

KIC 006525023

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})
006525023-01	OBS	No	559.400656	431.139160	2426.2	6.193	14.4	8.5	0.85	5712	5.24	0.45
006525023-02	OBS	No	366.192708	486.006257	1953.0	7.271	12.6	7.2	0.85	5712	3.73	0.79
006525023-03	OBS	No	556.118128	391.737685	1855.9	6.751	11.6	6.9	0.85	5712	3.69	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006525023-01	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—CENT_FEW_DIFFS
006525023-02	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
006525023-03	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

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

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

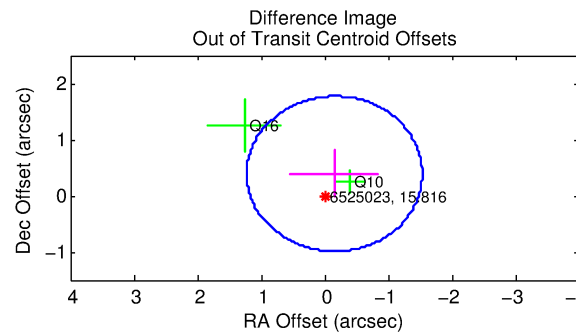
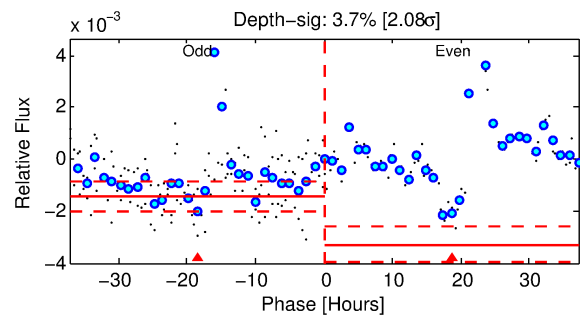
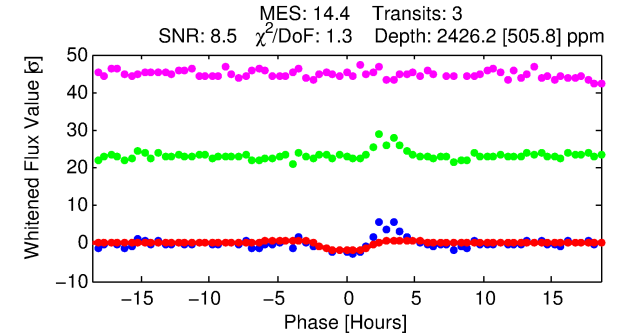
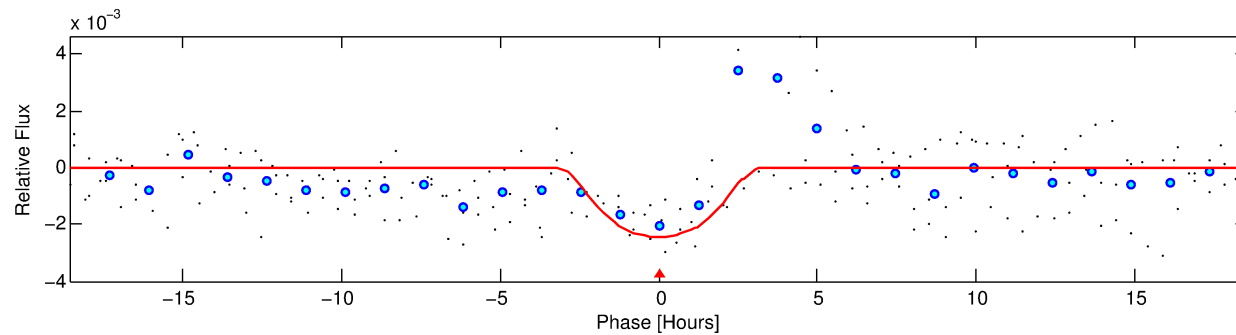
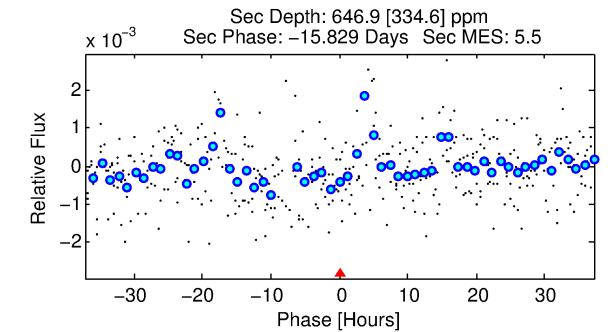
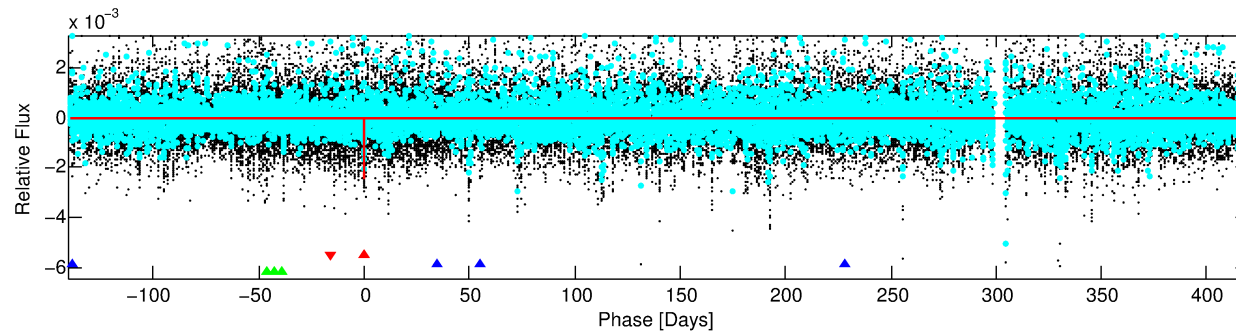
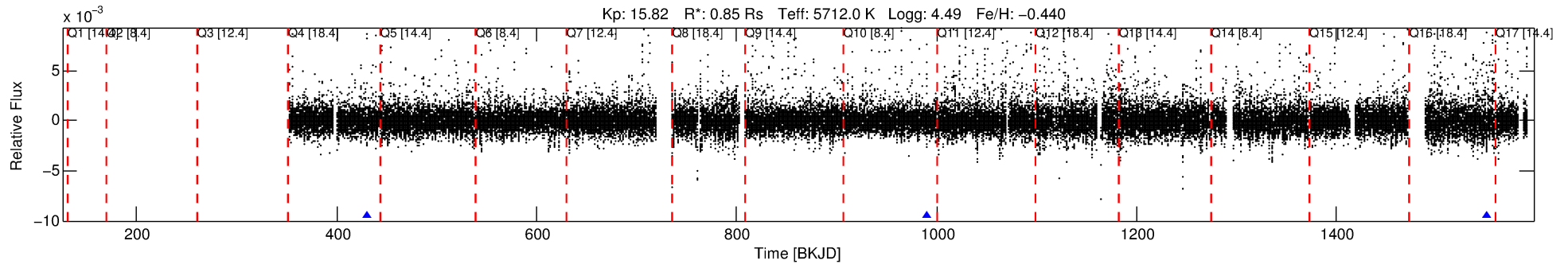
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006525023-01

No Significant Match Found

DV One-Page Summary

KIC: 6525023 Candidate: 1 of 3 Period: 559.401 d



DV Fit Results:

Period = 559.40066 [0.01261] d
Epoch = 431.1392 [0.0154] BKJD
Rp/R* = 0.0566 [0.0089]
a/R* = 332.28 [76.15]
b = 0.94 [0.04]
Seff = 0.45 [0.14]
Teq = 209 [17] K
Rp = 5.24 [1.53] Re
a = 1.2372 [0.2513] AU
Ag = 19838.80 [13320.51] [1.49 σ]
Teffp = 3830 [594] K [6.10 σ]

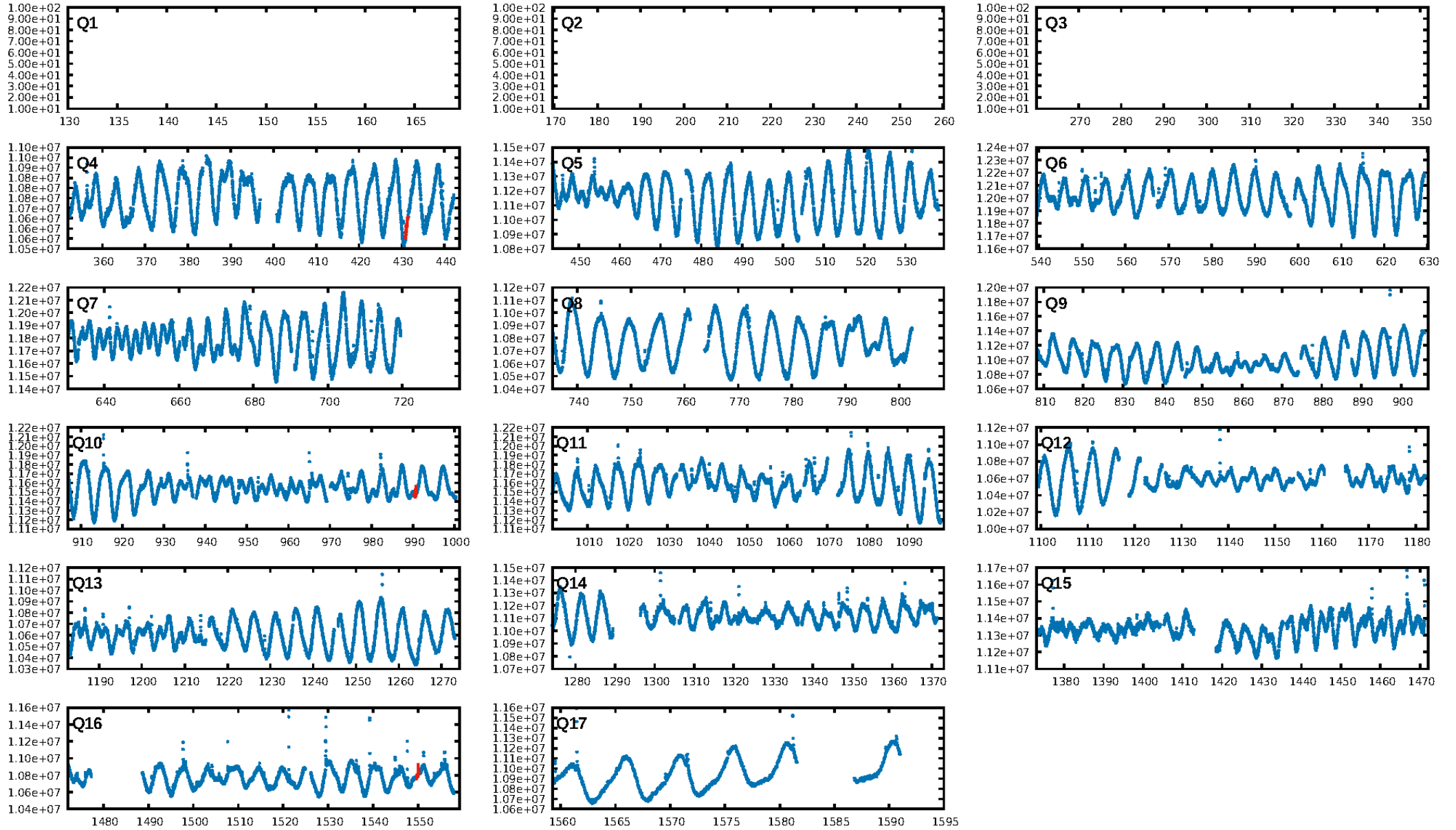
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.60 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 54.3%
Bootstrap-pfa: 5.62e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.968
Centroid-sig: 11.9%
Centroid-so: 1.268 arcsec [1.41 σ]
OotOffset-rm: 0.420 arcsec [0.91 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 0.530 arcsec [1.18 σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

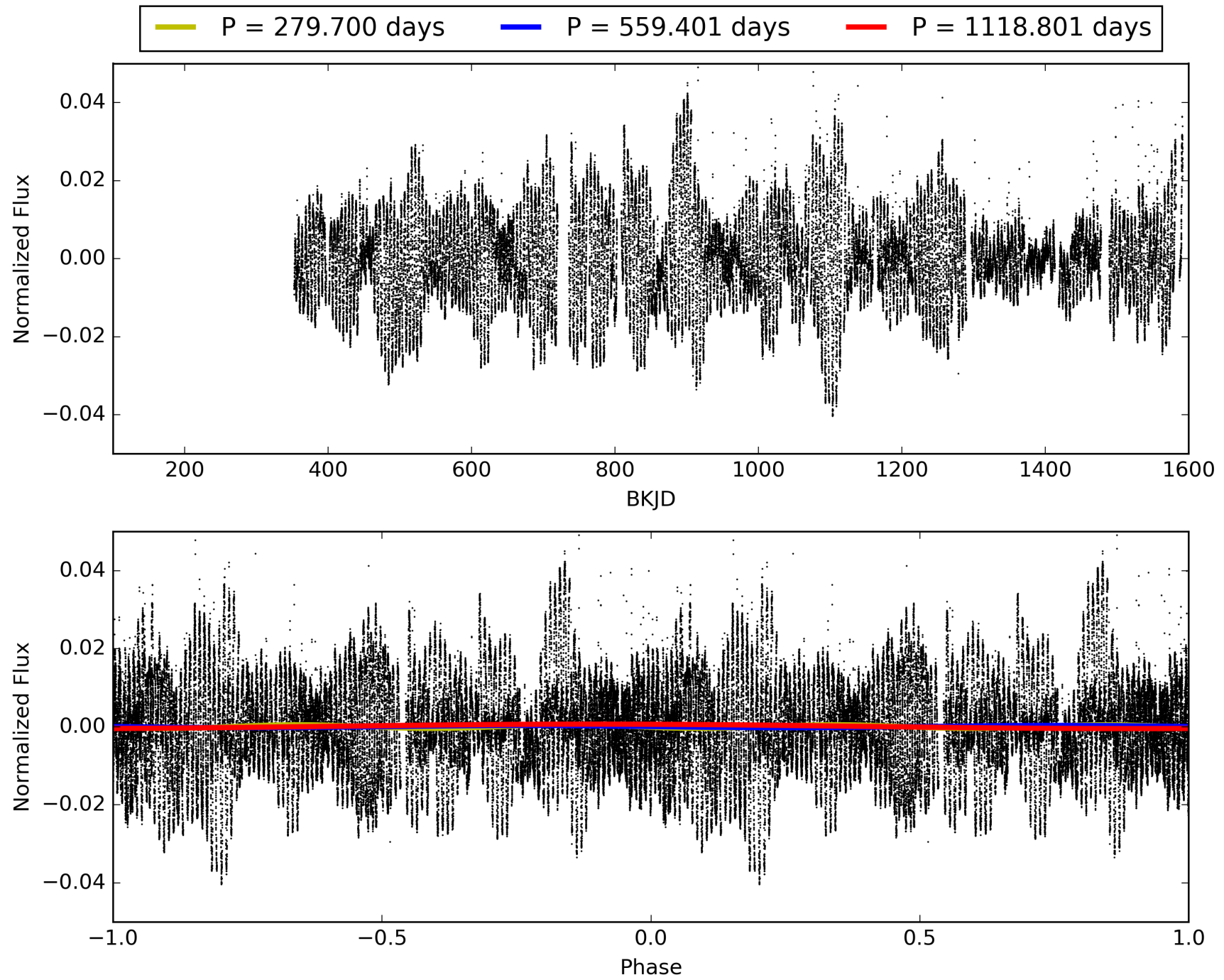
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 22:25:41 Z

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

TCE 006525023-01, PDC Light Curves

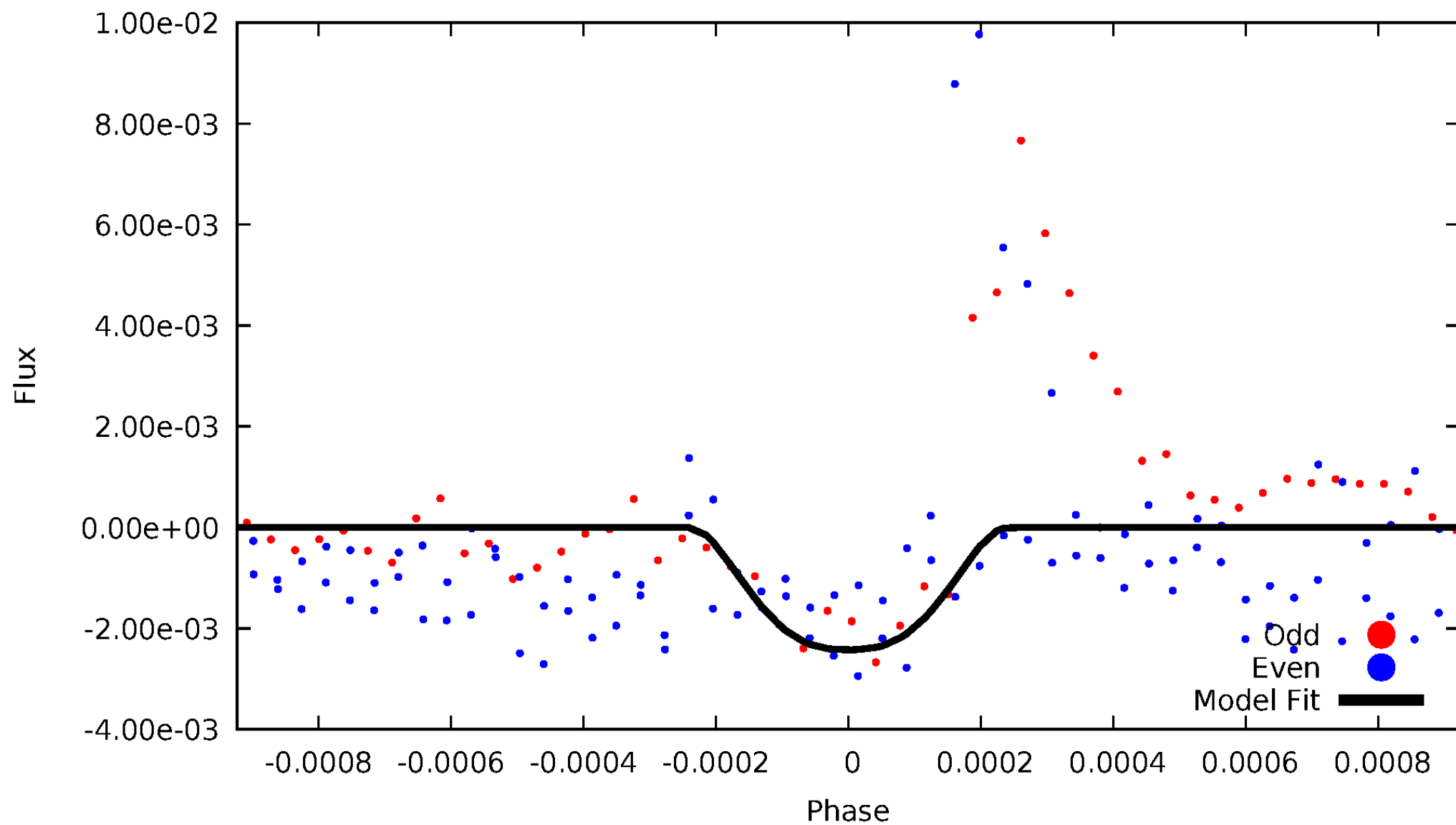


TCE 006525023-01



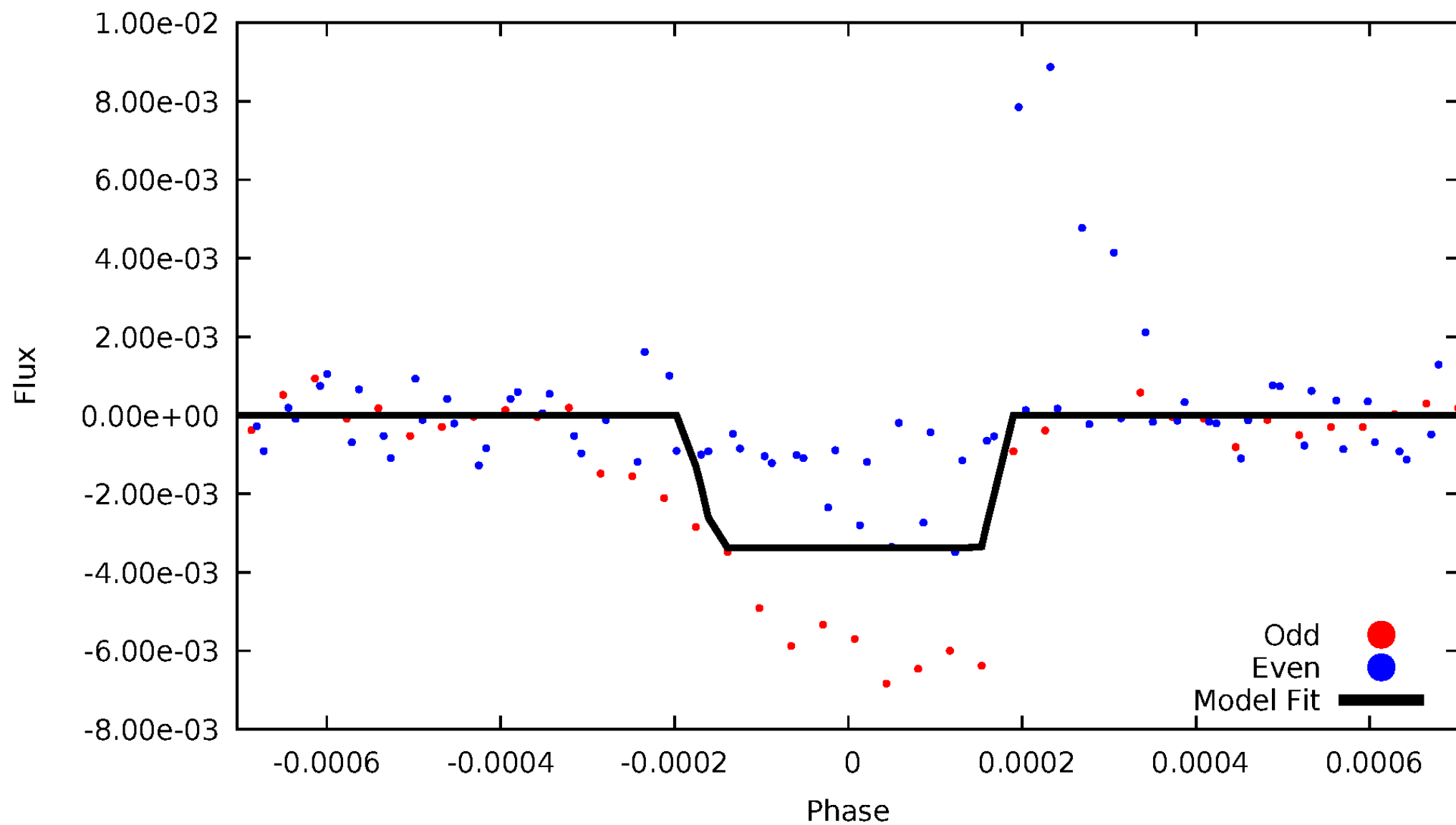
DV Odd/Even

TCE 006525023-01



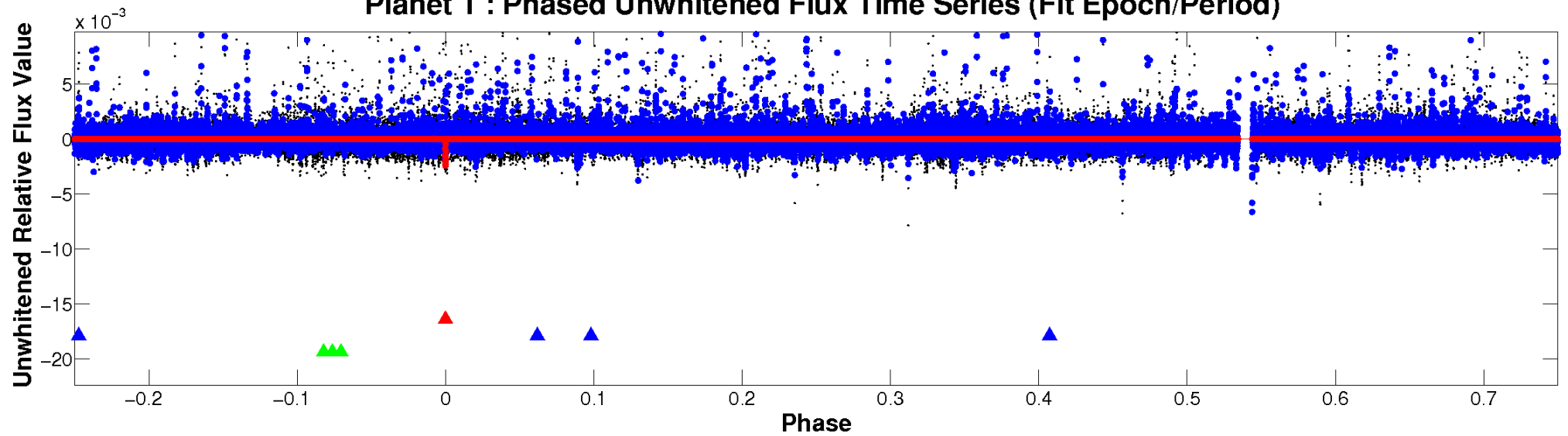
ALT Odd/Even

TCE 006525023-01

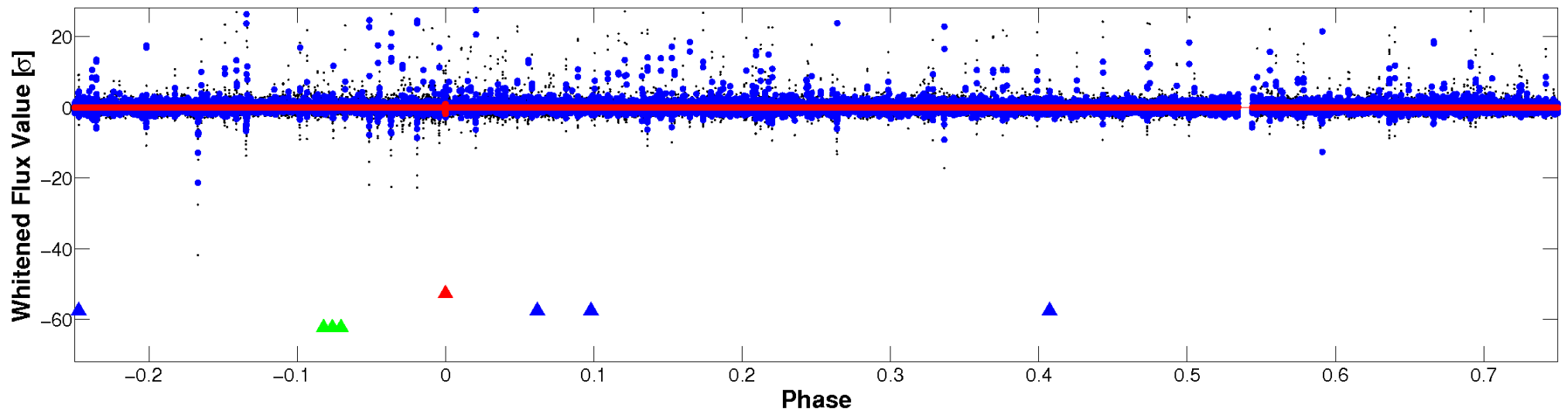


Non-Whitened Vs. Whitened Light Curve

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

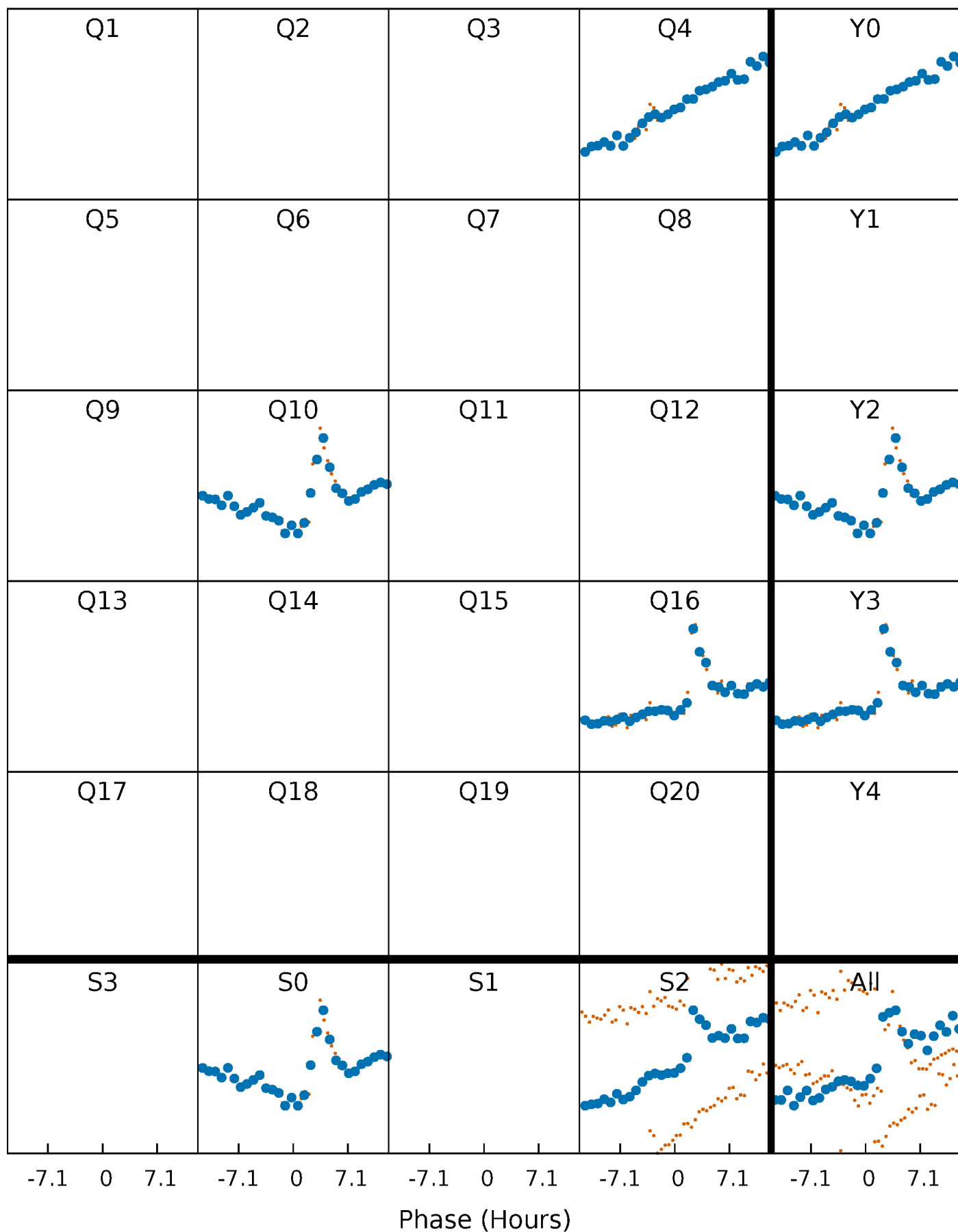


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



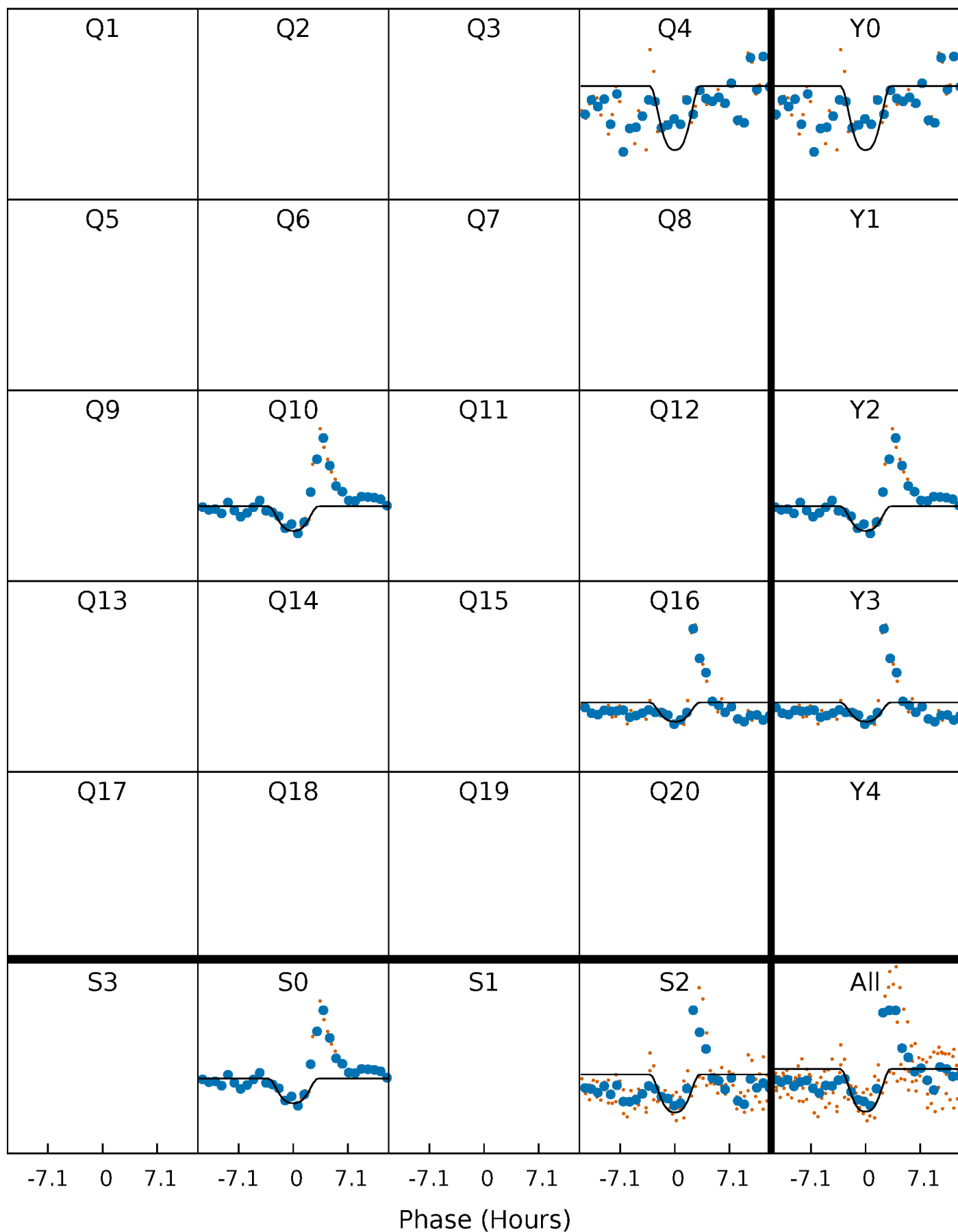
PDC Quarter-Phased Transit Curves

TCE 006525023-01 P=559.400656 Days $T_0=431.139160$ (BKJD)



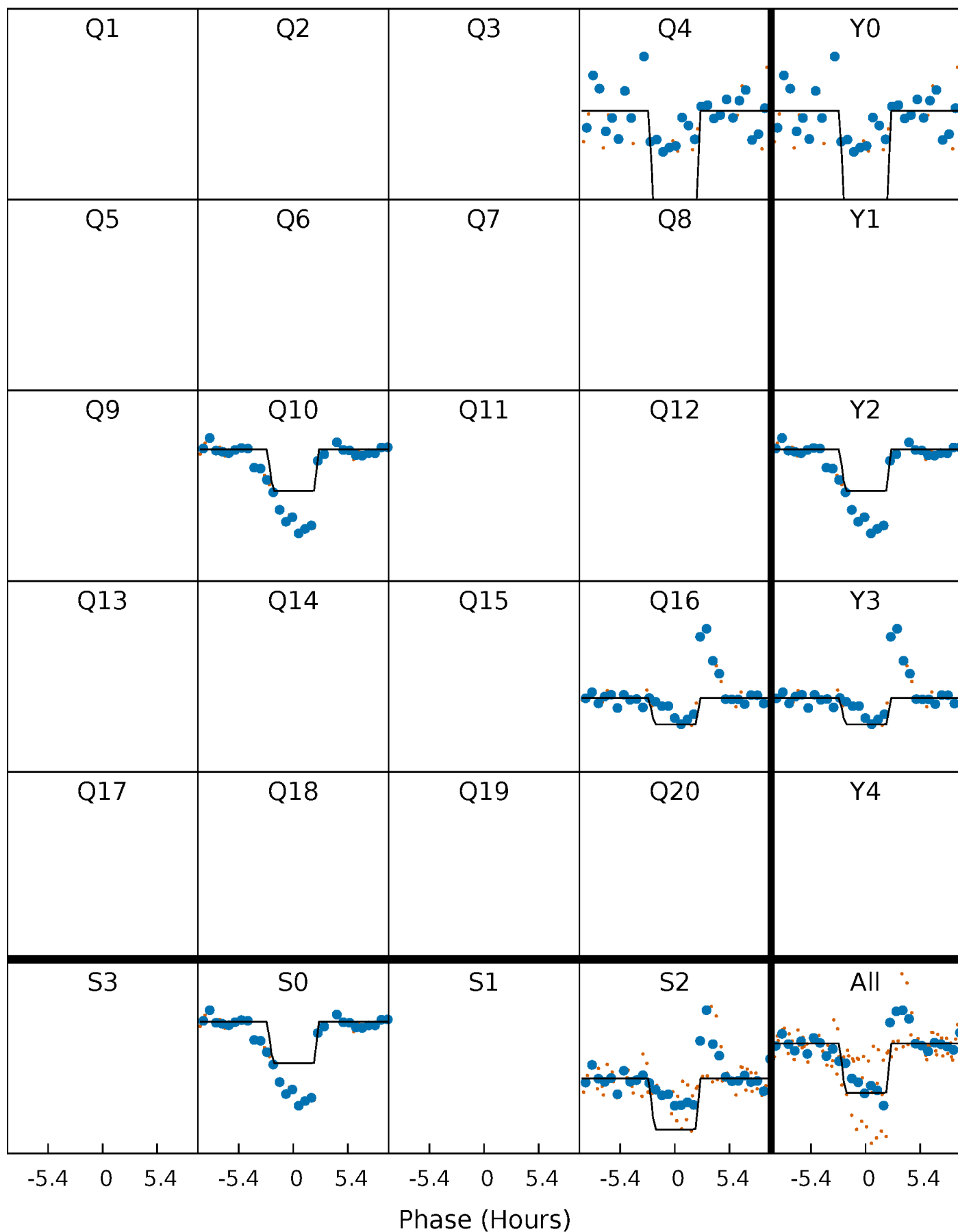
DV Quarter-Phased Transit Curves

TCE 006525023-01 P=559.400656 Days $T_0=431.139160$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

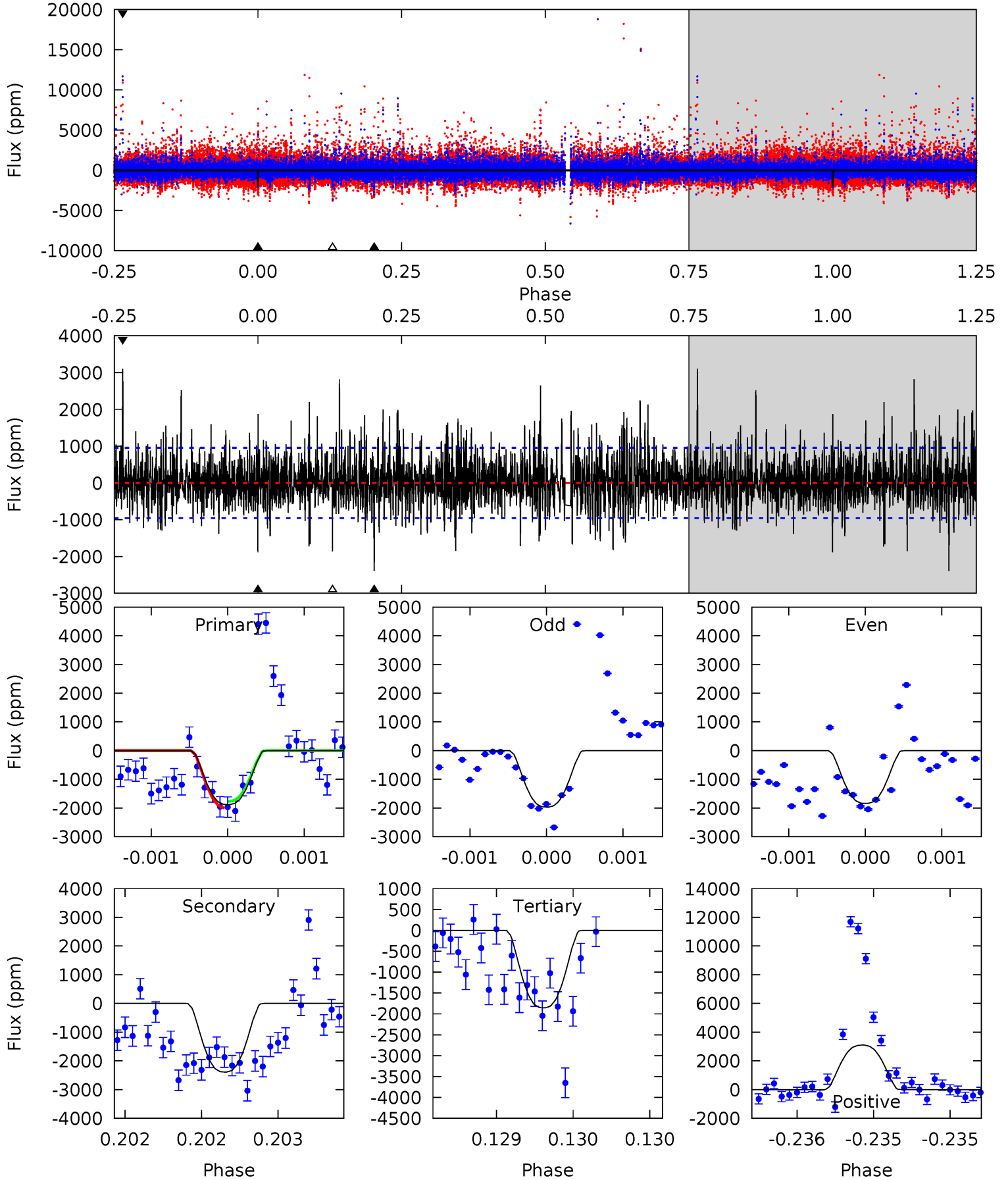
TCE 006525023-01 P=559.382327 Days $T_0=431.156231$ (BKJD)



DV Model-Shift Uniqueness Test

006525023-01, P = 559.400656 Days, E = 431.139160 Days

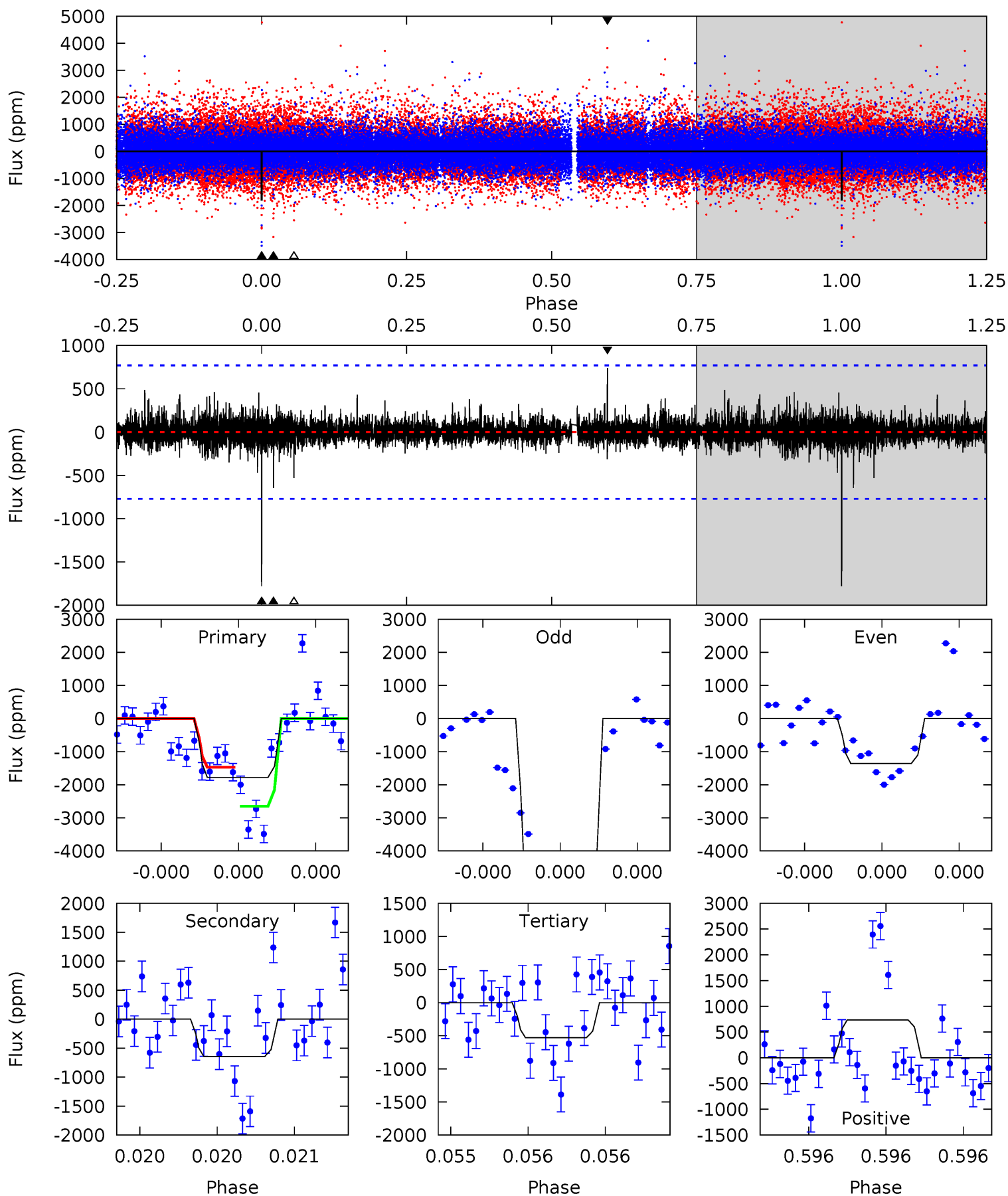
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	13.9	10.8	18.0	5.57	3.48	2.99	0.17	-7.08	3.12	-4.13	0.25	1.08	0.56	0.68



Alt Model-Shift Uniqueness Test

006525023-01, P = 559.382327 Days, E = 431.156231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	4.73	3.88	5.40	5.64	3.58	0.60	9.15	7.63	0.85	-0.67	17.5	1.41	0.29	4.41



Stellar Parameters For KIC 006525023

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5712^{+190}_{-190}	$4.487^{+0.104}_{-0.156}$	$-0.440^{+0.300}_{-0.300}$	$0.849^{+0.209}_{-0.112}$	$0.808^{+0.105}_{-0.061}$	$1.860^{+0.724}_{-0.857}$
	+3%/-3%	+2%/-3%	+68%/-68%	+25%/-13%	+13%/-8%	+39%/-46%
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 006525023-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2392 ± 172	$5.34^{+1.17}_{-0.94}$	294^{+19}_{-16}	5339^{+486}_{-398}	70542^{+34269}_{-22494}
Alt.	-646 ± 137	$5.48^{+1.08}_{-0.99}$	294^{+18}_{-16}	4070^{+329}_{-270}	18136^{+9659}_{-5989}

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

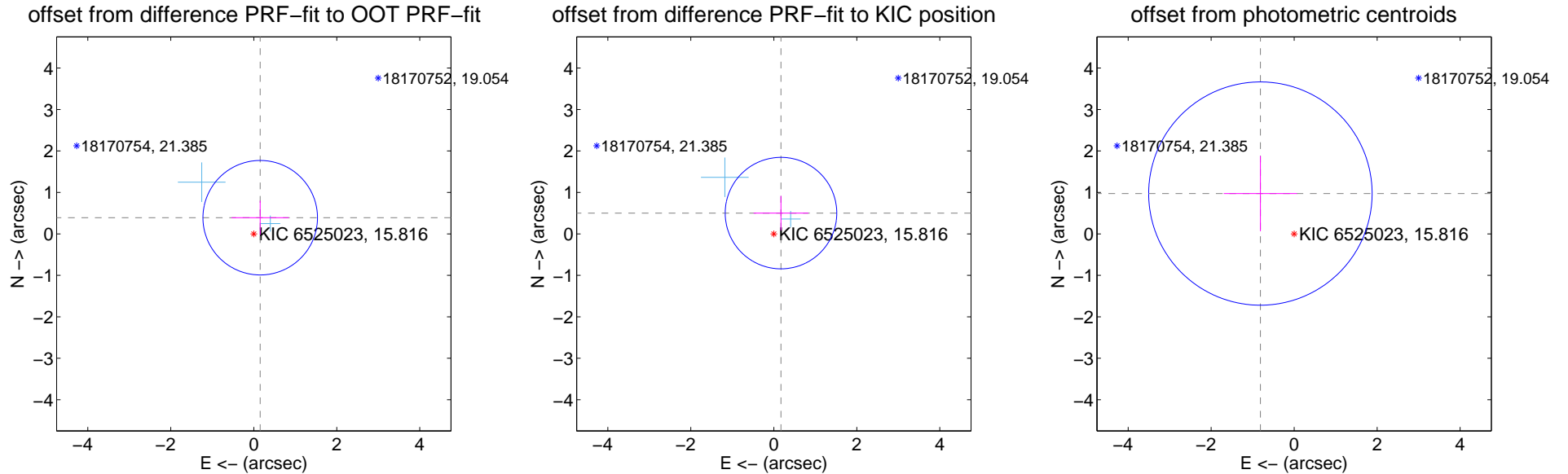
DV Centroid Data

Supplemental centroid analysis for 006525023-01. Kepler magnitude: 15.82. Transit SNR 8.46

There are 2 quarters with good PRF difference image offsets

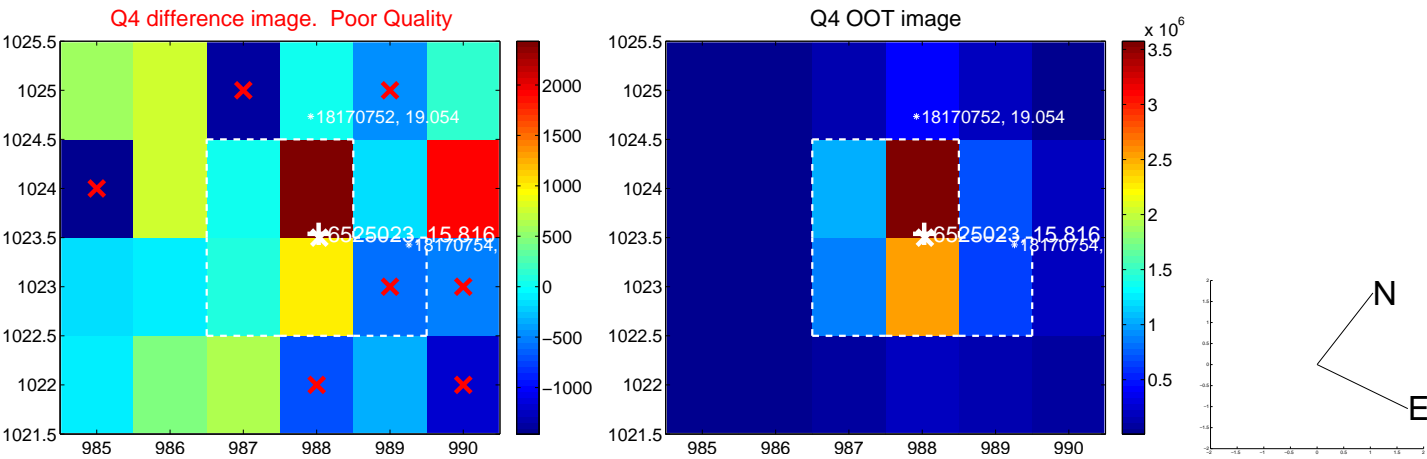
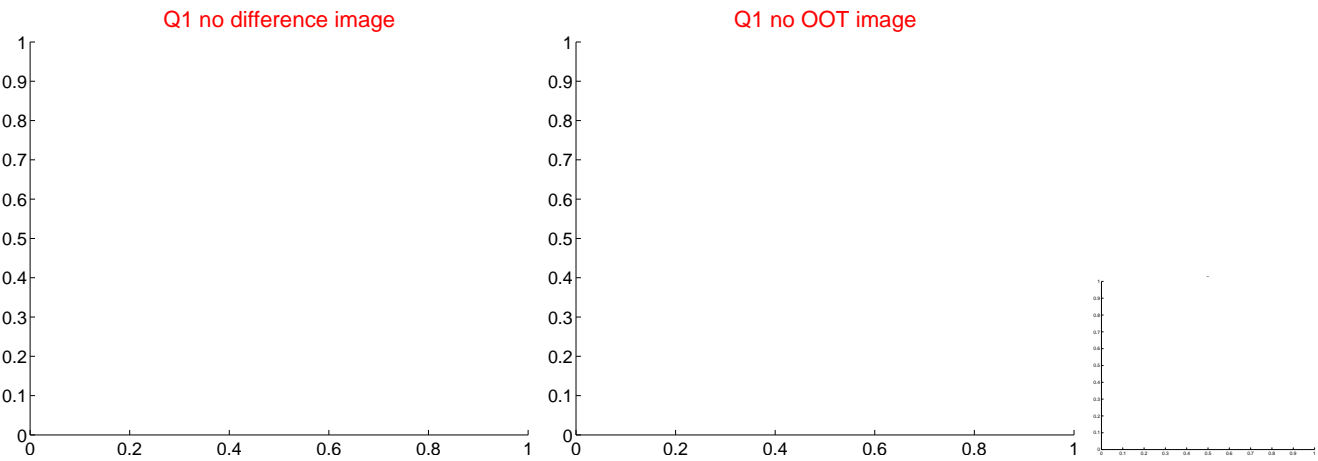
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.420 ± 0.460	0.91	-0.155 ± 0.689	0.390 ± 0.413
PRF-fit source offset from KIC position	0.530 ± 0.448	1.18	-0.173 ± 0.661	0.501 ± 0.416
photometric centroid source offset	1.27 ± 0.90	1.41	0.81 ± 0.88	0.97 ± 0.91



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.

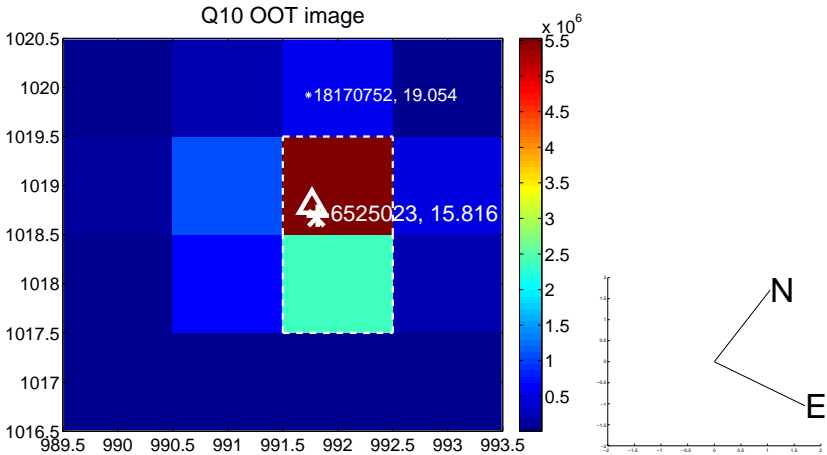
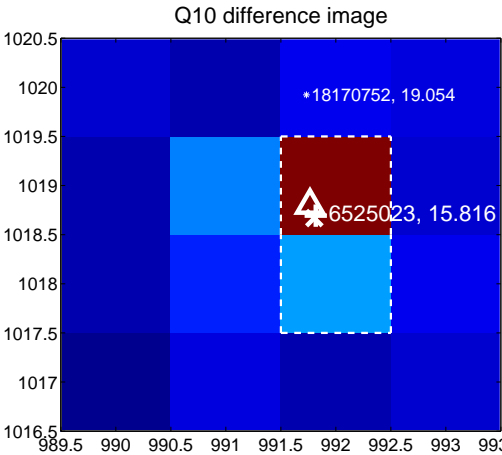


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

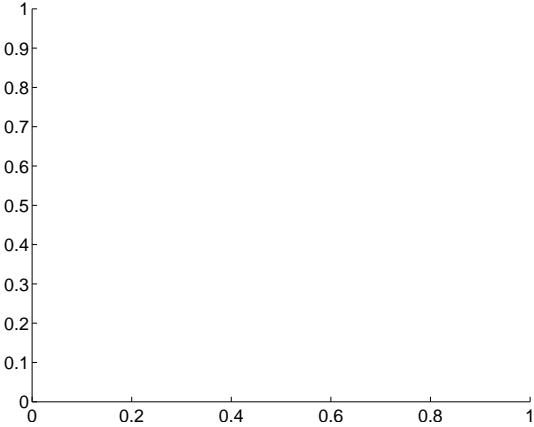
Q9 no difference image



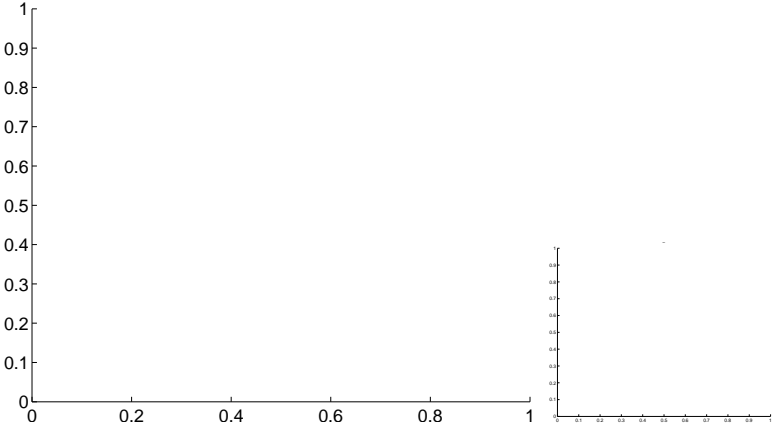
Q9 no OOT image



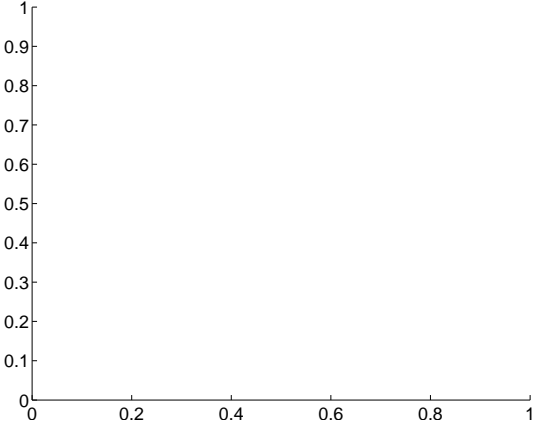
Q11 no difference image



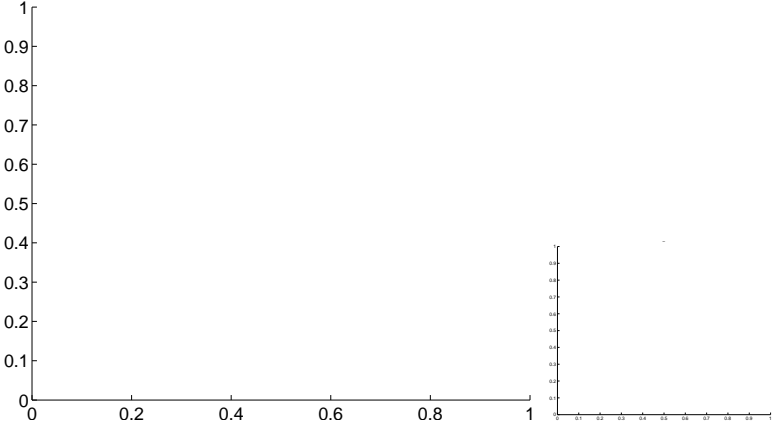
Q11 no OOT image



Q12 no difference image

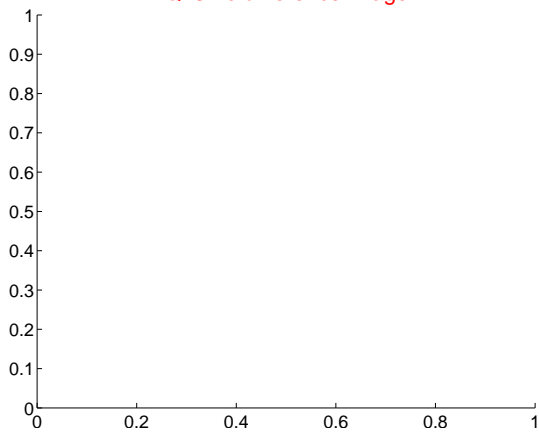


Q12 no OOT image

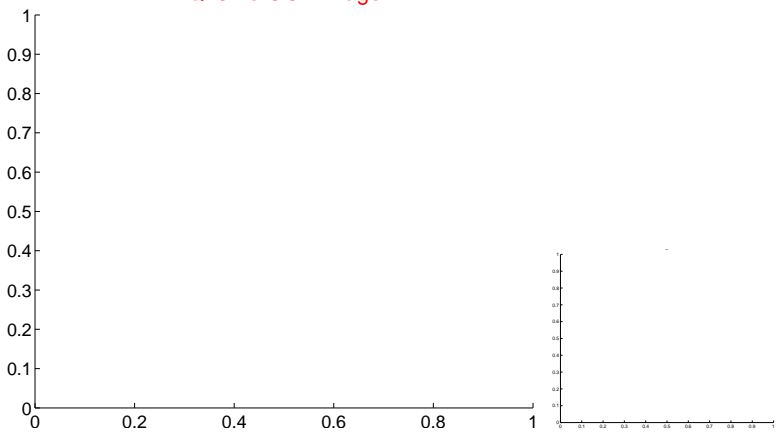


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

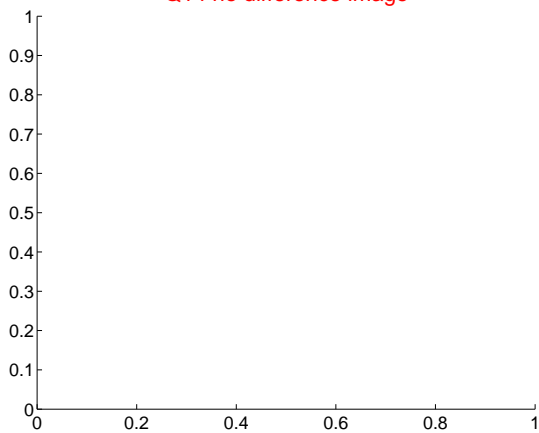
Q13 no difference image



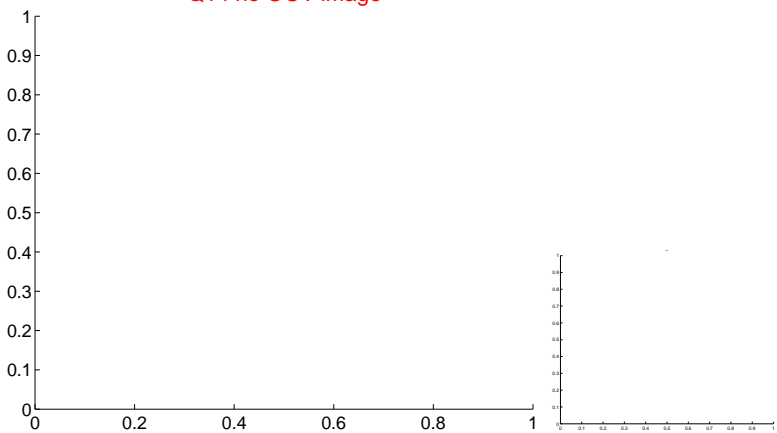
Q13 no OOT image



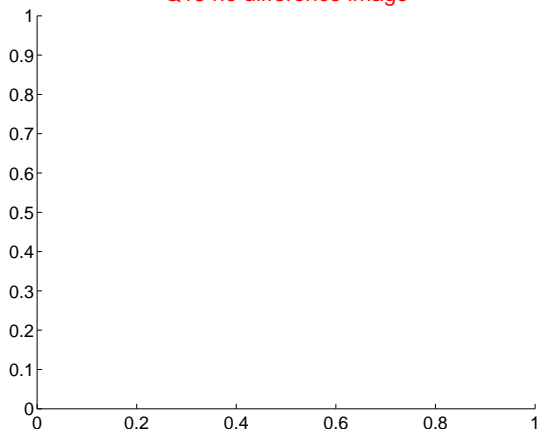
Q14 no difference image



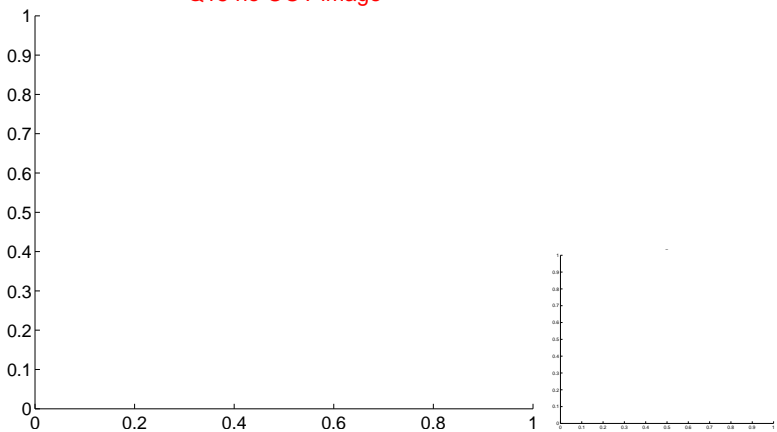
Q14 no OOT image



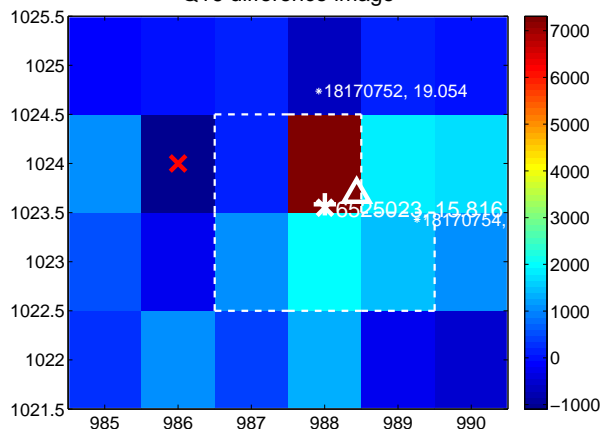
Q15 no difference image



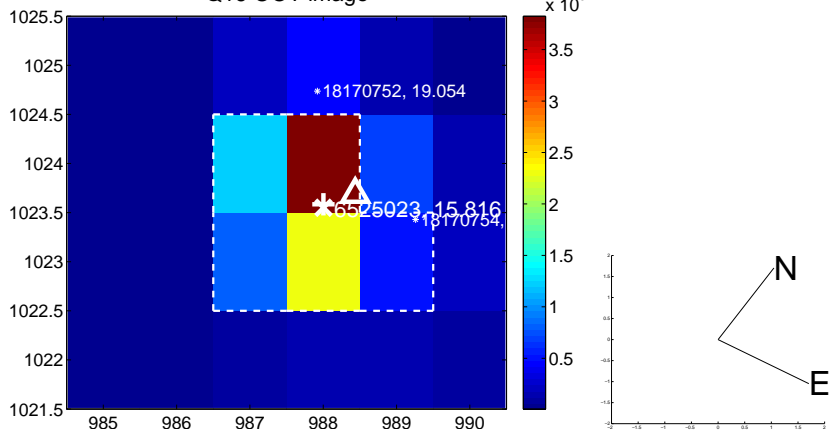
Q15 no OOT image



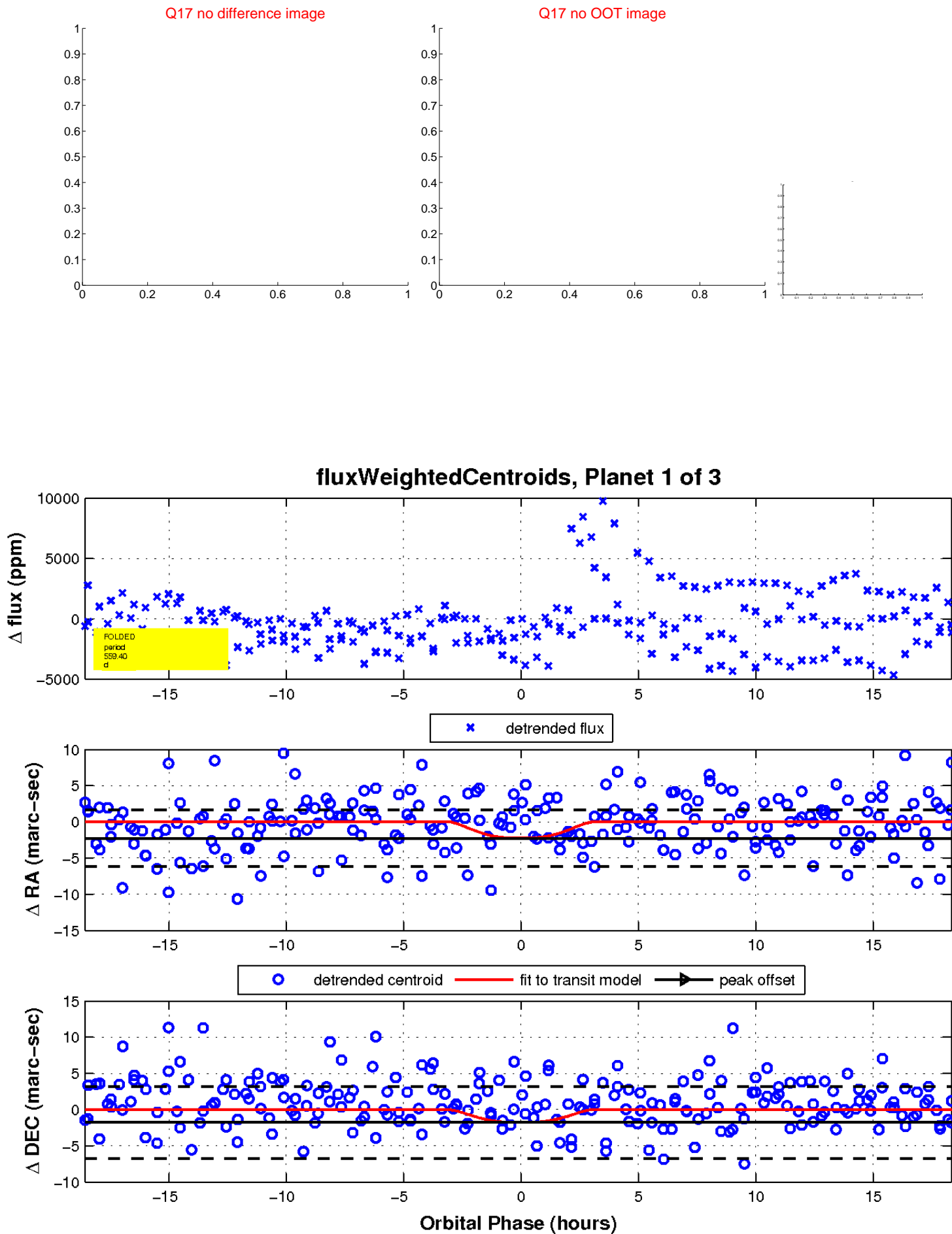
Q16 difference image



Q16 OOT image

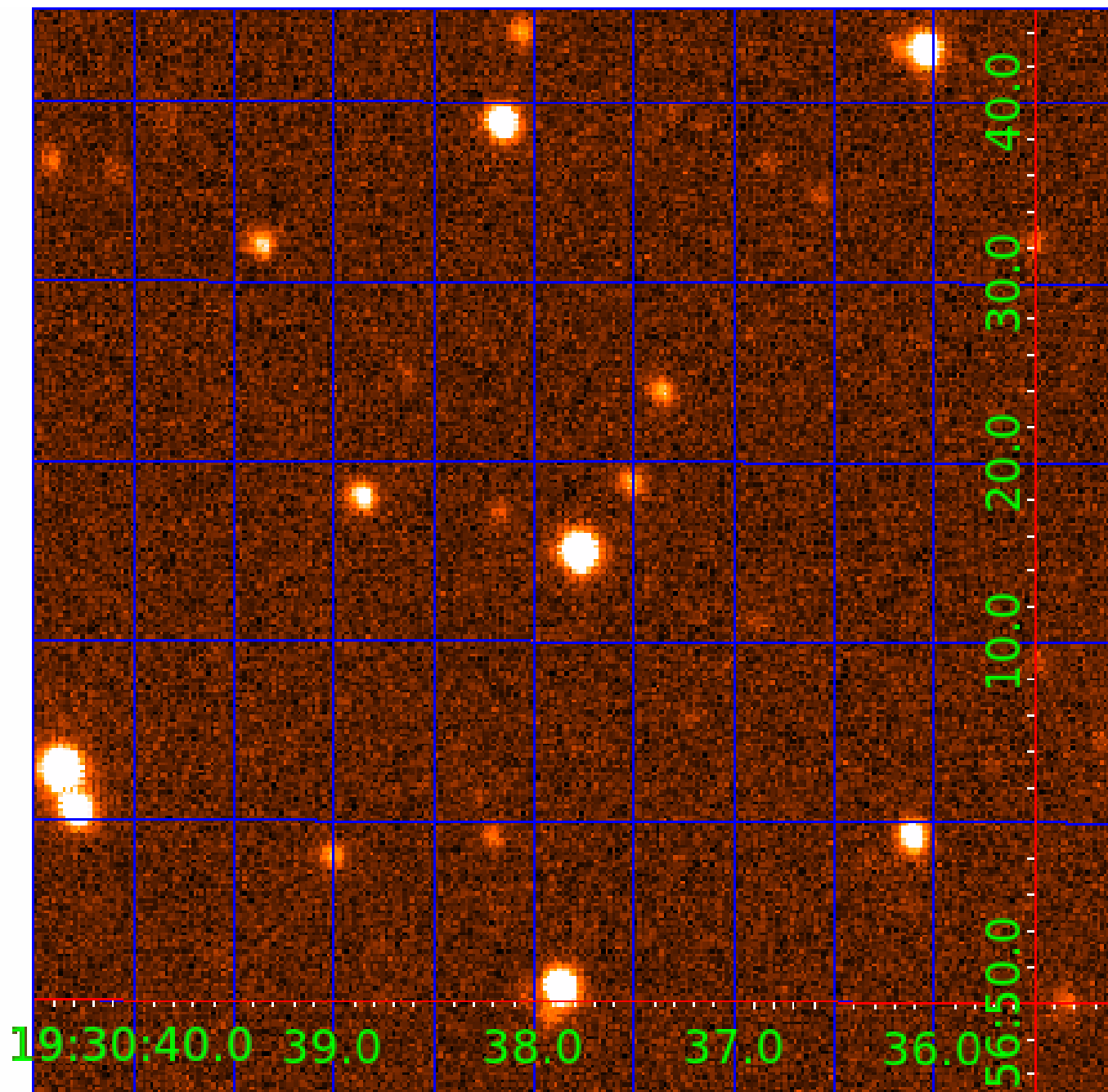


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006525023

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})
006525023-01	OBS	No	559.400656	431.139160	2426.2	6.193	14.4	8.5	0.85	5712	5.24	0.45
006525023-02	OBS	No	366.192708	486.006257	1953.0	7.271	12.6	7.2	0.85	5712	3.73	0.79
006525023-03	OBS	No	556.118128	391.737685	1855.9	6.751	11.6	6.9	0.85	5712	3.69	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006525023-01	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—CENT_FEW_DIFFS
006525023-02	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
006525023-03	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

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

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

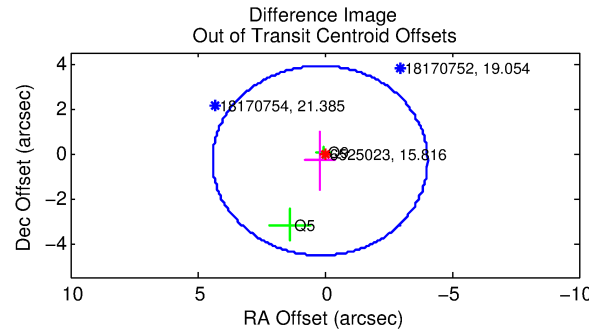
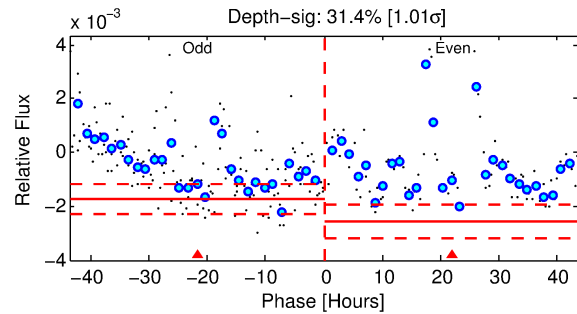
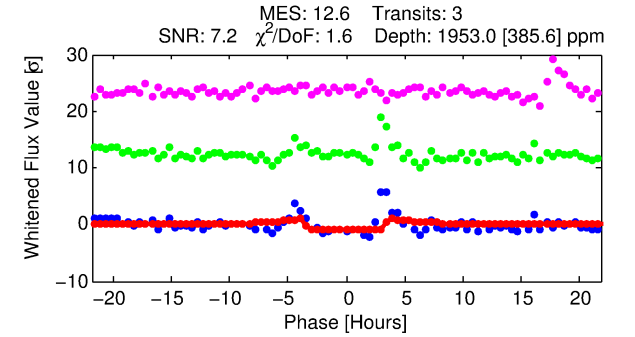
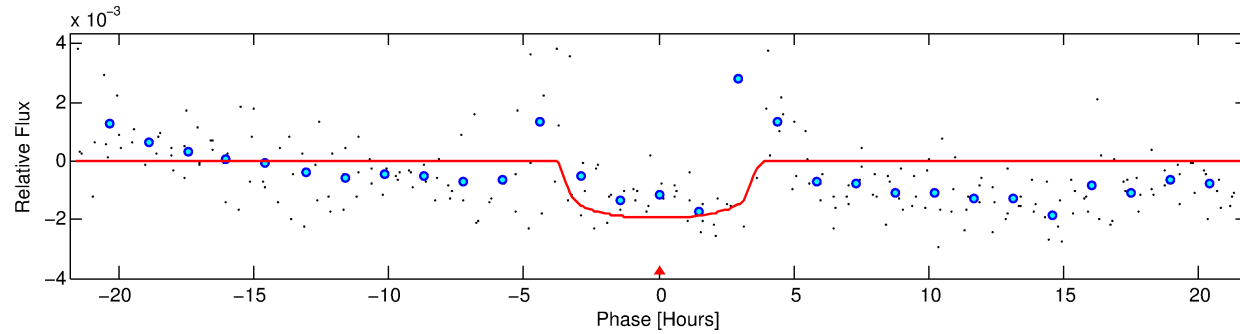
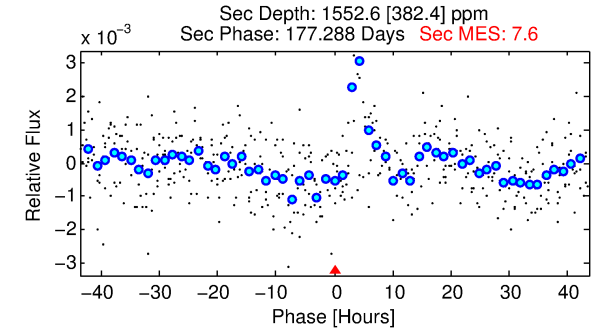
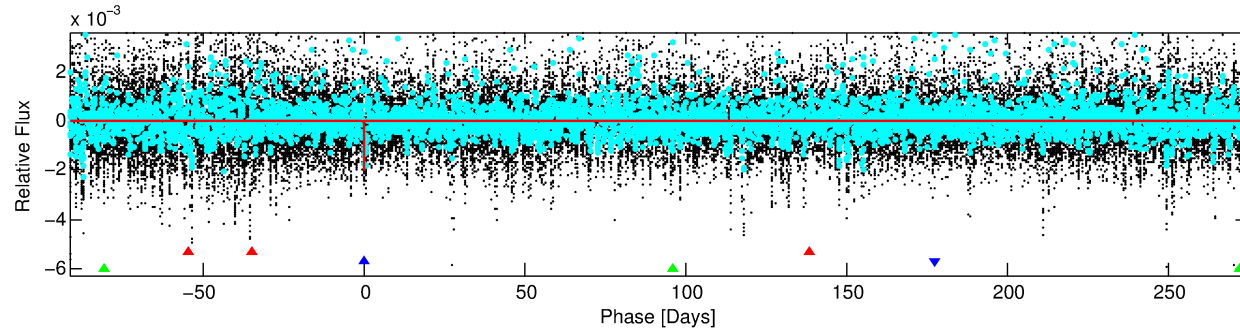
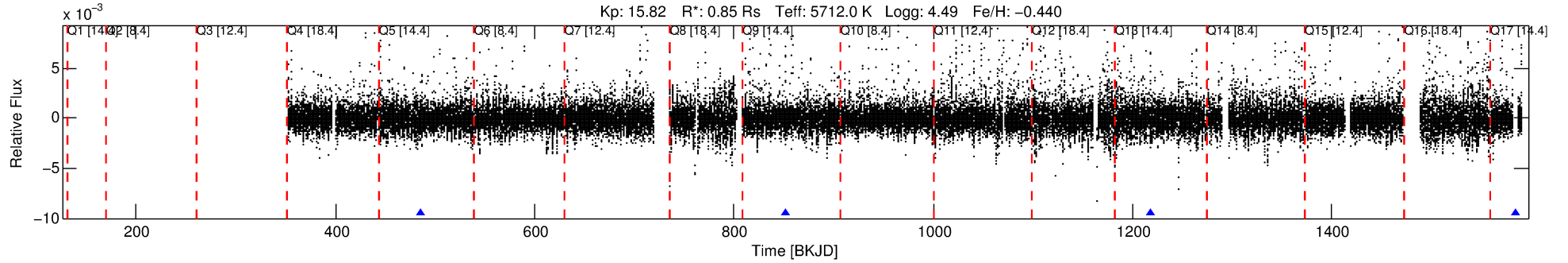
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006525023-02

No Significant Match Found

DV One-Page Summary

KIC: 6525023 Candidate: 2 of 3 Period: 366.193 d



DV Fit Results:

Period = 366.19271 [0.00947] d
Epoch = 486.0063 [0.0144] BKJD
Rp/R* = 0.0403 [0.0523]
a/R* = 398.61 [2356.19]
b = 0.09 [63.27]
Seff = 0.79 [0.25]
Teq = 240 [19] K
Rp = 3.73 [4.94] Re
a = 0.9328 [0.1895] AU
Ag = 53391.00 [140263.73] [0.38 σ]
Teffp = 5650 [3693] K [1.46 σ]

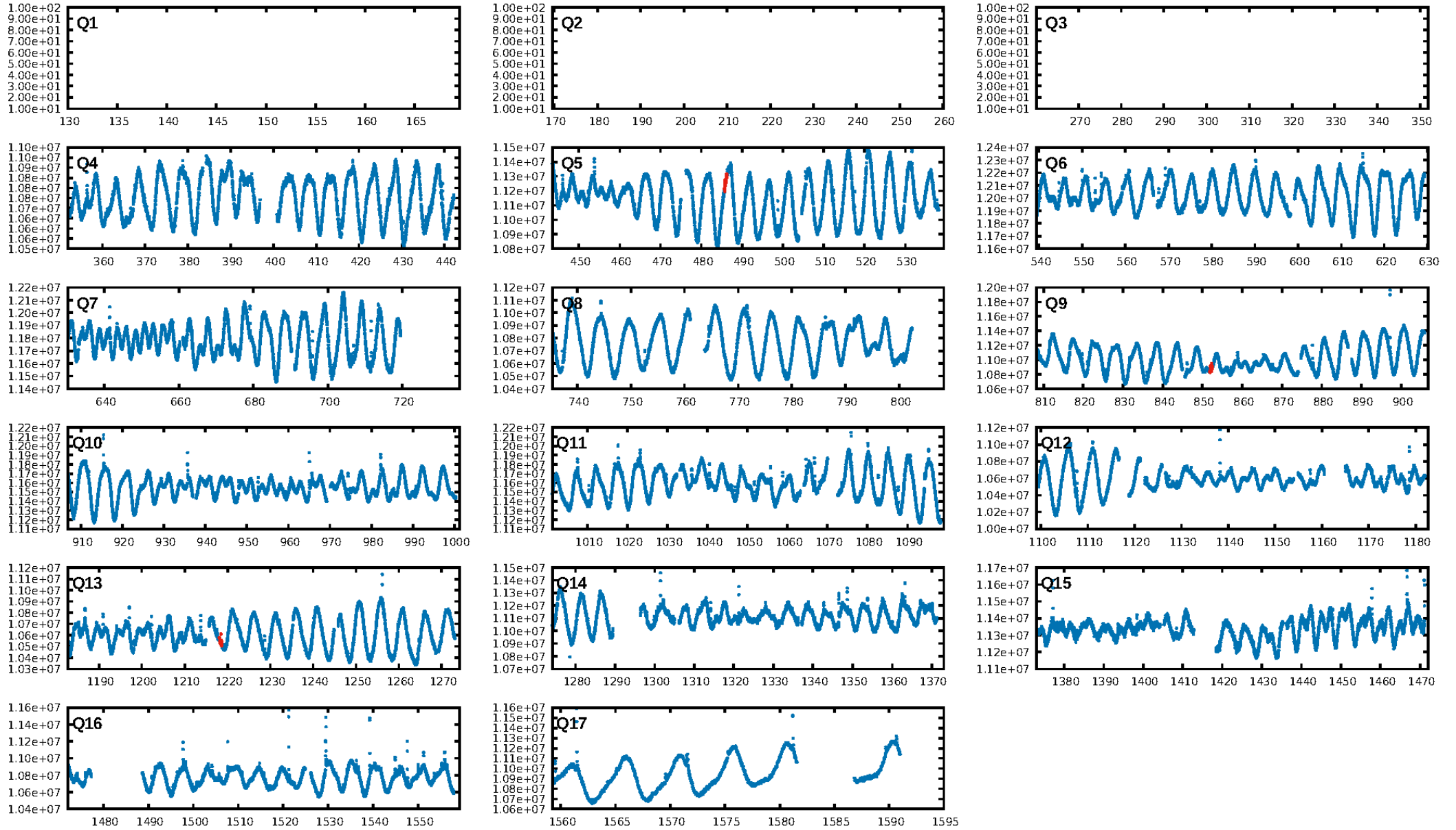
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [459.40 σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 94.7%
Bootstrap-pfa: 9.79e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.588
Centroid-sig: 53.1%
Centroid-so: 0.479 arcsec [0.40 σ]
OotOffset-rm: 0.366 arcsec [0.26 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 0.438 arcsec [0.42 σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

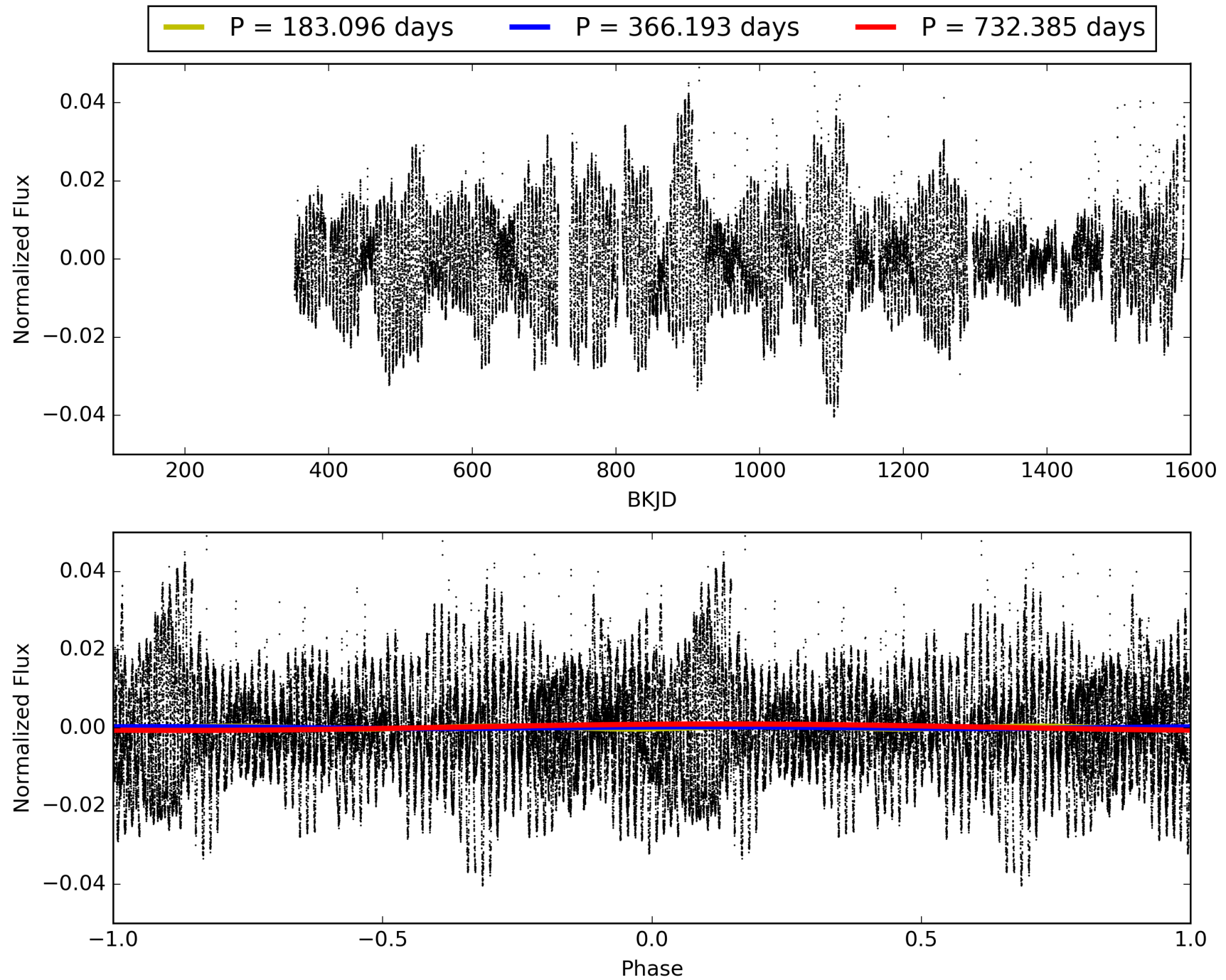
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 22:25:51 Z

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

TCE 006525023-02, PDC Light Curves

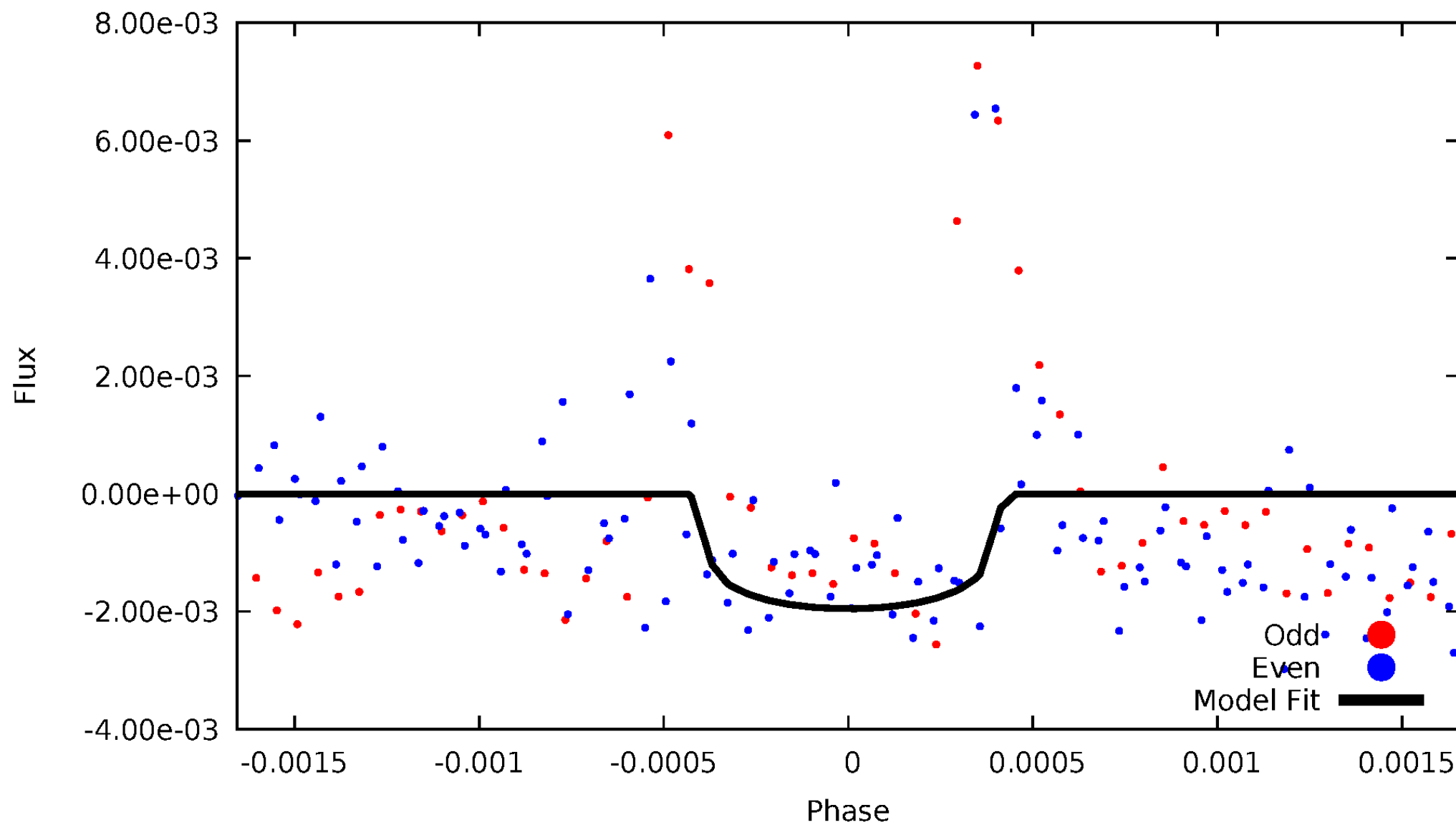


TCE 006525023-02



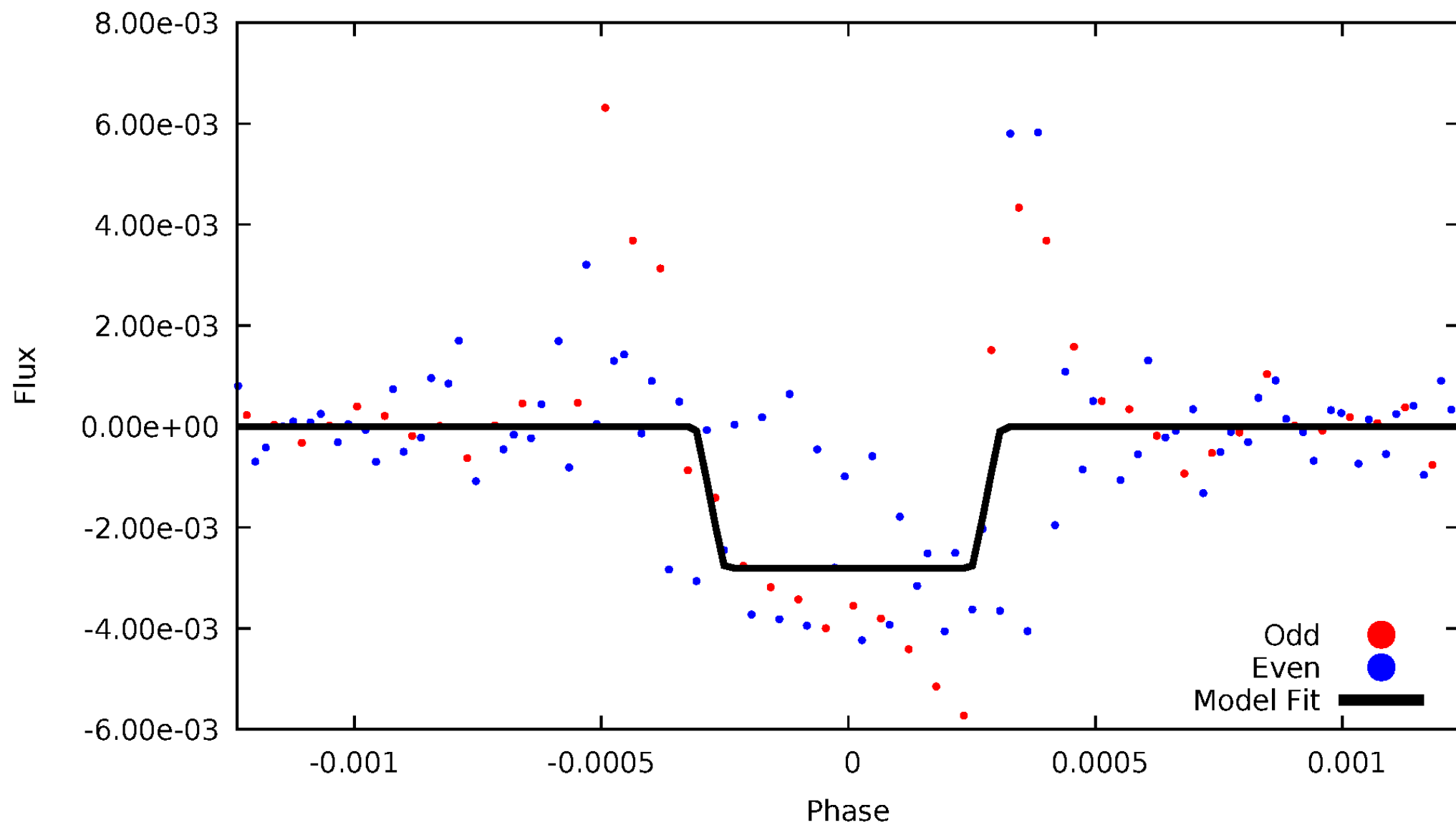
DV Odd/Even

TCE 006525023-02



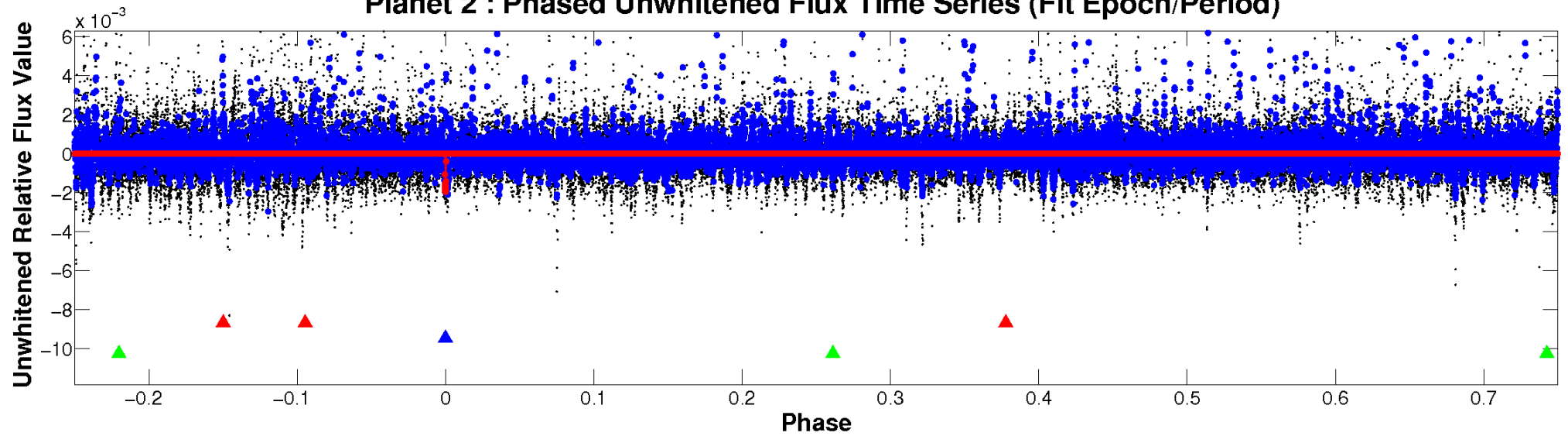
ALT Odd/Even

TCE 006525023-02

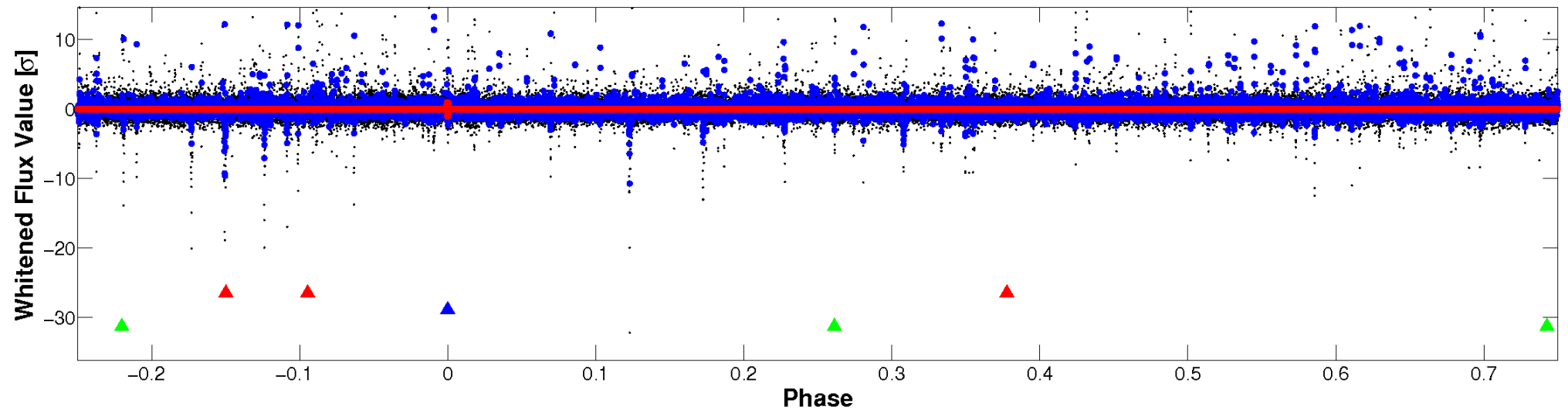


Non-Whitened Vs. Whitened Light Curve

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

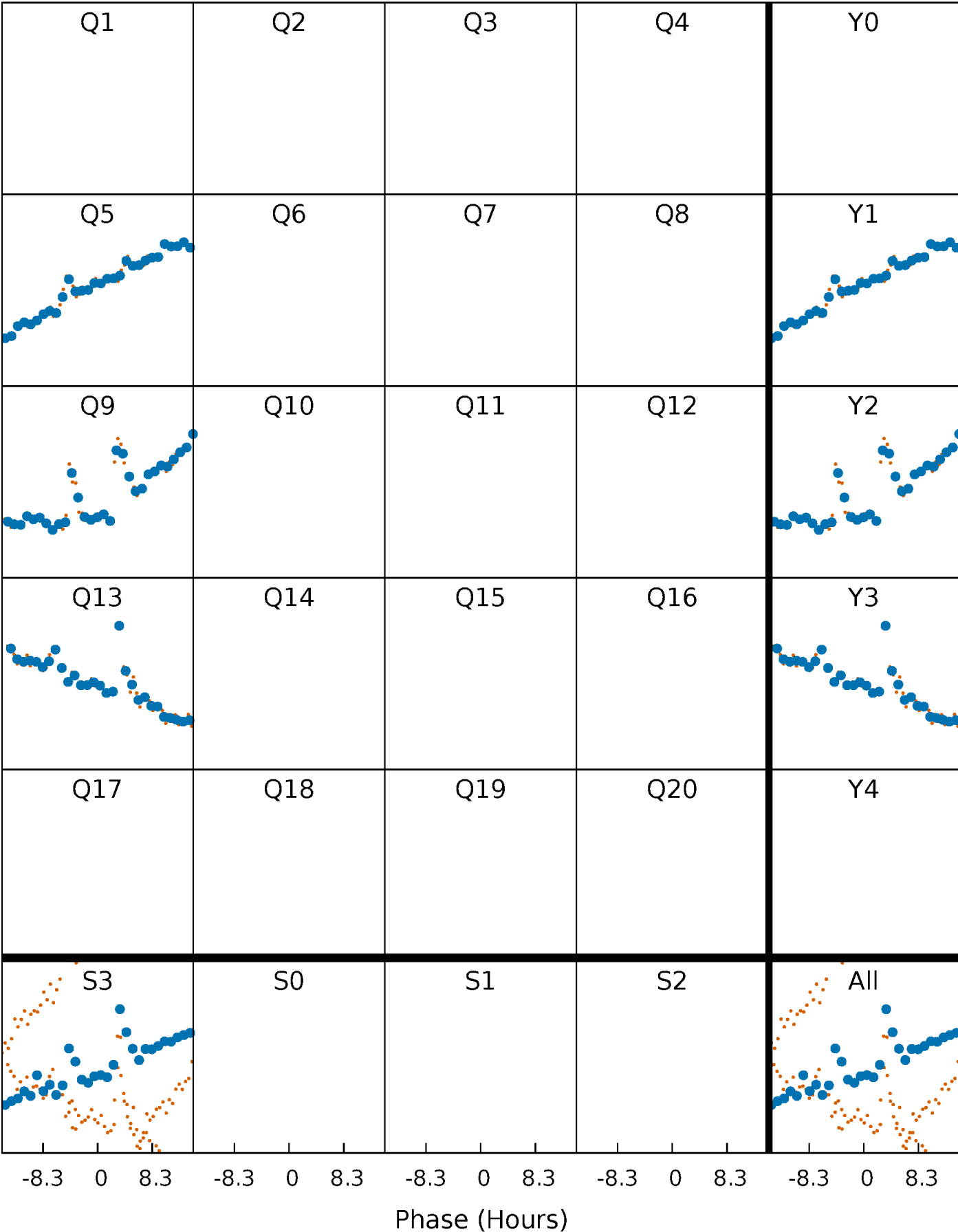


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



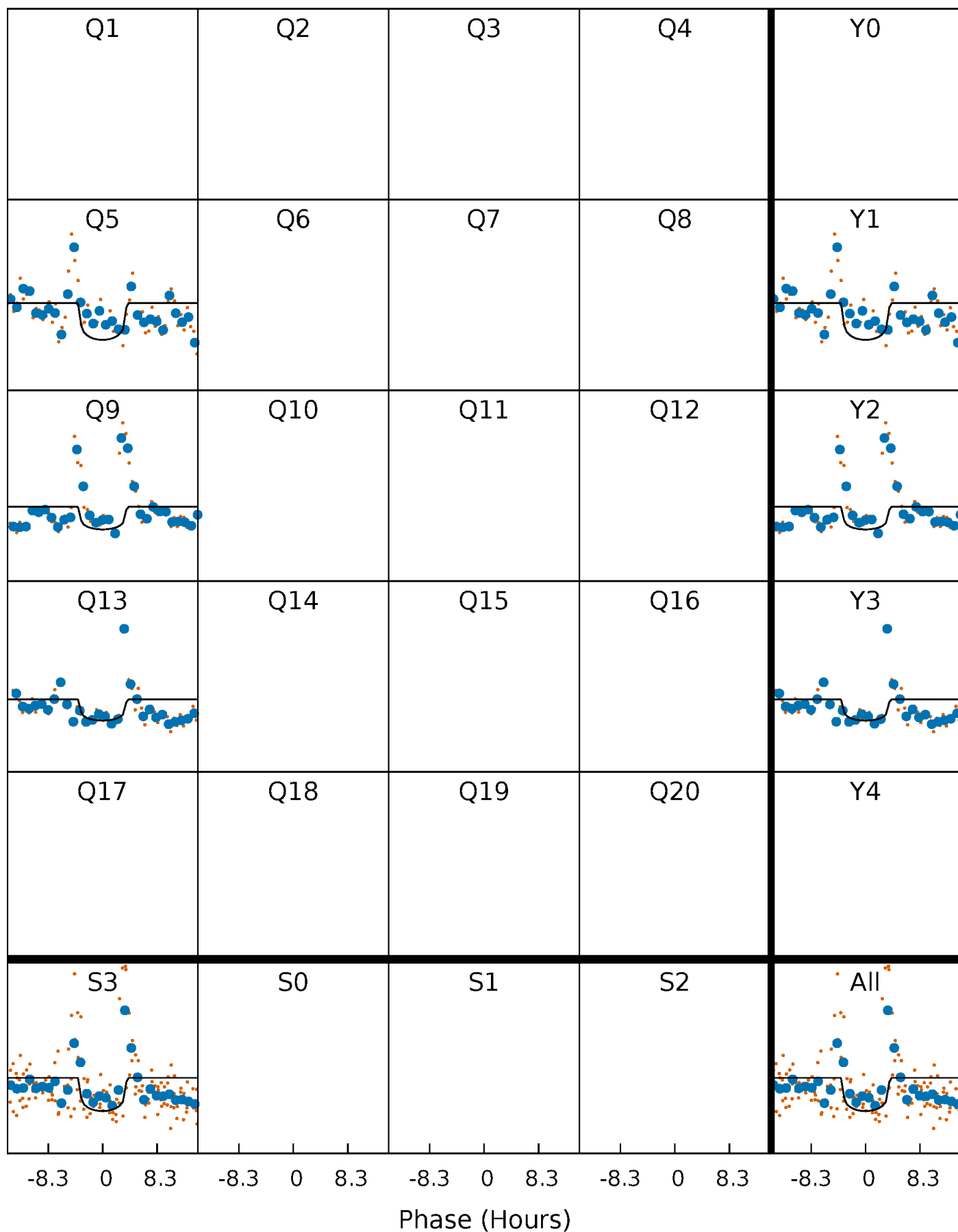
PDC Quarter-Phased Transit Curves

TCE 006525023-02 P=366.192708 Days T₀=486.006257 (BKJD)



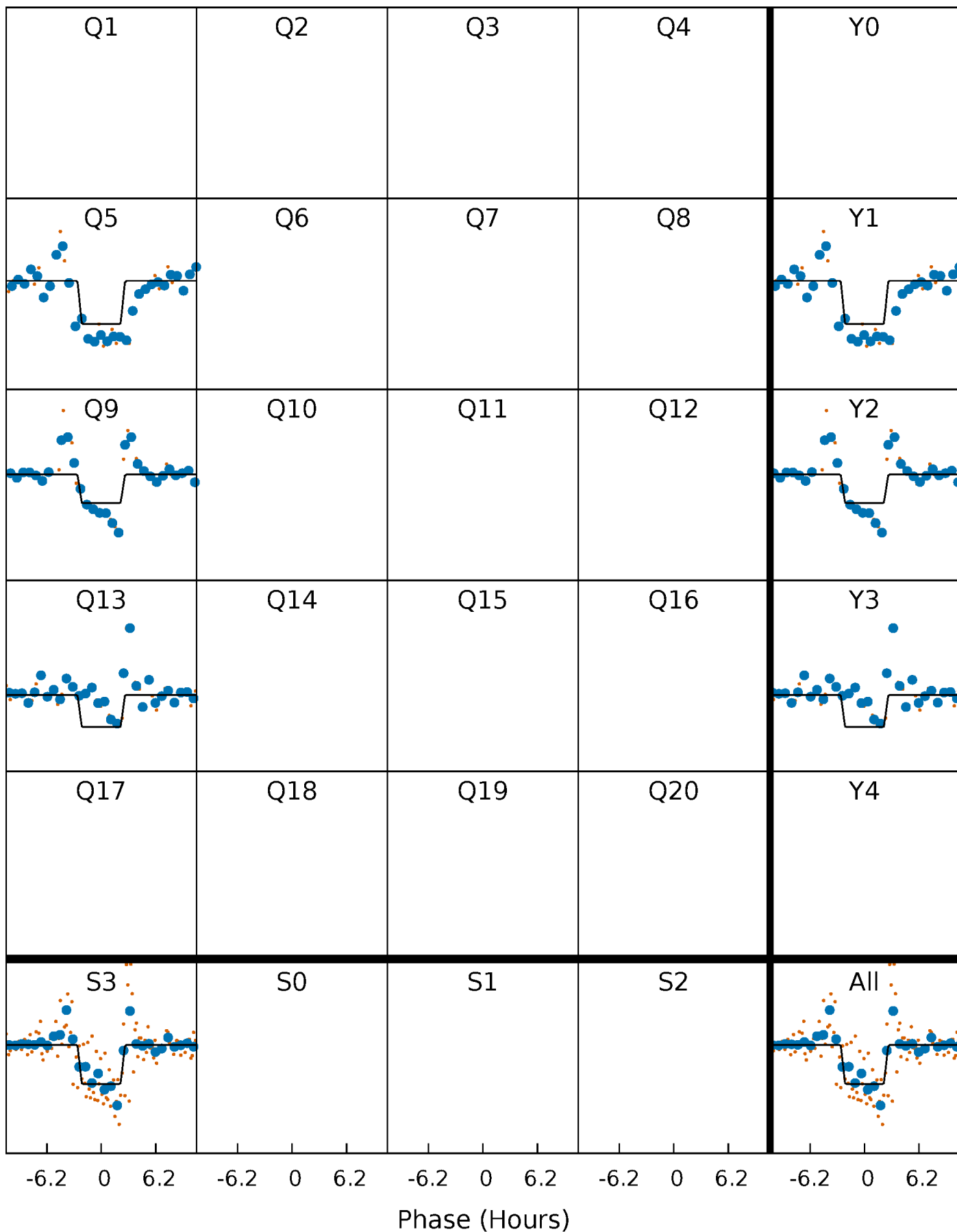
DV Quarter-Phased Transit Curves

TCE 006525023-02 $P=366.192708$ Days $T_0=486.006257$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

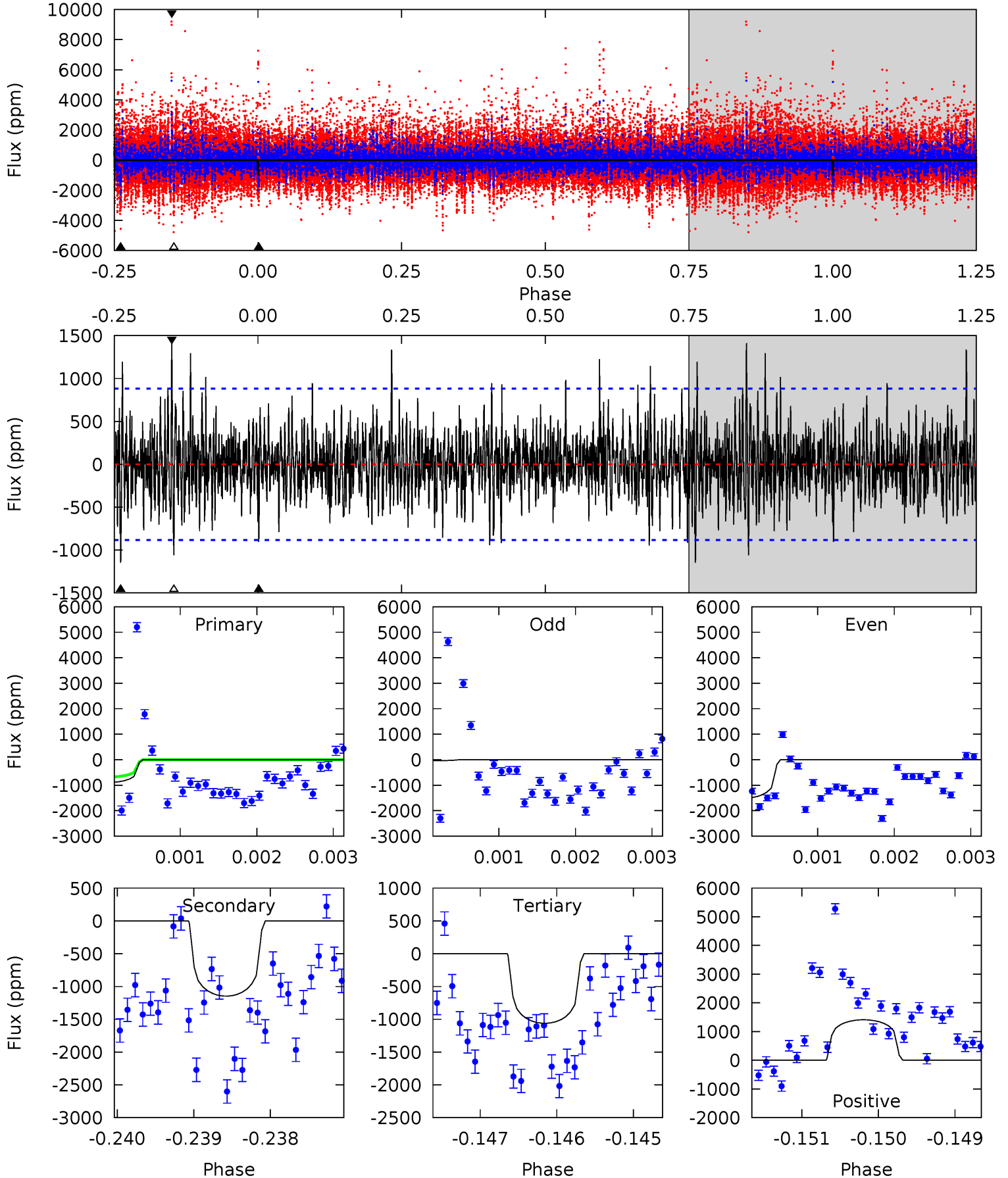
TCE 006525023-02 $P=366.196640$ Days $T_0=486.004014$ (BKJD)



DV Model-Shift Uniqueness Test

006525023-02, P = 366.192708 Days, E = 119.813549 Days

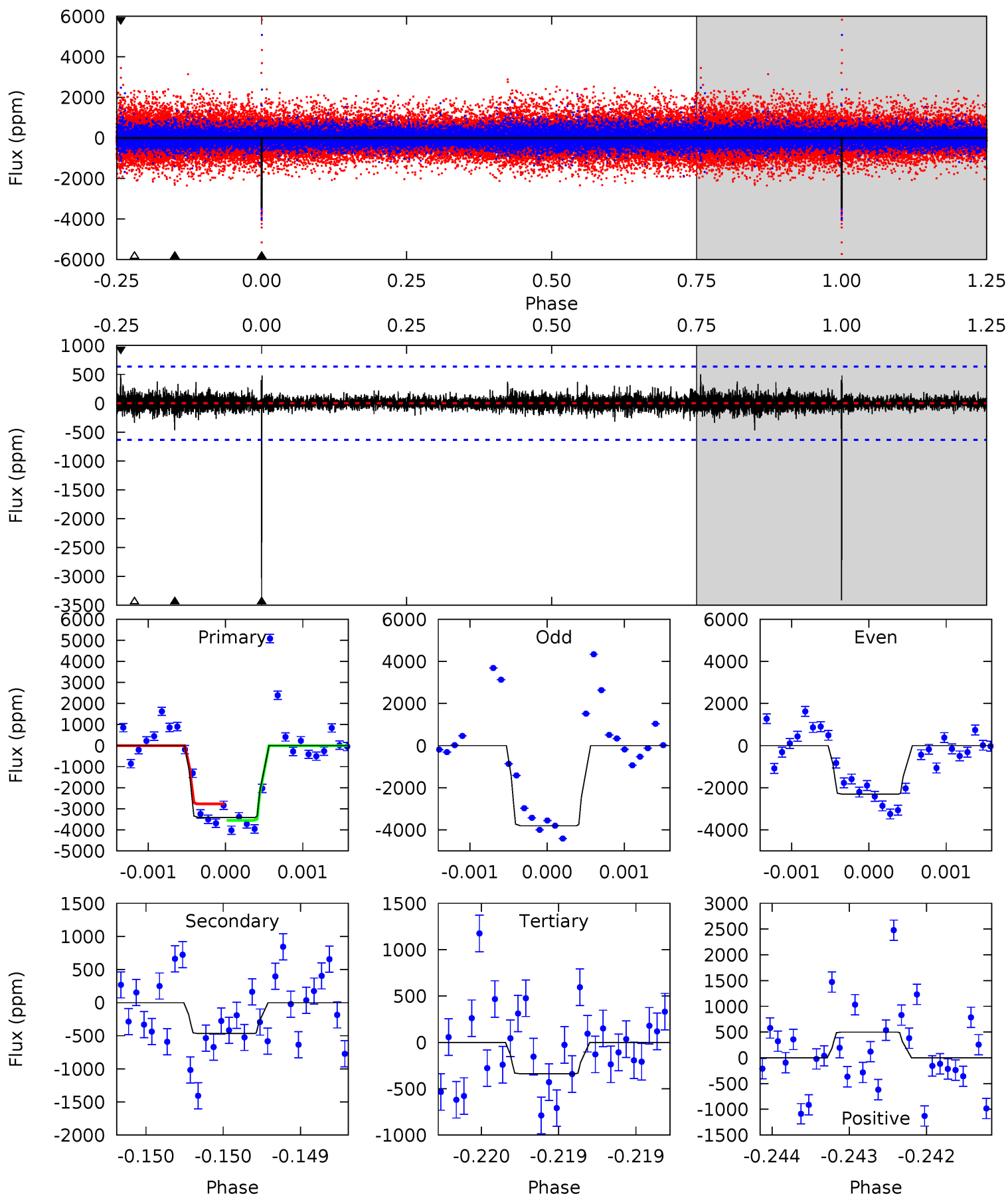
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.61	7.11	6.58	8.75	5.47	3.32	1.84	-0.97	-3.14	0.53	-1.64	3.17	0.73	0.55	1.35



Alt Model-Shift Uniqueness Test

006525023-02, P = 366.196640 Days, E = 119.807374 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.8	4.07	2.95	4.35	5.54	3.43	0.63	26.8	25.4	1.12	-0.28	6.74	0.77	0.13	3.47



Stellar Parameters For KIC 006525023

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5712^{+190}_{-190}	$4.487^{+0.104}_{-0.156}$	$-0.440^{+0.300}_{-0.300}$	$0.849^{+0.209}_{-0.112}$	$0.808^{+0.105}_{-0.061}$	$1.860^{+0.724}_{-0.857}$
	+3%/-3%	+2%/-3%	+68%/-68%	+25%/-13%	+13%/-8%	+39%/-46%
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 006525023-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1147 ± 161	$5.08^{+4.76}_{-3.27}$	337^{+23}_{-18}	4660^{+3034}_{-1004}	$21028^{+150439}_{-15380}$
Alt.	-467 ± 115	$5.87^{+4.63}_{-3.52}$	338^{+21}_{-18}	3758^{+1592}_{-667}	6396^{+34661}_{-4509}

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 $A_{obs} \gg 1.0$

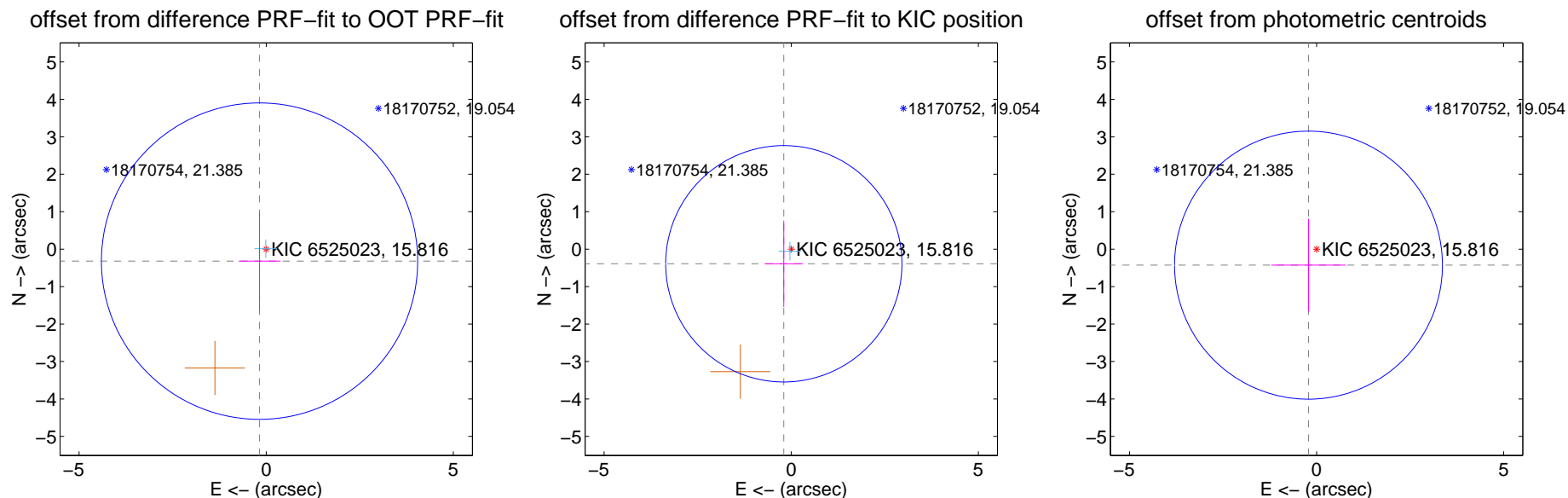
DV Centroid Data

Supplemental centroid analysis for 006525023-02. Kepler magnitude: 15.82. Transit SNR 7.20

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.366 ± 1.408	0.26	0.178 ± 0.559	-0.320 ± 1.302
PRF-fit source offset from KIC position	0.438 ± 1.052	0.42	0.198 ± 0.513	-0.391 ± 1.151
photometric centroid source offset	0.48 ± 1.19	0.40	0.22 ± 0.99	-0.43 ± 1.24

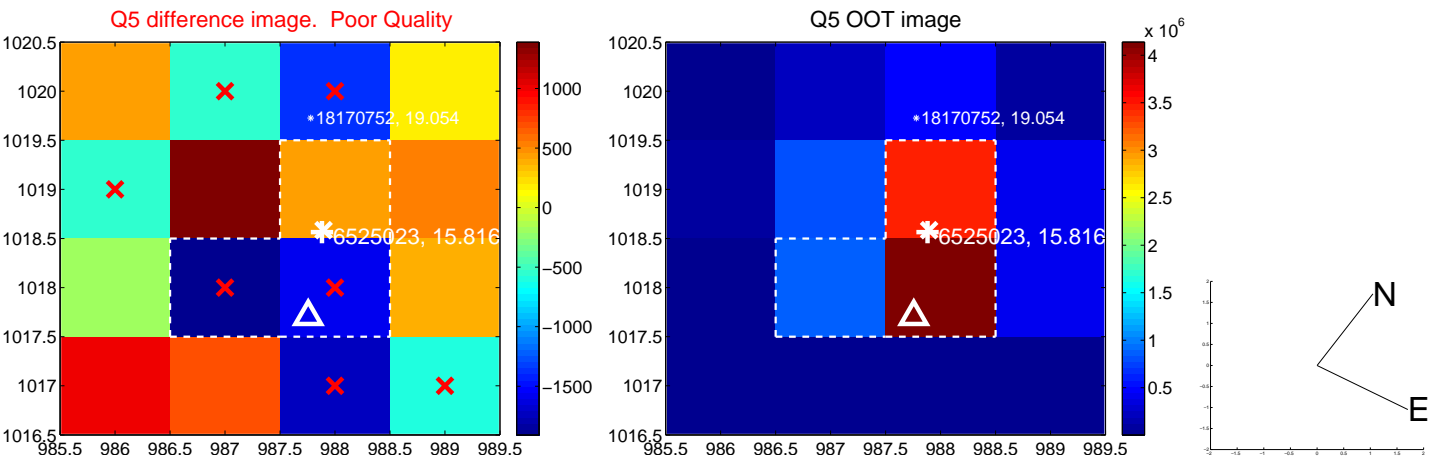


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

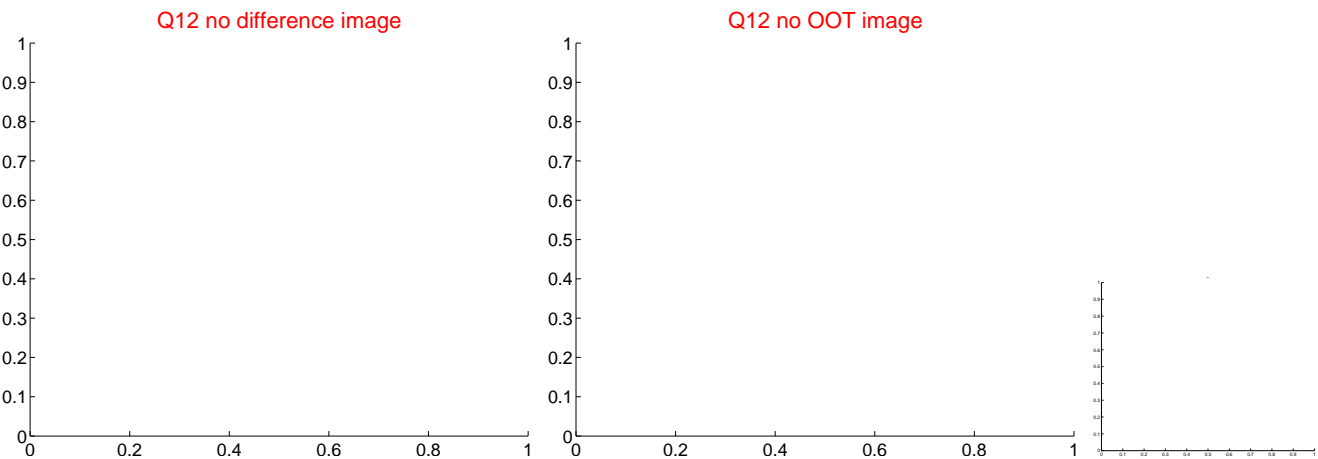
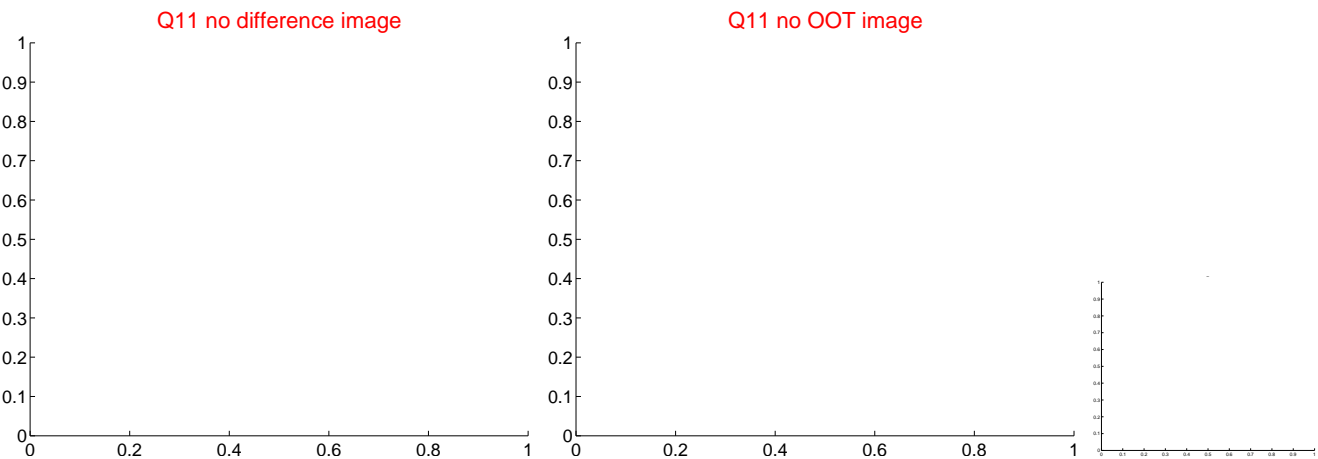
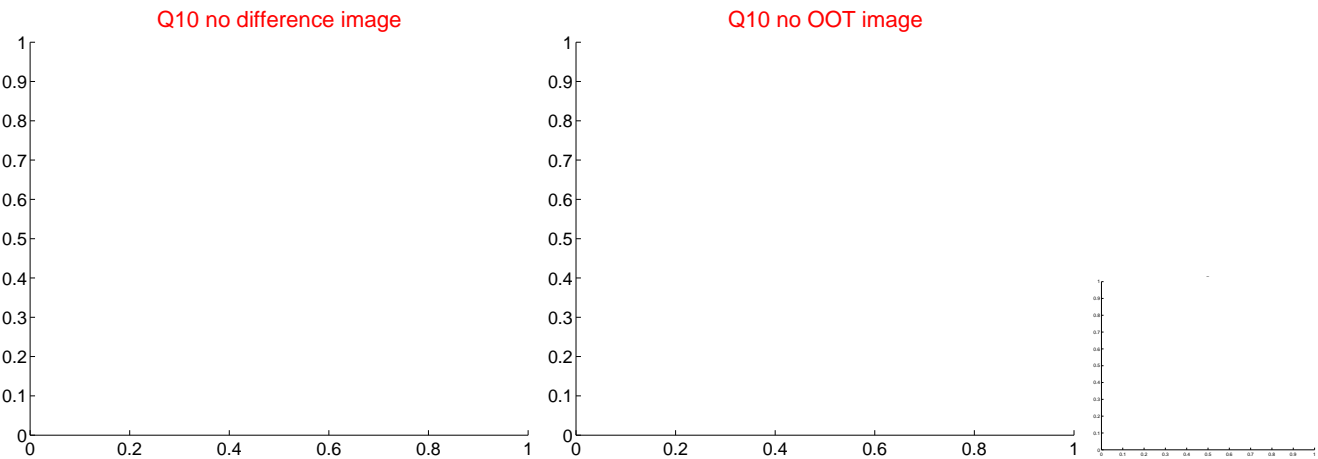
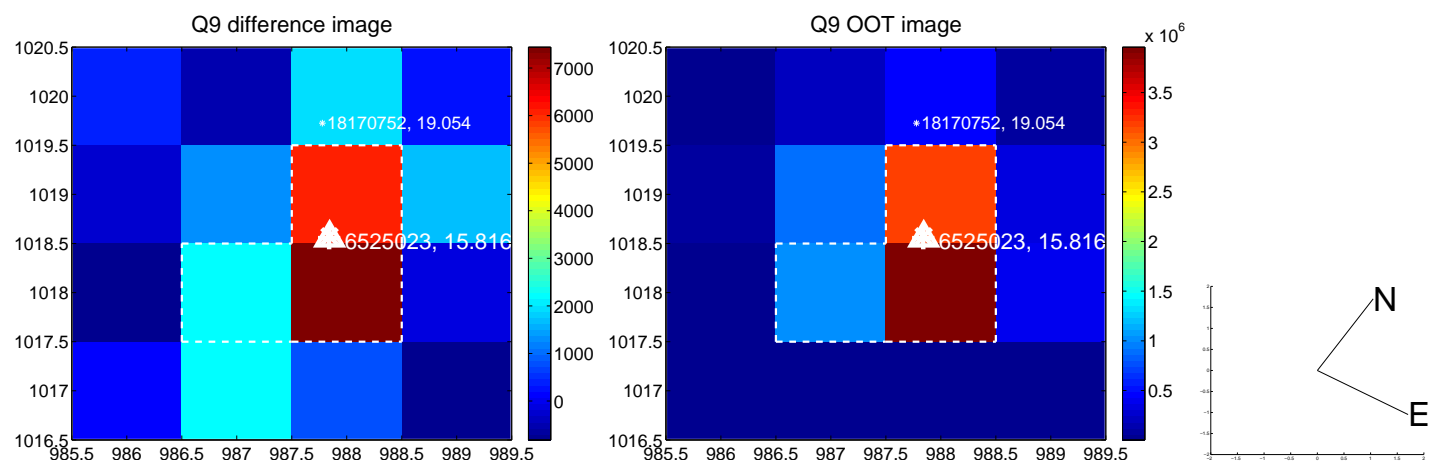
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



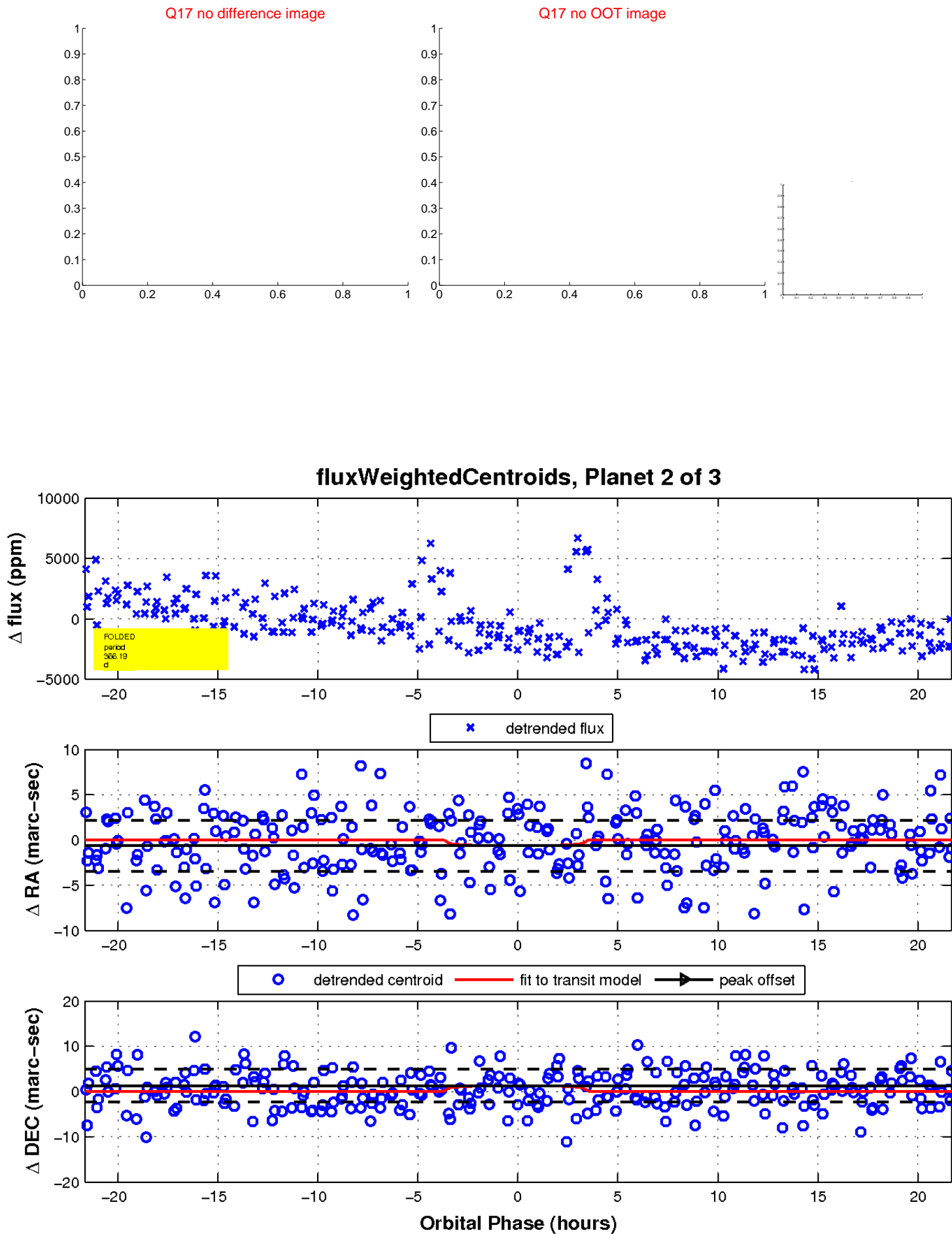
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

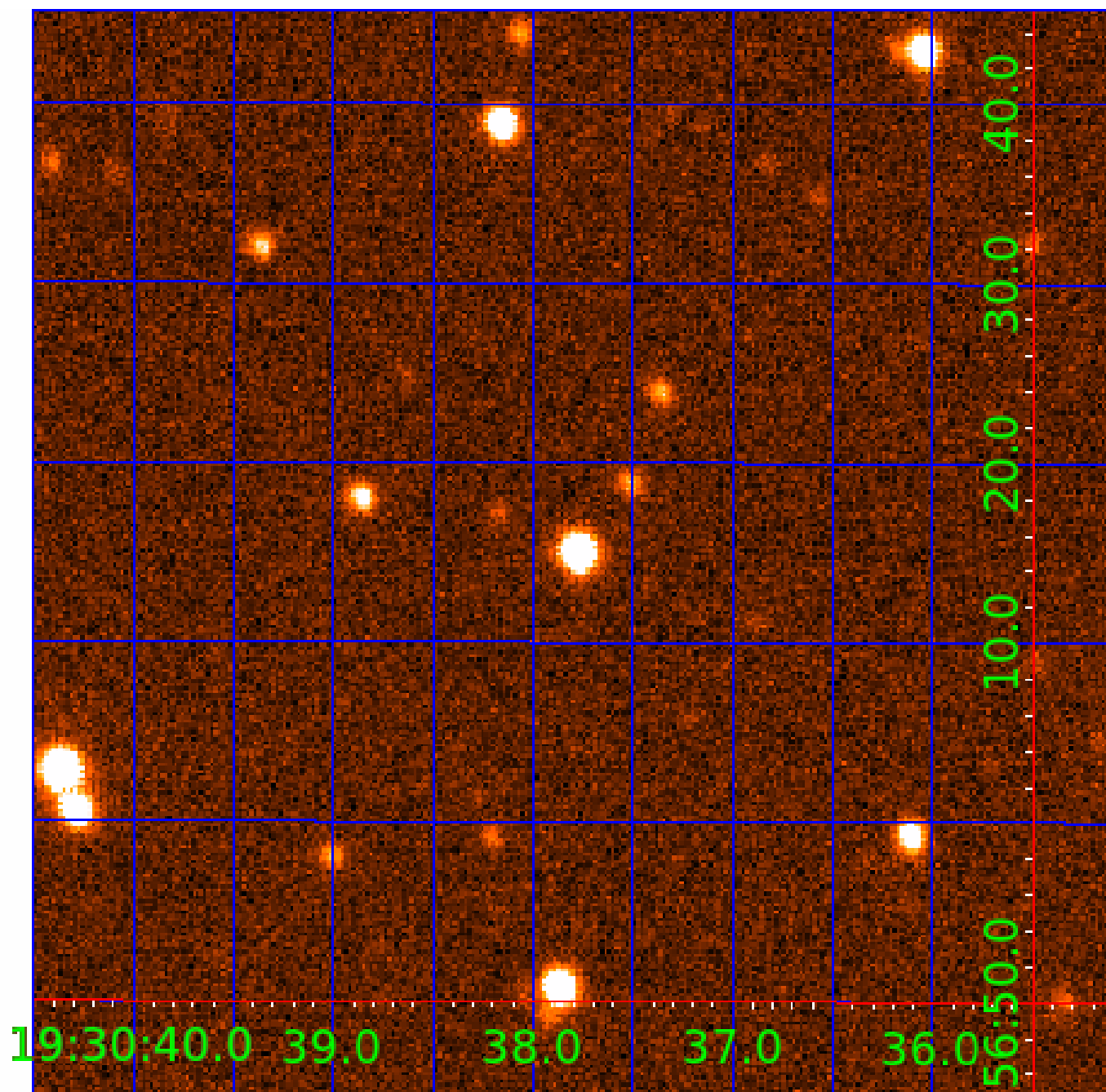


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006525023

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})
006525023-01	OBS	No	559.400656	431.139160	2426.2	6.193	14.4	8.5	0.85	5712	5.24	0.45
006525023-02	OBS	No	366.192708	486.006257	1953.0	7.271	12.6	7.2	0.85	5712	3.73	0.79
006525023-03	OBS	No	556.118128	391.737685	1855.9	6.751	11.6	6.9	0.85	5712	3.69	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006525023-01	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—CENT_FEW_DIFFS
006525023-02	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
006525023-03	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

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

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

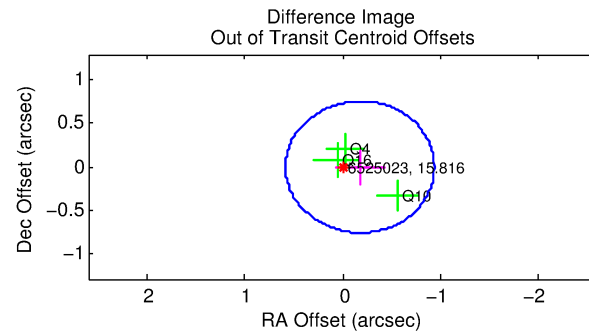
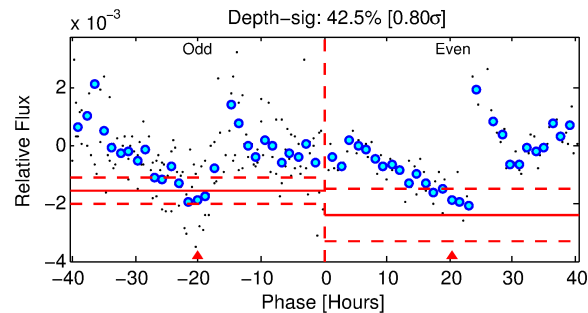
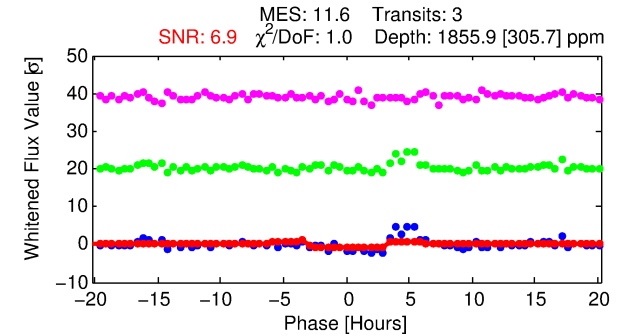
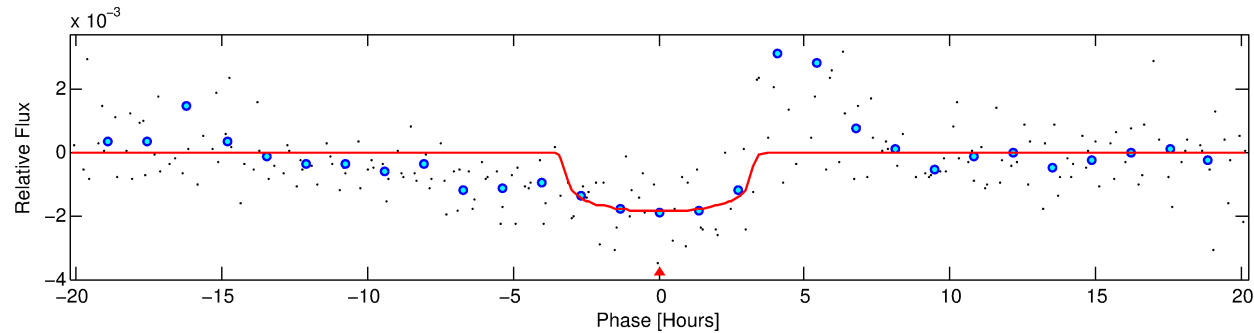
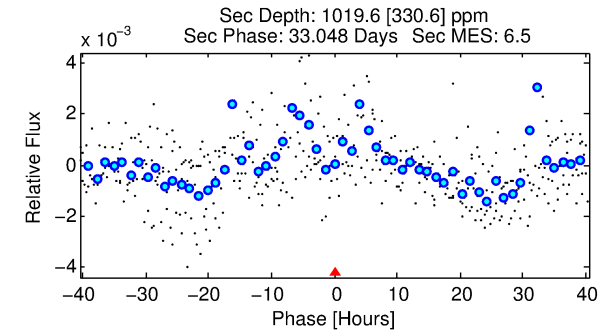
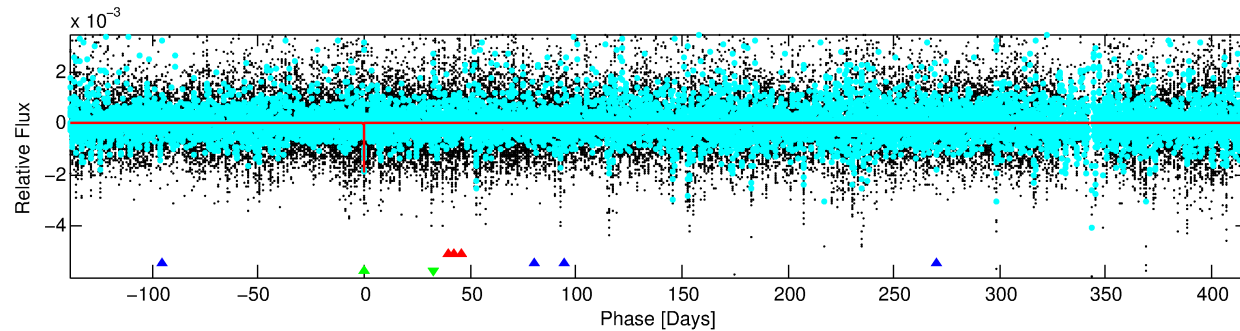
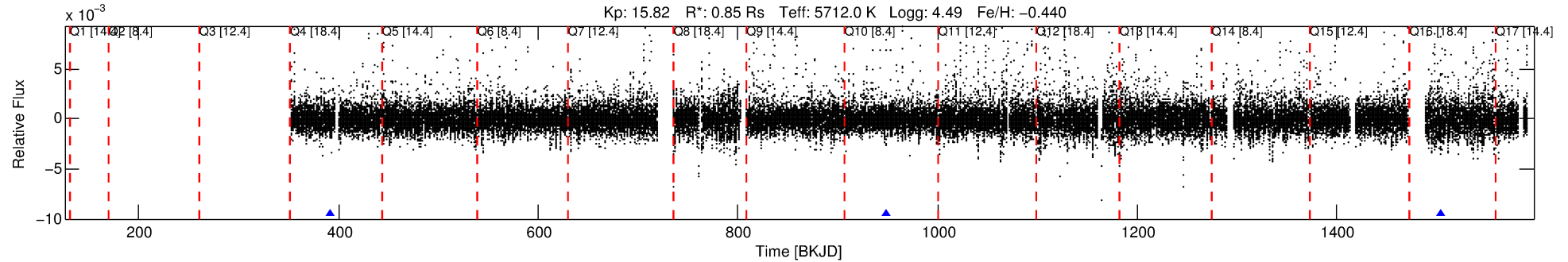
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006525023-03

No Significant Match Found

DV One-Page Summary

KIC: 6525023 Candidate: 3 of 3 Period: 556.118 d



DV Fit Results:

Period = 556.11813 [0.00884] d
Epoch = 391.7377 [0.0092] BKJD
Rp/R* = 0.0398 [0.0218]
a/R* = 614.97 [1480.63]
b = 0.36 [5.96]
Seff = 0.45 [0.14]
Teq = 209 [17] K
Rp = 3.69 [2.22] Re
a = 1.2324 [0.2504] AU
Ag = 62677.46 [73920.25] [0.85 σ]
Teffp = 5117 [1472] K [3.33 σ]

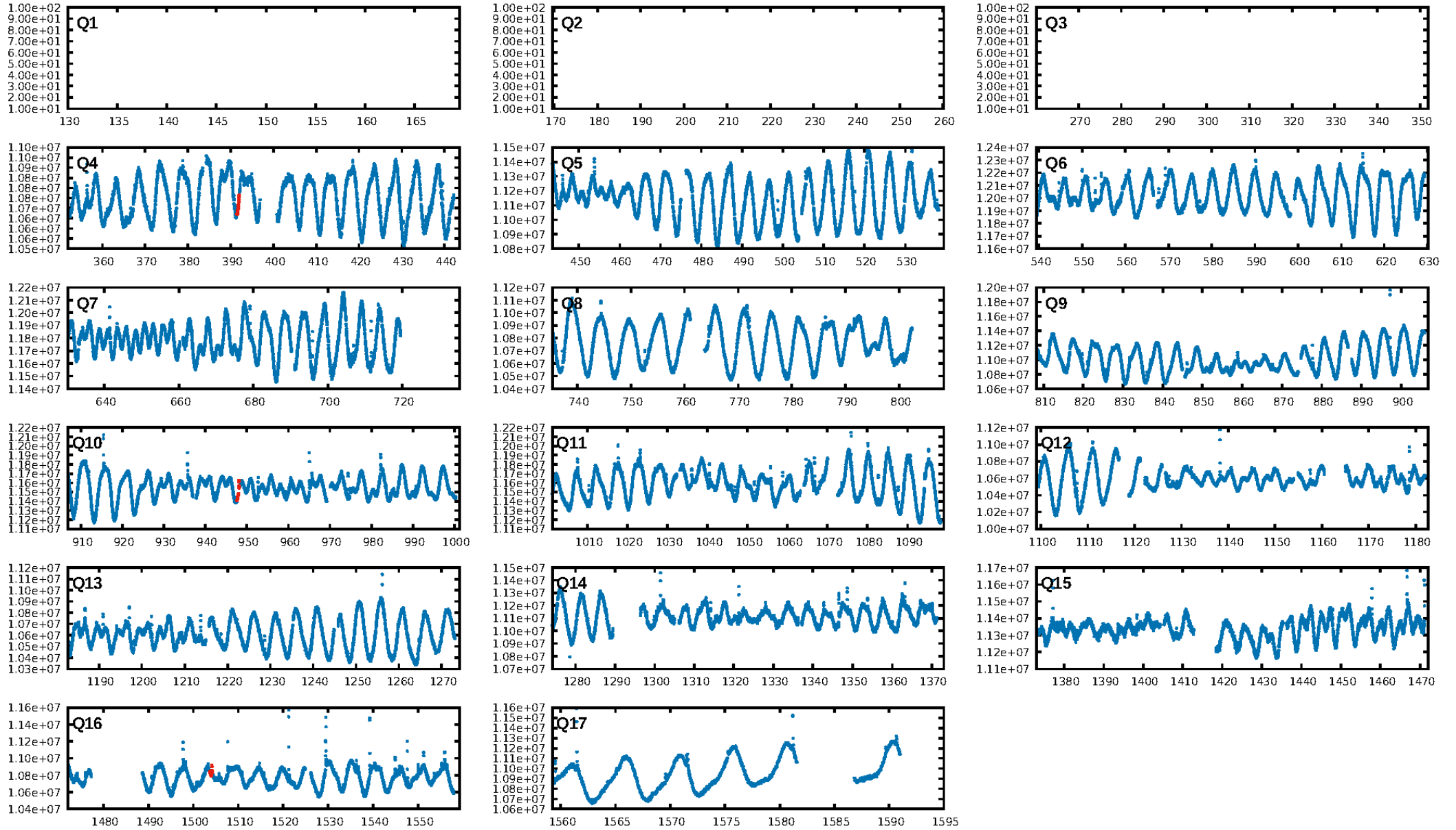
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [459.40 σ]
LongPeriod-sig: 100.0% [8.60 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 61.6%
Bootstrap-pfa: 2.69e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 12.71
Centroid-sig: 3.5%
Centroid-so: 1.092 arcsec [1.05 σ]
OotOffset-rm: 0.177 arcsec [0.70 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-rm: 0.269 arcsec [1.42 σ]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

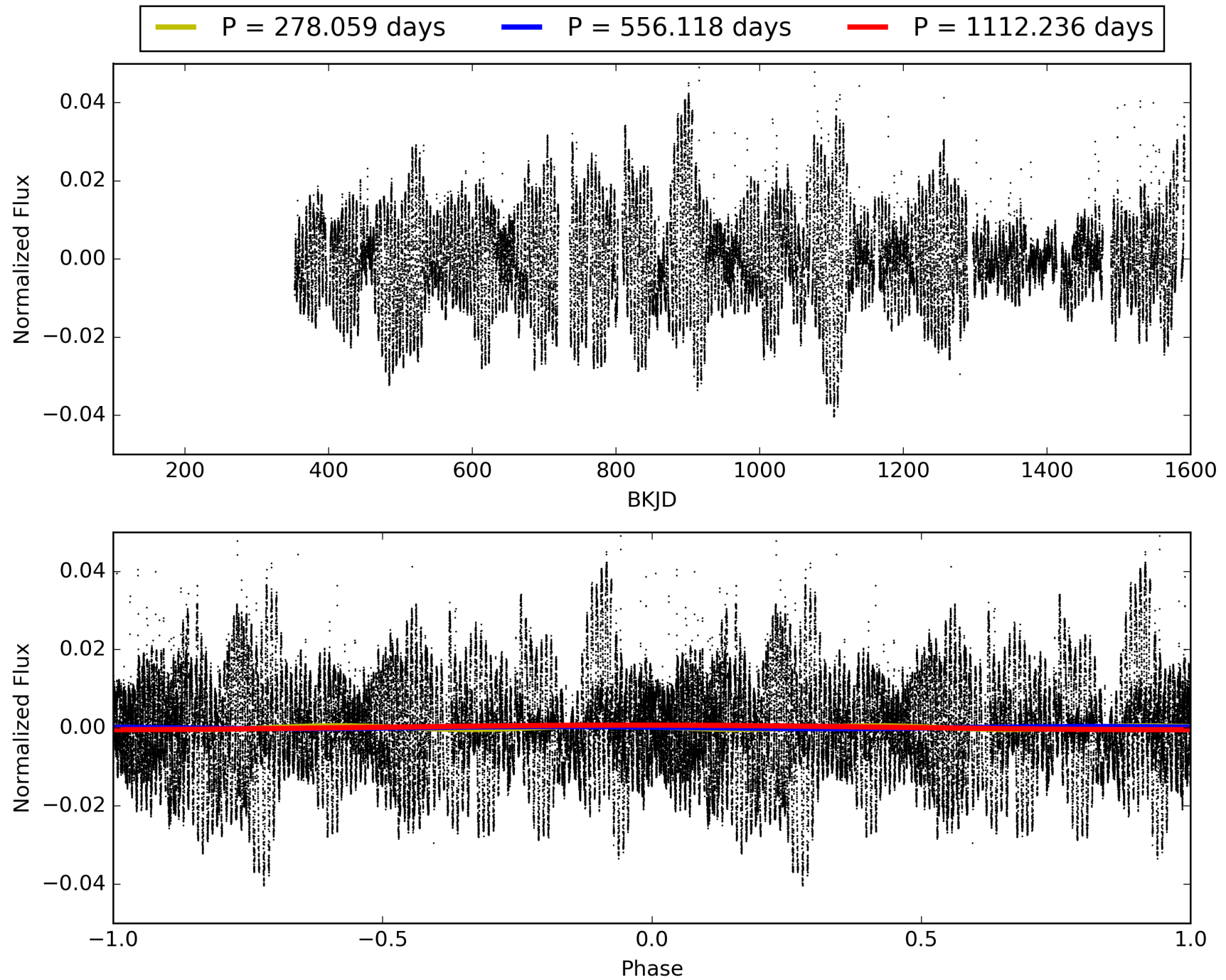
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 22:26:04 Z

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

TCE 006525023-03, PDC Light Curves

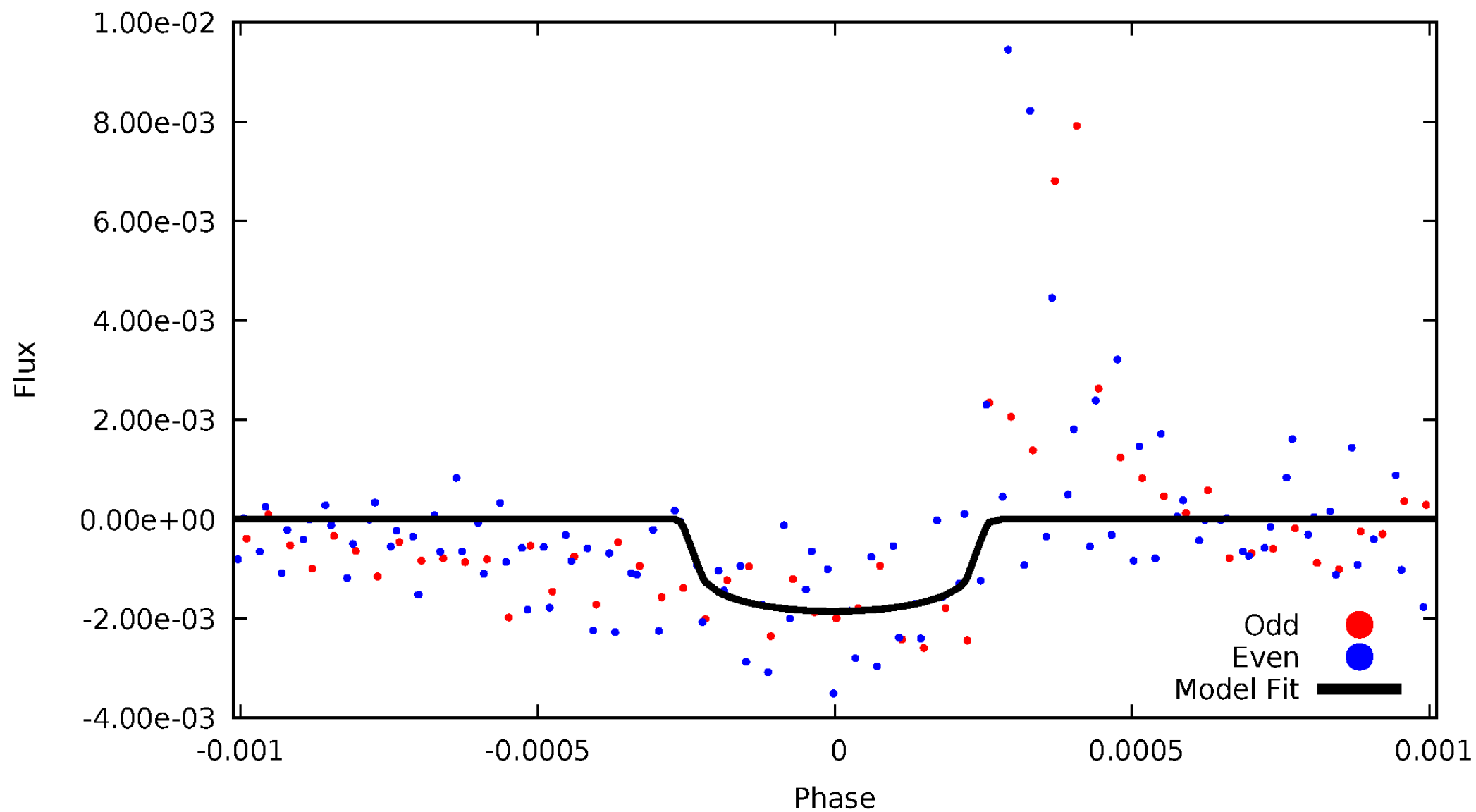


TCE 006525023-03



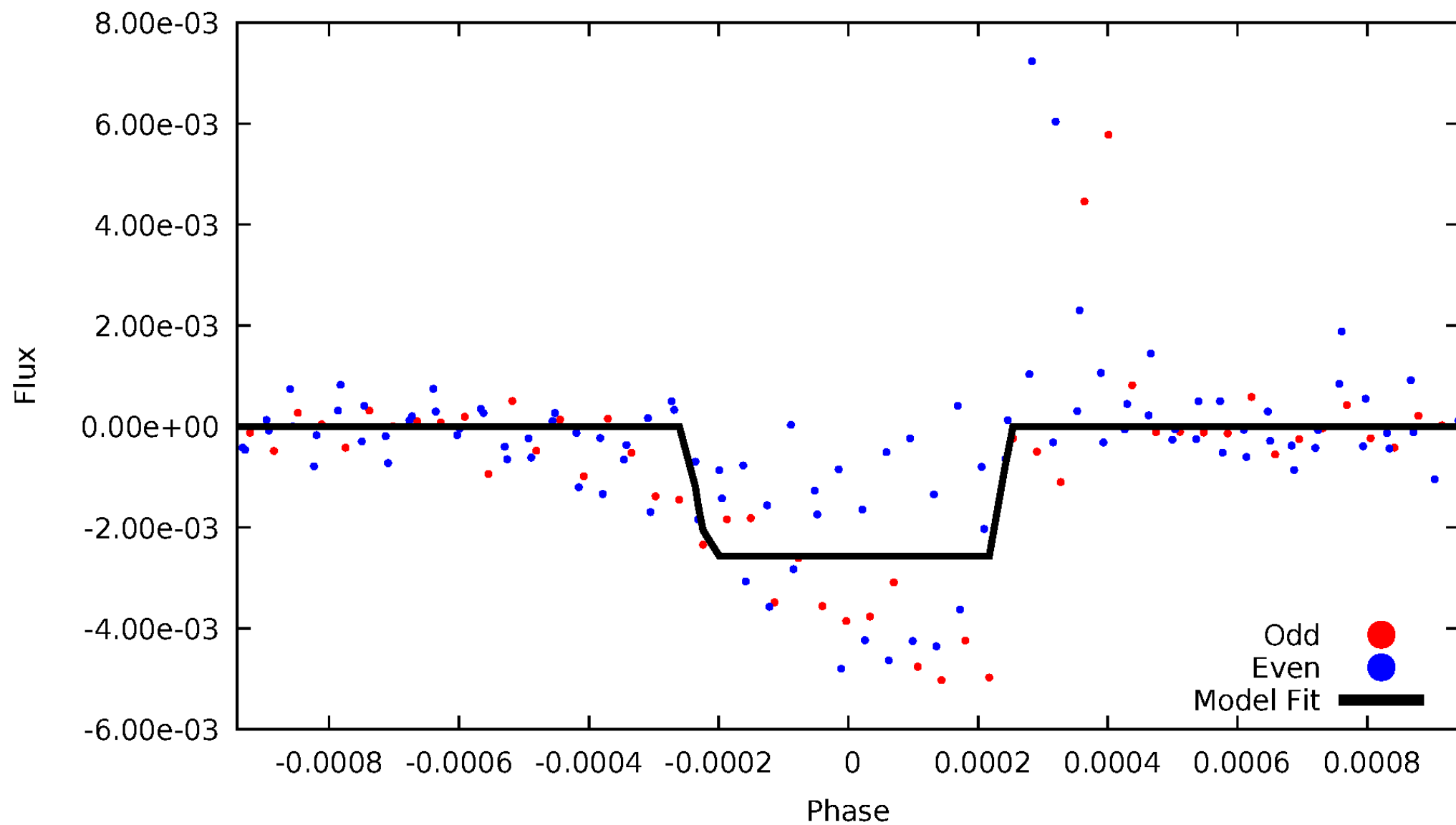
DV Odd/Even

TCE 006525023-03



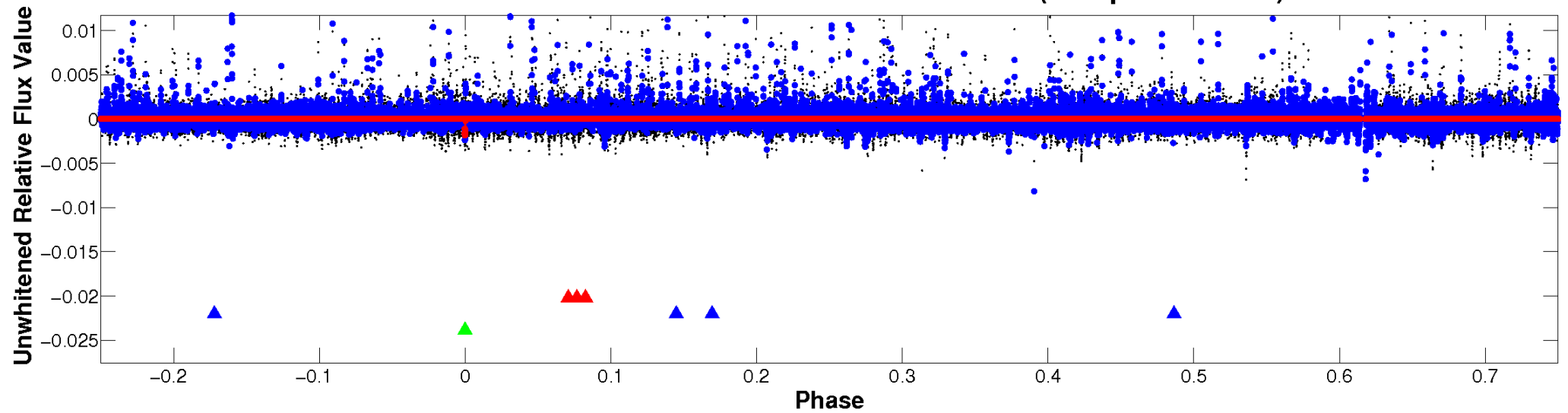
ALT Odd/Even

TCE 006525023-03

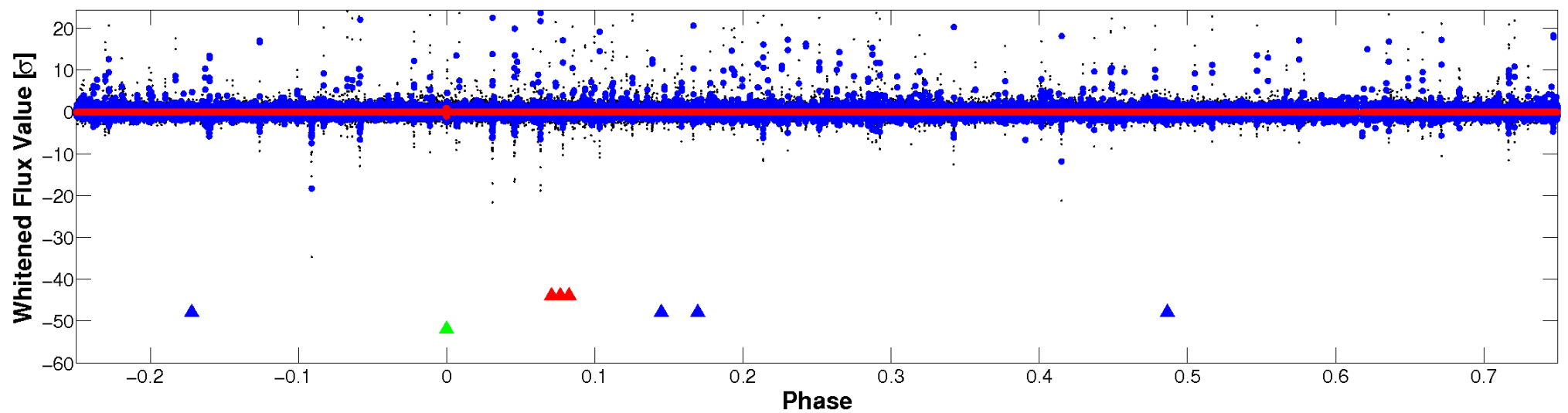


Non-Whitened Vs. Whitened Light Curve

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

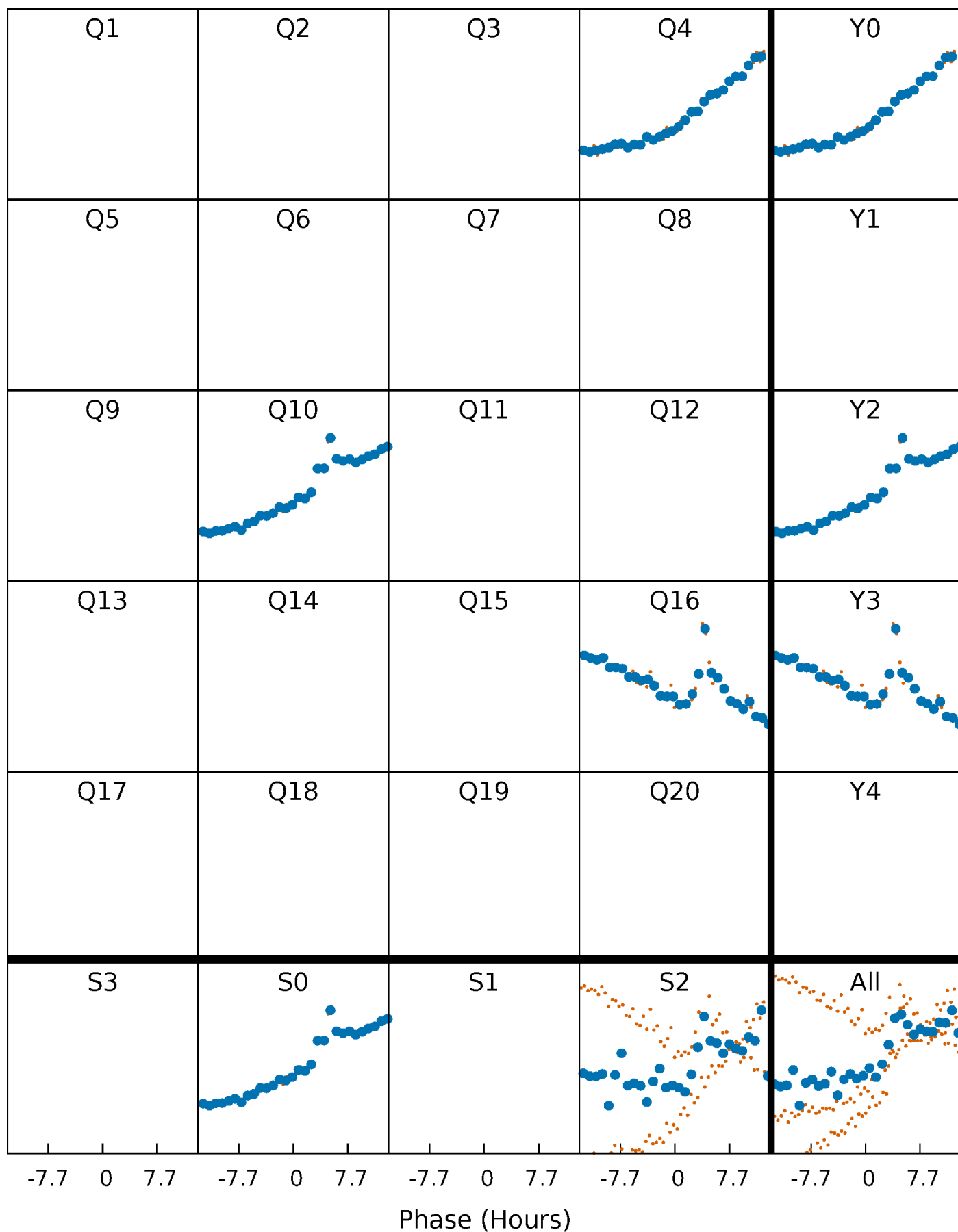


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



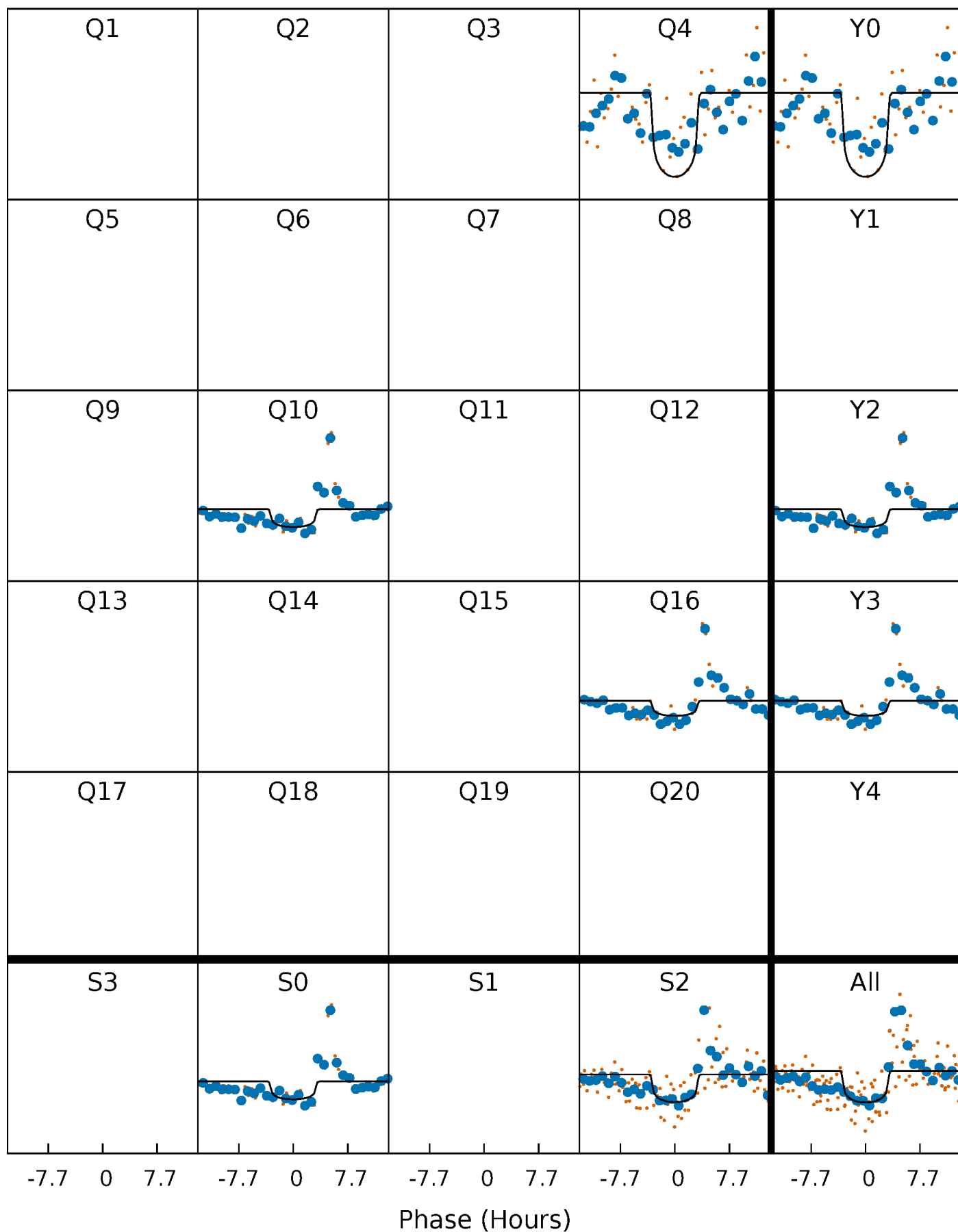
PDC Quarter-Phased Transit Curves

TCE 006525023-03 P=556.118128 Days $T_0=391.737685$ (BKJD)



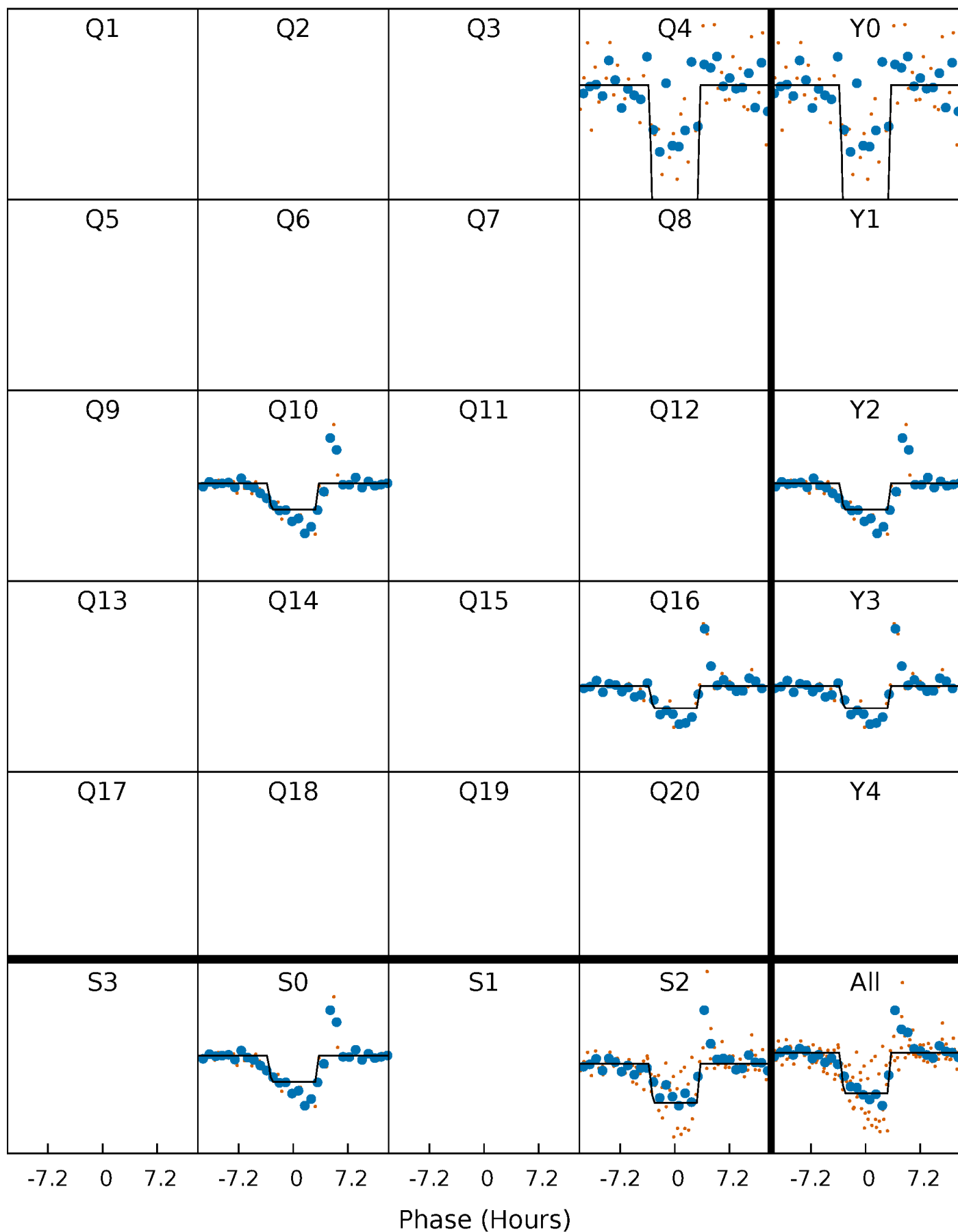
DV Quarter-Phased Transit Curves

TCE 006525023-03 P=556.118128 Days $T_0=391.737685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

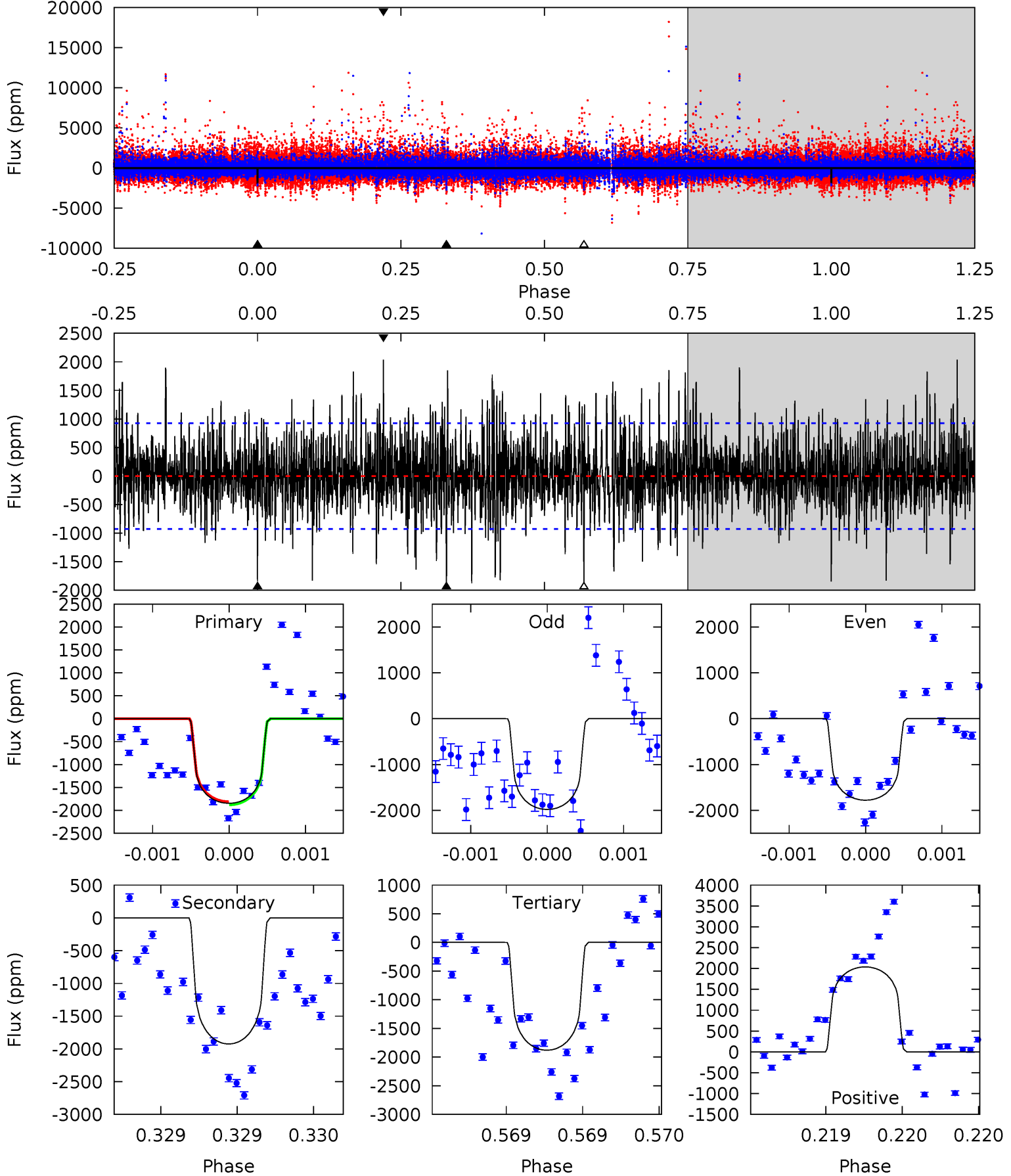
TCE 006525023-03 $P=556.119769$ Days $T_0=391.739292$ (BKJD)



DV Model-Shift Uniqueness Test

006525023-03, P = 556.118128 Days, E = 391.737685 Days

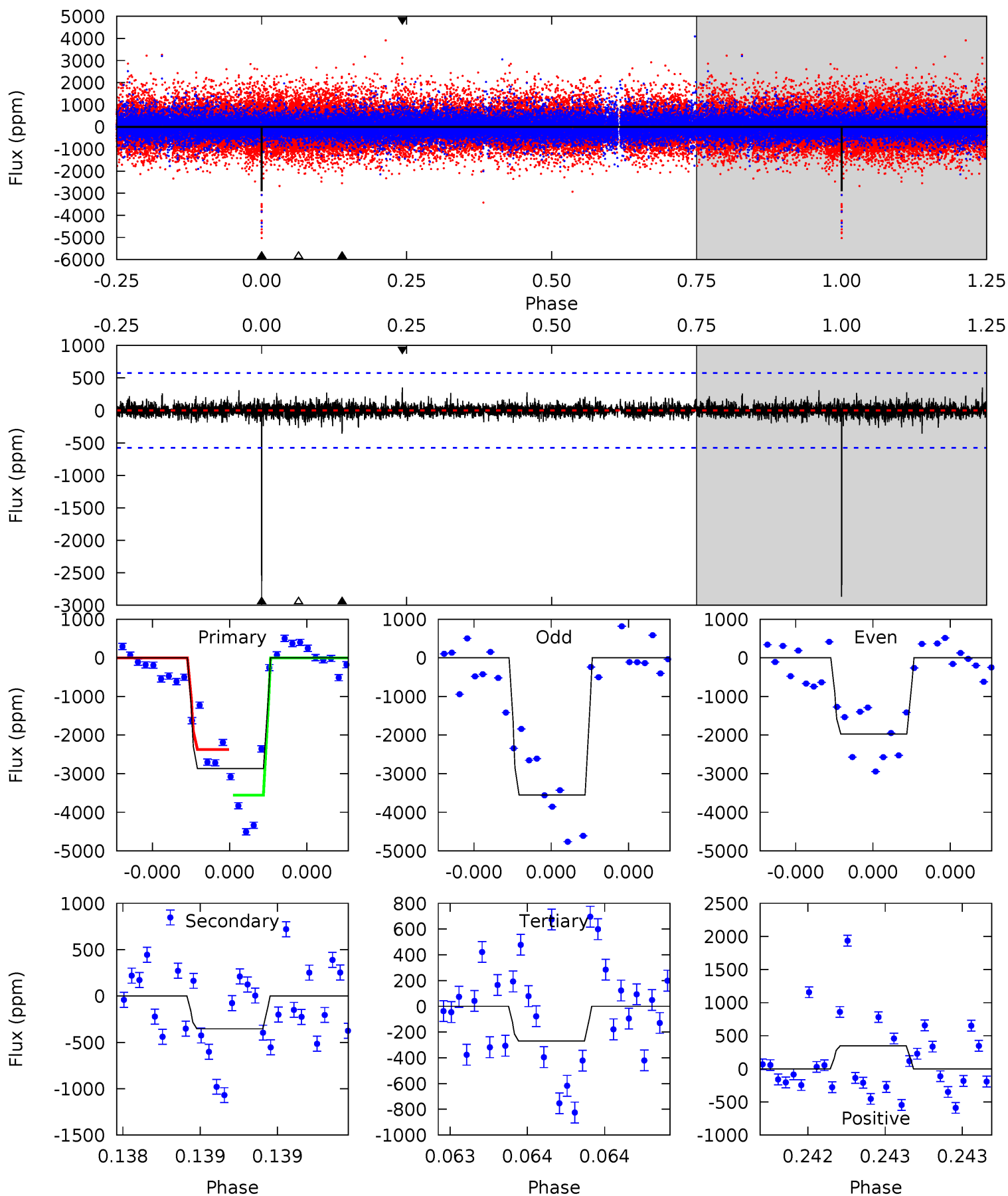
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	11.6	11.3	12.3	5.57	3.47	2.85	-0.21	-1.16	0.27	-0.68	0.40	0.93	0.51	0.20



Alt Model-Shift Uniqueness Test

006525023-03, P = 556.119769 Days, E = 391.739292 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	3.43	2.61	3.39	5.58	3.49	0.52	25.2	24.4	0.82	0.04	7.61	0.77	0.11	5.69



Stellar Parameters For KIC 006525023

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5712^{+190}_{-190}	$4.487^{+0.104}_{-0.156}$	$-0.440^{+0.300}_{-0.300}$	$0.849^{+0.209}_{-0.112}$	$0.808^{+0.105}_{-0.061}$	$1.860^{+0.724}_{-0.857}$
	+3%/-3%	+2%/-3%	+68%/-68%	+25%/-13%	+13%/-8%	+39%/-46%
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 006525023-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1925 ± 166	$3.89^{+2.13}_{-1.98}$	293^{+19}_{-15}	5840^{+2879}_{-1031}	$108820^{+347614}_{-64445}$
Alt.	-354 ± 103	$4.88^{+2.12}_{-2.17}$	292^{+19}_{-14}	3812^{+889}_{-463}	12322^{+26312}_{-6629}

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

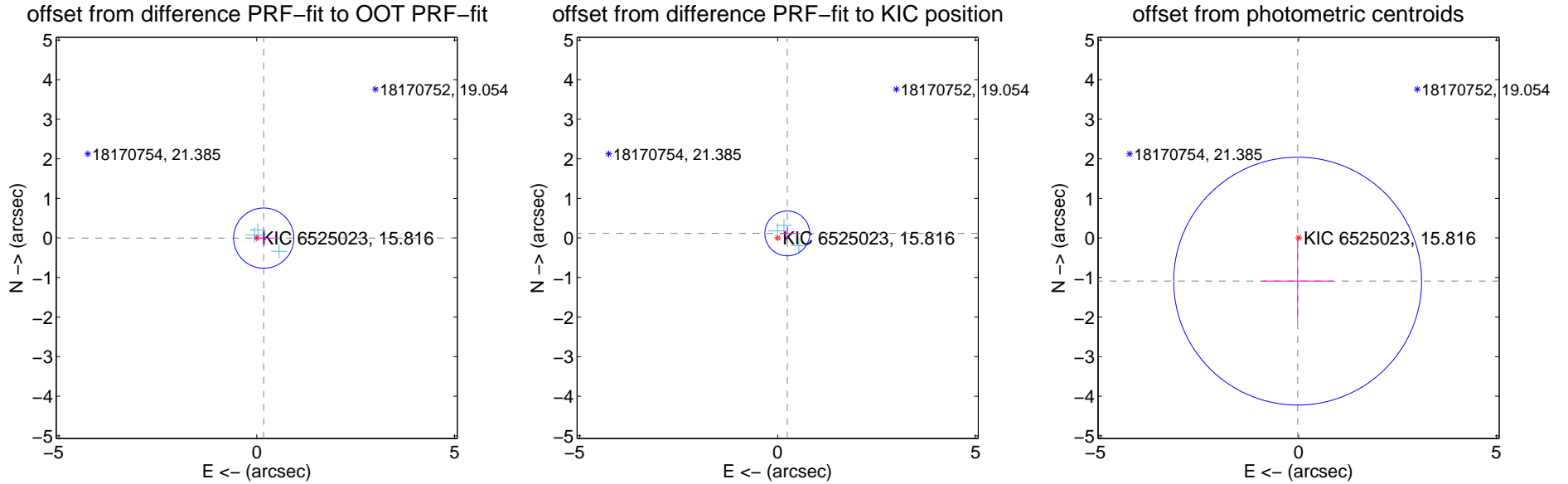
DV Centroid Data

Supplemental centroid analysis for 006525023-03. Kepler magnitude: 15.82. Transit SNR 6.91

There are 3 quarters with good PRF difference image offsets

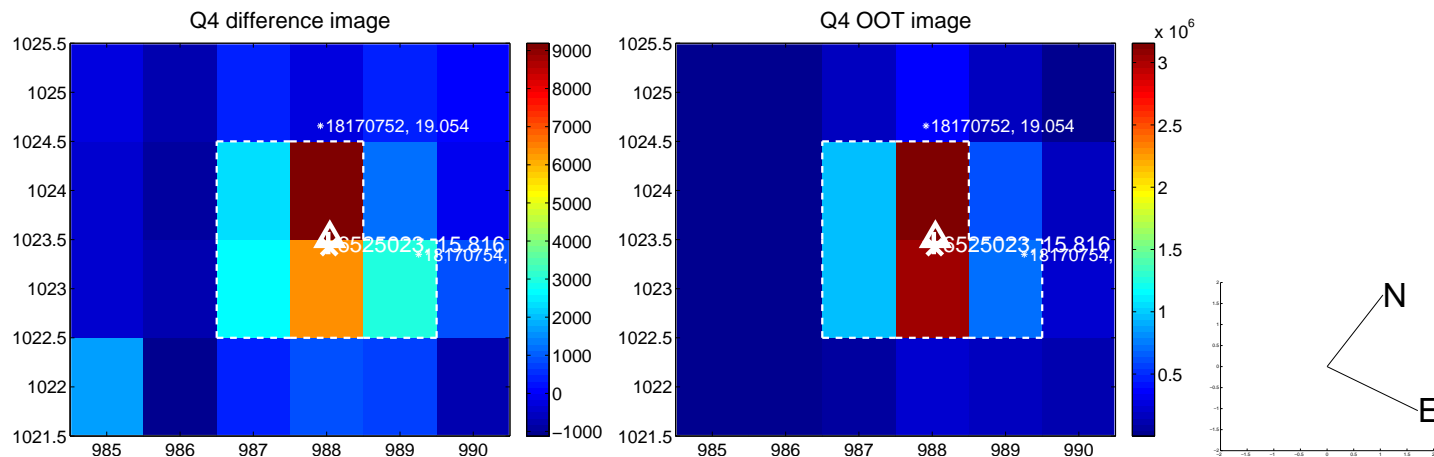
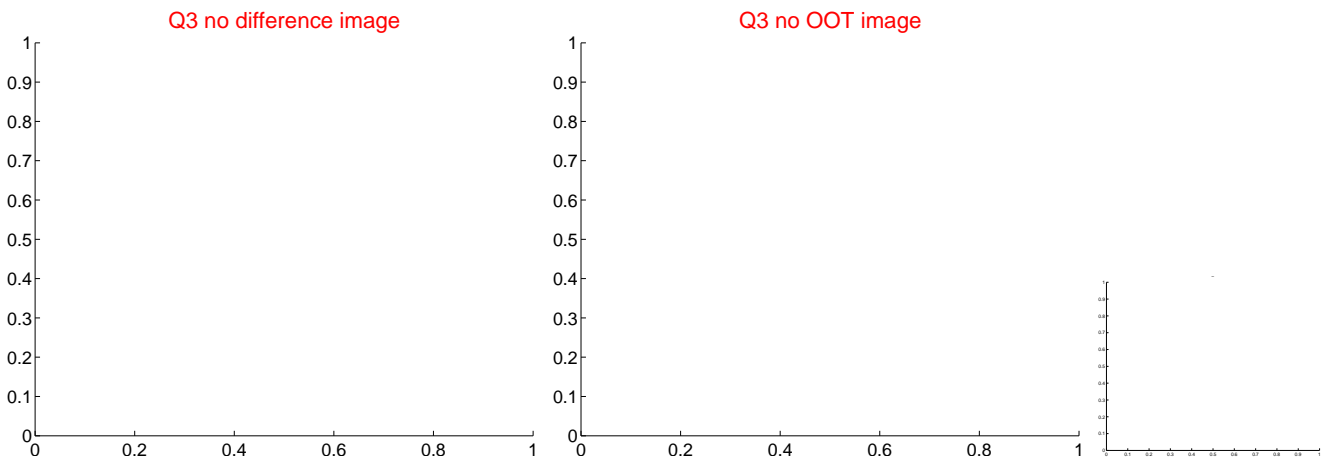
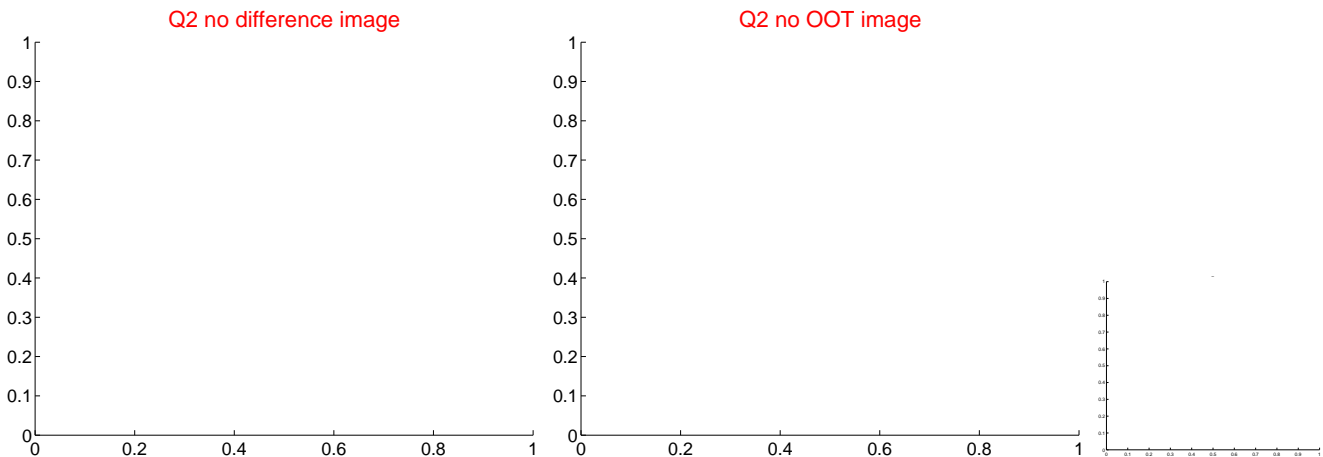
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.177 ± 0.254	0.70	-0.177 ± 0.254	-0.004 ± 0.195
PRF-fit source offset from KIC position	0.269 ± 0.189	1.42	-0.243 ± 0.190	0.114 ± 0.186
photometric centroid source offset	1.09 ± 1.04	1.05	0.02 ± 0.91	-1.09 ± 1.04



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.

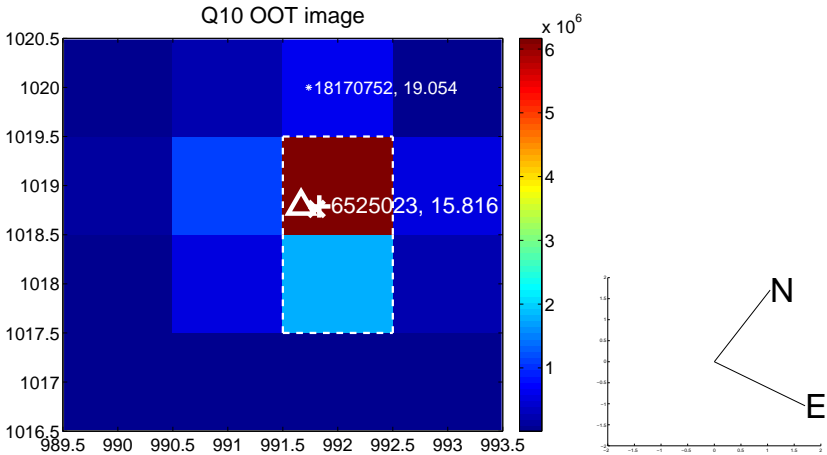
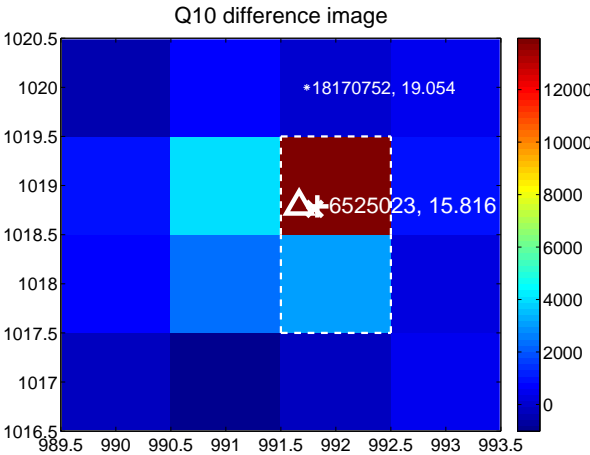


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

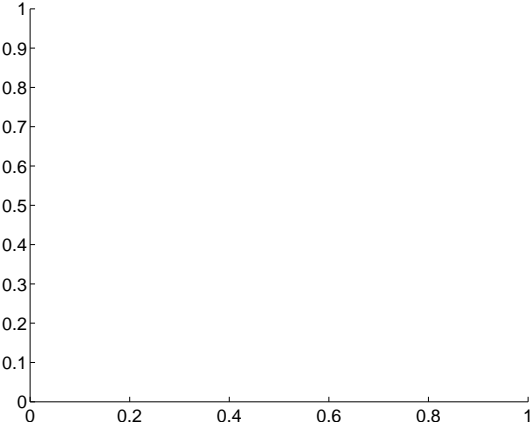
Q9 no difference image



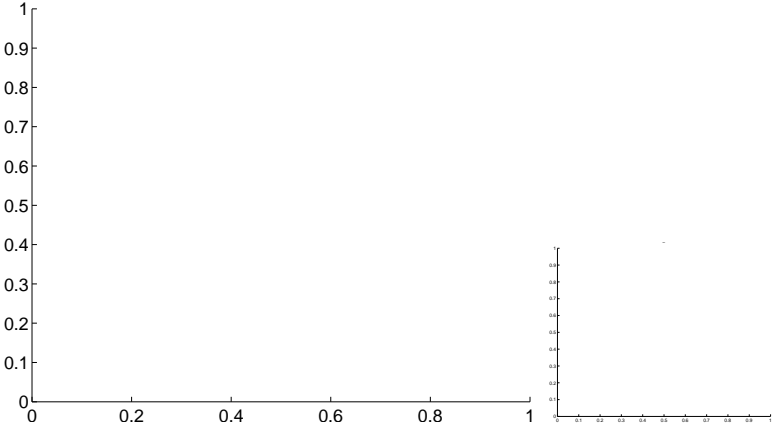
Q9 no OOT image



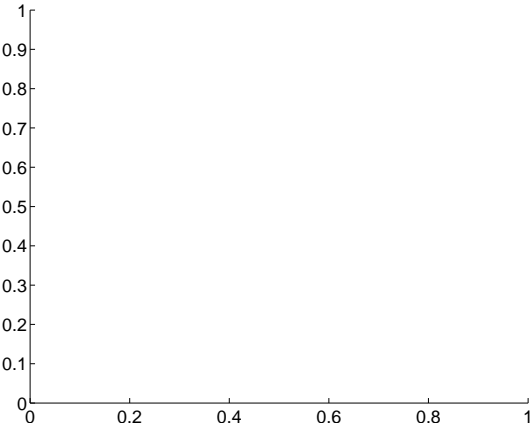
Q11 no difference image



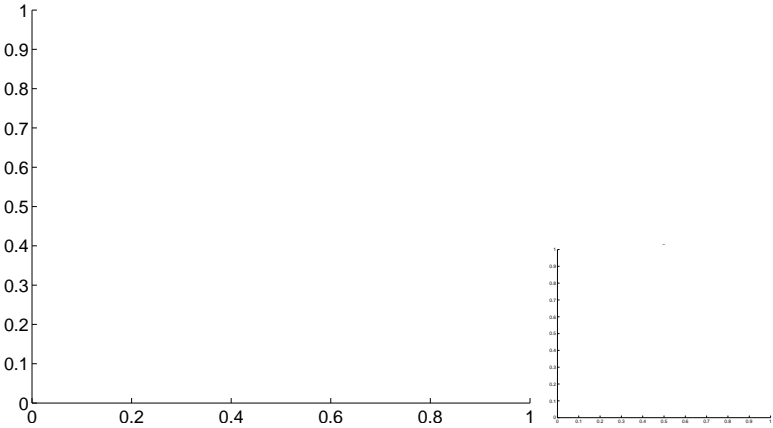
Q11 no OOT image



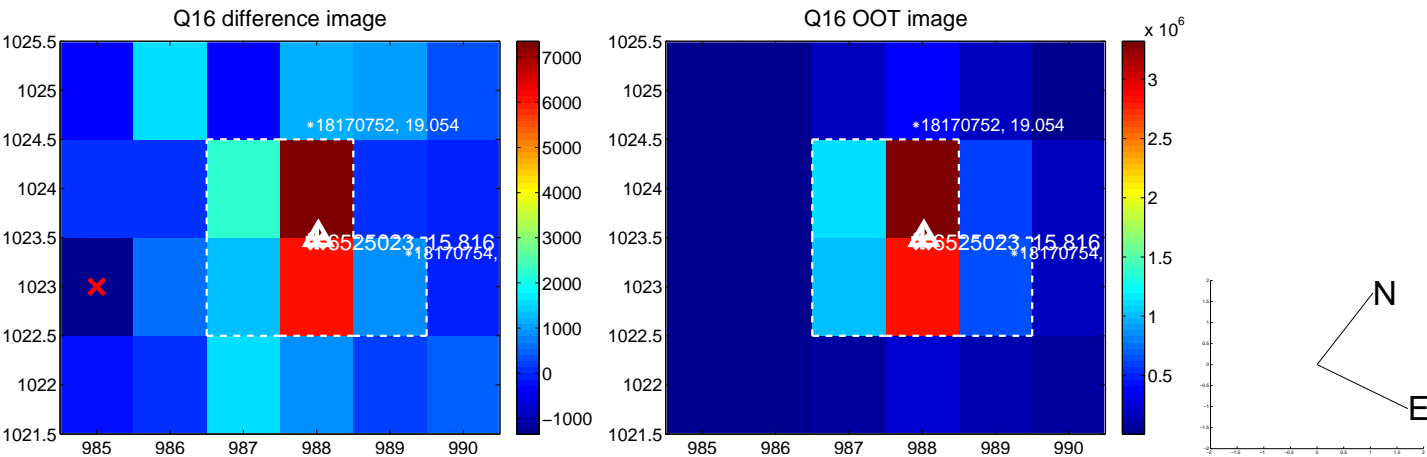
Q12 no difference image



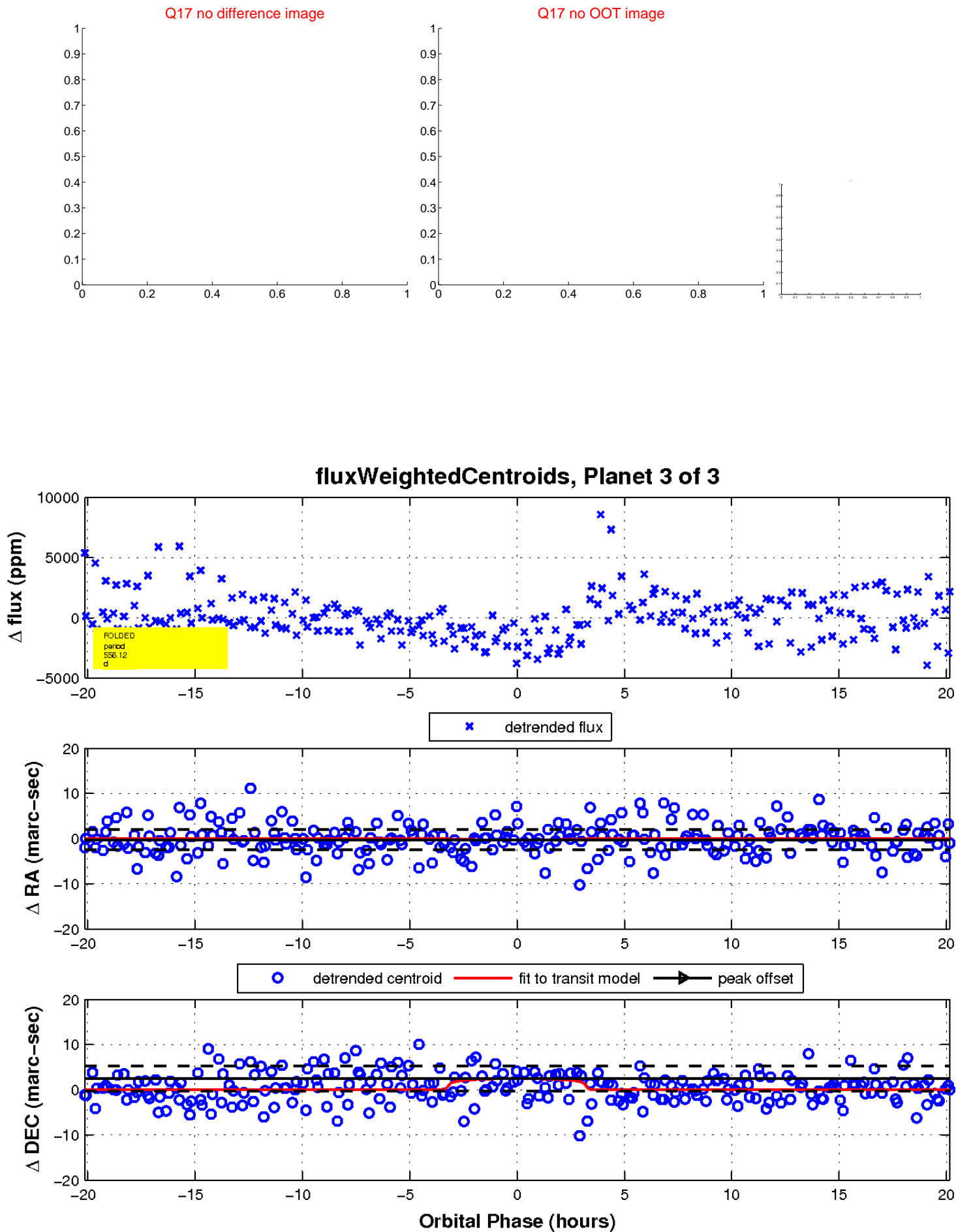
Q12 no OOT image



white ×: 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

