

KIC 006034120

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})
006034120-01	OBS	No	366.703628	195.179606	1435.5	4.219	14.8	9.0	0.78	5606	3.12	0.60
006034120-02	OBS	No	480.083856	543.859745	891.3	4.820	13.9	5.7	0.78	5606	2.50	0.42
006034120-03	OBS	No	311.415136	384.202604	1115.4	3.850	11.4	7.7	0.78	5606	2.86	0.74
006034120-04	OBS	No	610.909074	159.363857	880.9	3.058	11.8	5.4	0.78	5606	2.47	0.30
006034120-05	OBS	No	469.774356	459.953226	801.1	15.000	14.7	-1.0	0.78	5606	2.20	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034120-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006034120-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

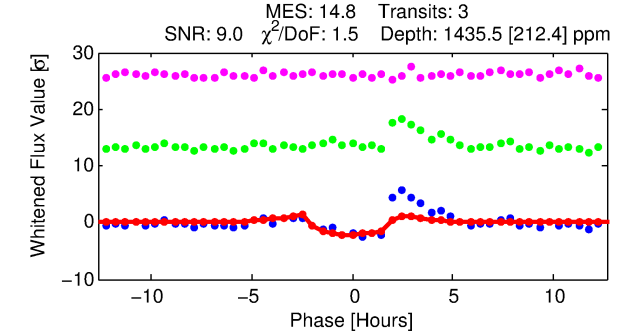
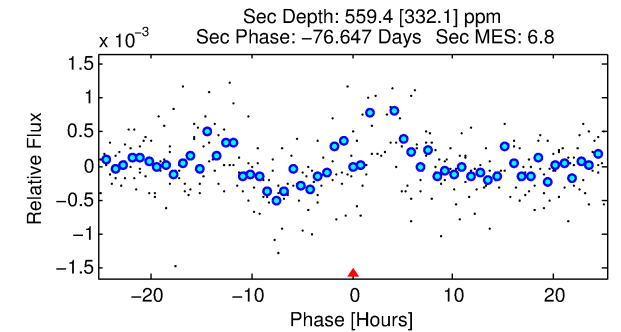
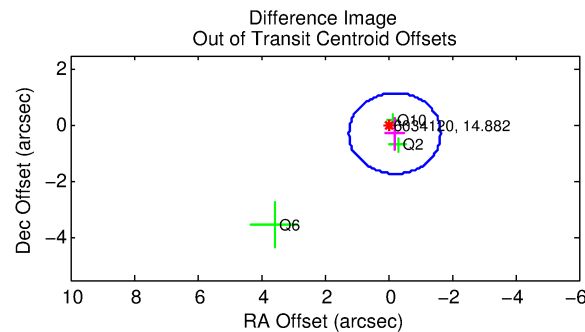
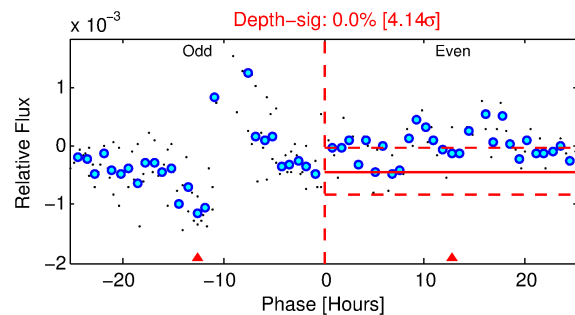
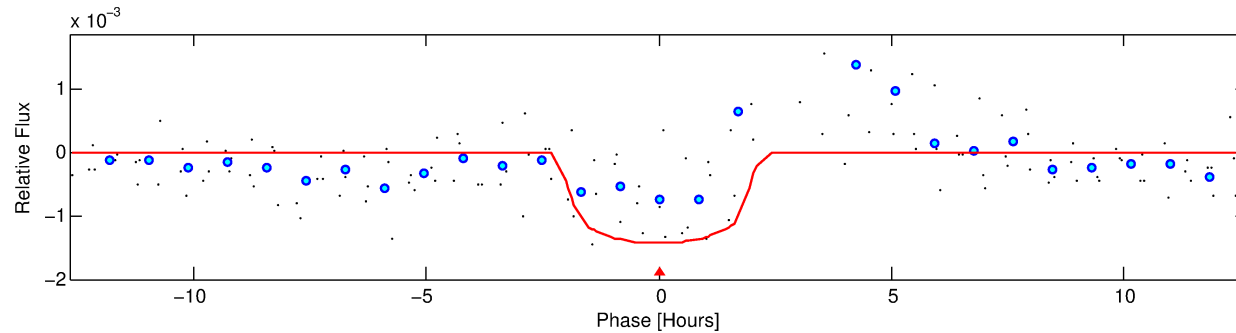
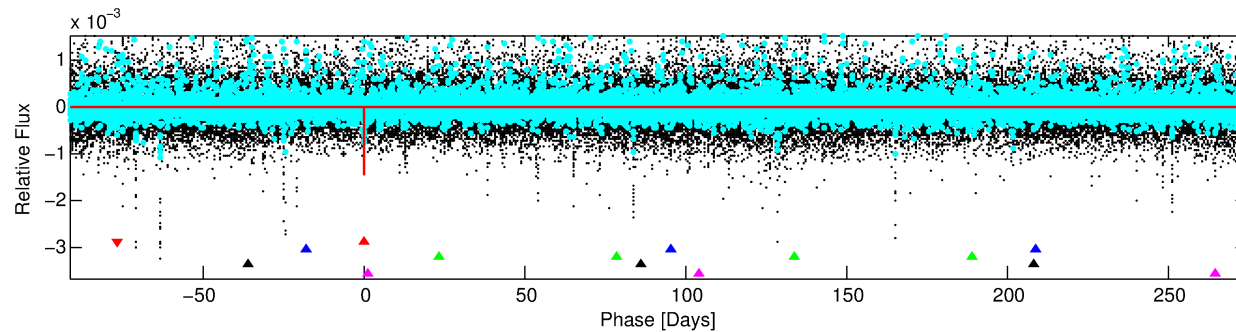
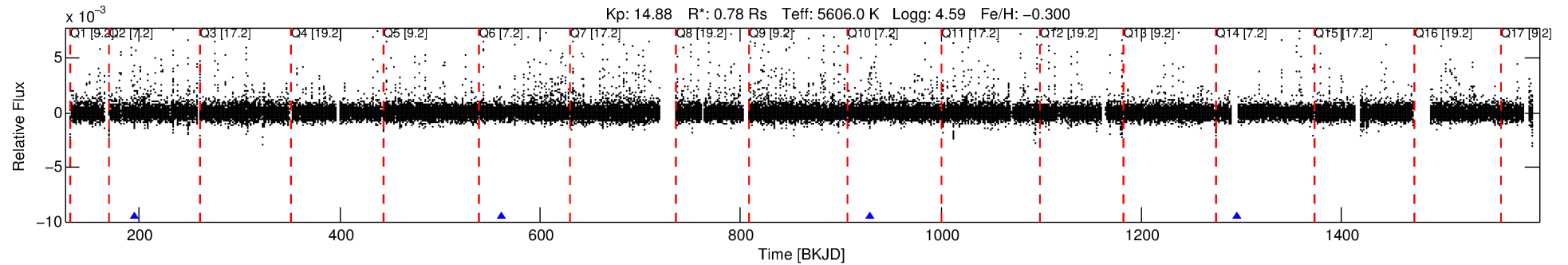
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034120-01

No Significant Match Found

DV One-Page Summary

KIC: 6034120 Candidate: 1 of 5 Period: 366.704 d



DV Fit Results:

Period = 366.70363 [0.00552] d
Epoch = 195.1796 [0.0065] BKJD
Rp/R* = 0.0364 [0.0718]
a/R* = 542.95 [4619.79]
b = 0.64 [8.04]
Seff = 0.60 [0.18]
Teq = 224 [17] K
Rp = 3.12 [6.18] Re
a = 0.9553 [0.1851] AU
Ag = 28899.40 [115393.24] [0.25 σ]
Teffp = 4517 [4499] K [0.95 σ]

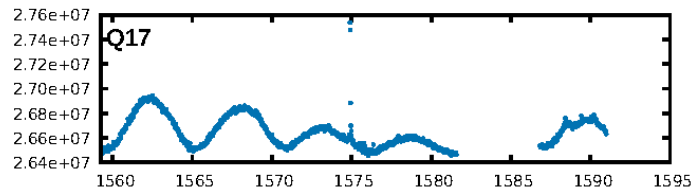
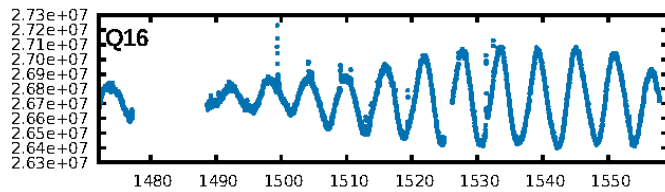
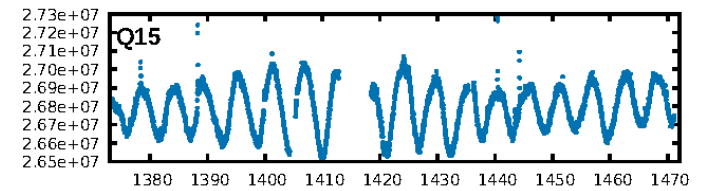
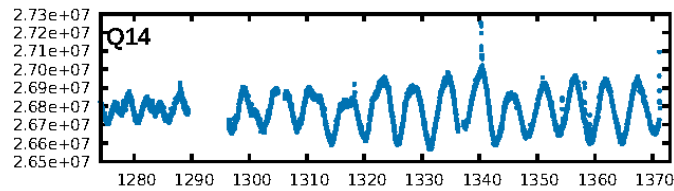
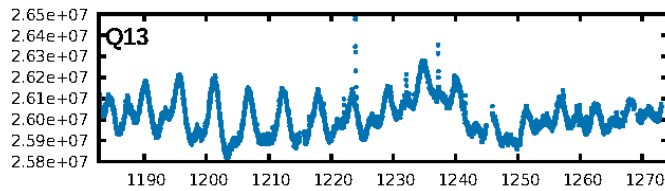
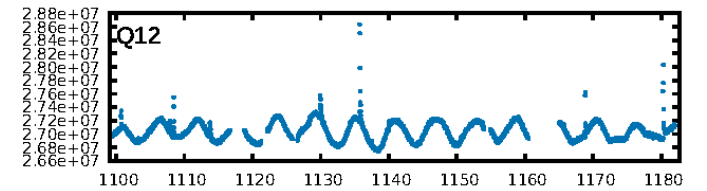
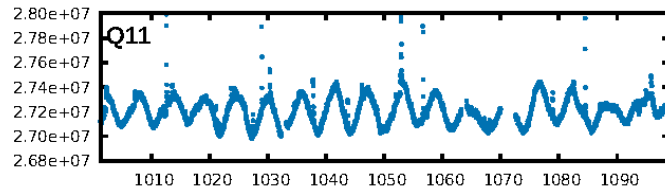
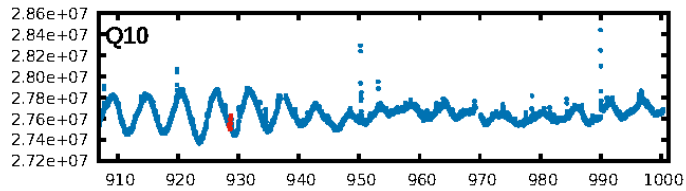
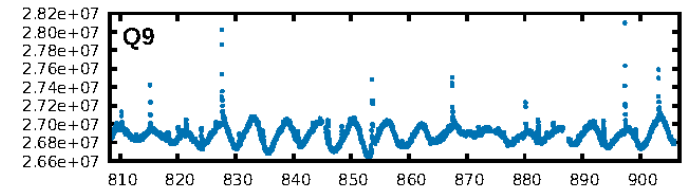
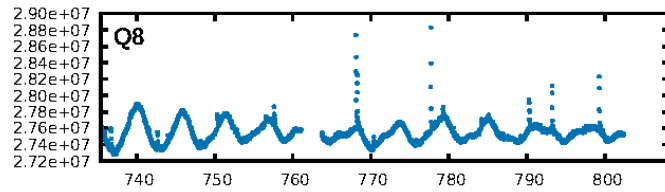
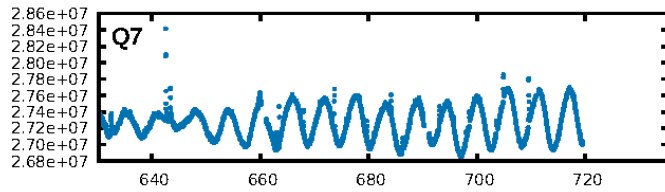
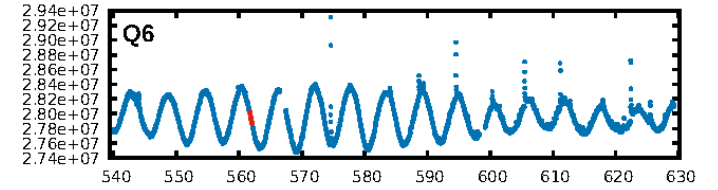
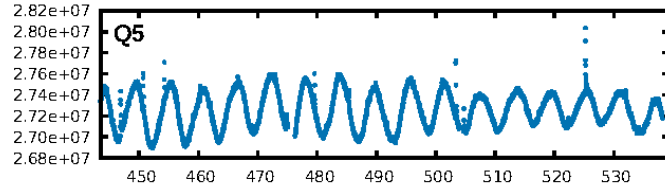
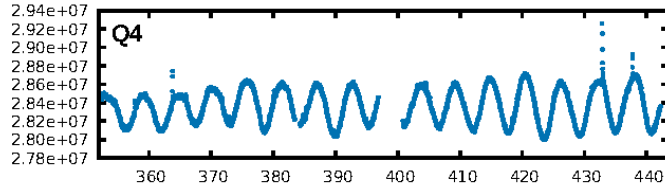
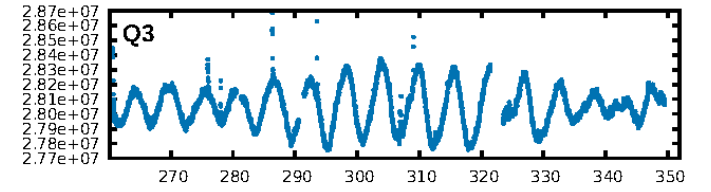
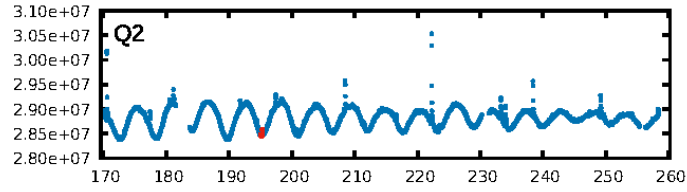
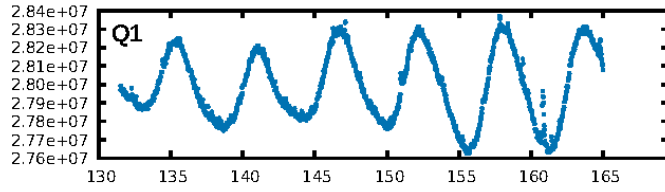
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [232.32 σ]
LongPeriod-sig: 100.0% [158.75 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 4.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9576
Centroid-sig: 16.8%
Centroid-so: 0.921 arcsec [1.14 σ]
OotOffset-rm: 0.345 arcsec [0.72 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 0.339 arcsec [0.68 σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

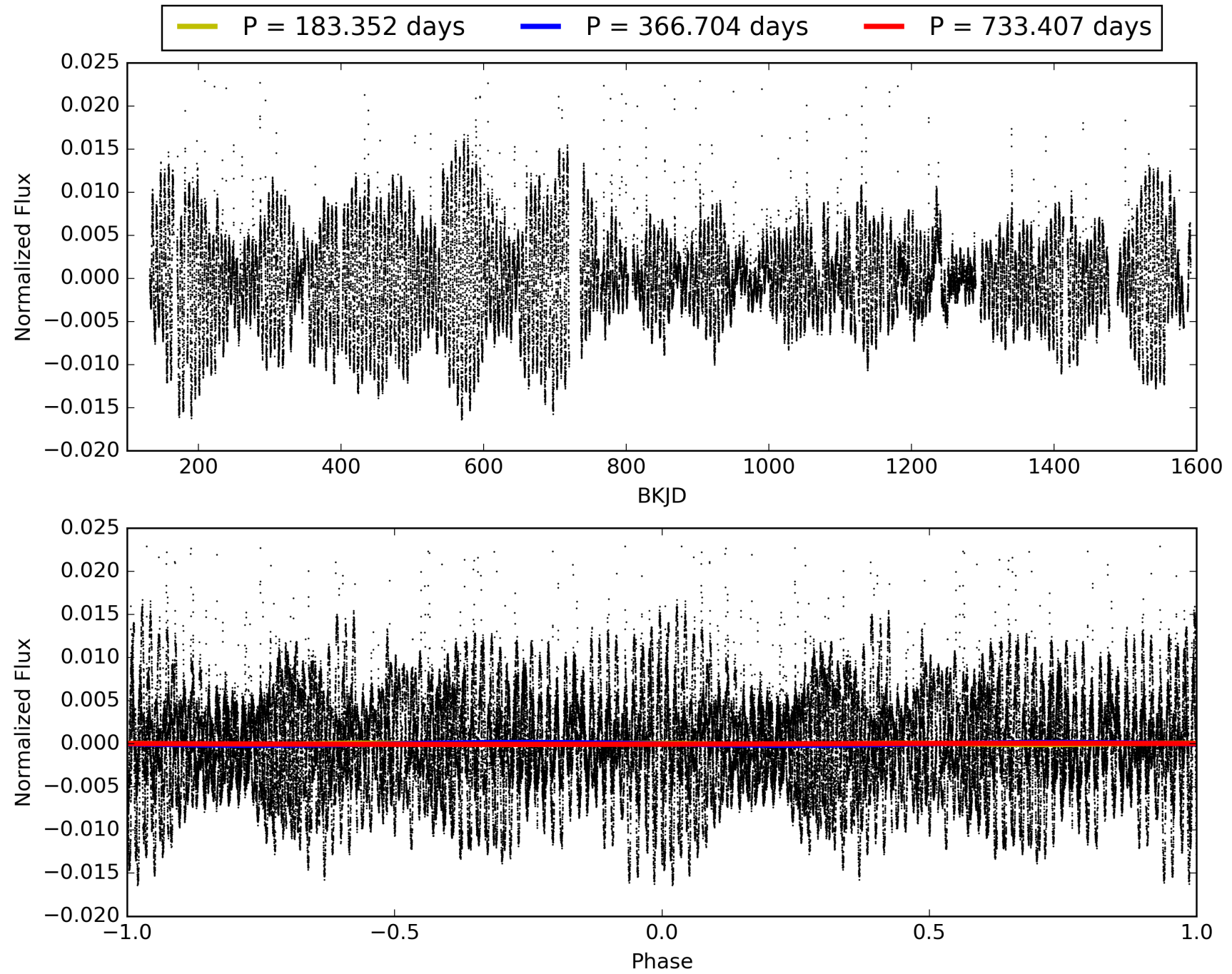
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:50:11 Z

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

TCE 006034120-01, PDC Light Curves

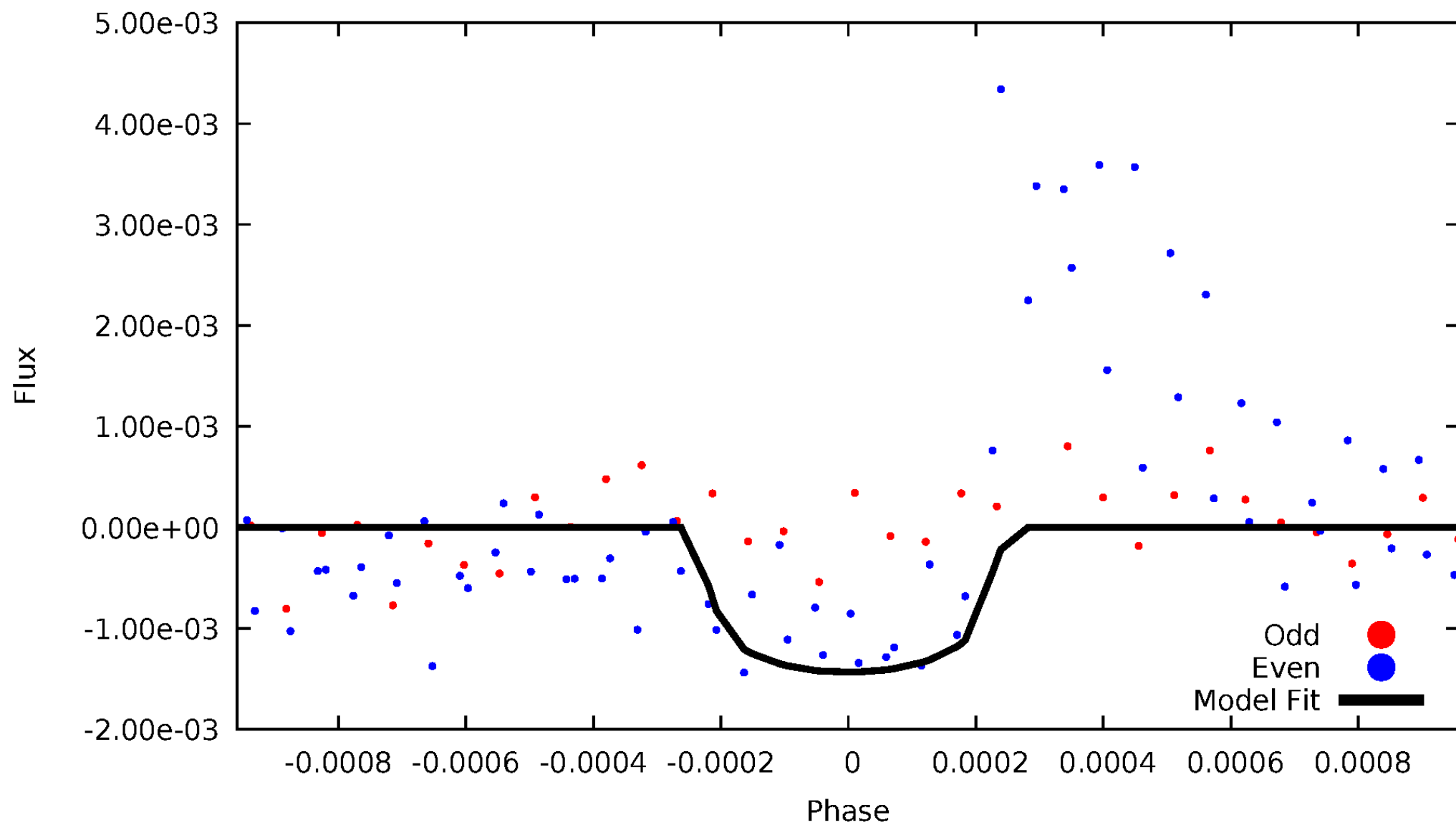


TCE 006034120-01



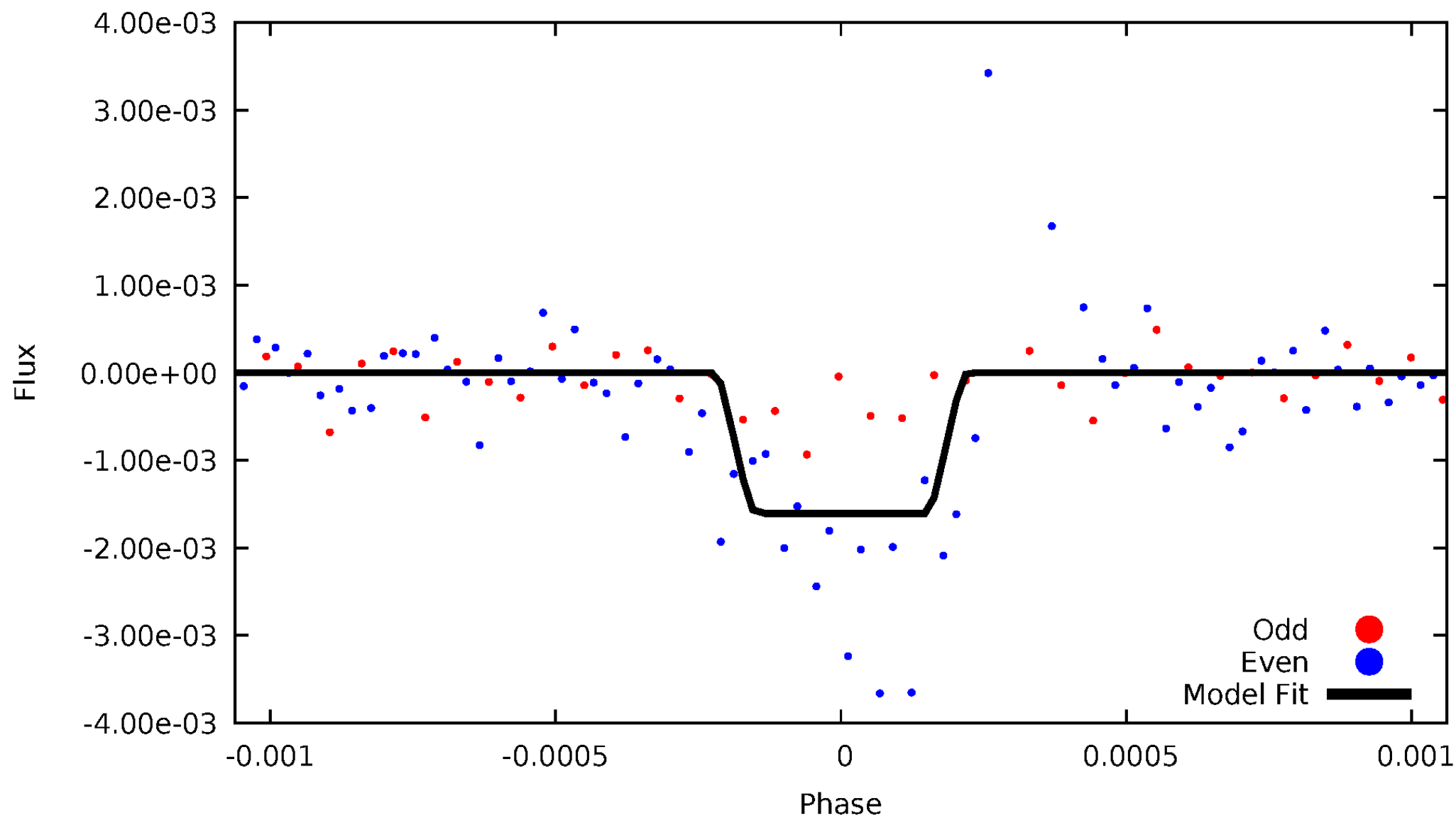
DV Odd/Even

TCE 006034120-01



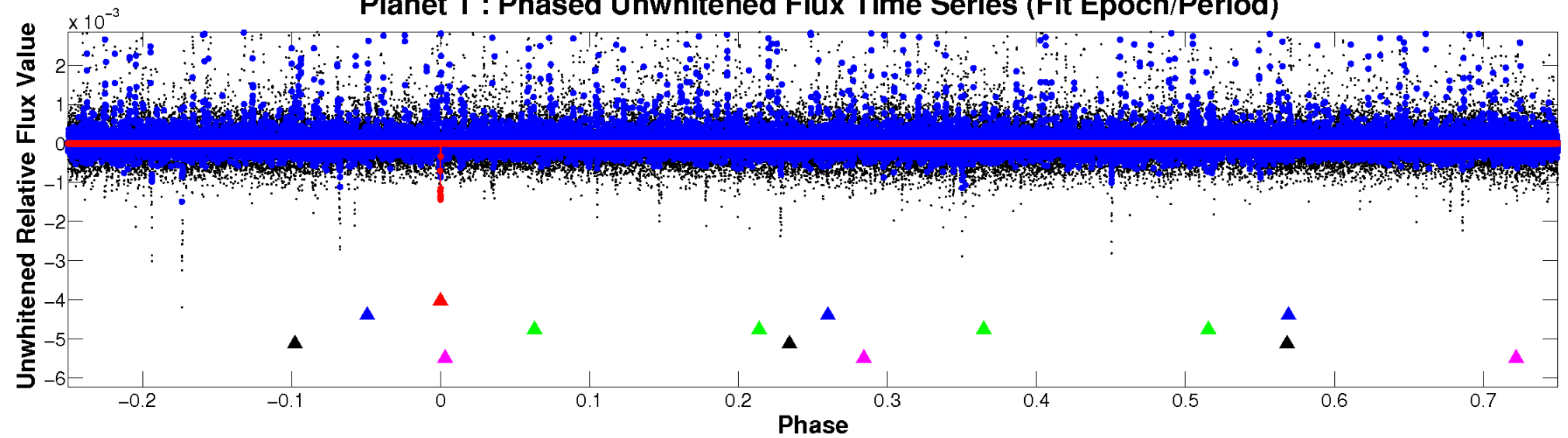
ALT Odd/Even

TCE 006034120-01

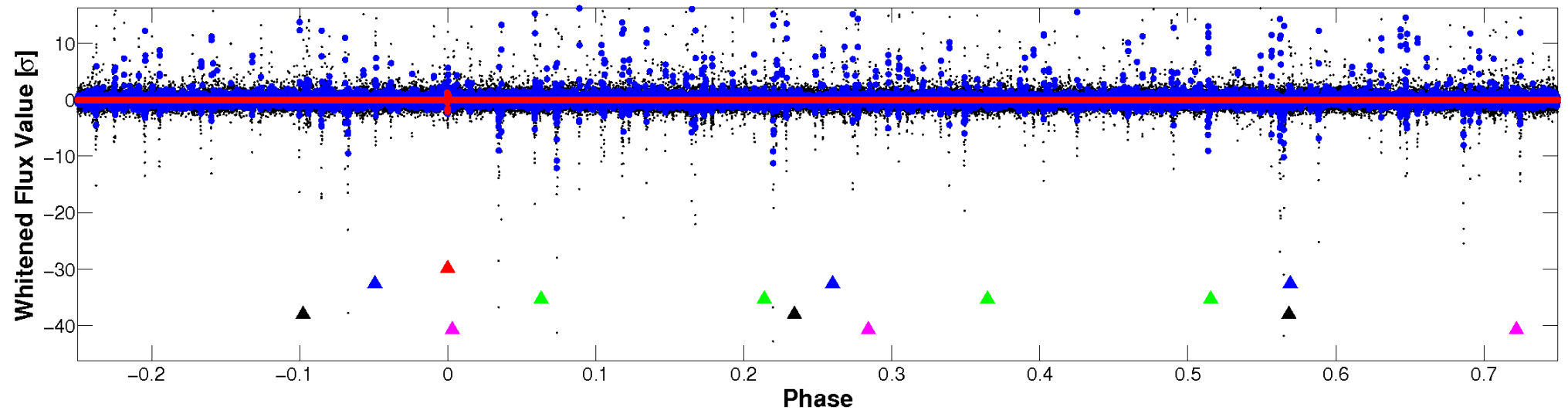


Non-Whitened Vs. Whitened Light Curve

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

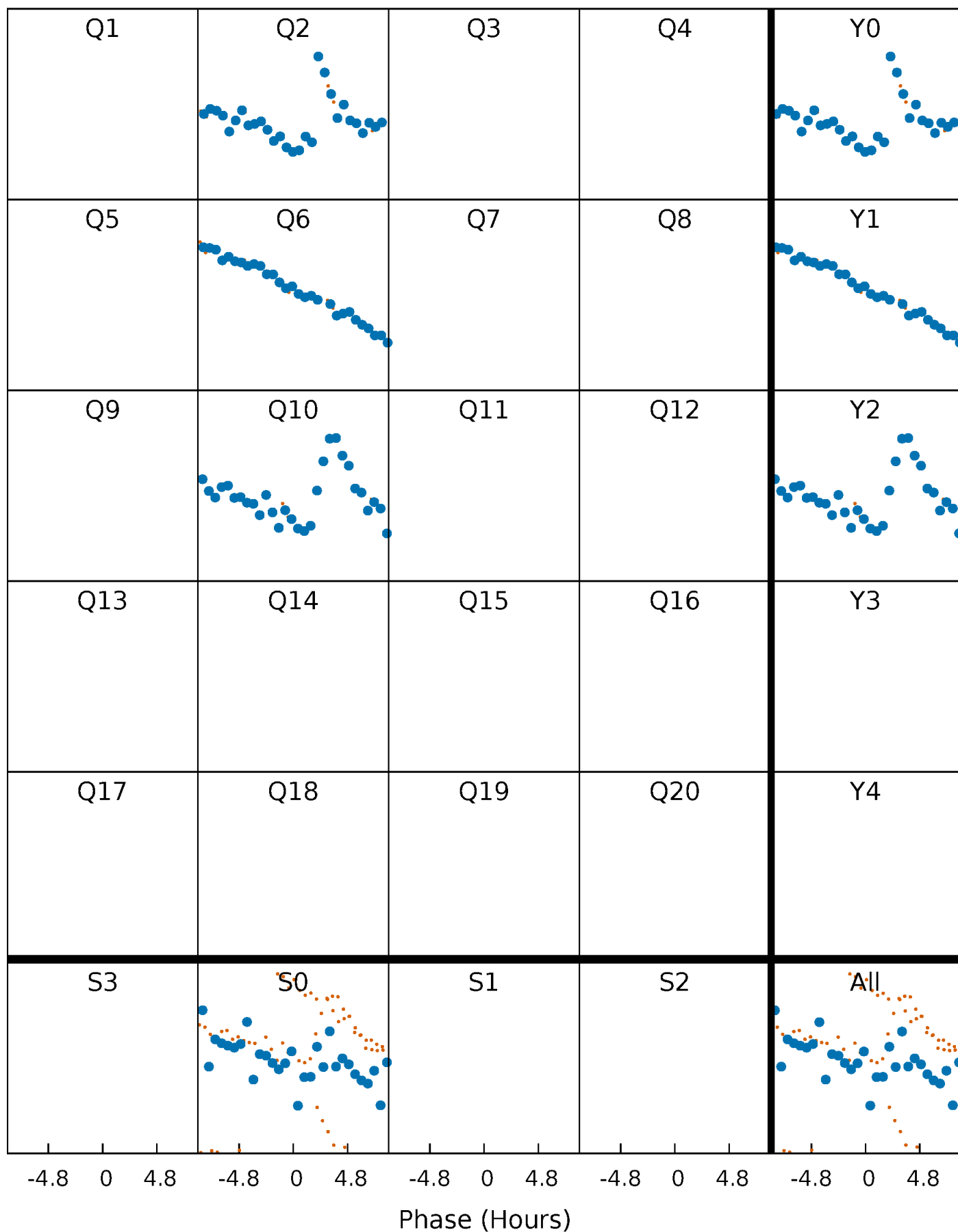


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



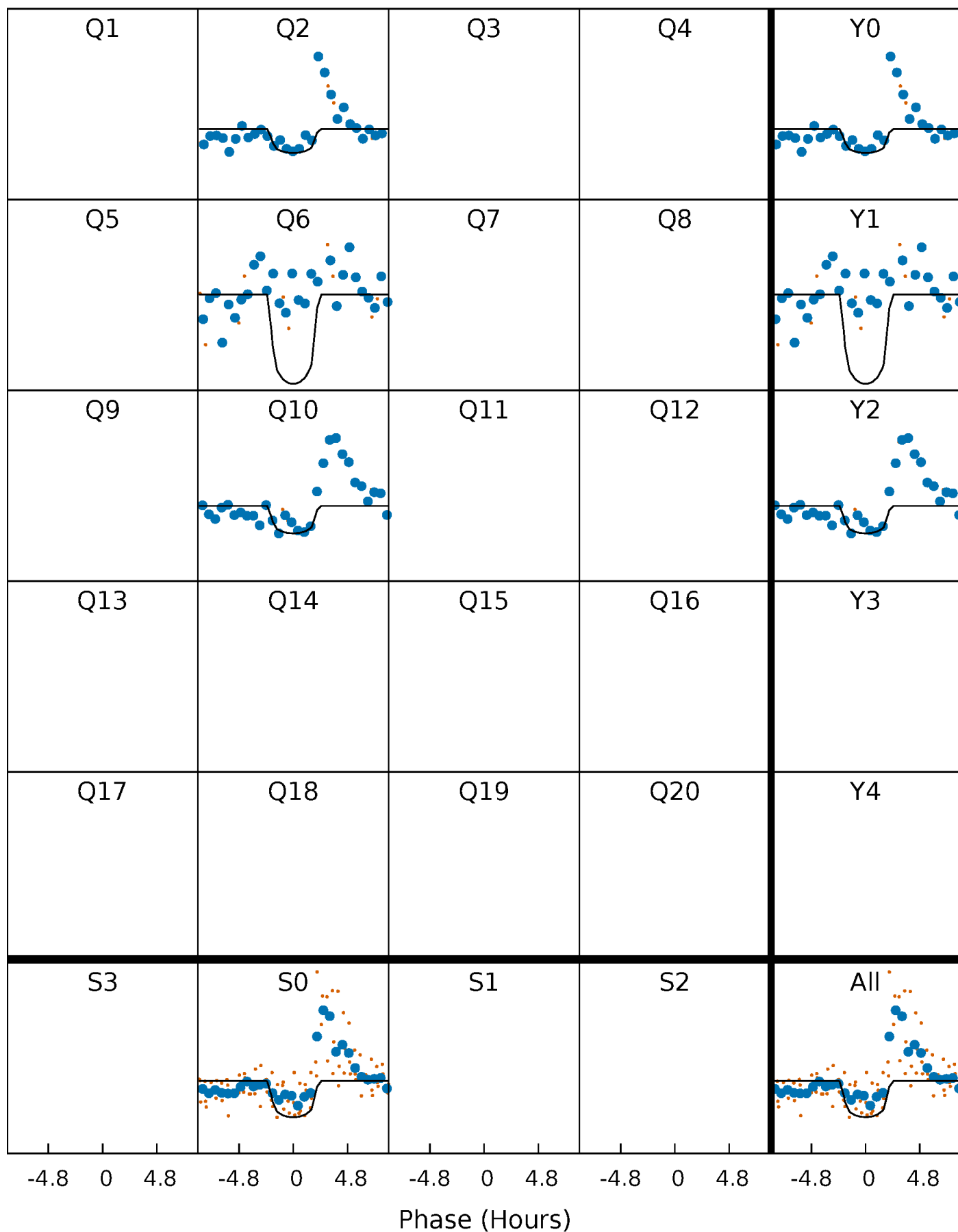
PDC Quarter-Phased Transit Curves

TCE 006034120-01 P=366.703628 Days $T_0=195.179606$ (BKJD)



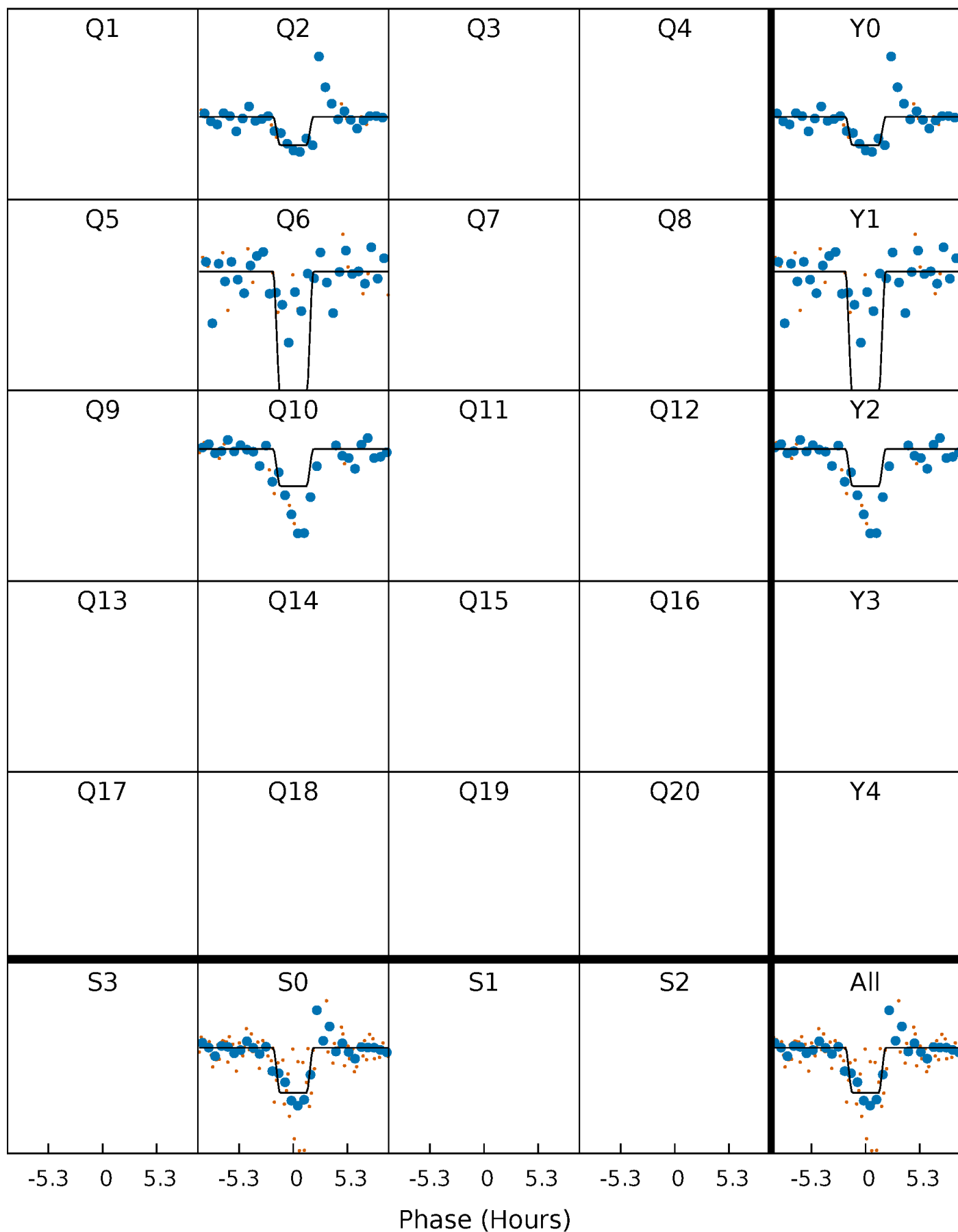
DV Quarter-Phased Transit Curves

TCE 006034120-01 P=366.703628 Days $T_0=195.179606$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

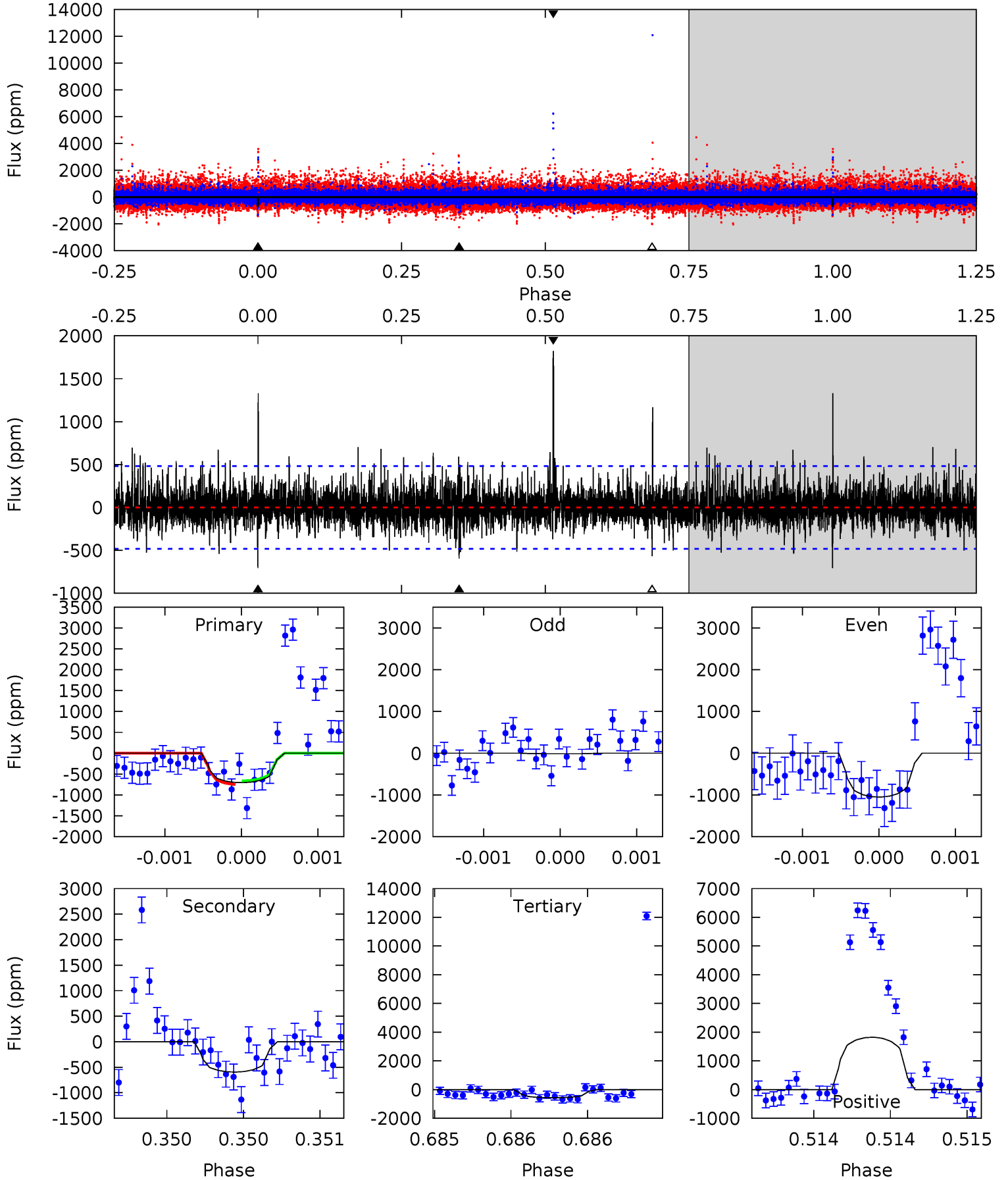
TCE 006034120-01 P=366.715687 Days $T_0=195.172621$ (BKJD)



DV Model-Shift Uniqueness Test

006034120-01, P = 366.703628 Days, E = 195.179606 Days

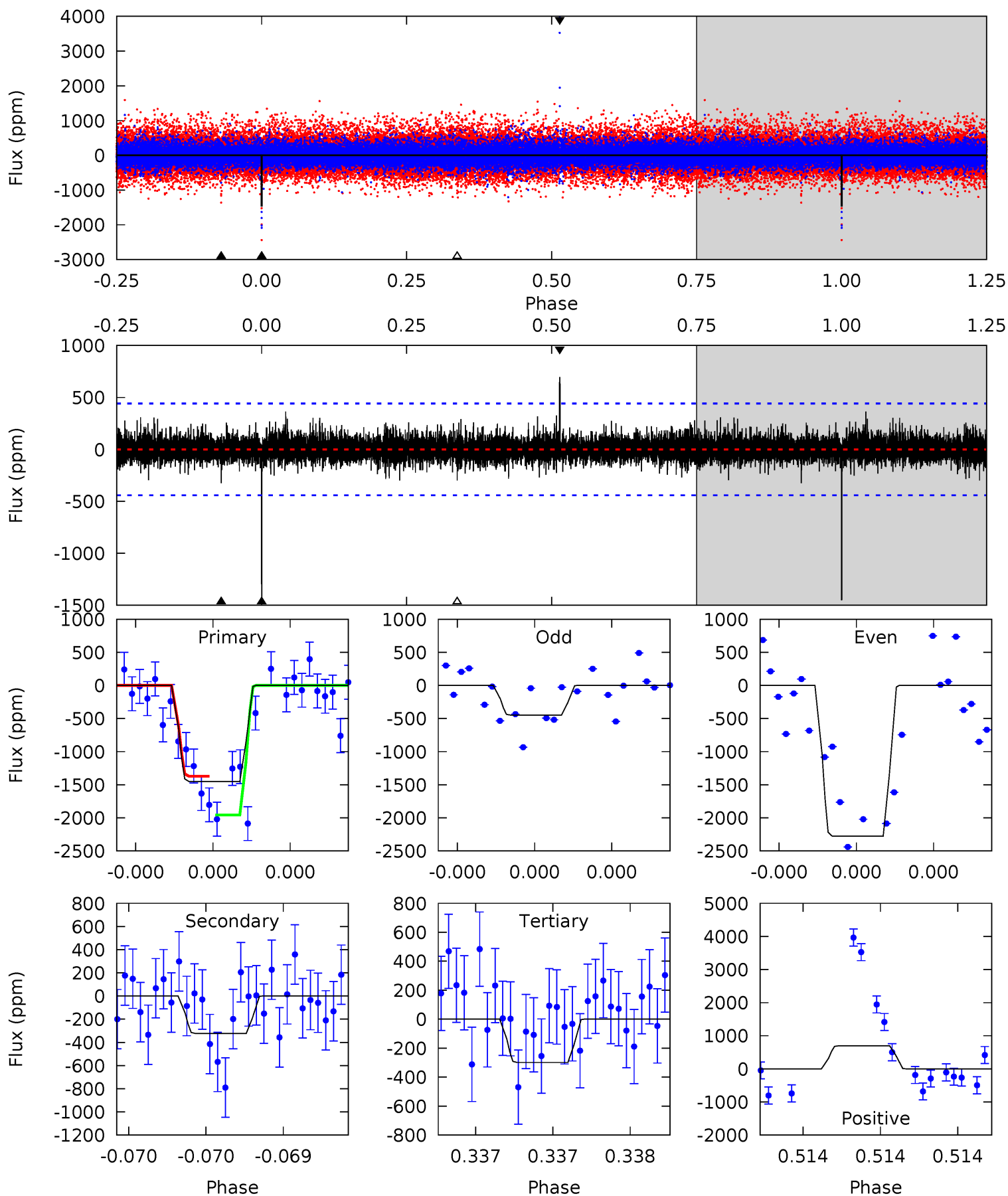
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.14	6.86	6.56	21.1	5.57	3.48	1.75	1.58	-12.9	0.30	-14.2	4.62	0.69	0.72	0.51



Alt Model-Shift Uniqueness Test

006034120-01, P = 366.715687 Days, E = 195.172621 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	4.09	3.79	8.83	5.60	3.53	0.89	14.6	9.57	0.31	-4.74	13.3	0.98	0.32	0



Stellar Parameters For KIC 006034120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5606^{+152}_{-152}	$4.586^{+0.038}_{-0.152}$	$-0.300^{+0.300}_{-0.300}$	$0.784^{+0.182}_{-0.061}$	$0.876^{+0.088}_{-0.097}$	$2.564^{+0.495}_{-1.051}$
	+3%/-3%	+1%/-3%	+100%/-100%	+23%/-8%	+10%/-11%	+19%/-41%
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 006034120-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-594 ± 87	$5.72^{+5.36}_{-3.57}$	319^{+17}_{-13}	3829^{+1921}_{-723}	8827^{+56643}_{-6413}
Alt.	-323 ± 79	$6.23^{+5.38}_{-4.13}$	318^{+16}_{-14}	3365^{+1498}_{-565}	4173^{+30441}_{-3023}

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 $A_{obs} \gg 1.0$

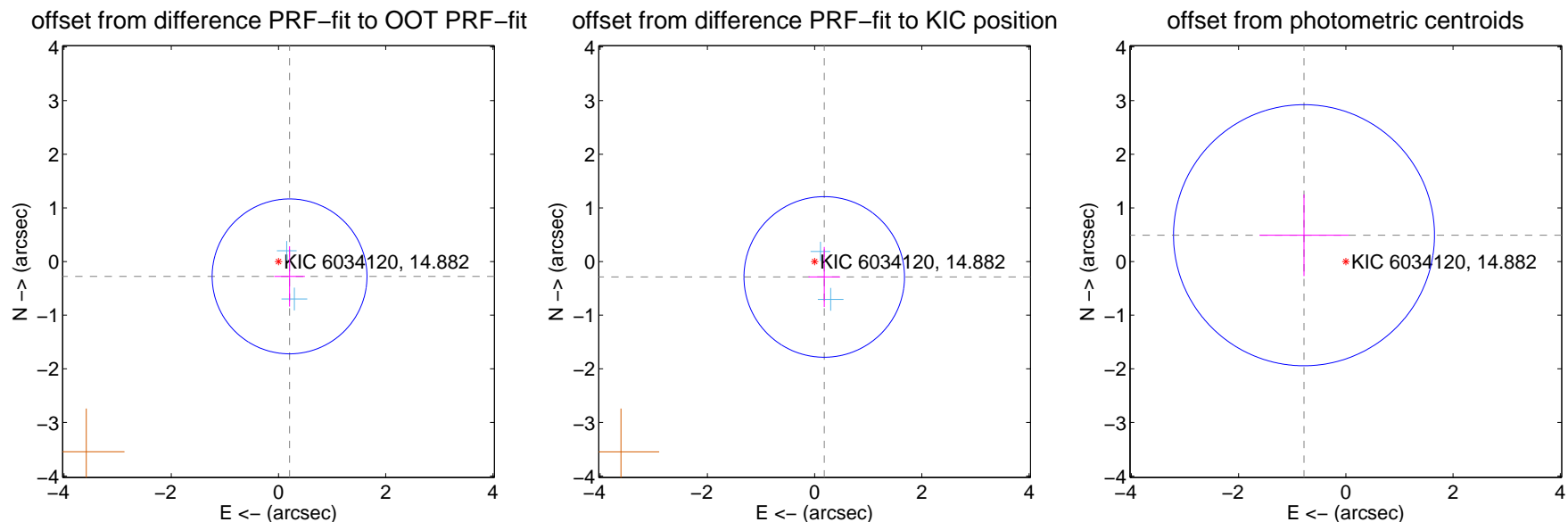
DV Centroid Data

Supplemental centroid analysis for 006034120-01. Kepler magnitude: 14.88. Transit SNR 9.00

There are 2 quarters with good PRF difference image offsets

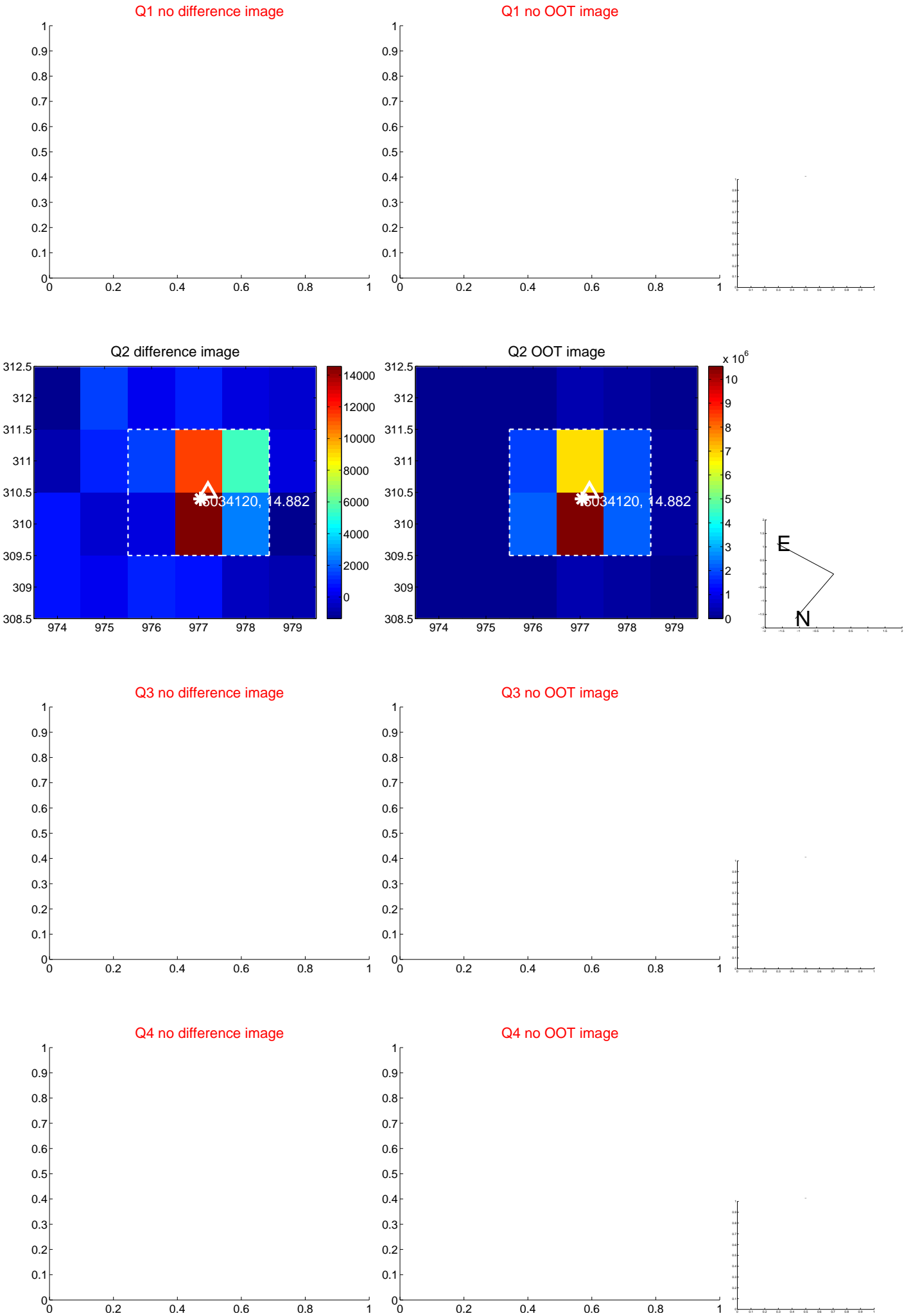
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.345 ± 0.481	0.72	-0.207 ± 0.285	-0.277 ± 0.561
PRF-fit source offset from KIC position	0.339 ± 0.499	0.68	-0.179 ± 0.296	-0.287 ± 0.559
photometric centroid source offset	0.92 ± 0.81	1.14	0.78 ± 0.83	0.49 ± 0.76

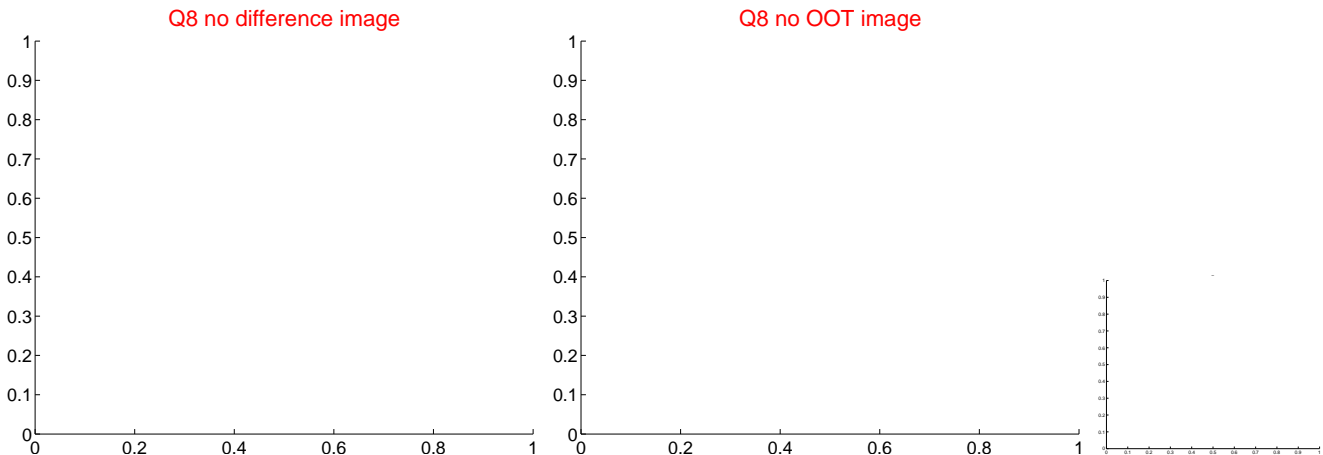
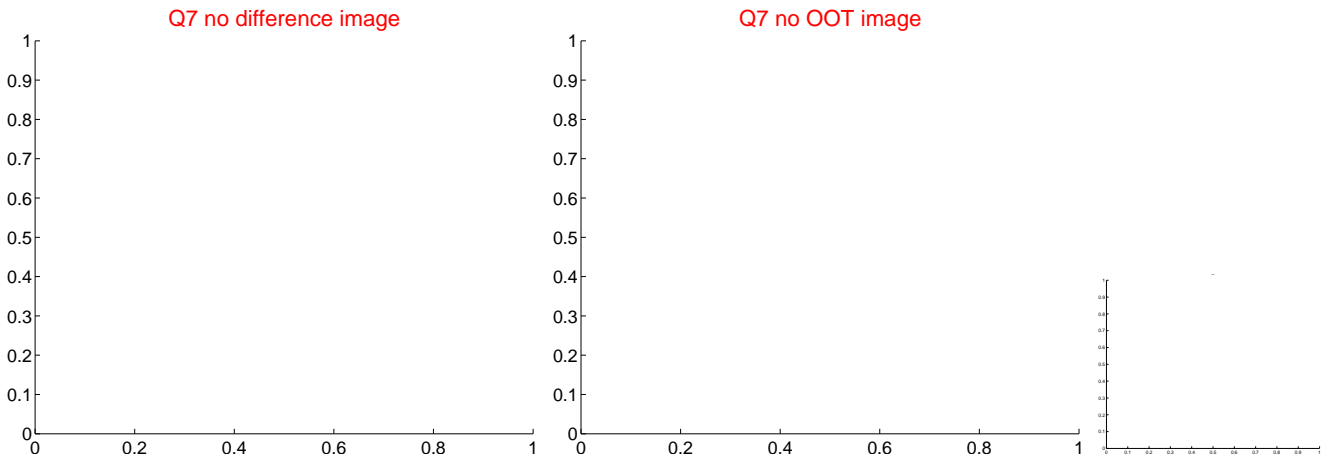
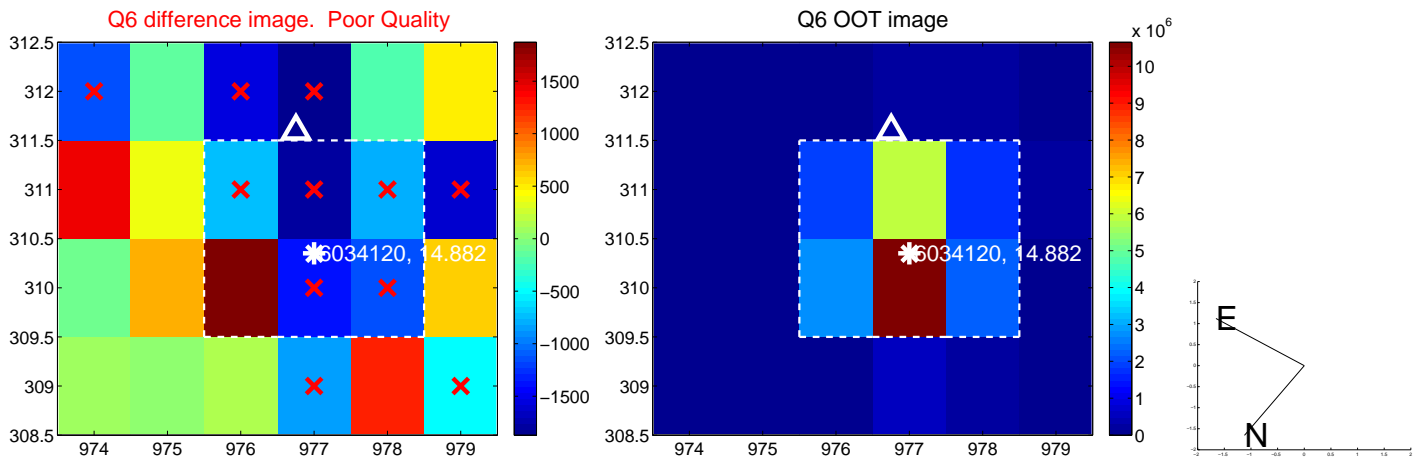
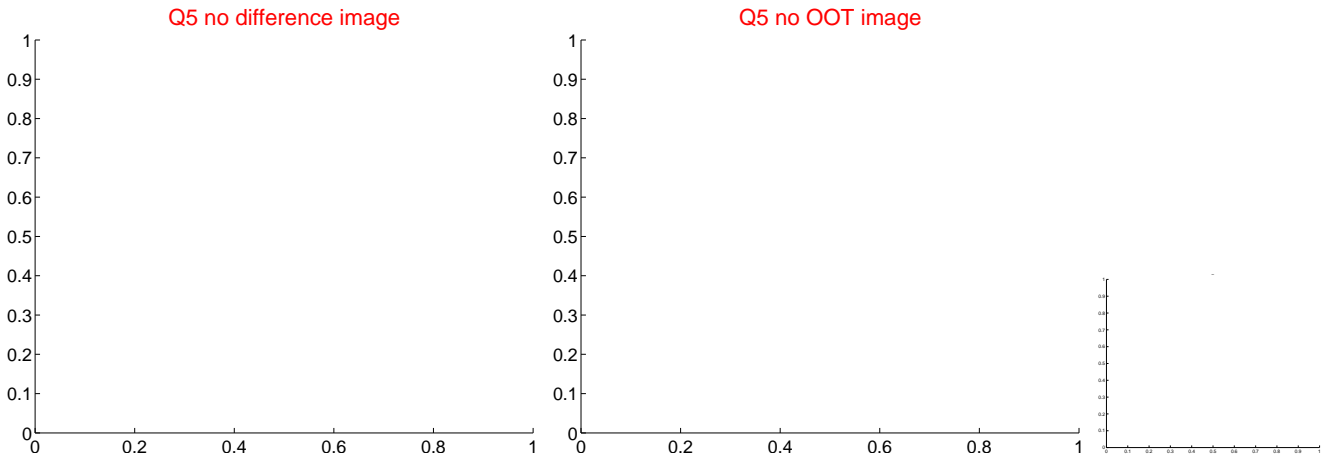


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

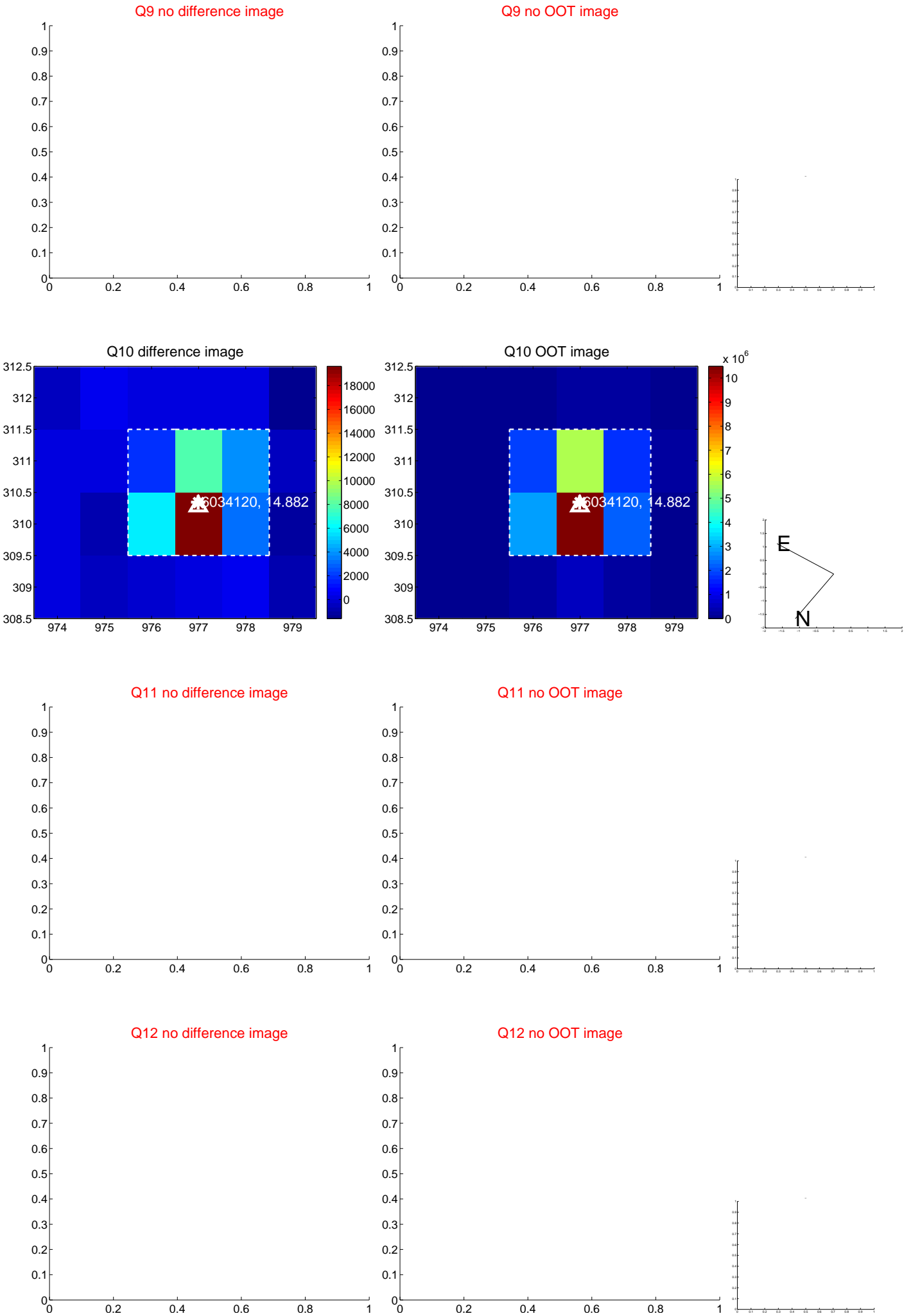
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



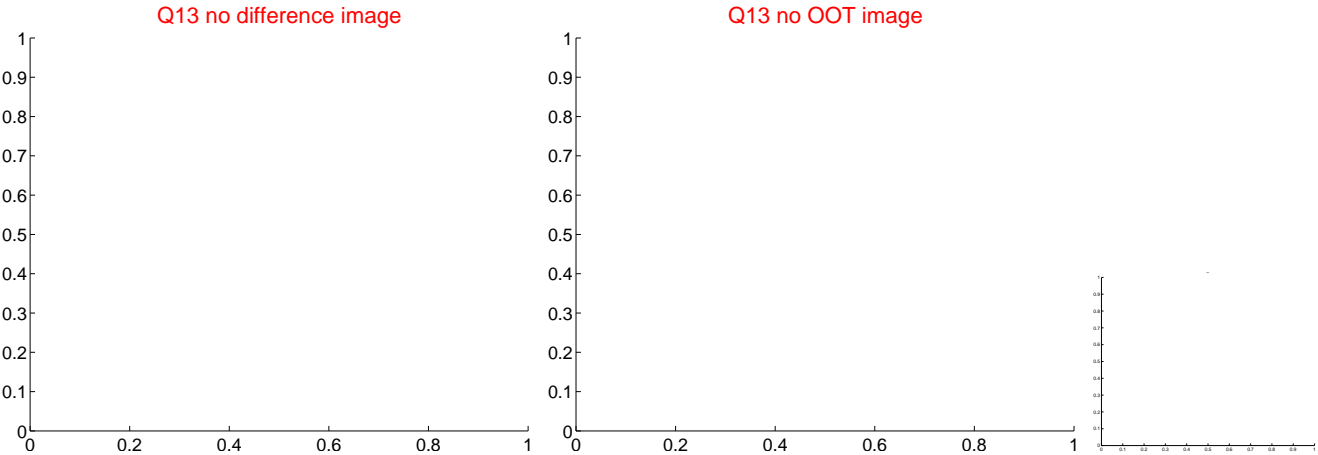
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



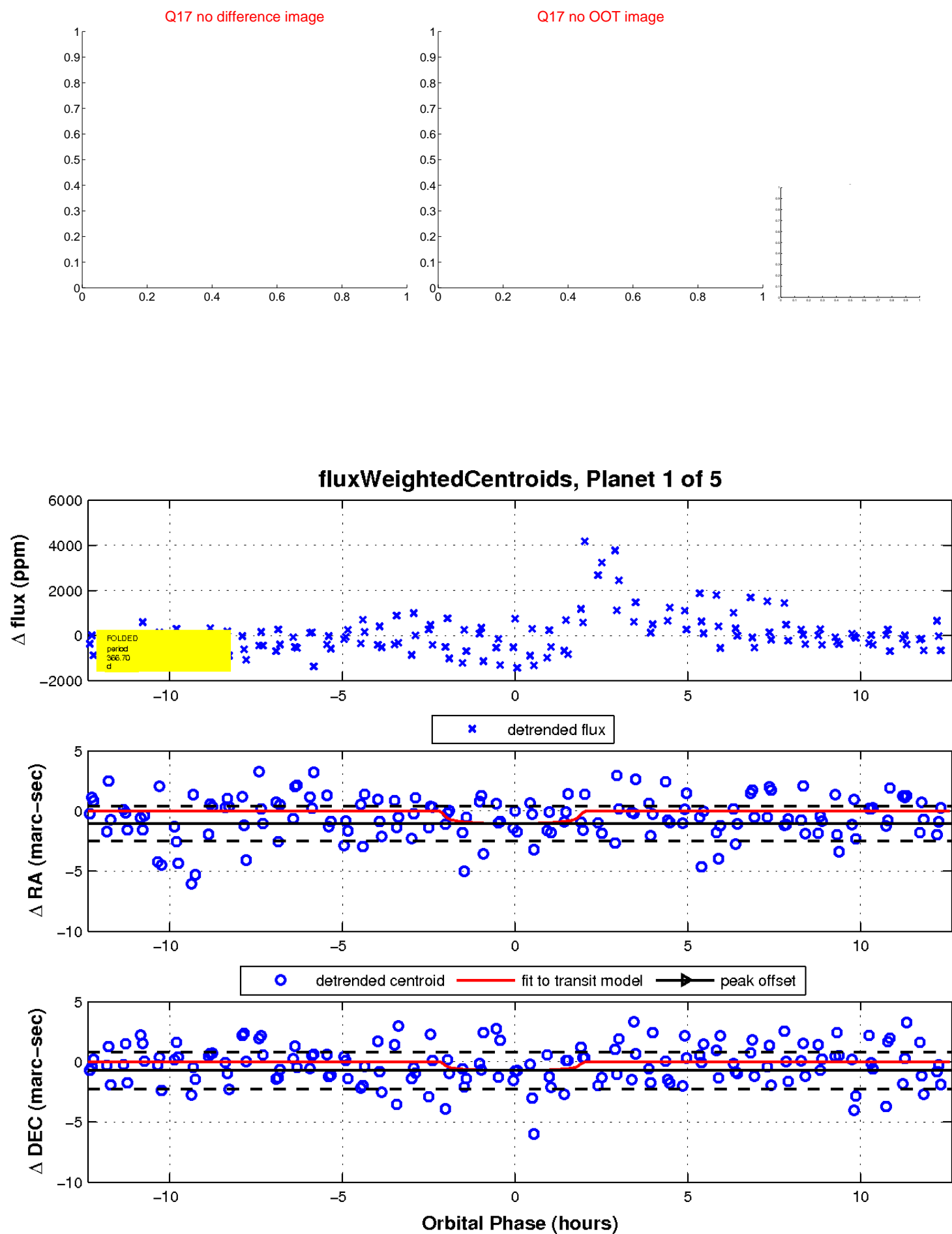
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

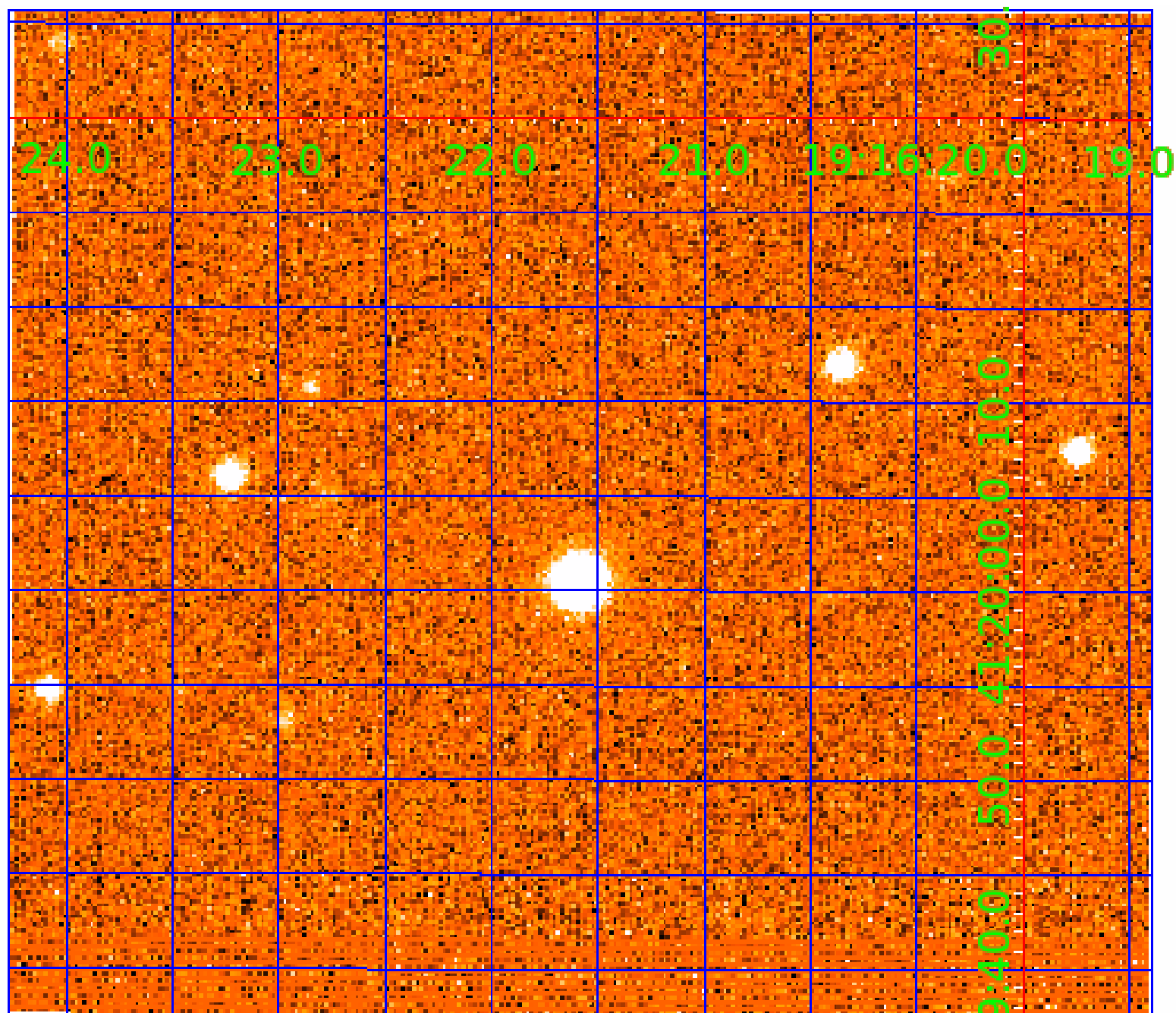


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006034120

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})
006034120-01	OBS	No	366.703628	195.179606	1435.5	4.219	14.8	9.0	0.78	5606	3.12	0.60
006034120-02	OBS	No	480.083856	543.859745	891.3	4.820	13.9	5.7	0.78	5606	2.50	0.42
006034120-03	OBS	No	311.415136	384.202604	1115.4	3.850	11.4	7.7	0.78	5606	2.86	0.74
006034120-04	OBS	No	610.909074	159.363857	880.9	3.058	11.8	5.4	0.78	5606	2.47	0.30
006034120-05	OBS	No	469.774356	459.953226	801.1	15.000	14.7	-1.0	0.78	5606	2.20	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034120-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006034120-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

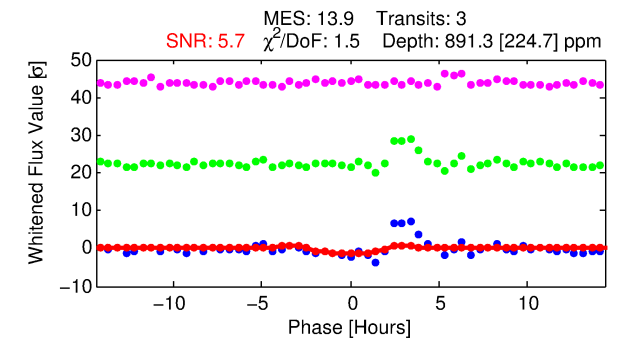
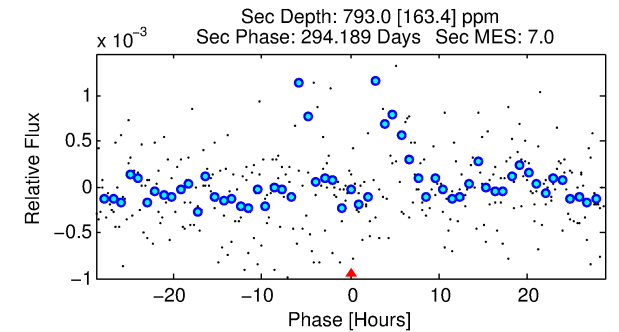
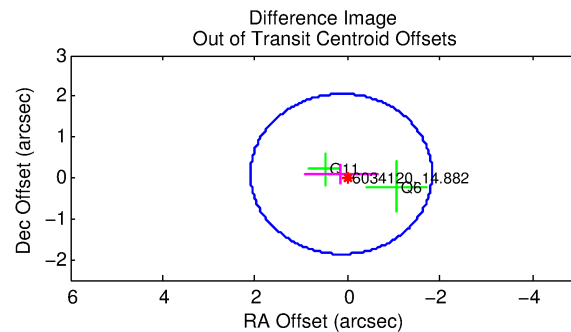
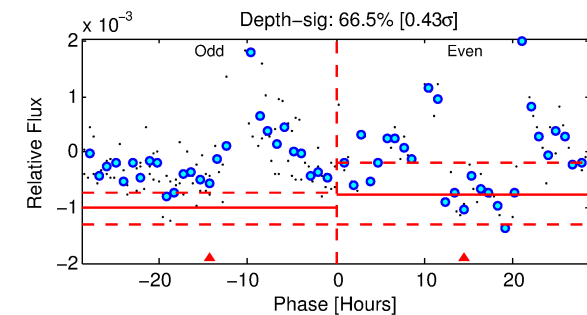
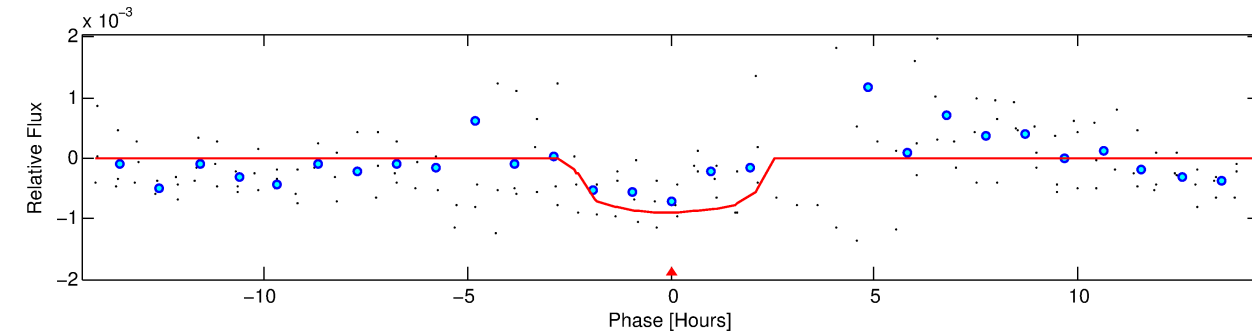
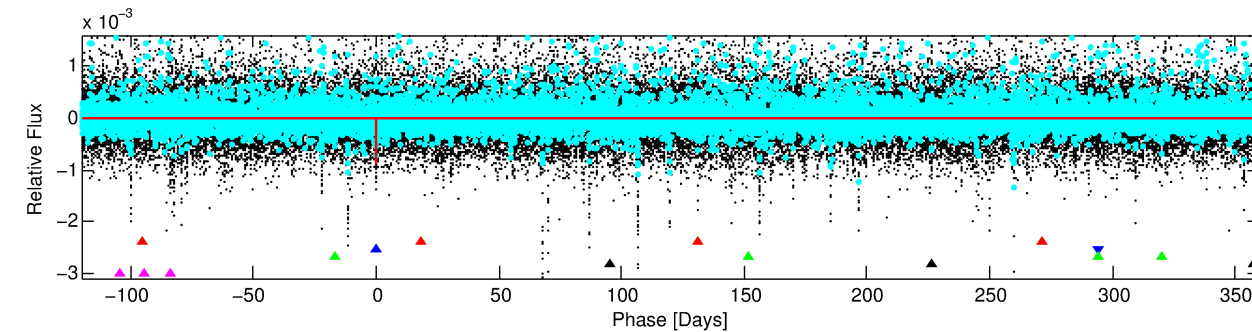
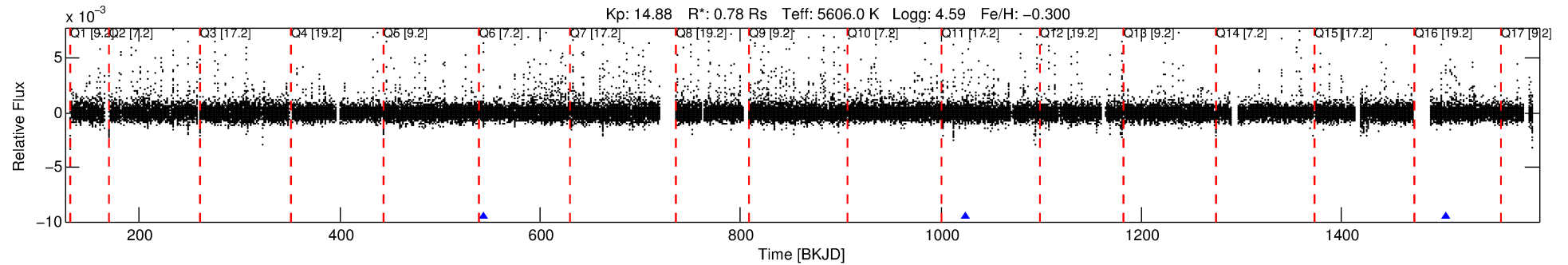
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034120-02

No Significant Match Found

DV One-Page Summary

KIC: 6034120 Candidate: 2 of 5 Period: 480.084 d



DV Fit Results:

Period = 480.08386 [0.00898] d
Epoch = 543.8597 [0.0129] BKJD
Rp/R* = 0.0293 [0.0358]
a/R* = 570.90 [3003.91]
b = 0.70 [3.79]
Seff = 0.42 [0.12]
Teq = 205 [15] K
Rp = 2.50 [3.12] Re
a = 1.1432 [0.2216] AU
Ag = 90994.70 [225023.73] [0.40 σ]
Teffp = 5500 [3382] K [1.57 σ]

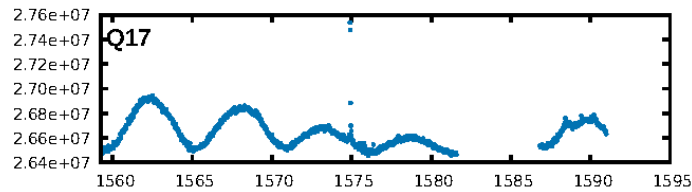
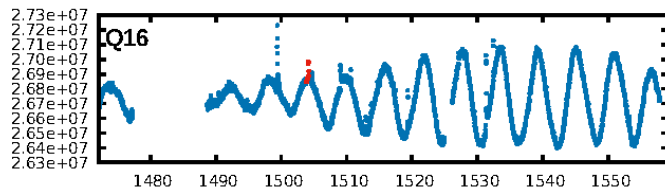
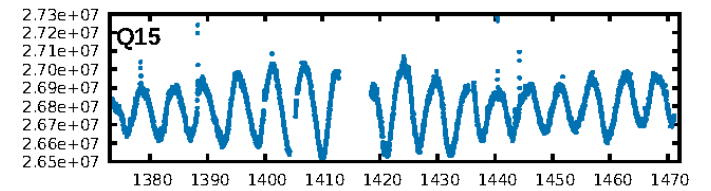
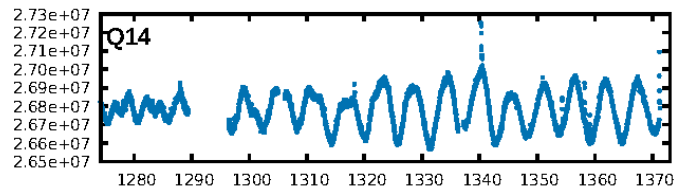
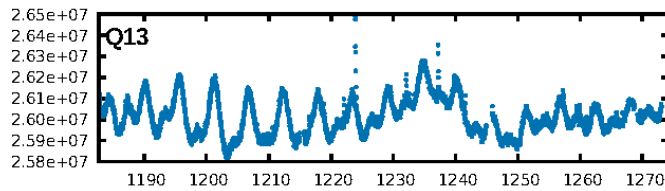
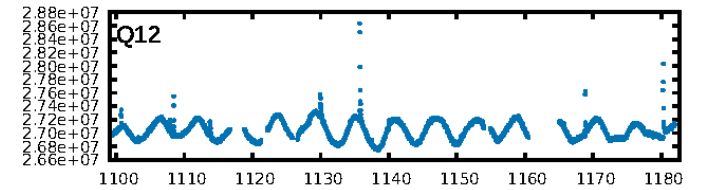
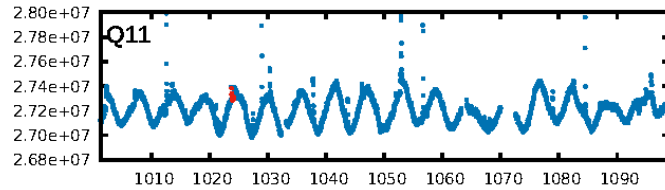
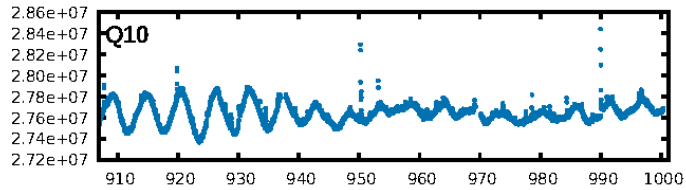
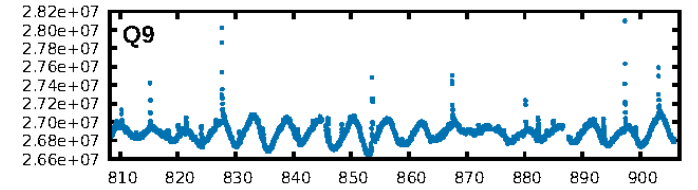
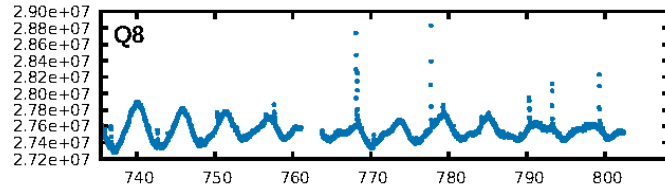
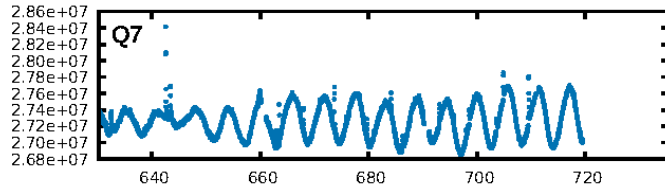
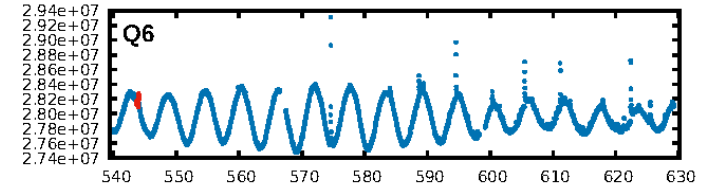
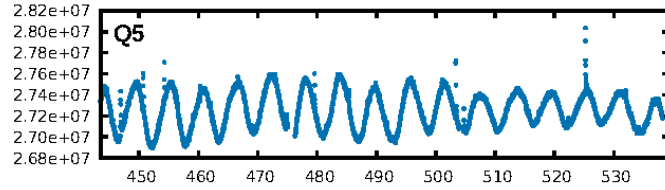
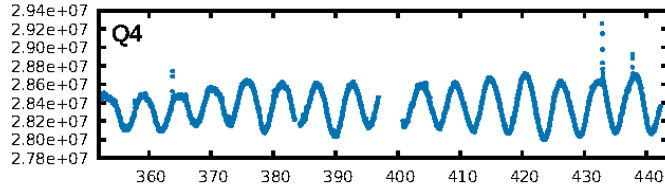
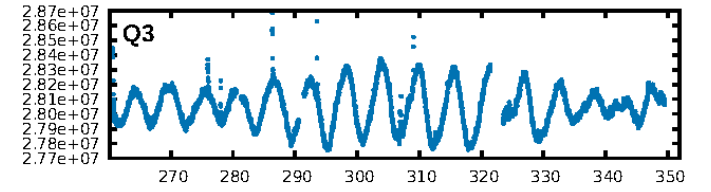
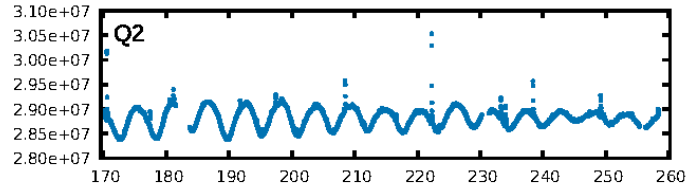
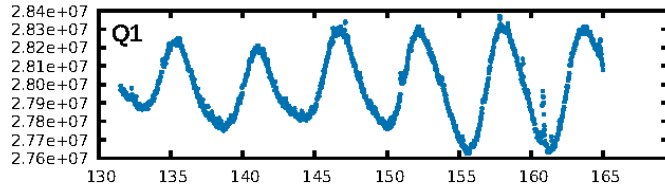
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.70 σ]
LongPeriod-sig: 100.0% [550.01 σ]
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 68.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.111
Centroid-sig: 65.6%
Centroid-so: 0.667 arcsec [0.49 σ]
OotOffset-rm: 0.168 arcsec [0.26 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.149 arcsec [0.20 σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

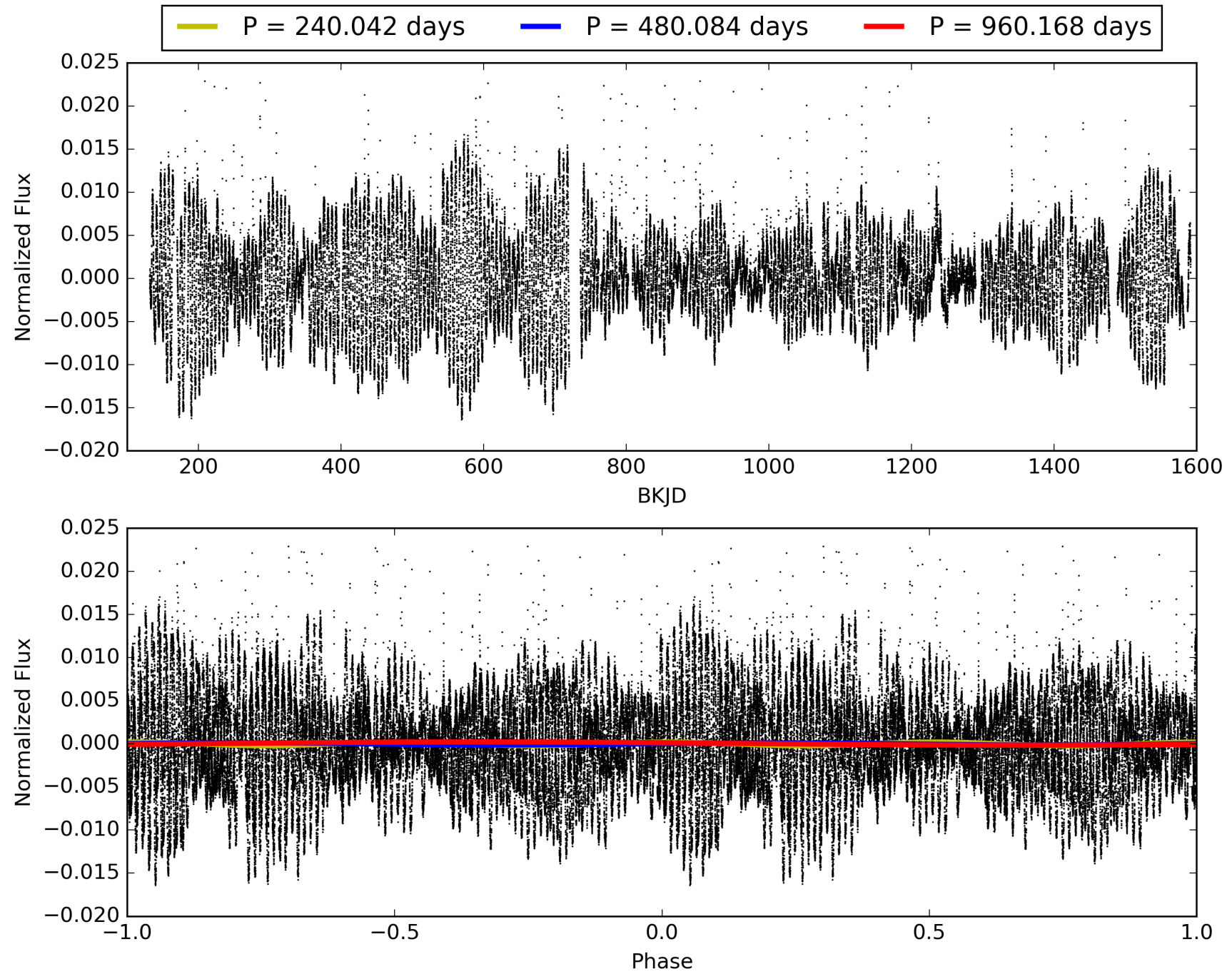
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:50:27 Z

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

TCE 006034120-02, PDC Light Curves

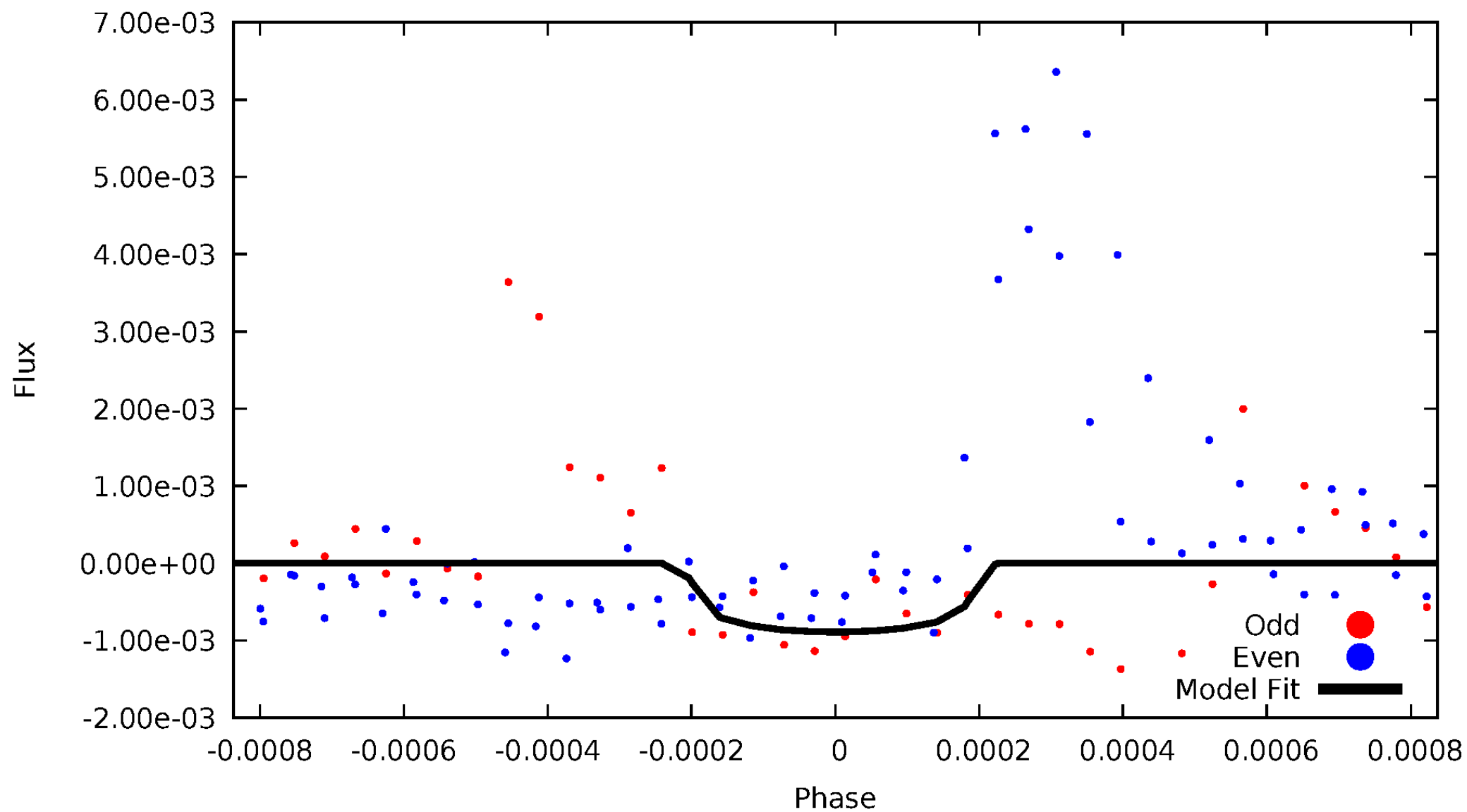


TCE 006034120-02



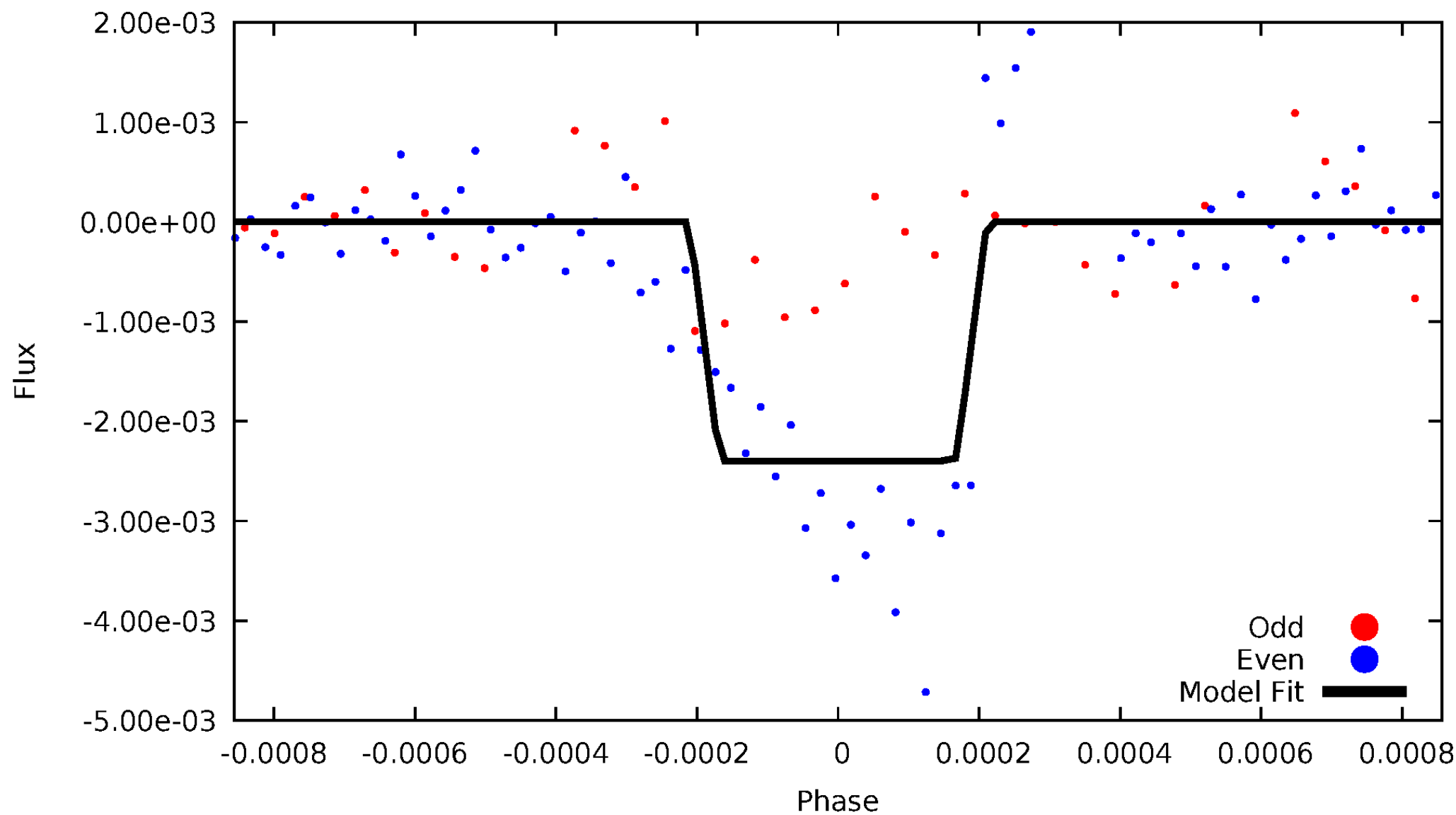
DV Odd/Even

TCE 006034120-02



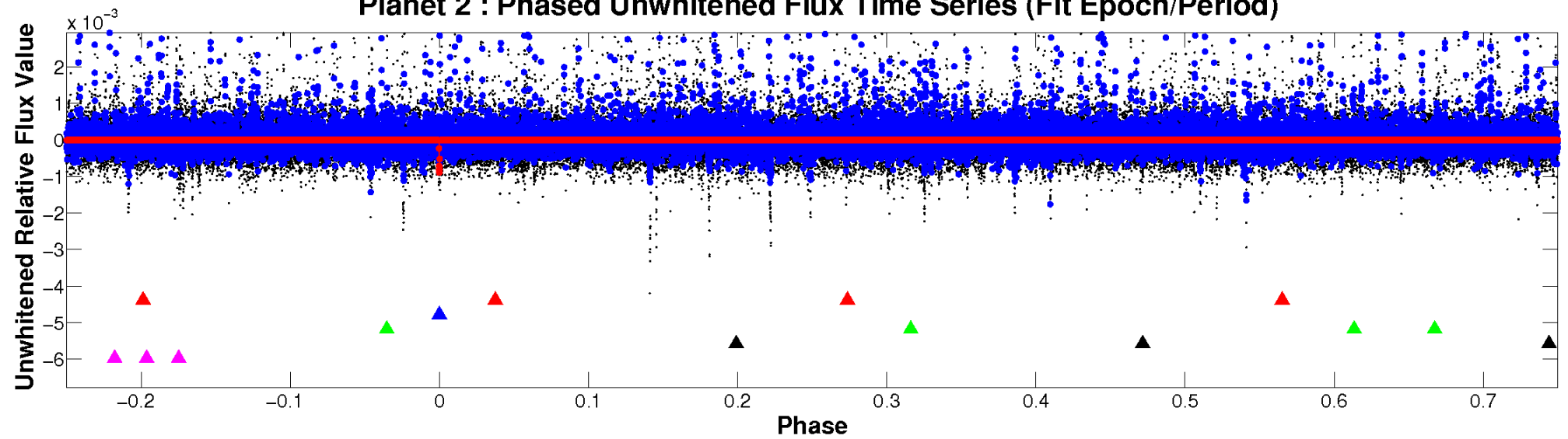
ALT Odd/Even

TCE 006034120-02

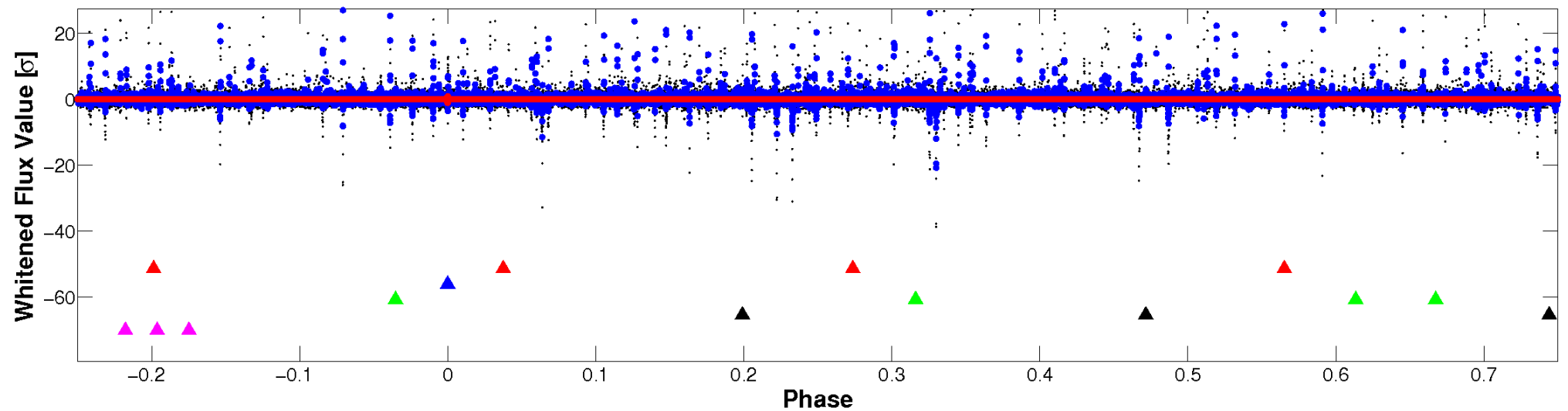


Non-Whitened Vs. Whitened Light Curve

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

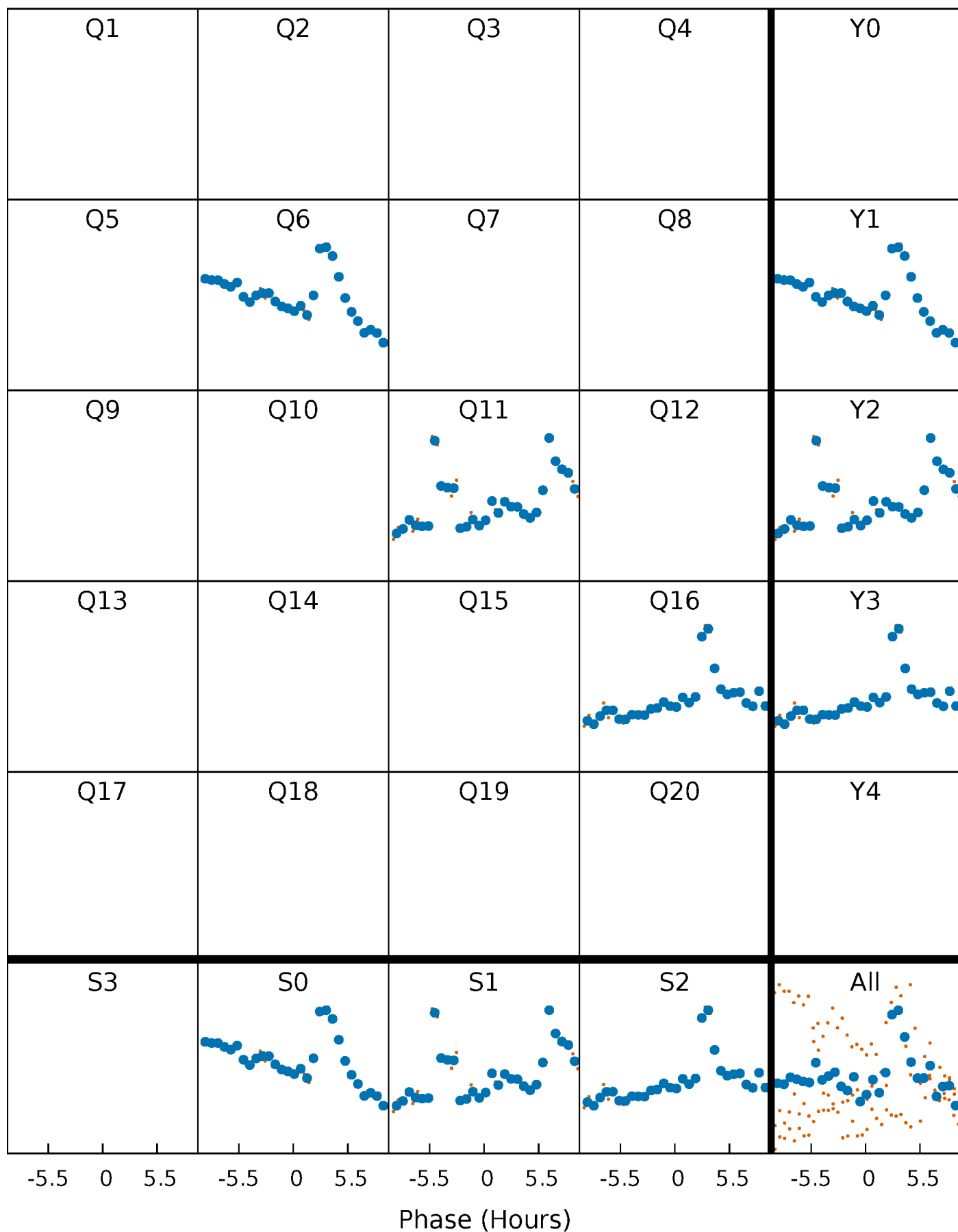


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



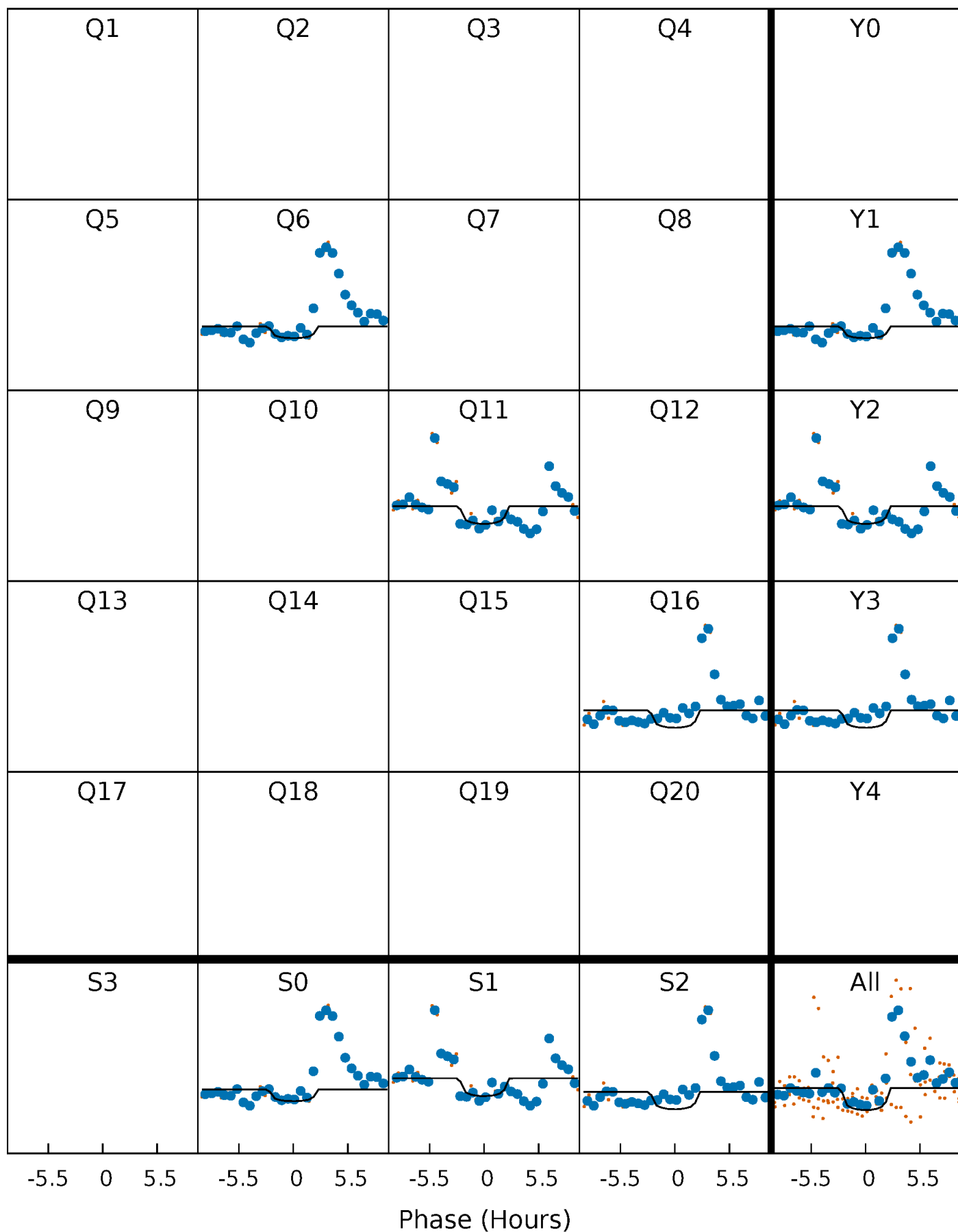
PDC Quarter-Phased Transit Curves

TCE 006034120-02 P=480.083856 Days $T_0=543.859745$ (BKJD)



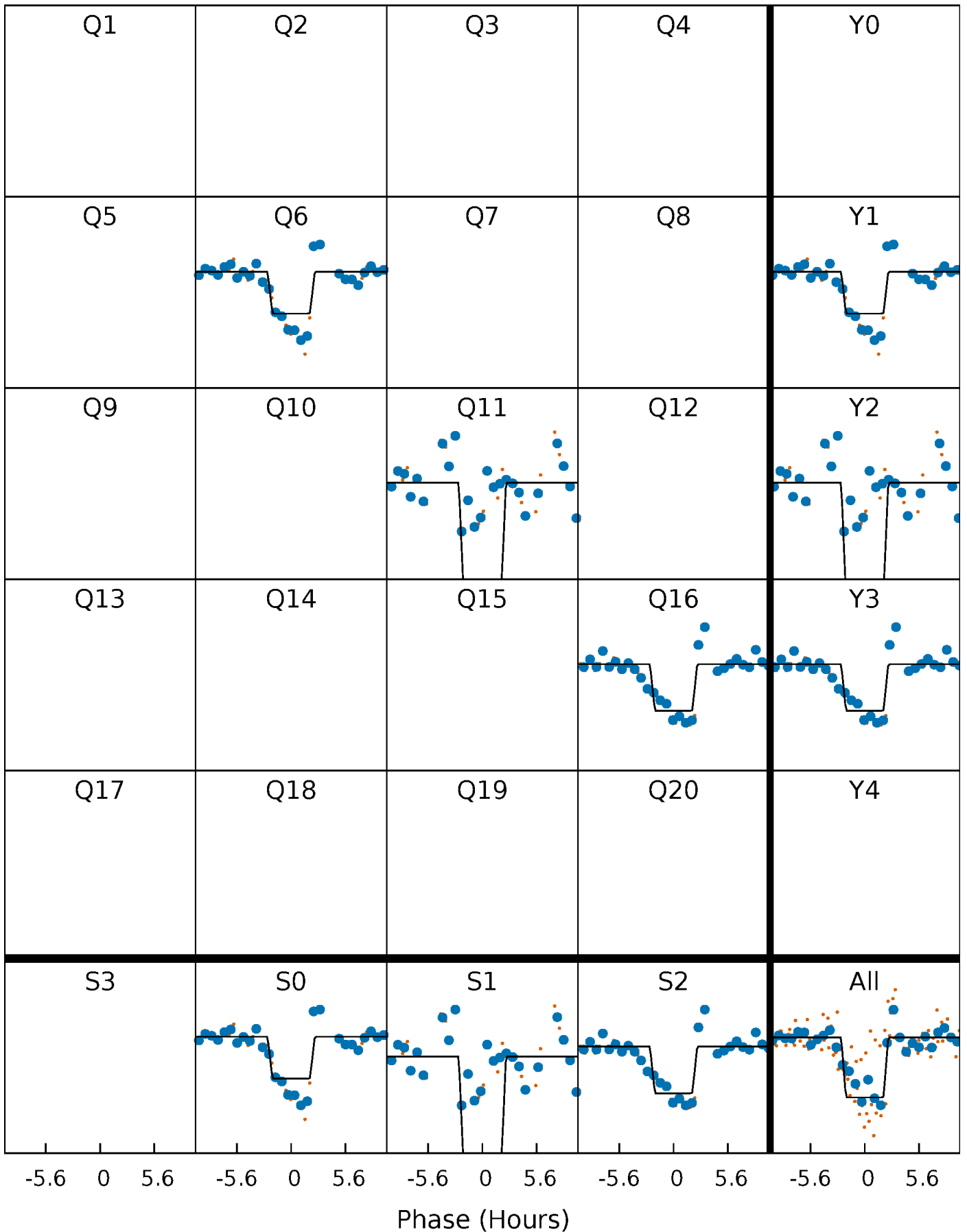
DV Quarter-Phased Transit Curves

TCE 006034120-02 $P=480.083856$ Days $T_0=543.859745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

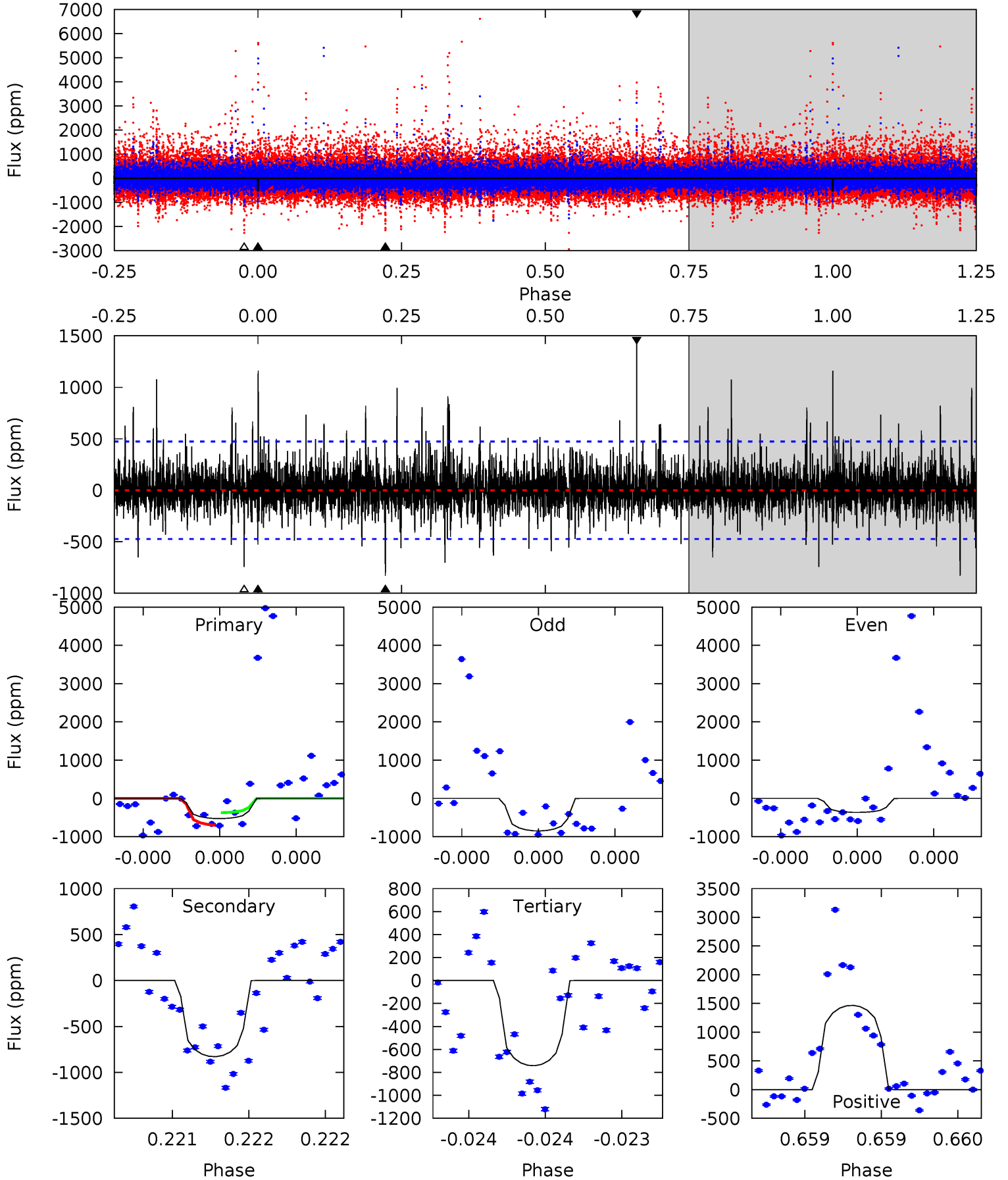
TCE 006034120-02 P=480.079681 Days $T_0=543.865777$ (BKJD)



DV Model-Shift Uniqueness Test

006034120-02, $P = 480.083856$ Days, $E = 63.775889$ Days

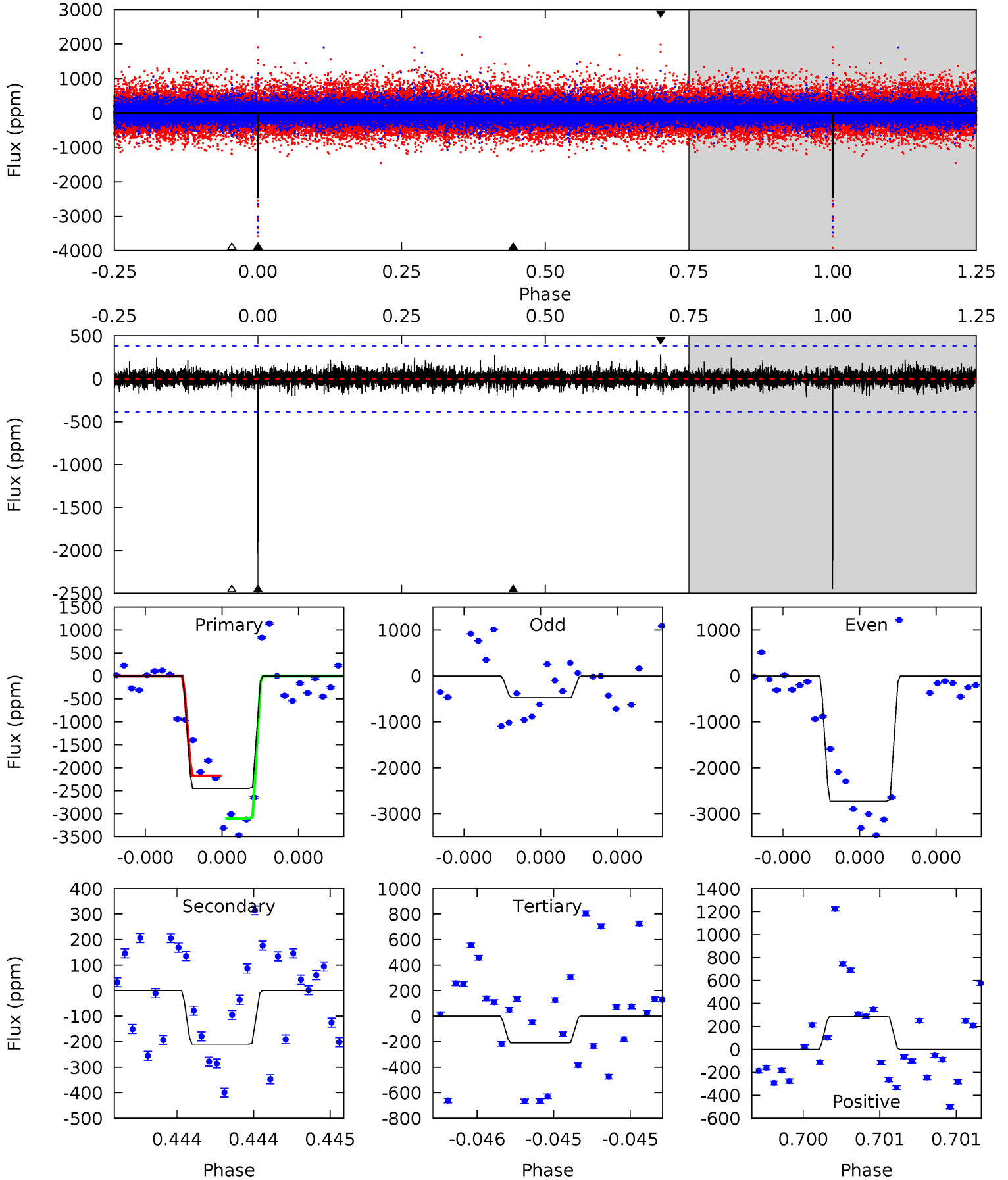
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.22	9.79	8.76	17.3	5.58	3.50	1.84	-2.54	-11.1	1.03	-7.52	1.42	1.04	0.64	1.95



Alt Model-Shift Uniqueness Test

006034120-02, P = 480.079681 Days, E = 63.786096 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	3.07	3.07	4.17	5.60	3.53	0.69	32.8	31.7	0.00	-1.10	16.0	0.79	0.10	6.56



Stellar Parameters For KIC 006034120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5606^{+152}_{-152}	$4.586^{+0.038}_{-0.152}$	$-0.300^{+0.300}_{-0.300}$	$0.784^{+0.182}_{-0.061}$	$0.876^{+0.088}_{-0.097}$	$2.564^{+0.495}_{-1.051}$
	+3%/-3%	+1%/-3%	+100%/-100%	+23%/-8%	+10%/-11%	+19%/-41%
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 006034120-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-829 ± 85	$3.44^{+2.87}_{-2.27}$	291^{+16}_{-12}	4945^{+3547}_{-1014}	$51152^{+376419}_{-36264}$
Alt.	-210 ± 68	$4.62^{+3.13}_{-2.44}$	291^{+16}_{-11}	3413^{+1053}_{-496}	6666^{+23713}_{-4414}

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 $A_{obs} \gg 1.0$

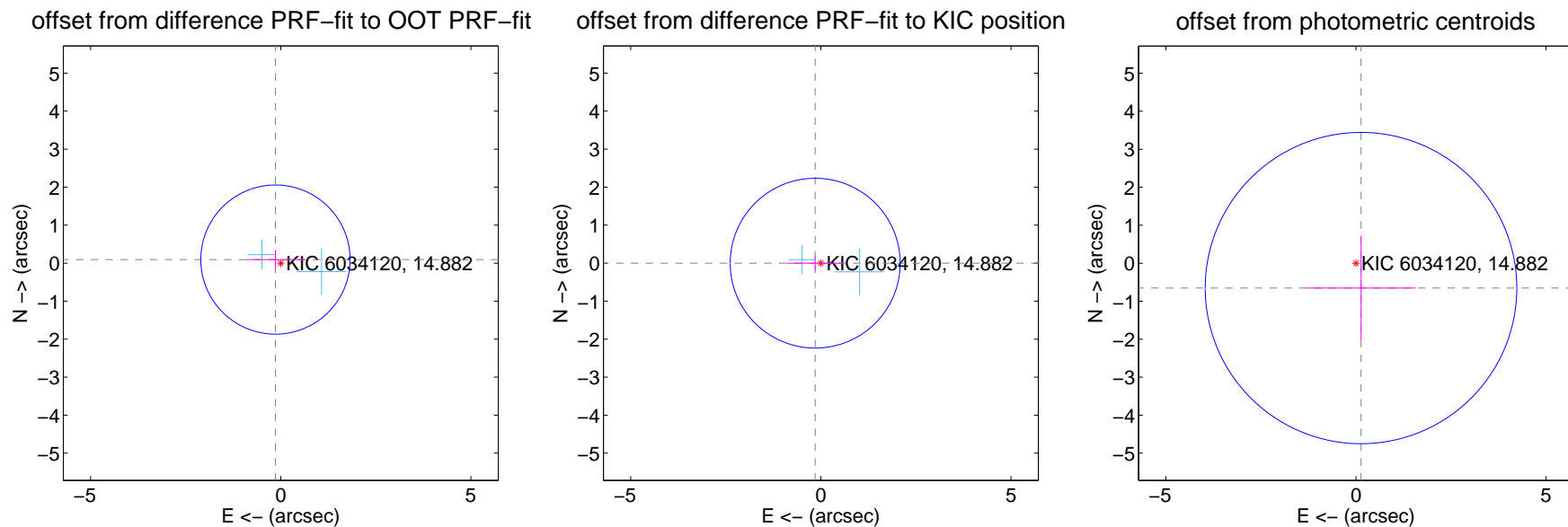
DV Centroid Data

Supplemental centroid analysis for 006034120-02. Kepler magnitude: 14.88. Transit SNR 5.68

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.168 ± 0.654	0.26	0.139 ± 0.772	0.094 ± 0.245
PRF-fit source offset from KIC position	0.149 ± 0.745	0.20	0.149 ± 0.745	-0.001 ± 0.182
photometric centroid source offset	0.67 ± 1.37	0.49	-0.13 ± 1.44	-0.65 ± 1.36

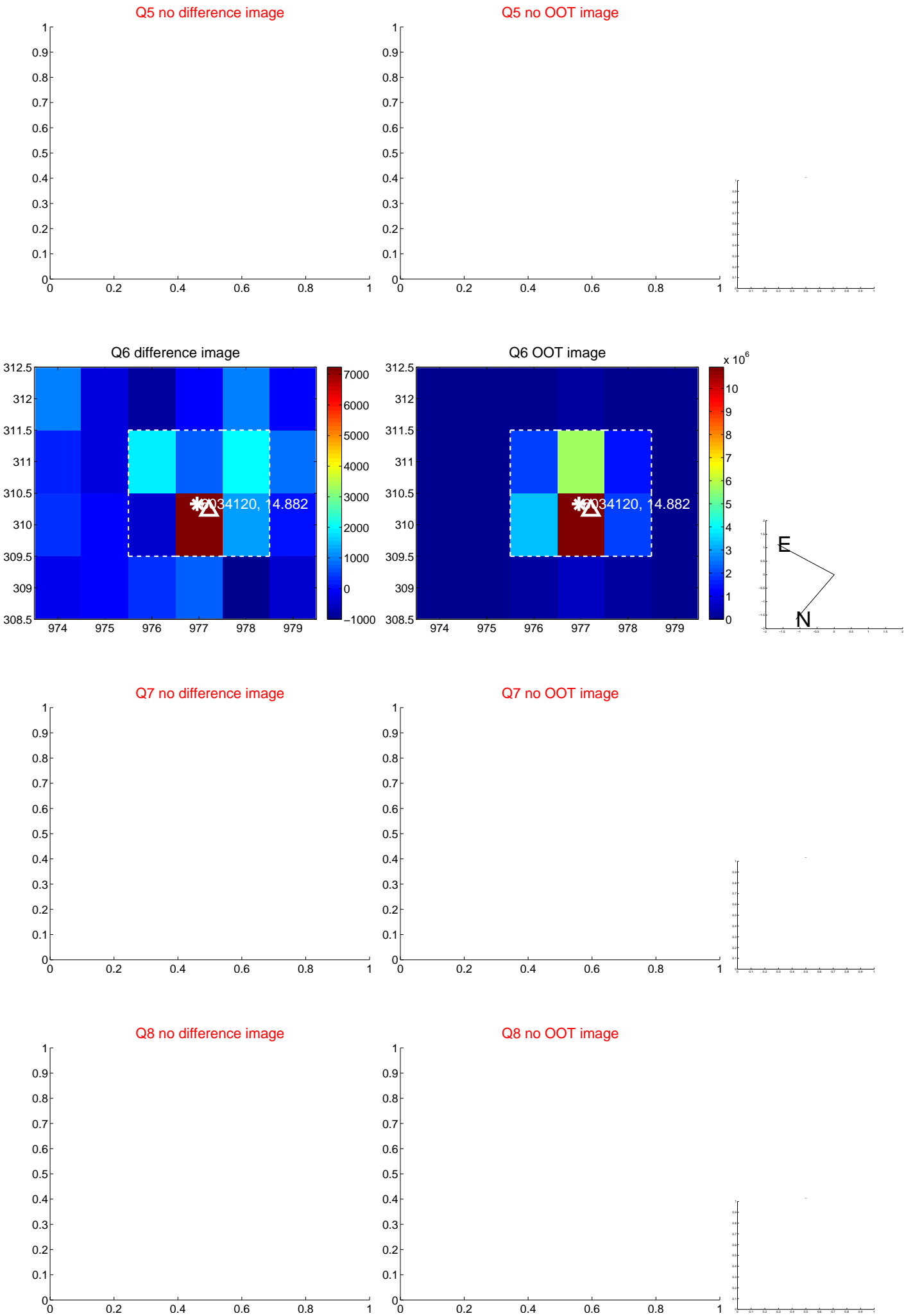


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

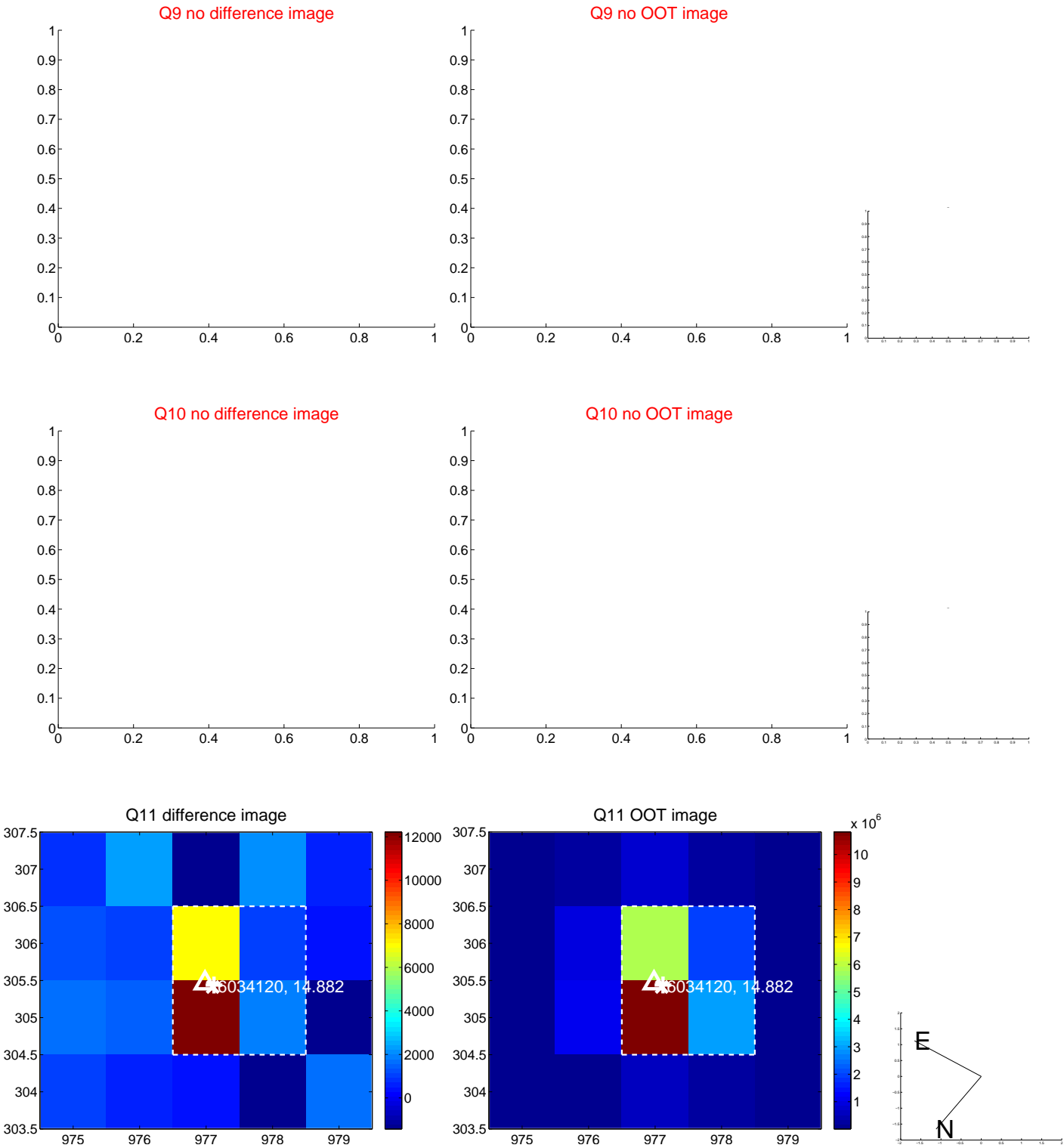
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



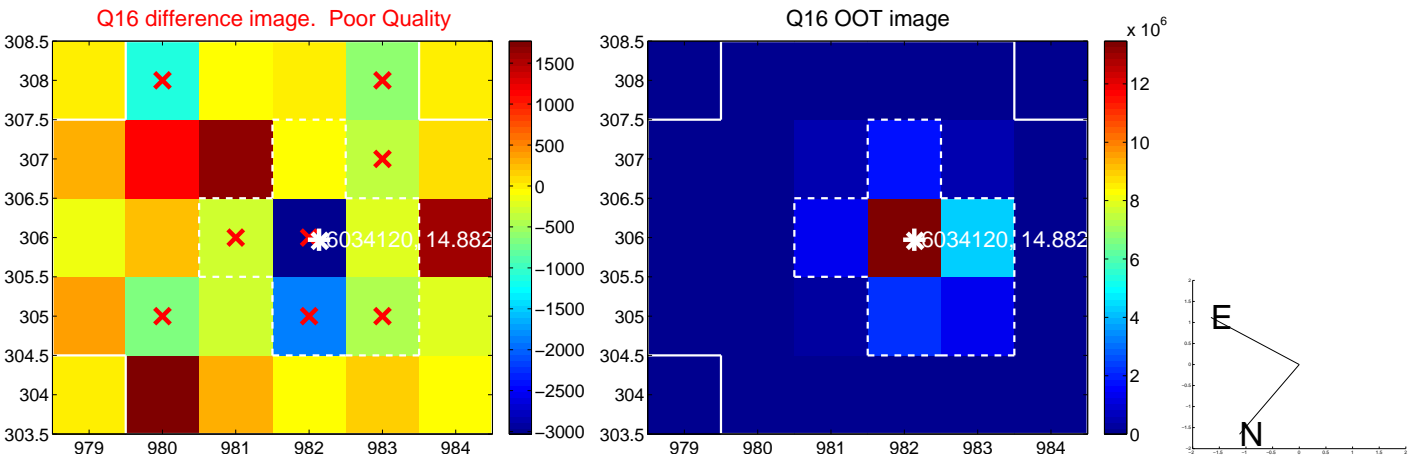
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



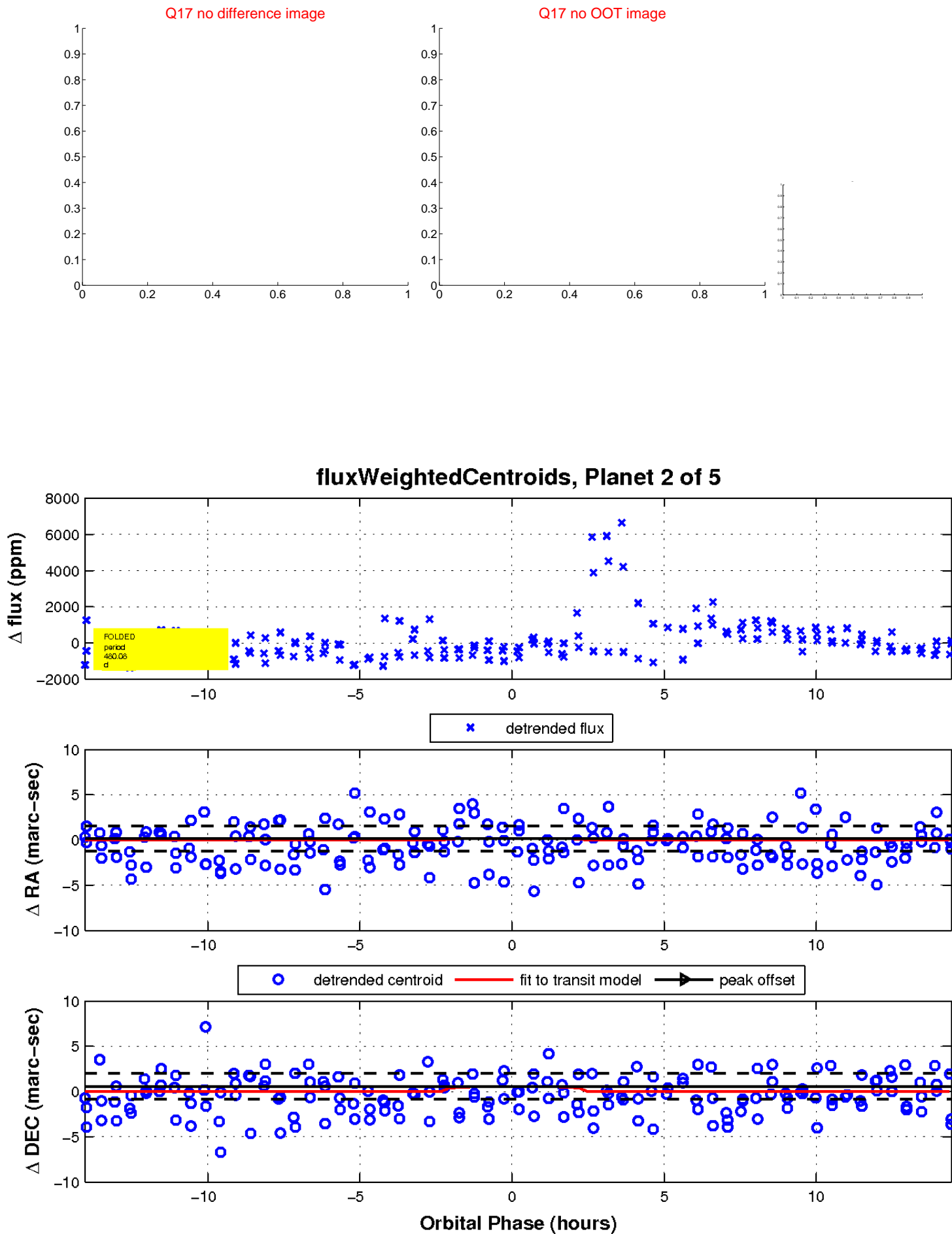
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

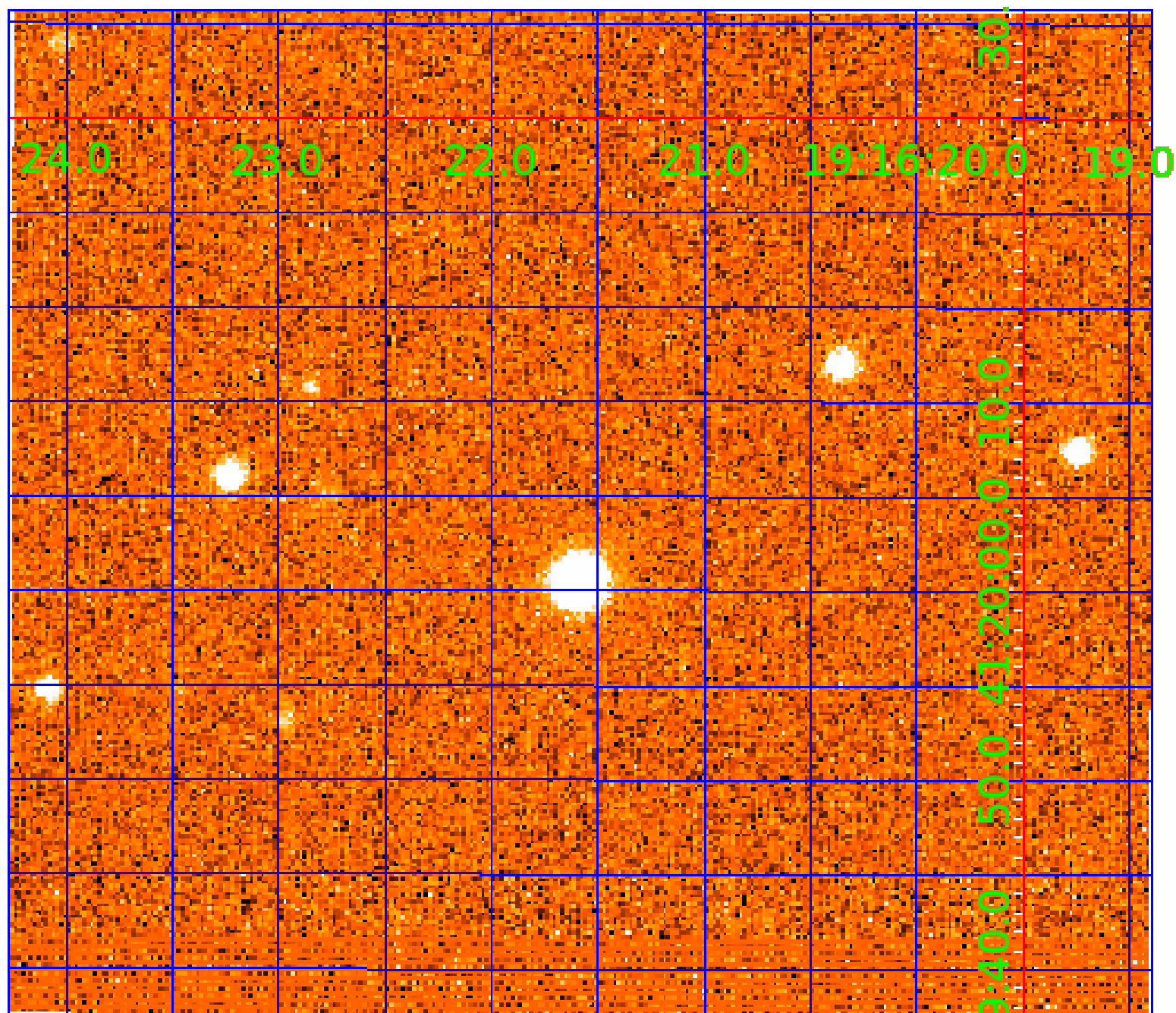


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006034120

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})
006034120-01	OBS	No	366.703628	195.179606	1435.5	4.219	14.8	9.0	0.78	5606	3.12	0.60
006034120-02	OBS	No	480.083856	543.859745	891.3	4.820	13.9	5.7	0.78	5606	2.50	0.42
006034120-03	OBS	No	311.415136	384.202604	1115.4	3.850	11.4	7.7	0.78	5606	2.86	0.74
006034120-04	OBS	No	610.909074	159.363857	880.9	3.058	11.8	5.4	0.78	5606	2.47	0.30
006034120-05	OBS	No	469.774356	459.953226	801.1	15.000	14.7	-1.0	0.78	5606	2.20	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034120-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006034120-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

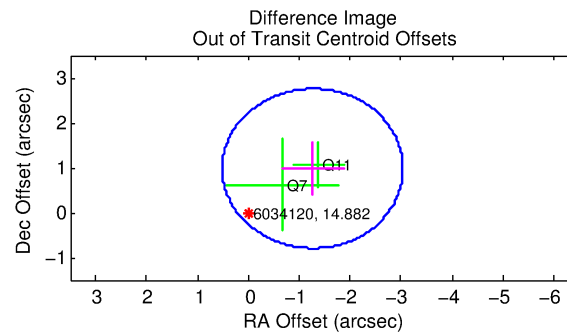
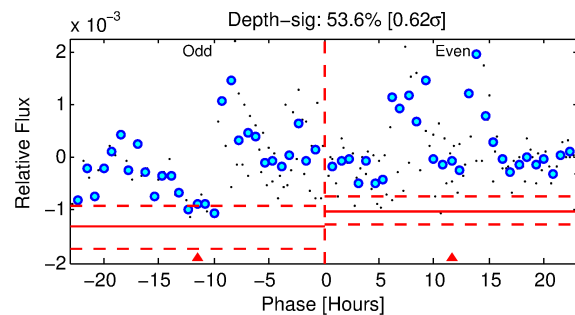
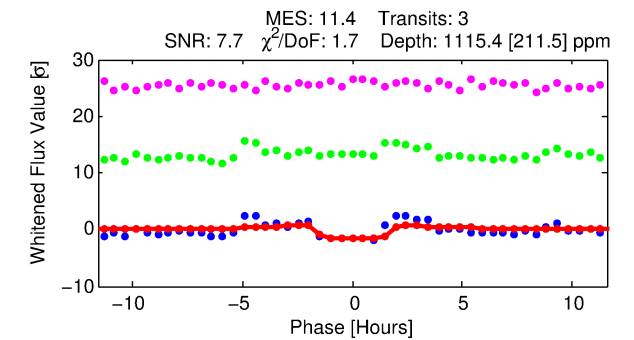
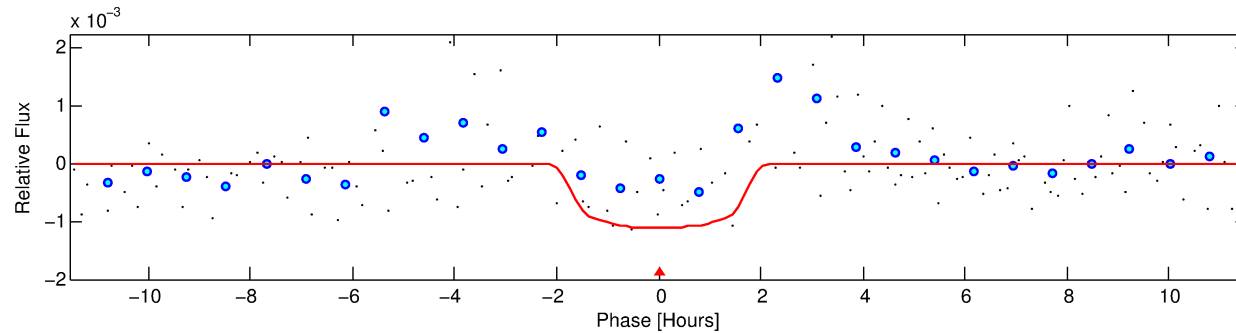
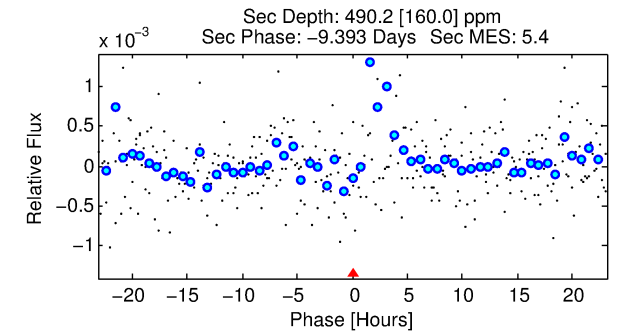
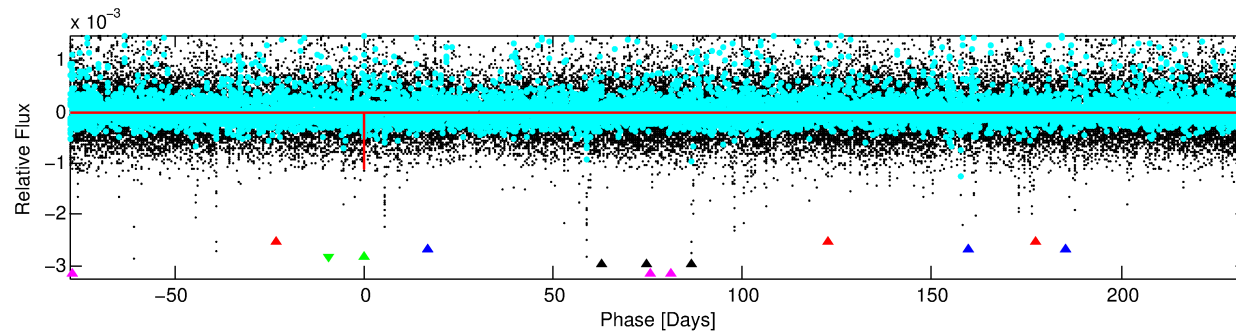
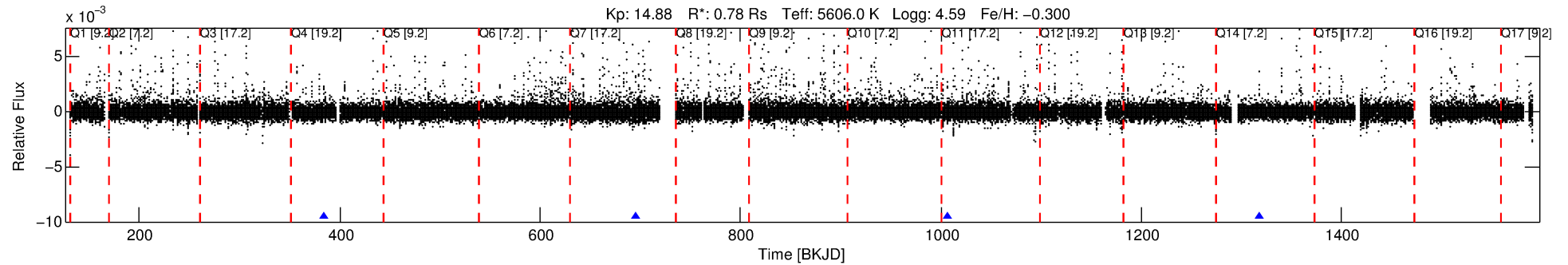
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034120-03

No Significant Match Found

DV One-Page Summary

KIC: 6034120 Candidate: 3 of 5 Period: 311.415 d



DV Fit Results:

Period = 311.41514 [0.00764] d
Epoch = 384.2026 [0.0180] BKJD
Rp/R* = 0.0335 [0.0247]
a/R* = 428.60 [1351.83]
b = 0.77 [1.72]
Seff = 0.74 [0.22]
Teq = 237 [18] K
Rp = 2.86 [2.22] Re
a = 0.8566 [0.1660] AU
Ag = 24130.99 [37158.23] [0.65 σ]
Teffp = 4559 [1730] K [2.50 σ]

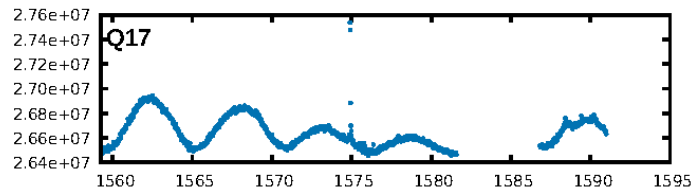
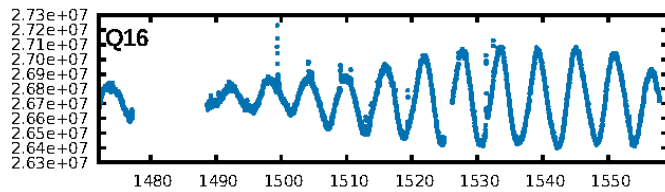
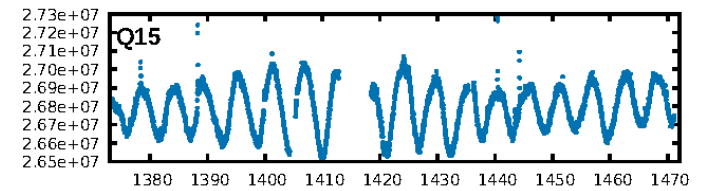
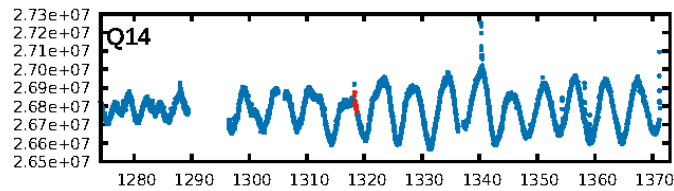
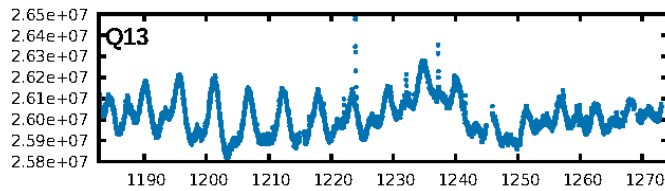
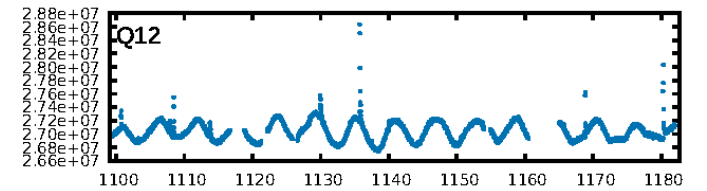
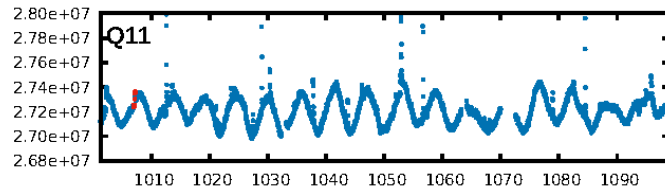
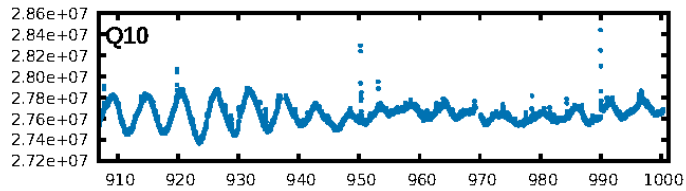
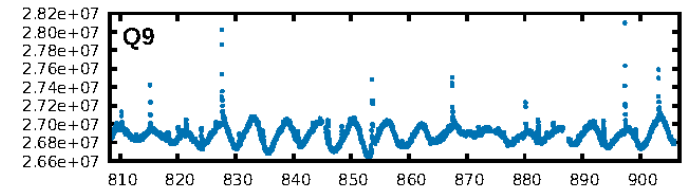
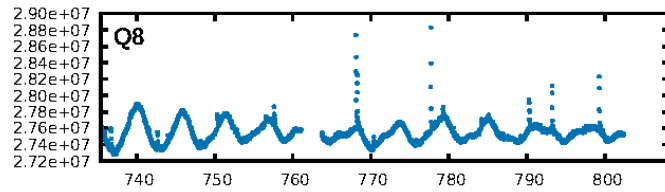
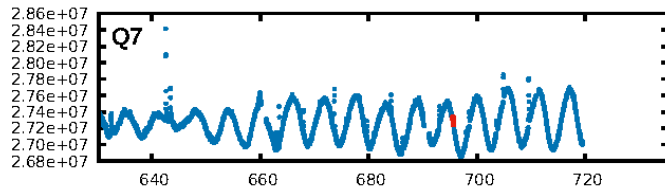
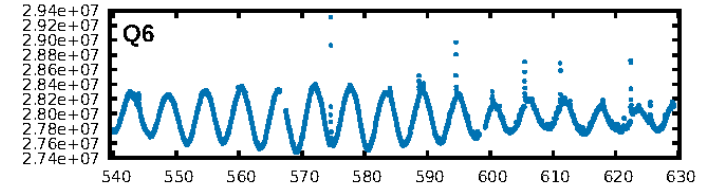
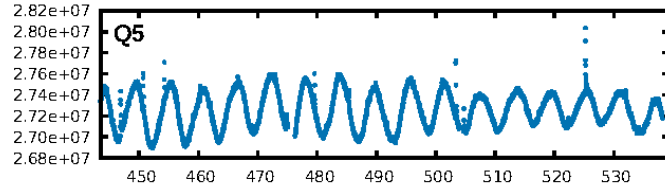
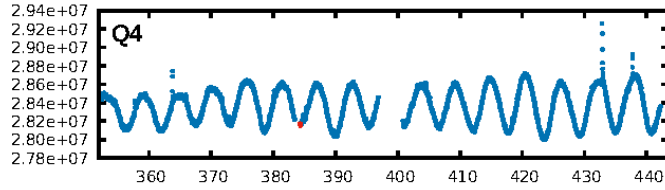
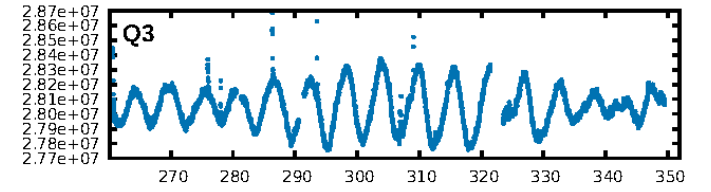
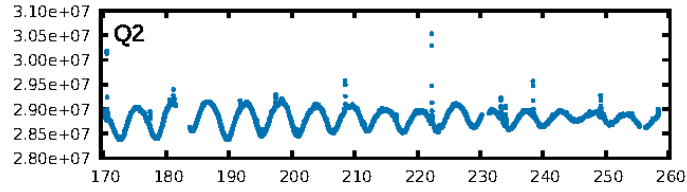
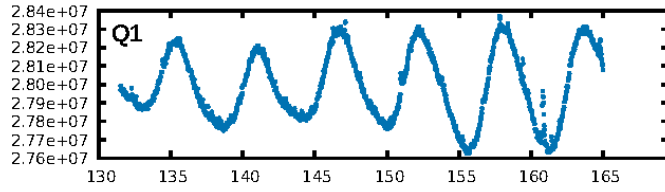
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [232.32 σ]
ModelChiSquare2-sig: 4.1%
ModelChiSquareGof-sig: 75.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.254
Centroid-sig: 39.8%
Centroid-so: 1.069 arcsec [0.84 σ]
OotOffset-rm: 1.599 arcsec [2.70 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-rm: 1.520 arcsec [2.56 σ]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

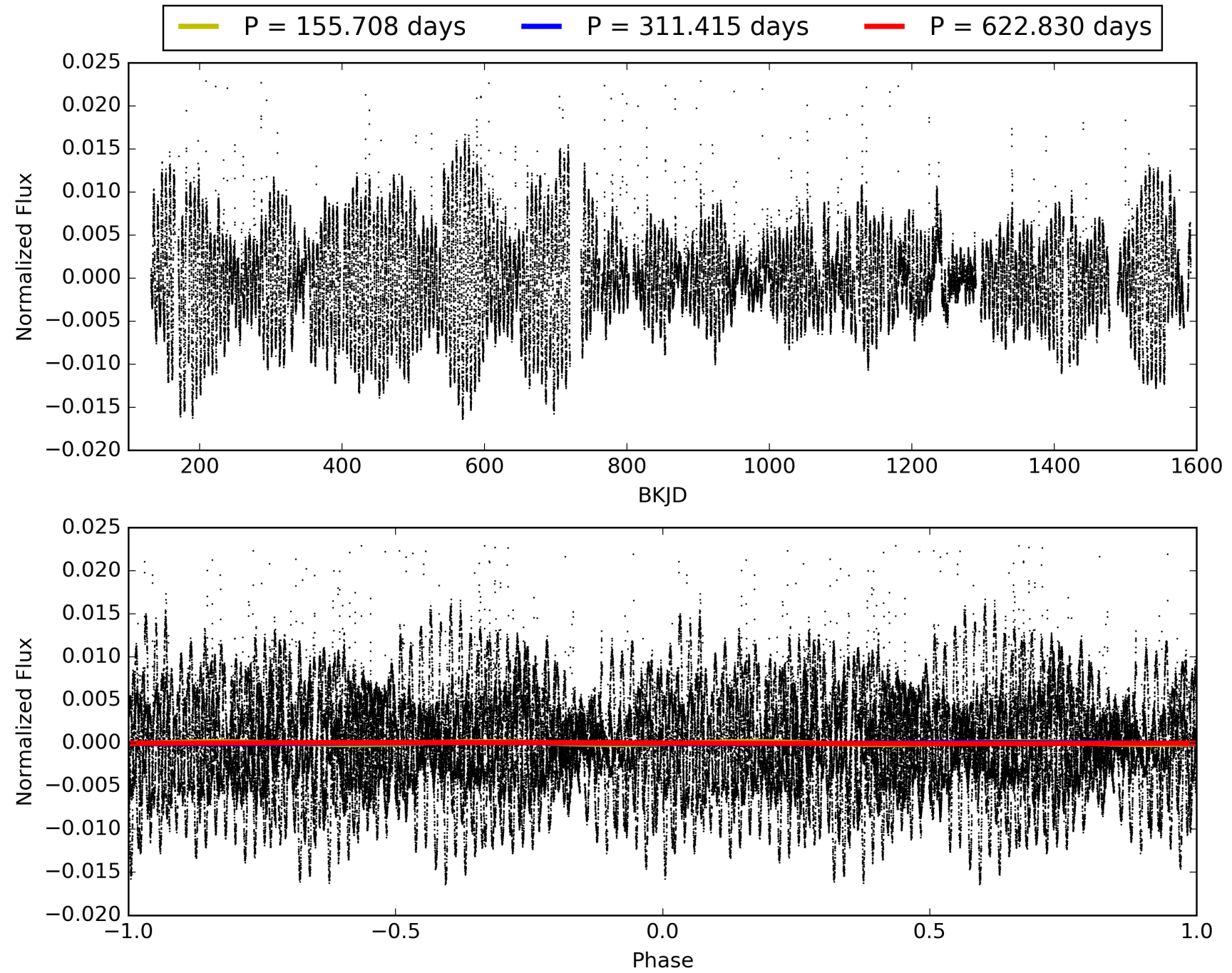
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:50:41 Z

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

TCE 006034120-03, PDC Light Curves

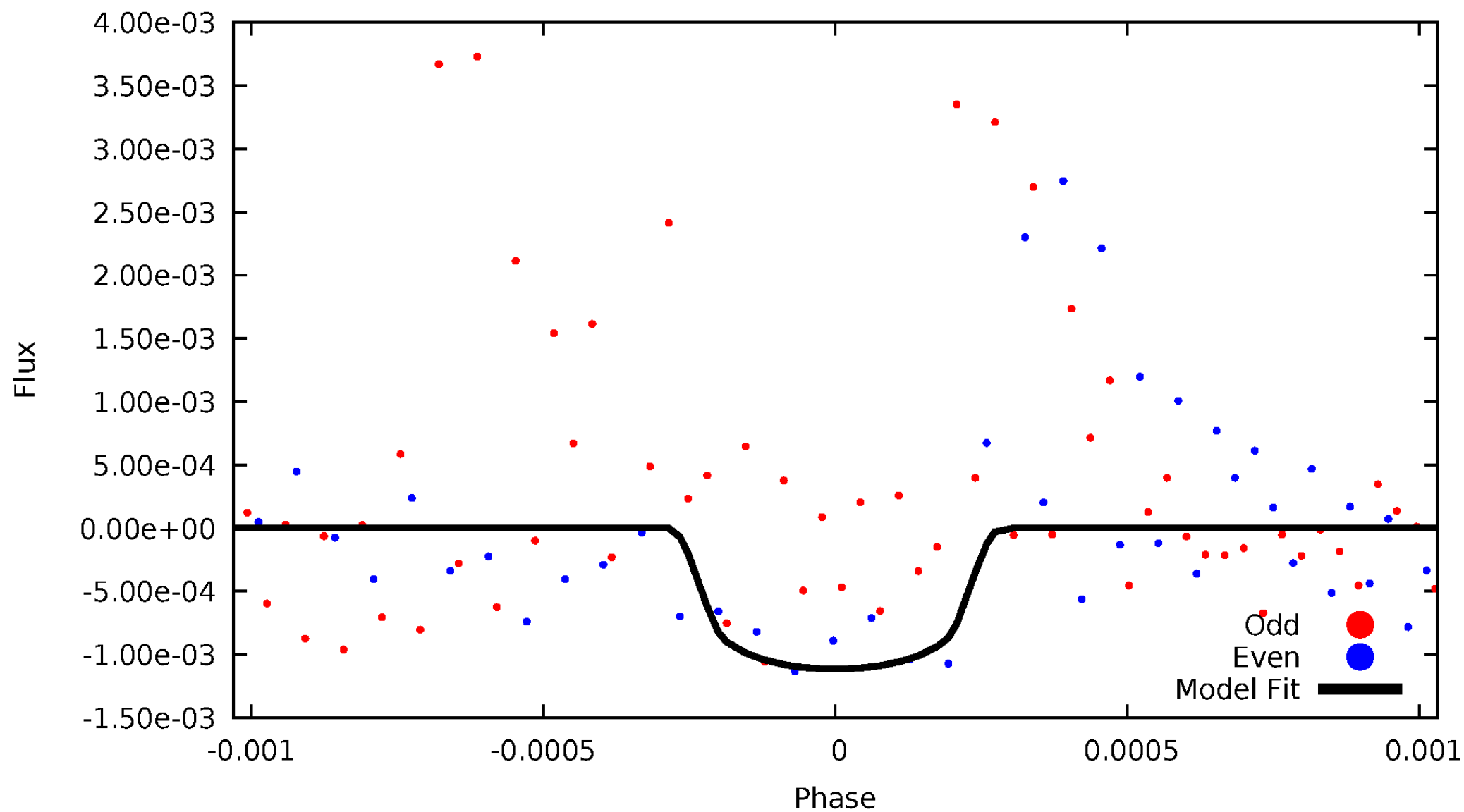


TCE 006034120-03



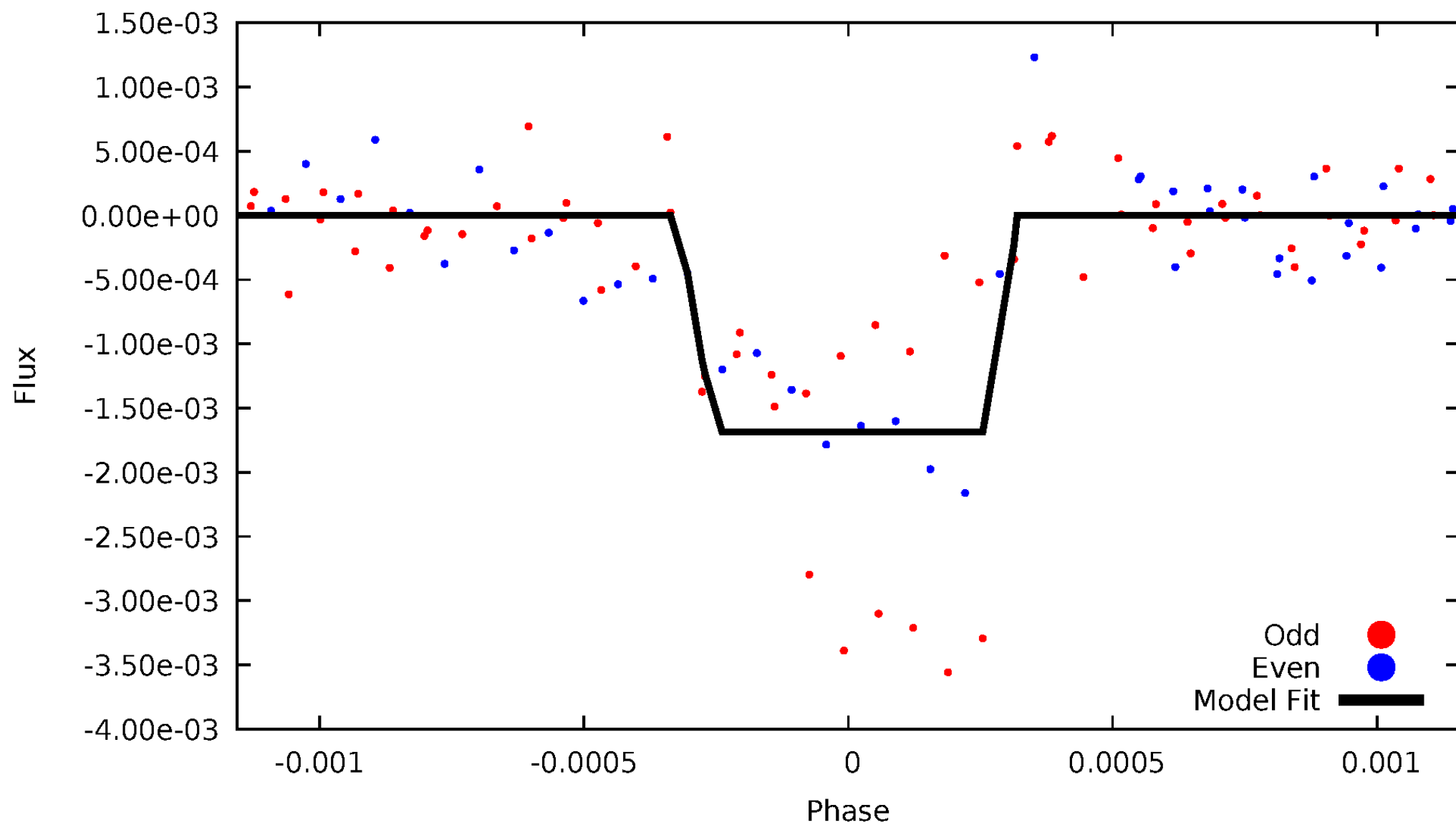
DV Odd/Even

TCE 006034120-03



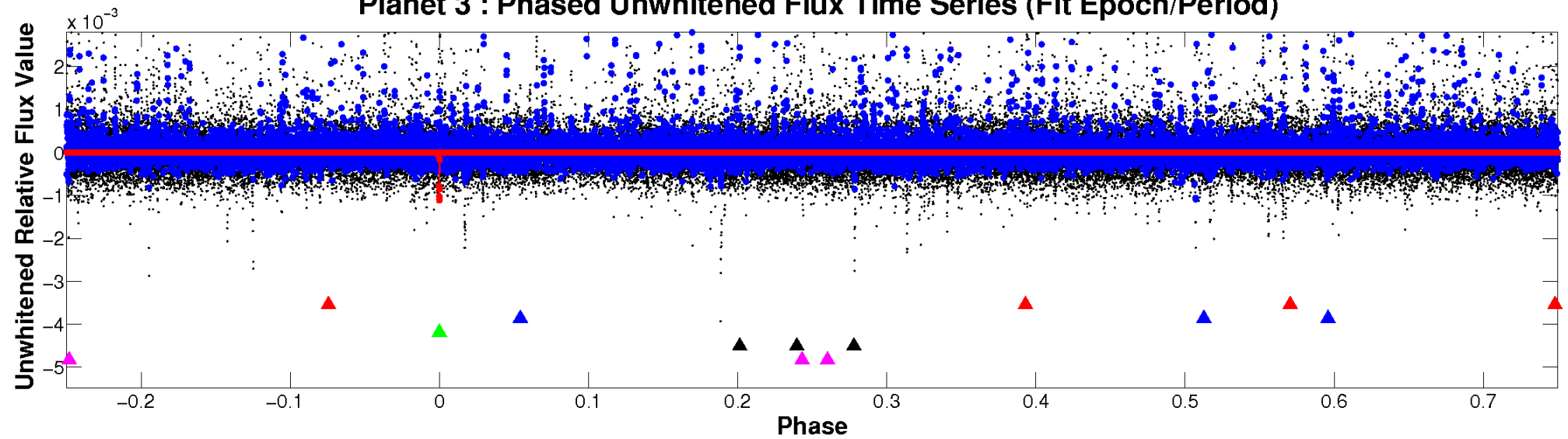
ALT Odd/Even

TCE 006034120-03

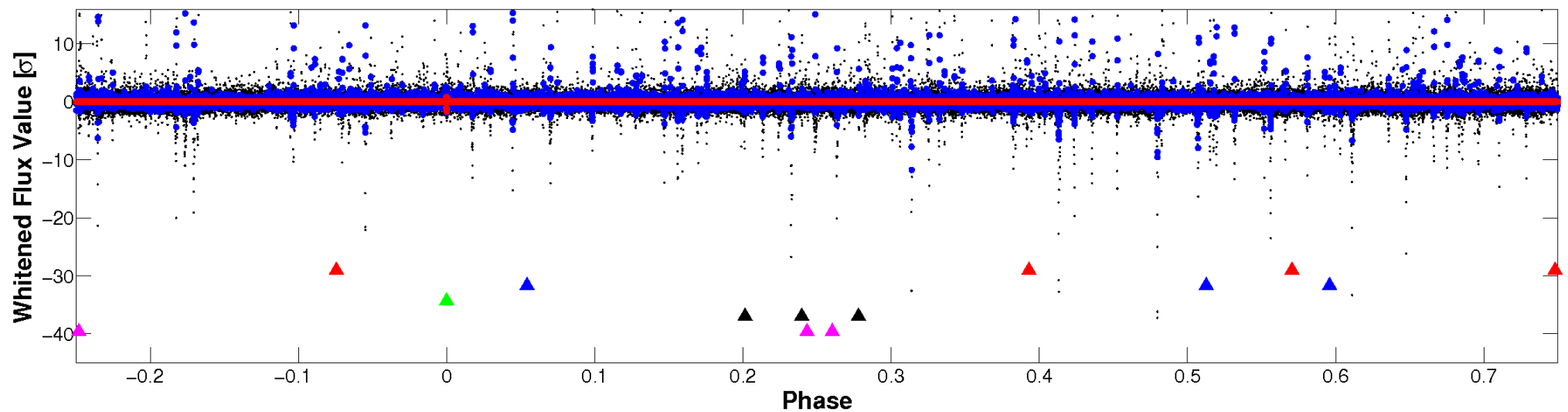


Non-Whitened Vs. Whitened Light Curve

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

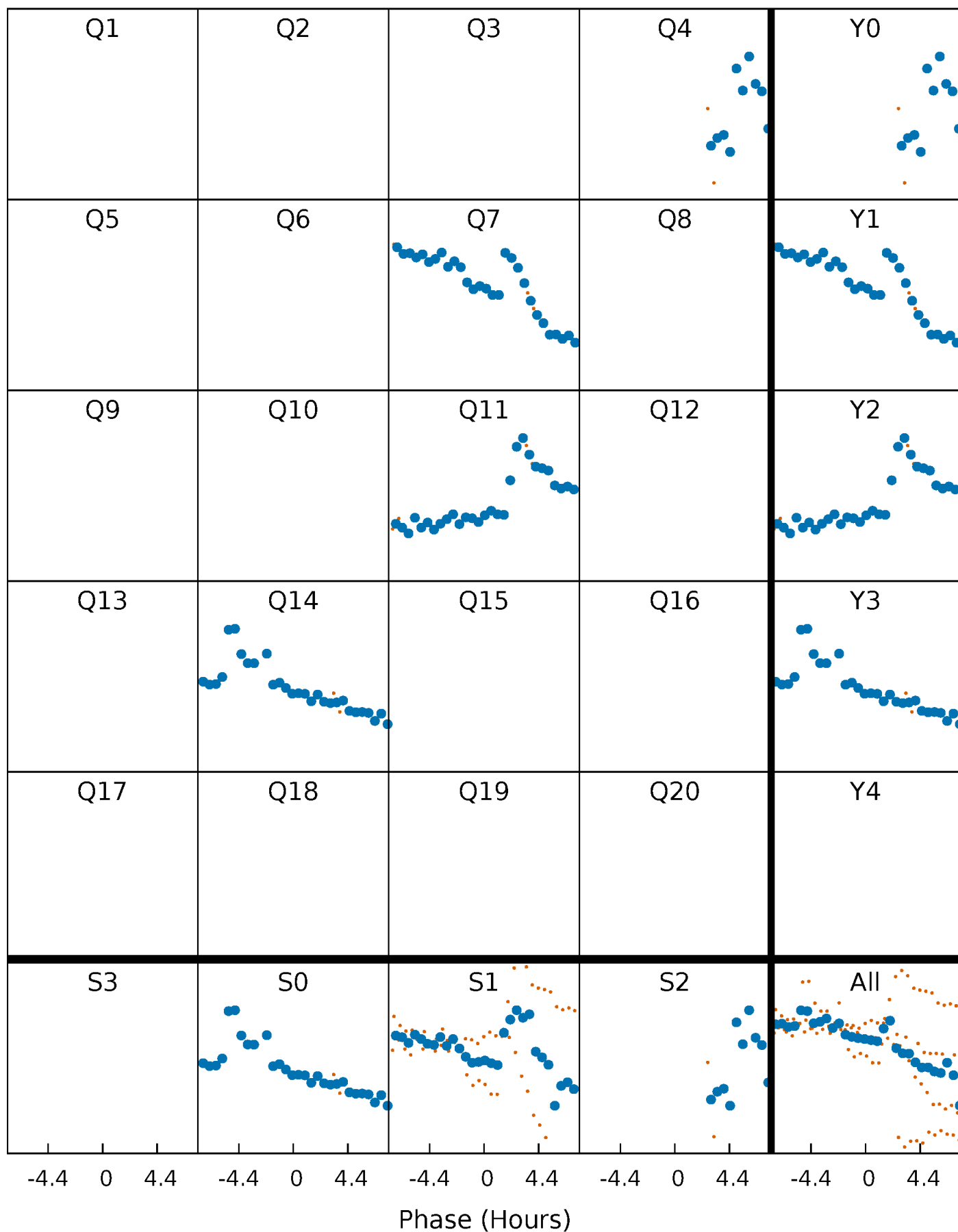


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



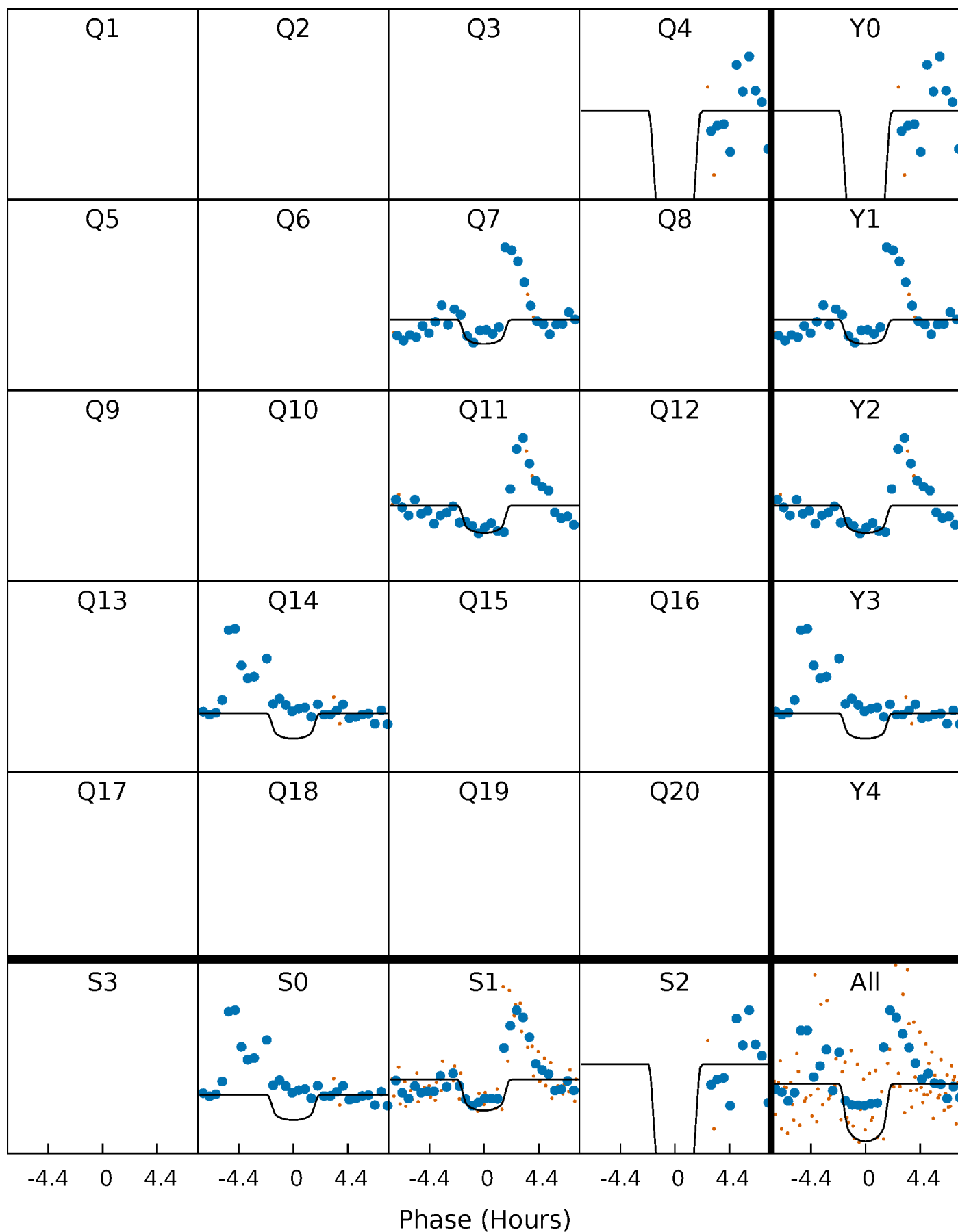
PDC Quarter-Phased Transit Curves

TCE 006034120-03 P=311.415136 Days $T_0=384.202604$ (BKJD)



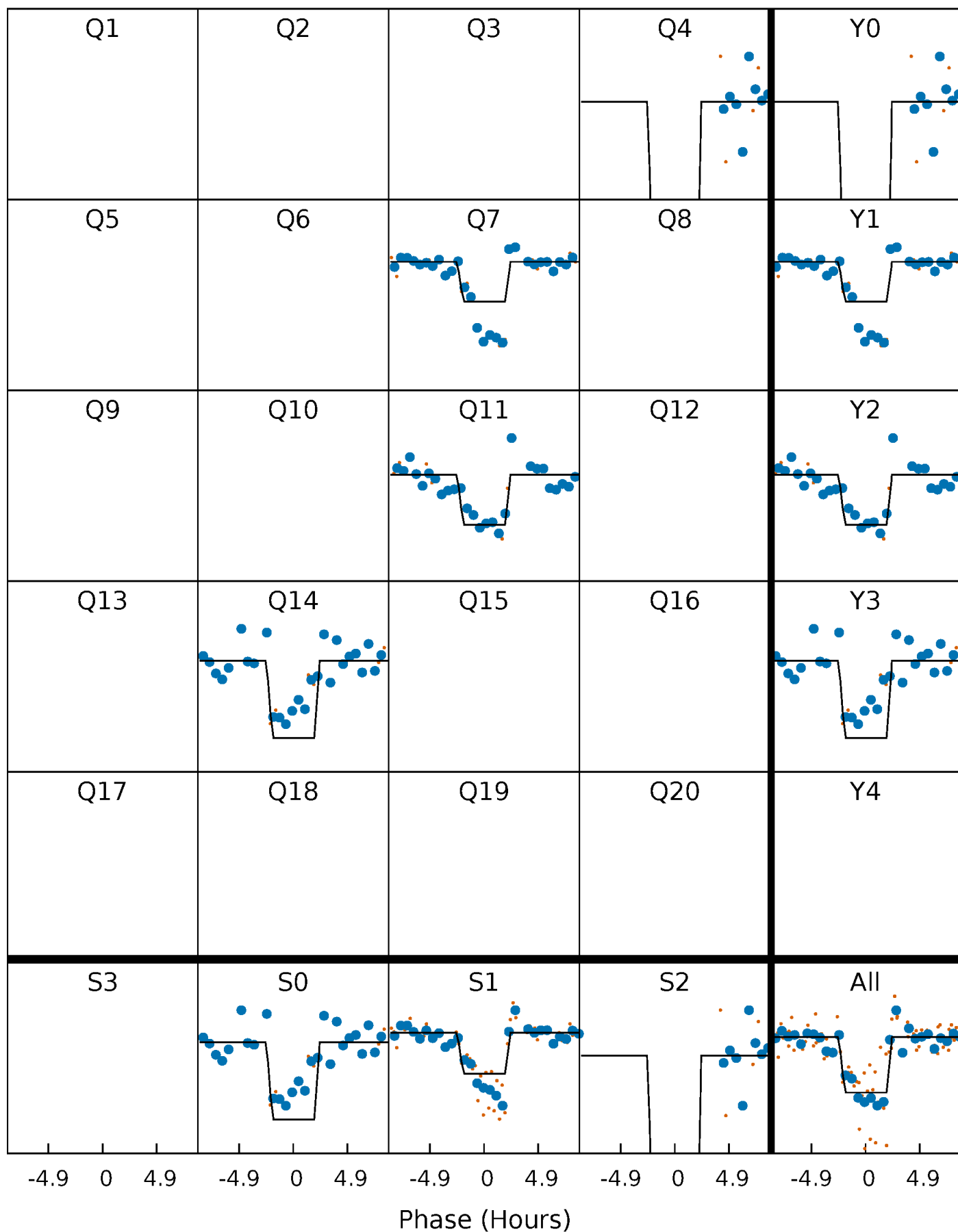
DV Quarter-Phased Transit Curves

TCE 006034120-03 $P=311.415136$ Days $T_0=384.202604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

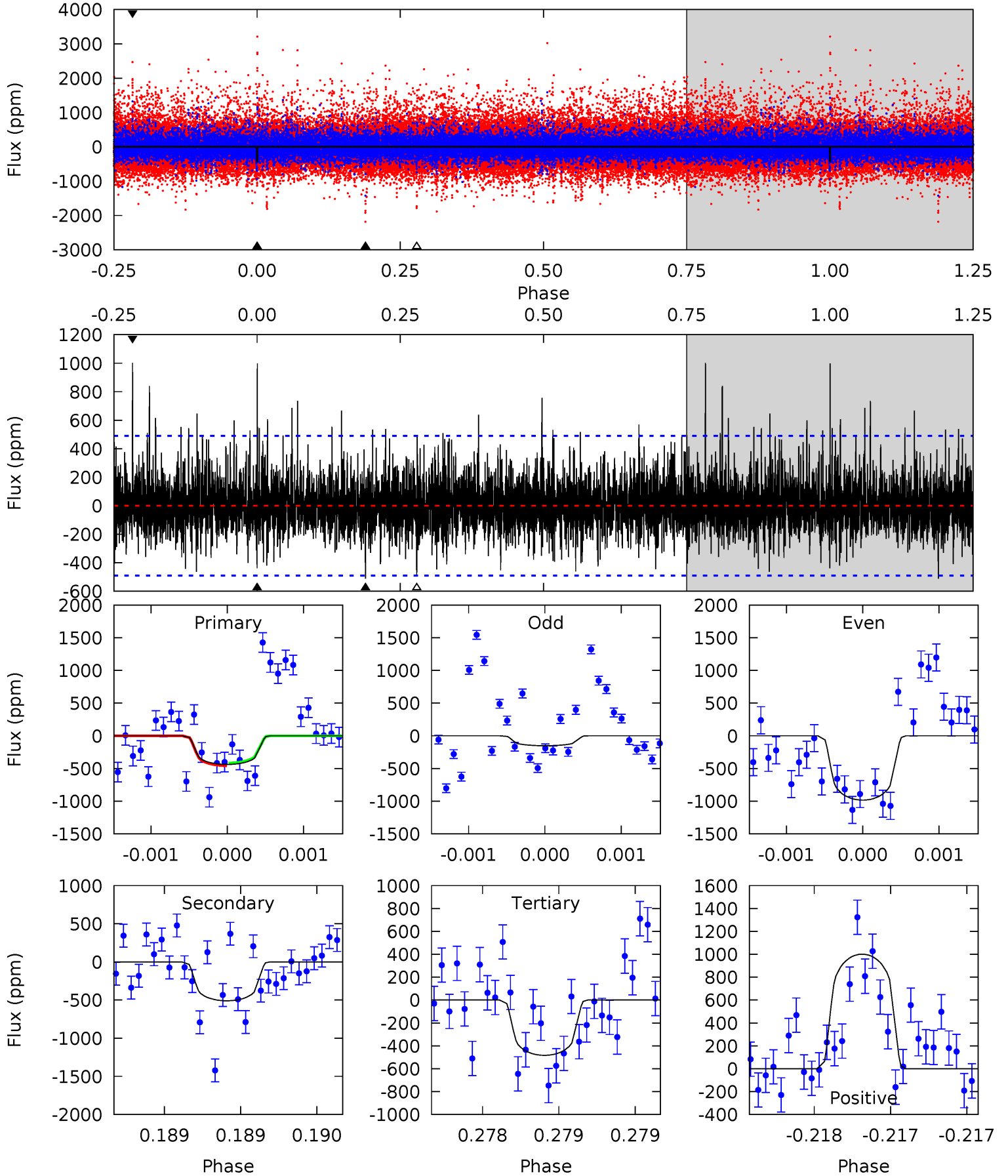
TCE 006034120-03 P=311.441510 Days $T_0=384.141377$ (BKJD)



DV Model-Shift Uniqueness Test

006034120-03, $P = 311.415136$ Days, $E = 72.787468$ Days

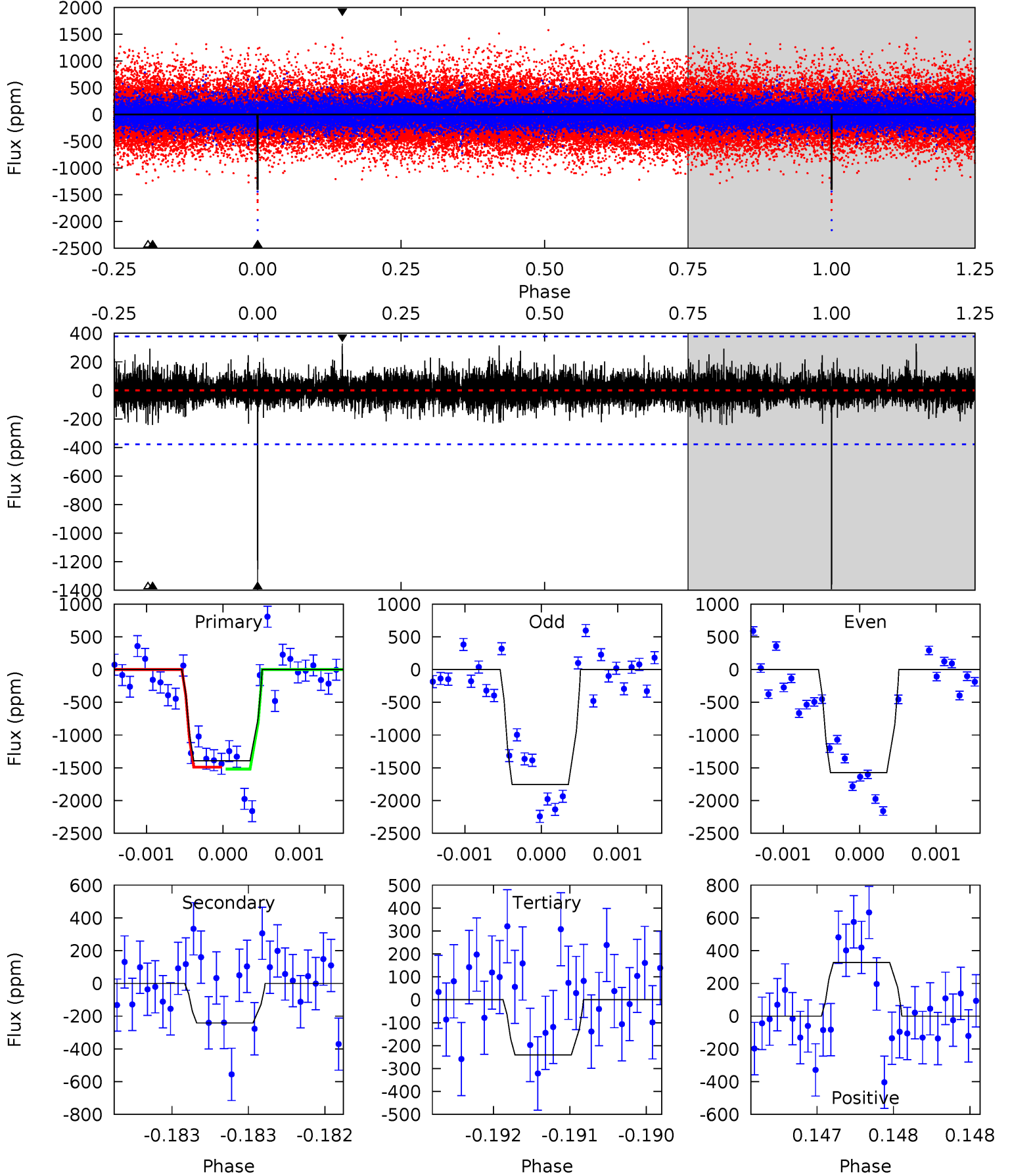
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.98	5.79	5.48	11.4	5.56	3.46	1.64	-0.50	-6.39	0.30	-5.58	3.48	1.54	0.66	0.22



Alt Model-Shift Uniqueness Test

006034120-03, P = 311.441510 Days, E = 72.699867 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	3.55	3.52	4.79	5.53	3.42	0.86	16.9	15.6	0.02	-1.25	1.41	1.11	0.19	0.22



Stellar Parameters For KIC 006034120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5606^{+152}_{-152}	$4.586^{+0.038}_{-0.152}$	$-0.300^{+0.300}_{-0.300}$	$0.784^{+0.182}_{-0.061}$	$0.876^{+0.088}_{-0.097}$	$2.564^{+0.495}_{-1.051}$
	+3%/-3%	+1%/-3%	+100%/-100%	+23%/-8%	+10%/-11%	+19%/-41%
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 006034120-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-510 ± 88	$3.26^{+2.01}_{-1.88}$	336^{+19}_{-13}	4573^{+2252}_{-734}	19046^{+91895}_{-11777}
Alt.	-242 ± 68	$3.75^{+2.08}_{-1.96}$	337^{+19}_{-14}	3775^{+1186}_{-544}	6669^{+22089}_{-4108}

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 $A_{obs} \gg 1.0$

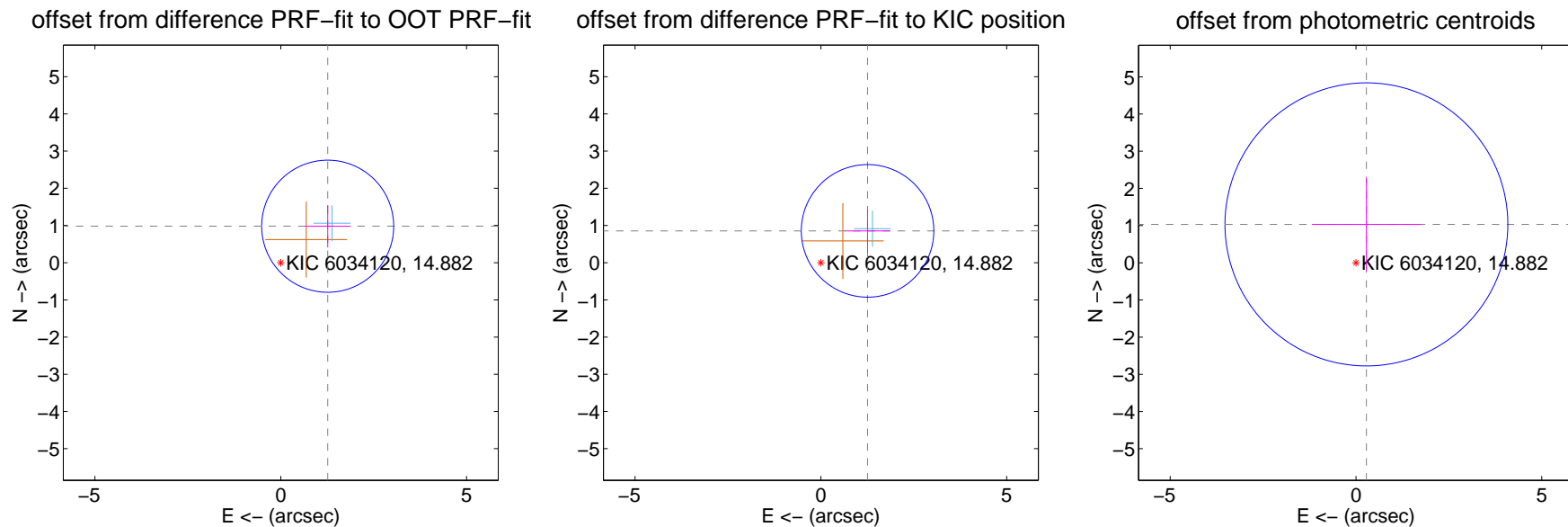
DV Centroid Data

Supplemental centroid analysis for 006034120-03. Kepler magnitude: 14.88. Transit SNR 7.72

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.599 ± 0.592	2.70	-1.263 ± 0.606	0.980 ± 0.568
PRF-fit source offset from KIC position	1.520 ± 0.594	2.56	-1.256 ± 0.606	0.855 ± 0.568
photometric centroid source offset	1.07 ± 1.27	0.84	-0.28 ± 1.47	1.03 ± 1.25

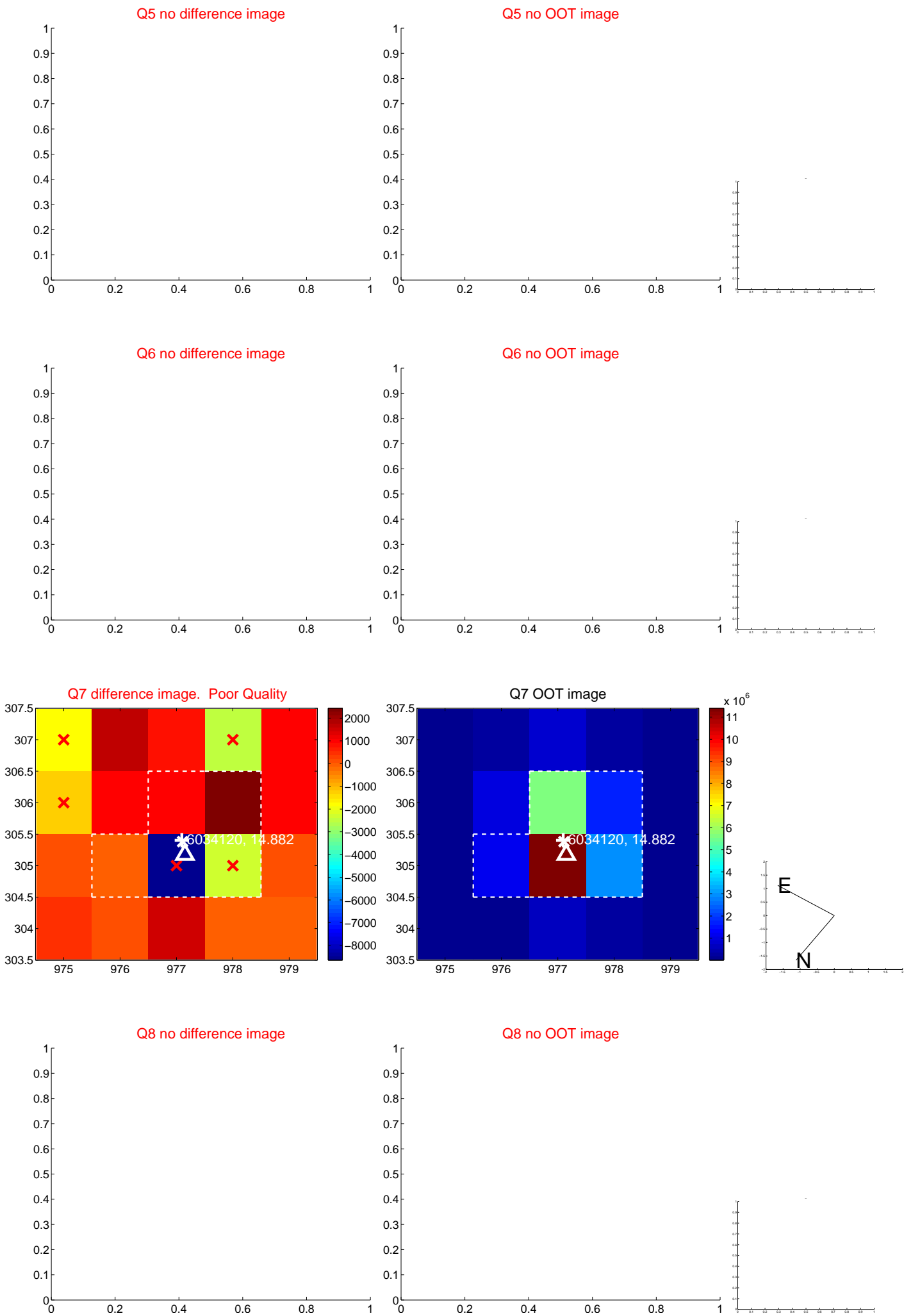


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

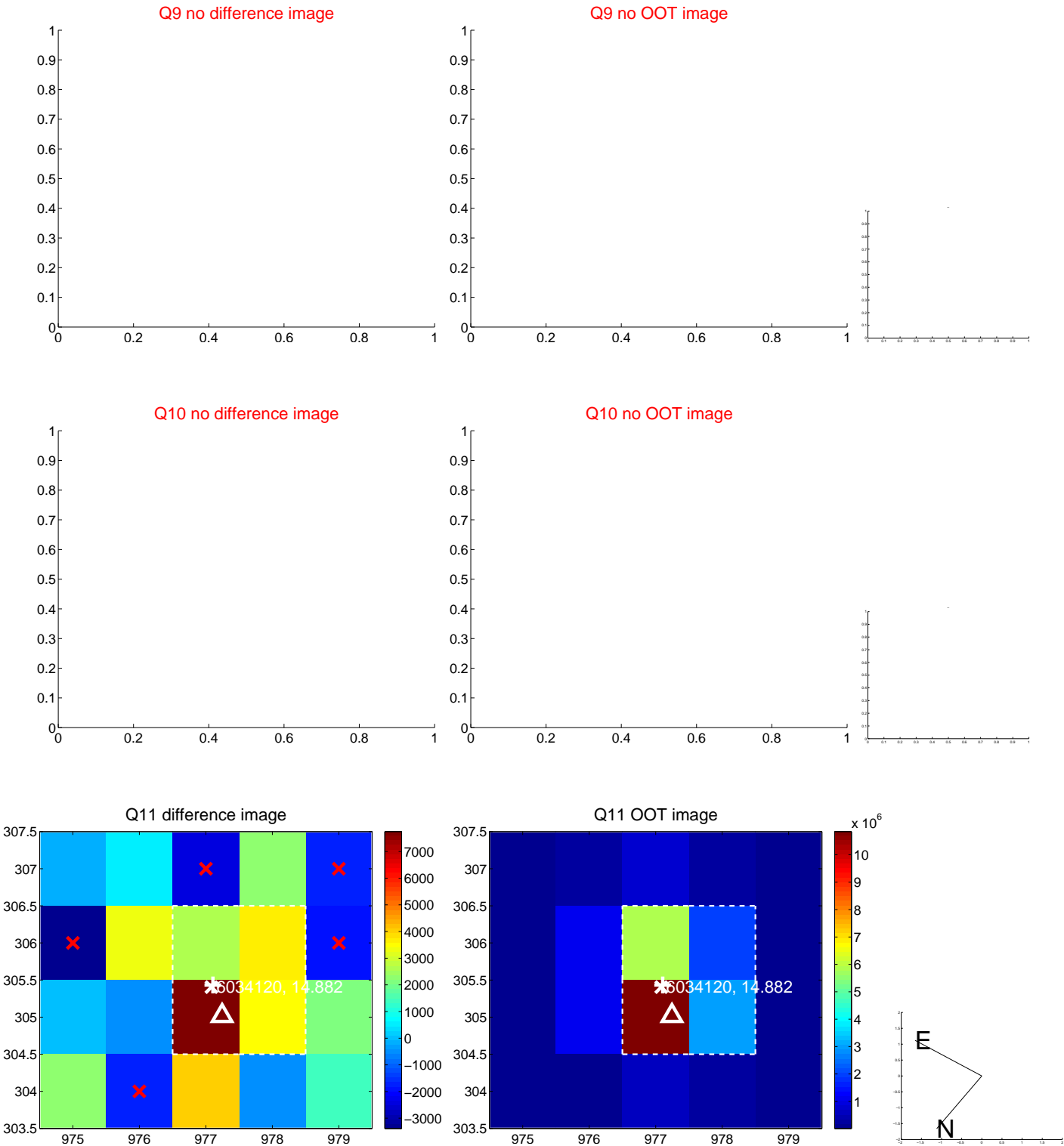
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



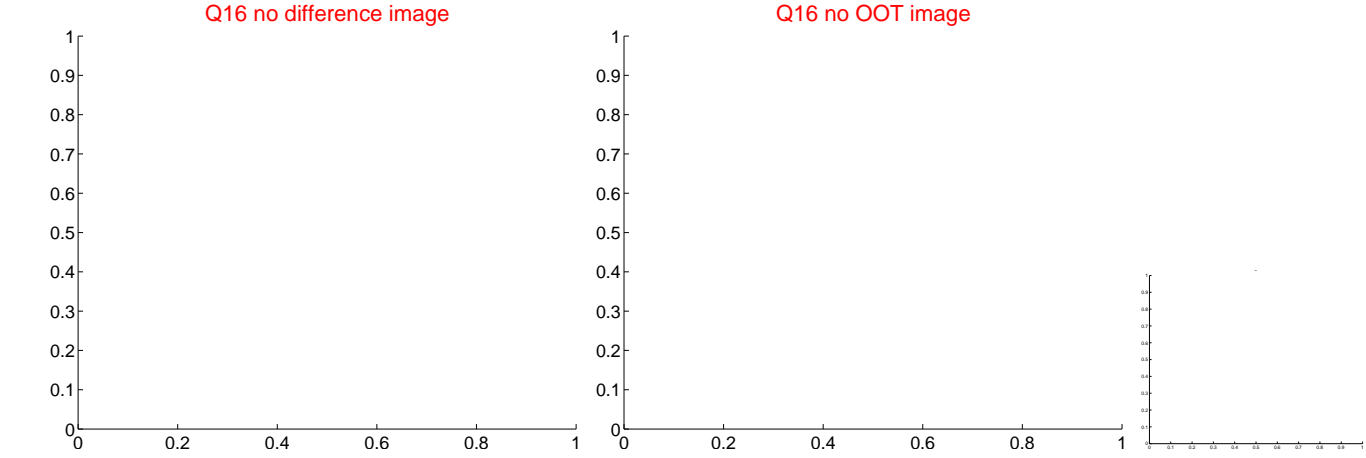
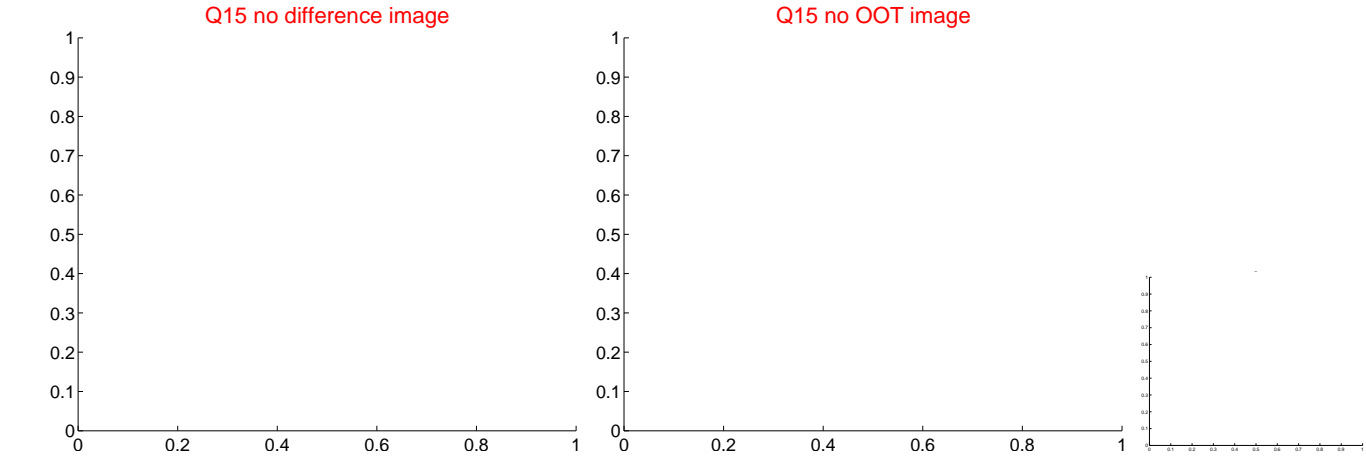
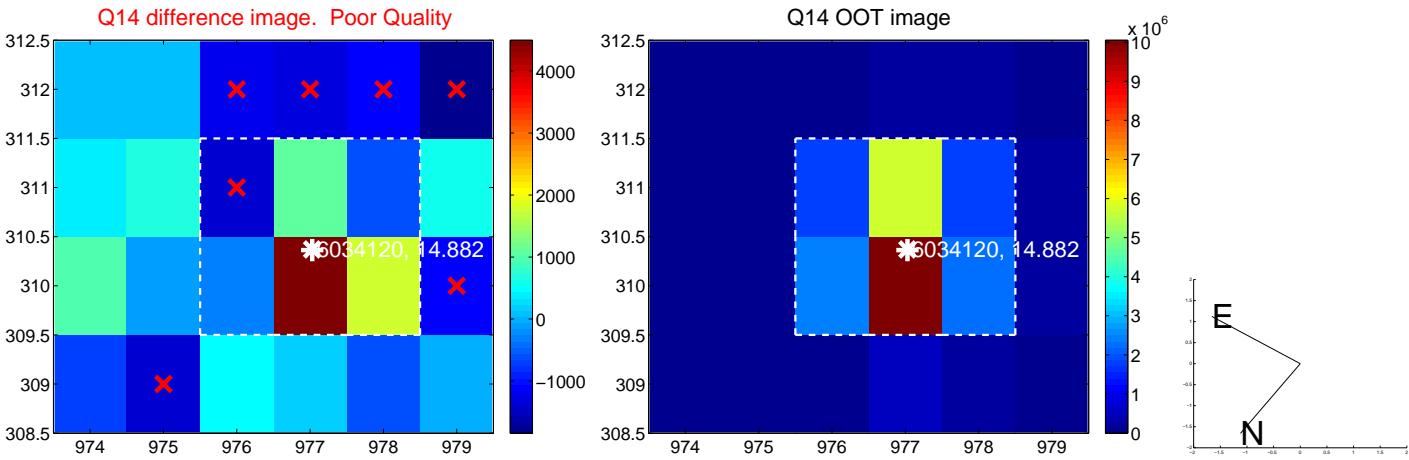
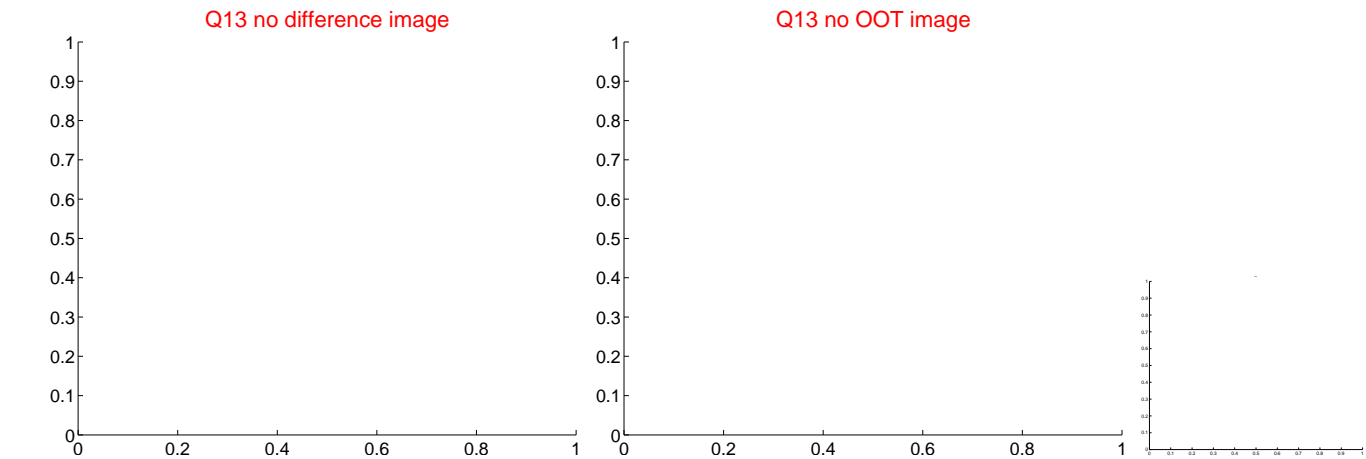
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



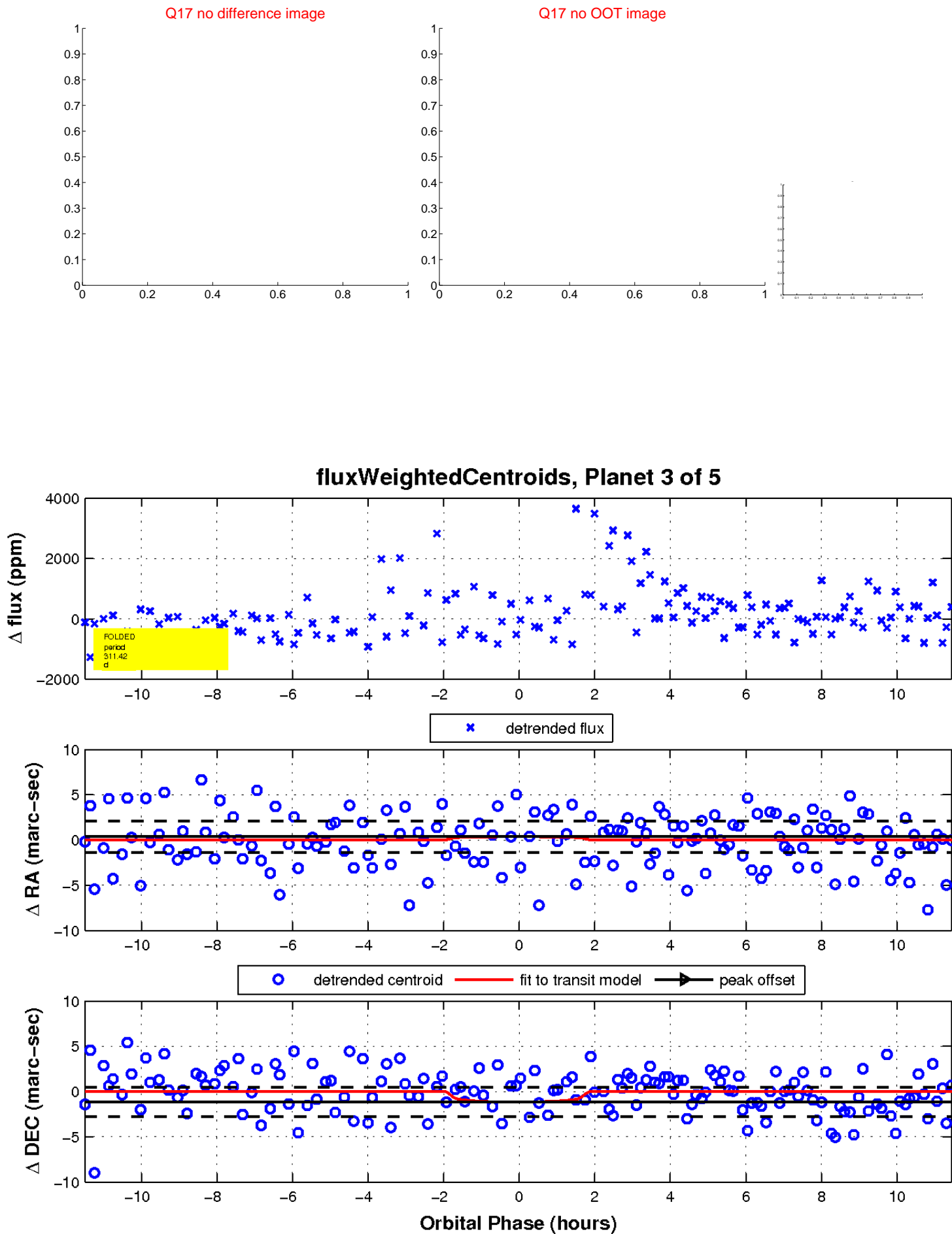
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

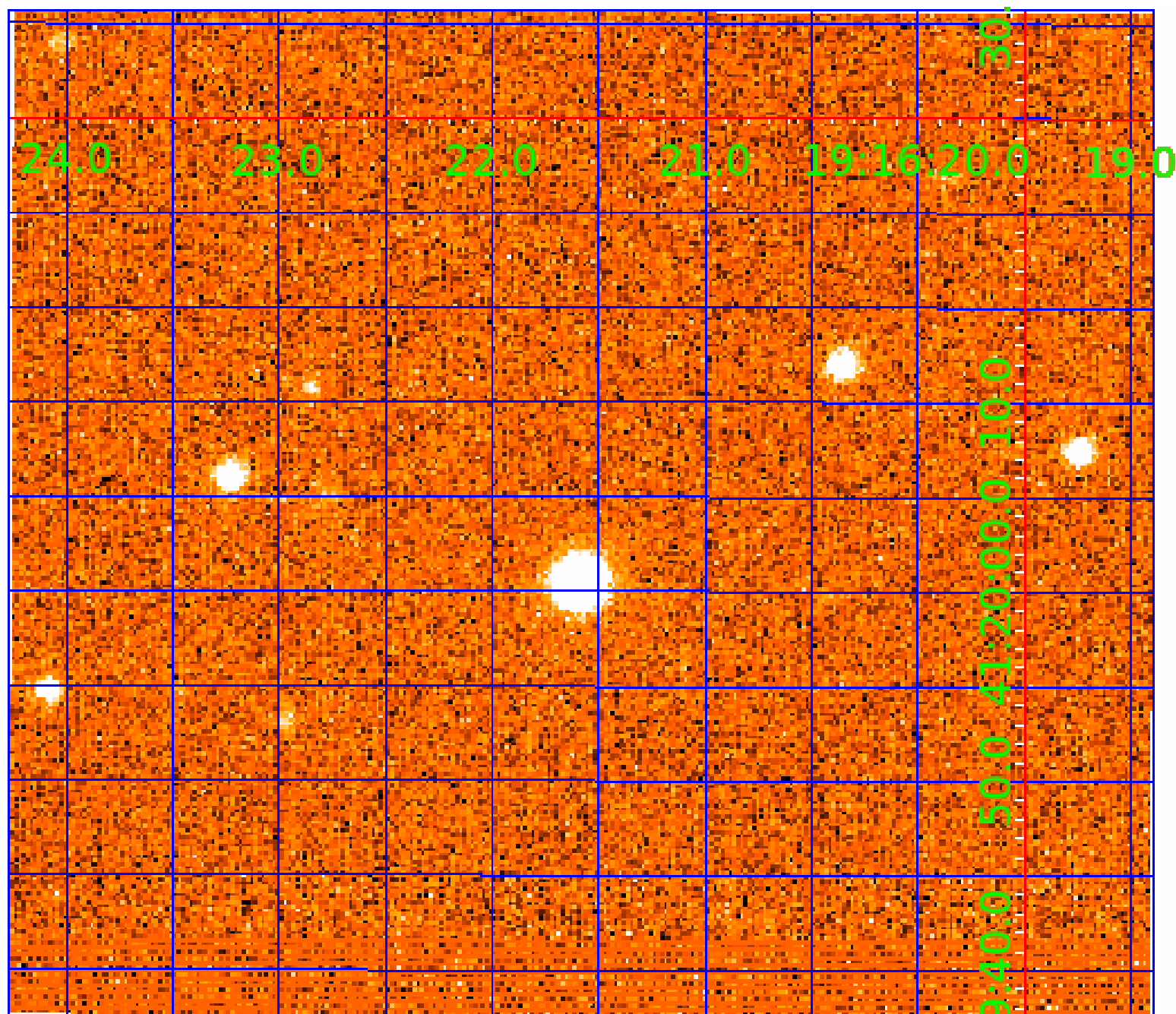


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006034120

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})
006034120-01	OBS	No	366.703628	195.179606	1435.5	4.219	14.8	9.0	0.78	5606	3.12	0.60
006034120-02	OBS	No	480.083856	543.859745	891.3	4.820	13.9	5.7	0.78	5606	2.50	0.42
006034120-03	OBS	No	311.415136	384.202604	1115.4	3.850	11.4	7.7	0.78	5606	2.86	0.74
006034120-04	OBS	No	610.909074	159.363857	880.9	3.058	11.8	5.4	0.78	5606	2.47	0.30
006034120-05	OBS	No	469.774356	459.953226	801.1	15.000	14.7	-1.0	0.78	5606	2.20	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034120-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006034120-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

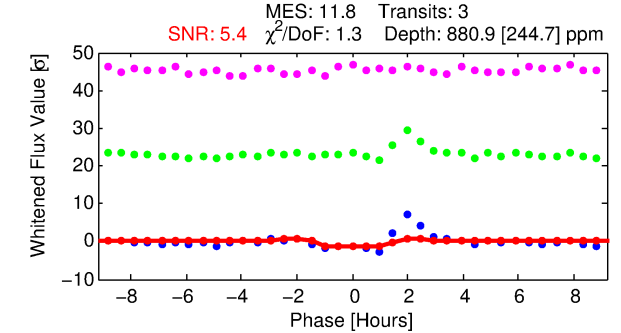
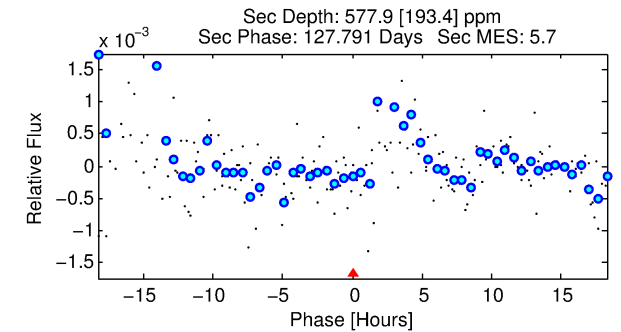
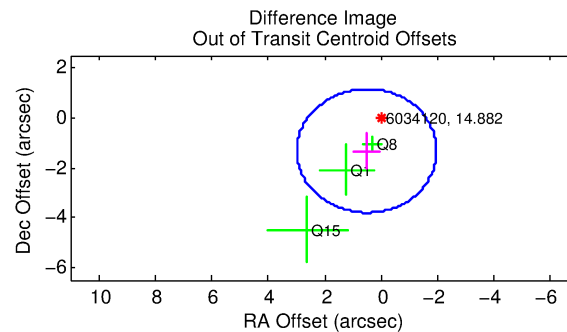
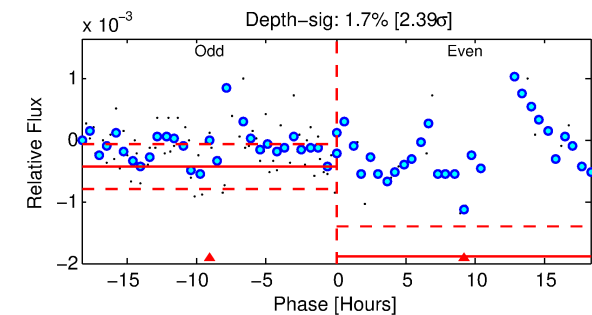
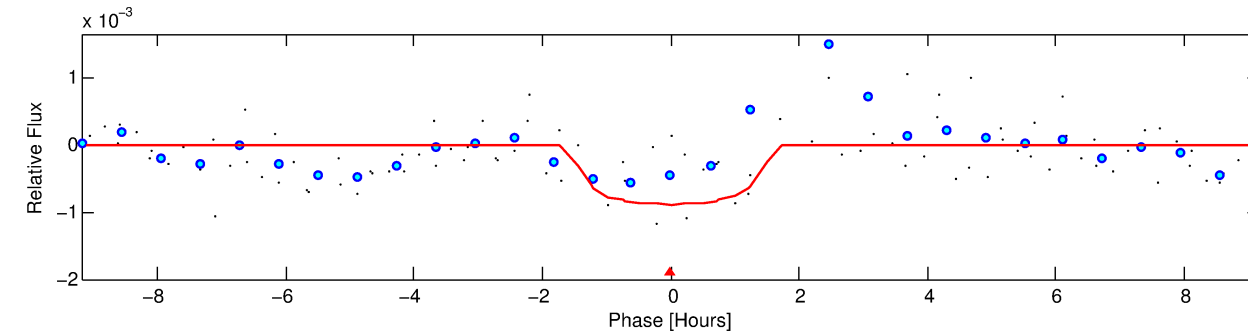
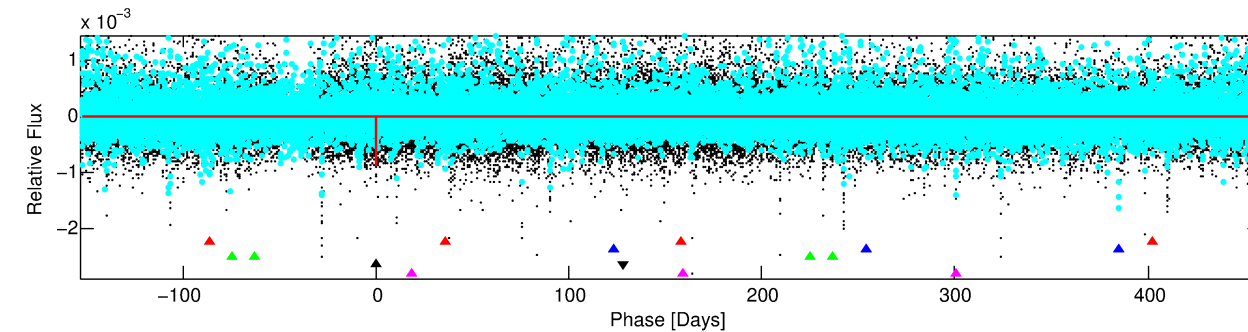
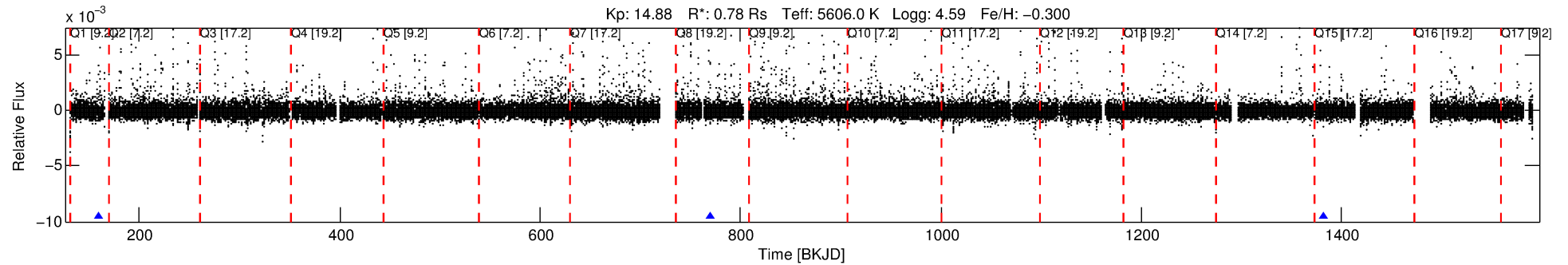
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034120-04

No Significant Match Found

DV One-Page Summary

KIC: 6034120 Candidate: 4 of 5 Period: 610.909 d



DV Fit Results:

Period = 610.90907 [0.00910] d
Epoch = 159.3639 [0.0105] BKJD
Rp/R* = 0.0289 [0.0413]
a/R* = 1180.67 [7179.73]
b = 0.68 [4.87]
Seff = 0.30 [0.09]
Teq = 189 [14] K
Rp = 2.47 [3.58] Re
a = 1.3424 [0.2602] AU
Ag = 93940.72 [271787.64] [0.35%]
Teffp = 5116 [3686] K [1.34%]

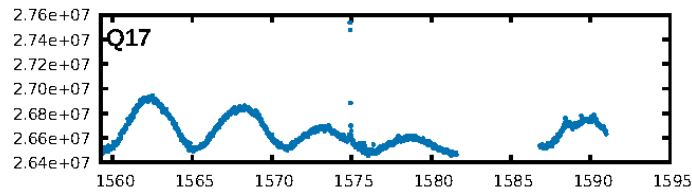
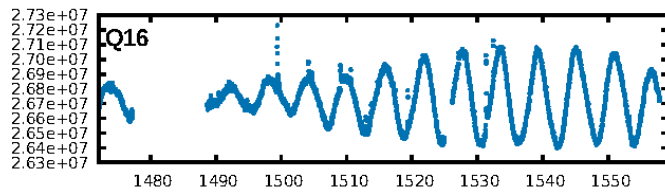
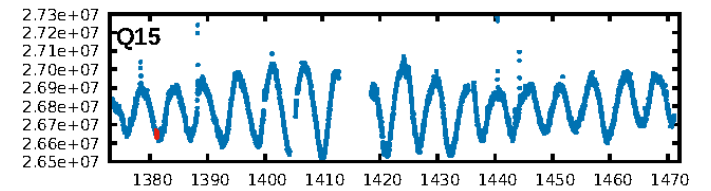
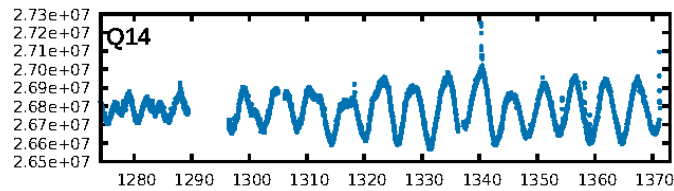
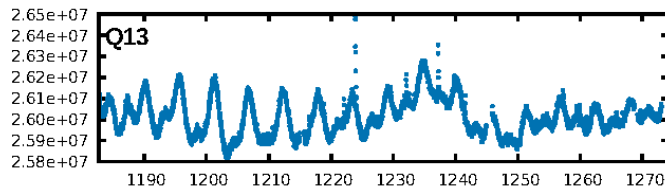
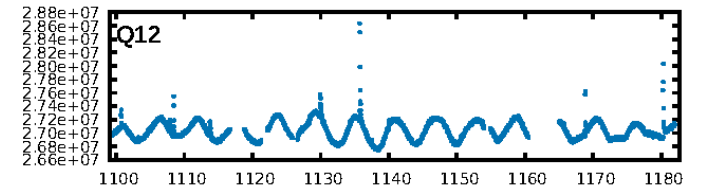
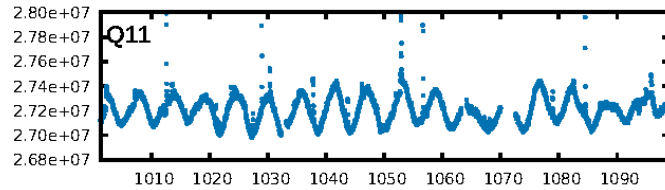
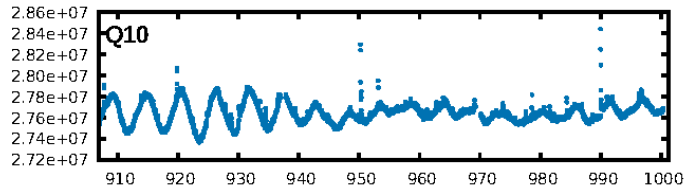
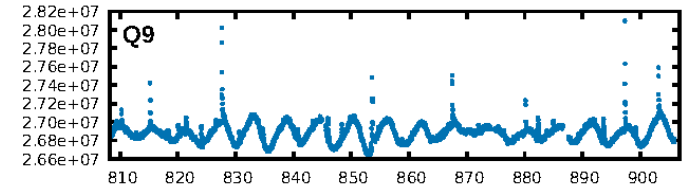
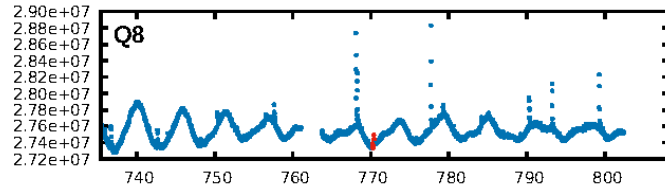
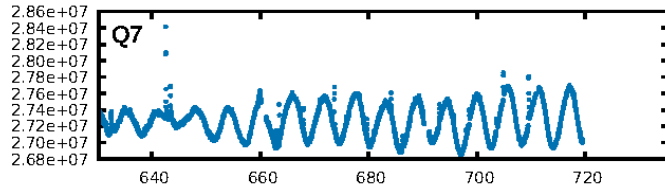
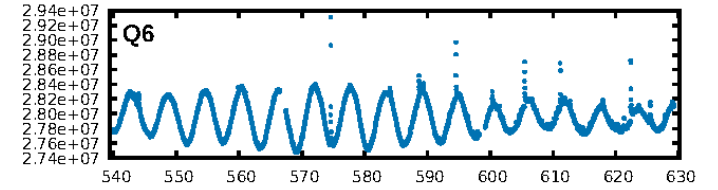
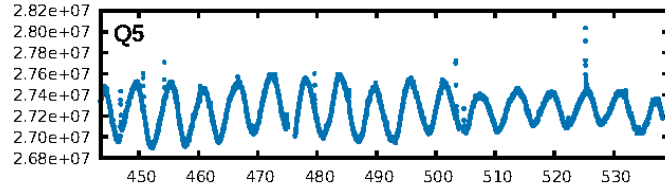
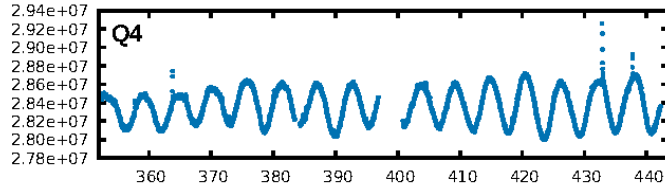
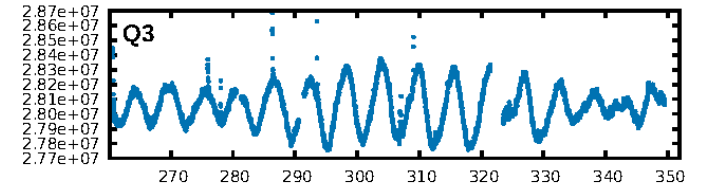
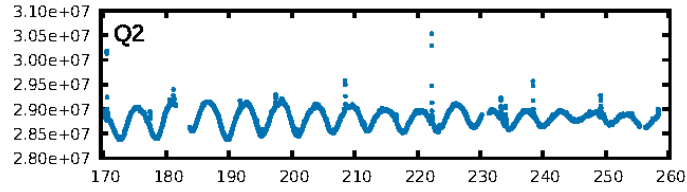
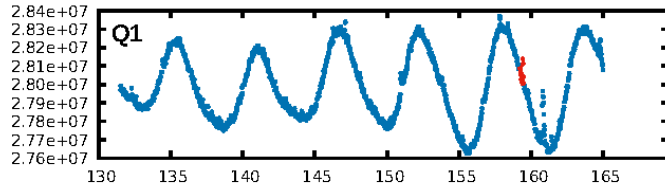
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [550.01%]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.5%
ModelChiSquareGof-sig: 60.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.237
Centroid-sig: 18.3%
Centroid-so: 1.743 arcsec [1.07%]
OotOffset-rm: 1.423 arcsec [1.72%]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 1.447 arcsec [1.47%]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

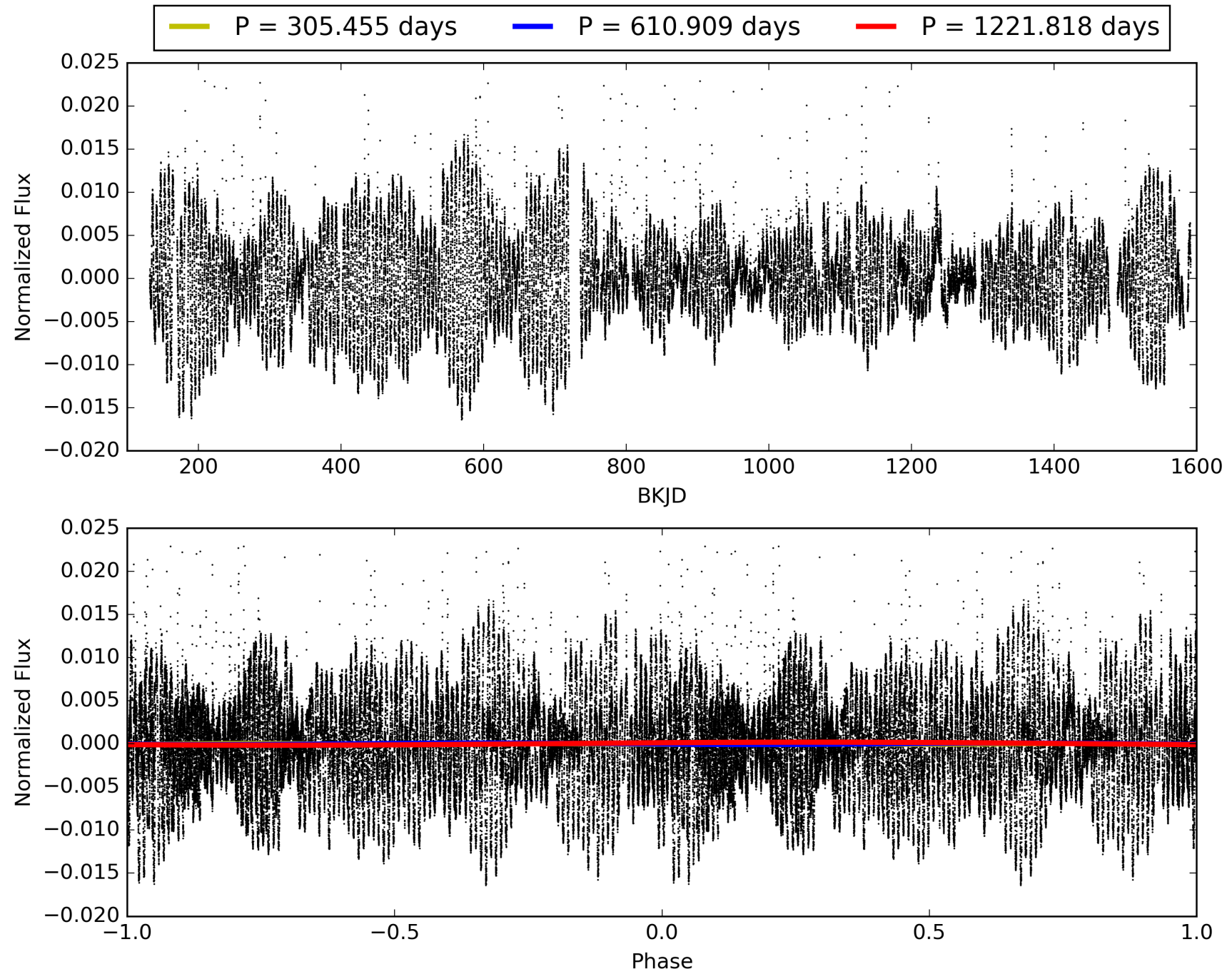
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:51:06 Z

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

TCE 006034120-04, PDC Light Curves

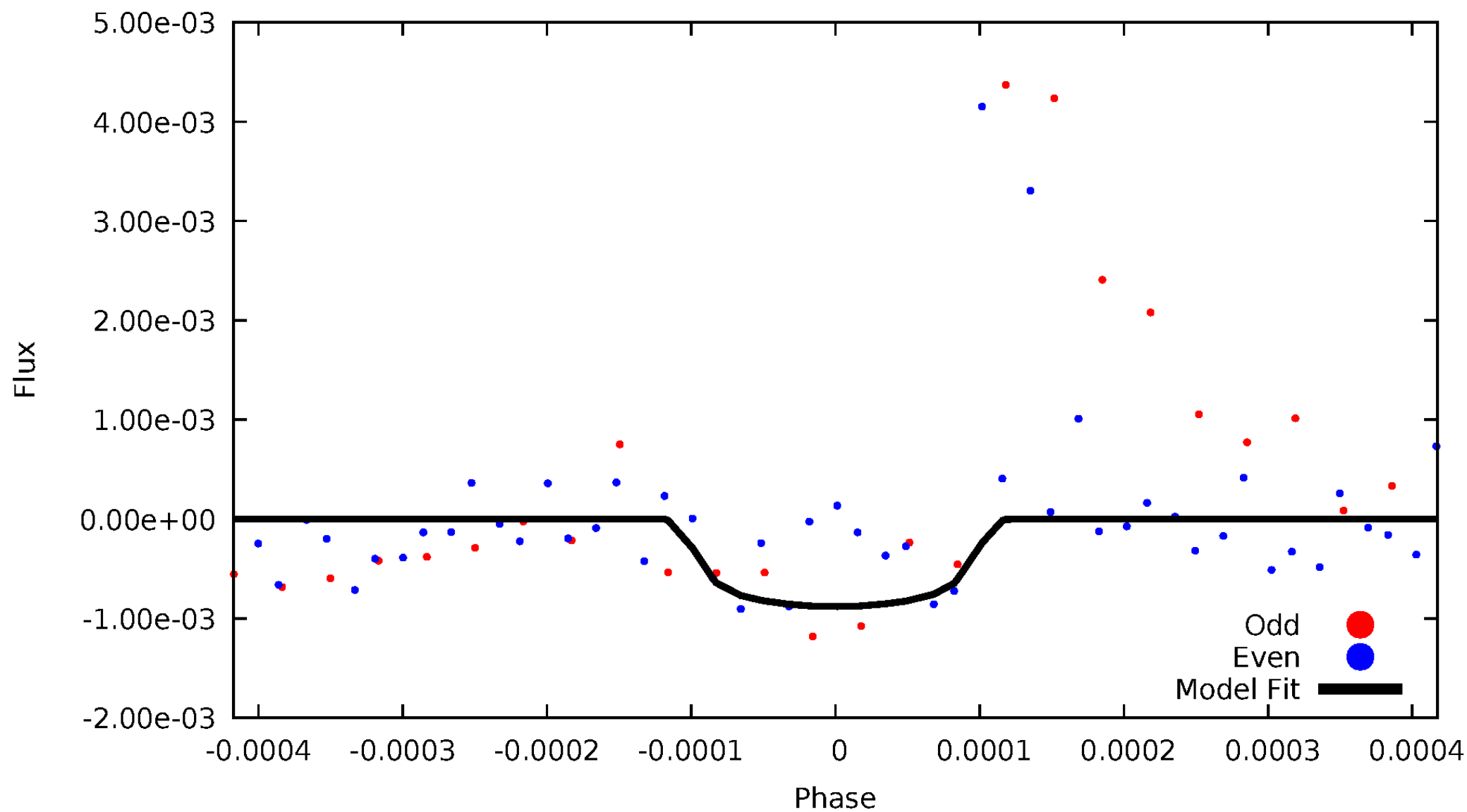


TCE 006034120-04



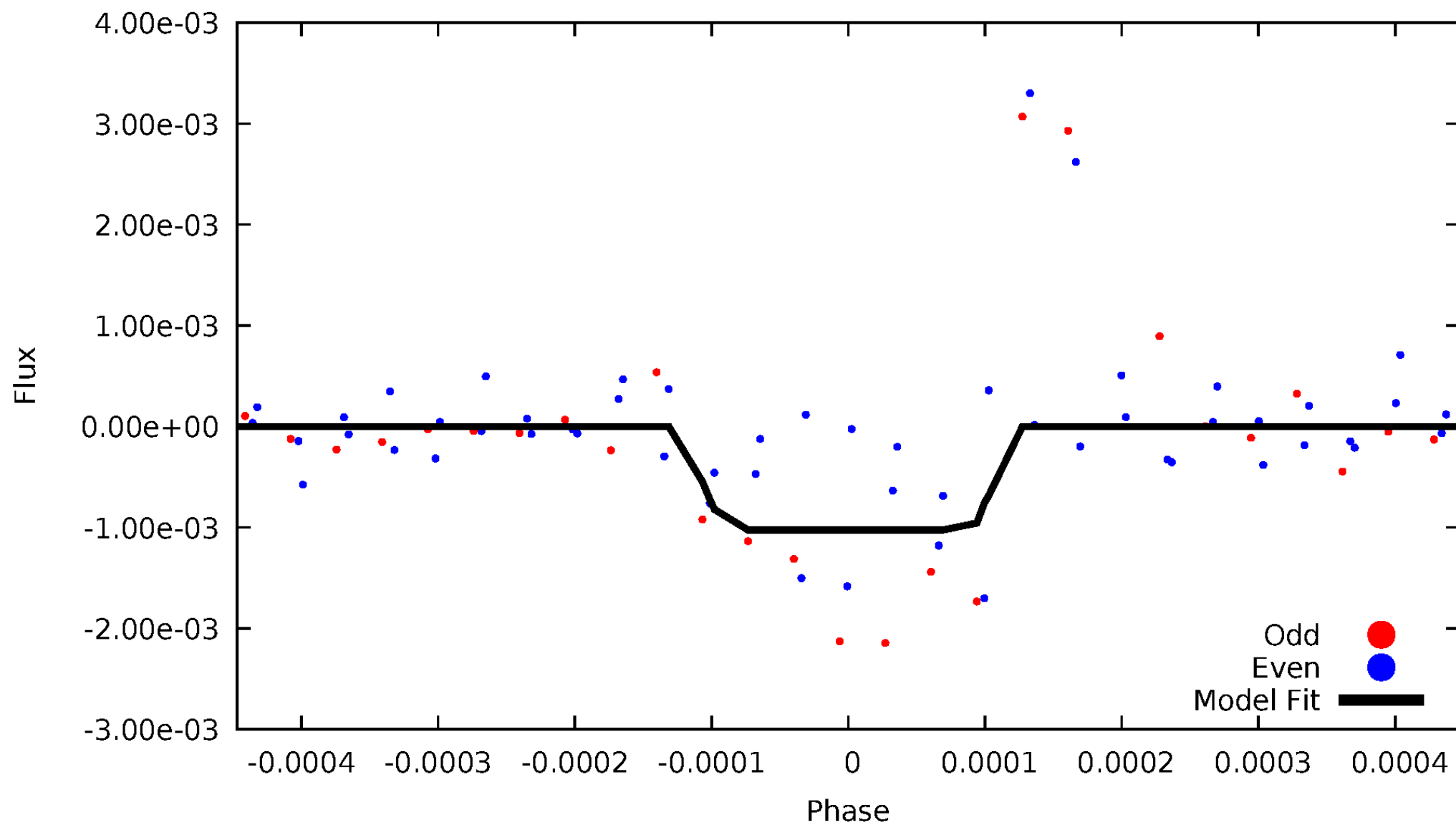
DV Odd/Even

TCE 006034120-04



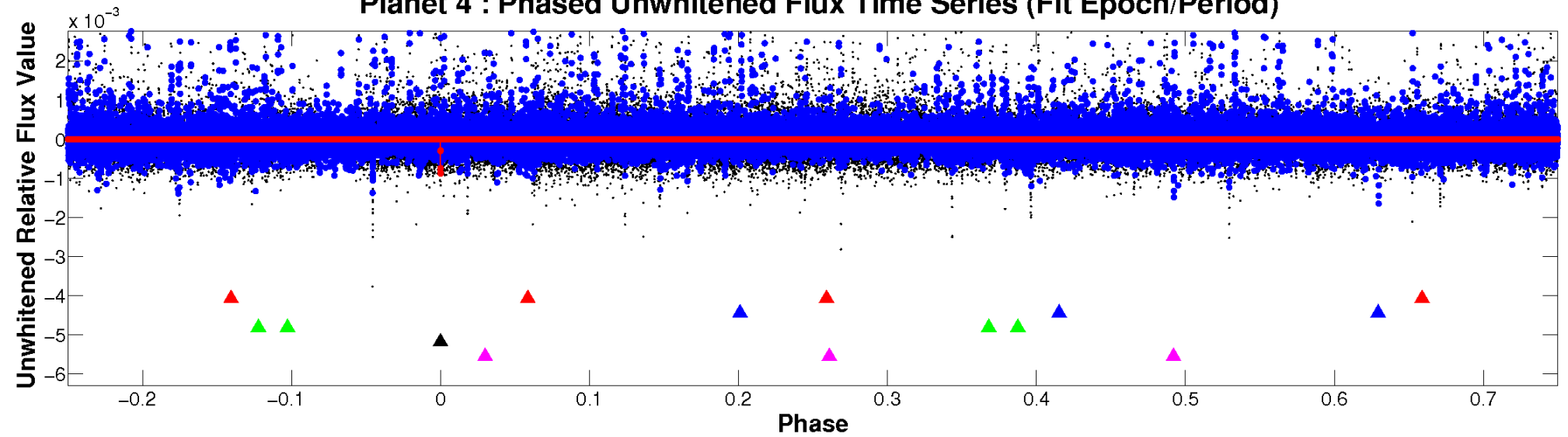
ALT Odd/Even

TCE 006034120-04

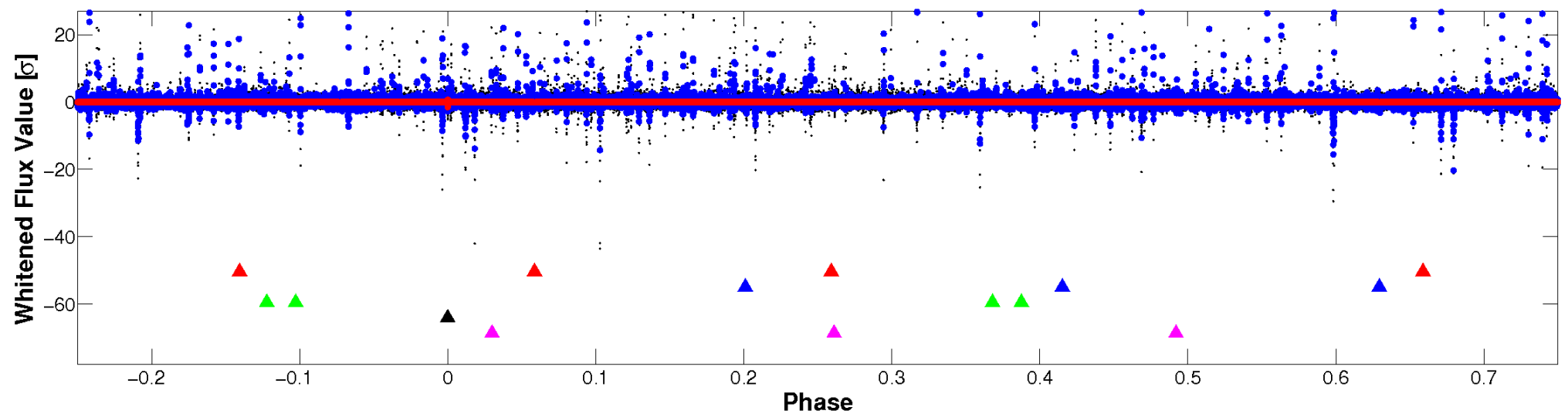


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

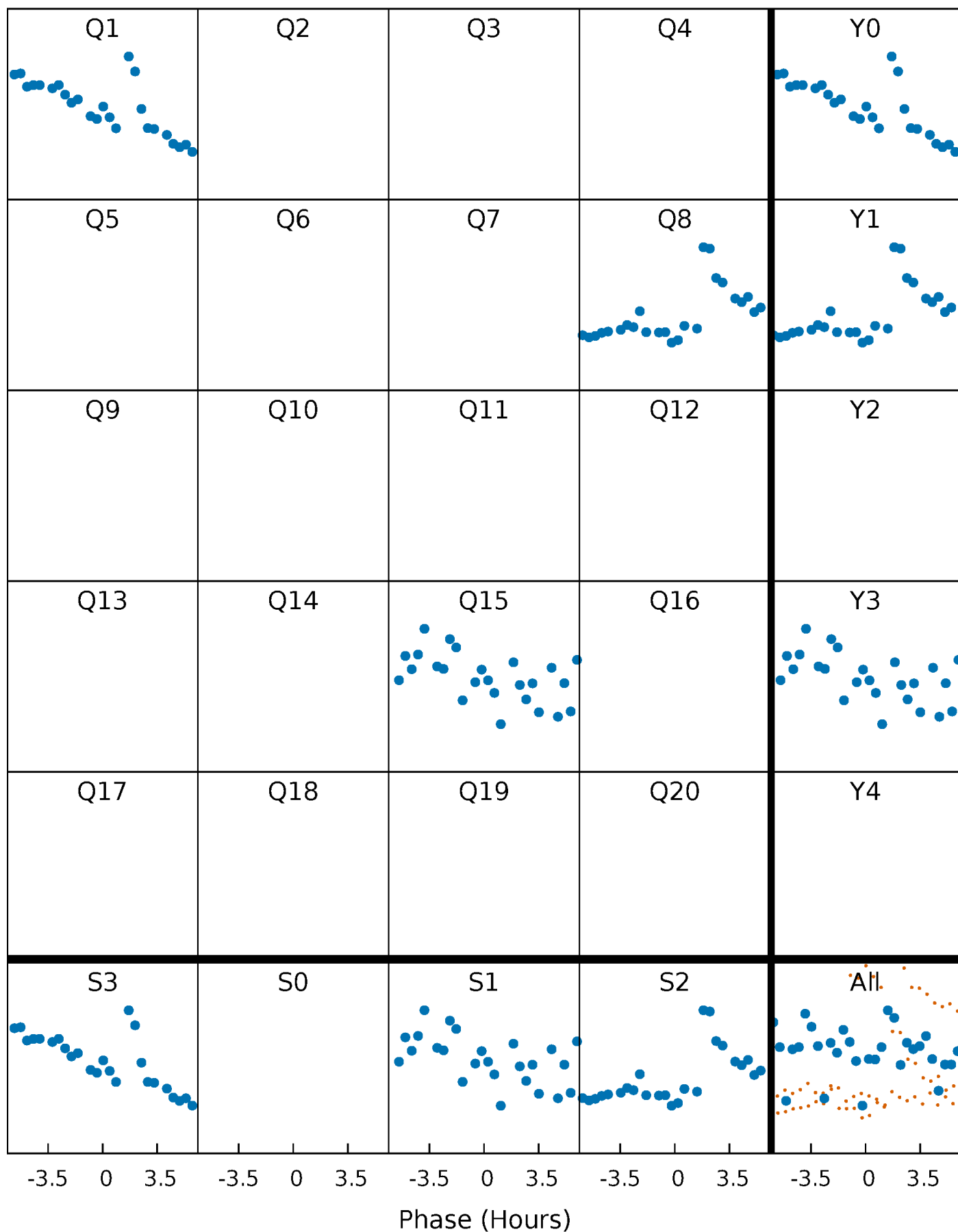


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



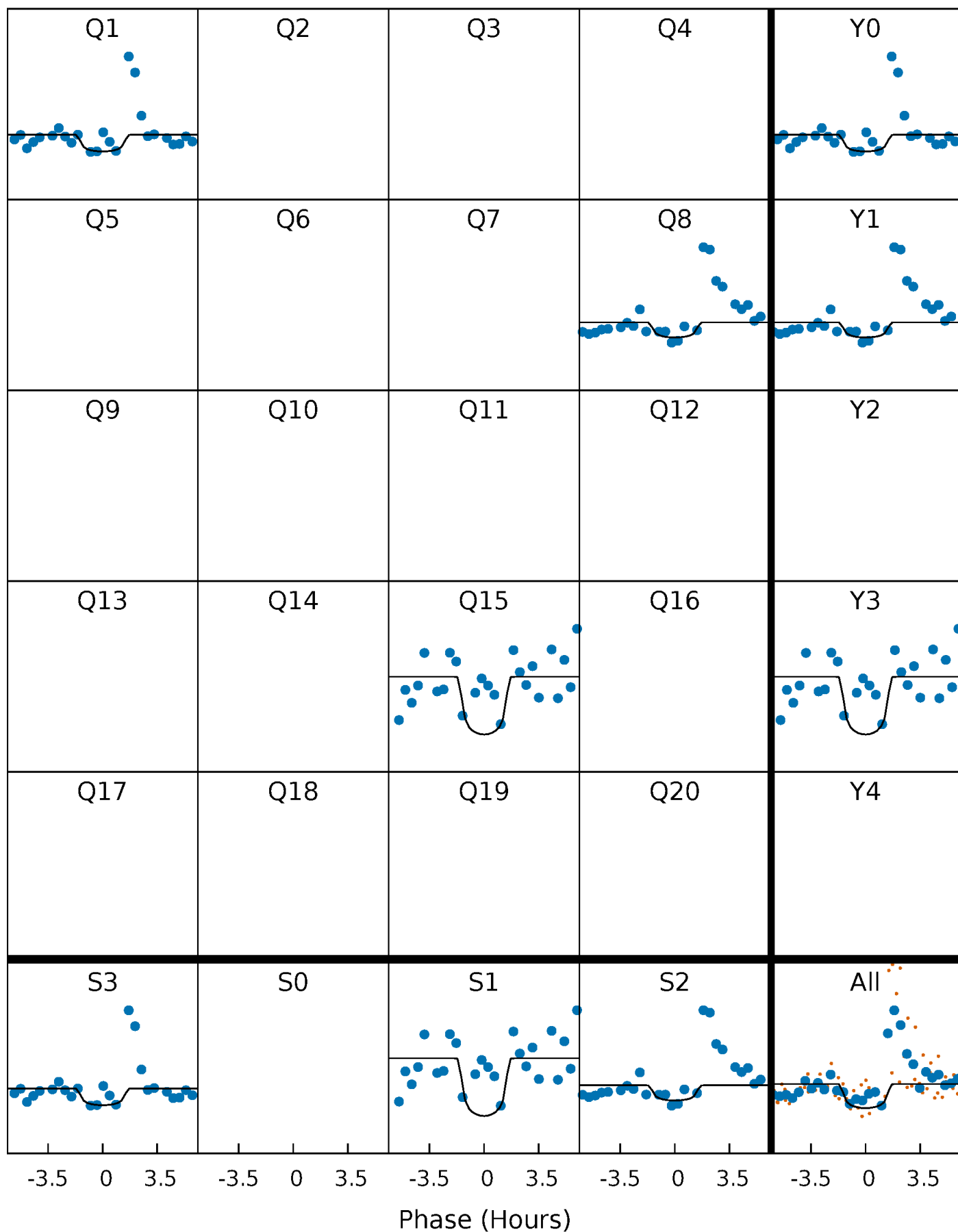
PDC Quarter-Phased Transit Curves

TCE 006034120-04 P=610.909074 Days $T_0=159.363857$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006034120-04 $P=610.909074$ Days $T_0=159.363857$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

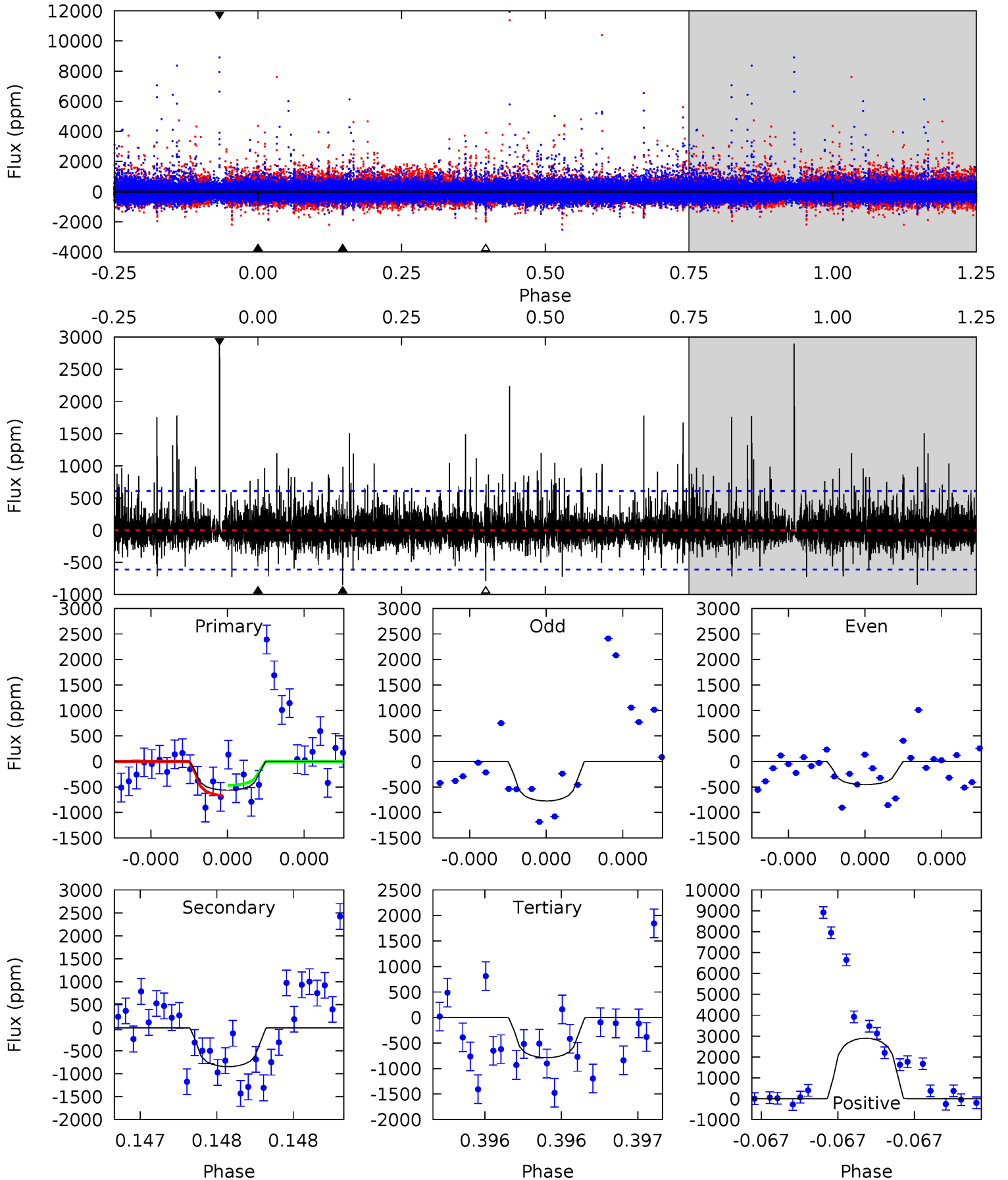
TCE 006034120-04 $P=610.922577$ Days $T_0=159.344747$ (BKJD)



DV Model-Shift Uniqueness Test

006034120-04, P = 610.909074 Days, E = 159.363857 Days

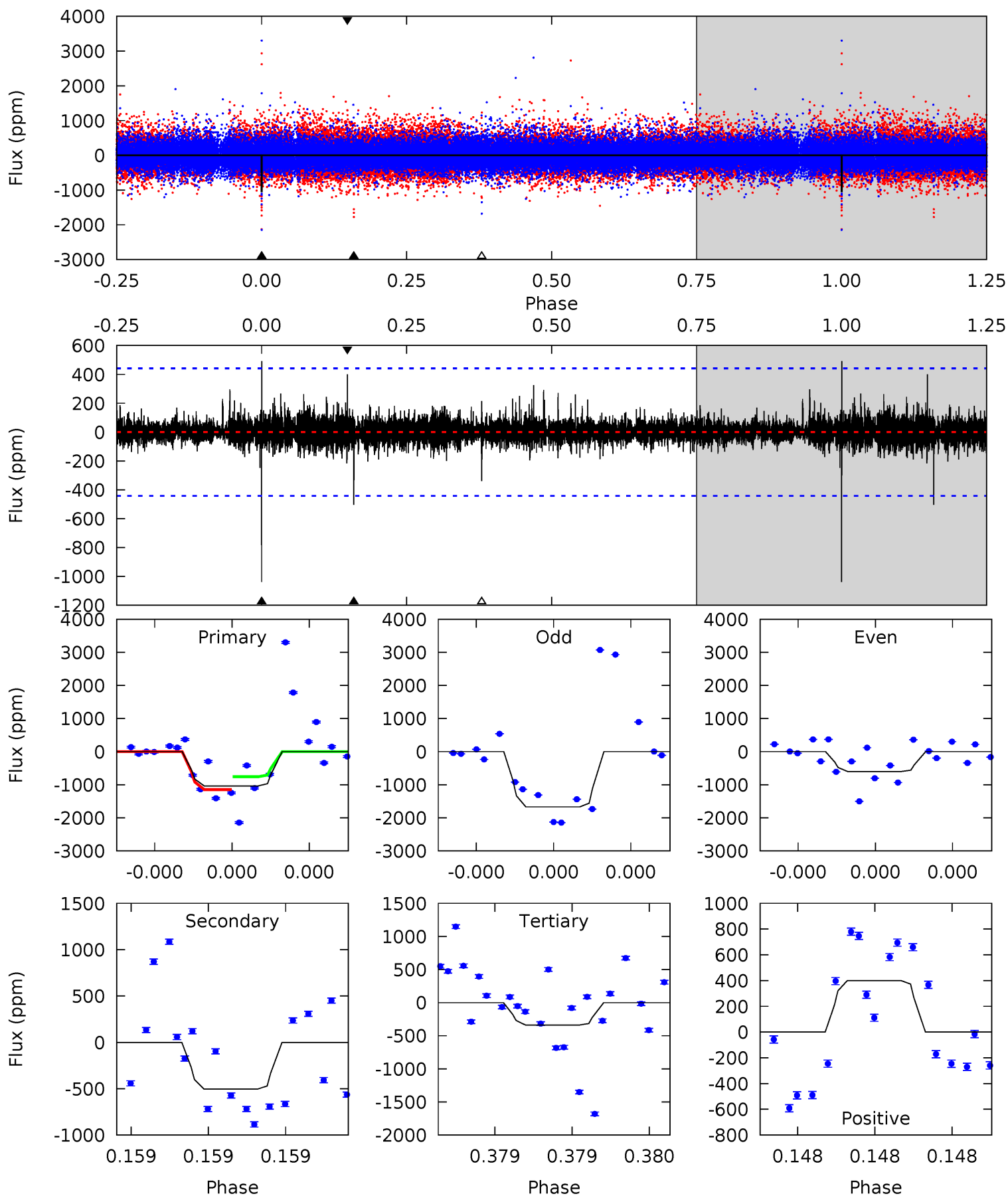
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.27	7.93	7.38	27.1	5.70	3.68	1.79	-2.11	-21.9	0.55	-19.2	0.63	1.44	0.77	0.94



Alt Model-Shift Uniqueness Test

006034120-04, P = 610.922577 Days, E = 159.344747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	6.53	4.38	5.17	5.73	3.71	0.64	9.06	8.27	2.14	1.35	6.17	0.85	0.32	2.44



Stellar Parameters For KIC 006034120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5606^{+152}_{-152}	$4.586^{+0.038}_{-0.152}$	$-0.300^{+0.300}_{-0.300}$	$0.784^{+0.182}_{-0.061}$	$0.876^{+0.088}_{-0.097}$	$2.564^{+0.495}_{-1.051}$
	+3%/-3%	+1%/-3%	+100%/-100%	+23%/-8%	+10%/-11%	+19%/-41%
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 006034120-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-847 ± 107	$3.70^{+3.07}_{-2.44}$	268^{+14}_{-10}	4809^{+3394}_{-1022}	$60755^{+473843}_{-42294}$
Alt.	-503 ± 77	$3.62^{+3.48}_{-2.39}$	269^{+14}_{-11}	4369^{+2780}_{-913}	$37925^{+296223}_{-28074}$

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 $A_{obs} \gg 1.0$

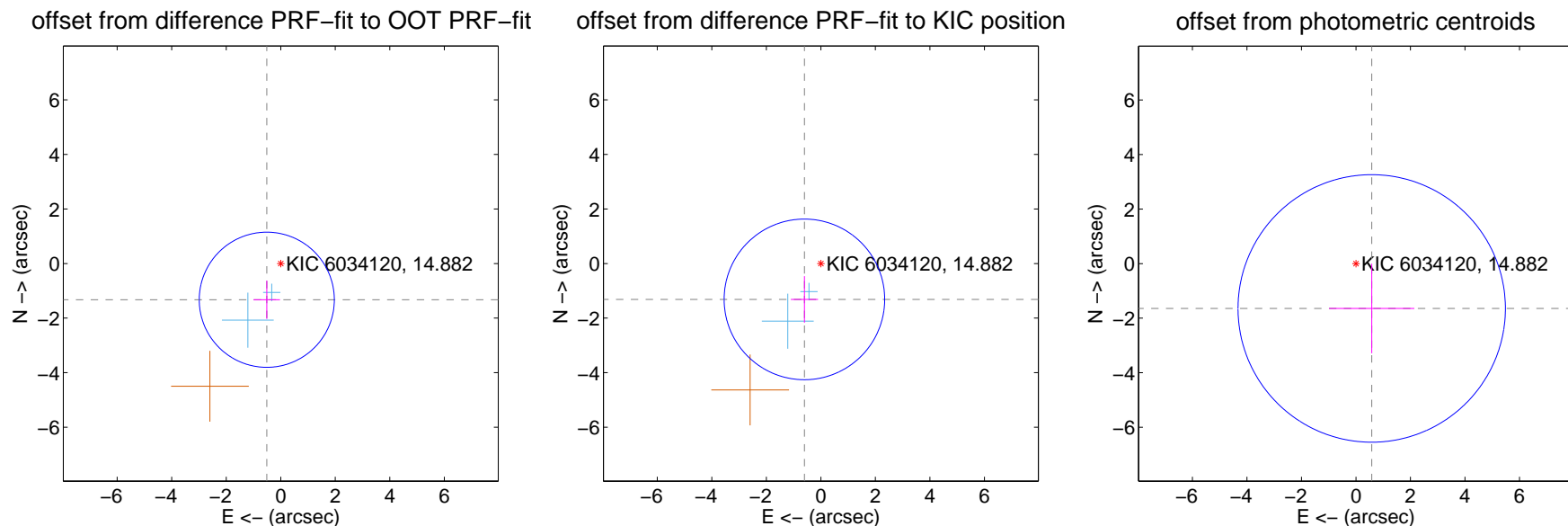
DV Centroid Data

Supplemental centroid analysis for 006034120-04. Kepler magnitude: 14.88. Transit SNR 5.37

There are 2 quarters with good PRF difference image offsets

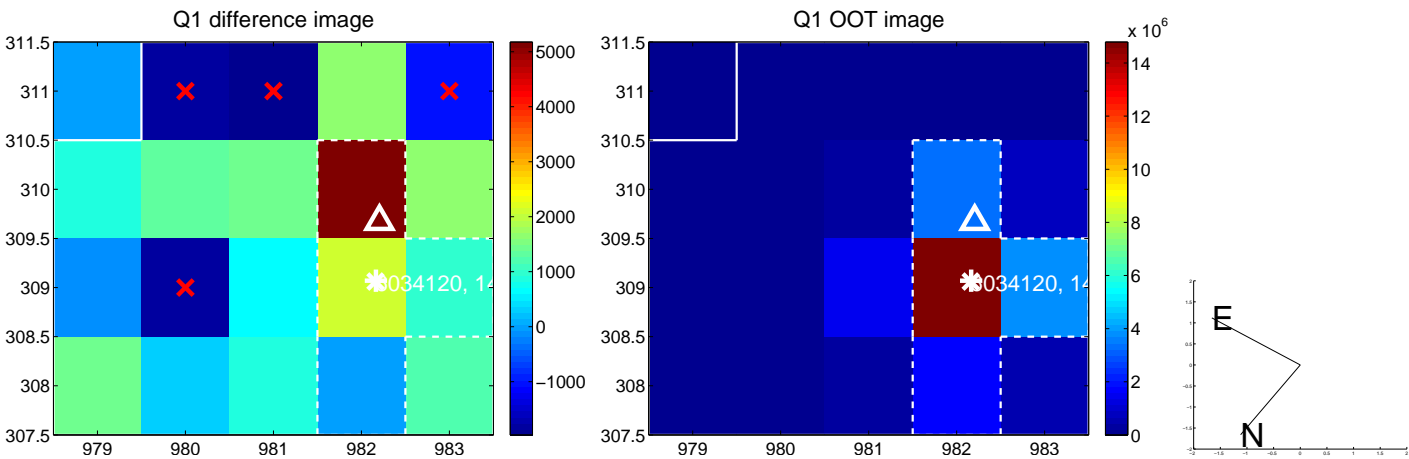
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.423 ± 0.826	1.72	0.512 ± 0.485	-1.328 ± 0.701
PRF-fit source offset from KIC position	1.447 ± 0.982	1.47	0.604 ± 0.498	-1.315 ± 0.854
photometric centroid source offset	1.74 ± 1.64	1.07	-0.58 ± 1.56	-1.64 ± 1.64

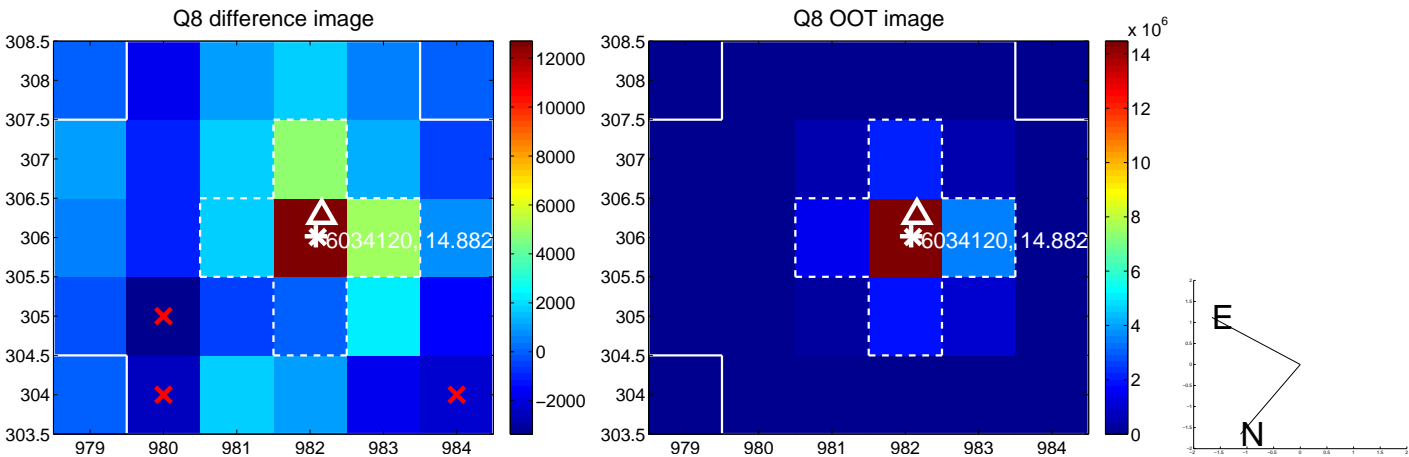


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q13 no difference image



Q13 no OOT image



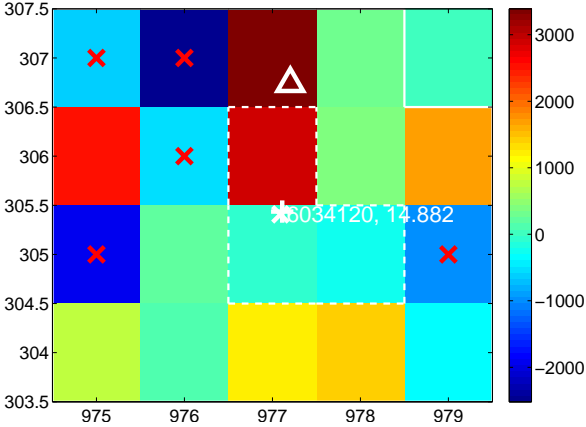
Q14 no difference image



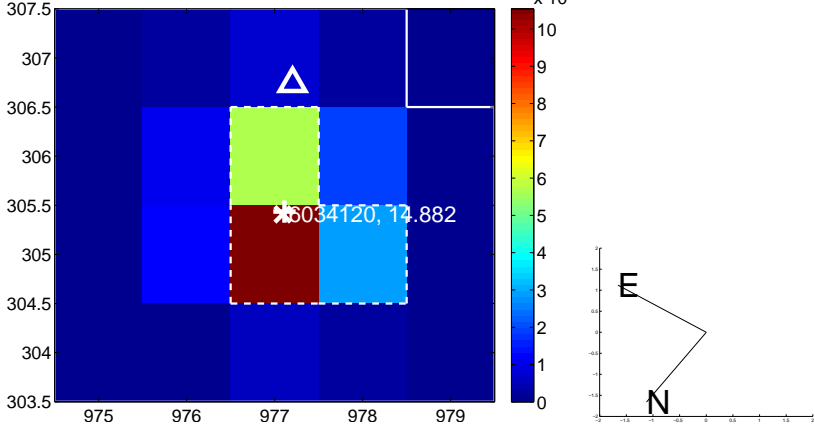
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



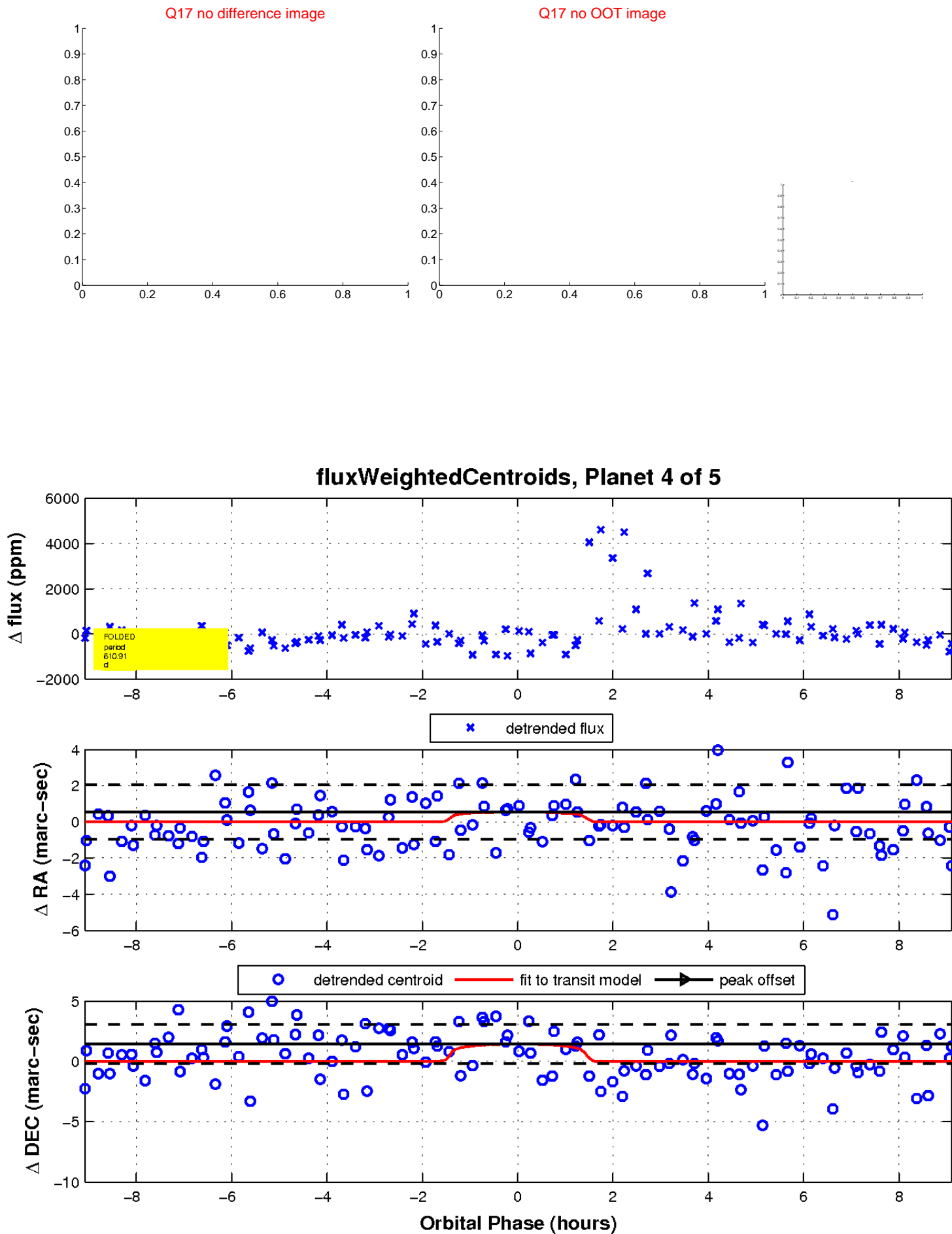
Q16 no difference image



Q16 no OOT image

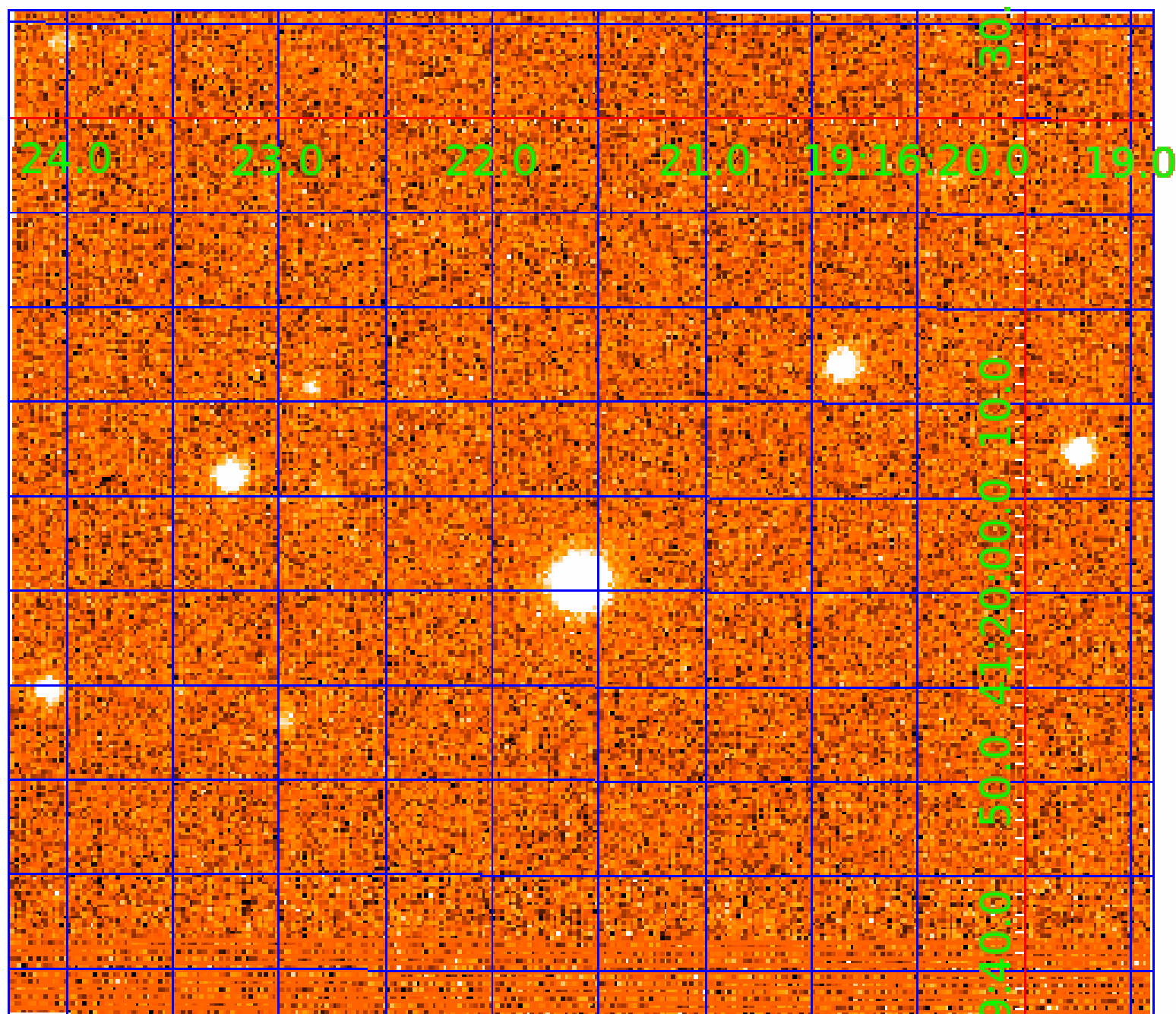


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006034120

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})
006034120-01	OBS	No	366.703628	195.179606	1435.5	4.219	14.8	9.0	0.78	5606	3.12	0.60
006034120-02	OBS	No	480.083856	543.859745	891.3	4.820	13.9	5.7	0.78	5606	2.50	0.42
006034120-03	OBS	No	311.415136	384.202604	1115.4	3.850	11.4	7.7	0.78	5606	2.86	0.74
006034120-04	OBS	No	610.909074	159.363857	880.9	3.058	11.8	5.4	0.78	5606	2.47	0.30
006034120-05	OBS	No	469.774356	459.953226	801.1	15.000	14.7	-1.0	0.78	5606	2.20	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034120-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006034120-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006034120-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

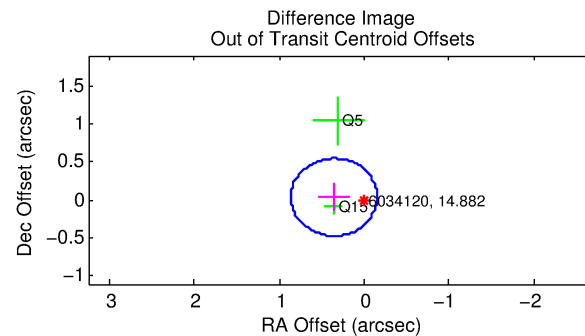
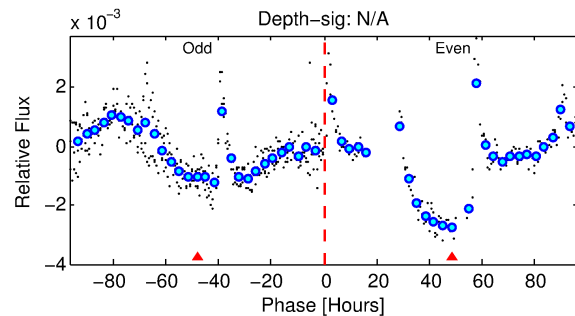
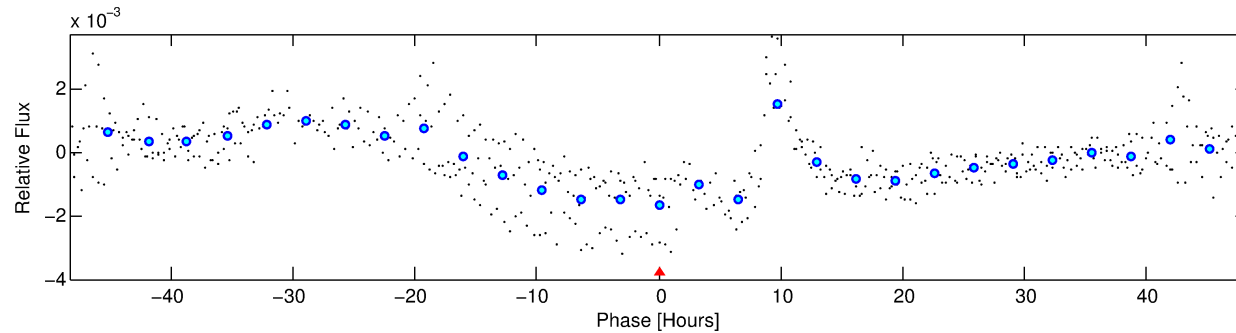
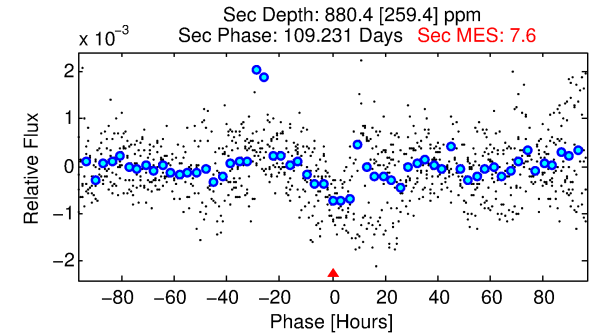
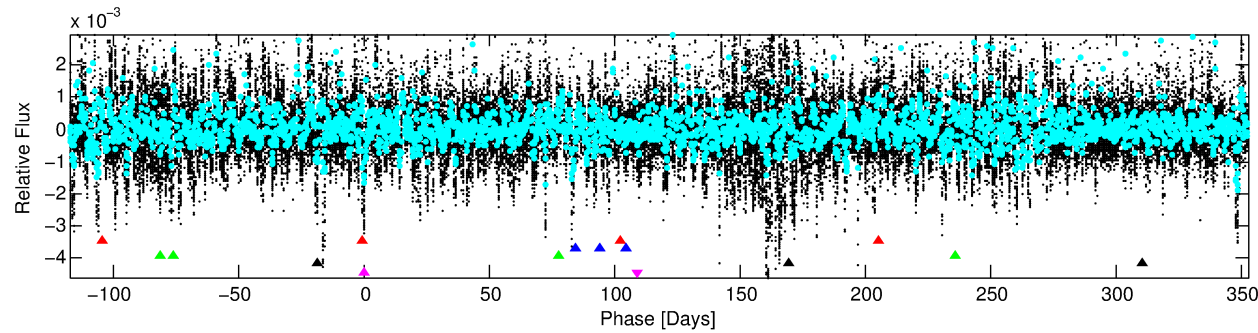
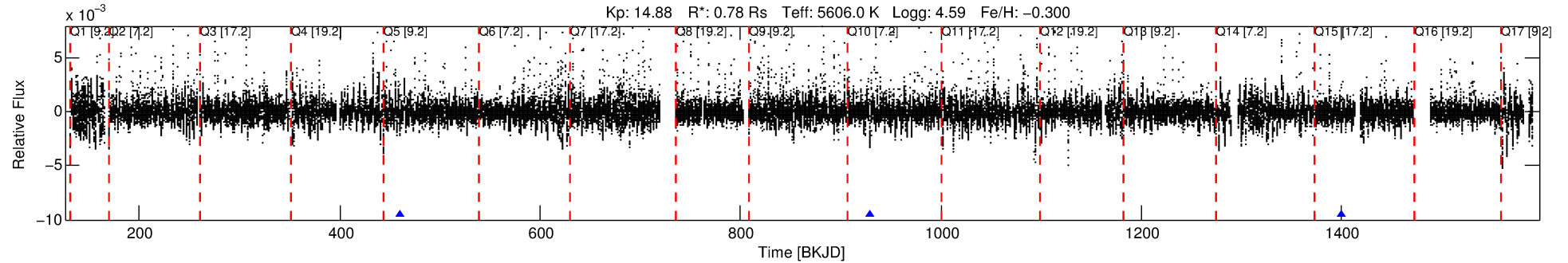
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034120-05

No Significant Match Found

DV One-Page Summary

KIC: 6034120 Candidate: 5 of 5 Period: 469.774 d



TPS TCE Results:

Period = 469.77436 d
Epoch = 459.9532 BKJD

DV fit results are unavailable

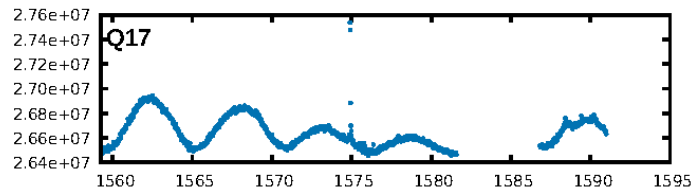
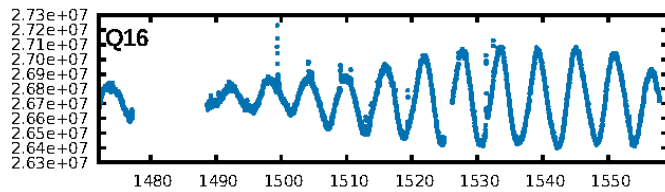
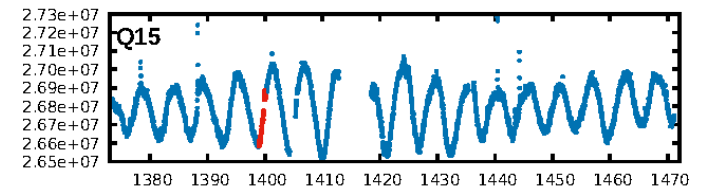
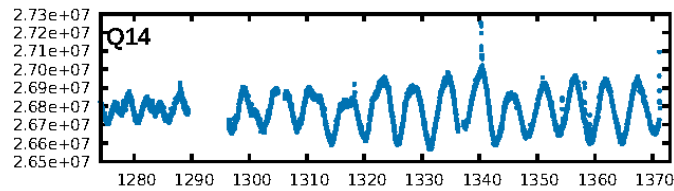
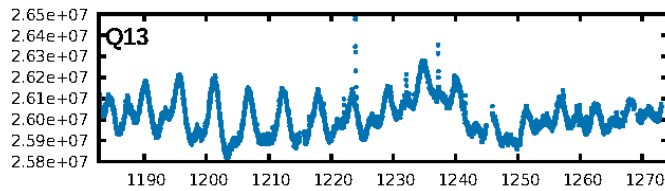
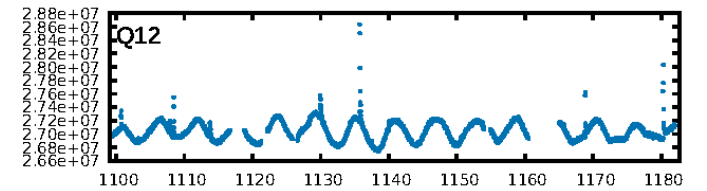
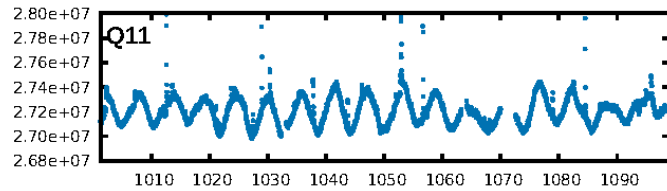
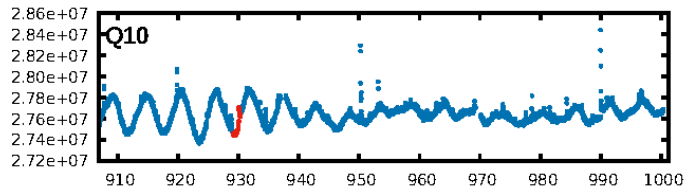
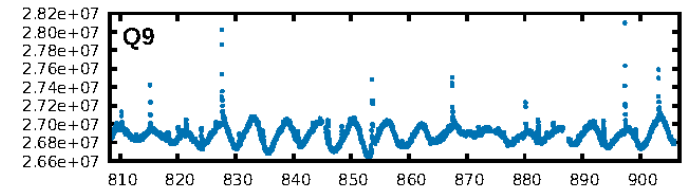
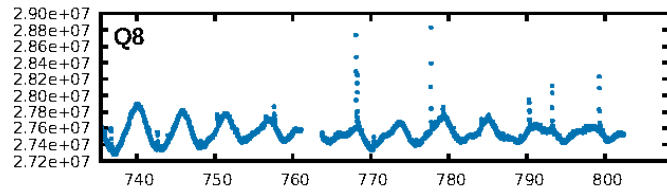
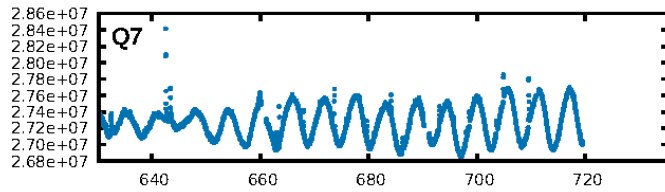
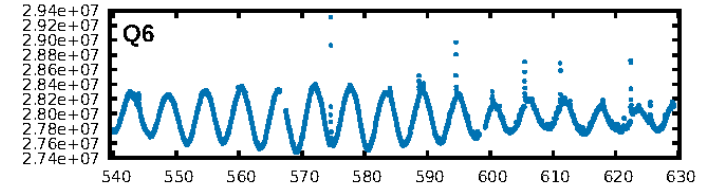
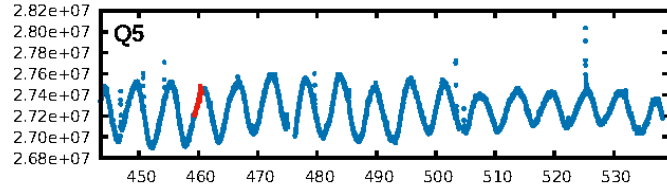
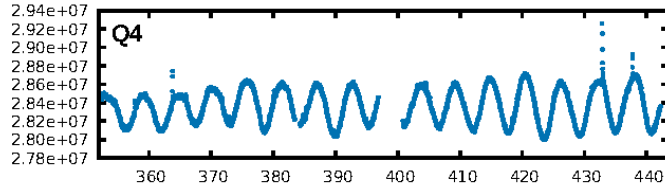
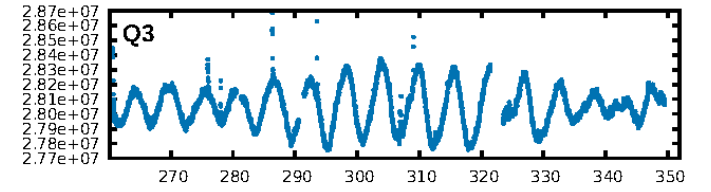
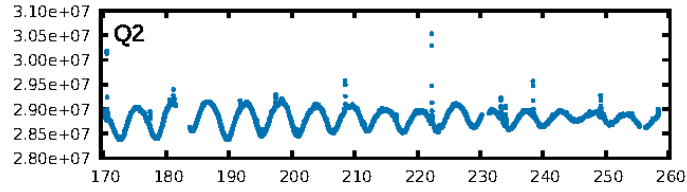
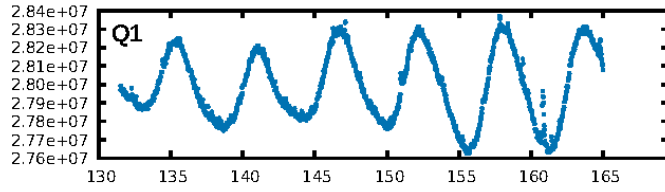
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [158.75 σ]
LongPeriod-sig: 100.0% [15.70 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.349
Centroid-sig: 16.7%
Centroid-so: 0.864 arcsec [1.09 σ]
OotOffset-rm: 0.355 arcsec [2.09 σ]
KicOffset-rm: 0.370 arcsec [2.18 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

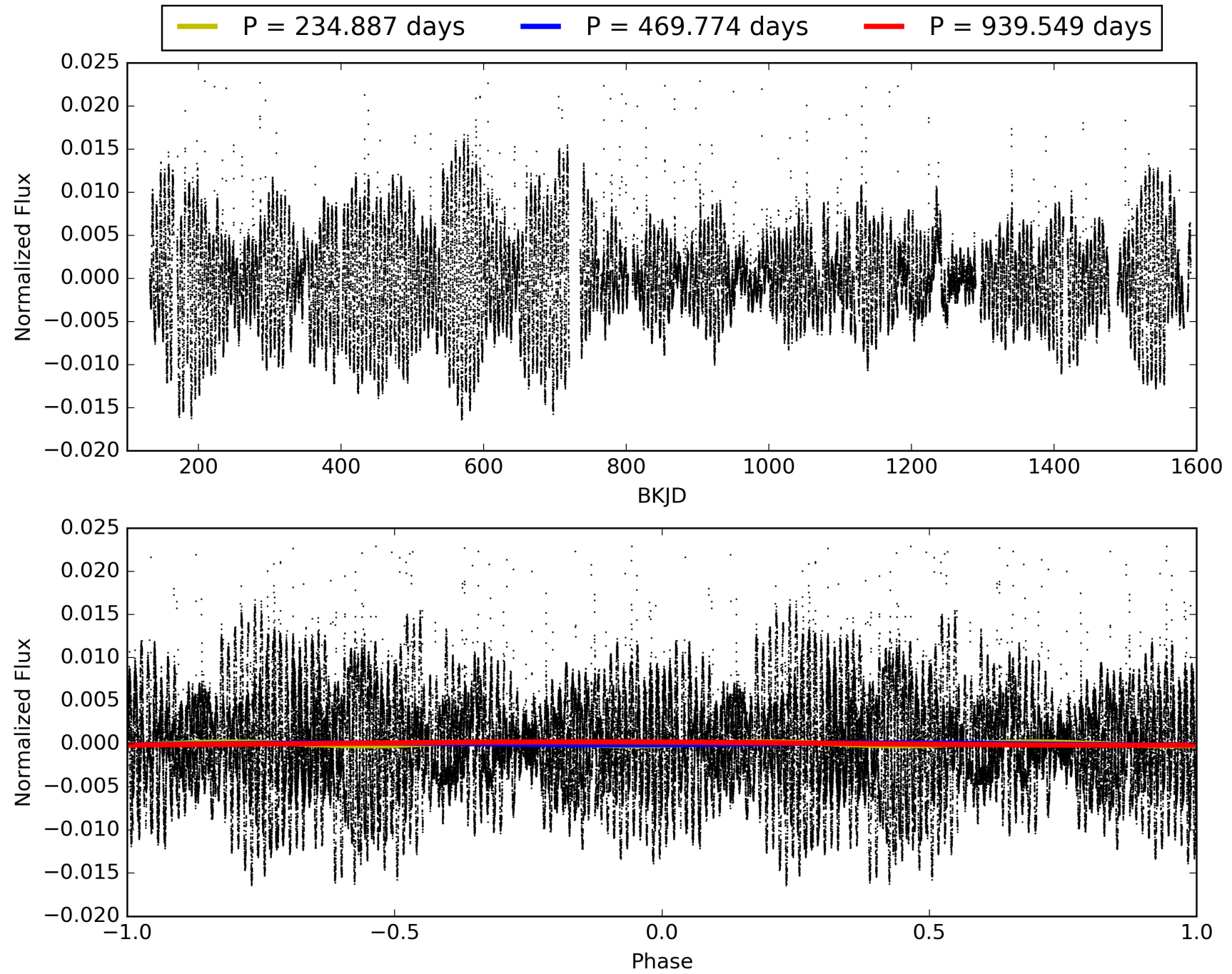
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:51:16 Z

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

TCE 006034120-05, PDC Light Curves

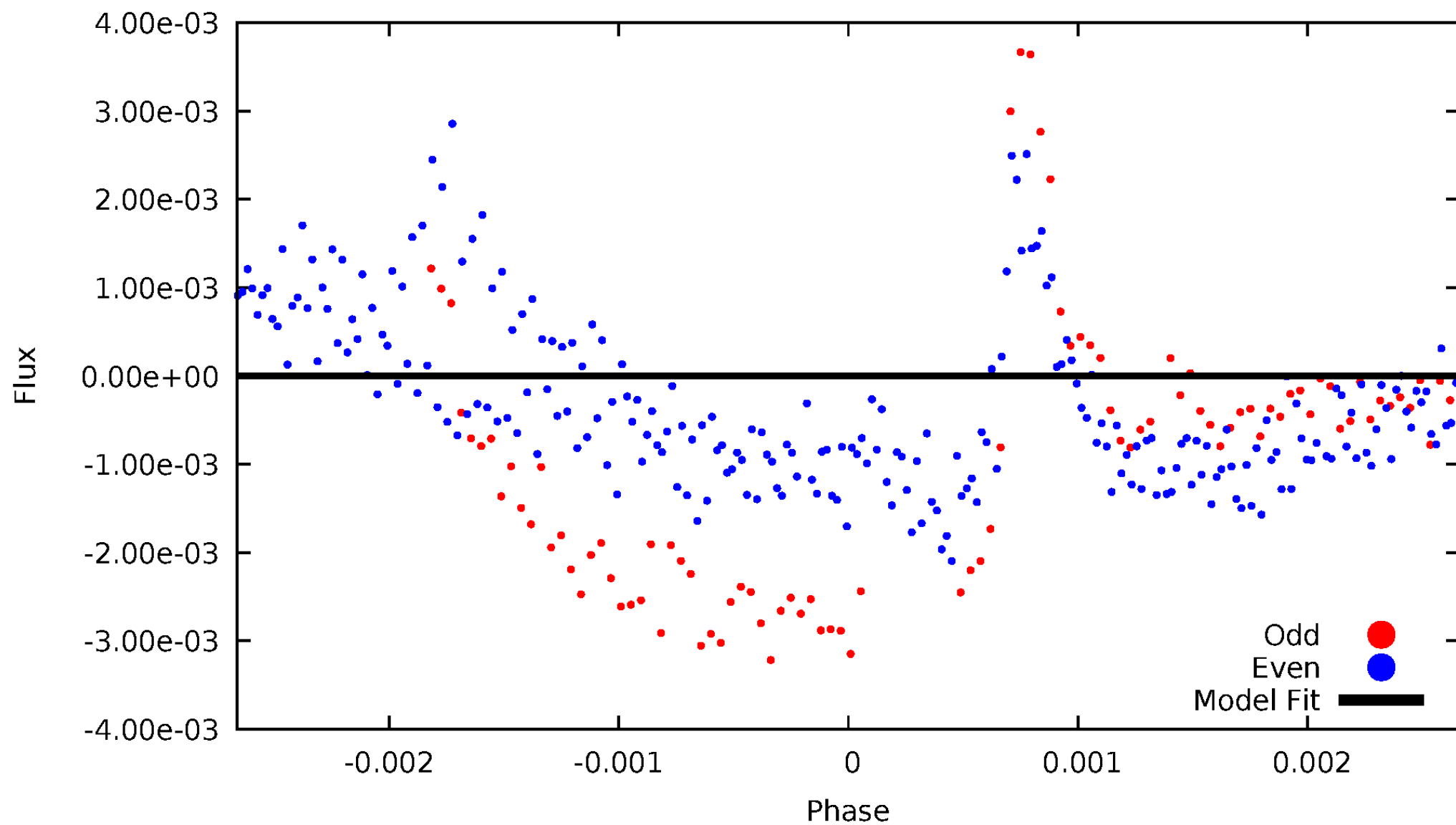


TCE 006034120-05



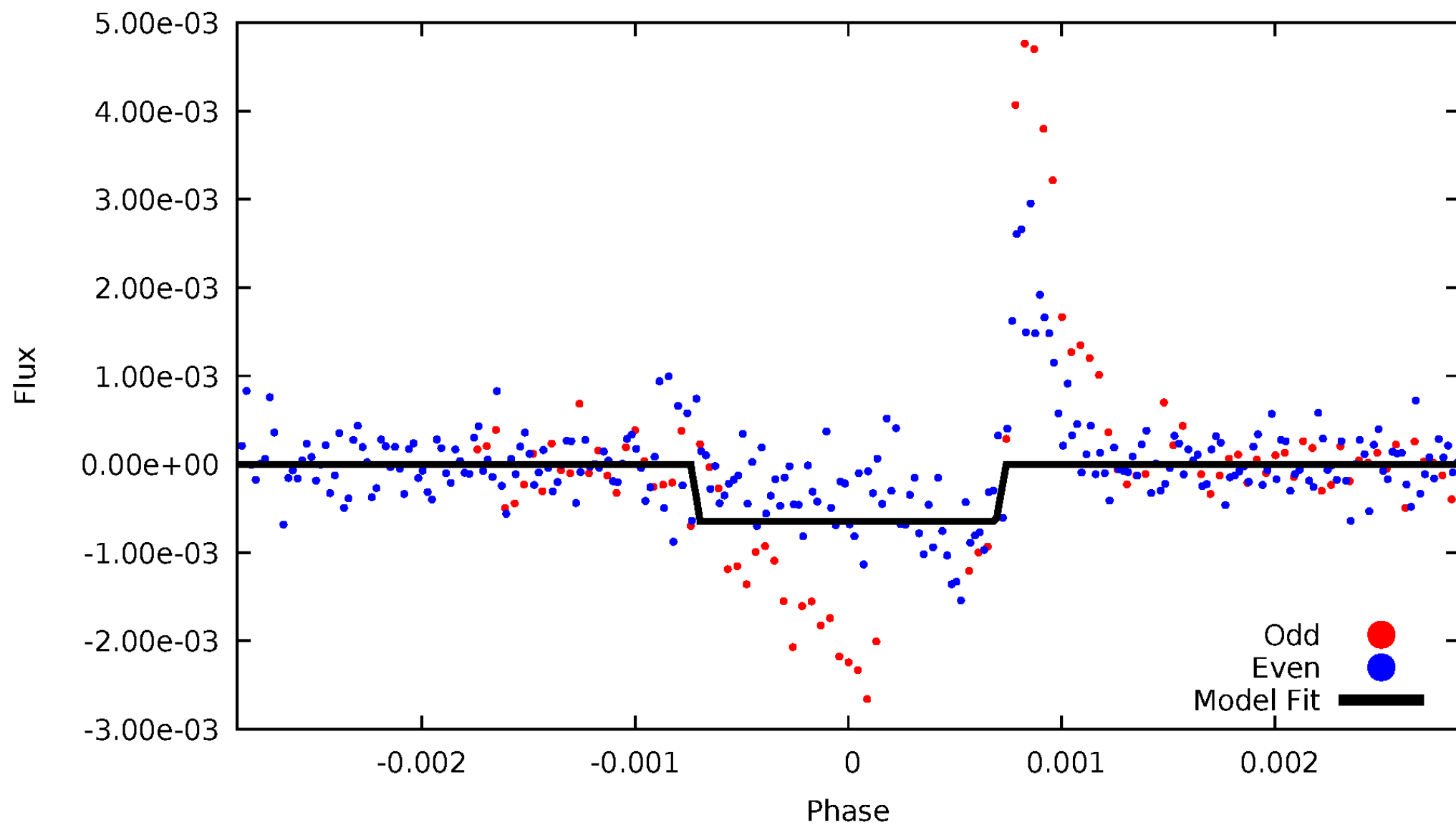
DV Odd/Even

TCE 006034120-05



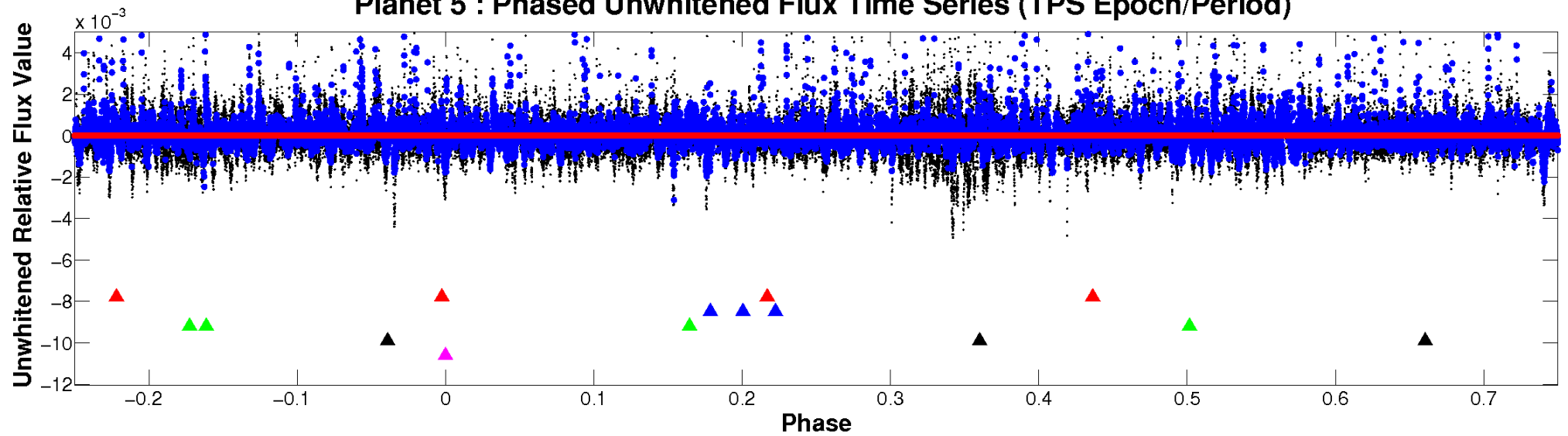
ALT Odd/Even

TCE 006034120-05

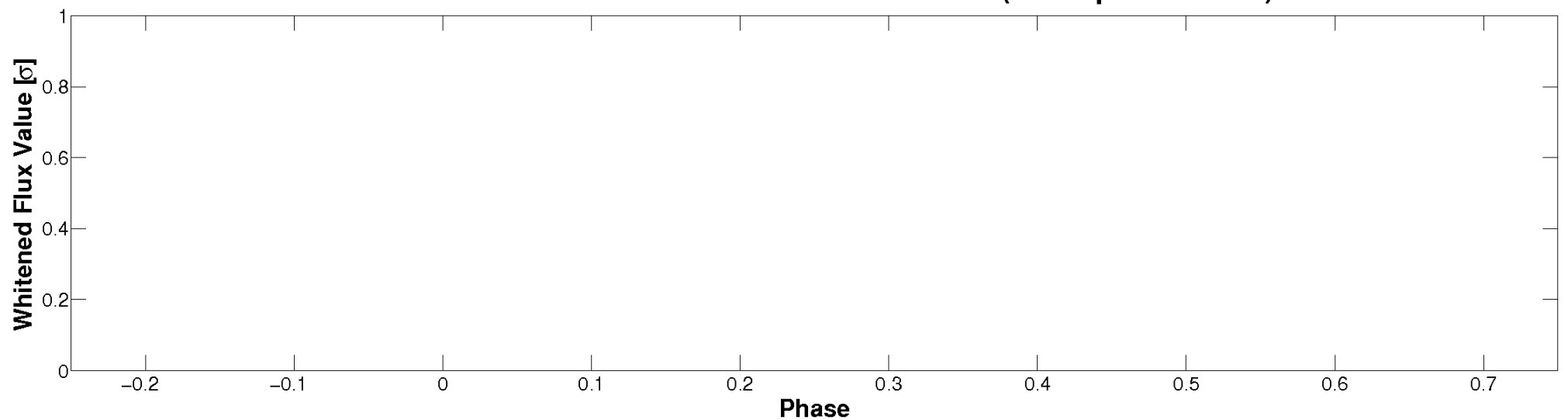


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

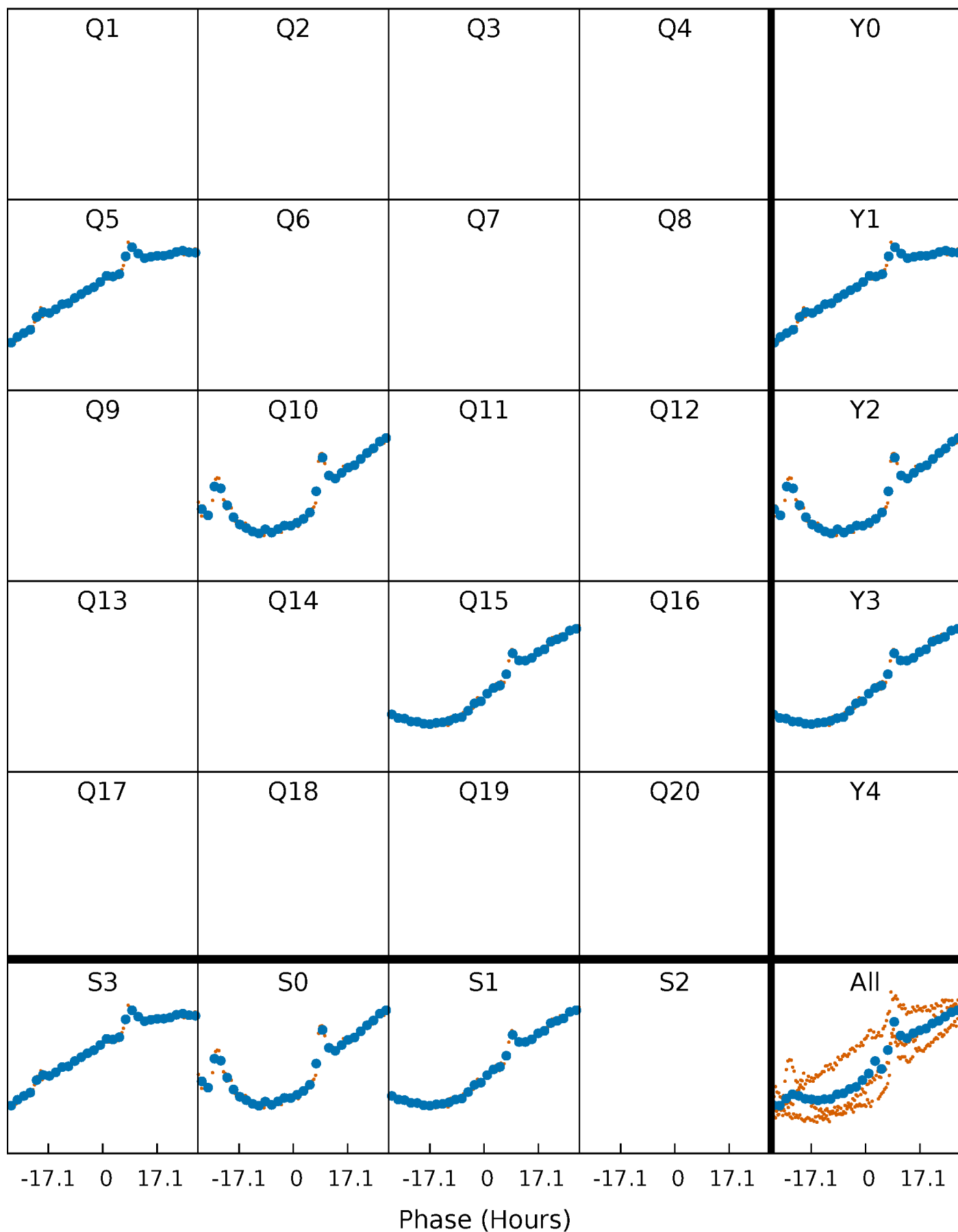


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



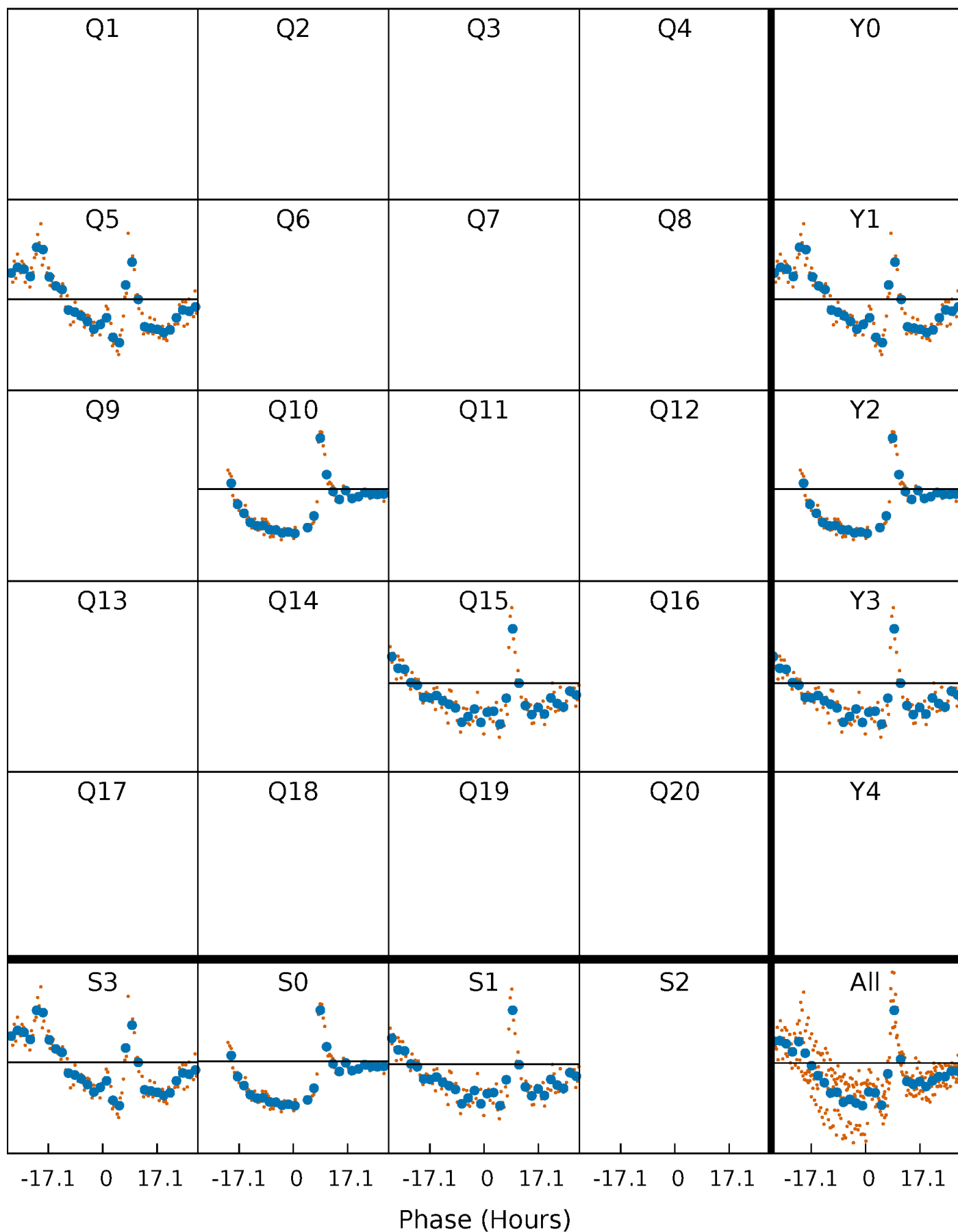
PDC Quarter-Phased Transit Curves

TCE 006034120-05 $P=469.774356$ Days $T_0=459.953226$ (BKJD)



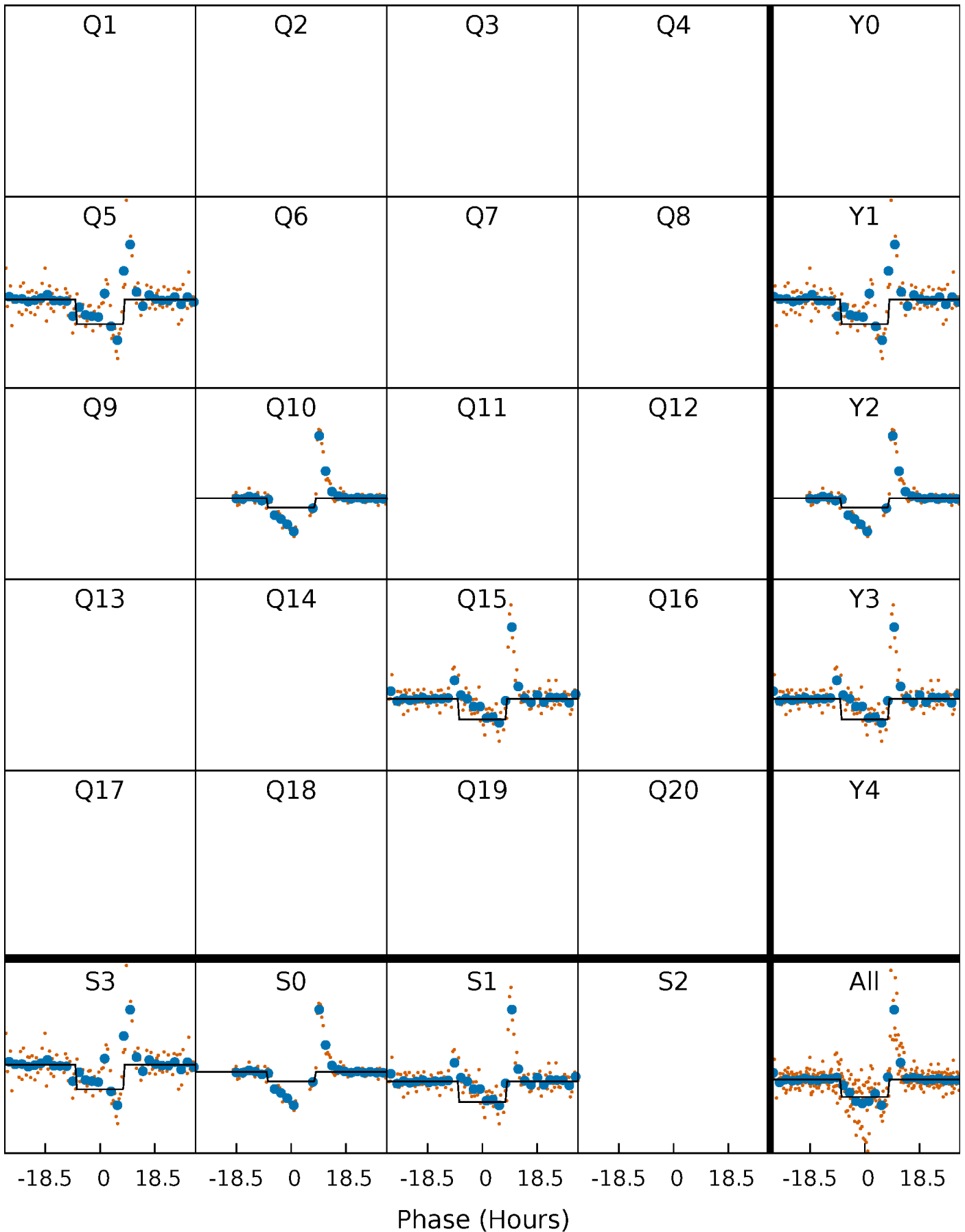
DV Quarter-Phased Transit Curves

TCE 006034120-05 $P=469.774356$ Days $T_0=459.953226$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

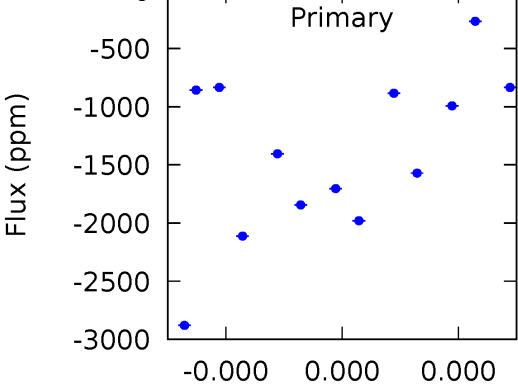
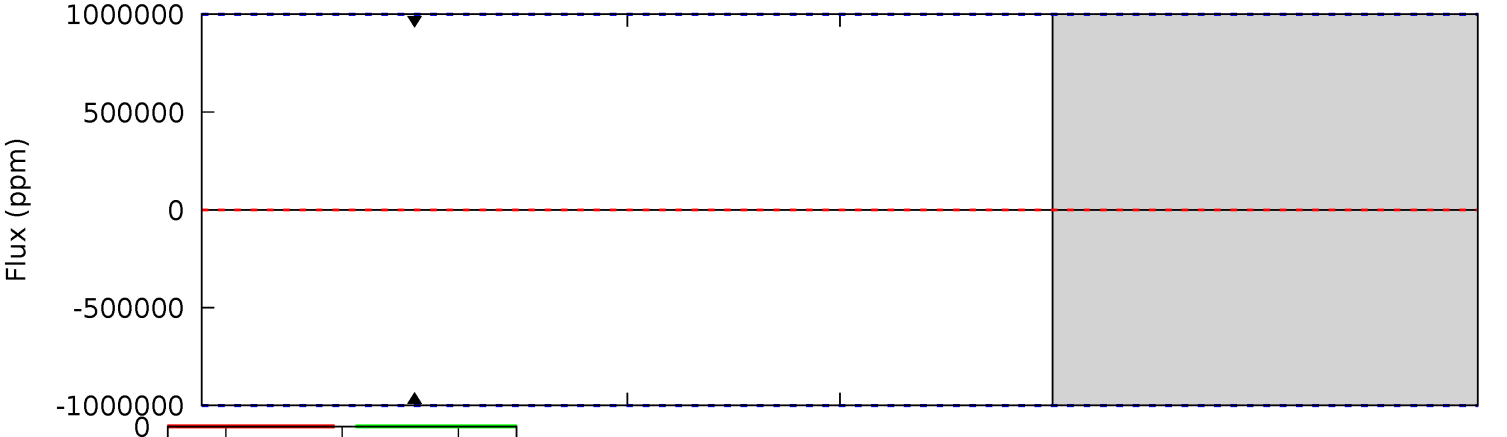
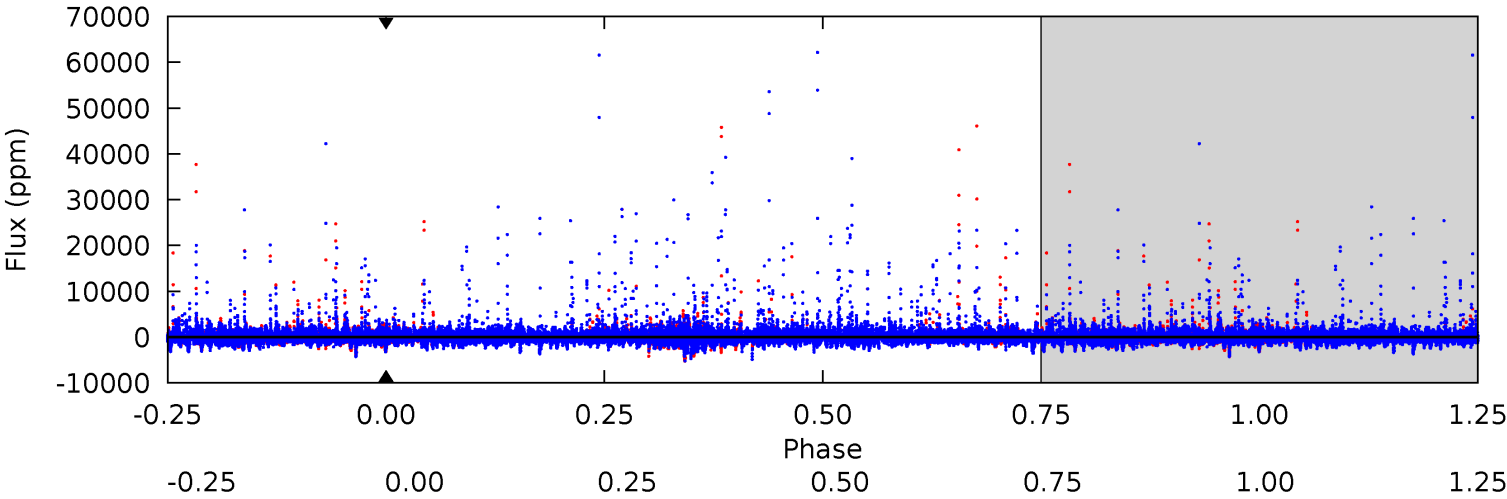
TCE 006034120-05 $P=469.774356$ Days $T_0=459.916752$ (BKJD)



DV Model-Shift Uniqueness Test

006034120-05, P = 469.774356 Days, E = 459.953226 Days

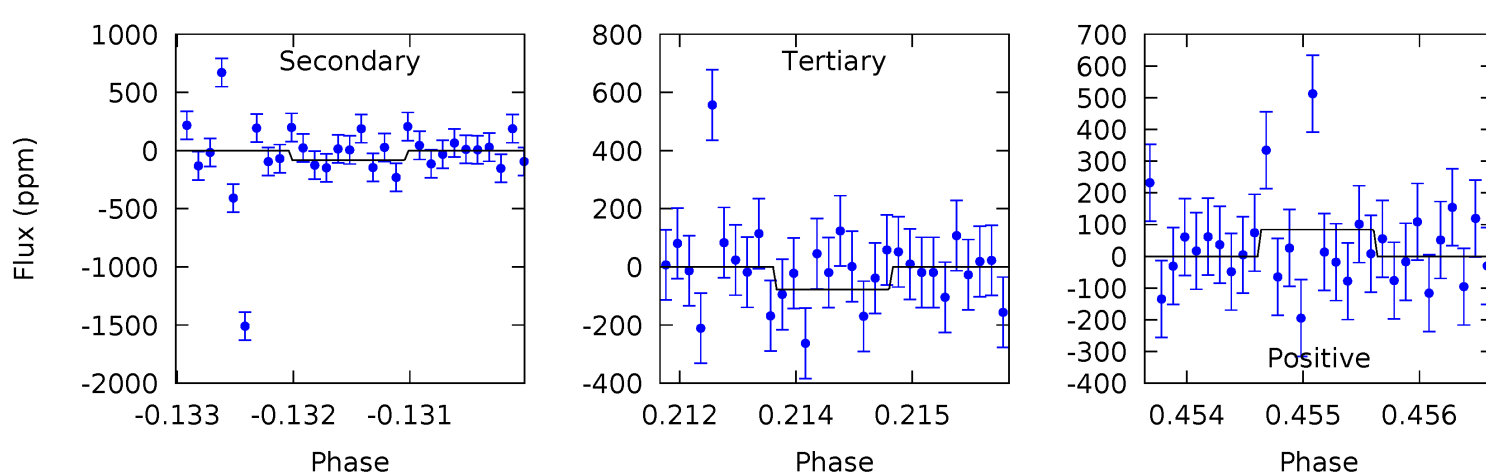
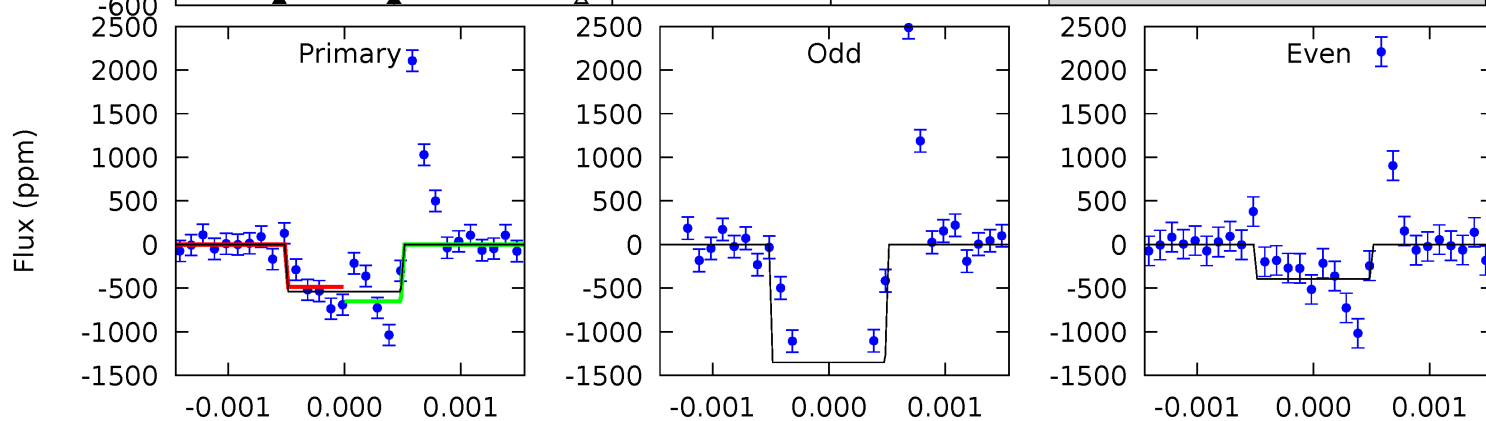
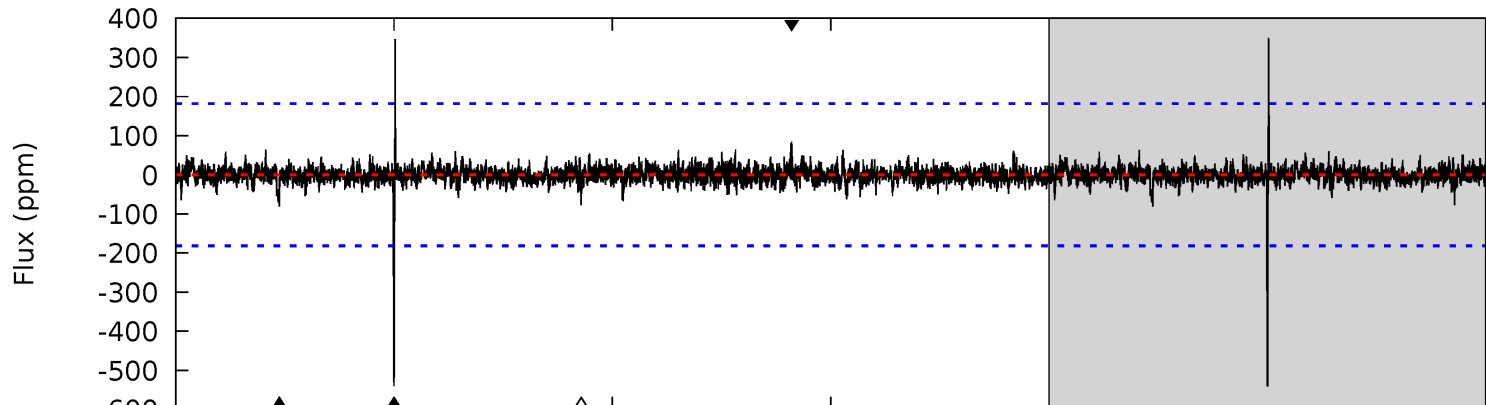
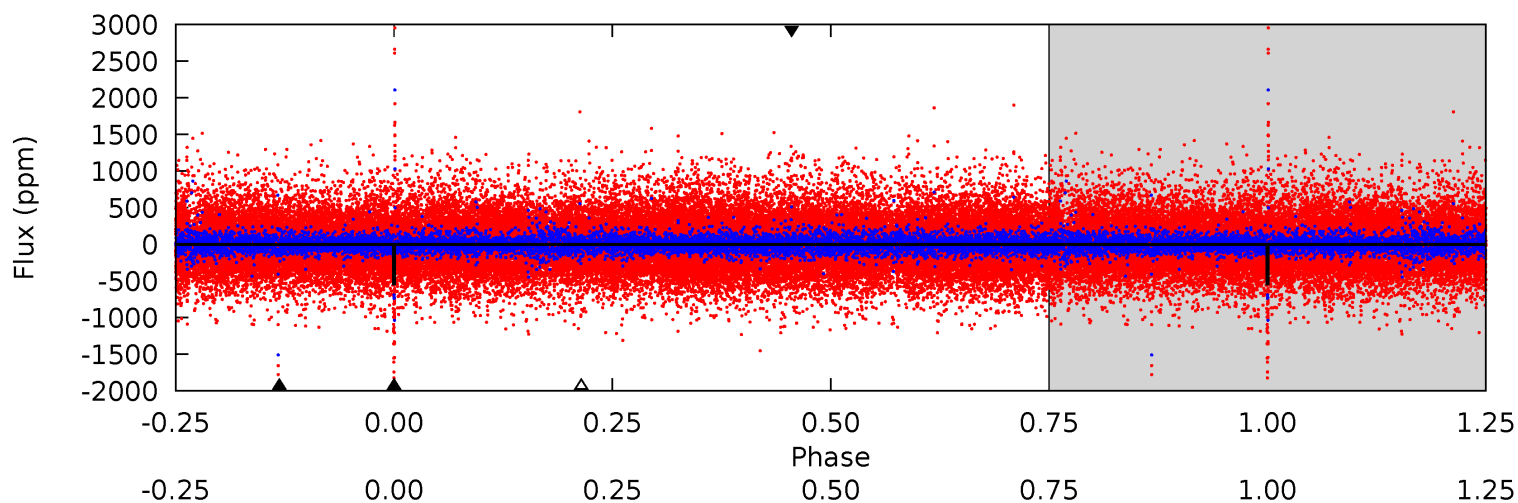
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006034120-05, P = 469.774356 Days, E = 459.916752 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	2.41	2.31	2.49	5.39	3.19	0.46	13.7	13.5	0.10	-0.08	11.2	1.70	0.39	2.47



Stellar Parameters For KIC 006034120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5606^{+152}_{-152}	$4.586^{+0.038}_{-0.152}$	$-0.300^{+0.300}_{-0.300}$	$0.784^{+0.182}_{-0.061}$	$0.876^{+0.088}_{-0.097}$	$2.564^{+0.495}_{-1.051}$
	+3%/-3%	+1%/-3%	+100%/-100%	+23%/-8%	+10%/-11%	+19%/-41%
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 006034120-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$7.26^{+6.72}_{-5.07}$	294^{+15}_{-12}	4645^{+11899}_{-21028}	$42930^{+2012113}_{-2131126}$
Alt.	-81 ± 34	$6.95^{+6.85}_{-4.91}$	294^{+15}_{-12}	2676^{+1248}_{-418}	1118^{+12854}_{-848}

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

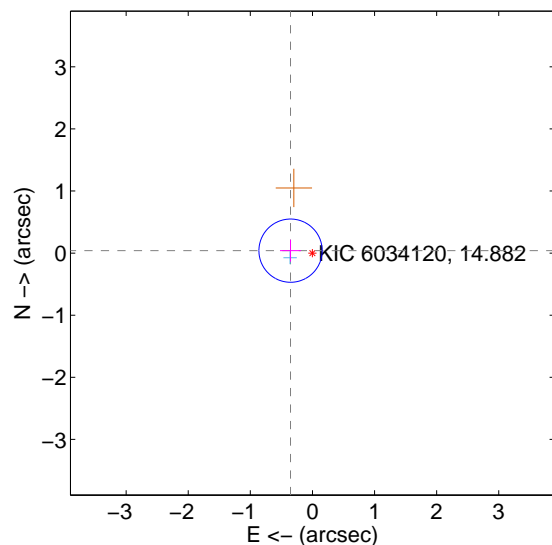
Supplemental centroid analysis for 006034120-05. Kepler magnitude: 14.88. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

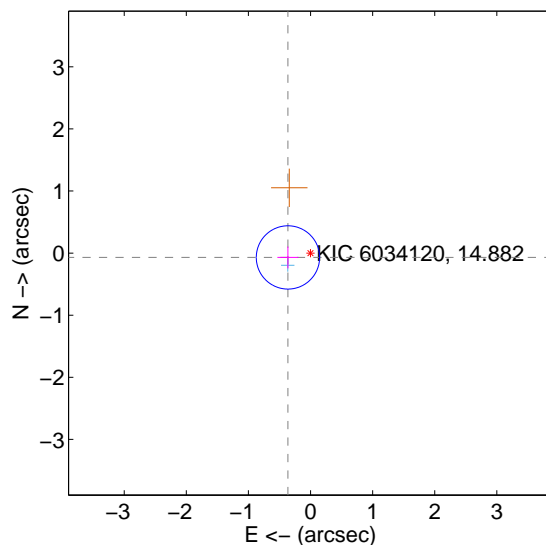
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.355 ± 0.170	2.09	0.353 ± 0.170	0.039 ± 0.176
PRF-fit source offset from KIC position	0.370 ± 0.170	2.18	0.364 ± 0.170	-0.070 ± 0.176
photometric centroid source offset	0.86 ± 0.79	1.09	0.32 ± 0.91	-0.80 ± 0.77

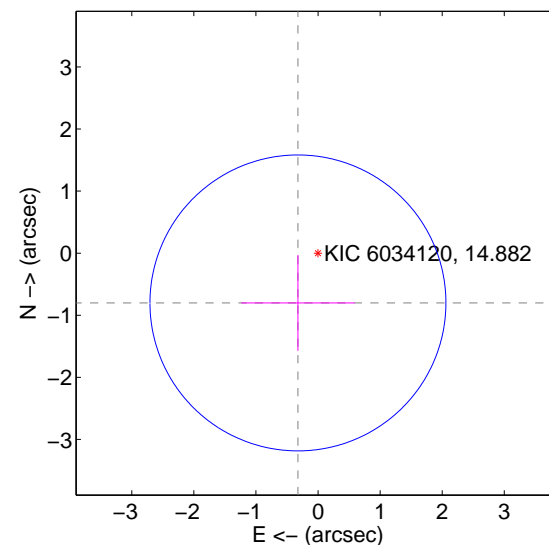
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

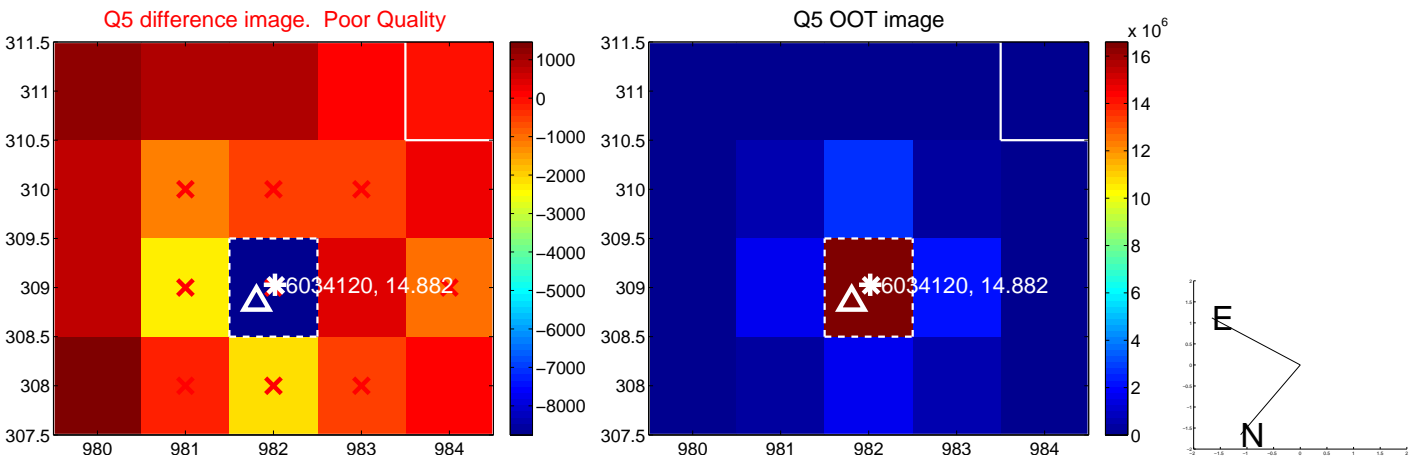


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

Q13 no difference image



Q13 no OOT image



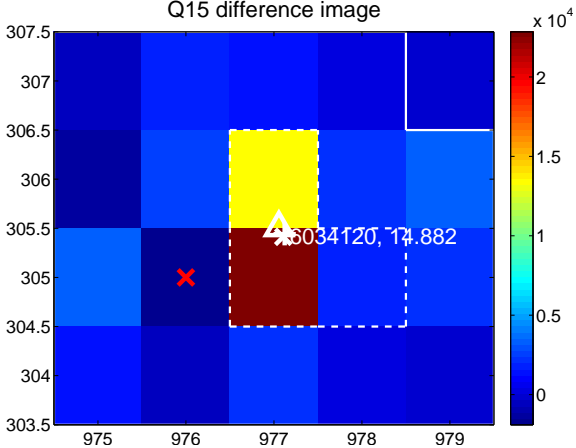
Q14 no difference image



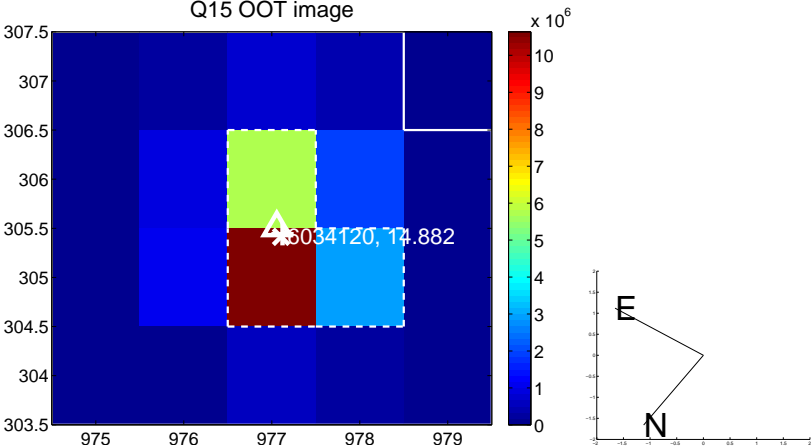
Q14 no OOT image



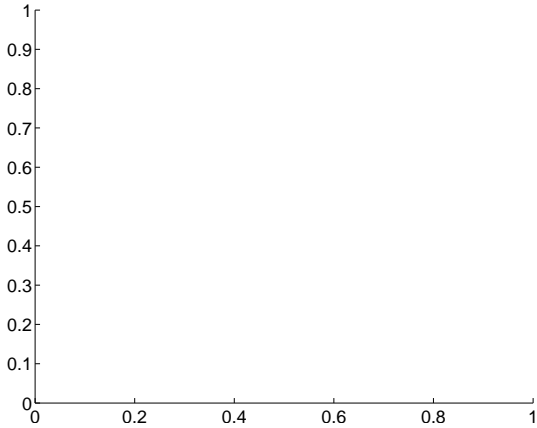
Q15 difference image



Q15 OOT image



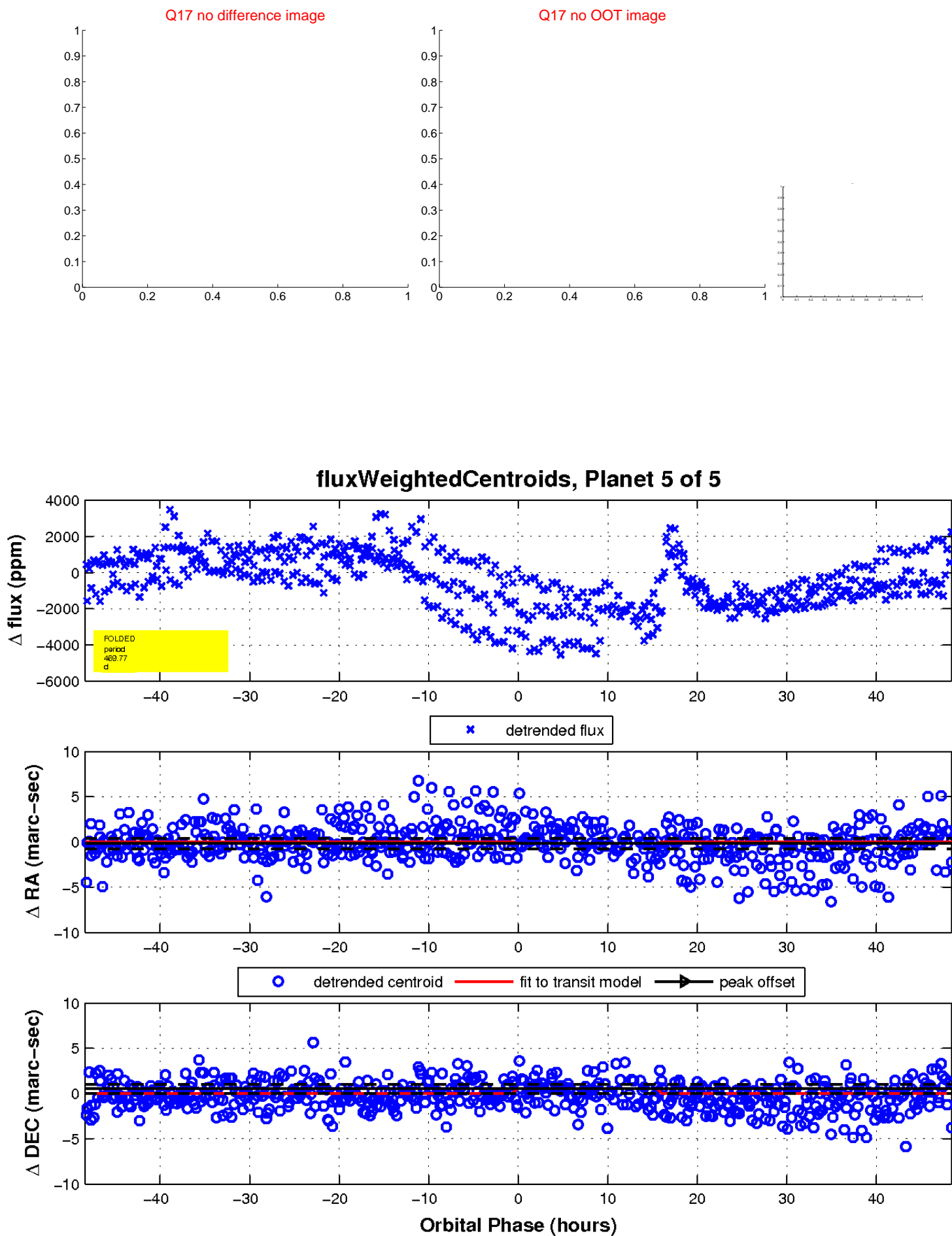
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

