

KIC 006308708

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})
006308708-01	OBS	No	548.908439	360.839604	1157.5	11.474	17.3	6.0	0.70	5037	2.31	0.21
006308708-02	OBS	No	444.513278	469.153281	858.8	3.296	11.9	7.9	0.70	5037	2.08	0.28
006308708-03	OBS	No	544.490119	340.287064	191.3	13.510	10.7	1.2	0.70	5037	1.04	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006308708-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
006308708-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006308708-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

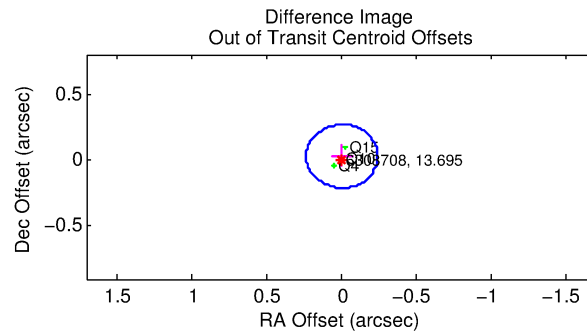
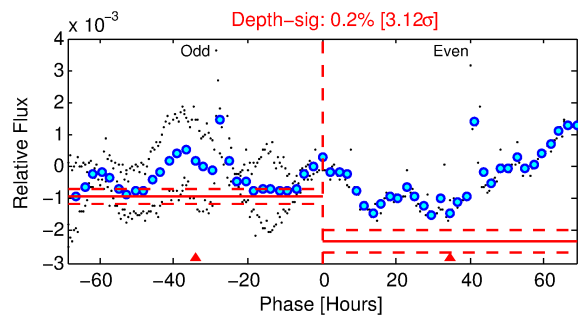
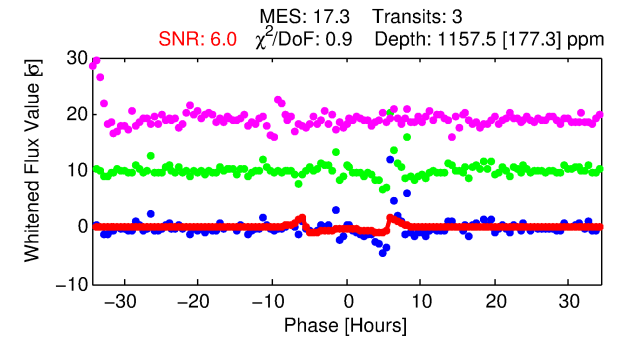
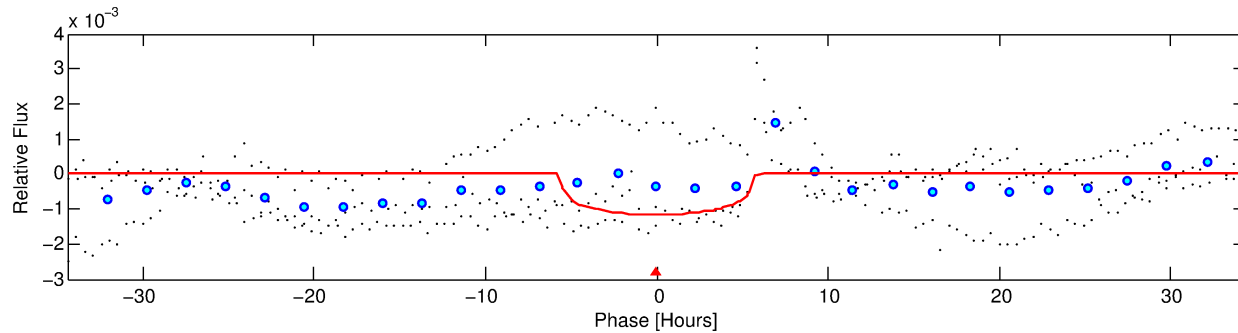
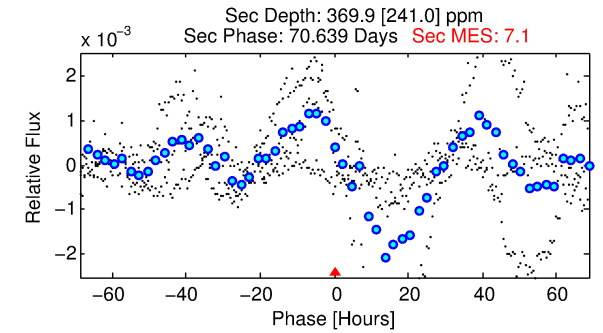
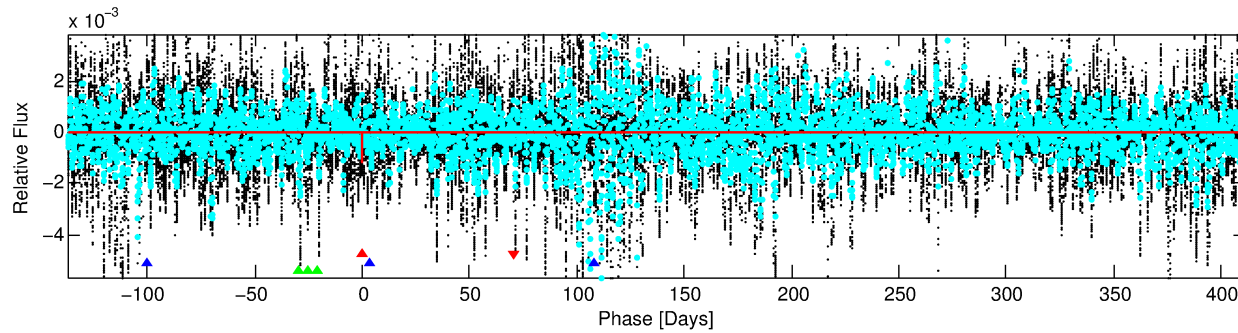
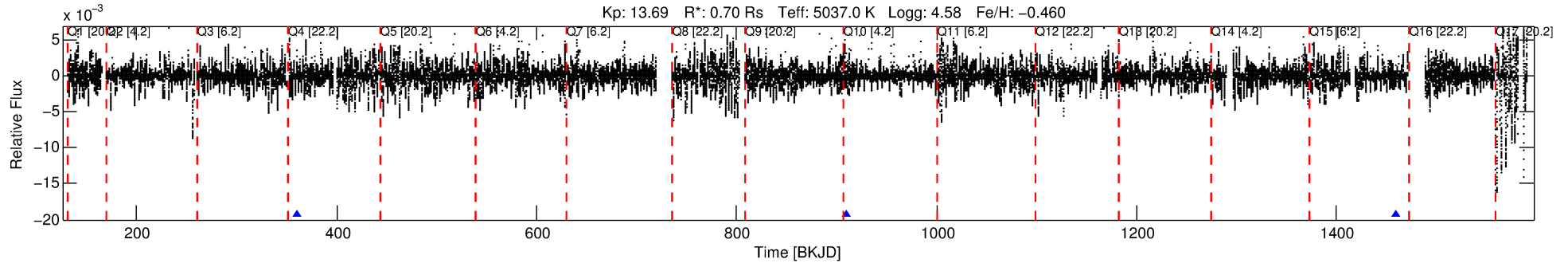
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006308708-01

No Significant Match Found

DV One-Page Summary

KIC: 6308708 Candidate: 1 of 3 Period: 548.908 d



DV Fit Results:

Period = 548.90844 [0.00435] d
Epoch = 360.8396 [0.0064] BKJD
Rp/R* = 0.0304 [0.0124]
a/R* = 375.98 [532.83]
b = 0.06 [24.72]
Seff = 0.21 [0.04]
Teq = 173 [8] K
Rp = 2.31 [0.98] Re
a = 1.1484 [0.1089] AU
Ag = 50451.88 [53084.30] [0.95 σ]
Teffp = 4009 [1053] K [3.64 σ]

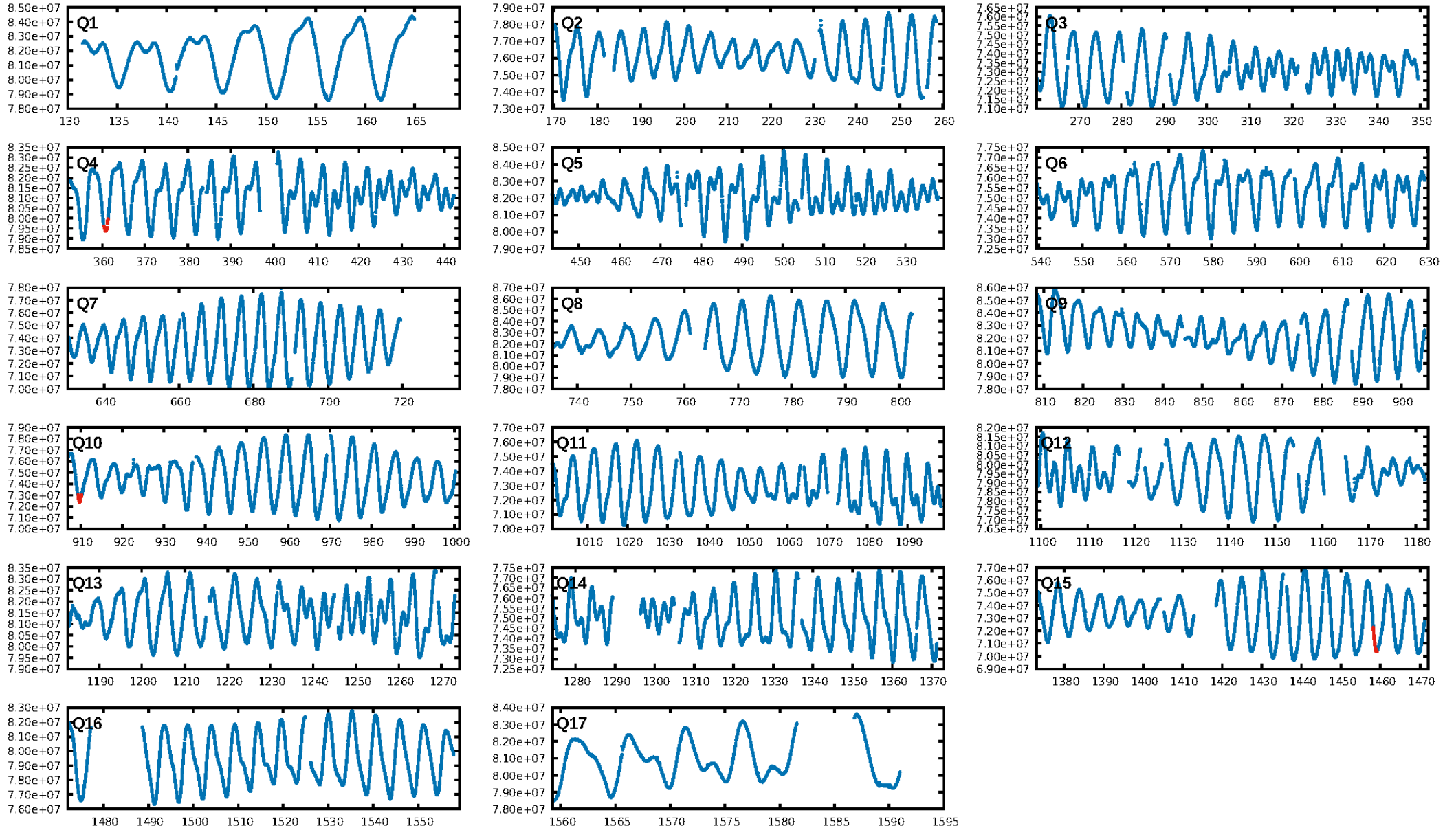
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.98 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.3%
ModelChiSquareGof-sig: 98.5%
Bootstrap-pfa: 5.33e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7559
Centroid-sig: 82.4%
Centroid-so: 0.049 arcsec [0.06 σ]
OotOffset-rm: 0.030 arcsec [0.38 σ]
KicOffset-rm: 0.056 arcsec [0.78 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

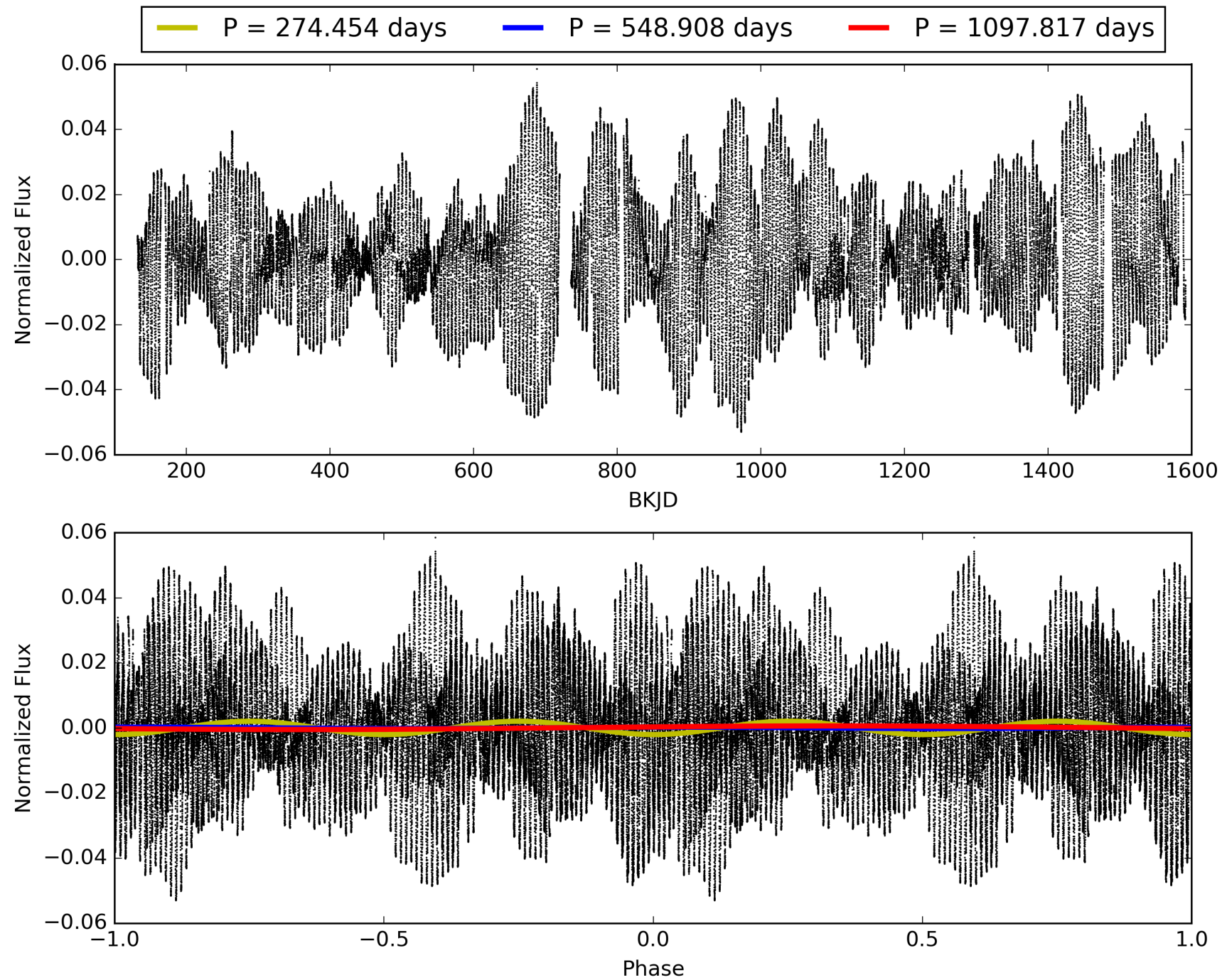
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:56:09 Z

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

TCE 006308708-01, PDC Light Curves

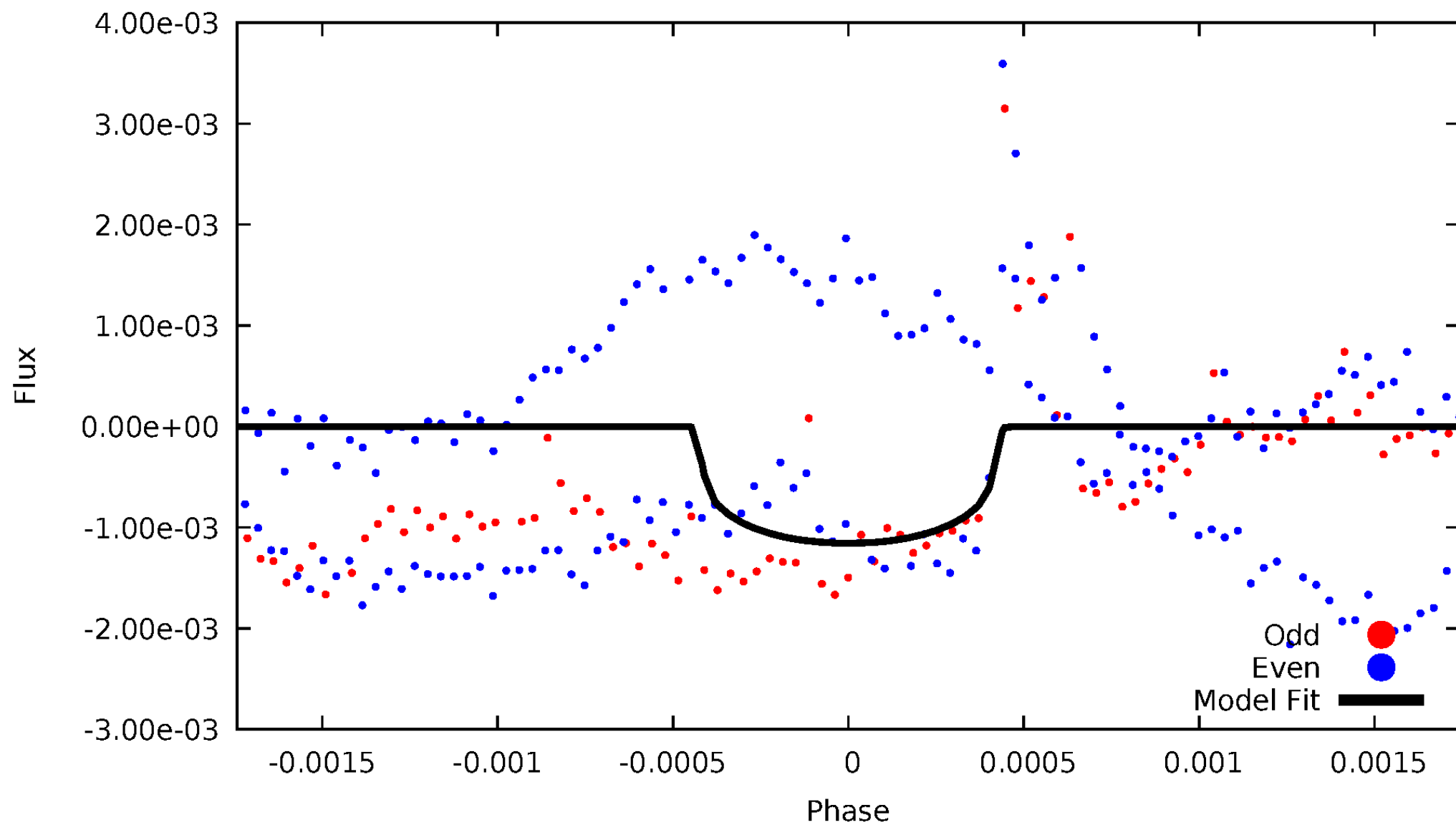


TCE 006308708-01



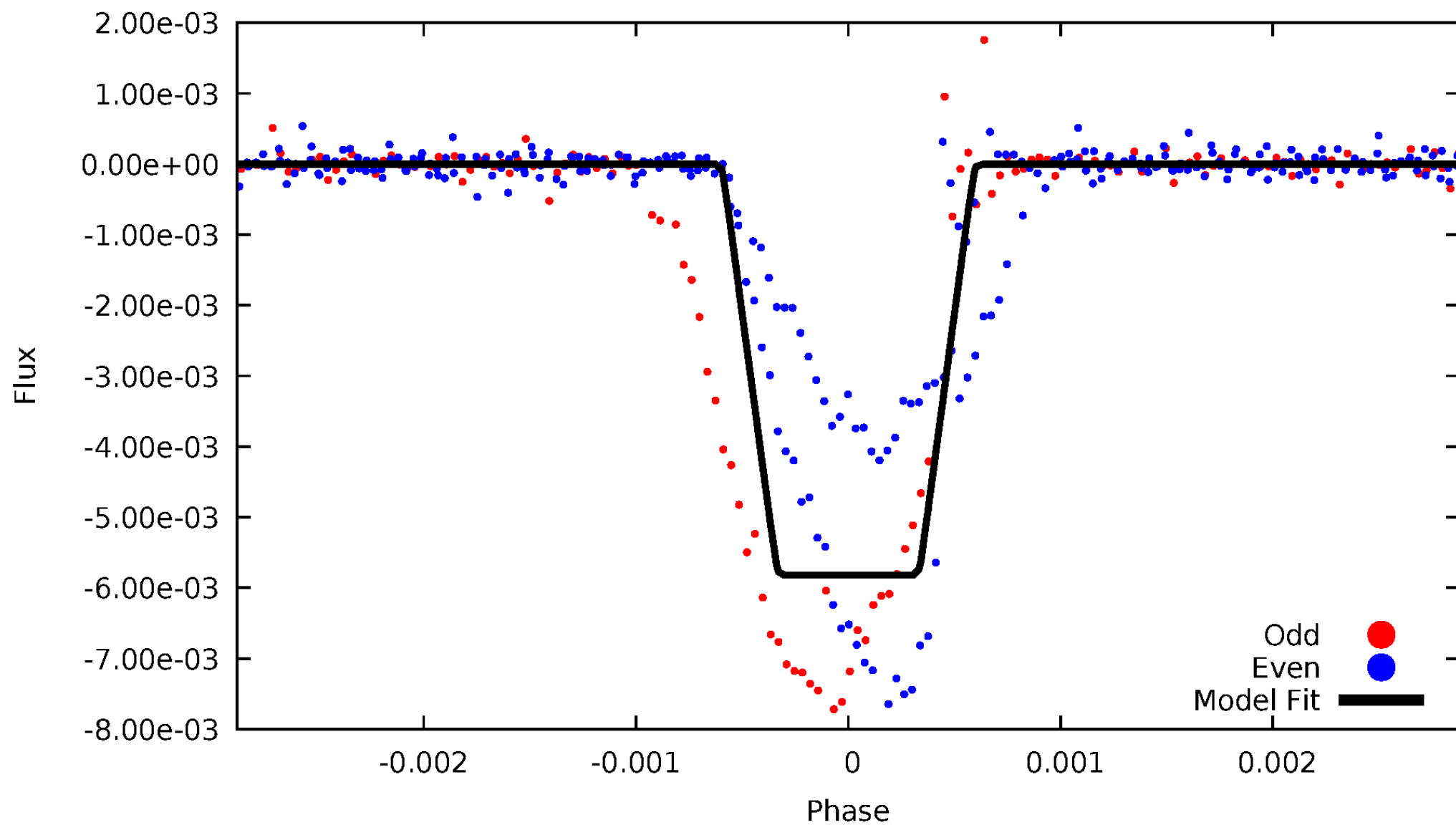
DV Odd/Even

TCE 006308708-01



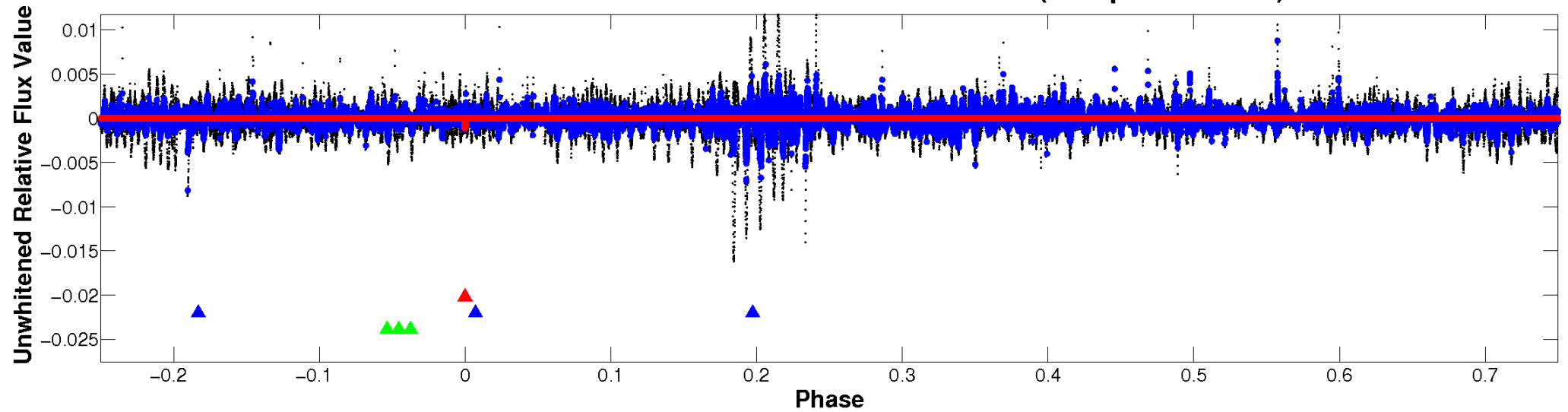
ALT Odd/Even

TCE 006308708-01

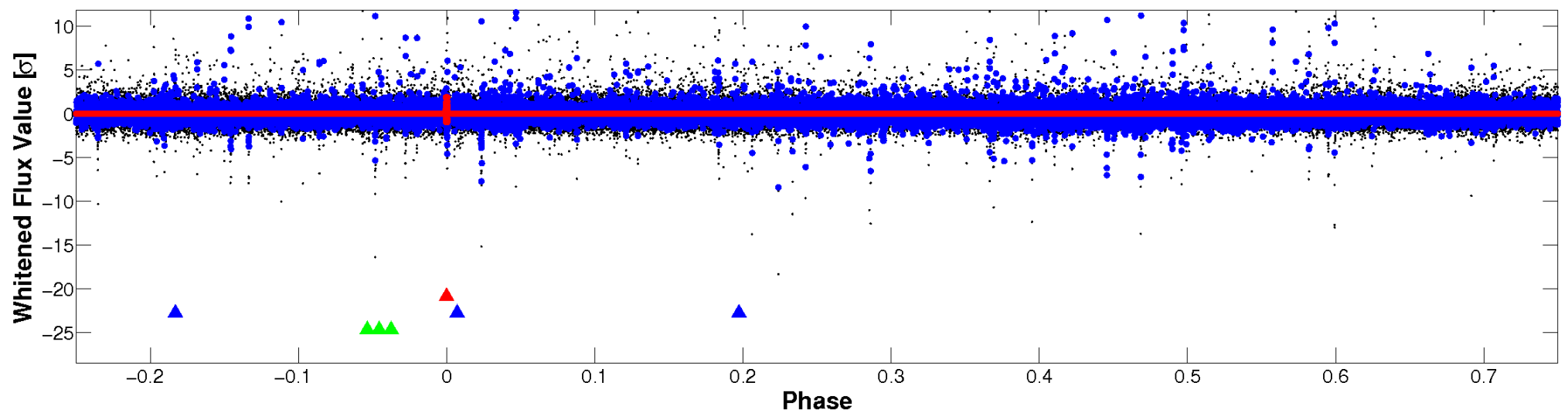


Non-Whitened Vs. Whitened Light Curve

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

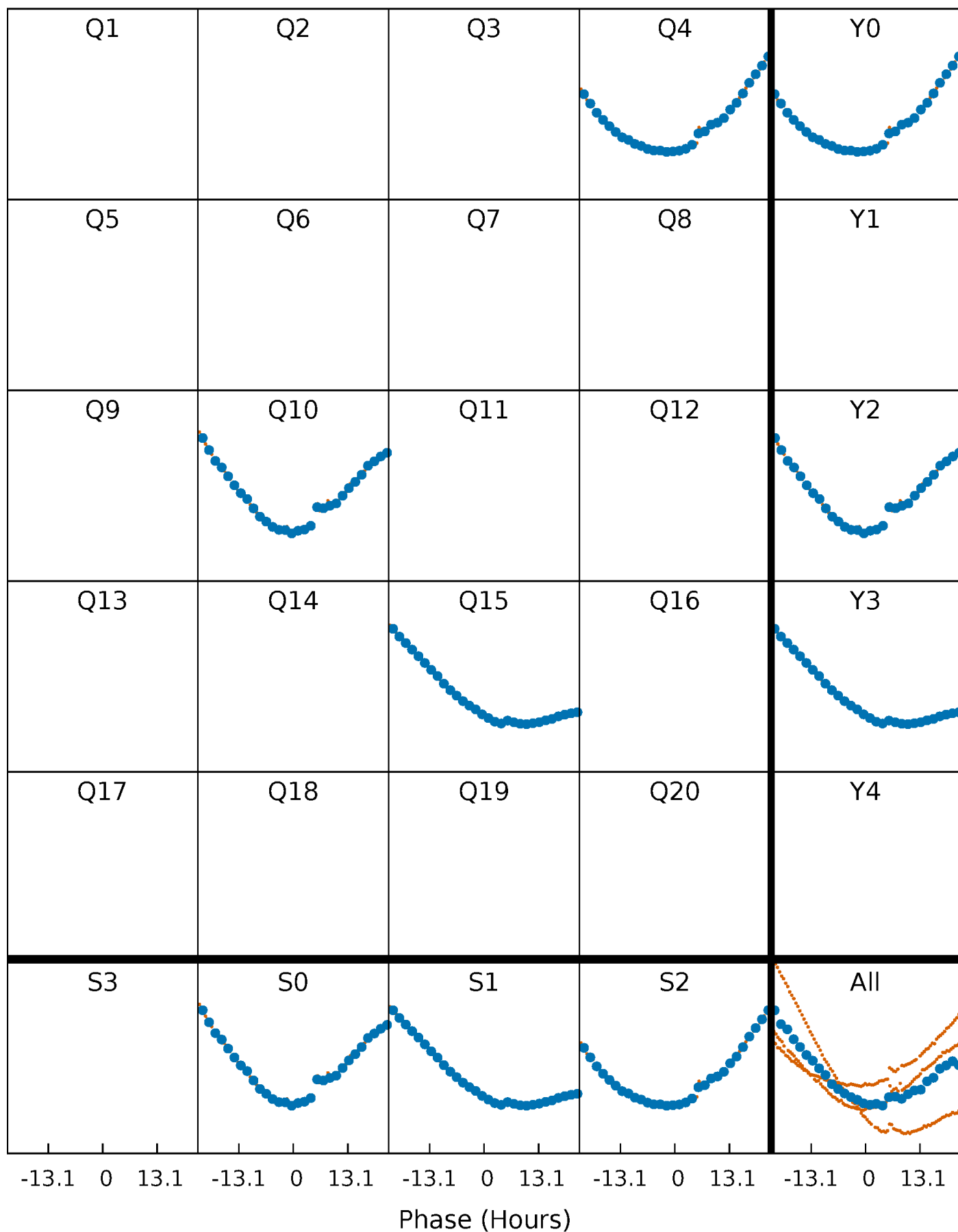


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



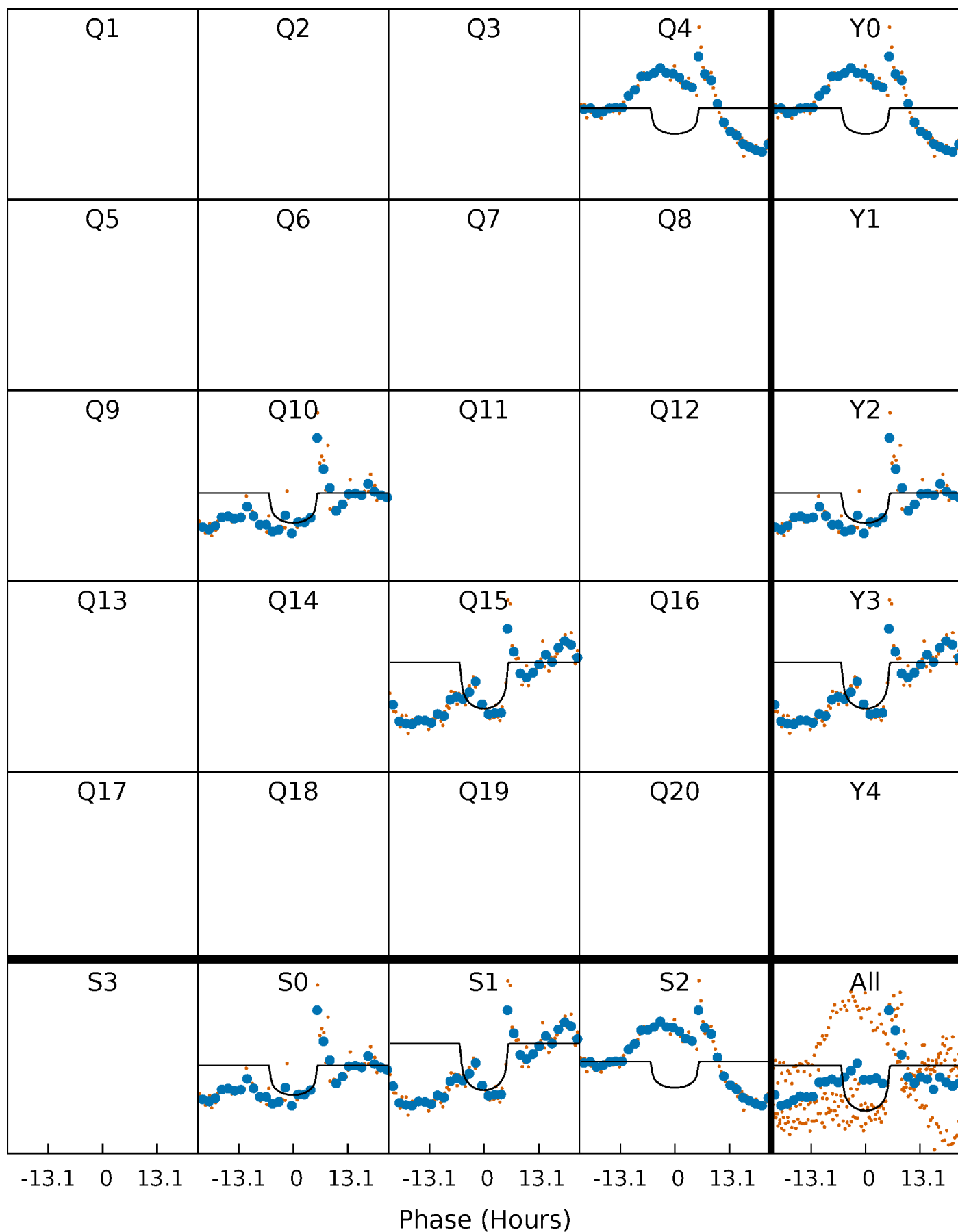
PDC Quarter-Phased Transit Curves

TCE 006308708-01 P=548.908439 Days $T_0=360.839604$ (BKJD)



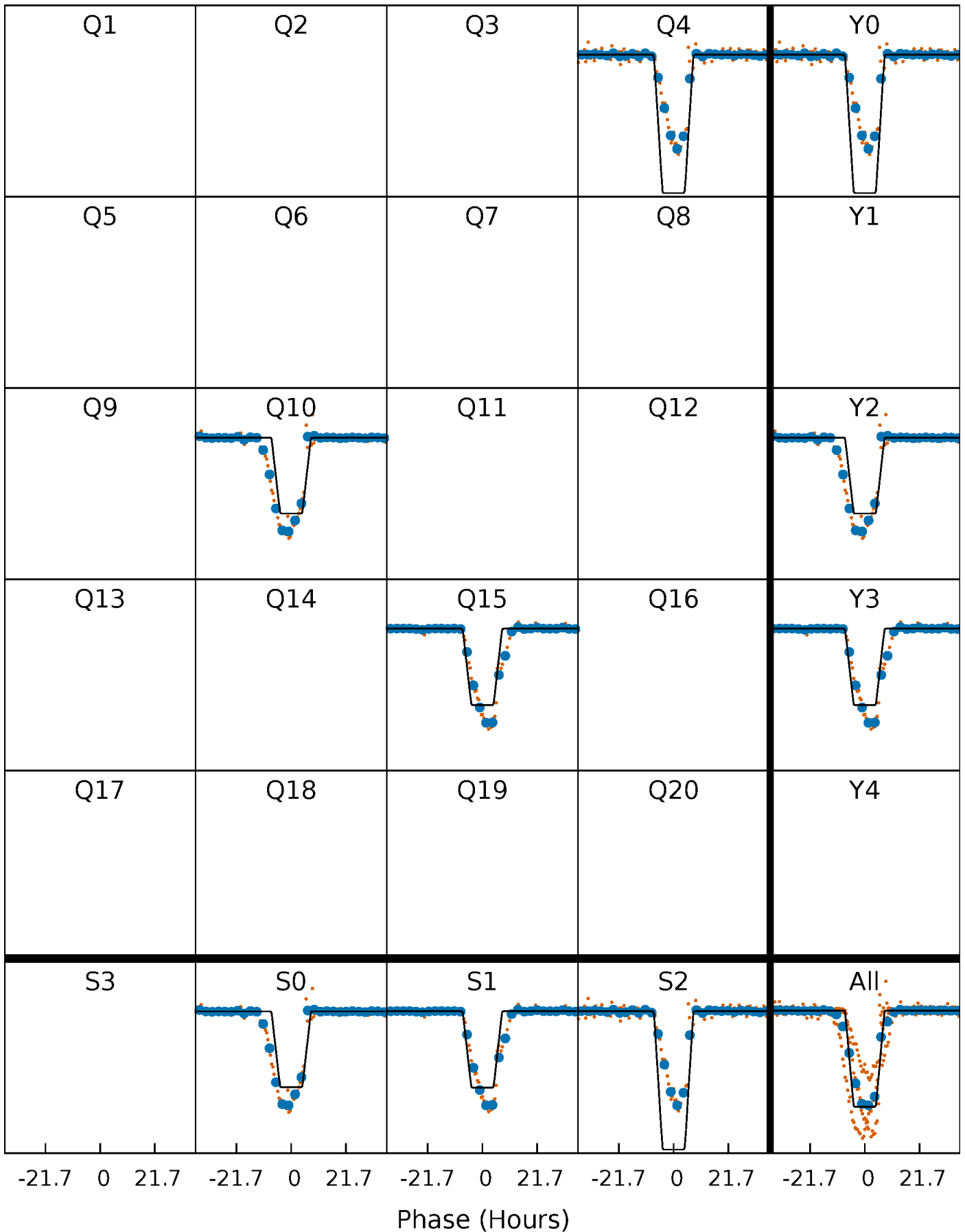
DV Quarter-Phased Transit Curves

TCE 006308708-01 P=548.908439 Days $T_0=360.839604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

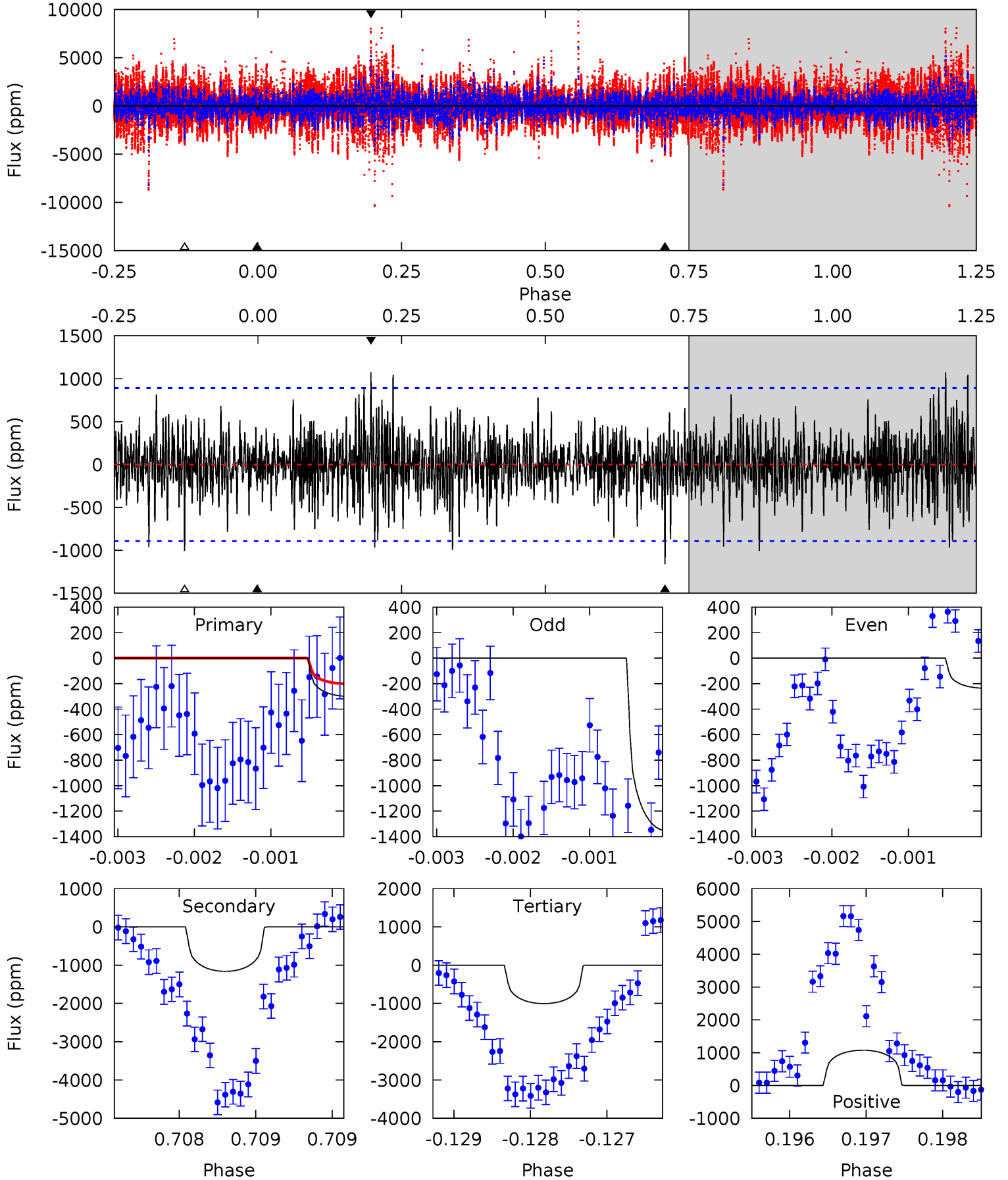
TCE 006308708-01 P=548.906722 Days $T_0=360.837259$ (BKJD)



DV Model-Shift Uniqueness Test

006308708-01, P = 548.908439 Days, E = 360.839604 Days

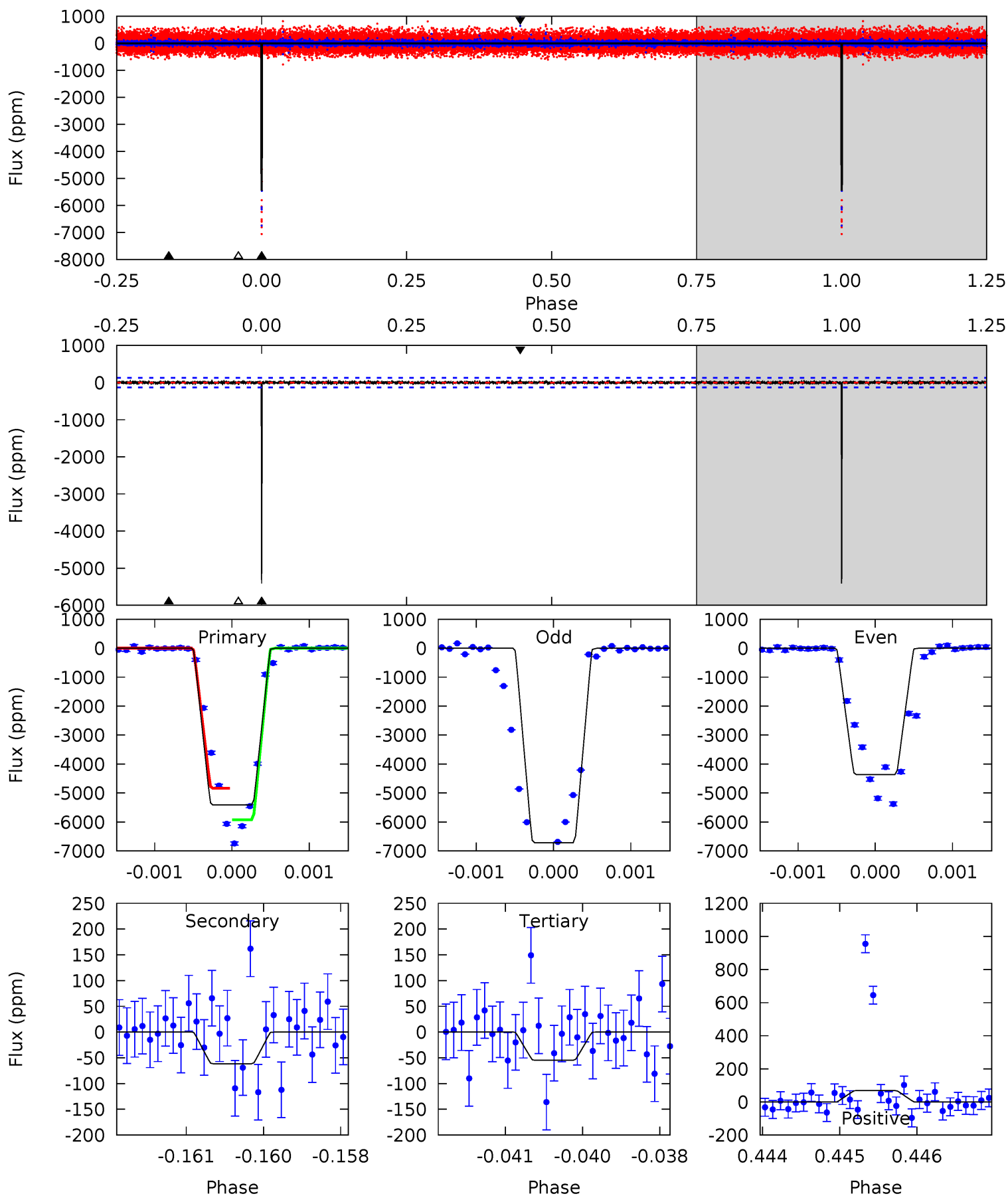
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.84	7.13	6.17	6.60	5.48	3.33	1.67	-4.33	-4.76	0.97	0.53	2.99	0.29	0.48	0.64



Alt Model-Shift Uniqueness Test

006308708-01, P = 548.906722 Days, E = 360.837259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
224.3	2.54	2.26	2.84	5.42	3.24	0.57	222.0	221.4	0.28	-0.29	68.9	0.87	0.01	0



Stellar Parameters For KIC 006308708

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5037^{+151}_{-136}	$4.579^{+0.071}_{-0.058}$	$-0.460^{+0.350}_{-0.300}$	$0.696^{+0.081}_{-0.067}$	$0.670^{+0.090}_{-0.042}$	$2.801^{+0.893}_{-0.566}$
	+3%/-3%	+2%/-1%	+76%/-65%	+12%/-10%	+13%/-6%	+32%/-20%
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 006308708-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1162 ± 163	$2.33^{+0.97}_{-0.92}$	241^{+10}_{-9}	5282^{+1540}_{-734}	$155630^{+289234}_{-79233}$
Alt.	-61 ± 24	$5.76^{+1.06}_{-0.94}$	242^{+9}_{-9}	2462^{+155}_{-160}	1336^{+859}_{-586}

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

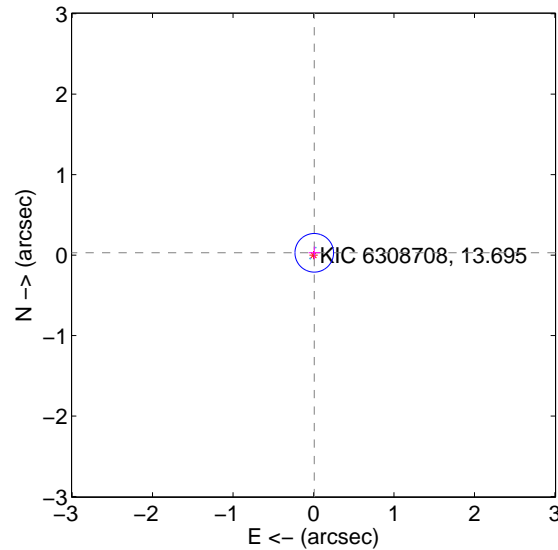
Supplemental centroid analysis for 006308708-01. Kepler magnitude: 13.70. Transit SNR 6.05

There are 3 quarters with good PRF difference image offsets

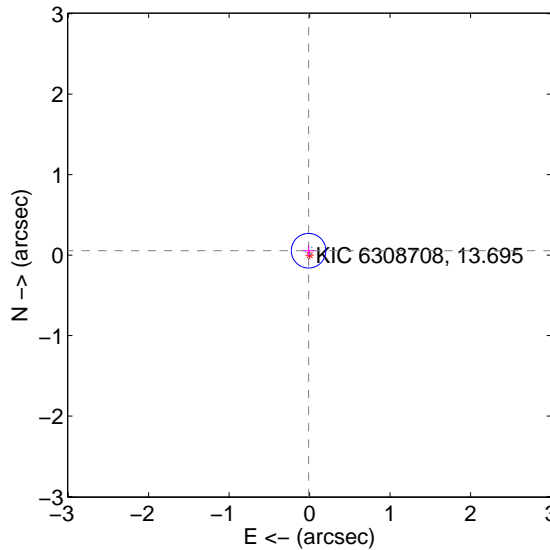
The direct PRF centroid is offset from the target star catalog position by about 0.00 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.080	0.38	-0.009 ± 0.070	0.029 ± 0.077
PRF-fit source offset from KIC position	0.056 ± 0.072	0.78	0.012 ± 0.073	0.054 ± 0.072
photometric centroid source offset	0.05 ± 0.82	0.06	-0.05 ± 0.82	-0.00 ± 0.48

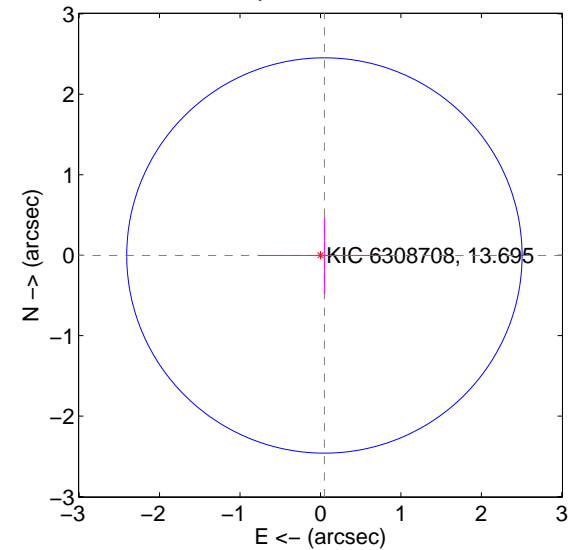
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

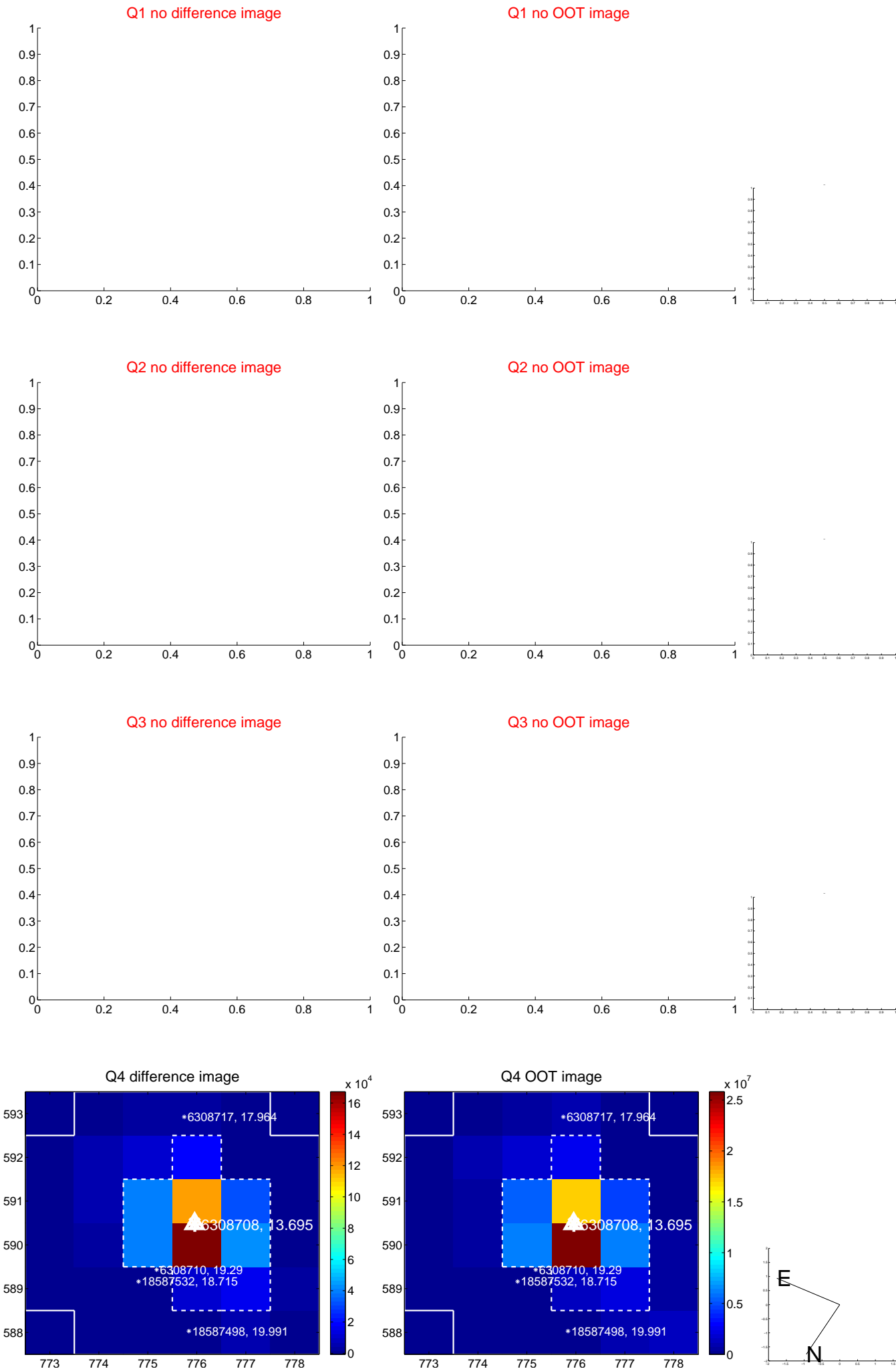


offset from photometric centroids



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.

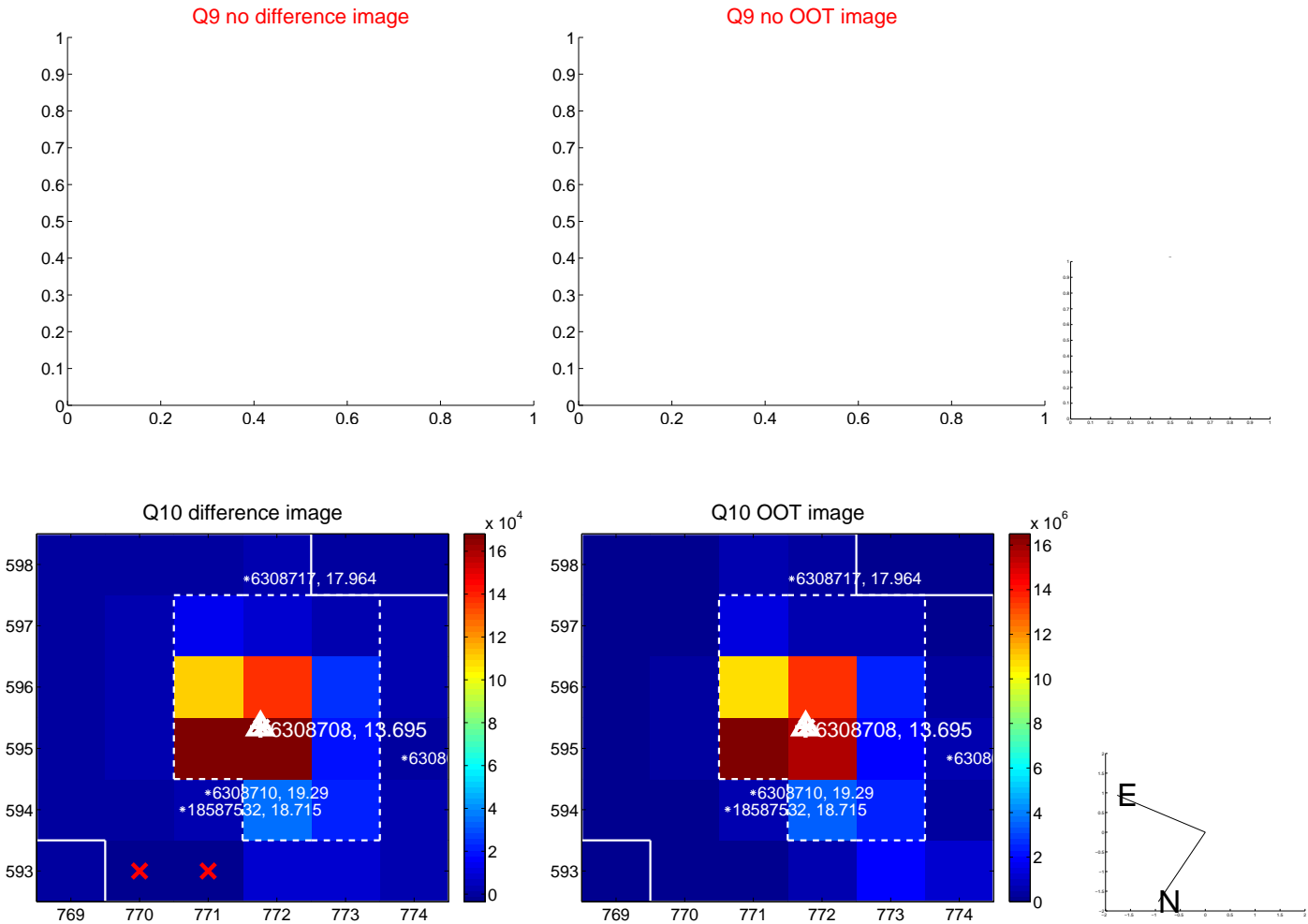
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



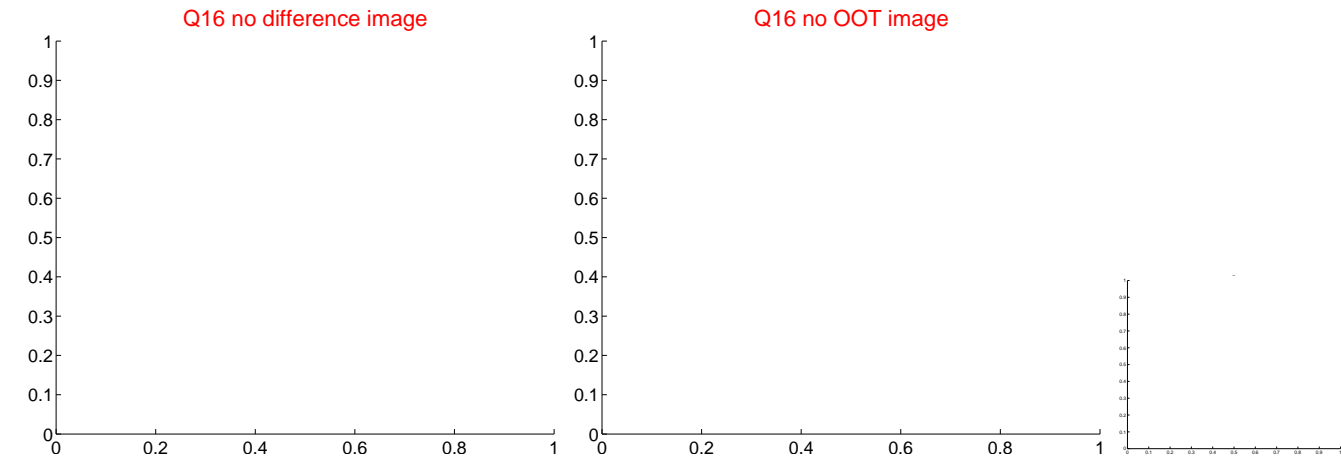
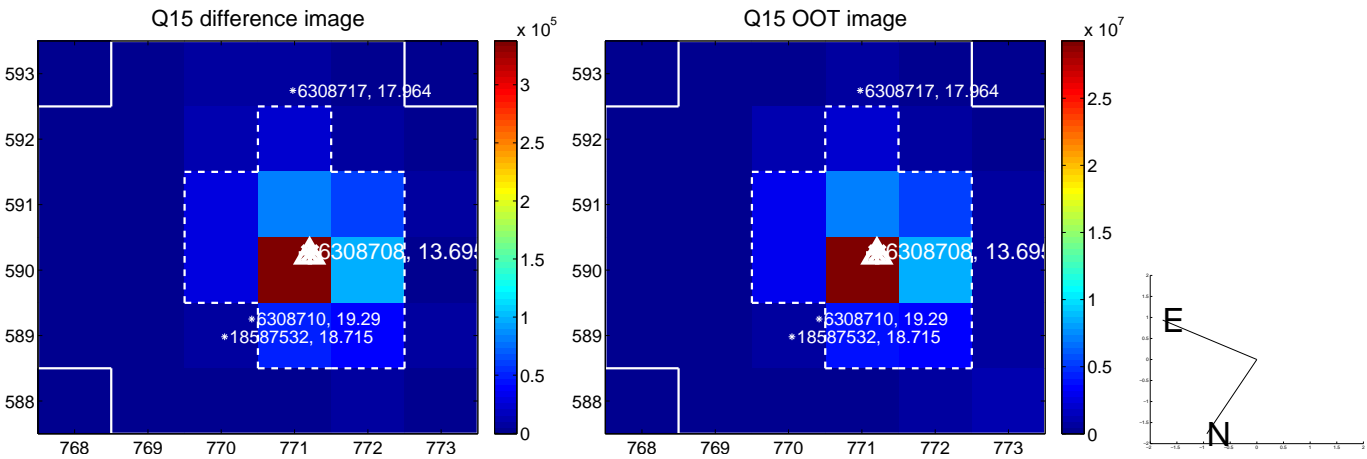
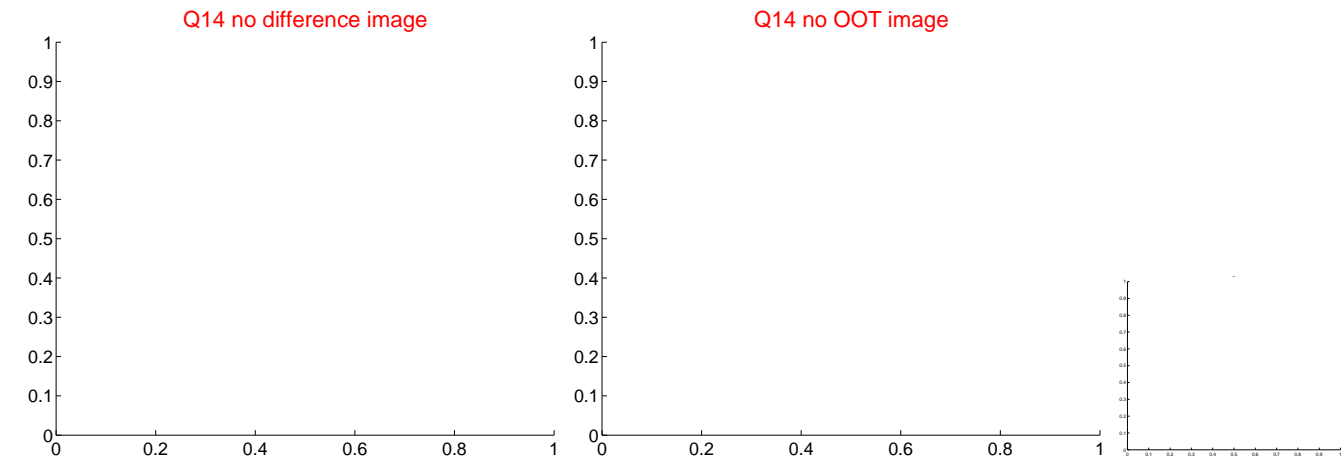
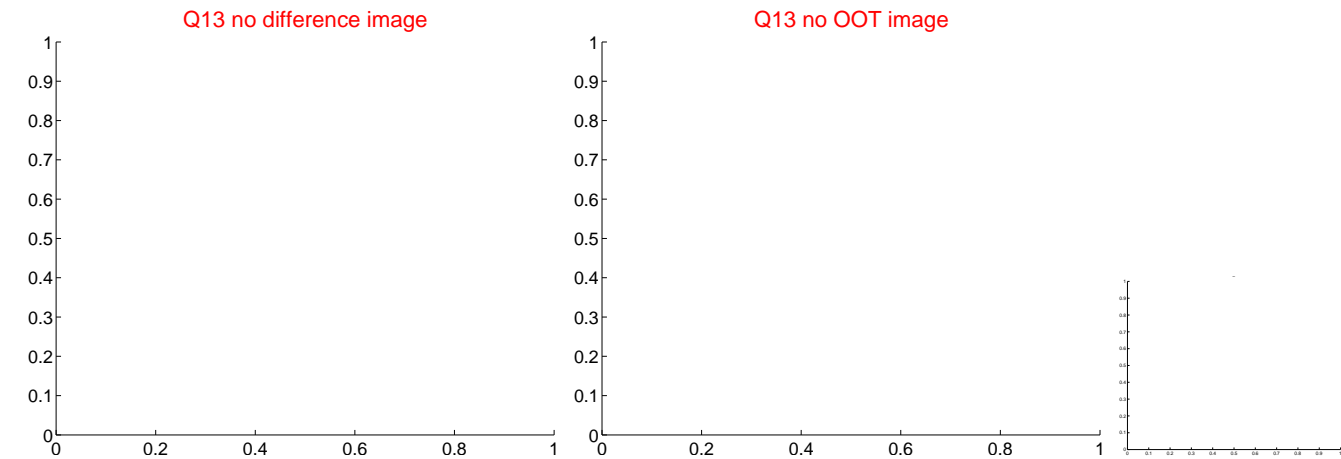
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



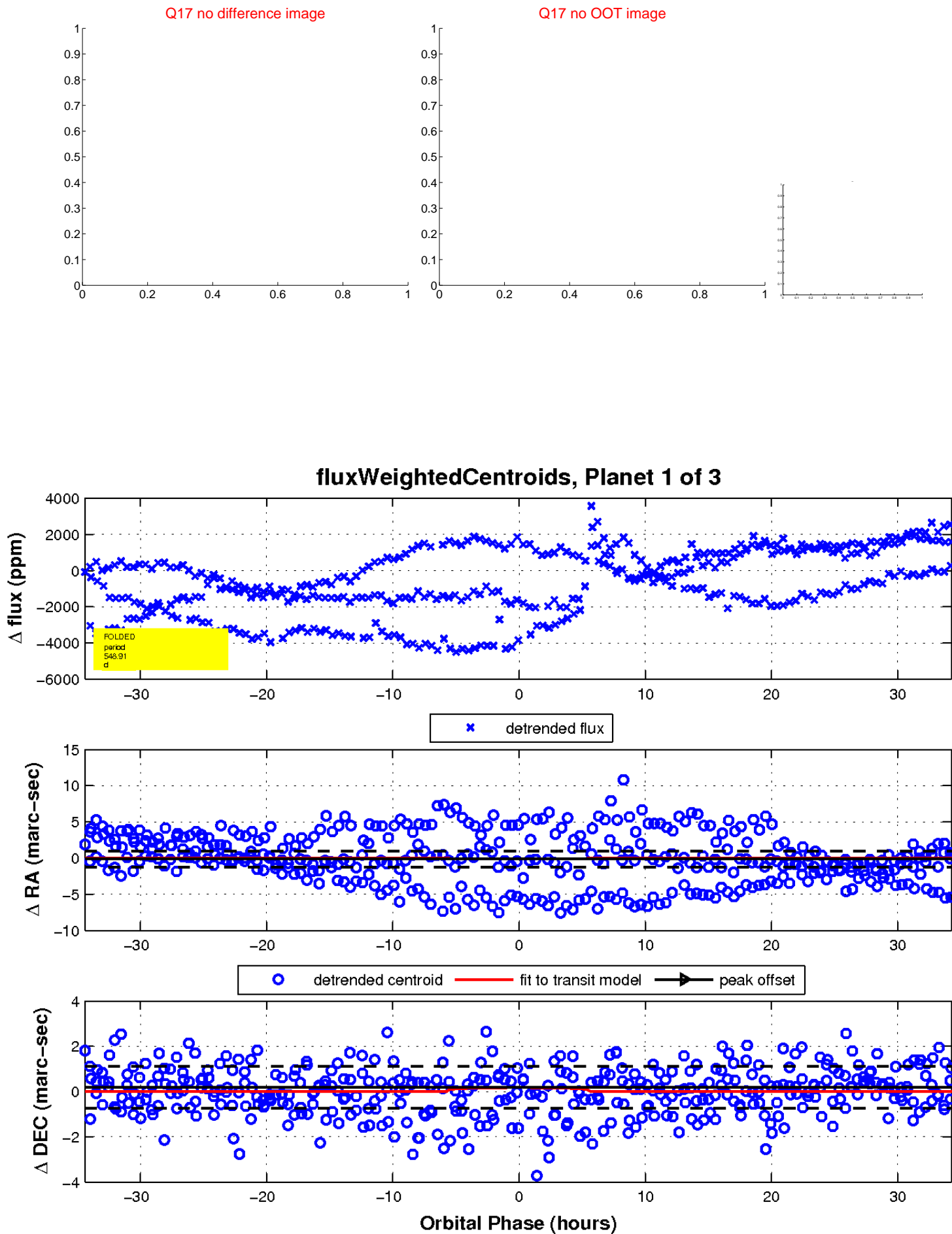
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

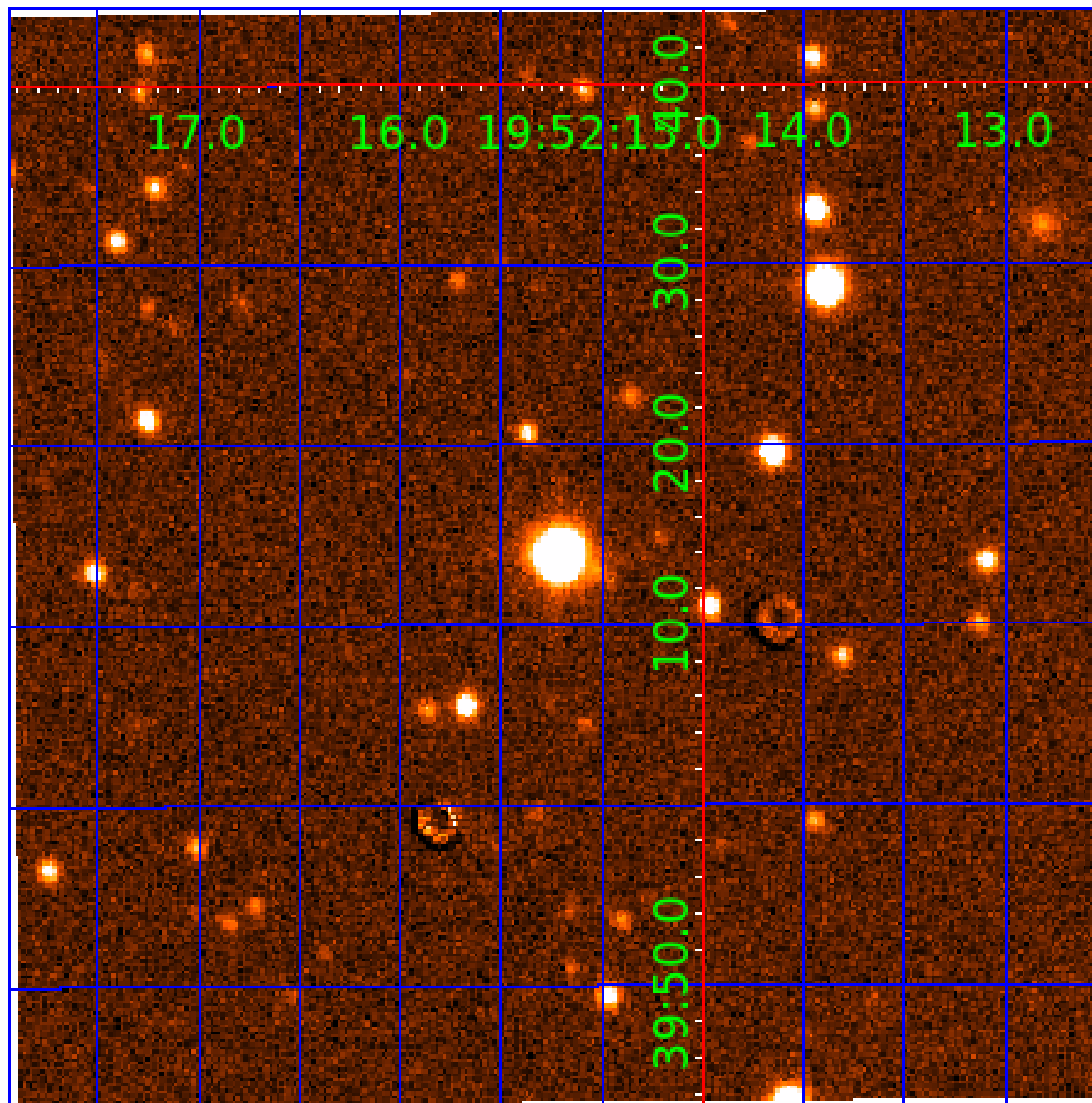


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006308708

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})
006308708-01	OBS	No	548.908439	360.839604	1157.5	11.474	17.3	6.0	0.70	5037	2.31	0.21
006308708-02	OBS	No	444.513278	469.153281	858.8	3.296	11.9	7.9	0.70	5037	2.08	0.28
006308708-03	OBS	No	544.490119	340.287064	191.3	13.510	10.7	1.2	0.70	5037	1.04	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006308708-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
006308708-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006308708-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

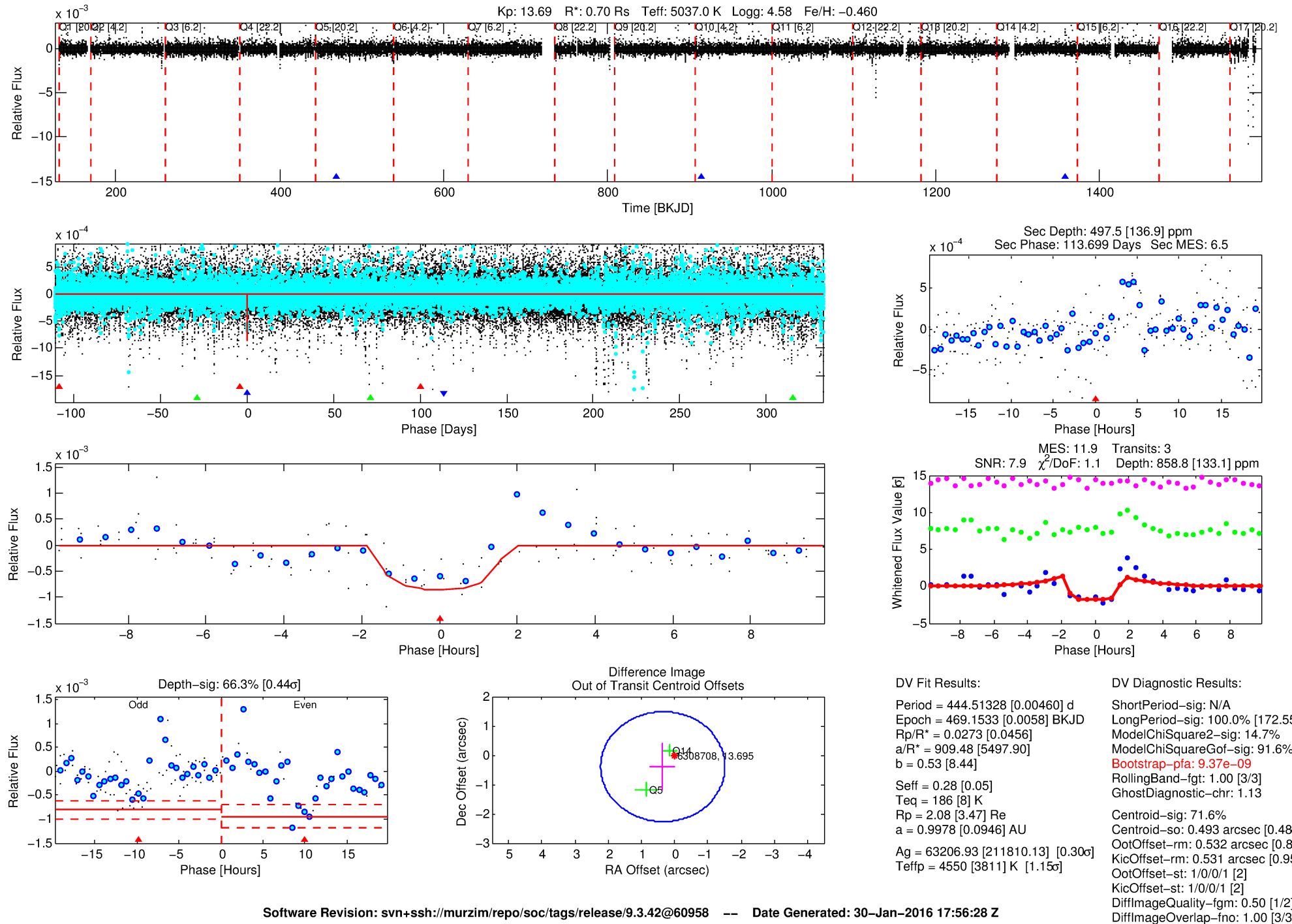
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006308708-02

No Significant Match Found

DV One-Page Summary

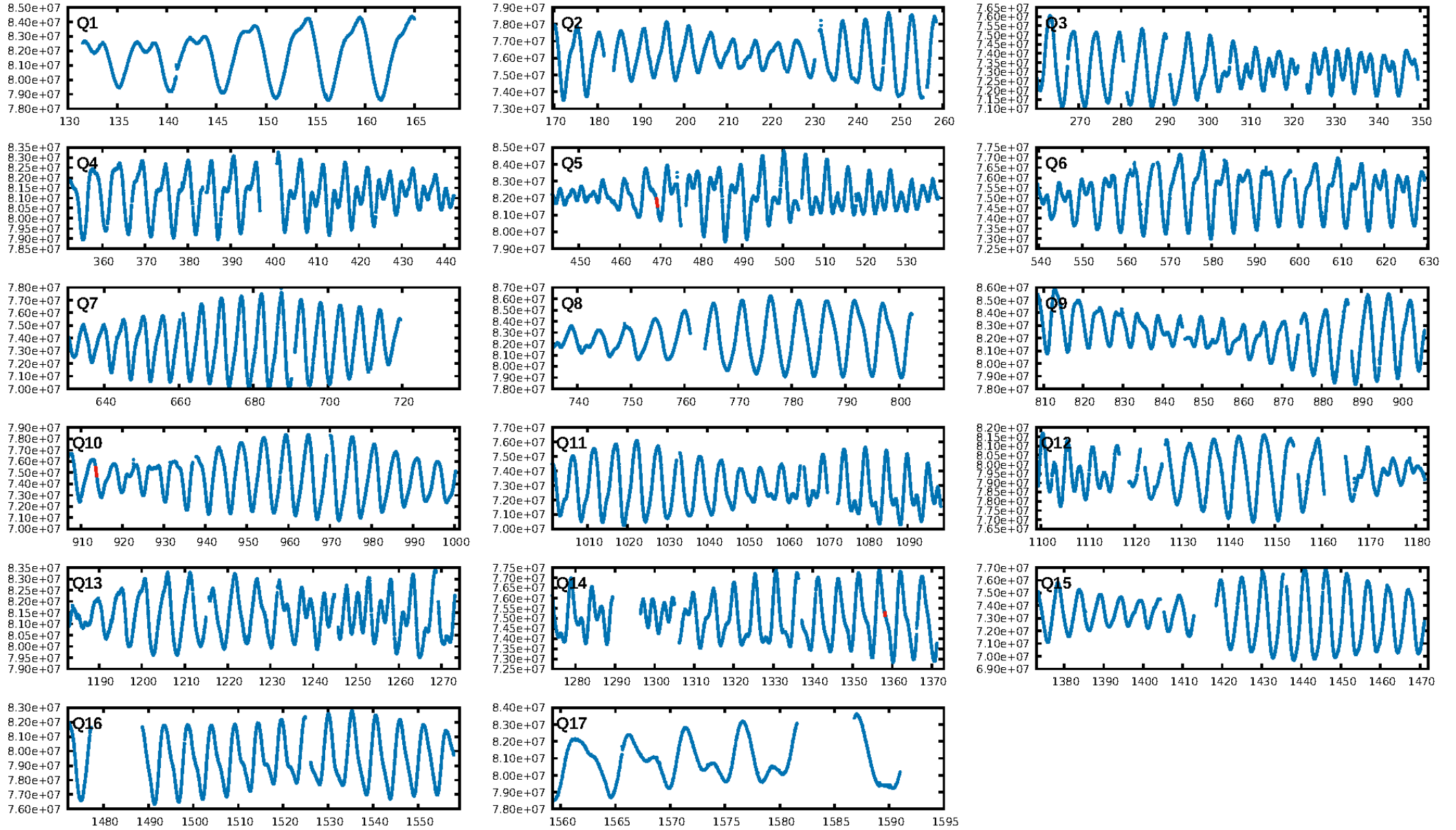
KIC: 6308708 Candidate: 2 of 3 Period: 444.513 d



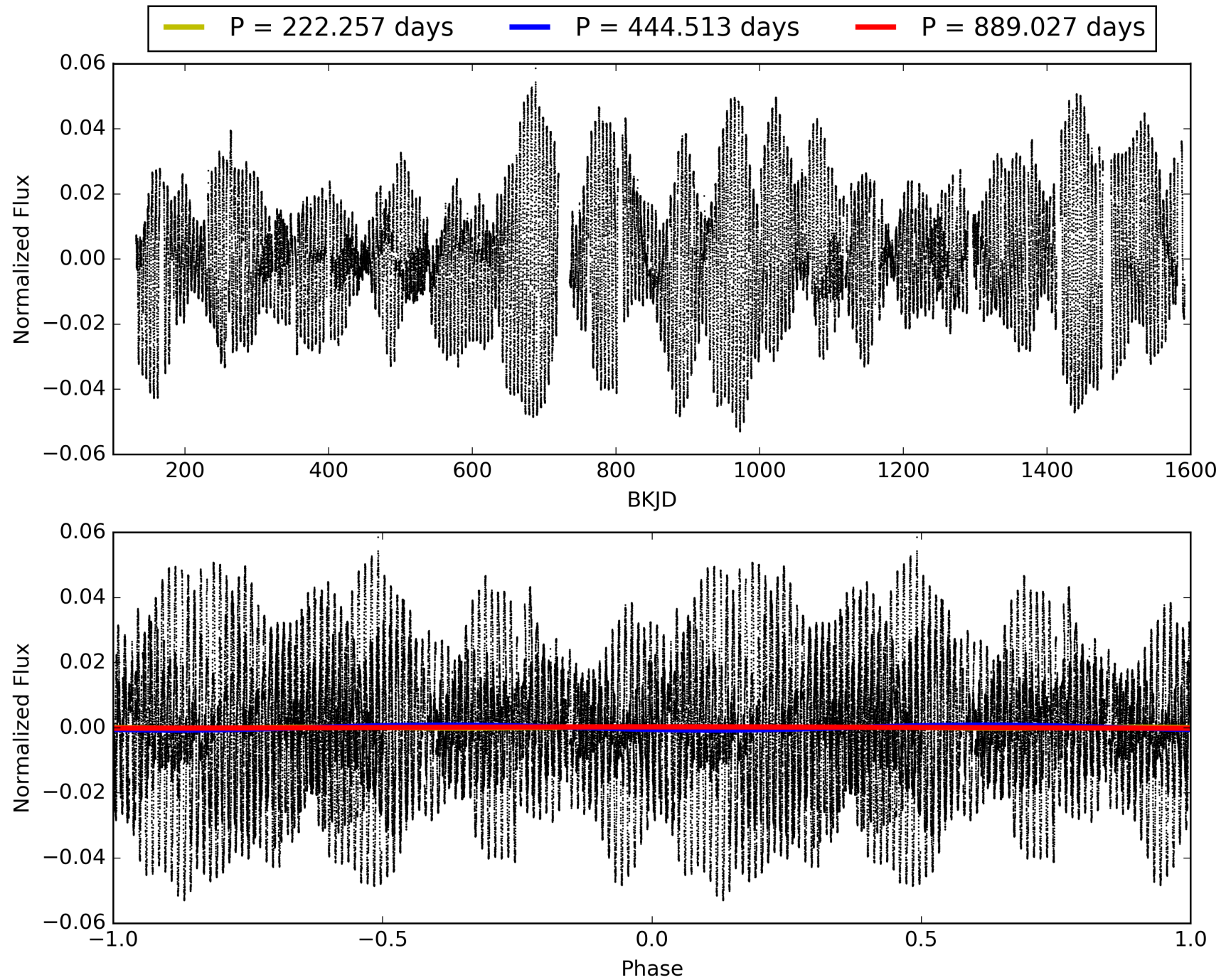
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:56:28 Z

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

TCE 006308708-02, PDC Light Curves

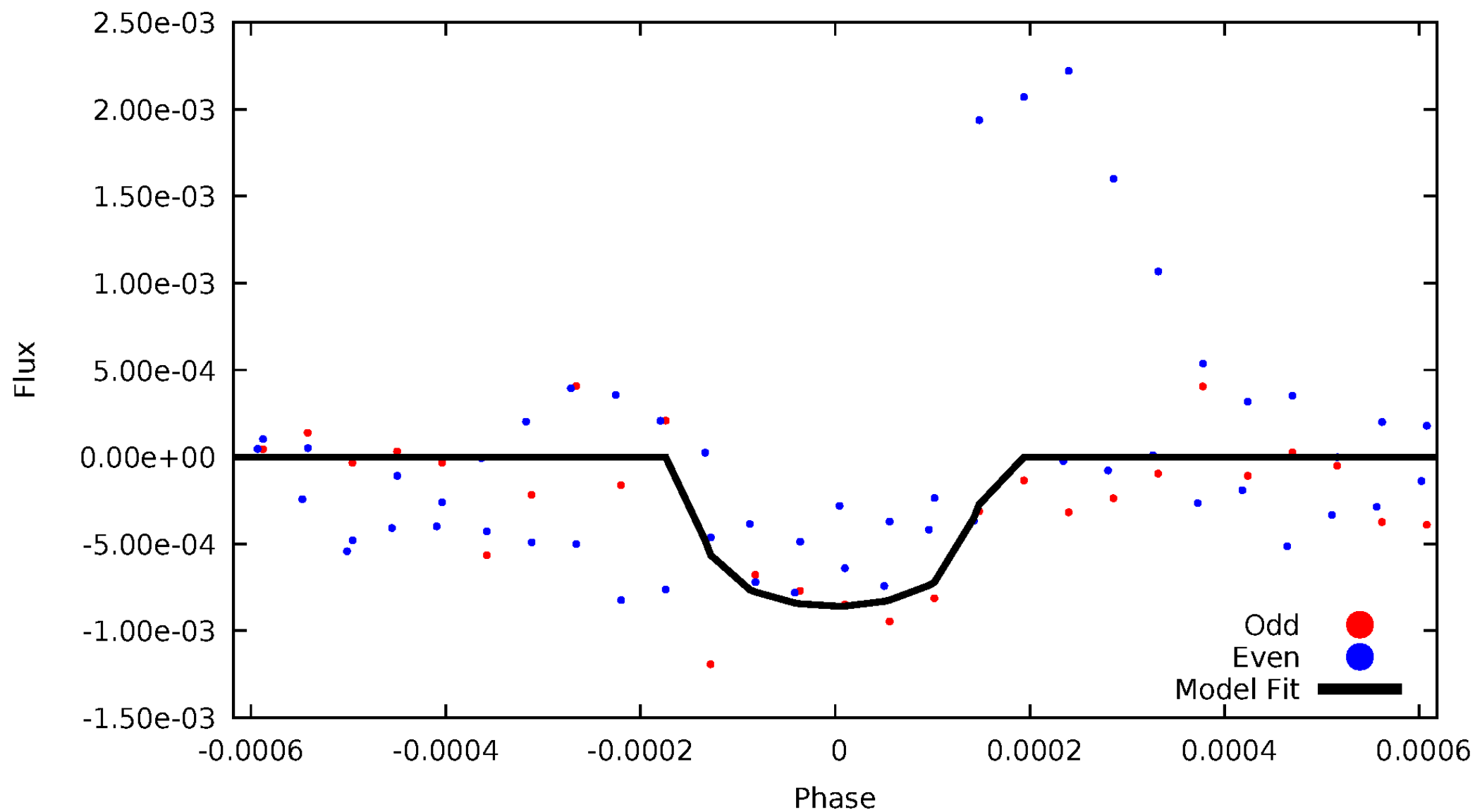


TCE 006308708-02



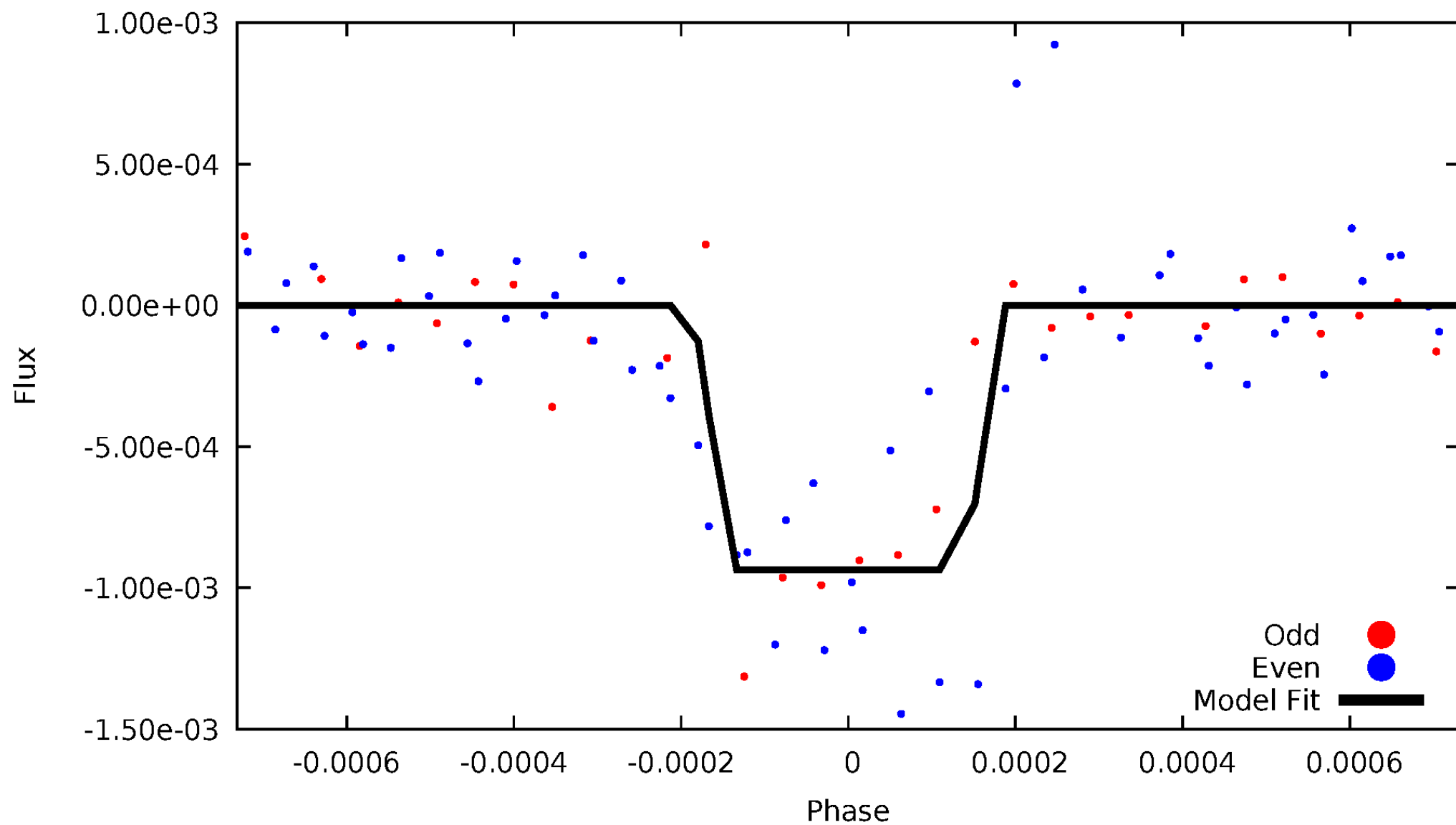
DV Odd/Even

TCE 006308708-02



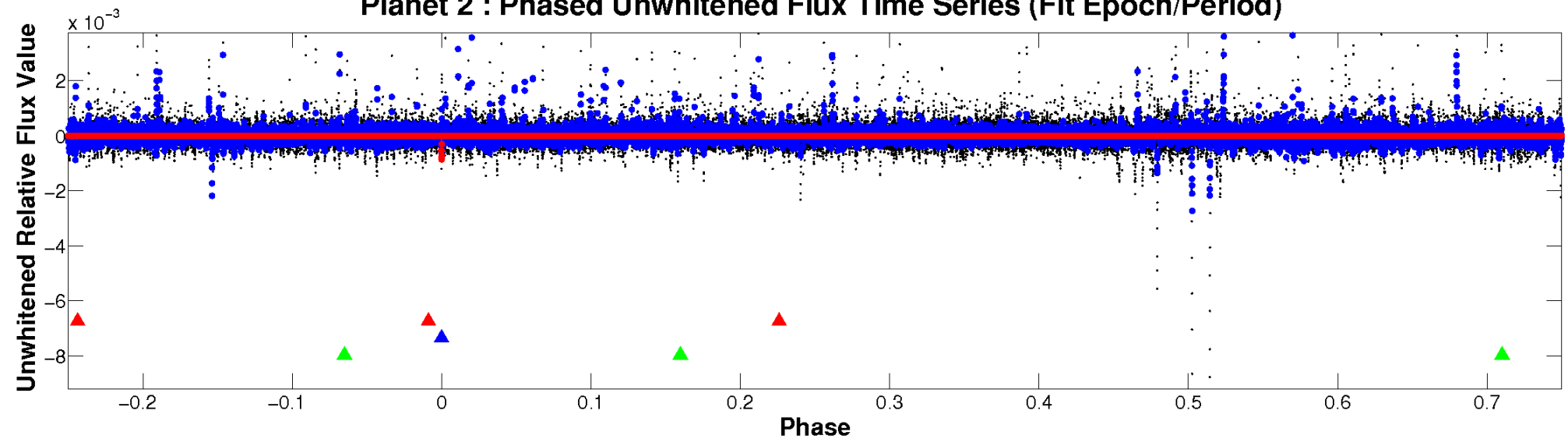
ALT Odd/Even

TCE 006308708-02

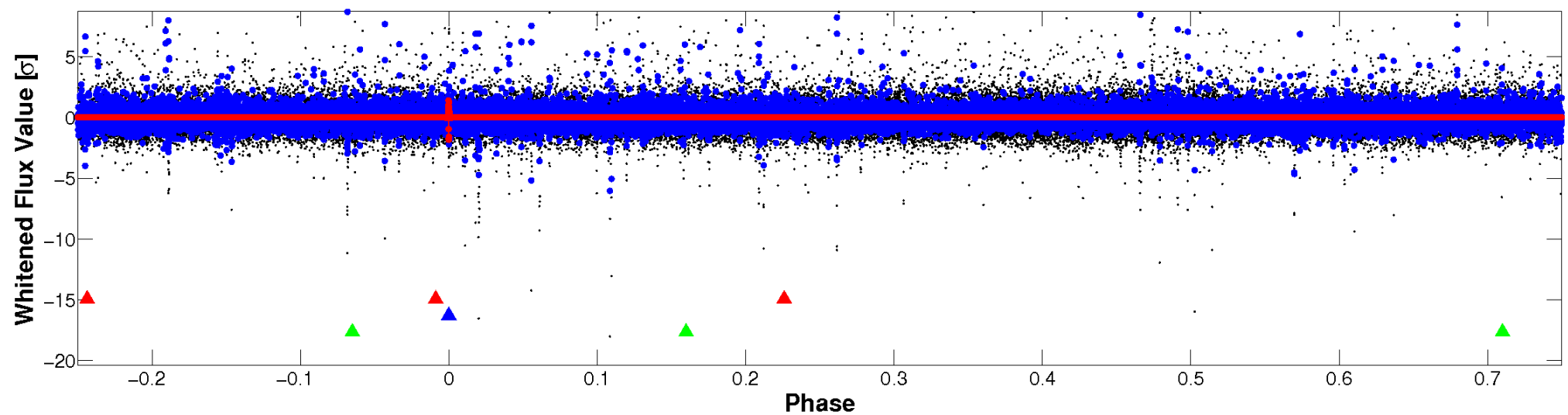


Non-Whitened Vs. Whitened Light Curve

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

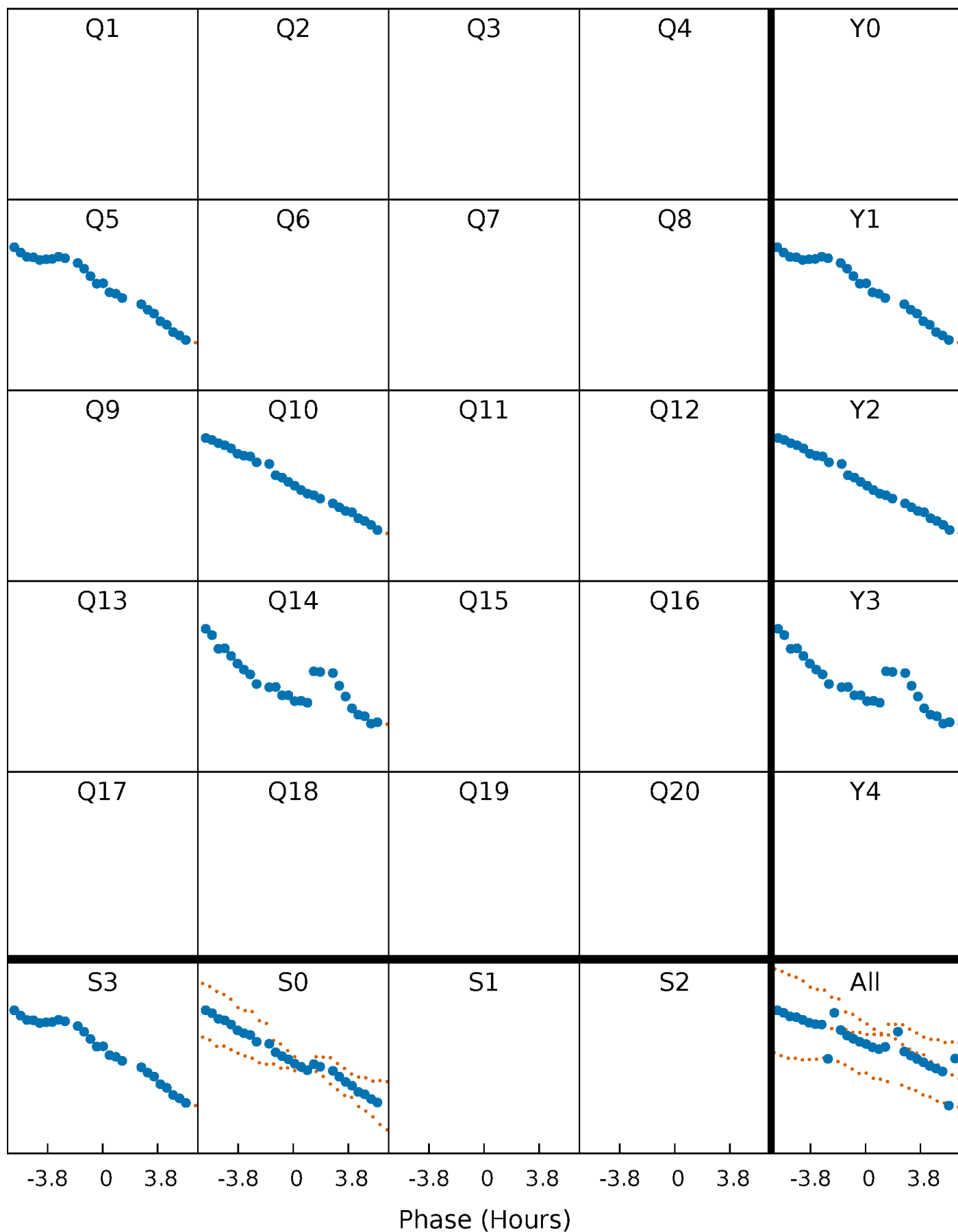


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



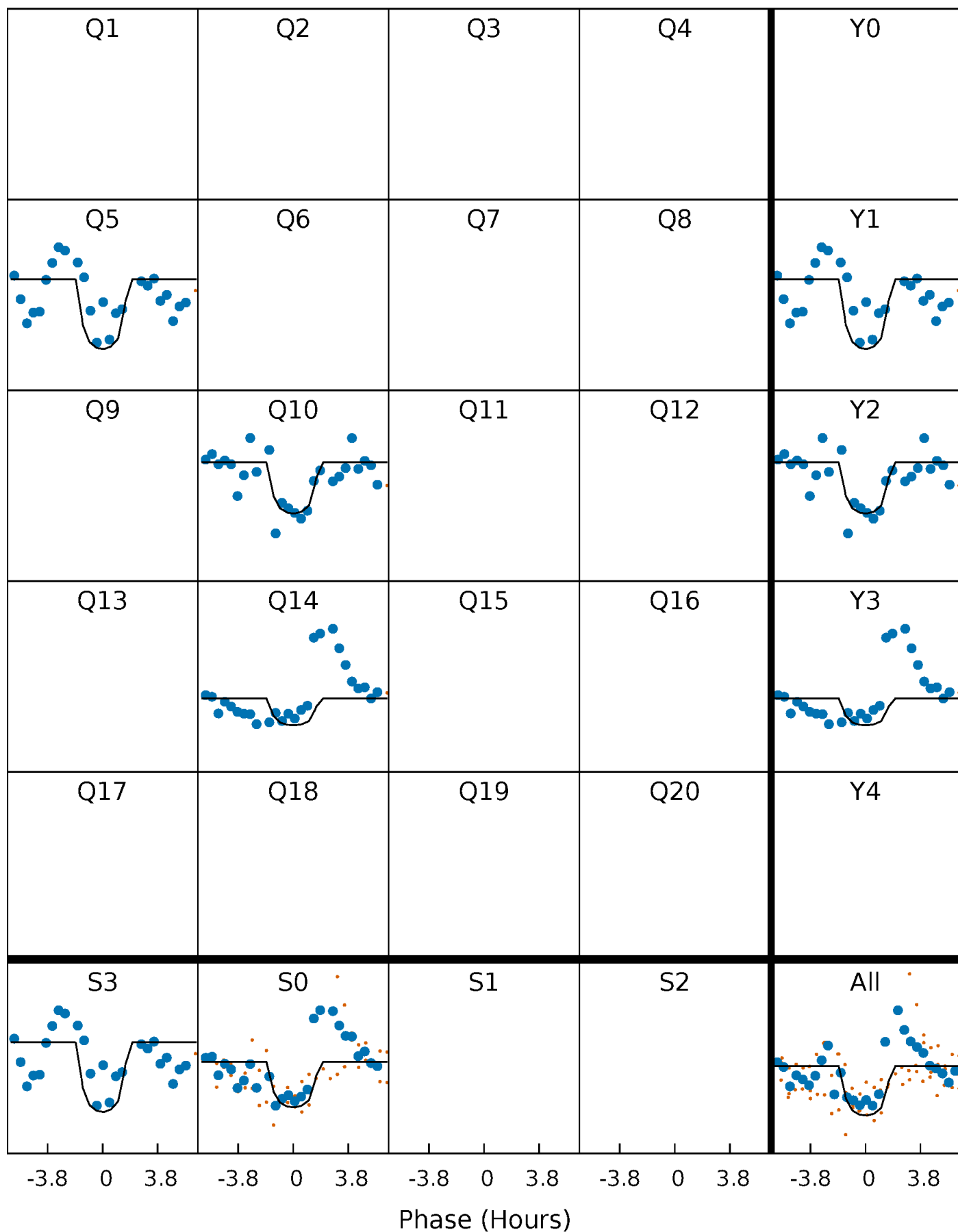
PDC Quarter-Phased Transit Curves

TCE 006308708-02 $P=444.513278$ Days $T_0=469.153281$ (BKJD)



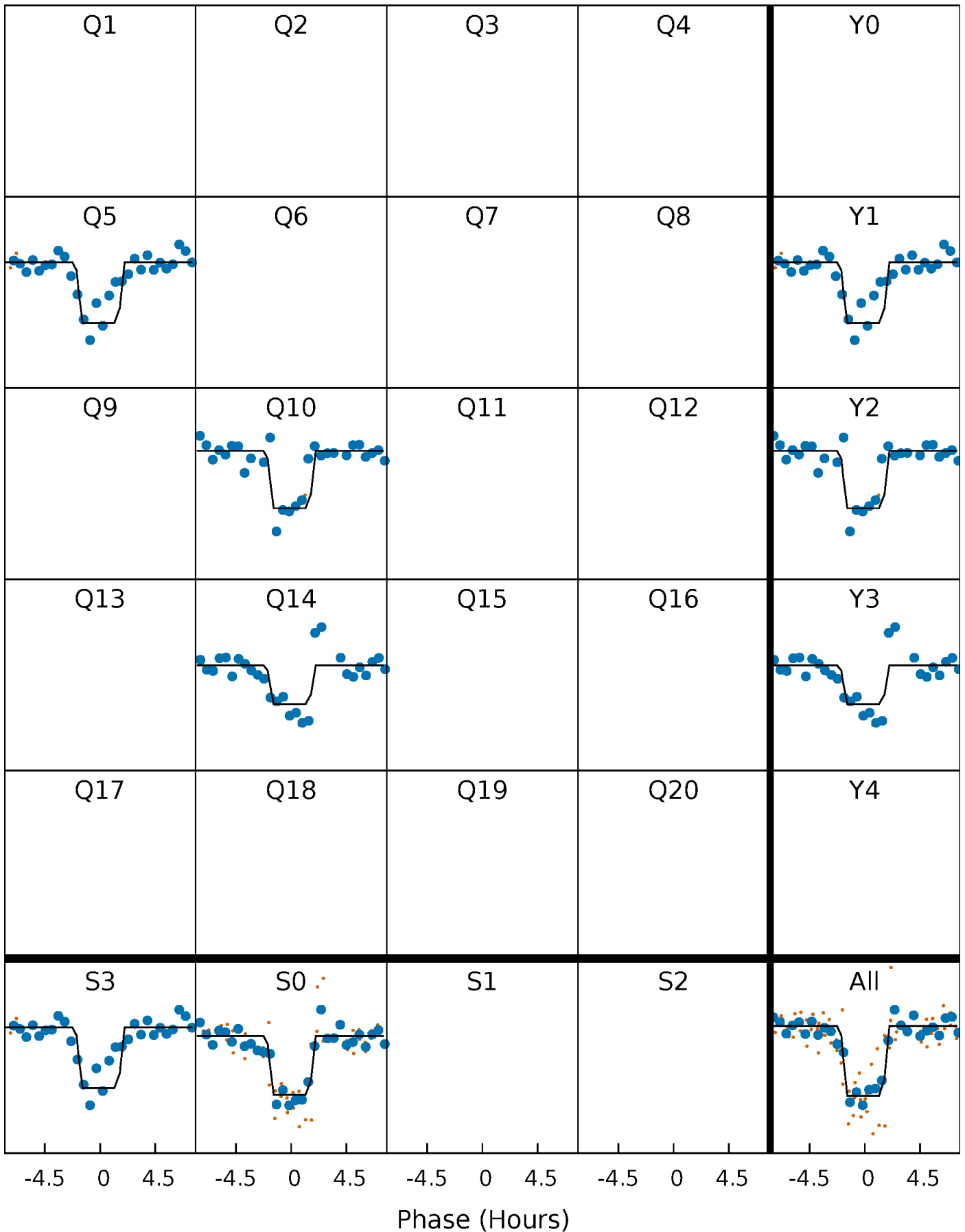
DV Quarter-Phased Transit Curves

TCE 006308708-02 $P=444.513278$ Days $T_0=469.153281$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

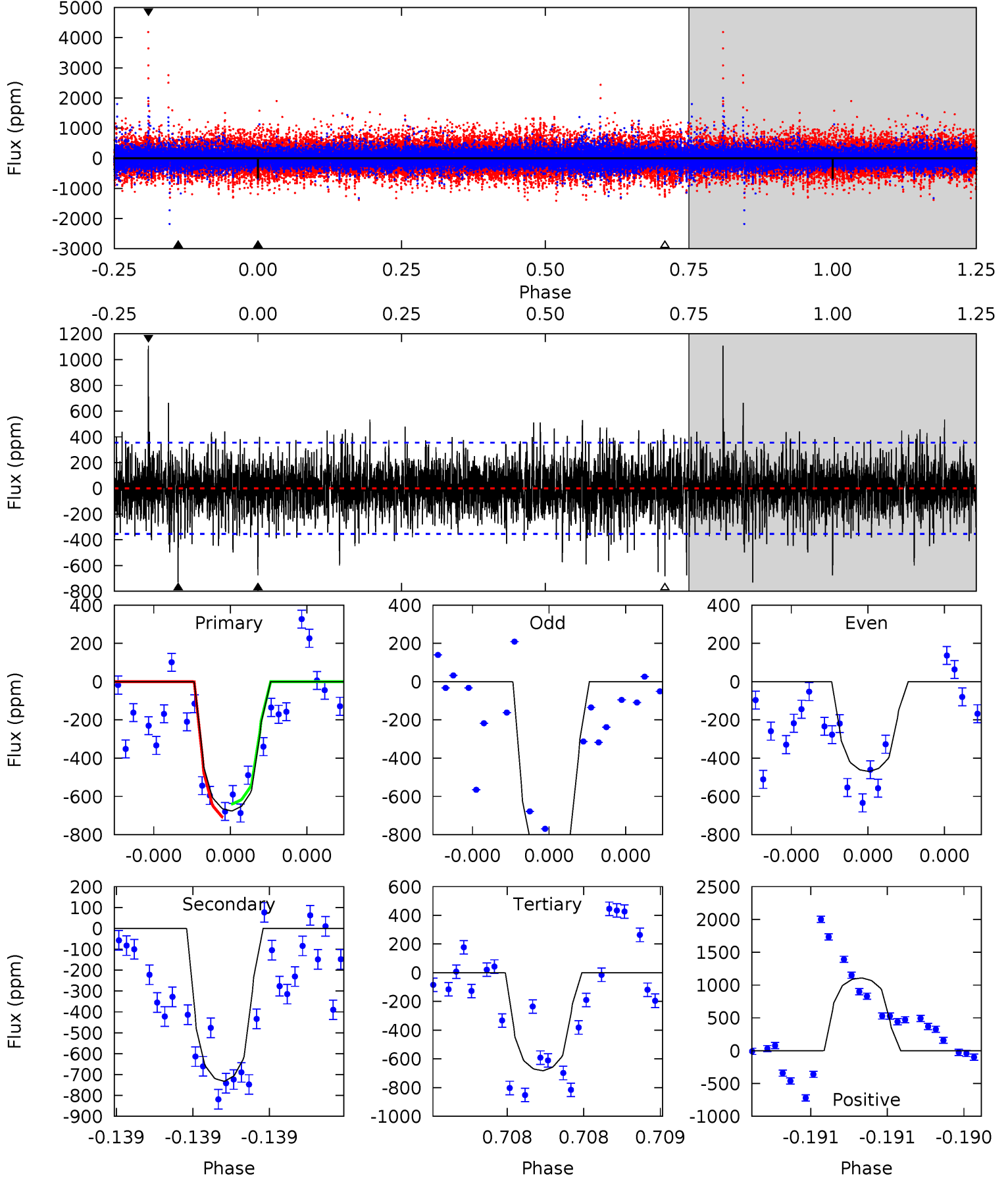
TCE 006308708-02 P=444.491231 Days $T_0=469.173759$ (BKJD)



DV Model-Shift Uniqueness Test

006308708-02, P = 444.513278 Days, E = 24.640003 Days

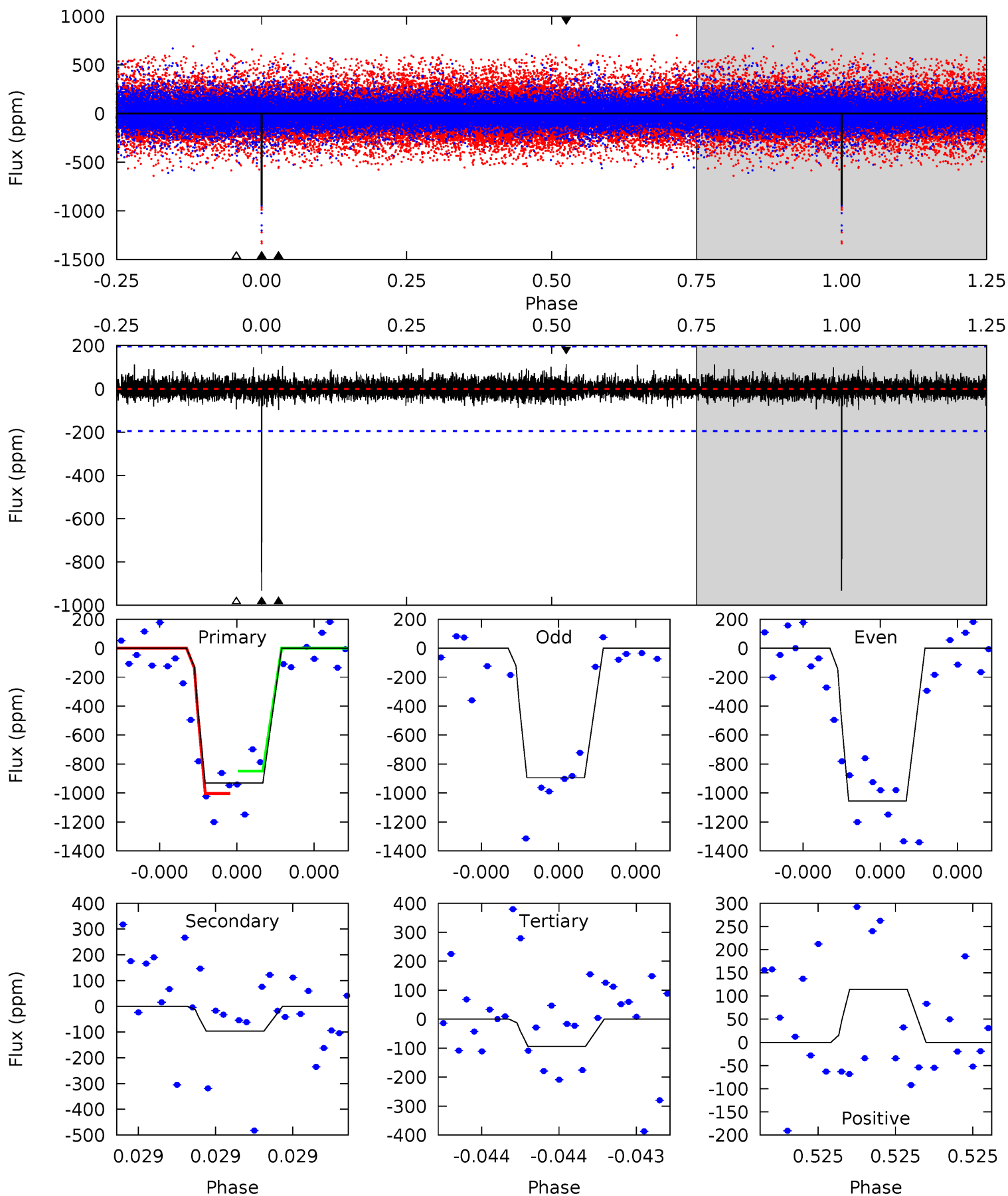
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	11.6	10.8	17.6	5.63	3.56	2.14	-0.10	-6.85	0.79	-5.96	3.06	1.19	0.60	0.55



Alt Model-Shift Uniqueness Test

006308708-02, P = 444.491231 Days, E = 24.682528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	2.79	2.71	3.30	5.65	3.59	0.62	24.2	23.6	0.08	-0.51	2.35	1.09	0.11	2.24



Stellar Parameters For KIC 006308708

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5037^{+151}_{-136}	$4.579^{+0.071}_{-0.058}$	$-0.460^{+0.350}_{-0.300}$	$0.696^{+0.081}_{-0.067}$	$0.670^{+0.090}_{-0.042}$	$2.801^{+0.893}_{-0.566}$
	+3%/-3%	+2%/-1%	+76%/-65%	+12%/-10%	+13%/-6%	+32%/-20%
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 006308708-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-732 ± 63	$3.41^{+2.75}_{-2.22}$	259^{+10}_{-9}	4181^{+2392}_{-793}	$35649^{+247650}_{-24937}$
Alt.	-97 ± 35	$3.26^{+3.12}_{-2.16}$	259^{+10}_{-9}	3029^{+1377}_{-514}	4775^{+40544}_{-3547}

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

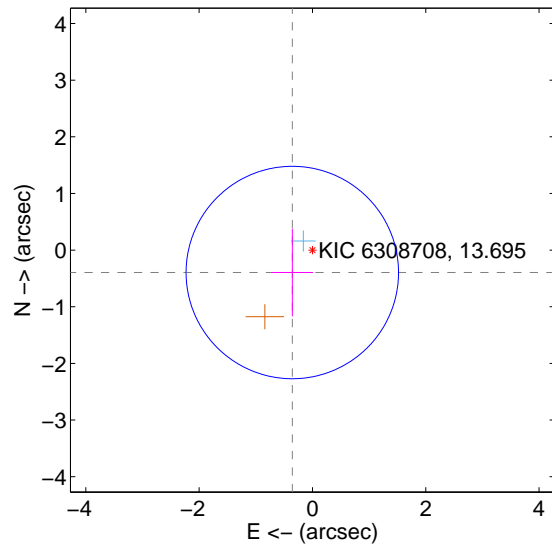
Supplemental centroid analysis for 006308708-02. Kepler magnitude: 13.70. Transit SNR 7.88

There are 1 quarters with good PRF difference image offsets

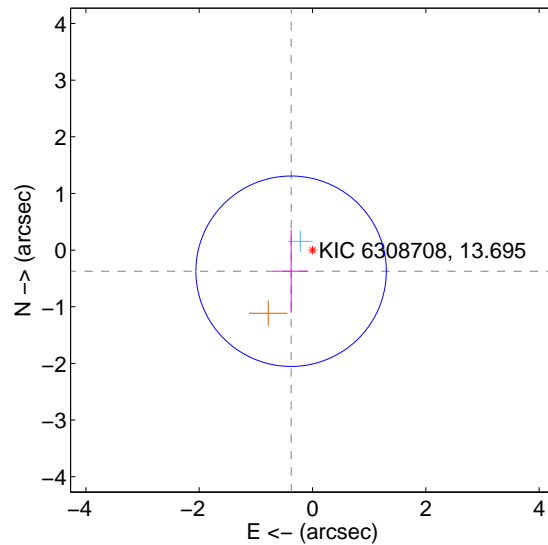
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.532 ± 0.625	0.85	0.355 ± 0.366	-0.396 ± 0.773
PRF-fit source offset from KIC position	0.531 ± 0.560	0.95	0.378 ± 0.307	-0.373 ± 0.734
photometric centroid source offset	0.49 ± 1.02	0.48	0.27 ± 1.31	0.42 ± 0.88

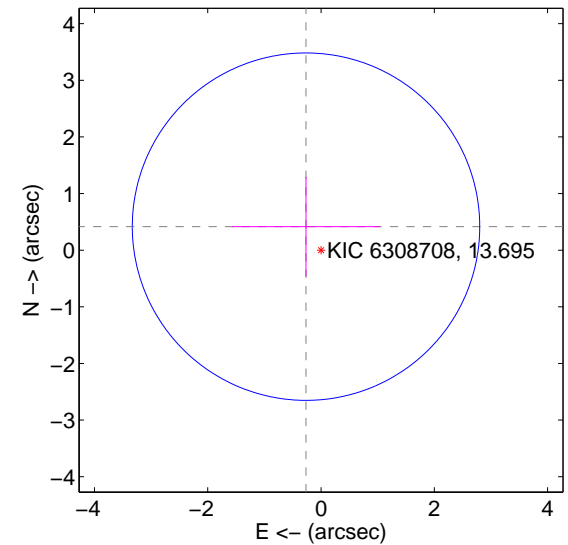
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

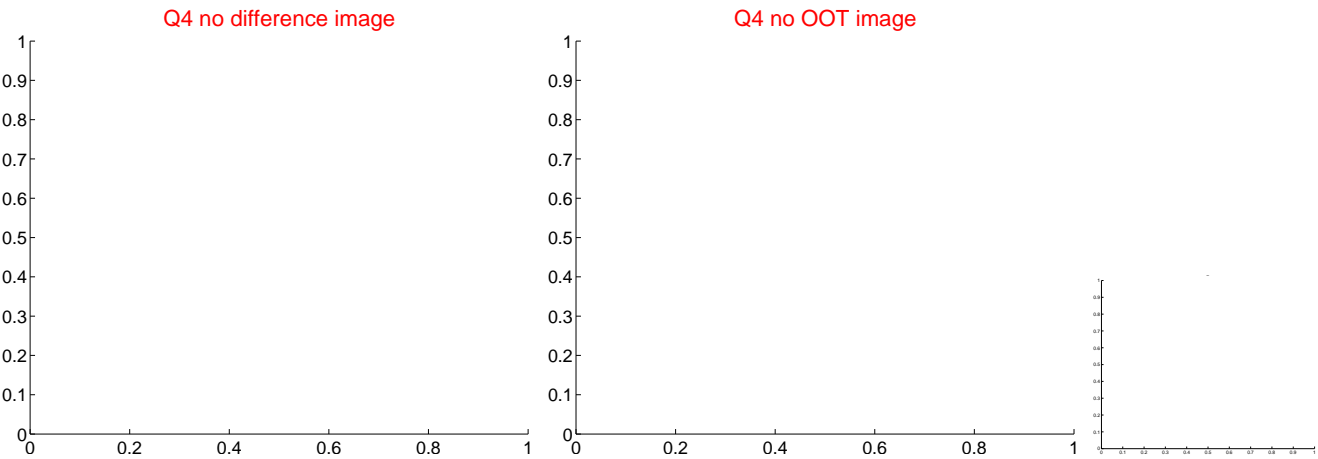
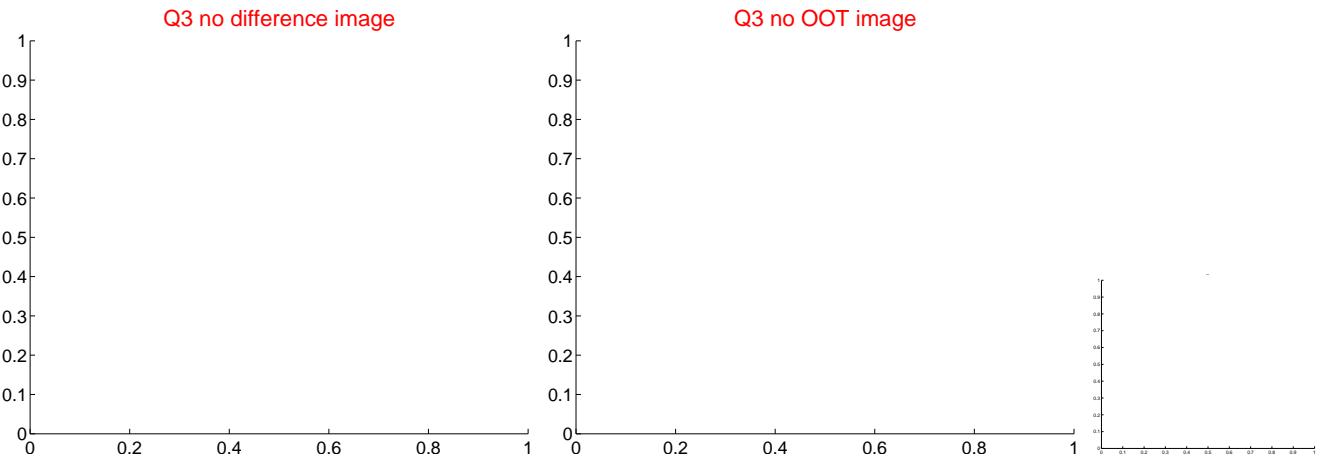
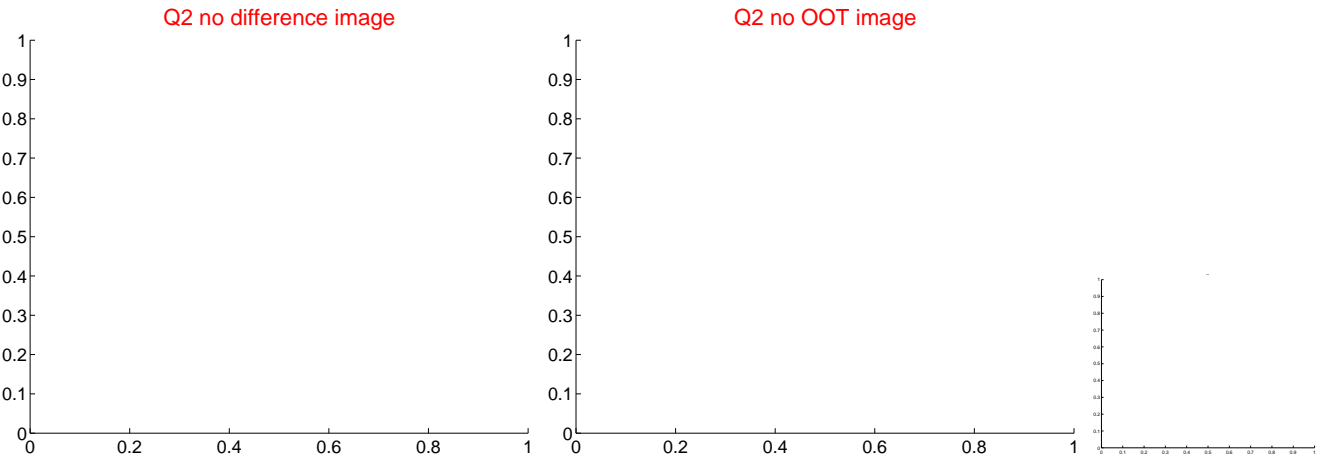
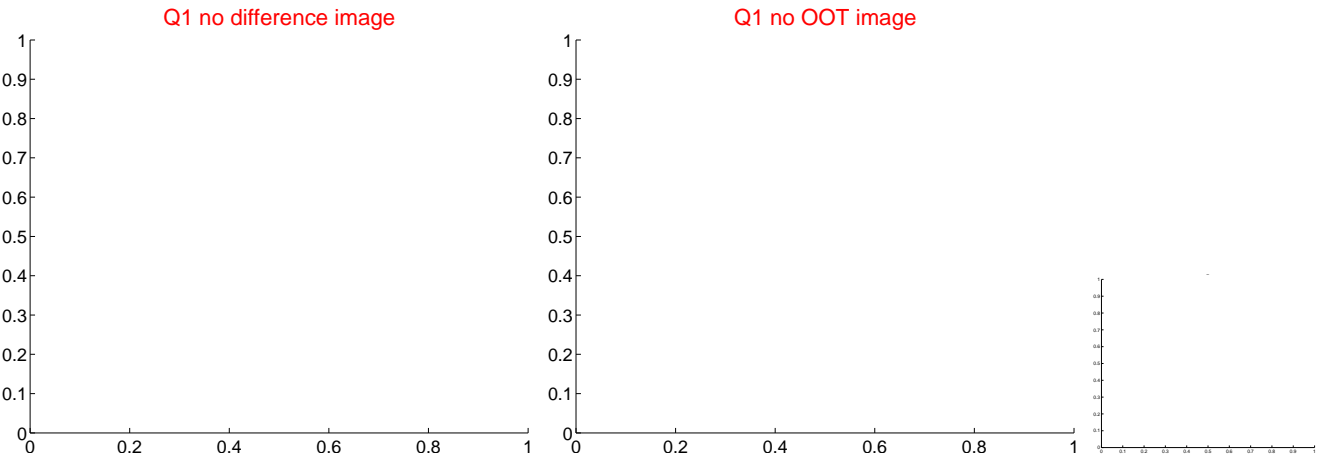


offset from photometric centroids

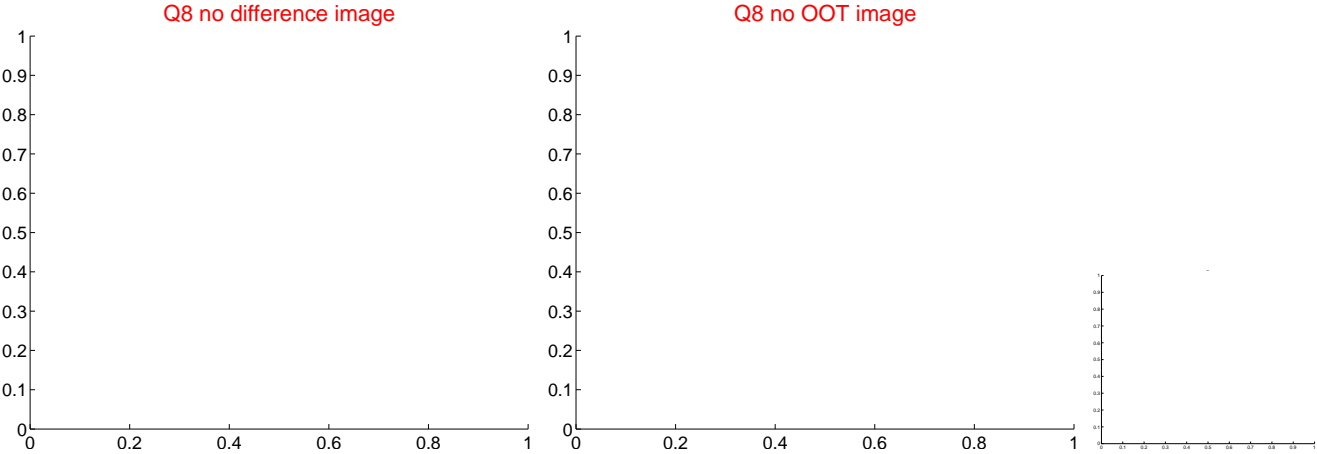
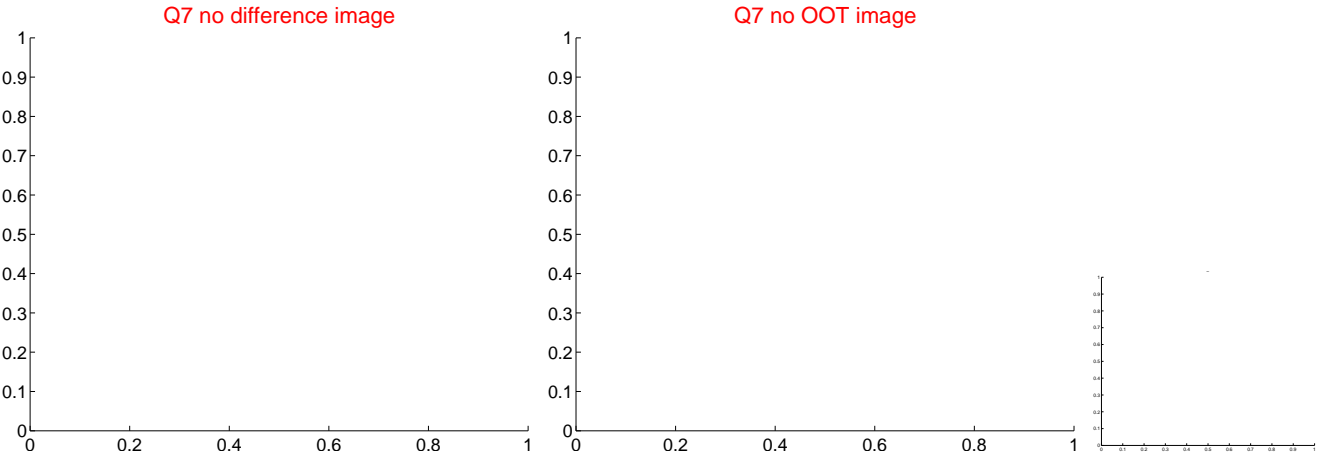
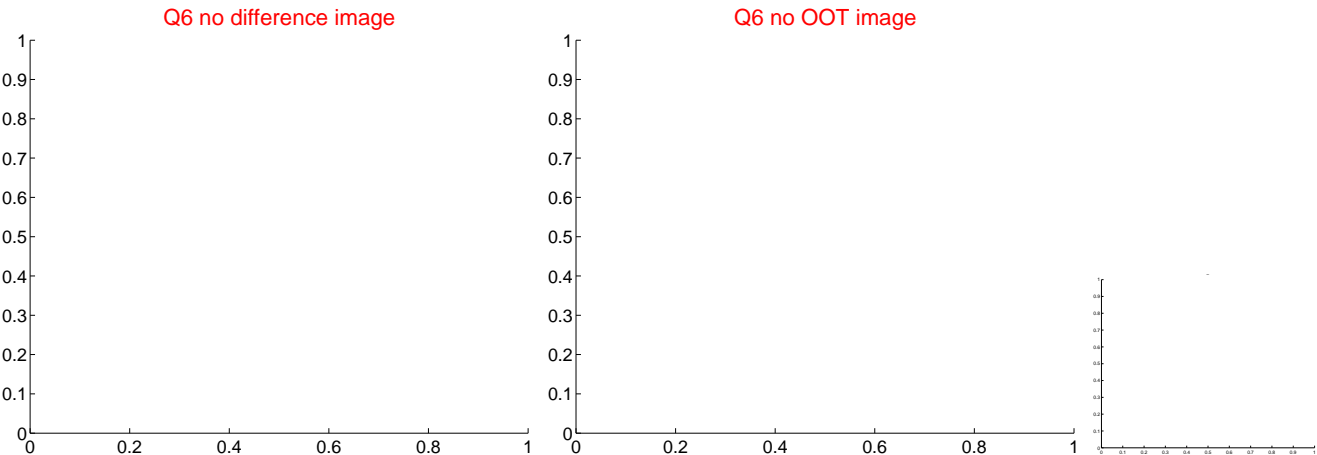
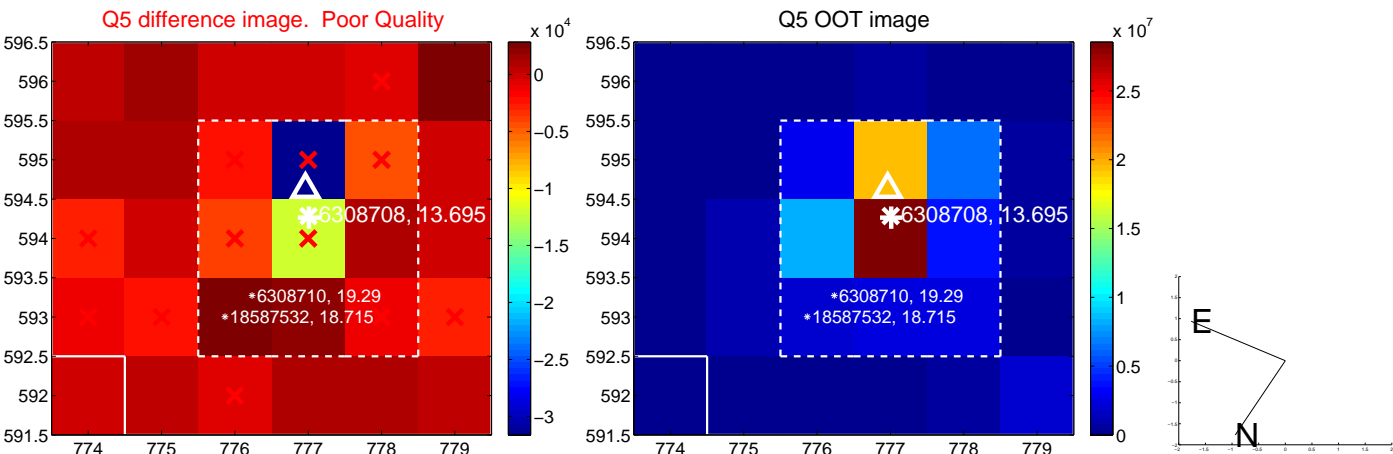


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

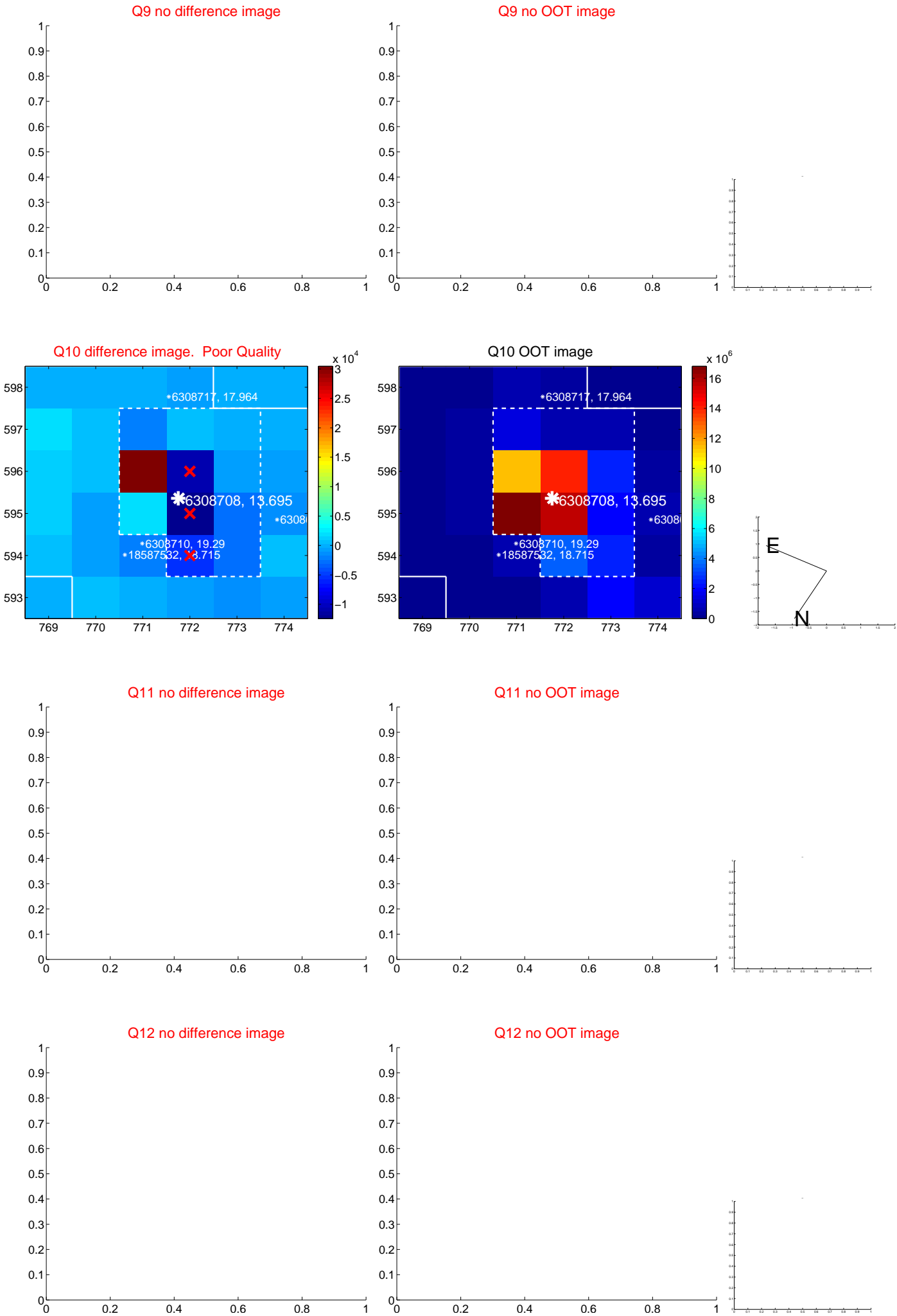
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

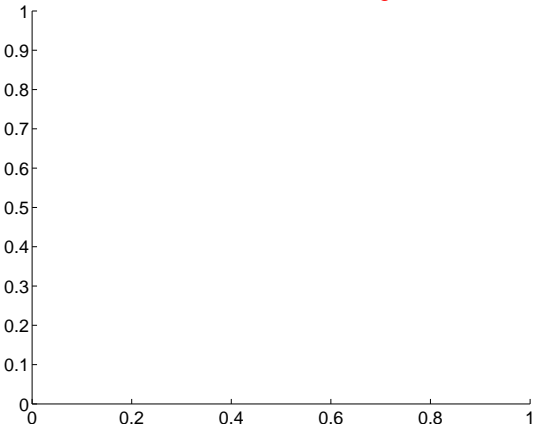


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

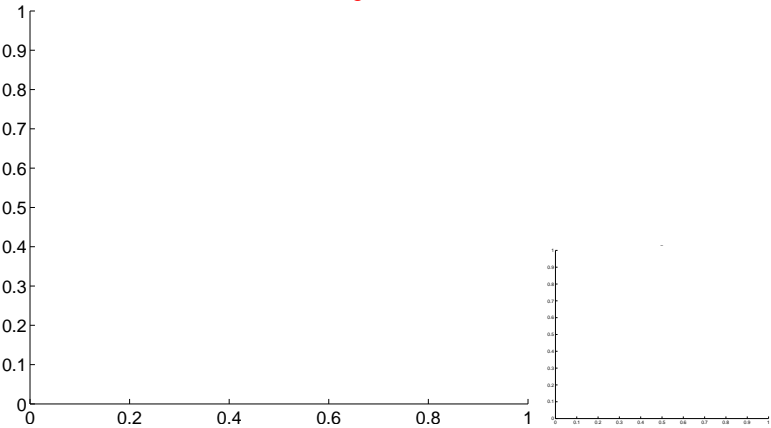


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

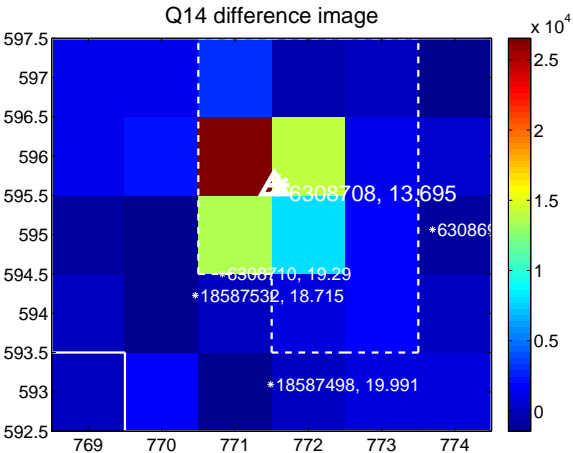
Q13 no difference image



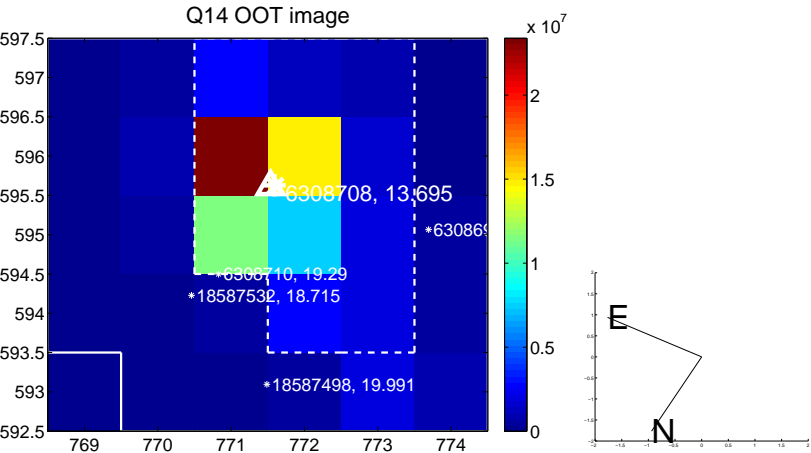
Q13 no OOT image



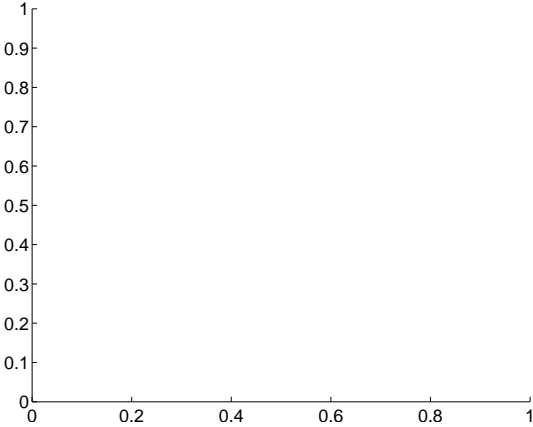
Q14 difference image



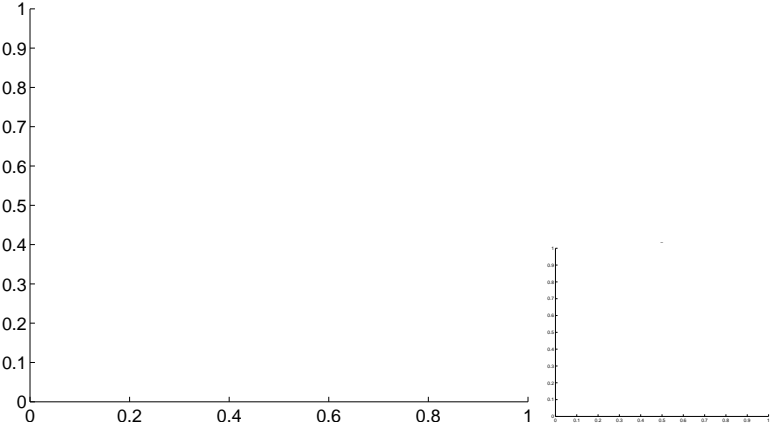
Q14 OOT image



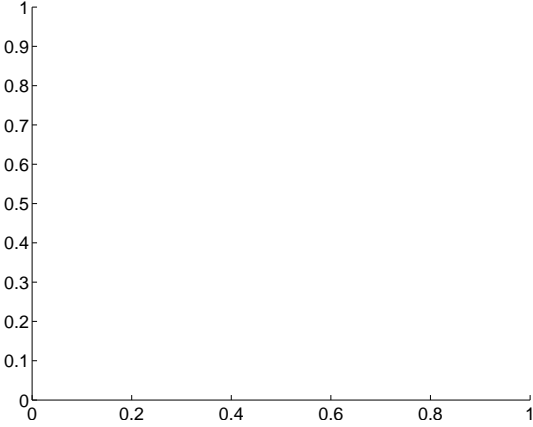
Q15 no difference image



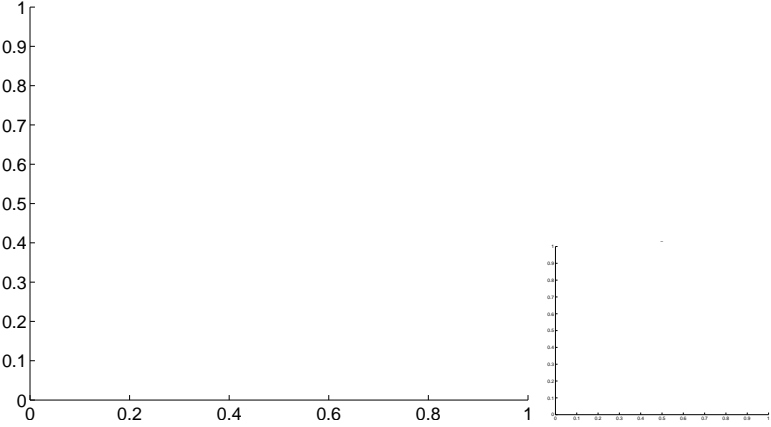
Q15 no OOT image



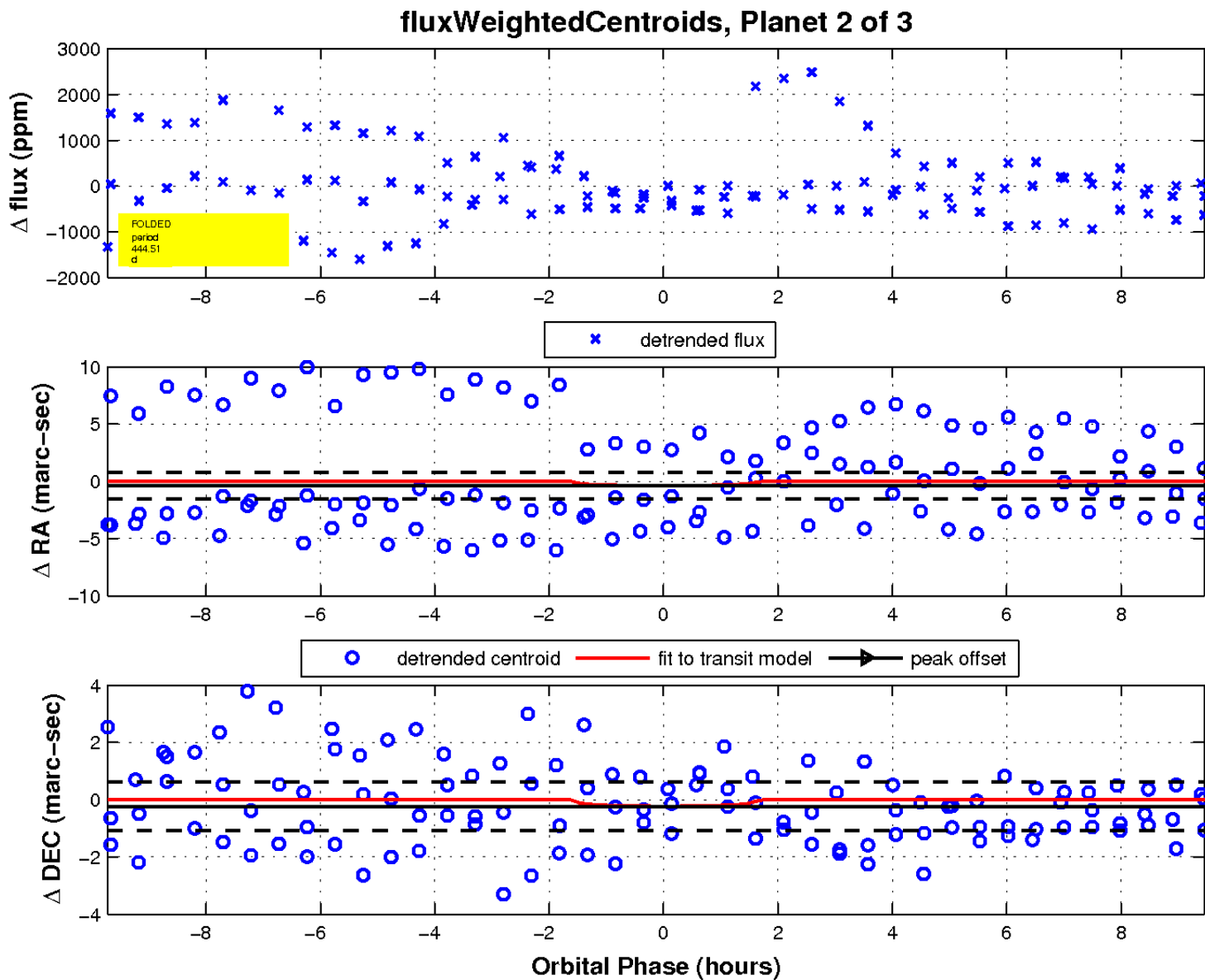
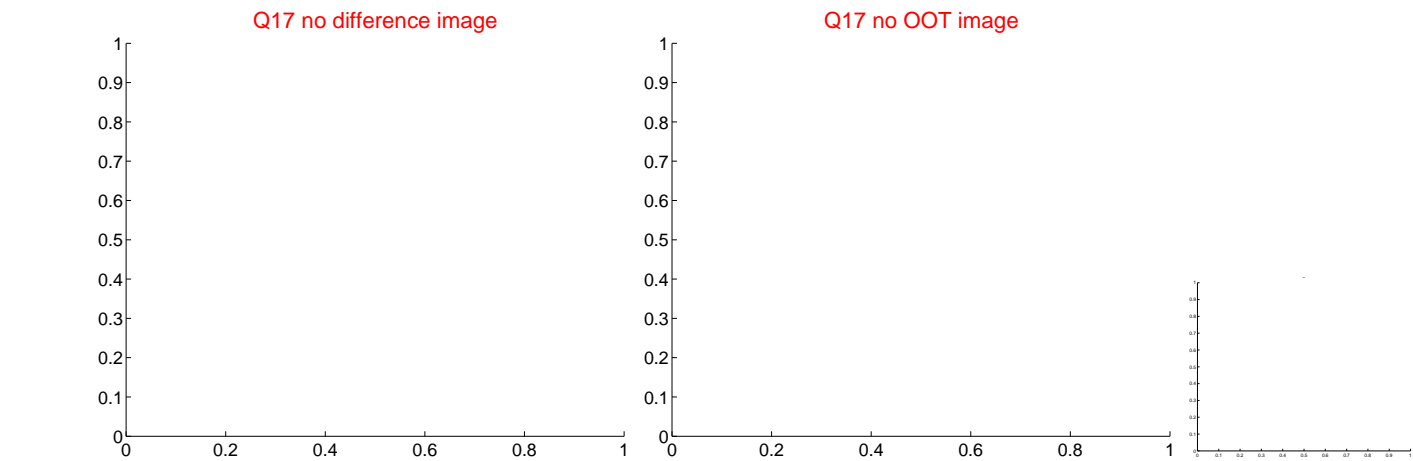
Q16 no difference image



Q16 no OOT image

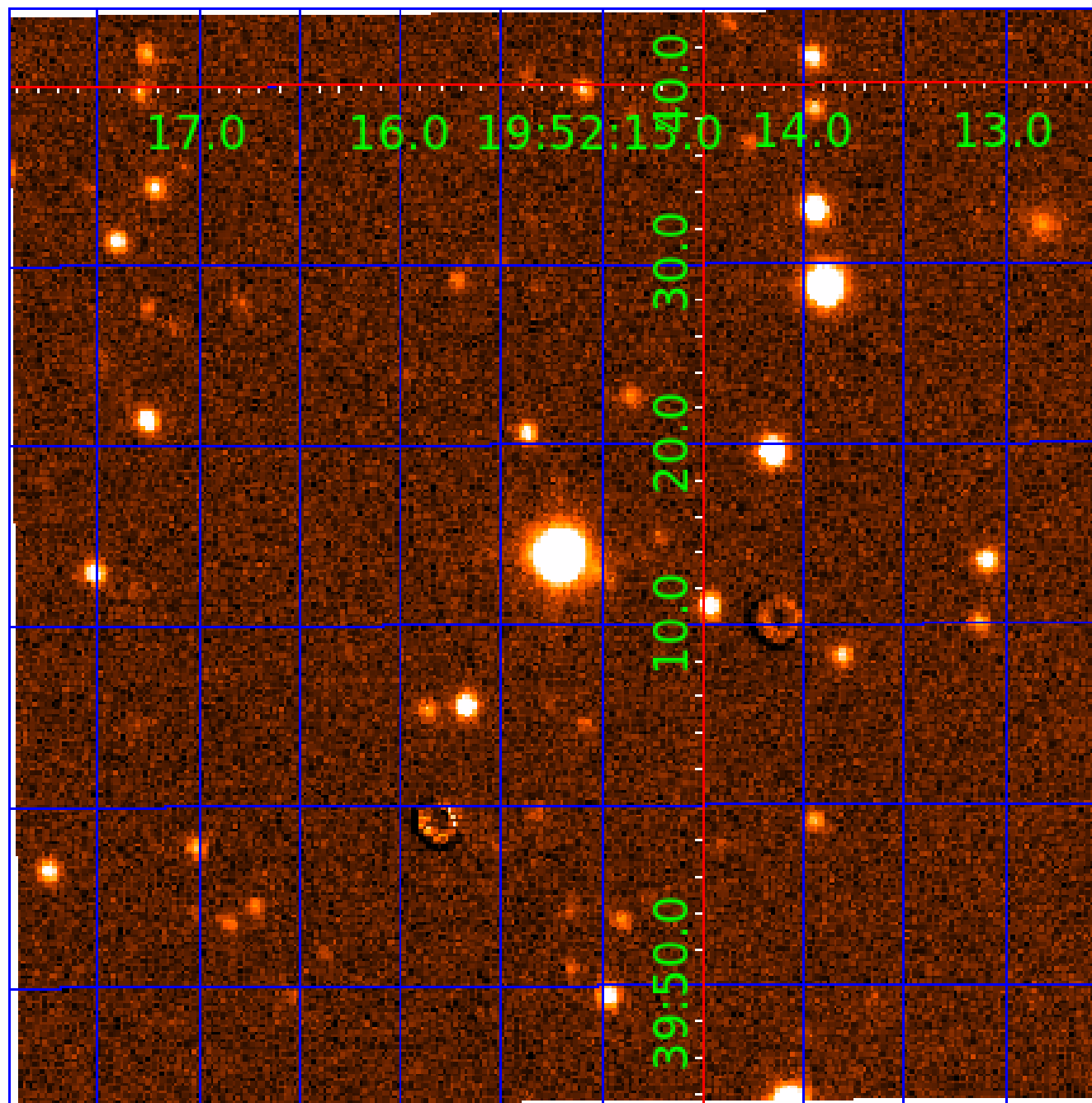


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006308708

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})
006308708-01	OBS	No	548.908439	360.839604	1157.5	11.474	17.3	6.0	0.70	5037	2.31	0.21
006308708-02	OBS	No	444.513278	469.153281	858.8	3.296	11.9	7.9	0.70	5037	2.08	0.28
006308708-03	OBS	No	544.490119	340.287064	191.3	13.510	10.7	1.2	0.70	5037	1.04	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006308708-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
006308708-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006308708-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

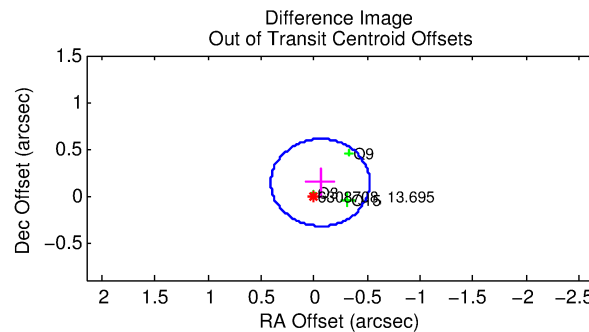
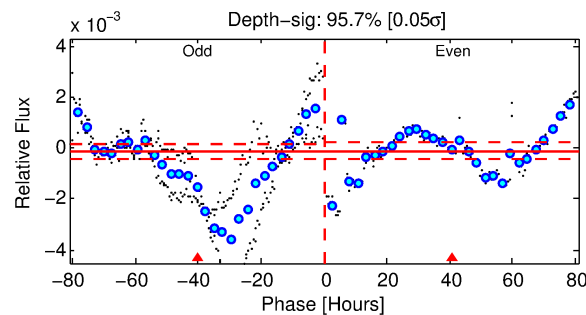
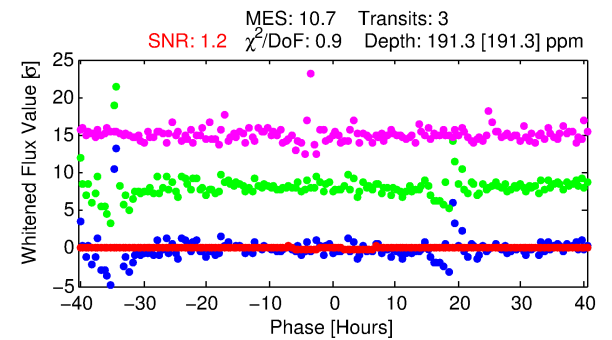
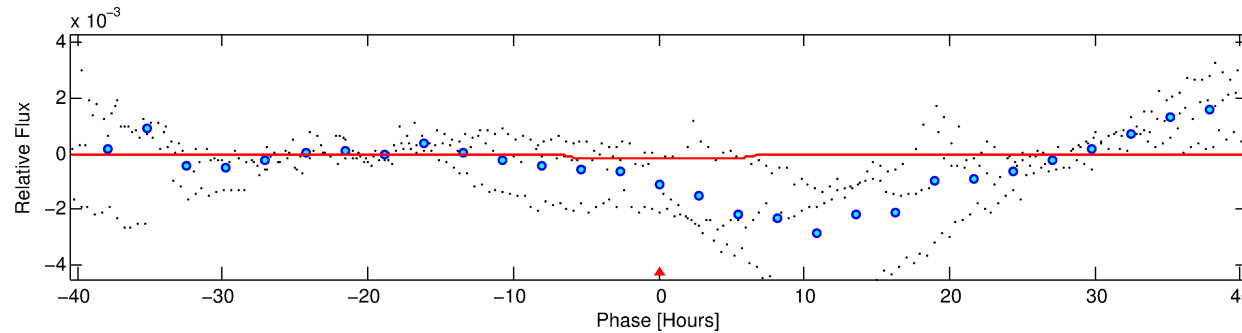
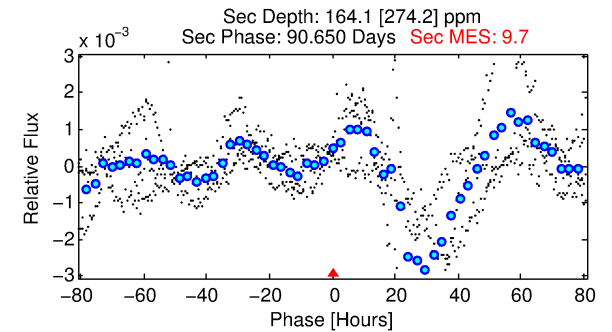
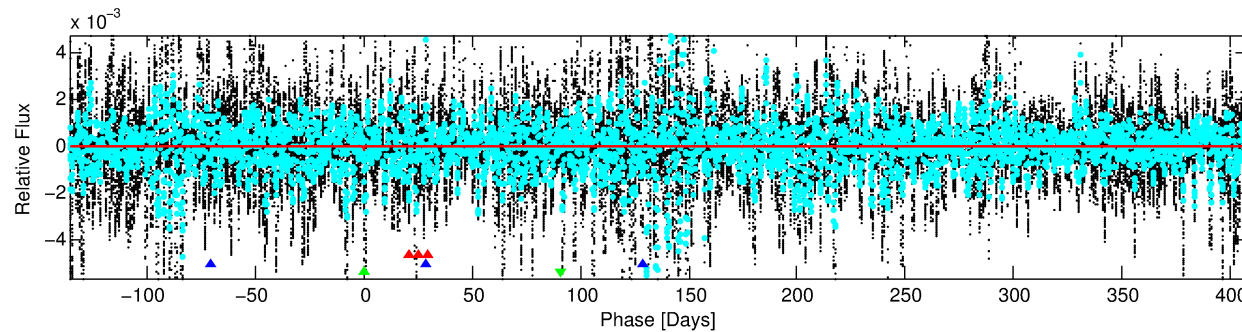
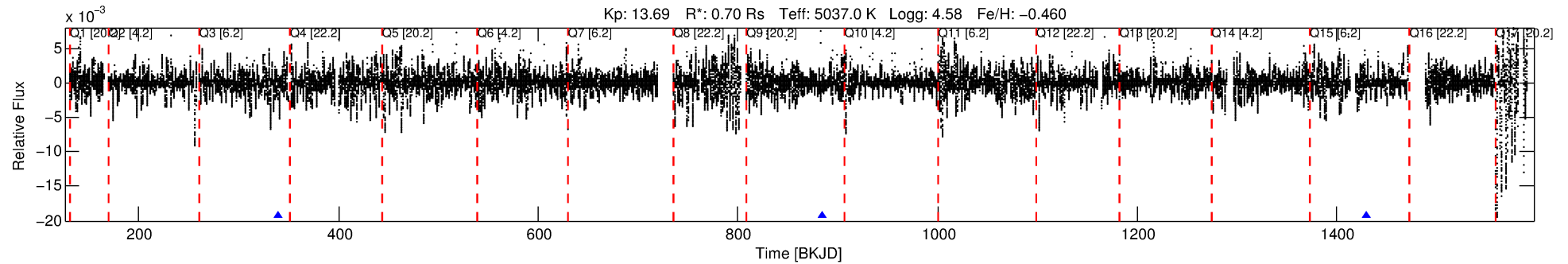
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006308708-03

No Significant Match Found

DV One-Page Summary

KIC: 6308708 Candidate: 3 of 3 Period: 544.490 d



DV Fit Results:

Period = 544.49012 [0.02998] d
Epoch = 340.2871 [0.0391] BKJD
Rp/R* = 0.0137 [0.0151]
a/R* = 216.67 [747.77]
b = 0.73 [2.23]
Seff = 0.21 [0.04]
Teq = 173 [8] K
Rp = 1.04 [1.15] Re
a = 1.1423 [0.1083] AU
Ag = 109329.47 [303007.38] [0.36σ]
Teffp = 4877 [3378] K [1.39σ]

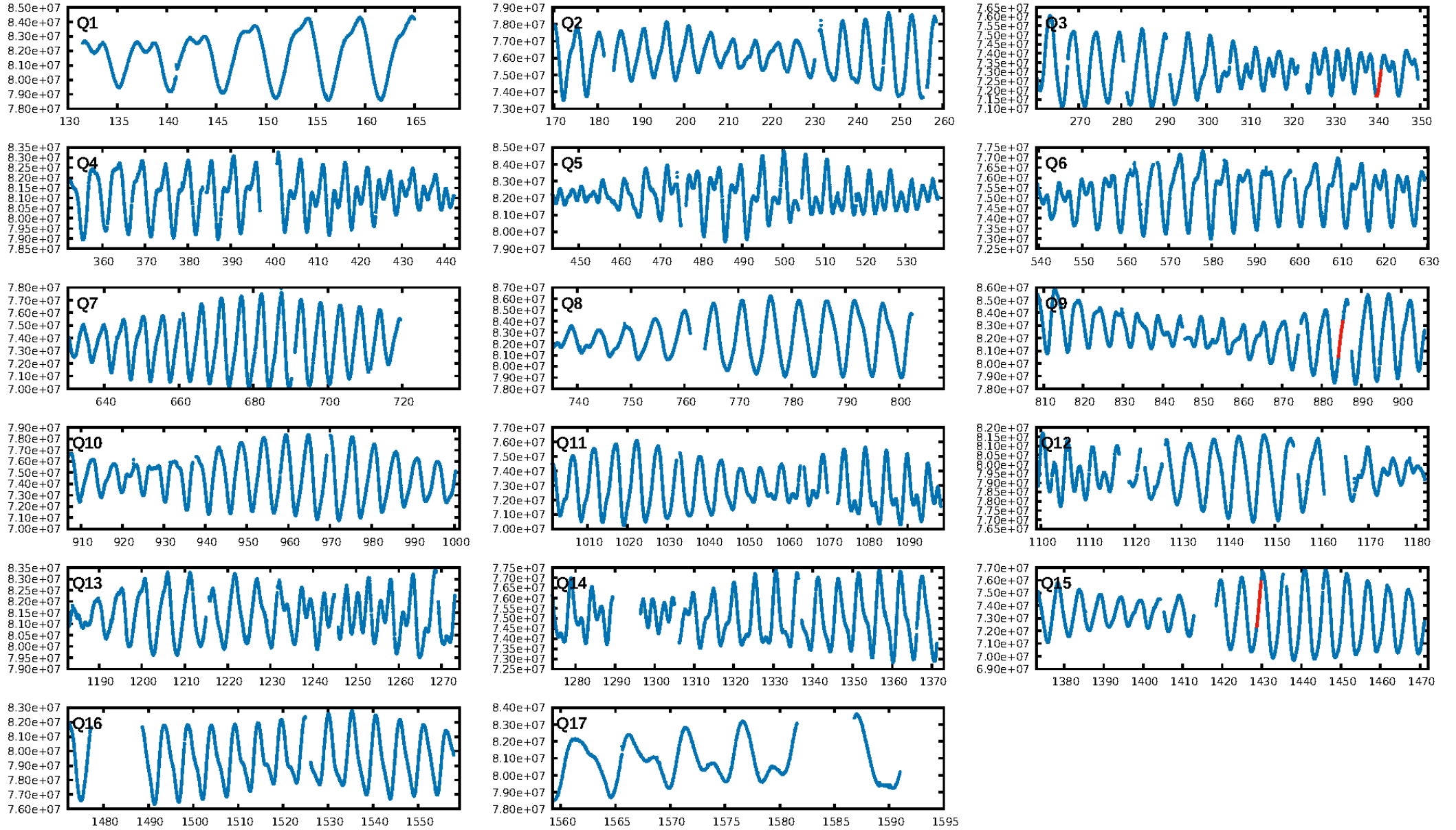
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [172.55σ]
LongPeriod-sig: 100.0% [5.98σ]
ModelChiSquare2-sig: 91.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.18e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.04
Centroid-sig: 65.8%
Centroid-so: 1.709 arcsec [0.55σ]
OotOffset-rm: 0.152 arcsec [0.98σ]
KicOffset-rm: 0.139 arcsec [0.79σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

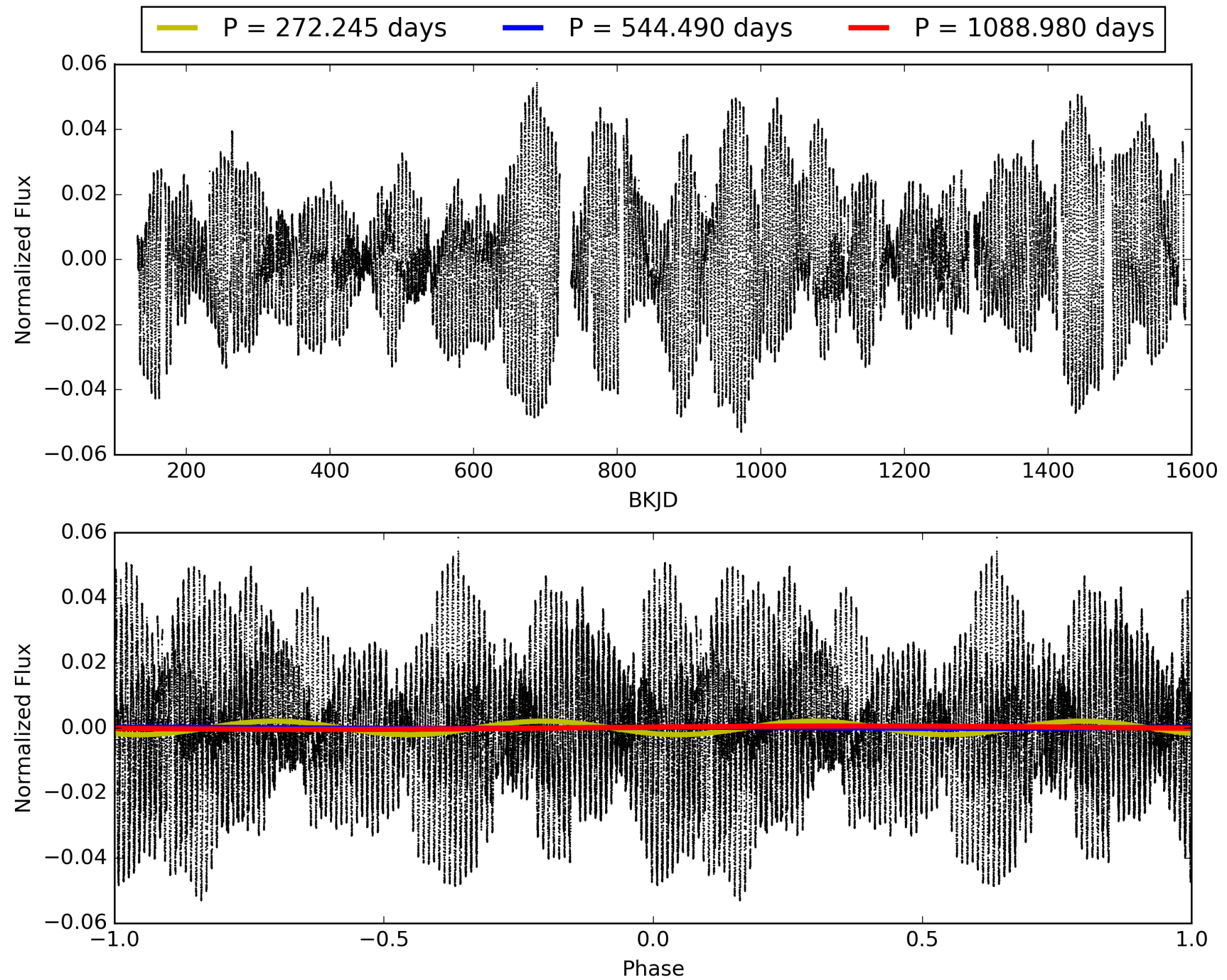
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:56:38 Z

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

TCE 006308708-03, PDC Light Curves

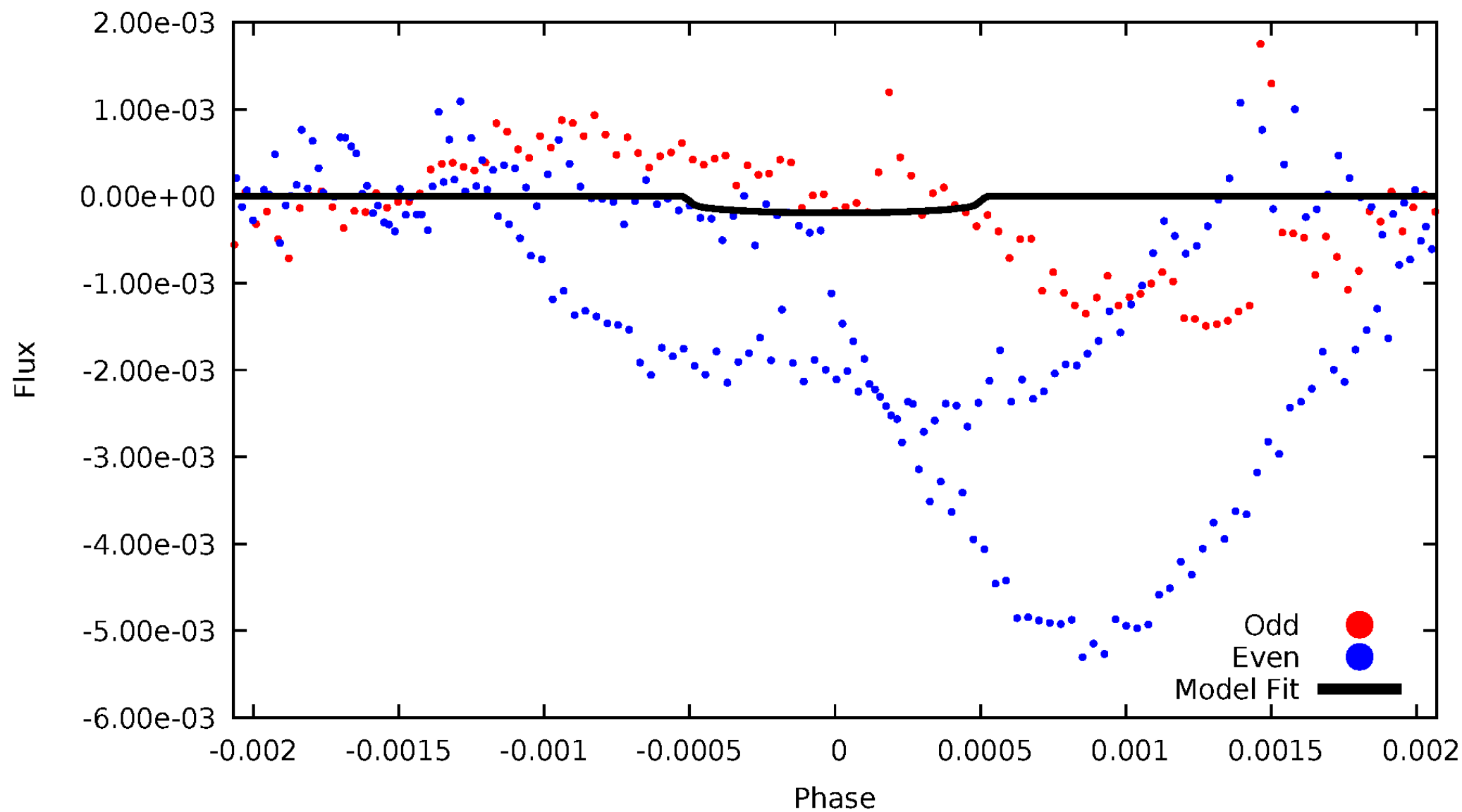


TCE 006308708-03



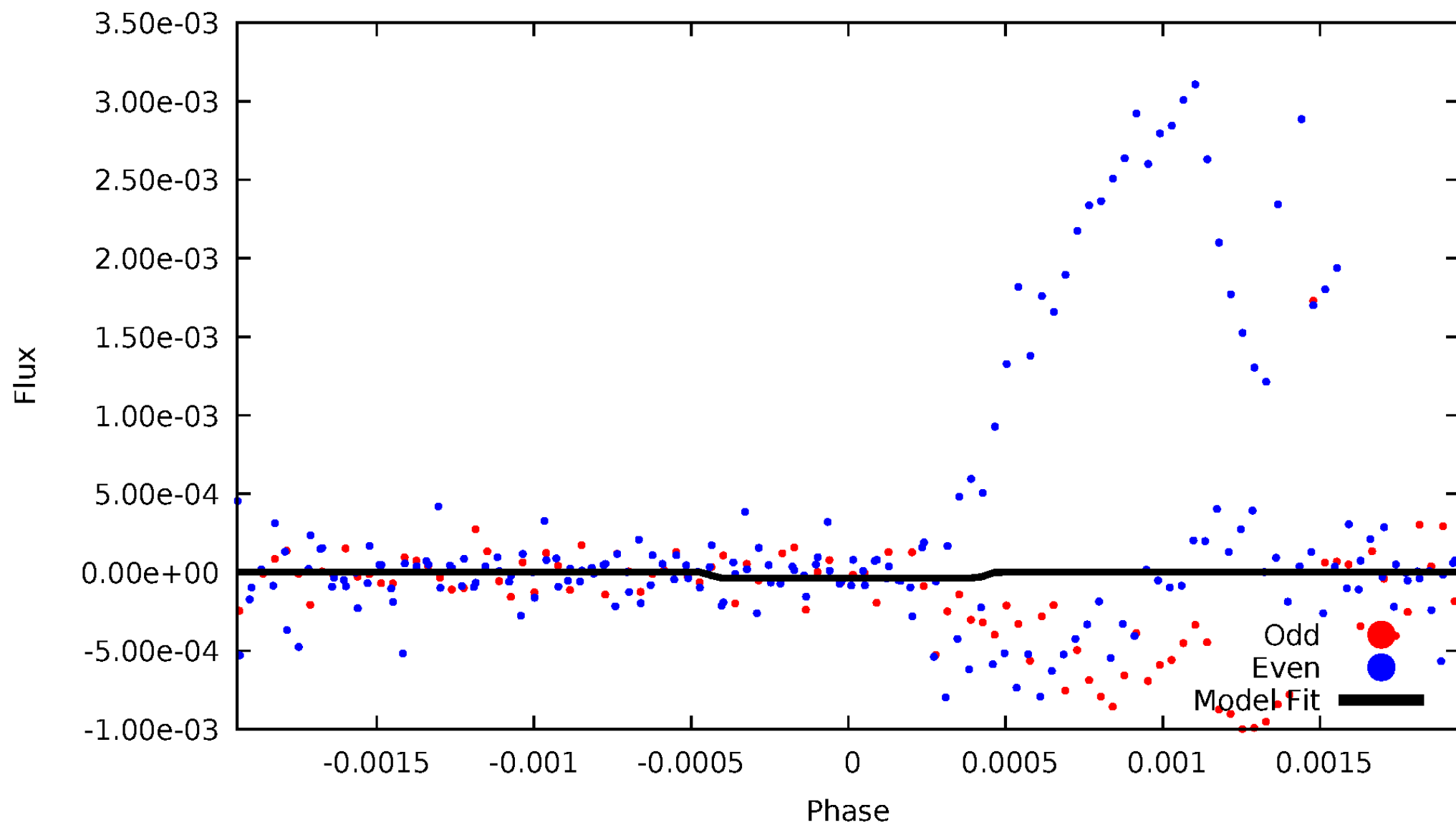
DV Odd/Even

TCE 006308708-03



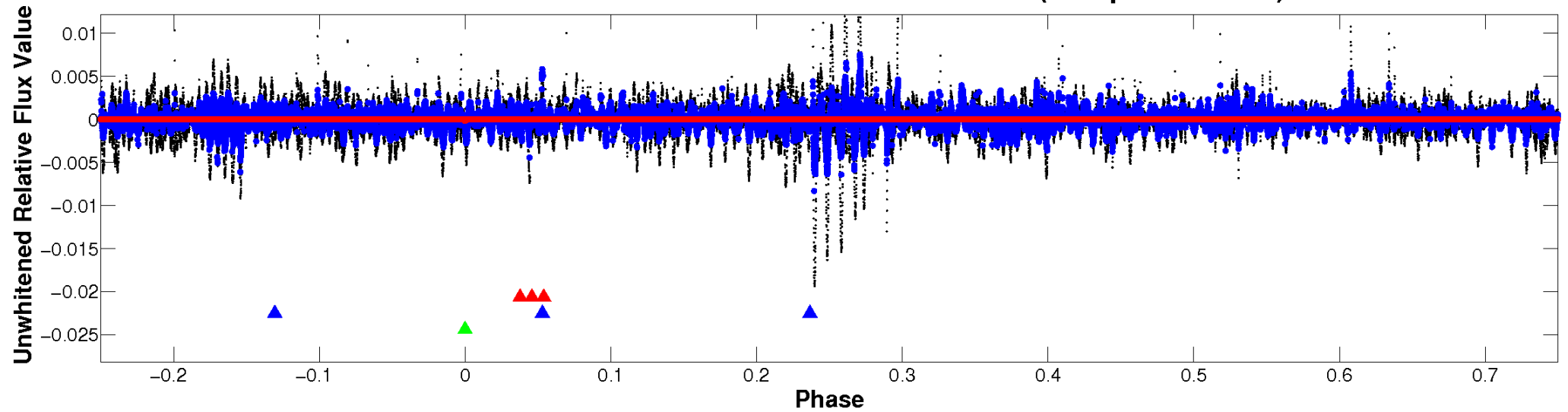
ALT Odd/Even

TCE 006308708-03

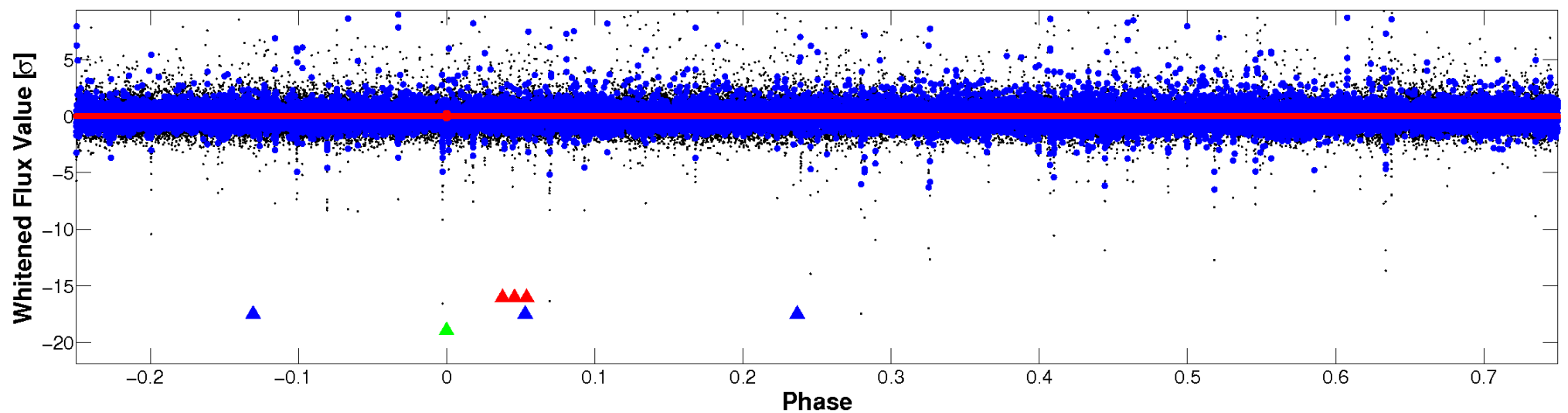


Non-Whitened Vs. Whitened Light Curve

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

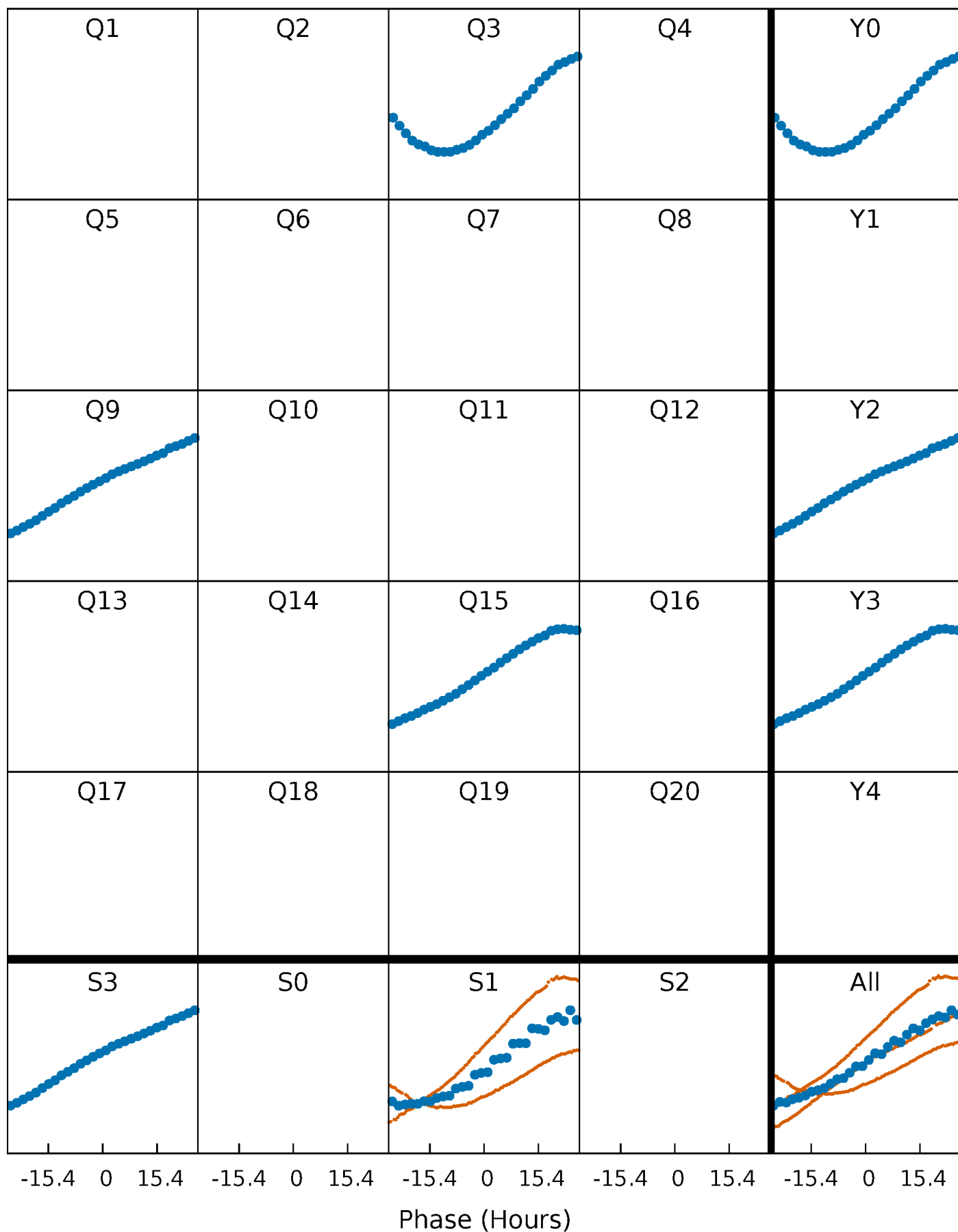


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



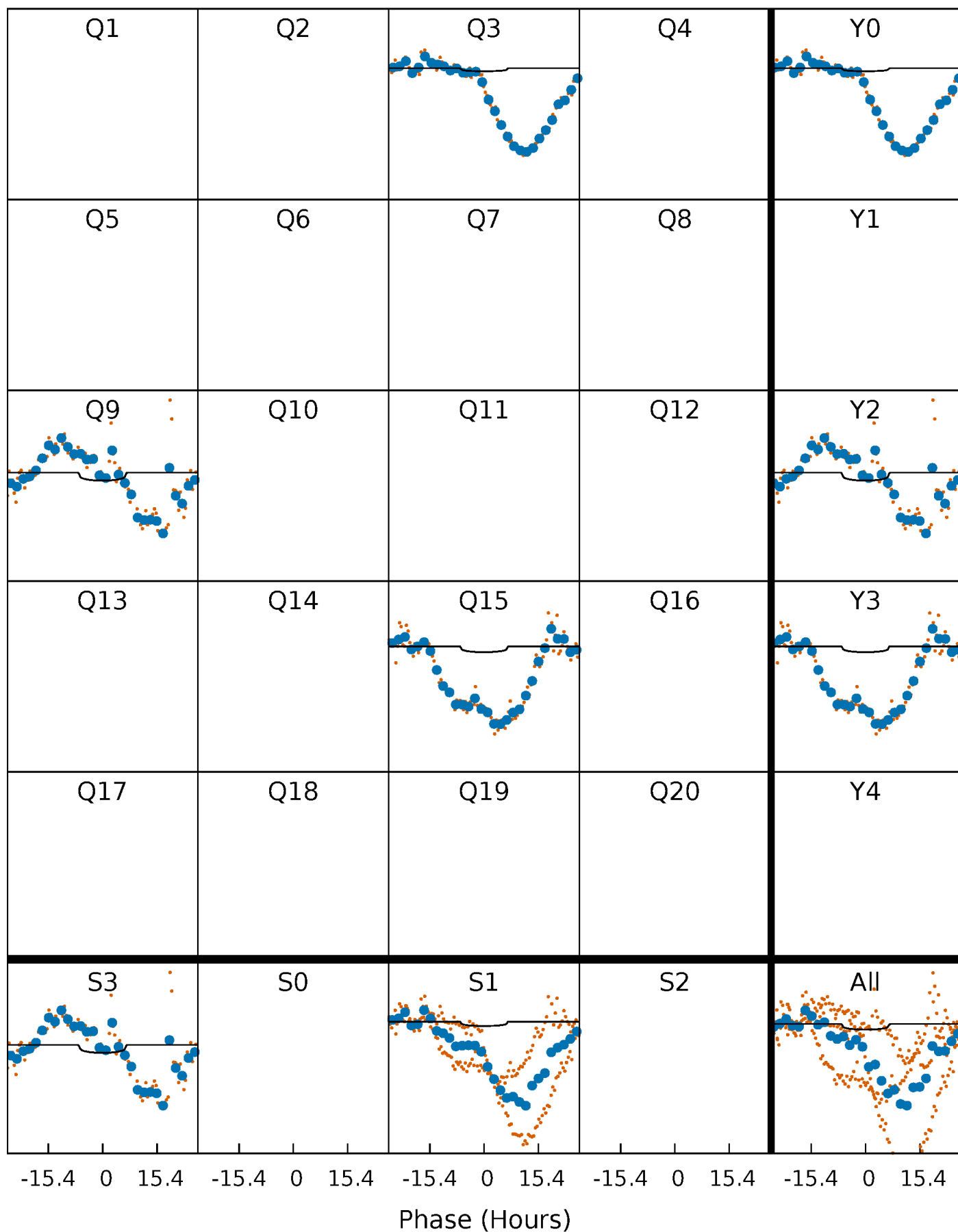
PDC Quarter-Phased Transit Curves

TCE 006308708-03 $P=544.490119$ Days $T_0=340.287064$ (BKJD)



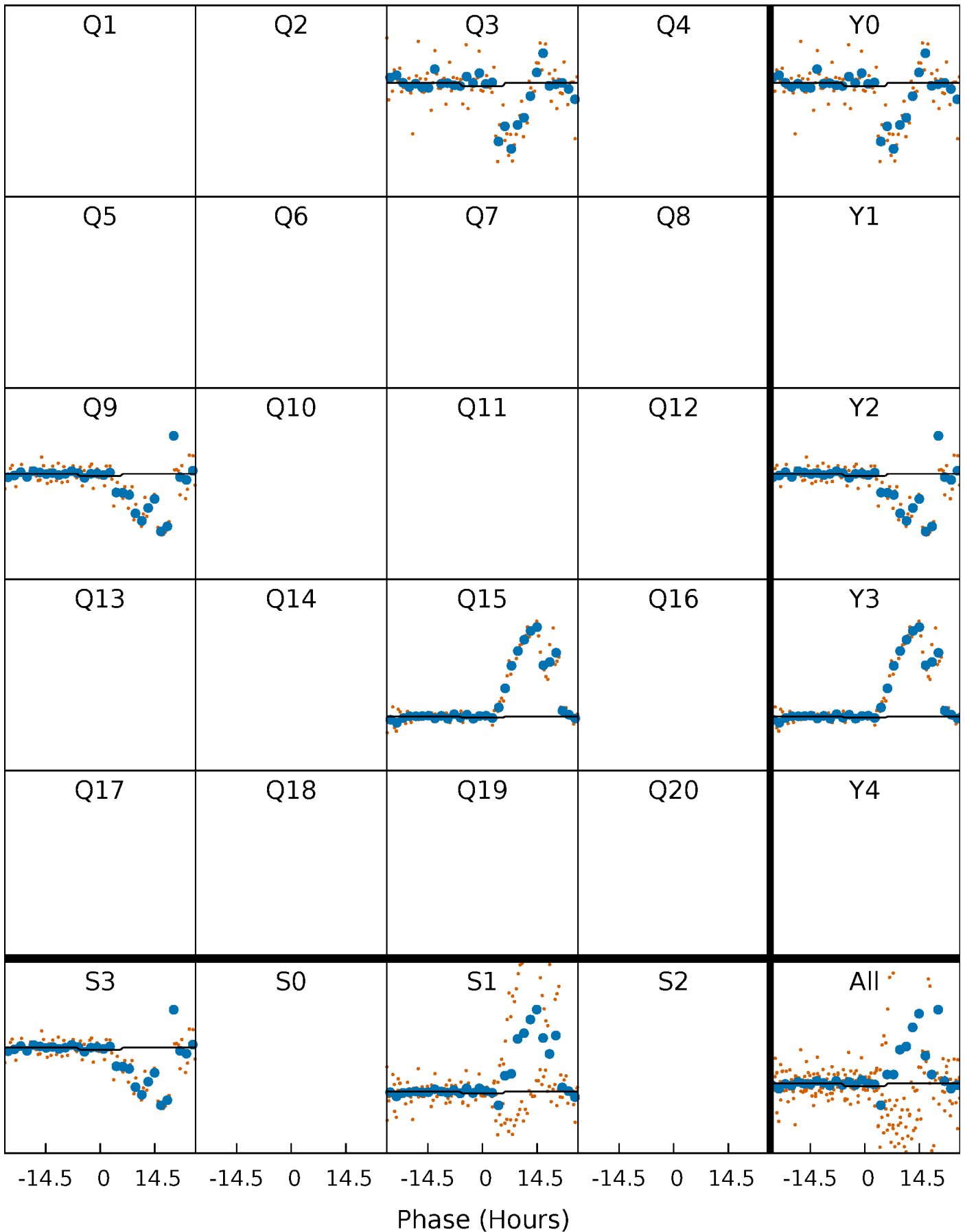
DV Quarter-Phased Transit Curves

TCE 006308708-03 $P=544.490119$ Days $T_0=340.287064$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

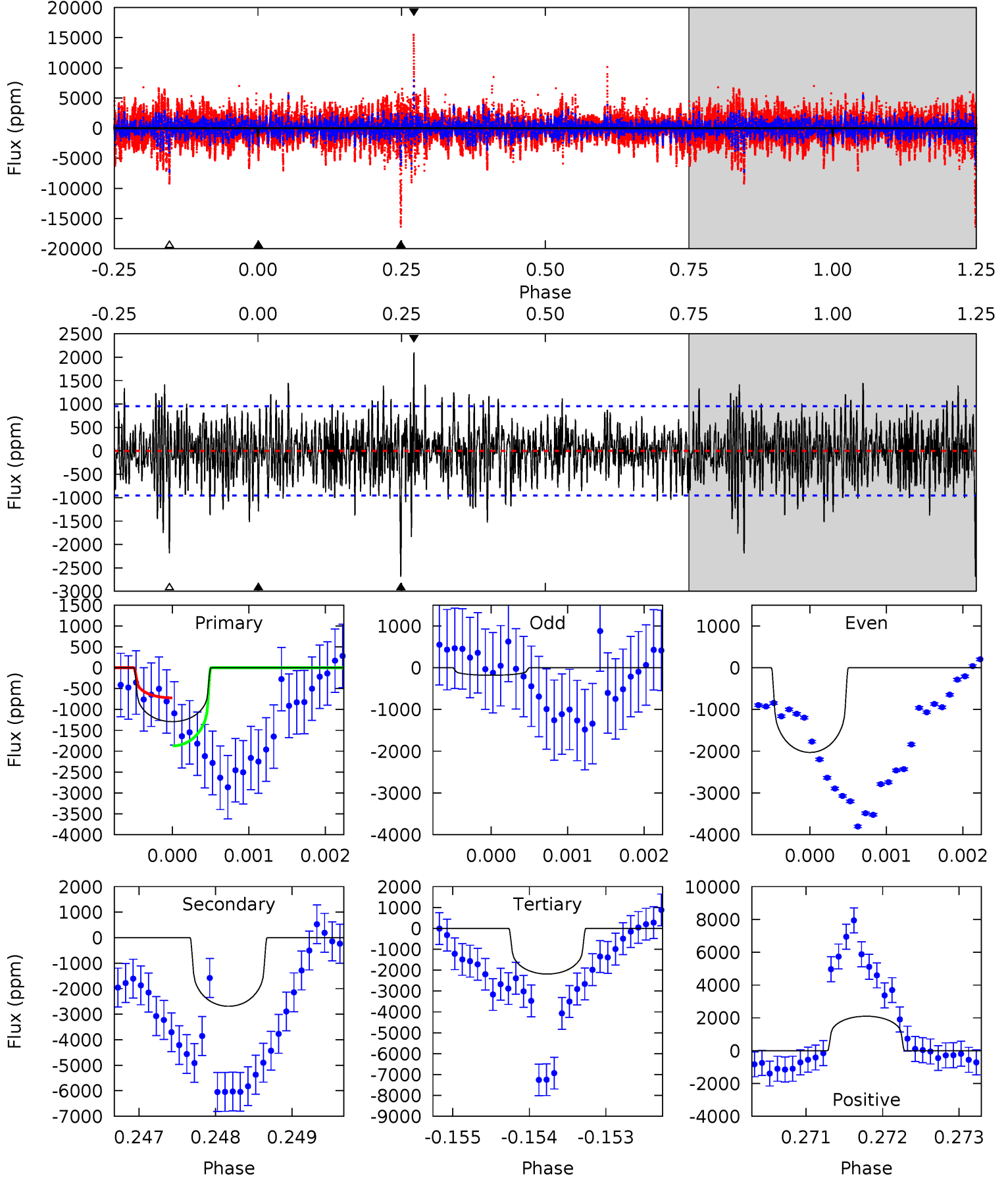
TCE 006308708-03 P=544.493073 Days $T_0=340.295944$ (BKJD)



DV Model-Shift Uniqueness Test

006308708-03, P = 544.490119 Days, E = 340.287064 Days

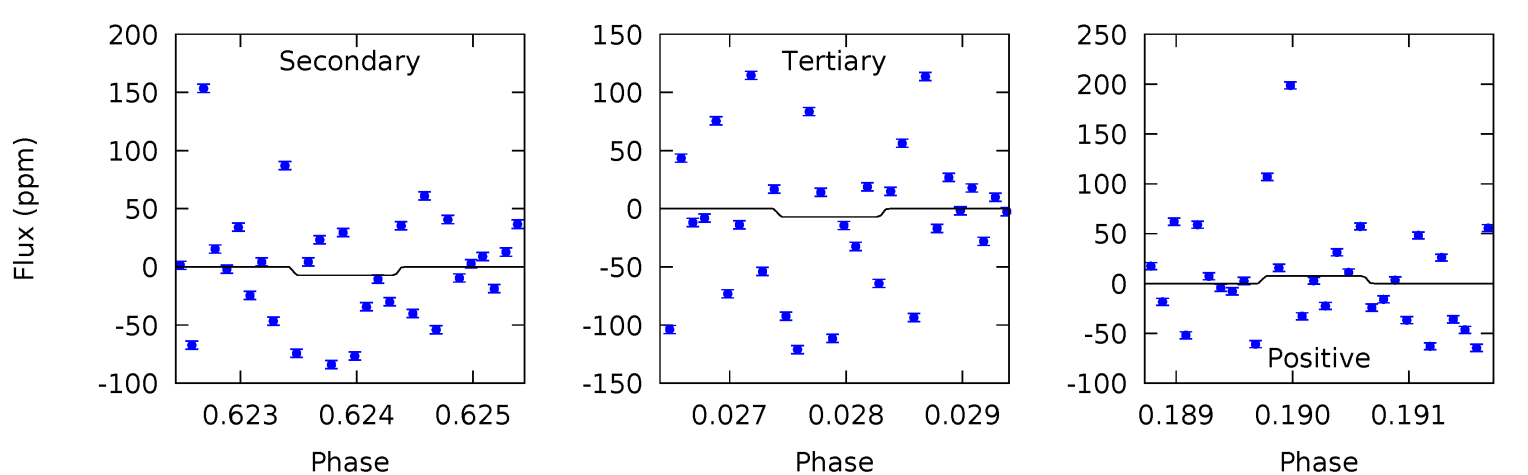
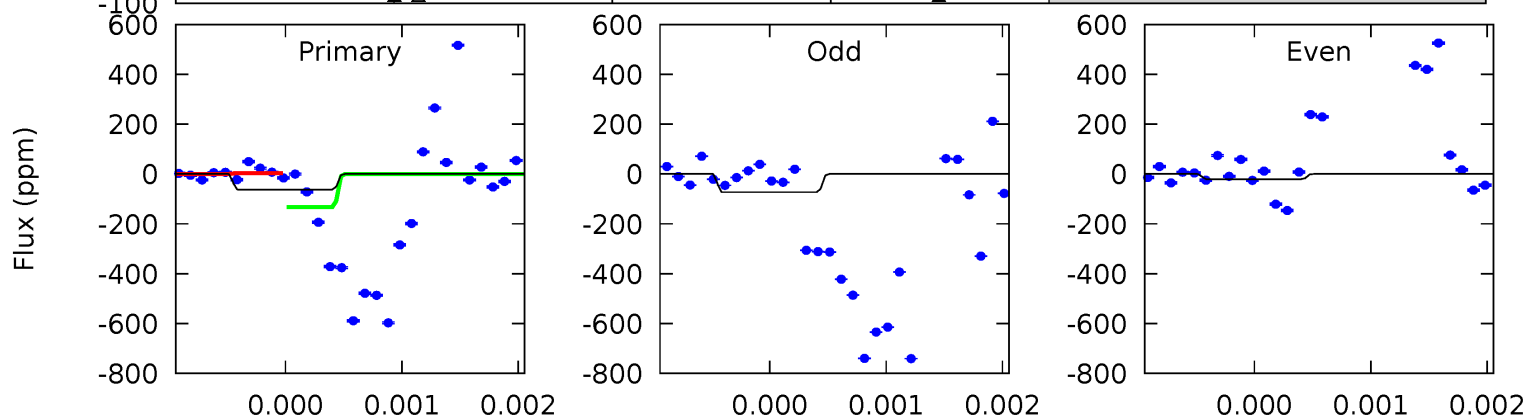
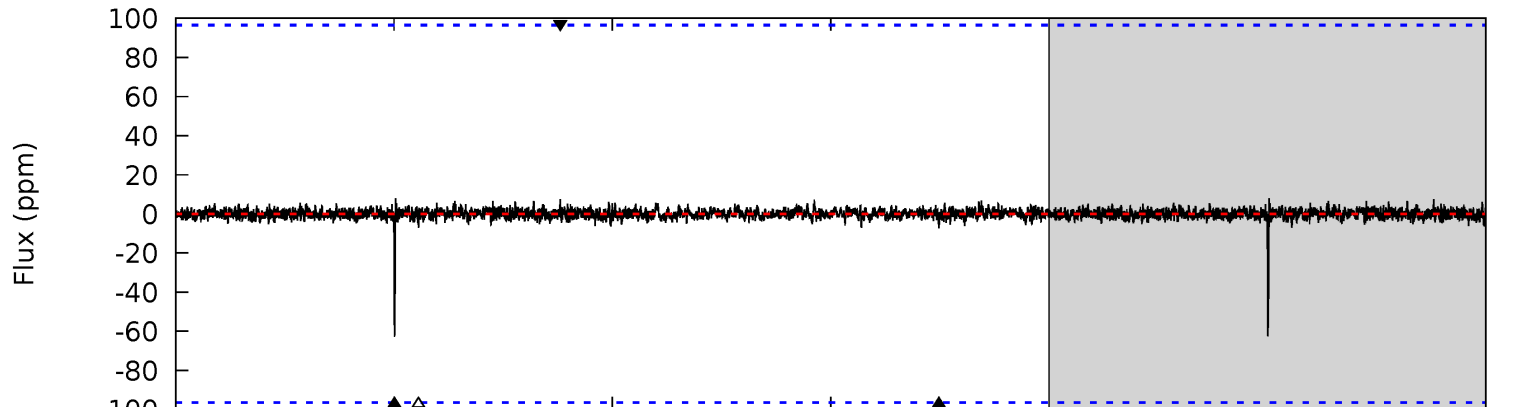
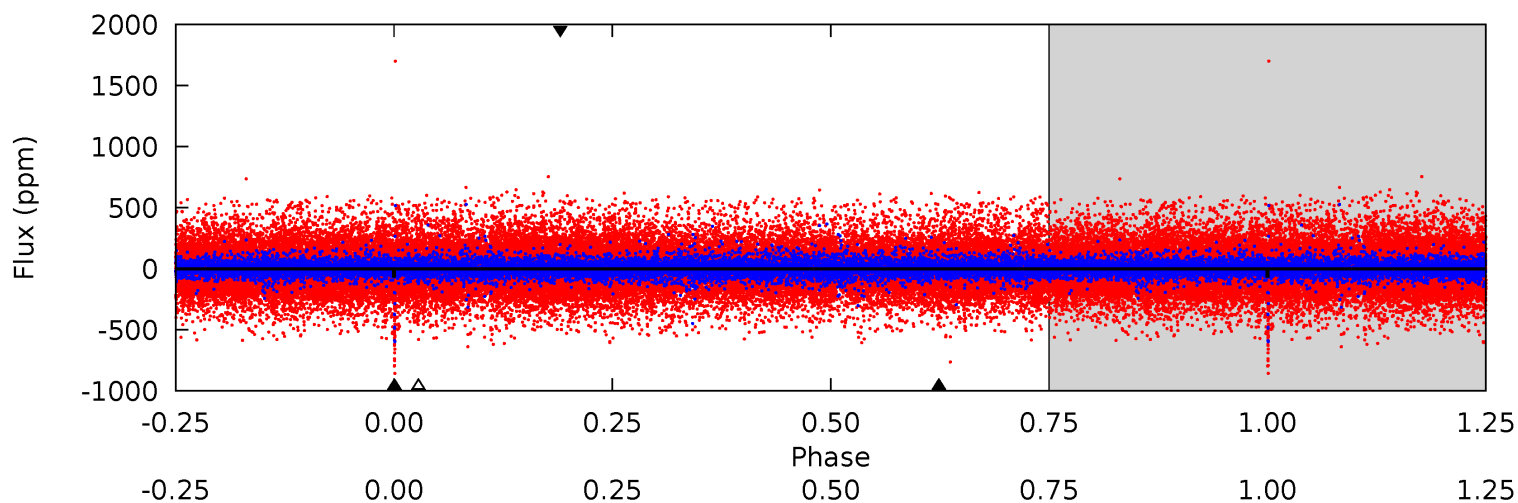
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	15.4	12.5	12.0	5.44	3.27	2.69	-5.11	-4.62	2.86	3.36	4.55	0.78	0.44	3.32



Alt Model-Shift Uniqueness Test

006308708-03, P = 544.493073 Days, E = 340.295944 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.55	0.41	0.40	0.42	5.46	3.30	0.10	3.15	3.12	0.01	-0.01	1.44	0.50	0.11	3.65



Stellar Parameters For KIC 006308708

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5037^{+151}_{-136}	$4.579^{+0.071}_{-0.058}$	$-0.460^{+0.350}_{-0.300}$	$0.696^{+0.081}_{-0.067}$	$0.670^{+0.090}_{-0.042}$	$2.801^{+0.893}_{-0.566}$
	+3%/-3%	+2%/-1%	+76%/-65%	+12%/-10%	+13%/-6%	+32%/-20%
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 006308708-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2688 ± 175	$1.27^{+1.03}_{-0.80}$	242^{+11}_{-9}	9289^{+13261}_{-2820}	$1177494^{+7015032}_{-808801}$
Alt.	-7 ± 18	$0.99^{+0.95}_{-0.66}$	242^{+9}_{-9}	2708^{+1519}_{-5834}	2824^{+48396}_{-10523}

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

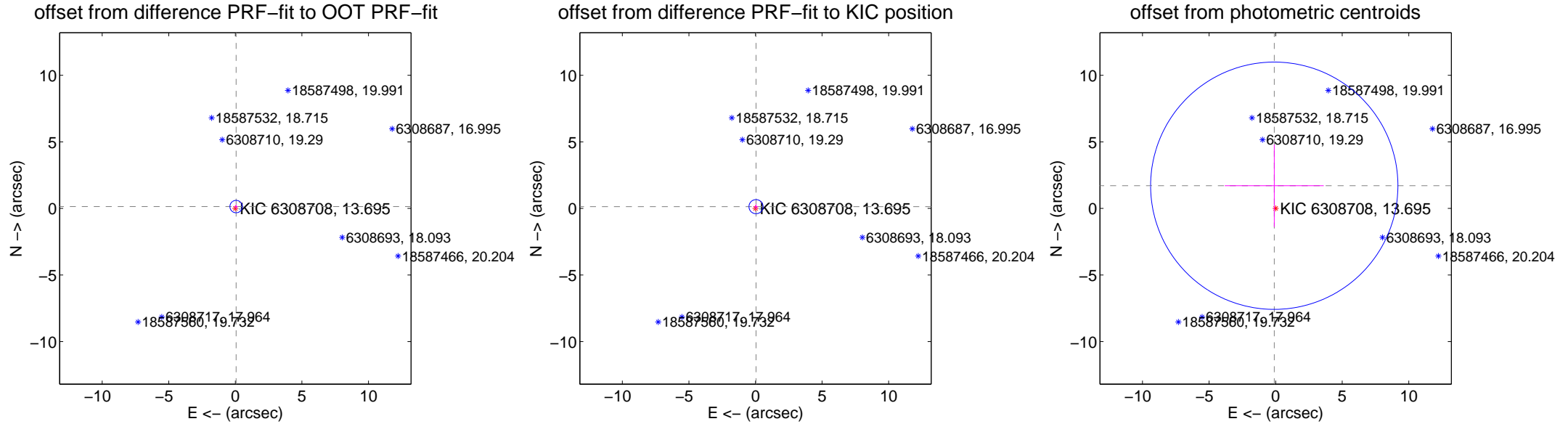
DV Centroid Data

Supplemental centroid analysis for 006308708-03. Kepler magnitude: 13.70. Transit SNR 1.16

There are 2 quarters with good PRF difference image offsets

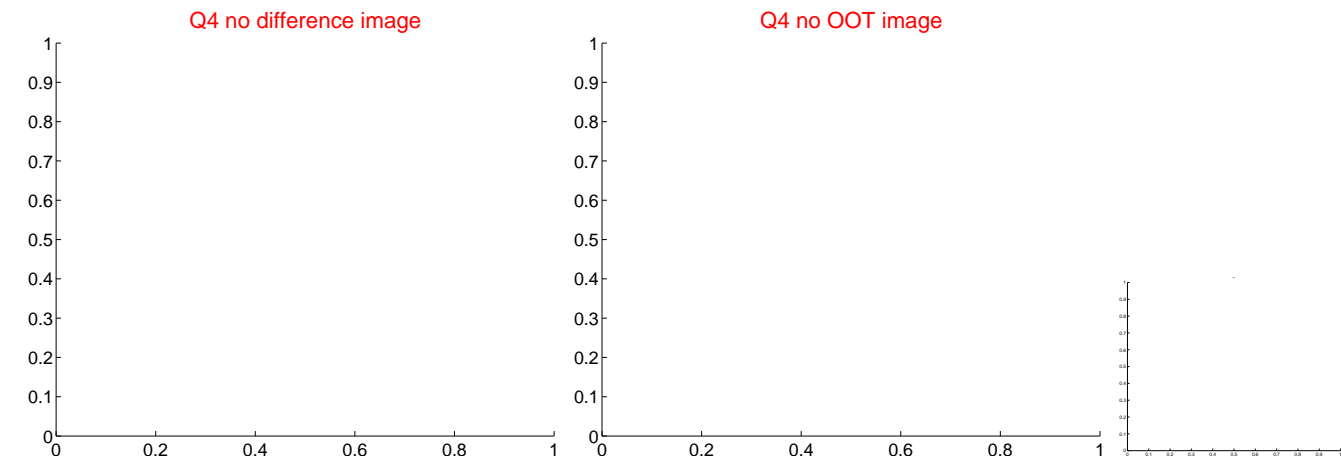
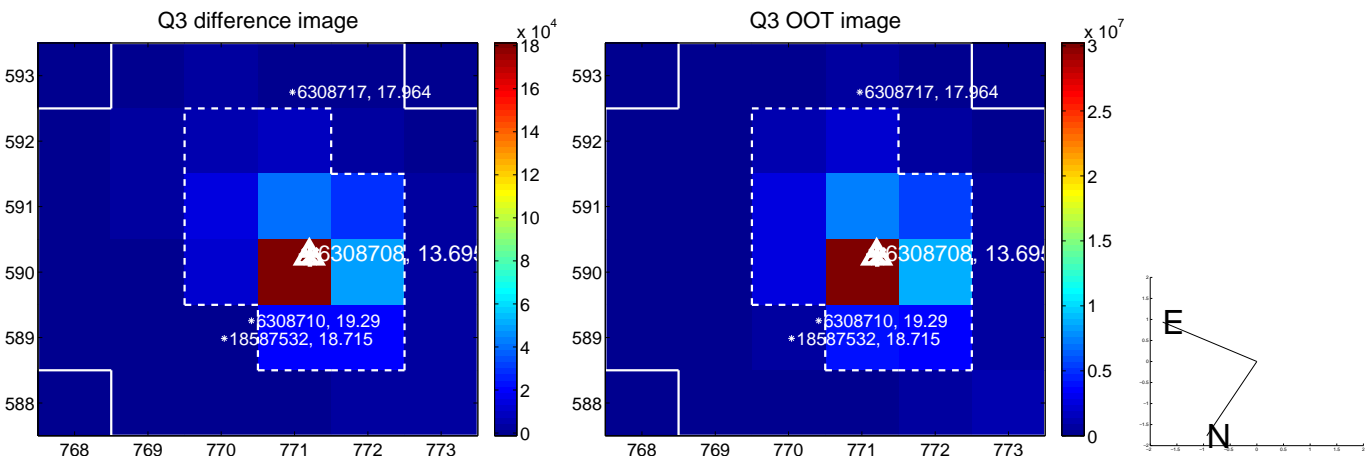
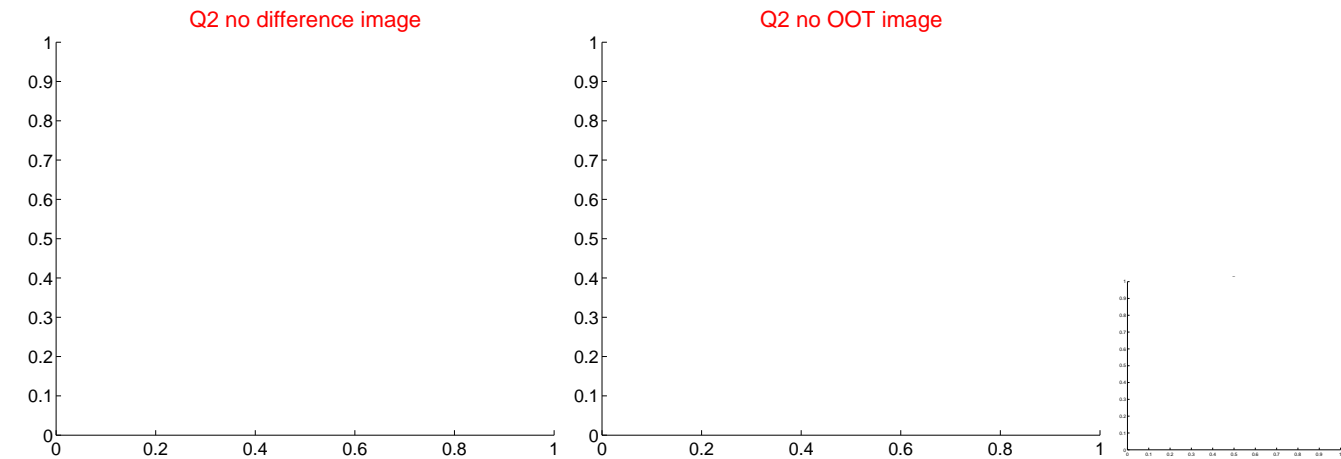
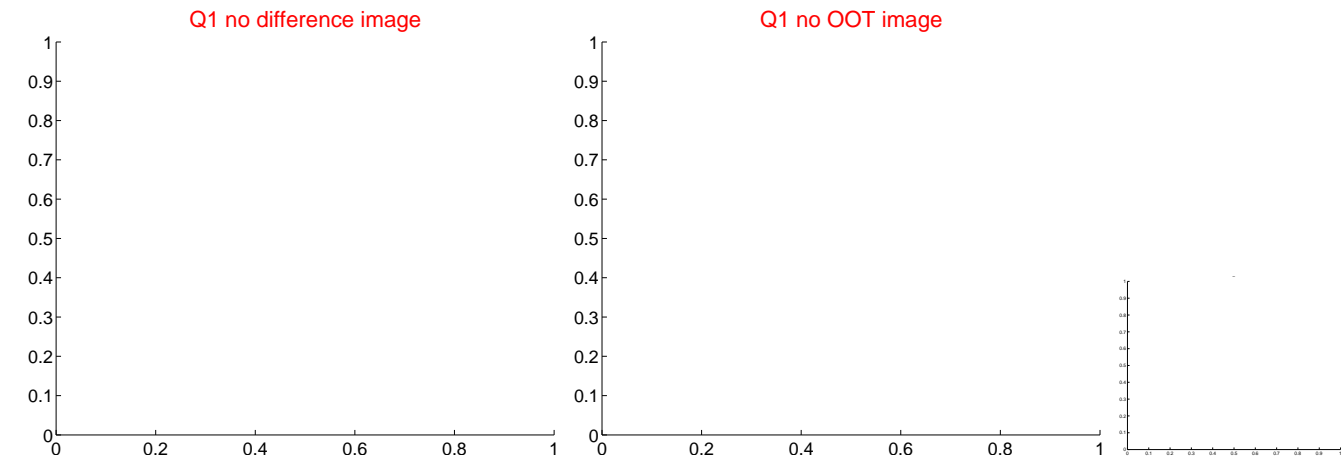
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.155	0.98	-0.058 ± 0.128	0.140 ± 0.159
PRF-fit source offset from KIC position	0.139 ± 0.176	0.79	-0.039 ± 0.149	0.134 ± 0.179
photometric centroid source offset	1.71 ± 3.09	0.55	0.10 ± 3.72	1.71 ± 3.09

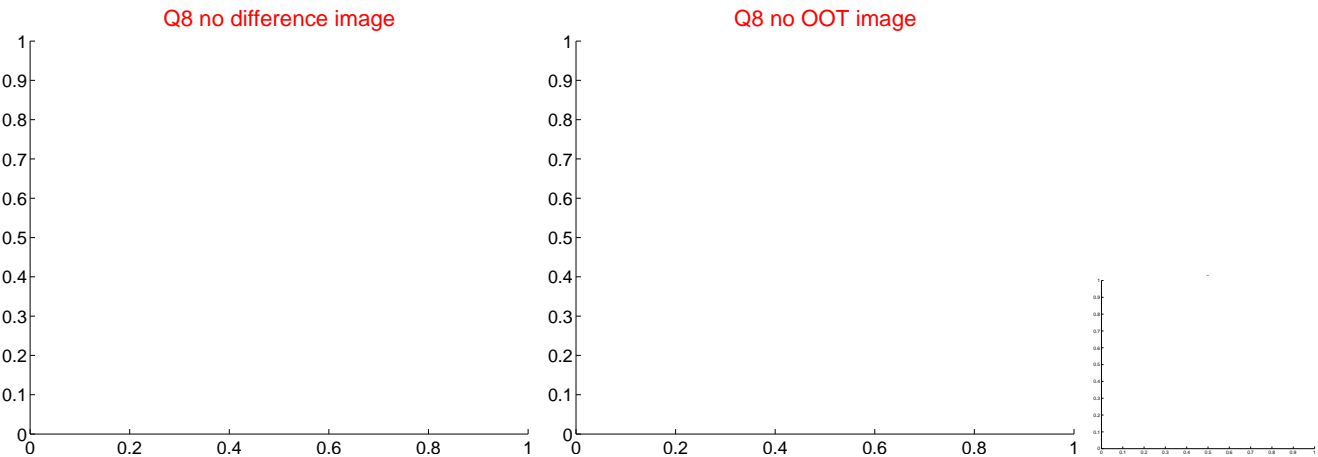
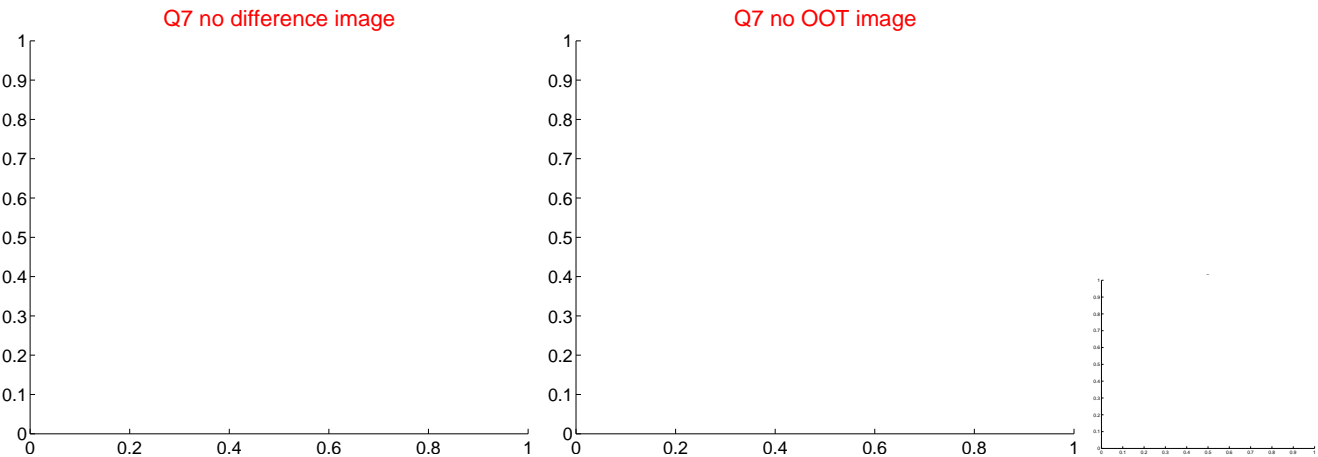
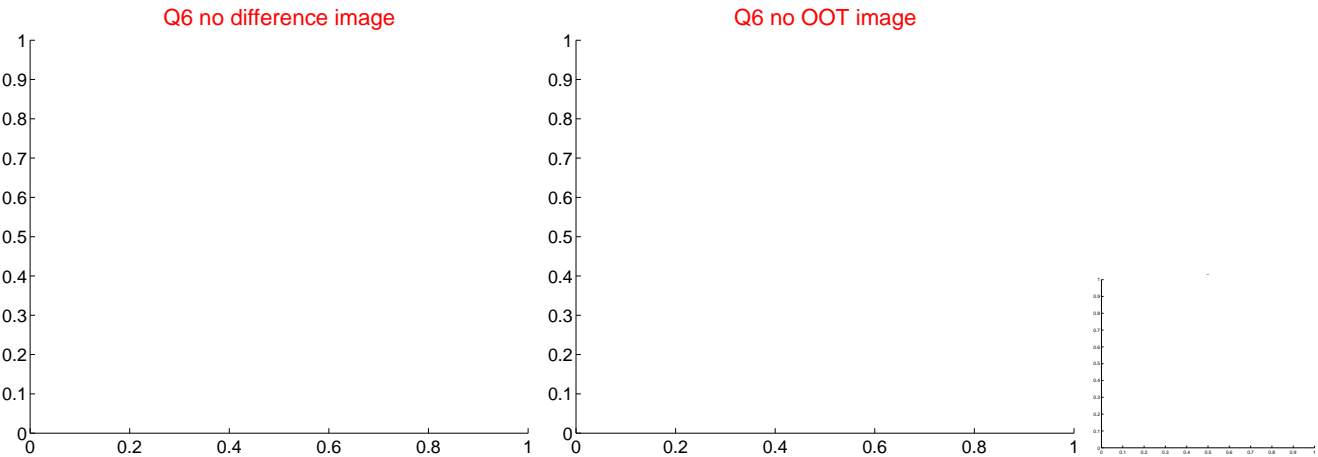
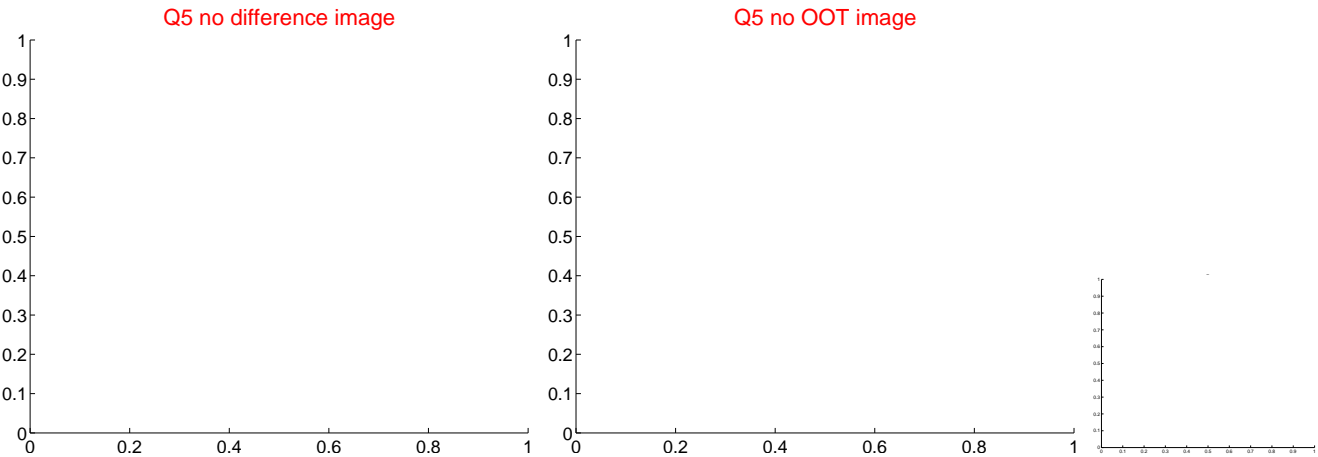


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

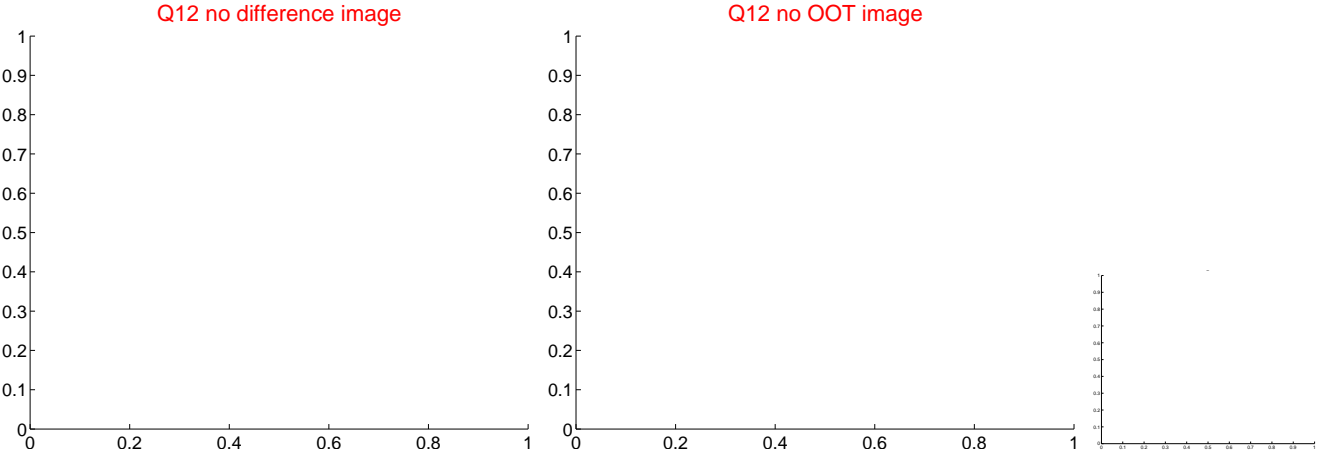
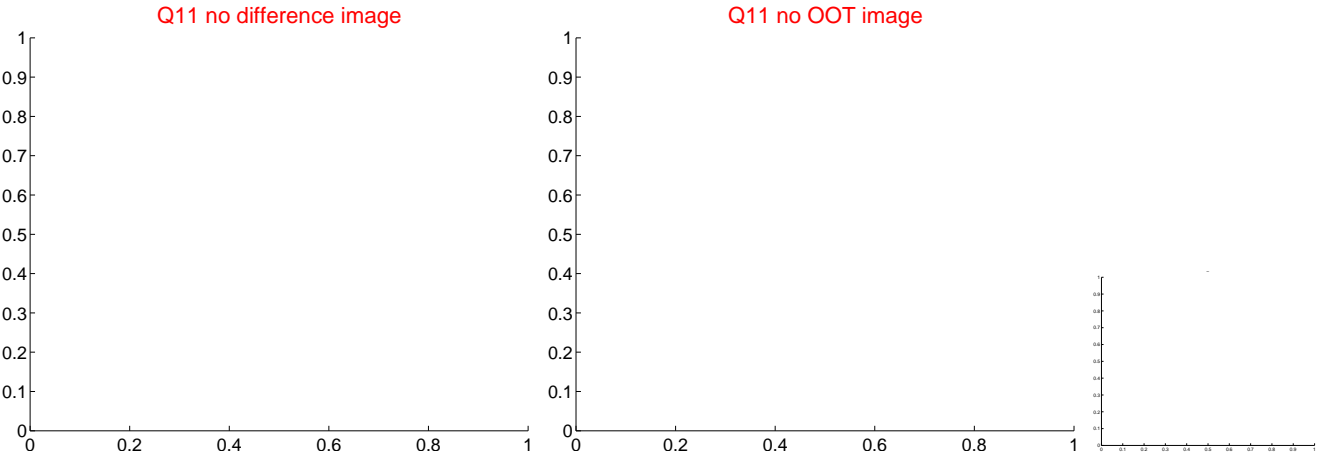
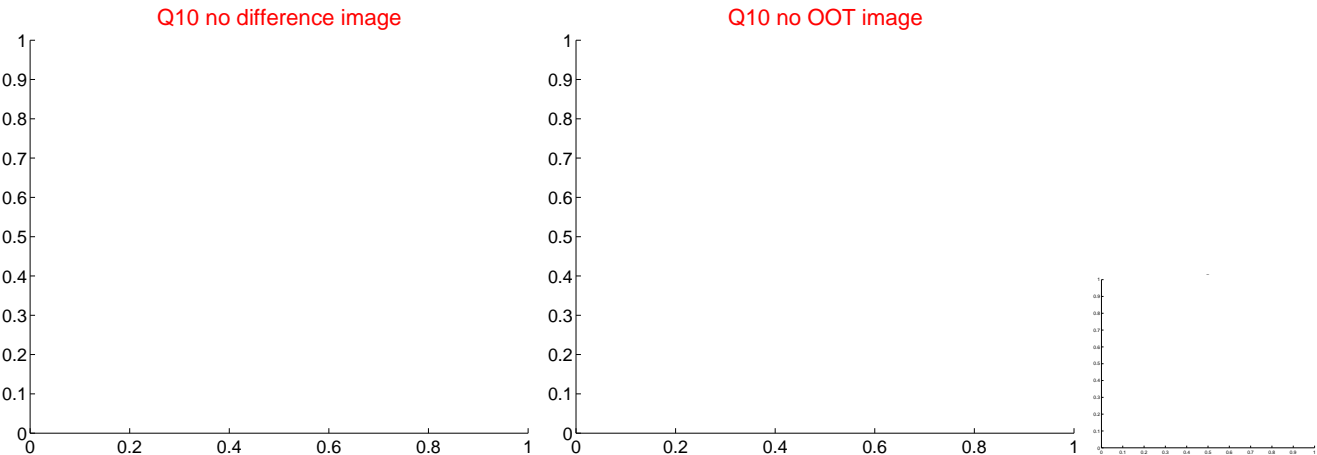
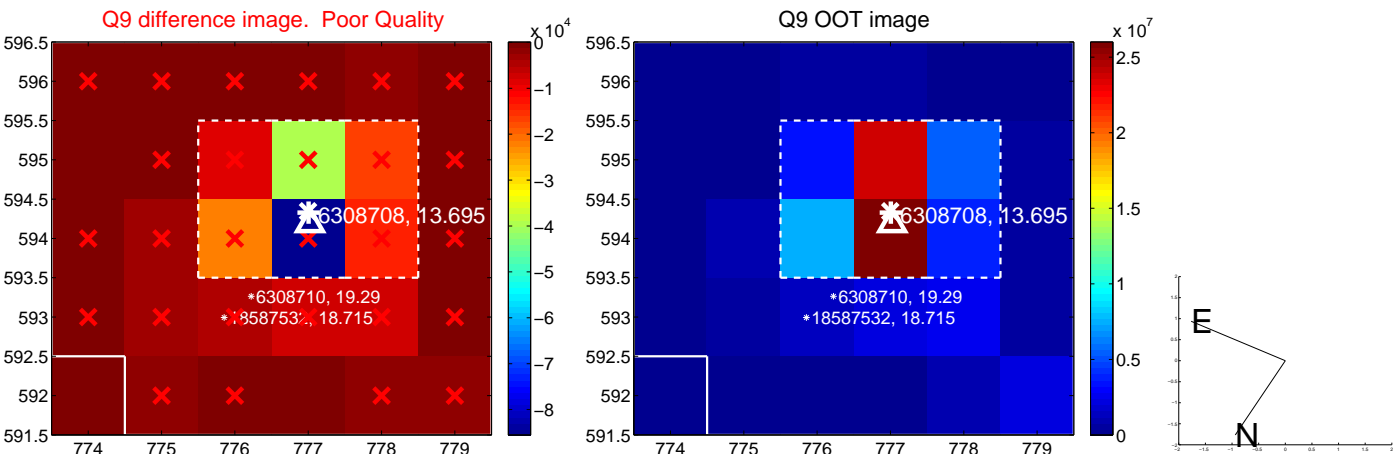
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



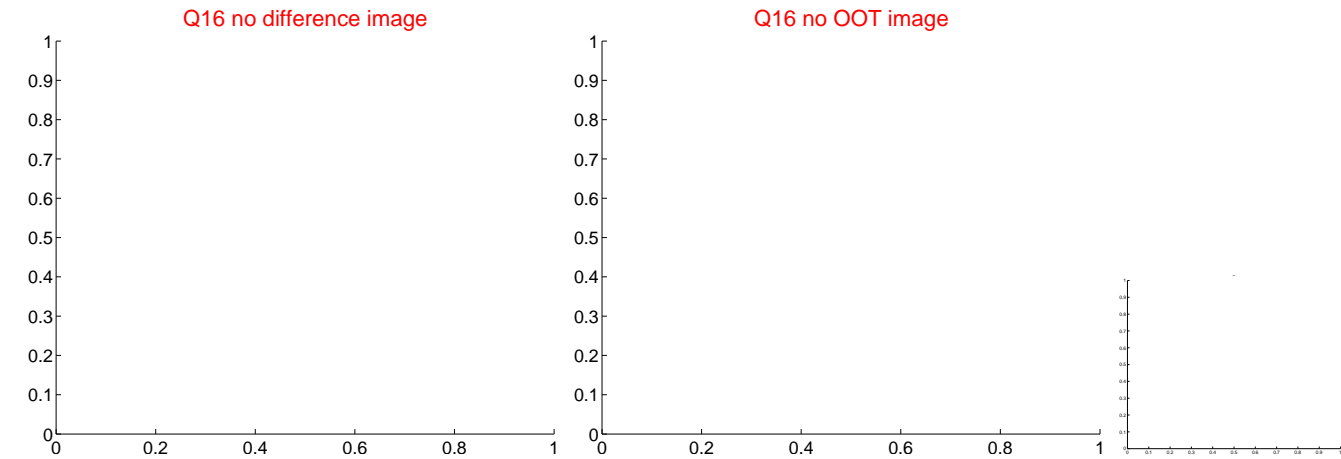
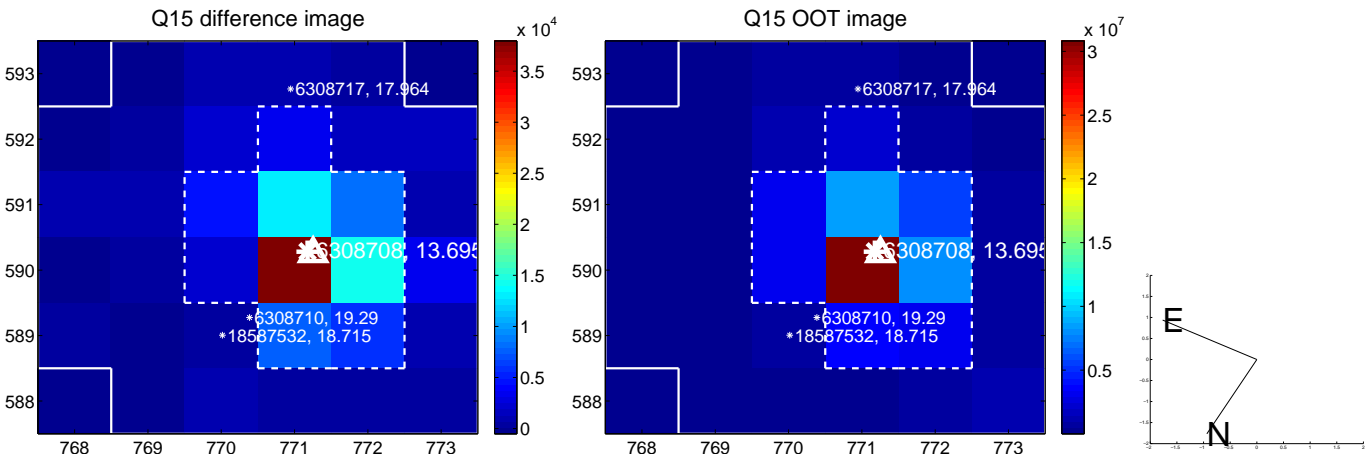
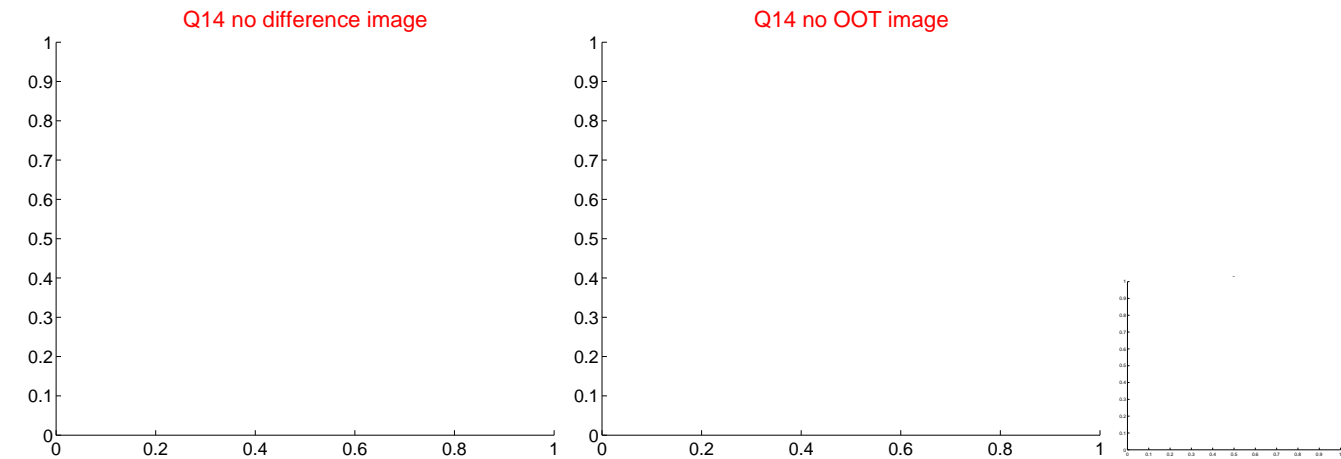
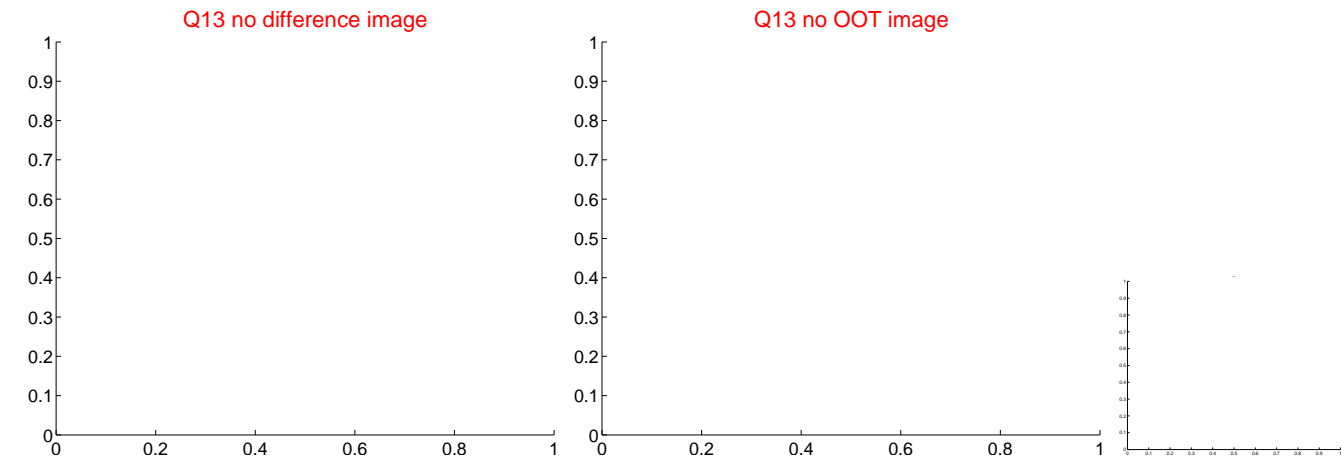
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



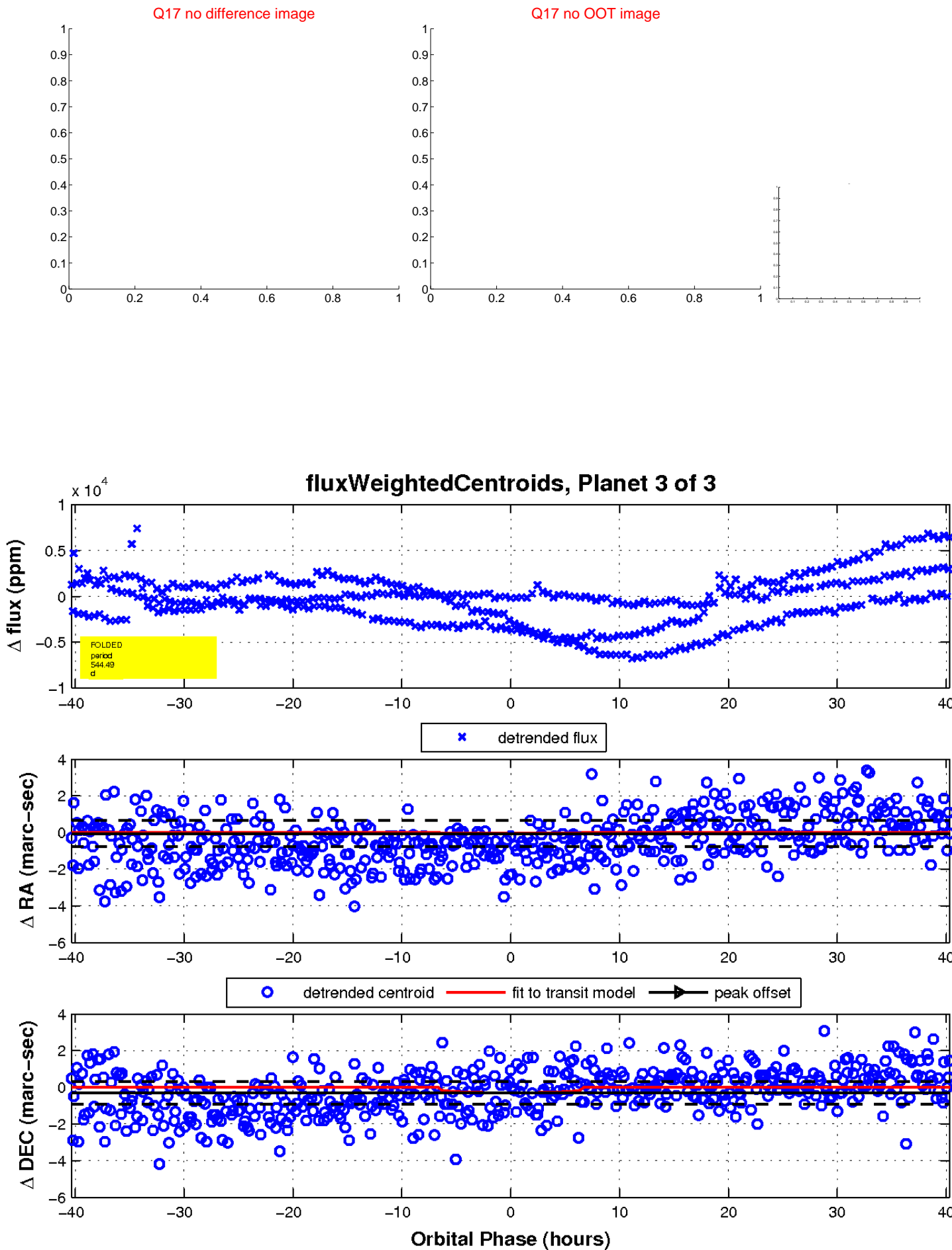
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

