

KIC 003346631

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})
003346631-01	OBS	No	405.093499	520.562908	2868.5	7.793	10.6	7.5	0.76	5268	3.98	0.40
003346631-02	OBS	No	611.572216	223.986712	2610.1	5.872	12.4	7.2	0.76	5268	4.82	0.23
003346631-03	OBS	No	461.316333	333.698557	2634.3	3.746	9.4	8.8	0.76	5268	3.93	0.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003346631-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003346631-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
003346631-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

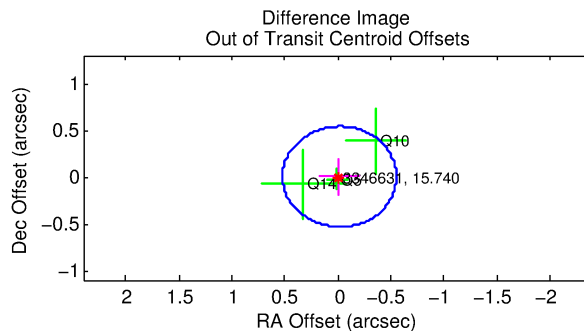
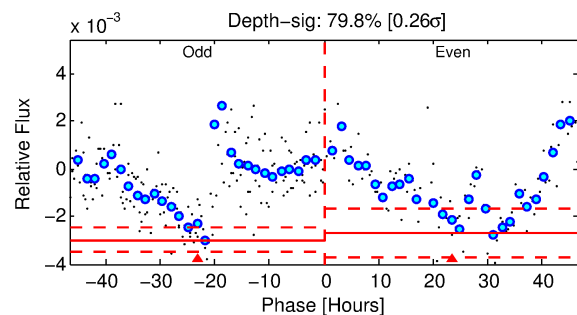
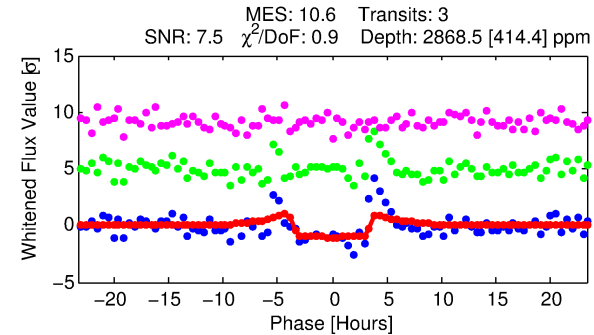
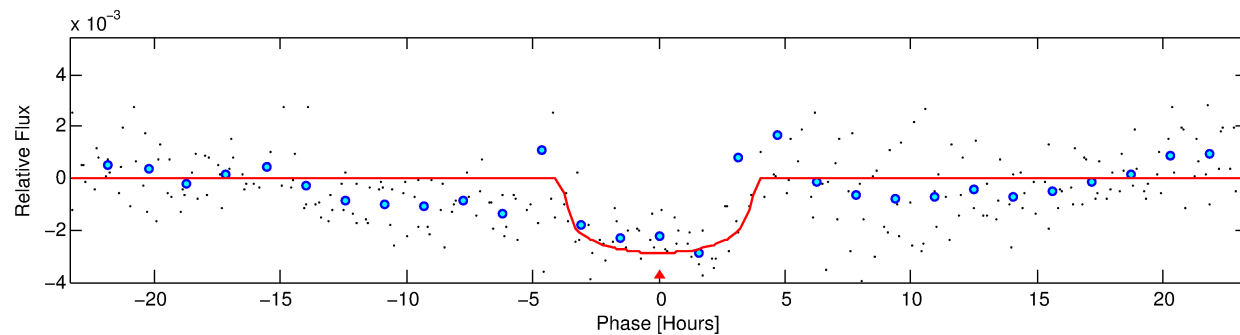
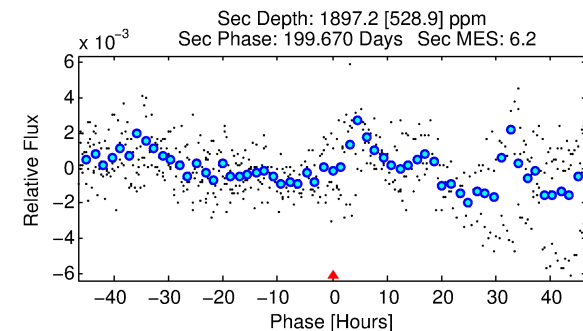
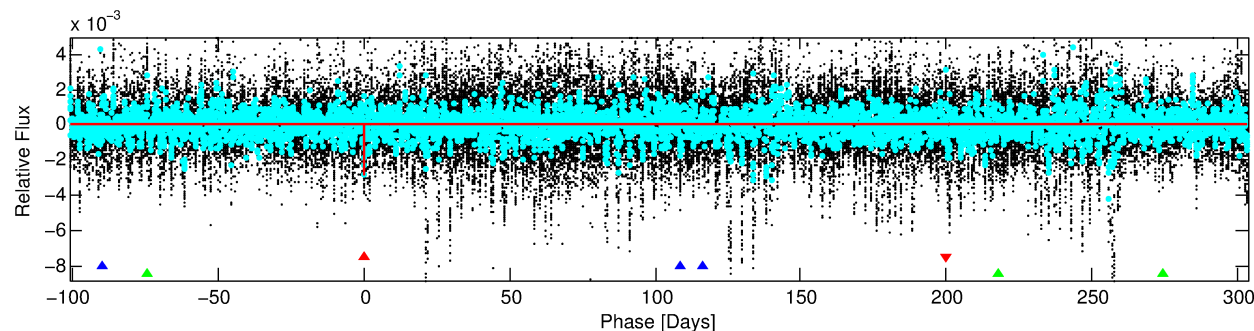
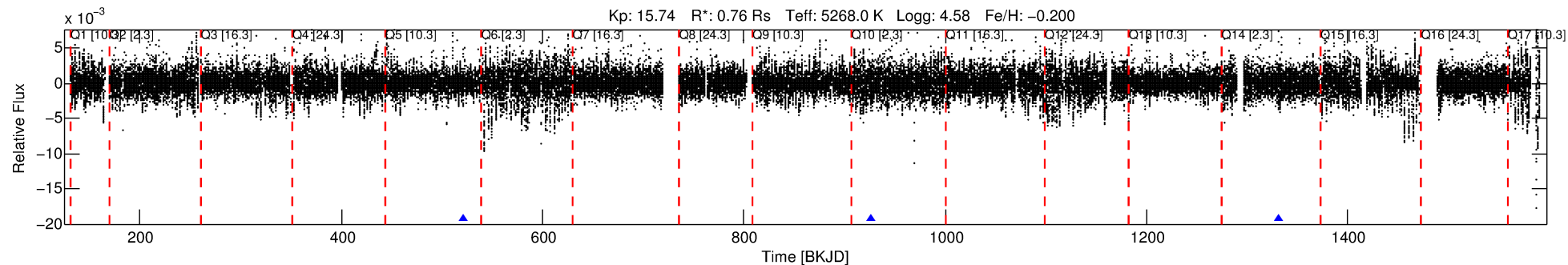
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003346631-01

No Significant Match Found

DV One-Page Summary

KIC: 3346631 Candidate: 1 of 3 Period: 405.093 d



DV Fit Results:

Period = 405.09350 [0.00623] d
Epoch = 520.5629 [0.0078] BKJD
Rp/R* = 0.0480 [0.0746]
a/R* = 415.96 [2450.23]
b = 0.03 [176.46]
Seff = 0.40 [0.08]
Teq = 203 [11] K
Rp = 3.98 [6.22] Re
a = 0.9953 [0.1200] AU
Ag = 65284.69 [204191.40] [0.32σ]
Teffp = 5019 [3922] K [1.23σ]

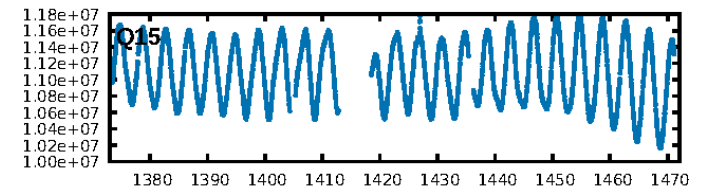
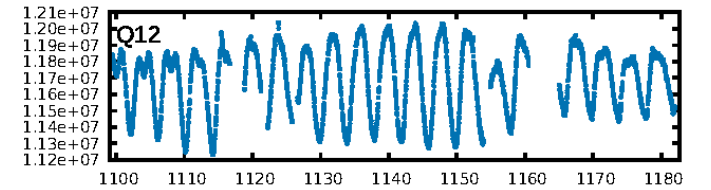
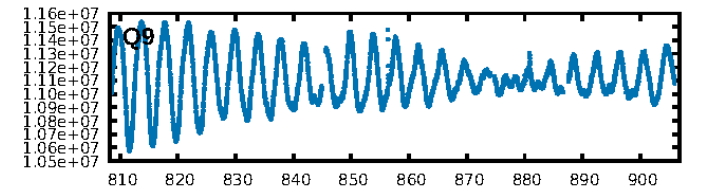
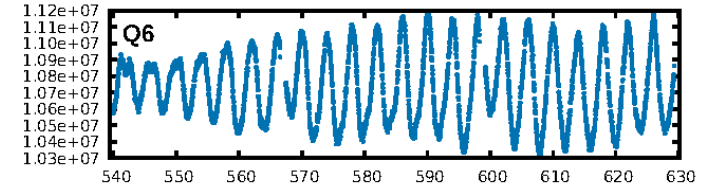
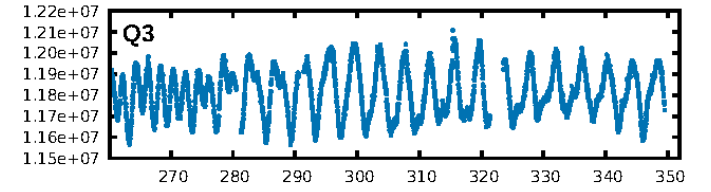
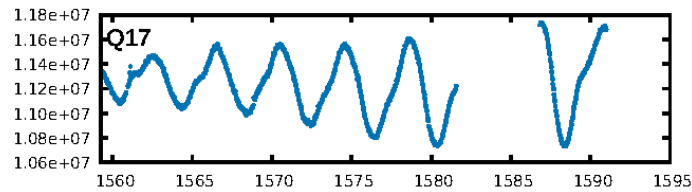
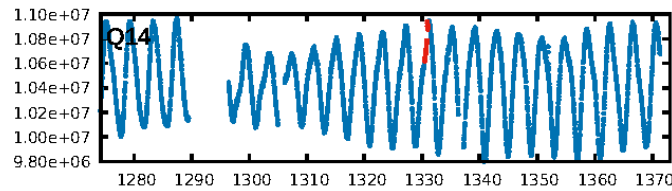
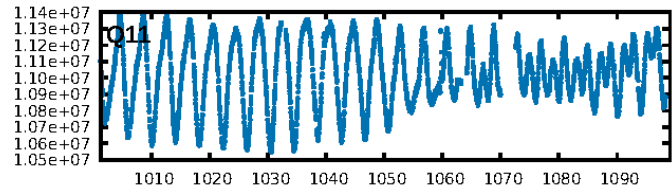
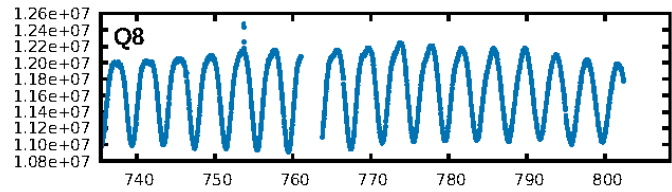
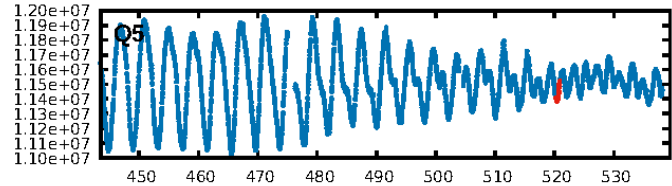
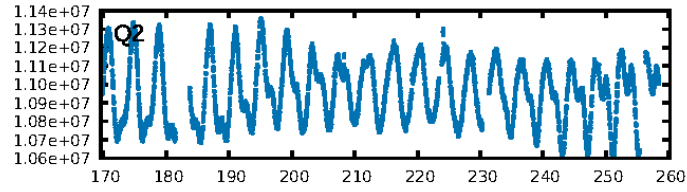
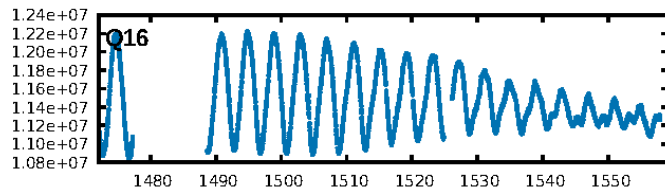
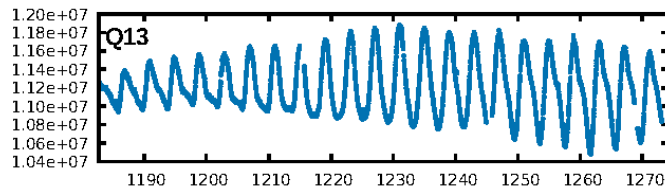
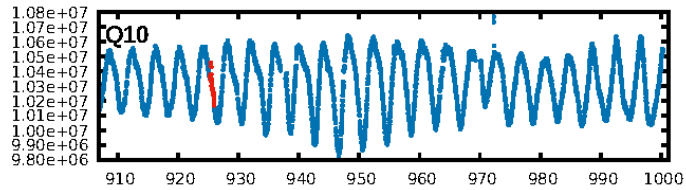
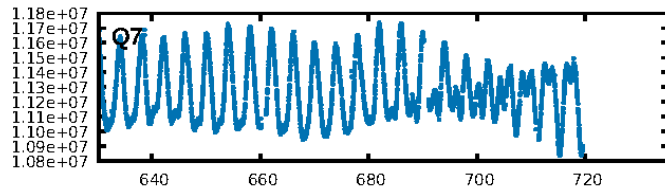
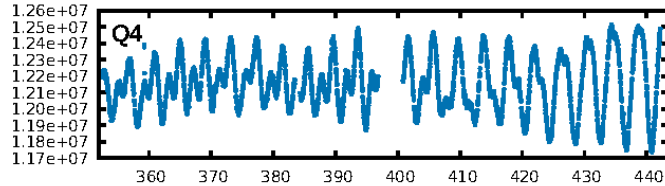
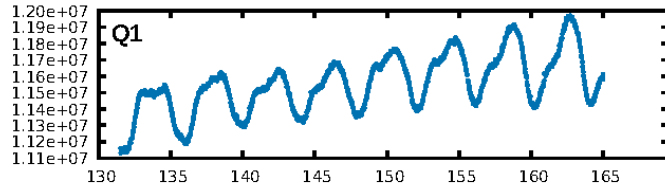
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [156.06σ]
ModelChiSquare2-sig: 43.8%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 5.16e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.421
Centroid-sig: 2.2%
Centroid-so: 1.944 arcsec [2.29σ]
OotOffset-rm: 0.017 arcsec [0.10σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.088 arcsec [0.47σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

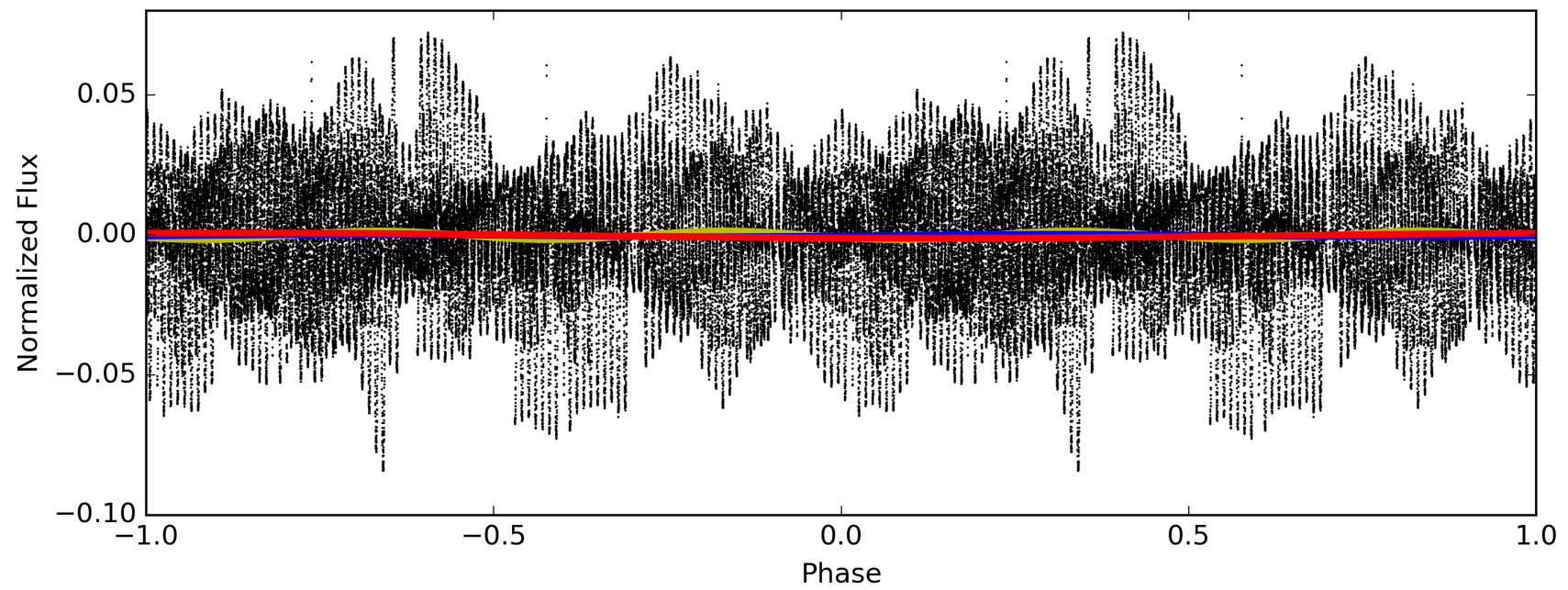
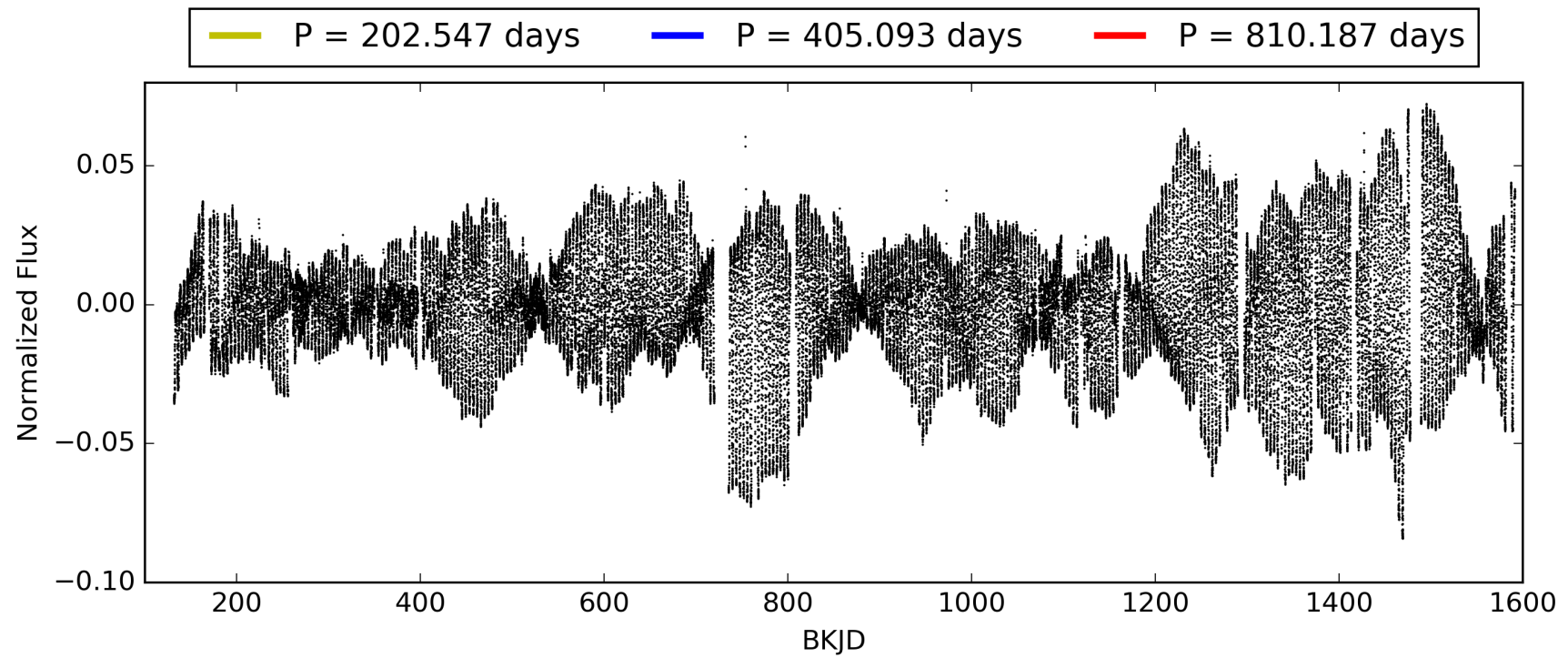
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003346631-01, PDC Light Curves

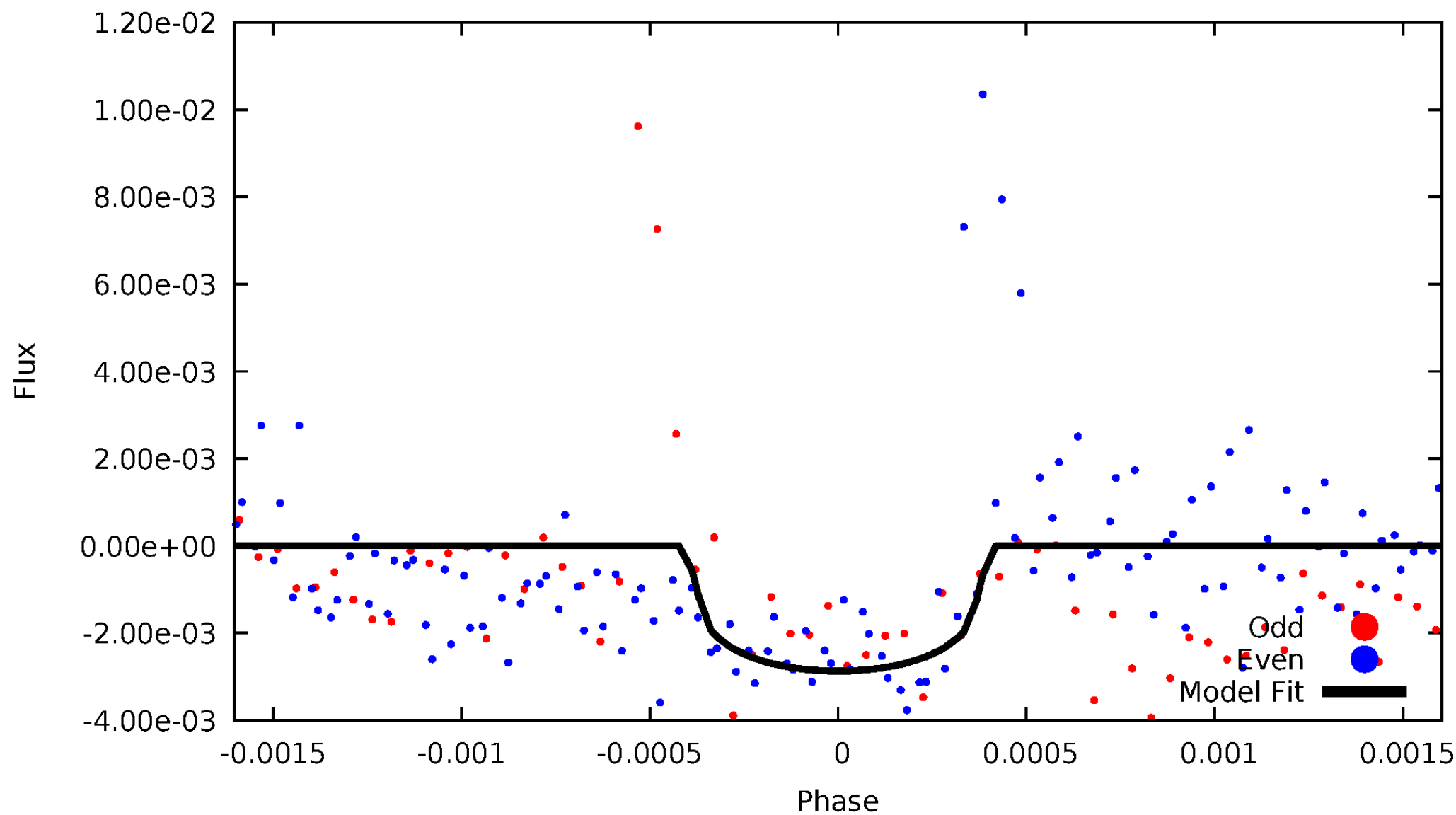


TCE 003346631-01



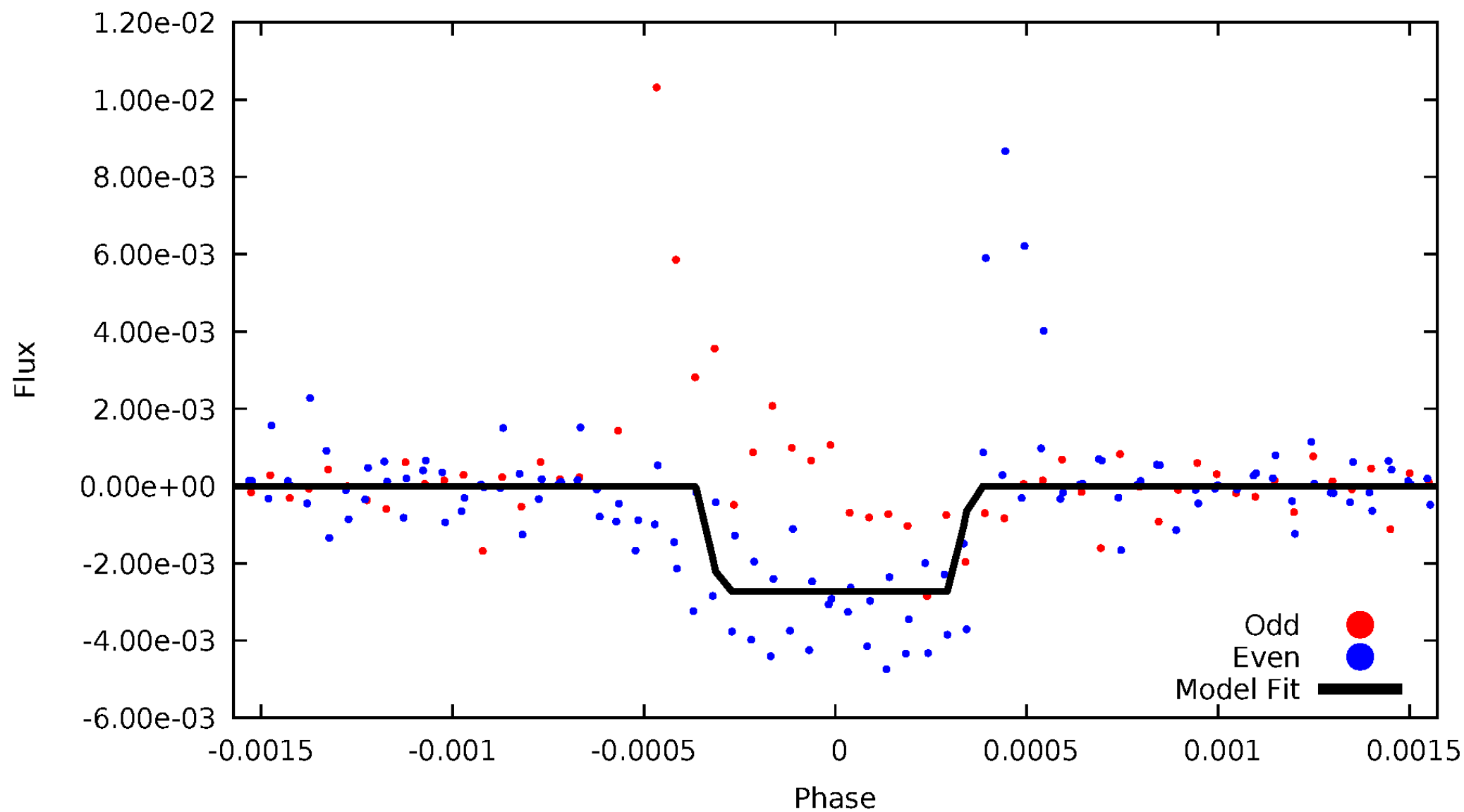
DV Odd/Even

TCE 003346631-01



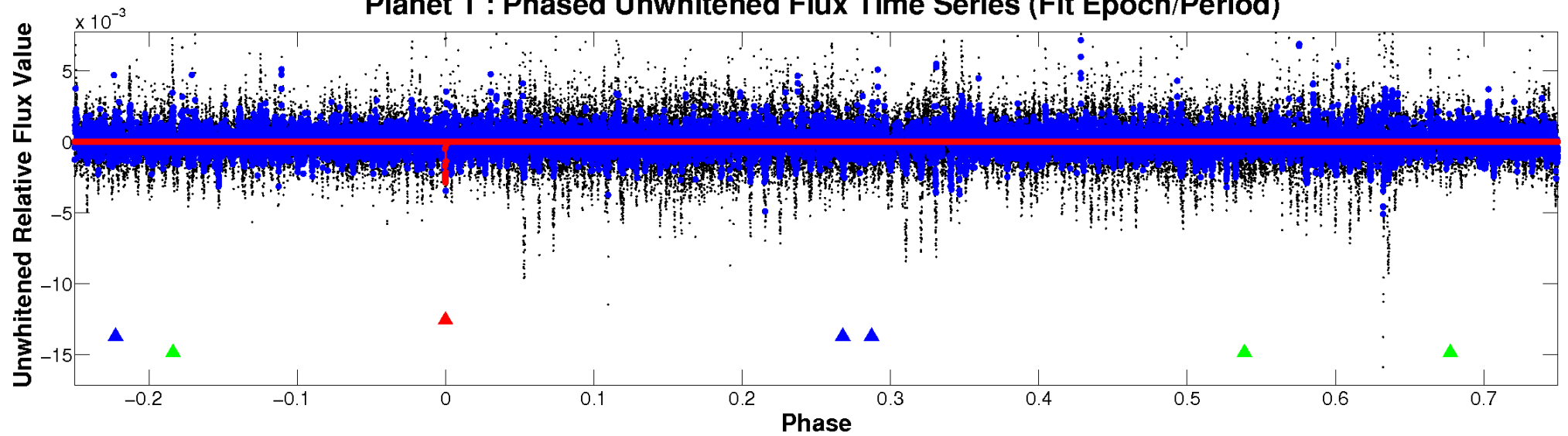
ALT Odd/Even

TCE 003346631-01

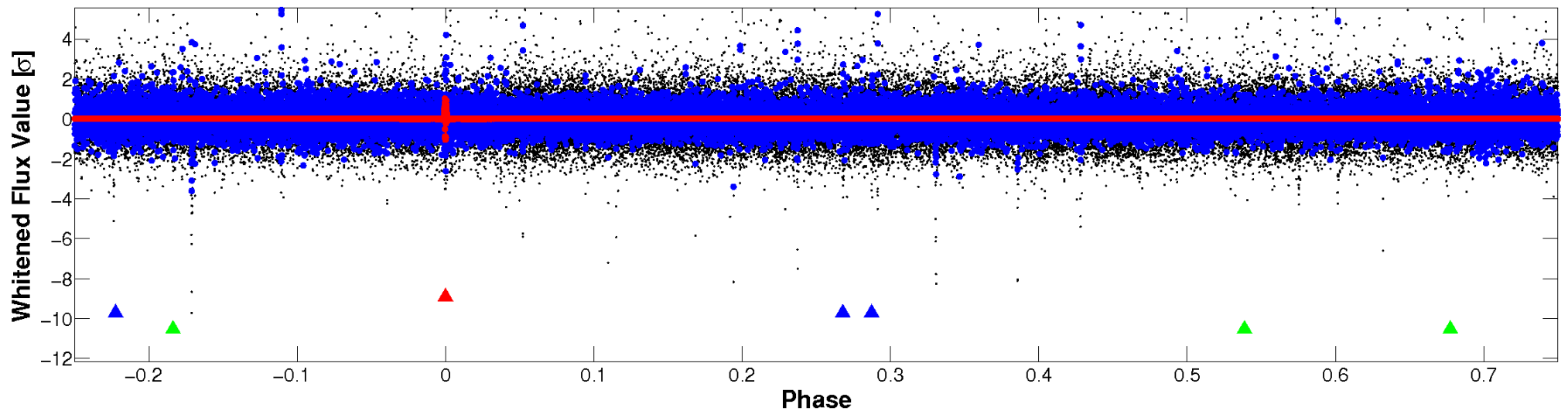


Non-Whitened Vs. Whitened Light Curve

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

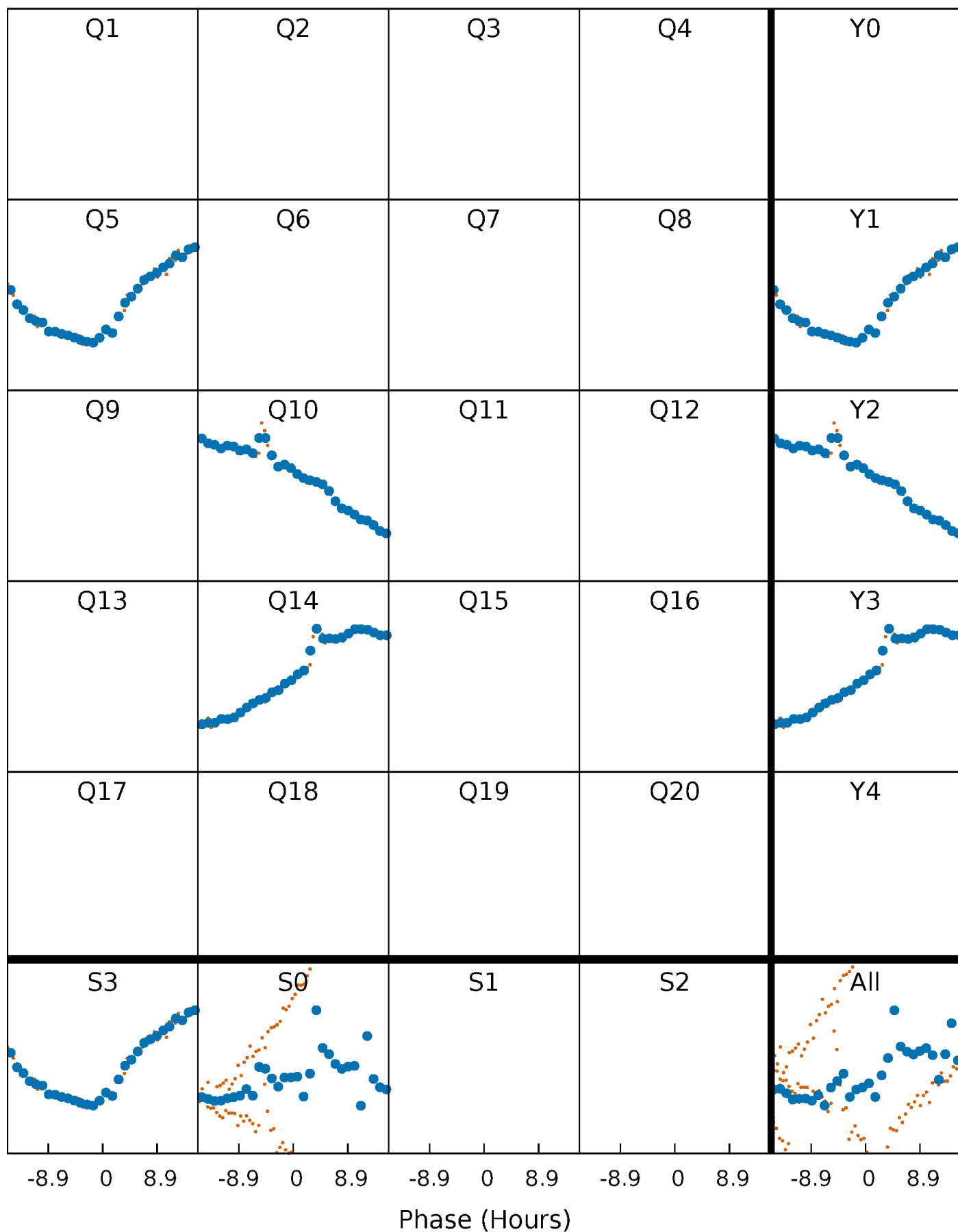


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



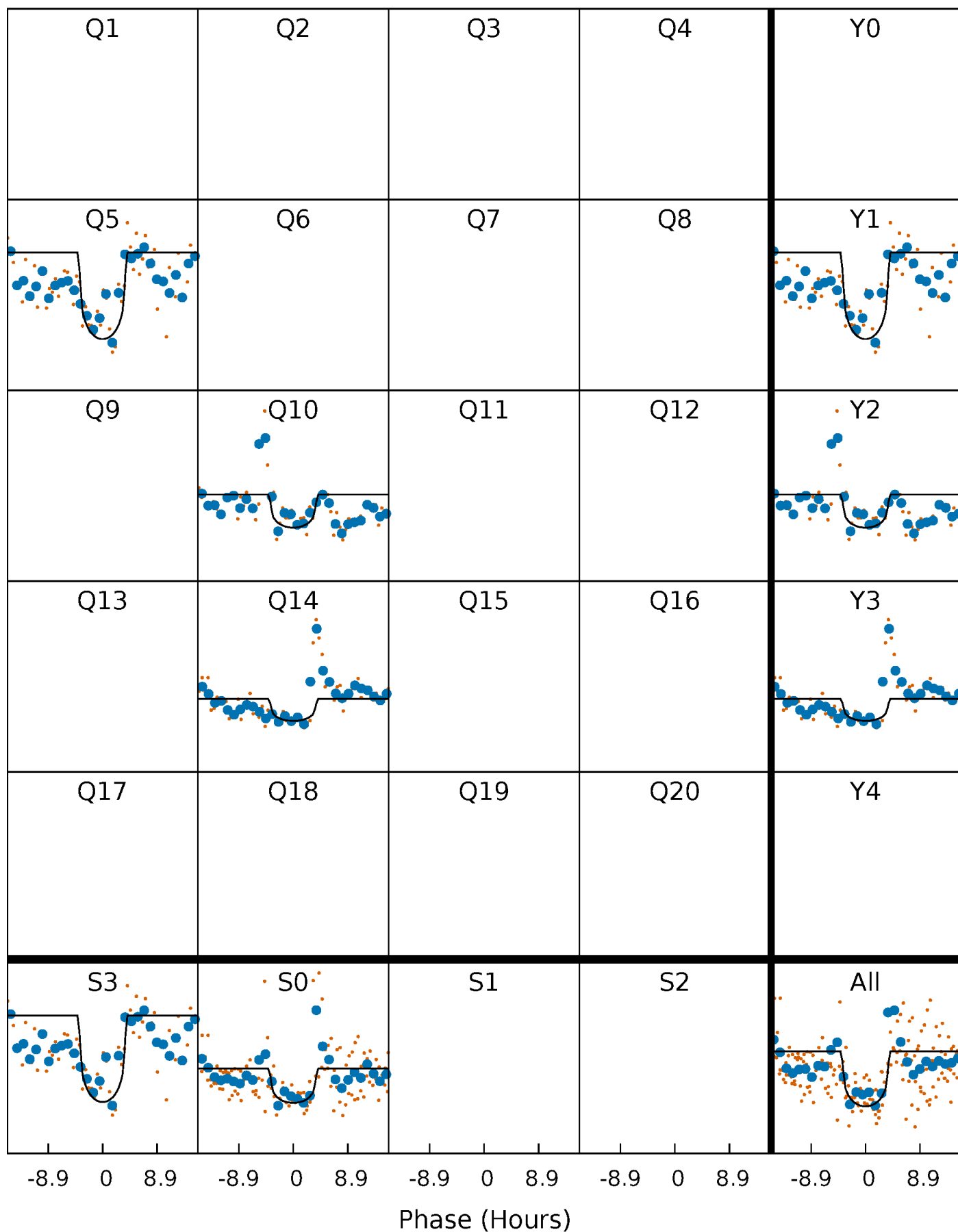
PDC Quarter-Phased Transit Curves

TCE 003346631-01 P=405.093499 Days $T_0=520.562908$ (BKJD)



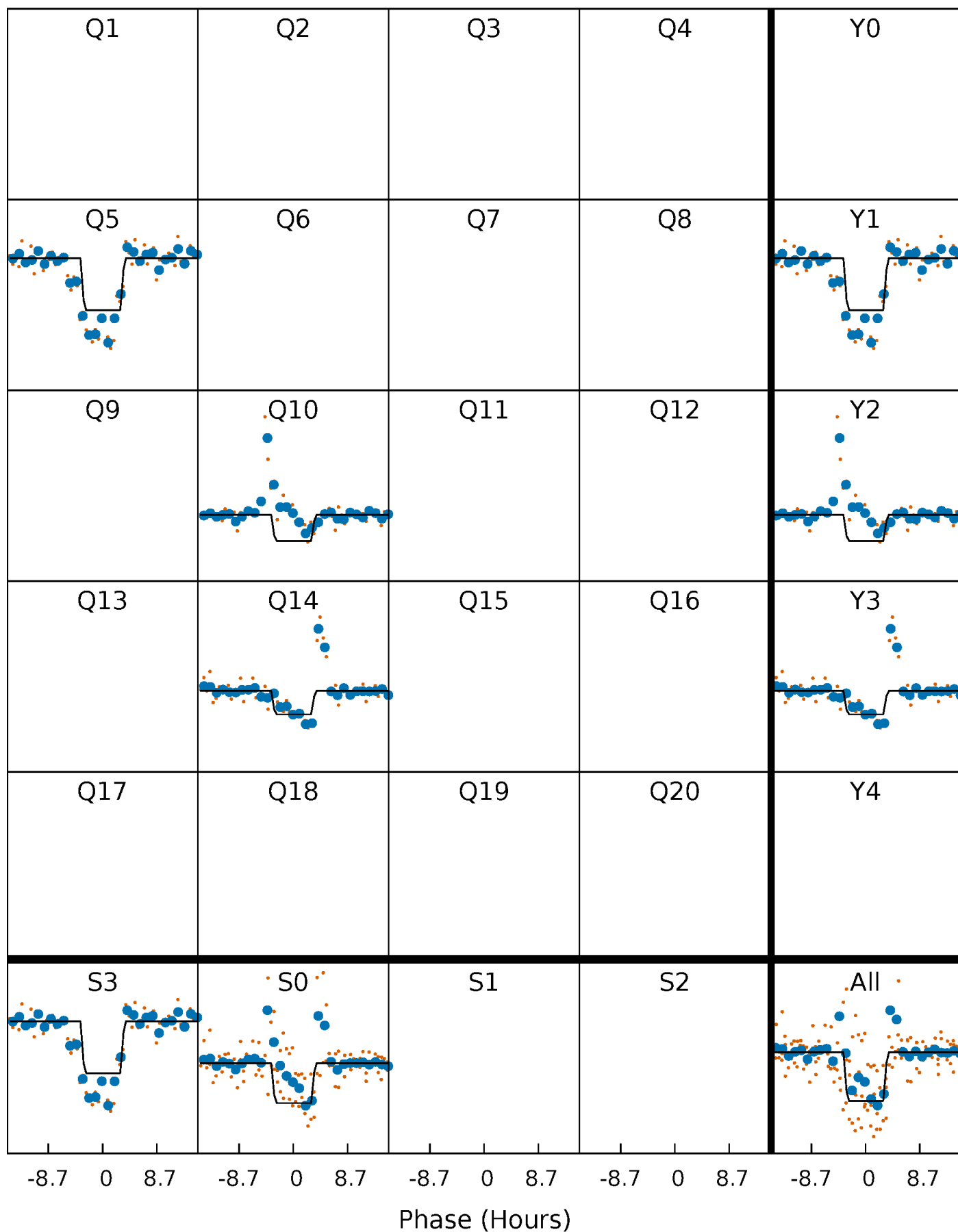
DV Quarter-Phased Transit Curves

TCE 003346631-01 P=405.093499 Days $T_0=520.562908$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

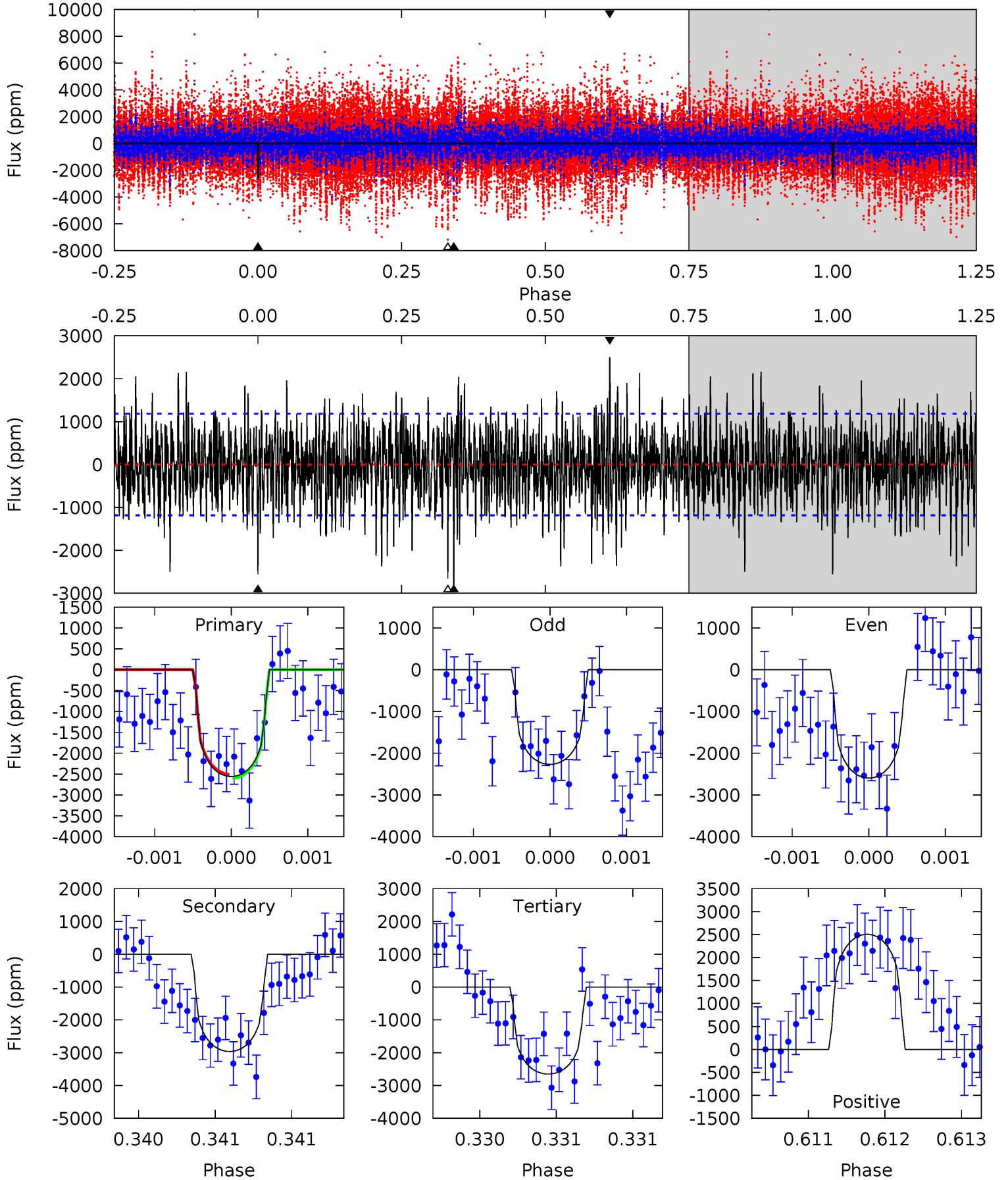
TCE 003346631-01 P=405.074893 Days $T_0=520.576198$ (BKJD)



DV Model-Shift Uniqueness Test

003346631-01, P = 405.093499 Days, E = 115.469409 Days

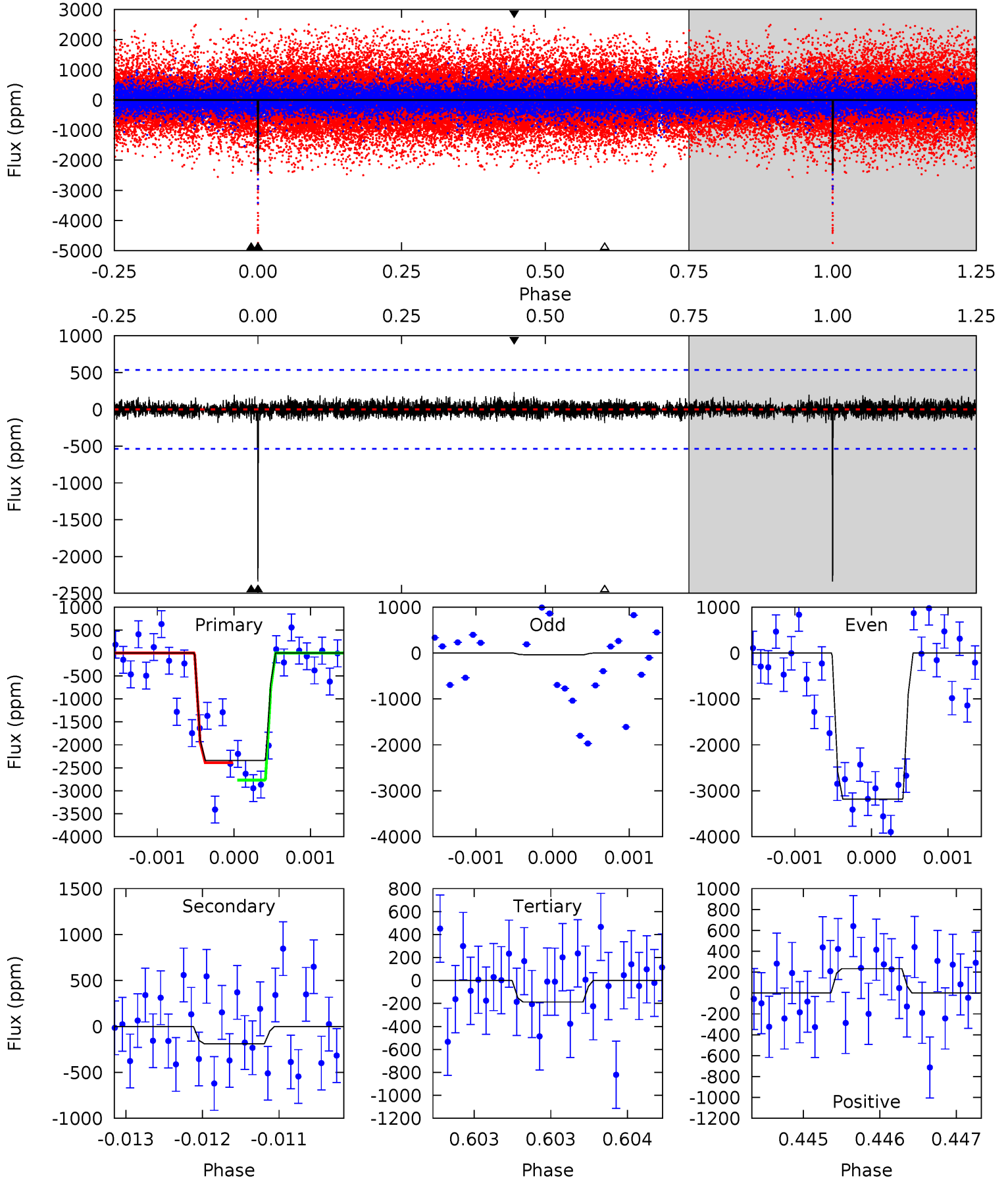
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	13.7	12.3	11.6	5.48	3.34	3.13	-0.43	0.24	1.44	2.12	0.67	1.02	0.46	0.22



Alt Model-Shift Uniqueness Test

003346631-01, P = 405.074893 Days, E = 115.501305 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	1.93	1.92	2.40	5.51	3.39	0.49	22.1	21.6	0.02	-0.46	15.8	0.80	0.09	1.87



Stellar Parameters For KIC 003346631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5268^{+158}_{-142}	$4.580^{+0.039}_{-0.091}$	$-0.200^{+0.300}_{-0.300}$	$0.760^{+0.112}_{-0.069}$	$0.801^{+0.086}_{-0.078}$	$2.571^{+0.526}_{-0.752}$
	+3%/-3%	+1%/-2%	+150%/-150%	+15%/-9%	+11%/-10%	+20%/-29%
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 003346631-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2963 ± 216	$6.17^{+5.43}_{-4.08}$	287^{+12}_{-11}	4676^{+3178}_{-965}	$43164^{+308345}_{-31364}$
Alt.	-188 ± 97	$6.10^{+5.99}_{-4.02}$	287^{+12}_{-10}	2926^{+1232}_{-521}	2412^{+19894}_{-1884}

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 $A_{obs} \gg 1.0$

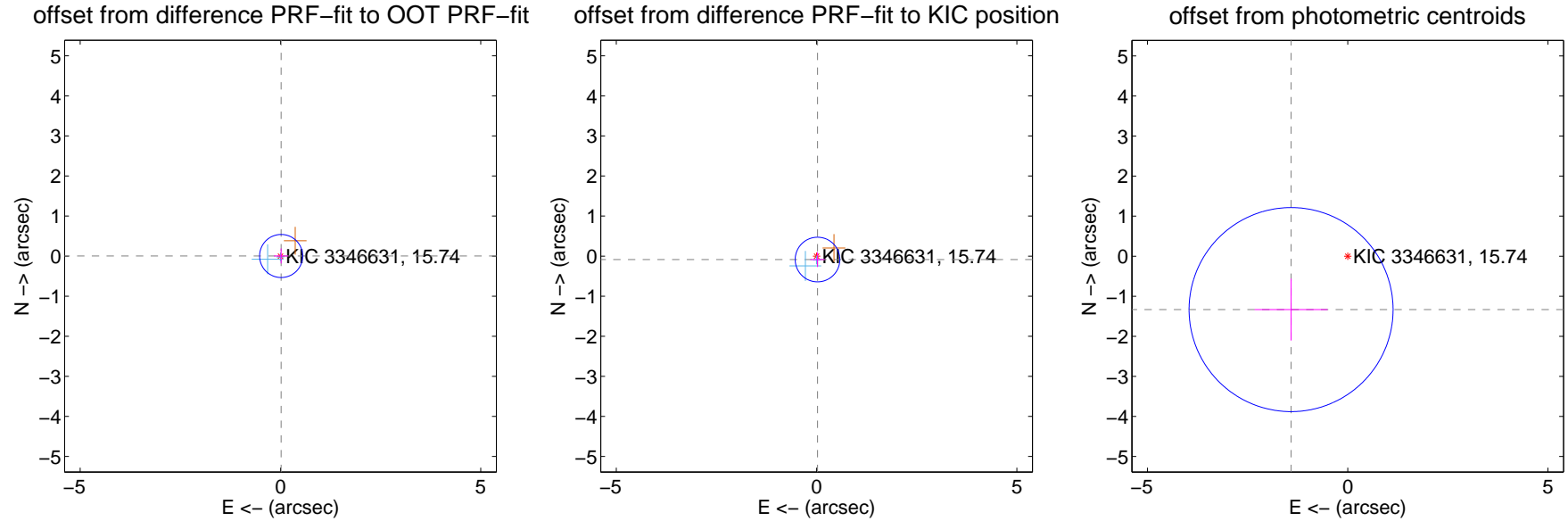
DV Centroid Data

Supplemental centroid analysis for 003346631-01. Kepler magnitude: 15.74. Transit SNR 7.48

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.179	0.10	-0.017 ± 0.179	0.003 ± 0.186
PRF-fit source offset from KIC position	0.088 ± 0.186	0.47	-0.024 ± 0.179	-0.085 ± 0.186
photometric centroid source offset	1.94 ± 0.85	2.29	1.41 ± 0.91	-1.33 ± 0.77

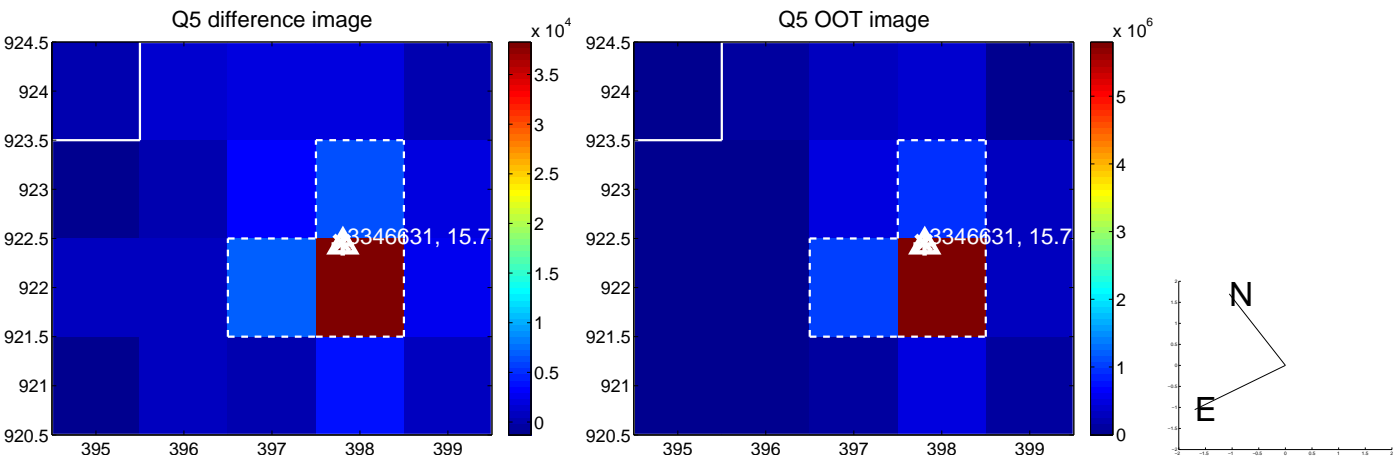


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

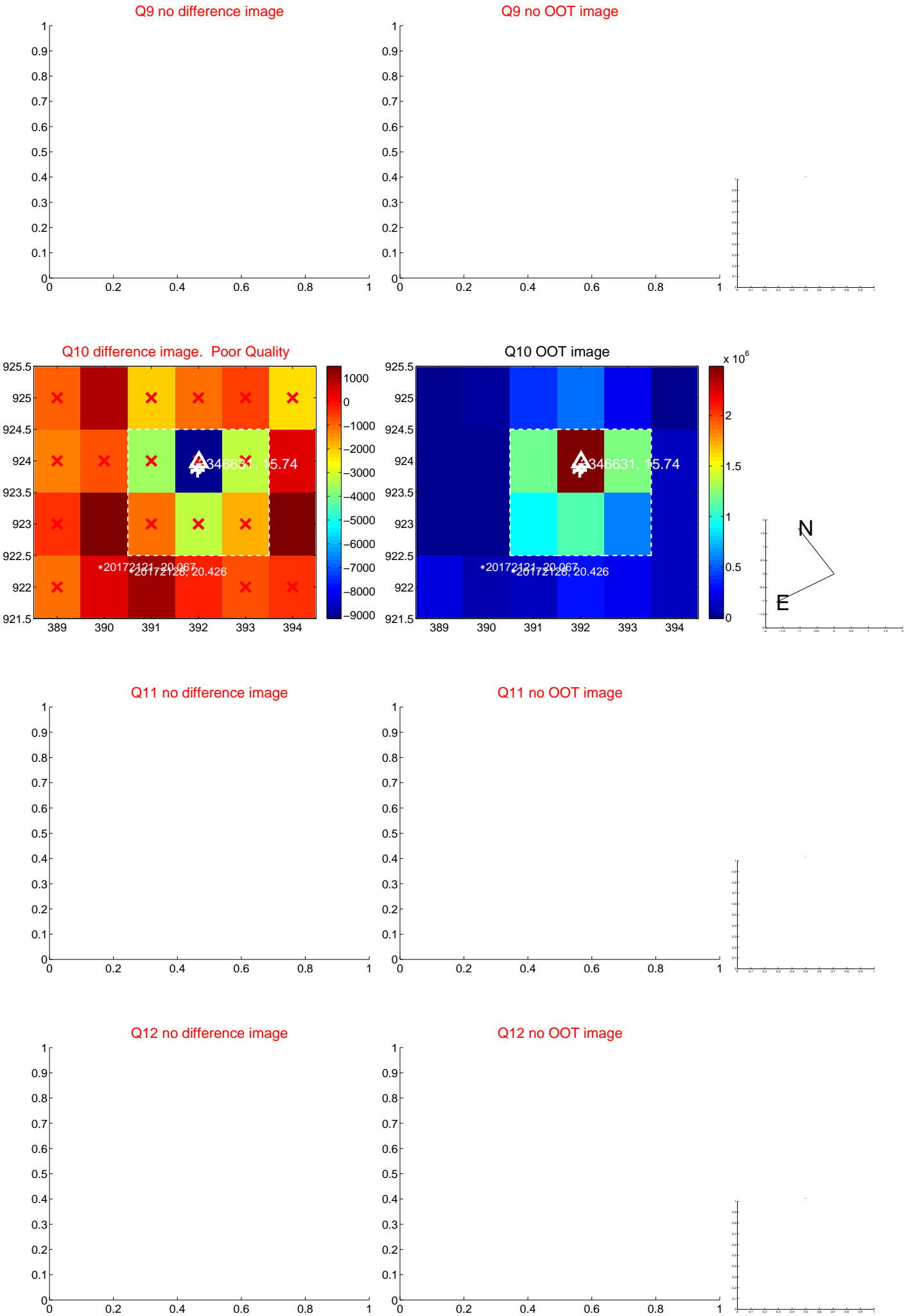
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



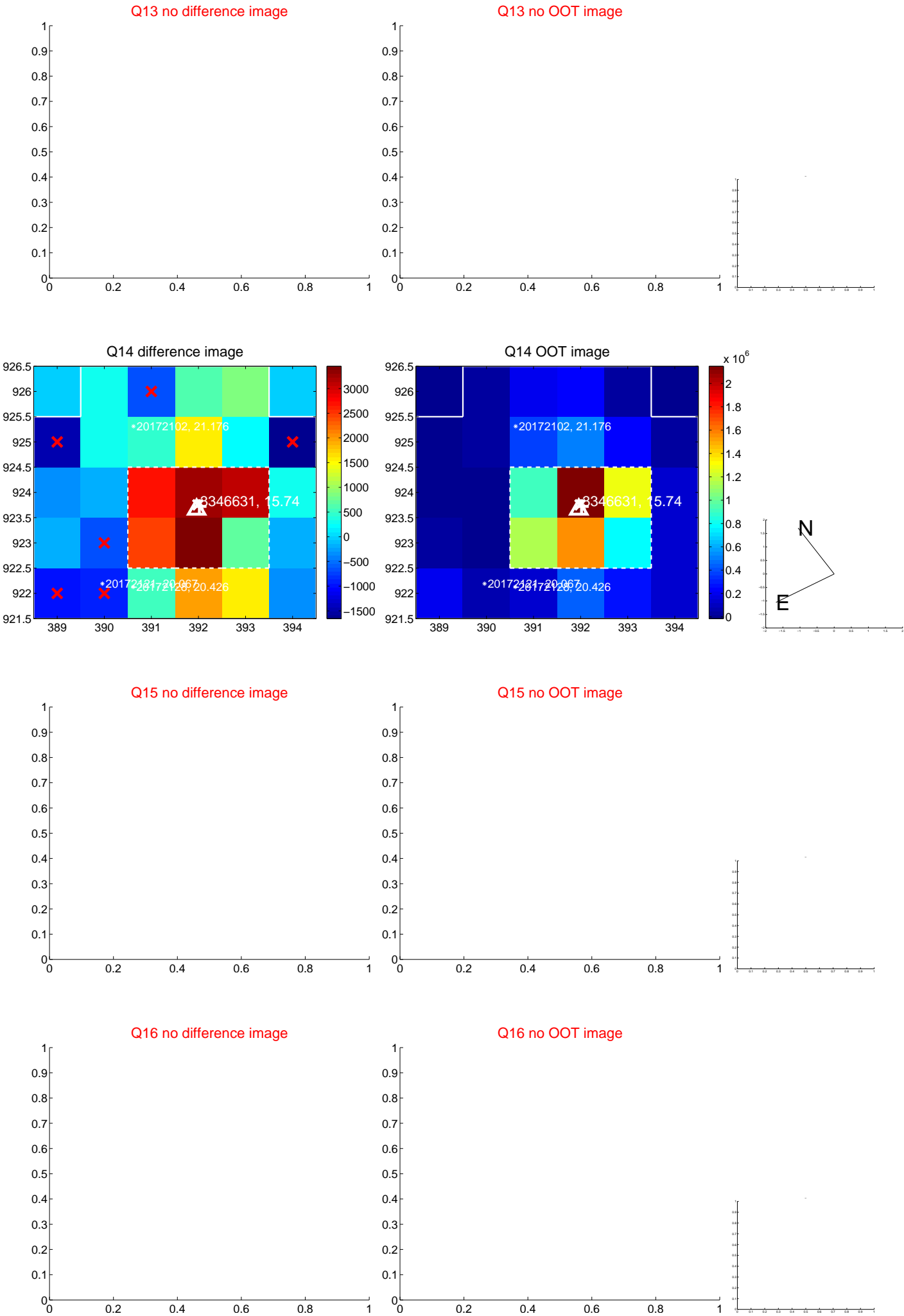
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



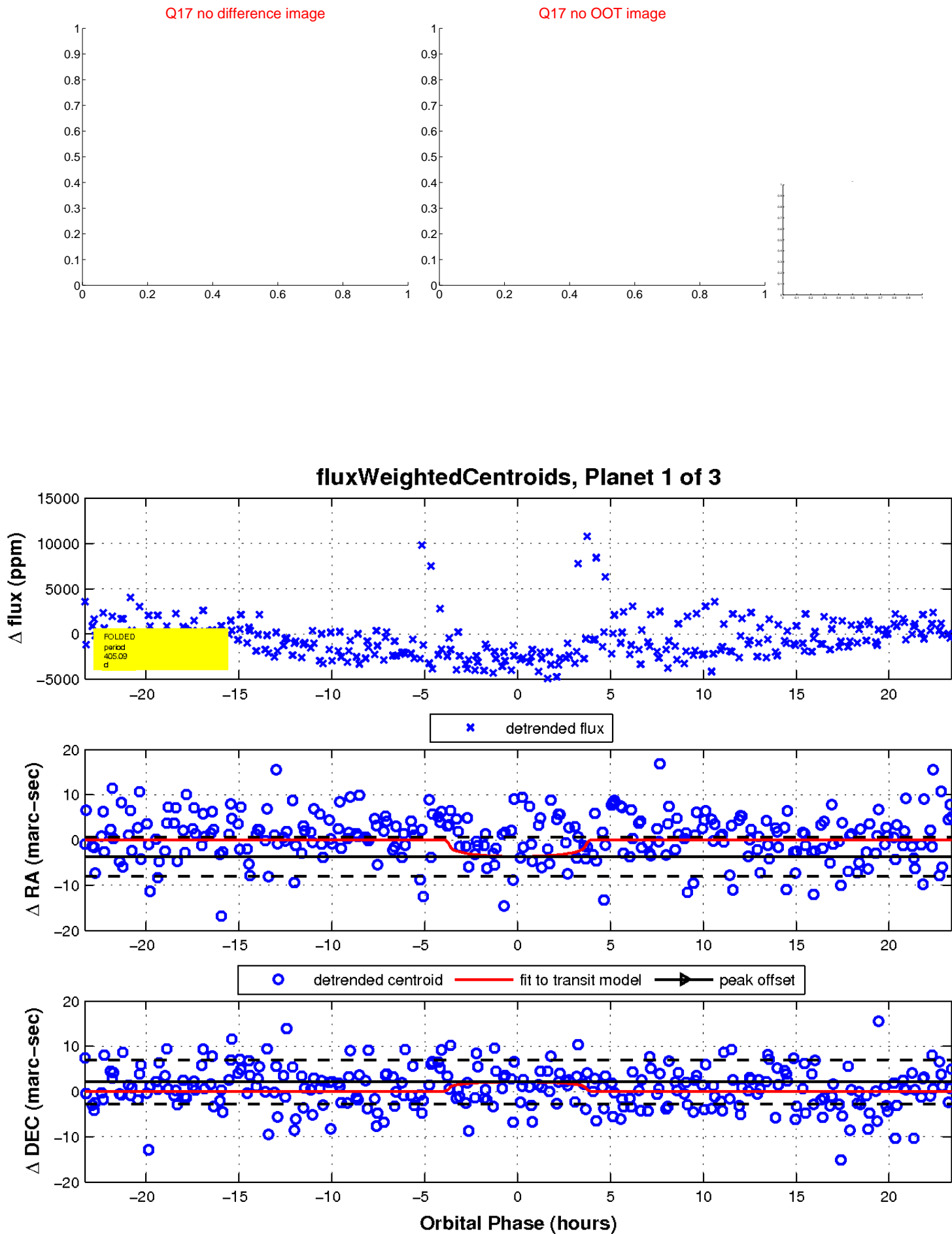
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

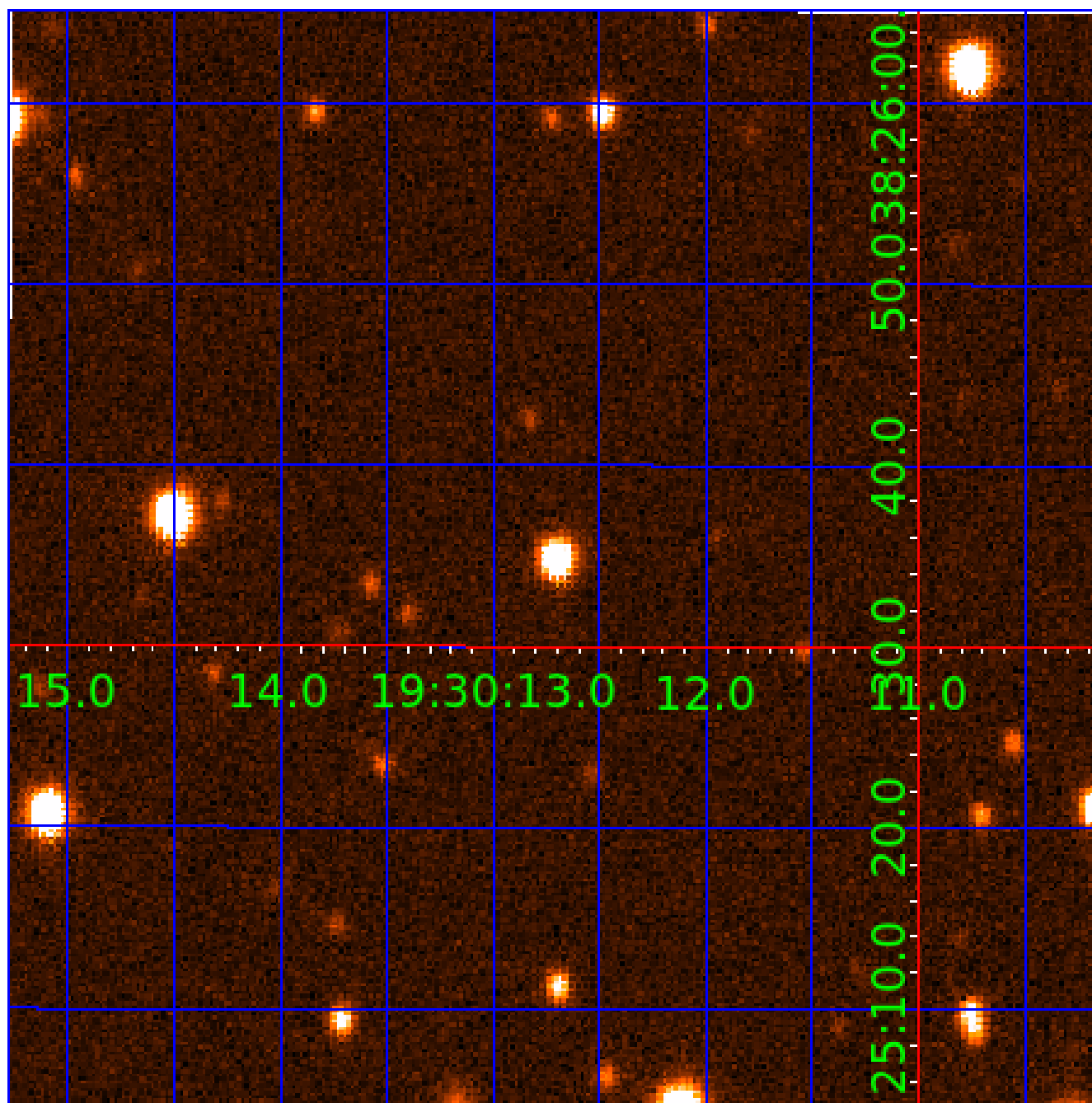


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003346631

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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003346631-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
003346631-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

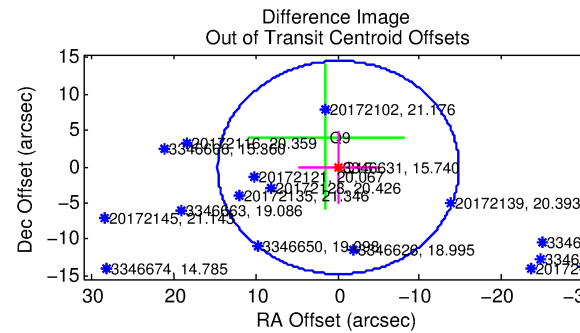
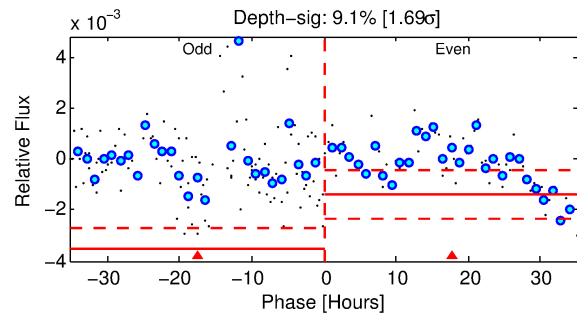
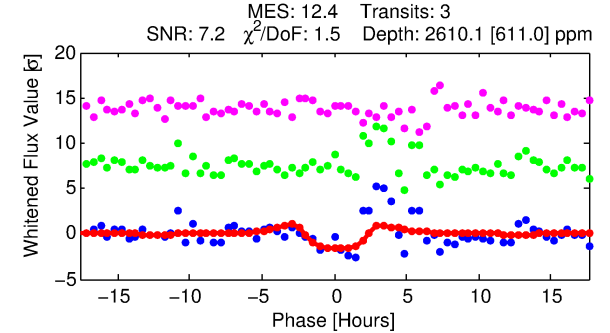
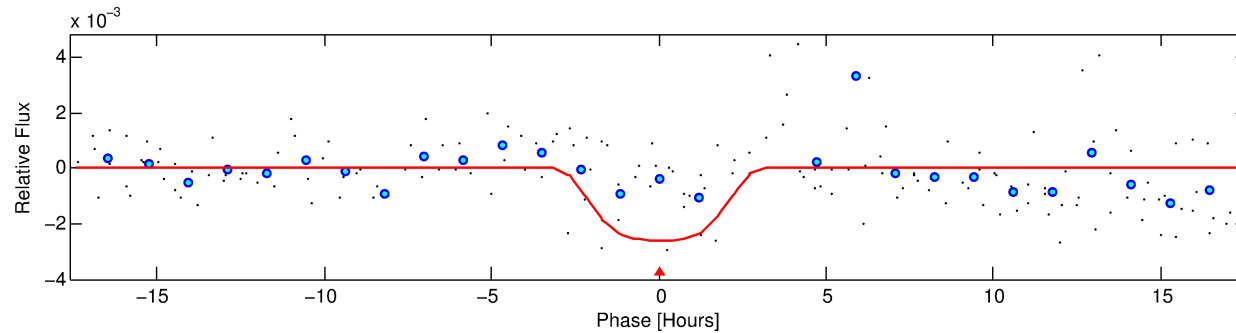
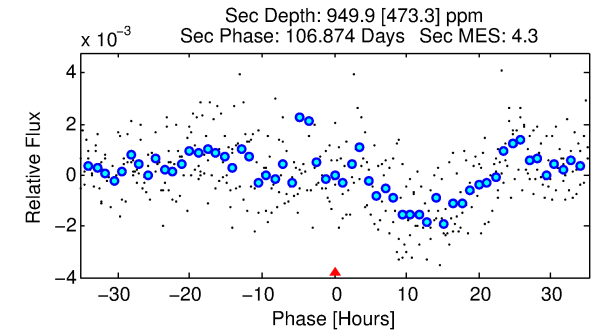
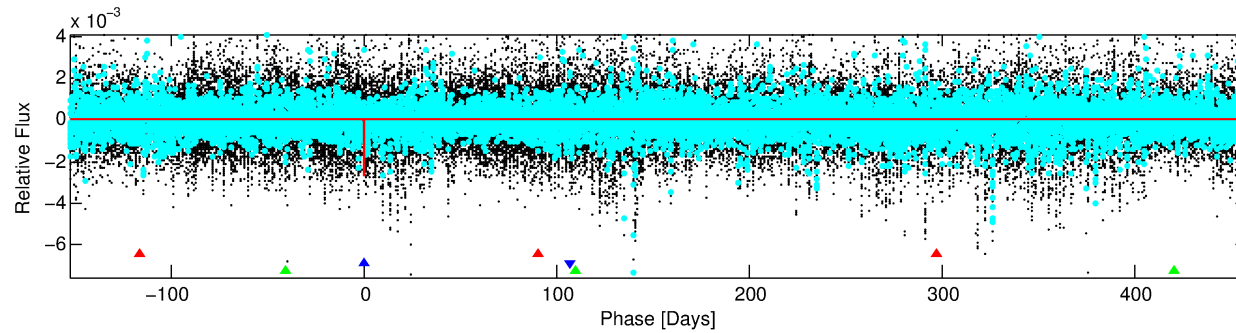
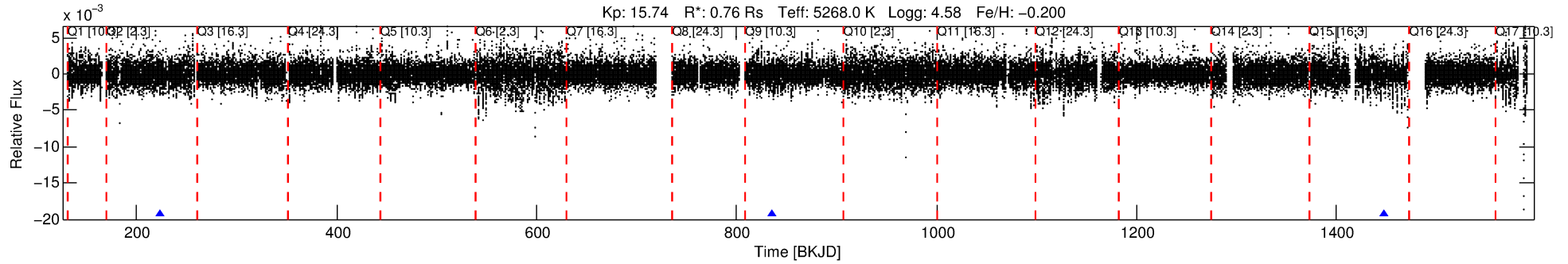
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003346631-02

No Significant Match Found

DV One-Page Summary

KIC: 3346631 Candidate: 2 of 3 Period: 611.572 d



DV Fit Results:

Period = 611.57222 [0.01245] d
Epoch = 223.9867 [0.0156] BKJD
Rp/R* = 0.0581 [0.0097]
a/R* = 415.09 [132.49]
b = 0.92 [0.06]
Seff = 0.23 [0.05]
Teq = 177 [9] K
Rp = 4.82 [1.07] Re
a = 1.3098 [0.1579] AU
Ag = 38583.31 [24060.48] [1.60σ]
Teffp = 3836 [587] K [6.24σ]

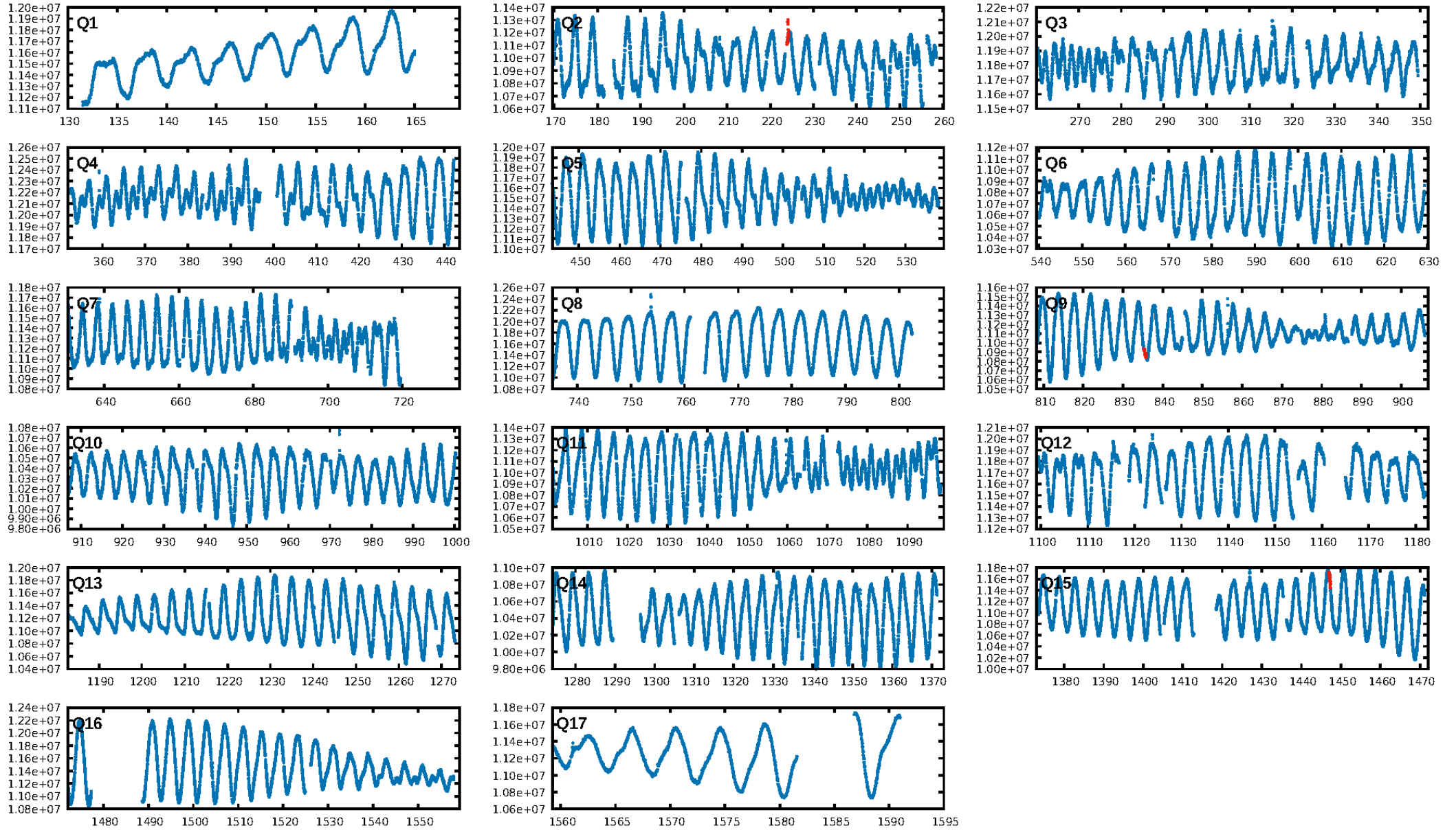
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [517.71σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 48.2%
Bootstrap-pfa: 3.99e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2026
Centroid-sig: 54.0%
Centroid-so: 0.669 arcsec [0.57σ]
OotOffset-rm: 0.153 arcsec [0.03σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 0.233 arcsec [0.05σ]
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DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

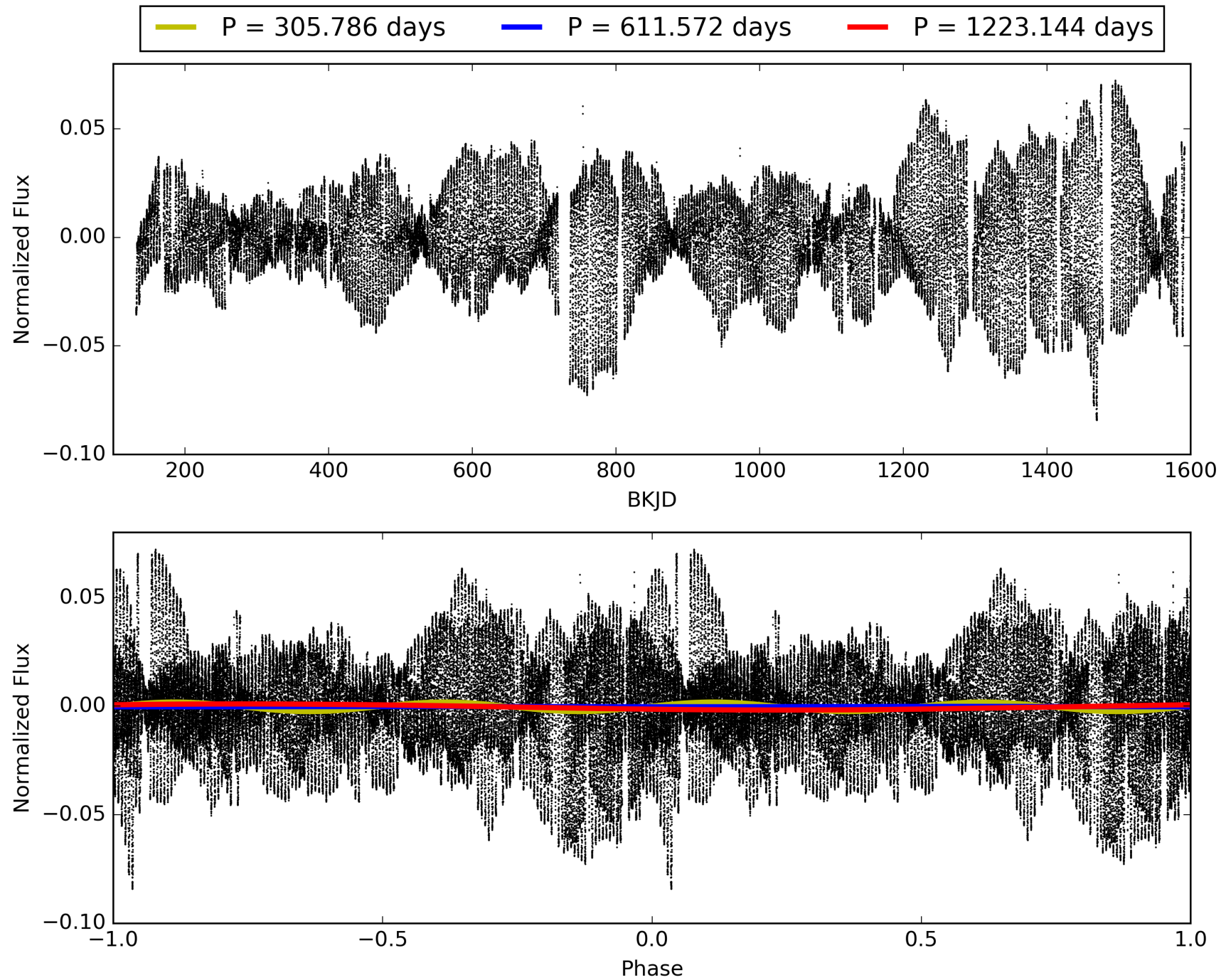
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:47:25 Z

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

TCE 003346631-02, PDC Light Curves

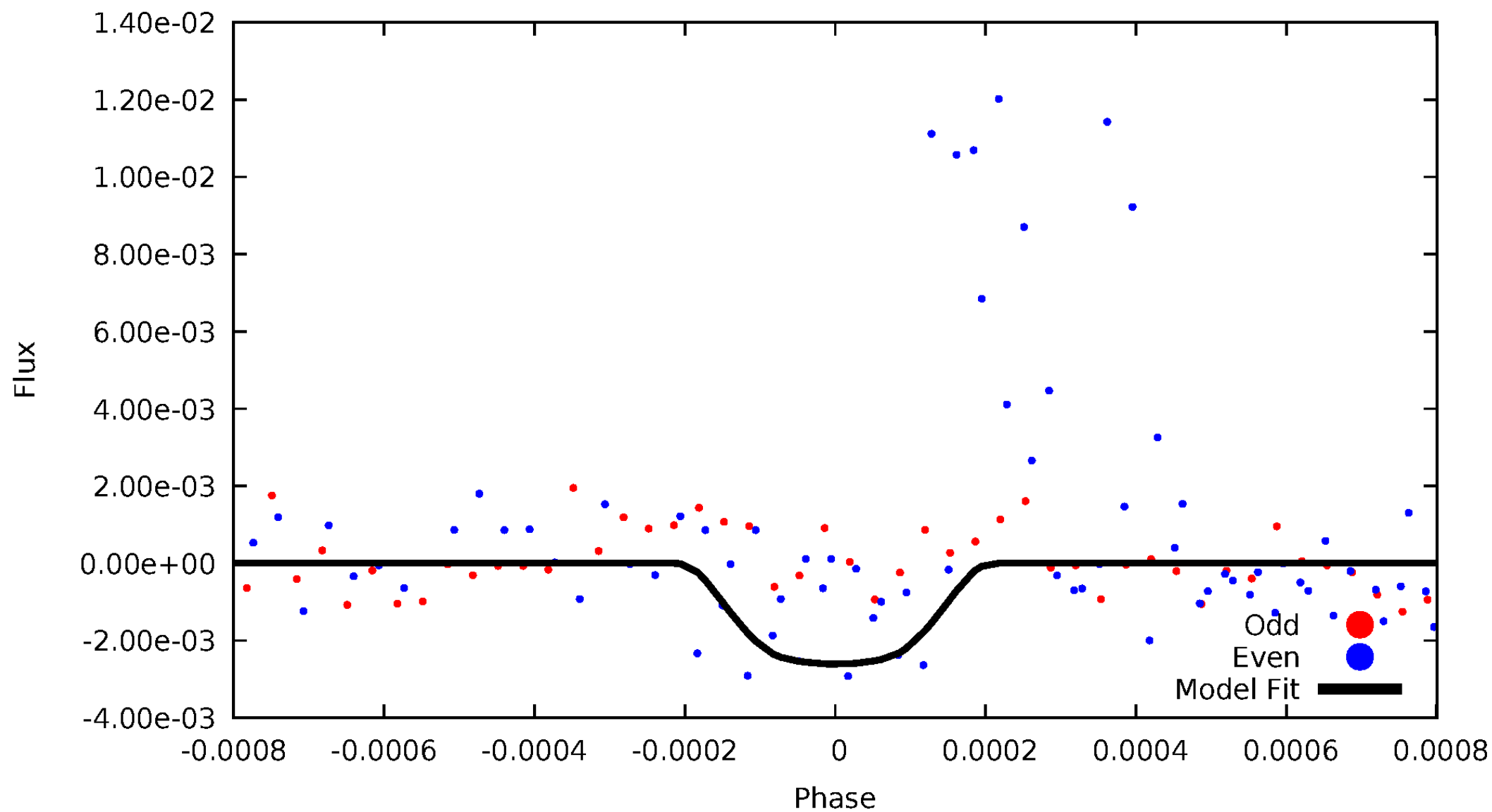


TCE 003346631-02



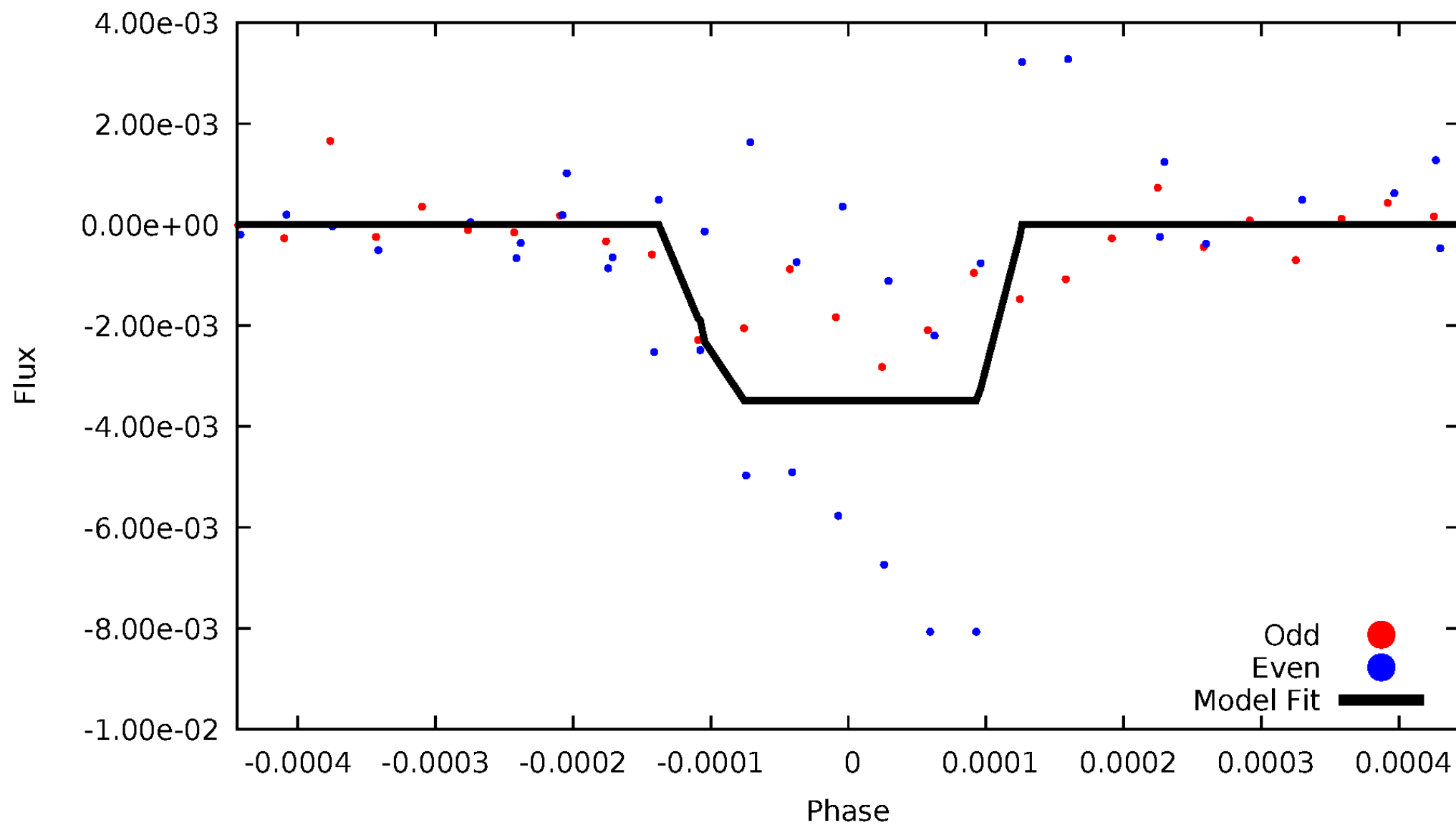
DV Odd/Even

TCE 003346631-02



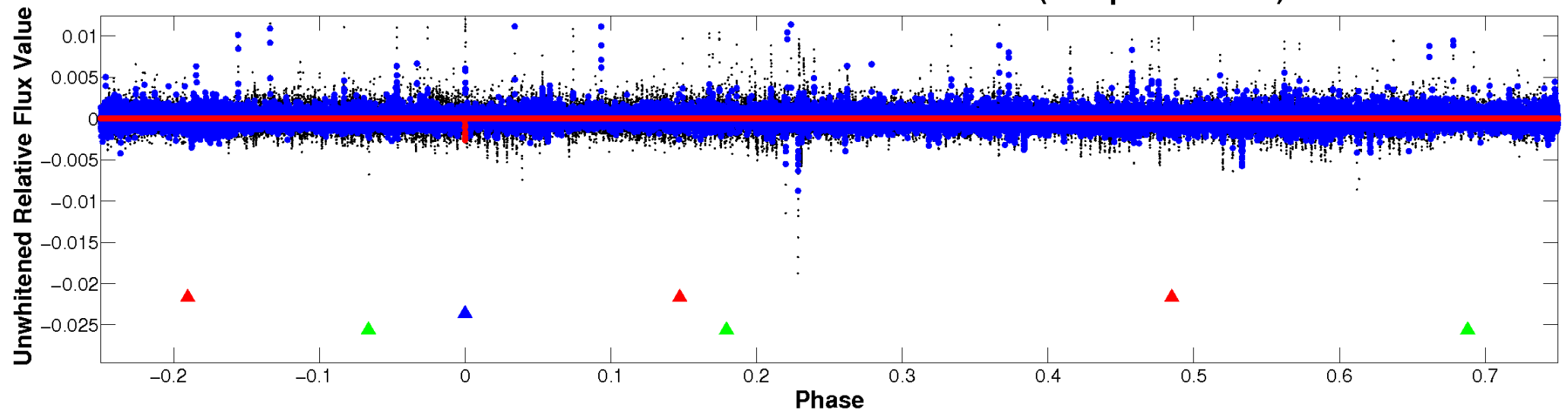
ALT Odd/Even

TCE 003346631-02

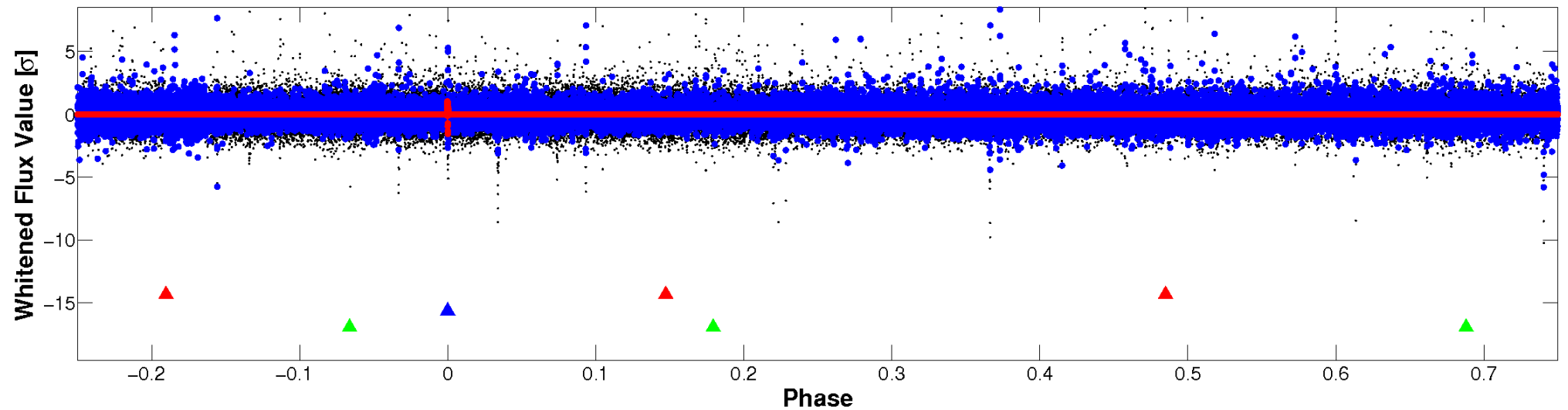


Non-Whitened Vs. Whitened Light Curve

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

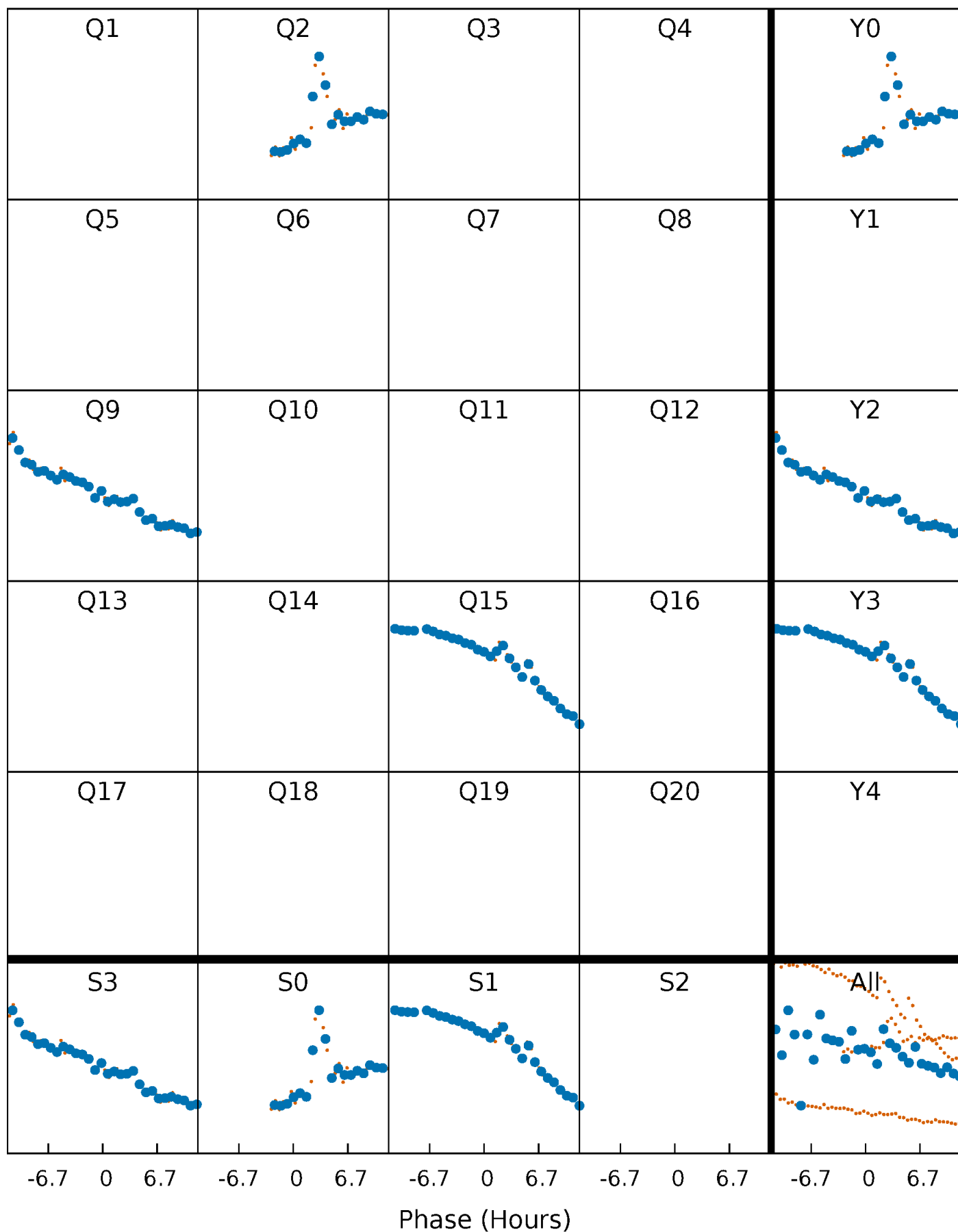


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 003346631-02 P=611.572215 Days $T_0=223.986712$ (BKJD)



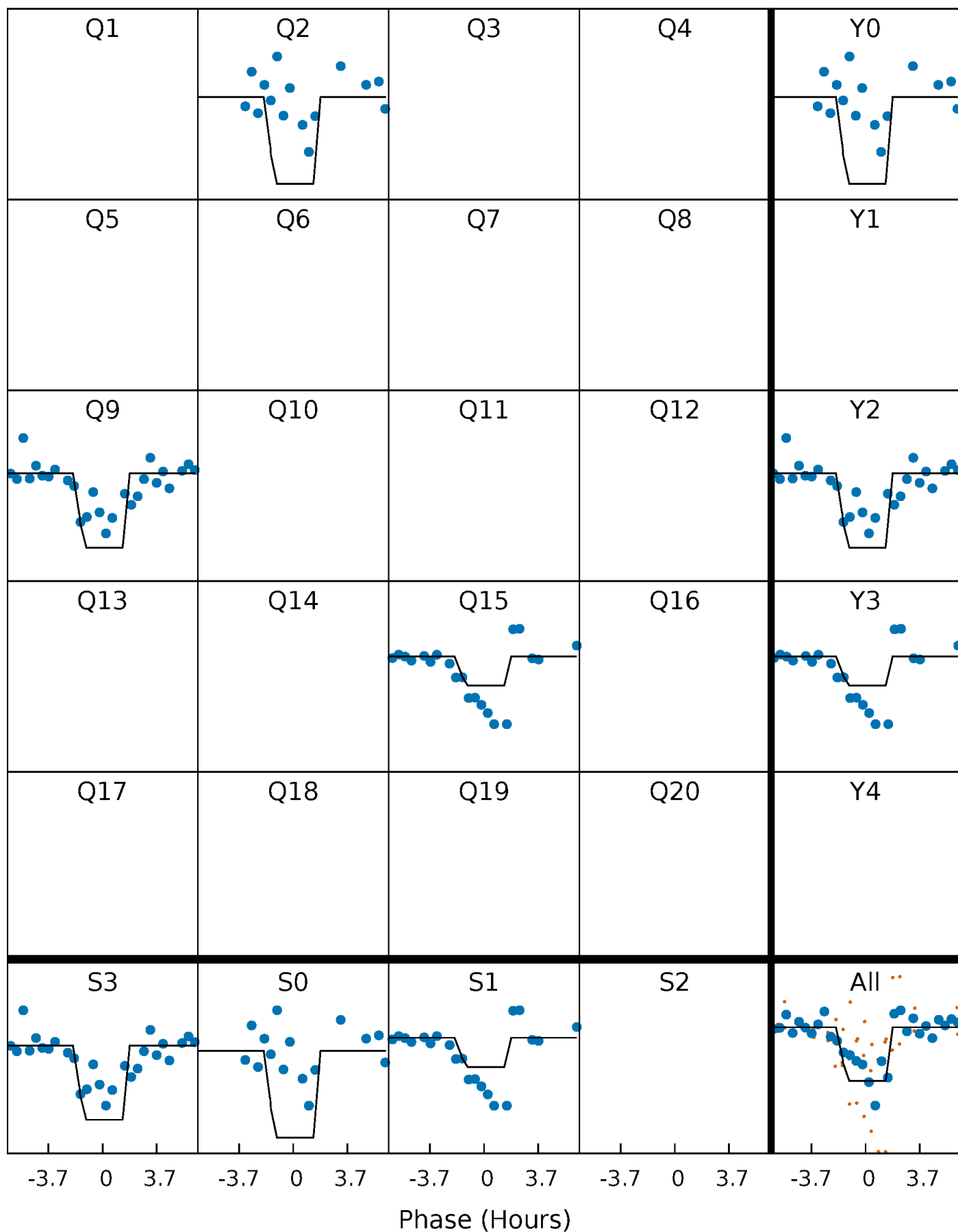
DV Quarter-Phased Transit Curves

TCE 003346631-02 P=611.572215 Days $T_0=223.986712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

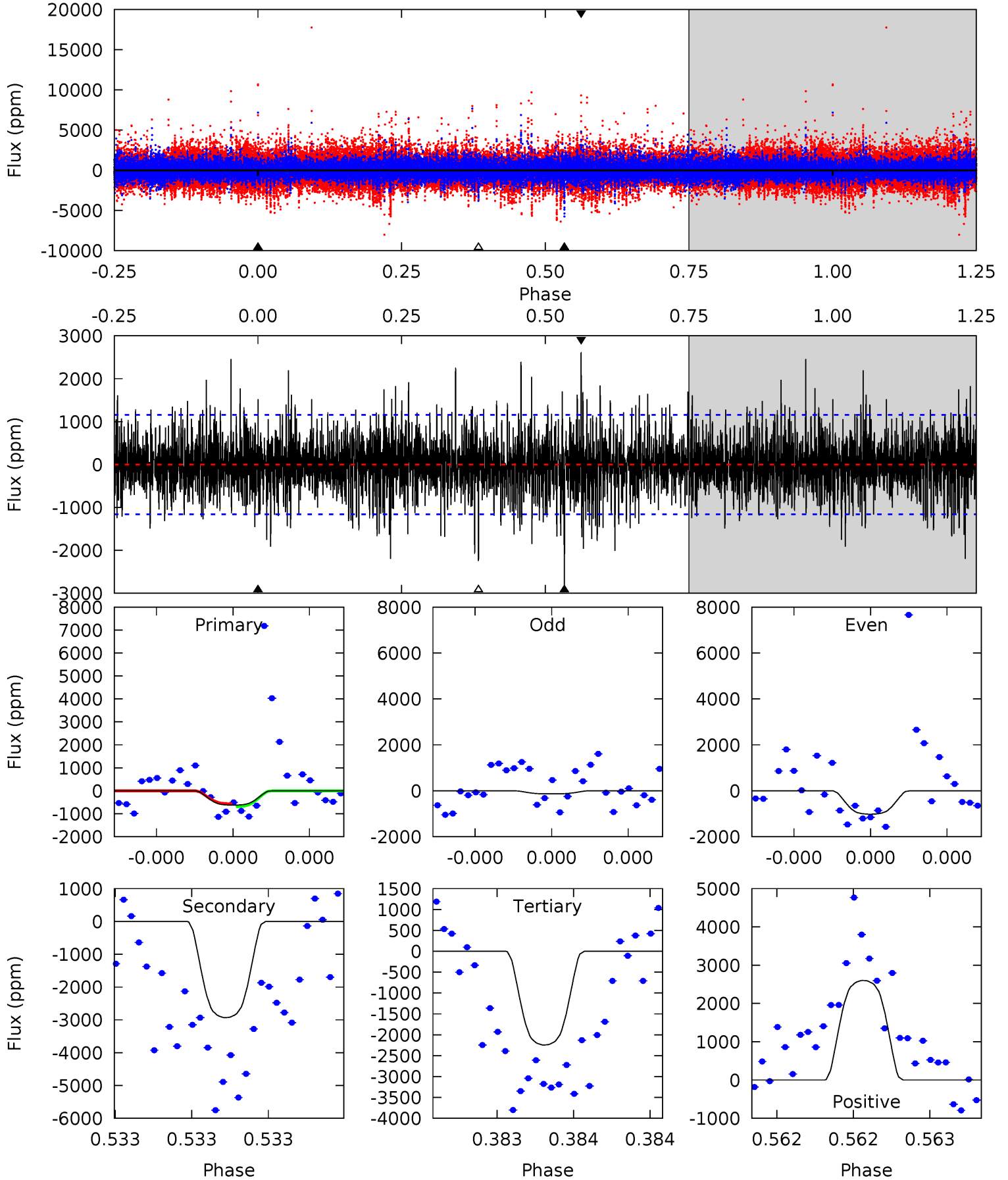
TCE 003346631-02 P=611.556017 Days $T_0=224.020209$ (BKJD)



DV Model-Shift Uniqueness Test

003346631-02, P = 611.572215 Days, E = 223.986712 Days

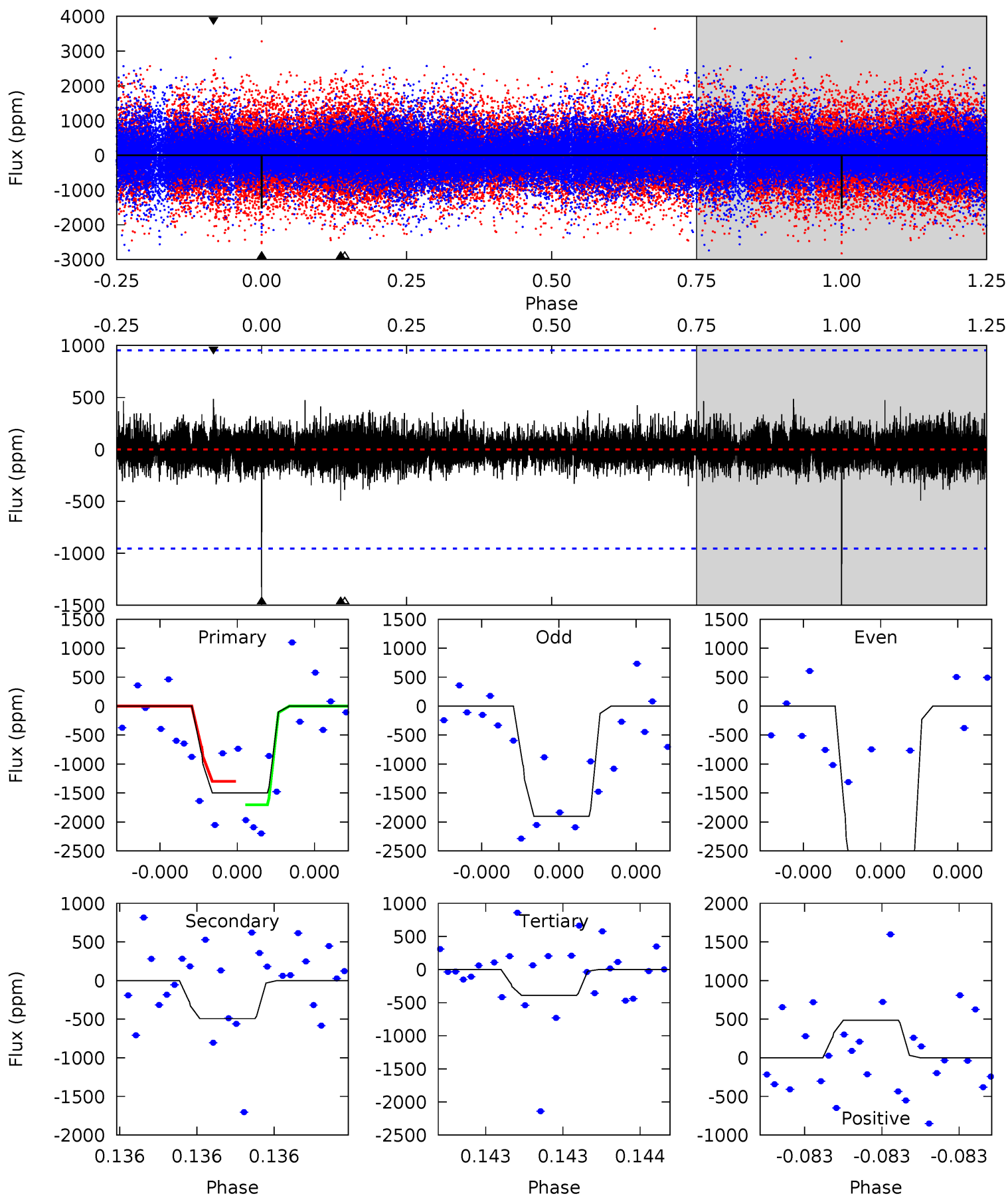
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.03	14.2	10.9	12.6	5.60	3.52	2.57	-7.83	-9.55	3.33	1.61	1.89	-2.11	0.47	0.30



Alt Model-Shift Uniqueness Test

003346631-02, P = 611.556017 Days, E = 224.020209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	2.95	2.33	2.90	5.70	3.68	0.54	6.63	6.05	0.62	0.04	5.00	1.52	0.24	1.21



Stellar Parameters For KIC 003346631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5268^{+158}_{-142}	$4.580^{+0.039}_{-0.091}$	$-0.200^{+0.300}_{-0.300}$	$0.760^{+0.112}_{-0.069}$	$0.801^{+0.086}_{-0.078}$	$2.571^{+0.526}_{-0.752}$
	+3%/-3%	+1%/-2%	+150%/-150%	+15%/-9%	+11%/-10%	+20%/-29%
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 003346631-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2933 ± 207	$4.91^{+0.93}_{-0.89}$	250^{+11}_{-9}	5122^{+491}_{-351}	114353^{+58473}_{-33062}
Alt.	-493 ± 167	$4.96^{+0.94}_{-0.87}$	250^{+12}_{-9}	3632^{+320}_{-265}	18373^{+11180}_{-7211}

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 $A_{obs} \gg 1.0$

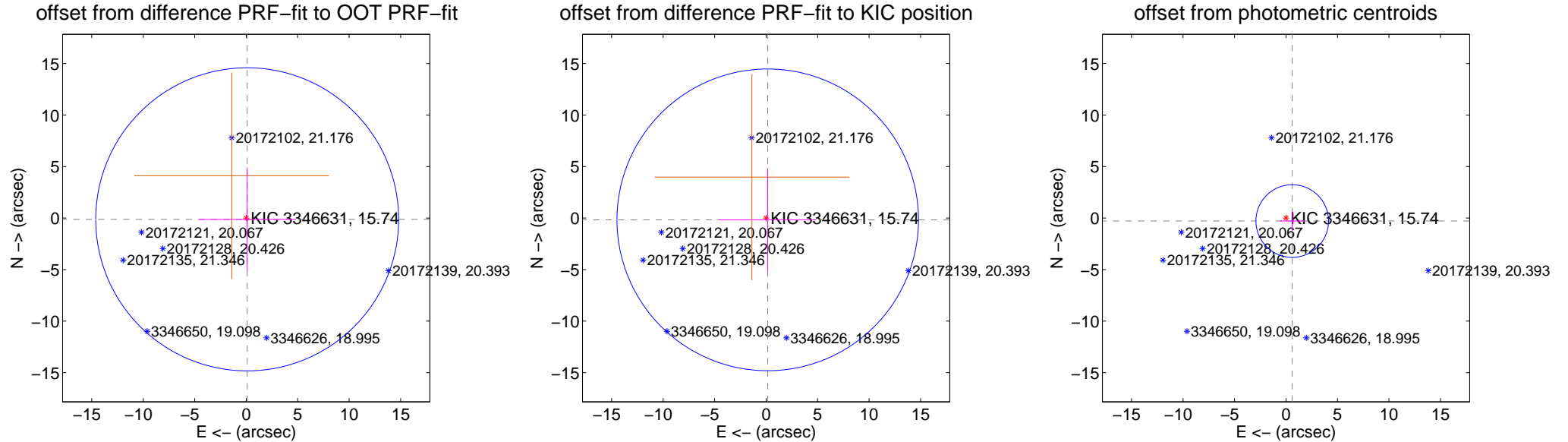
DV Centroid Data

Supplemental centroid analysis for 003346631-02. Kepler magnitude: 15.74. Transit SNR 7.21

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.153 ± 4.902	0.03	-0.095 ± 4.726	-0.120 ± 5.008
PRF-fit source offset from KIC position	0.233 ± 4.880	0.05	-0.159 ± 4.726	-0.171 ± 5.008
photometric centroid source offset	0.67 ± 1.18	0.57	-0.60 ± 1.21	-0.29 ± 0.98

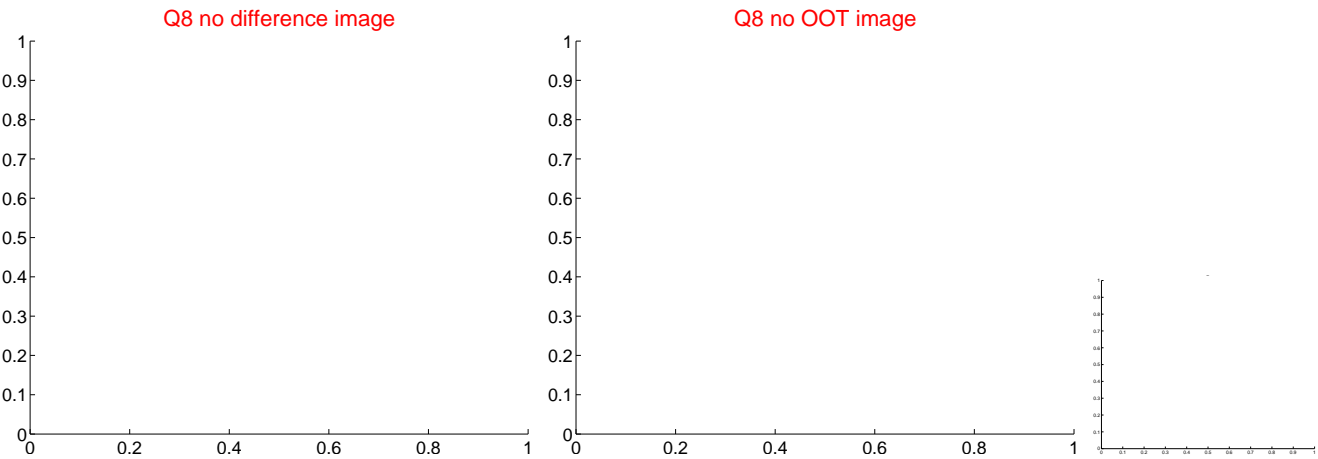
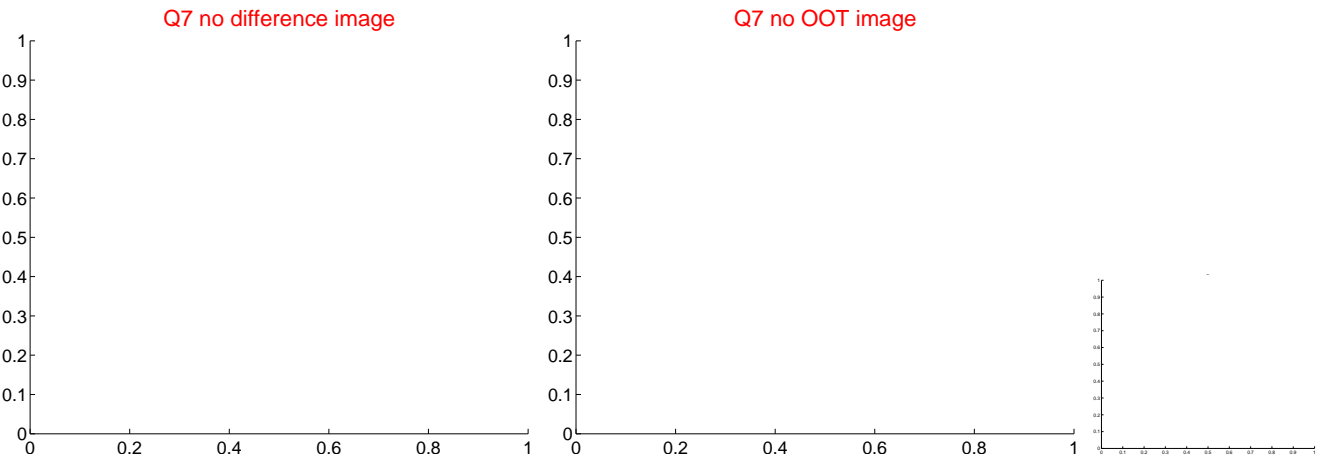
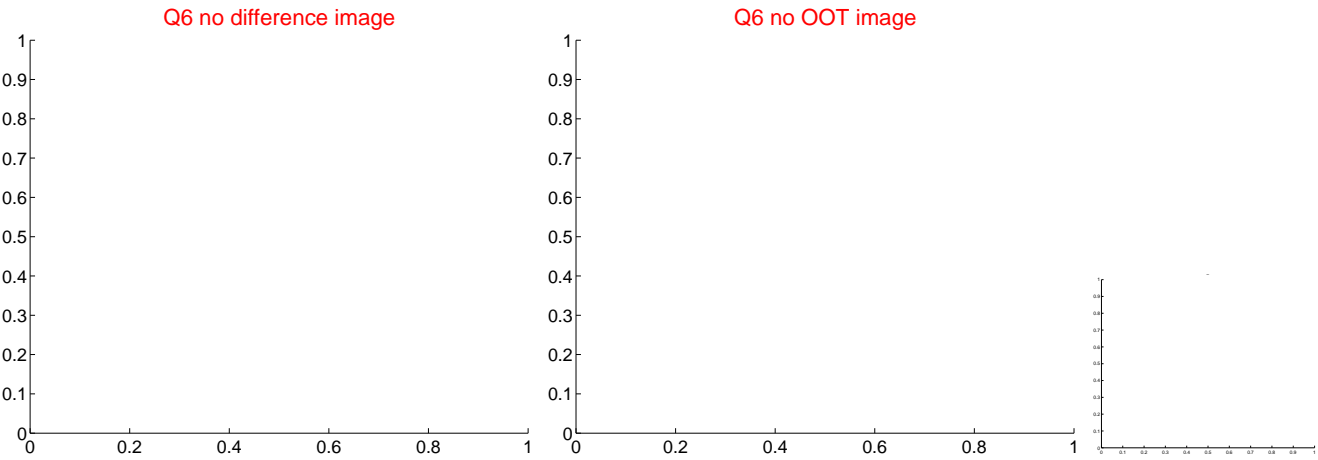
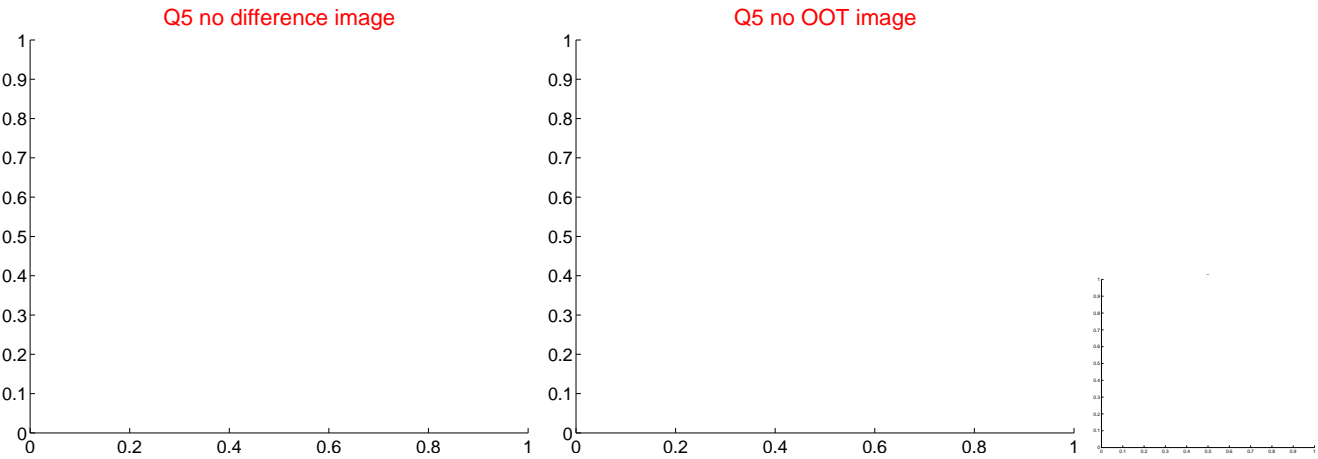


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

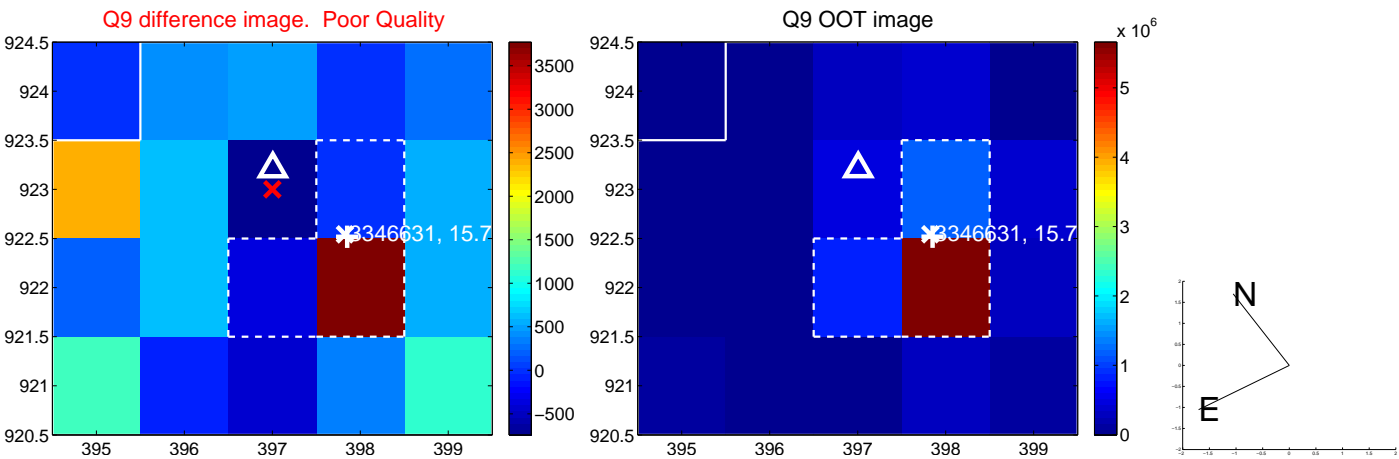
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



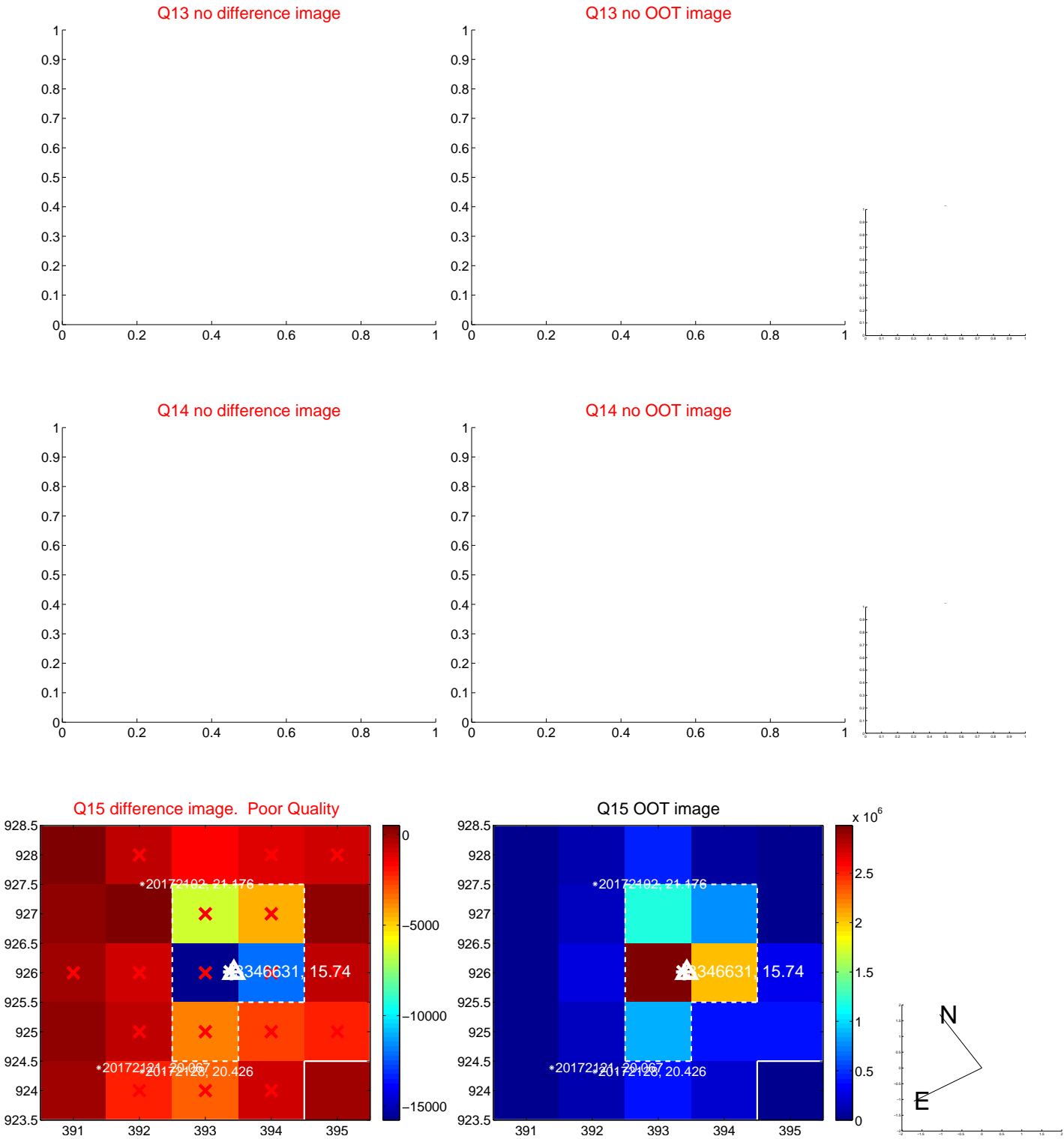
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



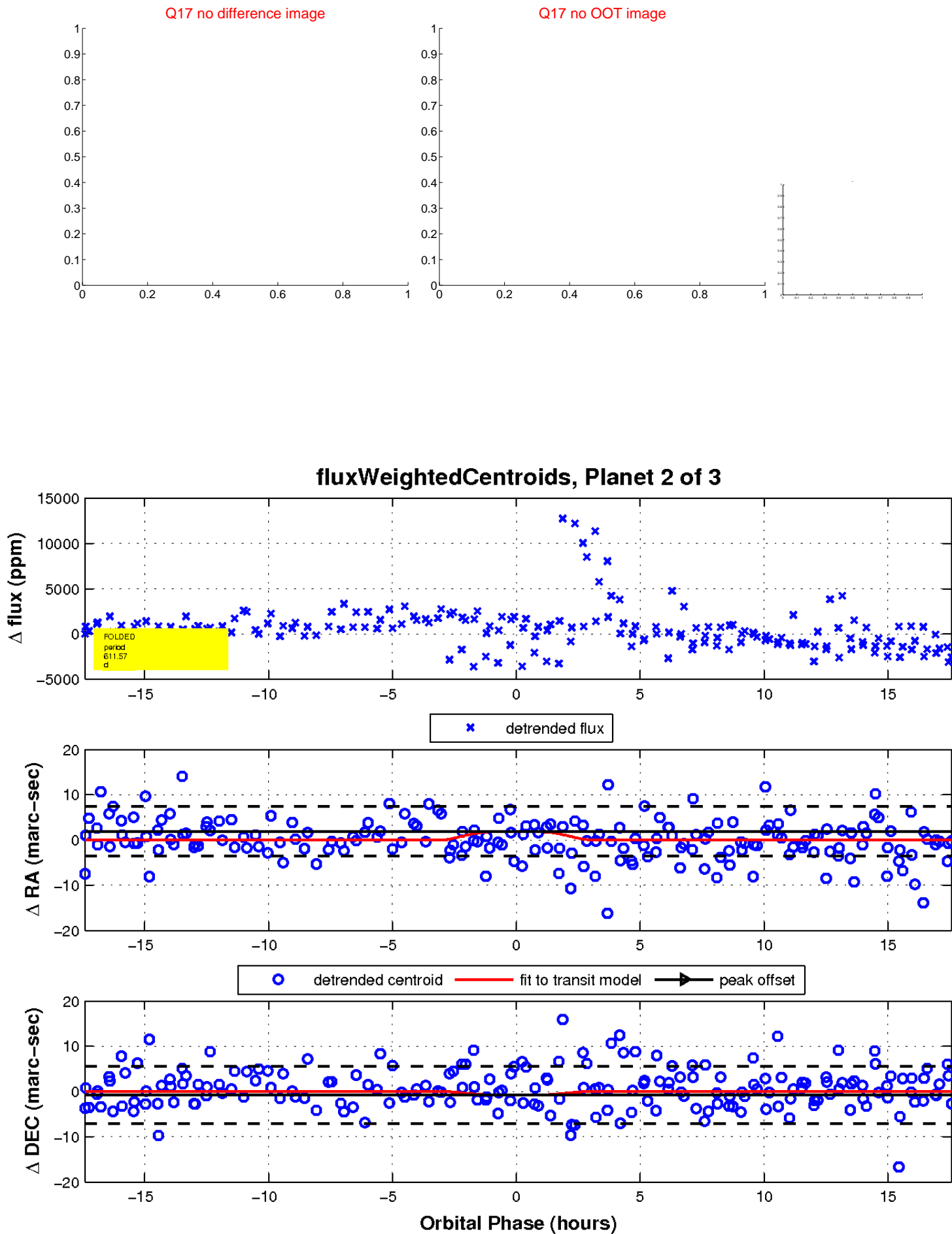
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

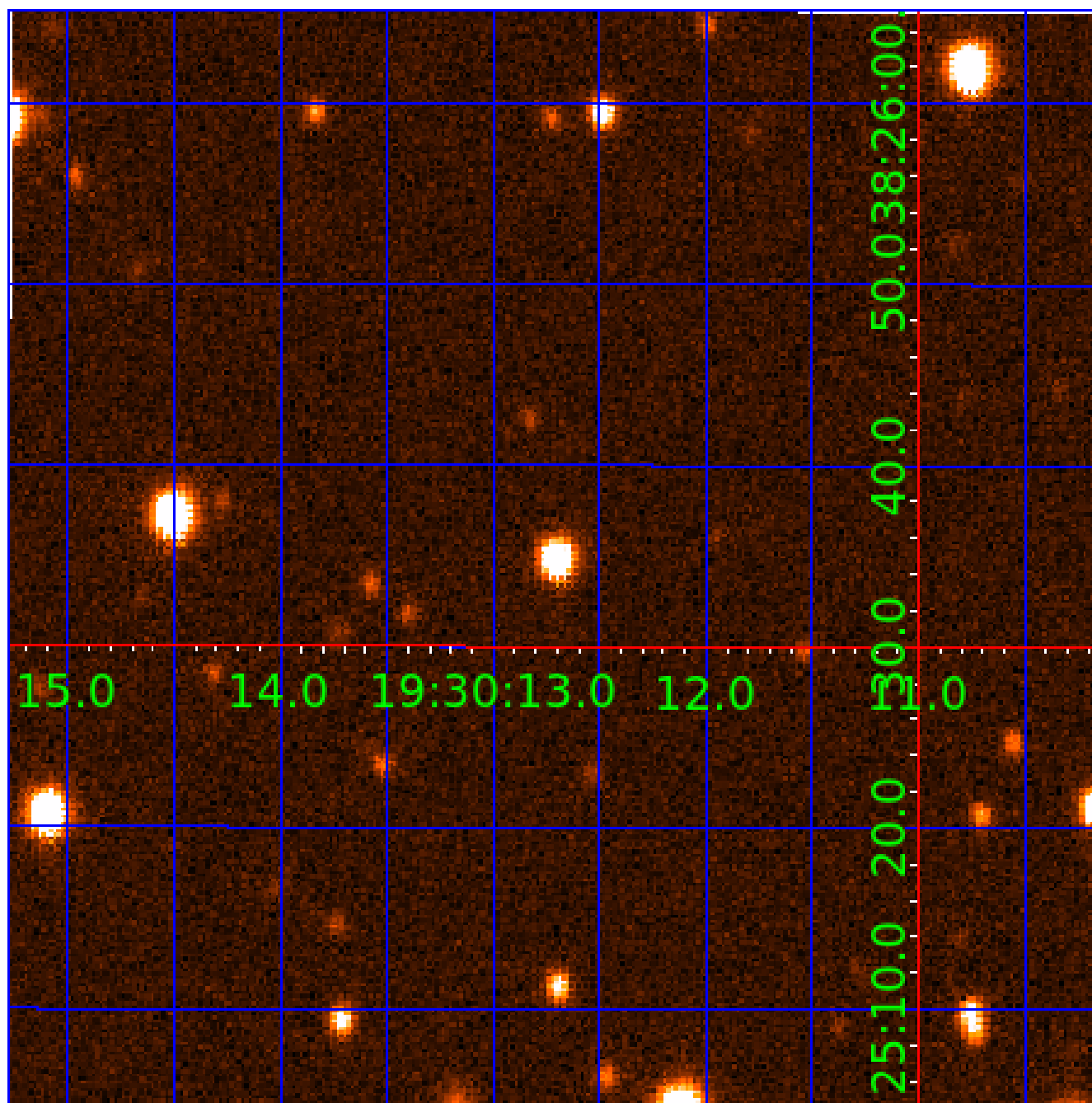


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003346631

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})
003346631-01	OBS	No	405.093499	520.562908	2868.5	7.793	10.6	7.5	0.76	5268	3.98	0.40
003346631-02	OBS	No	611.572216	223.986712	2610.1	5.872	12.4	7.2	0.76	5268	4.82	0.23
003346631-03	OBS	No	461.316333	333.698557	2634.3	3.746	9.4	8.8	0.76	5268	3.93	0.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003346631-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003346631-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
003346631-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

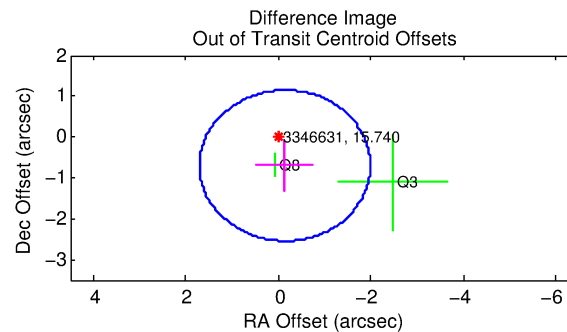
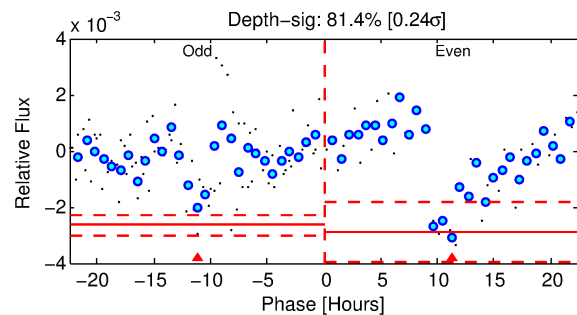
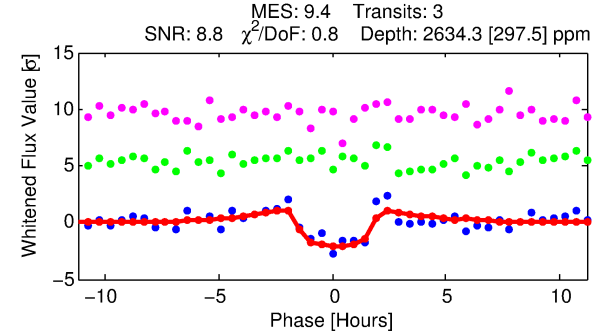
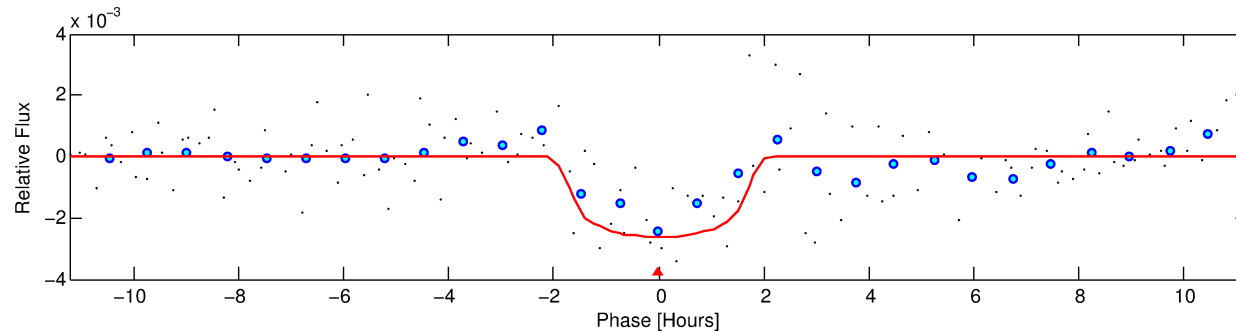
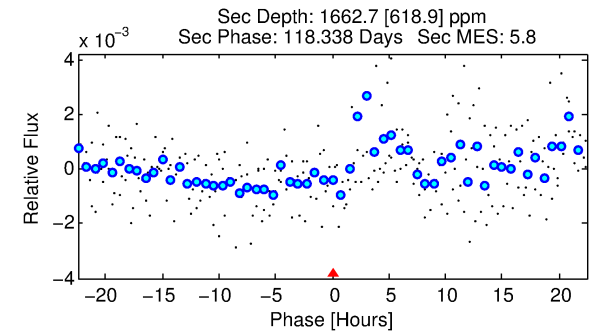
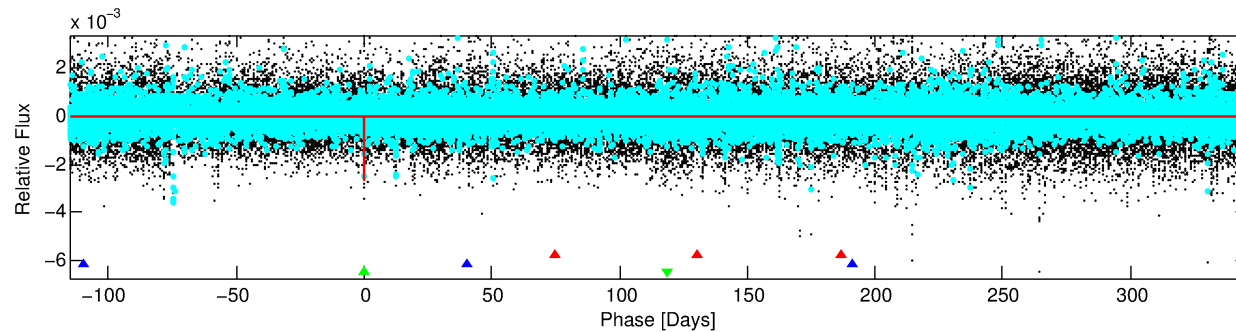
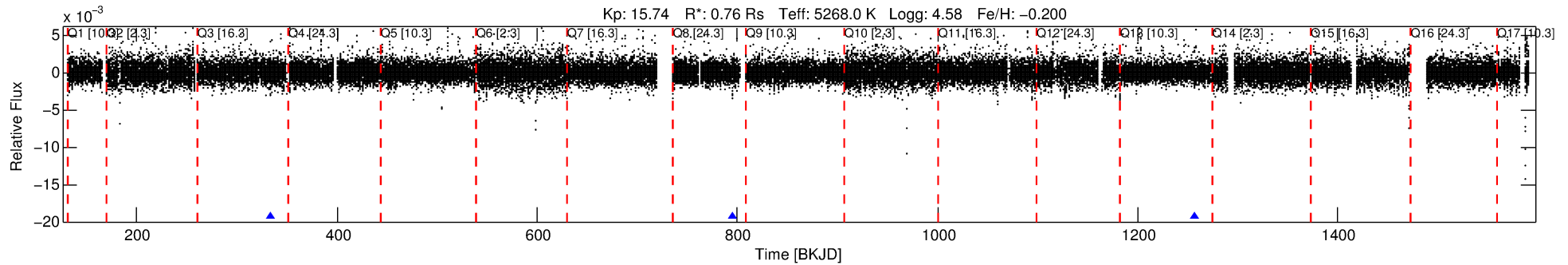
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003346631-03

No Significant Match Found

DV One-Page Summary

KIC: 3346631 Candidate: 3 of 3 Period: 461.316 d



DV Fit Results:

Period = 461.31633 [0.00478] d
Epoch = 333.6986 [0.0080] BKJD
Rp/R* = 0.0474 [0.0780]
a/R* = 886.02 [5469.36]
b = 0.46 [10.80]
Seff = 0.34 [0.07]
Teq = 194 [10] K
Rp = 3.93 [6.49] Re
a = 1.0854 [0.1308] AU
Ag = 69646.99 [230720.05] [0.30 σ]
Teffp = 4885 [4043] K [1.16 σ]

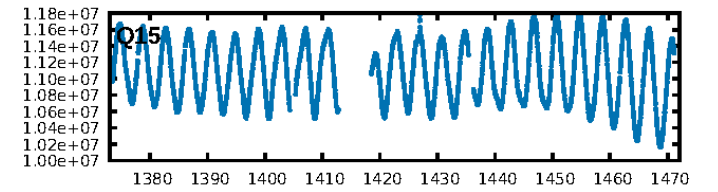
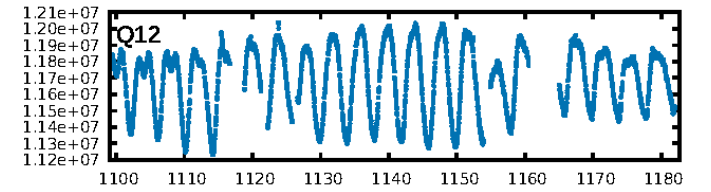
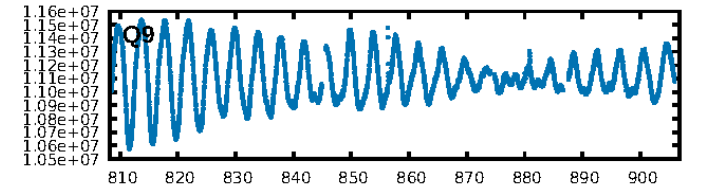
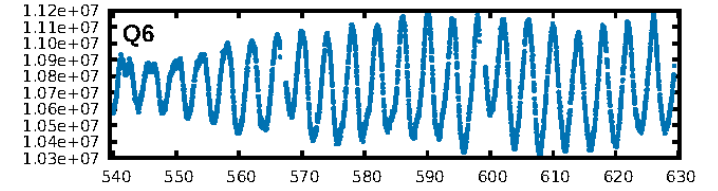
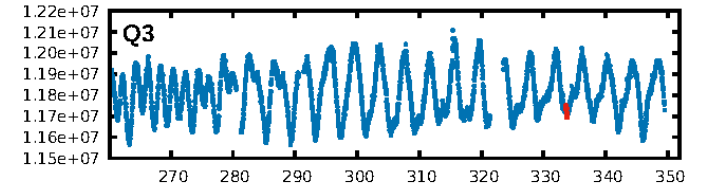
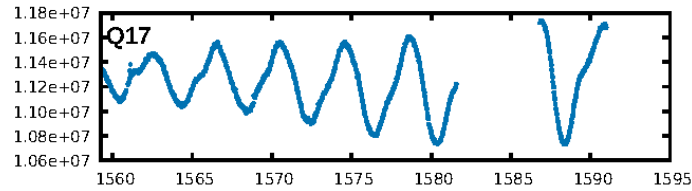
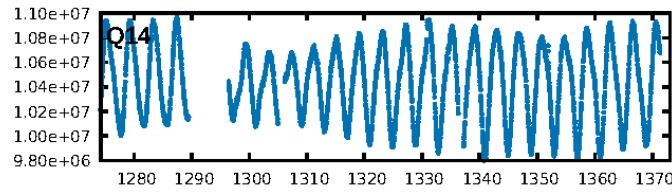
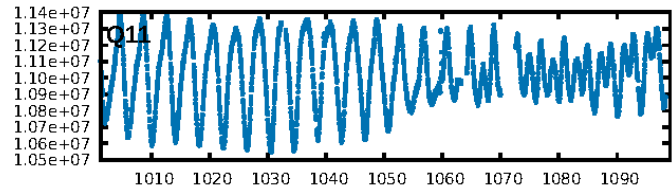
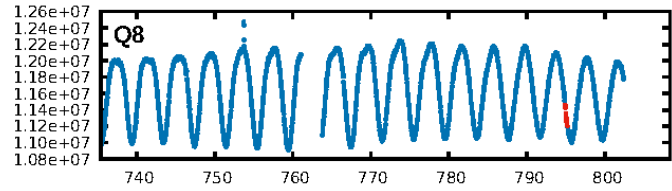
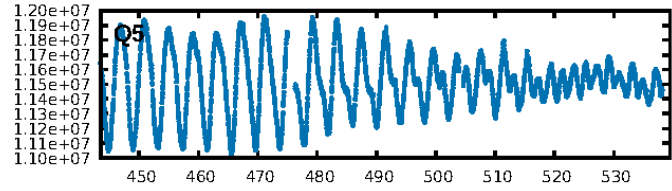
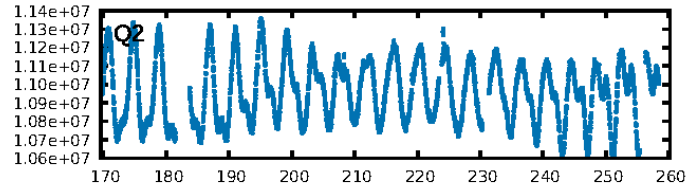
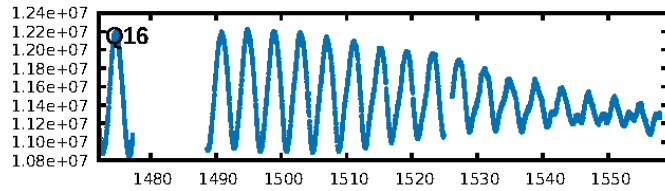
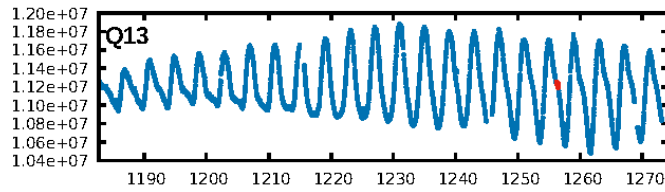
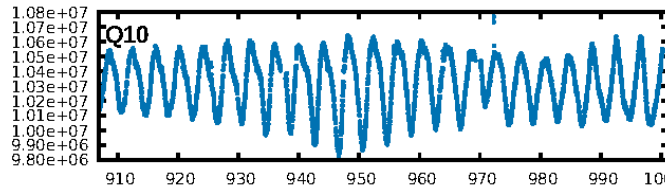
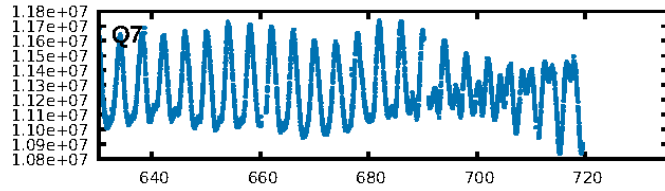
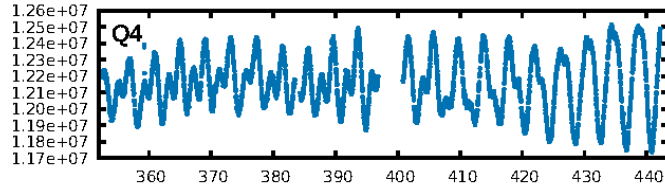
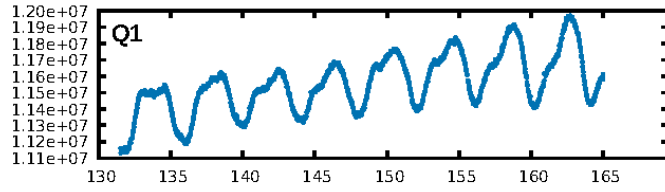
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [156.06 σ]
LongPeriod-sig: 100.0% [517.71 σ]
ModelChiSquare2-sig: 50.6%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 1.35e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1404
Centroid-sig: 41.6%
Centroid-so: 1.286 arcsec [1.20 σ]
OotOffset-rm: 0.714 arcsec [1.16 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.813 arcsec [1.32 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

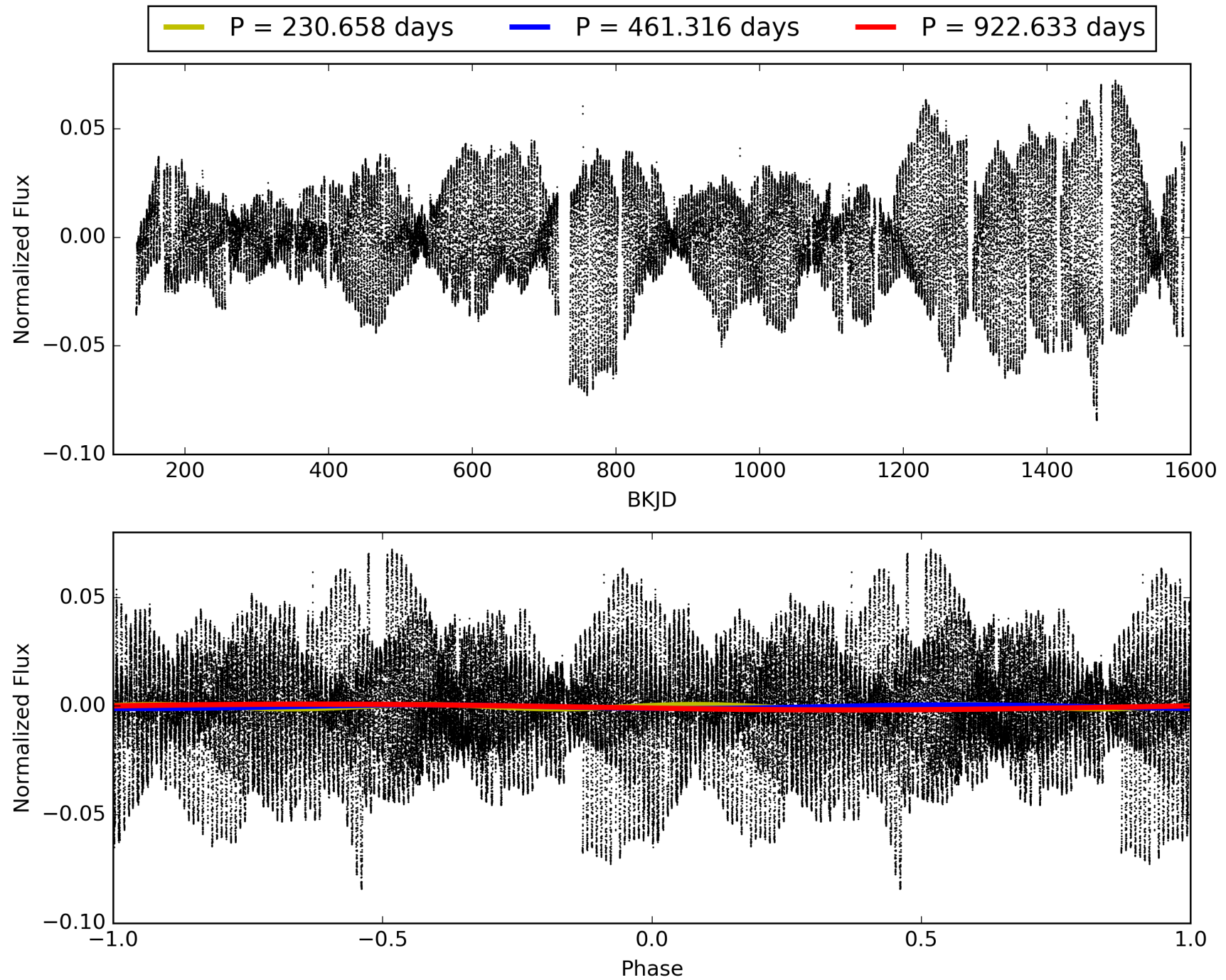
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:47:43 Z

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

TCE 003346631-03, PDC Light Curves

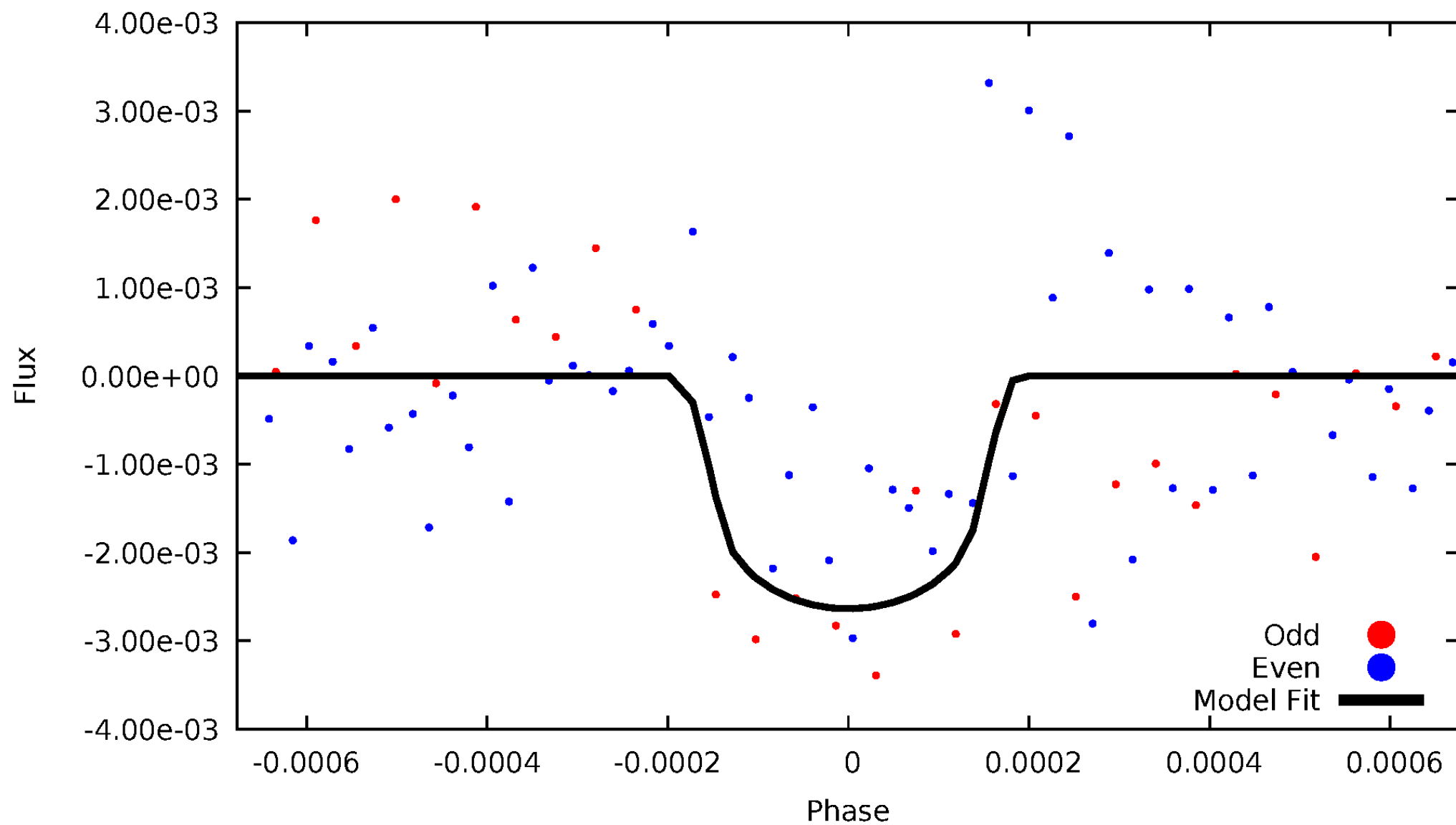


TCE 003346631-03



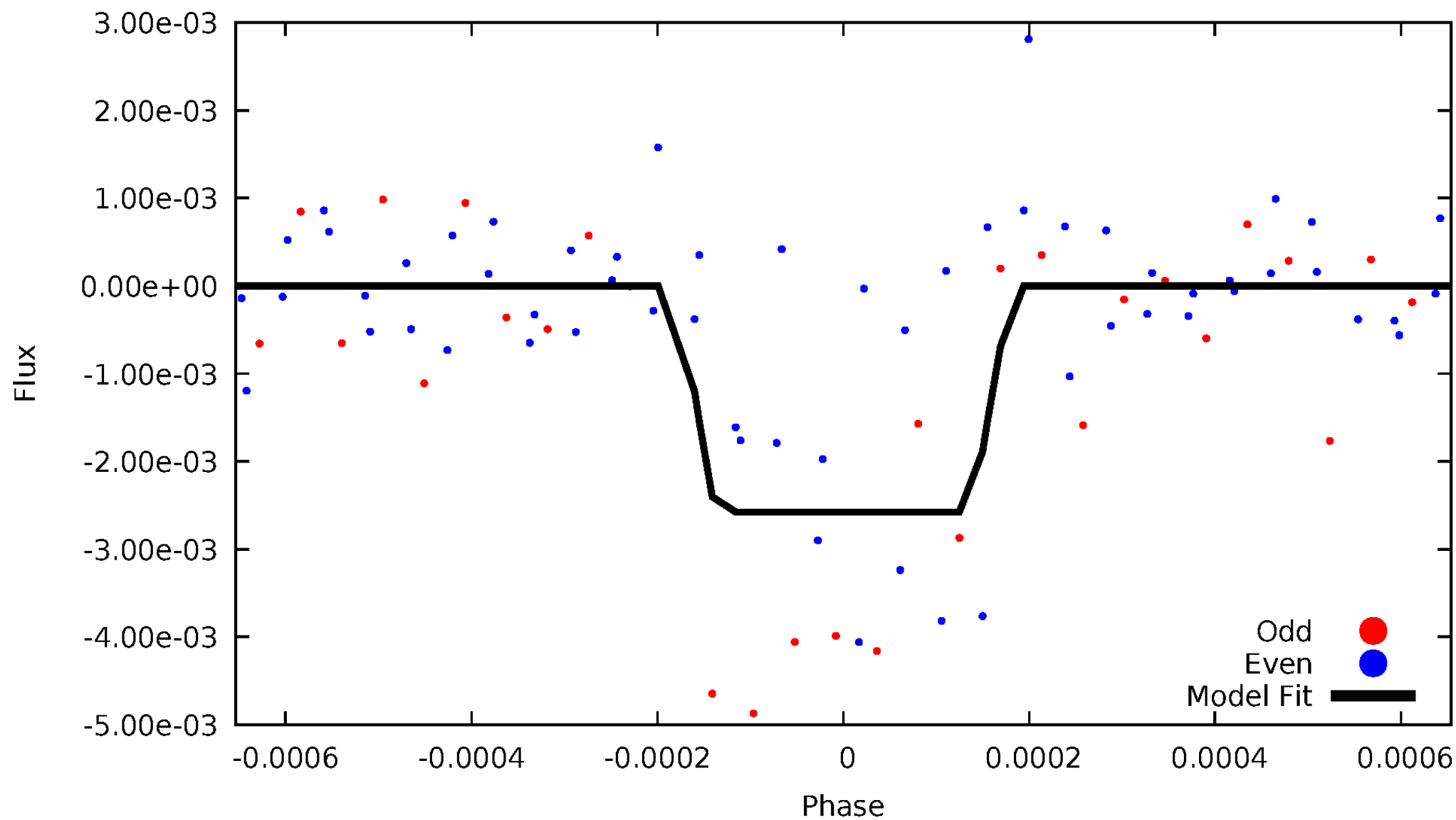
DV Odd/Even

TCE 003346631-03

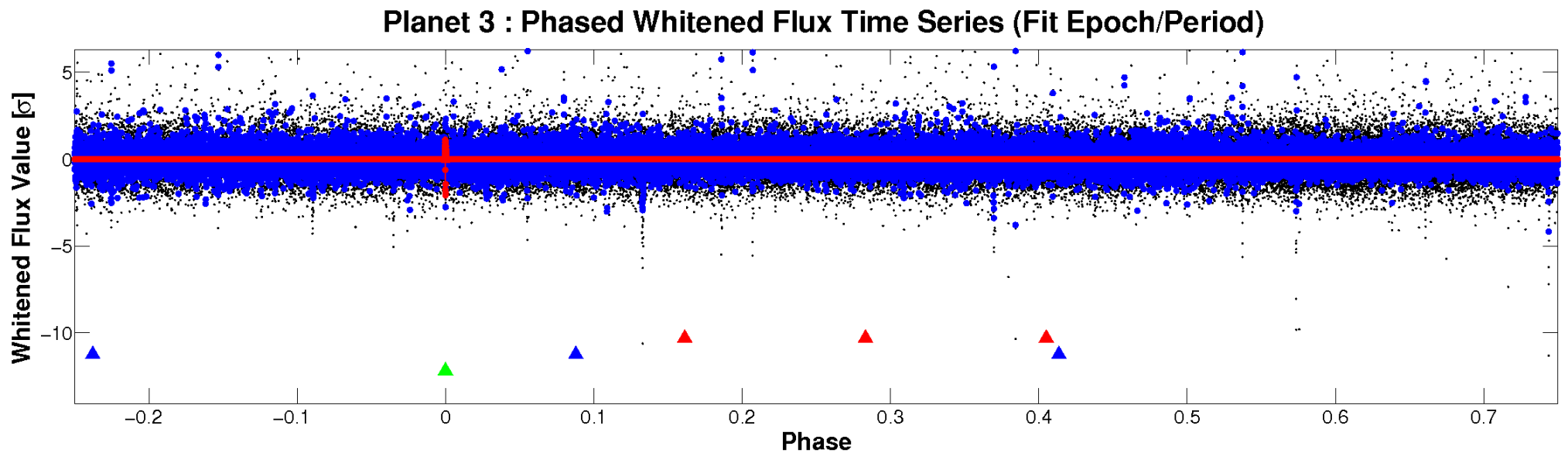
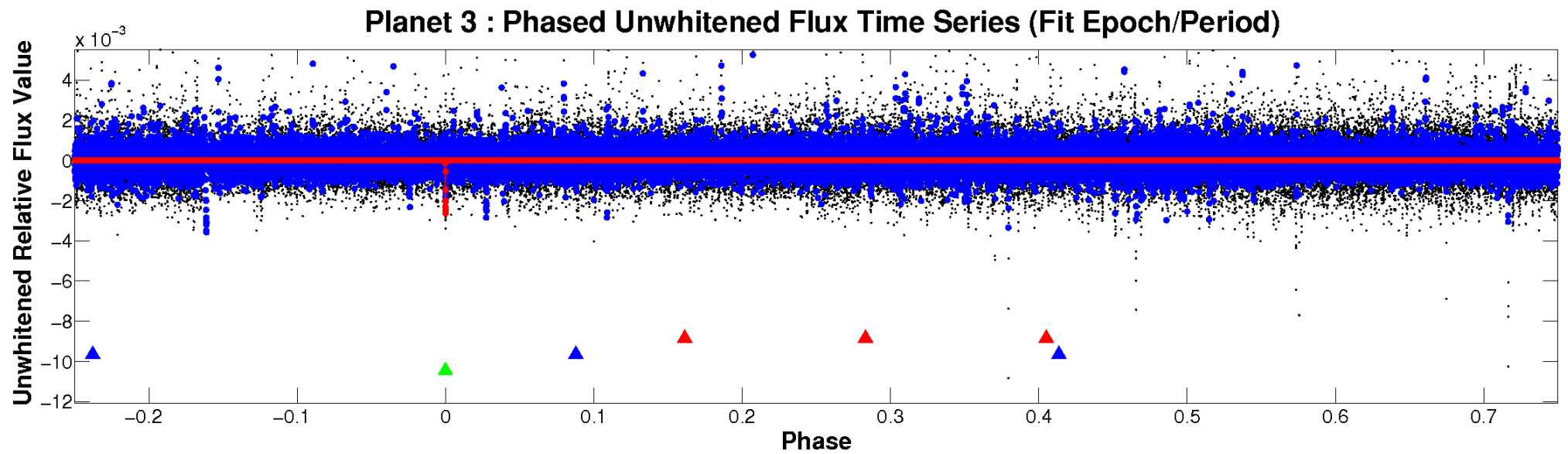


ALT Odd/Even

TCE 003346631-03

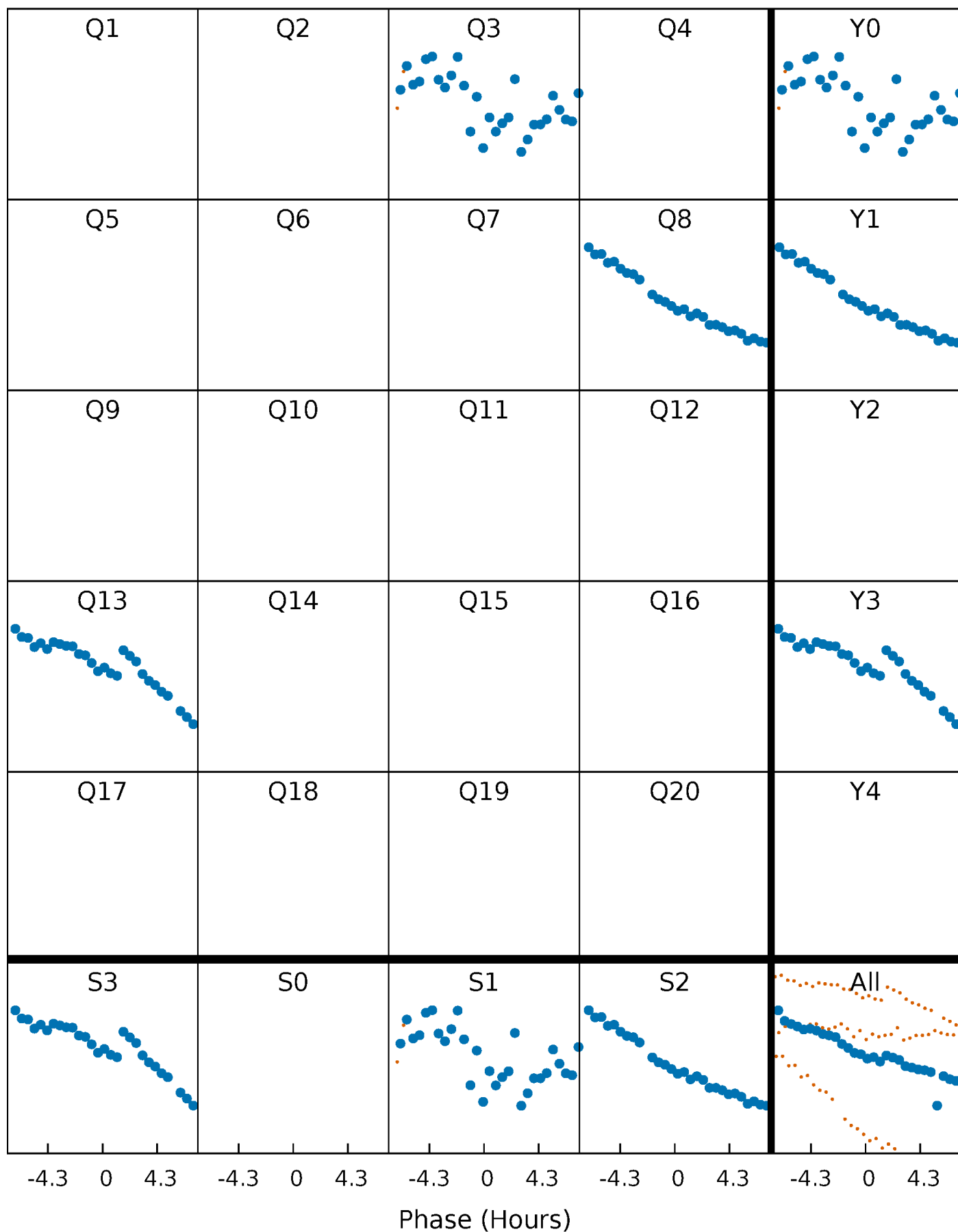


Non-Whitened Vs. Whitened Light Curve



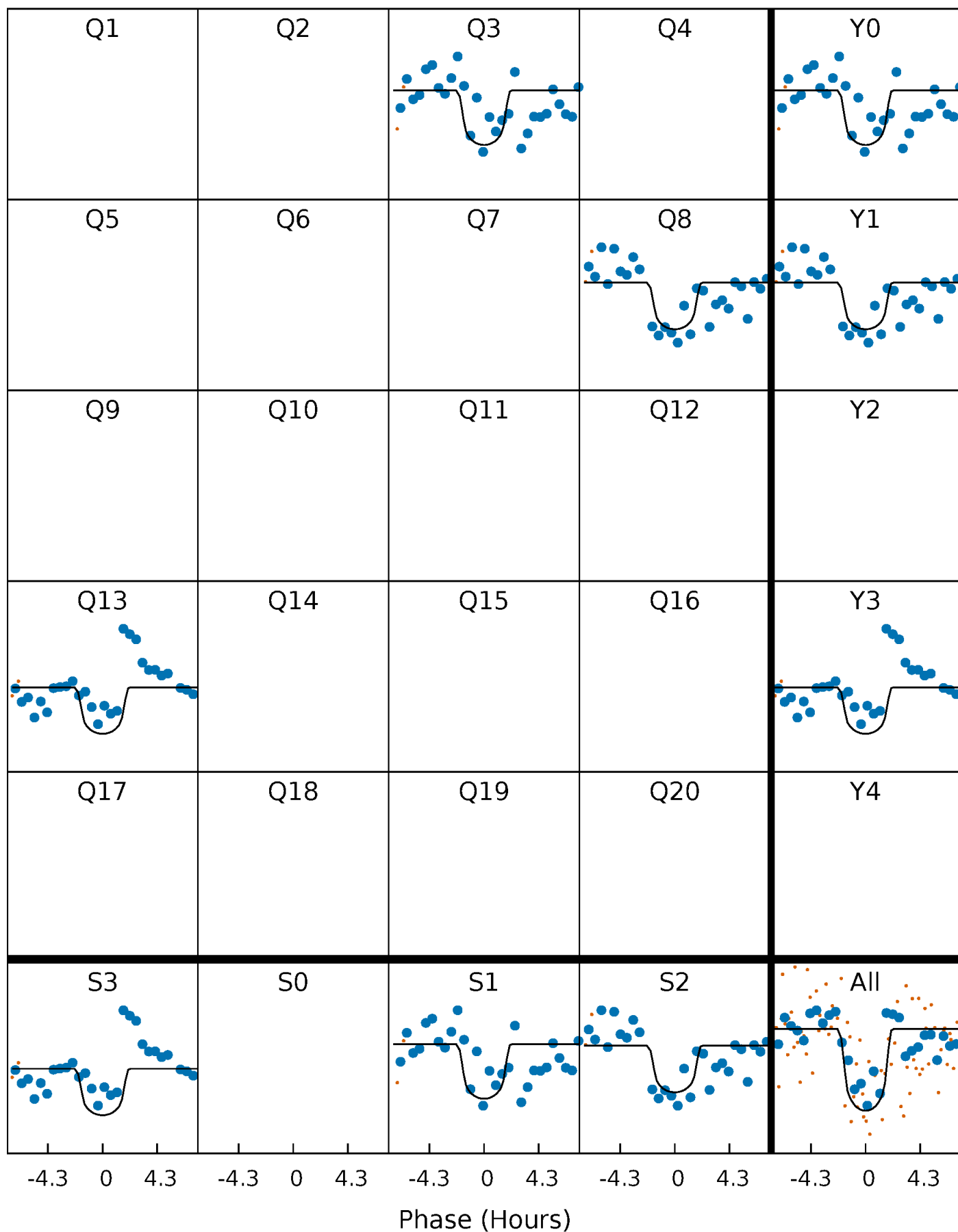
PDC Quarter-Phased Transit Curves

TCE 003346631-03 P=461.316333 Days $T_0=333.698557$ (BKJD)



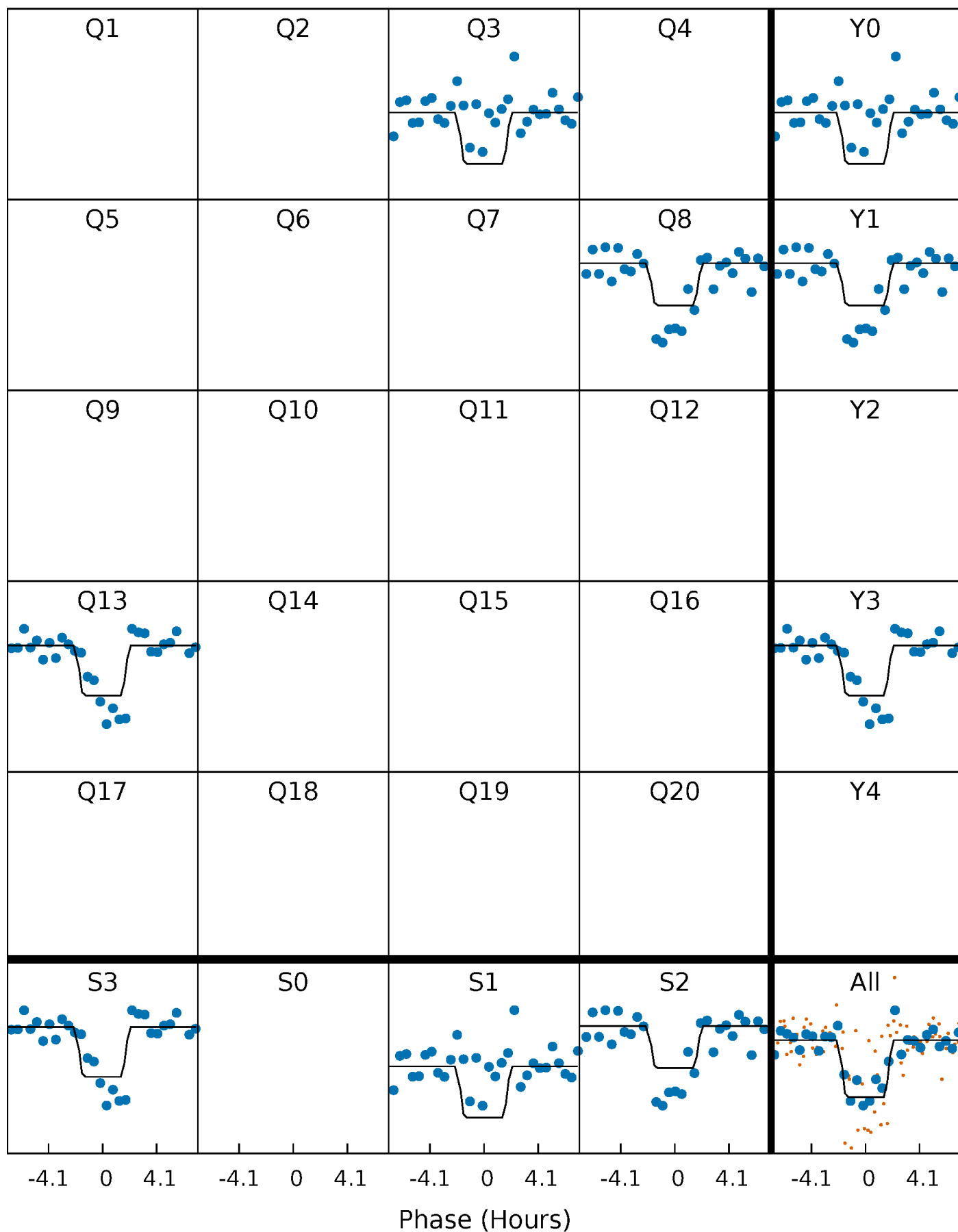
DV Quarter-Phased Transit Curves

TCE 003346631-03 $P=461.316333$ Days $T_0=333.698557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

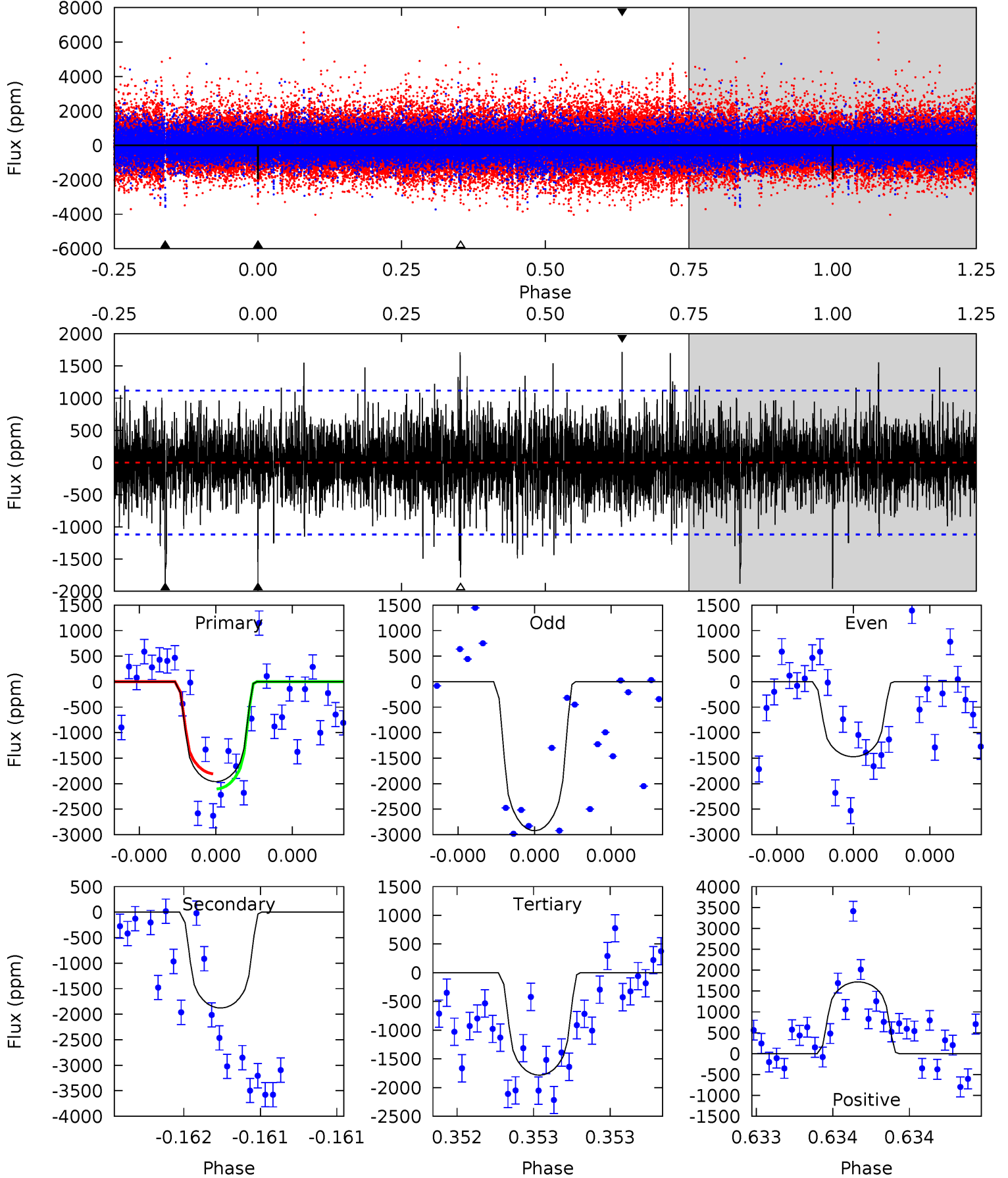
TCE 003346631-03 $P=461.301239$ Days $T_0=333.711021$ (BKJD)



DV Model-Shift Uniqueness Test

003346631-03, P = 461.316333 Days, E = 333.698557 Days

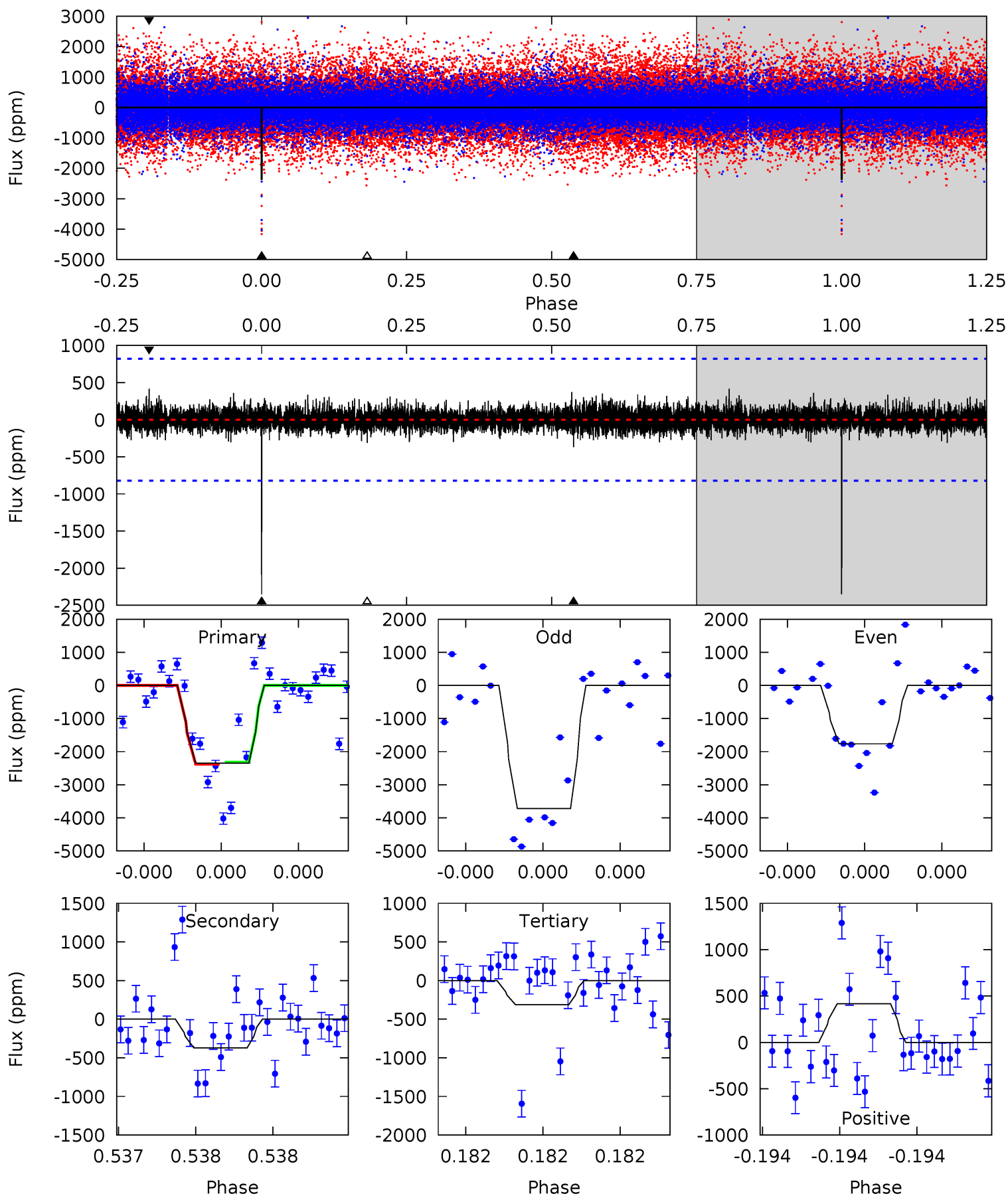
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	9.45	8.97	8.64	5.62	3.56	1.85	0.89	1.21	0.48	0.80	3.17	1.16	0.47	0.75



Alt Model-Shift Uniqueness Test

003346631-03, P = 461.301239 Days, E = 333.711021 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.54	2.14	2.86	5.64	3.58	0.54	14.0	13.3	0.40	-0.31	7.19	0.80	0.15	0.19



Stellar Parameters For KIC 003346631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5268^{+158}_{-142}	$4.580^{+0.039}_{-0.091}$	$-0.200^{+0.300}_{-0.300}$	$0.760^{+0.112}_{-0.069}$	$0.801^{+0.086}_{-0.078}$	$2.571^{+0.526}_{-0.752}$
	+3%/-3%	+1%/-2%	+150%/-150%	+15%/-9%	+11%/-10%	+20%/-29%
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 003346631-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1878 ± 199	$6.30^{+5.70}_{-4.39}$	274^{+11}_{-10}	4223^{+3209}_{-827}	$30745^{+329366}_{-22434}$
Alt.	-371 ± 146	$6.63^{+5.98}_{-4.47}$	275^{+11}_{-10}	3159^{+1455}_{-521}	5246^{+41910}_{-3884}

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 $A_{obs} \gg 1.0$

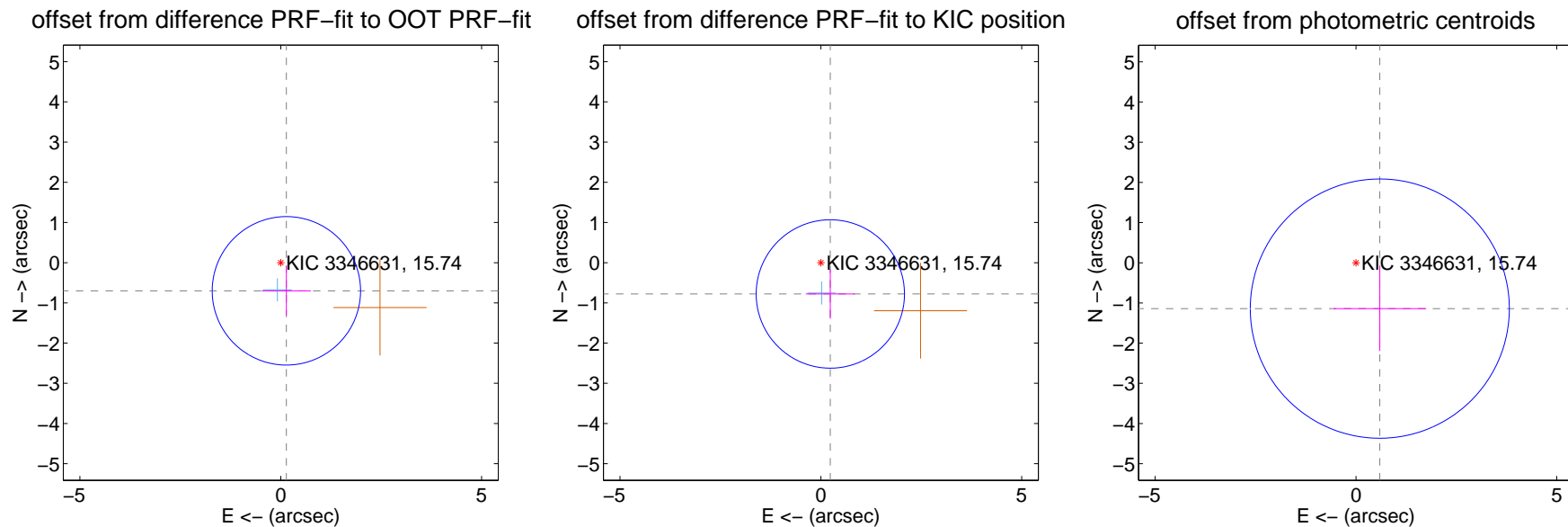
DV Centroid Data

Supplemental centroid analysis for 003346631-03. Kepler magnitude: 15.74. Transit SNR 8.81

There are 1 quarters with good PRF difference image offsets

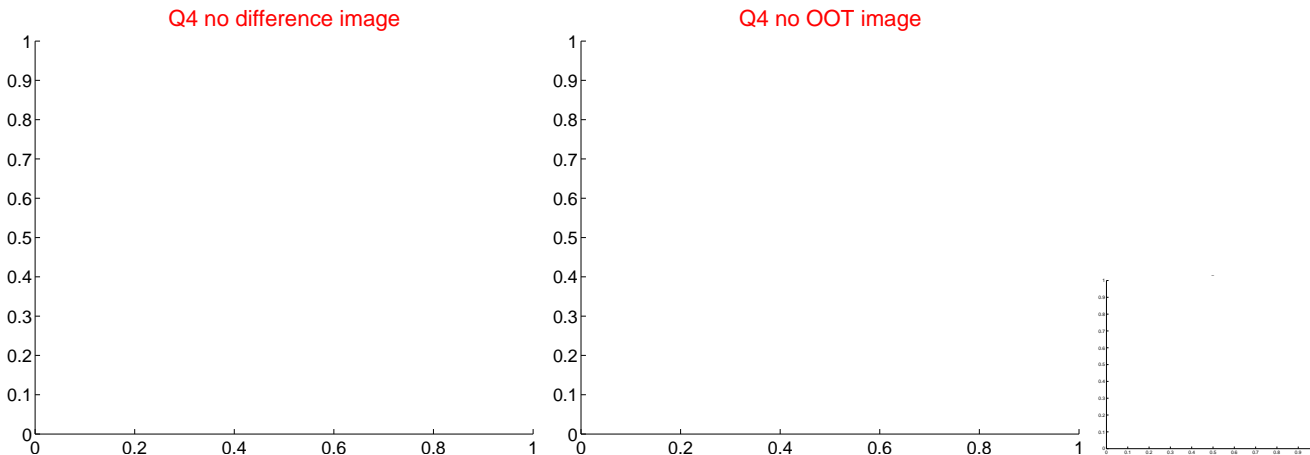
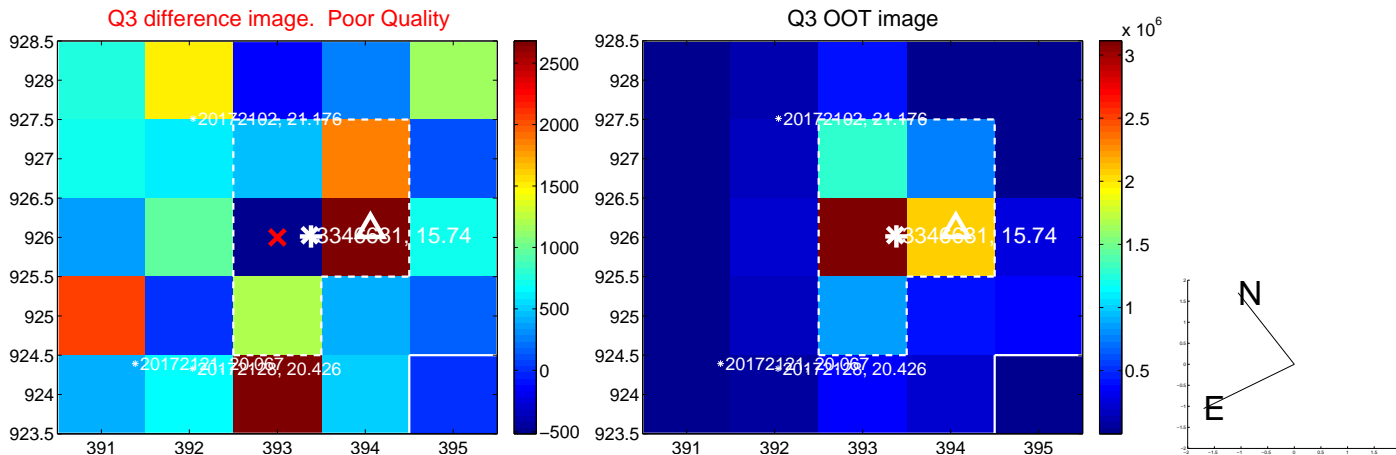
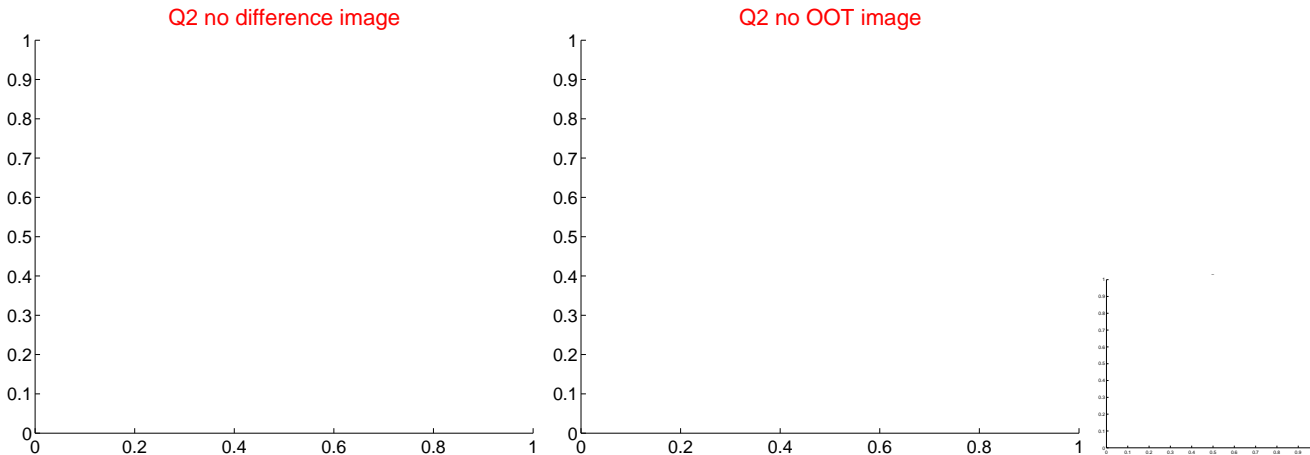
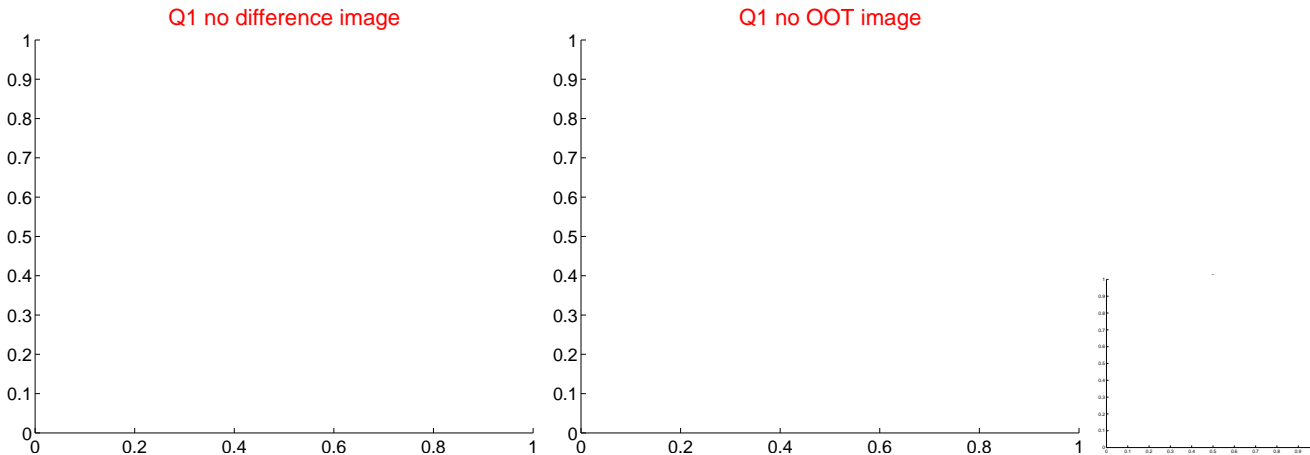
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.714 ± 0.616	1.16	-0.140 ± 0.610	-0.700 ± 0.616
PRF-fit source offset from KIC position	0.813 ± 0.615	1.32	-0.236 ± 0.610	-0.778 ± 0.616
photometric centroid source offset	1.29 ± 1.08	1.20	-0.59 ± 1.15	-1.14 ± 1.05

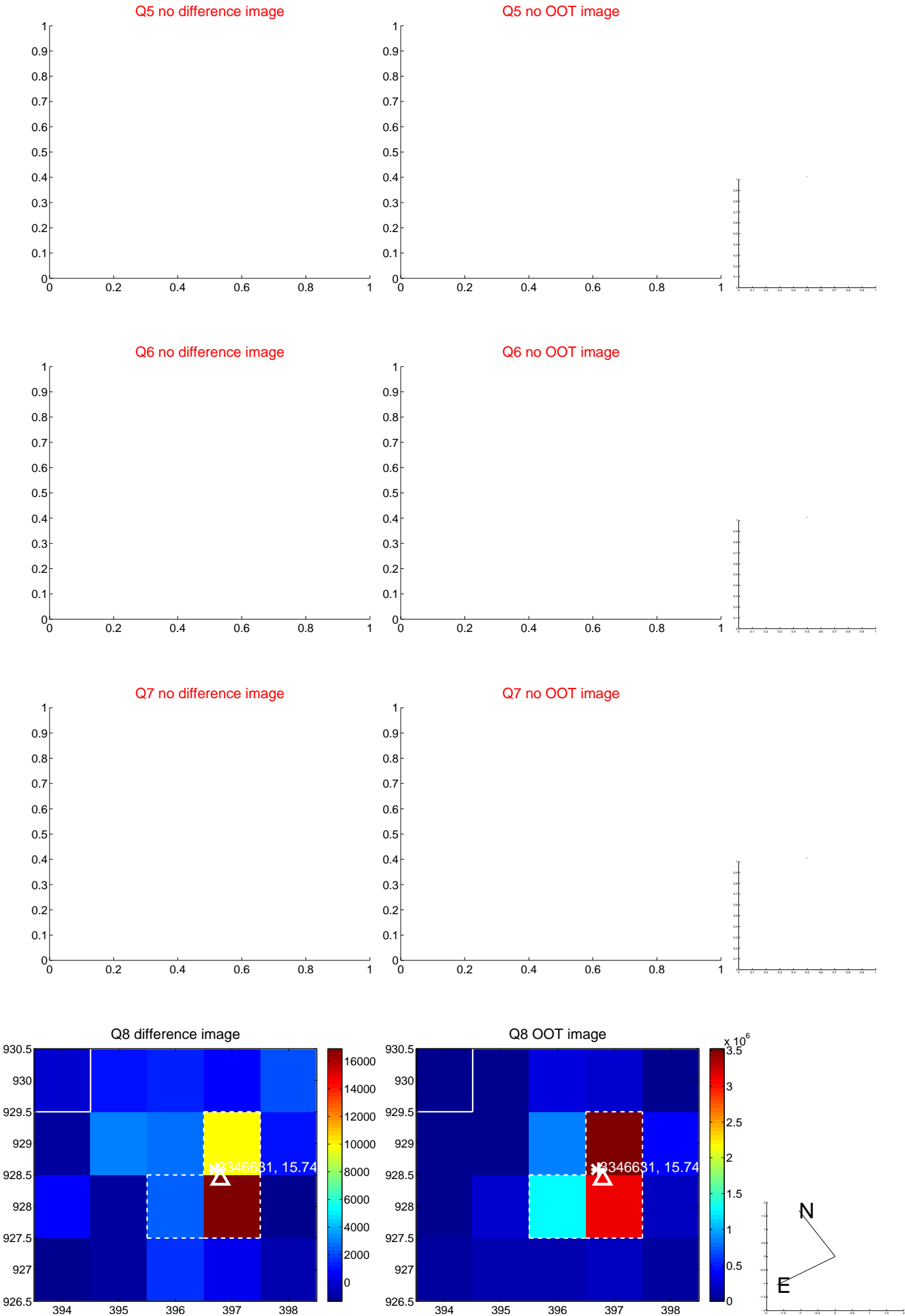


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



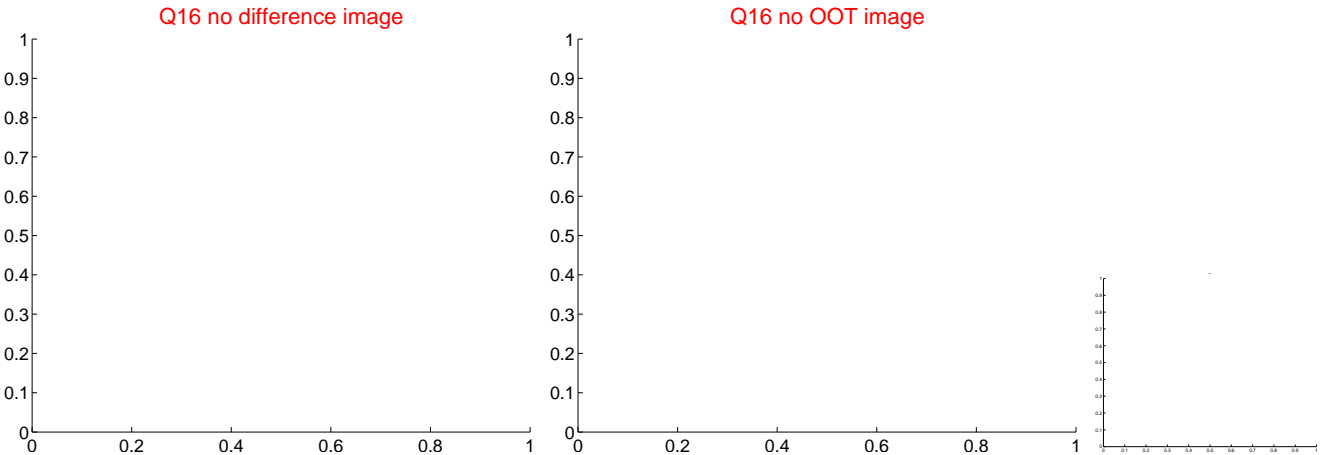
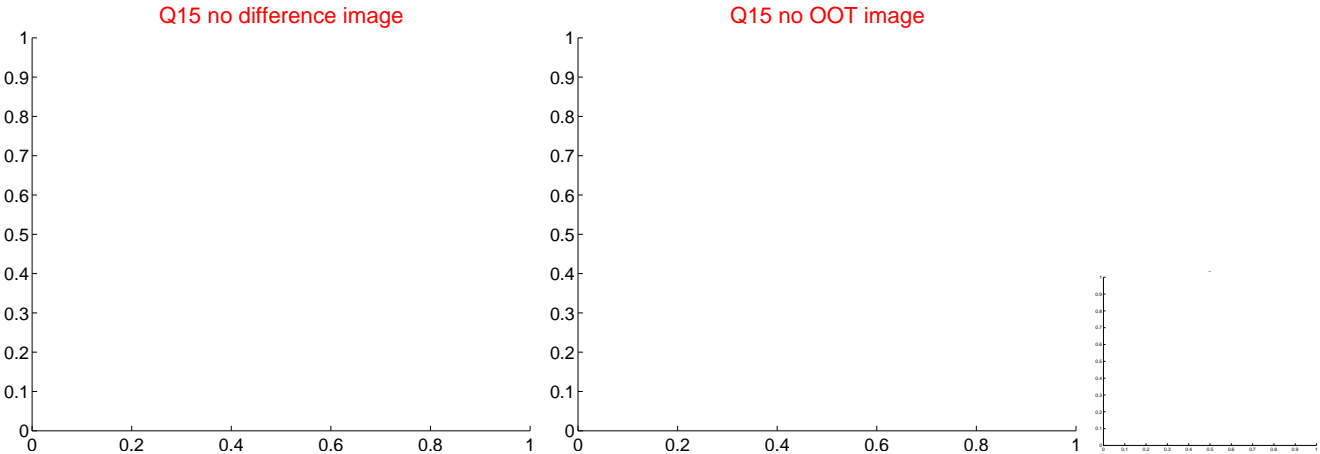
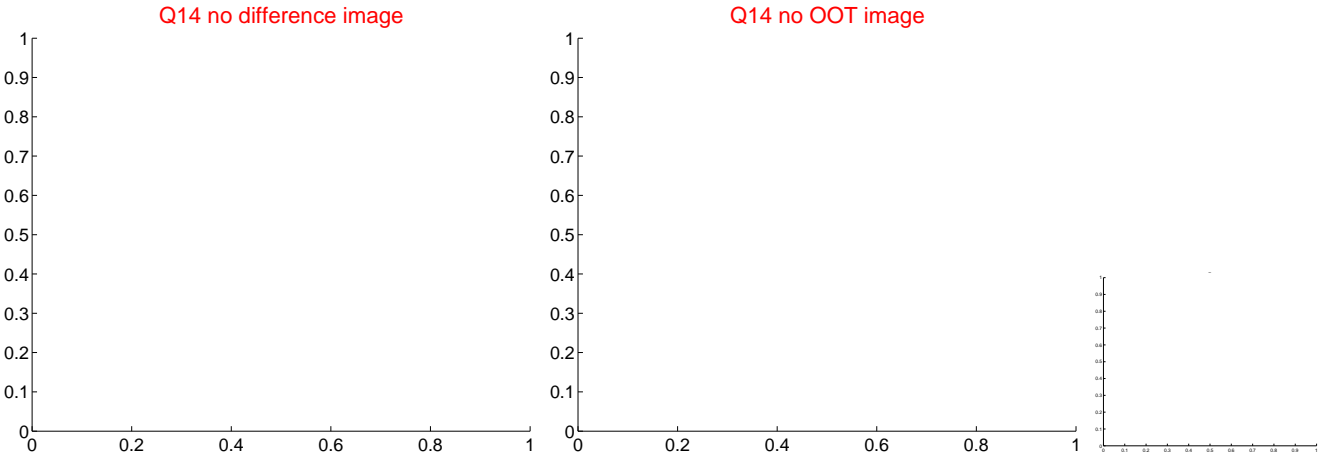
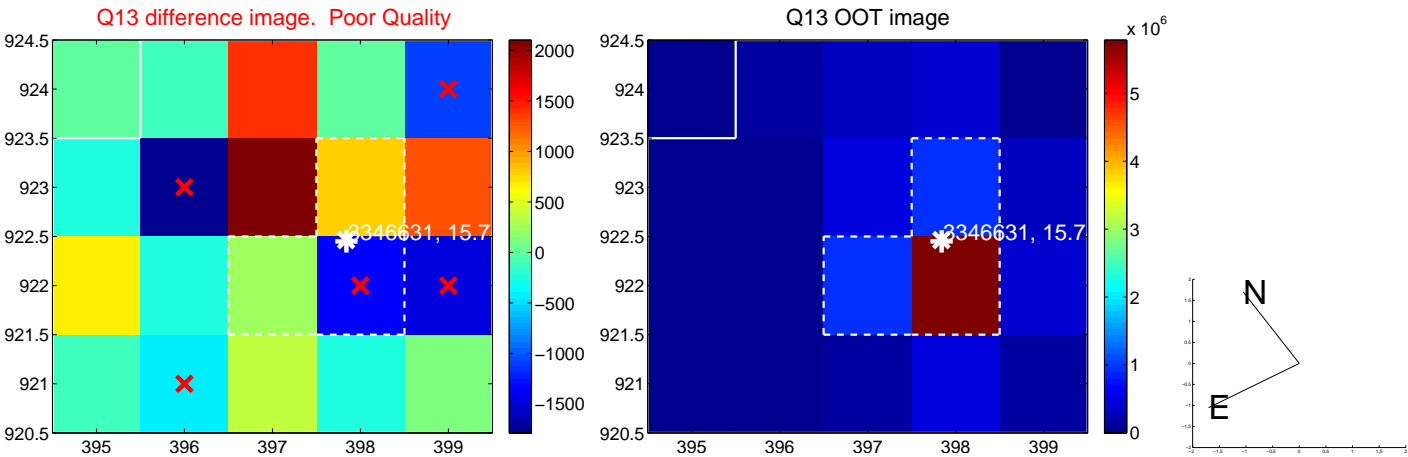
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



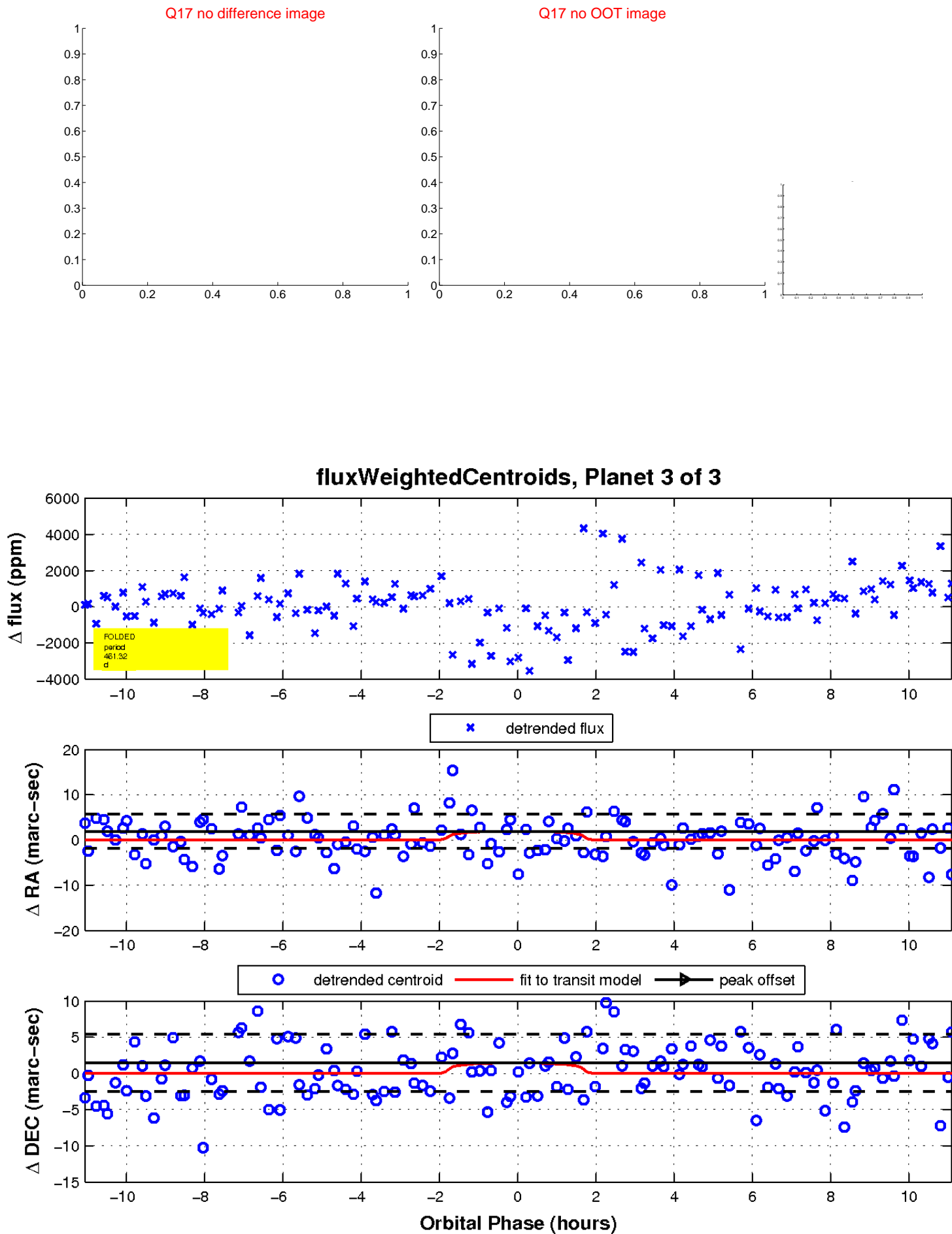
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

