

KIC 006119914

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})
006119914-01	OBS	No	376.557777	136.073684	1686.0	17.698	8.5	8.4	1.11	6370	4.56	1.58
006119914-02	OBS	No	227.963742	291.387620	531.7	15.380	8.5	6.9	1.11	6370	2.65	3.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119914-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
006119914-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_POS_DV—MOD_NONUNIQU_ALT—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.

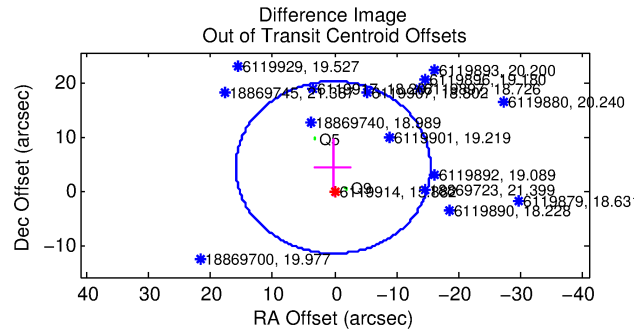
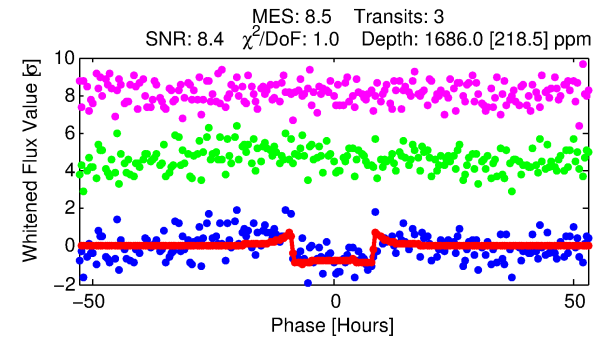
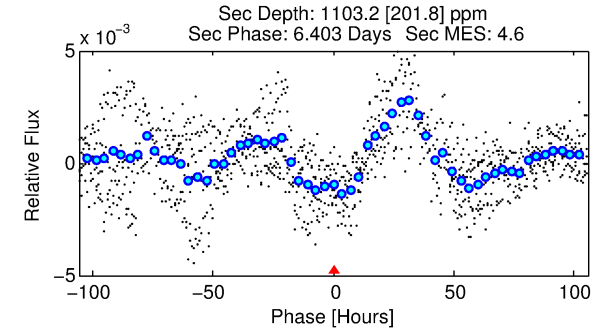
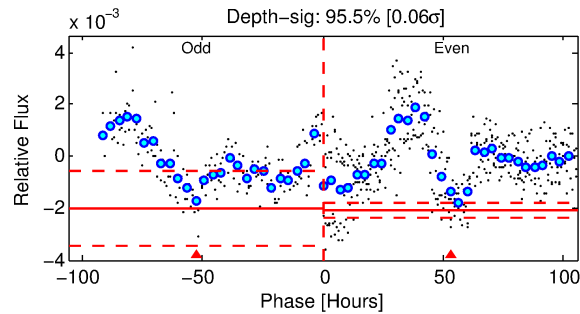
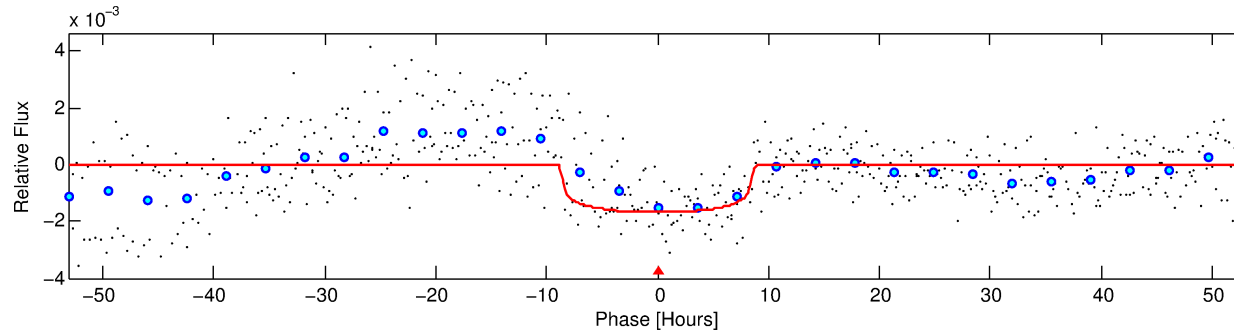
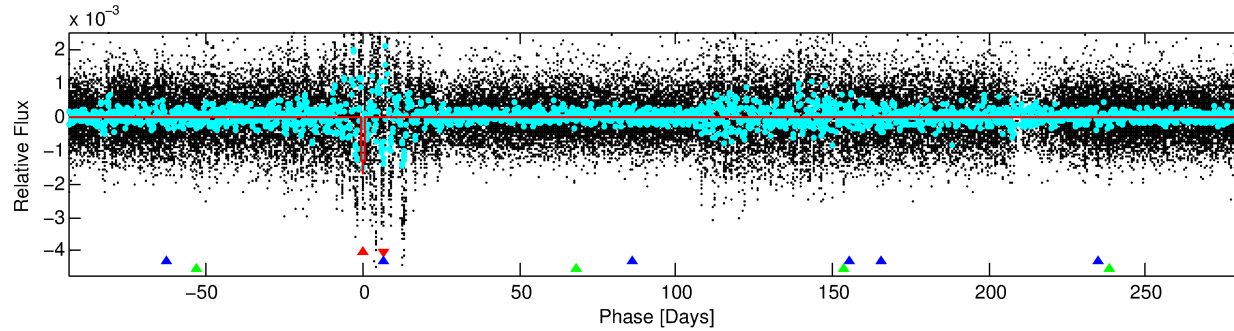
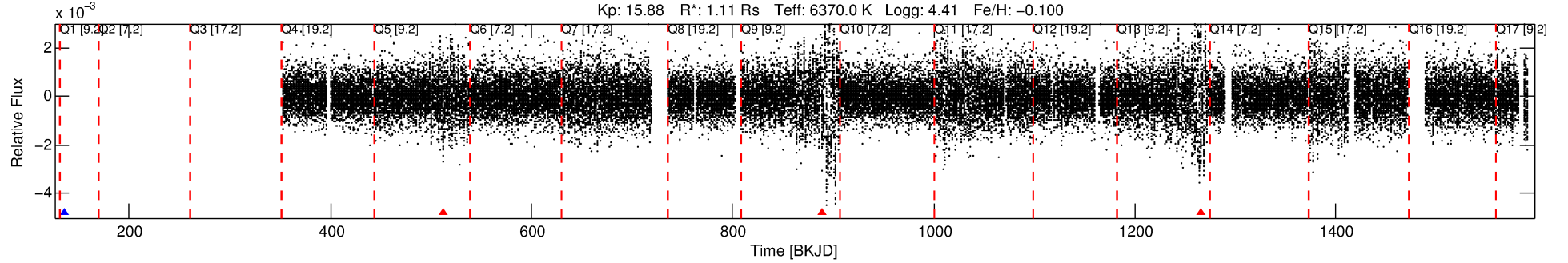
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006119914-01

No Significant Match Found

DV One-Page Summary

KIC: 6119914 Candidate: 1 of 3 Period: 376.558 d



DV Fit Results:

Period = 376.55778 [0.00900] d
Epoch = 136.0737 [0.0187] BKJD
Rp/R* = 0.0378 [0.0082]
a/R* = 167.43 [171.05]
b = 0.13 [7.99]
Seff = 1.58 [0.57]
Teq = 286 [26] K
Rp = 4.56 [1.63] Re
a = 1.0685 [0.2470] AU
Ag = 33338.03 [19097.62] [1.75 σ]
Teffp = 5973 [740] K [7.68 σ]

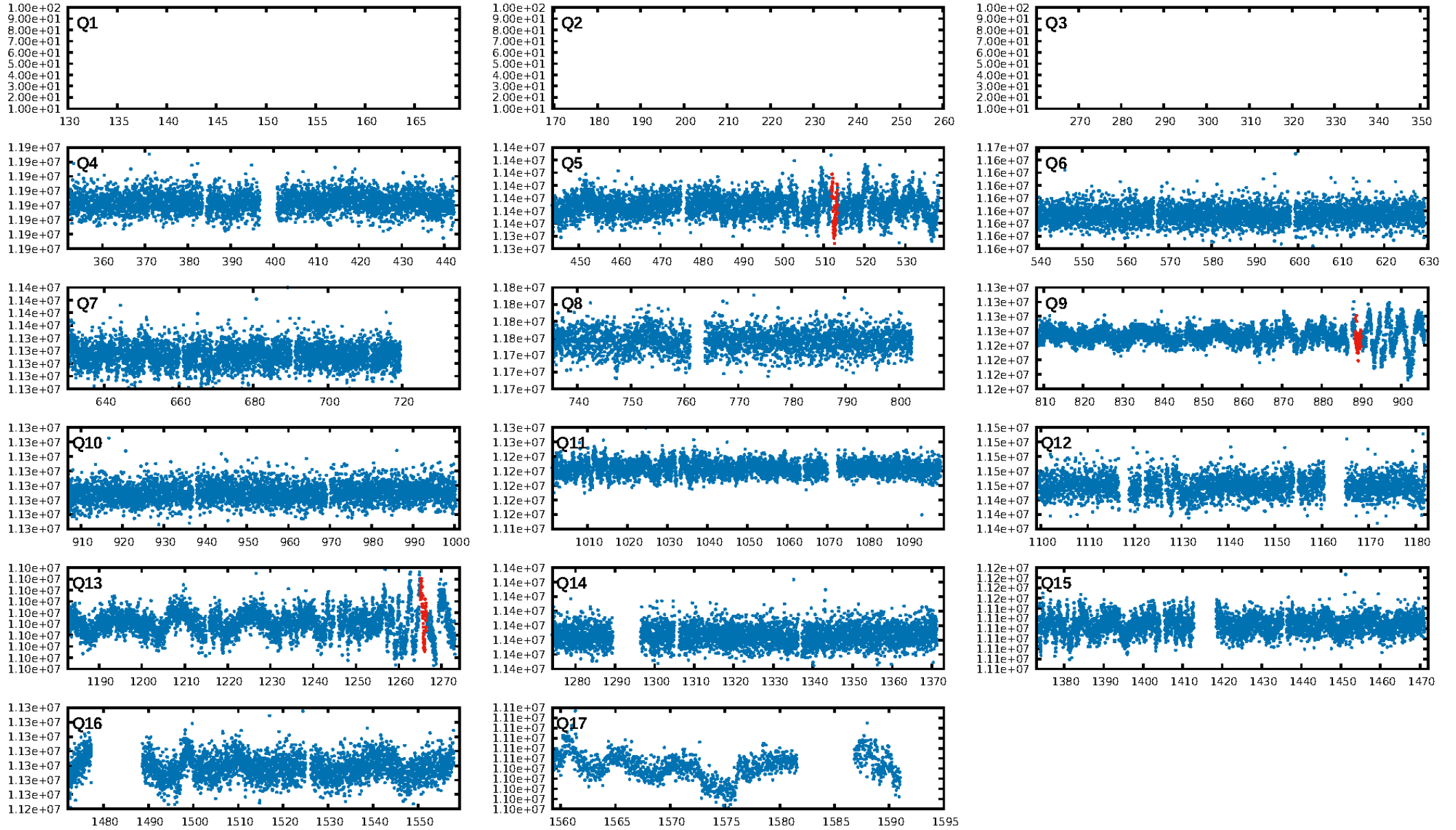
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [152.10 σ]
LongPeriod-sig: 100.0% [70.89 σ]
ModelChiSquare2-sig: 47.7%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 2.09e-10
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -98.24
Centroid-sig: 1.0%
Centroid-so: 5.067 arcsec [2.13 σ]
OotOffset-rm: 4.492 arcsec [0.86 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 4.587 arcsec [0.88 σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

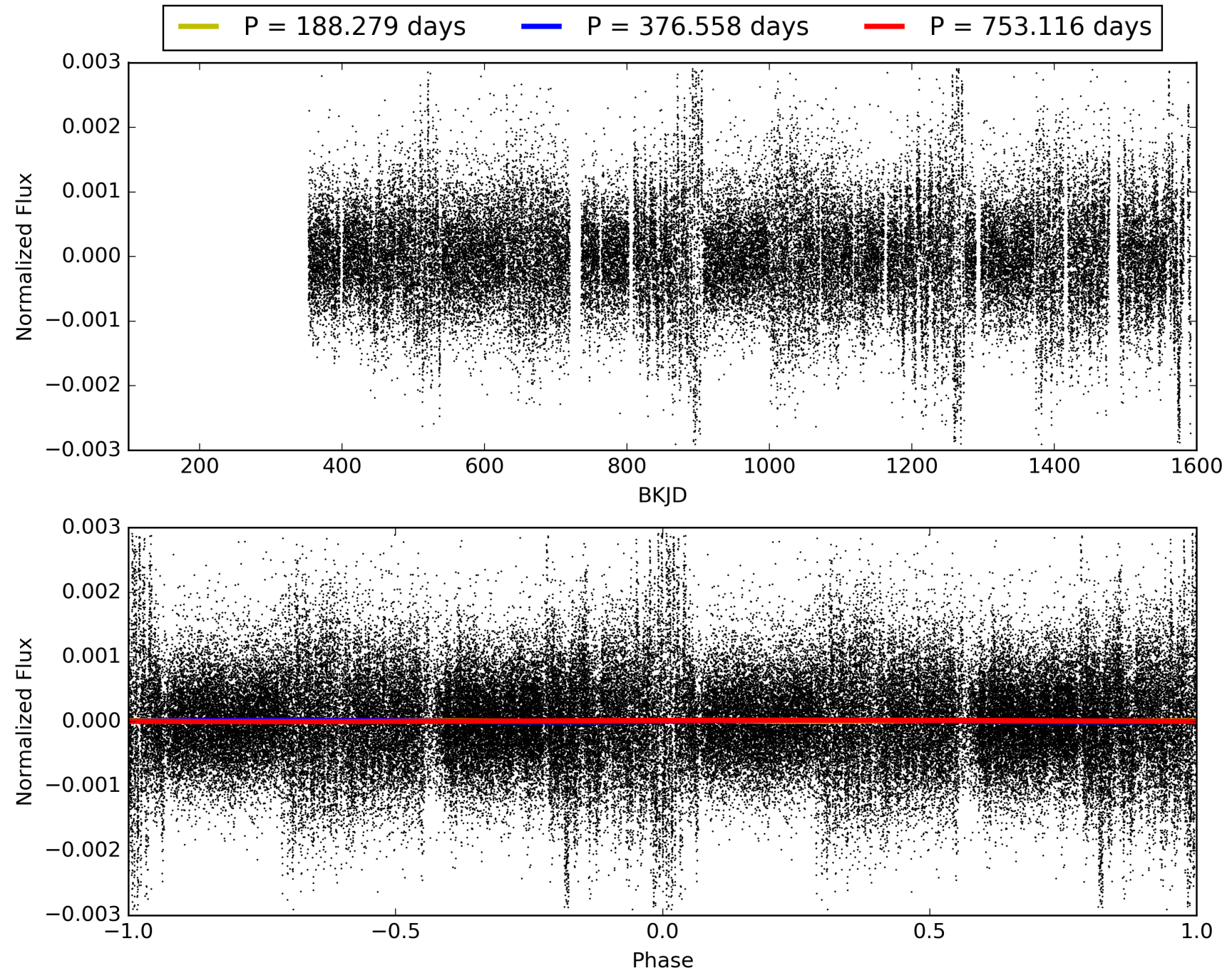
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:49:56 Z

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

TCE 006119914-01, PDC Light Curves

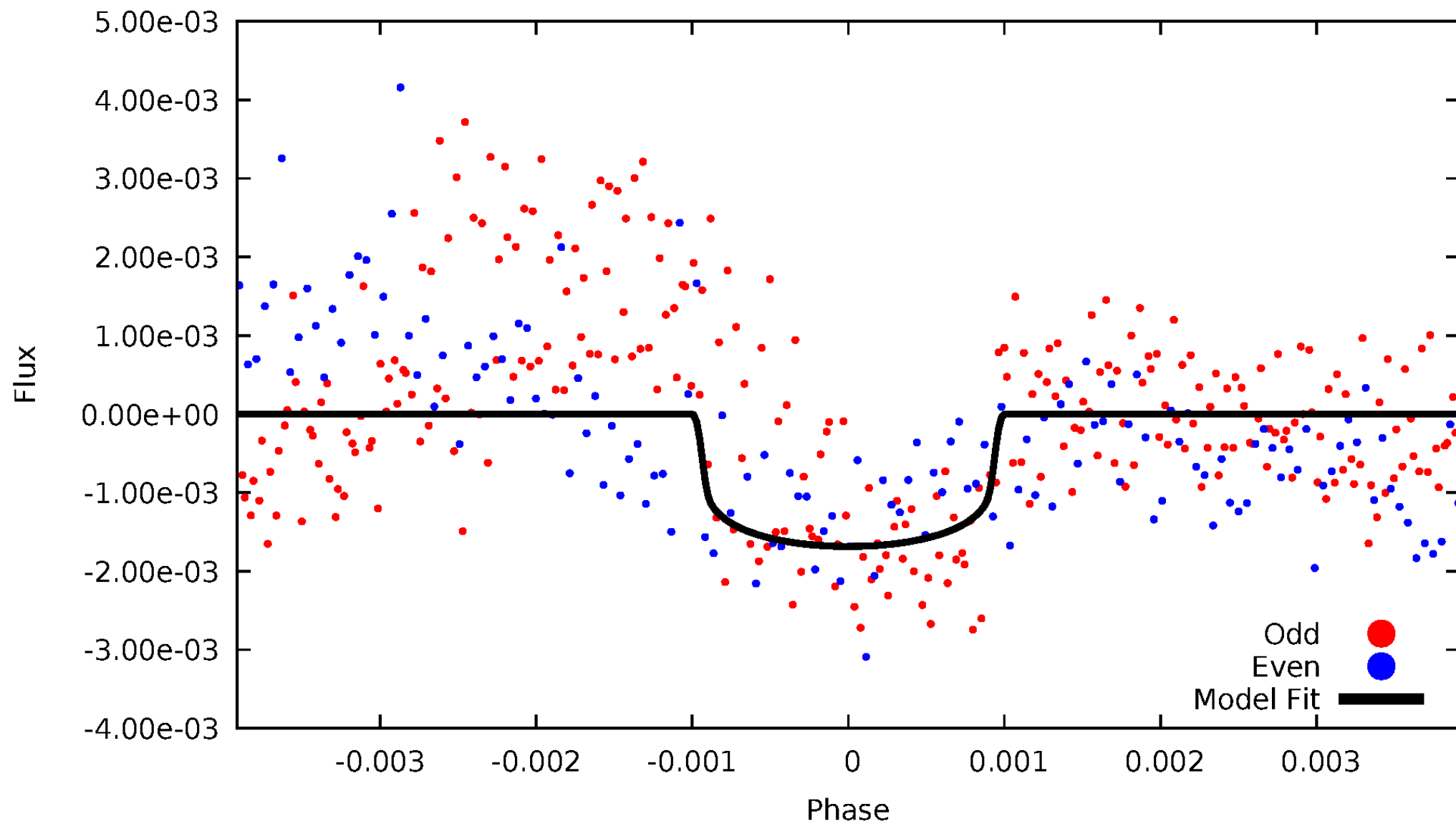


TCE 006119914-01



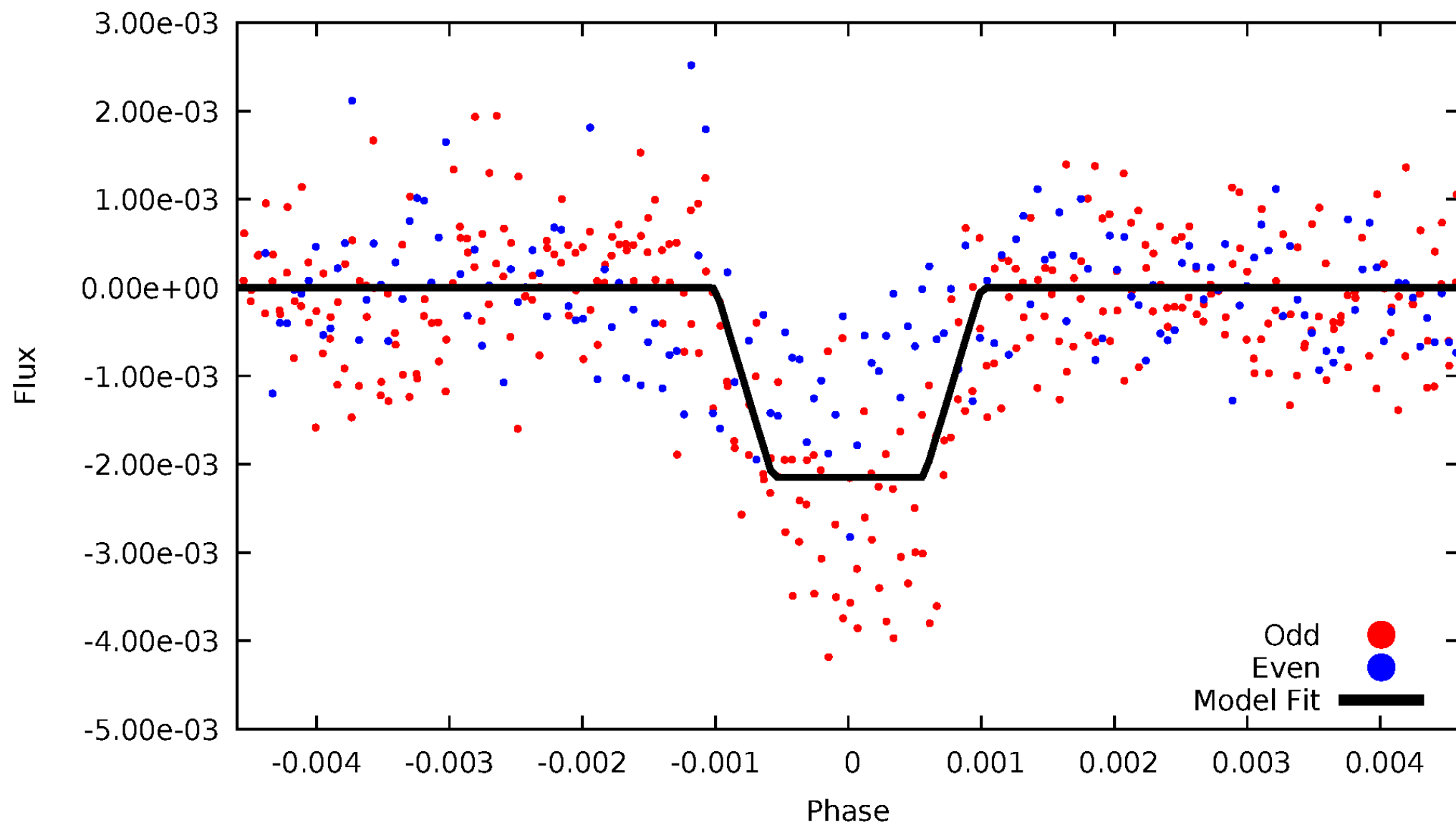
DV Odd/Even

TCE 006119914-01



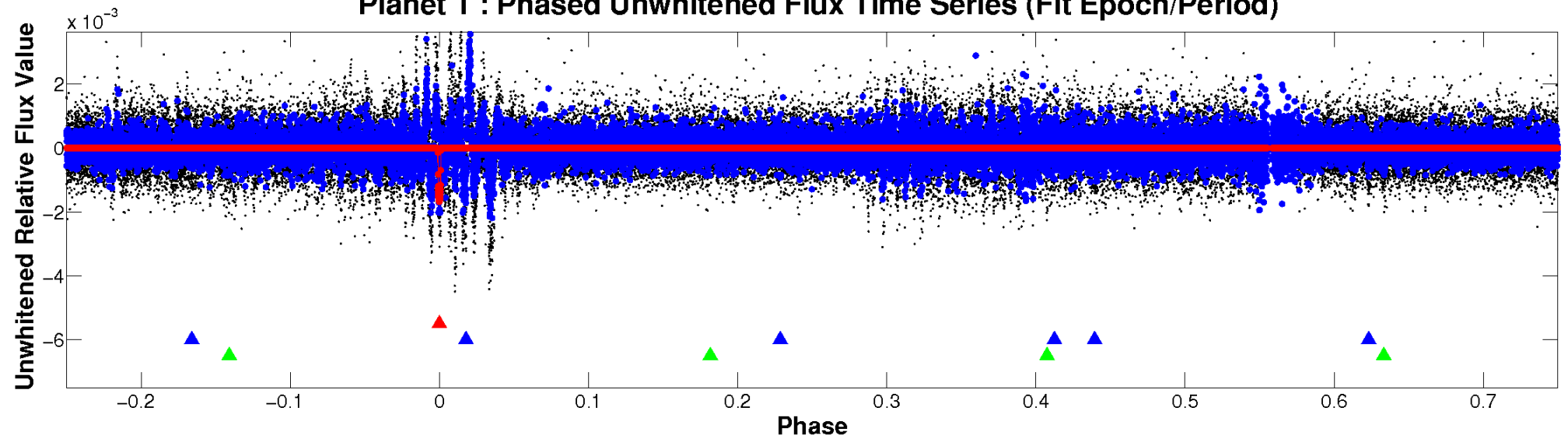
ALT Odd/Even

TCE 006119914-01

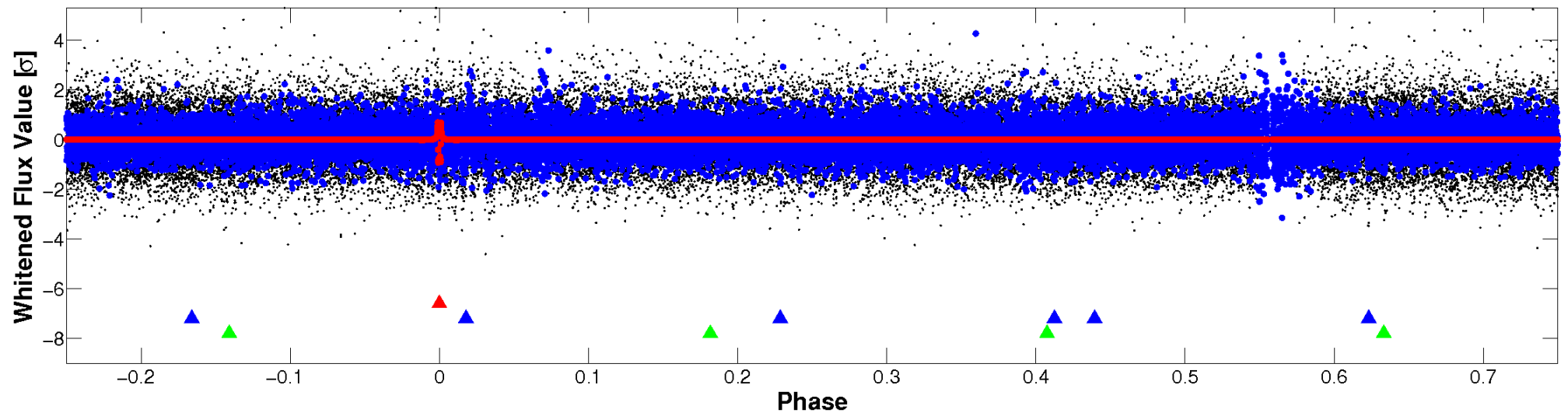


Non-Whitened Vs. Whitened Light Curve

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

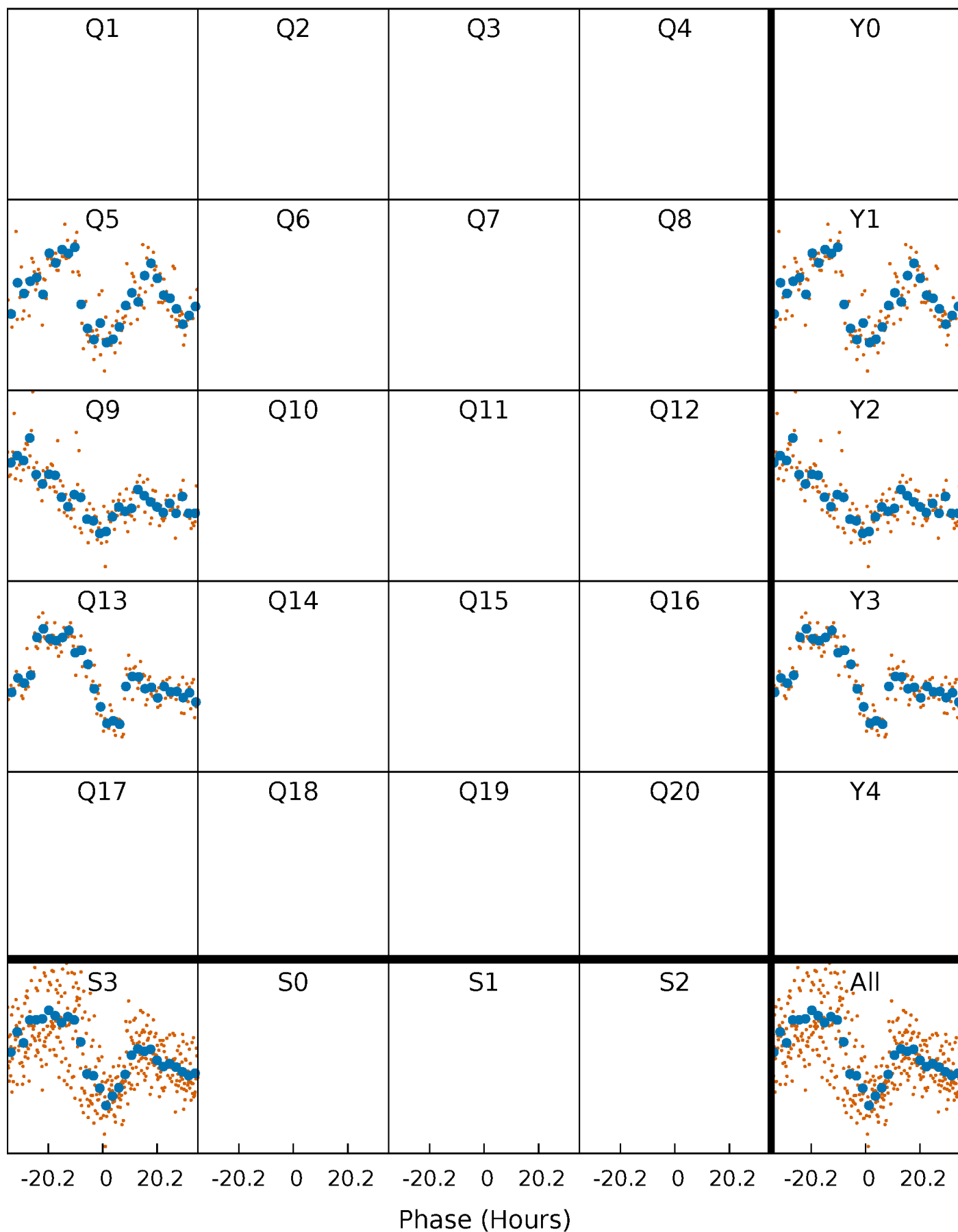


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



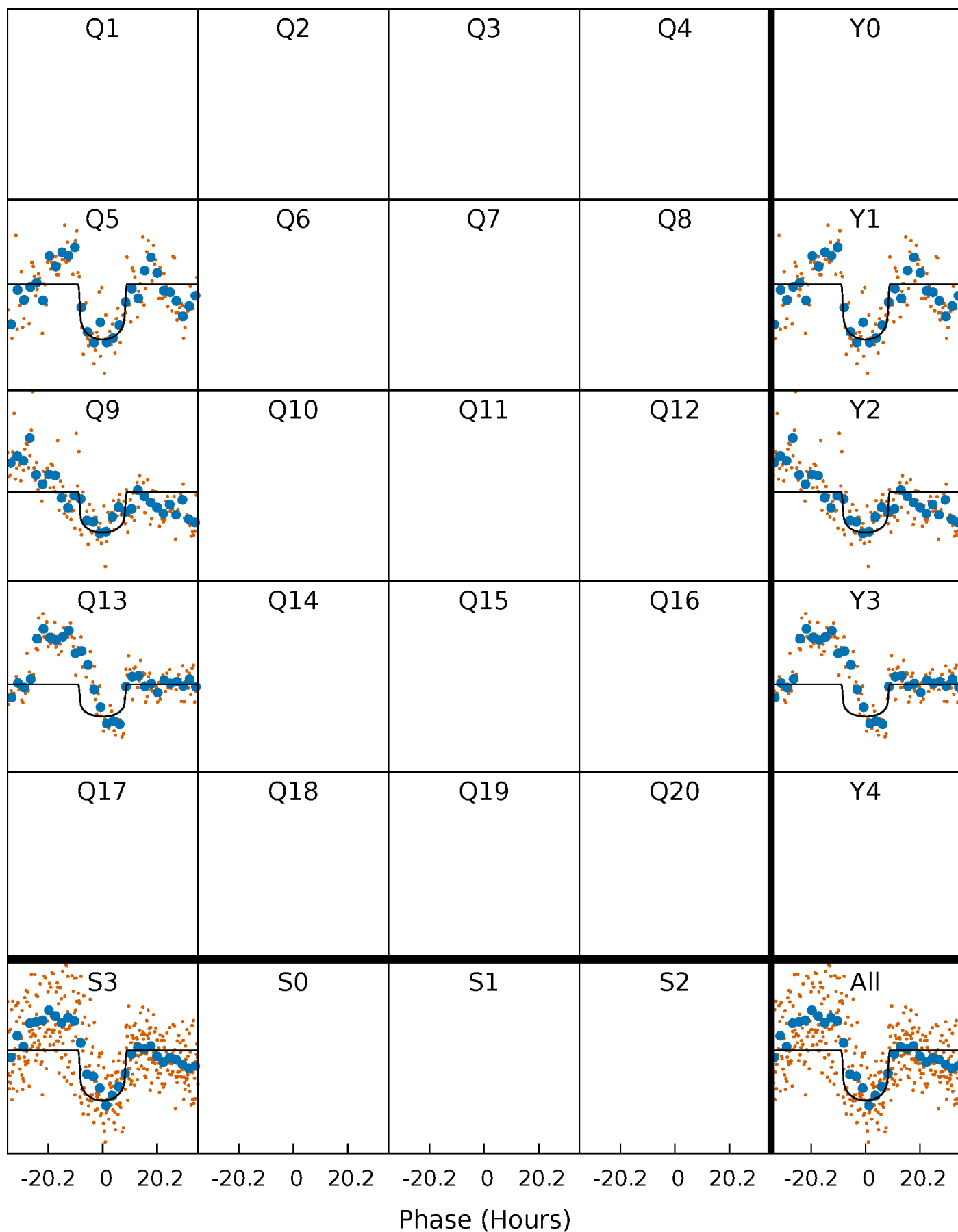
PDC Quarter-Phased Transit Curves

TCE 006119914-01 P=376.557777 Days $T_0=136.073684$ (BKJD)



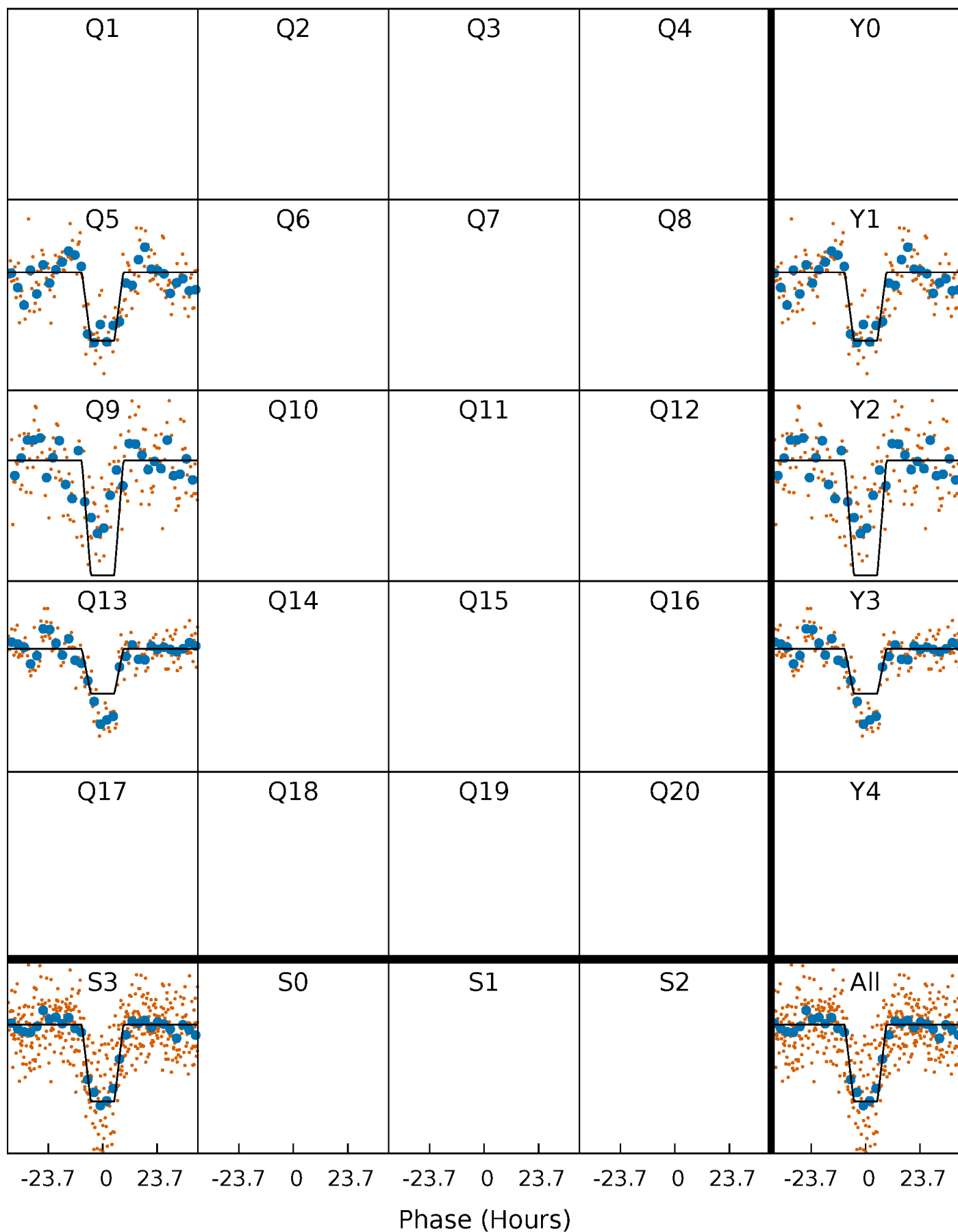
DV Quarter-Phased Transit Curves

TCE 006119914-01 P=376.557777 Days $T_0=136.073684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

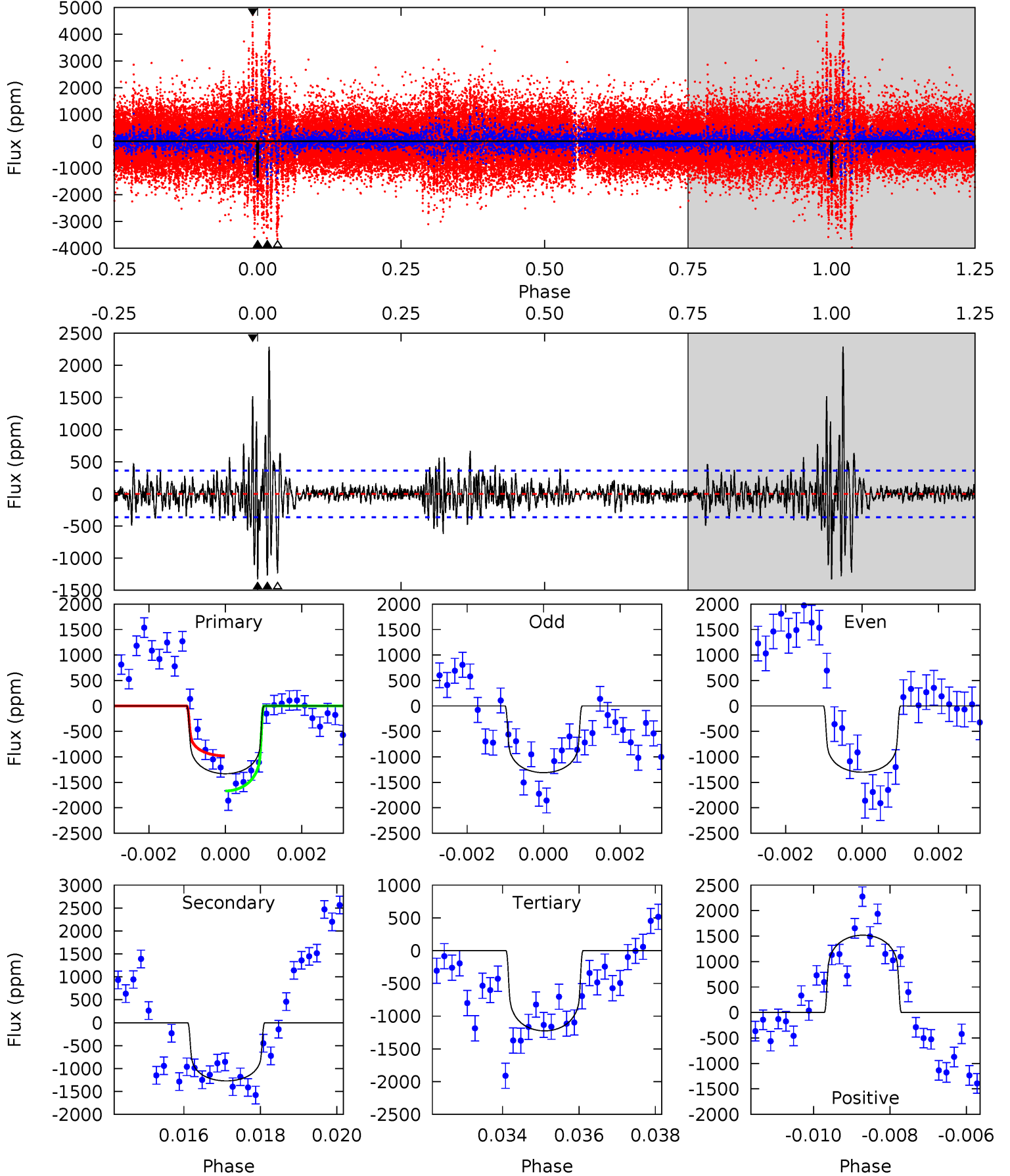
TCE 006119914-01 P=376.590511 Days $T_0=136.046145$ (BKJD)



DV Model-Shift Uniqueness Test

006119914-01, $P = 376.557777$ Days, $E = 136.073684$ Days

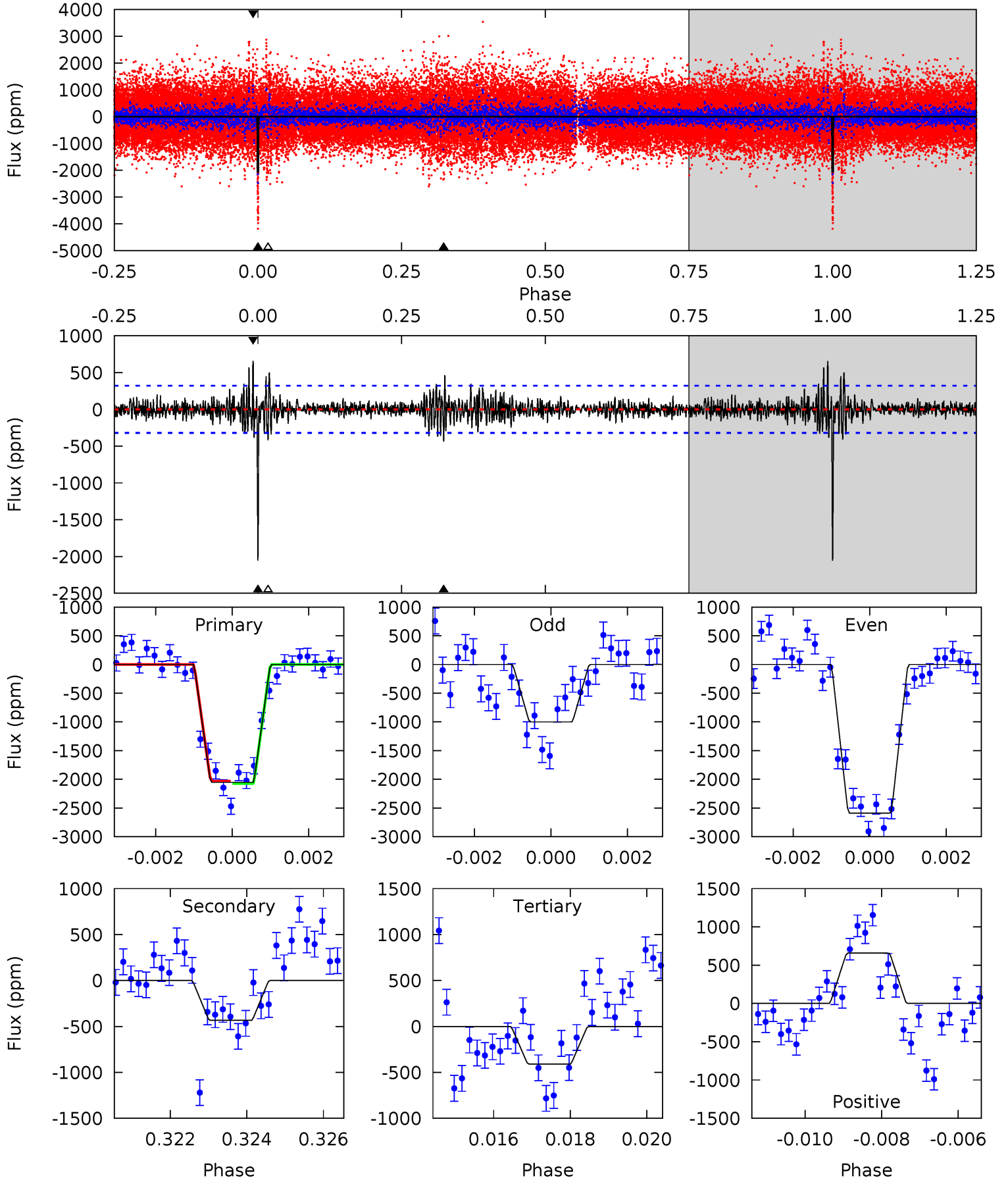
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	18.6	17.9	22.2	5.33	3.09	2.95	1.56	-2.73	0.66	-3.63	0.06	1.00	0.63	5.03



Alt Model-Shift Uniqueness Test

006119914-01, P = 376.590511 Days, E = 136.046145 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	7.21	6.81	10.9	5.33	3.09	1.49	27.3	23.2	0.40	-3.69	12.4	0.97	0.24	0.36



Stellar Parameters For KIC 006119914

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6370^{+179}_{-246}	$4.410^{+0.058}_{-0.173}$	$-0.100^{+0.250}_{-0.300}$	$1.106^{+0.314}_{-0.134}$	$1.148^{+0.162}_{-0.146}$	$1.194^{+0.387}_{-0.578}$
	+3%/-4%	+1%/-4%	+250%/-300%	+28%/-12%	+14%/-13%	+32%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006119914-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1270 ± 68	$4.74^{+1.13}_{-1.03}$	405^{+28}_{-20}	6152^{+853}_{-584}	35041^{+20934}_{-11513}
Alt.	-435 ± 60	$5.84^{+1.22}_{-1.11}$	408^{+23}_{-22}	4458^{+372}_{-330}	7994^{+4286}_{-2785}

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 $A_{obs} \gg 1.0$

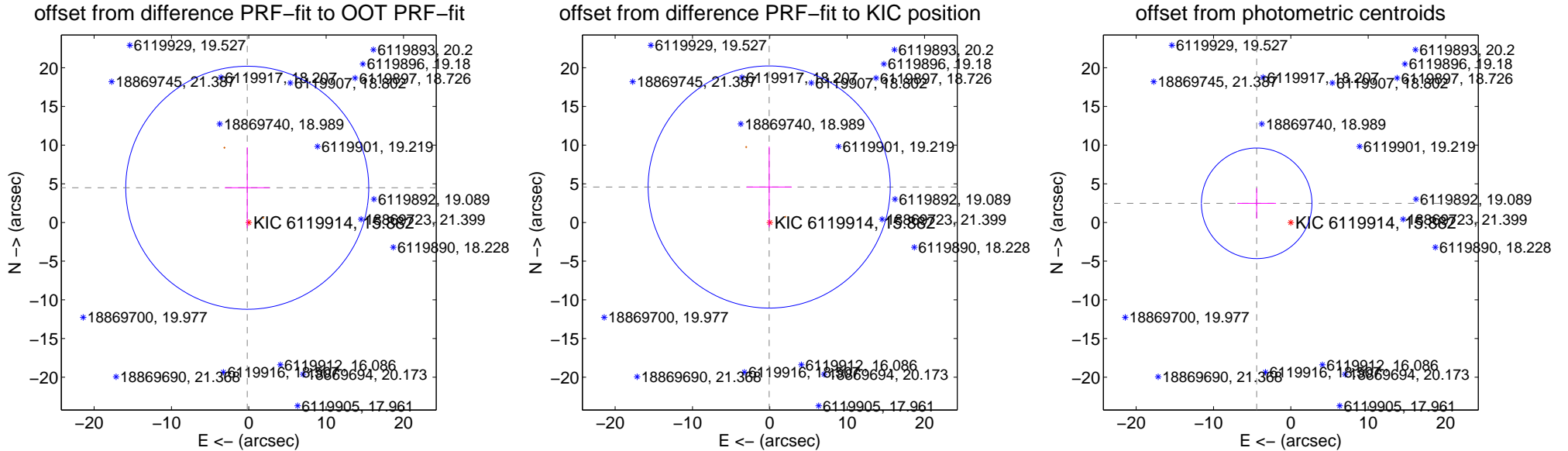
DV Centroid Data

Supplemental centroid analysis for 006119914-01. Kepler magnitude: 15.88. Transit SNR 8.44

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.492 ± 5.235	0.86	0.202 ± 2.901	4.487 ± 5.239
PRF-fit source offset from KIC position	4.587 ± 5.216	0.88	0.086 ± 2.926	4.586 ± 5.217
photometric centroid source offset	5.07 ± 2.38	2.13	4.42 ± 2.50	2.48 ± 1.96

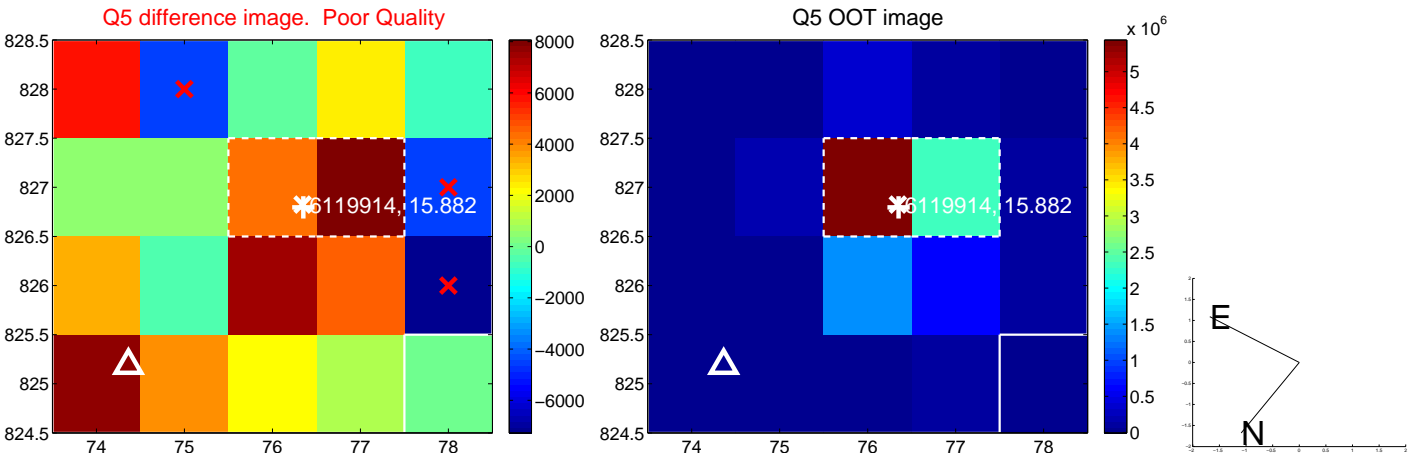


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

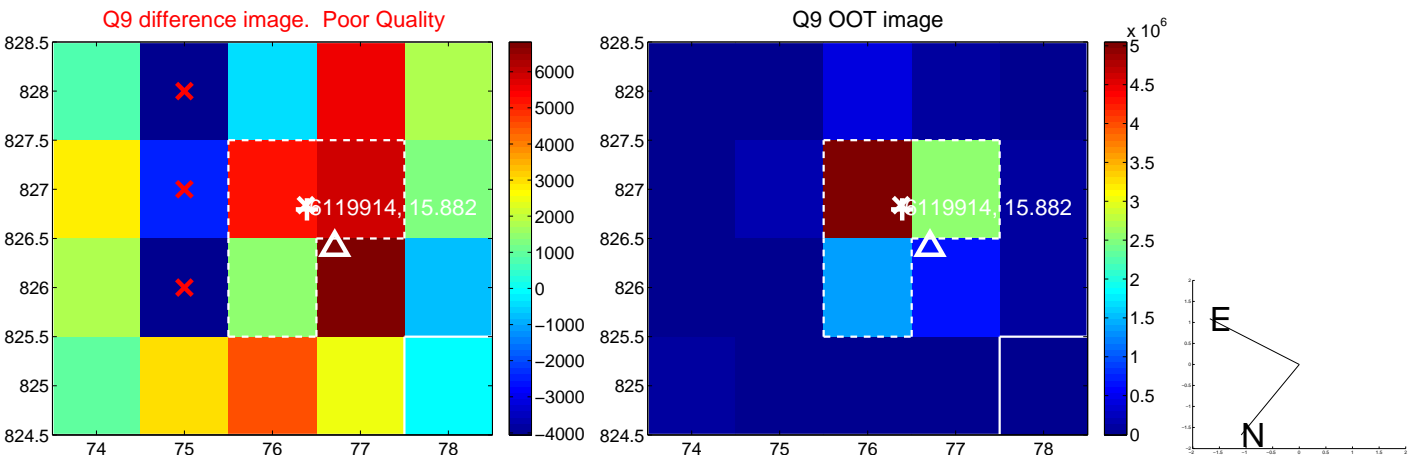
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



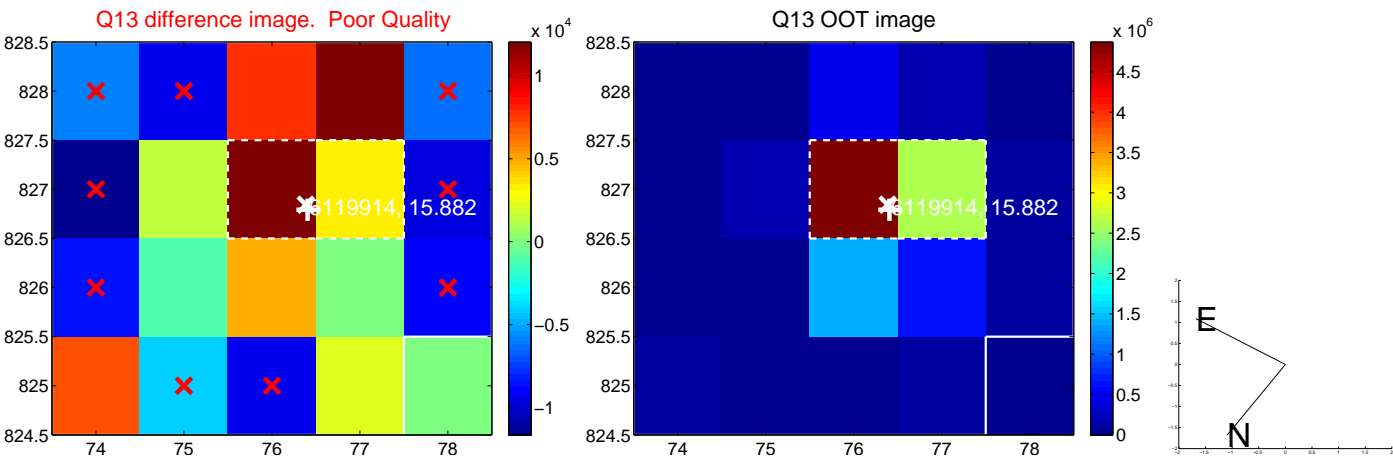
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



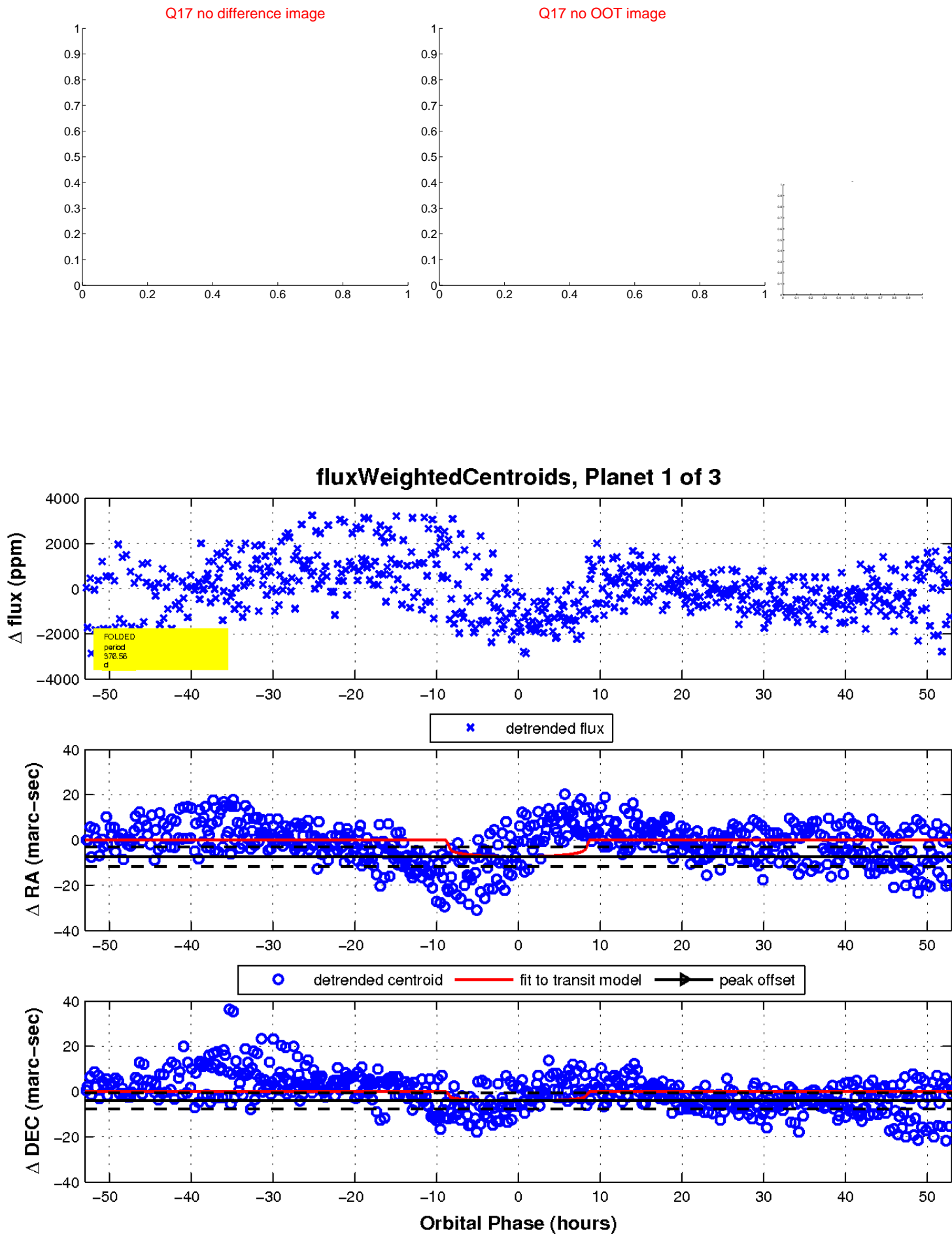
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

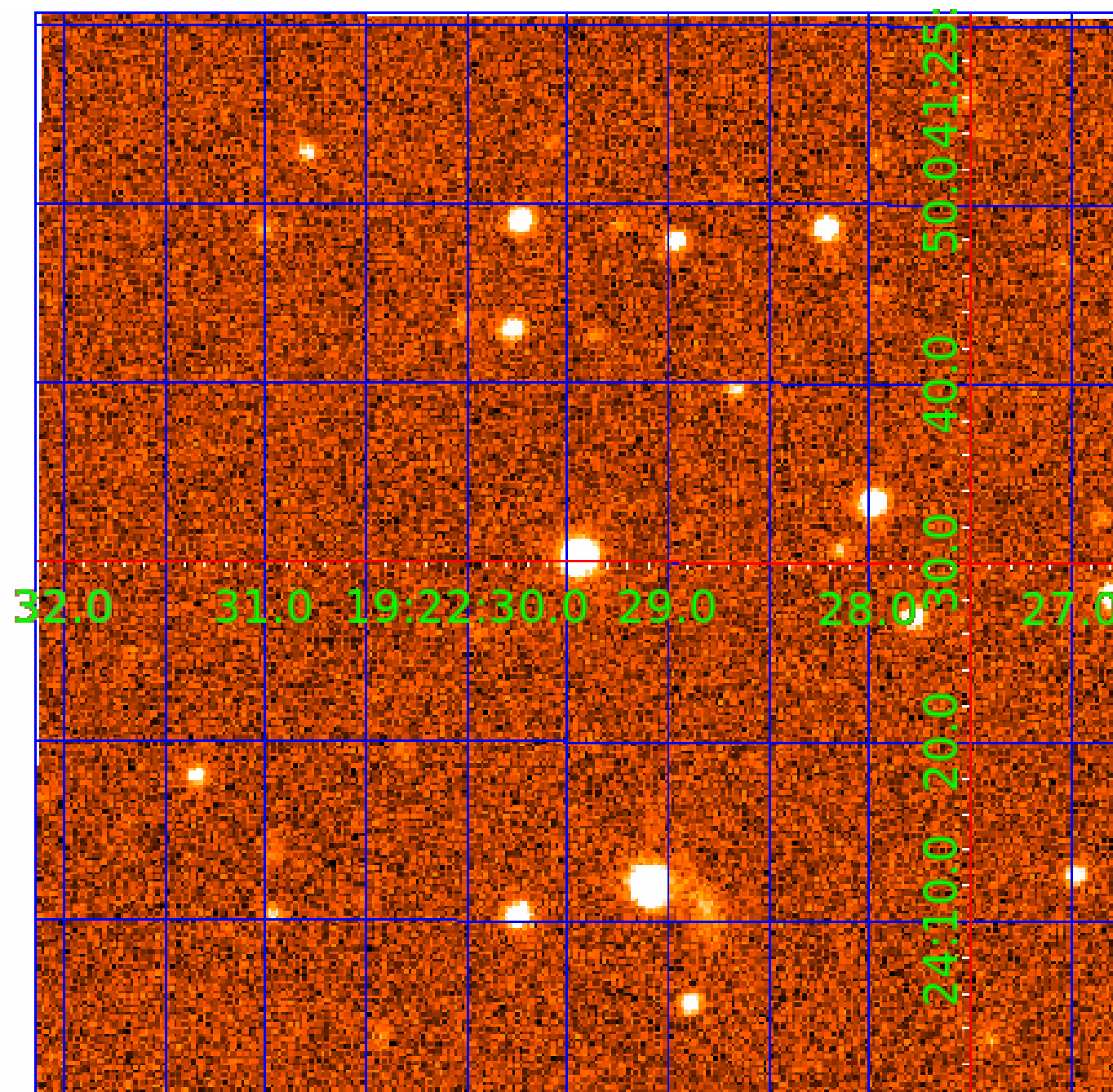


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006119914

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})
006119914-01	OBS	No	376.557777	136.073684	1686.0	17.698	8.5	8.4	1.11	6370	4.56	1.58
006119914-02	OBS	No	227.963742	291.387620	531.7	15.380	8.5	6.9	1.11	6370	2.65	3.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119914-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
006119914-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_POS_DV—MOD_NONUNIQU_ALT—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.

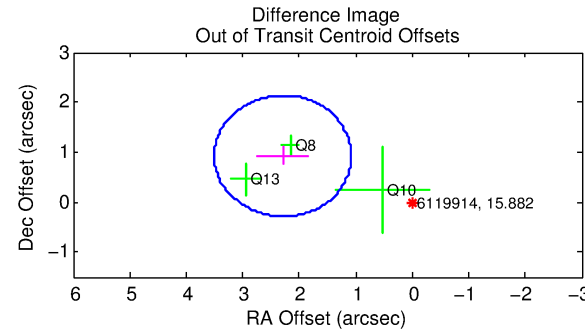
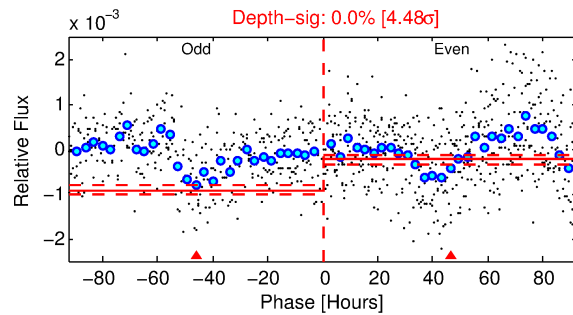
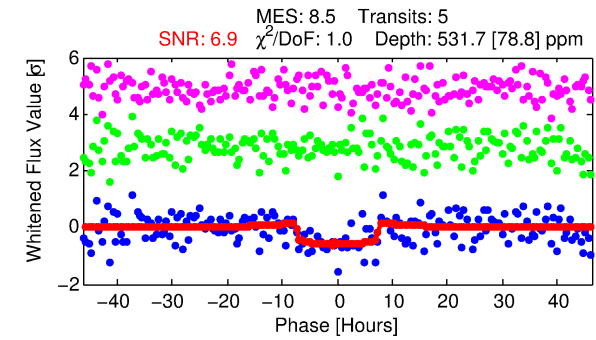
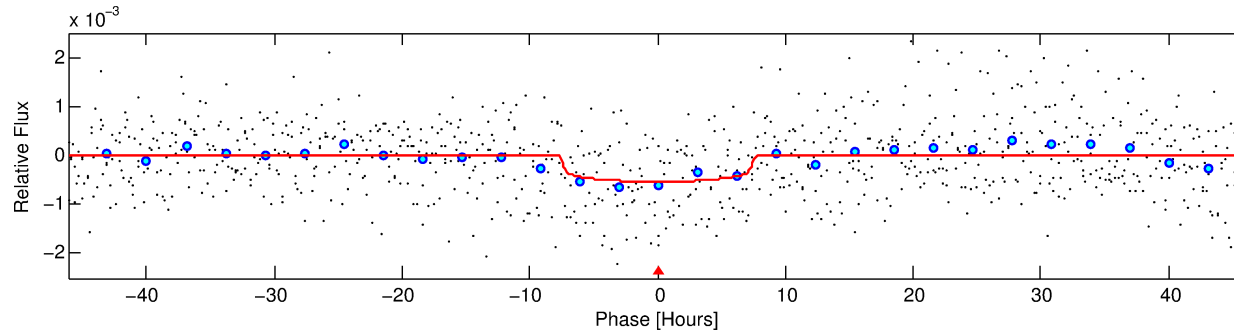
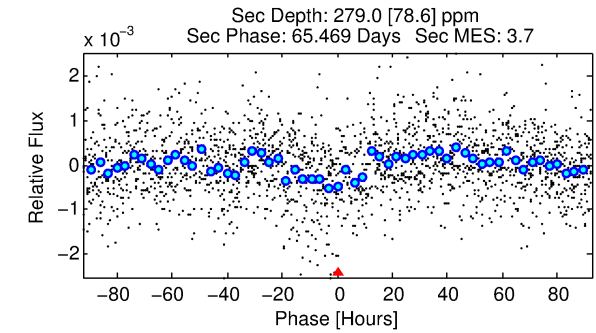
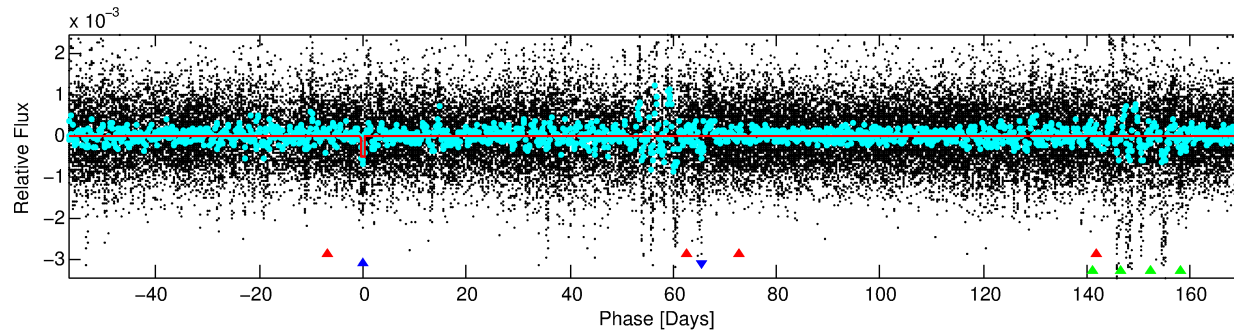
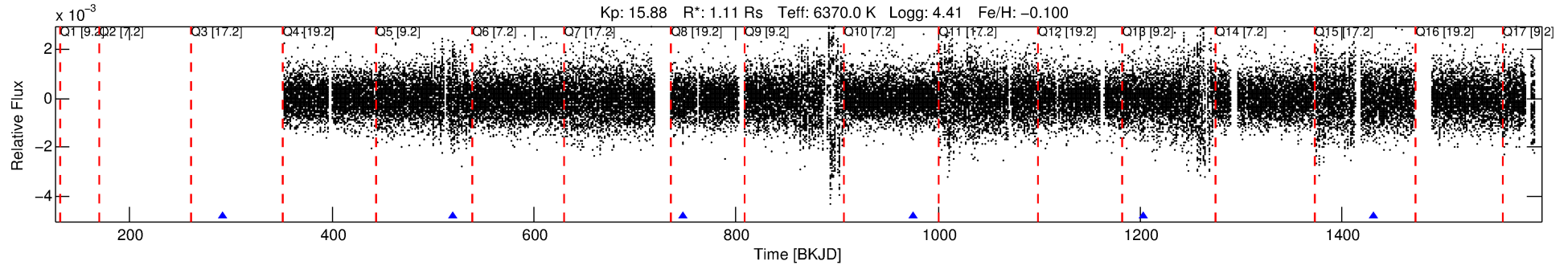
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006119914-02

No Significant Match Found

DV One-Page Summary

KIC: 6119914 Candidate: 2 of 3 Period: 227.964 d



DV Fit Results:

Period = 227.96374 [0.01136] d
Epoch = 291.3876 [0.0356] BKJD
Rp/R* = 0.0220 [0.0128]
a/R* = 97.02 [290.91]
b = 0.56 [3.74]
Seff = 3.09 [1.11]
Teq = 338 [30] K
Rp = 2.65 [1.72] Re
a = 0.7646 [0.1768] AU
Ag = 12777.78 [15877.48] [0.80σ]
Teffp = 5556 [1679] K [3.11σ]

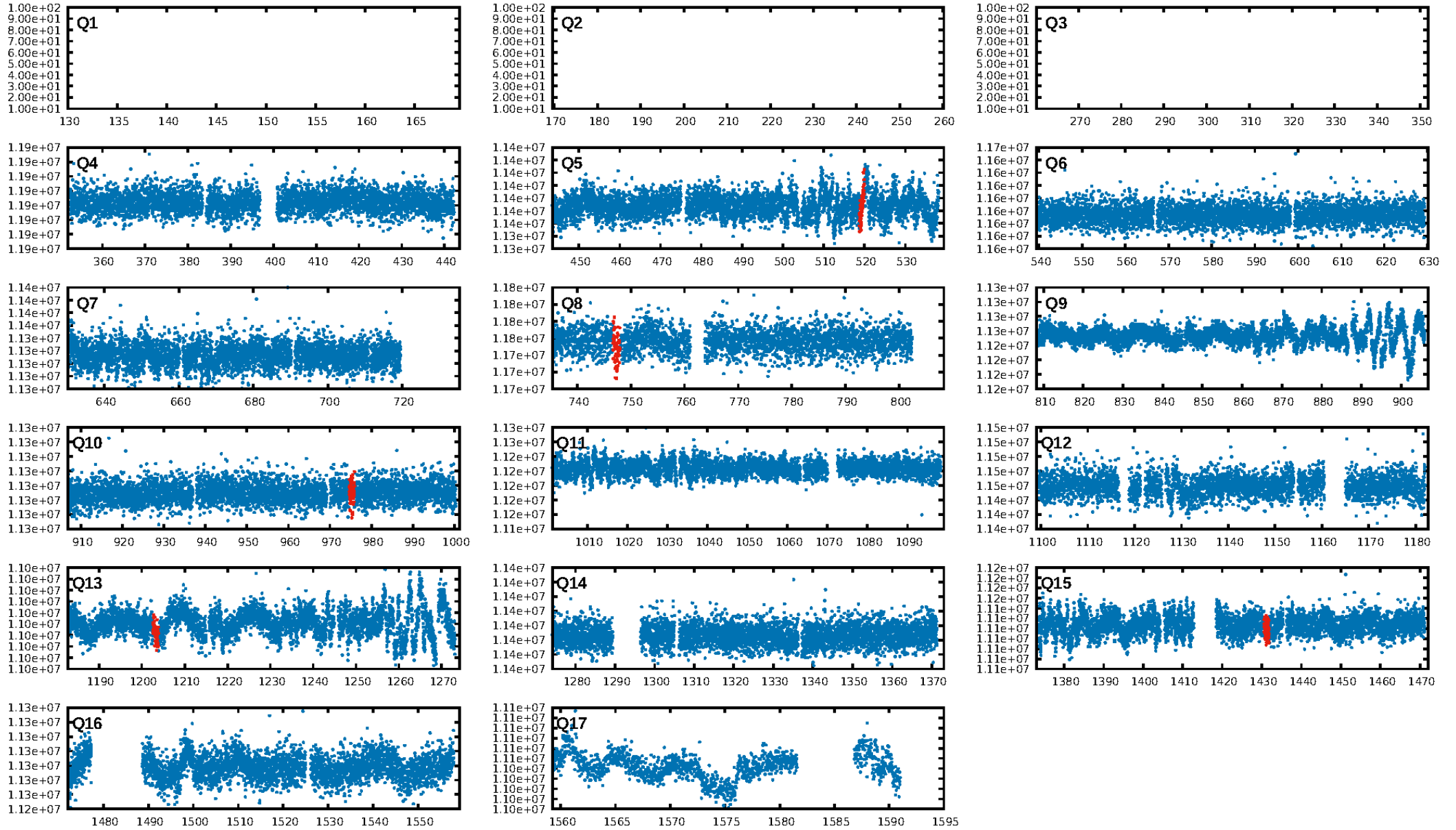
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [152.10σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 9.00e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.5016
Centroid-sig: 1.0%
Centroid-so: 4.229 arcsec [1.86σ]
OotOffset-rm: 2.470 arcsec [6.11σ]
KicOffset-rm: 2.503 arcsec [3.93σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [5/5]

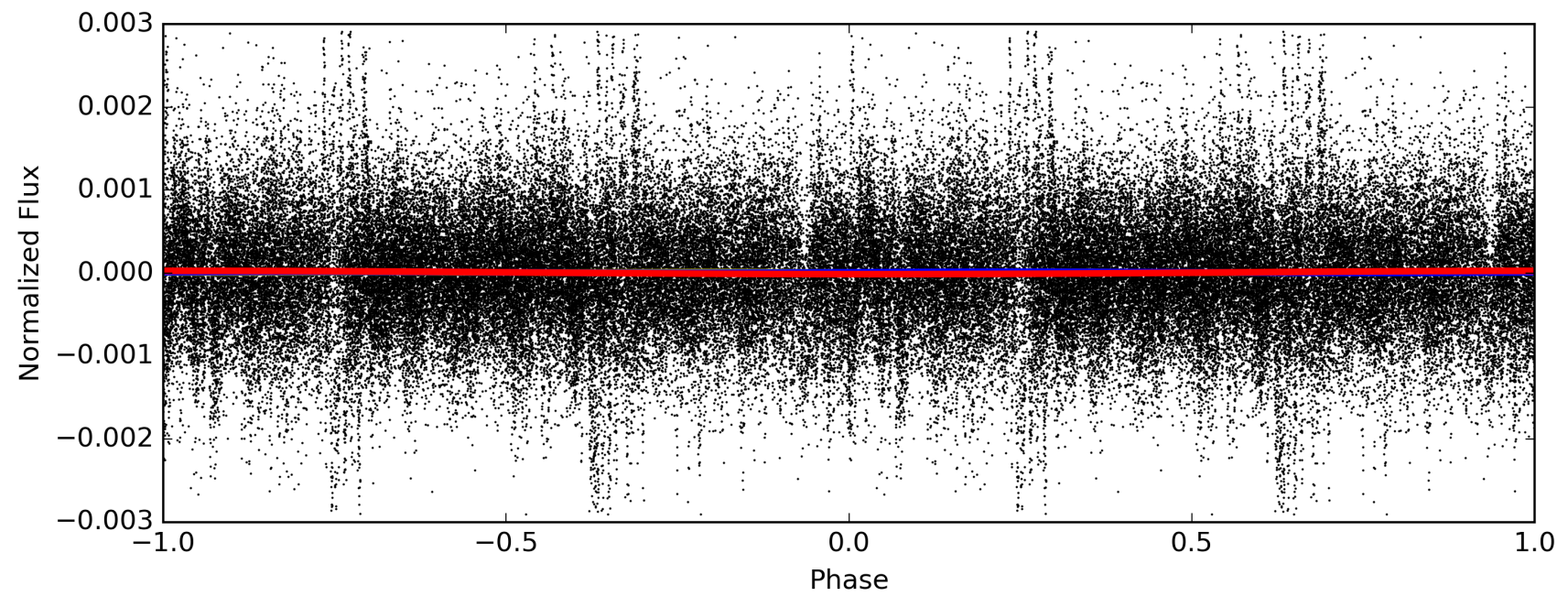
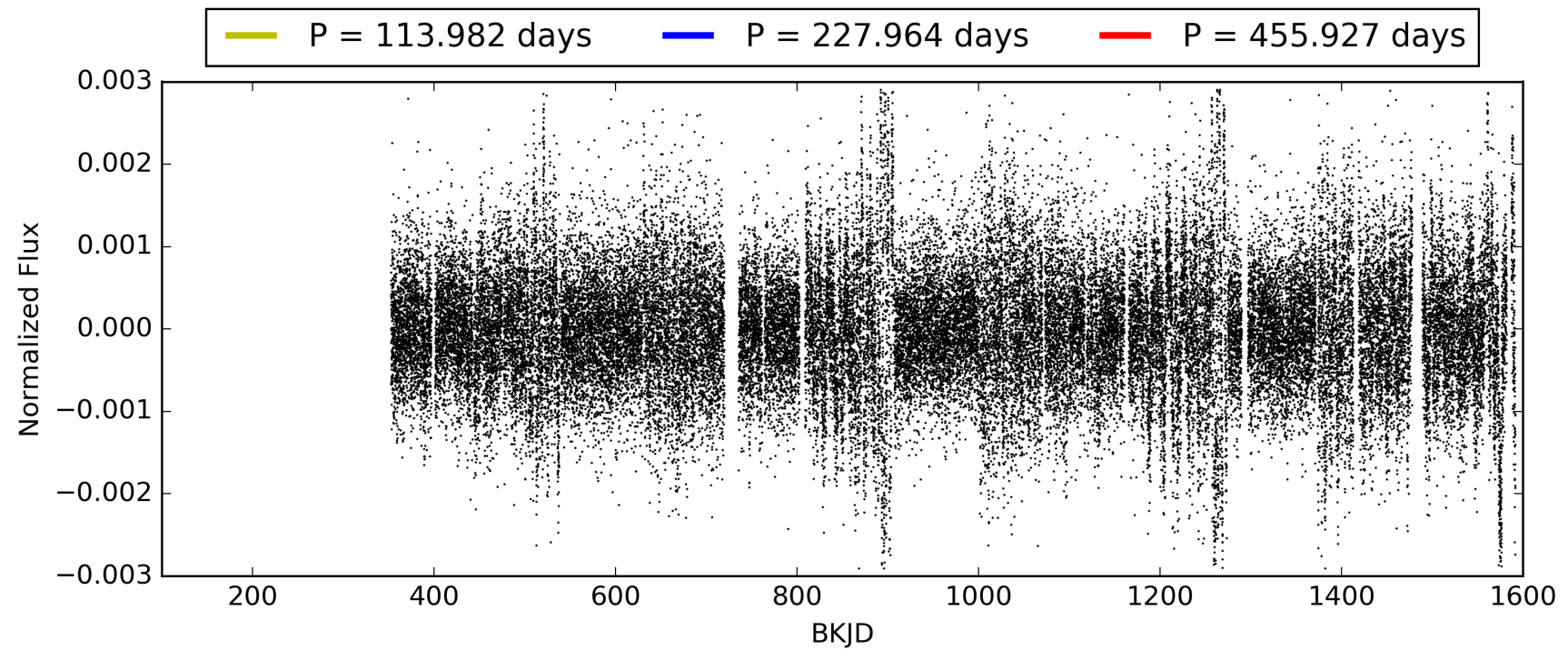
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:50:03 Z

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

TCE 006119914-02, PDC Light Curves

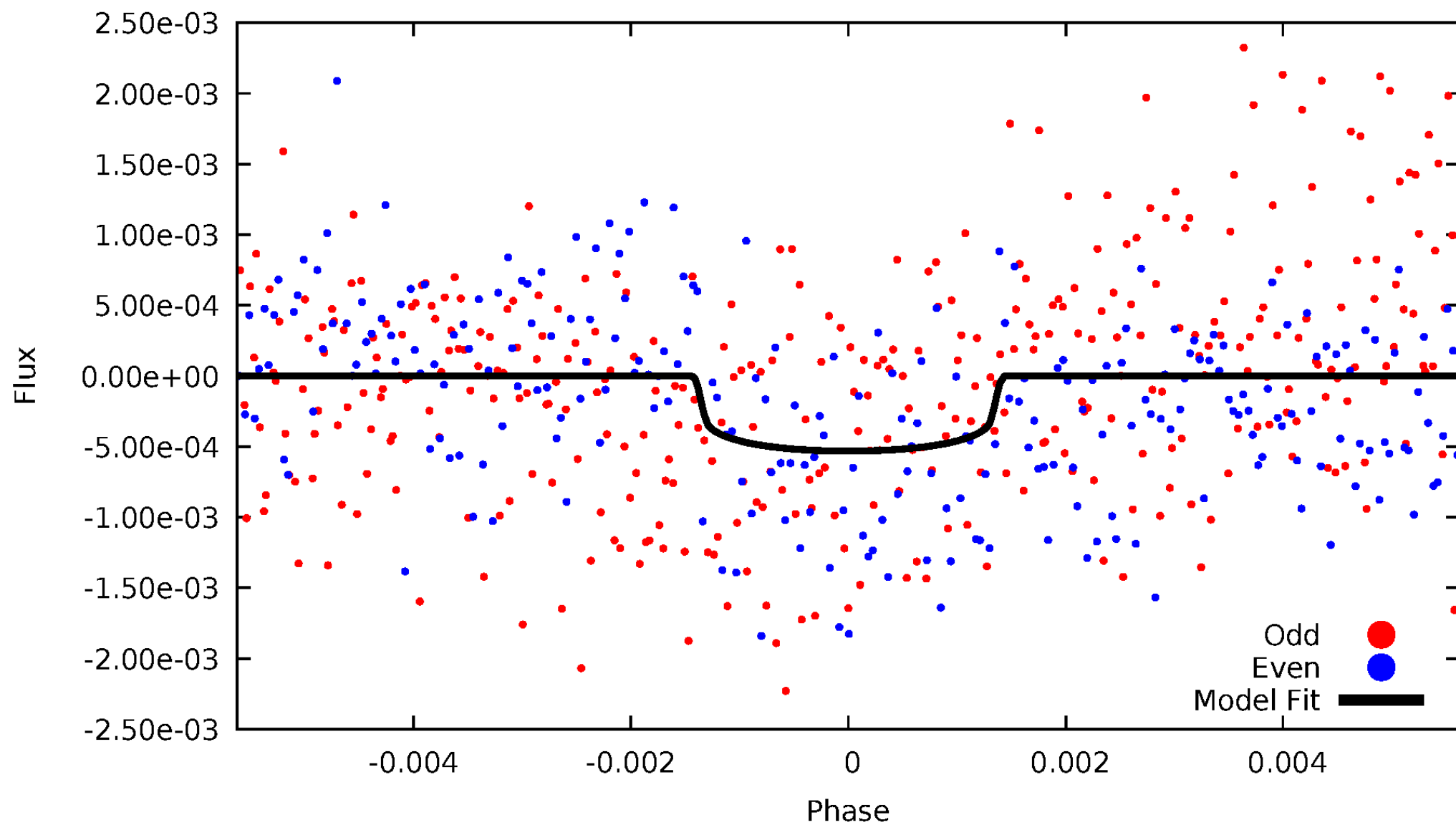


TCE 006119914-02



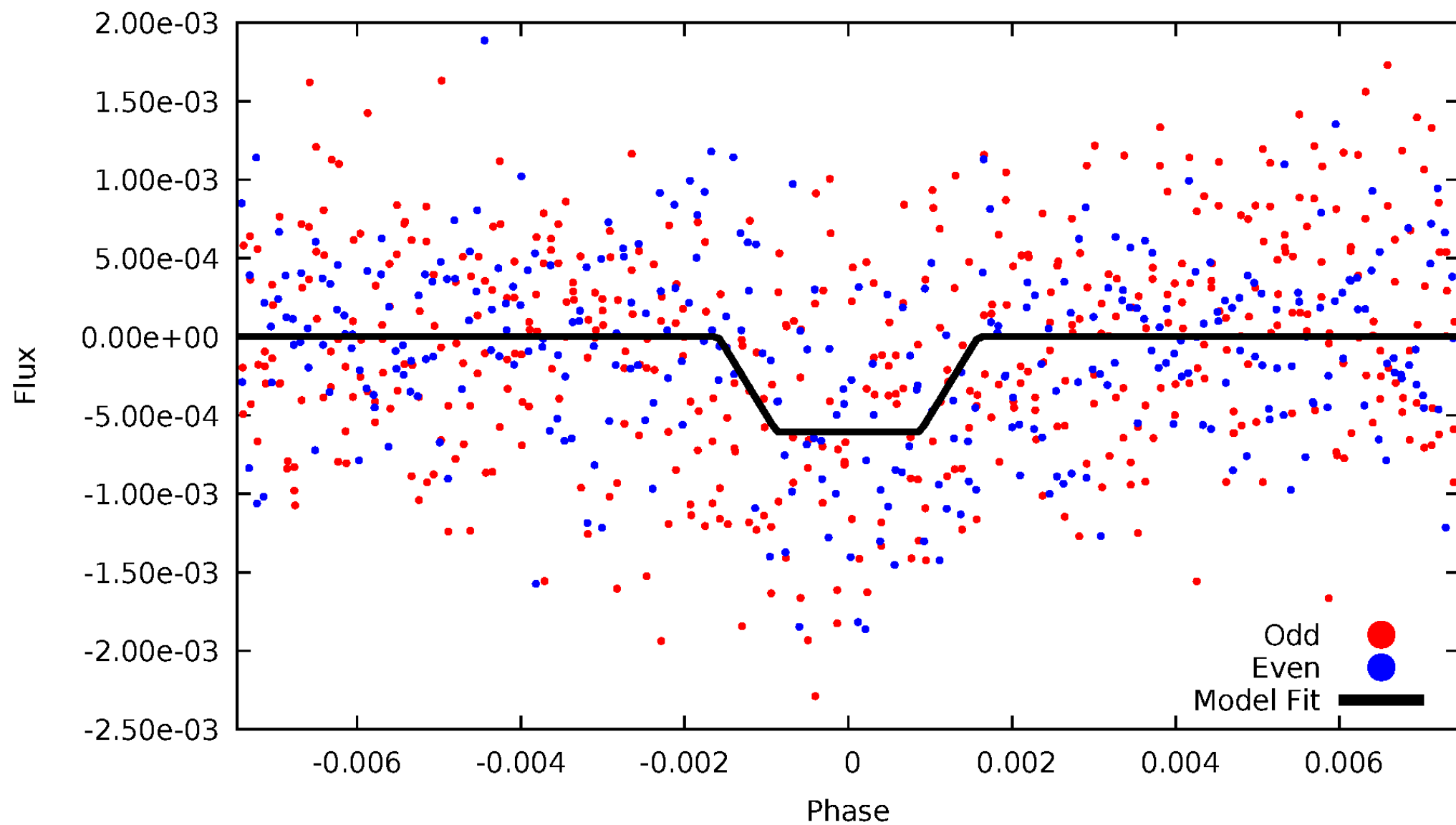
DV Odd/Even

TCE 006119914-02



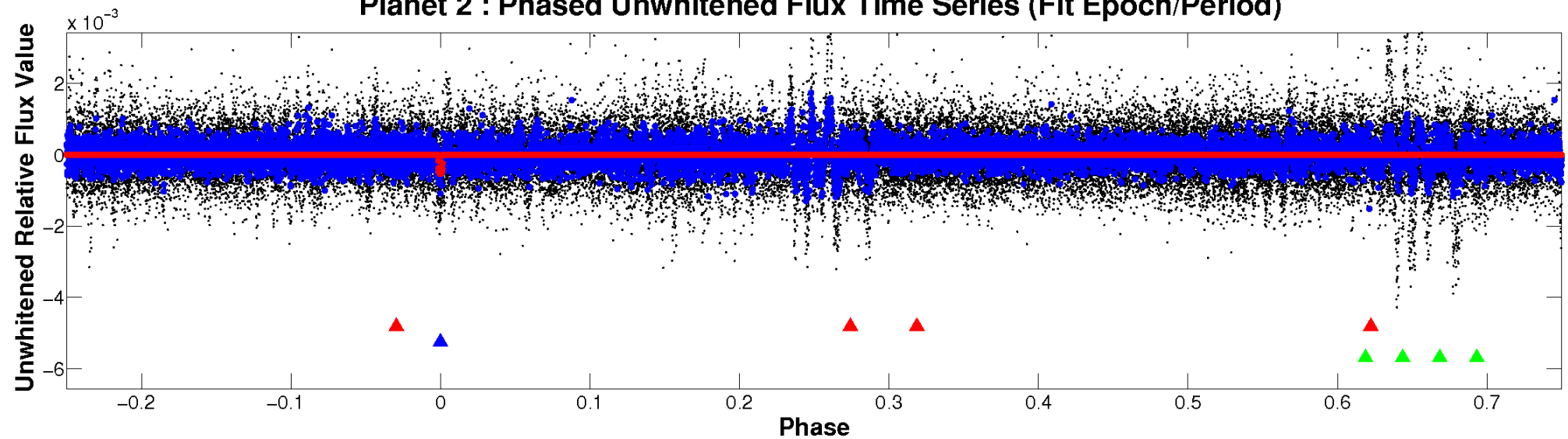
ALT Odd/Even

TCE 006119914-02

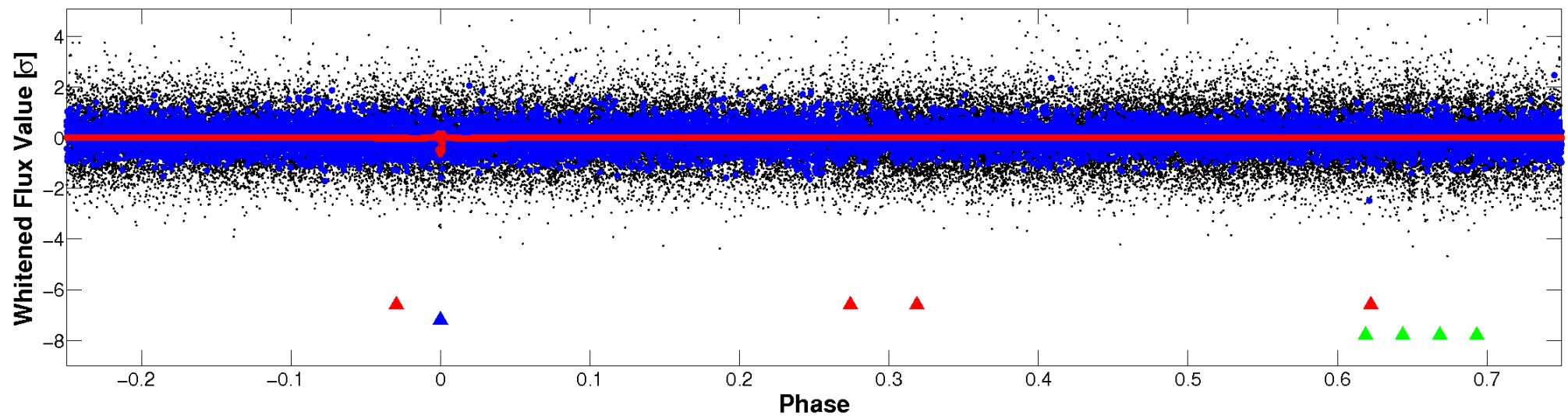


Non-Whitened Vs. Whitened Light Curve

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

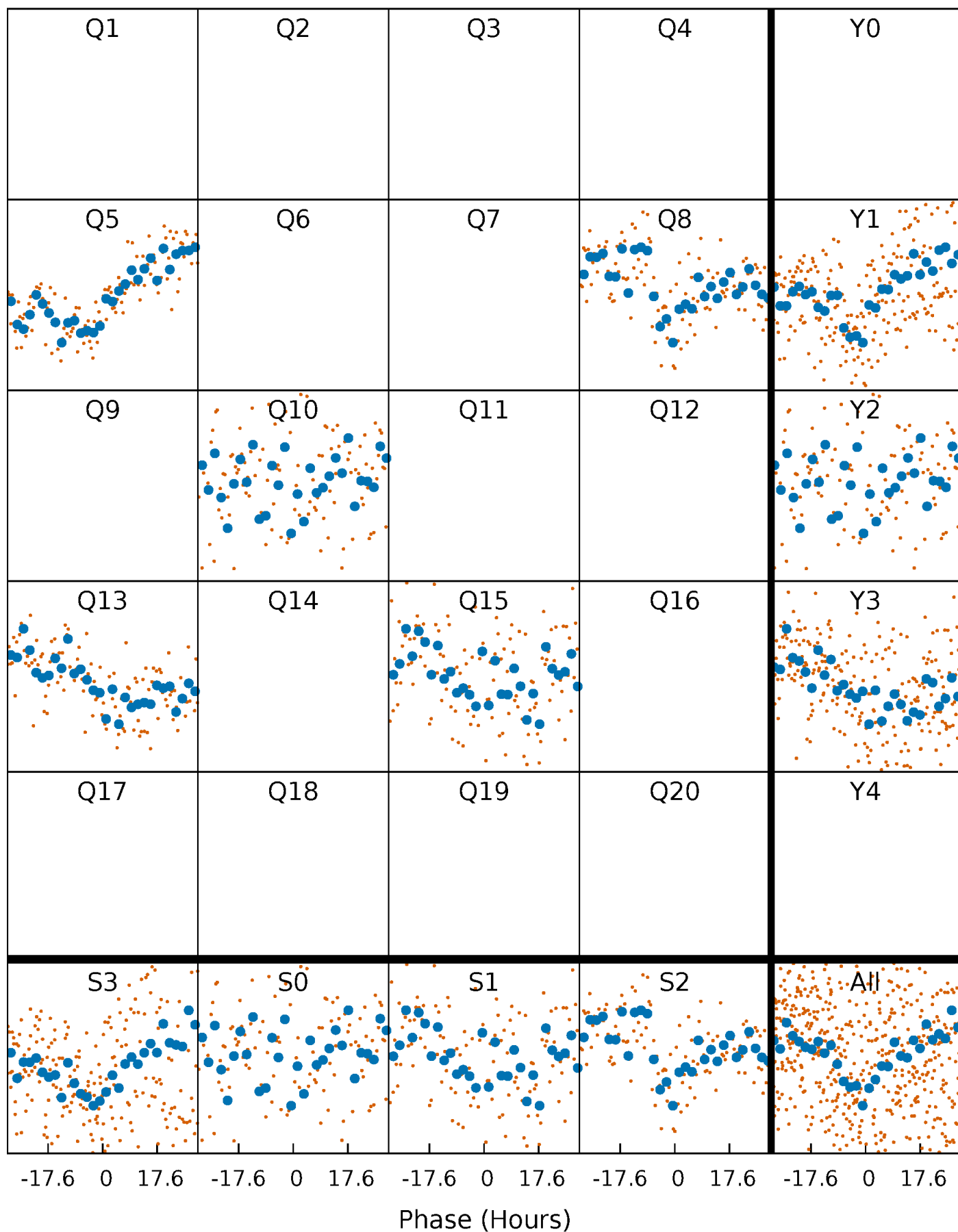


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 006119914-02 P=227.963742 Days $T_0=291.387620$ (BKJD)



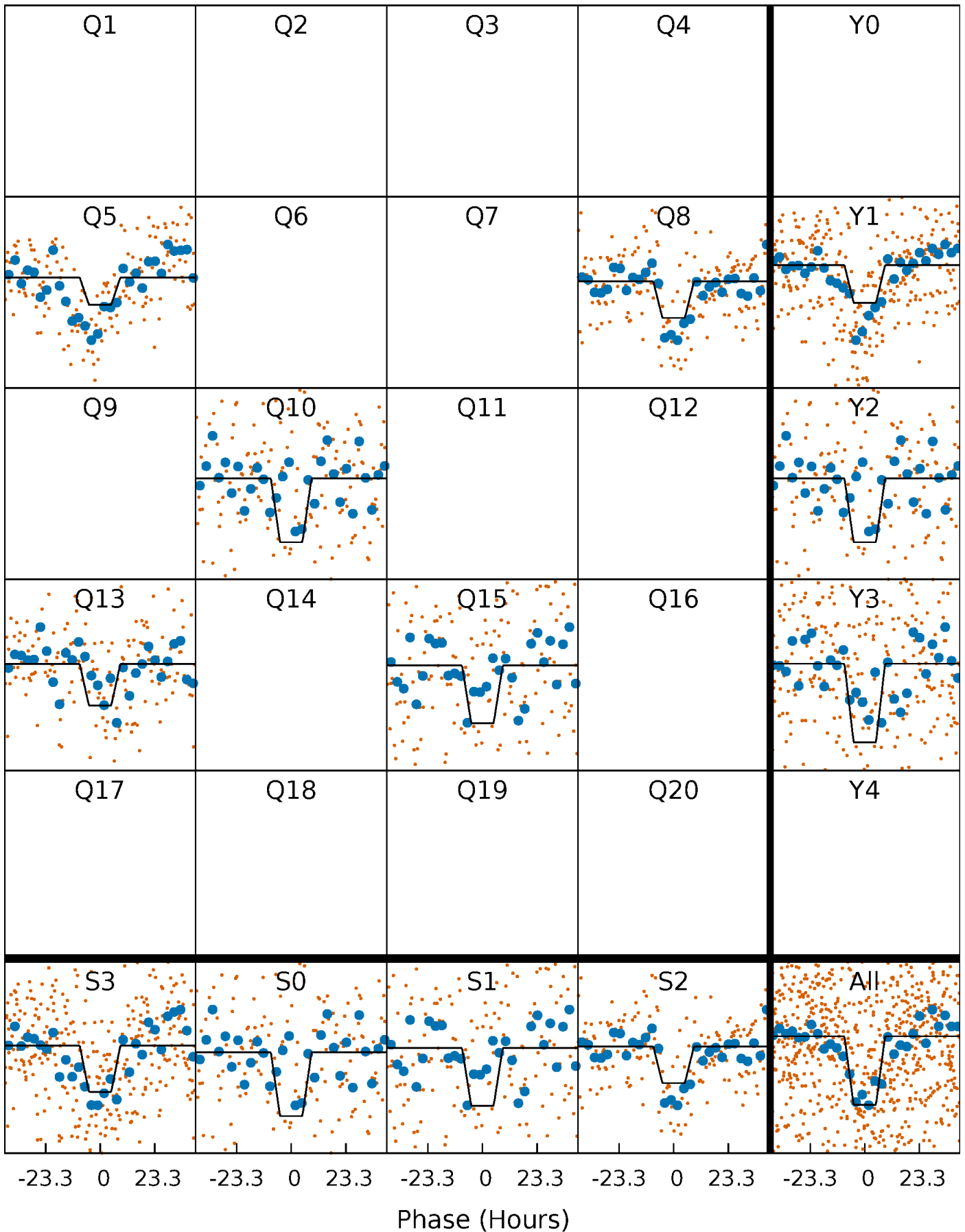
DV Quarter-Phased Transit Curves

TCE 006119914-02 P=227.963742 Days $T_0=291.387620$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

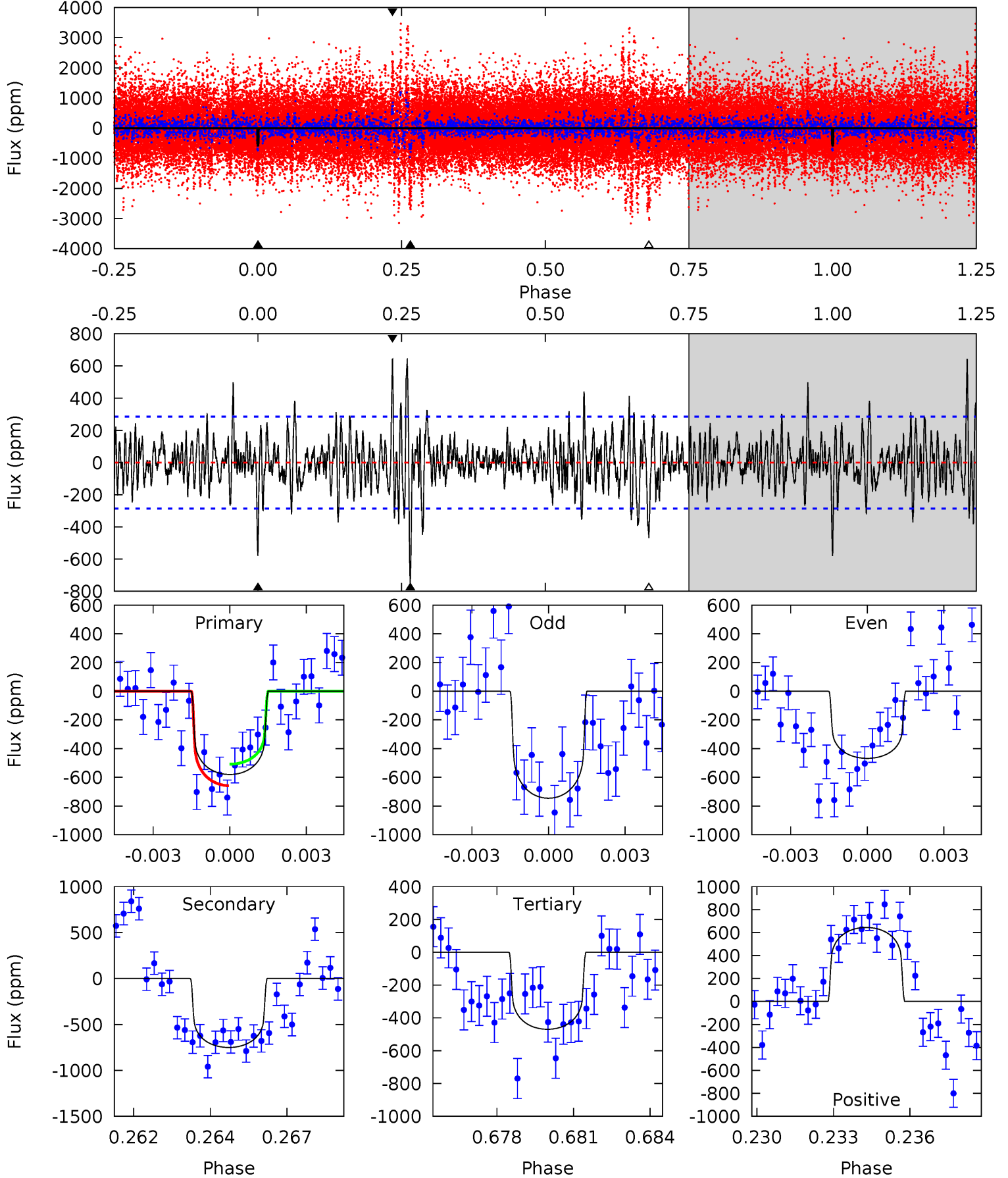
TCE 006119914-02 P=227.956795 Days $T_0=291.355696$ (BKJD)



DV Model-Shift Uniqueness Test

006119914-02, P = 227.963742 Days, E = 291.387620 Days

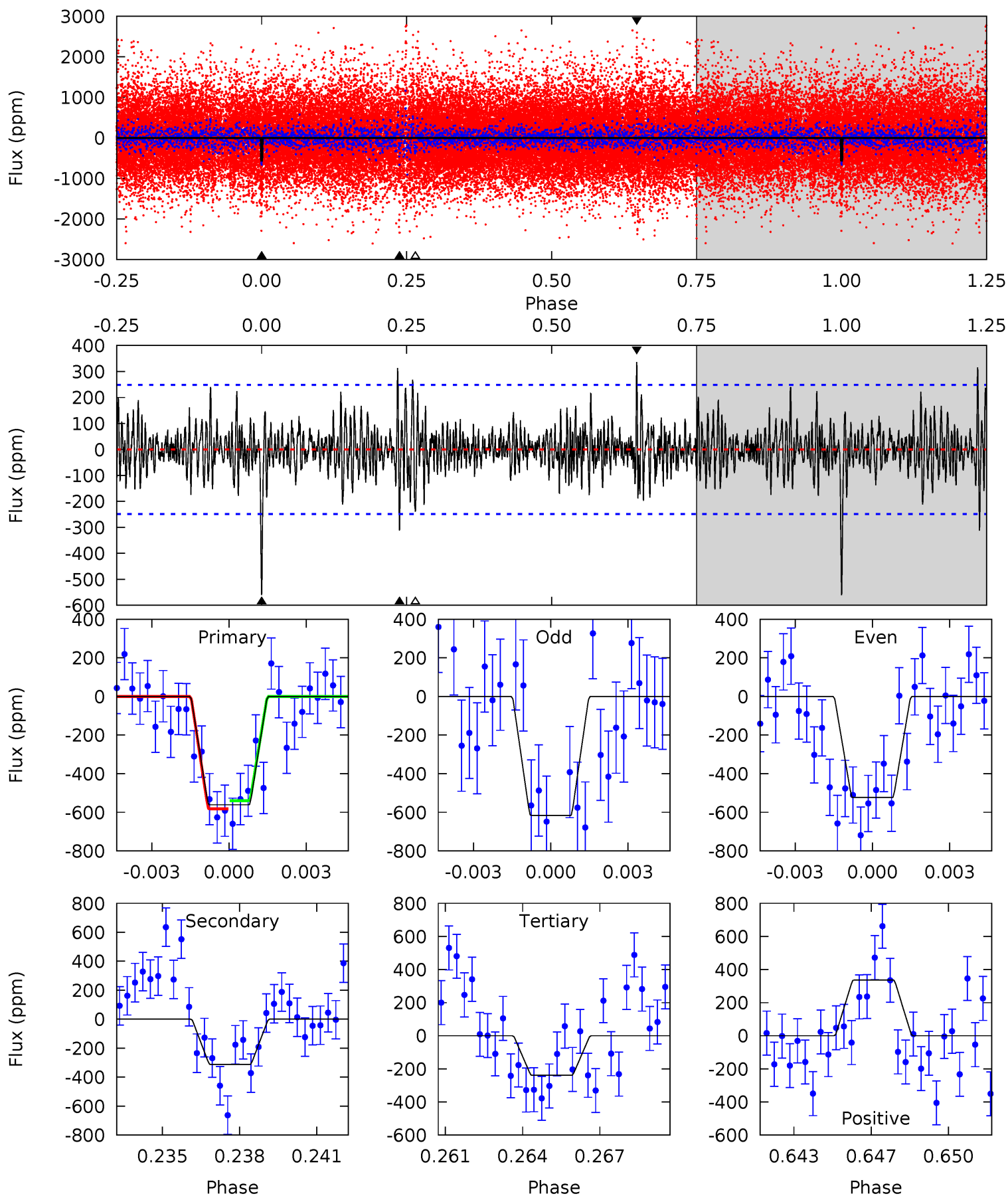
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	13.8	8.65	11.9	5.26	2.98	2.38	2.04	-1.18	5.18	1.96	2.51	0.95	0.46	1.39



Alt Model-Shift Uniqueness Test

006119914-02, P = 227.956795 Days, E = 291.355696 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	6.57	5.04	7.08	5.24	2.95	1.46	6.78	4.74	1.53	-0.51	0.97	1.54	0.37	0.45



Stellar Parameters For KIC 006119914

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6370^{+179}_{-246}	$4.410^{+0.058}_{-0.173}$	$-0.100^{+0.250}_{-0.300}$	$1.106^{+0.314}_{-0.134}$	$1.148^{+0.162}_{-0.146}$	$1.194^{+0.387}_{-0.578}$
	+3%/-4%	+1%/-4%	+250%/-300%	+28%/-12%	+14%/-13%	+32%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006119914-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-751 ± 54	$2.81^{+1.50}_{-1.46}$	481^{+29}_{-26}	7080^{+4341}_{-1389}	$30533^{+105187}_{-17410}$
Alt.	-312 ± 47	$3.08^{+1.61}_{-1.47}$	478^{+32}_{-24}	5353^{+2298}_{-800}	10237^{+28391}_{-5837}

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 $A_{obs} \gg 1.0$

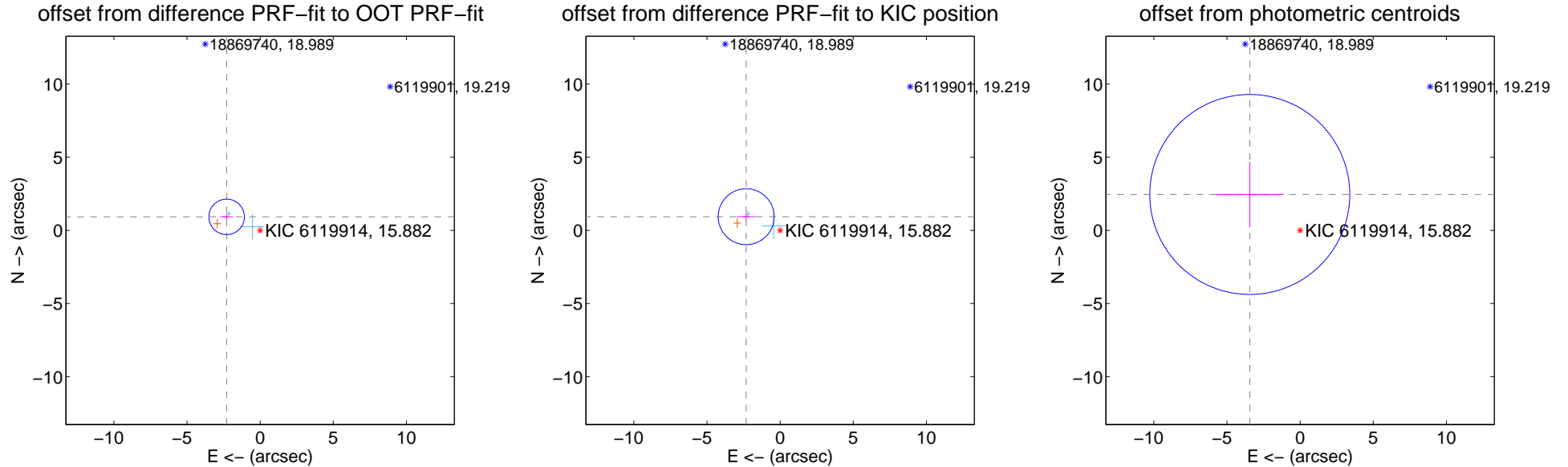
DV Centroid Data

Supplemental centroid analysis for 006119914-02. Kepler magnitude: 15.88. Transit SNR 6.88

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.470 \pm 0.404	6.11	2.291 \pm 0.441	0.924 \pm 0.167
PRF-fit source offset from KIC position	2.503 \pm 0.637	3.93	2.322 \pm 0.645	0.935 \pm 0.228
photometric centroid source offset	4.23 \pm 2.28	1.86	3.44 \pm 2.30	2.46 \pm 2.24

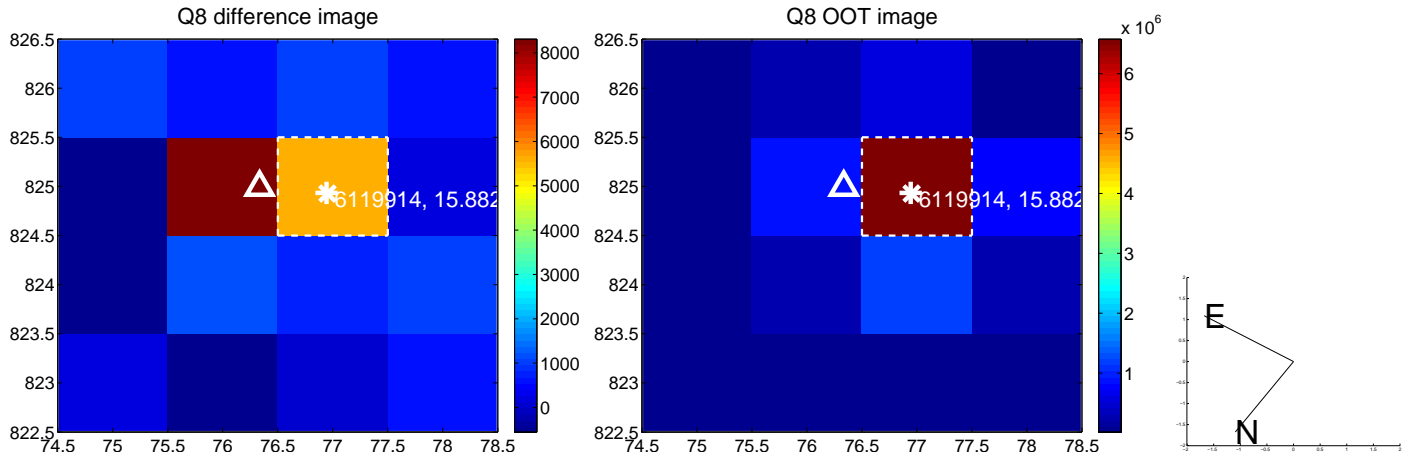
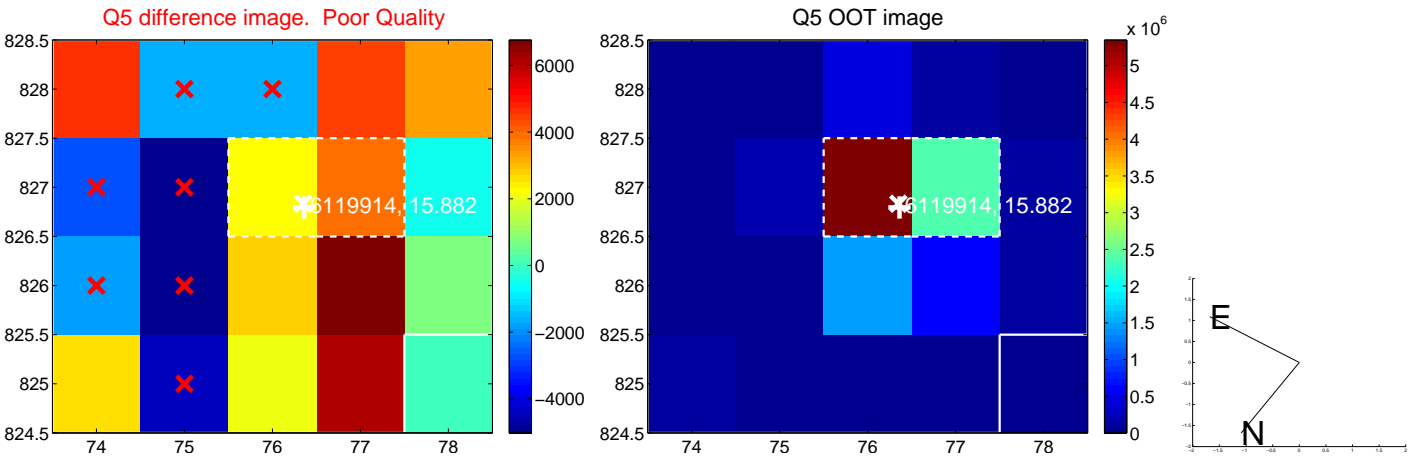


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

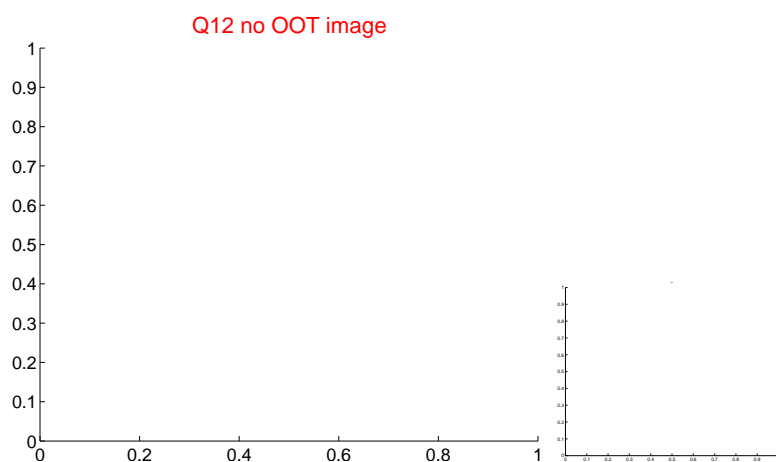
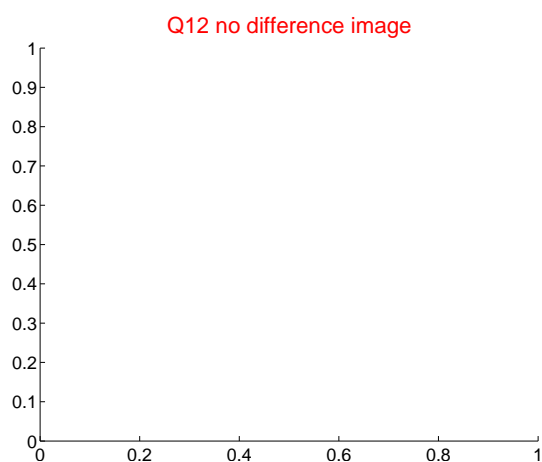
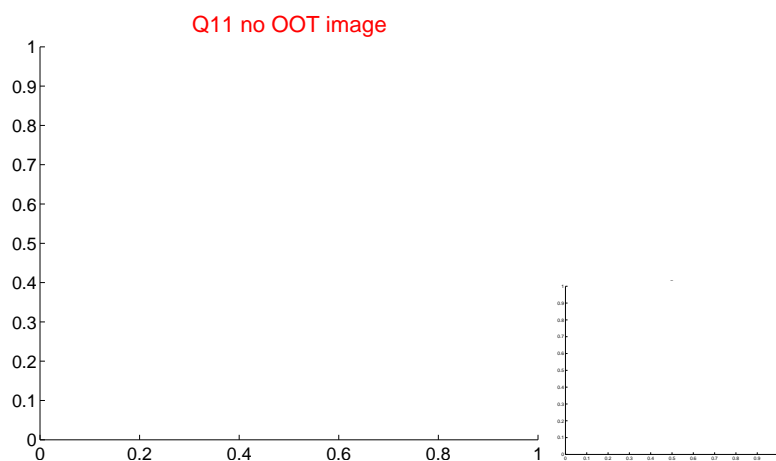
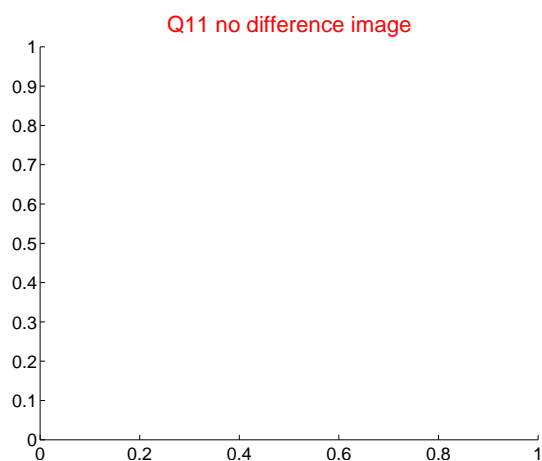
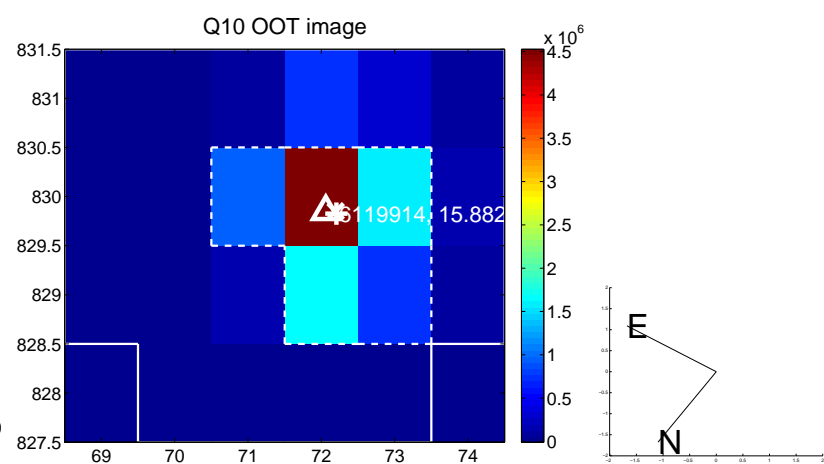
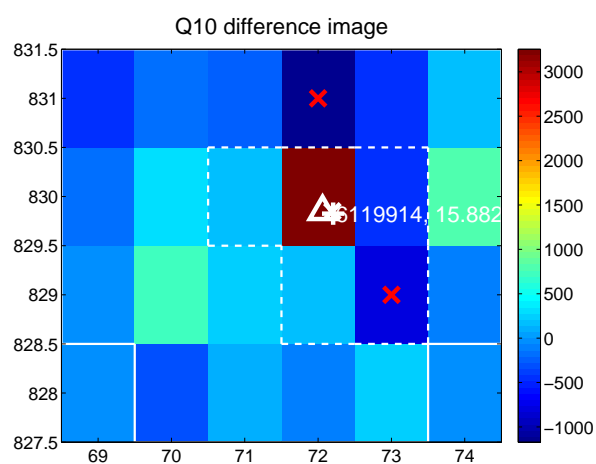
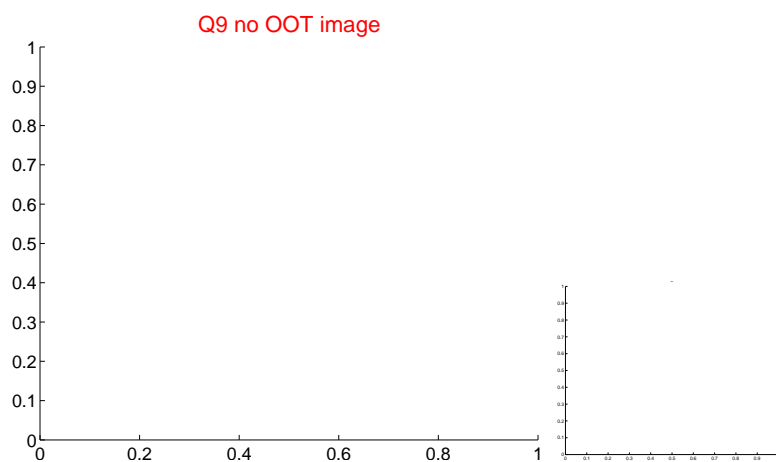
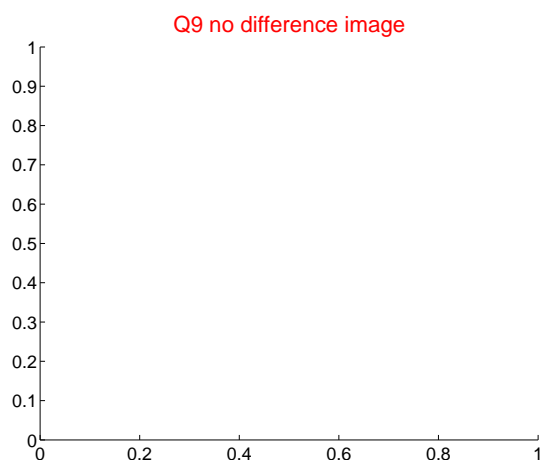
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



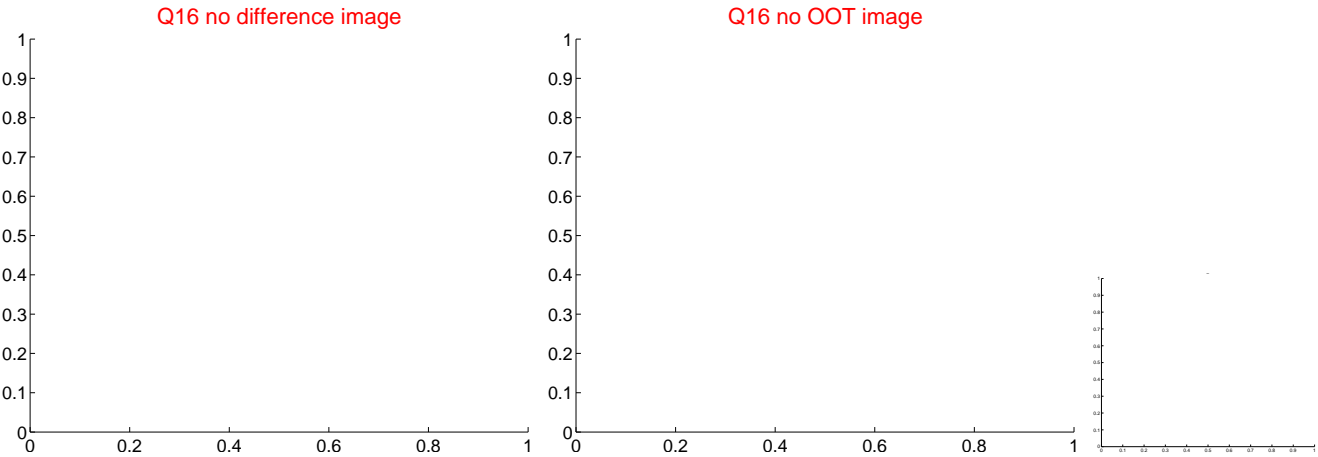
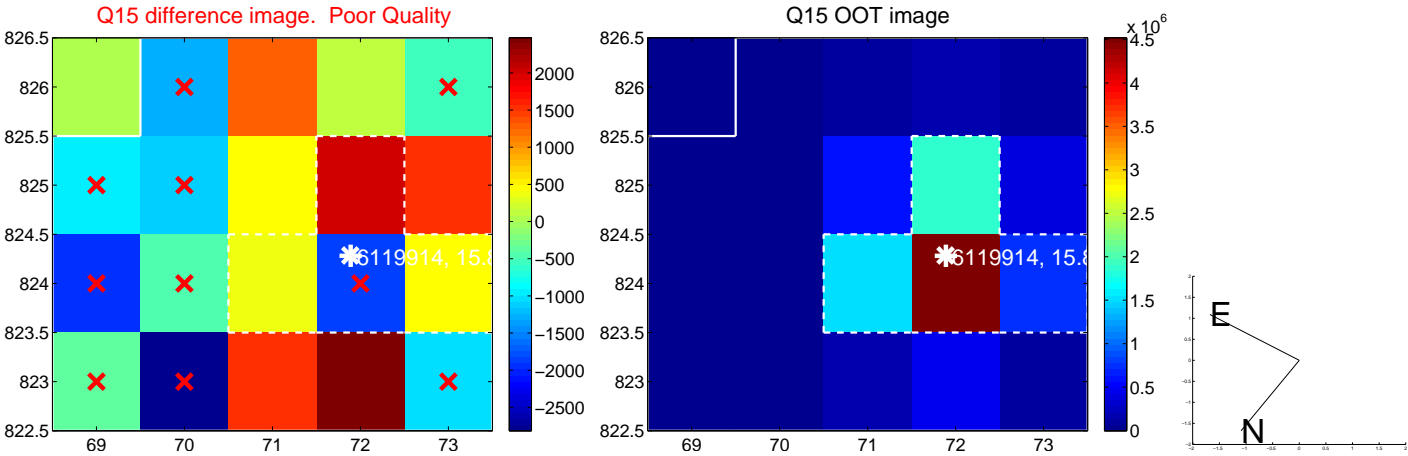
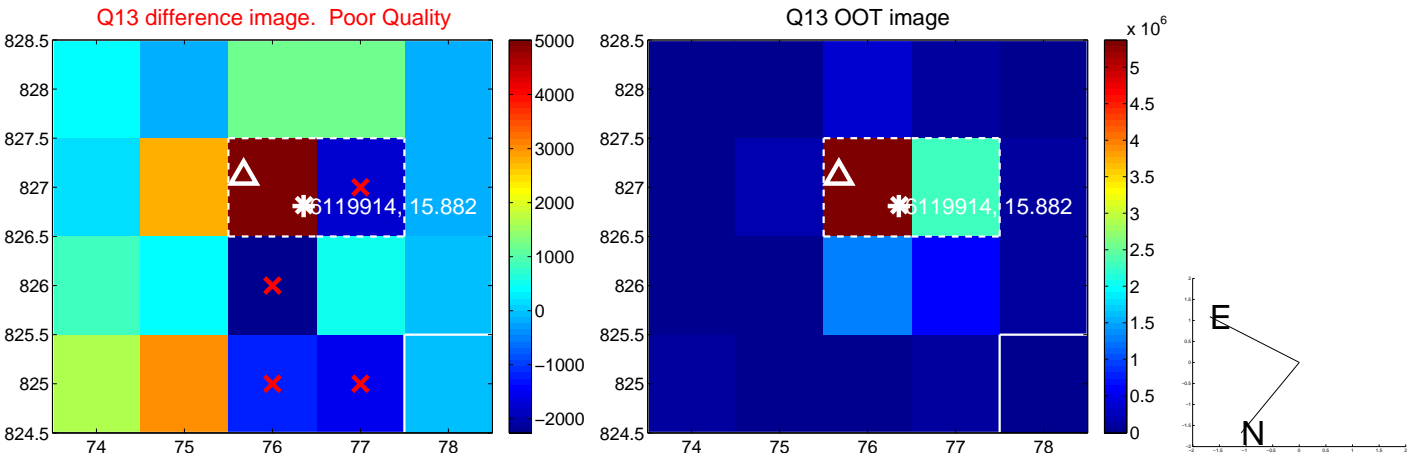
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



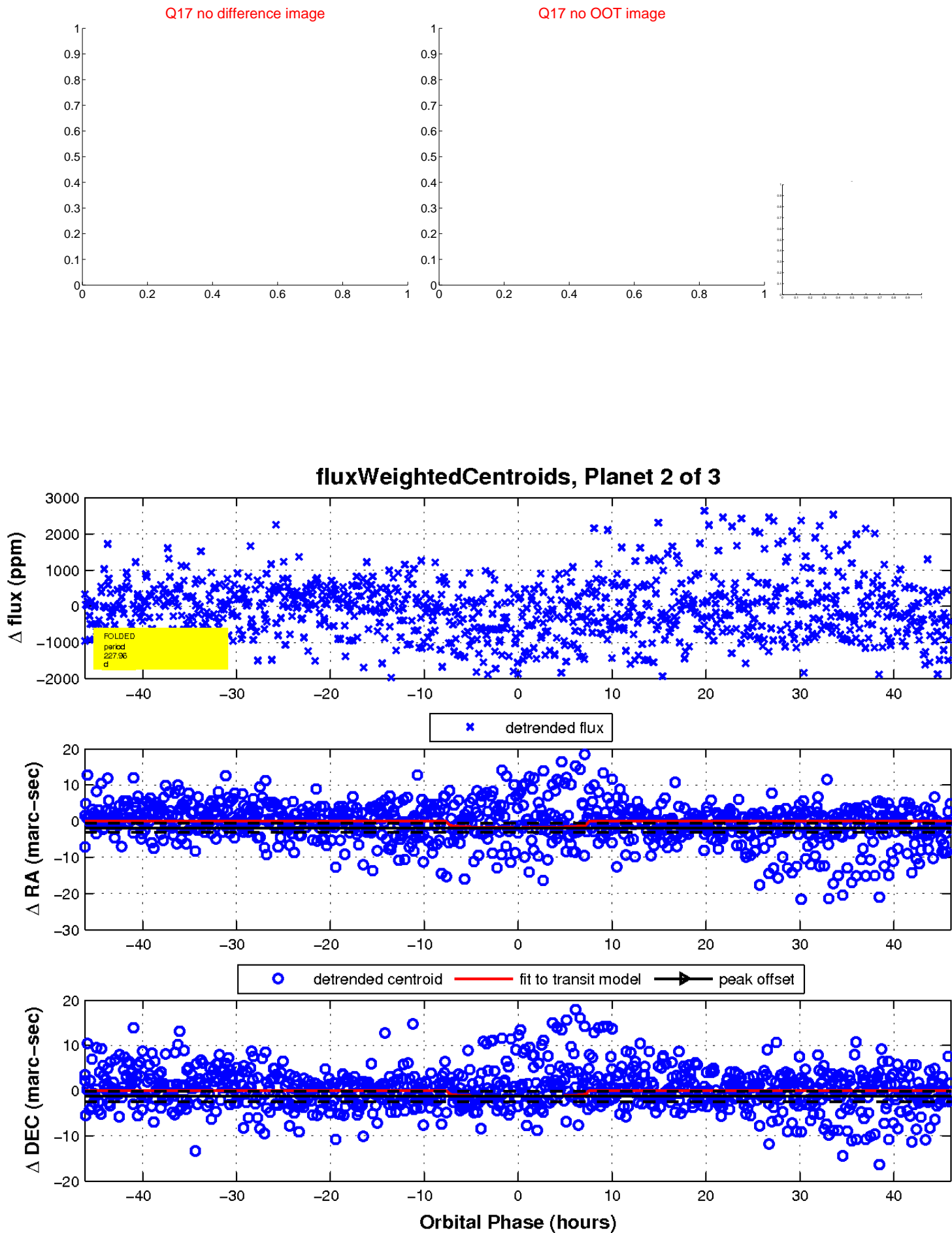
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

