

KIC 002696217

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})
002696217-01	OBS	No	490.704455	204.222865	19835.0	8.784	27.8	14.7	1.56	7405	37.57	3.58
002696217-02	OBS	No	449.896225	234.727592	22417.4	8.718	27.7	14.5	1.56	7405	40.01	4.03
002696217-03	OBS	No	350.888530	337.526029	7370.1	9.000	20.3	7.9	1.56	7405	23.44	5.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002696217-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

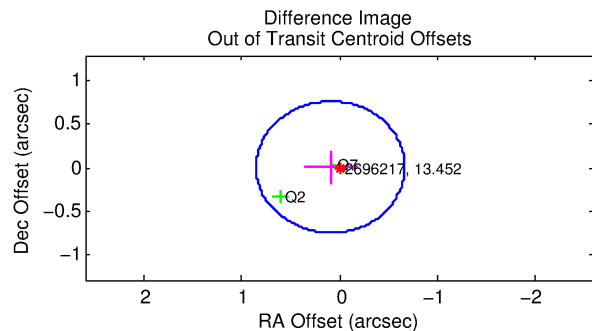
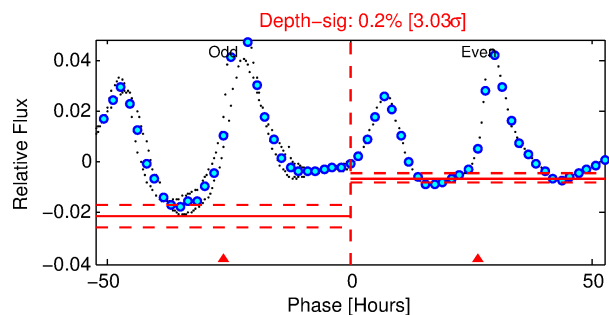
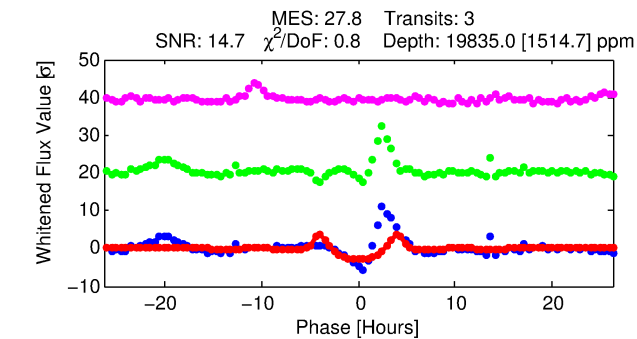
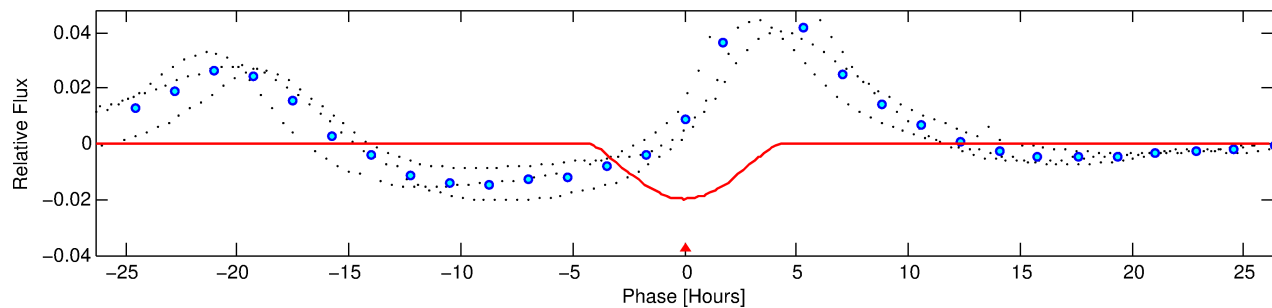
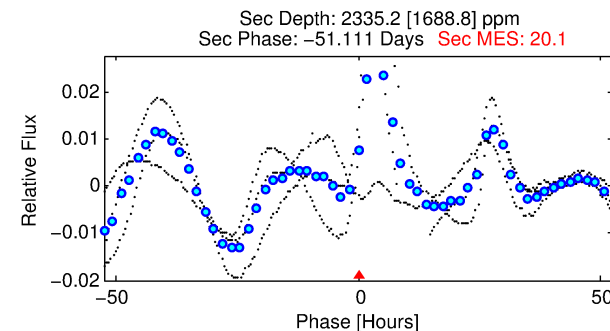
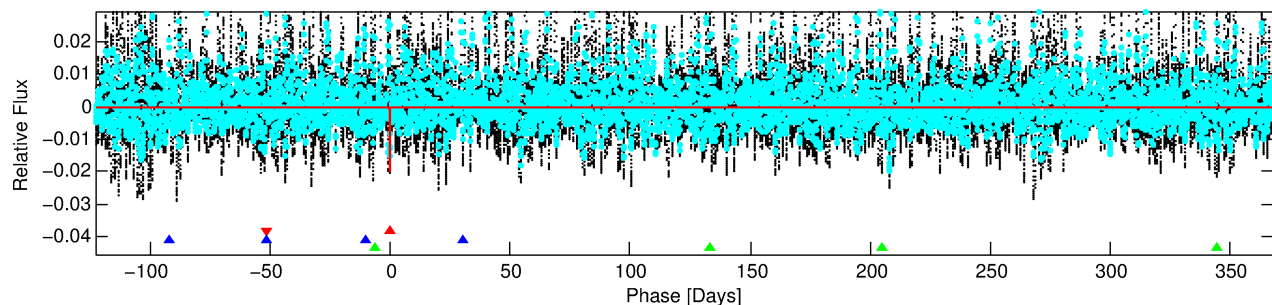
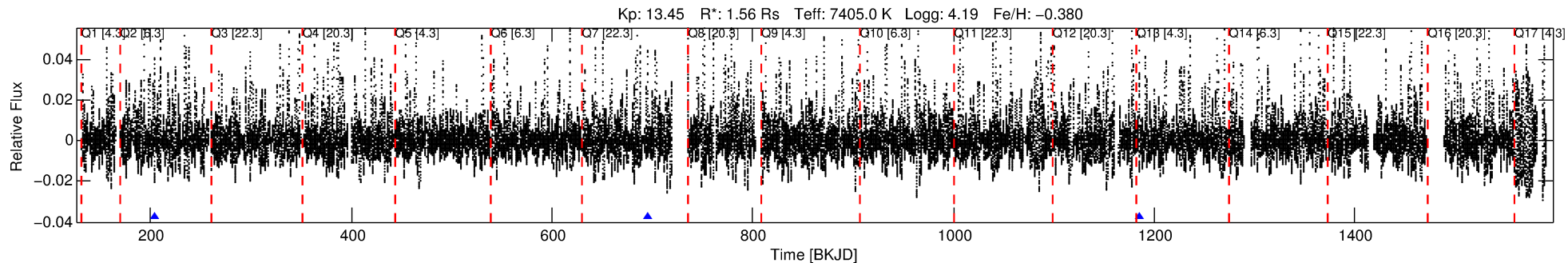
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002696217-01

No Significant Match Found

DV One-Page Summary

KIC: 2696217 Candidate: 1 of 3 Period: 490.704 d



DV Fit Results:

Period = 490.70445 [0.00347] d
Epoch = 204.2229 [0.0044] BKJD
Rp/R* = 0.2208 [0.1250]
a/R* = 299.65 [17.33]
b = 1.00 [0.18]
Seff = 3.58 [1.37]
Teq = 351 [34] K
Rp = 37.57 [24.08] Re
a = 1.3515 [0.3303] AU
Ag = 1662.41 [2305.37] [0.72σ]
Teffp = 3464 [1172] K [2.65σ]

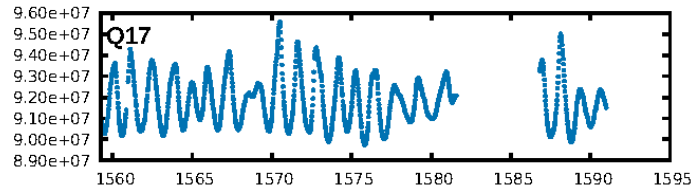
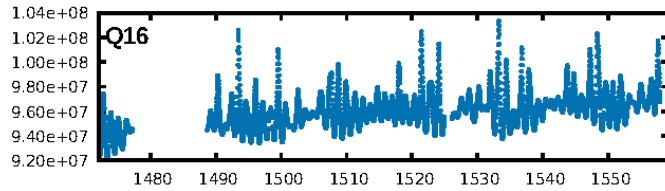
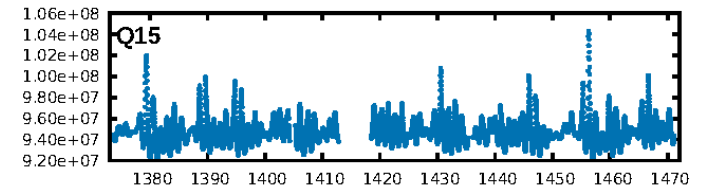
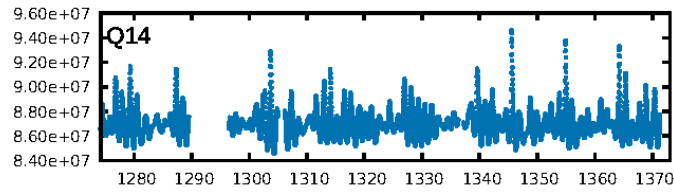
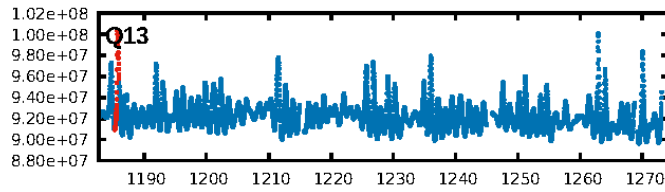
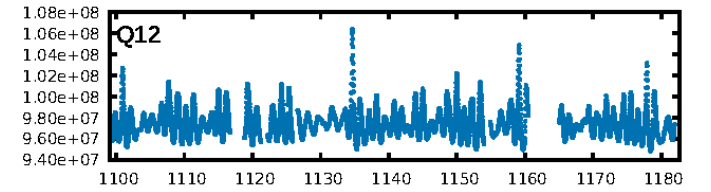
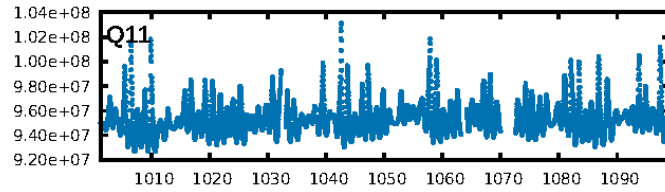
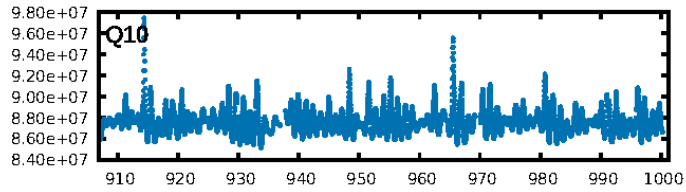
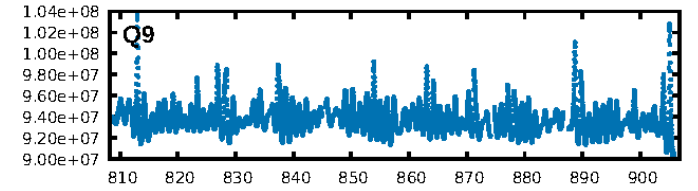
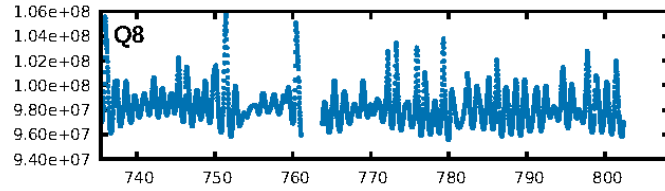
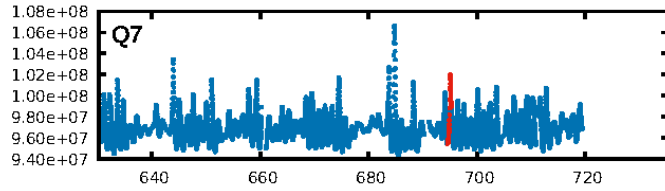
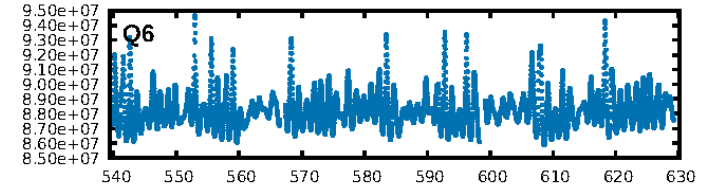
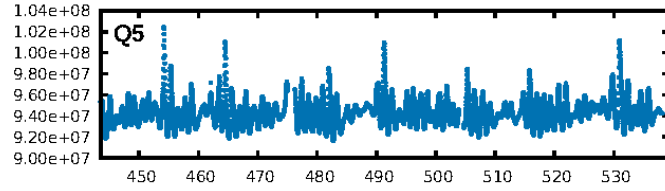
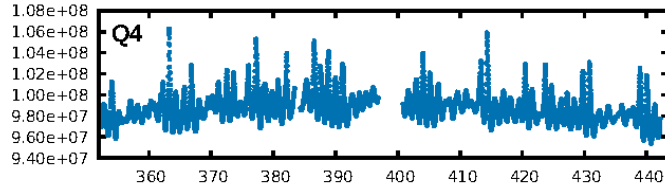
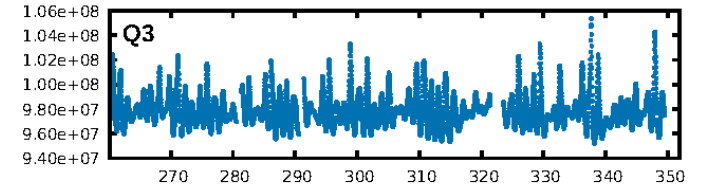
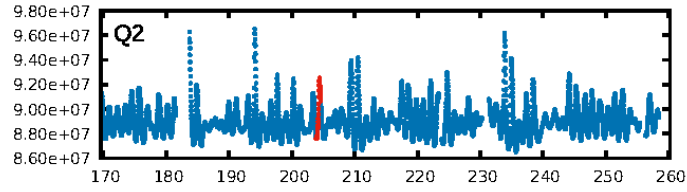
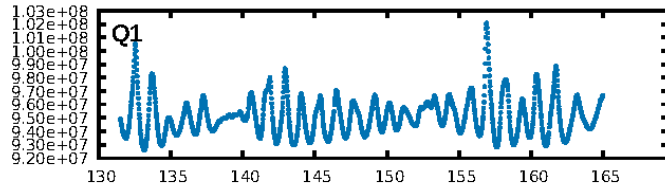
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [79.14σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 35.9%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.021
Centroid-sig: 66.3%
Centroid-so: 0.350 arcsec [5.94σ]
OotOffset-rm: 0.094 arcsec [0.37σ]
KicOffset-rm: 0.198 arcsec [1.13σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

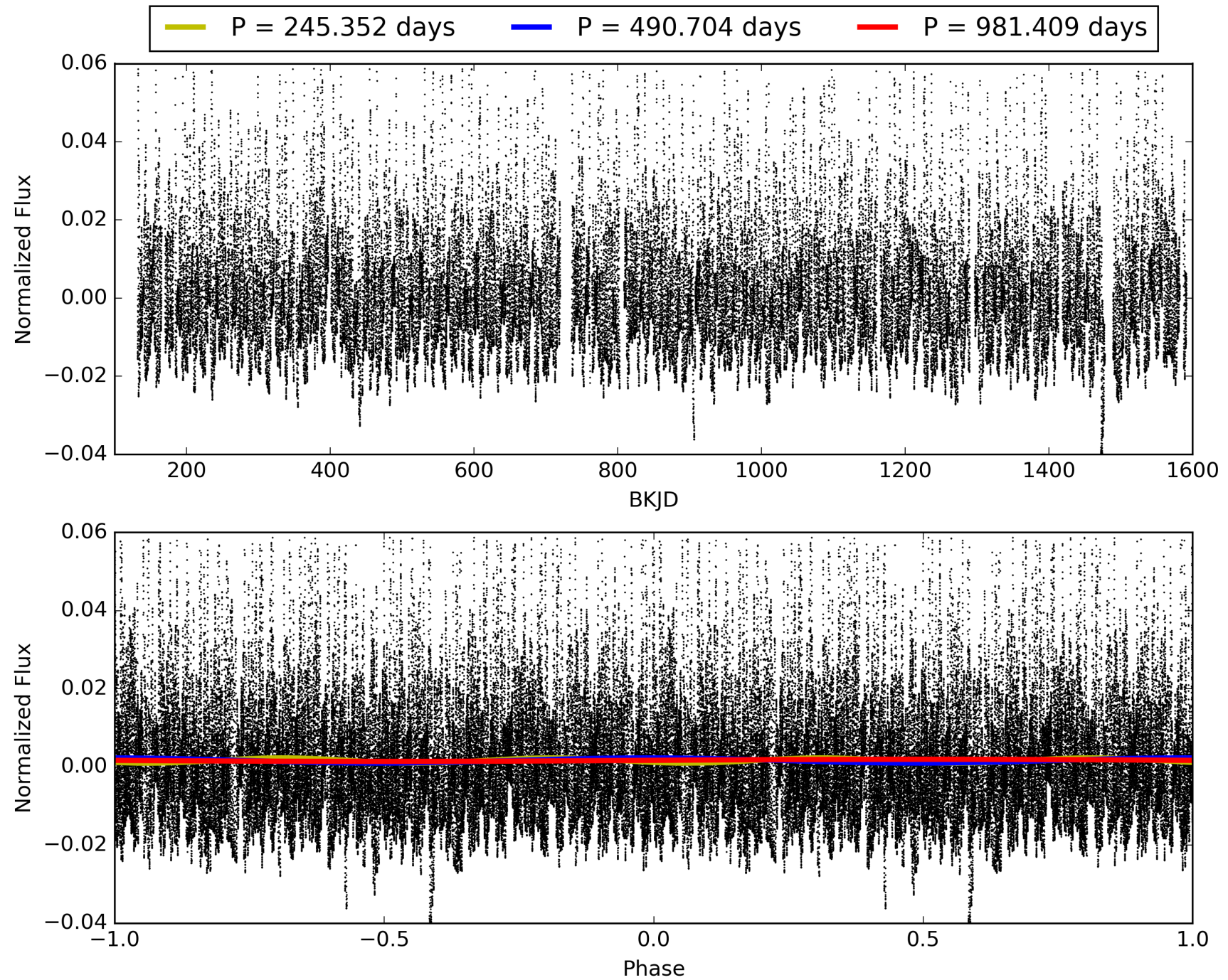
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 002696217-01, PDC Light Curves

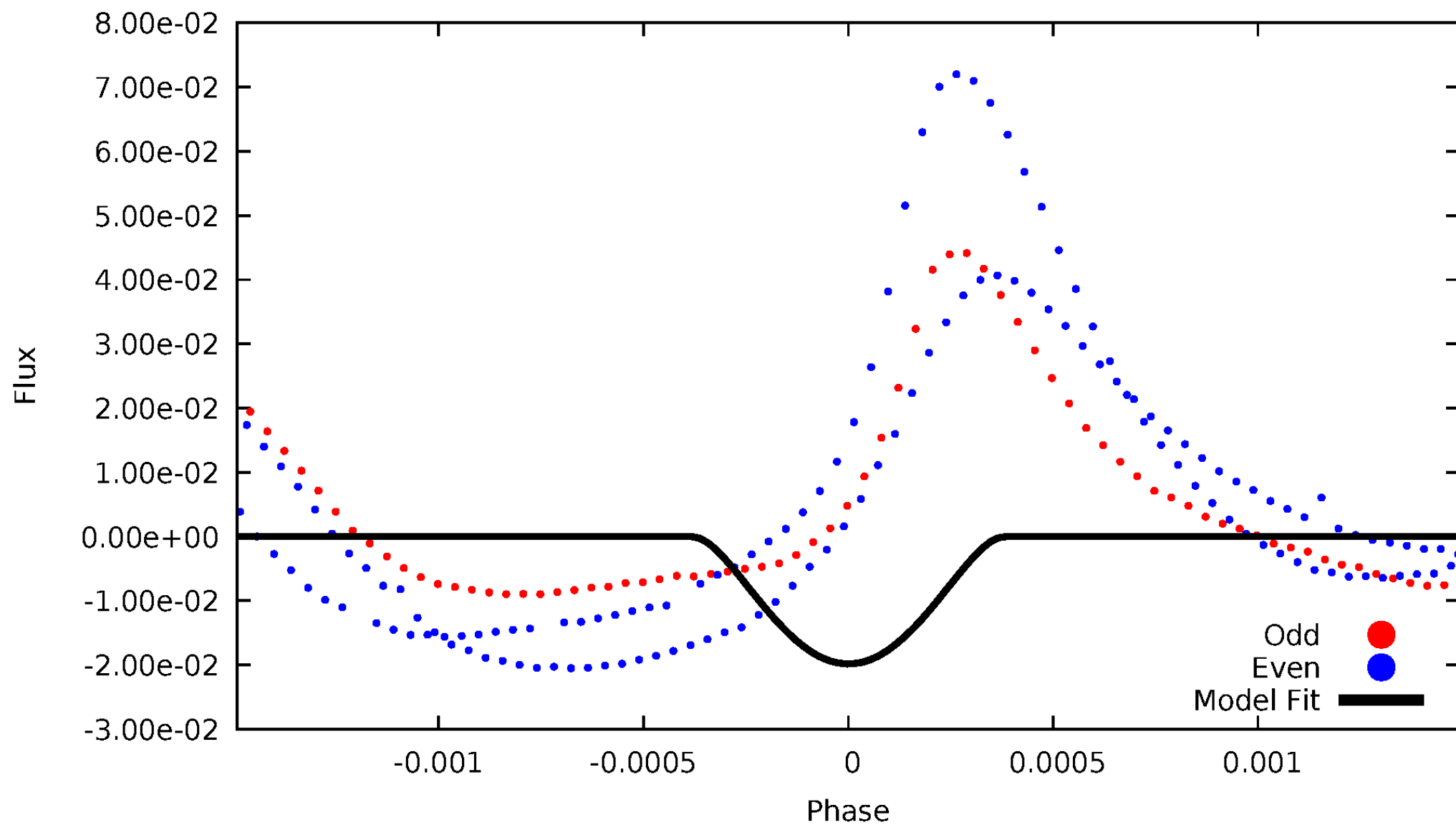


TCE 002696217-01



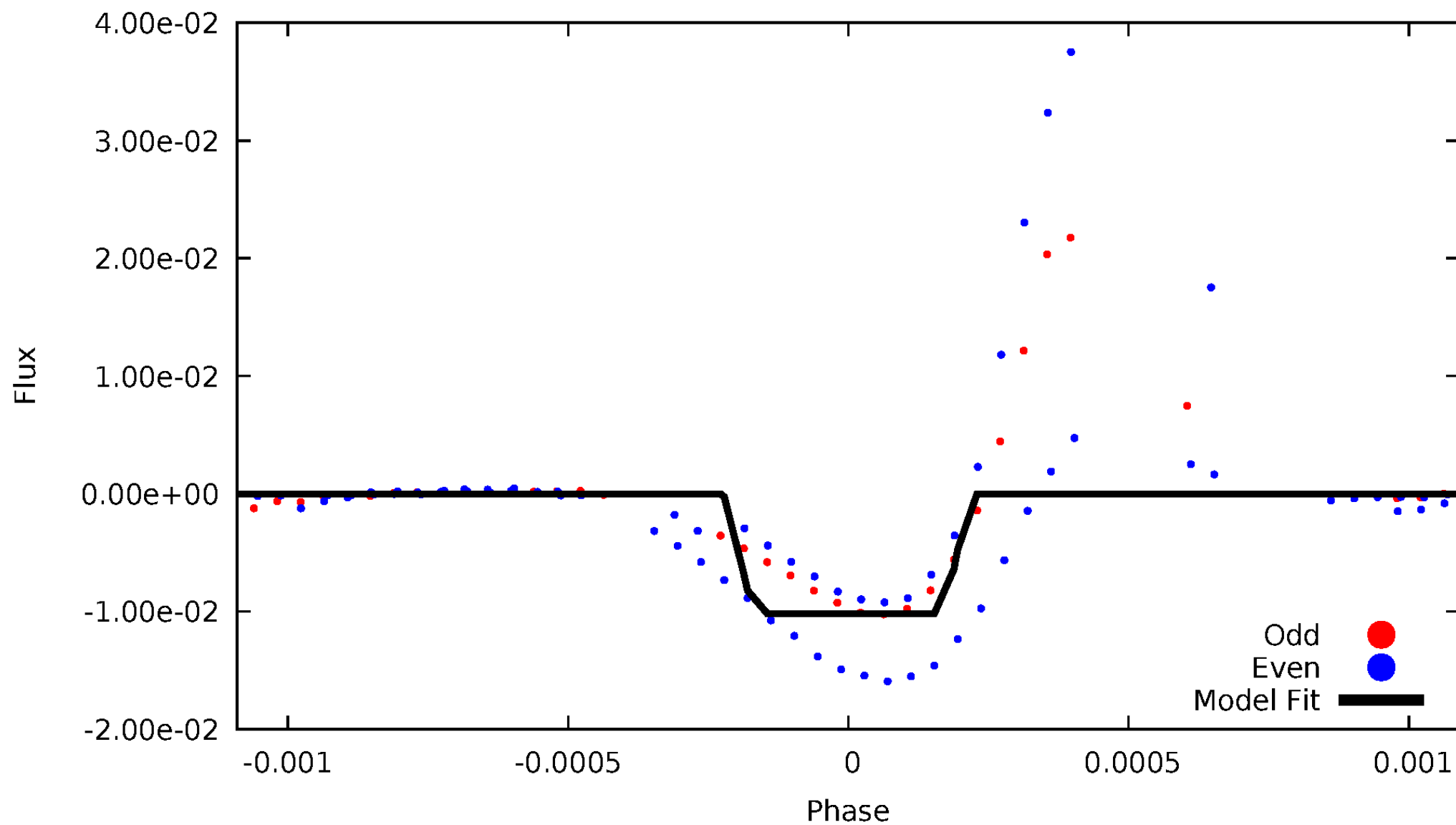
DV Odd/Even

TCE 002696217-01



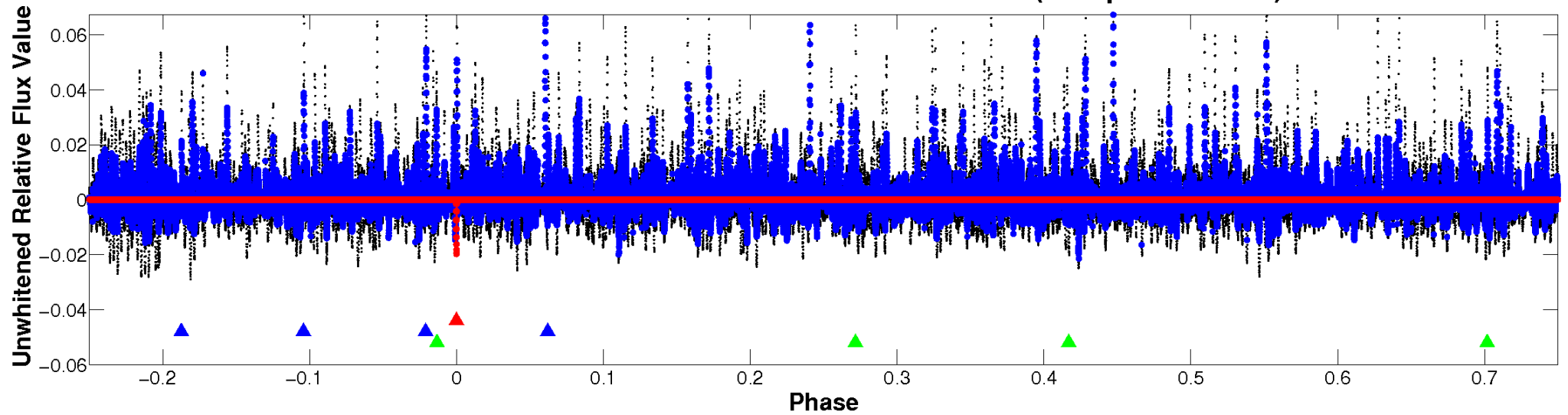
ALT Odd/Even

TCE 002696217-01

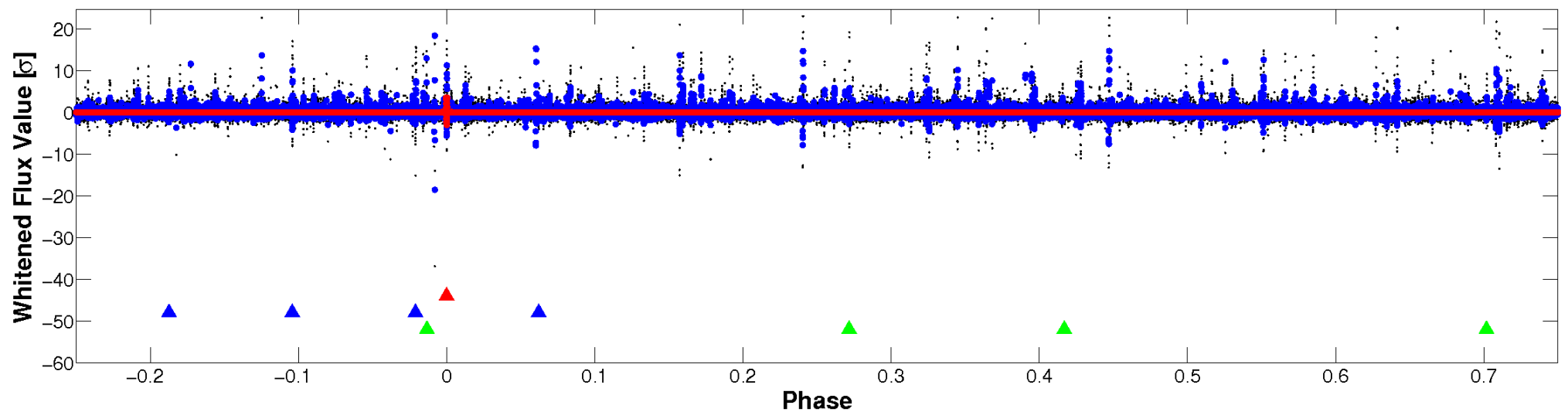


Non-Whitened Vs. Whitened Light Curve

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

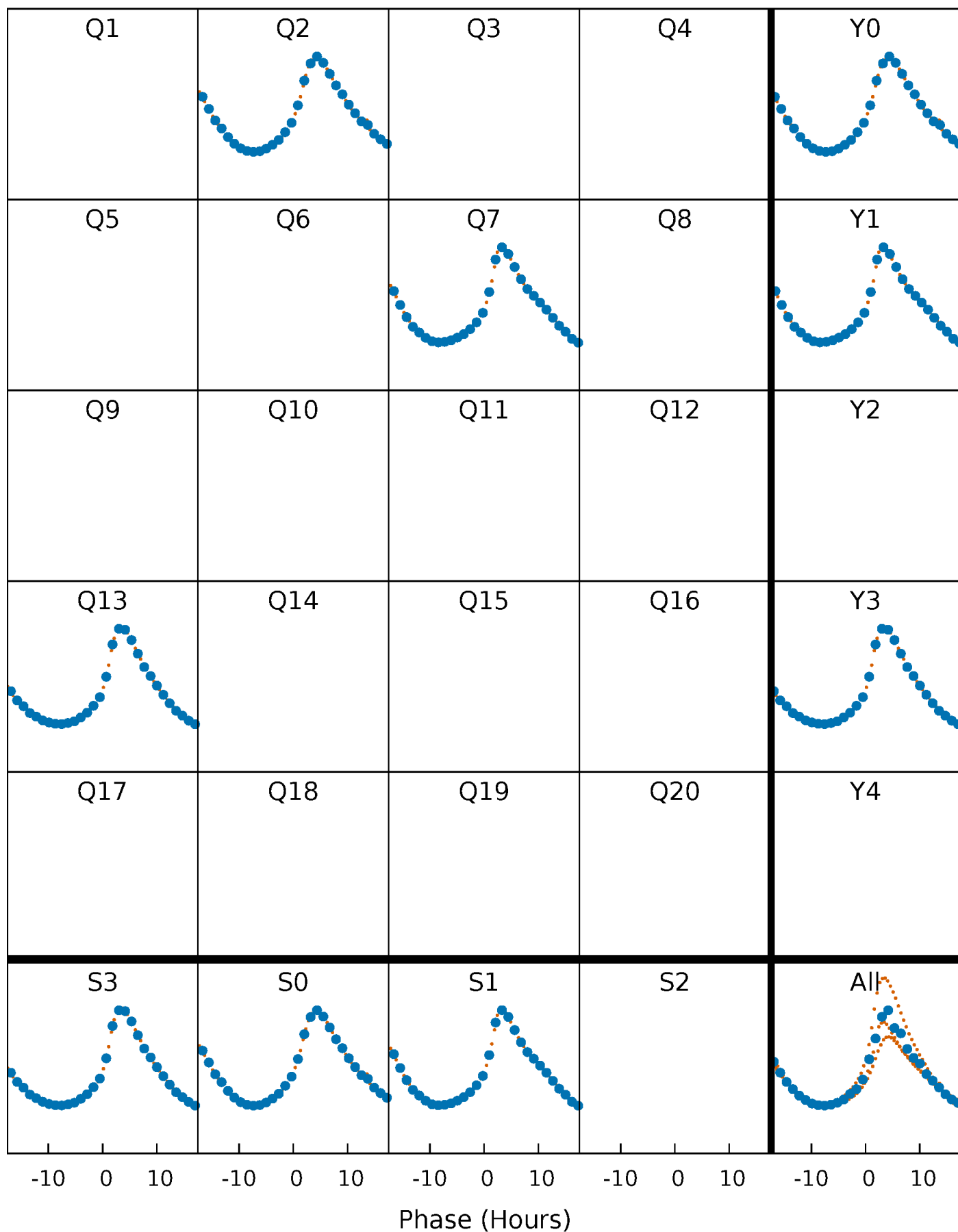


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



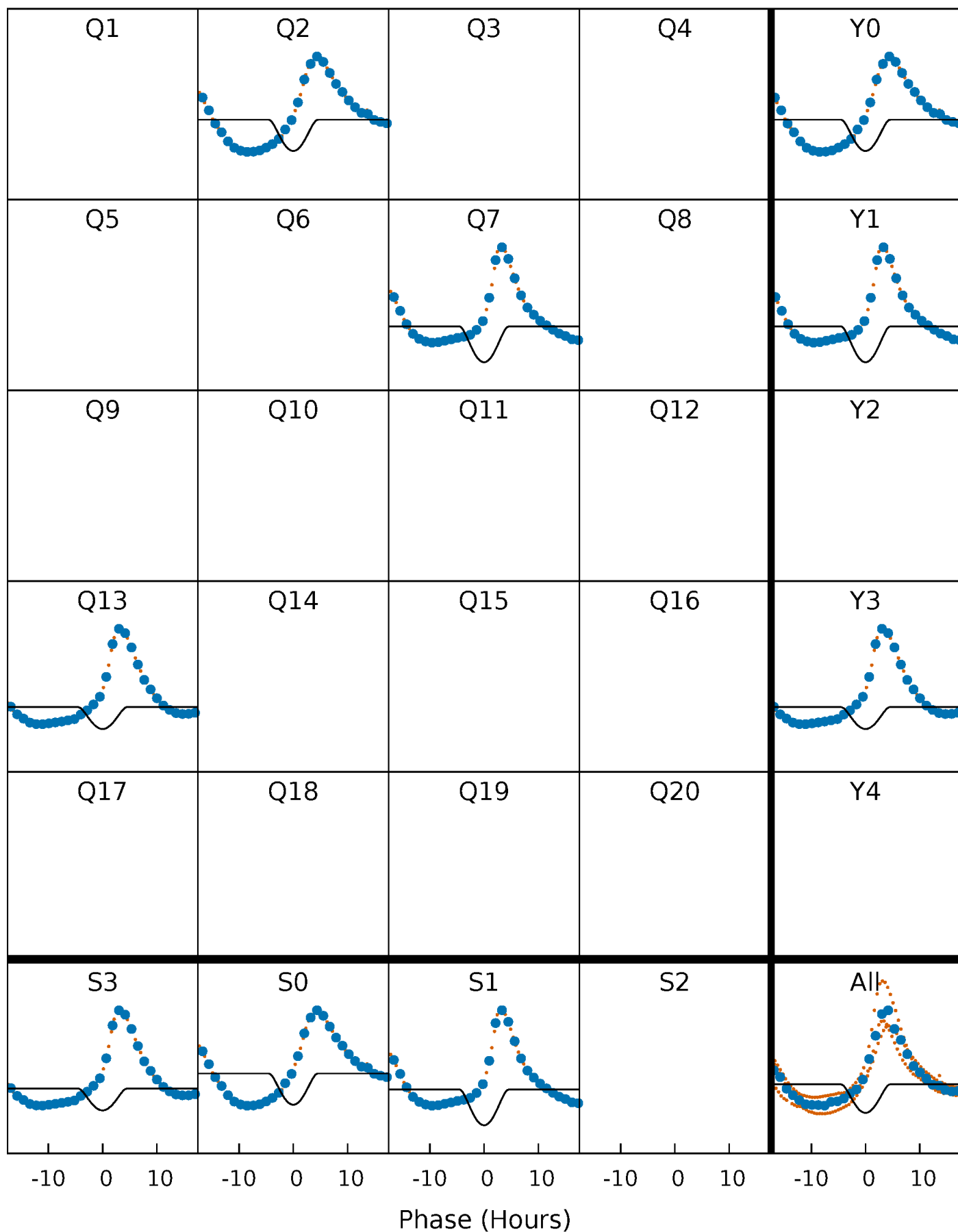
PDC Quarter-Phased Transit Curves

TCE 002696217-01 P=490.704455 Days $T_0=204.222865$ (BKJD)



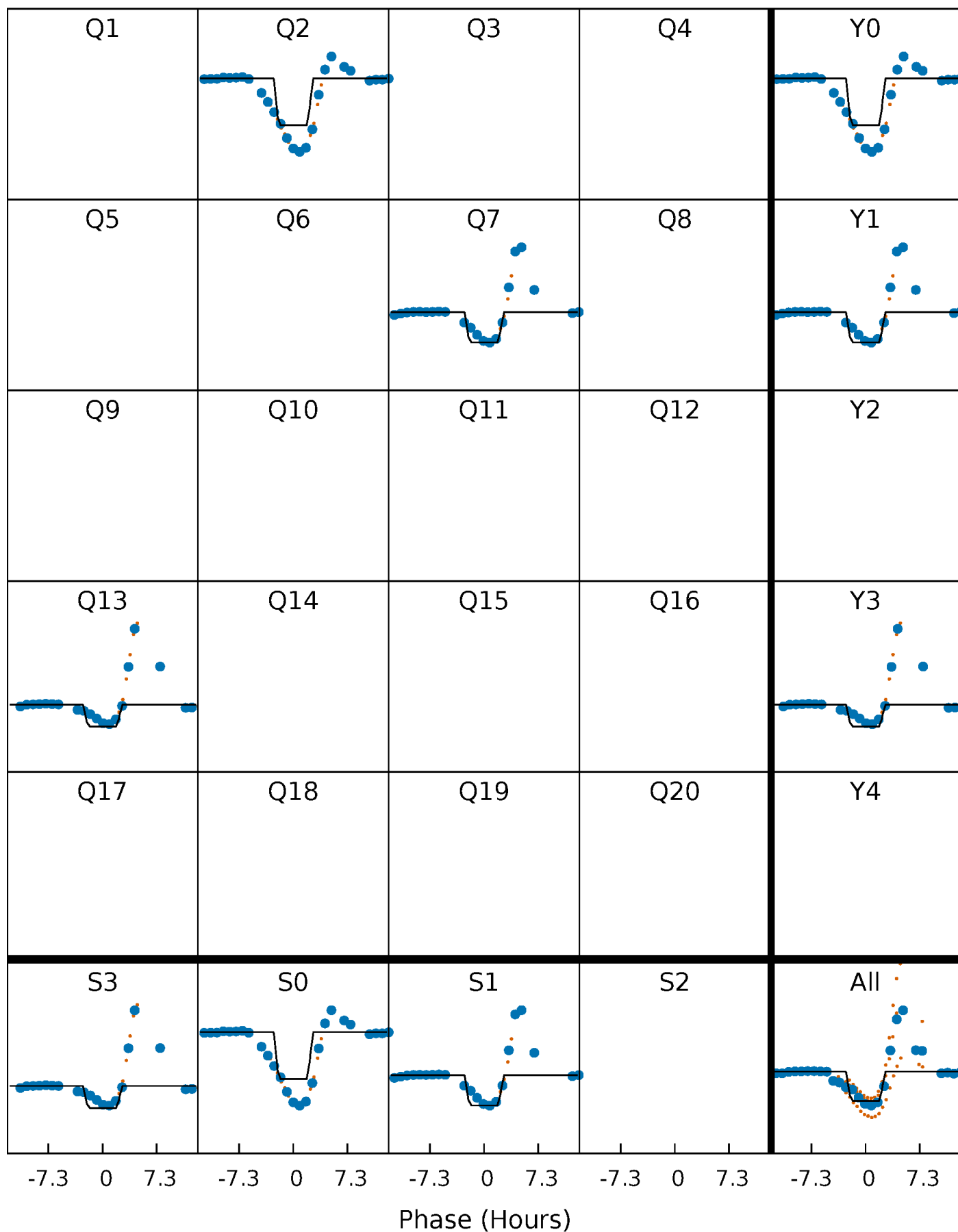
DV Quarter-Phased Transit Curves

TCE 002696217-01 P=490.704455 Days $T_0=204.222865$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

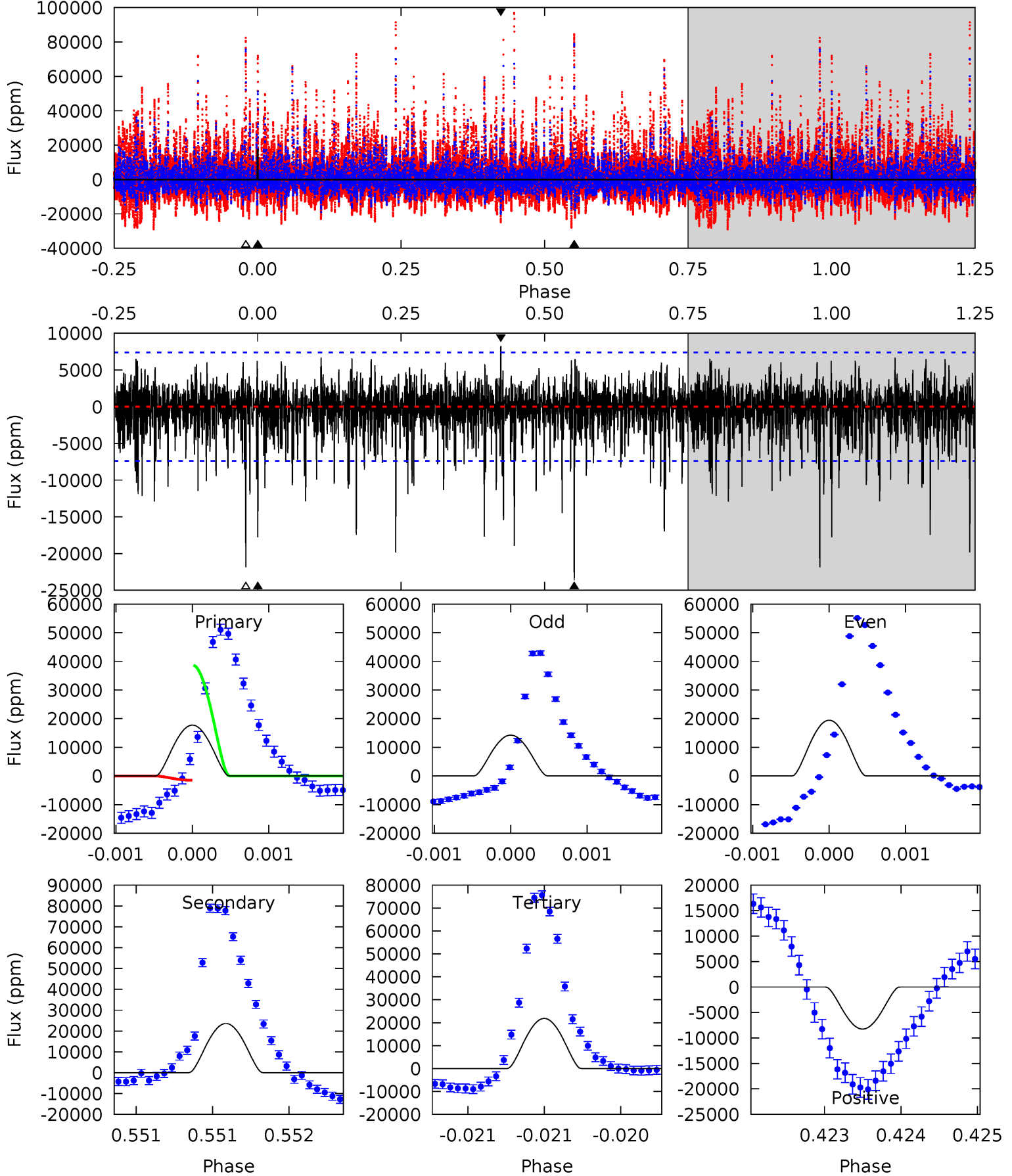
TCE 002696217-01 P=490.691510 Days $T_0=204.162655$ (BKJD)



DV Model-Shift Uniqueness Test

002696217-01, P = 490.704455 Days, E = 204.222865 Days

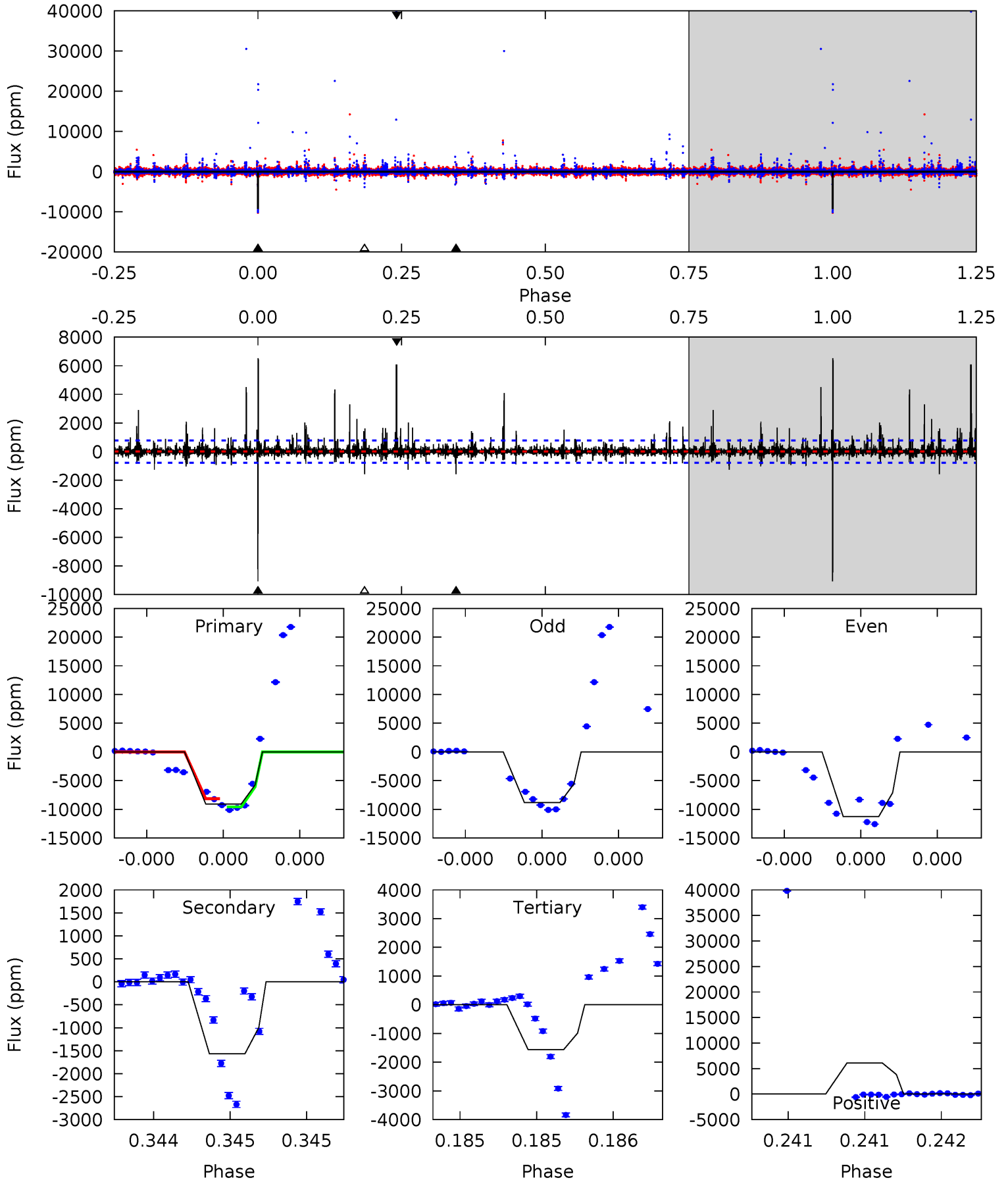
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	17.6	16.3	6.15	5.49	3.36	2.22	-3.06	7.07	1.31	11.4	1.75	1.24	0.26	13.9



Alt Model-Shift Uniqueness Test

002696217-01, P = 490.691510 Days, E = 204.162655 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.9	11.2	11.2	43.5	5.59	3.51	1.47	53.7	21.4	0.02	-32.3	8.92	1.17	0.42	0



Stellar Parameters For KIC 002696217

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7405^{+233}_{-311}	$4.188^{+0.149}_{-0.182}$	$-0.380^{+0.250}_{-0.350}$	$1.559^{+0.469}_{-0.312}$	$1.366^{+0.206}_{-0.206}$	$0.508^{+0.379}_{-0.251}$
	+3%/-4%	+4%/-4%	+66%/-92%	+30%/-20%	+15%/-15%	+75%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002696217-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23614 ± 1344	$38.66^{+22.33}_{-20.67}$	490^{+36}_{-32}	6073^{+3461}_{-1191}	16334^{+57098}_{-9988}
Alt.	-1568 ± 140	$22.55^{+18.80}_{-13.46}$	491^{+36}_{-32}	4254^{+2234}_{-817}	3137^{+15497}_{-2228}

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 $A_{\text{obs}} \gg 1.0$

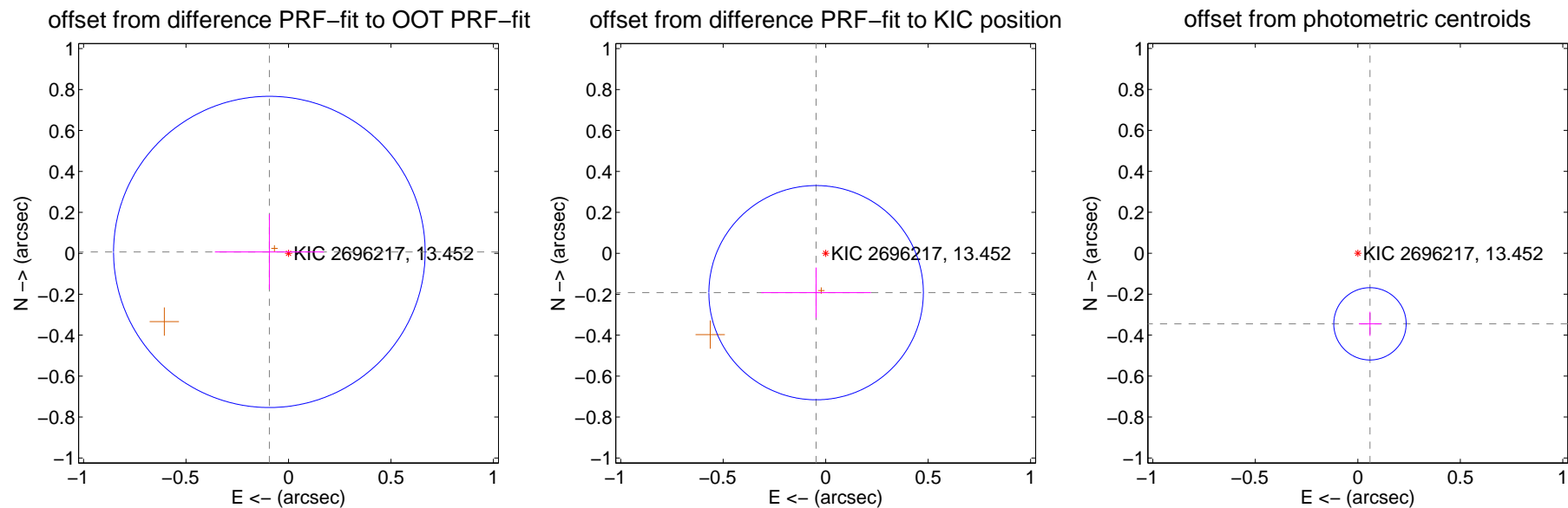
DV Centroid Data

Supplemental centroid analysis for 002696217-01. Kepler magnitude: 13.45. Transit SNR 14.66

There are 0 quarters with good PRF difference image offsets

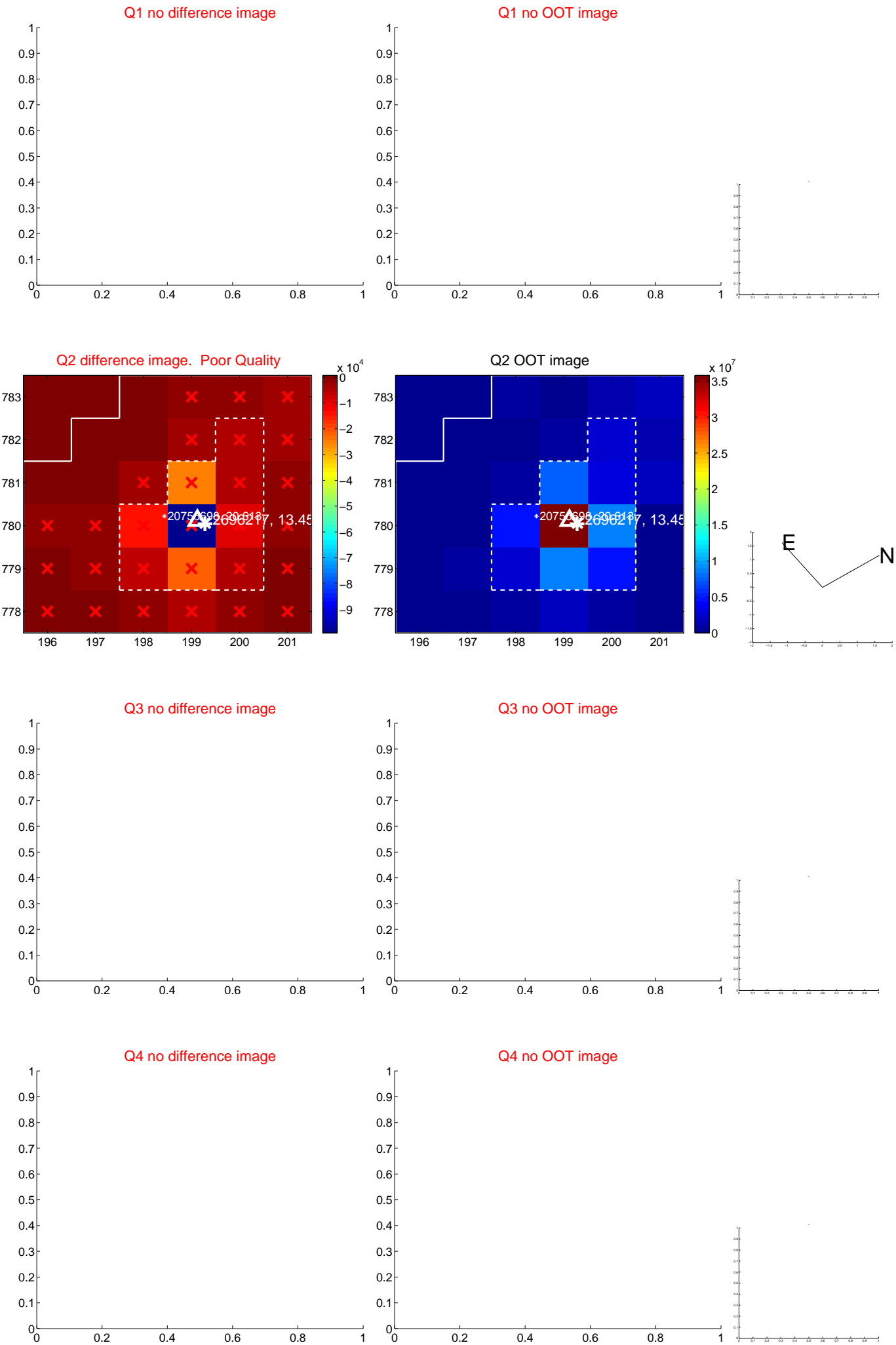
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.094 ± 0.253	0.37	0.093 ± 0.266	0.007 ± 0.184
PRF-fit source offset from KIC position	0.198 ± 0.174	1.13	0.047 ± 0.268	-0.192 ± 0.123
photometric centroid source offset	0.35 ± 0.06	5.94	-0.06 ± 0.05	-0.34 ± 0.06

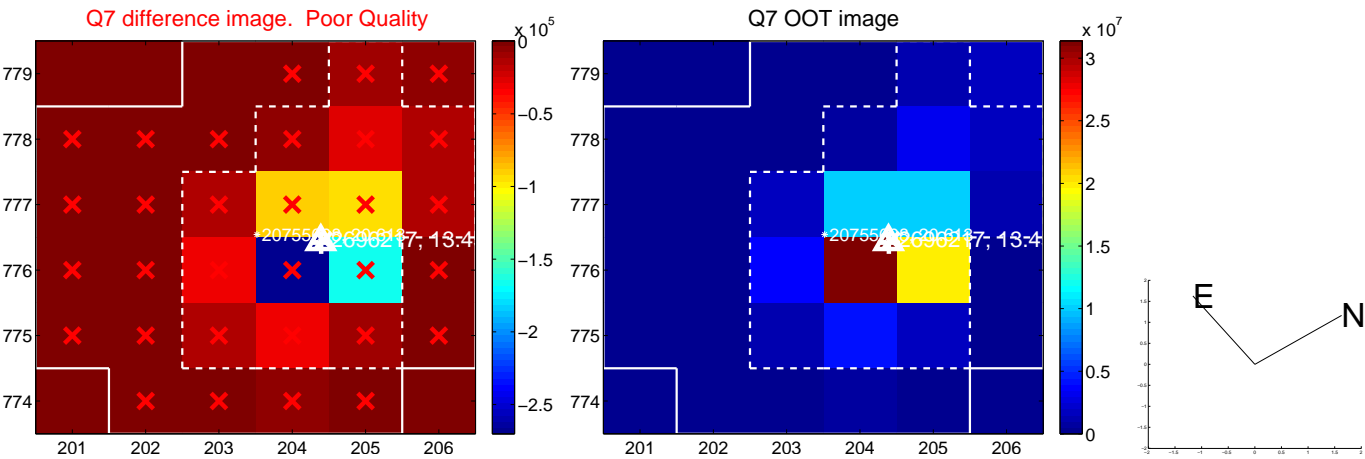


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



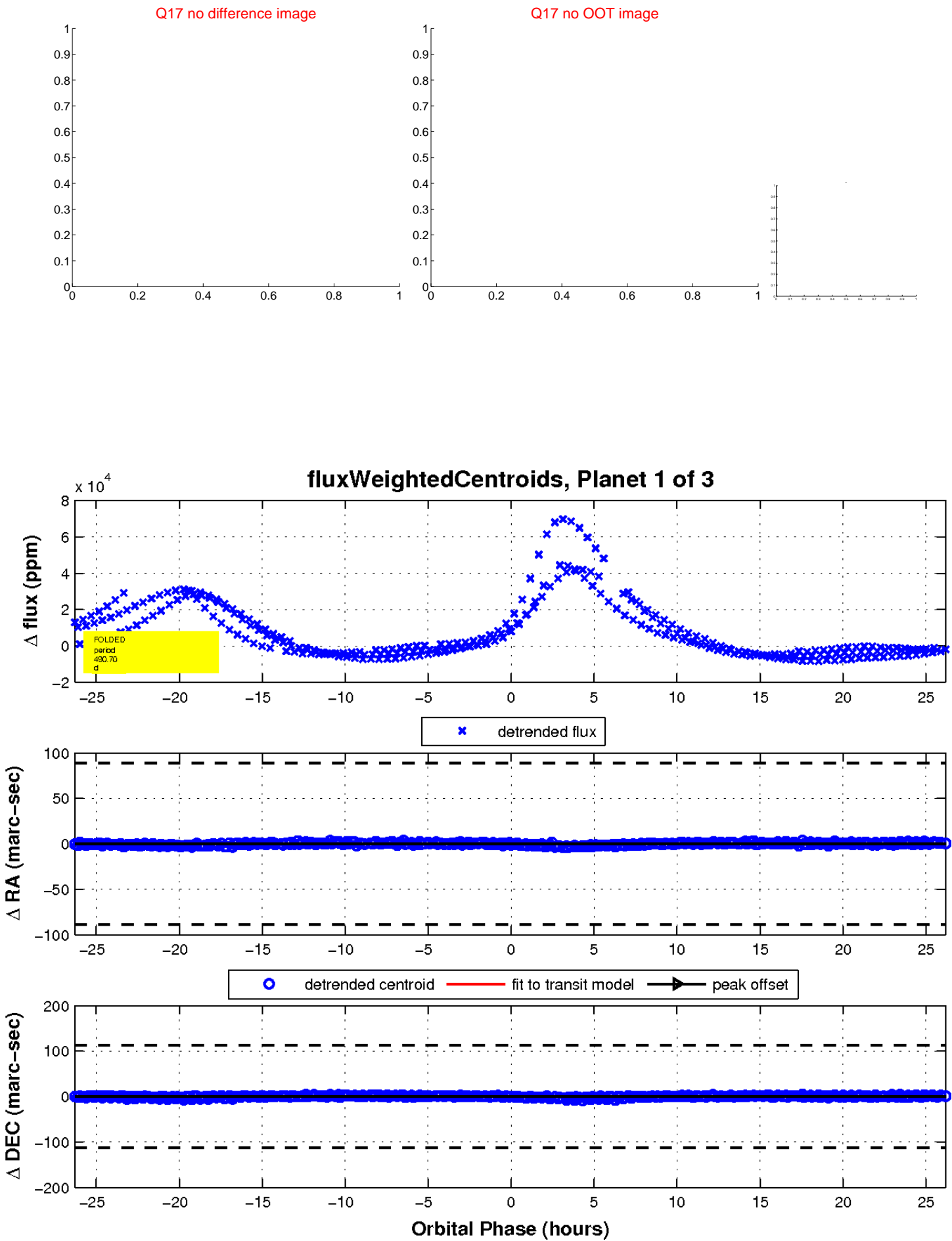
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



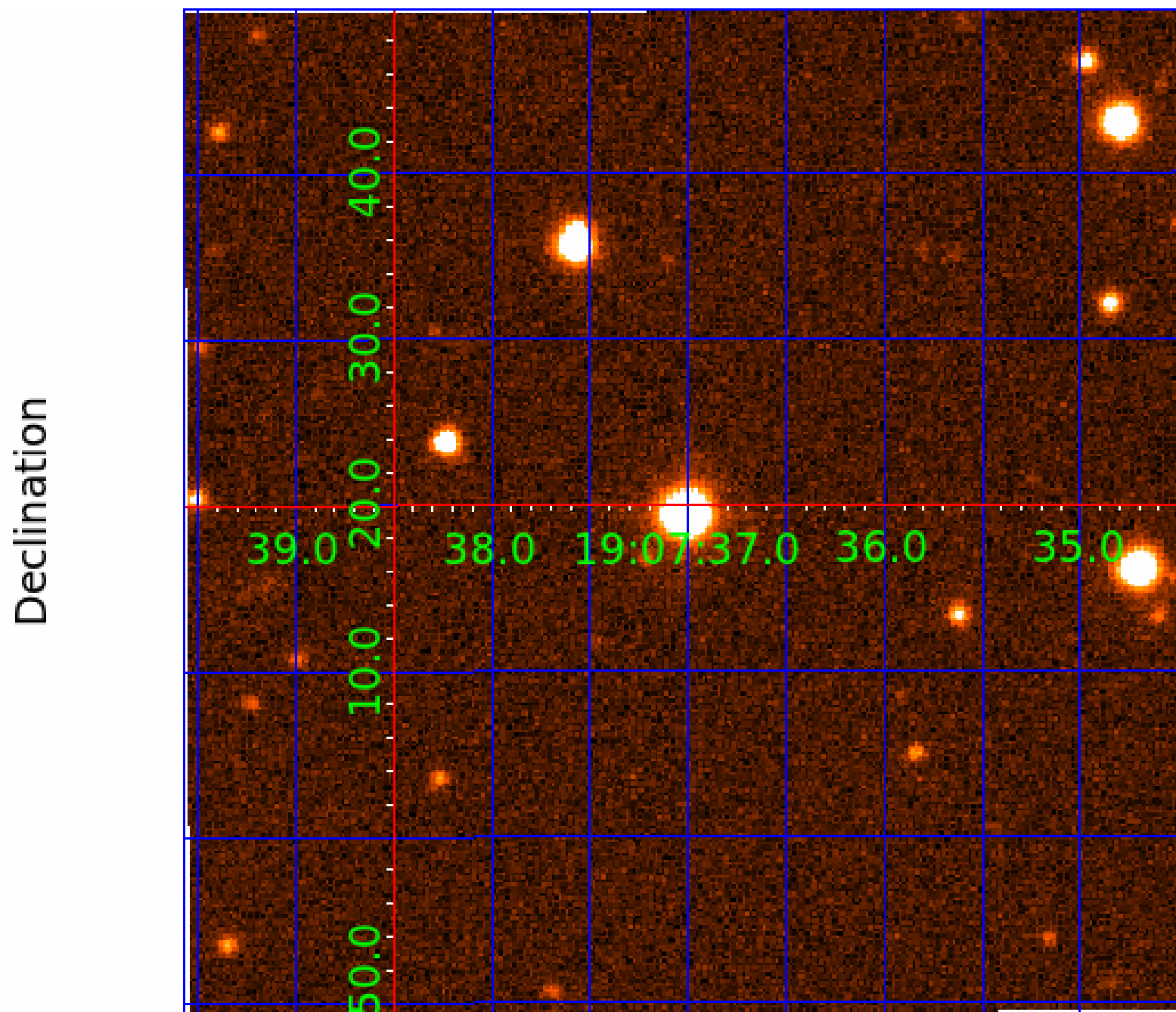
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 002696217

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002696217-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

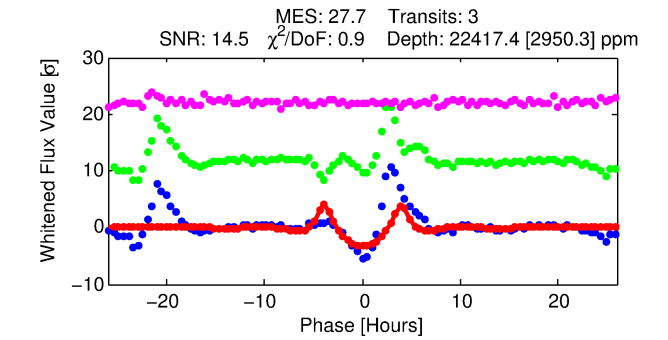
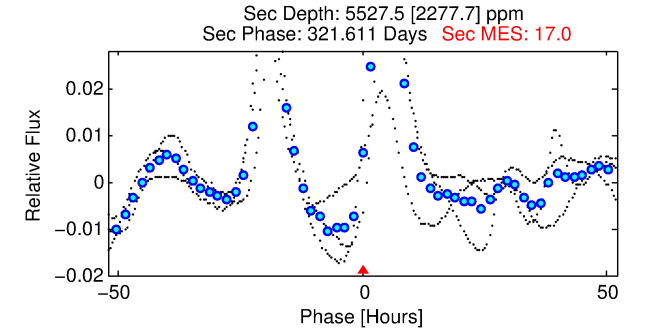
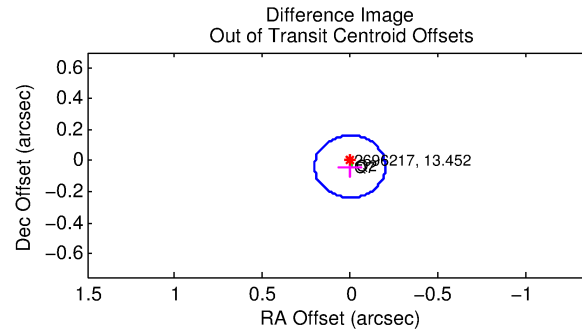
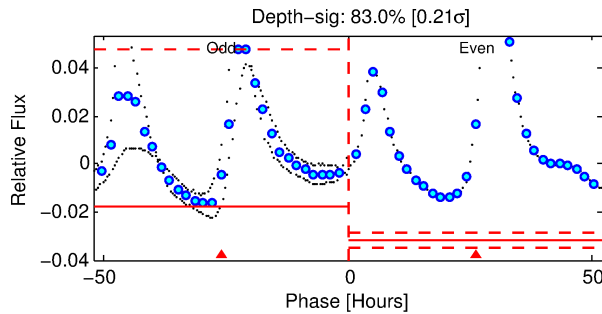
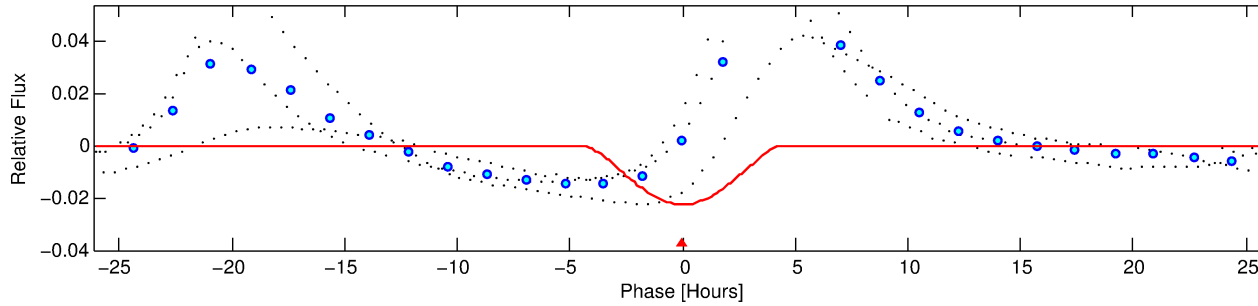
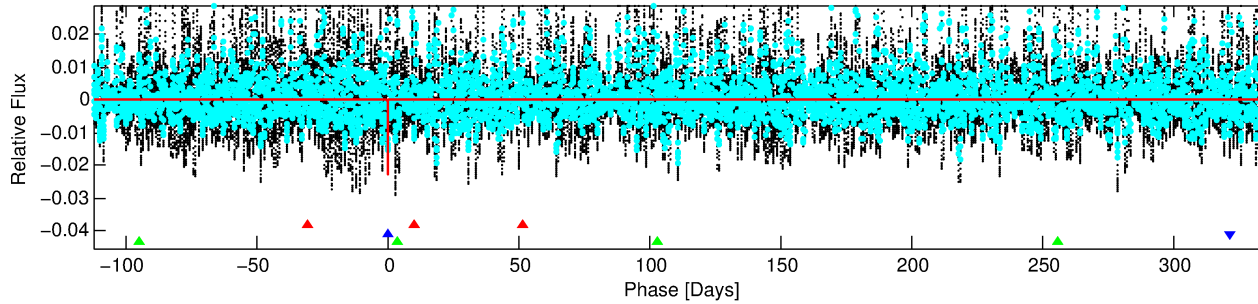
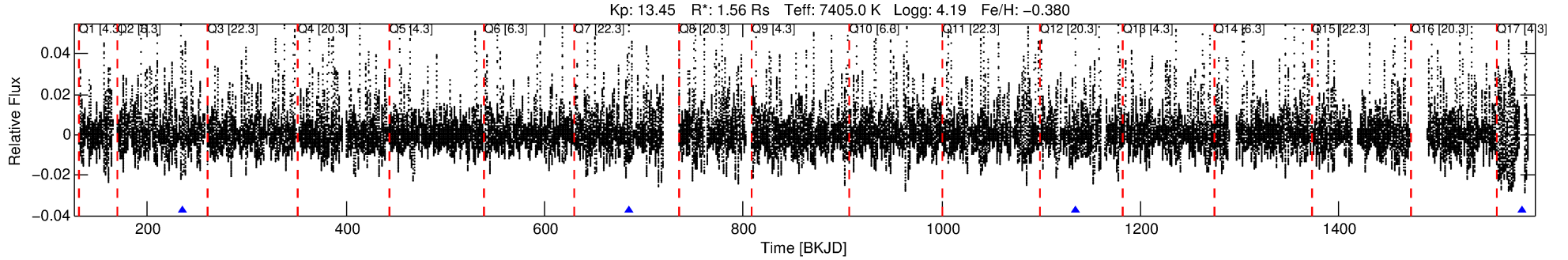
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002696217-02

No Significant Match Found

DV One-Page Summary

KIC: 2696217 Candidate: 2 of 3 Period: 449.896 d



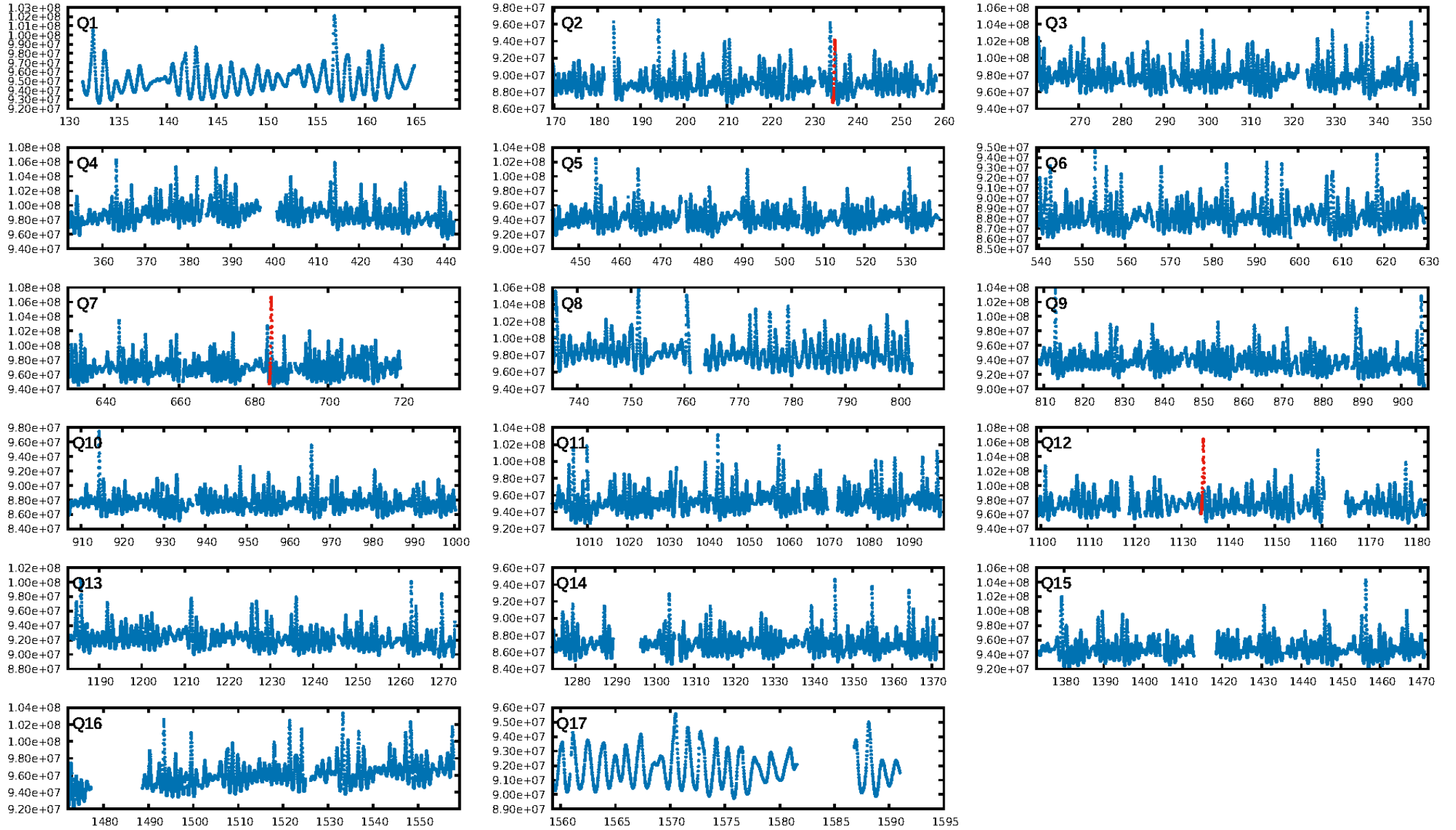
DV Fit Results:

Period = 449.89622 [0.00353] d
Epoch = 234.7276 [0.0050] BKJD
Rp/R* = 0.2352 [0.1385]
a/R* = 285.87 [15.85]
b = 1.00 [0.17]
Seff = 4.02 [1.54]
Teq = 361 [35] K
Rp = 40.01 [26.46] Re
a = 1.2755 [0.3117] AU
Ag = 3090.37 [4000.81] [0.77 σ]
Teffp = 4163 [1311] K [2.90 σ]

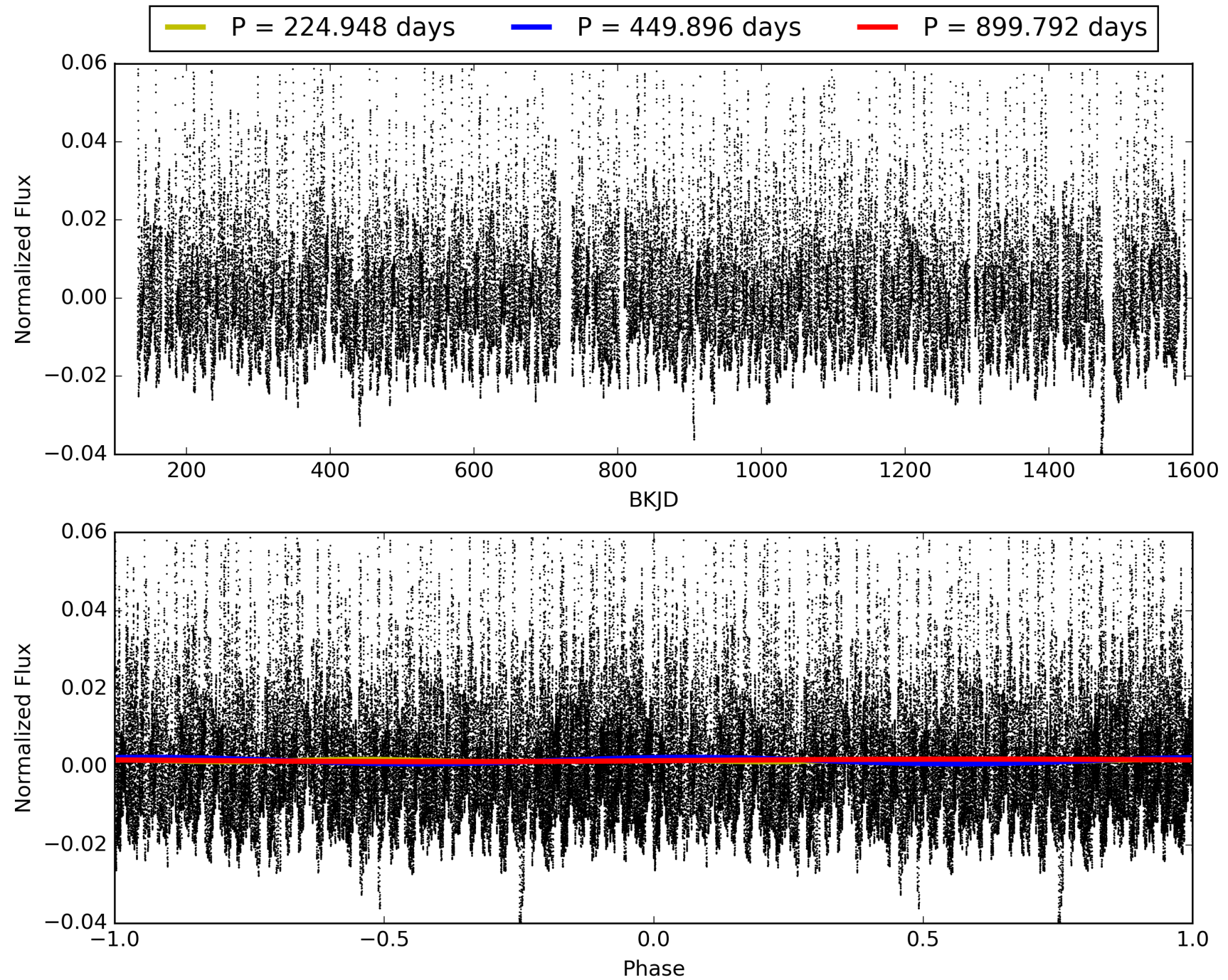
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [189.65 σ]
LongPeriod-sig: 100.0% [79.14 σ]
ModelChiSquare2-sig: 49.8%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.162
Centroid-sig: 46.0%
Centroid-so: 0.332 arcsec [7.62 σ]
OotOffset-rm: 0.037 arcsec [0.56 σ]
KicOffset-rm: 0.233 arcsec [3.29 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
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TCE 002696217-02, PDC Light Curves

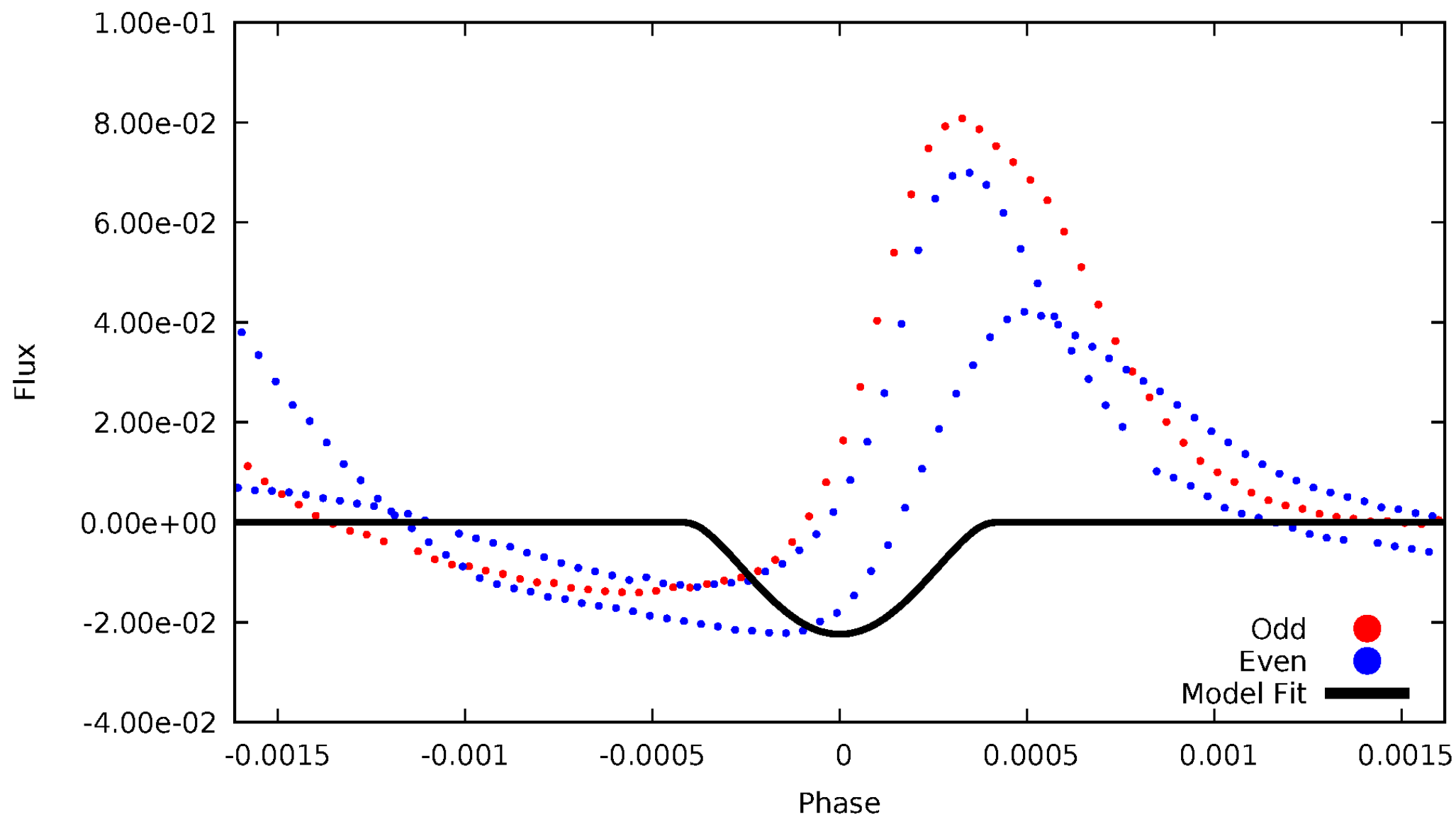


TCE 002696217-02



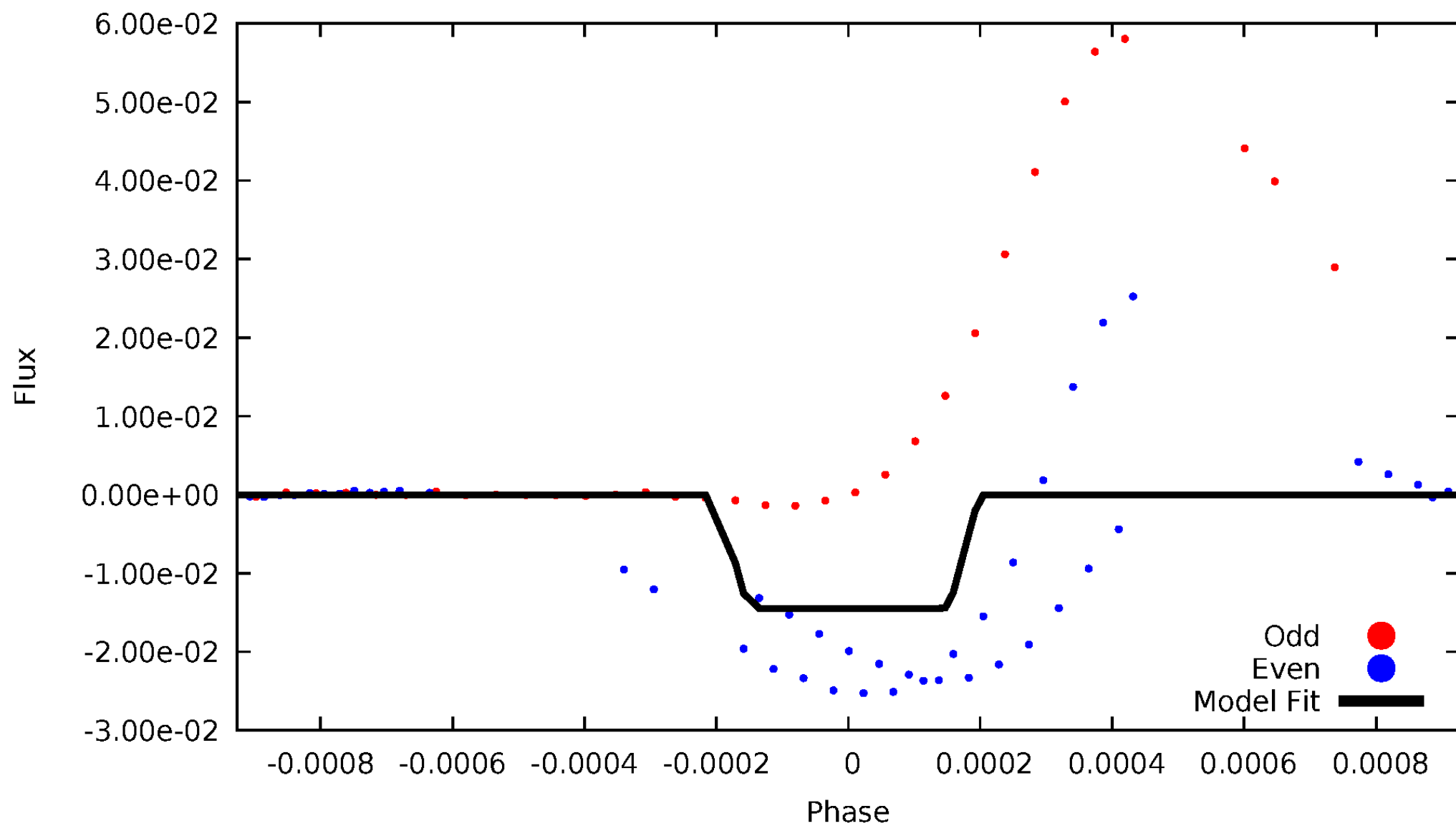
DV Odd/Even

TCE 002696217-02



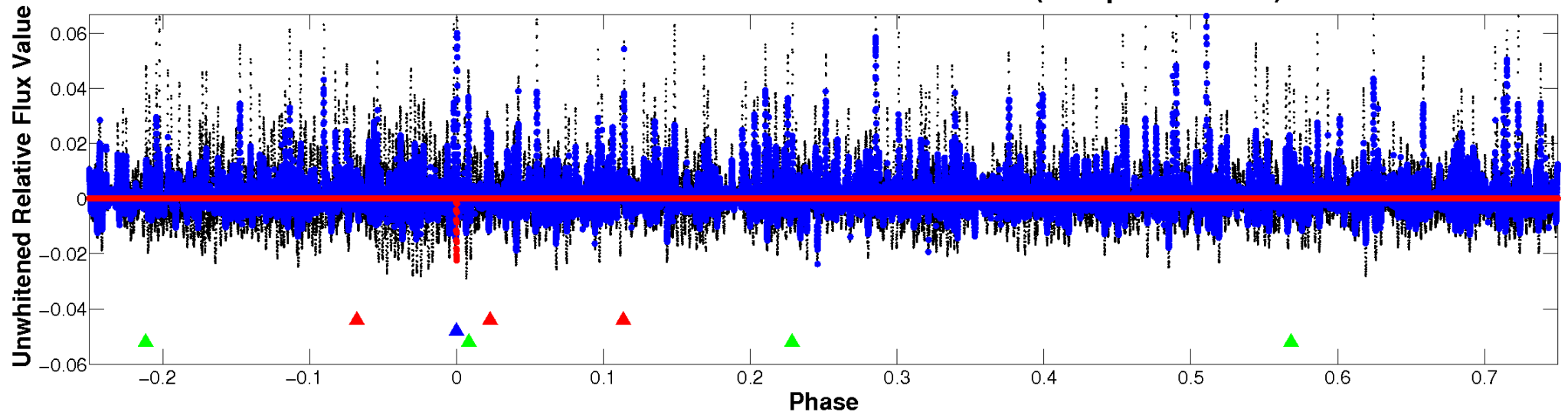
ALT Odd/Even

TCE 002696217-02

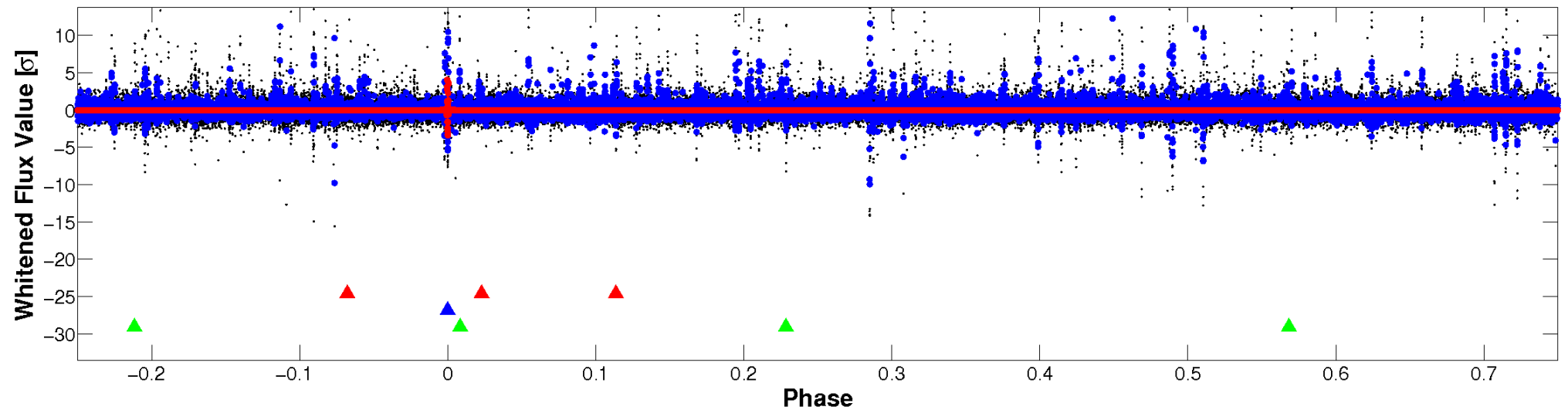


Non-Whitened Vs. Whitened Light Curve

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

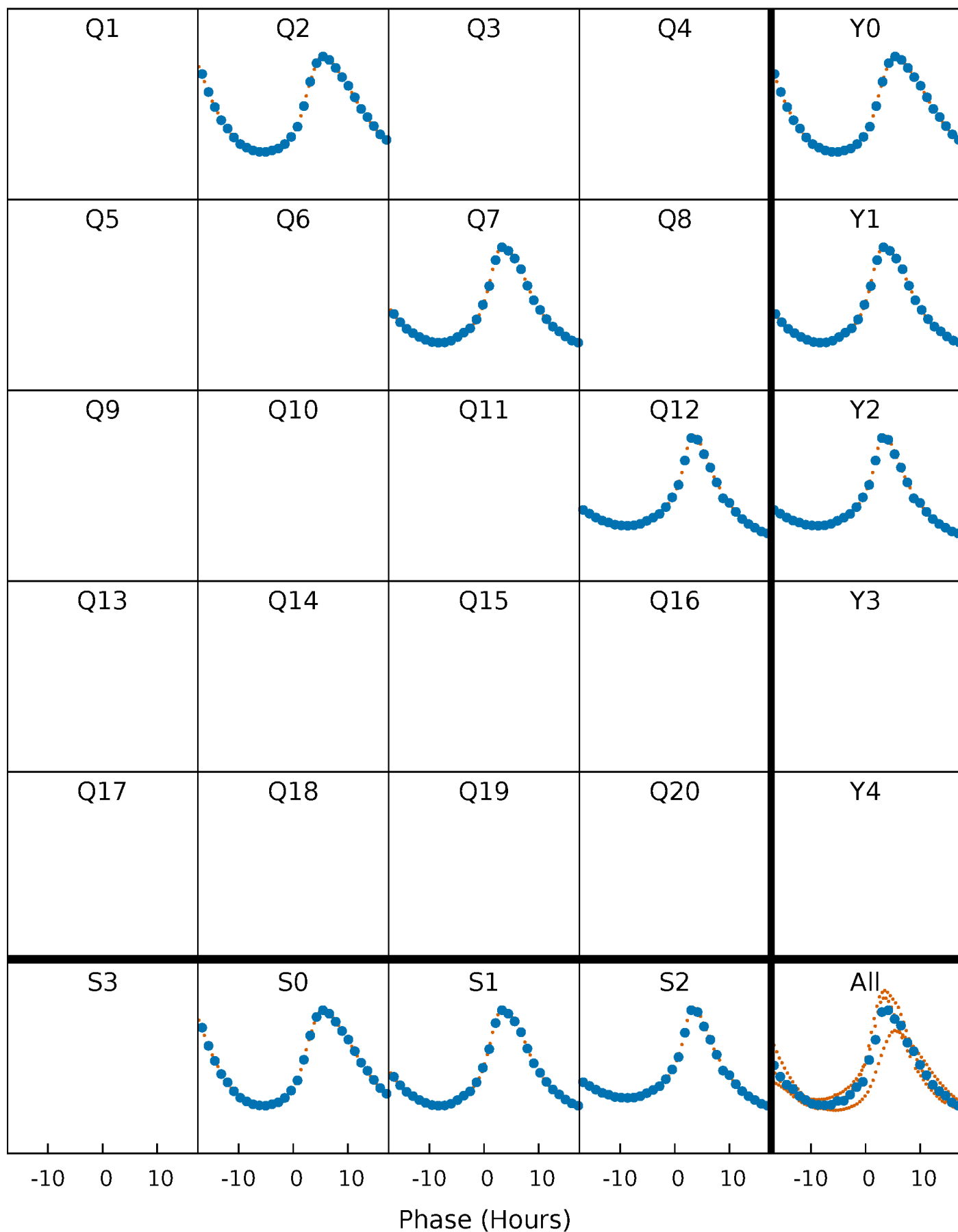


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



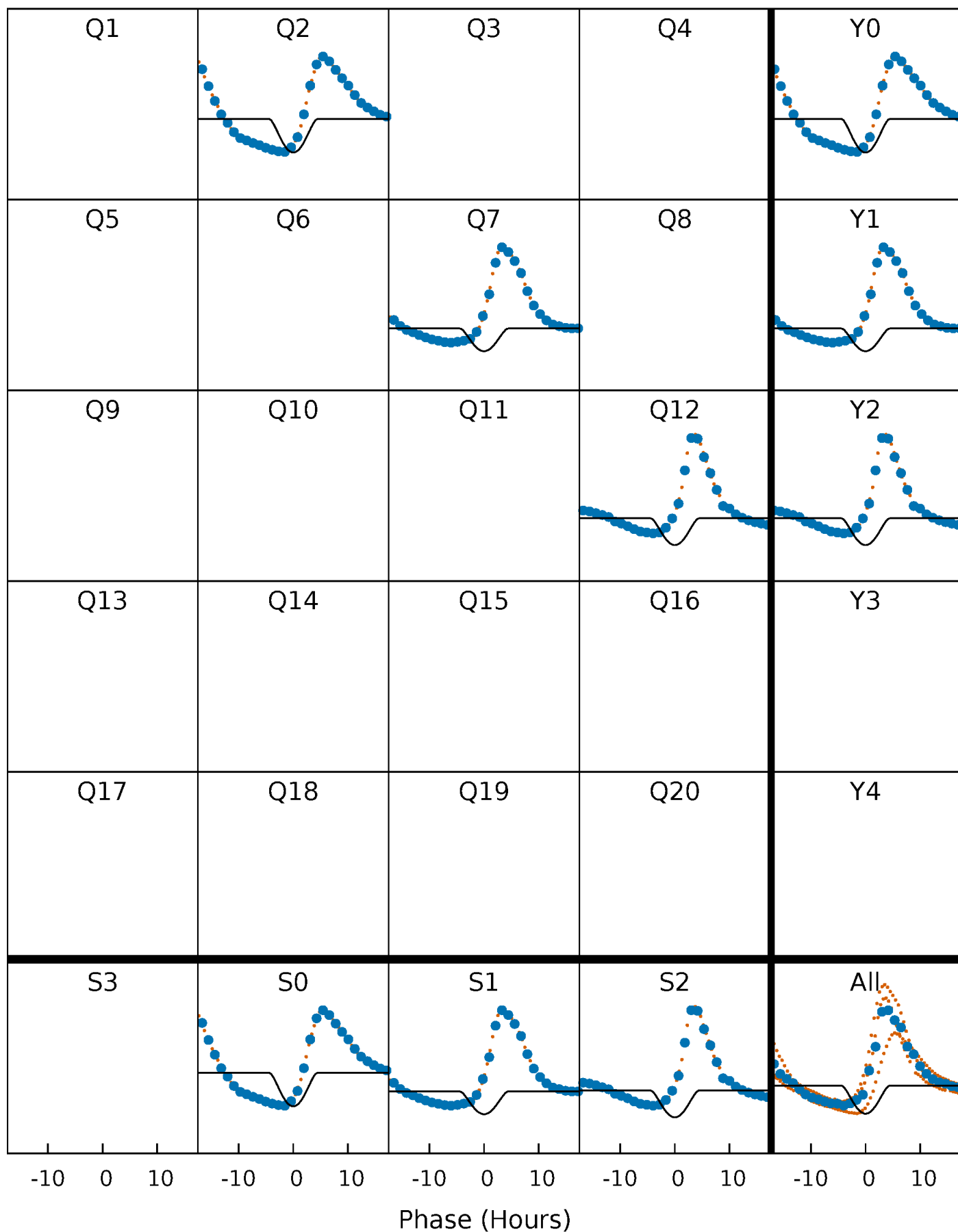
PDC Quarter-Phased Transit Curves

TCE 002696217-02 P=449.896225 Days $T_0=234.727592$ (BKJD)



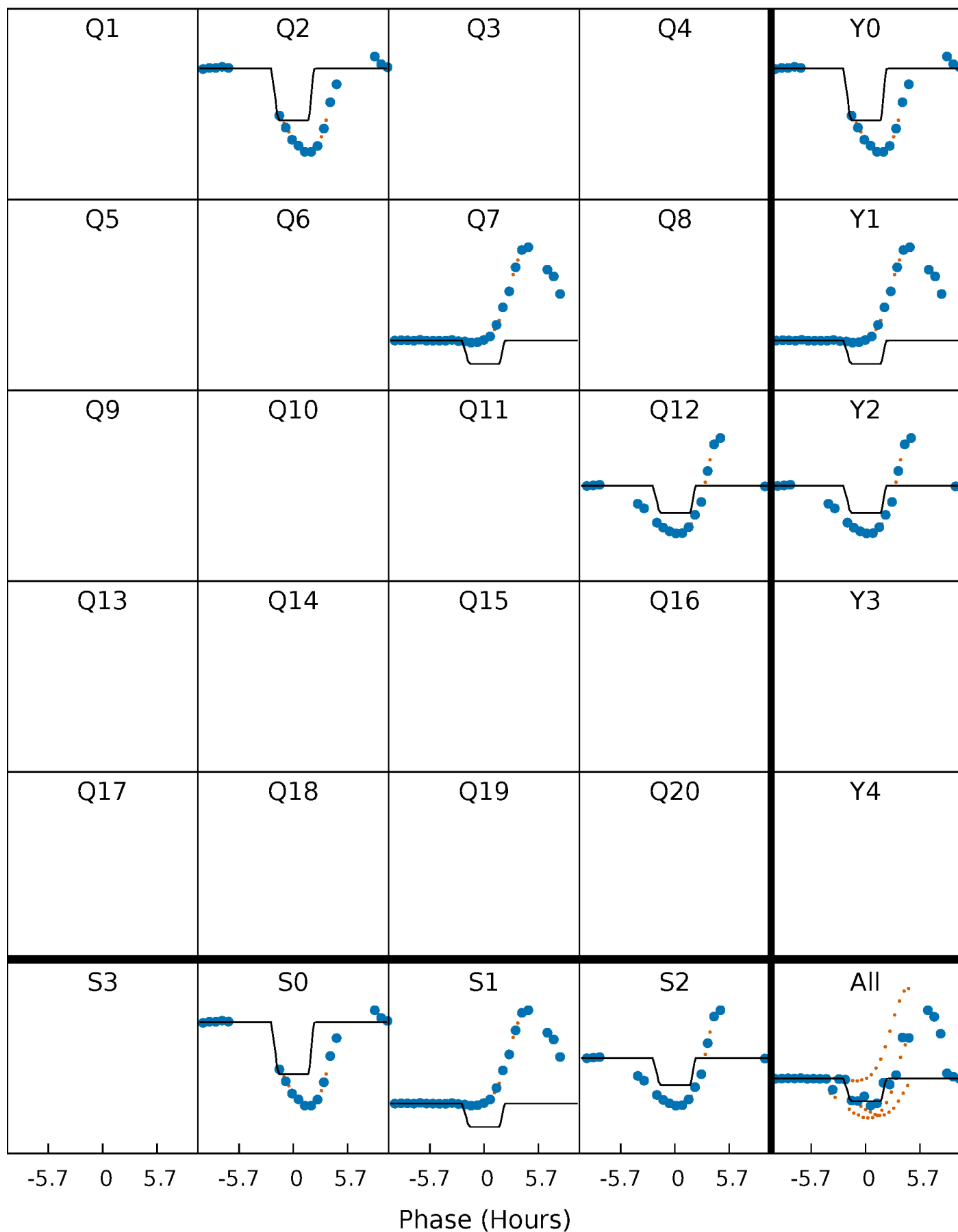
DV Quarter-Phased Transit Curves

TCE 002696217-02 P=449.896225 Days $T_0=234.727592$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

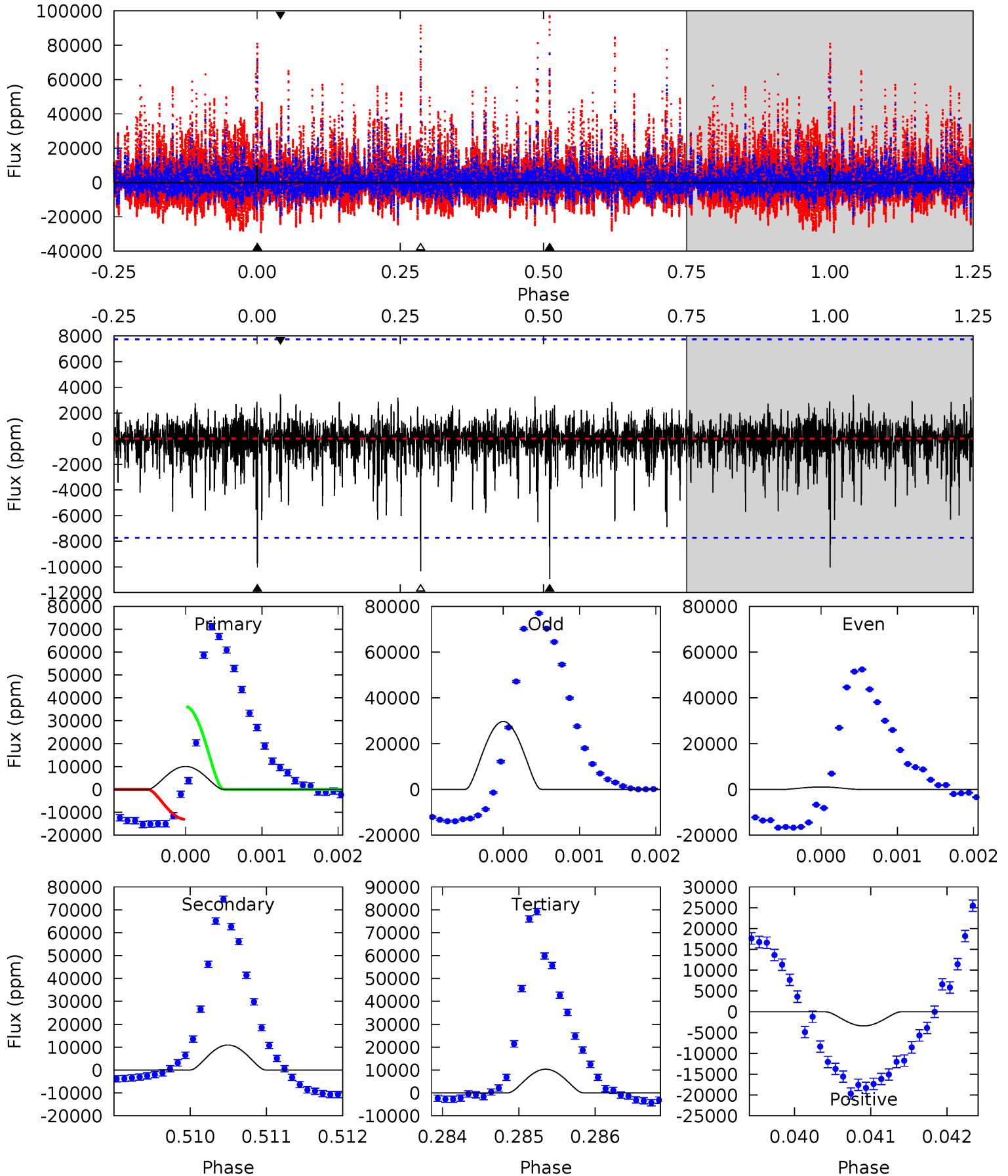
TCE 002696217-02 P=449.899313 Days $T_0=234.662672$ (BKJD)



DV Model-Shift Uniqueness Test

002696217-02, P = 449.896225 Days, E = 234.727592 Days

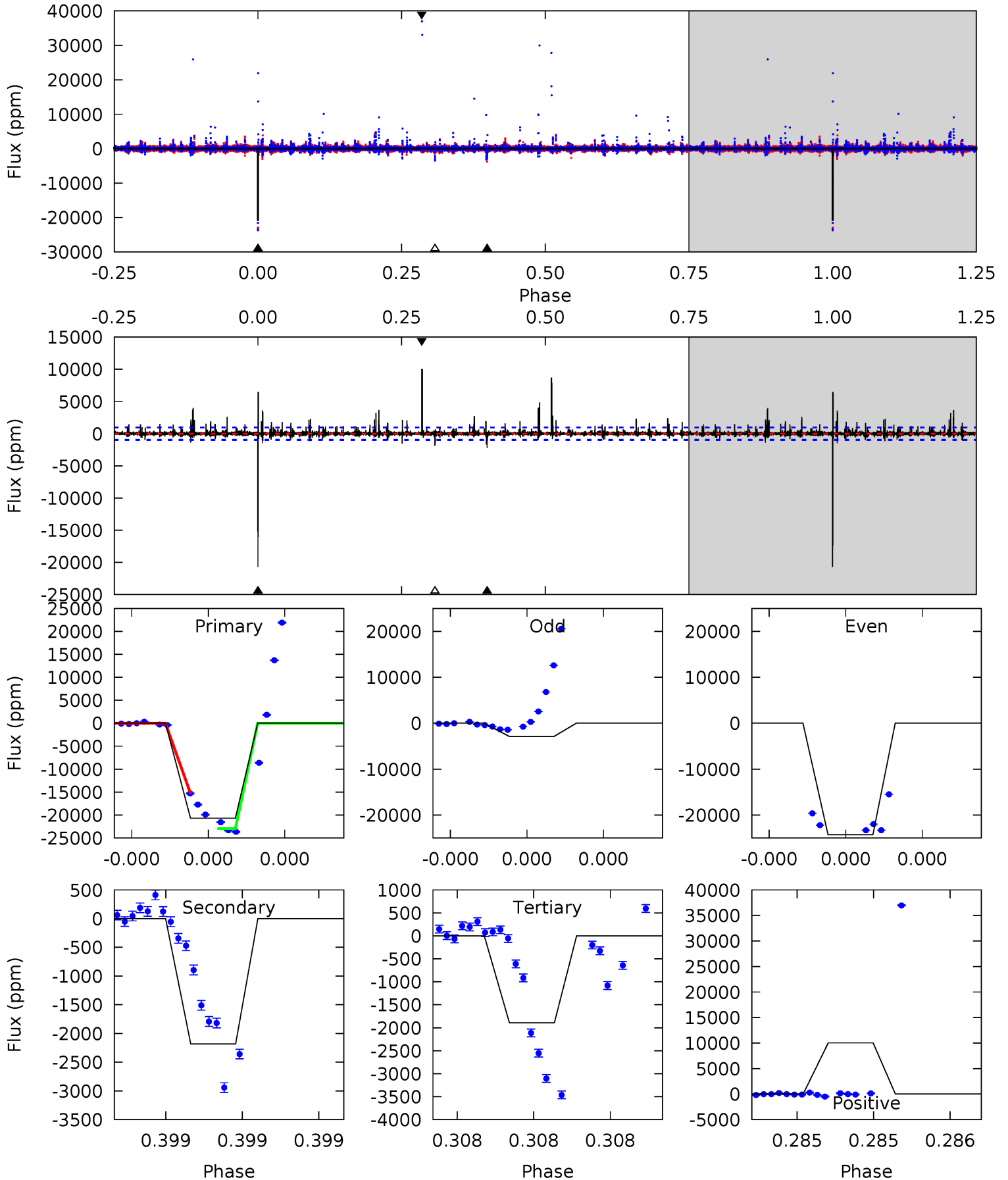
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.11	7.75	7.33	2.41	5.48	3.34	0.90	-0.22	4.70	0.42	5.34	9.53	0.63	0.24	8.20



Alt Model-Shift Uniqueness Test

002696217-02, P = 449.899313 Days, E = 234.662672 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.5	12.7	11.0	58.4	5.62	3.55	1.44	109.4	62.0	1.69	-45.7	71.8	0.68	0.33	0



Stellar Parameters For KIC 002696217

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7405^{+233}_{-311}	$4.188^{+0.149}_{-0.182}$	$-0.380^{+0.250}_{-0.350}$	$1.559^{+0.469}_{-0.312}$	$1.366^{+0.206}_{-0.206}$	$0.508^{+0.379}_{-0.251}$
	+3%/-4%	+4%/-4%	+66%/-92%	+30%/-20%	+15%/-15%	+75%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002696217-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10939 ± 1411	$42.15^{+26.37}_{-21.04}$	507^{+37}_{-34}	4865^{+1776}_{-802}	5303^{+16296}_{-3228}
Alt.	-2183 ± 172	$27.09^{+20.29}_{-17.81}$	505^{+35}_{-34}	4213^{+2456}_{-728}	2673^{+19145}_{-1814}

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 $A_{obs} \gg 1.0$

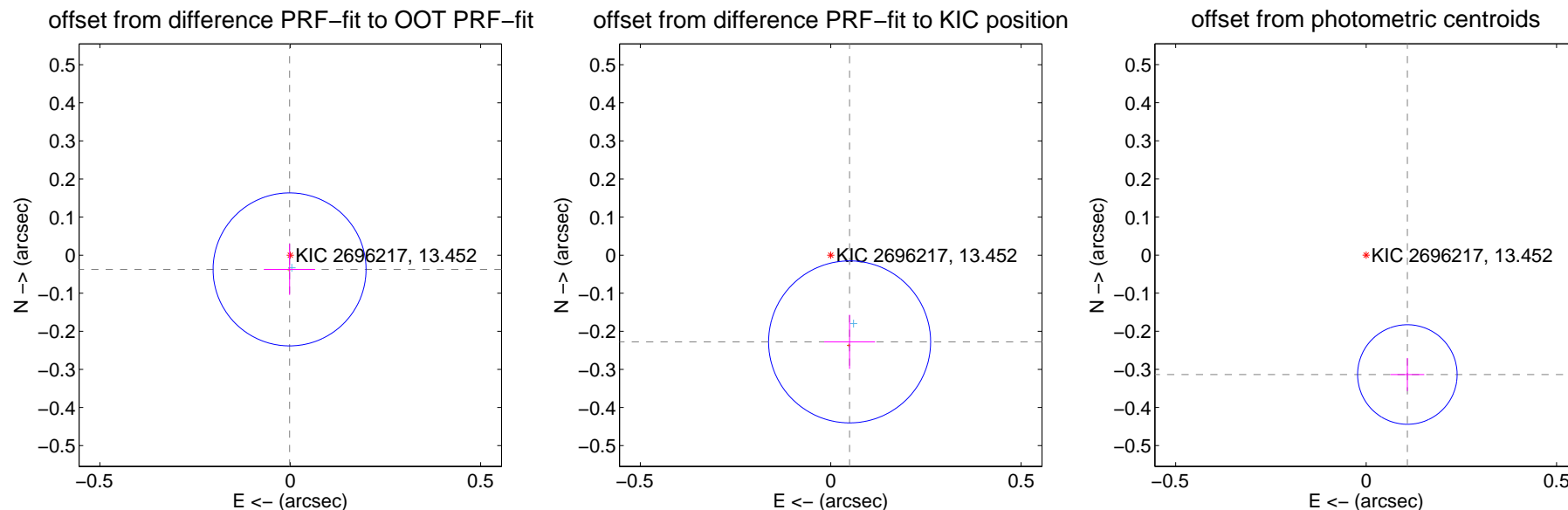
DV Centroid Data

Supplemental centroid analysis for 002696217-02. Kepler magnitude: 13.45. Transit SNR 14.50

There are 1 quarters with good PRF difference image offsets

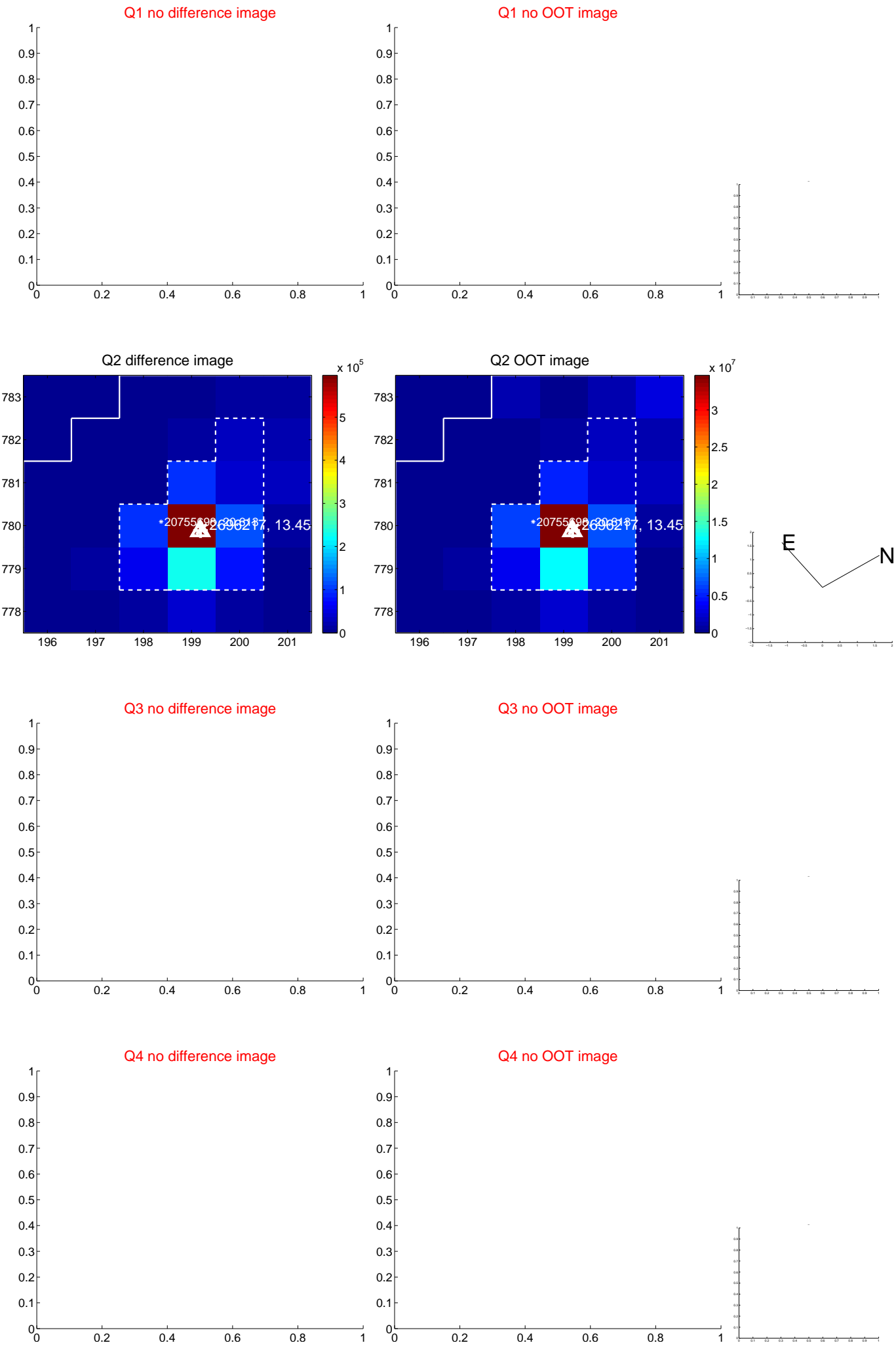
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.037 ± 0.067	0.56	0.002 ± 0.067	-0.037 ± 0.067
PRF-fit source offset from KIC position	0.233 ± 0.071	3.29	-0.050 ± 0.067	-0.228 ± 0.071
photometric centroid source offset	0.33 ± 0.04	7.62	-0.11 ± 0.04	-0.31 ± 0.04

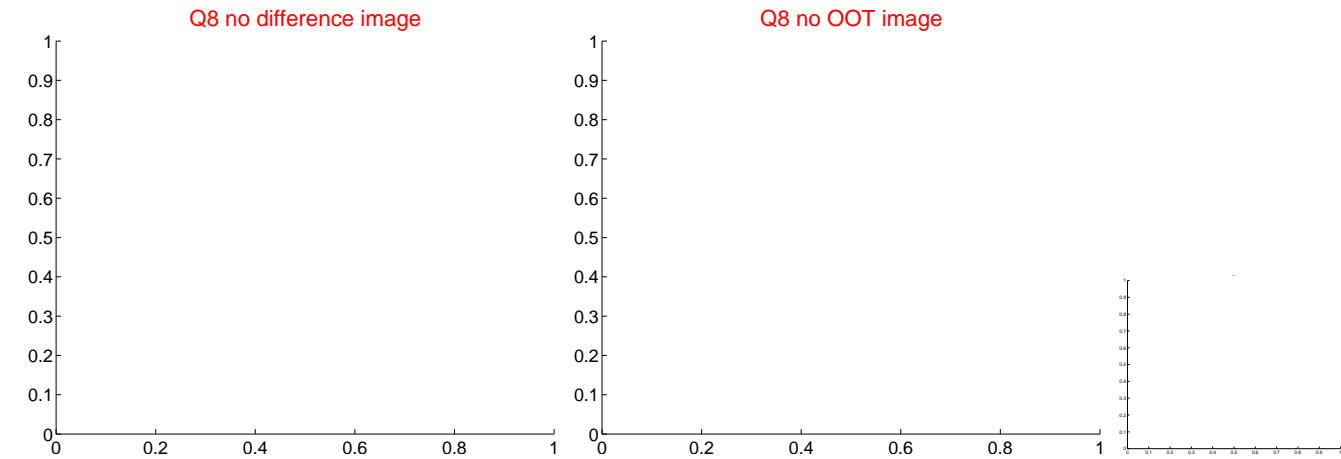
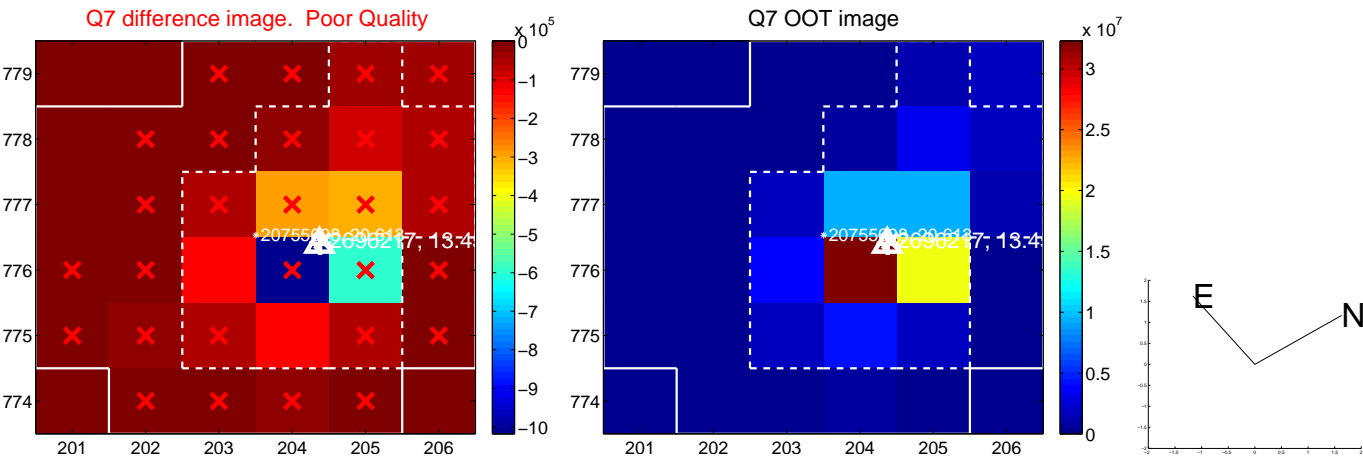
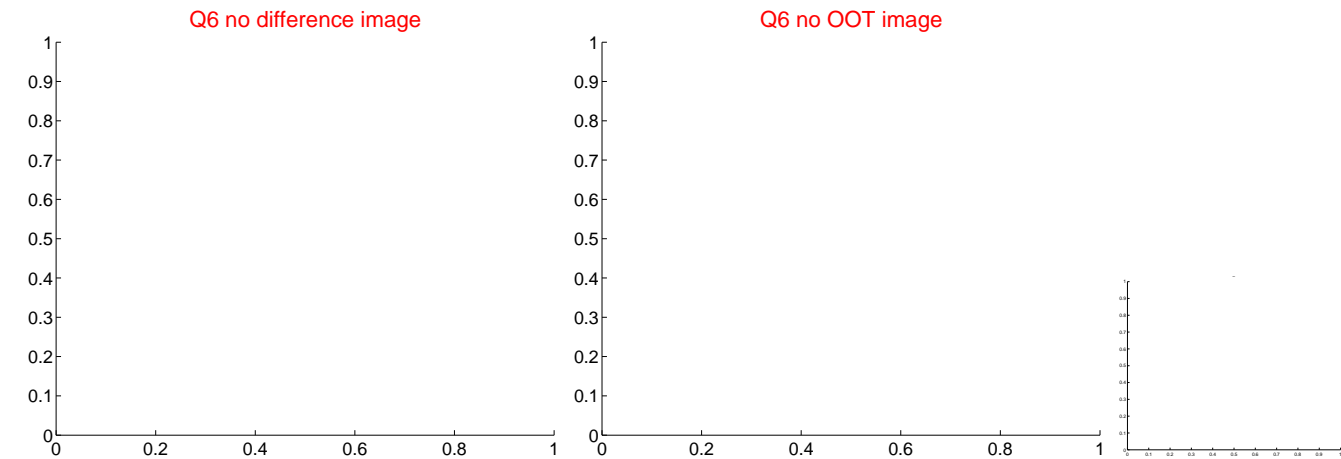
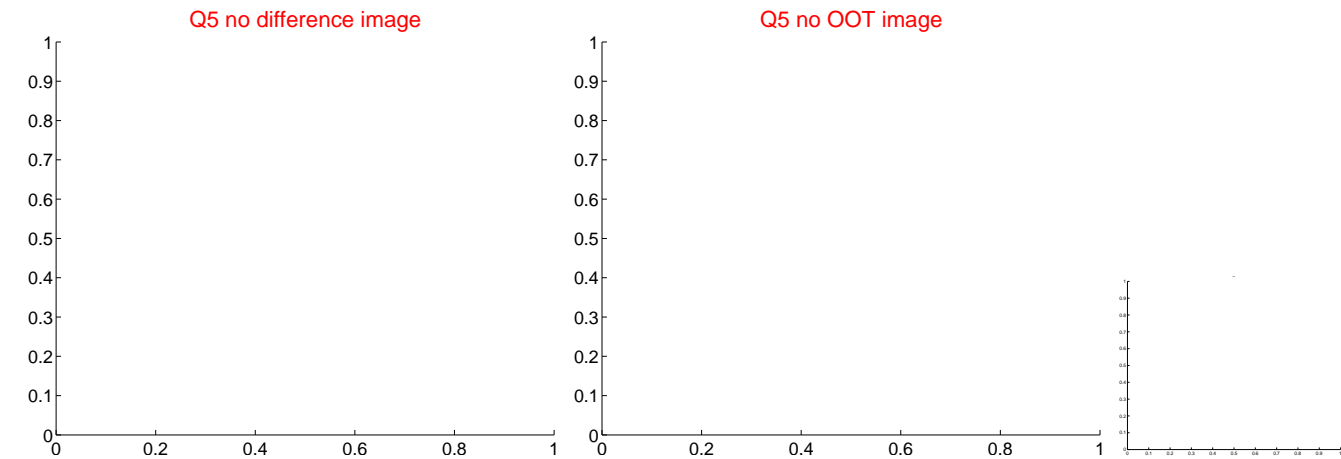


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



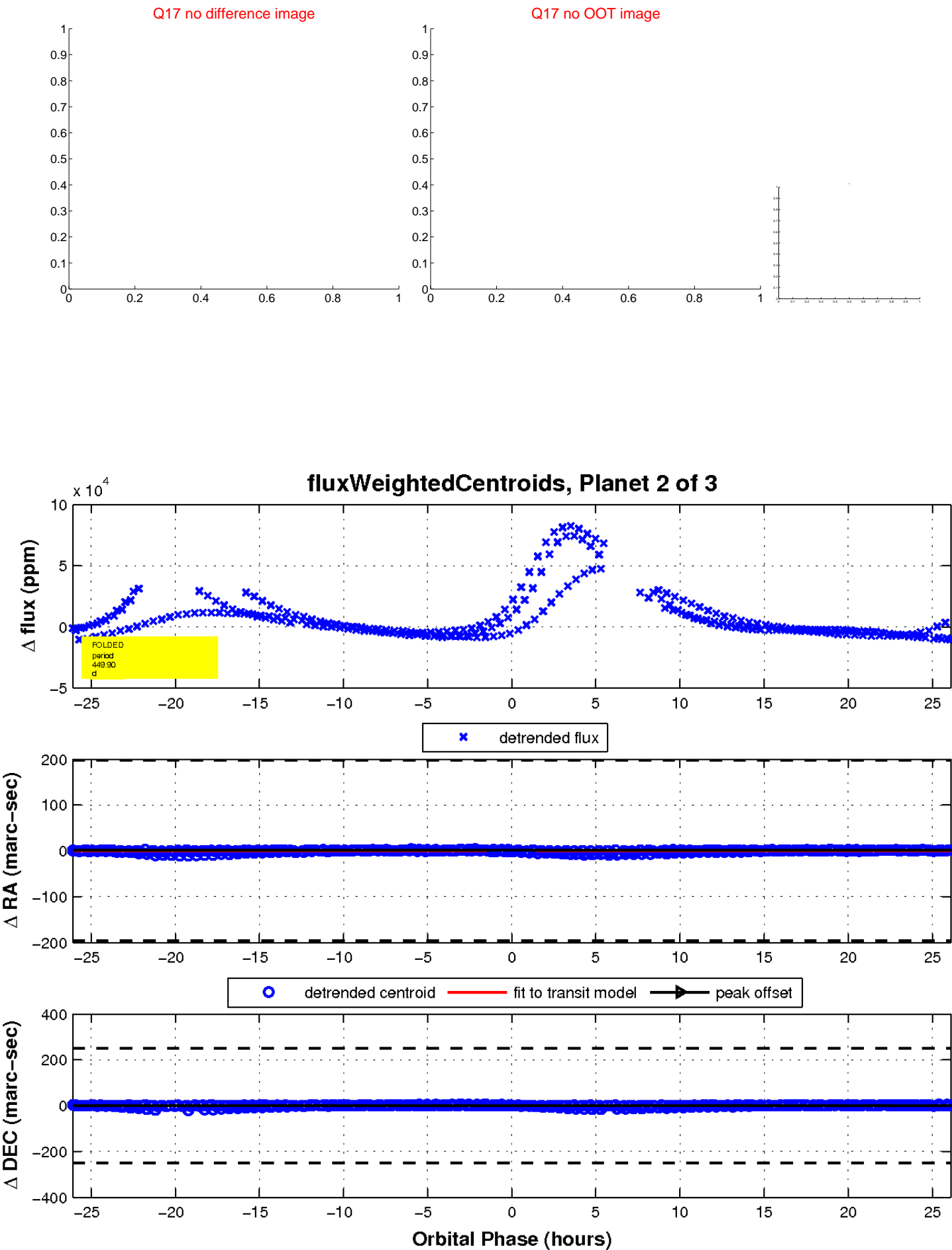
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



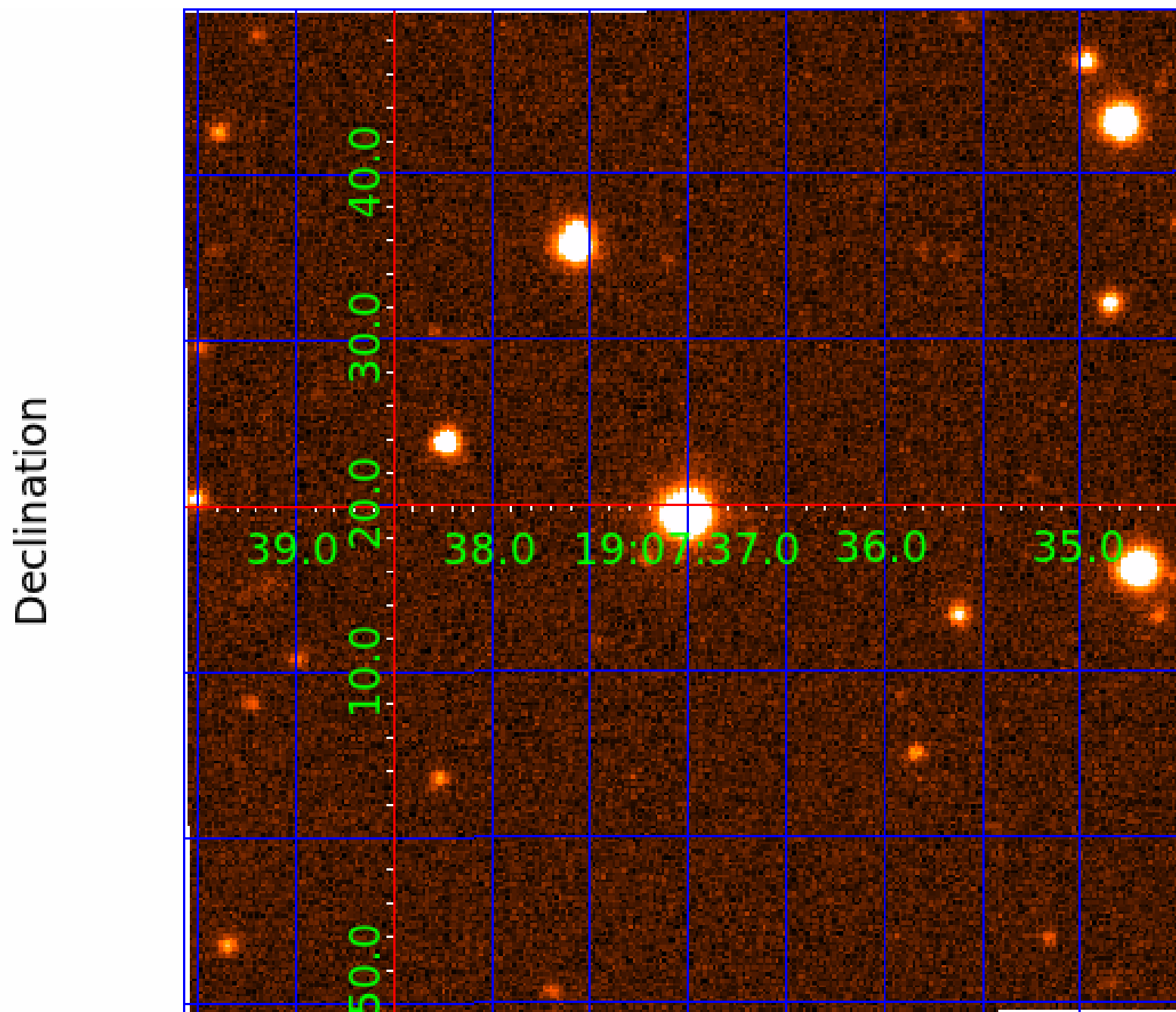
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 002696217

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})
002696217-01	OBS	No	490.704455	204.222865	19835.0	8.784	27.8	14.7	1.56	7405	37.57	3.58
002696217-02	OBS	No	449.896225	234.727592	22417.4	8.718	27.7	14.5	1.56	7405	40.01	4.03
002696217-03	OBS	No	350.888530	337.526029	7370.1	9.000	20.3	7.9	1.56	7405	23.44	5.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002696217-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002696217-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

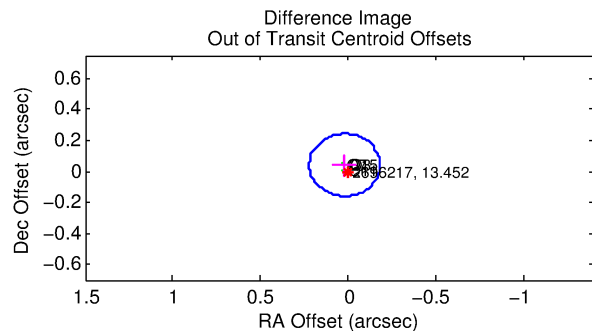
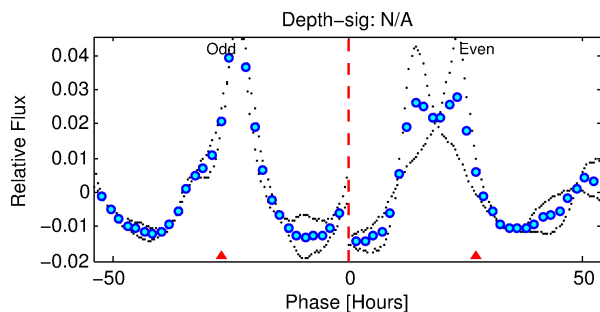
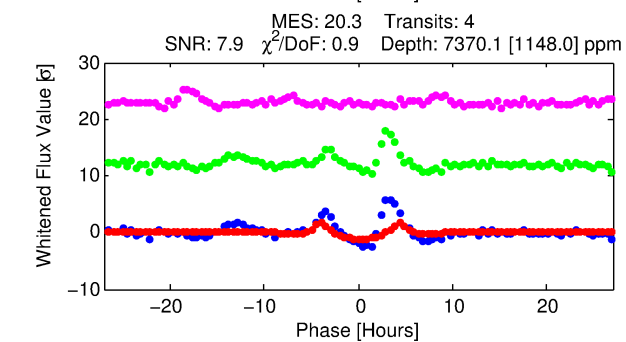
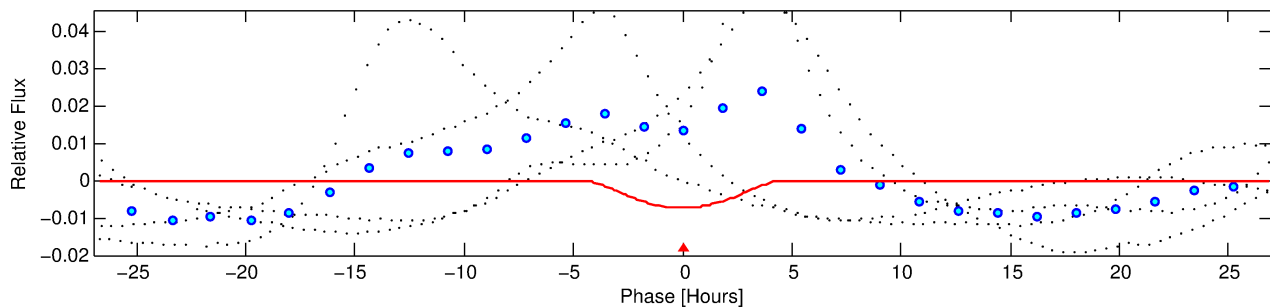
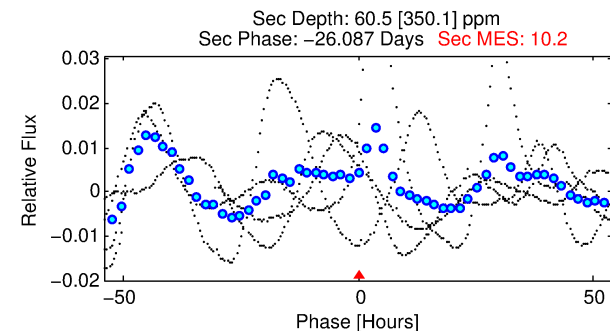
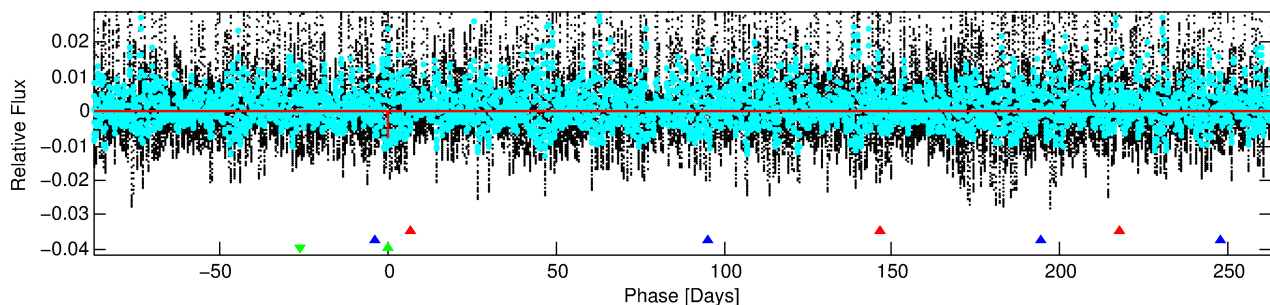
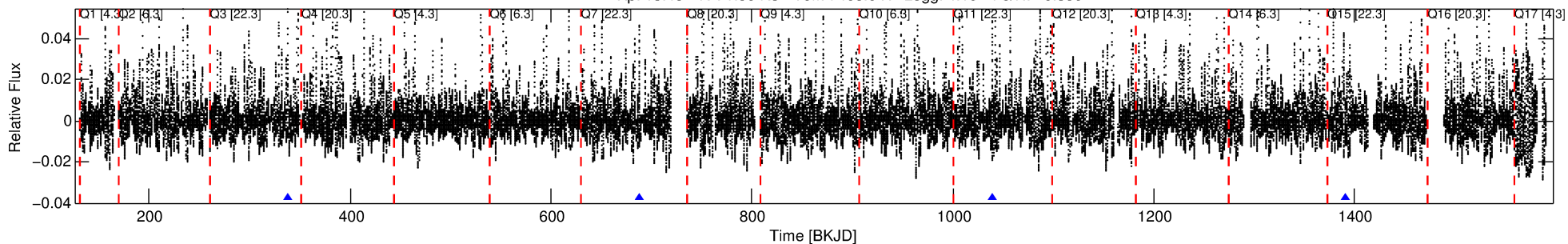
Ephemeris Match Information For 002696217-03

No Significant Match Found

DV One-Page Summary

KIC: 2696217 Candidate: 3 of 3 Period: 350.889 d

Kp: 13.45 R*: 1.56 Rs Teff: 7405.0 K Logg: 4.19 Fe/H: -0.380



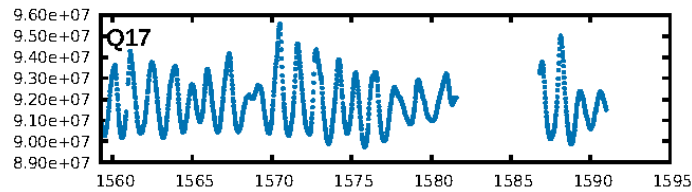
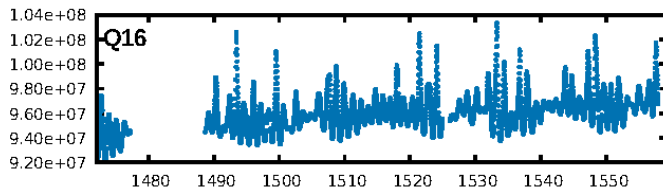
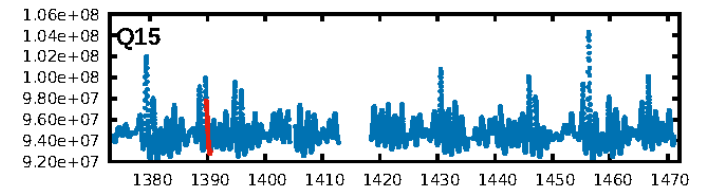
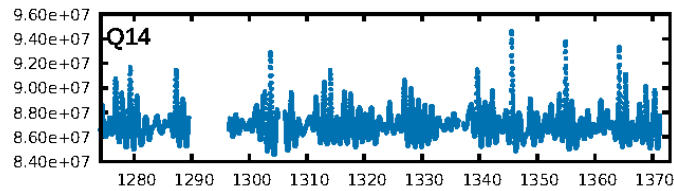
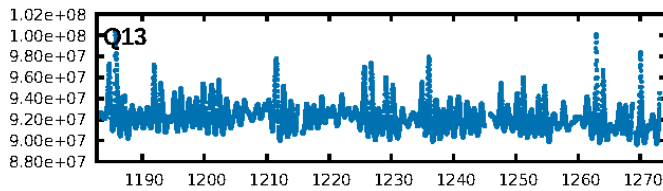
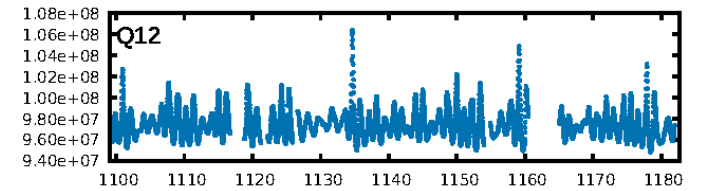
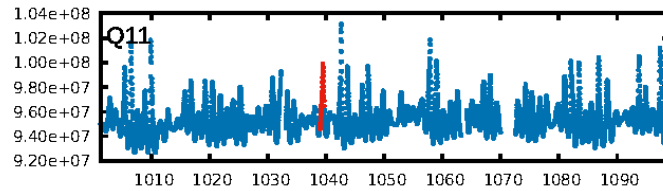
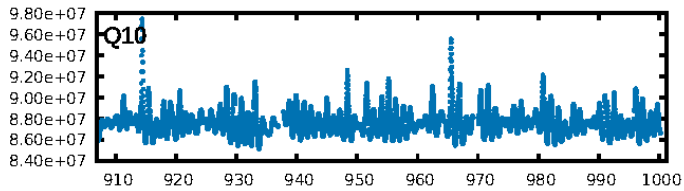
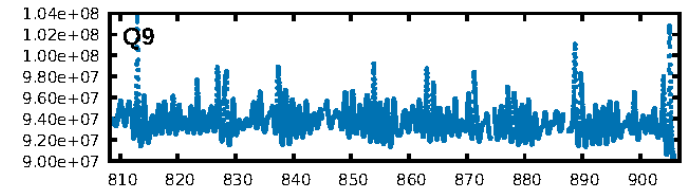
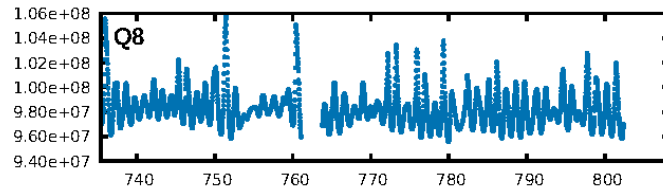
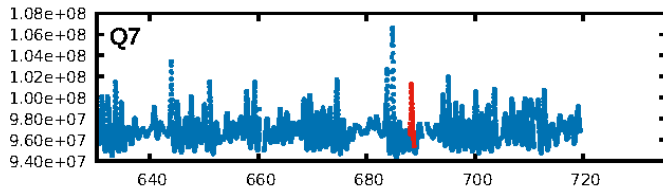
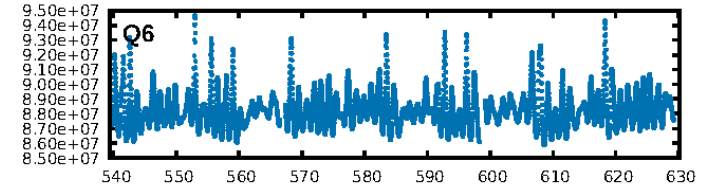
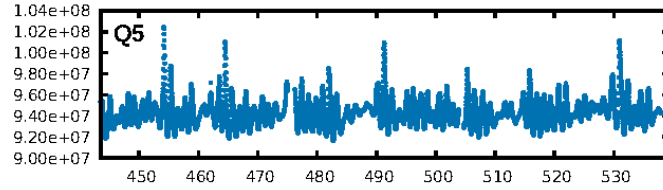
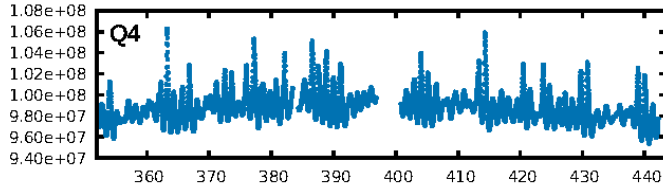
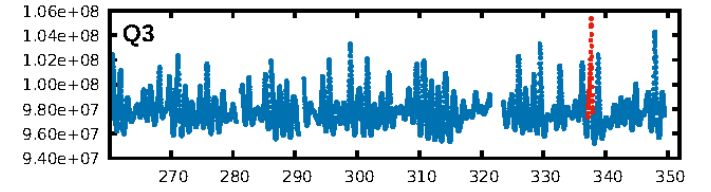
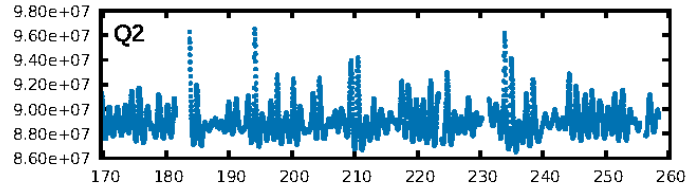
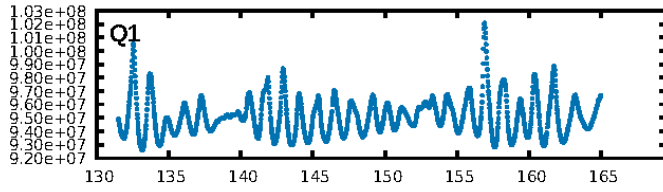
DV Fit Results:

Period = 350.88853 [0.00567] d
Epoch = 337.5260 [0.0108] BKJD
Rp/R* = 0.1378 [0.1246]
a/R* = 162.08 [23.33]
b = 1.00 [0.18]
Seff = 5.61 [2.15]
Teff = 392 [38] K
Rp = 23.44 [22.34] Re
a = 1.0807 [0.2641] AU
Ag = 70.80 [429.66] [0.16σ]
Teffp = 1760 [2667] K [0.51σ]

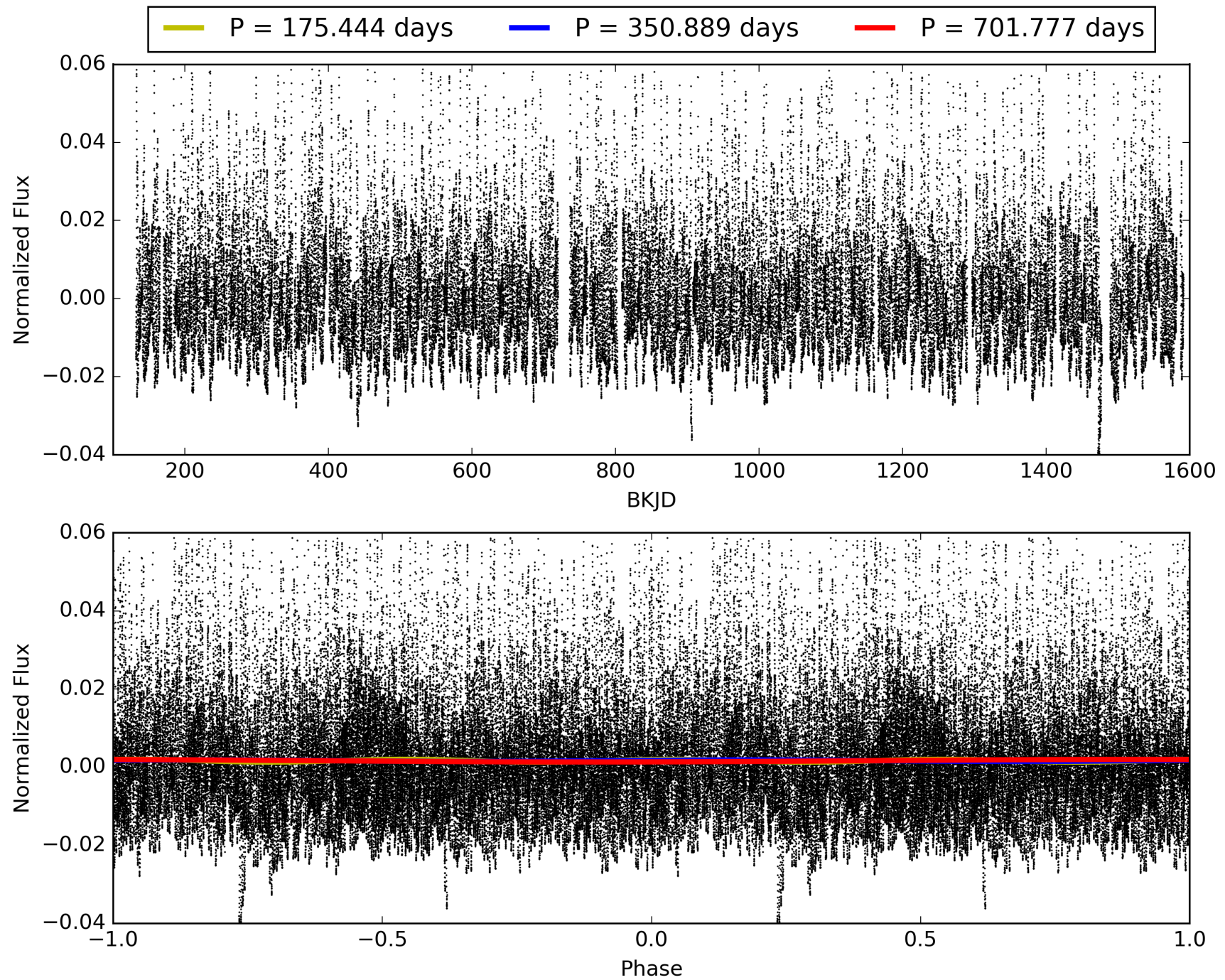
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [189.65σ]
ModelChiSquare2-sig: 7.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6706
Centroid-sig: 83.5%
Centroid-so: 0.288 arcsec [2.29σ]
OotOffset-rm: 0.047 arcsec [0.71σ]
KicOffset-rm: 0.174 arcsec [2.51σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 002696217-03, PDC Light Curves

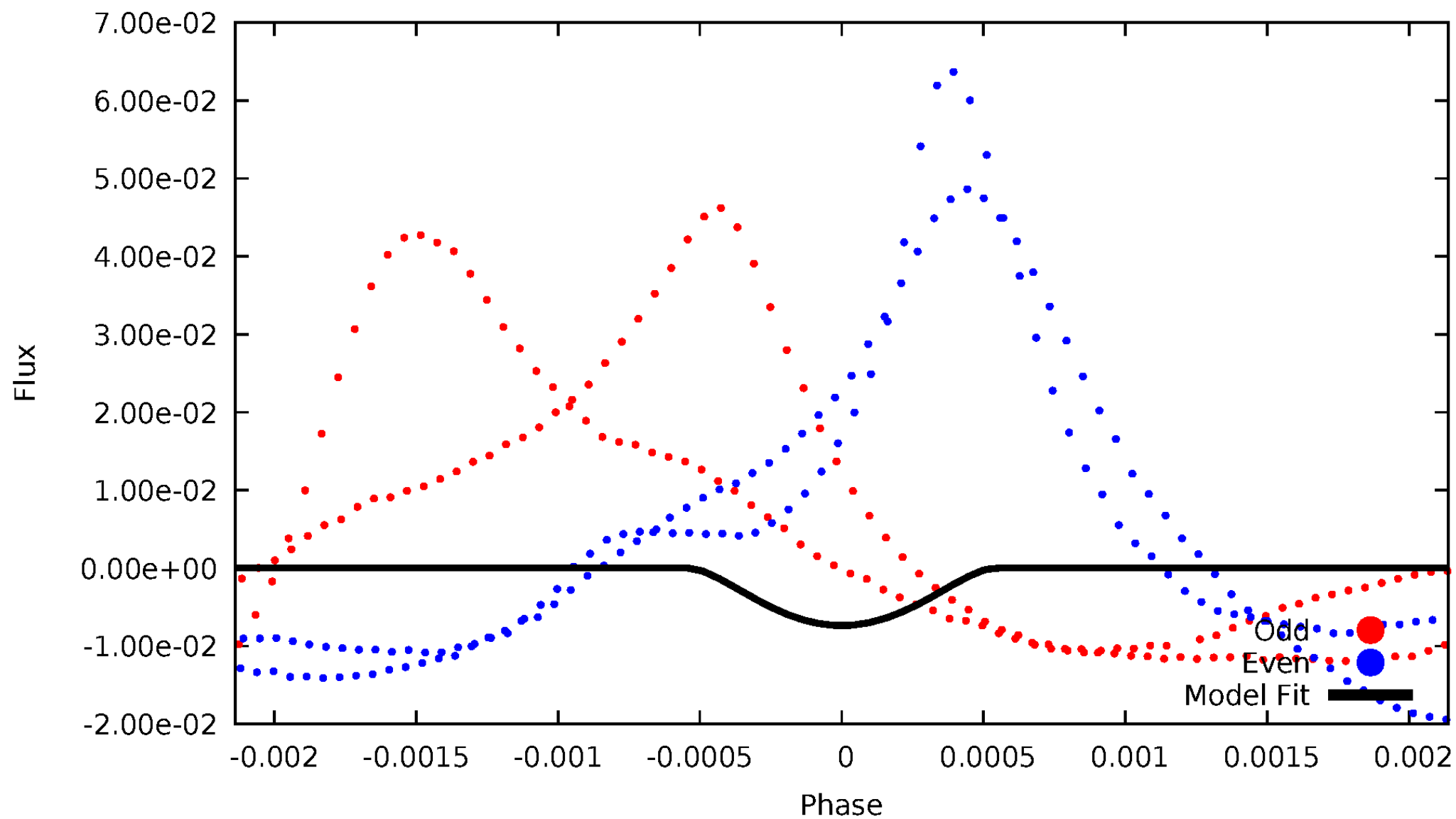


TCE 002696217-03



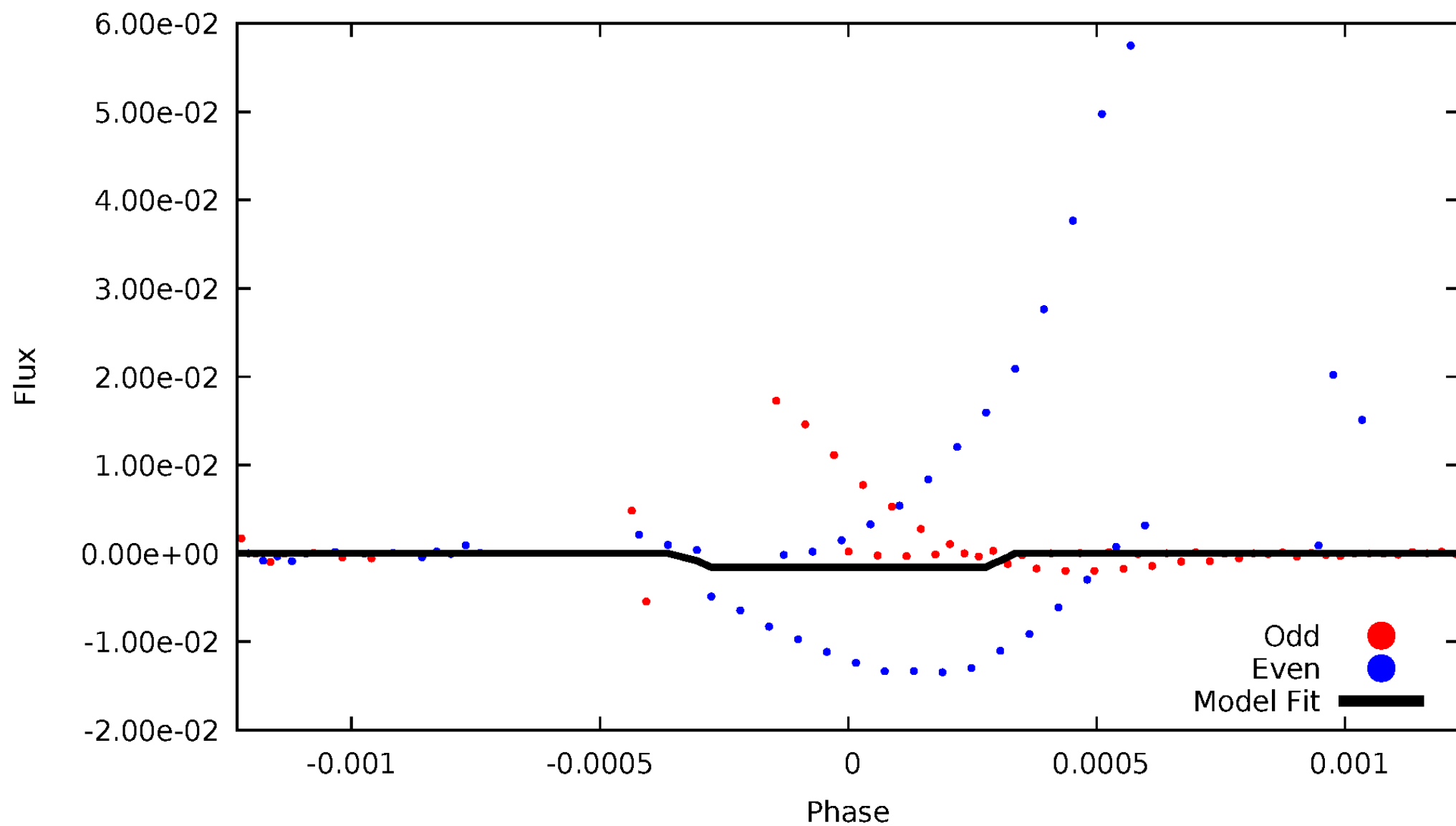
DV Odd/Even

TCE 002696217-03



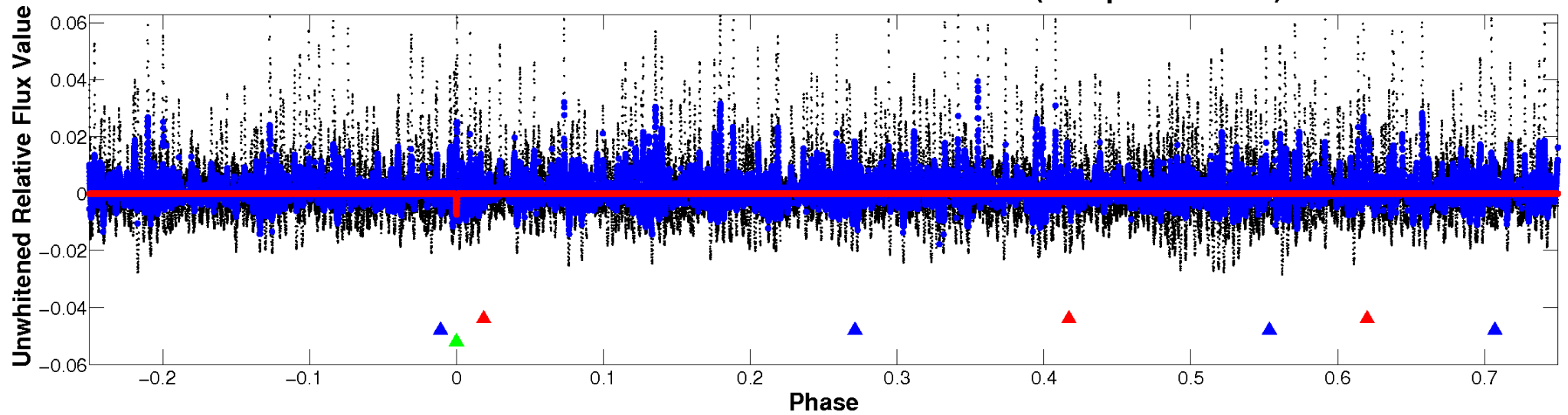
ALT Odd/Even

TCE 002696217-03

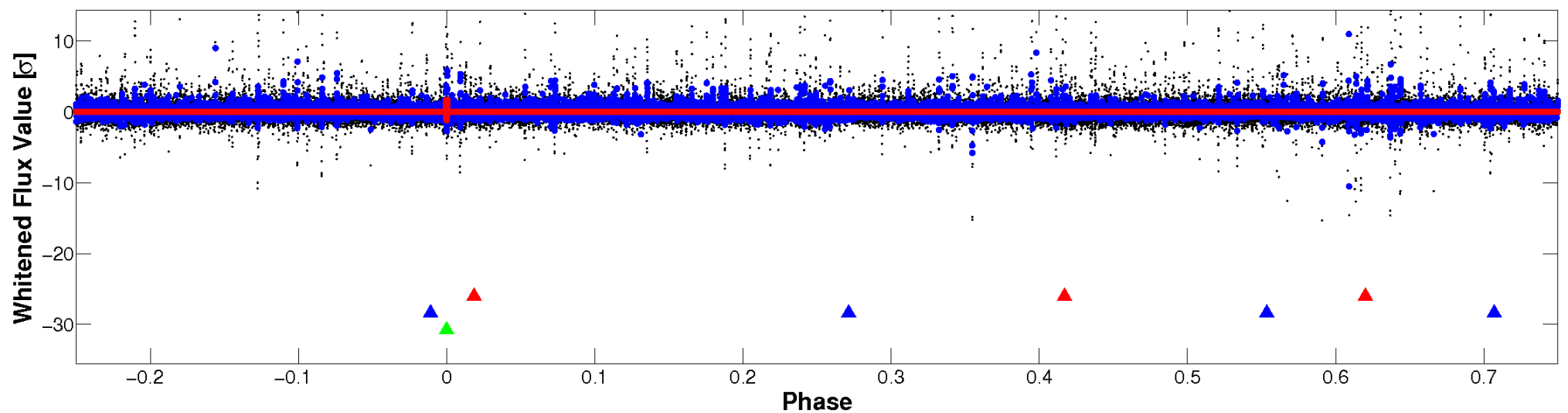


Non-Whitened Vs. Whitened Light Curve

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

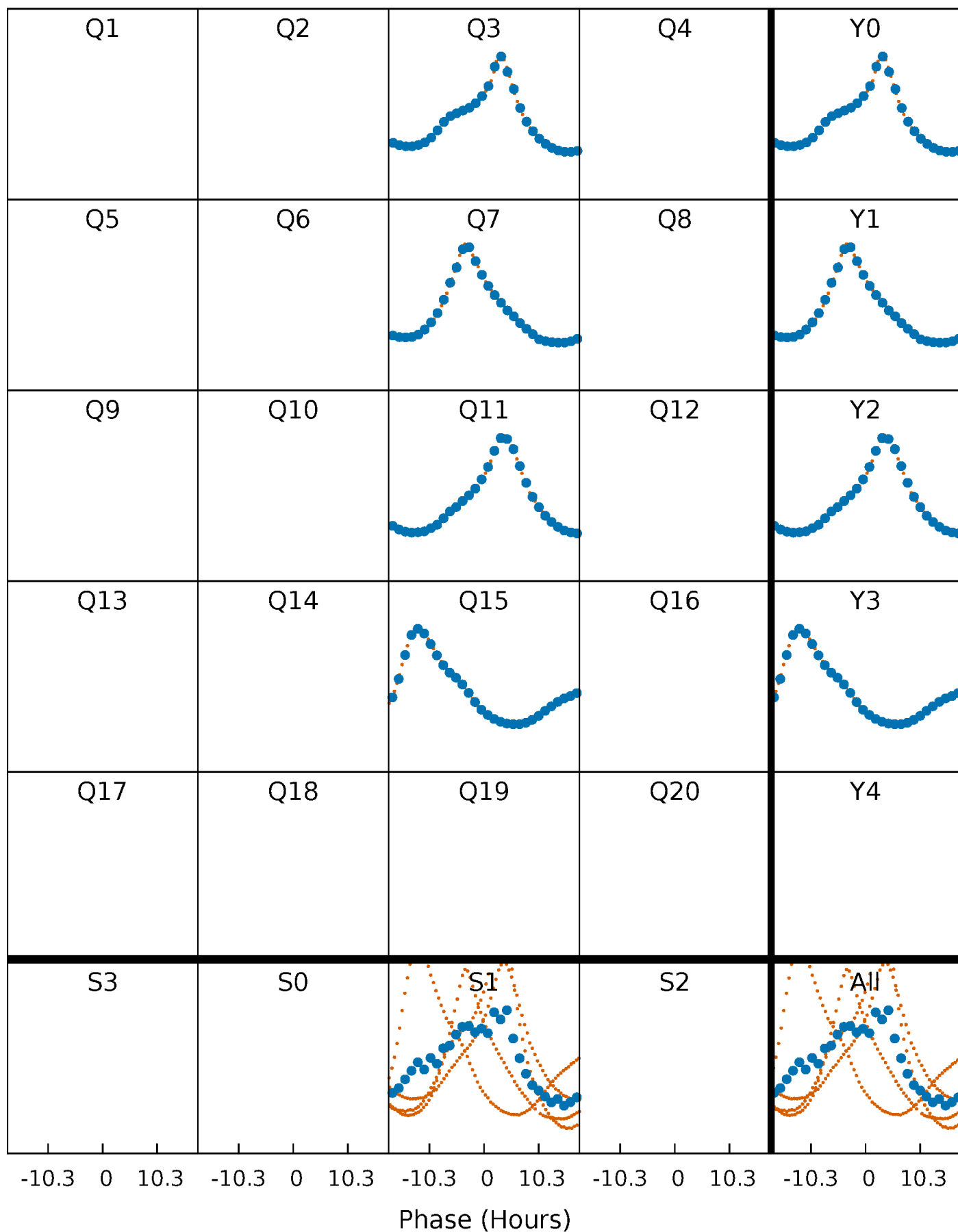


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



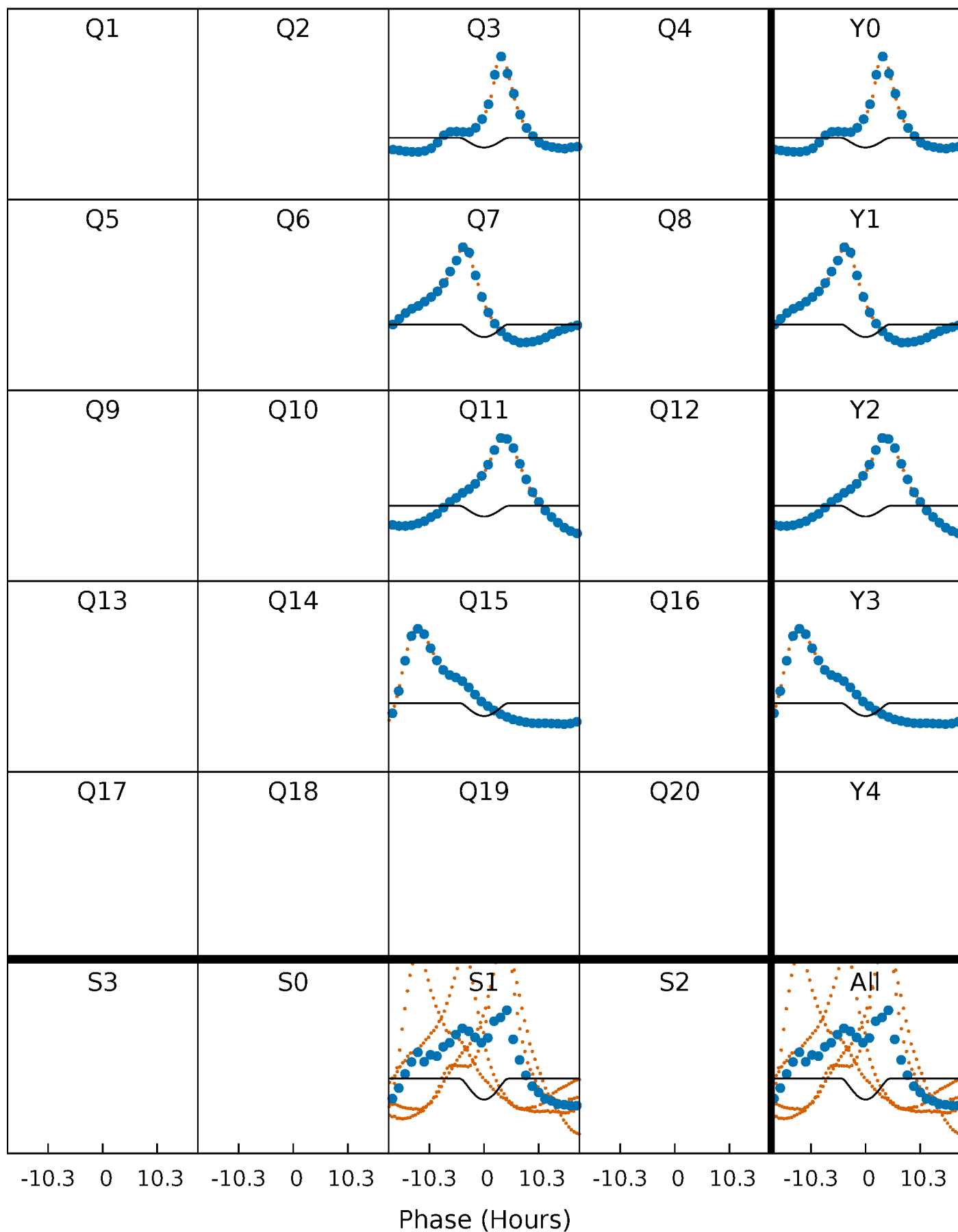
PDC Quarter-Phased Transit Curves

TCE 002696217-03 $P=350.888530$ Days $T_0=337.526029$ (BKJD)



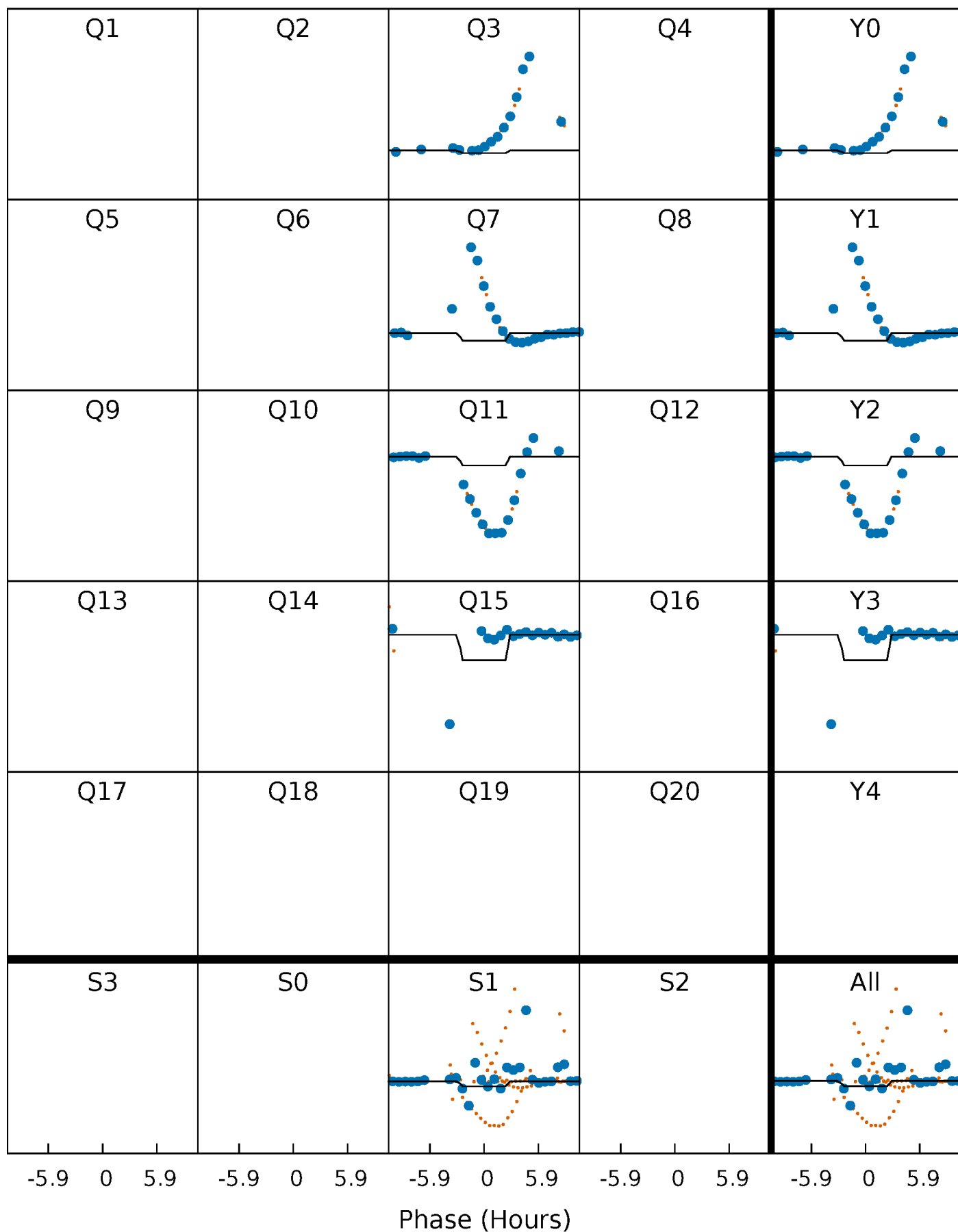
DV Quarter-Phased Transit Curves

TCE 002696217-03 $P=350.888530$ Days $T_0=337.526029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

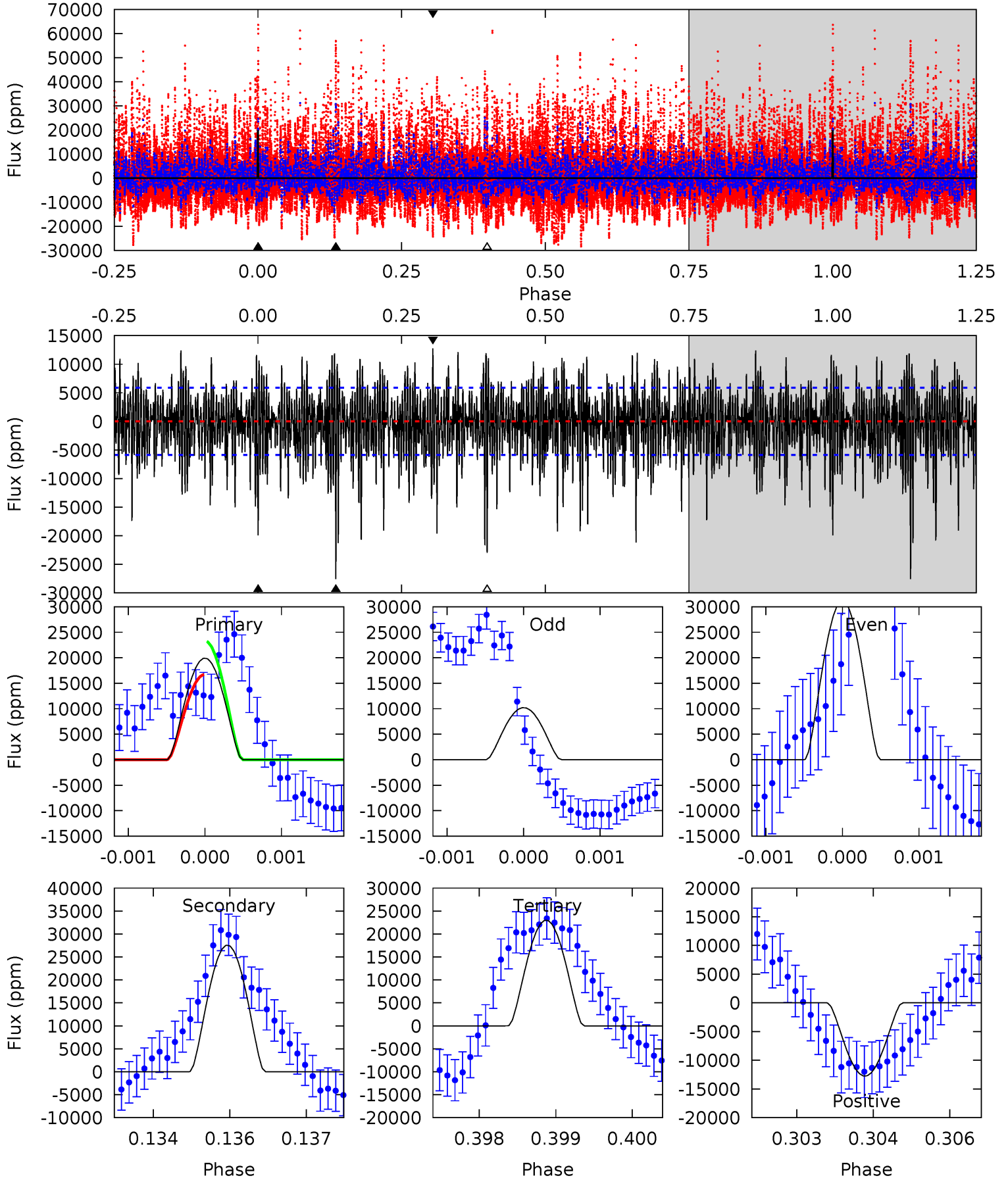
TCE 002696217-03 P=350.891904 Days $T_0=337.444471$ (BKJD)



DV Model-Shift Uniqueness Test

002696217-03, P = 350.888530 Days, E = 337.526029 Days

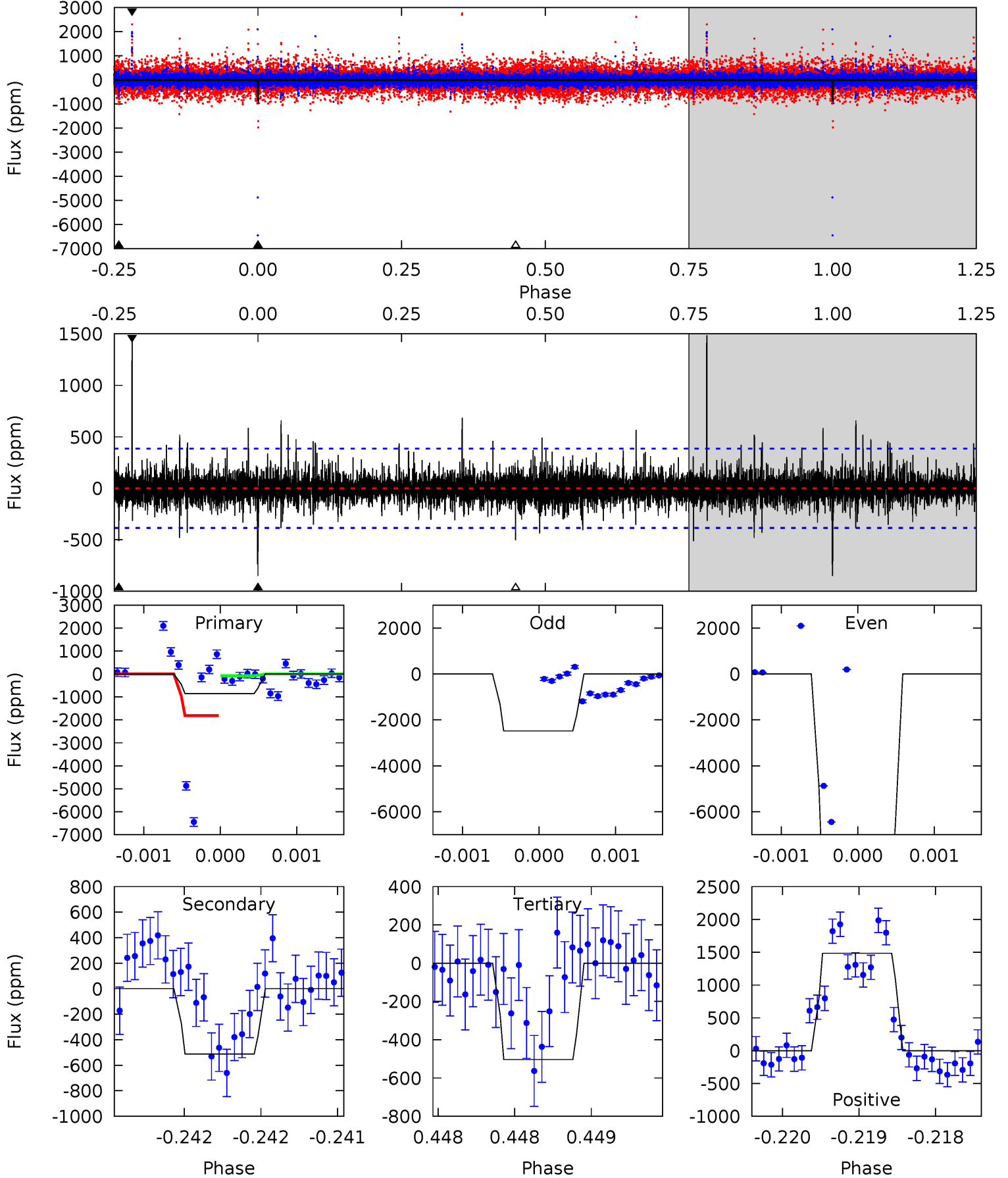
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	25.4	21.2	11.8	5.43	3.26	4.72	-2.85	6.61	4.21	13.7	8.89	0.84	0.32	3.00



Alt Model-Shift Uniqueness Test

002696217-03, P = 350.891904 Days, E = 337.444471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	7.38	7.25	21.4	5.54	3.43	1.30	5.01	-9.12	0.14	-14.0	33.2	0.19	0.64	12.0



Stellar Parameters For KIC 002696217

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7405^{+233}_{-311}	$4.188^{+0.149}_{-0.182}$	$-0.380^{+0.250}_{-0.350}$	$1.559^{+0.469}_{-0.312}$	$1.366^{+0.206}_{-0.206}$	$0.508^{+0.379}_{-0.251}$
	+3%/-4%	+4%/-4%	+66%/-92%	+30%/-20%	+15%/-15%	+75%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002696217-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27549 ± 1083	$26.91^{+21.69}_{-17.04}$	548^{+43}_{-38}	7627^{+9186}_{-1946}	$25510^{+160535}_{-17996}$
Alt.	-513 ± 69	$17.07^{+17.83}_{-11.89}$	547^{+41}_{-37}	3861^{+2386}_{-791}	1129^{+11073}_{-863}

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 $A_{\text{obs}} \gg 1.0$

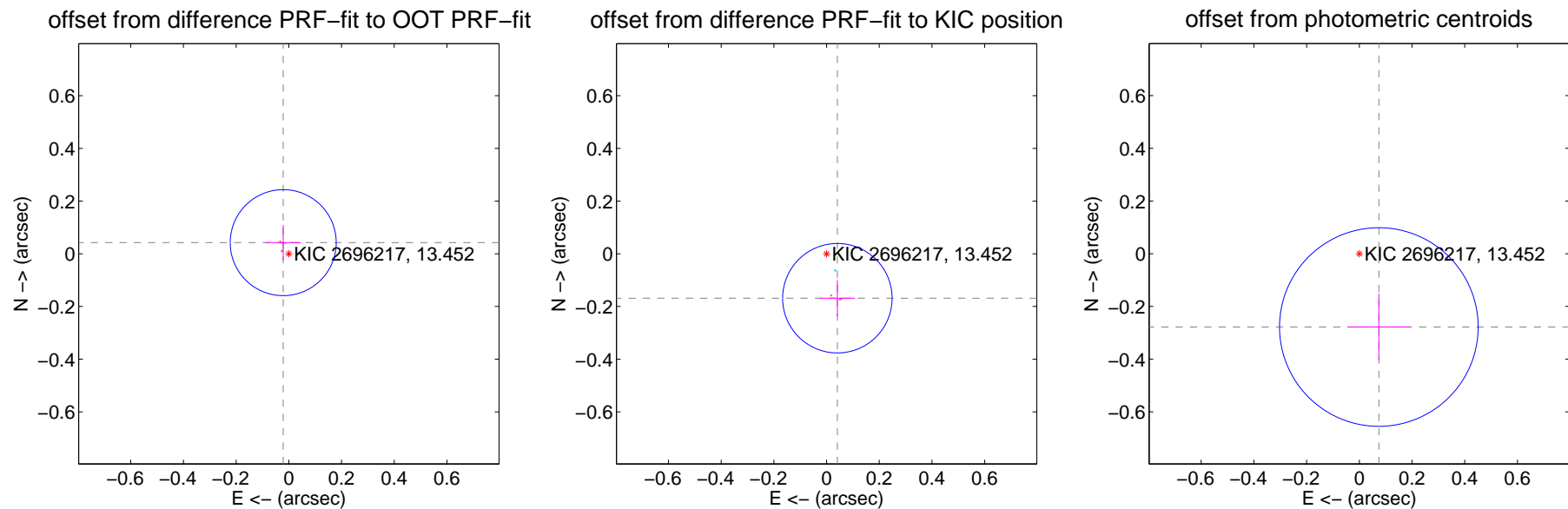
DV Centroid Data

Supplemental centroid analysis for 002696217-03. Kepler magnitude: 13.45. Transit SNR 7.90

There are 1 quarters with good PRF difference image offsets

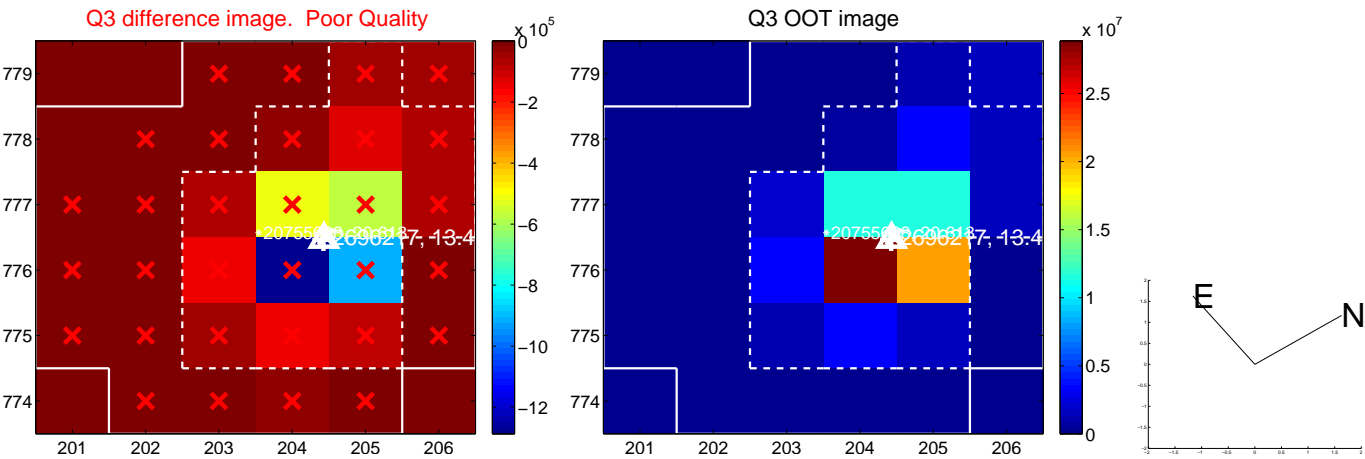
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.067	0.71	0.021 ± 0.067	0.042 ± 0.067
PRF-fit source offset from KIC position	0.174 ± 0.069	2.51	-0.041 ± 0.067	-0.169 ± 0.069
photometric centroid source offset	0.29 ± 0.13	2.29	-0.07 ± 0.12	-0.28 ± 0.13

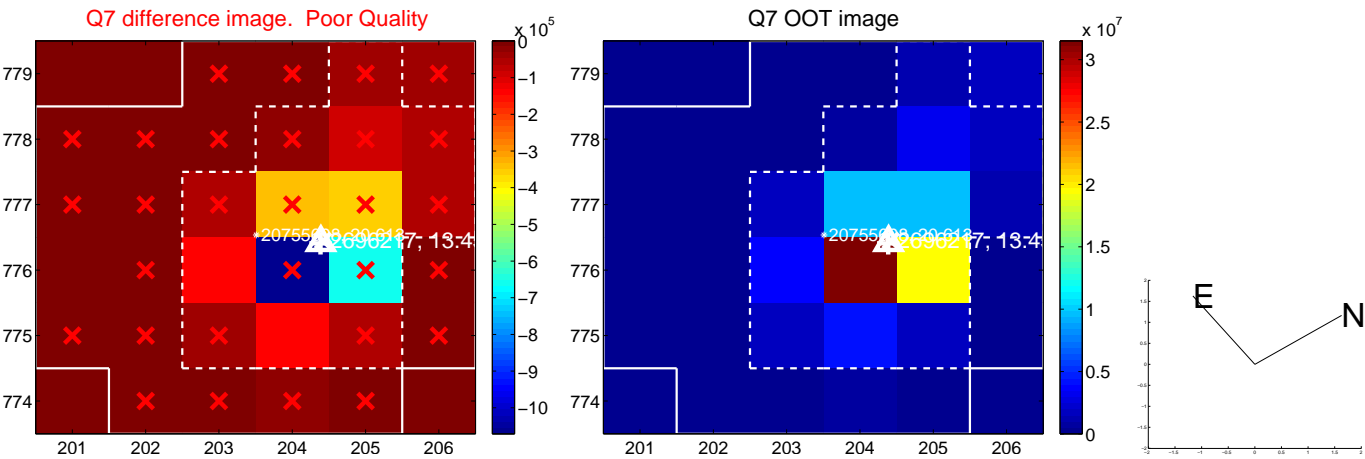


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

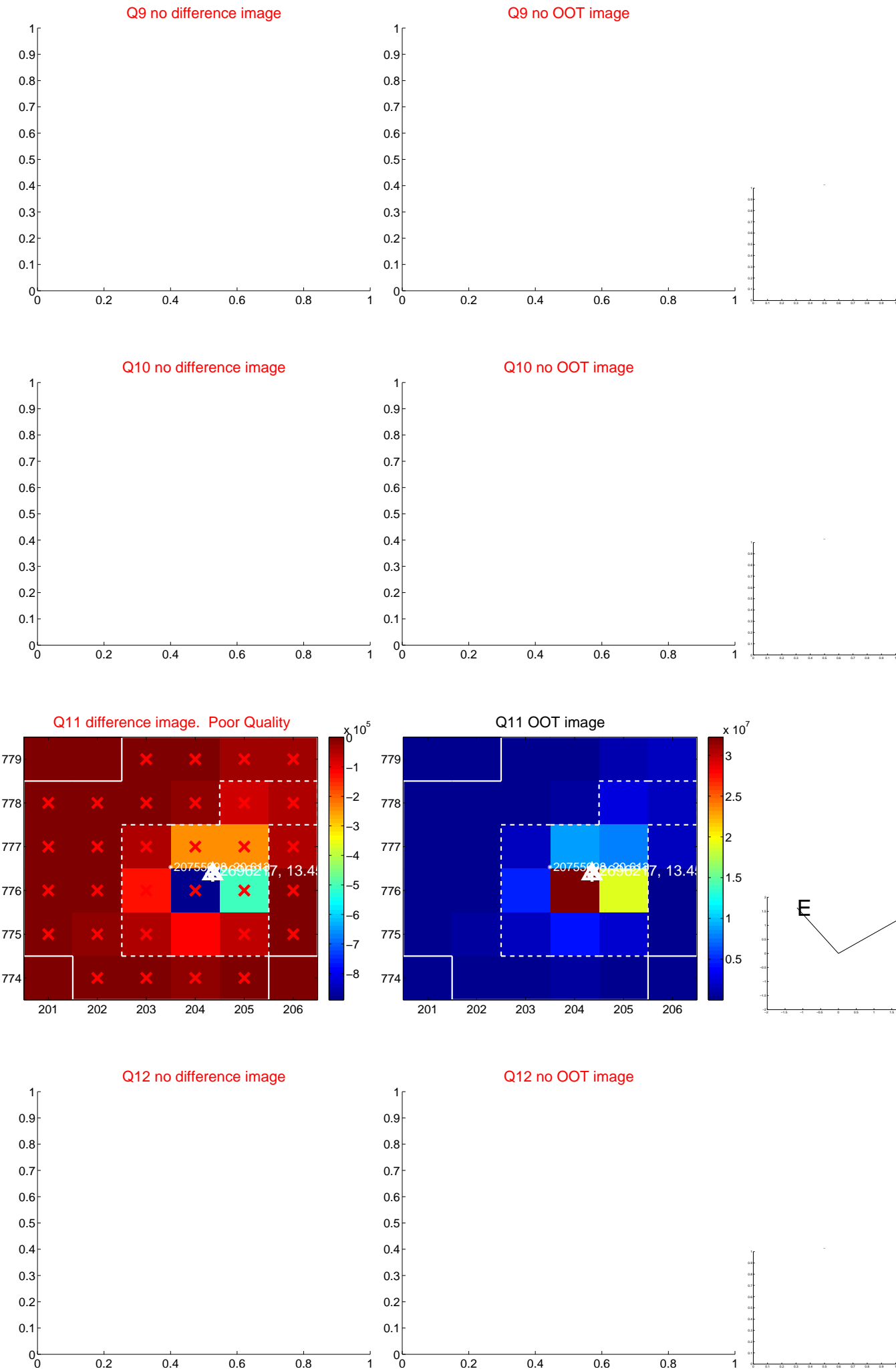
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



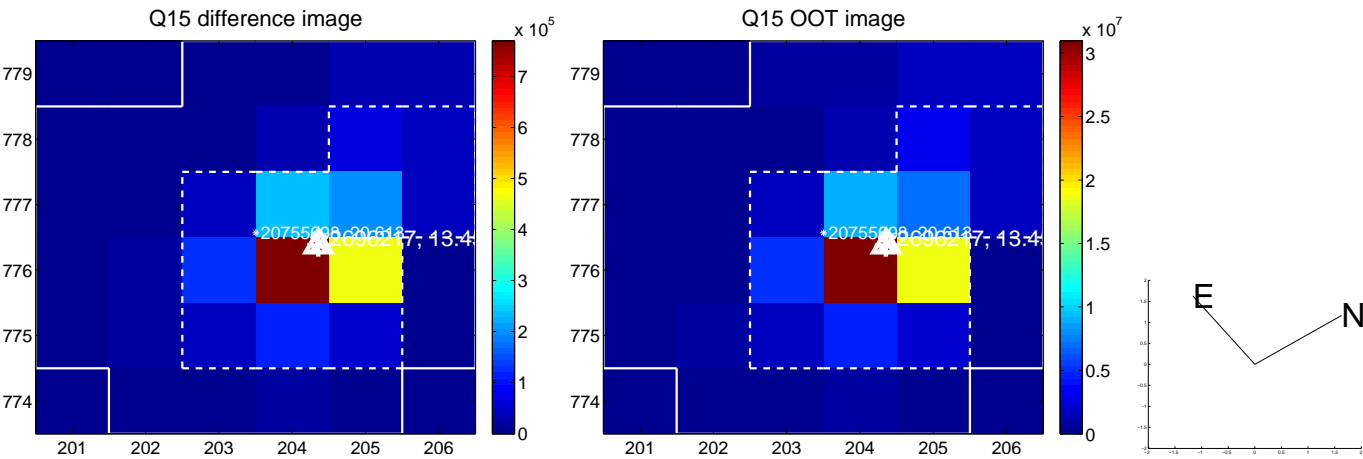
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



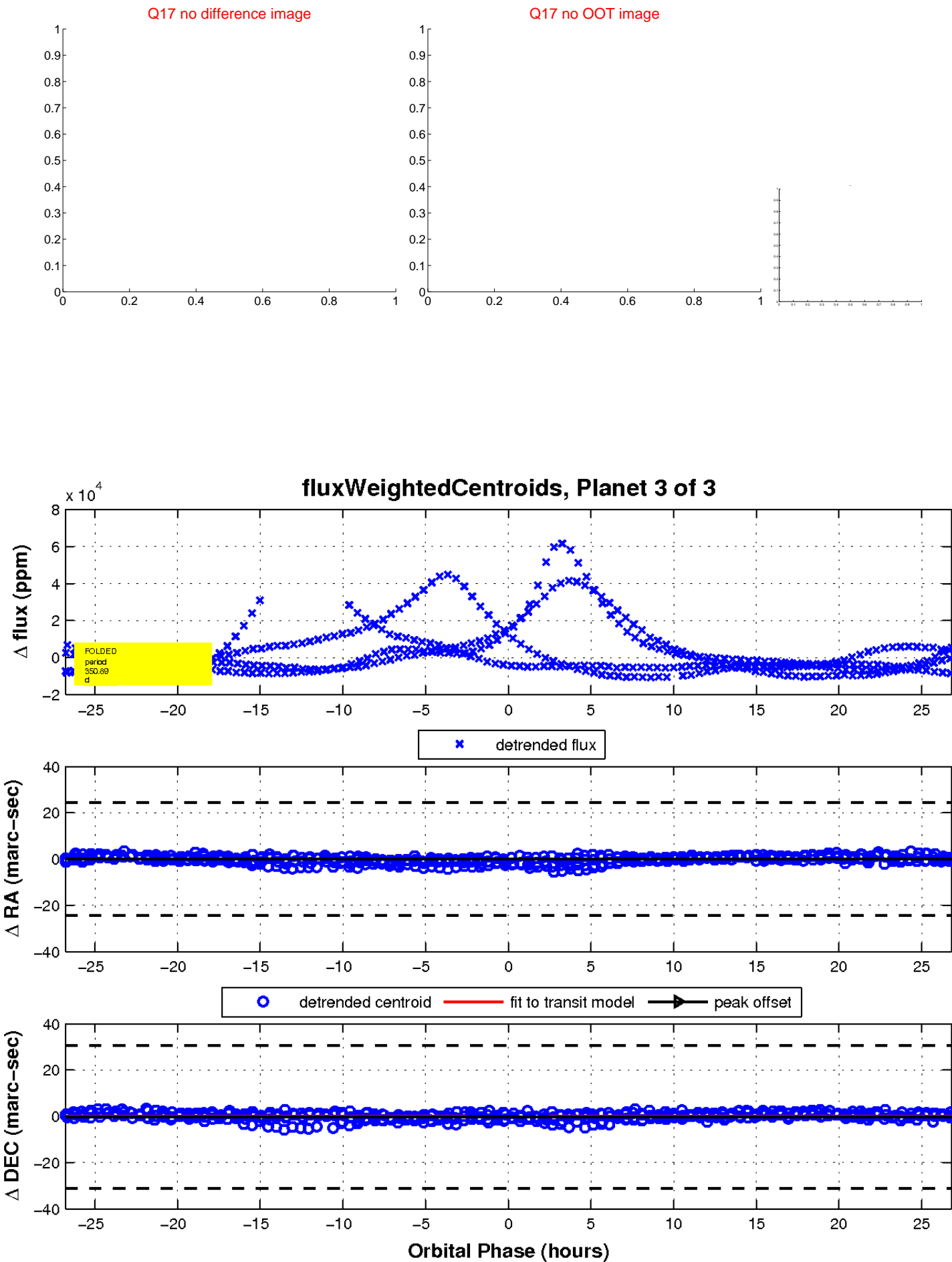
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

