

KIC 007739728

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})
007739728-01	OBS	No	473.756997	271.702261	53.8	0.939	21.9	0.5	0.60	4953	0.69	0.19
007739728-02	OBS	No	323.596332	161.482182	1073.1	5.441	19.7	10.8	0.60	4953	3.90	0.32
007739728-05	OBS	No	343.888505	220.530927	513.2	3.287	17.5	6.1	0.60	4953	1.50	0.29
007739728-06	OBS	No	603.875484	174.995440	1020.5	5.070	16.5	8.9	0.60	4953	3.81	0.14
007739728-07	OBS	No	359.290724	299.670083	663.7	8.936	15.5	5.6	0.60	4953	1.55	0.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007739728-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

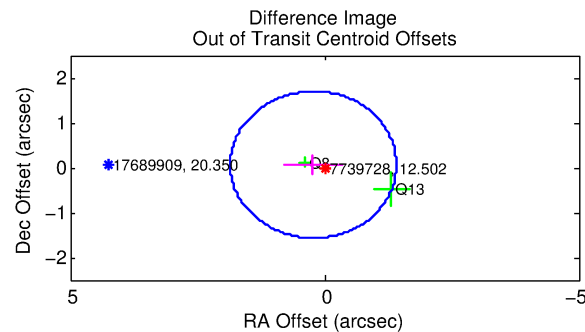
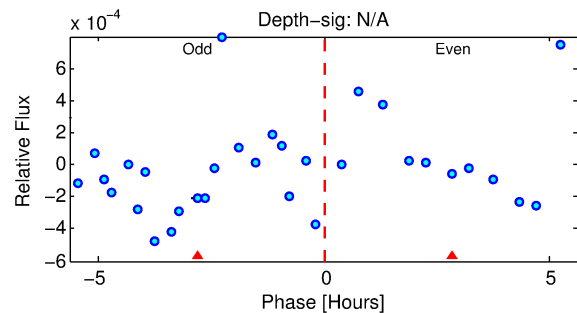
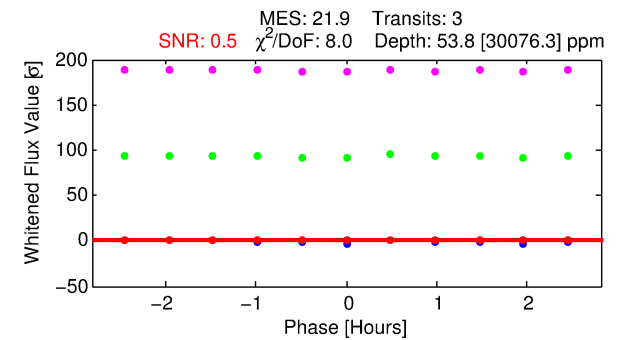
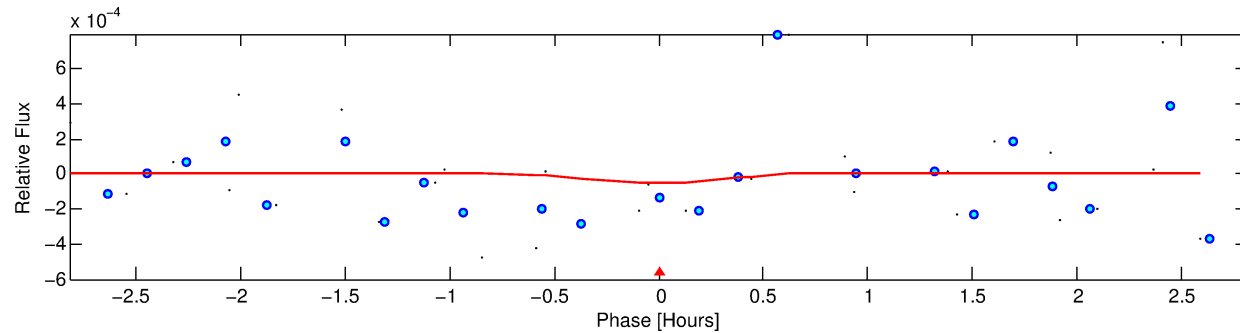
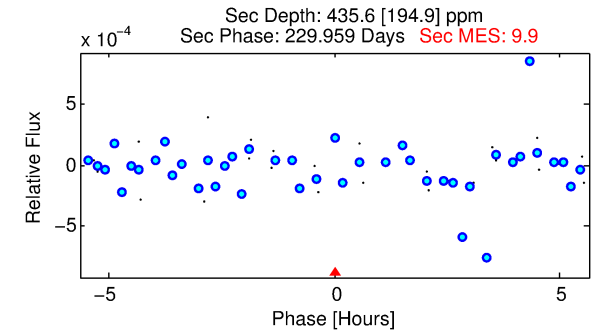
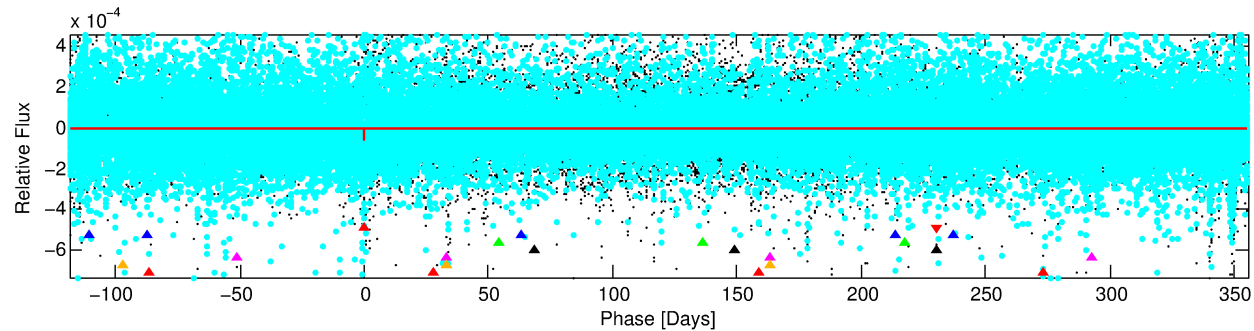
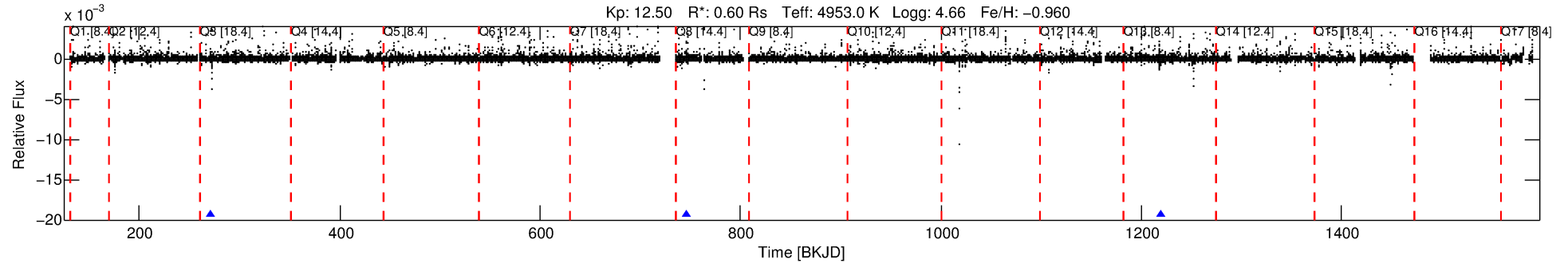
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007739728-01

No Significant Match Found

DV One-Page Summary

KIC: 7739728 Candidate: 1 of 7 Period: 473.757 d



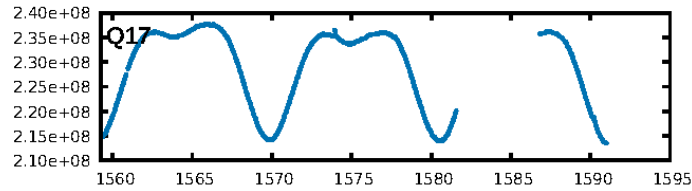
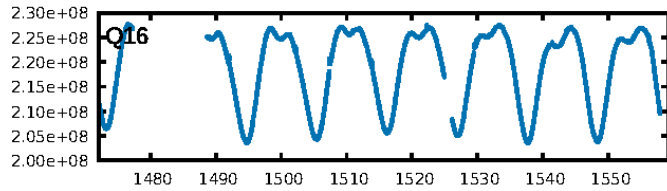
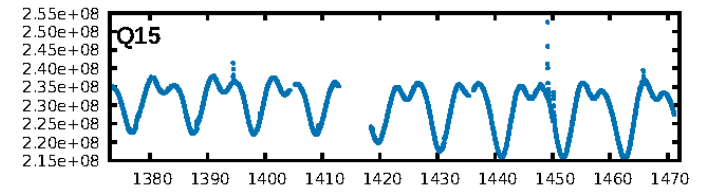
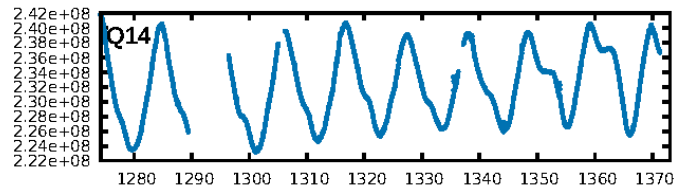
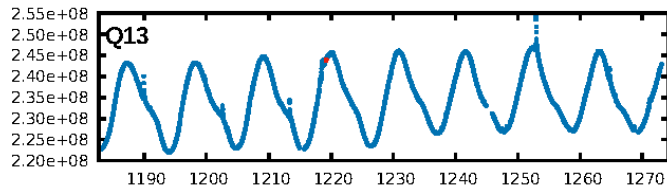
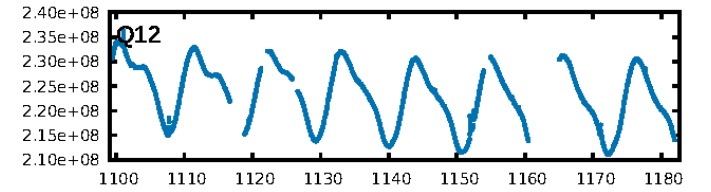
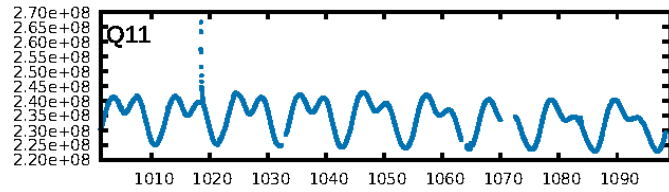
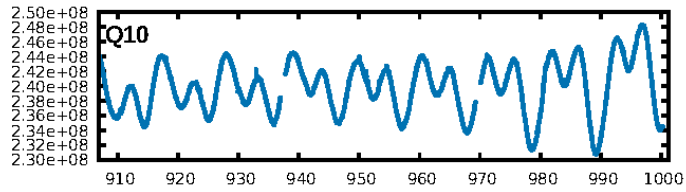
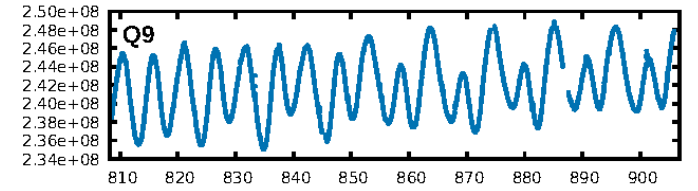
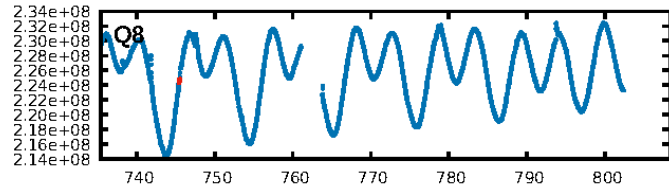
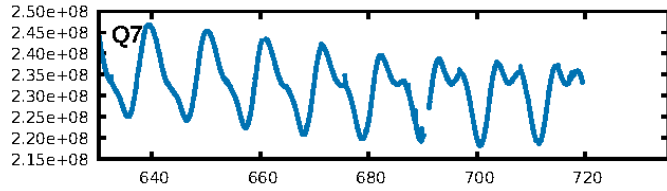
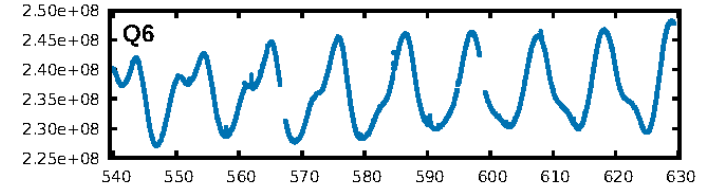
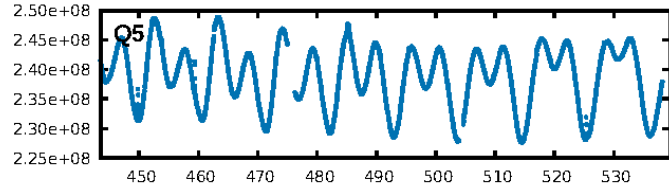
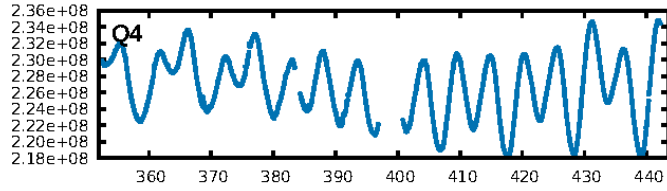
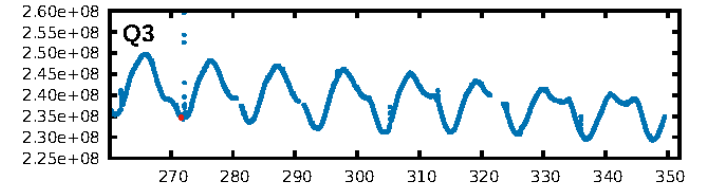
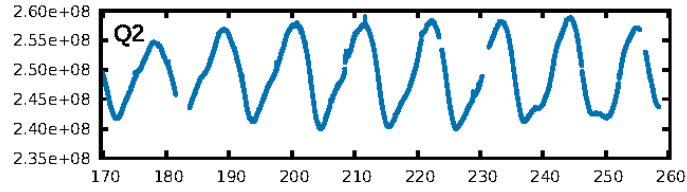
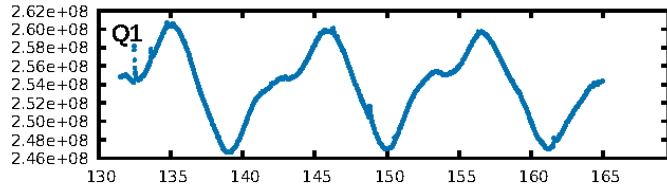
DV Fit Results:

Period = 473.75700 [0.79601] d
Epoch = 271.7023 [0.7202] BKJD
Rp/R* = 0.0106 [5.4591]
a/R* = 785.09 [411358.25]
b = 0.99 [20.13]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 0.69 [355.04] Re
a = 0.9990 [0.0687] AU
Ag = 499733.42 [512941664.42] [0.00%]
Teffp = 6938 [1780339] K [0.00%]

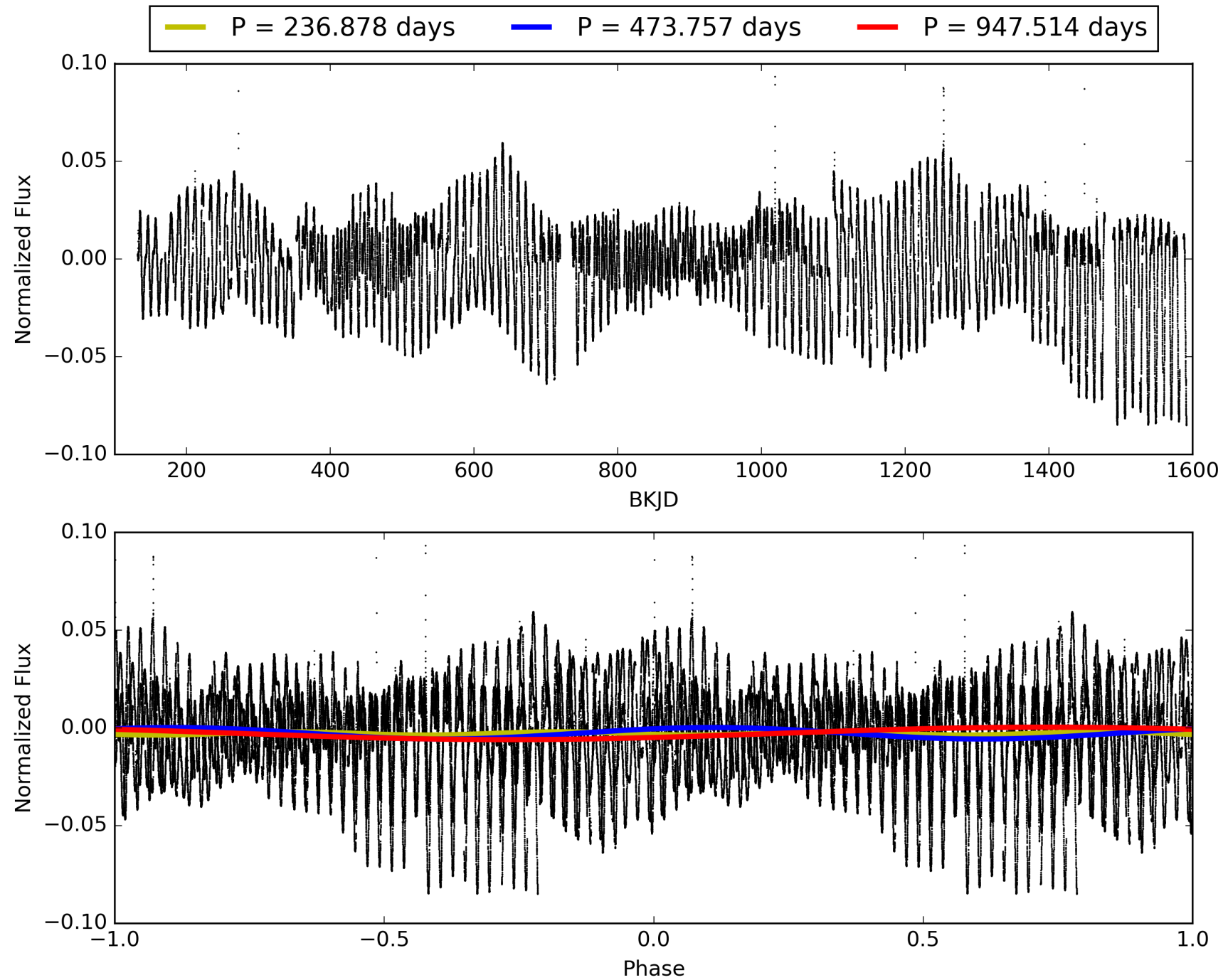
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [317.57]
LongPeriod-sig: 100.0% [398.14]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 1.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.331
Centroid-sig: 22.3%
Centroid-so: 12.869 arcsec [1.25]
OotOffset-rm: 0.232 arcsec [0.43]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 0.269 arcsec [0.50]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007739728-01, PDC Light Curves

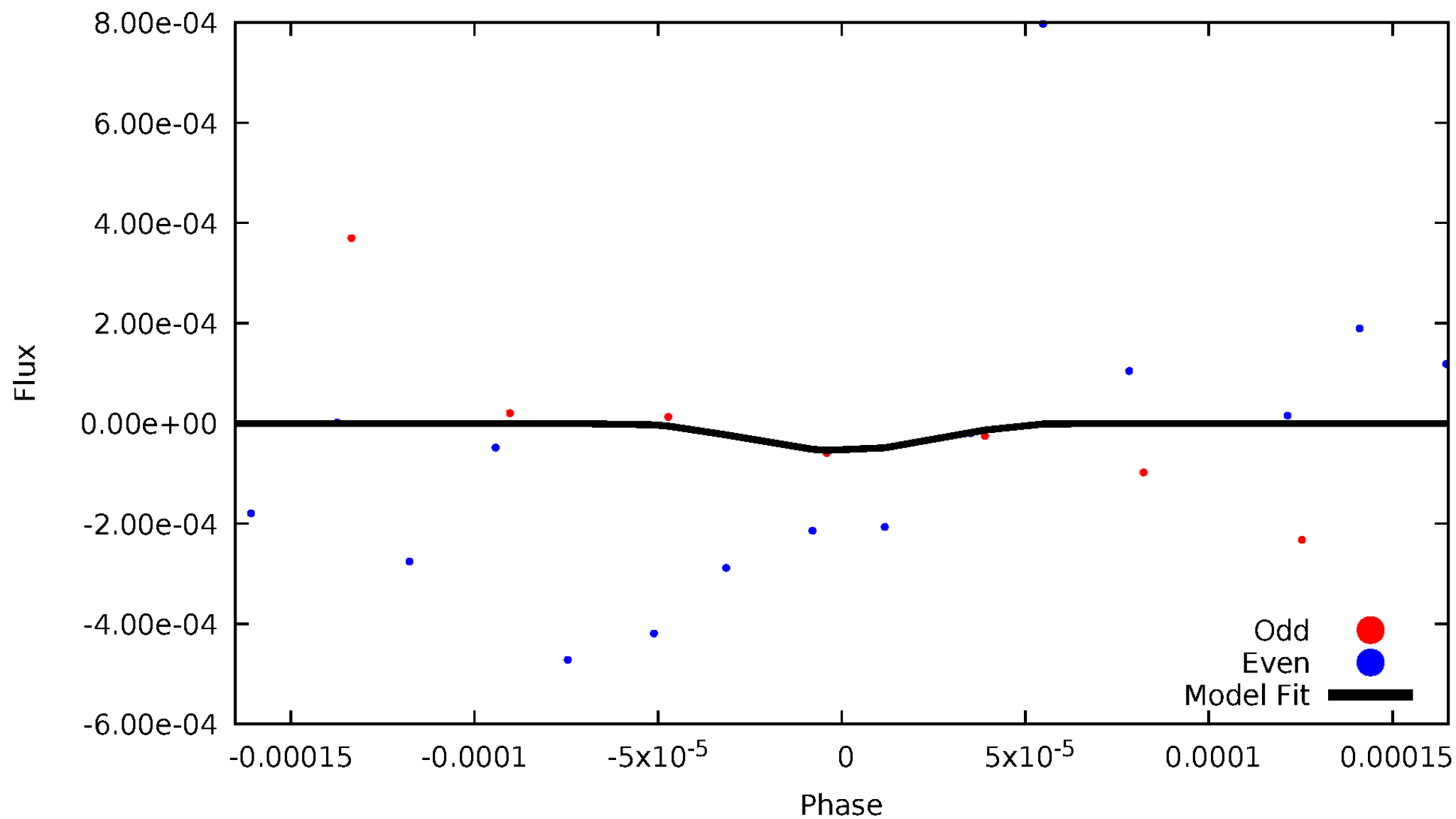


TCE 007739728-01



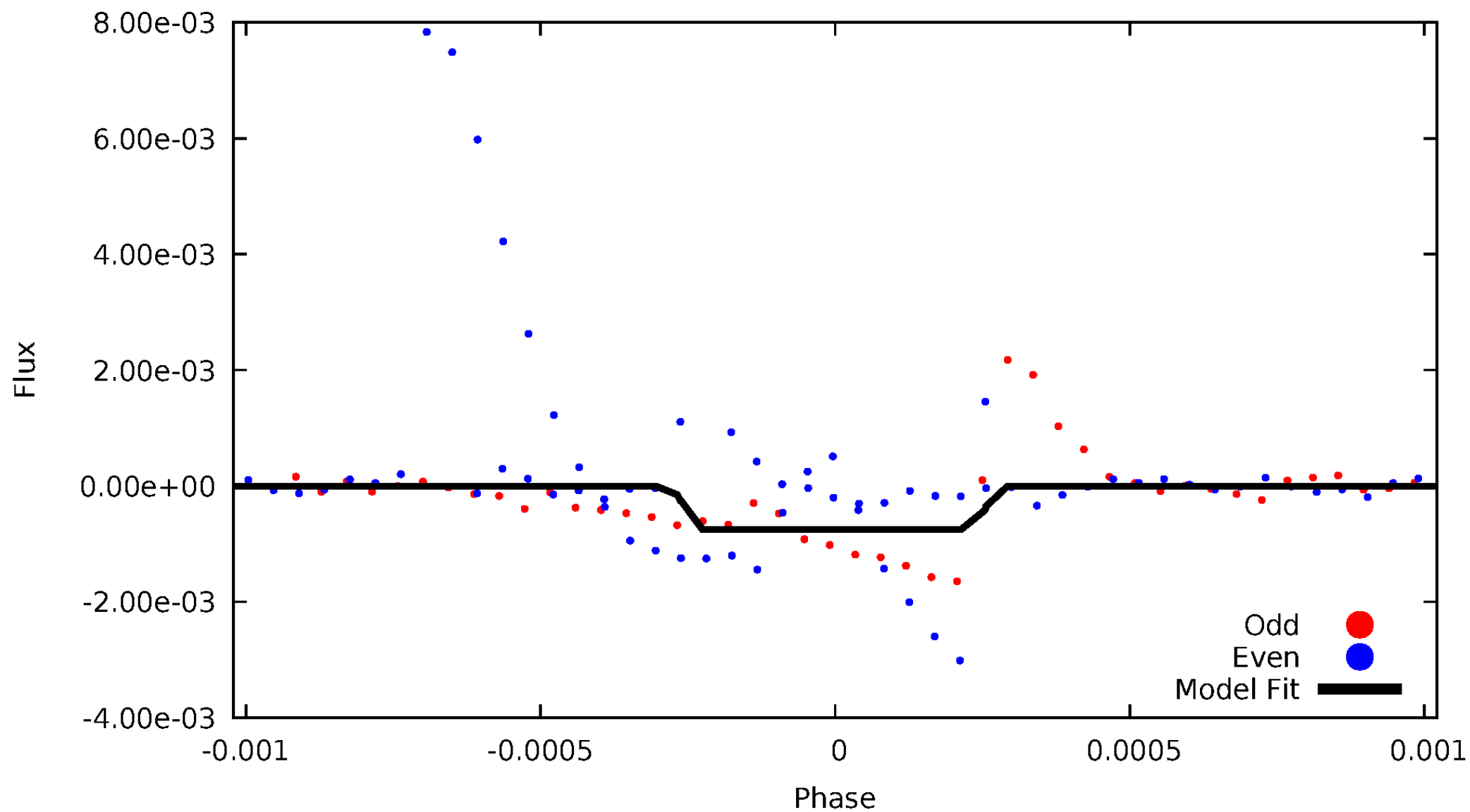
DV Odd/Even

TCE 007739728-01



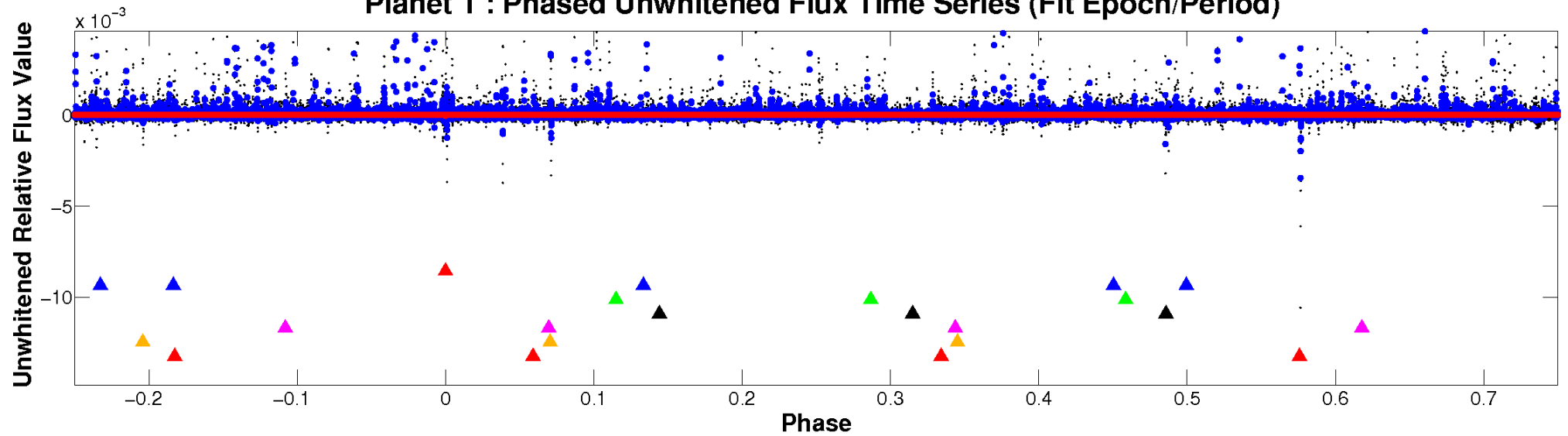
ALT Odd/Even

TCE 007739728-01

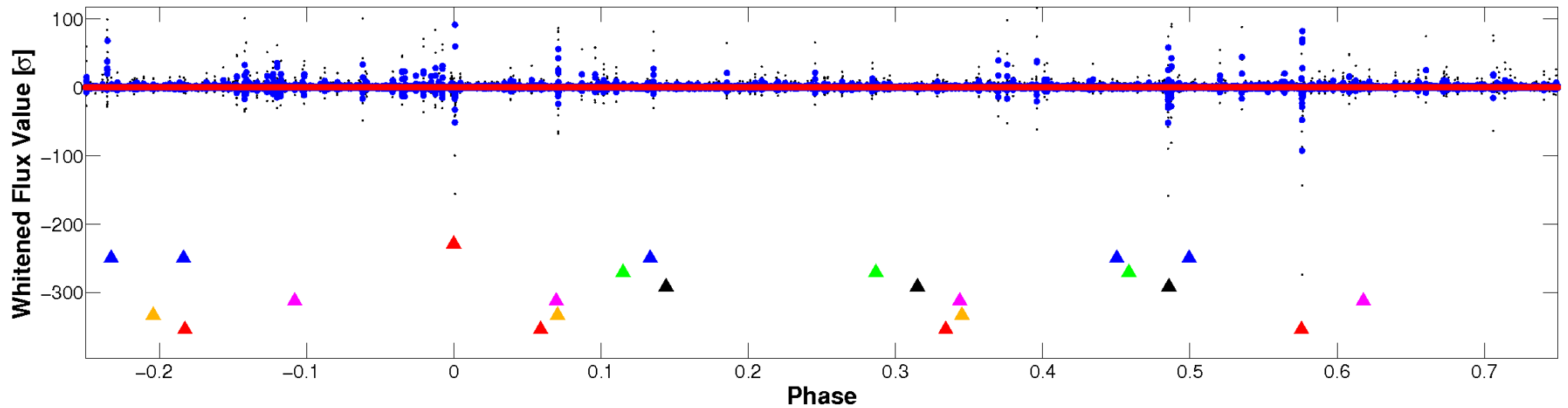


Non-Whitened Vs. Whitened Light Curve

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

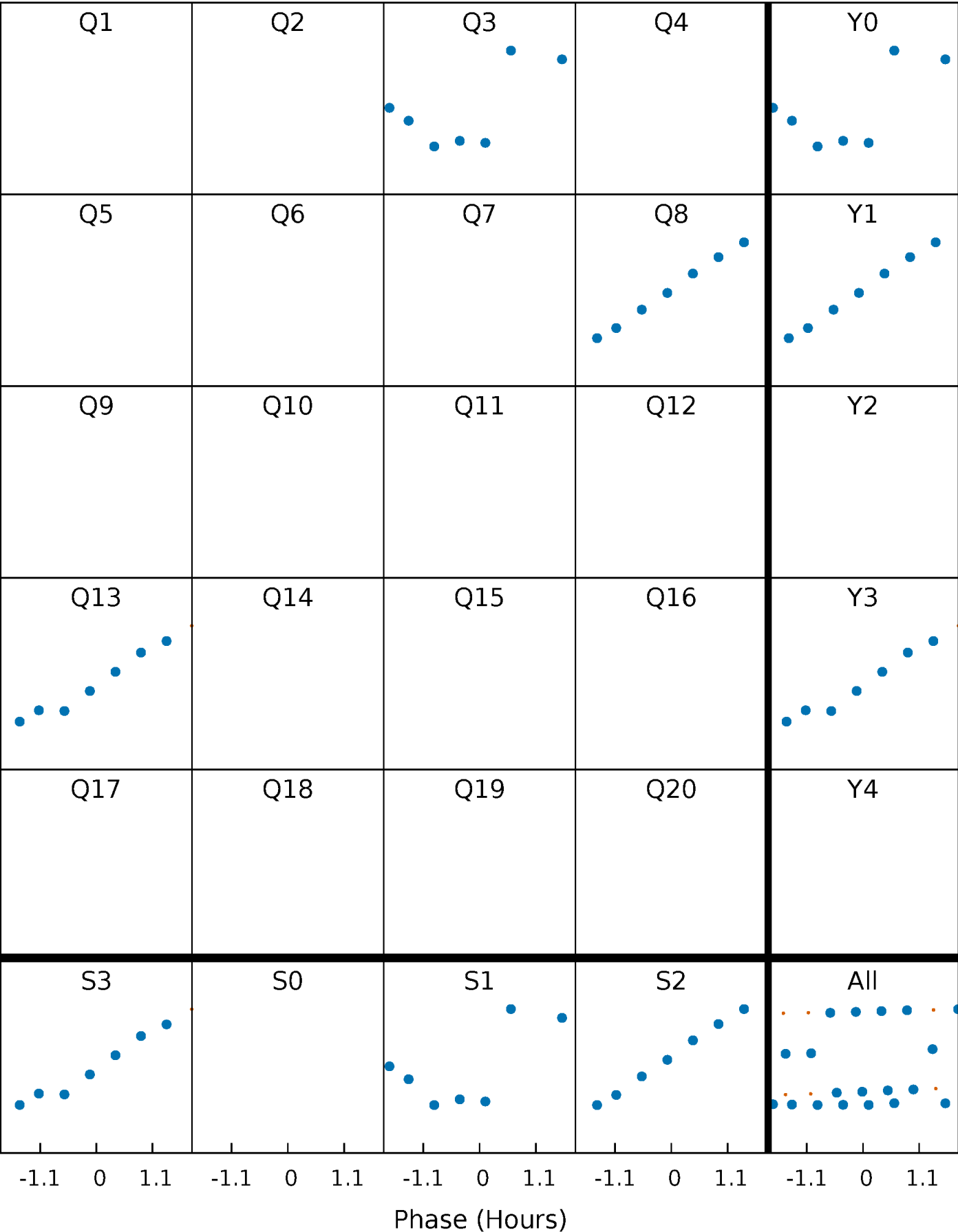


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



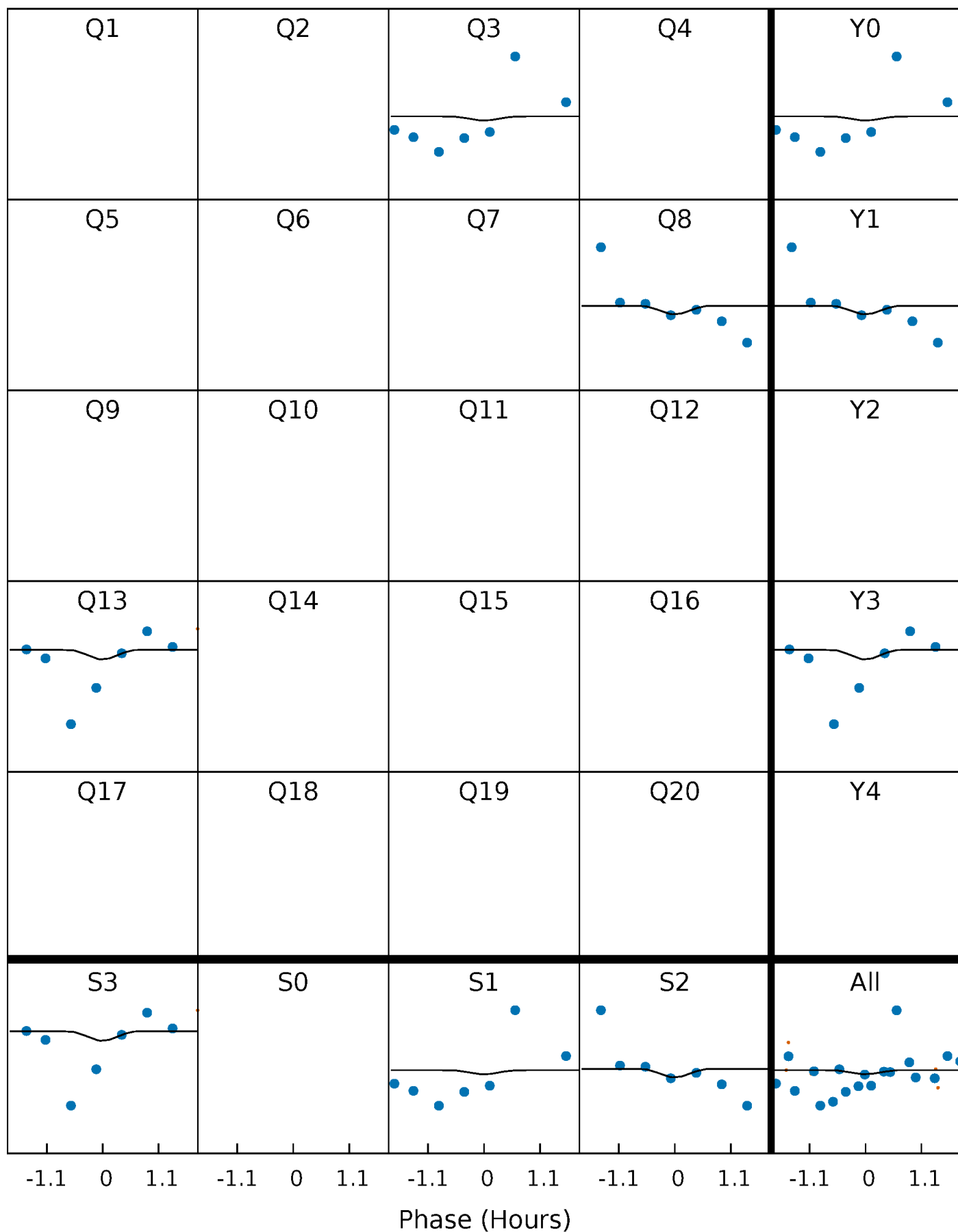
PDC Quarter-Phased Transit Curves

TCE 007739728-01 P=473.756997 Days T₀=271.702261 (BKJD)



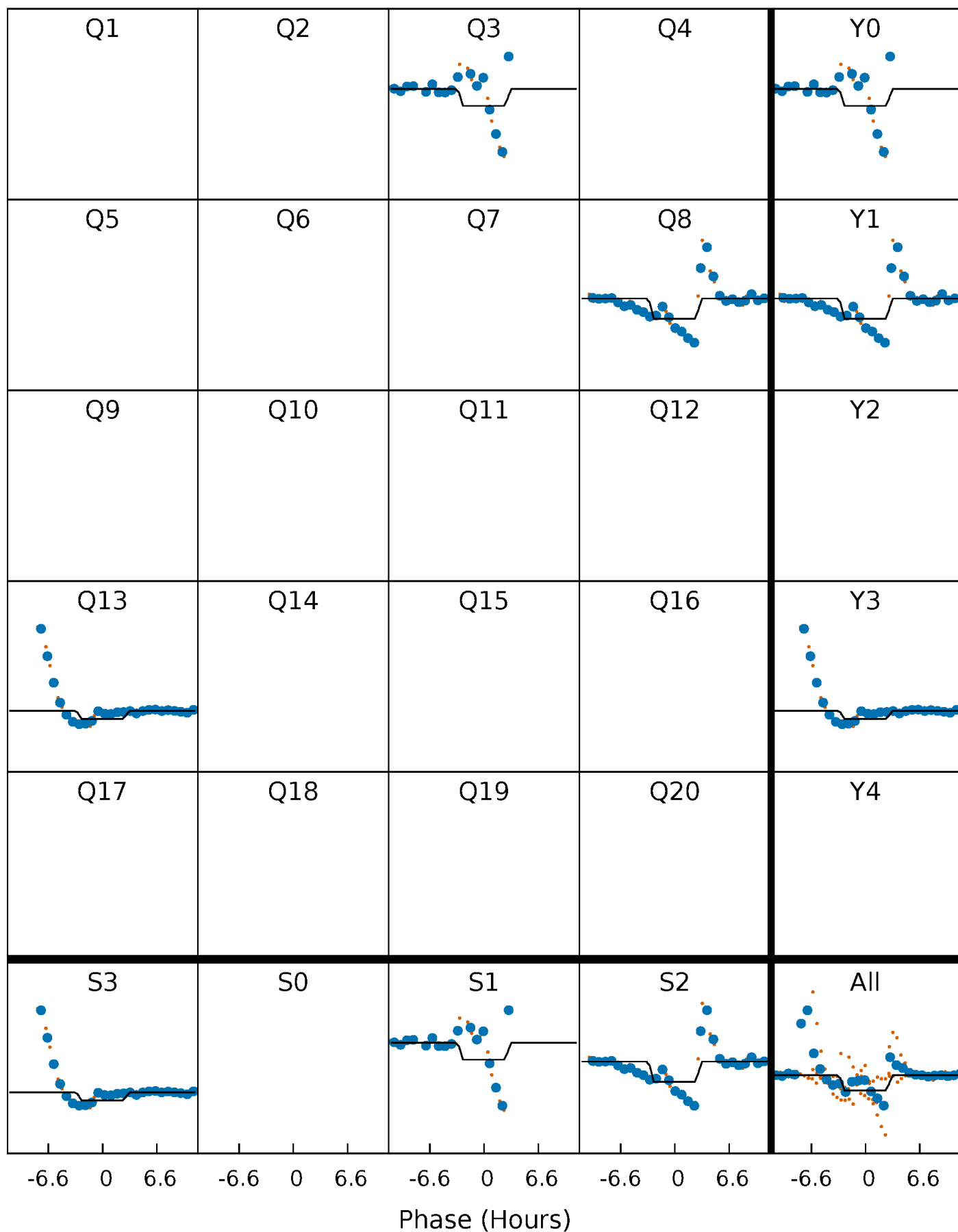
DV Quarter-Phased Transit Curves

TCE 007739728-01 P=473.756997 Days $T_0=271.702261$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

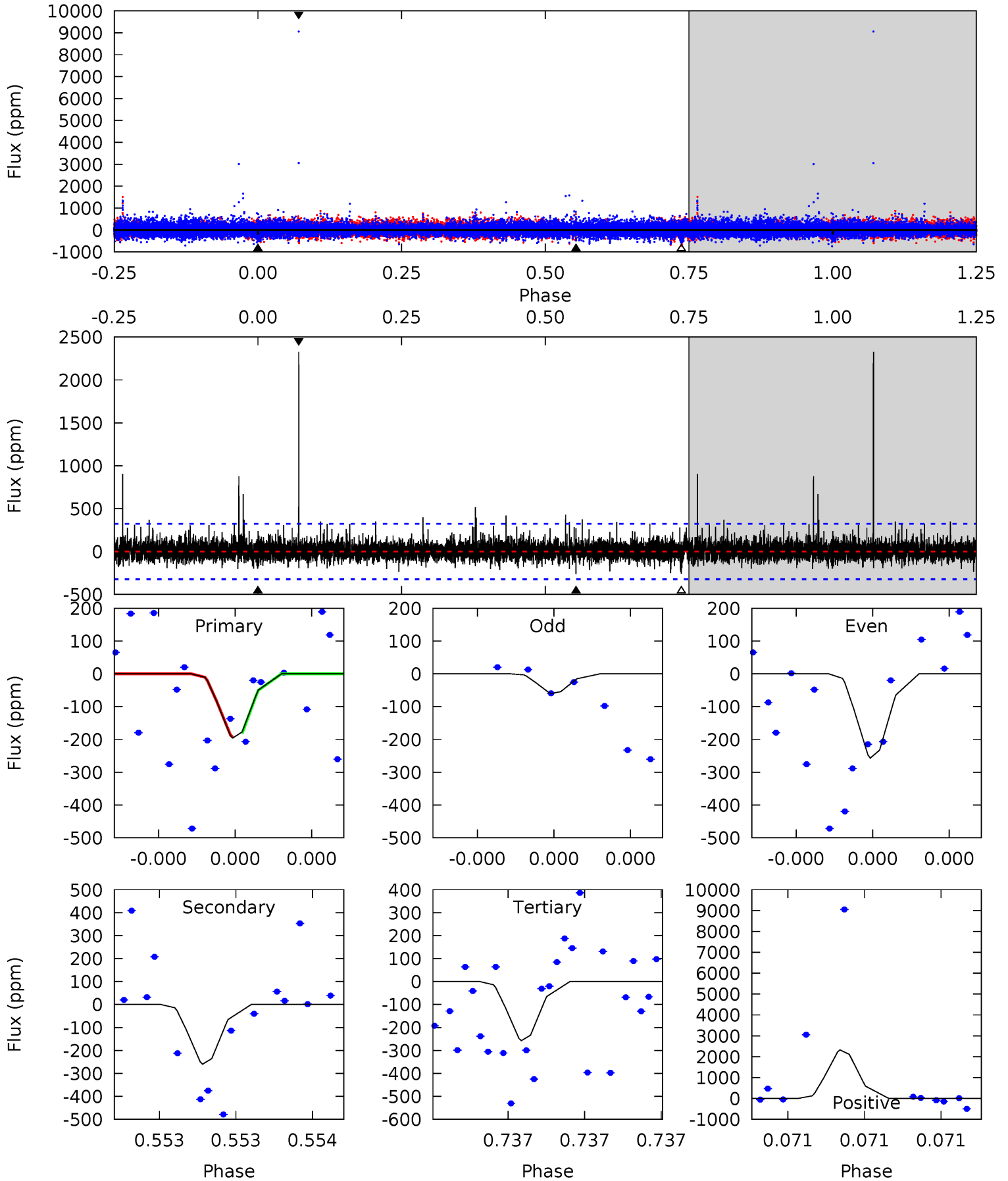
TCE 007739728-01 P=473.588620 Days $T_0=271.852591$ (BKJD)



DV Model-Shift Uniqueness Test

007739728-01, P = 473.756997 Days, E = 271.702261 Days

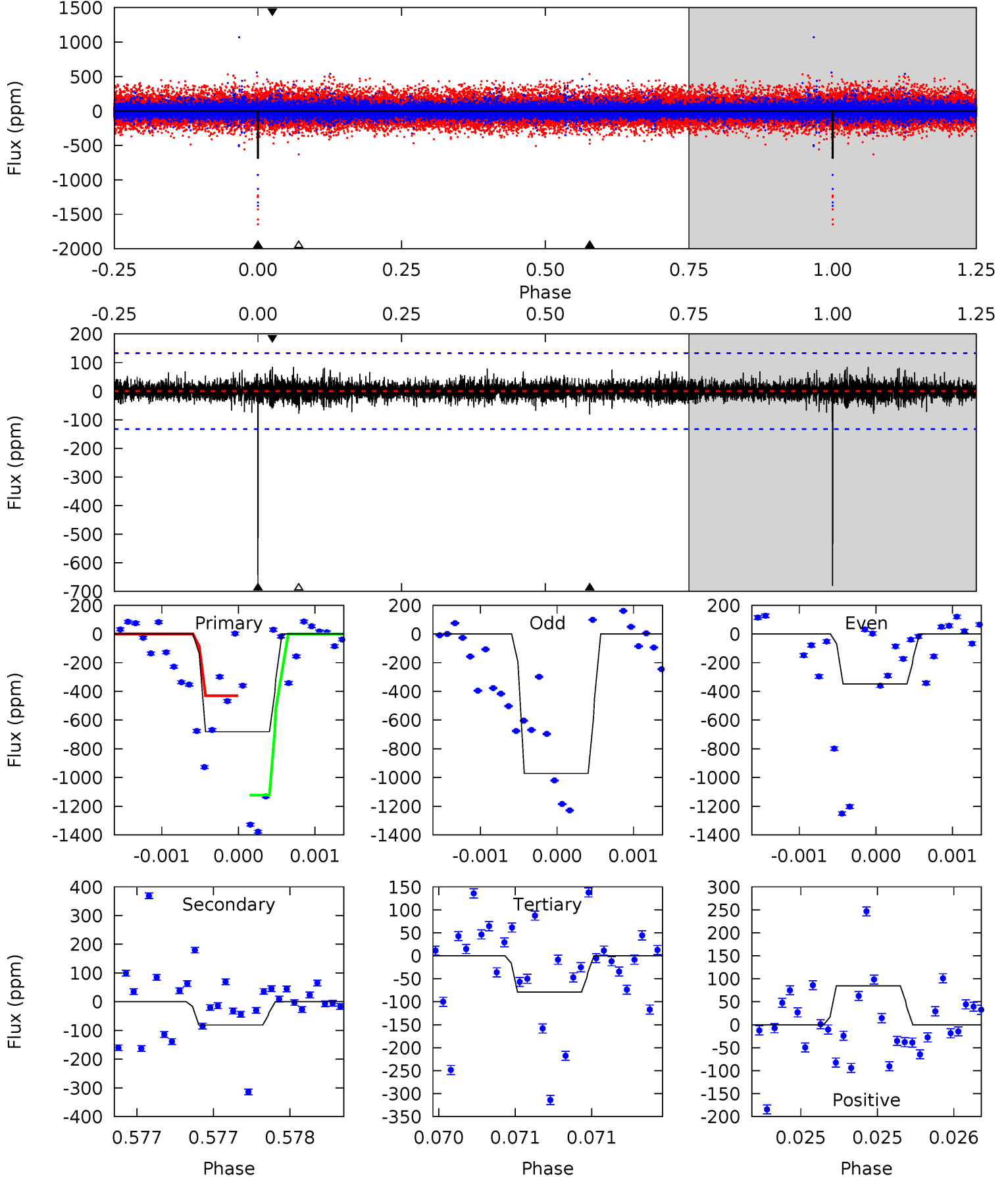
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.51	4.66	4.62	41.7	5.80	3.83	1.06	-1.11	-38.2	0.04	-37.1	0.78	0.85	0.90	0.10



Alt Model-Shift Uniqueness Test

007739728-01, P = 473.588620 Days, E = 271.852591 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	3.40	3.32	3.56	5.57	3.47	0.66	25.3	25.0	0.08	-0.16	6.26	1.18	0.11	13.7



Stellar Parameters For KIC 007739728

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4953^{+148}_{-133}	$4.660^{+0.054}_{-0.041}$	$-0.960^{+0.300}_{-0.300}$	$0.596^{+0.049}_{-0.041}$	$0.593^{+0.055}_{-0.022}$	$3.945^{+0.886}_{-0.603}$
	+3%/-3%	+1%/-1%	+31%/-31%	+8%/-7%	+9%/-4%	+22%/-15%
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 007739728-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-260 ± 56	$235.73^{+229.51}_{-169.57}$	235^{+9}_{-8}	1342^{+329}_{-169}	$2.597^{+30.637}_{-1.960}$
Alt.	-81 ± 24	$247.73^{+243.74}_{-177.24}$	236^{+8}_{-8}	1190^{+292}_{-2301}	$0.713^{+8.067}_{-0.546}$

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

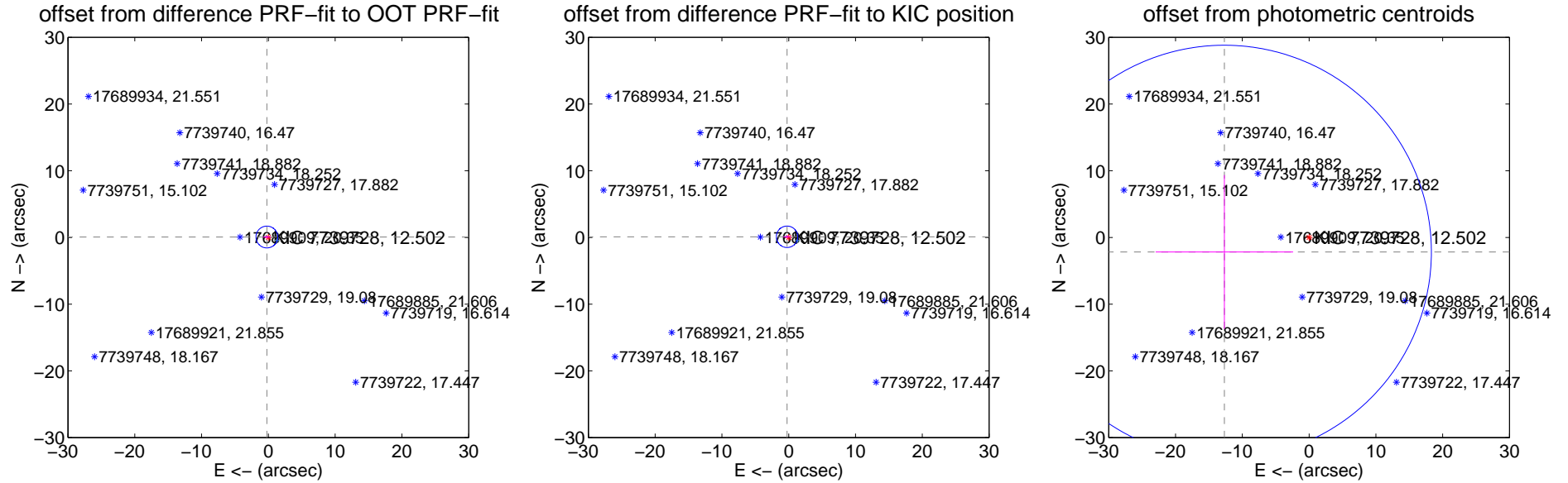
DV Centroid Data

Supplemental centroid analysis for 007739728-01. Kepler magnitude: 12.50. Transit SNR 0.51

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.232 ± 0.544	0.43	0.223 ± 0.564	0.065 ± 0.195
PRF-fit source offset from KIC position	0.269 ± 0.535	0.50	0.250 ± 0.570	0.099 ± 0.210
photometric centroid source offset	12.87 ± 10.33	1.25	12.68 ± 10.29	-2.18 ± 11.53

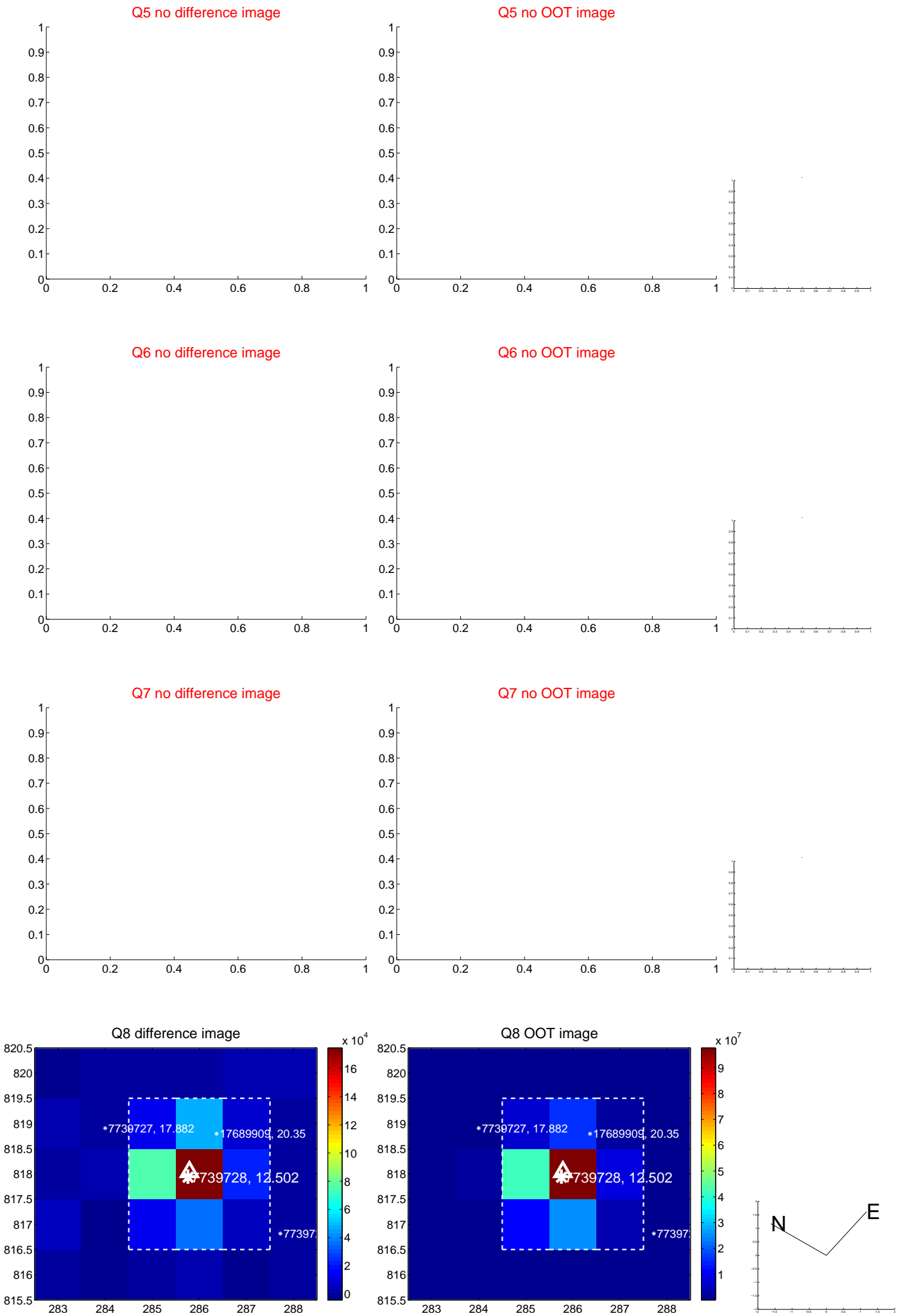


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



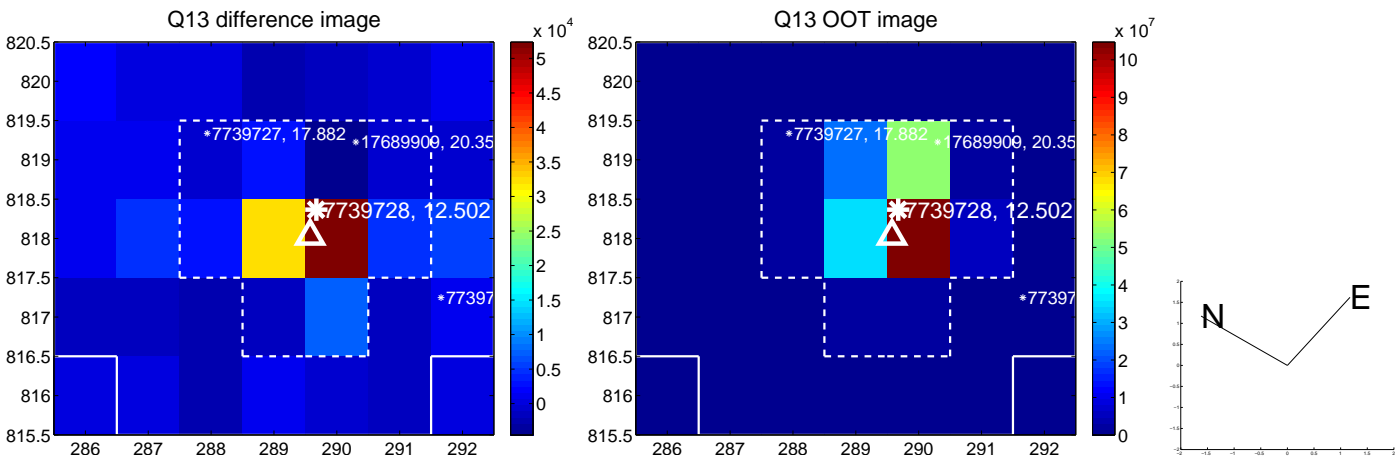
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



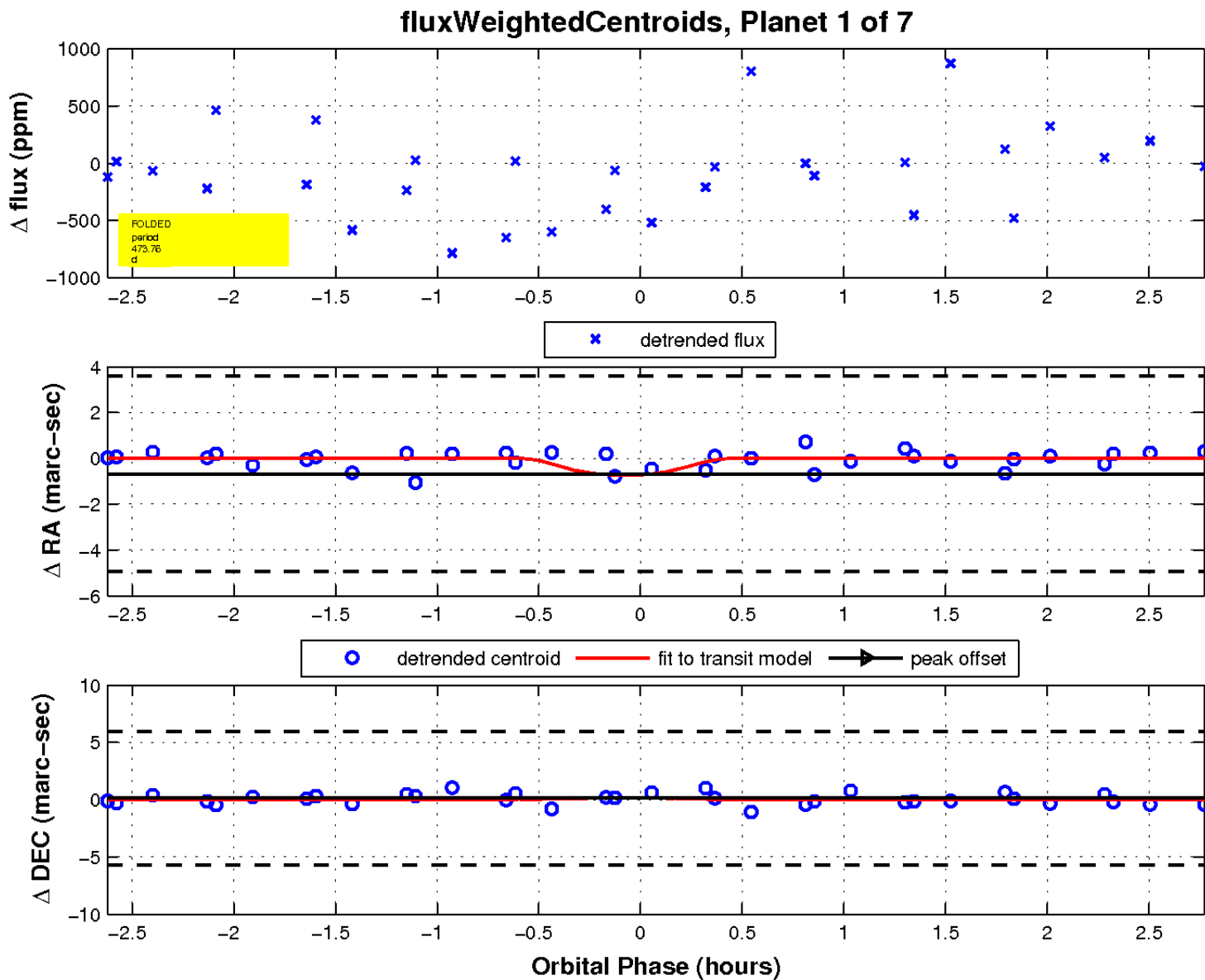
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

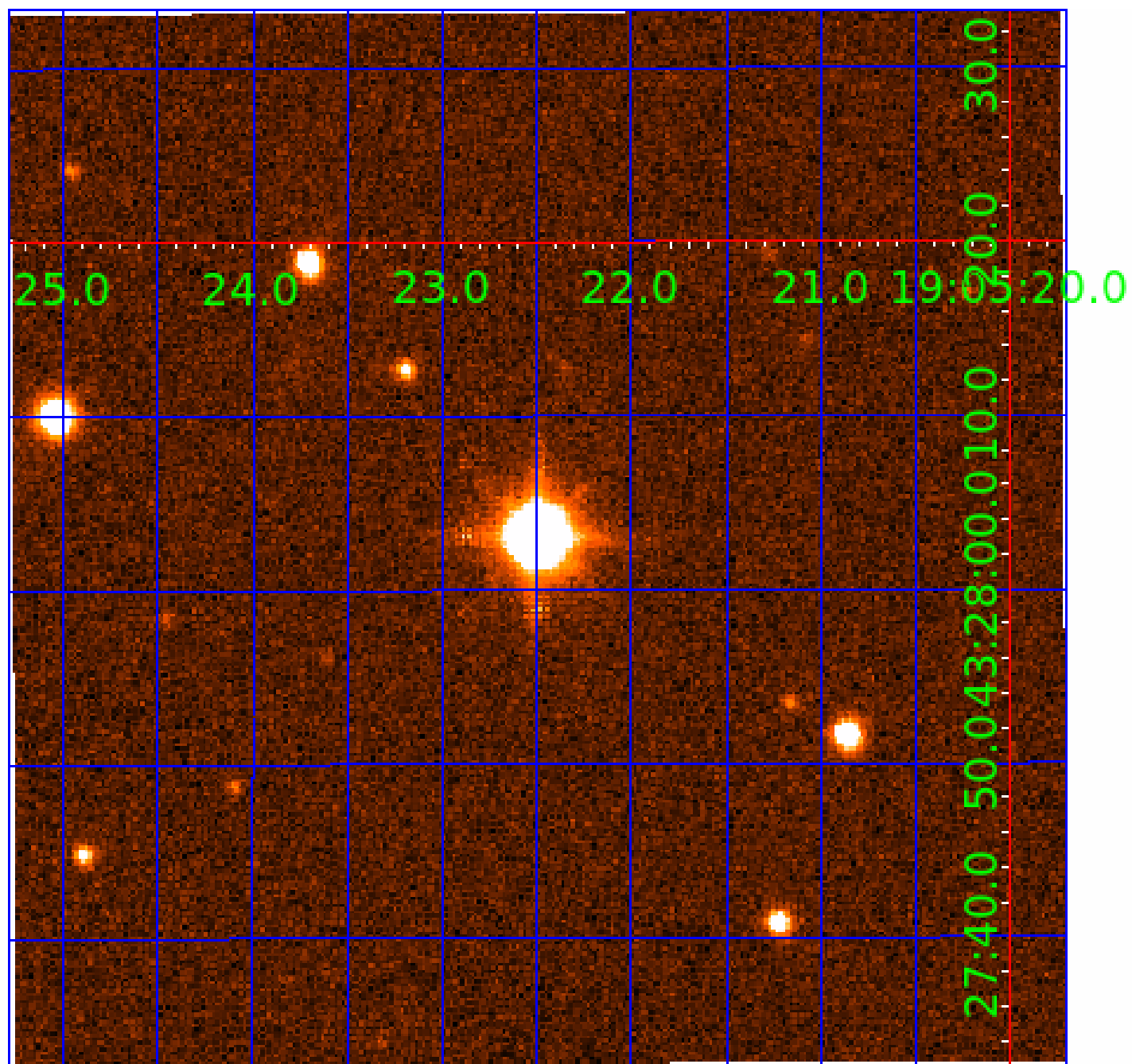


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007739728

Q1-17 DR25 TCE Parameters

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007739728-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

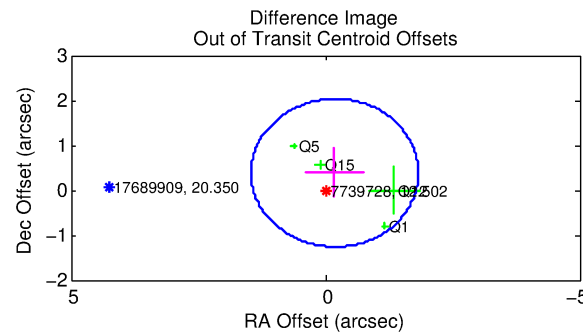
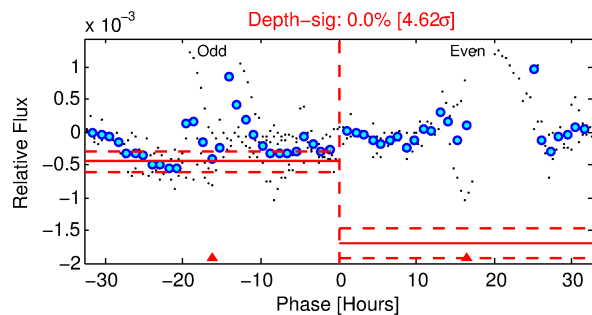
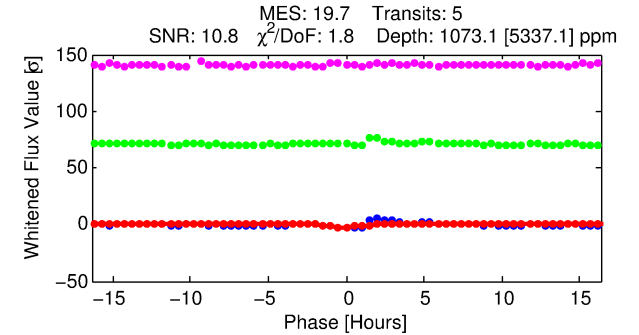
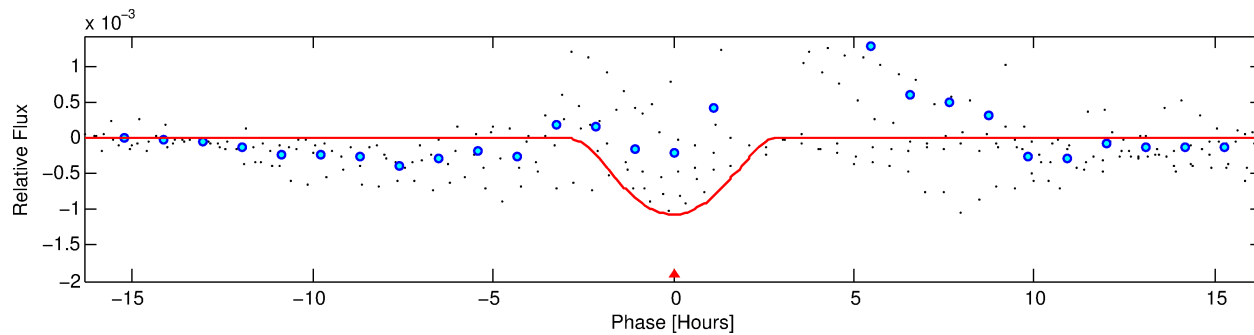
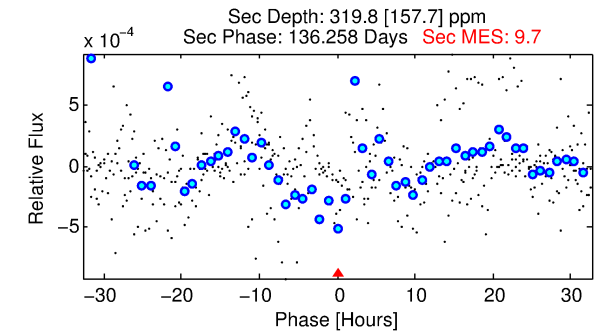
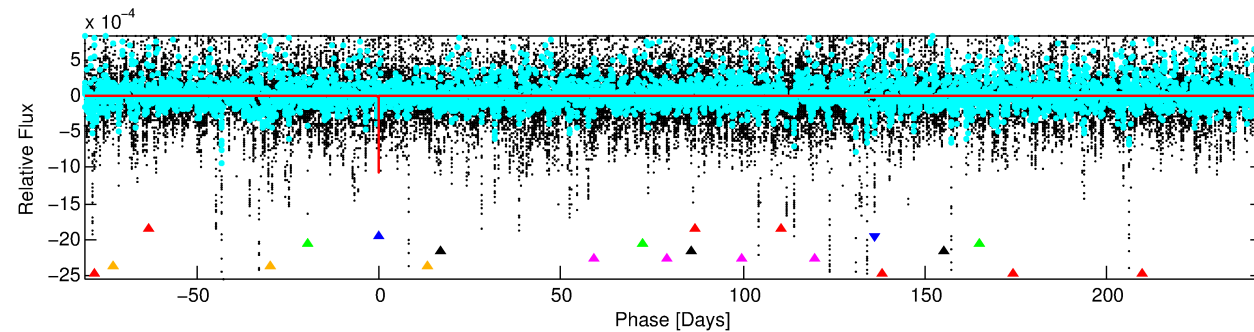
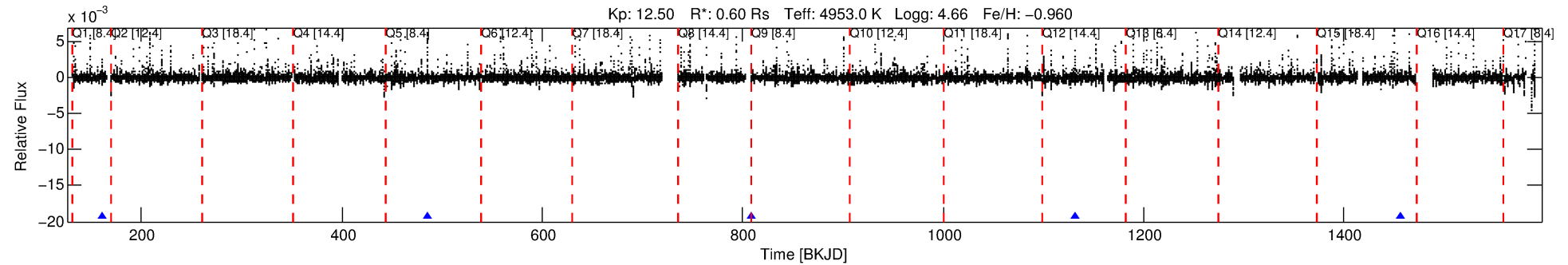
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007739728-02

No Significant Match Found

DV One-Page Summary

KIC: 7739728 Candidate: 2 of 7 Period: 323.596 d



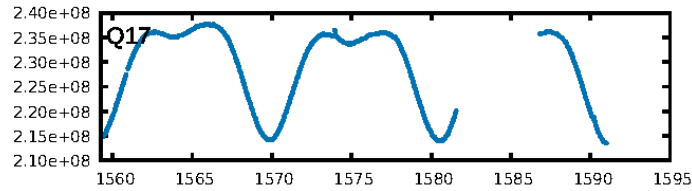
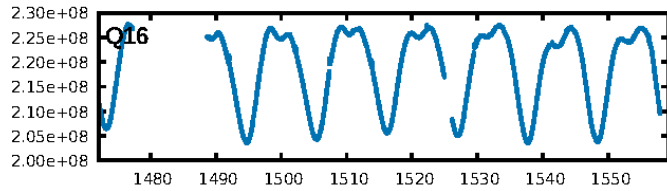
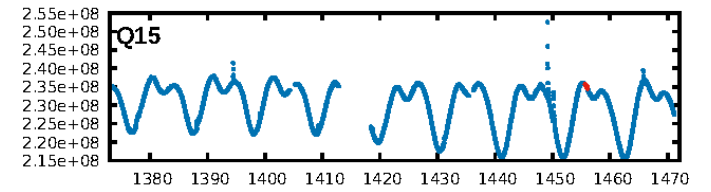
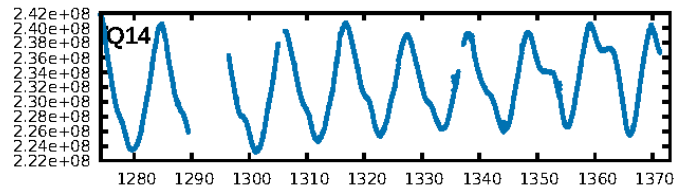
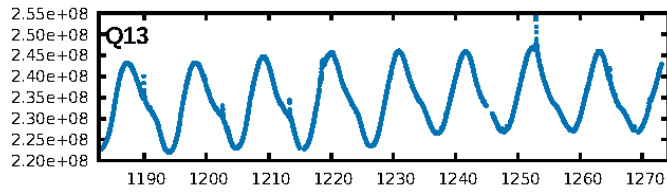
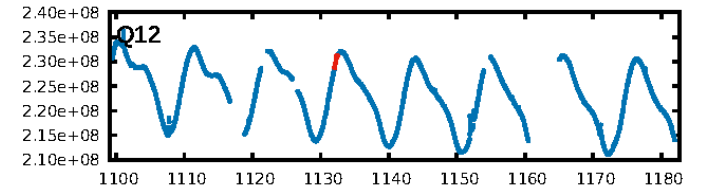
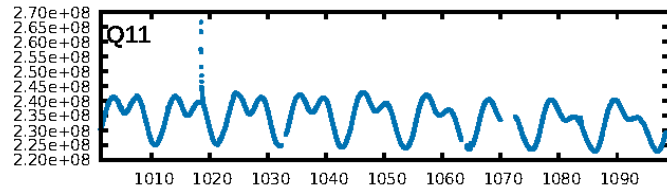
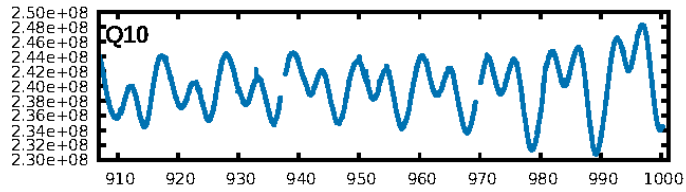
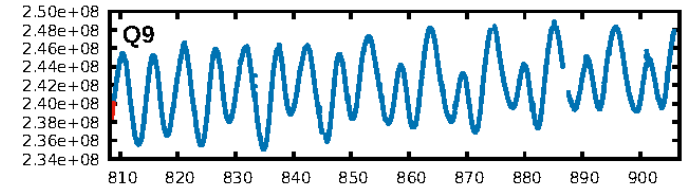
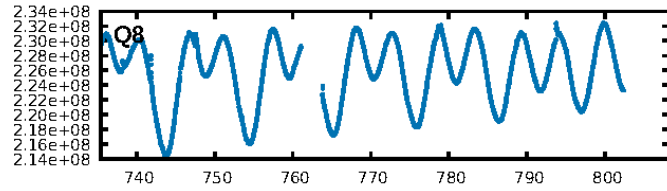
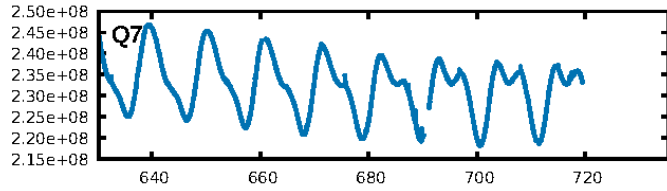
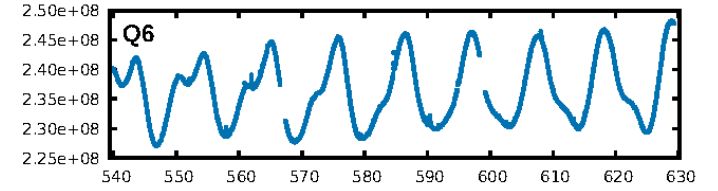
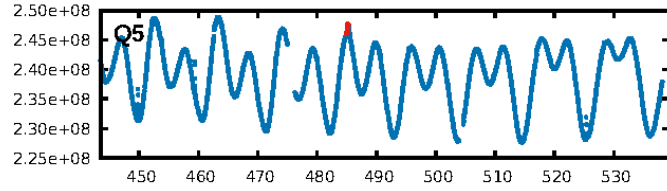
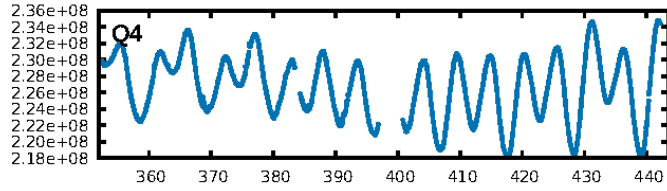
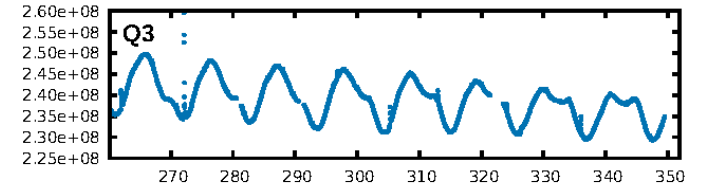
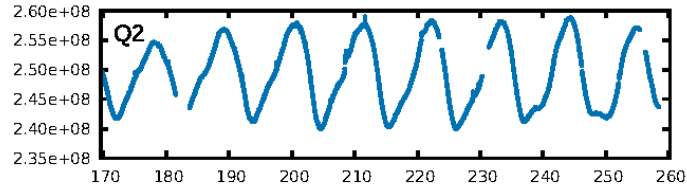
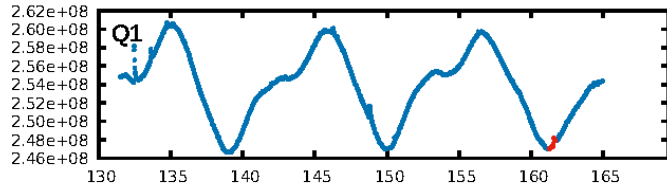
DV Fit Results:

Period = 323.59633 [0.00407] d
Epoch = 161.4822 [0.0101] BKJD
Rp/R* = 0.0600 [0.1261]
a/R* = 159.75 [76.10]
b = 1.00 [0.02]
Seff = 0.32 [0.05]
Teq = 192 [7] K
Rp = 3.90 [8.21] Re
a = 0.7748 [0.0532] AU
Ag = 6932.90 [29355.17] [0.24σ]
Teffp = 2704 [2862] K [0.88σ]

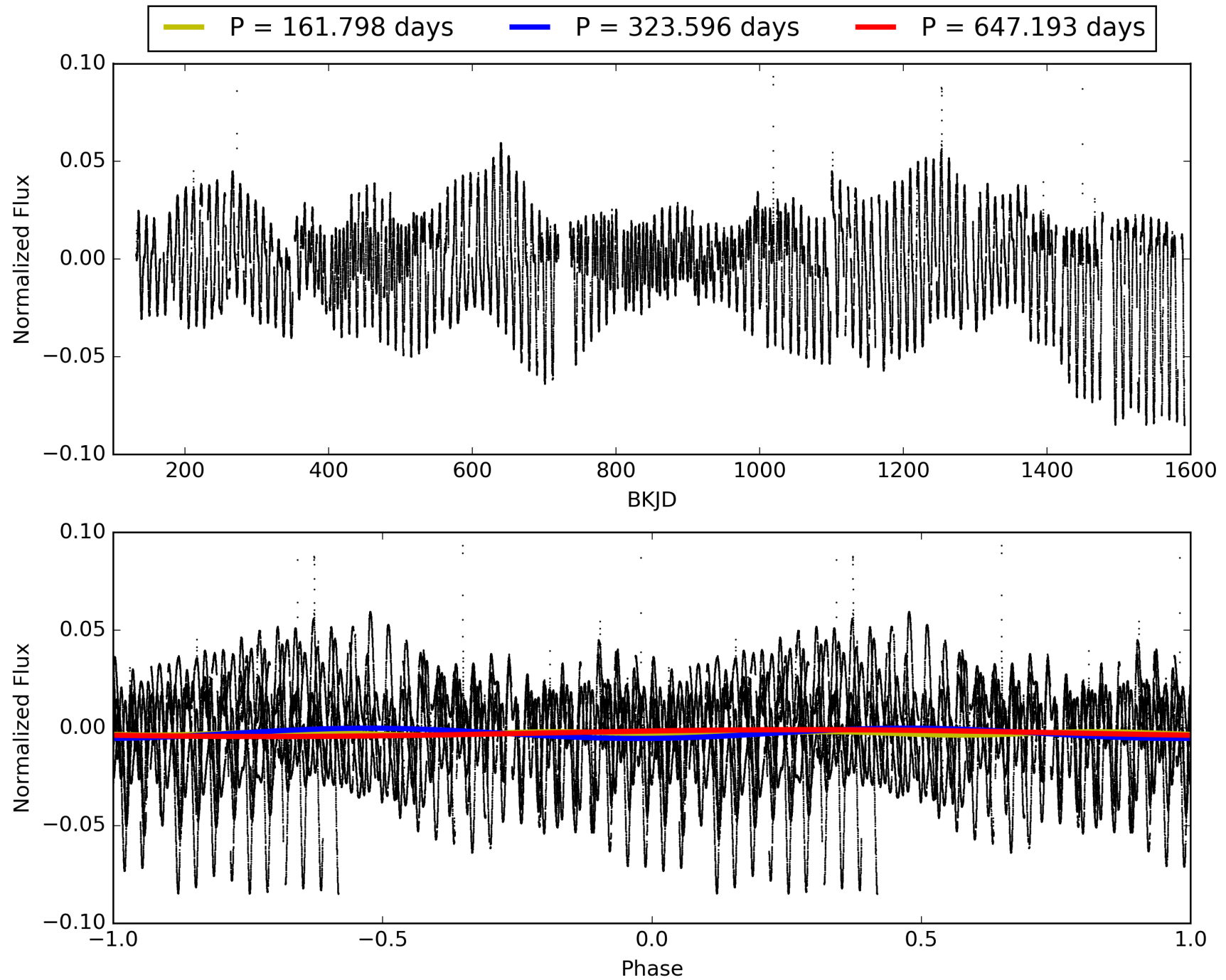
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [76.61σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.312
Centroid-sig: 1.1%
Centroid-so: 0.353 arcsec [1.75σ]
OotOffset-rm: 0.424 arcsec [0.77σ]
KicOffset-rm: 0.443 arcsec [0.85σ]
OotOffset-st: 0/1/1/2 [4]
KicOffset-st: 0/1/1/2 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 007739728-02, PDC Light Curves

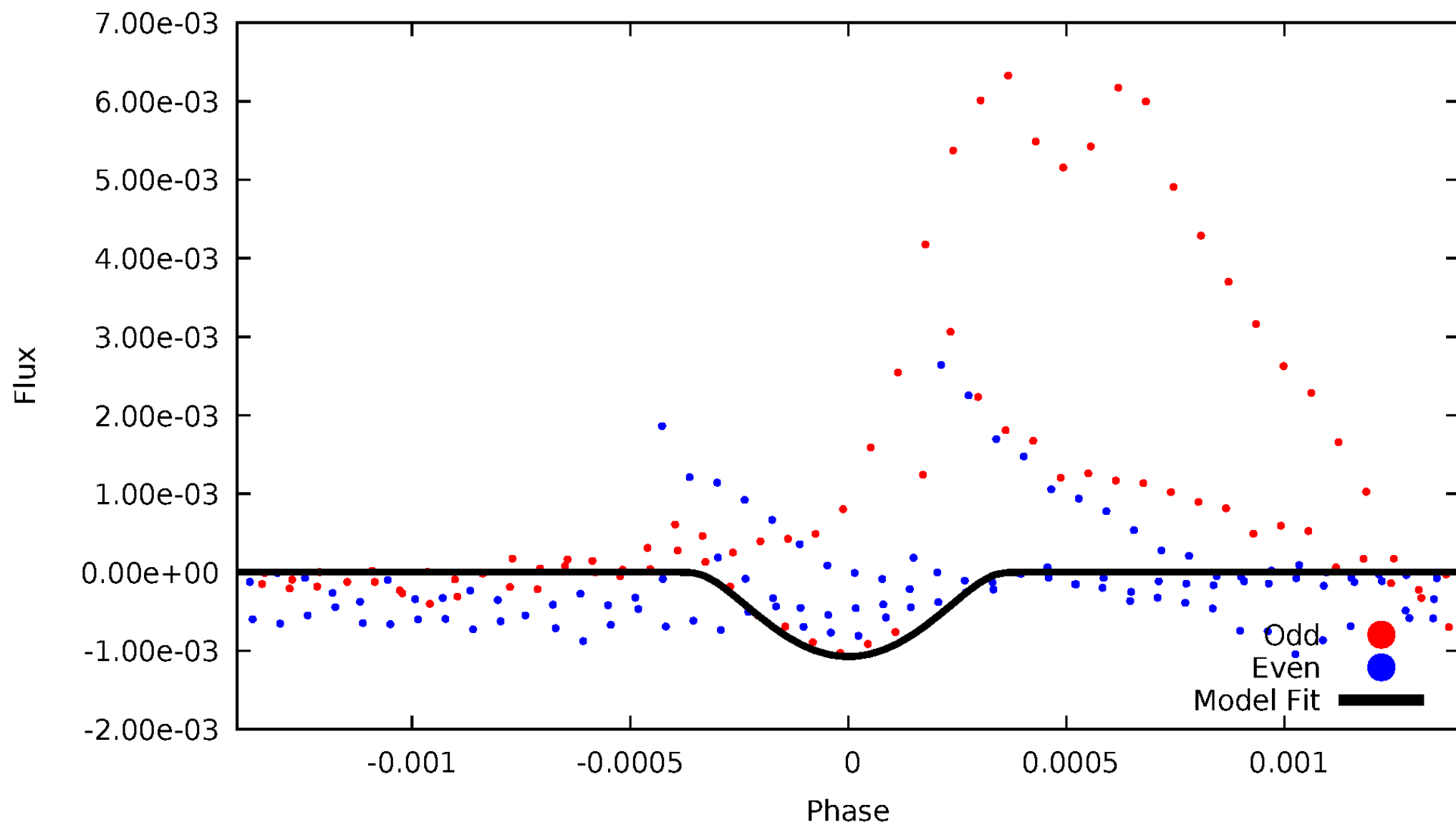


TCE 007739728-02



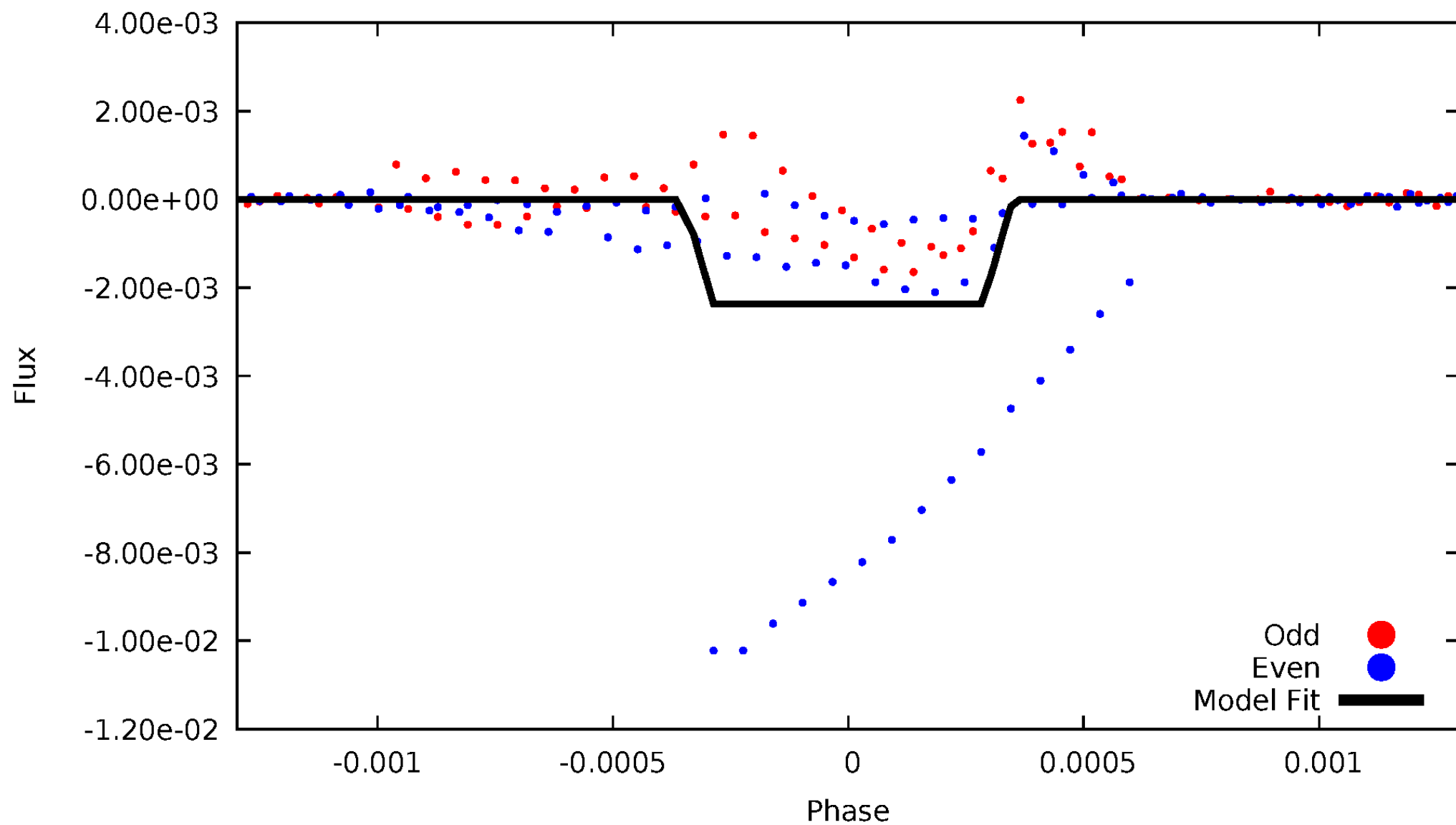
DV Odd/Even

TCE 007739728-02



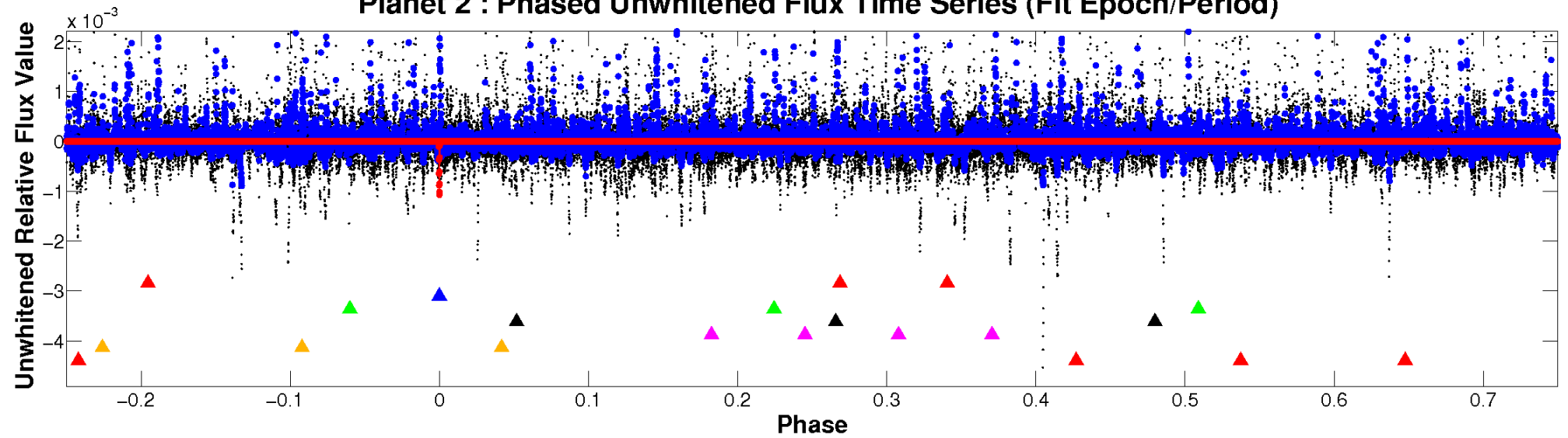
ALT Odd/Even

TCE 007739728-02

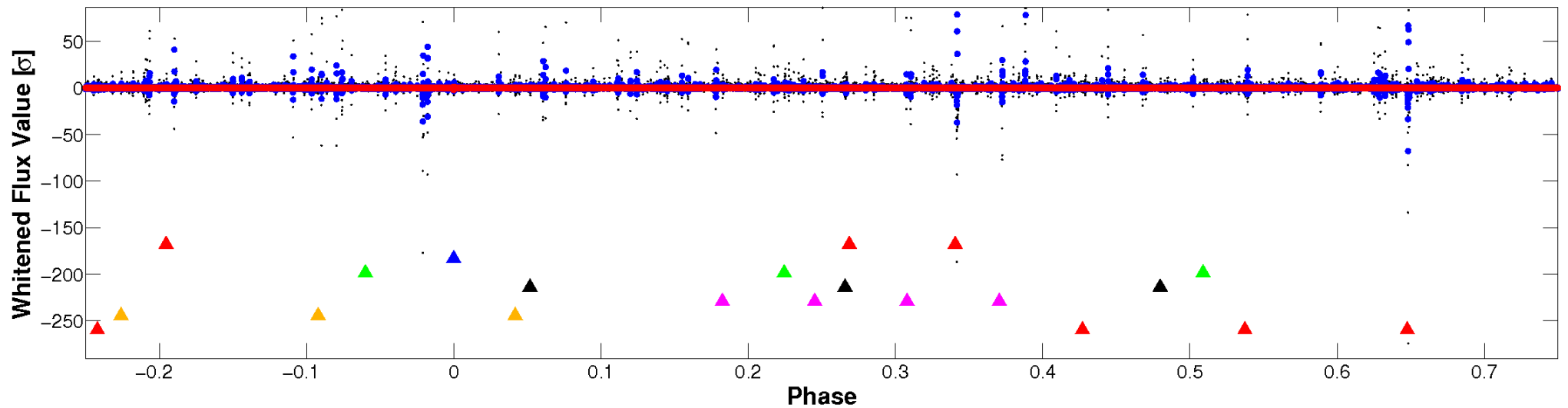


Non-Whitened Vs. Whitened Light Curve

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

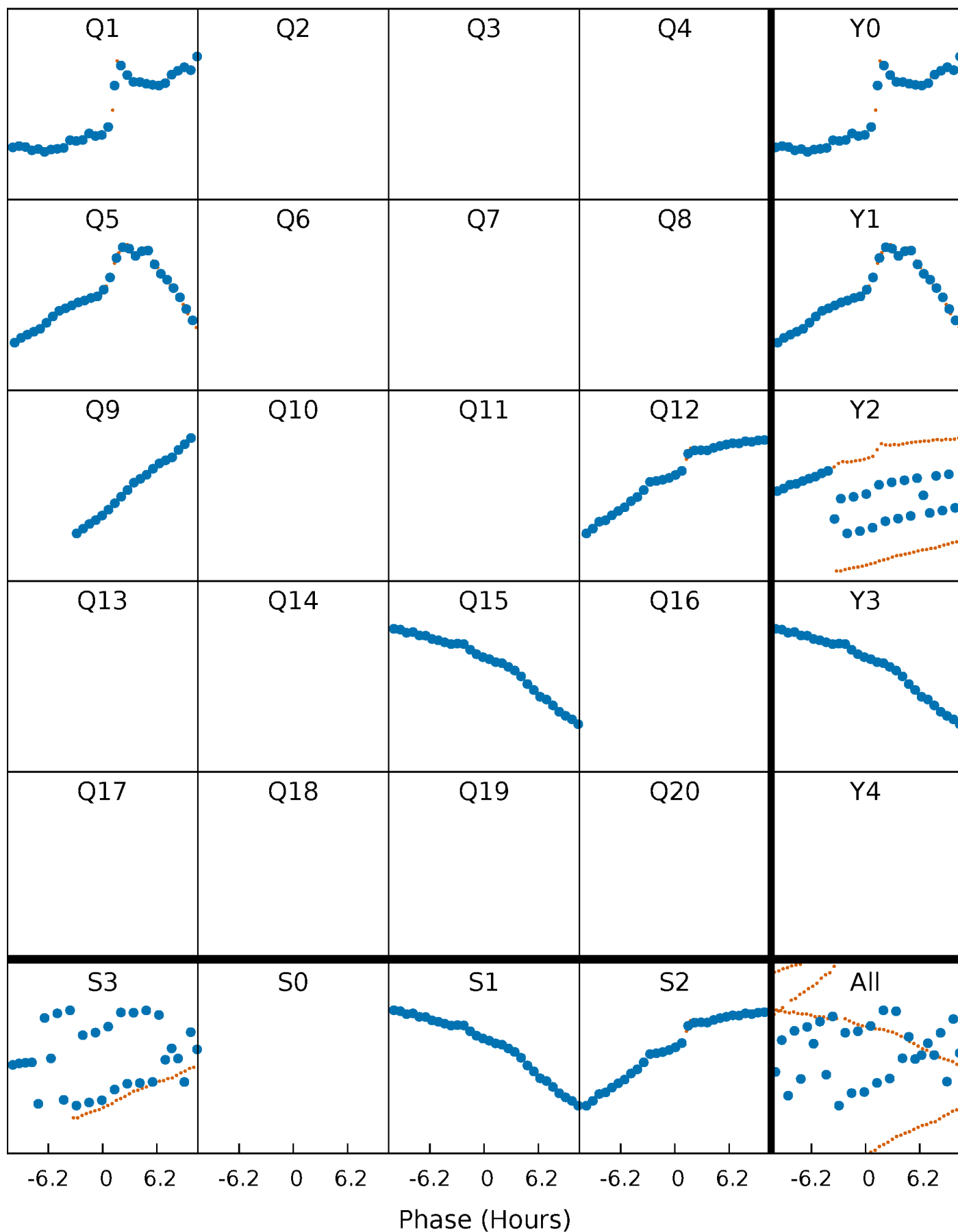


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



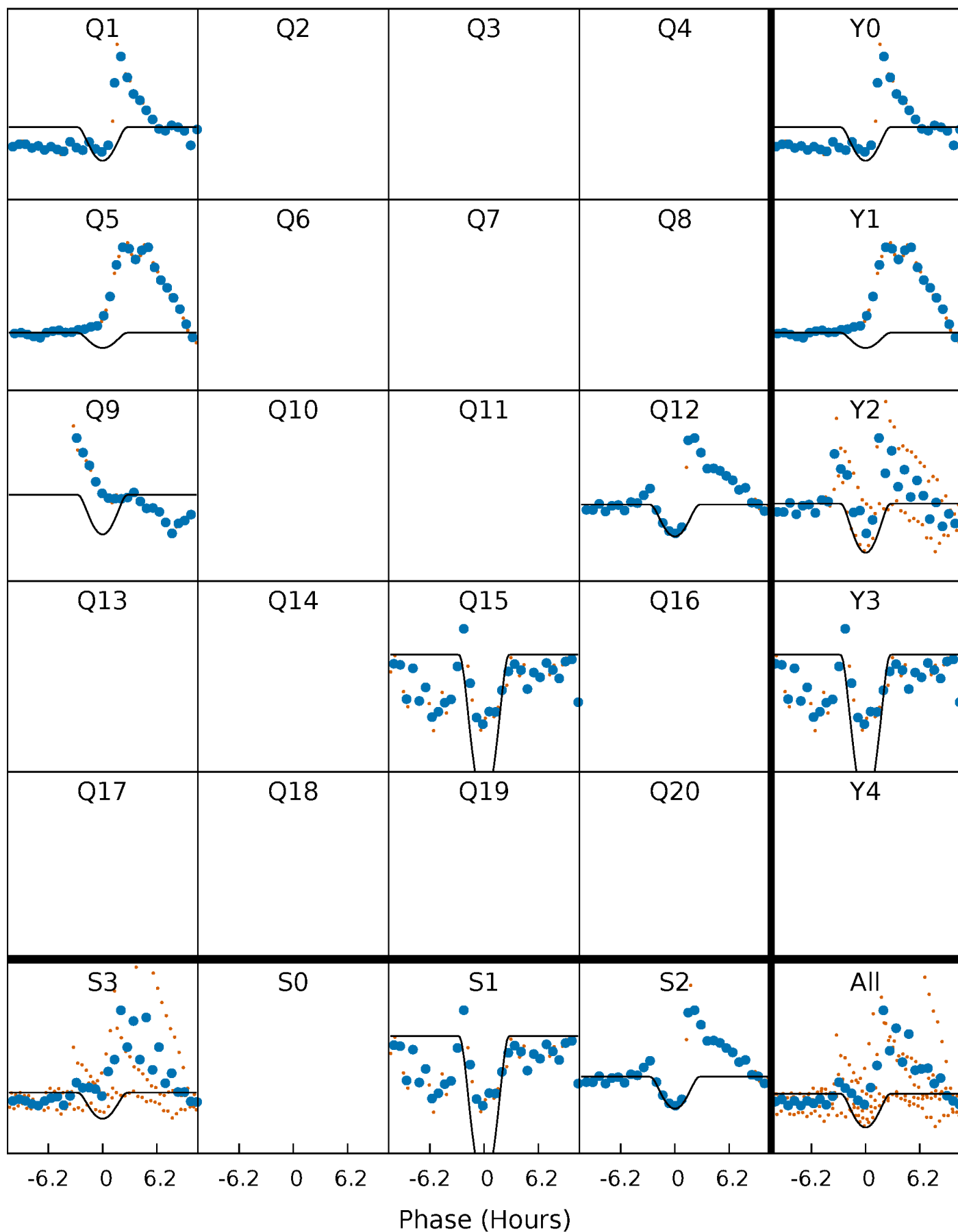
PDC Quarter-Phased Transit Curves

TCE 007739728-02 P=323.596332 Days $T_0=161.482182$ (BKJD)



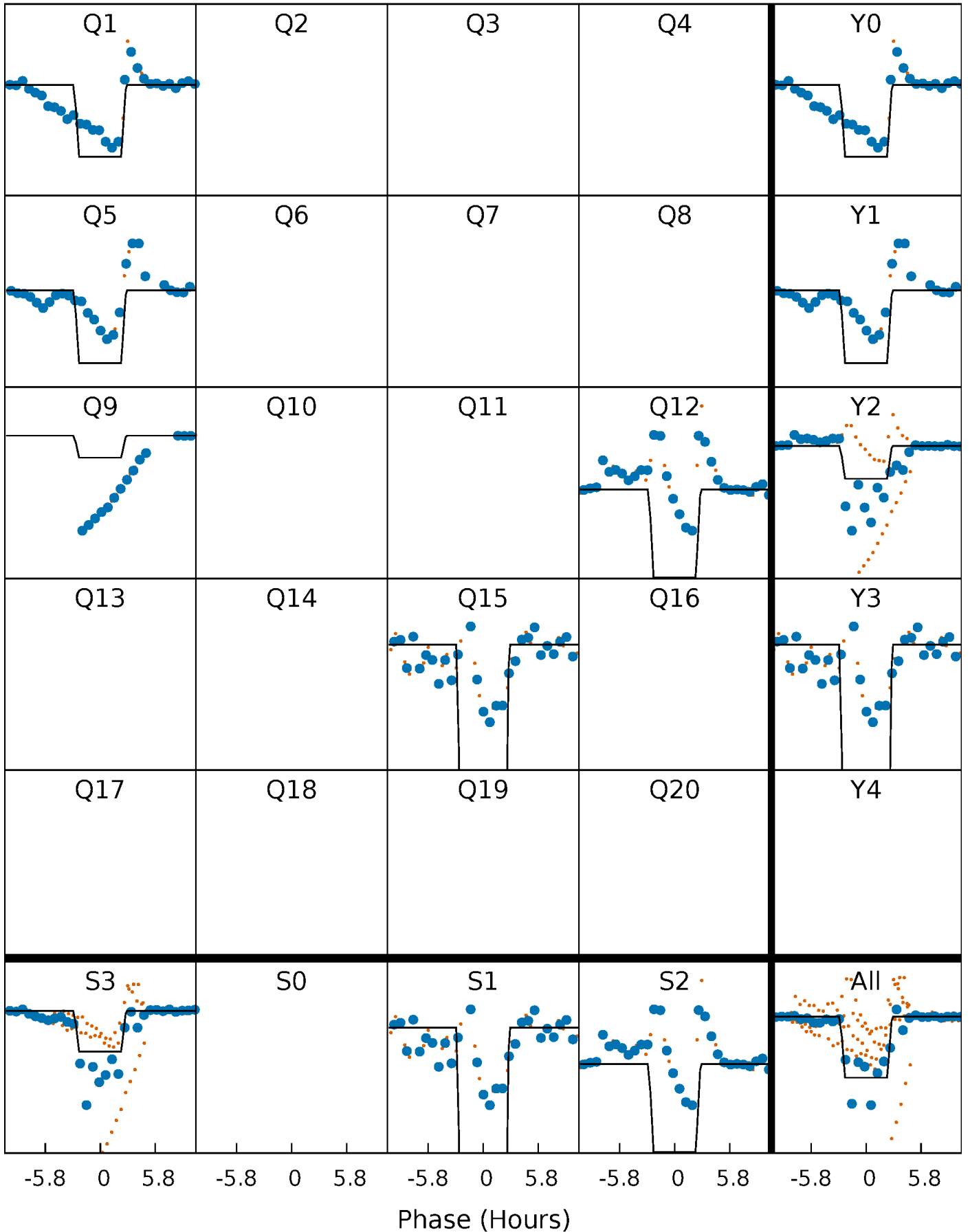
DV Quarter-Phased Transit Curves

TCE 007739728-02 $P=323.596332$ Days $T_0=161.482182$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

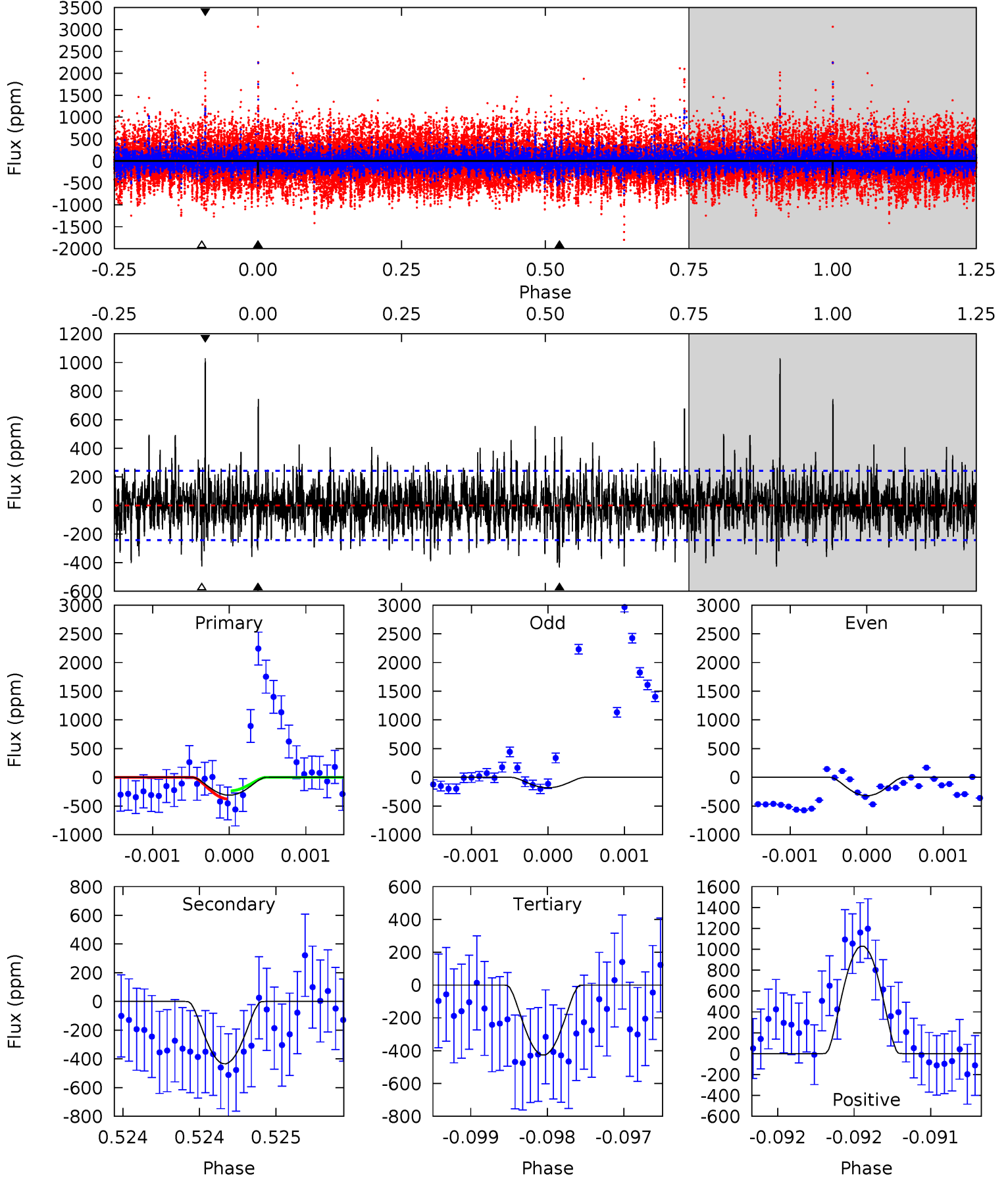
TCE 007739728-02 P=323.599478 Days $T_0=161.430253$ (BKJD)



DV Model-Shift Uniqueness Test

007739728-02, P = 323.596332 Days, E = 161.482182 Days

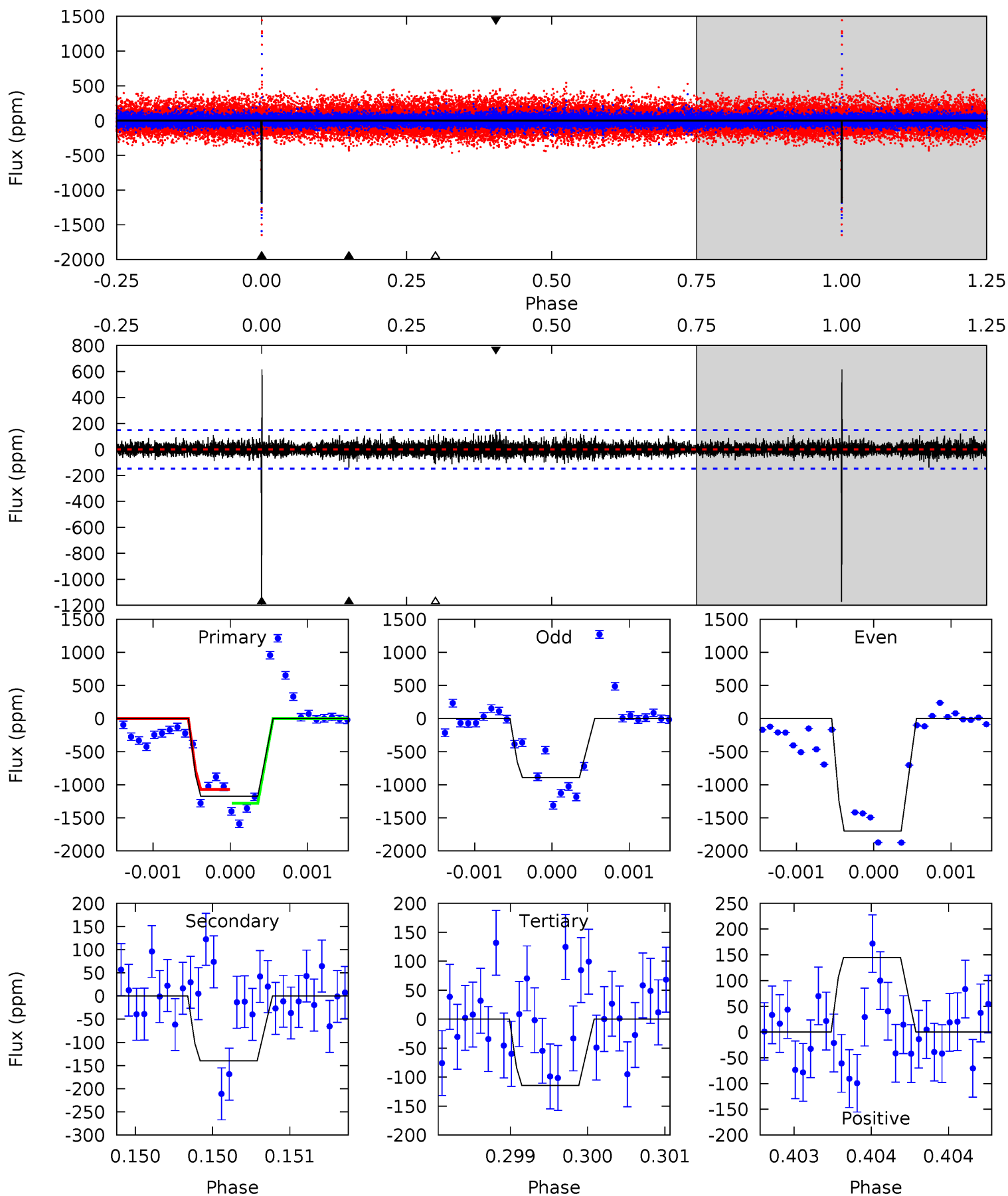
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.08	9.85	9.68	23.4	5.50	3.37	2.83	-2.60	-16.3	0.17	-13.5	1.11	-0.91	0.70	0



Alt Model-Shift Uniqueness Test

007739728-02, P = 323.599478 Days, E = 161.430253 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	5.20	4.25	5.39	5.52	3.40	0.99	39.4	38.2	0.94	-0.19	18.6	2.25	0.34	3.91



Stellar Parameters For KIC 007739728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4953^{+148}_{-133}	$4.660^{+0.054}_{-0.041}$	$-0.960^{+0.300}_{-0.300}$	$0.596^{+0.049}_{-0.041}$	$0.593^{+0.055}_{-0.022}$	$3.945^{+0.886}_{-0.603}$
	+3%/-3%	+1%/-1%	+31%/-31%	+8%/-7%	+9%/-4%	+22%/-15%
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 007739728-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-434 ± 44	$7.42^{+6.71}_{-4.79}$	267^{+9}_{-9}	2810^{+1072}_{-416}	2558^{+18449}_{-1832}
Alt.	-140 ± 27	$7.02^{+6.53}_{-4.81}$	267^{+10}_{-9}	2467^{+943}_{-355}	920^{+8530}_{-679}

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

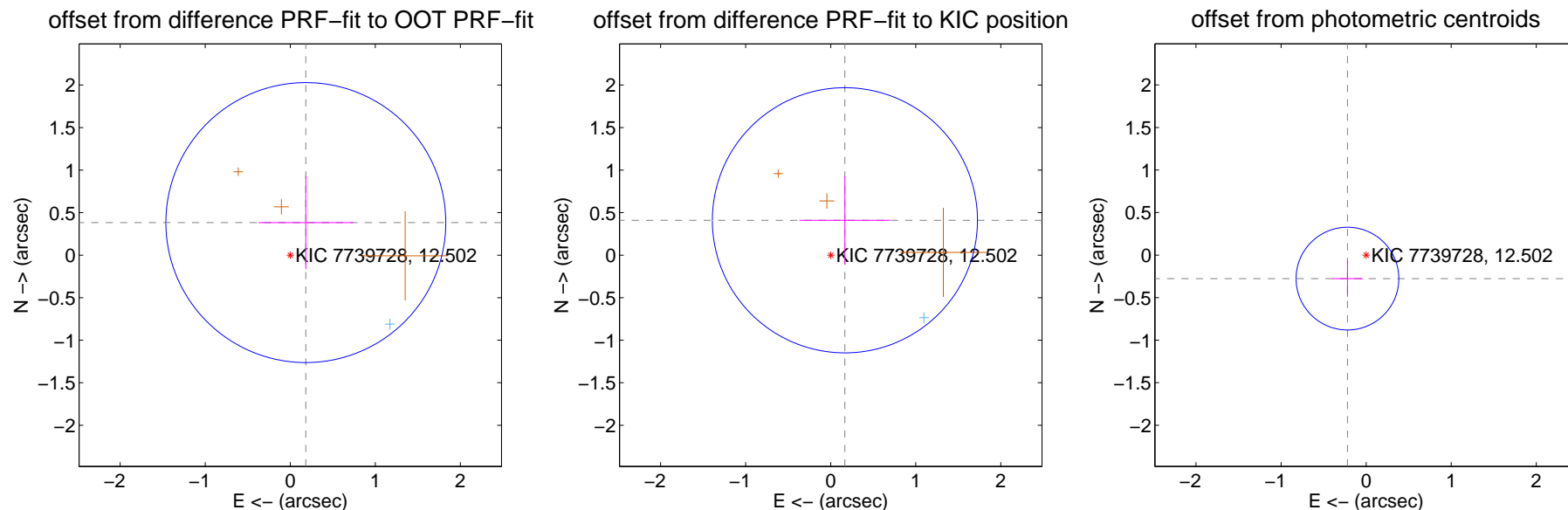
DV Centroid Data

Supplemental centroid analysis for 007739728-02. Kepler magnitude: 12.50. Transit SNR 10.78

There are 1 quarters with good PRF difference image offsets

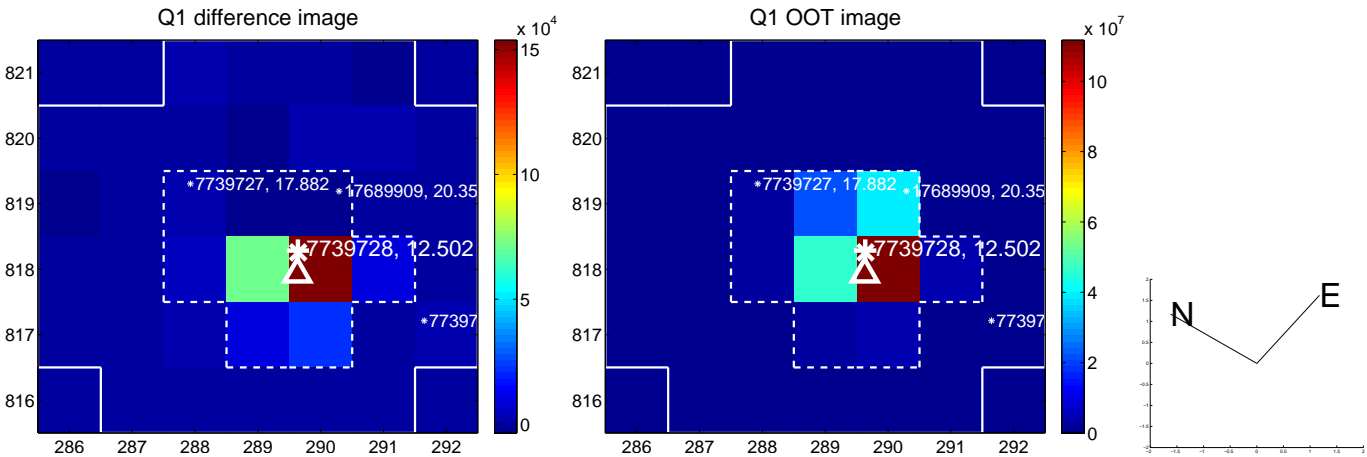
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.424 ± 0.549	0.77	-0.183 ± 0.557	0.383 ± 0.547
PRF-fit source offset from KIC position	0.443 ± 0.520	0.85	-0.167 ± 0.534	0.410 ± 0.517
photometric centroid source offset	0.35 ± 0.20	1.75	0.22 ± 0.18	-0.28 ± 0.21

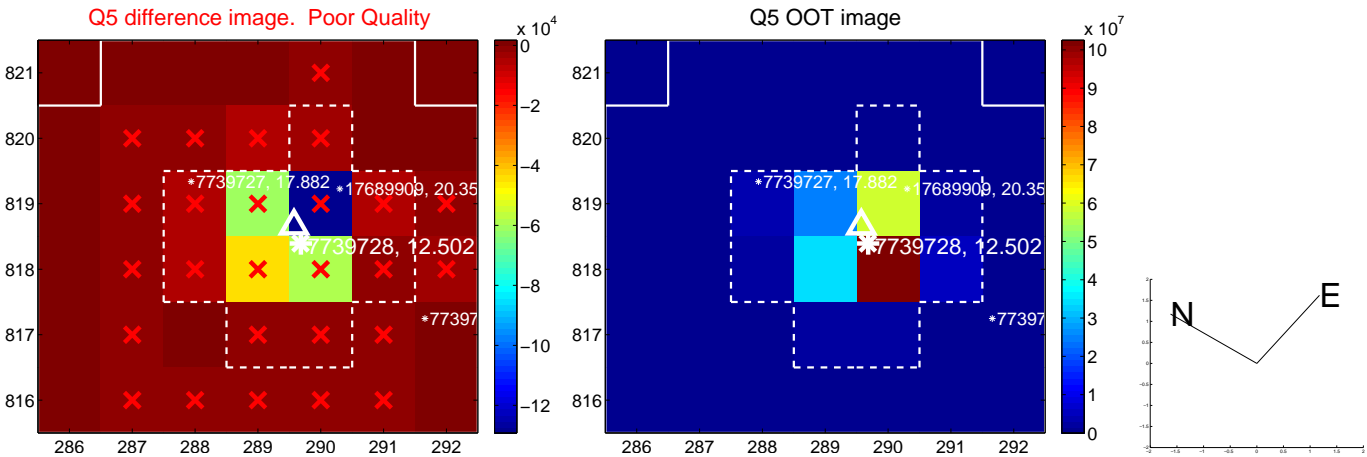


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

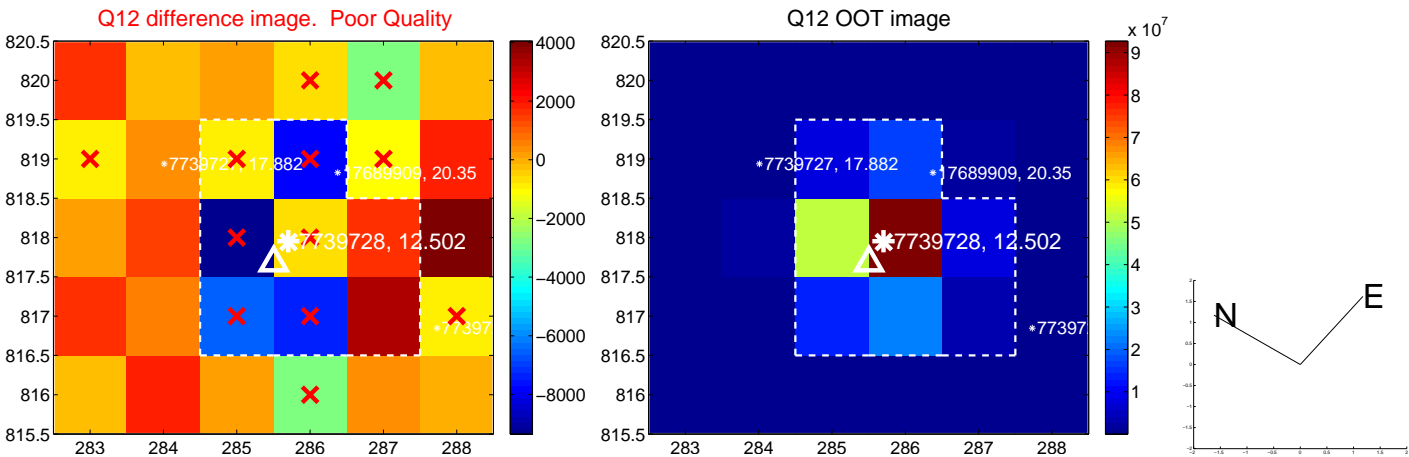
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



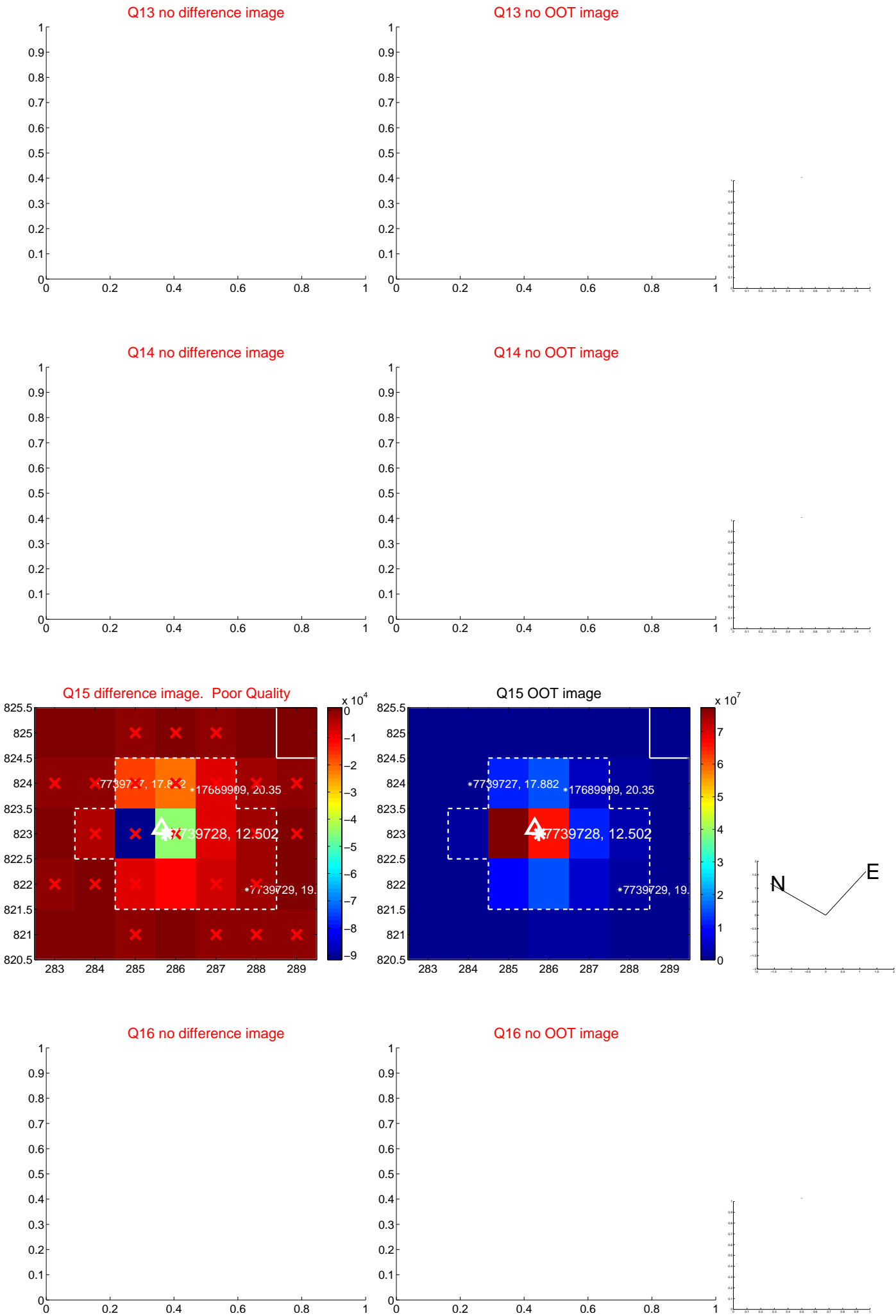
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



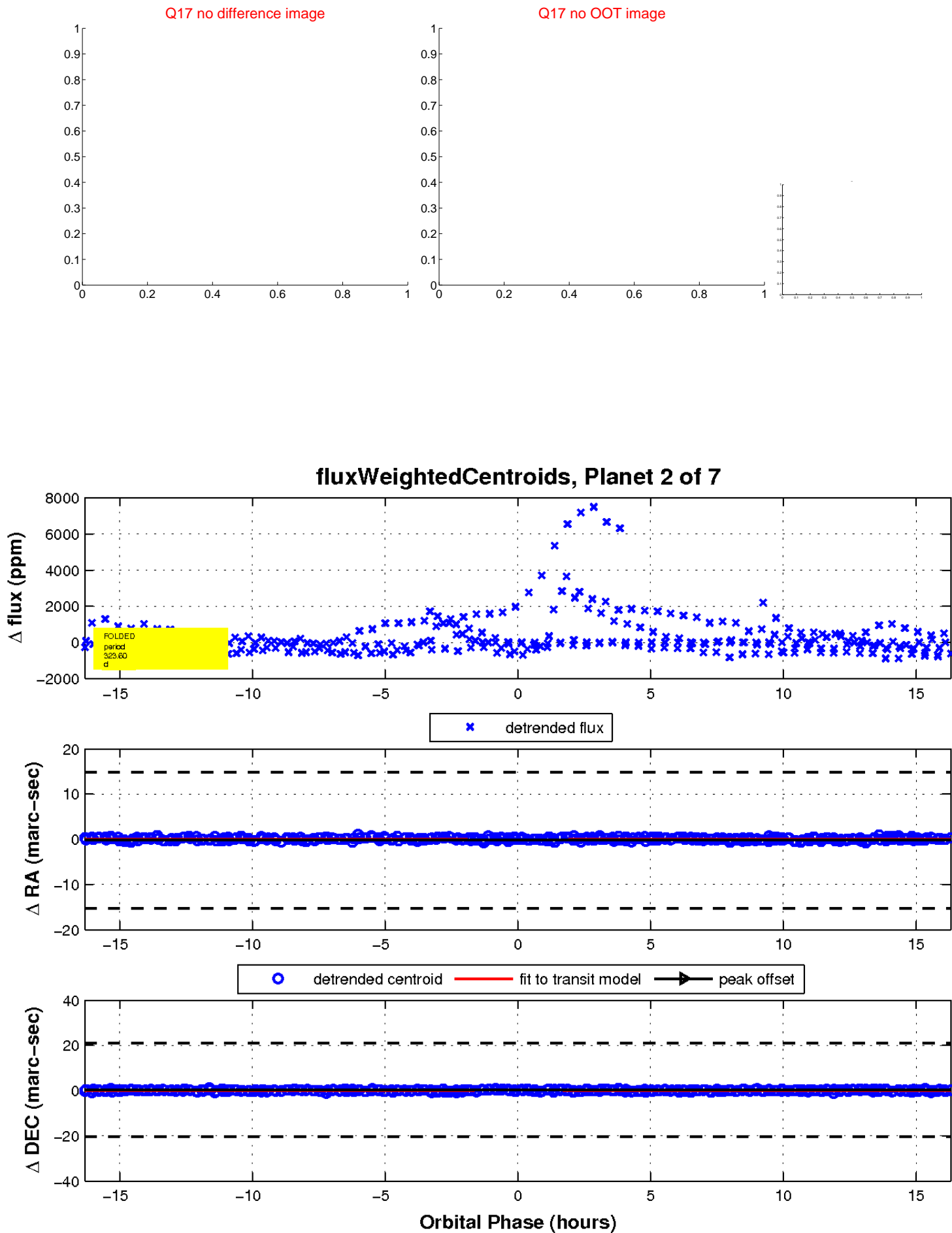
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

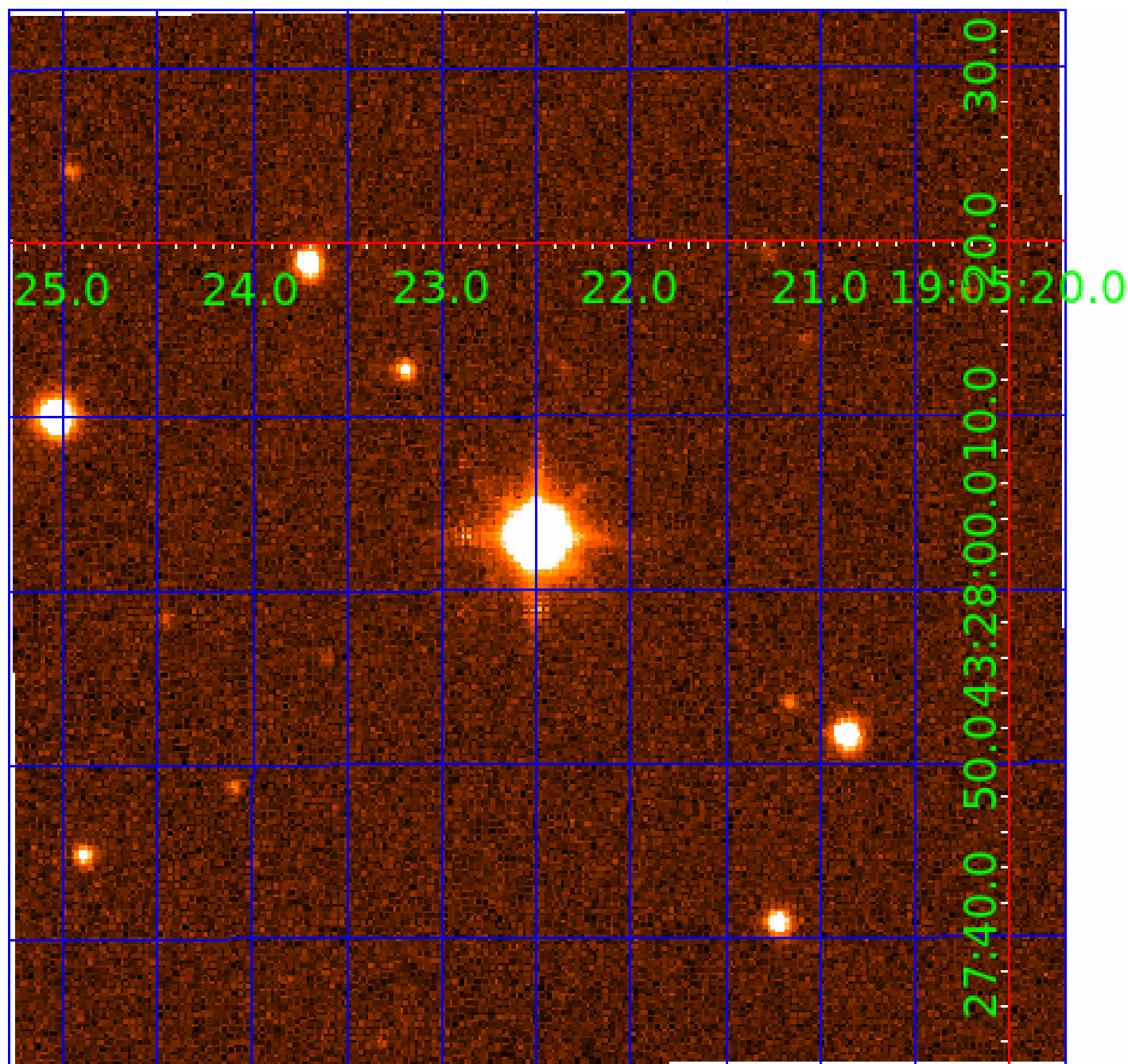


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007739728

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})
007739728-01	OBS	No	473.756997	271.702261	53.8	0.939	21.9	0.5	0.60	4953	0.69	0.19
007739728-02	OBS	No	323.596332	161.482182	1073.1	5.441	19.7	10.8	0.60	4953	3.90	0.32
007739728-05	OBS	No	343.888505	220.530927	513.2	3.287	17.5	6.1	0.60	4953	1.50	0.29
007739728-06	OBS	No	603.875484	174.995440	1020.5	5.070	16.5	8.9	0.60	4953	3.81	0.14
007739728-07	OBS	No	359.290724	299.670083	663.7	8.936	15.5	5.6	0.60	4953	1.55	0.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007739728-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

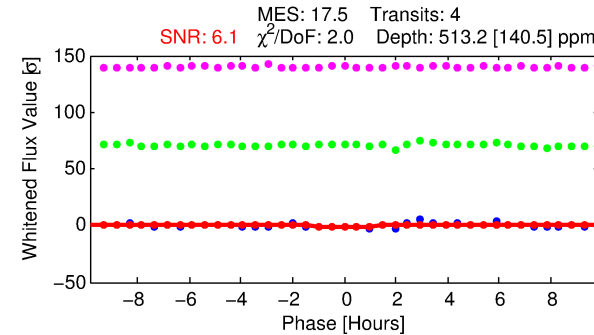
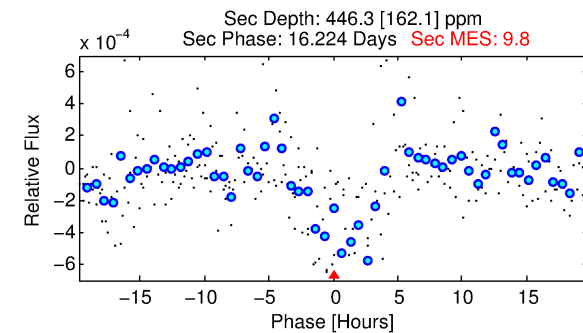
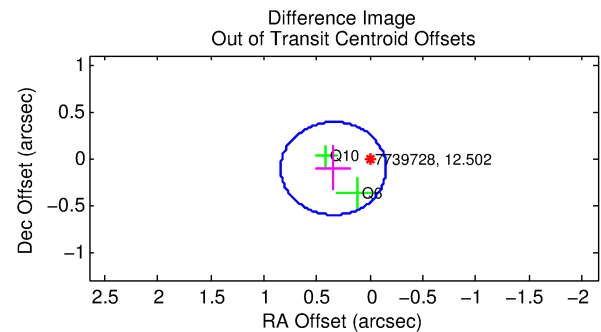
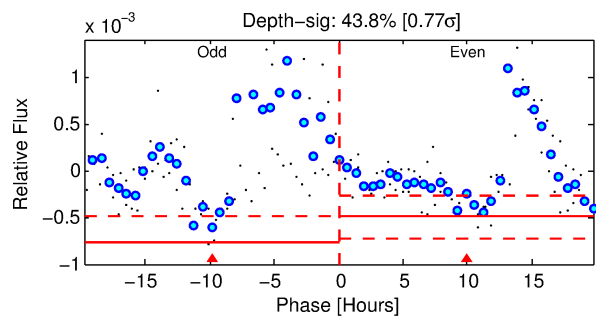
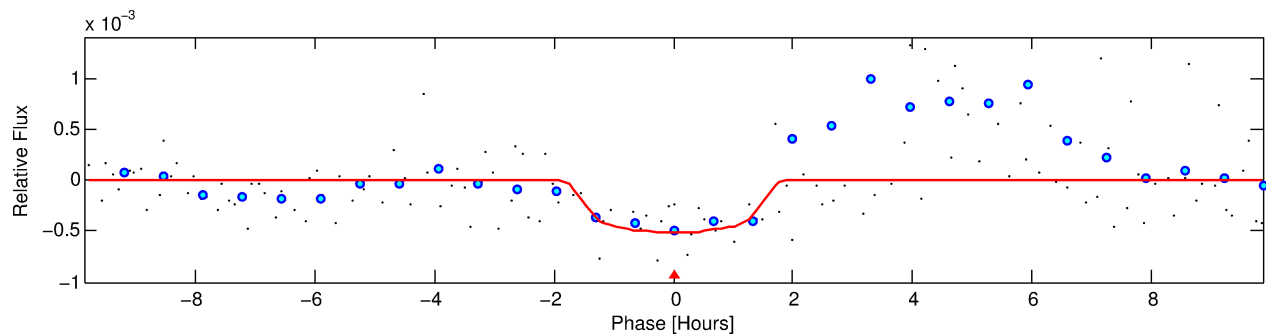
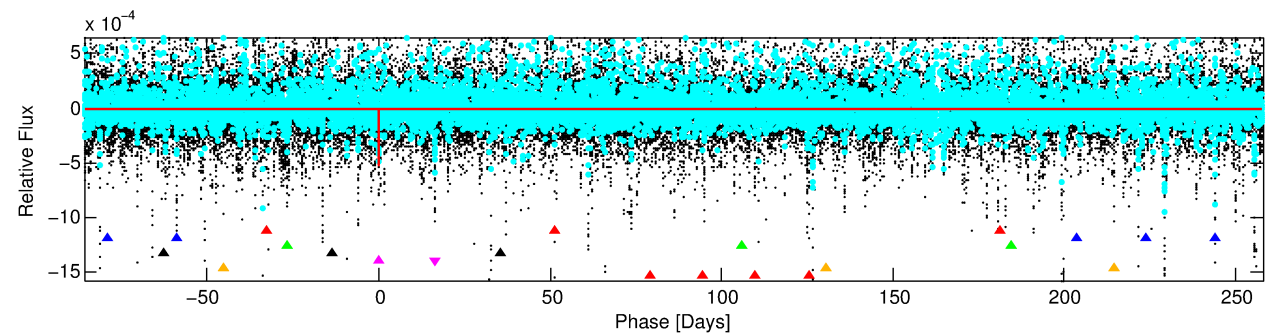
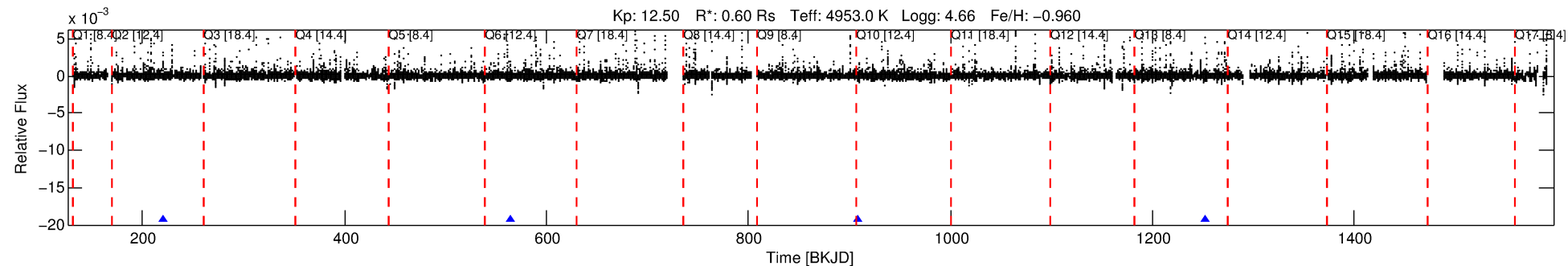
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007739728-05

No Significant Match Found

DV One-Page Summary

KIC: 7739728 Candidate: 5 of 7 Period: 343.889 d



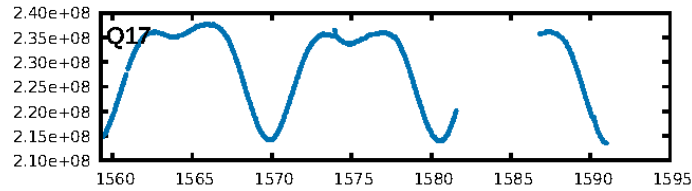
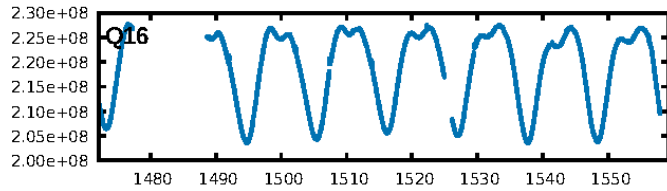
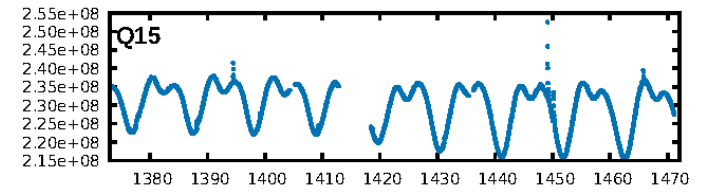
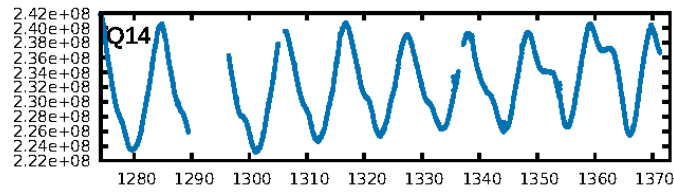
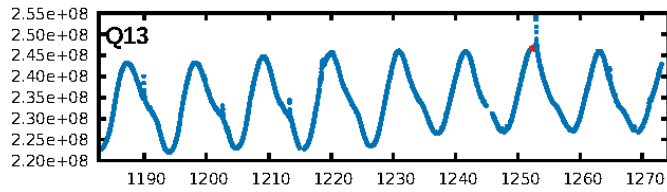
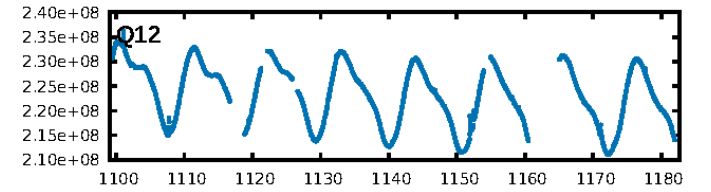
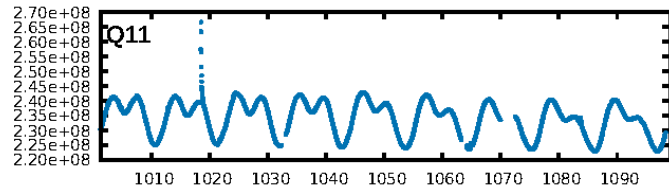
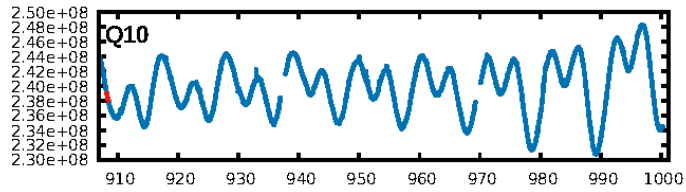
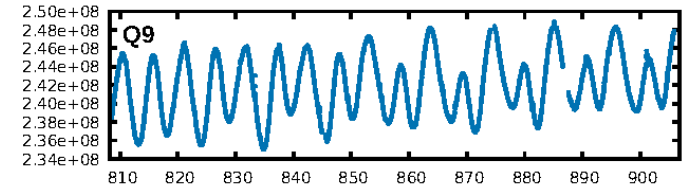
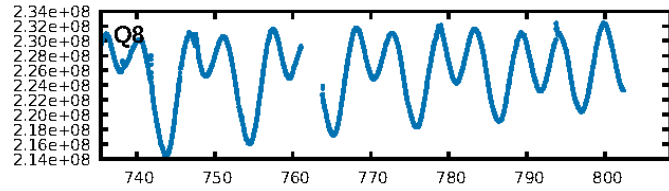
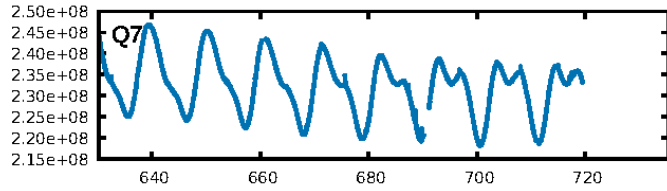
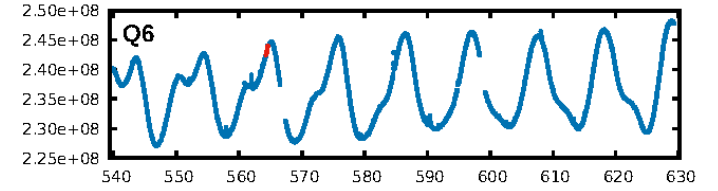
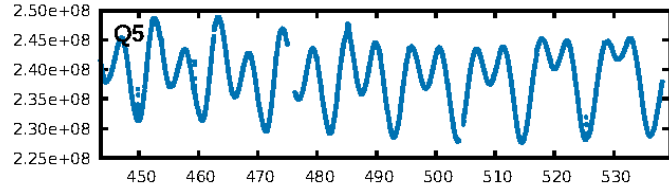
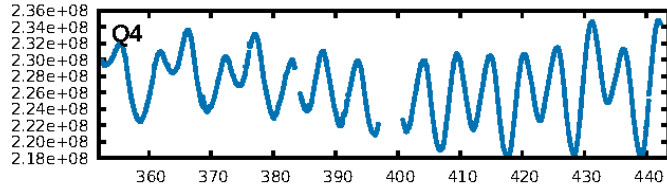
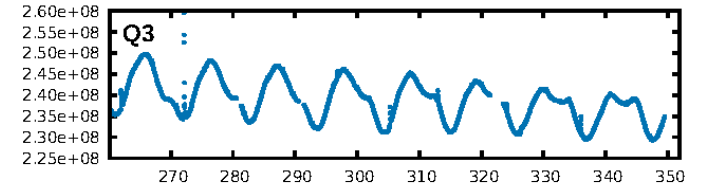
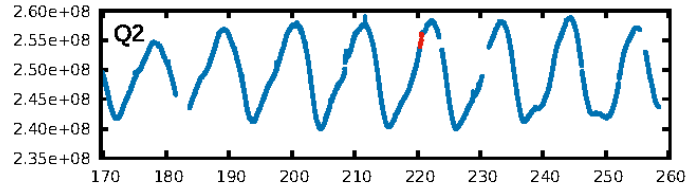
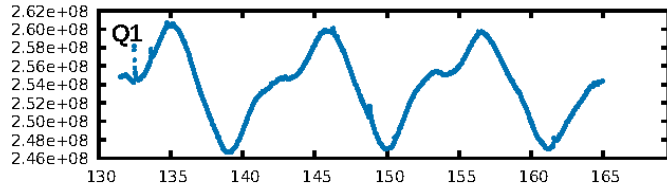
DV Fit Results:

Period = 343.88850 [0.00415] d
Epoch = 220.5309 [0.0092] BKJD
Rp/R* = 0.0230 [0.0257]
a/R* = 517.58 [2243.55]
b = 0.79 [2.09]
Seff = 0.29 [0.05]
Teq = 188 [7] K
Rp = 1.50 [1.68] Re
a = 0.8069 [0.0554] AU
Ag = 71235.27 [161383.64] [0.44 σ]
Teffp = 4744 [2688] K [1.69 σ]

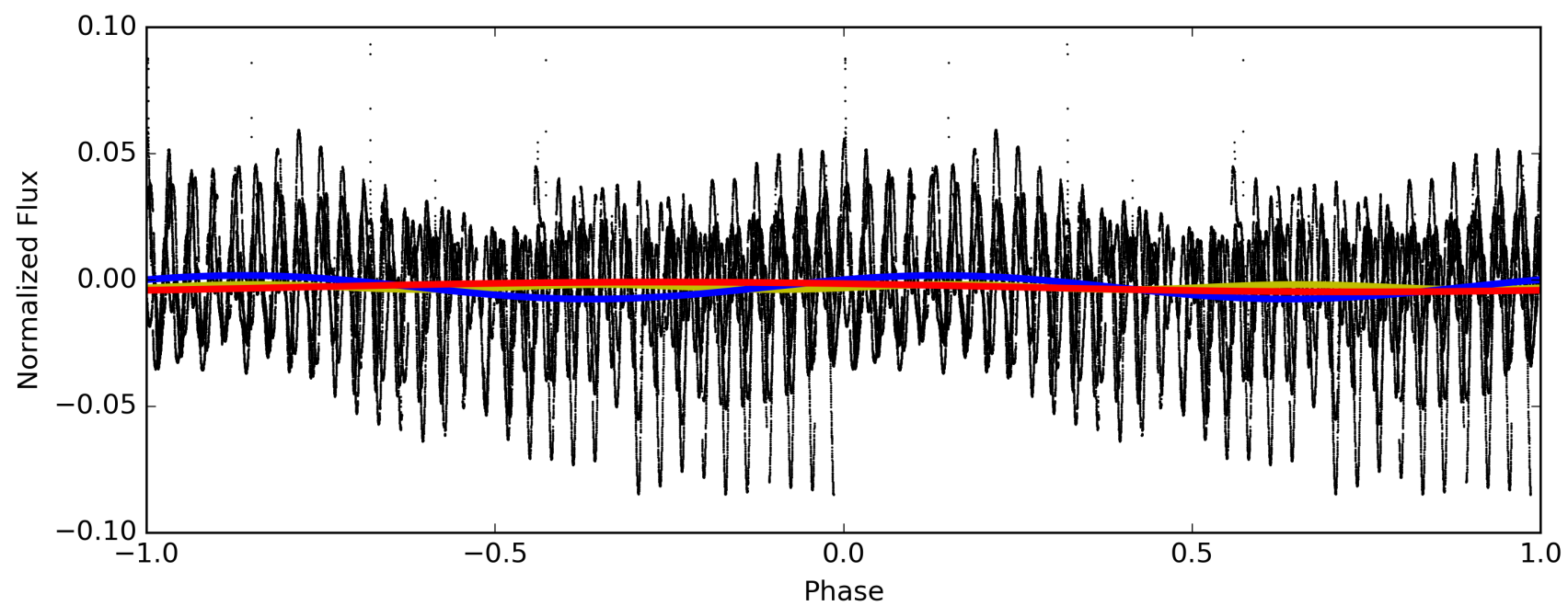
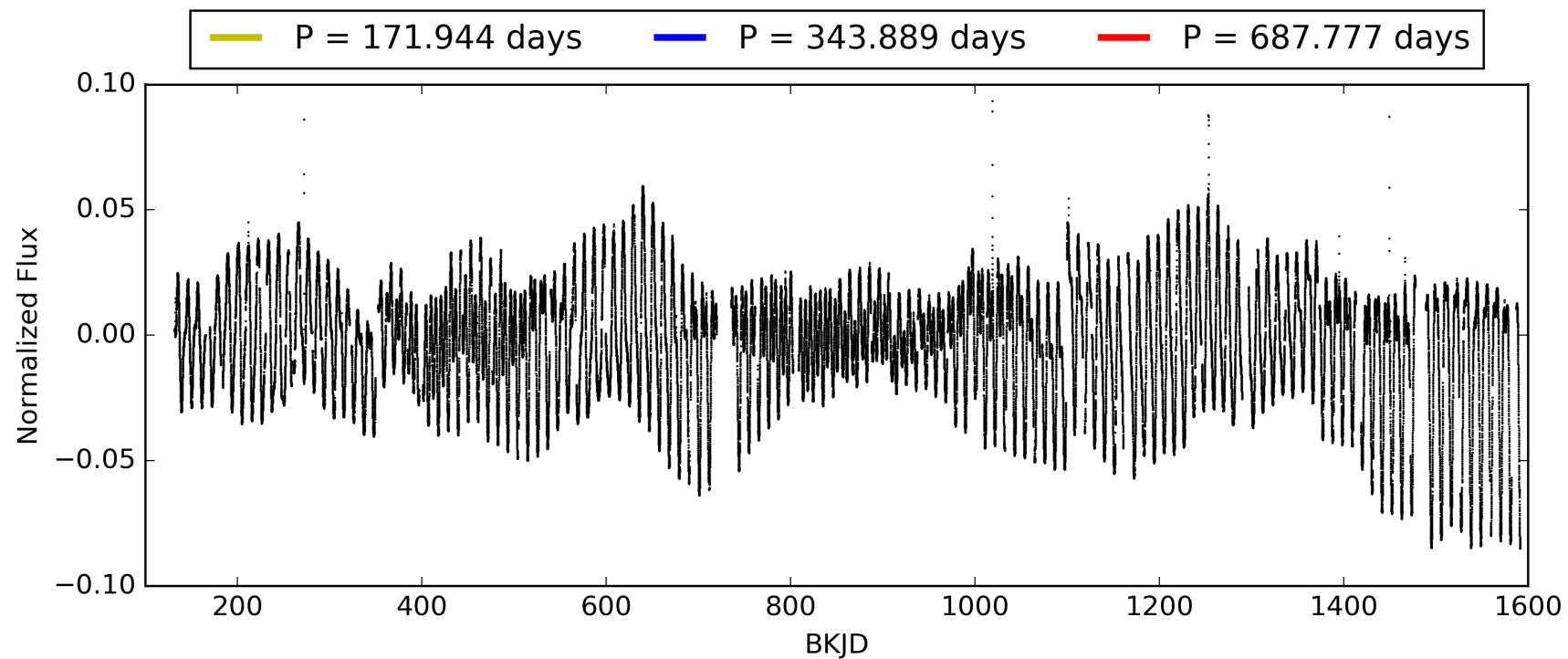
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.61 σ]
LongPeriod-sig: 100.0% [38.82 σ]
ModelChiSquare2-sig: 26.8%
ModelChiSquareGof-sig: 49.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6635
Centroid-sig: 6.9%
Centroid-so: 0.671 arcsec [1.25 σ]
OotOffset-rm: 0.362 arcsec [2.19 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 0.387 arcsec [2.13 σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 007739728-05, PDC Light Curves

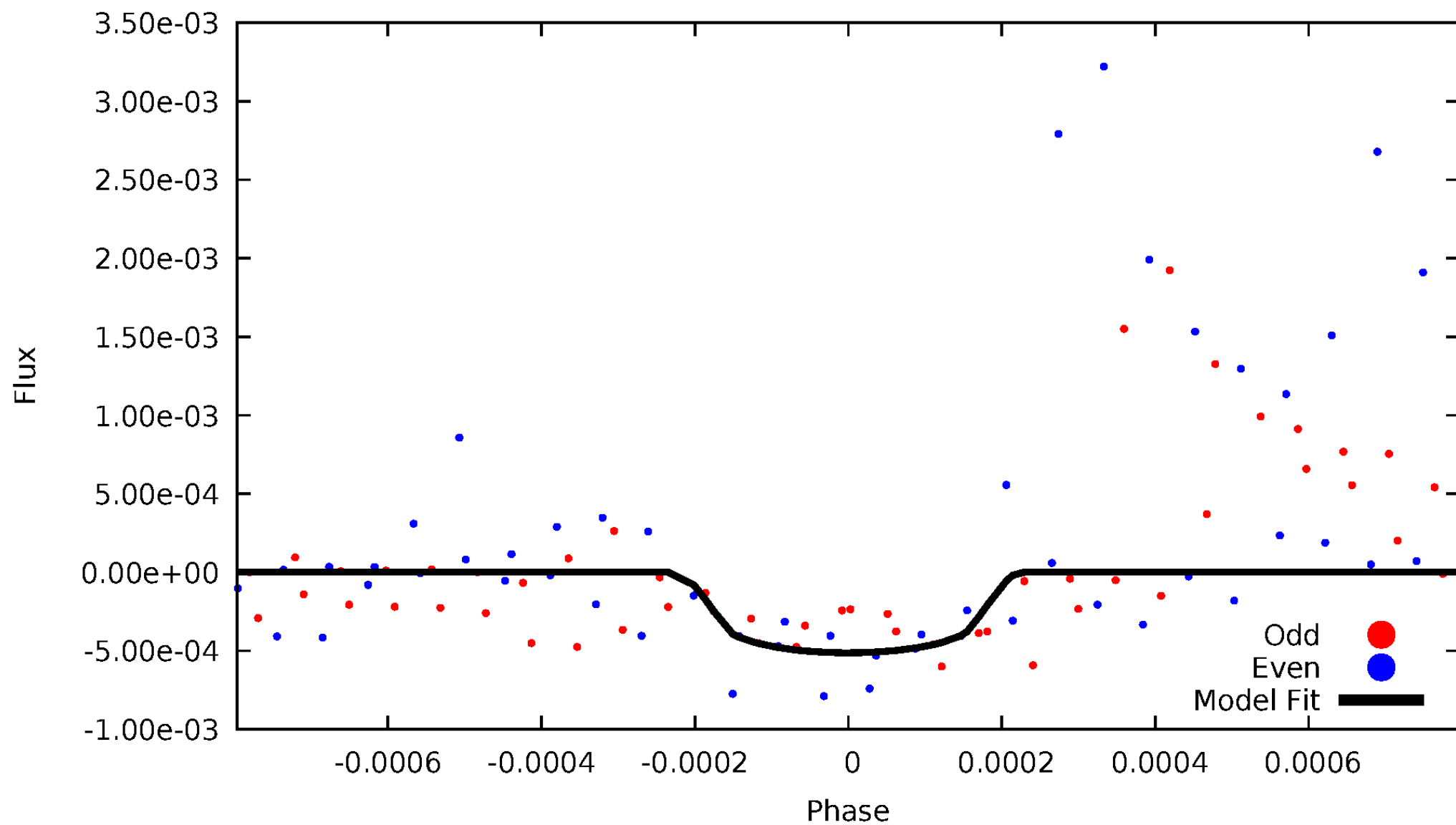


TCE 007739728-05



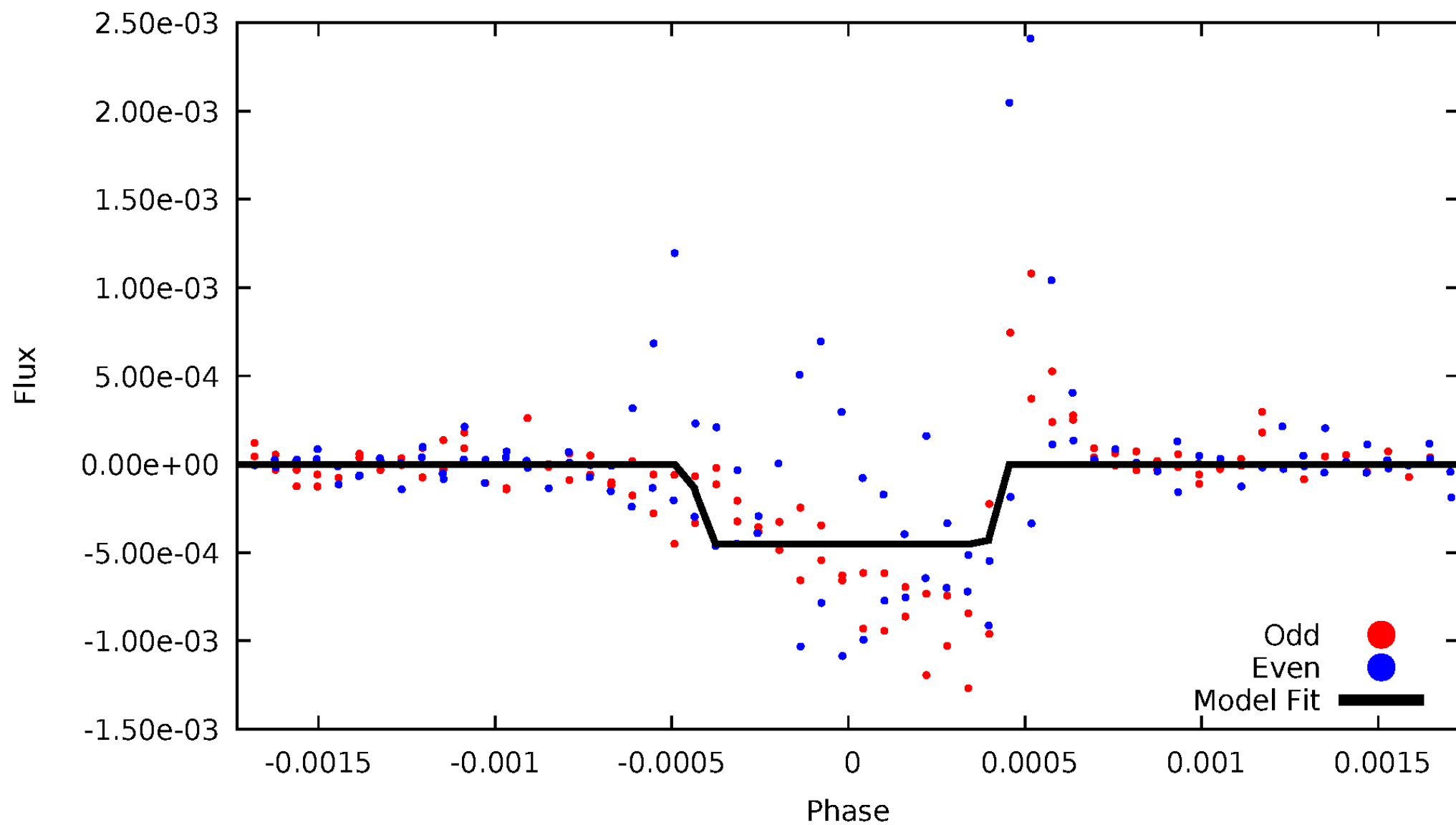
DV Odd/Even

TCE 007739728-05



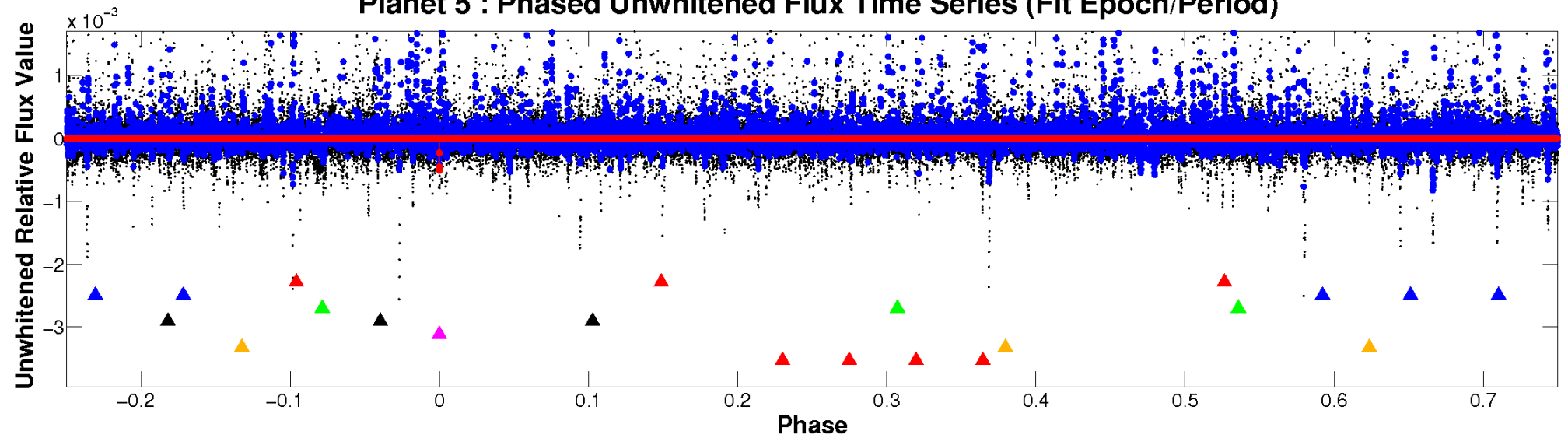
ALT Odd/Even

TCE 007739728-05

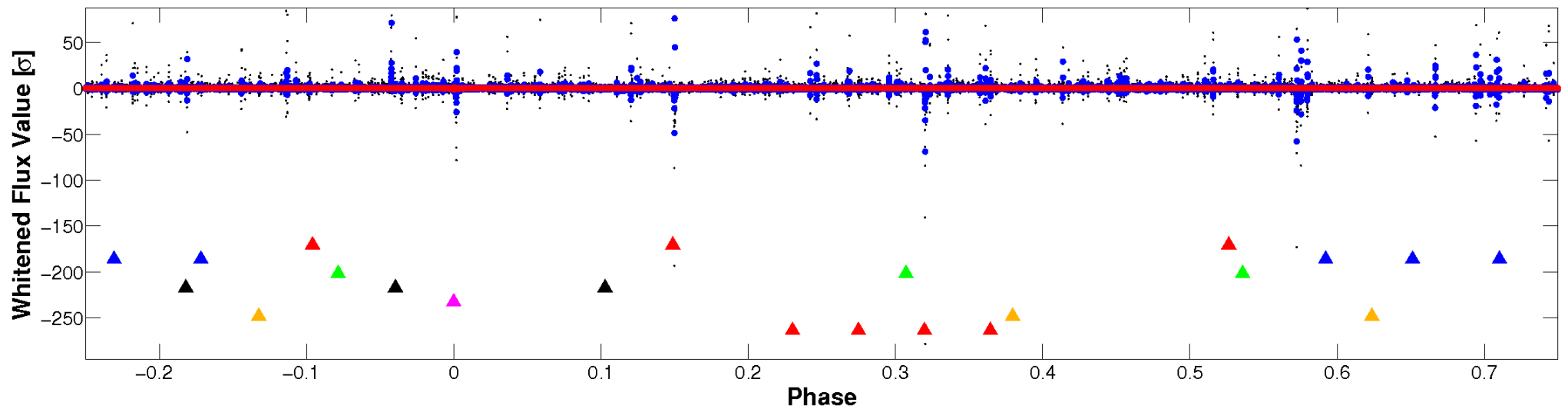


Non-Whitened Vs. Whitened Light Curve

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

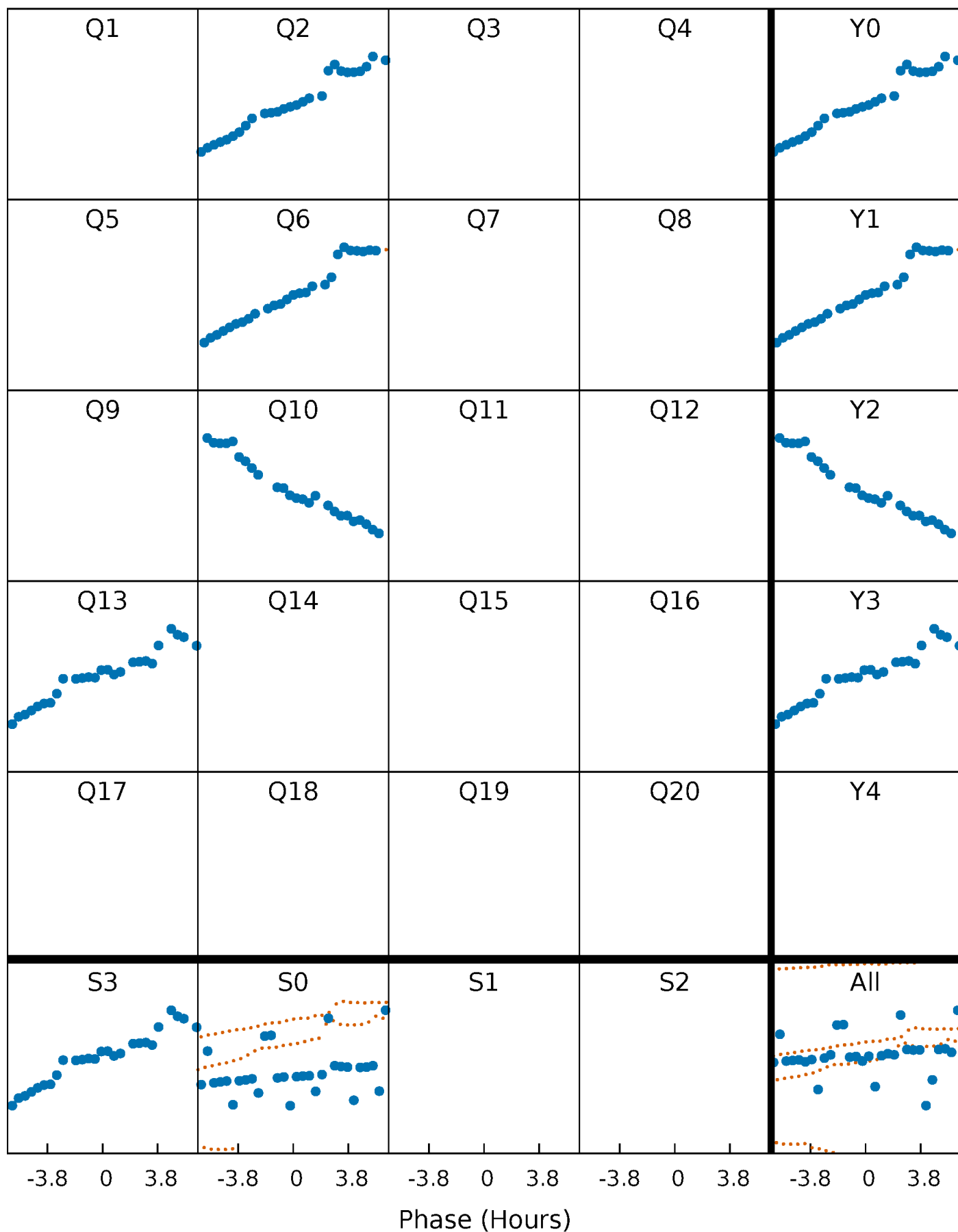


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



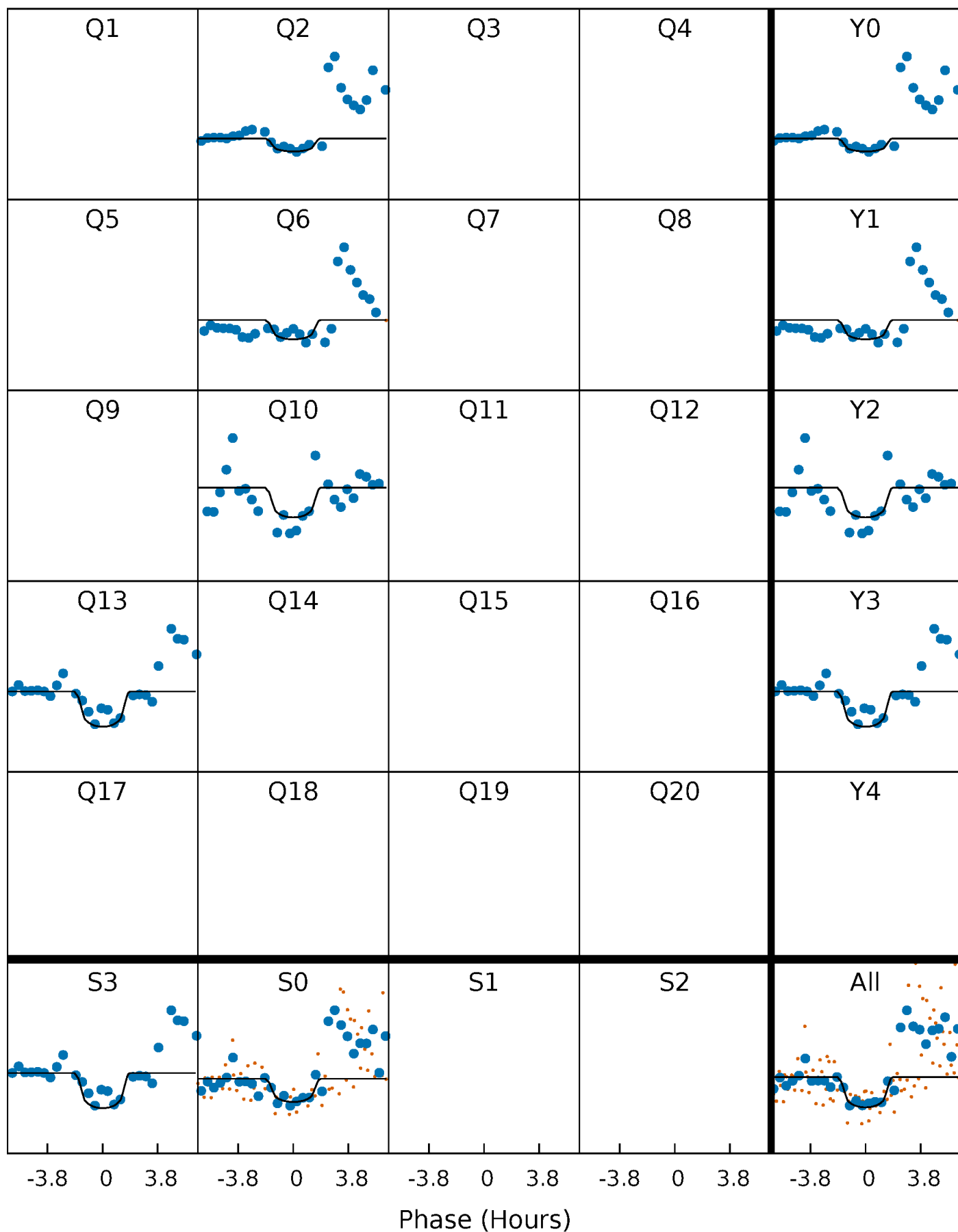
PDC Quarter-Phased Transit Curves

TCE 007739728-05 $P=343.888505$ Days $T_0=220.530927$ (BKJD)



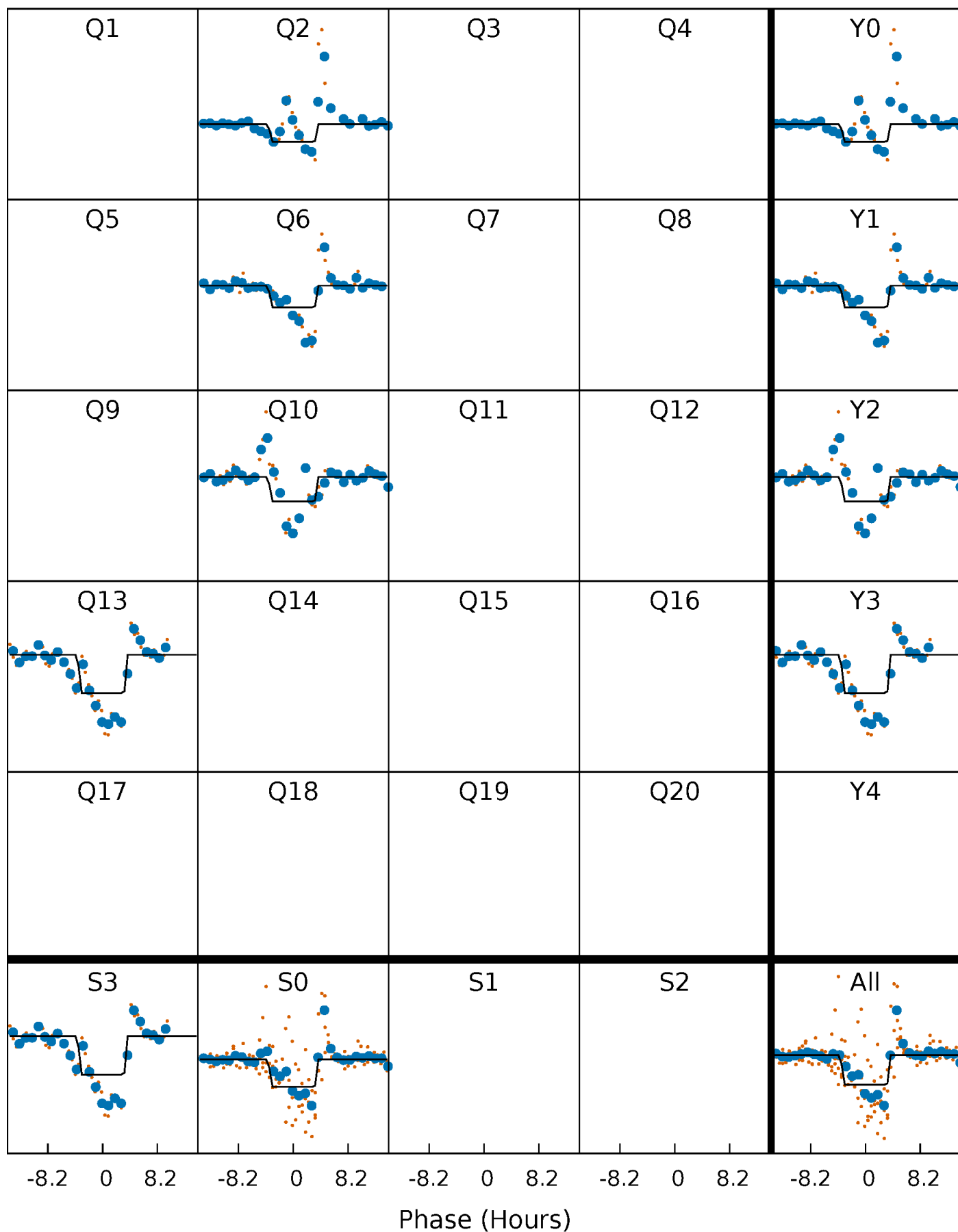
DV Quarter-Phased Transit Curves

TCE 007739728-05 $P=343.888505$ Days $T_0=220.530927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

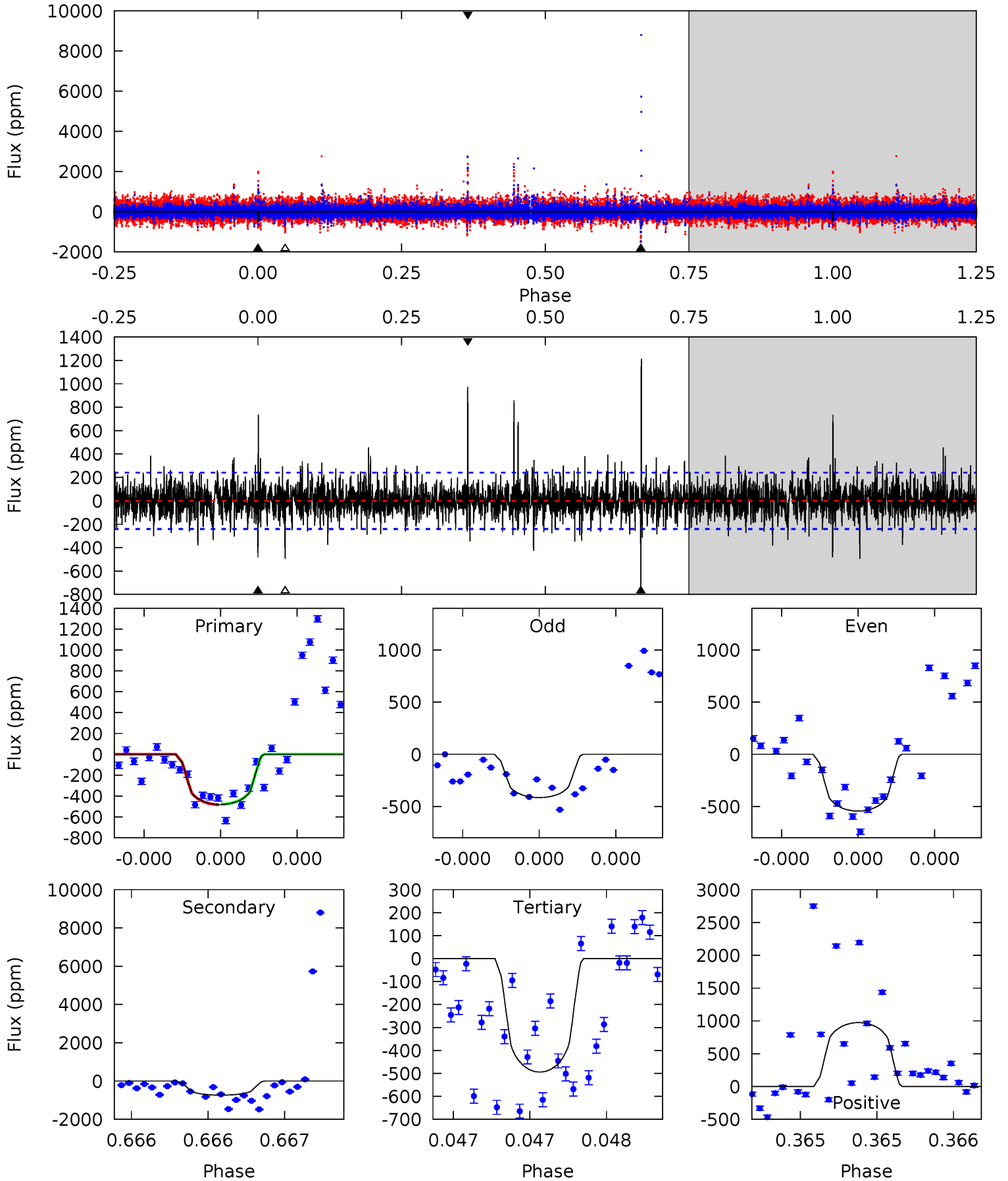
TCE 007739728-05 $P=343.917248$ Days $T_0=220.468201$ (BKJD)



DV Model-Shift Uniqueness Test

007739728-05, P = 343.888505 Days, E = 220.530927 Days

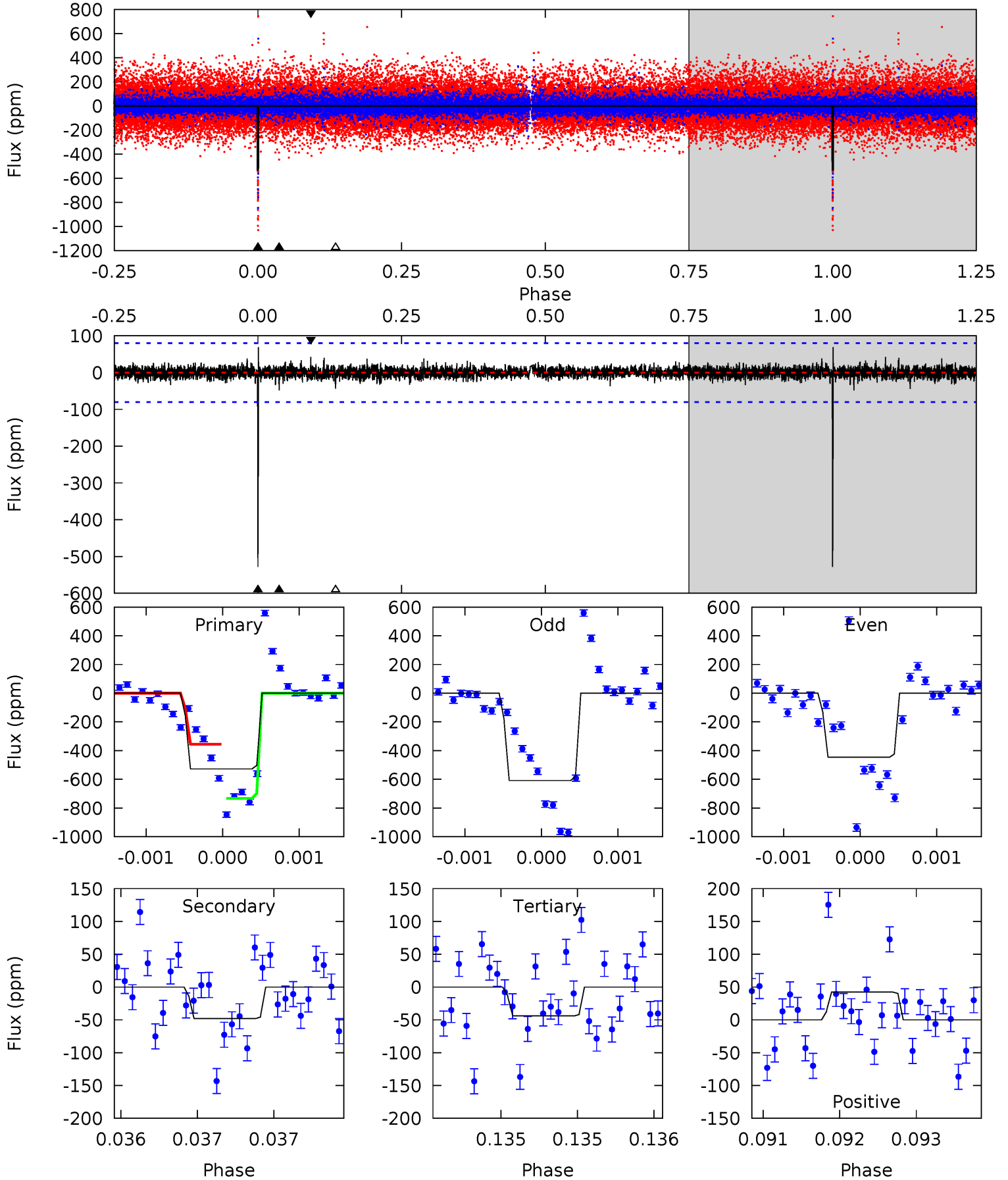
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	17.2	11.5	22.7	5.61	3.54	2.29	-0.30	-11.5	5.69	-5.52	0.56	1.10	0.62	0.07



Alt Model-Shift Uniqueness Test

007739728-05, P = 343.917248 Days, E = 220.468201 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.1	3.29	3.01	2.89	5.47	3.32	0.57	33.1	33.2	0.28	0.40	5.45	0.90	0.12	0



Stellar Parameters For KIC 007739728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4953^{+148}_{-133}	$4.660^{+0.054}_{-0.041}$	$-0.960^{+0.300}_{-0.300}$	$0.596^{+0.049}_{-0.041}$	$0.593^{+0.055}_{-0.022}$	$3.945^{+0.886}_{-0.603}$
	+3%/-3%	+1%/-1%	+31%/-31%	+8%/-7%	+9%/-4%	+22%/-15%
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 007739728-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-738 ± 43	$1.95^{+1.39}_{-1.18}$	262^{+10}_{-9}	4806^{+2883}_{-952}	$72219^{+410923}_{-48315}$
Alt.	-48 ± 15	$1.74^{+1.58}_{-1.13}$	262^{+9}_{-9}	3096^{+1197}_{-522}	5460^{+37838}_{-4049}

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

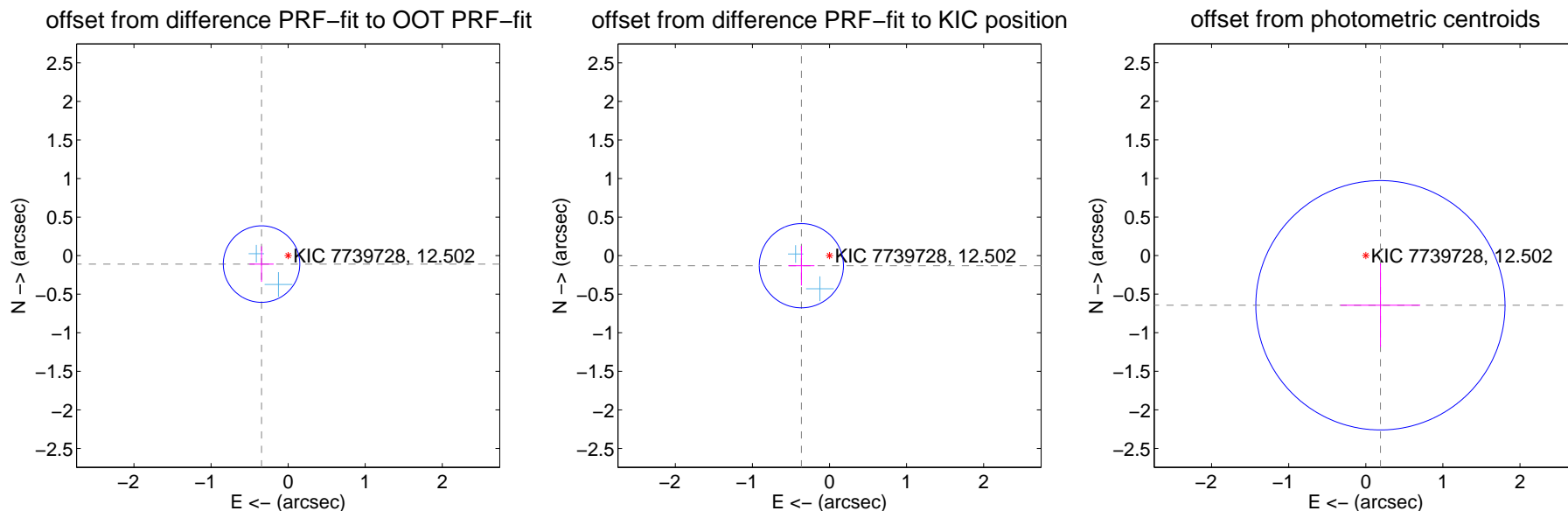
DV Centroid Data

Supplemental centroid analysis for 007739728-05. Kepler magnitude: 12.50. Transit SNR 6.15

There are 2 quarters with good PRF difference image offsets

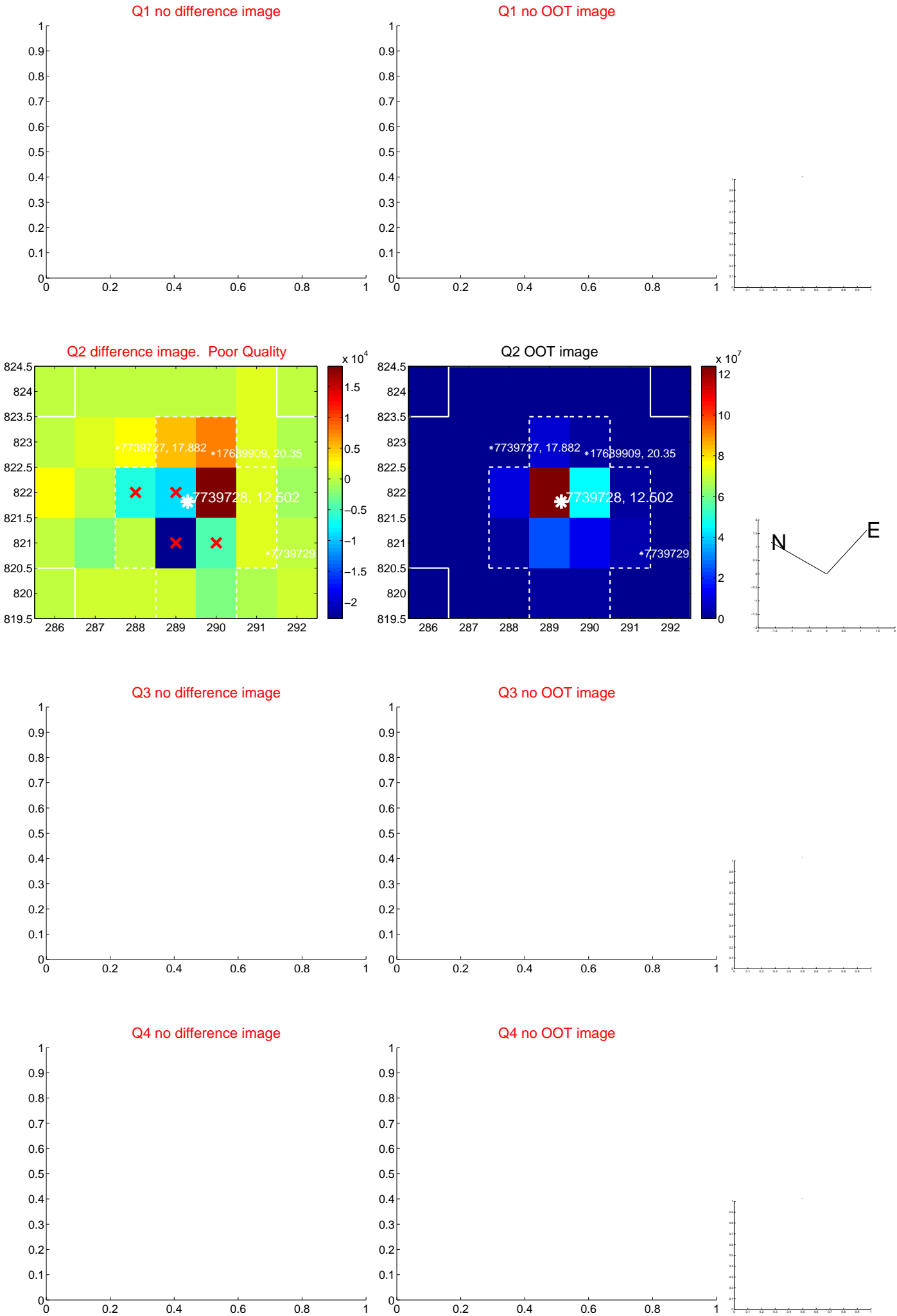
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.165	2.19	0.345 ± 0.157	-0.109 ± 0.230
PRF-fit source offset from KIC position	0.387 ± 0.182	2.13	0.365 ± 0.170	-0.130 ± 0.258
photometric centroid source offset	0.67 ± 0.54	1.25	-0.19 ± 0.52	-0.64 ± 0.54



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.

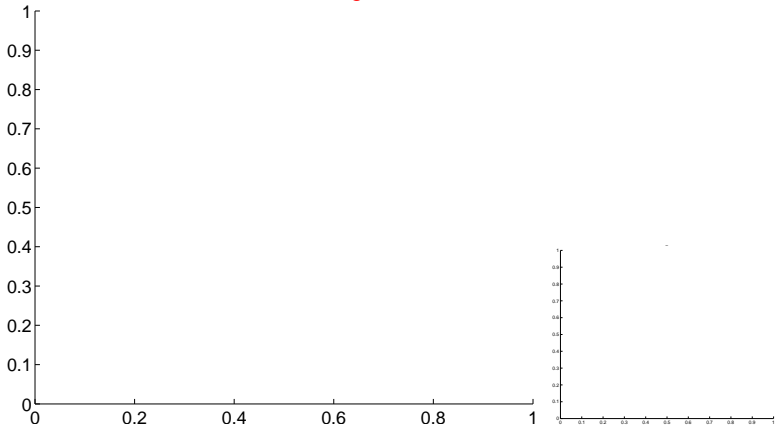


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

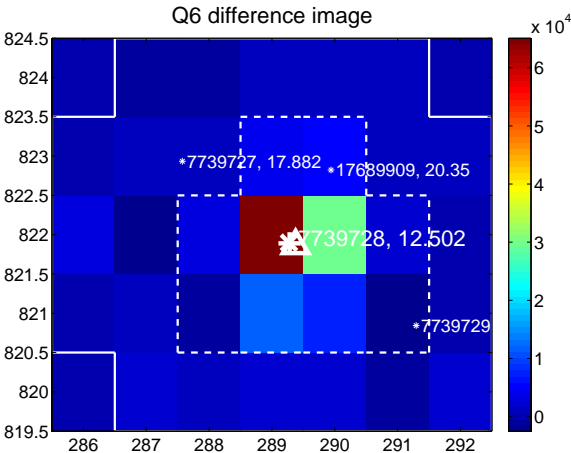
Q5 no difference image



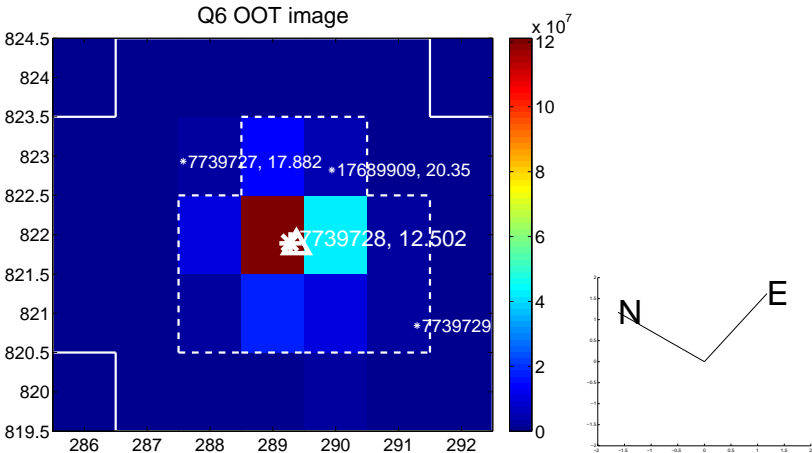
Q5 no OOT image



Q6 difference image



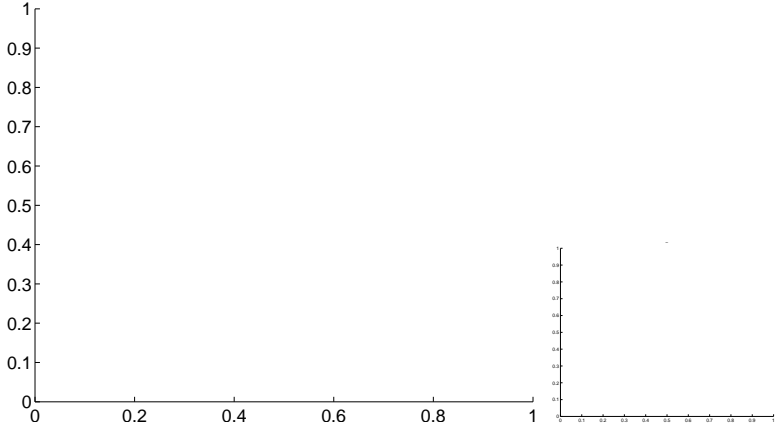
Q6 OOT image



Q7 no difference image



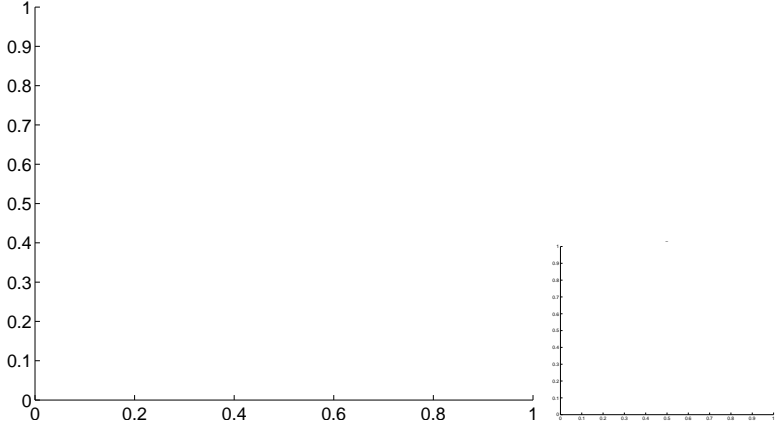
Q7 no OOT image



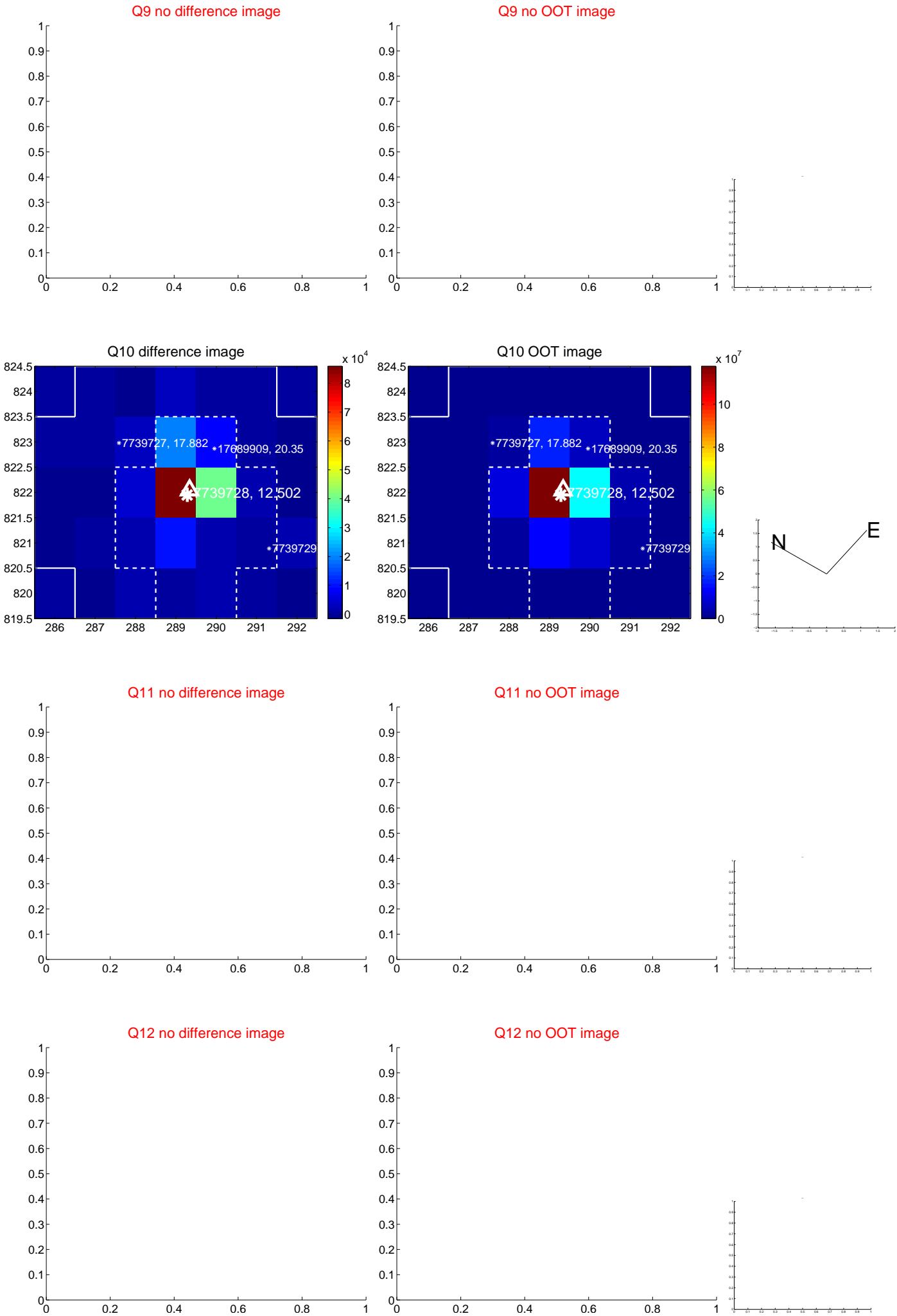
Q8 no difference image



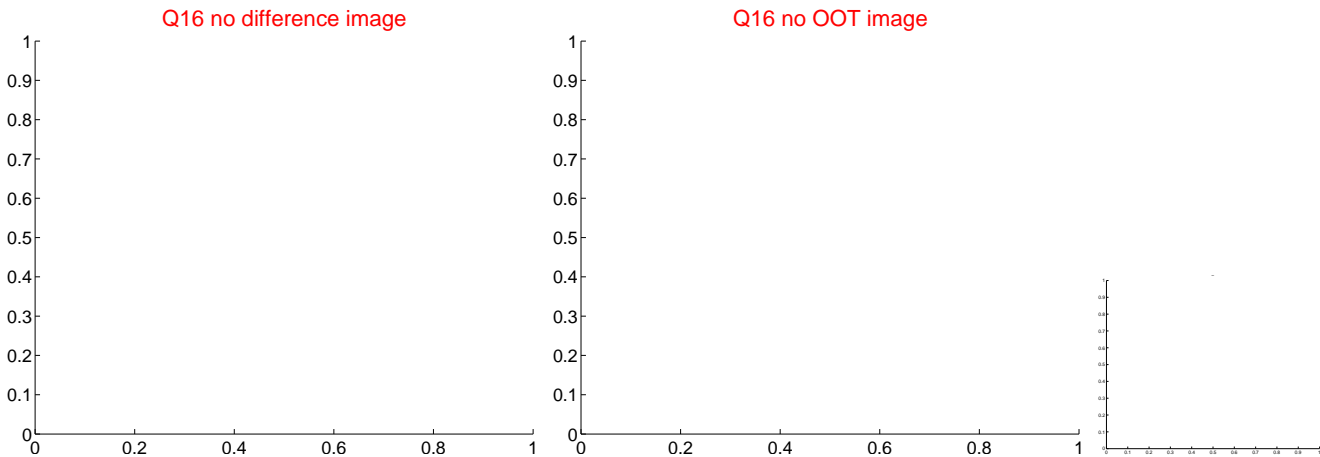
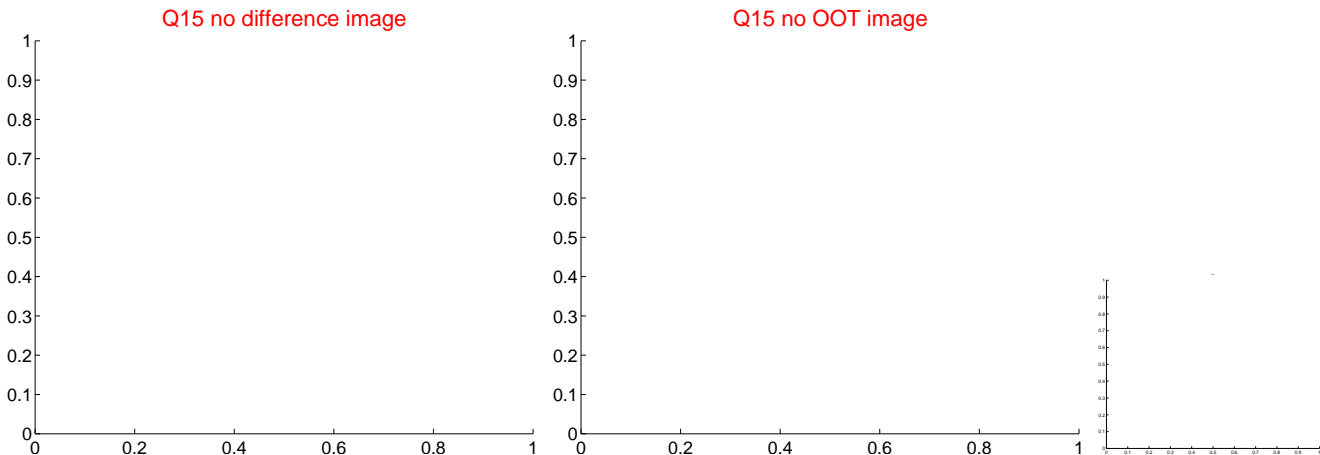
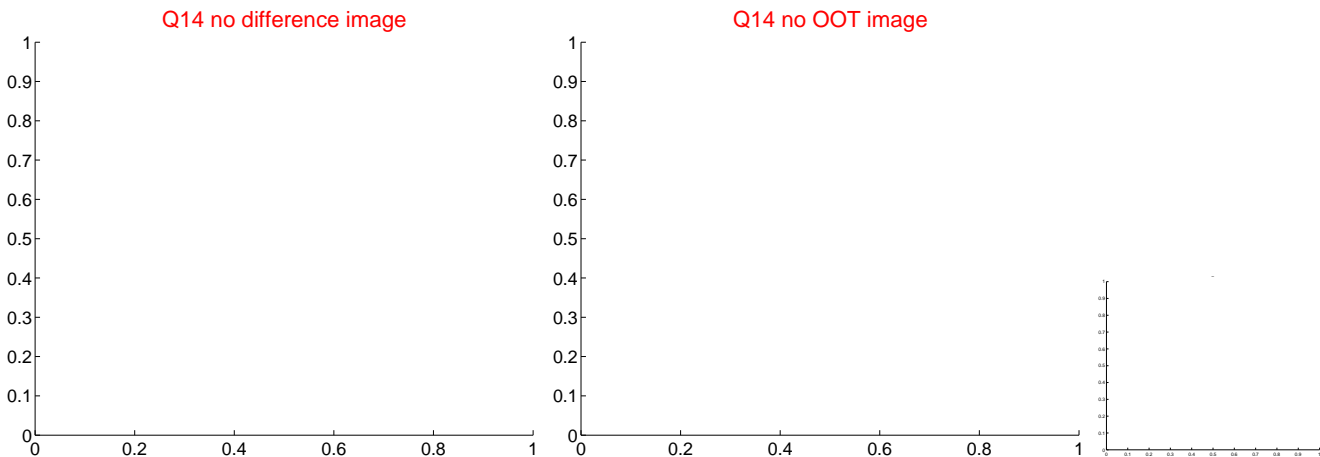
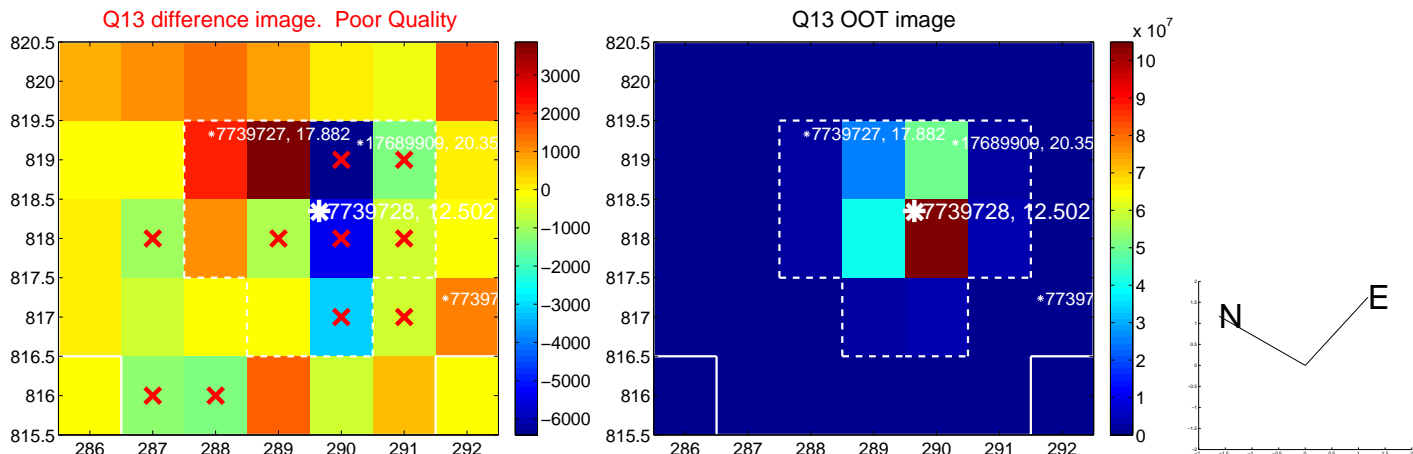
Q8 no OOT image



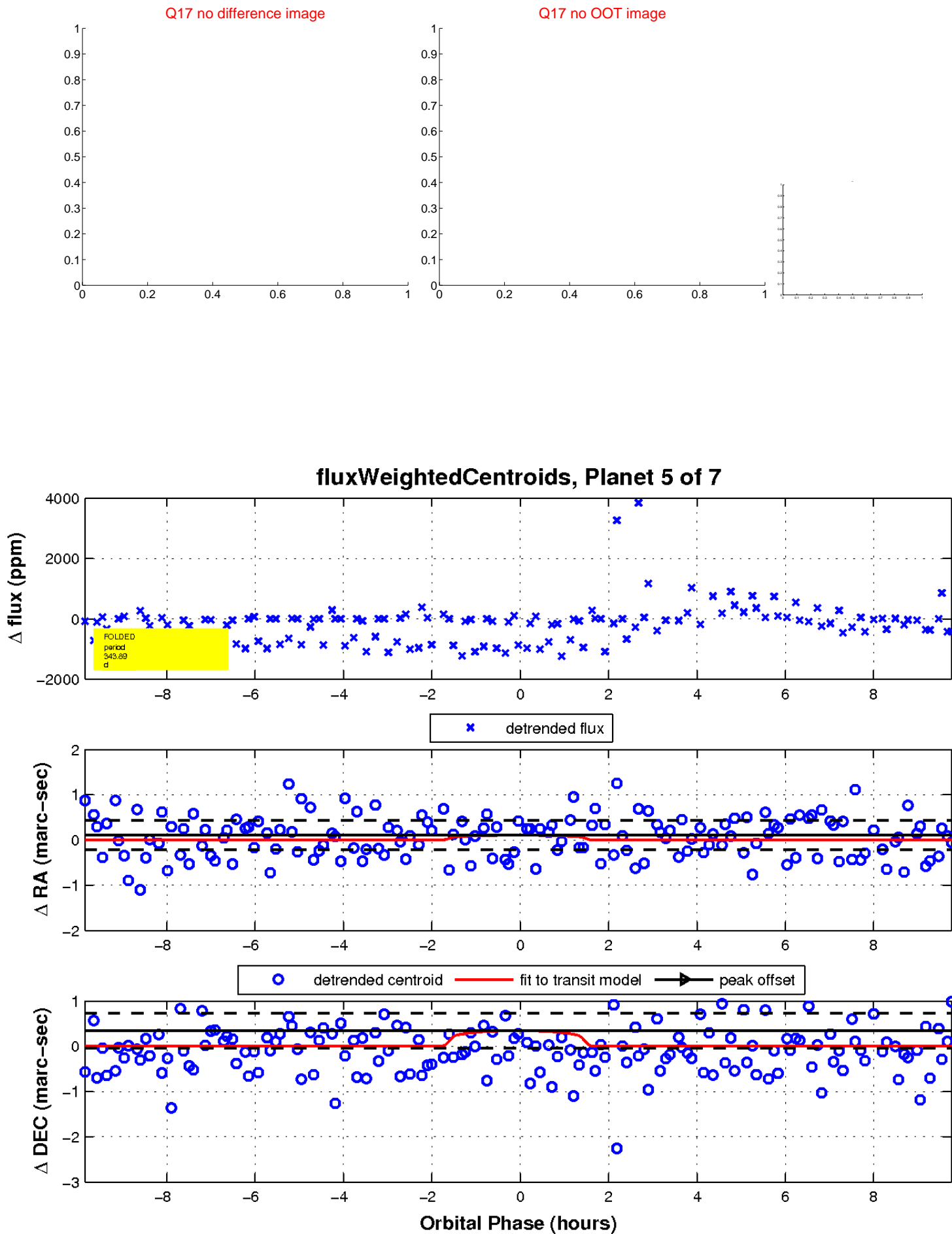
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

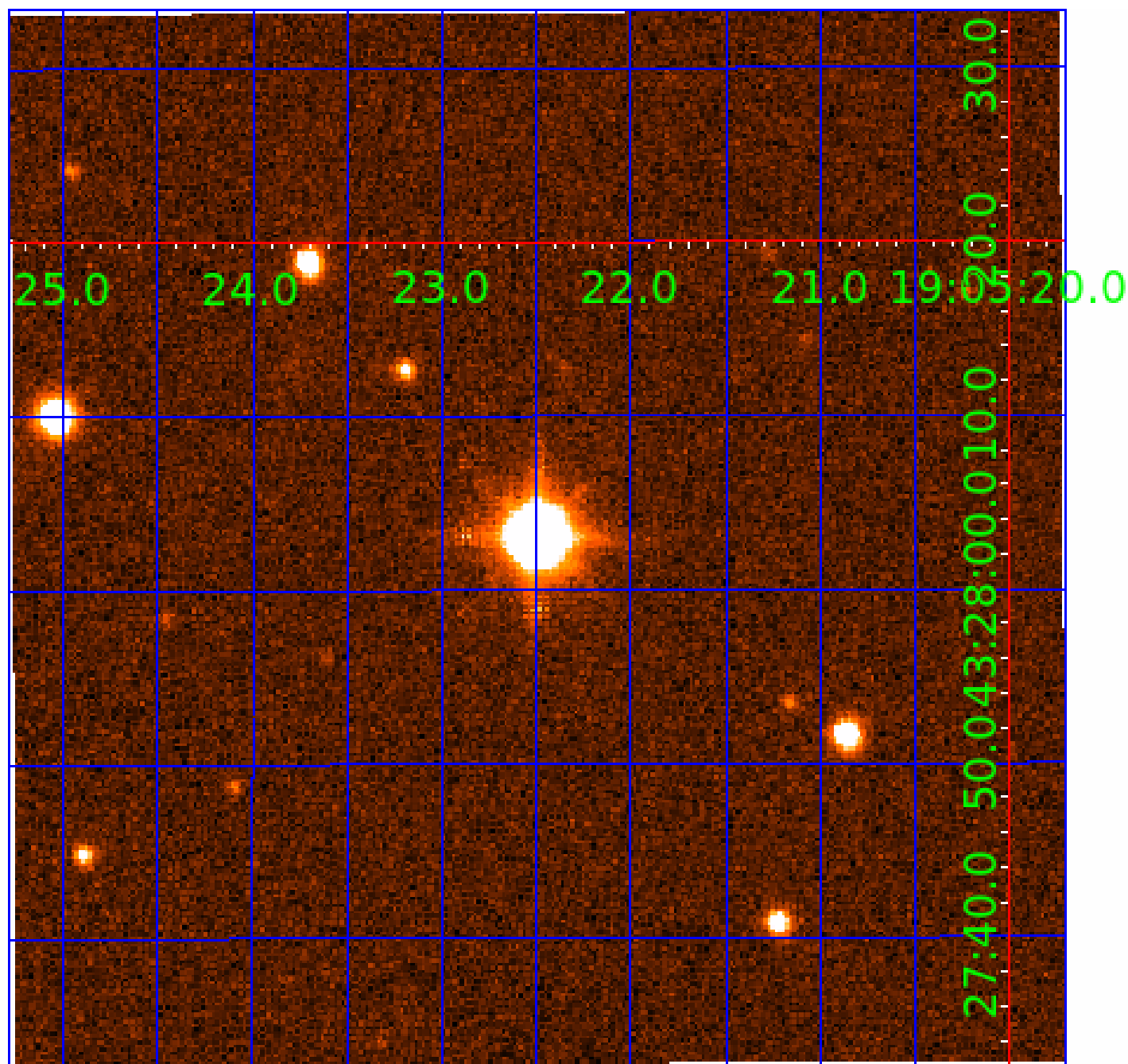


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007739728

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})
007739728-01	OBS	No	473.756997	271.702261	53.8	0.939	21.9	0.5	0.60	4953	0.69	0.19
007739728-02	OBS	No	323.596332	161.482182	1073.1	5.441	19.7	10.8	0.60	4953	3.90	0.32
007739728-05	OBS	No	343.888505	220.530927	513.2	3.287	17.5	6.1	0.60	4953	1.50	0.29
007739728-06	OBS	No	603.875484	174.995440	1020.5	5.070	16.5	8.9	0.60	4953	3.81	0.14
007739728-07	OBS	No	359.290724	299.670083	663.7	8.936	15.5	5.6	0.60	4953	1.55	0.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007739728-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

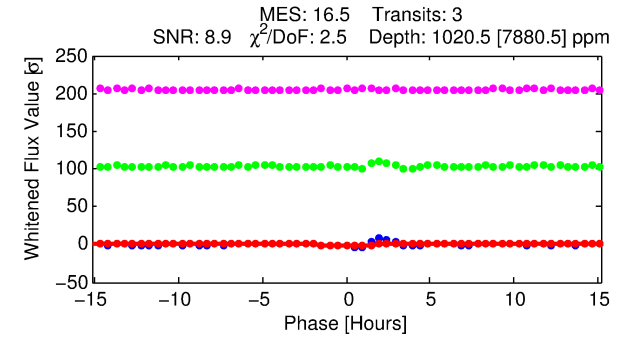
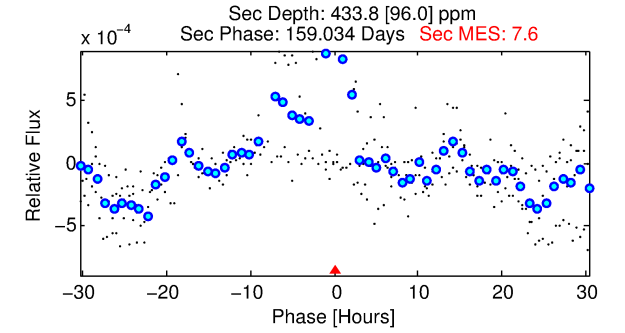
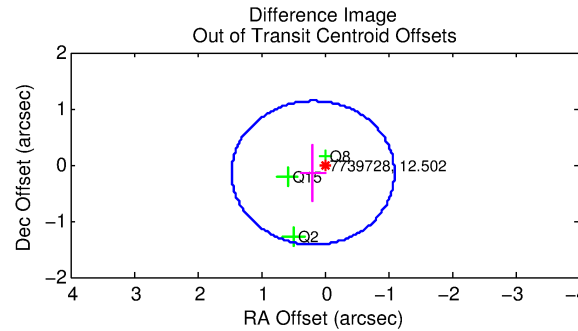
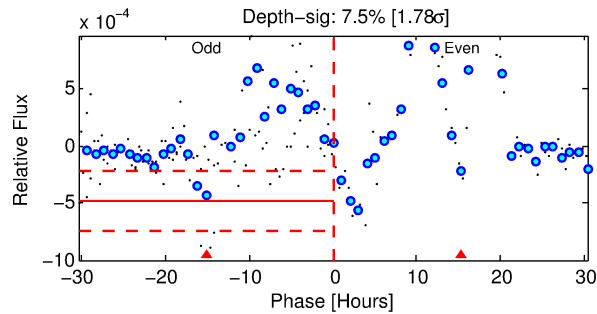
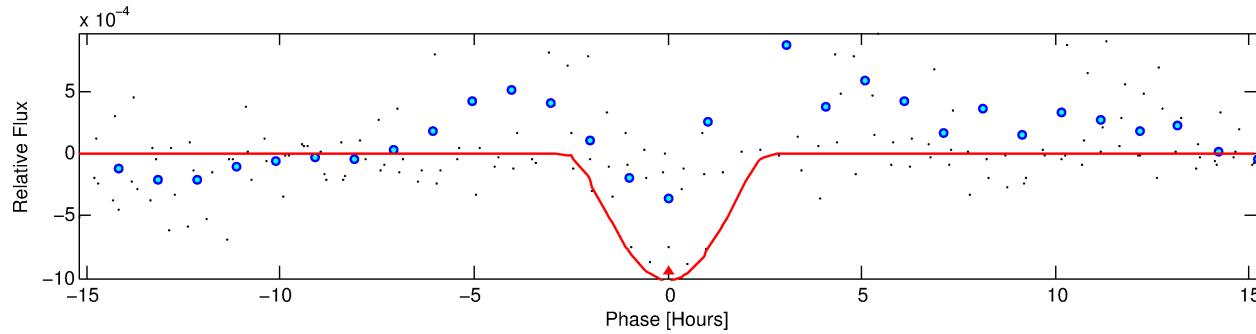
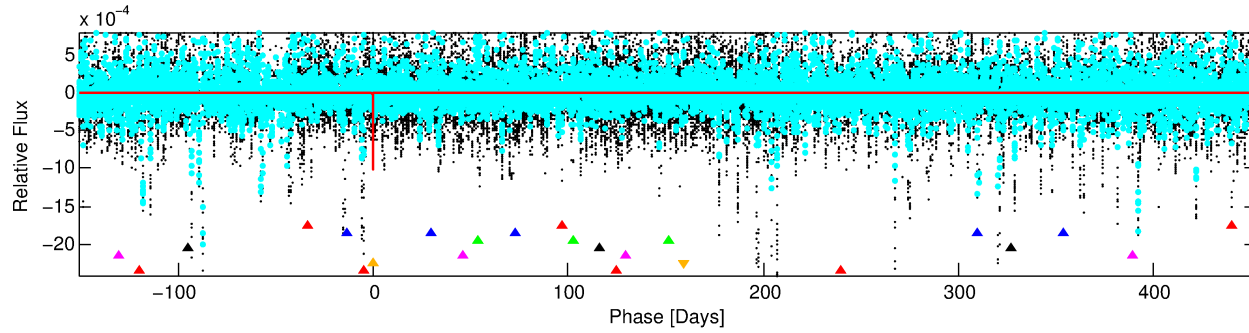
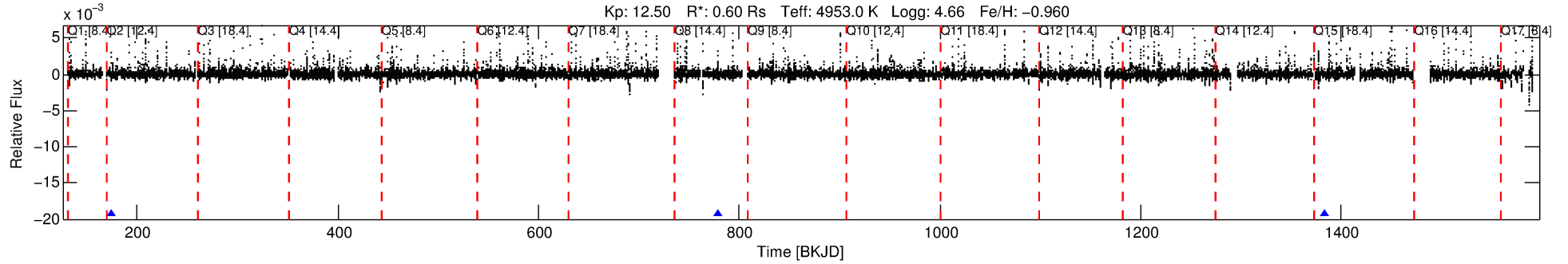
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007739728-06

No Significant Match Found

DV One-Page Summary

KIC: 7739728 Candidate: 6 of 7 Period: 603.875 d



DV Fit Results:

Period = 603.87548 [0.01032] d
Epoch = 174.9954 [0.0128] BKJD
Rp/R* = 0.0586 [0.2497]
a/R* = 316.03 [313.05]
b = 1.00 [0.65]
Seff = 0.14 [0.02]
Teff = 156 [6] K
Rp = 3.81 [16.24] Re
a = 1.1744 [0.0807] AU
Ag = 22661.94 [193172.41] [0.12σ]
Teffp = 2953 [6293] K [0.44σ]

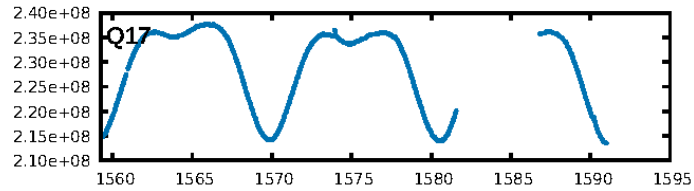
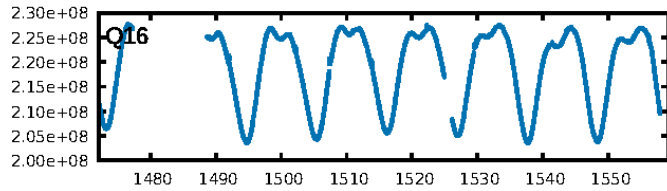
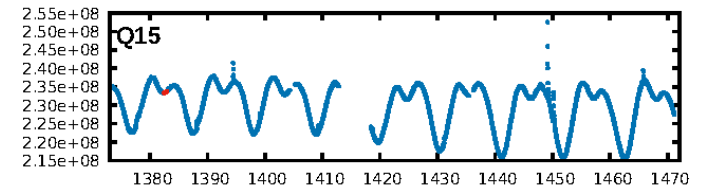
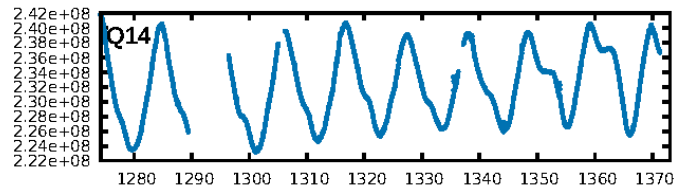
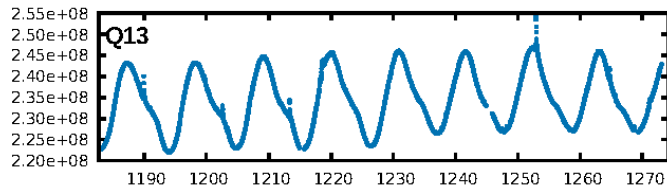
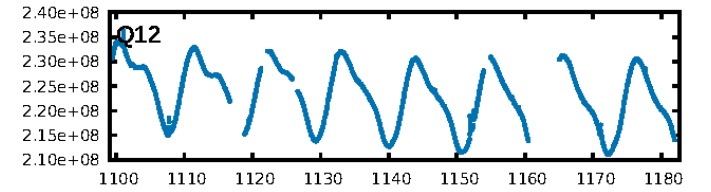
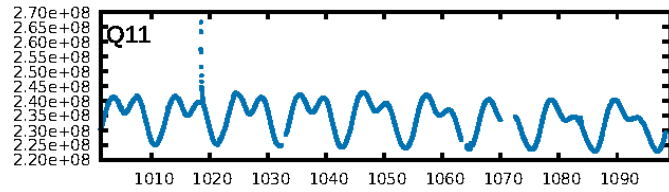
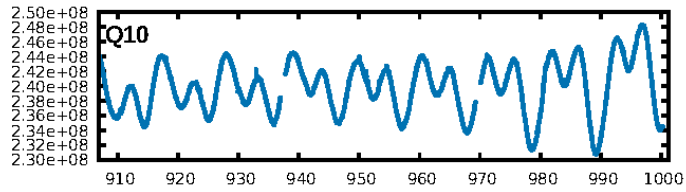
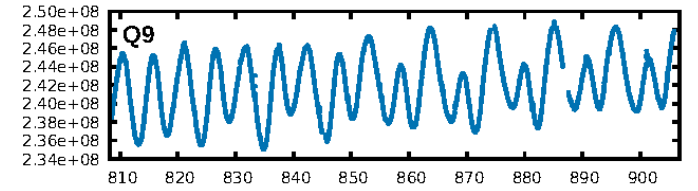
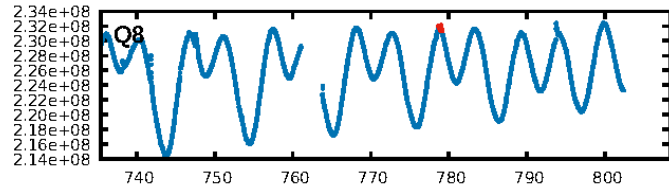
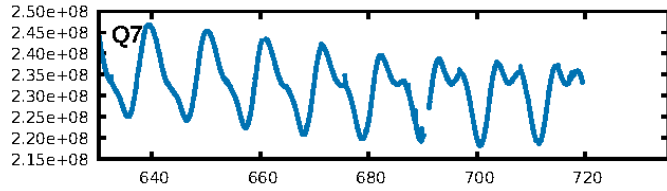
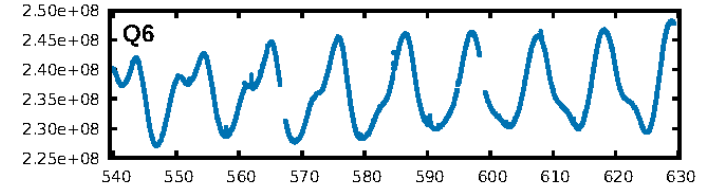
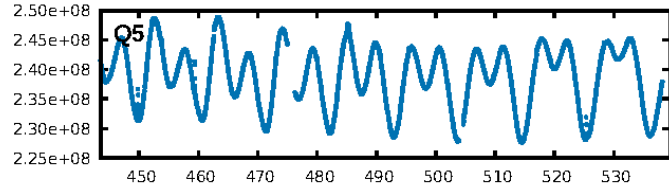
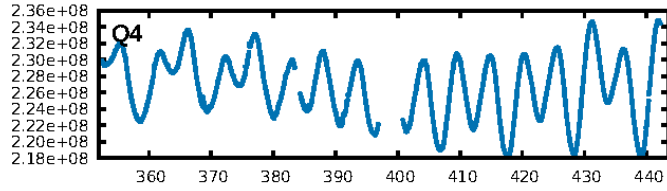
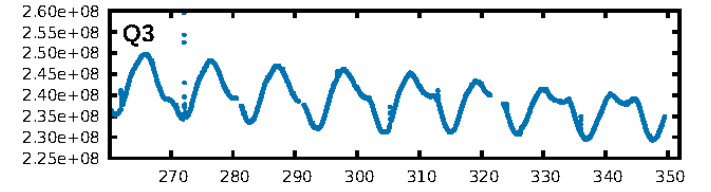
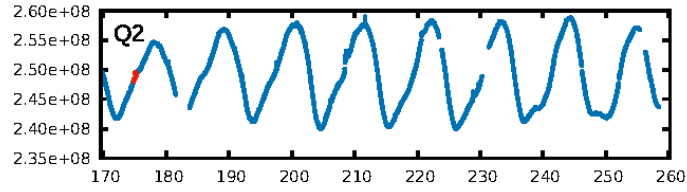
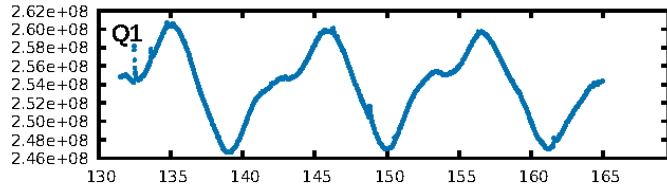
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [167.28σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 30.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2517
Centroid-sig: 34.1%
Centroid-so: 0.315 arcsec [0.96σ]
OotOffset-rm: 0.233 arcsec [0.55σ]
KicOffset-rm: 0.224 arcsec [0.56σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

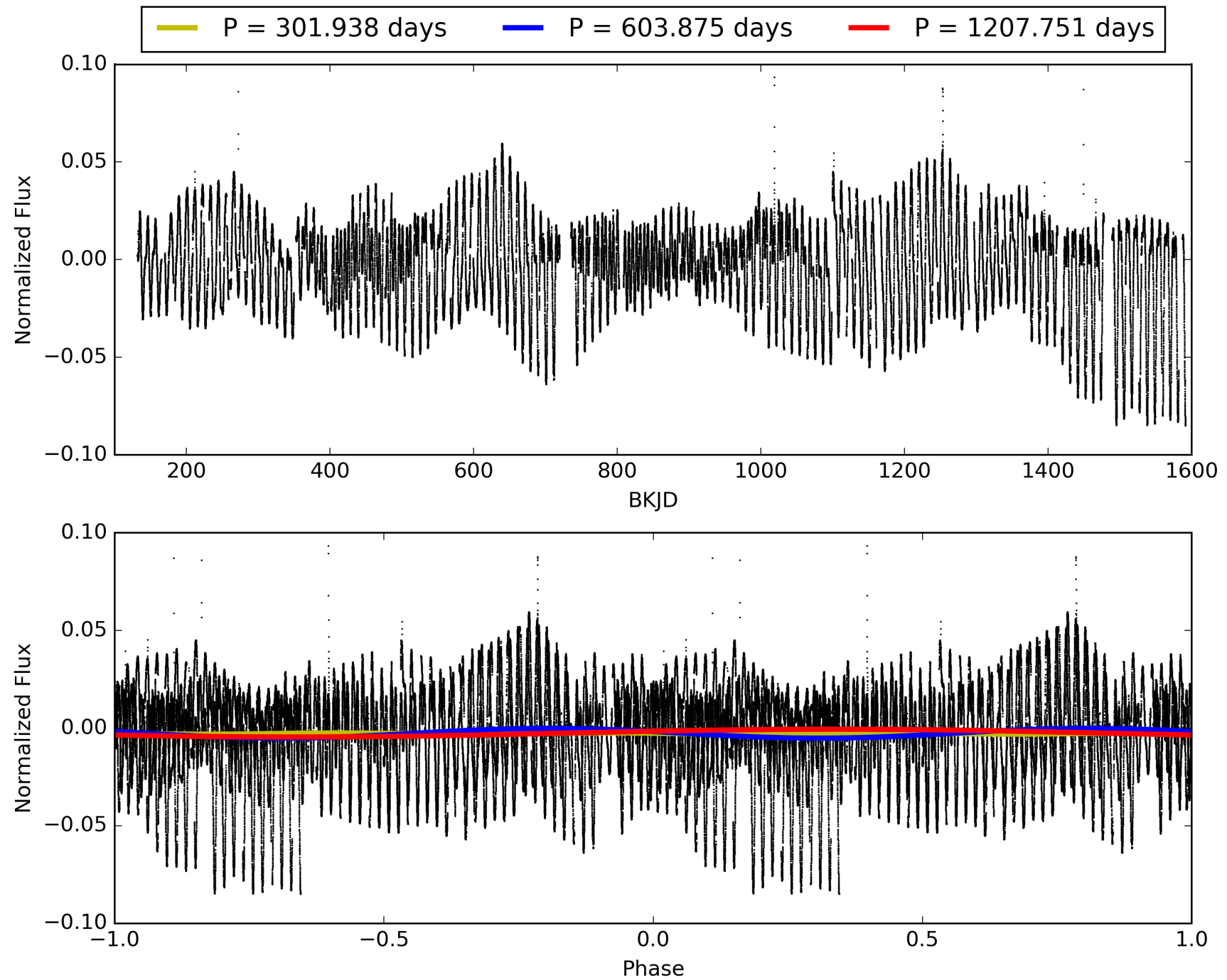
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:02:33 Z

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

TCE 007739728-06, PDC Light Curves

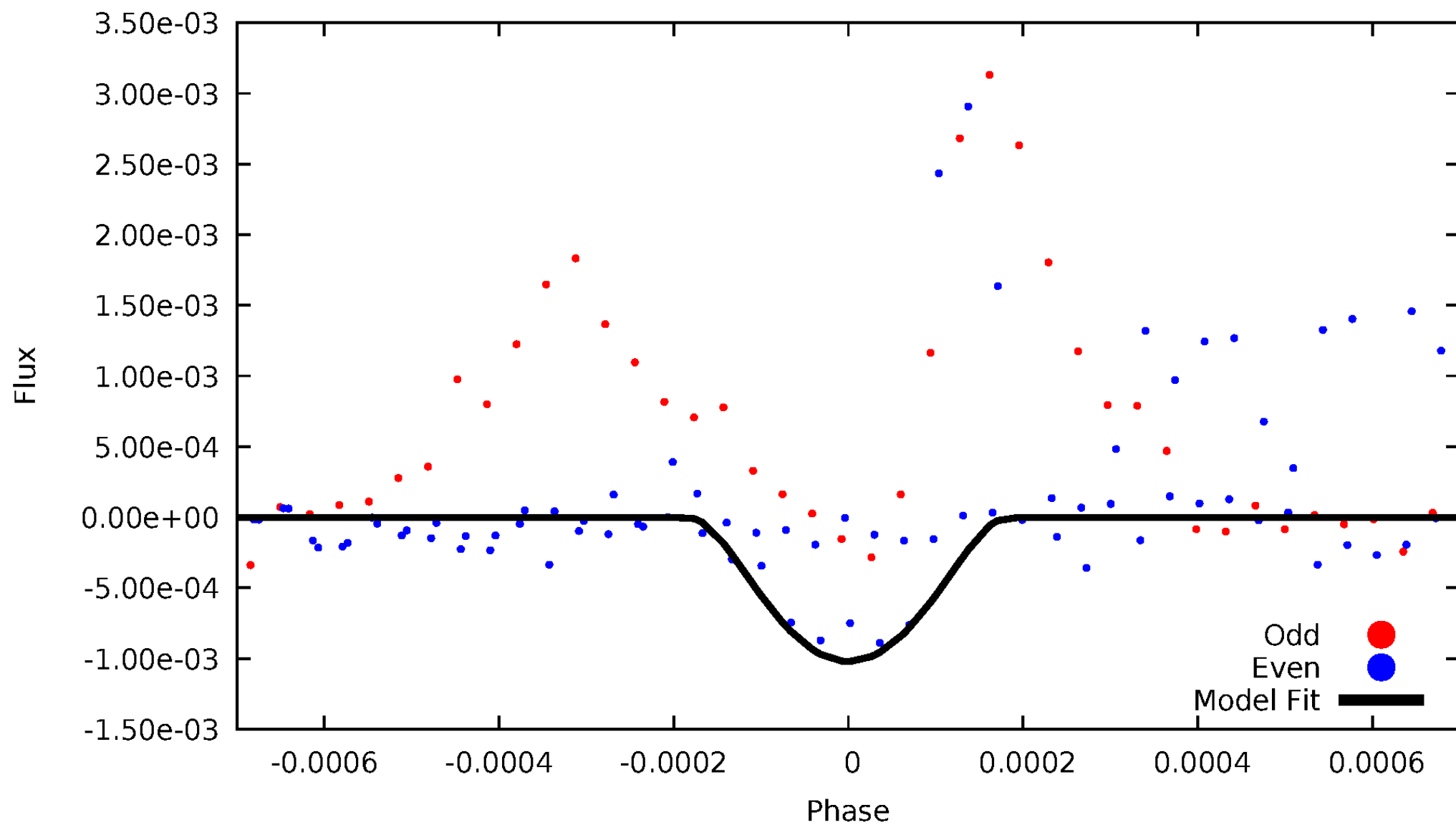


TCE 007739728-06



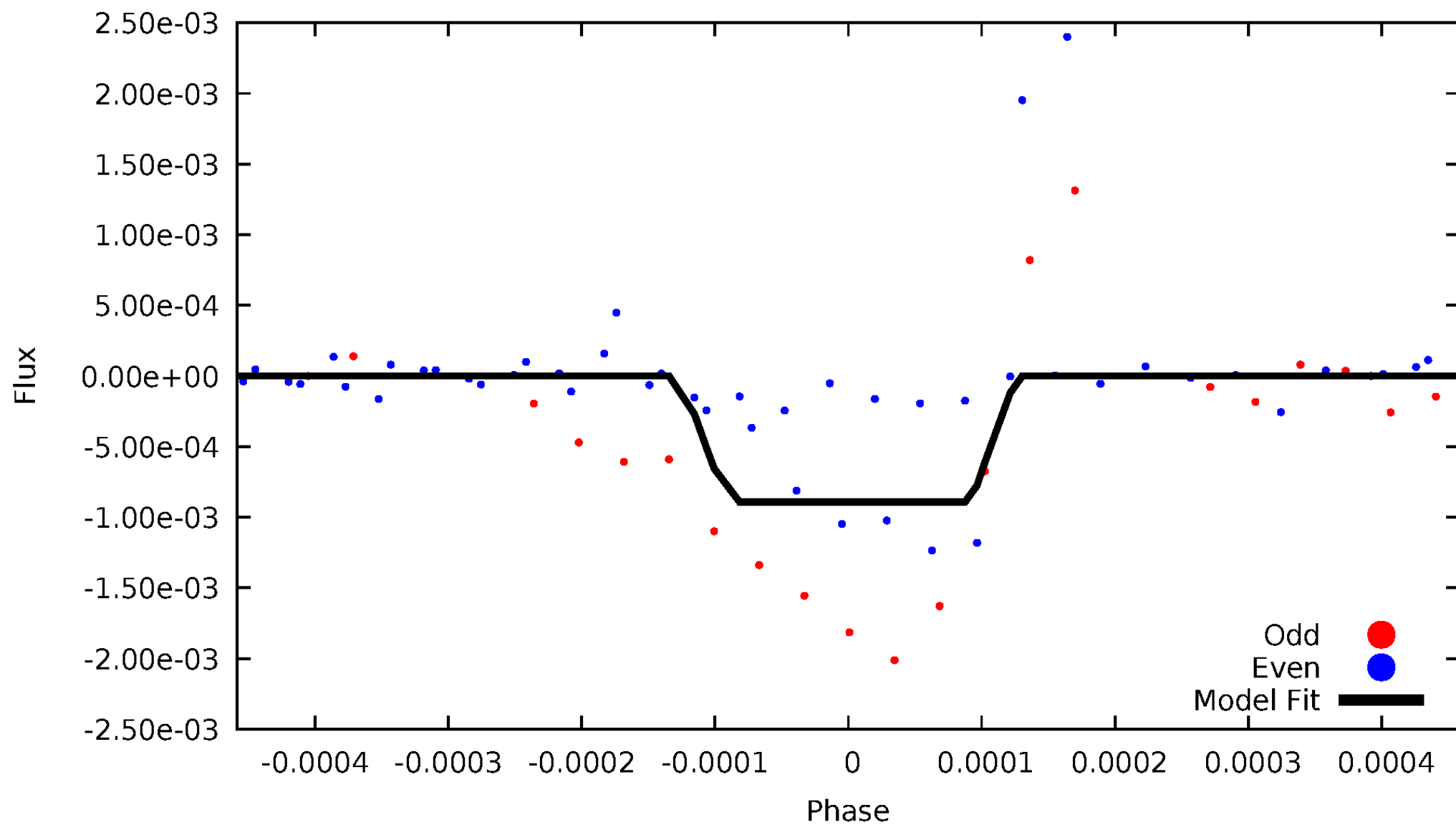
DV Odd/Even

TCE 007739728-06



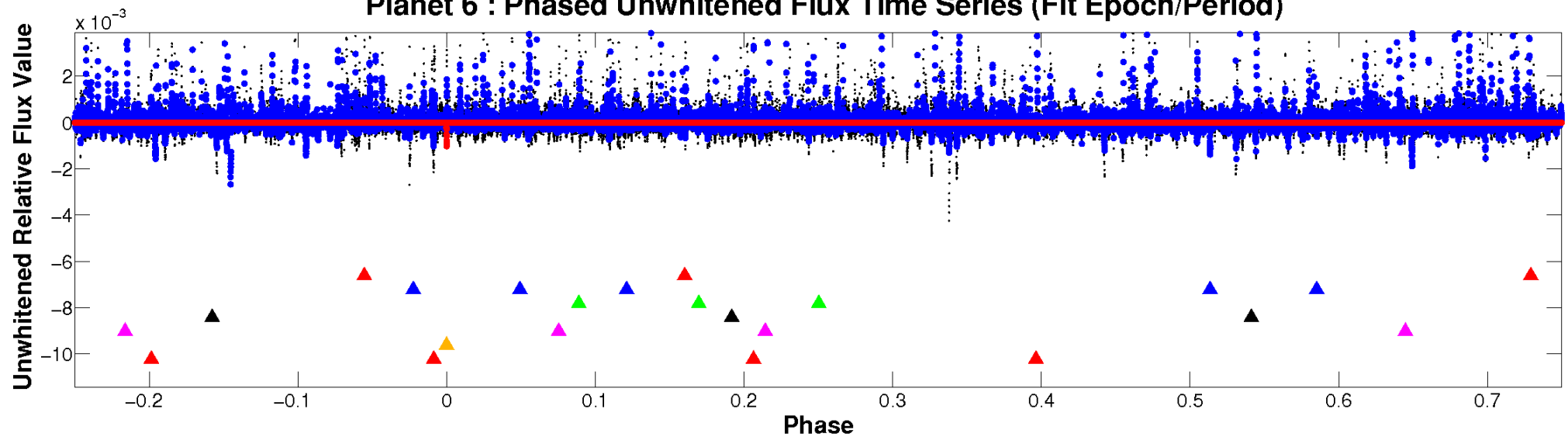
ALT Odd/Even

TCE 007739728-06

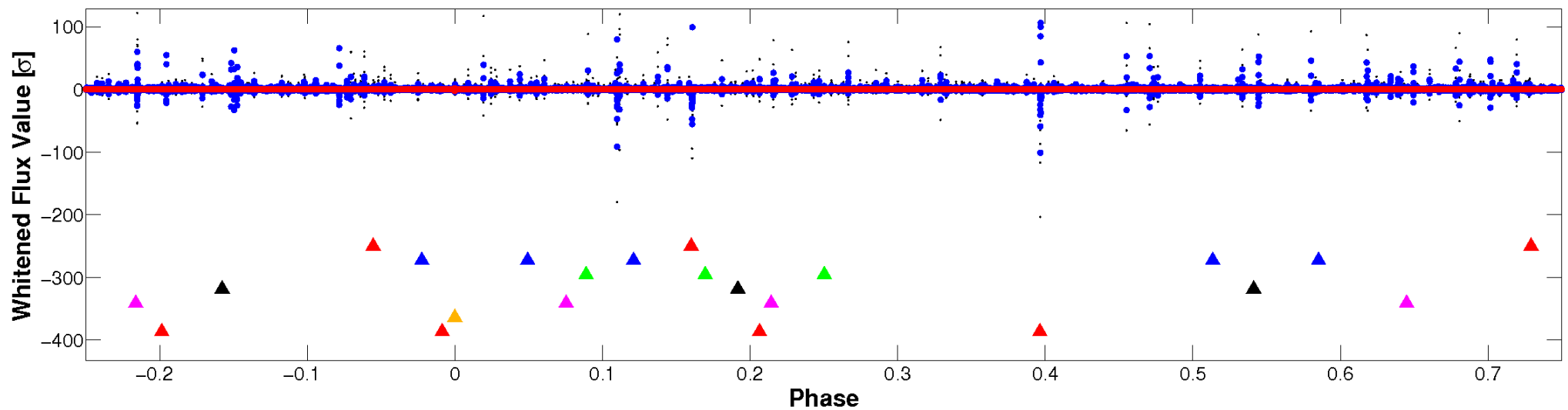


Non-Whitened Vs. Whitened Light Curve

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

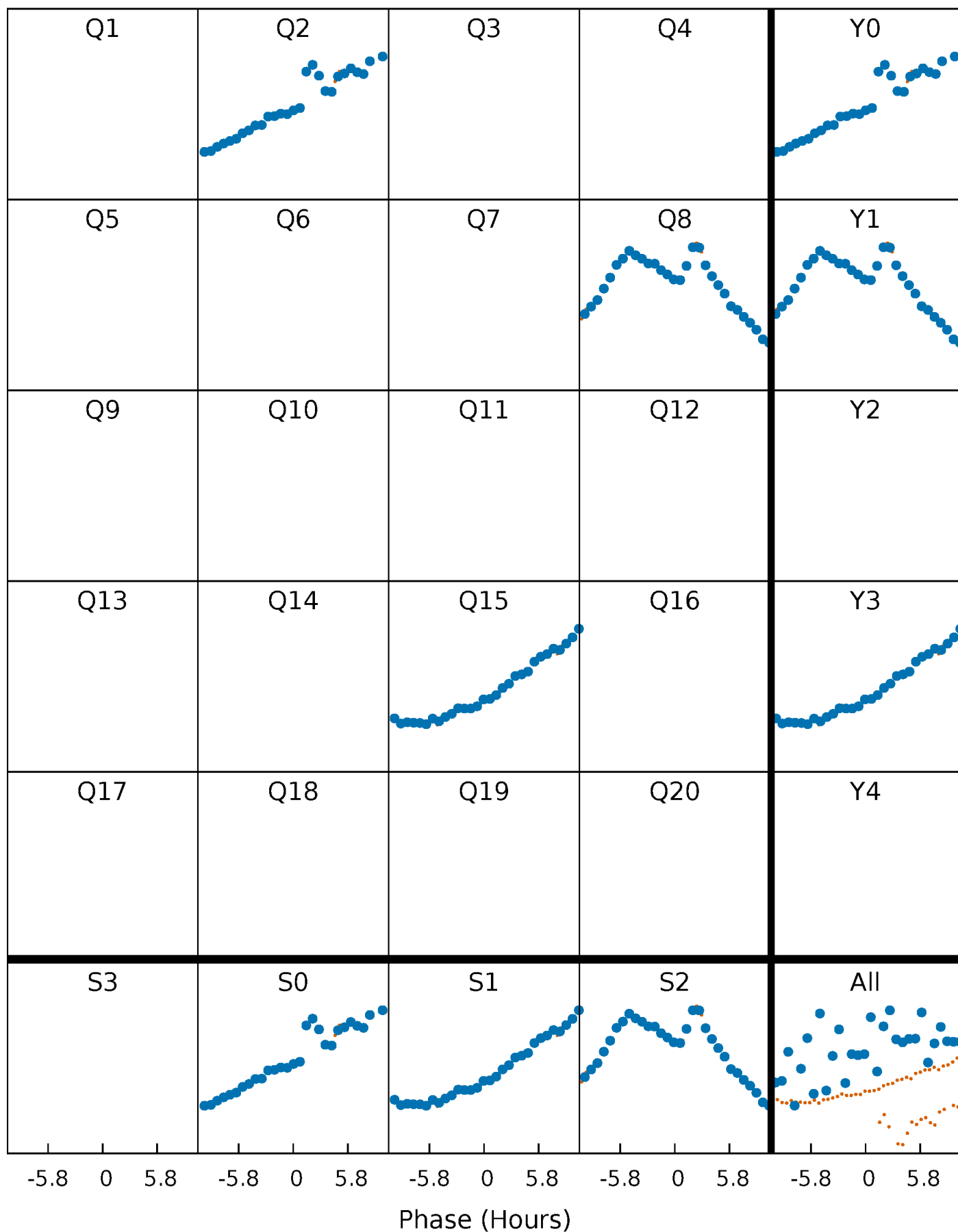


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



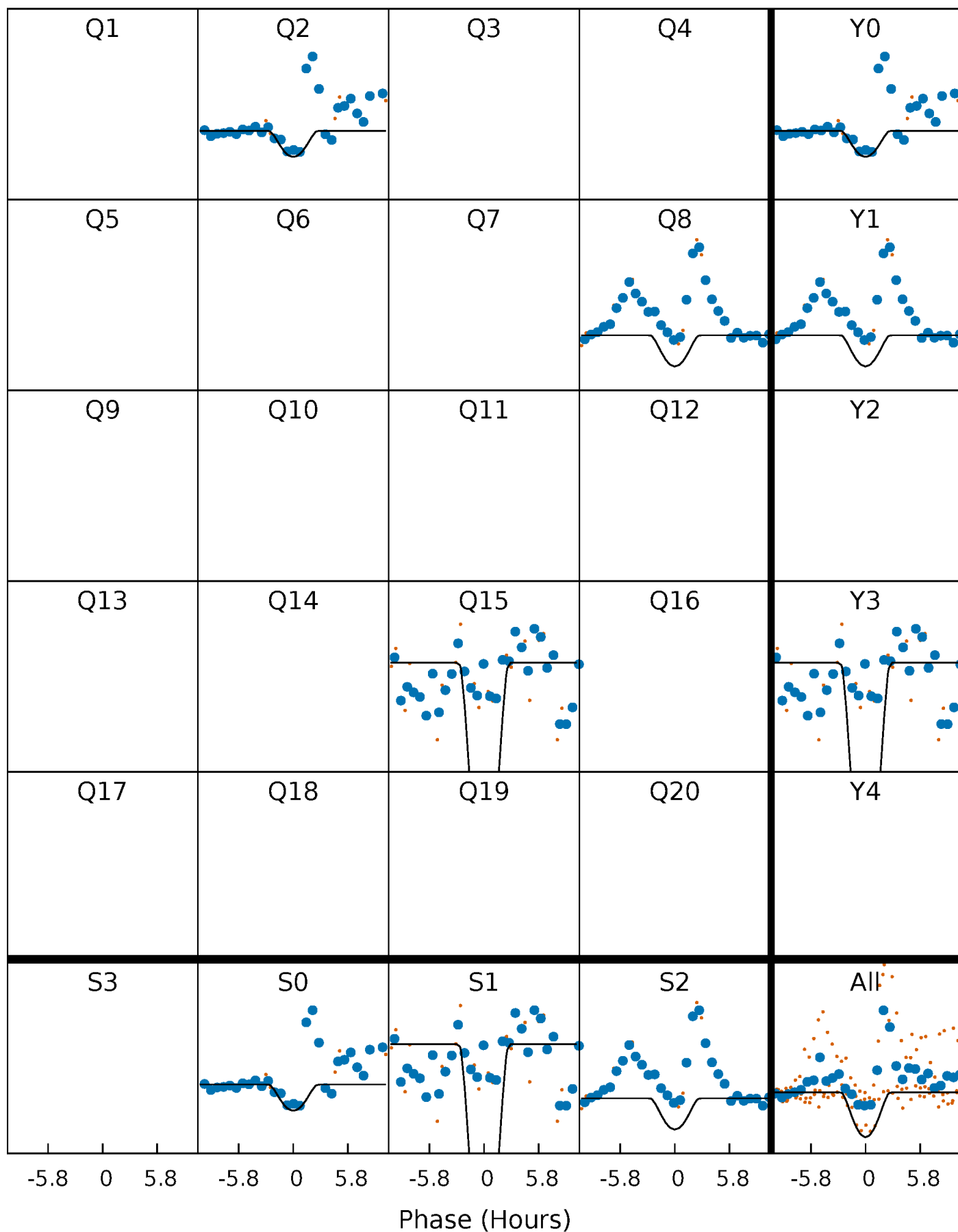
PDC Quarter-Phased Transit Curves

TCE 007739728-06 P=603.875484 Days $T_0=174.995440$ (BKJD)



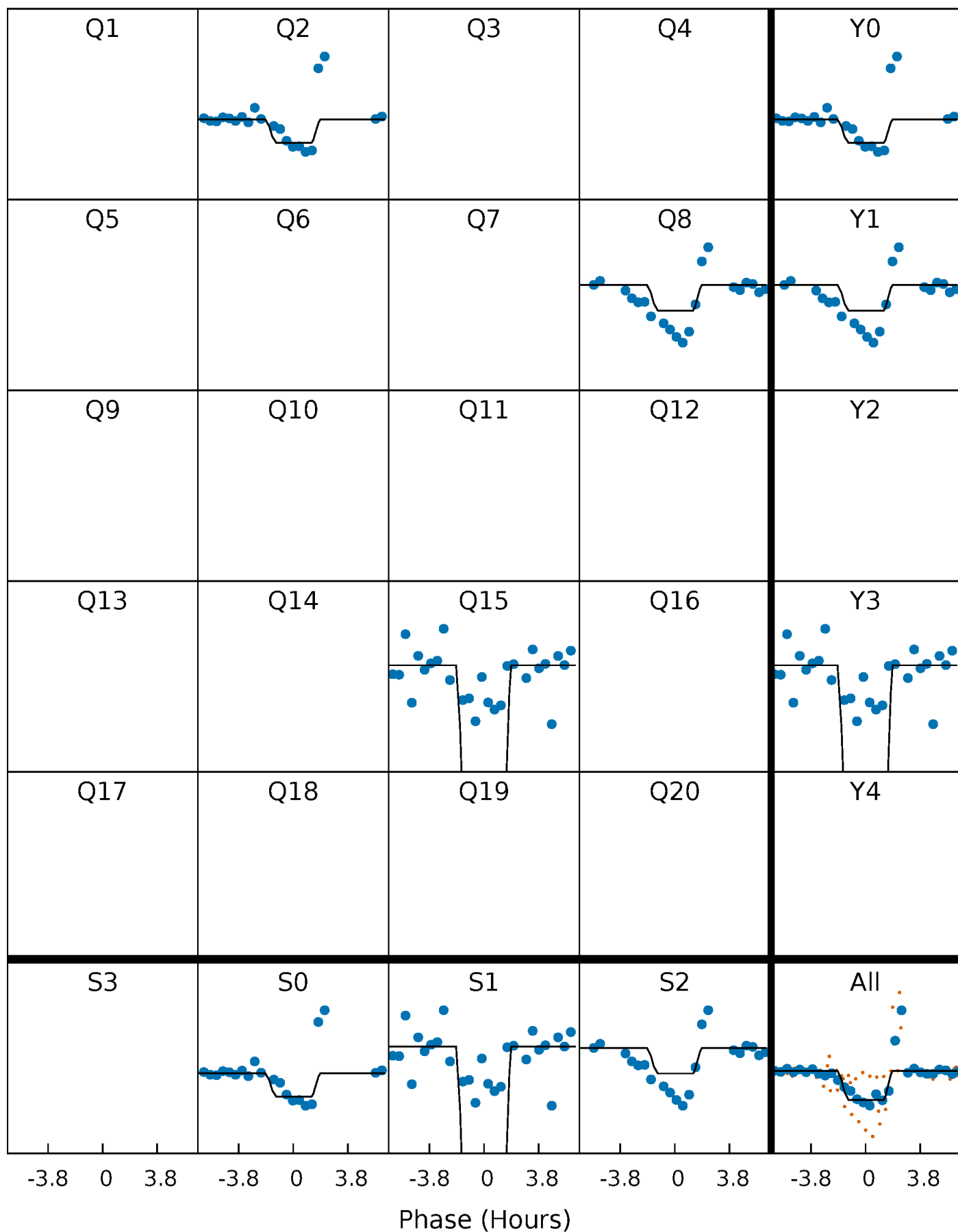
DV Quarter-Phased Transit Curves

TCE 007739728-06 P=603.875484 Days $T_0=174.995440$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

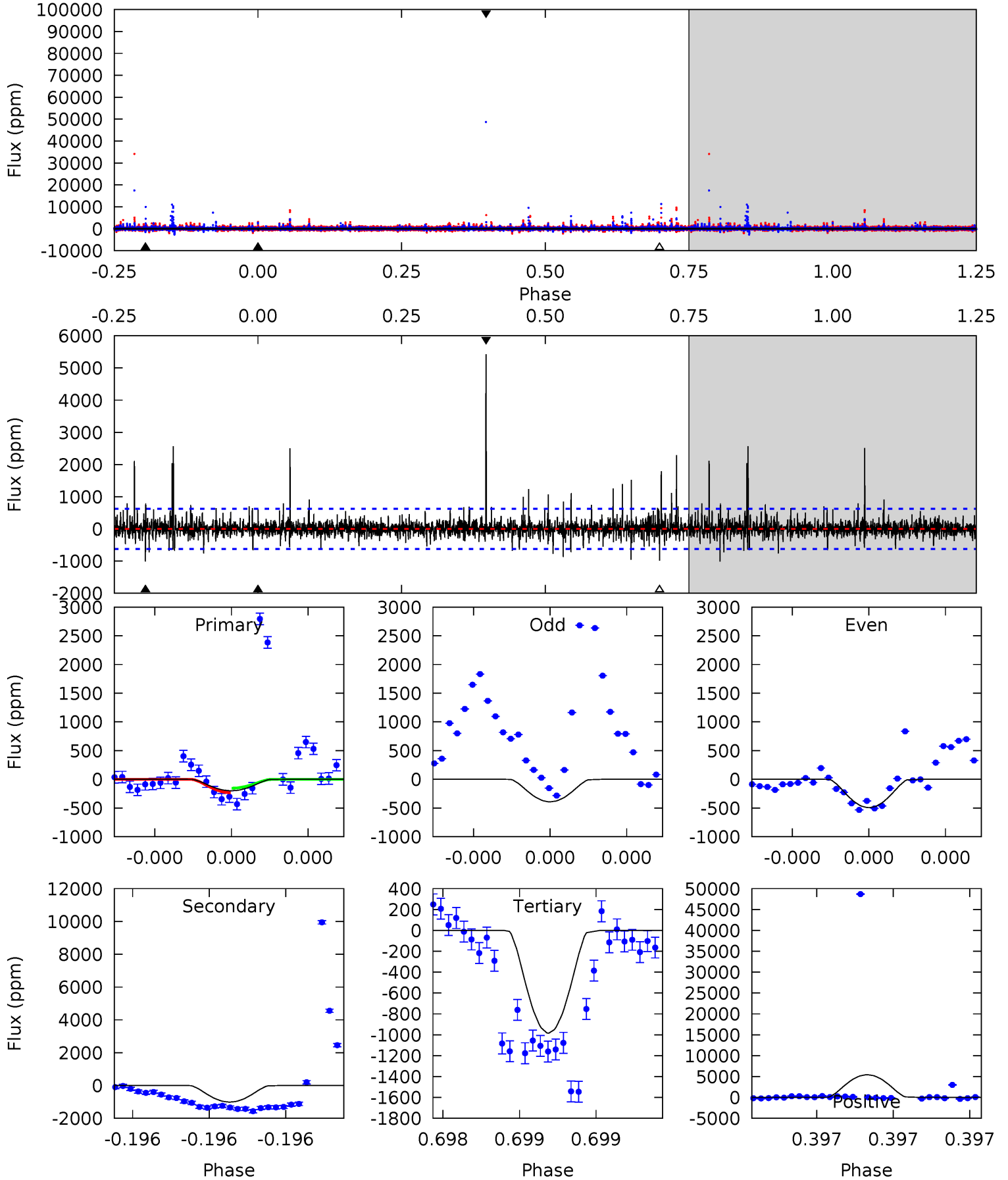
TCE 007739728-06 P=603.886621 Days $T_0=174.979201$ (BKJD)



DV Model-Shift Uniqueness Test

007739728-06, P = 603.875484 Days, E = 174.995440 Days

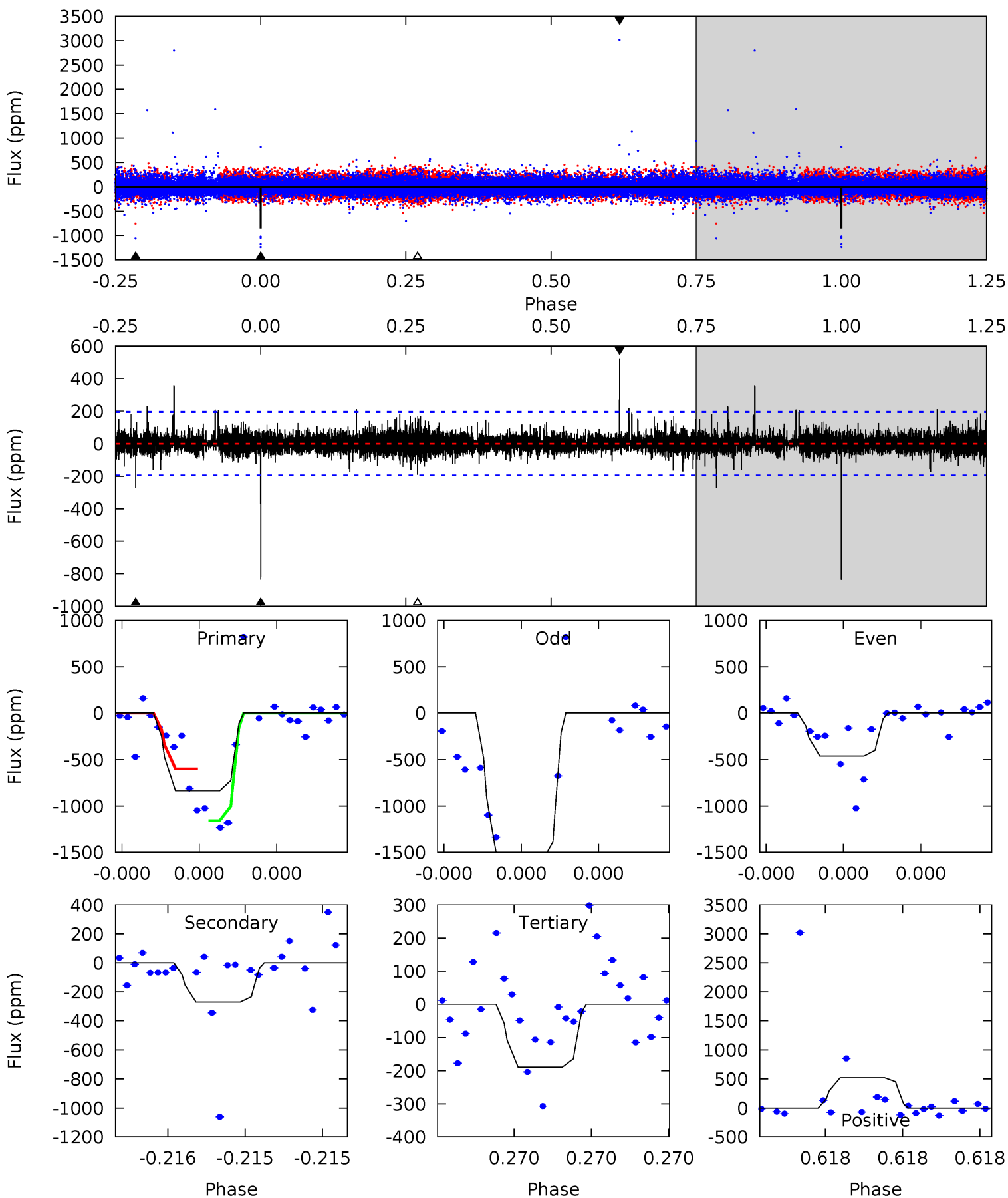
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.81	9.17	8.92	49.2	5.64	3.58	1.78	-7.11	-47.4	0.25	-40.0	0.38	0.37	0.84	0.36



Alt Model-Shift Uniqueness Test

007739728-06, P = 603.886621 Days, E = 174.979201 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.5	7.91	5.54	15.3	5.70	3.68	0.96	18.9	9.15	2.36	-7.42	21.9	0.97	0.39	8.05



Stellar Parameters For KIC 007739728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4953^{+148}_{-133}	$4.660^{+0.054}_{-0.041}$	$-0.960^{+0.300}_{-0.300}$	$0.596^{+0.049}_{-0.041}$	$0.593^{+0.055}_{-0.022}$	$3.945^{+0.886}_{-0.603}$
	+3%/-3%	+1%/-1%	+31%/-31%	+8%/-7%	+9%/-4%	+22%/-15%
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 007739728-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1012 ± 110	$12.65^{+12.60}_{-8.51}$	217^{+7}_{-7}	2742^{+1058}_{-437}	4801^{+39138}_{-3600}
Alt.	-270 ± 34	$11.55^{+11.22}_{-7.87}$	217^{+8}_{-7}	2379^{+810}_{-346}	1523^{+13484}_{-1144}

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 $A_{obs} \gg 1.0$

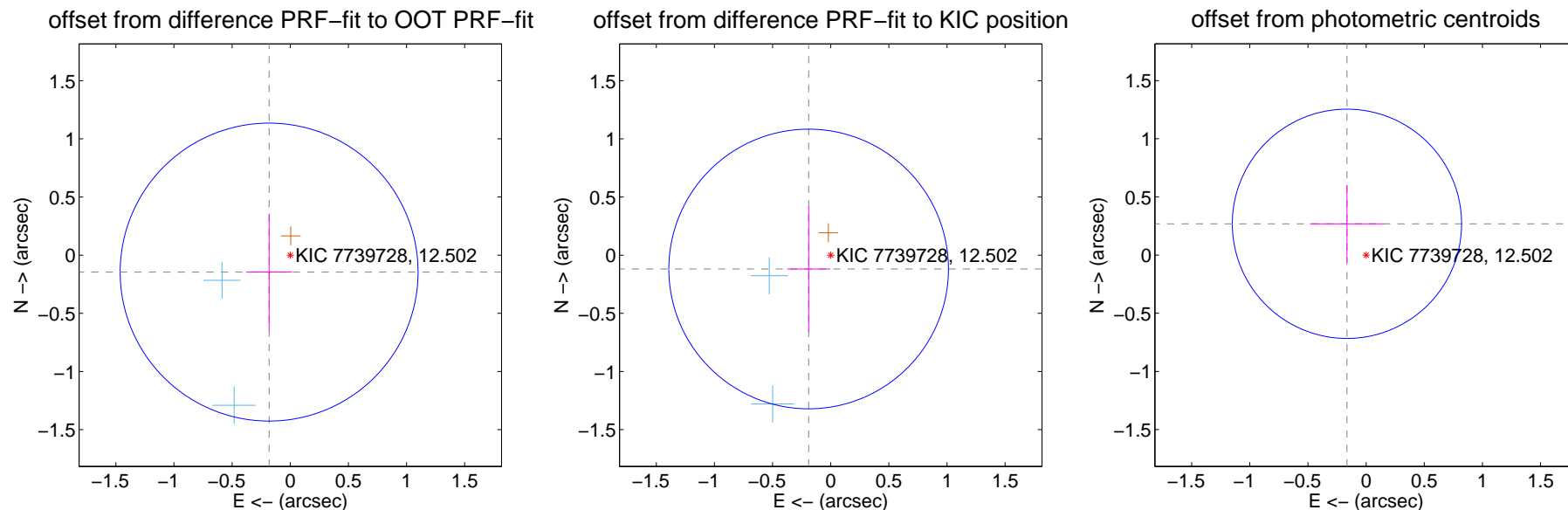
DV Centroid Data

Supplemental centroid analysis for 007739728-06. Kepler magnitude: 12.50. Transit SNR 8.91

There are 2 quarters with good PRF difference image offsets

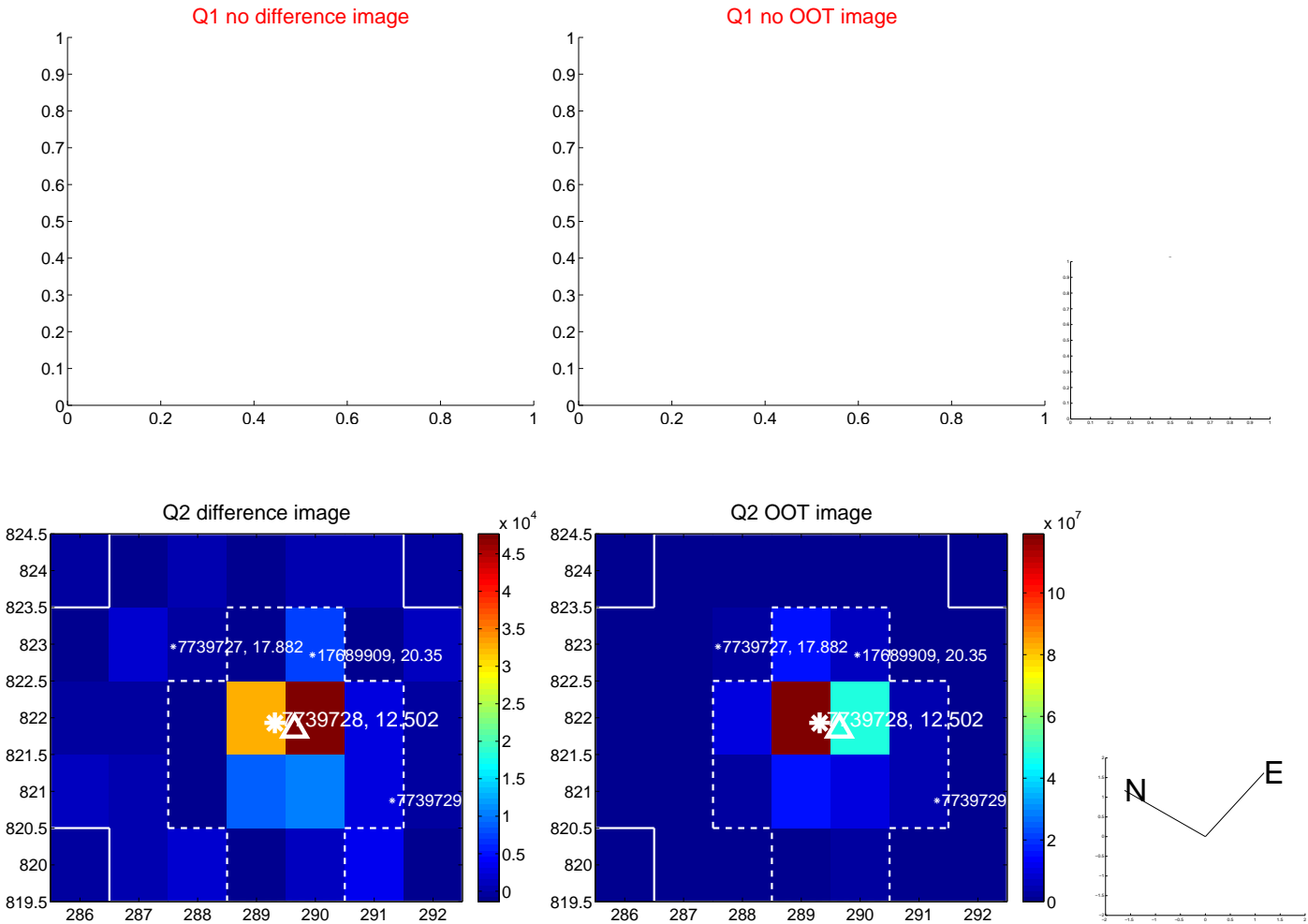
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.233 ± 0.427	0.55	0.182 ± 0.197	-0.146 ± 0.501
PRF-fit source offset from KIC position	0.224 ± 0.401	0.56	0.190 ± 0.185	-0.119 ± 0.539
photometric centroid source offset	0.32 ± 0.33	0.96	0.16 ± 0.32	0.27 ± 0.33

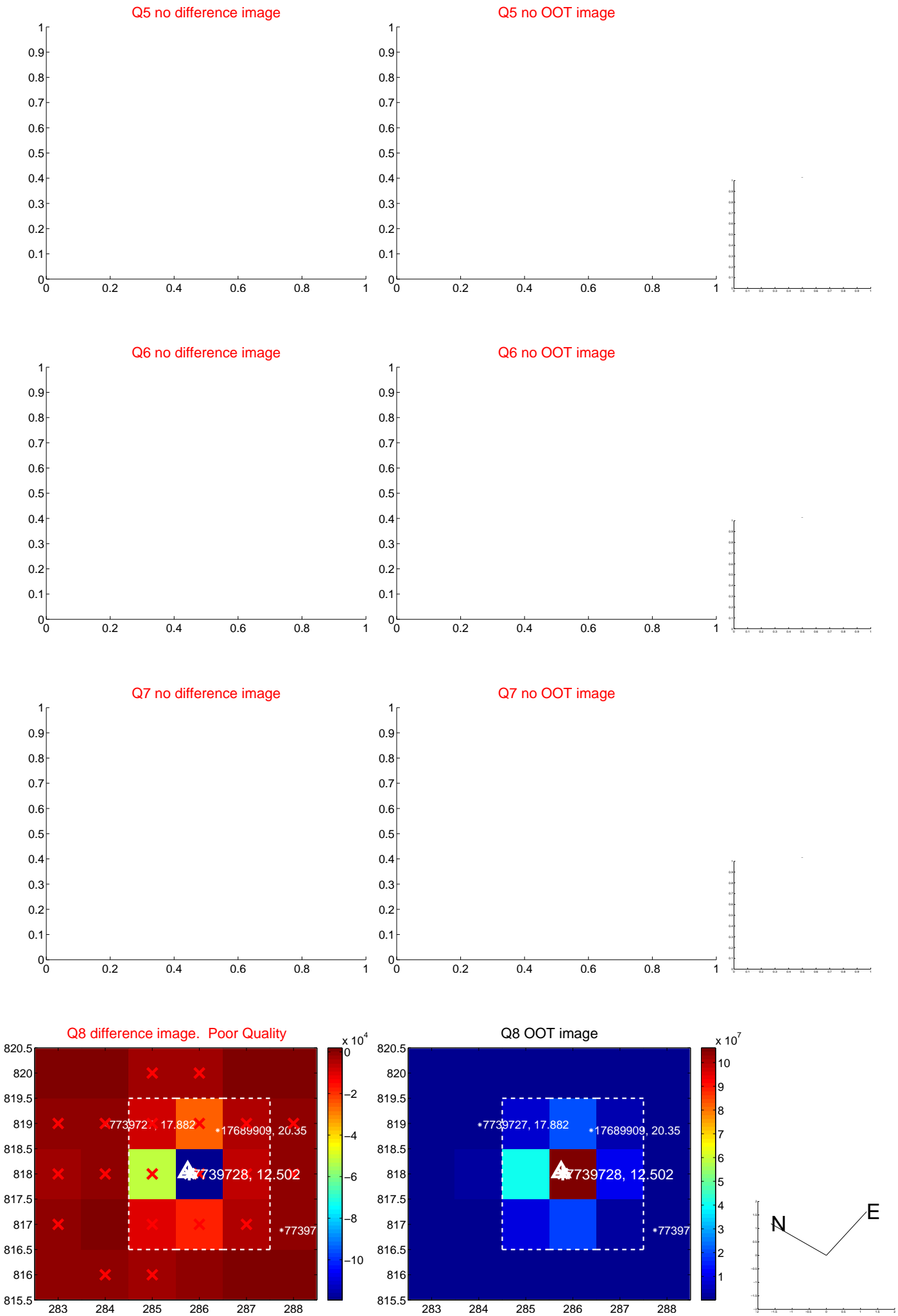


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



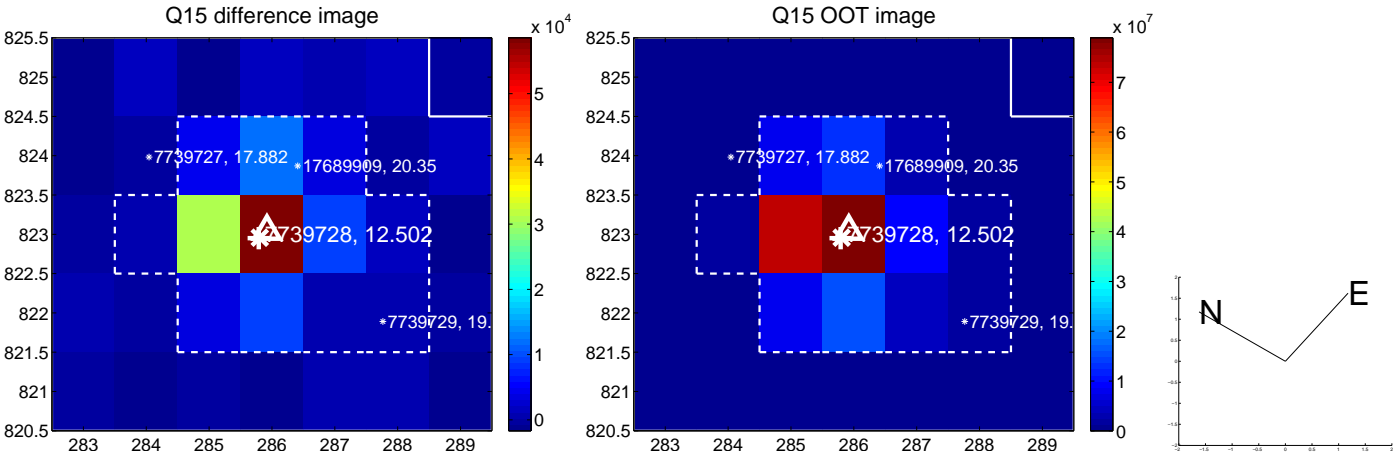
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



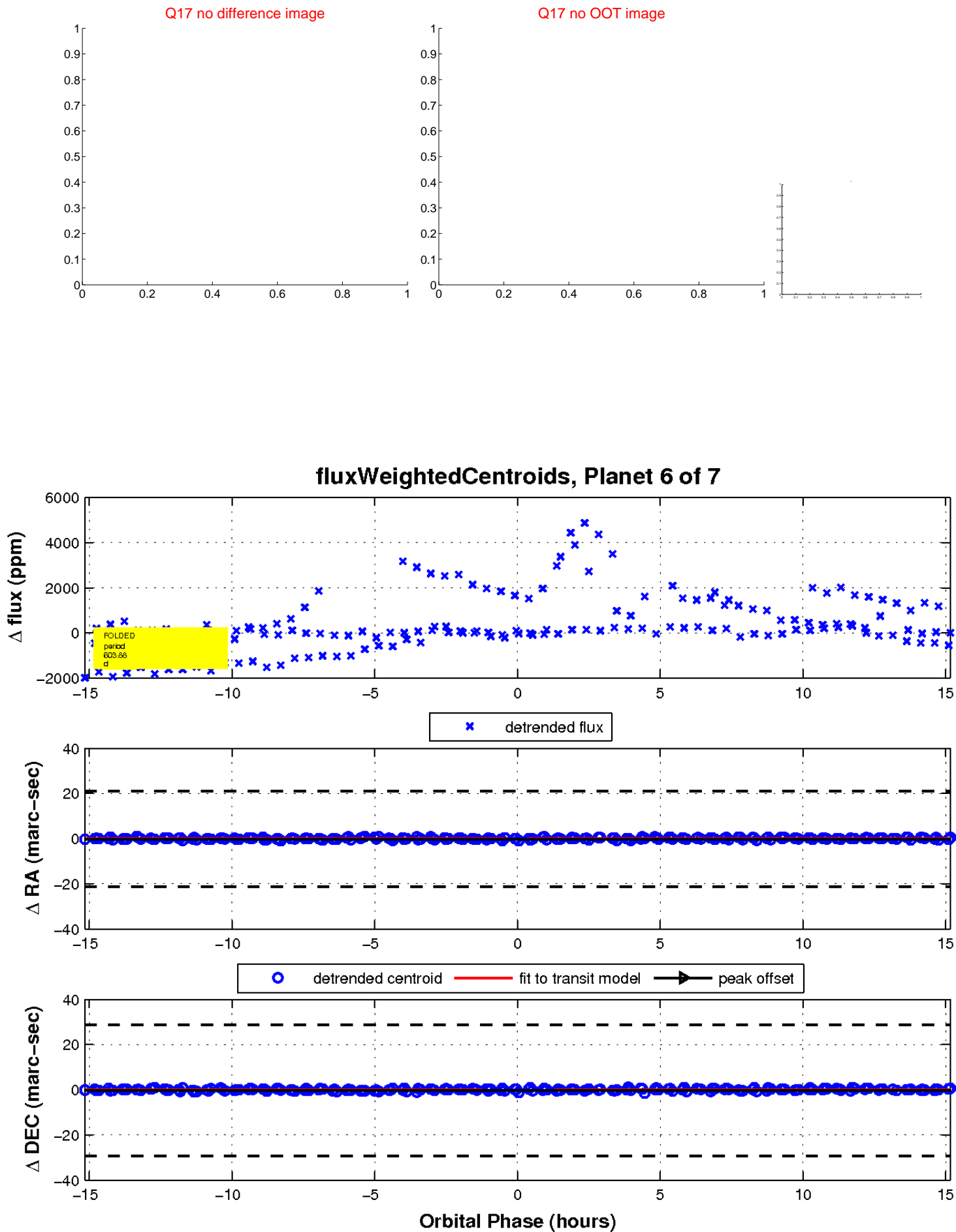
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

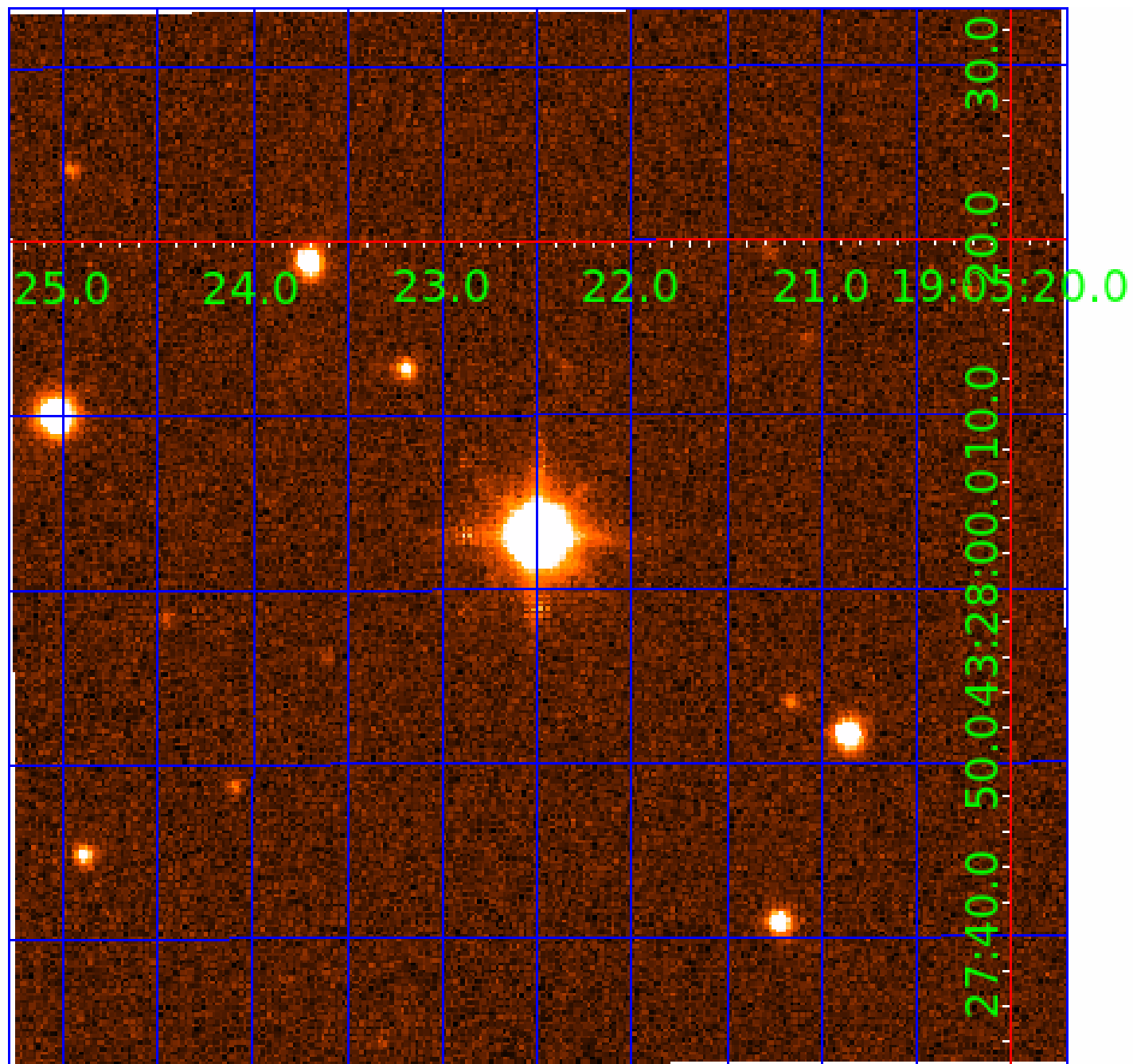


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007739728

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})
007739728-01	OBS	No	473.756997	271.702261	53.8	0.939	21.9	0.5	0.60	4953	0.69	0.19
007739728-02	OBS	No	323.596332	161.482182	1073.1	5.441	19.7	10.8	0.60	4953	3.90	0.32
007739728-05	OBS	No	343.888505	220.530927	513.2	3.287	17.5	6.1	0.60	4953	1.50	0.29
007739728-06	OBS	No	603.875484	174.995440	1020.5	5.070	16.5	8.9	0.60	4953	3.81	0.14
007739728-07	OBS	No	359.290724	299.670083	663.7	8.936	15.5	5.6	0.60	4953	1.55	0.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007739728-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007739728-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007739728-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

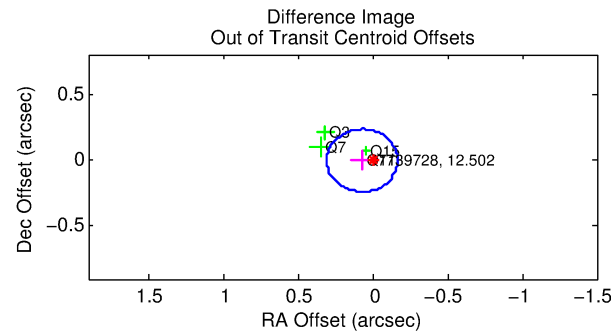
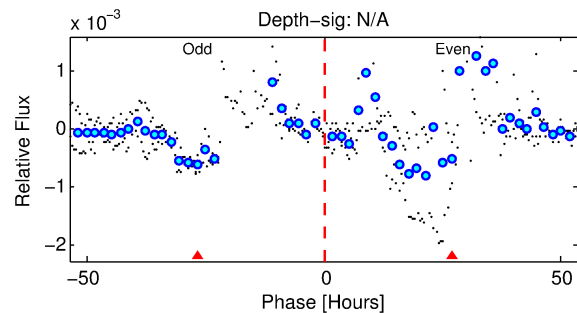
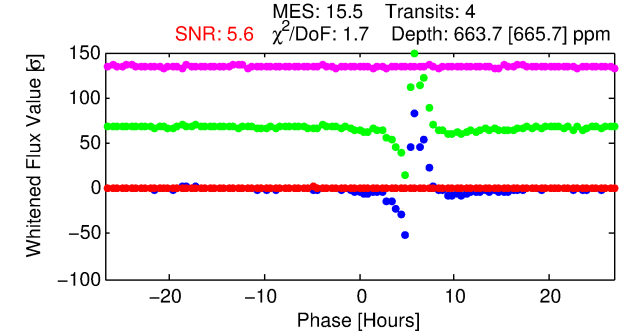
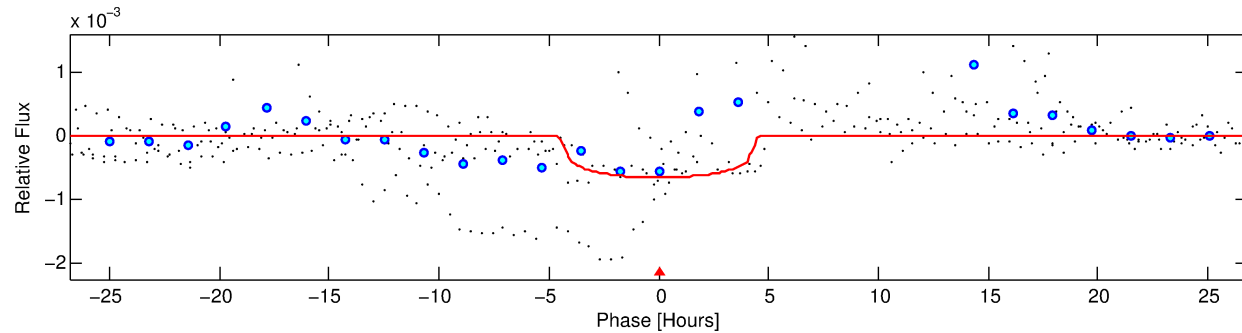
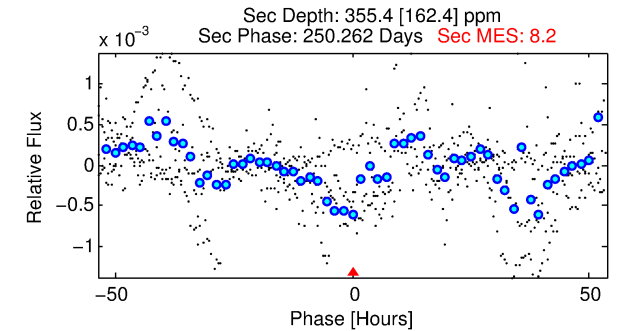
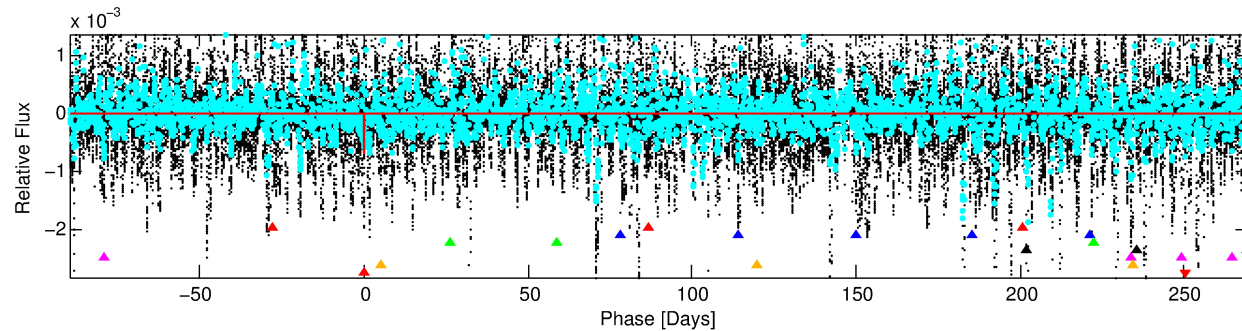
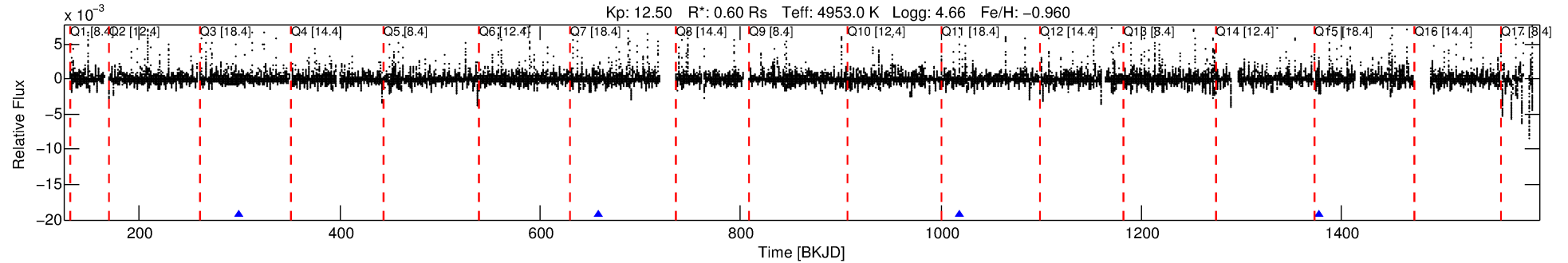
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007739728-07

No Significant Match Found

DV One-Page Summary

KIC: 7739728 Candidate: 7 of 7 Period: 359.291 d



DV Fit Results:

Period = 359.29072 [0.01706] d
Epoch = 299.6701 [0.0317] BKJD
Rp/R* = 0.0238 [0.0931]
a/R* = 282.57 [4209.79]
b = 0.45 [26.63]
Seff = 0.28 [0.04]
Teq = 185 [7] K
Rp = 1.55 [6.06] Re
a = 0.8308 [0.0571] AU
Ag = 56465.17 [443009.63] [0.13σ]
Teffp = 4411 [8652] K [0.49σ]

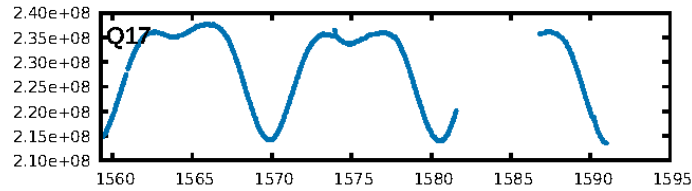
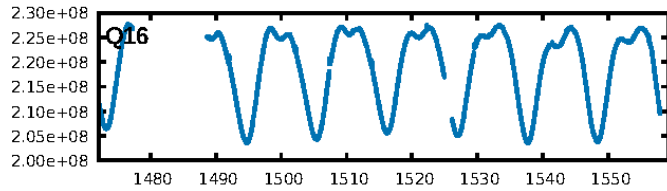
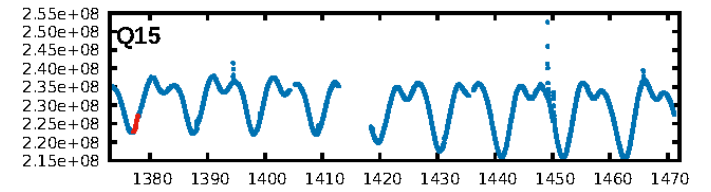
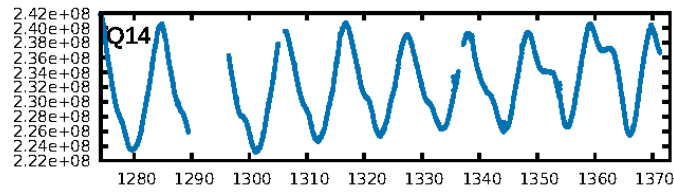
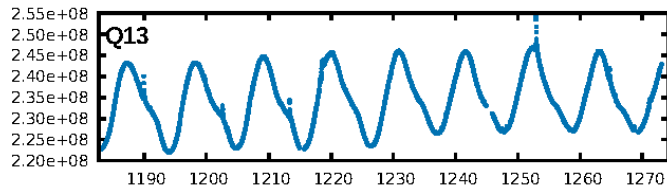
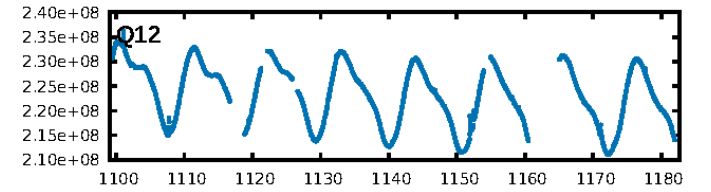
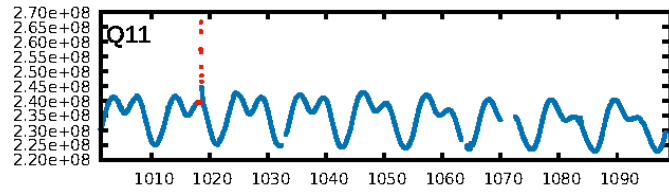
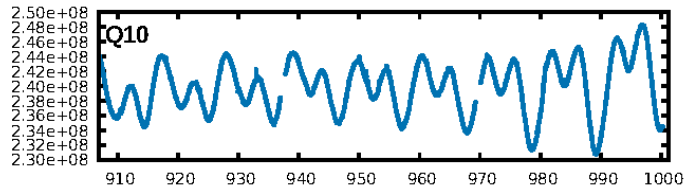
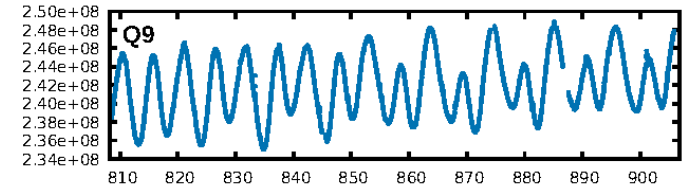
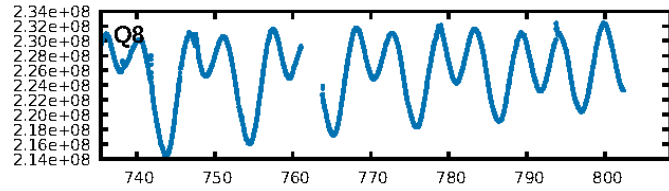
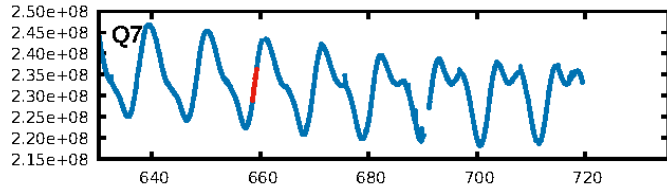
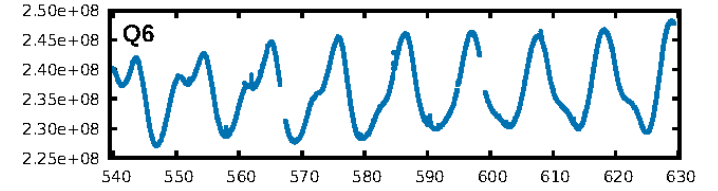
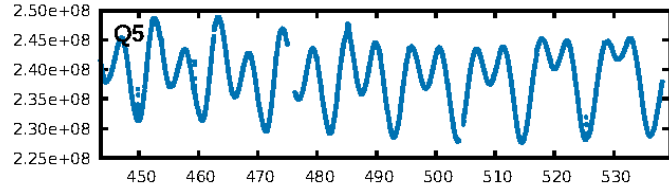
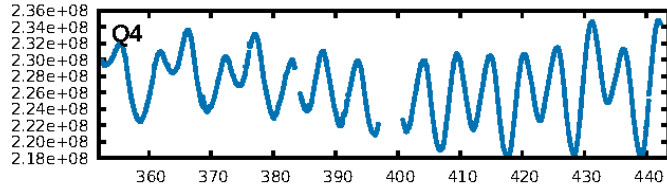
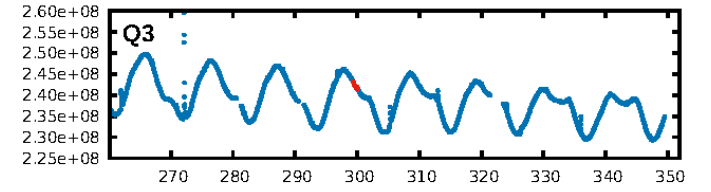
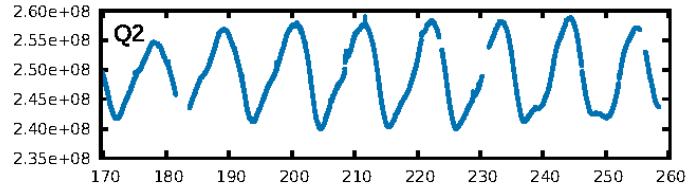
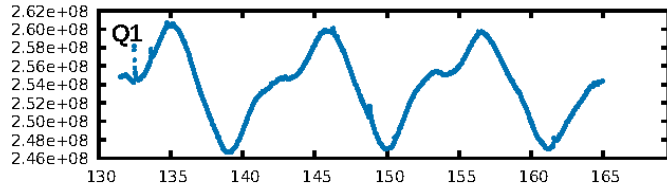
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.82σ]
LongPeriod-sig: 100.0% [74.66σ]
ModelChiSquare2-sig: 3.8%
ModelChiSquareGof-sig: 35.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6166
Centroid-sig: 3.3%
Centroid-so: 0.523 arcsec [1.78σ]
OotOffset-rm: 0.070 arcsec [0.89σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-rm: 0.029 arcsec [0.29σ]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

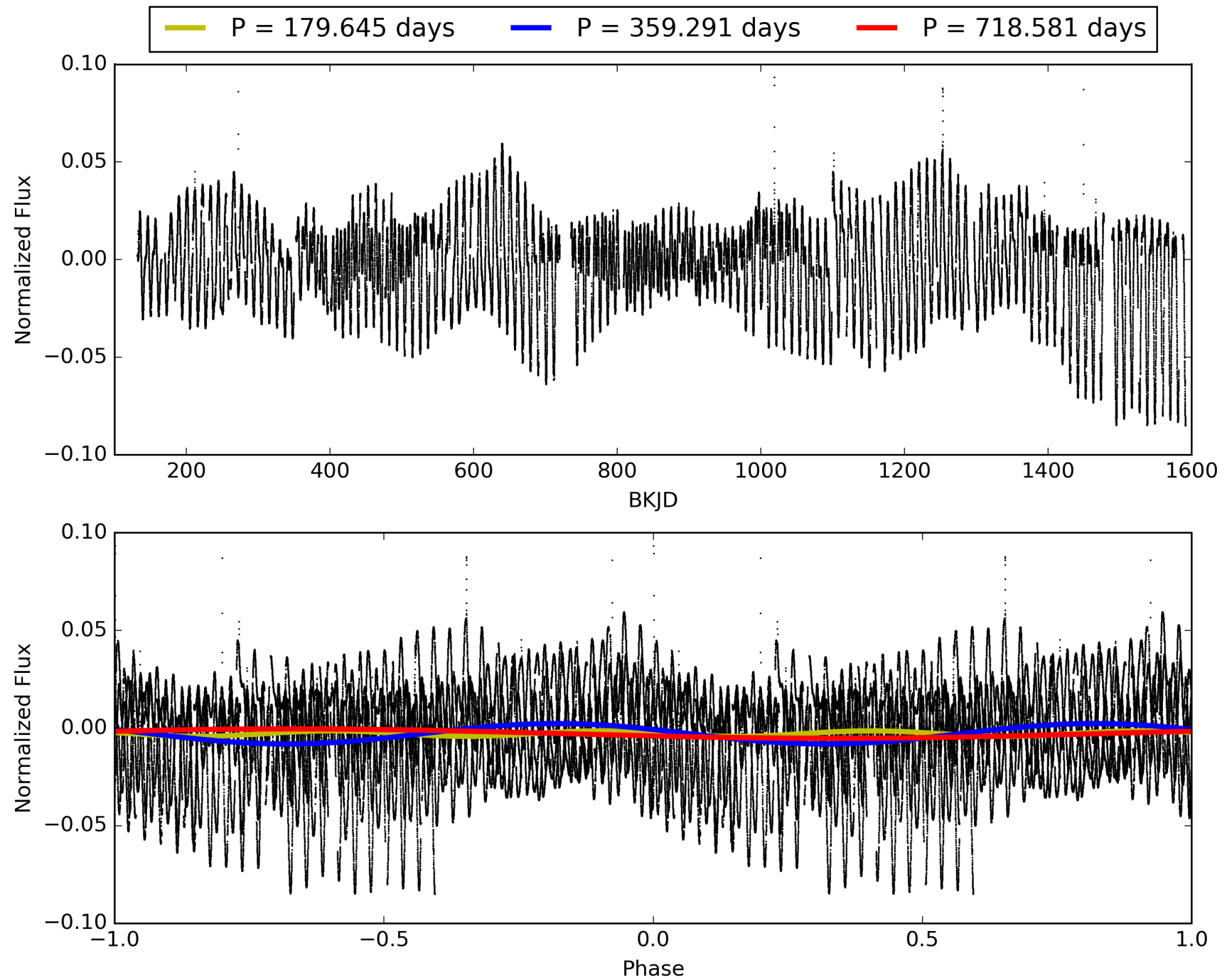
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:02:42 Z

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

TCE 007739728-07, PDC Light Curves

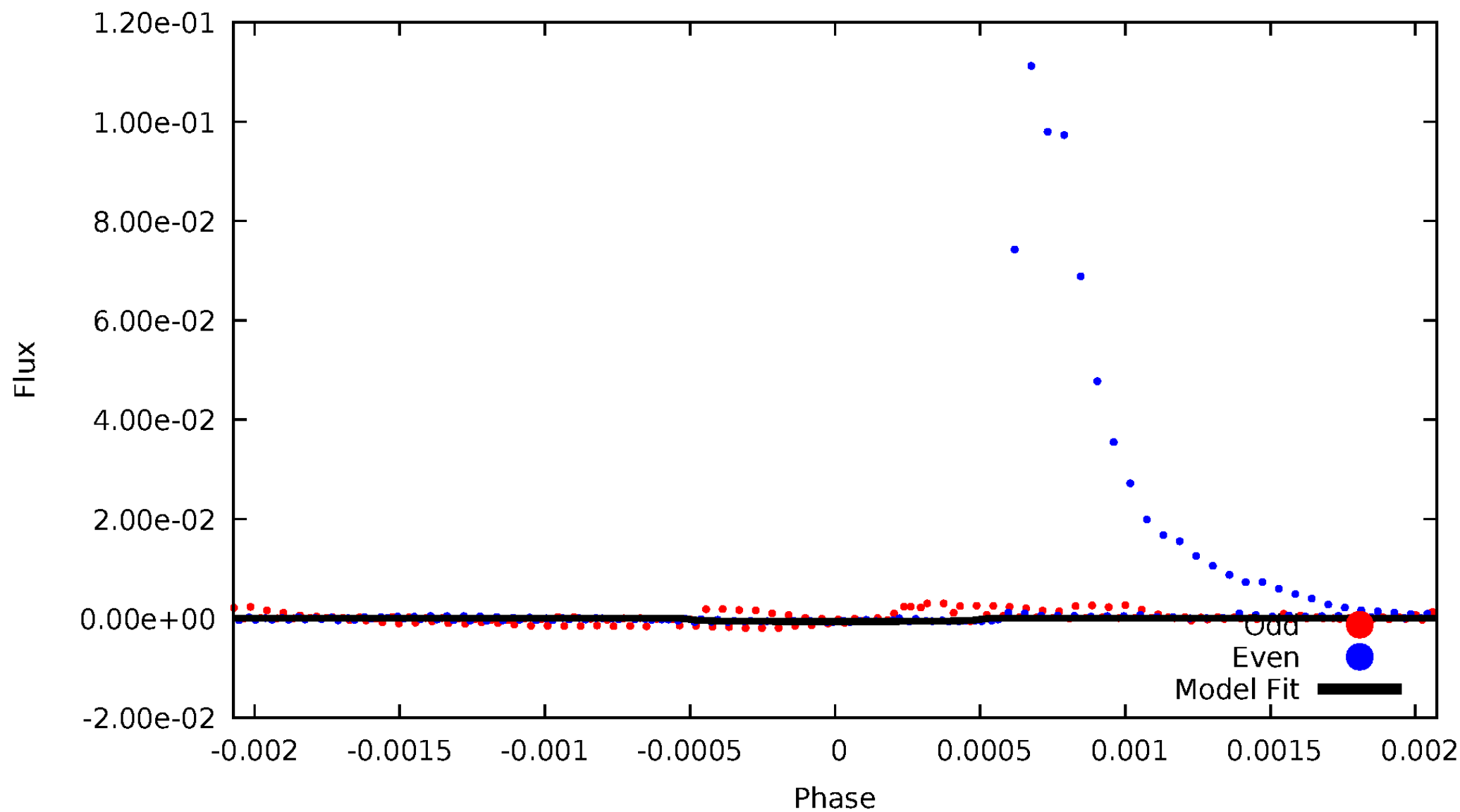


TCE 007739728-07



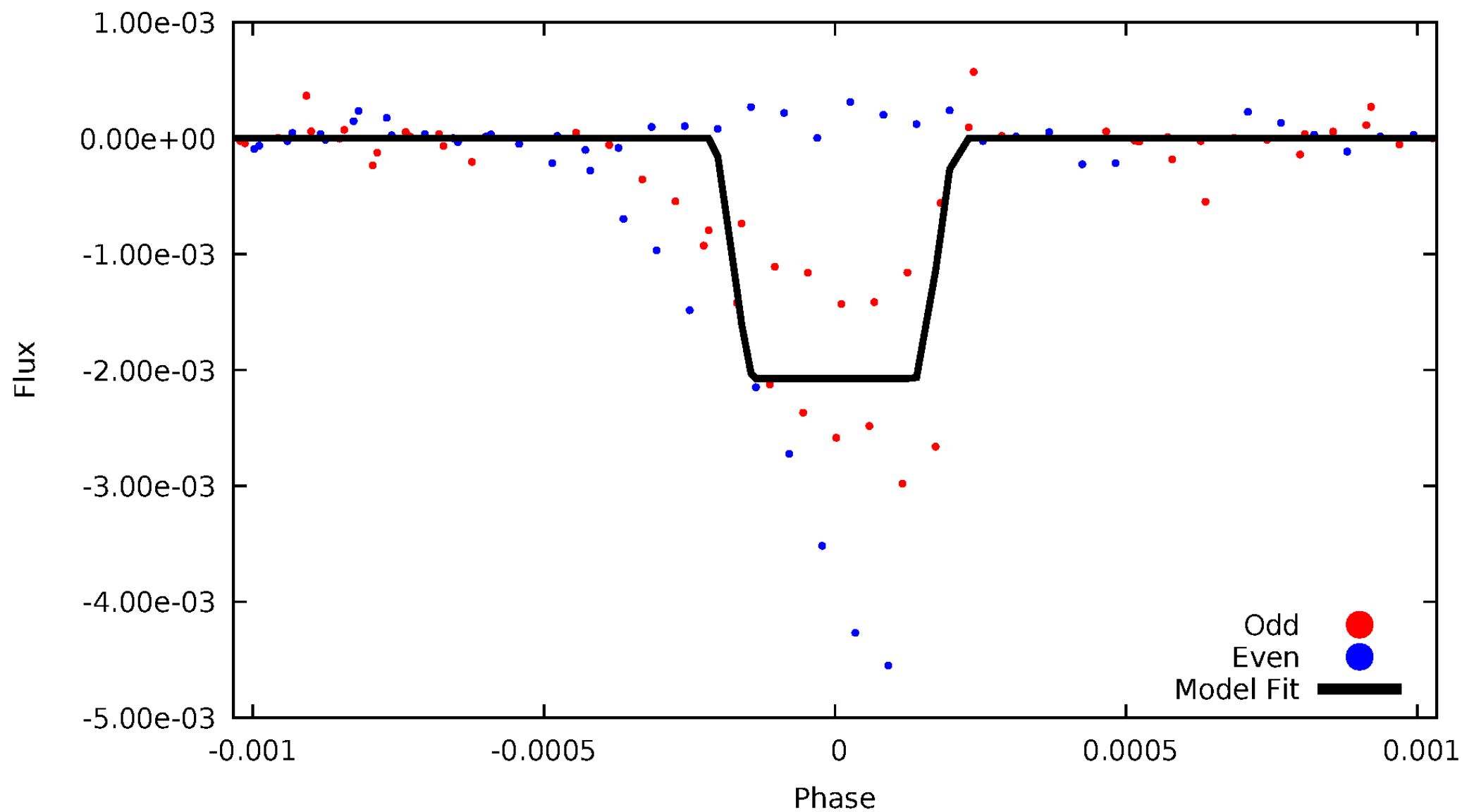
DV Odd/Even

TCE 007739728-07



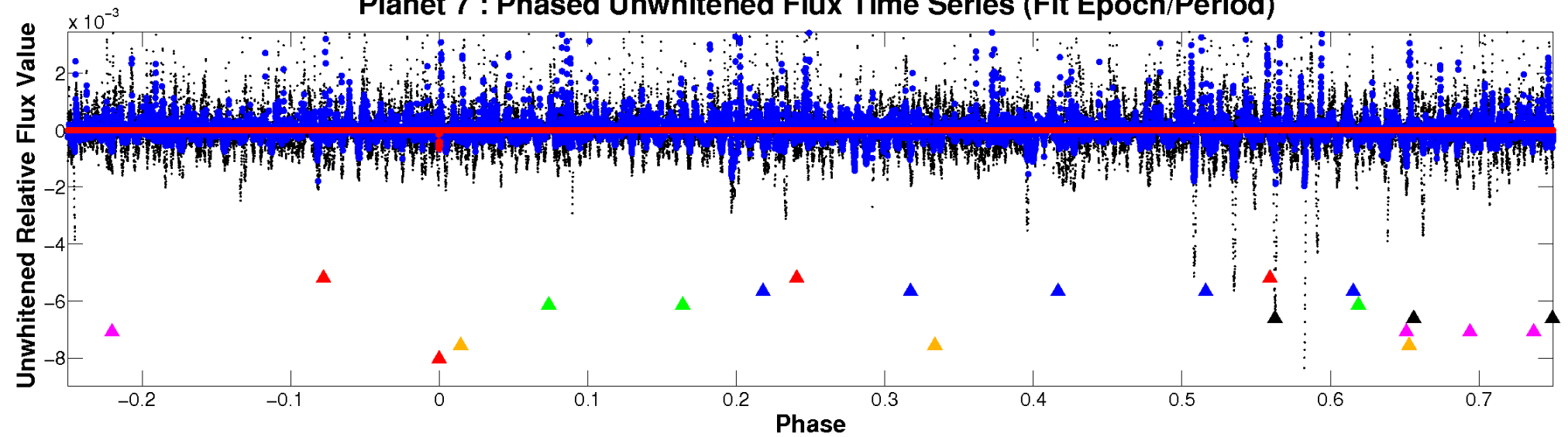
ALT Odd/Even

TCE 007739728-07

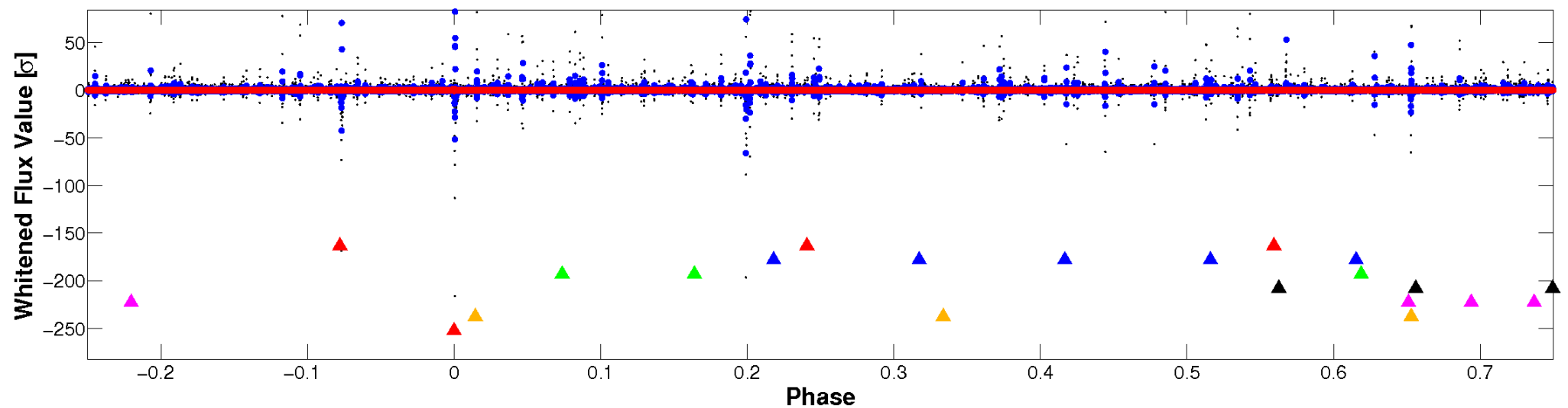


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

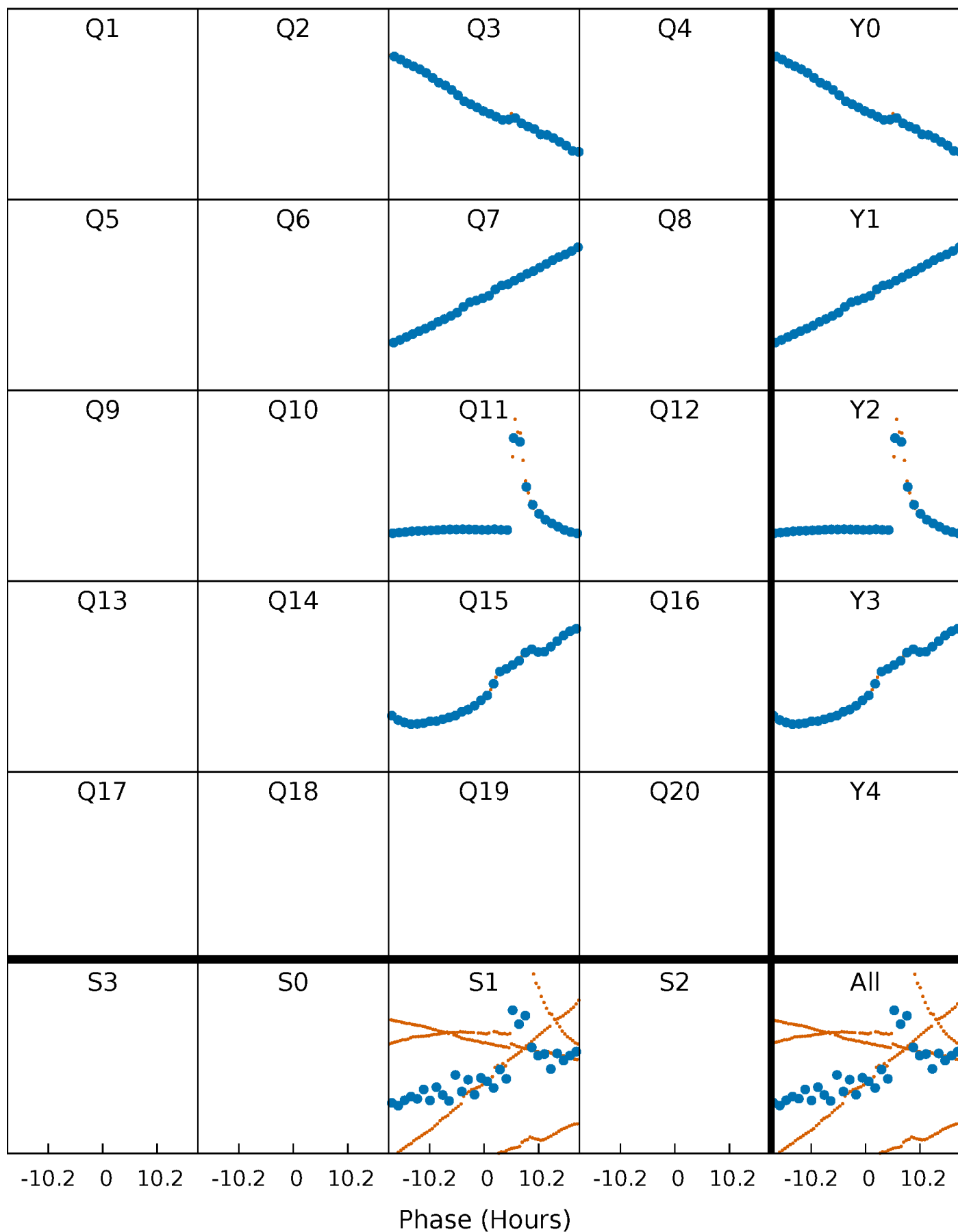


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



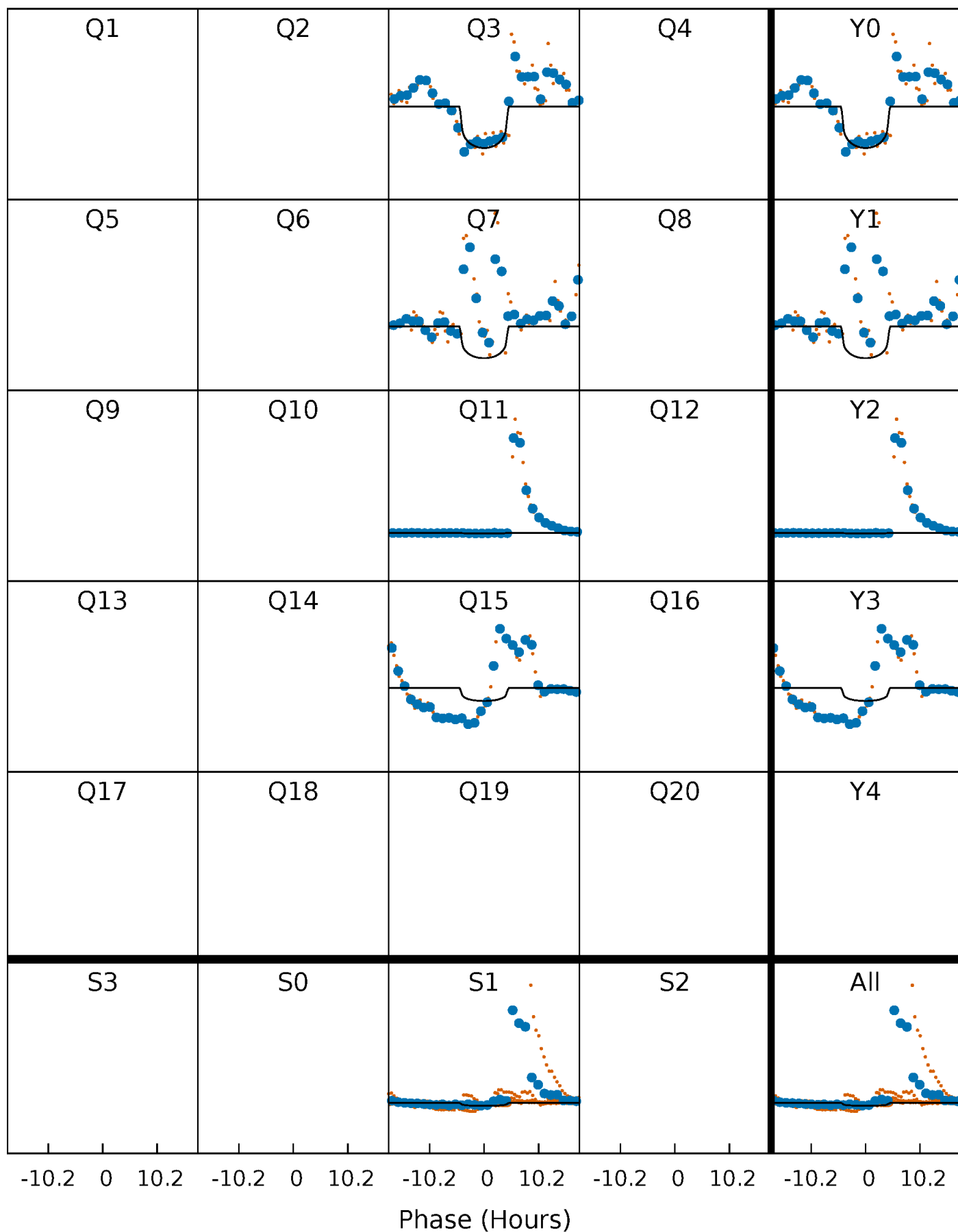
PDC Quarter-Phased Transit Curves

TCE 007739728-07 $P=359.290724$ Days $T_0=299.670083$ (BKJD)



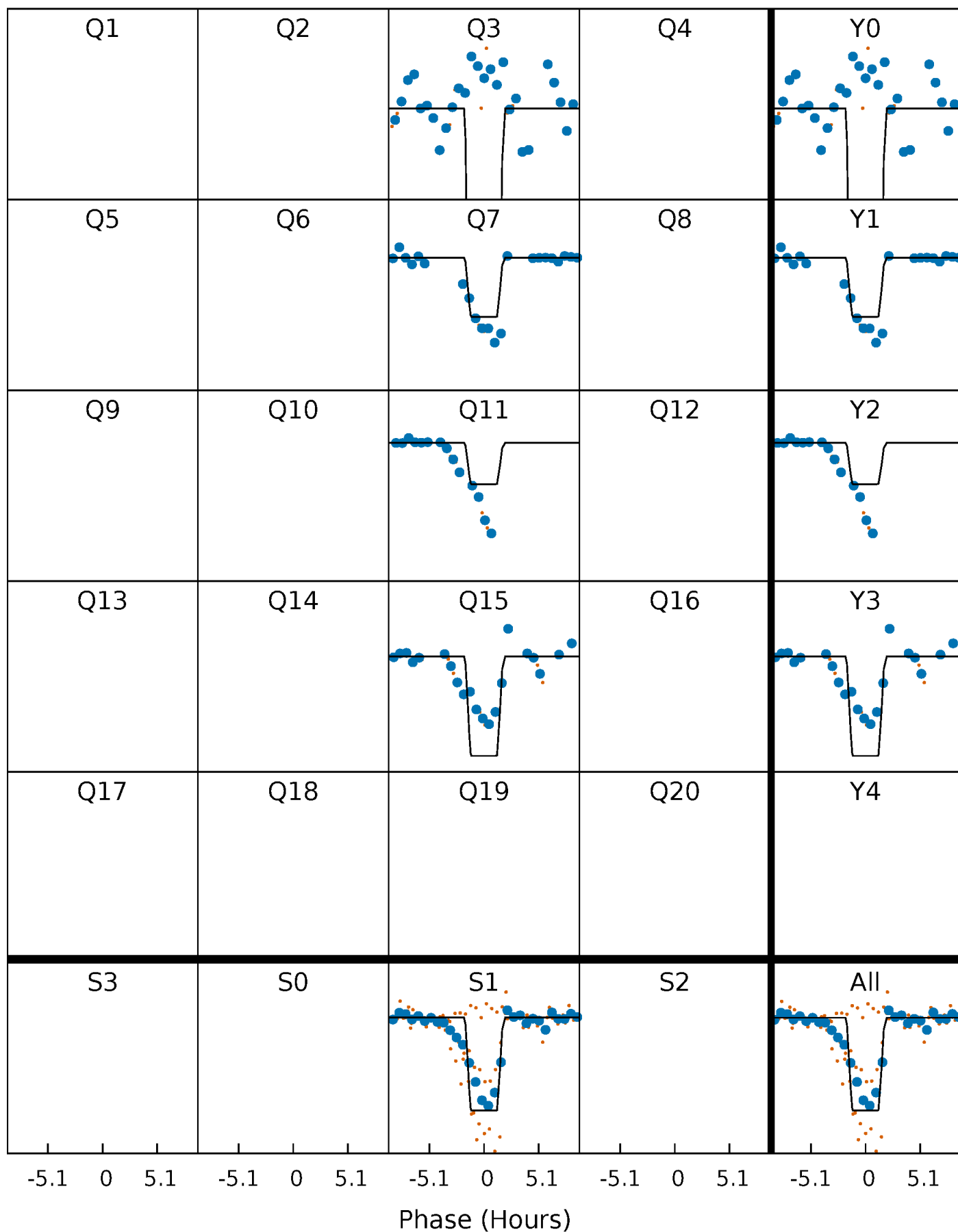
DV Quarter-Phased Transit Curves

TCE 007739728-07 $P=359.290724$ Days $T_0=299.670083$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

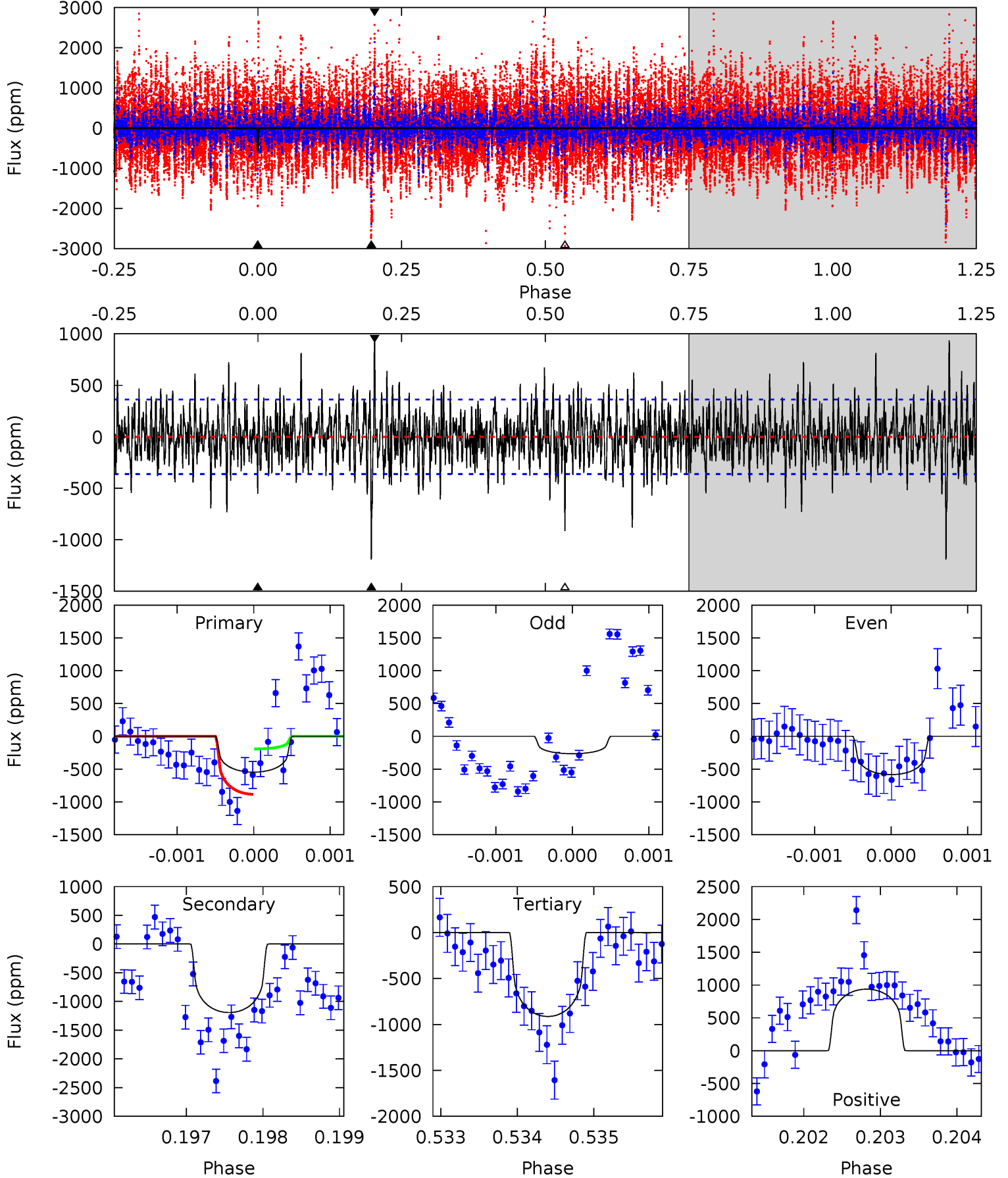
TCE 007739728-07 P=359.293185 Days $T_0=299.670743$ (BKJD)



DV Model-Shift Uniqueness Test

007739728-07, P = 359.290724 Days, E = 299.670083 Days

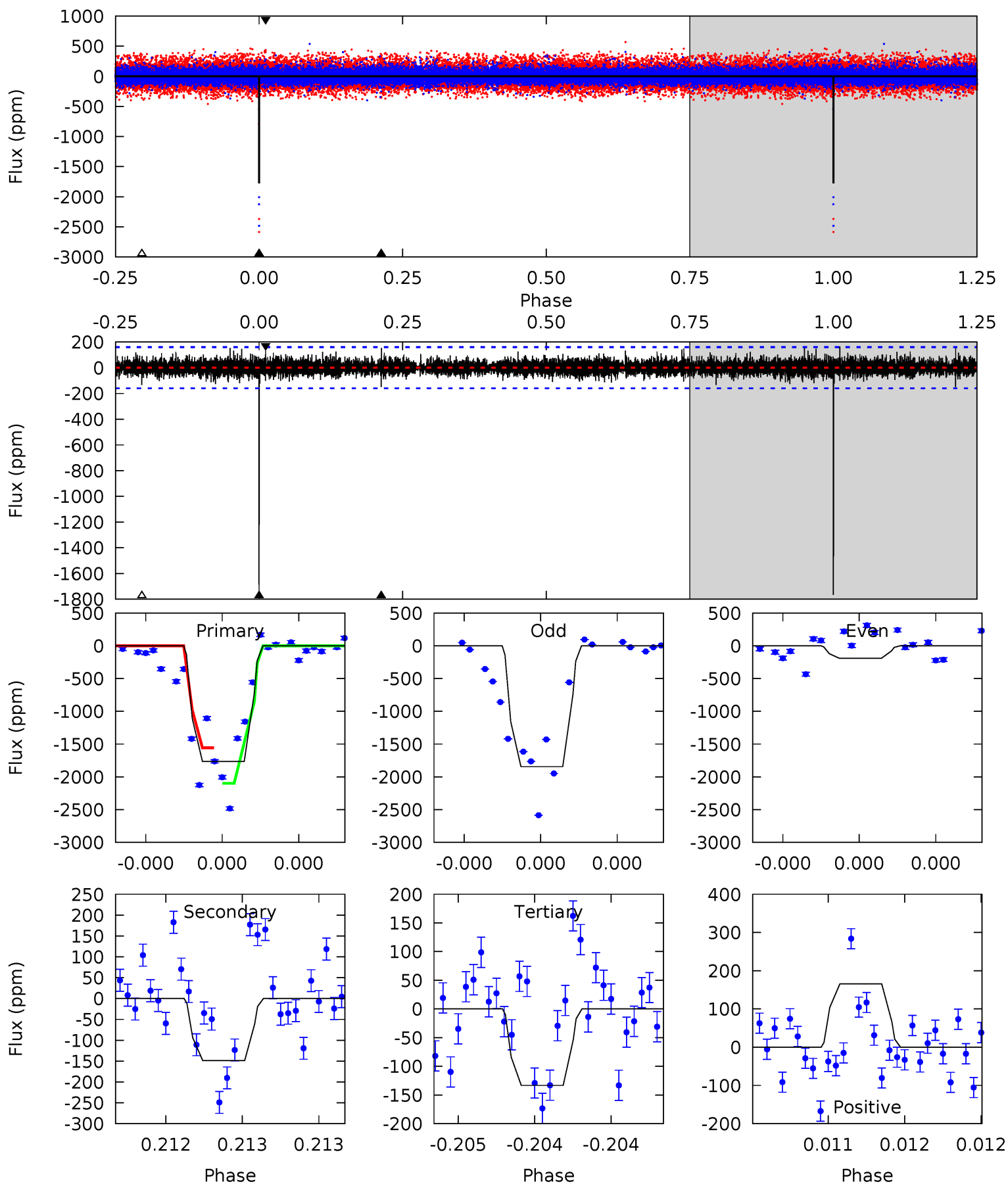
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	17.9	13.7	14.1	5.44	3.27	3.10	-5.50	-5.86	4.19	3.83	1.83	0.38	0.44	5.25



Alt Model-Shift Uniqueness Test

007739728-07, P = 359.293185 Days, E = 299.670743 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.7	5.20	4.66	5.78	5.60	3.52	1.06	57.0	55.9	0.54	-0.58	29.5	0.92	0.09	0



Stellar Parameters For KIC 007739728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4953^{+148}_{-133}	$4.660^{+0.054}_{-0.041}$	$-0.960^{+0.300}_{-0.300}$	$0.596^{+0.049}_{-0.041}$	$0.593^{+0.055}_{-0.022}$	$3.945^{+0.886}_{-0.603}$
	+3%/-3%	+1%/-1%	+31%/-31%	+8%/-7%	+9%/-4%	+22%/-15%
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 007739728-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1193 ± 67	$5.15^{+4.58}_{-3.42}$	259^{+9}_{-8}	3681^{+1849}_{-678}	$17549^{+131910}_{-12714}$
Alt.	-149 ± 29	$5.21^{+5.10}_{-3.45}$	258^{+10}_{-8}	2684^{+980}_{-403}	2059^{+15730}_{-1522}

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

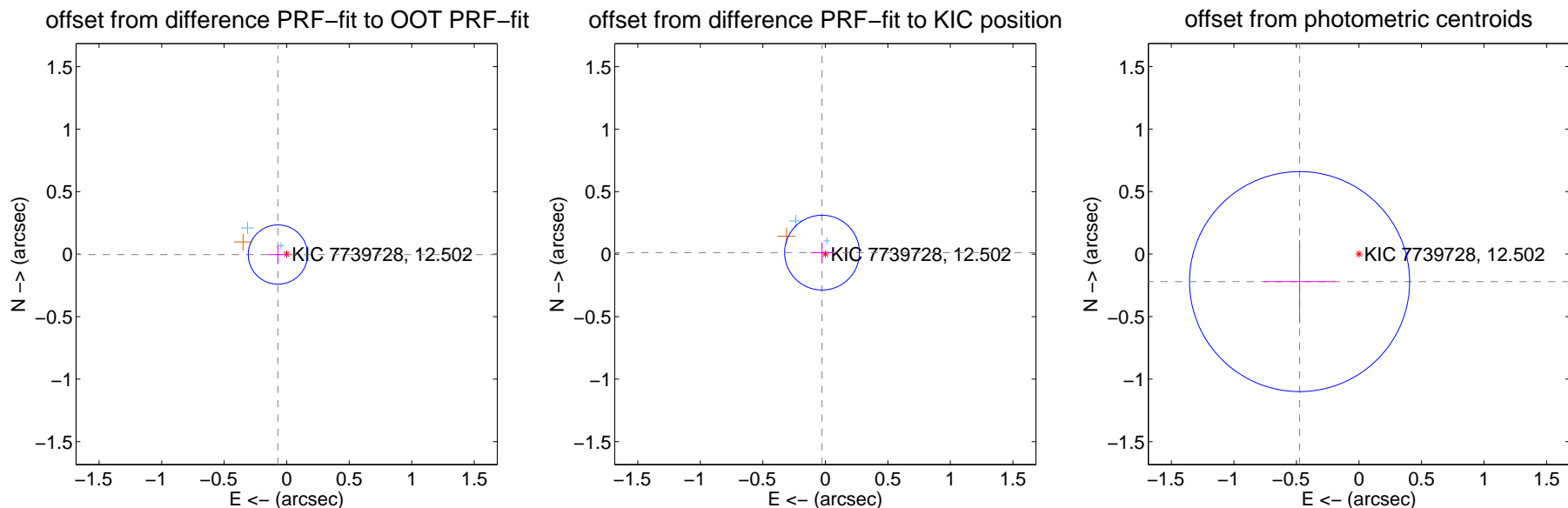
DV Centroid Data

Supplemental centroid analysis for 007739728-07. Kepler magnitude: 12.50. Transit SNR 5.60

There are 3 quarters with good PRF difference image offsets

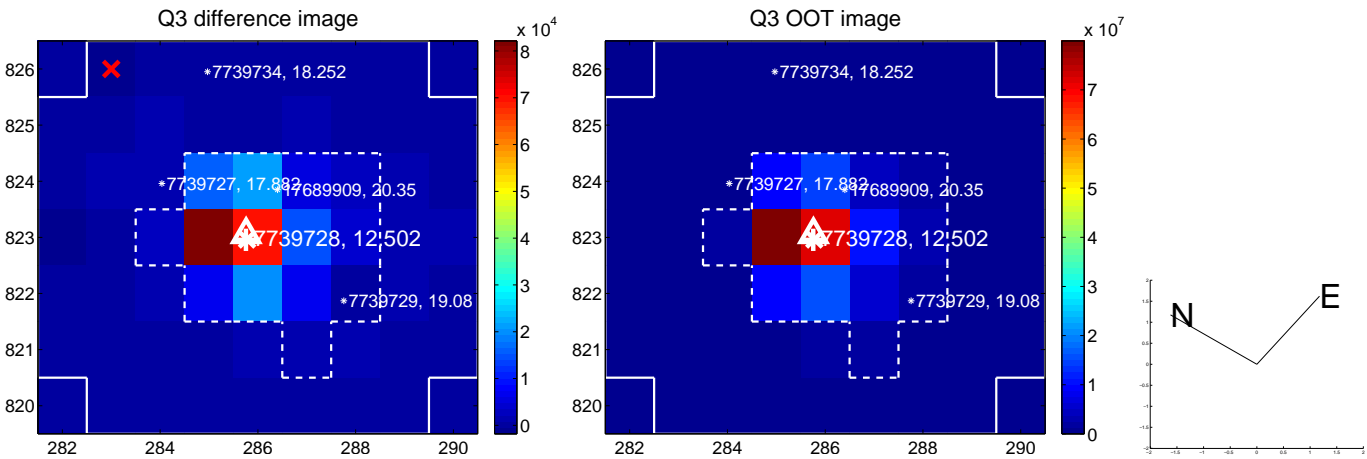
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.070 ± 0.079	0.89	0.070 ± 0.079	-0.003 ± 0.073
PRF-fit source offset from KIC position	0.029 ± 0.100	0.29	0.027 ± 0.092	0.012 ± 0.081
photometric centroid source offset	0.52 ± 0.29	1.78	0.47 ± 0.28	-0.22 ± 0.33

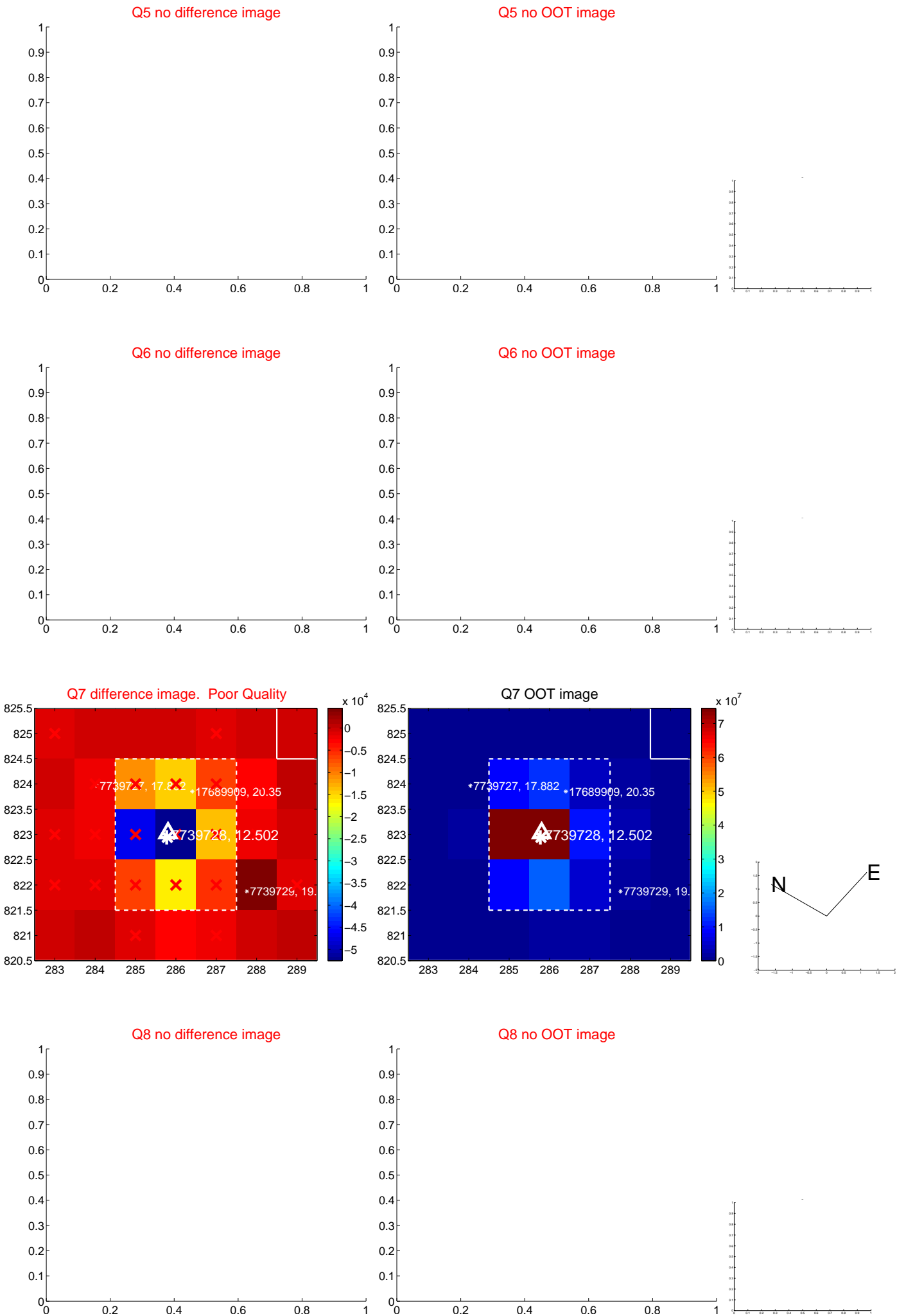


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



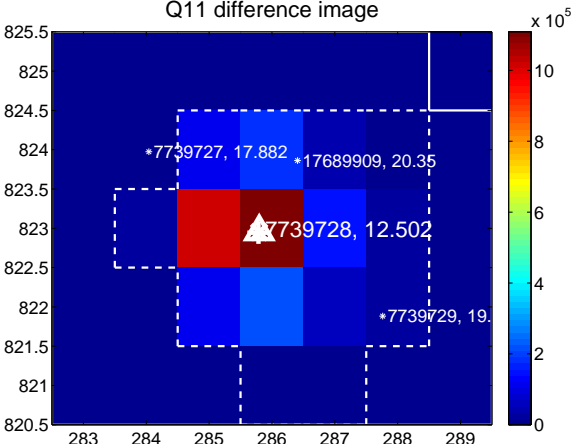
Q10 no difference image



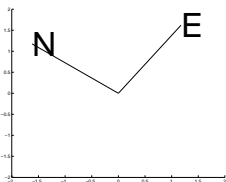
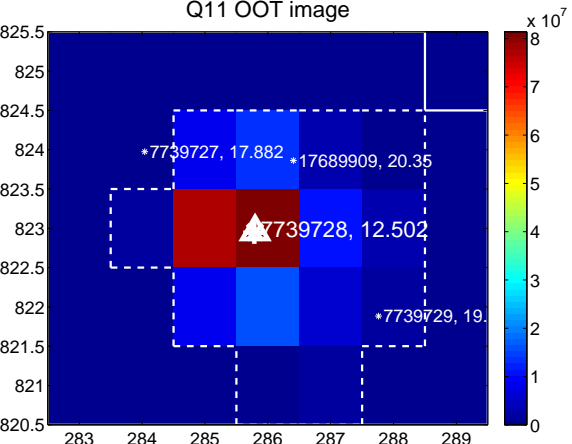
Q10 no OOT image



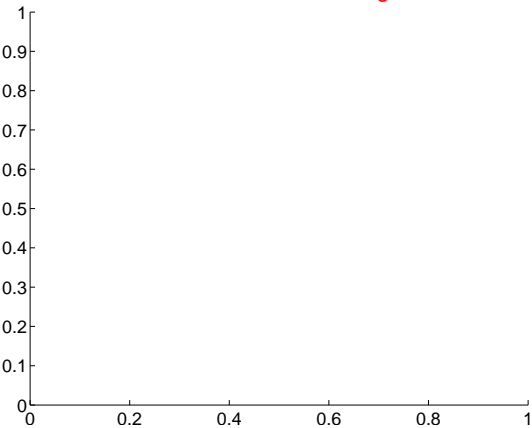
Q11 difference image



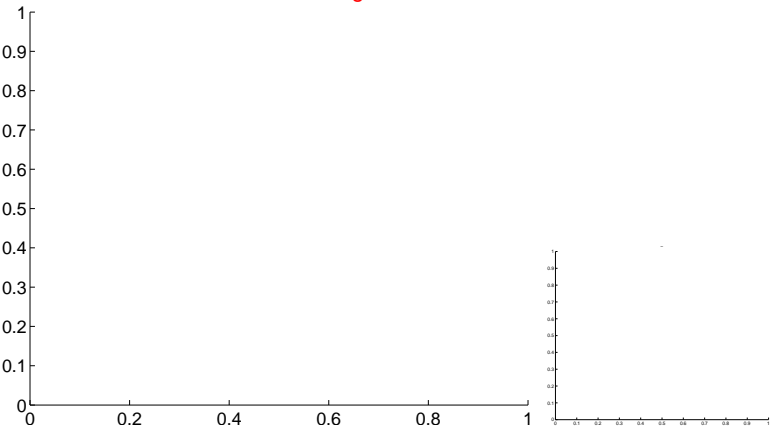
Q11 OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



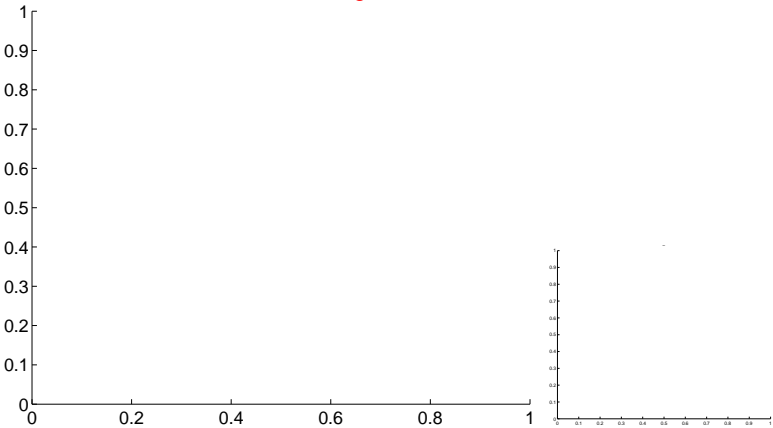
Q13 no OOT image



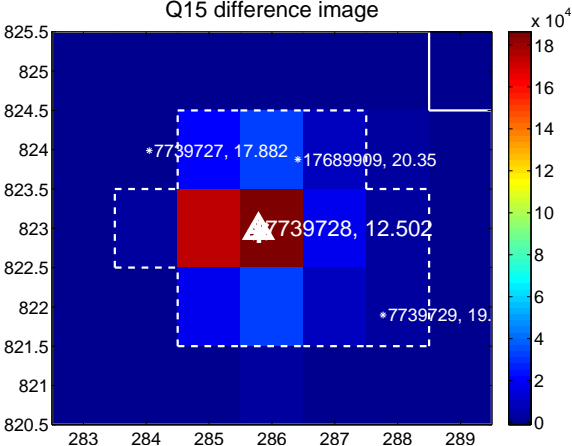
Q14 no difference image



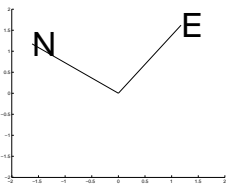
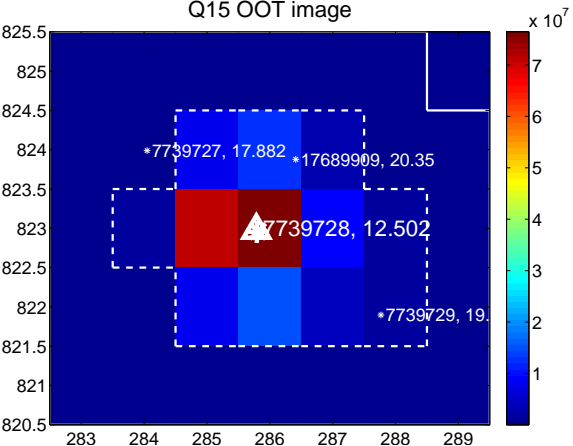
Q14 no OOT image



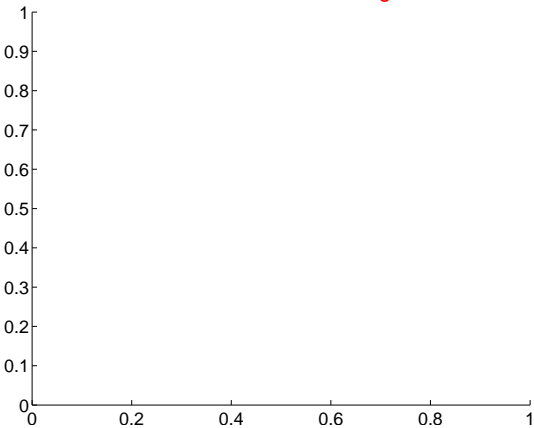
Q15 difference image



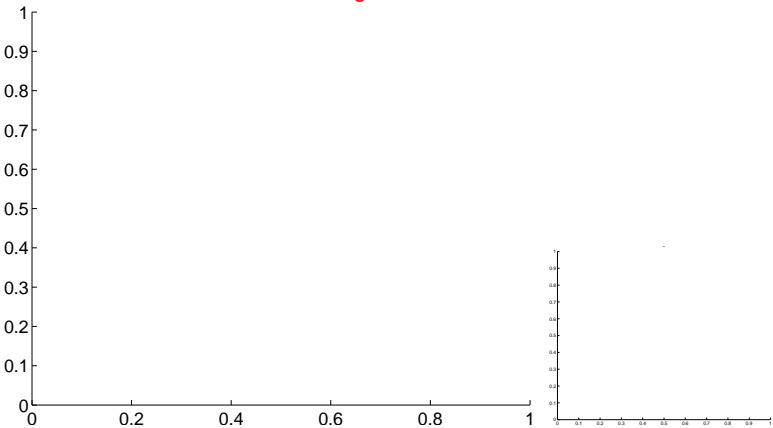
Q15 OOT image



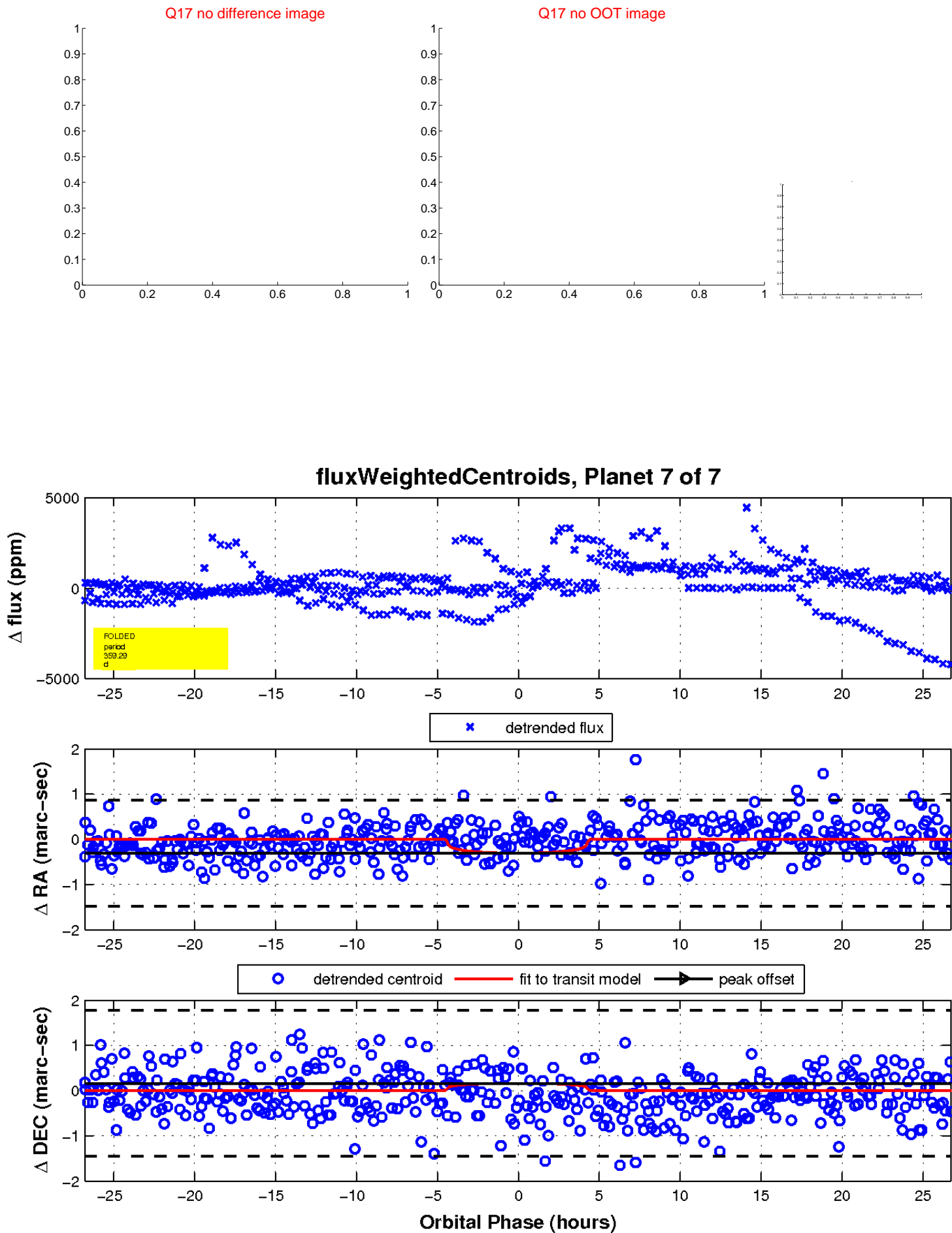
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

