec [1.35σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

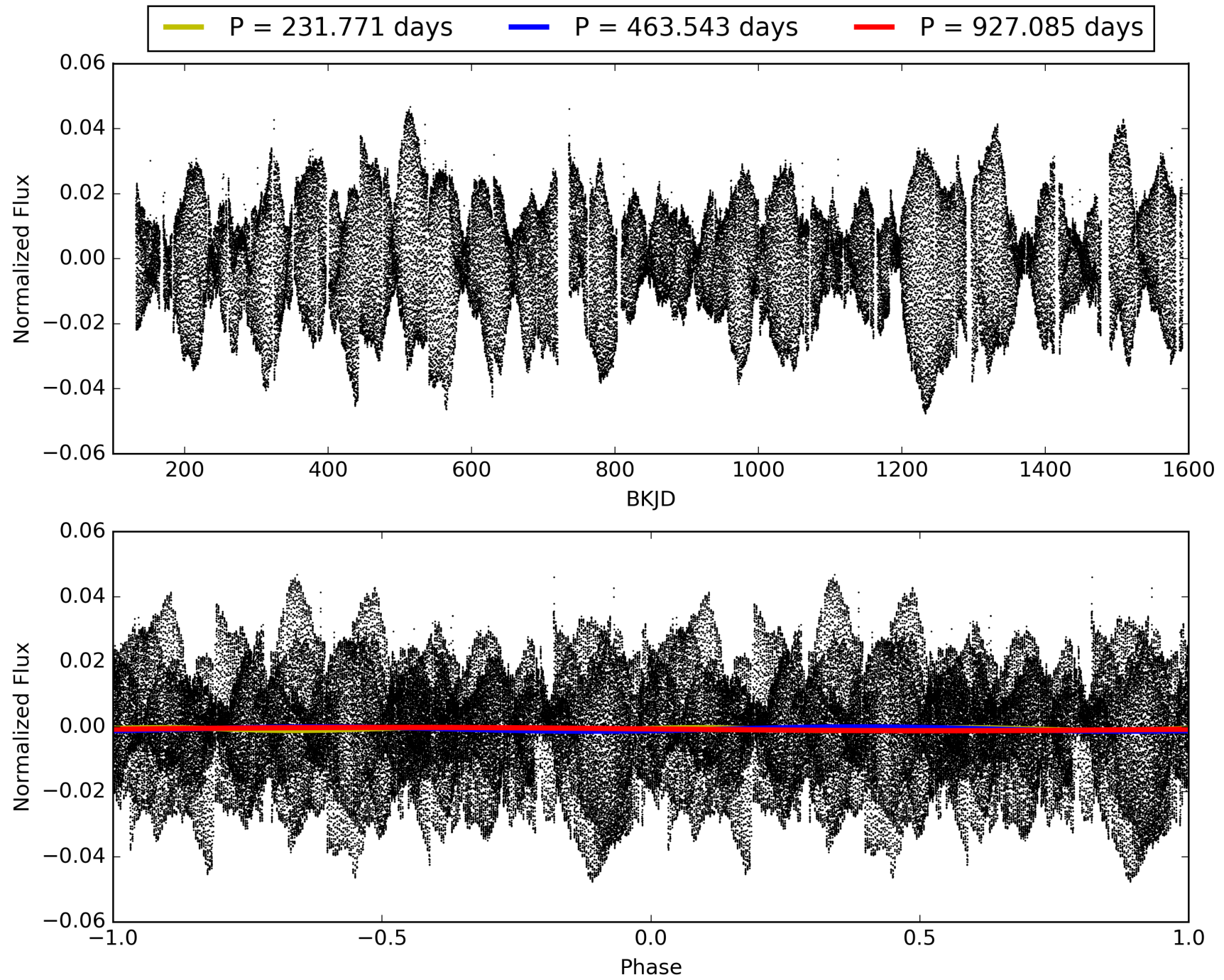
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:11:19 Z

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

TCE 006033873-03, PDC Light Curves

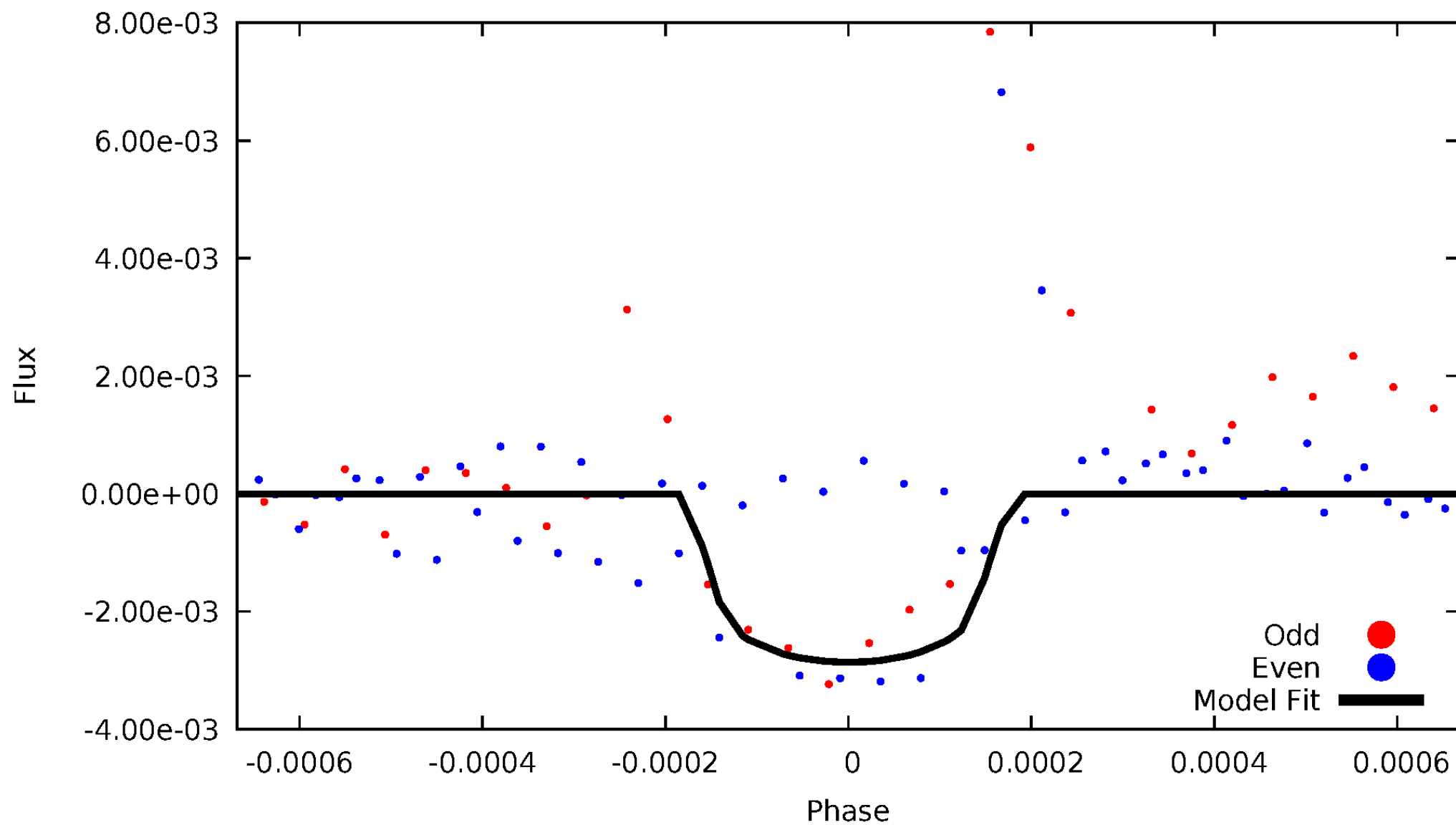


TCE 006033873-03



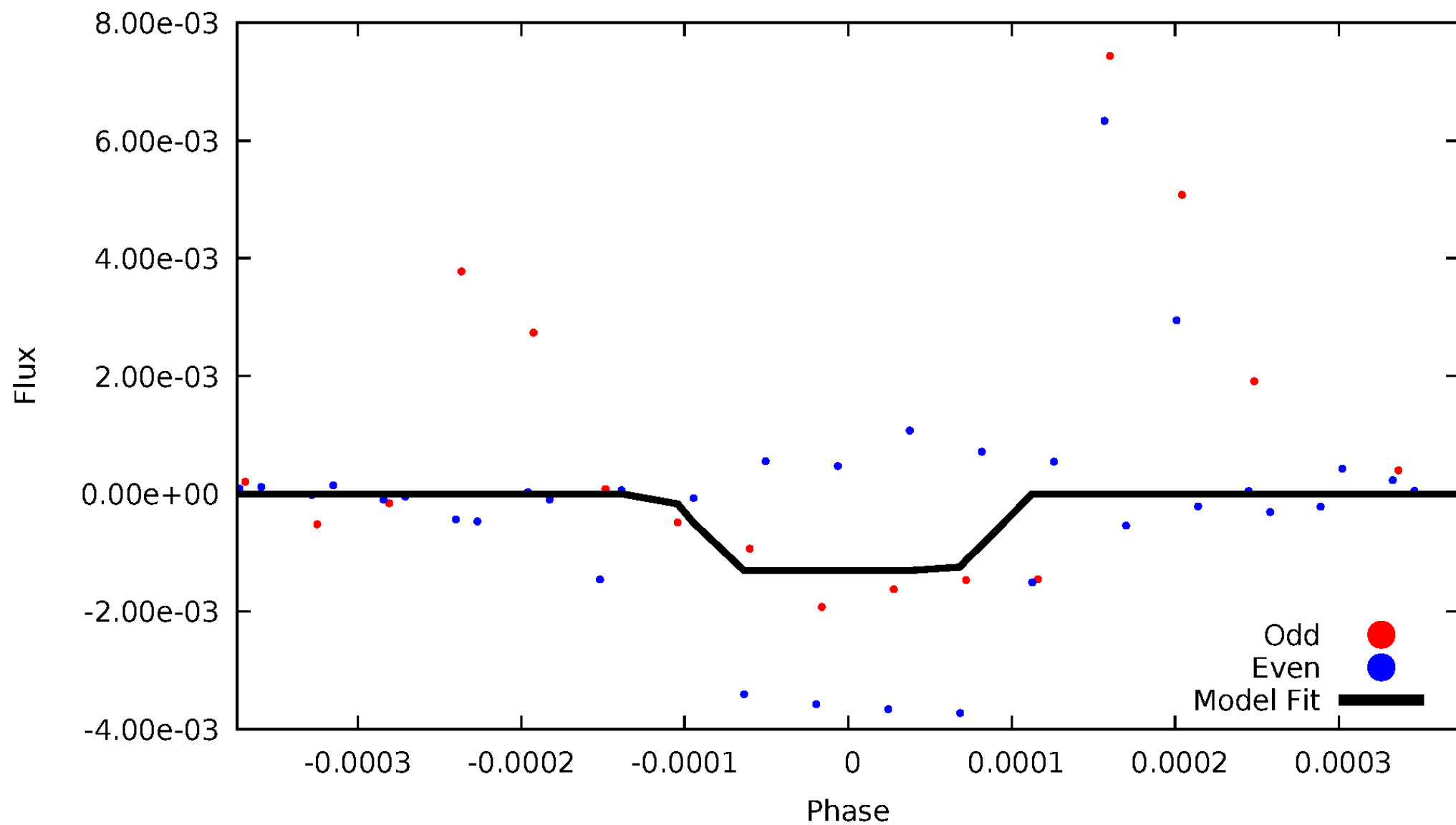
DV Odd/Even

TCE 006033873-03



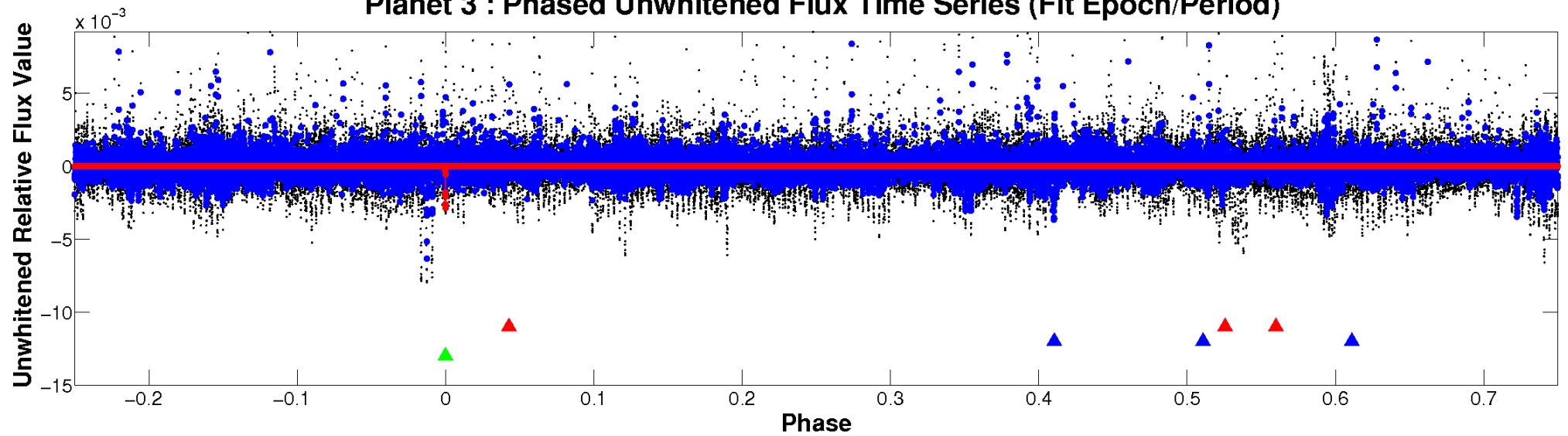
ALT Odd/Even

TCE 006033873-03

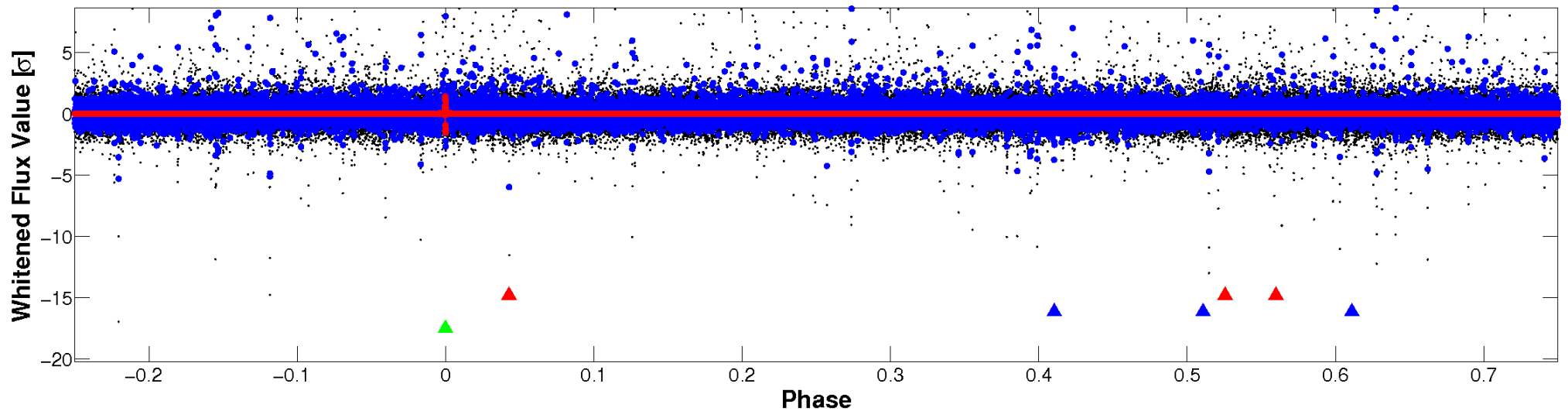


Non-Whitened Vs. Whitened Light Curve

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

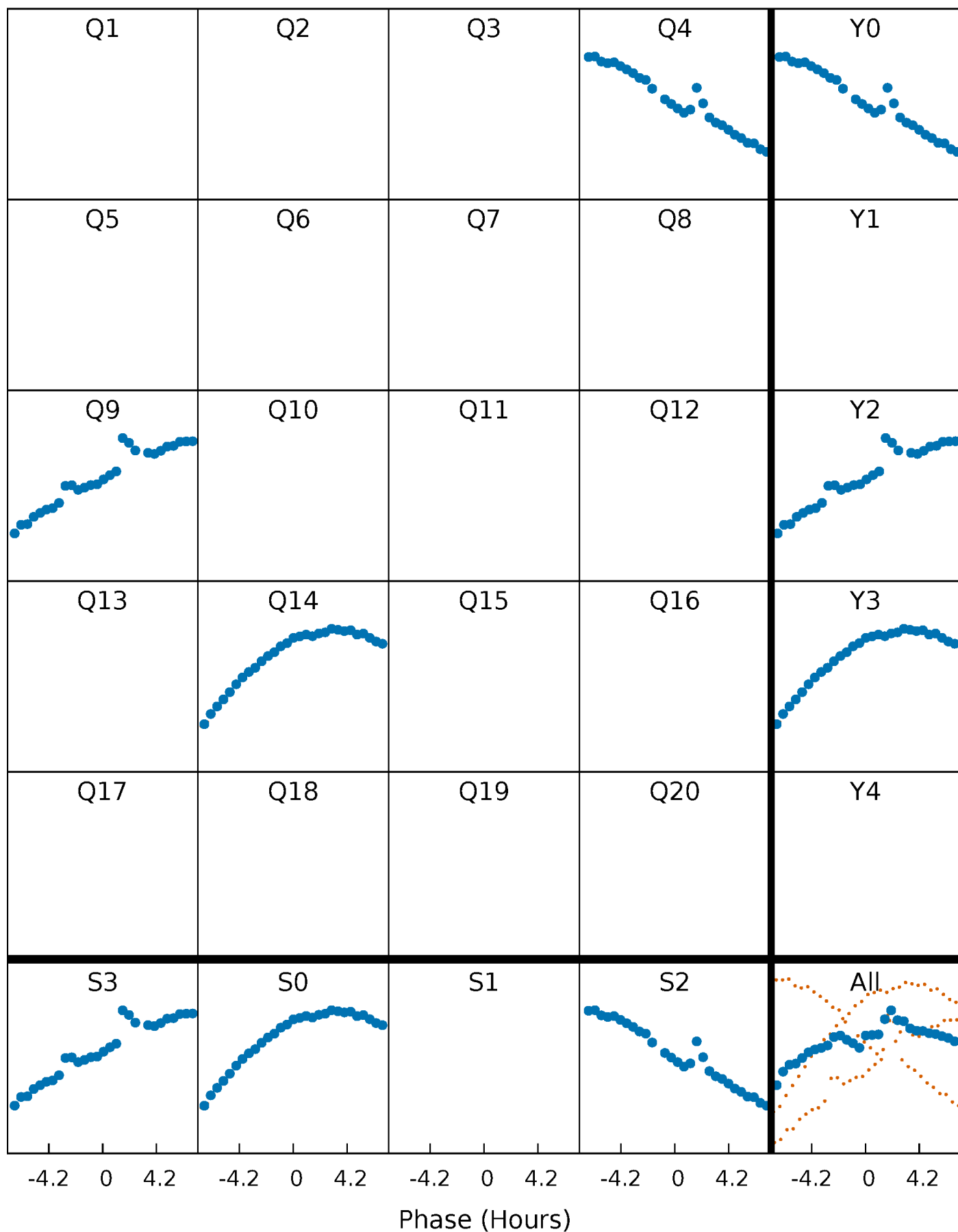


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



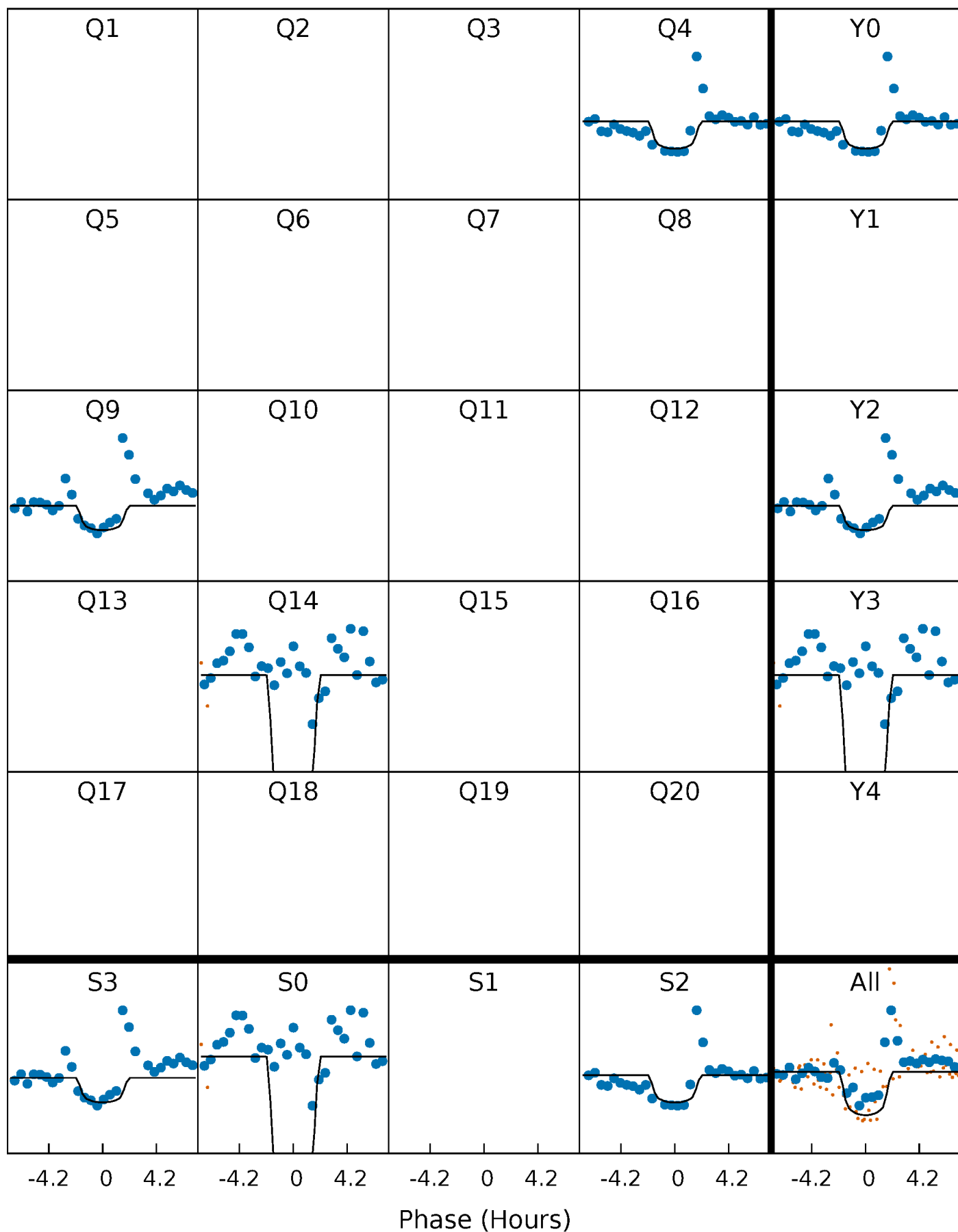
PDC Quarter-Phased Transit Curves

TCE 006033873-03 P=463.542658 Days $T_0=355.915483$ (BKJD)



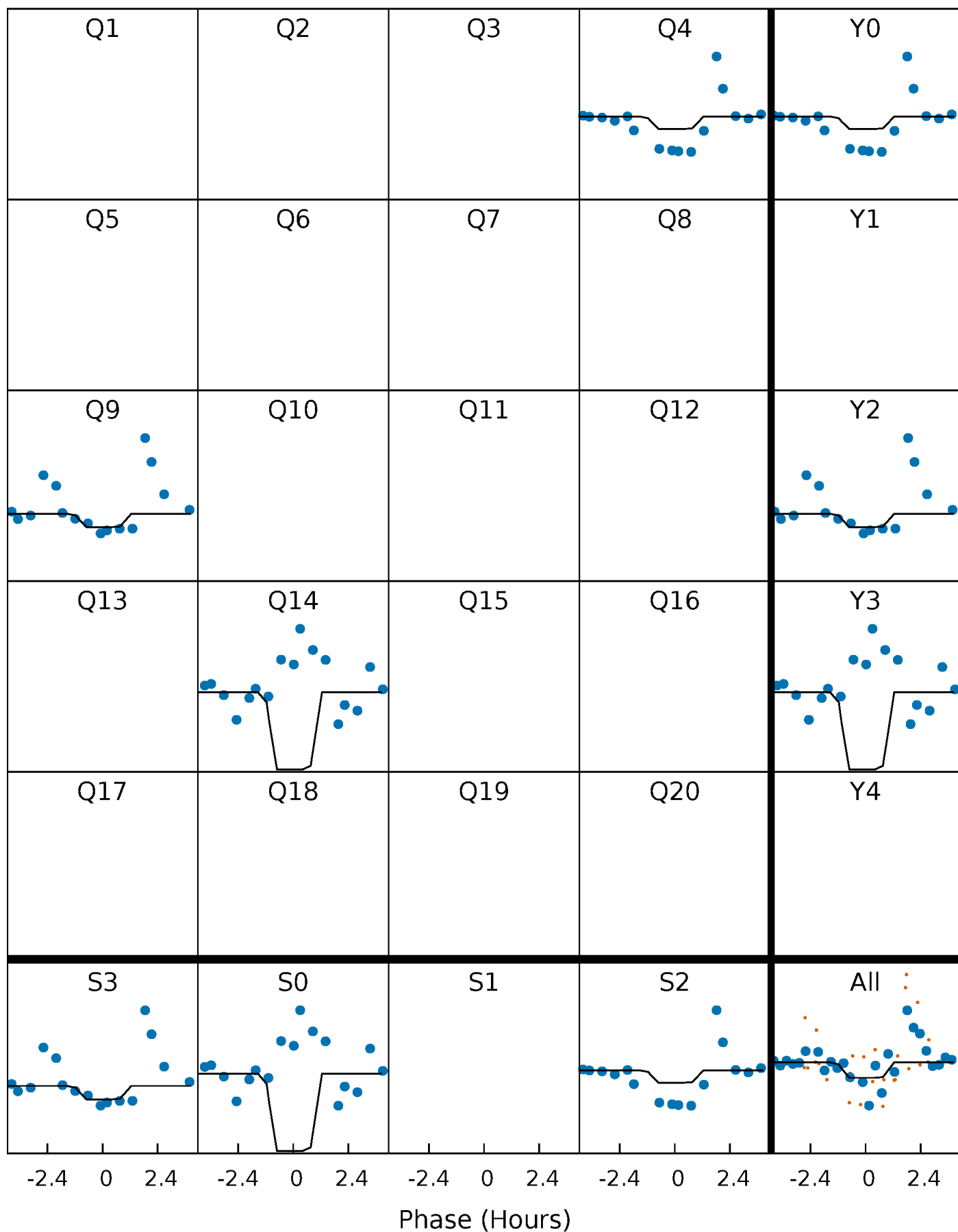
DV Quarter-Phased Transit Curves

TCE 006033873-03 P=463.542658 Days $T_0=355.915483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

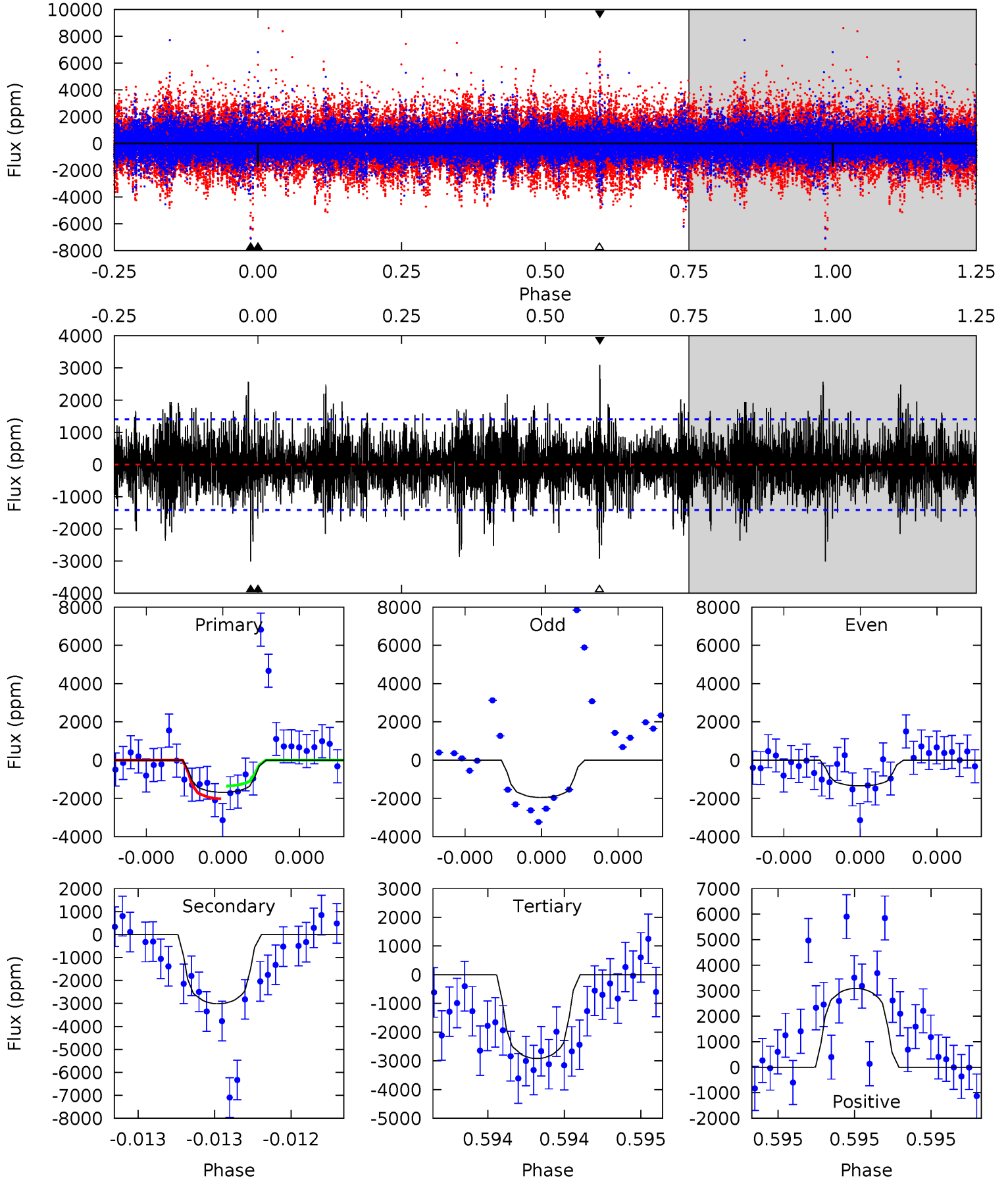
TCE 006033873-03 $P=463.535309$ Days $T_0=355.920480$ (BKJD)



DV Model-Shift Uniqueness Test

006033873-03, P = 463.542658 Days, E = 355.915483 Days

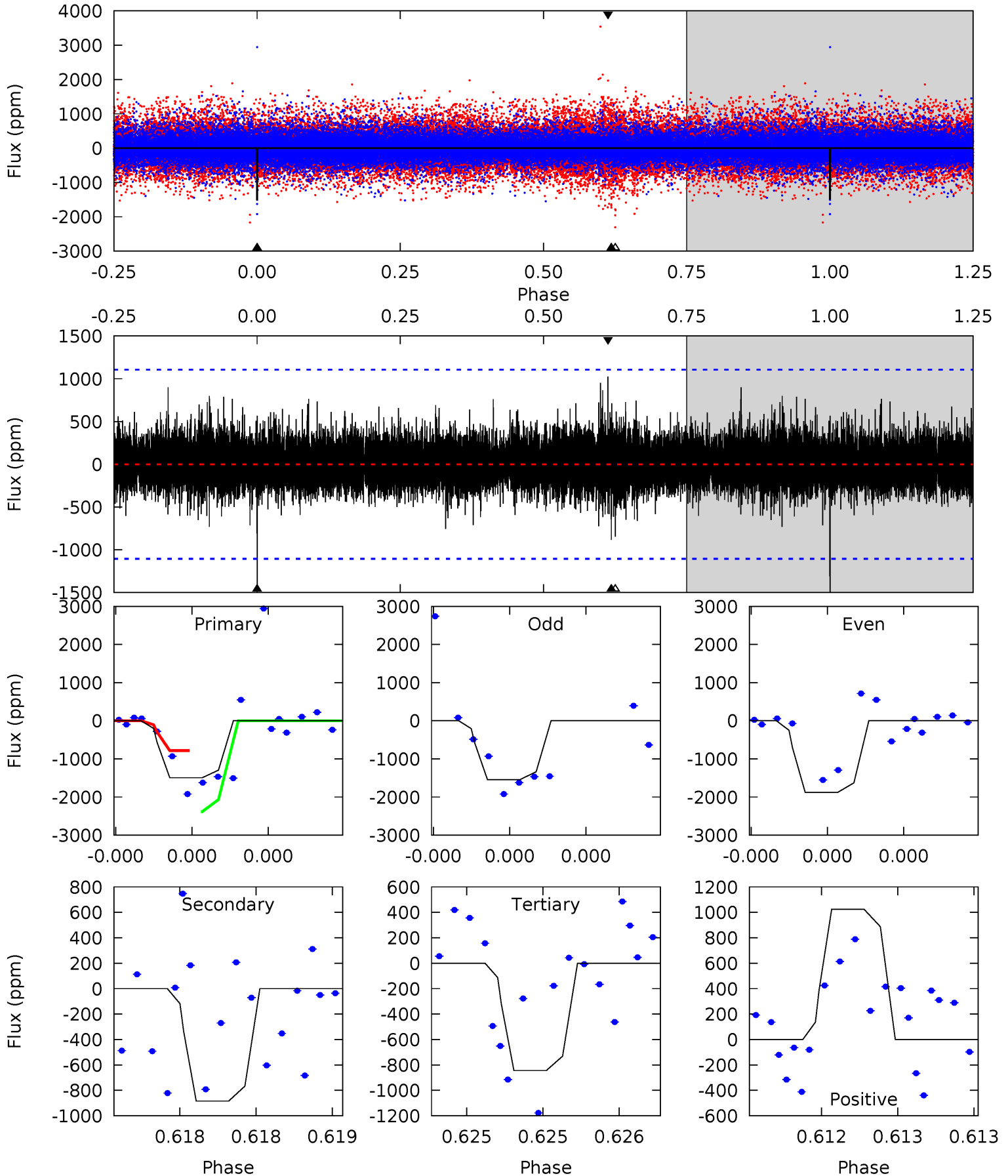
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.72	12.0	11.7	12.3	5.63	3.57	2.42	-4.94	-5.62	0.38	-0.30	1.12	0.78	0.51	1.33



Alt Model-Shift Uniqueness Test

006033873-03, P = 463.535309 Days, E = 355.920480 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.73	4.57	4.36	5.30	5.72	3.71	0.84	3.36	2.43	0.21	-0.72	1.31	0.96	0.41	5.09



Stellar Parameters For KIC 006033873

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+172}_{-172}	$4.401^{+0.153}_{-0.187}$	$-0.400^{+0.300}_{-0.300}$	$0.932^{+0.244}_{-0.162}$	$0.797^{+0.116}_{-0.062}$	$1.387^{+1.008}_{-0.681}$
	+3%/-3%	+3%/-4%	+75%/-75%	+26%/-17%	+15%/-8%	+73%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006033873-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3013 ± 250	$7.94^{+6.97}_{-5.27}$	325^{+23}_{-18}	4920^{+3610}_{-1085}	$32090^{+249456}_{-23180}$
Alt.	-884 ± 193	$6.88^{+6.71}_{-4.71}$	326^{+23}_{-19}	4096^{+2600}_{-821}	$12278^{+105468}_{-9228}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

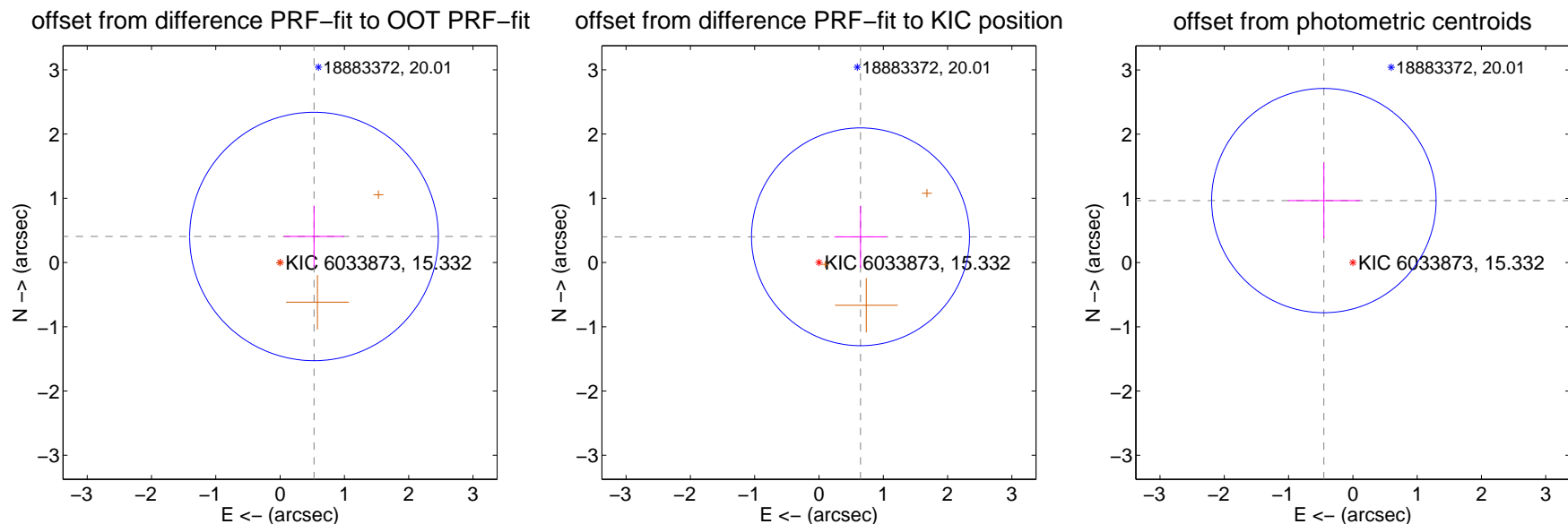
DV Centroid Data

Supplemental centroid analysis for 006033873-03. Kepler magnitude: 15.33. Transit SNR 7.33

There are 0 quarters with good PRF difference image offsets

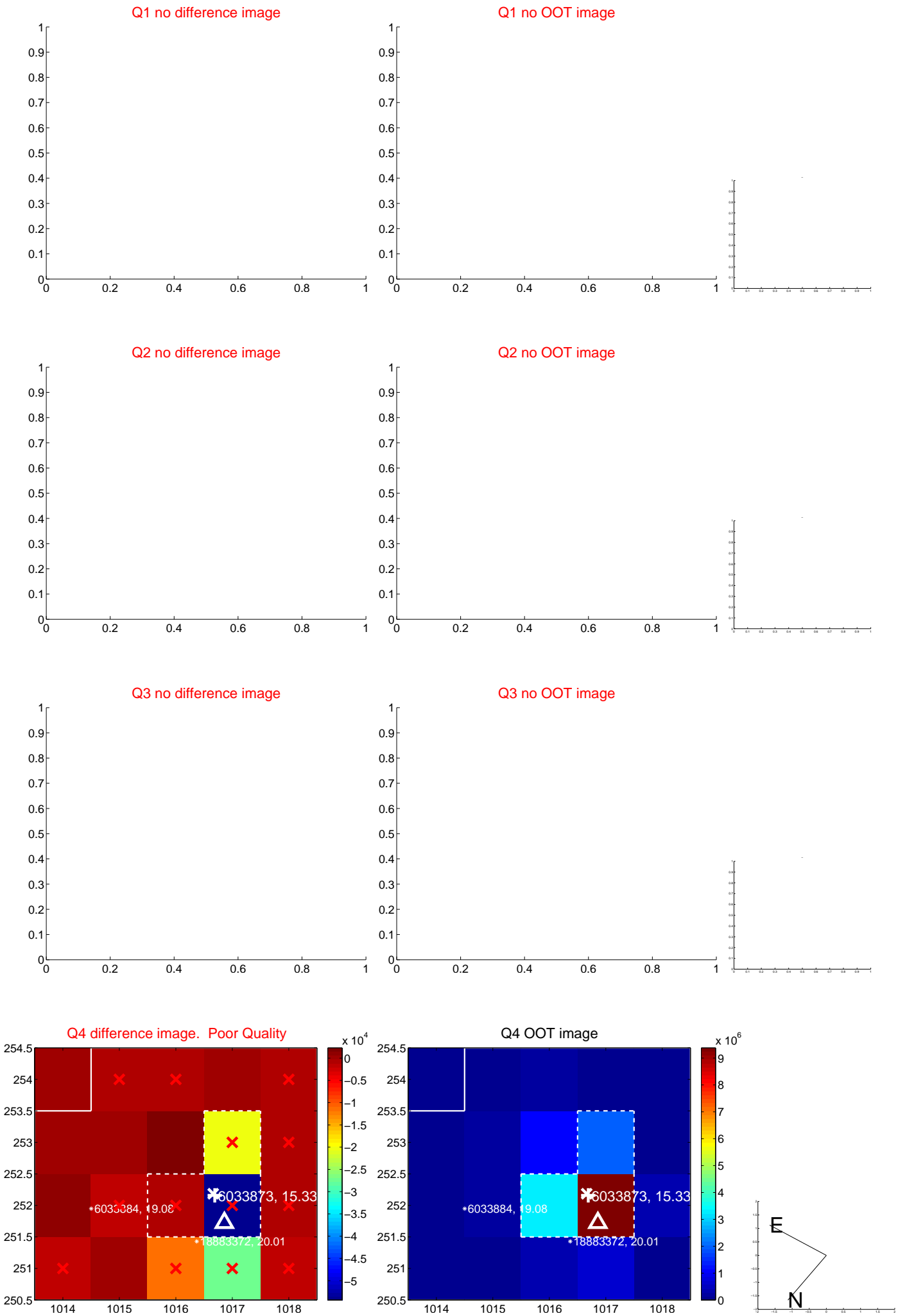
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.665 ± 0.645	1.03	-0.527 ± 0.467	0.406 ± 0.480
PRF-fit source offset from KIC position	0.760 ± 0.565	1.35	-0.646 ± 0.407	0.401 ± 0.484
photometric centroid source offset	1.07 ± 0.58	1.83	0.45 ± 0.56	0.97 ± 0.59



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

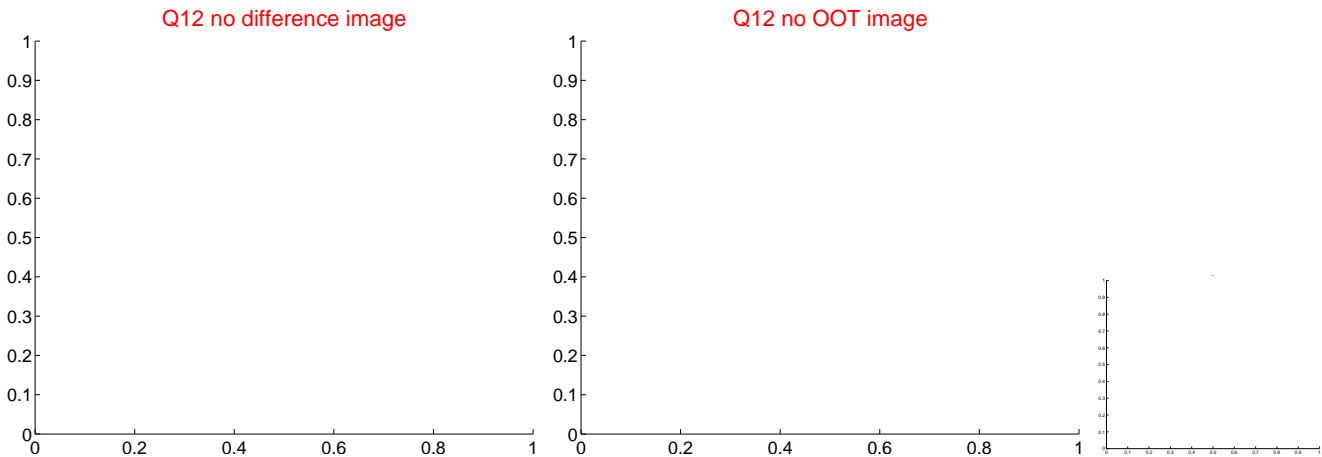
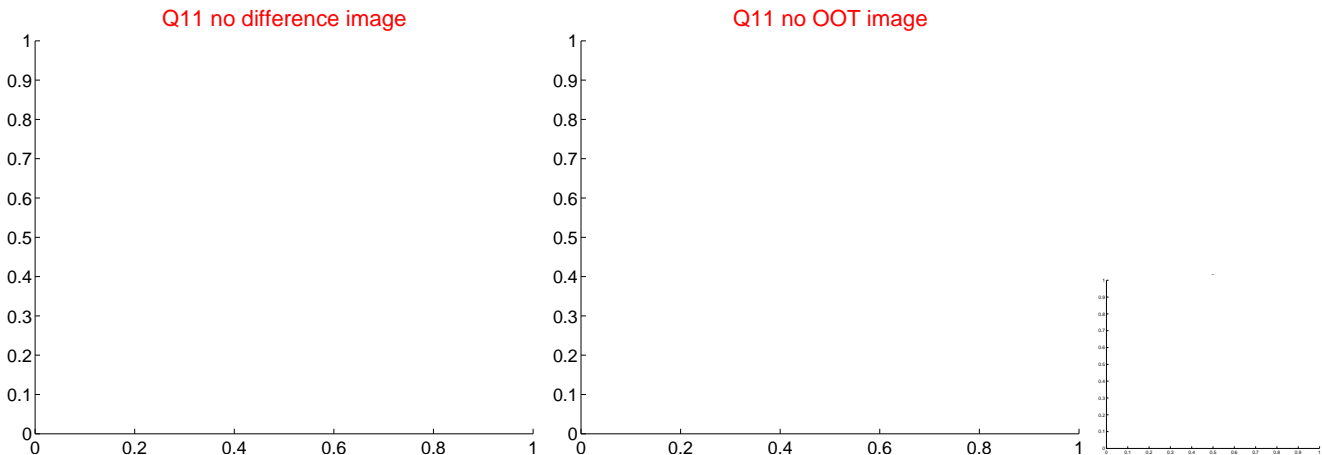
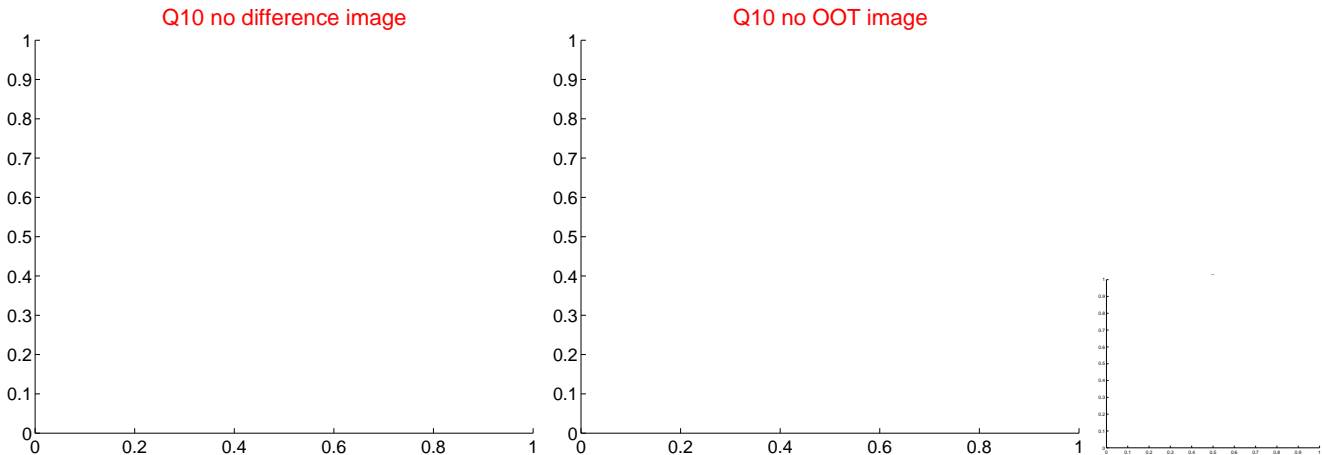
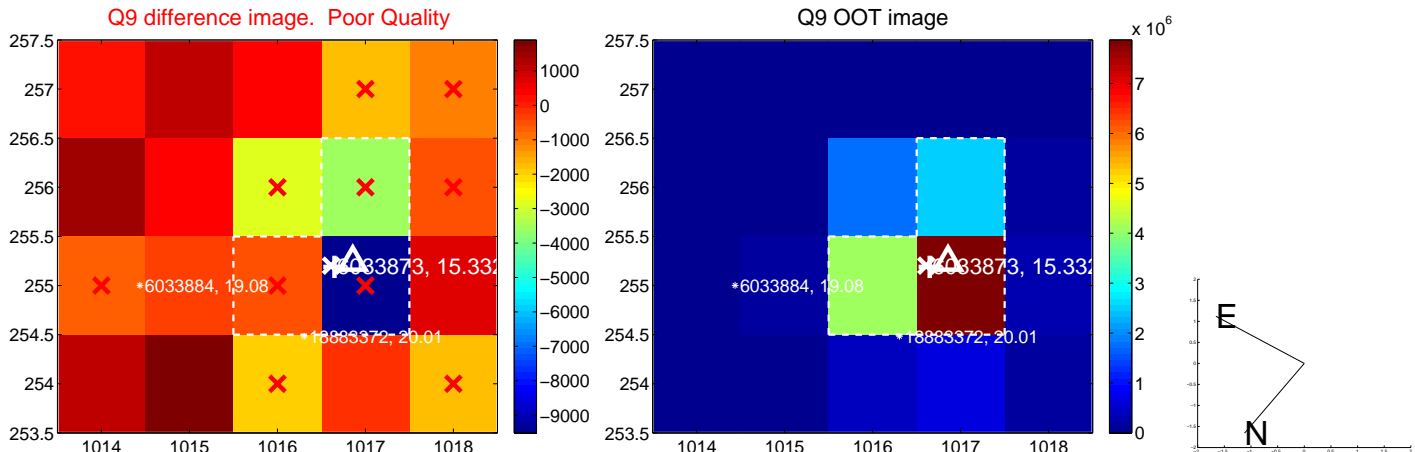
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



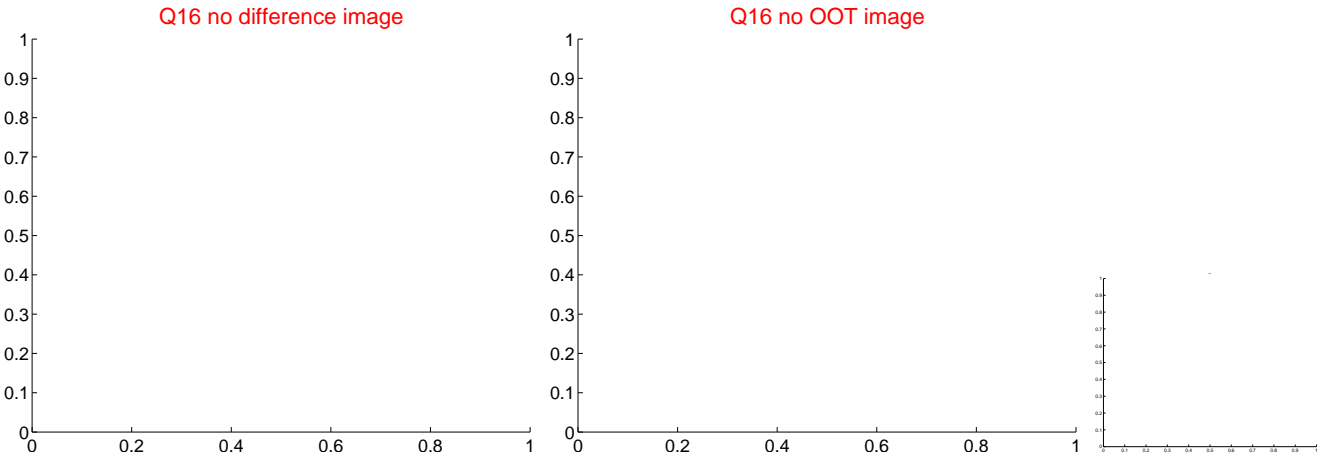
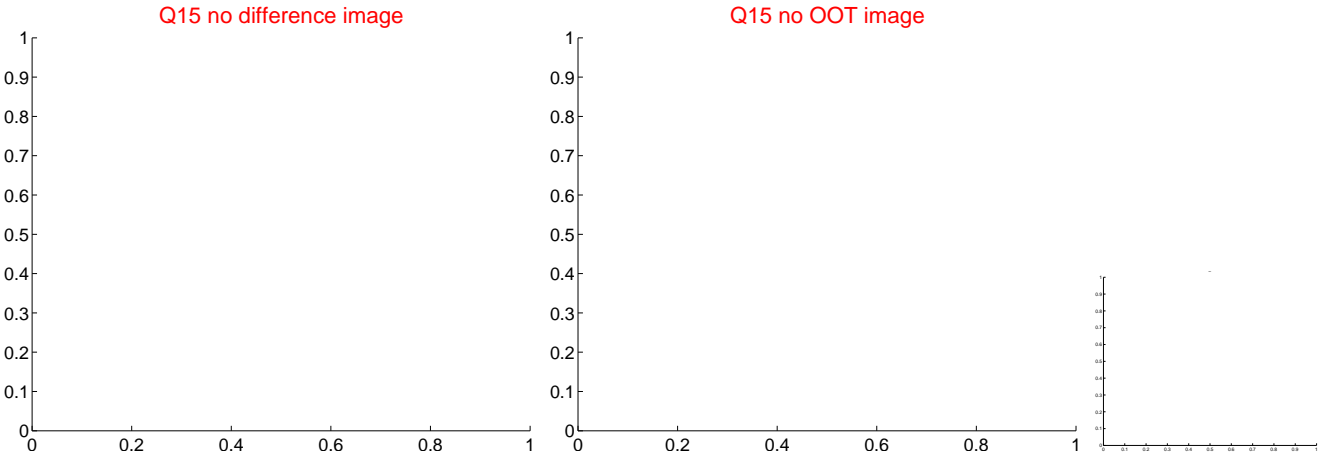
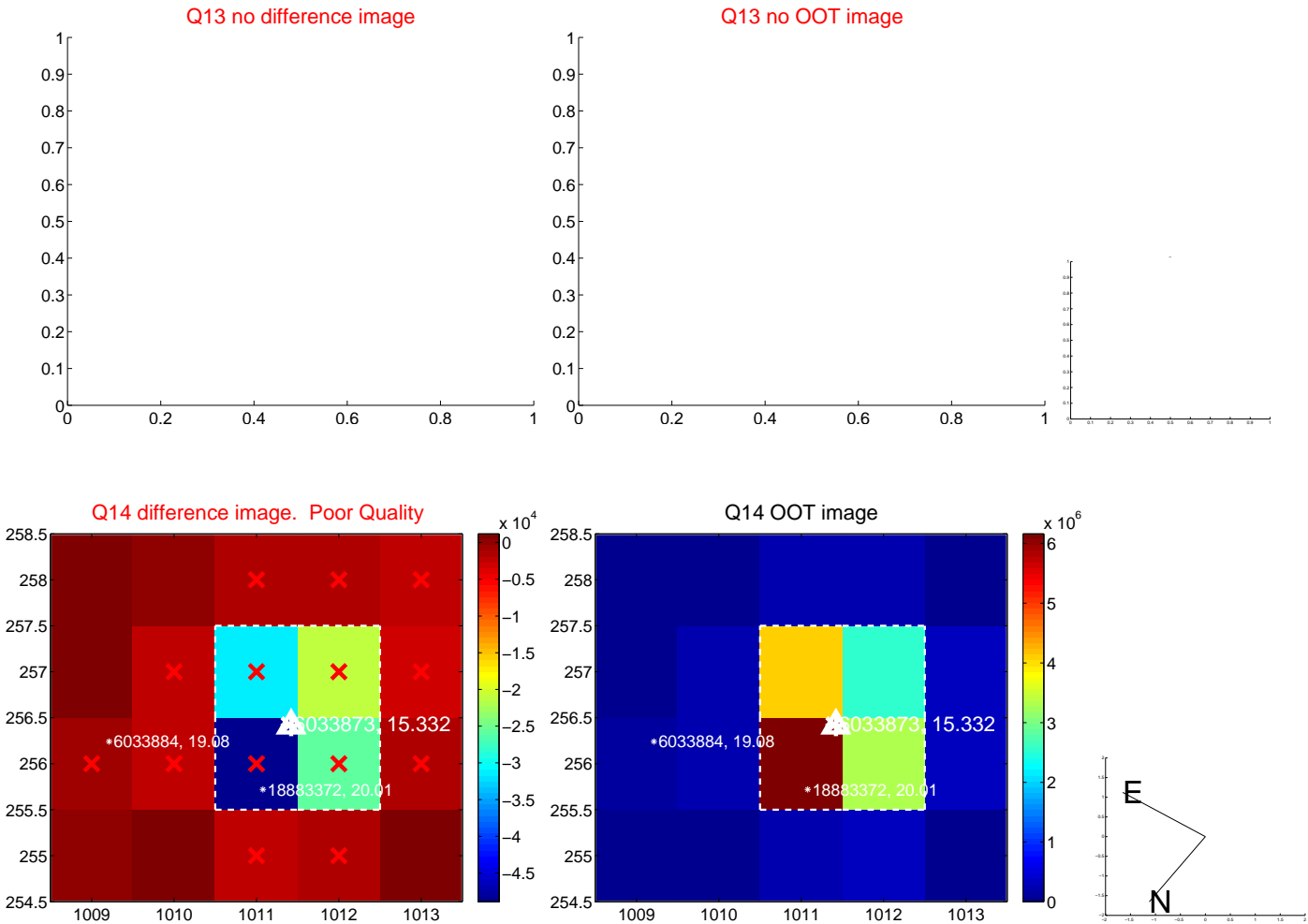
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



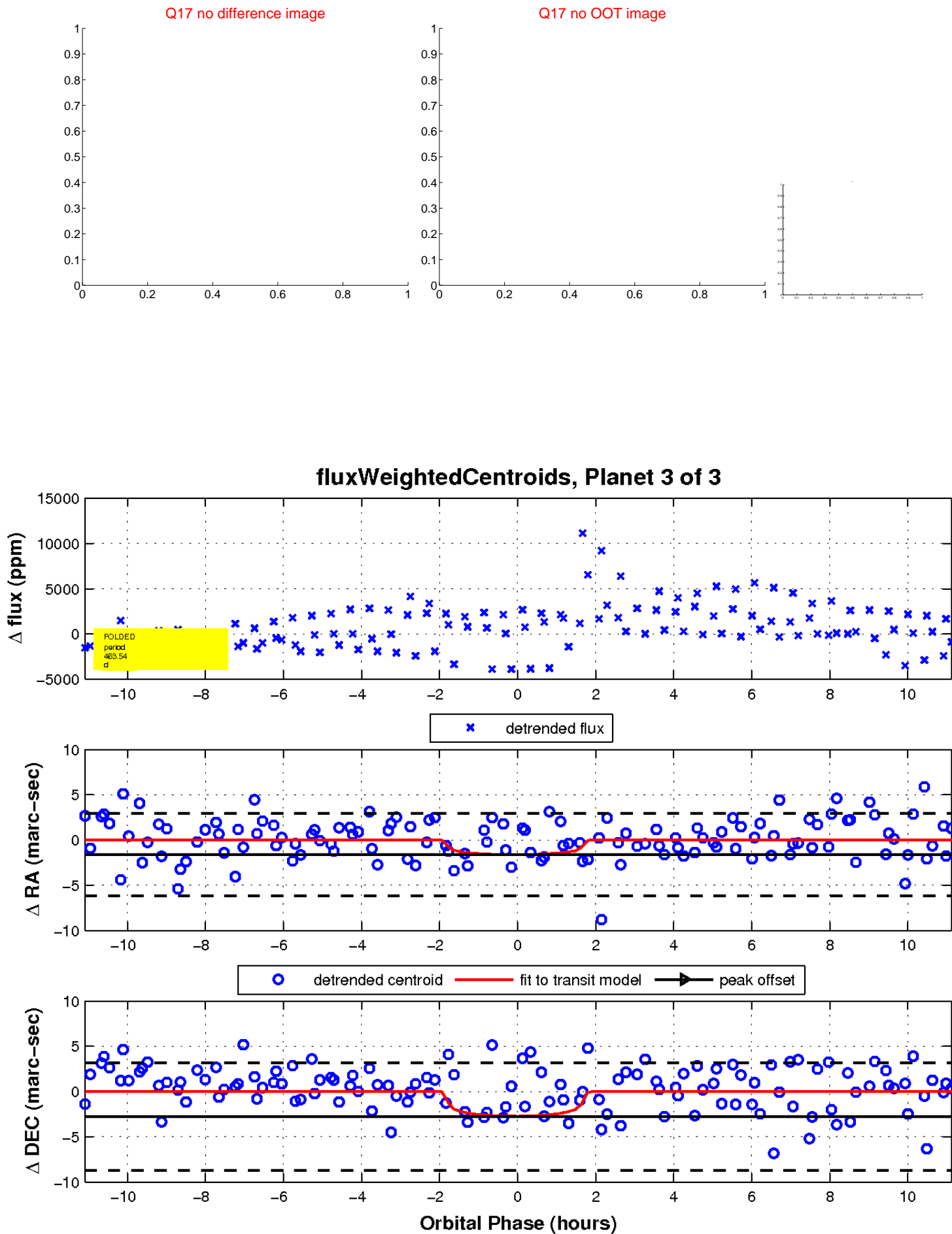
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

