

KIC 008108608

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})
008108608-01	OBS	No	367.082196	237.834827	901.7	28.039	7.3	8.7	0.89	5941	3.55	0.88
008108608-02	OBS	No	369.003453	174.989820	895.8	20.791	7.3	7.2	0.89	5941	3.42	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008108608-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
008108608-02	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.

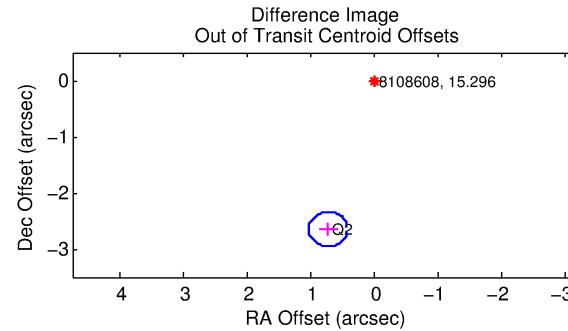
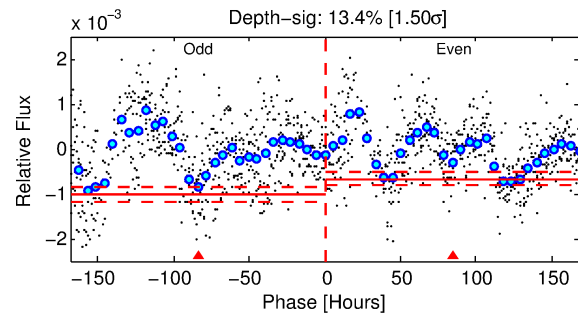
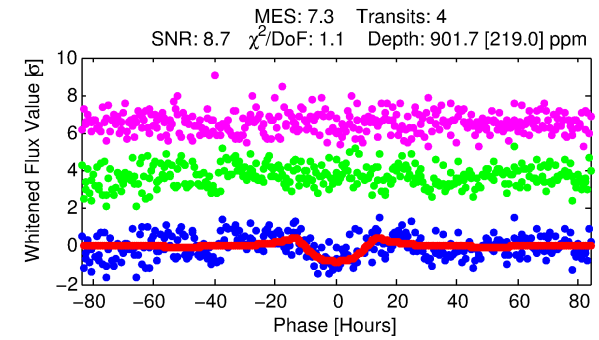
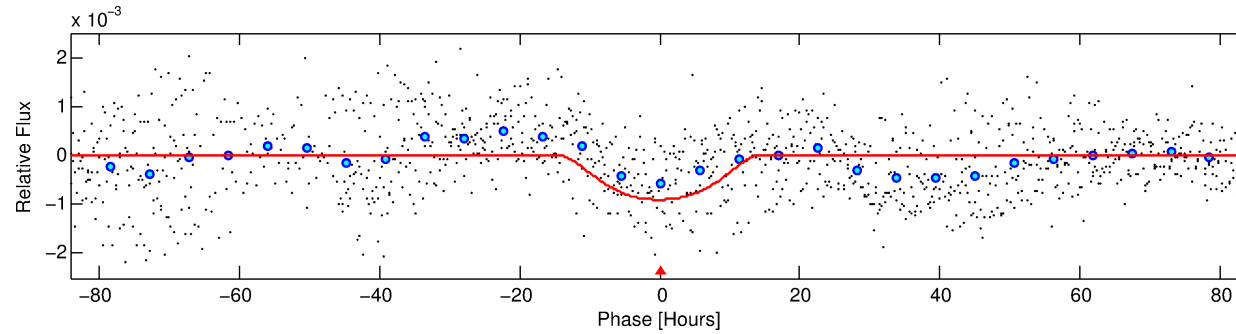
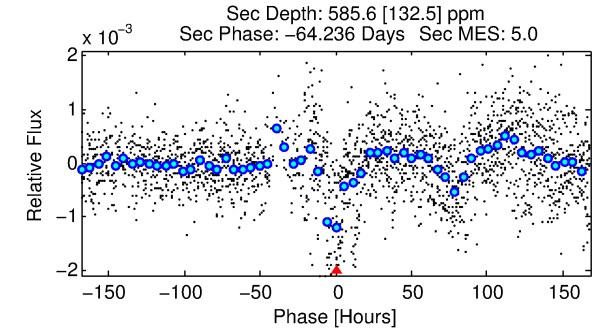
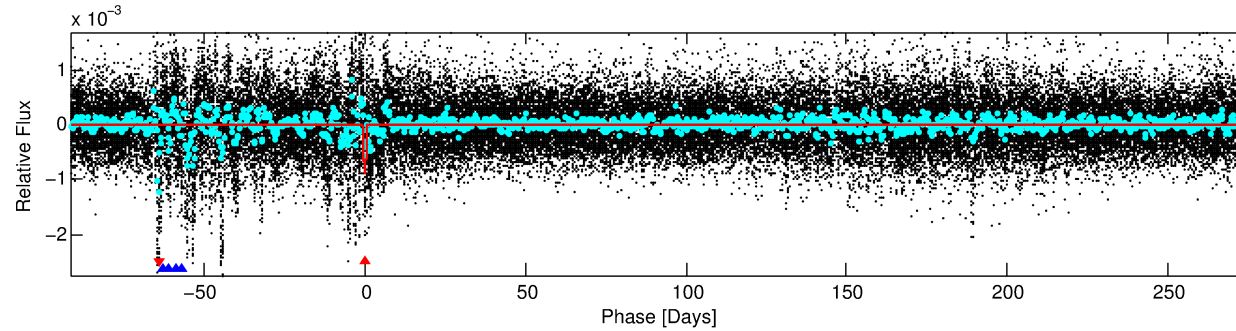
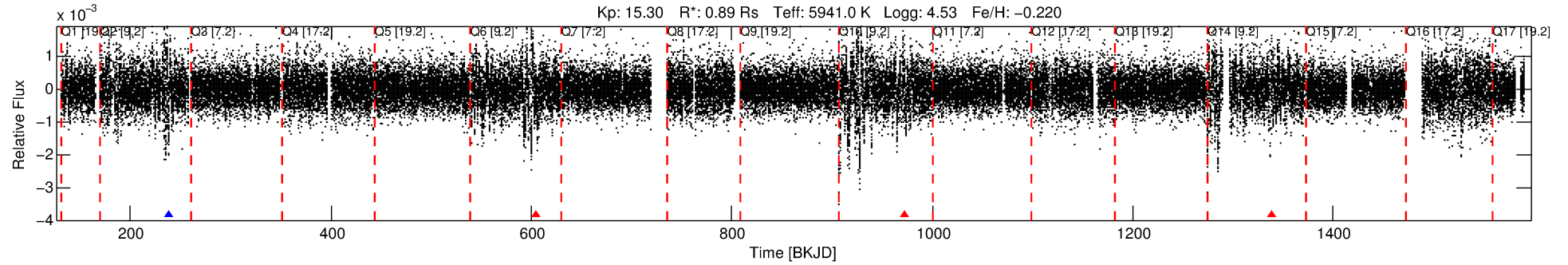
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008108608-01

No Significant Match Found

DV One-Page Summary

KIC: 8108608 Candidate: 1 of 2 Period: 367.082 d



DV Fit Results:

Period = 367.08220 [0.02478] d
Epoch = 237.8348 [0.0461] BKJD
Rp/R* = 0.0367 [0.0096]
a/R* = 37.08 [7.38]
b = 0.97 [0.03]
Seff = 0.88 [0.32]
Teq = 247 [22] K
Rp = 3.55 [1.30] Re
a = 0.9950 [0.2227] AU
Ag = 25344.78 [16689.84] [1.52σ]
Teff = 4822 [702] K [6.51σ]

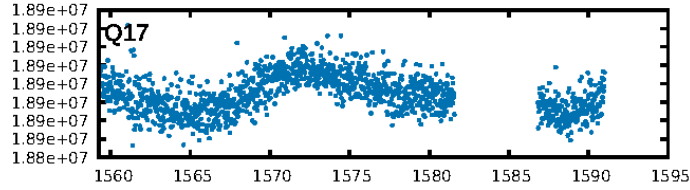
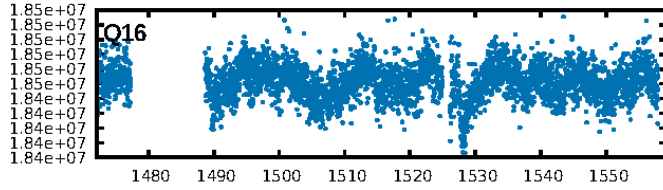
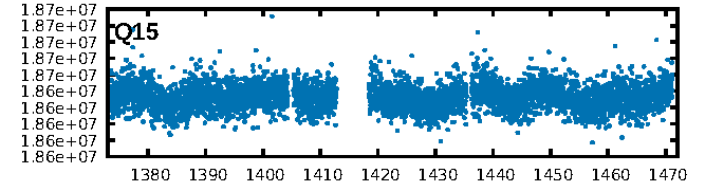
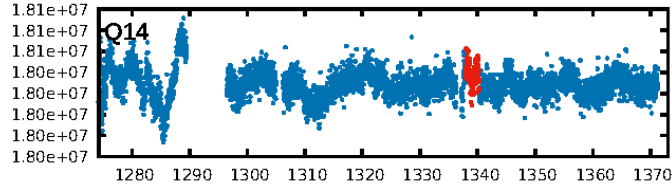
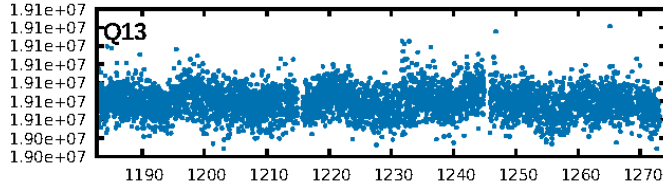
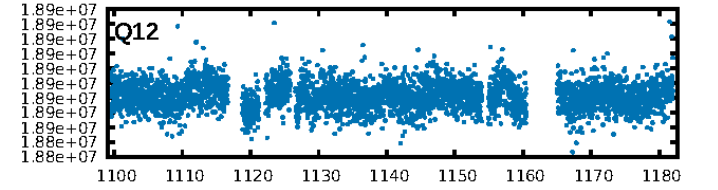
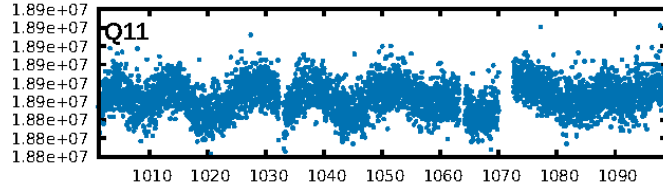
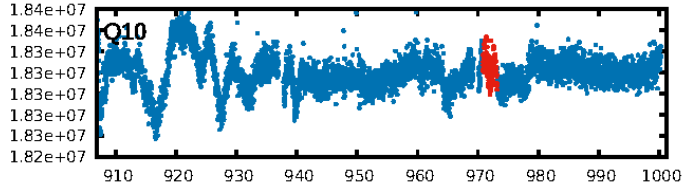
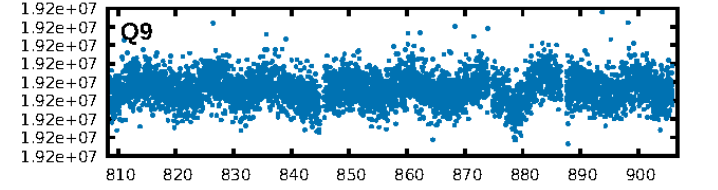
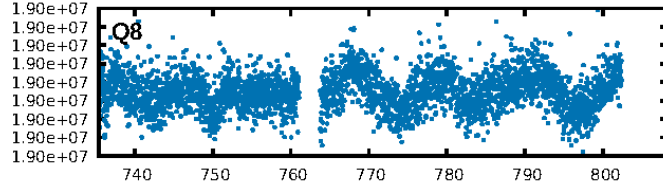
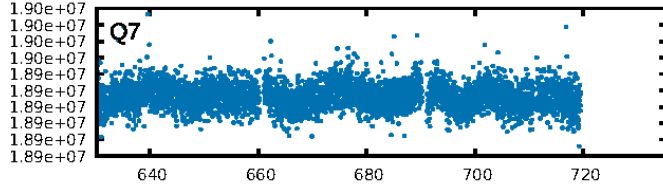
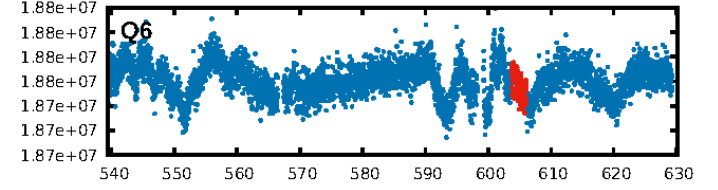
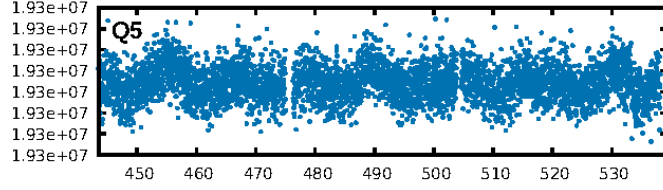
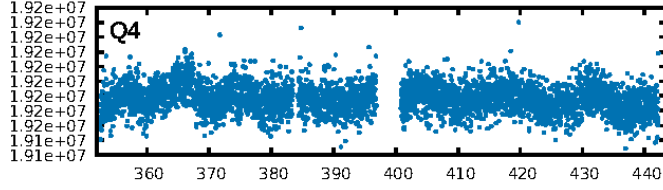
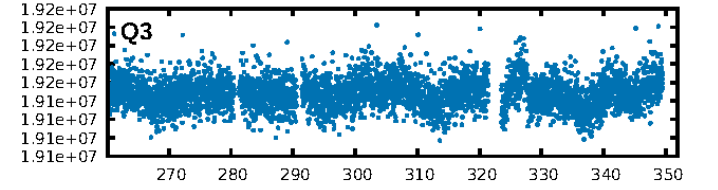
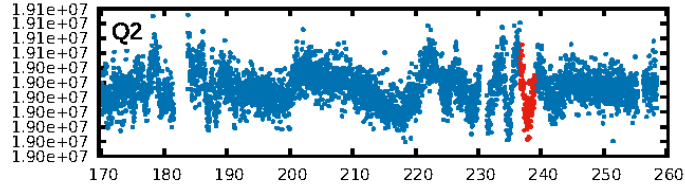
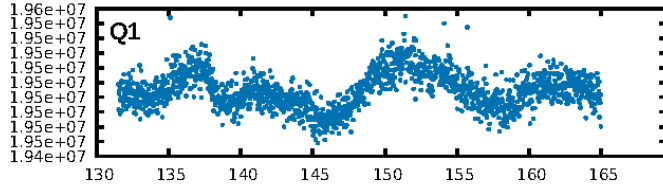
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 81.3% [1.32σ]
ModelChiSquare2-sig: 4.8%
ModelChiSquareGoF-sig: 99.9%
Bootstrap-pfa: 2.09e-08
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -0.1125
Centroid-sig: 2.0%
Centroid-so: 5.305 arcsec [1.93σ]
OotOffset-rm: 2.747 arcsec [26.98σ]
KicOffset-rm: 2.848 arcsec [27.89σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

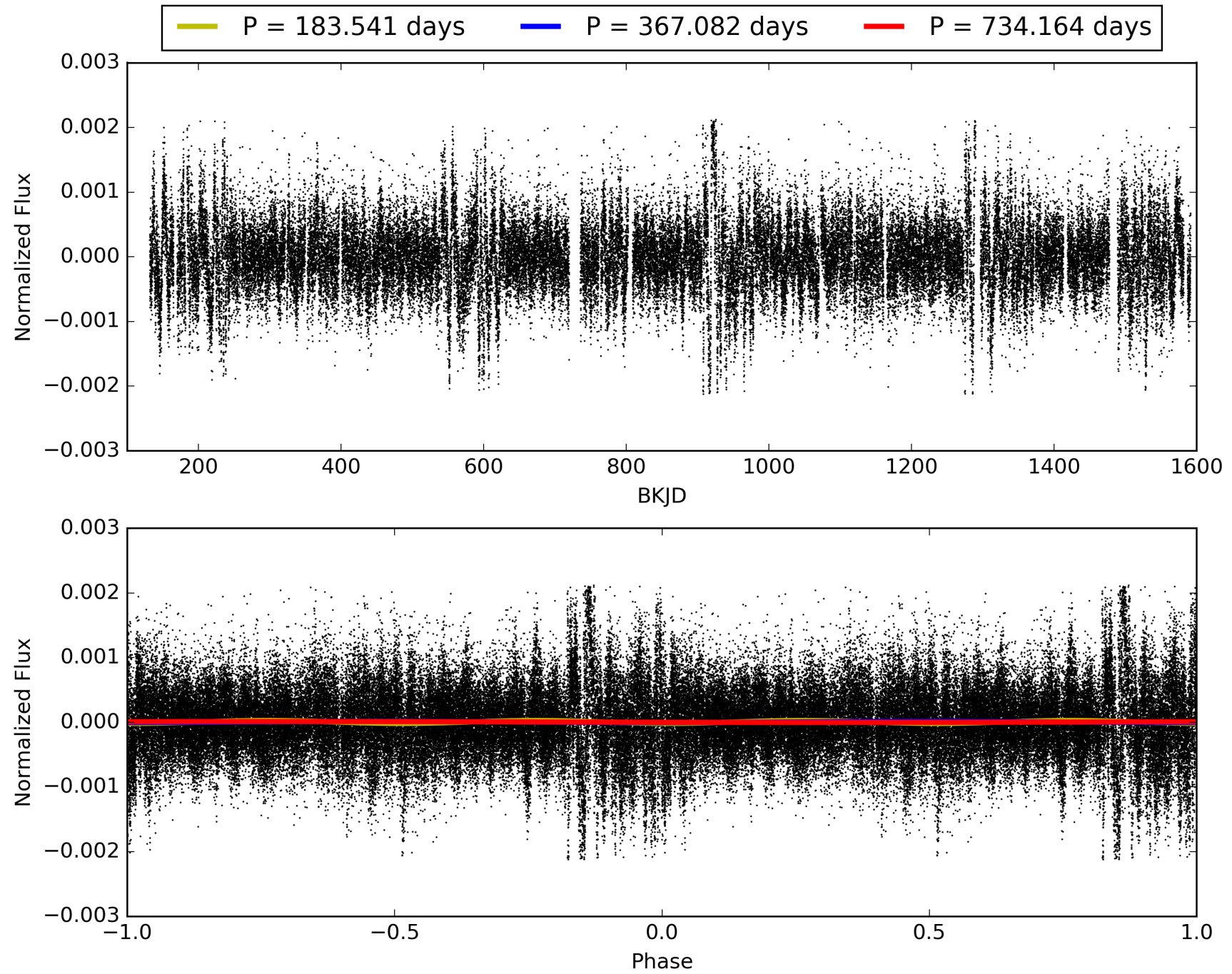
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:24:05 Z

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

TCE 008108608-01, PDC Light Curves

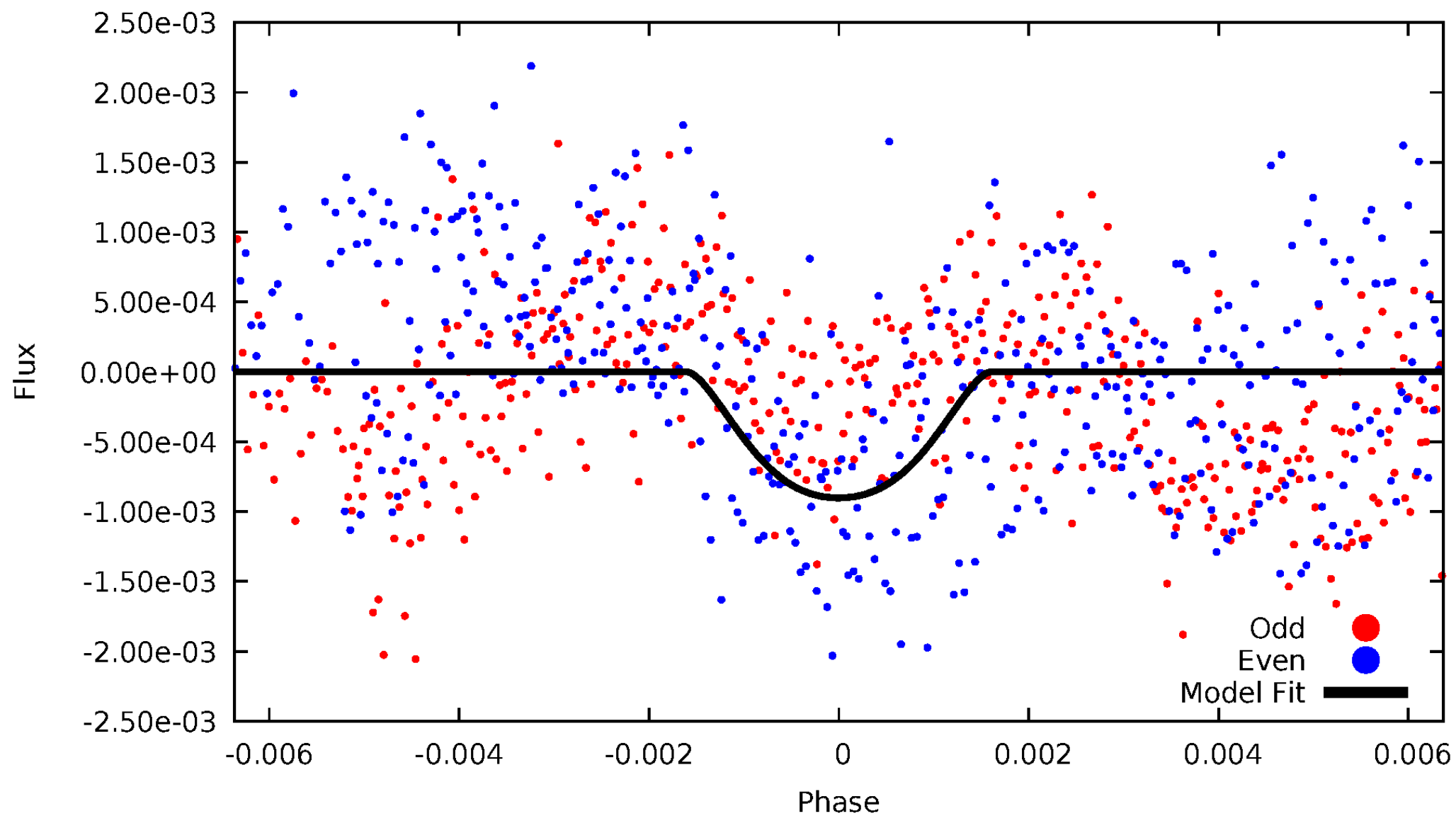


TCE 008108608-01



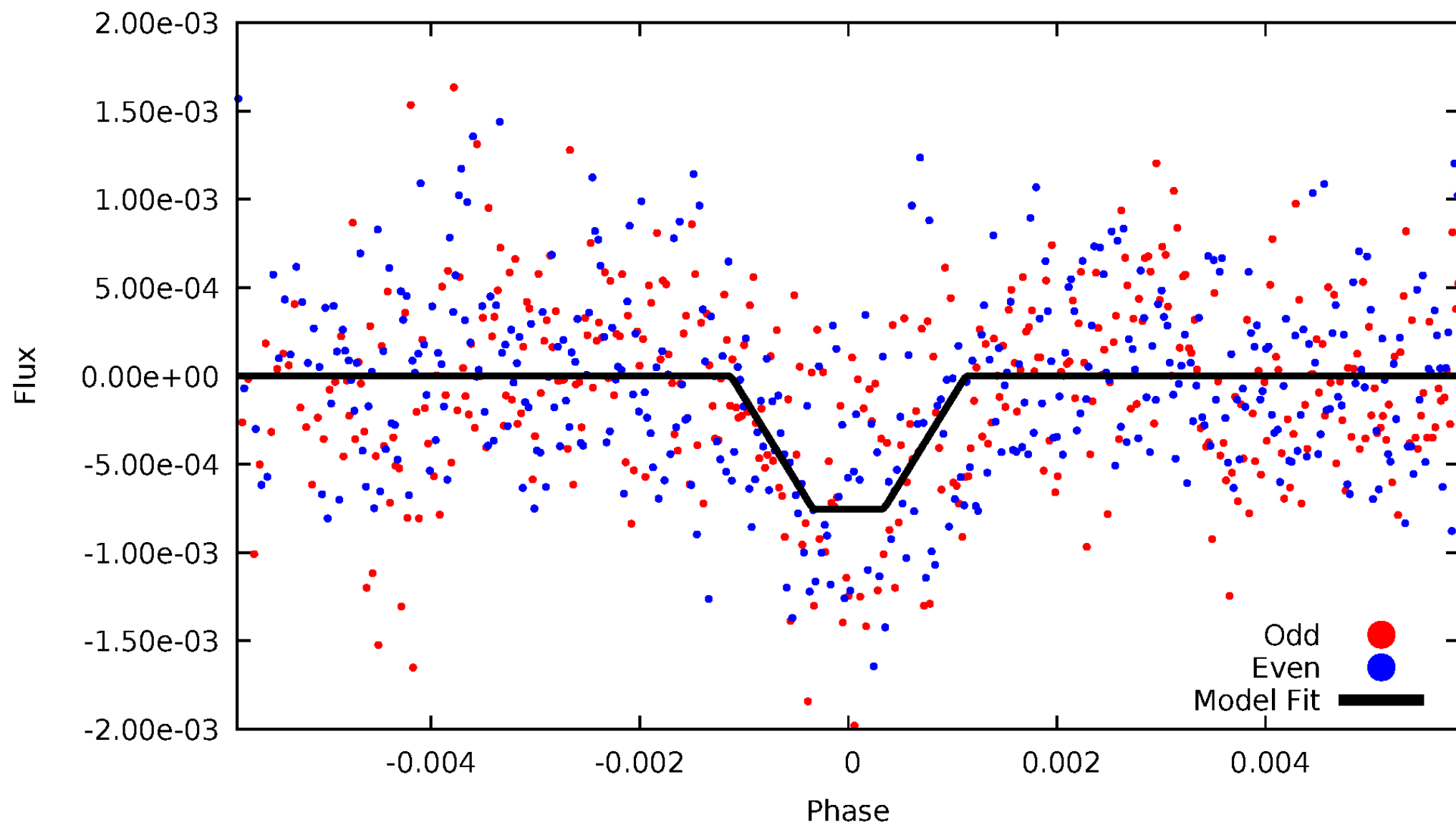
DV Odd/Even

TCE 008108608-01



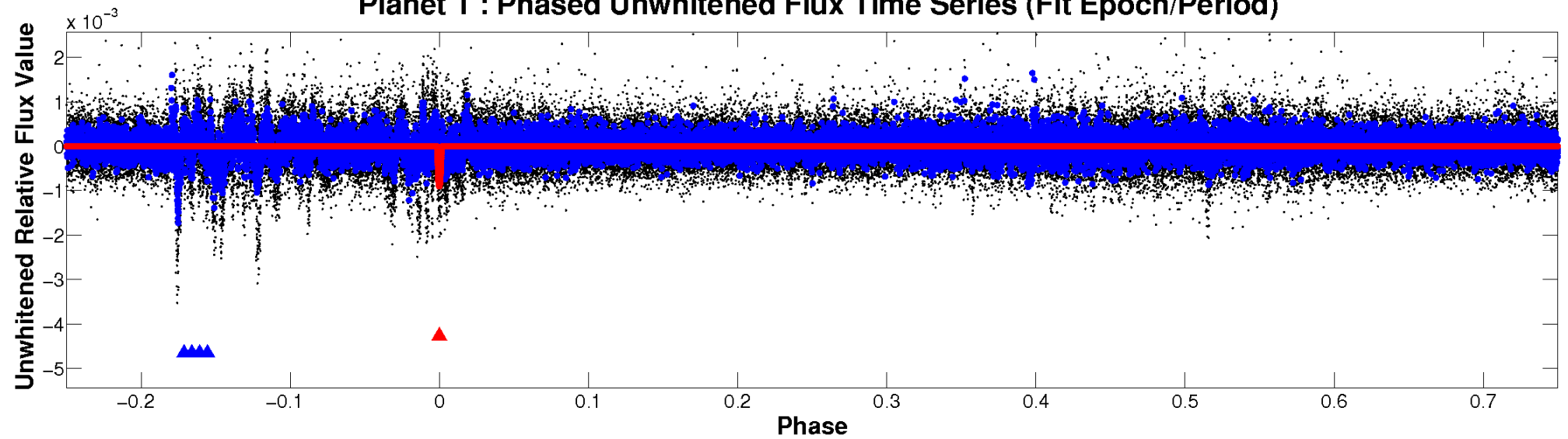
ALT Odd/Even

TCE 008108608-01

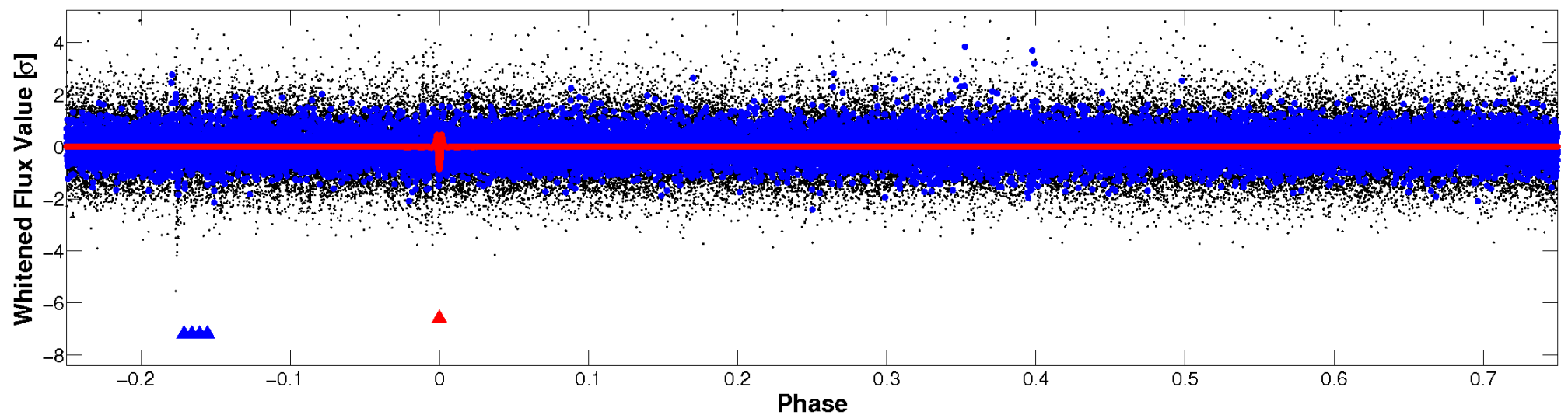


Non-Whitened Vs. Whitened Light Curve

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

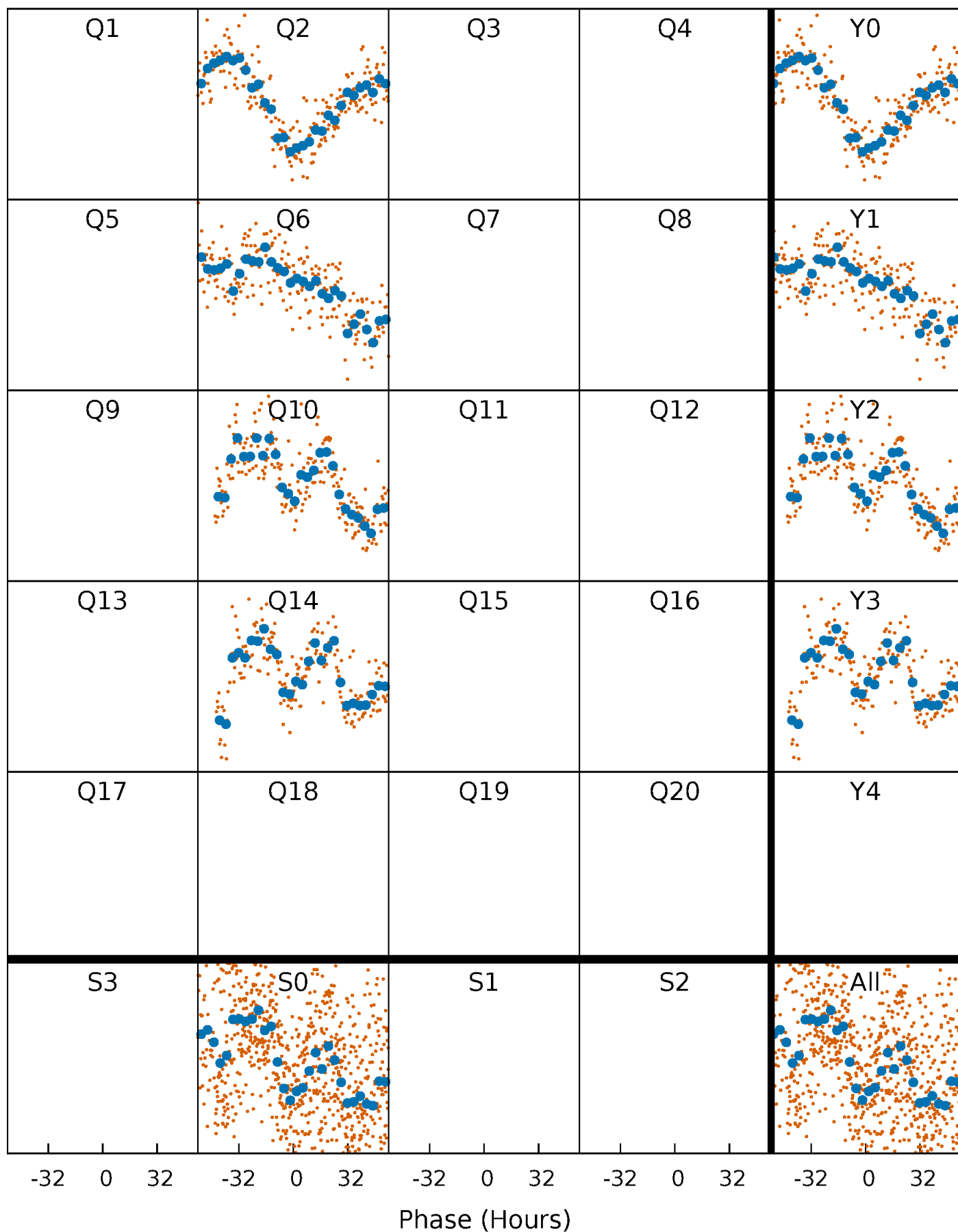


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



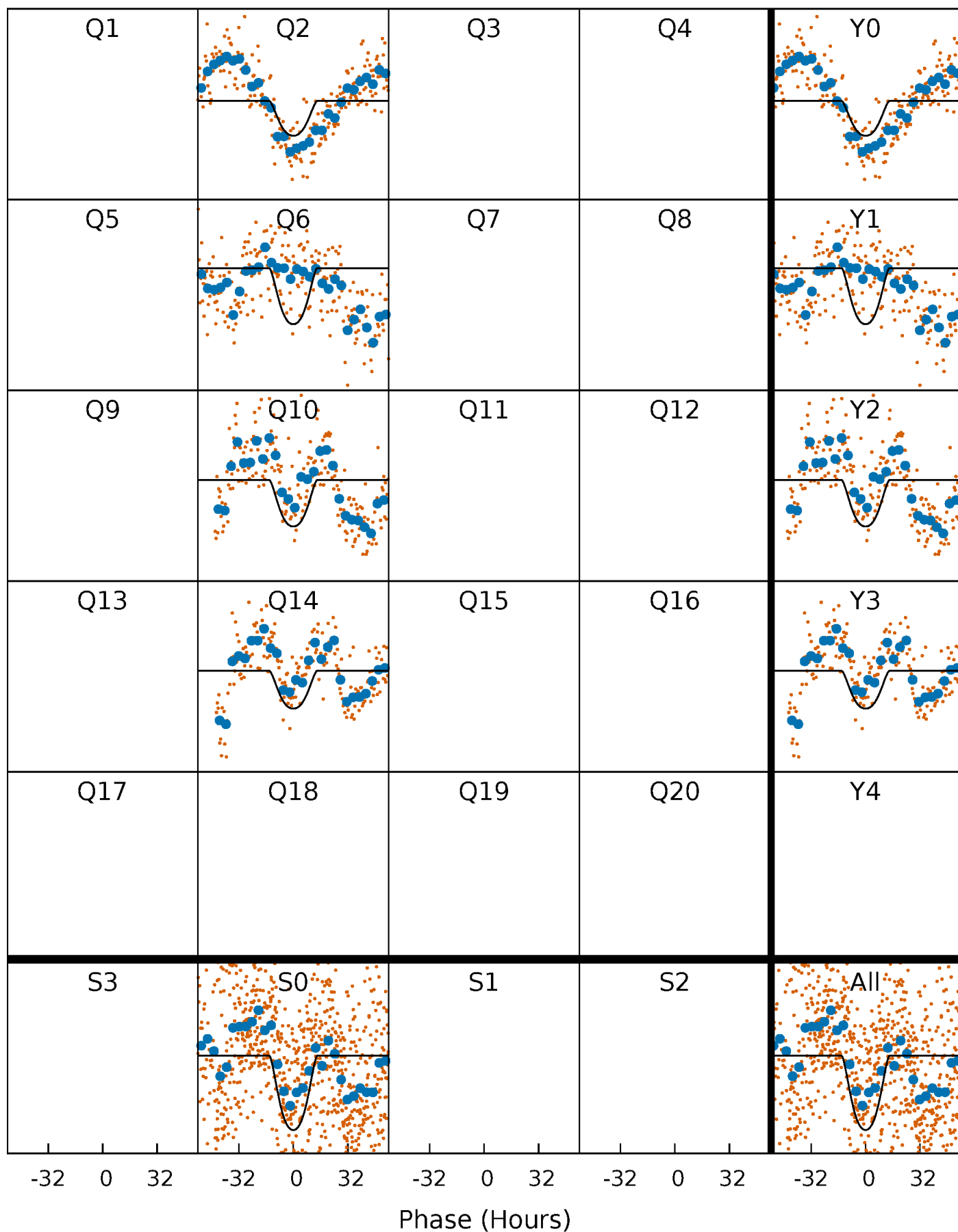
PDC Quarter-Phased Transit Curves

TCE 008108608-01 P=367.082196 Days $T_0=237.834826$ (BKJD)



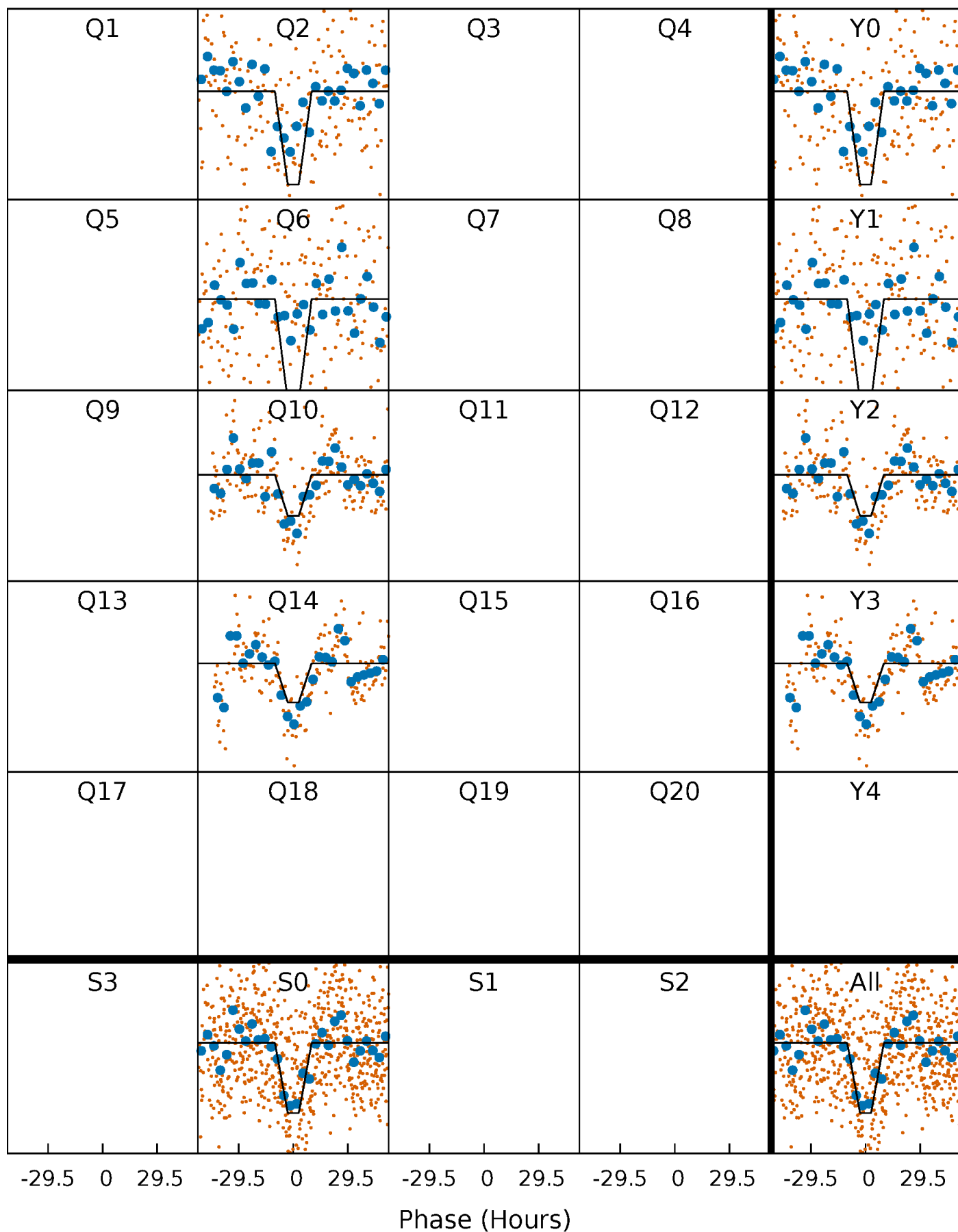
DV Quarter-Phased Transit Curves

TCE 008108608-01 P=367.082196 Days $T_0=237.834826$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

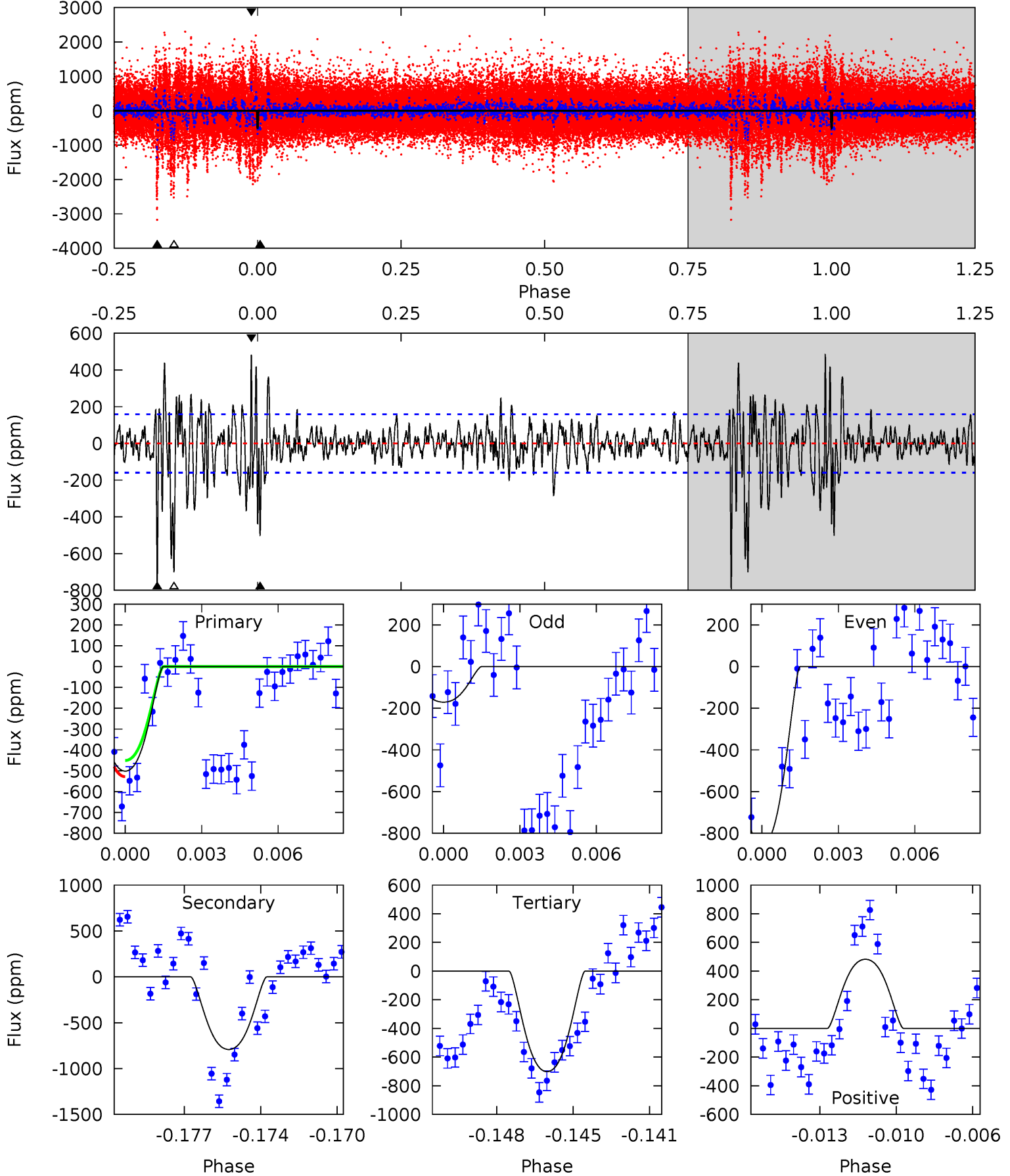
TCE 008108608-01 P=367.034416 Days $T_0=237.872310$ (BKJD)



DV Model-Shift Uniqueness Test

008108608-01, P = 367.082196 Days, E = 237.834826 Days

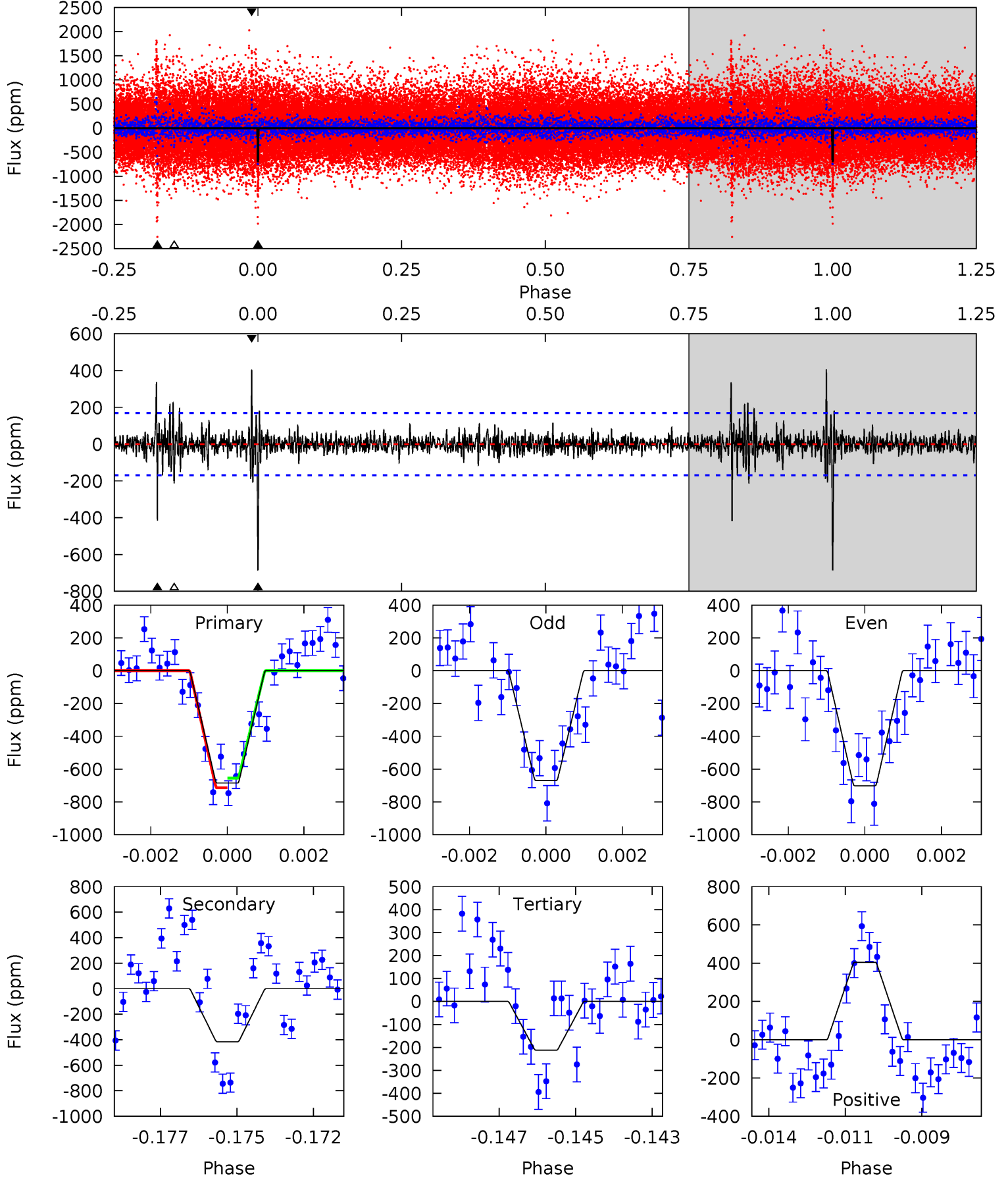
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	26.1	23.1	15.9	5.24	2.95	3.50	-6.59	0.63	2.99	10.2	11.2	2.05	0.38	1.29



Alt Model-Shift Uniqueness Test

008108608-01, P = 367.034416 Days, E = 237.872310 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	13.1	6.66	12.7	5.30	3.05	1.29	14.8	8.80	6.39	0.34	0.50	0.98	0.37	0.93



Stellar Parameters For KIC 008108608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+160}_{-196}	$4.533^{+0.044}_{-0.187}$	$-0.220^{+0.300}_{-0.300}$	$0.885^{+0.228}_{-0.082}$	$0.975^{+0.107}_{-0.131}$	$1.980^{+0.463}_{-0.921}$
	+3%/-3%	+1%/-4%	+136%/-136%	+26%/-9%	+11%/-13%	+23%/-47%
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 008108608-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-792 ± 30	$3.74^{+1.01}_{-1.02}$	352^{+25}_{-16}	5227^{+814}_{-472}	30318^{+25484}_{-11481}
Alt.	-416 ± 32	$2.77^{+0.97}_{-0.98}$	351^{+21}_{-15}	5135^{+1248}_{-555}	28397^{+39497}_{-12321}

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 $A_{obs} \gg 1.0$

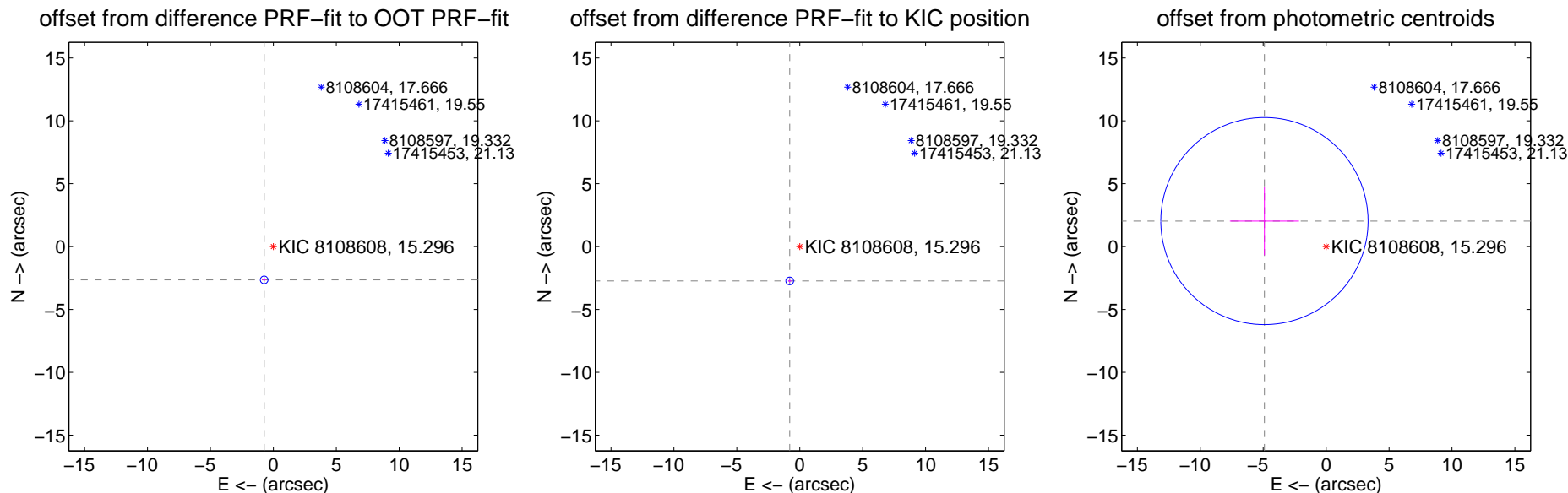
DV Centroid Data

Supplemental centroid analysis for 008108608-01. Kepler magnitude: 15.30. Transit SNR 8.69

There are 1 quarters with good PRF difference image offsets

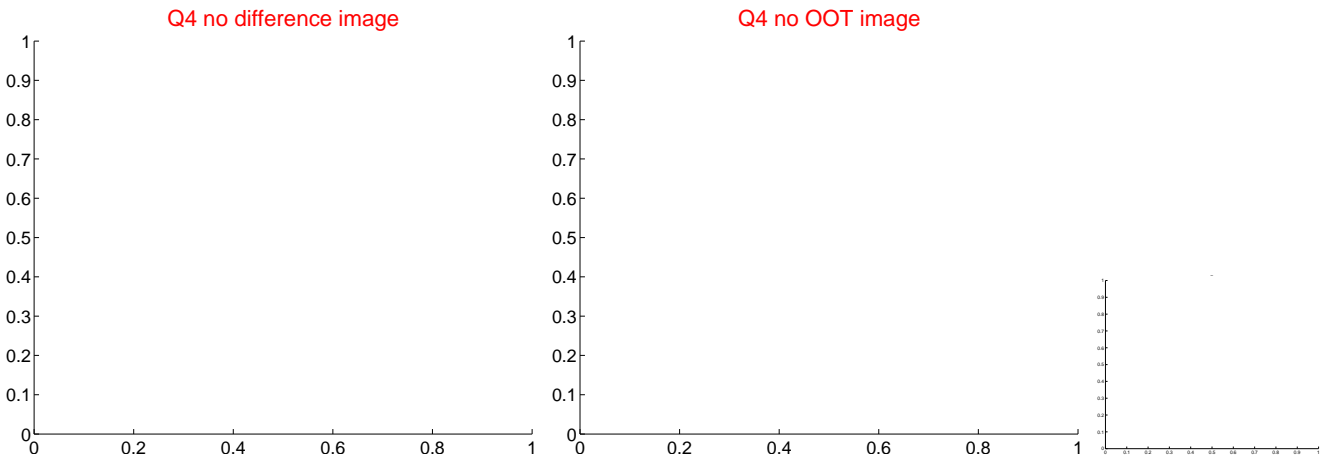
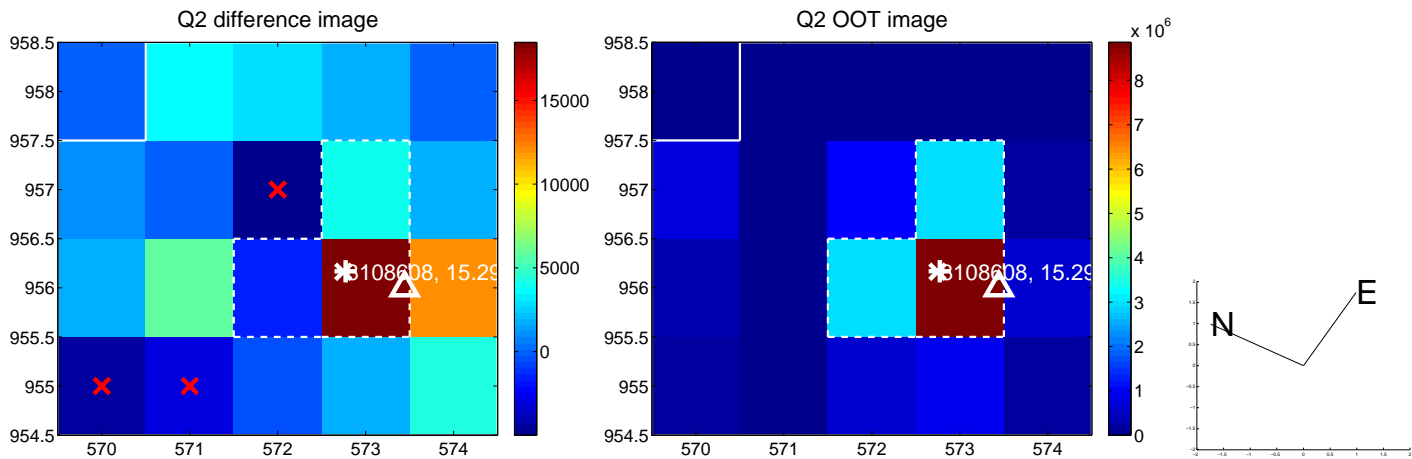
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.747 ± 0.102	26.98	0.730 ± 0.132	-2.649 ± 0.099
PRF-fit source offset from KIC position	2.848 ± 0.102	27.89	0.798 ± 0.132	-2.734 ± 0.099
photometric centroid source offset	5.30 ± 2.74	1.93	4.90 ± 2.75	2.03 ± 2.72

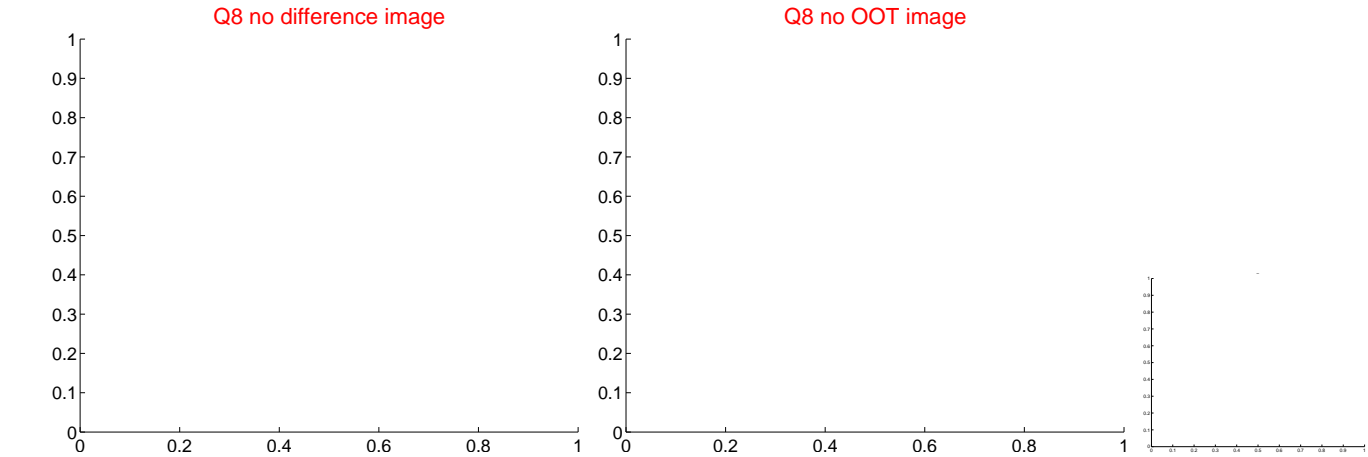
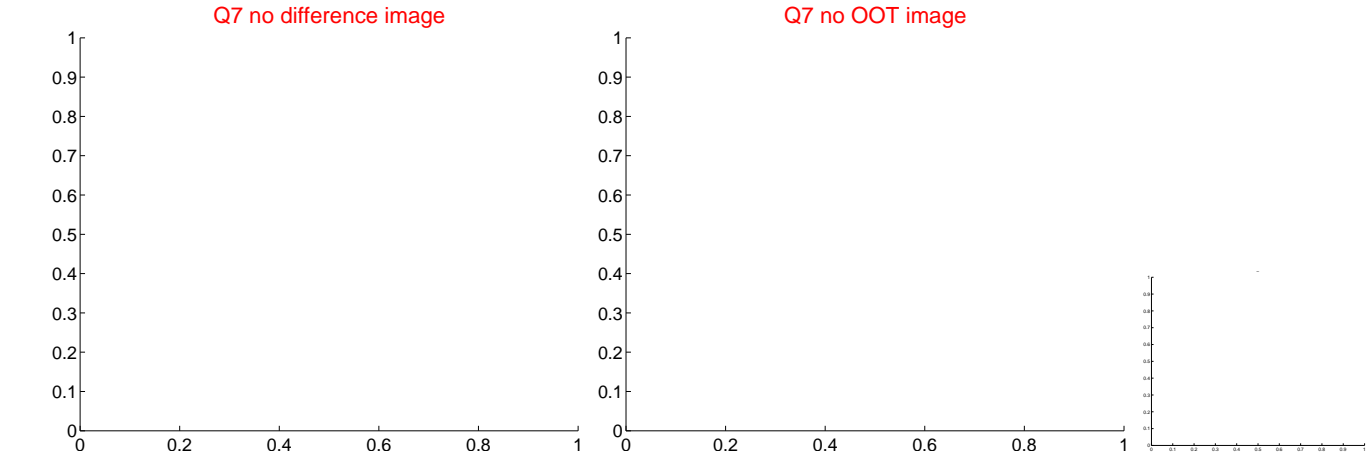
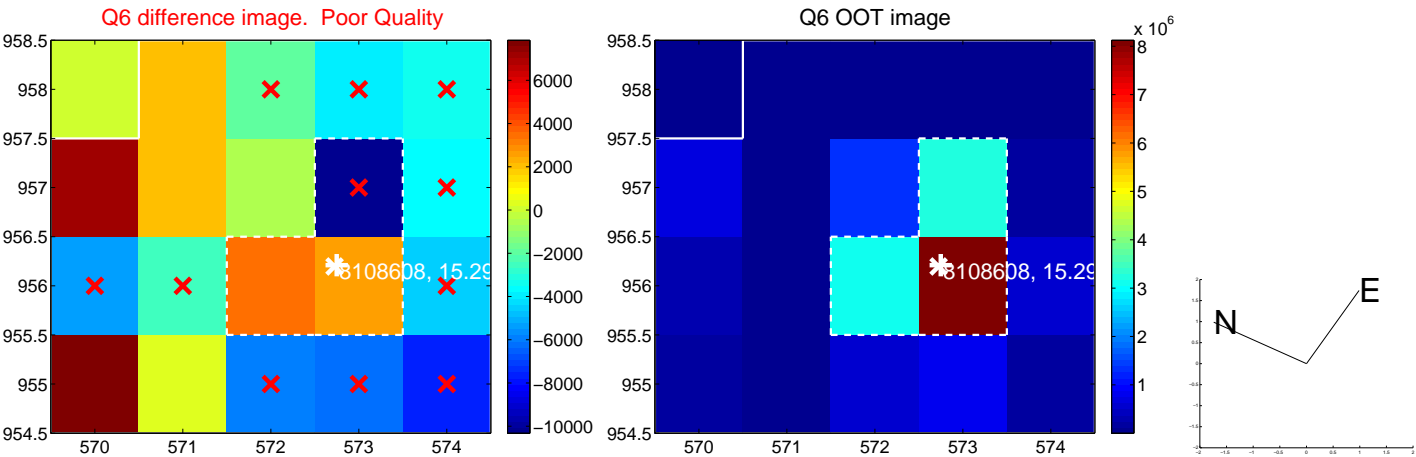
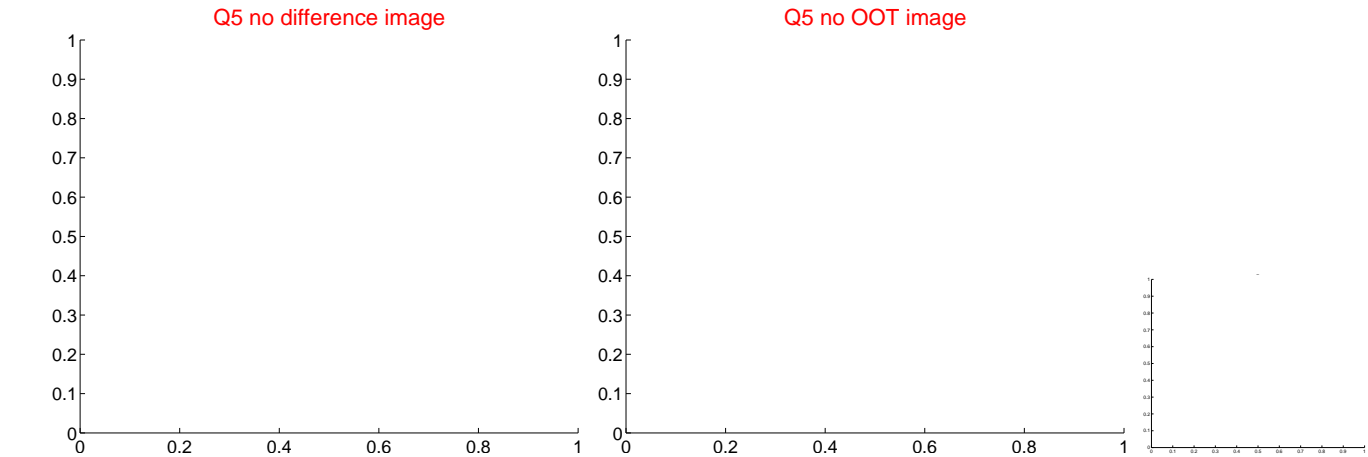


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



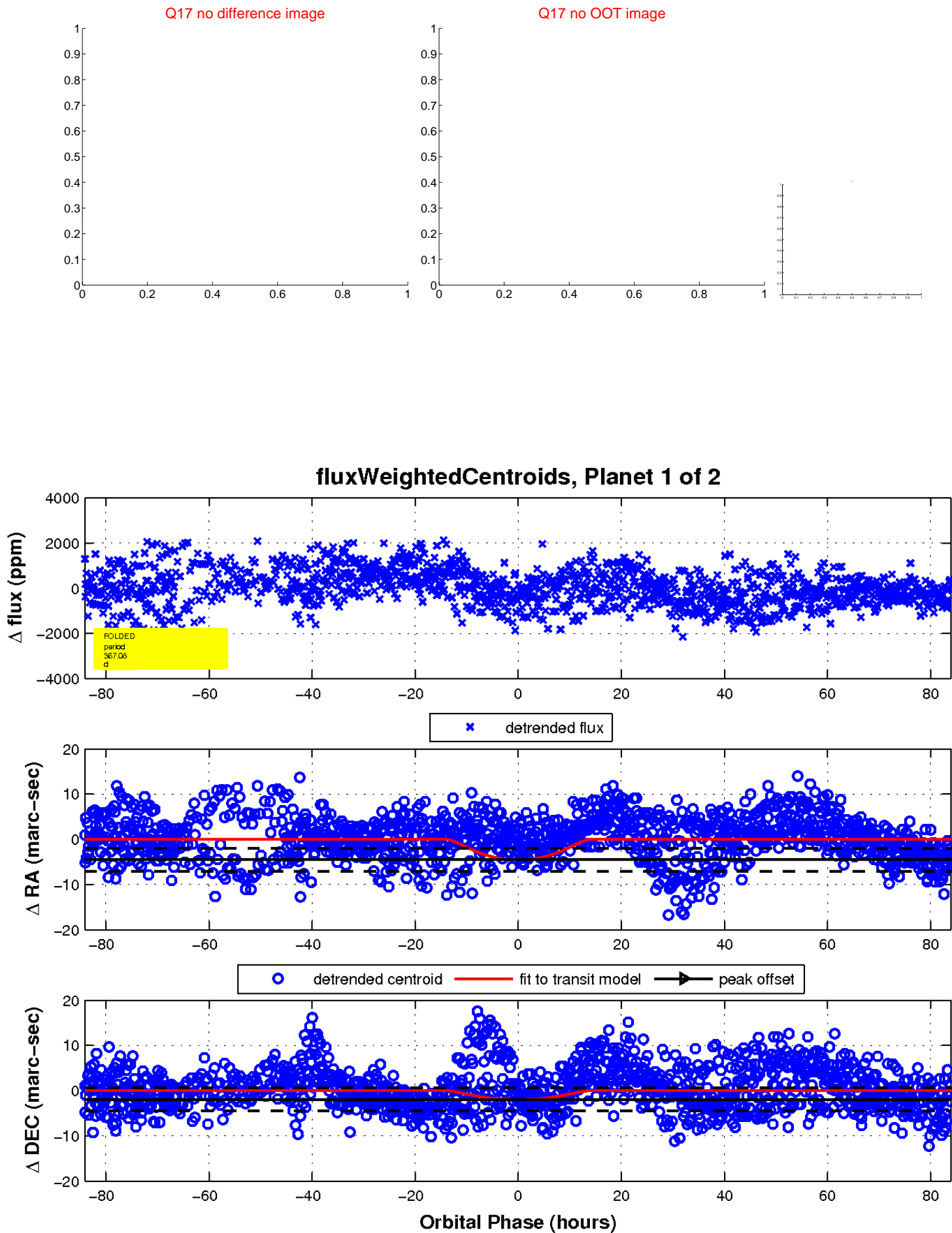
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

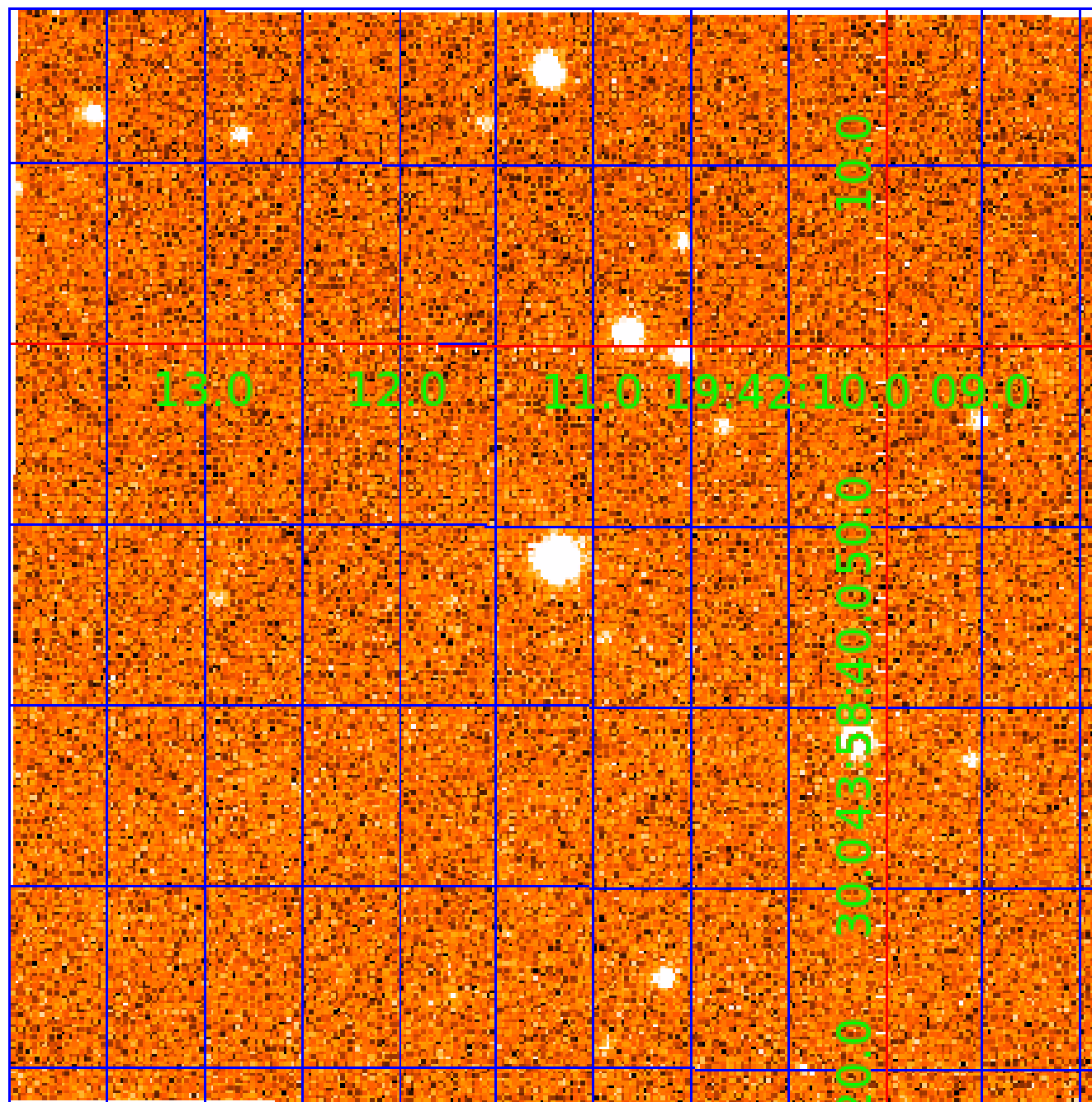


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008108608

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})
008108608-01	OBS	No	367.082196	237.834827	901.7	28.039	7.3	8.7	0.89	5941	3.55	0.88
008108608-02	OBS	No	369.003453	174.989820	895.8	20.791	7.3	7.2	0.89	5941	3.42	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008108608-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
008108608-02	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.

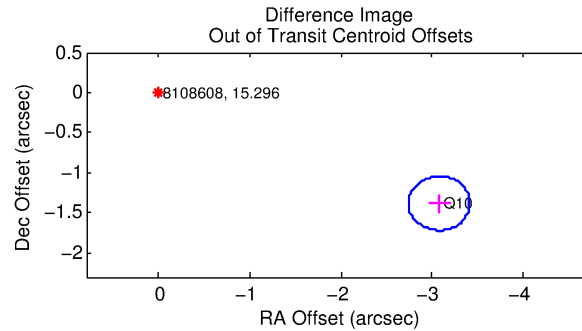
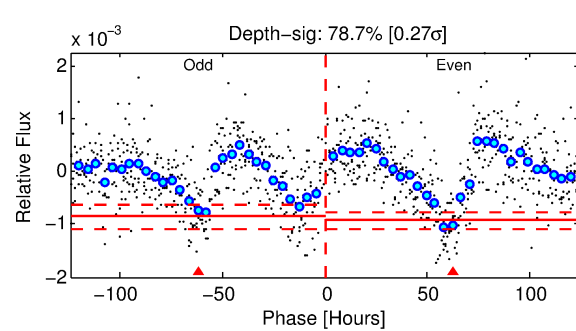
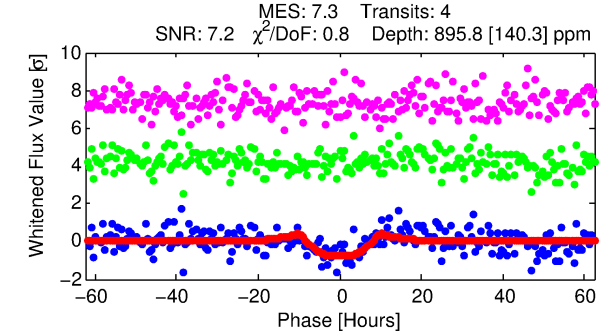
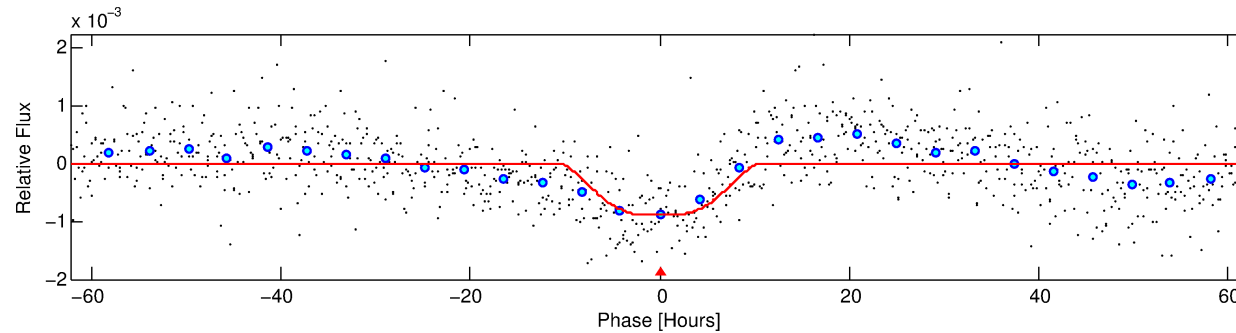
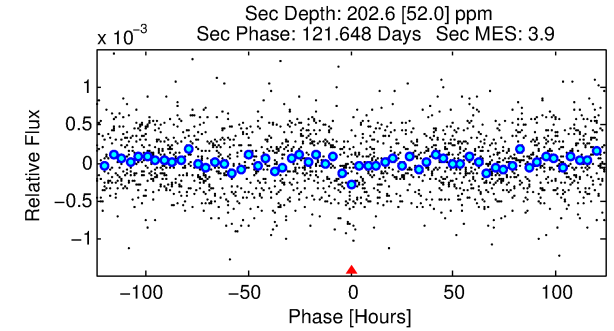
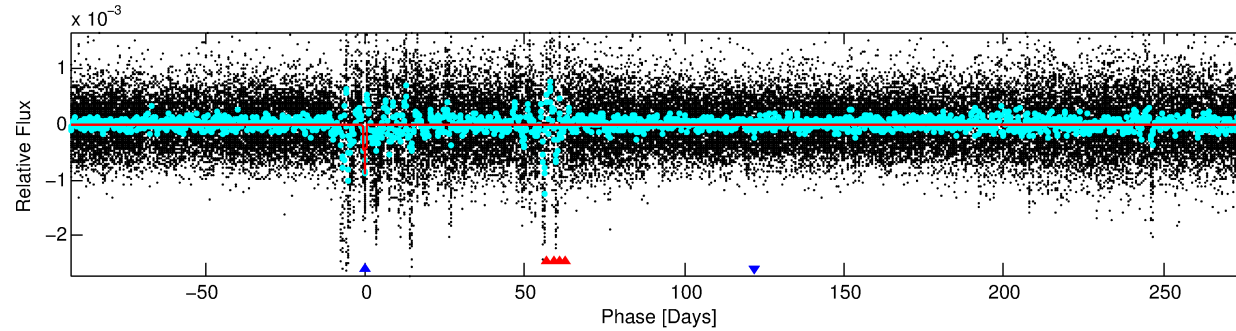
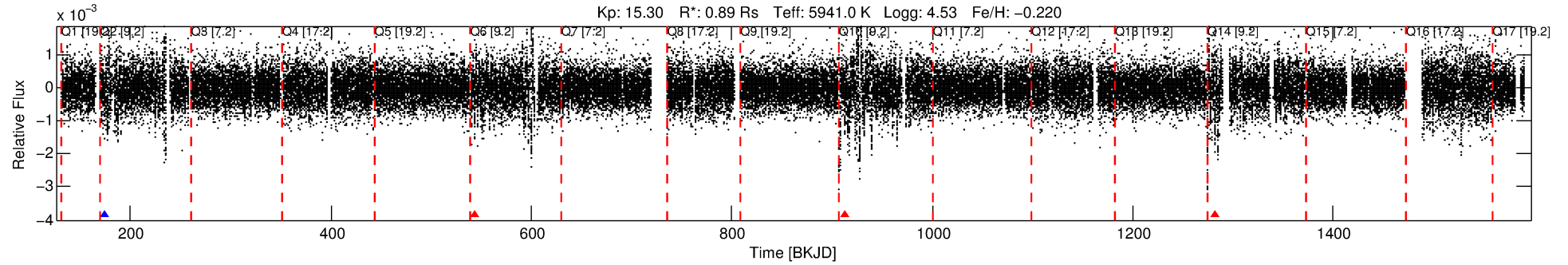
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008108608-02

No Significant Match Found

DV One-Page Summary

KIC: 8108608 Candidate: 2 of 2 Period: 369.003 d



DV Fit Results:

Period = 369.00345 [0.02099] d
Epoch = 174.9898 [0.0358] BKJD
Rp/R* = 0.0354 [0.0034]
a/R* = 52.43 [7.17]
b = 0.96 [0.01]
Seff = 0.88 [0.32]
Teq = 247 [22] K
Rp = 3.41 [0.94] Re
a = 0.9985 [0.2235] AU
Ag = 9528.25 [4421.53] [2.15σ]
Teffp = 3769 [328] K [10.73σ]

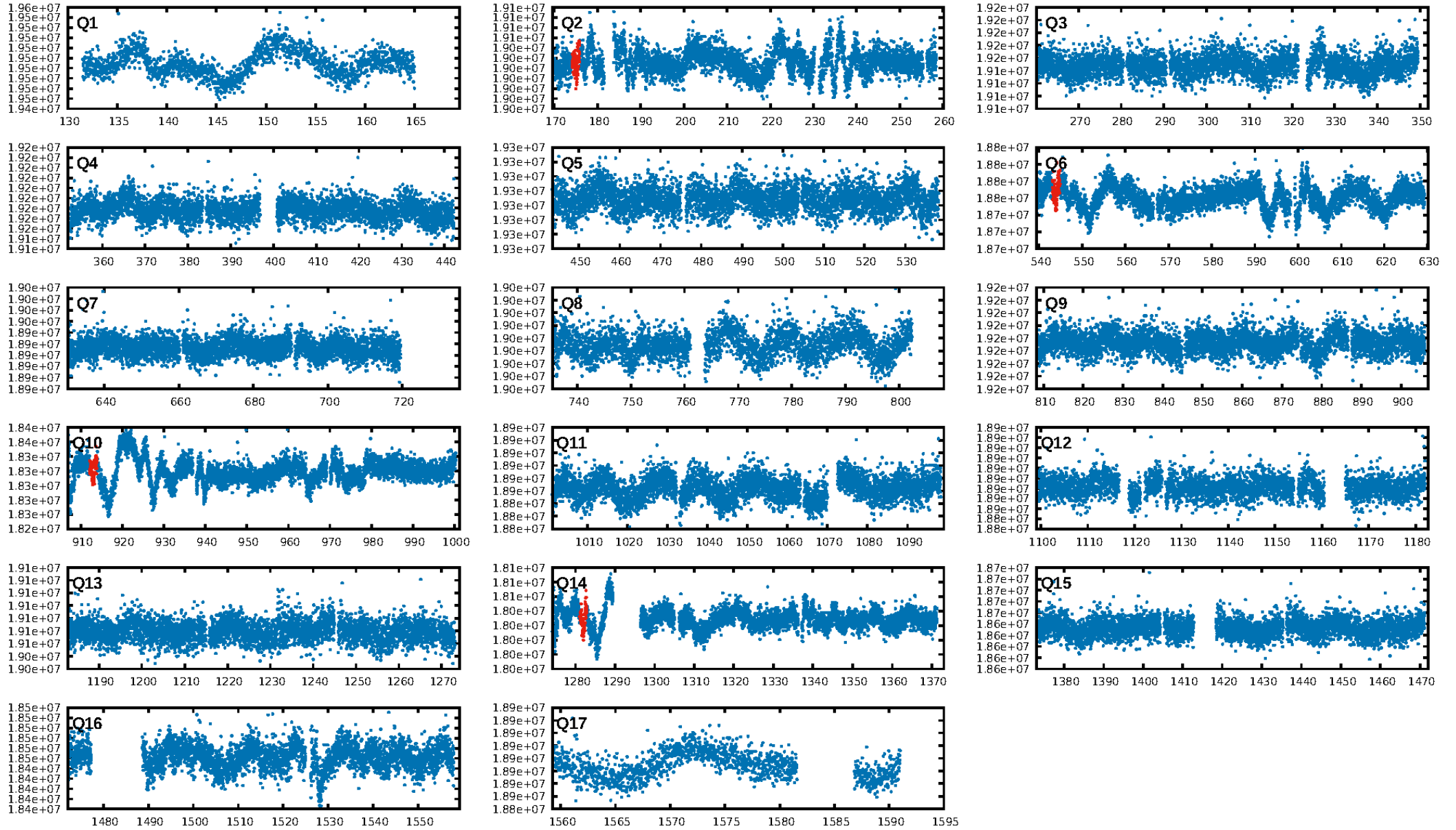
DV Diagnostic Results:

ShortPeriod-sig: 81.3% [1.32σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.34e-08
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 4.026
Centroid-sig: 96.6%
Centroid-so: 0.497 arcsec [0.19σ]
OotOffset-rm: 3.378 arcsec [29.99σ]
KicOffset-rm: 3.343 arcsec [29.73σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
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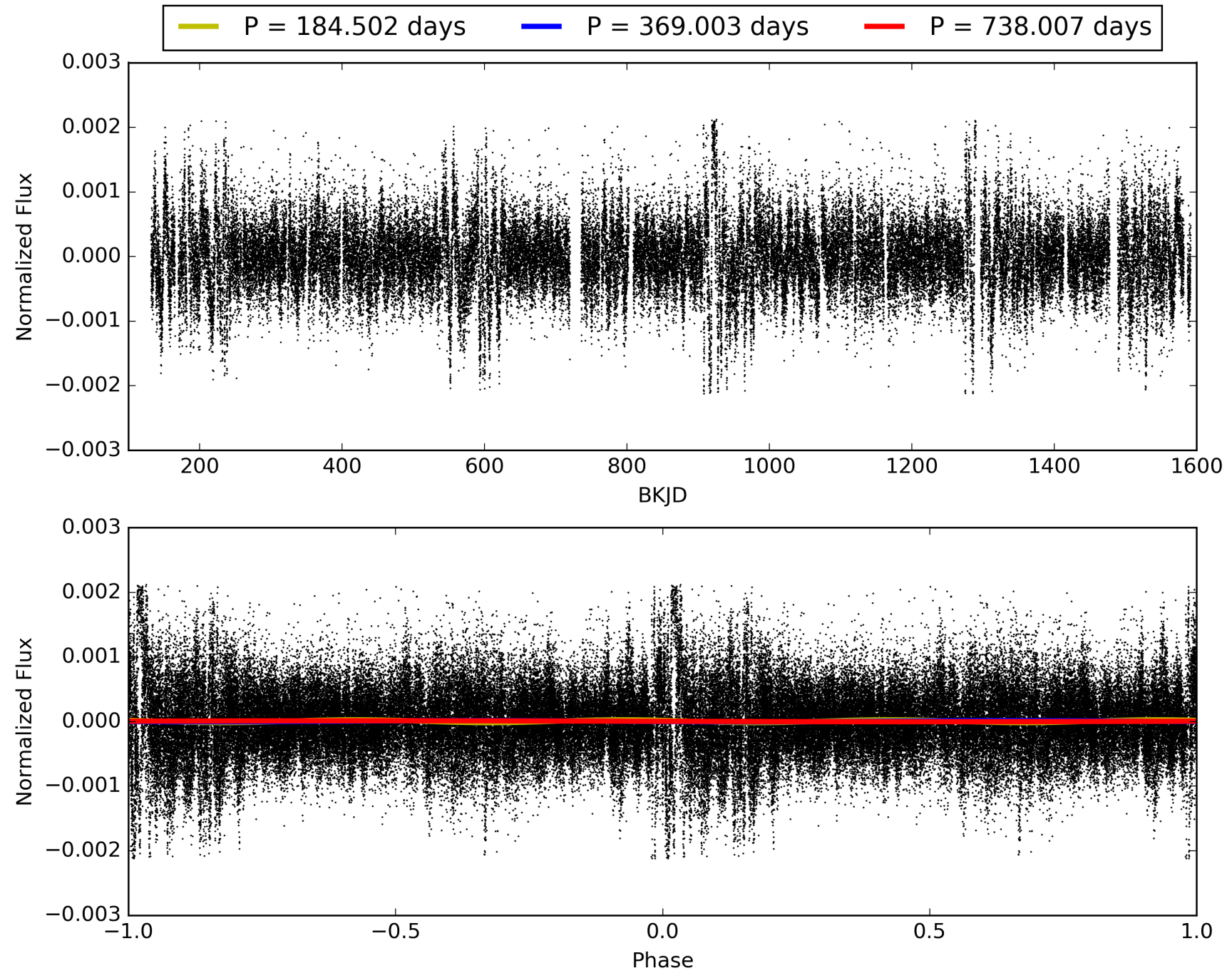
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:24:13 Z

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

TCE 008108608-02, PDC Light Curves

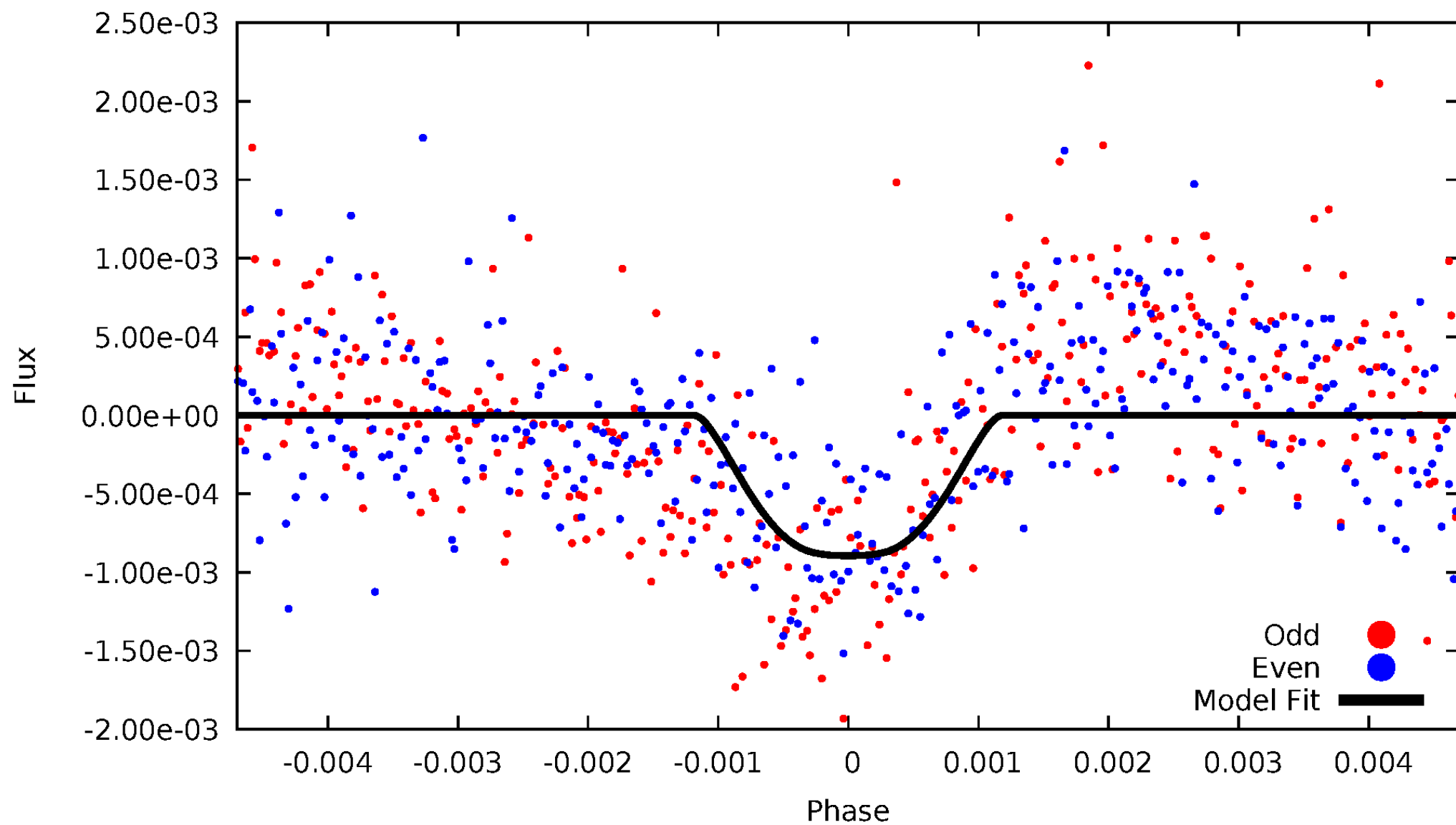


TCE 008108608-02



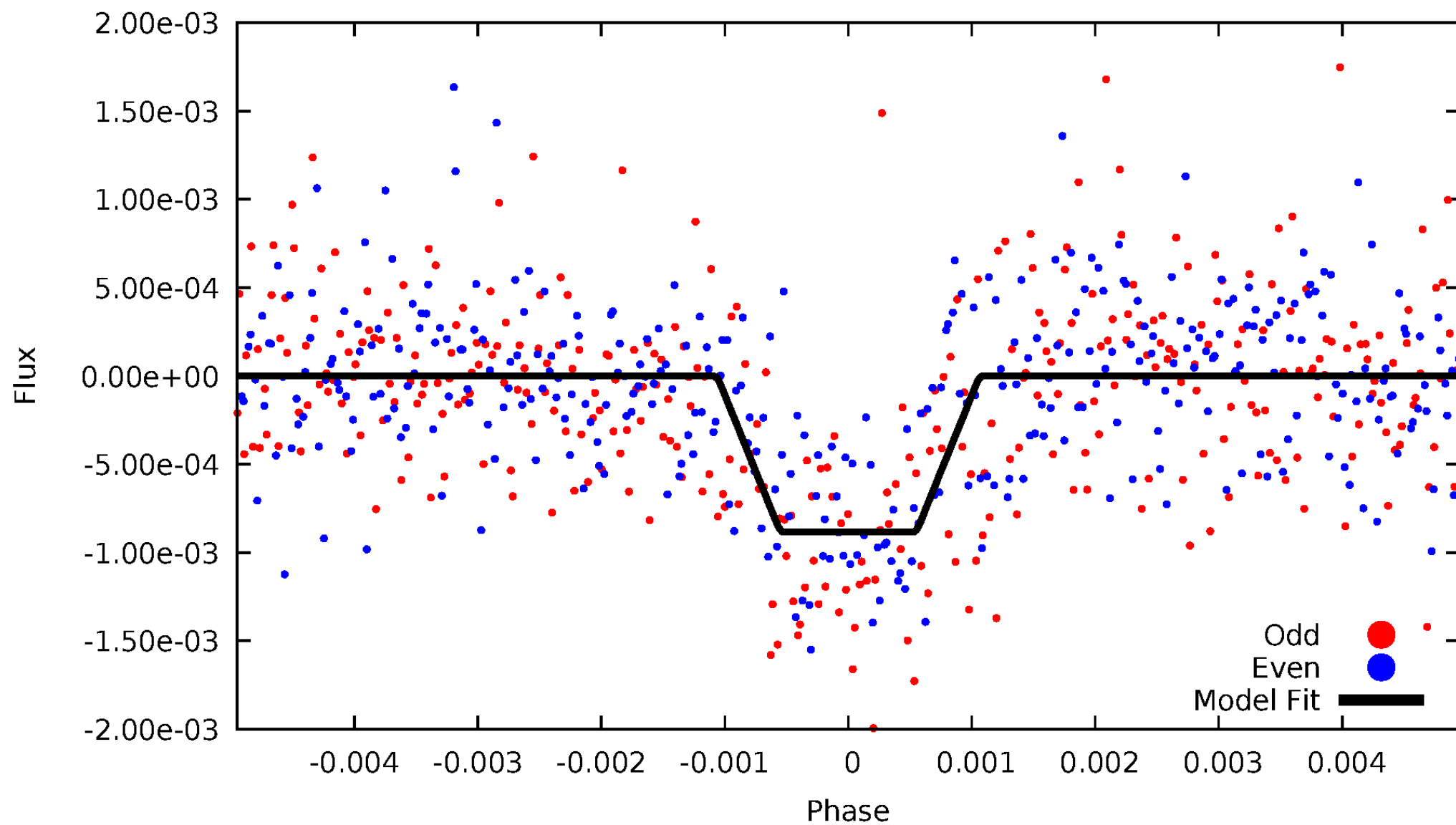
DV Odd/Even

TCE 008108608-02



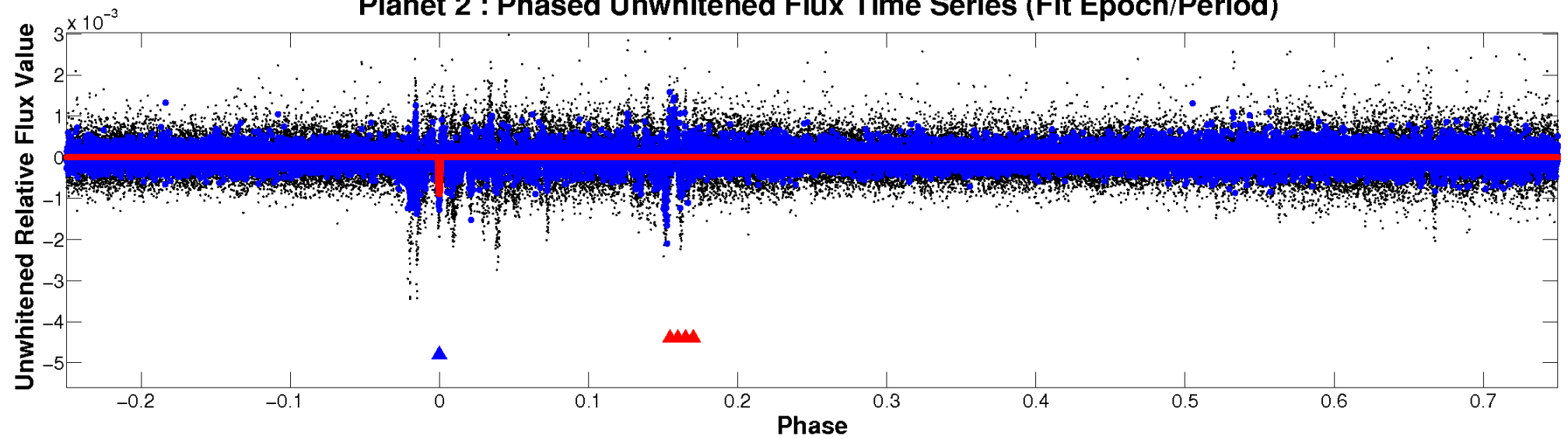
ALT Odd/Even

TCE 008108608-02

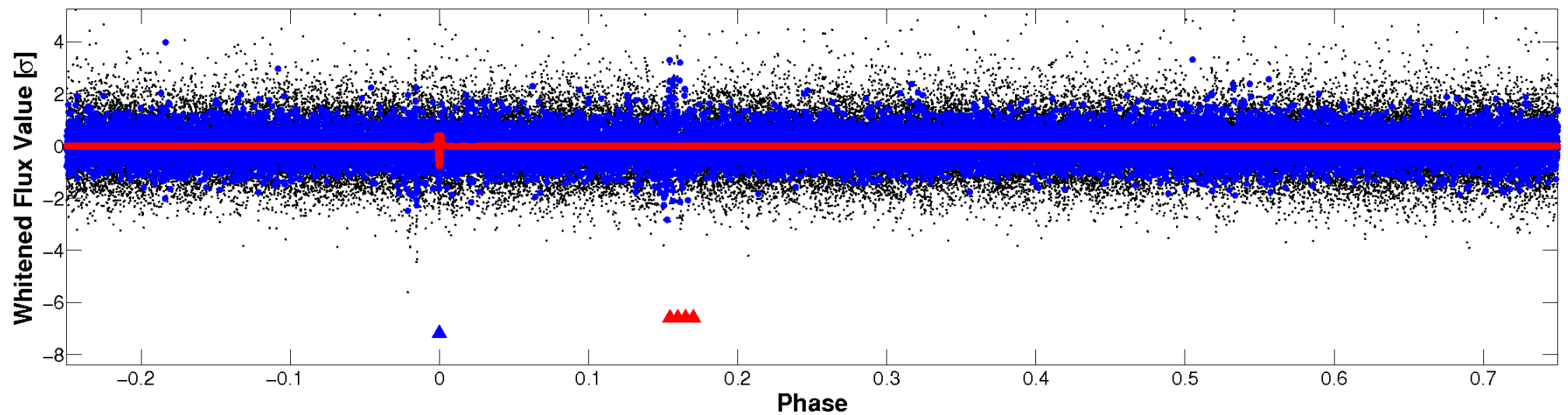


Non-Whitened Vs. Whitened Light Curve

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

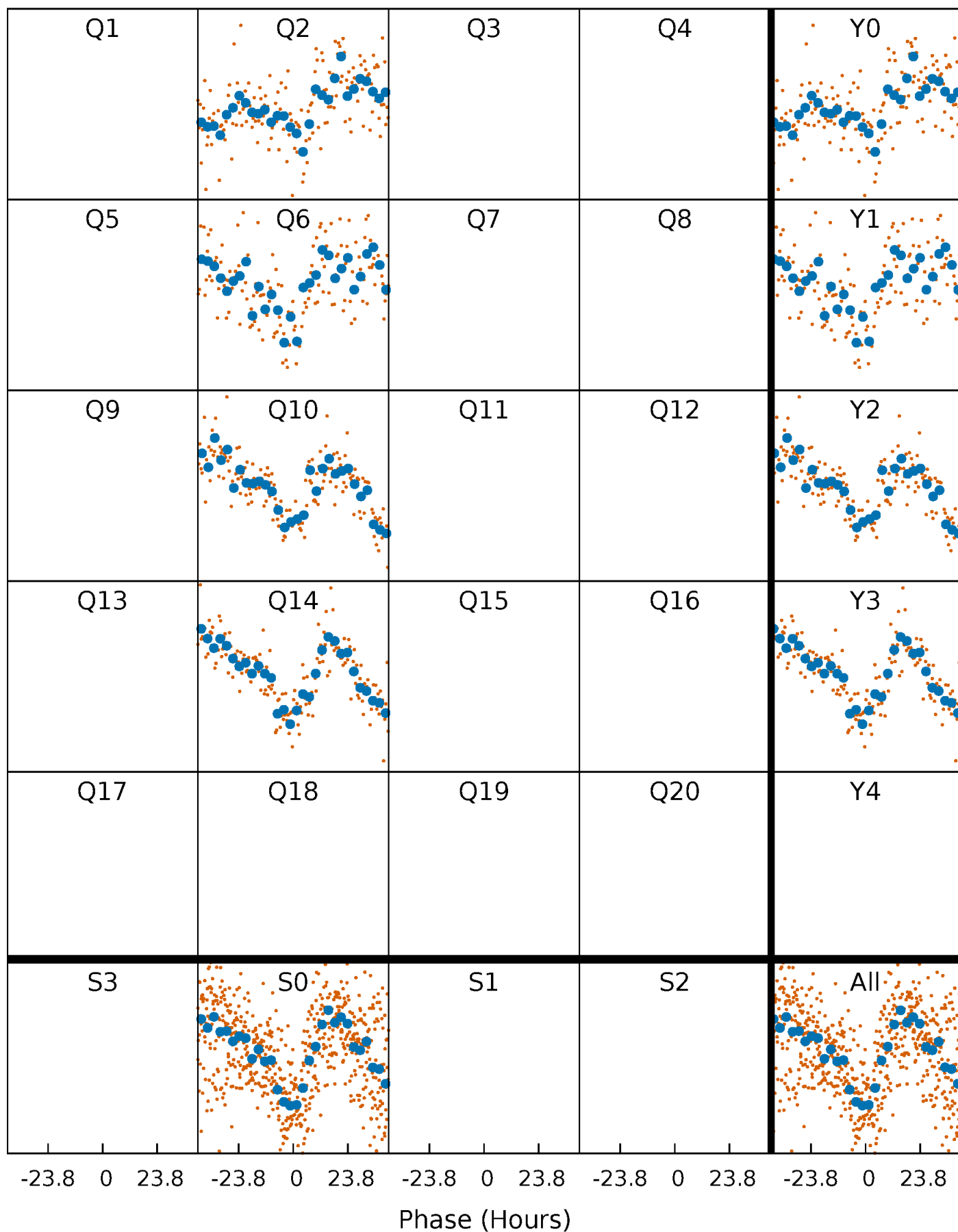


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



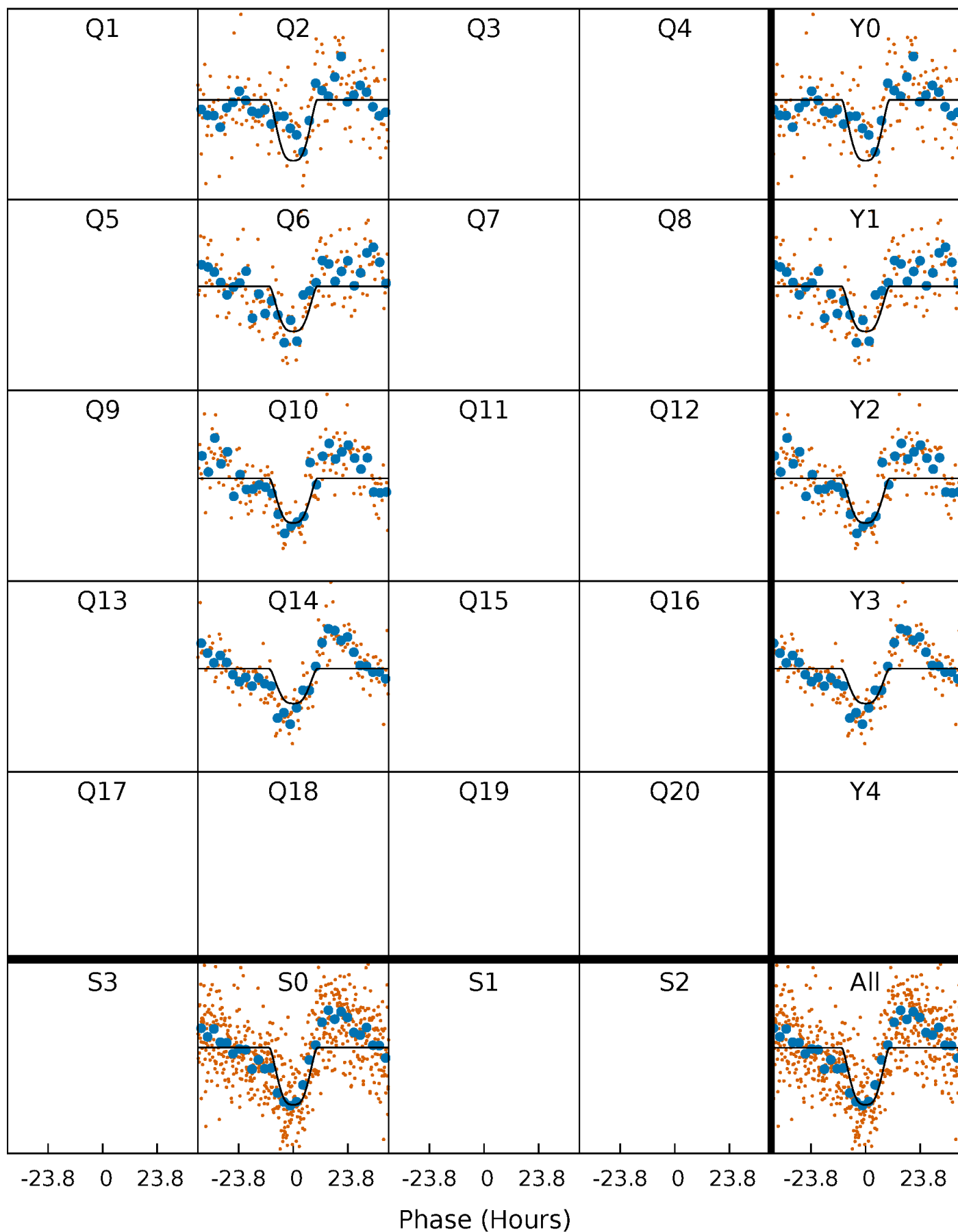
PDC Quarter-Phased Transit Curves

TCE 008108608-02 P=369.003453 Days $T_0=174.989820$ (BKJD)



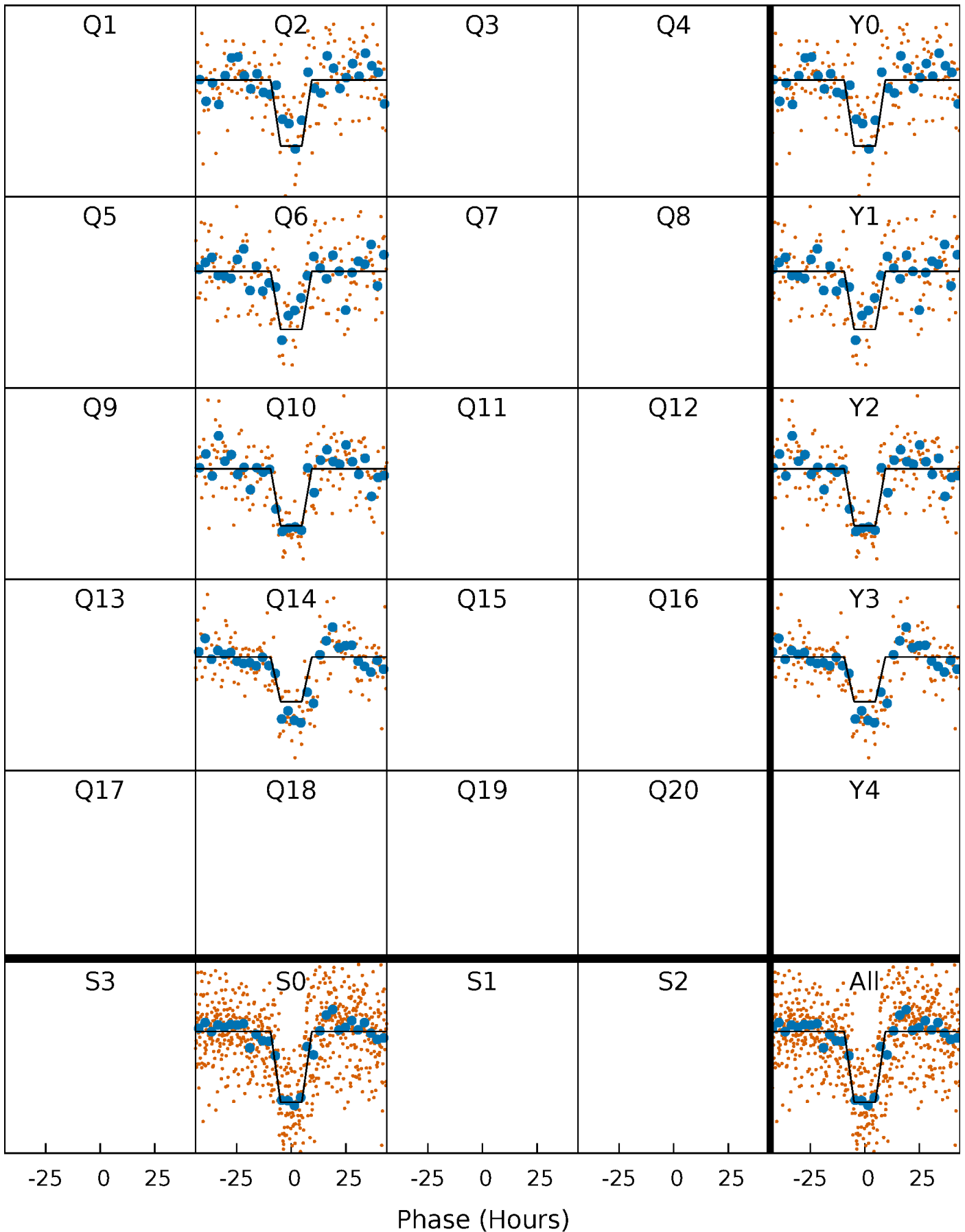
DV Quarter-Phased Transit Curves

TCE 008108608-02 P=369.003453 Days $T_0=174.989820$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

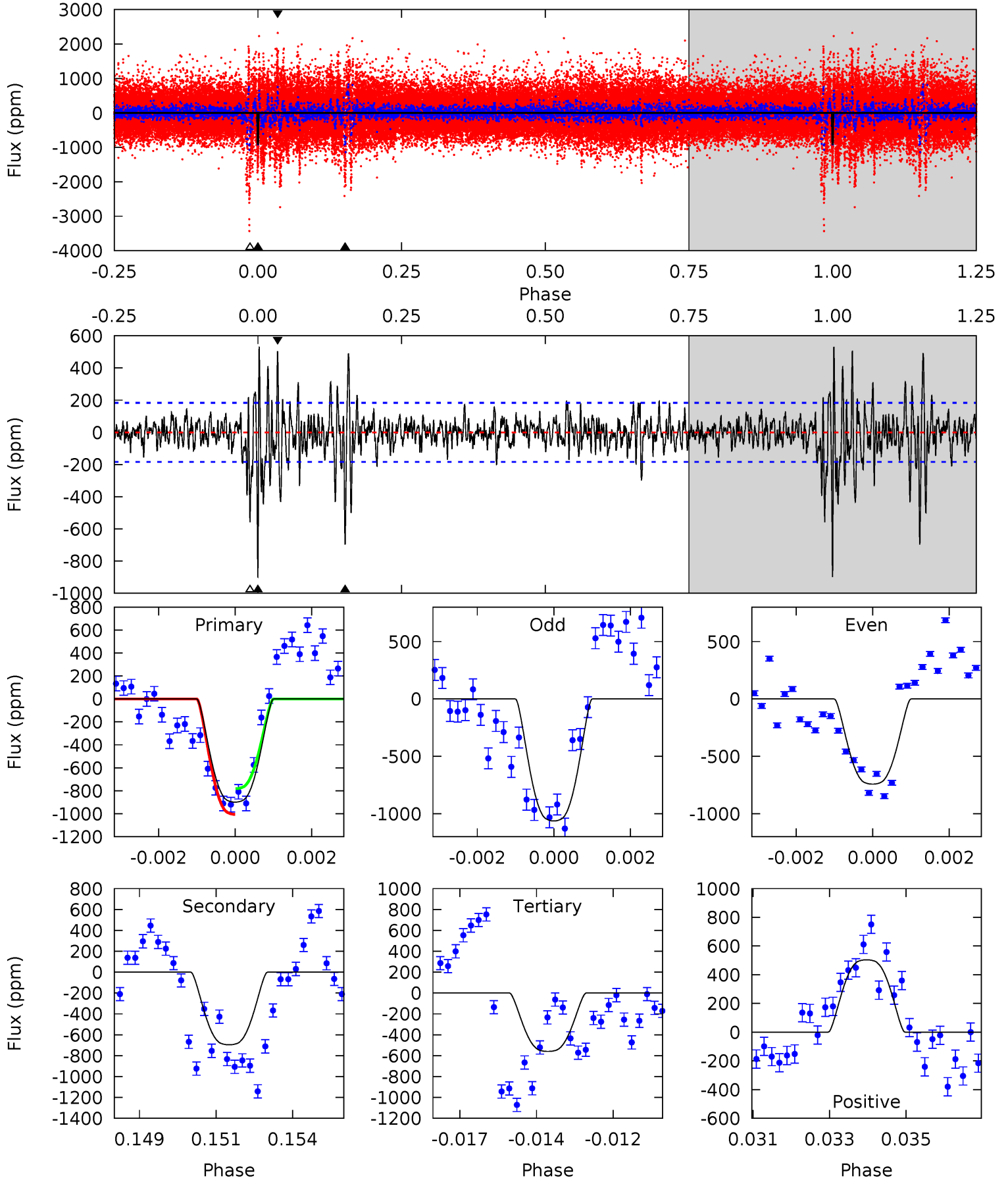
TCE 008108608-02 P=368.941548 Days $T_0=175.086916$ (BKJD)



DV Model-Shift Uniqueness Test

008108608-02, P = 369.003453 Days, E = 174.989820 Days

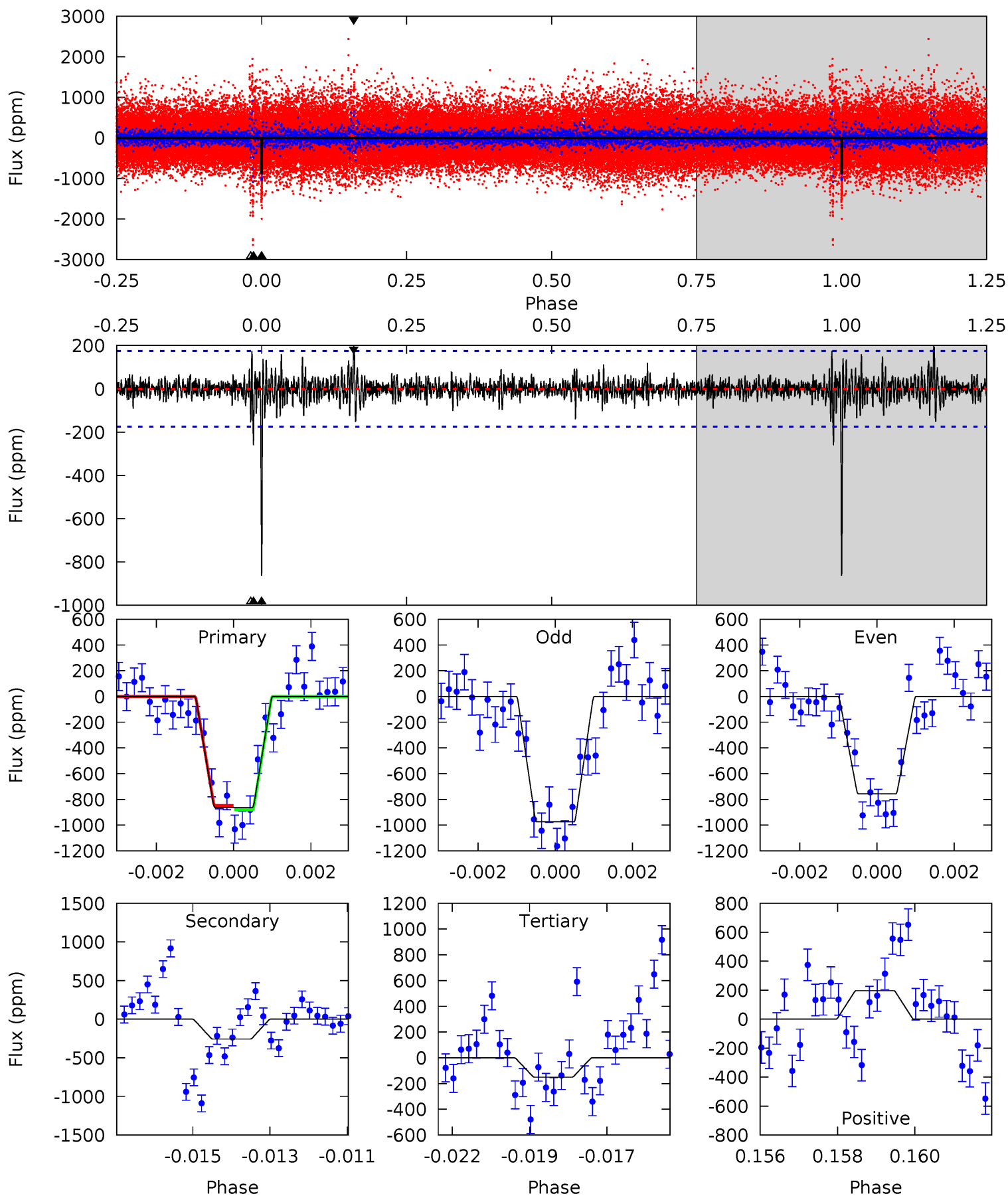
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	20.1	16.1	14.5	5.30	3.04	2.85	9.80	11.4	3.94	5.53	4.63	0.99	0.37	3.23



Alt Model-Shift Uniqueness Test

008108608-02, P = 368.941548 Days, E = 175.086916 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	7.81	4.57	5.98	5.31	3.07	1.06	21.6	20.2	3.24	1.83	3.30	1.05	0.19	0.50



Stellar Parameters For KIC 008108608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+160}_{-196}	$4.533^{+0.044}_{-0.187}$	$-0.220^{+0.300}_{-0.300}$	$0.885^{+0.228}_{-0.082}$	$0.975^{+0.107}_{-0.131}$	$1.980^{+0.463}_{-0.921}$
	+3%/-3%	+1%/-4%	+136%/-136%	+26%/-9%	+11%/-13%	+23%/-47%
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 008108608-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-696 ± 35	$3.53^{+0.58}_{-0.44}$	351^{+23}_{-15}	5178^{+308}_{-246}	29979^{+9503}_{-7347}
Alt.	-257 ± 33	$3.01^{+0.49}_{-0.46}$	353^{+22}_{-18}	4528^{+276}_{-239}	15265^{+5984}_{-4299}

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 $A_{obs} \gg 1.0$

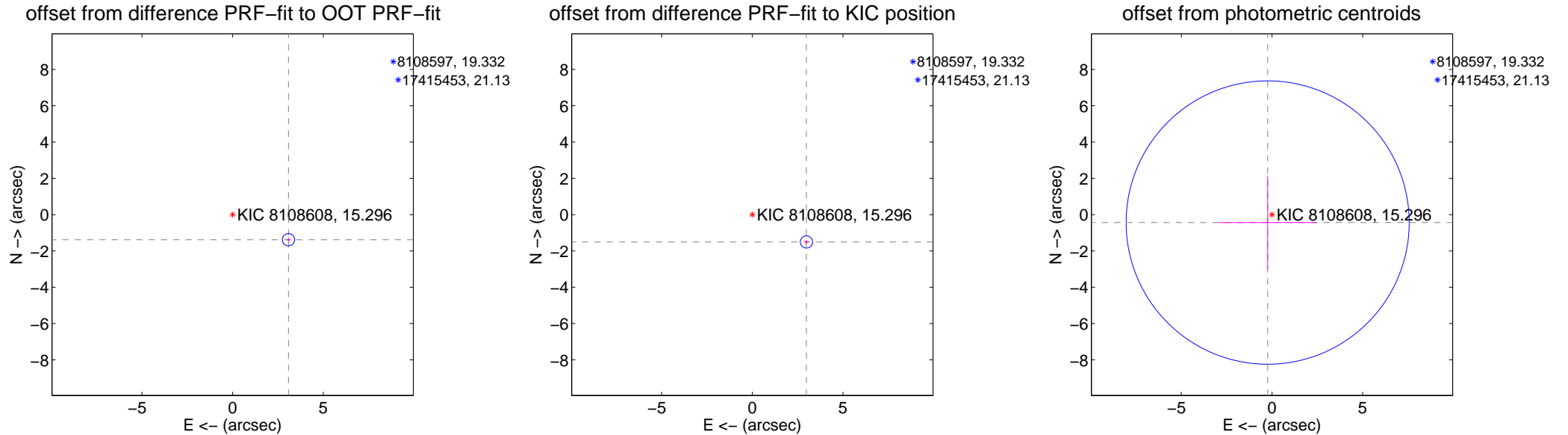
DV Centroid Data

Supplemental centroid analysis for 008108608-02. Kepler magnitude: 15.30. Transit SNR 7.23

There are 0 quarters with good PRF difference image offsets

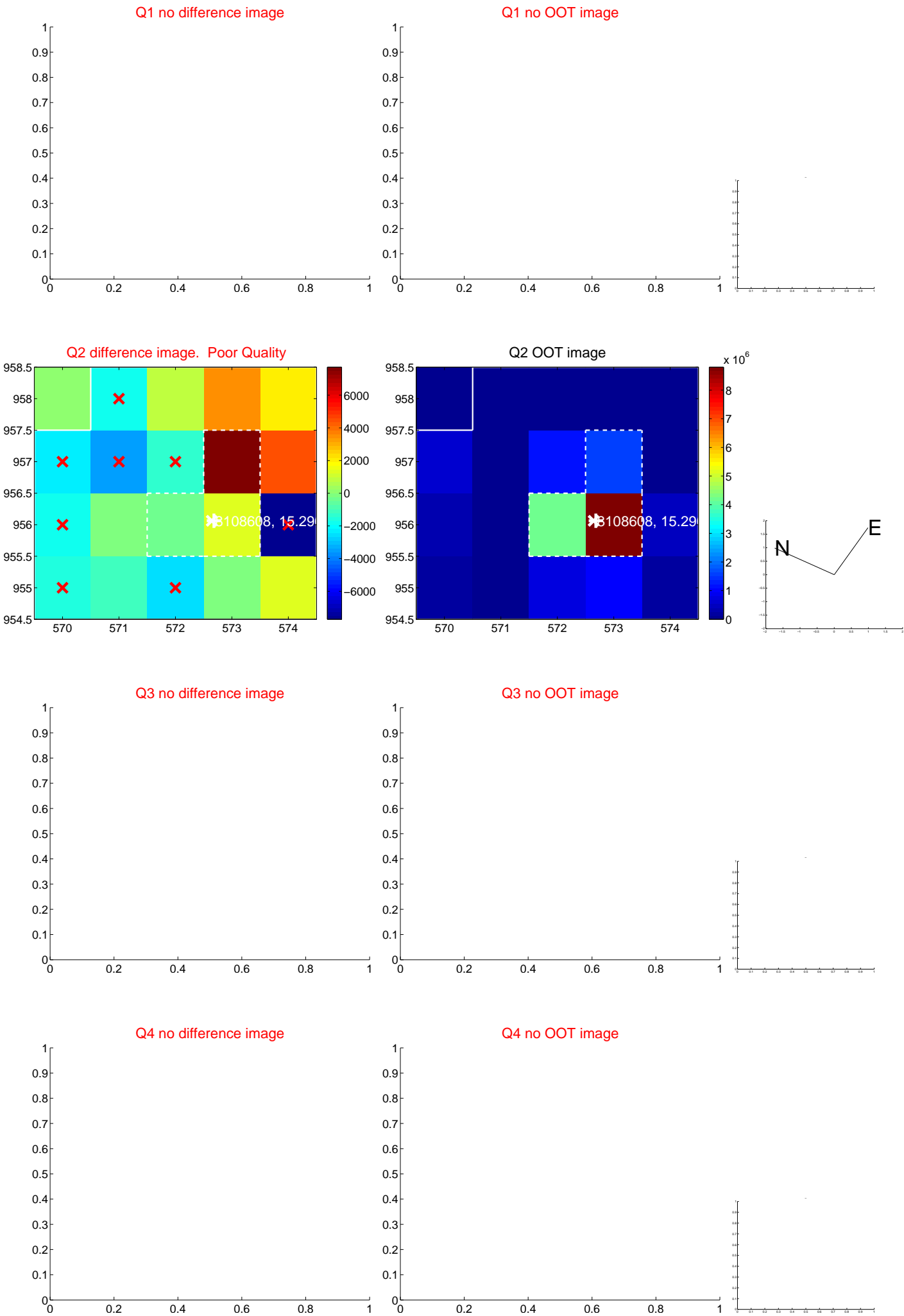
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.378 ± 0.113	29.99	-3.082 ± 0.114	-1.383 ± 0.108
PRF-fit source offset from KIC position	3.343 ± 0.112	29.73	-2.985 ± 0.114	-1.505 ± 0.108
photometric centroid source offset	0.50 ± 2.60	0.19	0.24 ± 2.71	-0.44 ± 2.57

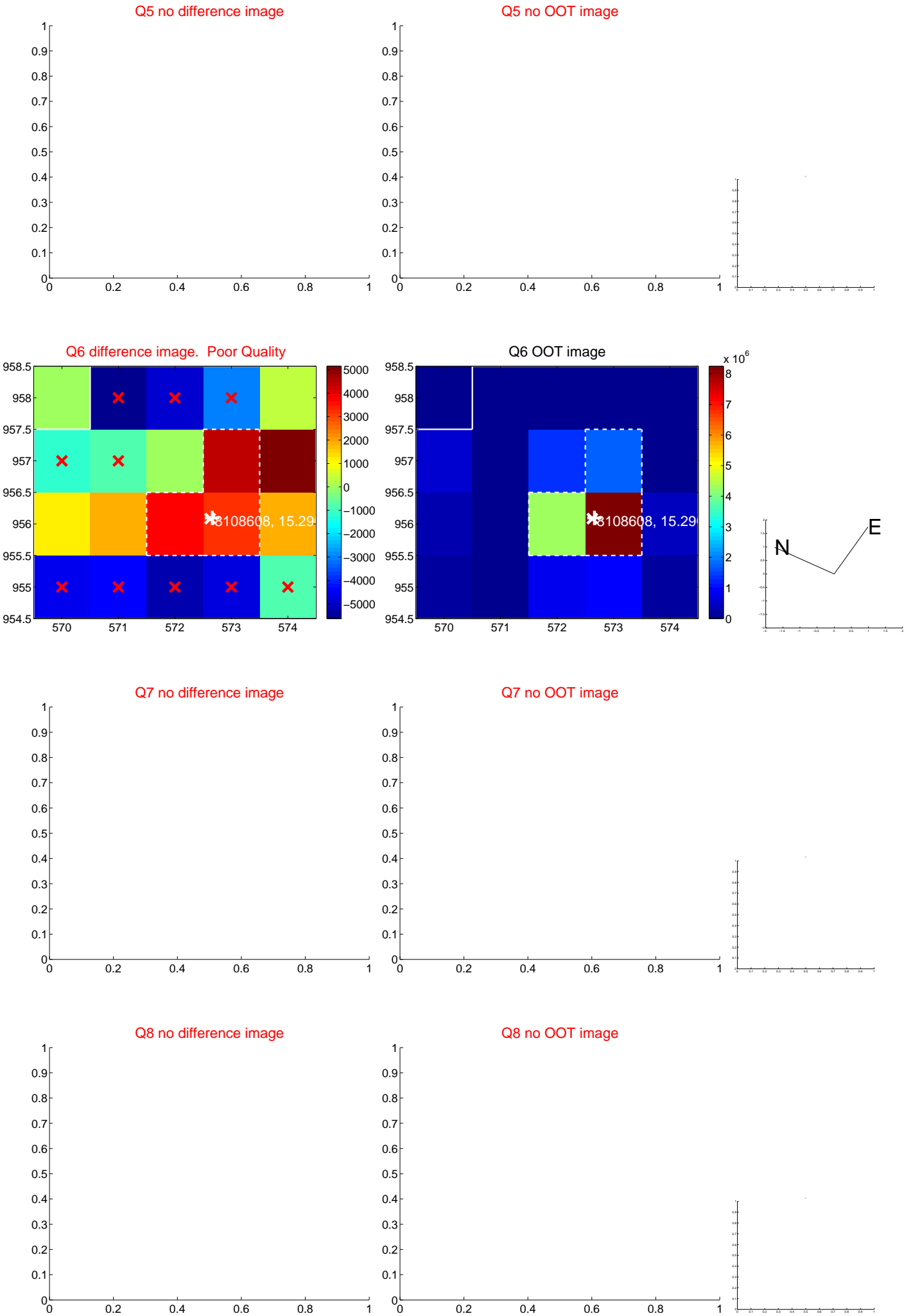


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

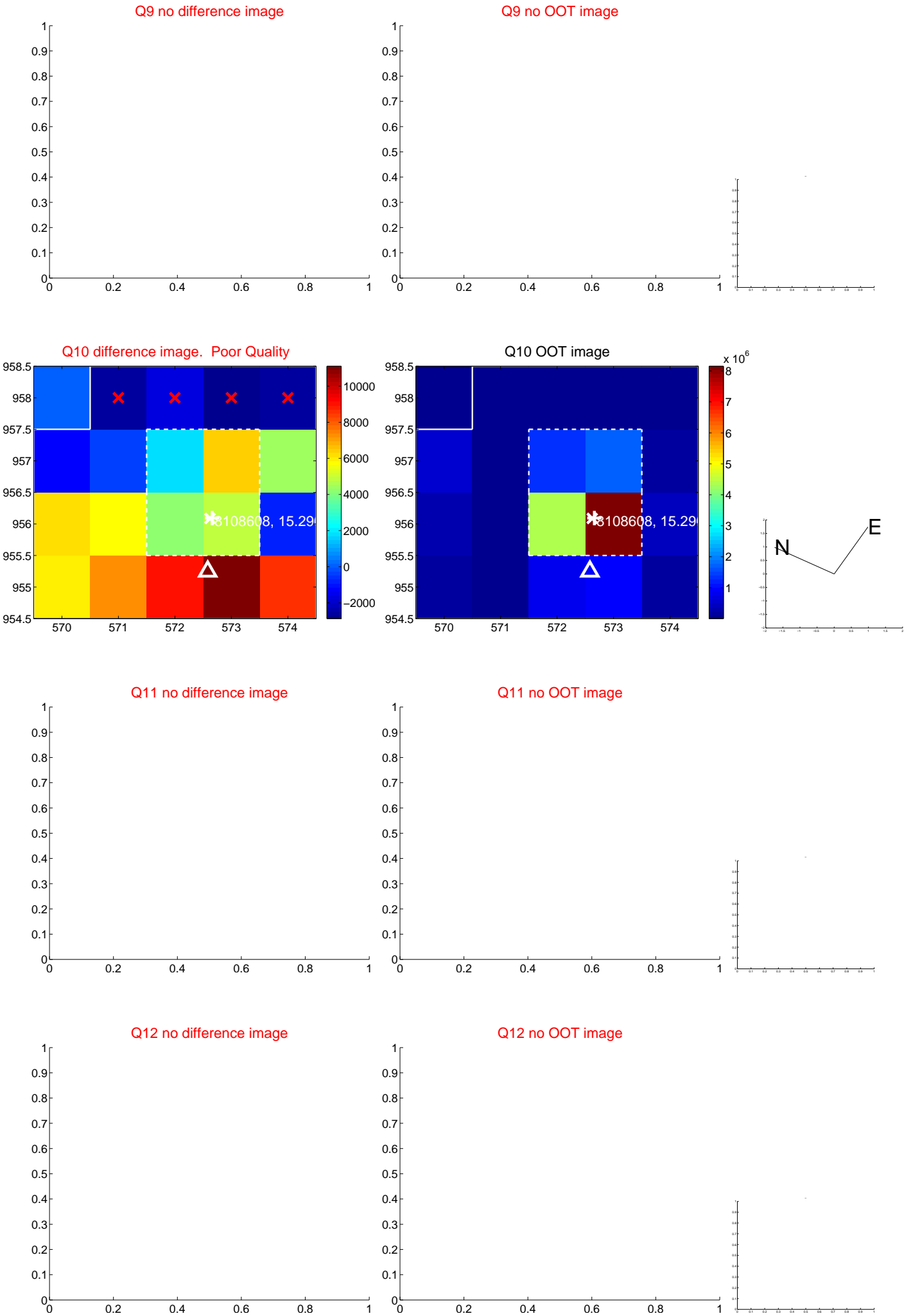
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



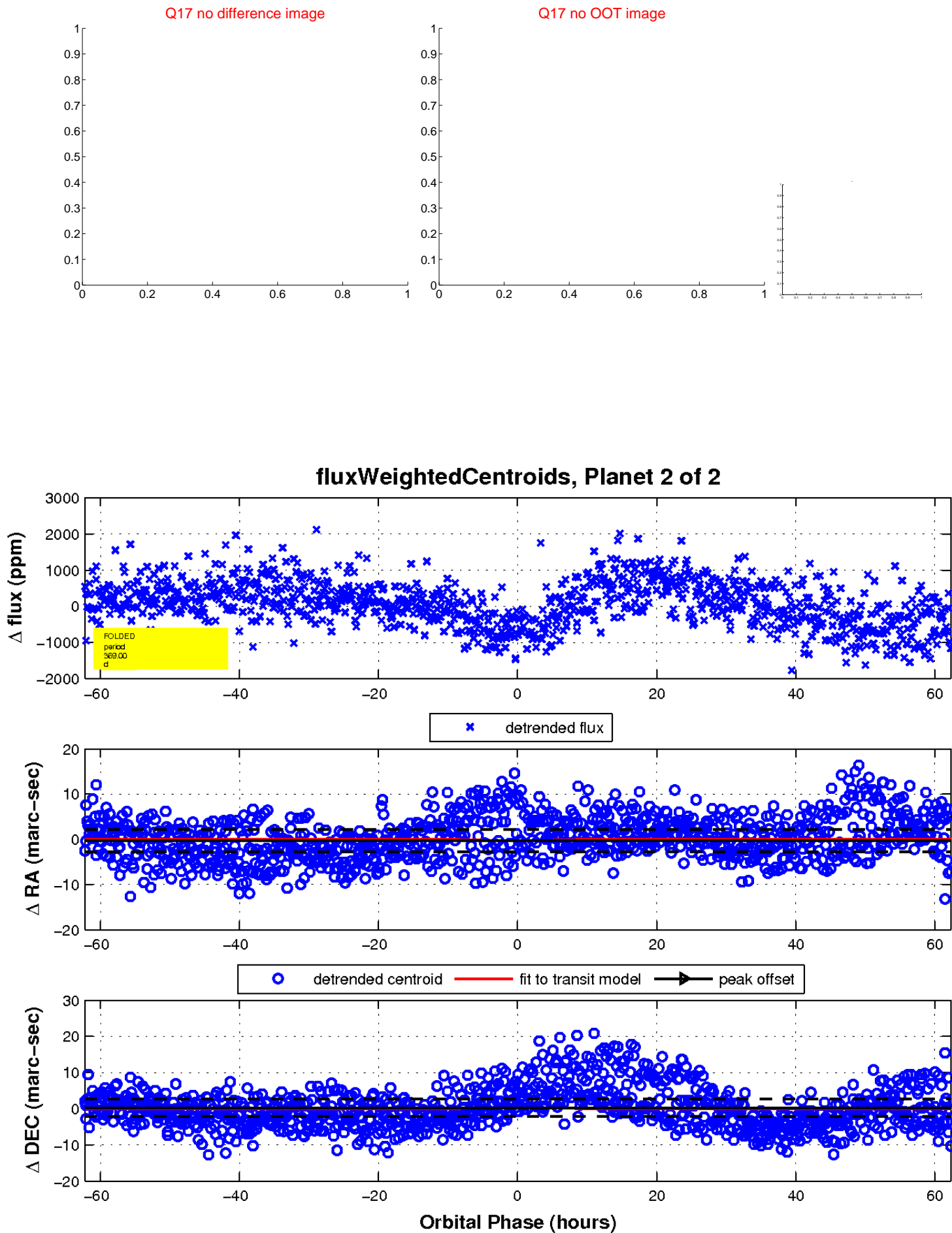
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

