

KIC 006200917

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})
006200917-01	OBS	No	361.715665	163.135444	2263.8	15.781	10.0	9.2	1.03	6108	4.89	1.23
006200917-02	OBS	No	373.624267	147.568017	2059.4	23.157	8.0	7.3	1.03	6108	6.01	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006200917-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006200917-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

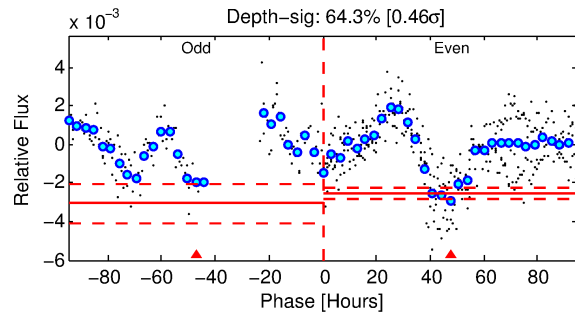
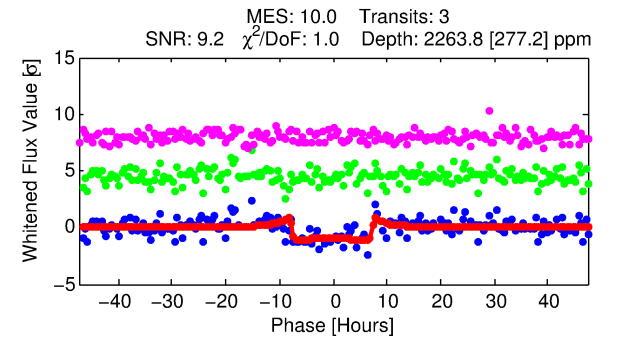
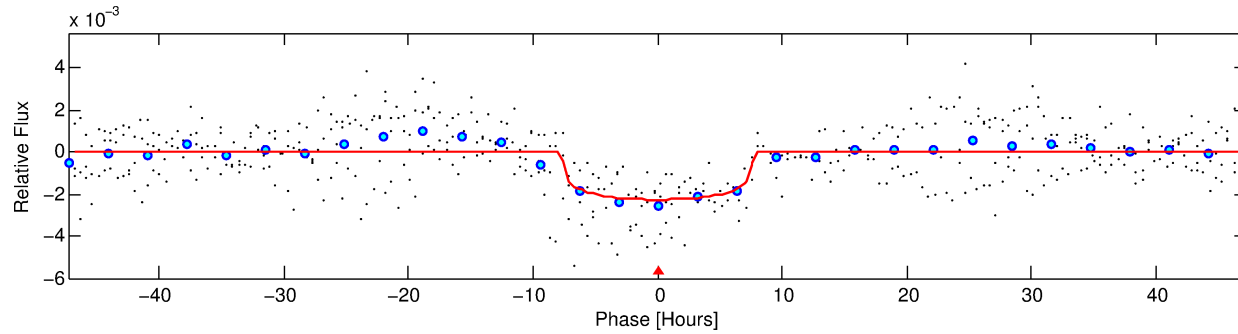
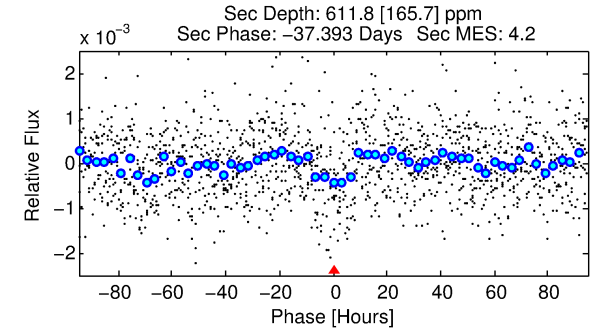
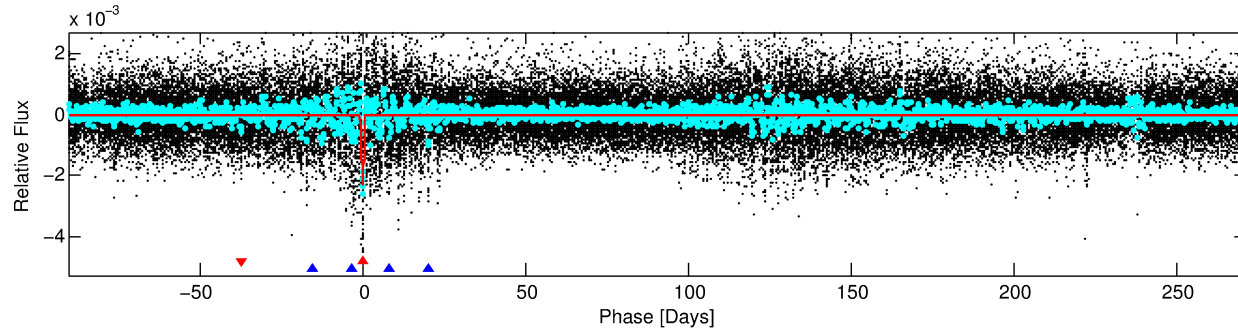
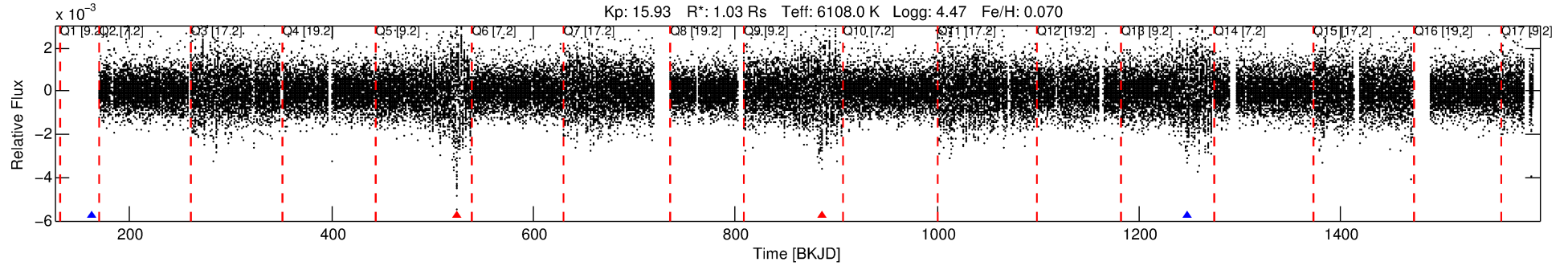
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006200917-01

No Significant Match Found

DV One-Page Summary

KIC: 6200917 Candidate: 1 of 2 Period: 361.716 d



DV Fit Results:

Period = 361.71567 [0.00786] d
Epoch = 163.1354 [0.0174] BKJD
Rp/R* = 0.0435 [0.0120]
a/R* = 181.28 [220.51]
b = 0.13 [9.24]
Seff = 1.23 [0.47]
Teq = 269 [26] K
Rp = 4.89 [1.94] Re
a = 1.0355 [0.2503] AU
Ag = 15101.14 [10666.85] [1.42σ]
Teffp = 4606 [727] K [5.96σ]

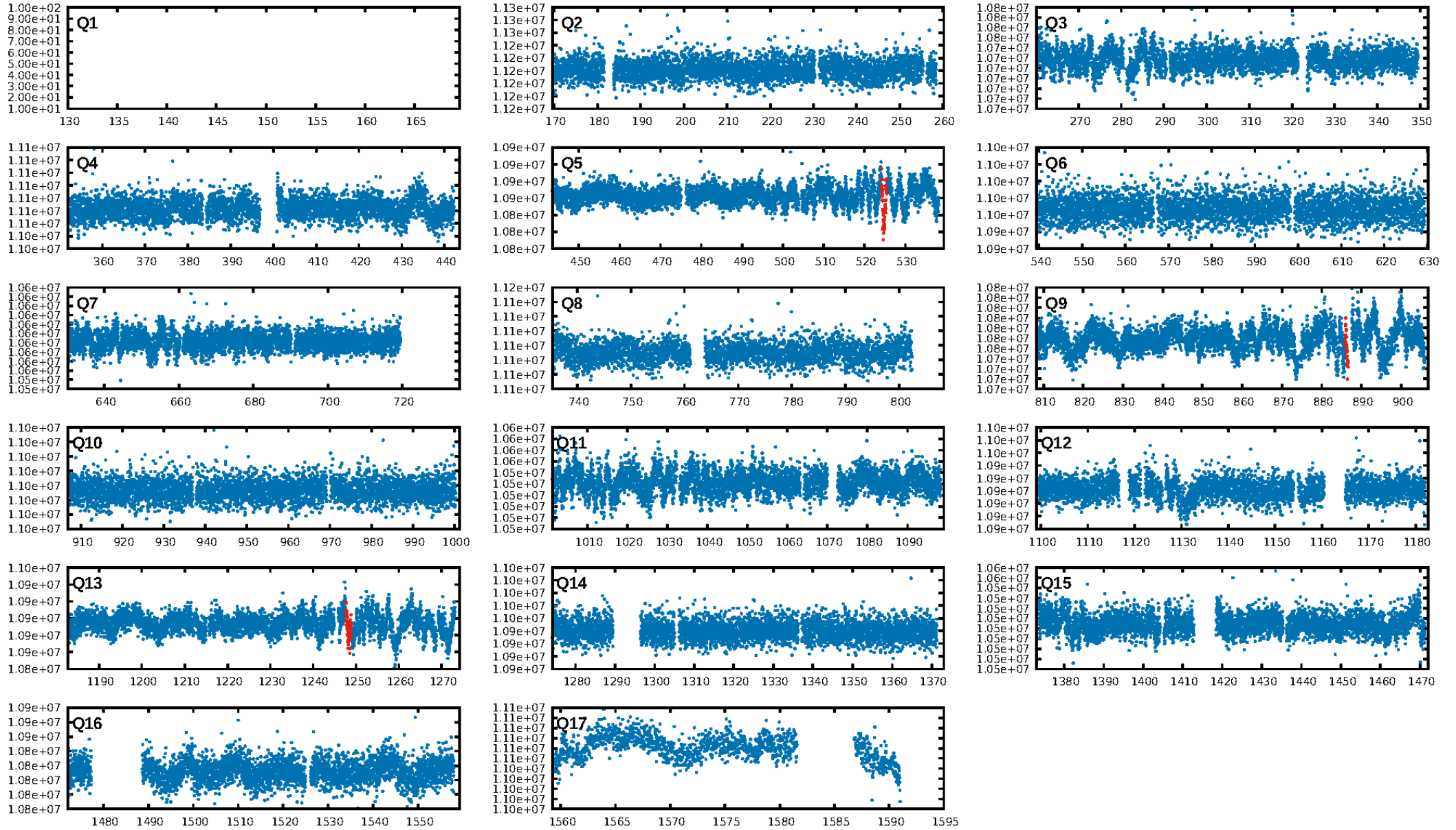
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [10.20σ]
ModelChiSquare2-sig: 12.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.91e-13
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 2.273
Centroid-sig: 0.0%
Centroid-so: 4.067 arcsec [2.46σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

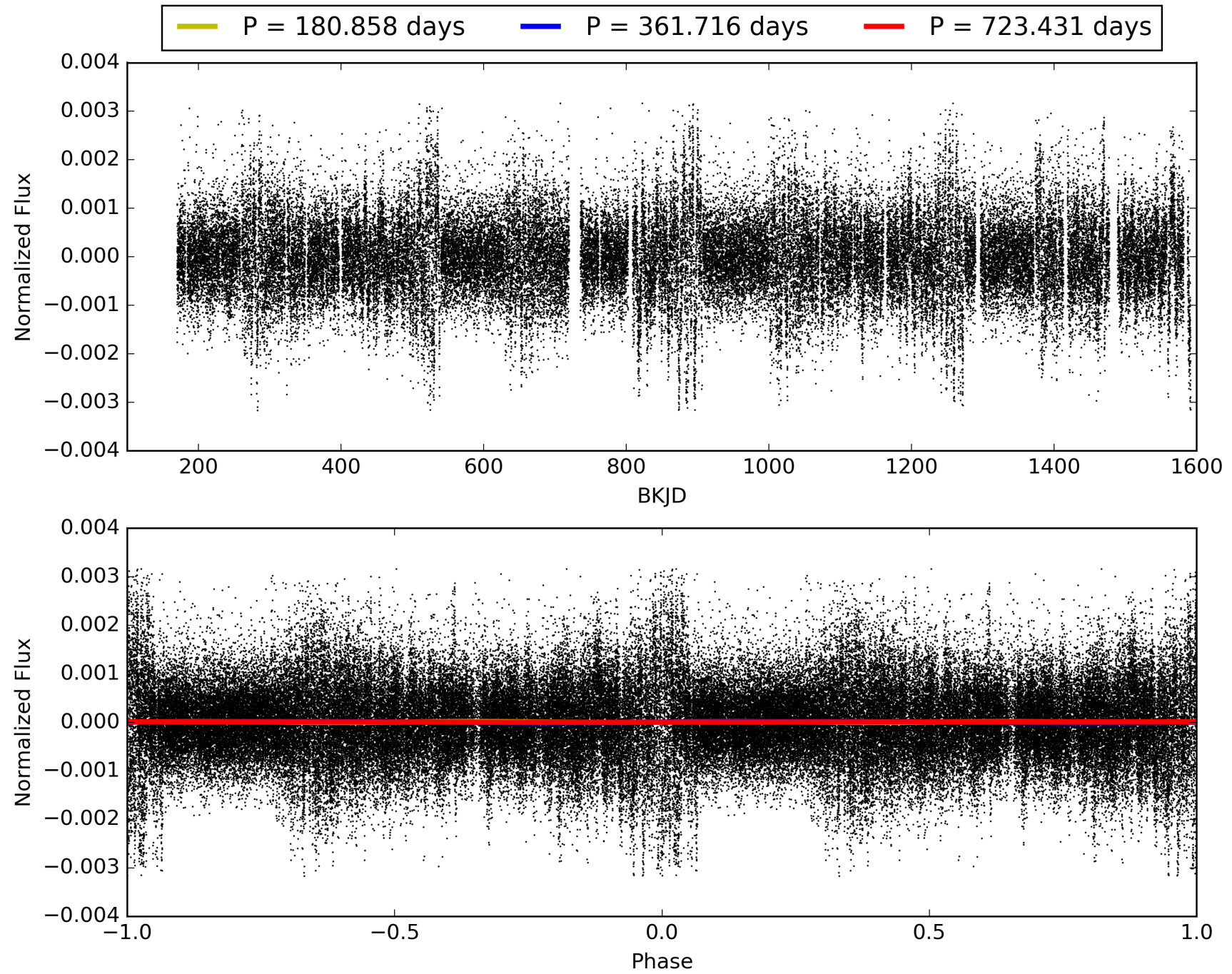
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:08:50 Z

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

TCE 006200917-01, PDC Light Curves

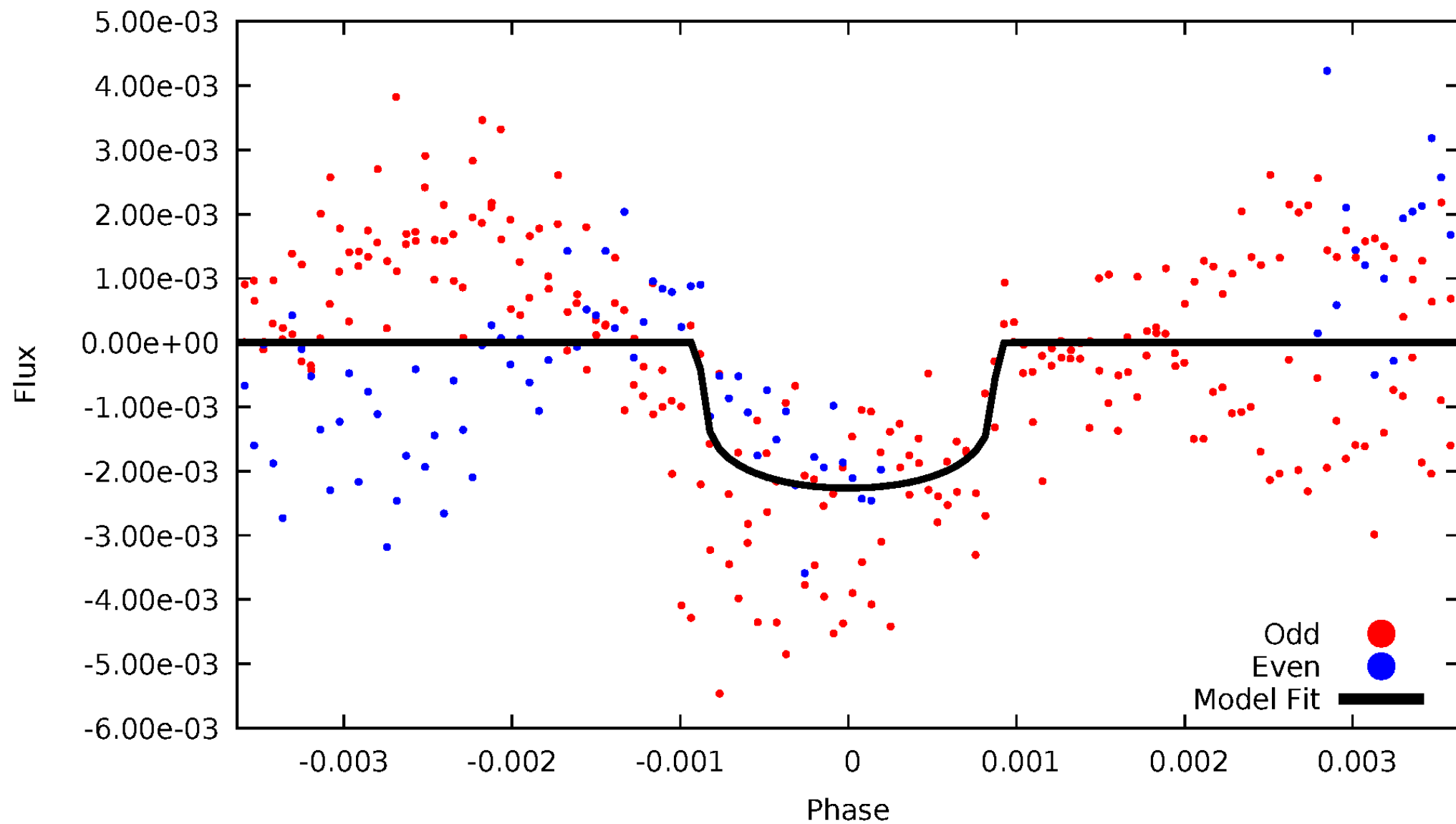


TCE 006200917-01



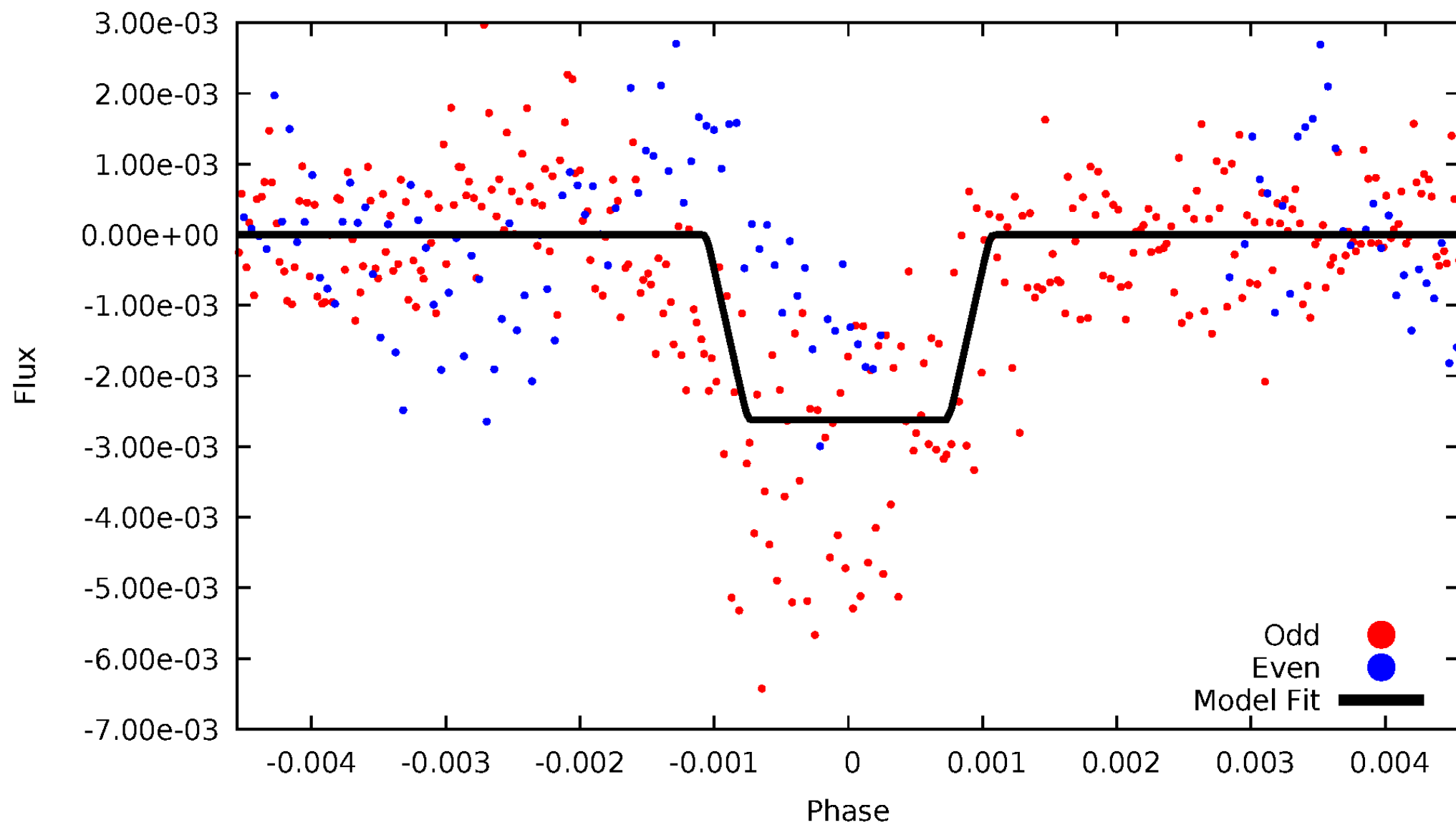
DV Odd/Even

TCE 006200917-01



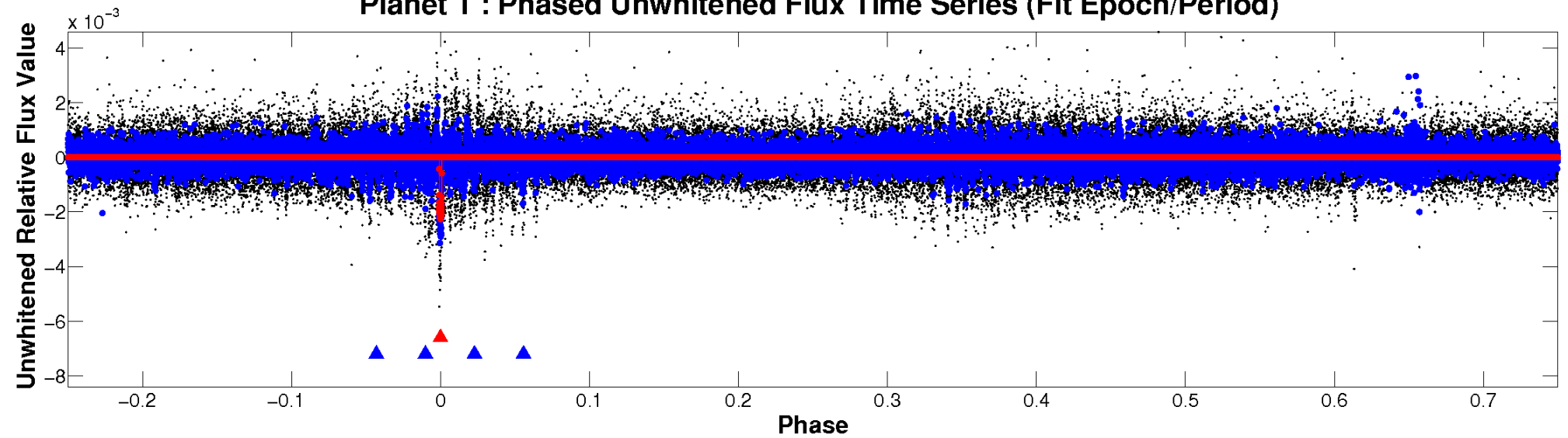
ALT Odd/Even

TCE 006200917-01

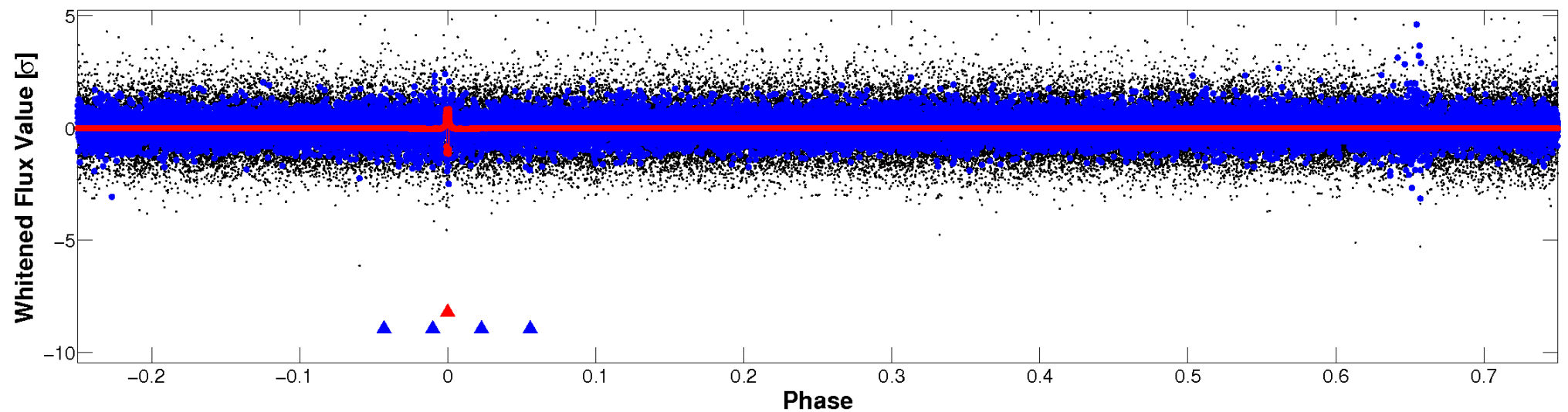


Non-Whitened Vs. Whitened Light Curve

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

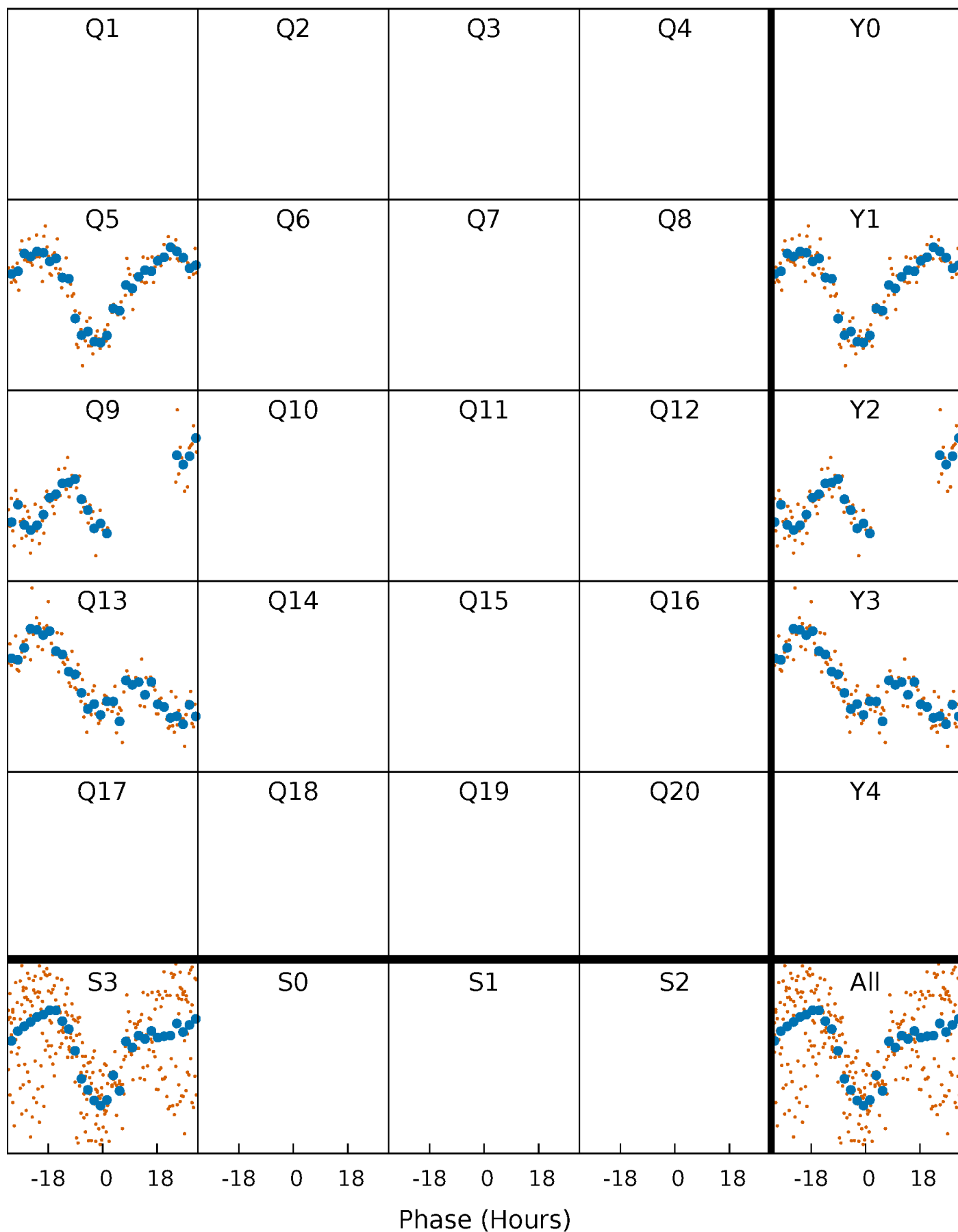


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



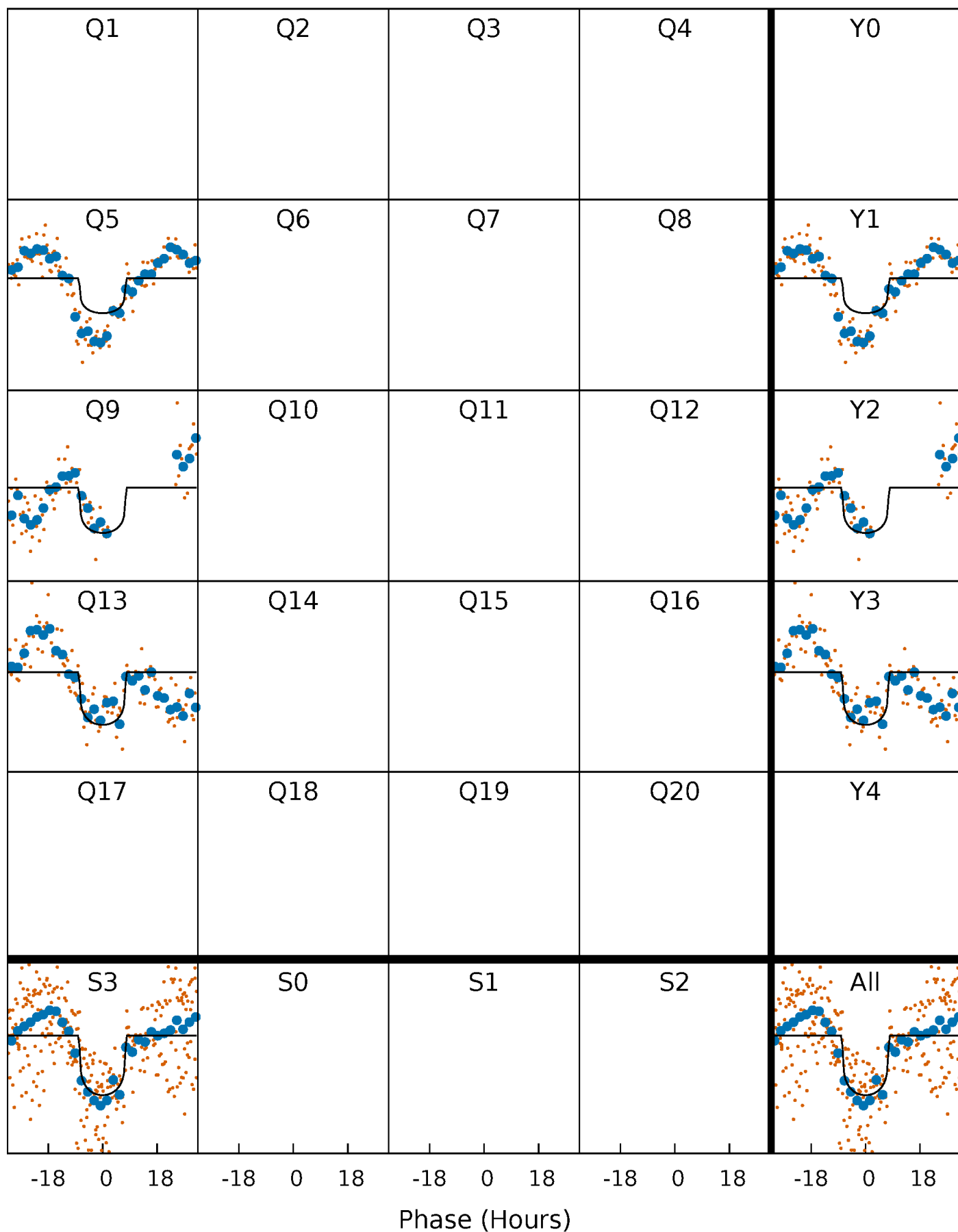
PDC Quarter-Phased Transit Curves

TCE 006200917-01 P=361.715666 Days $T_0=163.135445$ (BKJD)



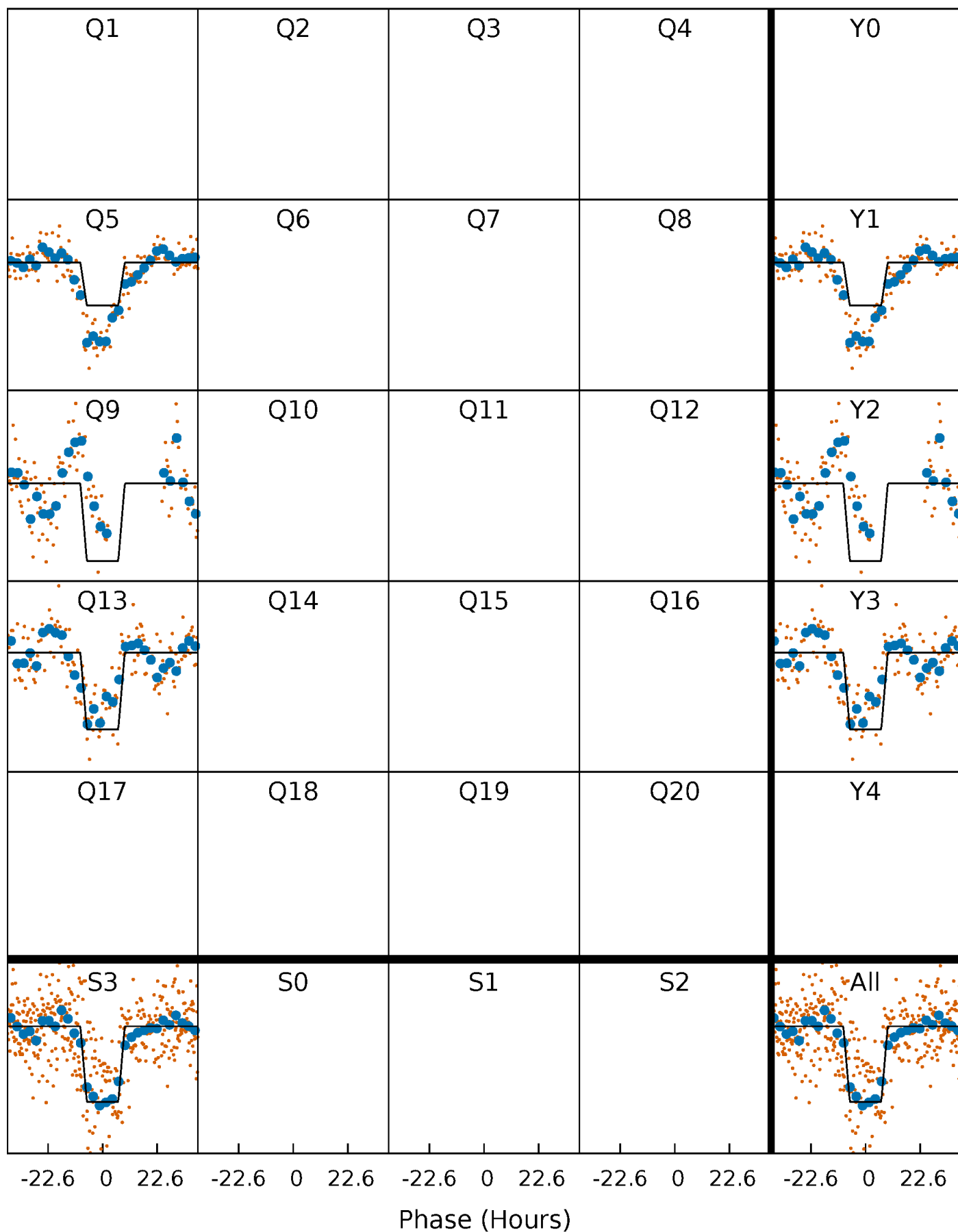
DV Quarter-Phased Transit Curves

TCE 006200917-01 P=361.715666 Days $T_0=163.135445$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

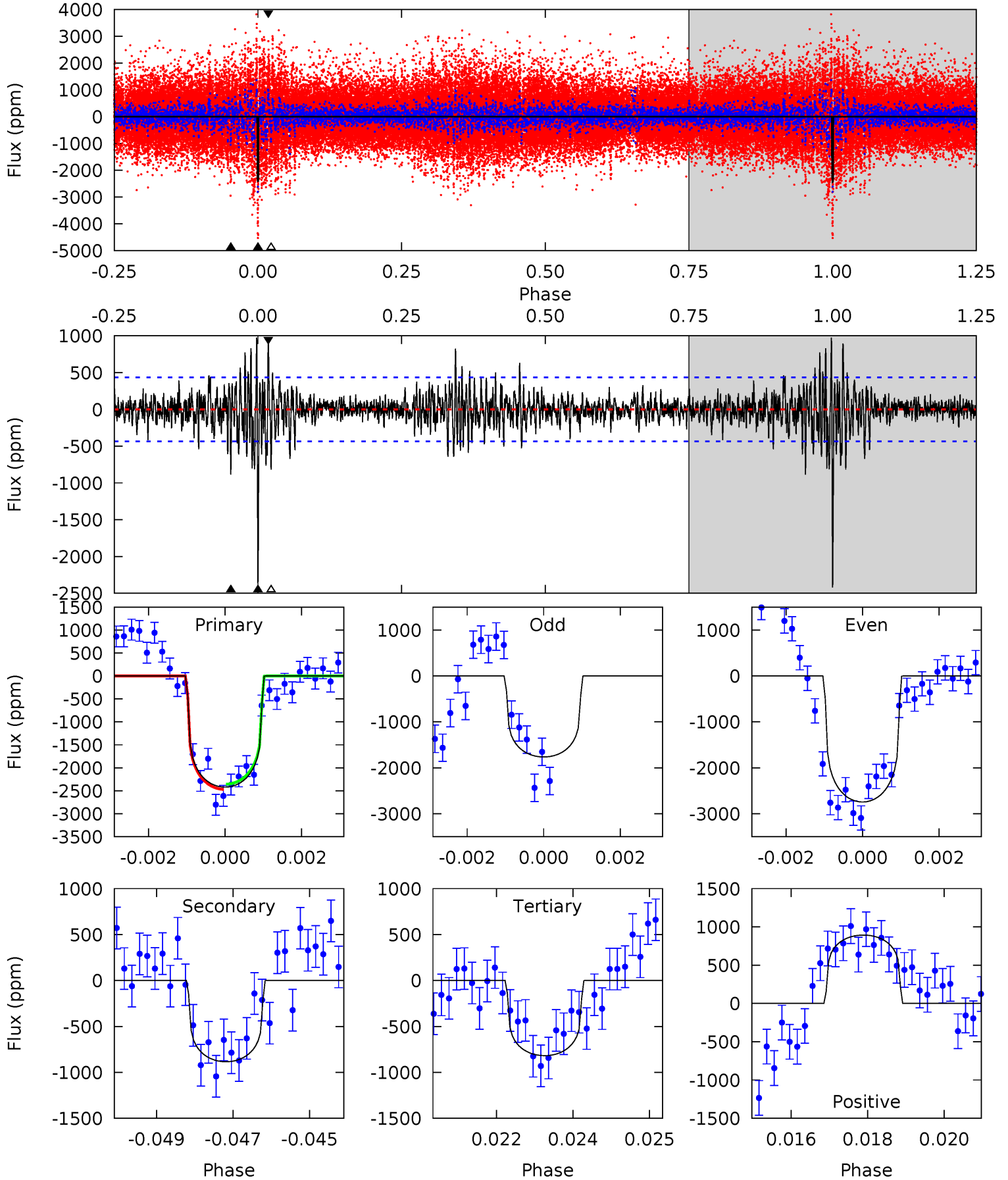
TCE 006200917-01 P=361.742124 Days $T_0=163.064958$ (BKJD)



DV Model-Shift Uniqueness Test

006200917-01, P = 361.715666 Days, E = 163.135445 Days

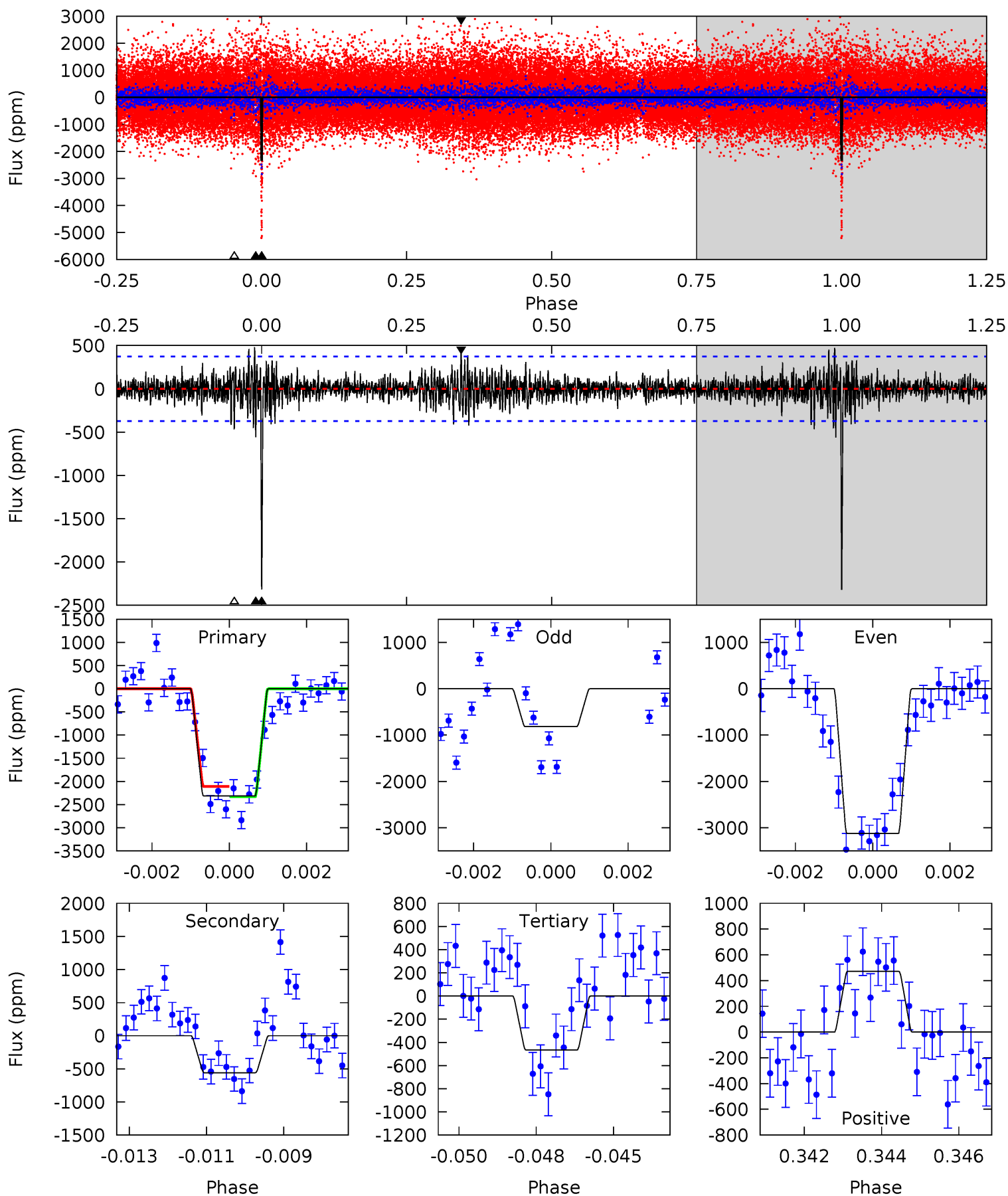
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.7	10.8	10.0	11.0	5.34	3.12	2.16	19.7	18.7	0.81	-0.11	5.15	1.32	0.29	0.68



Alt Model-Shift Uniqueness Test

006200917-01, P = 361.742124 Days, E = 163.064958 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	7.95	6.63	6.72	5.31	3.07	1.41	26.4	26.3	1.32	1.24	14.4	1.24	0.17	1.54



Stellar Parameters For KIC 006200917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+192}_{-235}	$4.466^{+0.048}_{-0.192}$	$0.070^{+0.250}_{-0.350}$	$1.030^{+0.296}_{-0.118}$	$1.132^{+0.133}_{-0.163}$	$1.457^{+0.385}_{-0.741}$
	+3%/-4%	+1%/-4%	+357%/-500%	+29%/-11%	+12%/-14%	+26%/-51%
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 006200917-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-884 ± 82	$5.16^{+1.61}_{-1.46}$	384^{+24}_{-20}	5080^{+823}_{-490}	18867^{+18068}_{-7678}
Alt.	-558 ± 70	$5.99^{+1.63}_{-1.34}$	383^{+26}_{-20}	4353^{+476}_{-356}	8998^{+5951}_{-3466}

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

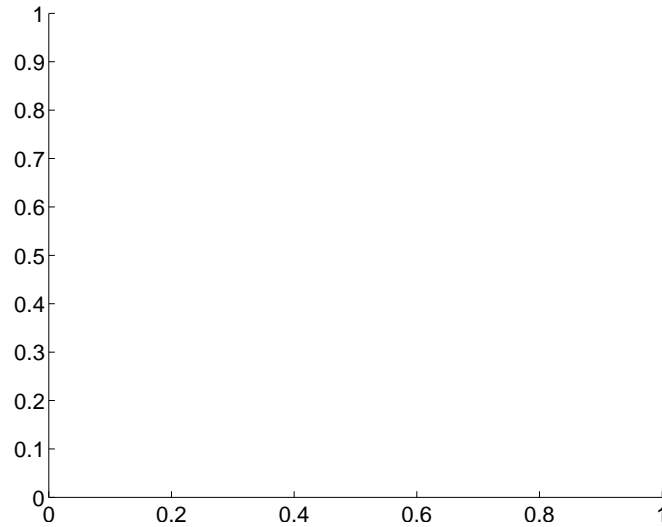
Supplemental centroid analysis for 006200917-01. Kepler magnitude: 15.93. Transit SNR 9.19

There are 0 quarters with good PRF difference image offsets

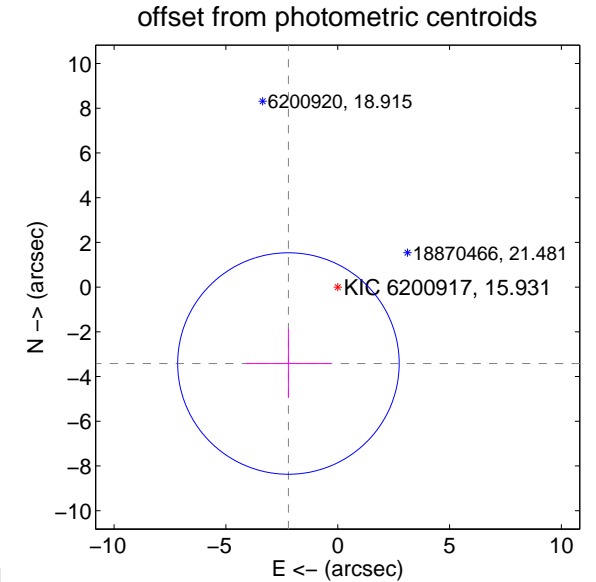
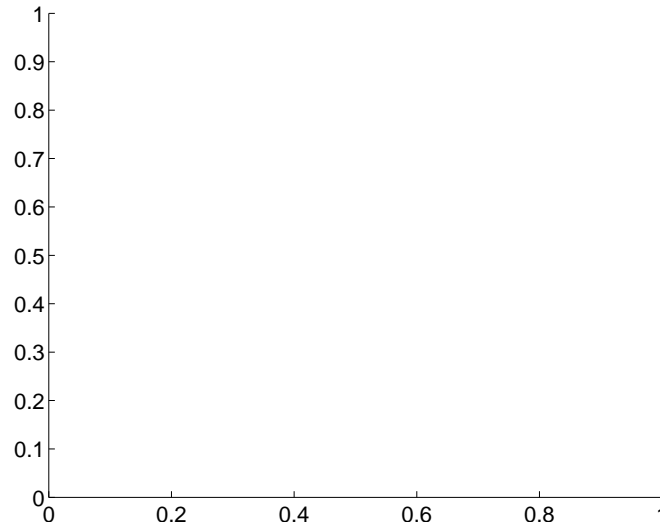
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	4.07 ± 1.65	2.46	2.20 ± 1.90	-3.42 ± 1.54

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

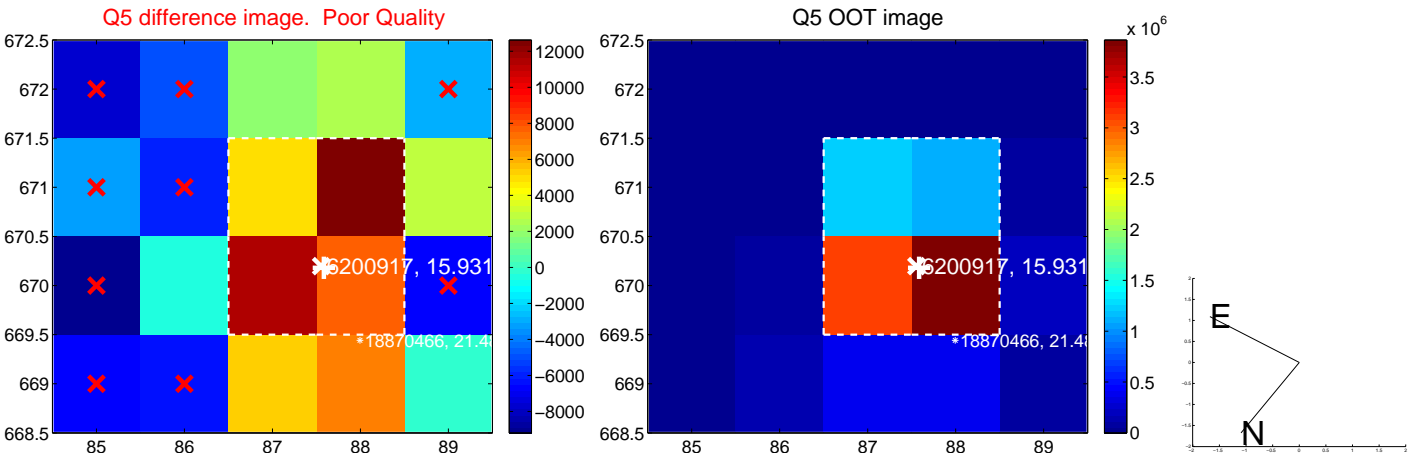


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



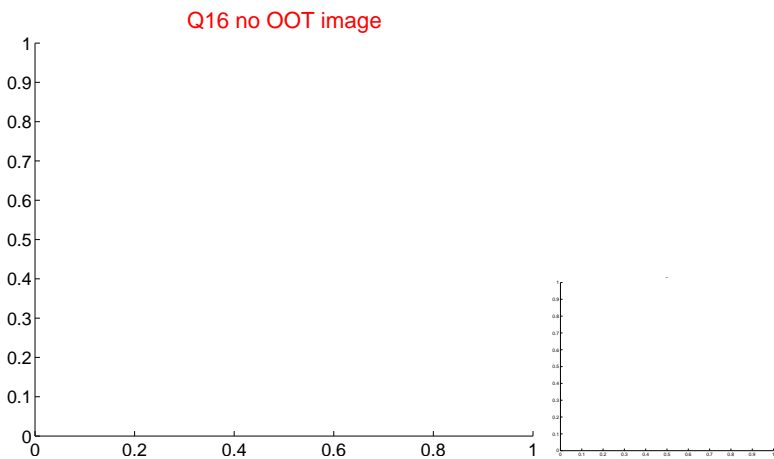
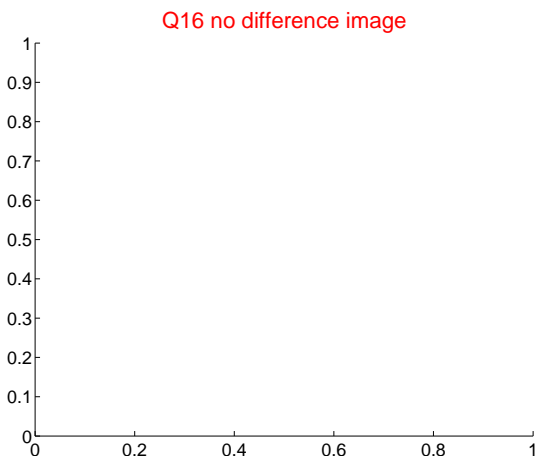
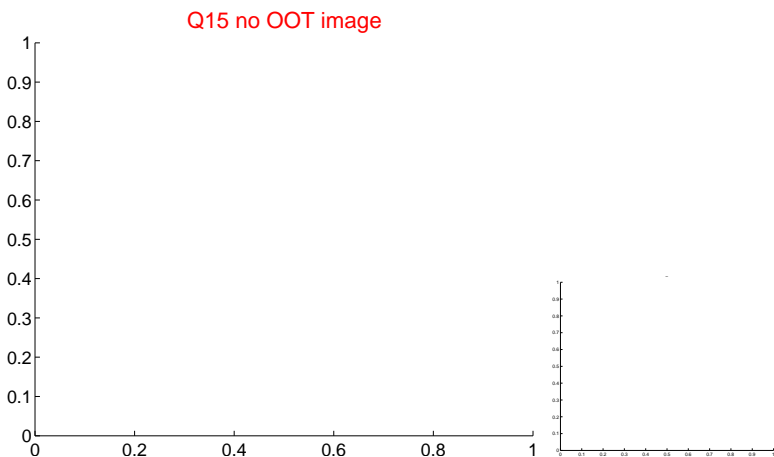
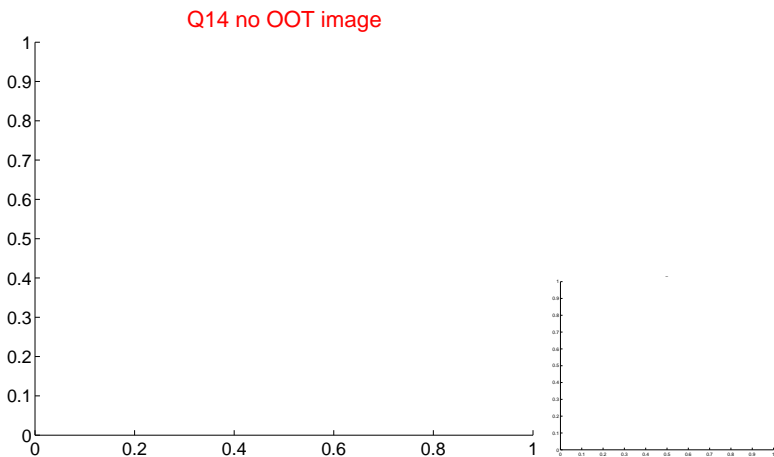
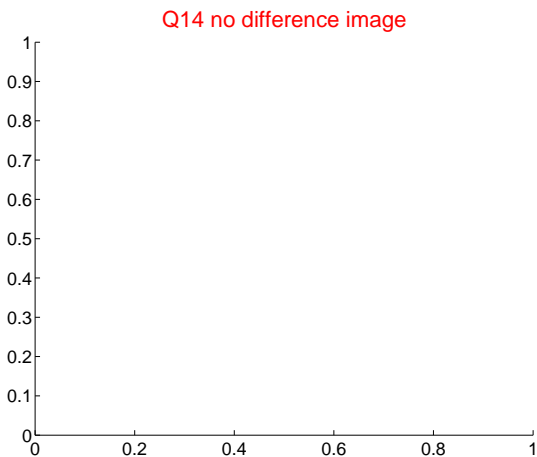
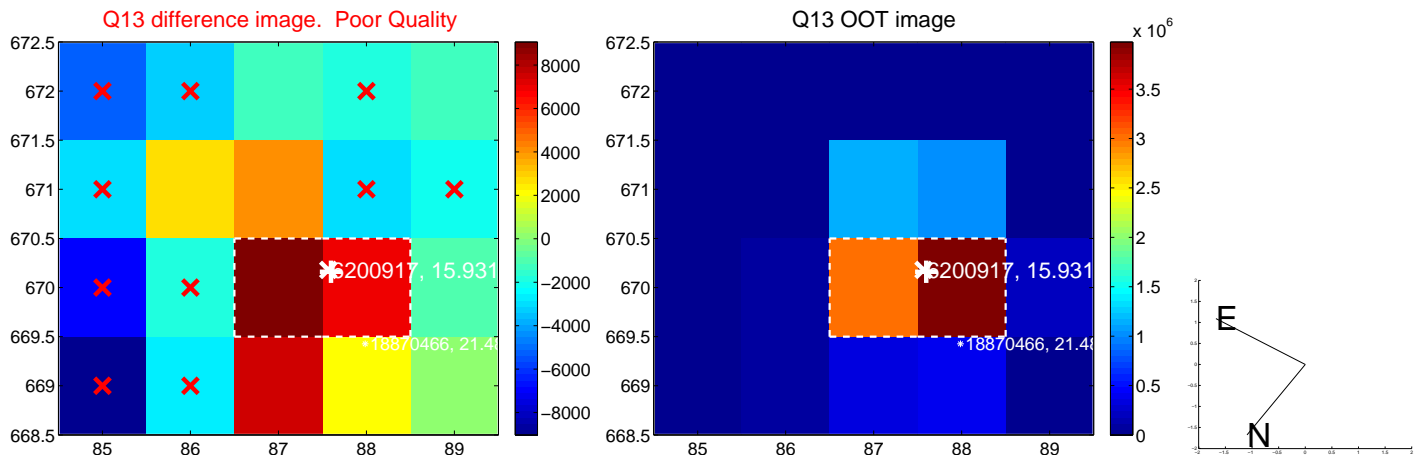
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



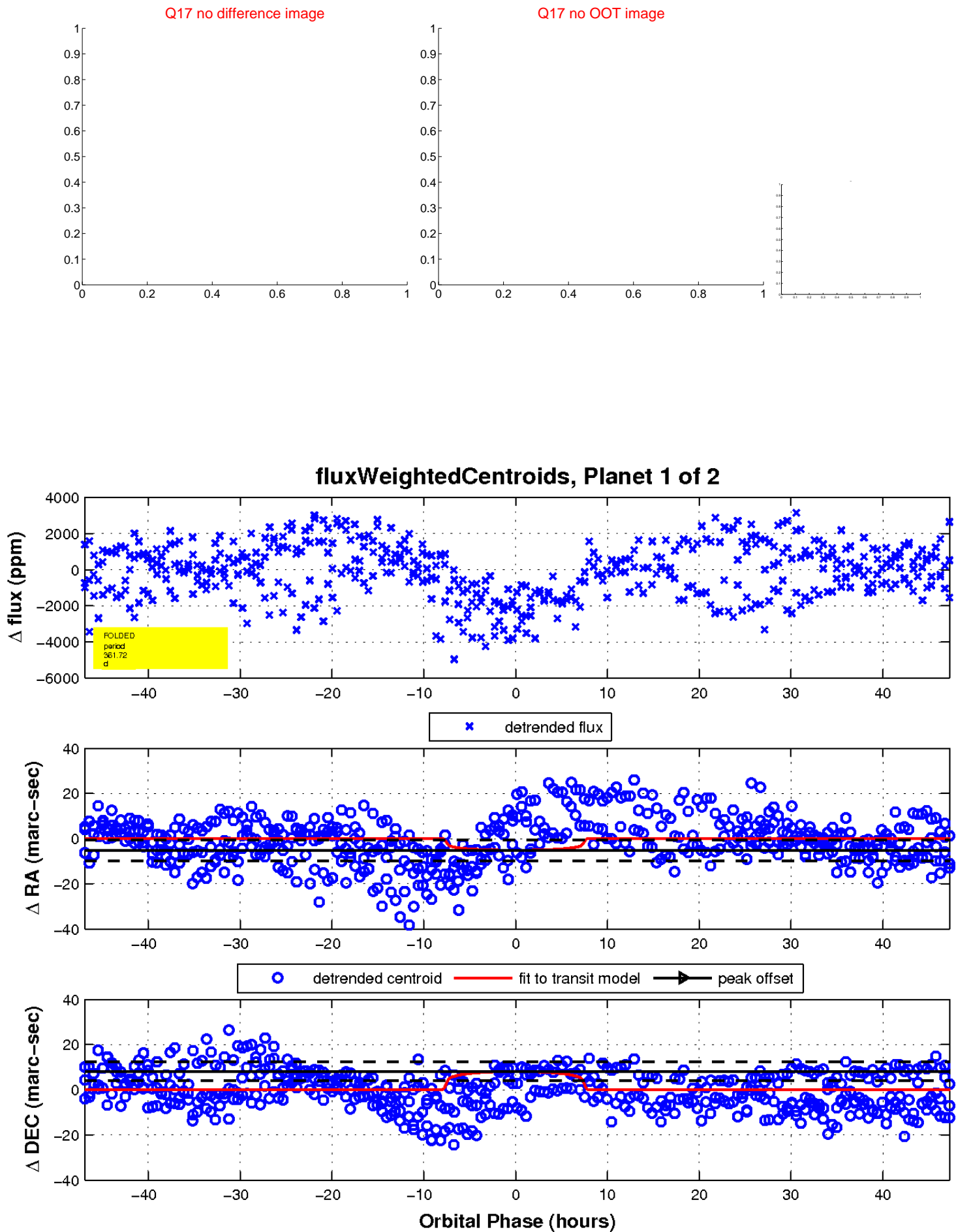
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

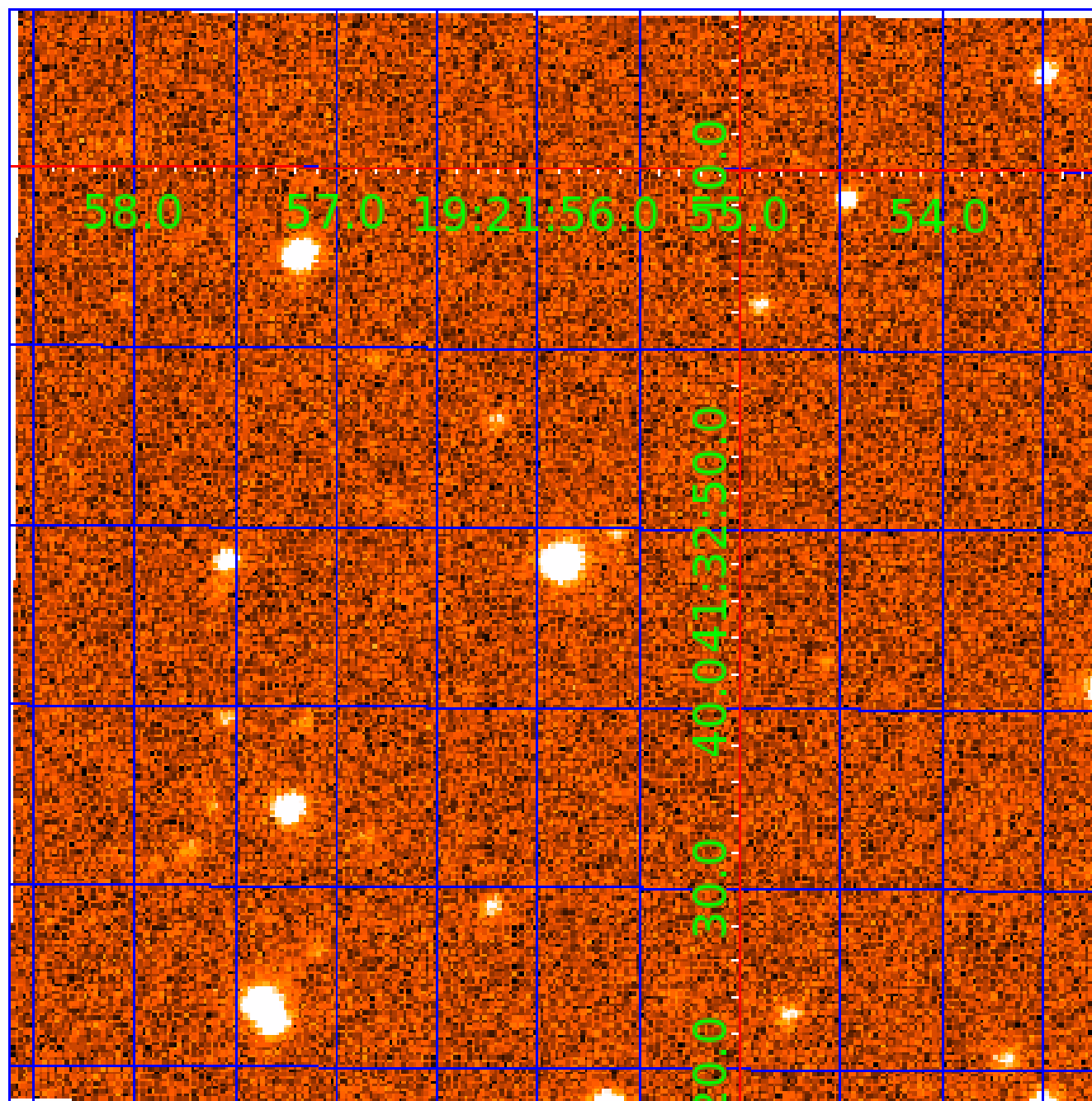


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006200917

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})
006200917-01	OBS	No	361.715665	163.135444	2263.8	15.781	10.0	9.2	1.03	6108	4.89	1.23
006200917-02	OBS	No	373.624267	147.568017	2059.4	23.157	8.0	7.3	1.03	6108	6.01	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006200917-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006200917-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

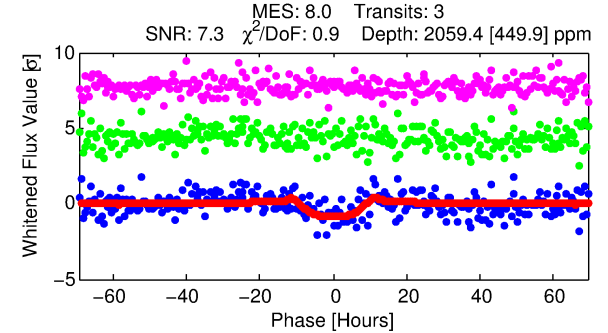
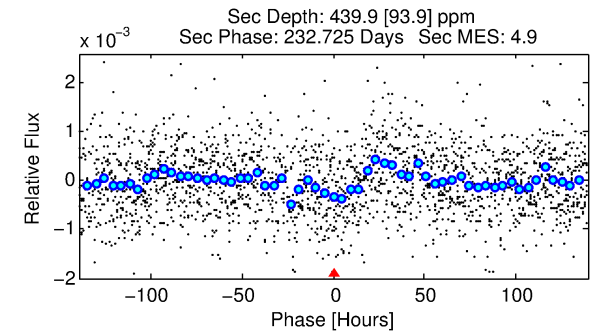
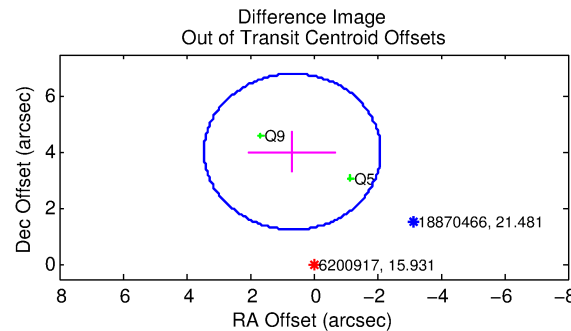
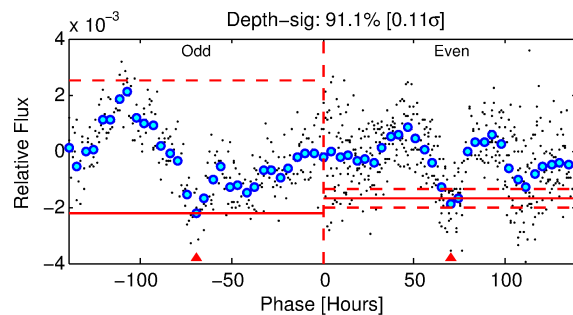
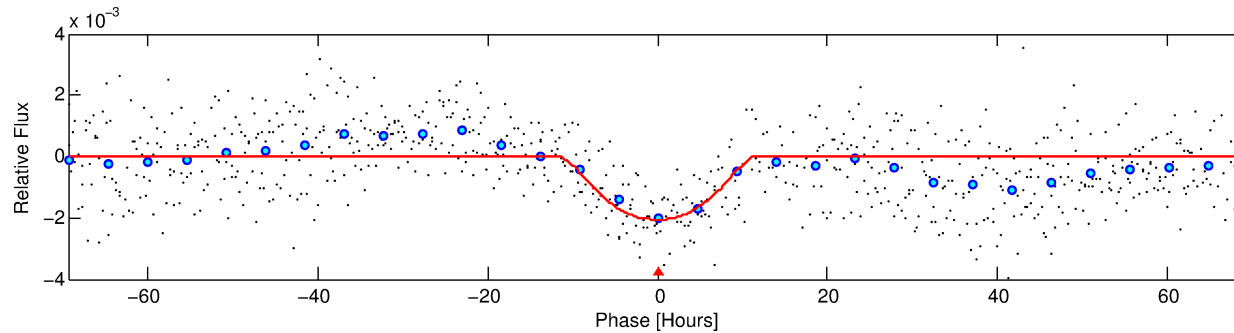
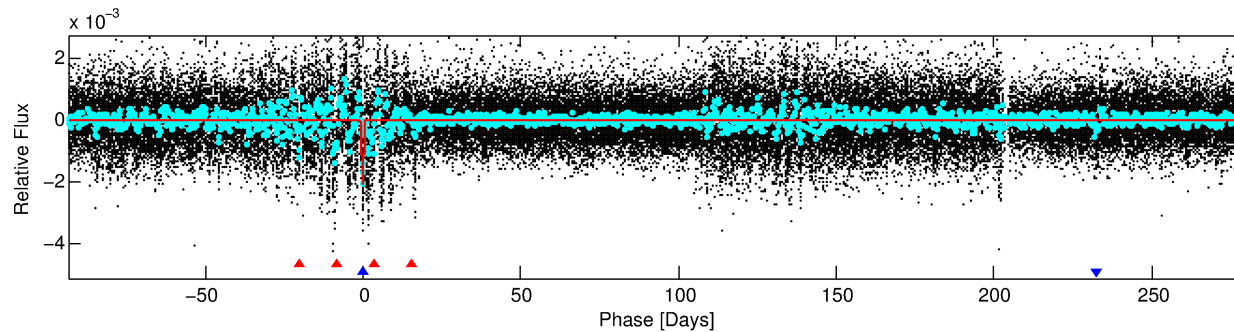
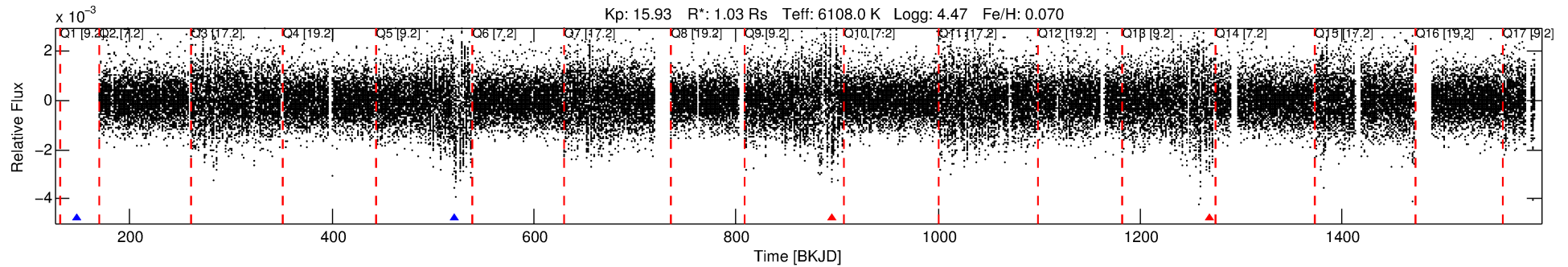
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006200917-02

No Significant Match Found

DV One-Page Summary

KIC: 6200917 Candidate: 2 of 2 Period: 373.624 d



DV Fit Results:

Period = 373.62427 [0.03879] d
Epoch = 147.5680 [0.0717] BKJD
Rp/R* = 0.0535 [0.0123]
a/R* = 55.55 [9.84]
b = 0.95 [0.03]
Seff = 1.18 [0.45]
Teq = 266 [26] K
Rp = 6.01 [2.22] Re
a = 1.0581 [0.2558] AU
Ag = 7492.53 [4628.15] [1.62 σ]
Teff = 3824 [507] K [7.00 σ]

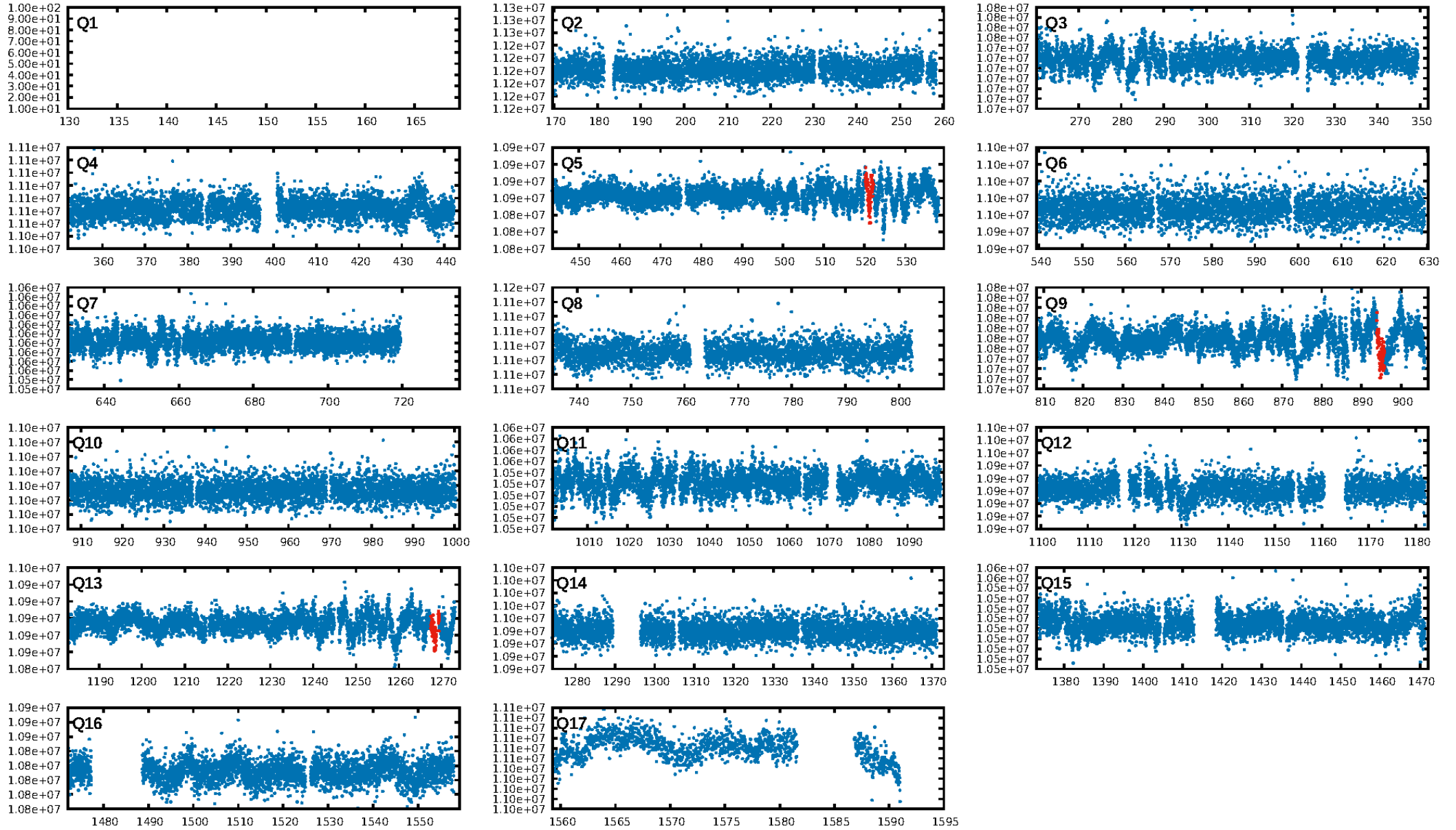
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.20 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.8%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.93e-10
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 18.32
Centroid-sig: 1.2%
Centroid-so: 4.101 arcsec [1.89 σ]
OotOffset-rm: 4.084 arcsec [4.41 σ]
KicOffset-rm: 4.049 arcsec [4.75 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

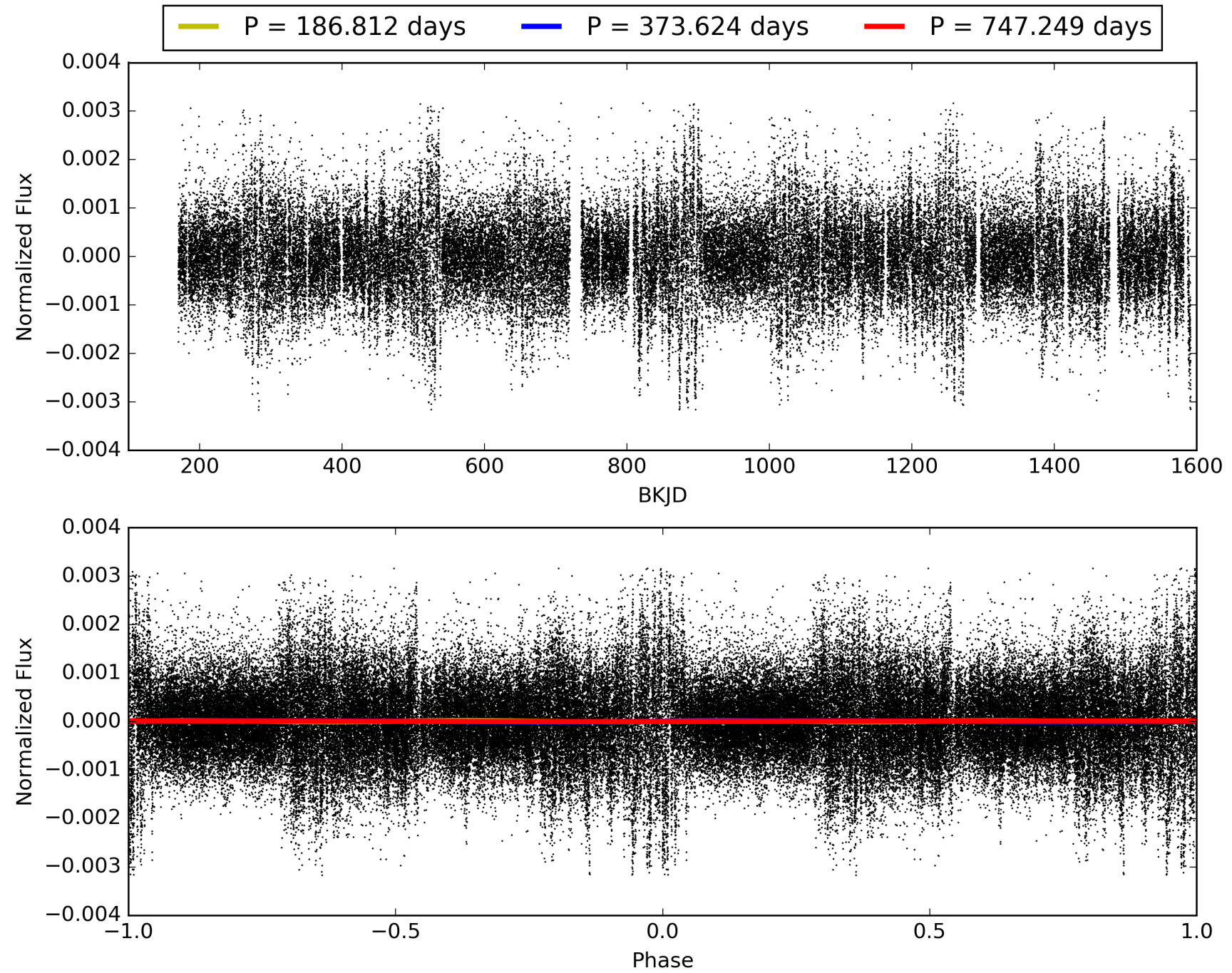
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:08:58 Z

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

TCE 006200917-02, PDC Light Curves

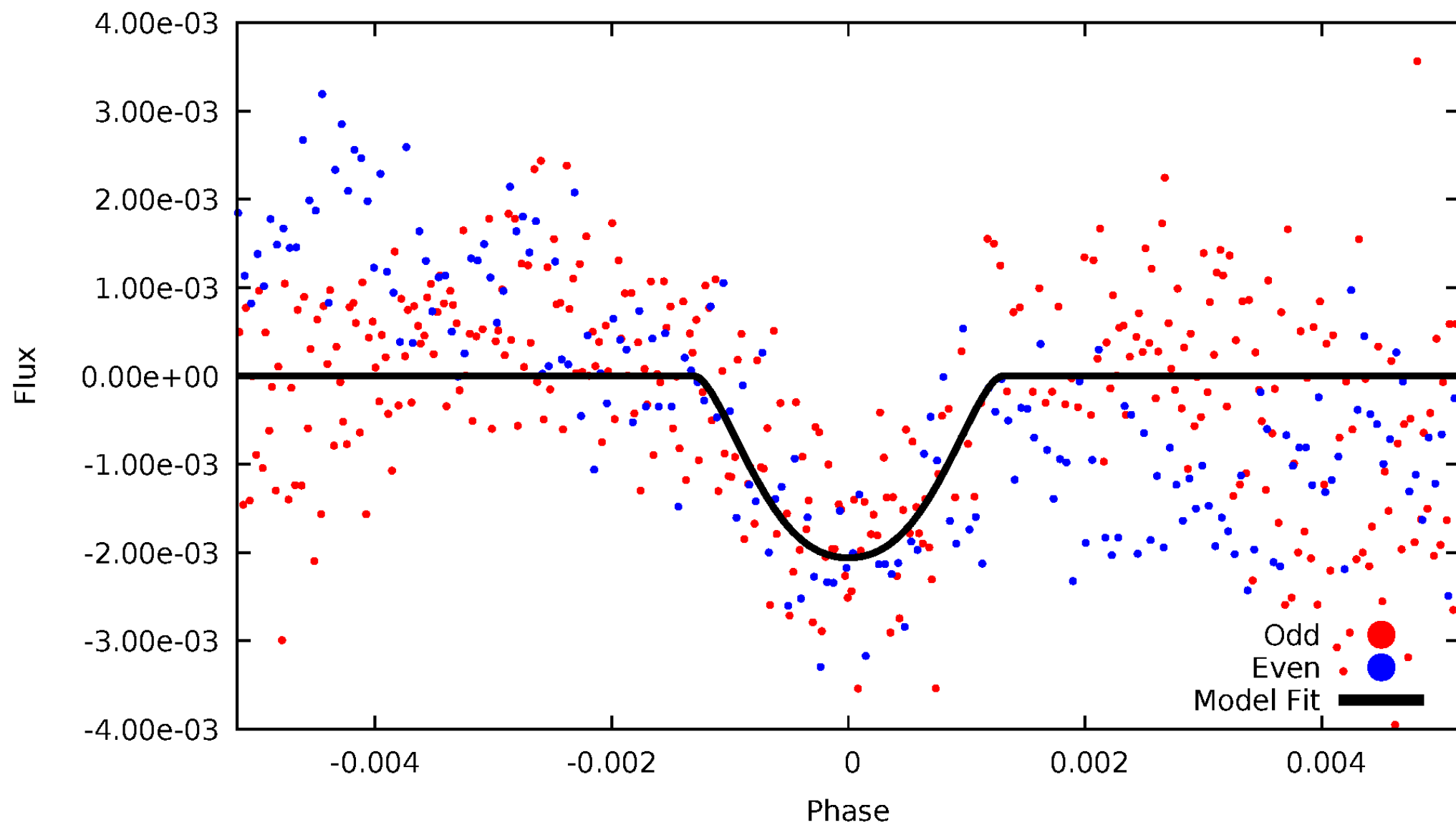


TCE 006200917-02



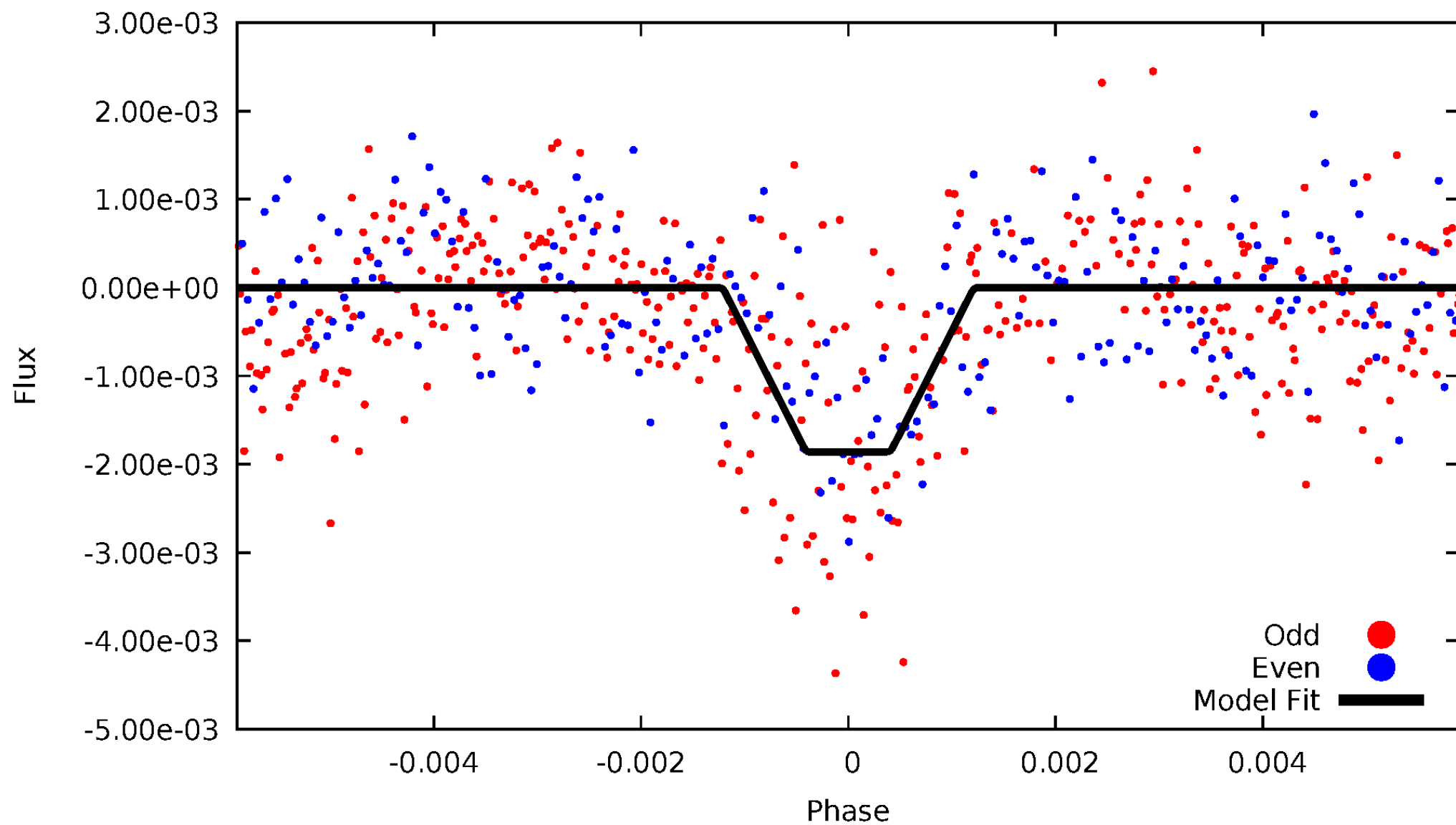
DV Odd/Even

TCE 006200917-02



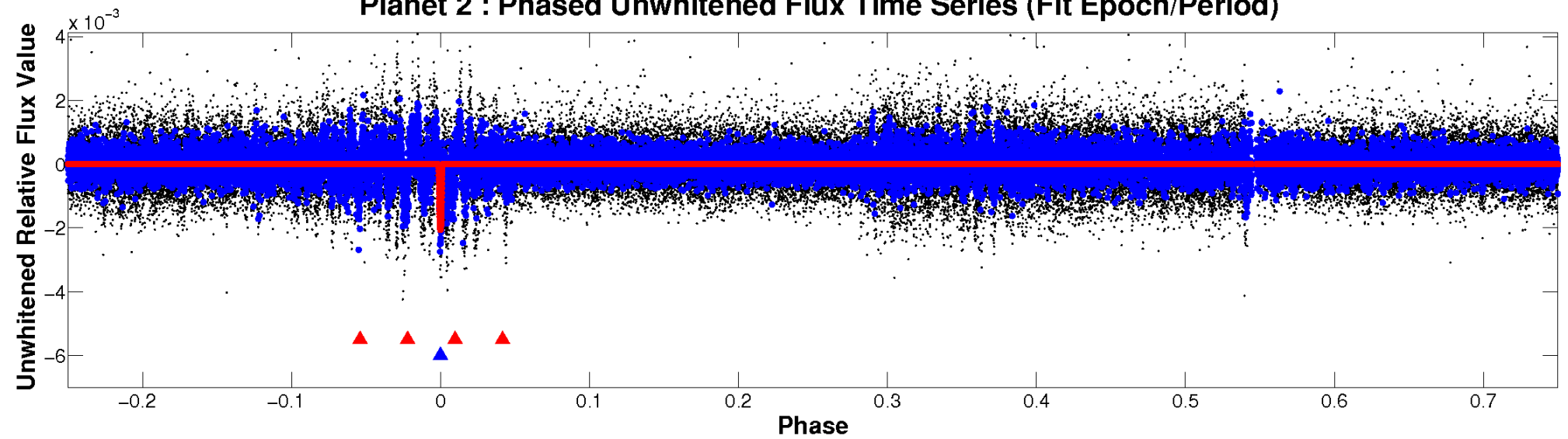
ALT Odd/Even

TCE 006200917-02

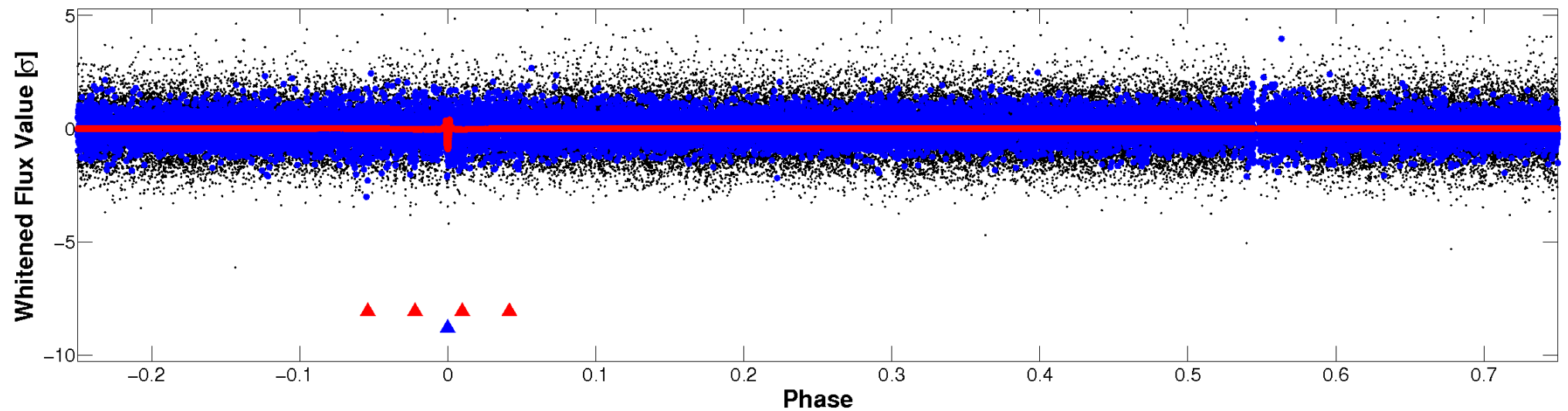


Non-Whitened Vs. Whitened Light Curve

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

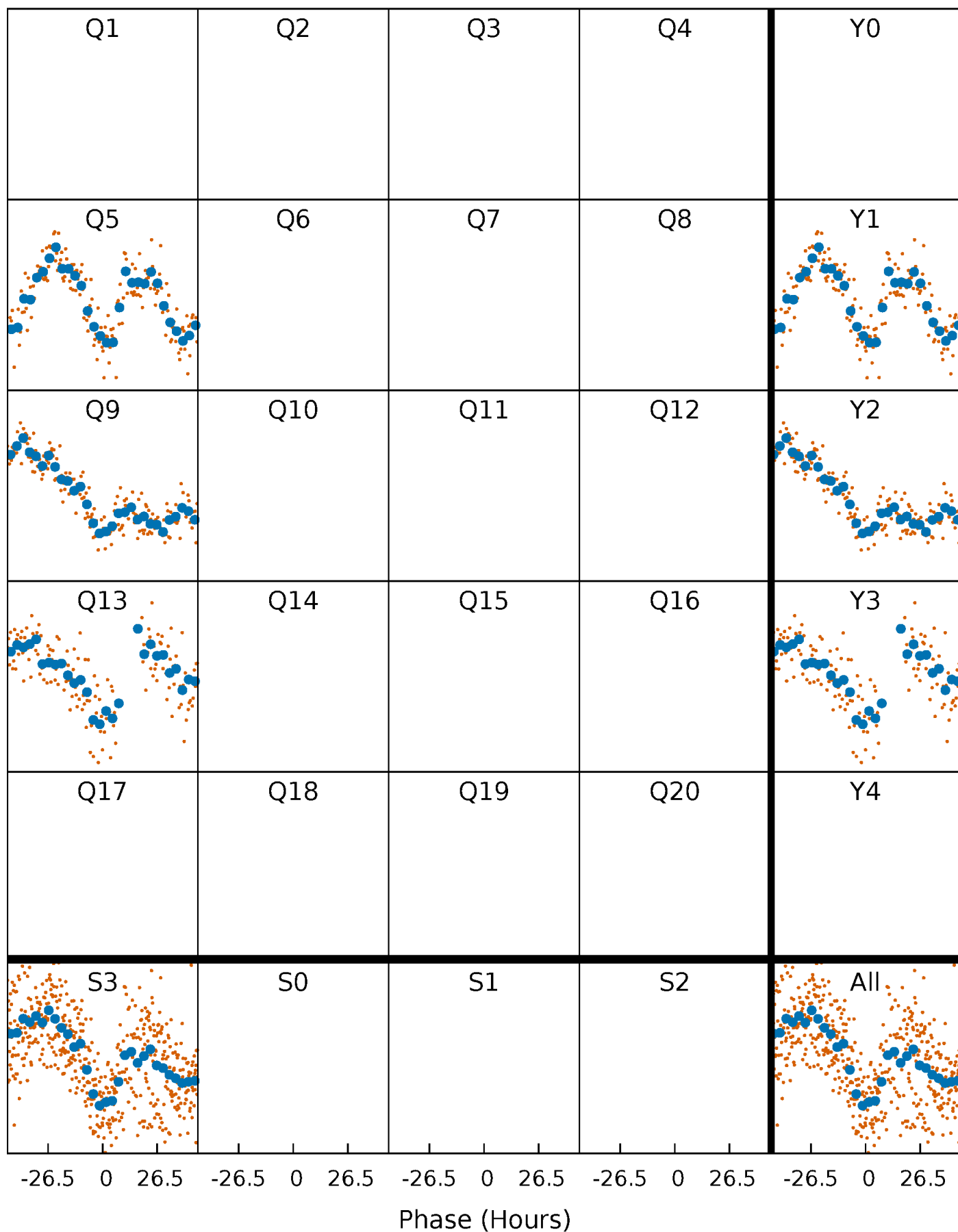


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



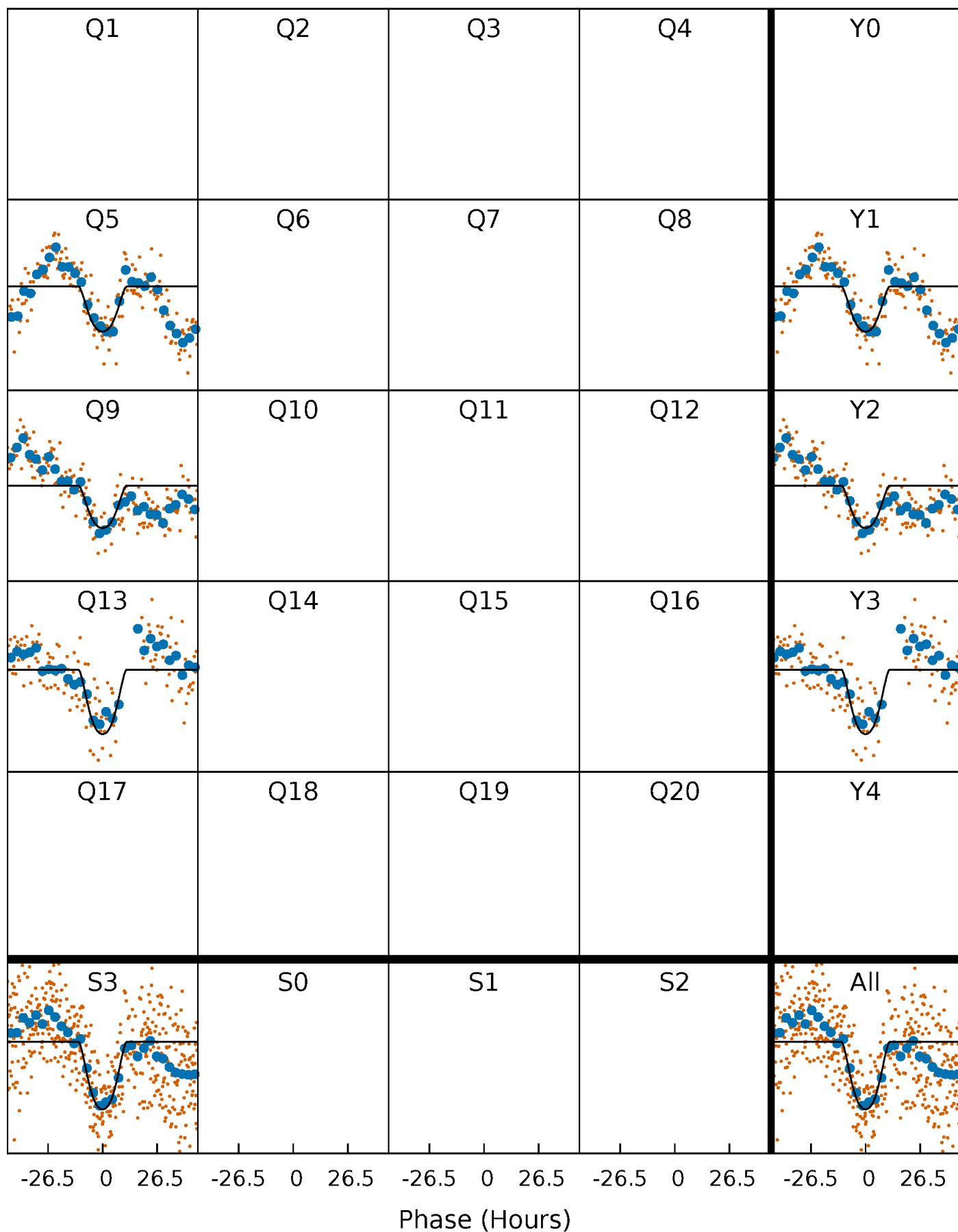
PDC Quarter-Phased Transit Curves

TCE 006200917-02 $P=373.624267$ Days $T_0=147.568017$ (BKJD)



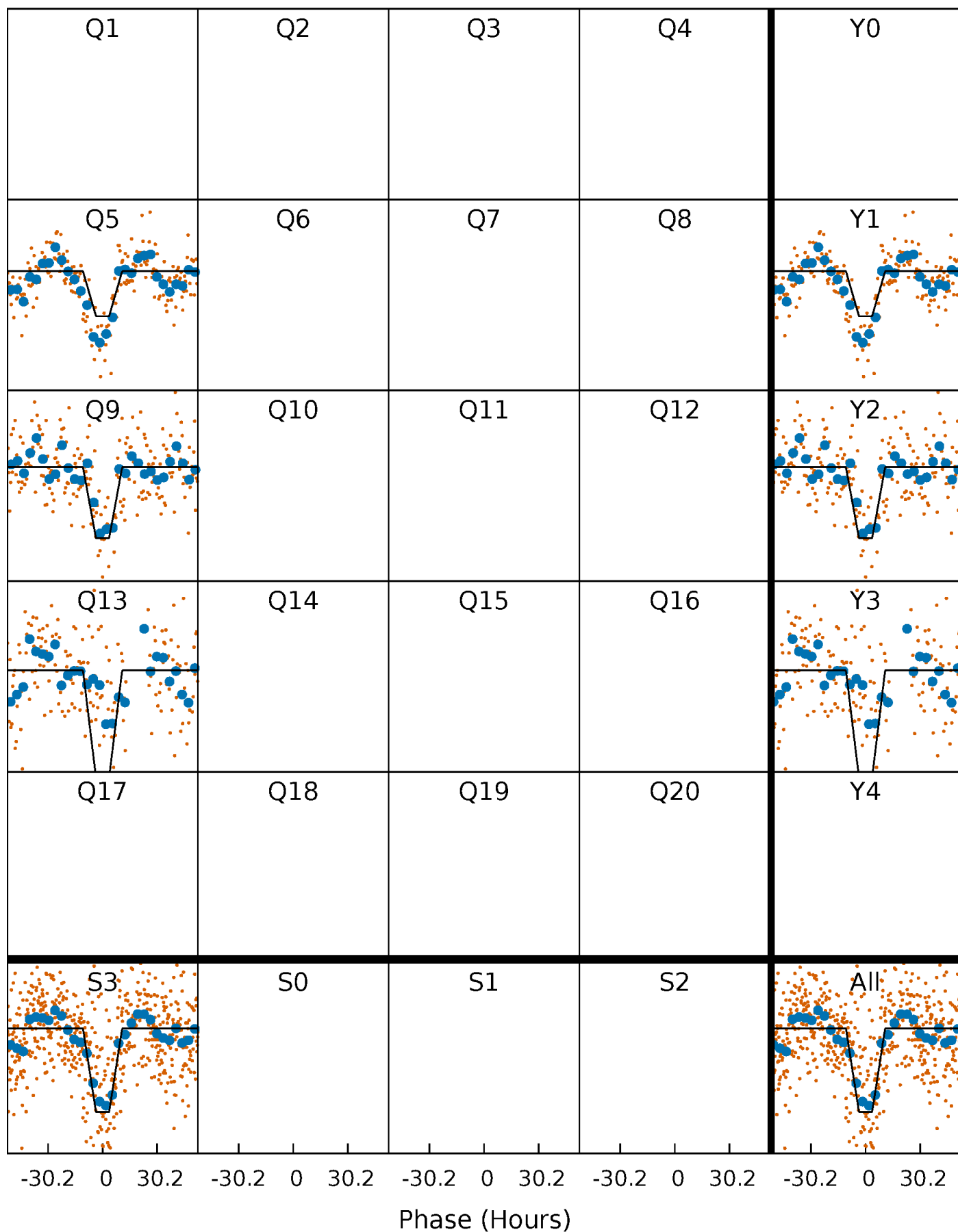
DV Quarter-Phased Transit Curves

TCE 006200917-02 P=373.624267 Days $T_0=147.568017$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

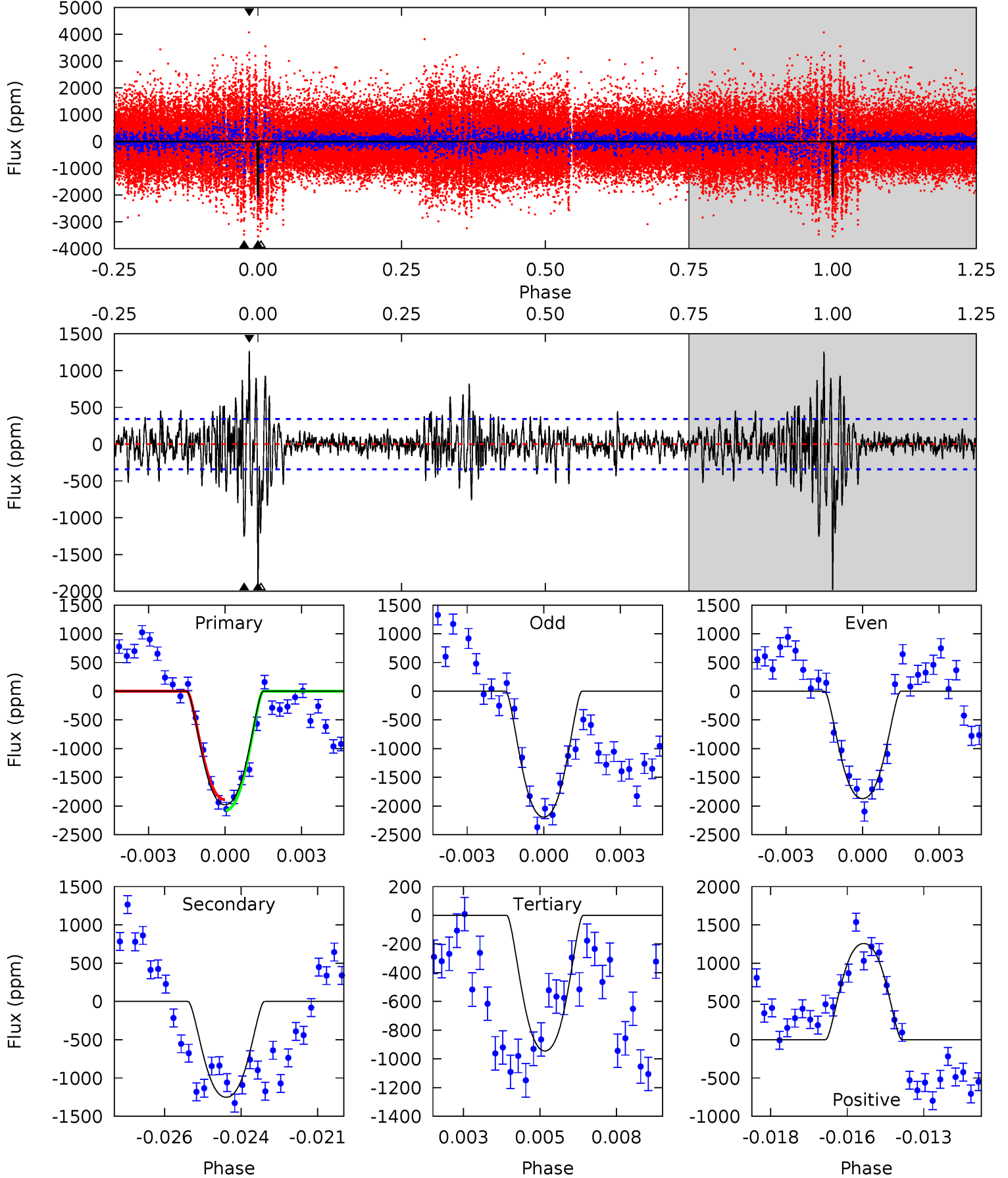
TCE 006200917-02 P=373.457365 Days $T_0=147.812028$ (BKJD)



DV Model-Shift Uniqueness Test

006200917-02, P = 373.624267 Days, E = 147.568017 Days

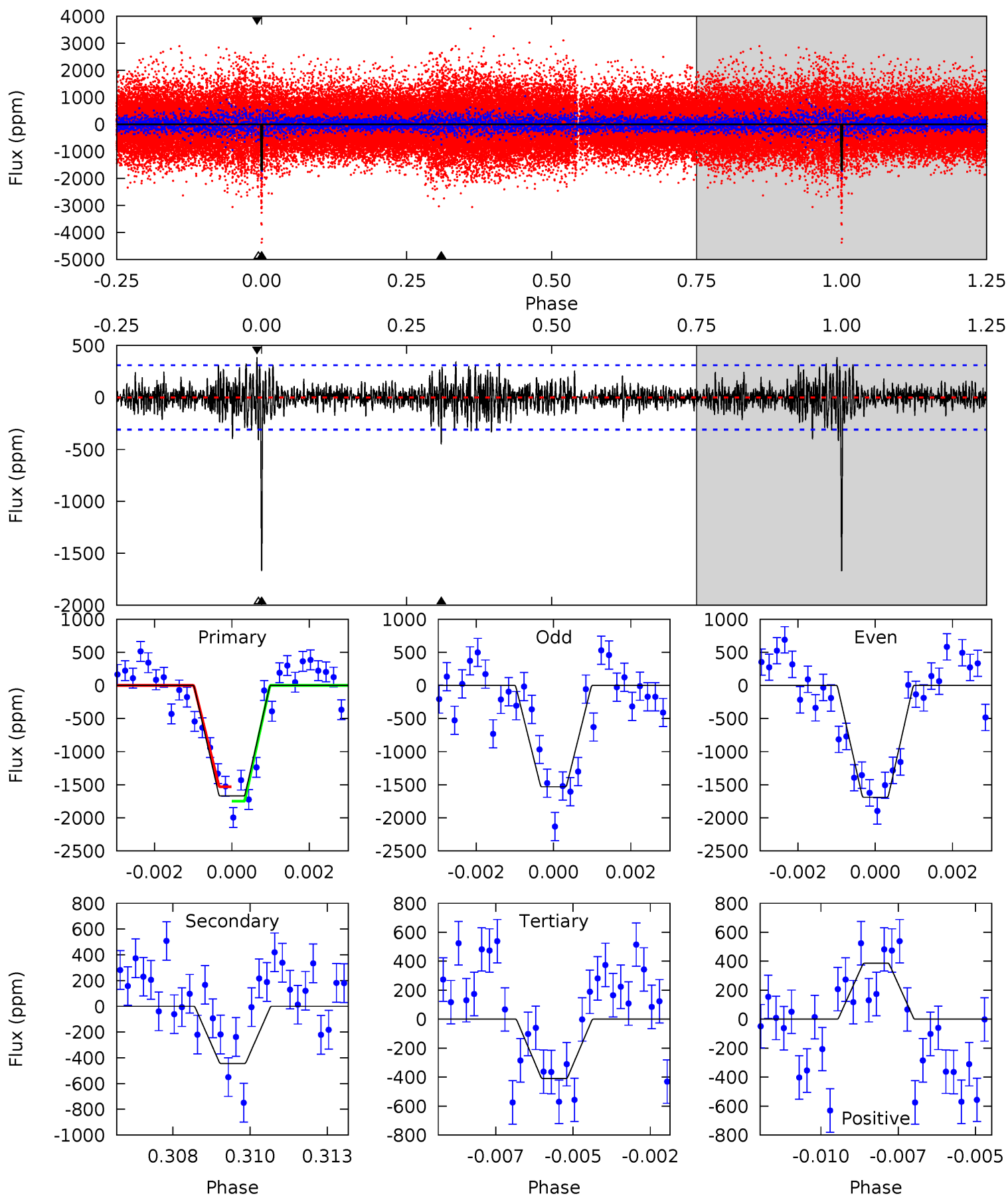
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.6	19.3	14.6	19.4	5.28	3.01	3.14	16.0	11.1	4.74	-0.10	2.38	0.99	0.39	1.44



Alt Model-Shift Uniqueness Test

006200917-02, P = 373.457365 Days, E = 147.812028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	7.59	6.99	6.60	5.29	3.03	1.54	21.5	21.9	0.60	1.00	1.28	1.09	0.19	1.87



Stellar Parameters For KIC 006200917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+192}_{-235}	$4.466^{+0.048}_{-0.192}$	$0.070^{+0.250}_{-0.350}$	$1.030^{+0.296}_{-0.118}$	$1.132^{+0.133}_{-0.163}$	$1.457^{+0.385}_{-0.741}$
	+3%/-4%	+1%/-4%	+357%/-500%	+29%/-11%	+12%/-14%	+26%/-51%
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 006200917-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1252 ± 65	$6.26^{+1.74}_{-1.52}$	381^{+25}_{-20}	5040^{+623}_{-428}	18863^{+14777}_{-6956}
Alt.	-445 ± 59	$4.98^{+1.61}_{-1.57}$	380^{+24}_{-20}	4491^{+736}_{-439}	10658^{+12632}_{-4653}

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

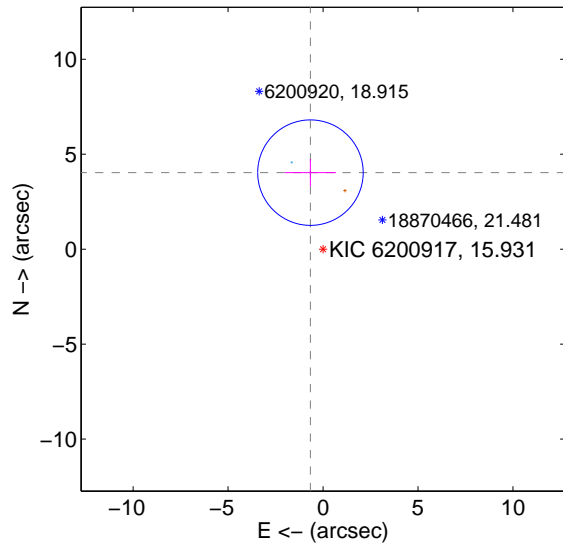
Supplemental centroid analysis for 006200917-02. Kepler magnitude: 15.93. Transit SNR 7.29

There are 1 quarters with good PRF difference image offsets

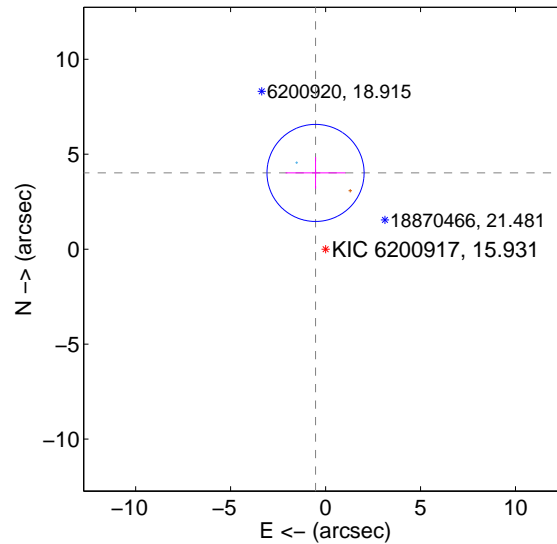
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.084 ± 0.925	4.41	0.663 ± 1.345	4.029 ± 0.718
PRF-fit source offset from KIC position	4.049 ± 0.852	4.75	0.529 ± 1.575	4.015 ± 0.834
photometric centroid source offset	4.10 ± 2.17	1.89	3.07 ± 2.34	2.71 ± 1.94

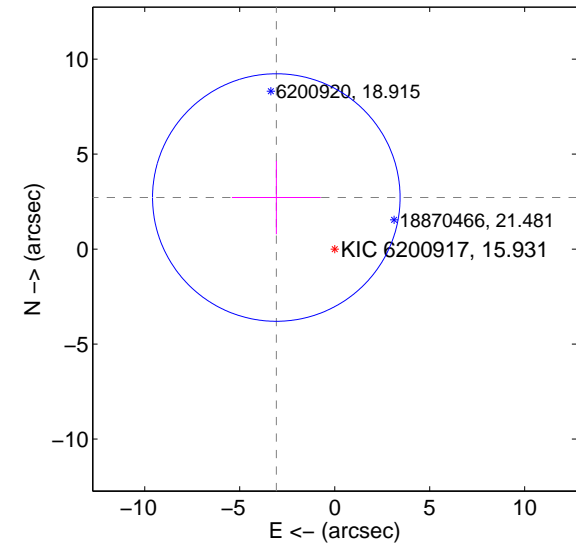
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

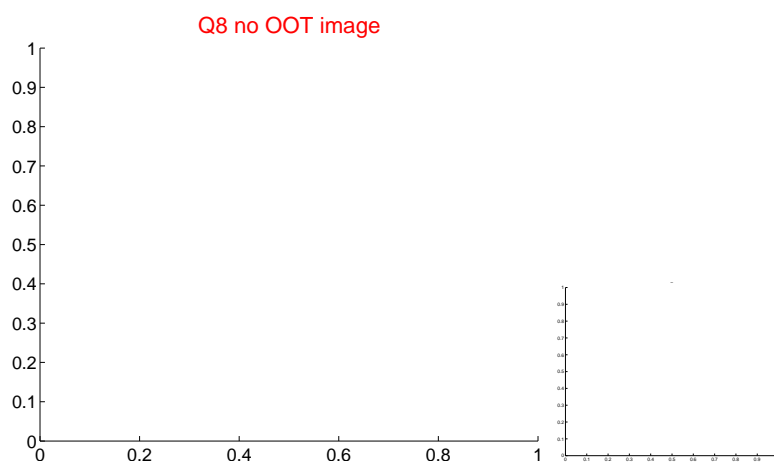
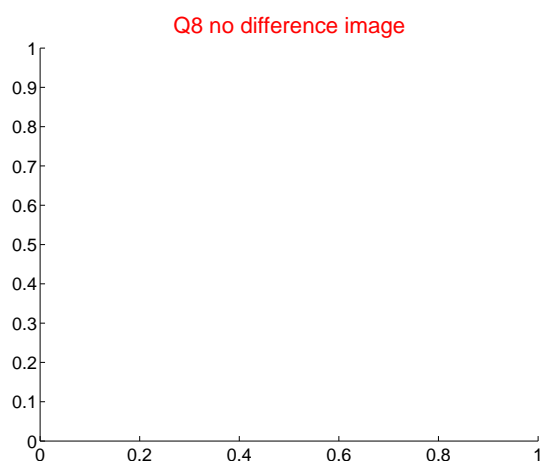
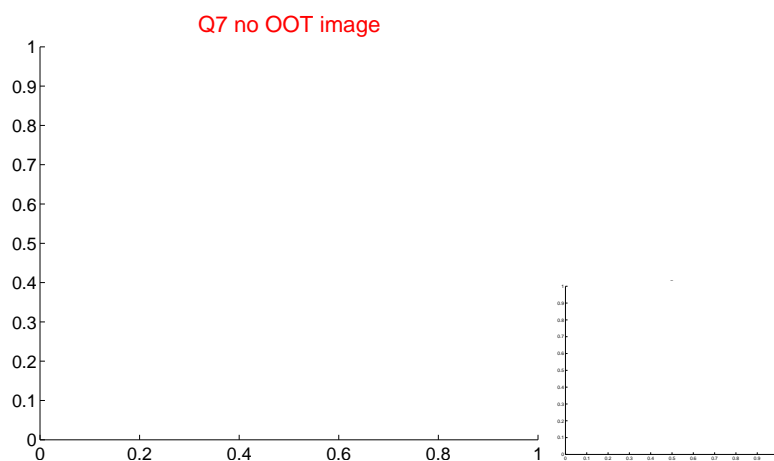
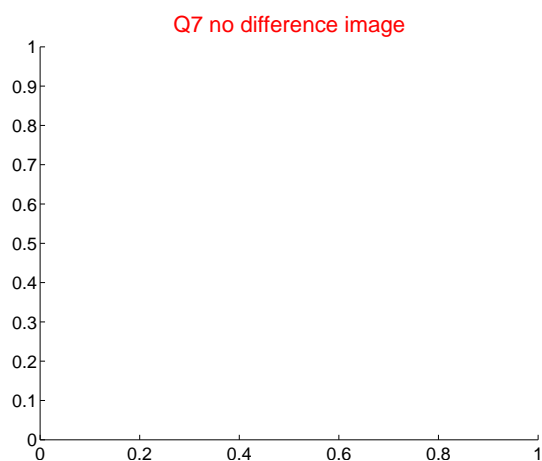
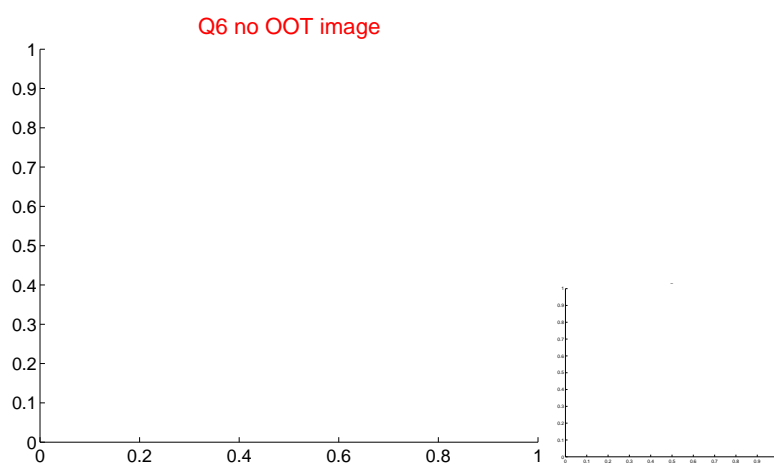
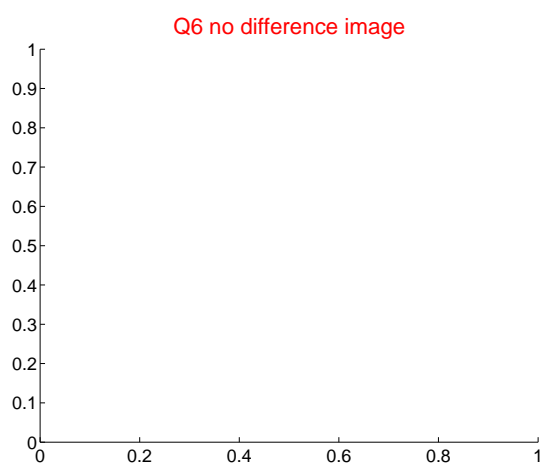
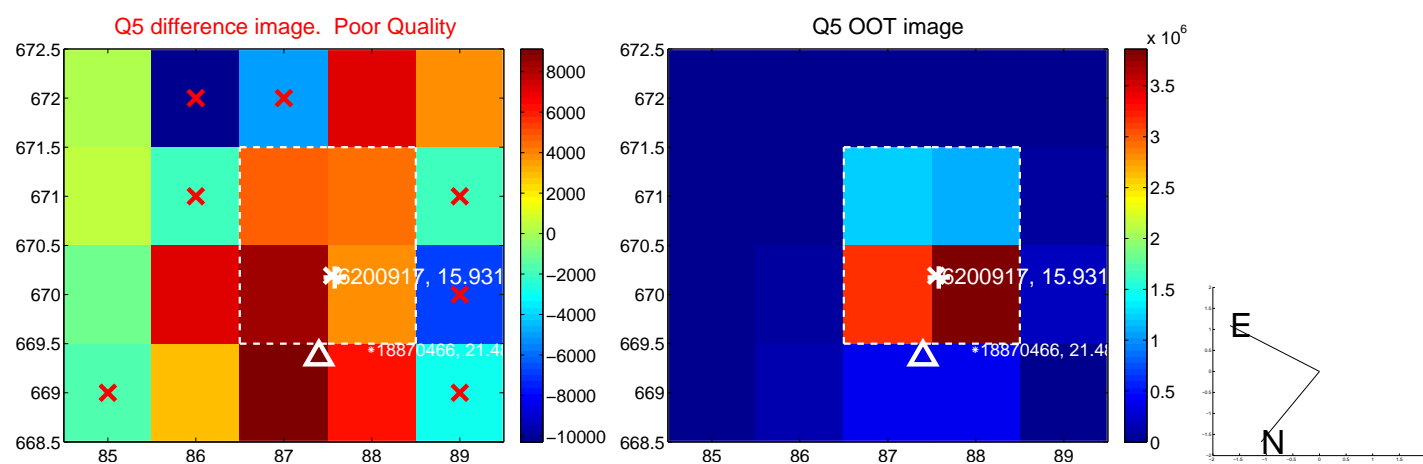


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

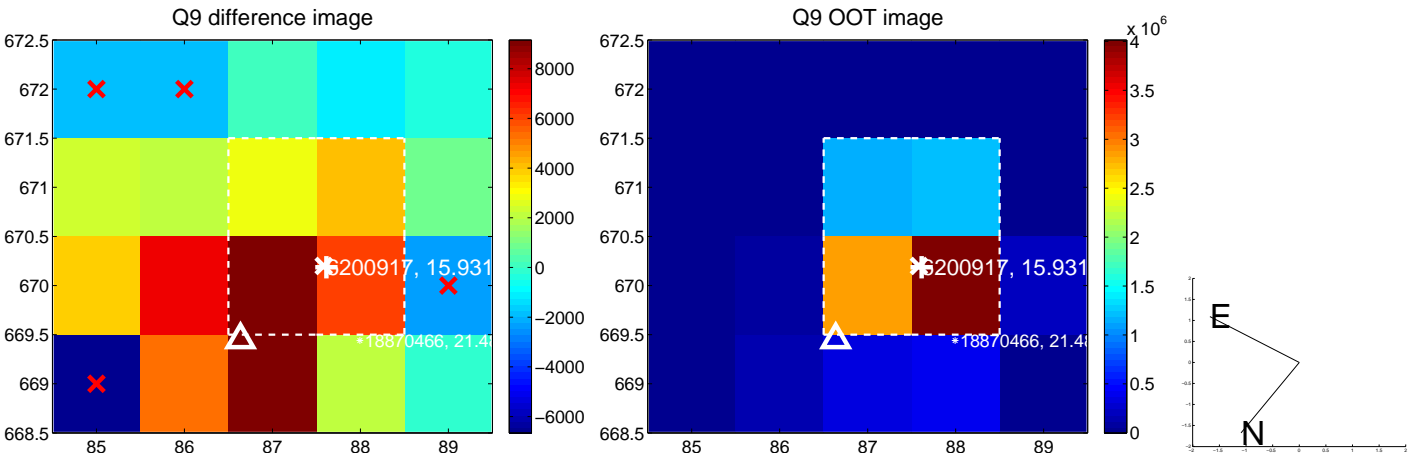
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



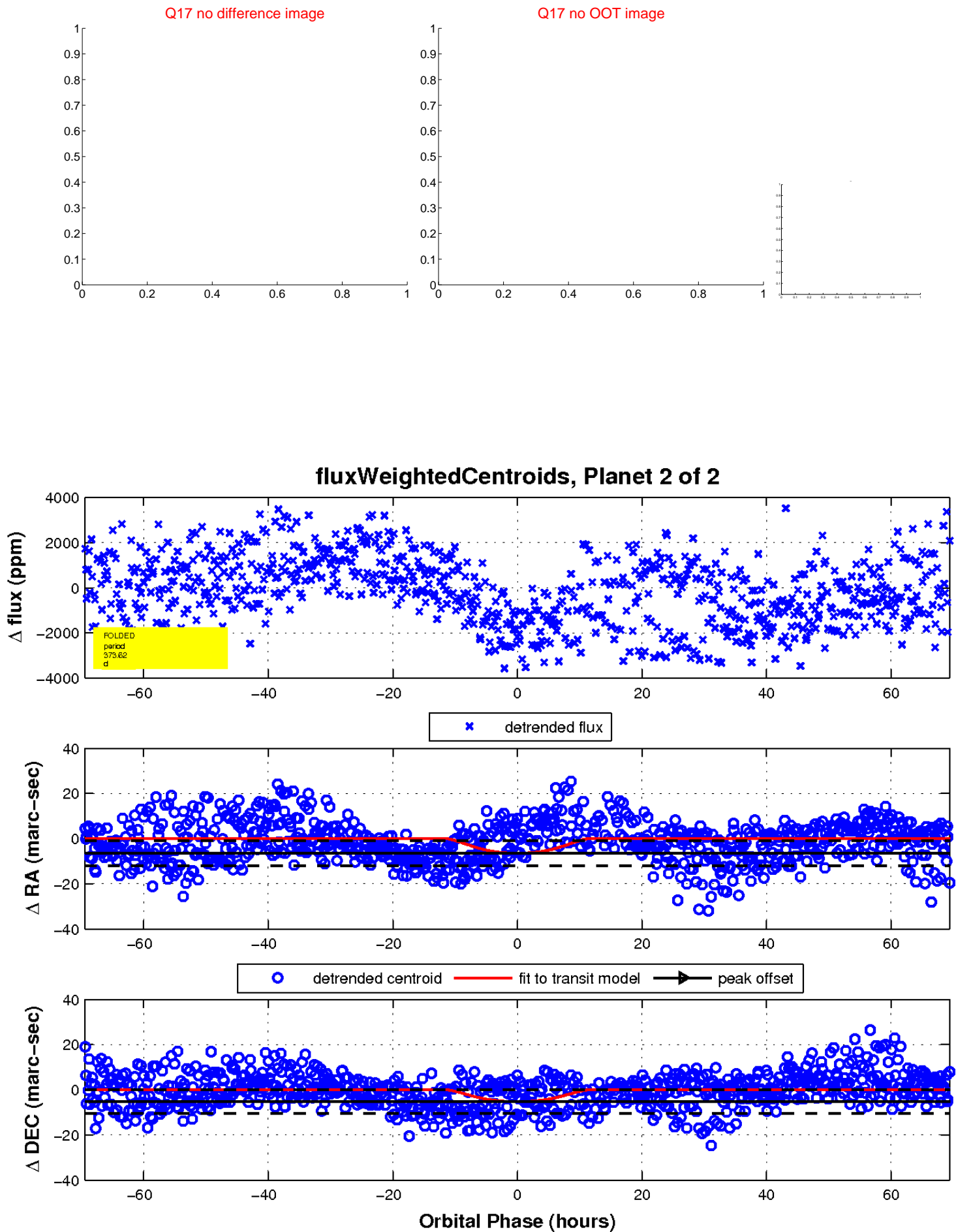
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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UKIRT Image

Declination

