

KIC 007591386

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})
007591386-01	OBS	No	381.462772	324.067306	921.2	16.174	10.8	10.6	0.73	5522	4.33	0.49
007591386-02	OBS	No	279.454554	289.193334	546.0	4.768	9.4	7.6	0.73	5522	1.89	0.74
007591386-03	OBS	No	650.405765	264.096770	557.0	8.901	10.3	6.4	0.73	5522	1.86	0.24
007591386-04	OBS	No	559.855214	319.073792	825.9	40.989	8.5	6.9	0.73	5522	2.47	0.29
007591386-05	OBS	No	284.592336	316.717684	511.8	6.367	10.5	7.0	0.73	5522	1.78	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007591386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS
007591386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007591386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

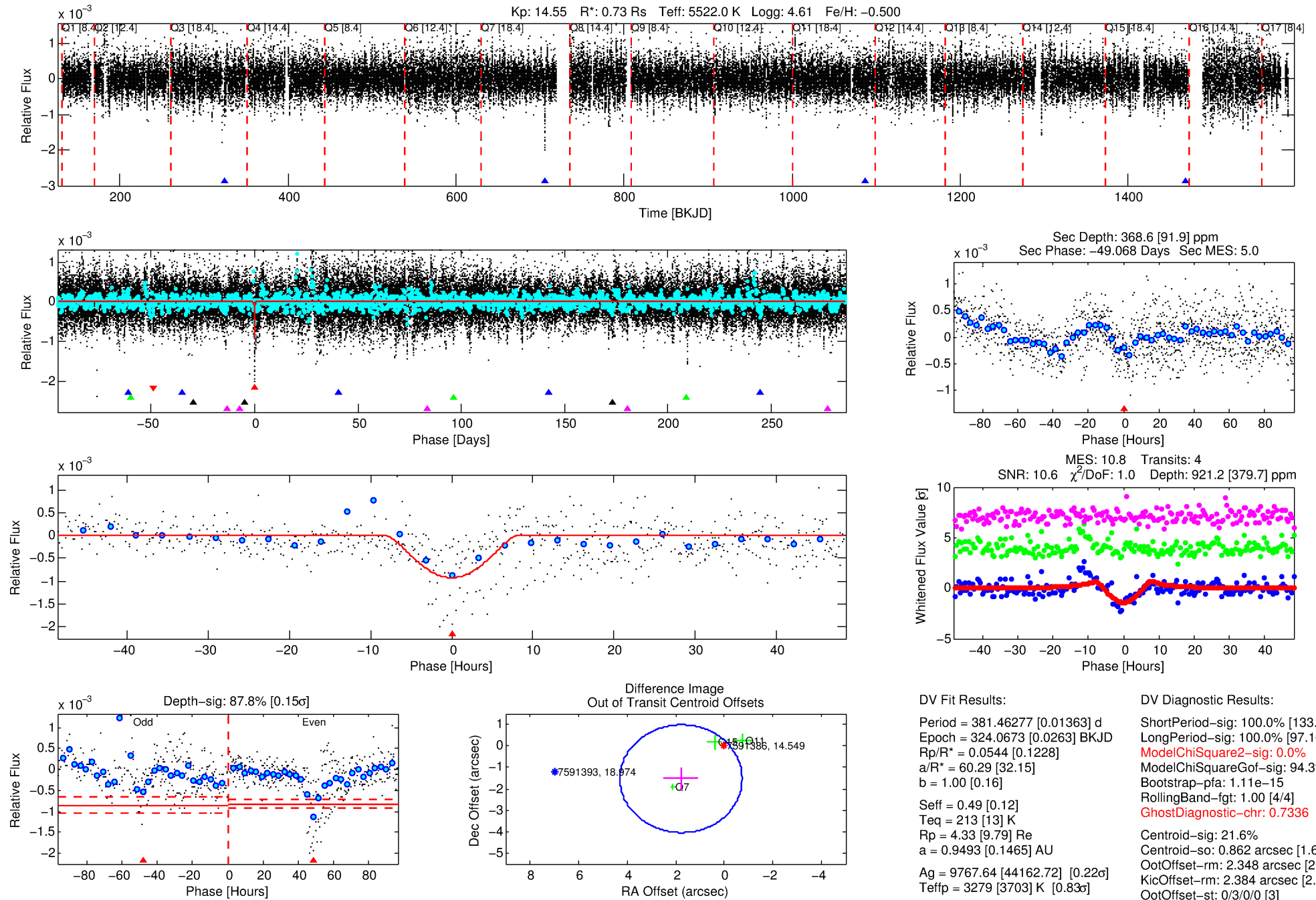
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007591386-01

No Significant Match Found

DV One-Page Summary

KIC: 7591386 Candidate: 1 of 5 Period: 381.463 d



DV Fit Results:

Period = 381.46277 [0.01363] d
Epoch = 324.0673 [0.0263] BKJD
Rp/R* = 0.0544 [0.1228]
a/R* = 60.29 [32.15]
b = 1.00 [0.16]
Seff = 0.49 [0.12]
Teq = 213 [13] K
Rp = 4.33 [9.79] Re
a = 0.9493 [0.1465] AU
Ag = 9767.64 [44162.72] [0.22 σ]
Teff = 3279 [3703] K [0.83 σ]

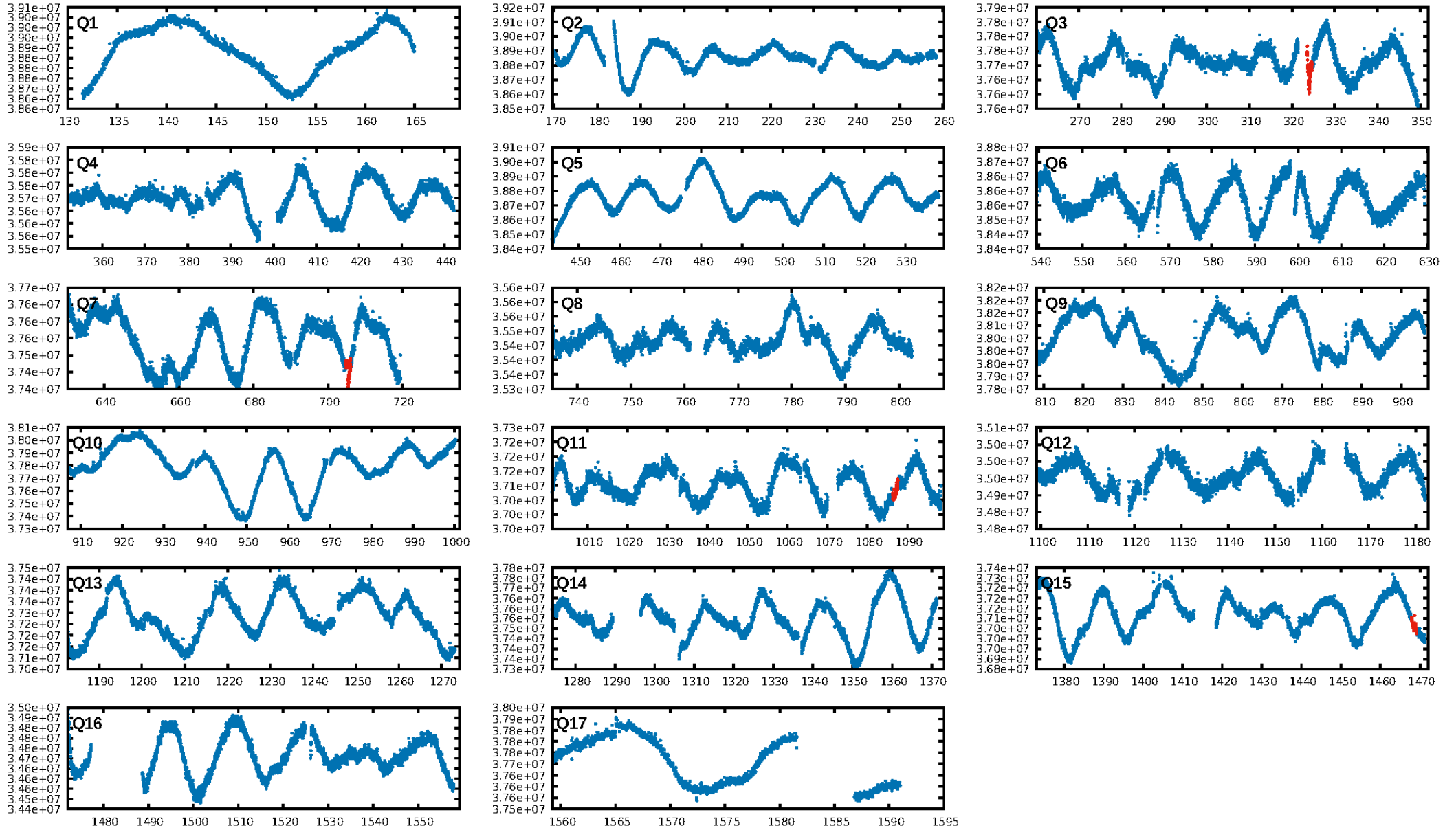
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [133.75 σ]
LongPeriod-sig: 100.0% [97.16 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 94.3%
Bootstrap-pfa: 1.11e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7336
Centroid-sig: 21.6%
Centroid-so: 0.862 arcsec [1.64 σ]
OotOffset-rm: 2.348 arcsec [2.80 σ]
KicOffset-rm: 2.384 arcsec [2.77 σ]
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]

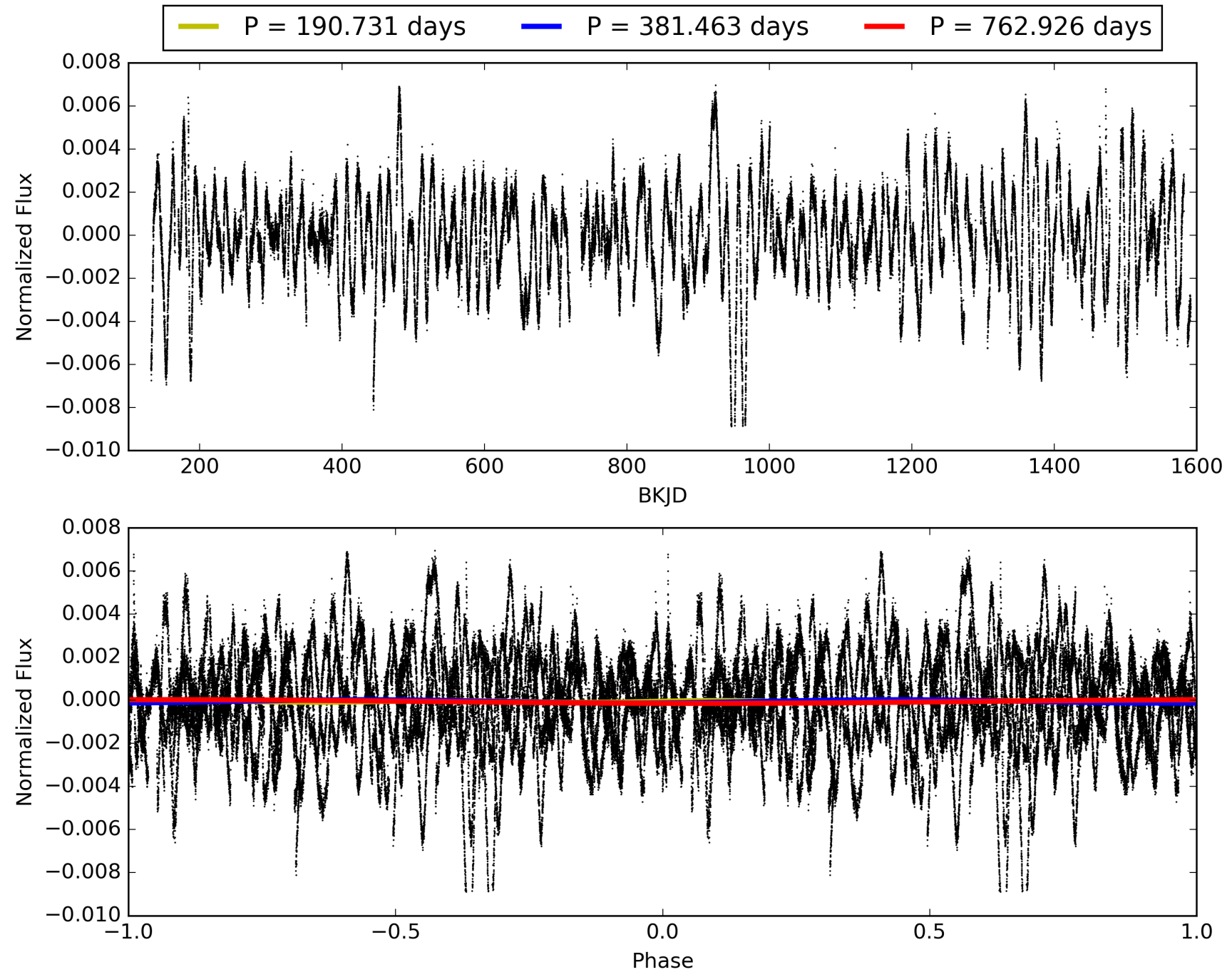
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:02:07 Z

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

TCE 007591386-01, PDC Light Curves

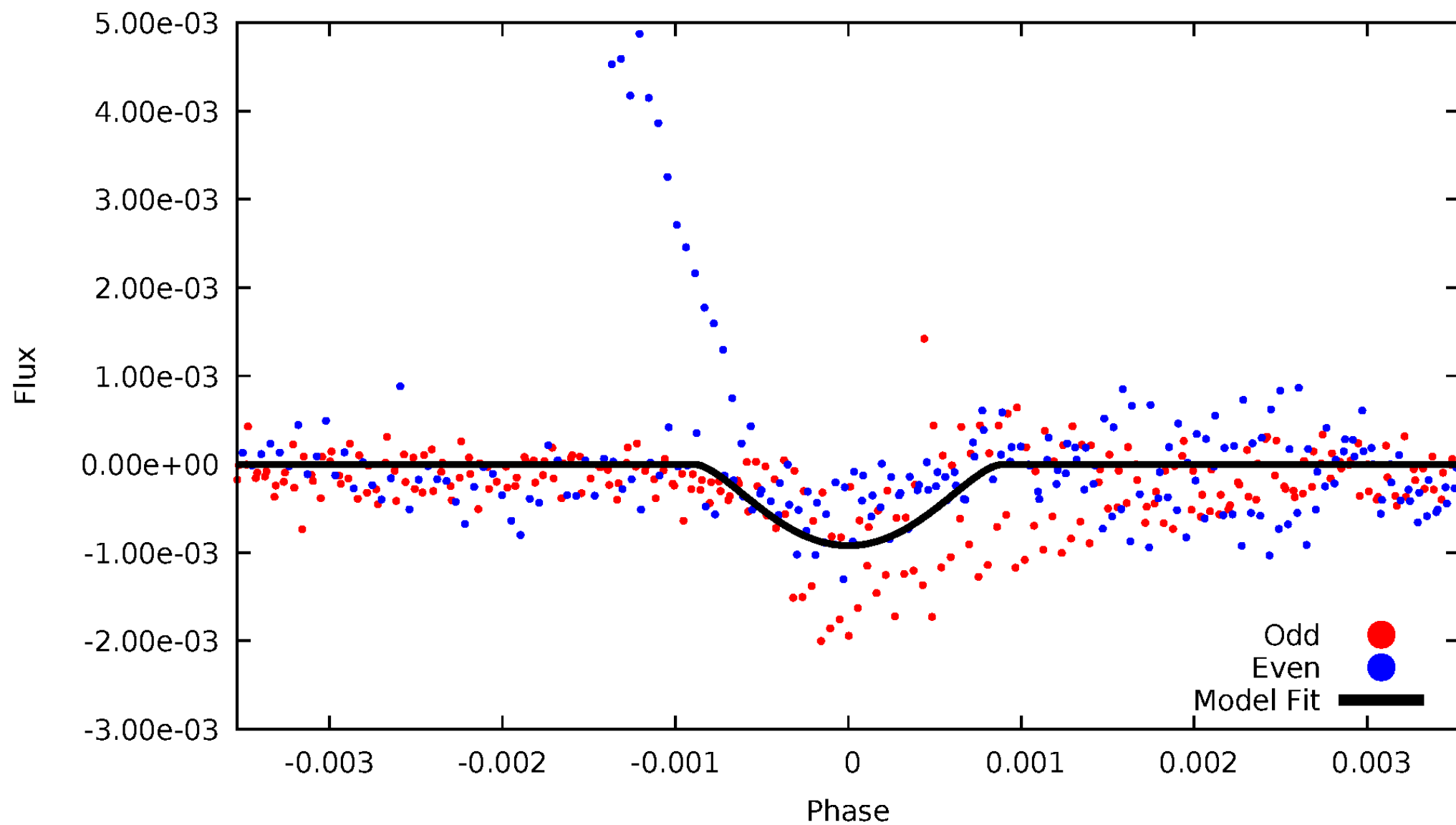


TCE 007591386-01



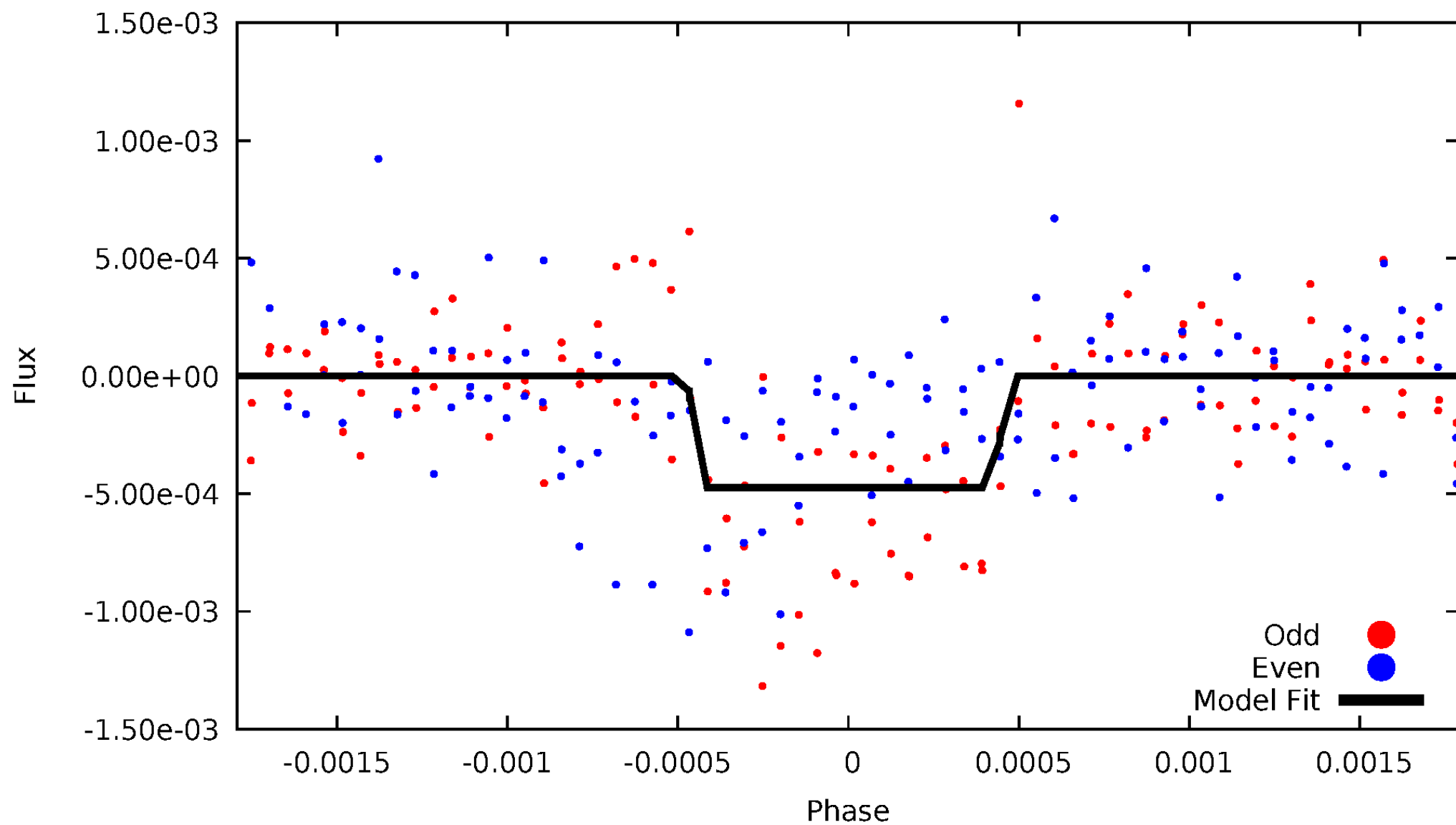
DV Odd/Even

TCE 007591386-01



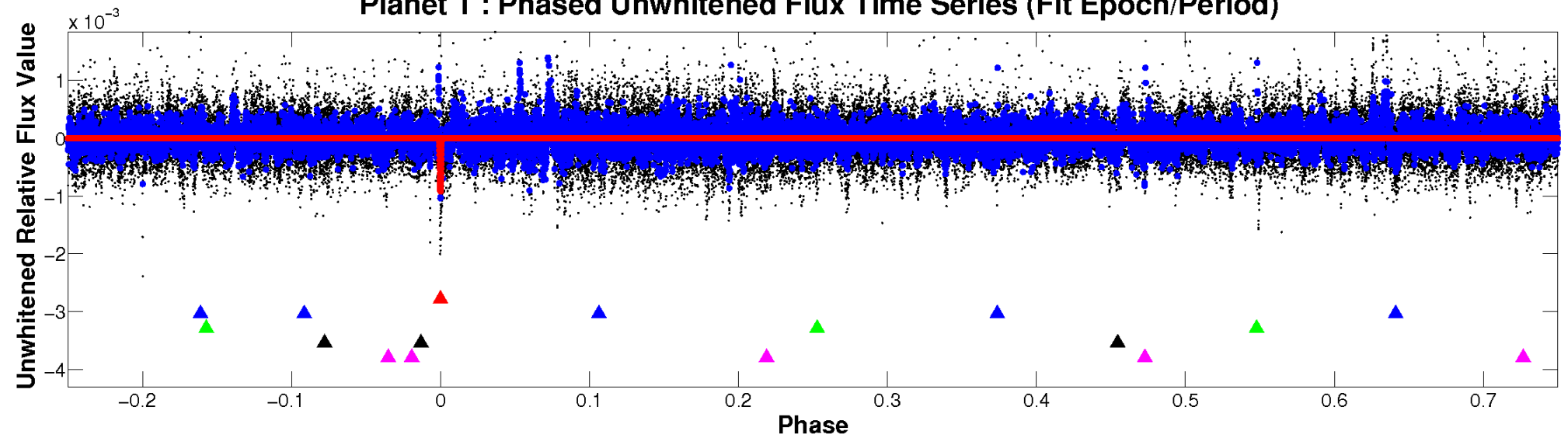
ALT Odd/Even

TCE 007591386-01

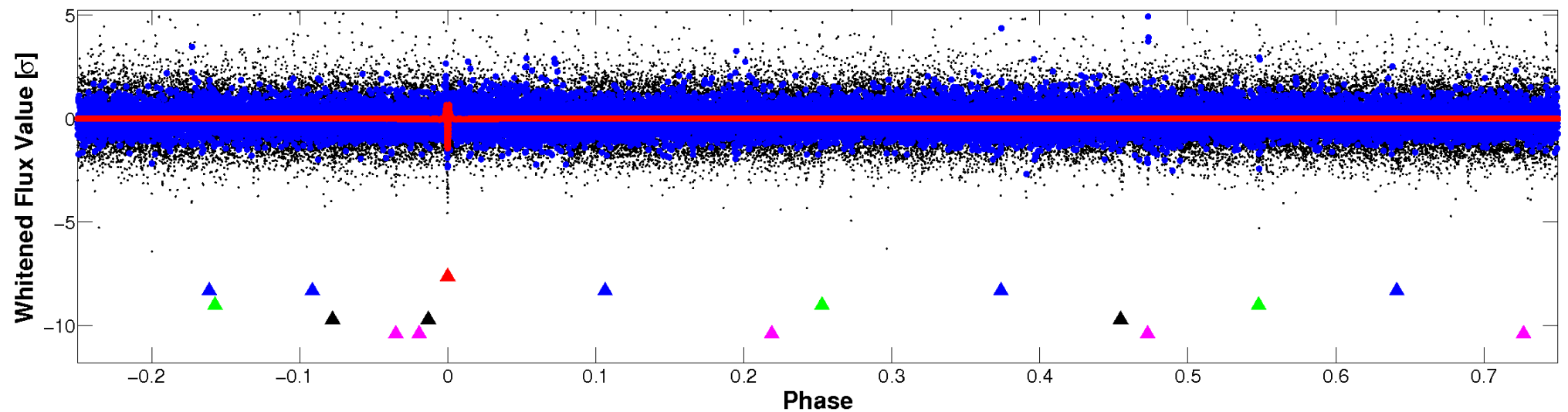


Non-Whitened Vs. Whitened Light Curve

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

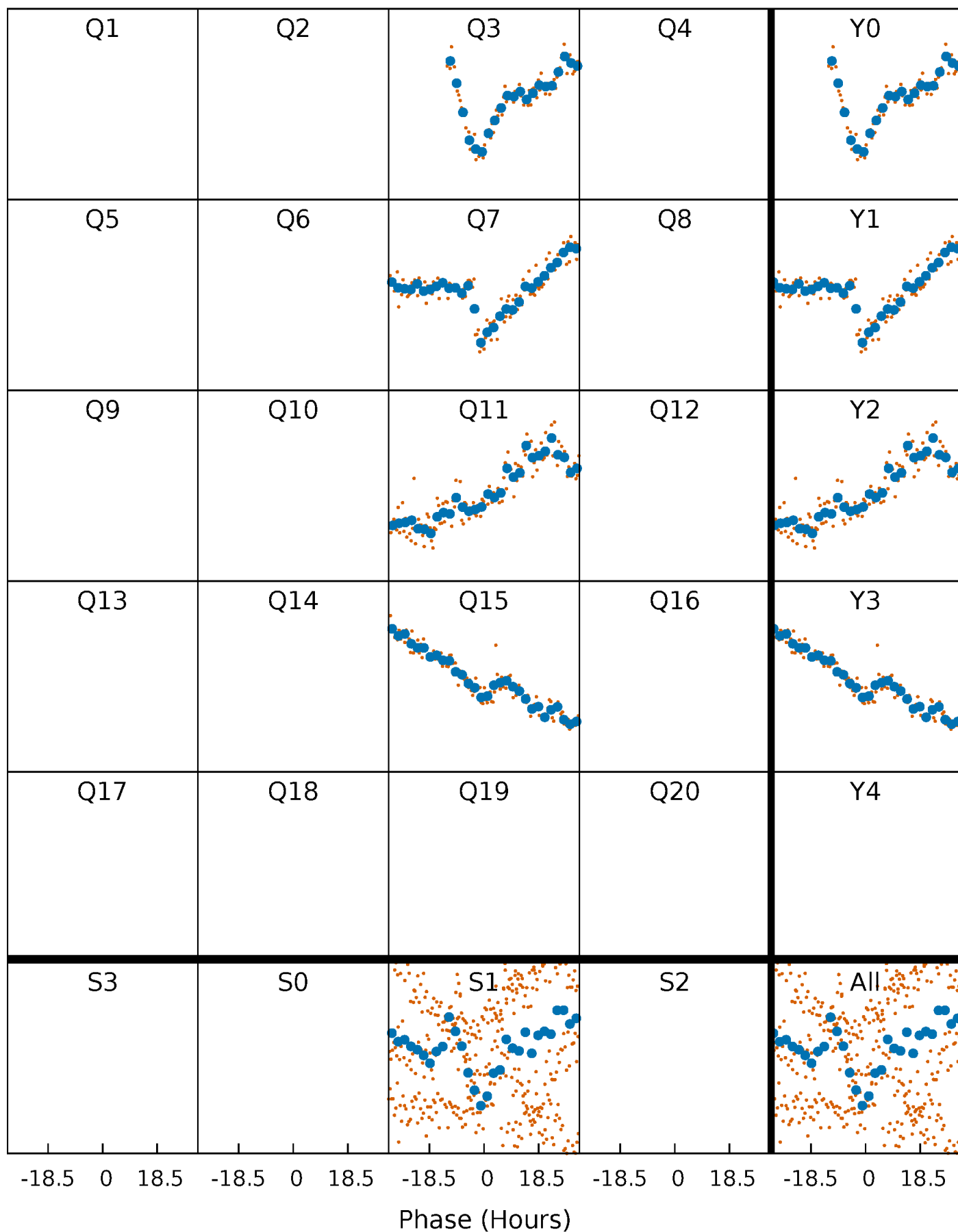


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



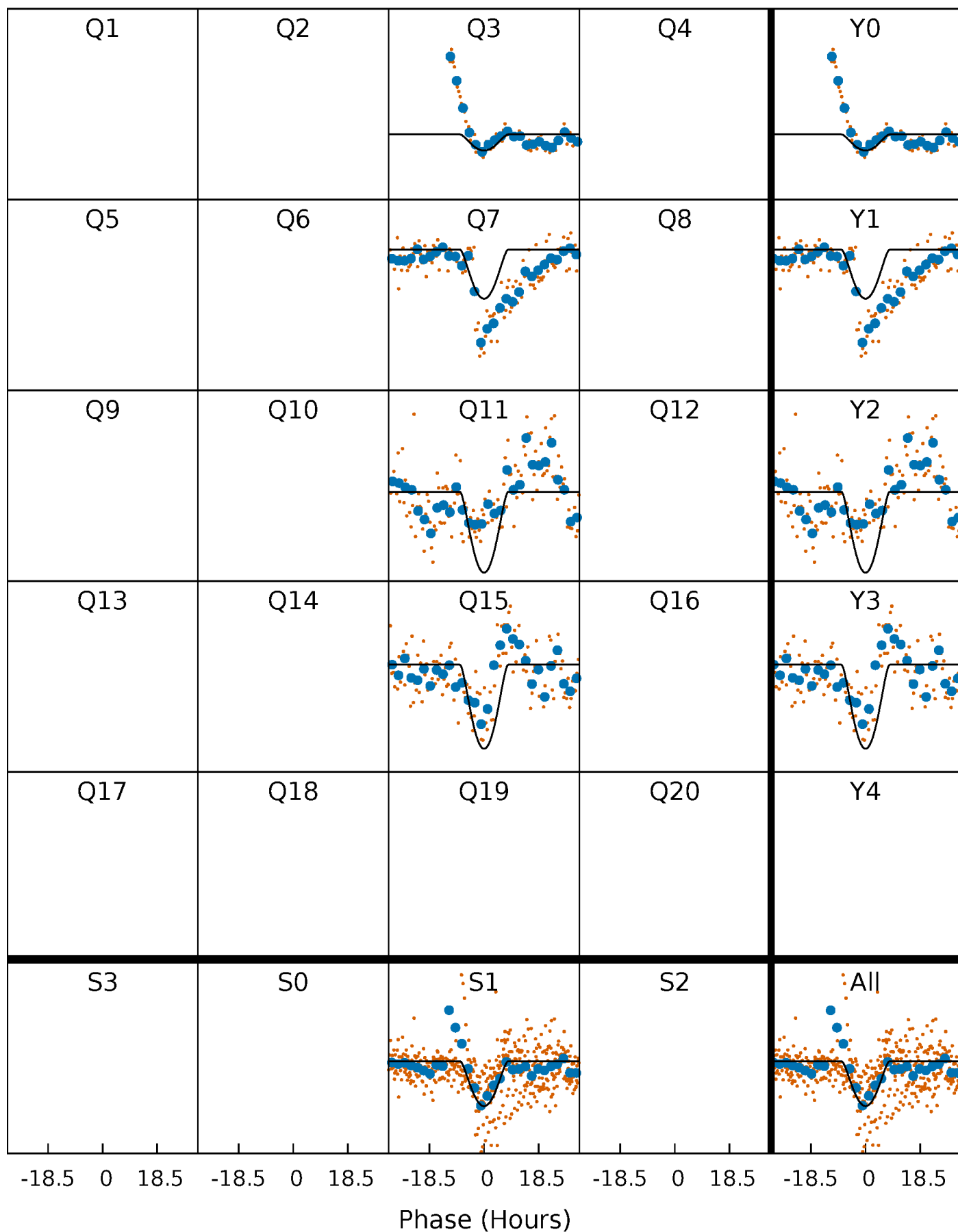
PDC Quarter-Phased Transit Curves

TCE 007591386-01 $P=381.462772$ Days $T_0=324.067306$ (BKJD)



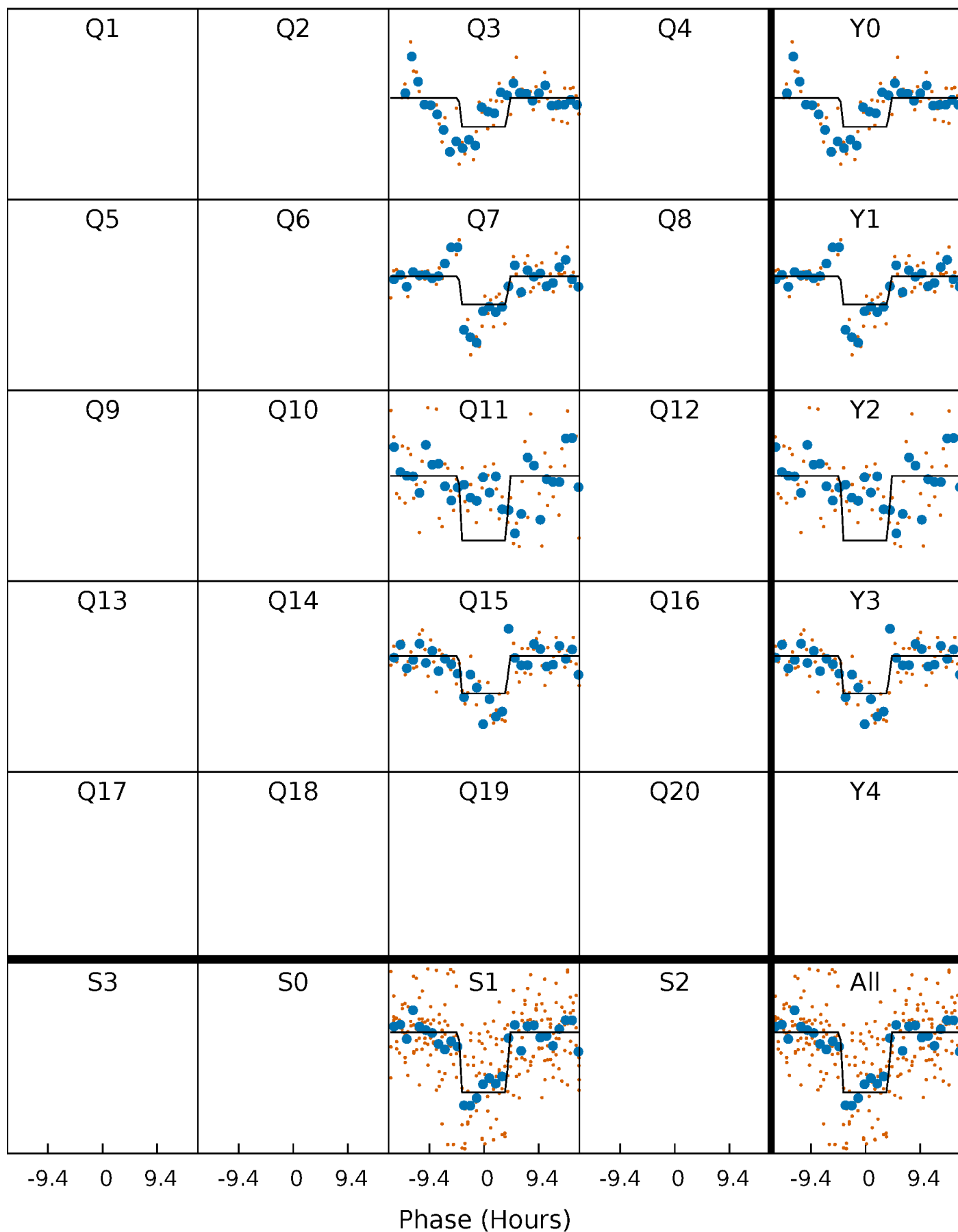
DV Quarter-Phased Transit Curves

TCE 007591386-01 P=381.462772 Days $T_0=324.067306$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

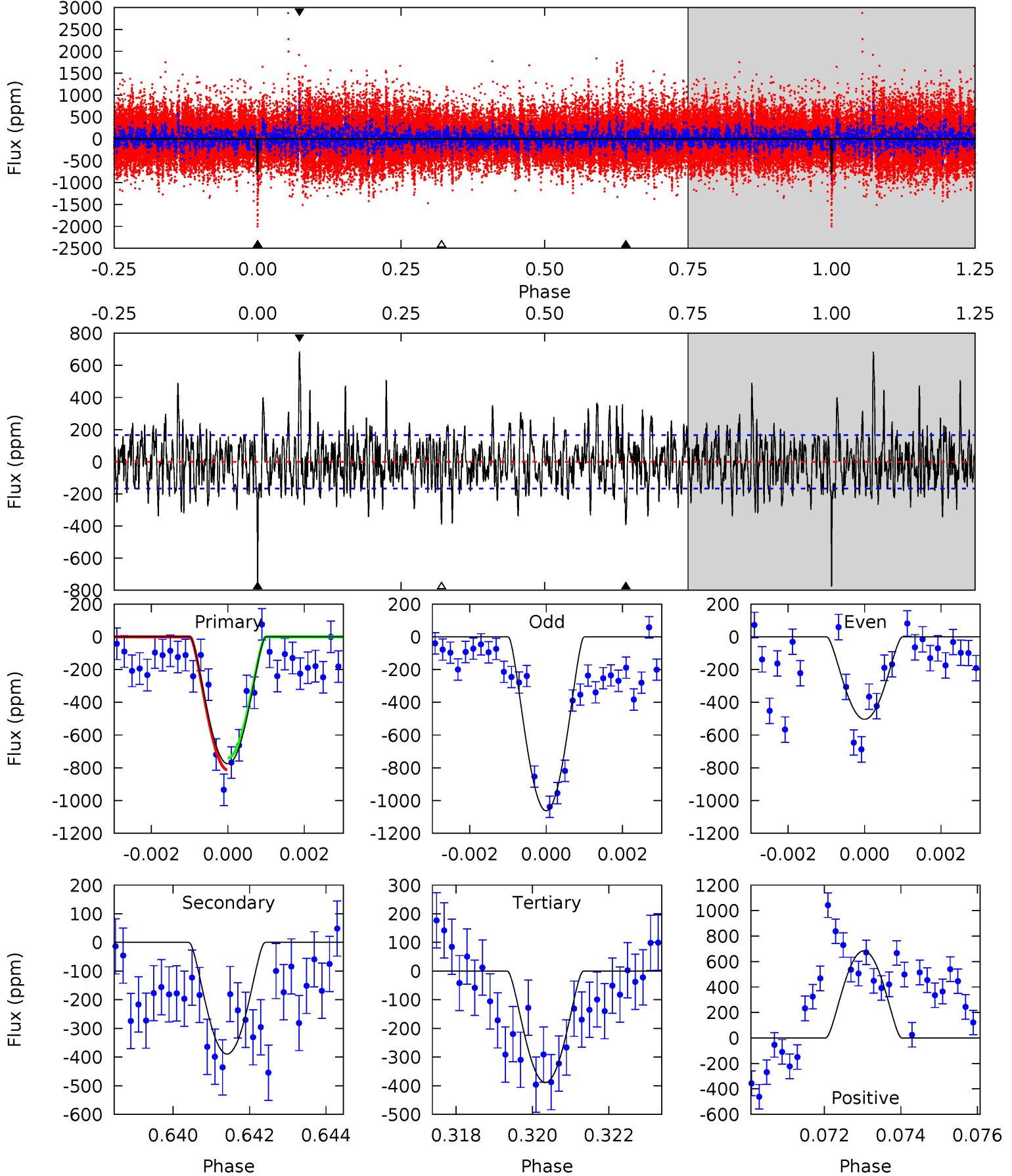
TCE 007591386-01 P=381.433265 Days $T_0=324.132544$ (BKJD)



DV Model-Shift Uniqueness Test

007591386-01, P = 381.462772 Days, E = 324.067306 Days

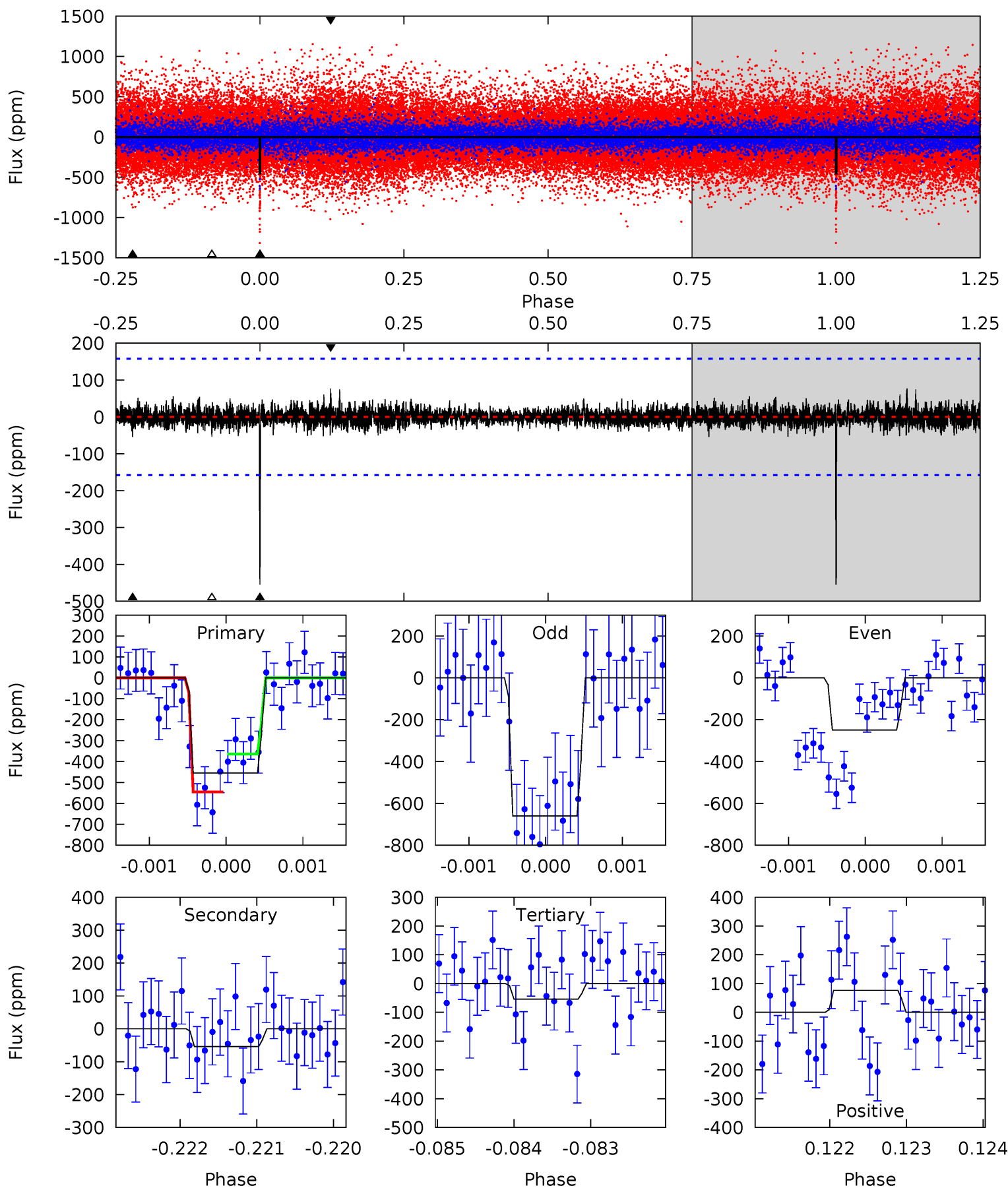
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	12.5	12.5	22.0	5.35	3.12	4.22	12.4	2.96	0.02	-9.46	8.89	1.37	0.47	1.18



Alt Model-Shift Uniqueness Test

007591386-01, P = 381.433265 Days, E = 324.132544 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	1.87	1.86	2.65	5.46	3.30	0.47	13.9	13.1	0.01	-0.78	7.12	0.97	0.14	3.14



Stellar Parameters For KIC 007591386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5522^{+163}_{-147}	$4.608^{+0.040}_{-0.112}$	$-0.500^{+0.300}_{-0.300}$	$0.728^{+0.140}_{-0.060}$	$0.783^{+0.091}_{-0.074}$	$2.859^{+0.466}_{-1.043}$
	+3%/-3%	+1%/-2%	+60%/-60%	+19%/-8%	+12%/-9%	+16%/-36%
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 007591386-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-390 ± 31	$8.38^{+8.27}_{-5.30}$	302^{+15}_{-12}	3040^{+1237}_{-492}	2699^{+18429}_{-1996}
Alt.	-54 ± 29	$7.65^{+7.86}_{-5.34}$	302^{+13}_{-12}	2412^{+926}_{-416}	433^{+4182}_{-354}

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 $A_{obs} \gg 1.0$

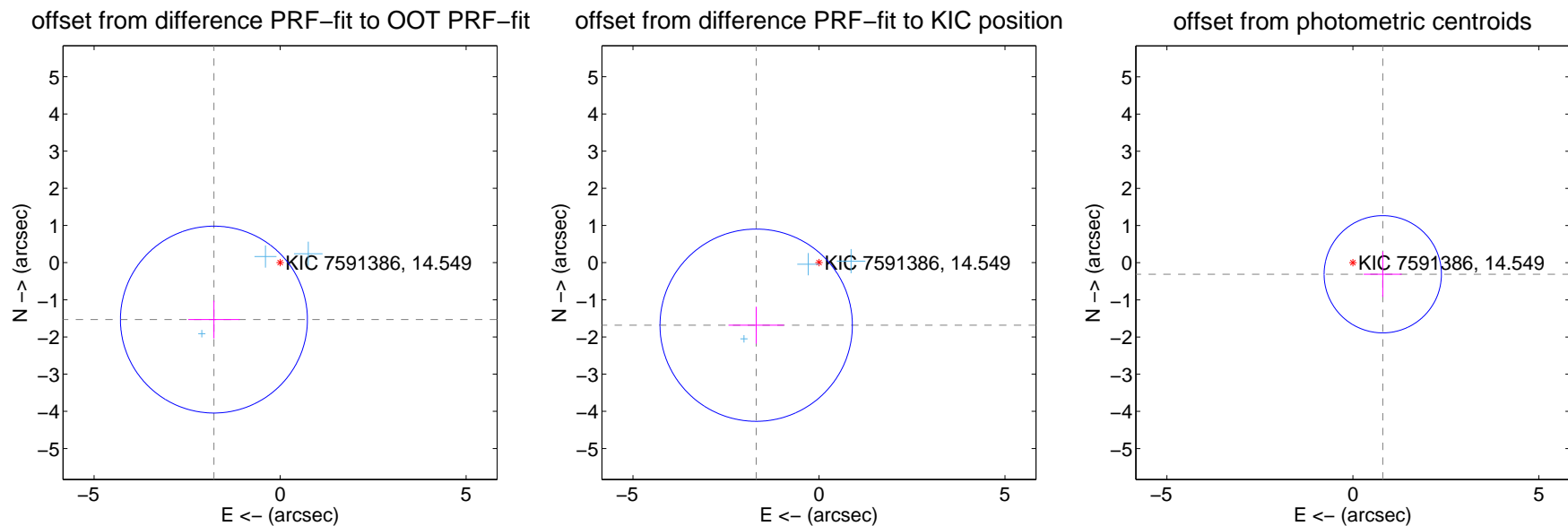
DV Centroid Data

Supplemental centroid analysis for 007591386-01. Kepler magnitude: 14.55. Transit SNR 10.55

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.348 ± 0.838	2.80	1.779 ± 0.690	-1.532 ± 0.508
PRF-fit source offset from KIC position	2.384 ± 0.862	2.77	1.688 ± 0.745	-1.683 ± 0.498
photometric centroid source offset	0.86 ± 0.53	1.64	-0.80 ± 0.51	-0.31 ± 0.61

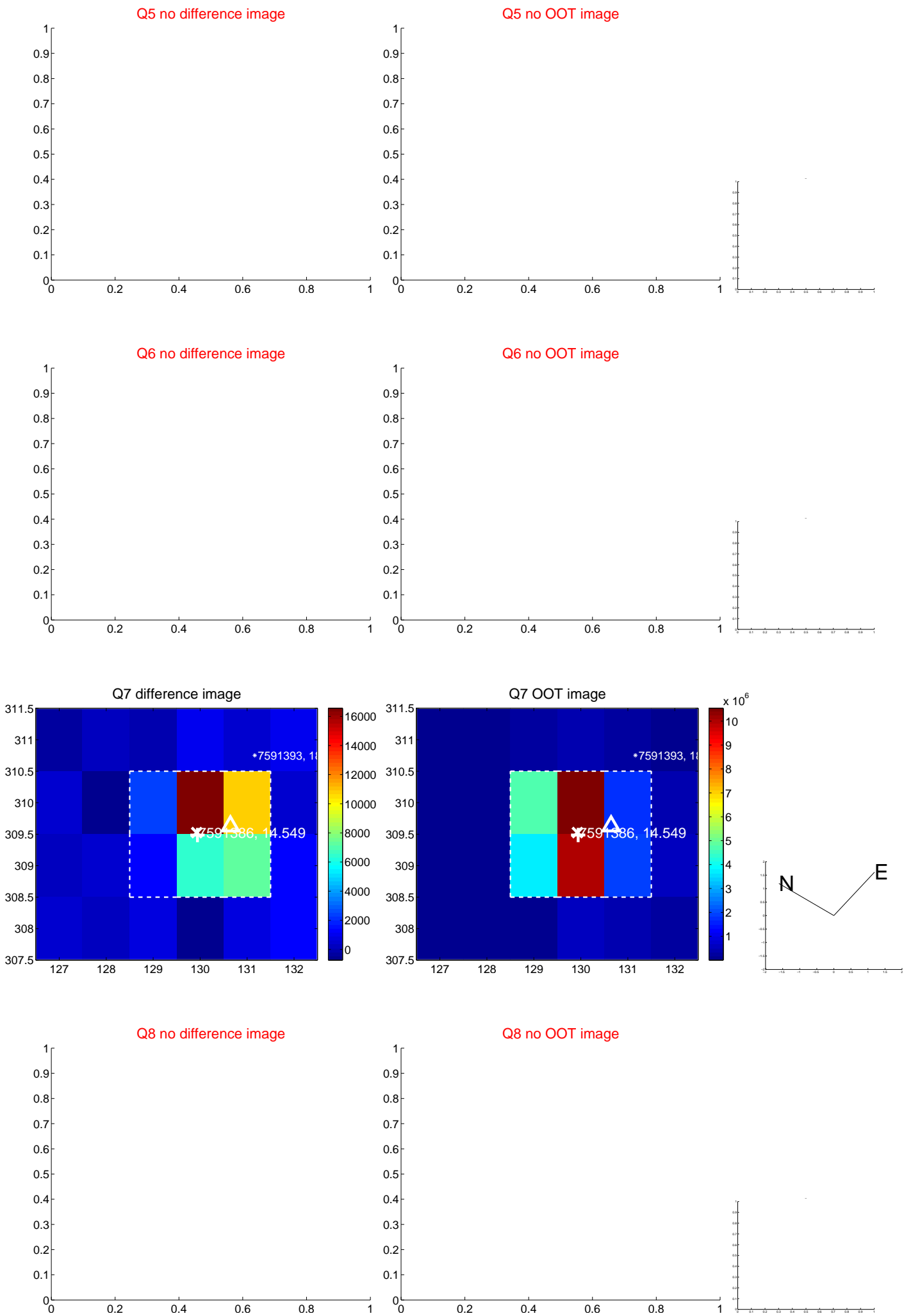


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

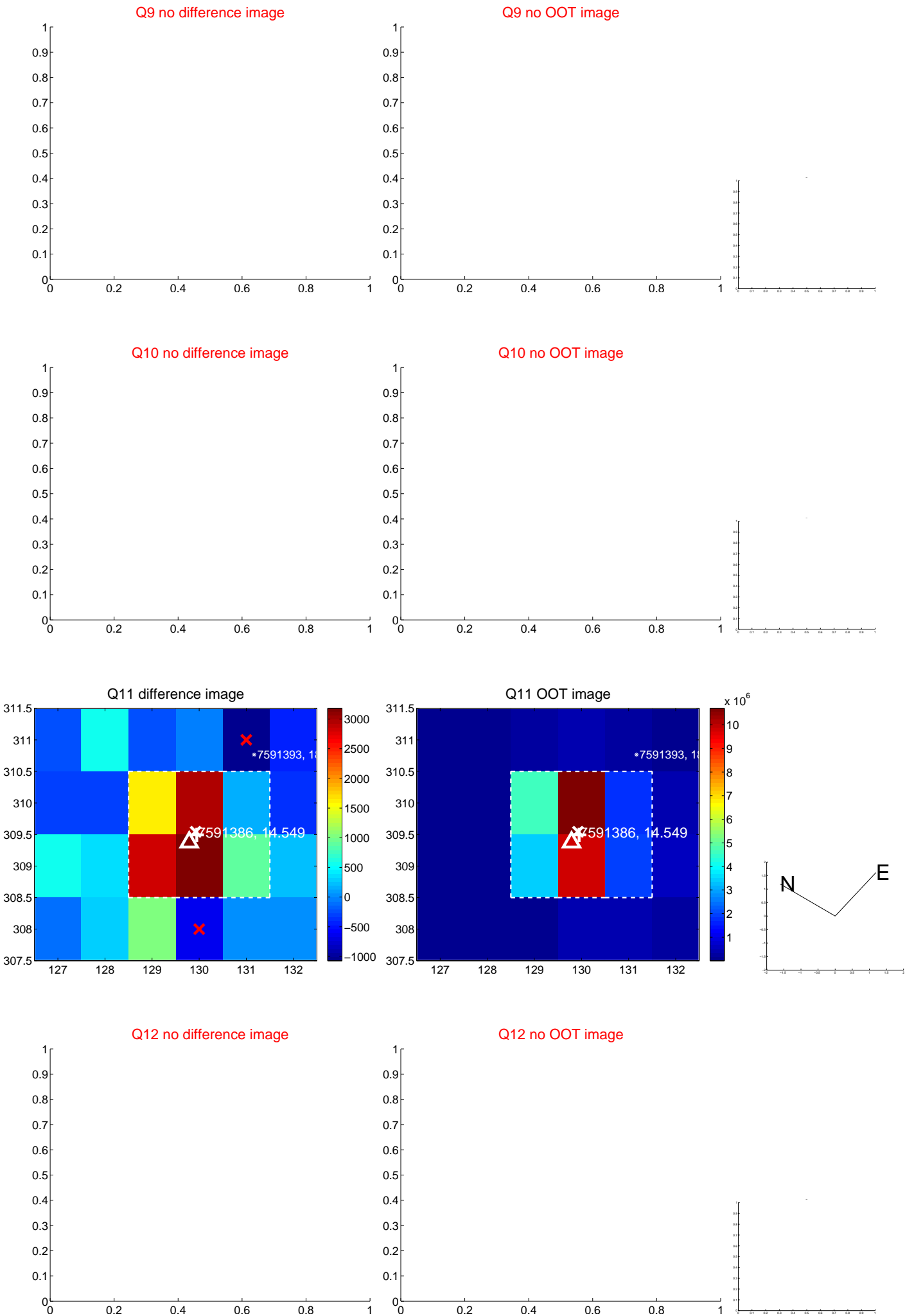
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



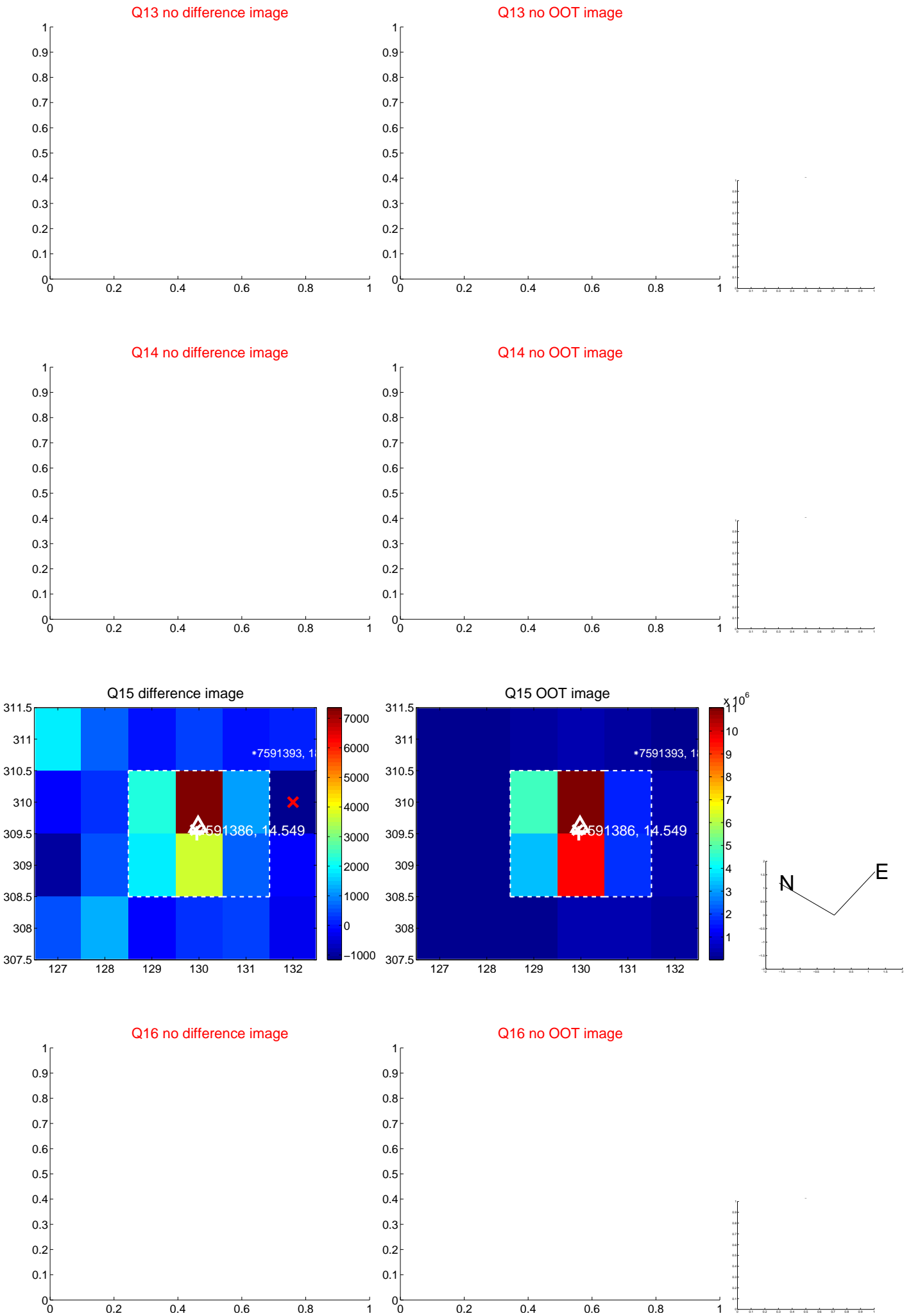
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



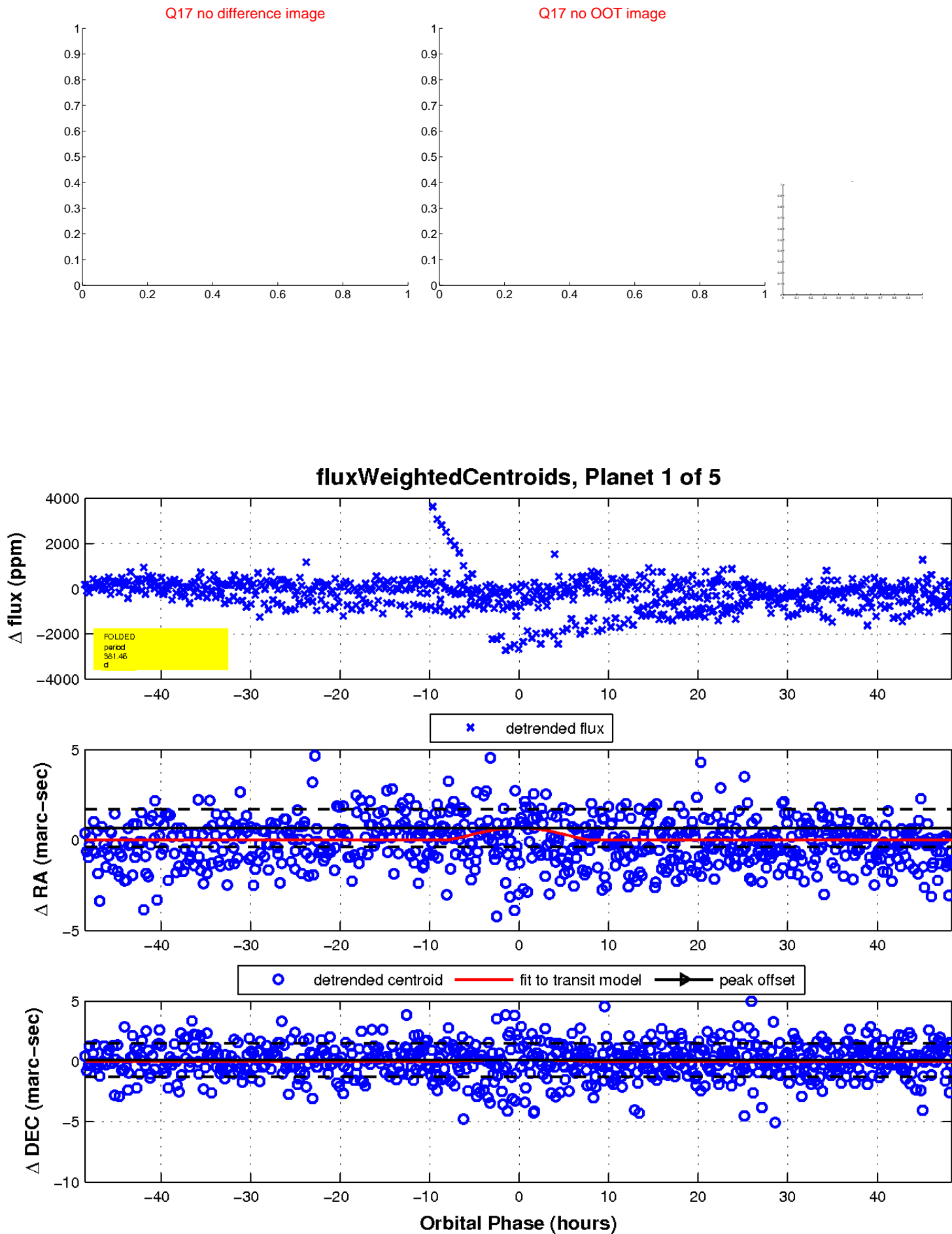
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

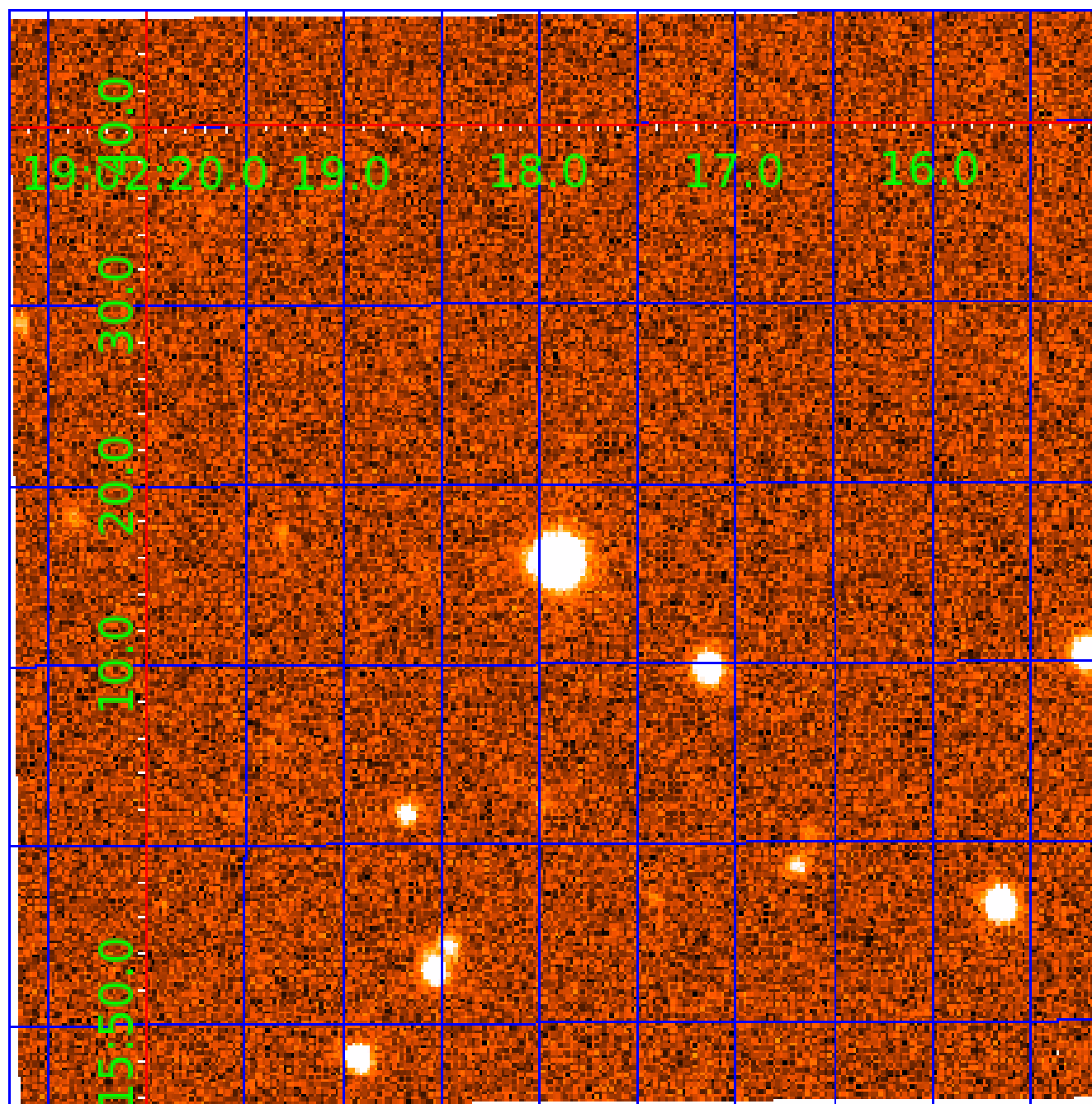


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007591386

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})
007591386-01	OBS	No	381.462772	324.067306	921.2	16.174	10.8	10.6	0.73	5522	4.33	0.49
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007591386-05	OBS	No	284.592336	316.717684	511.8	6.367	10.5	7.0	0.73	5522	1.78	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007591386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS
007591386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007591386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

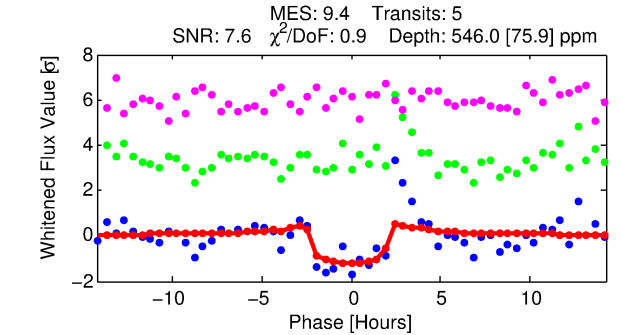
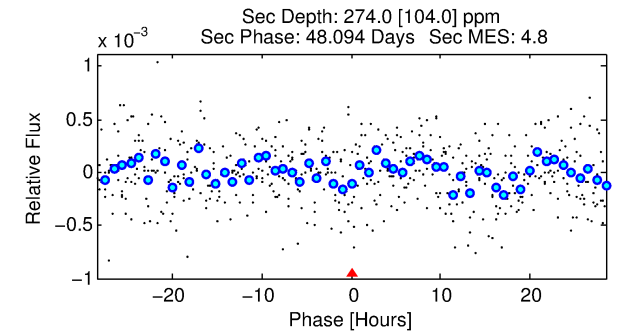
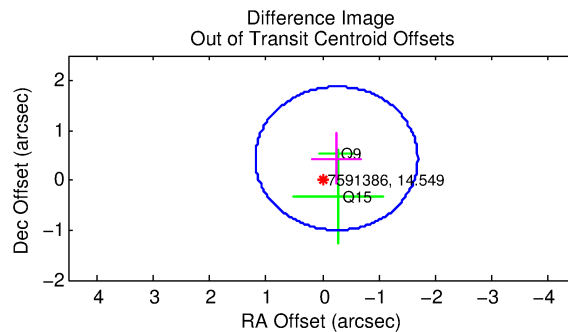
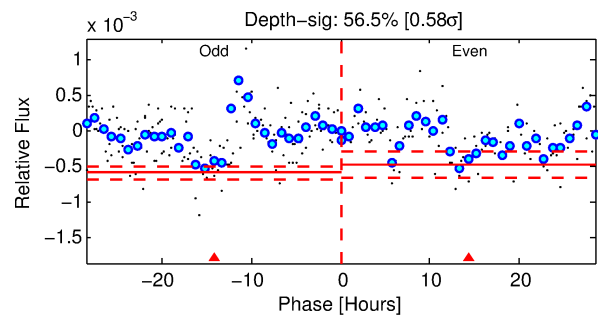
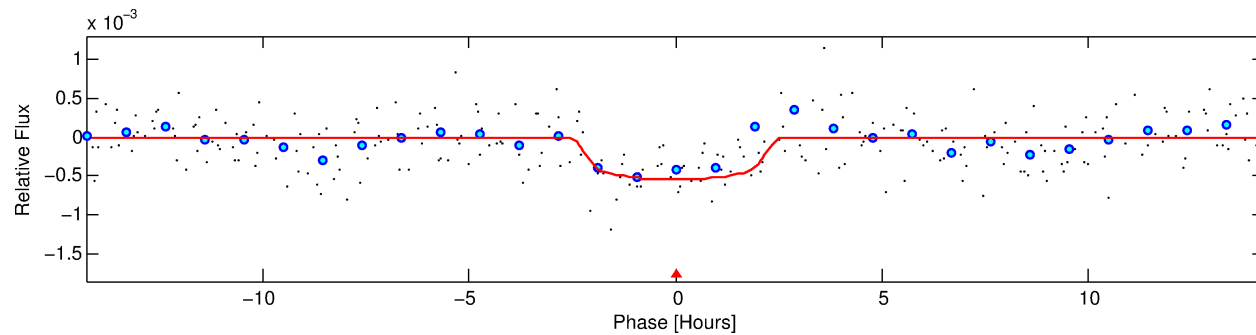
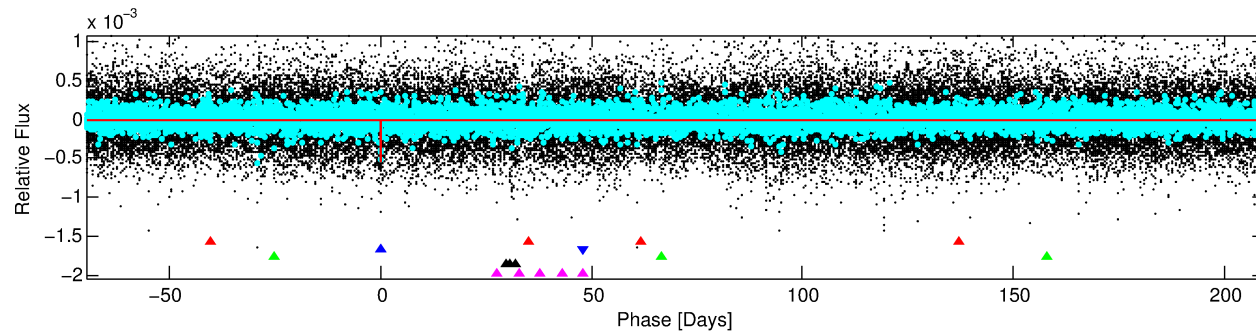
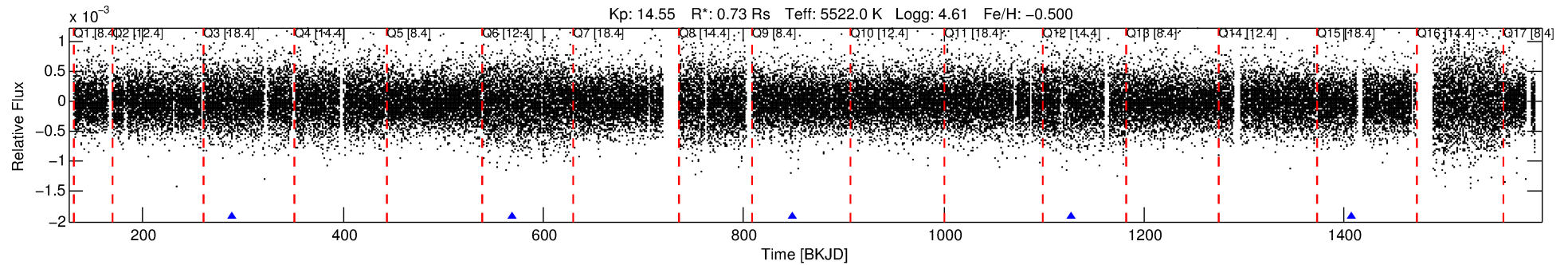
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007591386-02

No Significant Match Found

DV One-Page Summary

KIC: 7591386 Candidate: 2 of 5 Period: 279.455 d



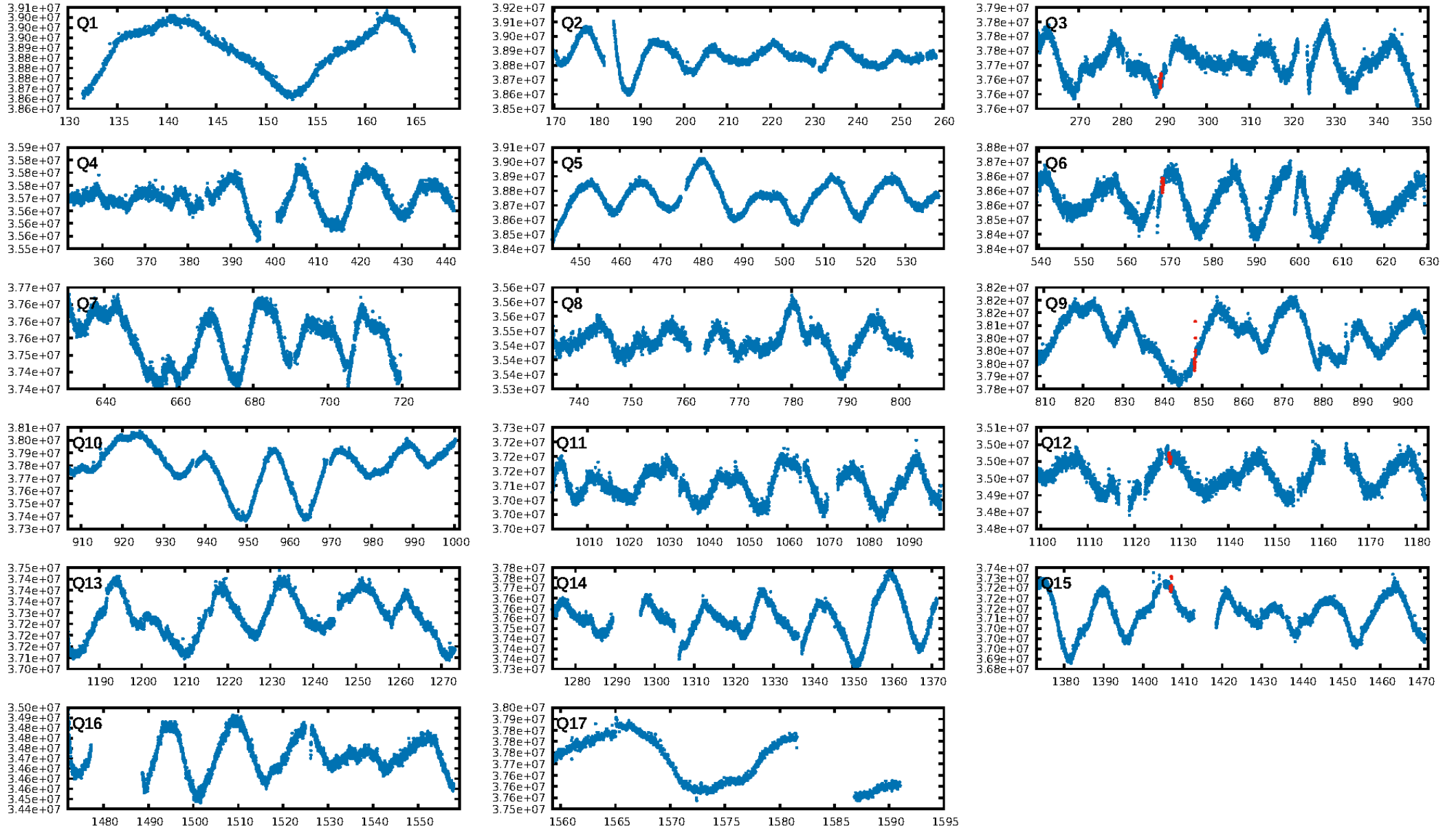
DV Fit Results:

Period = 279.45455 [0.00332] d
Epoch = 289.1933 [0.0097] BKJD
Rp/R* = 0.0238 [0.0164]
a/R* = 286.25 [874.63]
b = 0.80 [1.40]
Seff = 0.74 [0.18]
Teff = 237 [14] K
Rp = 1.89 [1.35] Re
a = 0.7715 [0.1191] AU
Ag = 25178.20 [36394.08] [0.69 σ]
Teffp = 4609 [1653] K [2.65 σ]

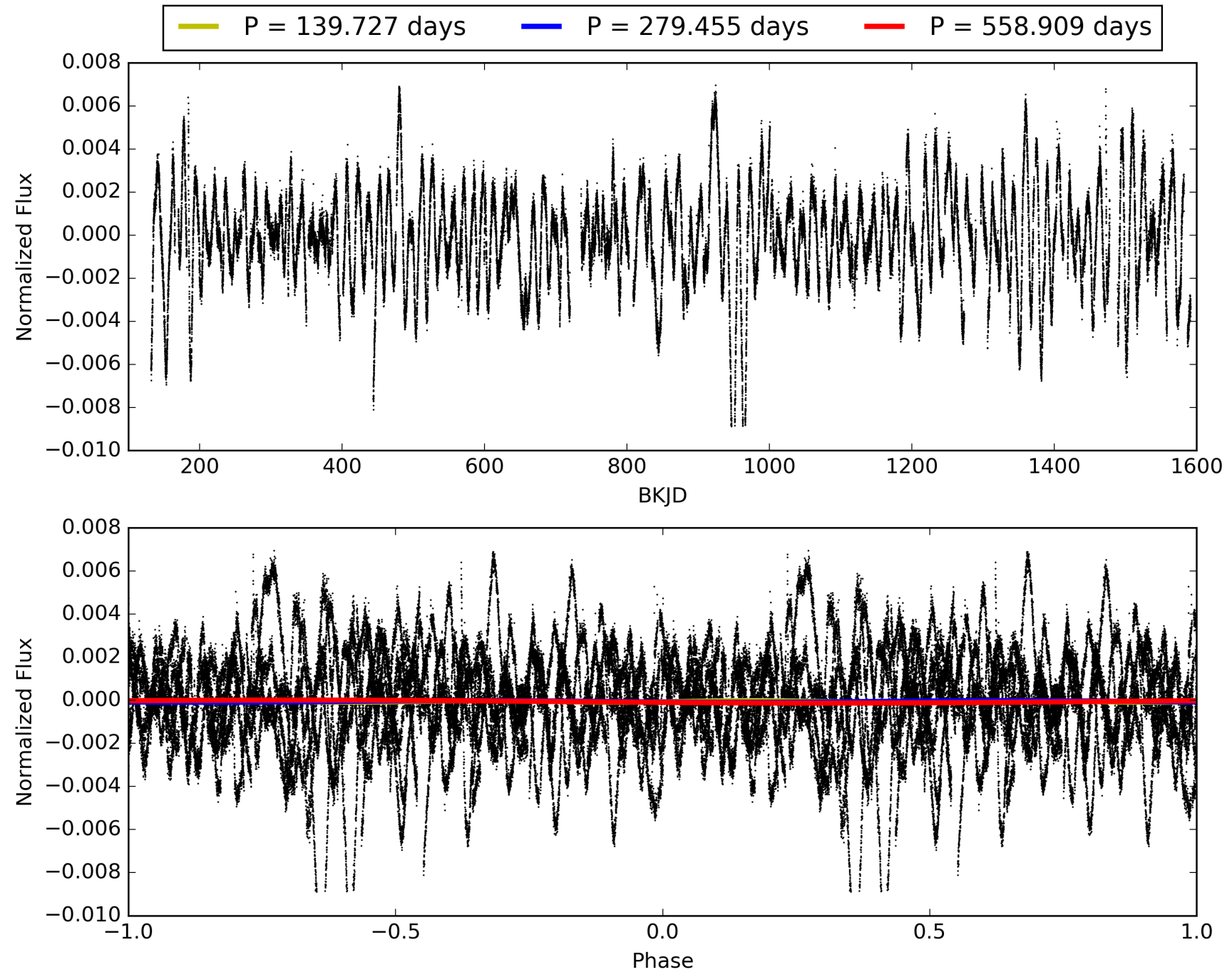
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [15.50 σ]
ModelChiSquare2-sig: 12.2%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 1.70e-13
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 18.08
Centroid-sig: 34.6%
Centroid-so: 1.148 arcsec [0.97 σ]
OotOffset-rm: 0.502 arcsec [1.05 σ]
KicOffset-rm: 0.424 arcsec [0.98 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007591386-02, PDC Light Curves

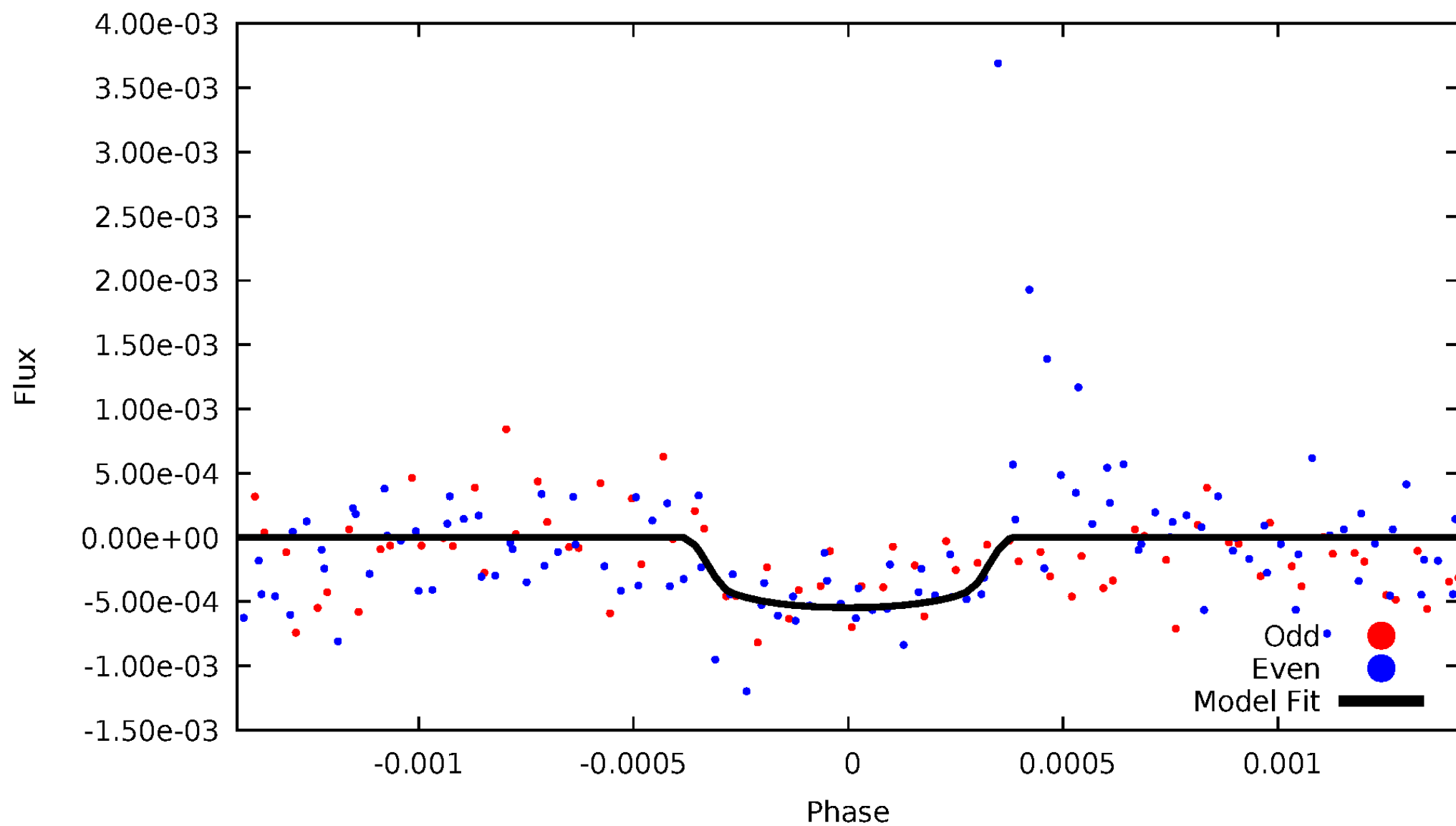


TCE 007591386-02



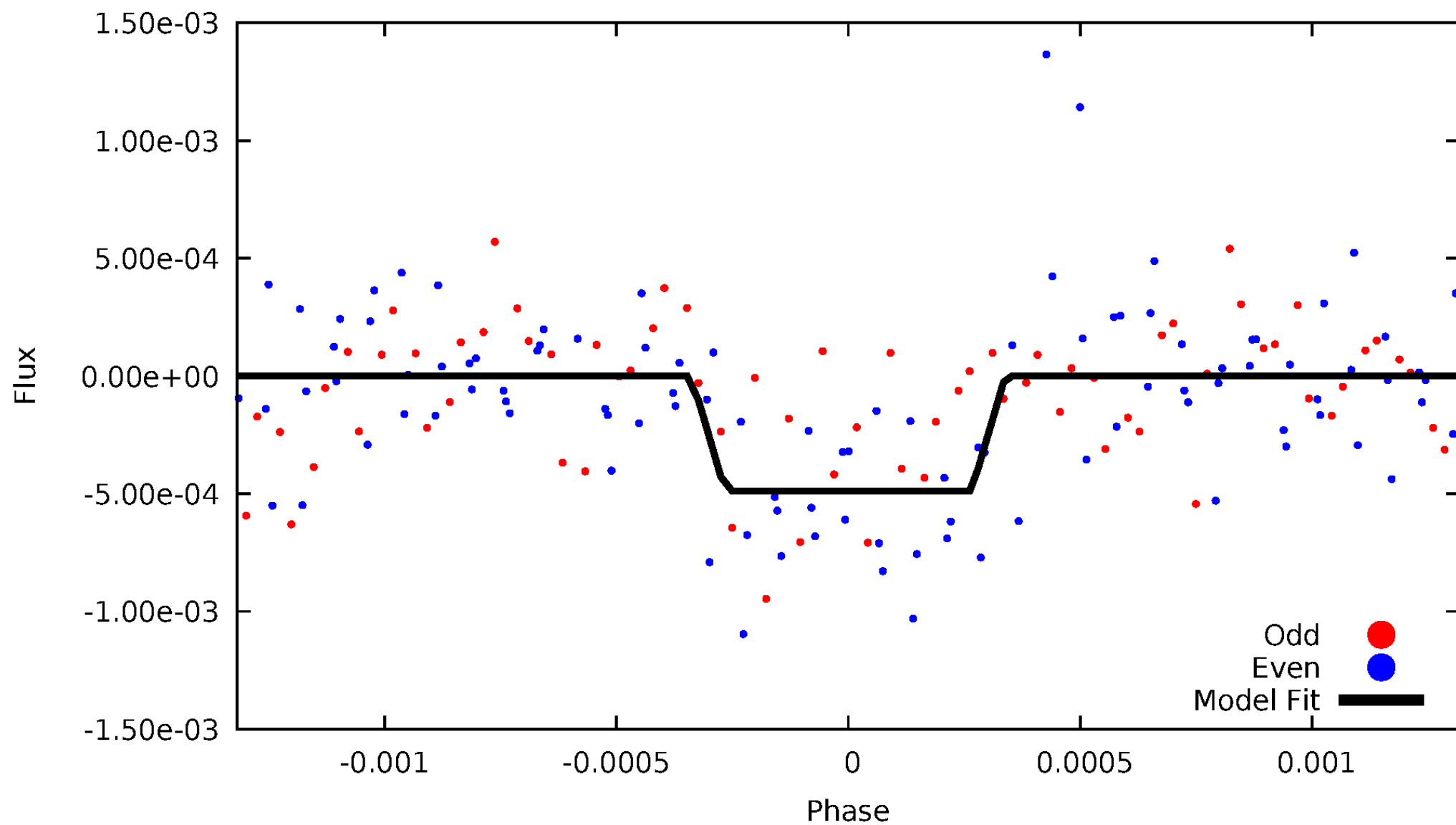
DV Odd/Even

TCE 007591386-02



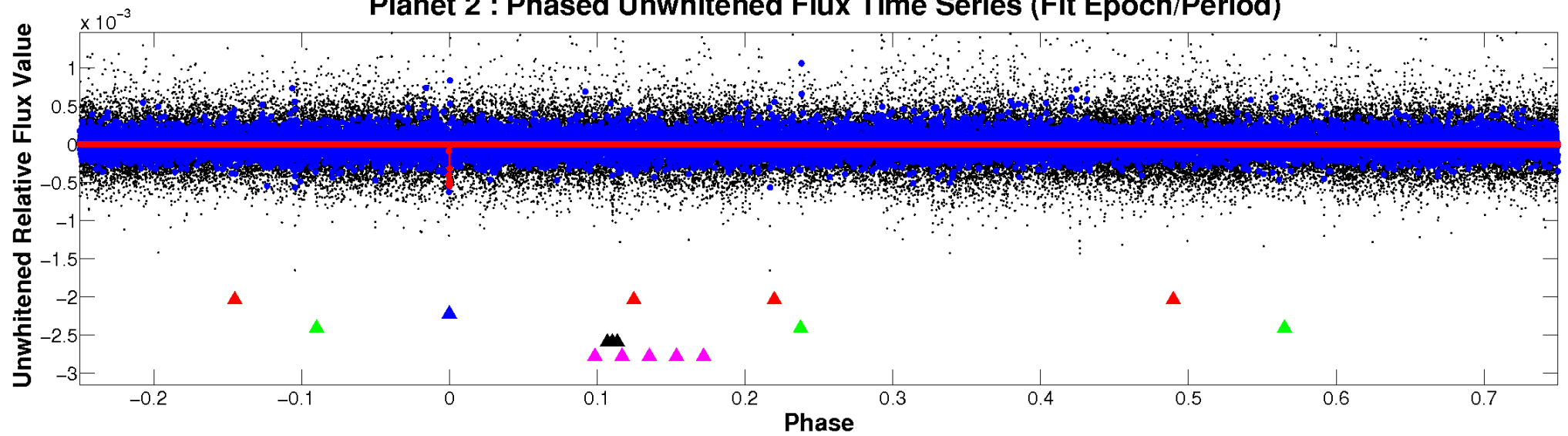
ALT Odd/Even

TCE 007591386-02

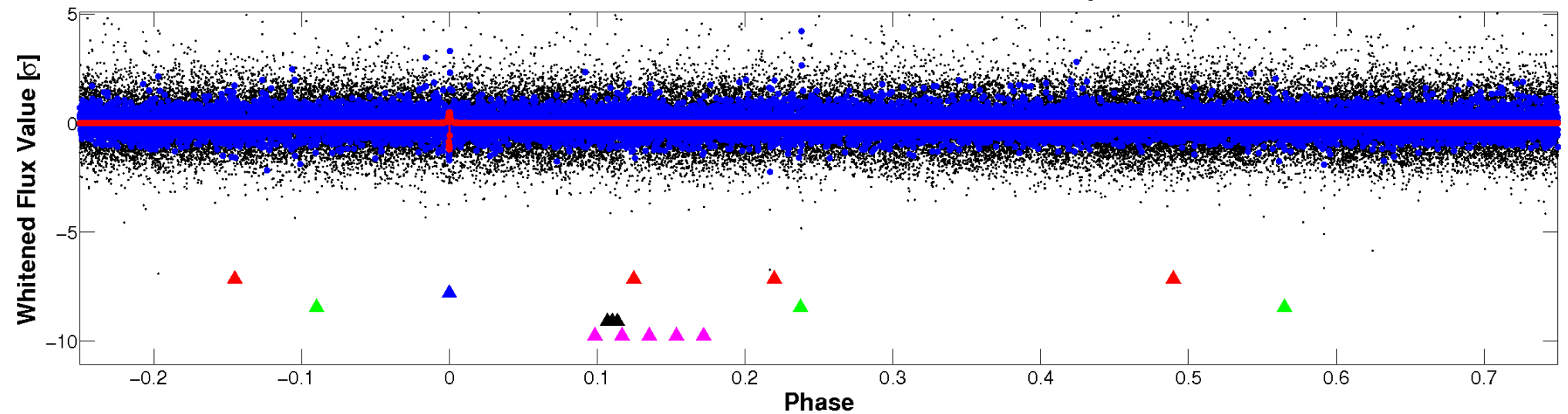


Non-Whitened Vs. Whitened Light Curve

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

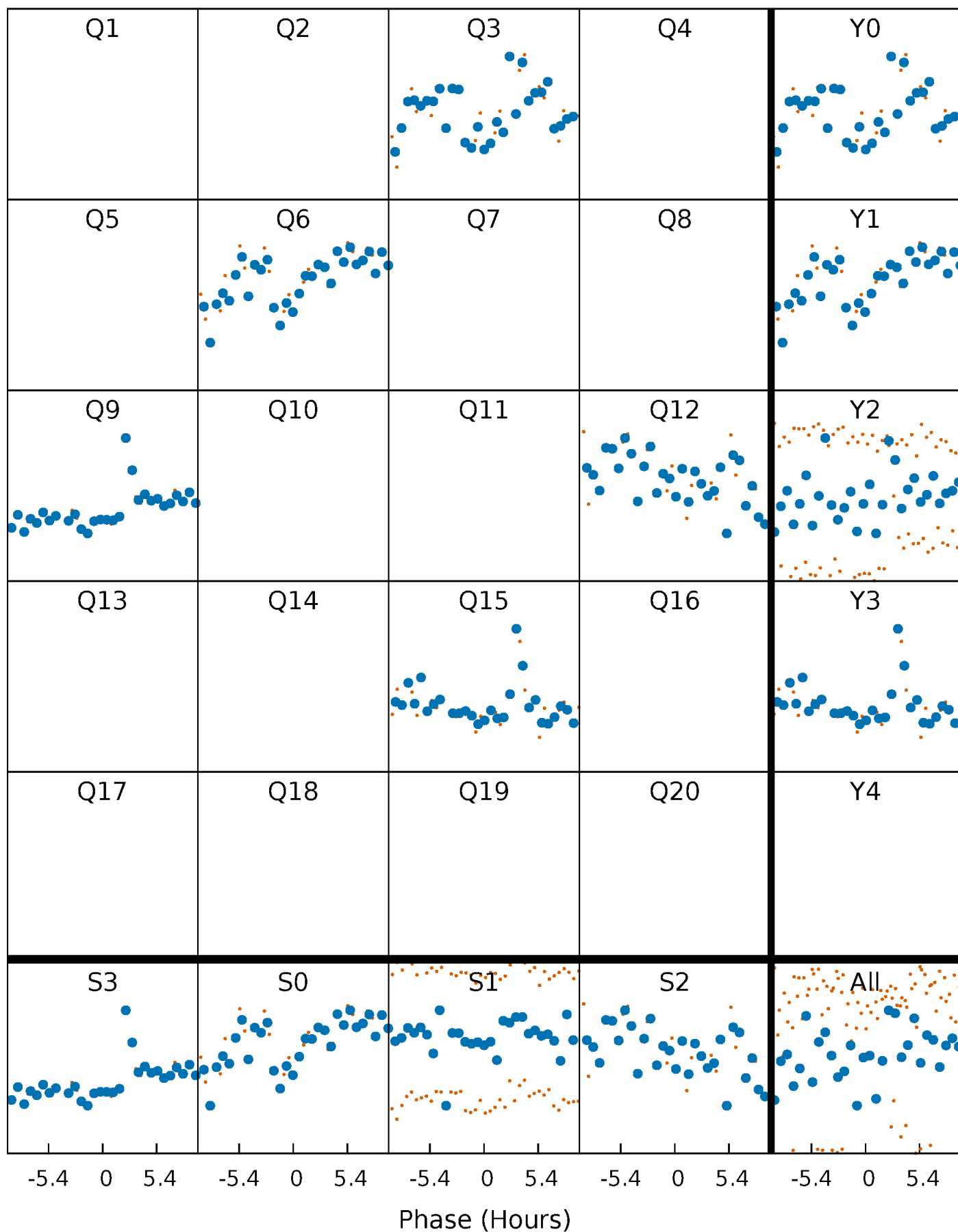


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



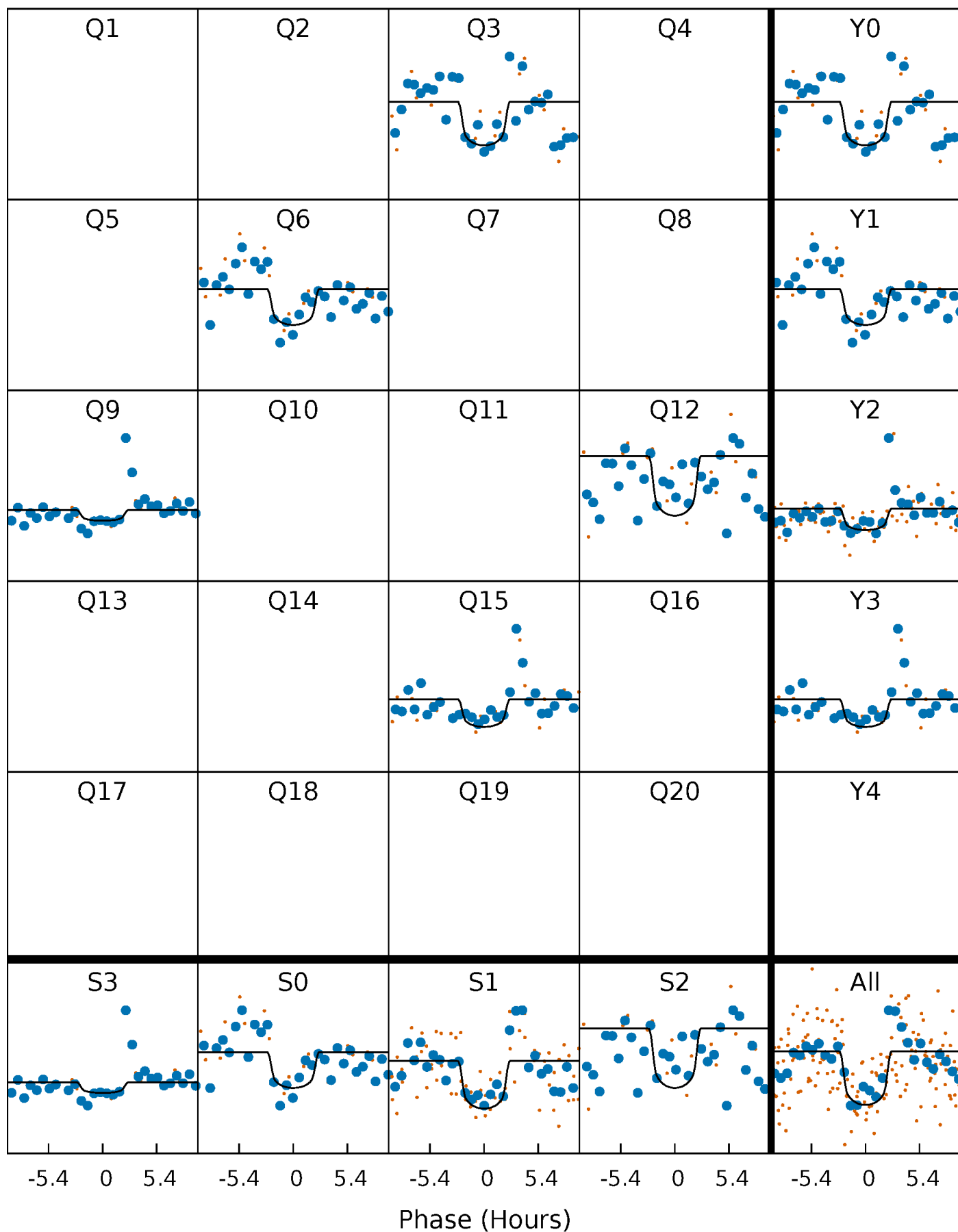
PDC Quarter-Phased Transit Curves

TCE 007591386-02 $P=279.454554$ Days $T_0=289.193334$ (BKJD)



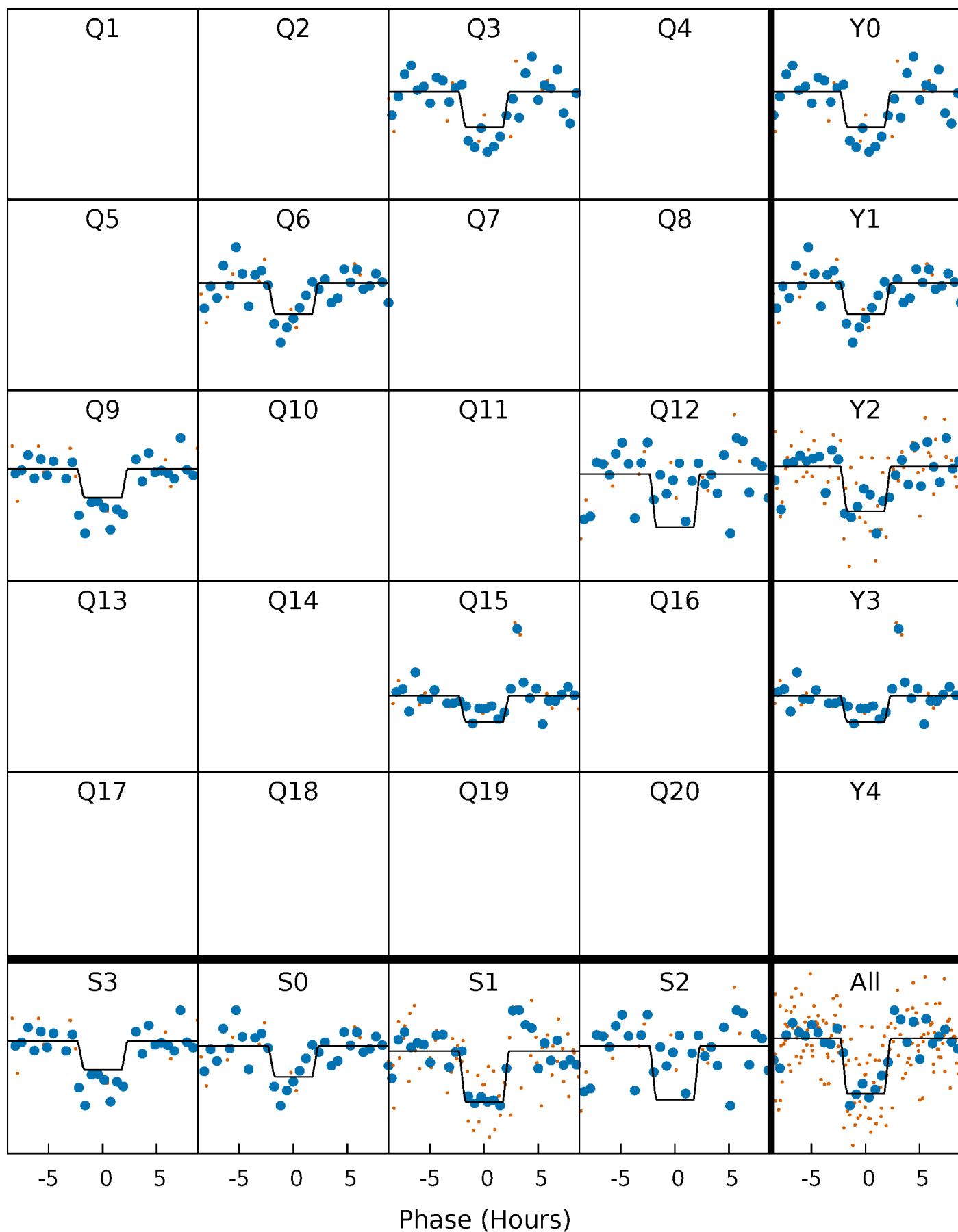
DV Quarter-Phased Transit Curves

TCE 007591386-02 $P=279.454554$ Days $T_0=289.193334$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

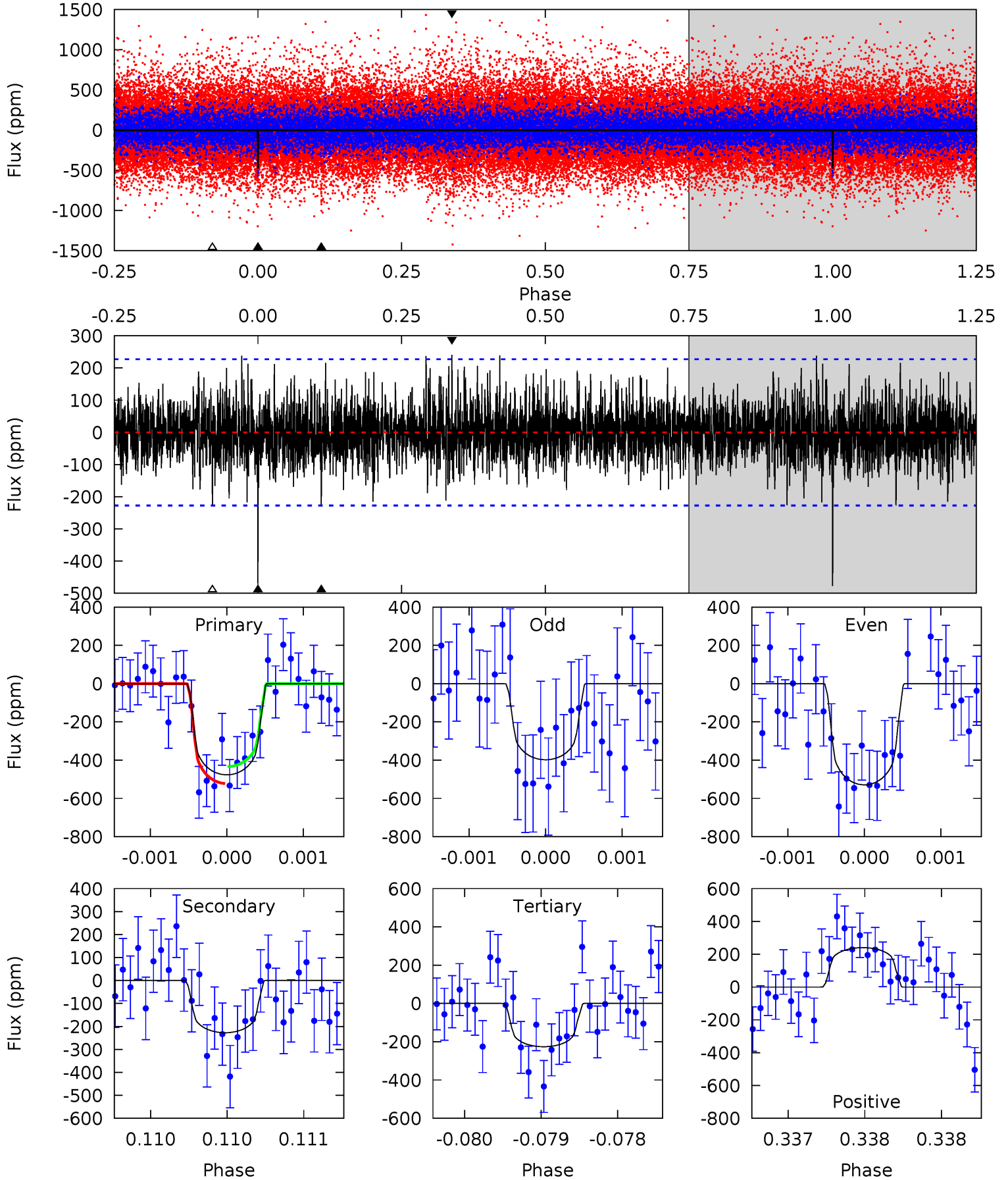
TCE 007591386-02 $P=279.461052$ Days $T_0=289.177364$ (BKJD)



DV Model-Shift Uniqueness Test

007591386-02, $P = 279.454554$ Days, $E = 9.738780$ Days

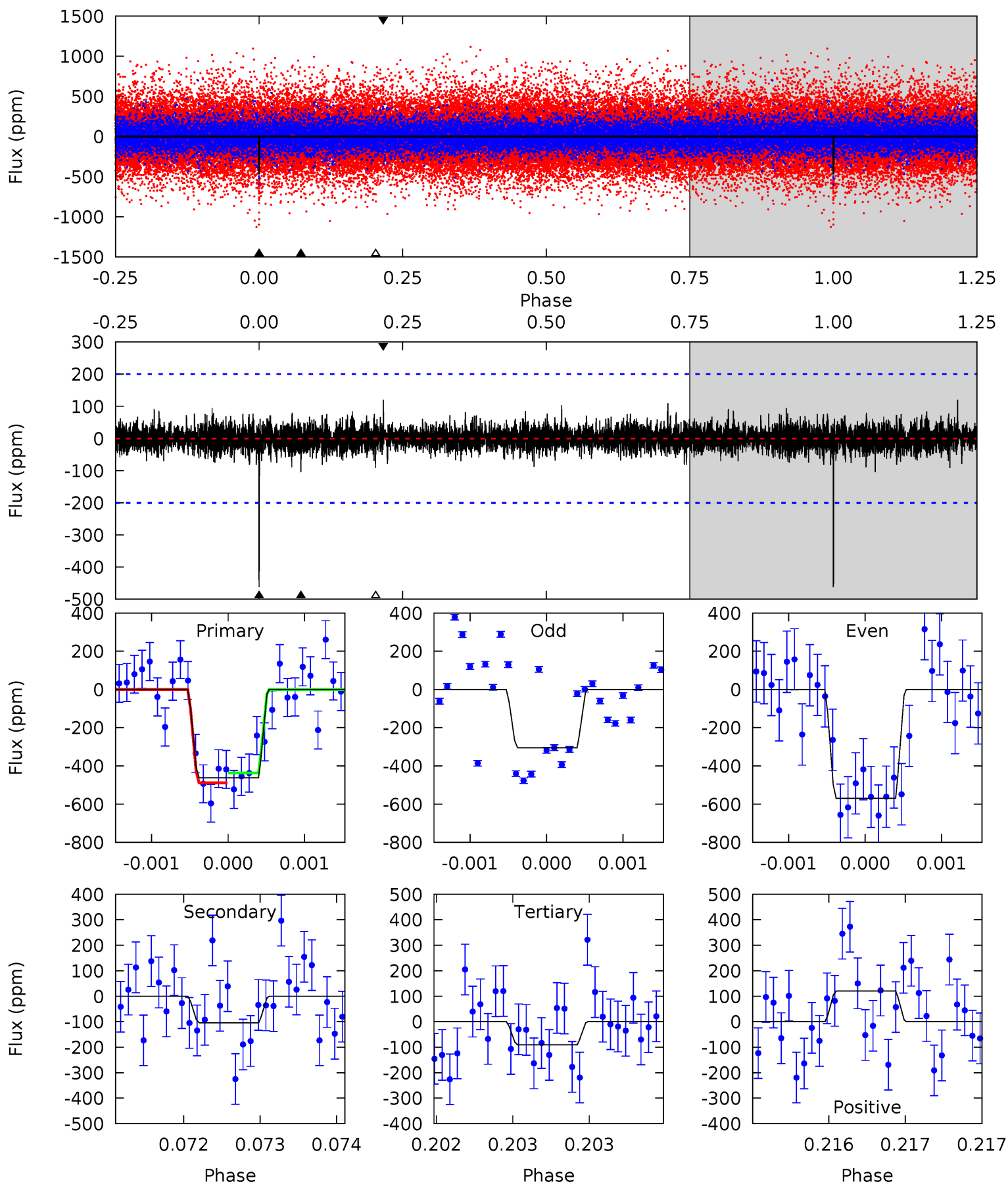
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	5.51	5.48	5.82	5.50	3.37	1.56	6.07	5.72	0.03	-0.31	1.56	1.02	0.34	1.07



Alt Model-Shift Uniqueness Test

007591386-02, P = 279.461052 Days, E = 9.716312 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	2.88	2.51	3.31	5.53	3.41	0.65	10.2	9.43	0.37	-0.43	3.55	0.93	0.21	0.72



Stellar Parameters For KIC 007591386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5522^{+163}_{-147}	$4.608^{+0.040}_{-0.112}$	$-0.500^{+0.300}_{-0.300}$	$0.728^{+0.140}_{-0.060}$	$0.783^{+0.091}_{-0.074}$	$2.859^{+0.466}_{-1.043}$
	+3%/-3%	+1%/-2%	+60%/-60%	+19%/-8%	+12%/-9%	+16%/-36%
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 007591386-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-227 ± 41	$1.95^{+1.28}_{-1.04}$	335^{+14}_{-12}	4543^{+1857}_{-800}	19520^{+66709}_{-12918}
Alt.	-104 ± 36	$1.98^{+1.35}_{-1.15}$	335^{+16}_{-13}	3924^{+1551}_{-647}	8549^{+38948}_{-5575}

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

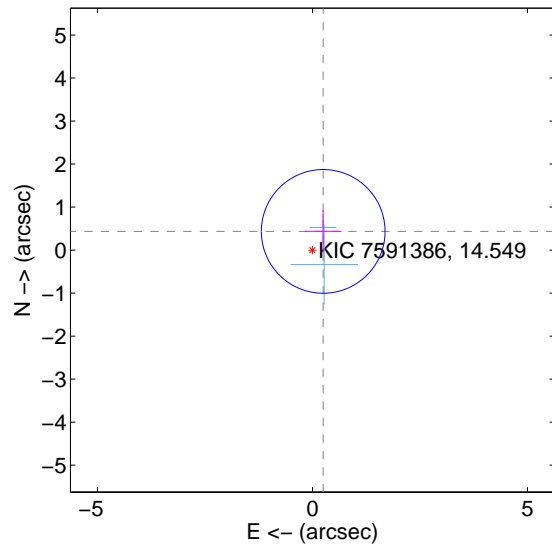
Supplemental centroid analysis for 007591386-02. Kepler magnitude: 14.55. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

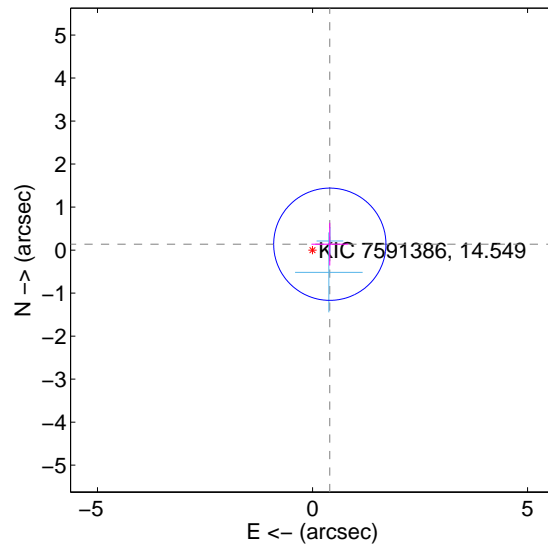
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.502 ± 0.479	1.05	-0.250 ± 0.428	0.435 ± 0.495
PRF-fit source offset from KIC position	0.424 ± 0.435	0.98	-0.402 ± 0.428	0.136 ± 0.495
photometric centroid source offset	1.15 ± 1.18	0.97	0.40 ± 1.12	-1.07 ± 1.19

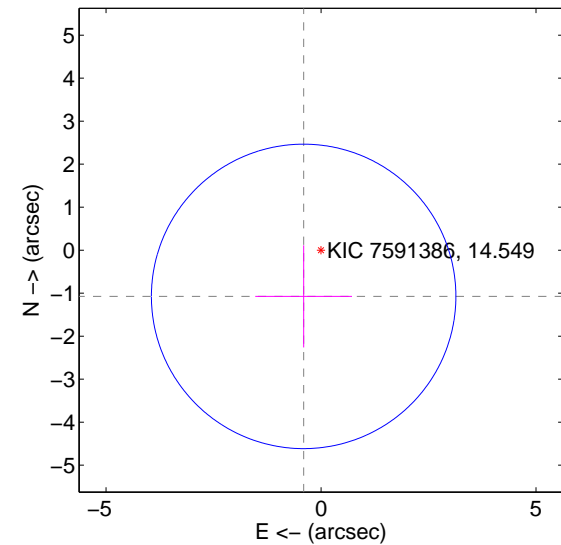
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

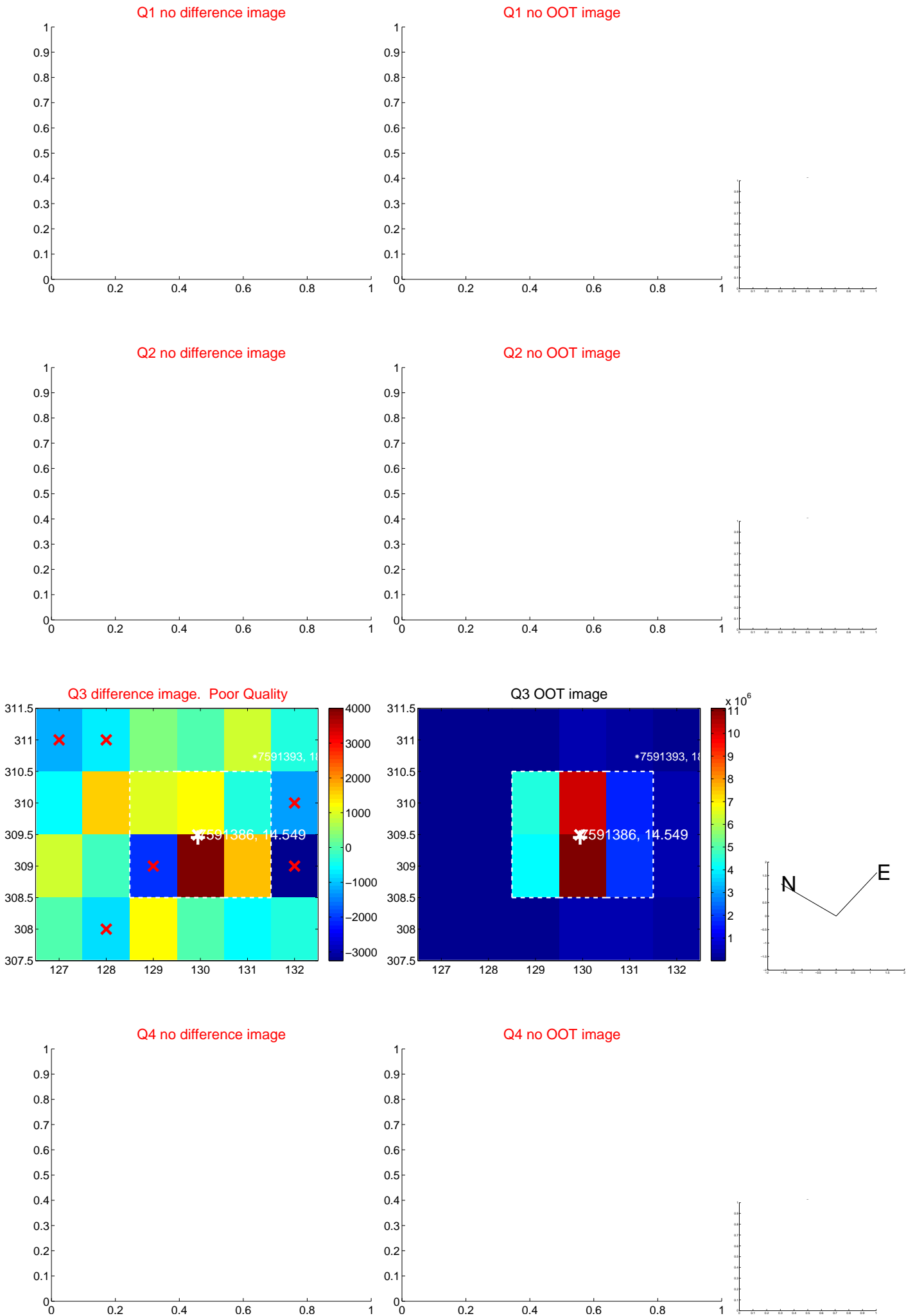


offset from photometric centroids



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.

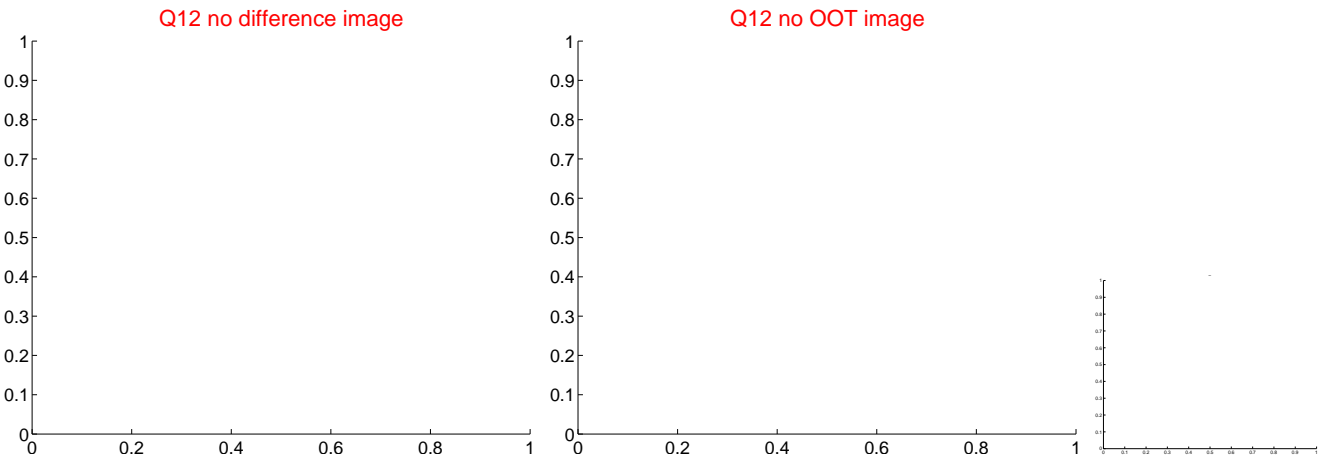
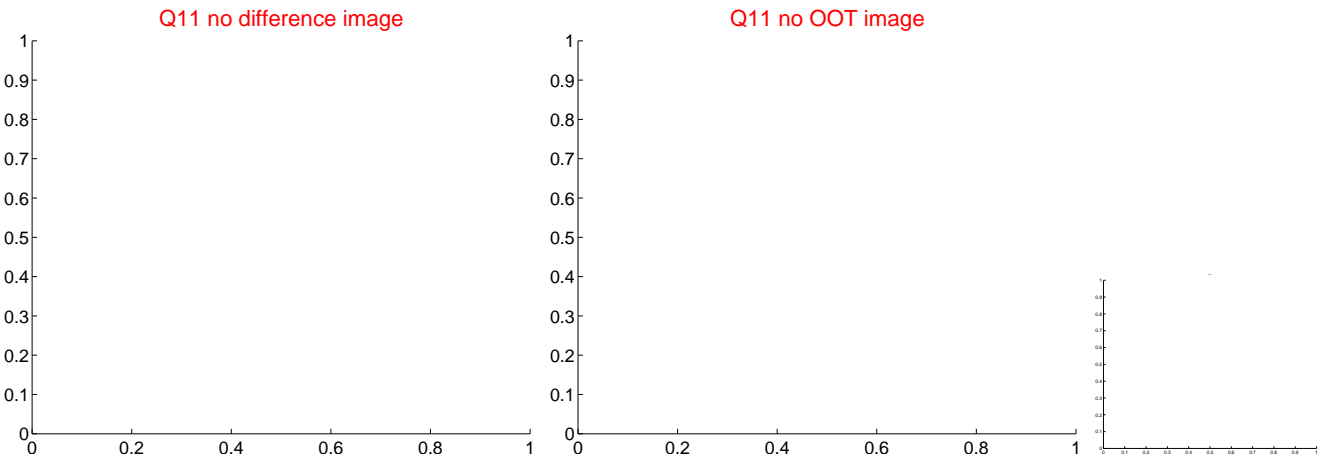
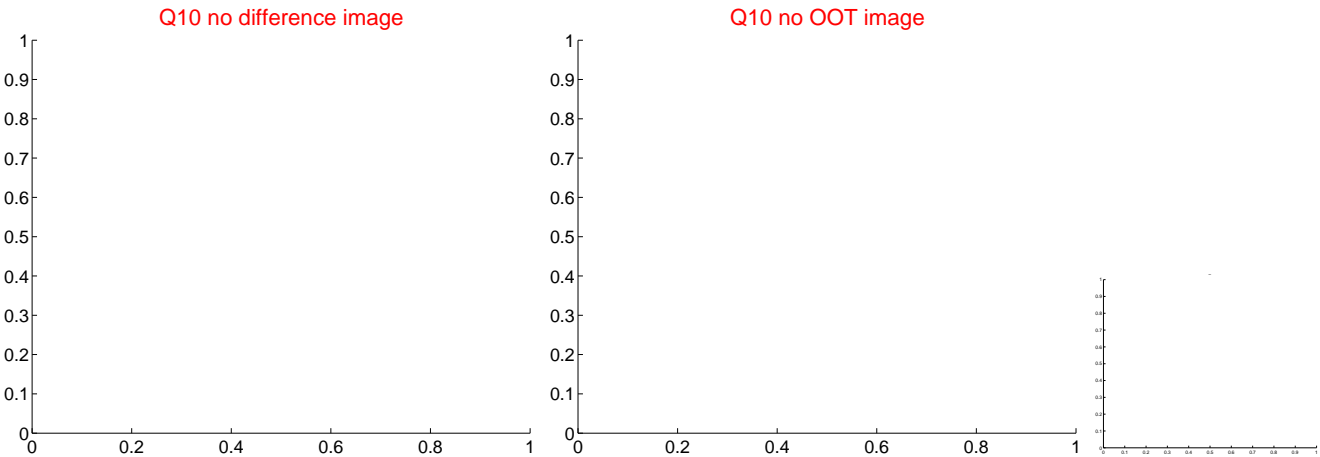
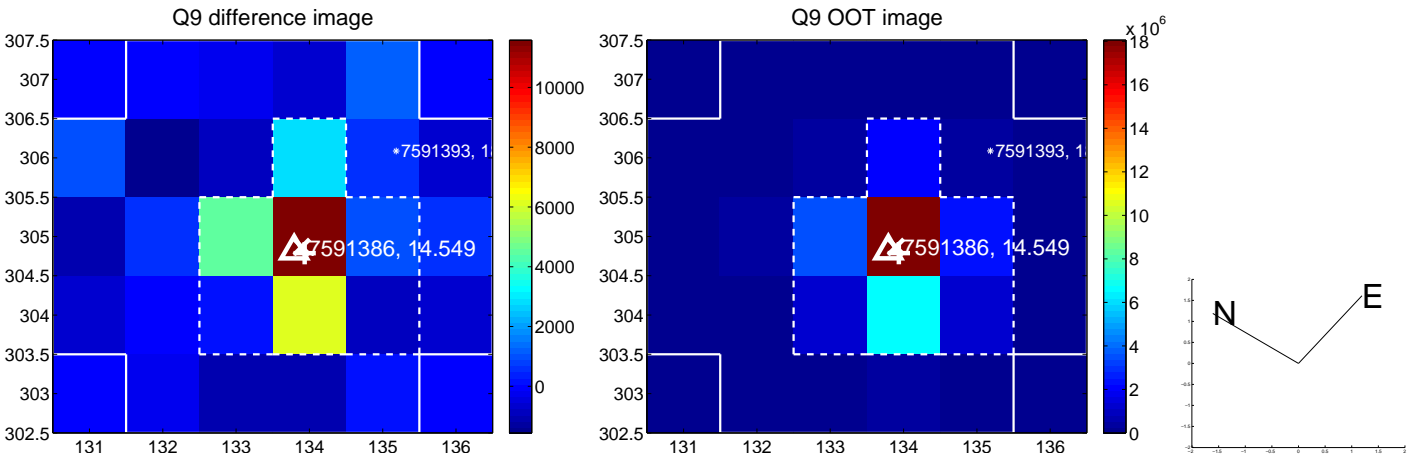
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



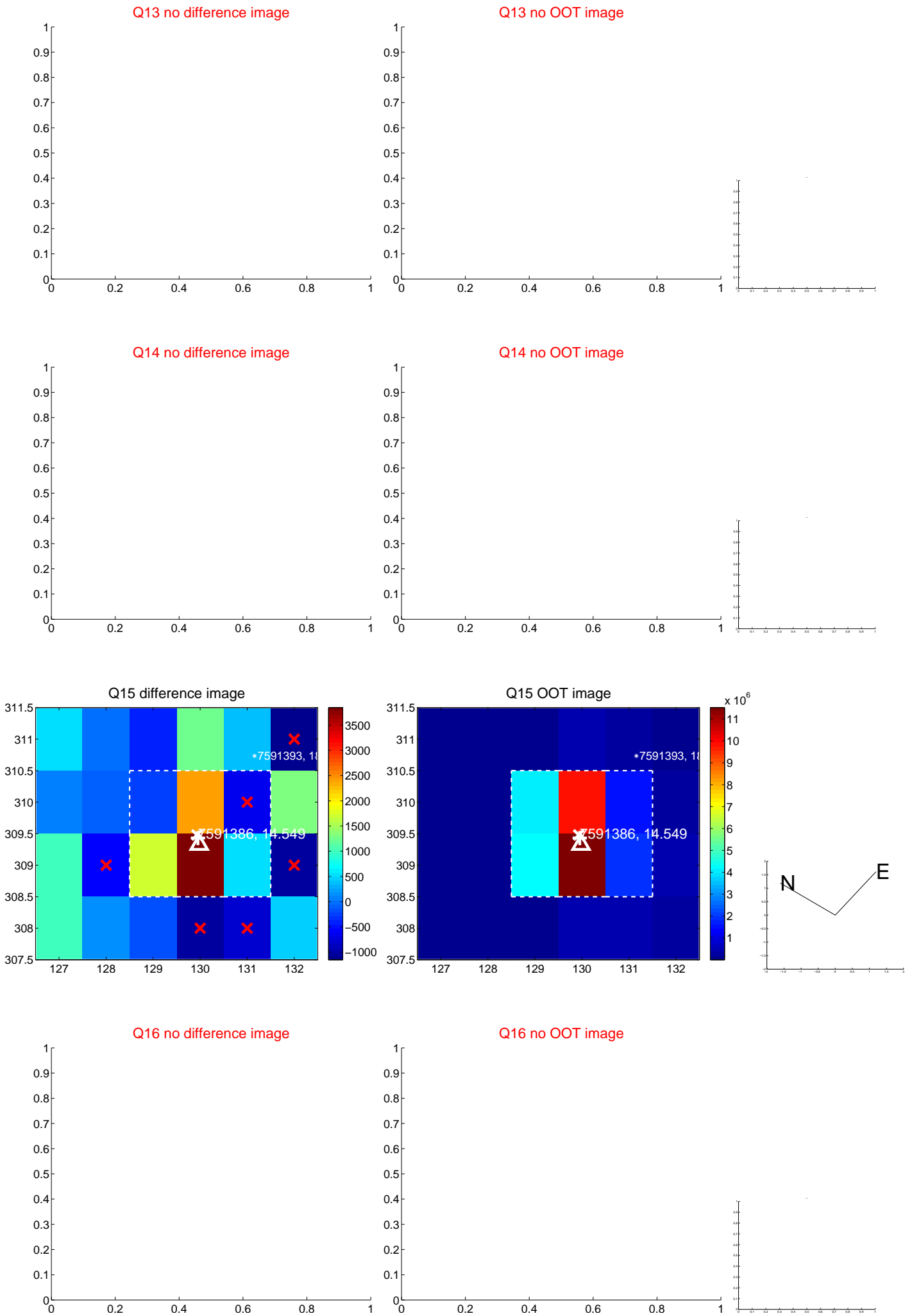
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



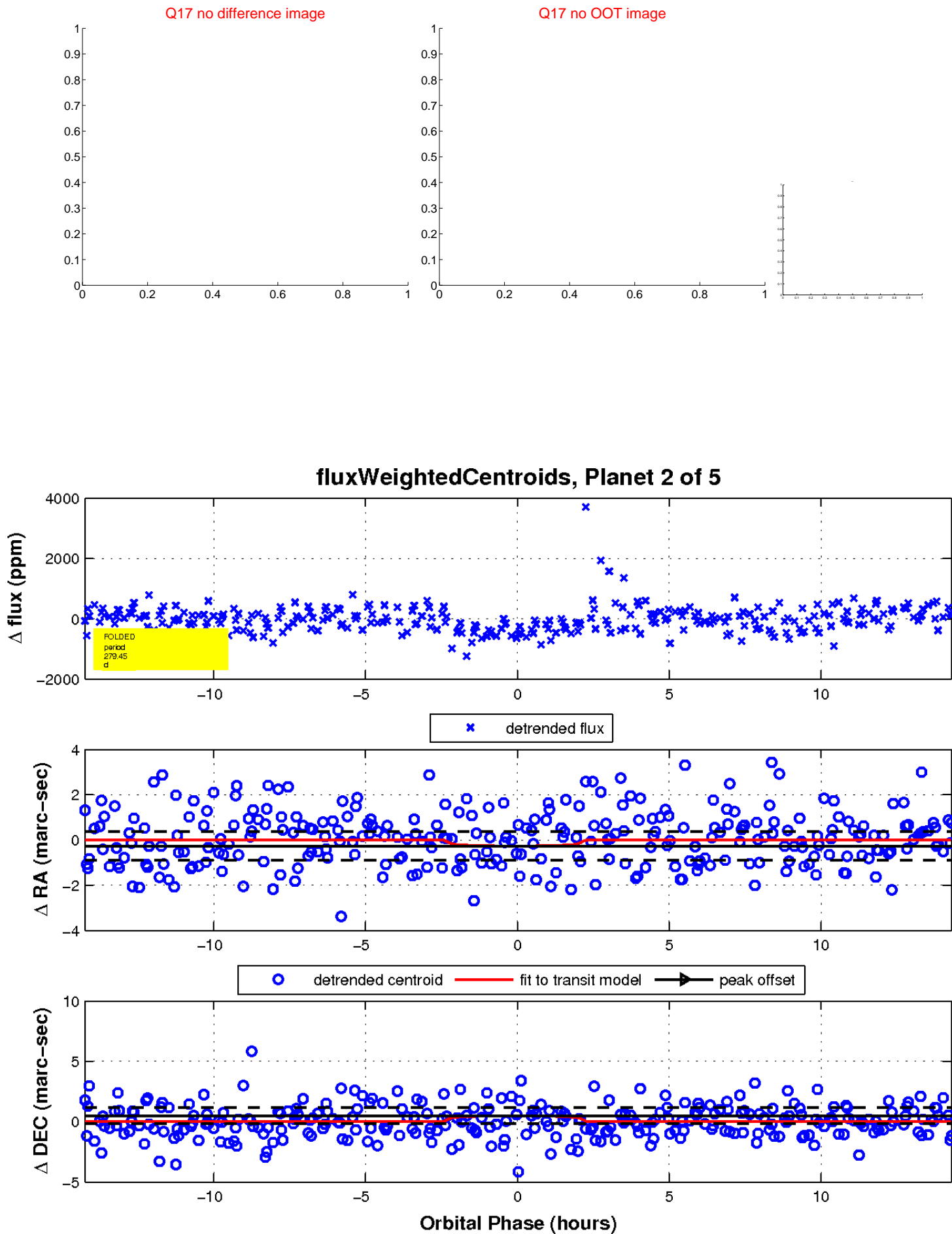
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

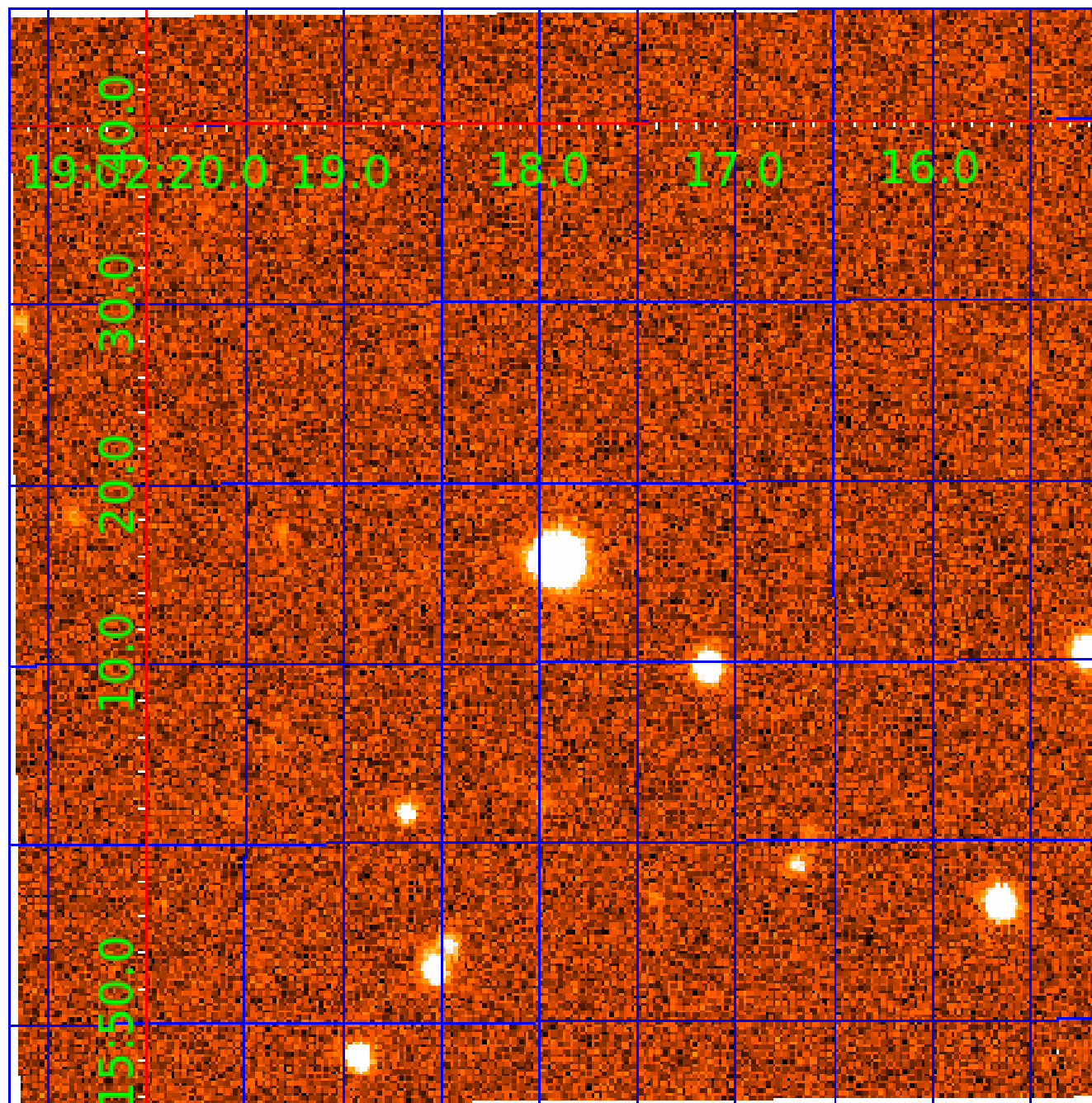


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007591386

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})
007591386-01	OBS	No	381.462772	324.067306	921.2	16.174	10.8	10.6	0.73	5522	4.33	0.49
007591386-02	OBS	No	279.454554	289.193334	546.0	4.768	9.4	7.6	0.73	5522	1.89	0.74
007591386-03	OBS	No	650.405765	264.096770	557.0	8.901	10.3	6.4	0.73	5522	1.86	0.24
007591386-04	OBS	No	559.855214	319.073792	825.9	40.989	8.5	6.9	0.73	5522	2.47	0.29
007591386-05	OBS	No	284.592336	316.717684	511.8	6.367	10.5	7.0	0.73	5522	1.78	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007591386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS
007591386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007591386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

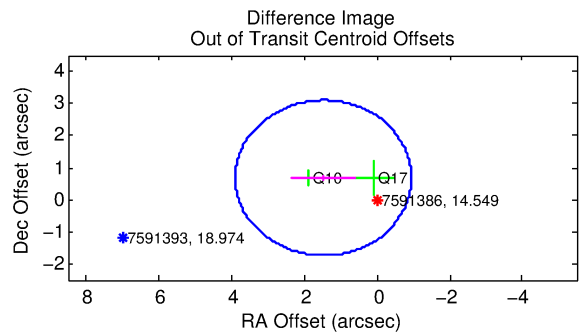
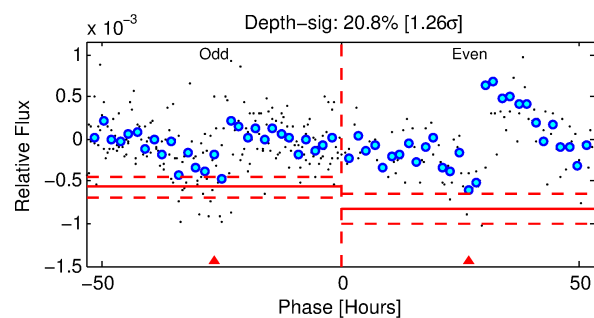
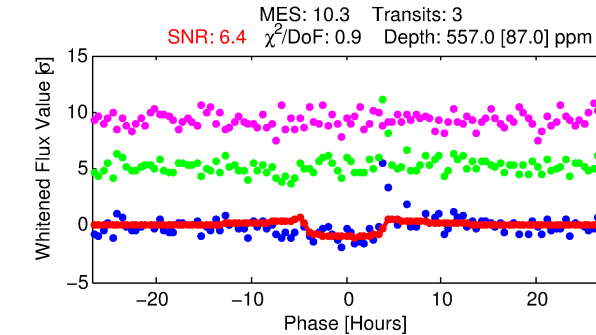
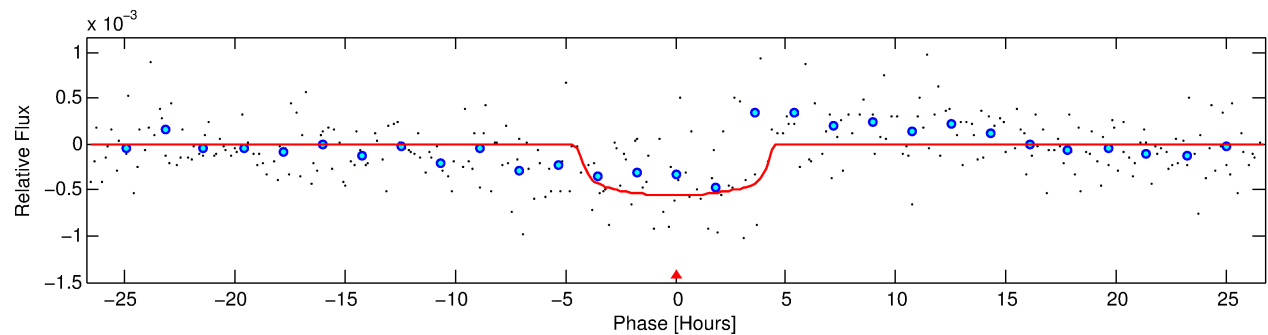
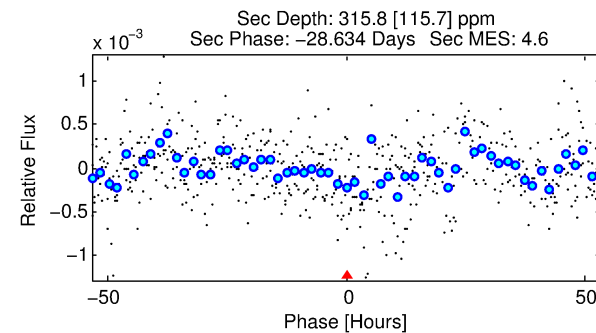
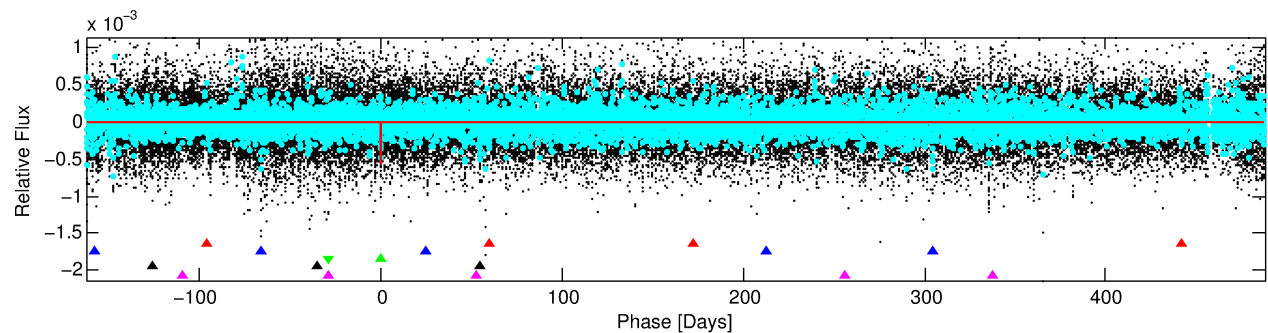
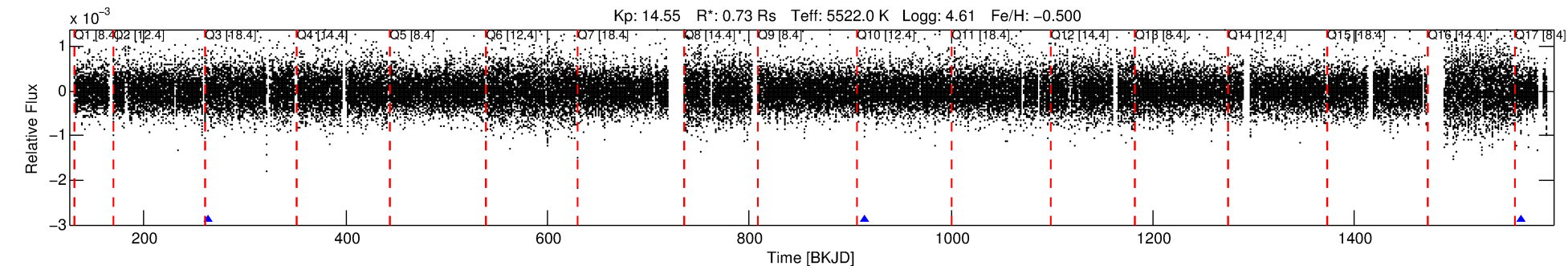
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007591386-03

No Significant Match Found

DV One-Page Summary

KIC: 7591386 Candidate: 3 of 5 Period: 650.406 d



DV Fit Results:

Period = 650.40576 [0.01010] d
Epoch = 264.0968 [0.0129] BKJD
Rp/R* = 0.0235 [0.0089]
a/R* = 389.27 [625.90]
b = 0.75 [0.95]
Seff = 0.24 [0.06]
Teq = 179 [11] K
Rp = 1.86 [0.79] Re
a = 1.3549 [0.2091] AU
Ag = 91716.78 [79386.61] [1.16 σ]
Teff = 4805 [1017] K [4.55 σ]

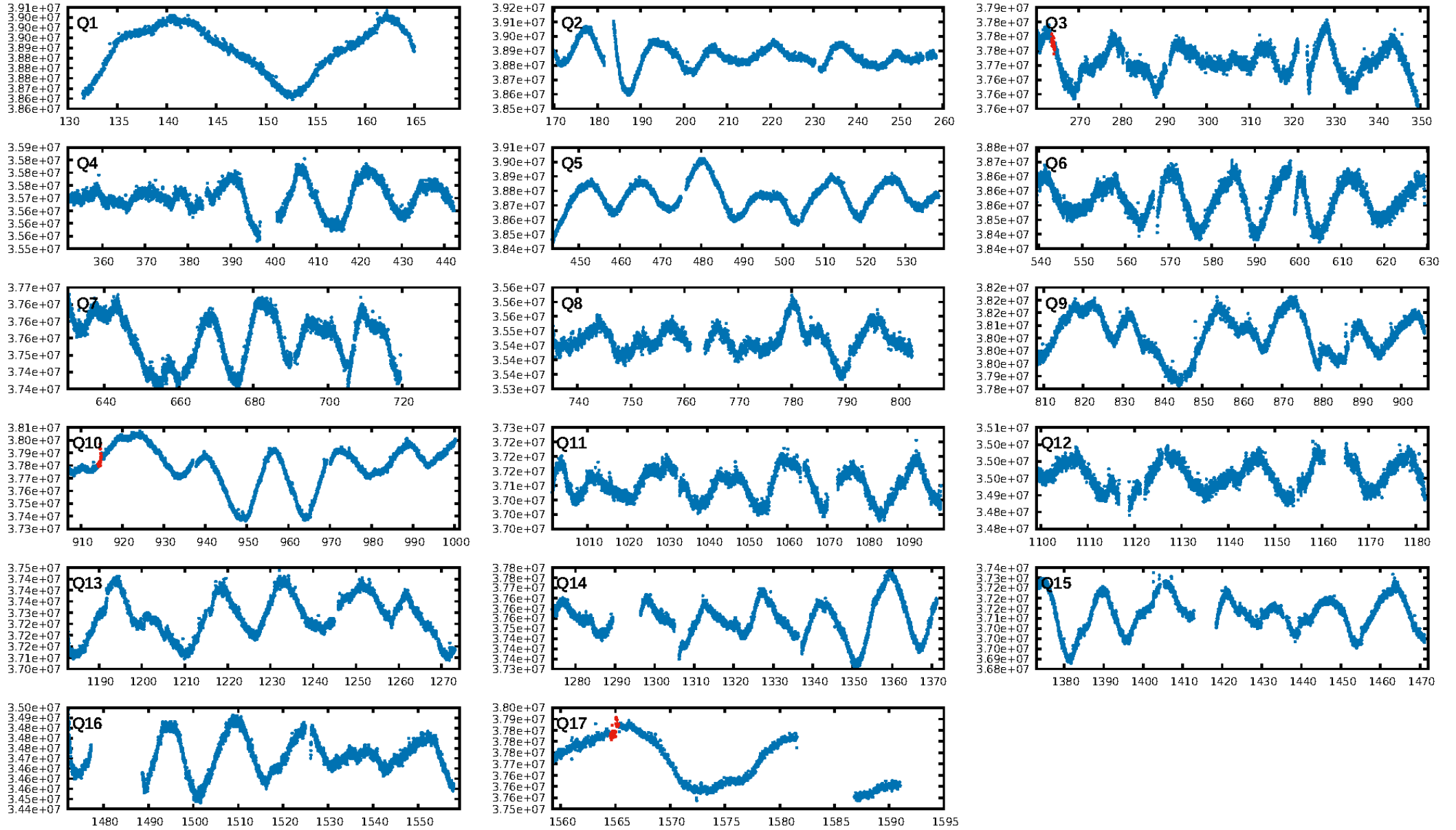
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.81 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 9.64e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -3.962
Centroid-sig: 0.1%
Centroid-so: 2.234 arcsec [2.08 σ]
OotOffset-rm: 1.624 arcsec [2.01 σ]
KicOffset-rm: 1.431 arcsec [1.70 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

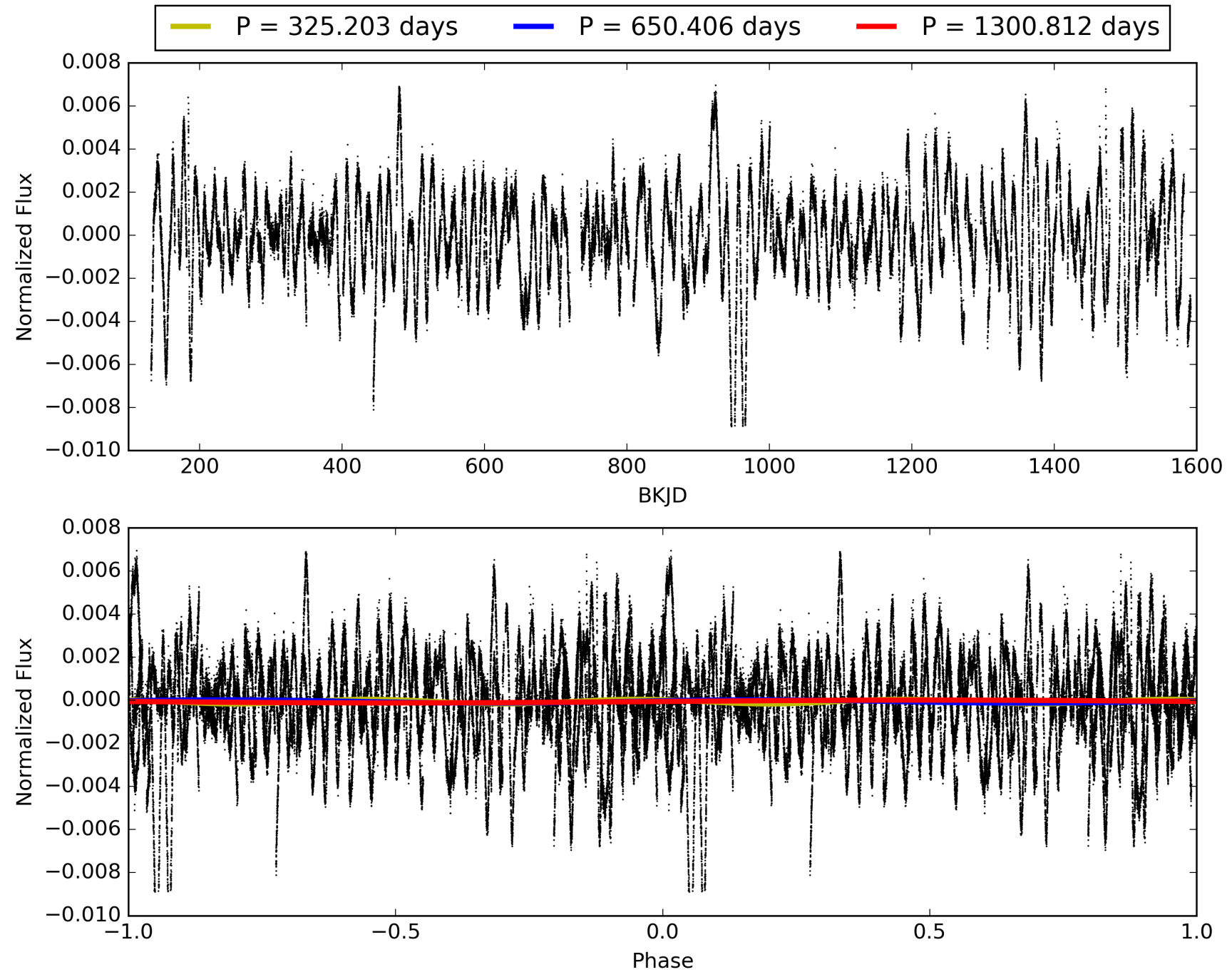
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:02:32 Z

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

TCE 007591386-03, PDC Light Curves

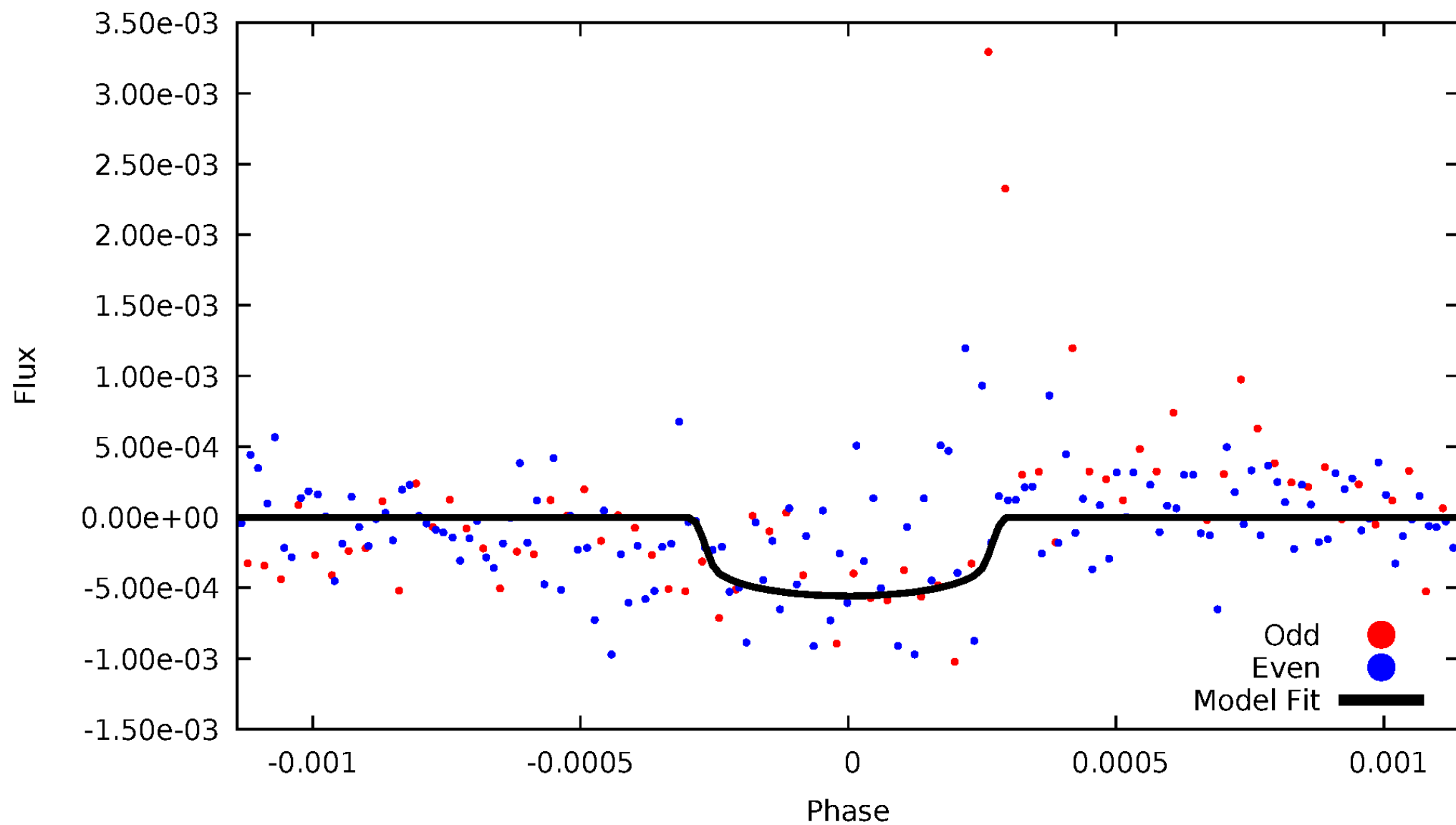


TCE 007591386-03



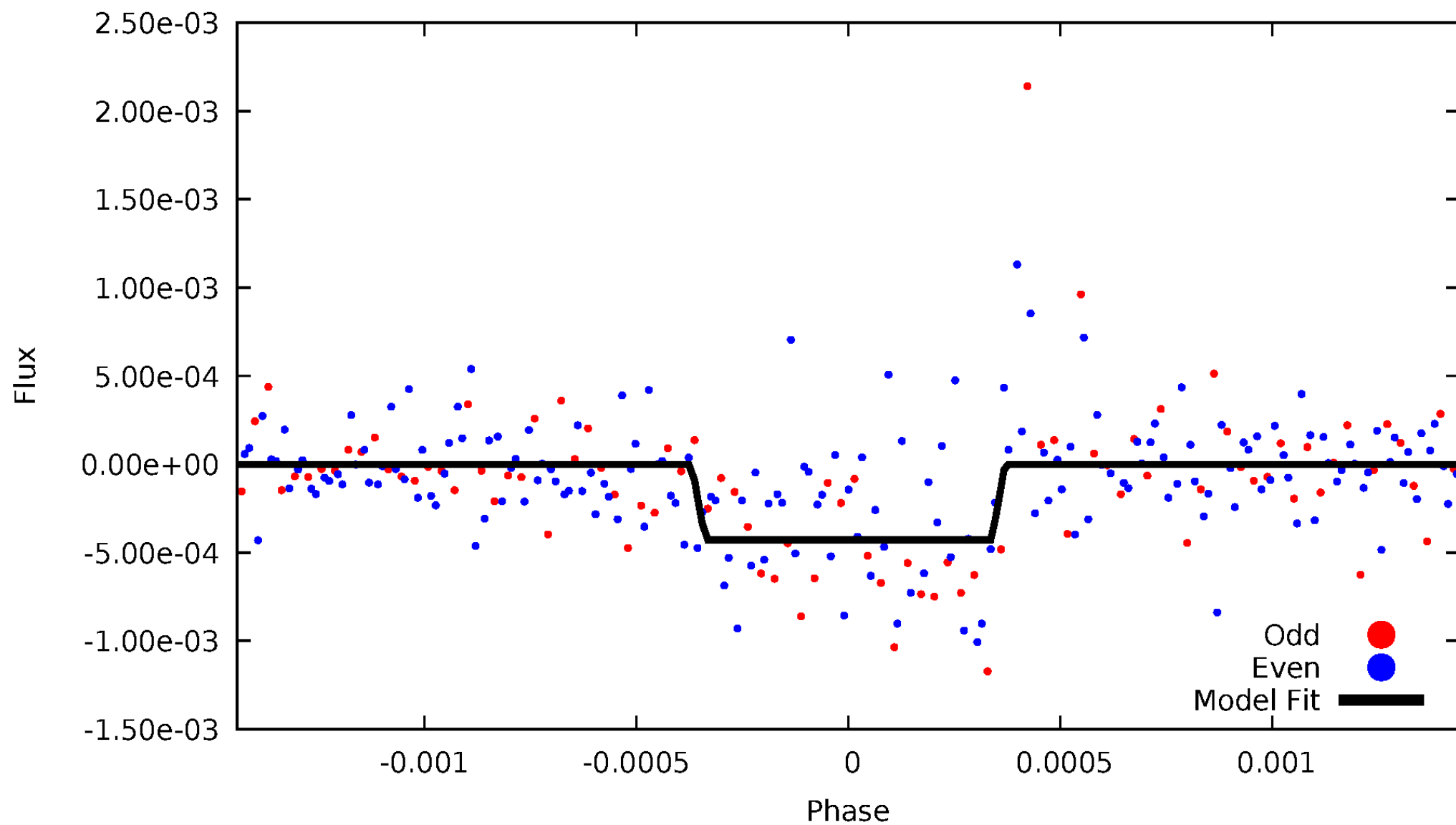
DV Odd/Even

TCE 007591386-03



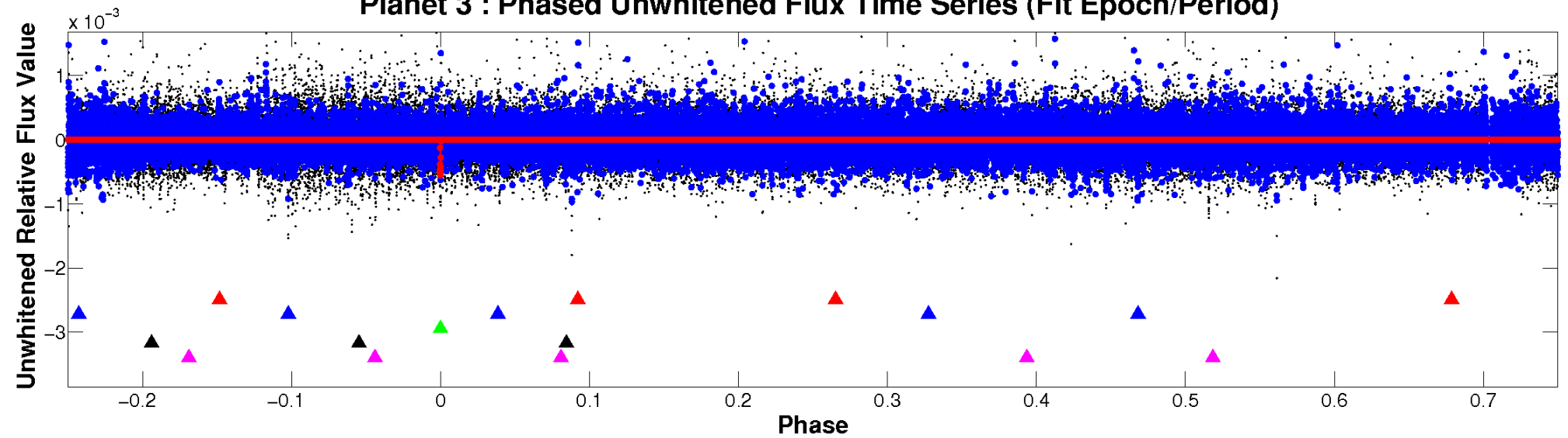
ALT Odd/Even

TCE 007591386-03

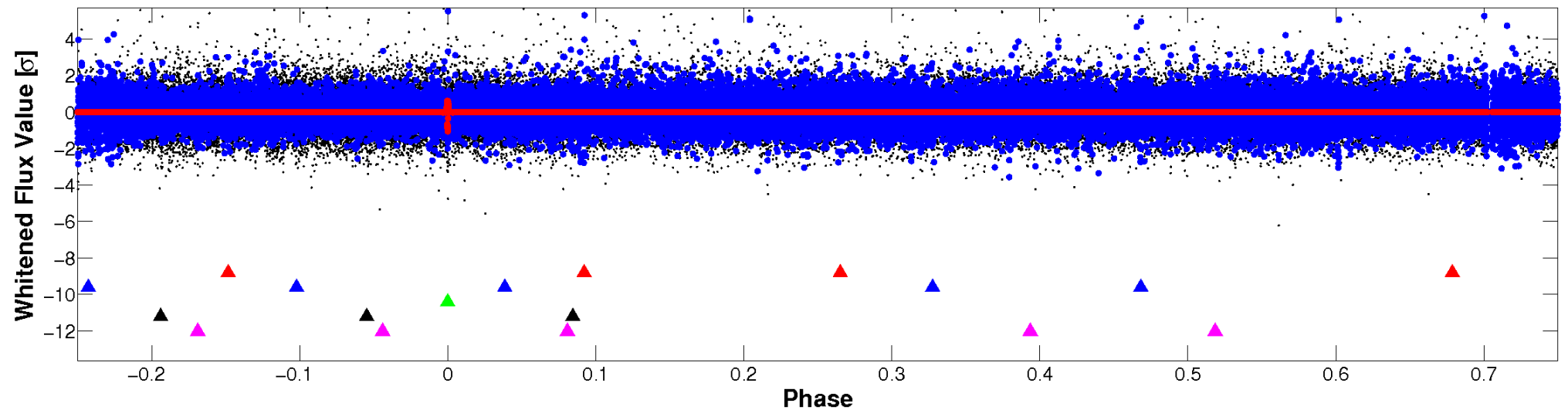


Non-Whitened Vs. Whitened Light Curve

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

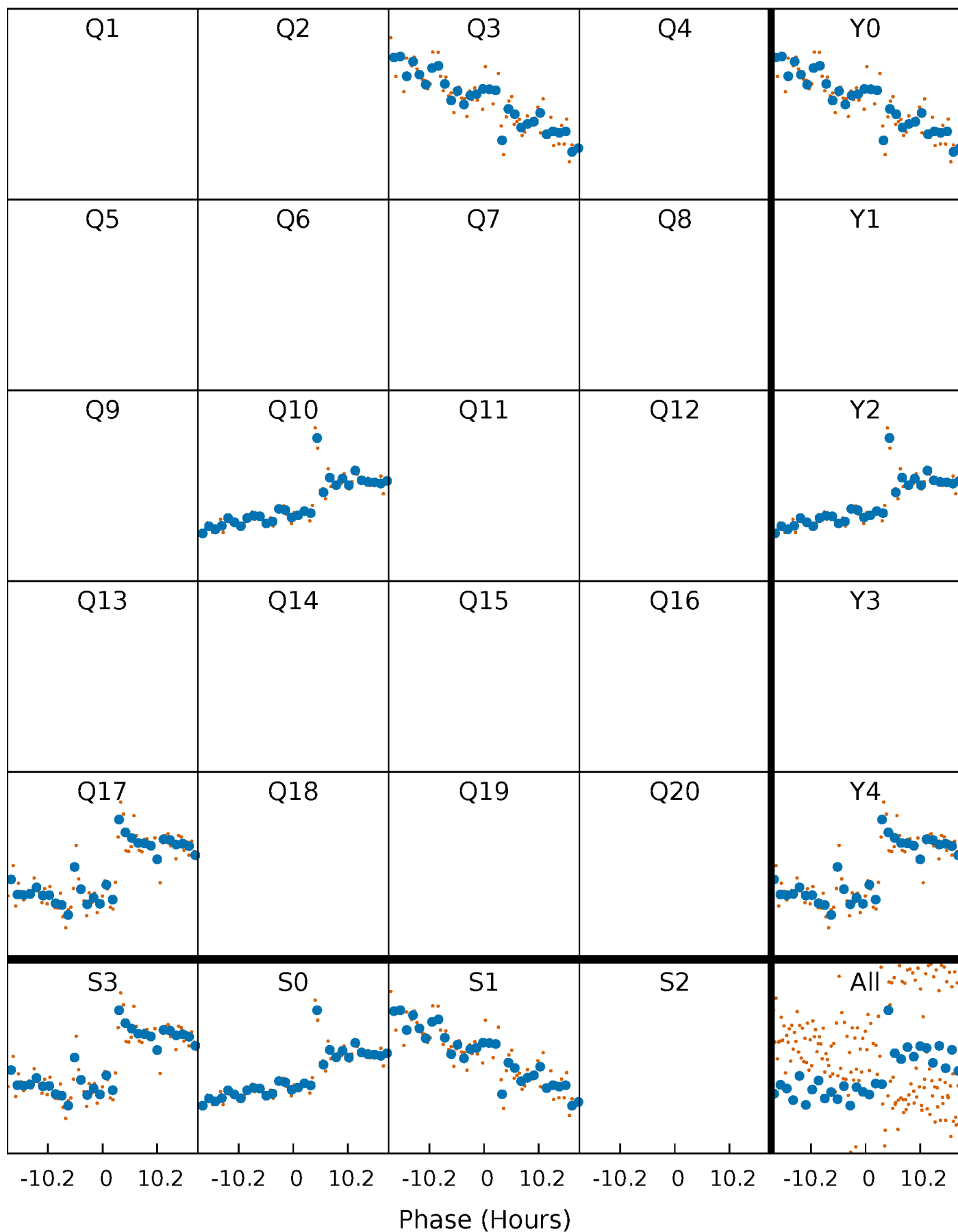


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



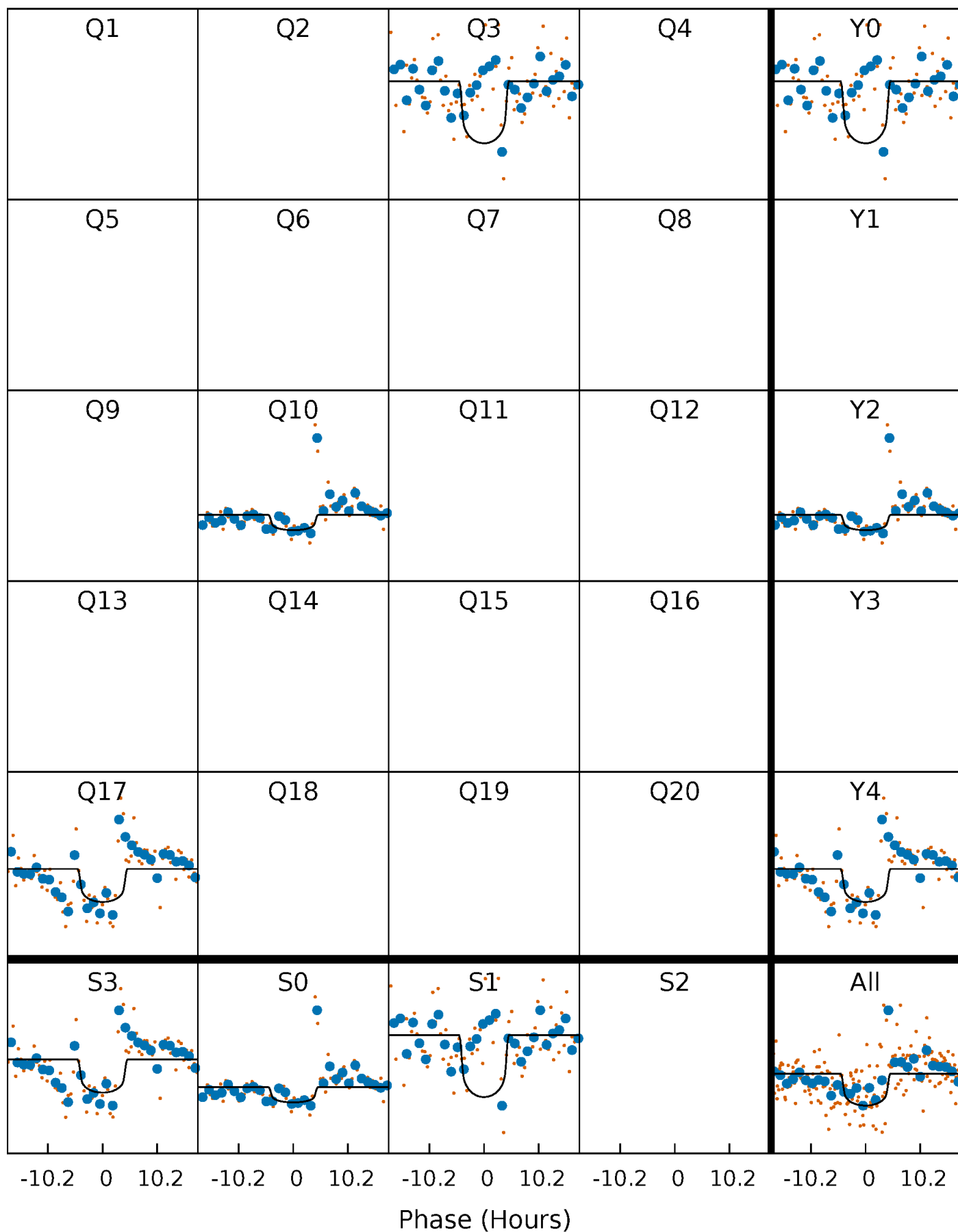
PDC Quarter-Phased Transit Curves

TCE 007591386-03 $P=650.405765$ Days $T_0=264.096770$ (BKJD)



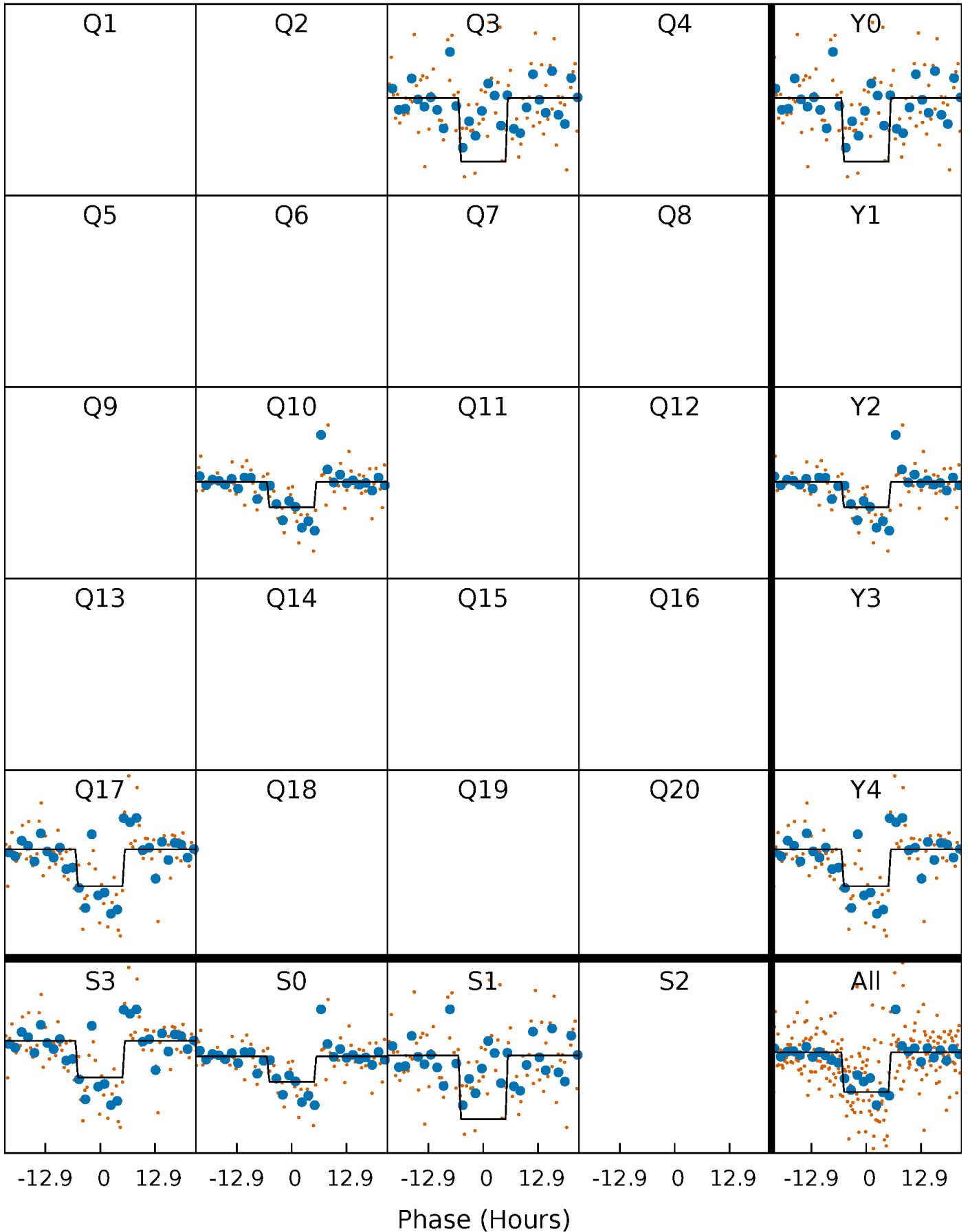
DV Quarter-Phased Transit Curves

TCE 007591386-03 $P=650.405765$ Days $T_0=264.096770$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

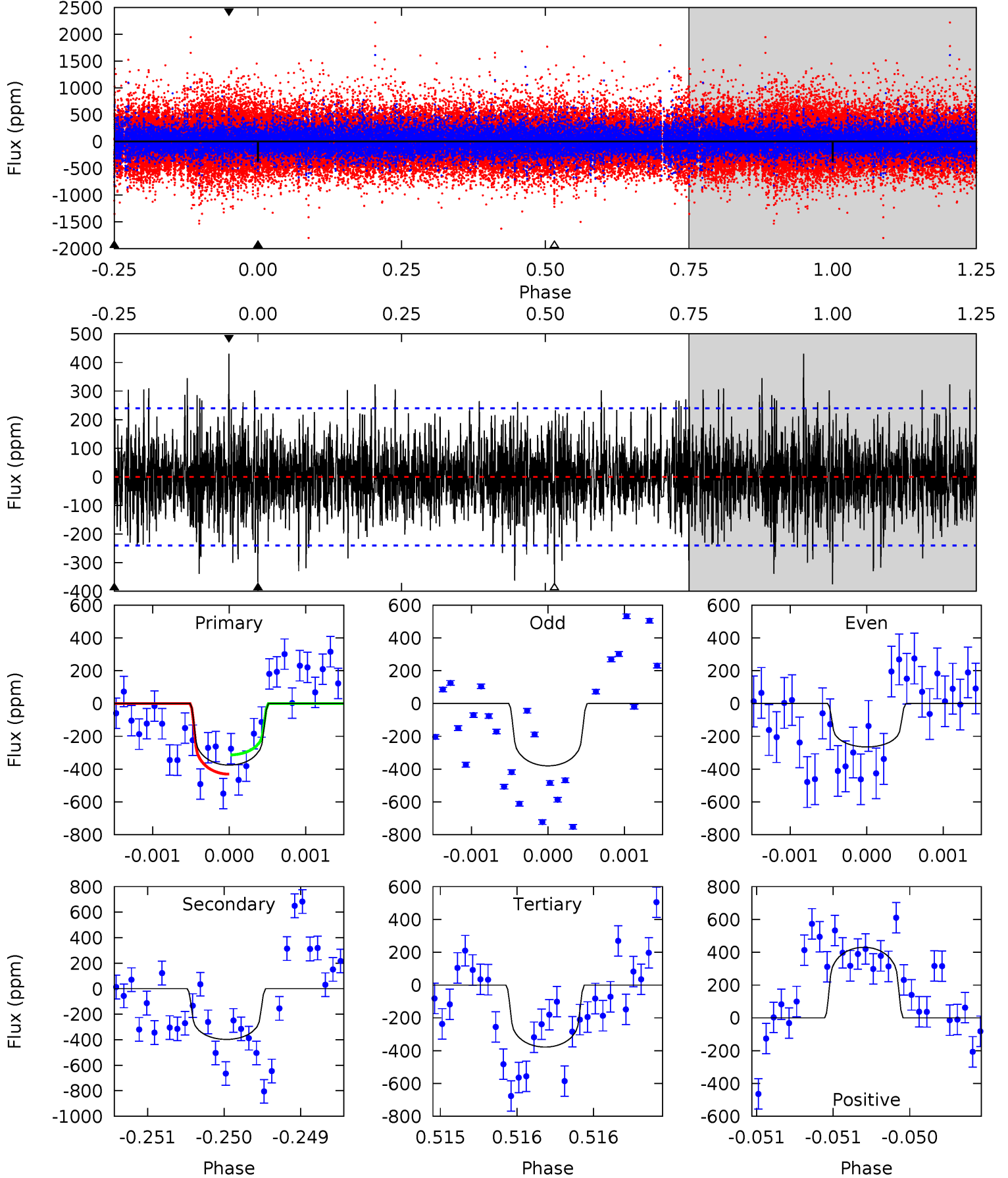
TCE 007591386-03 $P=650.372970$ Days $T_0=264.045003$ (BKJD)



DV Model-Shift Uniqueness Test

007591386-03, P = 650.405765 Days, E = 264.096770 Days

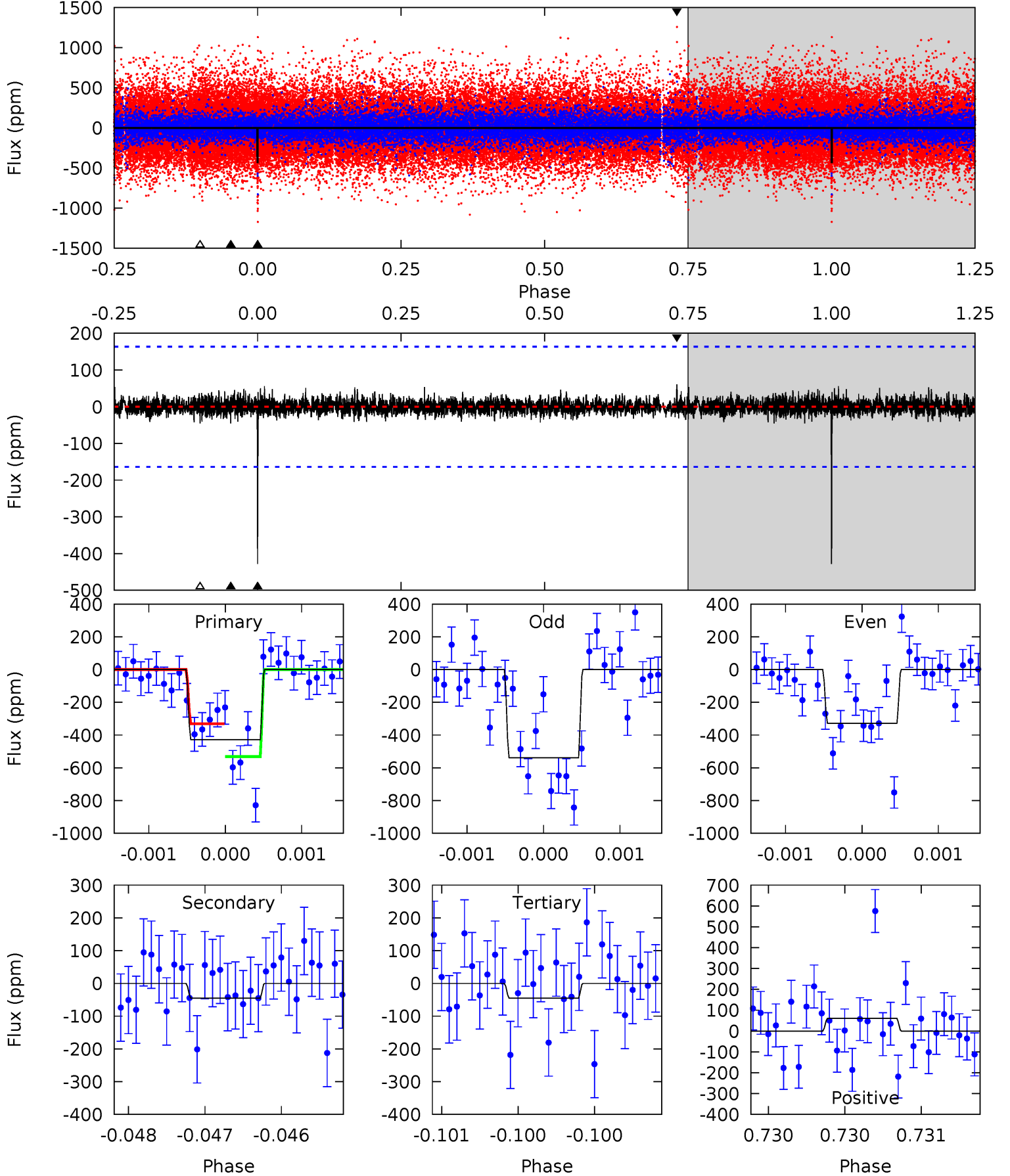
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.69	9.20	8.74	9.95	5.55	3.44	2.08	-0.05	-1.26	0.46	-0.75	1.30	0.79	0.52	1.36



Alt Model-Shift Uniqueness Test

007591386-03, P = 650.372970 Days, E = 264.045003 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	1.51	1.51	2.04	5.51	3.38	0.41	12.9	12.4	0.00	-0.53	3.40	0.78	0.12	3.39



Stellar Parameters For KIC 007591386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5522^{+163}_{-147}	$4.608^{+0.040}_{-0.112}$	$-0.500^{+0.300}_{-0.300}$	$0.728^{+0.140}_{-0.060}$	$0.783^{+0.091}_{-0.074}$	$2.859^{+0.466}_{-1.043}$
	+3%/-3%	+1%/-2%	+60%/-60%	+19%/-8%	+12%/-9%	+16%/-36%
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 007591386-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-398 ± 43	$1.91^{+0.76}_{-0.69}$	253^{+12}_{-10}	5163^{+1228}_{-667}	$109284^{+169017}_{-53633}$
Alt.	-45 ± 30	$1.76^{+0.68}_{-0.76}$	253^{+12}_{-10}	3488^{+784}_{-596}	13284^{+30657}_{-9621}

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

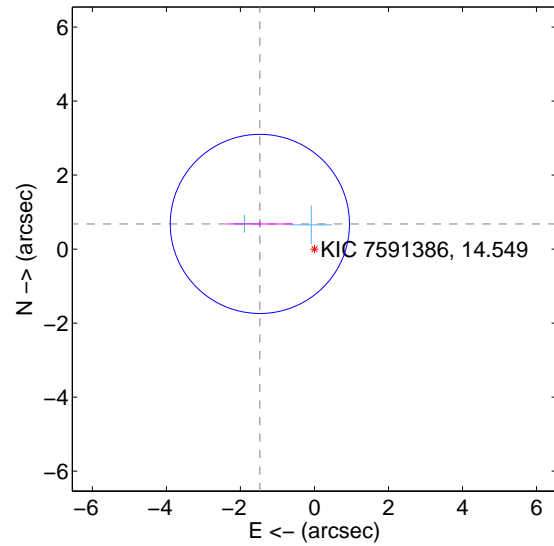
Supplemental centroid analysis for 007591386-03. Kepler magnitude: 14.55. Transit SNR 6.44

There are 2 quarters with good PRF difference image offsets

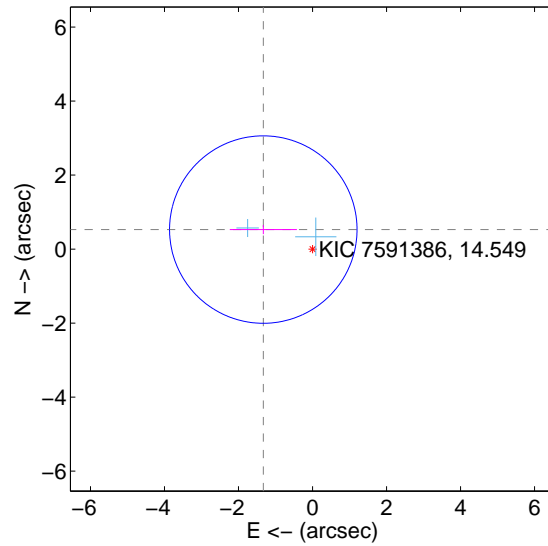
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.624 ± 0.807	2.01	1.475 ± 0.888	0.680 ± 0.068
PRF-fit source offset from KIC position	1.431 ± 0.844	1.70	1.331 ± 0.907	0.528 ± 0.125
photometric centroid source offset	2.23 ± 1.07	2.08	1.45 ± 1.03	1.70 ± 1.11

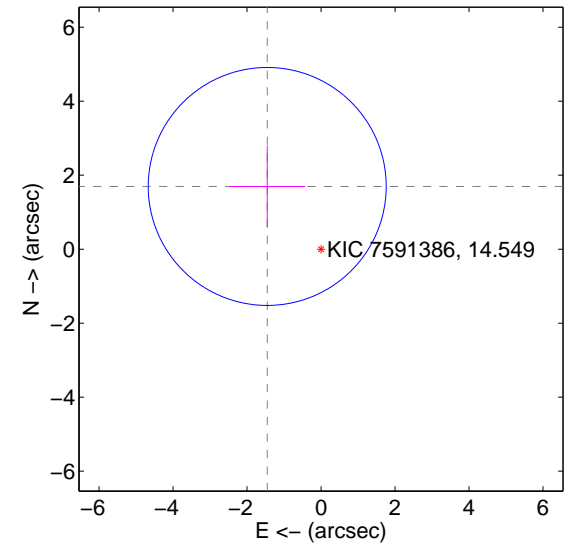
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

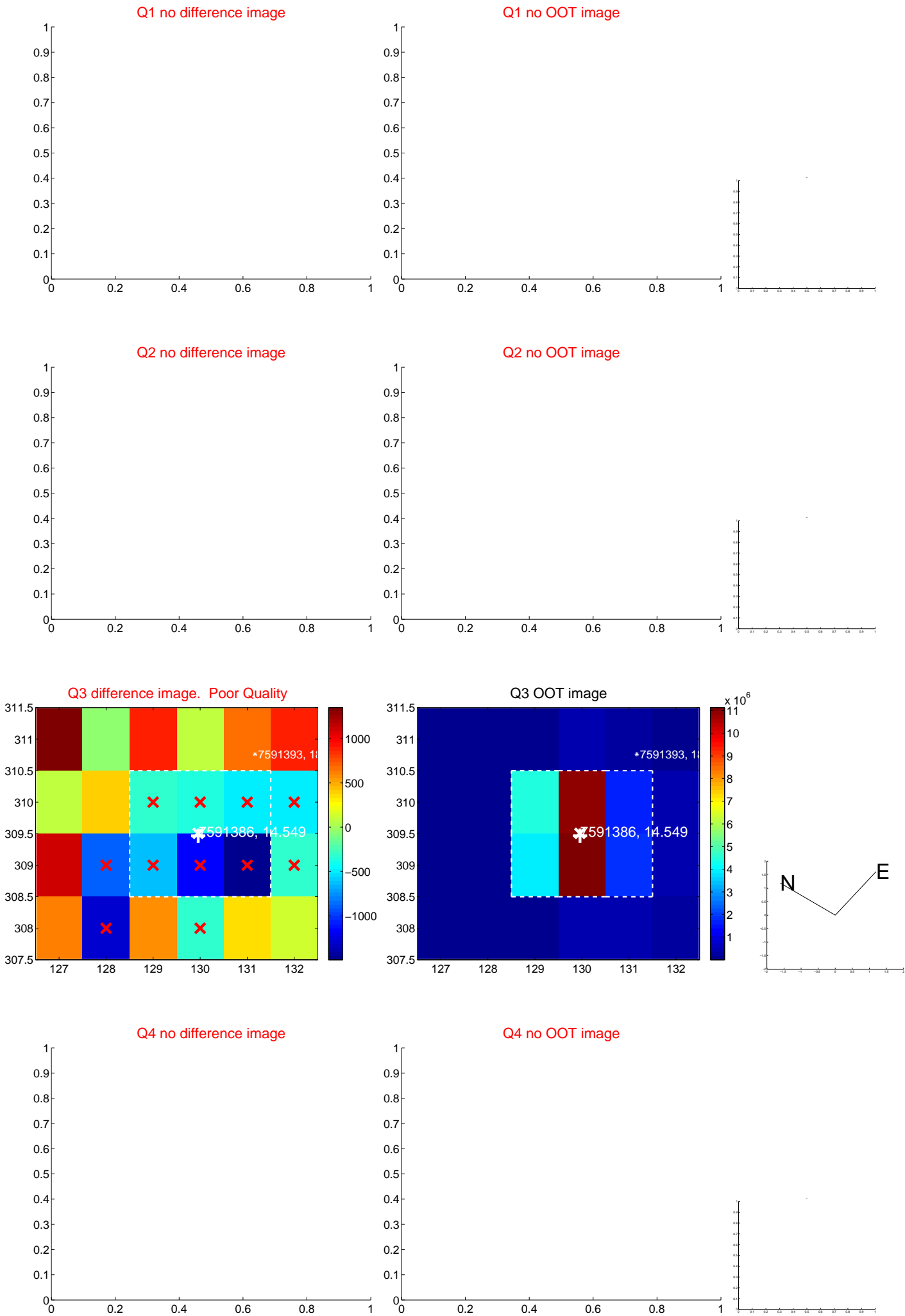


offset from photometric centroids



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.

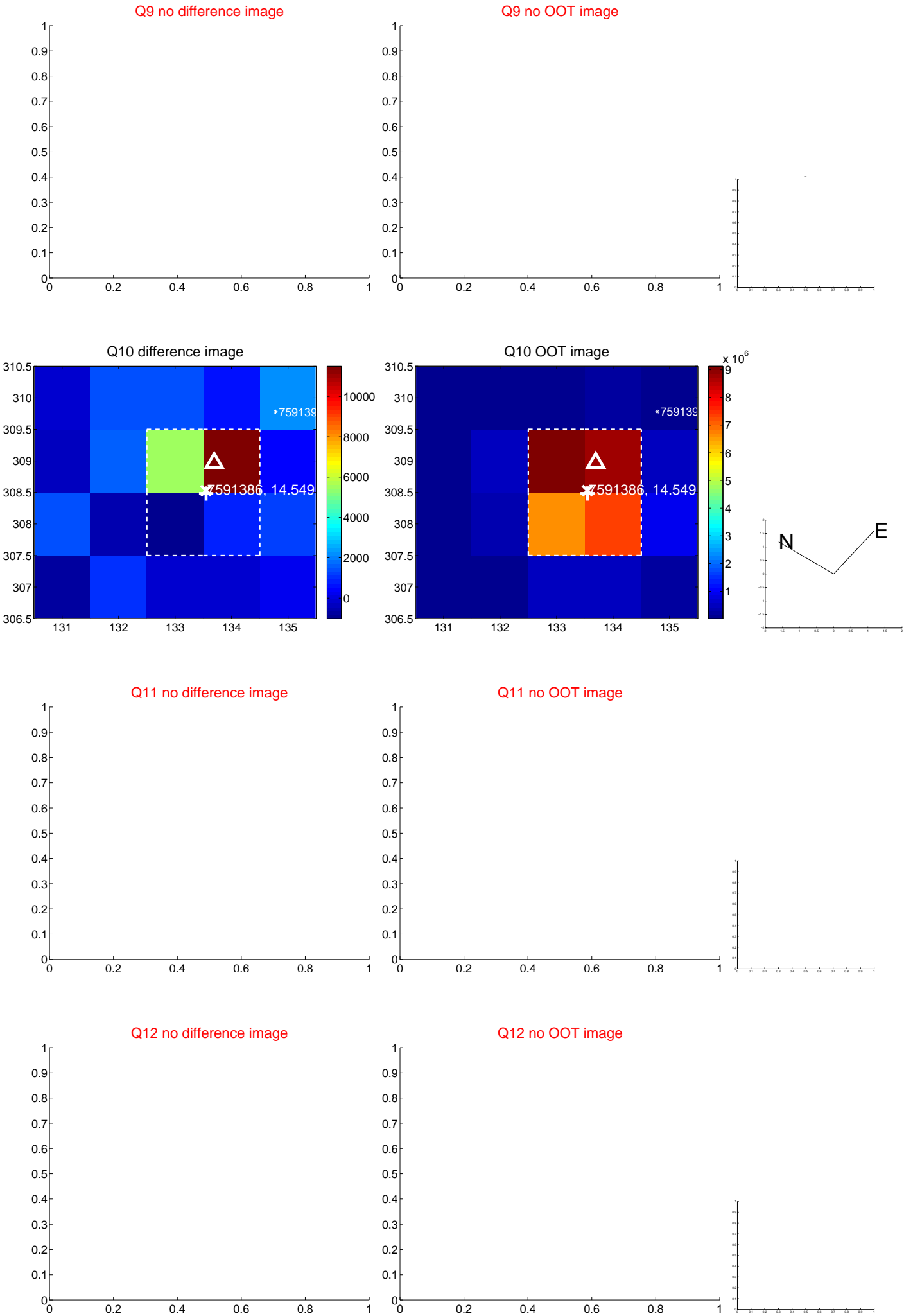
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



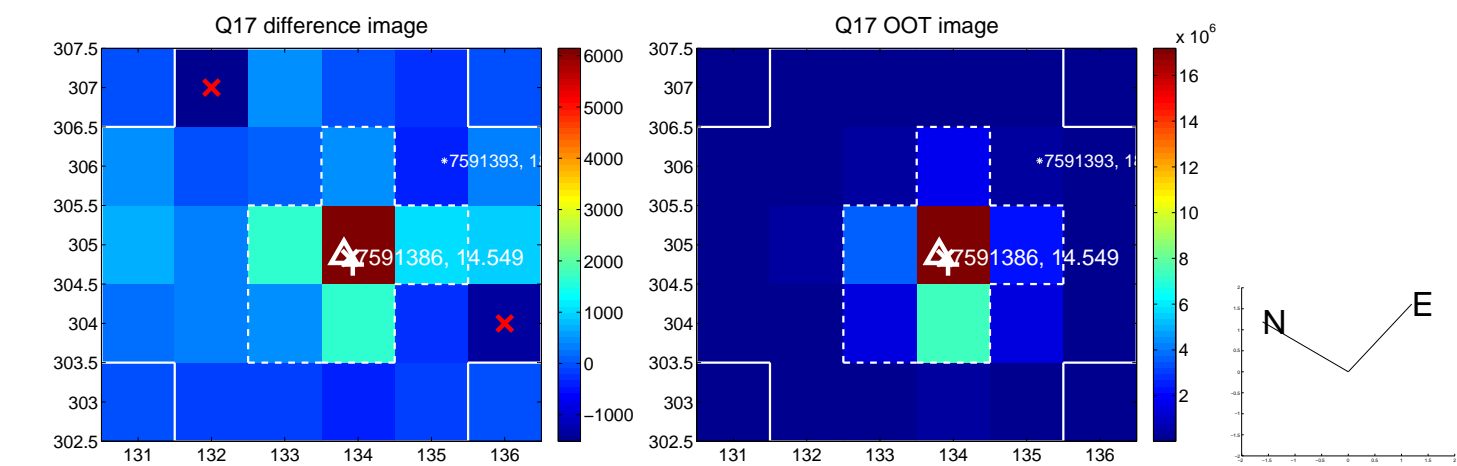
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



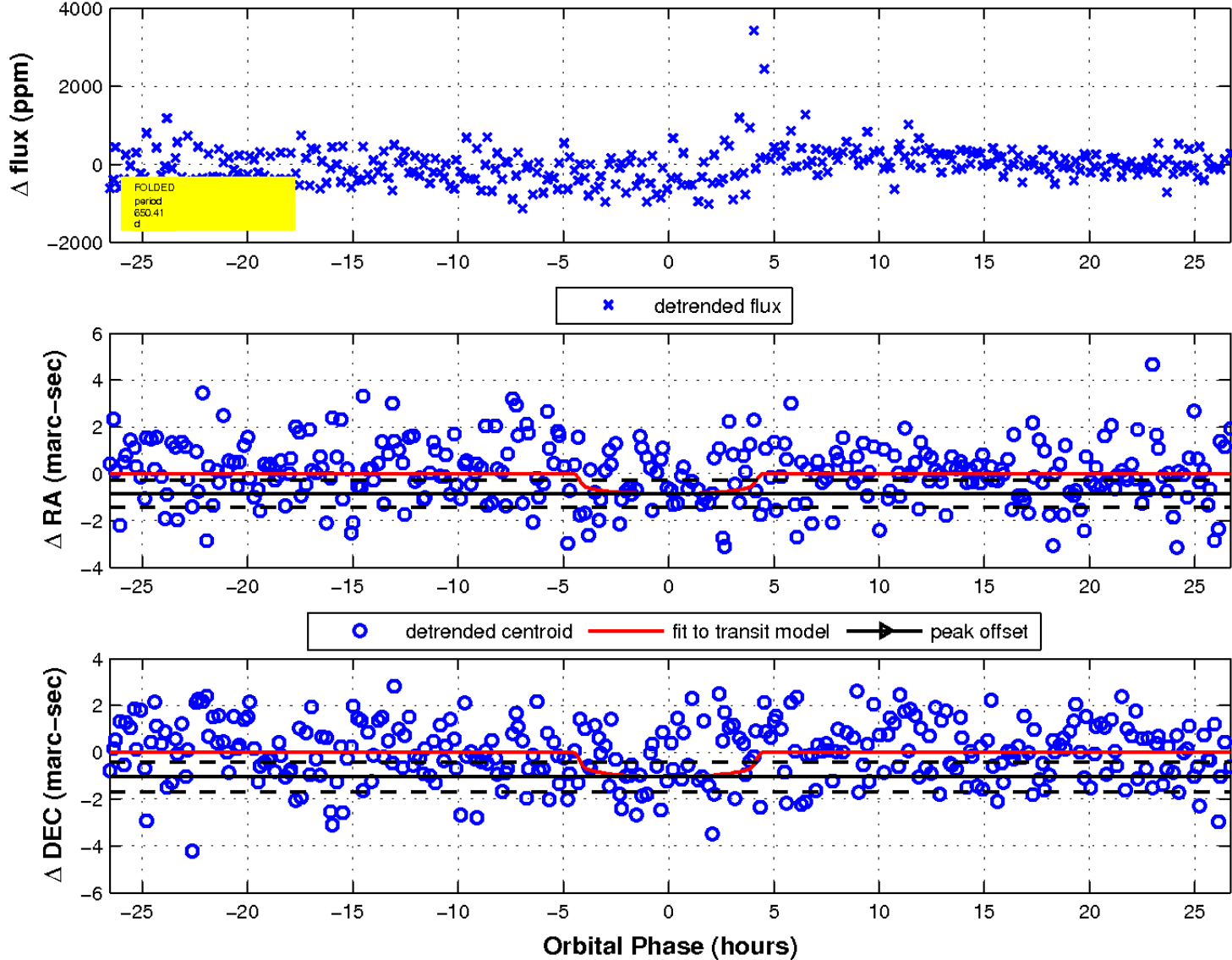
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

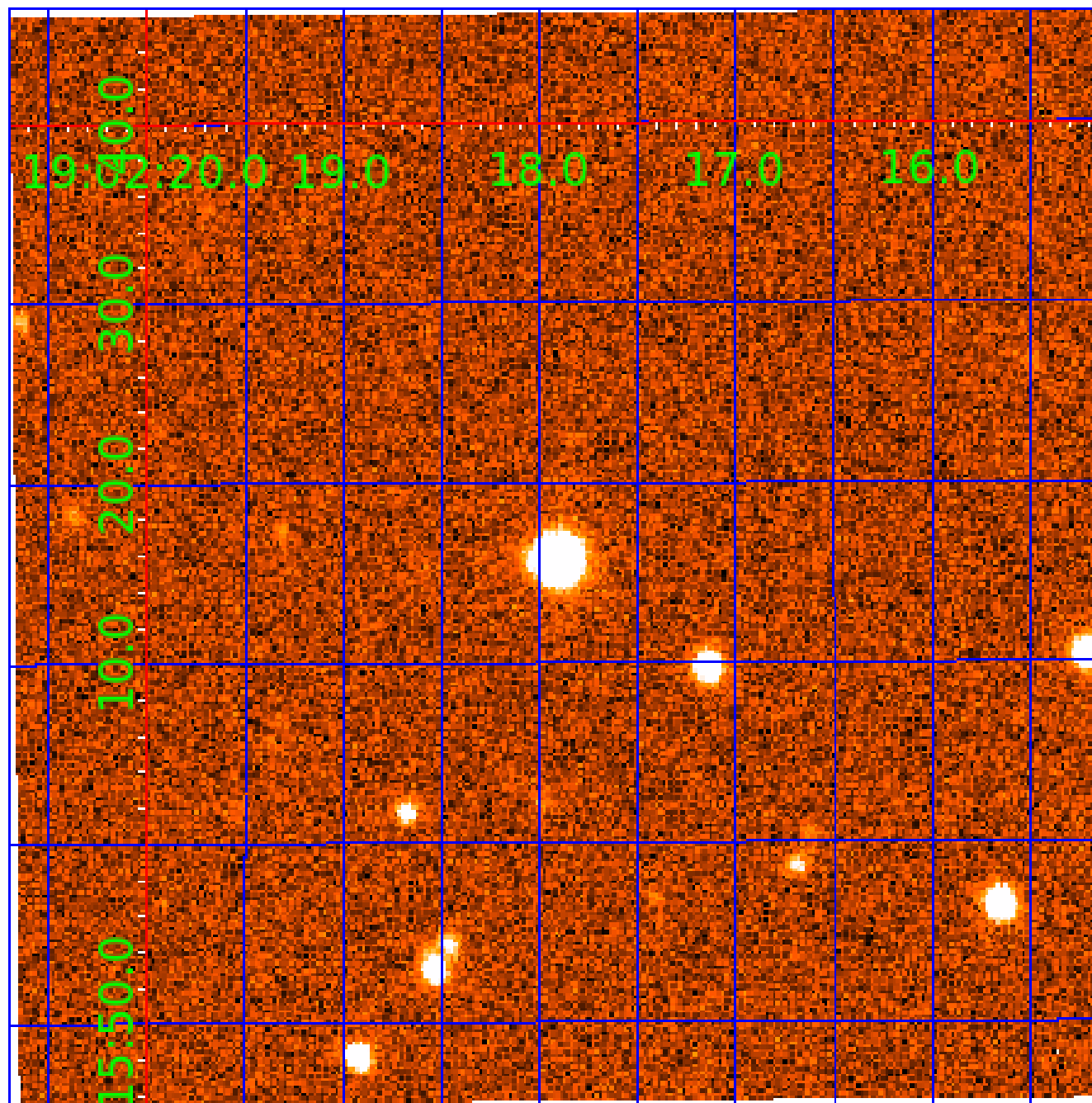


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 007591386

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})
007591386-01	OBS	No	381.462772	324.067306	921.2	16.174	10.8	10.6	0.73	5522	4.33	0.49
007591386-02	OBS	No	279.454554	289.193334	546.0	4.768	9.4	7.6	0.73	5522	1.89	0.74
007591386-03	OBS	No	650.405765	264.096770	557.0	8.901	10.3	6.4	0.73	5522	1.86	0.24
007591386-04	OBS	No	559.855214	319.073792	825.9	40.989	8.5	6.9	0.73	5522	2.47	0.29
007591386-05	OBS	No	284.592336	316.717684	511.8	6.367	10.5	7.0	0.73	5522	1.78	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007591386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS
007591386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007591386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

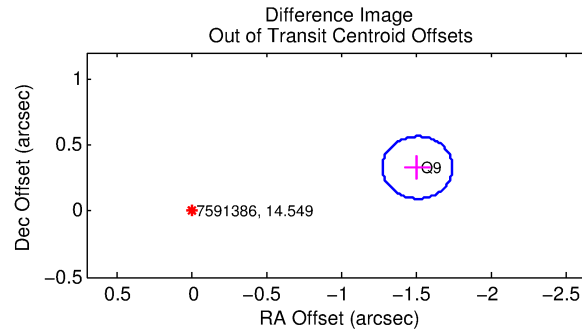
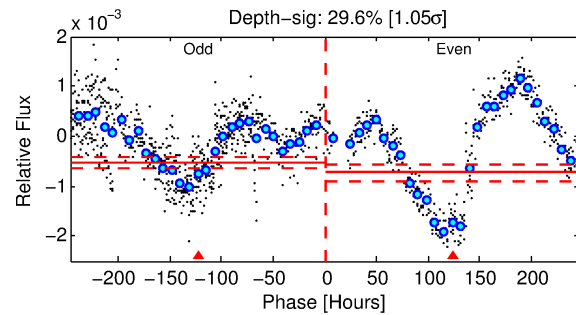
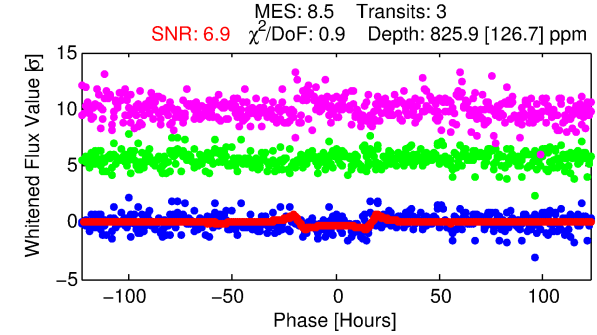
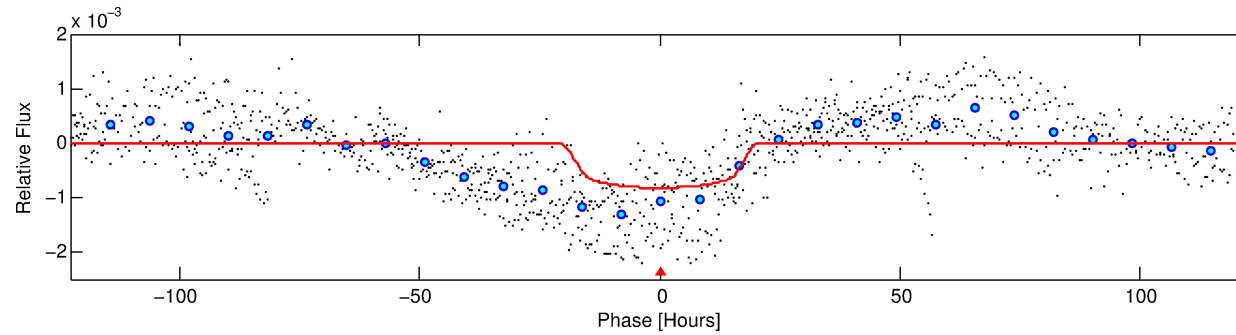
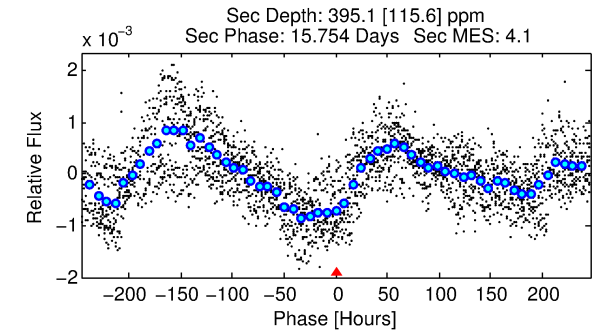
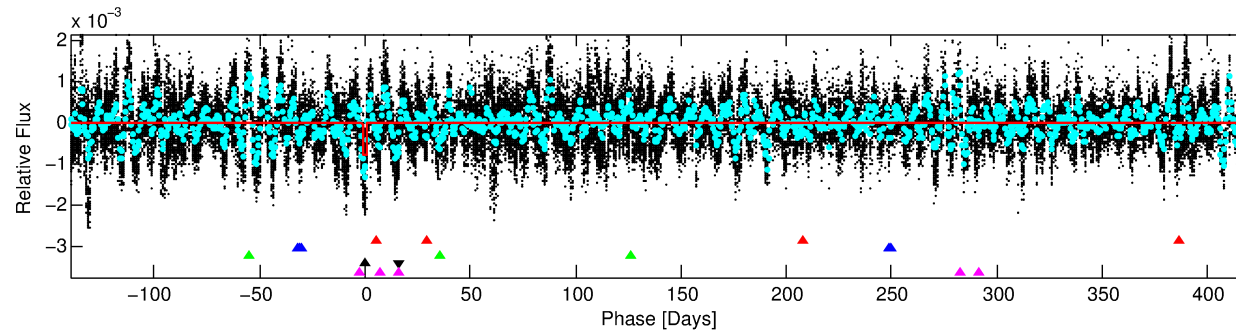
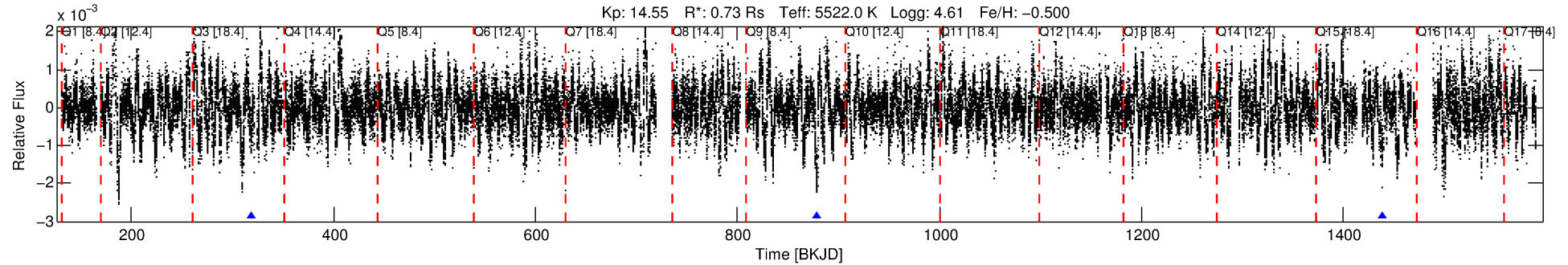
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007591386-04

No Significant Match Found

DV One-Page Summary

KIC: 7591386 Candidate: 4 of 5 Period: 559.855 d



DV Fit Results:

Period = 559.85521 [0.02681] d
Epoch = 319.0738 [0.0361] BKJD
Rp/R* = 0.0311 [0.0027]
a/R* = 53.99 [7.70]
b = 0.89 [0.03]
Seff = 0.29 [0.07]
Teq = 188 [11] K
Rp = 2.47 [0.52] Re
a = 1.2260 [0.1892] AU
Ag = 53658.81 [21609.82] [2.48 σ]
Teff = 4417 [398] K [10.61 σ]

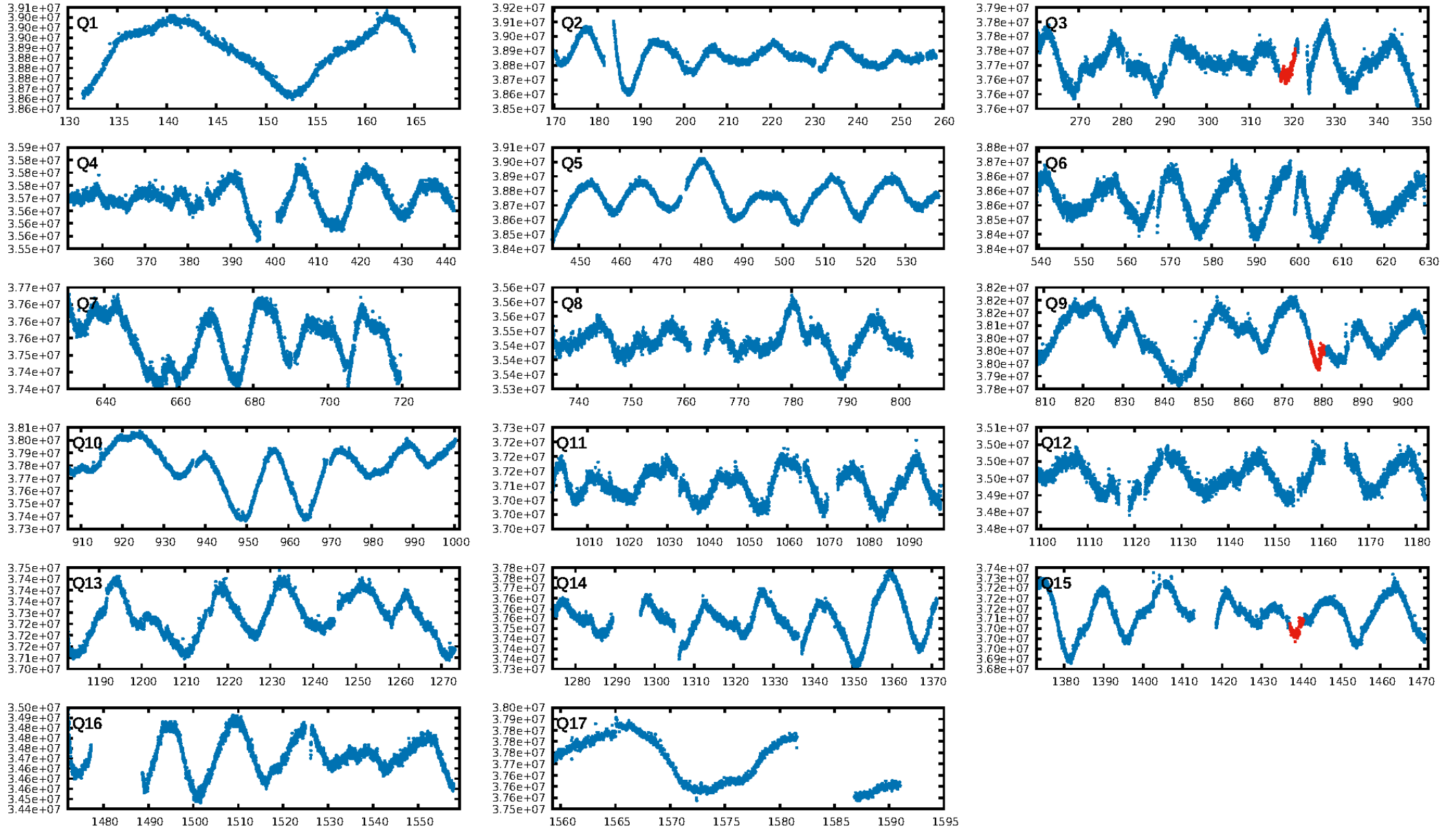
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [97.16 σ]
LongPeriod-sig: 100.0% [51.81 σ]
ModelChiSquare2-sig: 58.7%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.47e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -12.31
Centroid-sig: 2.8%
Centroid-so: 0.817 arcsec [2.17 σ]
OotOffset-rm: 1.546 arcsec [19.71 σ]
KicOffset-rm: 1.747 arcsec [22.29 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

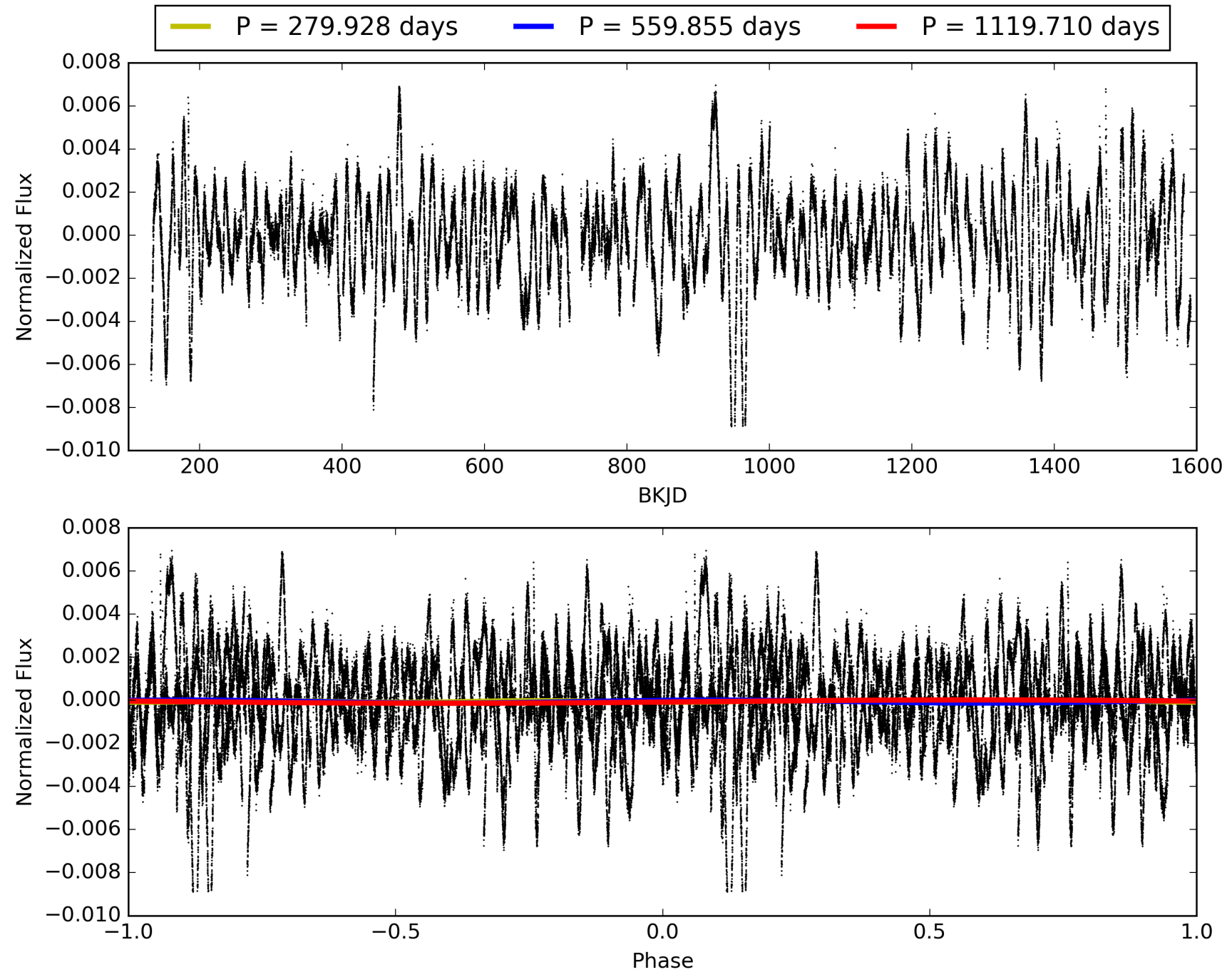
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:02:40 Z

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

TCE 007591386-04, PDC Light Curves

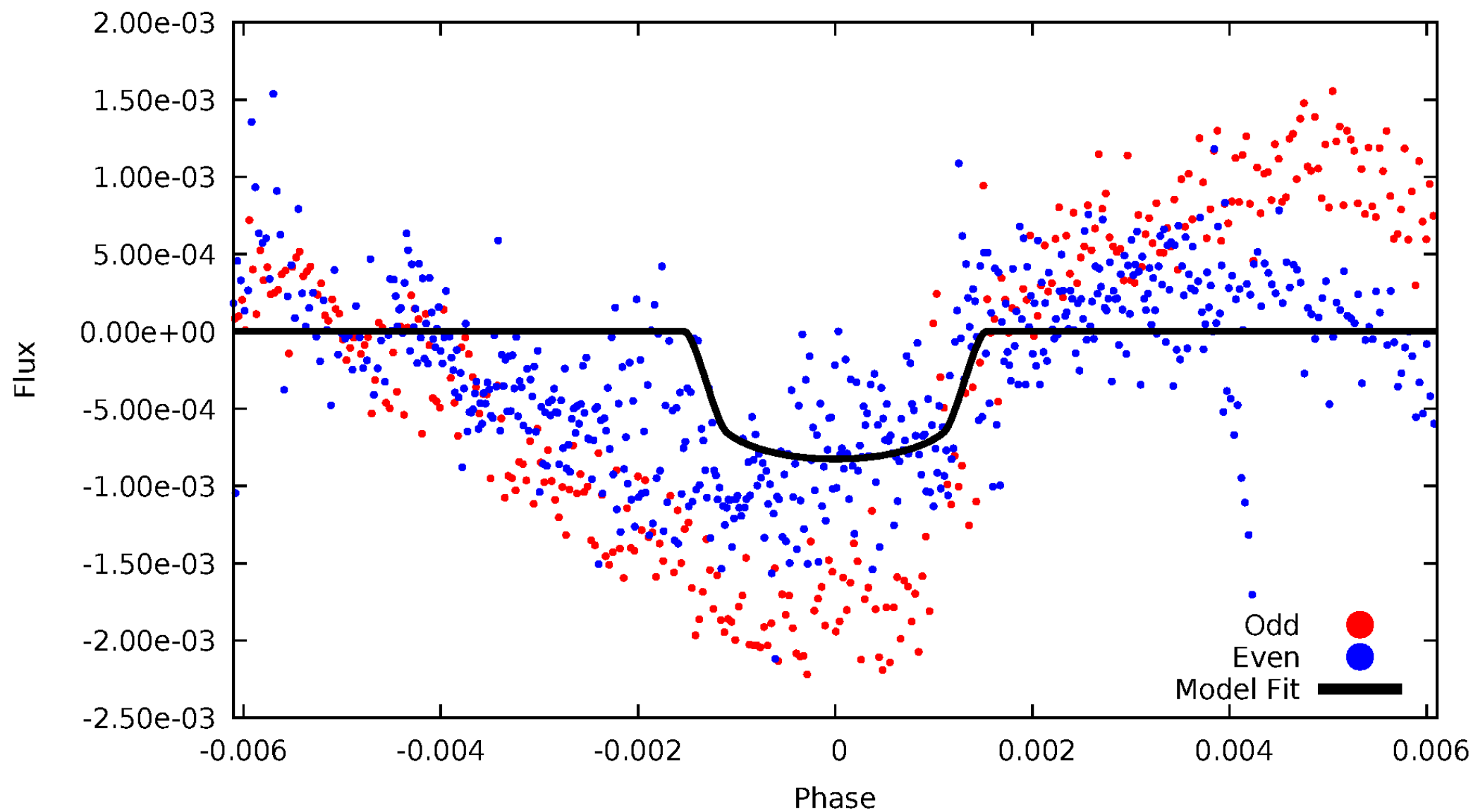


TCE 007591386-04



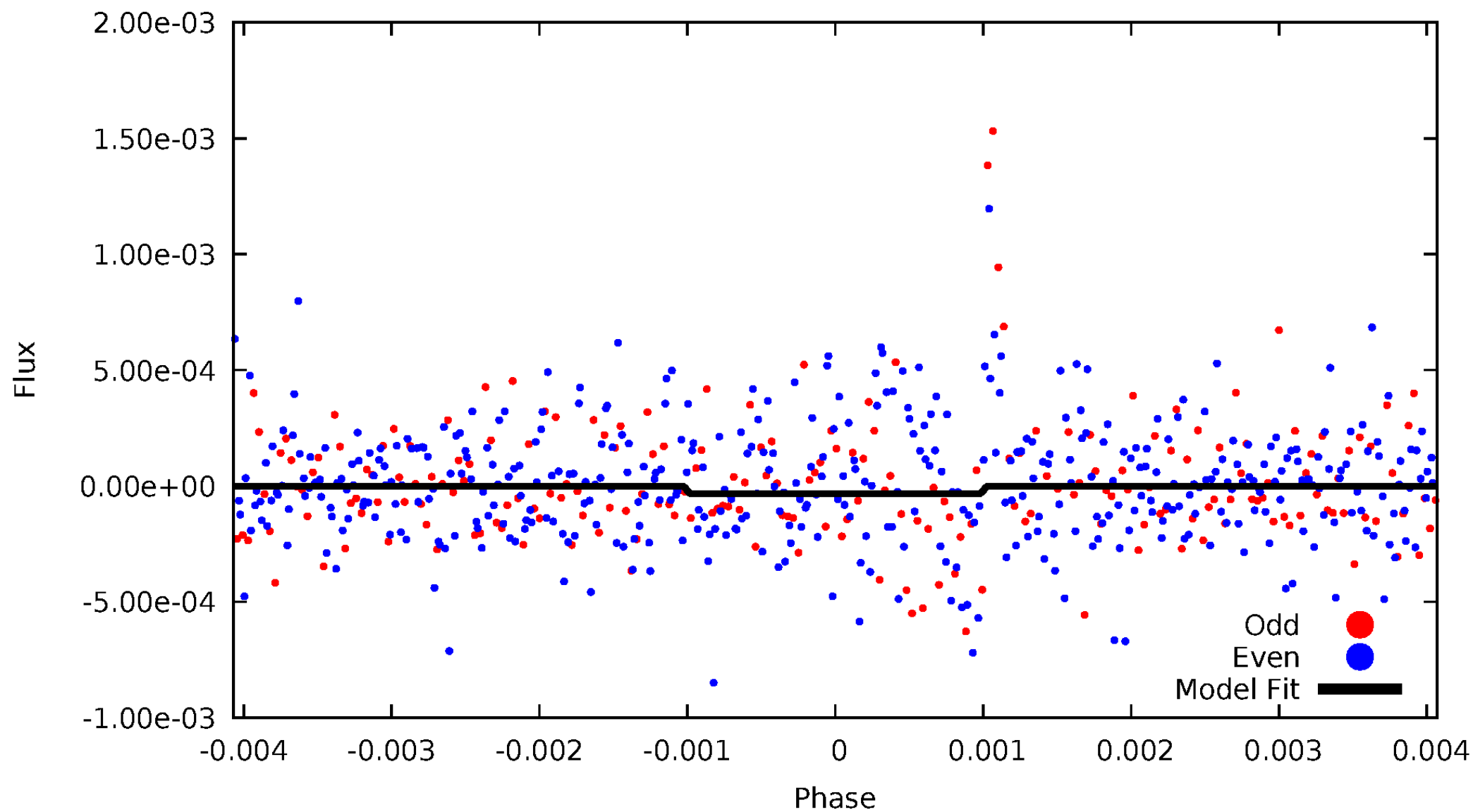
DV Odd/Even

TCE 007591386-04



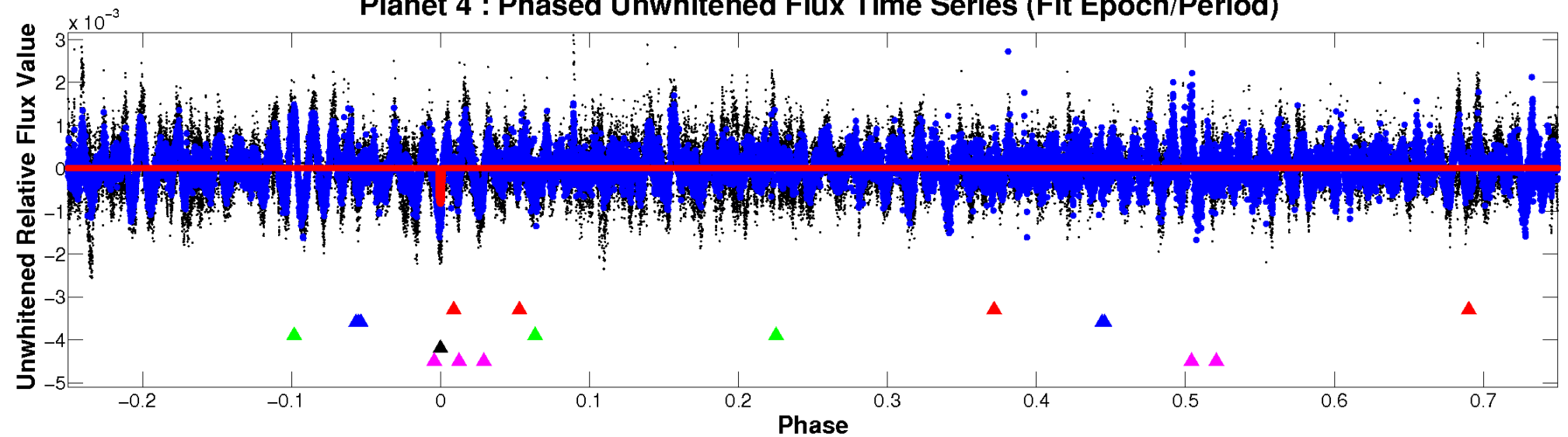
ALT Odd/Even

TCE 007591386-04

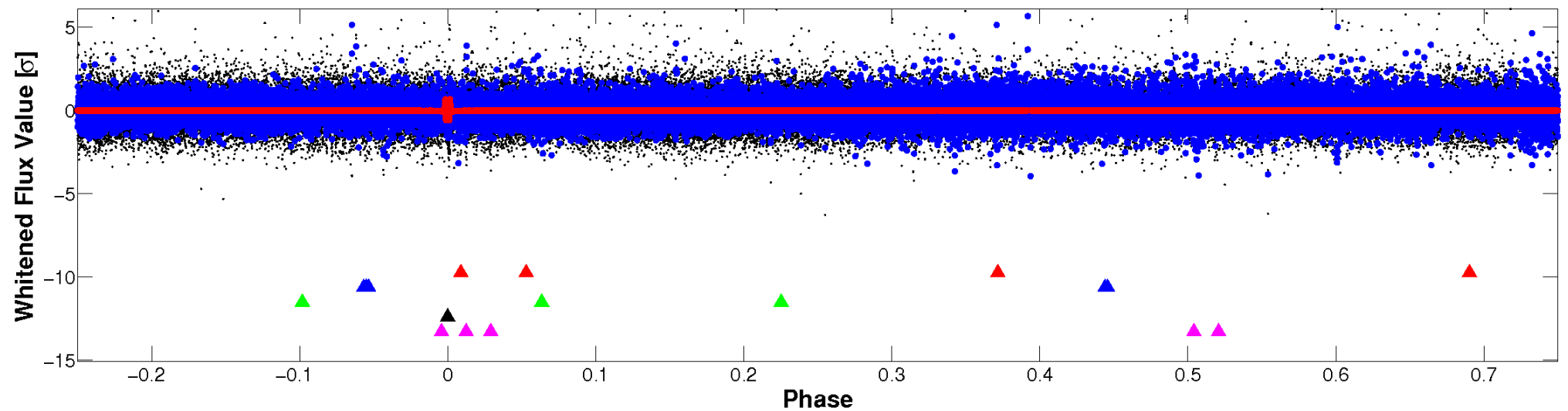


Non-Whitened Vs. Whitened Light Curve

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

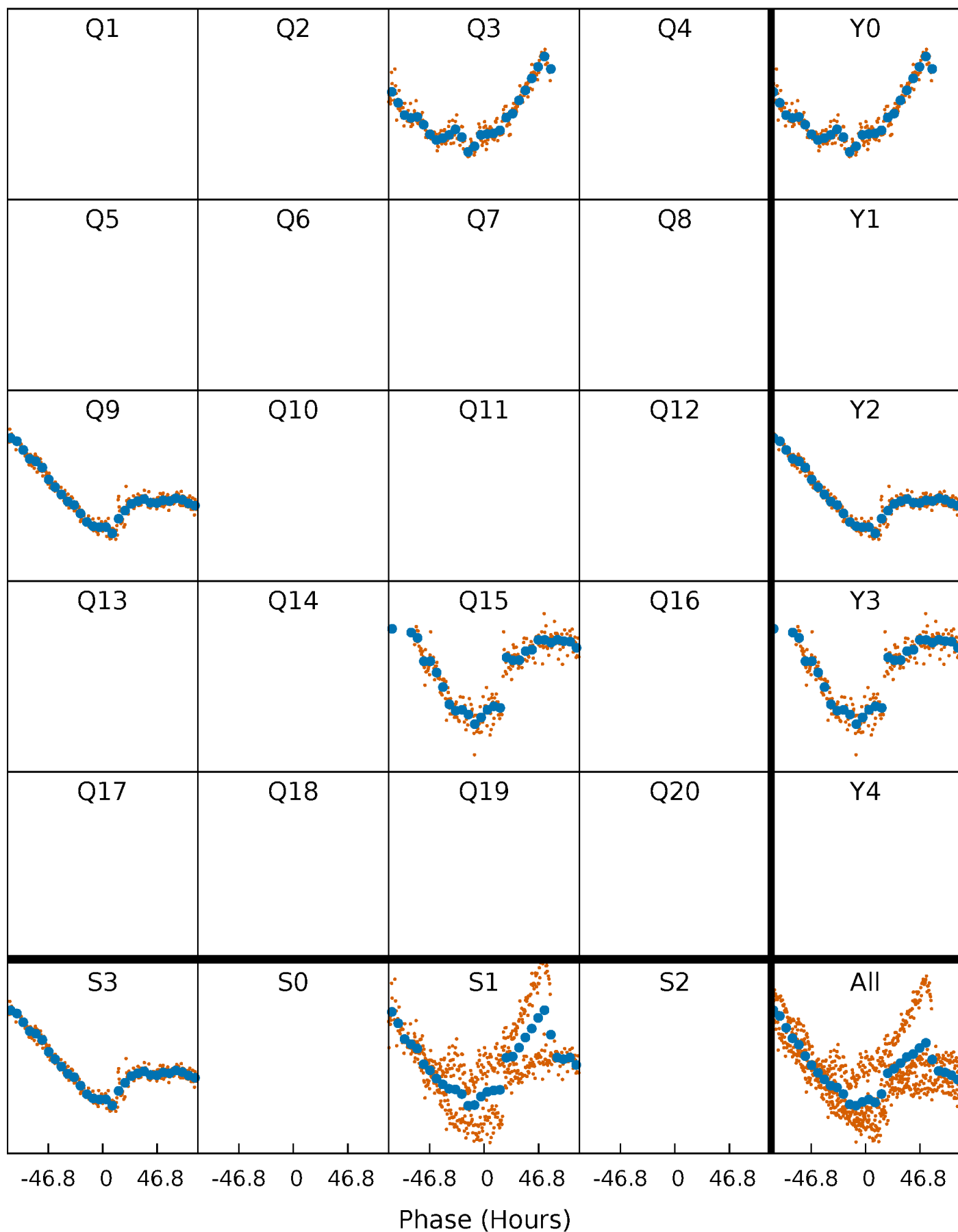


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



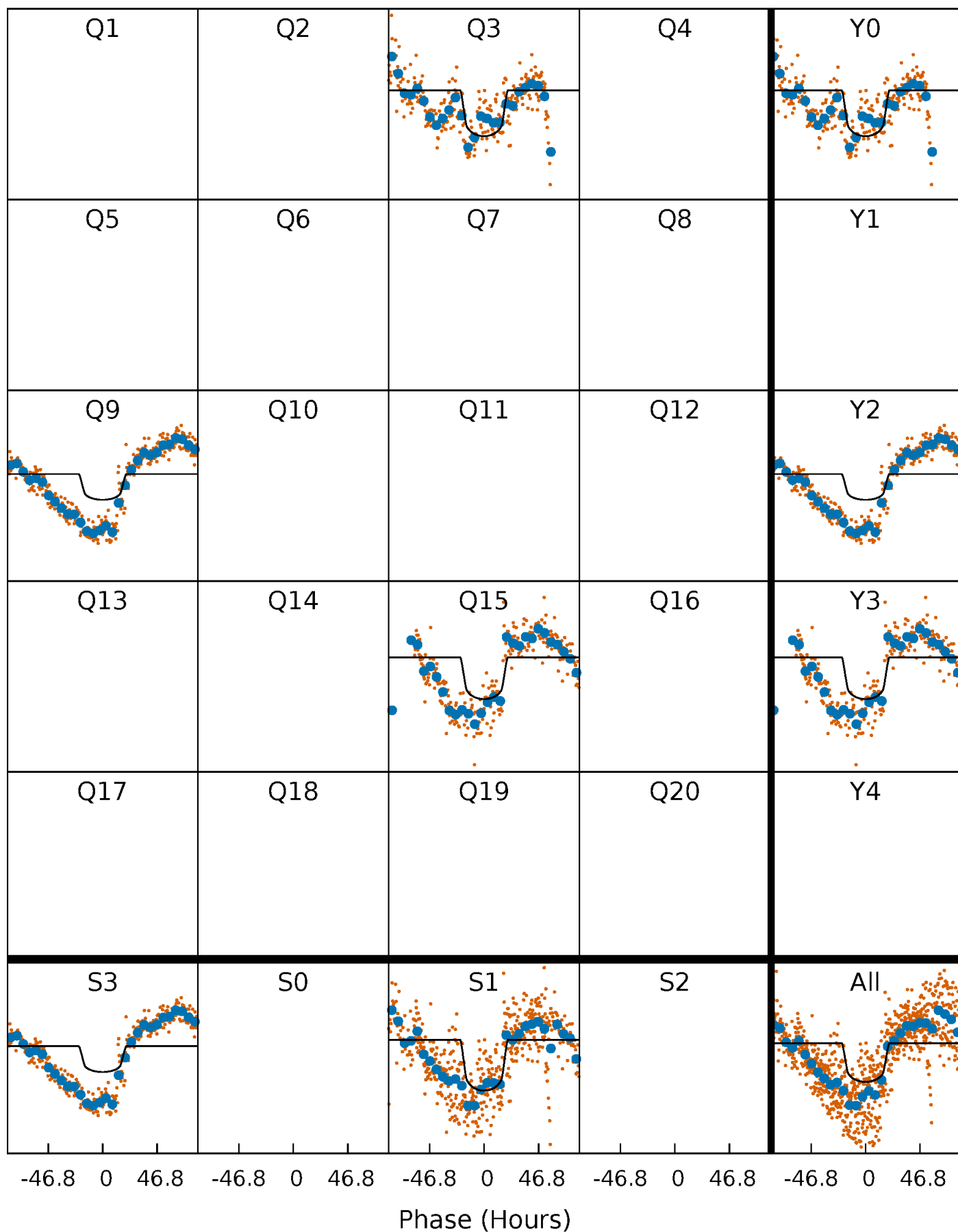
PDC Quarter-Phased Transit Curves

TCE 007591386-04 $P=559.855214$ Days $T_0=319.073792$ (BKJD)



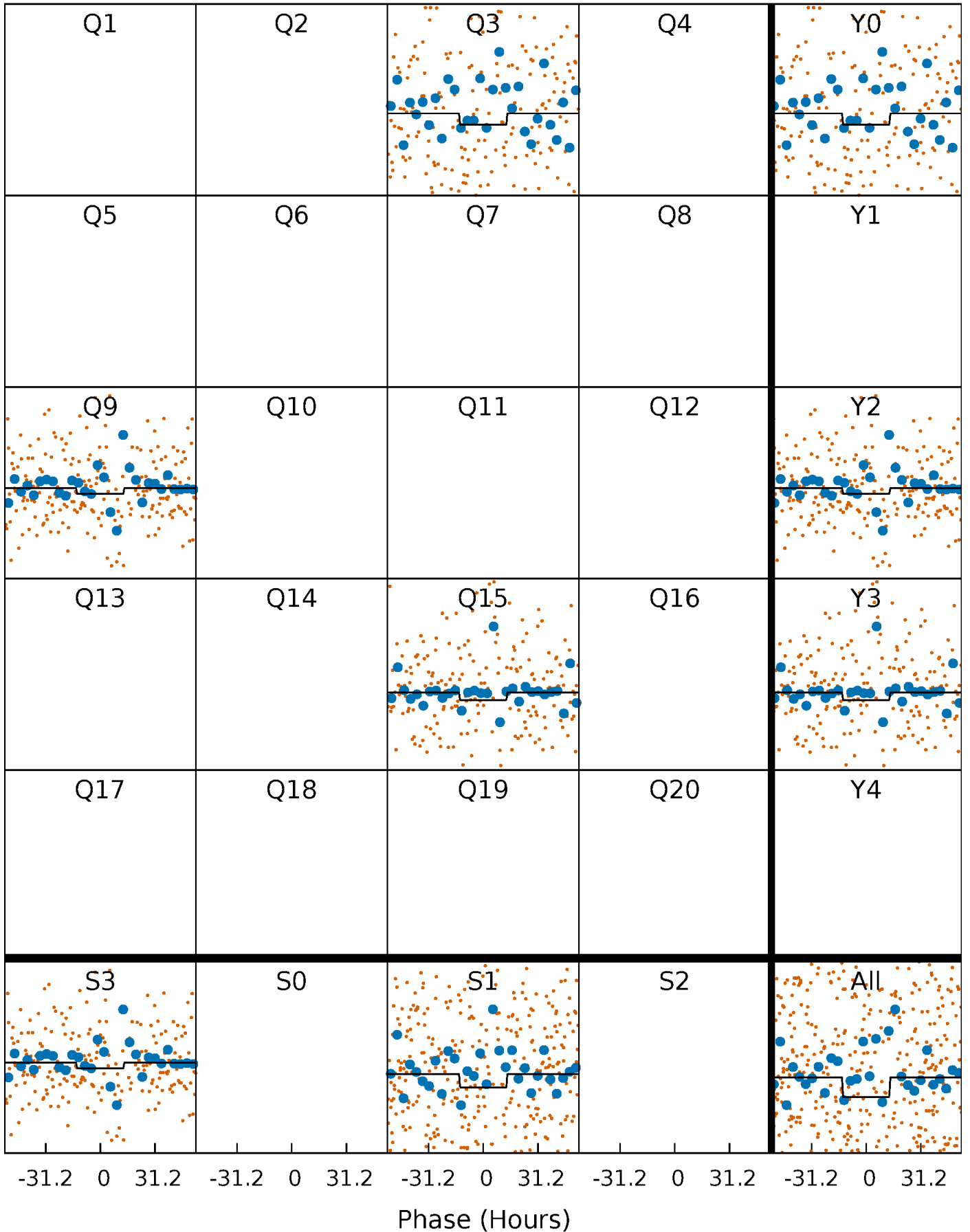
DV Quarter-Phased Transit Curves

TCE 007591386-04 $P=559.855214$ Days $T_0=319.073792$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

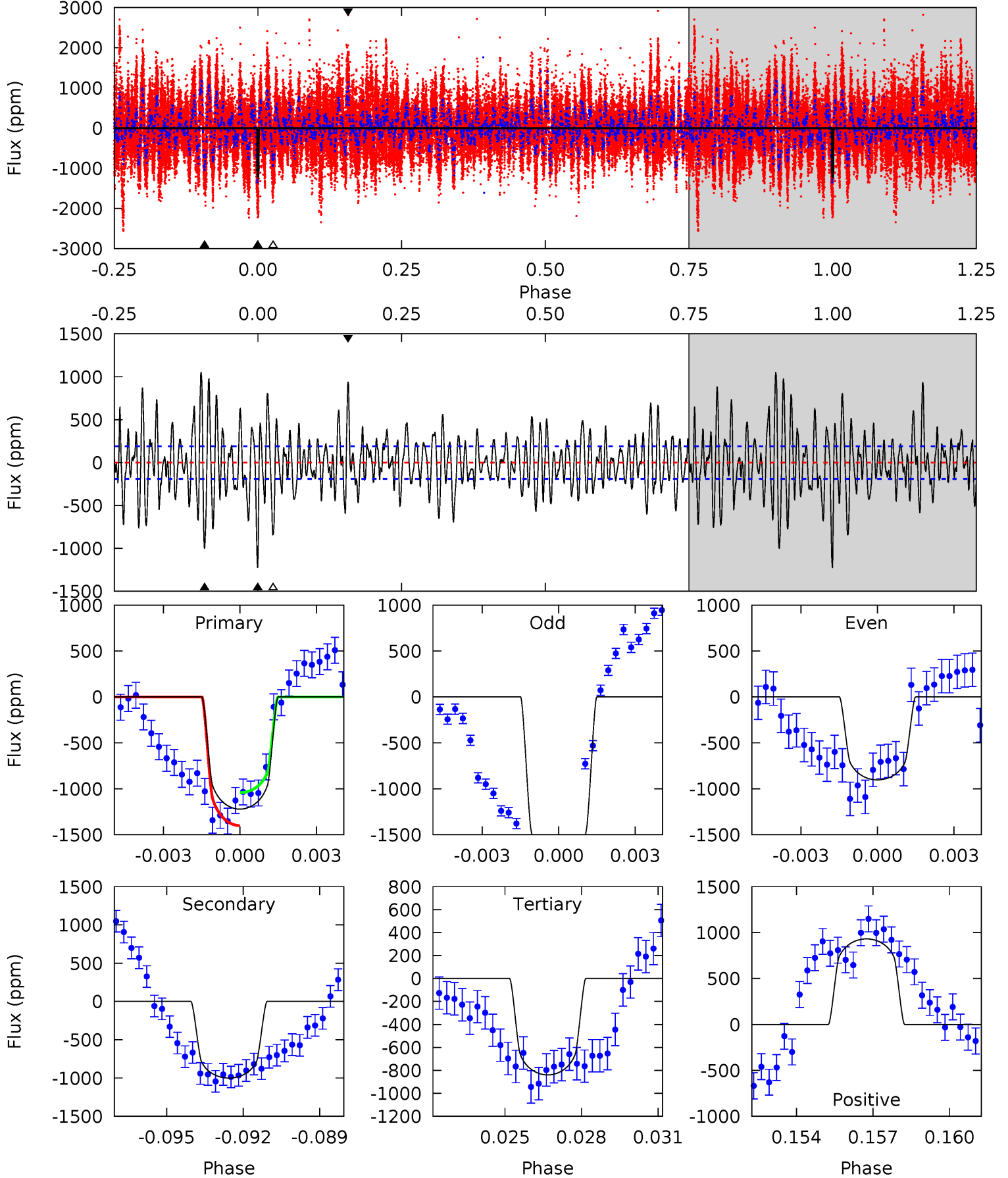
TCE 007591386-04 $P=559.995334$ Days $T_0=318.912841$ (BKJD)



DV Model-Shift Uniqueness Test

007591386-04, P = 559.855214 Days, E = 319.073792 Days

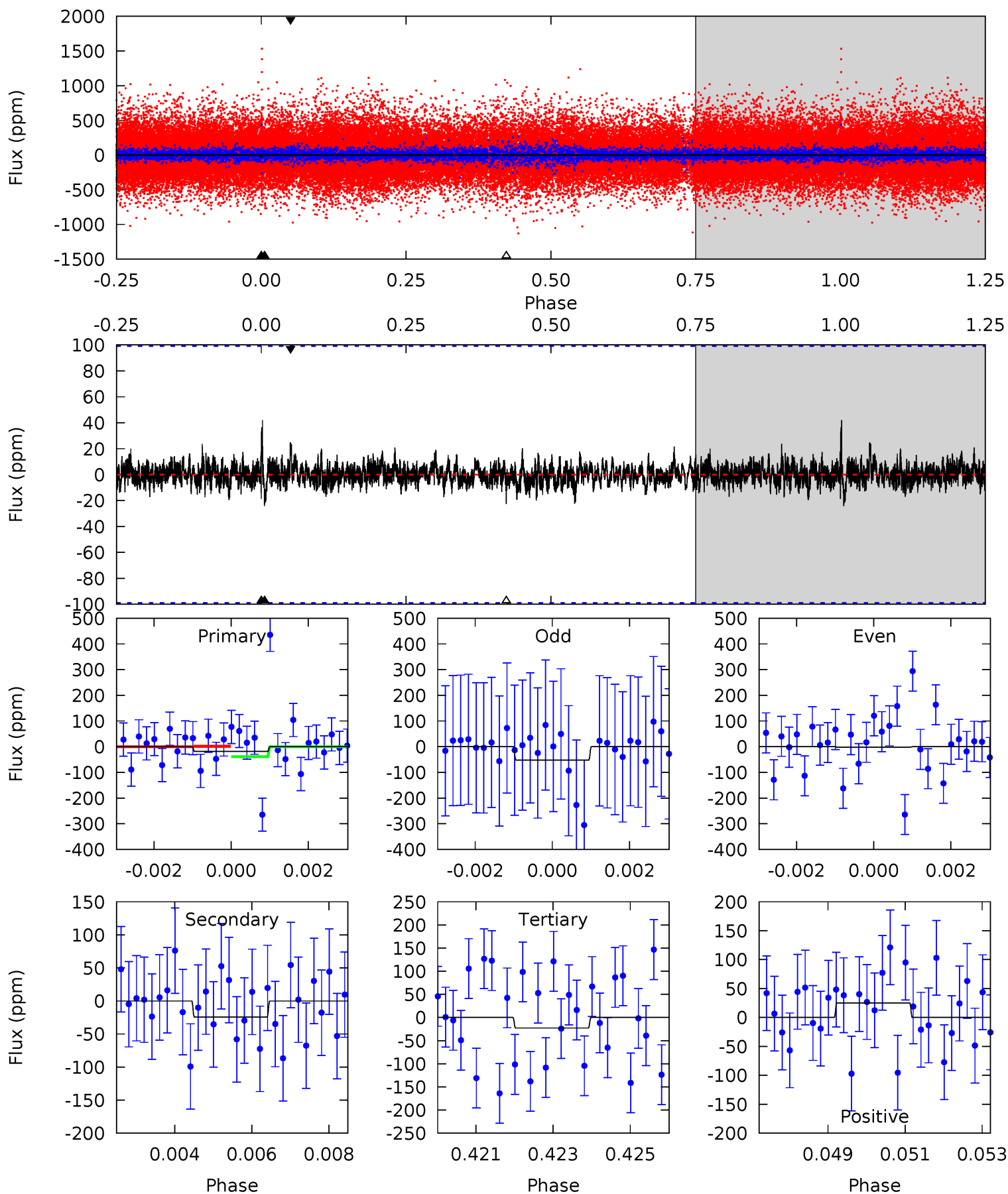
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	27.7	23.2	25.7	5.25	2.96	8.34	10.6	8.03	4.46	1.93	12.8	1.12	0.46	4.95



Alt Model-Shift Uniqueness Test

007591386-04, P = 559.995334 Days, E = 318.912841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.00	1.30	1.22	1.34	5.32	3.08	0.31	-0.22	-0.34	0.08	-0.04	1.28	0.60	0.63	1.00



Stellar Parameters For KIC 007591386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5522^{+163}_{-147}	$4.608^{+0.040}_{-0.112}$	$-0.500^{+0.300}_{-0.300}$	$0.728^{+0.140}_{-0.060}$	$0.783^{+0.091}_{-0.074}$	$2.859^{+0.466}_{-1.043}$
	+3%/-3%	+1%/-2%	+60%/-60%	+19%/-8%	+12%/-9%	+16%/-36%
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 007591386-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1001 ± 36	$2.52^{+0.30}_{-0.26}$	266^{+12}_{-10}	5567^{+299}_{-267}	128446^{+31087}_{-24858}
Alt.	-24 ± 19	$0.47^{+0.23}_{-0.20}$	266^{+13}_{-10}	4990^{+1796}_{-1295}	$74803^{+201540}_{-59319}$

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 $A_{obs} \gg 1.0$

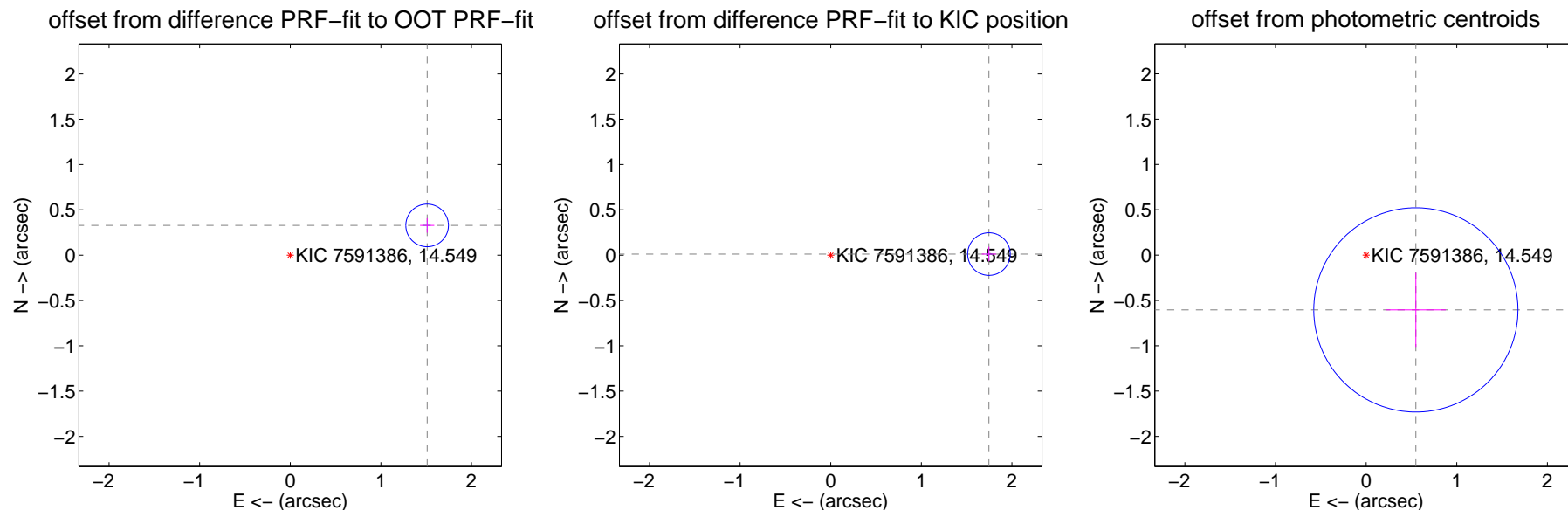
DV Centroid Data

Supplemental centroid analysis for 007591386-04. Kepler magnitude: 14.55. Transit SNR 6.92

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.546 ± 0.078	19.71	-1.511 ± 0.078	0.328 ± 0.080
PRF-fit source offset from KIC position	1.747 ± 0.078	22.29	-1.747 ± 0.078	0.012 ± 0.080
photometric centroid source offset	0.82 ± 0.38	2.17	-0.55 ± 0.33	-0.60 ± 0.41



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.

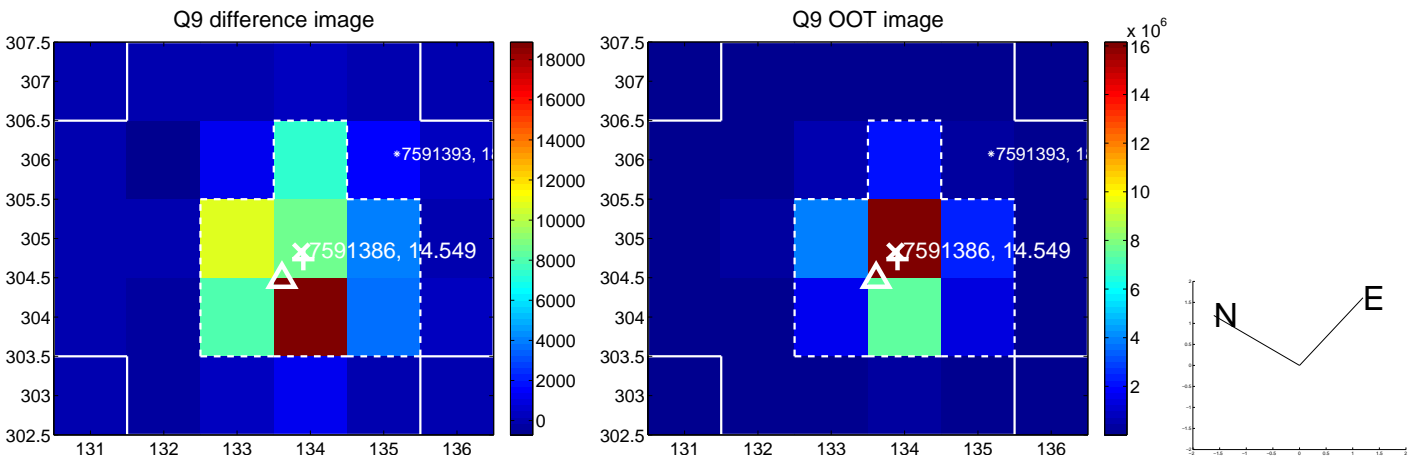
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



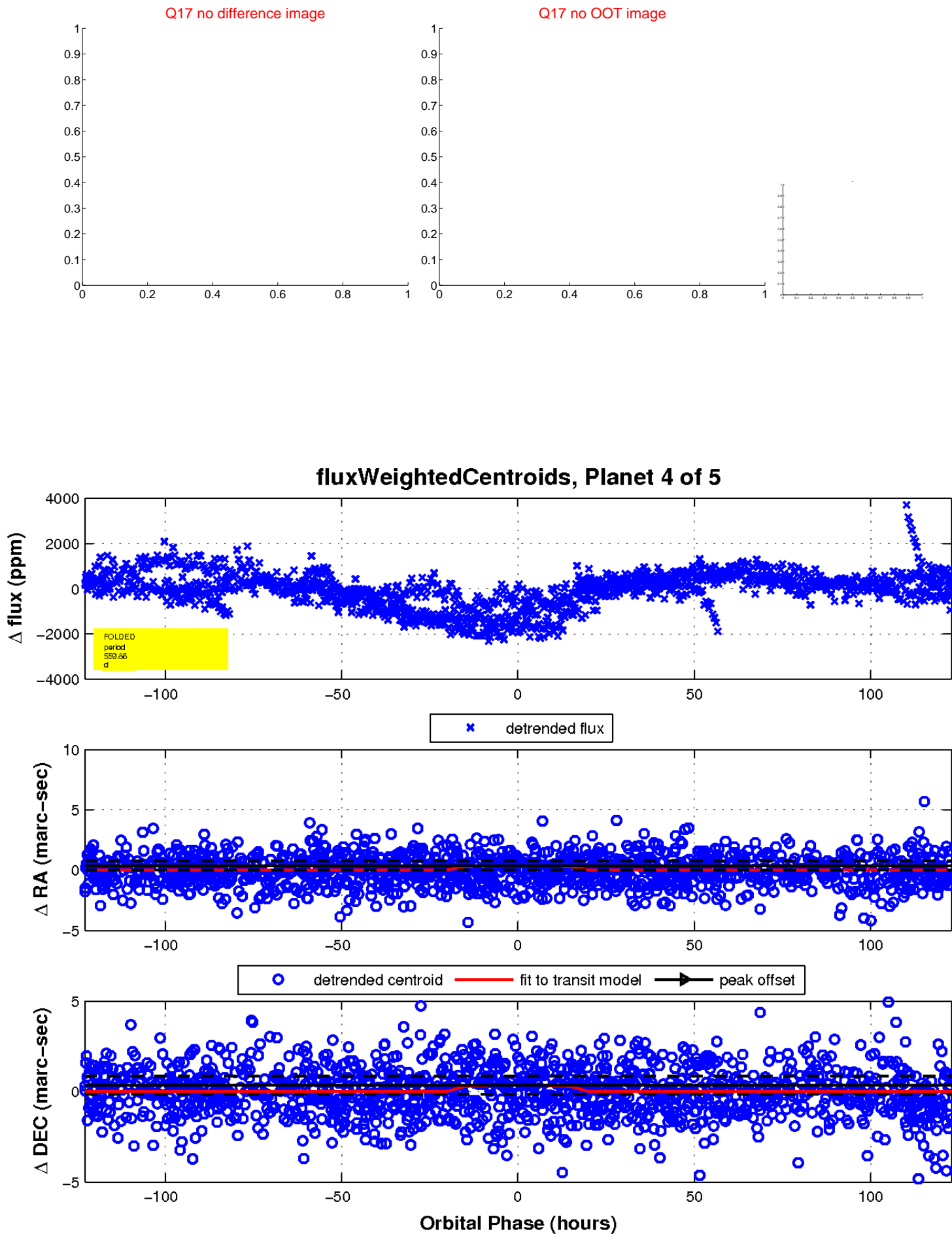
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

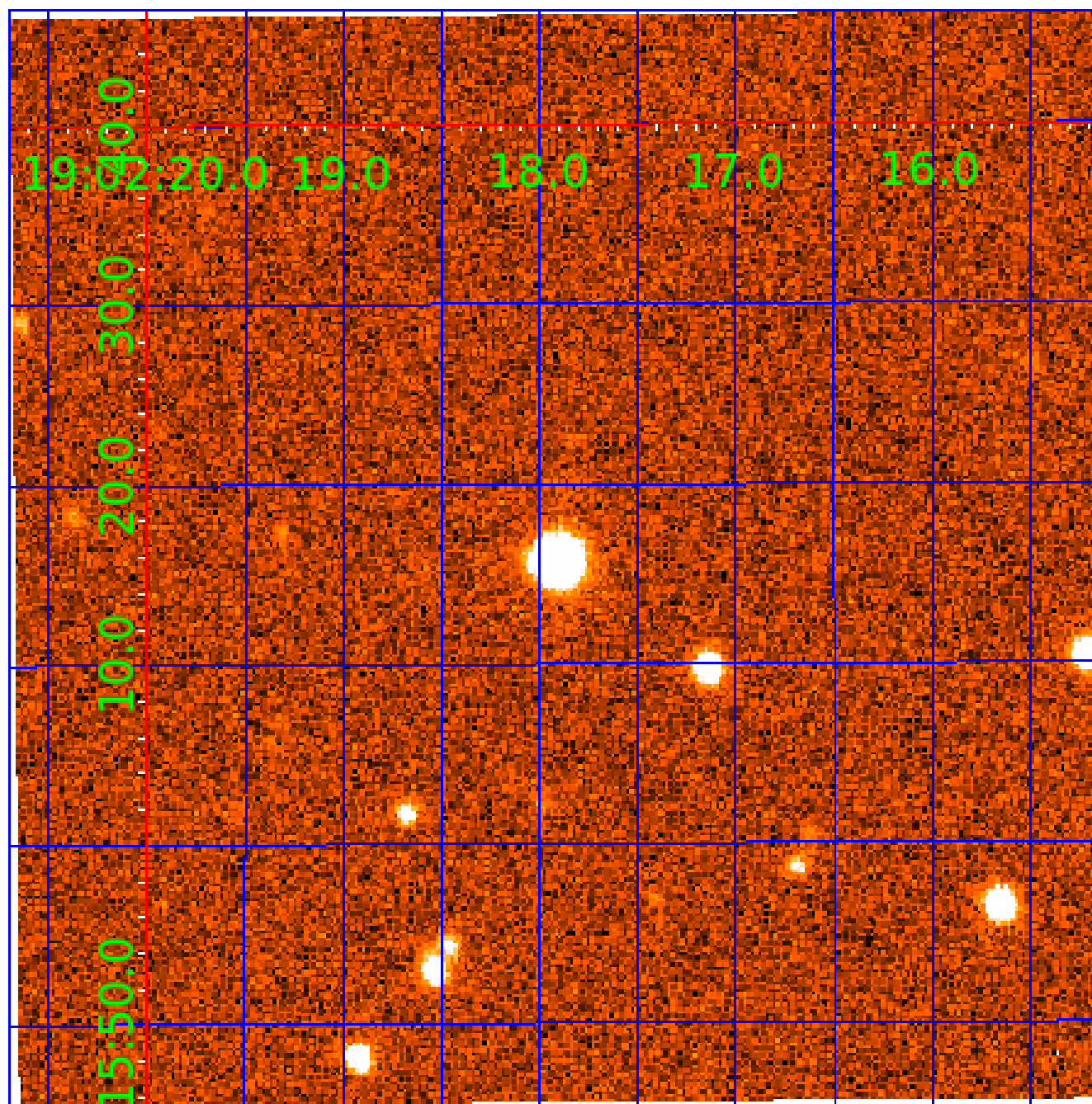


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007591386

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})
007591386-01	OBS	No	381.462772	324.067306	921.2	16.174	10.8	10.6	0.73	5522	4.33	0.49
007591386-02	OBS	No	279.454554	289.193334	546.0	4.768	9.4	7.6	0.73	5522	1.89	0.74
007591386-03	OBS	No	650.405765	264.096770	557.0	8.901	10.3	6.4	0.73	5522	1.86	0.24
007591386-04	OBS	No	559.855214	319.073792	825.9	40.989	8.5	6.9	0.73	5522	2.47	0.29
007591386-05	OBS	No	284.592336	316.717684	511.8	6.367	10.5	7.0	0.73	5522	1.78	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007591386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS
007591386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007591386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007591386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

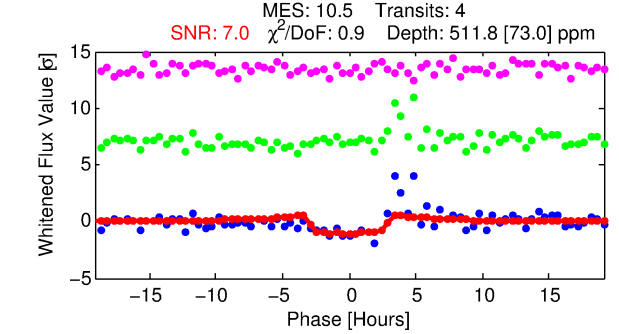
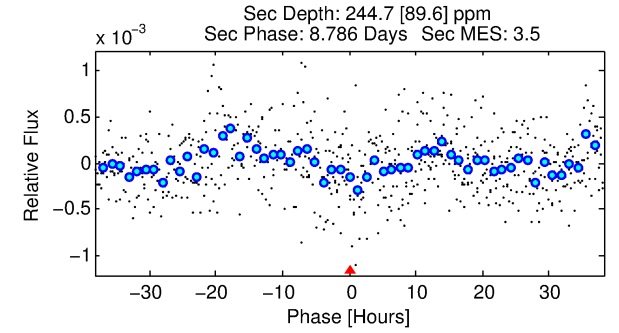
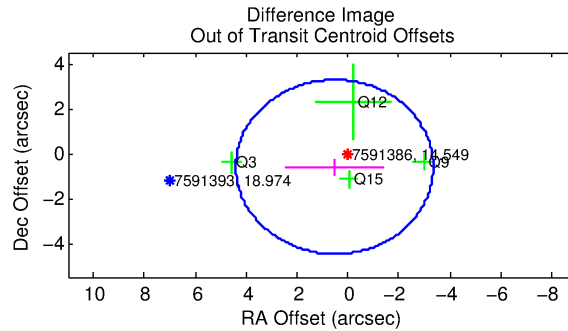
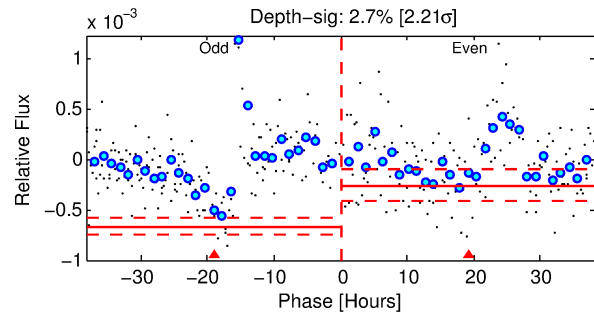
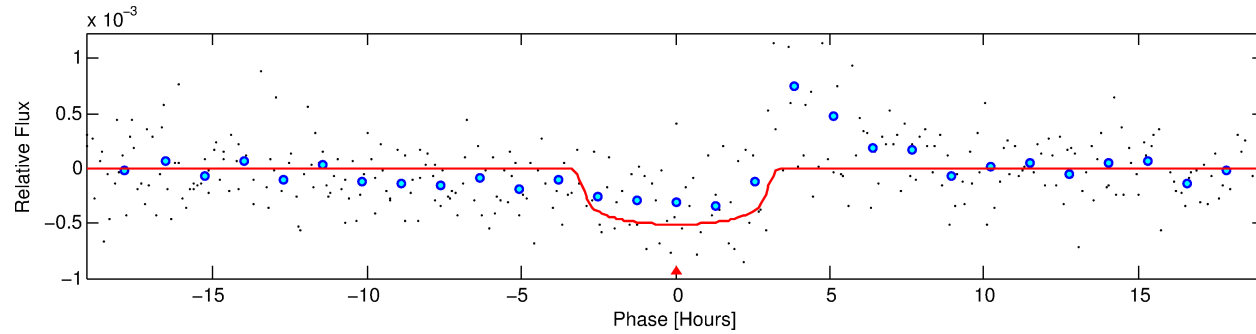
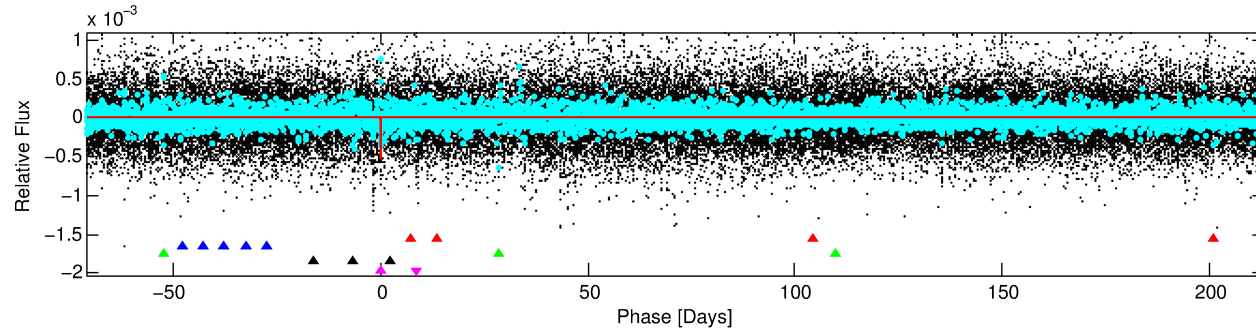
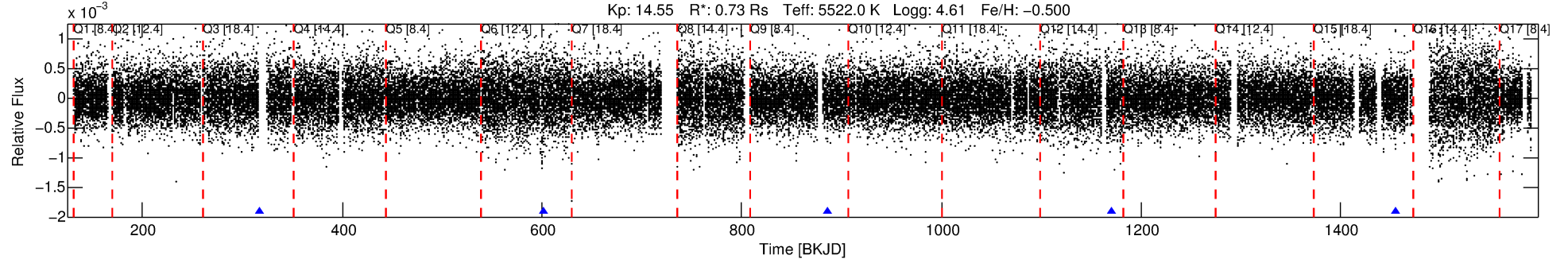
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007591386-05

No Significant Match Found

DV One-Page Summary

KIC: 7591386 Candidate: 5 of 5 Period: 284.592 d



DV Fit Results:

Period = 284.59234 [0.00655] d
Epoch = 316.7177 [0.0188] BKJD
Rp/R* = 0.0225 [0.0178]
a/R* = 239.57 [833.87]
b = 0.74 [2.12]
Seff = 0.72 [0.18]
Teff = 235 [14] K
Rp = 1.78 [1.45] Re
a = 0.7809 [0.1205] AU
Ag = 25798.32 [42279.38] [0.61 σ]
Teffp = 4609 [1877] K [2.33 σ]

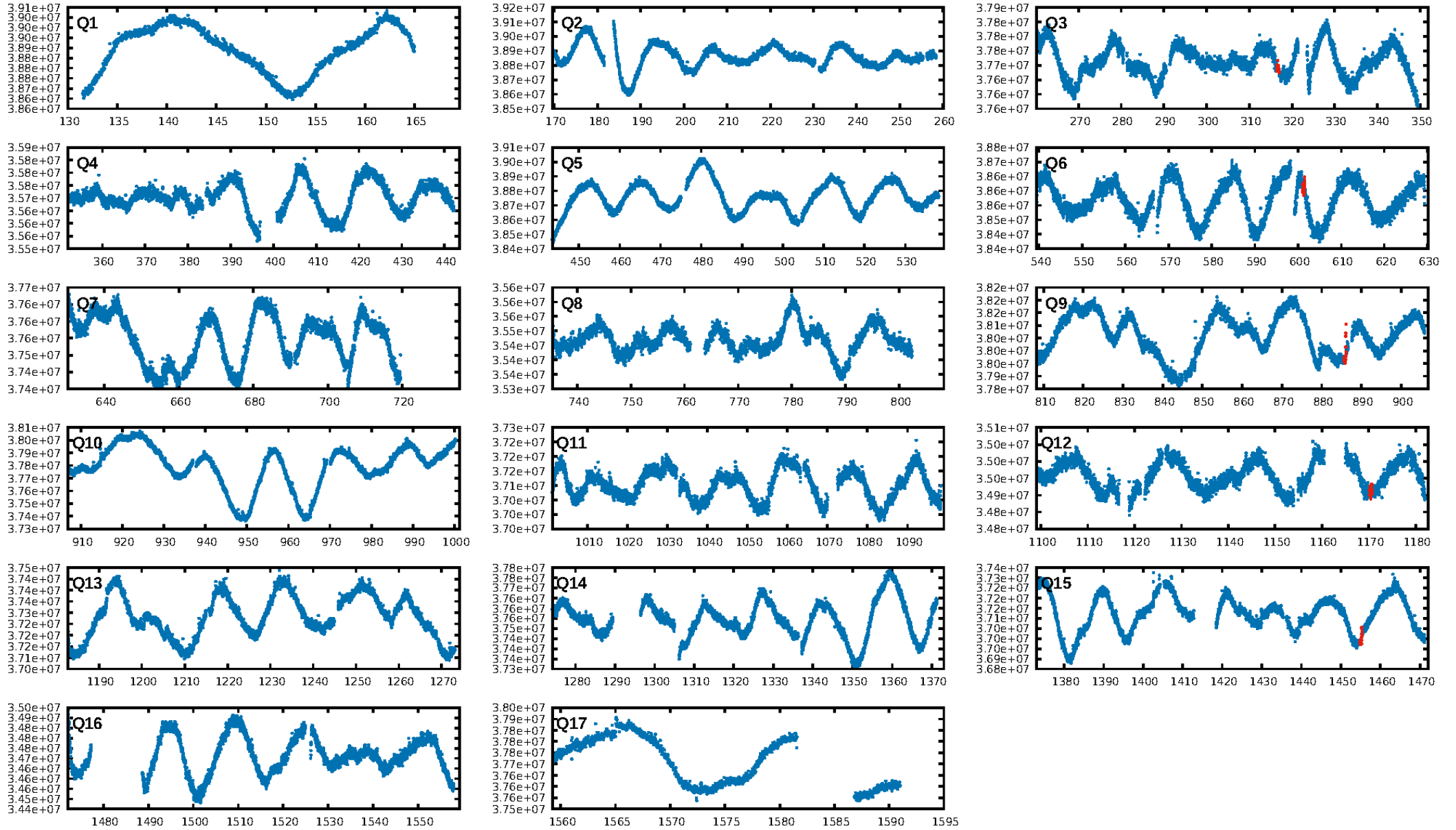
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.50 σ]
LongPeriod-sig: 100.0% [133.75 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 96.4%
Bootstrap-pfa: 3.46e-16
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6421
Centroid-sig: 65.5%
Centroid-so: 0.383 arcsec [0.36 σ]
OotOffset-rm: 0.795 arcsec [0.62 σ]
KicOffset-rm: 0.918 arcsec [1.05 σ]
OotOffset-st: 0/2/1/1 [4]
KicOffset-st: 0/2/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [5/5]

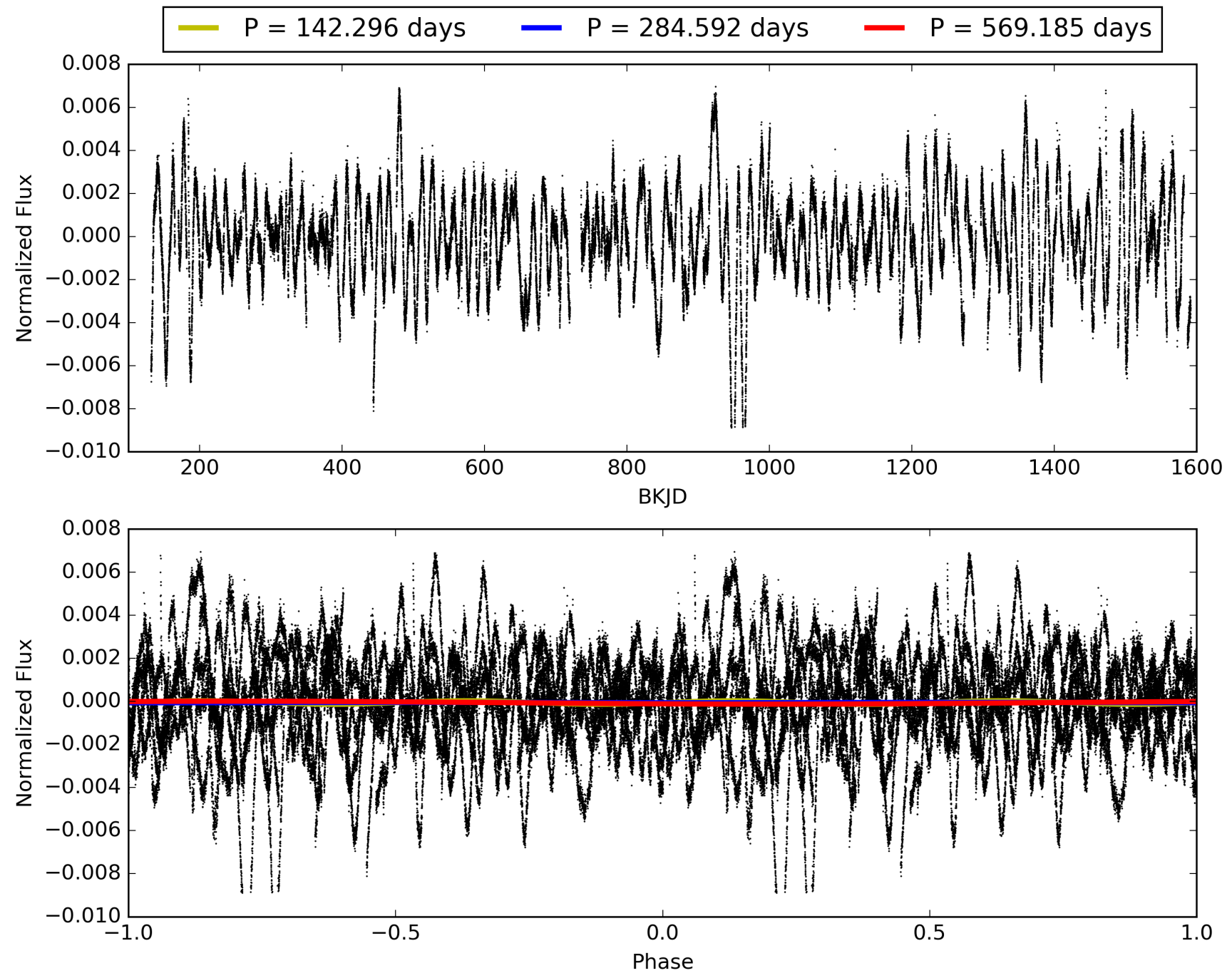
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:02:50 Z

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

TCE 007591386-05, PDC Light Curves

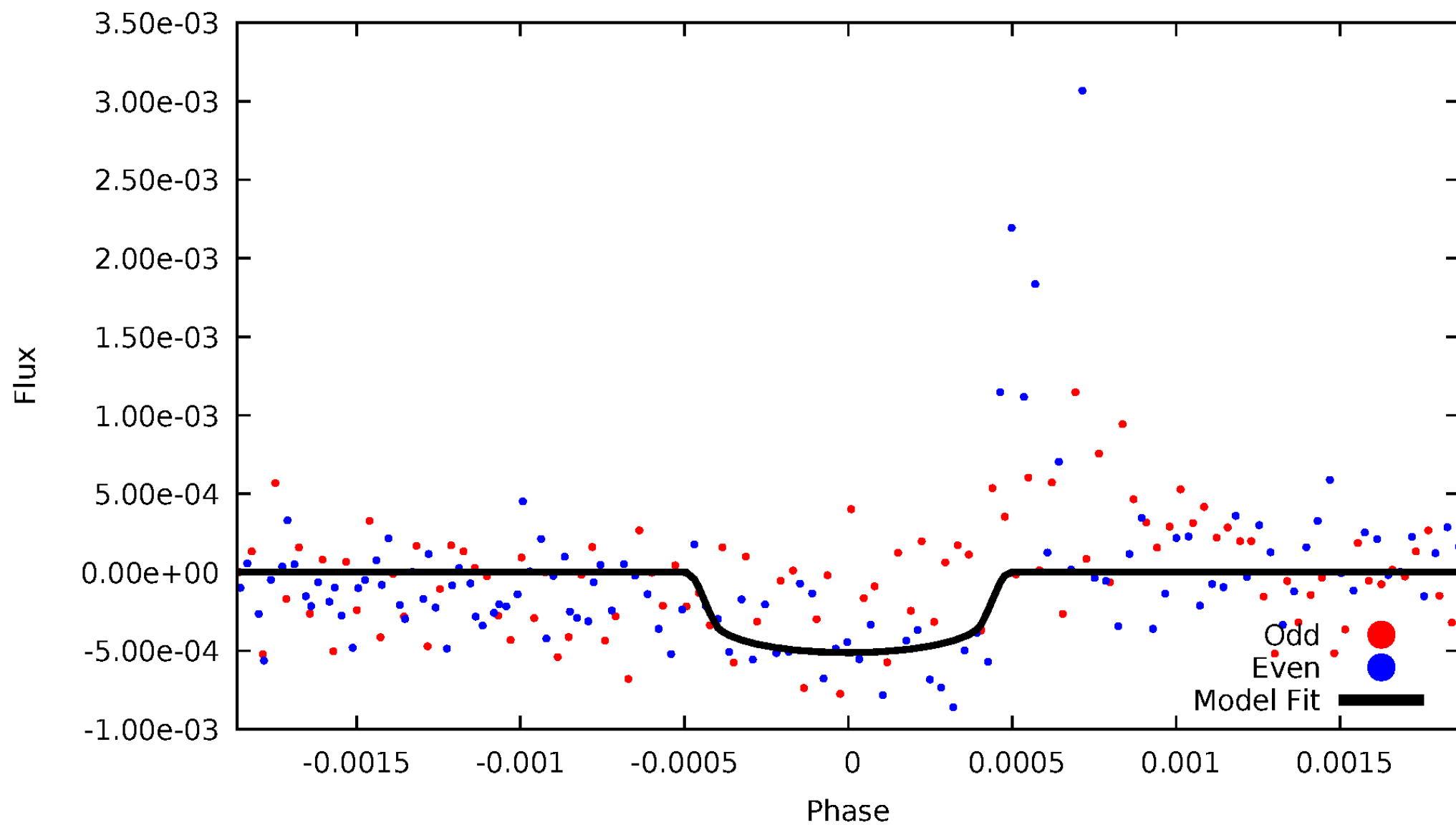


TCE 007591386-05



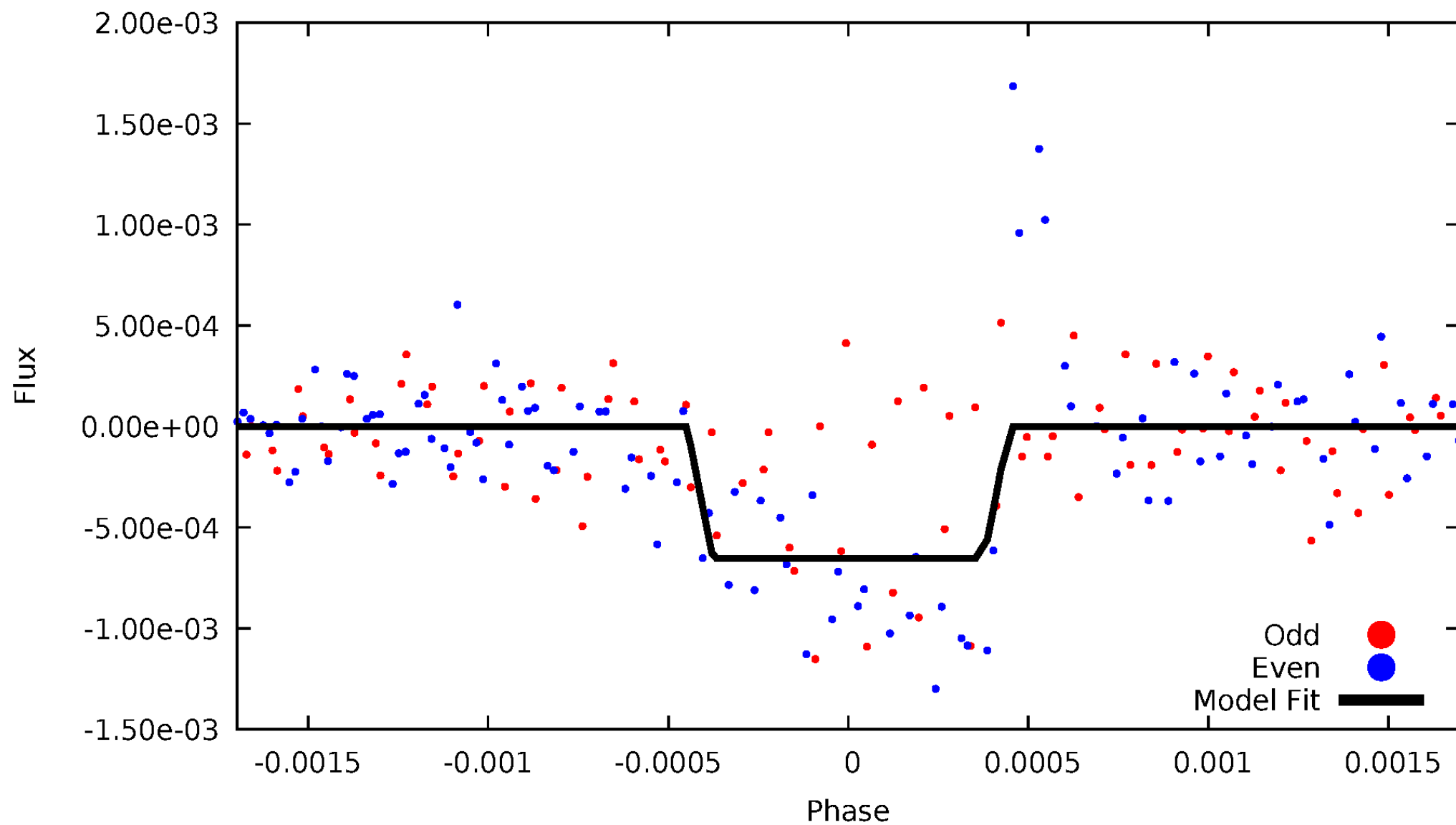
DV Odd/Even

TCE 007591386-05



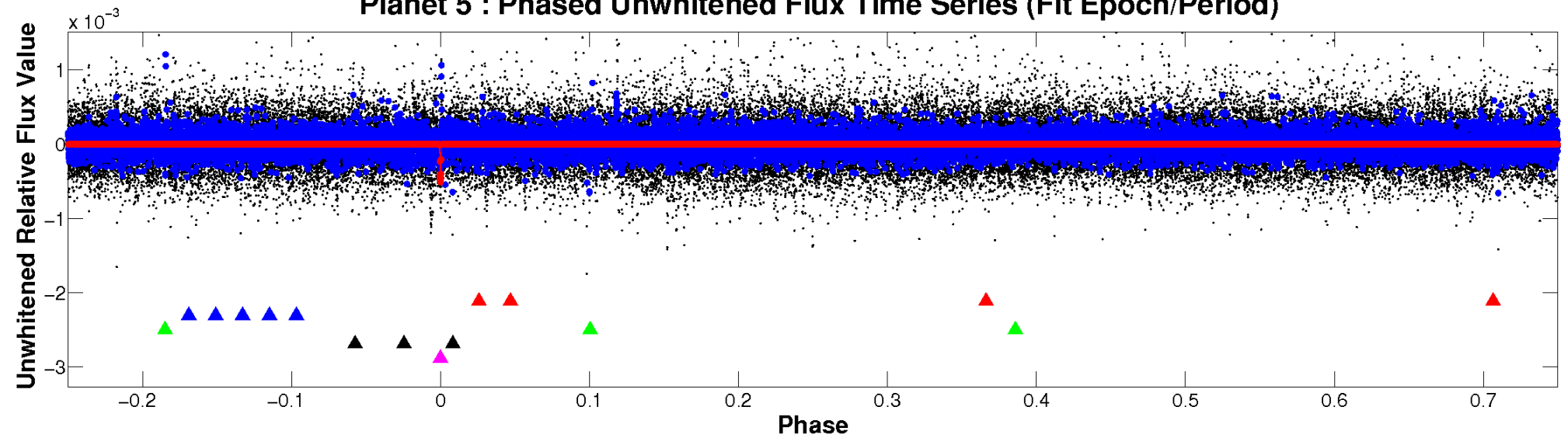
ALT Odd/Even

TCE 007591386-05

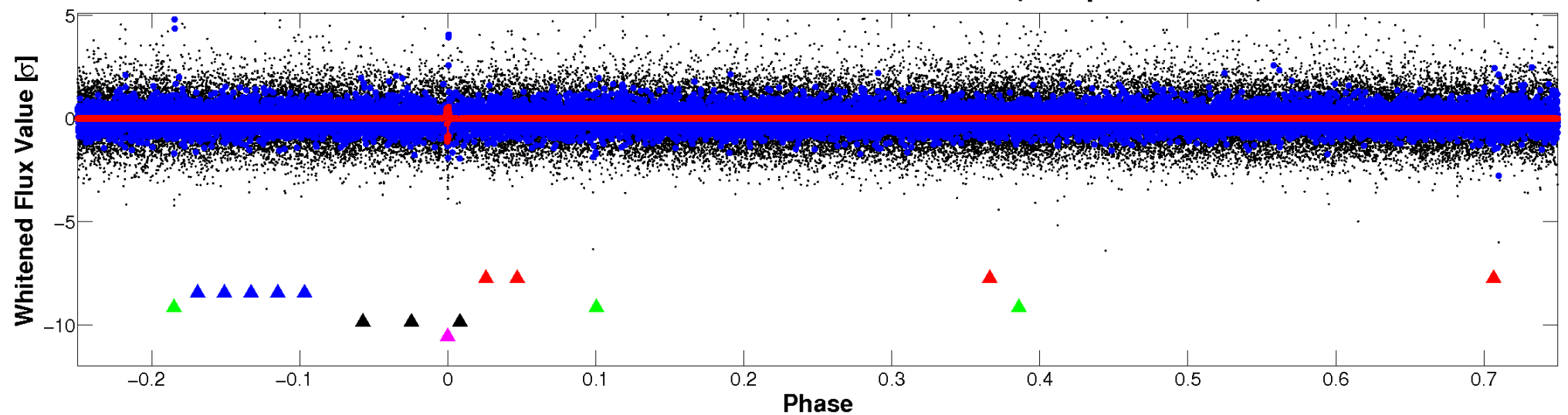


Non-Whitened Vs. Whitened Light Curve

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

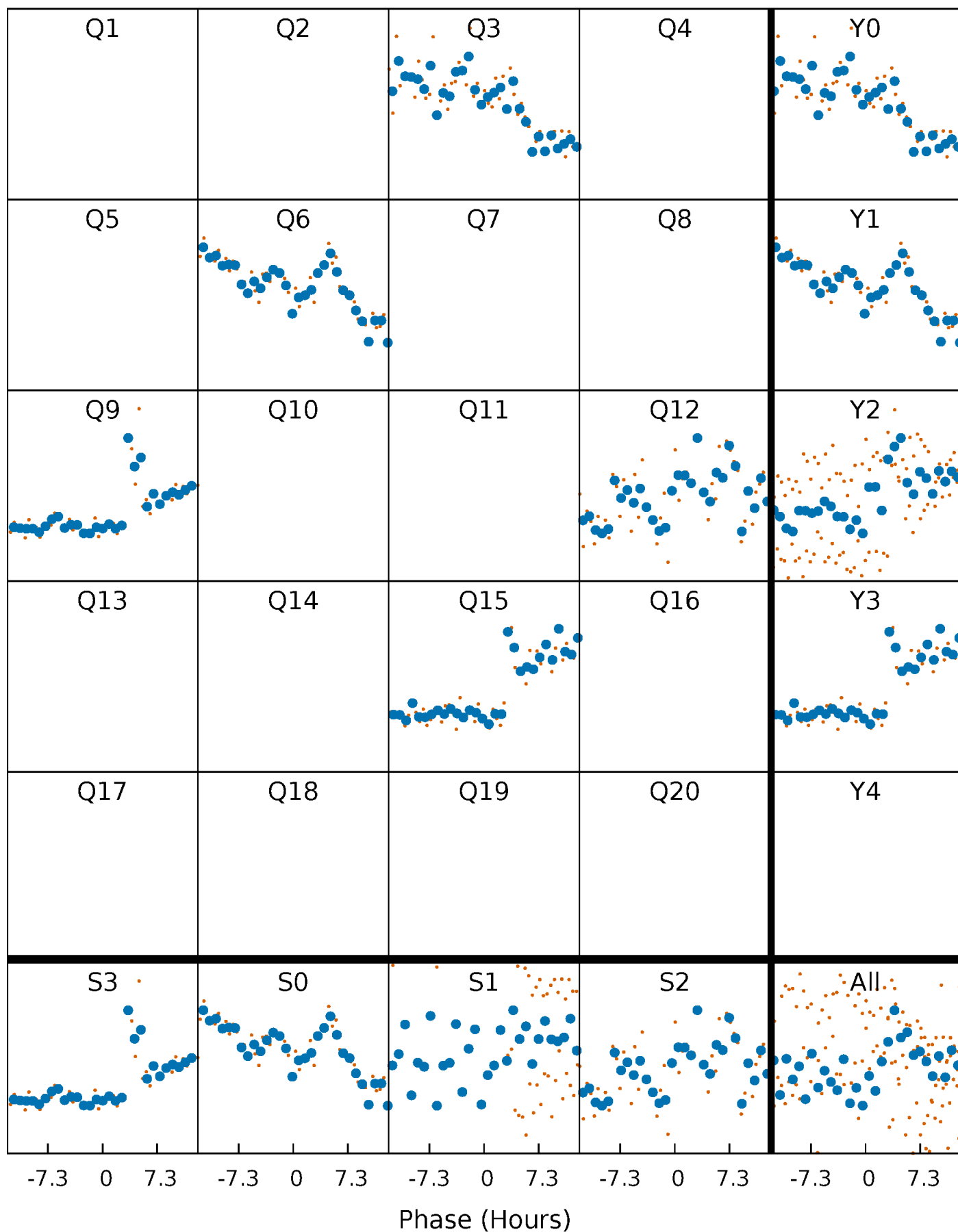


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



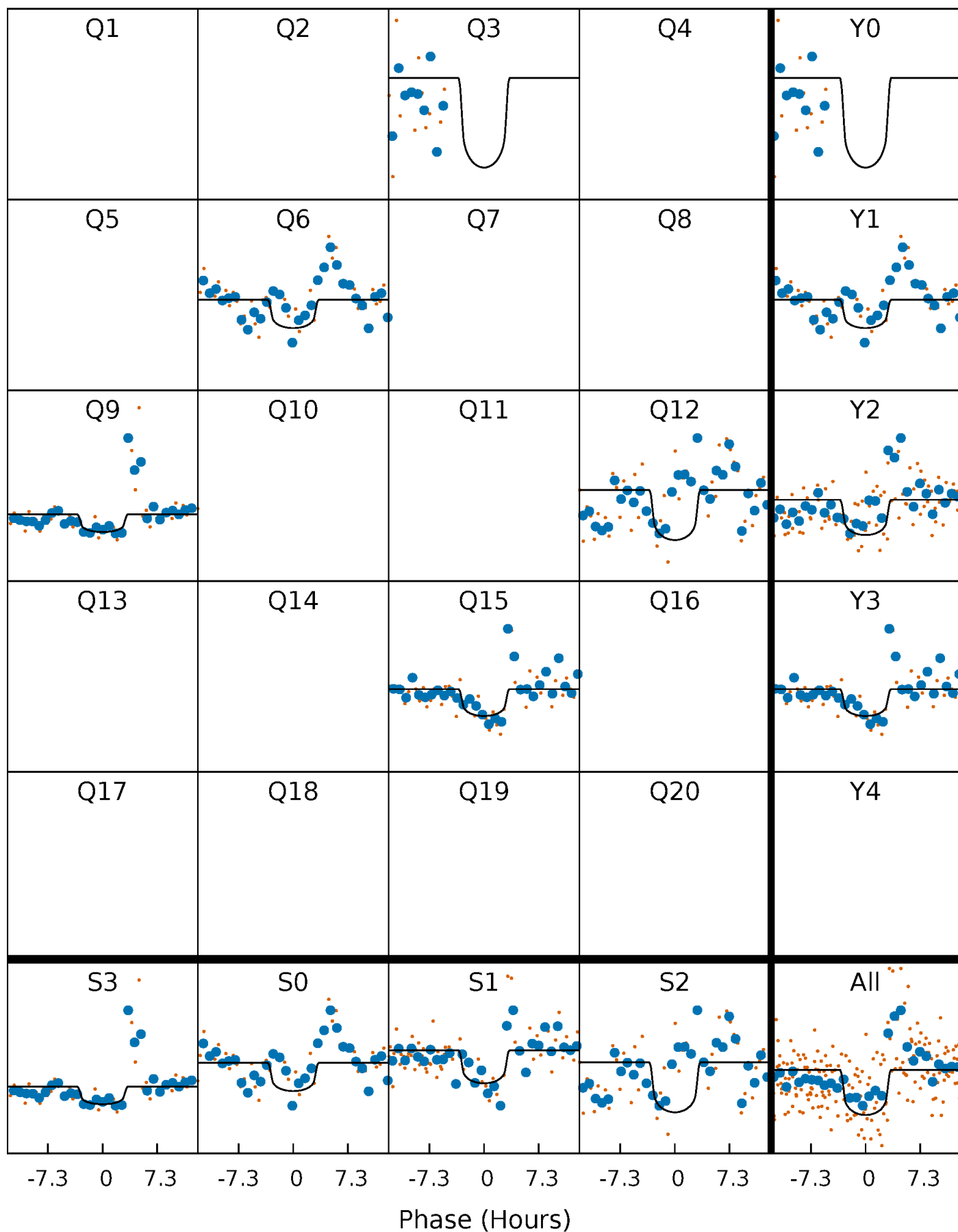
PDC Quarter-Phased Transit Curves

TCE 007591386-05 $P=284.592336$ Days $T_0=316.717684$ (BKJD)



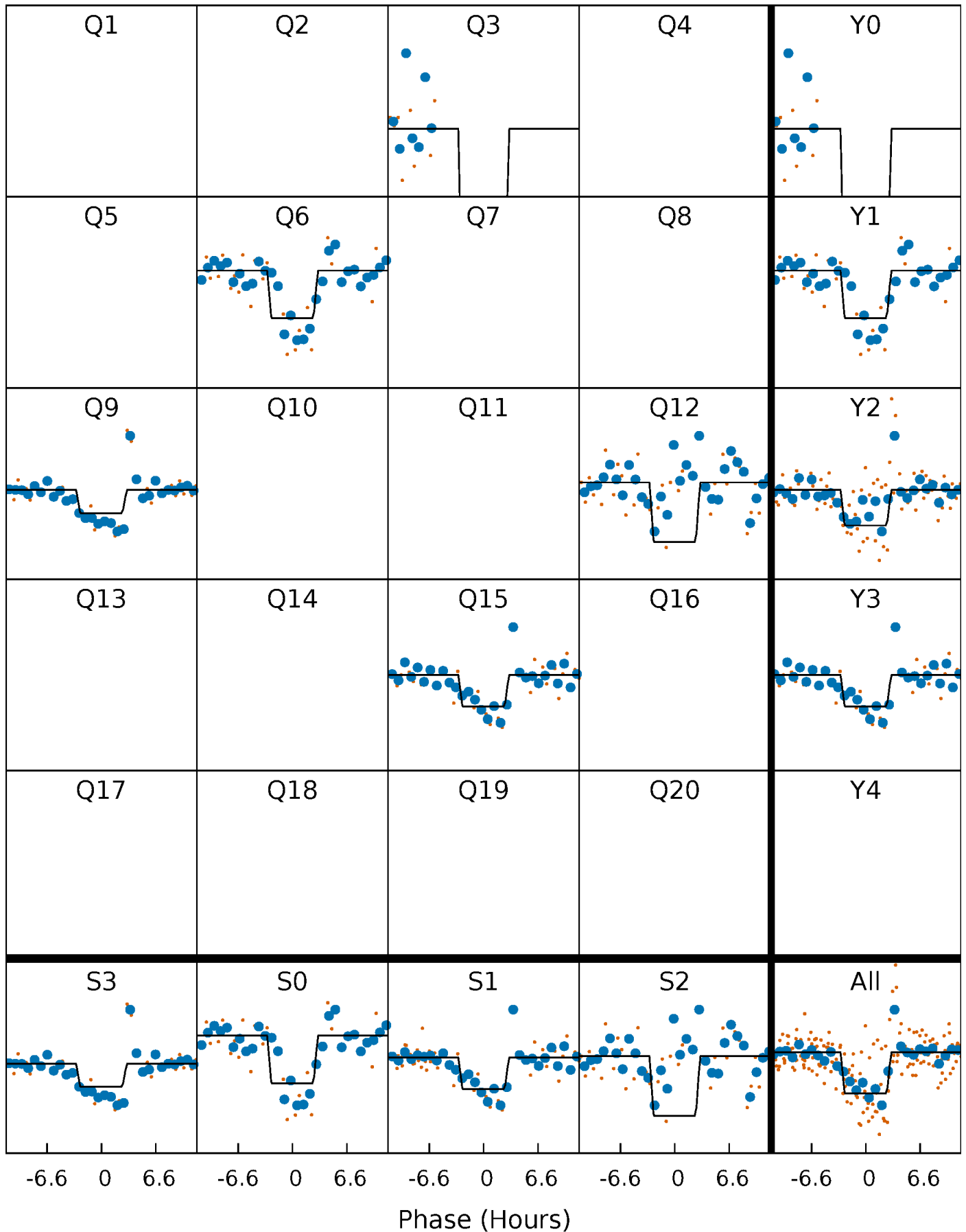
DV Quarter-Phased Transit Curves

TCE 007591386-05 $P=284.592336$ Days $T_0=316.717684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

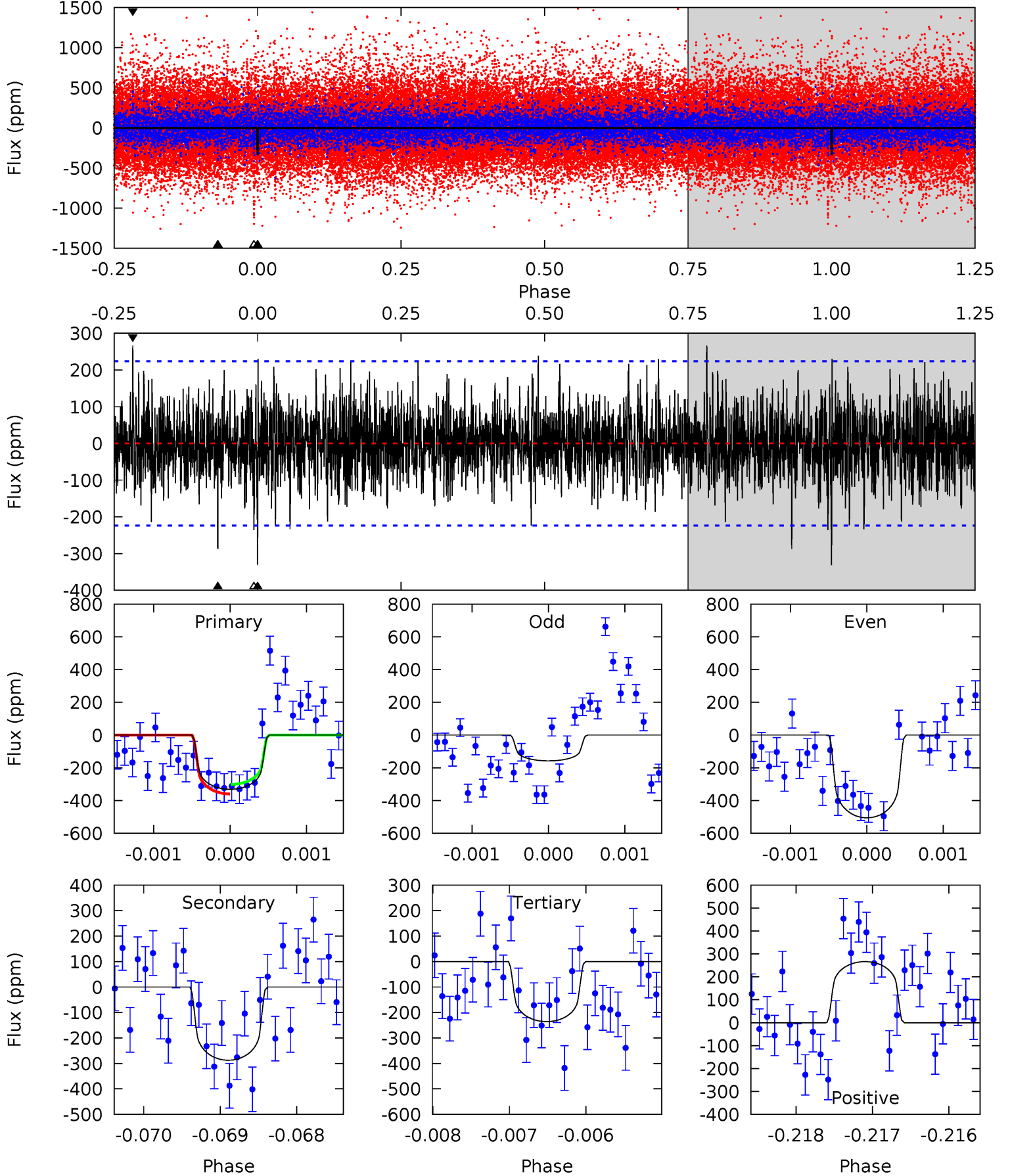
TCE 007591386-05 $P=284.585001$ Days $T_0=316.743981$ (BKJD)



DV Model-Shift Uniqueness Test

007591386-05, $P = 284.592336$ Days, $E = 32.125348$ Days

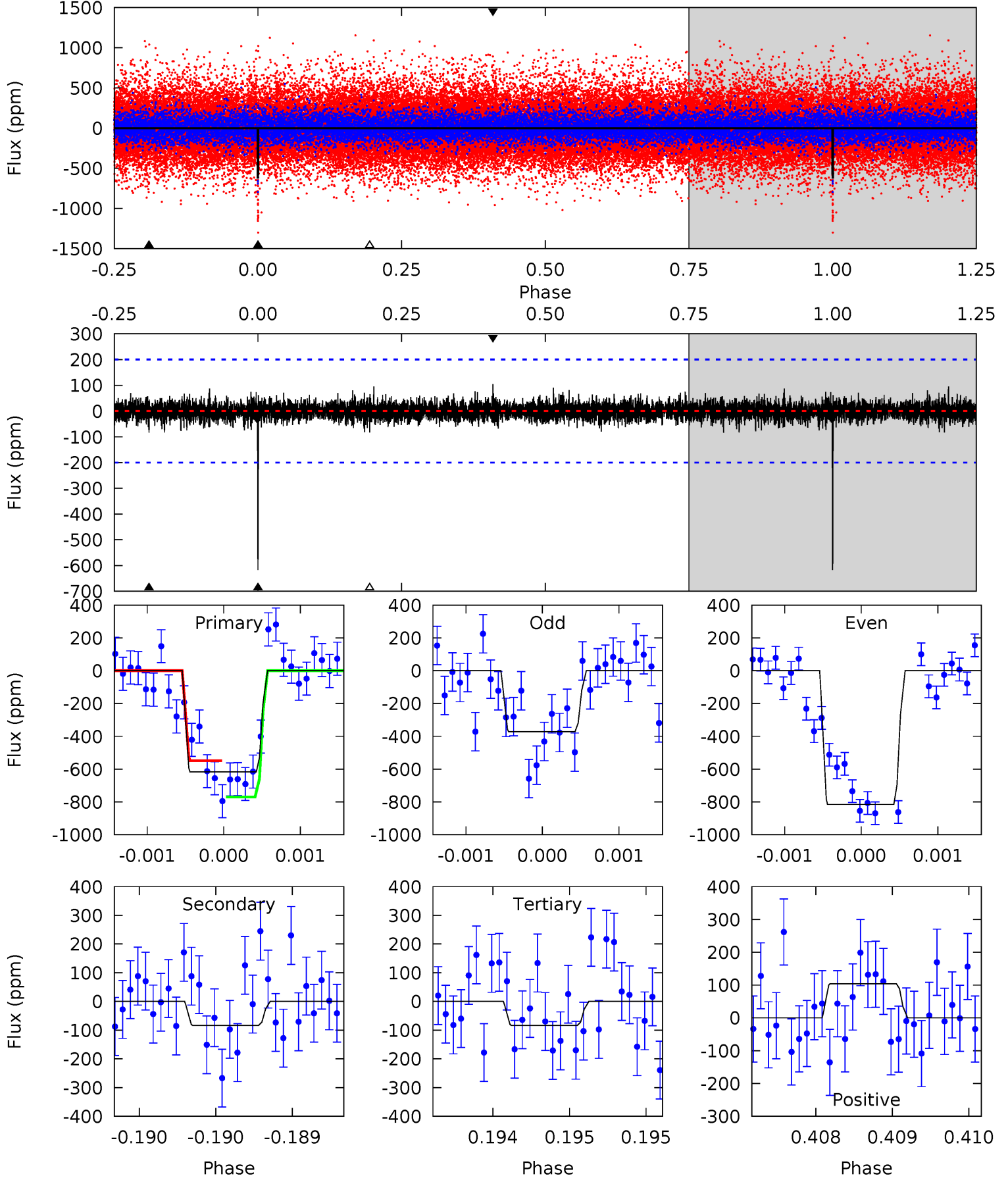
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.07	7.00	5.74	6.49	5.45	3.29	1.64	2.33	1.58	1.26	0.51	4.27	0.91	0.45	0.71



Alt Model-Shift Uniqueness Test

007591386-05, P = 284.585001 Days, E = 32.158980 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	2.28	2.28	2.86	5.48	3.34	0.58	14.6	14.1	0.00	-0.57	6.16	0.86	0.14	0



Stellar Parameters For KIC 007591386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5522^{+163}_{-147}	$4.608^{+0.040}_{-0.112}$	$-0.500^{+0.300}_{-0.300}$	$0.728^{+0.140}_{-0.060}$	$0.783^{+0.091}_{-0.074}$	$2.859^{+0.466}_{-1.043}$
	+3%/-3%	+1%/-2%	+60%/-60%	+19%/-8%	+12%/-9%	+16%/-36%
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 007591386-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-287 ± 41	$2.00^{+1.46}_{-1.18}$	333^{+16}_{-12}	4734^{+2650}_{-900}	$24533^{+124759}_{-16893}$
Alt.	-83 ± 36	$2.34^{+1.38}_{-1.22}$	333^{+15}_{-13}	3538^{+1167}_{-538}	4955^{+18928}_{-3371}

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 $A_{obs} \gg 1.0$

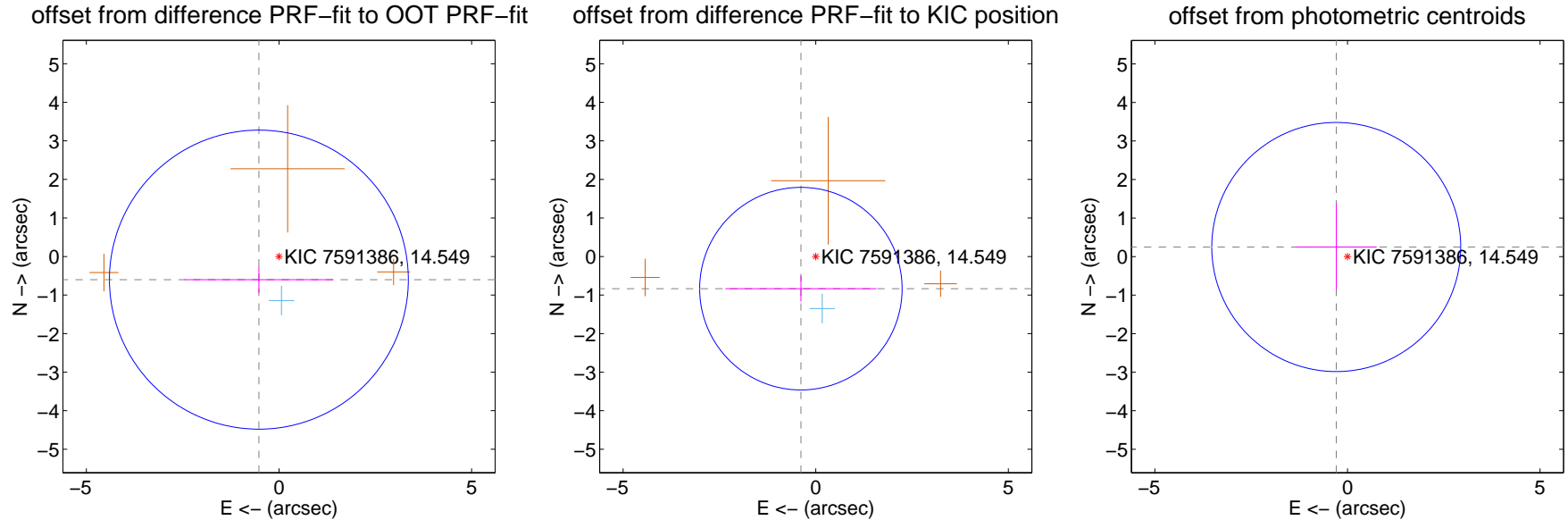
DV Centroid Data

Supplemental centroid analysis for 007591386-05. Kepler magnitude: 14.55. Transit SNR 7.04

There are 1 quarters with good PRF difference image offsets

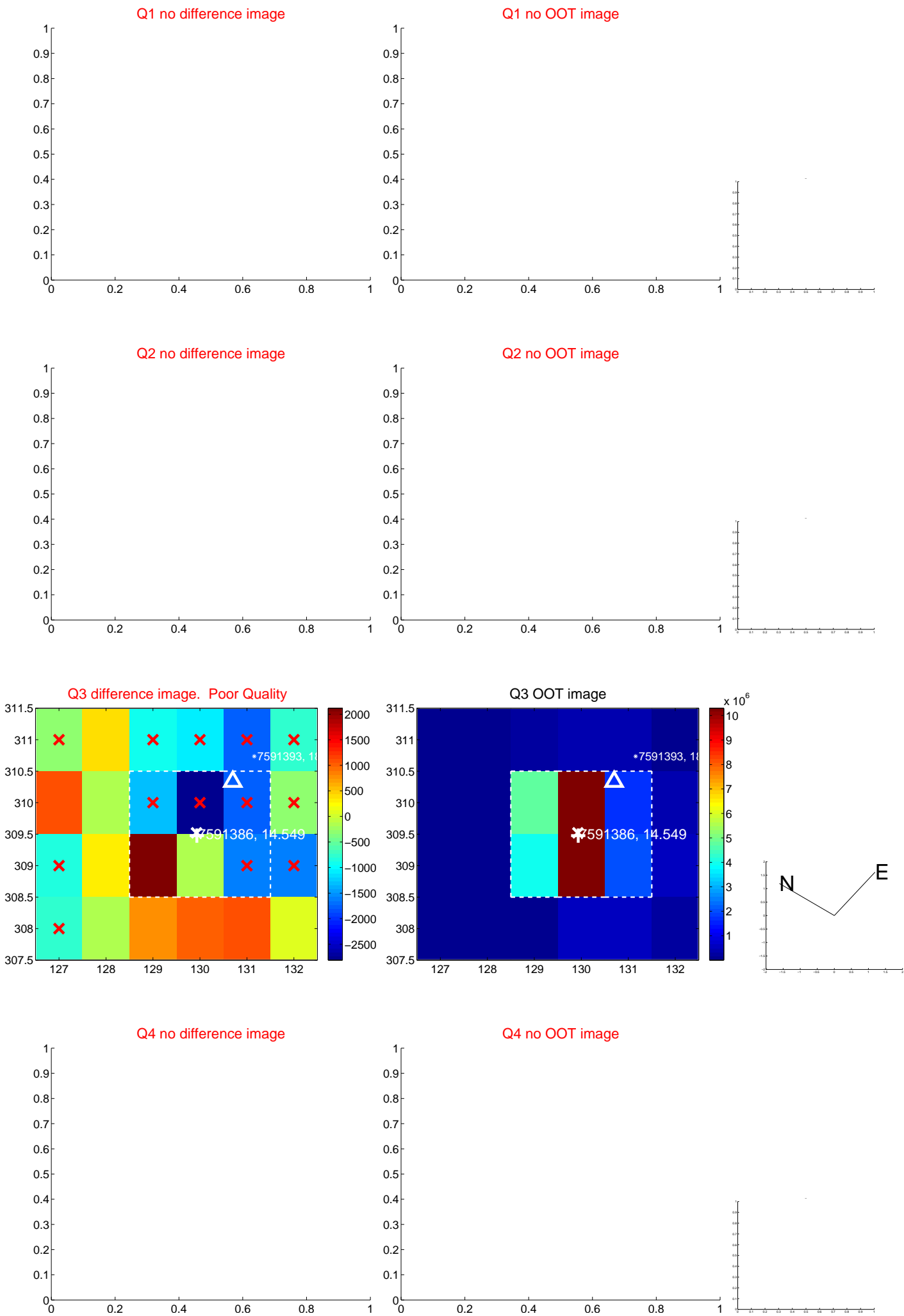
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.795 ± 1.293	0.62	0.522 ± 1.930	-0.600 ± 0.343
PRF-fit source offset from KIC position	0.918 ± 0.876	1.05	0.385 ± 1.960	-0.834 ± 0.335
photometric centroid source offset	0.38 ± 1.08	0.36	0.29 ± 1.05	0.25 ± 1.11

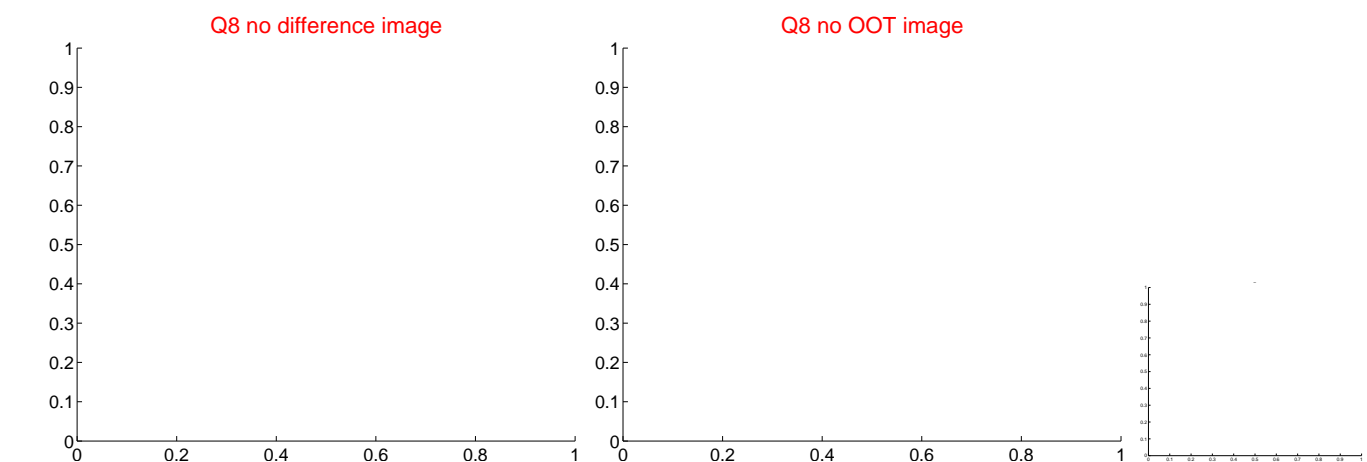
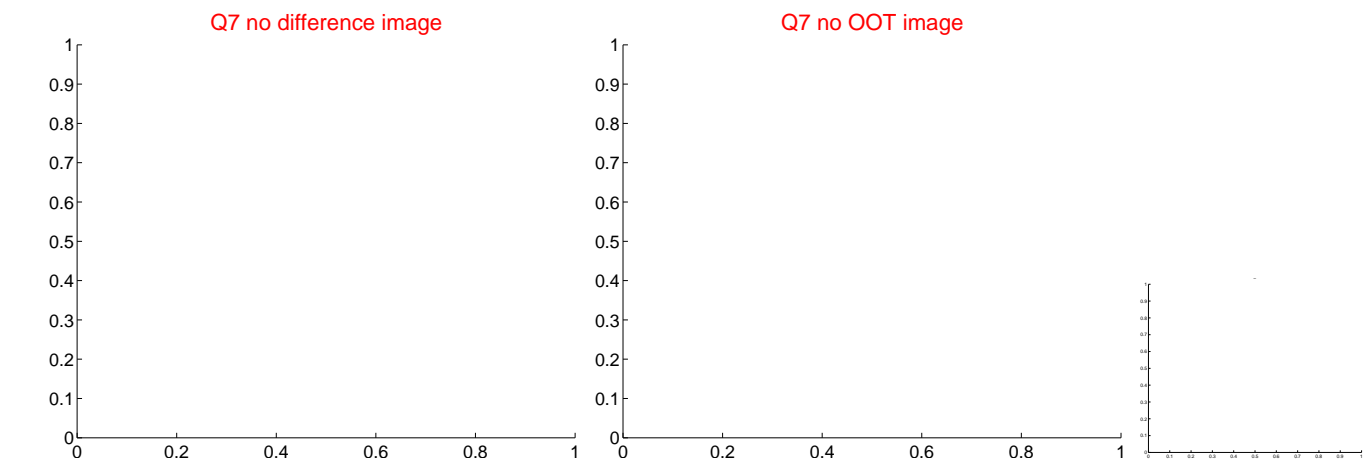
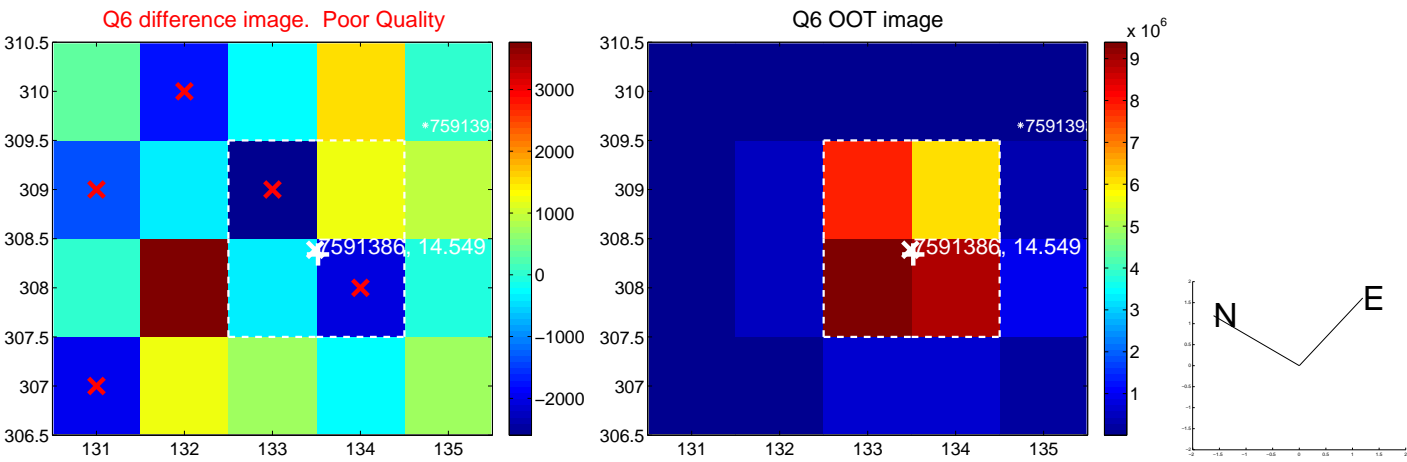
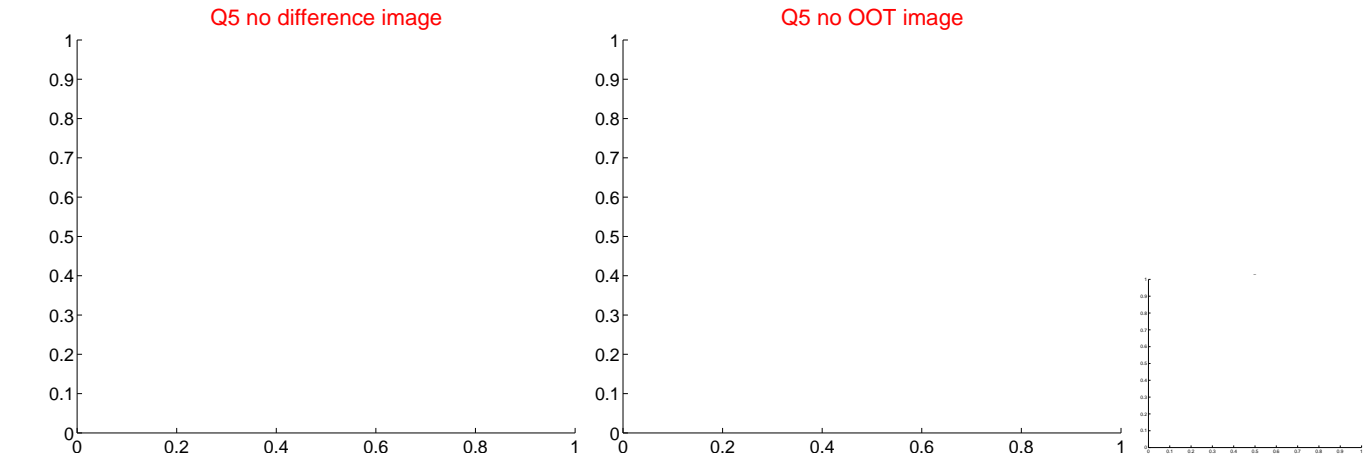


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

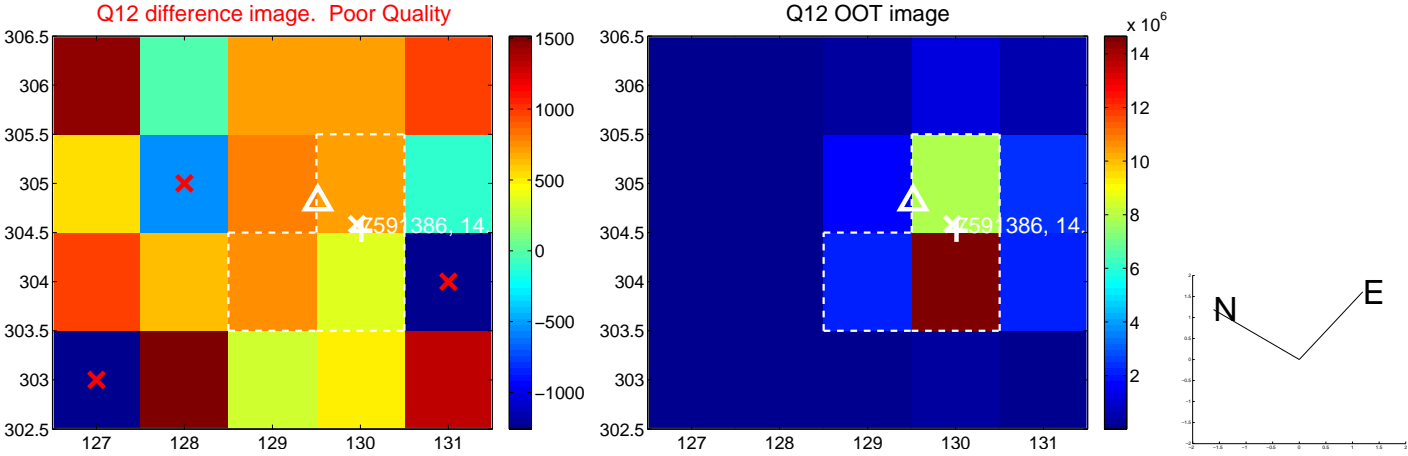
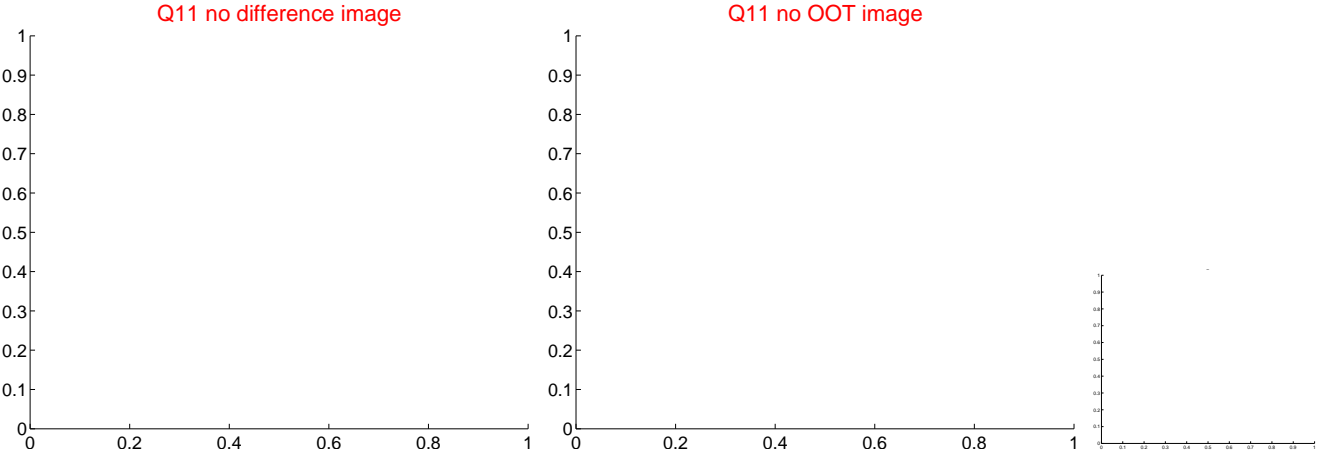
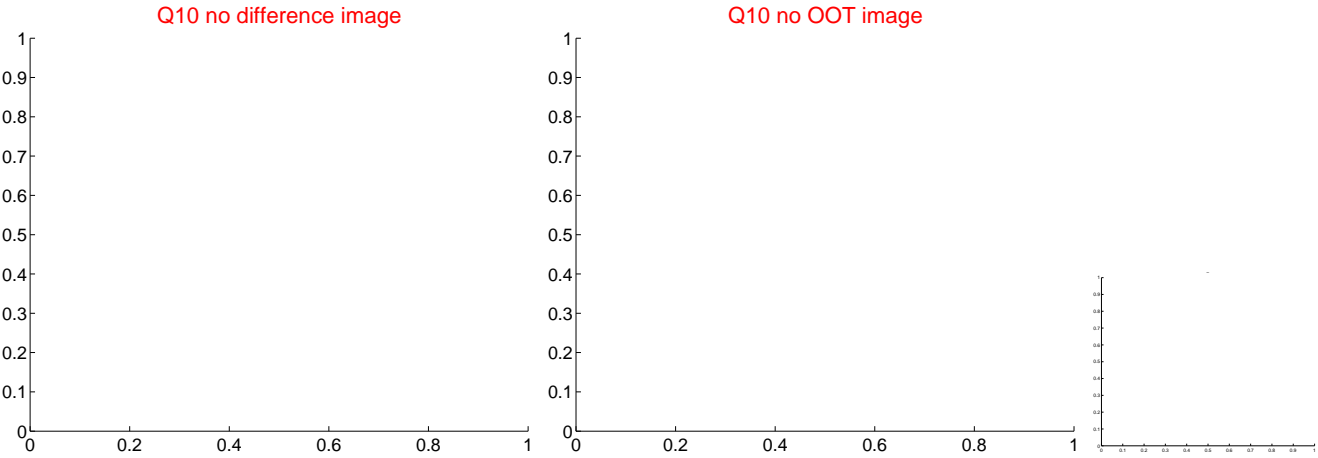
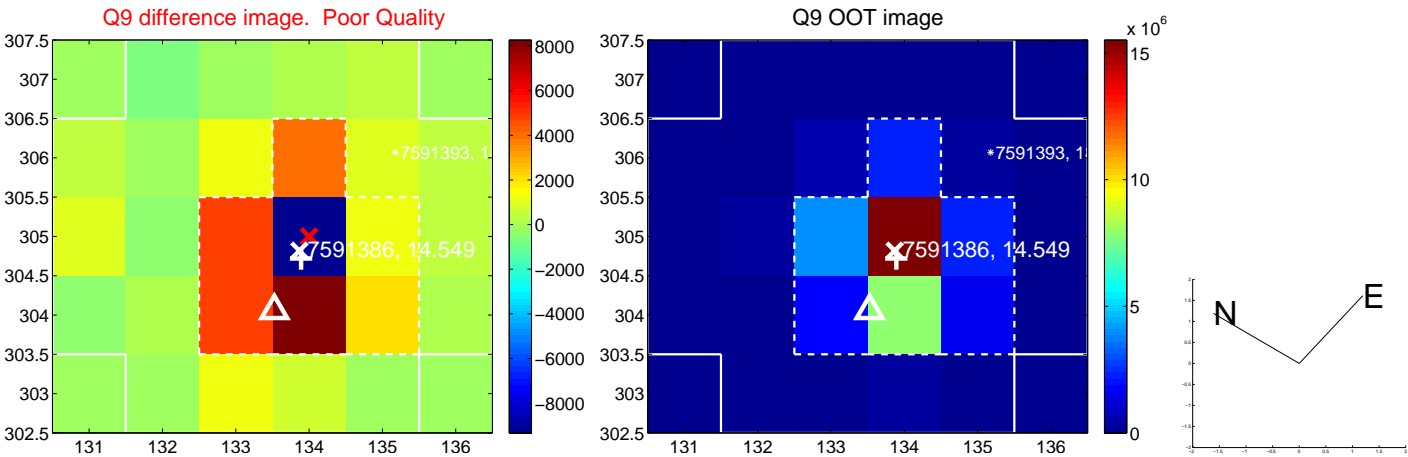
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



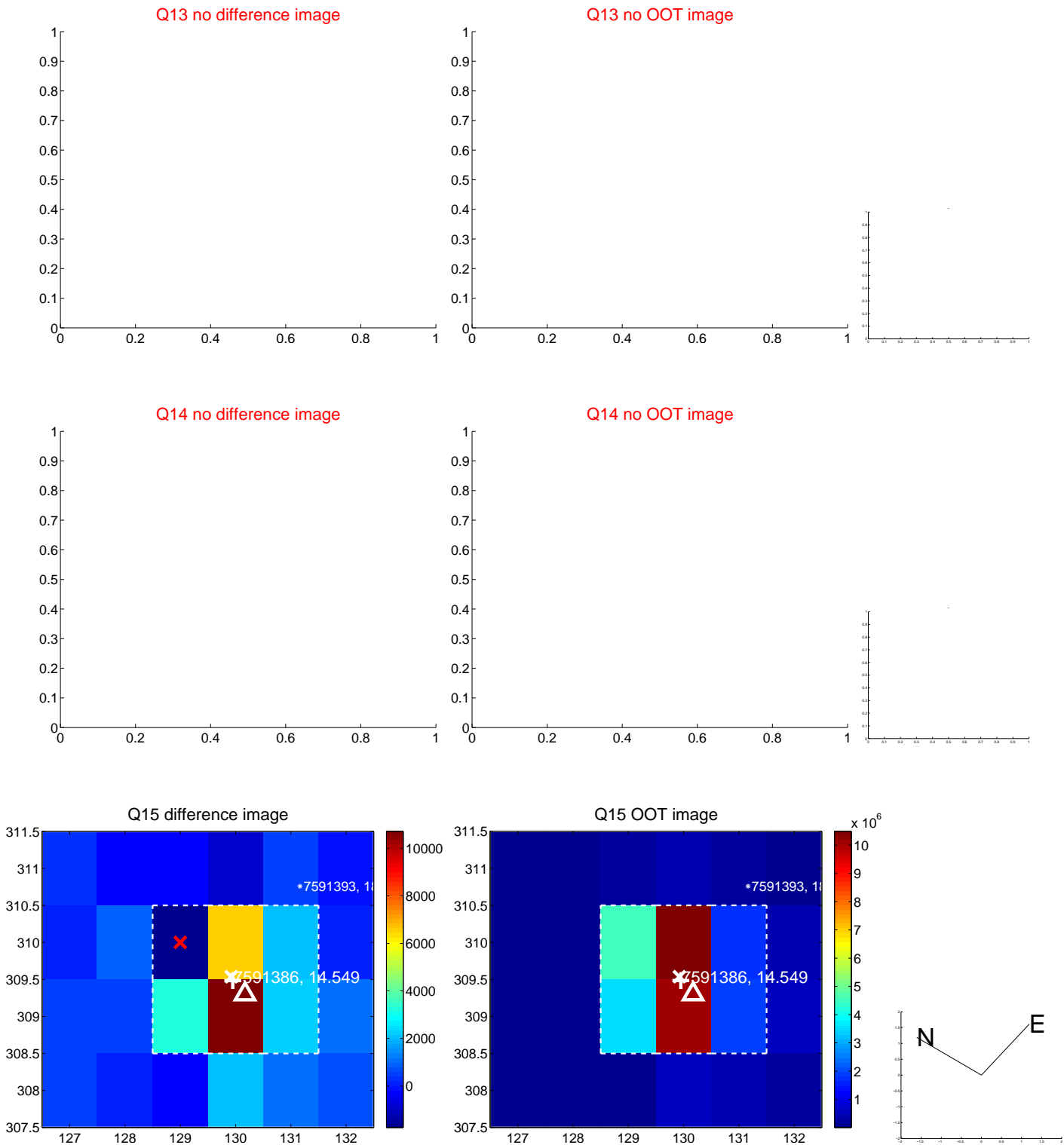
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



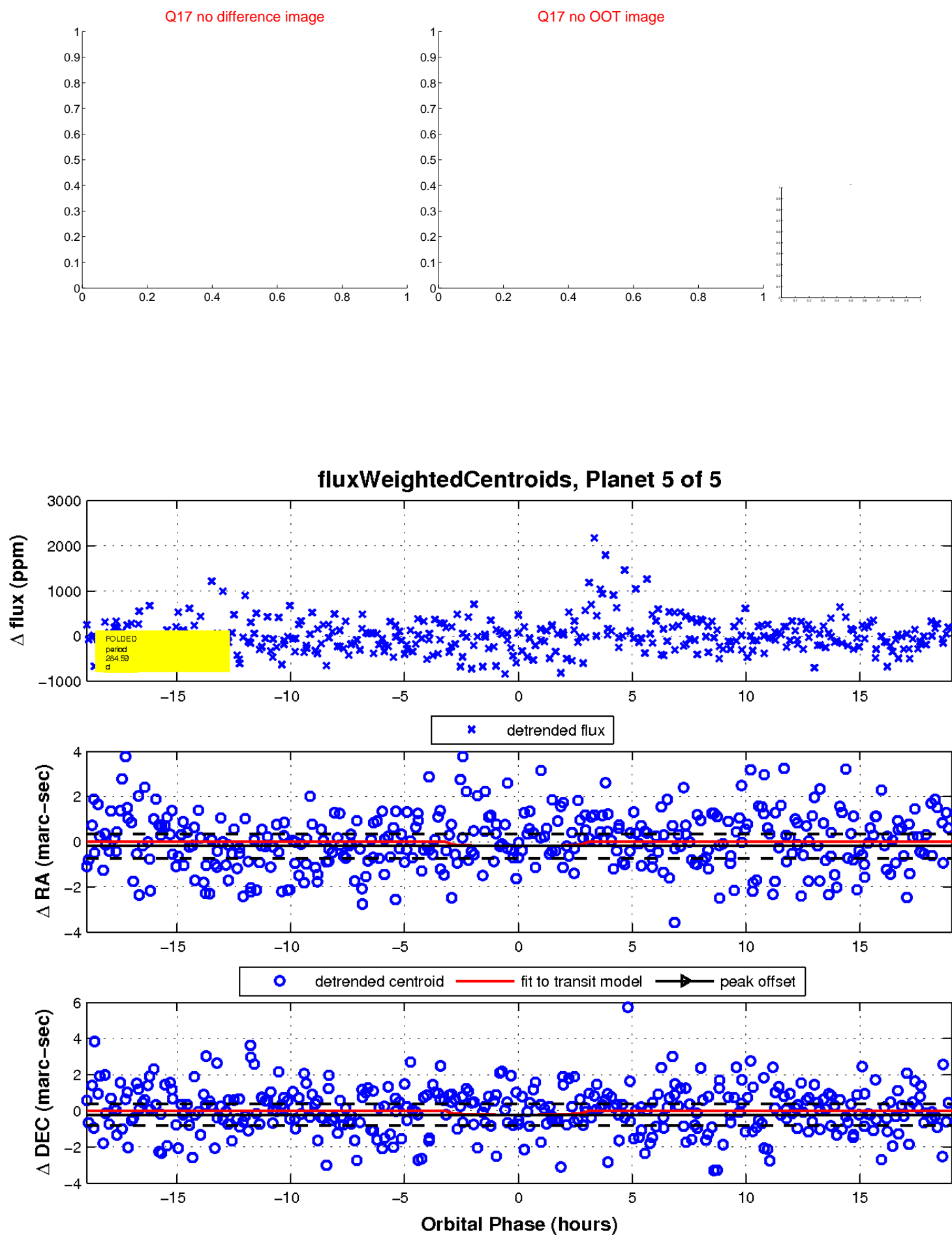
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

