

KIC 003561372

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})
003561372-02	OBS	No	557.803777	452.487943	1735.7	10.711	20.6	8.1	6.54	4922	26.63	14.58
003561372-03	OBS	No	410.745837	214.851358	1145.6	8.747	52.8	5.9	6.54	4922	21.68	21.93
003561372-06	OBS	No	707.034628	157.260031	1774.0	11.618	18.4	9.0	6.54	4922	29.84	10.63
003561372-07	OBS	No	558.097645	461.751036	749.9	3.767	19.9	3.6	6.54	4922	18.79	14.57
003561372-08	OBS	No	361.810236	333.677231	799.7	5.000	16.2	-1.0	6.54	4922	18.06	25.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561372-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003561372-03	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_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

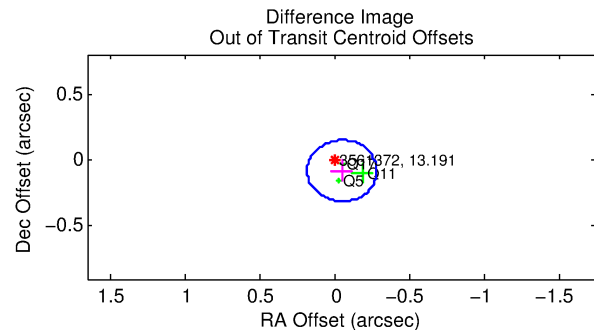
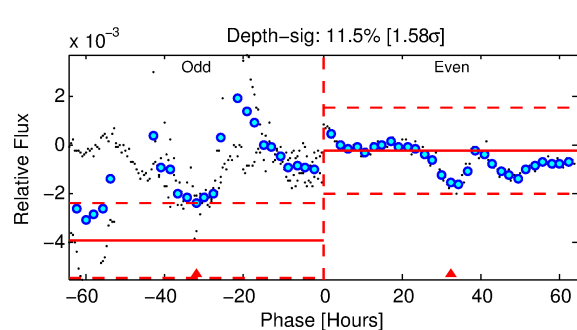
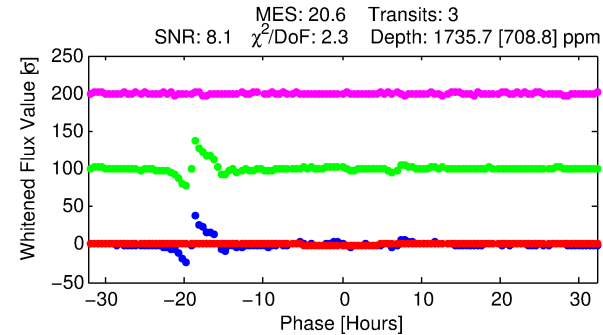
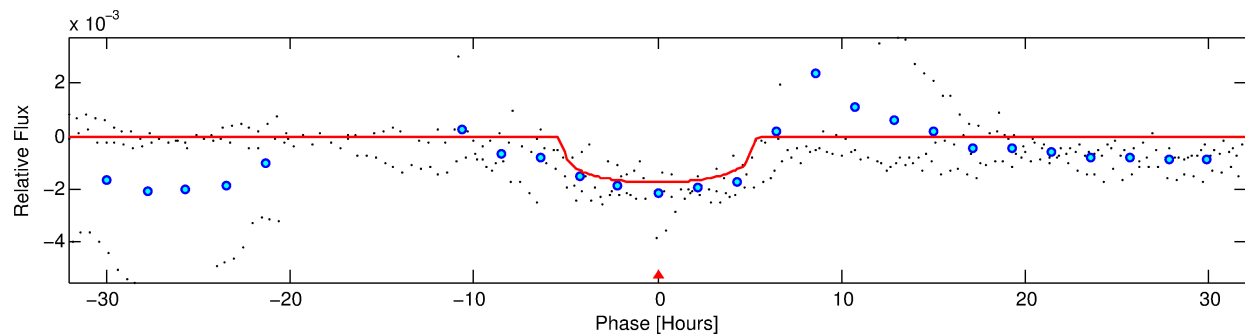
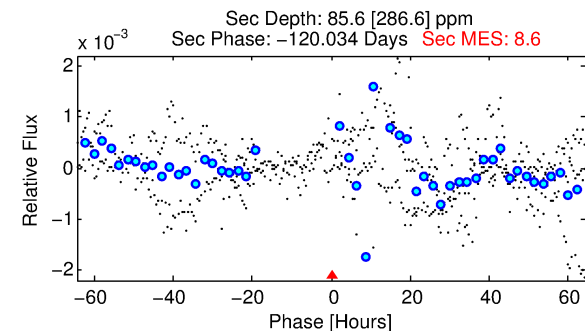
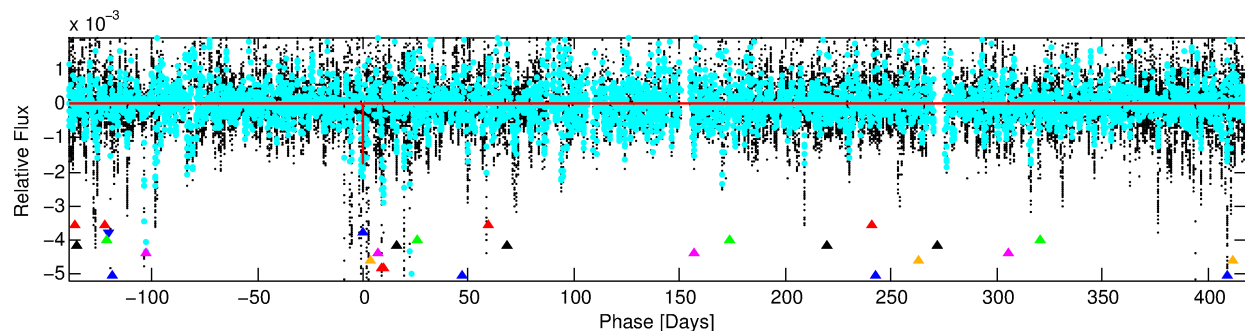
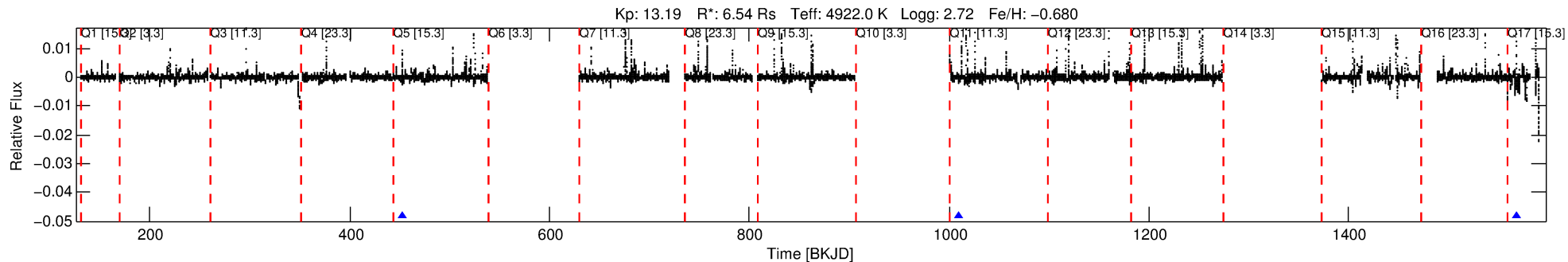
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561372-02

No Significant Match Found

DV One-Page Summary

KIC: 3561372 Candidate: 2 of 8 Period: 557.804 d



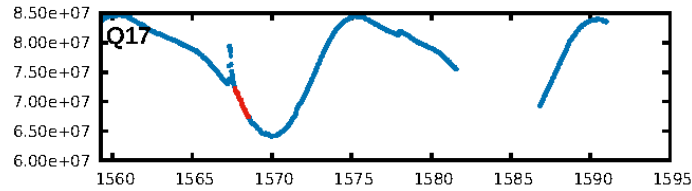
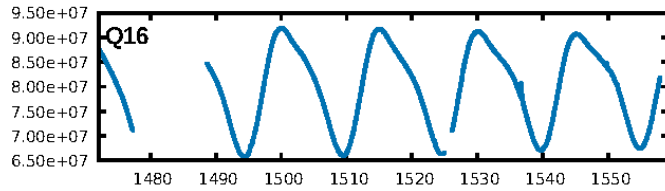
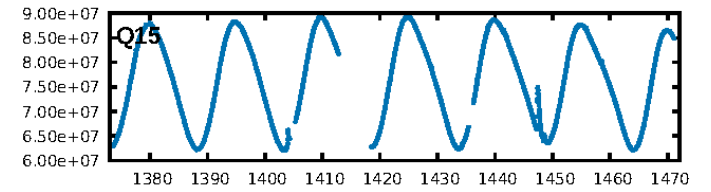
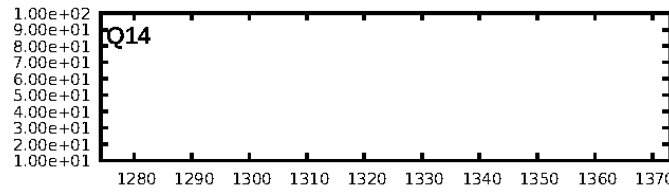
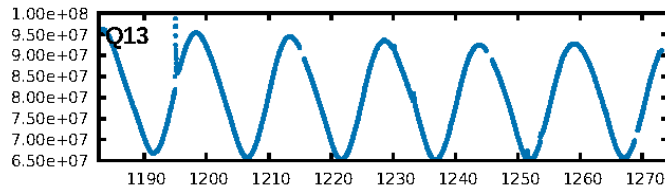
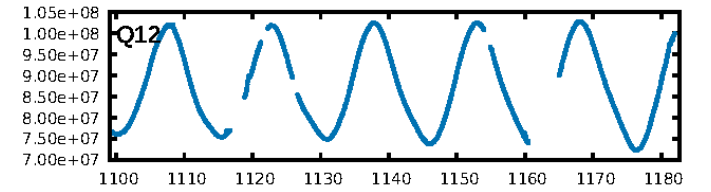
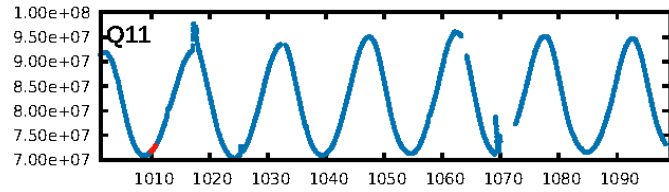
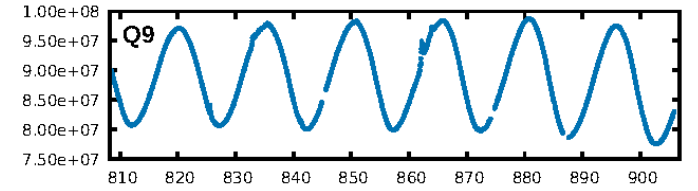
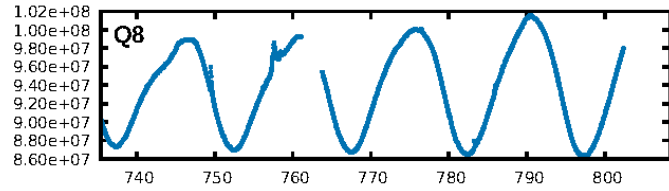
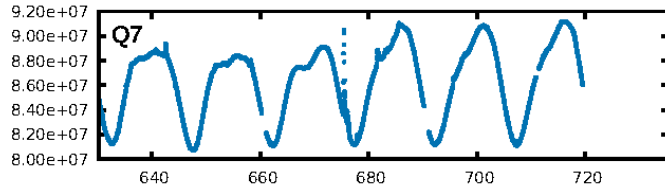
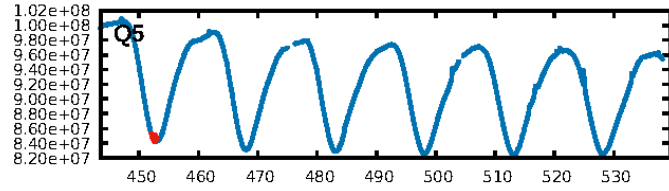
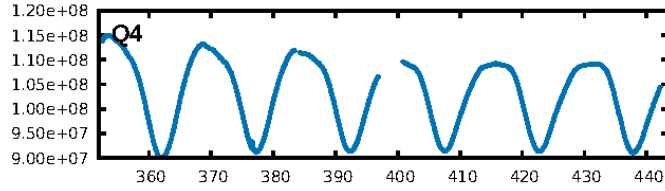
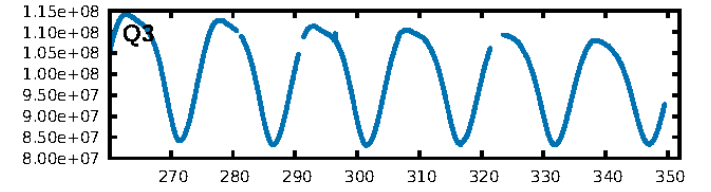
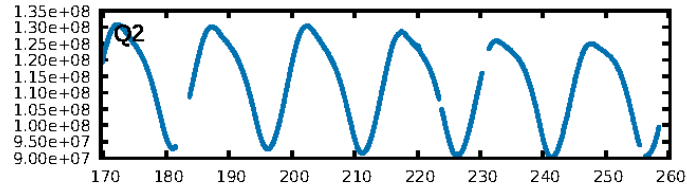
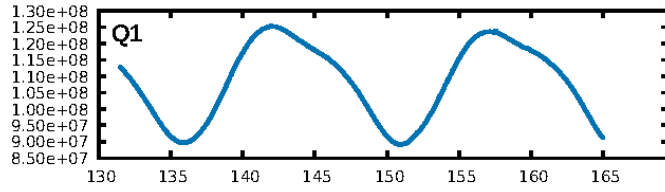
DV Fit Results:

Period = 557.80378 [0.01301] d
Epoch = 452.4879 [0.0123] BKJD
Rp/R* = 0.0373 [0.0471]
a/R* = 409.28 [1880.42]
b = 0.13 [34.25]
Seff = 14.58 [44.41]
Teq = 498 [379] K
Rp = 26.63 [40.55] Re
a = 1.2419 [1.9851] AU
Ag = 102.39 [530.60] [0.19σ]
Teffp = 2451 [2572] K [0.75σ]

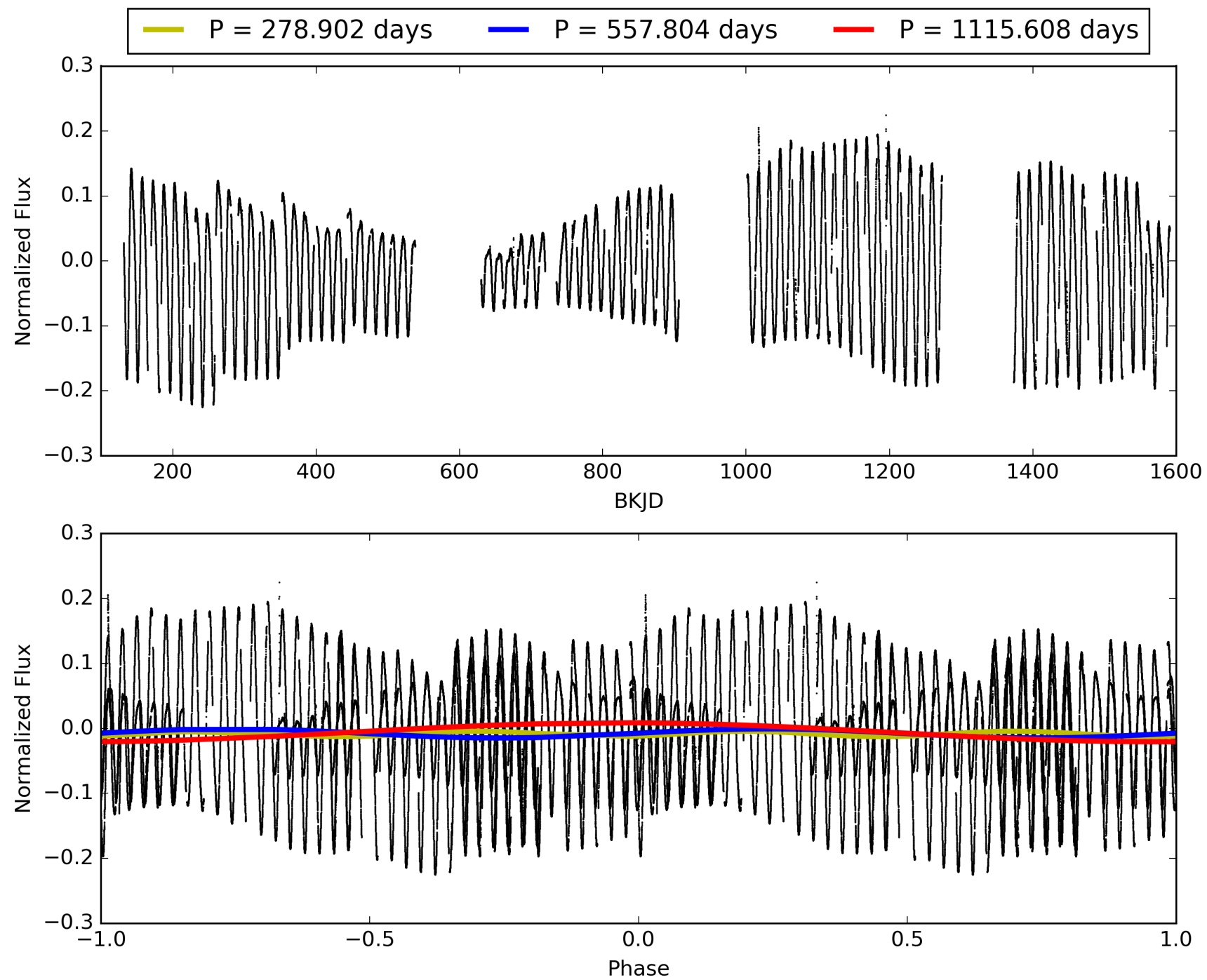
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [255.22σ]
LongPeriod-sig: 46.6% [0.62σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.741
Centroid-sig: 17.0%
Centroid-so: 0.787 arcsec [1.84σ]
OotOffset-rm: 0.096 arcsec [1.25σ]
KicOffset-rm: 0.240 arcsec [2.93σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003561372-02, PDC Light Curves

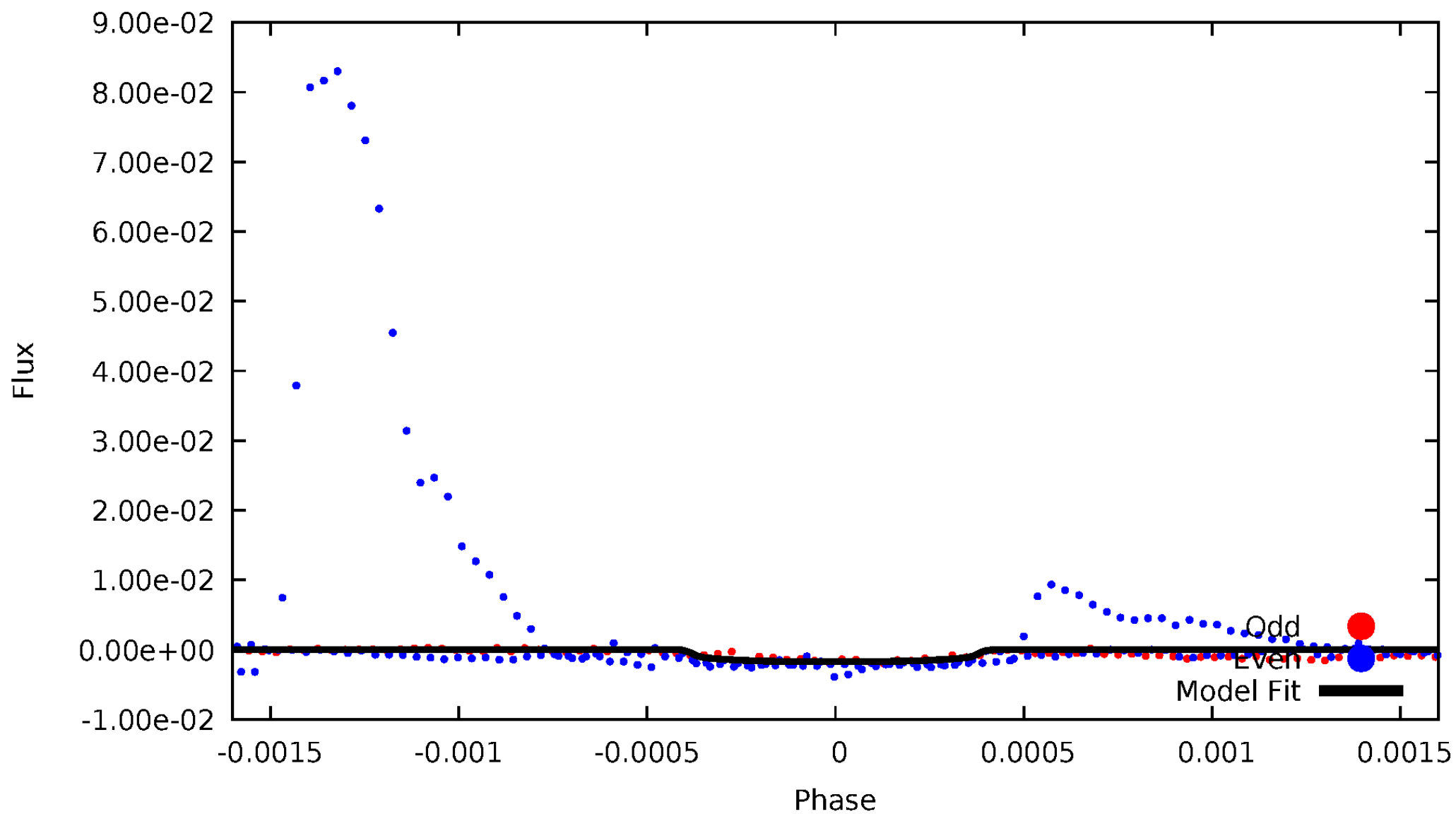


TCE 003561372-02



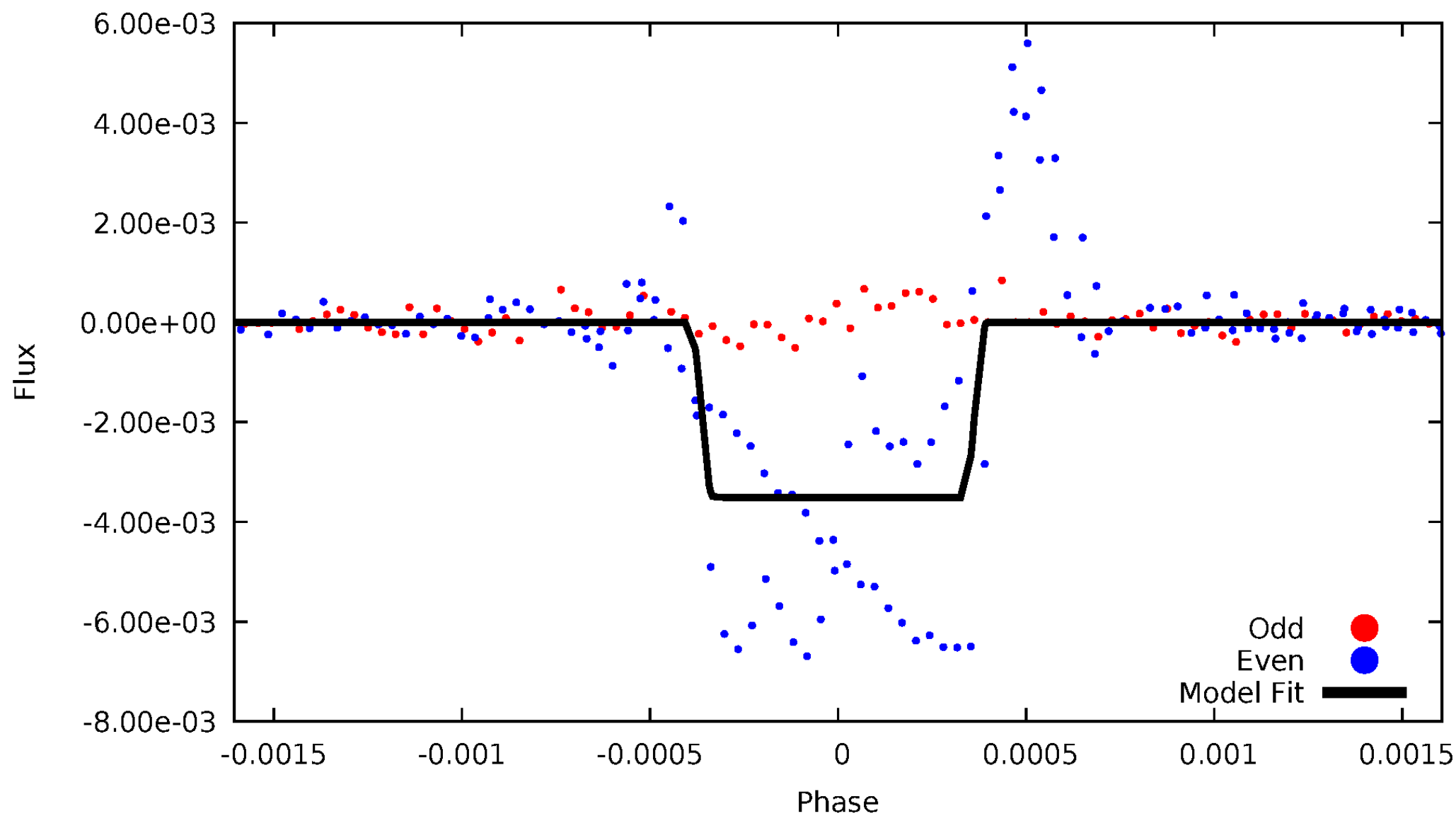
DV Odd/Even

TCE 003561372-02



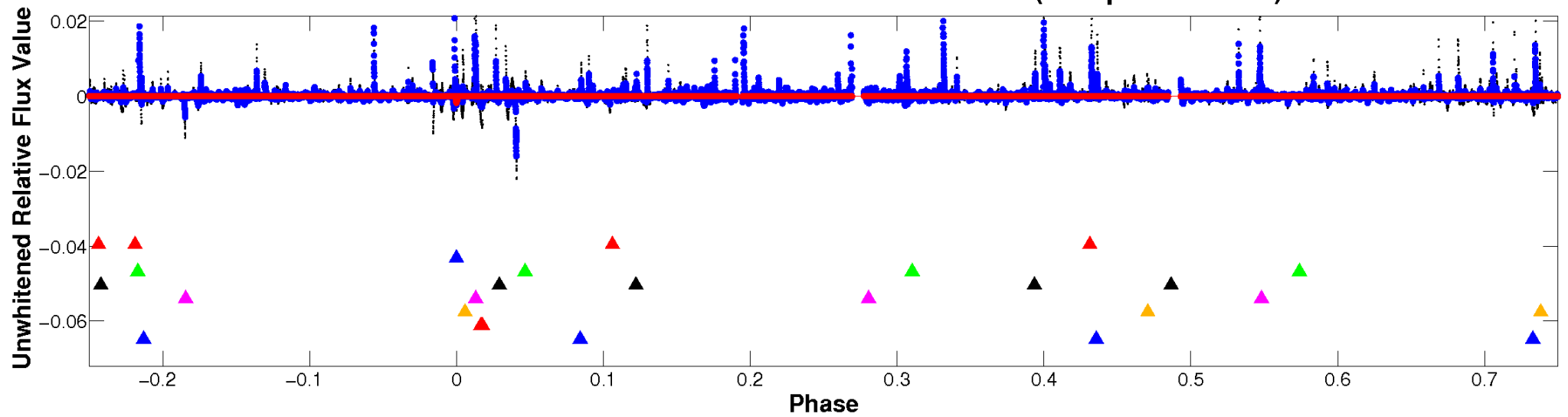
ALT Odd/Even

TCE 003561372-02

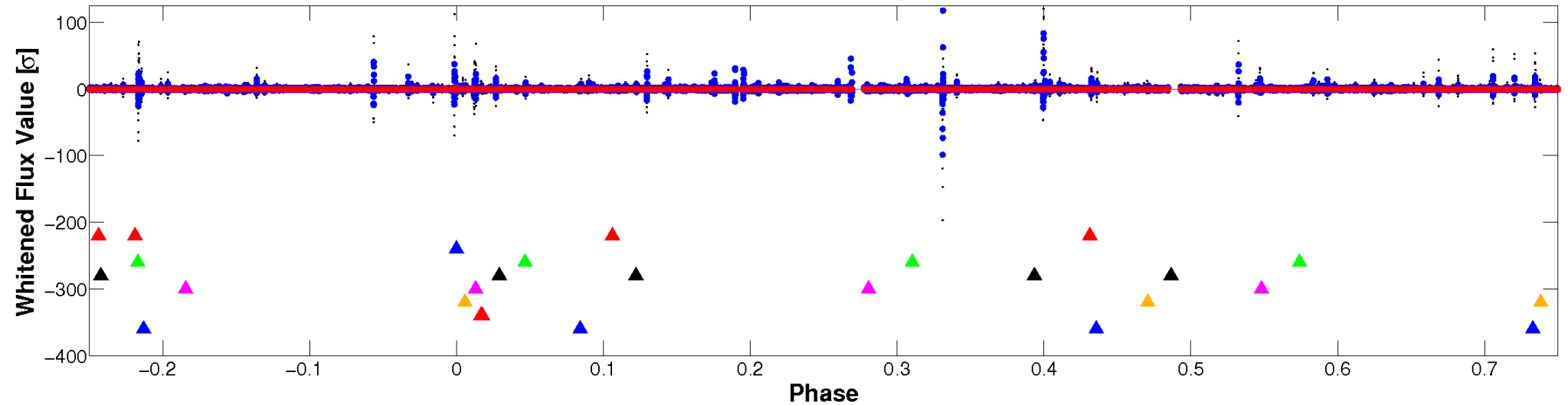


Non-Whitened Vs. Whitened Light Curve

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

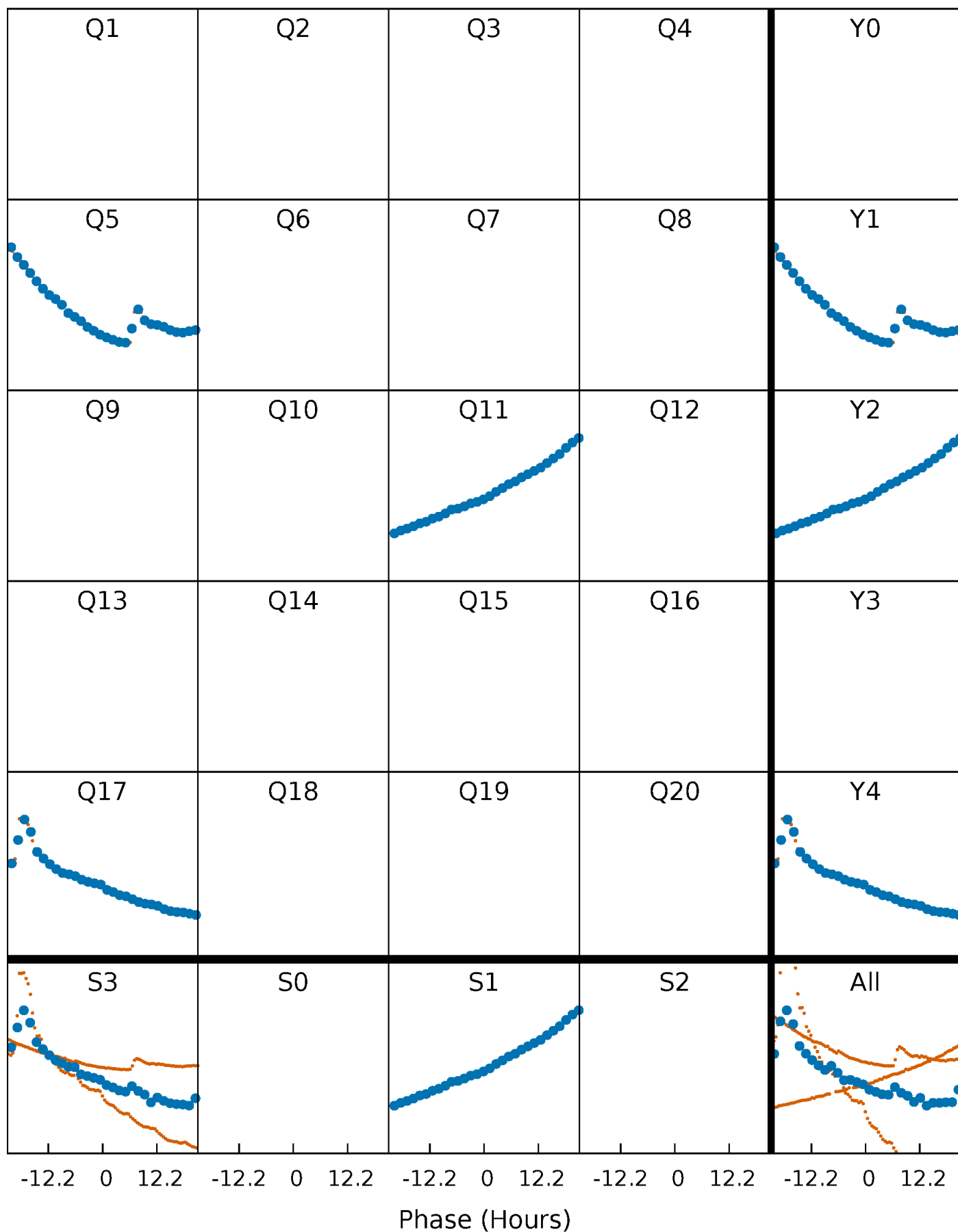


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



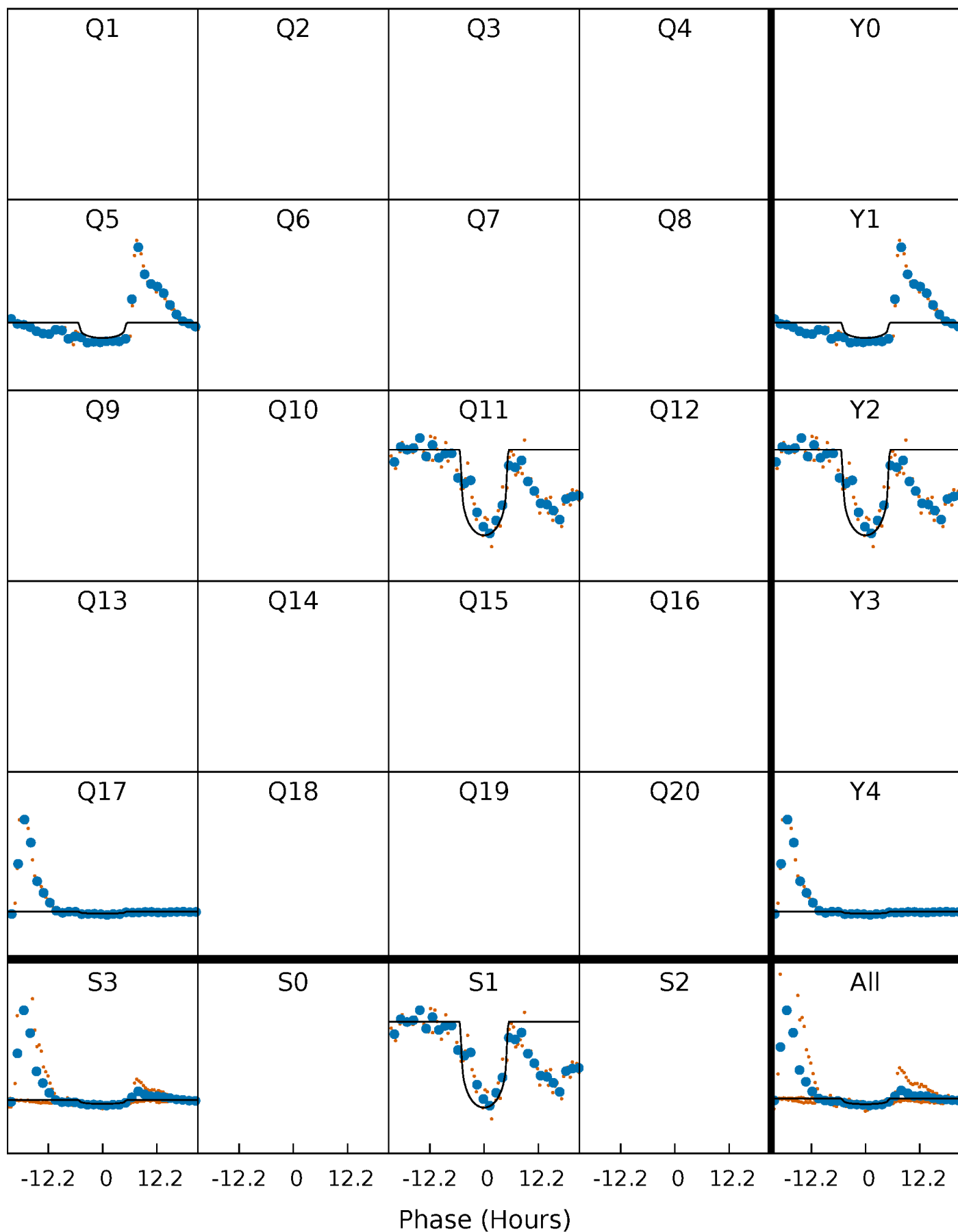
PDC Quarter-Phased Transit Curves

TCE 003561372-02 P=557.803777 Days $T_0=452.487943$ (BKJD)



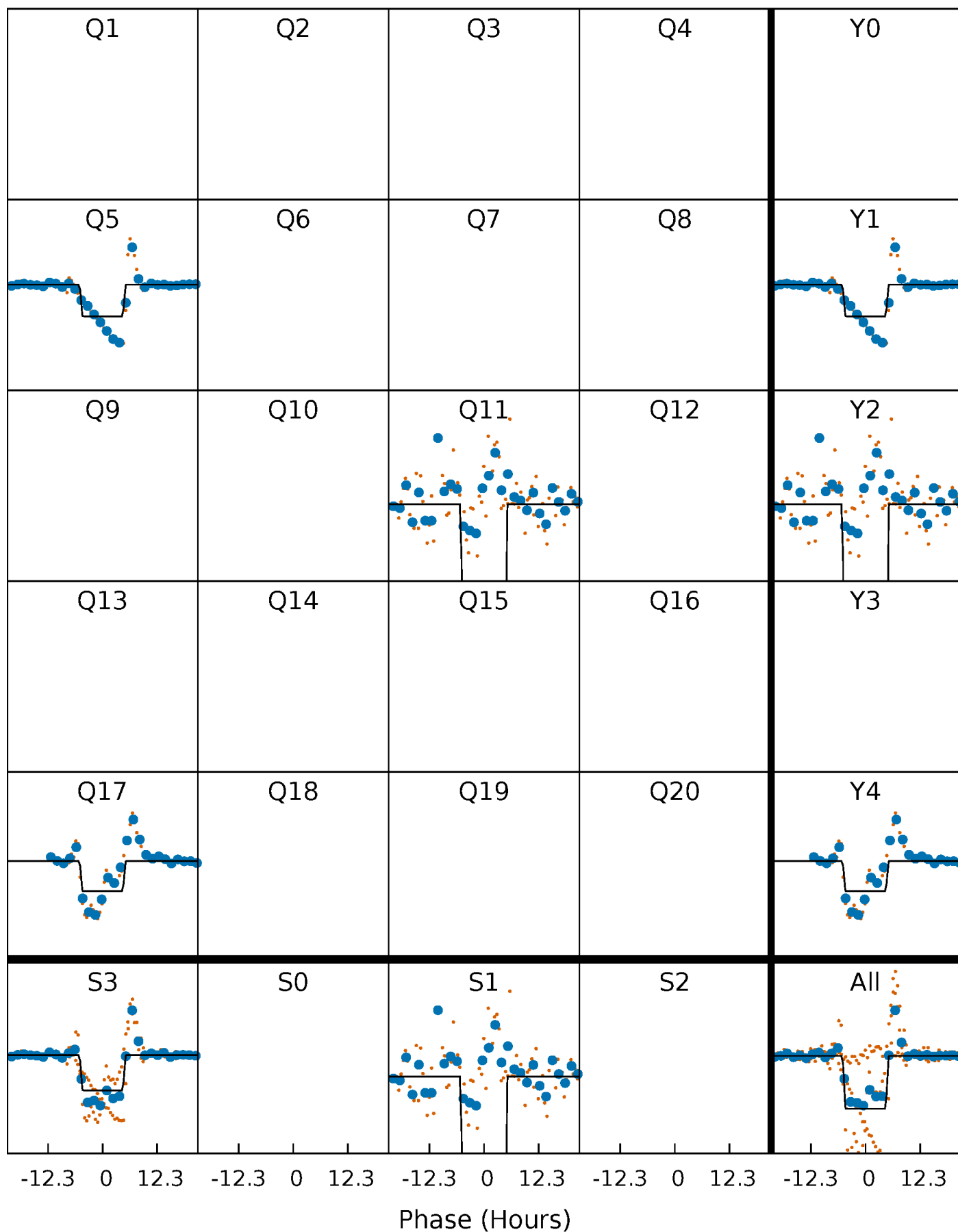
DV Quarter-Phased Transit Curves

TCE 003561372-02 $P=557.803777$ Days $T_0=452.487943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

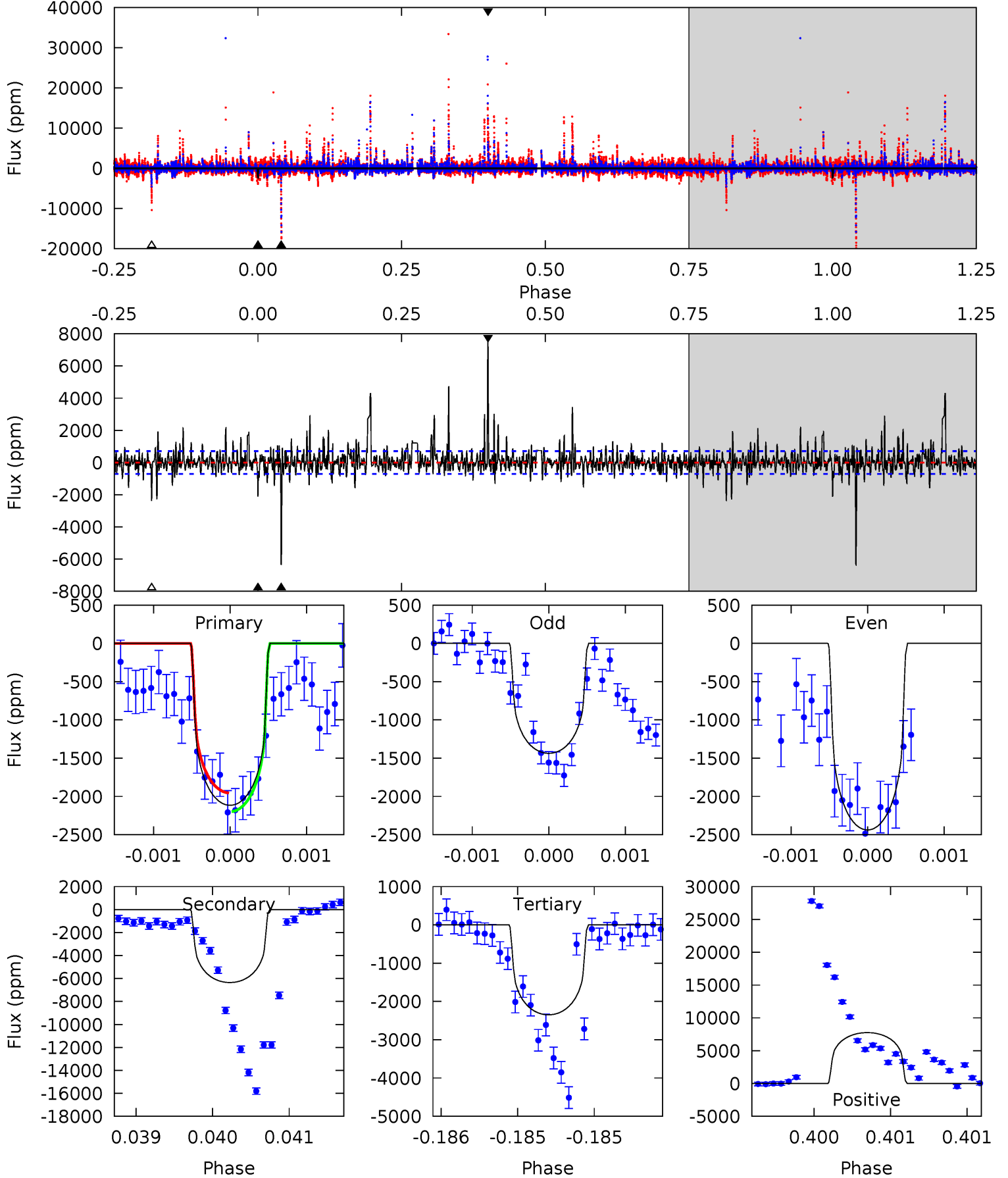
TCE 003561372-02 P=557.877055 Days $T_0=452.549340$ (BKJD)



DV Model-Shift Uniqueness Test

003561372-02, P = 557.803777 Days, E = 452.487943 Days

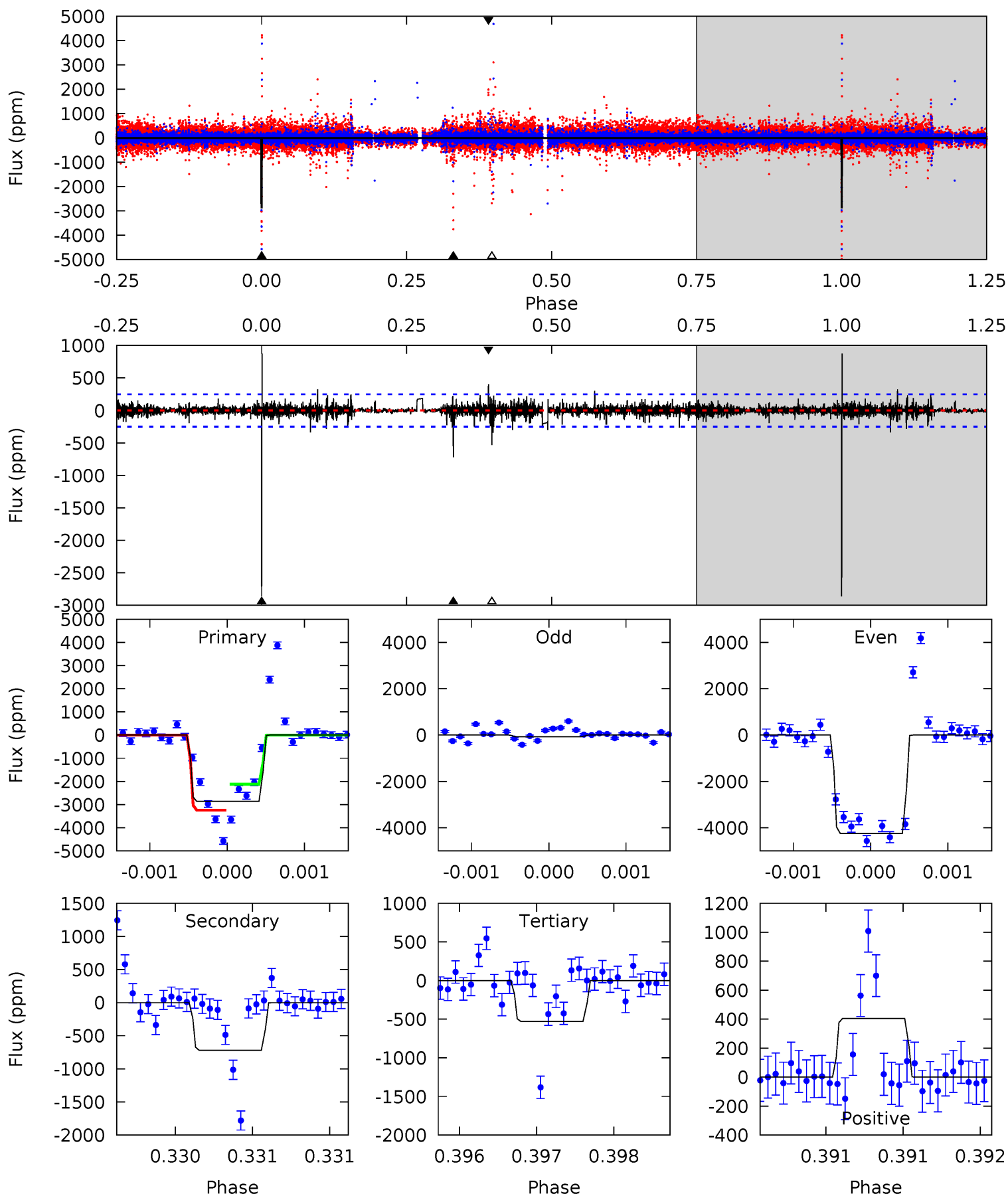
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	49.6	18.3	60.5	5.49	3.35	4.57	-1.82	-44.0	31.2	-10.9	1.33	0.87	0.55	0



Alt Model-Shift Uniqueness Test

003561372-02, P = 557.877055 Days, E = 452.549340 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	16.0	11.7	8.96	5.50	3.36	1.04	51.7	54.5	4.23	7.00	49.2	0.71	0.23	0



Stellar Parameters For KIC 003561372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4922^{+155}_{-173}	$2.721^{+1.947}_{-0.344}$	$-0.680^{+0.300}_{-0.350}$	$6.540^{+4.049}_{-5.567}$	$0.820^{+0.301}_{-0.246}$	$0.004^{+3.247}_{-0.003}$
	+3%/-4%	+72%/-13%	+44%/-51%	+62%/-85%	+37%/-30%	+78639%/-82%
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 003561372-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6353 ± 128	$29.00^{+37.66}_{-21.07}$	665^{+120}_{-182}	6114^{+5613}_{-1481}	6463^{+82501}_{-5197}
Alt.	-720 ± 45	$36.36^{+39.47}_{-24.01}$	654^{+133}_{-177}	3586^{+1253}_{-552}	484^{+3568}_{-377}

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

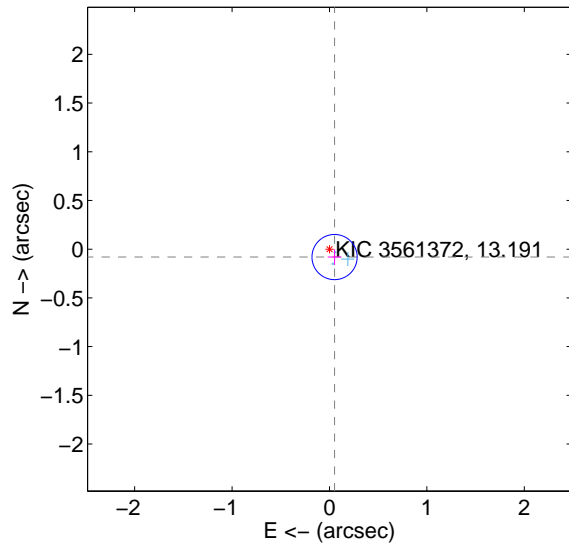
Supplemental centroid analysis for 003561372-02. Kepler magnitude: 13.19. Transit SNR 8.14

There are 3 quarters with good PRF difference image offsets

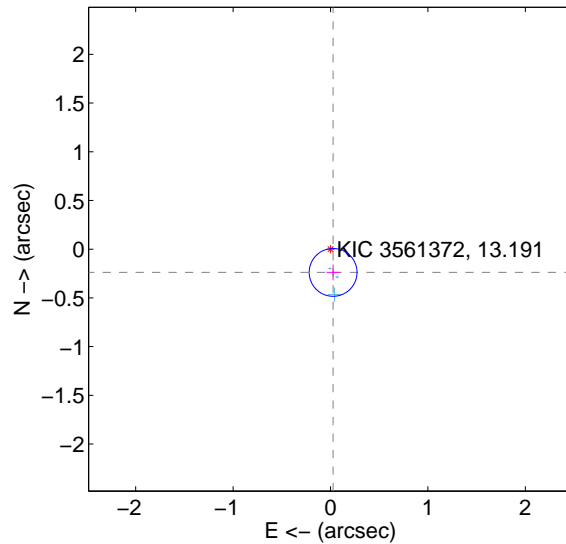
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.077	1.25	-0.052 ± 0.070	-0.081 ± 0.080
PRF-fit source offset from KIC position	0.240 ± 0.082	2.93	-0.027 ± 0.068	-0.238 ± 0.082
photometric centroid source offset	0.79 ± 0.43	1.84	-0.28 ± 0.32	-0.74 ± 0.44

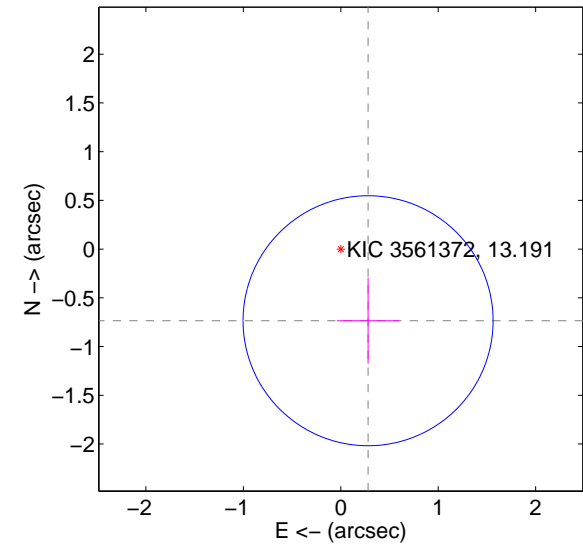
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

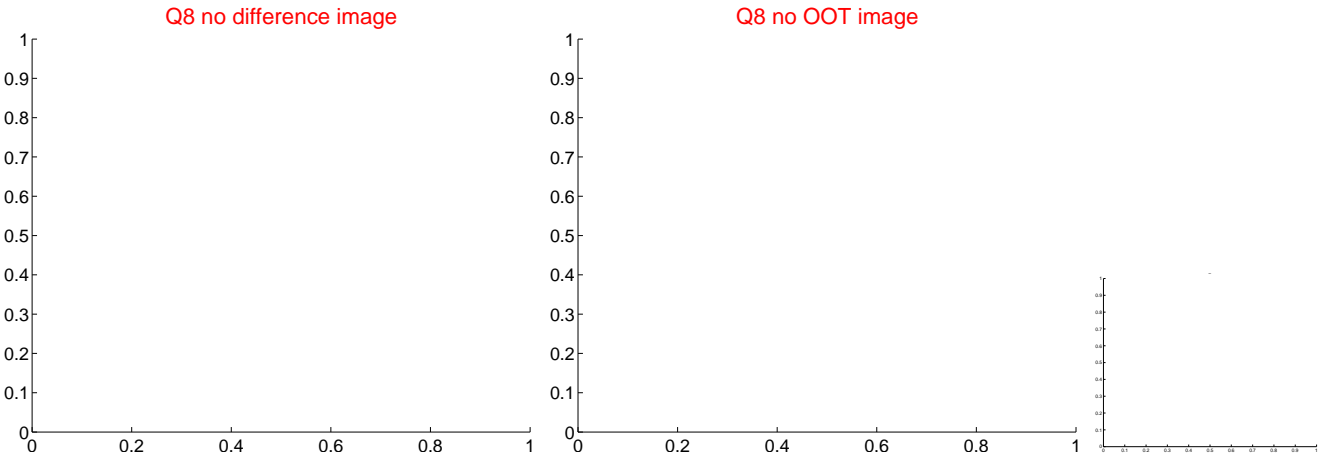
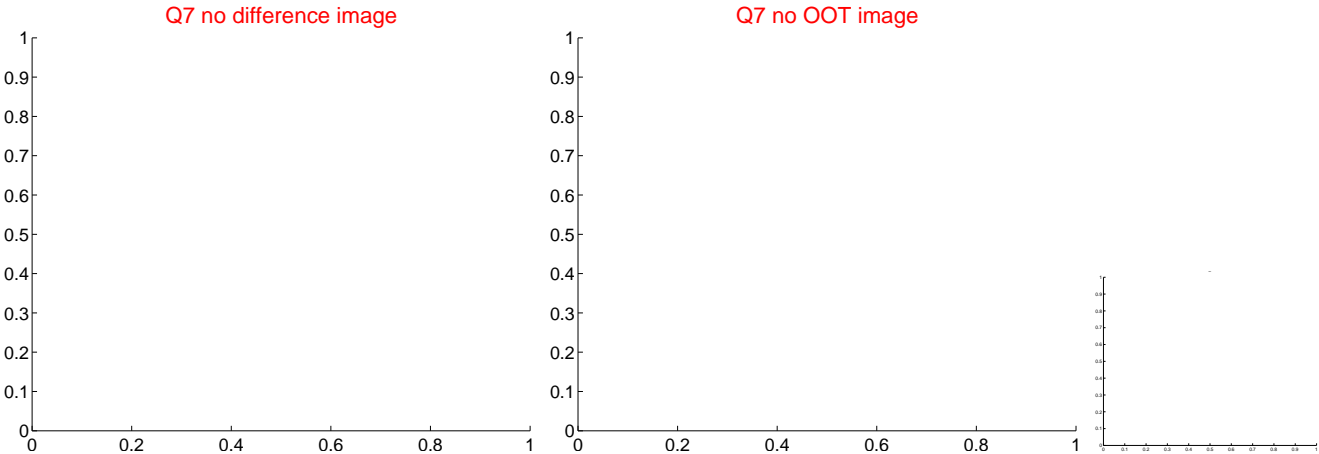
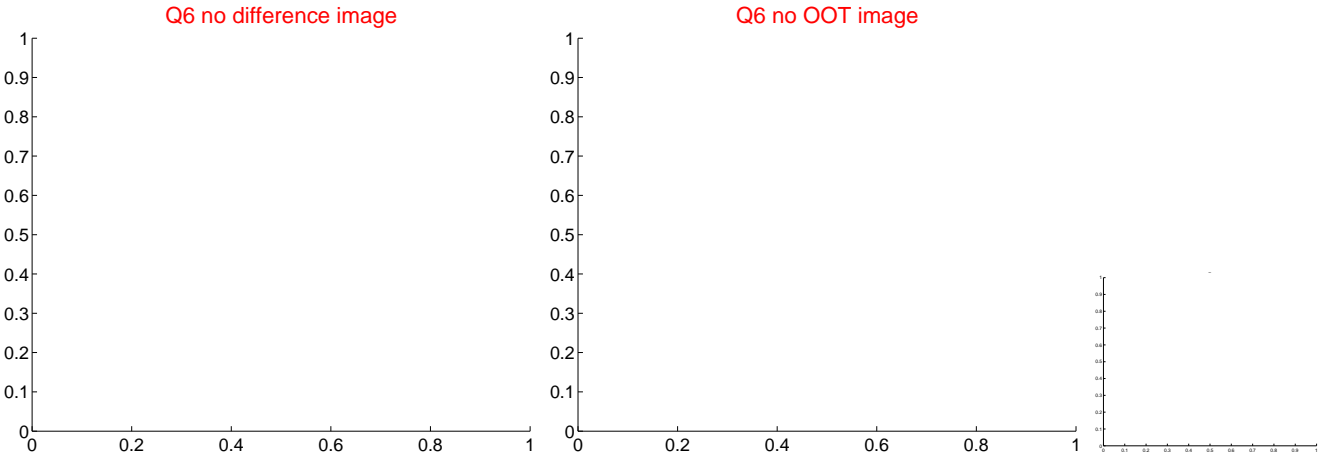
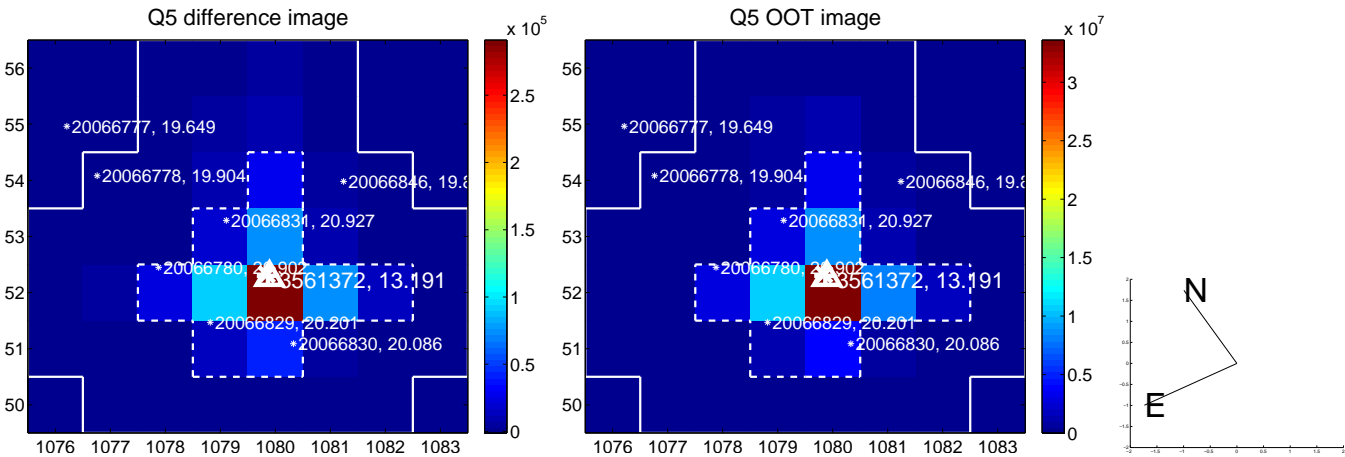


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

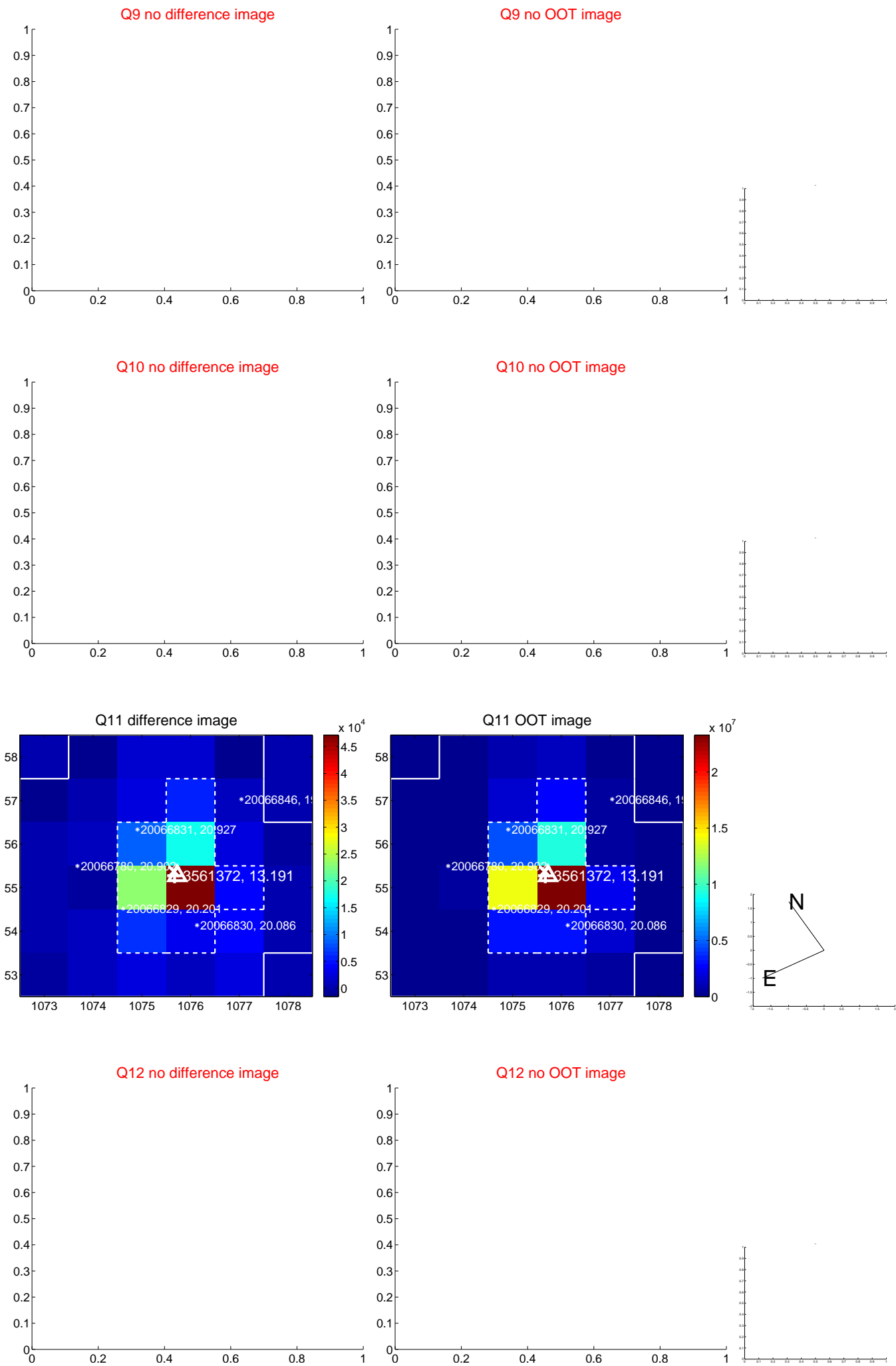
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



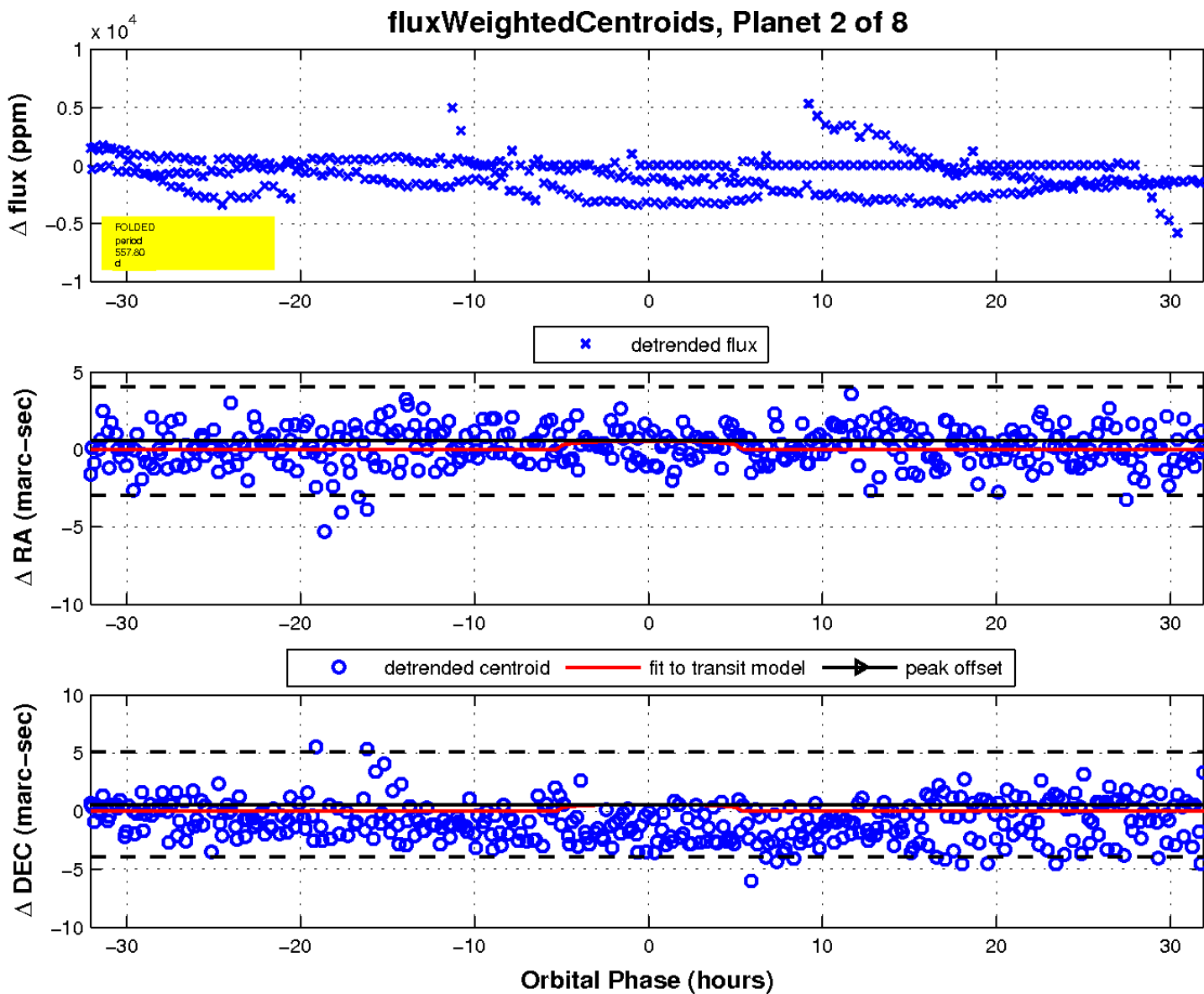
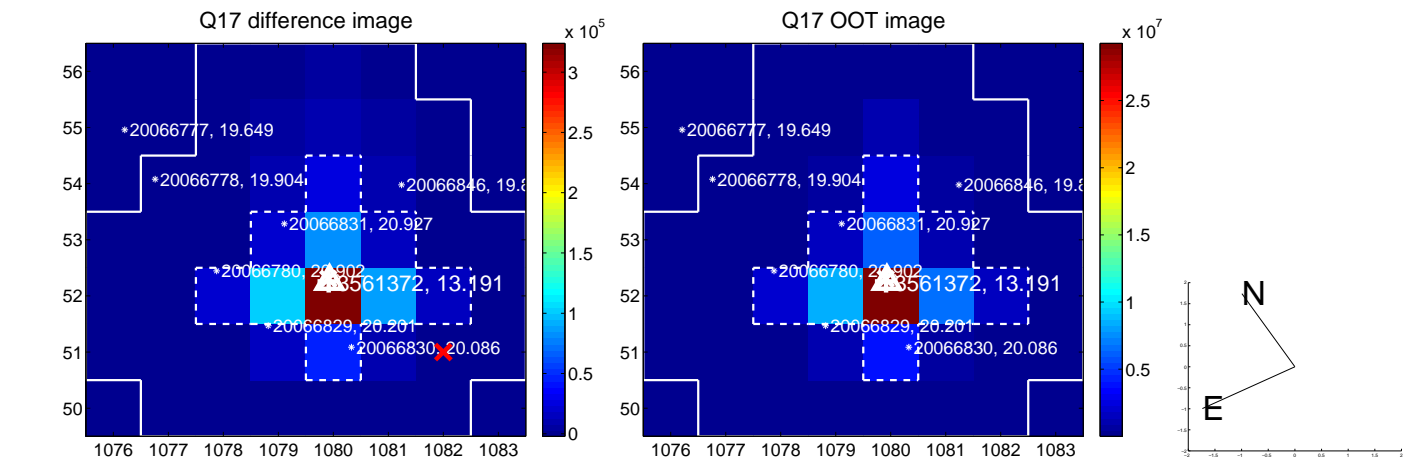
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

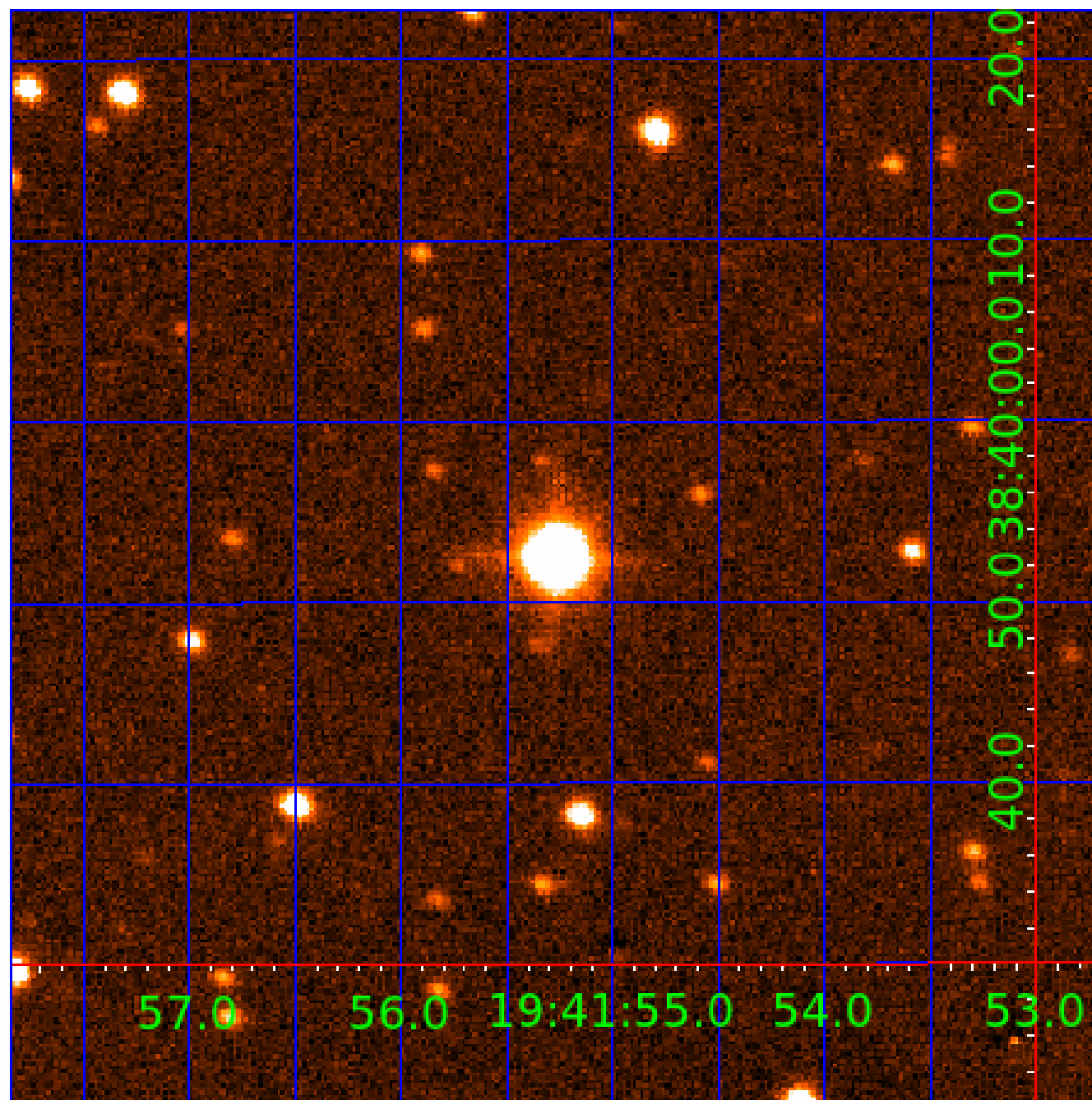


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003561372

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})
003561372-02	OBS	No	557.803777	452.487943	1735.7	10.711	20.6	8.1	6.54	4922	26.63	14.58
003561372-03	OBS	No	410.745837	214.851358	1145.6	8.747	52.8	5.9	6.54	4922	21.68	21.93
003561372-06	OBS	No	707.034628	157.260031	1774.0	11.618	18.4	9.0	6.54	4922	29.84	10.63
003561372-07	OBS	No	558.097645	461.751036	749.9	3.767	19.9	3.6	6.54	4922	18.79	14.57
003561372-08	OBS	No	361.810236	333.677231	799.7	5.000	16.2	-1.0	6.54	4922	18.06	25.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561372-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003561372-03	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_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

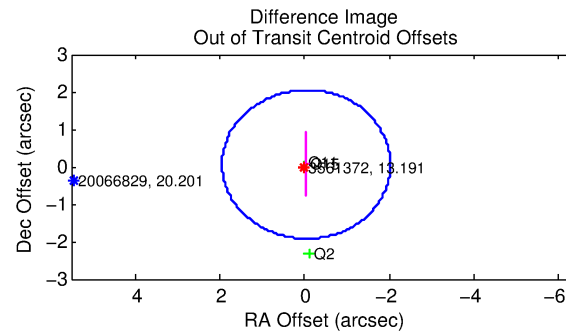
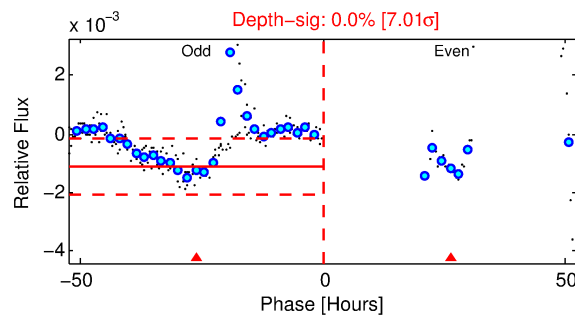
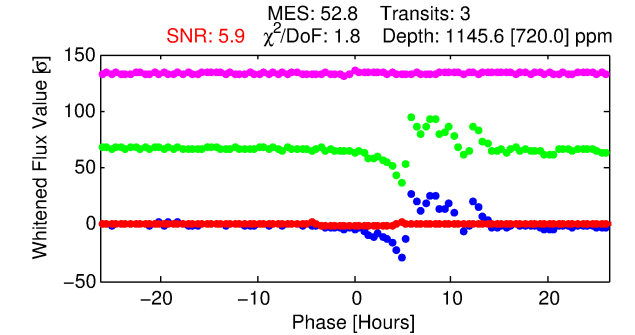
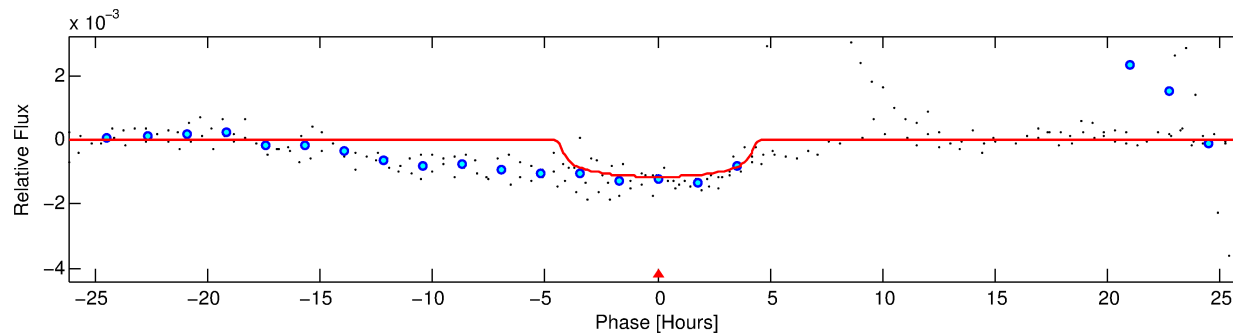
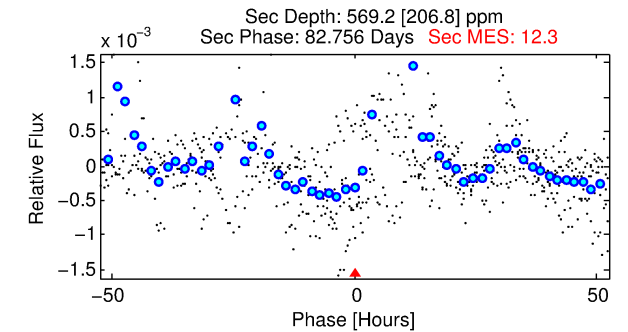
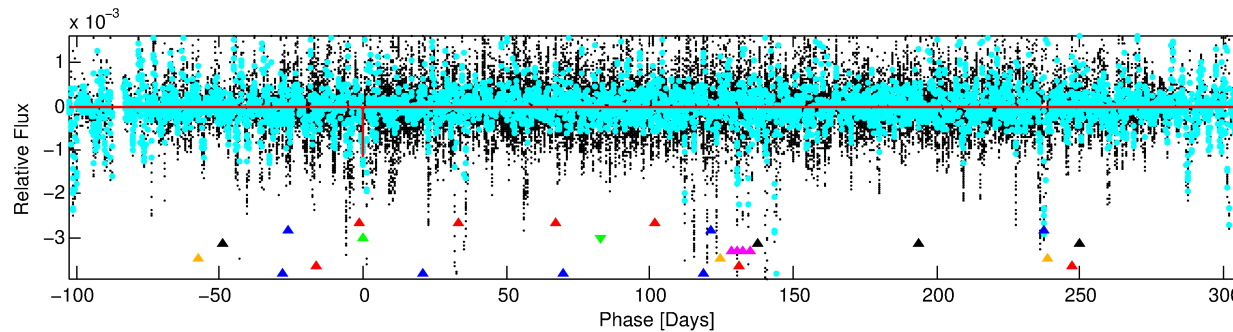
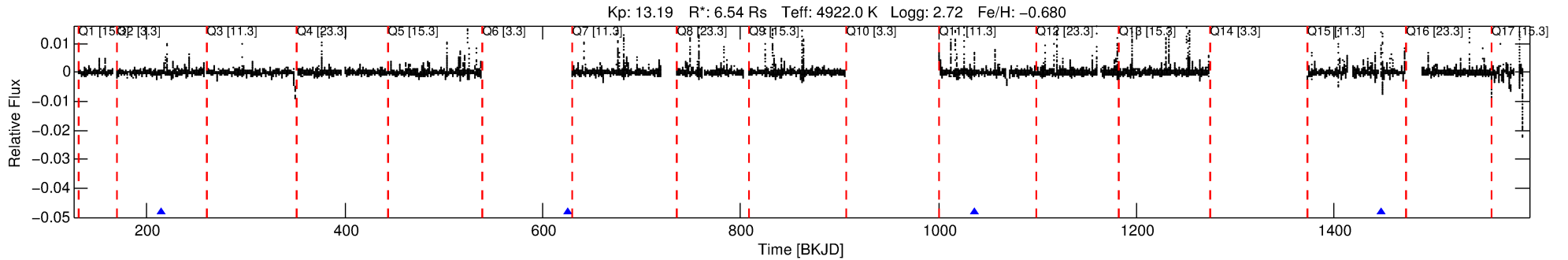
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561372-03

No Significant Match Found

DV One-Page Summary

KIC: 3561372 Candidate: 3 of 8 Period: 410.746 d



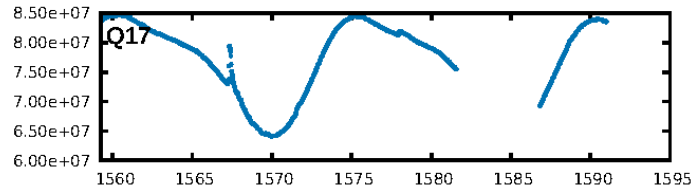
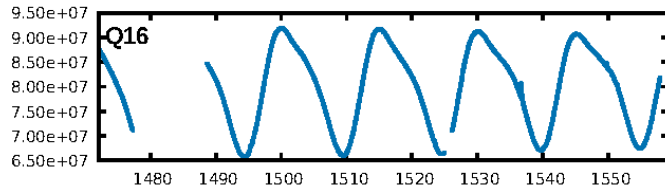
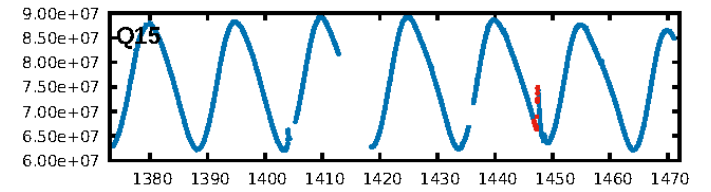
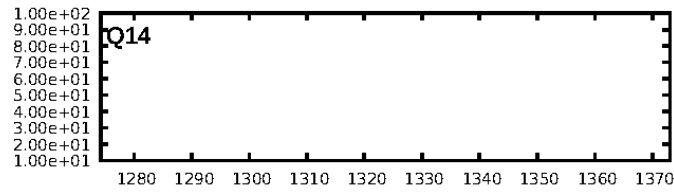
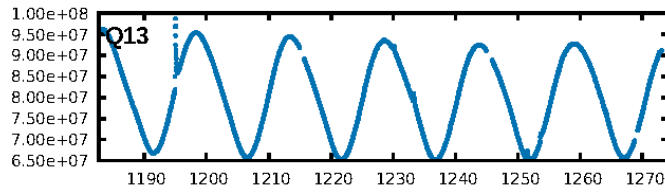
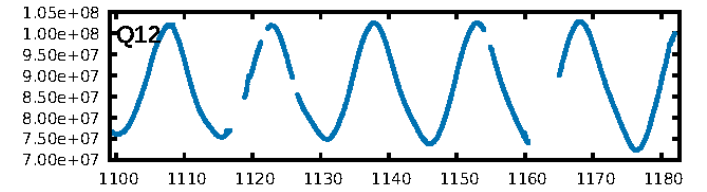
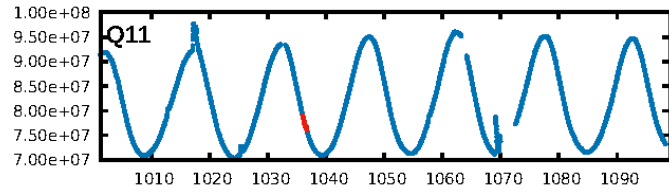
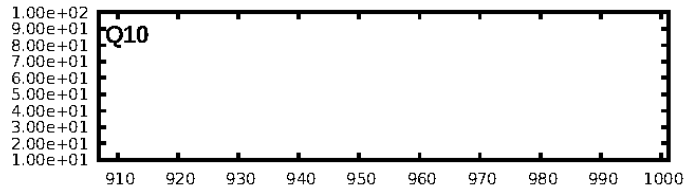
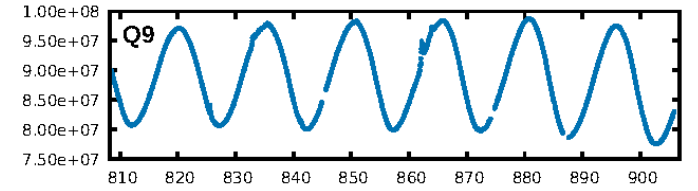
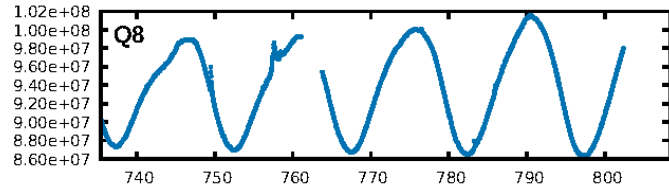
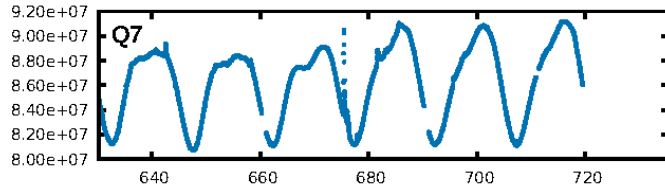
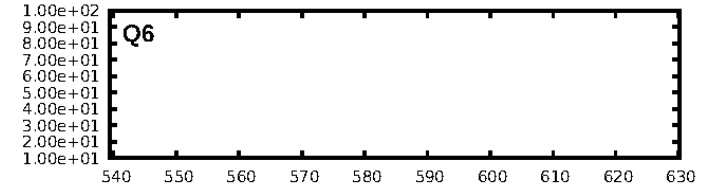
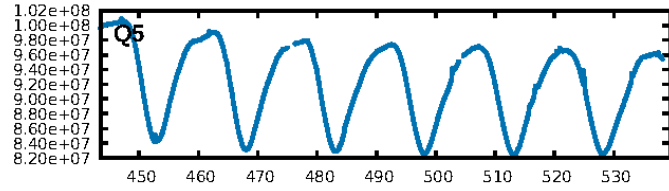
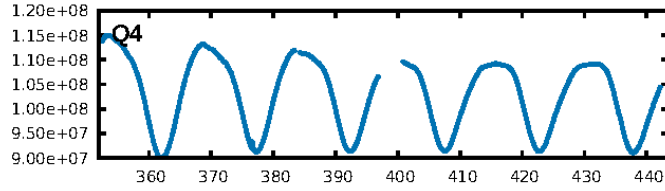
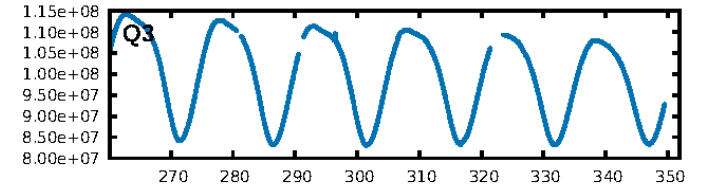
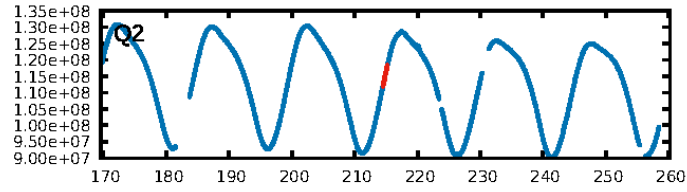
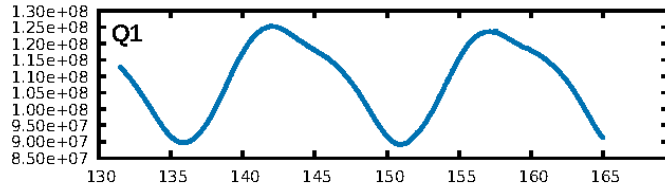
DV Fit Results:

Period = 410.74584 [0.01205] d
Epoch = 214.8514 [0.0200] BKJD
Rp/R* = 0.0304 [0.1069]
a/R* = 363.57 [4787.83]
b = 0.19 [68.98]
Seff = 21.93 [66.79]
Teq = 552 [420] K
Rp = 21.68 [78.51] Re
a = 1.0127 [1.6187] AU
Ag = 683.17 [5244.71] [0.13σ]
Teffp = 4362 [7688] K [0.49σ]

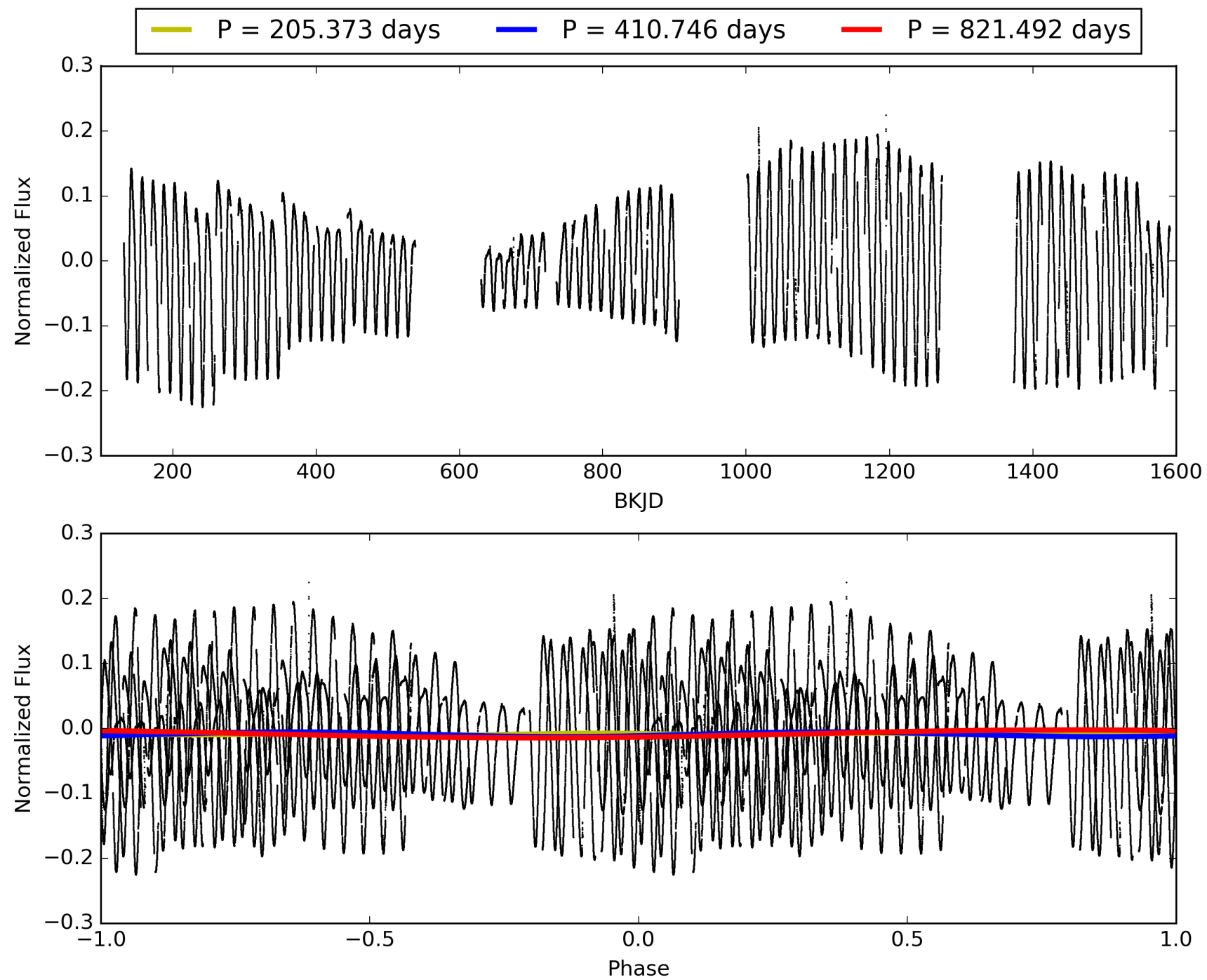
DV Diagnostic Results:

ShortPeriod-sig: 99.7% [3.02σ]
LongPeriod-sig: 100.0% [255.22σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 82.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.044
Centroid-sig: 30.4%
Centroid-so: 0.587 arcsec [0.84σ]
OotOffset-rm: 0.075 arcsec [0.11σ]
KicOffset-rm: 0.355 arcsec [0.75σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003561372-03, PDC Light Curves

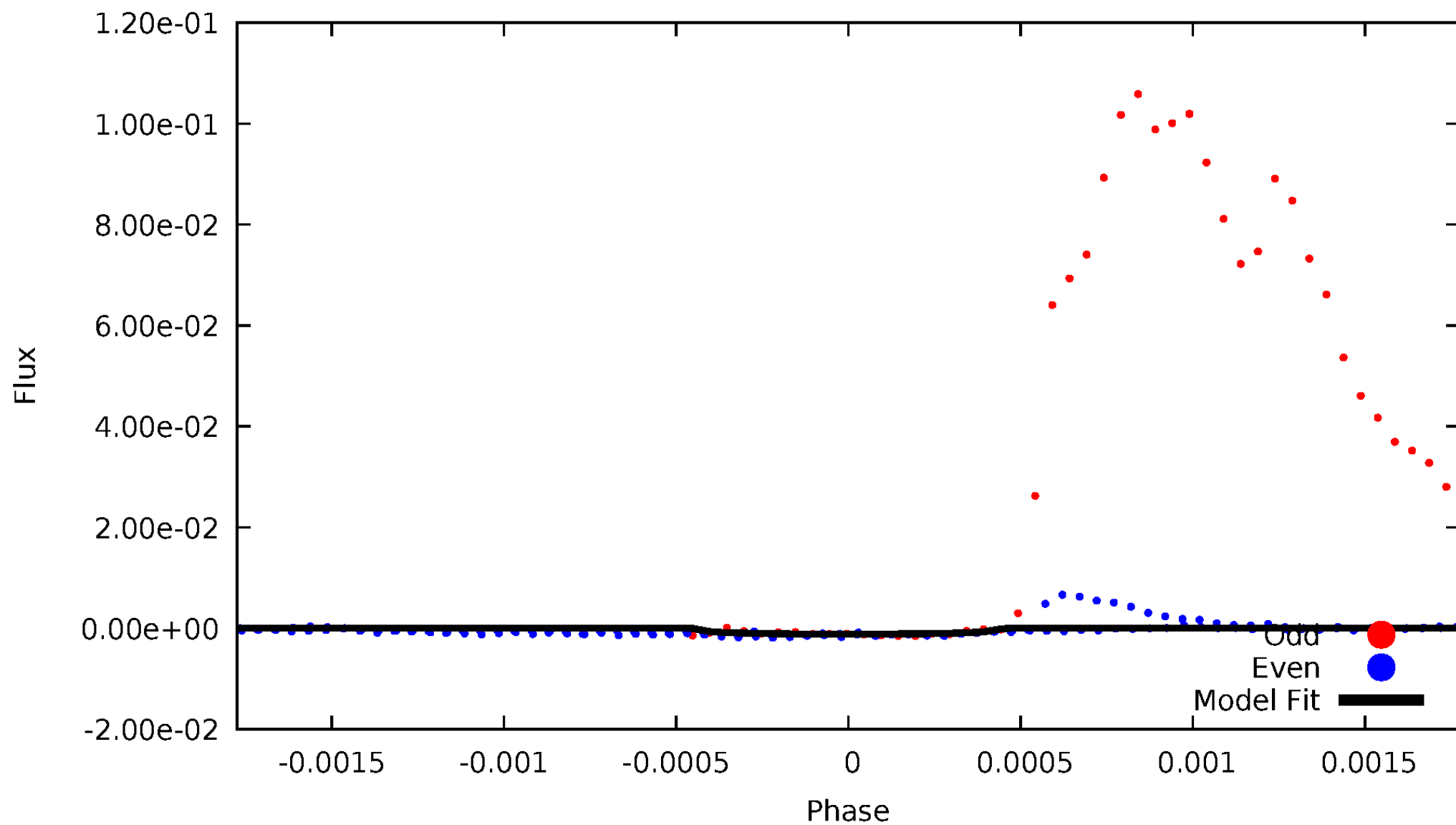


TCE 003561372-03



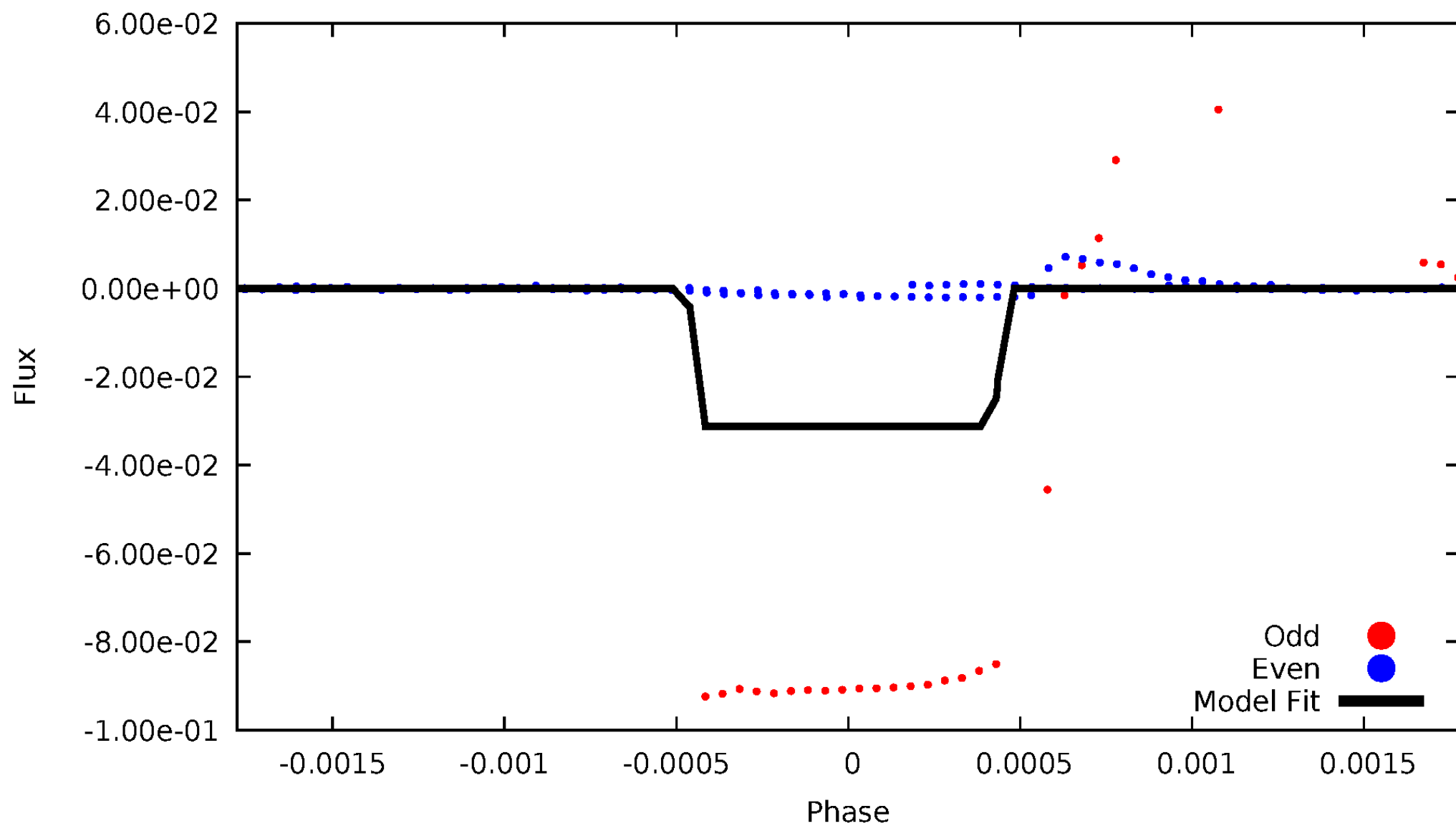
DV Odd/Even

TCE 003561372-03



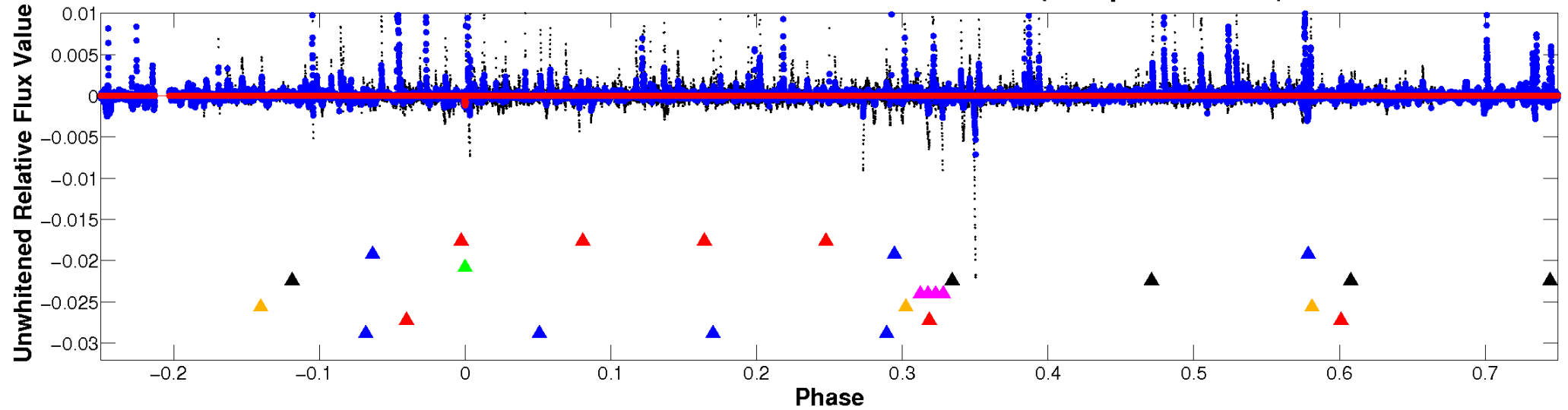
ALT Odd/Even

TCE 003561372-03

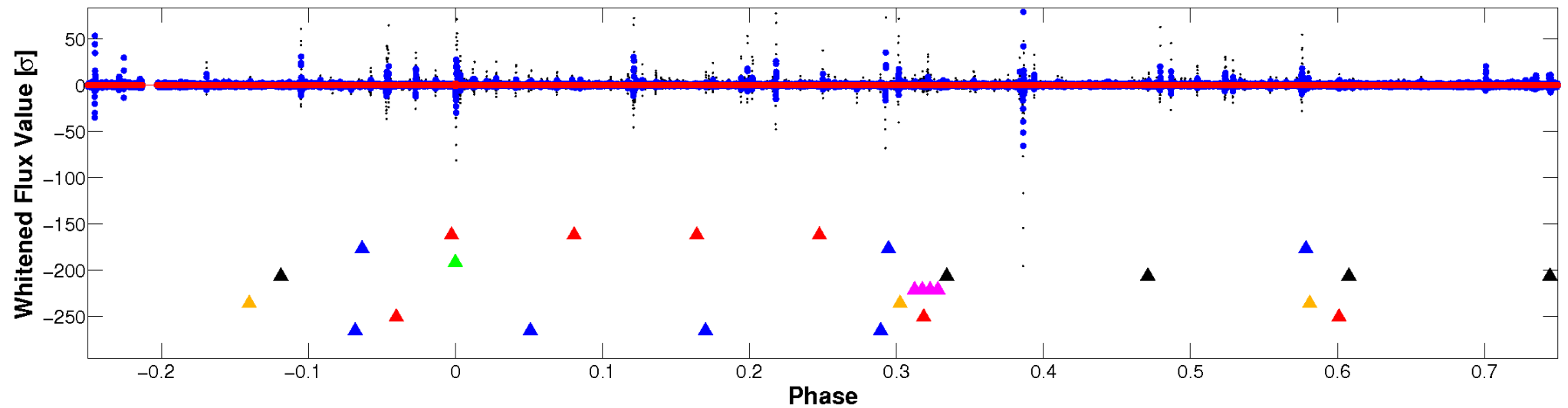


Non-Whitened Vs. Whitened Light Curve

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

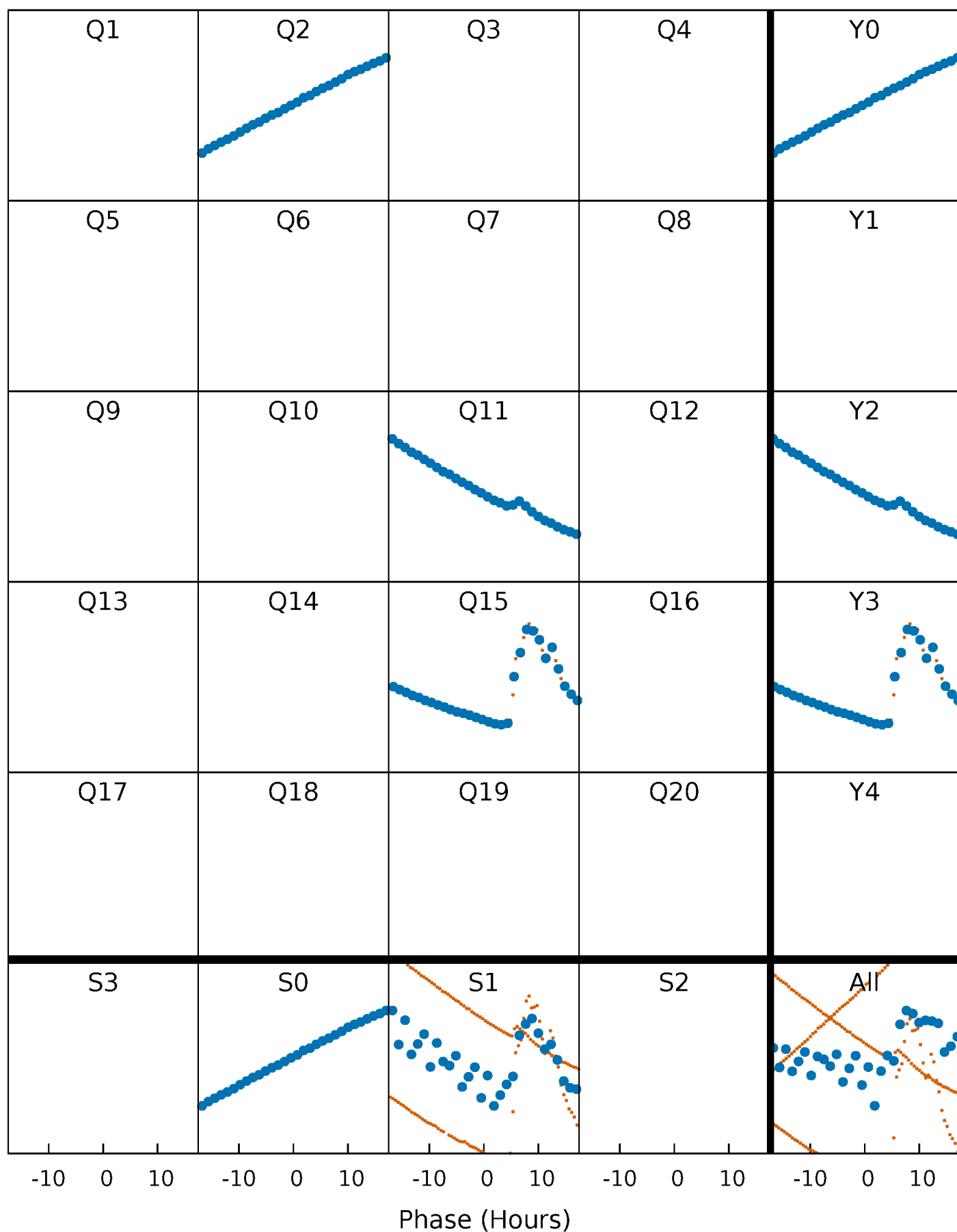


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



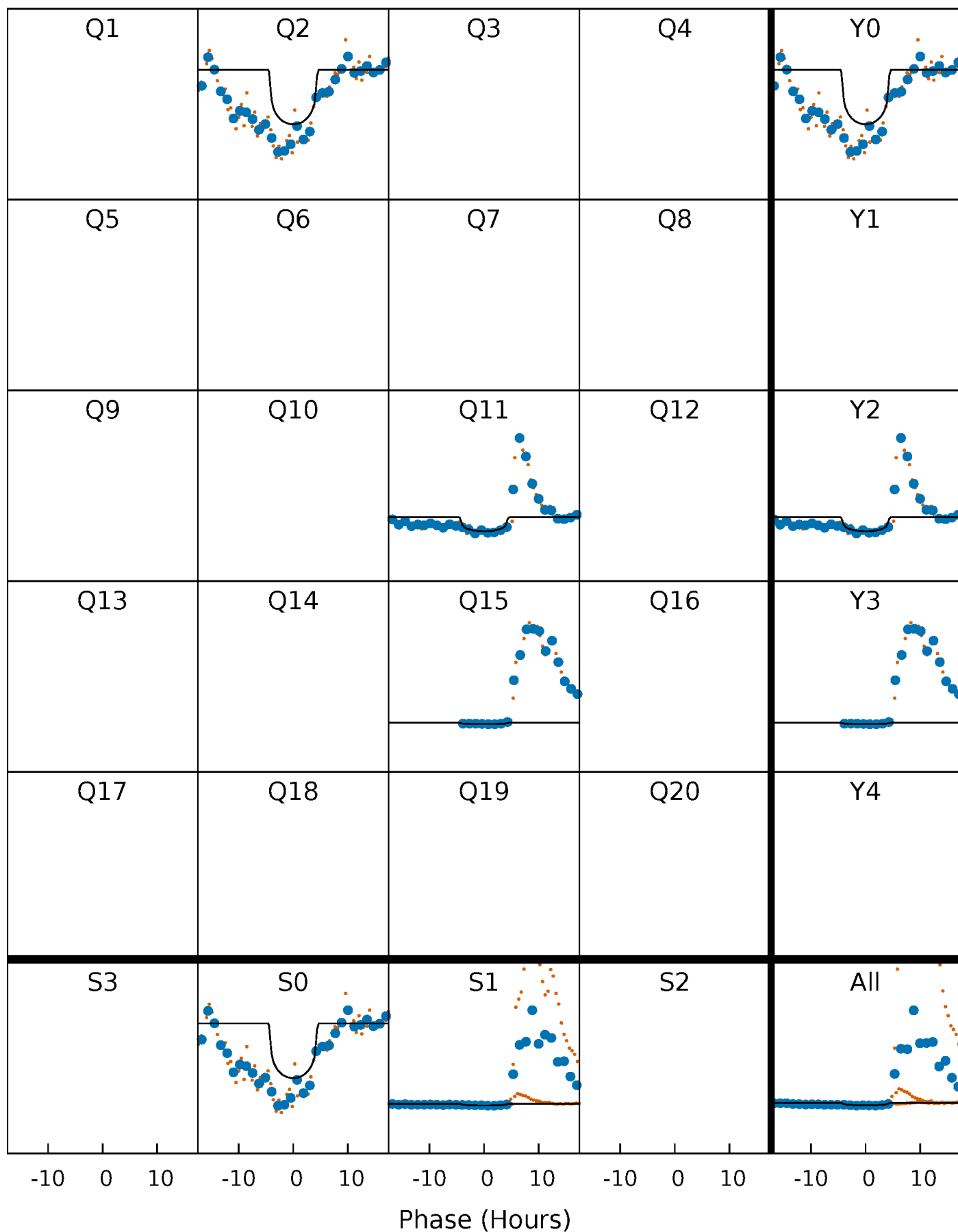
PDC Quarter-Phased Transit Curves

TCE 003561372-03 P=410.745837 Days $T_0=214.851358$ (BKJD)



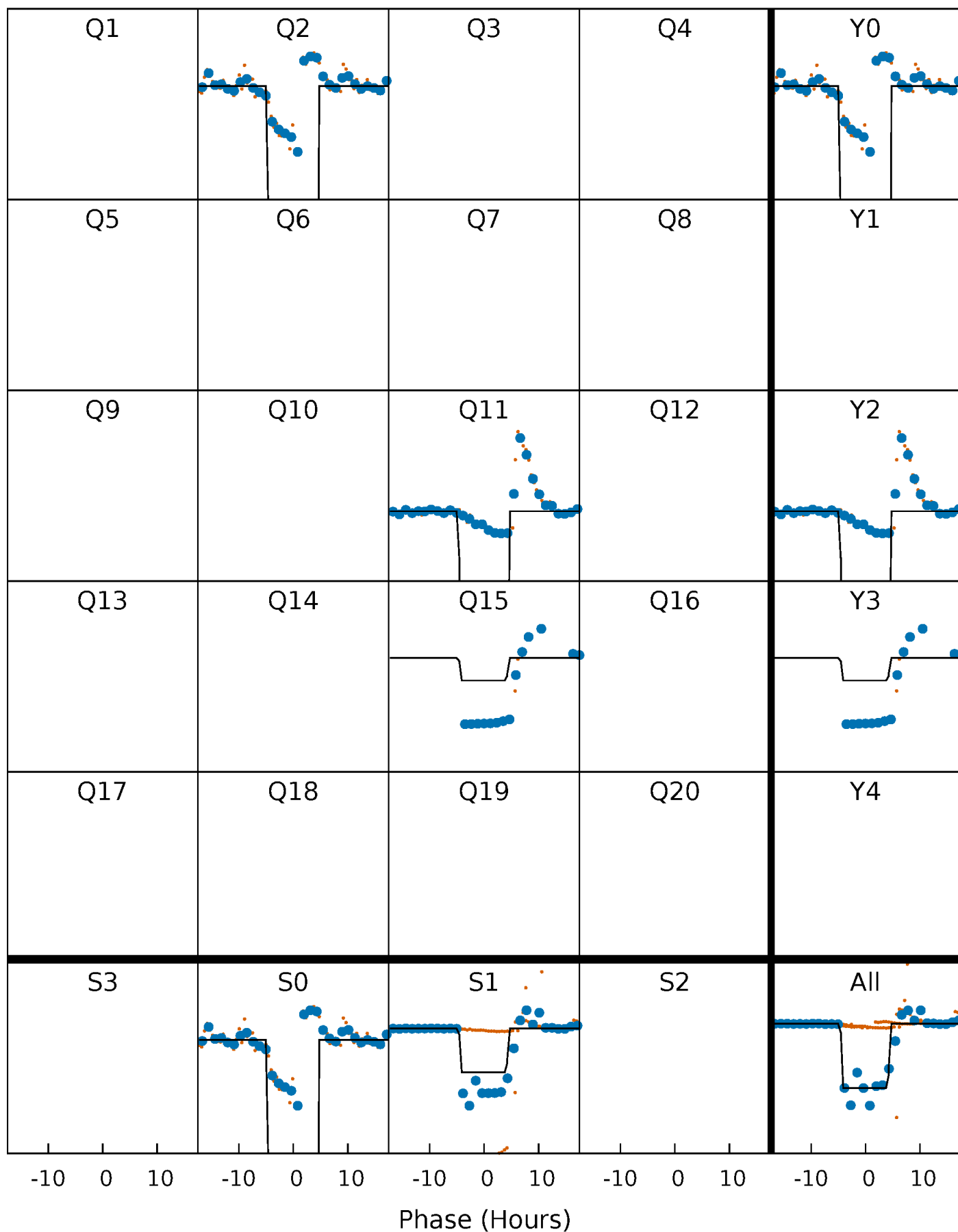
DV Quarter-Phased Transit Curves

TCE 003561372-03 $P=410.745837$ Days $T_0=214.851358$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

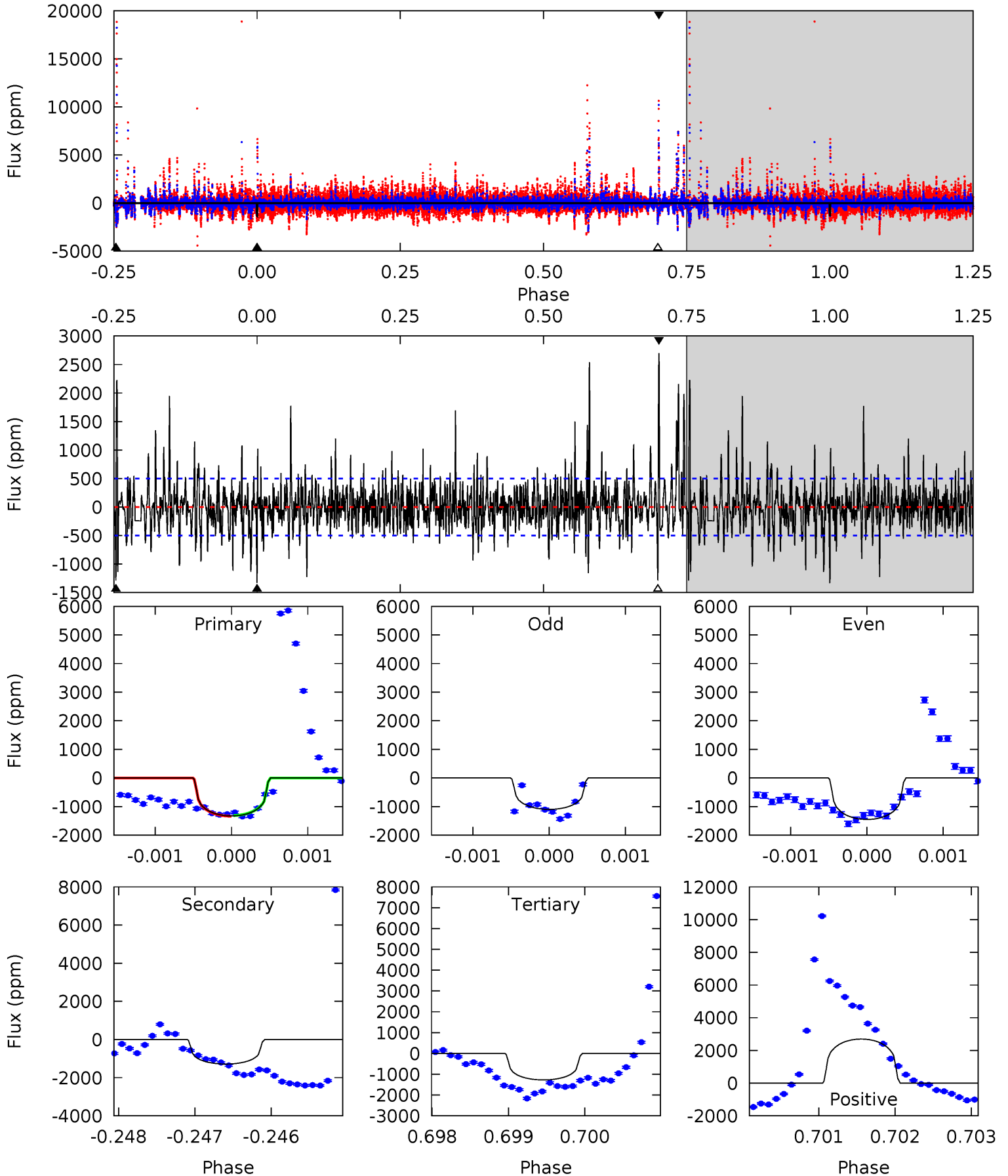
TCE 003561372-03 P=410.734989 Days $T_0=214.868947$ (BKJD)



DV Model-Shift Uniqueness Test

003561372-03, P = 410.745837 Days, E = 214.851358 Days

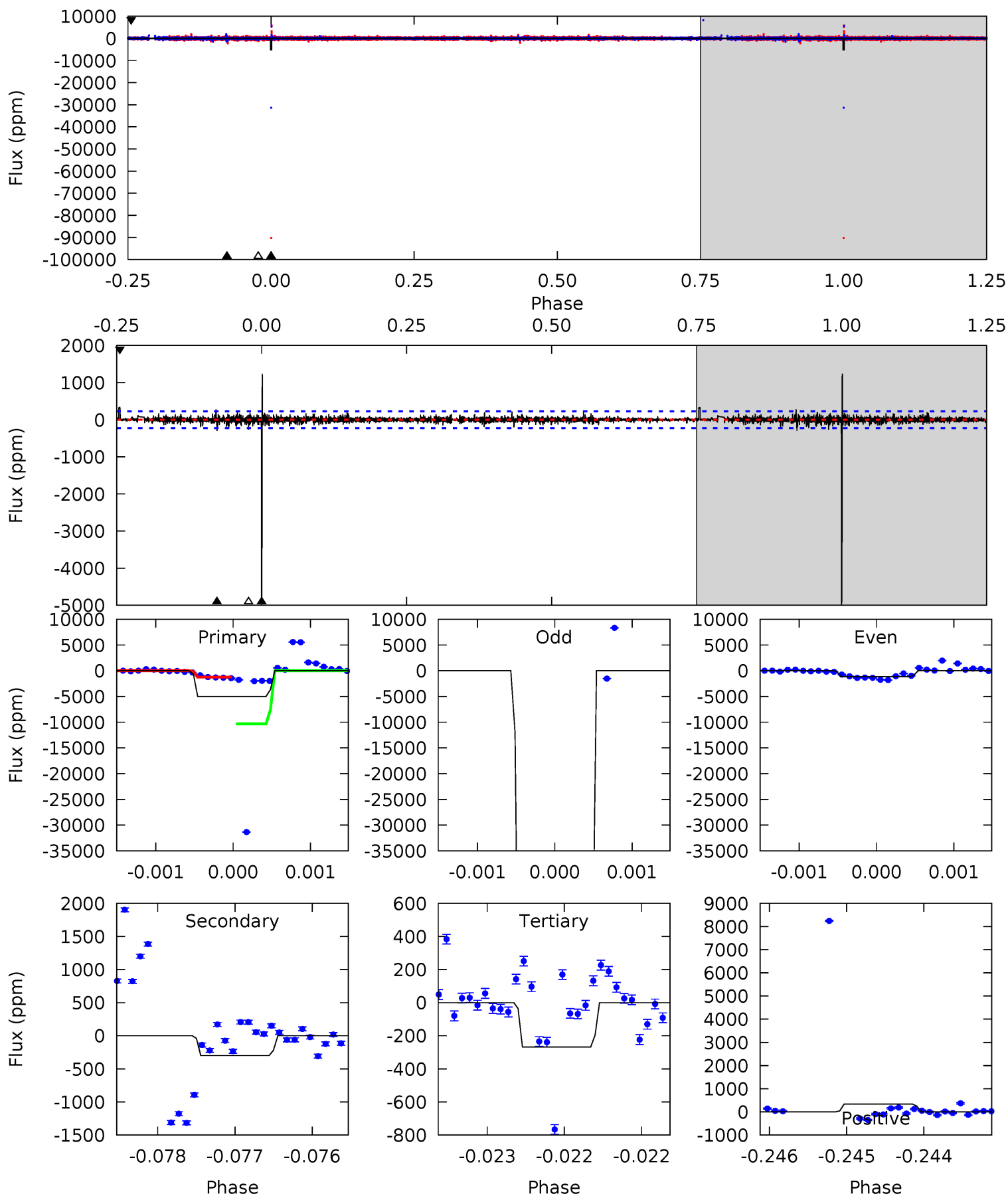
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	14.1	14.0	29.5	5.47	3.31	3.74	0.57	-15.0	0.12	-15.4	0.68	1.05	0.67	0.12



Alt Model-Shift Uniqueness Test

003561372-03, P = 410.734989 Days, E = 214.868947 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.8	7.27	6.48	8.17	5.47	3.32	1.11	114.4	112.7	0.78	-0.91	838.7	22.3	0.20	109.5



Stellar Parameters For KIC 003561372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4922^{+155}_{-173}	$2.721^{+1.947}_{-0.344}$	$-0.680^{+0.300}_{-0.350}$	$6.540^{+4.049}_{-5.567}$	$0.820^{+0.301}_{-0.246}$	$0.004^{+3.247}_{-0.003}$
	+3%/-4%	+72%/-13%	+44%/-51%	+62%/-85%	+37%/-30%	+78639%/-82%
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 003561372-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1286 ± 91	$48.66^{+72.74}_{-37.04}$	725^{+150}_{-206}	3525^{+2188}_{-602}	332^{+4822}_{-279}
Alt.	-300 ± 41	$105.15^{+102.26}_{-64.46}$	731^{+145}_{-213}	2361^{+431}_{-233}	15^{+91}_{-11}

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 $A_{obs} \gg 1.0$

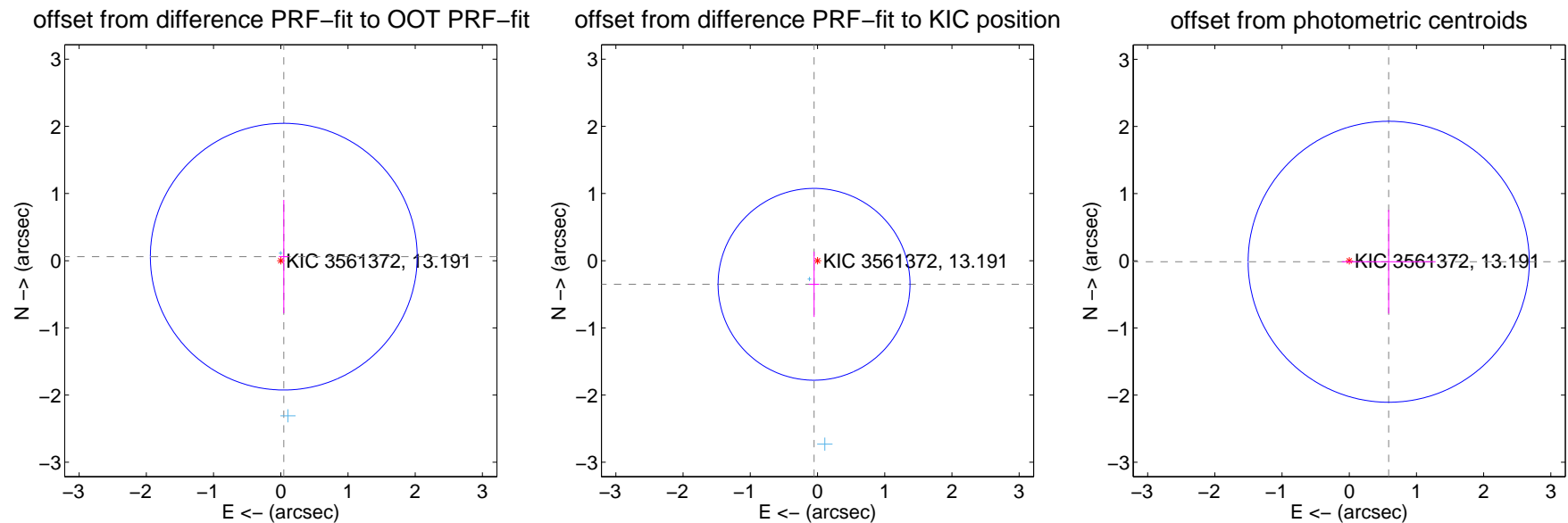
DV Centroid Data

Supplemental centroid analysis for 003561372-03. Kepler magnitude: 13.19. Transit SNR 5.92

There are 3 quarters with good PRF difference image offsets

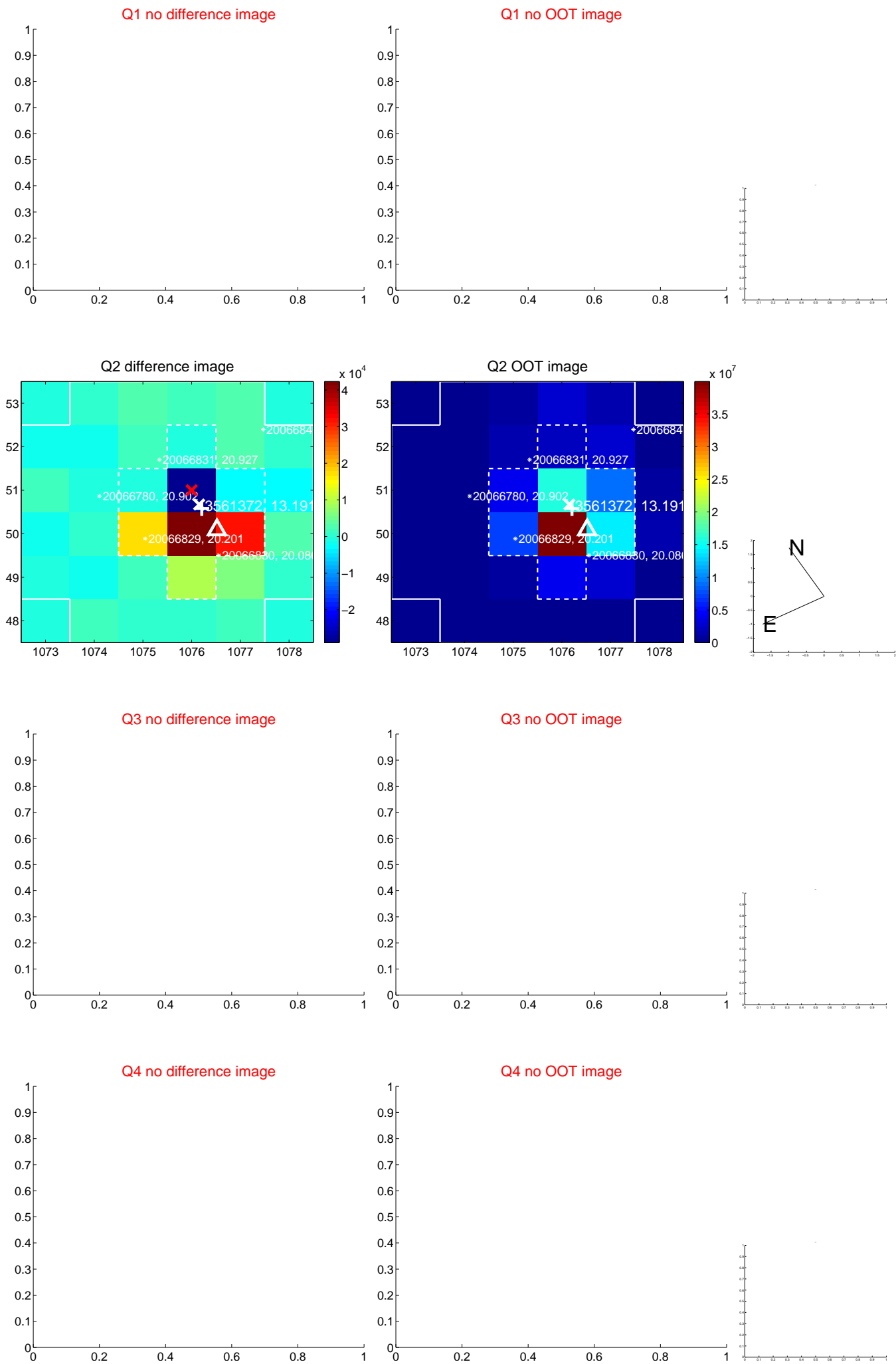
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.662	0.11	-0.045 ± 0.073	0.060 ± 0.844
PRF-fit source offset from KIC position	0.355 ± 0.476	0.75	0.051 ± 0.077	-0.351 ± 0.486
photometric centroid source offset	0.59 ± 0.70	0.84	-0.59 ± 0.70	-0.01 ± 0.77



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.

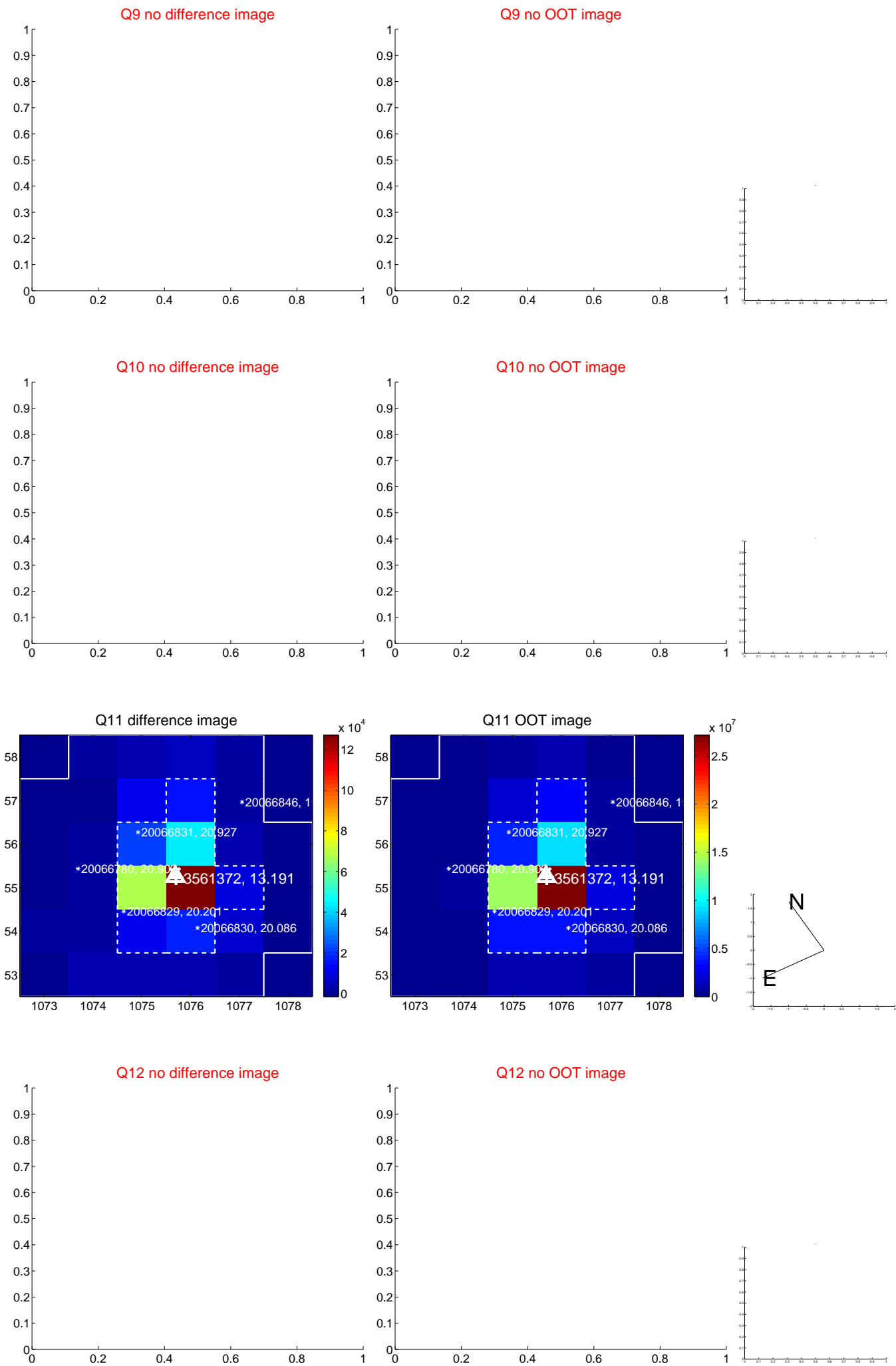
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



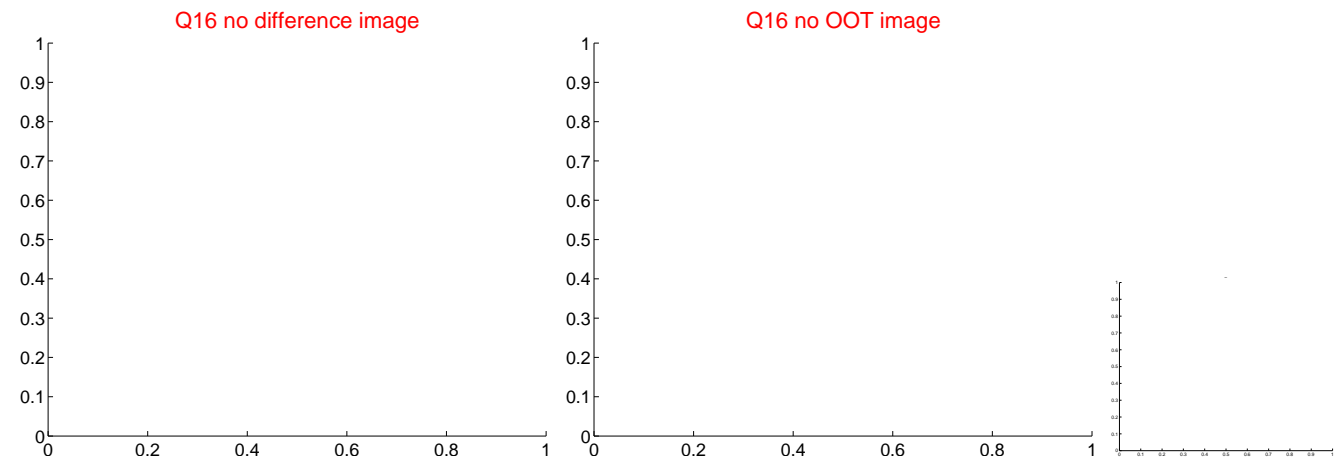
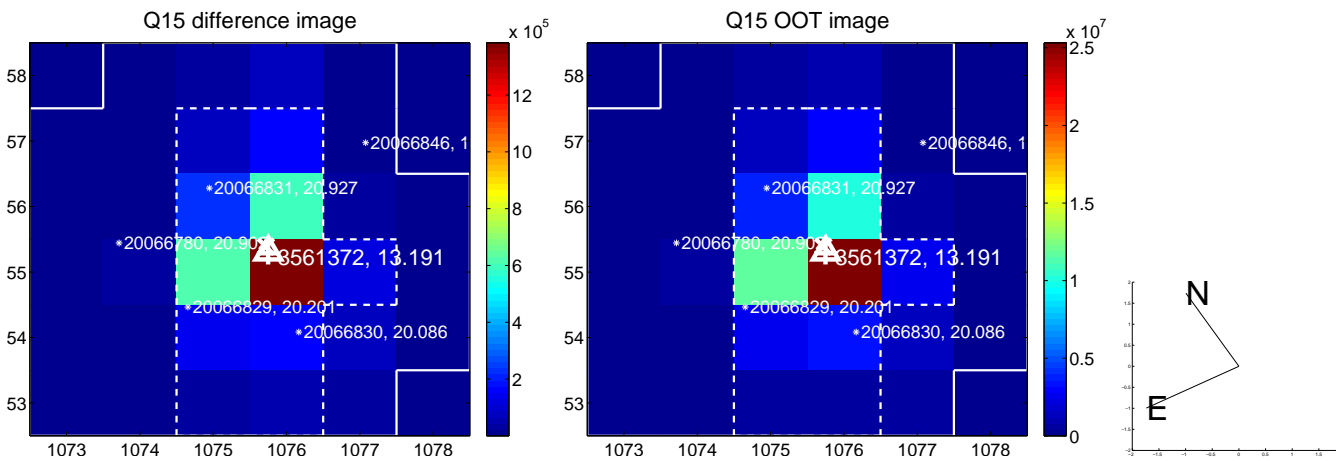
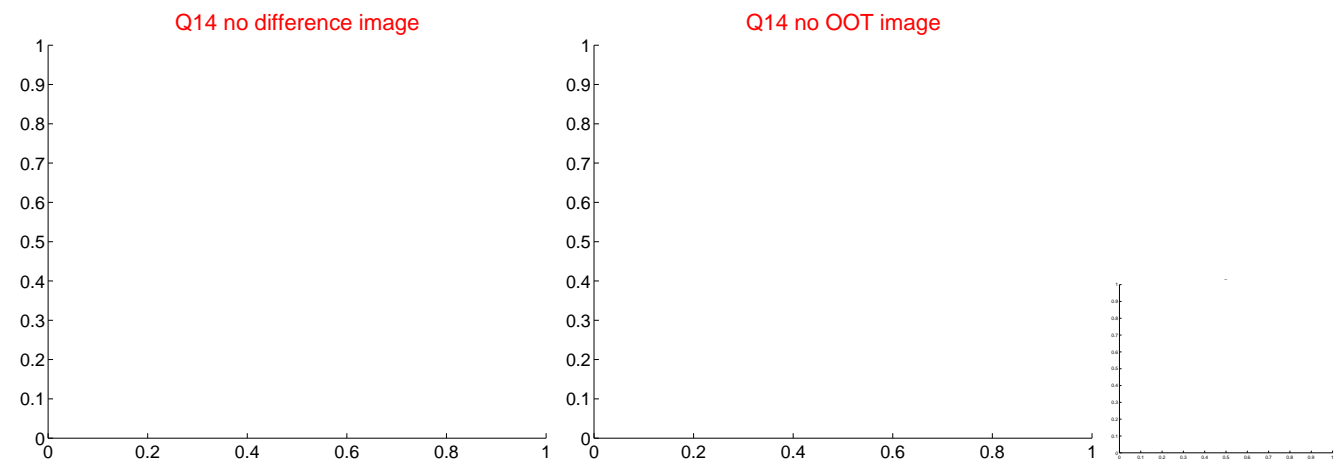
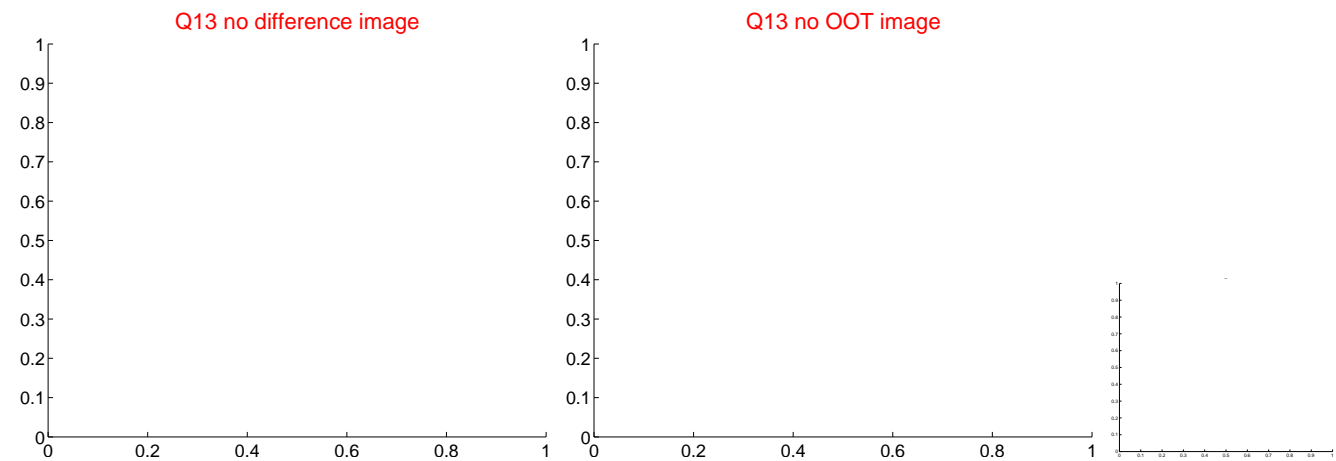
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



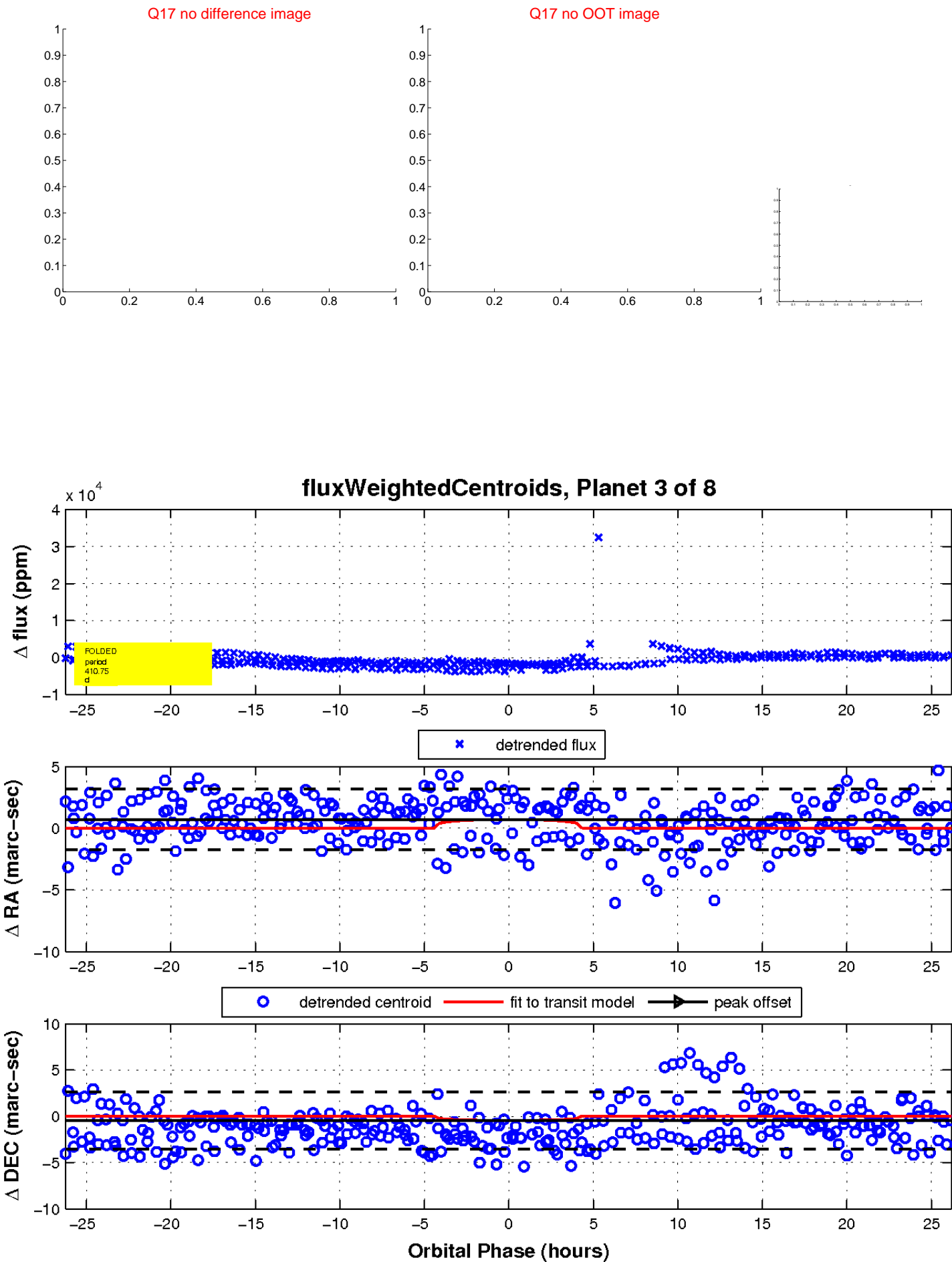
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

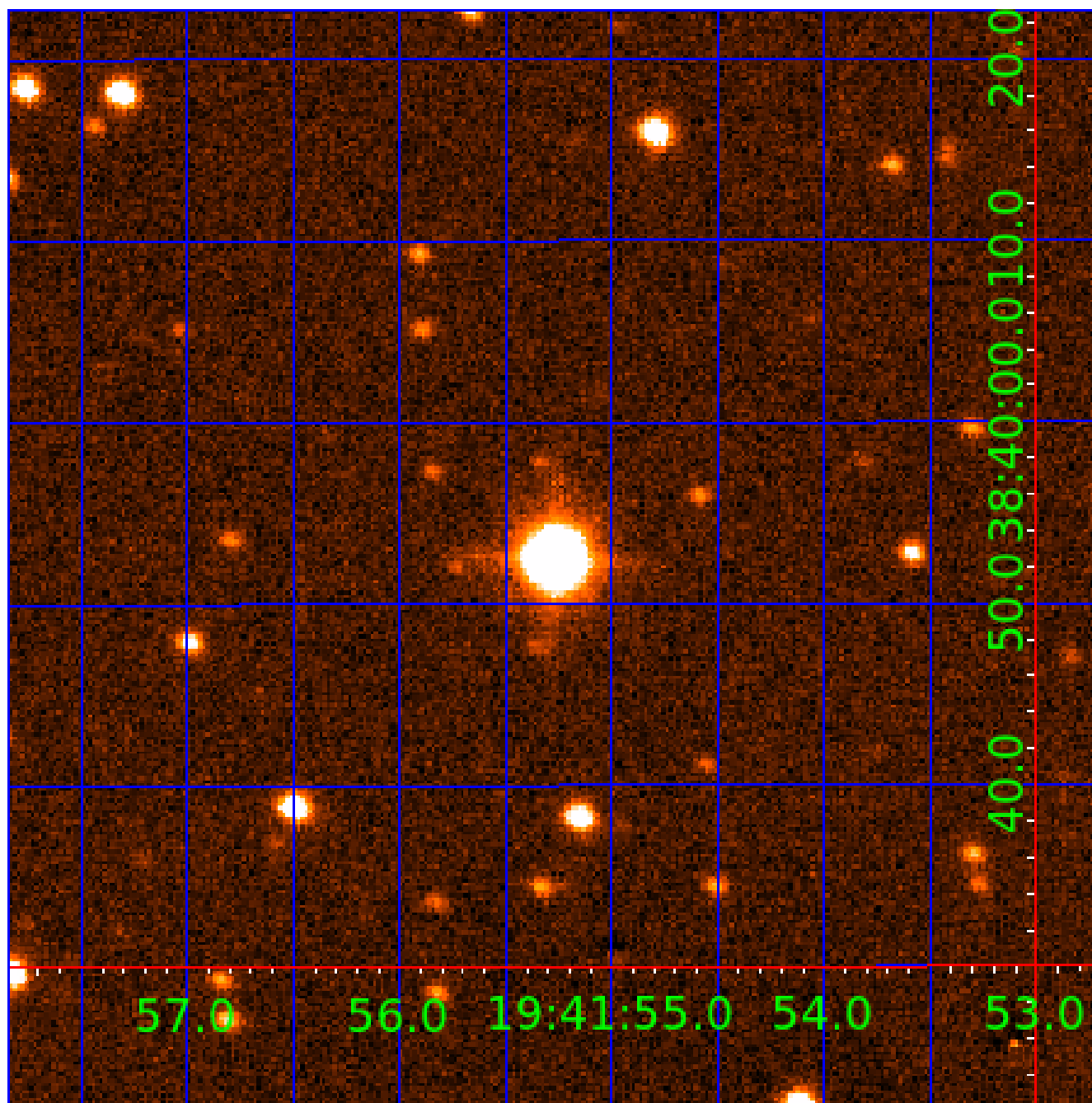


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003561372

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})
003561372-02	OBS	No	557.803777	452.487943	1735.7	10.711	20.6	8.1	6.54	4922	26.63	14.58
003561372-03	OBS	No	410.745837	214.851358	1145.6	8.747	52.8	5.9	6.54	4922	21.68	21.93
003561372-06	OBS	No	707.034628	157.260031	1774.0	11.618	18.4	9.0	6.54	4922	29.84	10.63
003561372-07	OBS	No	558.097645	461.751036	749.9	3.767	19.9	3.6	6.54	4922	18.79	14.57
003561372-08	OBS	No	361.810236	333.677231	799.7	5.000	16.2	-1.0	6.54	4922	18.06	25.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561372-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003561372-03	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_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

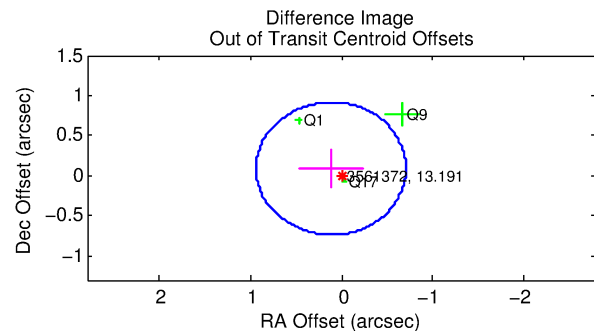
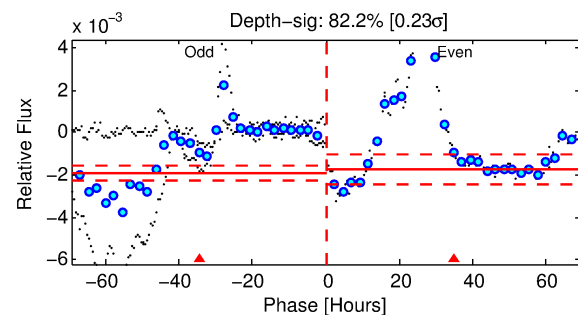
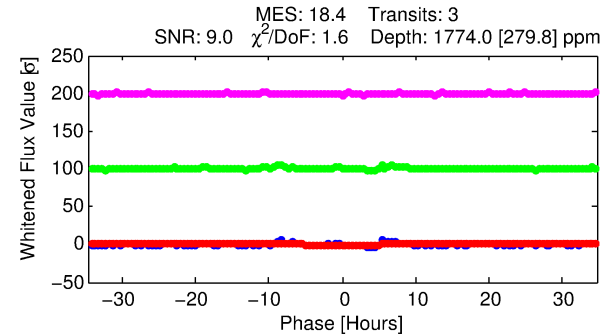
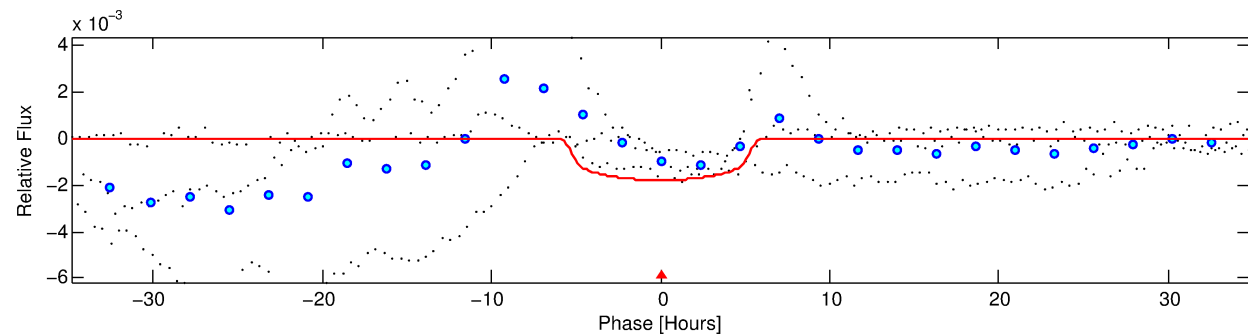
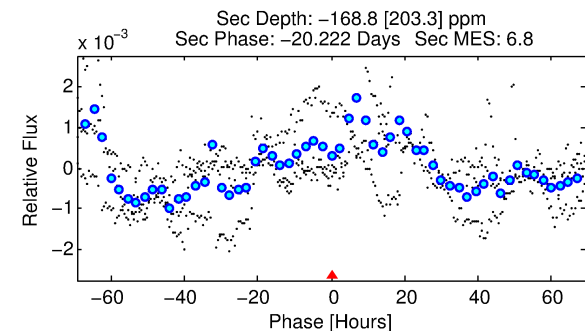
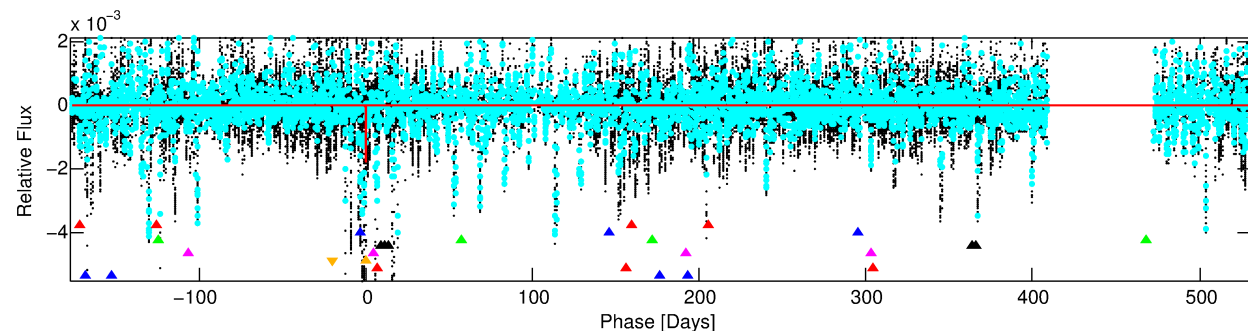
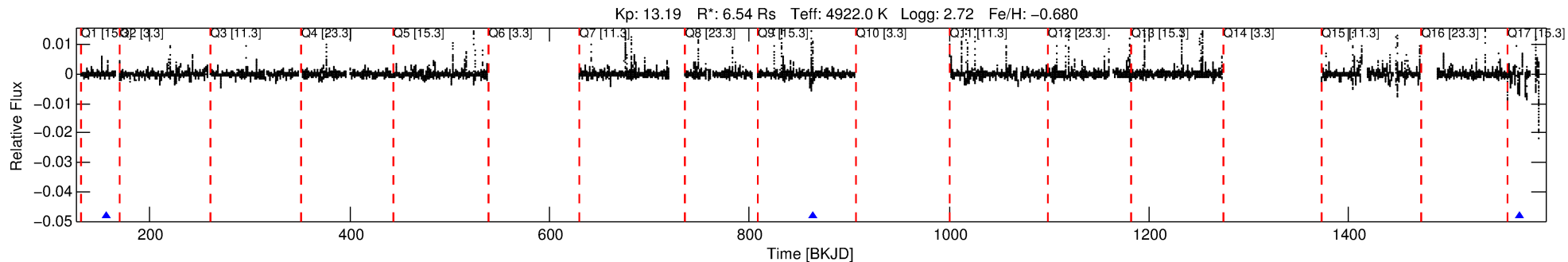
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561372-06

No Significant Match Found

DV One-Page Summary

KIC: 3561372 Candidate: 6 of 8 Period: 707.035 d



DV Fit Results:

Period = 707.03463 [0.00519] d
Epoch = 157.2600 [0.0059] BKJD
Rp/R* = 0.0418 [0.0043]
a/R* = 340.96 [68.65]
b = 0.74 [0.12]
Seff = 10.63 [32.38]
Teff = 460 [351] K
Rp = 29.84 [25.59] Re
a = 1.4545 [2.3250] AU
Ag = N/A
Teffp = N/A

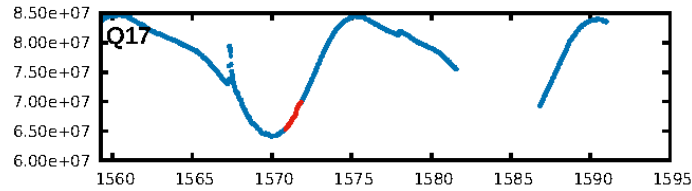
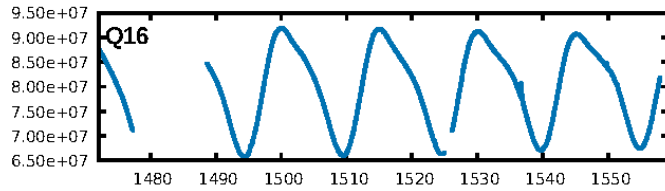
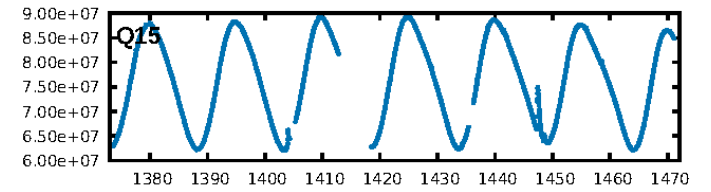
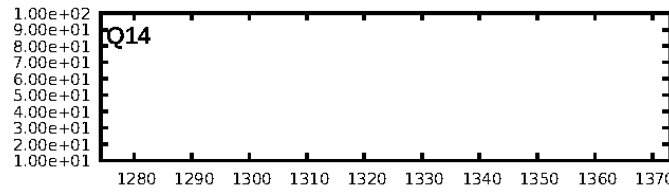
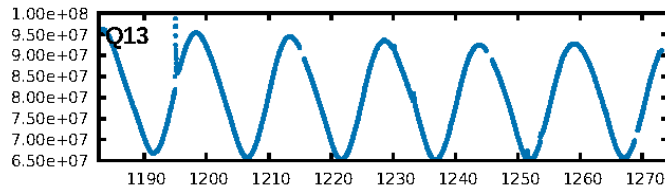
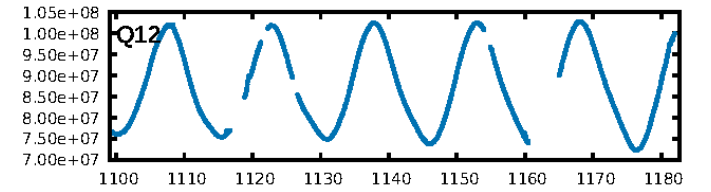
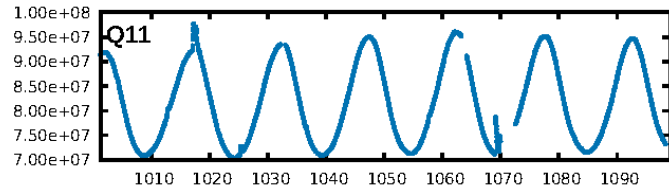
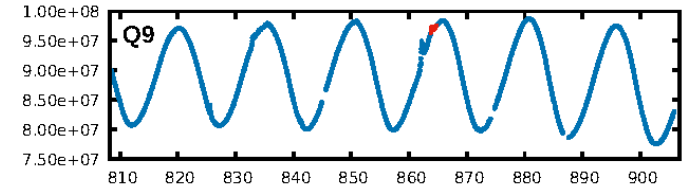
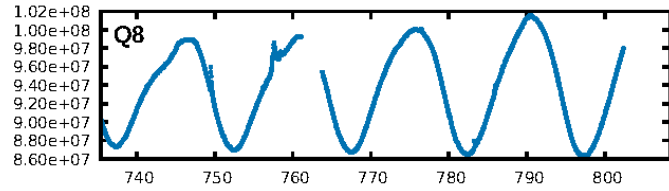
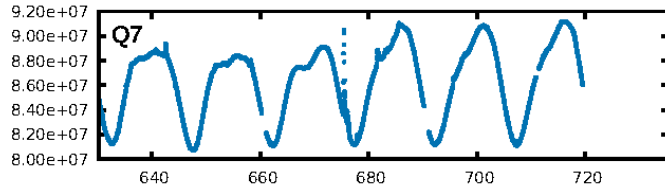
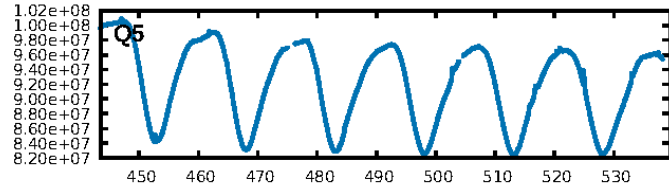
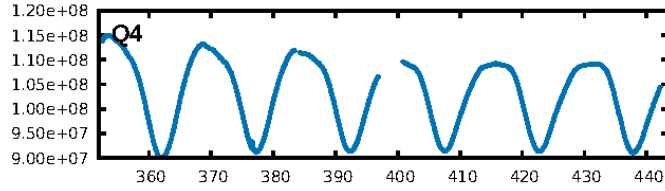
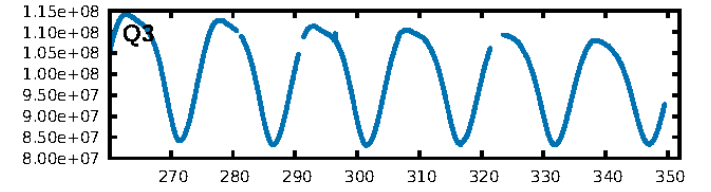
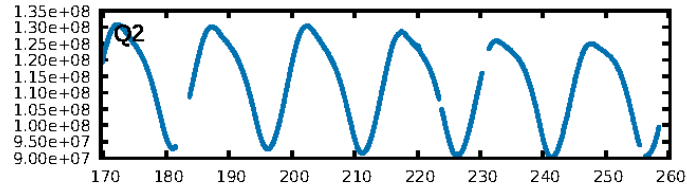
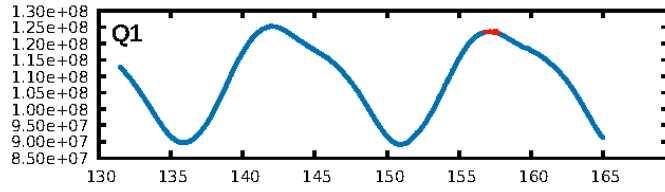
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [292.68σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 49.7%
ModelChiSquareGof-sig: 26.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: 0.901
Centroid-sig: 79.2%
Centroid-so: 0.437 arcsec [1.15σ]
OotOffset-rm: 0.147 arcsec [0.53σ]
KicOffset-rm: 0.137 arcsec [0.66σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

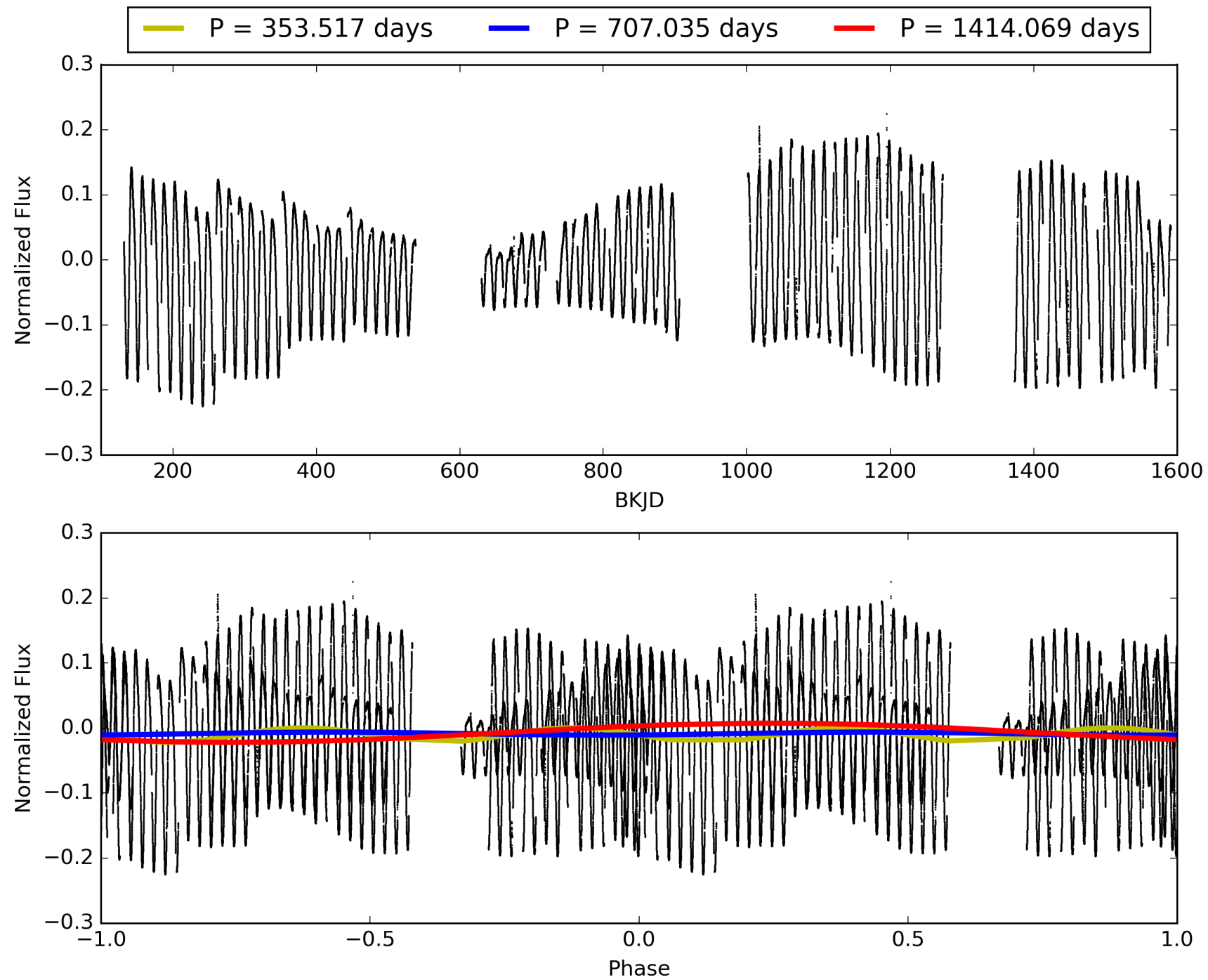
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:46:17 Z

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

TCE 003561372-06, PDC Light Curves

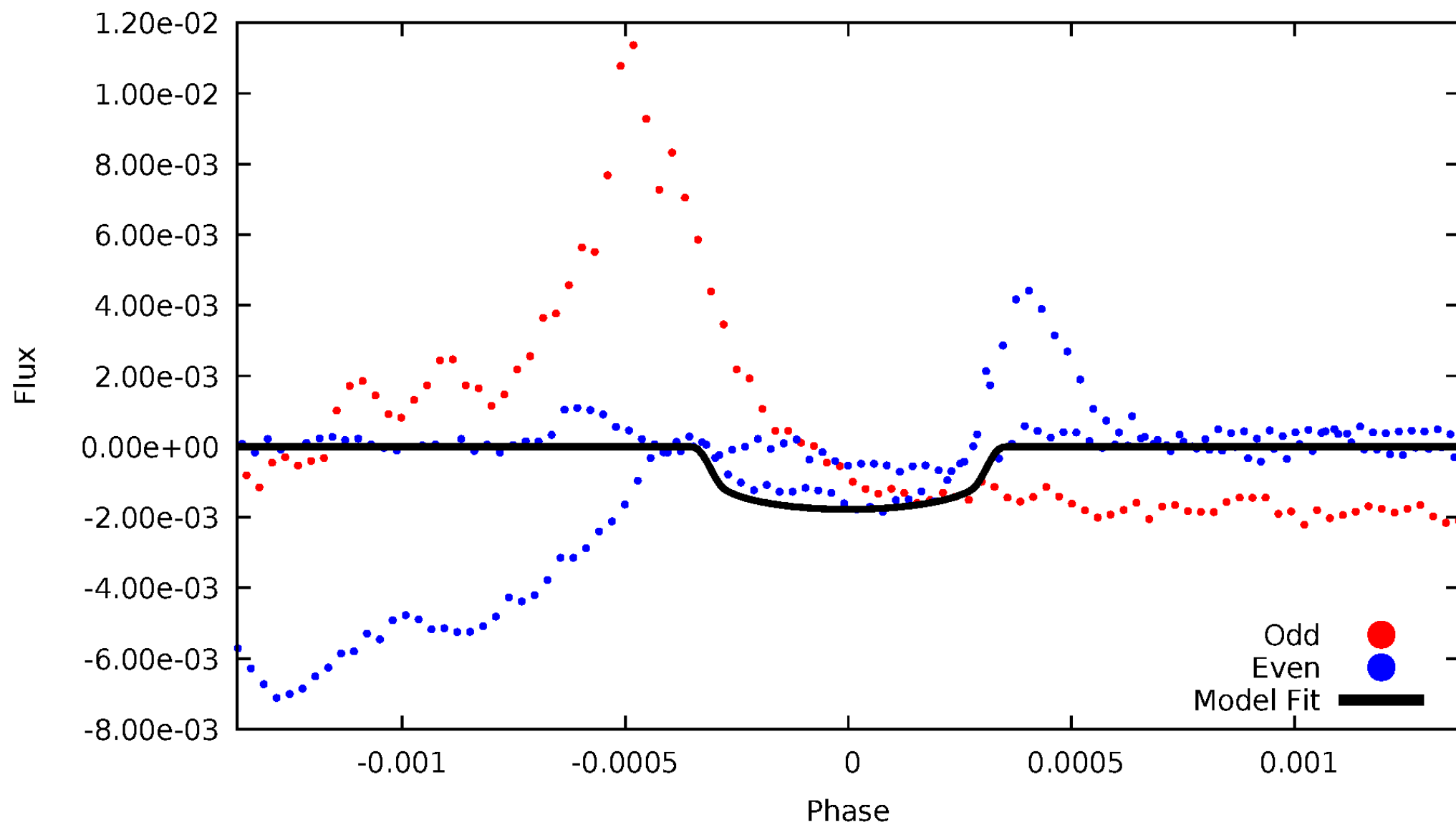


TCE 003561372-06



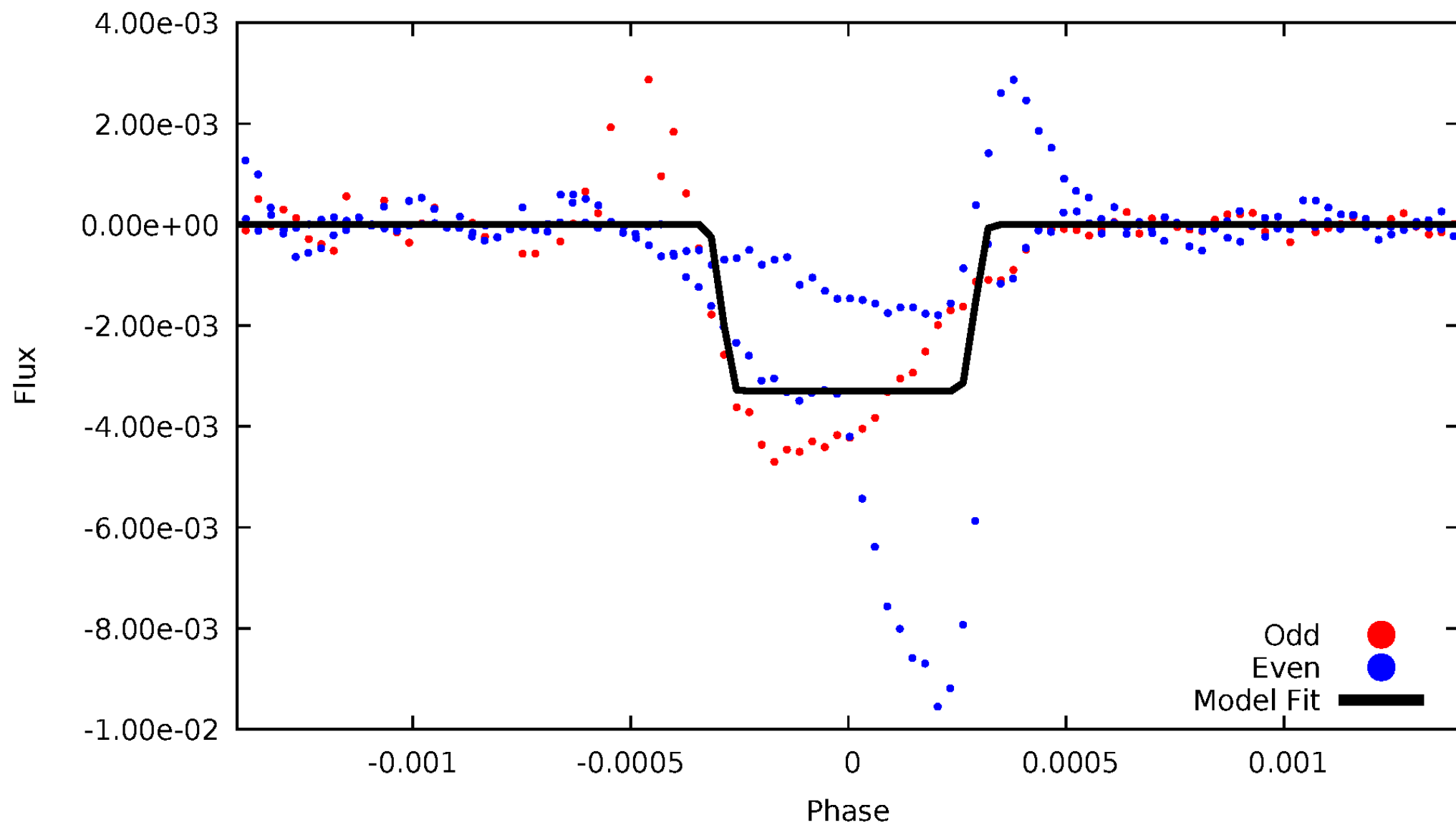
DV Odd/Even

TCE 003561372-06



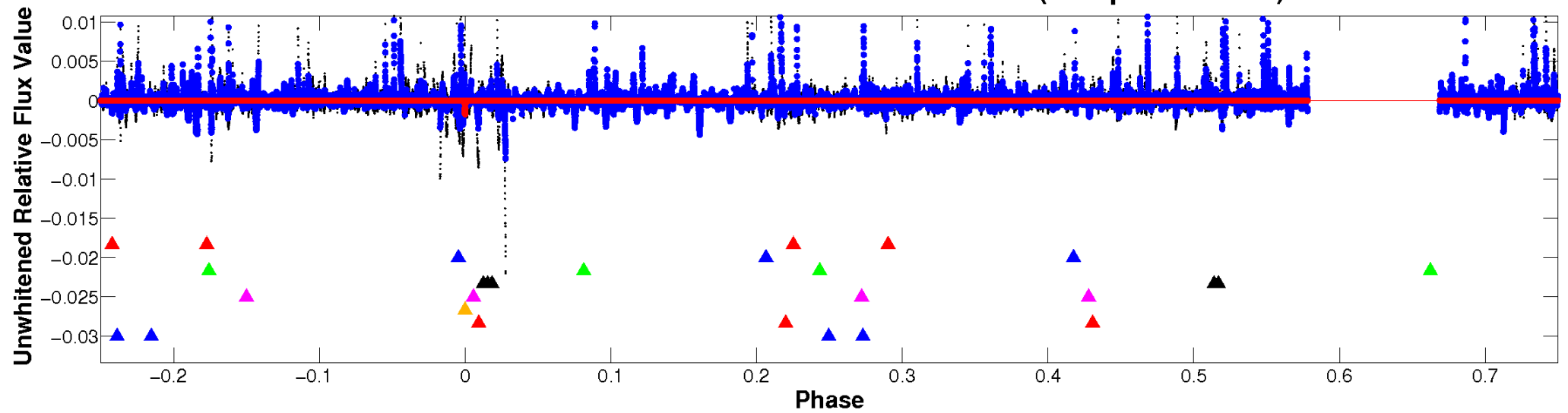
ALT Odd/Even

TCE 003561372-06

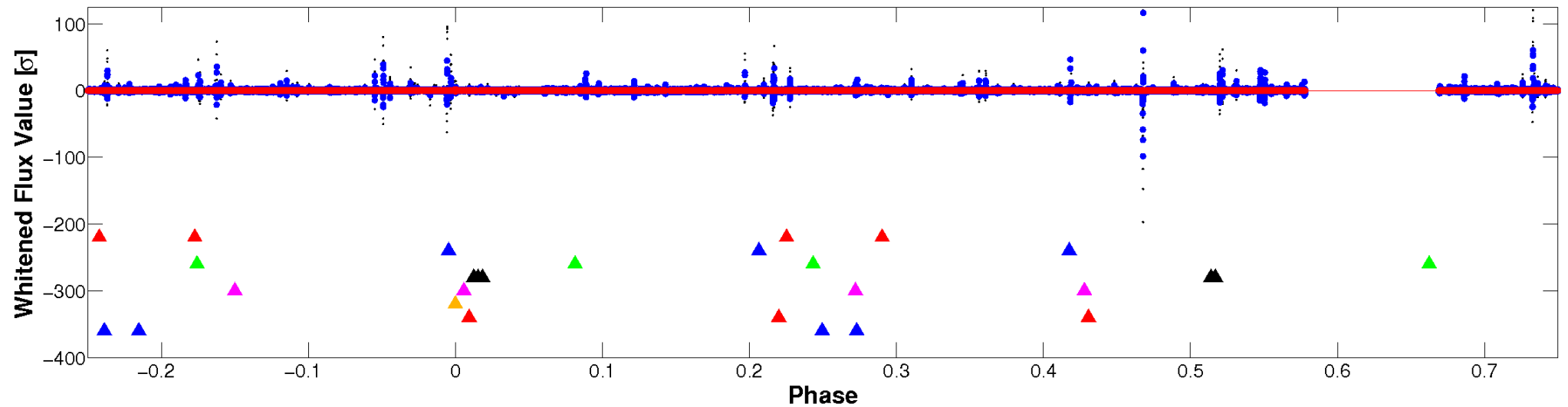


Non-Whitened Vs. Whitened Light Curve

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

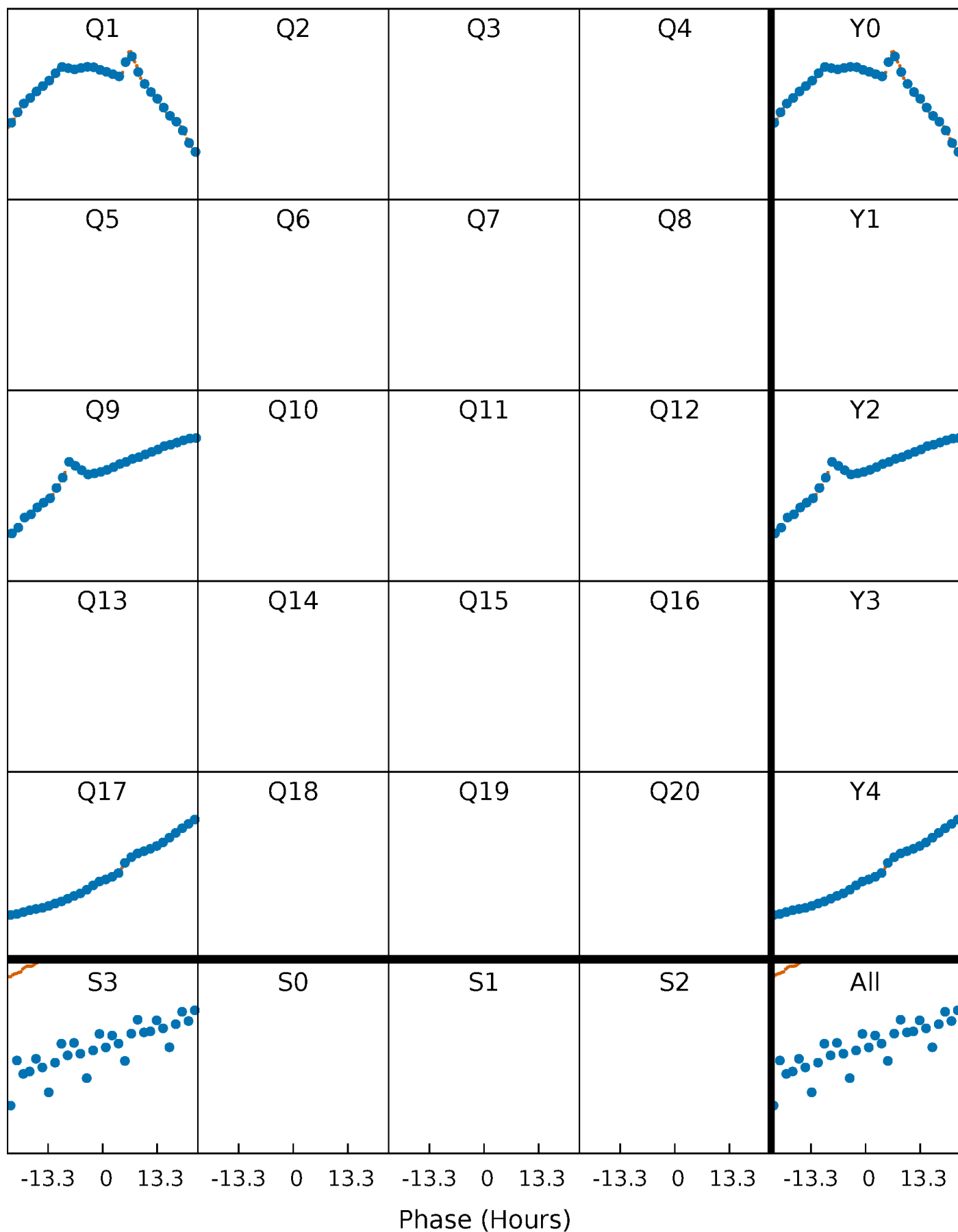


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



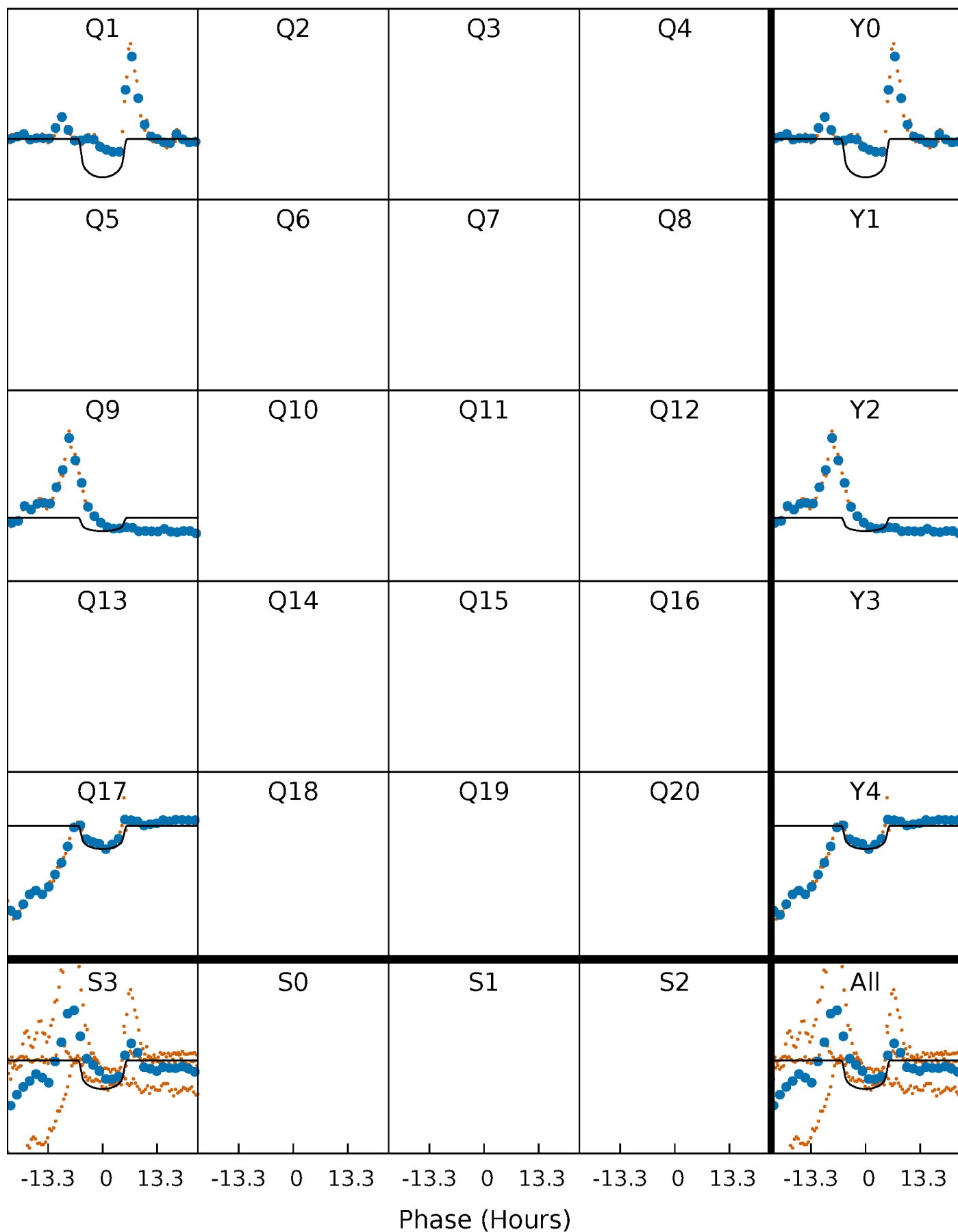
PDC Quarter-Phased Transit Curves

TCE 003561372-06 P=707.034628 Days $T_0=157.260031$ (BKJD)



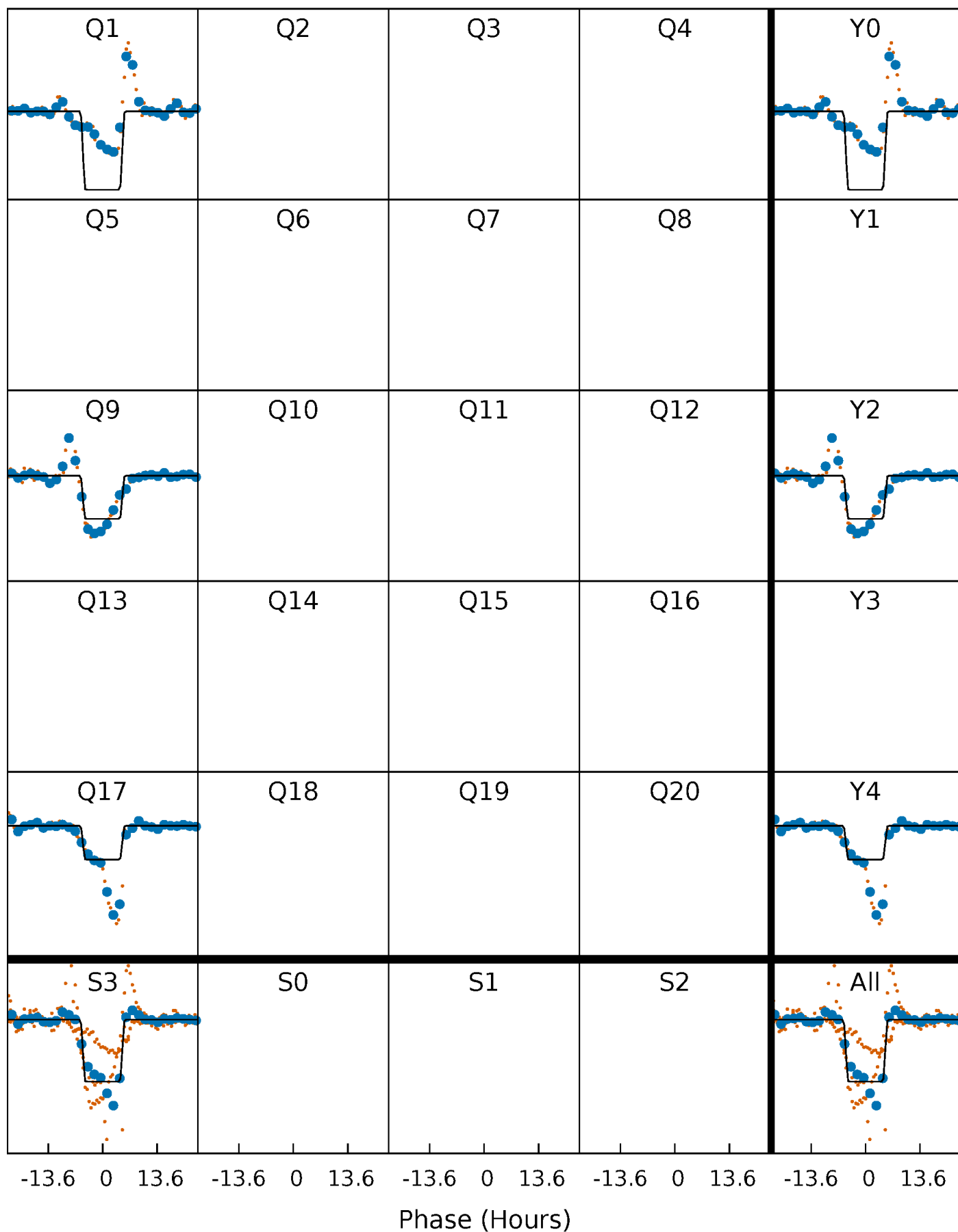
DV Quarter-Phased Transit Curves

TCE 003561372-06 $P=707.034628$ Days $T_0=157.260031$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

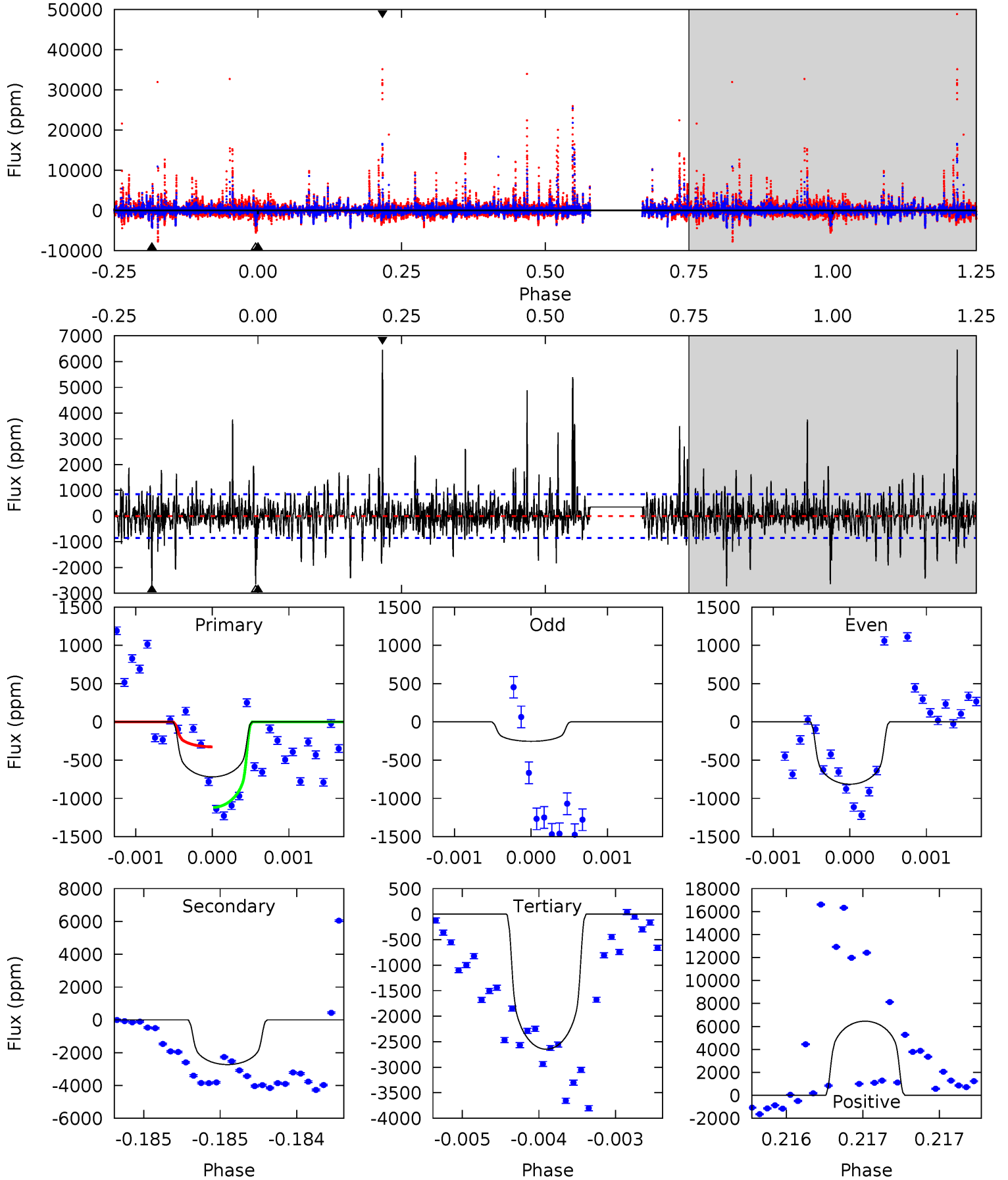
TCE 003561372-06 P=707.021609 Days $T_0=157.277441$ (BKJD)



DV Model-Shift Uniqueness Test

003561372-06, P = 707.034628 Days, E = 157.260031 Days

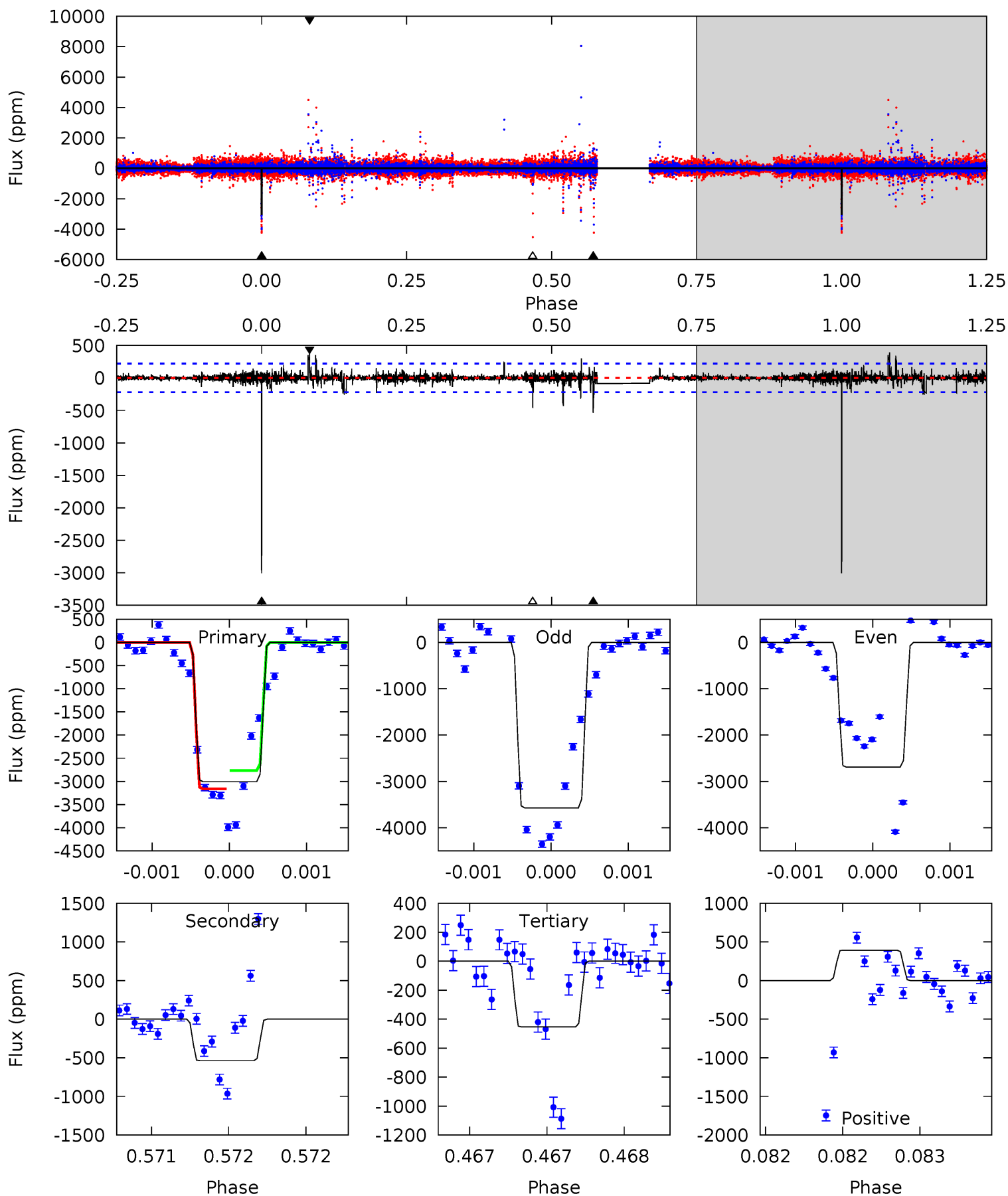
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.65	17.7	17.2	41.8	5.52	3.40	3.93	-12.5	-37.2	0.50	-24.2	0.76	2.02	0.70	2.59



Alt Model-Shift Uniqueness Test

003561372-06, P = 707.021609 Days, E = 157.277441 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.2	13.4	11.4	9.83	5.52	3.40	0.88	63.8	65.4	2.08	3.60	11.4	0.96	0.12	0



Stellar Parameters For KIC 003561372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4922^{+155}_{-173}	$2.721^{+1.947}_{-0.344}$	$-0.680^{+0.300}_{-0.350}$	$6.540^{+4.049}_{-5.567}$	$0.820^{+0.301}_{-0.246}$	$0.004^{+3.247}_{-0.003}$
	+3%/-4%	+72%/-13%	+44%/-51%	+62%/-85%	+37%/-30%	+78639%/-82%
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 003561372-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2725 ± 154	$27.66^{+11.56}_{-13.91}$	616^{+117}_{-167}	5432^{+350}_{-318}	4214^{+11462}_{-2045}
Alt.	-537 ± 40	$37.61^{+16.32}_{-17.93}$	612^{+111}_{-162}	3531^{+145}_{-138}	469^{+1160}_{-241}

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

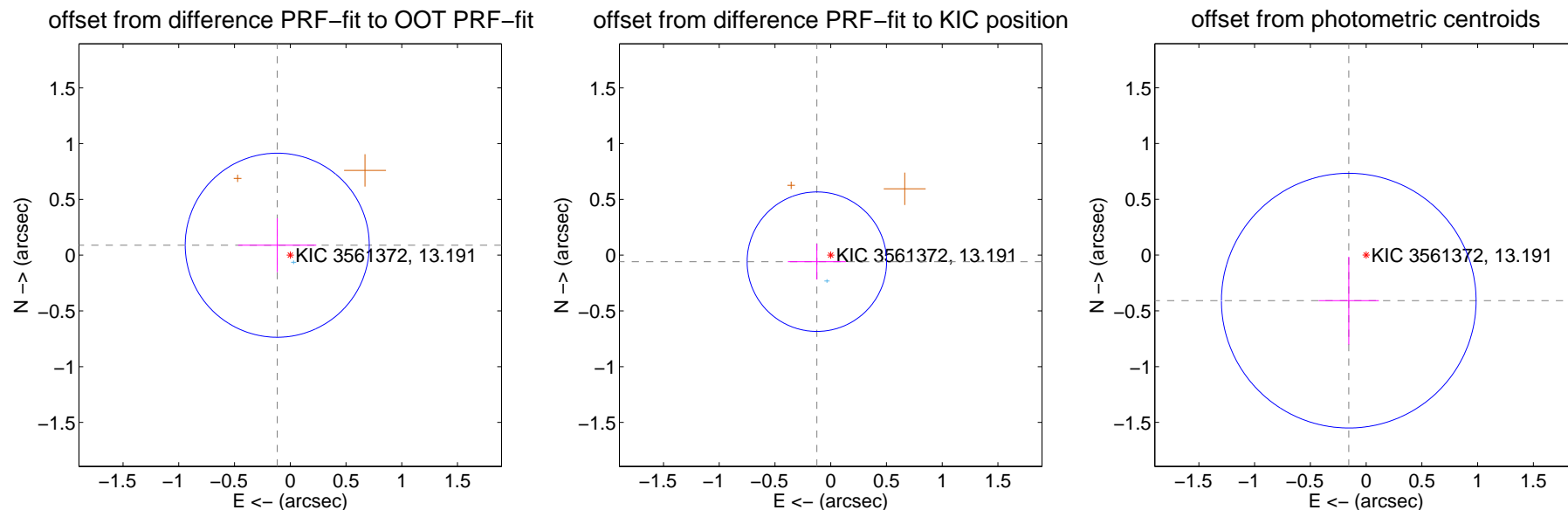
DV Centroid Data

Supplemental centroid analysis for 003561372-06. Kepler magnitude: 13.19. Transit SNR 8.96

There are 1 quarters with good PRF difference image offsets

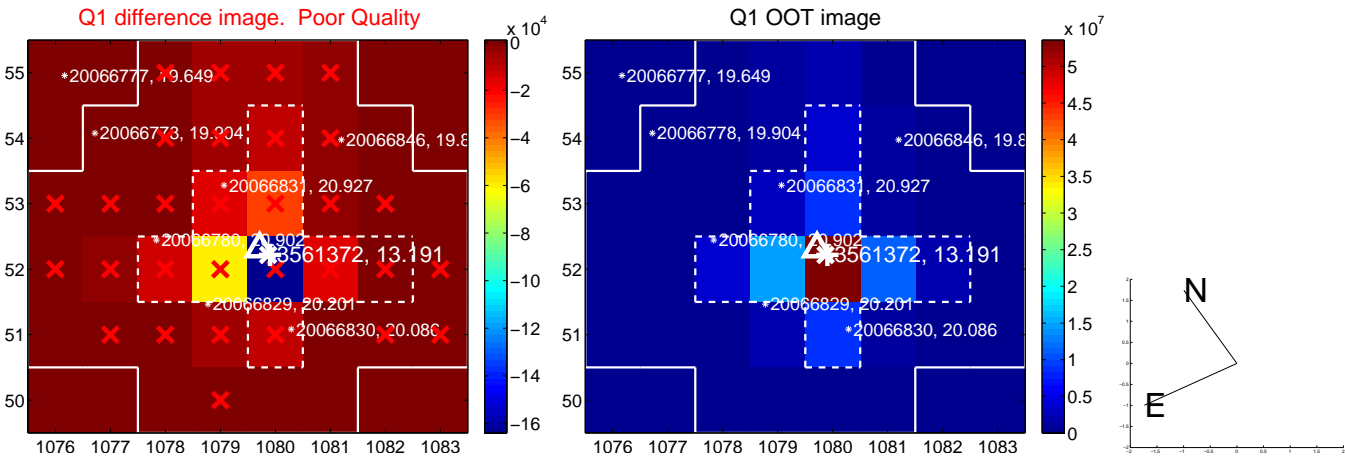
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.147 ± 0.275	0.53	0.117 ± 0.351	0.089 ± 0.241
PRF-fit source offset from KIC position	0.137 ± 0.208	0.66	0.124 ± 0.260	-0.059 ± 0.160
photometric centroid source offset	0.44 ± 0.38	1.15	0.16 ± 0.27	-0.41 ± 0.39



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

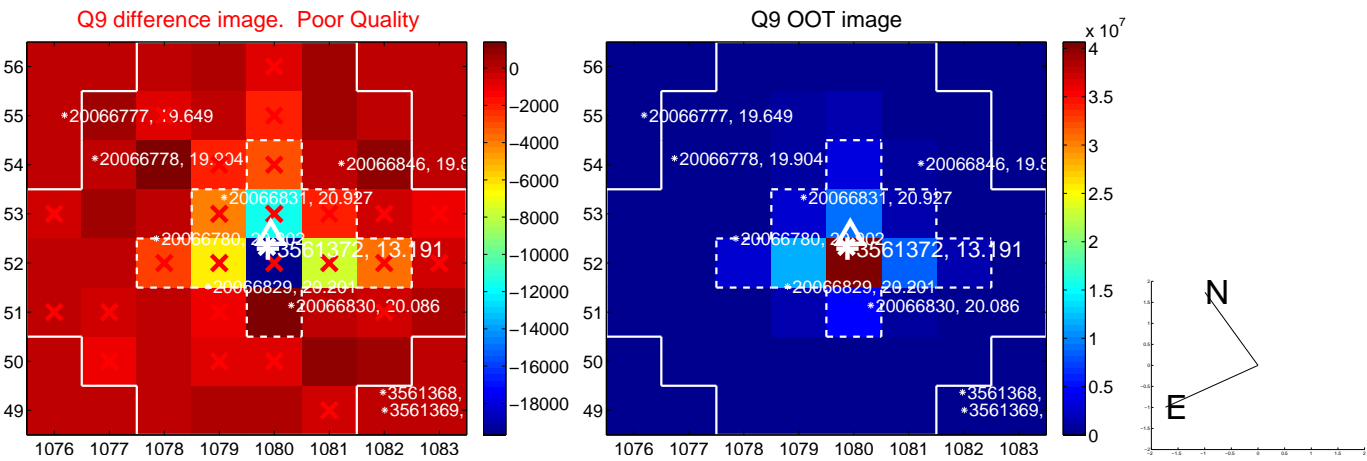
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



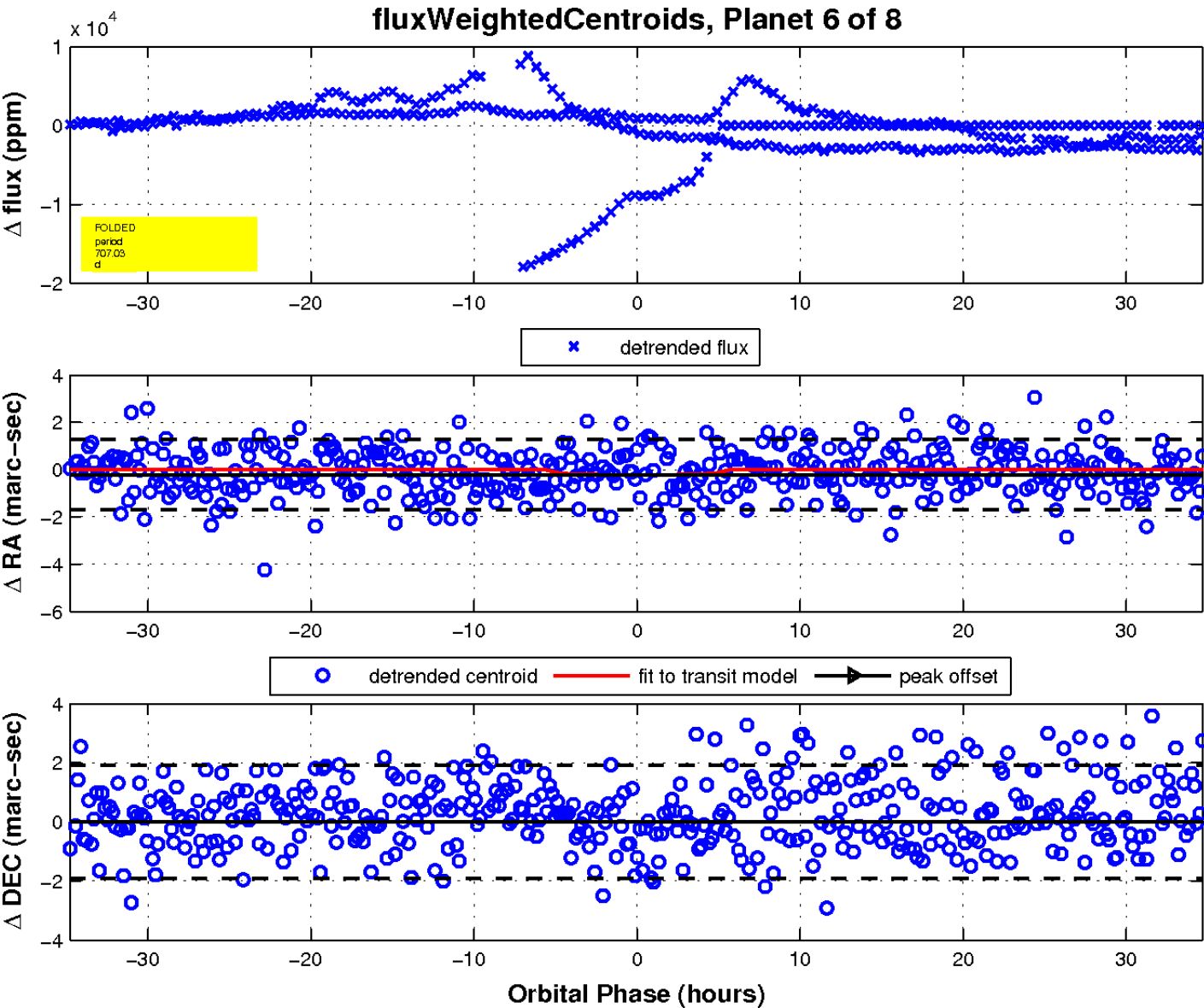
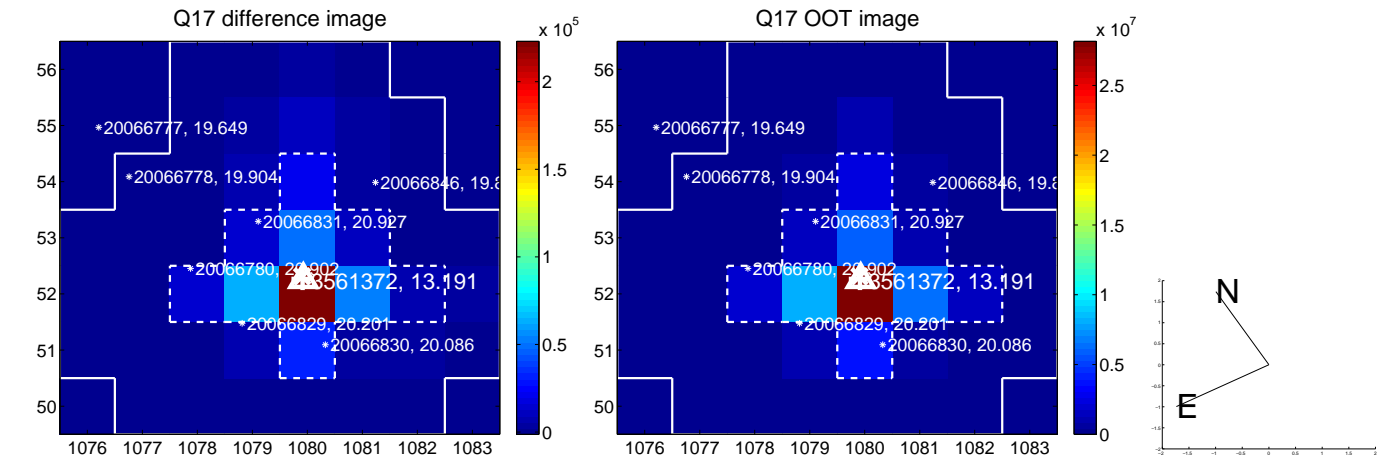
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

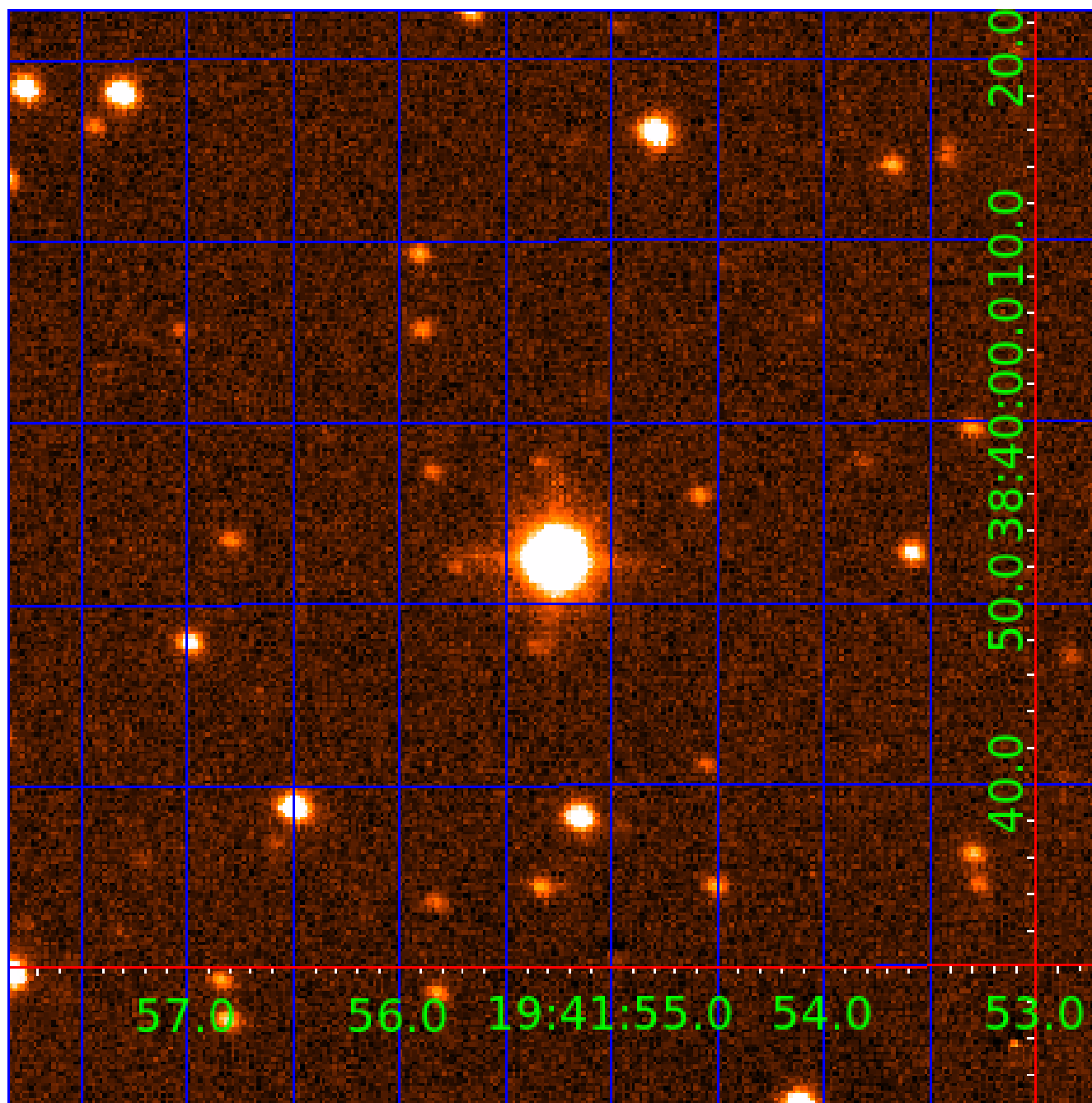


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003561372

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})
003561372-02	OBS	No	557.803777	452.487943	1735.7	10.711	20.6	8.1	6.54	4922	26.63	14.58
003561372-03	OBS	No	410.745837	214.851358	1145.6	8.747	52.8	5.9	6.54	4922	21.68	21.93
003561372-06	OBS	No	707.034628	157.260031	1774.0	11.618	18.4	9.0	6.54	4922	29.84	10.63
003561372-07	OBS	No	558.097645	461.751036	749.9	3.767	19.9	3.6	6.54	4922	18.79	14.57
003561372-08	OBS	No	361.810236	333.677231	799.7	5.000	16.2	-1.0	6.54	4922	18.06	25.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561372-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003561372-03	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_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

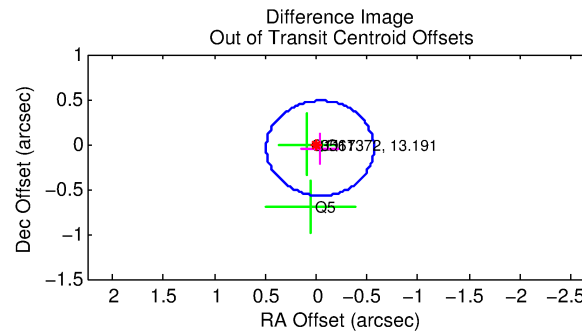
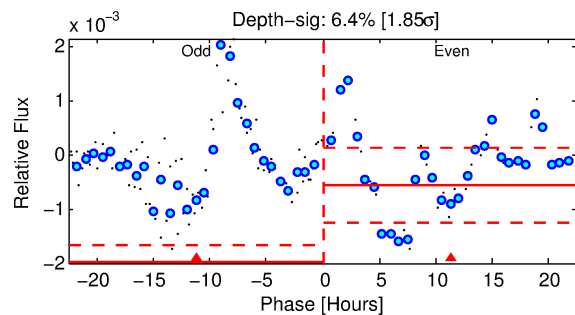
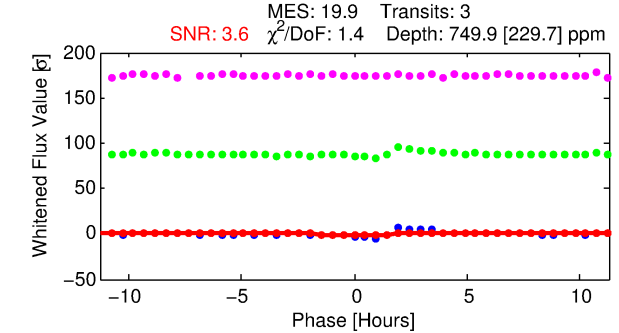
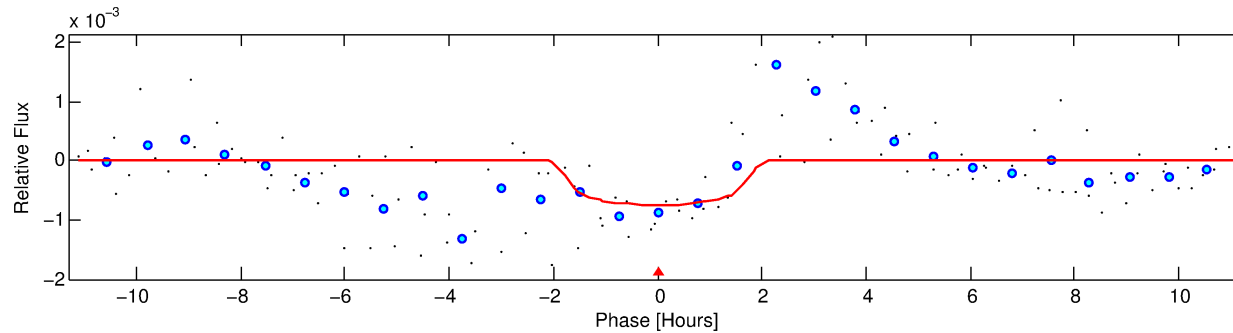
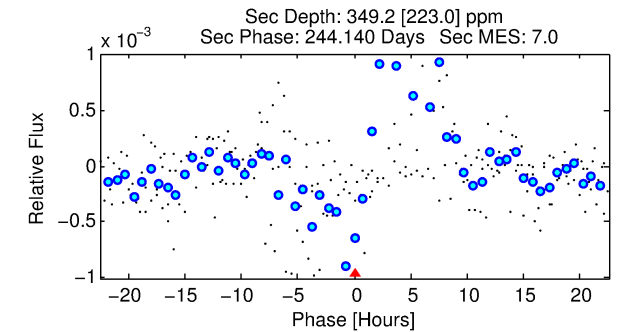
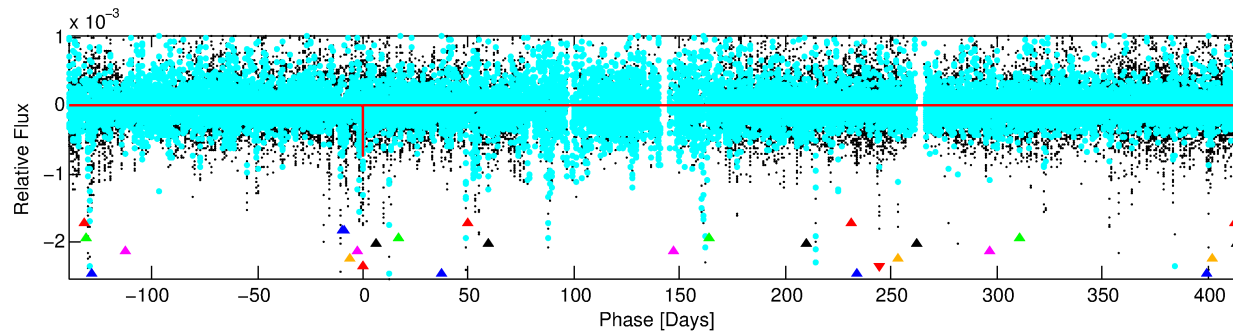
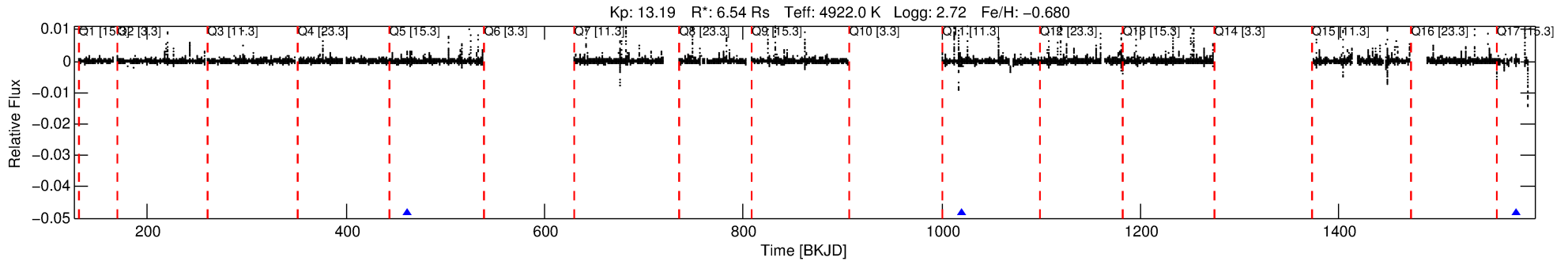
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561372-07

No Significant Match Found

DV One-Page Summary

KIC: 3561372 Candidate: 7 of 8 Period: 558.098 d



DV Fit Results:

Period = 558.09764 [0.00831] d
Epoch = 461.7510 [0.0091] BKJD
Rp/R* = 0.0263 [0.0486]
a/R* = 899.88 [6149.43]
b = 0.65 [6.20]
Seff = 14.57 [44.38]
Teff = 498 [379] K
Rp = 18.79 [38.18] Re
a = 1.2423 [1.9858] AU
Ag = 839.40 [4049.46] [0.21σ]
Teffp = 4146 [3884] K [0.93σ]

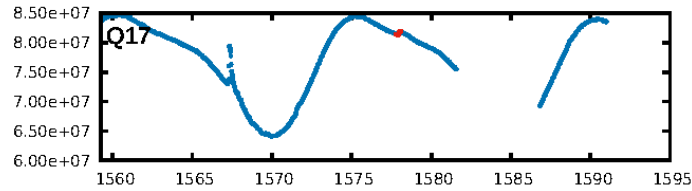
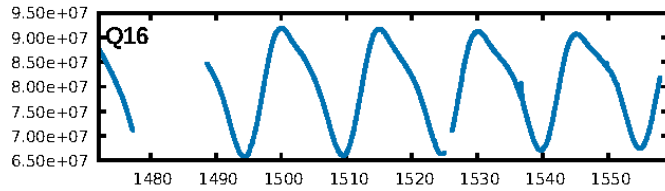
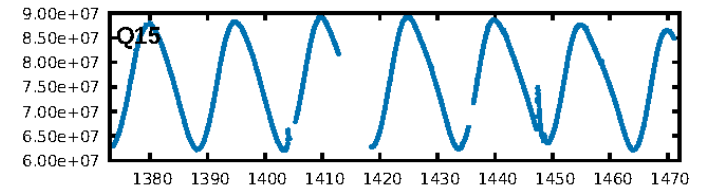
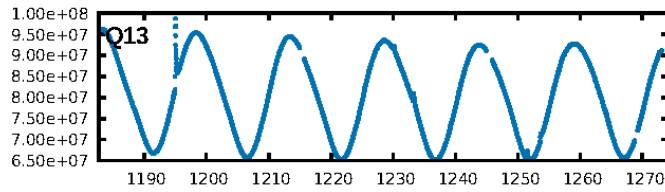
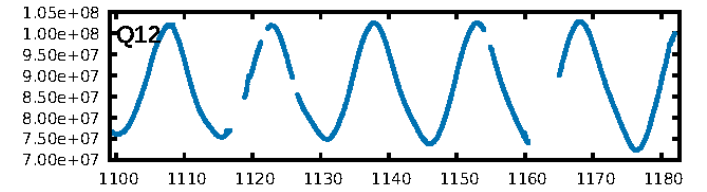
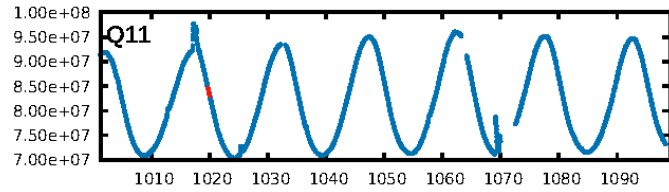
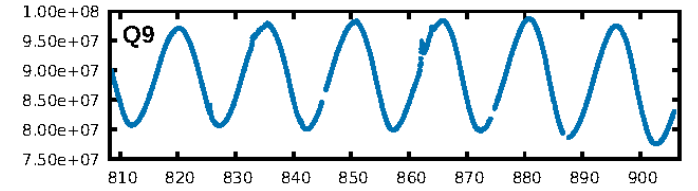
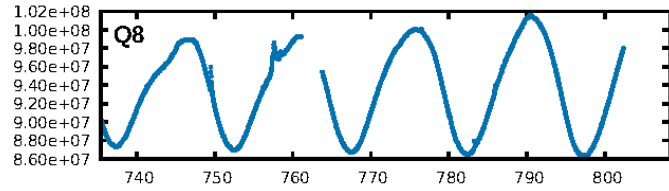
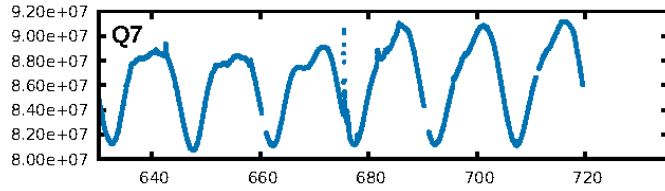
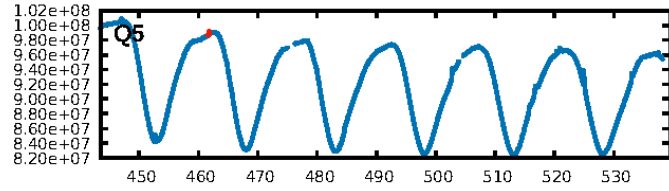
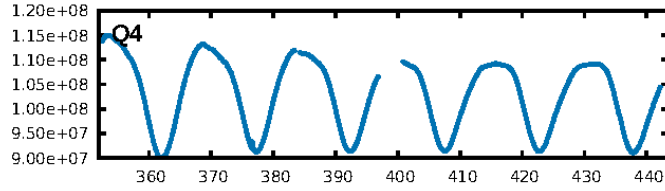
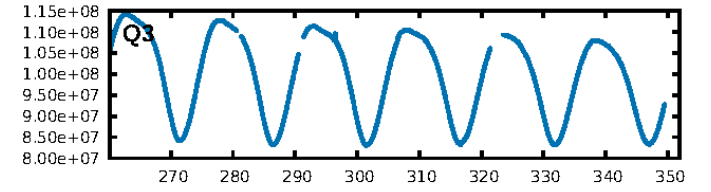
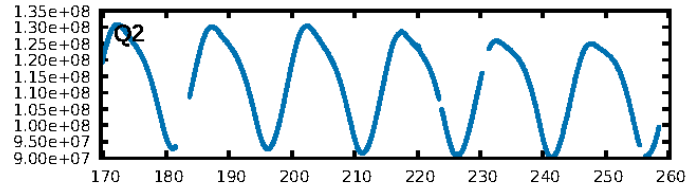
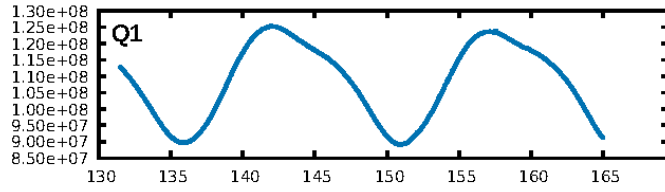
DV Diagnostic Results:

ShortPeriod-sig: 46.6% [0.62σ]
LongPeriod-sig: 100.0% [292.68σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 87.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.381
Centroid-sig: 0.5%
Centroid-so: 1.751 arcsec [1.38σ]
OotOffset-rm: 0.059 arcsec [0.34σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 0.222 arcsec [1.35σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

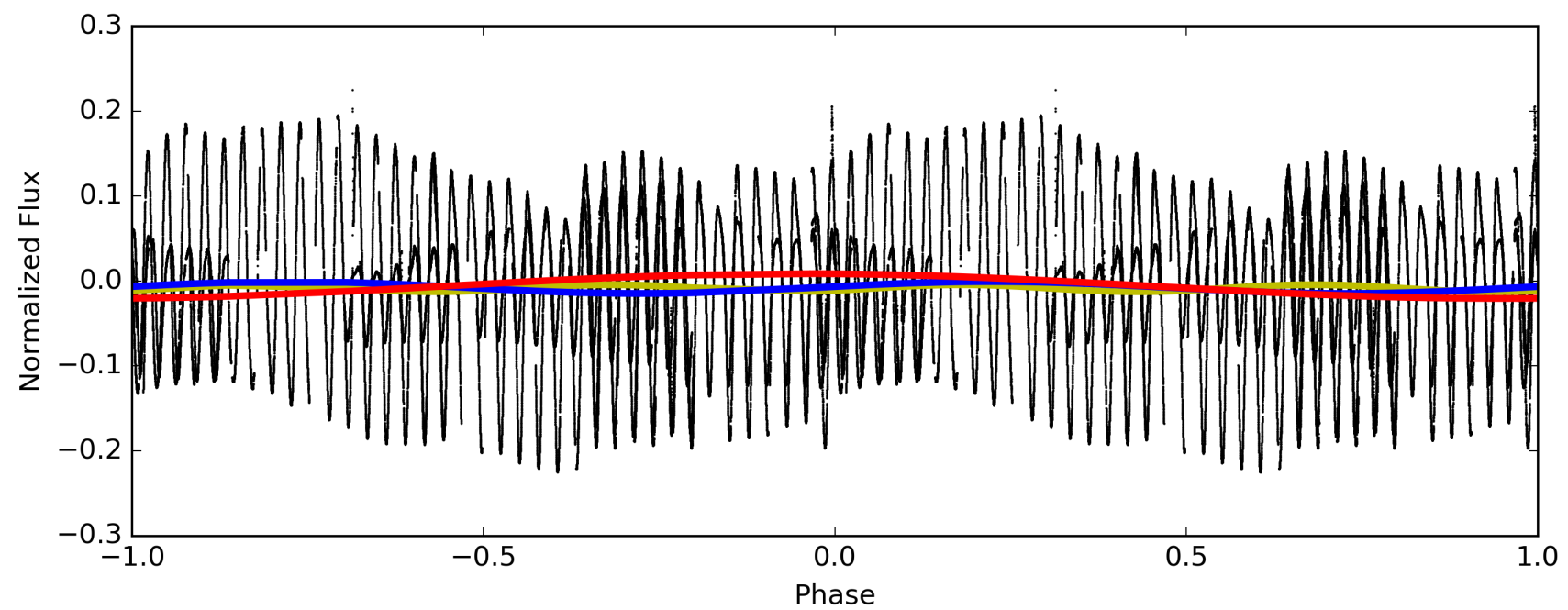
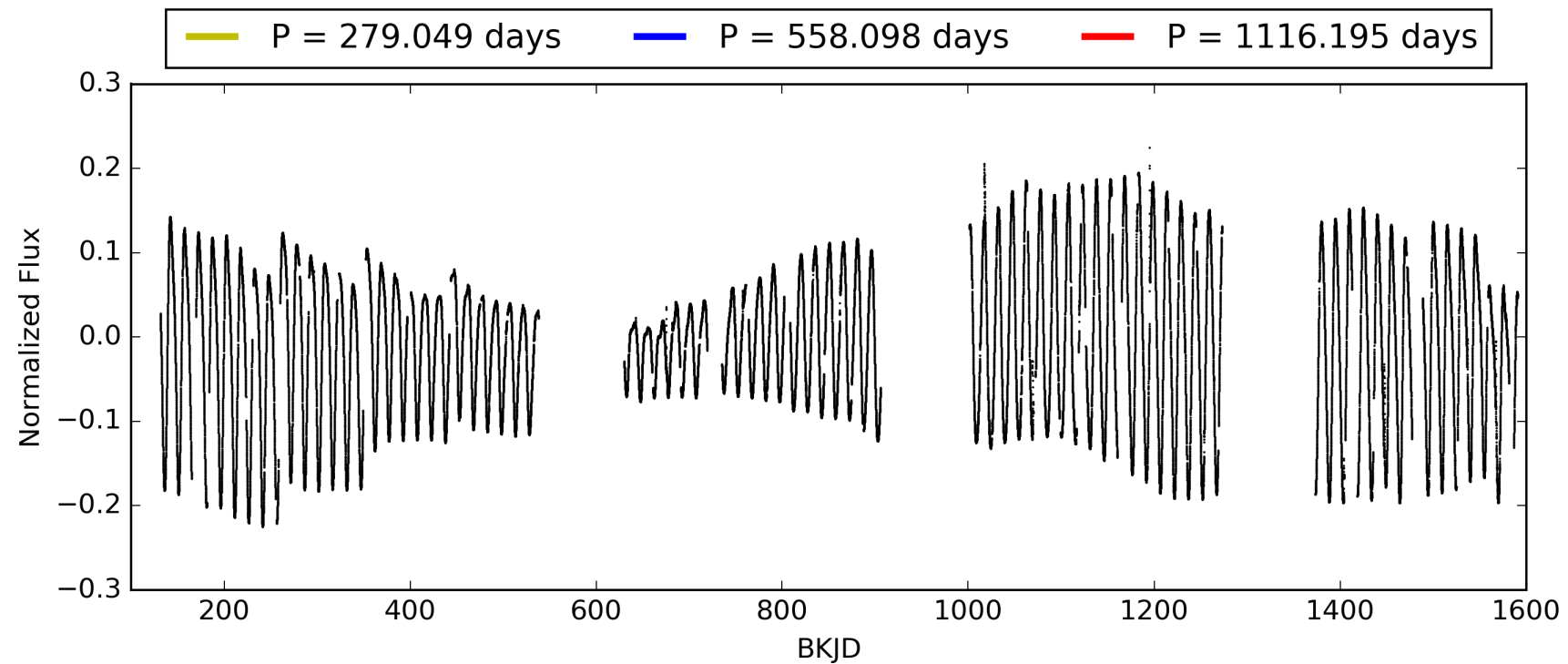
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:46:33 Z

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

TCE 003561372-07, PDC Light Curves

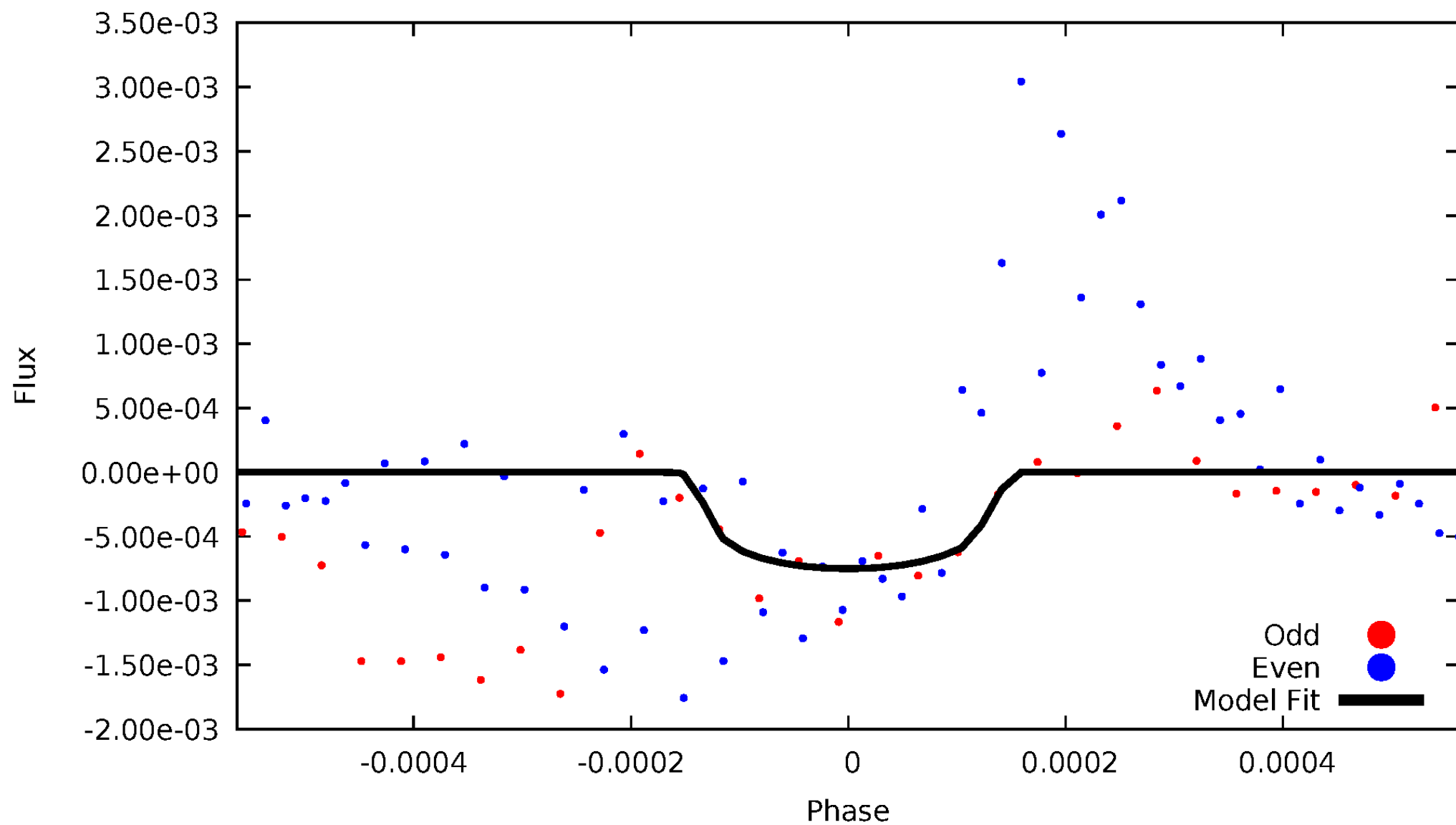


TCE 003561372-07



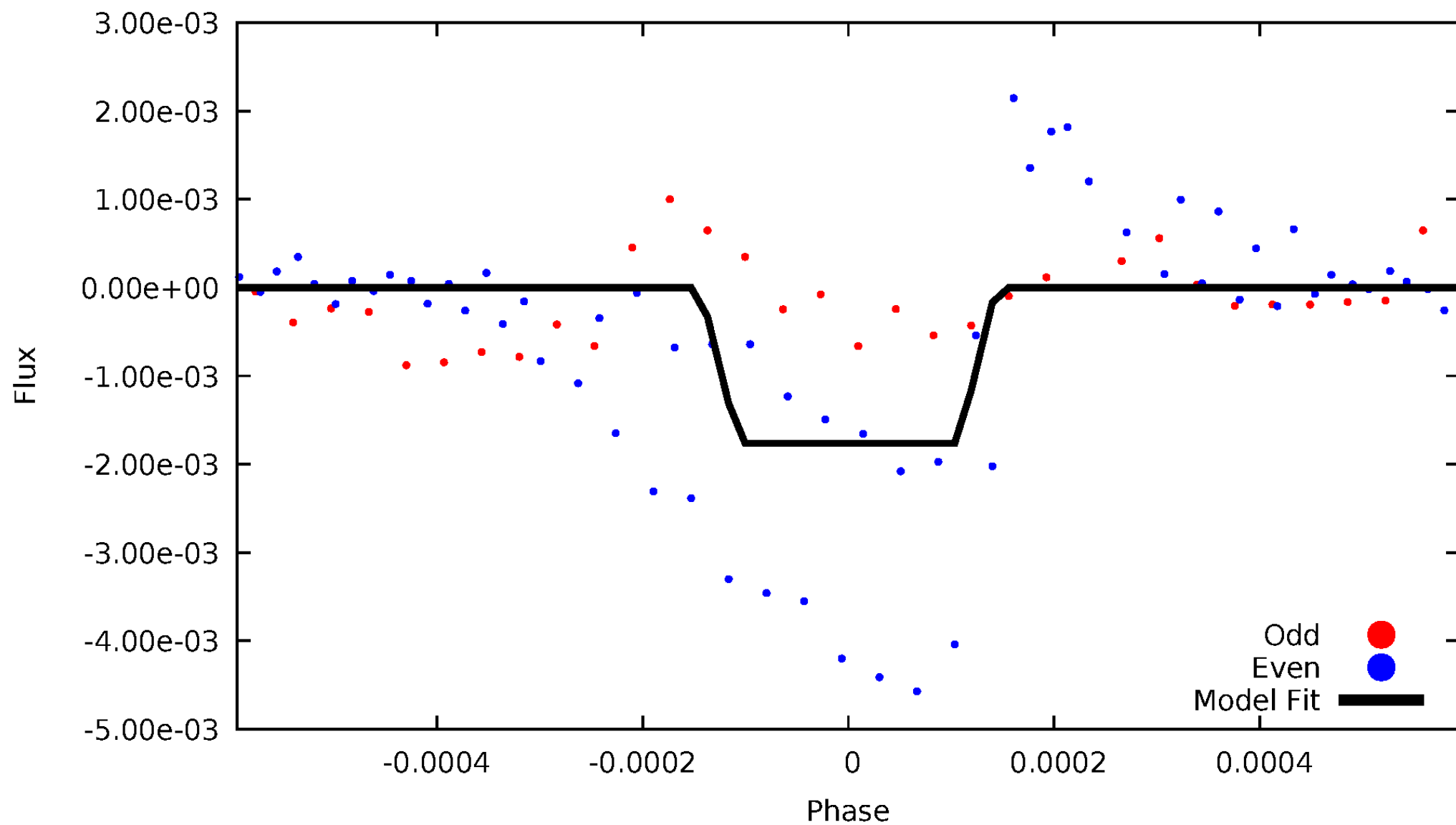
DV Odd/Even

TCE 003561372-07



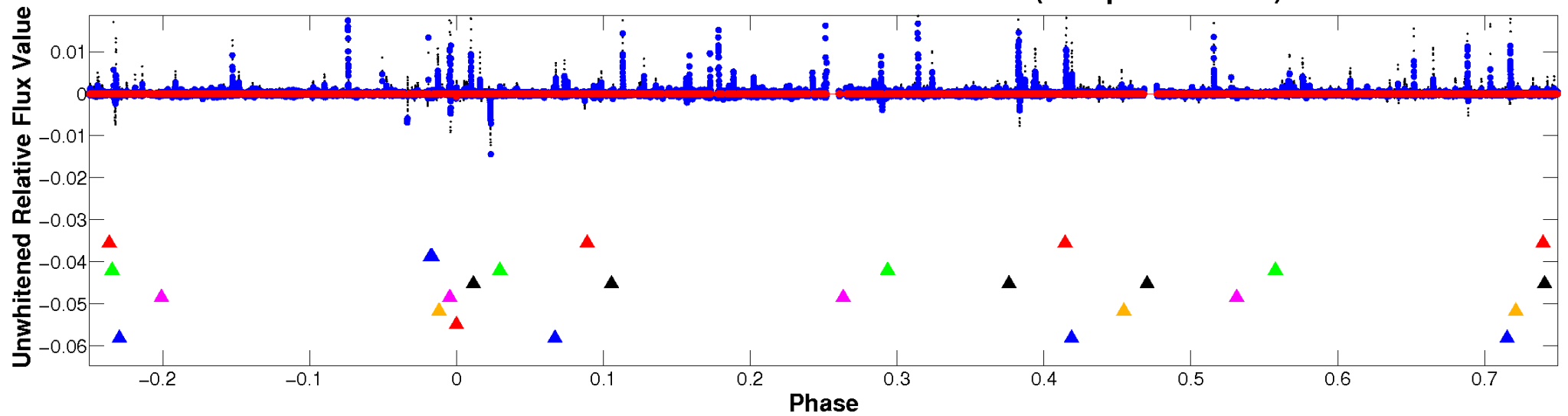
ALT Odd/Even

TCE 003561372-07

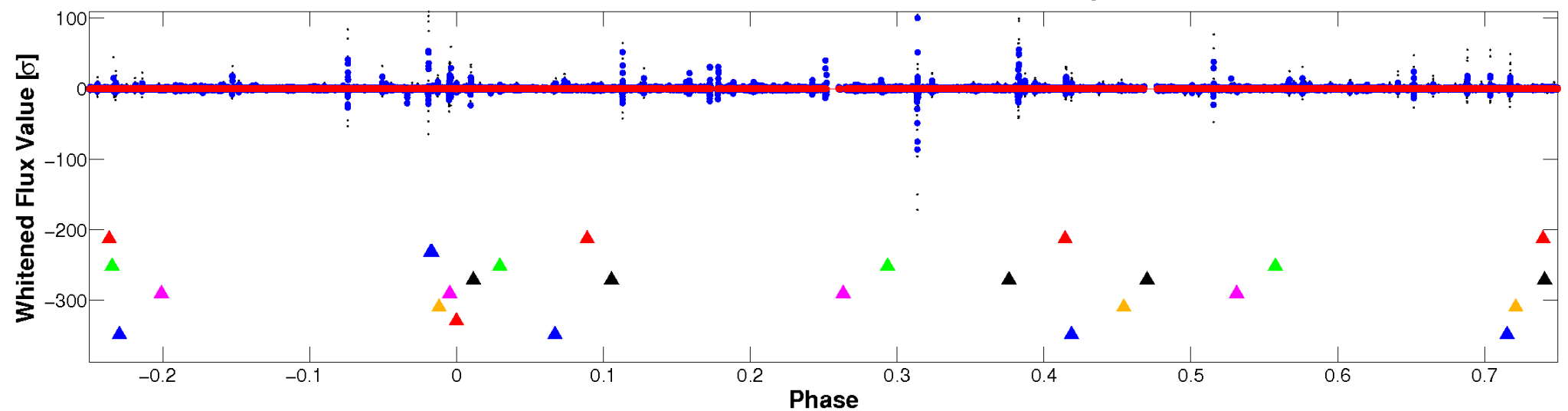


Non-Whitened Vs. Whitened Light Curve

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

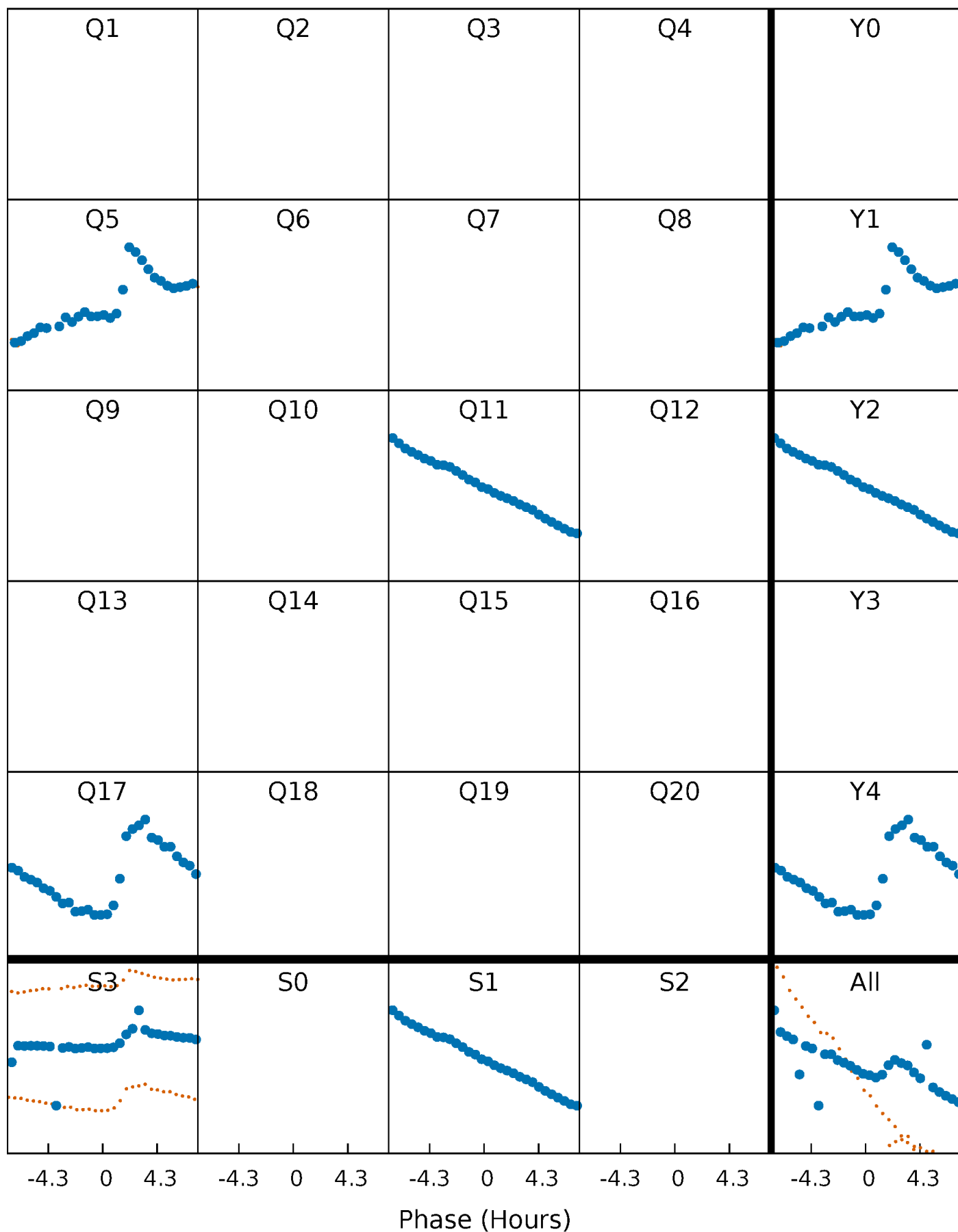


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



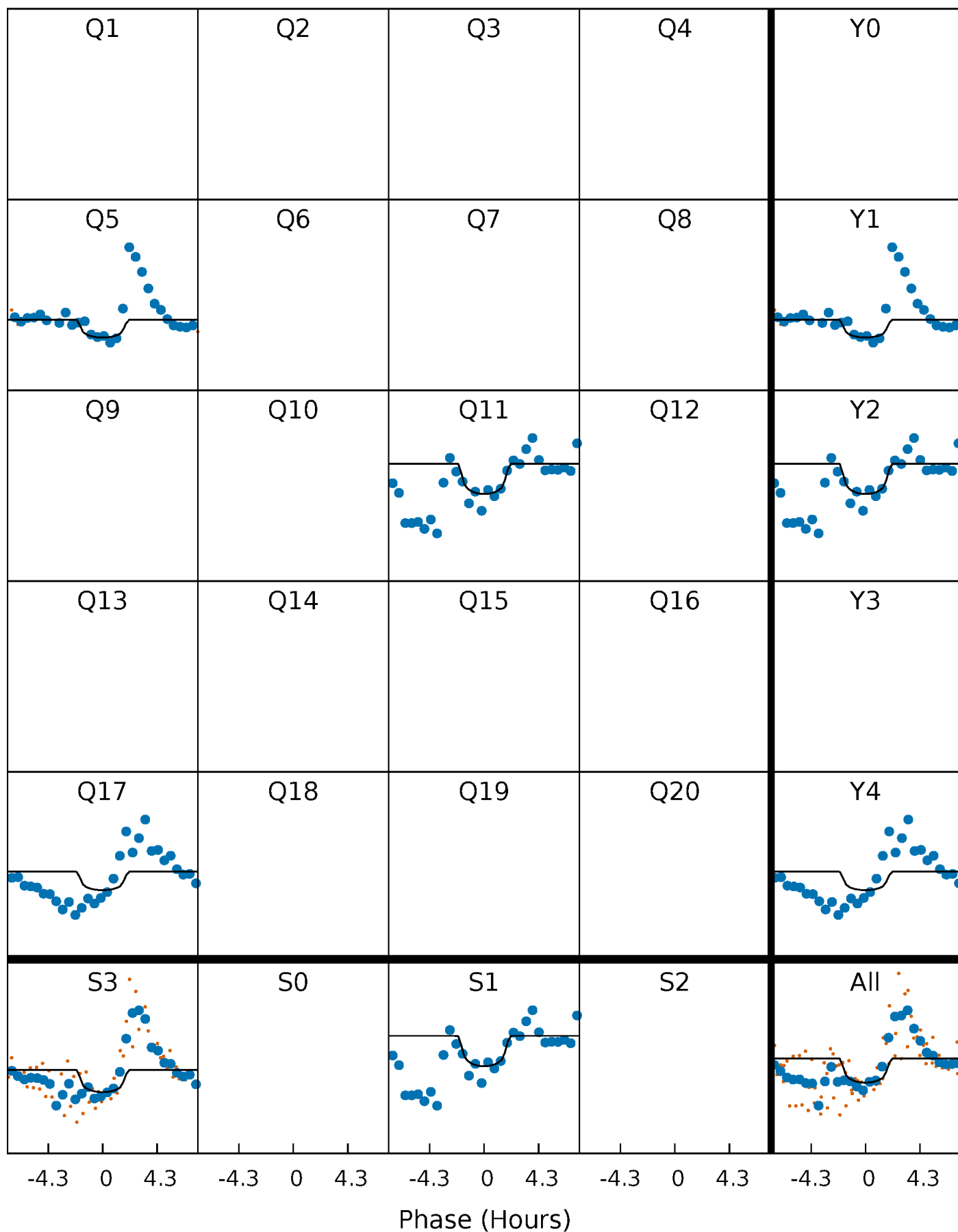
PDC Quarter-Phased Transit Curves

TCE 003561372-07 $P=558.097645$ Days $T_0=461.751036$ (BKJD)



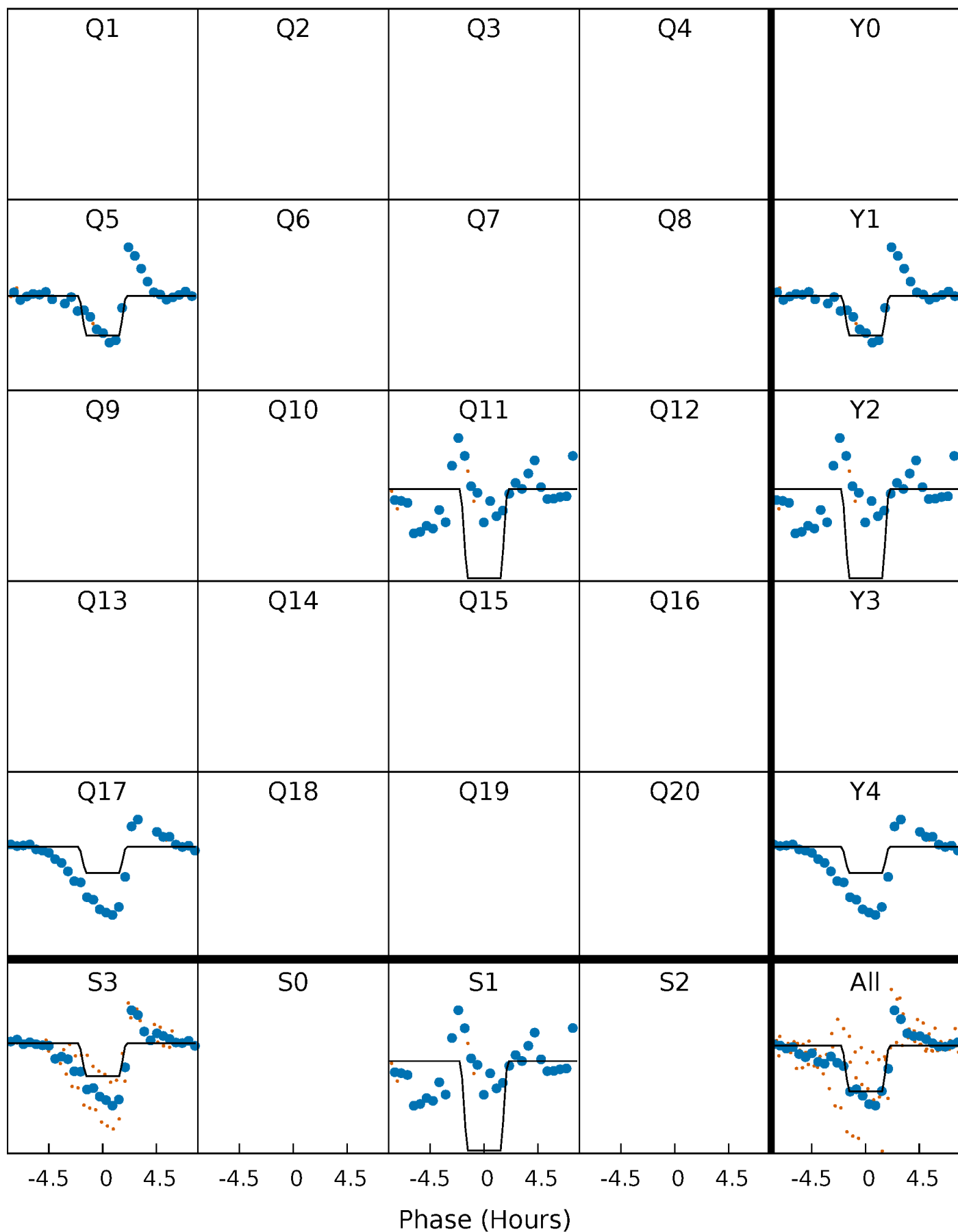
DV Quarter-Phased Transit Curves

TCE 003561372-07 $P=558.097645$ Days $T_0=461.751036$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

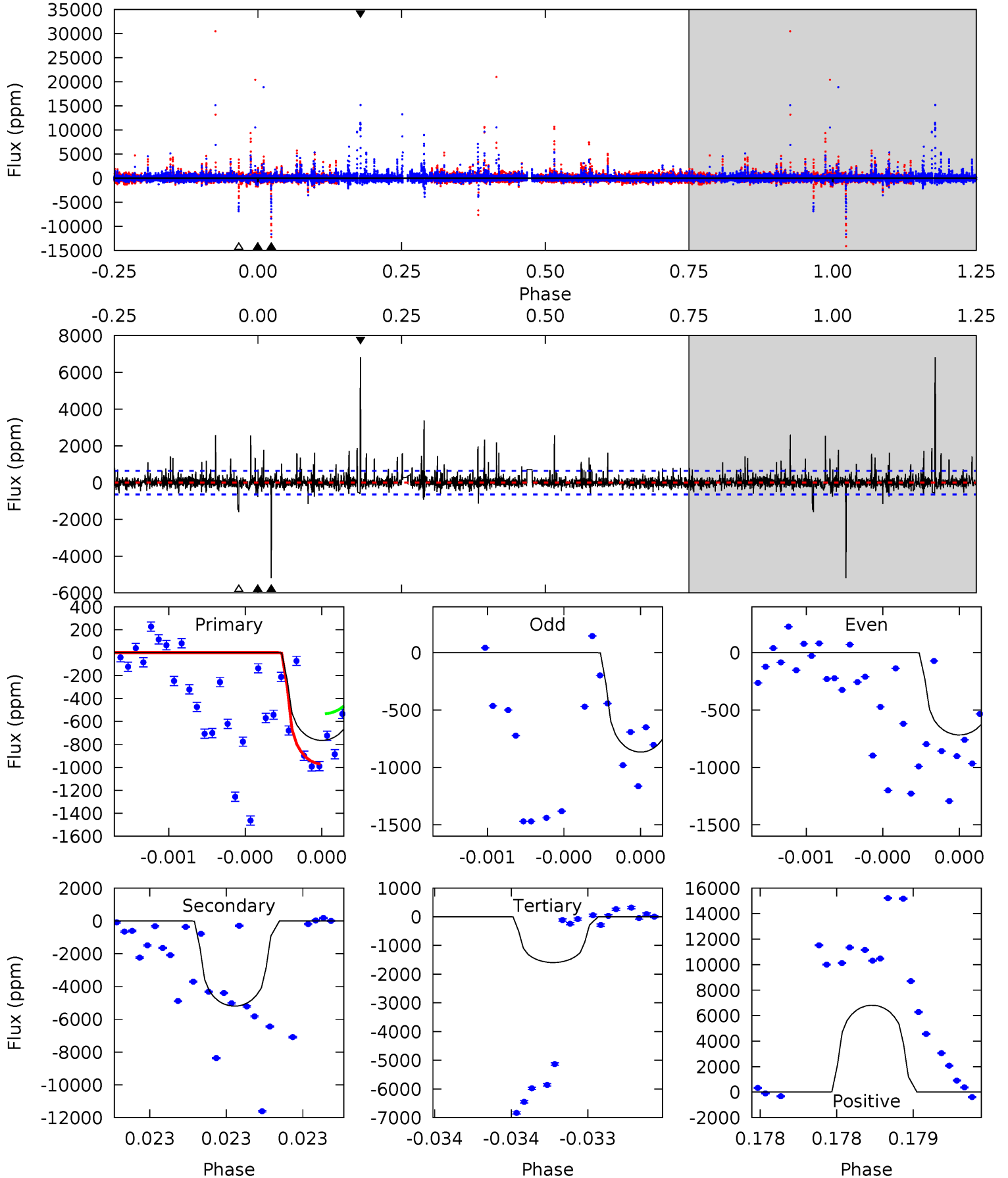
TCE 003561372-07 P=558.088202 Days $T_0=461.750178$ (BKJD)



DV Model-Shift Uniqueness Test

003561372-07, P = 558.097645 Days, E = 461.751036 Days

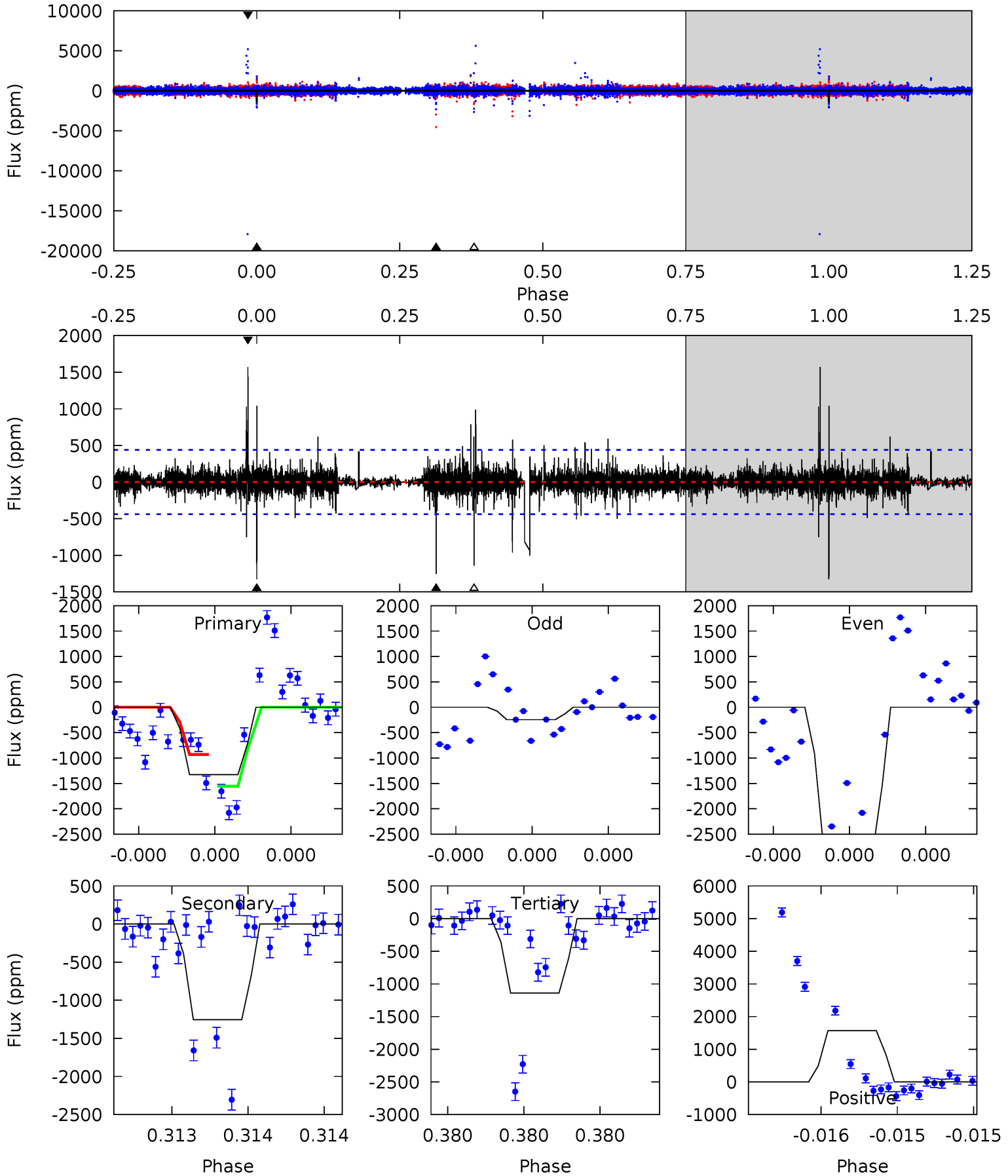
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.70	45.6	14.0	59.7	5.66	3.62	2.38	-7.27	-53.0	31.6	-14.1	0.16	0.94	0.57	1.89



Alt Model-Shift Uniqueness Test

003561372-07, P = 558.088202 Days, E = 461.750178 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	16.2	14.7	20.3	5.67	3.63	1.07	2.43	-3.11	1.49	-4.05	17.4	1.30	0.54	0



Stellar Parameters For KIC 003561372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4922^{+155}_{-173}	$2.721^{+1.947}_{-0.344}$	$-0.680^{+0.300}_{-0.350}$	$6.540^{+4.049}_{-5.567}$	$0.820^{+0.301}_{-0.246}$	$0.004^{+3.247}_{-0.003}$
	+3%/-4%	+72%/-13%	+44%/-51%	+62%/-85%	+37%/-30%	+78639%/-82%
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 003561372-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5200 ± 114	$24.80^{+37.14}_{-18.41}$	662^{+124}_{-187}	6095^{+7677}_{-1508}	$7278^{+101744}_{-6024}$
Alt.	-1255 ± 77	$30.98^{+35.50}_{-22.16}$	647^{+138}_{-184}	4120^{+2426}_{-700}	1188^{+12127}_{-942}

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

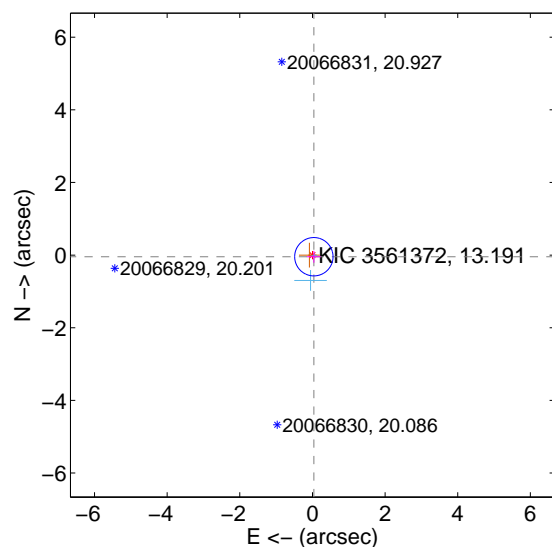
Supplemental centroid analysis for 003561372-07. Kepler magnitude: 13.19. Transit SNR 3.59

There are 2 quarters with good PRF difference image offsets

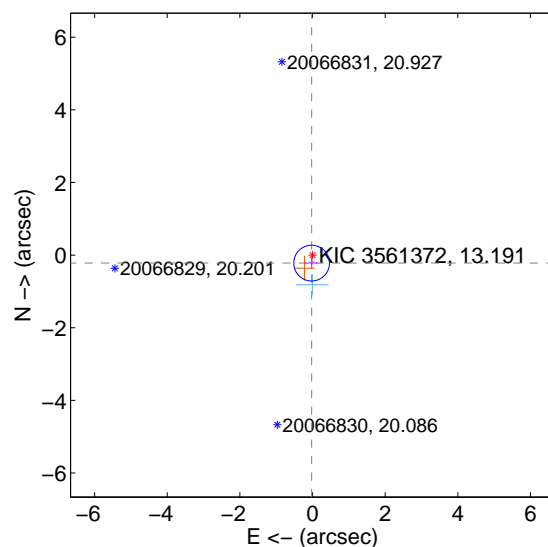
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.059 ± 0.176	0.34	-0.039 ± 0.191	-0.045 ± 0.164
PRF-fit source offset from KIC position	0.222 ± 0.164	1.35	0.025 ± 0.191	-0.220 ± 0.164
photometric centroid source offset	1.75 ± 1.27	1.38	0.27 ± 1.04	1.73 ± 1.27

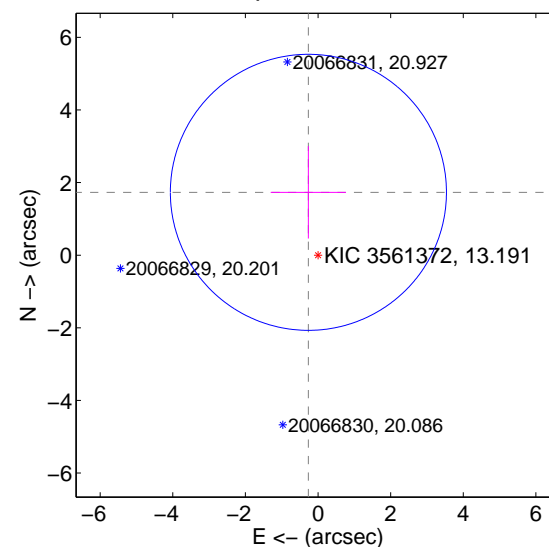
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

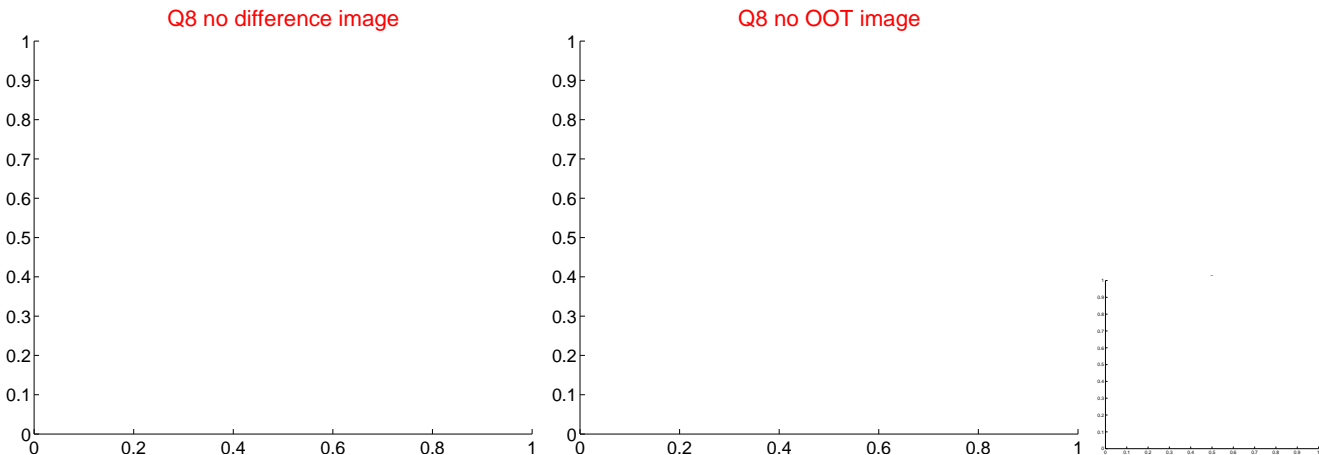
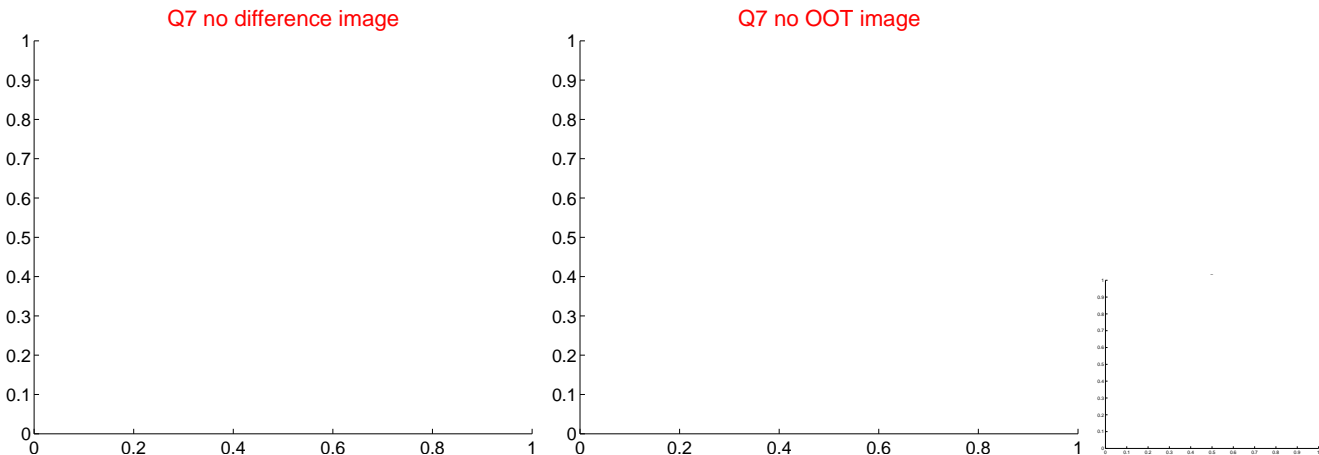
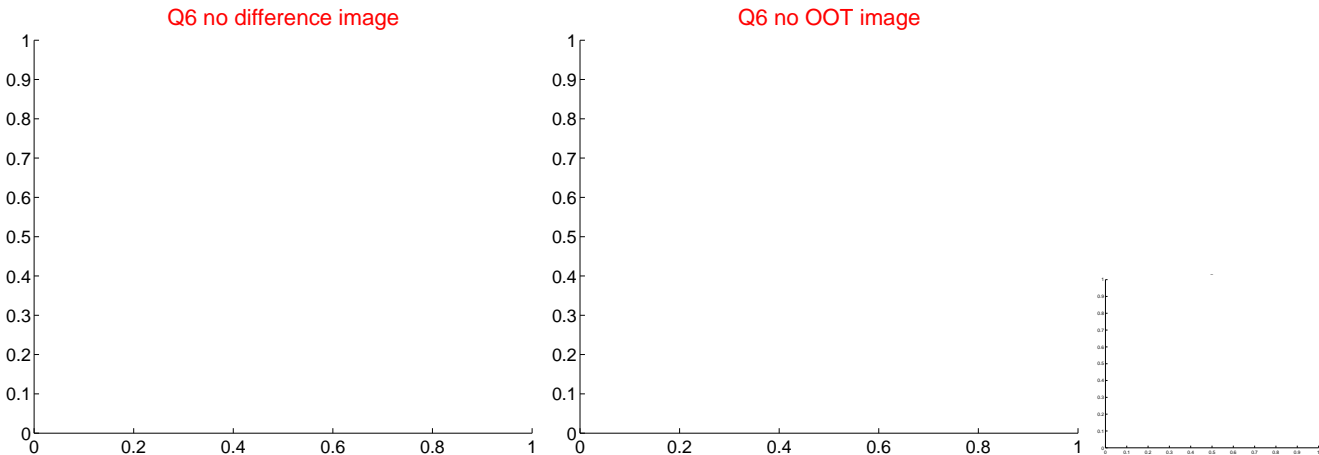
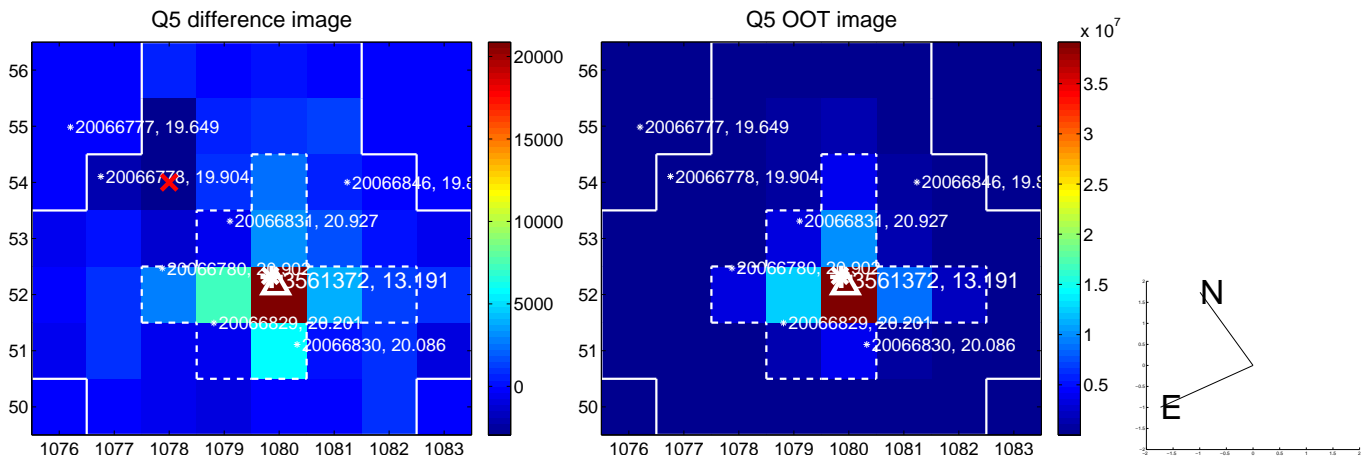


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

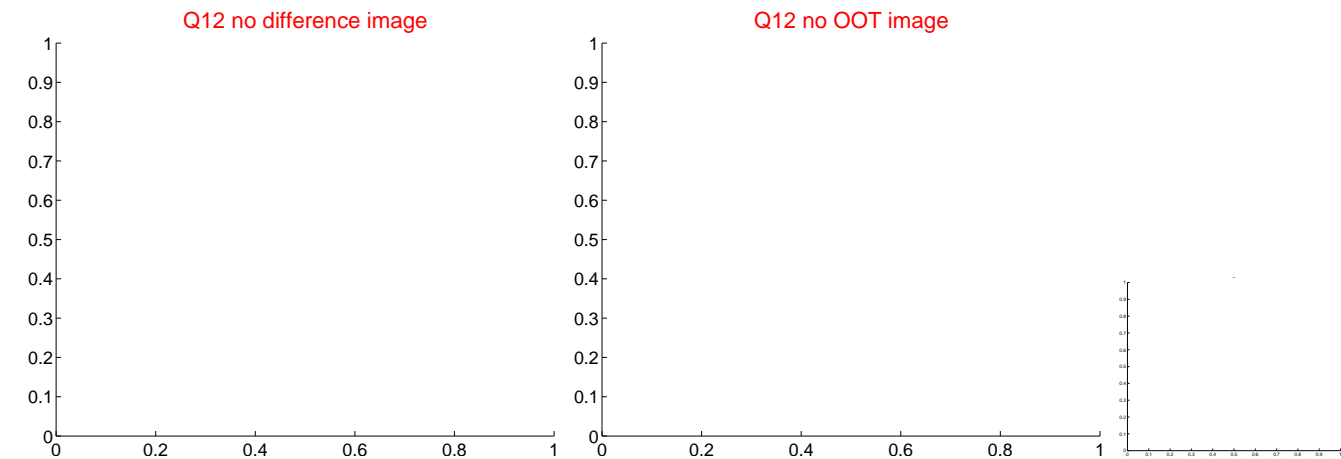
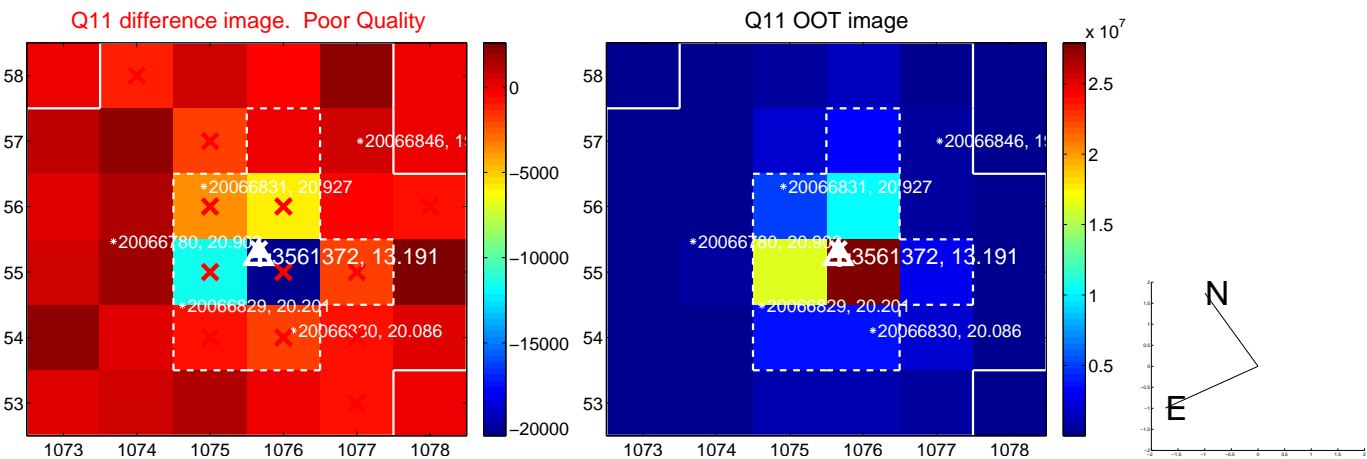
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



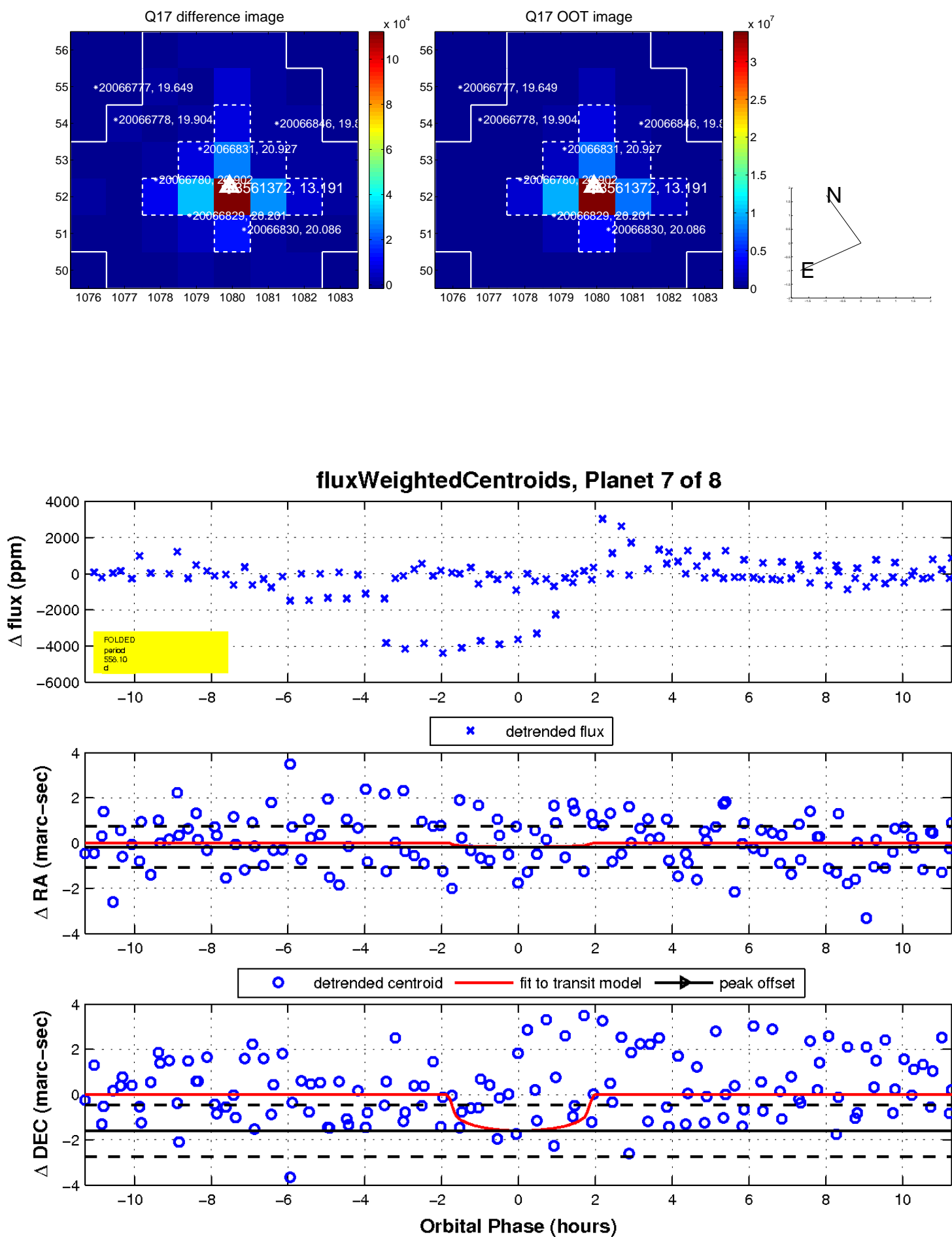
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

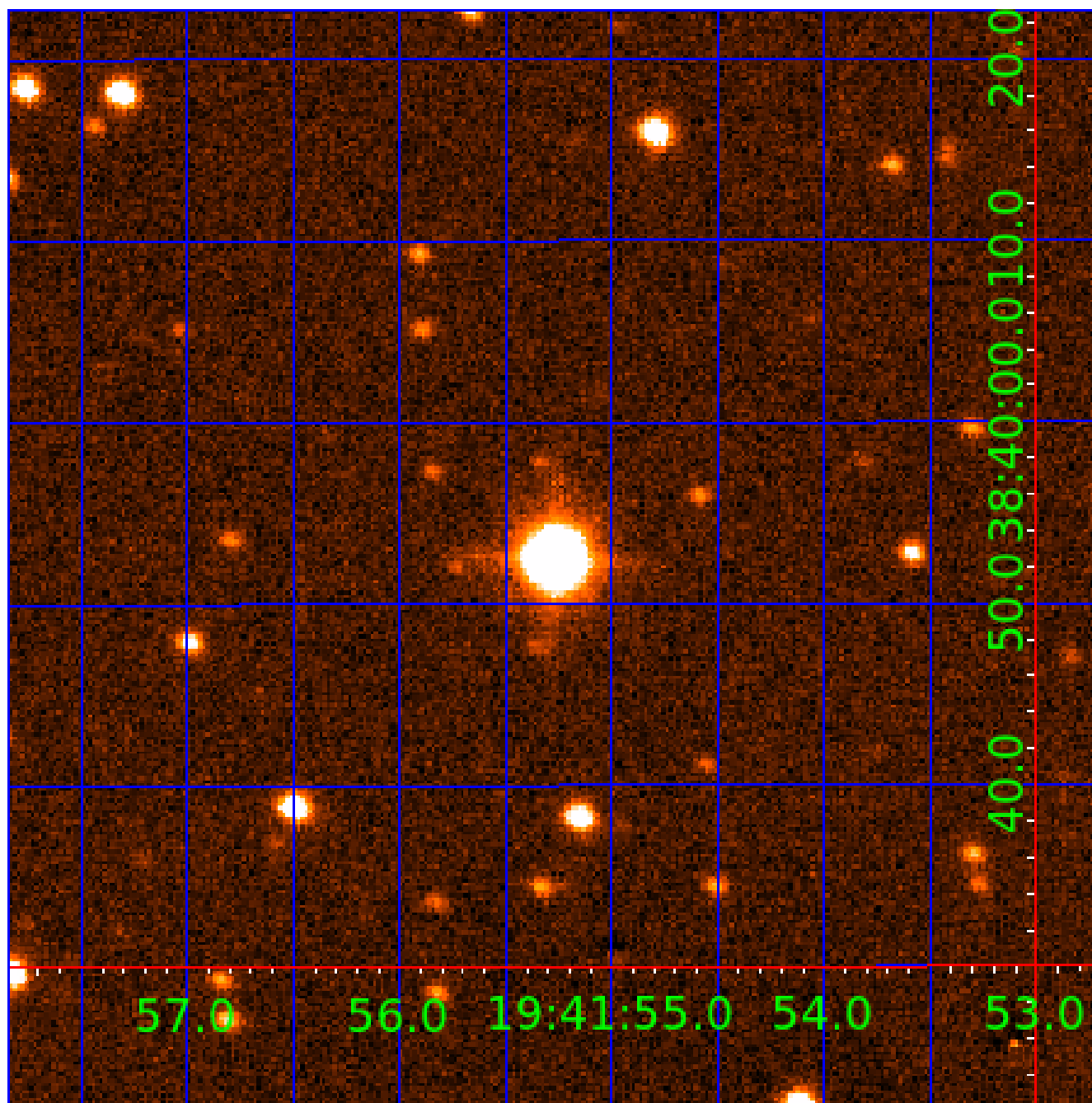


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003561372

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})
003561372-02	OBS	No	557.803777	452.487943	1735.7	10.711	20.6	8.1	6.54	4922	26.63	14.58
003561372-03	OBS	No	410.745837	214.851358	1145.6	8.747	52.8	5.9	6.54	4922	21.68	21.93
003561372-06	OBS	No	707.034628	157.260031	1774.0	11.618	18.4	9.0	6.54	4922	29.84	10.63
003561372-07	OBS	No	558.097645	461.751036	749.9	3.767	19.9	3.6	6.54	4922	18.79	14.57
003561372-08	OBS	No	361.810236	333.677231	799.7	5.000	16.2	-1.0	6.54	4922	18.06	25.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561372-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003561372-03	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_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003561372-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

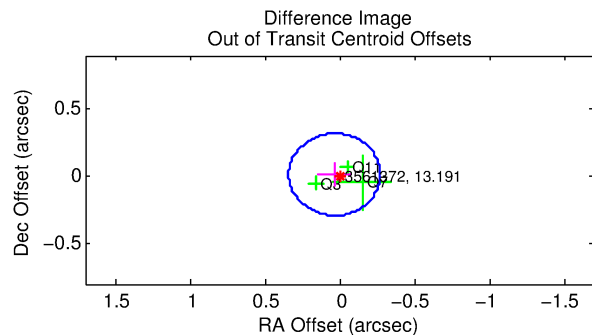
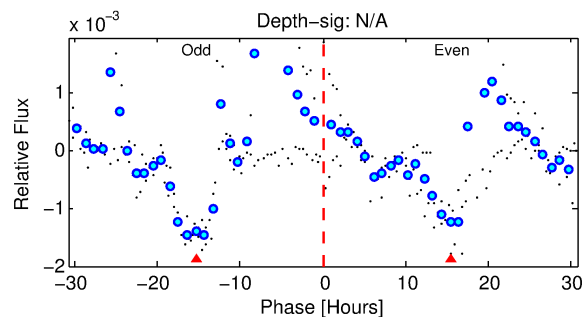
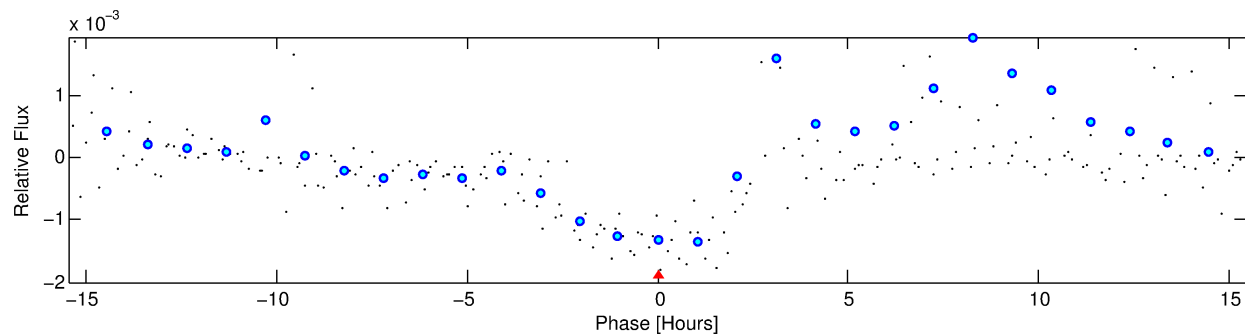
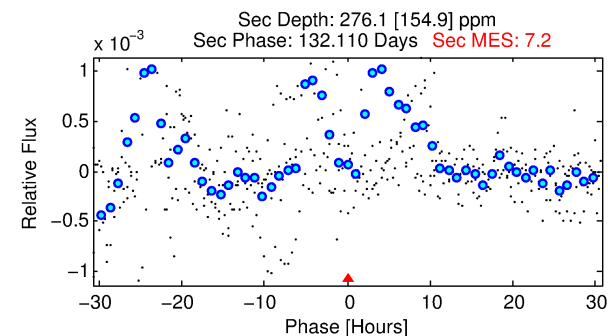
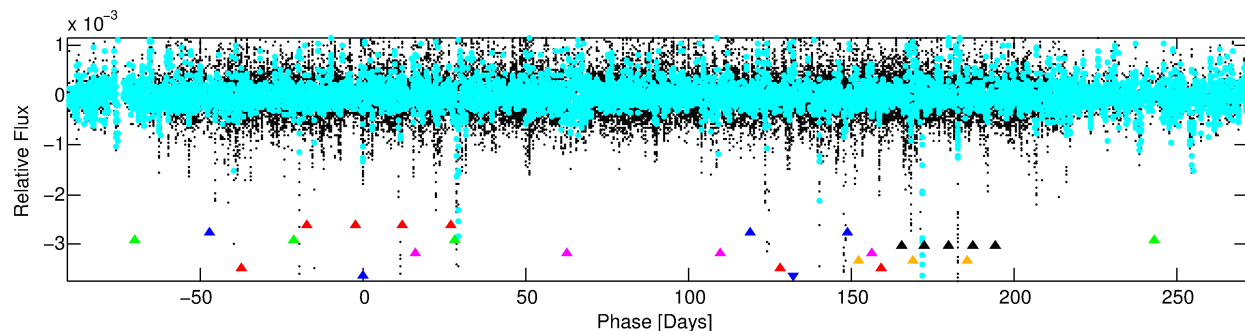
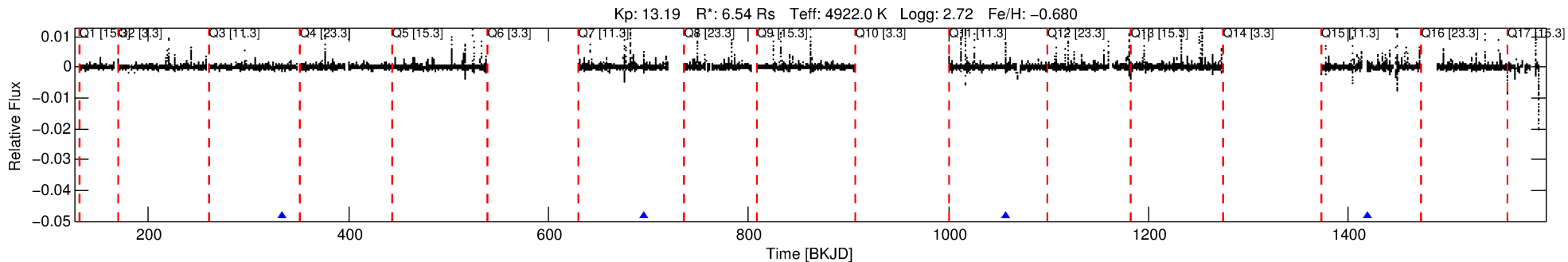
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561372-08

No Significant Match Found

DV One-Page Summary

KIC: 3561372 Candidate: 8 of 8 Period: 361.810 d



TPS TCE Results:

Period = 361.81024 d
Epoch = 333.6772 BKJD

DV fit results are unavailable

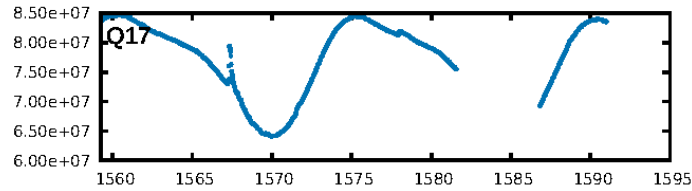
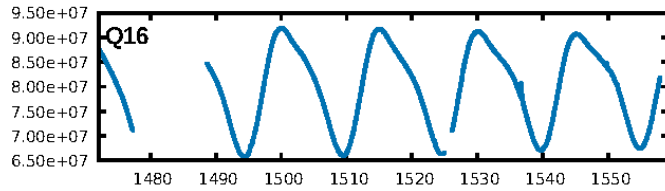
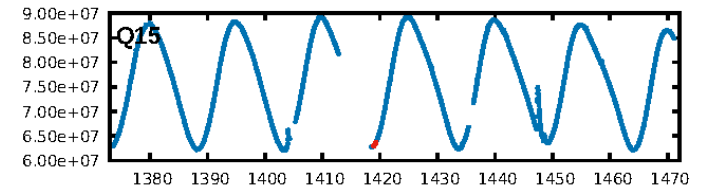
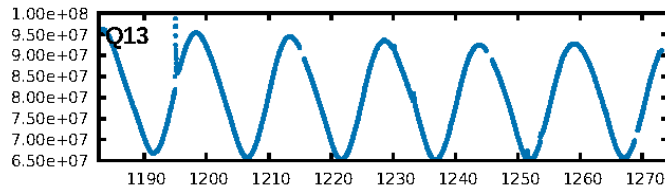
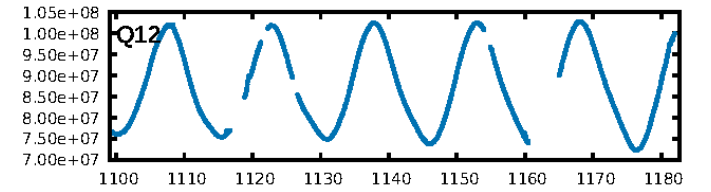
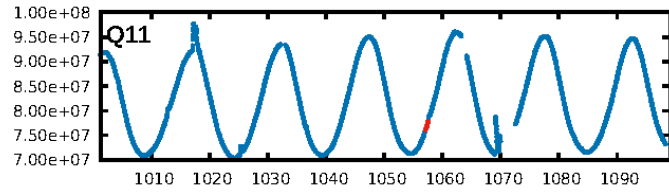
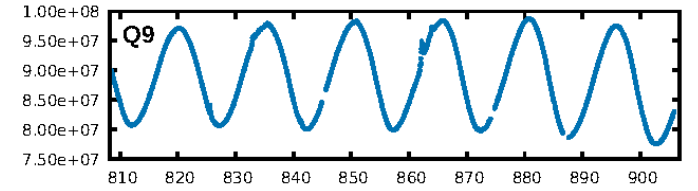
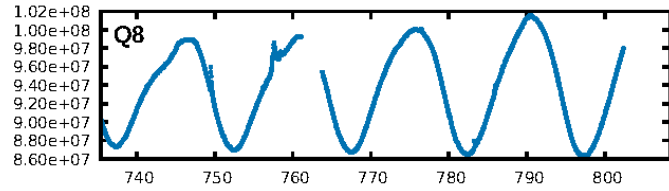
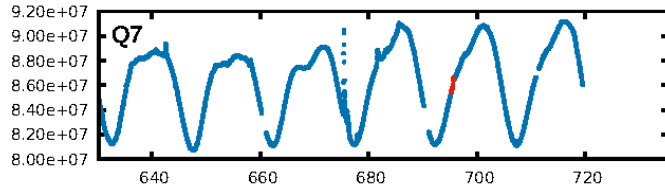
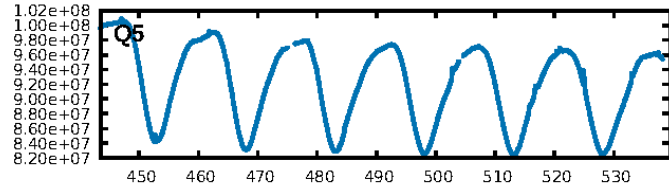
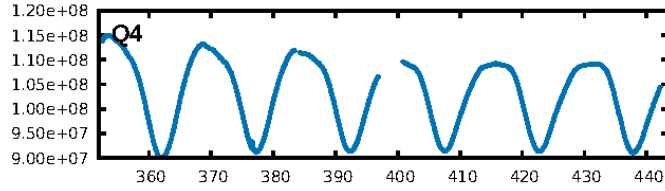
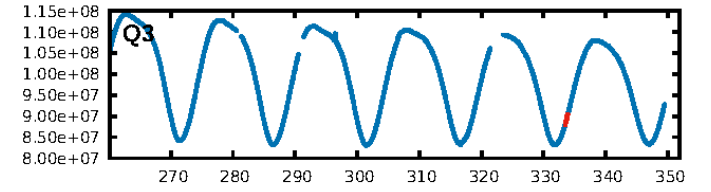
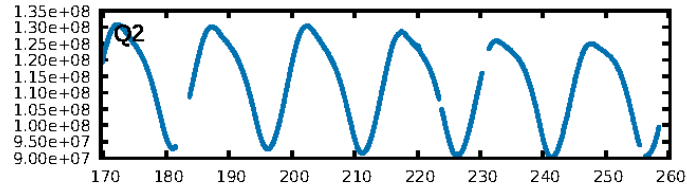
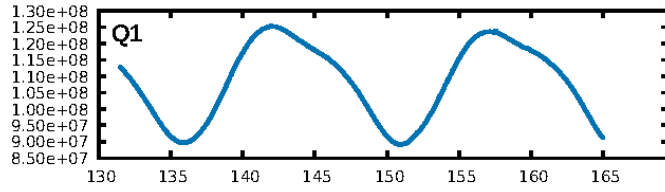
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.59σ]
LongPeriod-sig: 100.0% [23.79σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.645
Centroid-sig: 78.3%
Centroid-so: 0.575 arcsec [1.35σ]
OotOffset-rm: 0.037 arcsec [0.37σ]
KicOffset-rm: 0.427 arcsec [4.40σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

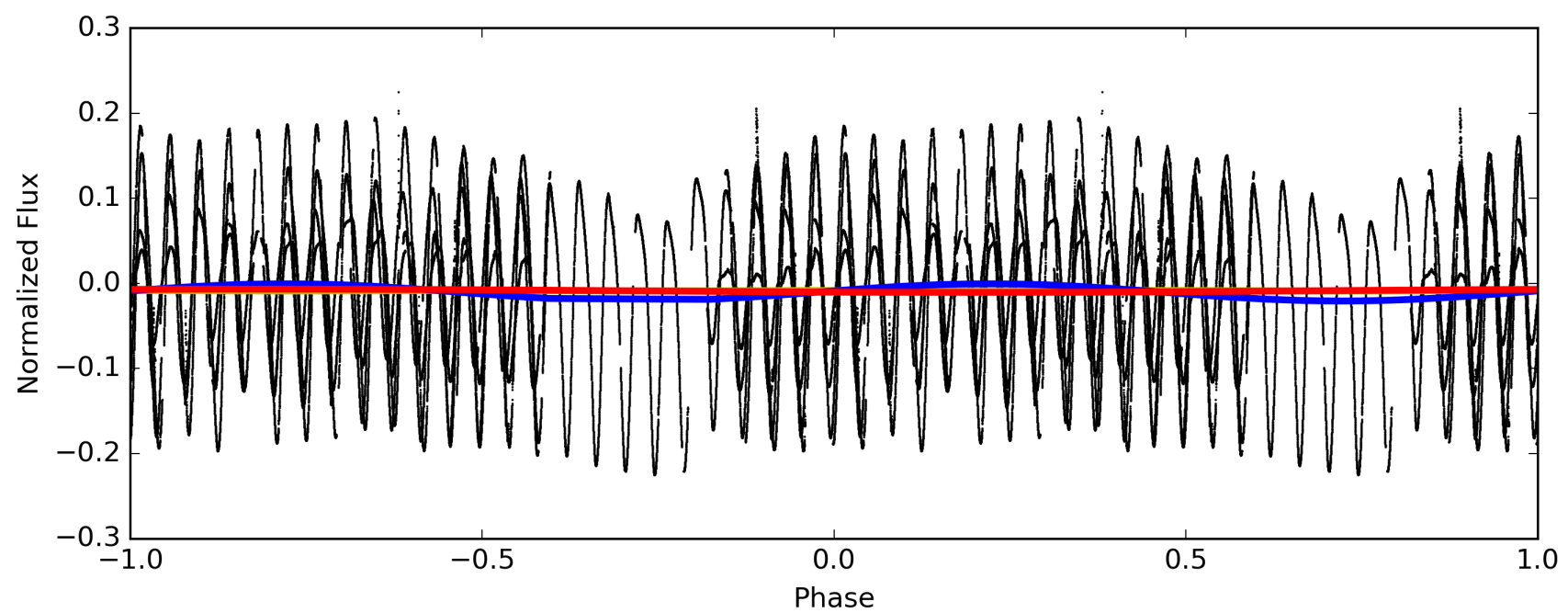
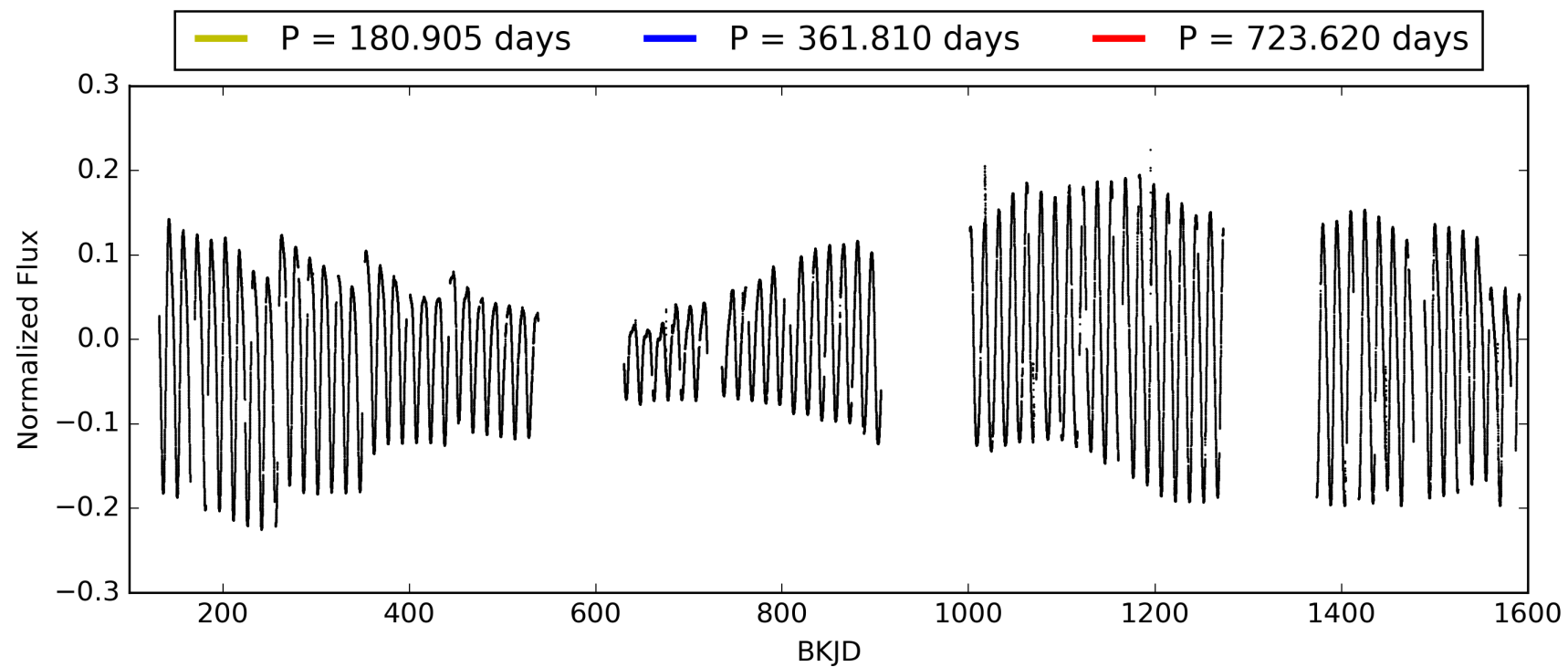
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:46:44 Z

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

TCE 003561372-08, PDC Light Curves

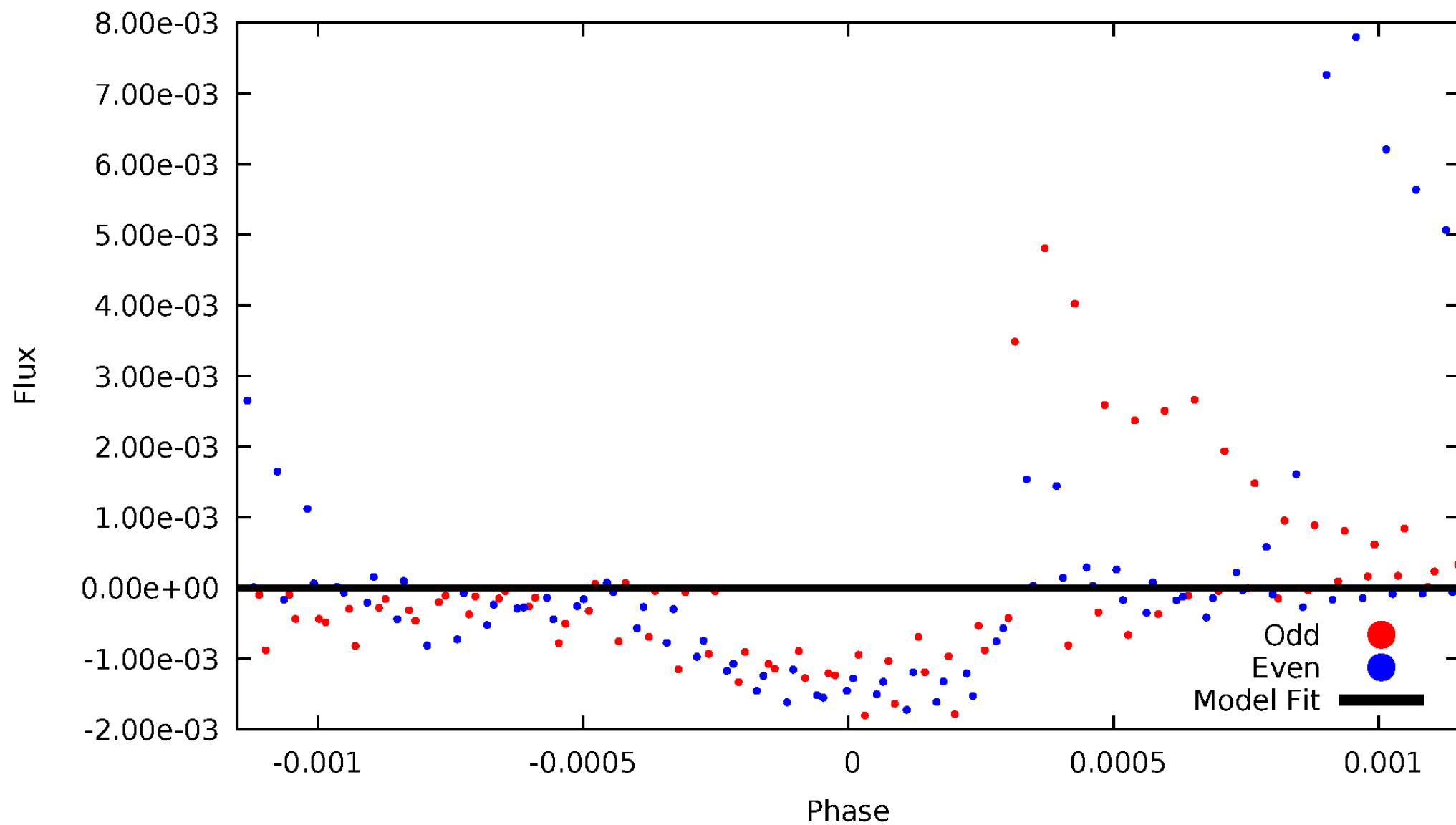


TCE 003561372-08



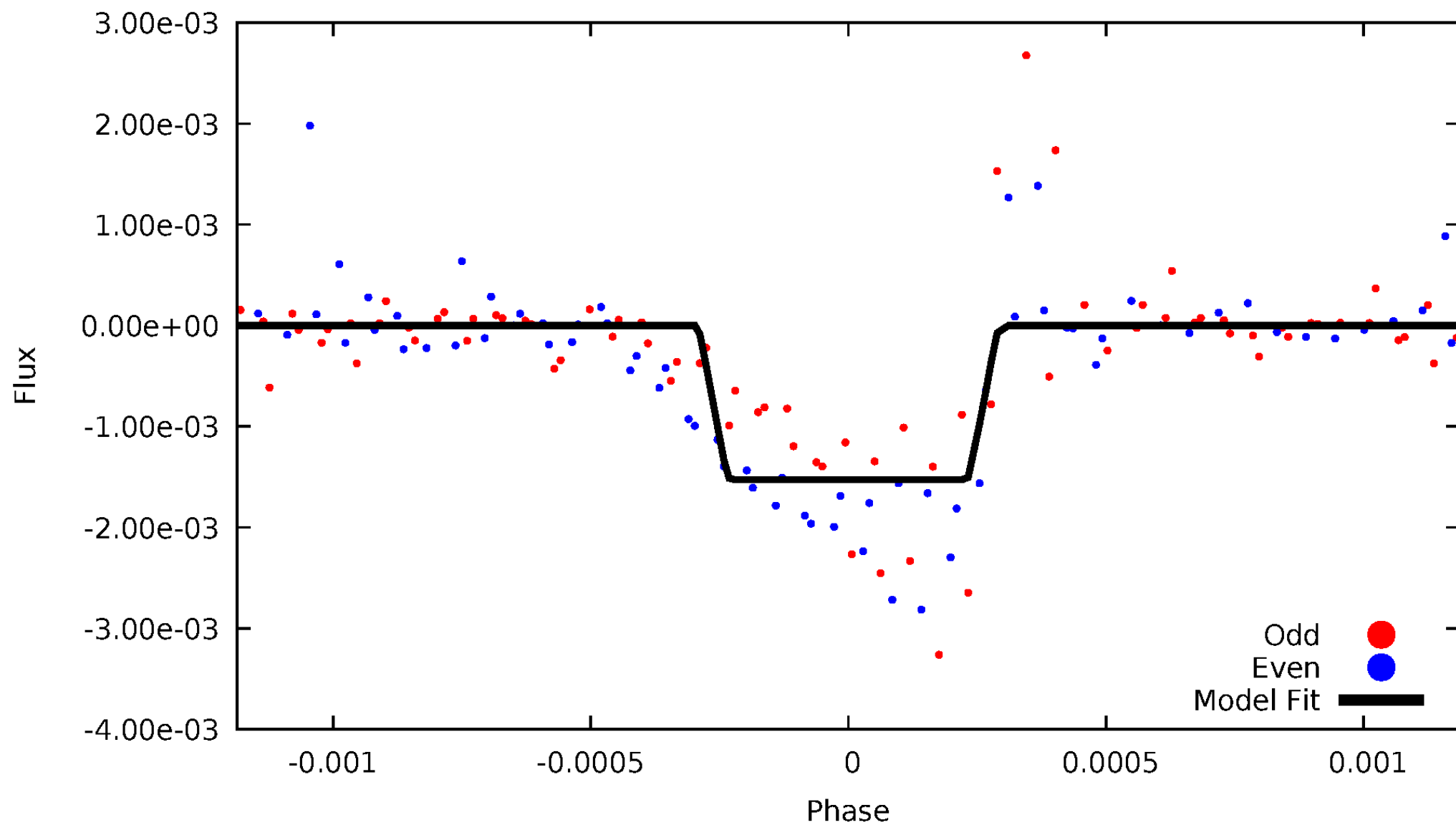
DV Odd/Even

TCE 003561372-08



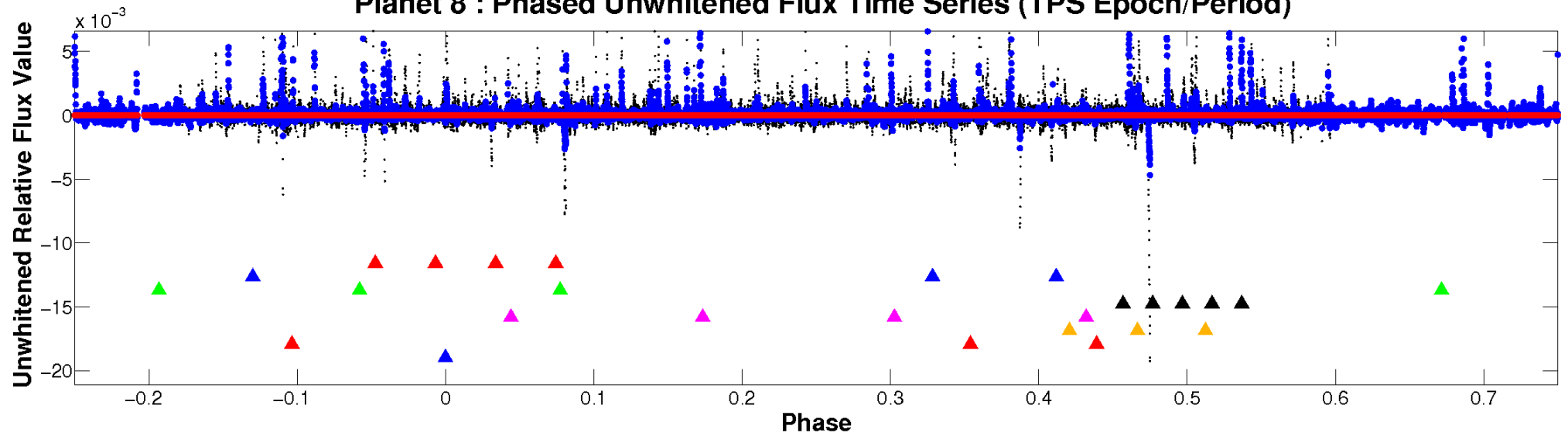
ALT Odd/Even

TCE 003561372-08

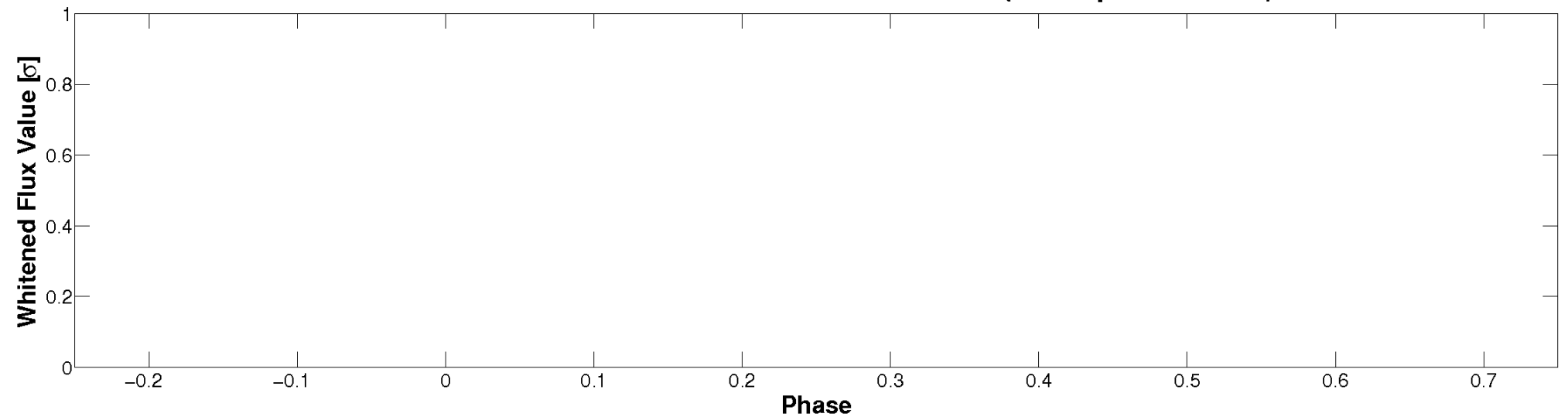


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

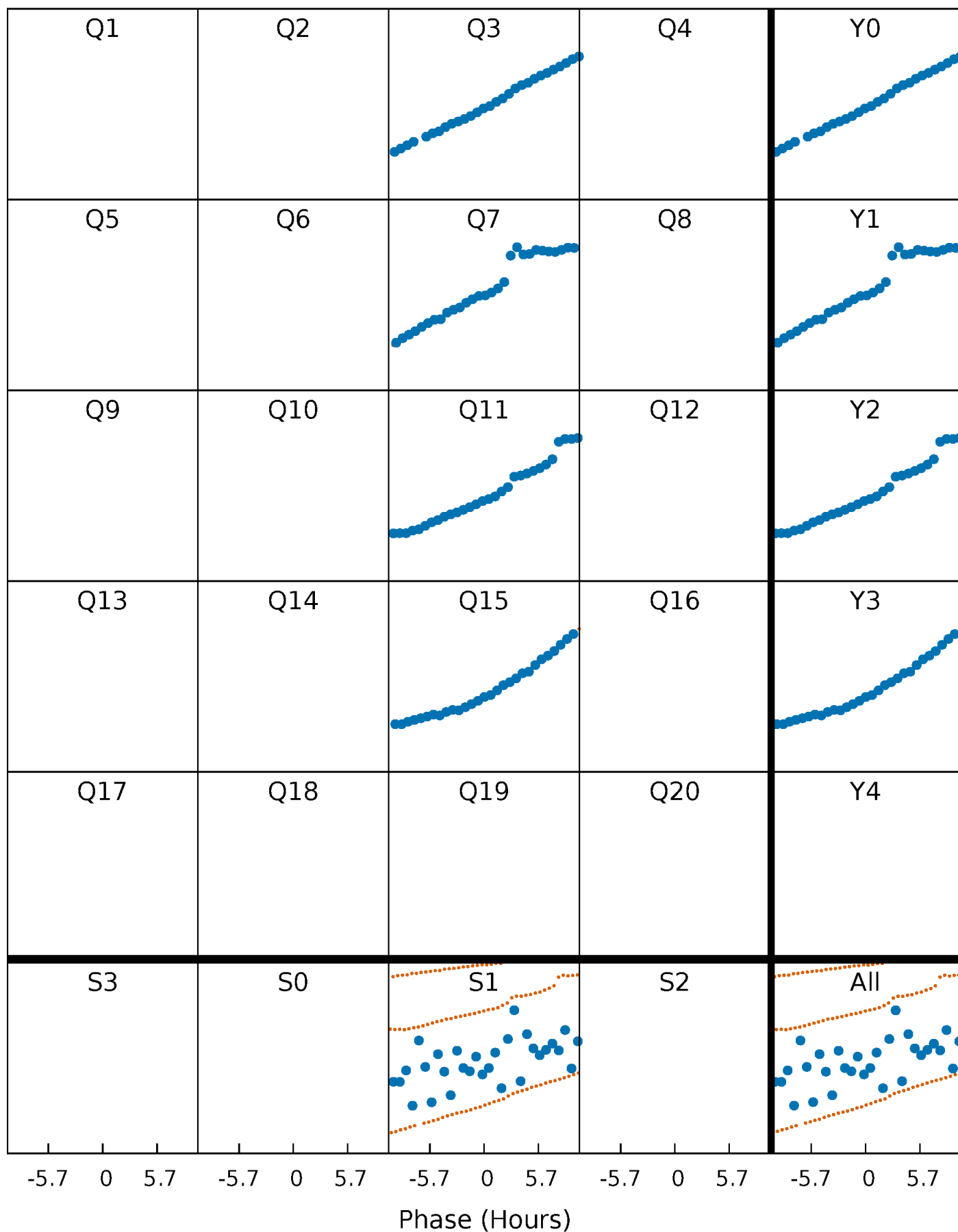


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



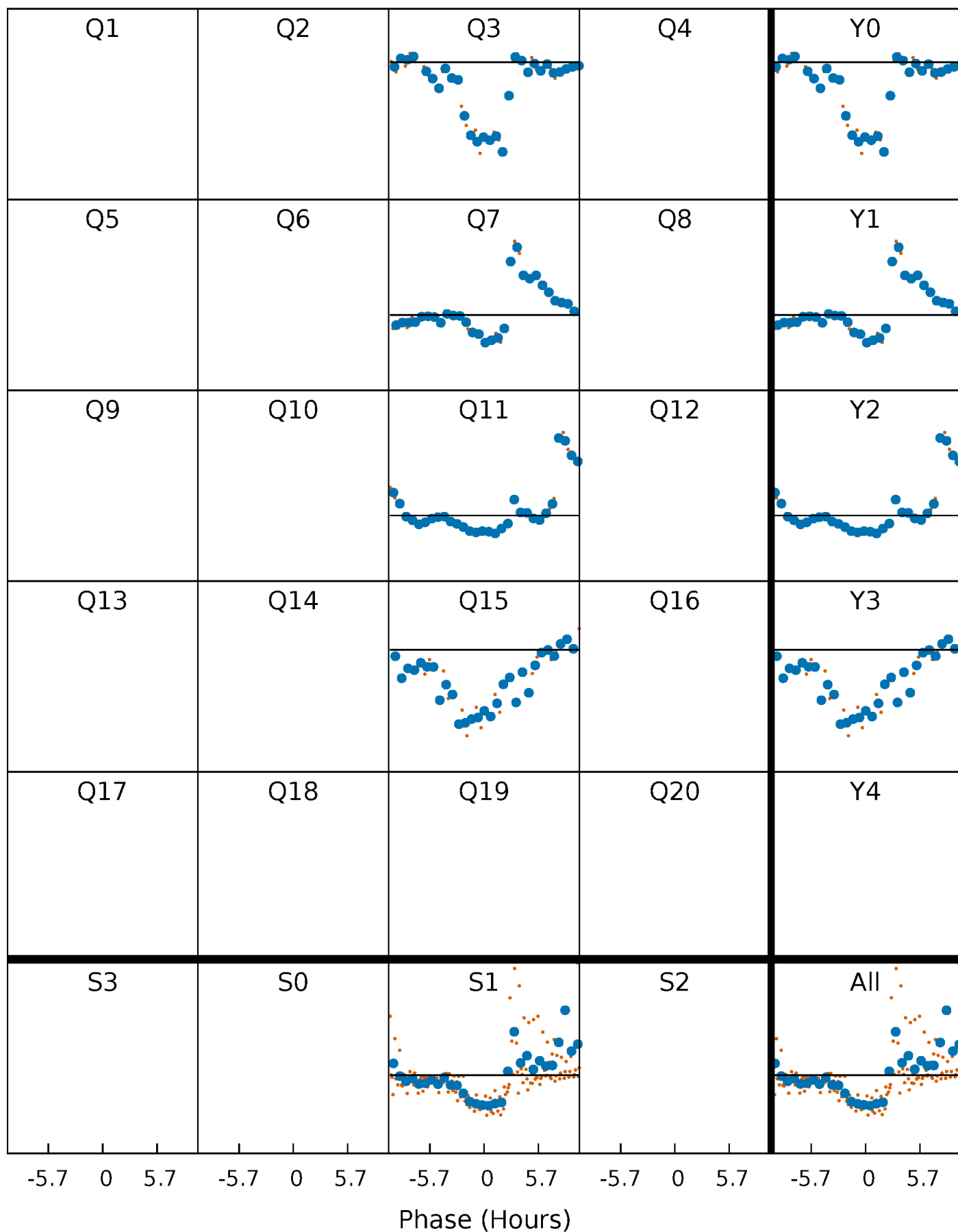
PDC Quarter-Phased Transit Curves

TCE 003561372-08 $P=361.810236$ Days $T_0=333.677231$ (BKJD)



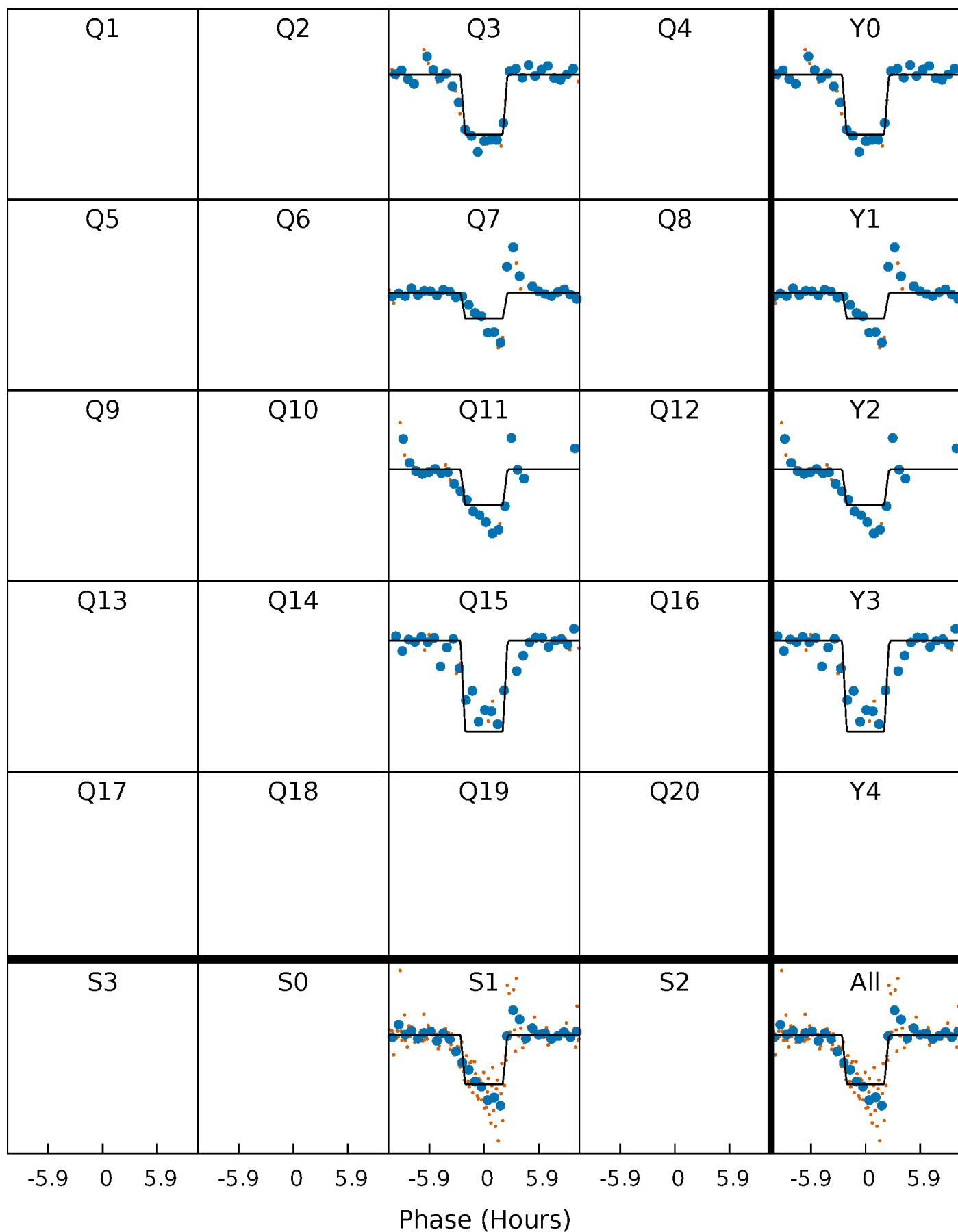
DV Quarter-Phased Transit Curves

TCE 003561372-08 $P=361.810236$ Days $T_0=333.677231$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

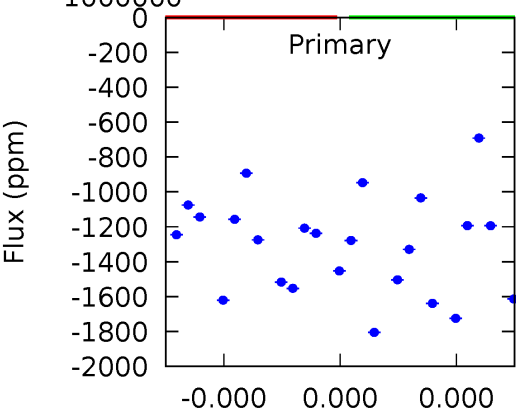
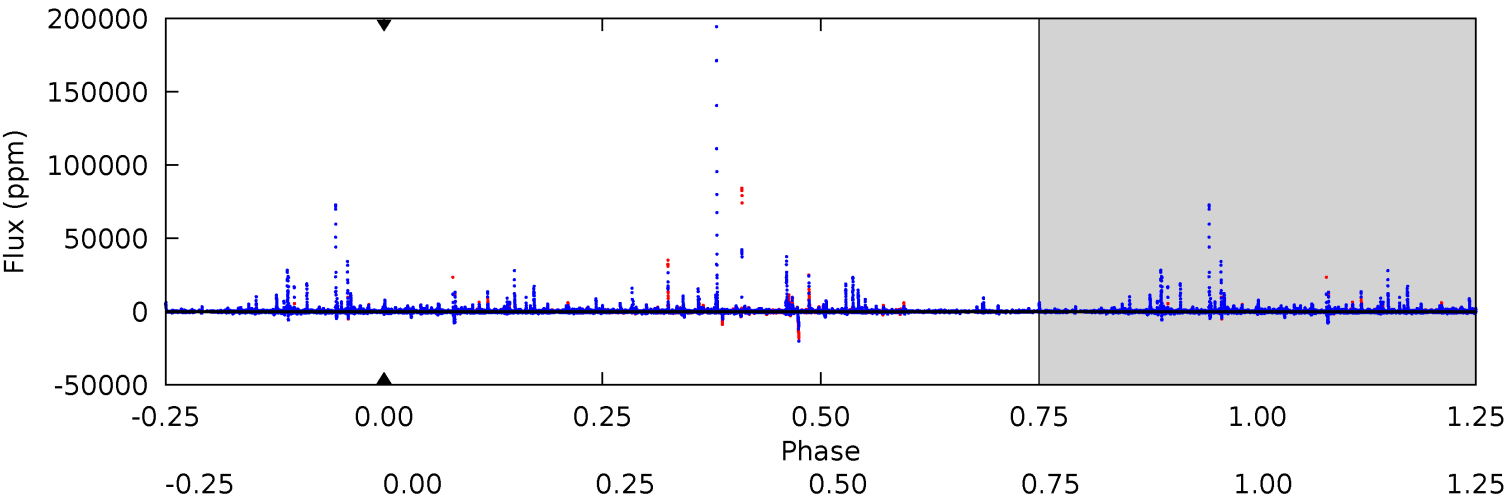
TCE 003561372-08 $P=361.810236$ Days $T_0=333.686209$ (BKJD)



DV Model-Shift Uniqueness Test

003561372-08, P = 361.810236 Days, E = 333.677231 Days

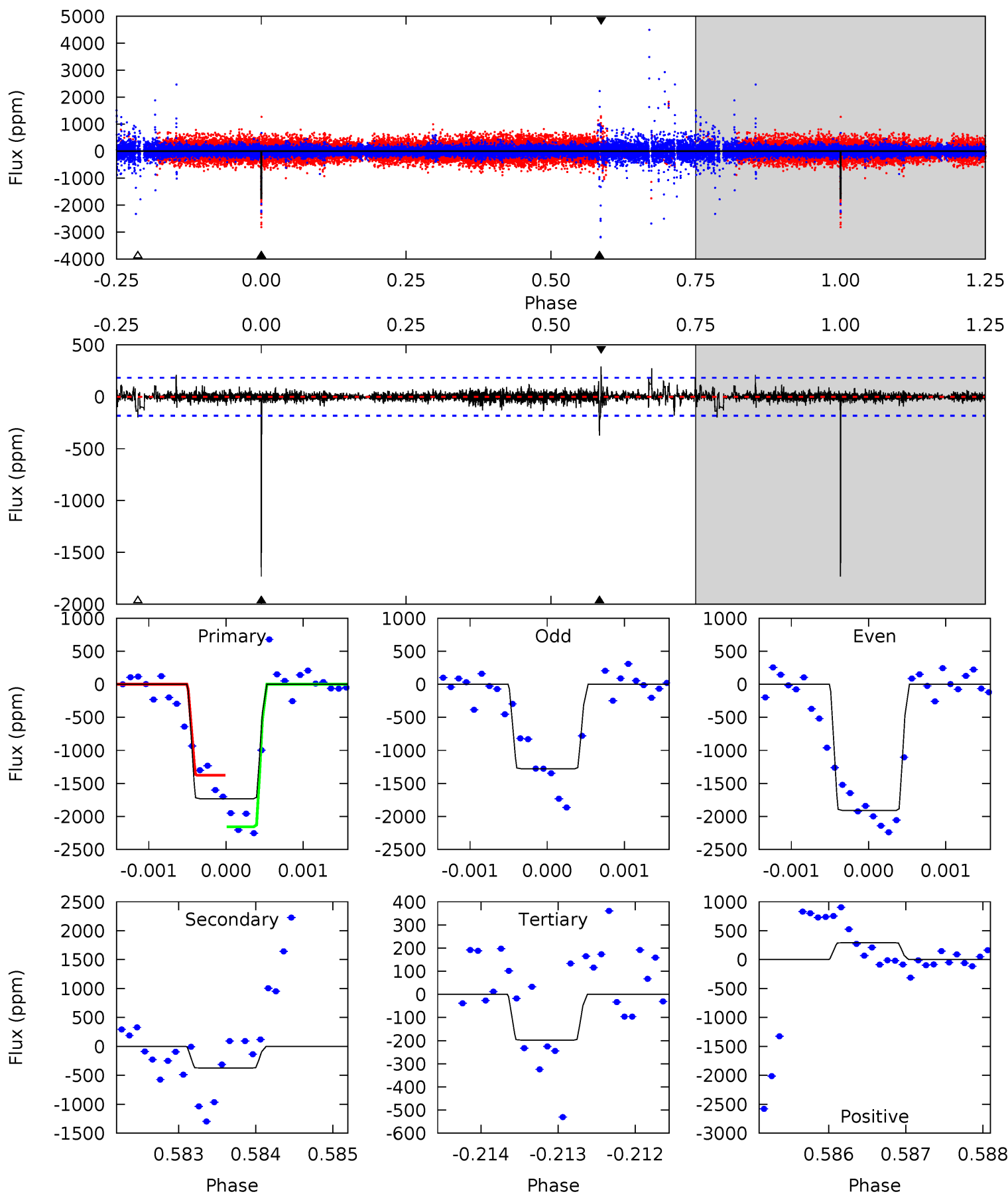
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003561372-08, P = 361.810236 Days, E = 333.686209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.6	11.3	6.00	8.86	5.55	3.44	0.82	46.6	43.8	5.31	2.45	8.88	0.96	0.14	11.6



Stellar Parameters For KIC 003561372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4922^{+155}_{-173}	$2.721^{+1.947}_{-0.344}$	$-0.680^{+0.300}_{-0.350}$	$6.540^{+4.049}_{-5.567}$	$0.820^{+0.301}_{-0.246}$	$0.004^{+3.247}_{-0.003}$
	+3%/-4%	+72%/-13%	+44%/-51%	+62%/-85%	+37%/-30%	+78639%/-82%
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 003561372-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$43.91^{+59.49}_{-32.77}$	765^{+143}_{-209}	3100^{+11947}_{-15317}	73^{+51750}_{-42875}
Alt.	-372 ± 33	$46.46^{+63.33}_{-33.91}$	773^{+145}_{-205}	3037^{+1349}_{-524}	83^{+1106}_{-69}

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

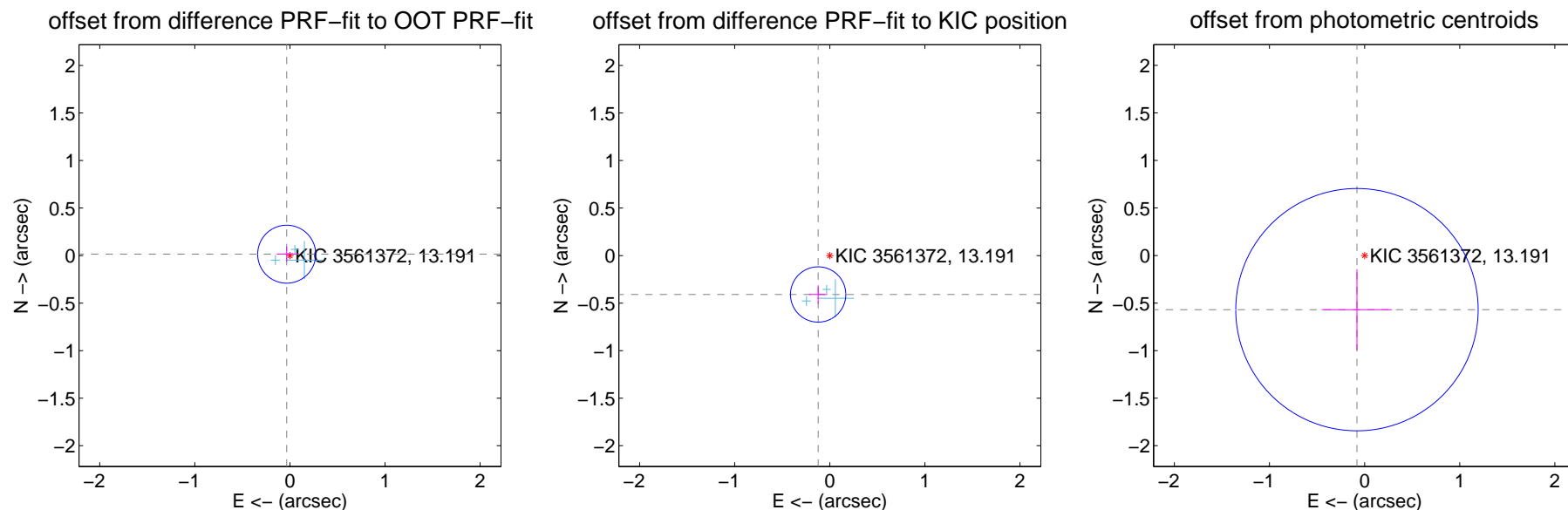
DV Centroid Data

Supplemental centroid analysis for 003561372-08. Kepler magnitude: 13.19. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

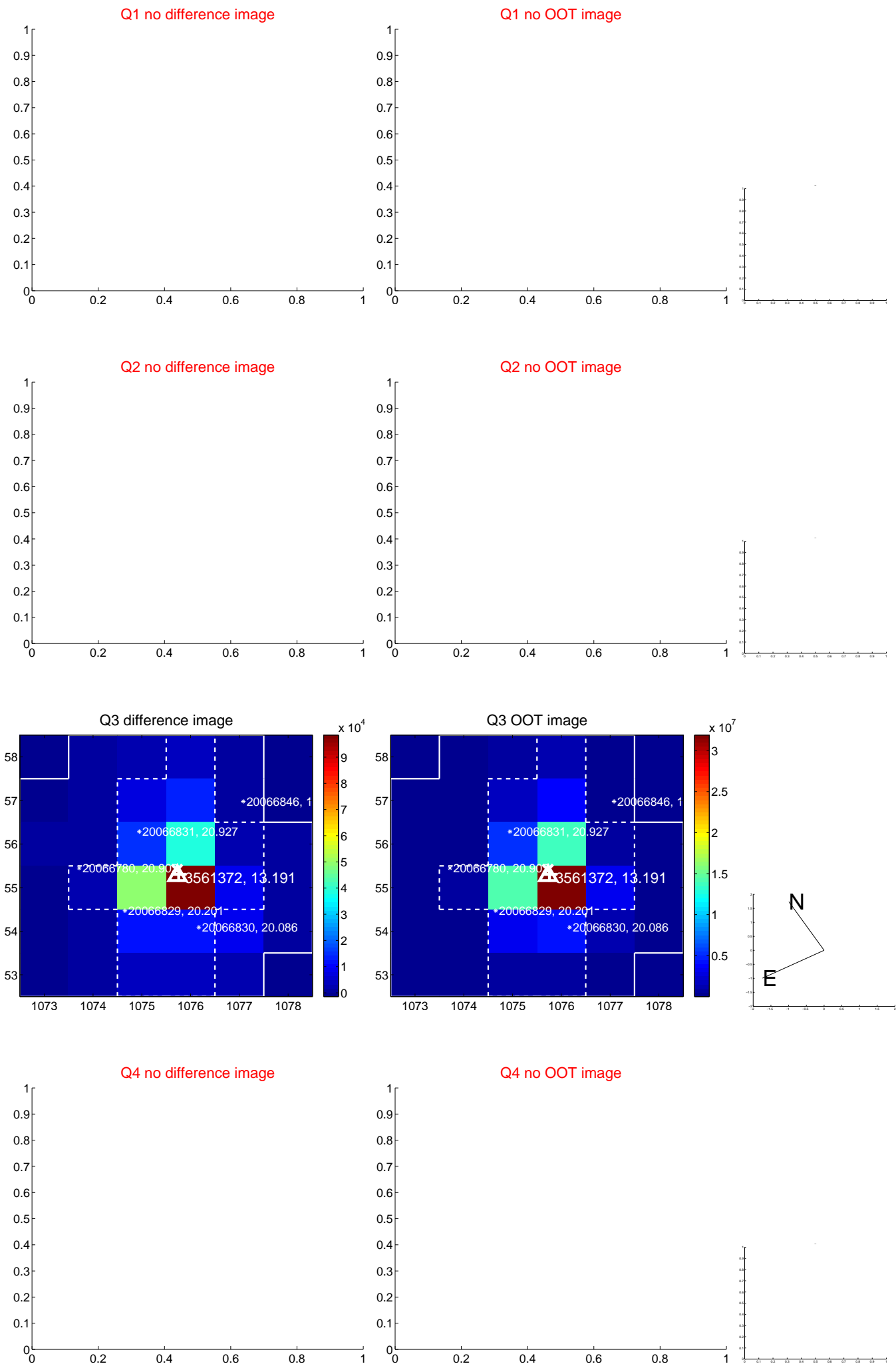
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.037 ± 0.102	0.37	0.034 ± 0.105	0.015 ± 0.080
PRF-fit source offset from KIC position	0.427 ± 0.097	4.40	0.123 ± 0.096	-0.409 ± 0.097
photometric centroid source offset	0.58 ± 0.42	1.35	0.08 ± 0.37	-0.57 ± 0.43

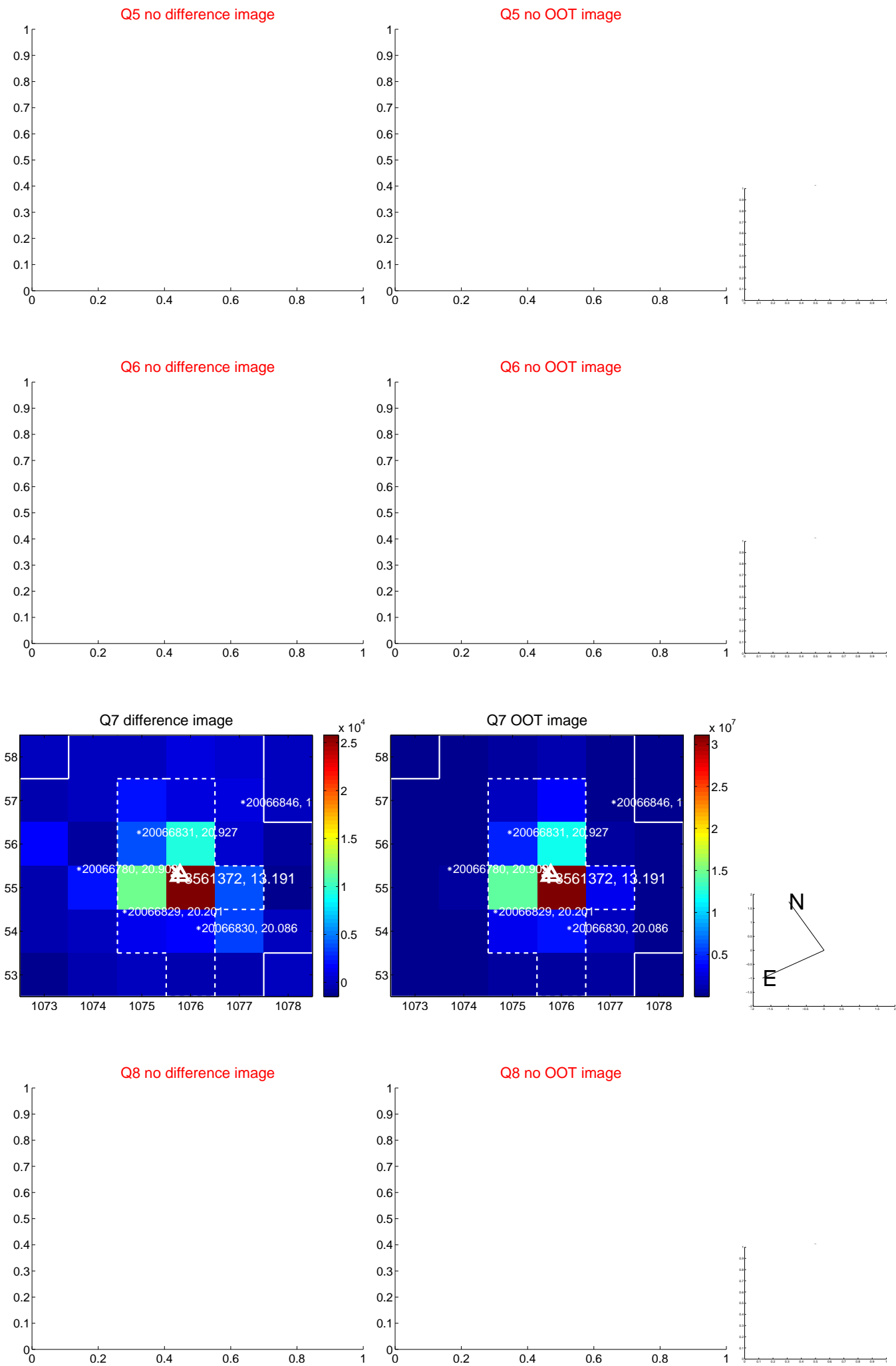


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

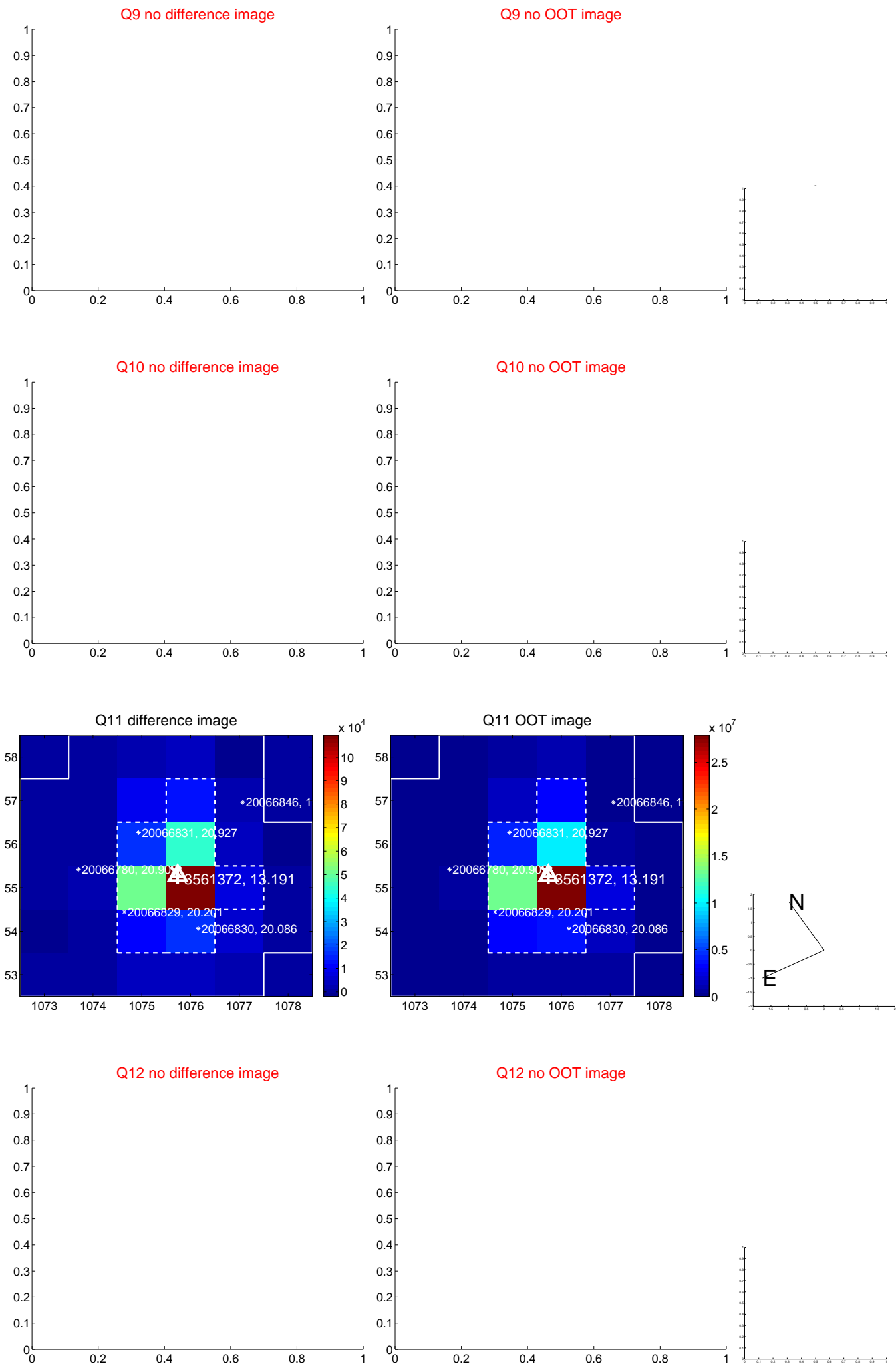
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



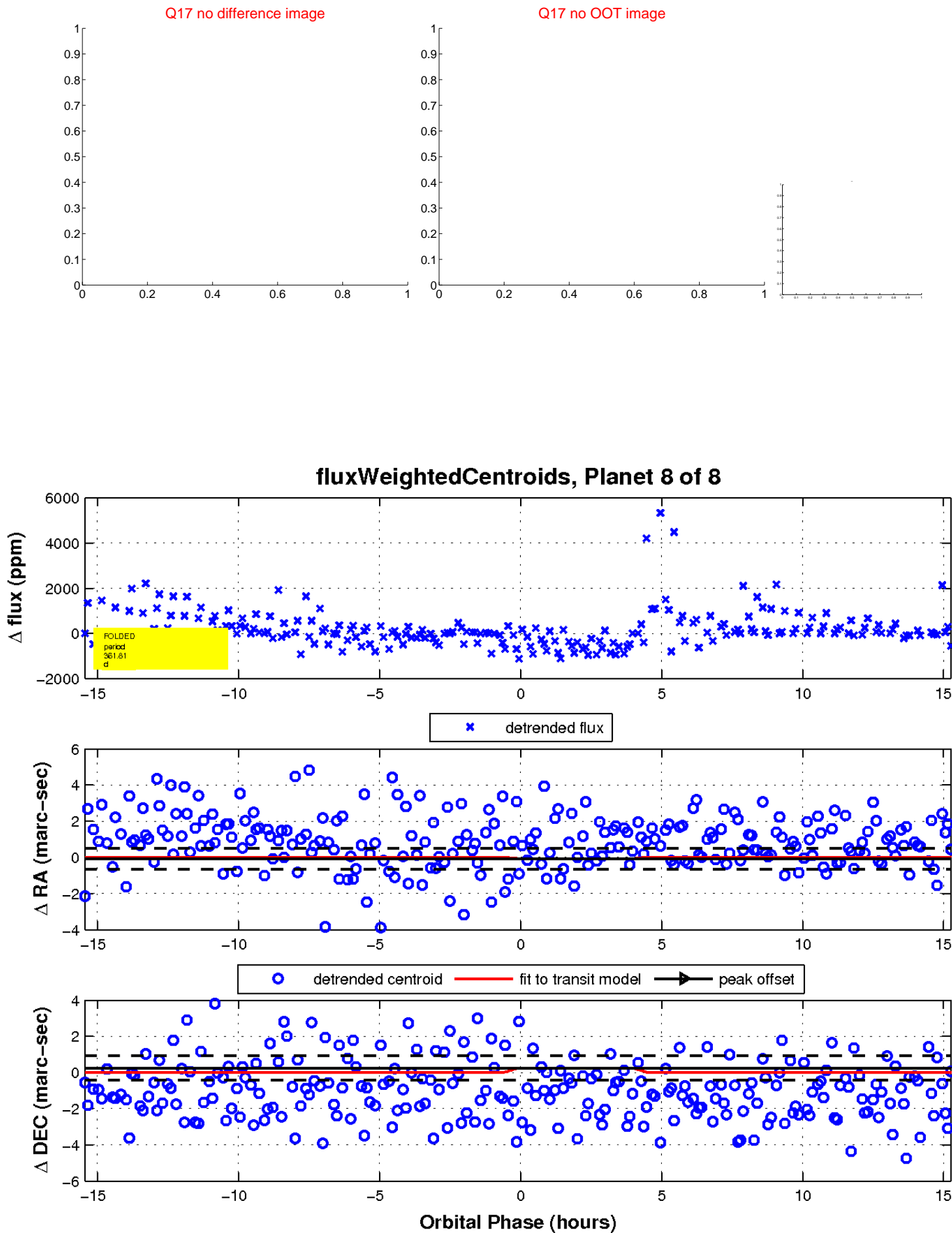
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

