

KIC 006692180

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})
006692180-01	OBS	No	425.562204	516.376279	1079.3	4.441	19.9	6.6	1.68	5226	6.01	1.66
006692180-02	OBS	No	471.428379	359.149997	1788.1	8.949	18.2	7.3	1.68	5226	7.15	1.44
006692180-03	OBS	No	569.751541	404.625648	1229.3	4.708	15.6	6.5	1.68	5226	6.16	1.12
006692180-04	OBS	No	536.874783	236.974860	1303.1	11.207	13.3	5.1	1.68	5226	6.13	1.22
006692180-05	OBS	No	431.882152	459.145859	560.2	4.969	17.7	2.9	1.68	5226	3.92	1.62
006692180-06	OBS	No	591.832988	195.189891	1025.1	3.203	14.1	5.6	1.68	5226	5.38	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006692180-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

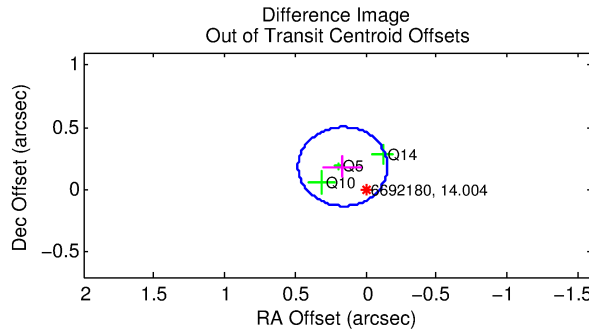
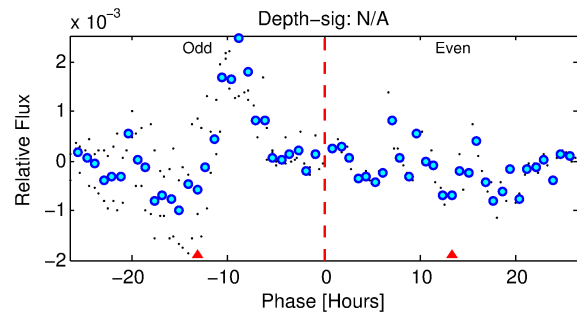
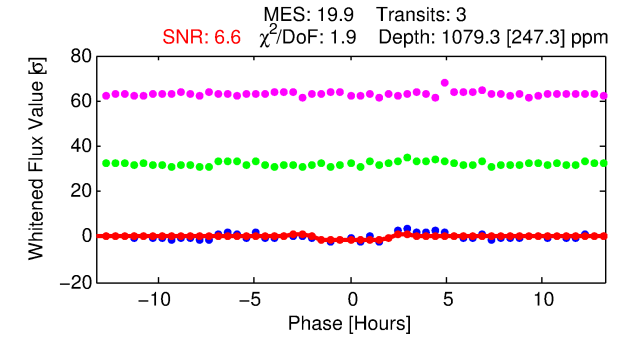
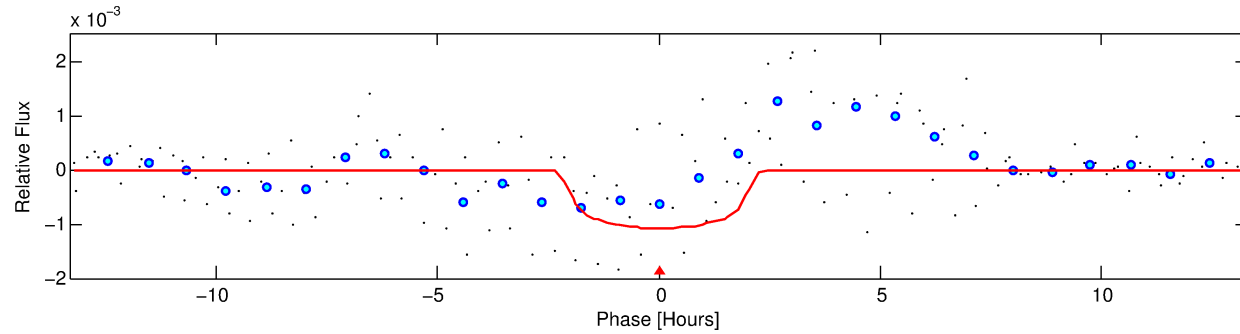
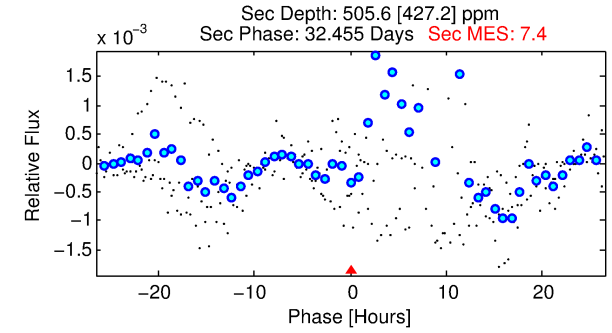
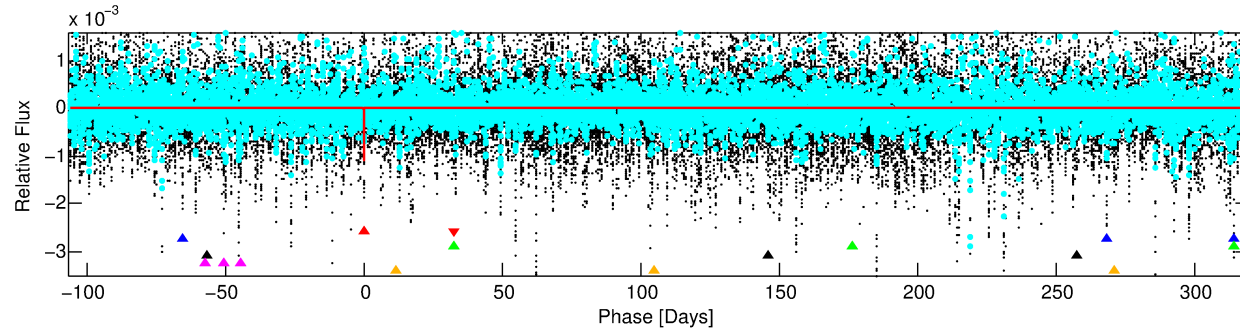
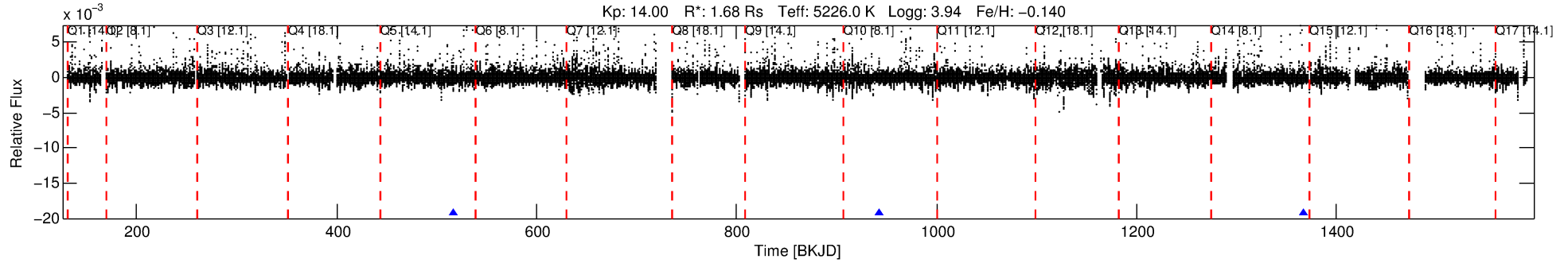
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-01

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 1 of 6 Period: 425.562 d



DV Fit Results:

Period = 425.56220 [0.00556] d
Epoch = 516.3763 [0.0082] BKJD
Rp/R* = 0.0329 [0.0228]
a/R* = 512.55 [1318.58]
b = 0.76 [1.45]
Seff = 1.66 [1.64]
Teq = 289 [72] K
Rp = 6.02 [5.25] Re
a = 1.0642 [0.6170] AU
Ag = 8705.95 [16518.60] [0.53] σ
Teffp = 4320 [1757] K [2.29] σ

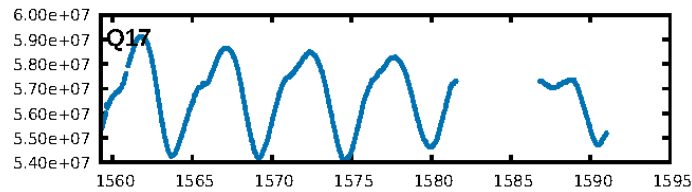
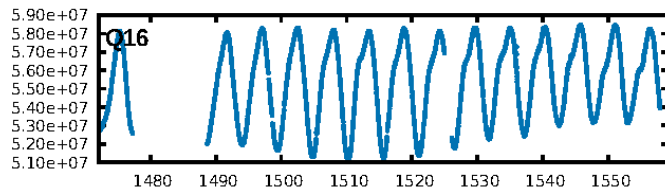
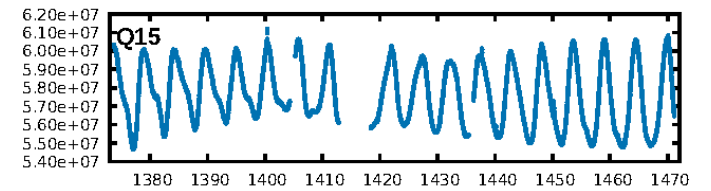
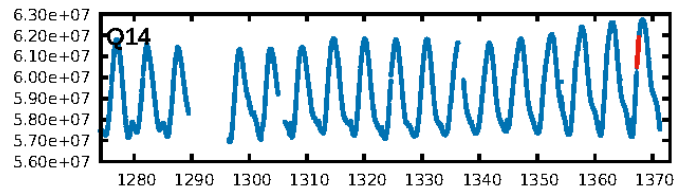
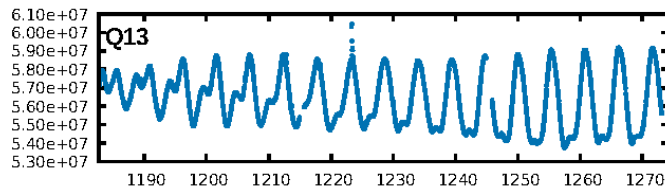
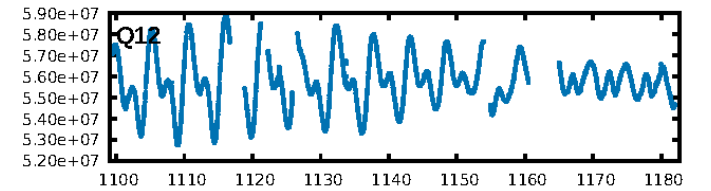
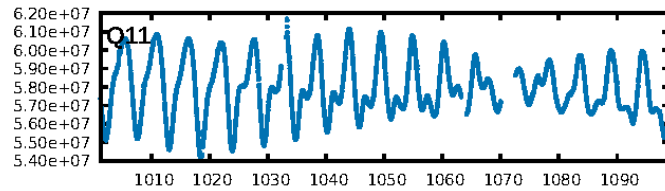
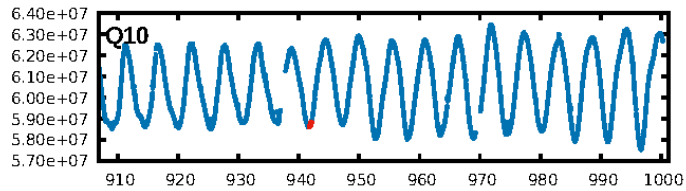
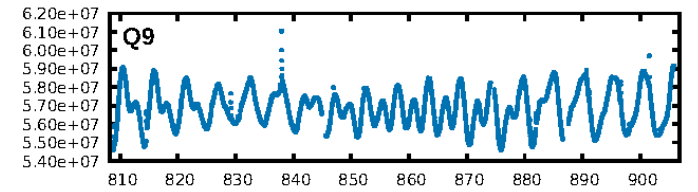
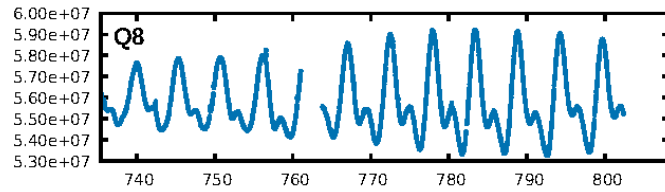
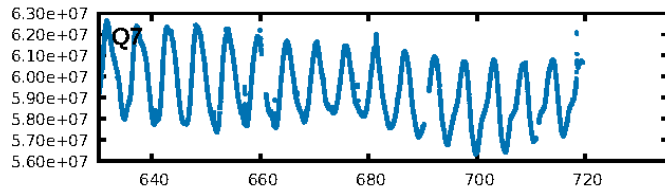
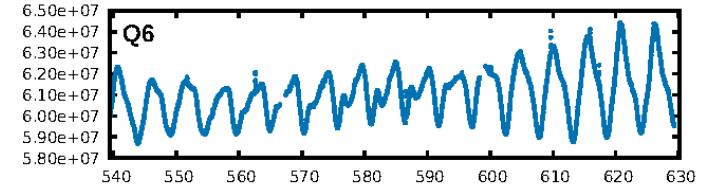
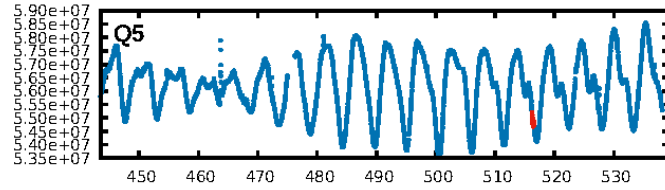
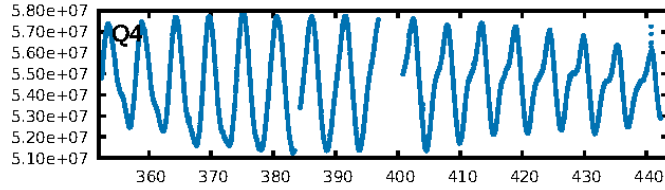
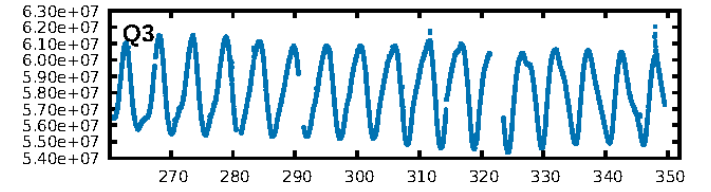
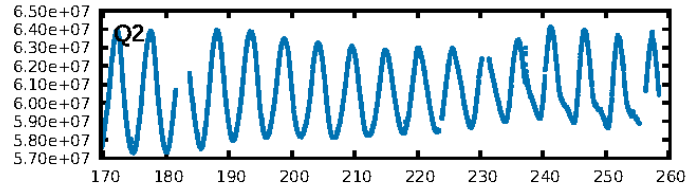
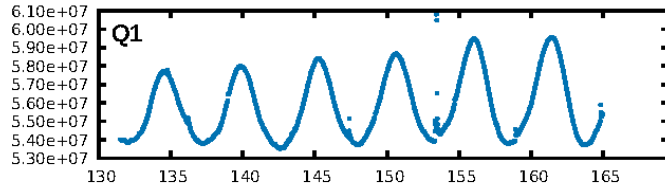
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [22.76] σ
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.07669
Centroid-sig: 10.1%
Centroid-so: 0.870 arcsec [1.56] σ
OotOffset-rm: 0.247 arcsec [2.34] σ
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.447 arcsec [5.05] σ
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

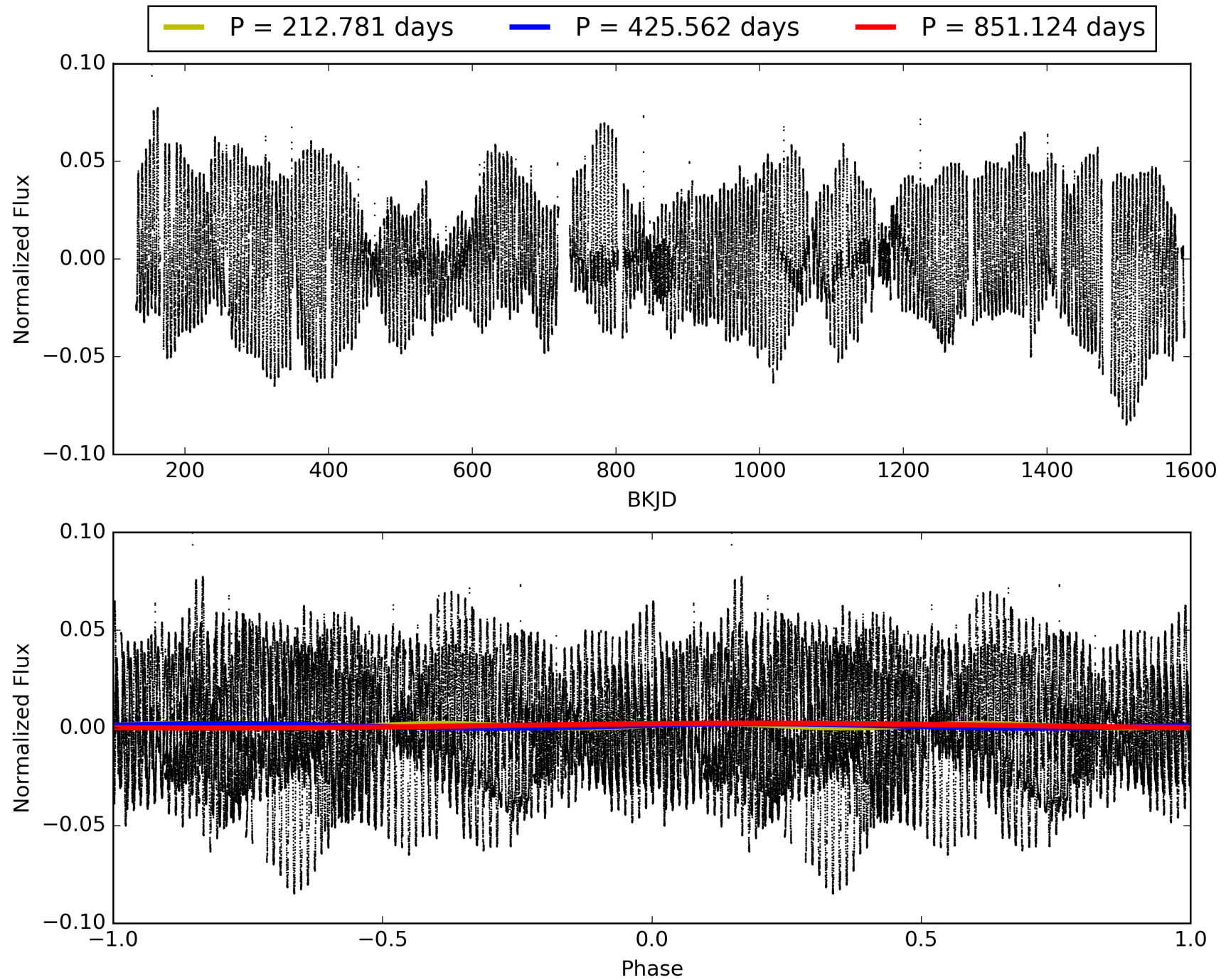
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006692180-01, PDC Light Curves

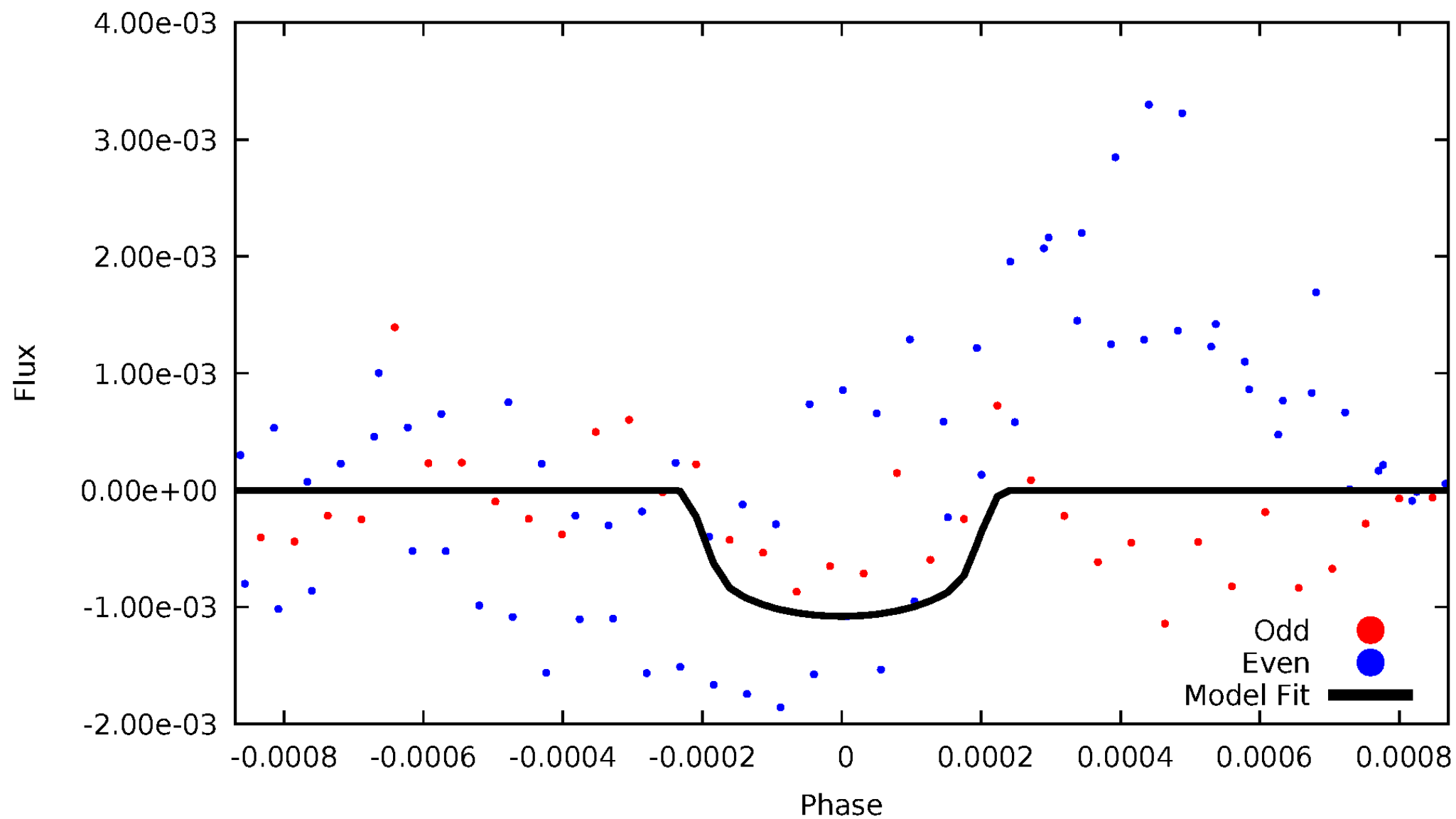


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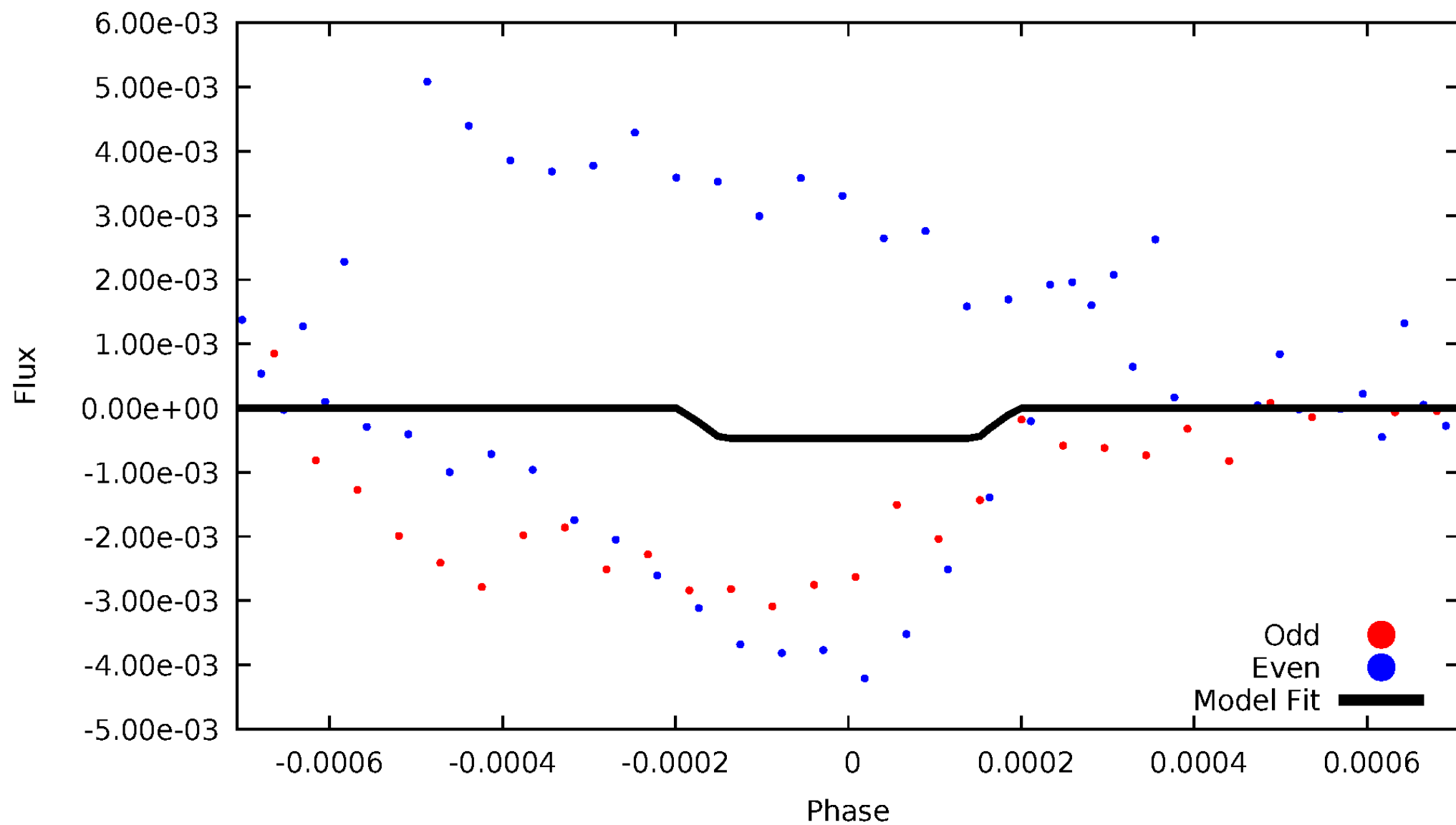
DV Odd/Even

TCE 006692180-01



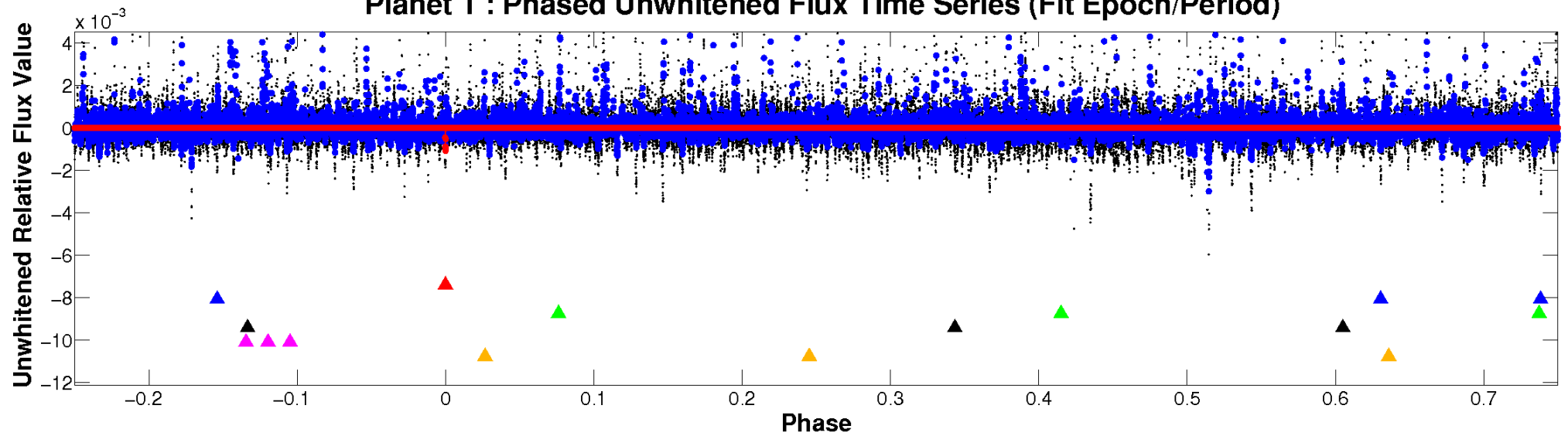
ALT Odd/Even

TCE 006692180-01

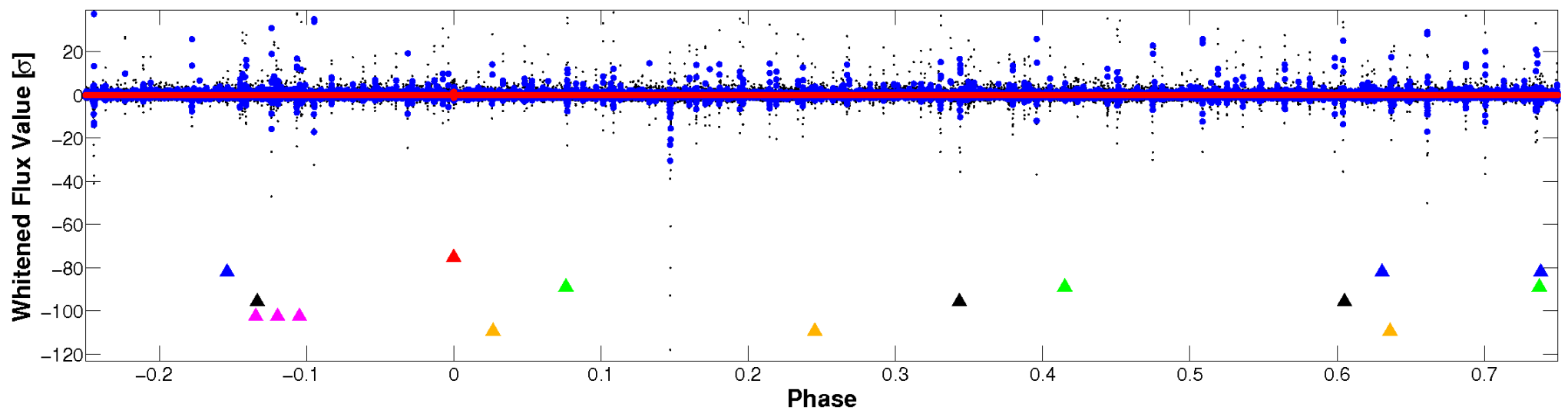


Non-Whitened Vs. Whitened Light Curve

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

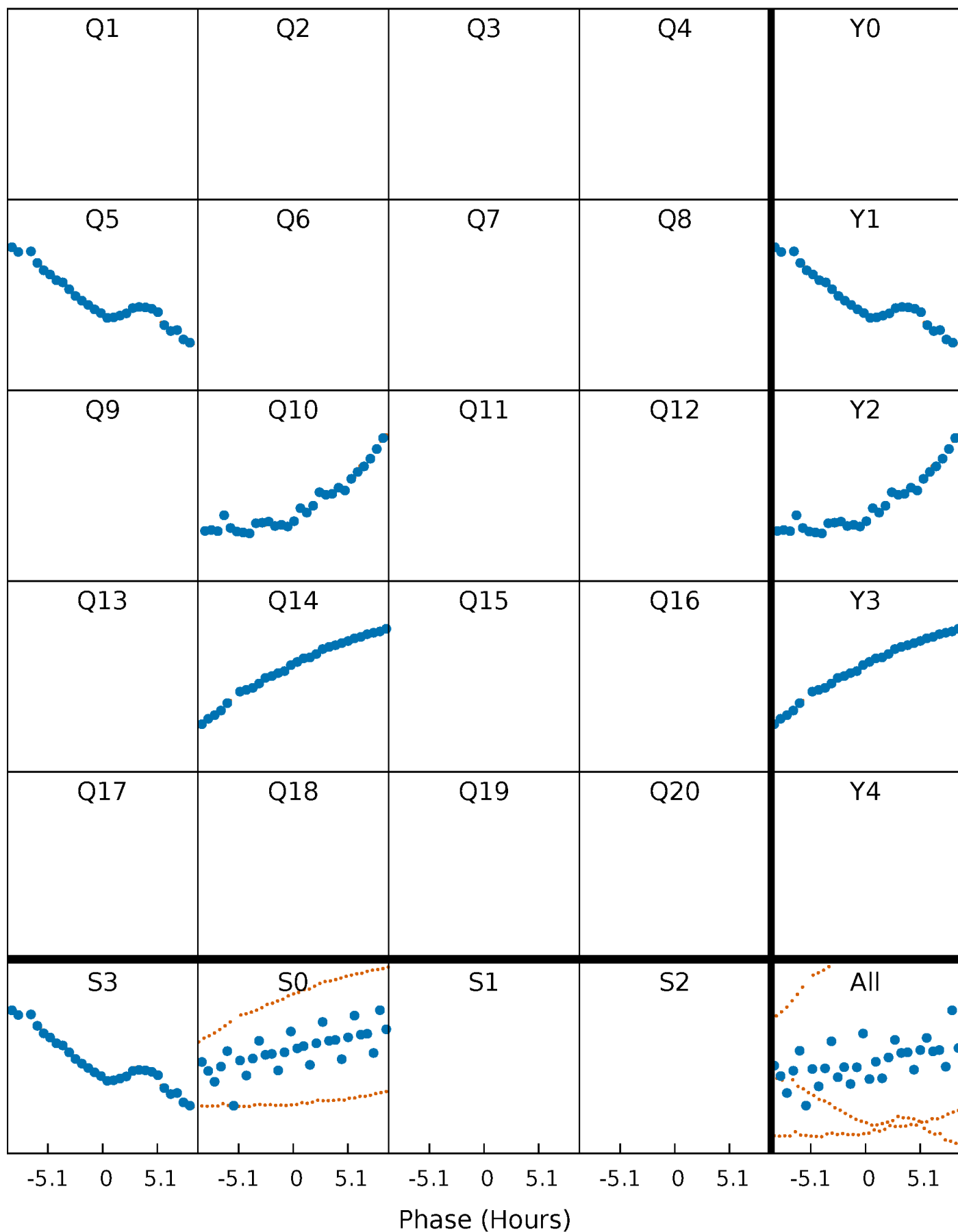


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



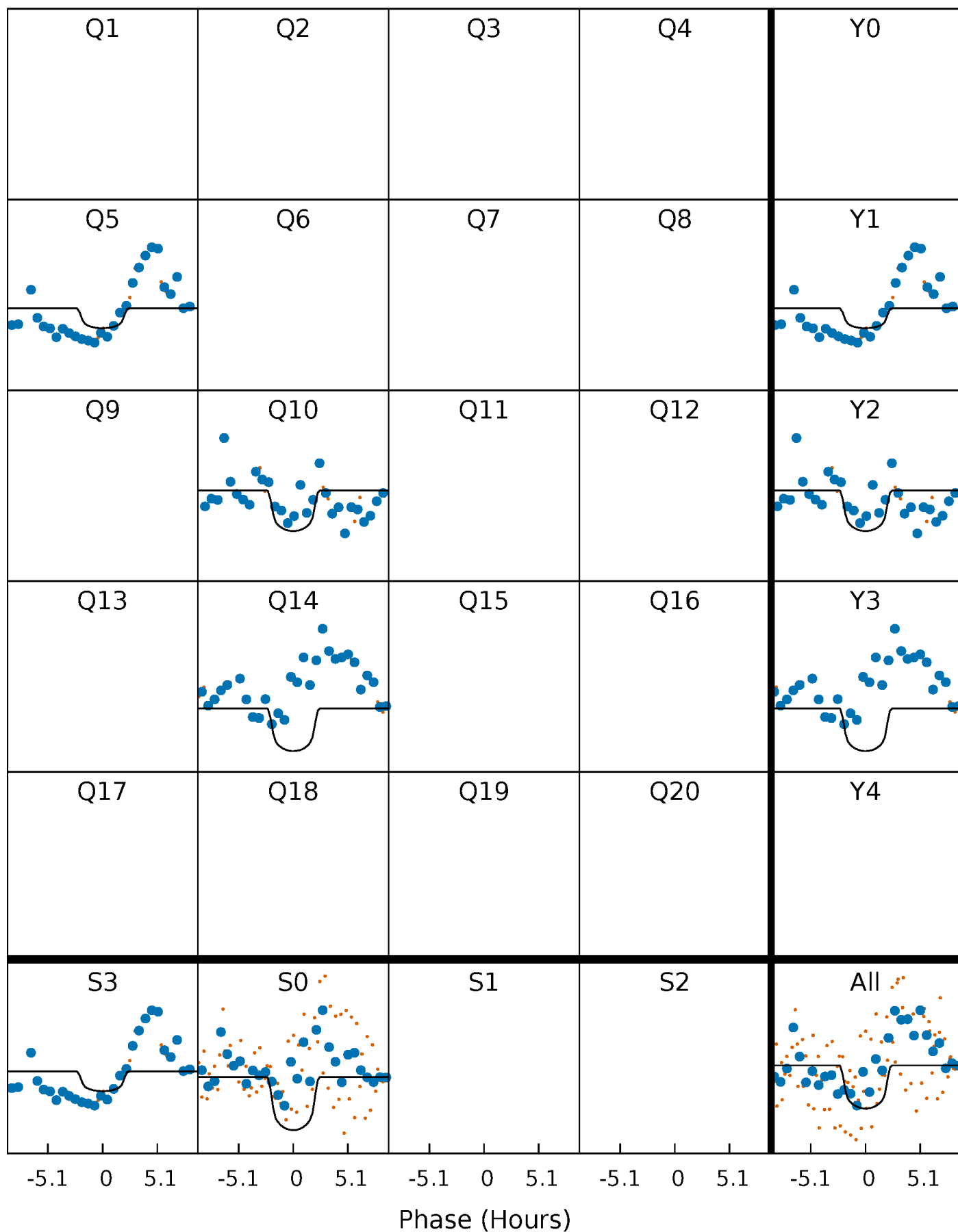
PDC Quarter-Phased Transit Curves

TCE 006692180-01 P=425.562204 Days $T_0=516.376279$ (BKJD)



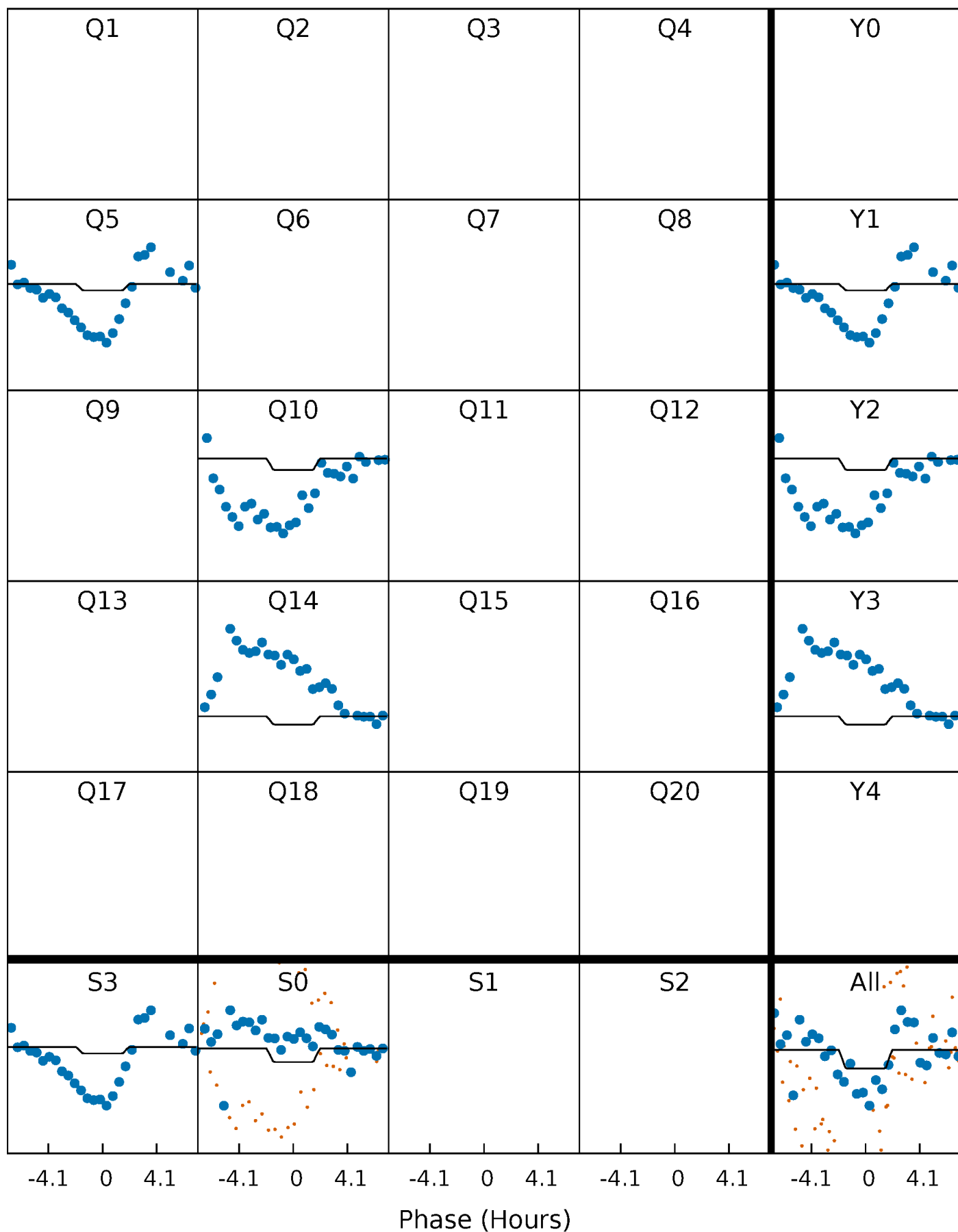
DV Quarter-Phased Transit Curves

TCE 006692180-01 P=425.562204 Days $T_0=516.376279$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

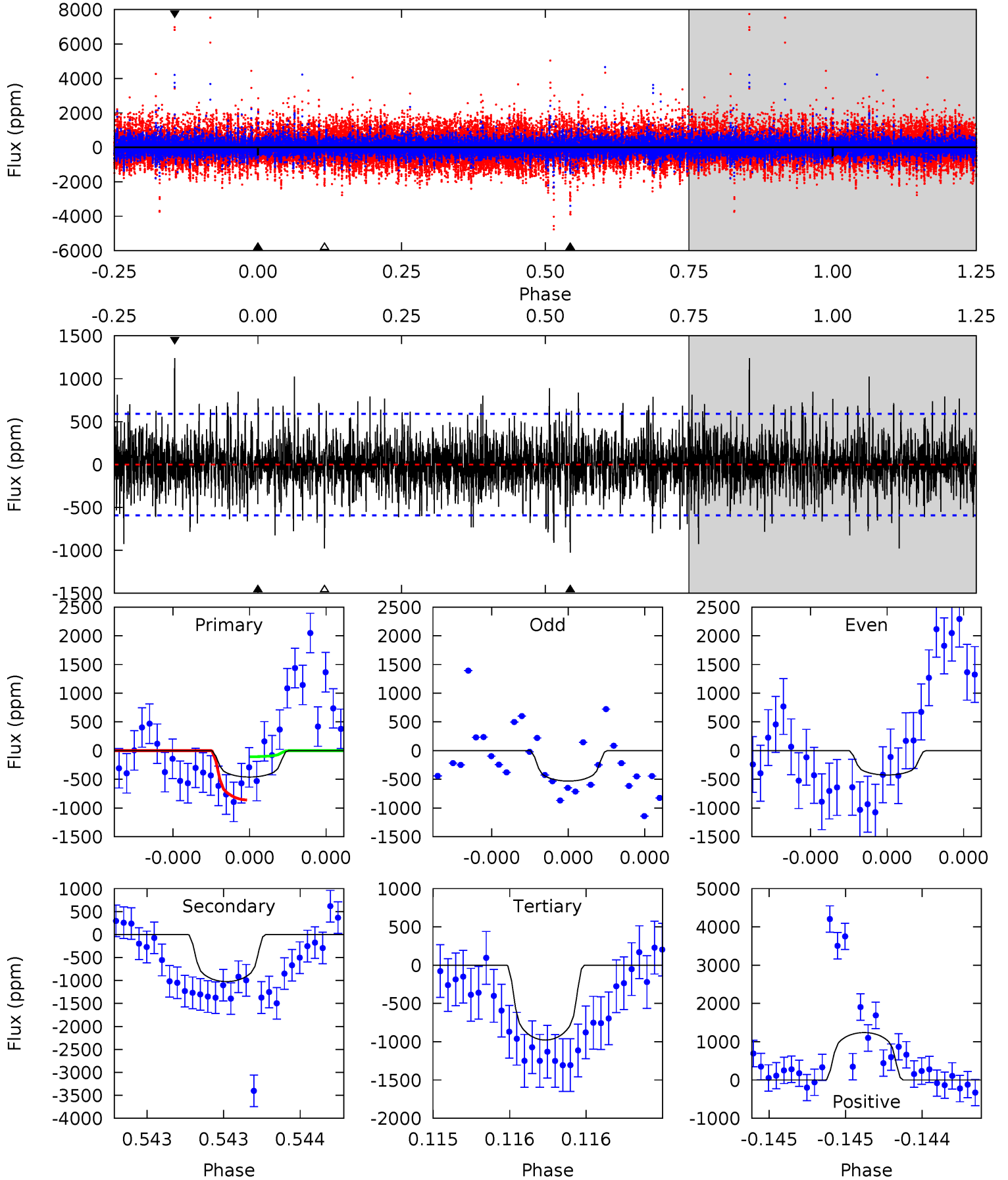
TCE 006692180-01 P=425.556132 Days $T_0=516.392141$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-01, P = 425.562204 Days, E = 90.814075 Days

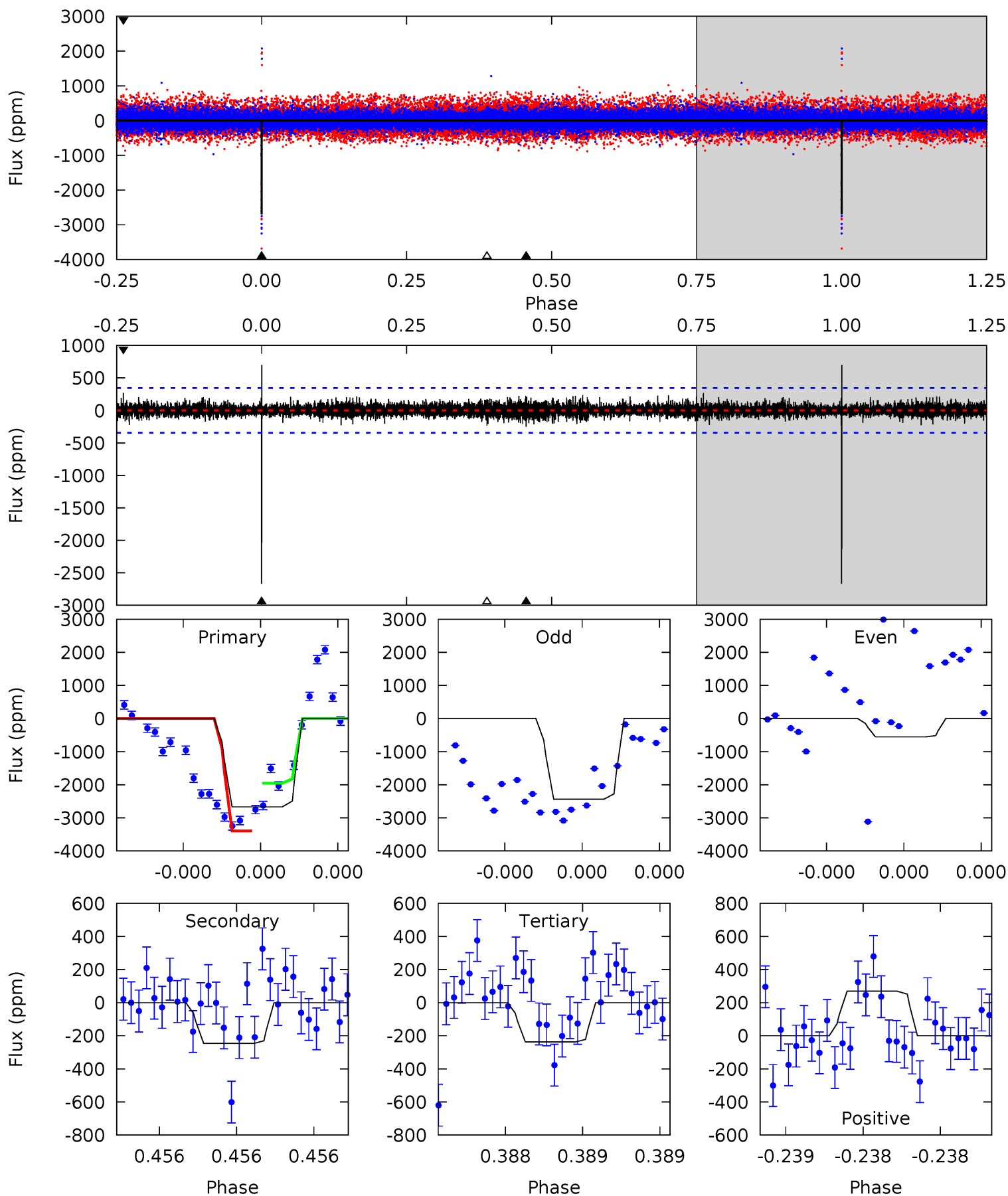
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.35	9.67	9.24	11.7	5.58	3.50	2.04	-4.88	-7.36	0.43	-2.04	0.29	0.86	0.55	3.57



Alt Model-Shift Uniqueness Test

006692180-01, P = 425.556132 Days, E = 90.836009 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.6	4.03	3.88	4.39	5.63	3.56	0.81	39.7	39.2	0.15	-0.36	18.8	0.42	0.21	0



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1024 \pm 106	$5.79^{+4.64}_{-3.49}$	400^{+54}_{-65}	5018^{+2914}_{-878}	$18873^{+102356}_{-13240}$
Alt.	-247 \pm 61	$4.35^{+4.21}_{-2.82}$	396^{+55}_{-57}	4227^{+2312}_{-792}	7903^{+49632}_{-5864}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
 A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

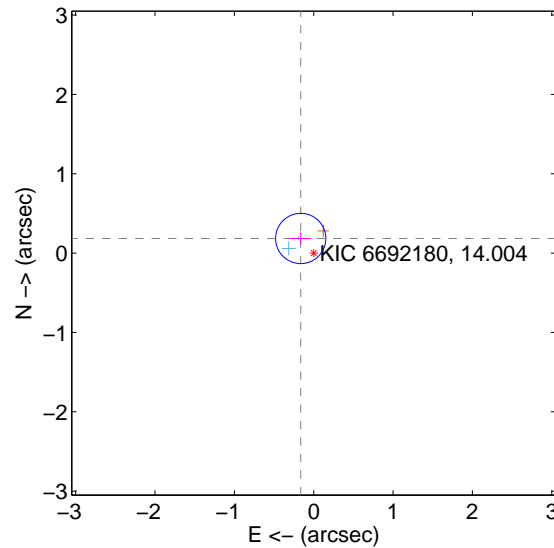
Supplemental centroid analysis for 006692180-01. Kepler magnitude: 14.00. Transit SNR 6.64

There are 2 quarters with good PRF difference image offsets

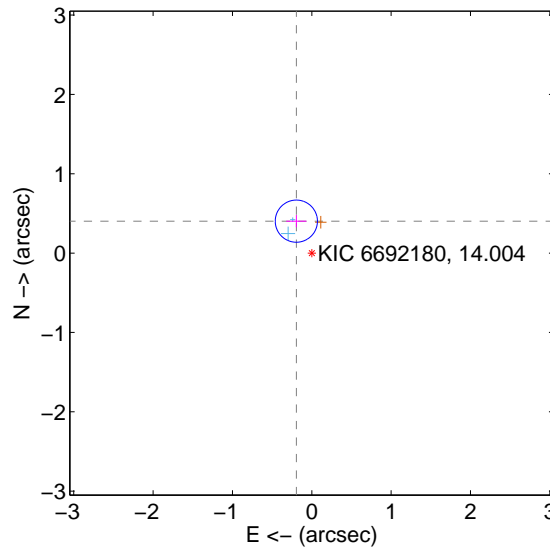
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.247 ± 0.106	2.34	0.164 ± 0.134	0.185 ± 0.076
PRF-fit source offset from KIC position	0.447 ± 0.089	5.05	0.195 ± 0.127	0.403 ± 0.077
photometric centroid source offset	0.87 ± 0.56	1.56	-0.02 ± 0.54	0.87 ± 0.56

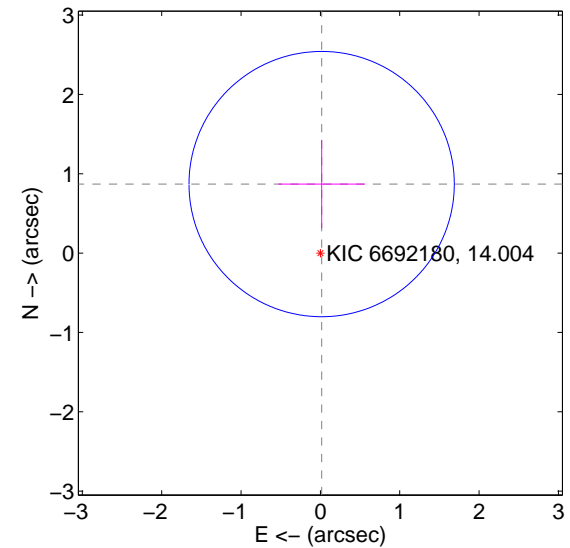
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

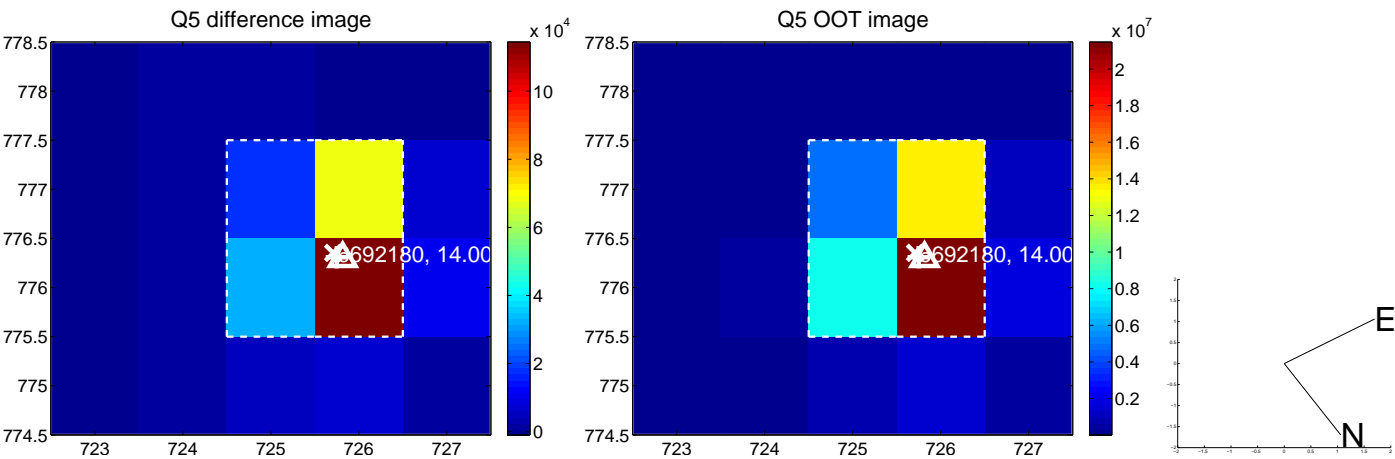


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

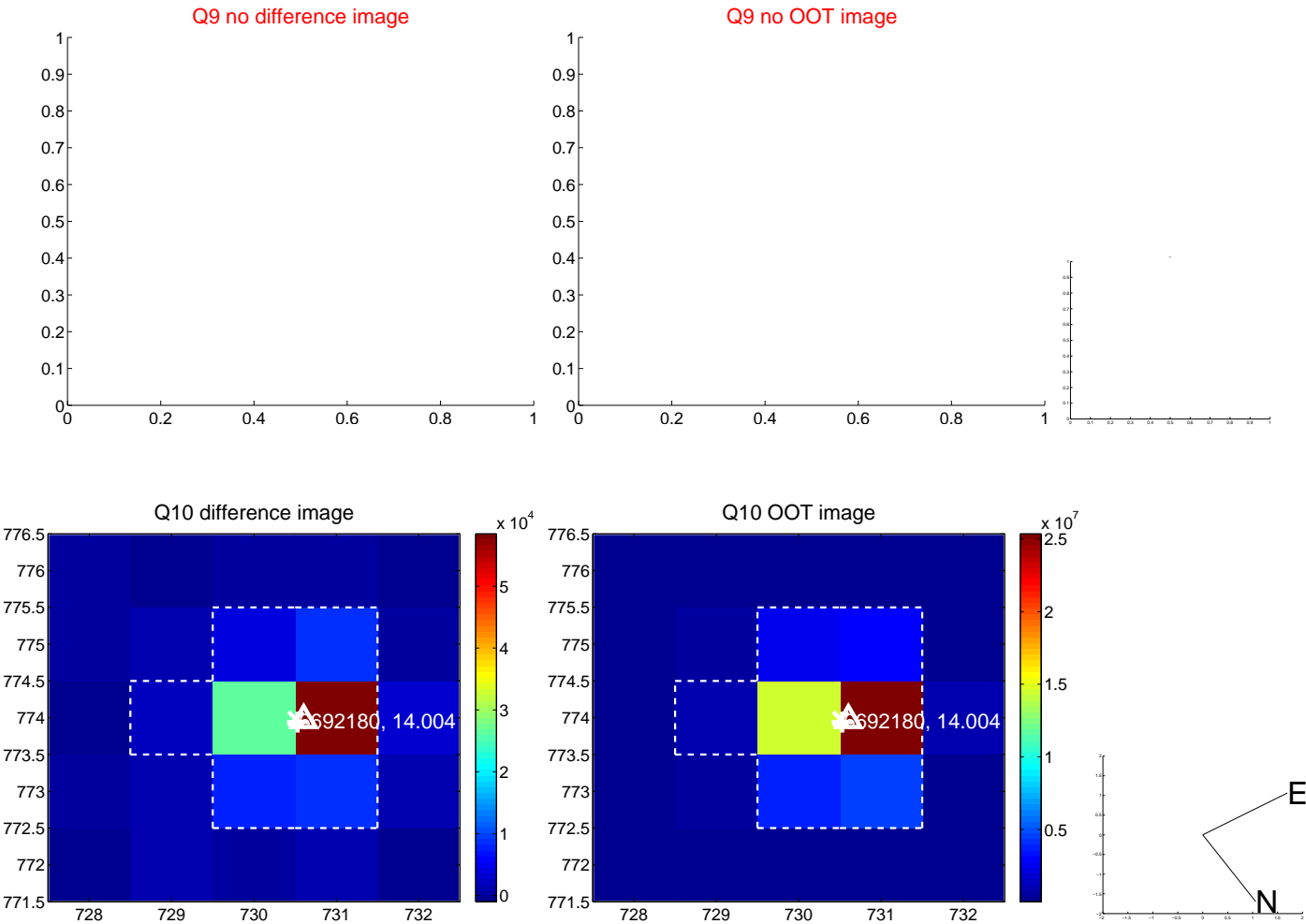
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



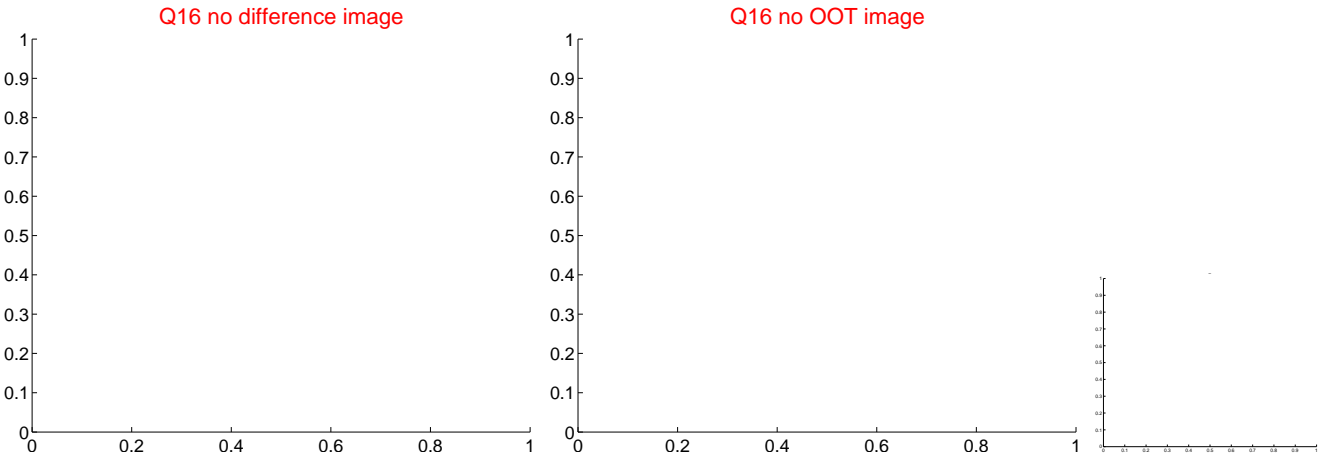
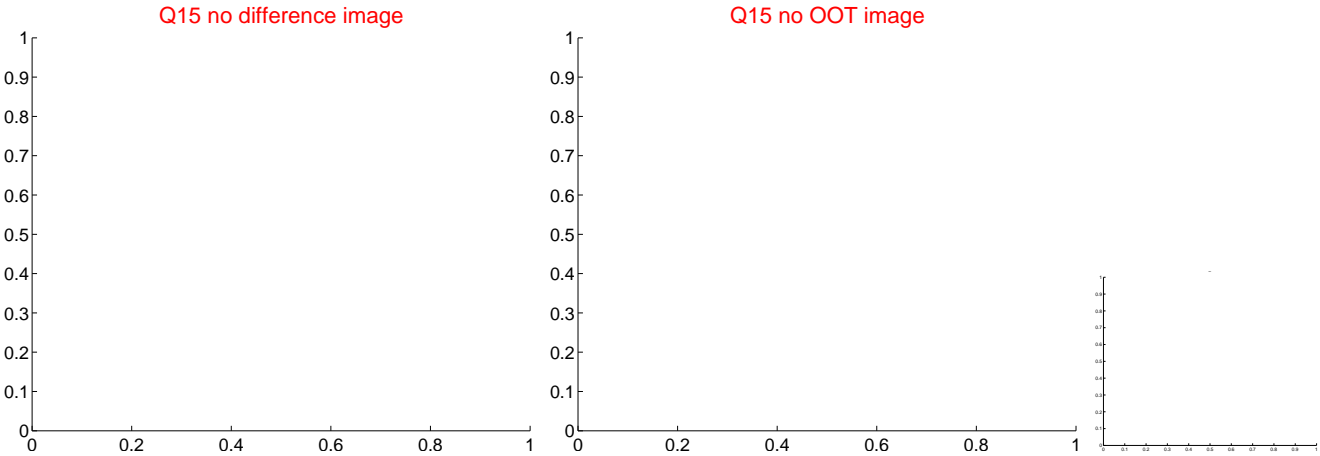
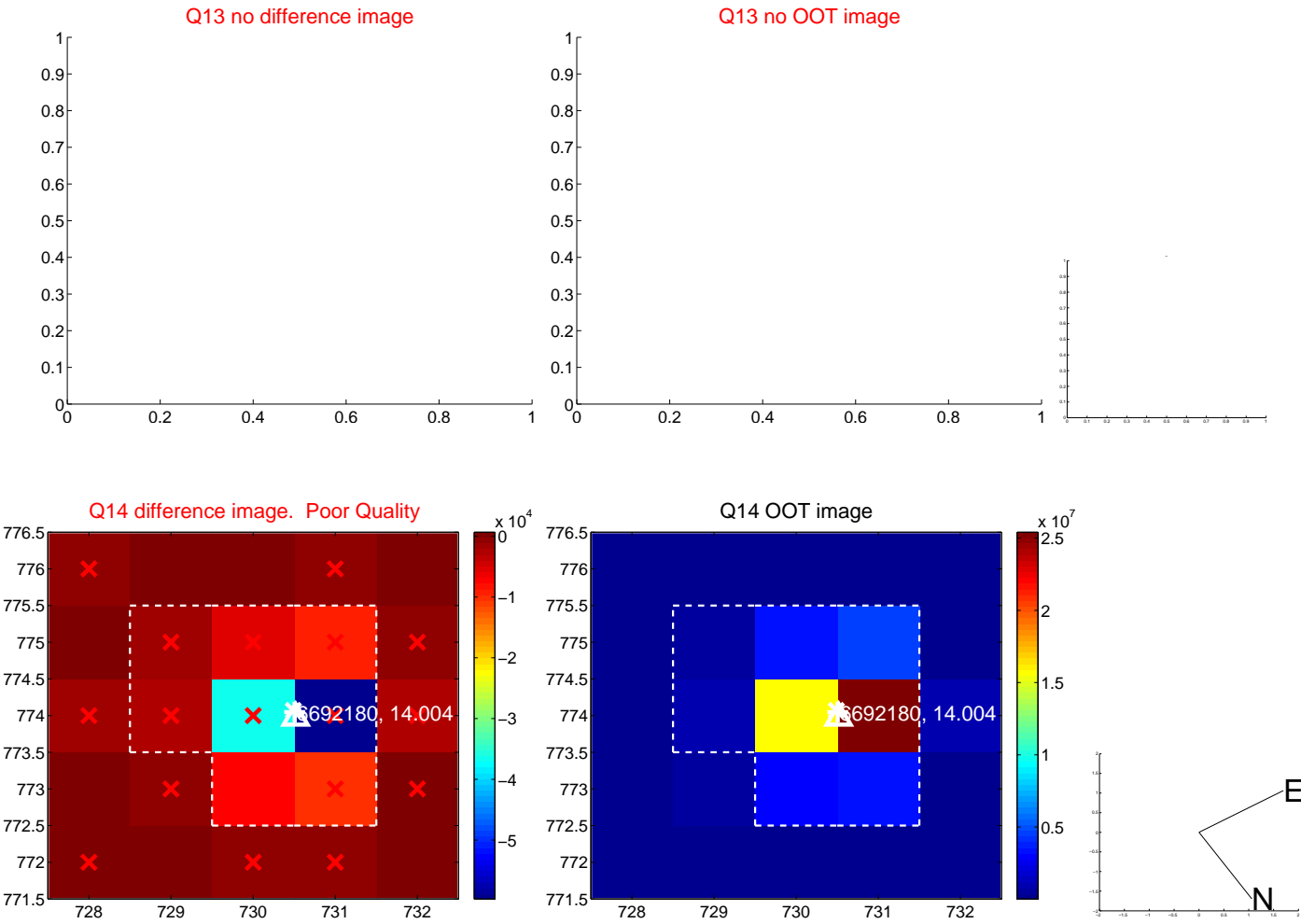
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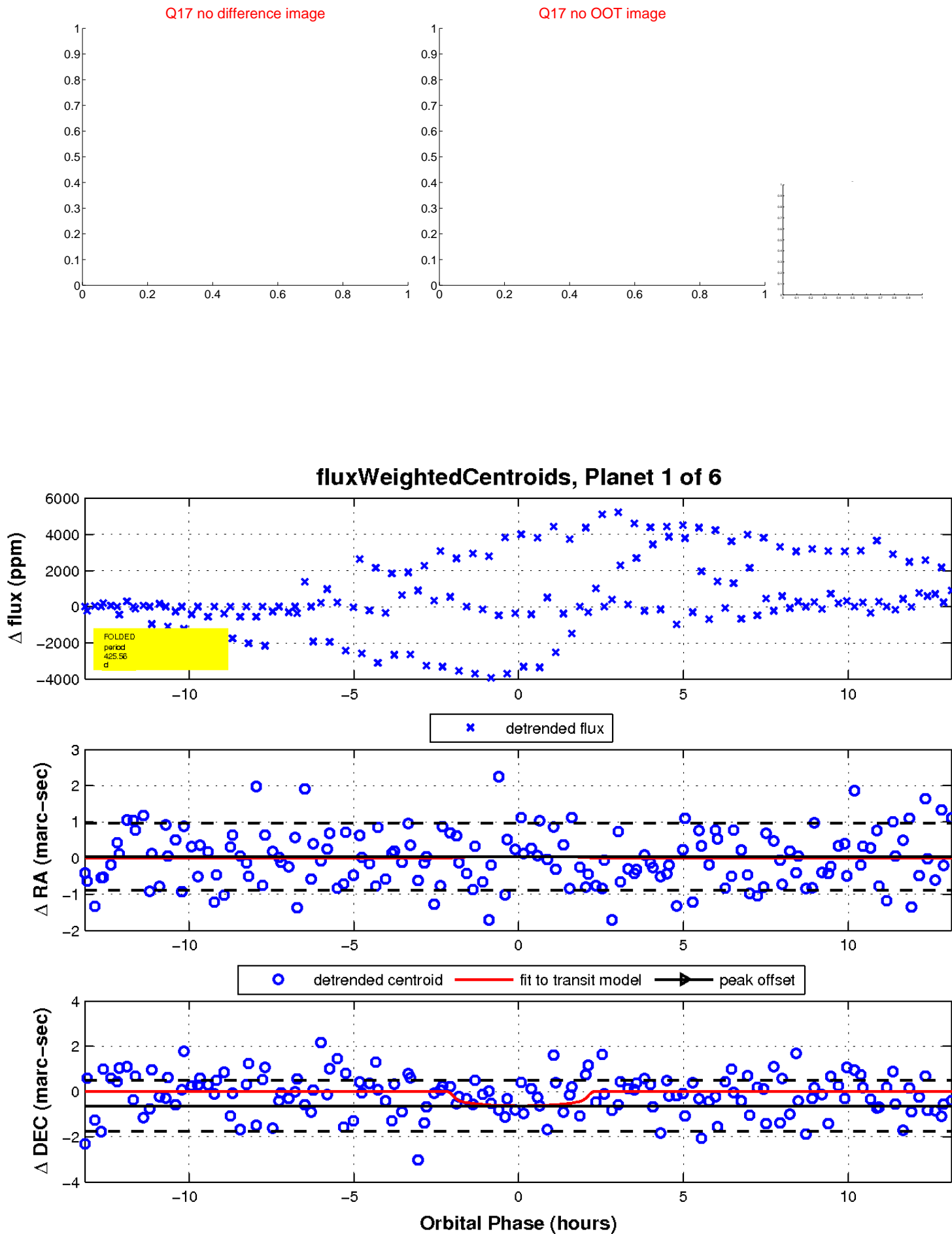
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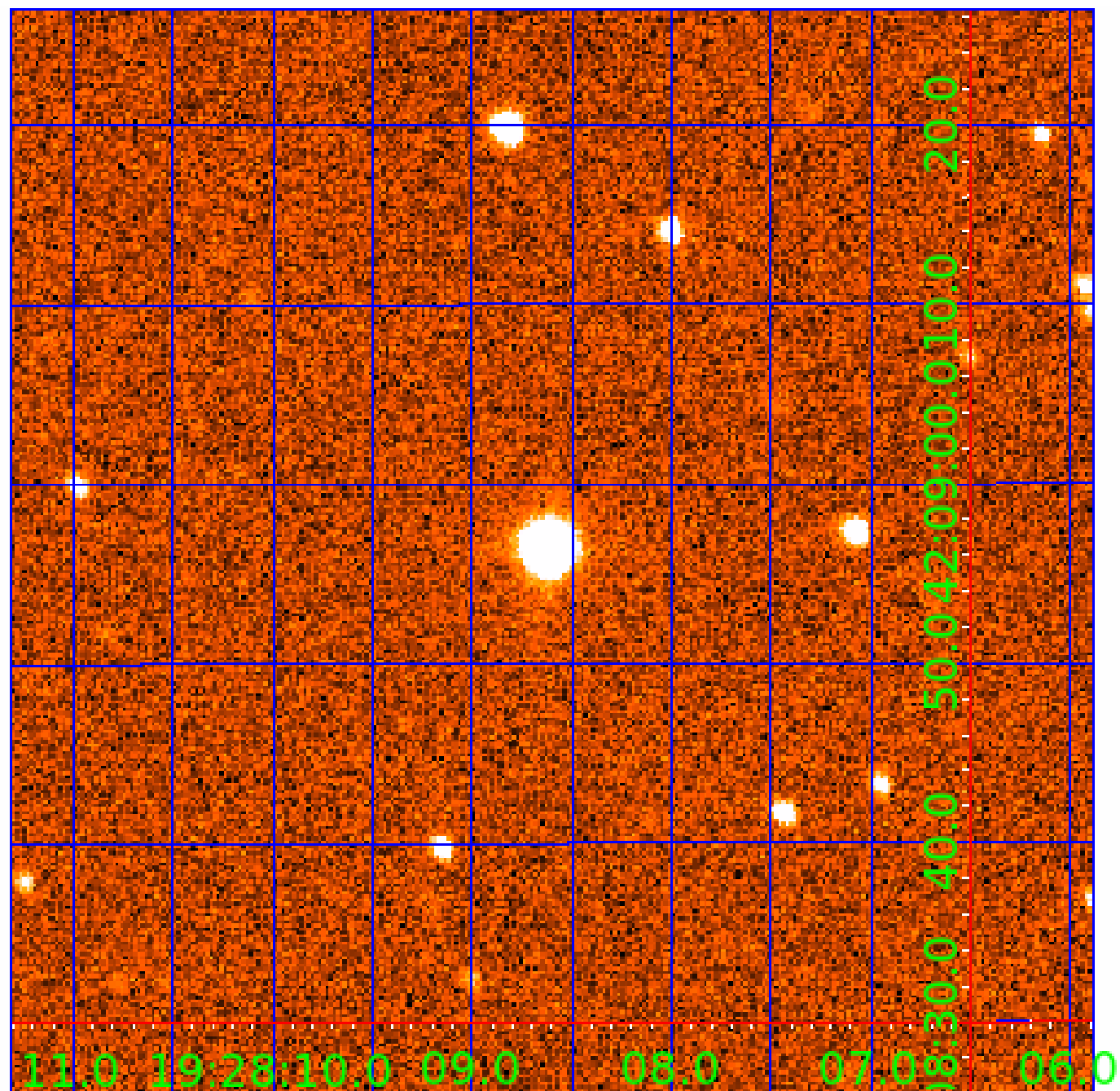


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UKIRT Image

Declination



KIC 006692180

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006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

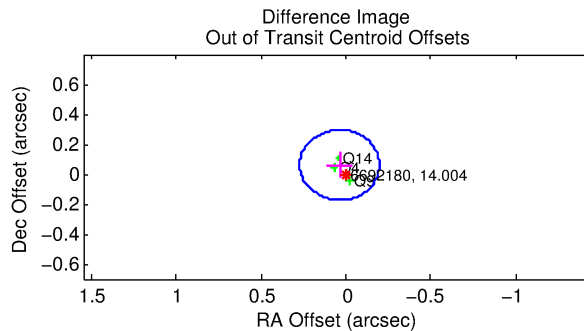
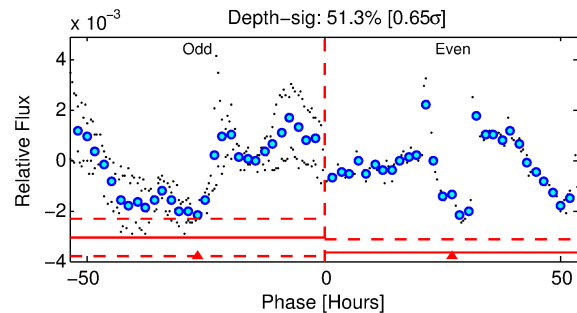
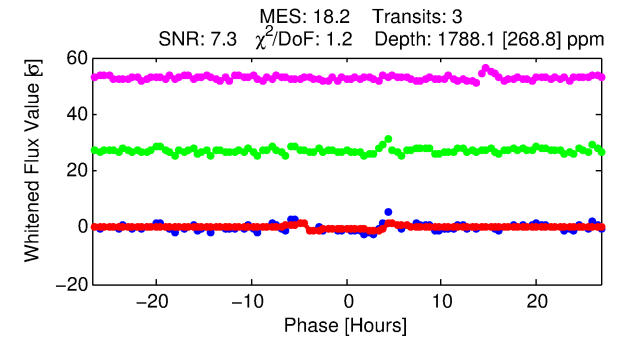
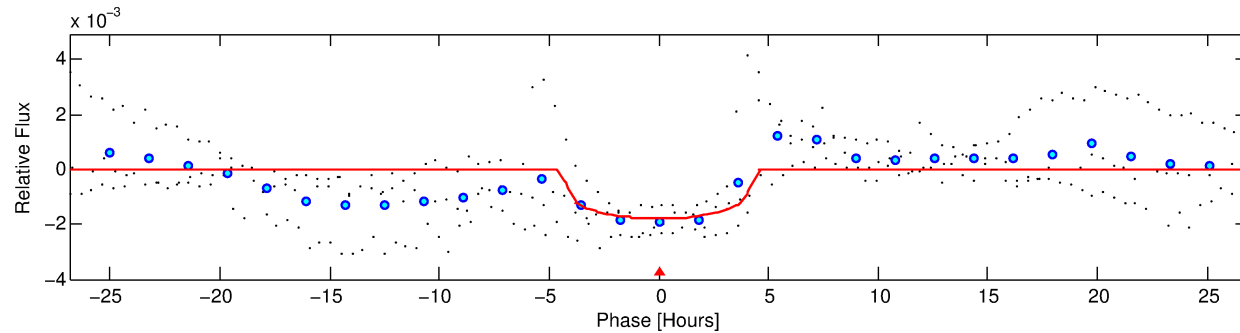
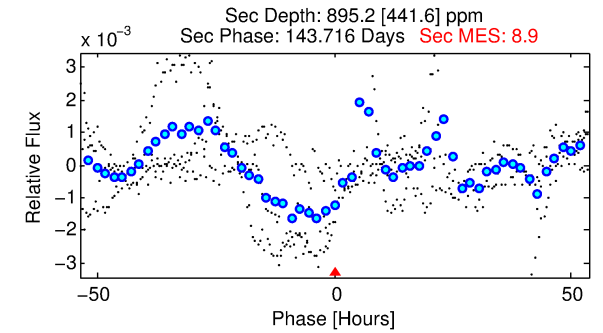
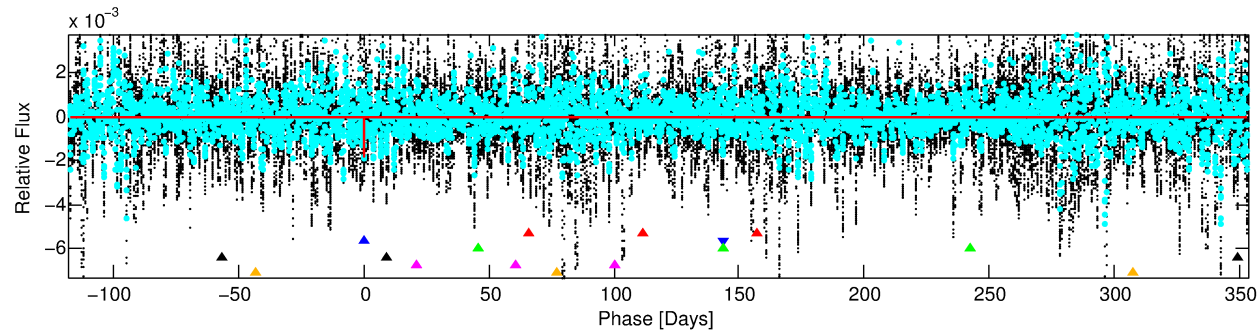
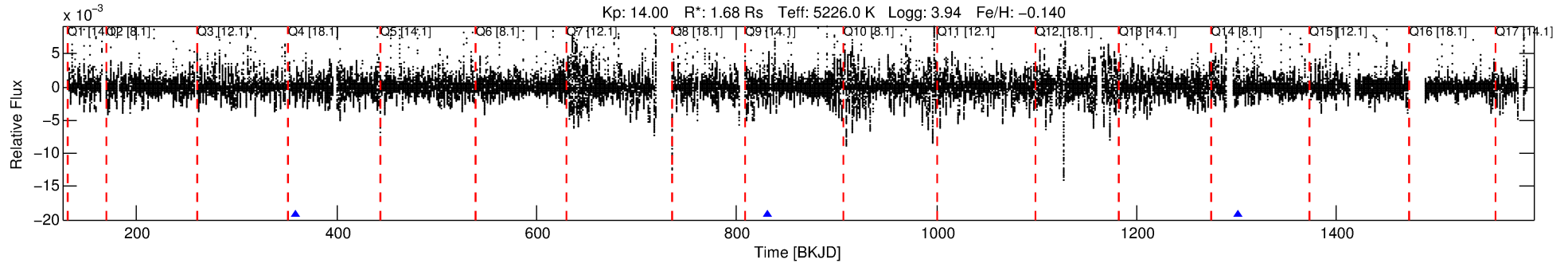
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-02

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 2 of 6 Period: 471.428 d



DV Fit Results:

Period = 471.42838 [0.00388] d
Epoch = 359.1500 [0.0049] BKJD
Rp/R* = 0.0391 [0.0132]
a/R* = 371.71 [439.68]
b = 0.48 [1.93]
Seff = 1.44 [1.43]
Teq = 280 [69] K
Rp = 7.15 [4.50] Re
a = 1.1393 [0.6606] AU
Ag = 12500.93 [16123.32] [0.78 σ]
Teffp = 4570 [963] K [4.45 σ]

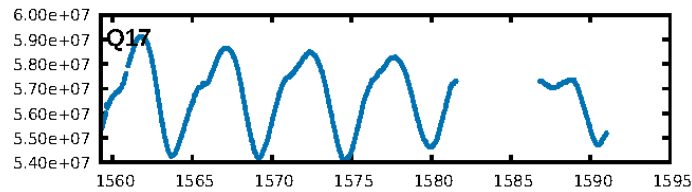
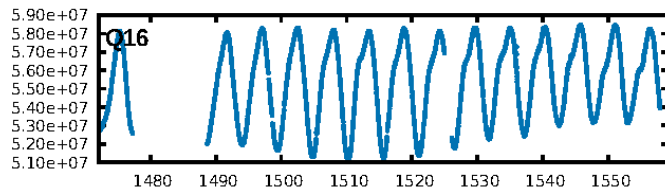
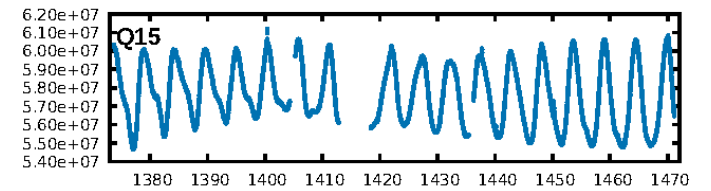
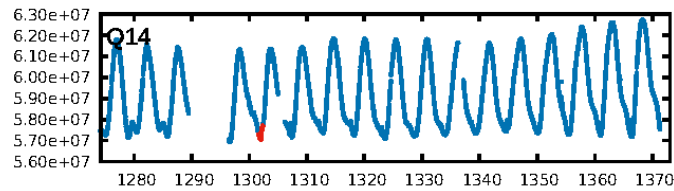
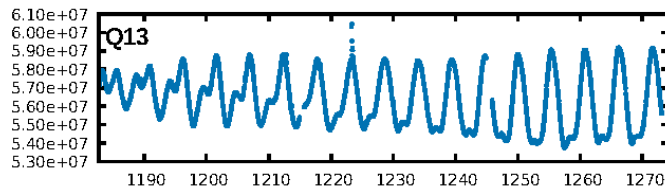
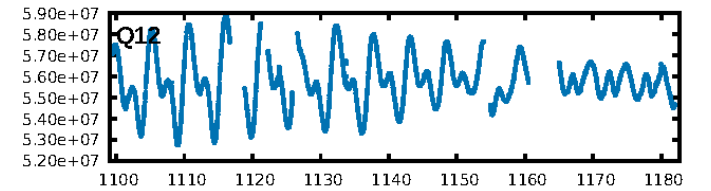
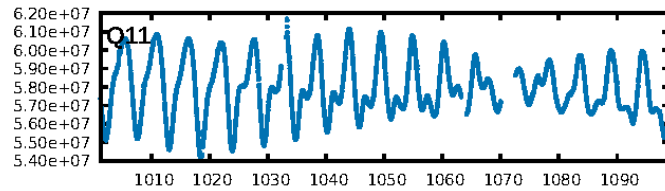
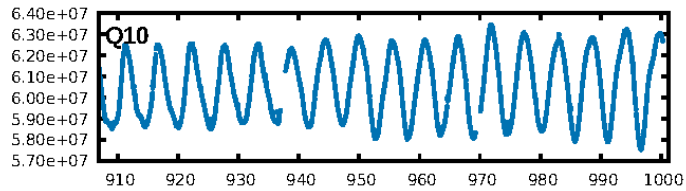
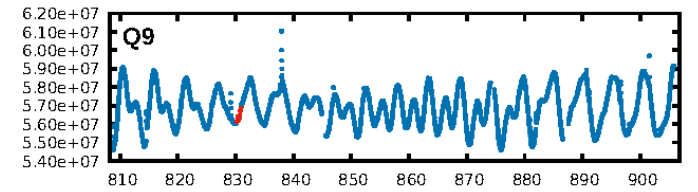
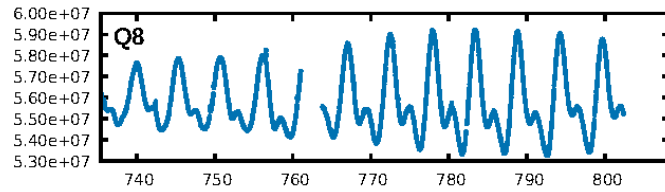
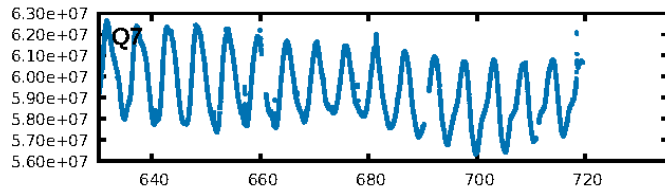
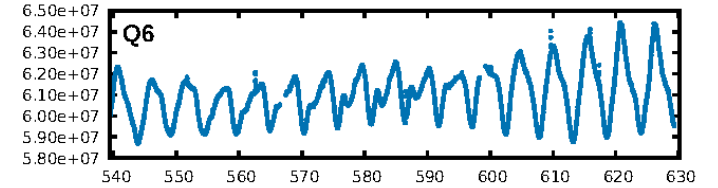
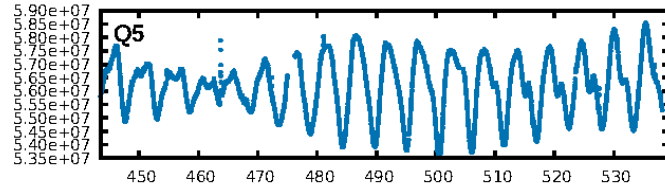
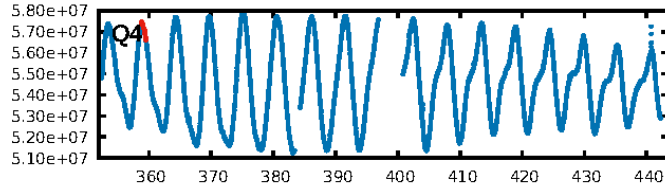
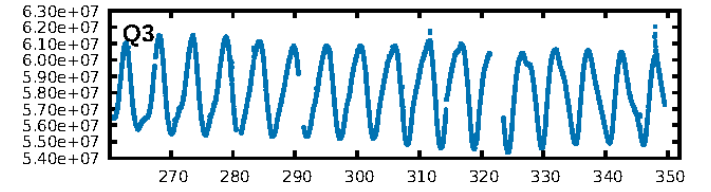
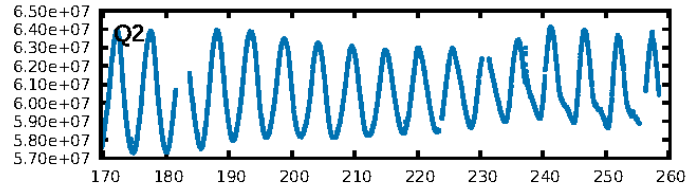
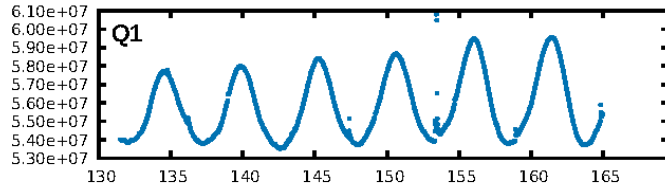
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.72 σ]
LongPeriod-sig: 100.0% [109.52 σ]
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 80.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.6273
Centroid-sig: 53.1%
Centroid-so: 0.368 arcsec [1.40 σ]
OotOffset-rm: 0.073 arcsec [0.93 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.283 arcsec [3.93 σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

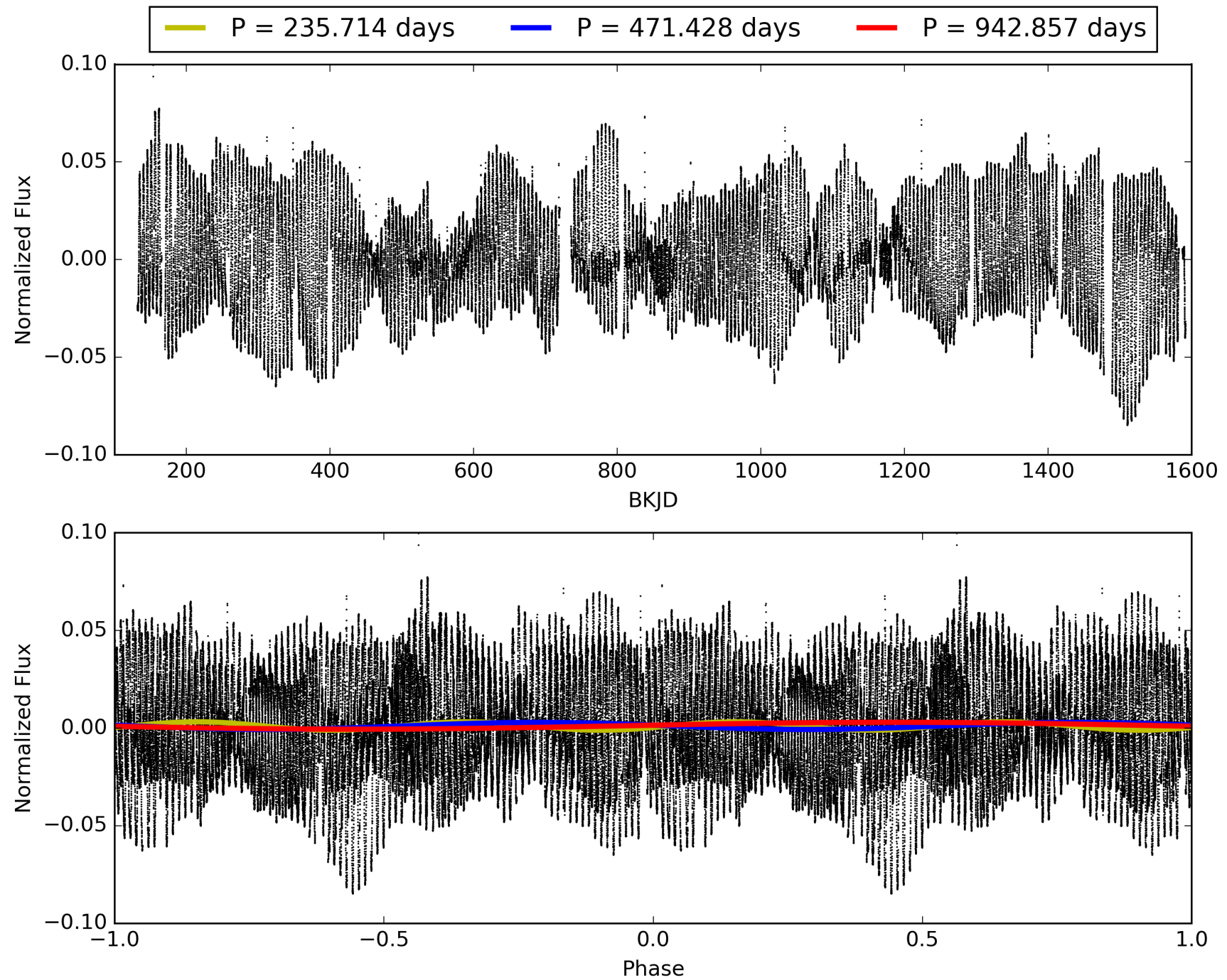
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:58:50 Z

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

TCE 006692180-02, PDC Light Curves

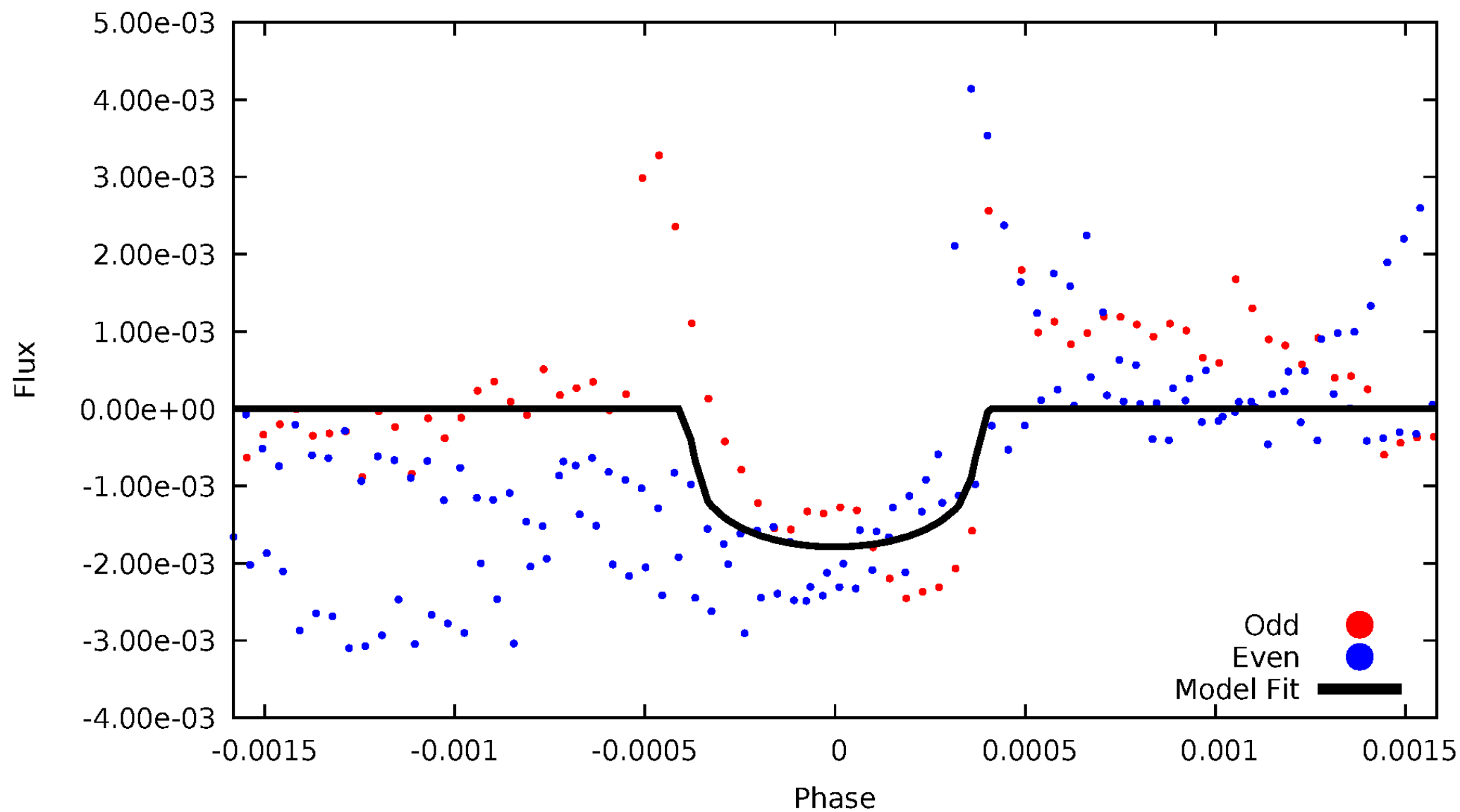


TCE 006692180-02



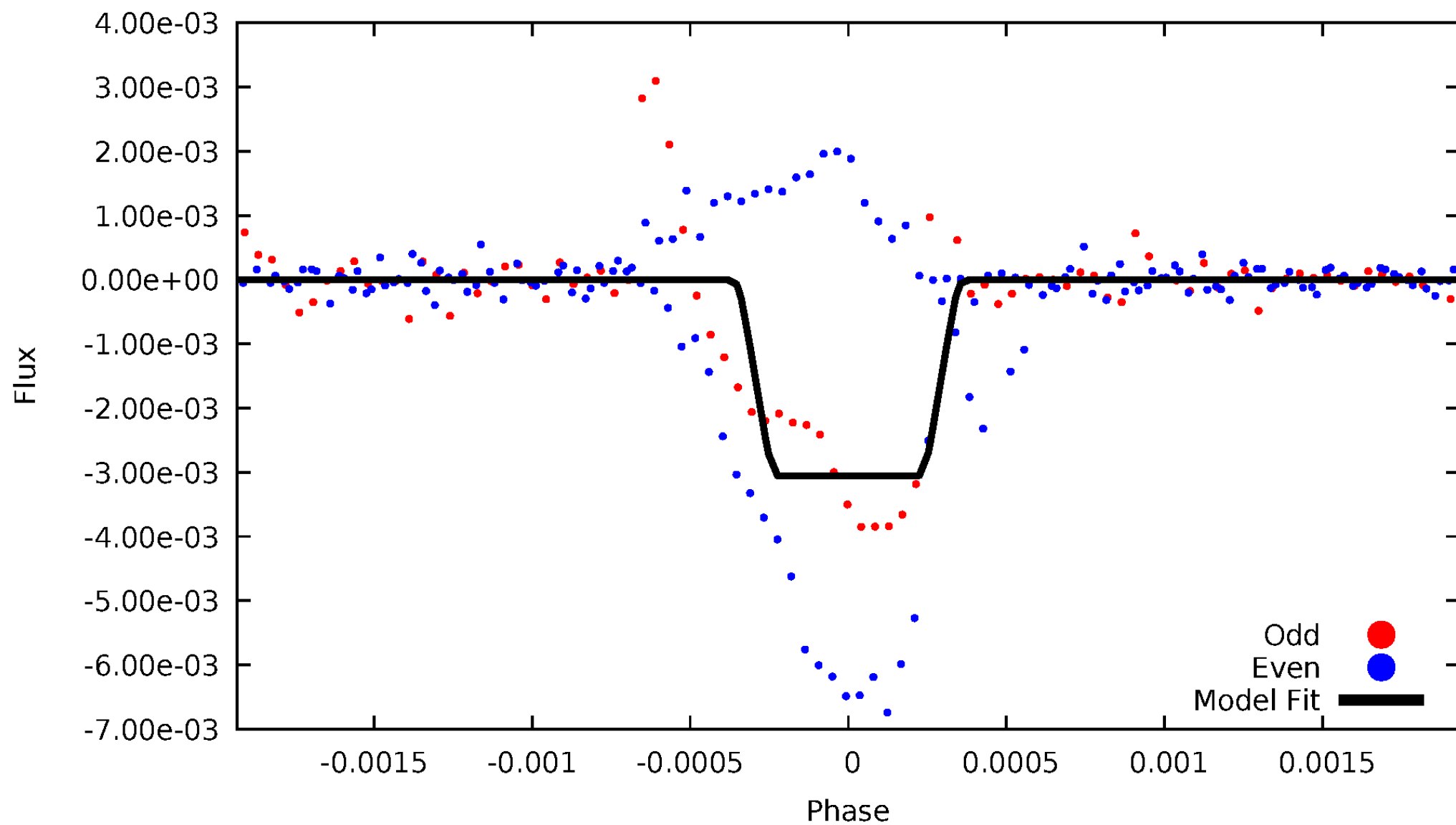
DV Odd/Even

TCE 006692180-02



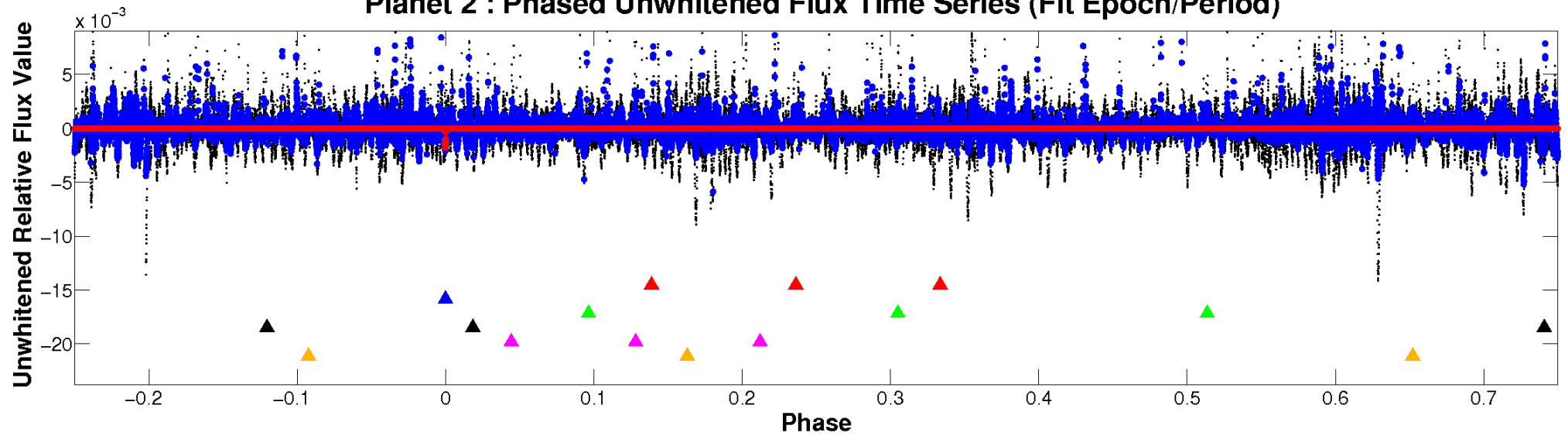
ALT Odd/Even

TCE 006692180-02

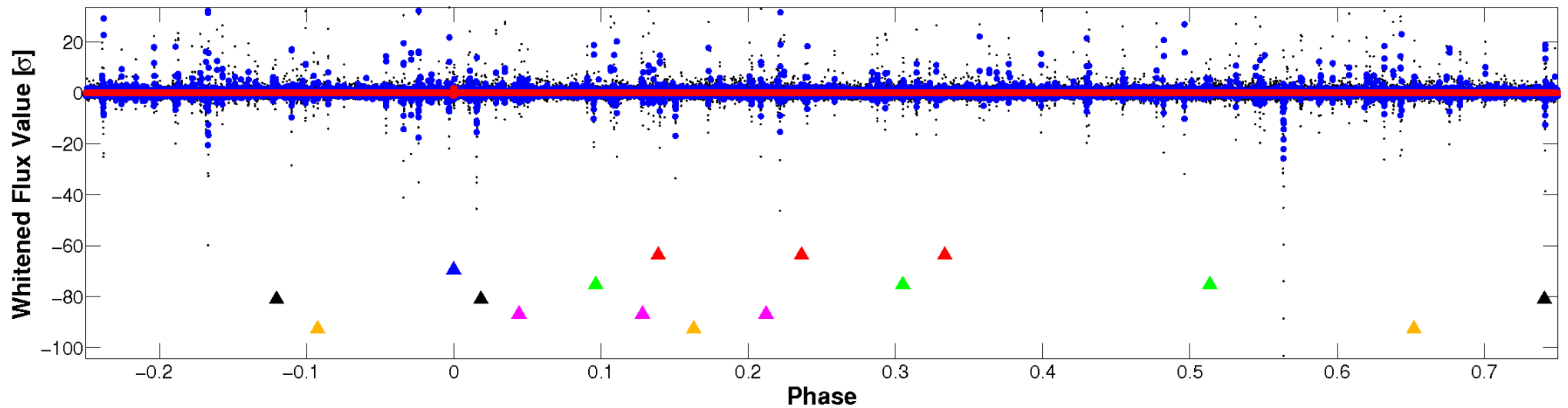


Non-Whitened Vs. Whitened Light Curve

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

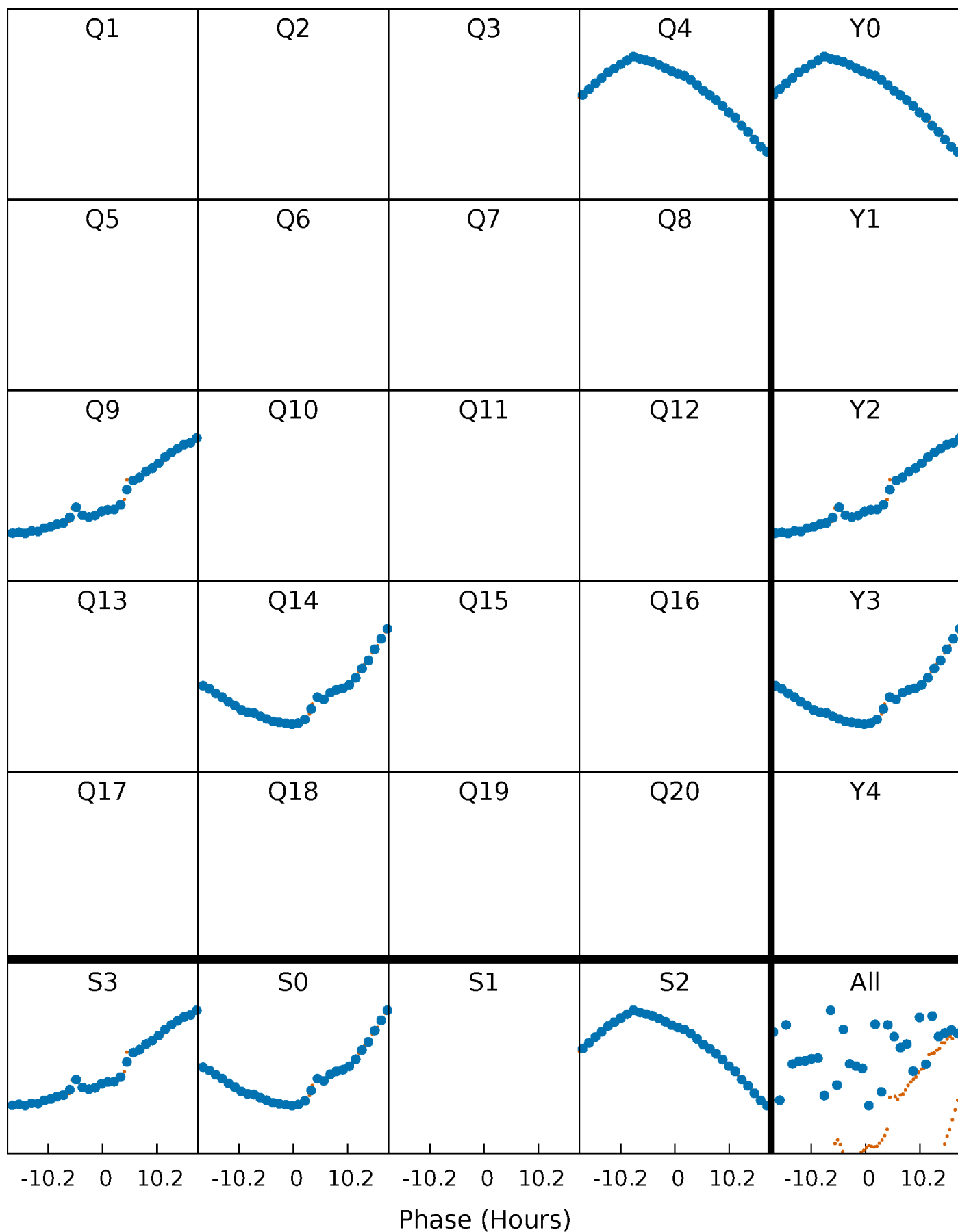


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



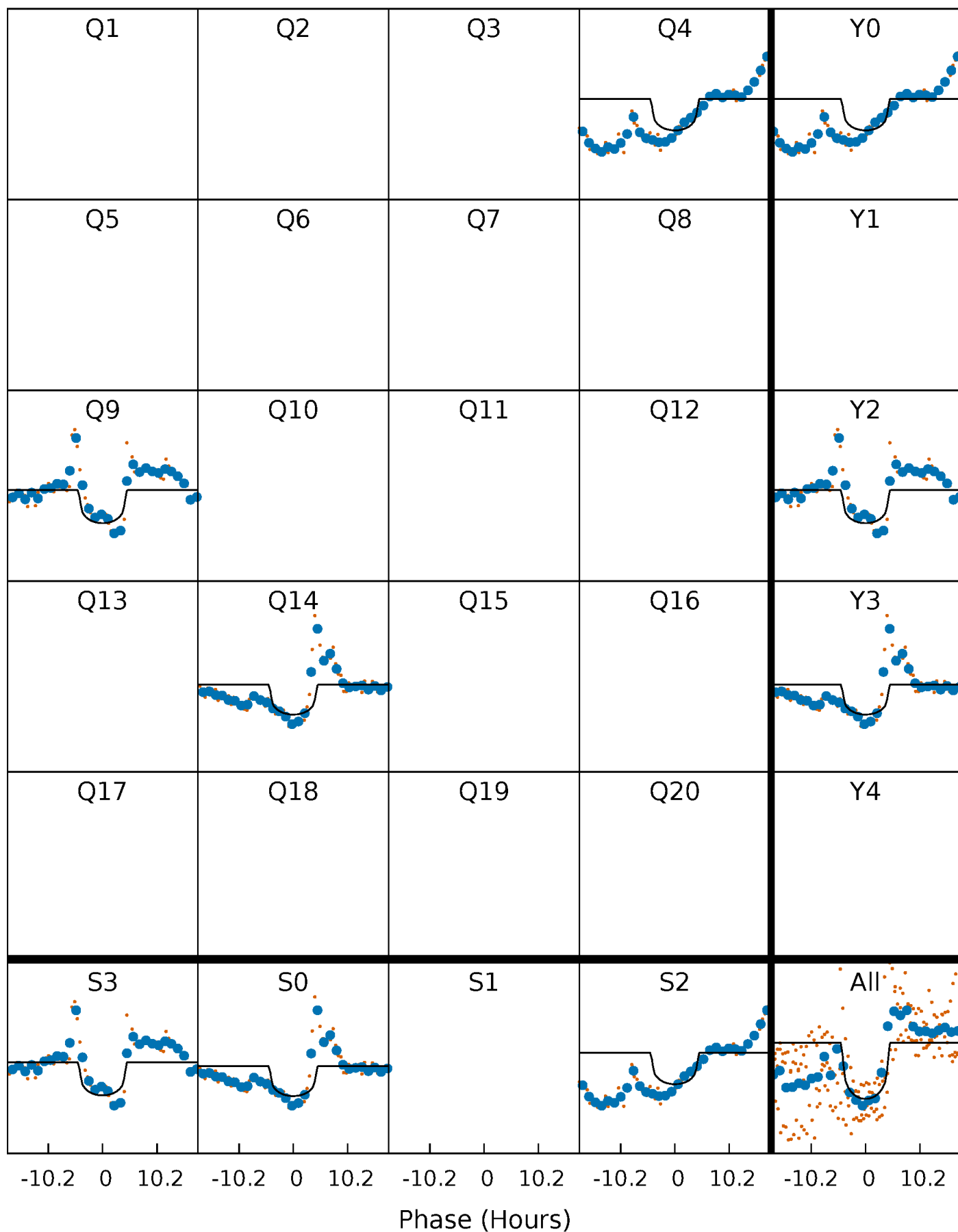
PDC Quarter-Phased Transit Curves

TCE 006692180-02 P=471.428379 Days $T_0=359.149997$ (BKJD)



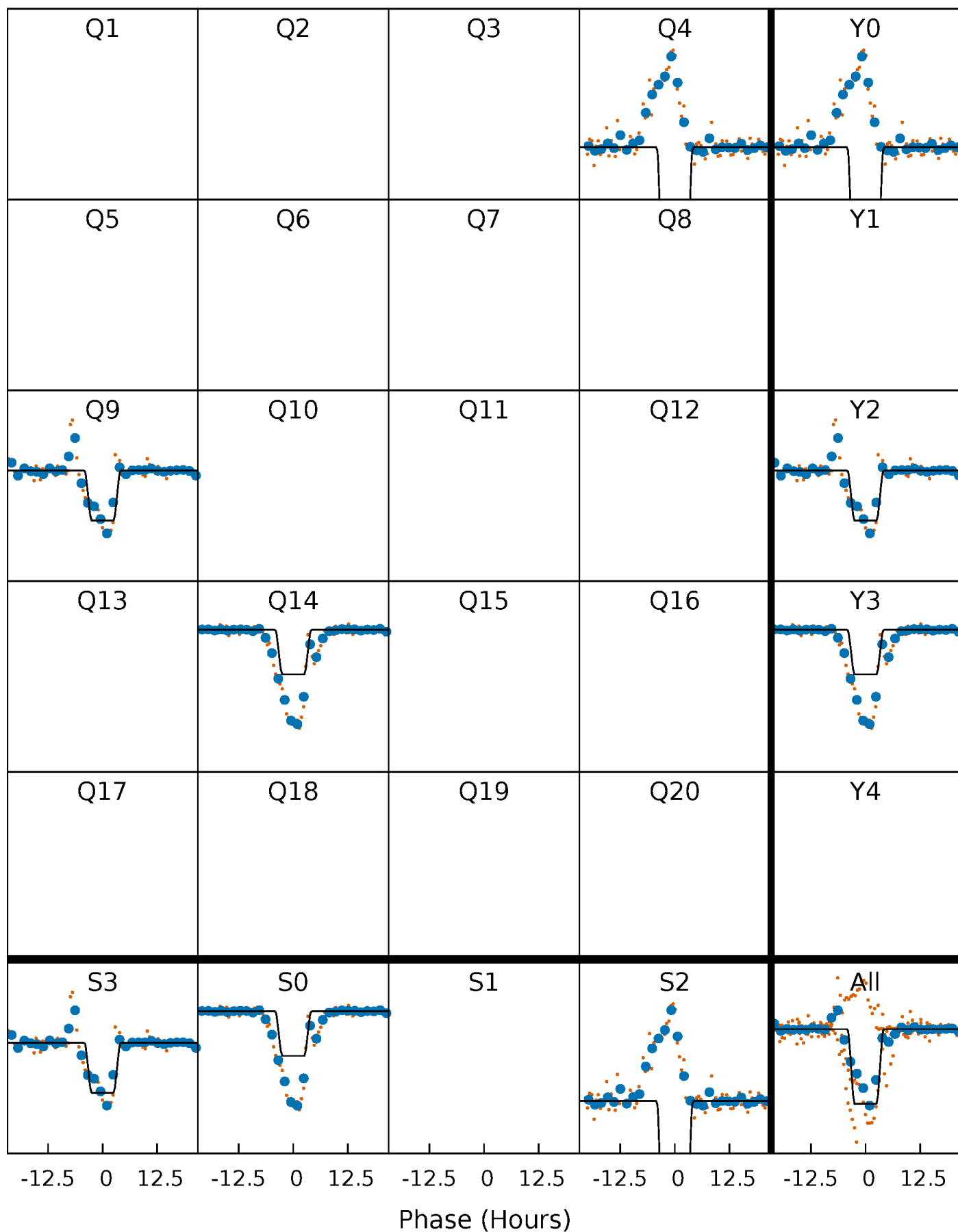
DV Quarter-Phased Transit Curves

TCE 006692180-02 $P=471.428379$ Days $T_0=359.149997$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

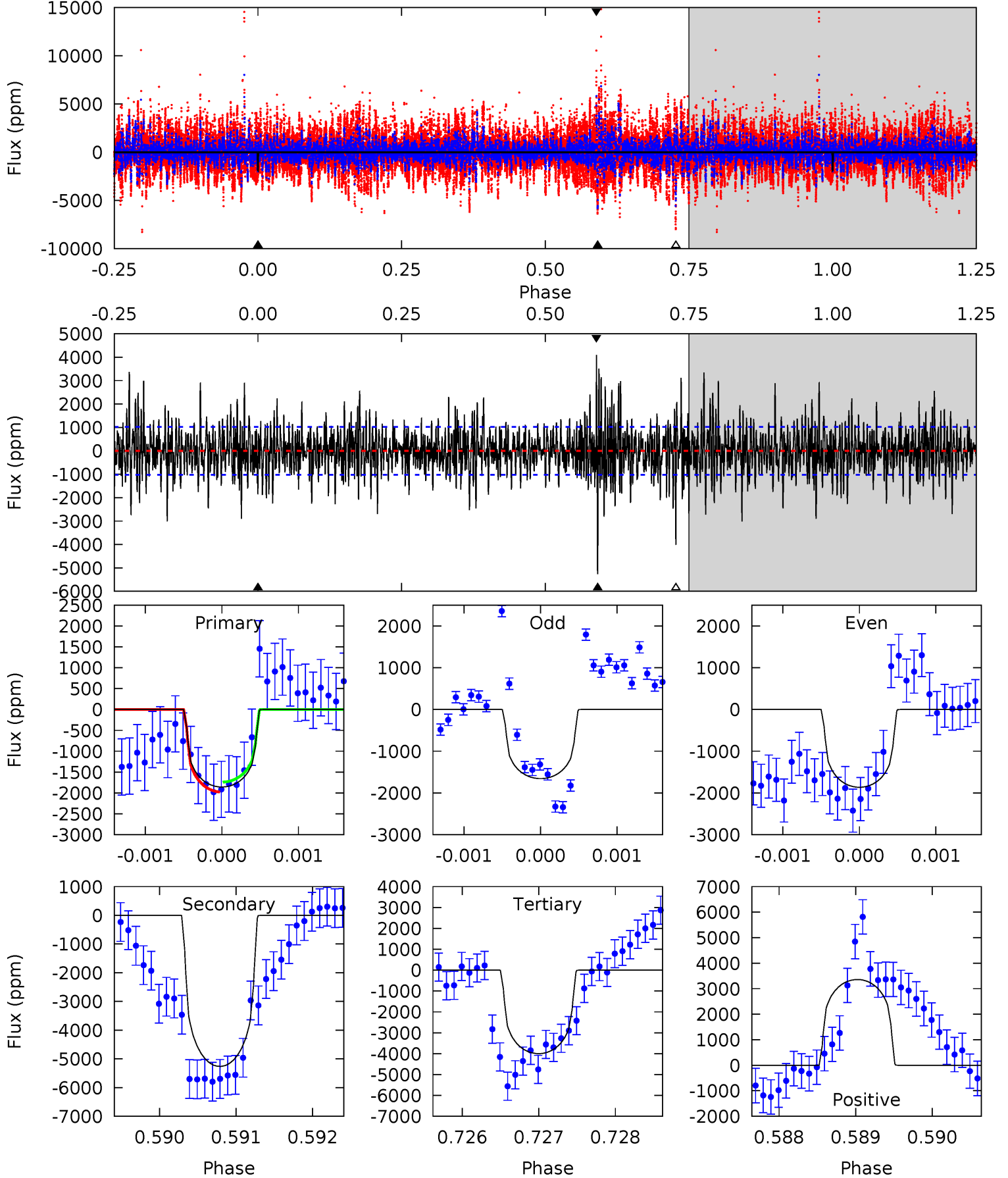
TCE 006692180-02 P=471.388607 Days $T_0=359.258681$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-02, $P = 471.428379$ Days, $E = 359.149997$ Days

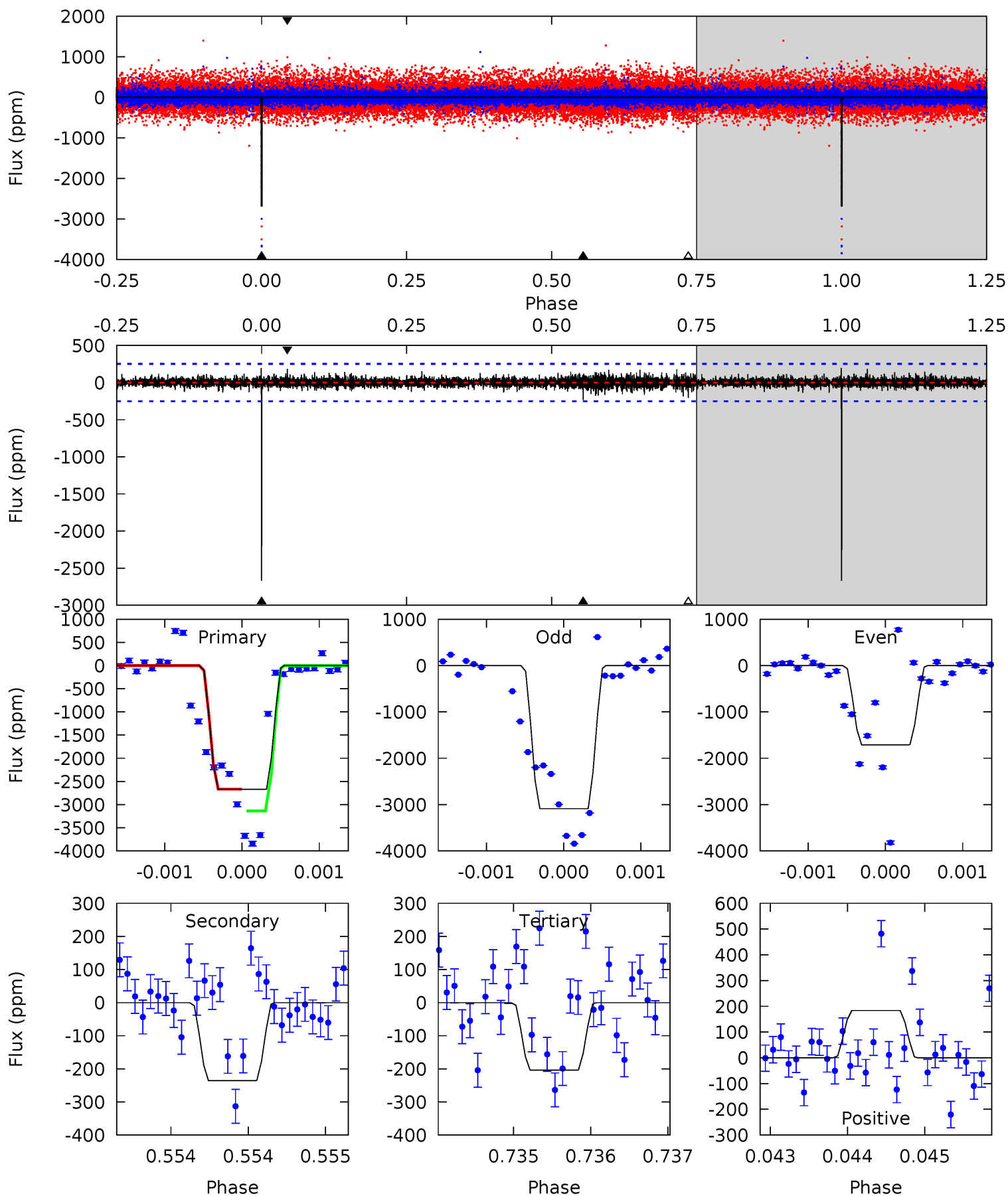
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.97	28.3	21.5	18.0	5.49	3.34	4.47	-11.5	-8.06	6.78	10.2	0.40	1.08	0.44	0.64



Alt Model-Shift Uniqueness Test

006692180-02, P = 471.388607 Days, E = 359.258681 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.4	5.14	4.45	4.01	5.51	3.39	0.75	53.9	54.3	0.69	1.13	19.4	0.83	0.07	5.03



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5262 ± 186	$6.51^{+3.42}_{-2.63}$	384^{+52}_{-59}	7048^{+2215}_{-979}	$87991^{+151944}_{-49994}$
Alt.	-235 ± 46	$9.39^{+3.87}_{-2.97}$	385^{+49}_{-54}	3289^{+341}_{-238}	1863^{+2244}_{-963}

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 $A_{obs} \gg 1.0$

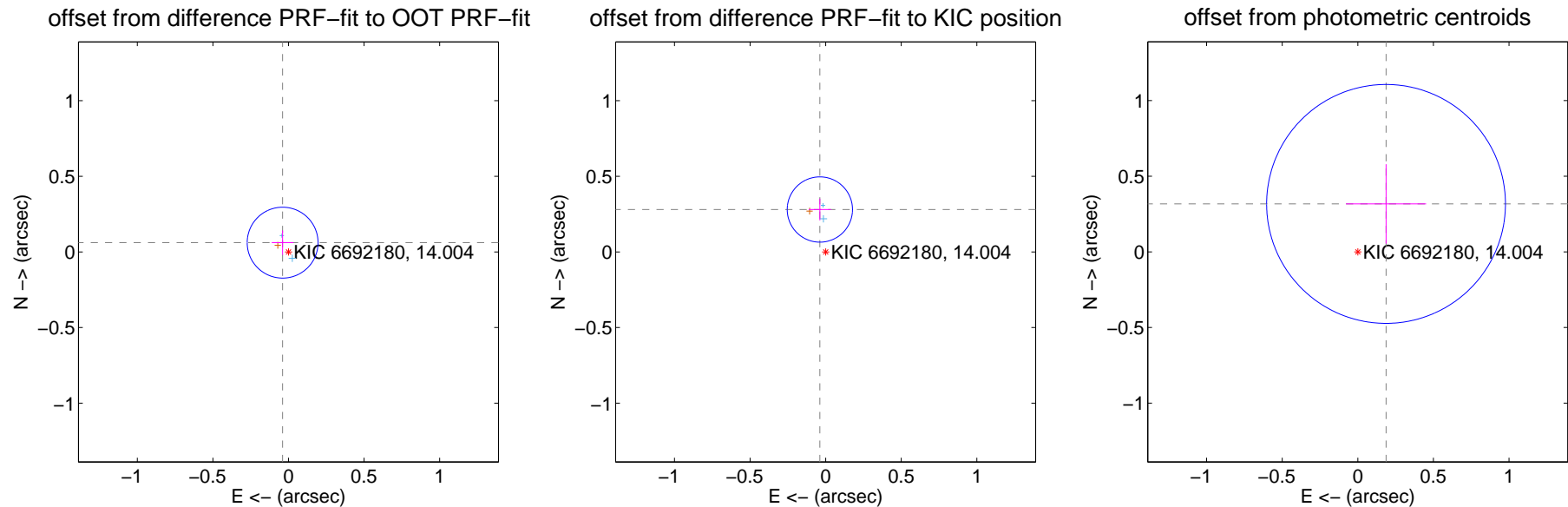
DV Centroid Data

Supplemental centroid analysis for 006692180-02. Kepler magnitude: 14.00. Transit SNR 7.32

There are 2 quarters with good PRF difference image offsets

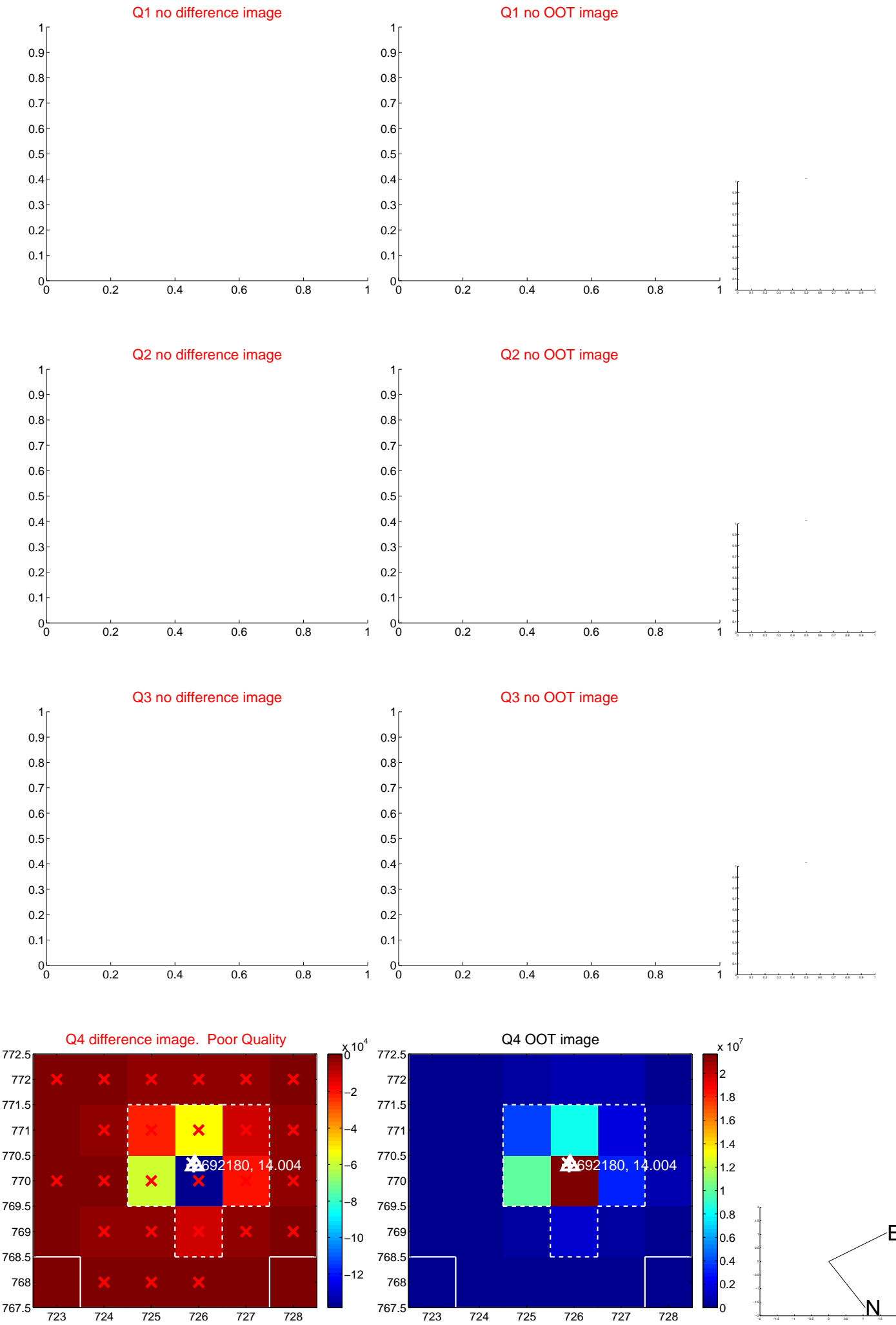
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.073 ± 0.078	0.93	0.039 ± 0.072	0.061 ± 0.081
PRF-fit source offset from KIC position	0.283 ± 0.072	3.93	0.038 ± 0.074	0.280 ± 0.072
photometric centroid source offset	0.37 ± 0.26	1.40	-0.19 ± 0.27	0.32 ± 0.26



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

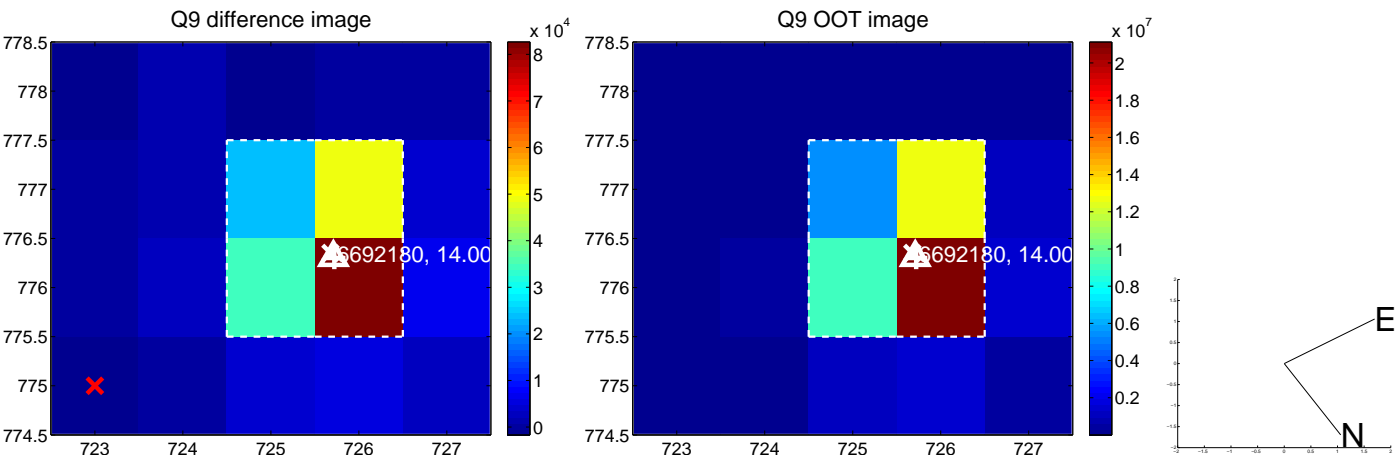
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



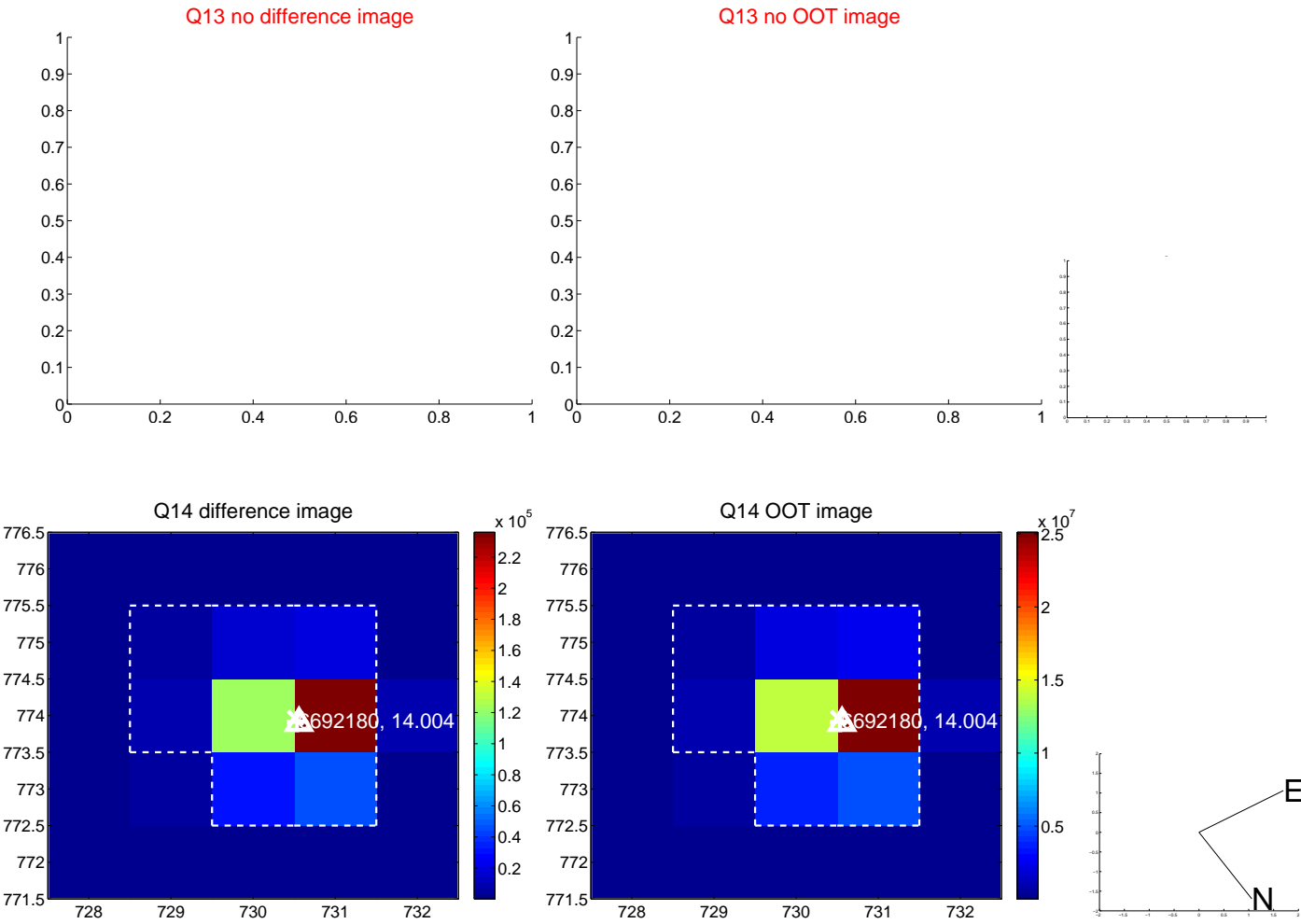
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



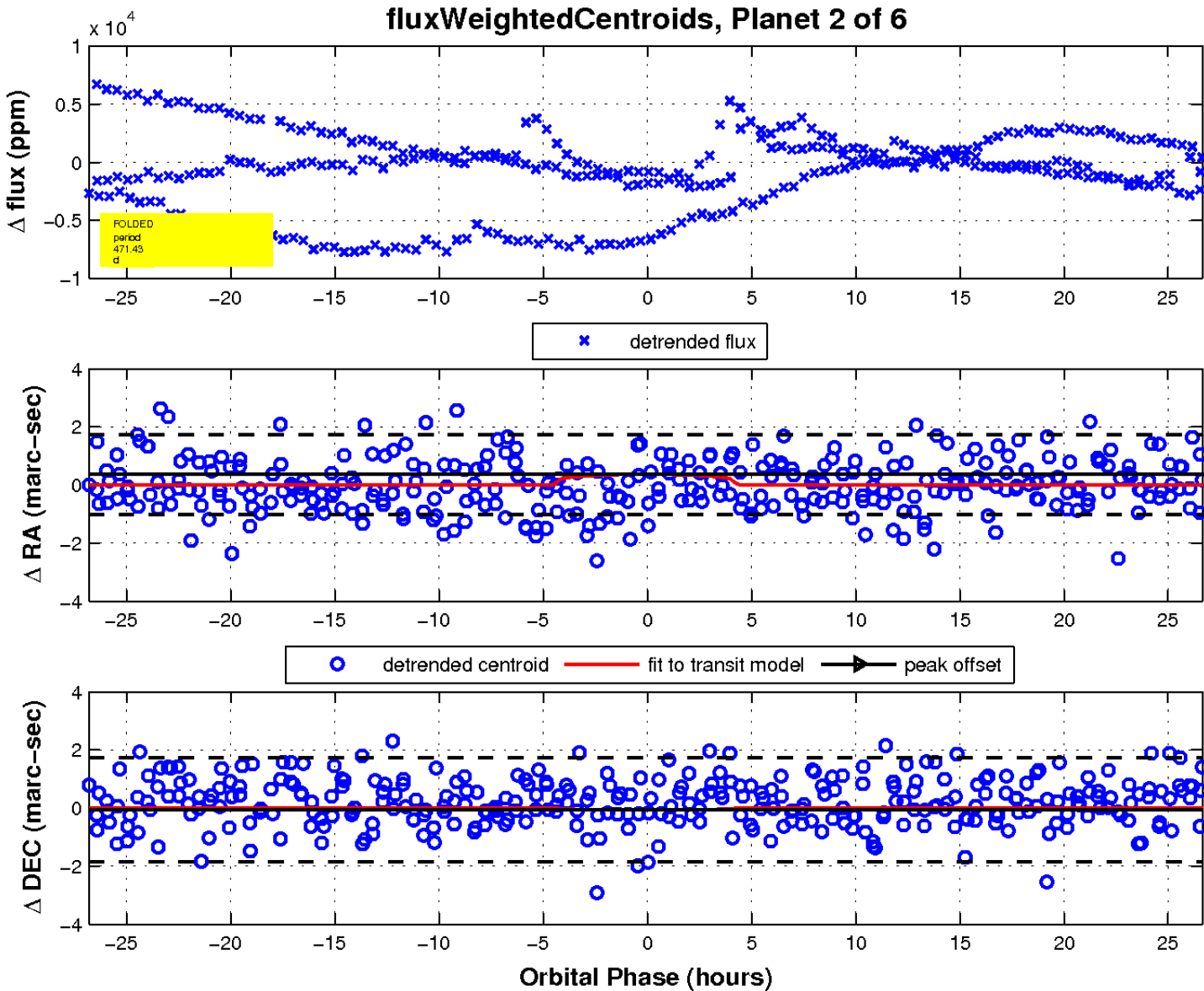
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

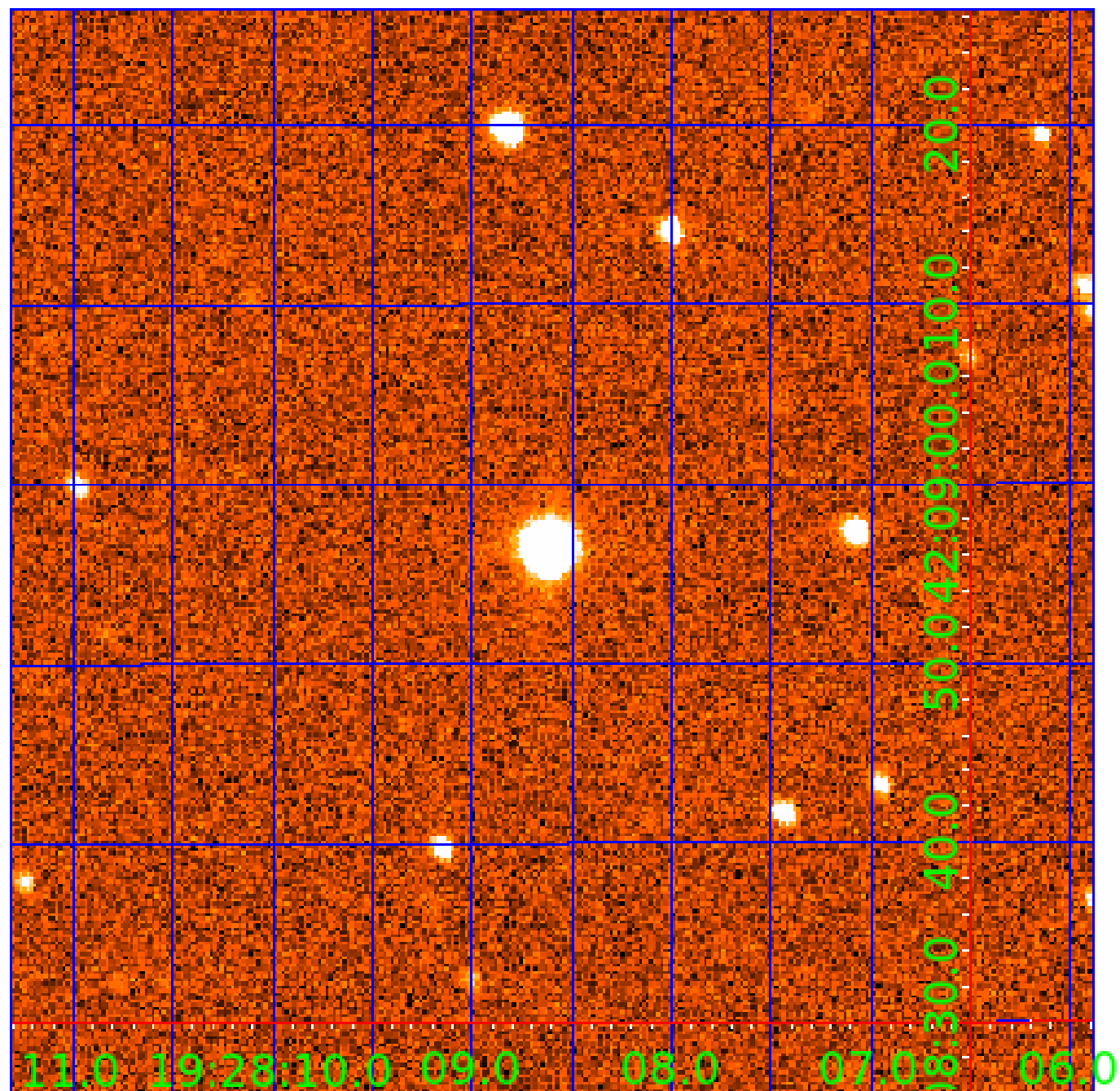
Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination



KIC 006692180

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})
006692180-01	OBS	No	425.562204	516.376279	1079.3	4.441	19.9	6.6	1.68	5226	6.01	1.66
006692180-02	OBS	No	471.428379	359.149997	1788.1	8.949	18.2	7.3	1.68	5226	7.15	1.44
006692180-03	OBS	No	569.751541	404.625648	1229.3	4.708	15.6	6.5	1.68	5226	6.16	1.12
006692180-04	OBS	No	536.874783	236.974860	1303.1	11.207	13.3	5.1	1.68	5226	6.13	1.22
006692180-05	OBS	No	431.882152	459.145859	560.2	4.969	17.7	2.9	1.68	5226	3.92	1.62
006692180-06	OBS	No	591.832988	195.189891	1025.1	3.203	14.1	5.6	1.68	5226	5.38	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006692180-01	OBS	FP	0.00	1	0	1	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—HALO_GHOST
006692180-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

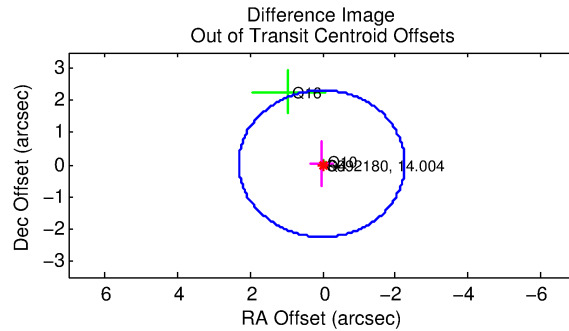
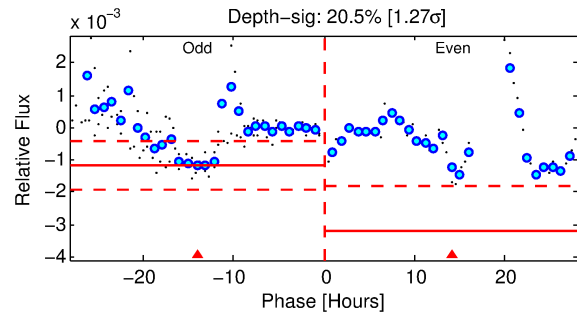
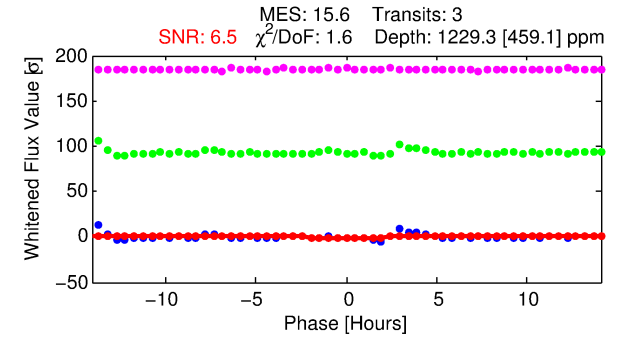
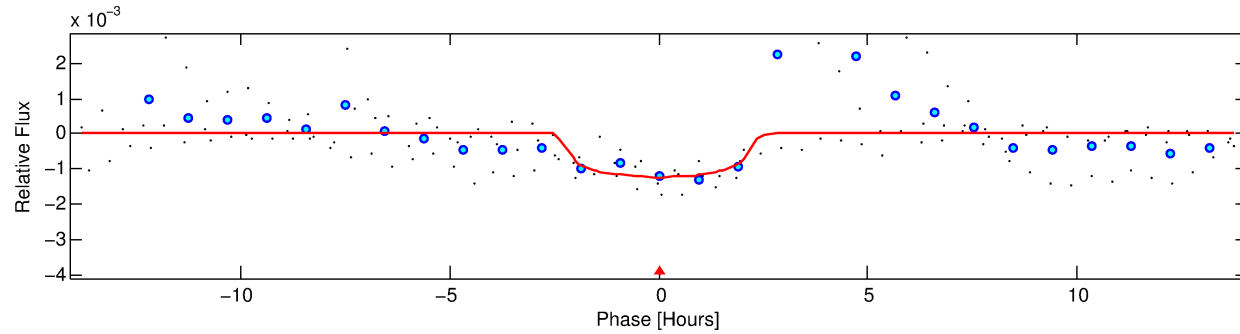
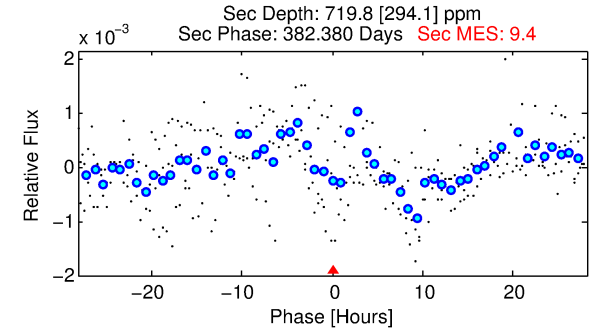
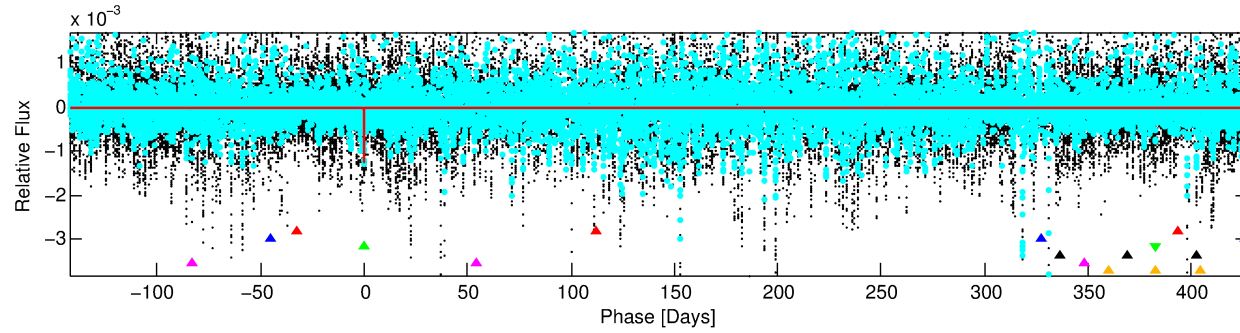
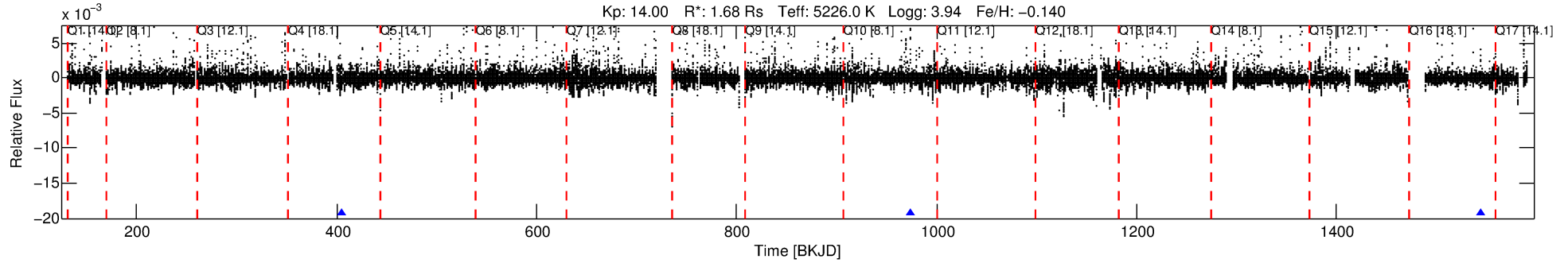
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-03

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 3 of 6 Period: 569.752 d



DV Fit Results:

Period = 569.75154 [0.01053] d
Epoch = 404.6256 [0.0147] BKJD
Rp/R* = 0.0337 [0.0378]
a/R* = 745.16 [2923.84]
b = 0.65 [3.56]
Seff = 1.12 [1.11]
Teq = 262 [65] K
Rp = 6.16 [7.65] Re
a = 1.2927 [0.7495] AU
Ag = 17444.85 [43332.99] [0.40 σ]
Teffp = 4663 [2663] K [1.65 σ]

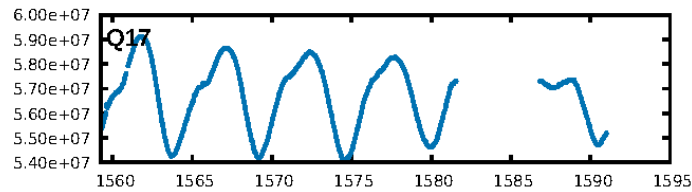
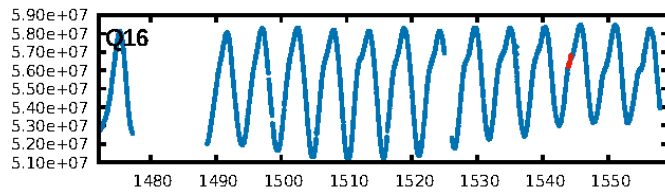
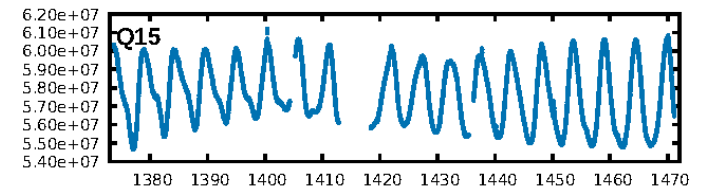
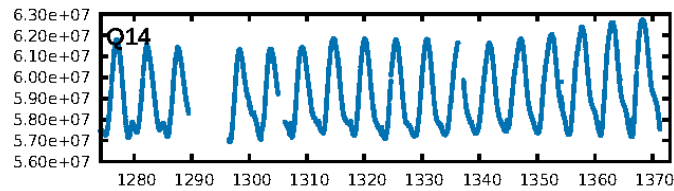
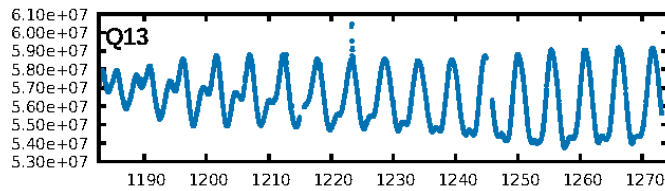
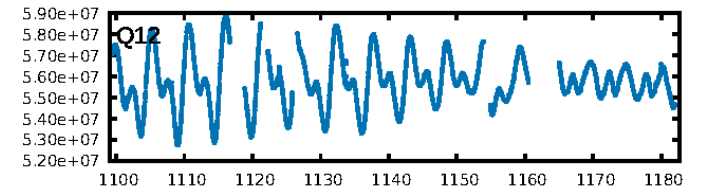
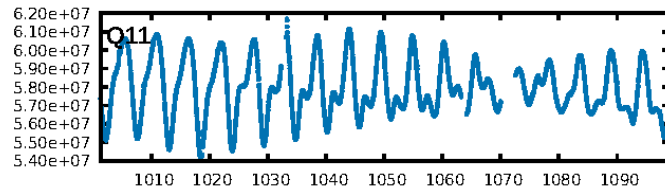
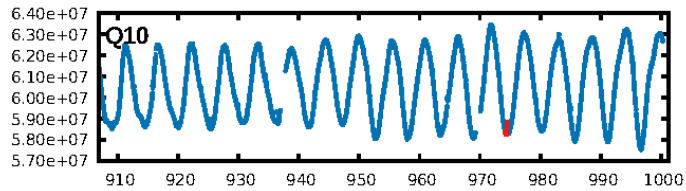
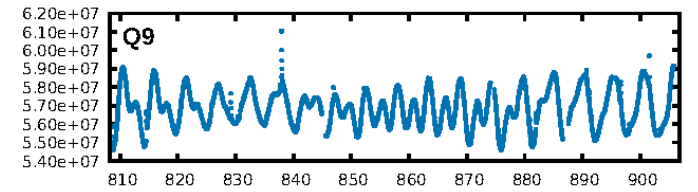
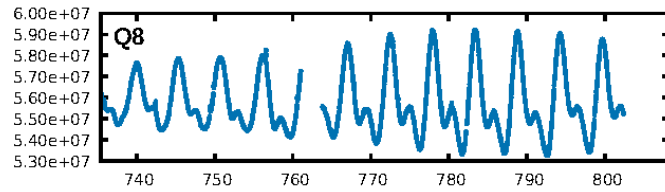
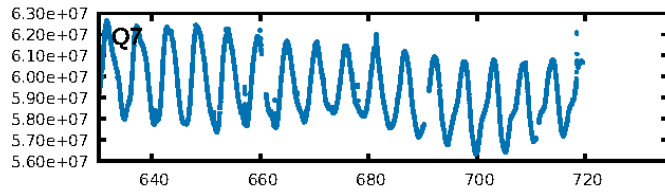
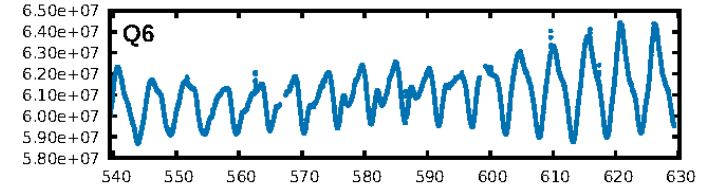
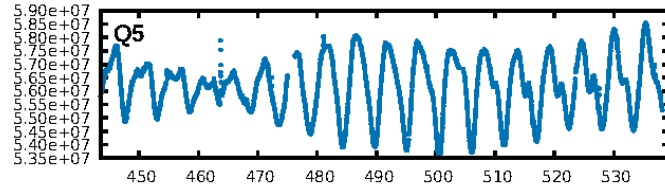
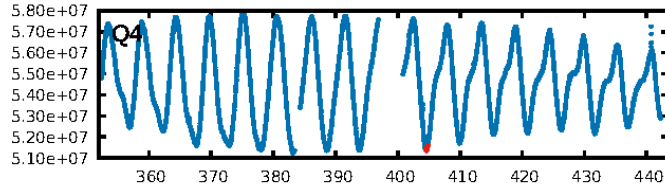
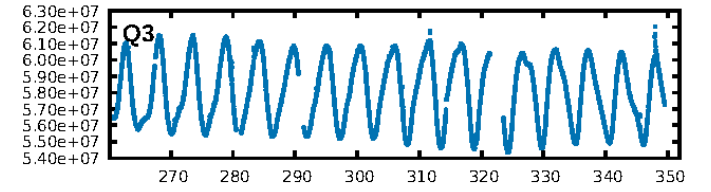
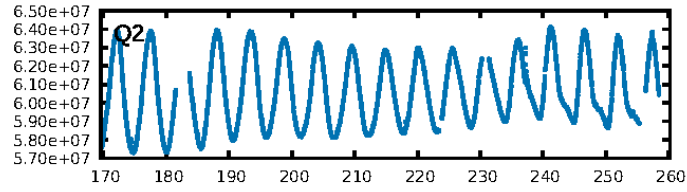
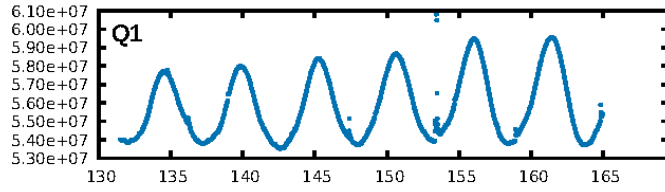
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [64.91 σ]
LongPeriod-sig: 100.0% [93.07 σ]
ModelChiSquare2-sig: 2.0%
ModelChiSquareGof-sig: 14.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.572
Centroid-sig: 88.3%
Centroid-so: 0.340 arcsec [0.62 σ]
OotOffset-rm: 0.037 arcsec [0.05 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-rm: 0.224 arcsec [0.28 σ]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

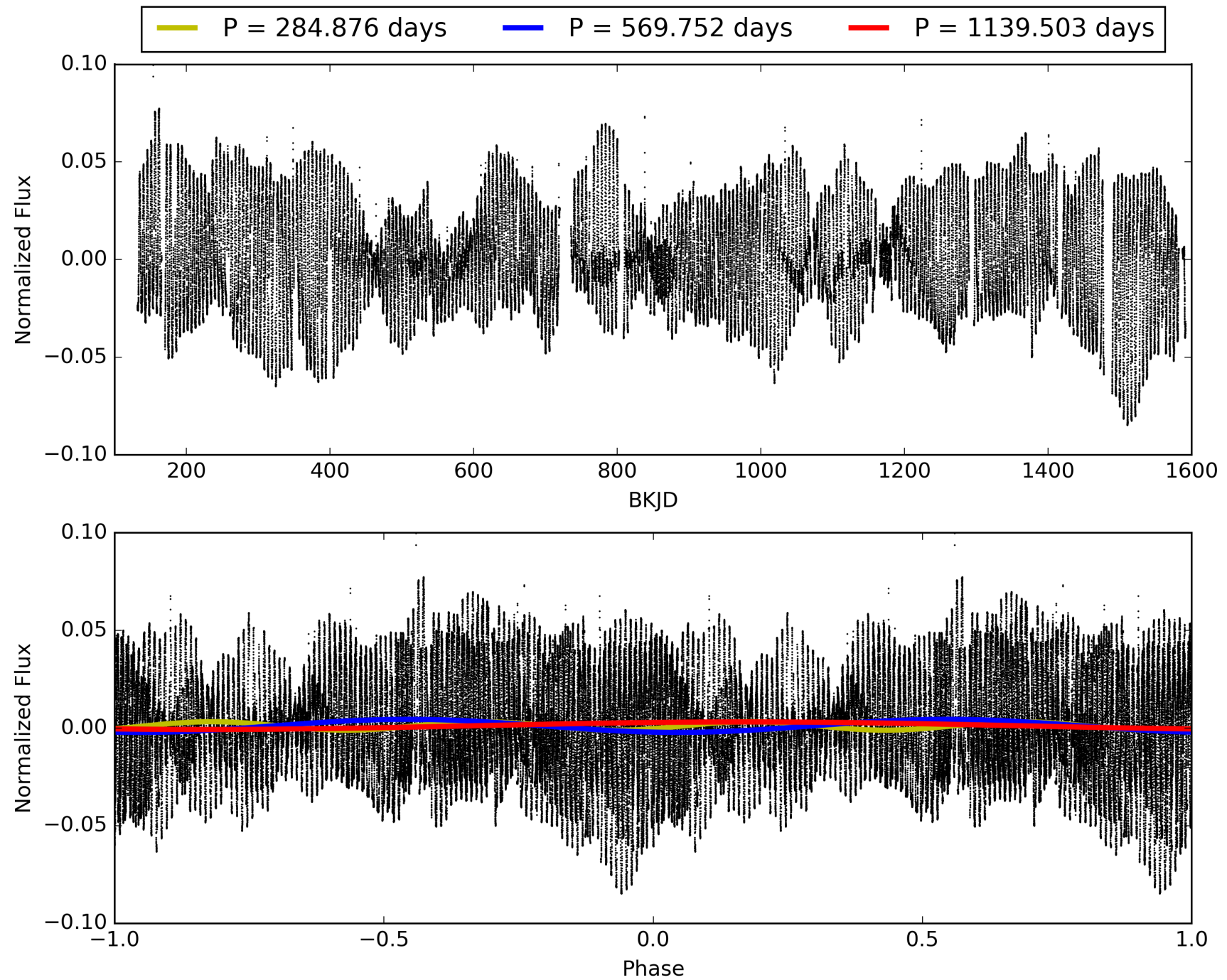
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:59:08 Z

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

TCE 006692180-03, PDC Light Curves

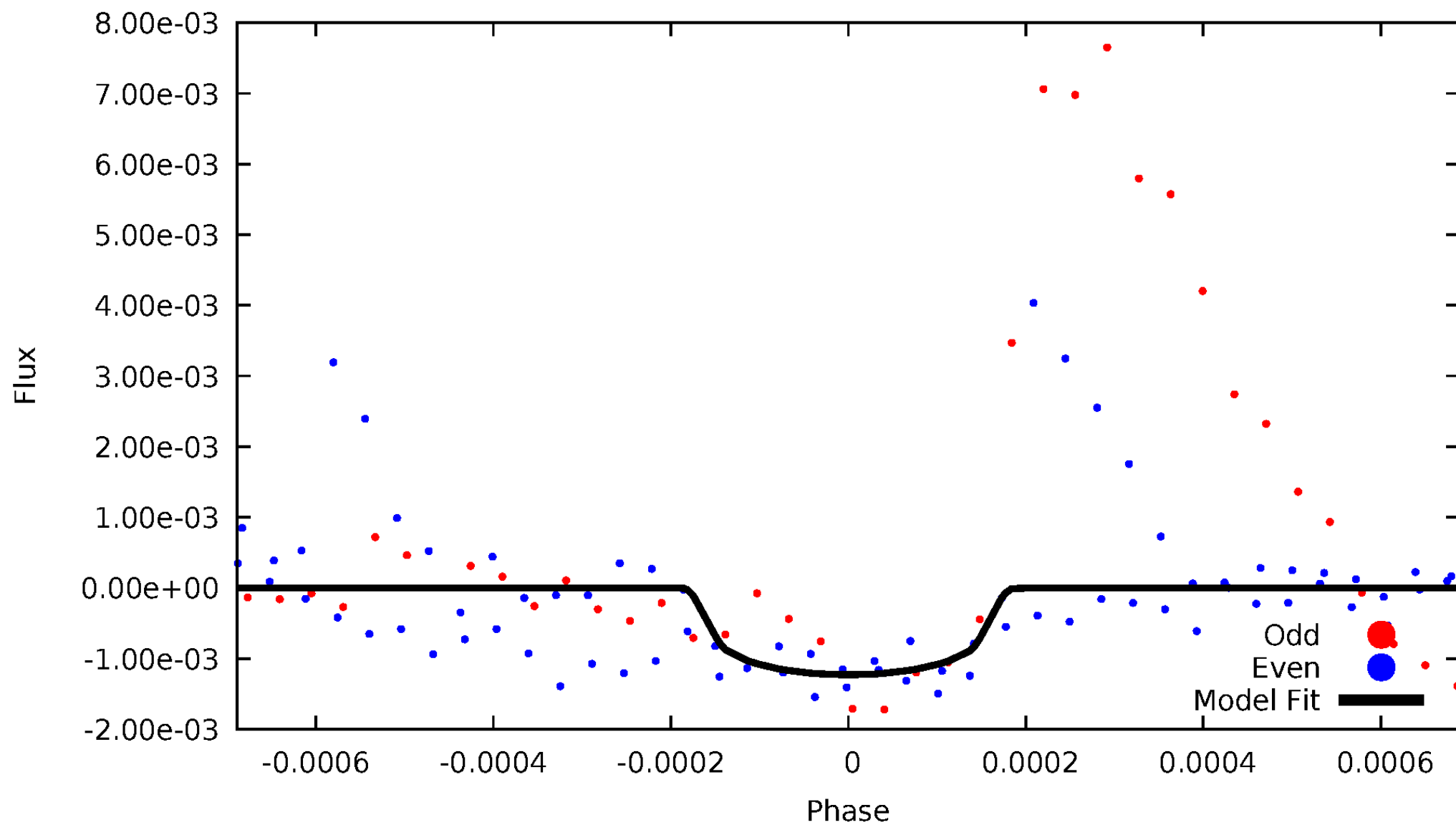


TCE 006692180-03



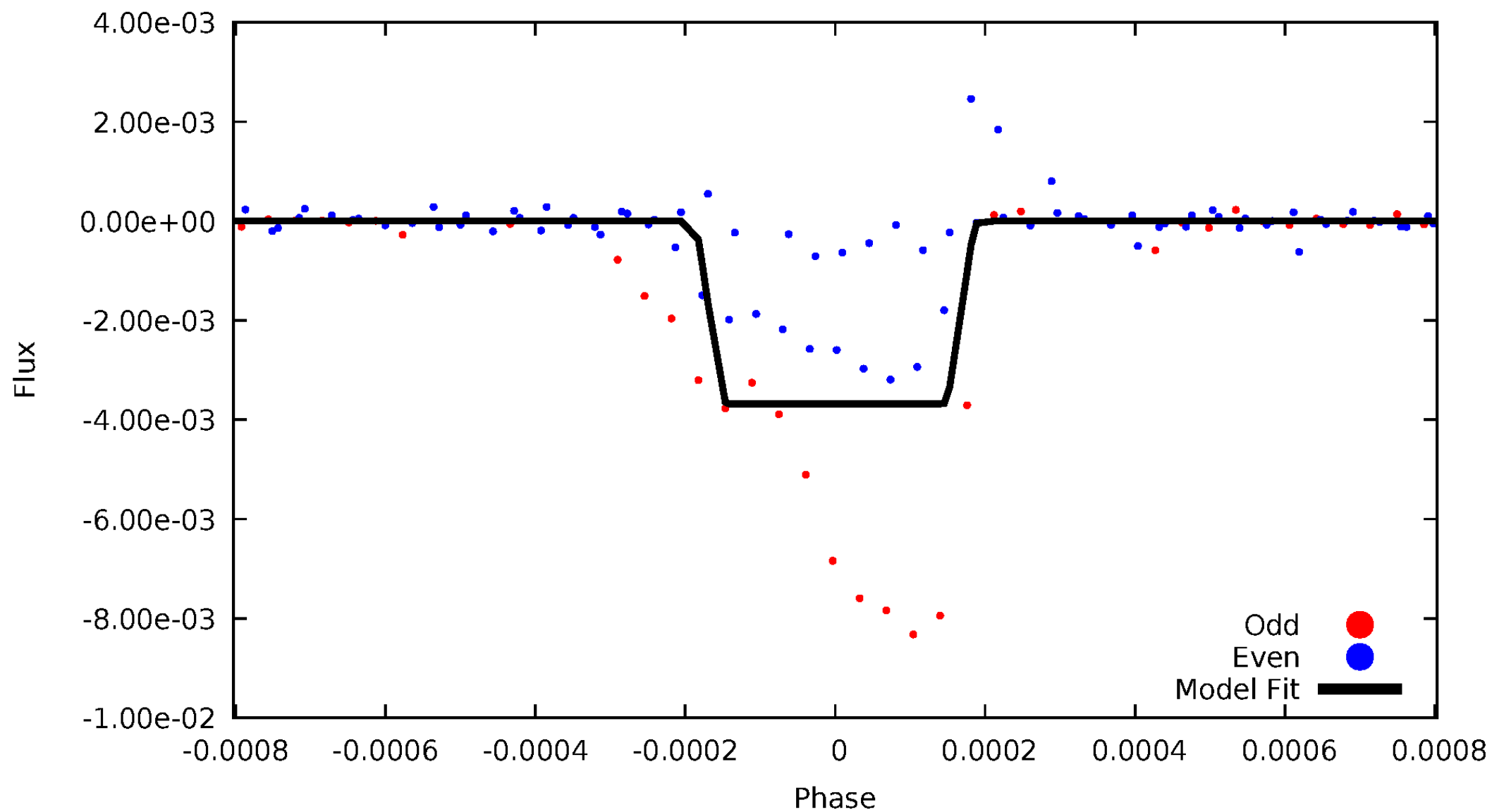
DV Odd/Even

TCE 006692180-03

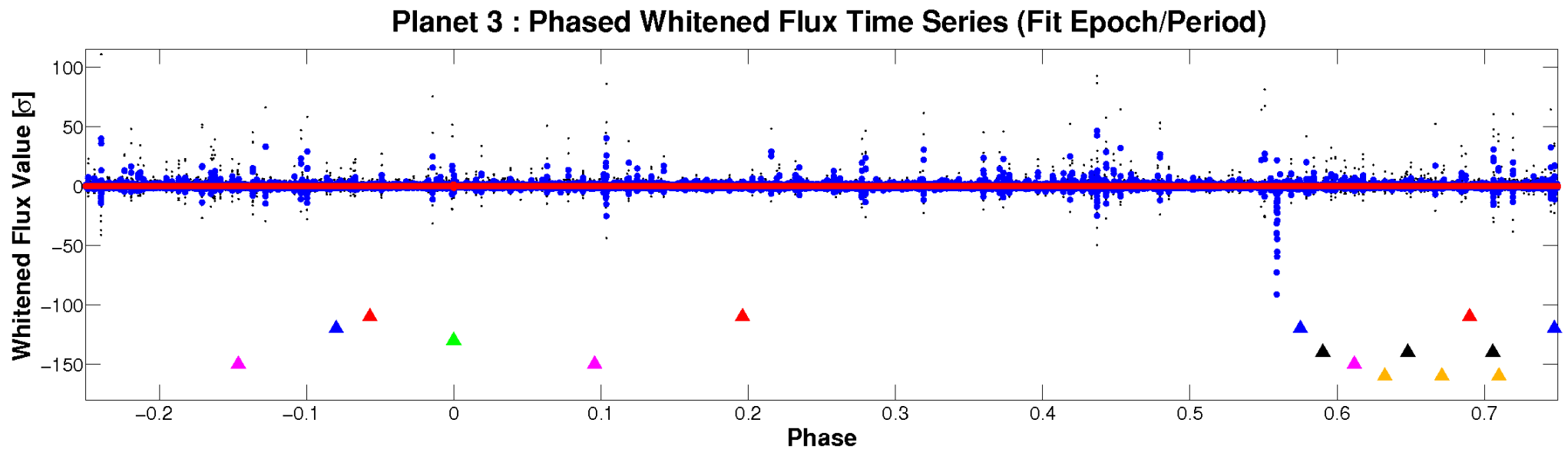
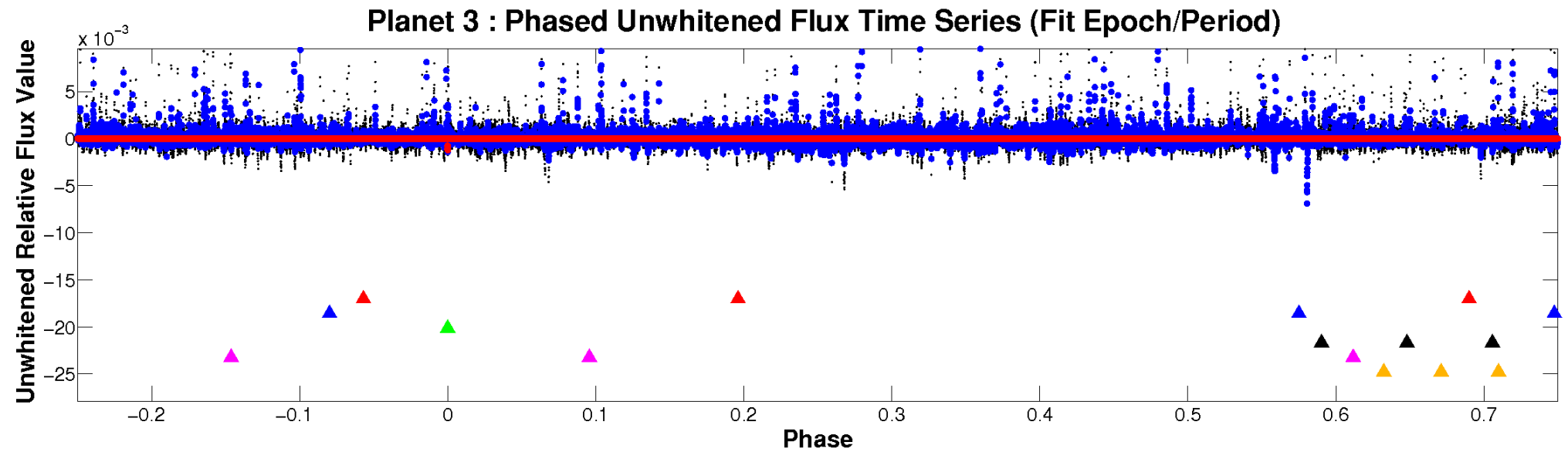


ALT Odd/Even

TCE 006692180-03

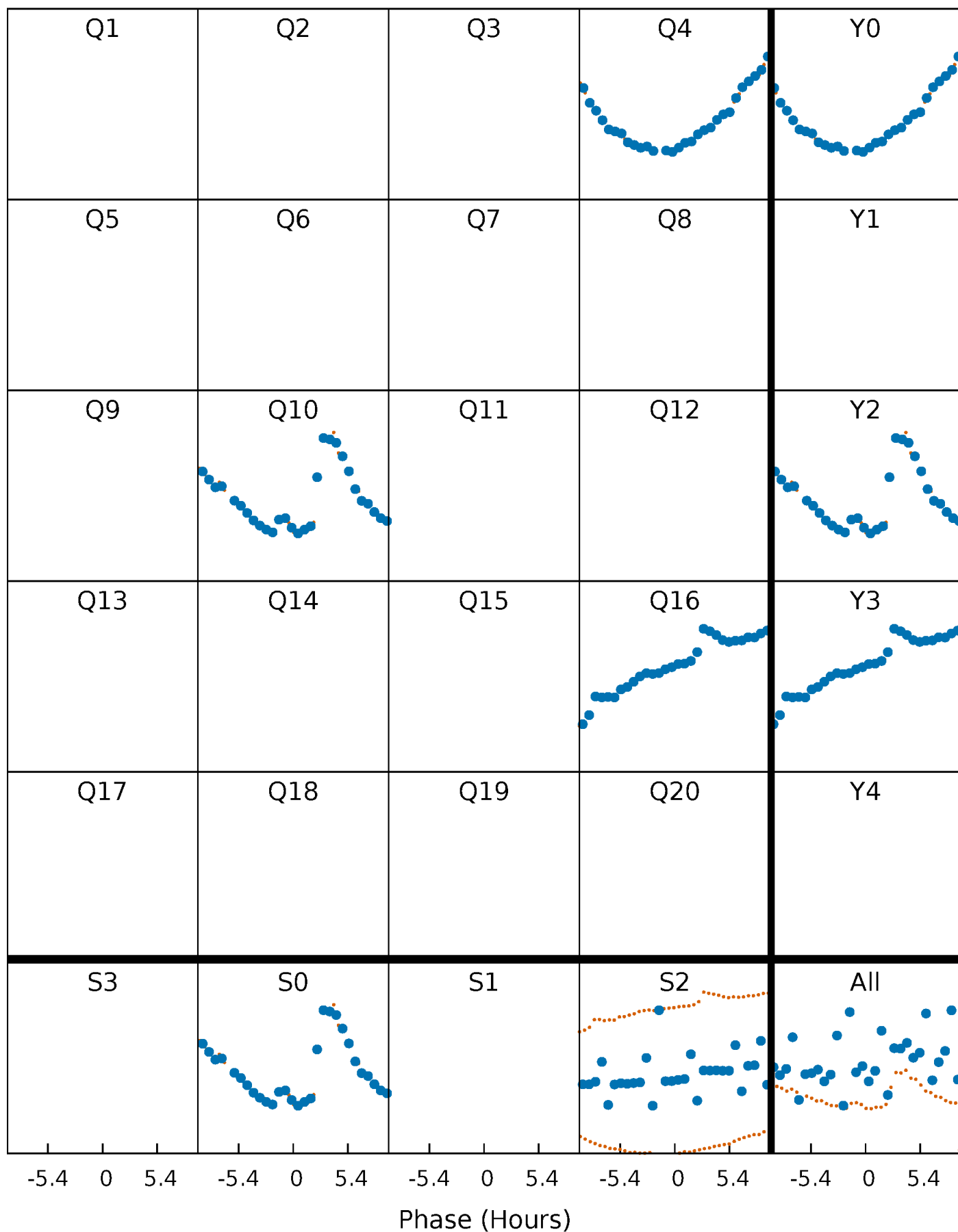


Non-Whitened Vs. Whitened Light Curve



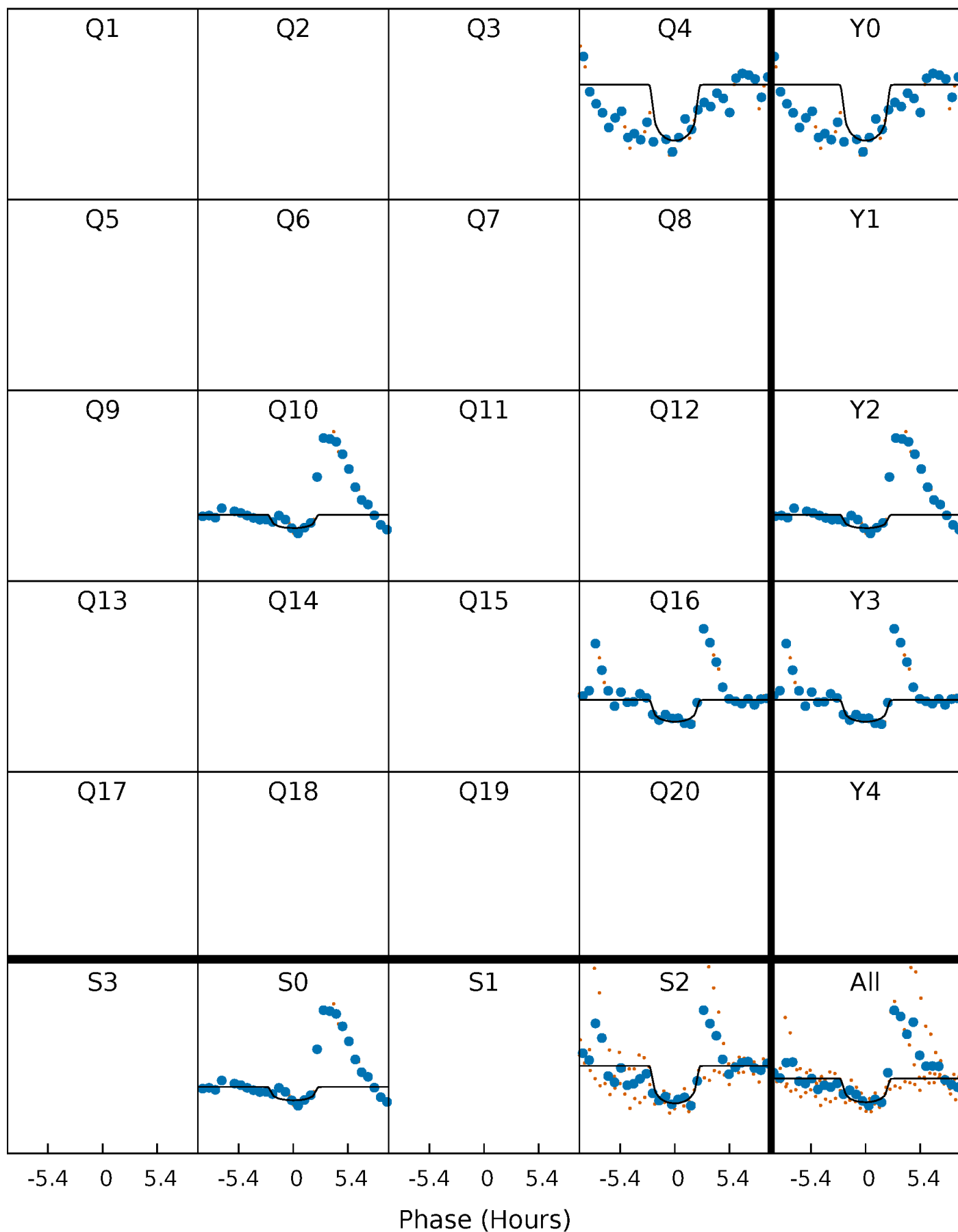
PDC Quarter-Phased Transit Curves

TCE 006692180-03 P=569.751541 Days $T_0=404.625648$ (BKJD)



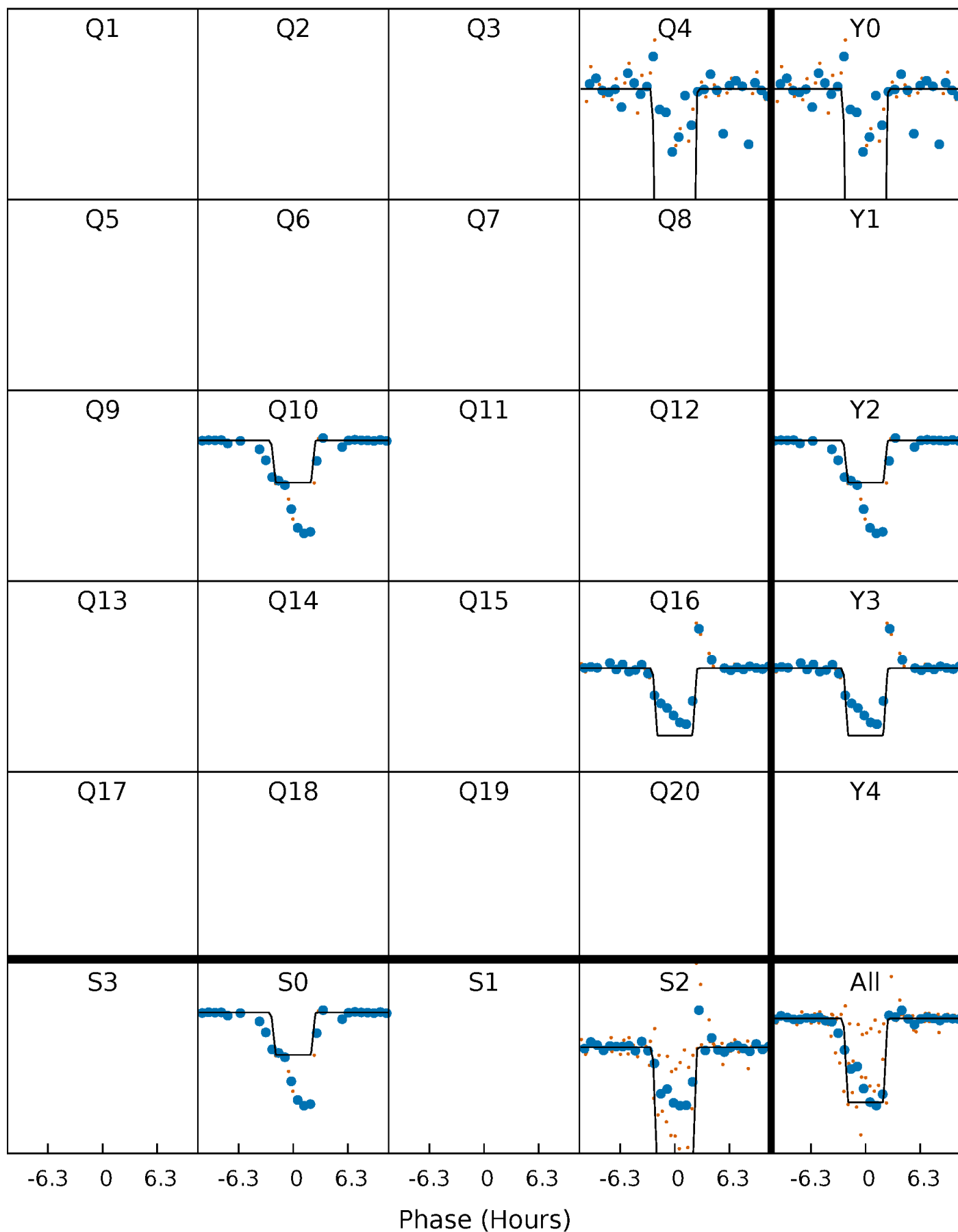
DV Quarter-Phased Transit Curves

TCE 006692180-03 P=569.751541 Days $T_0=404.625648$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

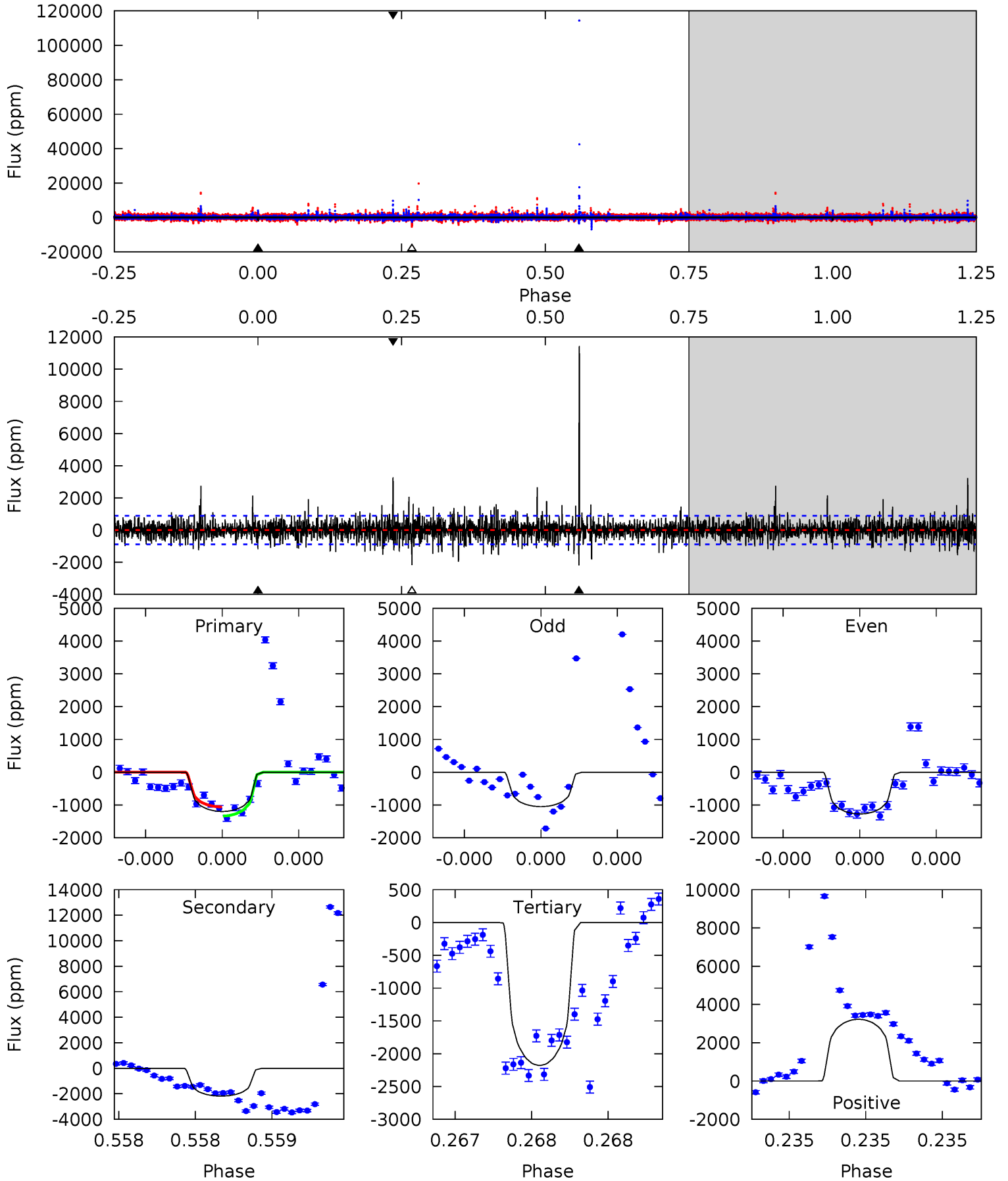
TCE 006692180-03 P=569.762576 Days $T_0=404.619225$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-03, P = 569.751541 Days, E = 404.625648 Days

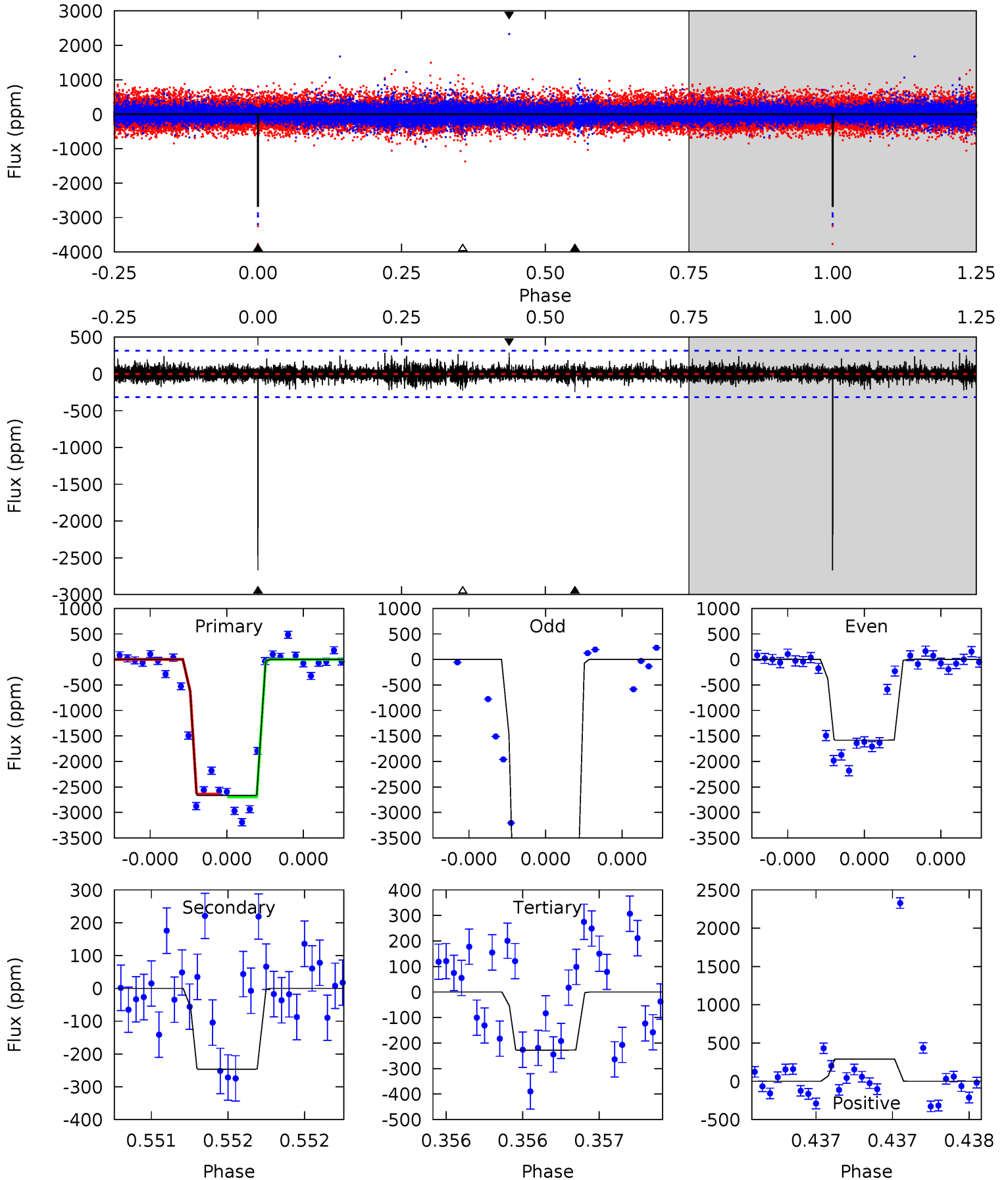
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.61	13.9	13.8	20.5	5.62	3.55	2.77	-6.23	-12.9	0.02	-6.63	0.50	0.97	0.84	0.89



Alt Model-Shift Uniqueness Test

006692180-03, P = 569.762576 Days, E = 404.619225 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.6	4.39	4.06	5.18	5.62	3.56	0.77	43.5	42.4	0.34	-0.78	51.1	1.23	0.10	0



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2182 ± 158	$7.11^{+6.92}_{-4.75}$	359^{+48}_{-53}	5422^{+4337}_{-1228}	$39321^{+297443}_{-29370}$
Alt.	-246 ± 56	$10.13^{+8.40}_{-5.44}$	360^{+51}_{-57}	3171^{+911}_{-406}	2144^{+8123}_{-1530}

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 $A_{obs} \gg 1.0$

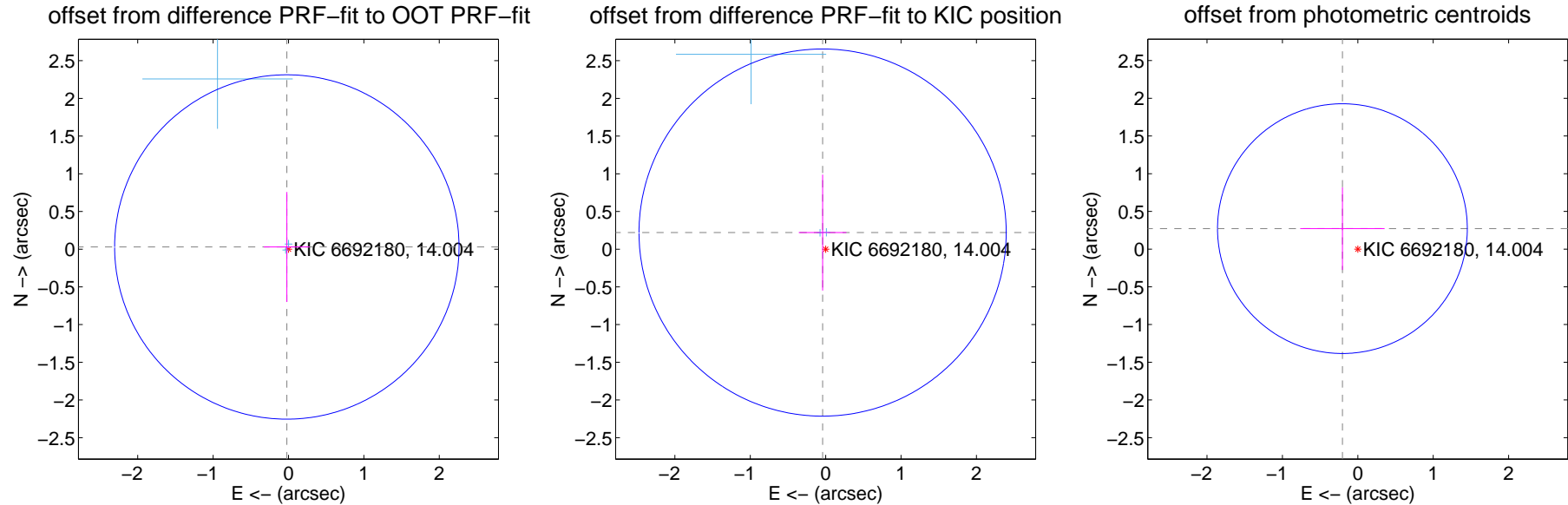
DV Centroid Data

Supplemental centroid analysis for 006692180-03. Kepler magnitude: 14.00. Transit SNR 6.48

There are 3 quarters with good PRF difference image offsets

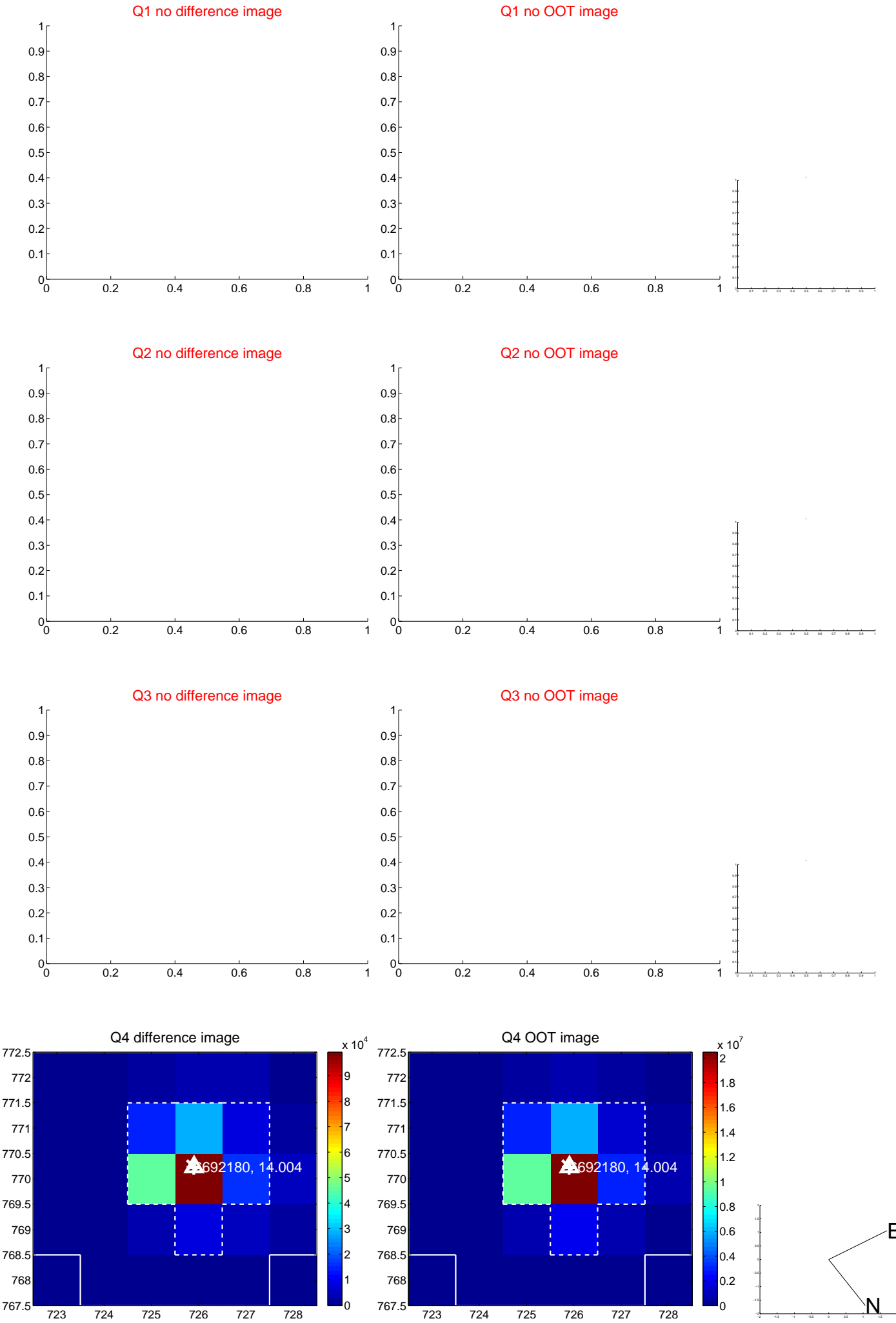
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.037 ± 0.761	0.05	0.022 ± 0.305	0.029 ± 0.729
PRF-fit source offset from KIC position	0.224 ± 0.812	0.28	0.040 ± 0.316	0.220 ± 0.769
photometric centroid source offset	0.34 ± 0.55	0.62	0.20 ± 0.56	0.27 ± 0.55



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.

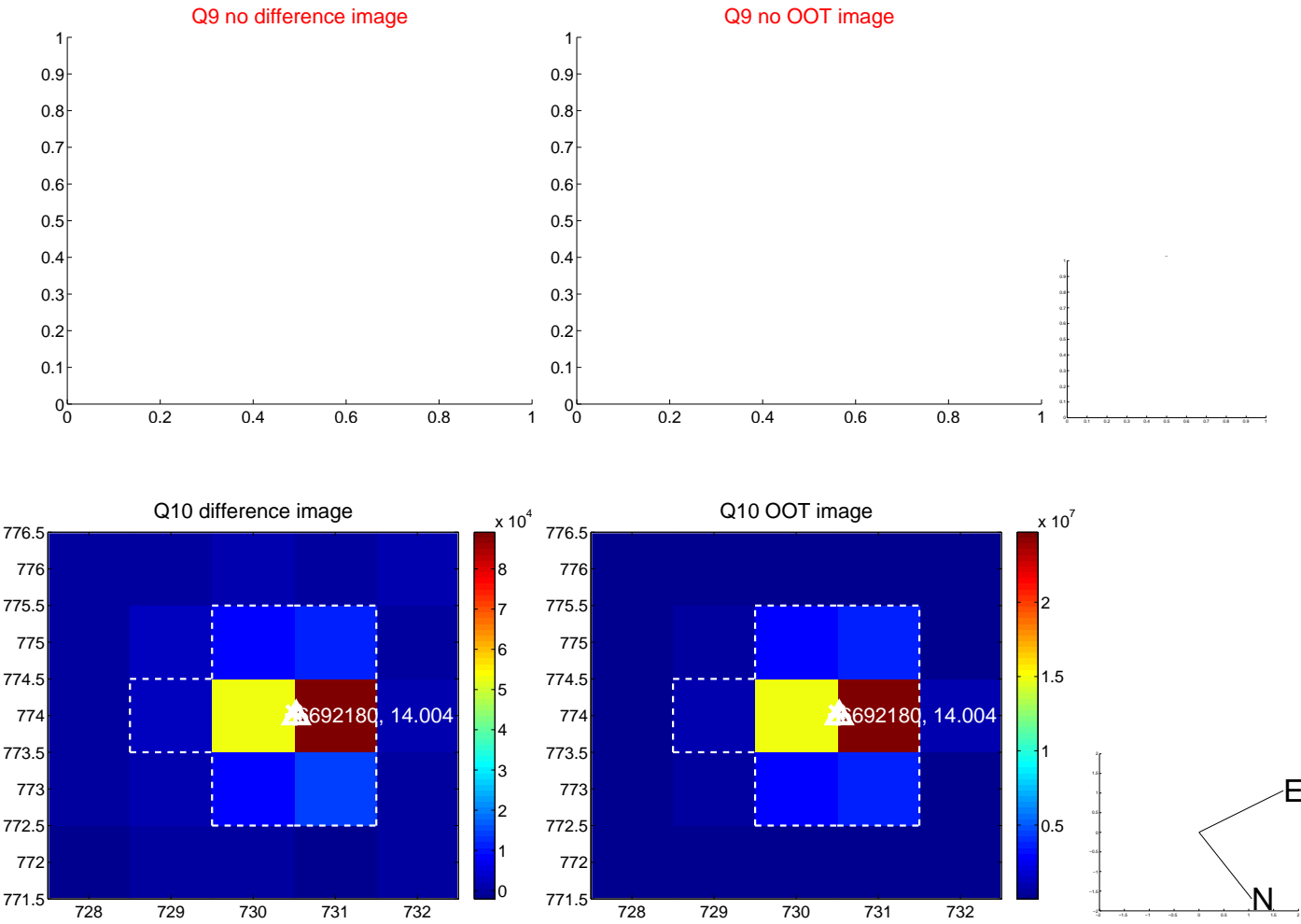
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



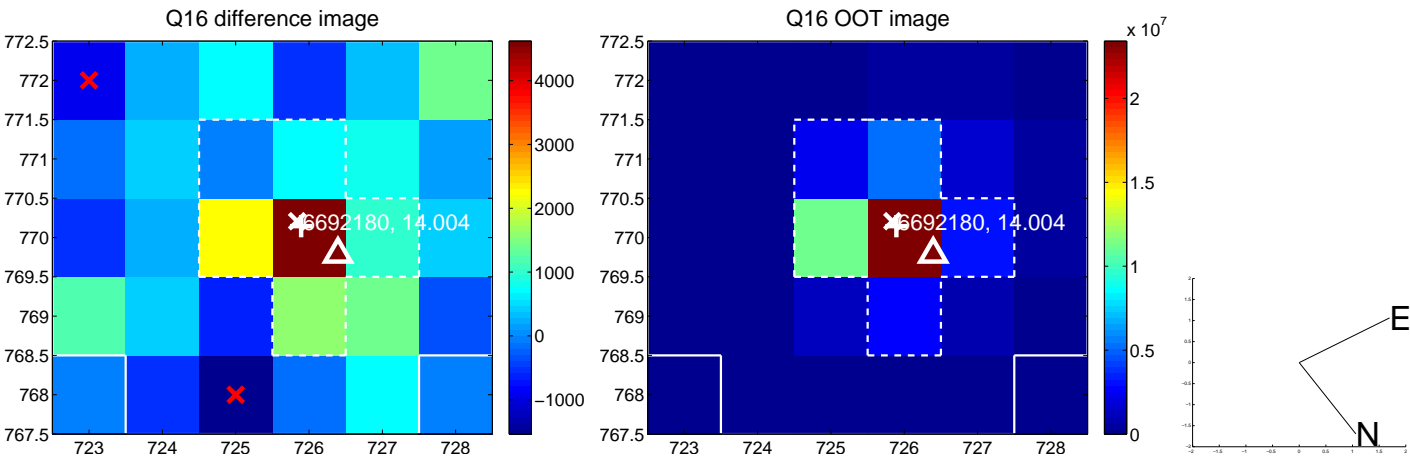
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



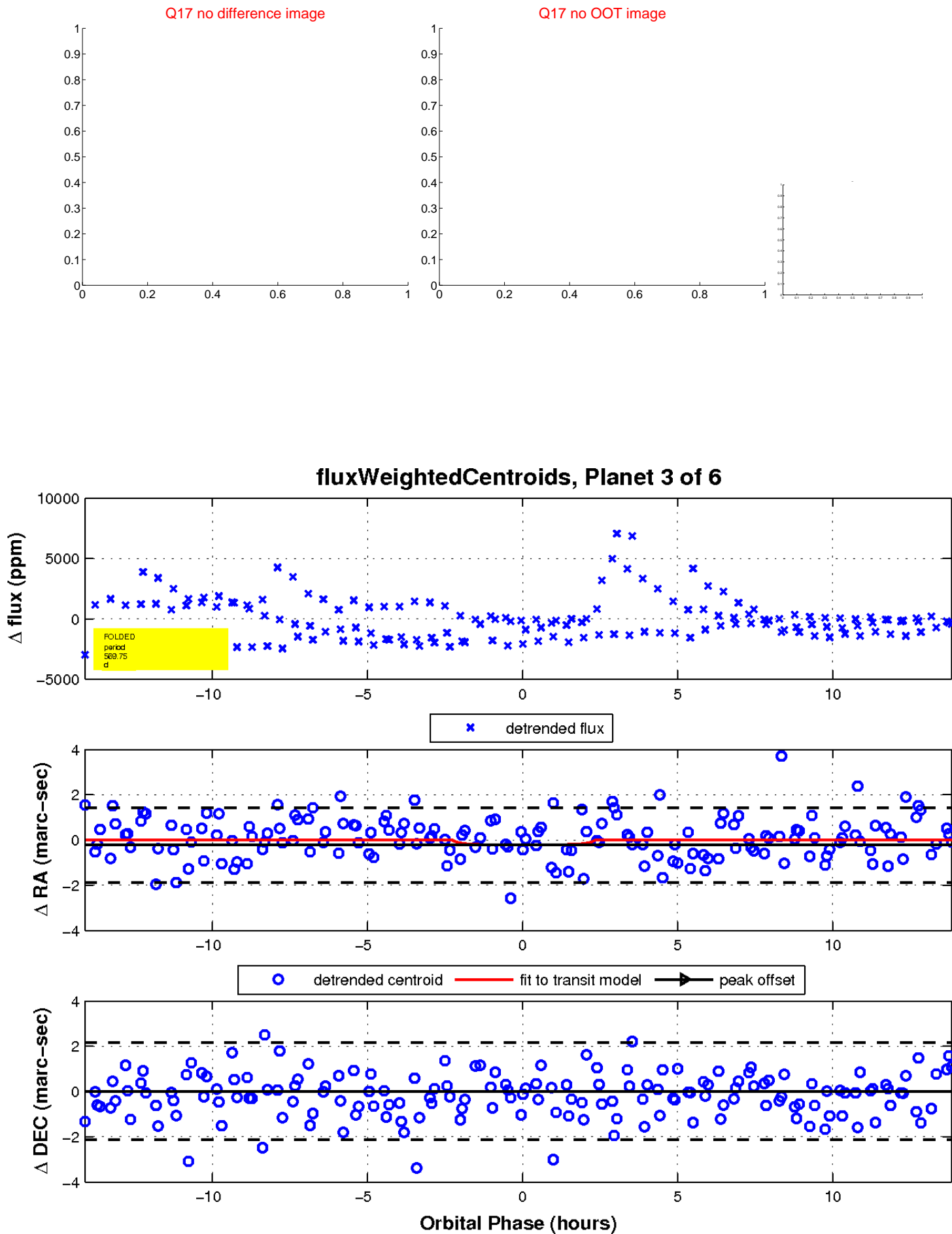
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

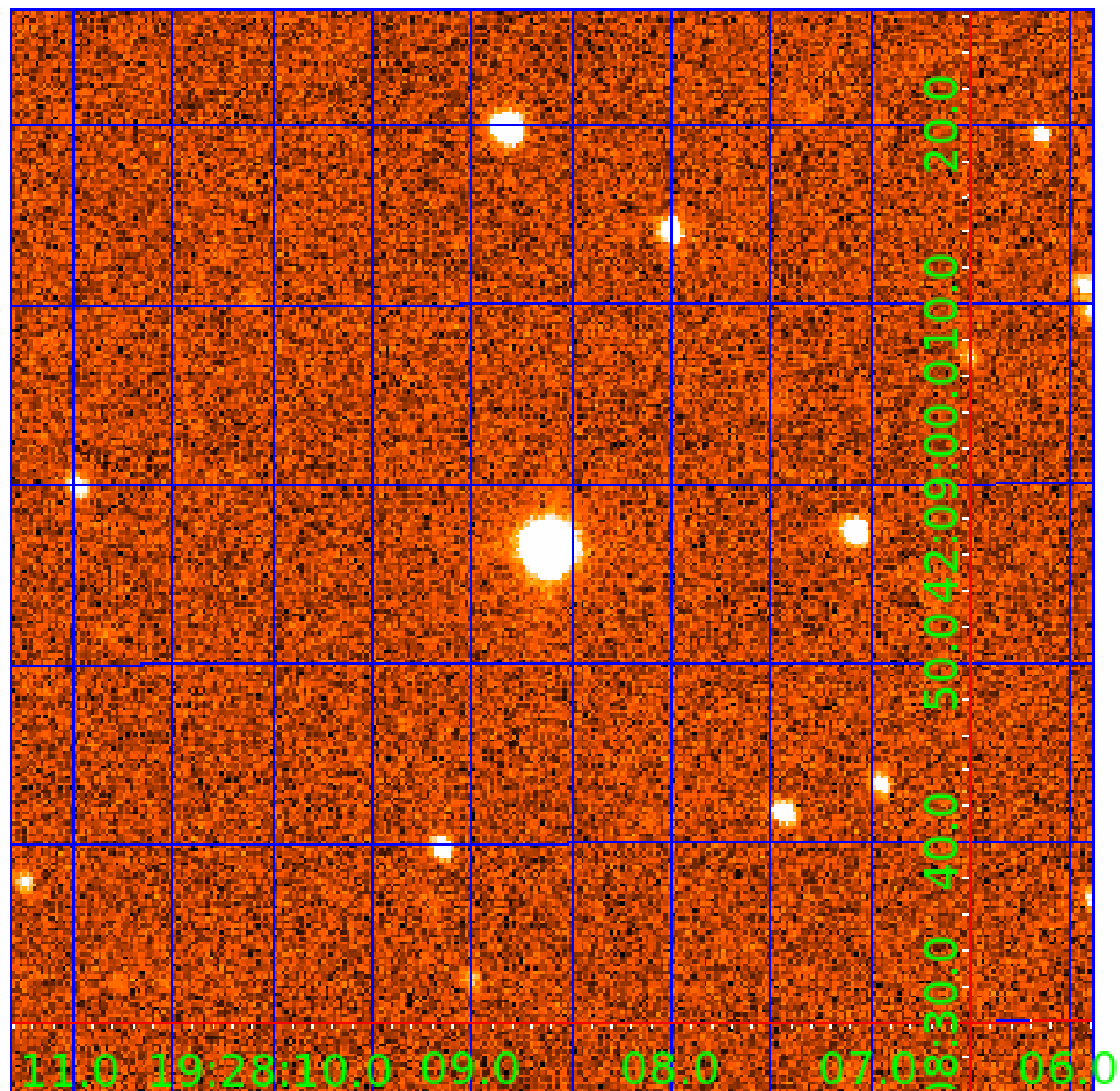


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006692180

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})
006692180-01	OBS	No	425.562204	516.376279	1079.3	4.441	19.9	6.6	1.68	5226	6.01	1.66
006692180-02	OBS	No	471.428379	359.149997	1788.1	8.949	18.2	7.3	1.68	5226	7.15	1.44
006692180-03	OBS	No	569.751541	404.625648	1229.3	4.708	15.6	6.5	1.68	5226	6.16	1.12
006692180-04	OBS	No	536.874783	236.974860	1303.1	11.207	13.3	5.1	1.68	5226	6.13	1.22
006692180-05	OBS	No	431.882152	459.145859	560.2	4.969	17.7	2.9	1.68	5226	3.92	1.62
006692180-06	OBS	No	591.832988	195.189891	1025.1	3.203	14.1	5.6	1.68	5226	5.38	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006692180-01	OBS	FP	0.00	1	0	1	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—HALO_GHOST
006692180-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

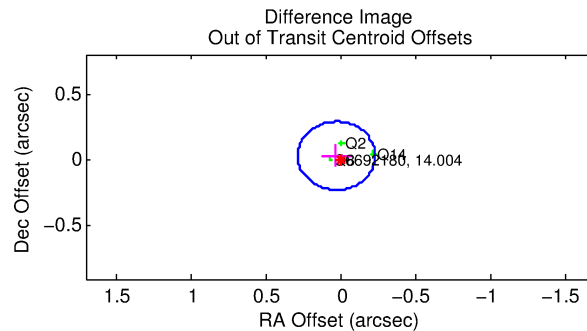
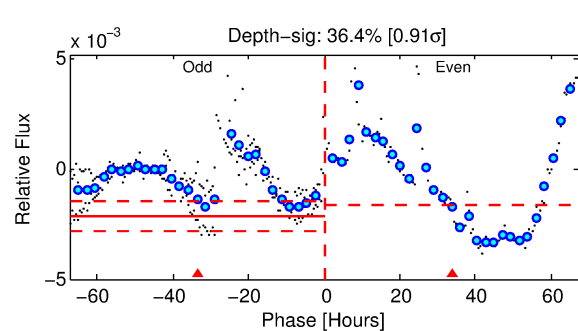
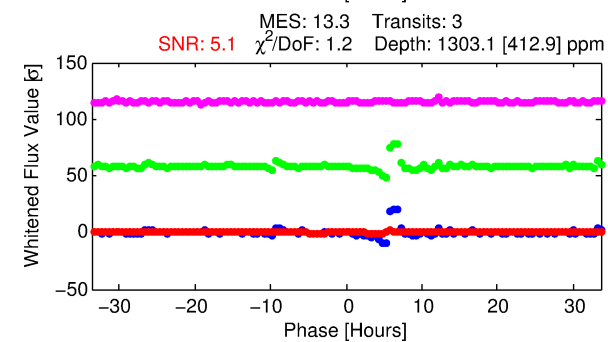
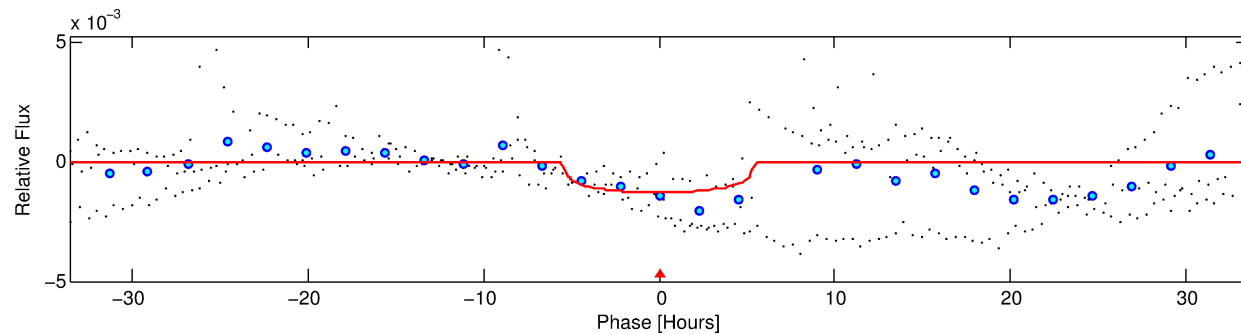
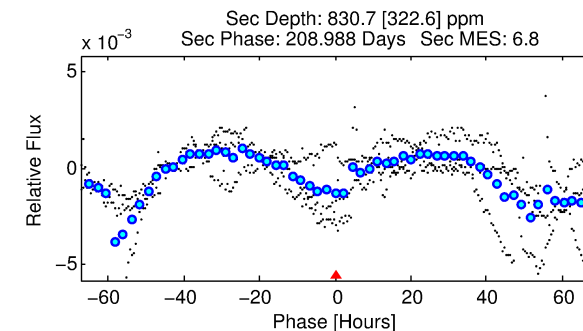
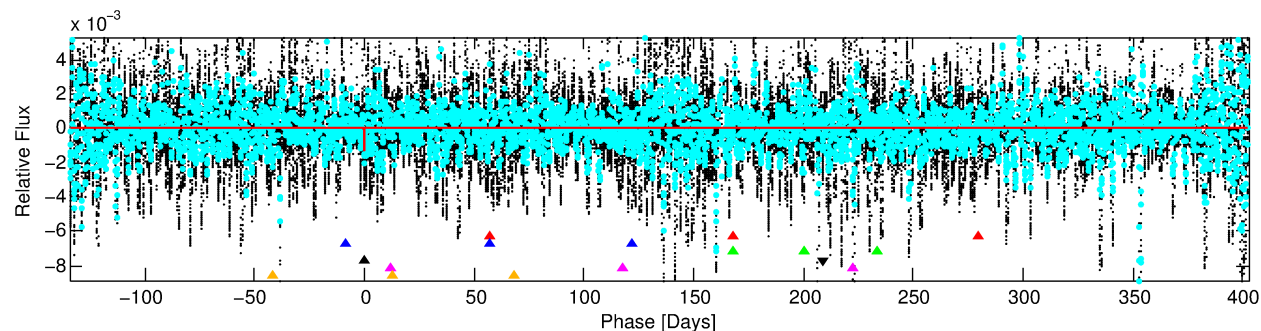
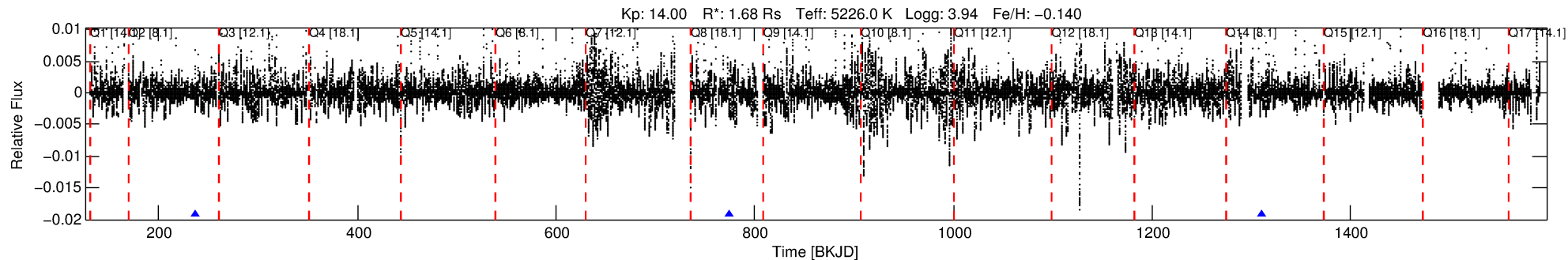
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-04

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 4 of 6 Period: 536.875 d



DV Fit Results:

Period = 536.87478 [0.00858] d
Epoch = 236.9749 [0.0116] BKJD
Rp/R* = 0.0335 [0.0128]
a/R* = 331.05 [379.90]
b = 0.50 [1.73]
Seff = 1.21 [1.20]
Teq = 268 [66] K
Rp = 6.13 [4.00] Re
a = 1.2425 [0.7204] AU
Ag = 18785.85 [24476.15] [0.77σ]
Teff = 4845 [1045] K [4.37σ]

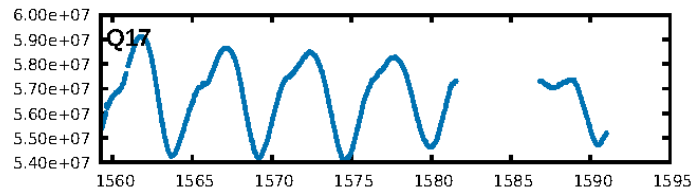
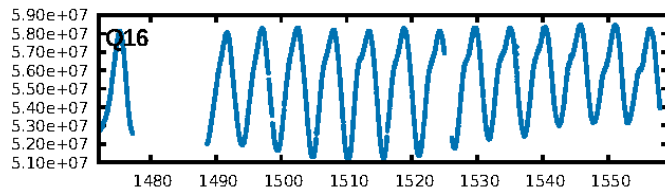
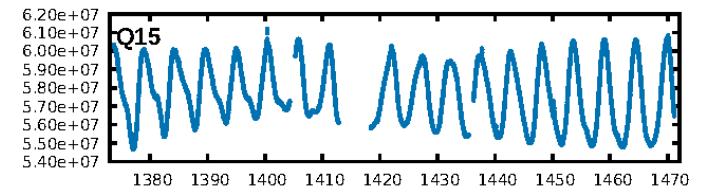
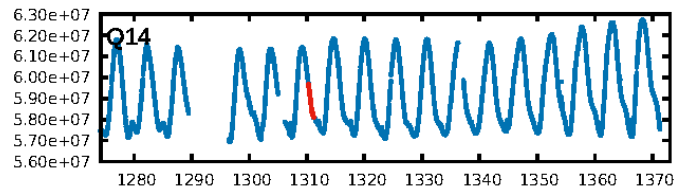
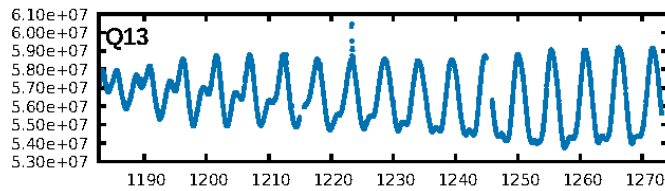
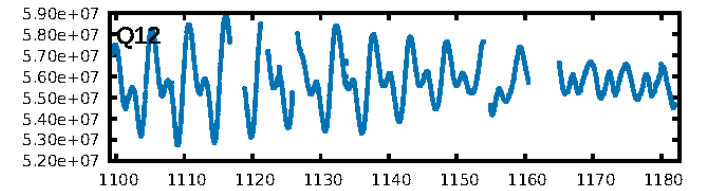
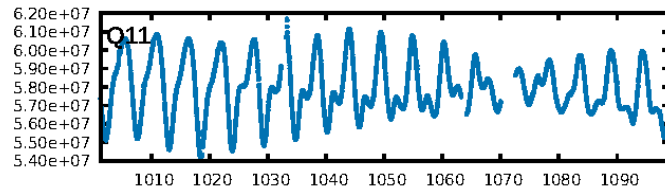
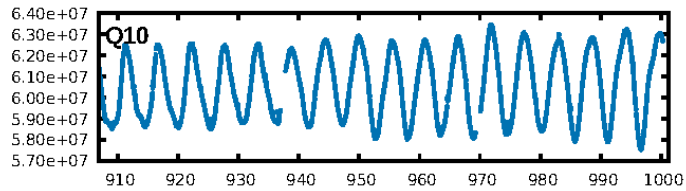
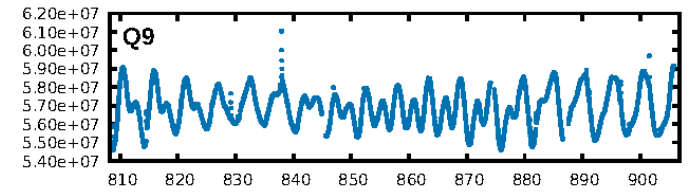
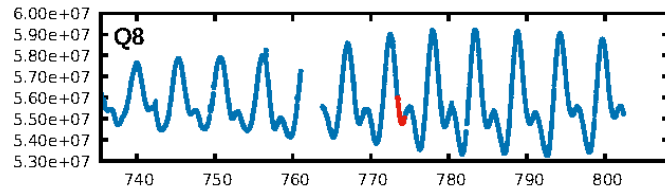
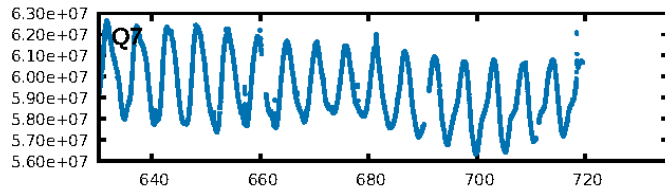
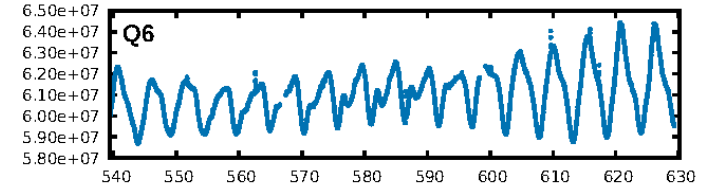
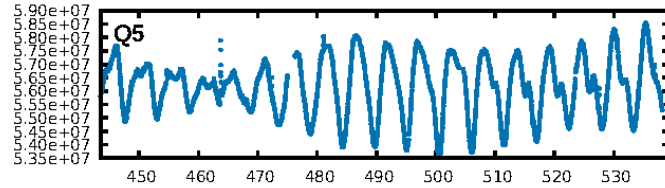
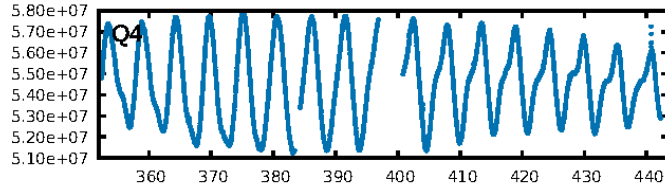
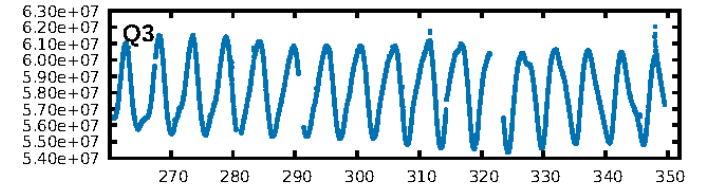
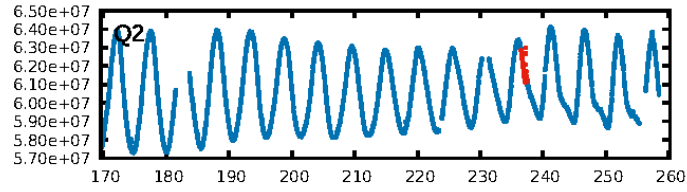
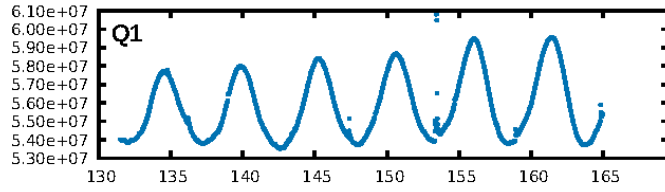
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [109.52σ]
LongPeriod-sig: 100.0% [64.91σ]
ModelChiSquare2-sig: 44.4%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.06008
Centroid-sig: 44.2%
Centroid-so: 0.497 arcsec [1.45σ]
OotOffset-rm: 0.041 arcsec [0.48σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

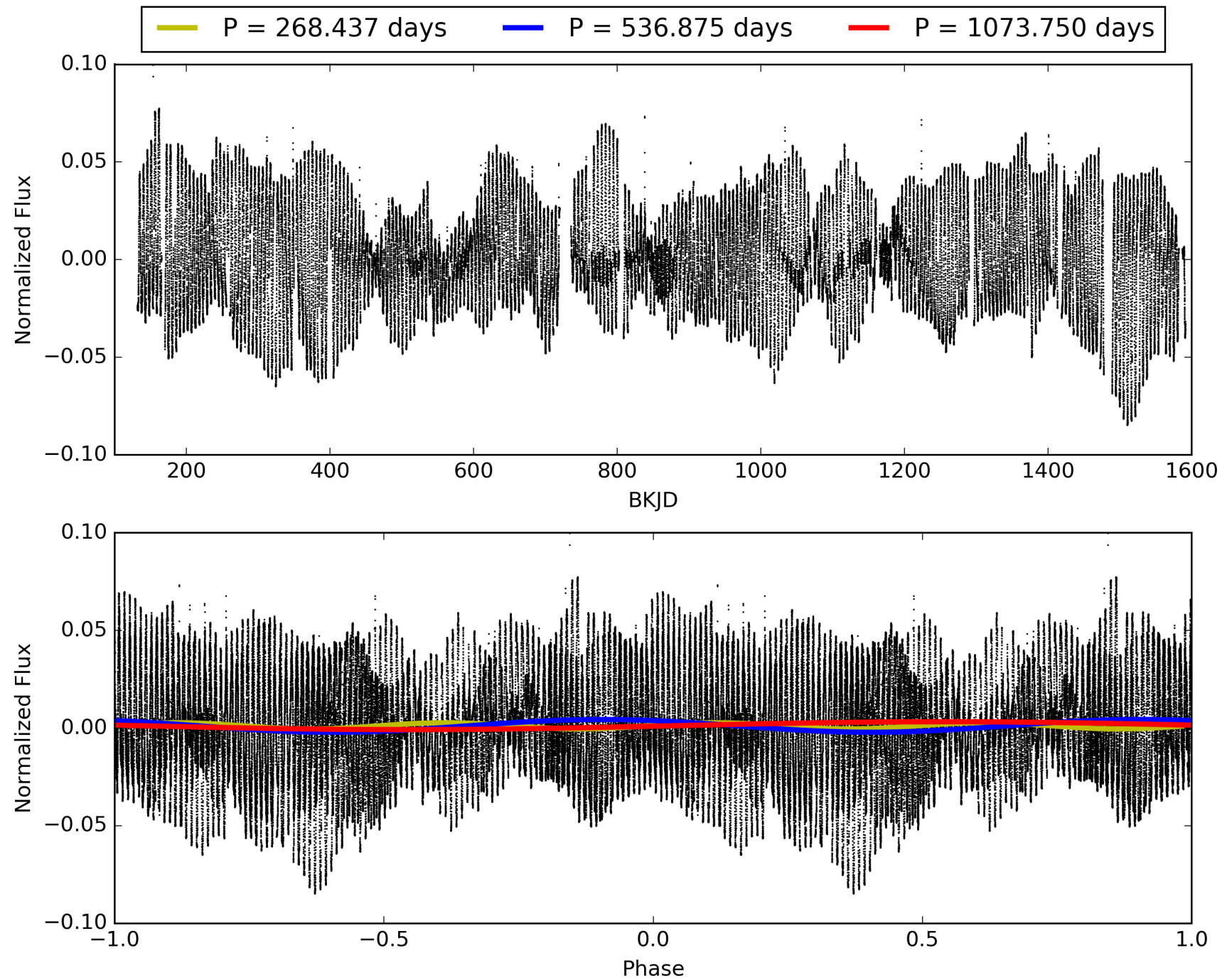
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:59:19 Z

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

TCE 006692180-04, PDC Light Curves

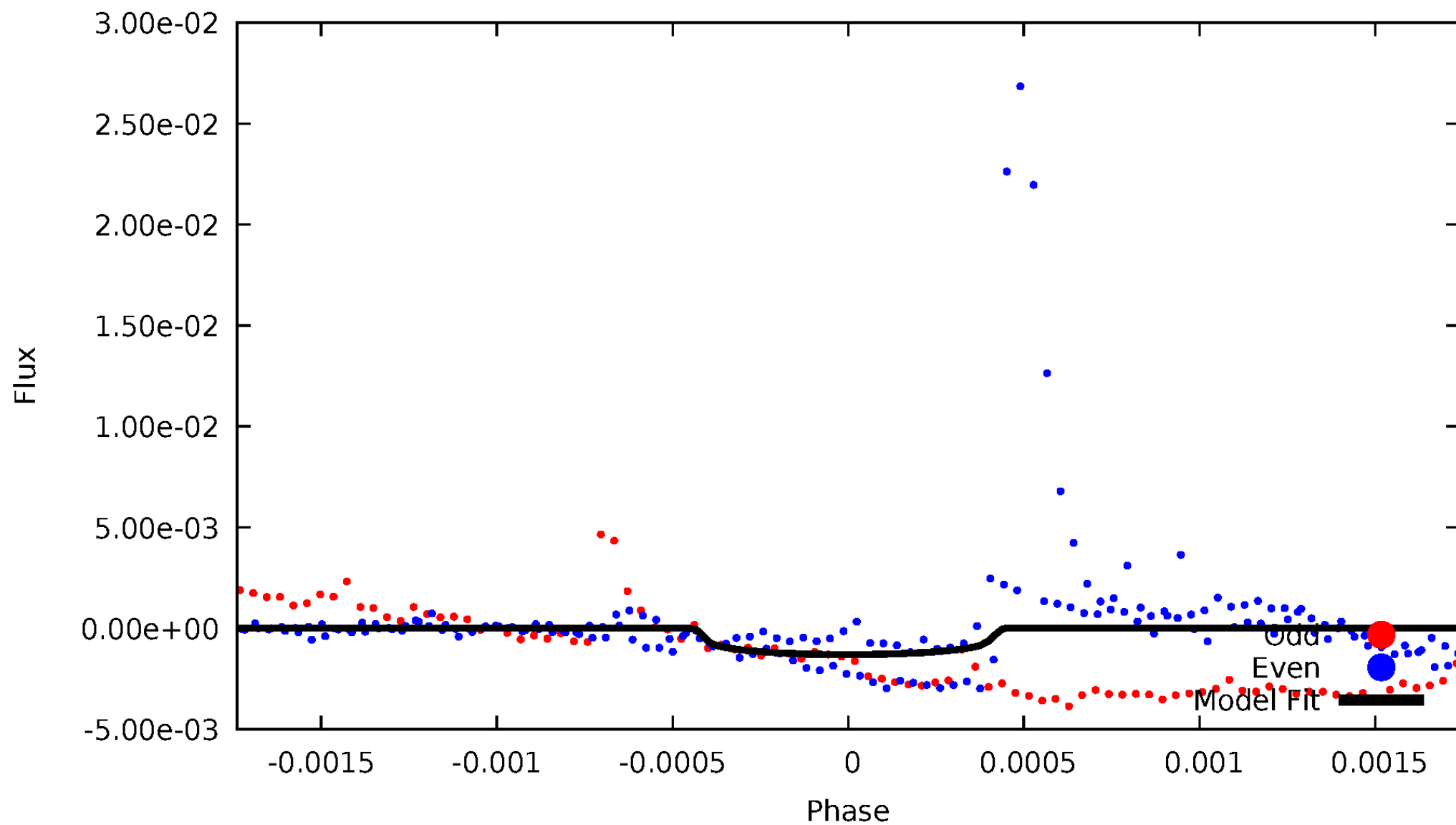


TCE 006692180-04



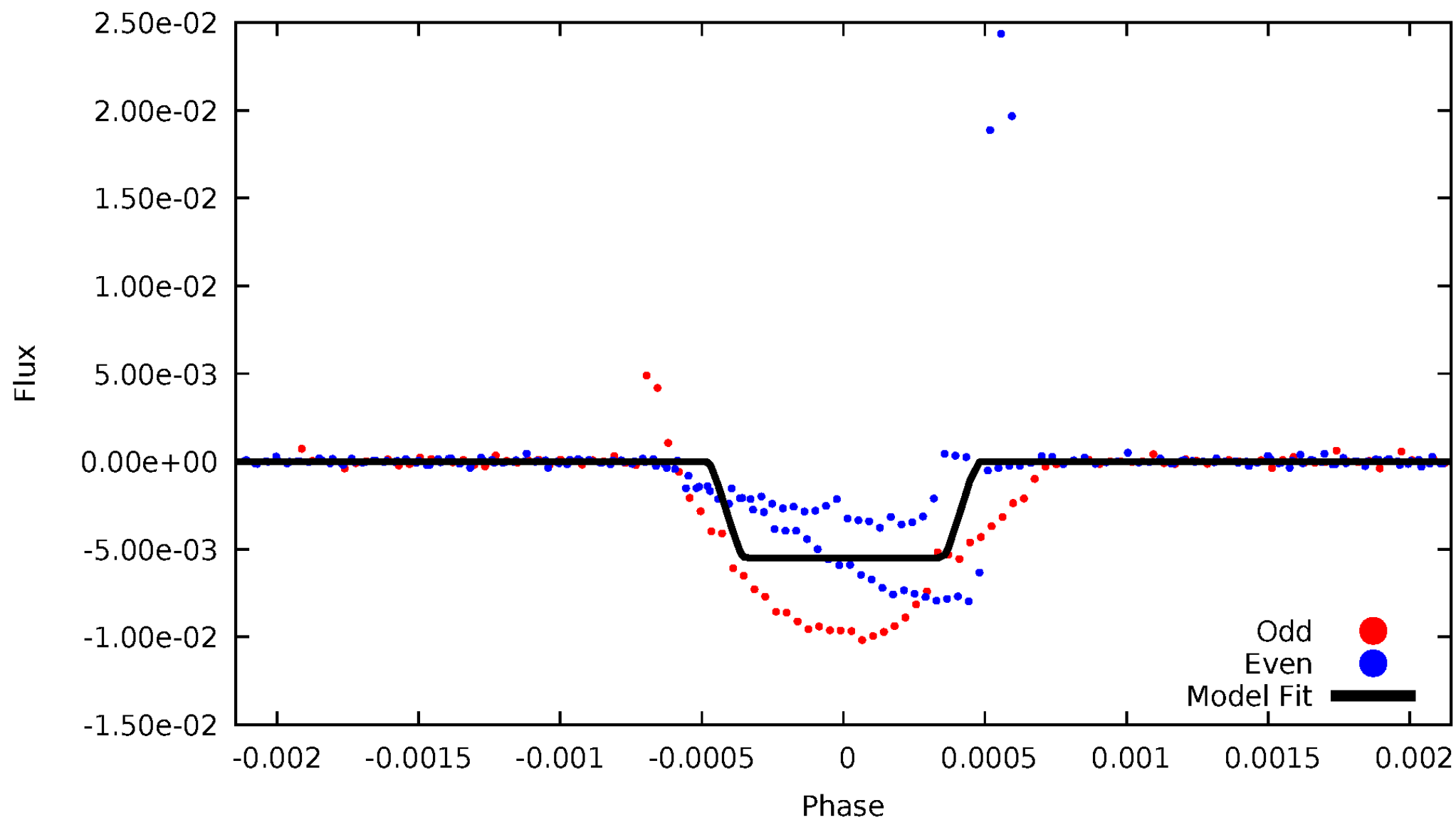
DV Odd/Even

TCE 006692180-04



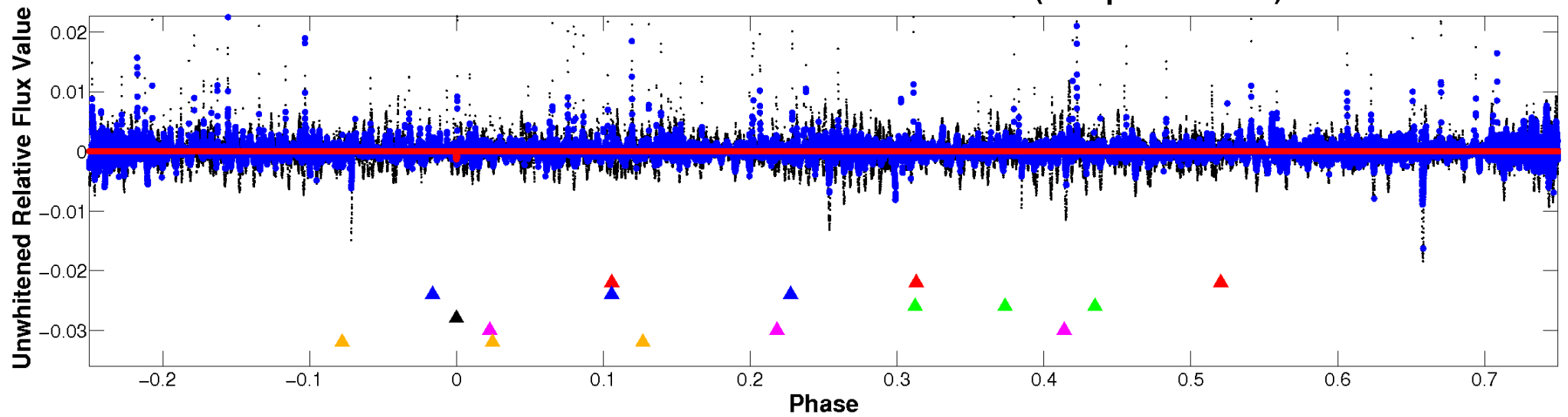
ALT Odd/Even

TCE 006692180-04

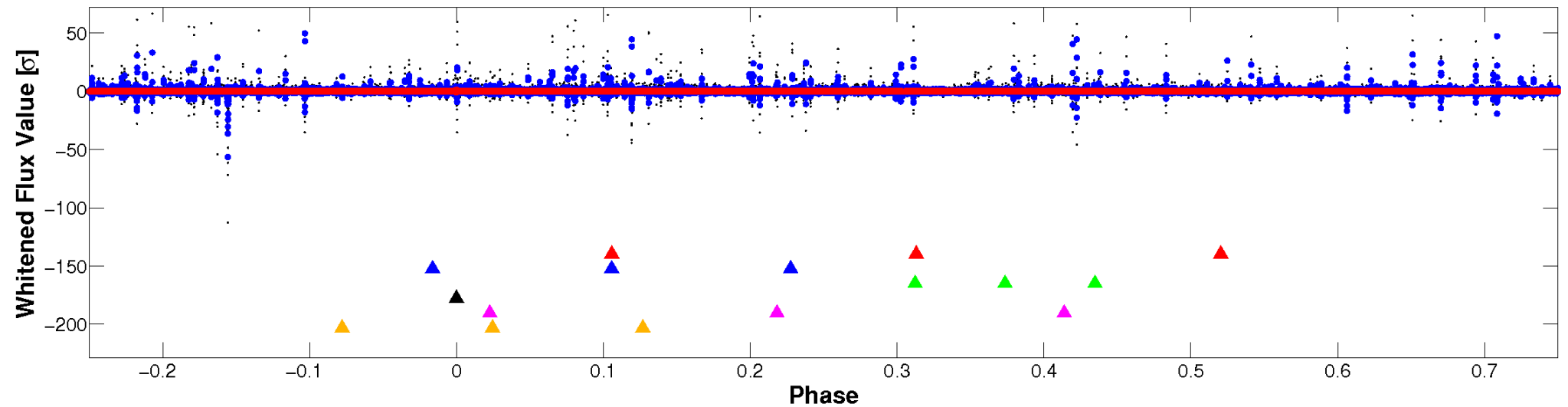


Non-Whitened Vs. Whitened Light Curve

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

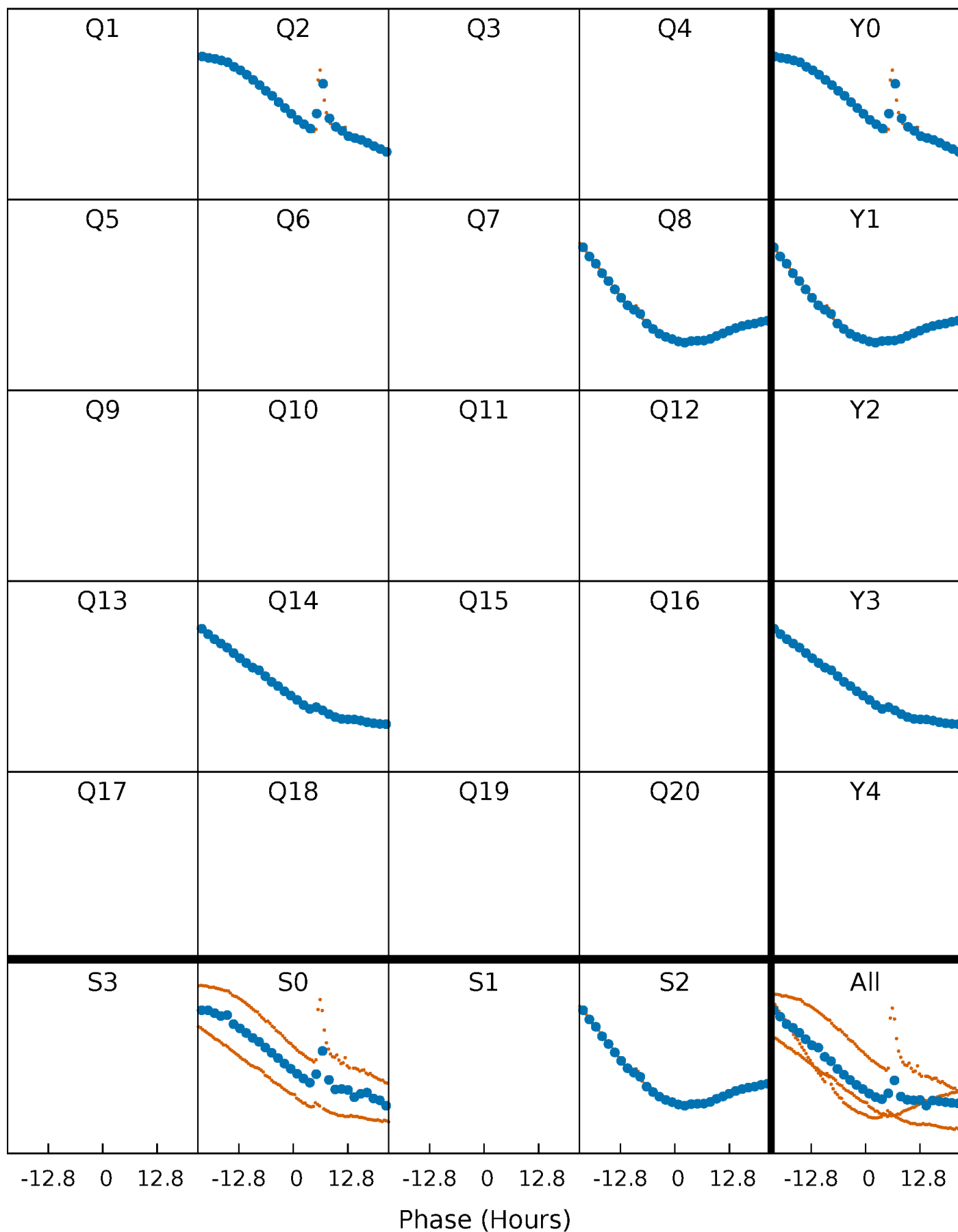


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



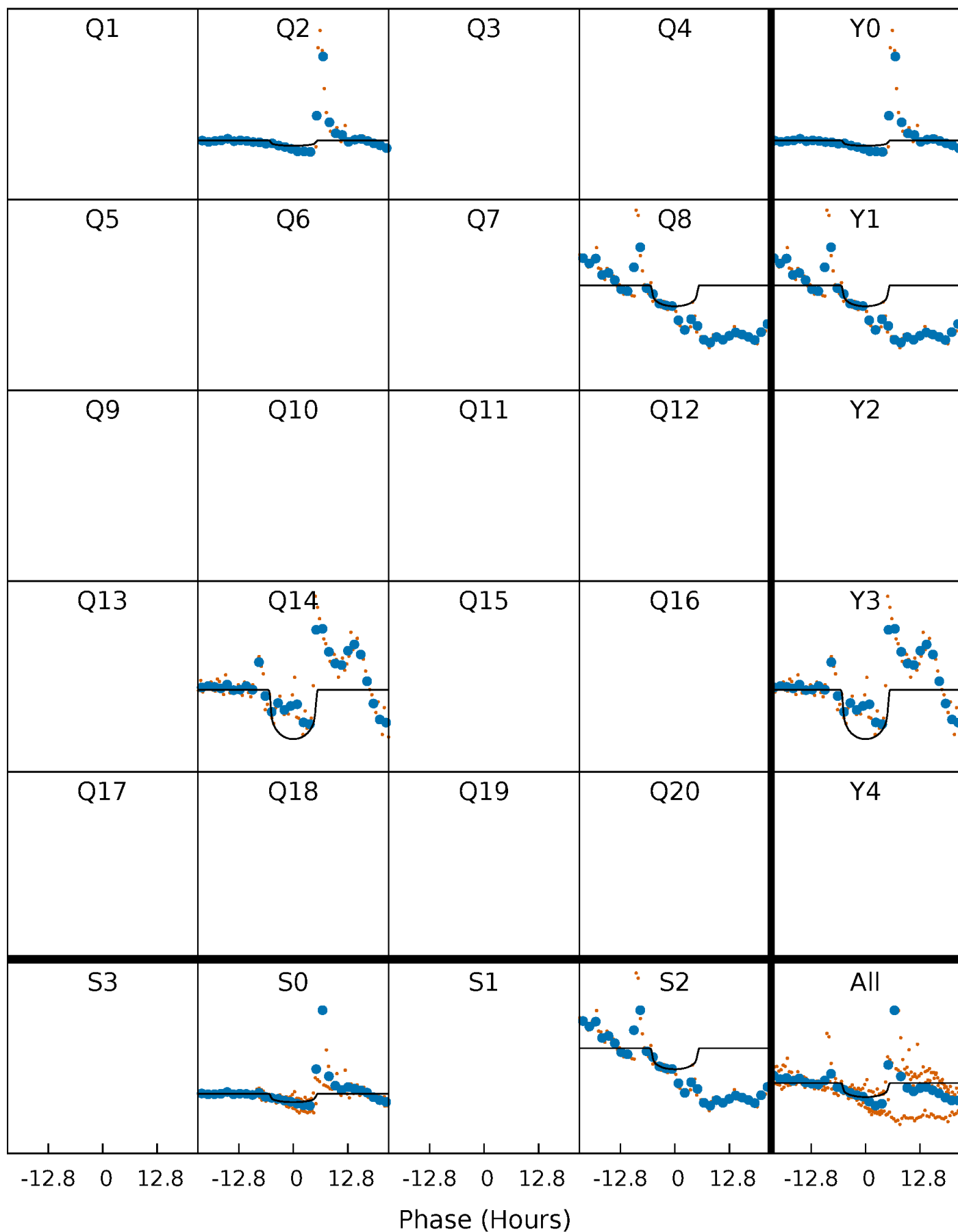
PDC Quarter-Phased Transit Curves

TCE 006692180-04 P=536.874783 Days $T_0=236.974860$ (BKJD)



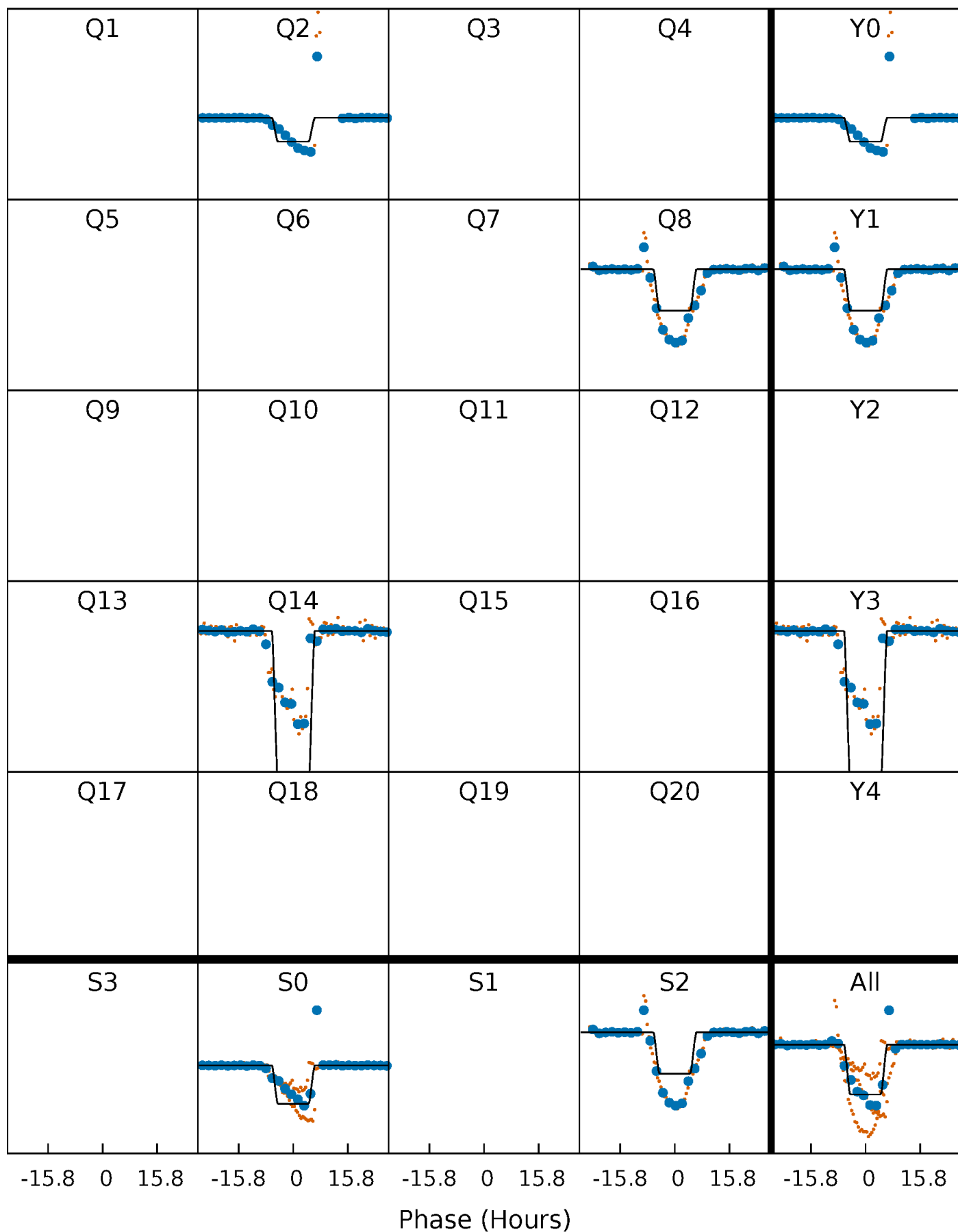
DV Quarter-Phased Transit Curves

TCE 006692180-04 $P=536.874783$ Days $T_0=236.974860$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

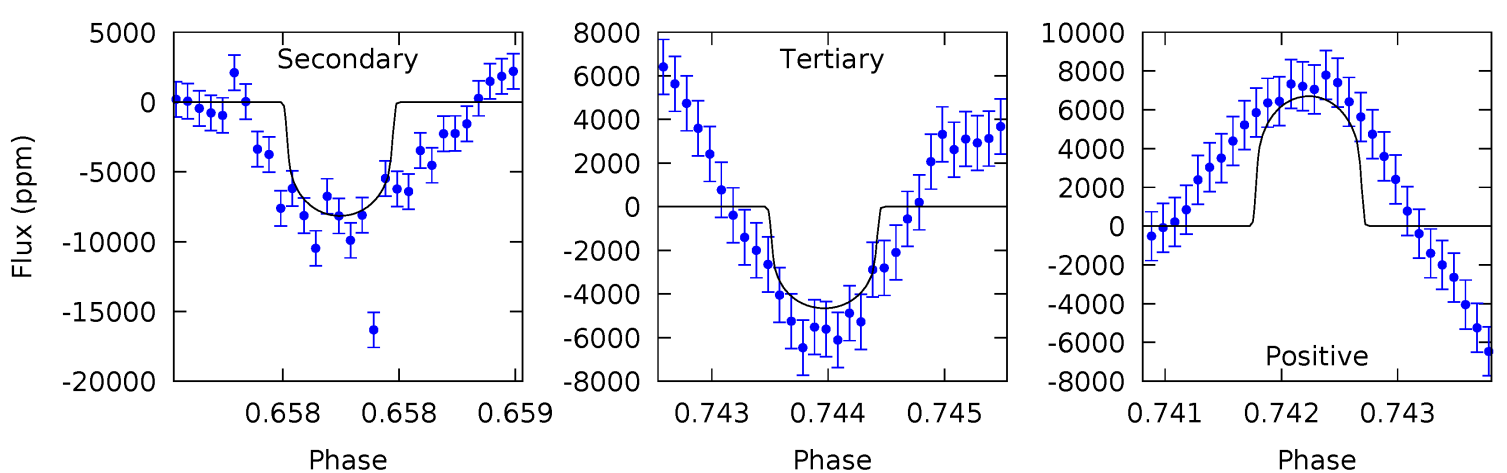
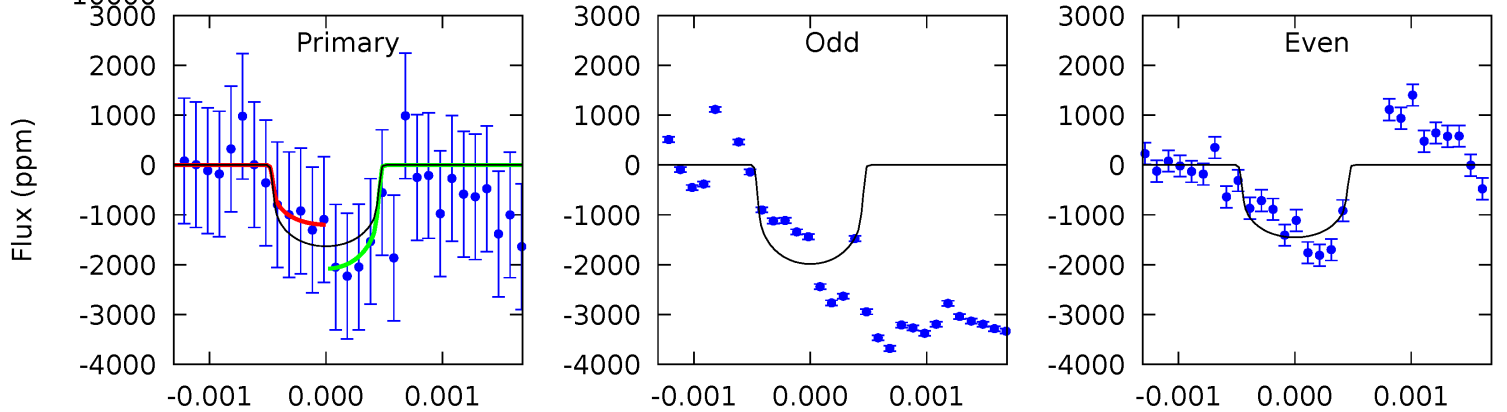
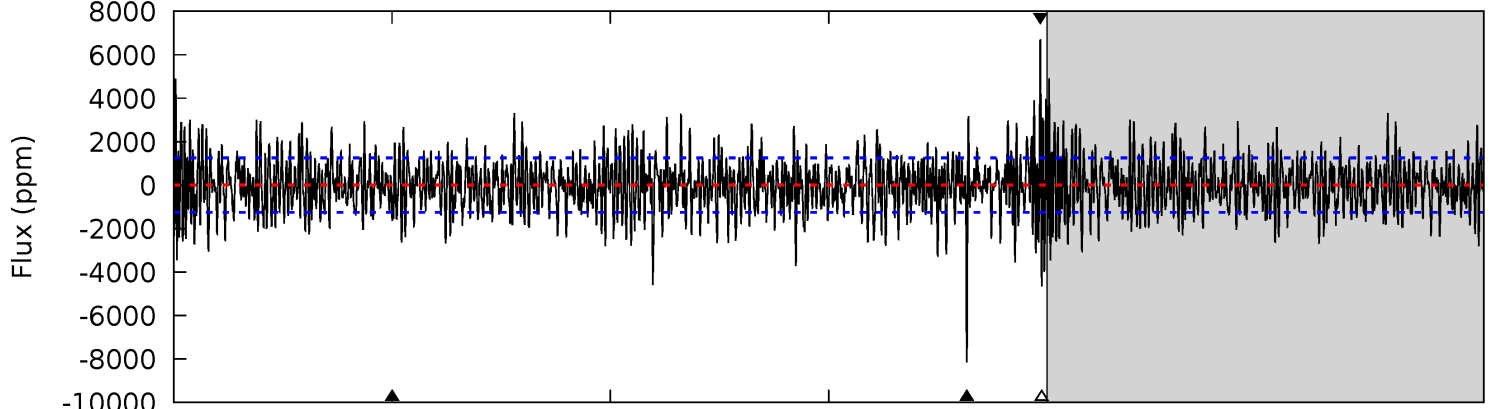
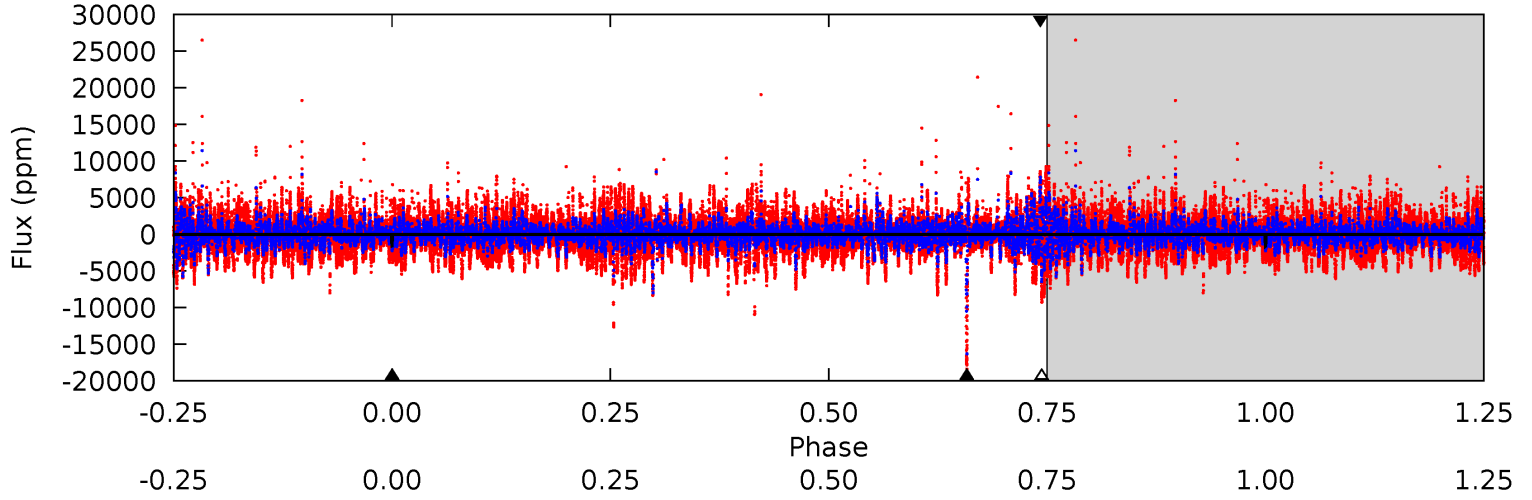
TCE 006692180-04 P=536.905411 Days $T_0=236.938924$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-04, P = 536.874783 Days, E = 236.974860 Days

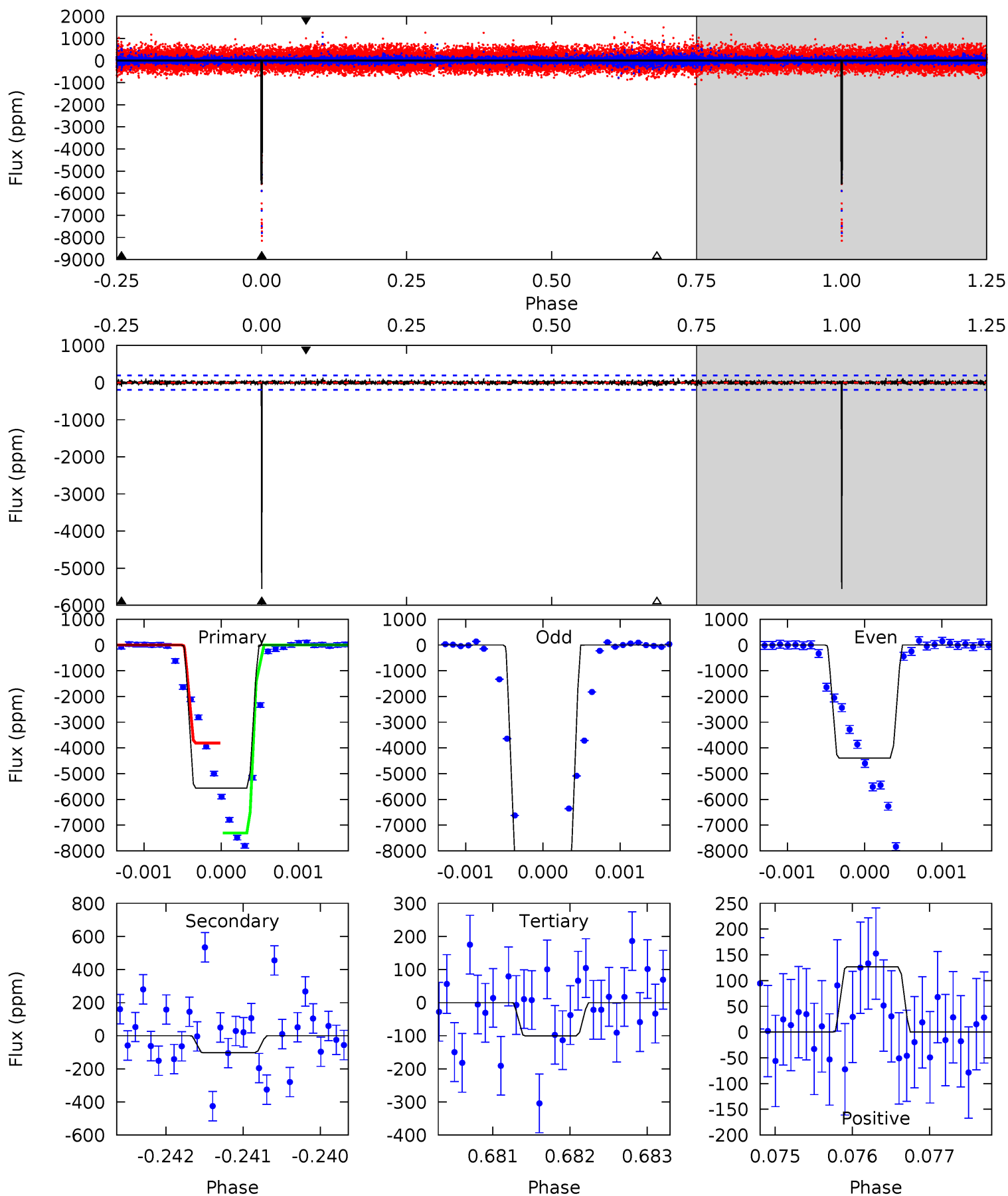
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.13	35.6	20.3	29.3	5.47	3.32	4.87	-13.2	-22.1	15.3	6.36	0.90	0.82	0.45	1.94



Alt Model-Shift Uniqueness Test

006692180-04, P = 536.905411 Days, E = 236.938924 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
156.9	2.90	2.83	3.57	5.45	3.29	0.59	154.0	153.3	0.07	-0.67	79.3	0.98	0.02	0



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8155 ± 229	$5.66^{+2.97}_{-2.39}$	365^{+46}_{-55}	8806^{+3505}_{-1586}	$215358^{+423444}_{-123400}$
Alt.	-103 ± 35	$12.66^{+4.62}_{-3.91}$	367^{+45}_{-56}	2705^{+174}_{-188}	534^{+583}_{-291}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

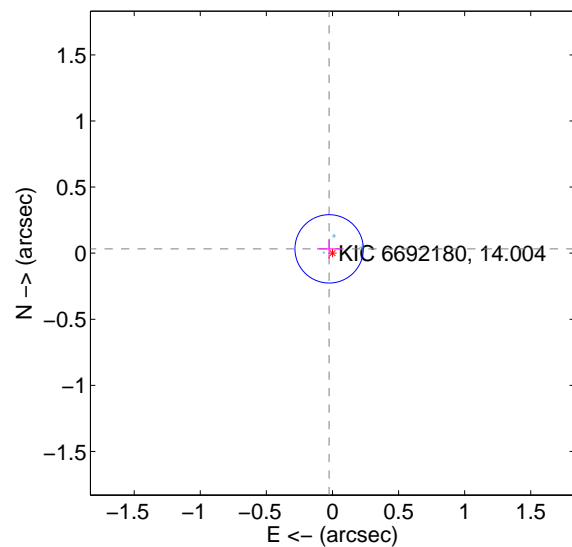
Supplemental centroid analysis for 006692180-04. Kepler magnitude: 14.00. Transit SNR 5.15

There are 3 quarters with good PRF difference image offsets

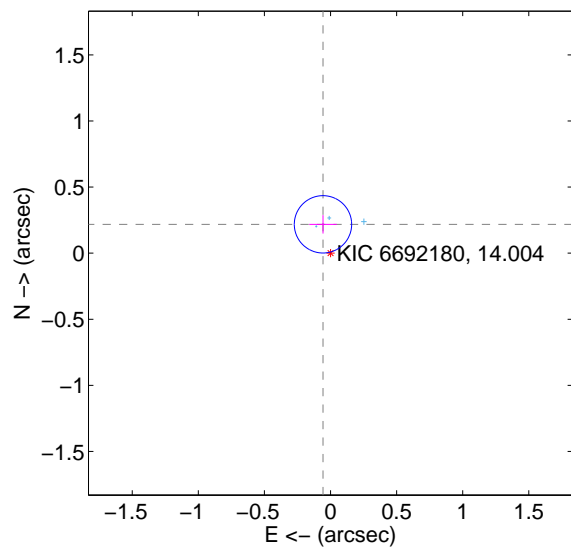
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.086	0.48	0.025 ± 0.092	0.033 ± 0.076
PRF-fit source offset from KIC position	0.226 ± 0.072	3.12	0.057 ± 0.104	0.218 ± 0.070
photometric centroid source offset	0.50 ± 0.34	1.45	-0.20 ± 0.40	0.46 ± 0.33

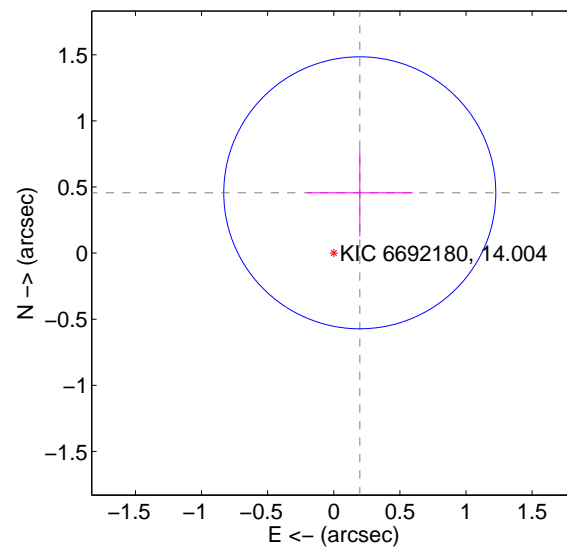
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

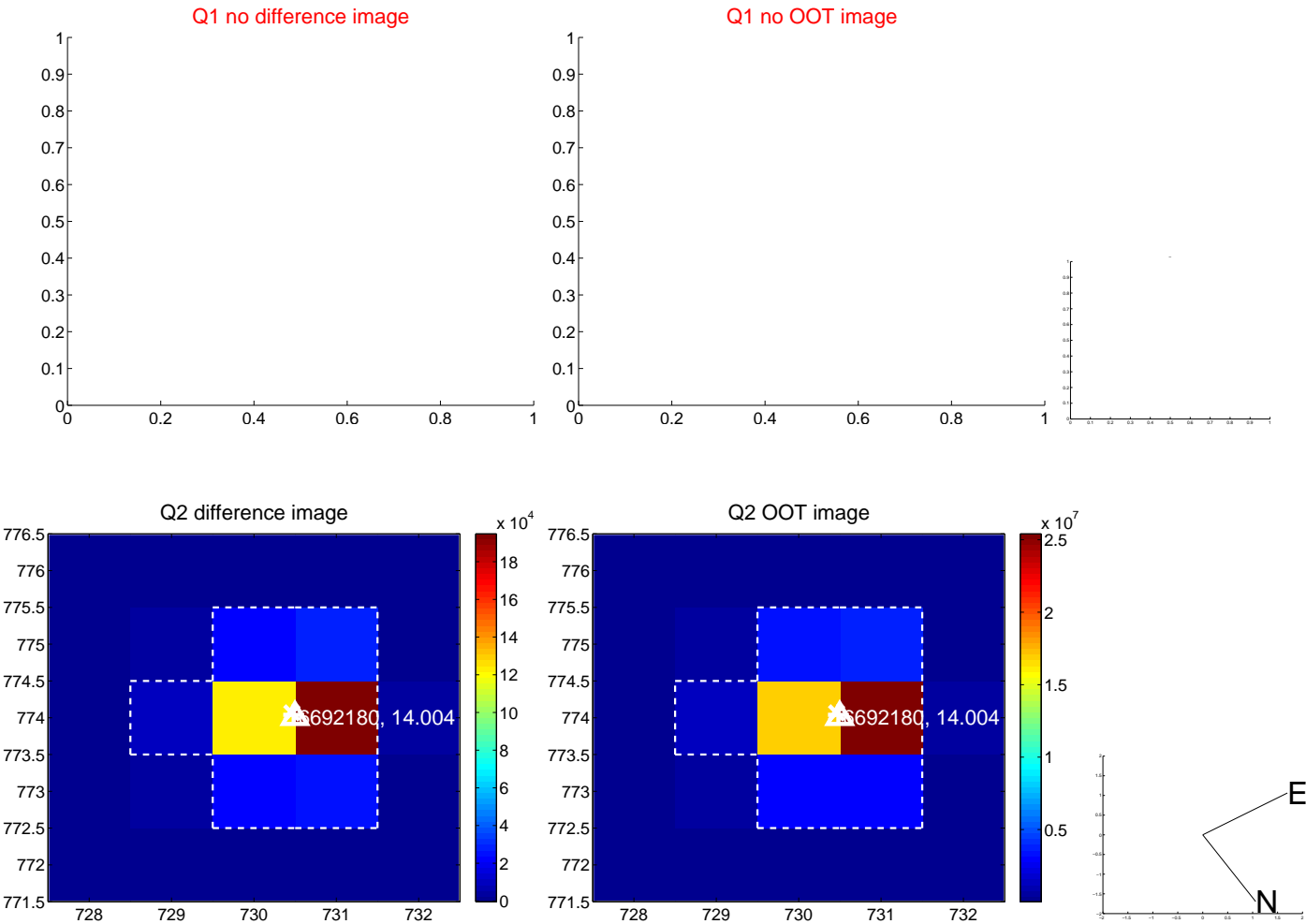


offset from photometric centroids

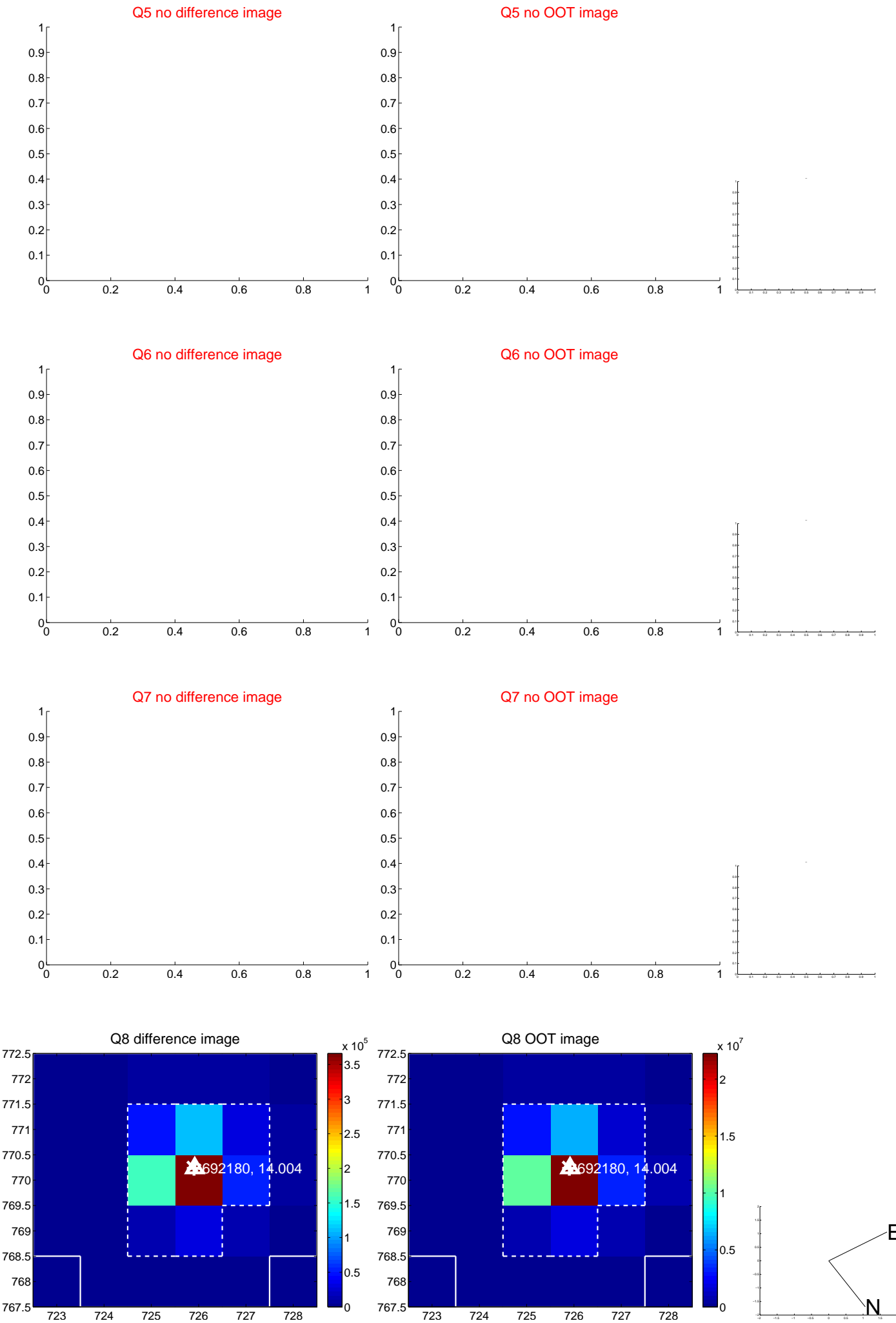


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



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



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

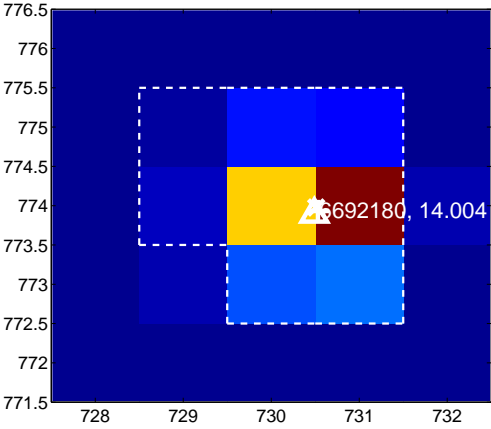
Q13 no difference image



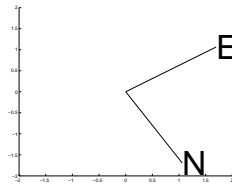
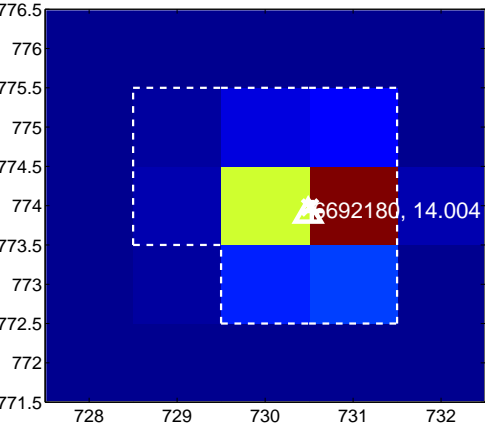
Q13 no OOT image



Q14 difference image



Q14 OOT image



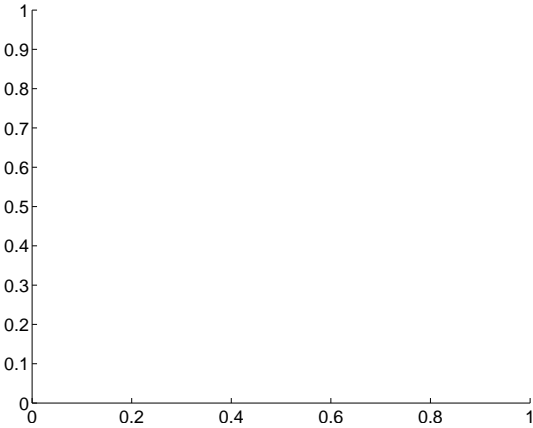
Q15 no difference image



Q15 no OOT image



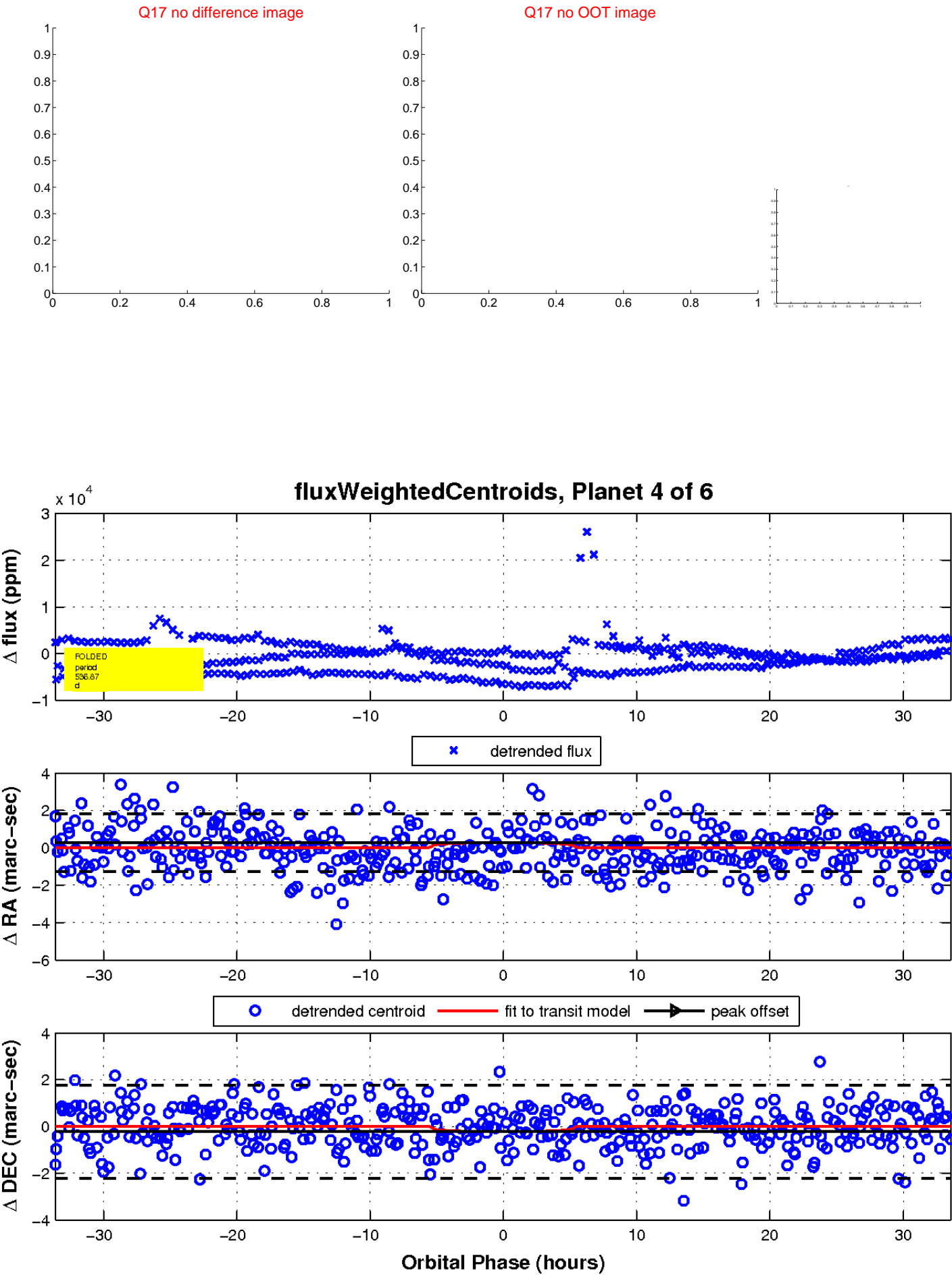
Q16 no difference image



Q16 no OOT image

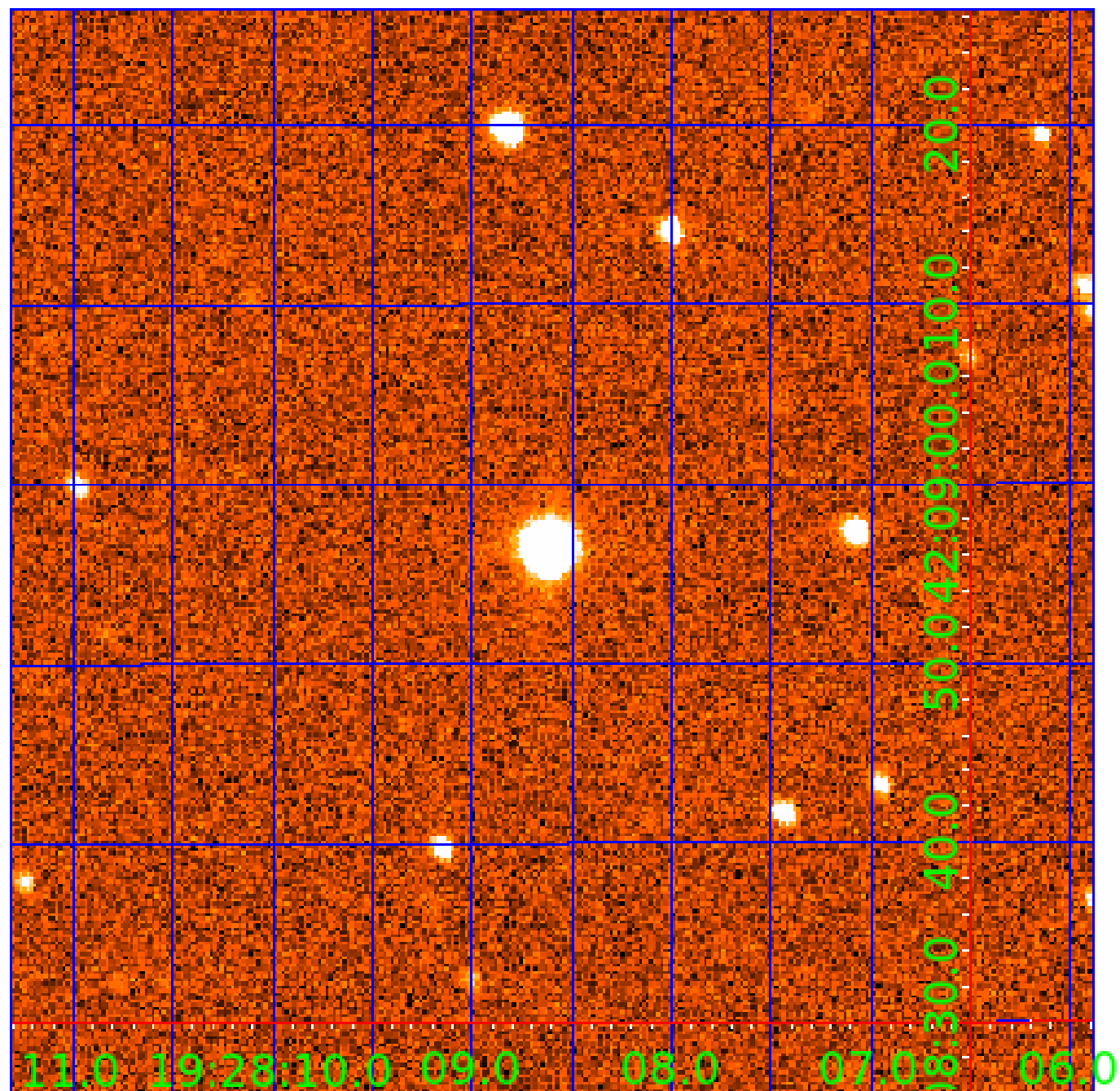


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006692180

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})
006692180-01	OBS	No	425.562204	516.376279	1079.3	4.441	19.9	6.6	1.68	5226	6.01	1.66
006692180-02	OBS	No	471.428379	359.149997	1788.1	8.949	18.2	7.3	1.68	5226	7.15	1.44
006692180-03	OBS	No	569.751541	404.625648	1229.3	4.708	15.6	6.5	1.68	5226	6.16	1.12
006692180-04	OBS	No	536.874783	236.974860	1303.1	11.207	13.3	5.1	1.68	5226	6.13	1.22
006692180-05	OBS	No	431.882152	459.145859	560.2	4.969	17.7	2.9	1.68	5226	3.92	1.62
006692180-06	OBS	No	591.832988	195.189891	1025.1	3.203	14.1	5.6	1.68	5226	5.38	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006692180-01	OBS	FP	0.00	1	0	1	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—HALO_GHOST
006692180-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

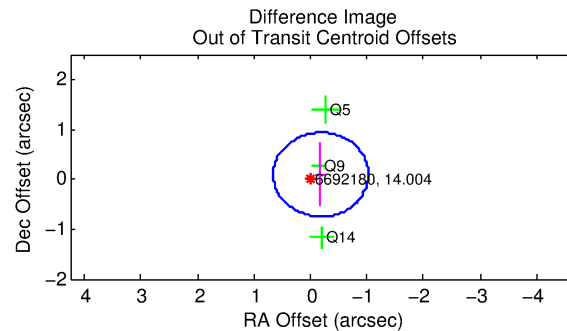
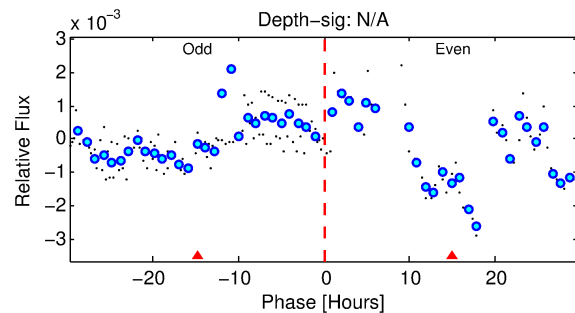
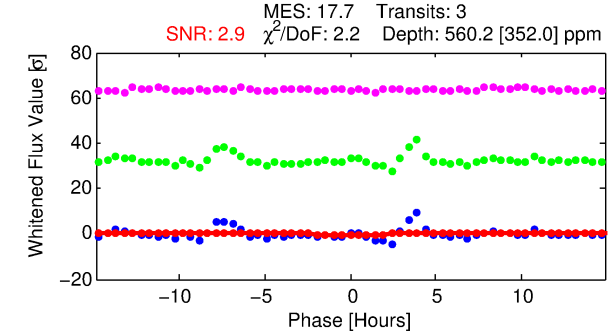
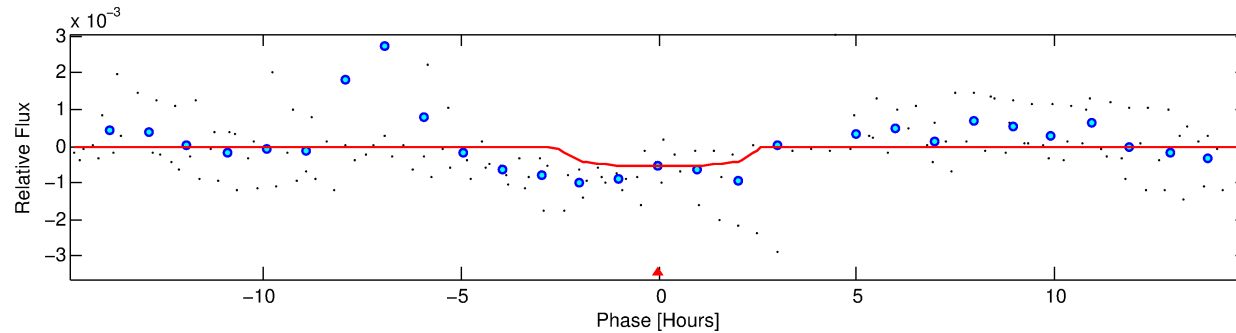
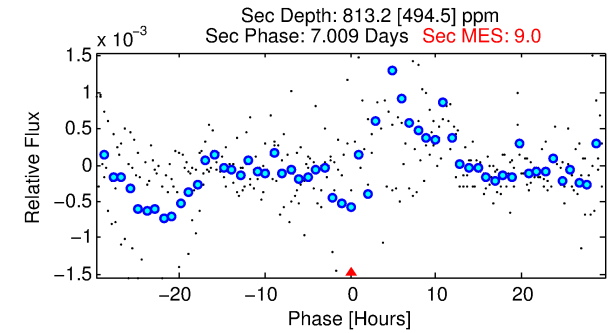
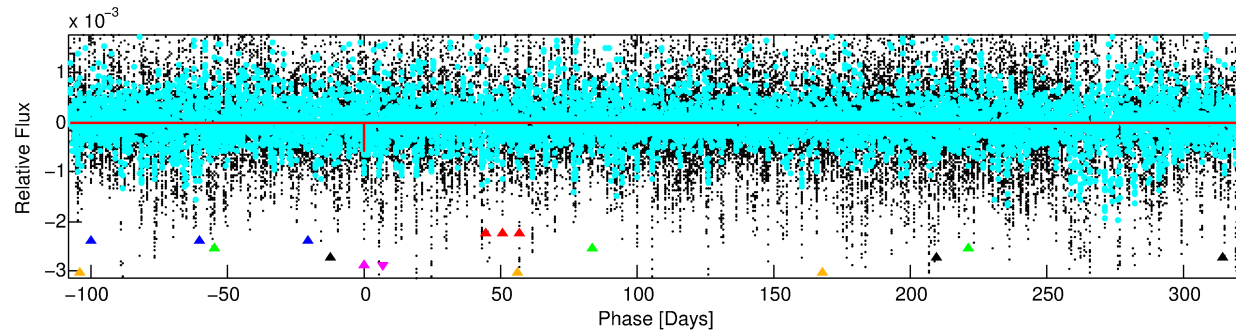
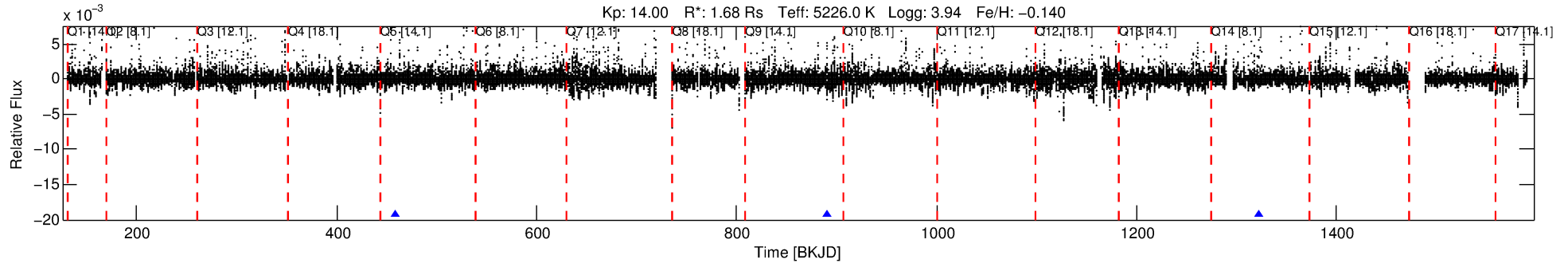
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-05

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 5 of 6 Period: 431.882 d



DV Fit Results:

Period = 431.88215 [0.01708] d
Epoch = 459.1459 [0.0218] BKJD
Rp/R* = 0.0215 [0.1319]
a/R* = 646.67 [15089.87]
b = 0.31 [69.48]
Seff = 1.62 [1.61]
Teq = 288 [71] K
Rp = 3.92 [24.21] Re
a = 1.0747 [0.6231] AU
Ag = 33610.37 [415287.51] [0.08σ]
Teffp = 6025 [18554] K [0.31σ]

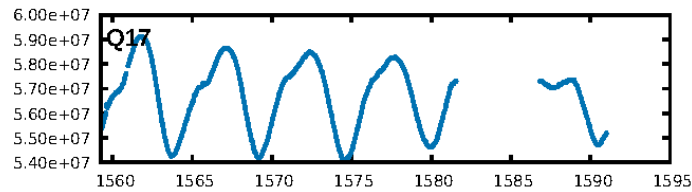
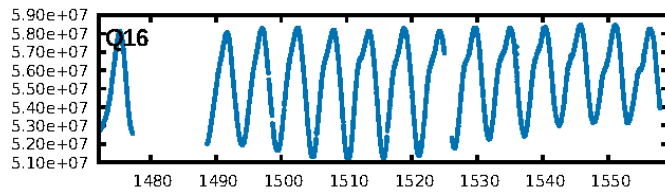
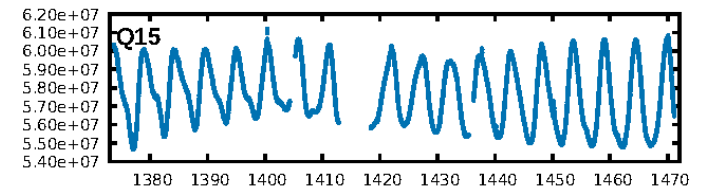
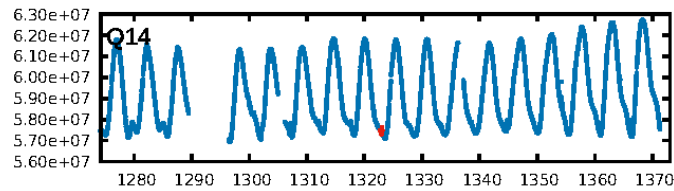
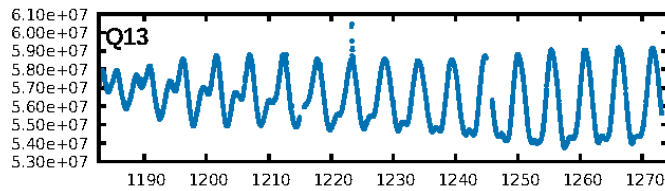
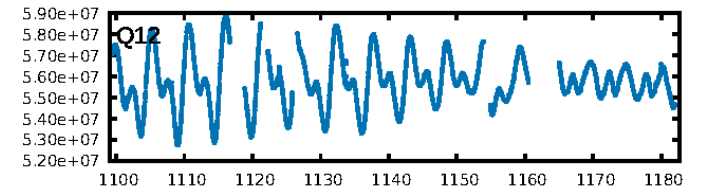
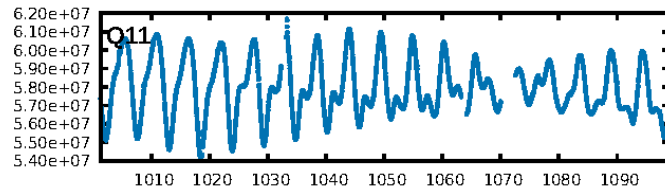
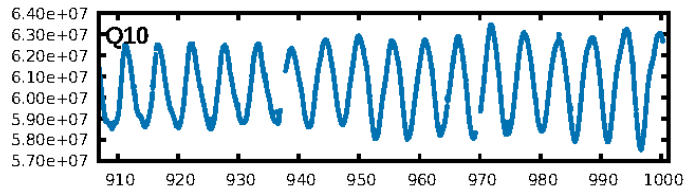
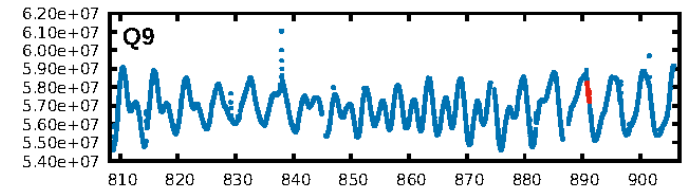
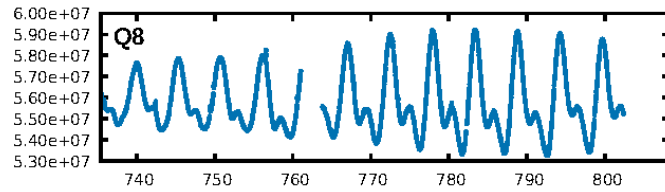
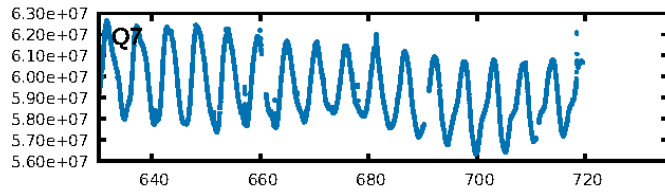
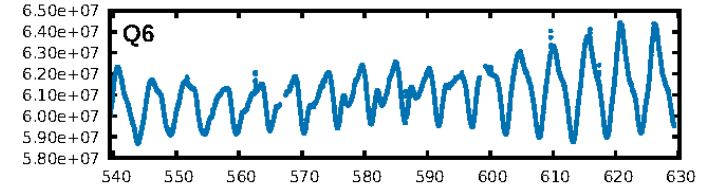
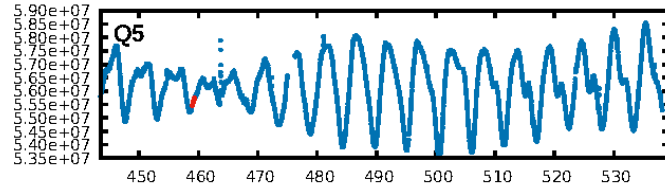
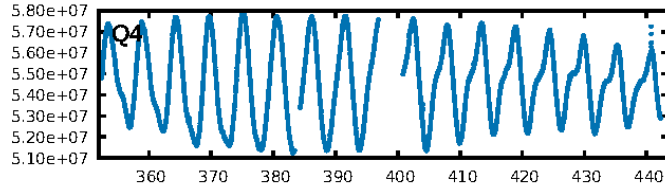
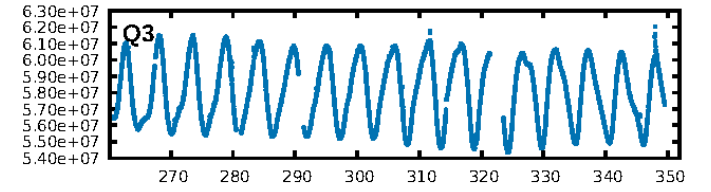
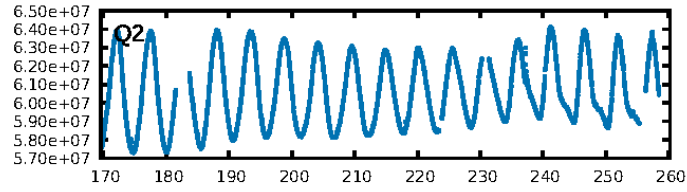
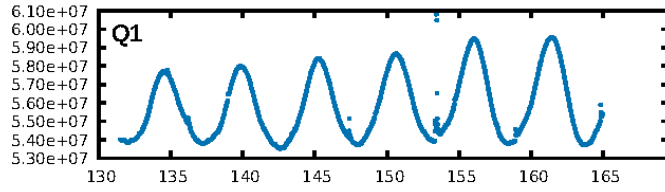
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.76σ]
LongPeriod-sig: 100.0% [92.72σ]
ModelChiSquare2-sig: 13.6%
ModelChiSquareGof-sig: 24.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2031
Centroid-sig: 28.0%
Centroid-so: 1.094 arcsec [1.17σ]
OotOffset-rm: 0.202 arcsec [0.72σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 0.357 arcsec [0.62σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

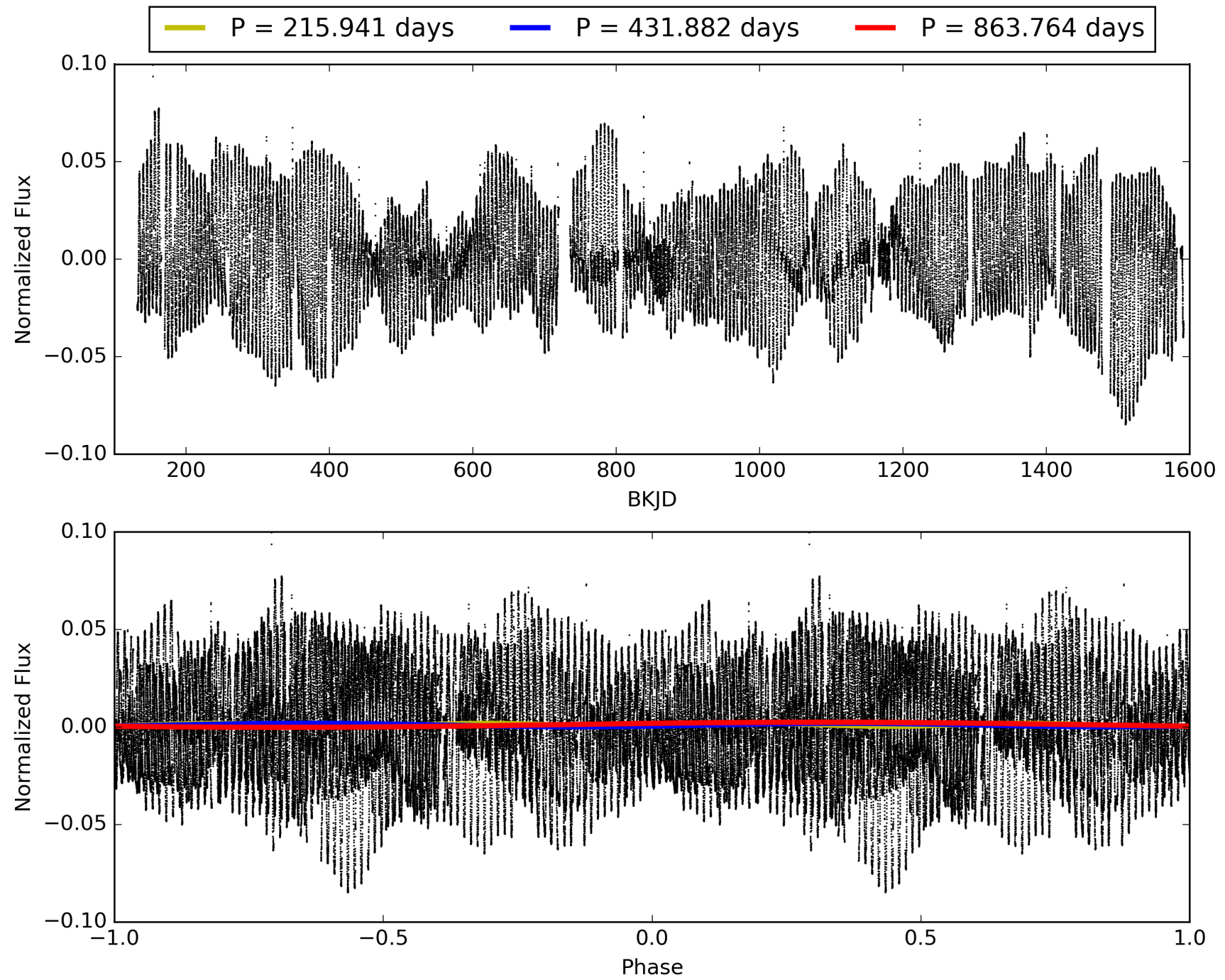
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:59:33 Z

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

TCE 006692180-05, PDC Light Curves

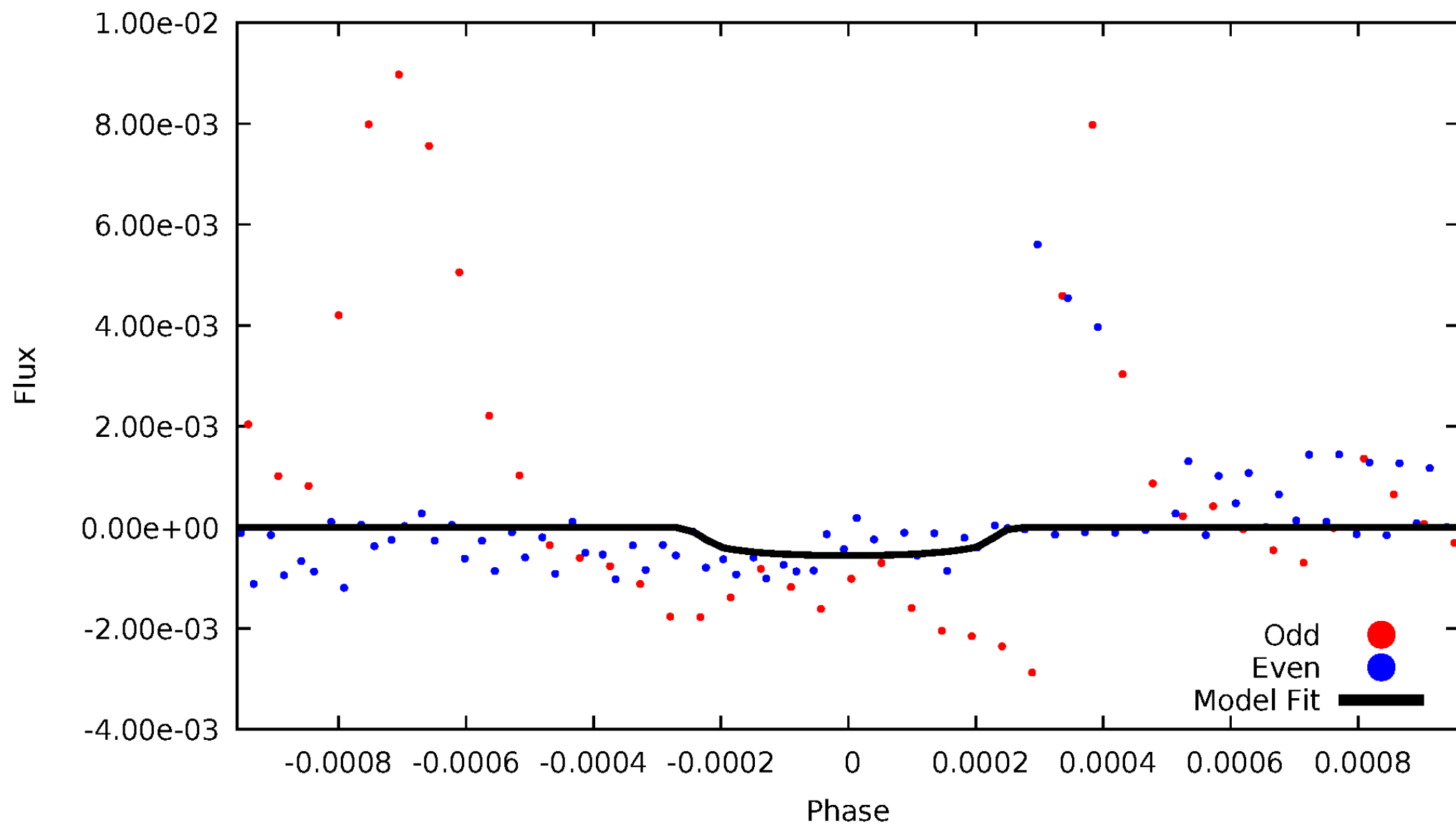


TCE 006692180-05



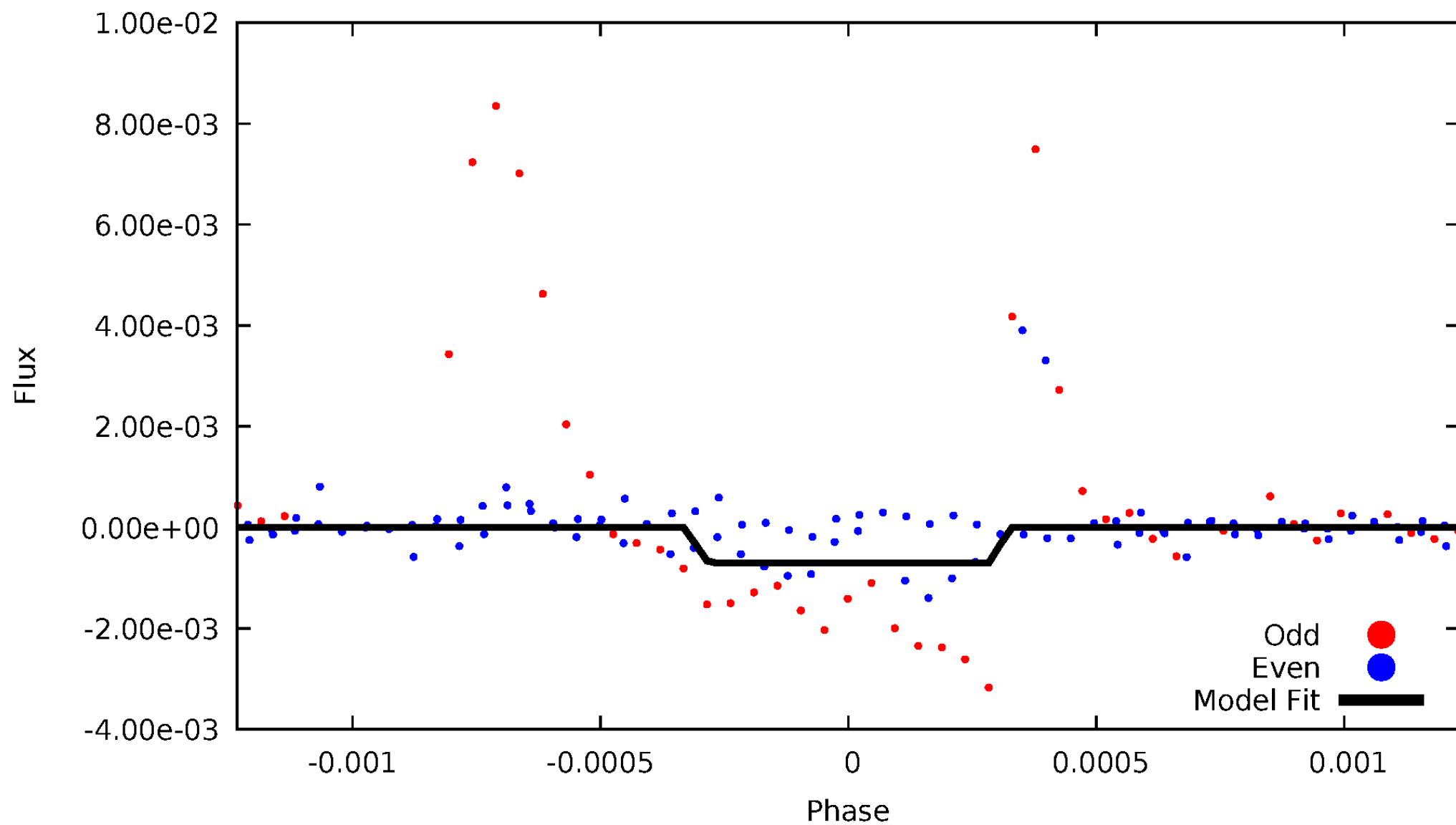
DV Odd/Even

TCE 006692180-05



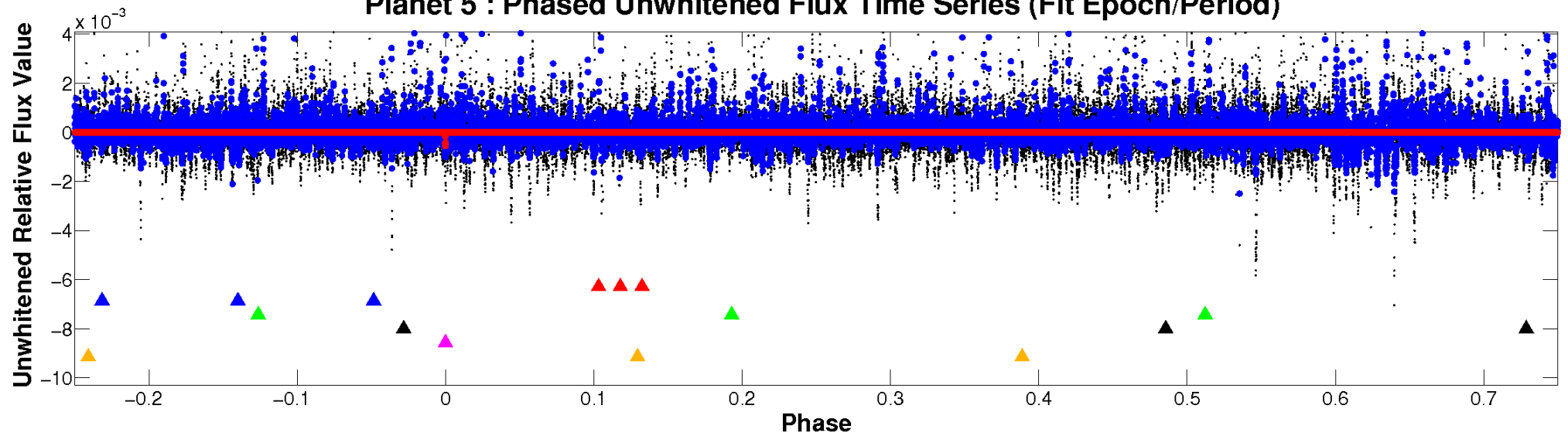
ALT Odd/Even

TCE 006692180-05

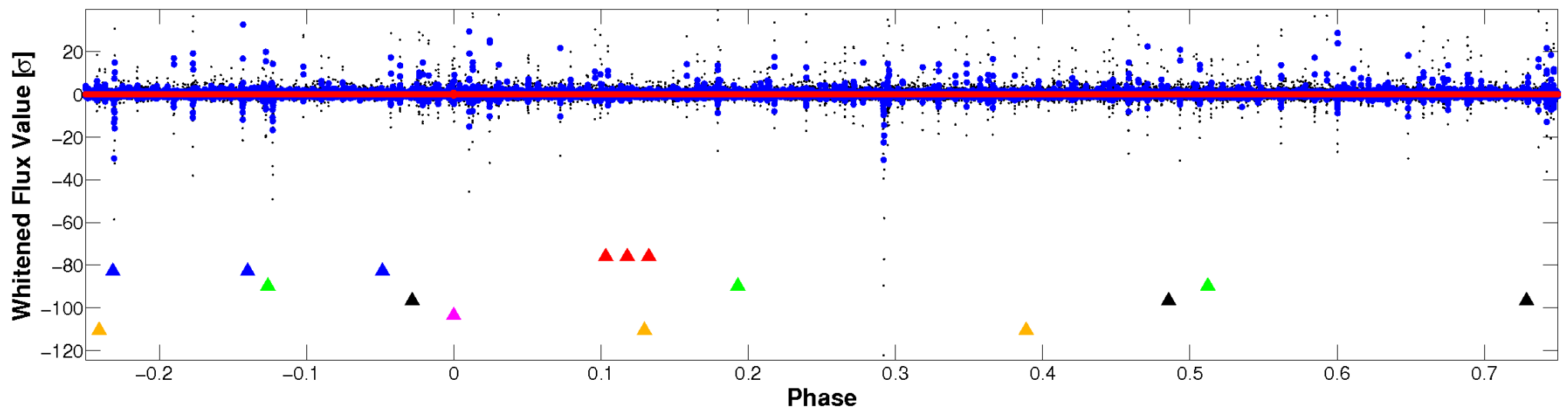


Non-Whitened Vs. Whitened Light Curve

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

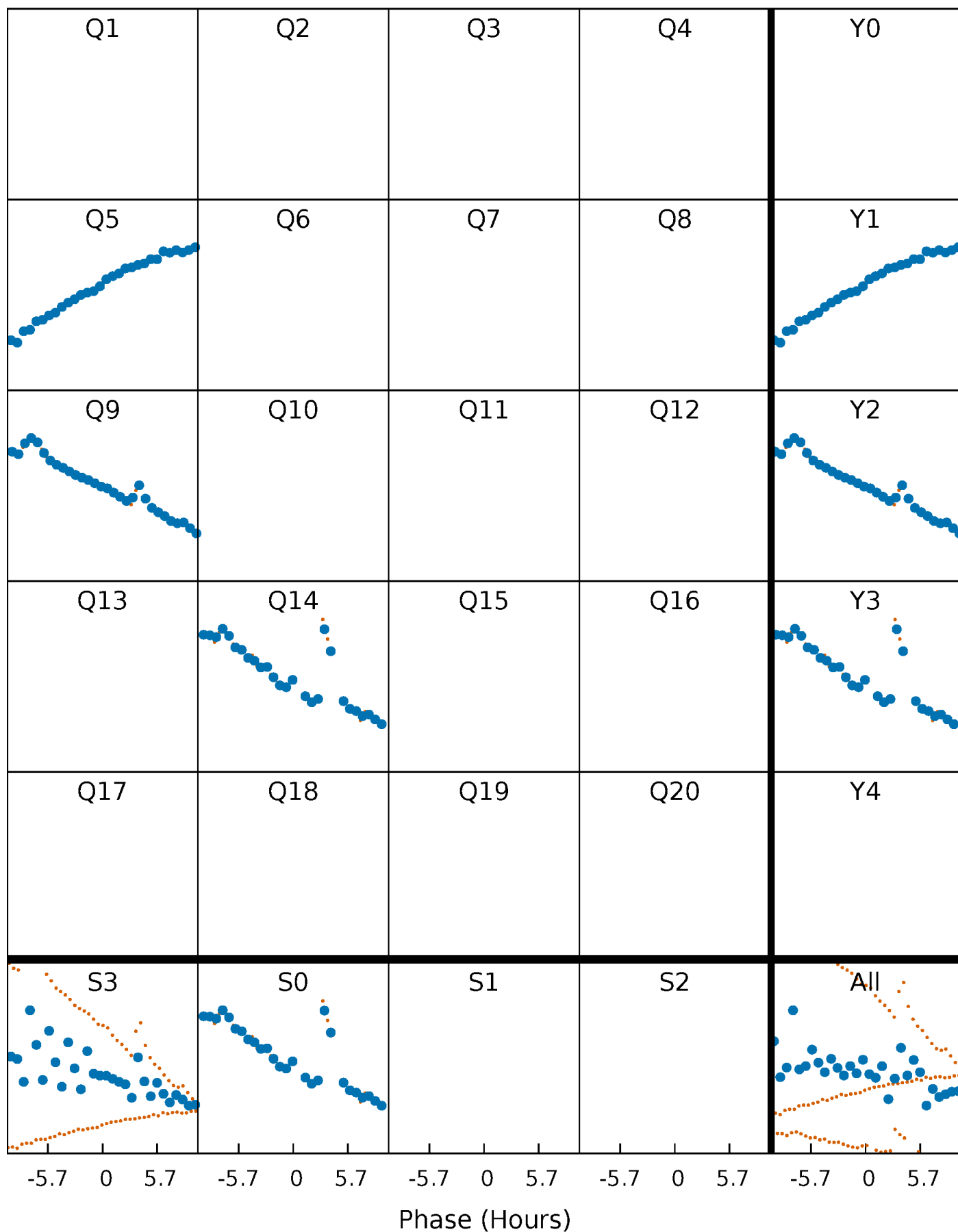


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



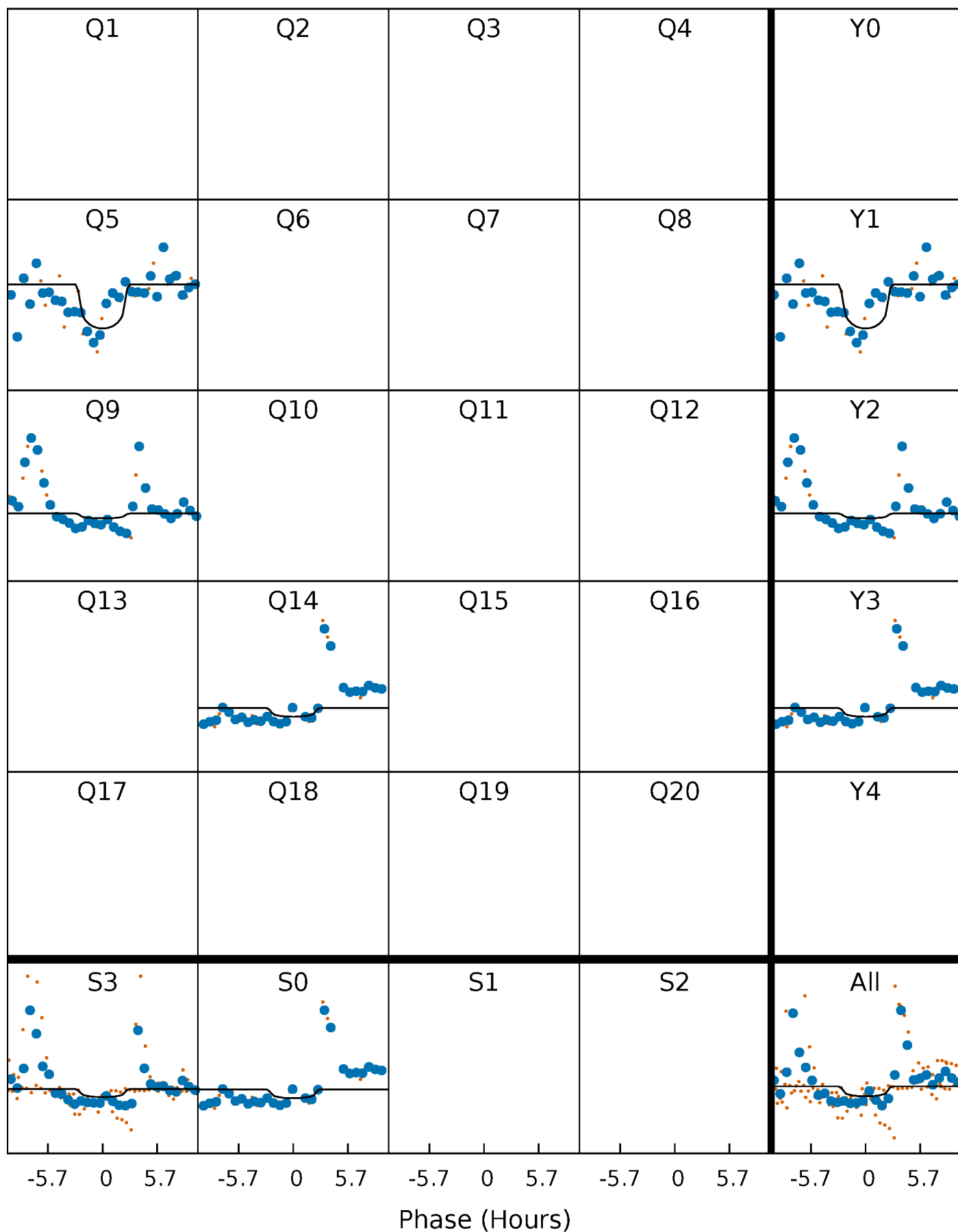
PDC Quarter-Phased Transit Curves

TCE 006692180-05 $P=431.882152$ Days $T_0=459.145859$ (BKJD)



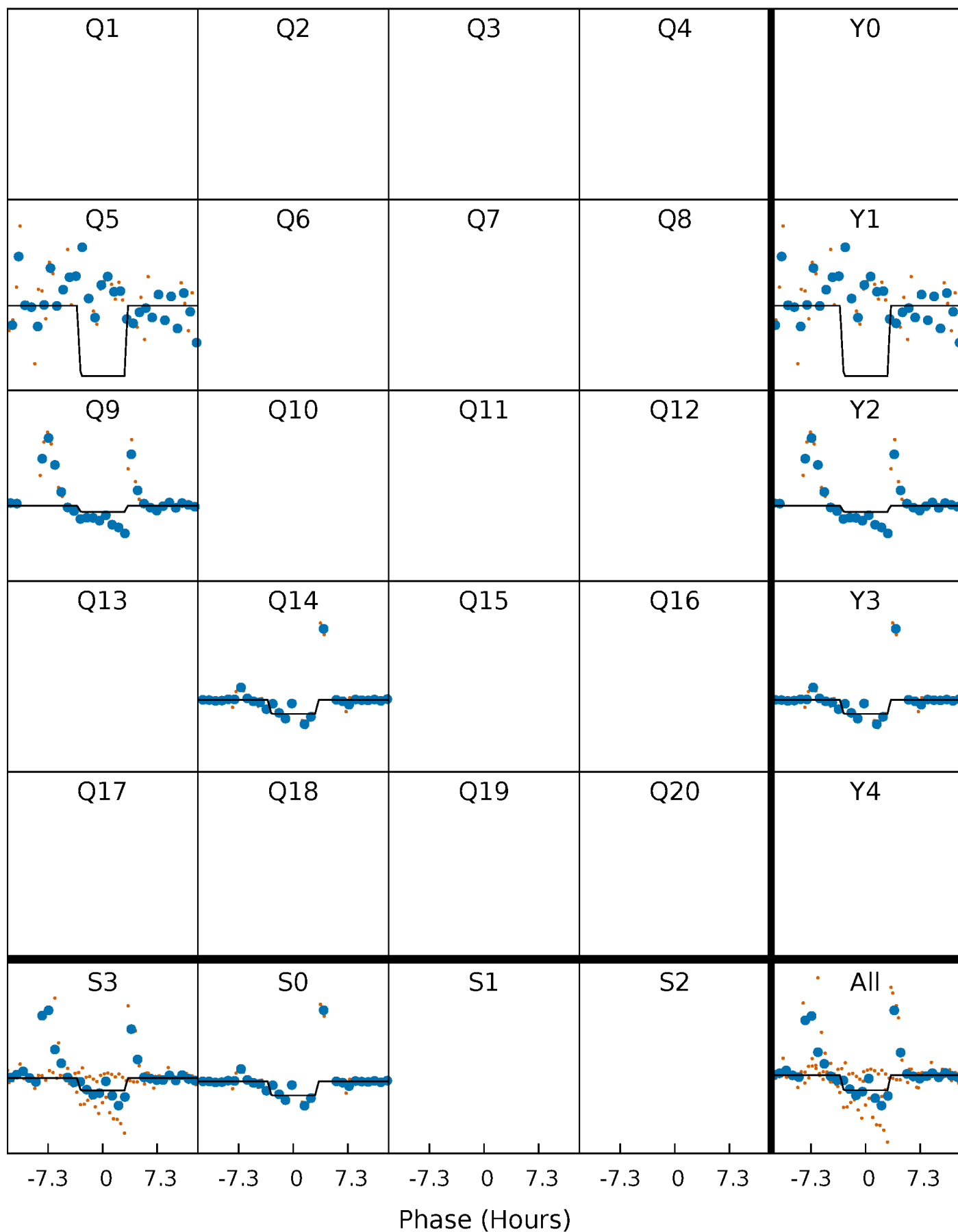
DV Quarter-Phased Transit Curves

TCE 006692180-05 $P=431.882152$ Days $T_0=459.145859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

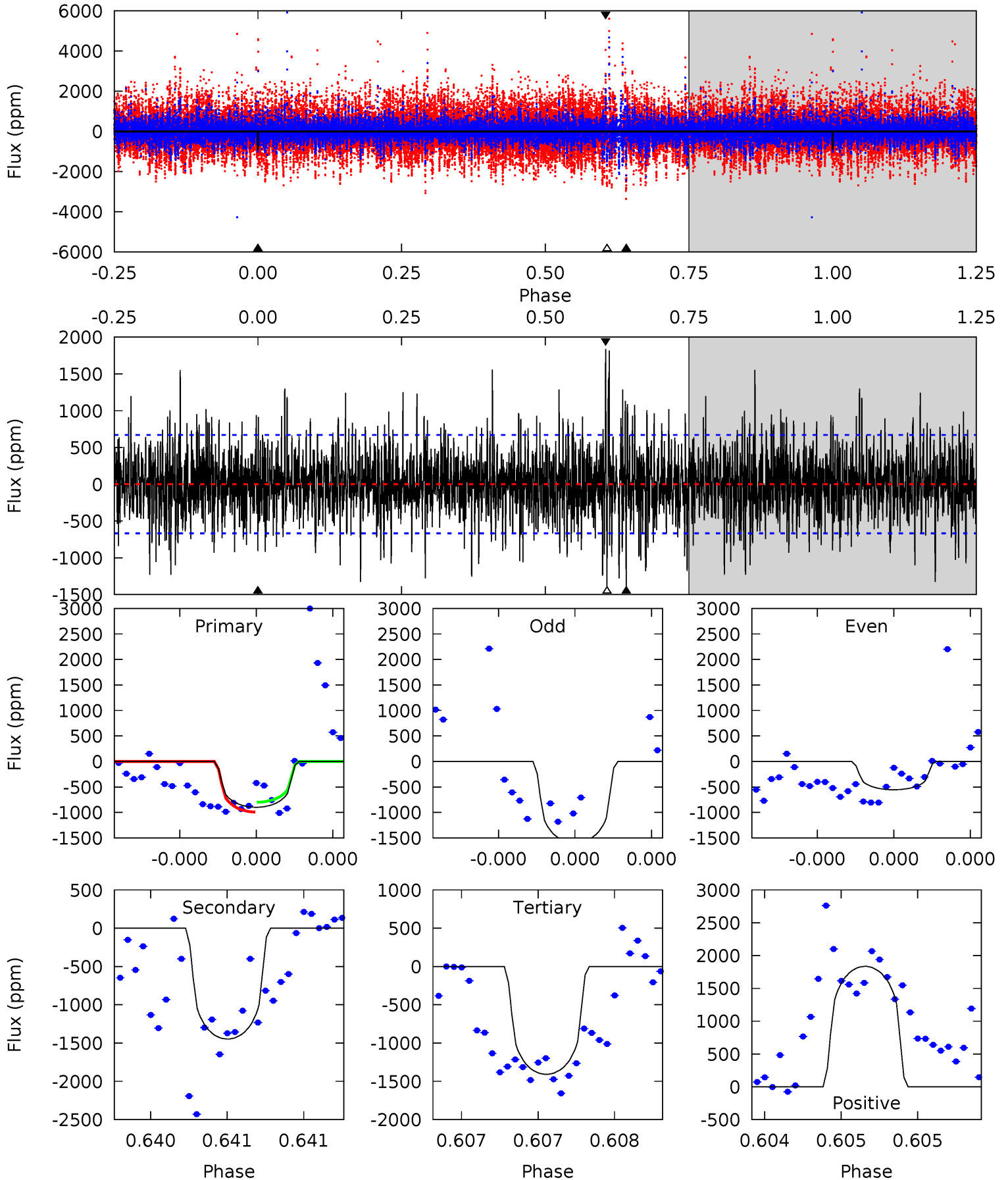
TCE 006692180-05 $P=431.876913$ Days $T_0=459.153534$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-05, P = 431.882152 Days, E = 27.263707 Days

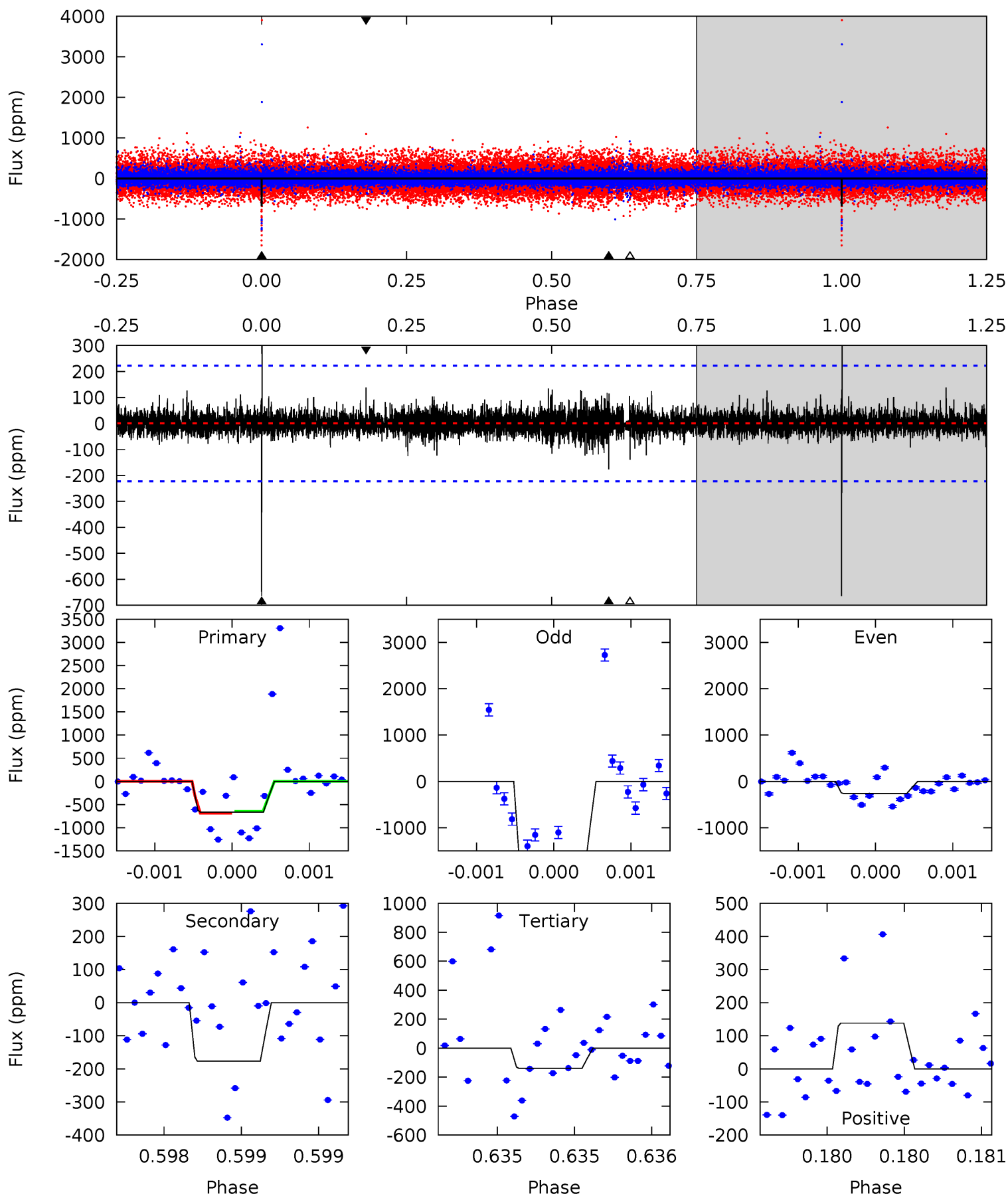
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	12.1	11.7	15.3	5.58	3.48	2.92	-4.26	-7.82	0.33	-3.23	2.63	1.39	0.56	0.81



Alt Model-Shift Uniqueness Test

006692180-05, P = 431.876913 Days, E = 27.276621 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.38	3.48	3.43	5.53	3.41	0.64	13.0	13.1	0.91	0.95	22.5	1.13	0.31	0.42



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1448 ± 120	$16.10^{+18.11}_{-11.49}$	393^{+57}_{-60}	3666^{+2367}_{-686}	3518^{+39550}_{-2756}
Alt.	-177 ± 40	$16.67^{+18.78}_{-11.59}$	397^{+51}_{-57}	2700^{+1032}_{-448}	399^{+4138}_{-314}

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 $A_{obs} \gg 1.0$

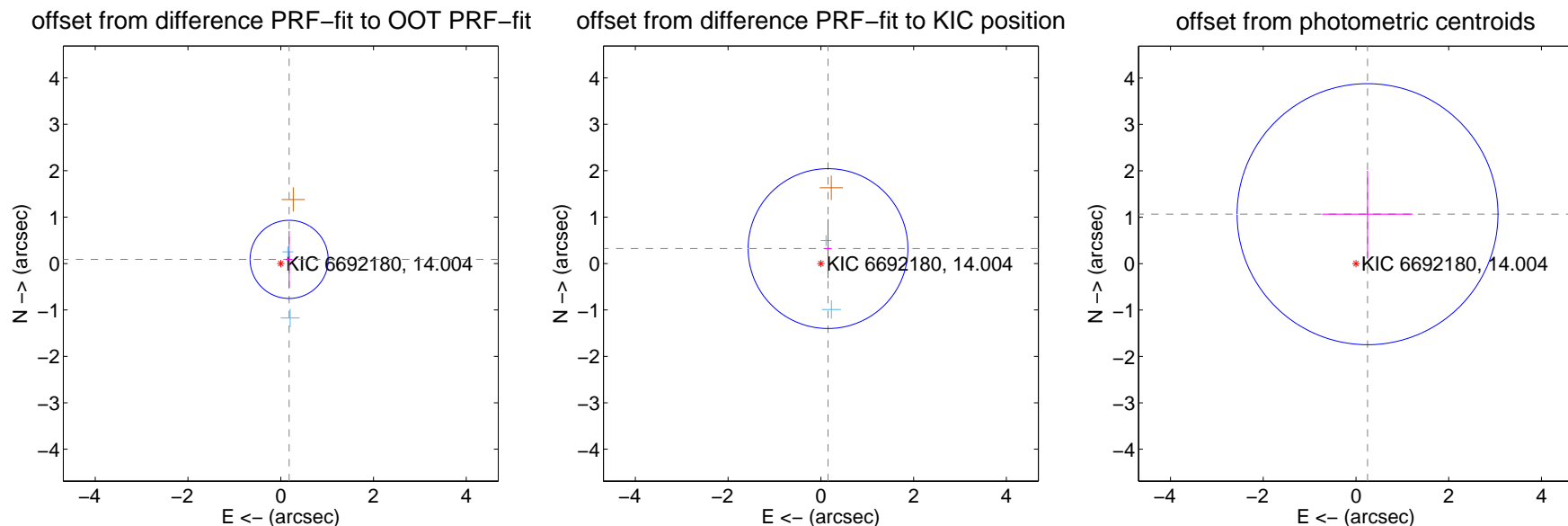
DV Centroid Data

Supplemental centroid analysis for 006692180-05. Kepler magnitude: 14.00. Transit SNR 2.87

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.281	0.72	-0.181 ± 0.074	0.090 ± 0.614
PRF-fit source offset from KIC position	0.357 ± 0.574	0.62	-0.154 ± 0.081	0.322 ± 0.635
photometric centroid source offset	1.09 ± 0.94	1.17	-0.25 ± 0.98	1.07 ± 0.94

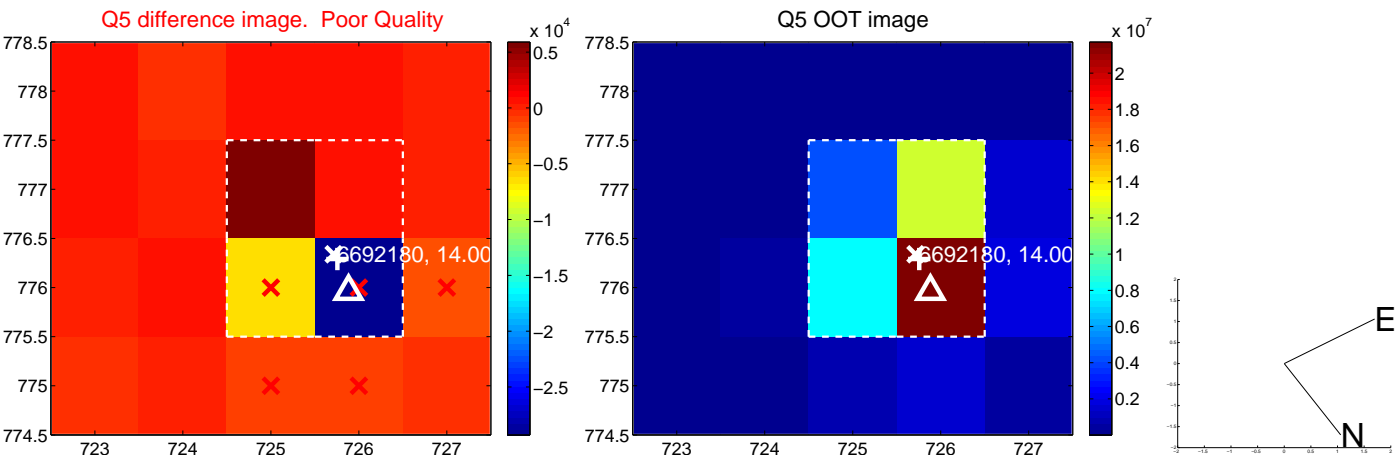


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

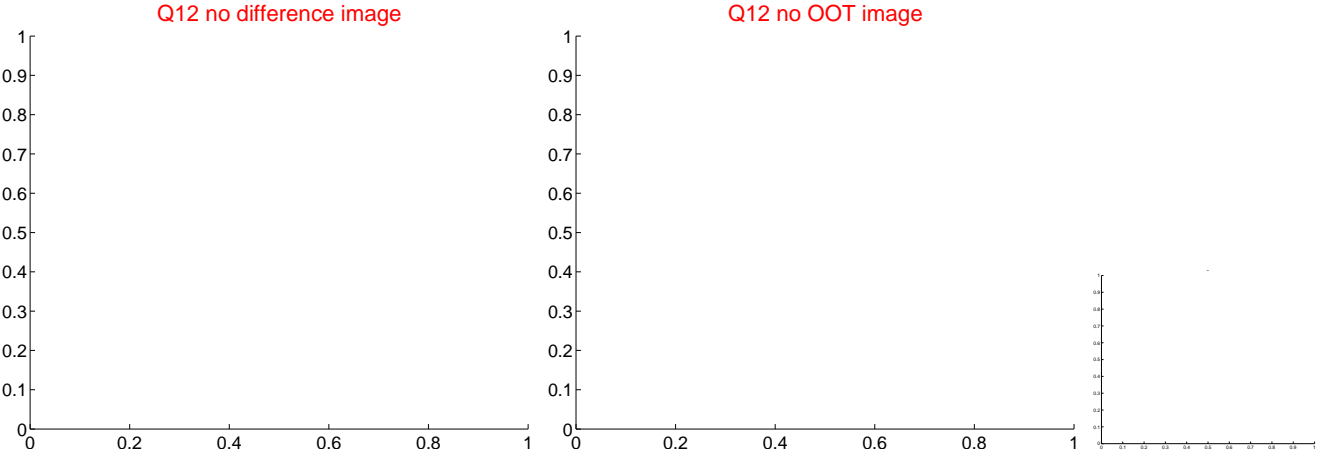
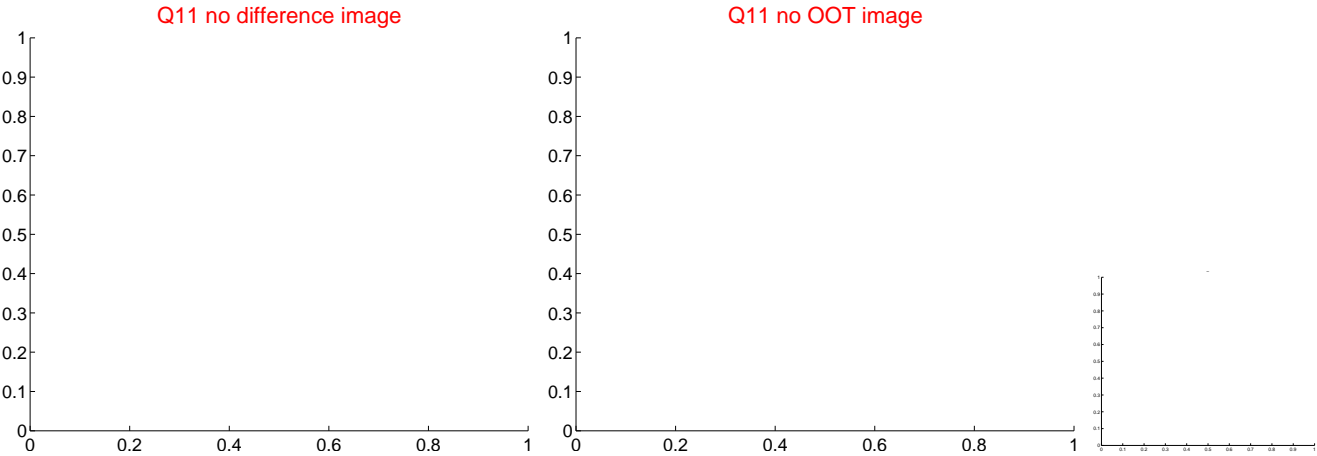
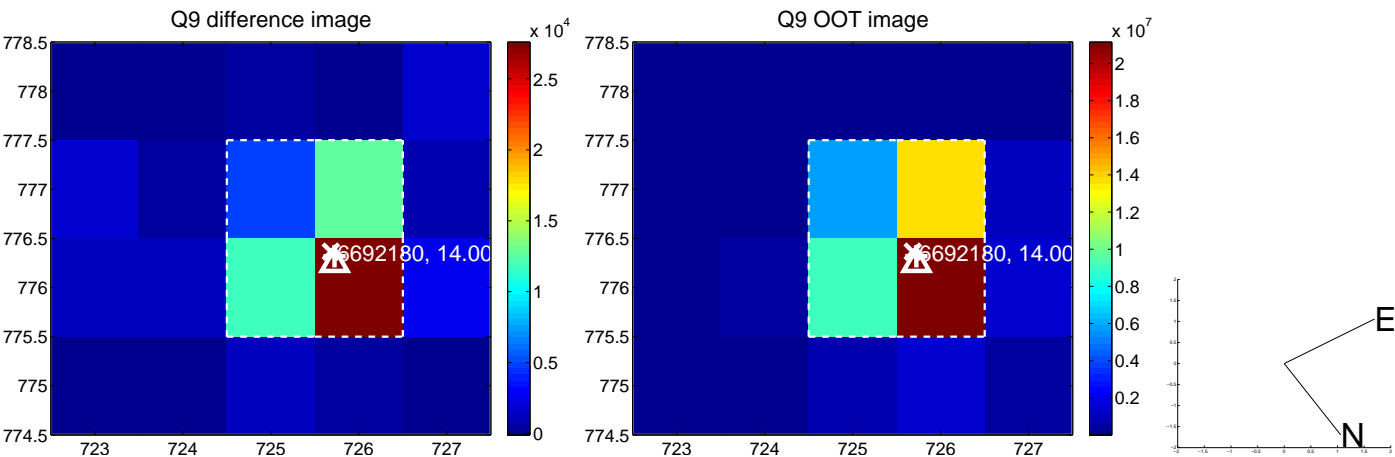
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



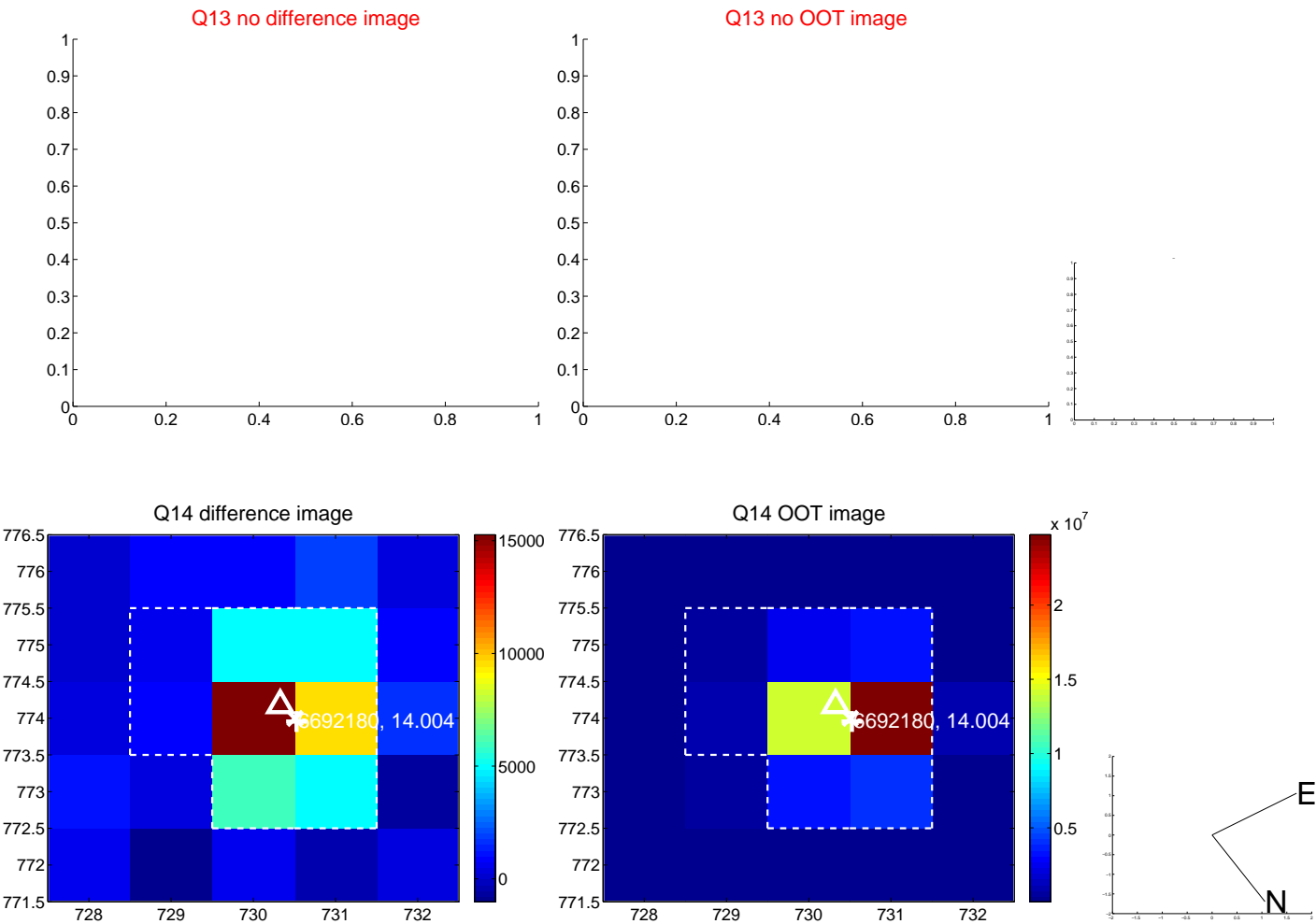
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



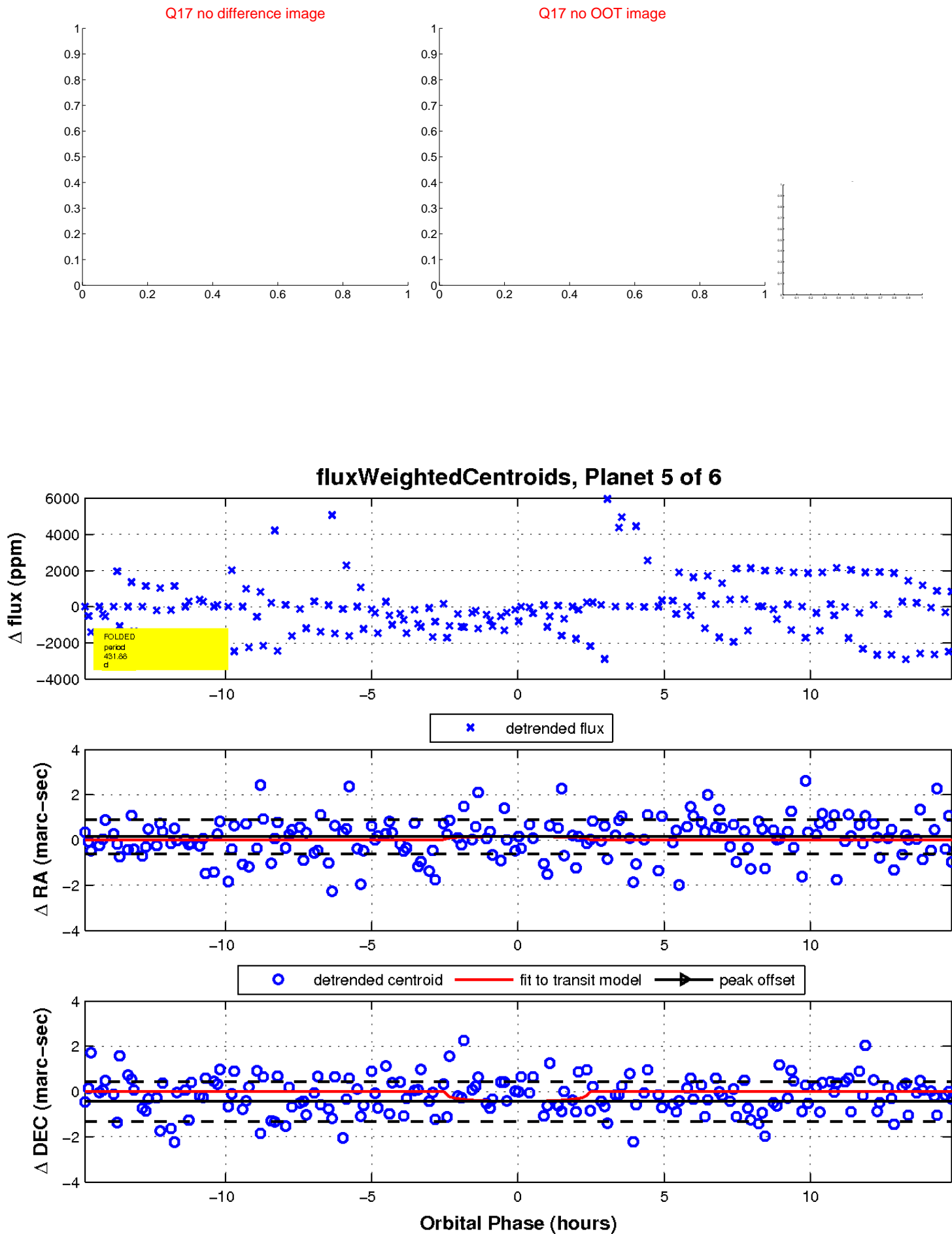
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



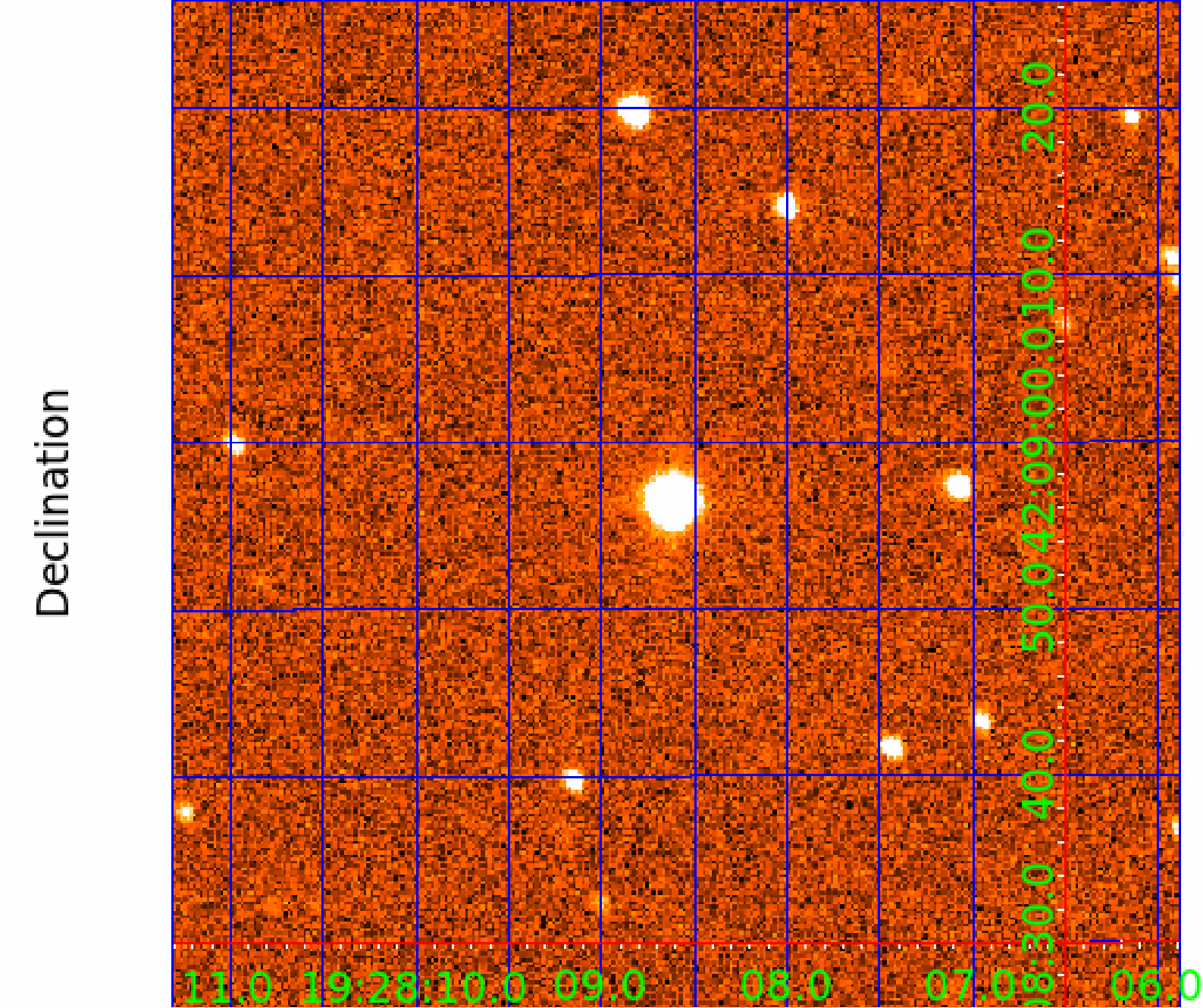
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006692180

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})
006692180-01	OBS	No	425.562204	516.376279	1079.3	4.441	19.9	6.6	1.68	5226	6.01	1.66
006692180-02	OBS	No	471.428379	359.149997	1788.1	8.949	18.2	7.3	1.68	5226	7.15	1.44
006692180-03	OBS	No	569.751541	404.625648	1229.3	4.708	15.6	6.5	1.68	5226	6.16	1.12
006692180-04	OBS	No	536.874783	236.974860	1303.1	11.207	13.3	5.1	1.68	5226	6.13	1.22
006692180-05	OBS	No	431.882152	459.145859	560.2	4.969	17.7	2.9	1.68	5226	3.92	1.62
006692180-06	OBS	No	591.832988	195.189891	1025.1	3.203	14.1	5.6	1.68	5226	5.38	1.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006692180-01	OBS	FP	0.00	1	0	1	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—HALO_GHOST
006692180-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006692180-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006692180-04	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—HALO_GHOST
006692180-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006692180-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

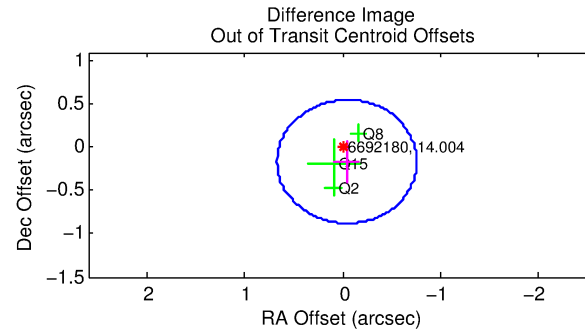
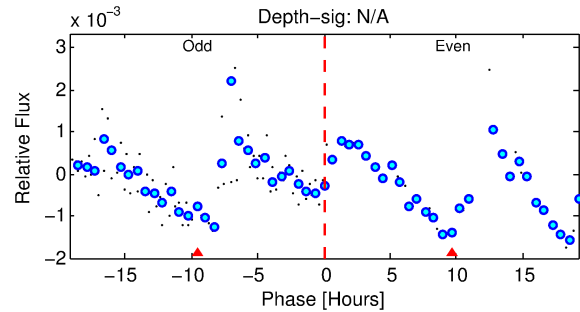
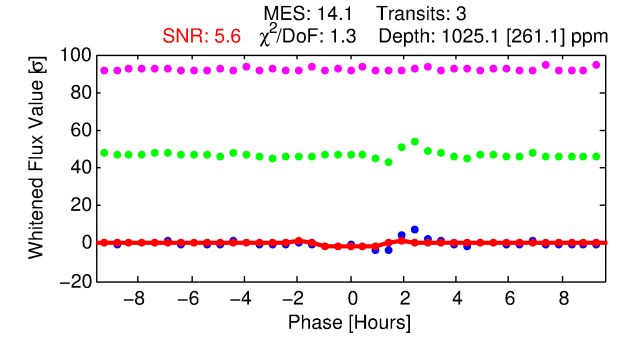
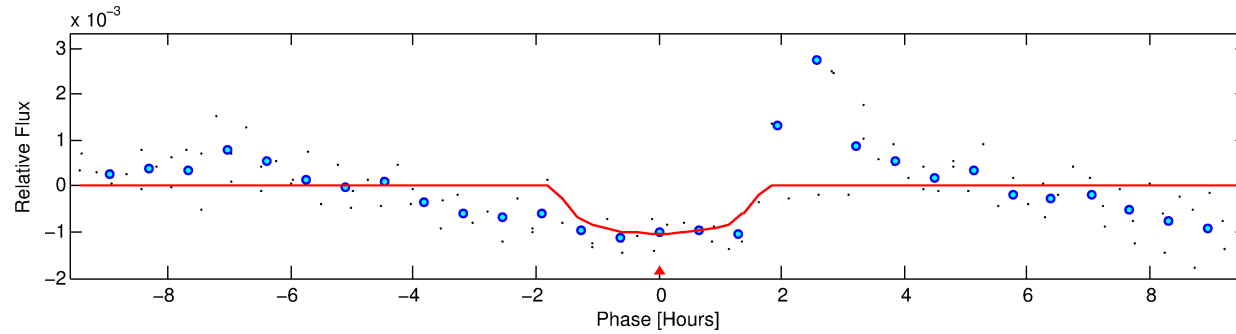
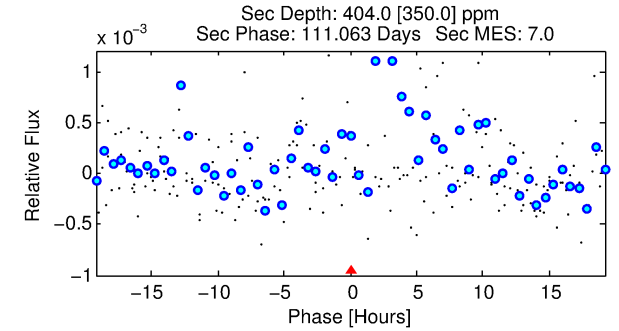
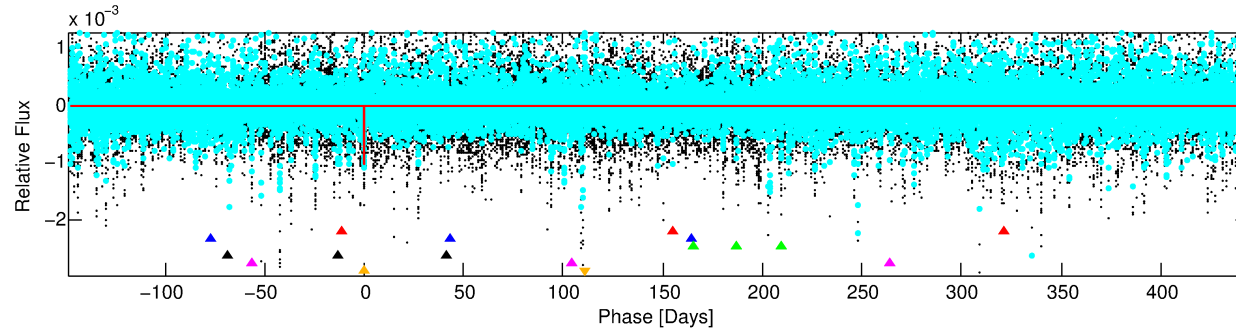
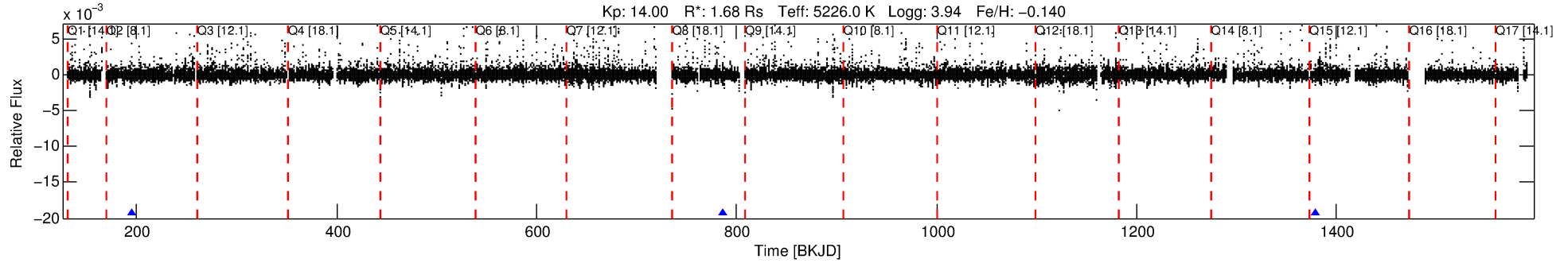
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006692180-06

No Significant Match Found

DV One-Page Summary

KIC: 6692180 Candidate: 6 of 6 Period: 591.833 d



DV Fit Results:

Period = 591.83299 [0.00815] d
Epoch = 195.1899 [0.0099] BKJD
Rp/R* = 0.0294 [0.0969]
a/R* = 1325.60 [16158.10]
b = 0.42 [24.08]
Seff = 1.07 [1.06]
Teq = 259 [64] K
Rp = 5.38 [17.95] Re
a = 1.3259 [0.7687] AU
Ag = 13510.09 [90765.91] [0.15] σ
Teffp = 4319 [7178] K [0.57] σ

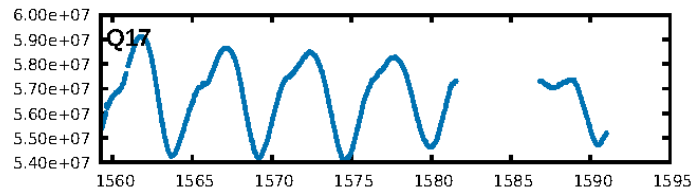
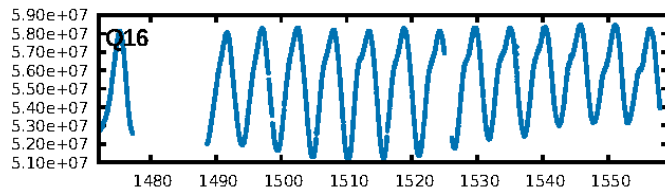
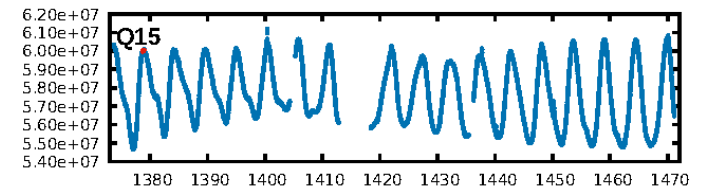
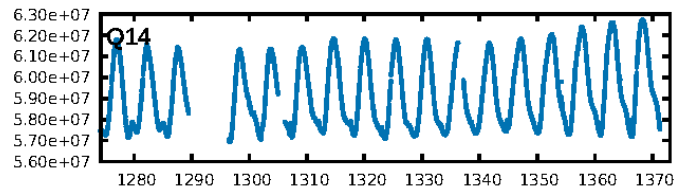
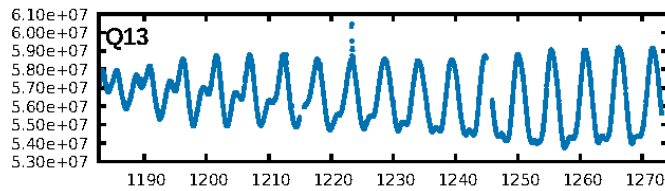
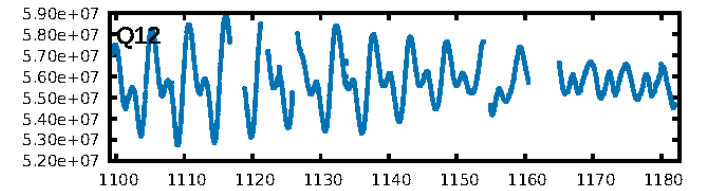
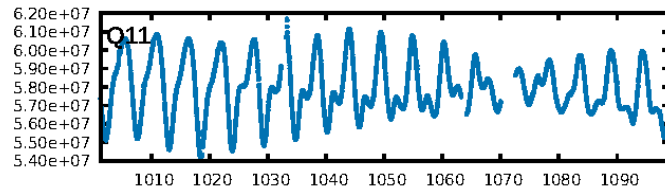
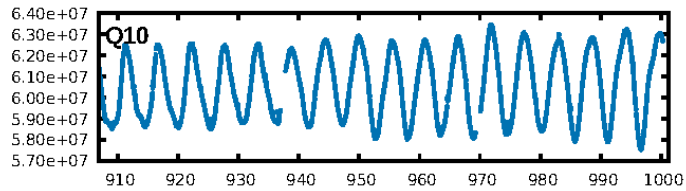
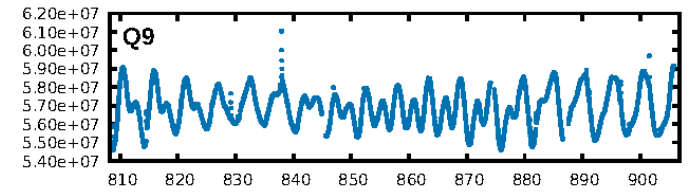
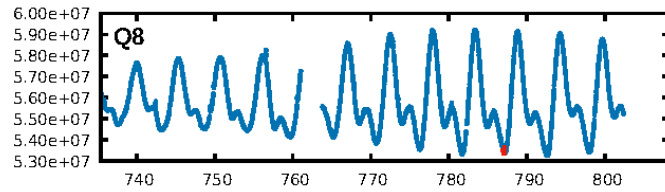
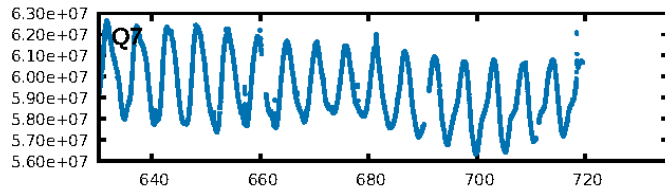
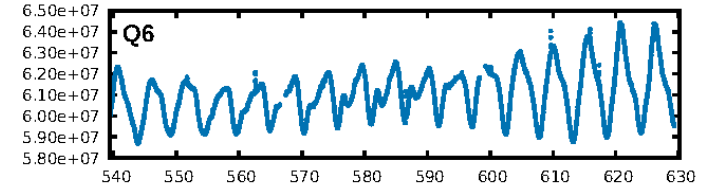
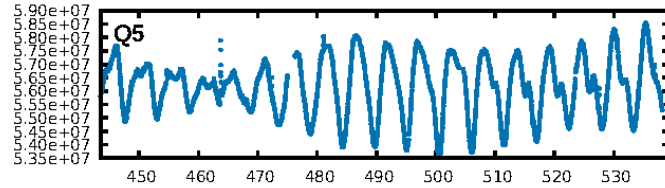
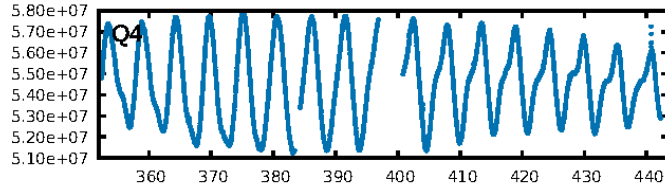
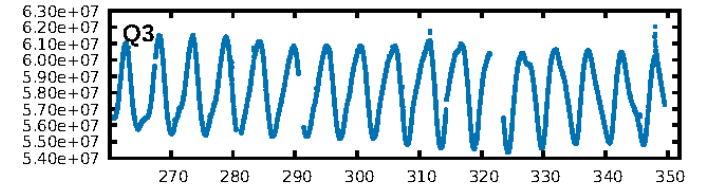
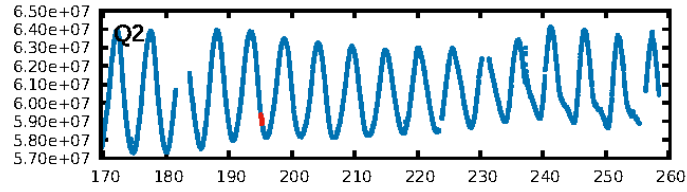
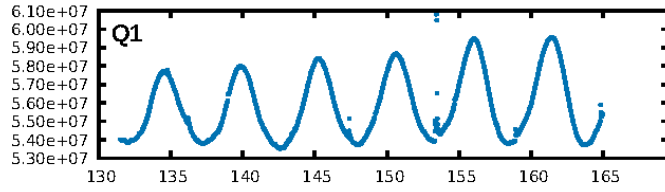
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [93.07] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.8%
ModelChiSquareGof-sig: 79.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.229
Centroid-sig: 9.3%
Centroid-so: 1.375 arcsec [1.57] σ
OotOffset-rm: 0.171 arcsec [0.72] σ
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.020 arcsec [0.10] σ
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

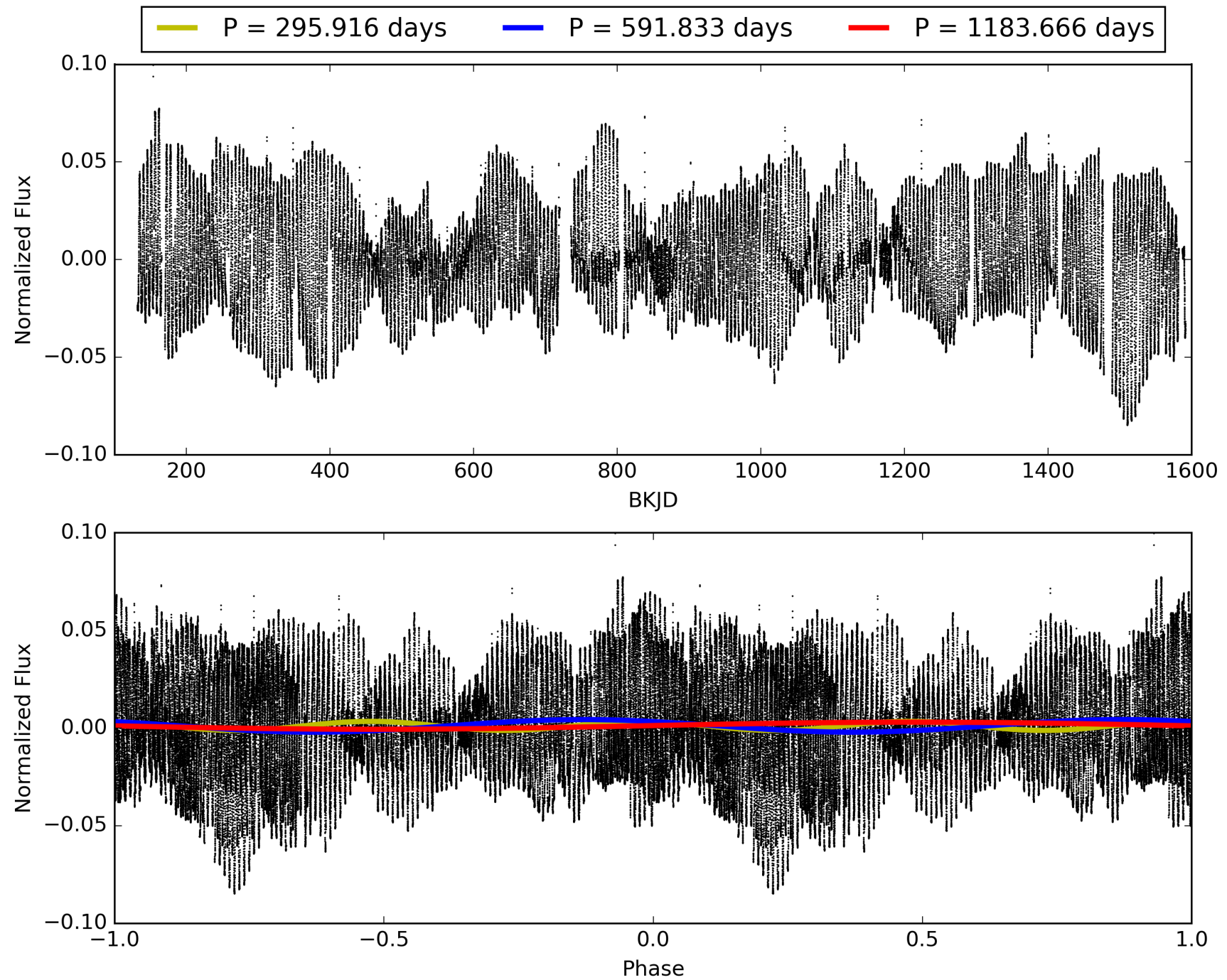
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:59:57 Z

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

TCE 006692180-06, PDC Light Curves

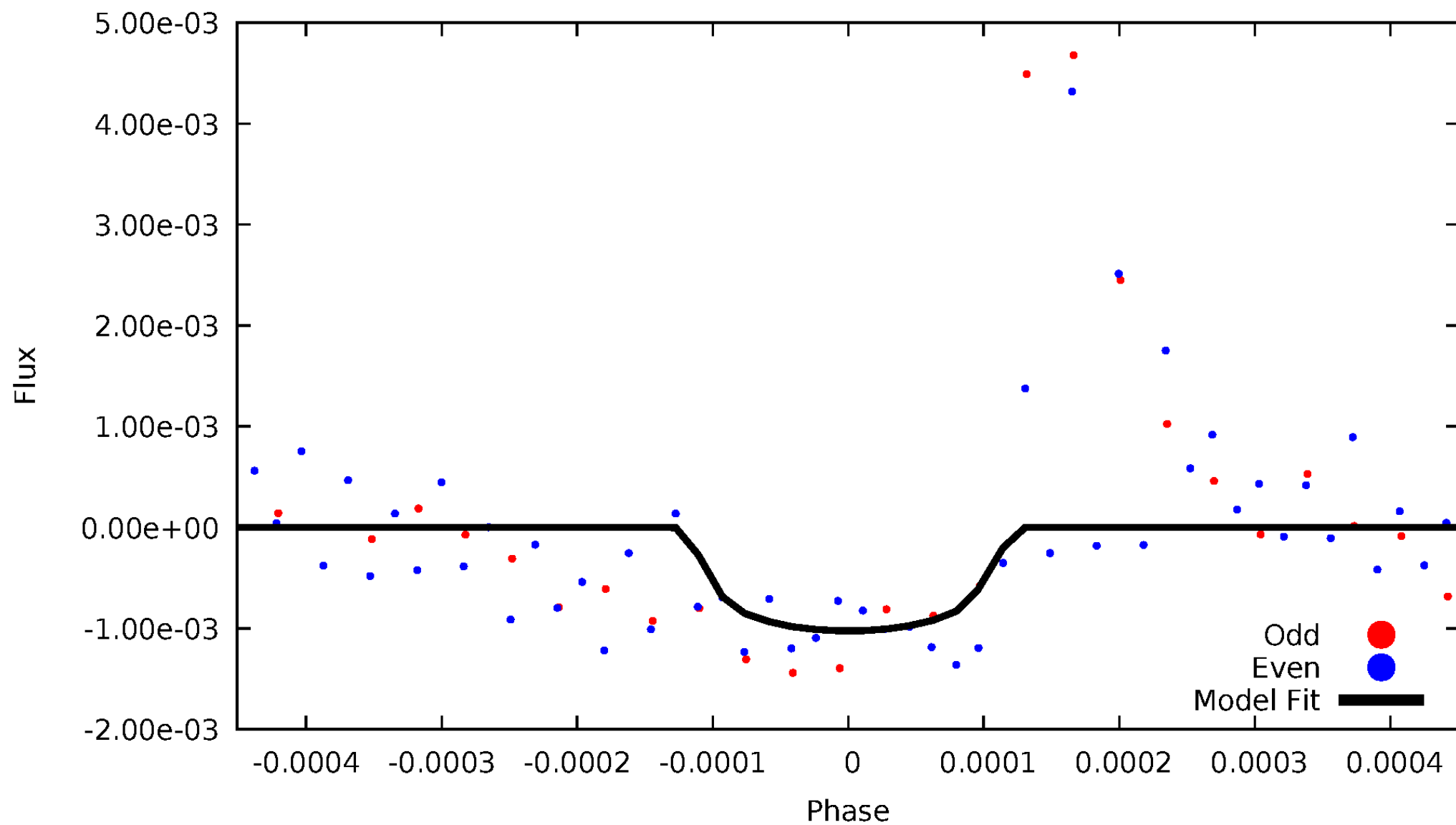


TCE 006692180-06



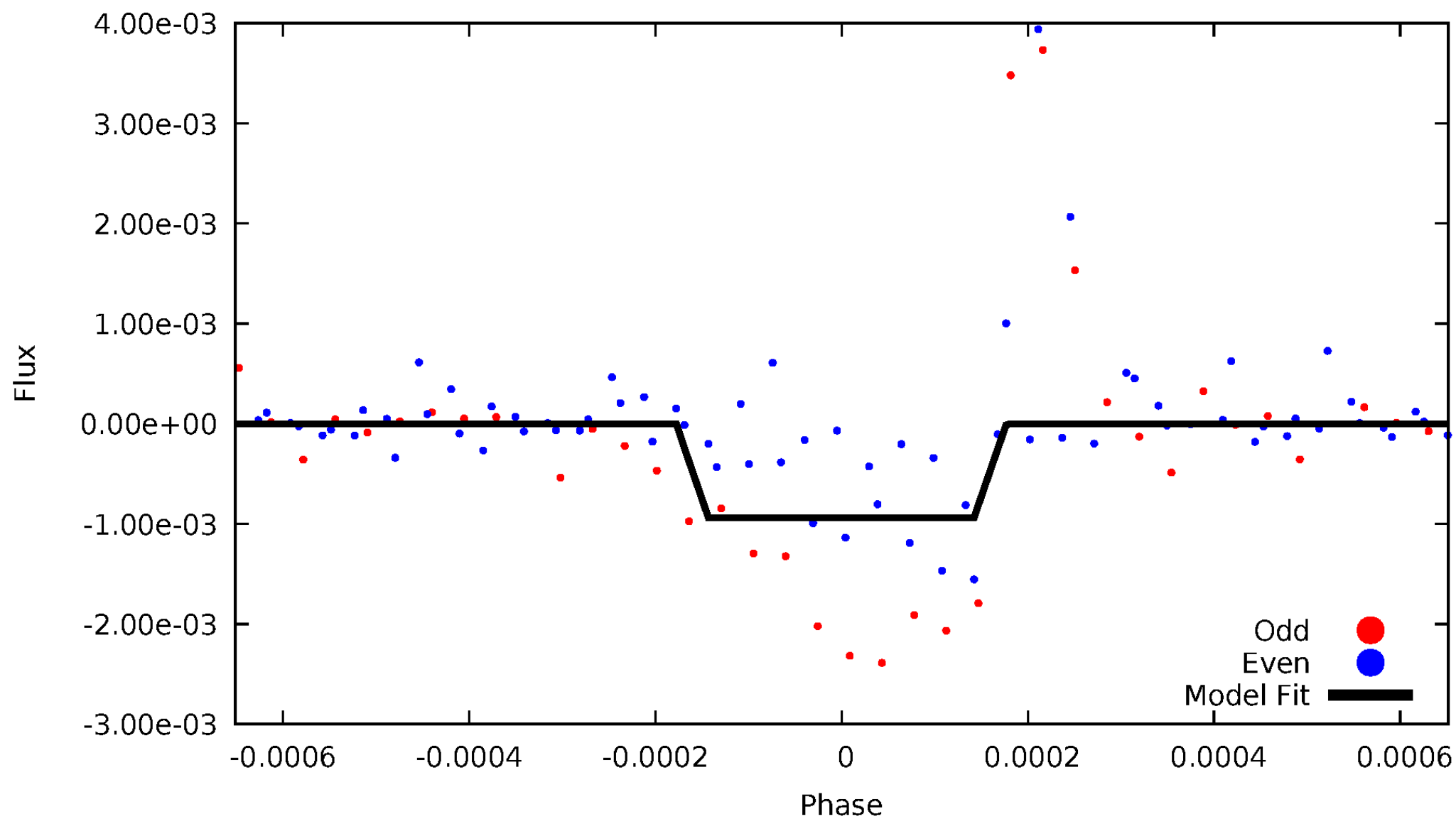
DV Odd/Even

TCE 006692180-06



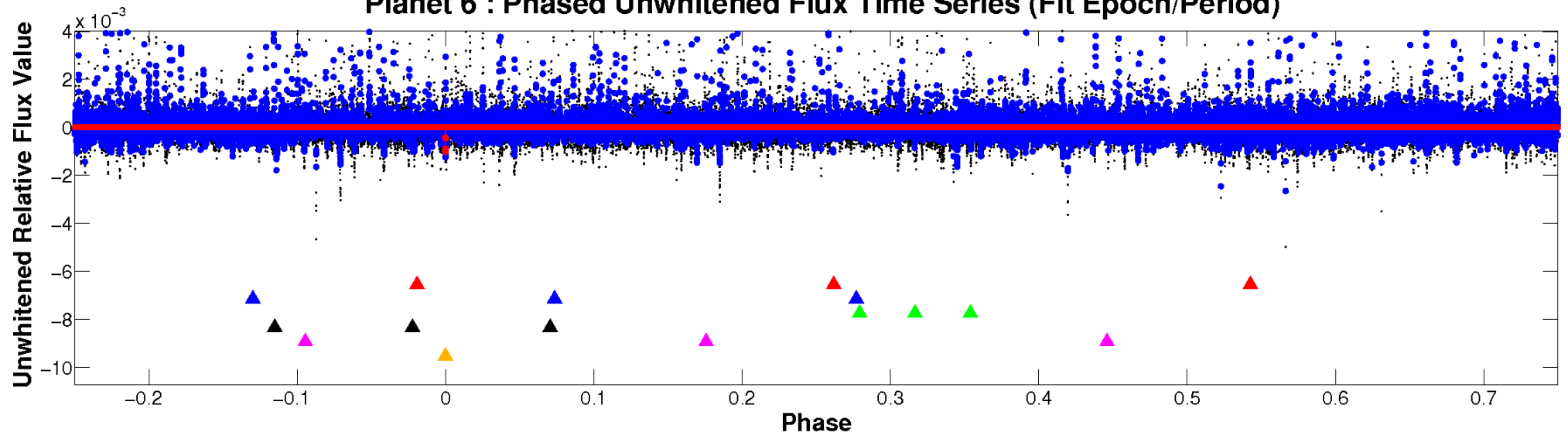
ALT Odd/Even

TCE 006692180-06

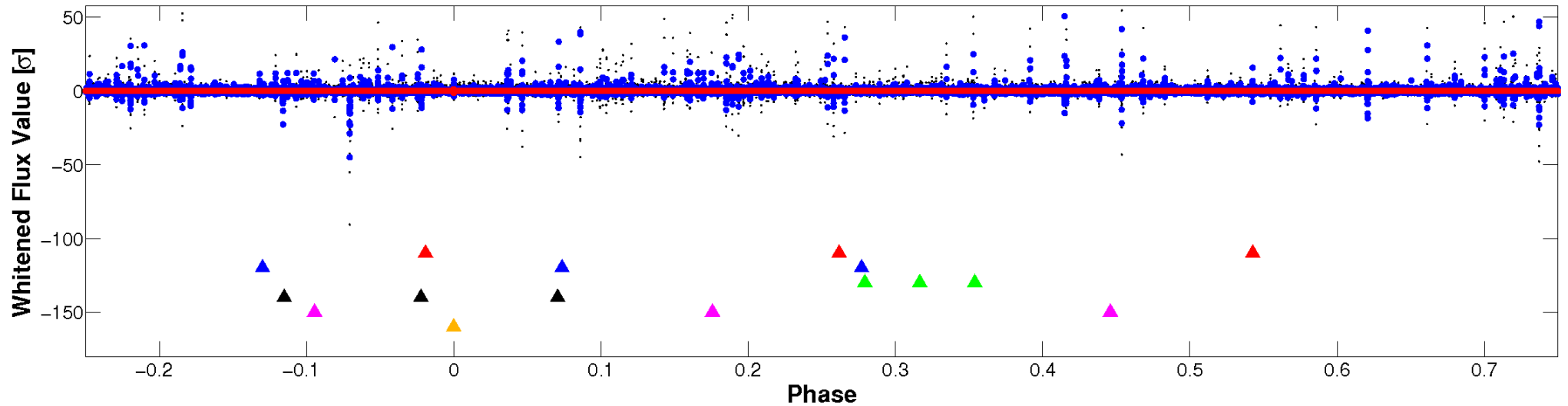


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

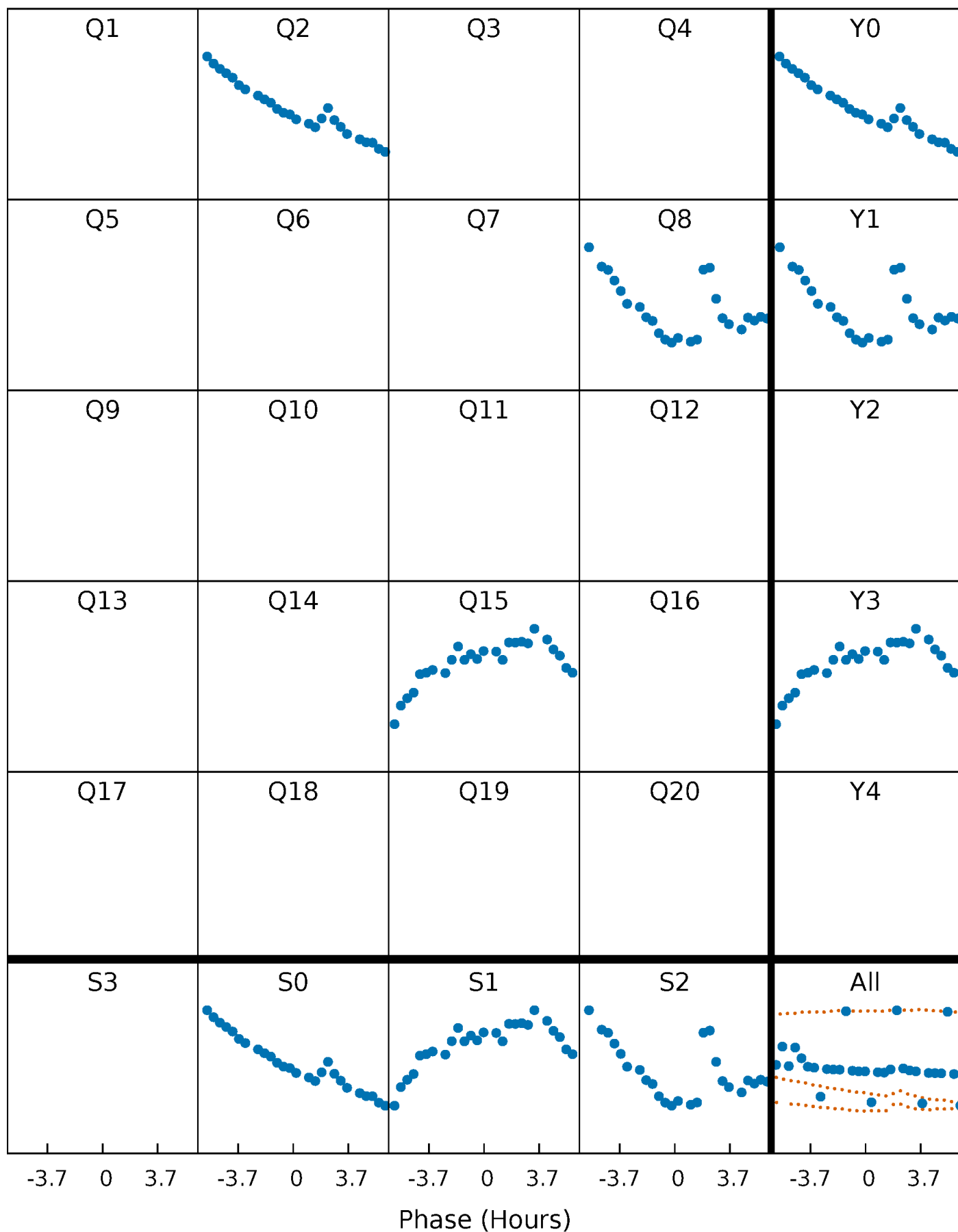


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



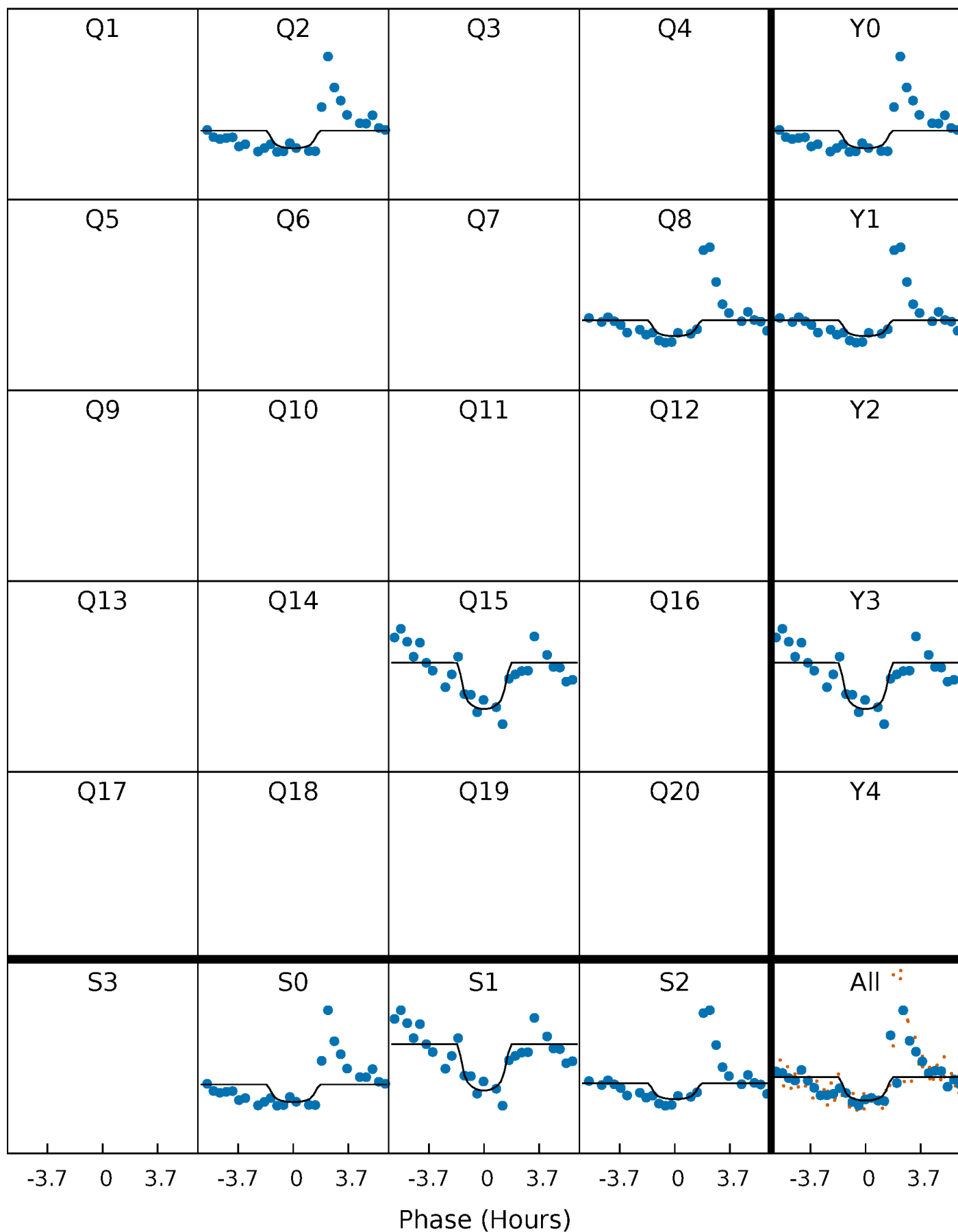
PDC Quarter-Phased Transit Curves

TCE 006692180-06 P=591.832988 Days $T_0=195.189891$ (BKJD)



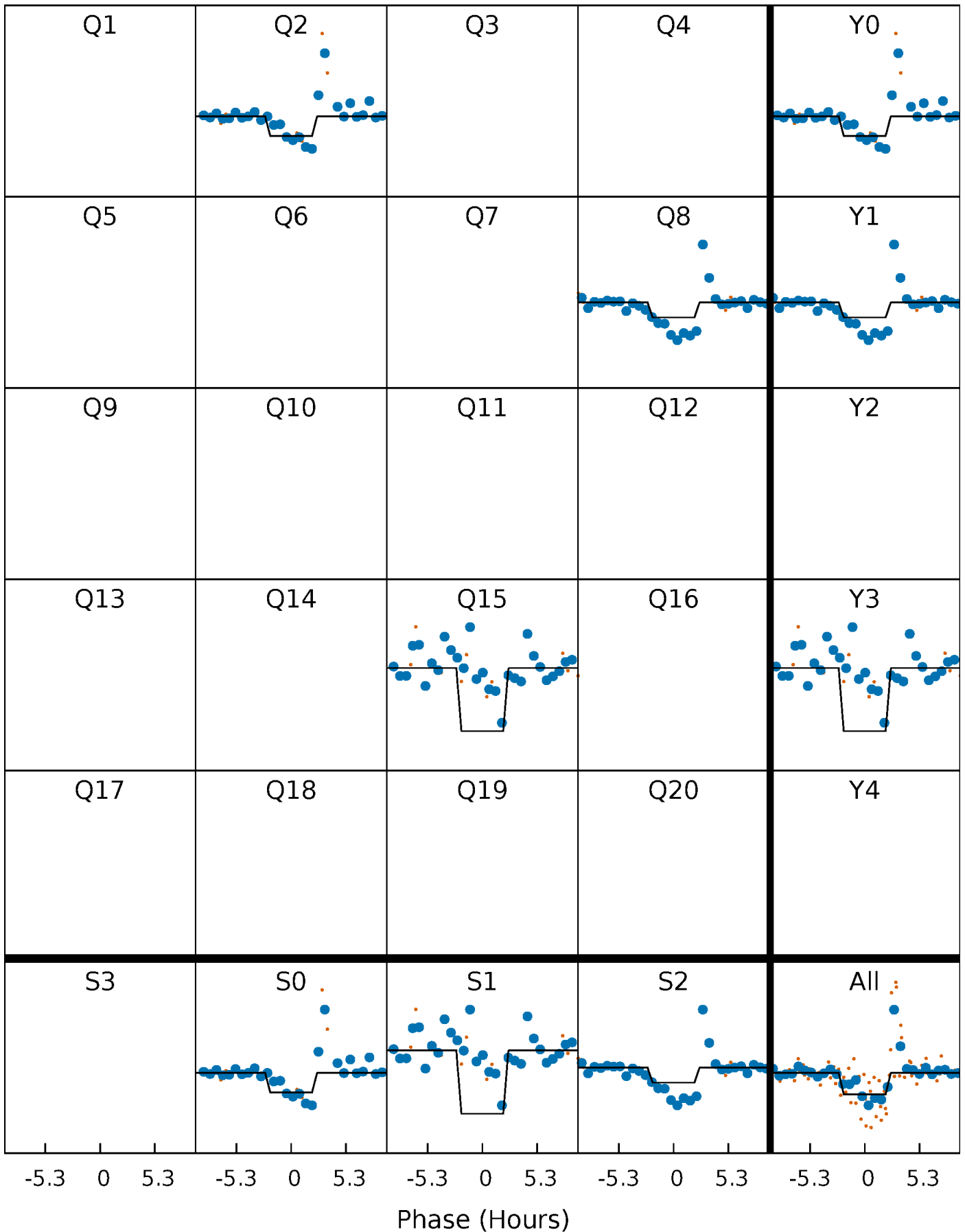
DV Quarter-Phased Transit Curves

TCE 006692180-06 P=591.832988 Days $T_0=195.189891$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

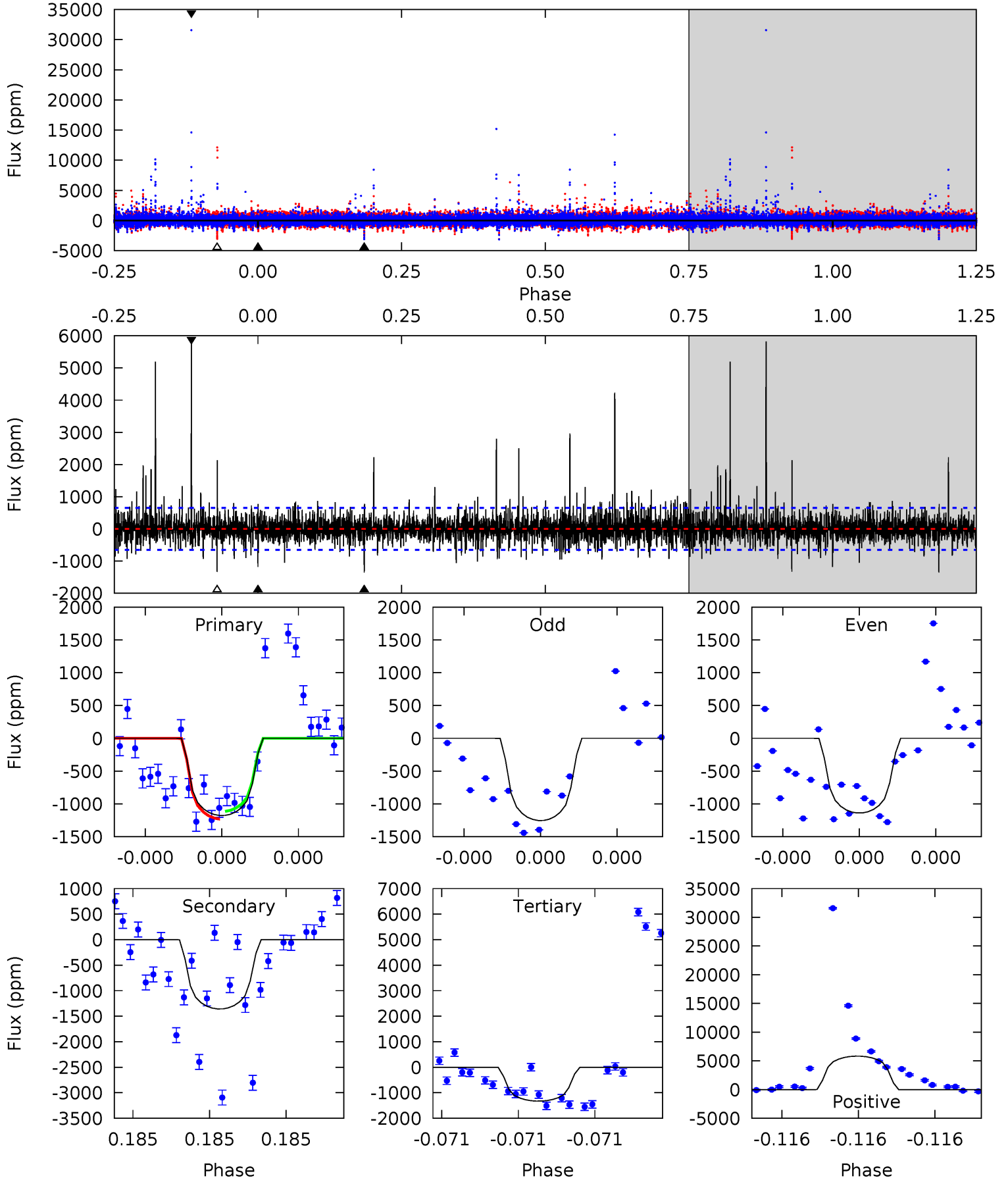
TCE 006692180-06 P=591.830821 Days $T_0=195.162670$ (BKJD)



DV Model-Shift Uniqueness Test

006692180-06, P = 591.832988 Days, E = 195.189891 Days

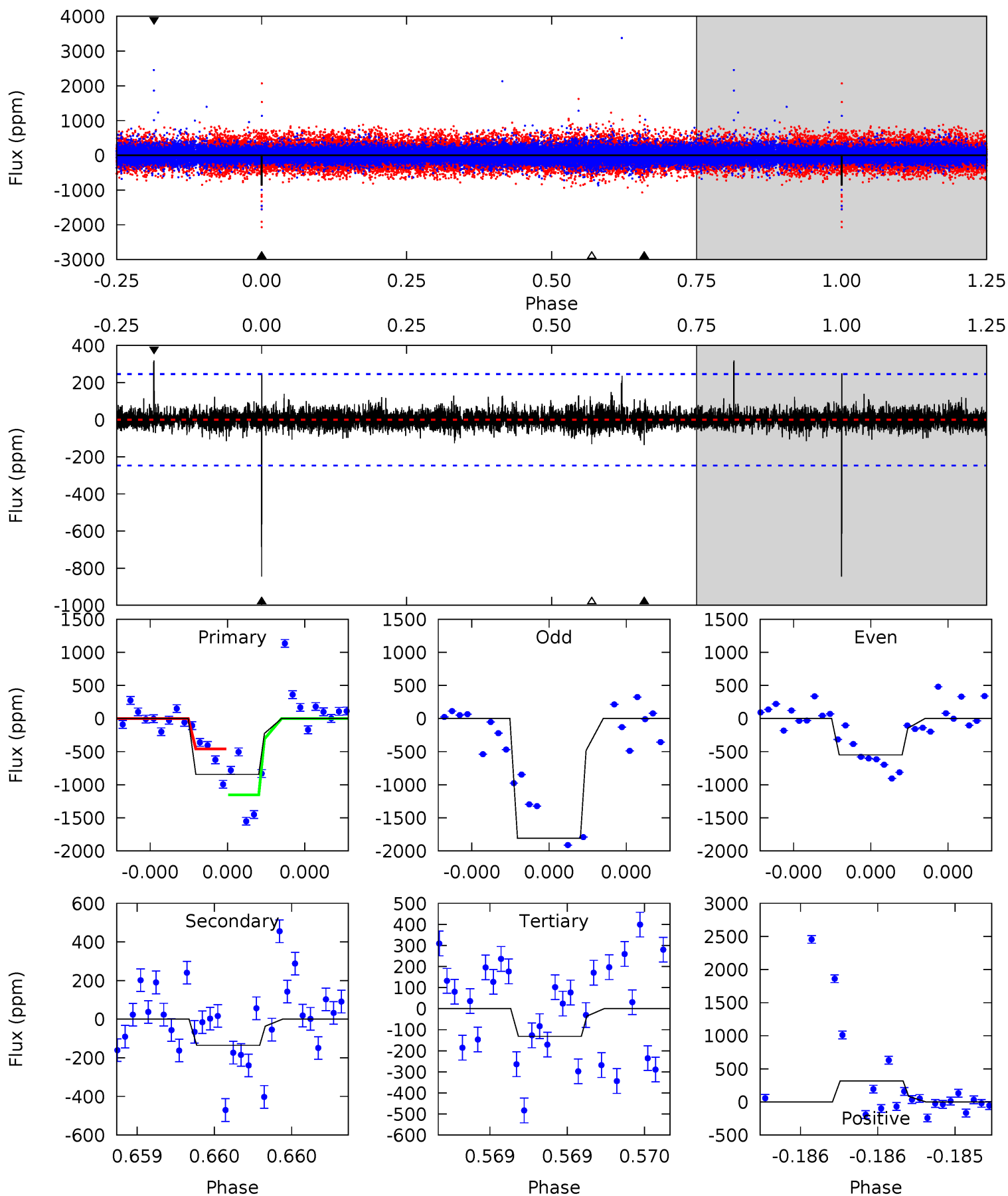
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	11.8	11.5	50.7	5.70	3.67	2.58	-1.30	-40.4	0.27	-38.9	0.25	0.96	0.81	0.51



Alt Model-Shift Uniqueness Test

006692180-06, P = 591.830821 Days, E = 195.162670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	3.10	3.01	7.28	5.64	3.58	0.61	16.3	12.0	0.10	-4.17	14.9	1.04	0.27	8.13



Stellar Parameters For KIC 006692180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5226^{+158}_{-142}	$3.938^{+0.598}_{-0.276}$	$-0.140^{+0.350}_{-0.250}$	$1.675^{+0.890}_{-0.890}$	$0.889^{+0.078}_{-0.123}$	$0.266^{+2.486}_{-0.168}$
	+3%/-3%	+15%/-7%	+250%/-179%	+53%/-53%	+9%/-14%	+934%/-63%
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 006692180-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1357 ± 115	$13.26^{+15.30}_{-9.31}$	352^{+52}_{-52}	3876^{+2507}_{-773}	7382^{+79450}_{-5745}
Alt.	-136 ± 44	$12.39^{+14.69}_{-8.84}$	356^{+51}_{-53}	2783^{+1303}_{-452}	788^{+9677}_{-624}

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 $A_{obs} \gg 1.0$

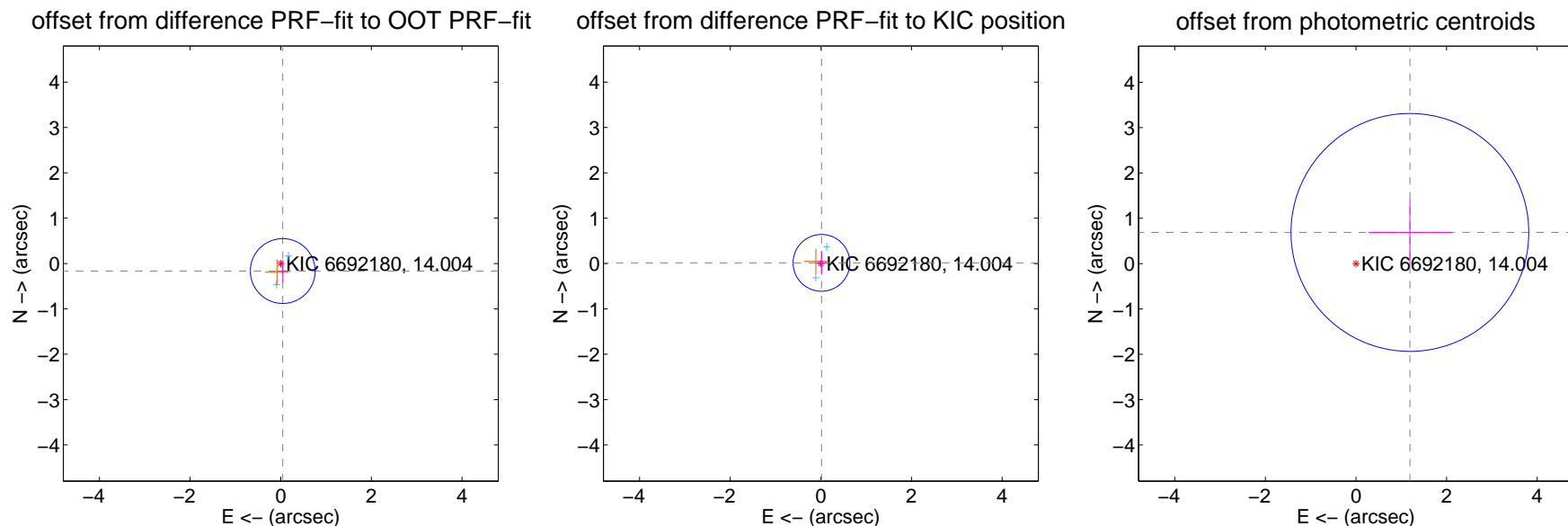
DV Centroid Data

Supplemental centroid analysis for 006692180-06. Kepler magnitude: 14.00. Transit SNR 5.64

There are 2 quarters with good PRF difference image offsets

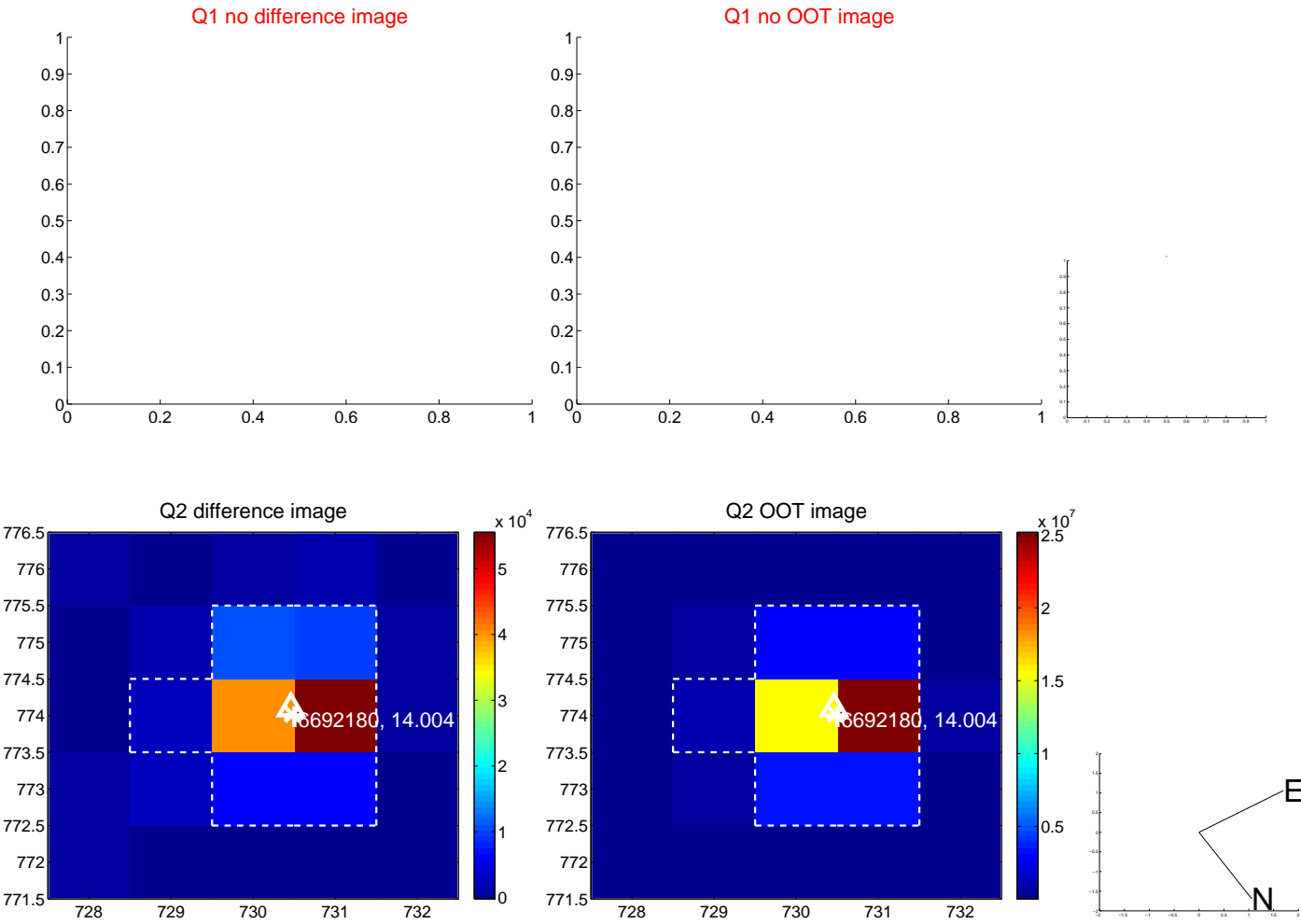
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.171 ± 0.238	0.72	-0.044 ± 0.120	-0.165 ± 0.244
PRF-fit source offset from KIC position	0.020 ± 0.209	0.10	-0.014 ± 0.114	0.015 ± 0.261
photometric centroid source offset	1.37 ± 0.87	1.57	-1.19 ± 0.92	0.69 ± 0.73

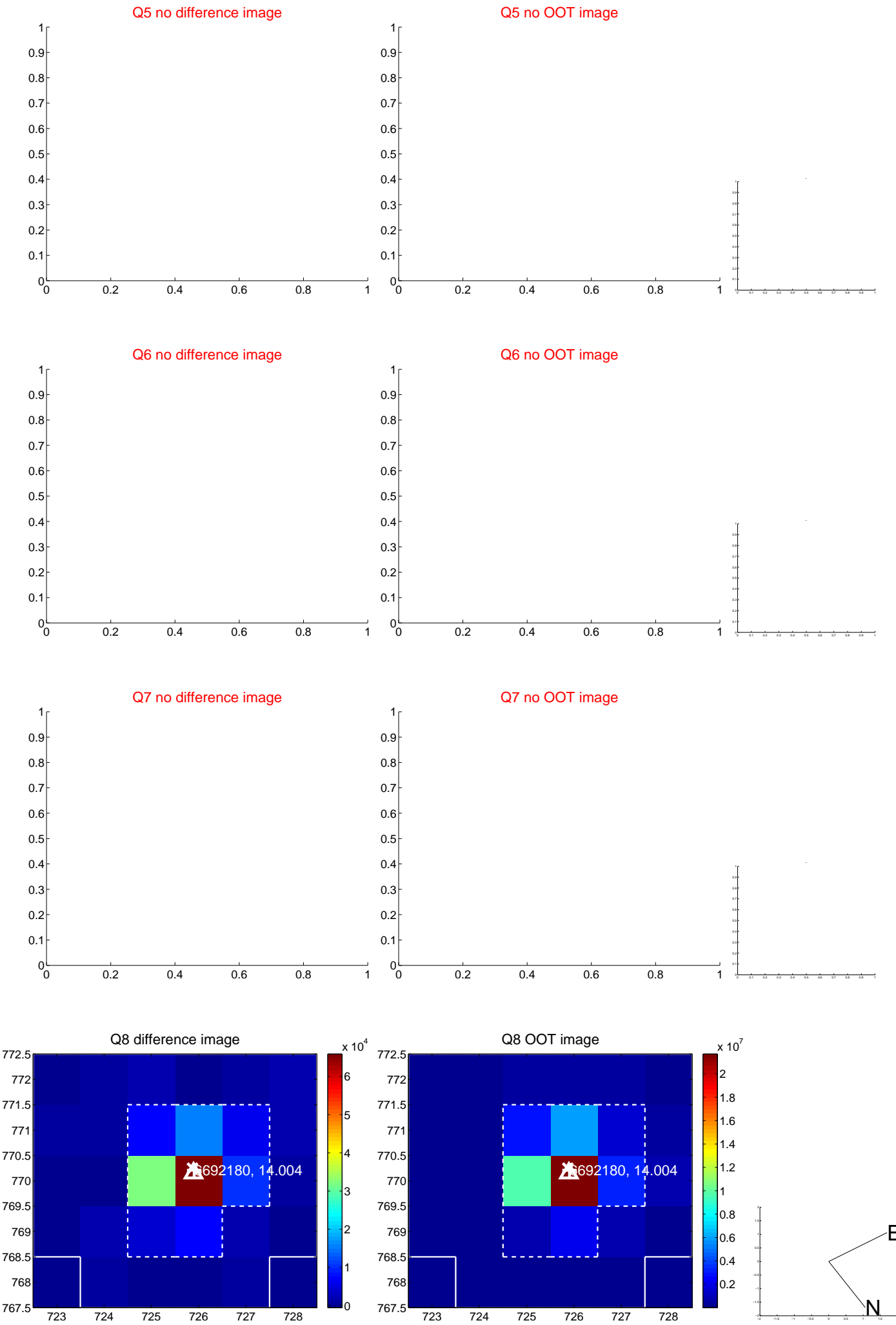


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

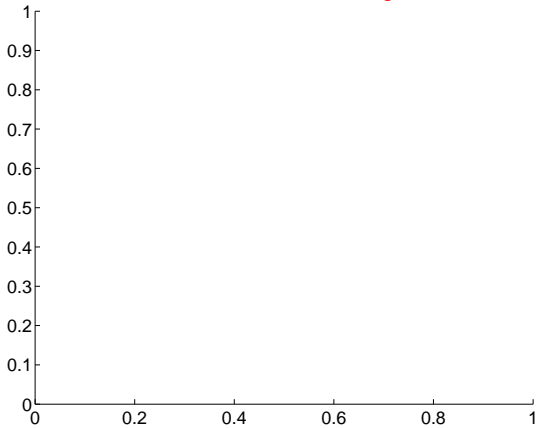
Q13 no difference image



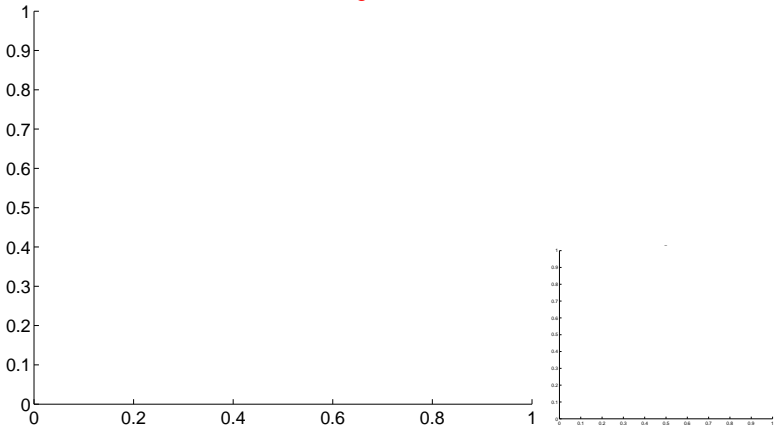
Q13 no OOT image



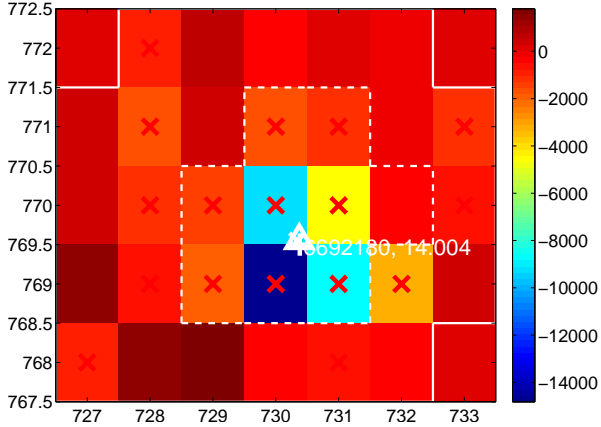
Q14 no difference image



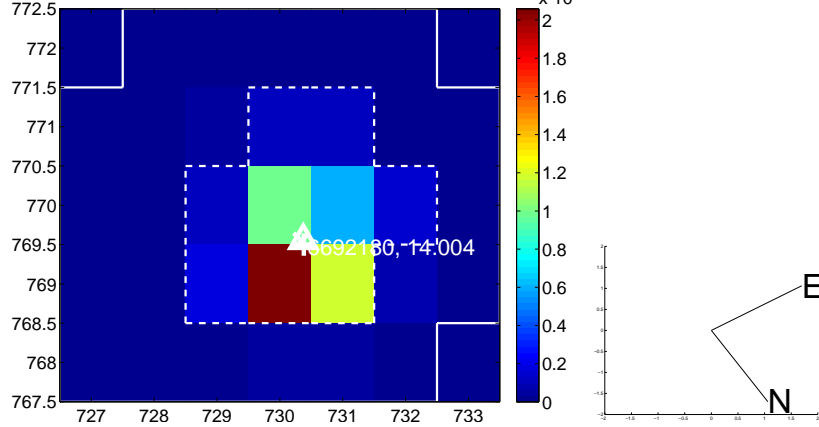
Q14 no OOT image



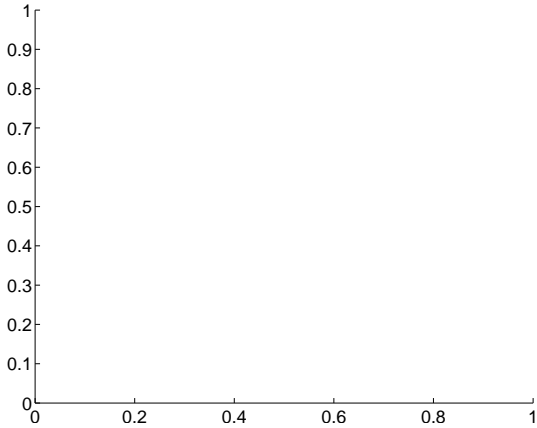
Q15 difference image. Poor Quality



Q15 OOT image



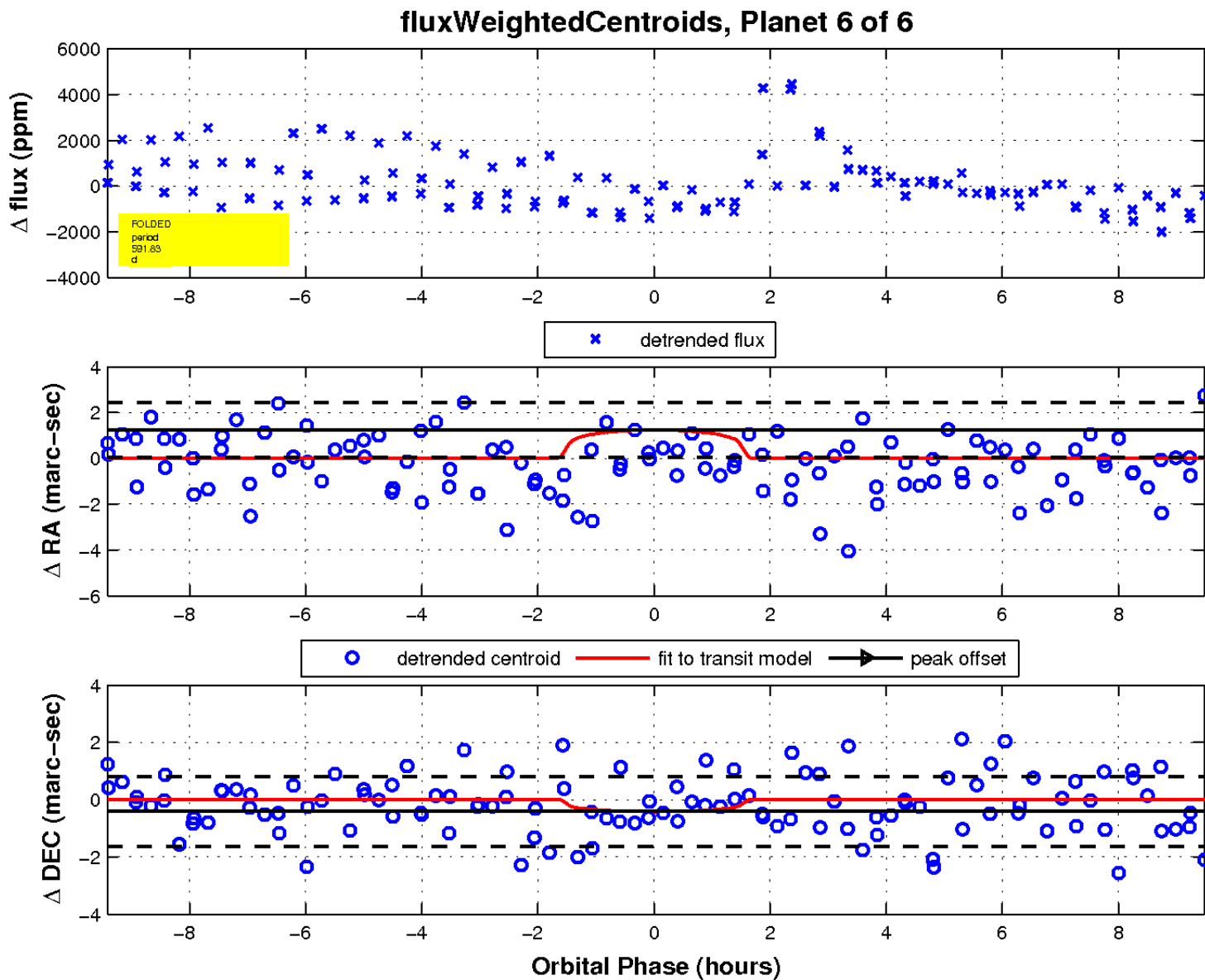
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

