

KIC 006119608

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})
006119608-01	OBS	No	370.439303	153.772295	1159.9	21.932	8.1	8.6	1.26	6623	4.34	2.24
006119608-02	OBS	No	365.513405	152.818108	1088.8	18.633	7.8	8.0	1.26	6623	4.21	2.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119608-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006119608-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

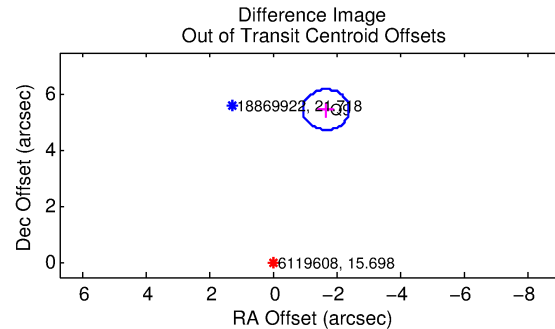
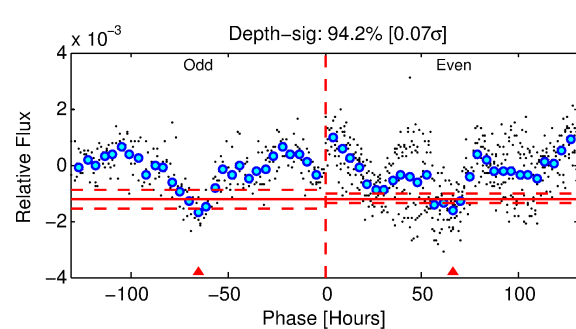
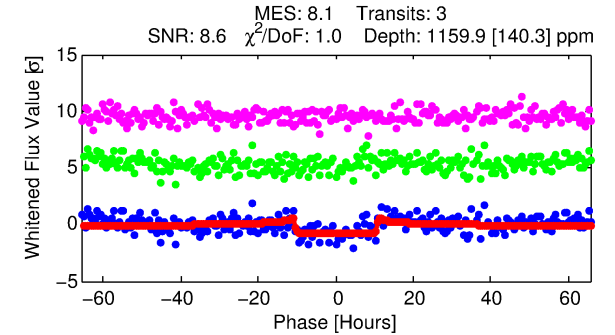
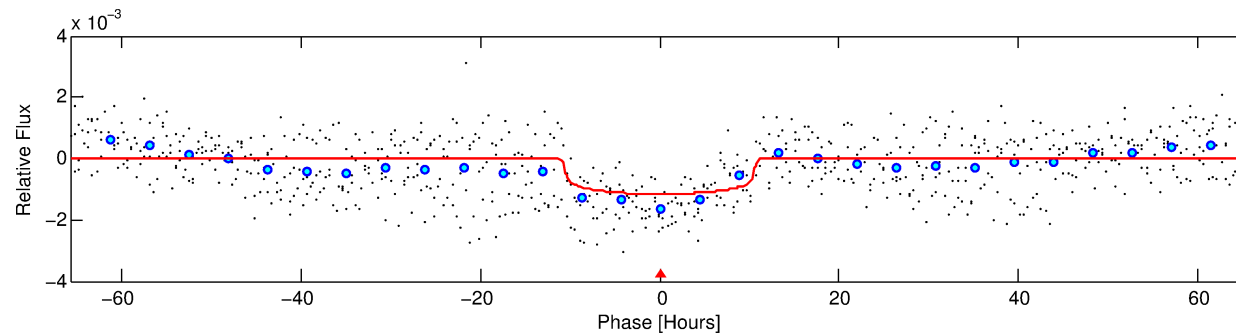
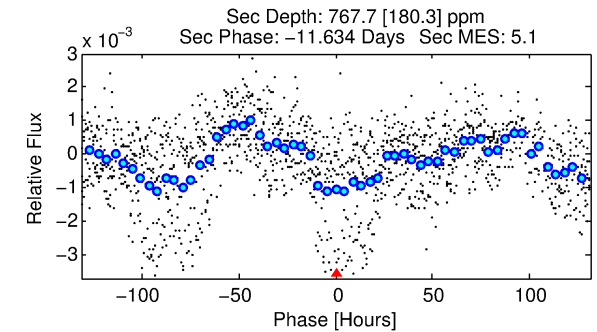
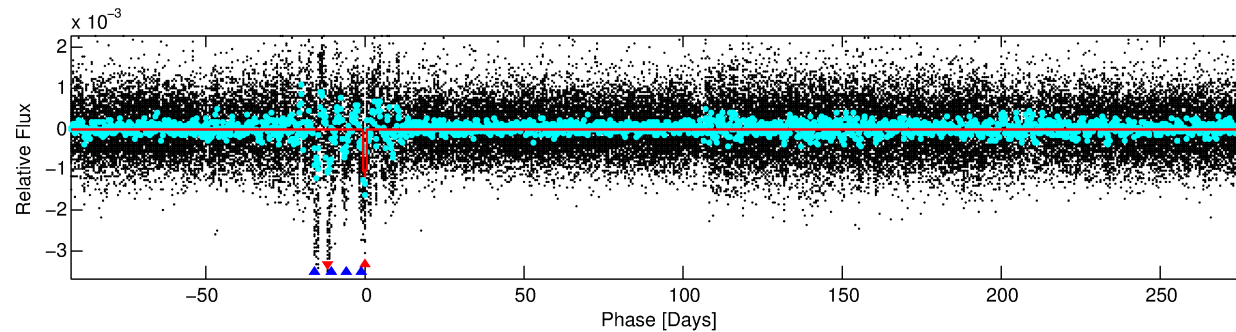
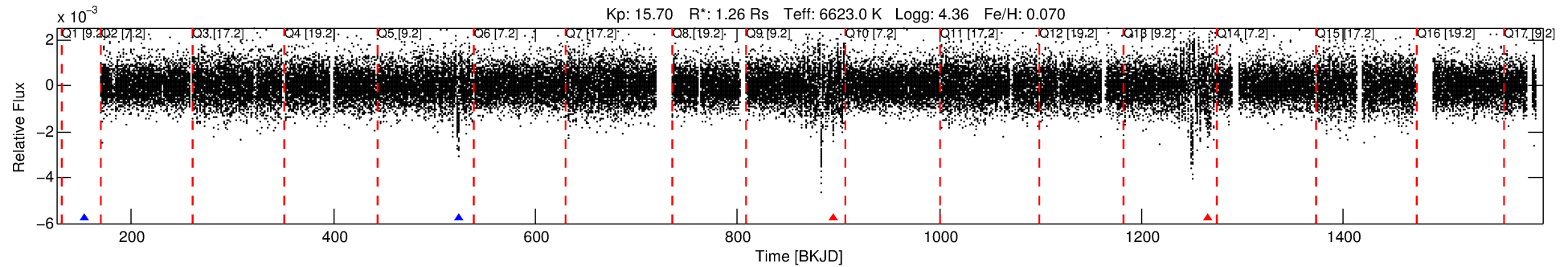
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006119608-01

No Significant Match Found

DV One-Page Summary

KIC: 6119608 Candidate: 1 of 2 Period: 370.439 d



DV Fit Results:

Period = 370.43930 [0.01239] d
Epoch = 153.7723 [0.0259] BKJD
Rp/R* = 0.0315 [0.0074]
a/R* = 129.22 [151.45]
b = 0.25 [4.48]
Seff = 2.24 [0.84]
Teq = 312 [29] K
Rp = 4.34 [1.63] Re
a = 1.1057 [0.2653] AU
Ag = 27401.86 [17072.99] [1.60σ]
Teff = 6207 [847] K [6.96σ]

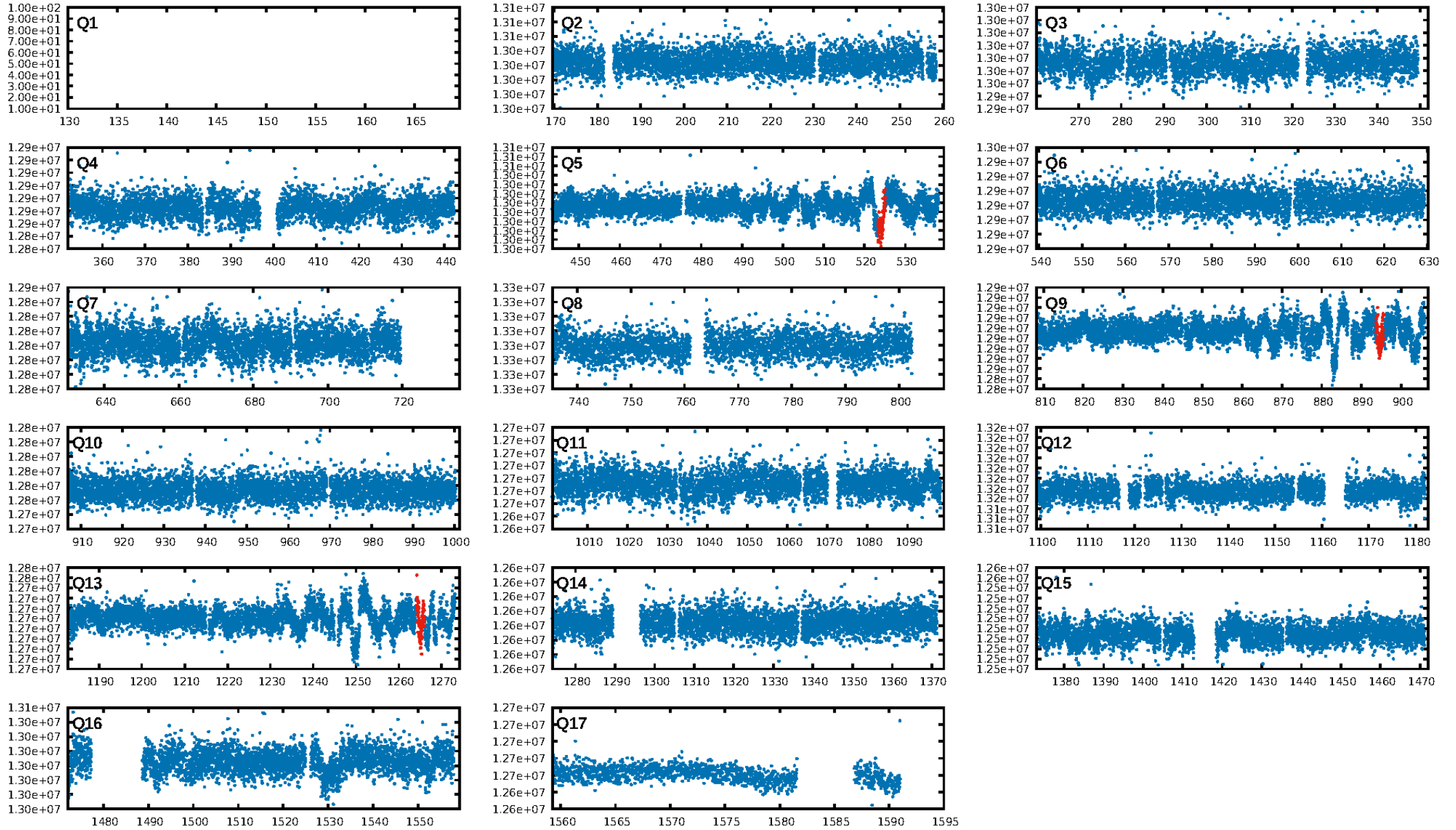
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.11σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.04e-12
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: -1.1
Centroid-sig: 0.2%
Centroid-so: 6.016 arcsec [2.10σ]
OotOffset-rm: 5.699 arcsec [23.67σ]
KicOffset-rm: 6.041 arcsec [25.07σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

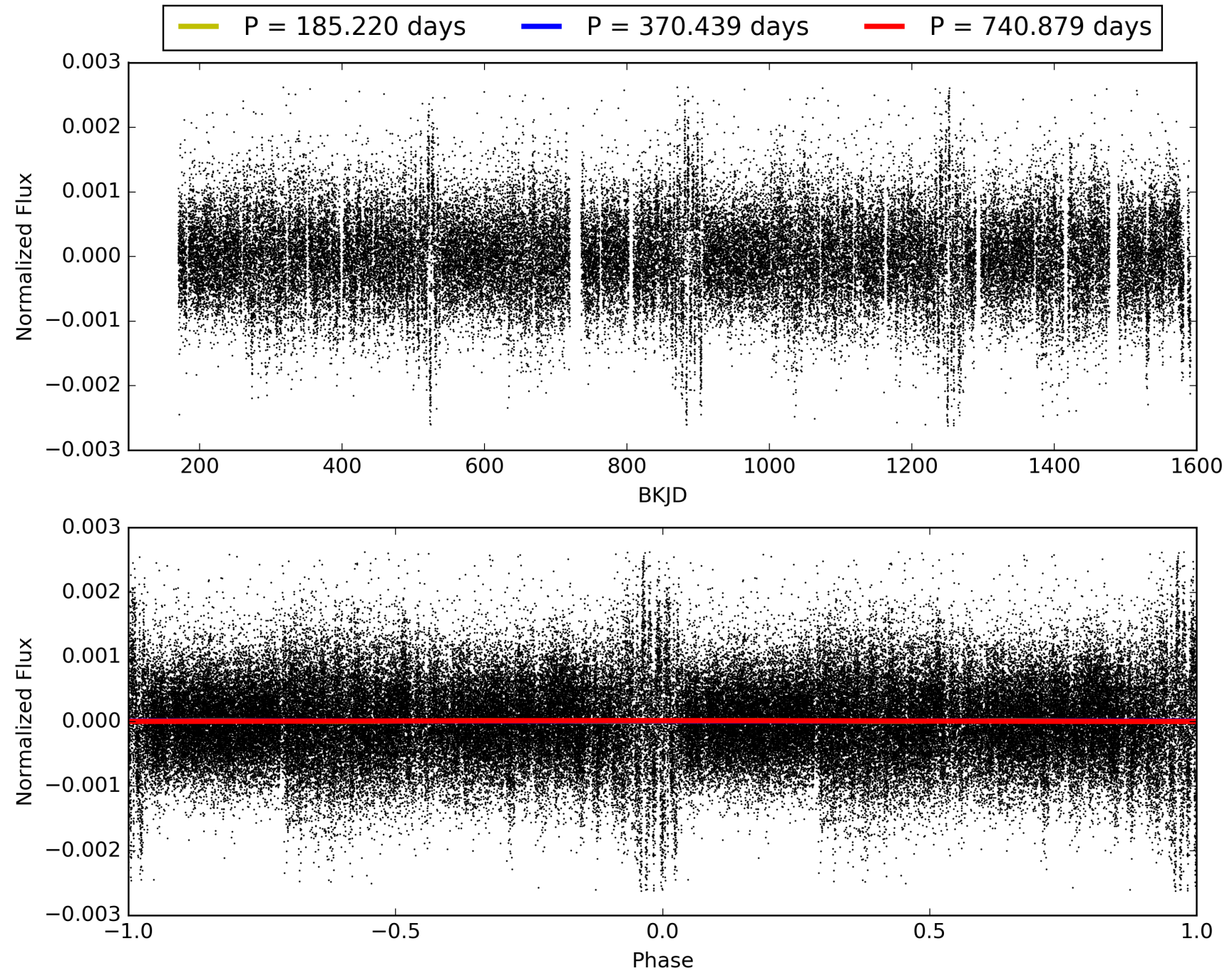
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:04:35 Z

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

TCE 006119608-01, PDC Light Curves

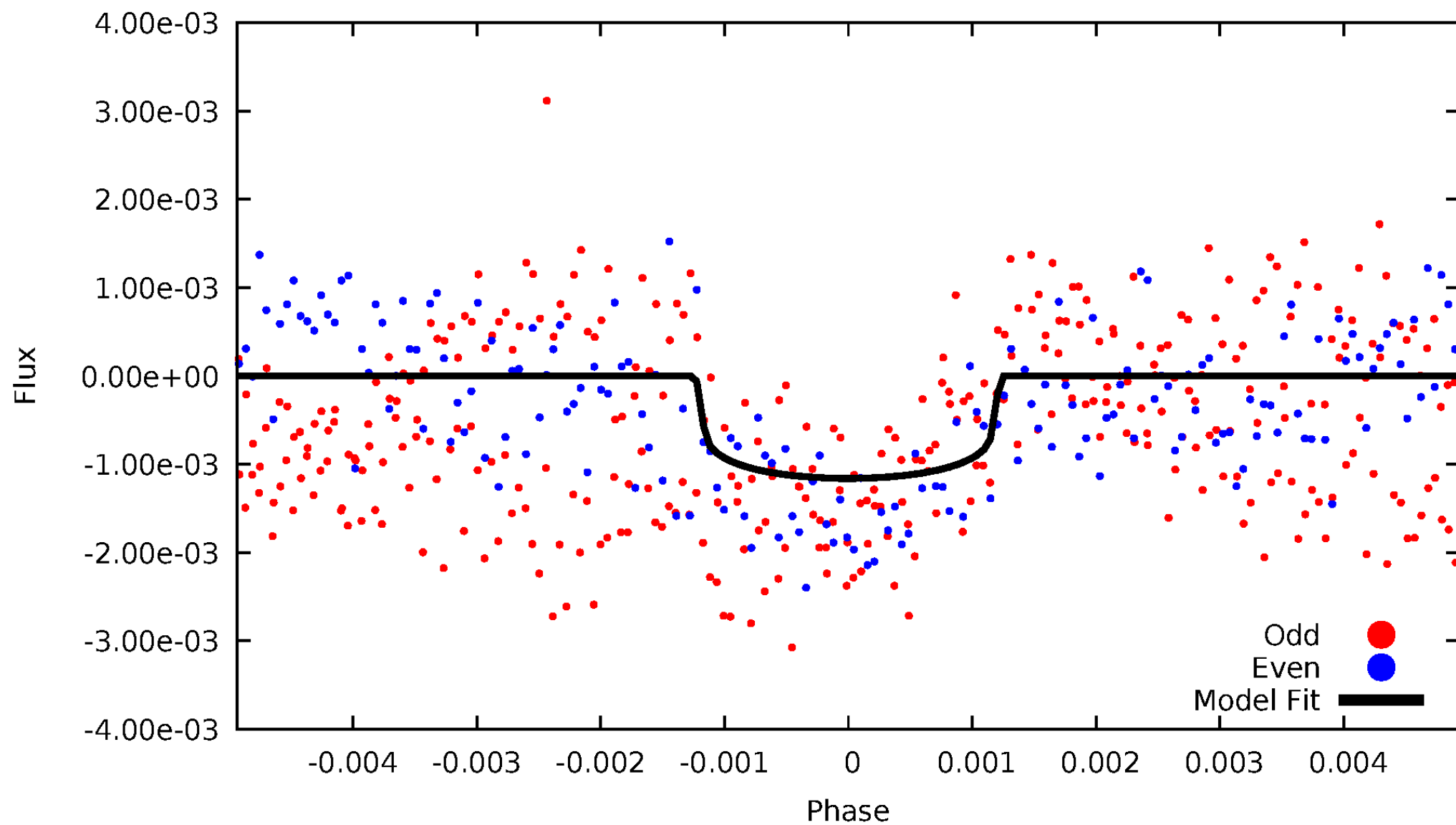


TCE 006119608-01



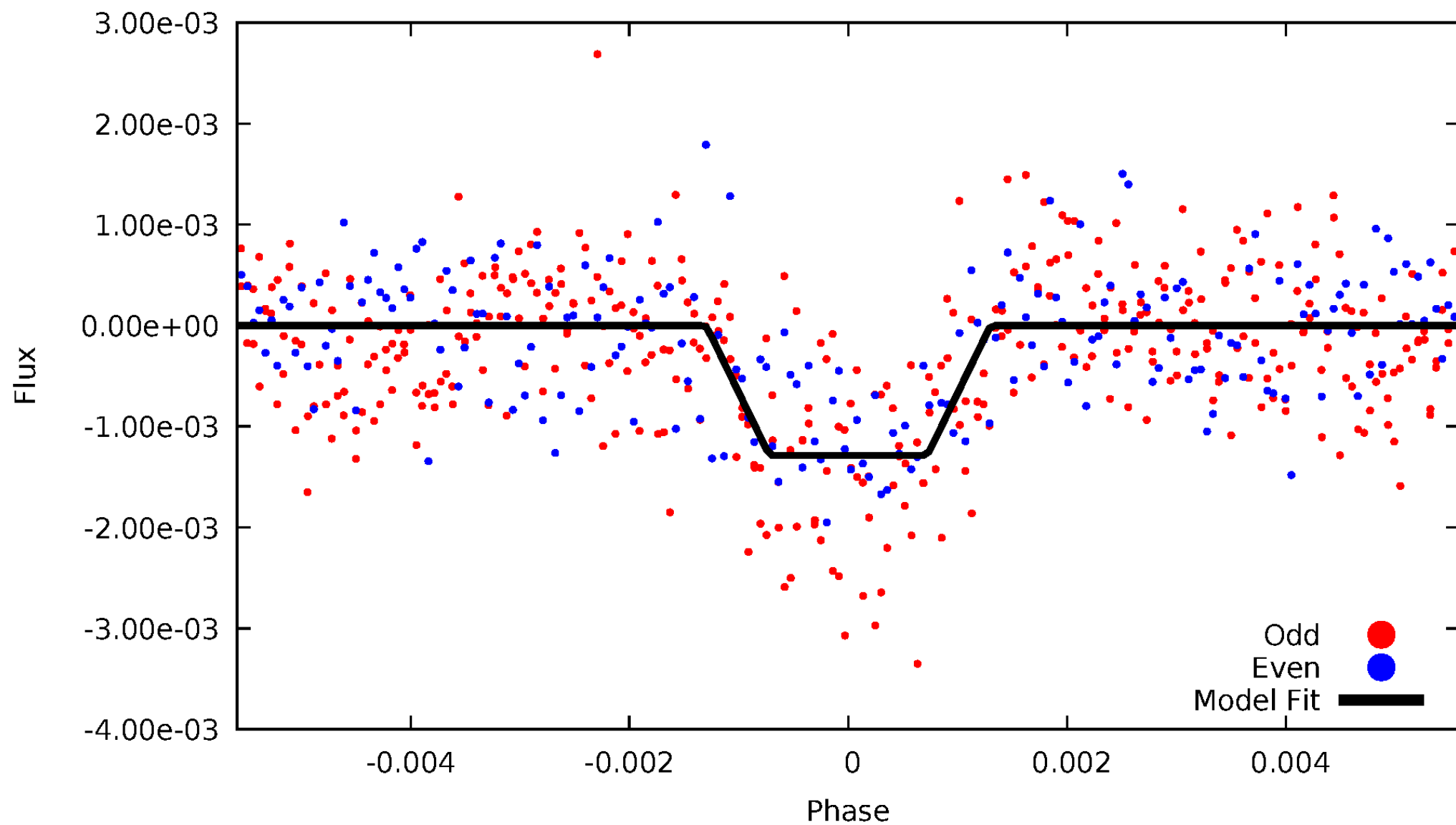
DV Odd/Even

TCE 006119608-01



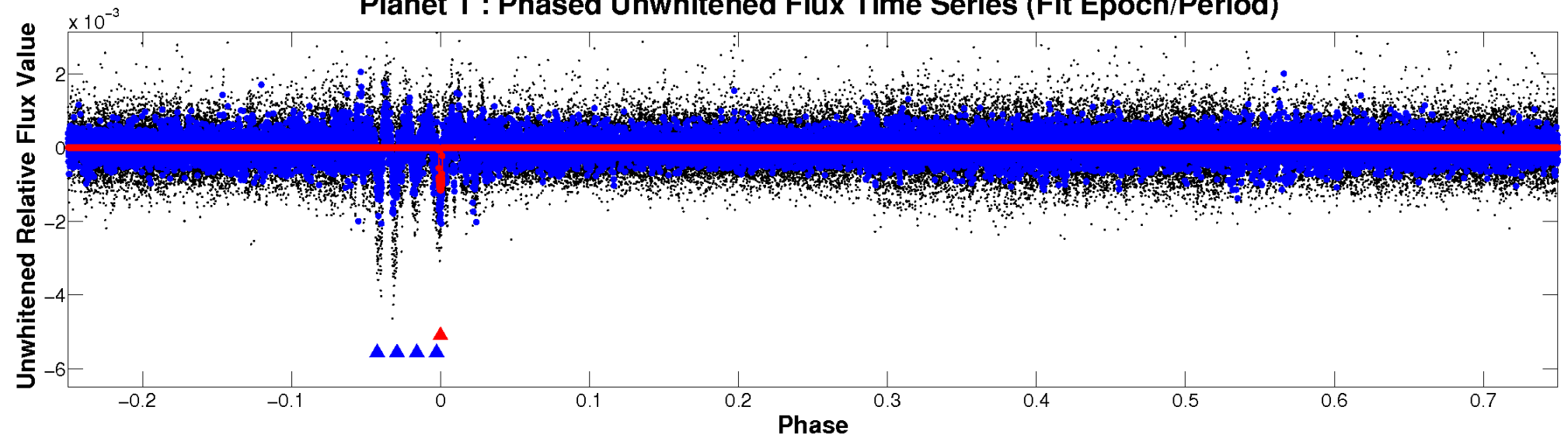
ALT Odd/Even

TCE 006119608-01

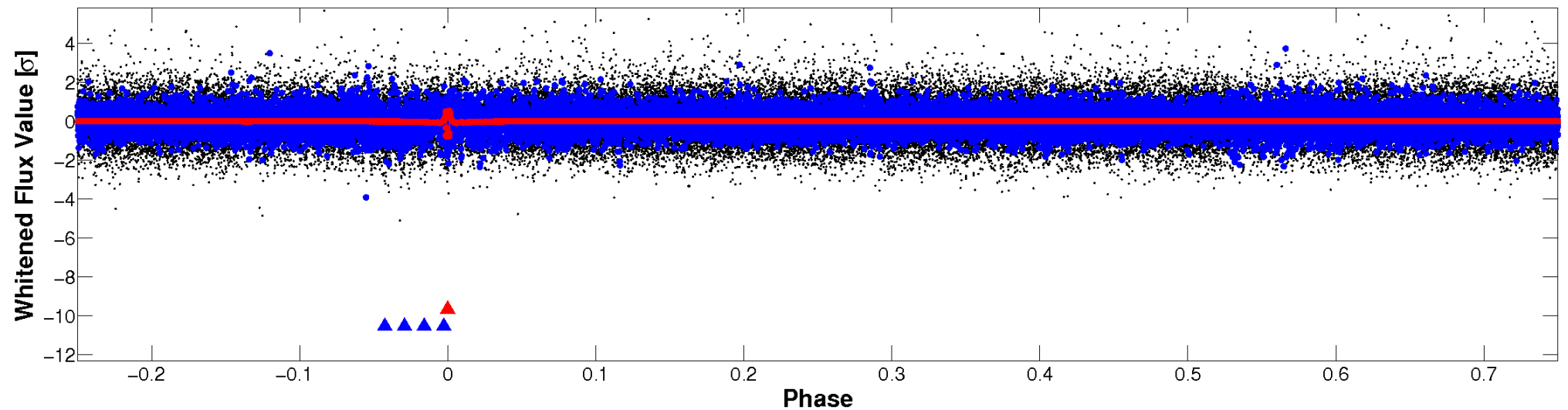


Non-Whitened Vs. Whitened Light Curve

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

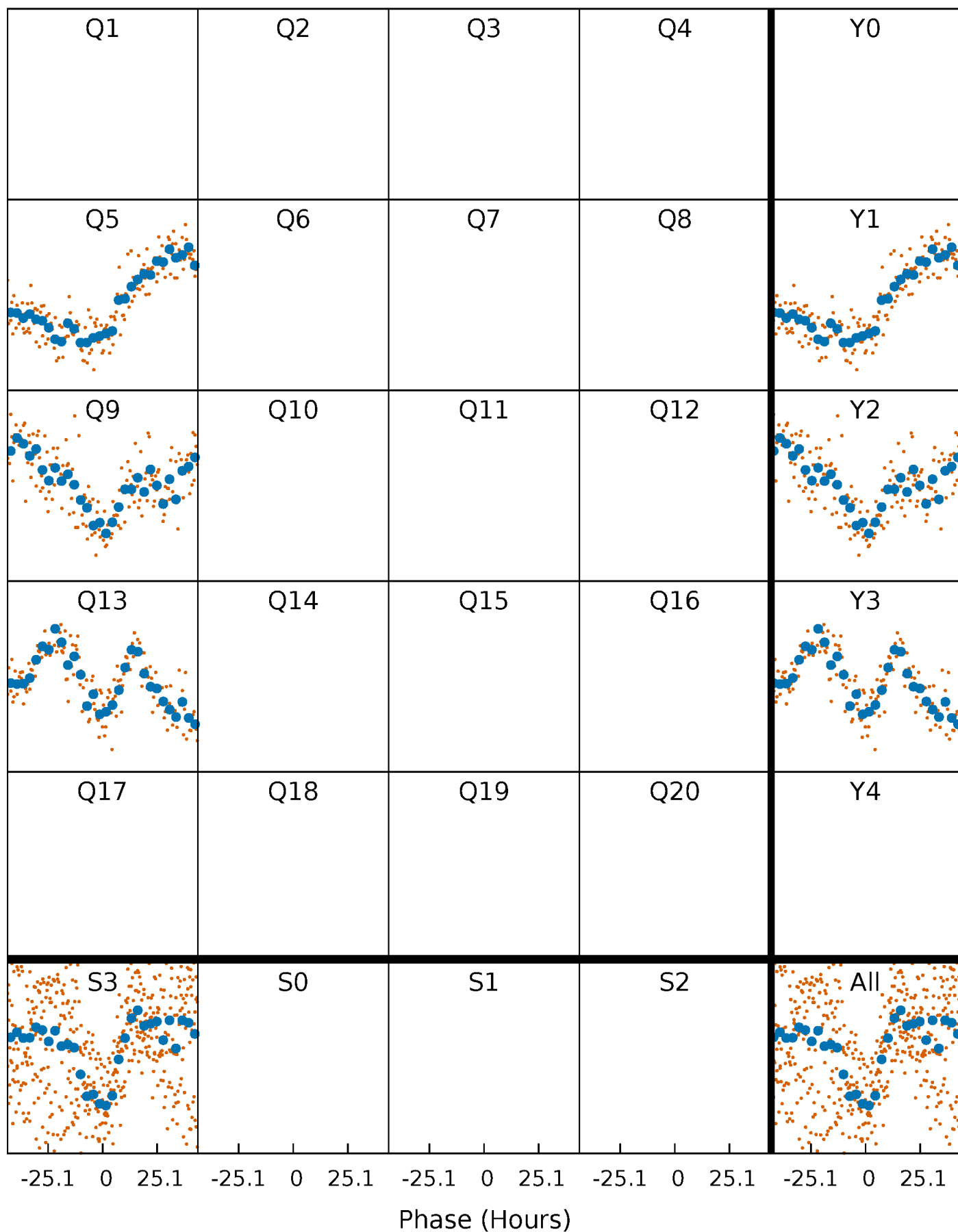


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



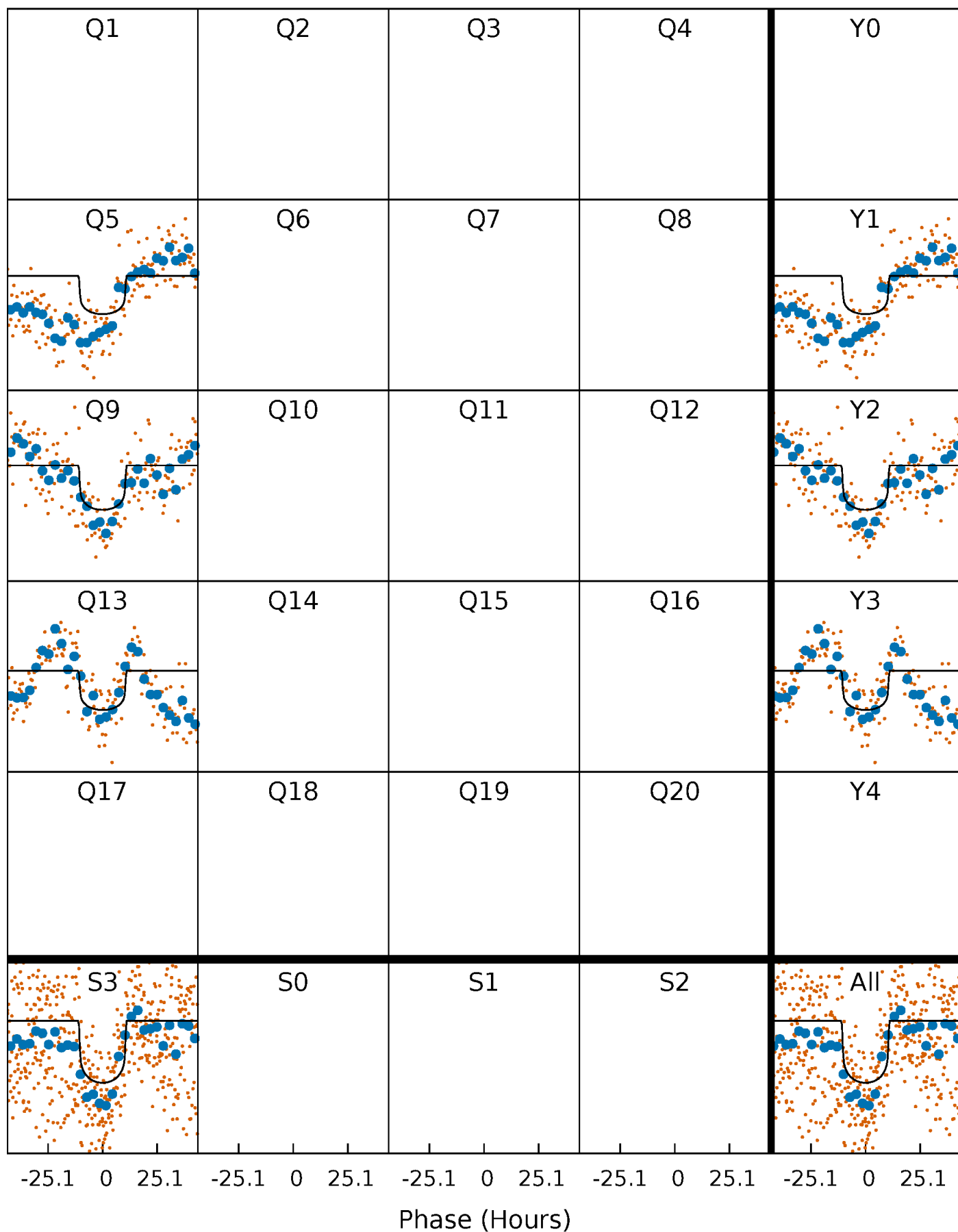
PDC Quarter-Phased Transit Curves

TCE 006119608-01 P=370.439303 Days $T_0=153.772296$ (BKJD)



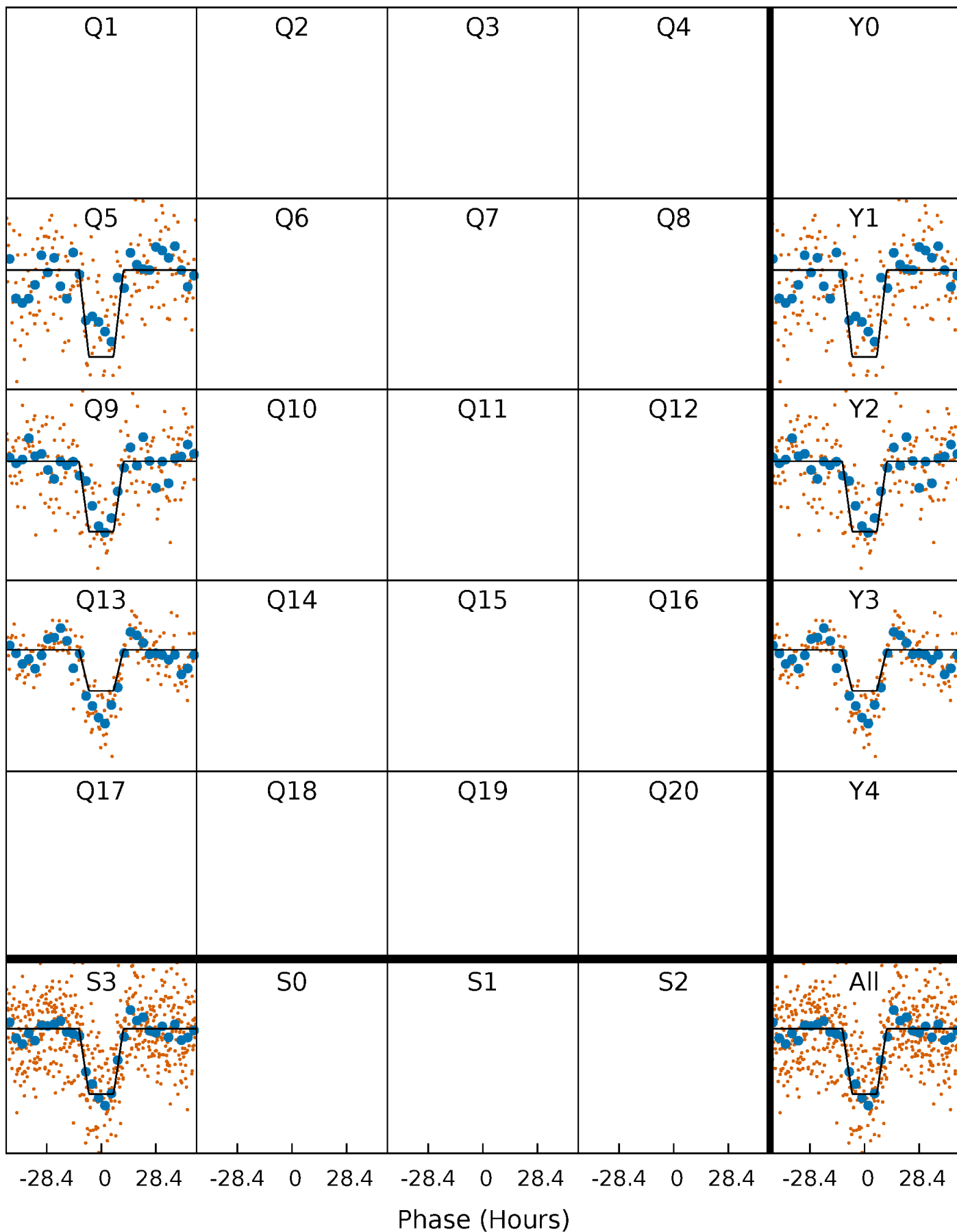
DV Quarter-Phased Transit Curves

TCE 006119608-01 P=370.439303 Days $T_0=153.772296$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

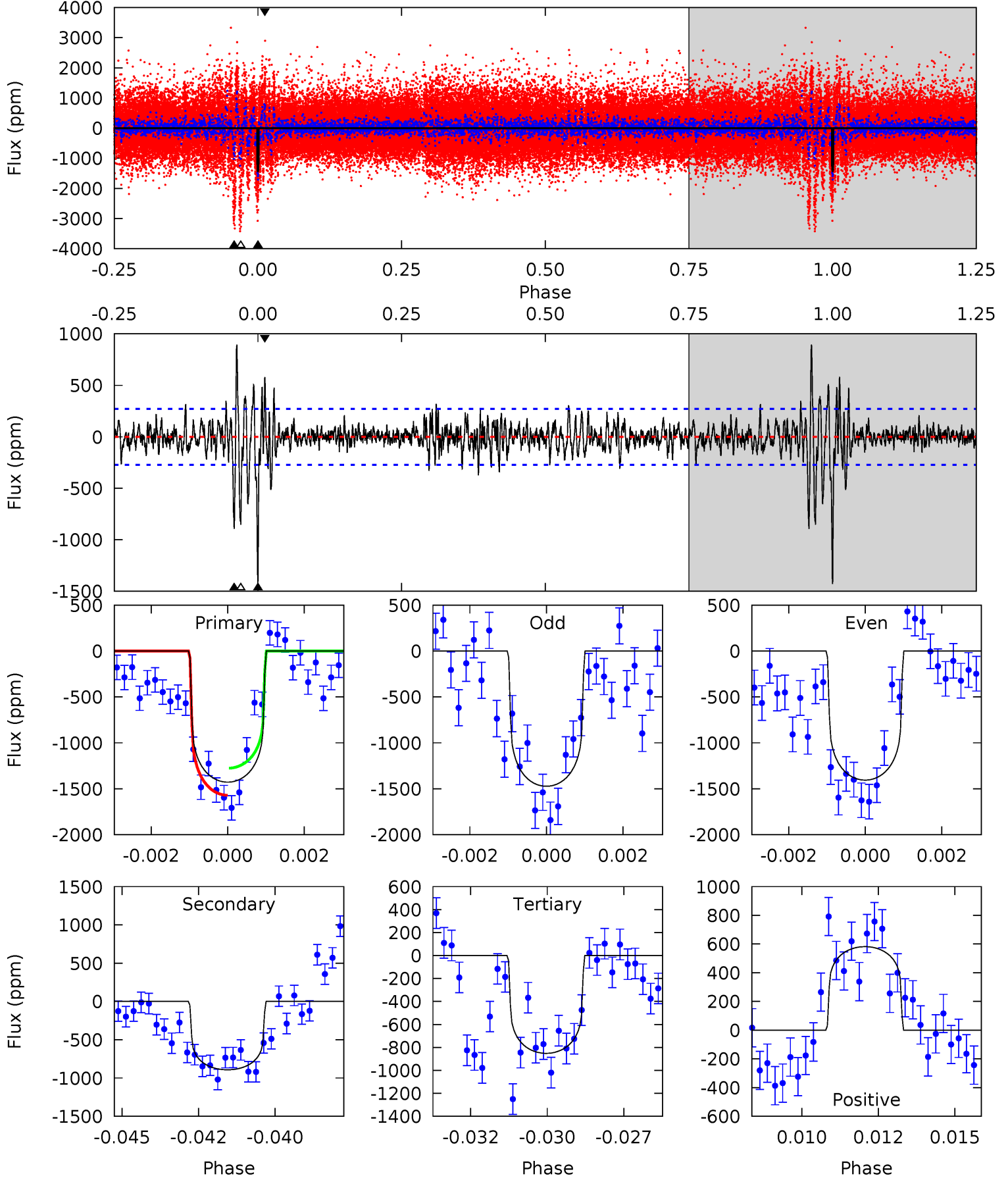
TCE 006119608-01 P=370.440009 Days $T_0=153.717494$ (BKJD)



DV Model-Shift Uniqueness Test

006119608-01, $P = 370.439303$ Days, $E = 153.772296$ Days

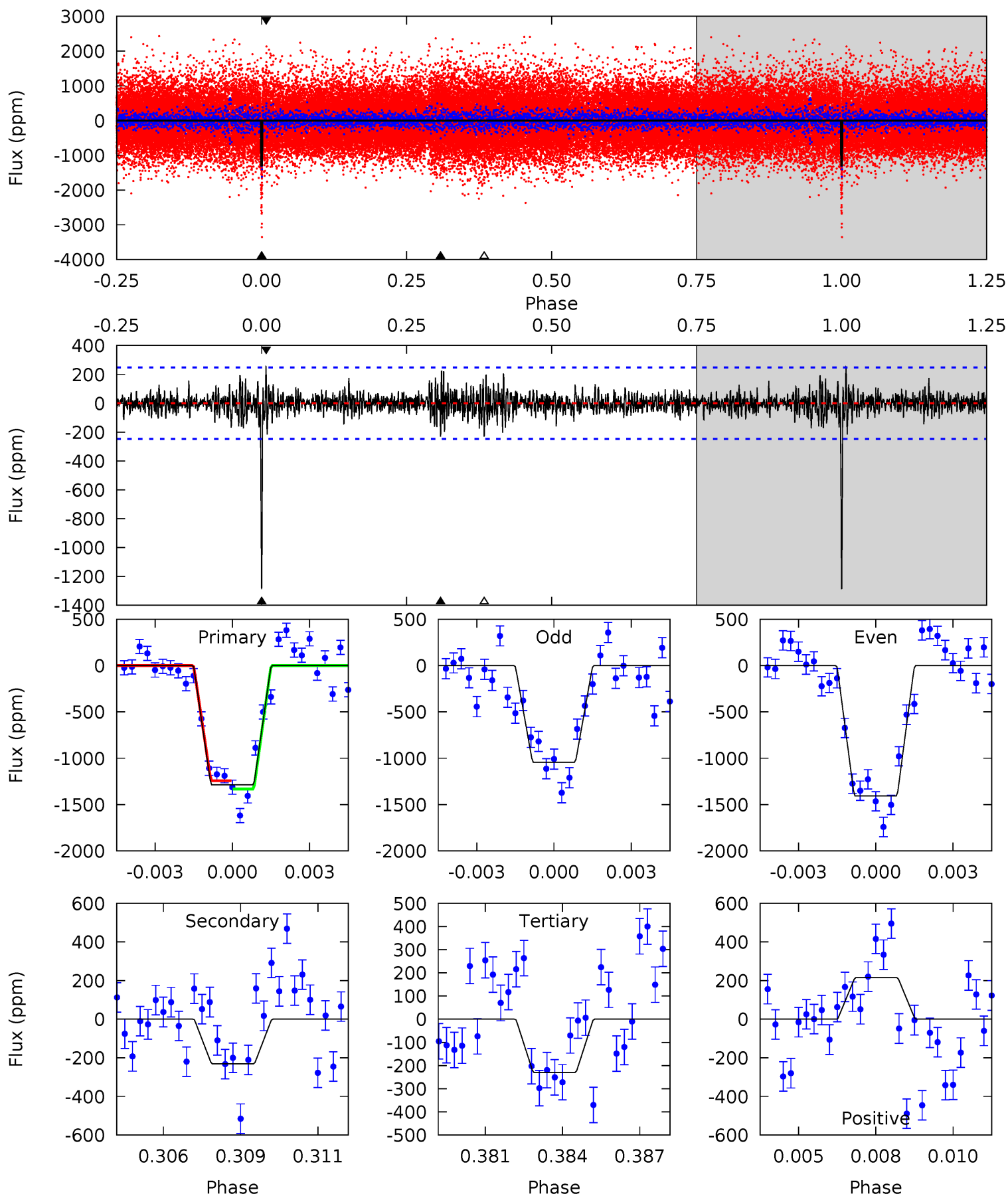
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	17.4	16.6	11.3	5.29	3.02	2.38	11.2	16.5	0.80	6.05	0.62	0.97	0.39	2.85



Alt Model-Shift Uniqueness Test

006119608-01, P = 370.440009 Days, E = 153.717494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	4.94	4.91	4.60	5.28	3.01	1.13	22.6	22.9	0.03	0.35	3.66	1.23	0.16	0.95



Stellar Parameters For KIC 006119608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6623^{+187}_{-258}	$4.355^{+0.060}_{-0.180}$	$0.070^{+0.200}_{-0.400}$	$1.261^{+0.371}_{-0.159}$	$1.317^{+0.150}_{-0.224}$	$0.924^{+0.303}_{-0.447}$
	+3%/-4%	+1%/-4%	+286%/-571%	+29%/-13%	+11%/-17%	+33%/-48%
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 006119608-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-893 ± 51	$4.42^{+1.21}_{-1.05}$	443^{+28}_{-24}	6455^{+1003}_{-654}	30245^{+21158}_{-11412}
Alt.	-231 ± 47	$5.03^{+1.25}_{-1.02}$	442^{+31}_{-21}	4489^{+490}_{-359}	5902^{+3887}_{-2195}

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

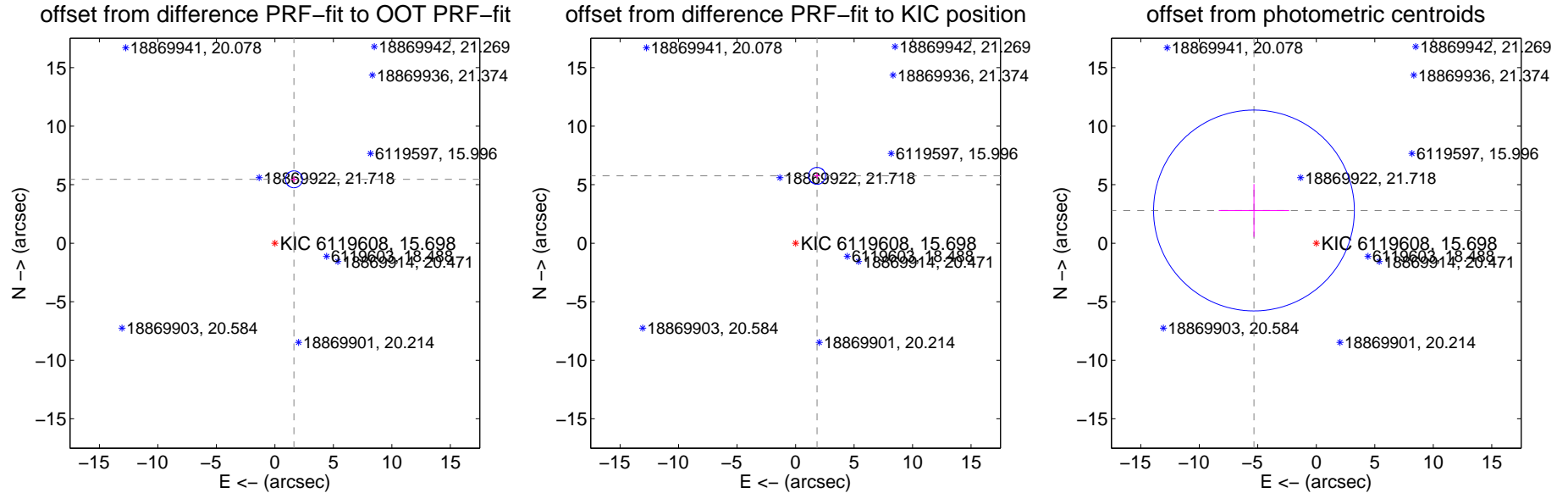
DV Centroid Data

Supplemental centroid analysis for 006119608-01. Kepler magnitude: 15.70. Transit SNR 8.59

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.699 ± 0.241	23.67	-1.632 ± 0.263	5.460 ± 0.239
PRF-fit source offset from KIC position	6.041 ± 0.241	25.07	-1.837 ± 0.263	5.755 ± 0.239
photometric centroid source offset	6.02 ± 2.86	2.10	5.33 ± 3.01	2.80 ± 2.26

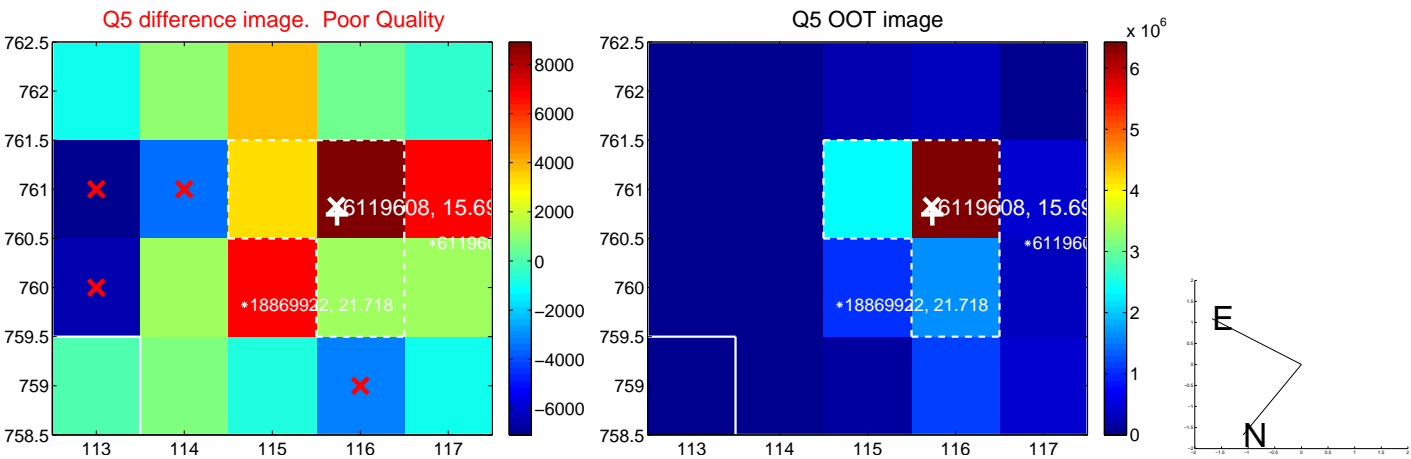


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

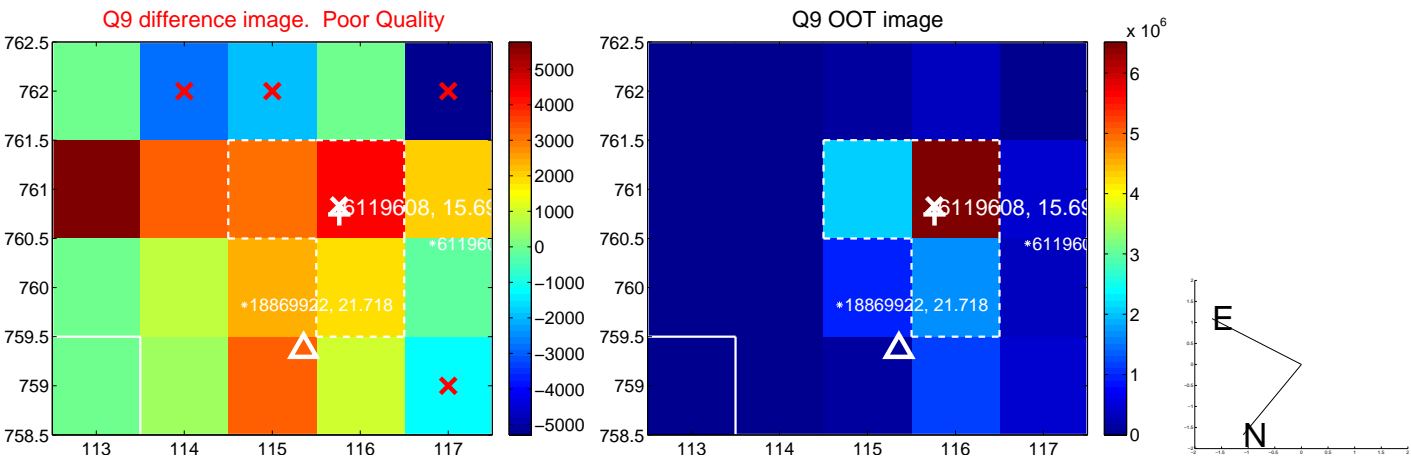
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



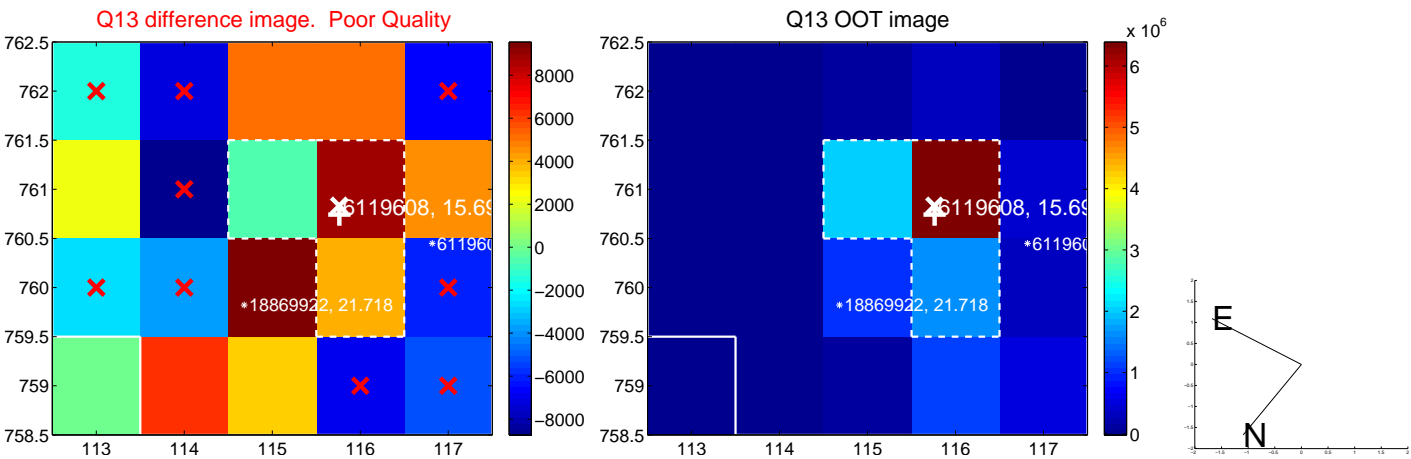
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



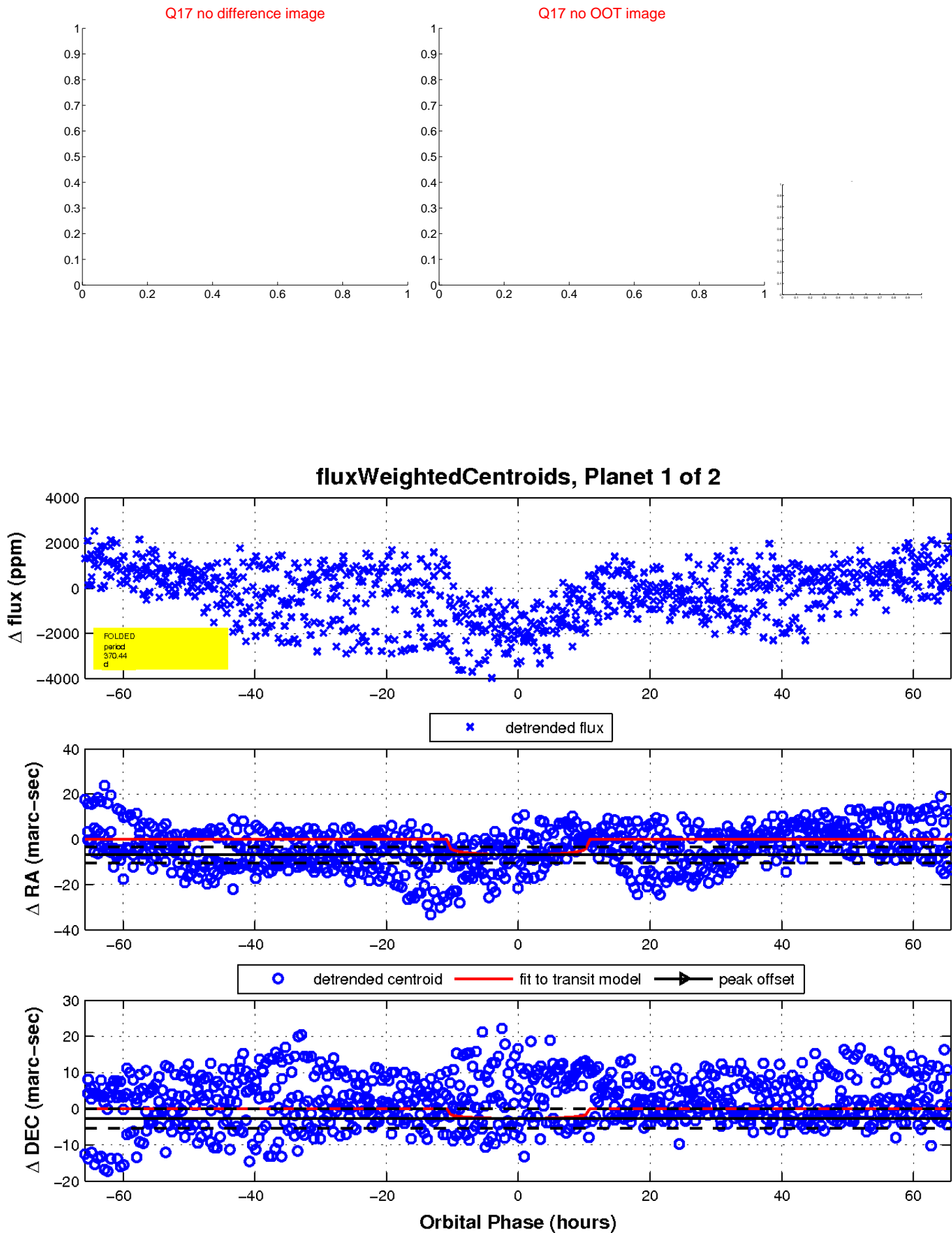
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

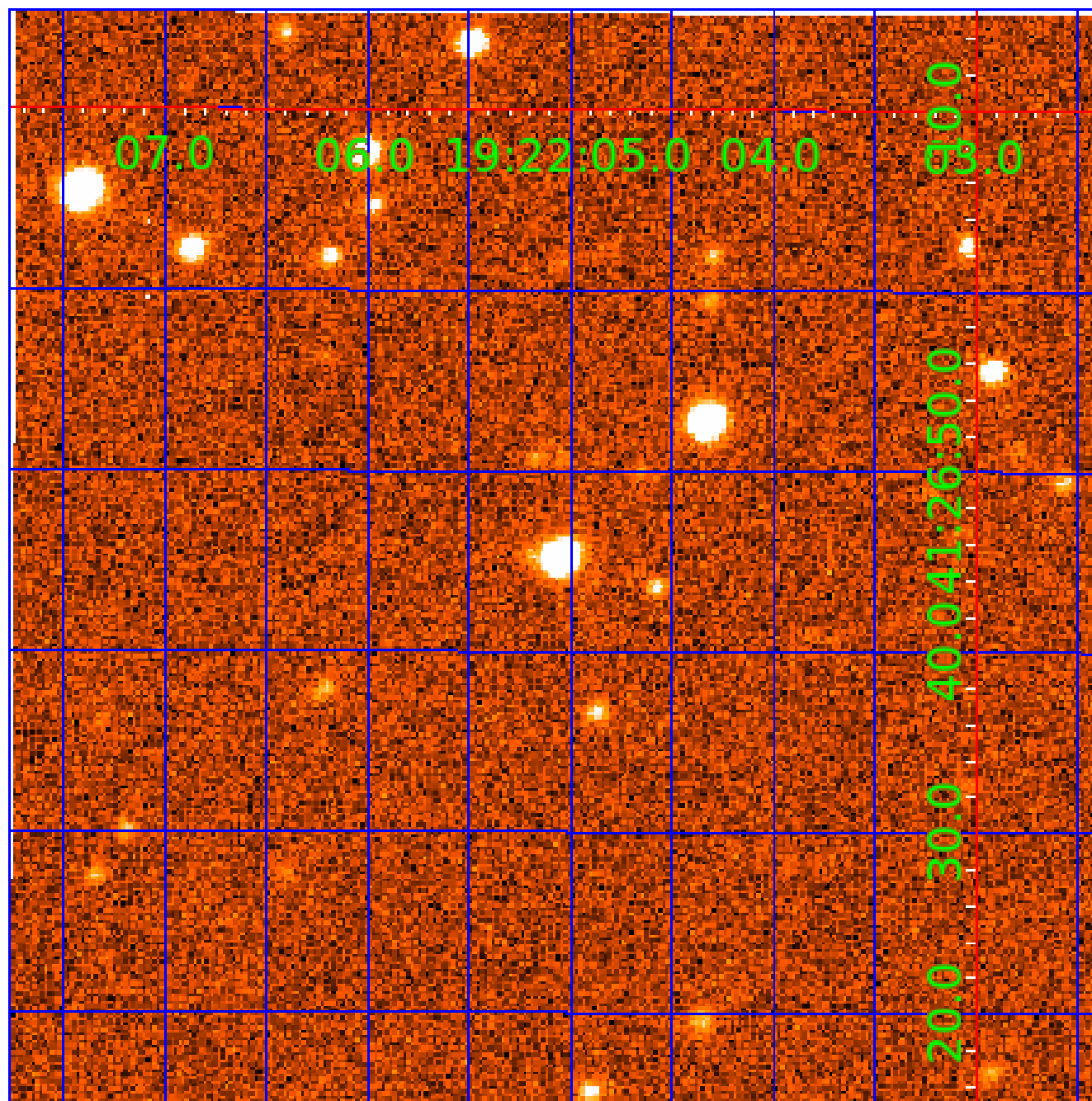


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006119608

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})
006119608-01	OBS	No	370.439303	153.772295	1159.9	21.932	8.1	8.6	1.26	6623	4.34	2.24
006119608-02	OBS	No	365.513405	152.818108	1088.8	18.633	7.8	8.0	1.26	6623	4.21	2.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119608-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006119608-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

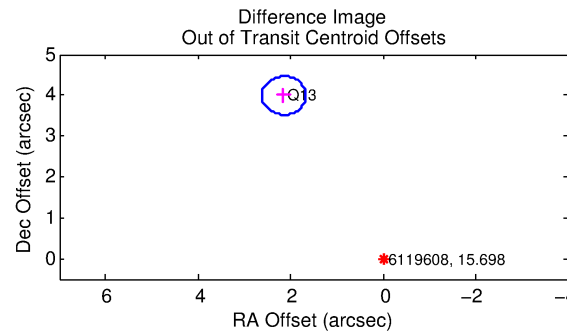
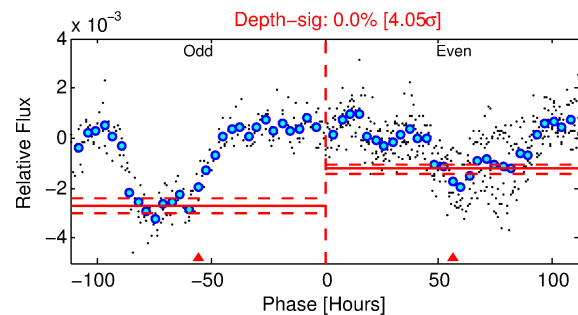
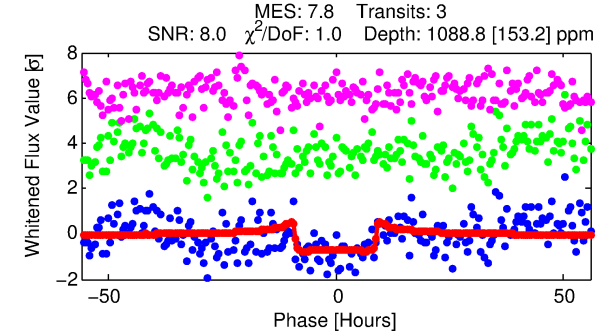
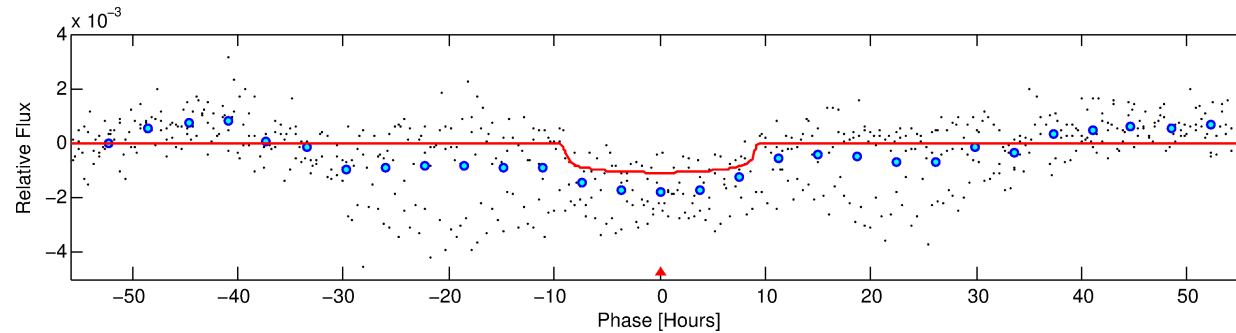
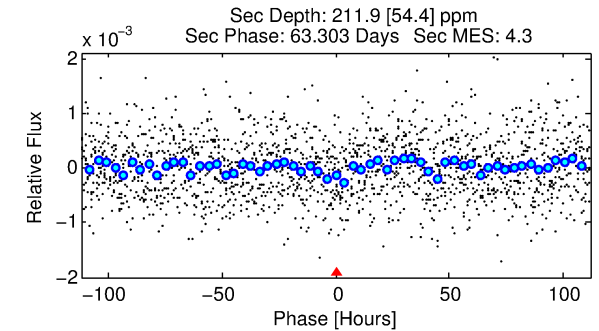
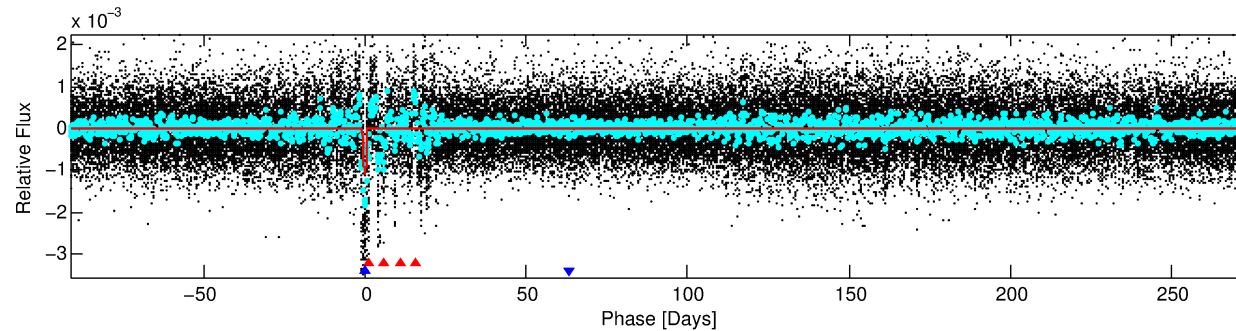
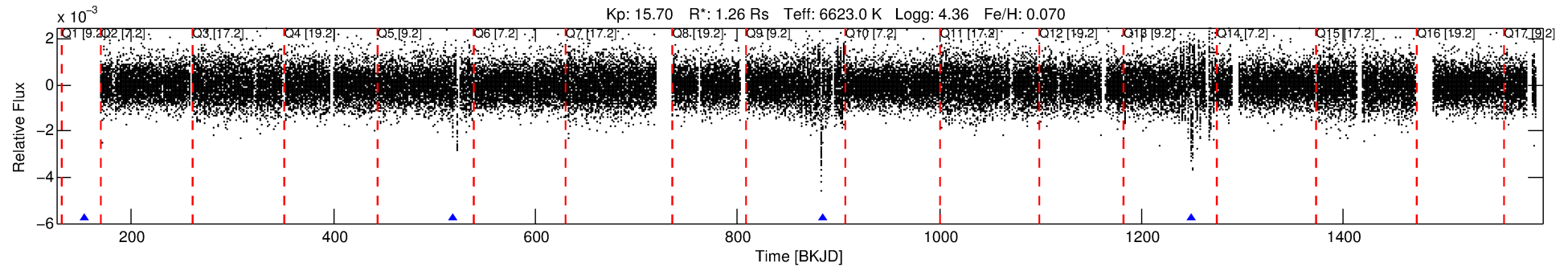
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006119608-02

No Significant Match Found

DV One-Page Summary

KIC: 6119608 Candidate: 2 of 2 Period: 365.513 d



DV Fit Results:

Period = 365.51341 [0.01185] d
Epoch = 152.8181 [0.0244] BKJD
Rp/R* = 0.0306 [0.0117]
a/R* = 148.84 [290.32]
b = 0.28 [6.60]
Seff = 2.28 [0.85]
Teq = 313 [29] K
Rp = 4.21 [2.03] Re
a = 1.0959 [0.2629] AU
Ag = 7892.08 [6888.01] [1.15σ]
Teff = 4567 [935] K [4.55σ]

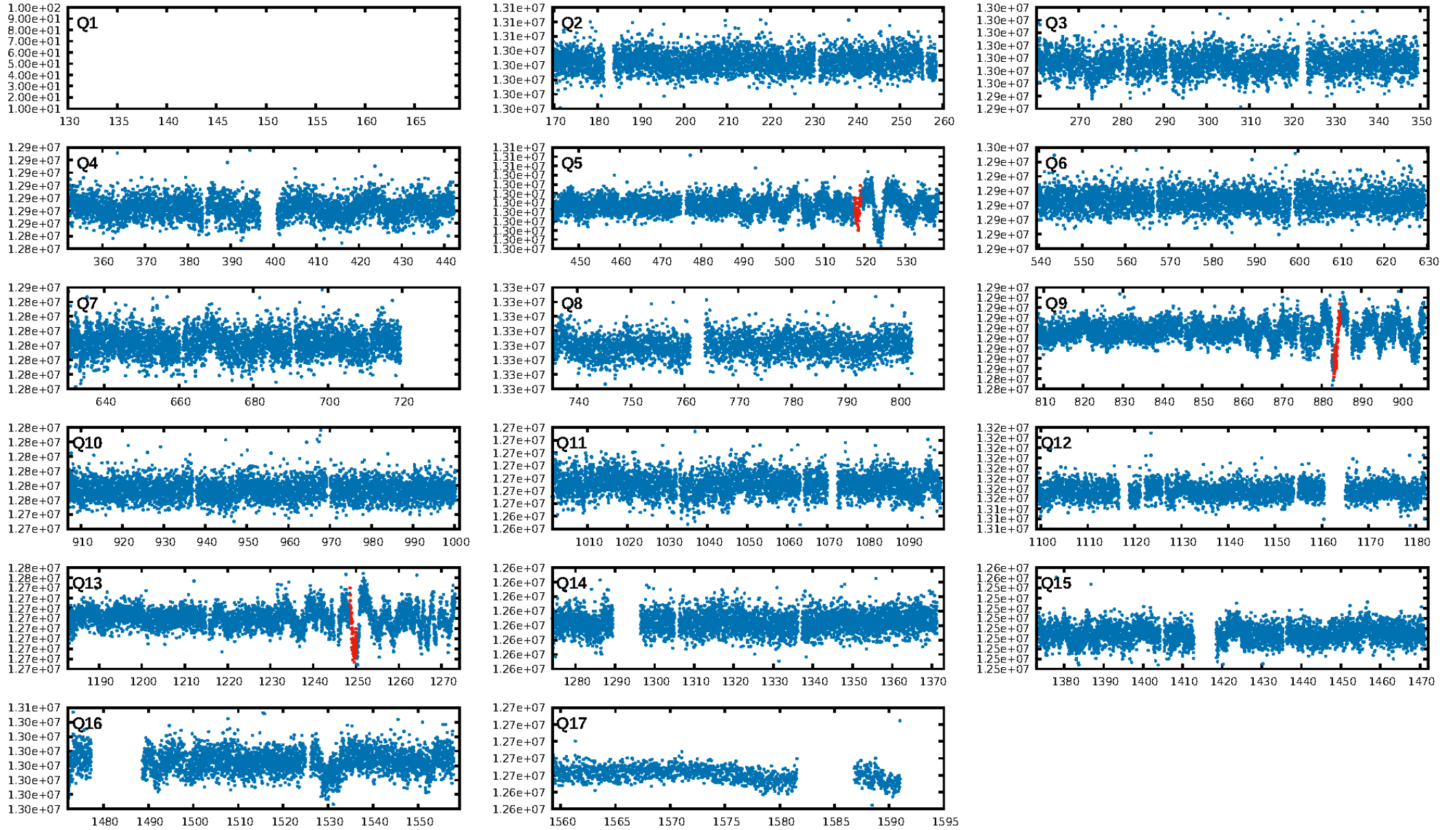
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.11σ]
ModelChiSquare2-sig: 1.7%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 5.06e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -15.69
Centroid-sig: 0.0%
Centroid-so: 5.645 arcsec [2.23σ]
OotOffset-rm: 4.533 arcsec [29.04σ]
KicOffset-rm: 4.674 arcsec [29.92σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

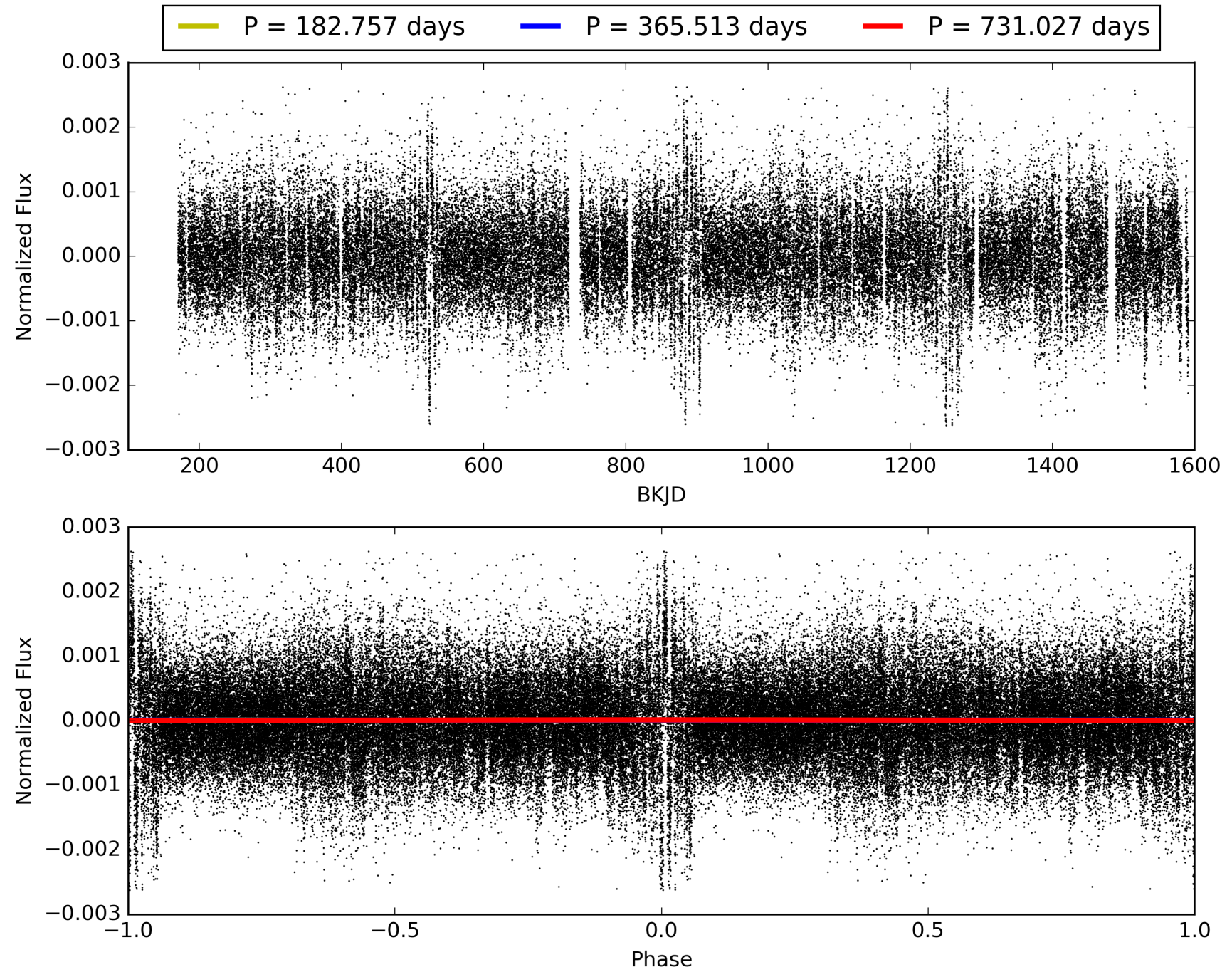
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:04:43 Z

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

TCE 006119608-02, PDC Light Curves

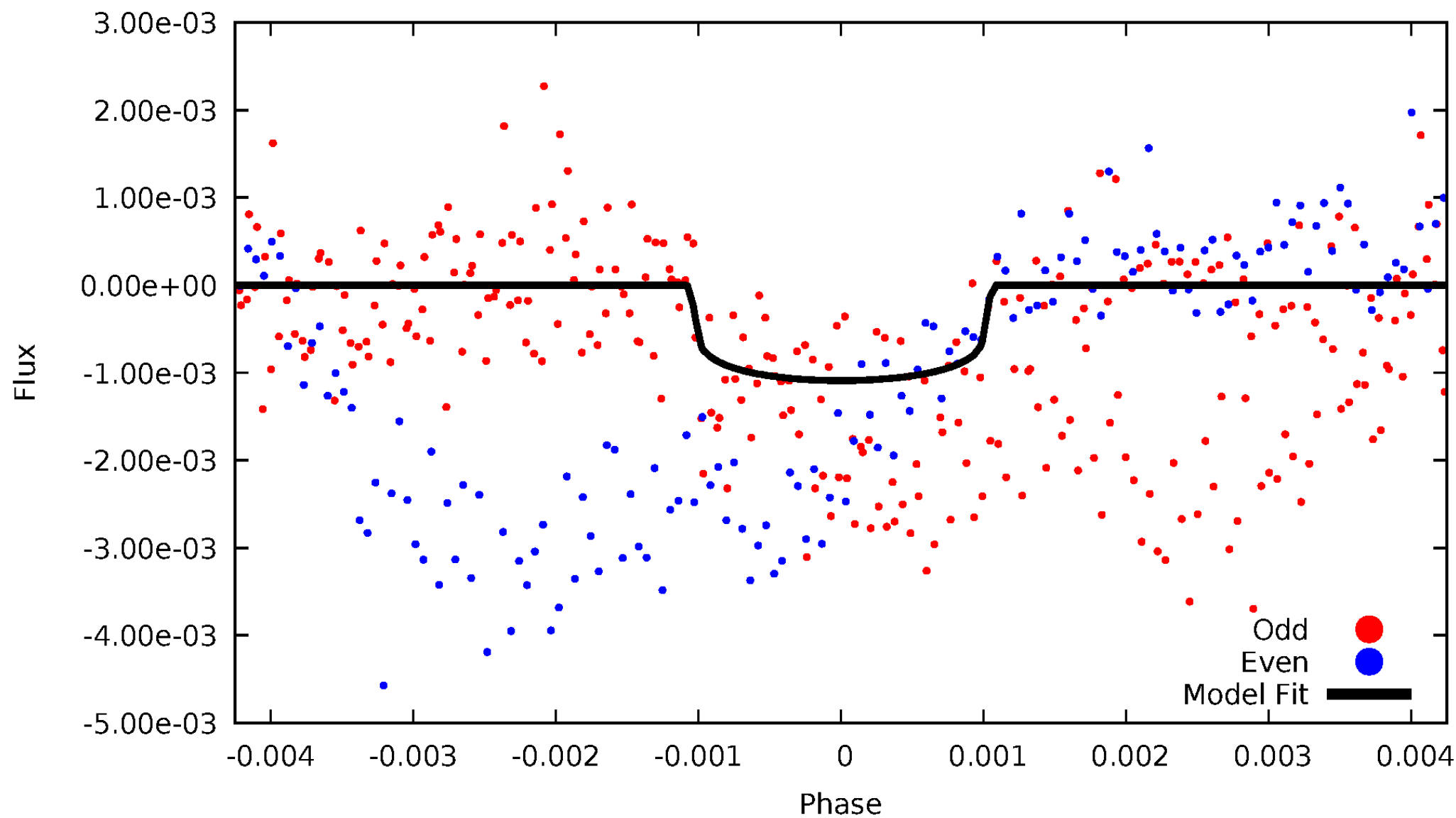


TCE 006119608-02



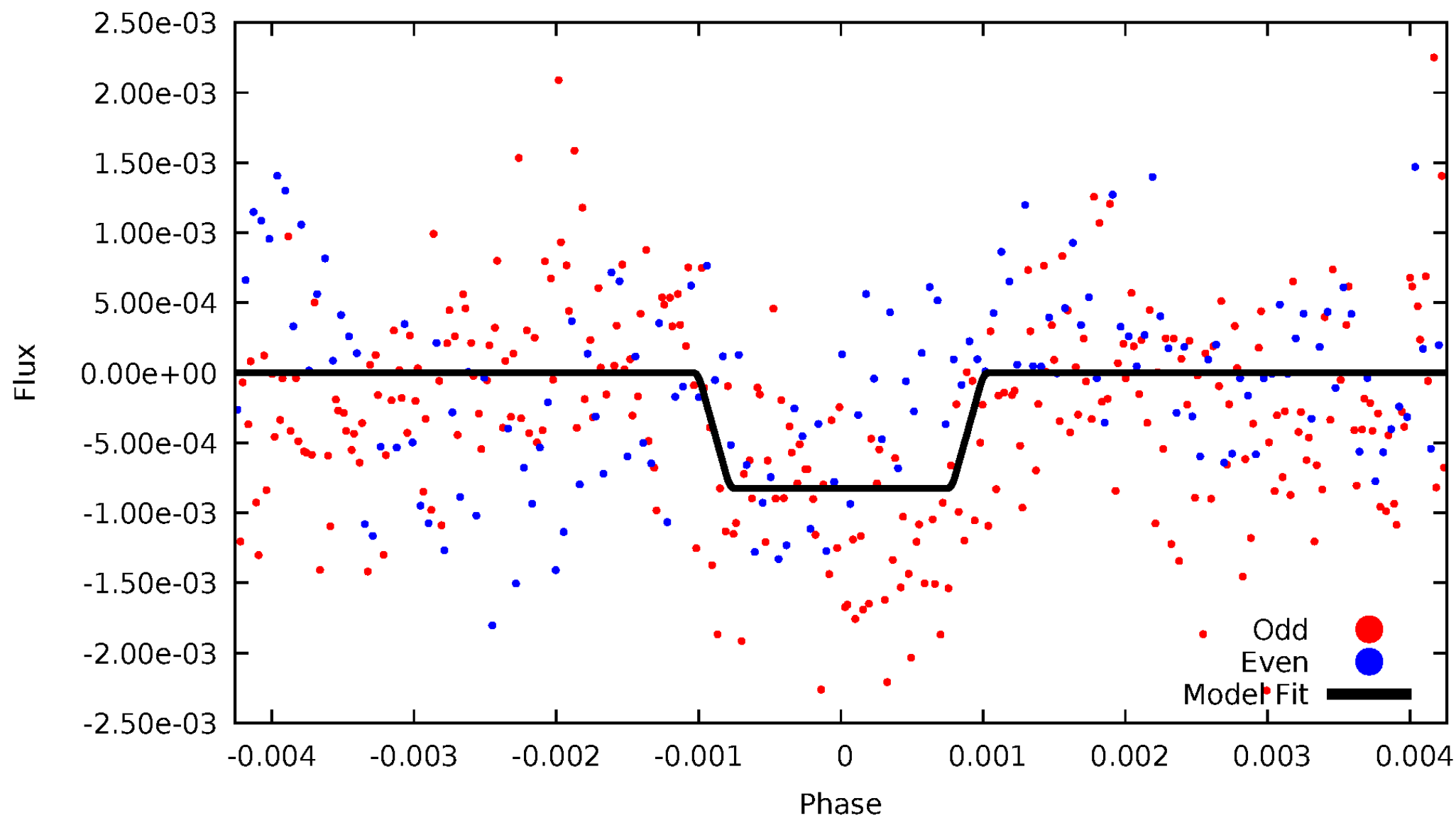
DV Odd/Even

TCE 006119608-02



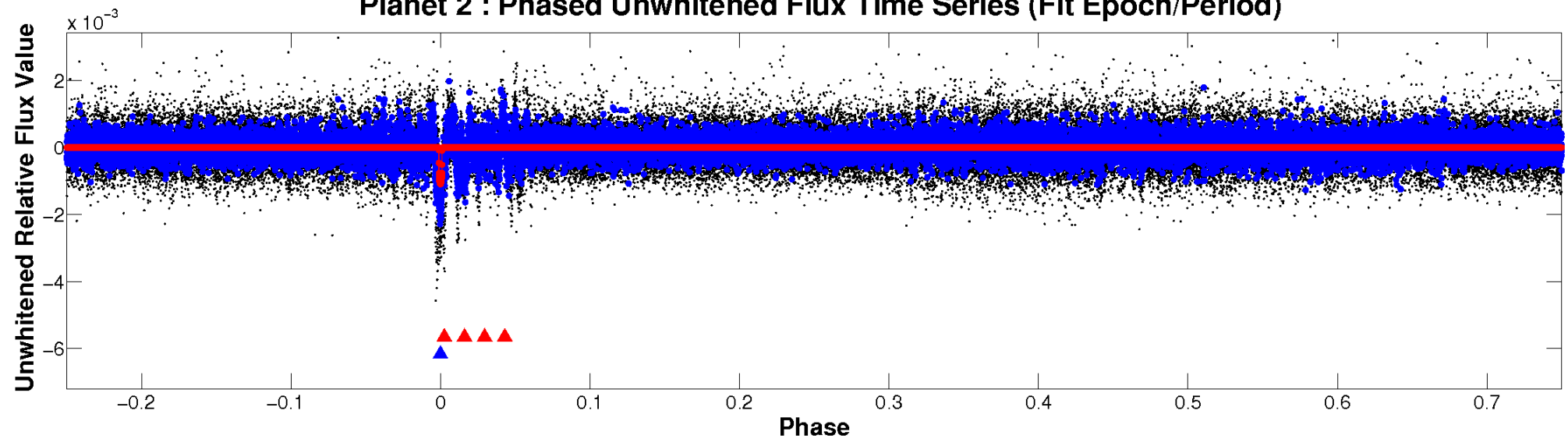
ALT Odd/Even

TCE 006119608-02

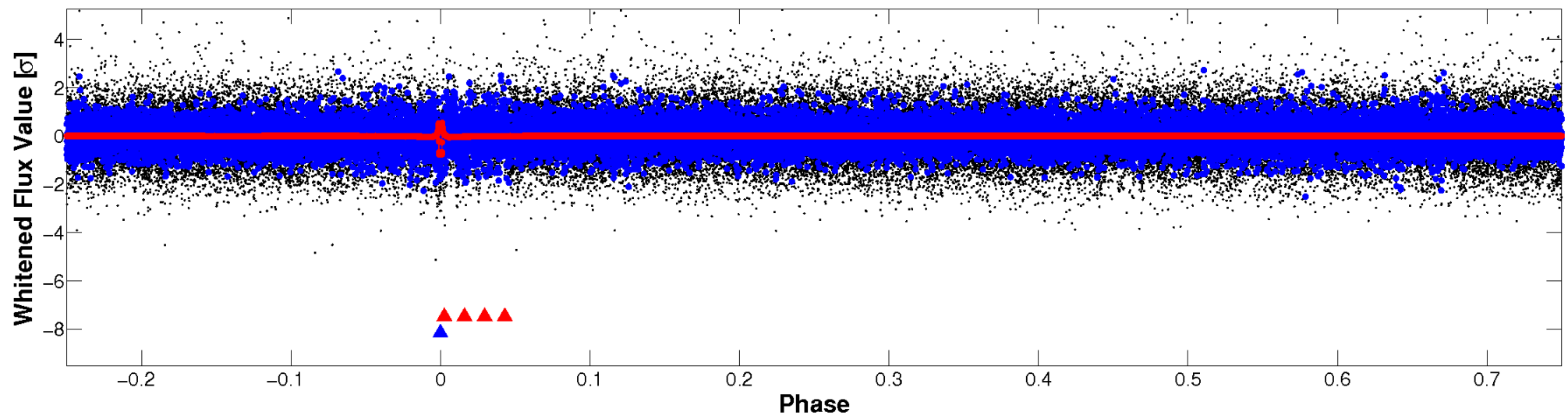


Non-Whitened Vs. Whitened Light Curve

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

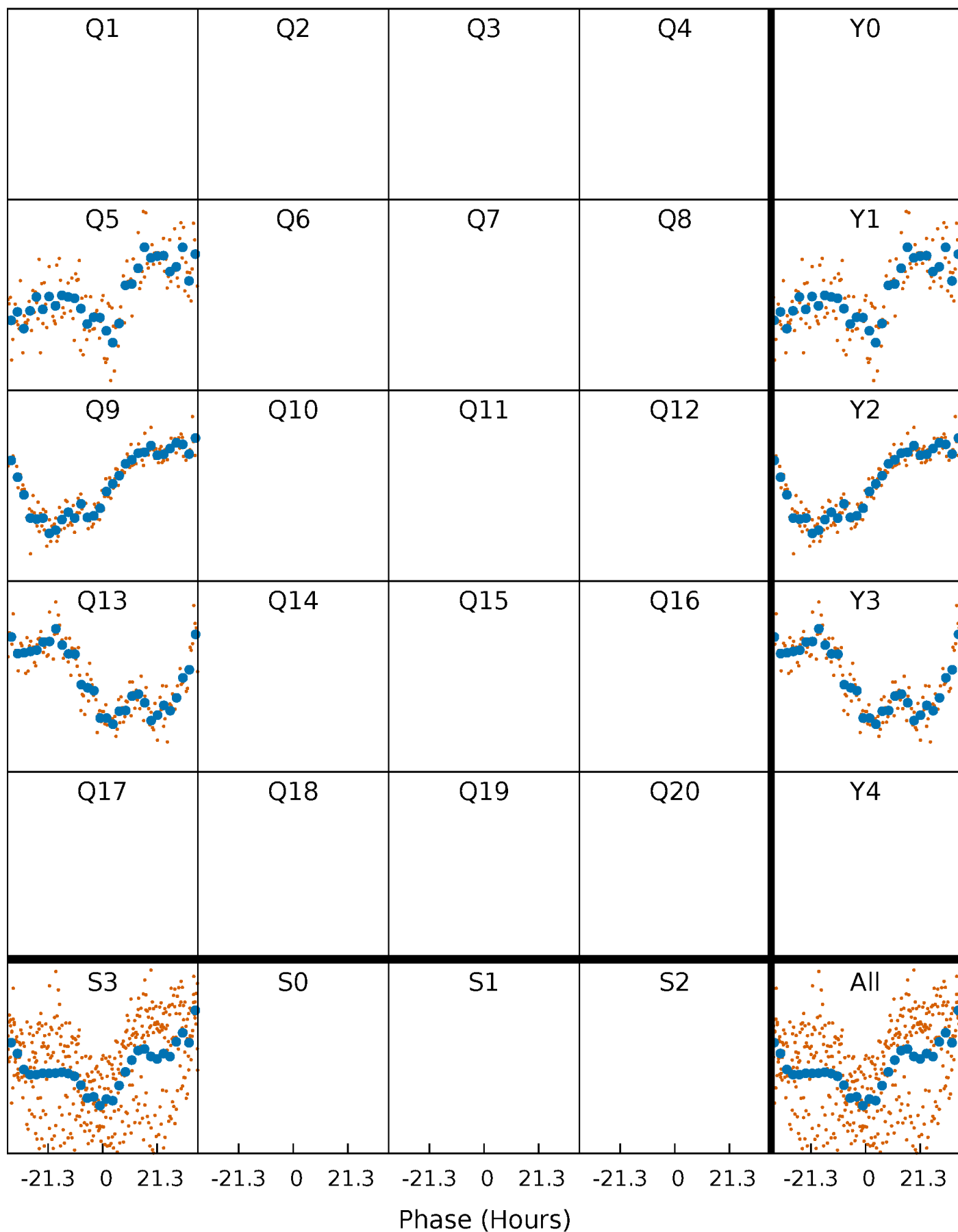


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



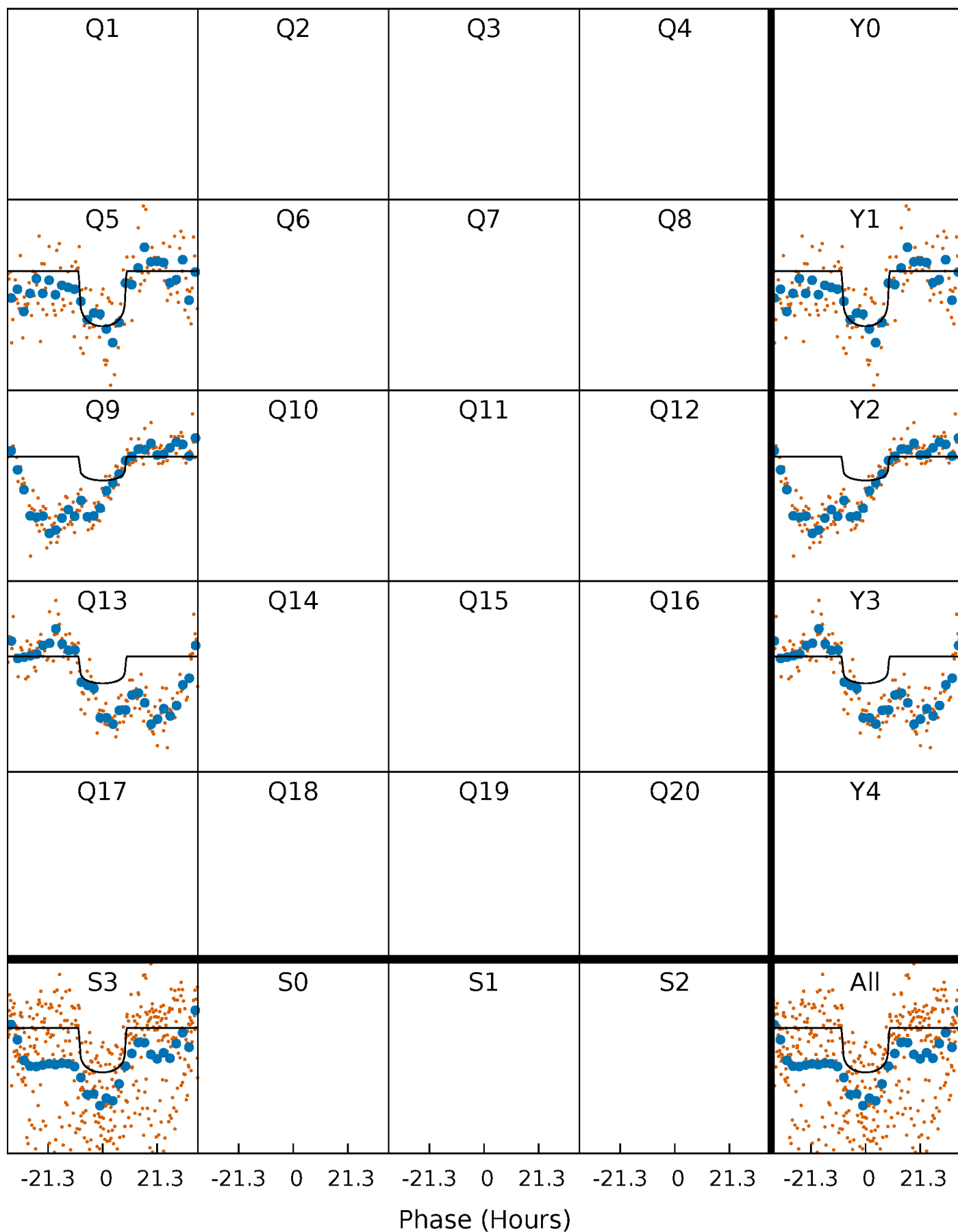
PDC Quarter-Phased Transit Curves

TCE 006119608-02 P=365.513405 Days $T_0=152.818108$ (BKJD)



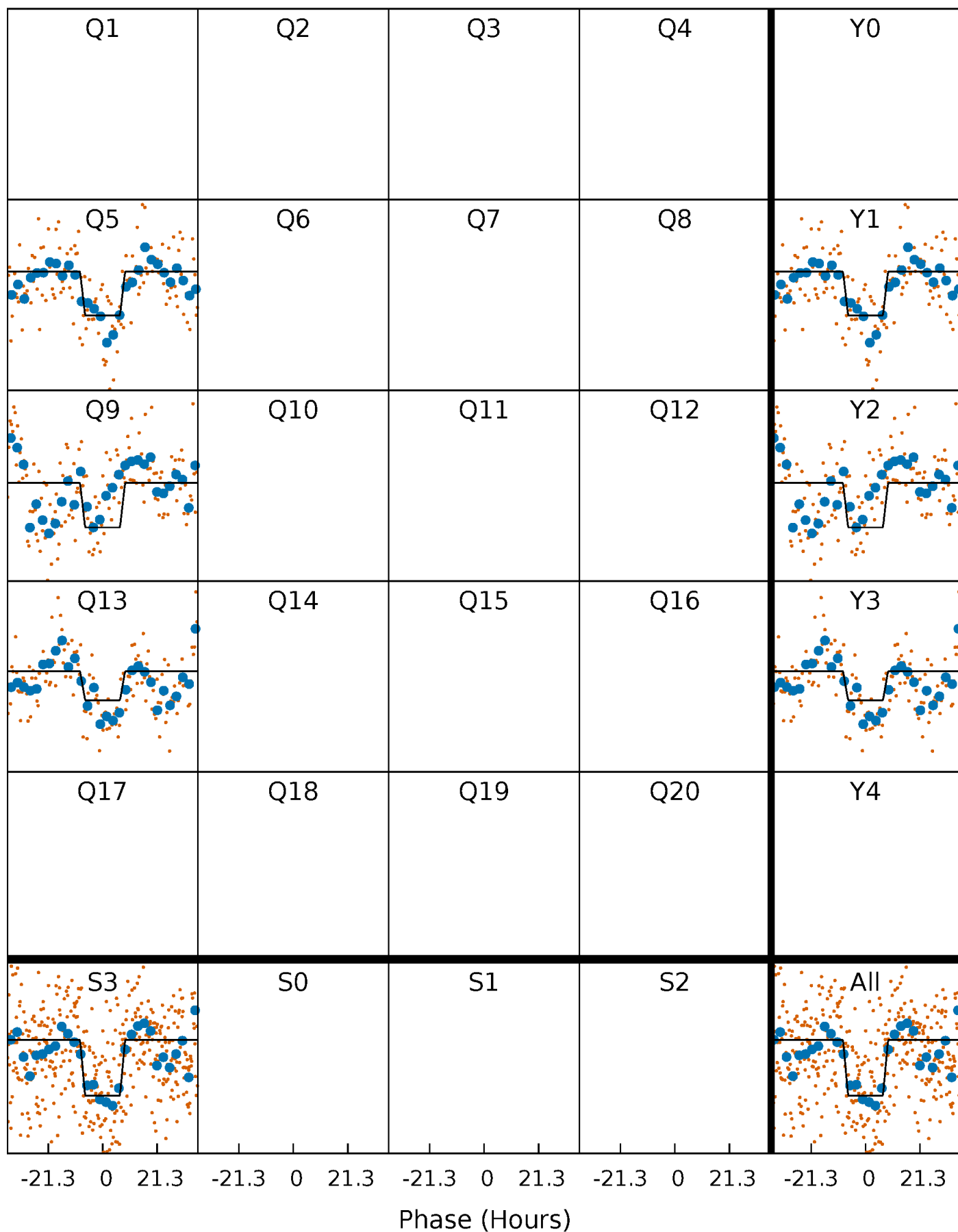
DV Quarter-Phased Transit Curves

TCE 006119608-02 P=365.513405 Days $T_0=152.818108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

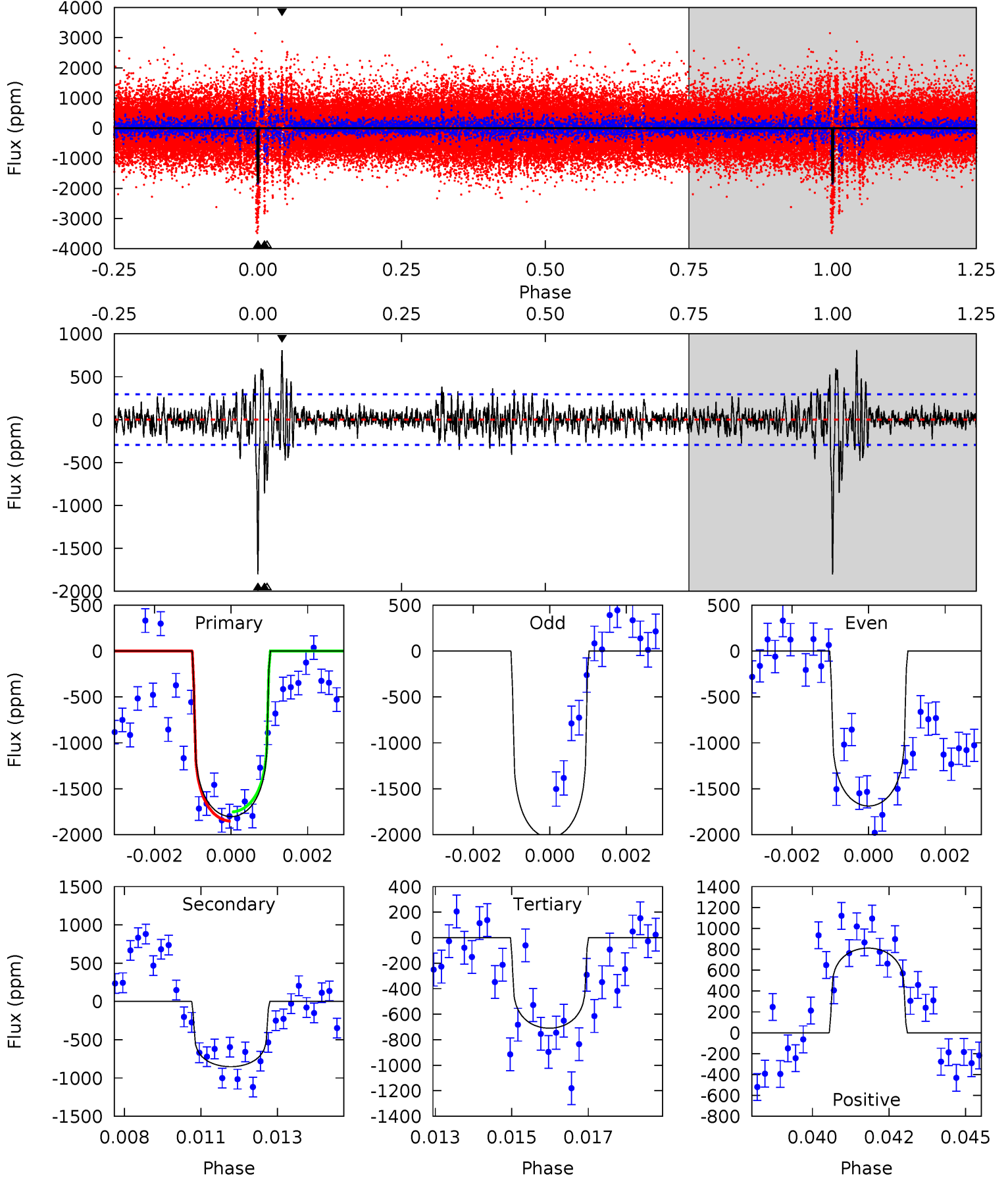
TCE 006119608-02 P=365.488276 Days $T_0=152.857224$ (BKJD)



DV Model-Shift Uniqueness Test

006119608-02, P = 365.513405 Days, E = 152.818108 Days

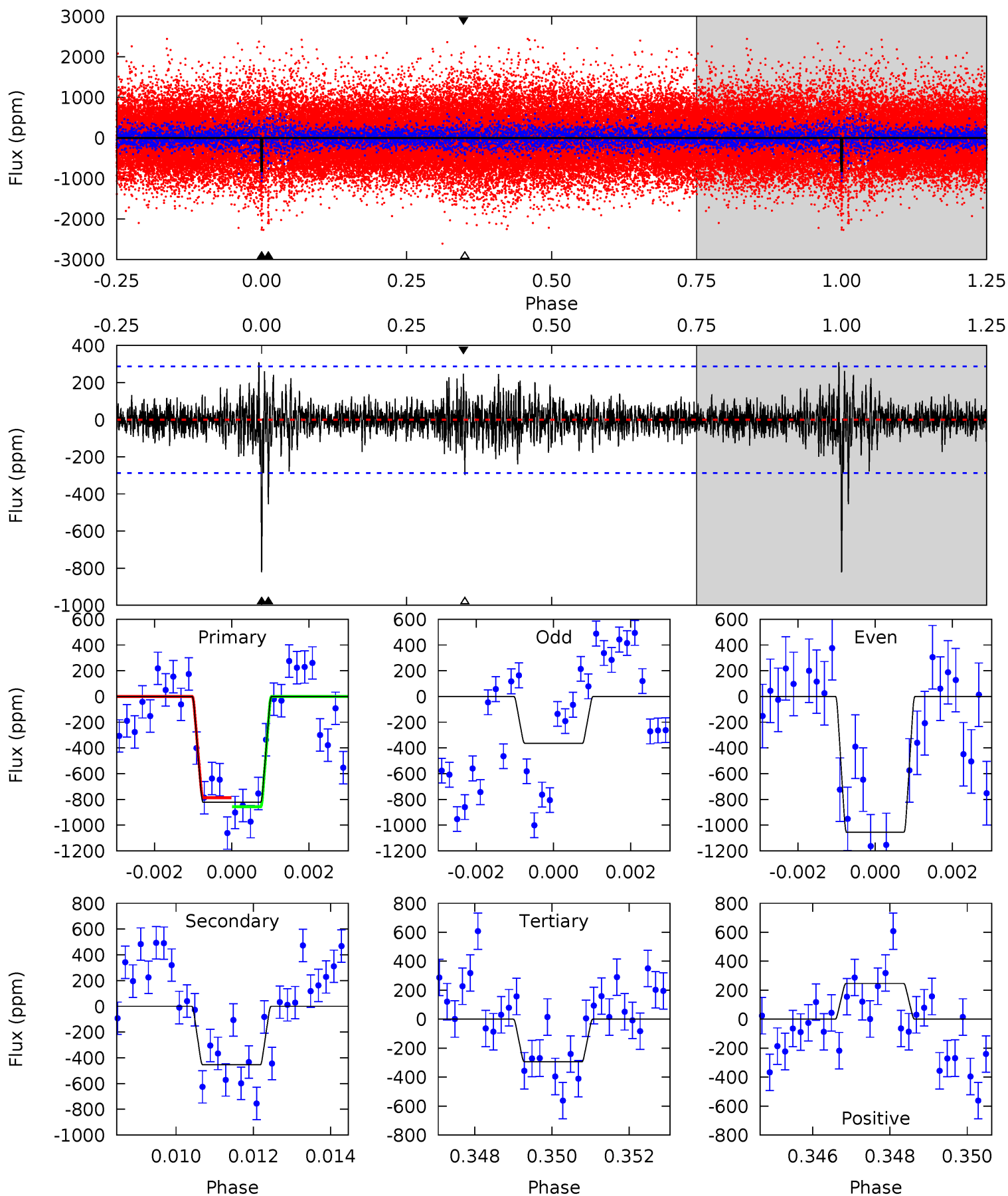
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.6	15.4	12.8	14.6	5.32	3.07	2.17	19.7	17.9	2.57	0.75	2.95	0.88	0.31	0.91



Alt Model-Shift Uniqueness Test

006119608-02, P = 365.488276 Days, E = 152.857224 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	8.43	5.45	4.57	5.33	3.09	1.17	9.79	10.7	2.99	3.86	6.06	0.86	0.27	0.65



Stellar Parameters For KIC 006119608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6623^{+187}_{-258}	$4.355^{+0.060}_{-0.180}$	$0.070^{+0.200}_{-0.400}$	$1.261^{+0.371}_{-0.159}$	$1.317^{+0.150}_{-0.224}$	$0.924^{+0.303}_{-0.447}$
	+3%/-4%	+1%/-4%	+286%/-571%	+29%/-13%	+11%/-17%	+33%/-48%
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 006119608-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-852 ± 55	$4.30^{+1.72}_{-1.72}$	445^{+29}_{-23}	6421^{+2309}_{-944}	29221^{+52144}_{-14051}
Alt.	-455 ± 54	$4.27^{+1.71}_{-1.71}$	446^{+31}_{-24}	5596^{+1566}_{-744}	16432^{+26382}_{-8252}

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

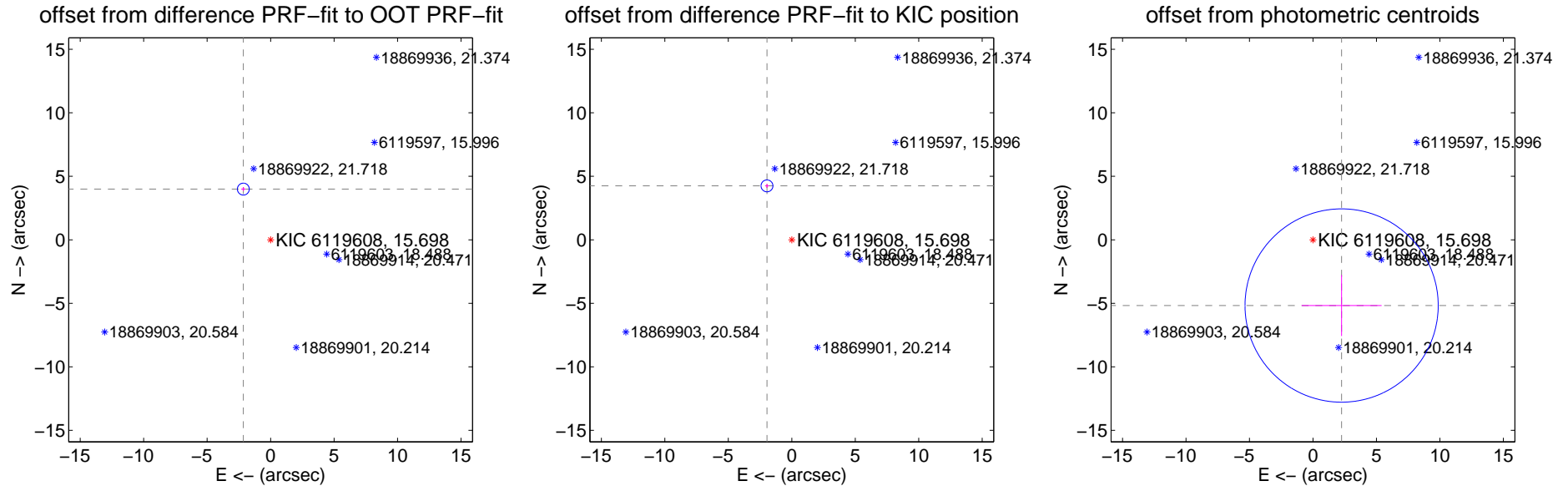
DV Centroid Data

Supplemental centroid analysis for 006119608-02. Kepler magnitude: 15.70. Transit SNR 8.01

There are 0 quarters with good PRF difference image offsets

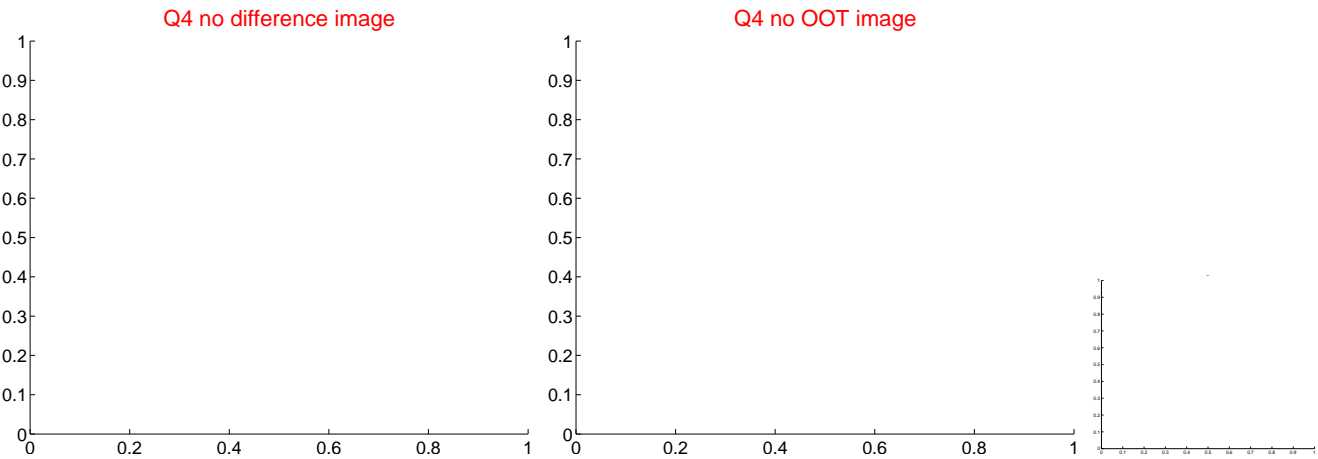
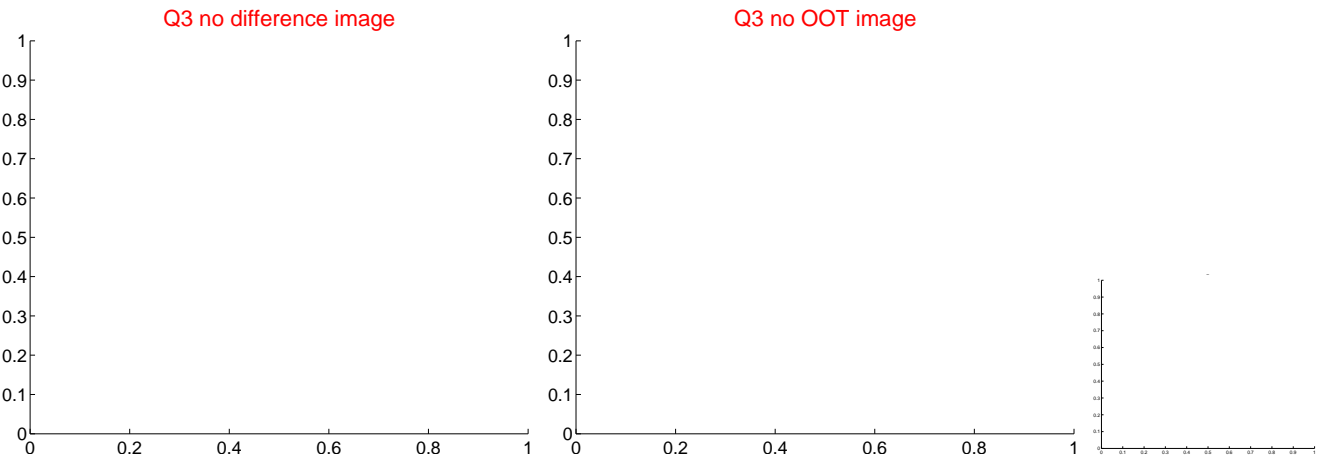
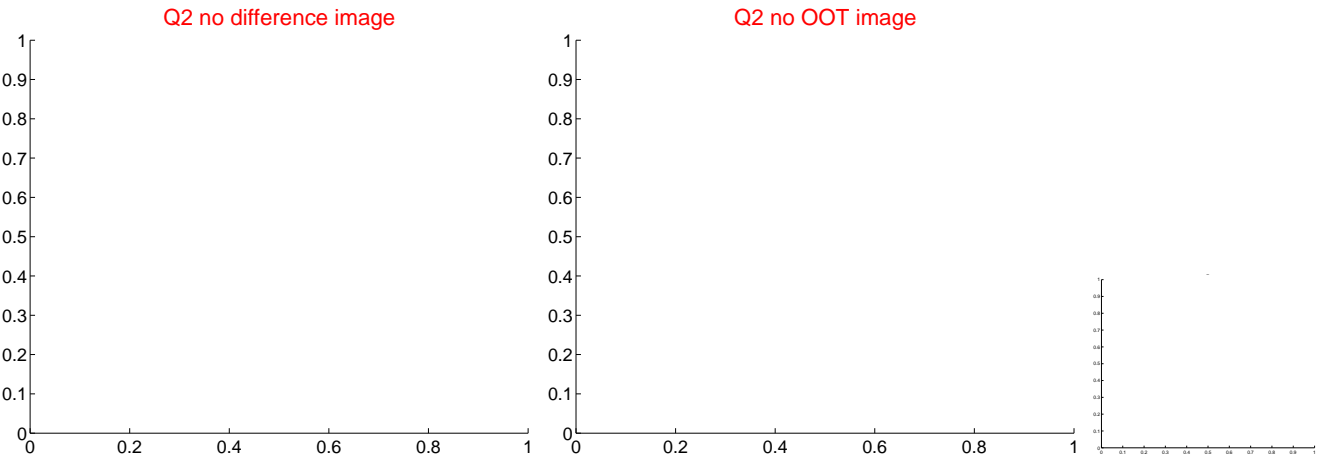
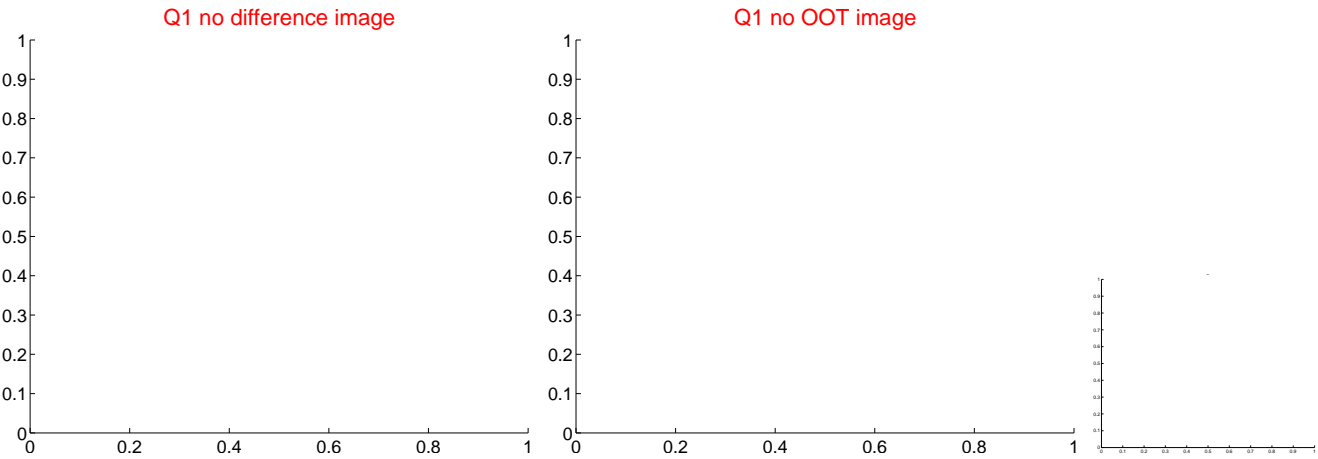
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.533 ± 0.156	29.04	2.148 ± 0.154	3.992 ± 0.157
PRF-fit source offset from KIC position	4.674 ± 0.156	29.92	1.954 ± 0.154	4.246 ± 0.157
photometric centroid source offset	5.65 ± 2.54	2.23	-2.26 ± 3.15	-5.17 ± 2.40

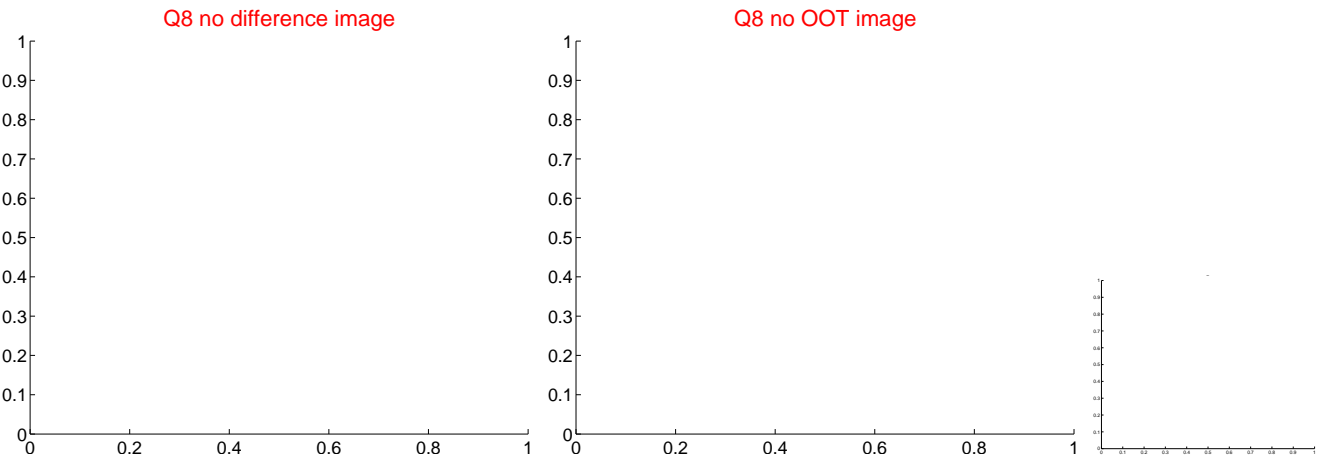
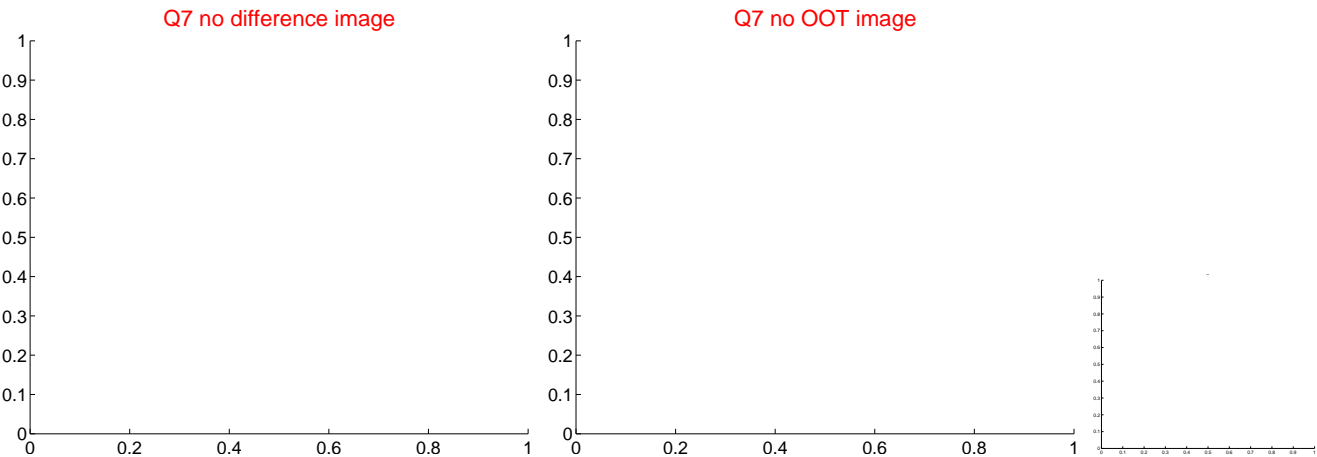
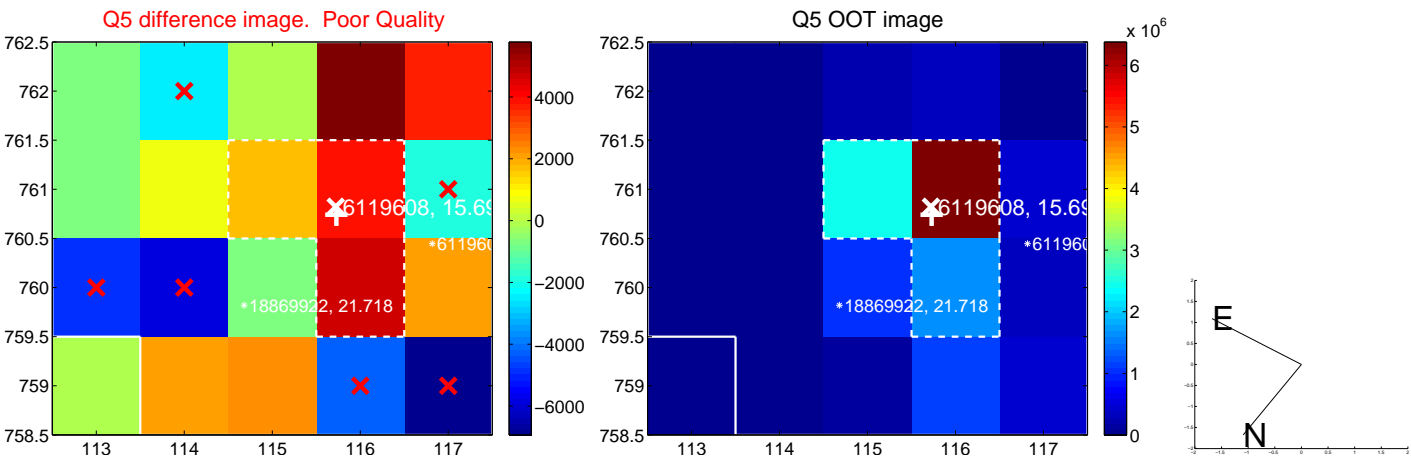


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

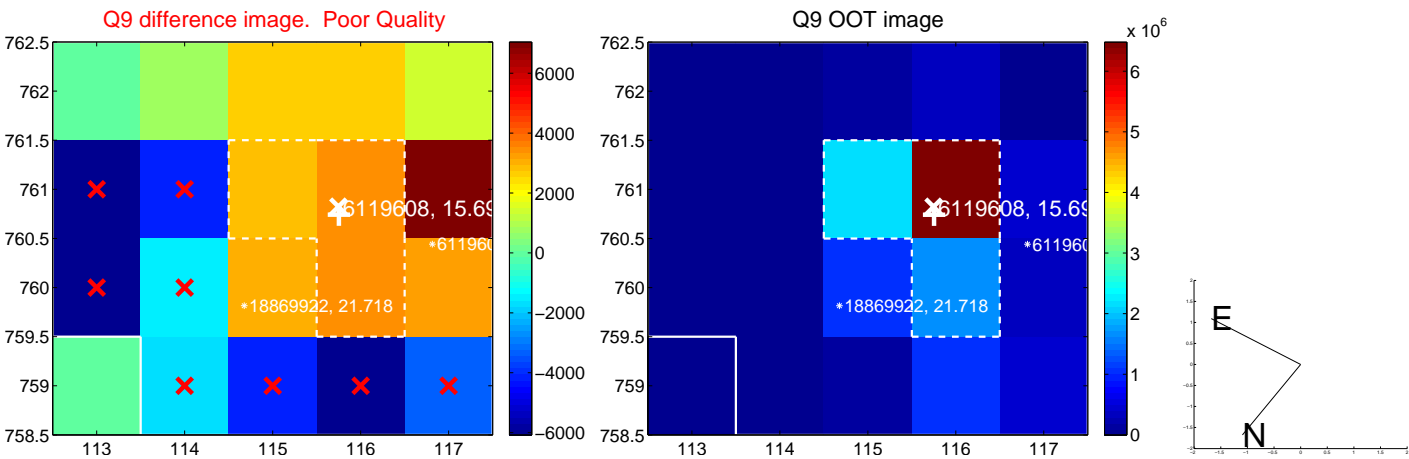
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



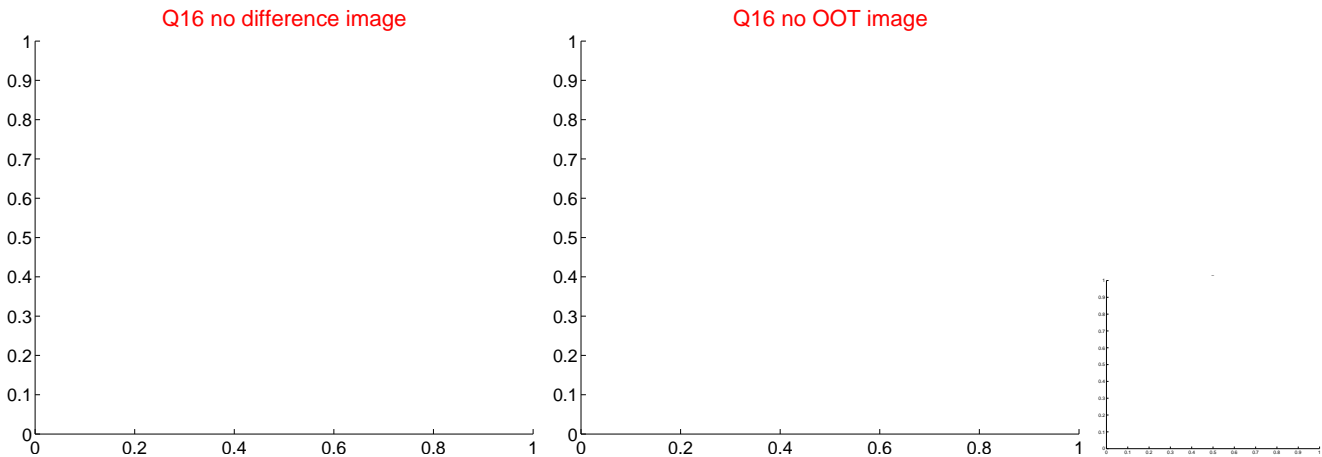
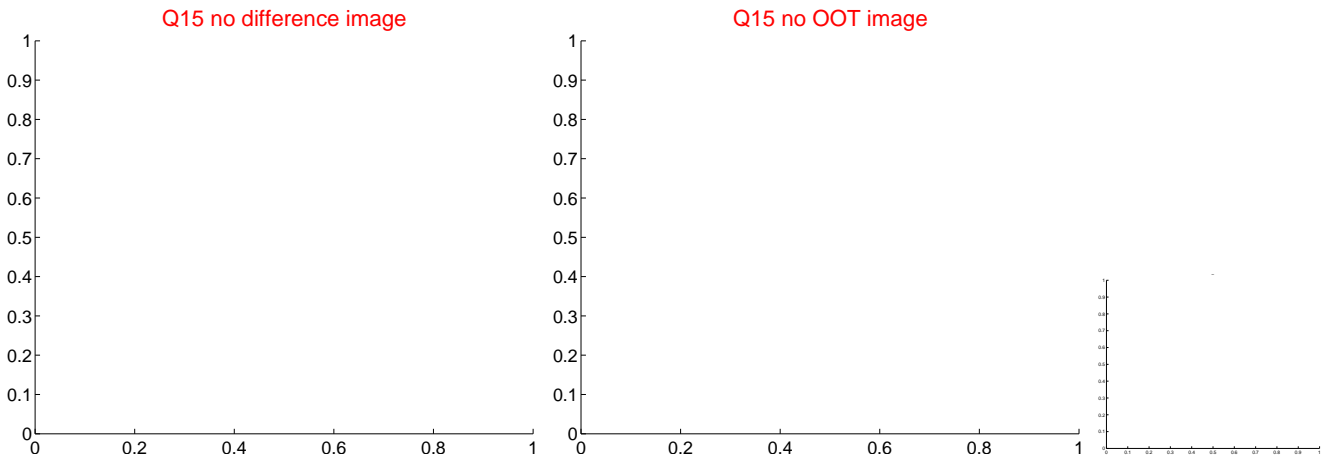
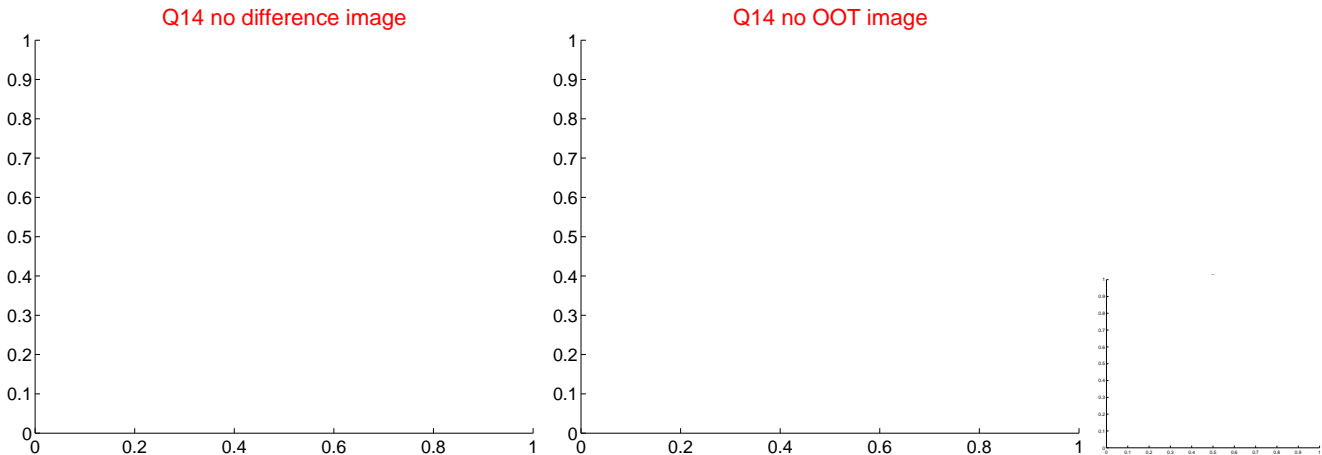
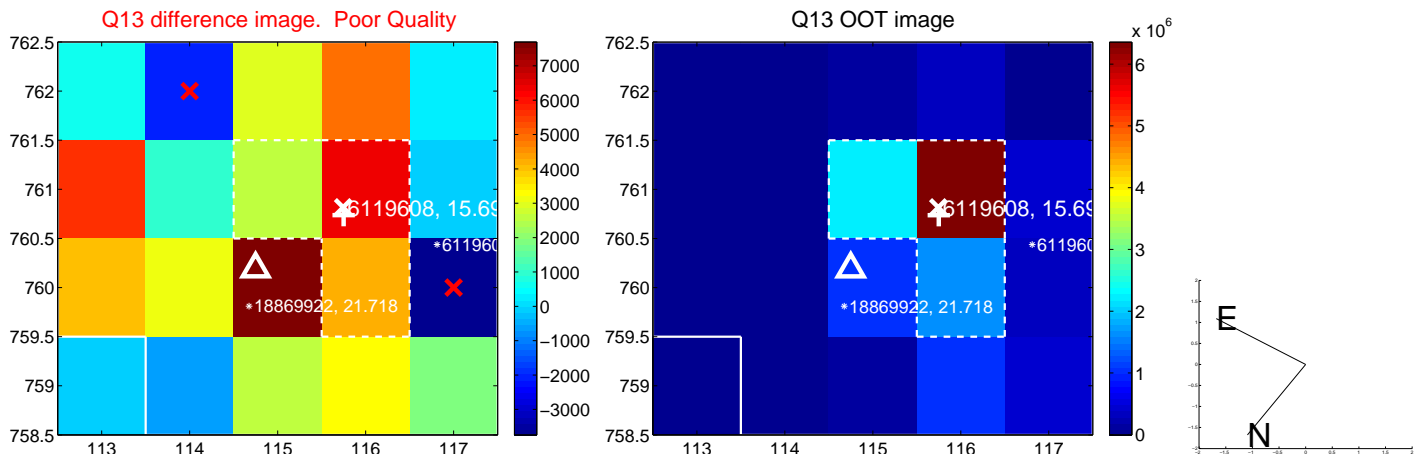
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



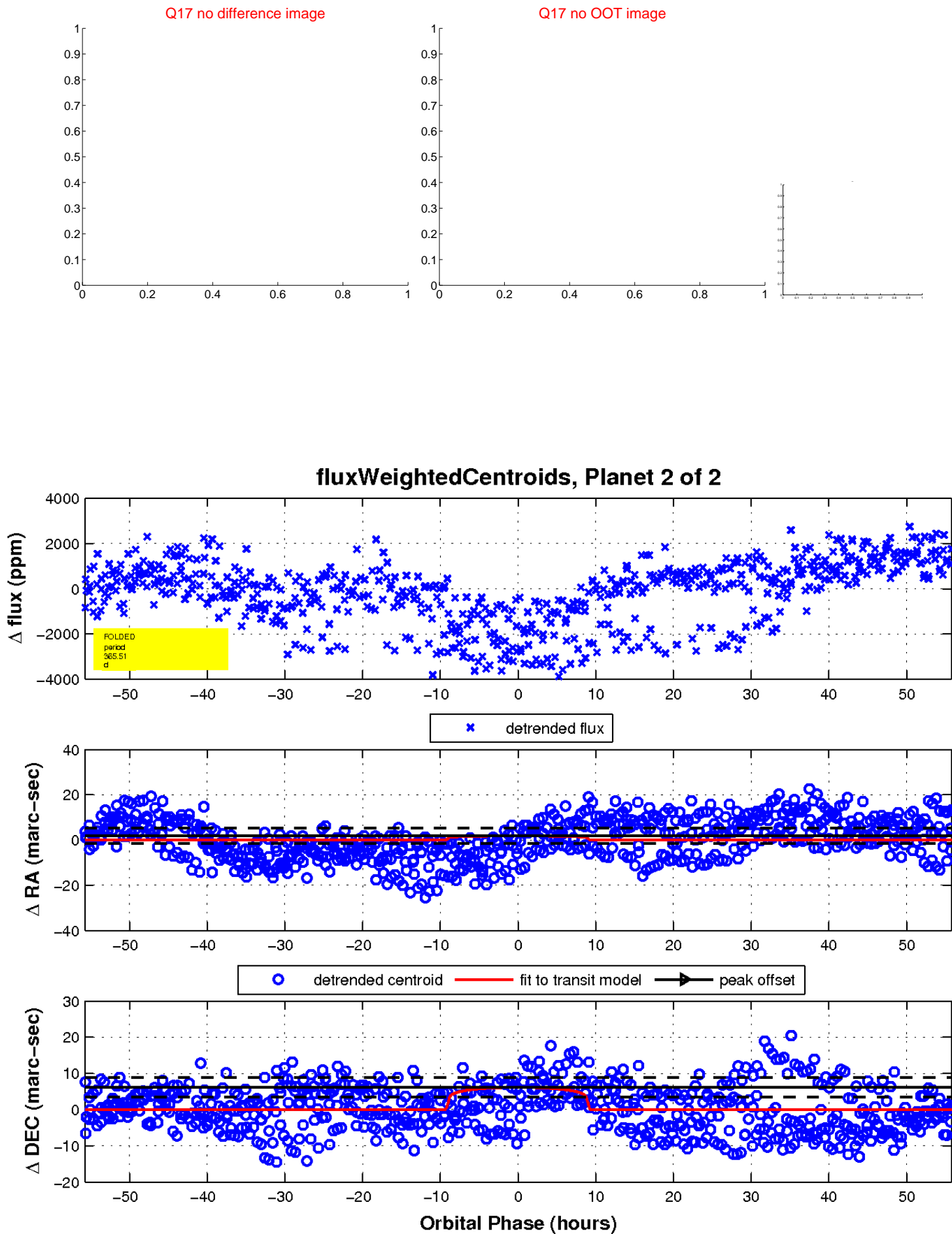
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

