

KIC 009002278

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})
009002278-01	OBS	0701.01	18.164044	144.484811	937.3	3.044	81.6	82.2	0.66	4926	2.25	15.75
009002278-02	OBS	0701.02	5.714886	136.634086	428.6	2.518	57.2	64.8	0.66	4926	1.67	73.58
009002278-03	OBS	0701.03	122.385753	150.411809	719.0	7.435	35.9	36.9	0.66	4926	1.97	1.24
009002278-04	OBS	0701.04	267.281495	322.443501	469.6	7.783	14.3	14.6	0.66	4926	1.53	0.44
009002278-05	OBS	0701.05	12.441950	134.648628	74.8	3.821	8.5	9.1	0.66	4926	0.68	26.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009002278-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
009002278-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—CENT_KIC_POS
009002278-05	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

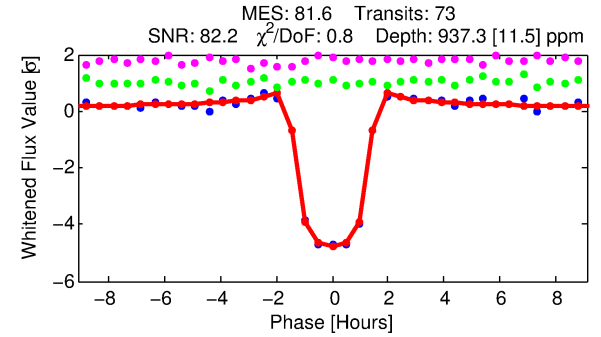
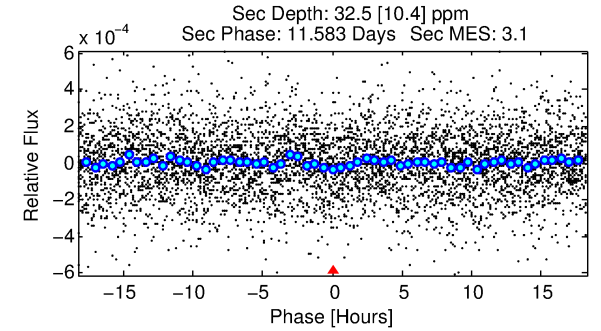
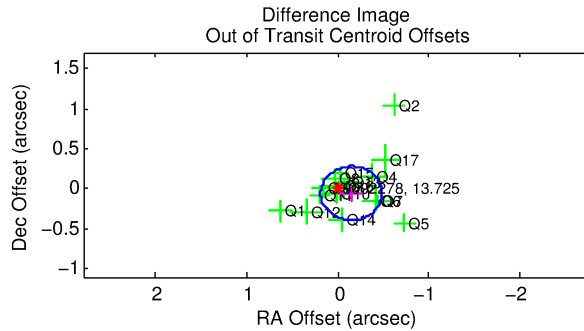
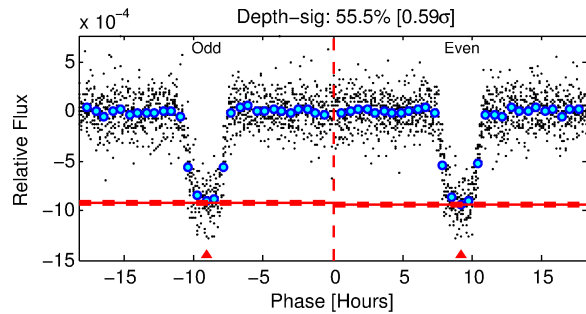
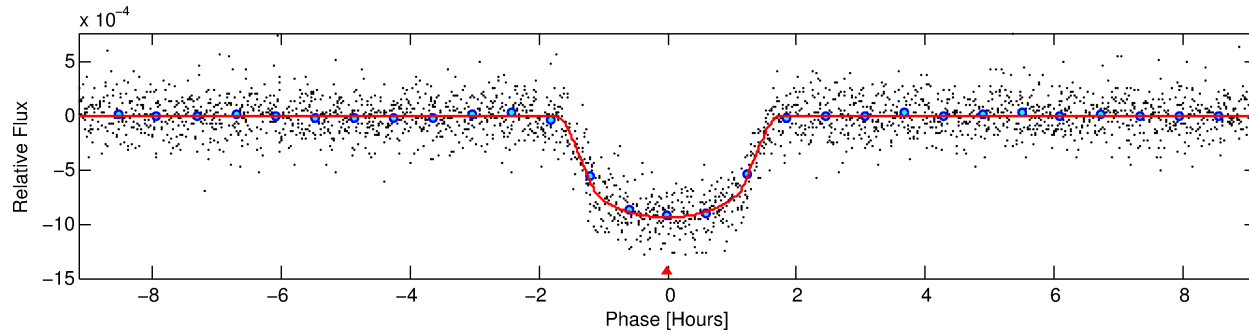
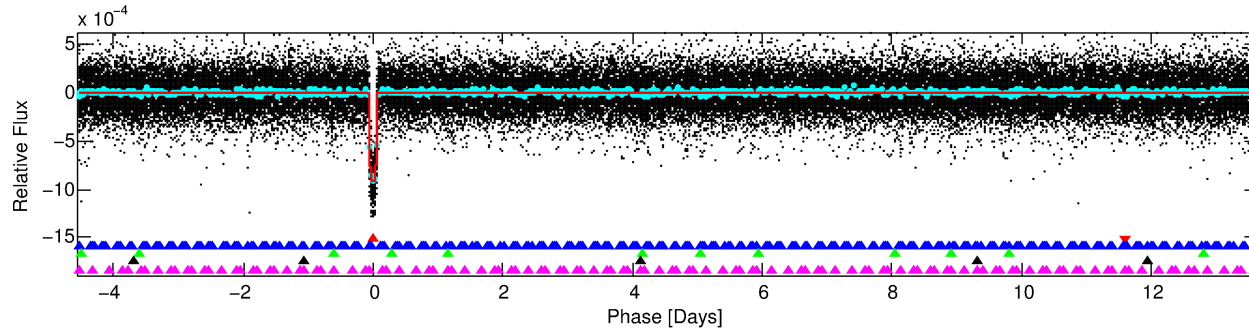
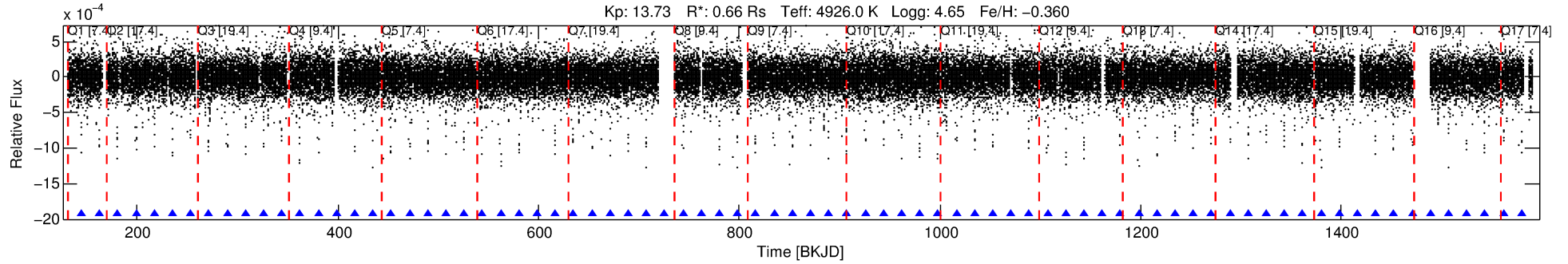
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009002278-01

No Significant Match Found

DV One-Page Summary

KIC: 9002278 Candidate: 1 of 5 Period: 18.164 d
KOI: K00701.01 Name: Kepler-62d Corr: 0.982



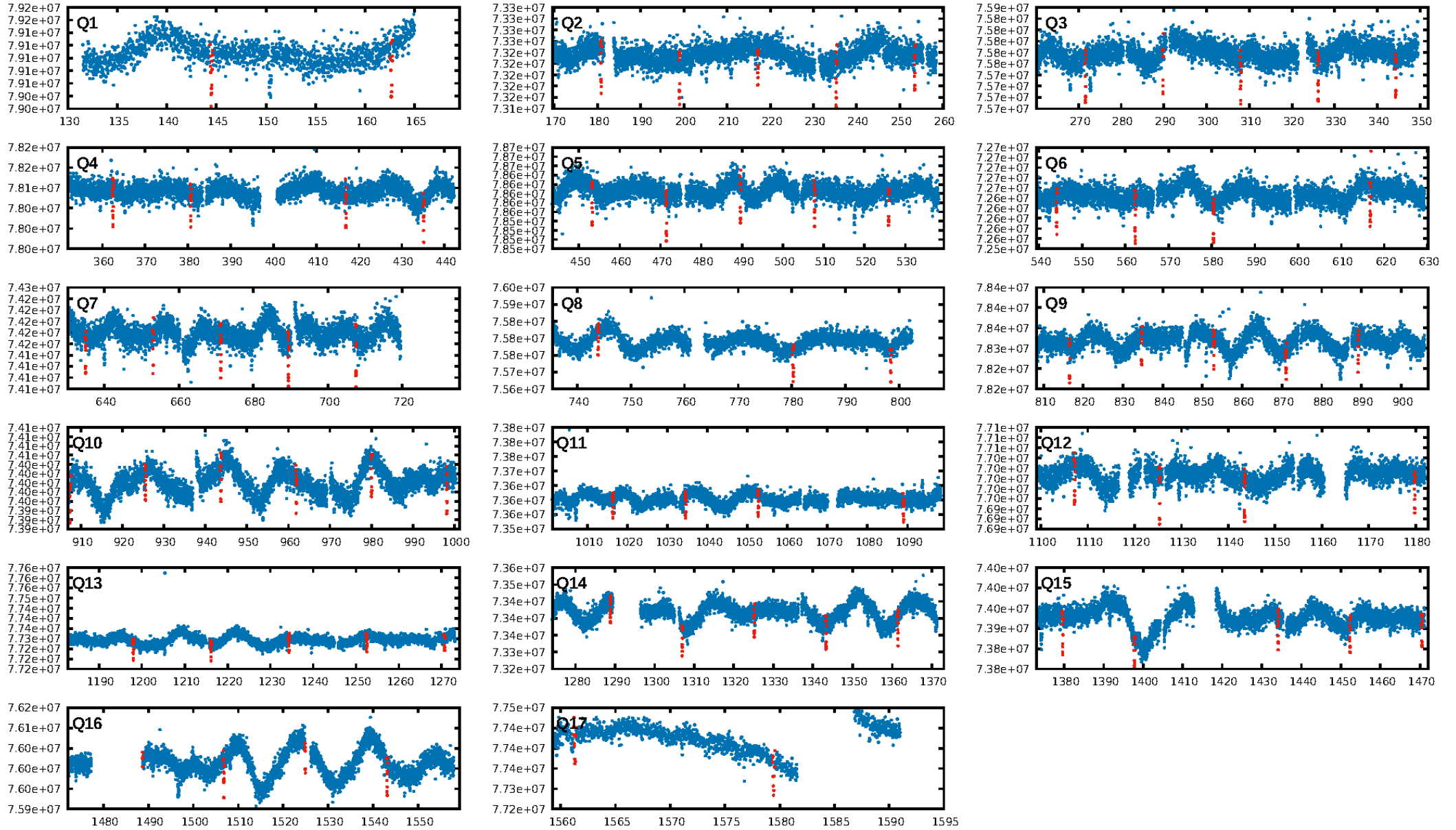
DV Fit Results:

Period = 18.16404 [0.00002] d
Epoch = 144.4848 [0.0008] BKJD
Rp/R* = 0.0312 [0.0030]
a/R* = 30.30 [10.55]
b = 0.79 [0.17]
Seff = 15.75 [1.84]
Teq = 508 [15] K
Rp = 2.26 [0.26] Re
a = 0.1212 [0.0068] AU
Ag = 51.56 [19.89] [2.54 σ]
Teffp = 2104 [202] K [7.87 σ]

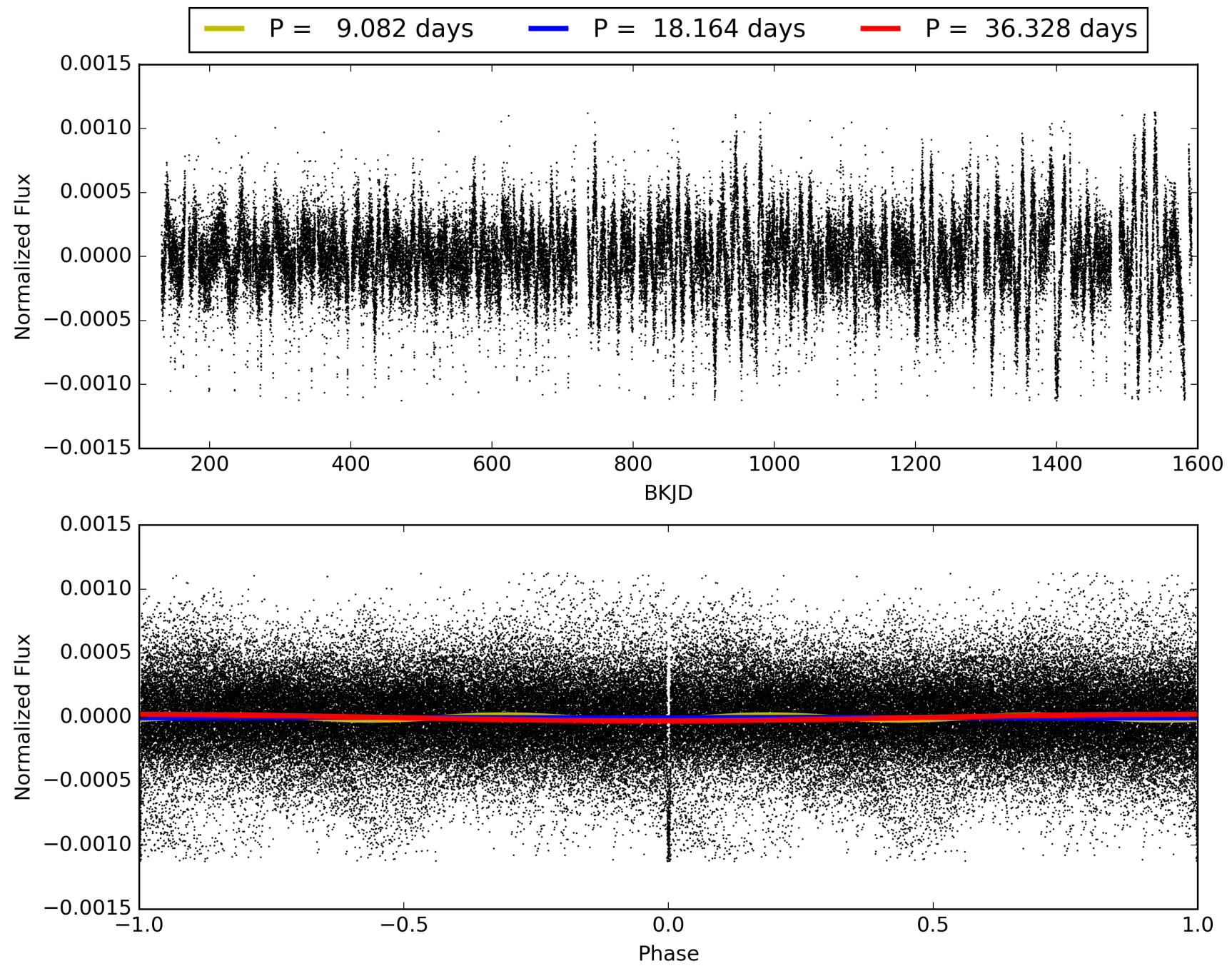
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.11 σ]
LongPeriod-sig: 100.0% [311.35 σ]
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: 8.153
Centroid-sig: 11.5%
Centroid-so: 0.595 arcsec [4.75 σ]
OotOffset-rm: 0.159 arcsec [1.42 σ]
KicOffset-rm: 0.679 arcsec [6.61 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009002278-01, PDC Light Curves

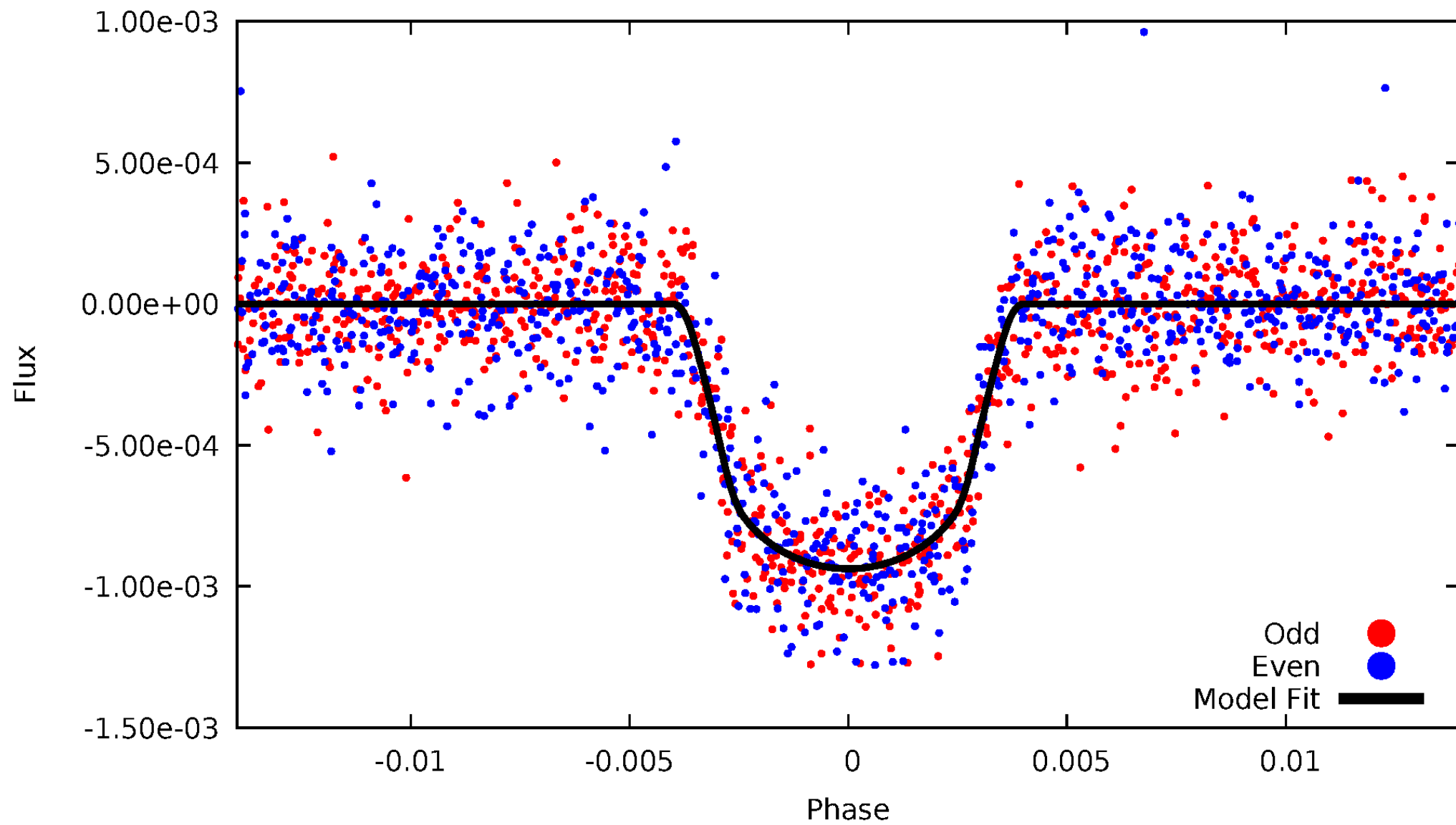


TCE 009002278-01



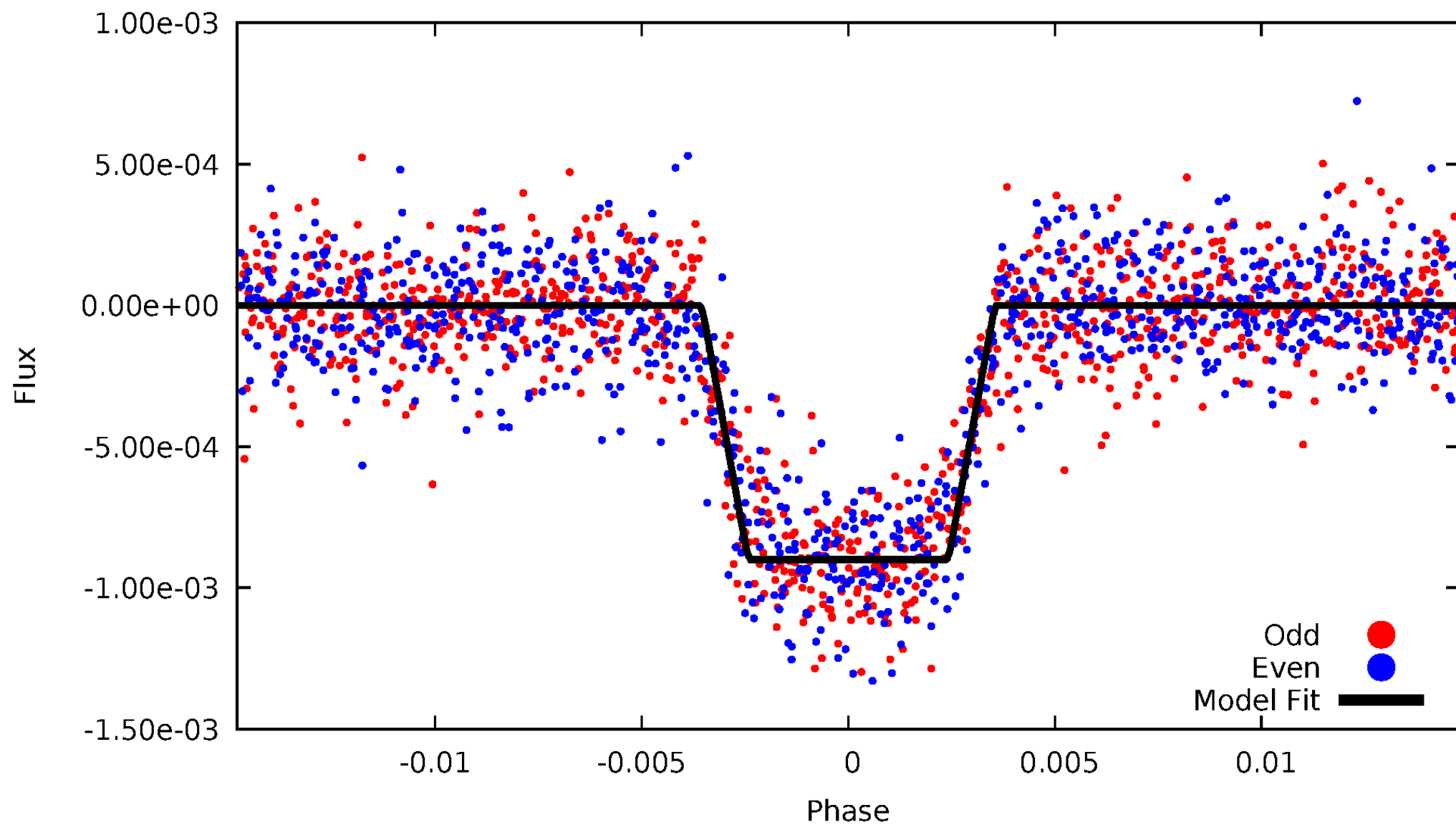
DV Odd/Even

TCE 009002278-01



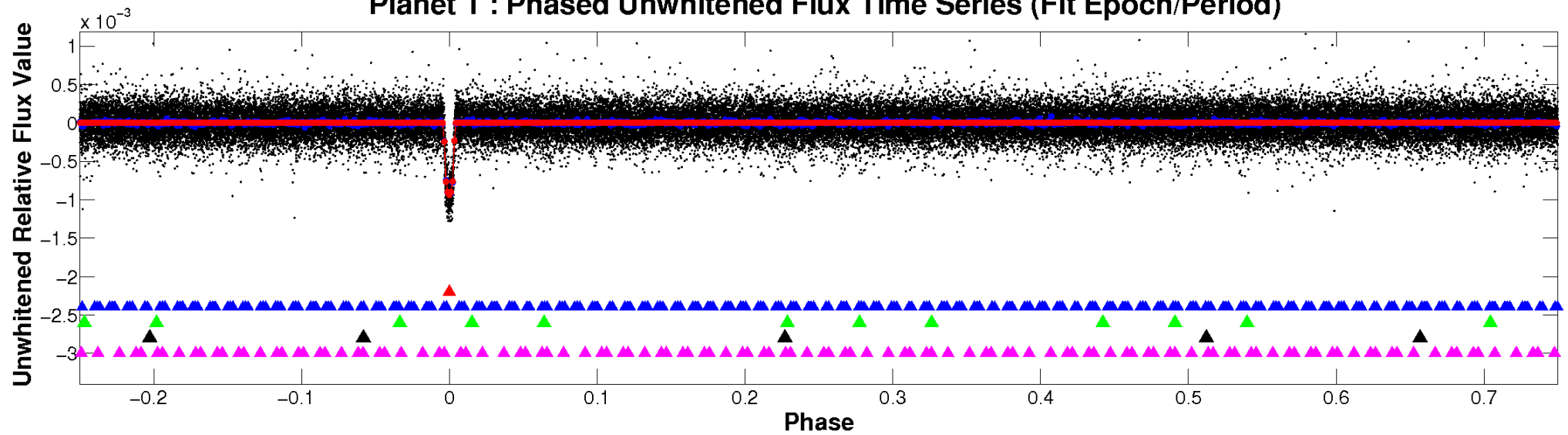
ALT Odd/Even

TCE 009002278-01

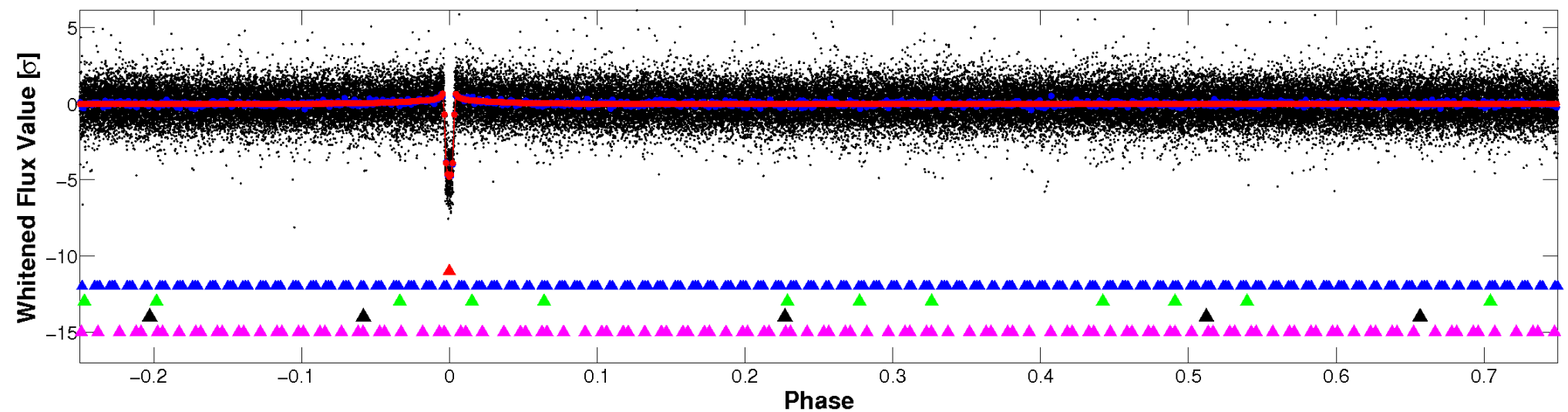


Non-Whitened Vs. Whitened Light Curve

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

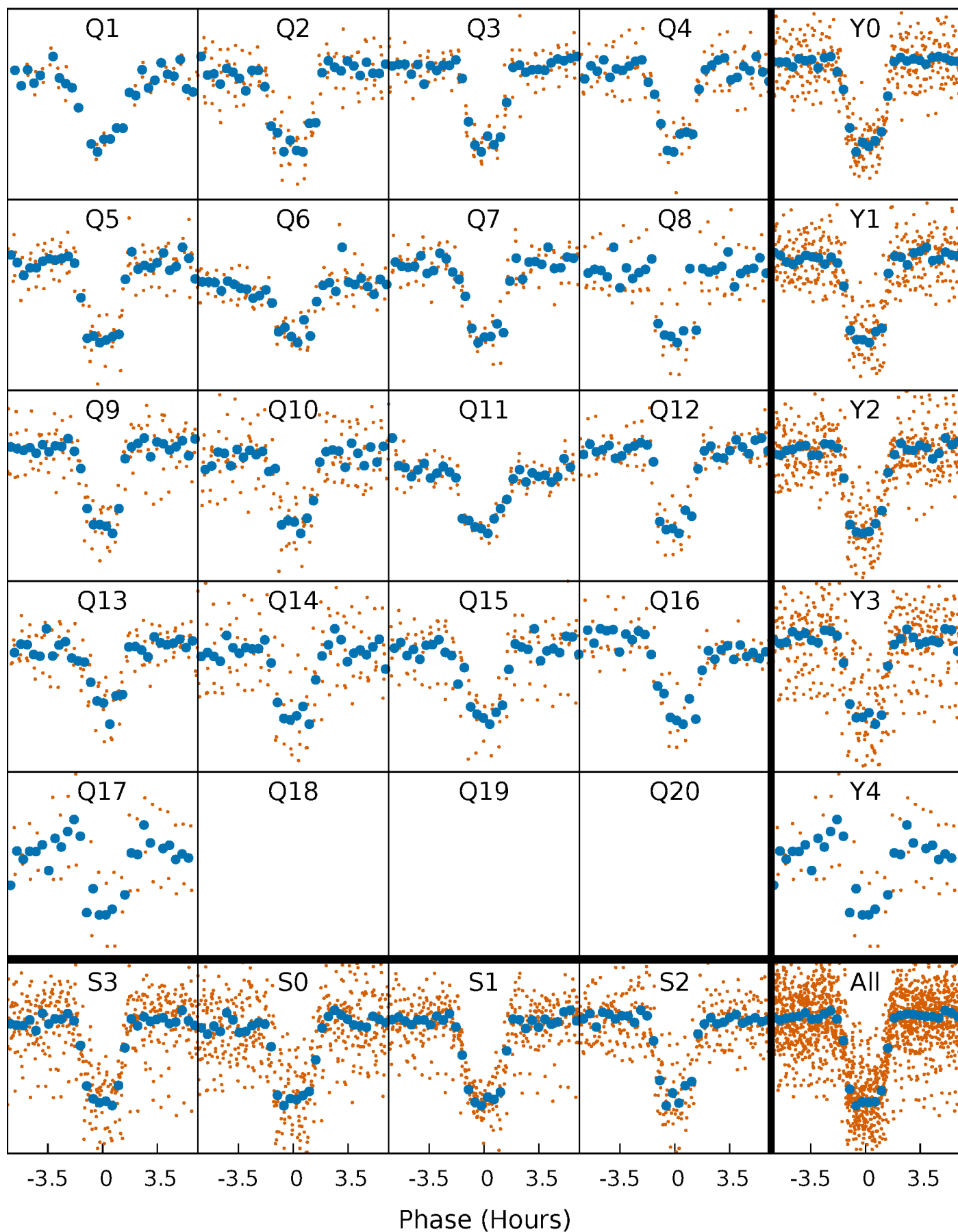


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



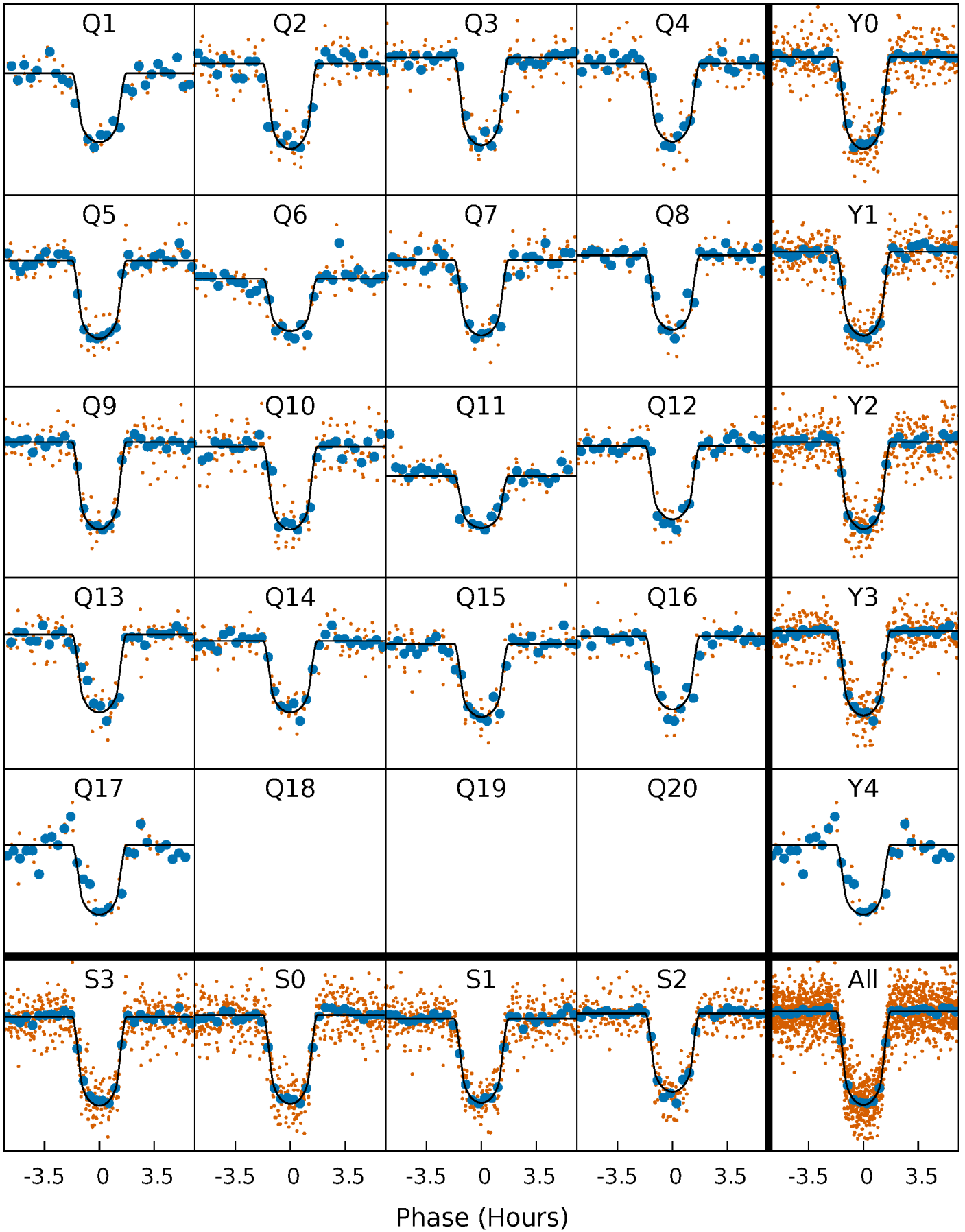
PDC Quarter-Phased Transit Curves

TCE 009002278-01 P= 18.164044 Days $T_0=144.484811$ (BKJD)



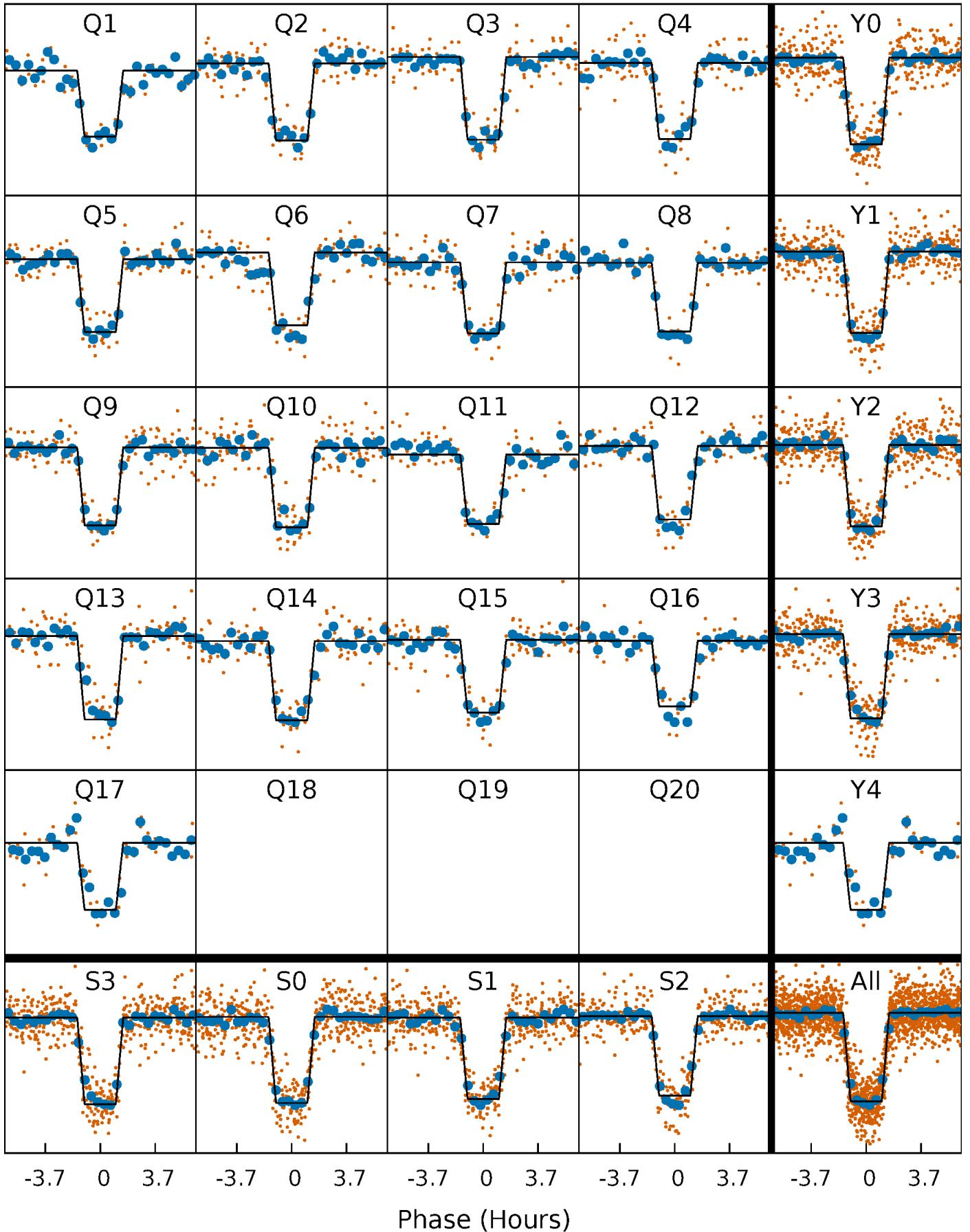
DV Quarter-Phased Transit Curves

TCE 009002278-01 P= 18.164044 Days $T_0=144.484811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

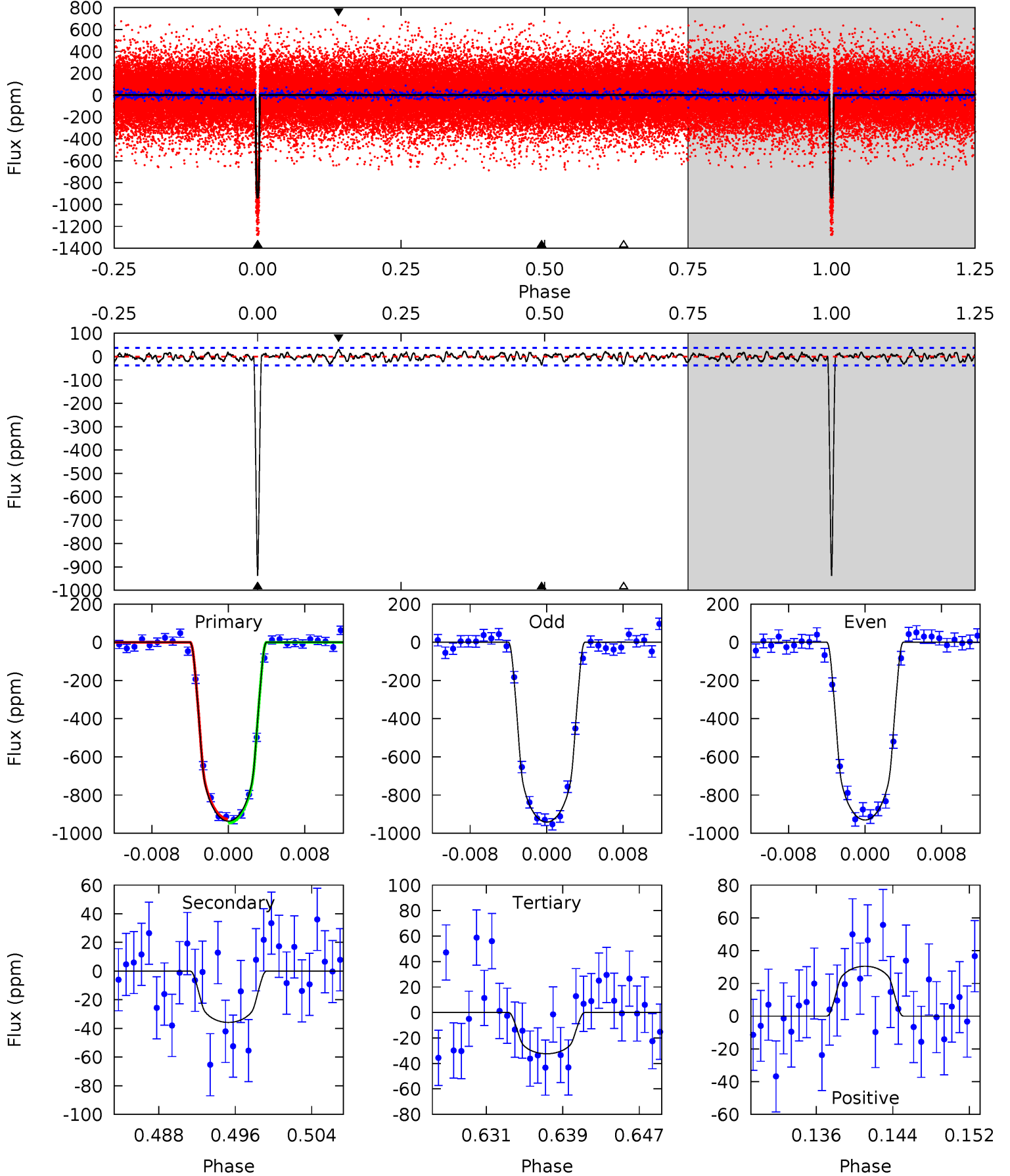
TCE 009002278-01 P= 18.164009 Days $T_0=144.486532$ (BKJD)



DV Model-Shift Uniqueness Test

009002278-01, P = 18.164044 Days, E = 126.320767 Days

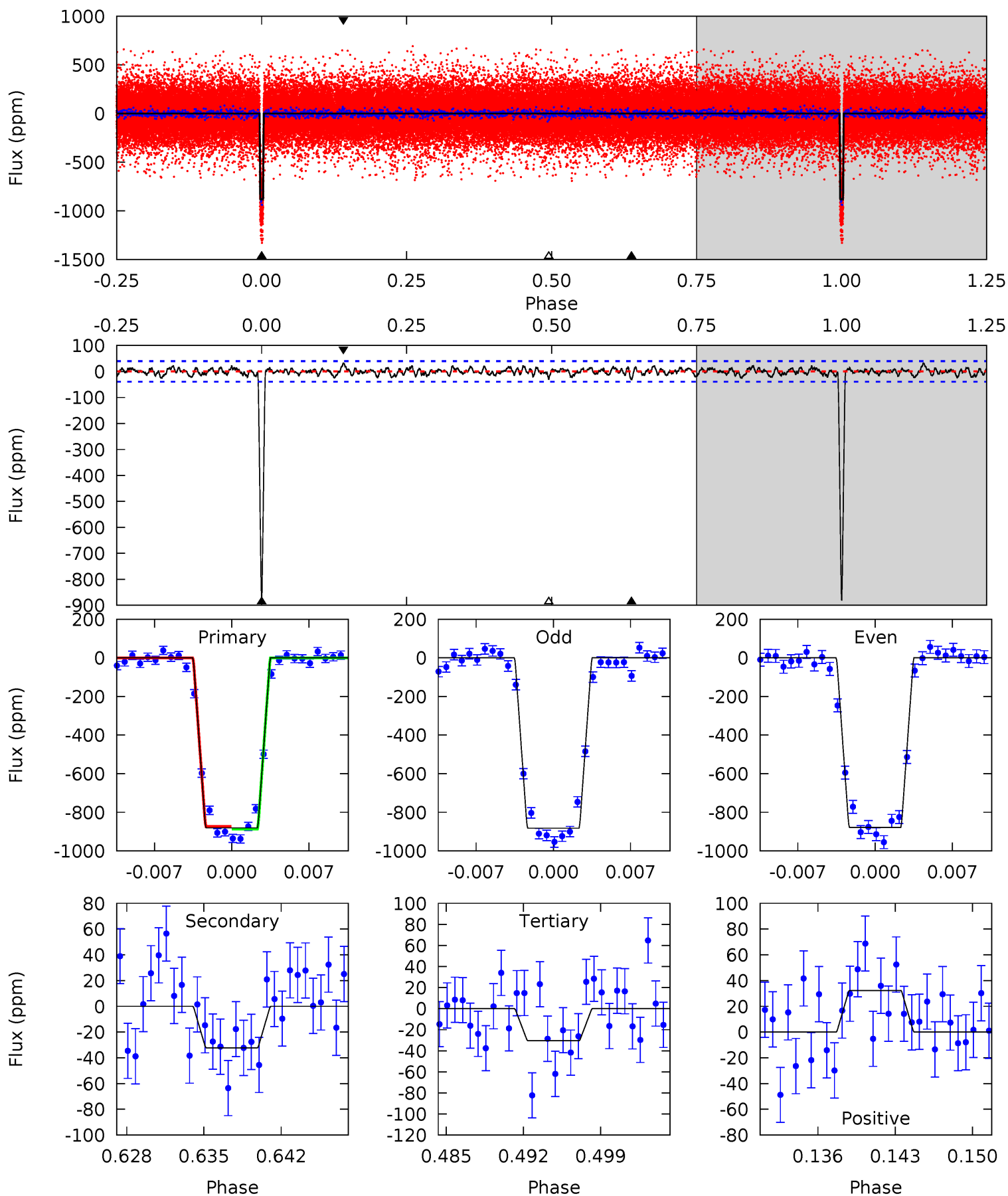
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
126.5	4.84	4.37	4.11	5.07	2.65	1.42	122.1	122.3	0.46	0.72	0.77	0.99	0.03	1.40



Alt Model-Shift Uniqueness Test

009002278-01, P = 18.164009 Days, E = 126.322523 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
112.9	4.13	3.90	4.14	5.09	2.69	1.24	109.0	108.8	0.23	-0.01	0.25	1.00	0.04	0.84



Stellar Parameters For KIC 009002278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4926^{+98}_{-98}	$4.653^{+0.017}_{-0.049}$	$-0.360^{+0.150}_{-0.150}$	$0.662^{+0.041}_{-0.027}$	$0.727^{+0.029}_{-0.059}$	$3.535^{+0.298}_{-0.564}$
	+2%/-2%	+0%/-1%	+42%/-42%	+6%/-4%	+4%/-8%	+8%/-16%
Source	SPE62	SPE62	SPE62	DSEP		

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

Secondary Eclipse Parameters for KIC 009002278-01 / KOI 0701.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-36 ± 7	$2.29^{+0.23}_{-0.24}$	715^{+17}_{-16}	2838^{+117}_{-110}	55^{+17}_{-15}
Alt.	-32 ± 8	$2.18^{+0.23}_{-0.23}$	715^{+16}_{-16}	2834^{+131}_{-123}	54^{+19}_{-16}

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

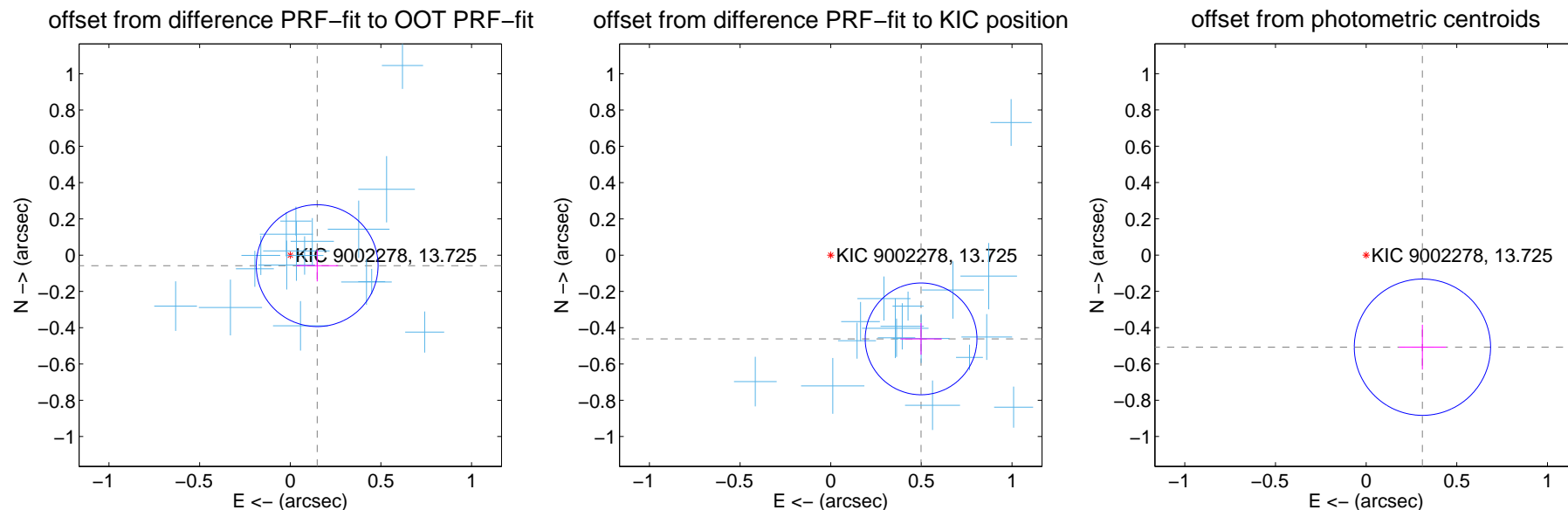
DV Centroid Data

Supplemental centroid analysis for 009002278-01. Kepler magnitude: 13.72. Transit SNR 82.21

There are 17 quarters with good PRF difference image offsets

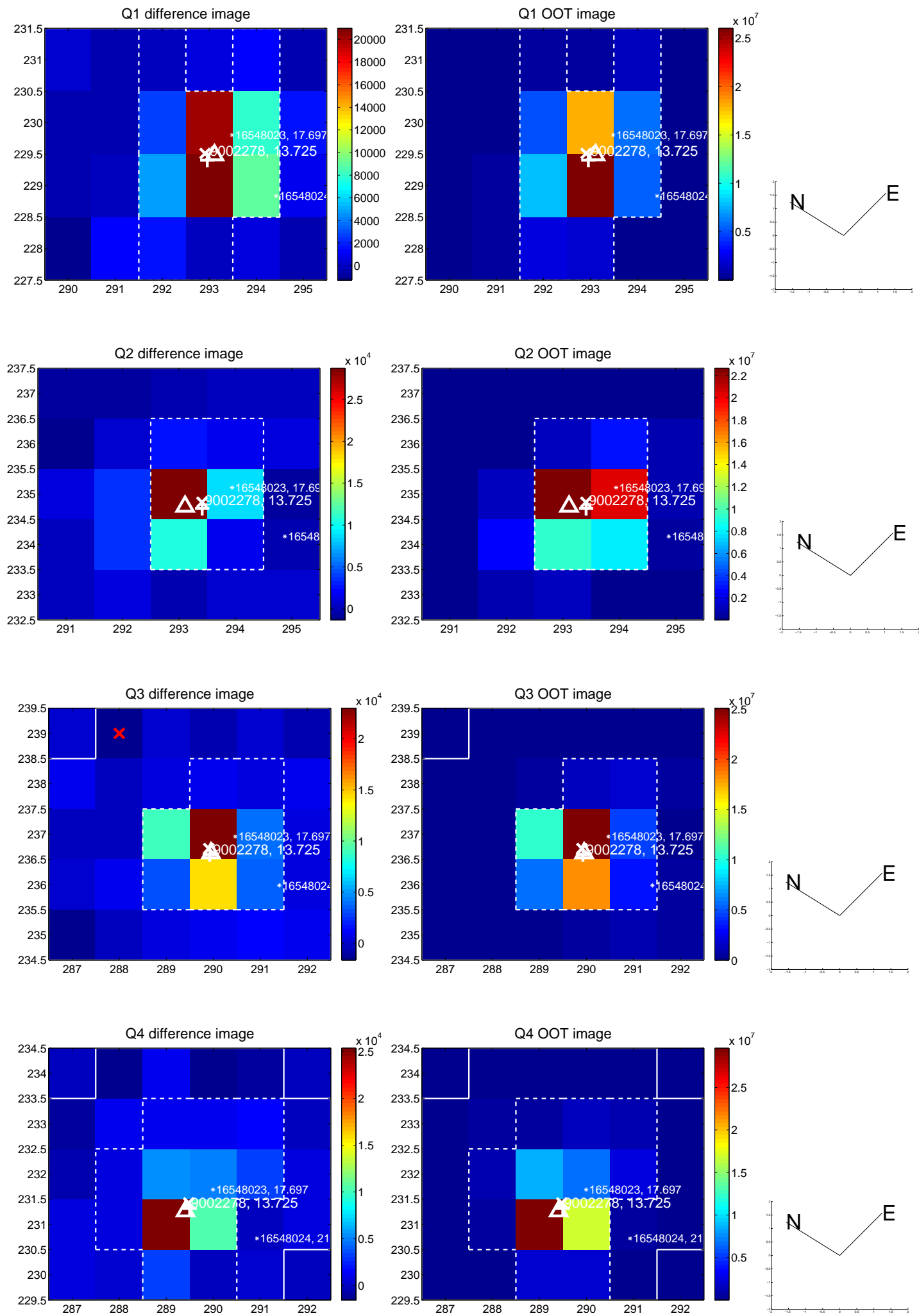
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.159 ± 0.112	1.42	-0.148 ± 0.115	-0.058 ± 0.087
PRF-fit source offset from KIC position	0.679 ± 0.103	6.61	-0.498 ± 0.114	-0.462 ± 0.087
photometric centroid source offset	0.60 ± 0.13	4.75	-0.31 ± 0.13	-0.51 ± 0.12

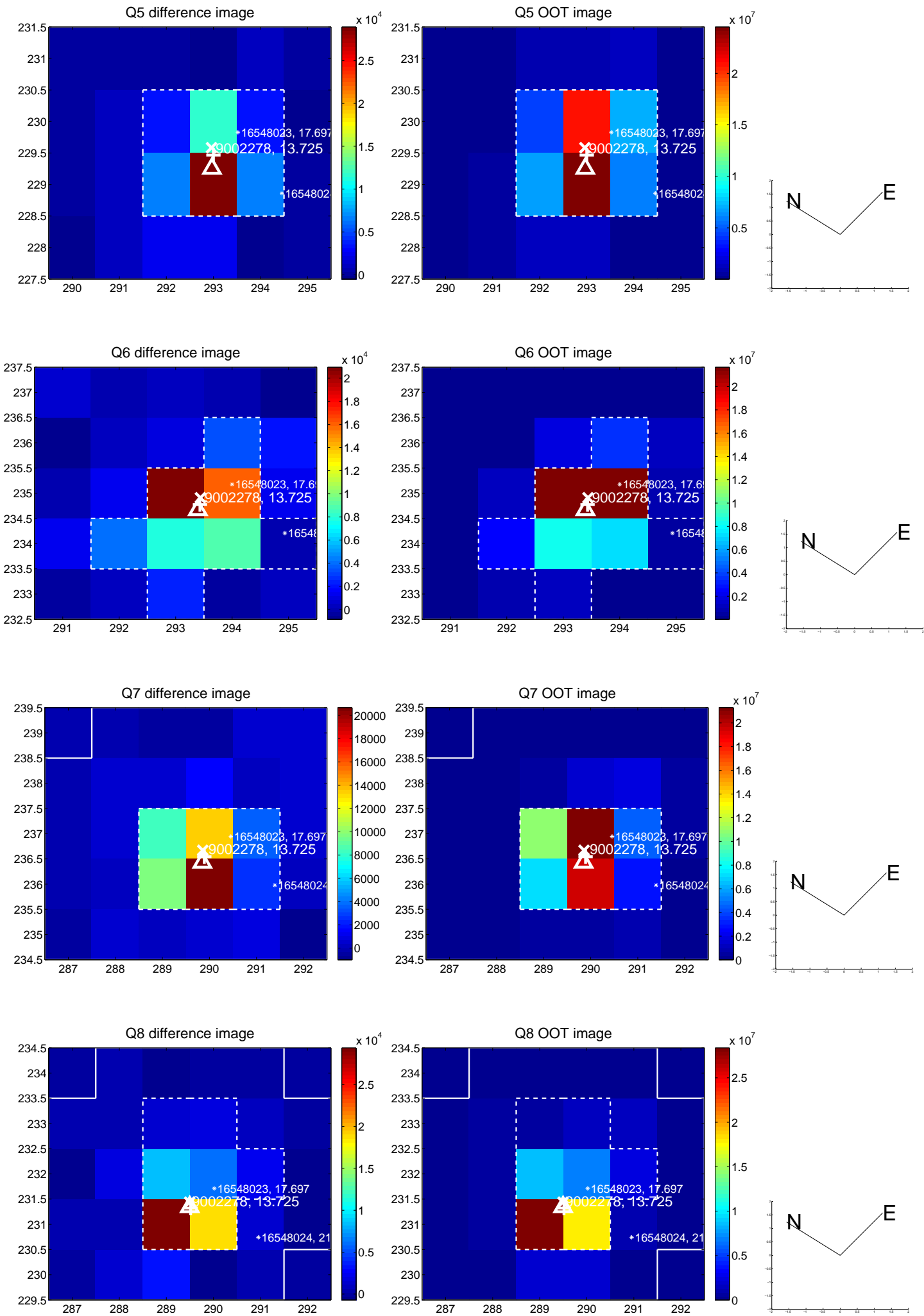


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

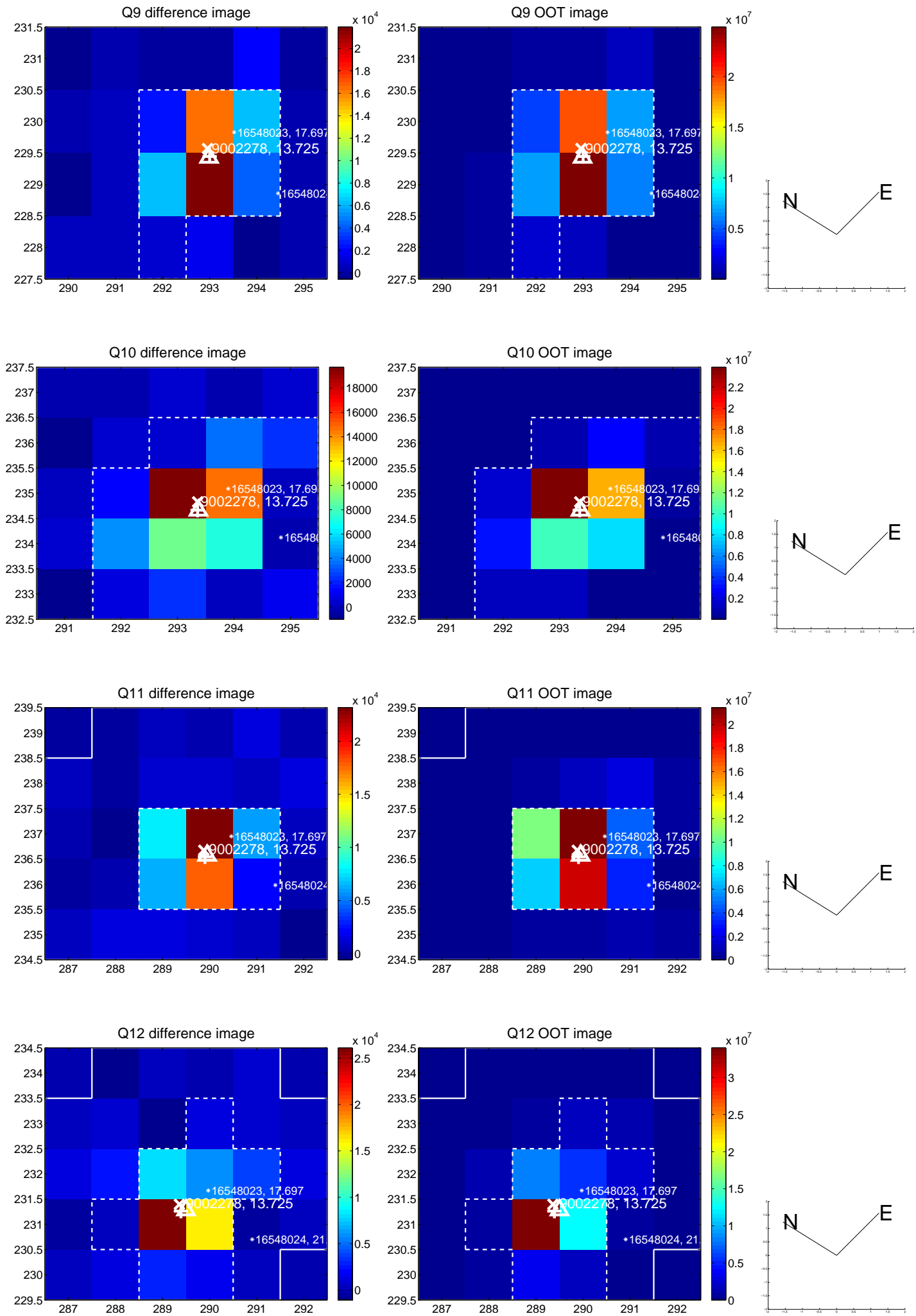
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



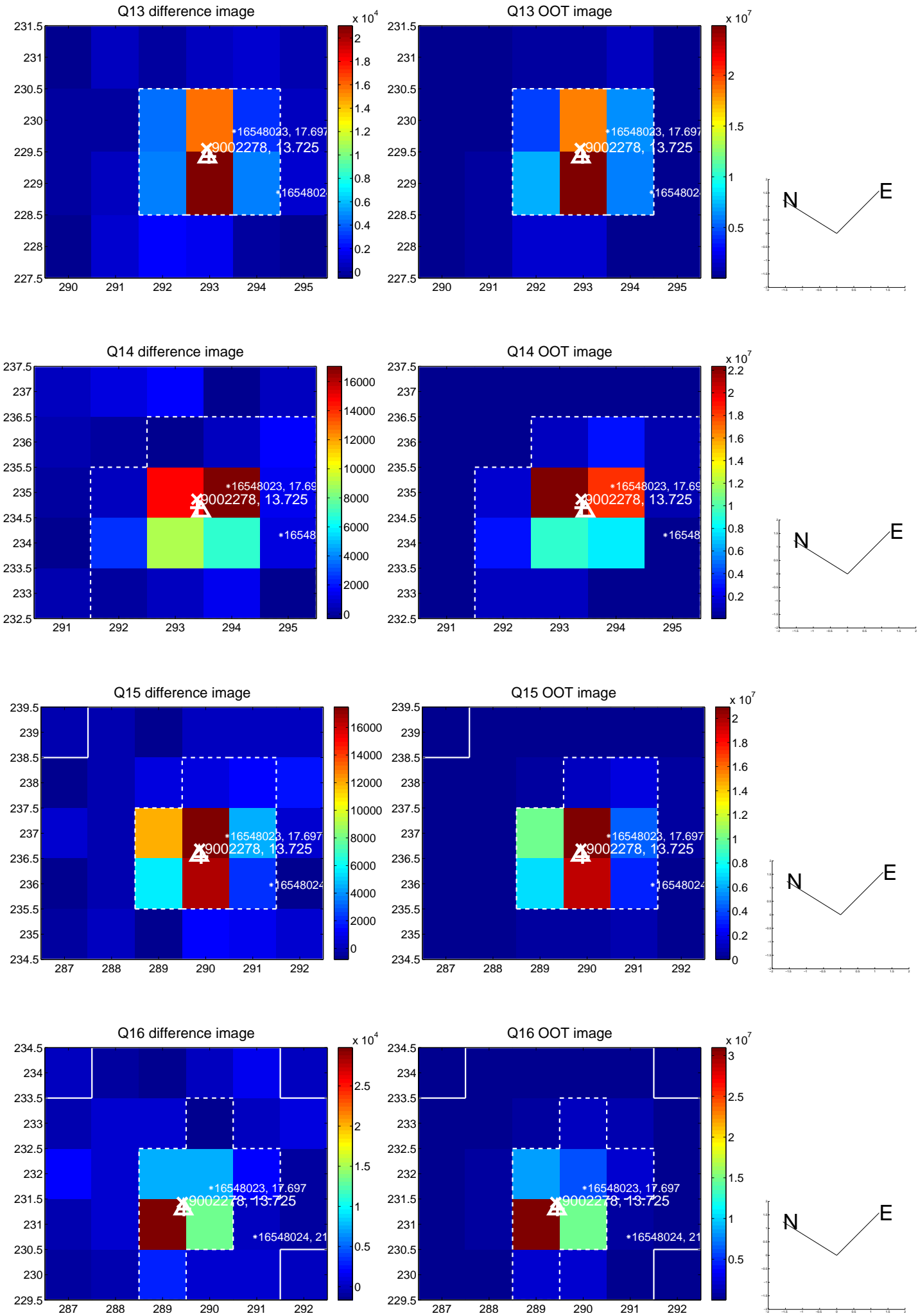
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



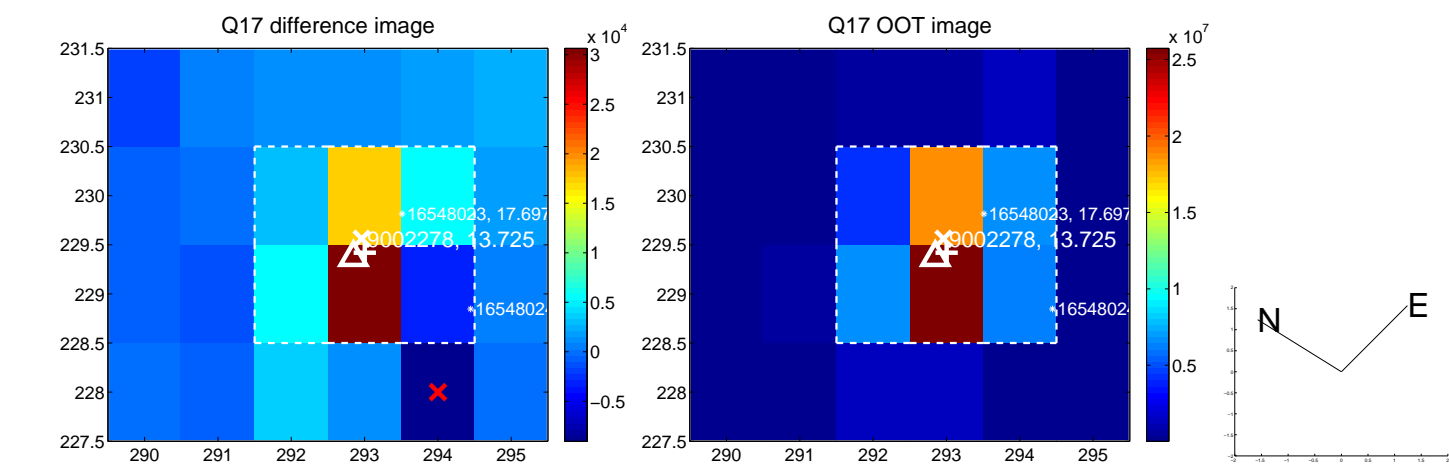
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



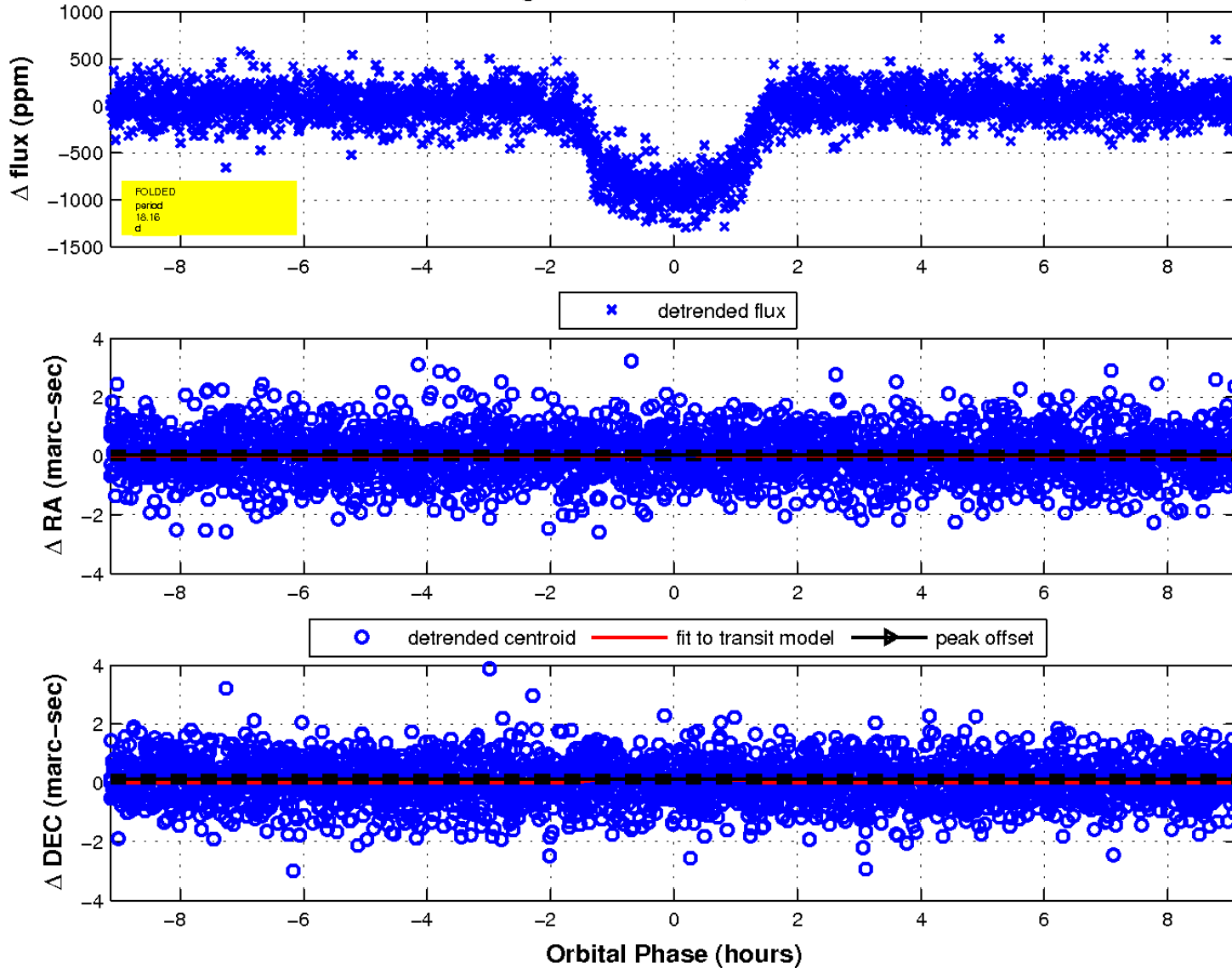
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

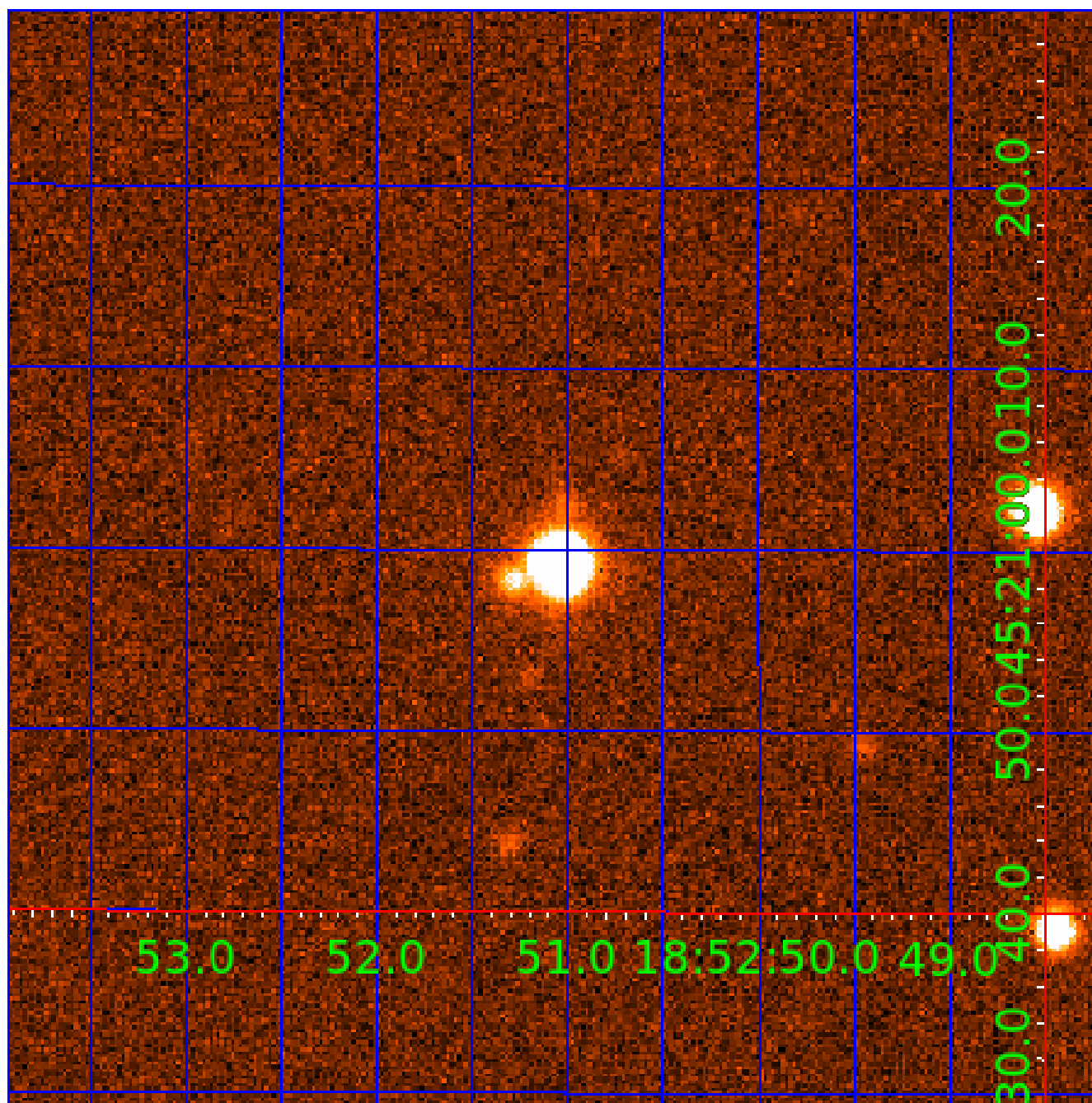


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 009002278

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})
009002278-01	OBS	0701.01	18.164044	144.484811	937.3	3.044	81.6	82.2	0.66	4926	2.25	15.75
009002278-02	OBS	0701.02	5.714886	136.634086	428.6	2.518	57.2	64.8	0.66	4926	1.67	73.58
009002278-03	OBS	0701.03	122.385753	150.411809	719.0	7.435	35.9	36.9	0.66	4926	1.97	1.24
009002278-04	OBS	0701.04	267.281495	322.443501	469.6	7.783	14.3	14.6	0.66	4926	1.53	0.44
009002278-05	OBS	0701.05	12.441950	134.648628	74.8	3.821	8.5	9.1	0.66	4926	0.68	26.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009002278-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
009002278-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—CENT_KIC_POS
009002278-05	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

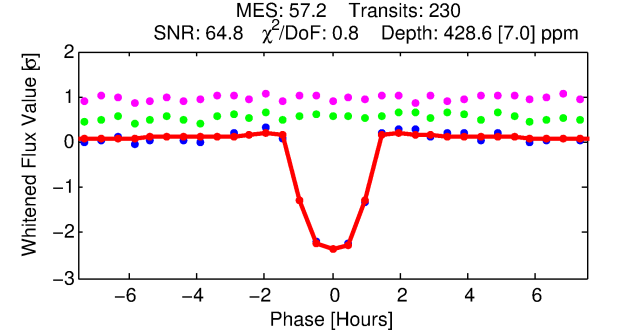
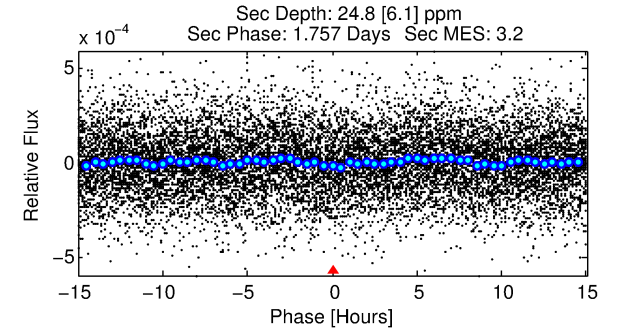
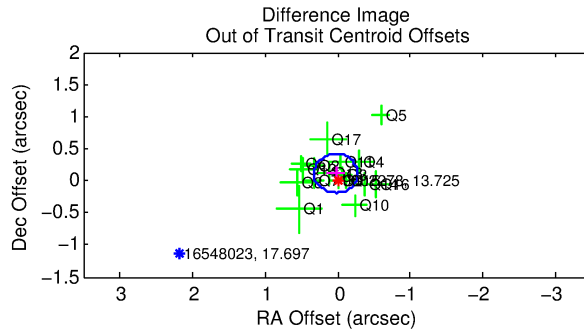
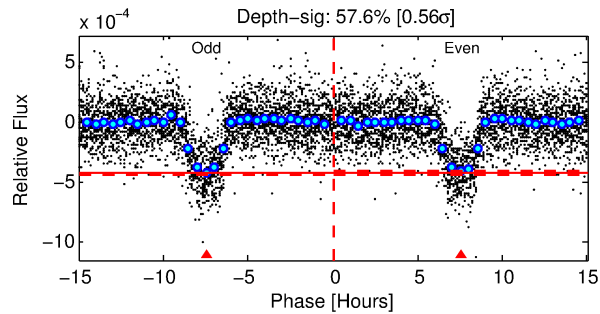
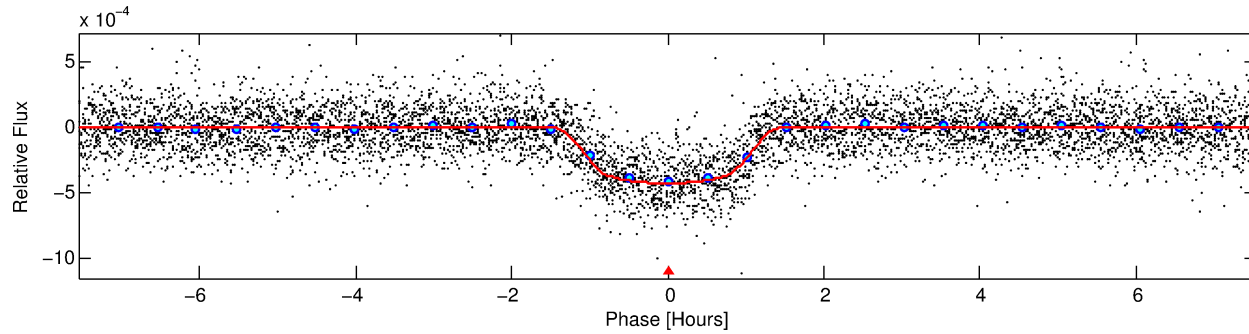
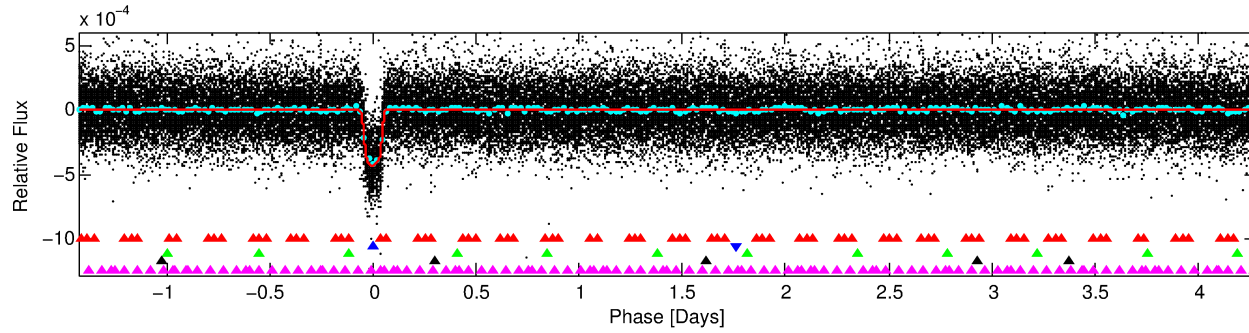
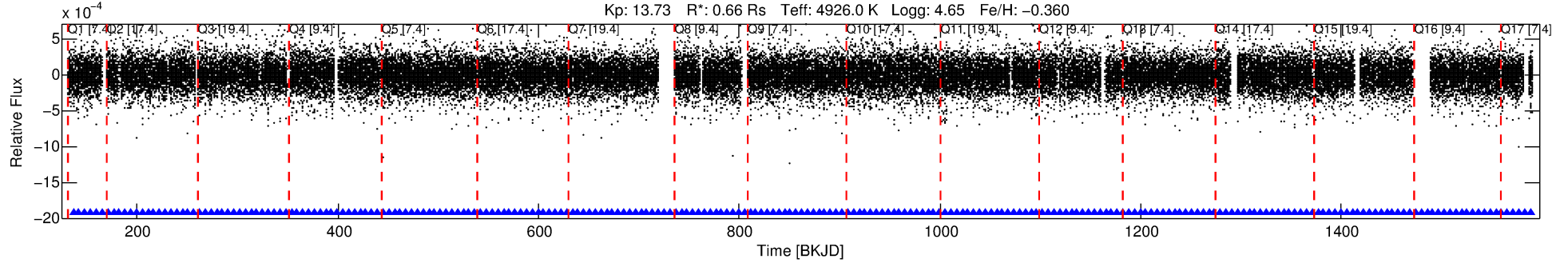
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009002278-02

No Significant Match Found

DV One-Page Summary

KIC: 9002278 Candidate: 2 of 5 Period: 5.715 d
KOI: K00701.02 Name: Kepler-62b Corr: 0.963



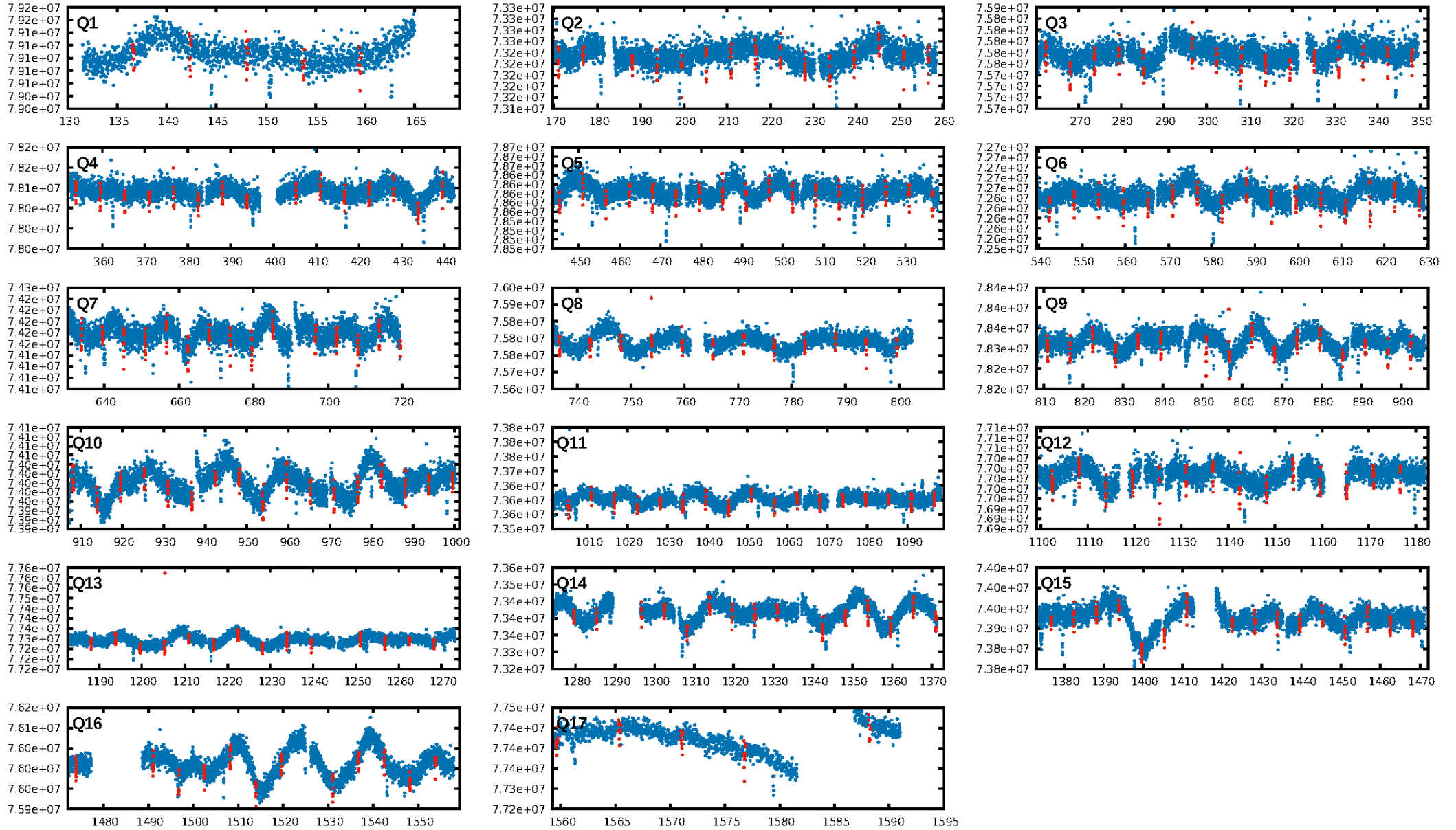
DV Fit Results:

Period = 5.71489 [0.00001] d
Epoch = 136.6341 [0.0007] BKJD
Rp/R* = 0.0231 [0.0018]
a/R* = 8.48 [2.56]
b = 0.90 [0.07]
Seff = 73.58 [8.61]
Teff = 747 [22] K
Rp = 1.67 [0.17] Re
a = 0.0561 [0.0031] AU
Ag = 15.39 [4.69] [3.07 σ]
Teffp = 2287 [173] K [8.82 σ]

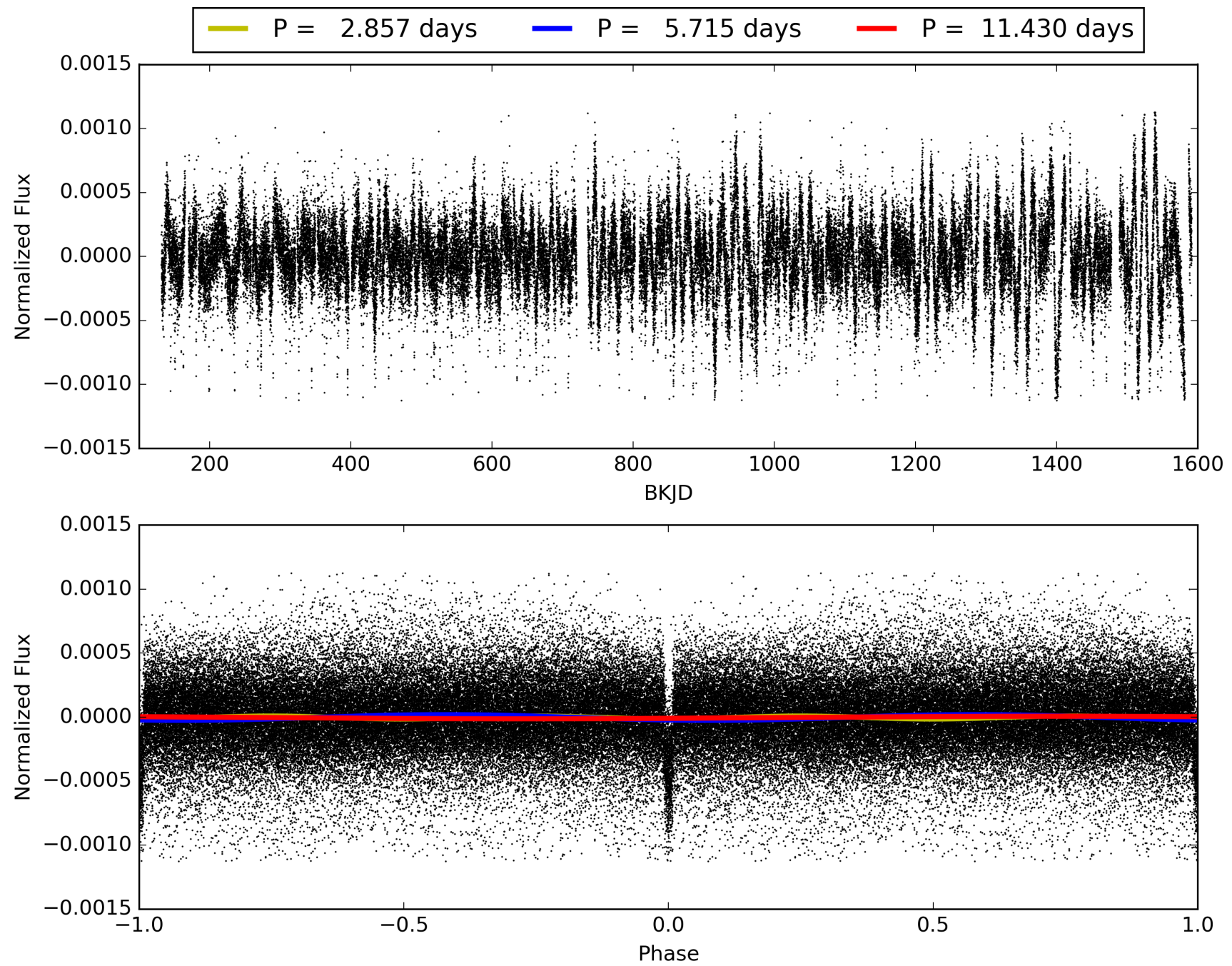
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [35.29 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [220/220]
GhostDiagnostic-chr: 6.026
Centroid-sig: 60.4%
Centroid-so: 0.421 arcsec [2.52 σ]
OotOffset-rm: 0.117 arcsec [1.16 σ]
KicOffset-rm: 0.424 arcsec [4.08 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009002278-02, PDC Light Curves

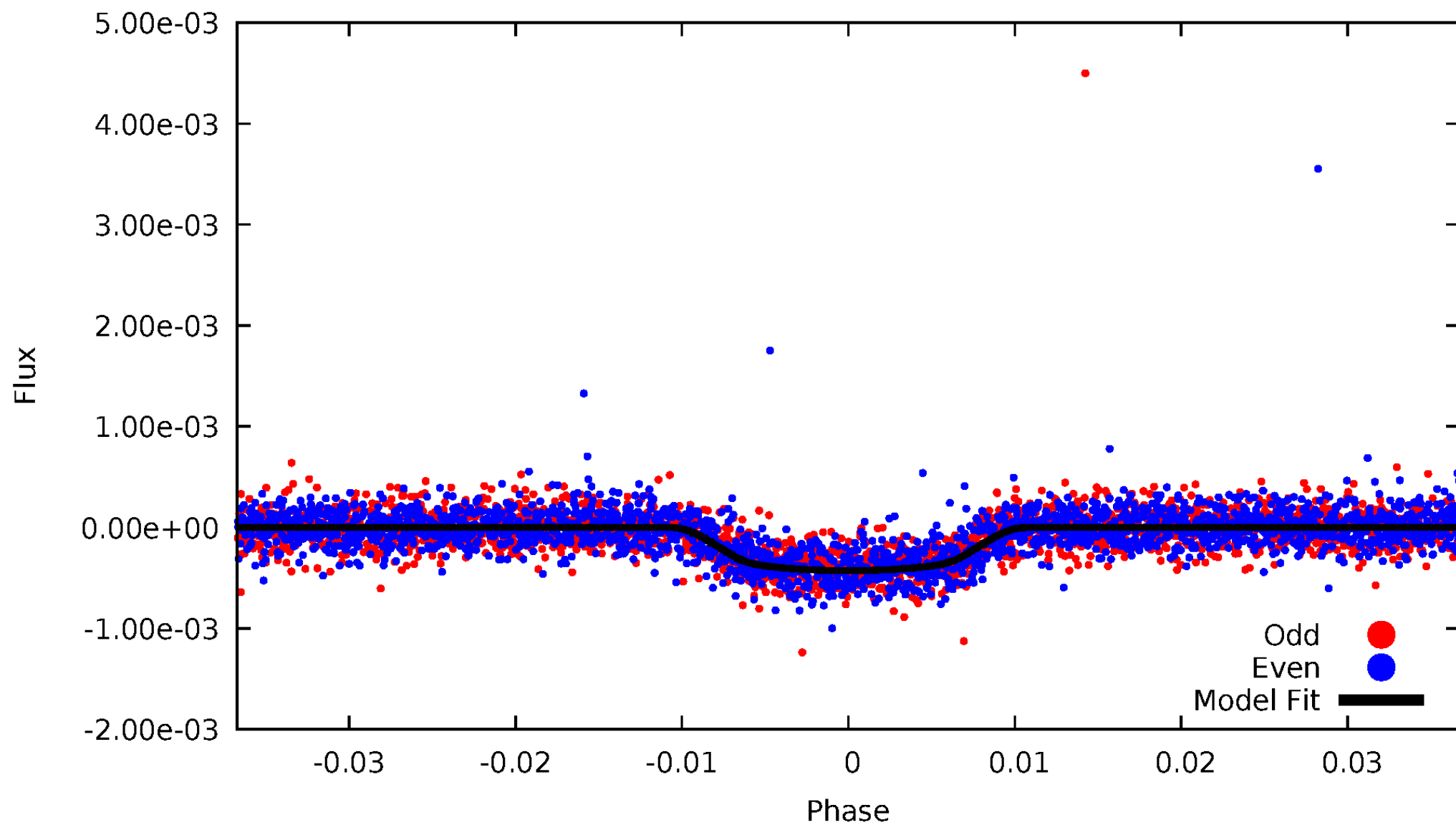


TCE 009002278-02



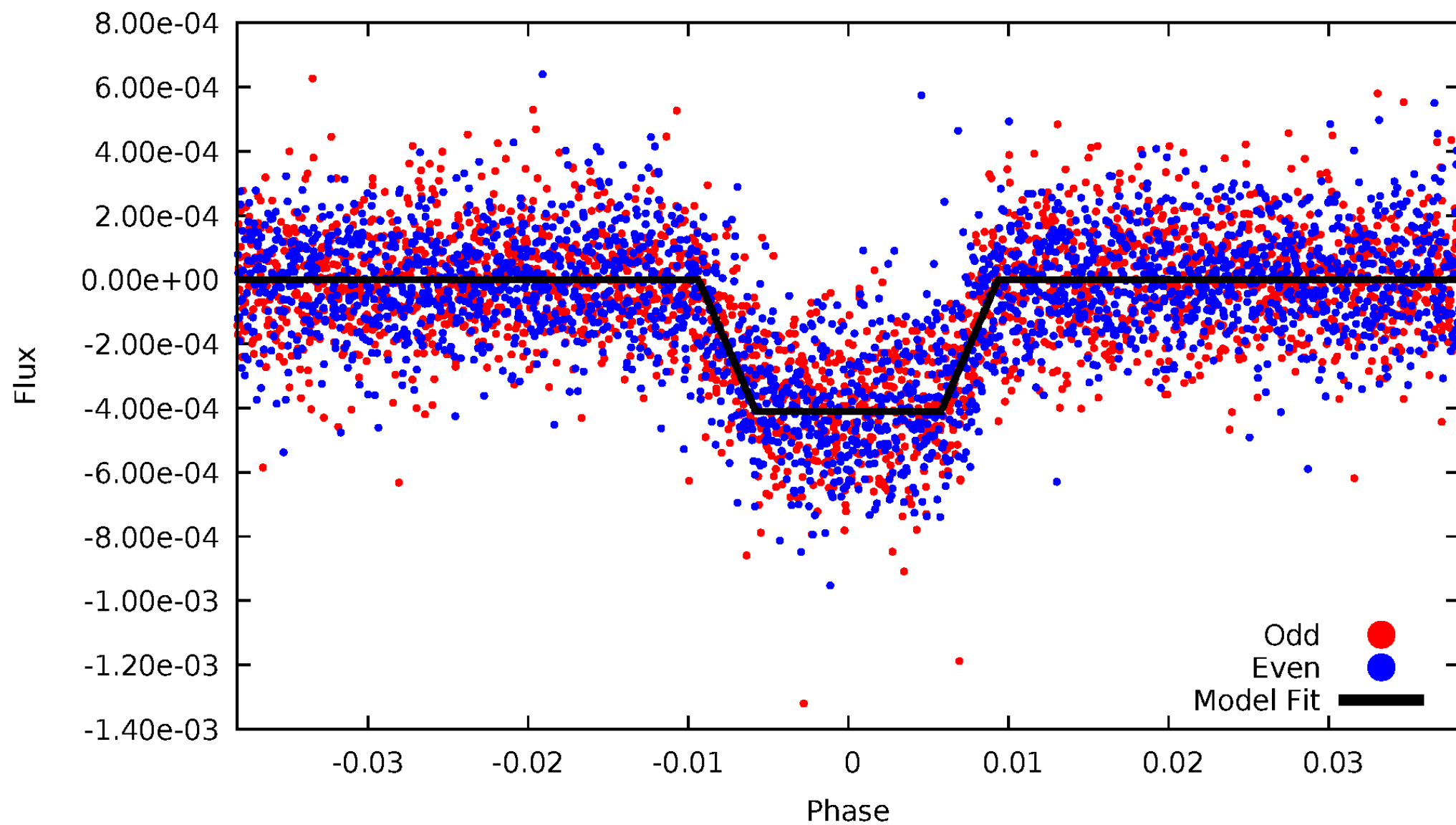
DV Odd/Even

TCE 009002278-02



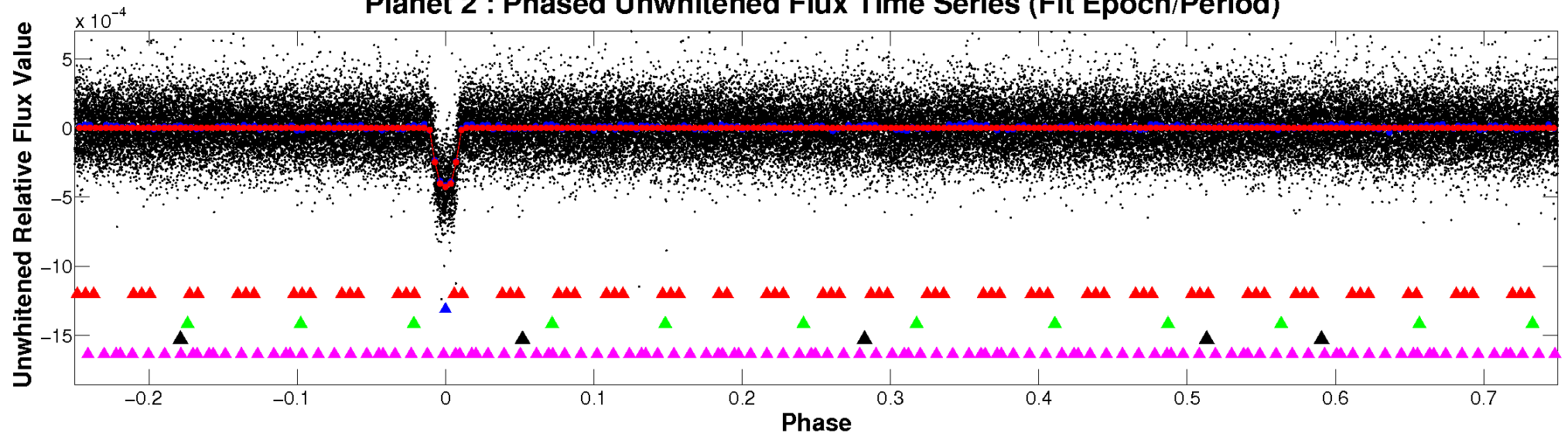
ALT Odd/Even

TCE 009002278-02

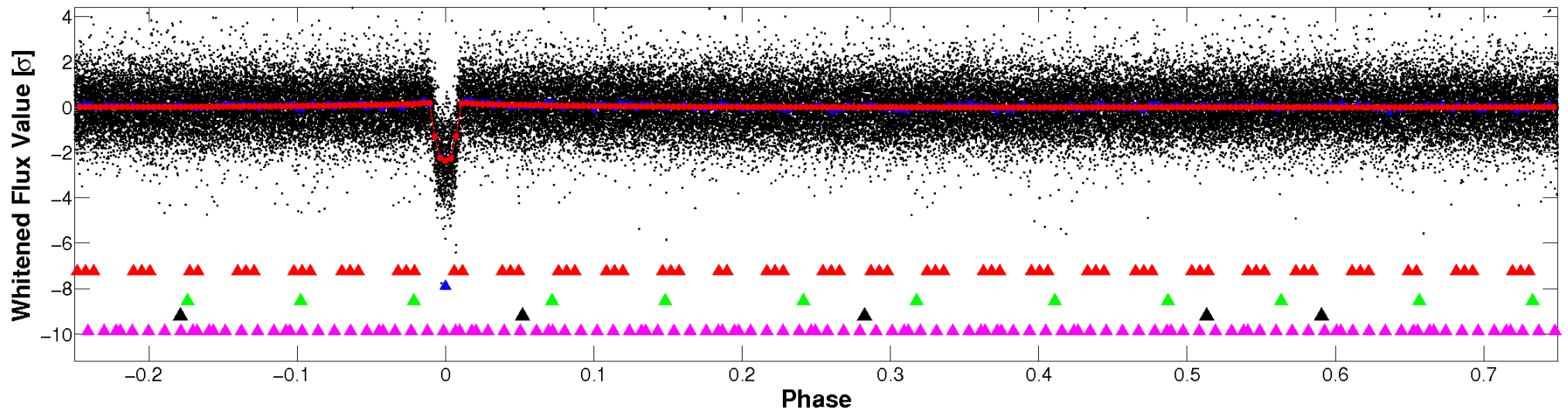


Non-Whitened Vs. Whitened Light Curve

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

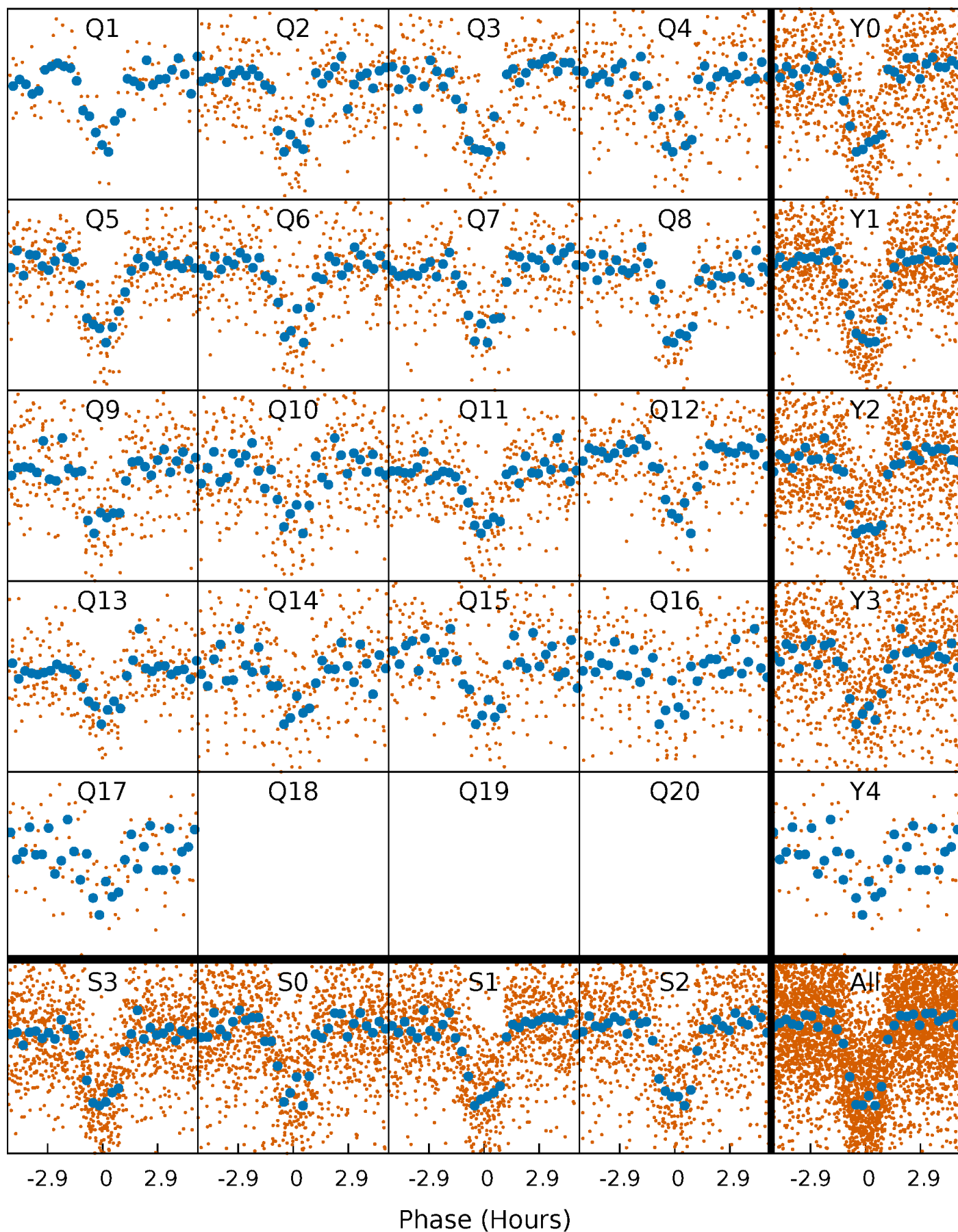


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



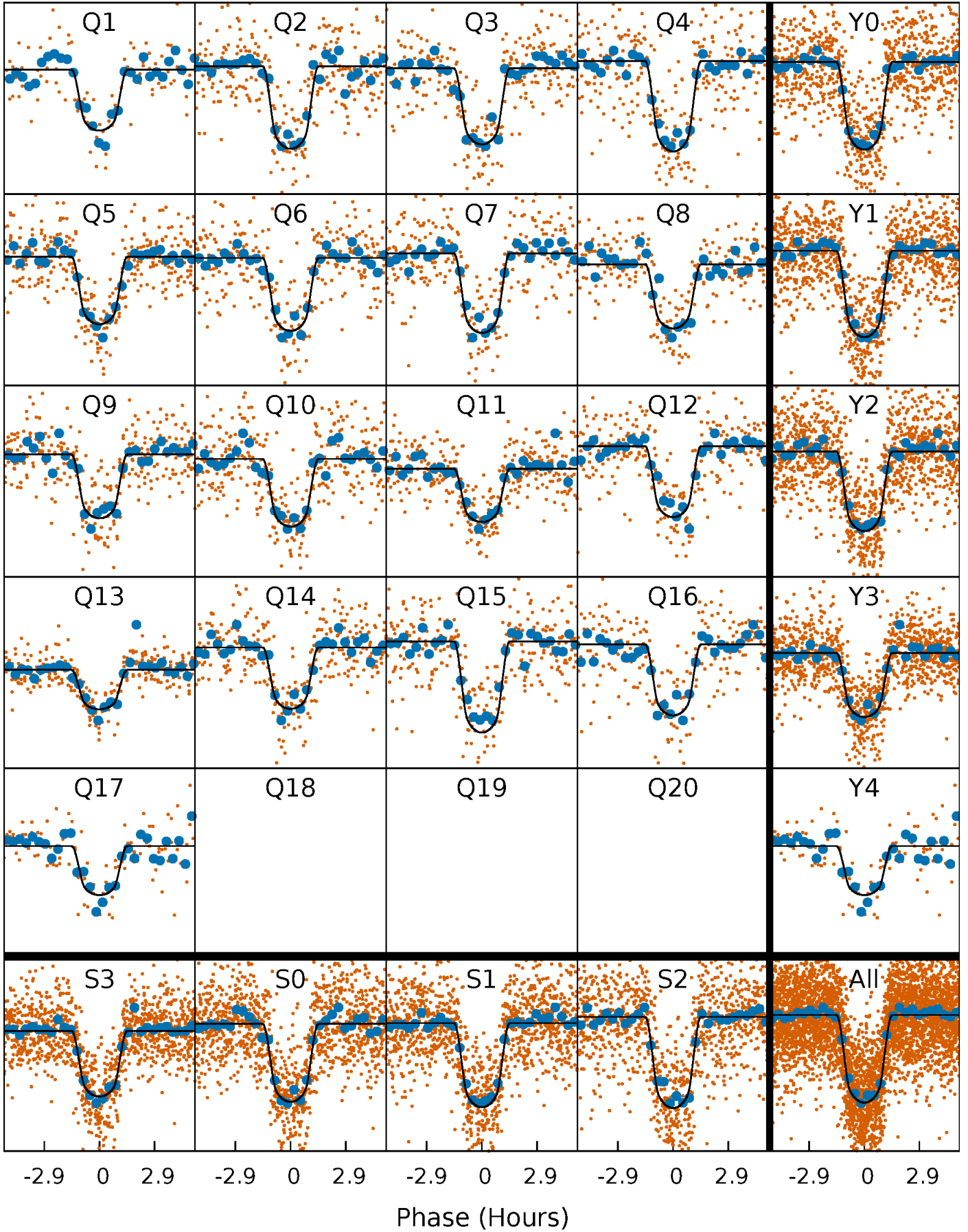
PDC Quarter-Phased Transit Curves

TCE 009002278-02 P= 5.714886 Days $T_0=136.634086$ (BKJD)



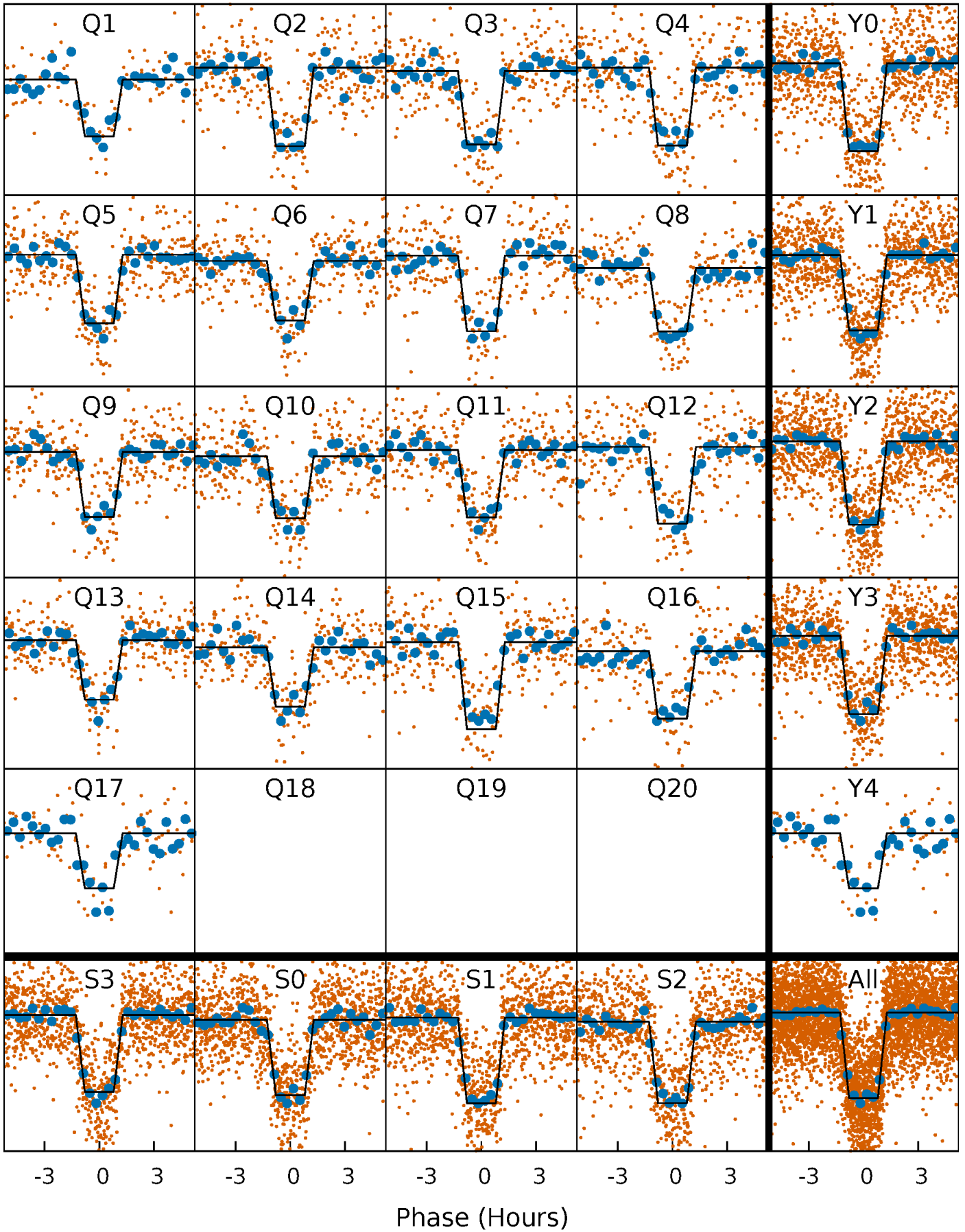
DV Quarter-Phased Transit Curves

TCE 009002278-02 $P = 5.714886$ Days $T_0 = 136.634086$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

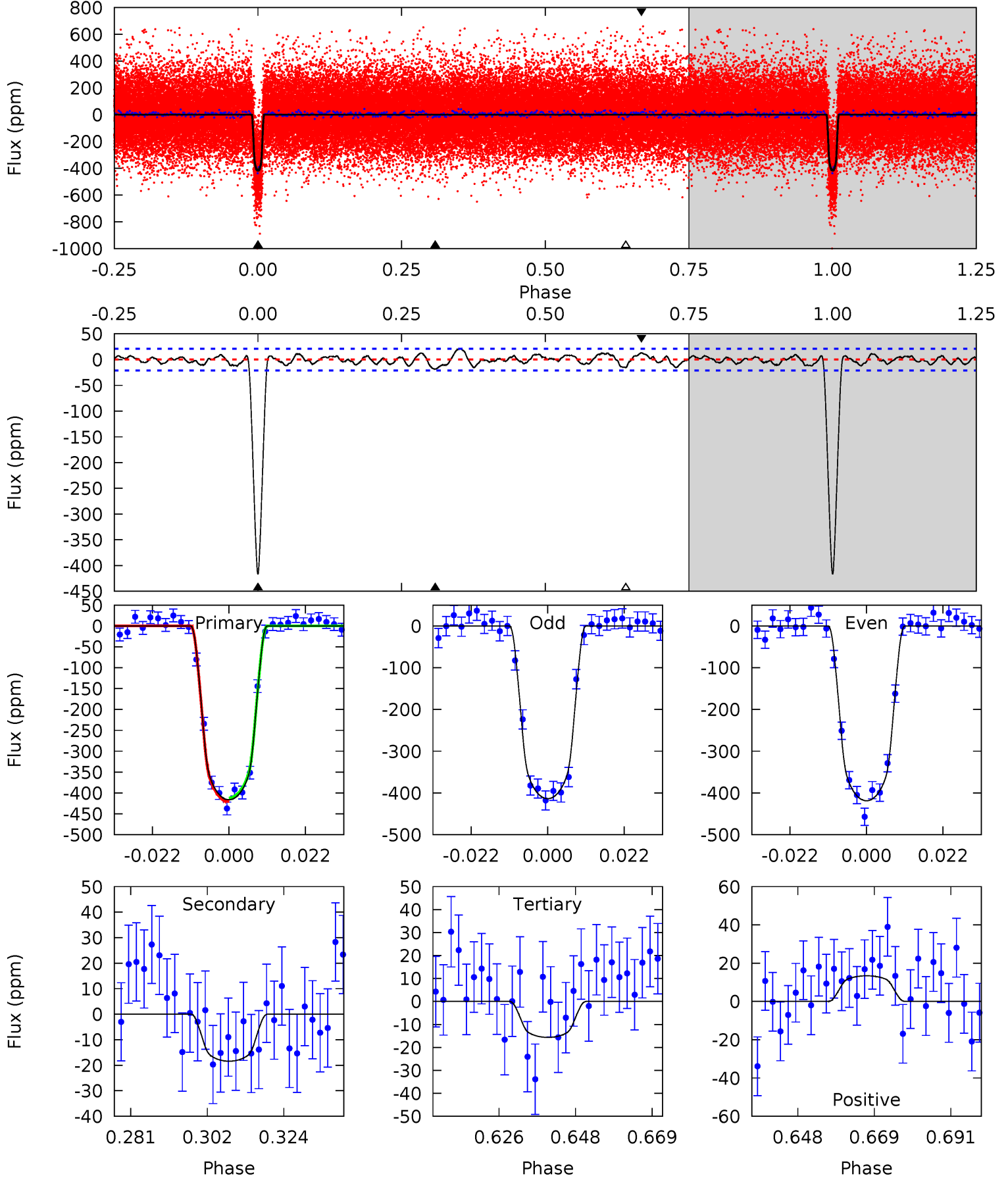
TCE 009002278-02 $P = 5.714892$ Days $T_0 = 136.633355$ (BKJD)



DV Model-Shift Uniqueness Test

009002278-02, P = 5.714886 Days, E = 130.919200 Days

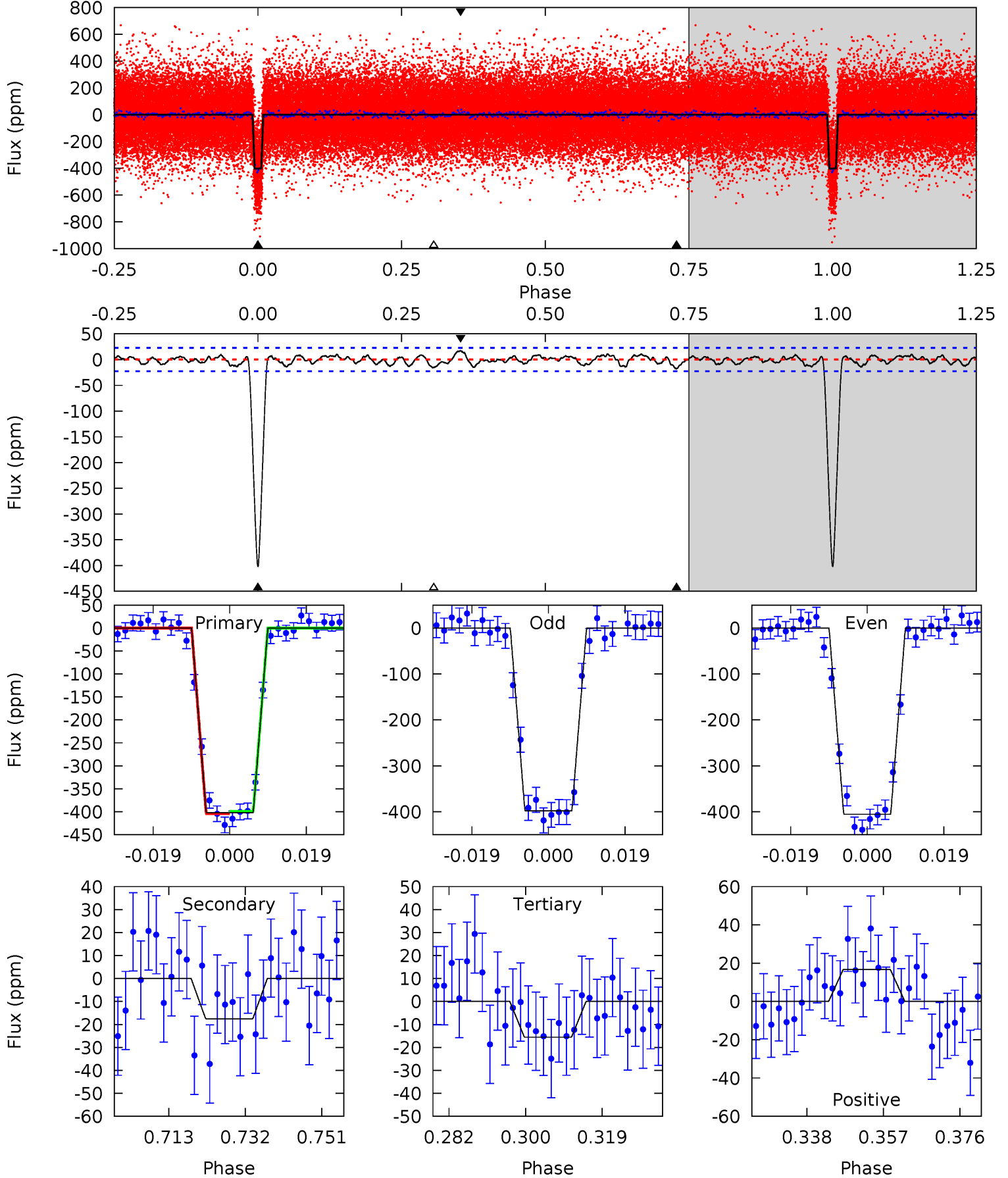
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
96.1	4.25	3.61	3.09	4.88	2.30	1.60	92.5	93.0	0.64	1.16	0.59	0.99	0.05	0.91



Alt Model-Shift Uniqueness Test

009002278-02, P = 5.714892 Days, E = 130.918463 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.7	3.79	3.36	3.62	4.90	2.35	1.41	83.3	83.1	0.43	0.18	0.81	1.00	0.04	0.54



Stellar Parameters For KIC 009002278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4926^{+98}_{-98}	$4.653^{+0.017}_{-0.049}$	$-0.360^{+0.150}_{-0.150}$	$0.662^{+0.041}_{-0.027}$	$0.727^{+0.029}_{-0.059}$	$3.535^{+0.298}_{-0.564}$
	+2%/-2%	+0%/-1%	+42%/-42%	+6%/-4%	+4%/-8%	+8%/-16%
Source	SPE62	SPE62	SPE62	DSEP		

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

Secondary Eclipse Parameters for KIC 009002278-02 / KOI 0701.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 4	$1.69^{+0.15}_{-0.14}$	1049^{+25}_{-22}	2796^{+111}_{-109}	11^{+3}_{-3}
Alt.	-18 ± 5	$1.48^{+0.15}_{-0.14}$	1050^{+26}_{-25}	2892^{+122}_{-143}	14^{+4}_{-4}

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

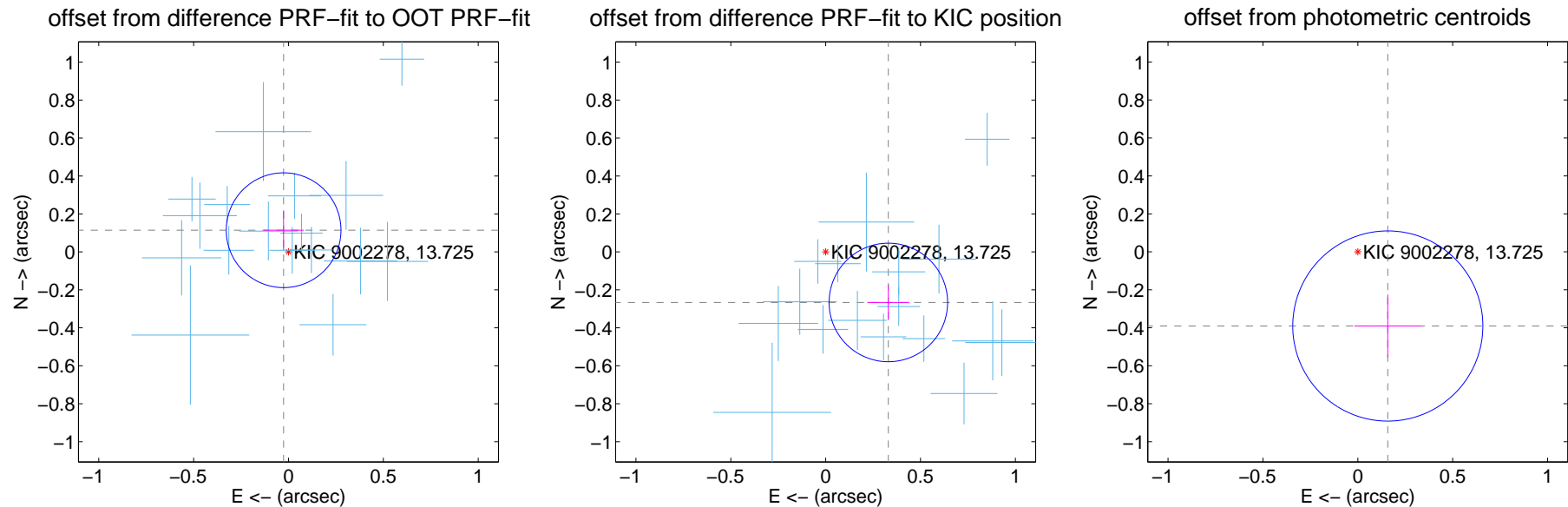
DV Centroid Data

Supplemental centroid analysis for 009002278-02. Kepler magnitude: 13.72. Transit SNR 64.76

There are 17 quarters with good PRF difference image offsets

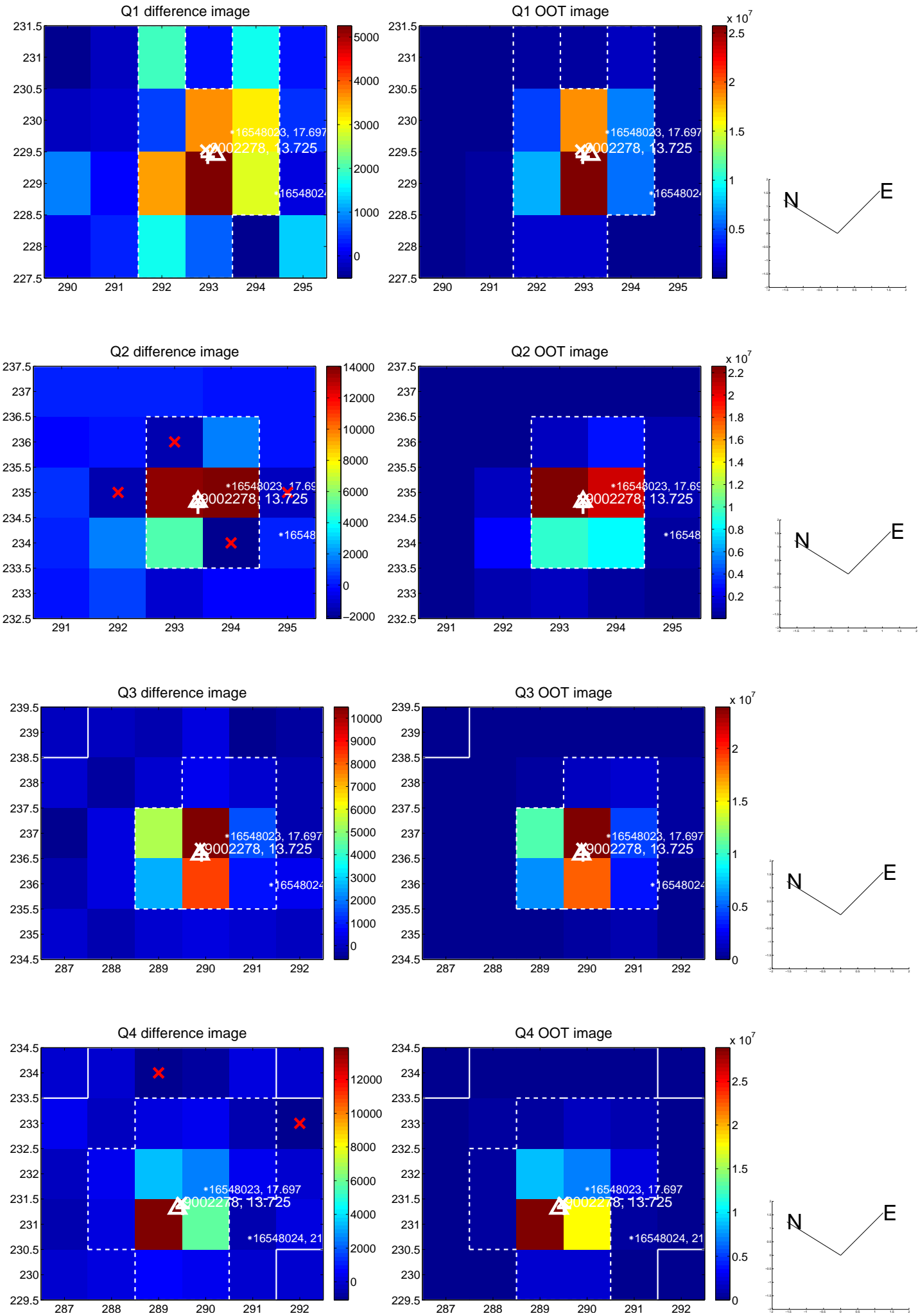
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.117 ± 0.101	1.16	0.026 ± 0.106	0.114 ± 0.105
PRF-fit source offset from KIC position	0.424 ± 0.104	4.08	-0.330 ± 0.111	-0.266 ± 0.093
photometric centroid source offset	0.42 ± 0.17	2.52	-0.16 ± 0.18	-0.39 ± 0.17

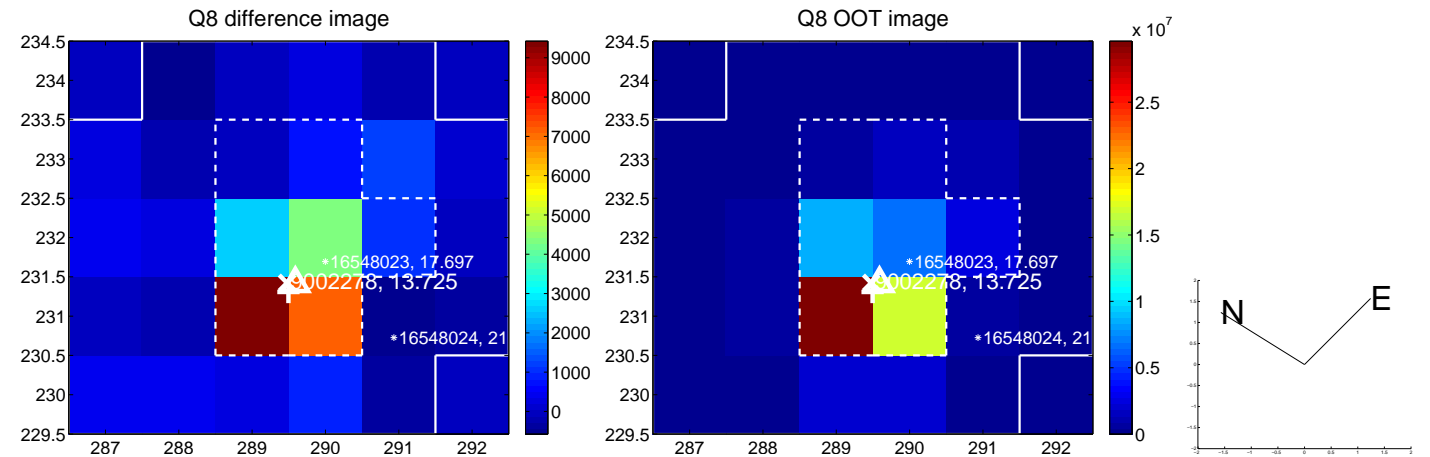
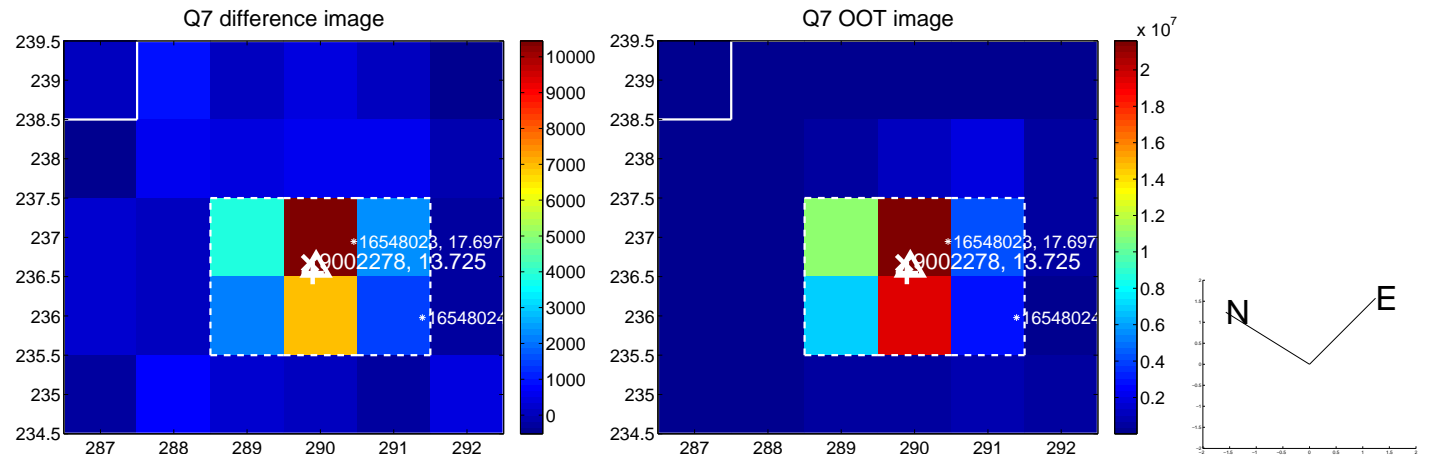
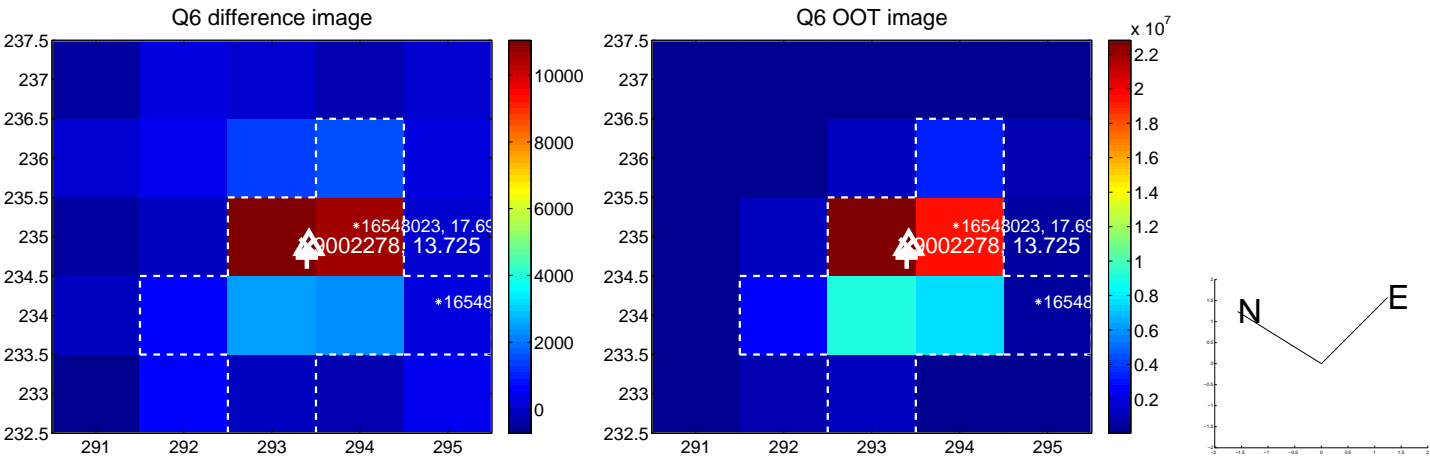
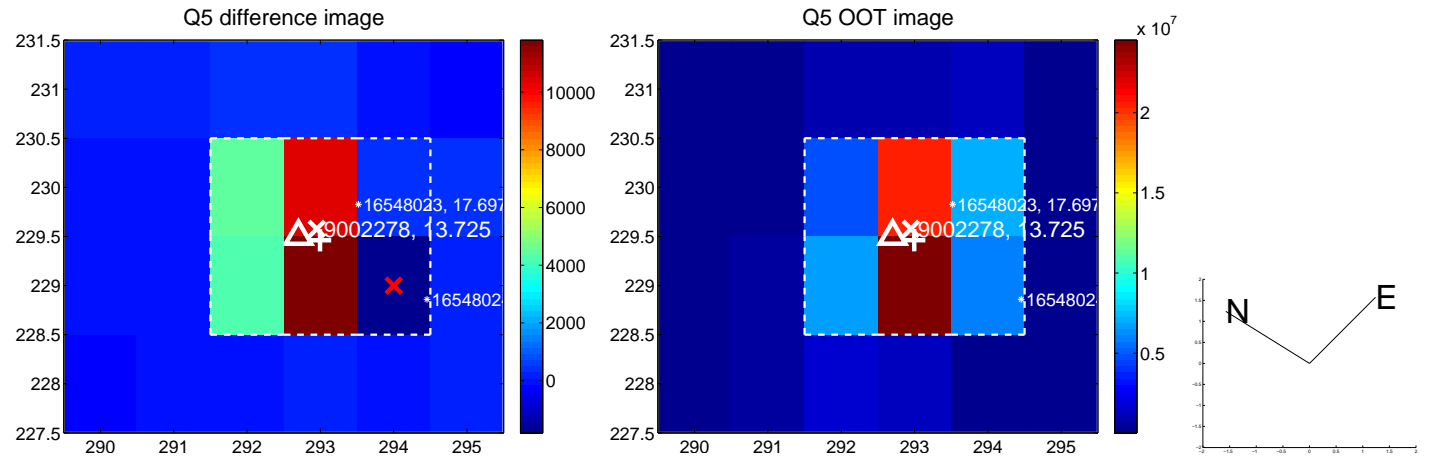


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

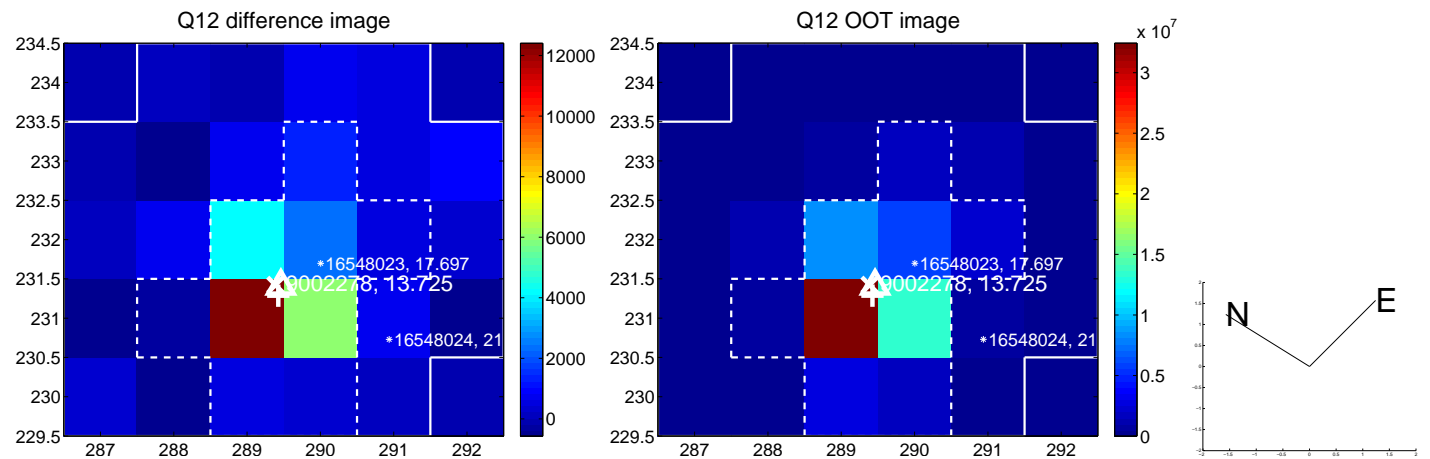
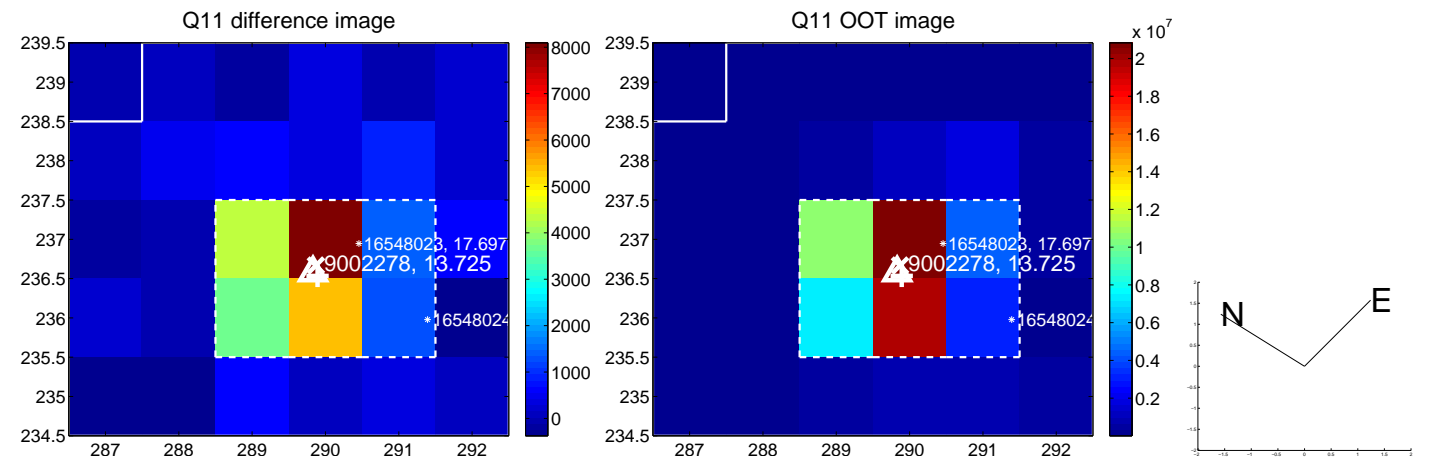
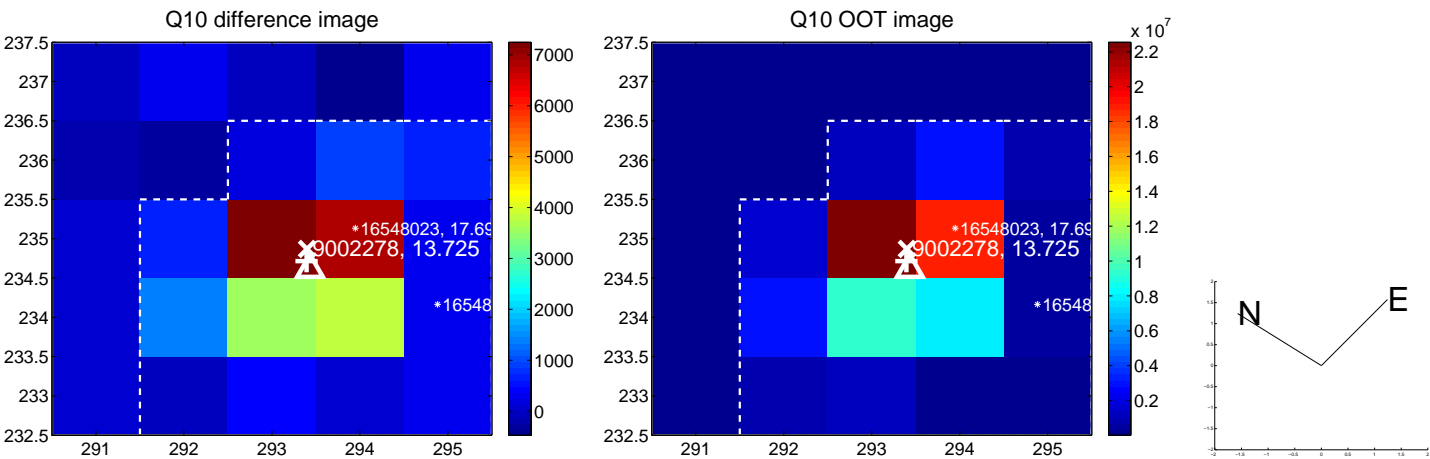
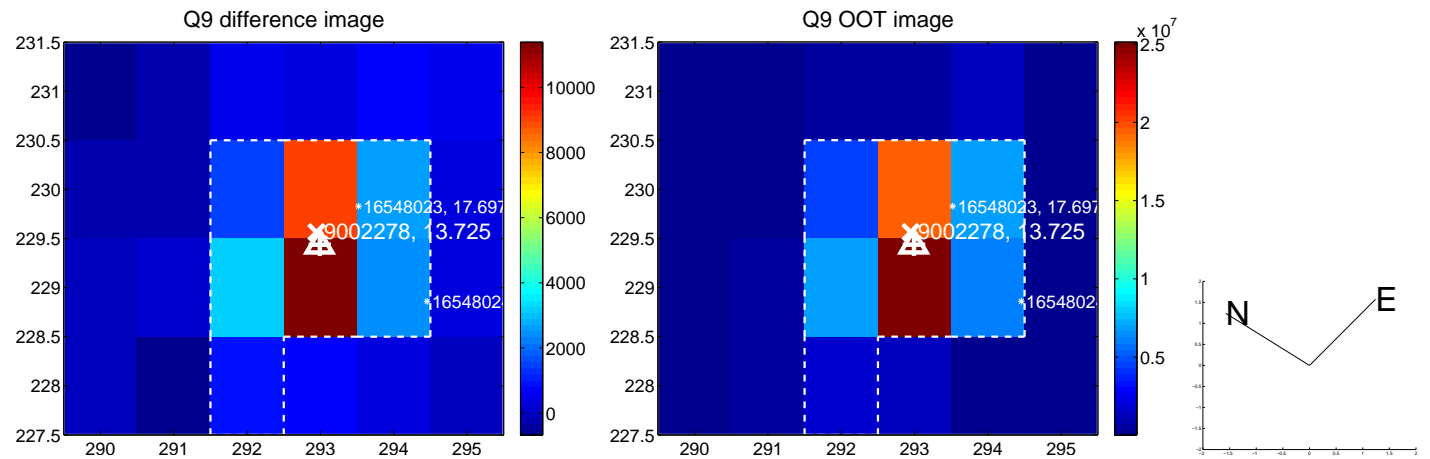
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



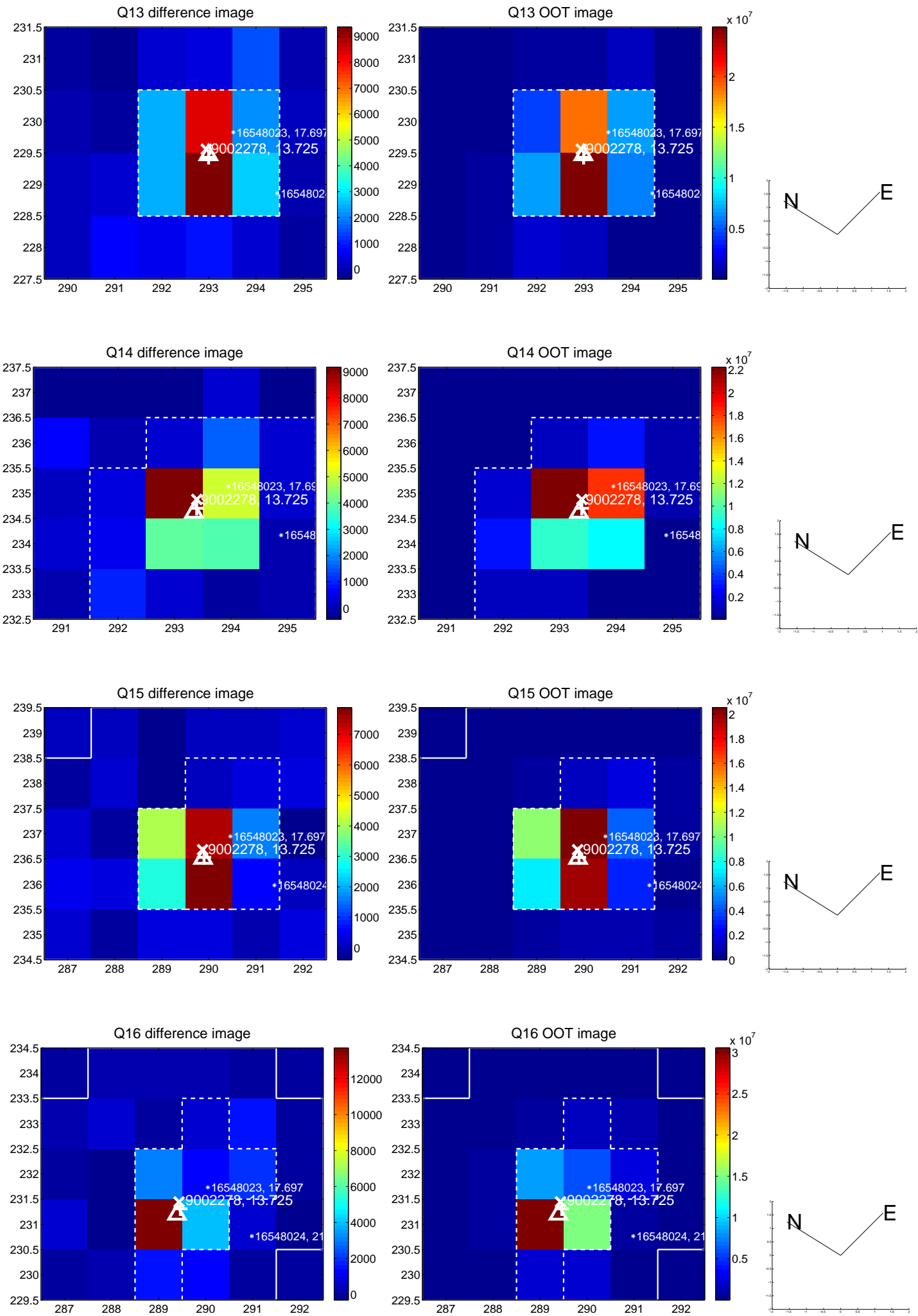
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



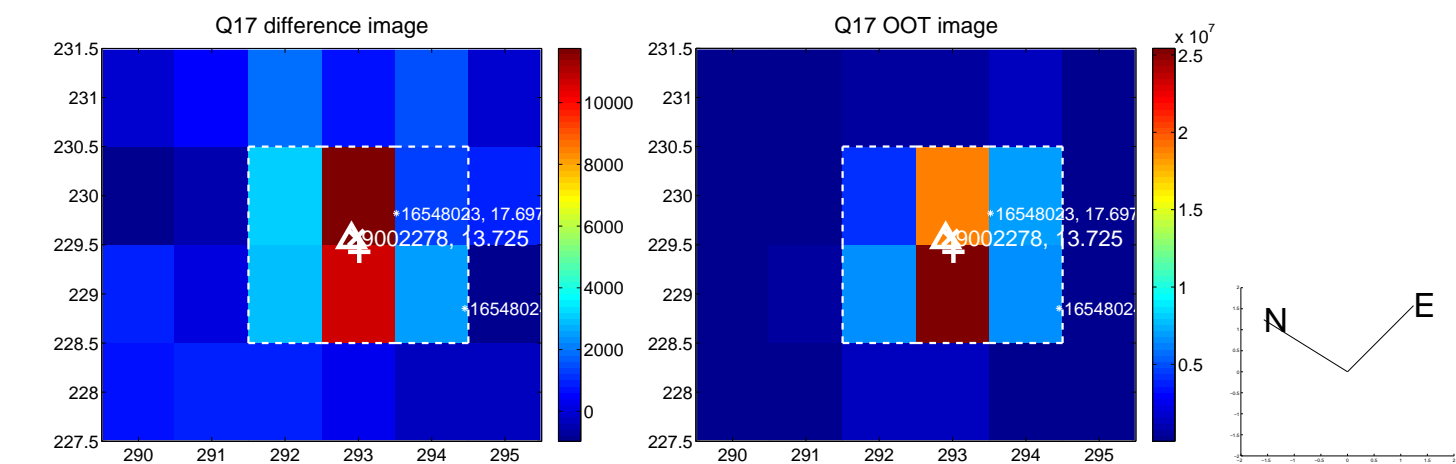
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



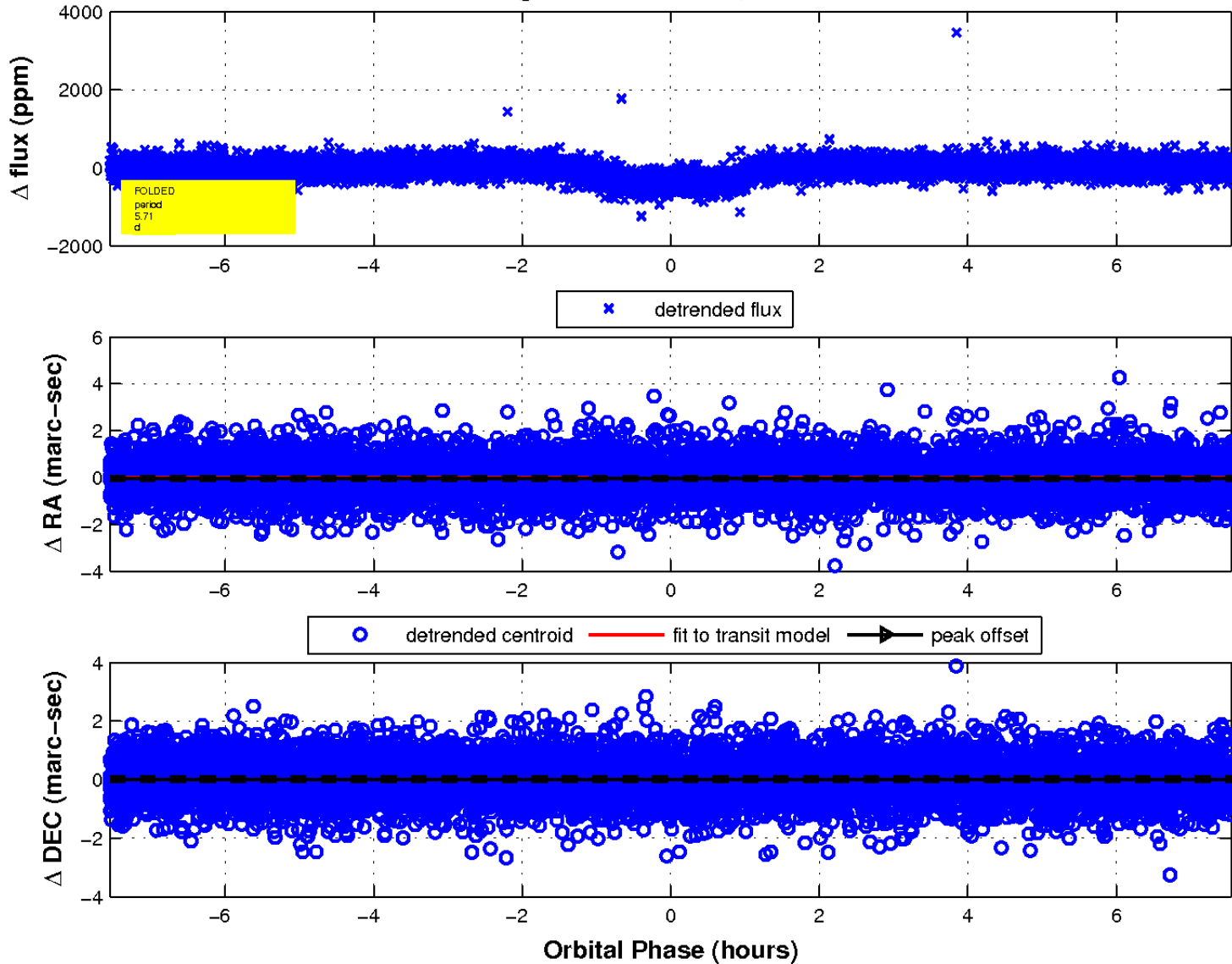
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

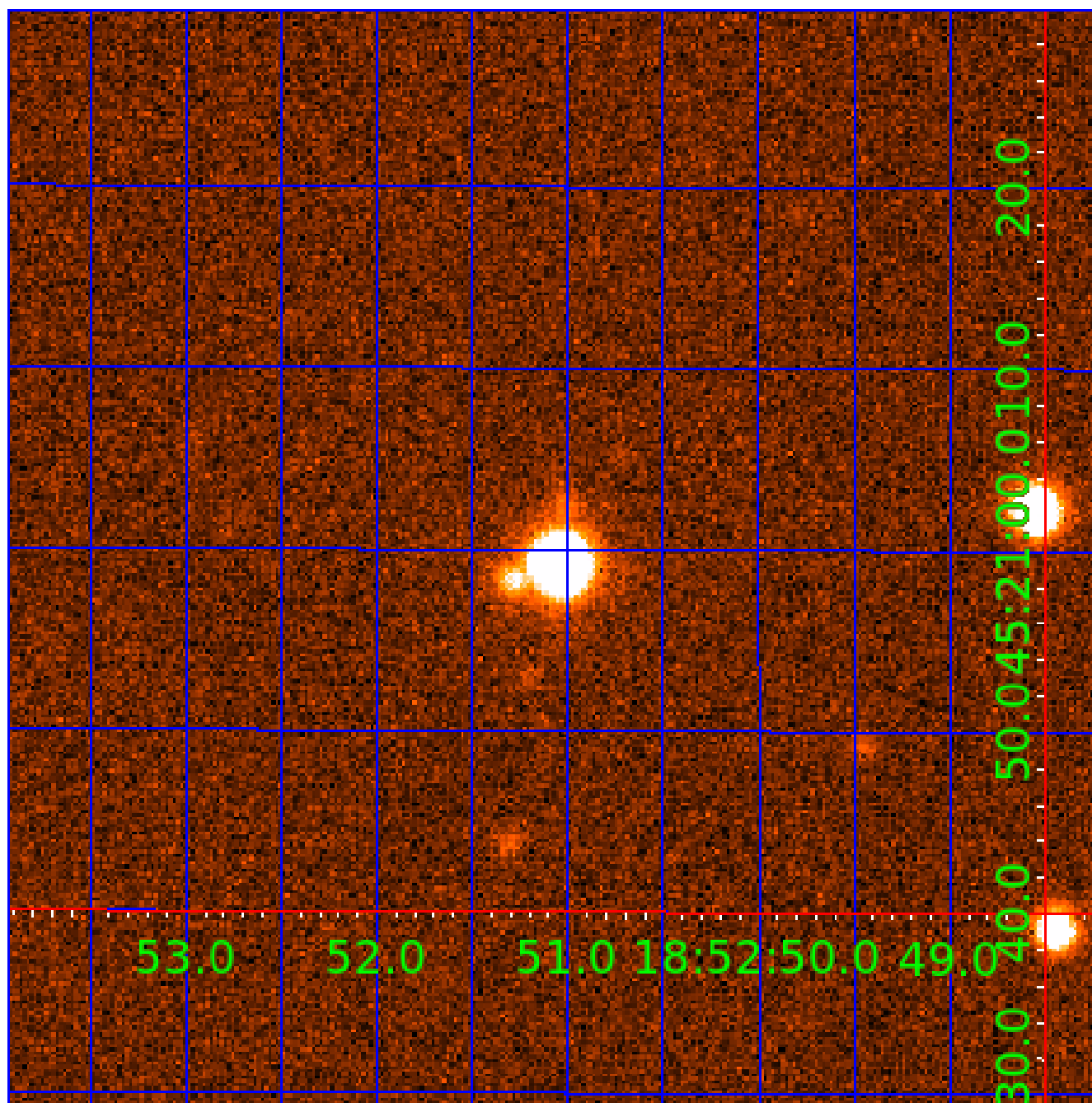


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 009002278

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})
009002278-01	OBS	0701.01	18.164044	144.484811	937.3	3.044	81.6	82.2	0.66	4926	2.25	15.75
009002278-02	OBS	0701.02	5.714886	136.634086	428.6	2.518	57.2	64.8	0.66	4926	1.67	73.58
009002278-03	OBS	0701.03	122.385753	150.411809	719.0	7.435	35.9	36.9	0.66	4926	1.97	1.24
009002278-04	OBS	0701.04	267.281495	322.443501	469.6	7.783	14.3	14.6	0.66	4926	1.53	0.44
009002278-05	OBS	0701.05	12.441950	134.648628	74.8	3.821	8.5	9.1	0.66	4926	0.68	26.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009002278-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
009002278-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—CENT_KIC_POS
009002278-05	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

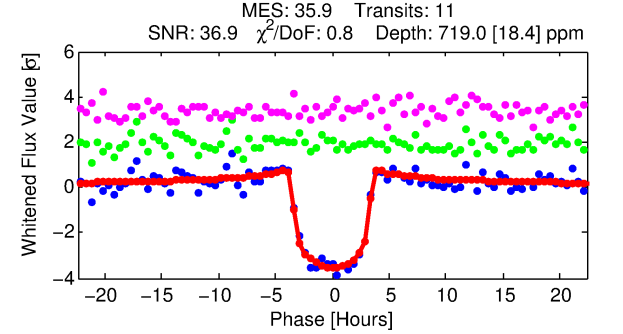
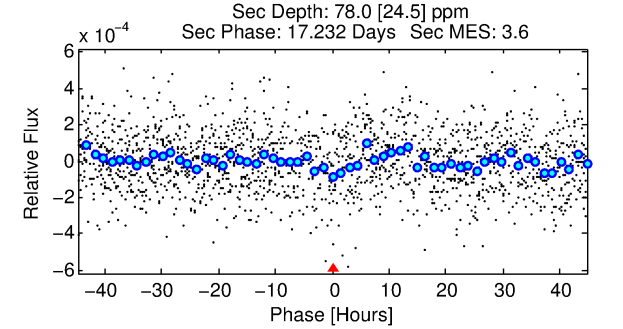
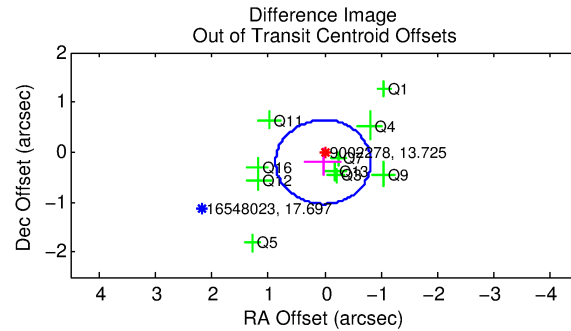
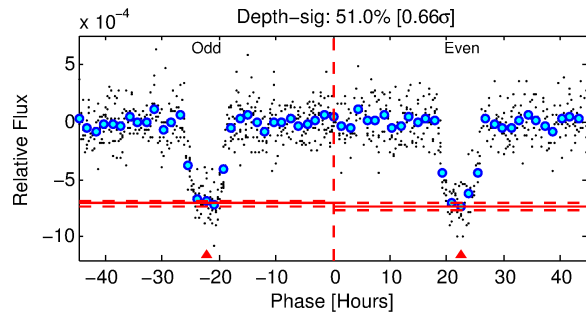
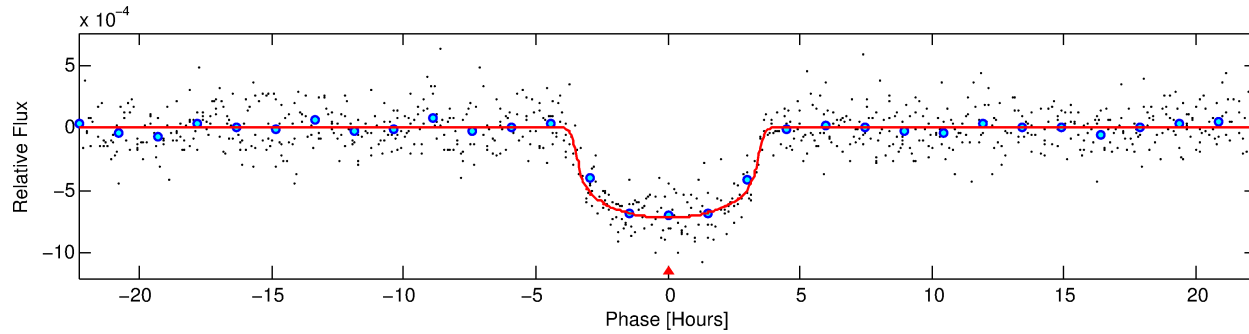
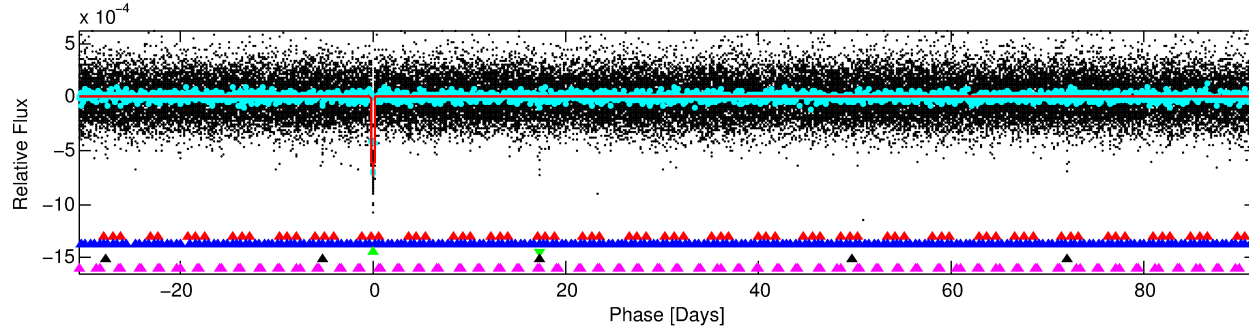
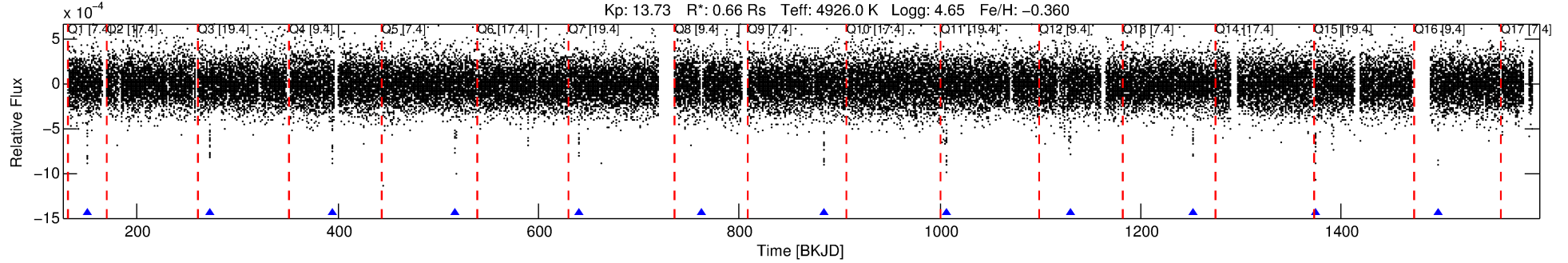
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009002278-03

No Significant Match Found

DV One-Page Summary

KIC: 9002278 Candidate: 3 of 5 Period: 122.386 d
KOI: K00701.03 Name: Kepler-62e Corr: 0.984



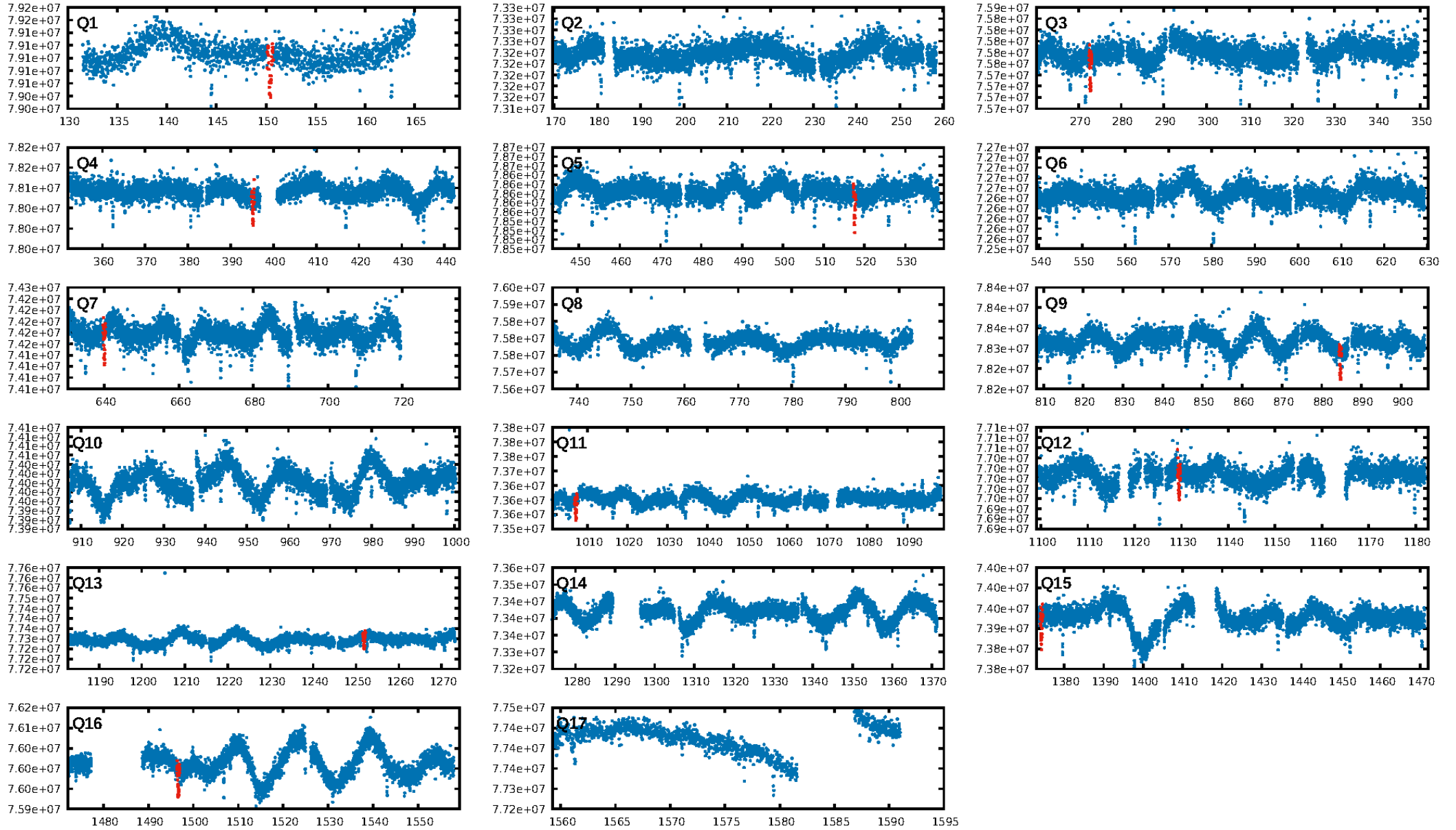
DV Fit Results:

Period = 122.38575 [0.00047] d
Epoch = 150.4118 [0.0029] BKJD
Rp/R* = 0.0273 [0.0027]
a/R* = 82.79 [29.21]
b = 0.79 [0.17]
Seff = 1.24 [0.14]
Teq = 269 [8] K
Rp = 1.97 [0.23] Re
a = 0.4323 [0.0241] AU
Ag = 2059.99 [784.11] [2.63σ]
Teffp = 2801 [266] K [9.53σ]

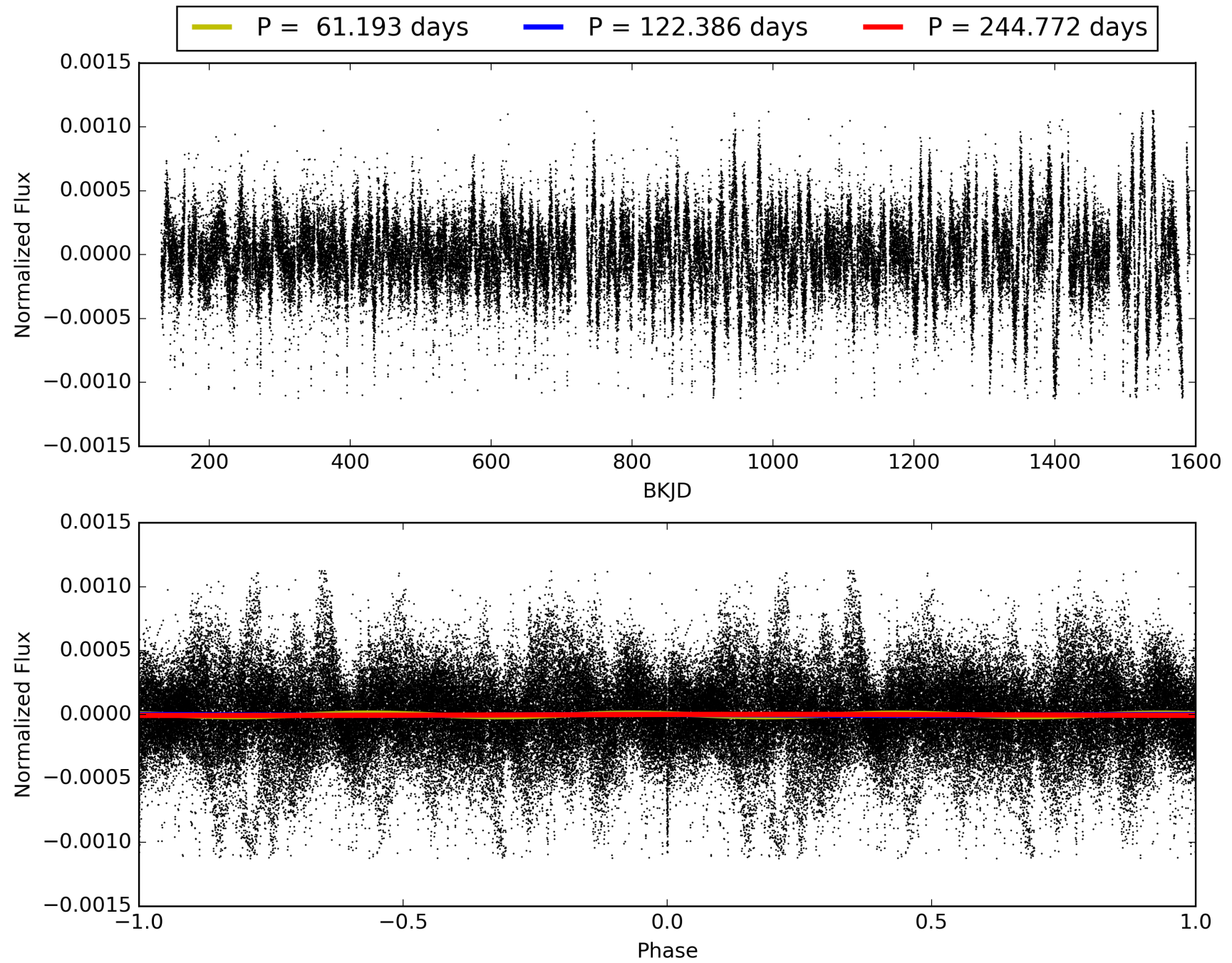
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [311.35σ]
LongPeriod-sig: 100.0% [323.09σ]
ModelChiSquare2-sig: 55.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.55e-252
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 19.11
Centroid-sig: 99.8%
Centroid-so: 0.469 arcsec [1.75σ]
OotOffset-rm: 0.199 arcsec [0.71σ]
KicOffset-rm: 0.694 arcsec [2.56σ]
OotOffset-st: 0/3/3/4 [10]
KicOffset-st: 0/3/3/4 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 0.50 [5/10]

TCE 009002278-03, PDC Light Curves

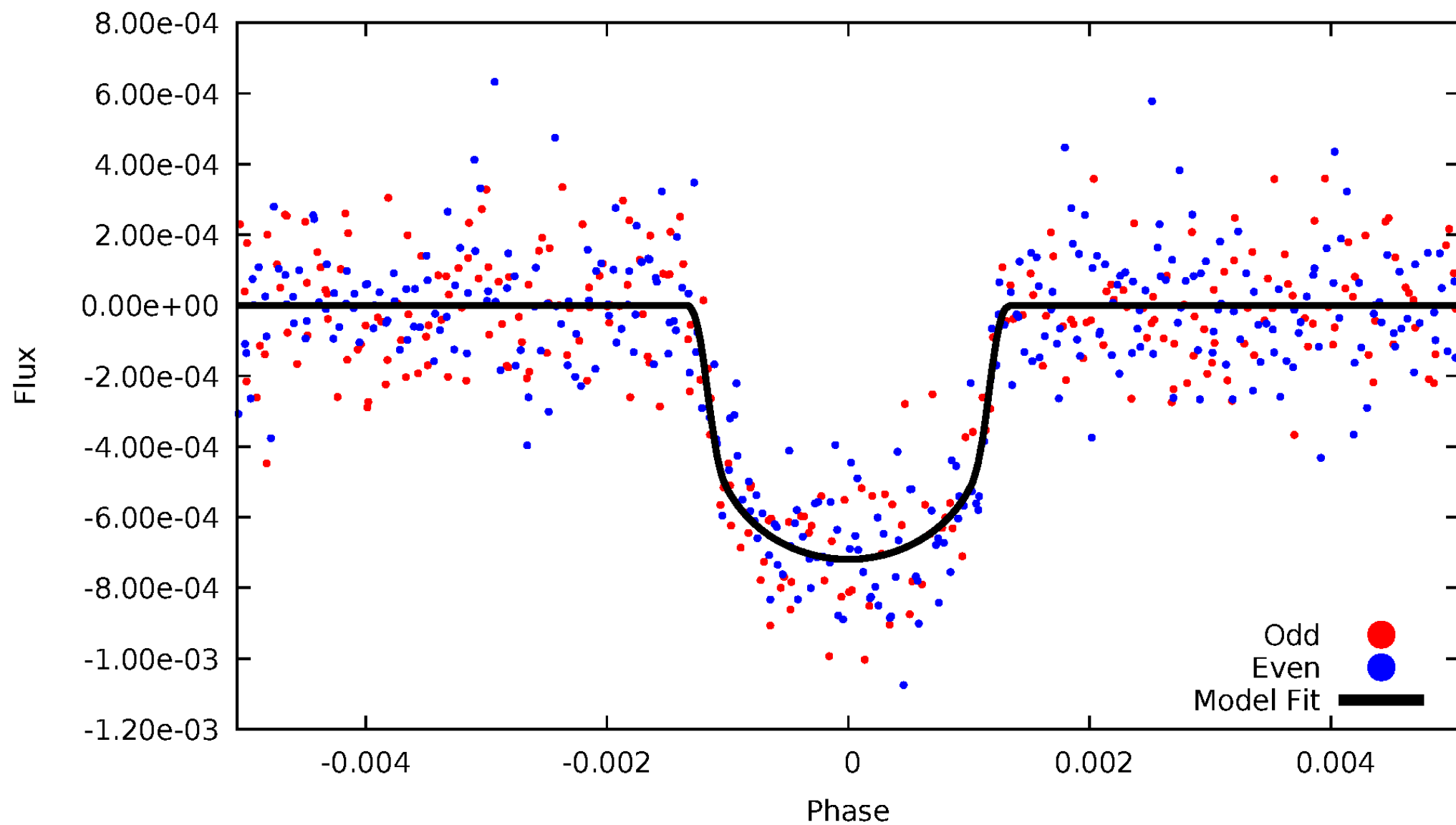


TCE 009002278-03



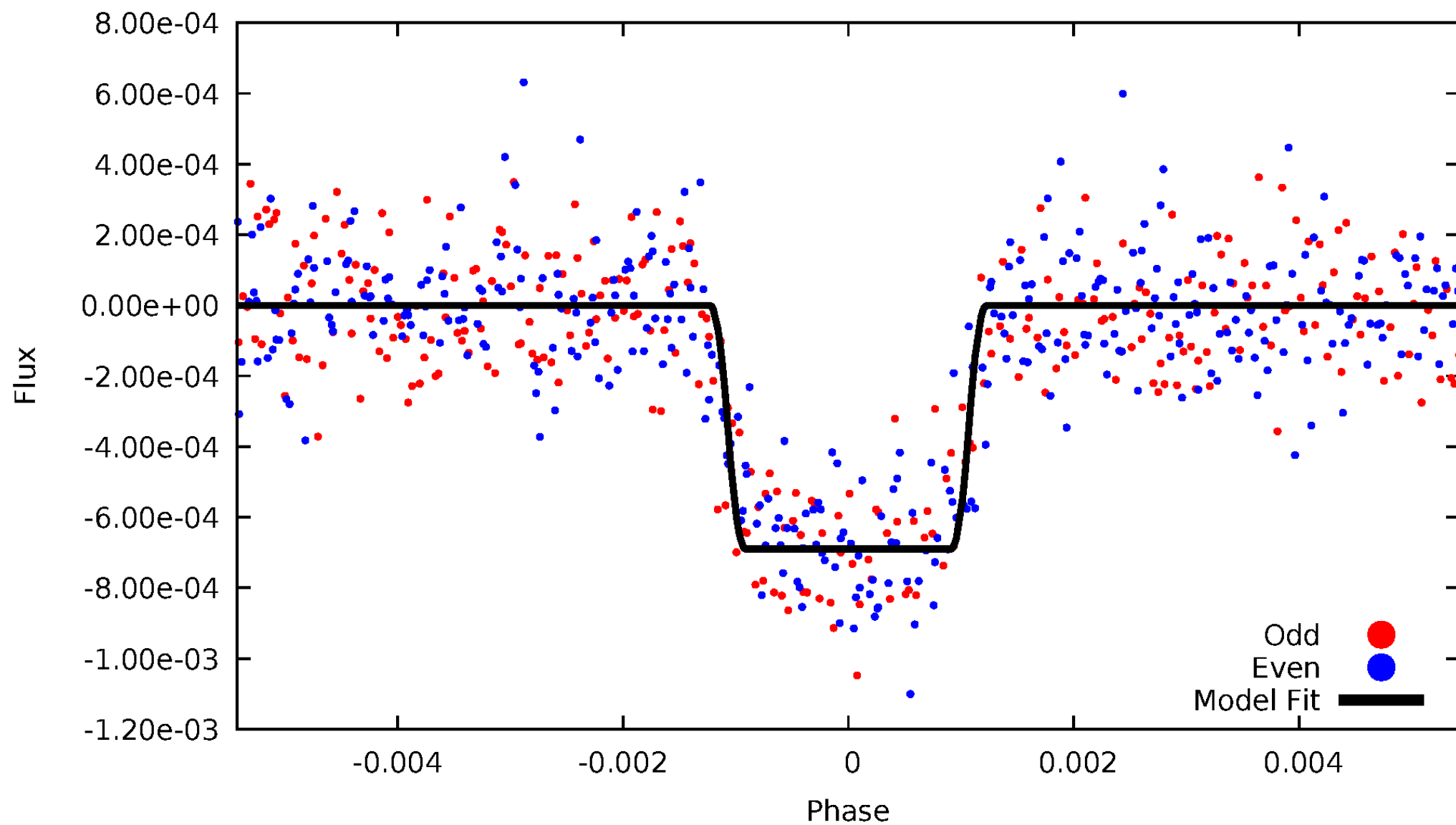
DV Odd/Even

TCE 009002278-03



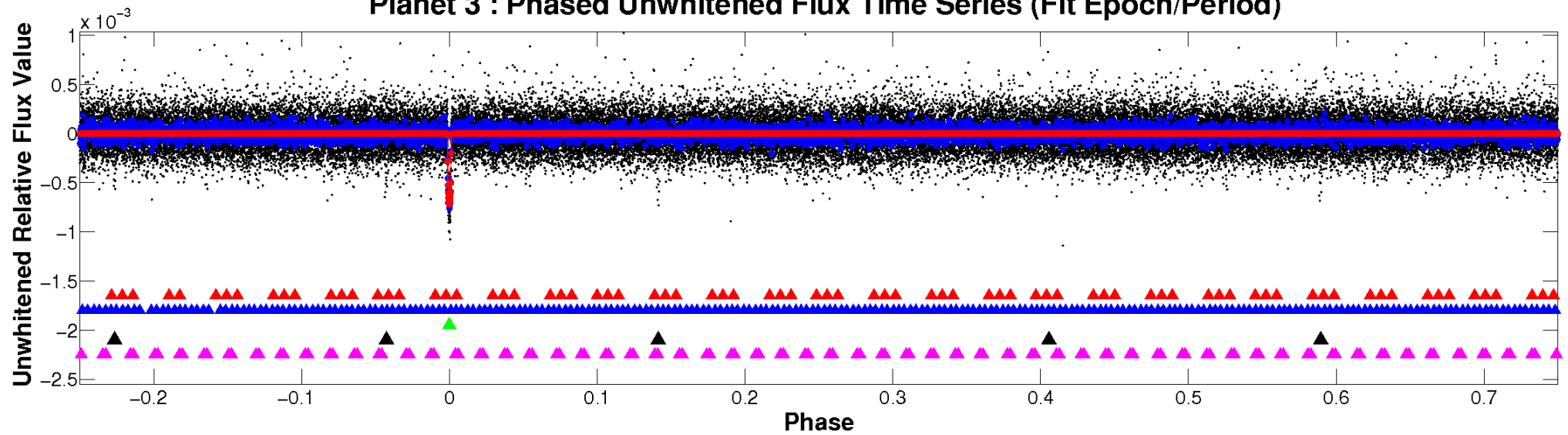
ALT Odd/Even

TCE 009002278-03

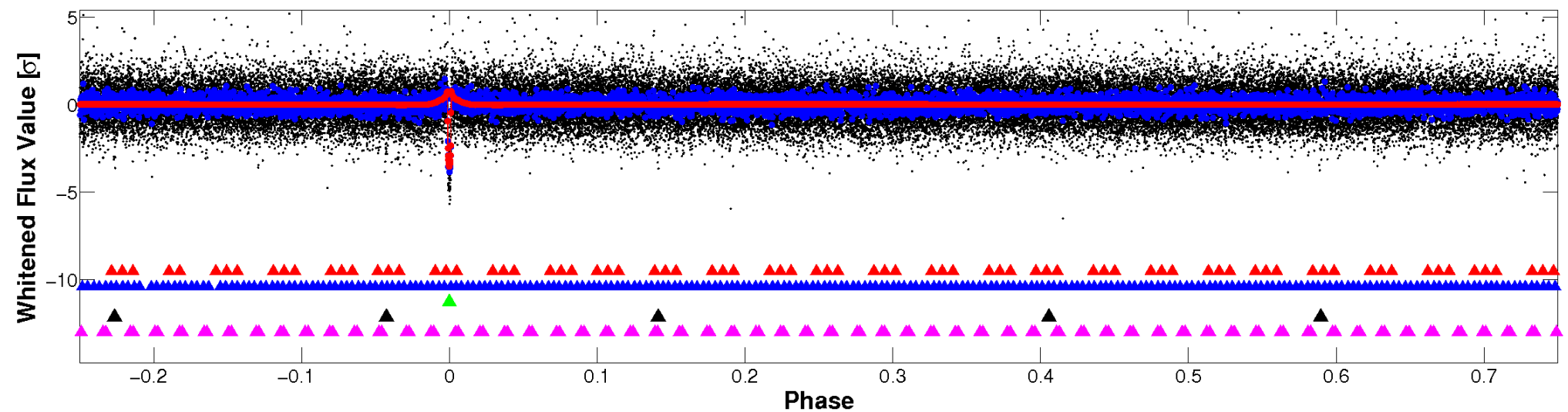


Non-Whitened Vs. Whitened Light Curve

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

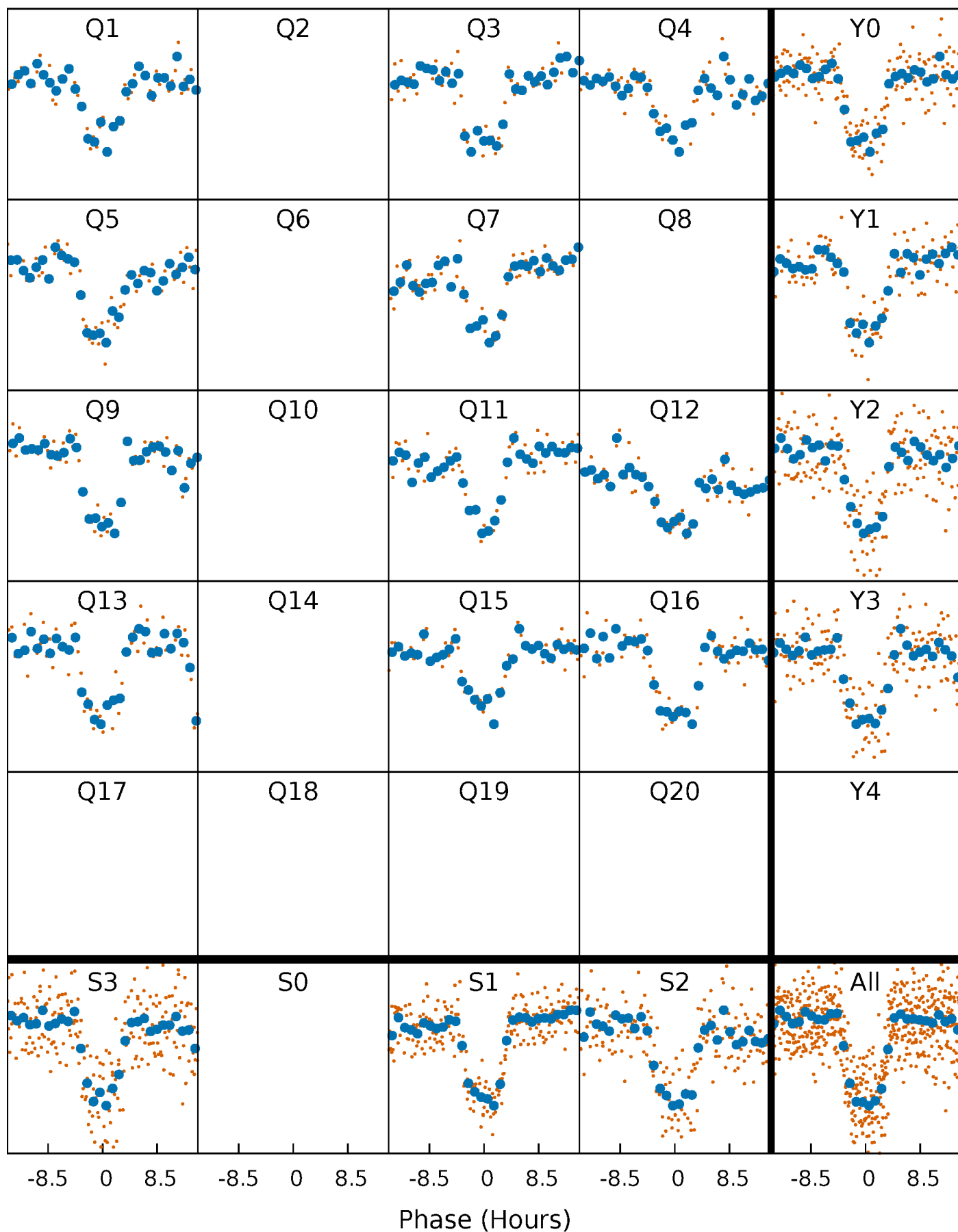


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



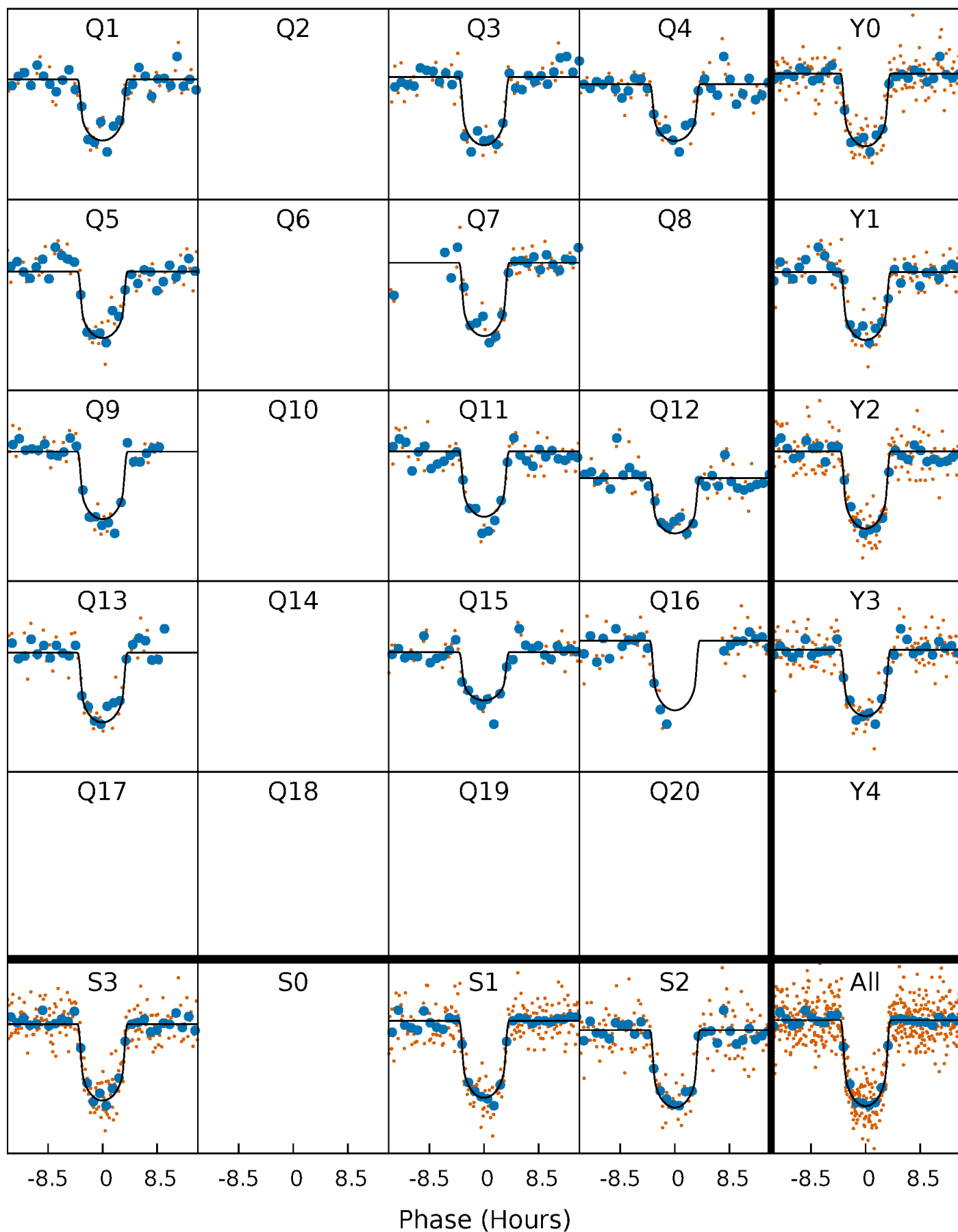
PDC Quarter-Phased Transit Curves

TCE 009002278-03 P=122.385753 Days $T_0=150.411809$ (BKJD)



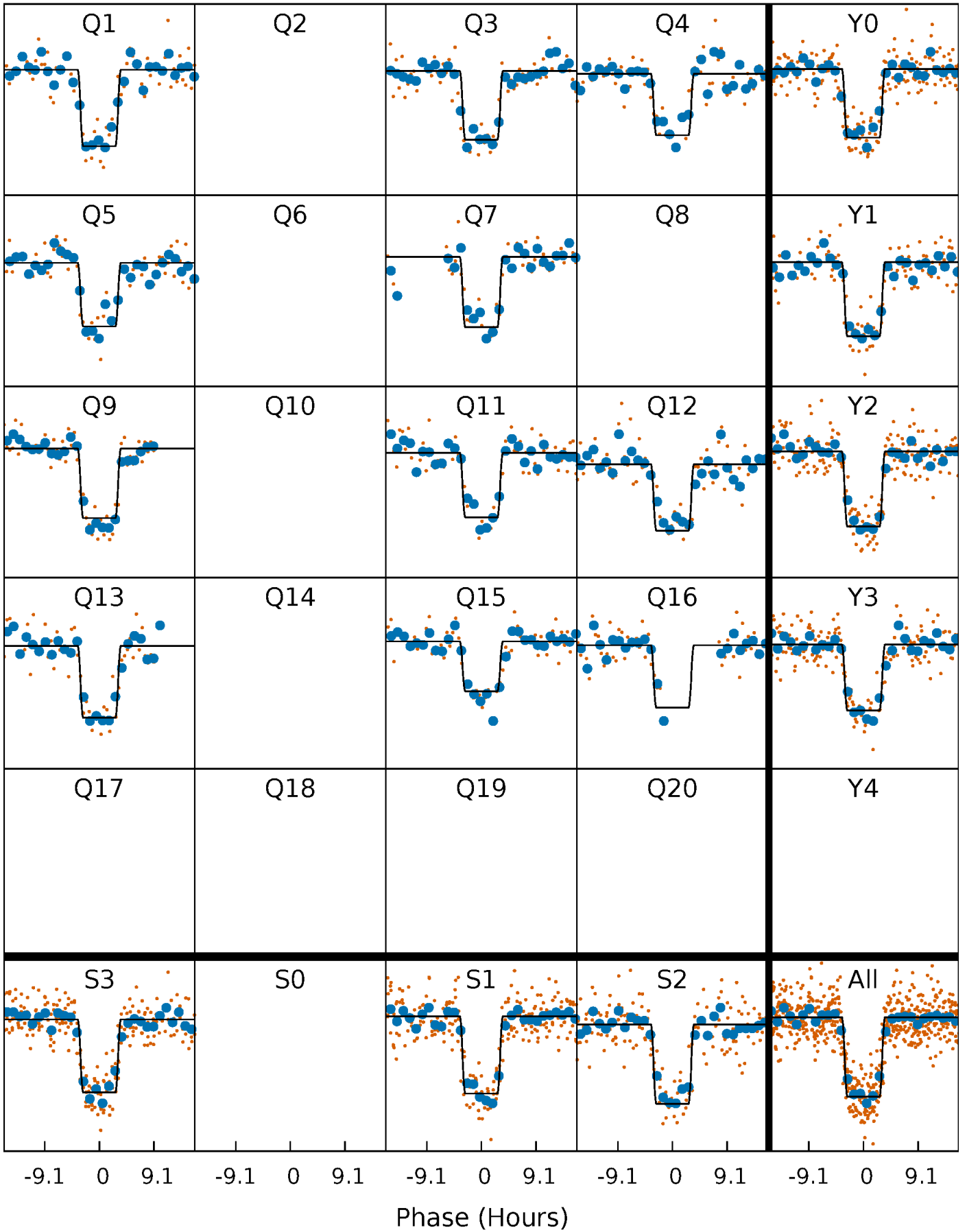
DV Quarter-Phased Transit Curves

TCE 009002278-03 $P=122.385753$ Days $T_0=150.411809$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

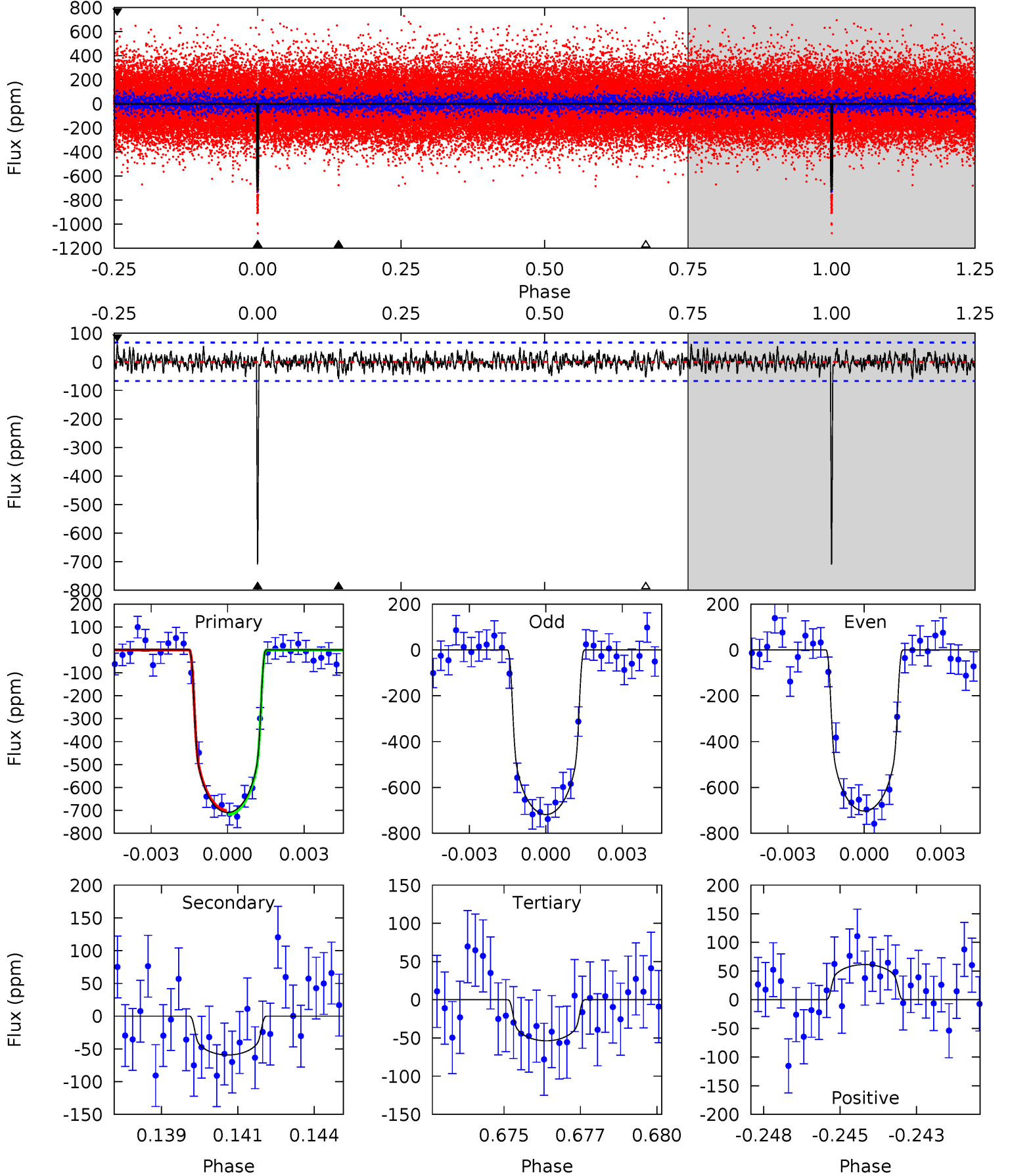
TCE 009002278-03 P=122.383145 Days $T_0=150.426596$ (BKJD)



DV Model-Shift Uniqueness Test

009002278-03, P = 122.385753 Days, E = 28.026056 Days

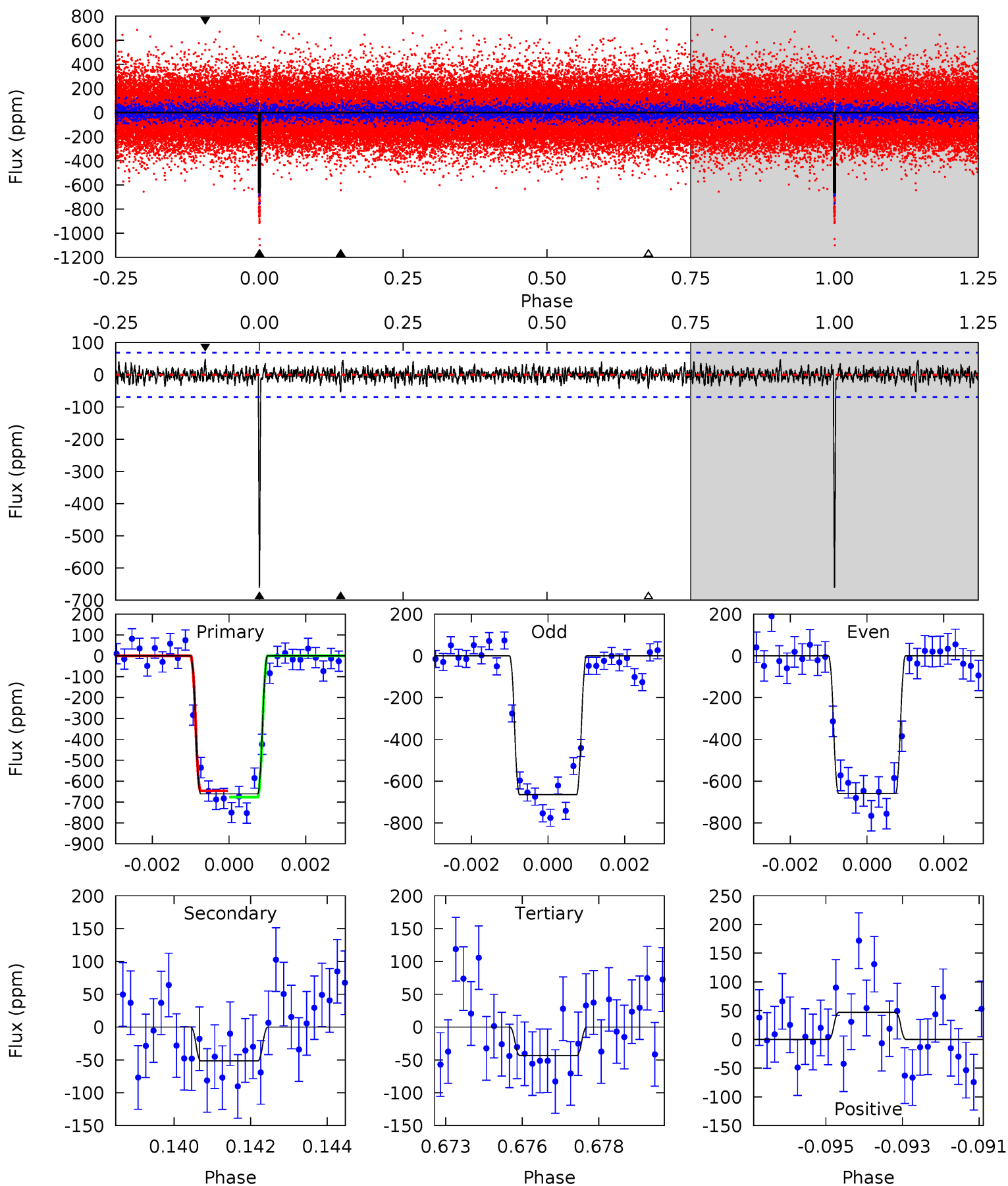
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.6	4.64	4.21	4.81	5.27	3.00	1.37	51.4	50.8	0.43	-0.17	0.59	1.04	0.08	0.71



Alt Model-Shift Uniqueness Test

009002278-03, P = 122.383145 Days, E = 28.043451 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.8	3.96	3.33	3.62	5.29	3.03	0.99	47.5	47.2	0.63	0.34	0.21	1.02	0.07	1.14



Stellar Parameters For KIC 009002278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4926^{+98}_{-98}	$4.653^{+0.017}_{-0.049}$	$-0.360^{+0.150}_{-0.150}$	$0.662^{+0.041}_{-0.027}$	$0.727^{+0.029}_{-0.059}$	$3.535^{+0.298}_{-0.564}$
	+2%/-2%	+0%/-1%	+42%/-42%	+6%/-4%	+4%/-8%	+8%/-16%
Source	SPE62	SPE62	SPE62	DSEP		

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

Secondary Eclipse Parameters for KIC 009002278-03 / KOI 0701.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-59 ± 13	$1.99^{+0.20}_{-0.21}$	378^{+9}_{-9}	3171^{+141}_{-145}	1541^{+503}_{-424}
Alt.	-52 ± 13	$1.90^{+0.23}_{-0.19}$	378^{+9}_{-8}	3152^{+143}_{-168}	1482^{+489}_{-472}

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 $A_{obs} \gg 1.0$

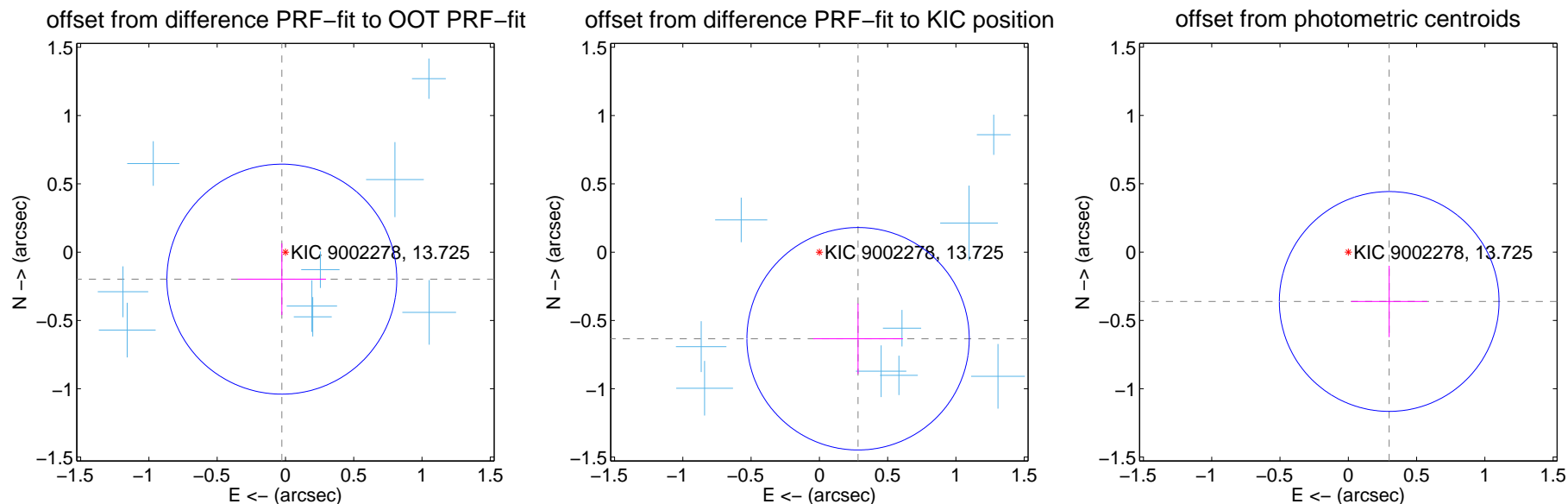
DV Centroid Data

Supplemental centroid analysis for 009002278-03. Kepler magnitude: 13.72. Transit SNR 36.89

There are 10 quarters with good PRF difference image offsets

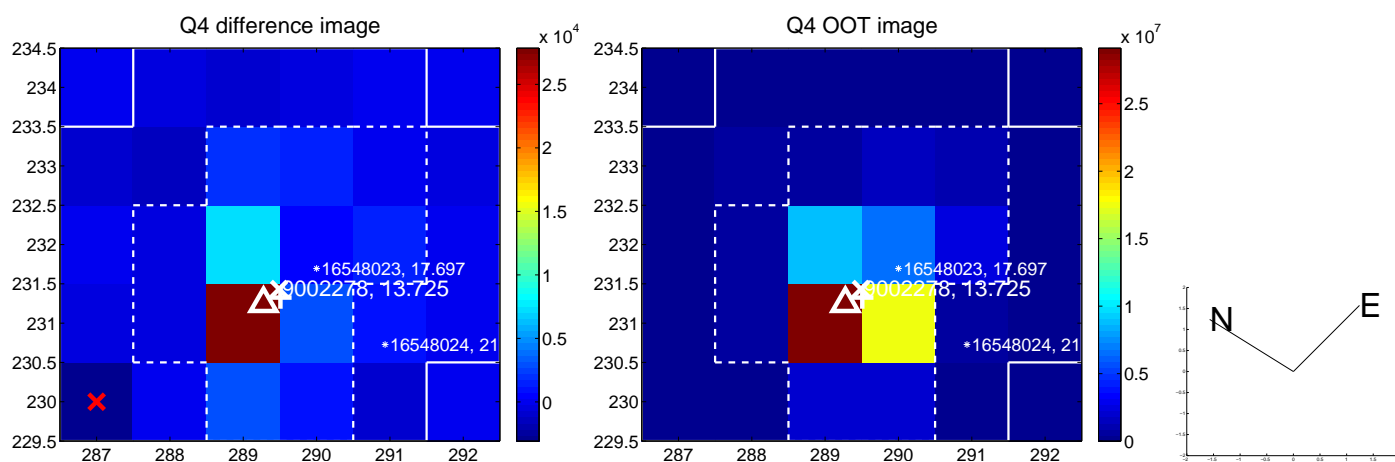
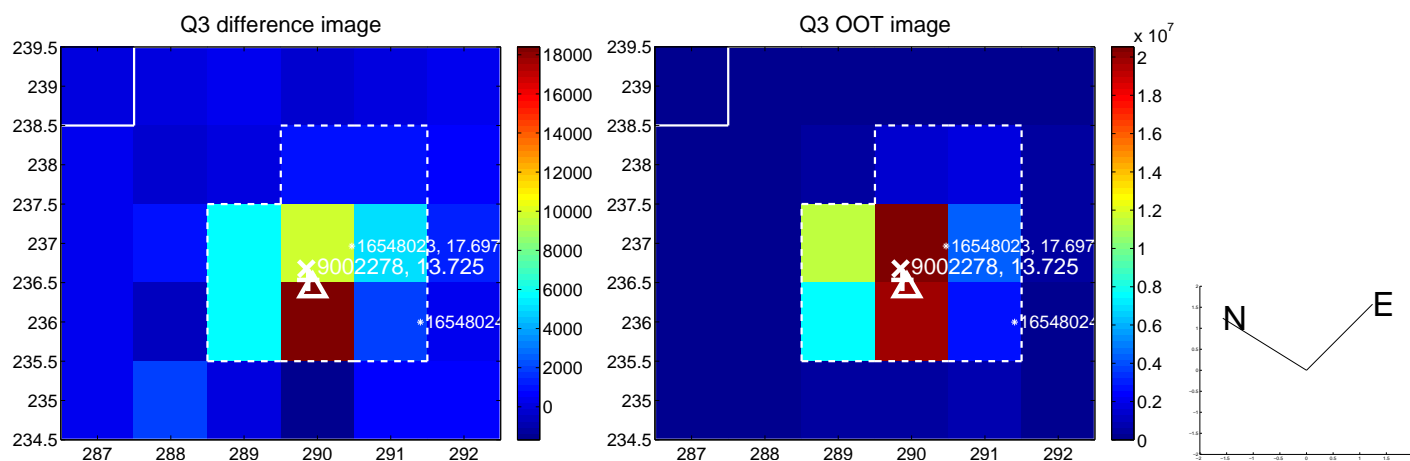
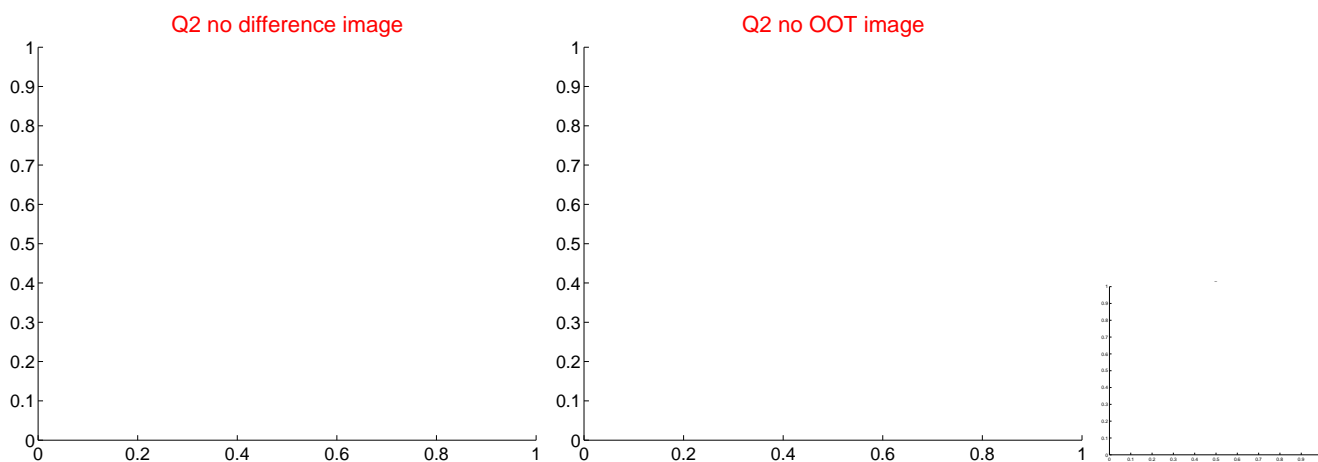
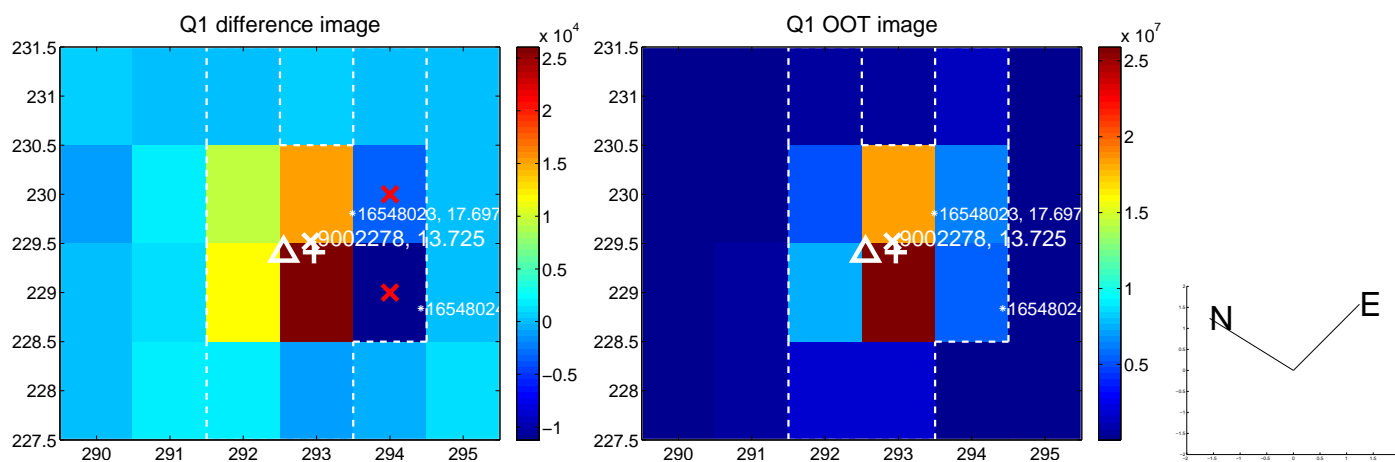
The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.199 ± 0.281	0.71	0.026 ± 0.324	-0.198 ± 0.262
PRF-fit source offset from KIC position	0.694 ± 0.271	2.56	-0.283 ± 0.329	-0.634 ± 0.258
photometric centroid source offset	0.47 ± 0.27	1.75	-0.30 ± 0.28	-0.36 ± 0.26

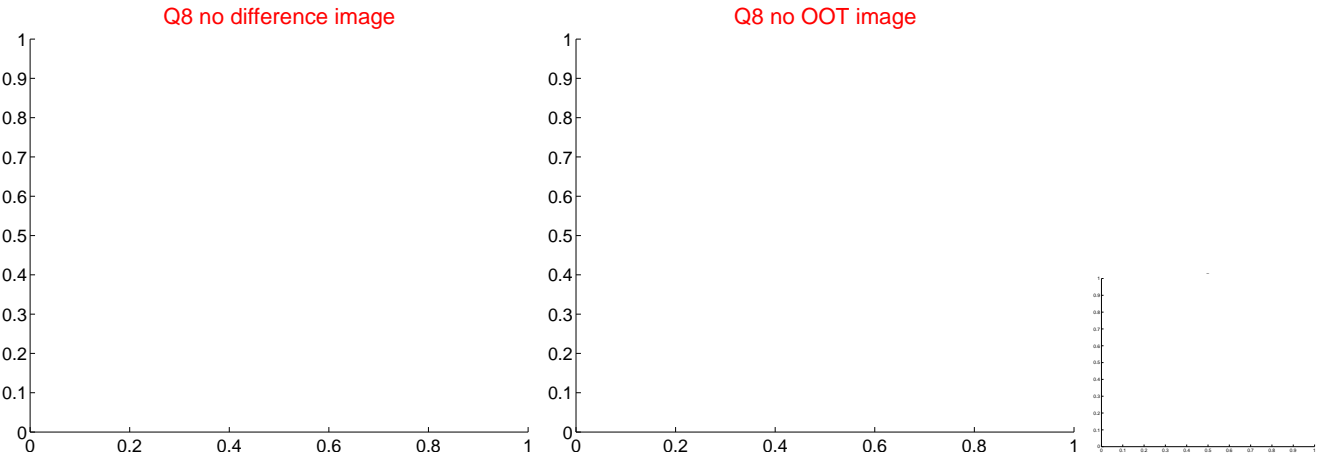
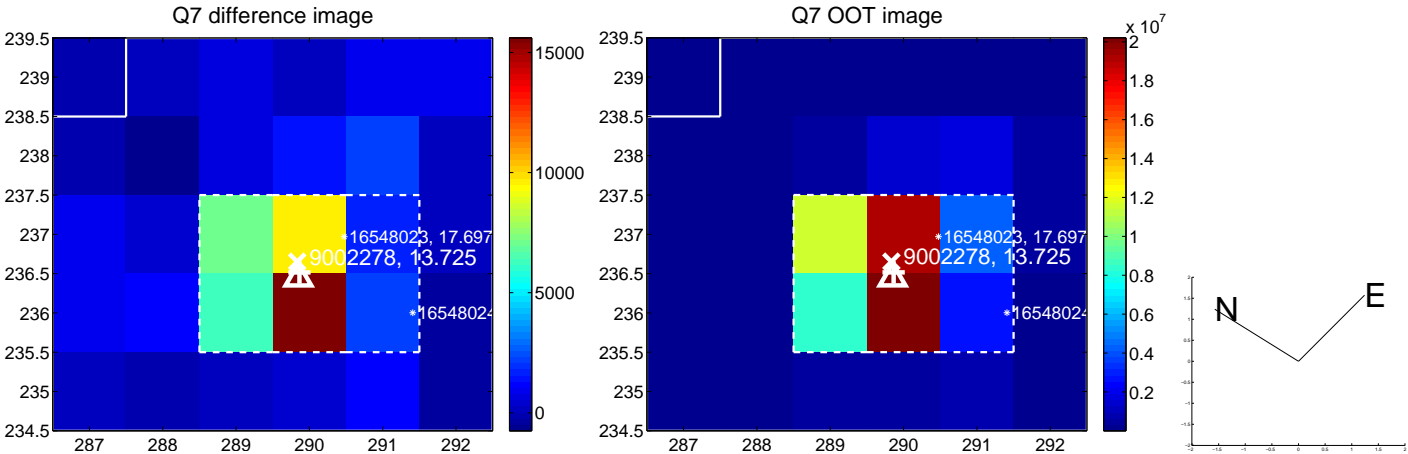
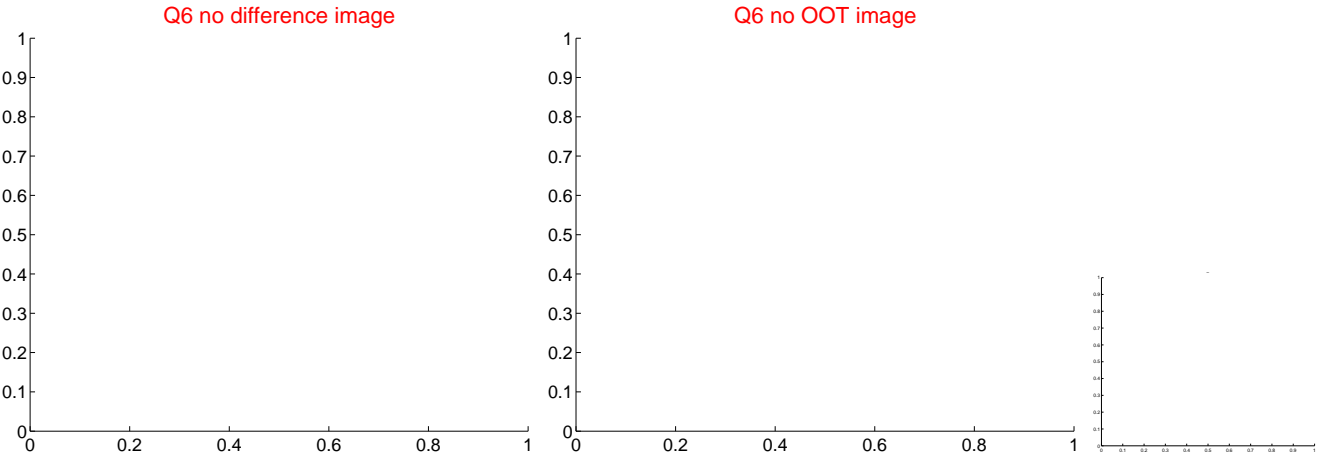
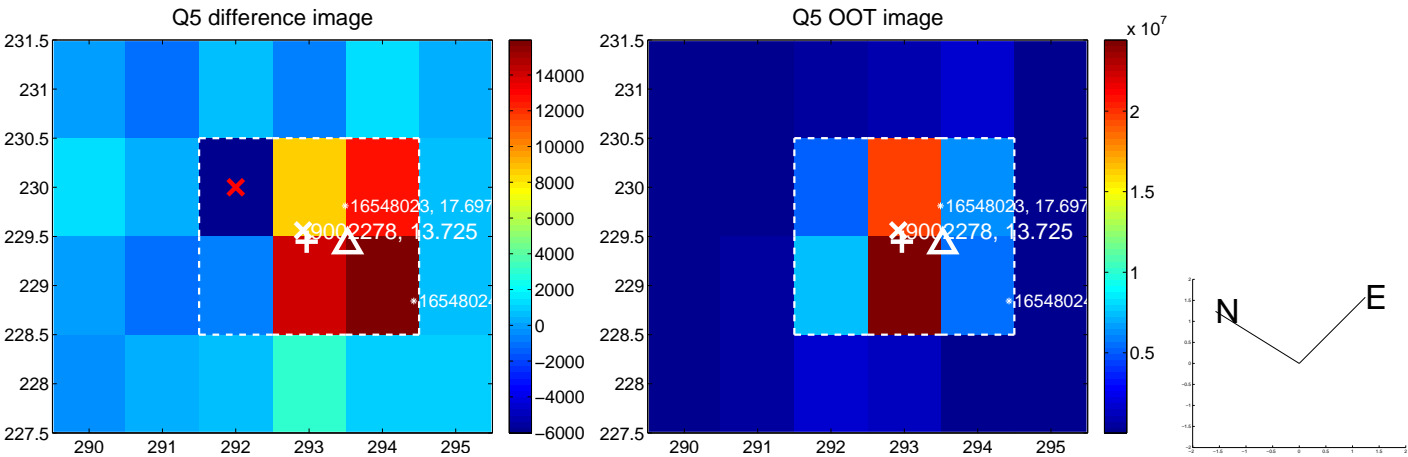


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

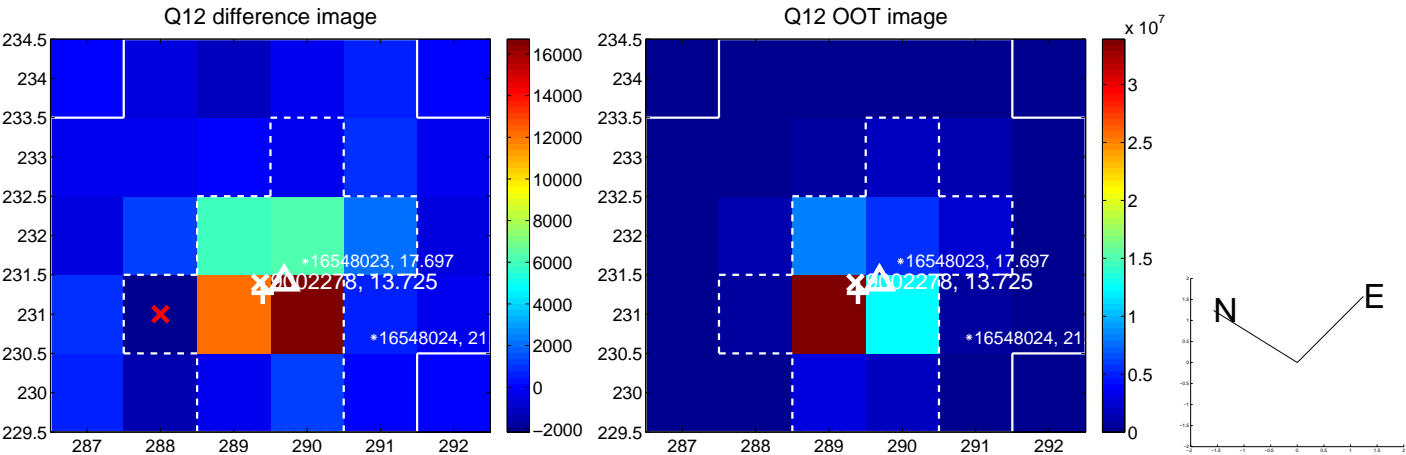
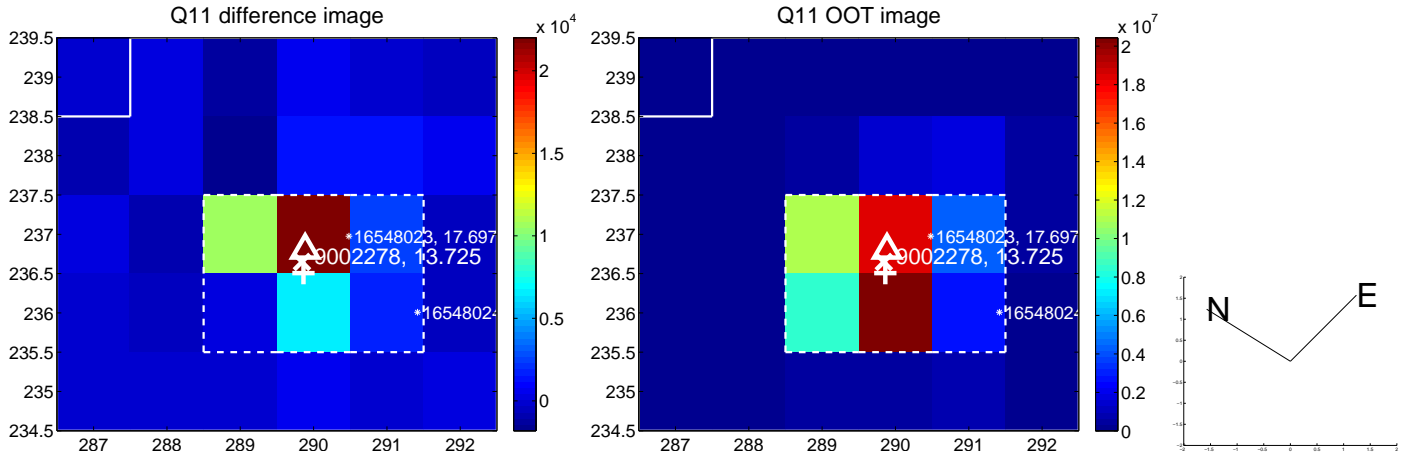
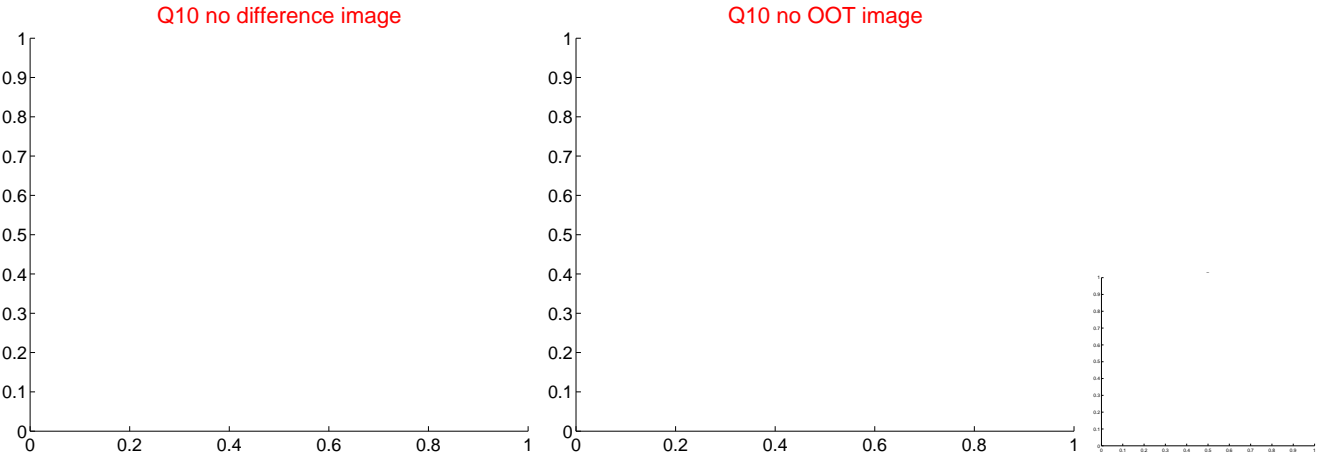
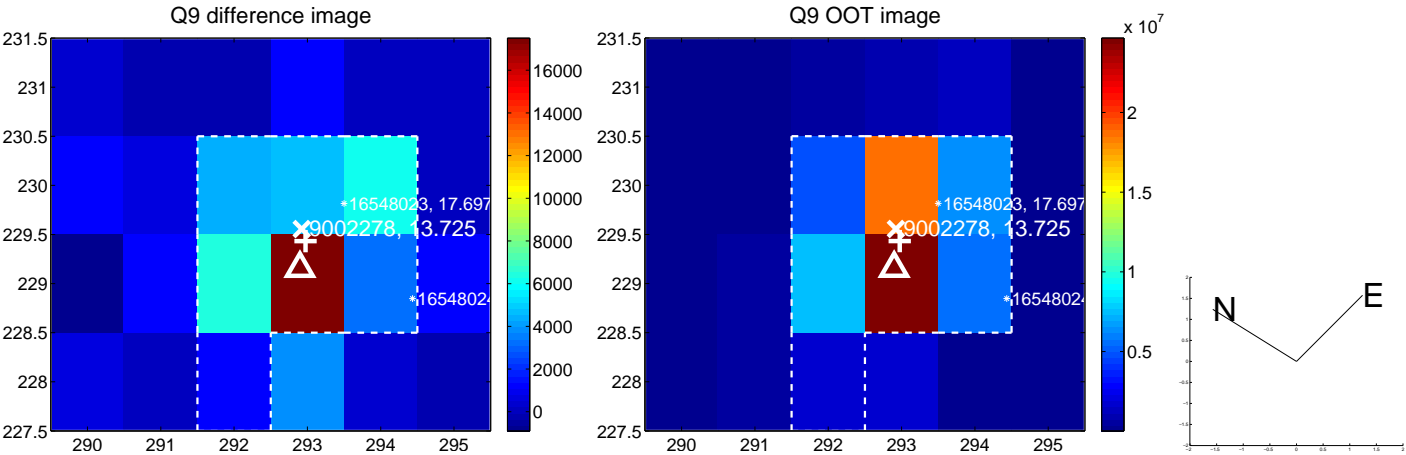
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



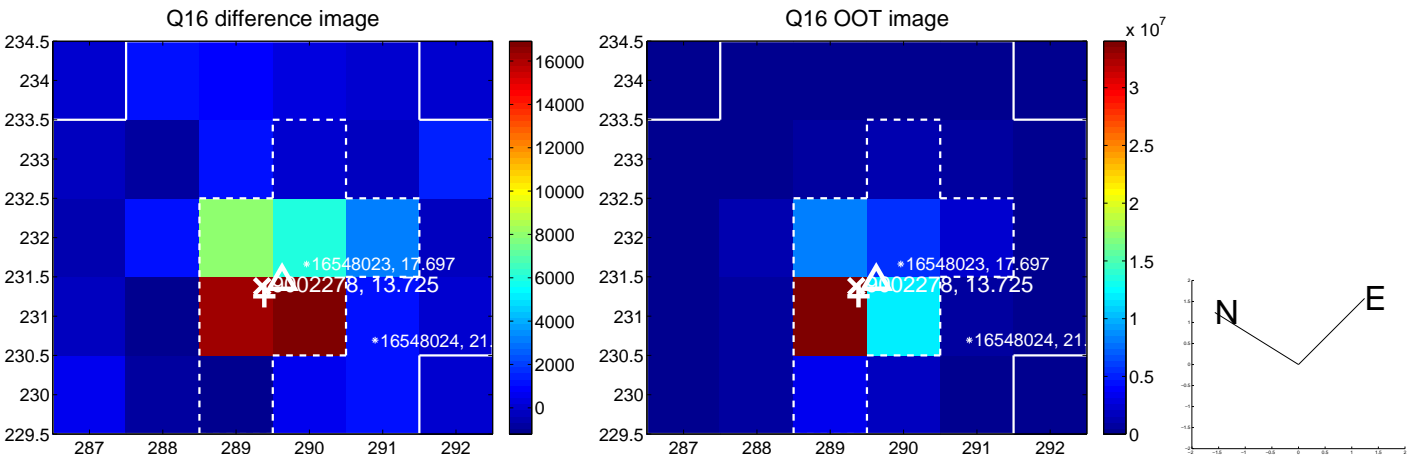
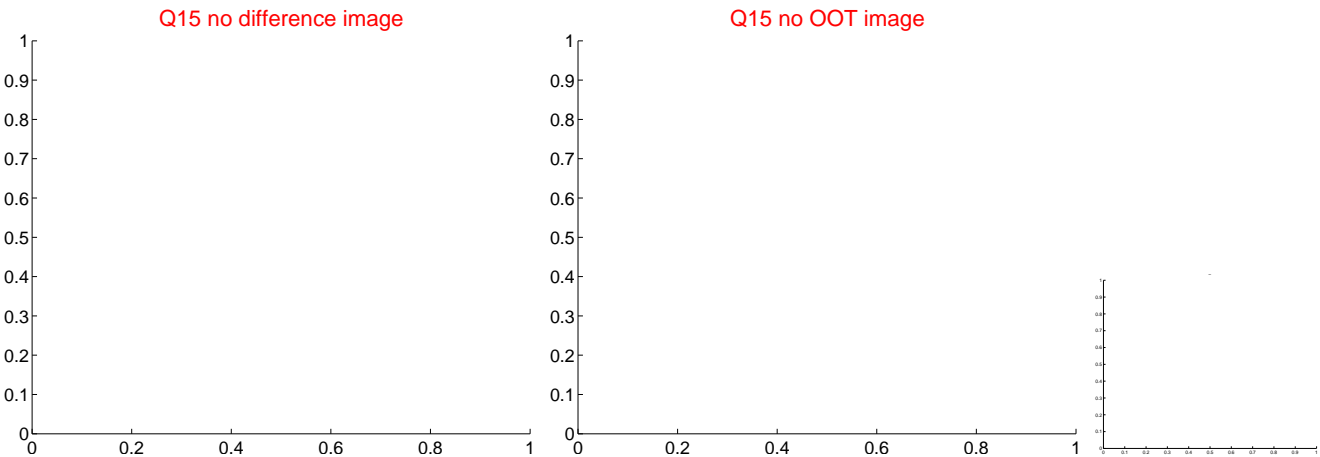
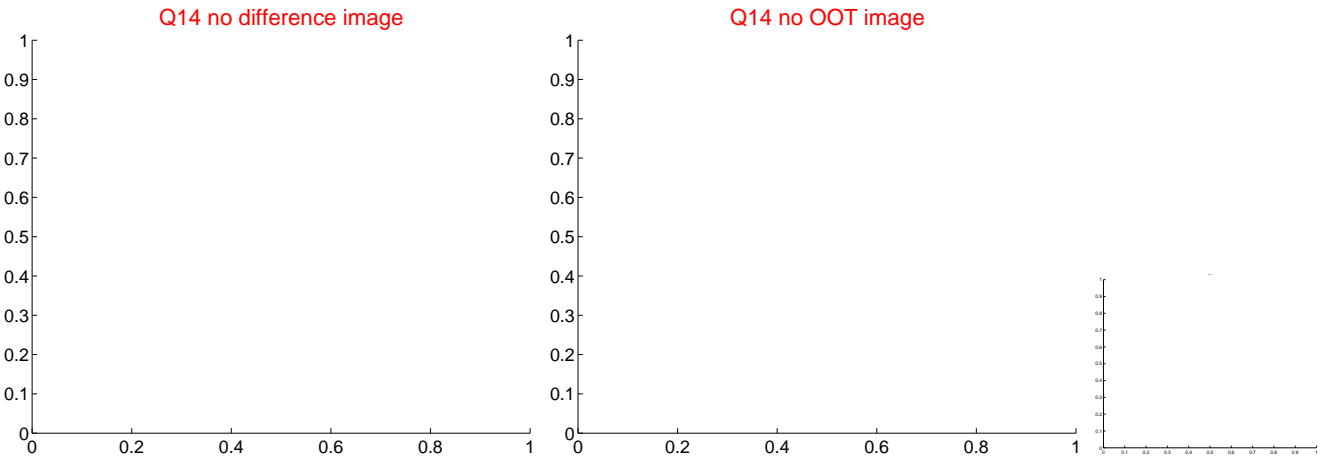
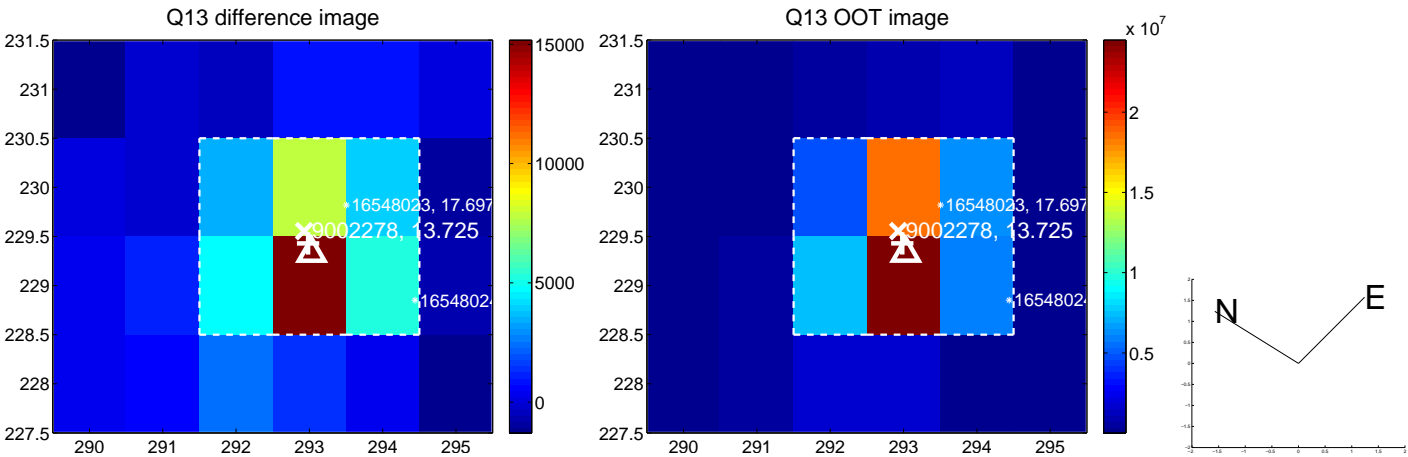
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



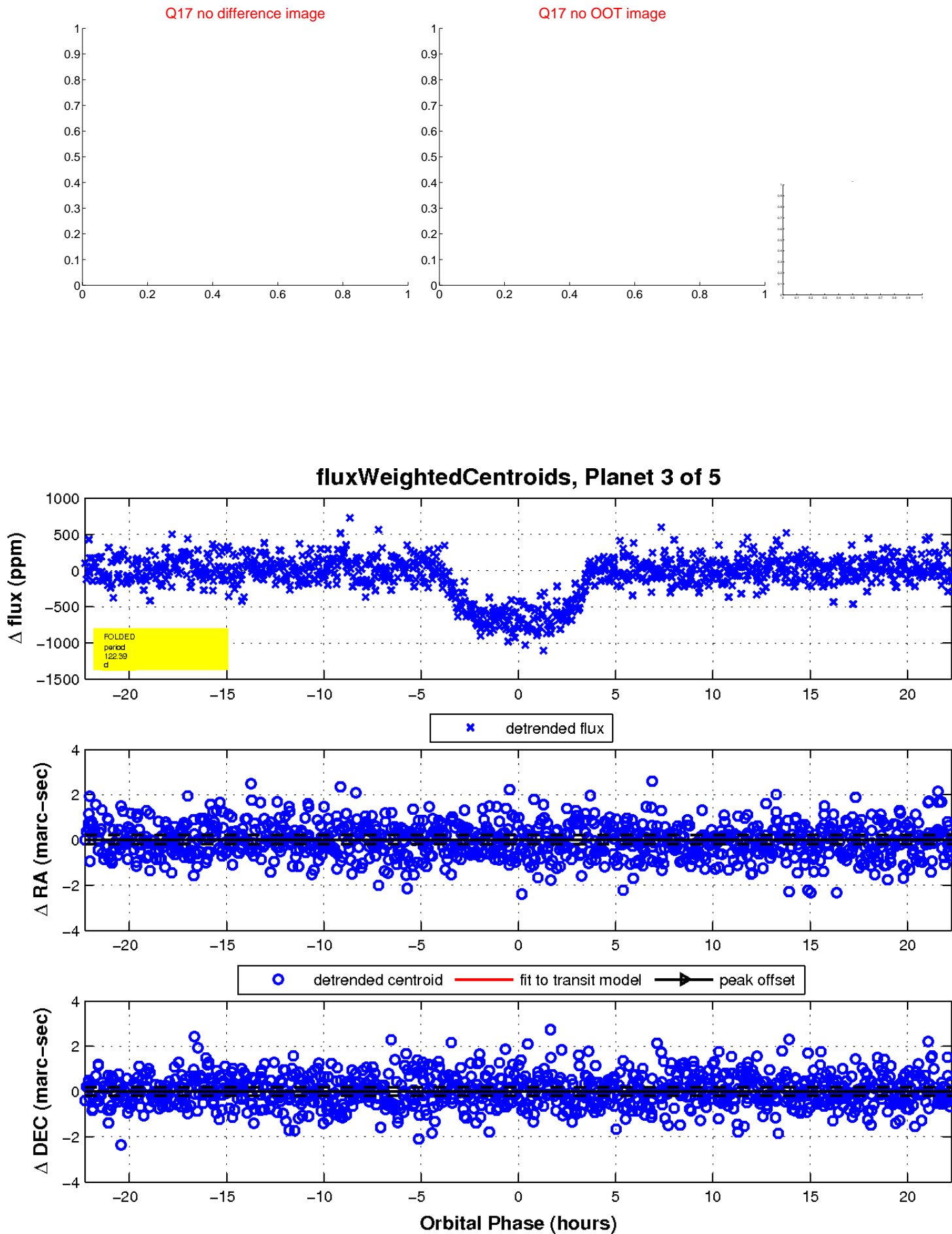
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

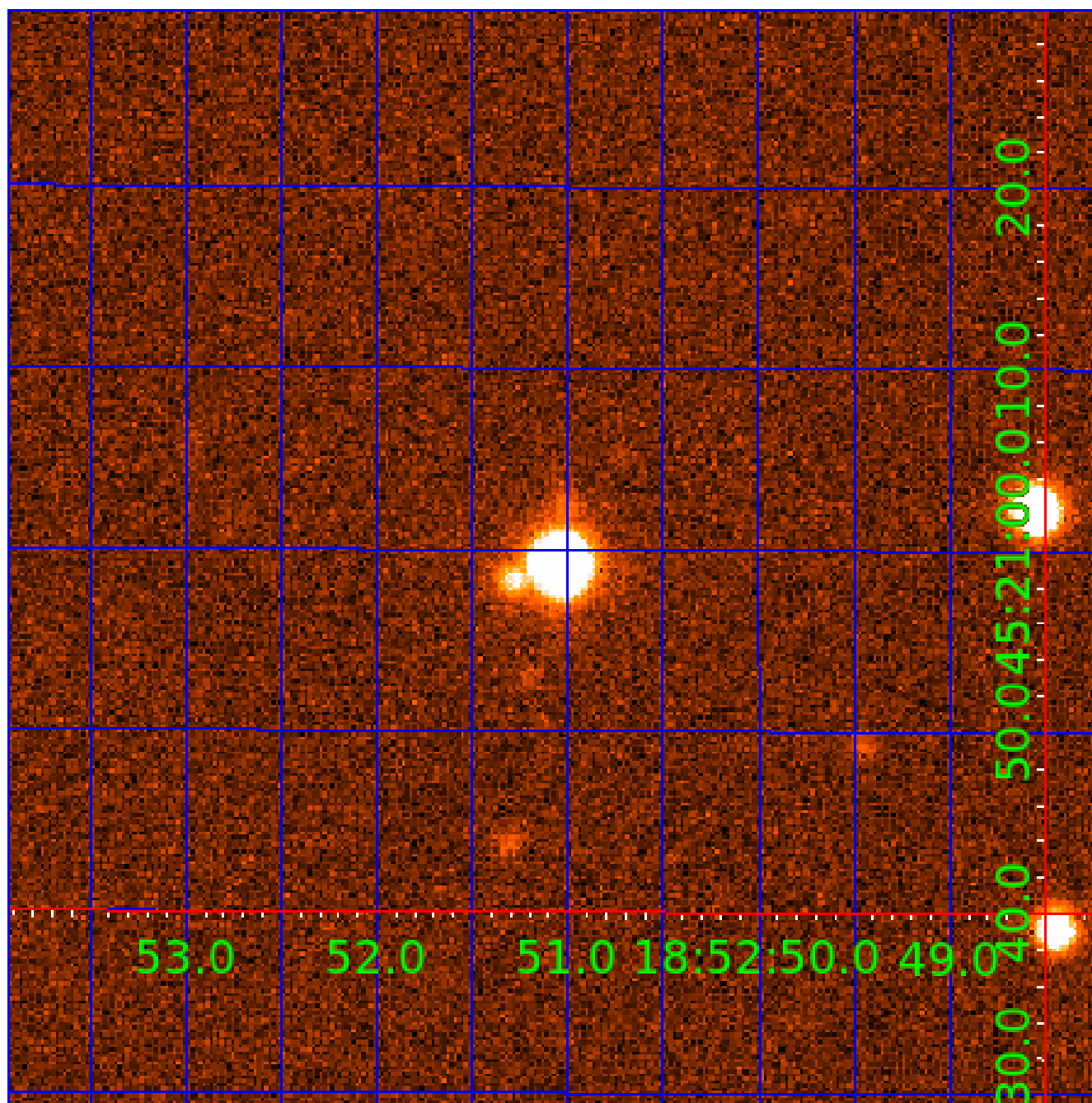


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009002278

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})
009002278-01	OBS	0701.01	18.164044	144.484811	937.3	3.044	81.6	82.2	0.66	4926	2.25	15.75
009002278-02	OBS	0701.02	5.714886	136.634086	428.6	2.518	57.2	64.8	0.66	4926	1.67	73.58
009002278-03	OBS	0701.03	122.385753	150.411809	719.0	7.435	35.9	36.9	0.66	4926	1.97	1.24
009002278-04	OBS	0701.04	267.281495	322.443501	469.6	7.783	14.3	14.6	0.66	4926	1.53	0.44
009002278-05	OBS	0701.05	12.441950	134.648628	74.8	3.821	8.5	9.1	0.66	4926	0.68	26.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009002278-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
009002278-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—CENT_KIC_POS
009002278-05	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

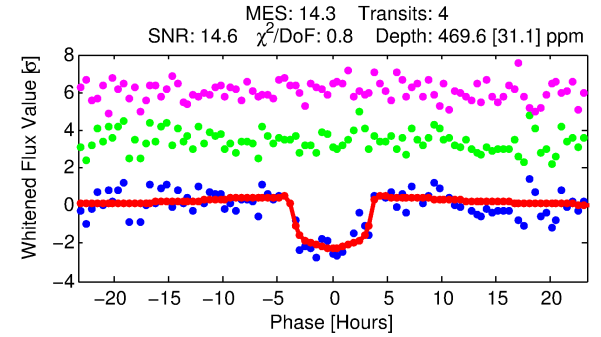
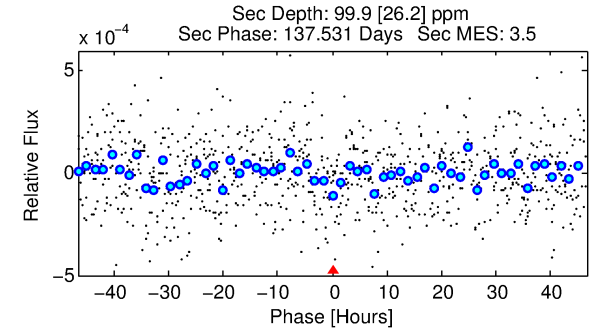
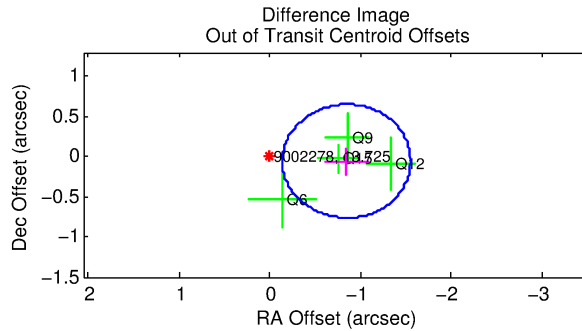
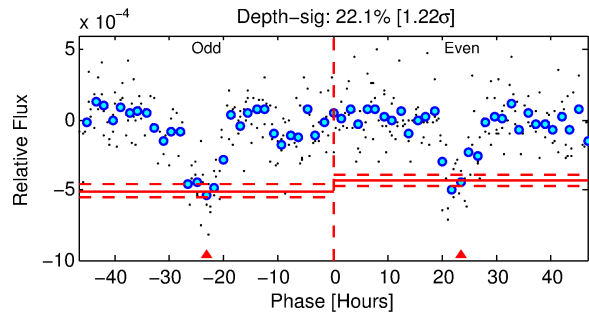
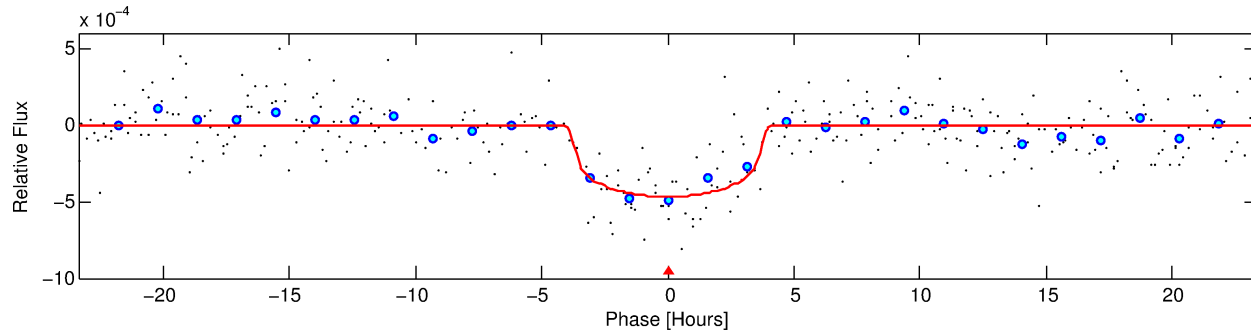
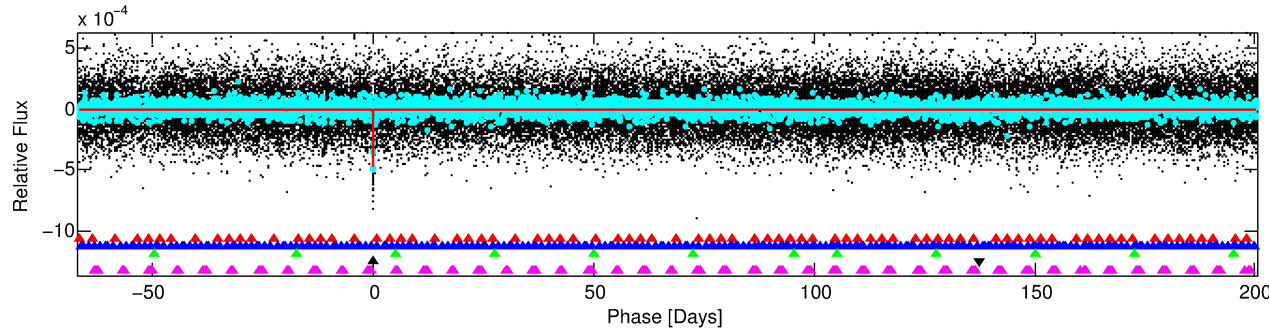
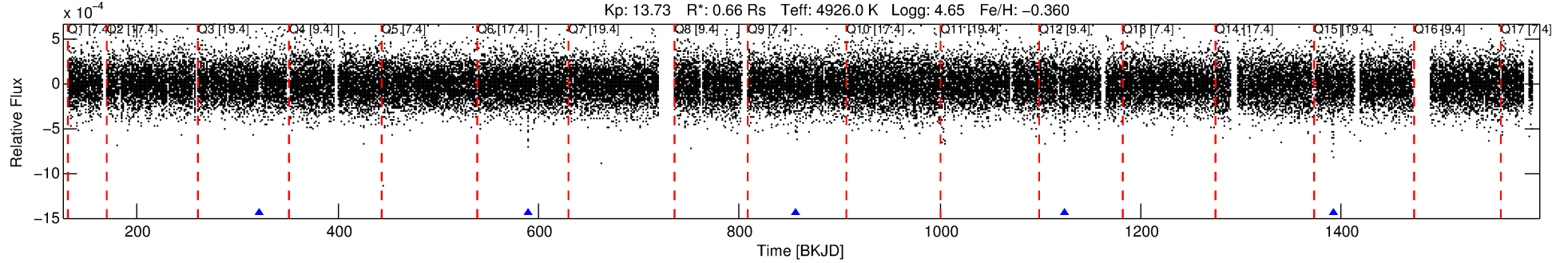
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009002278-04

No Significant Match Found

DV One-Page Summary

KIC: 9002278 Candidate: 4 of 5 Period: 267.281 d
KOI: K00701.04 Name: Kepler-62f Corr: 0.983



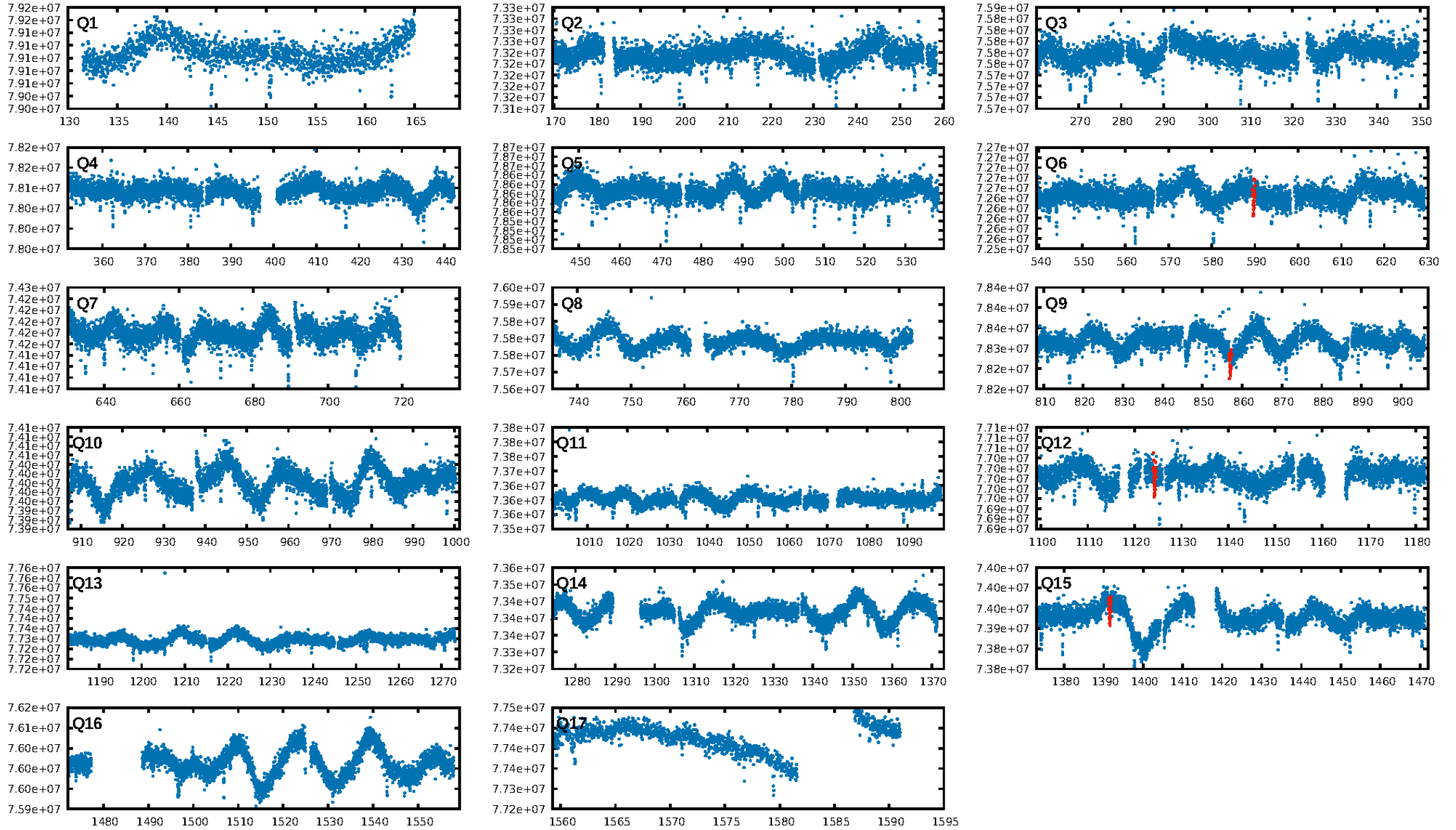
DV Fit Results:

Period = 267.28149 [0.00390] d
Epoch = 322.4435 [0.0099] BKJD
Rp/R* = 0.0212 [0.0117]
a/R* = 193.63 [378.34]
b = 0.71 [1.41]
Seff = 0.44 [0.05]
Teq = 207 [6] K
Rp = 1.53 [0.85] Re
a = 0.7276 [0.0406] AU
Ag = 12385.20 [14028.32] [0.88 σ]
Teffp = 3381 [957] K [3.32 σ]

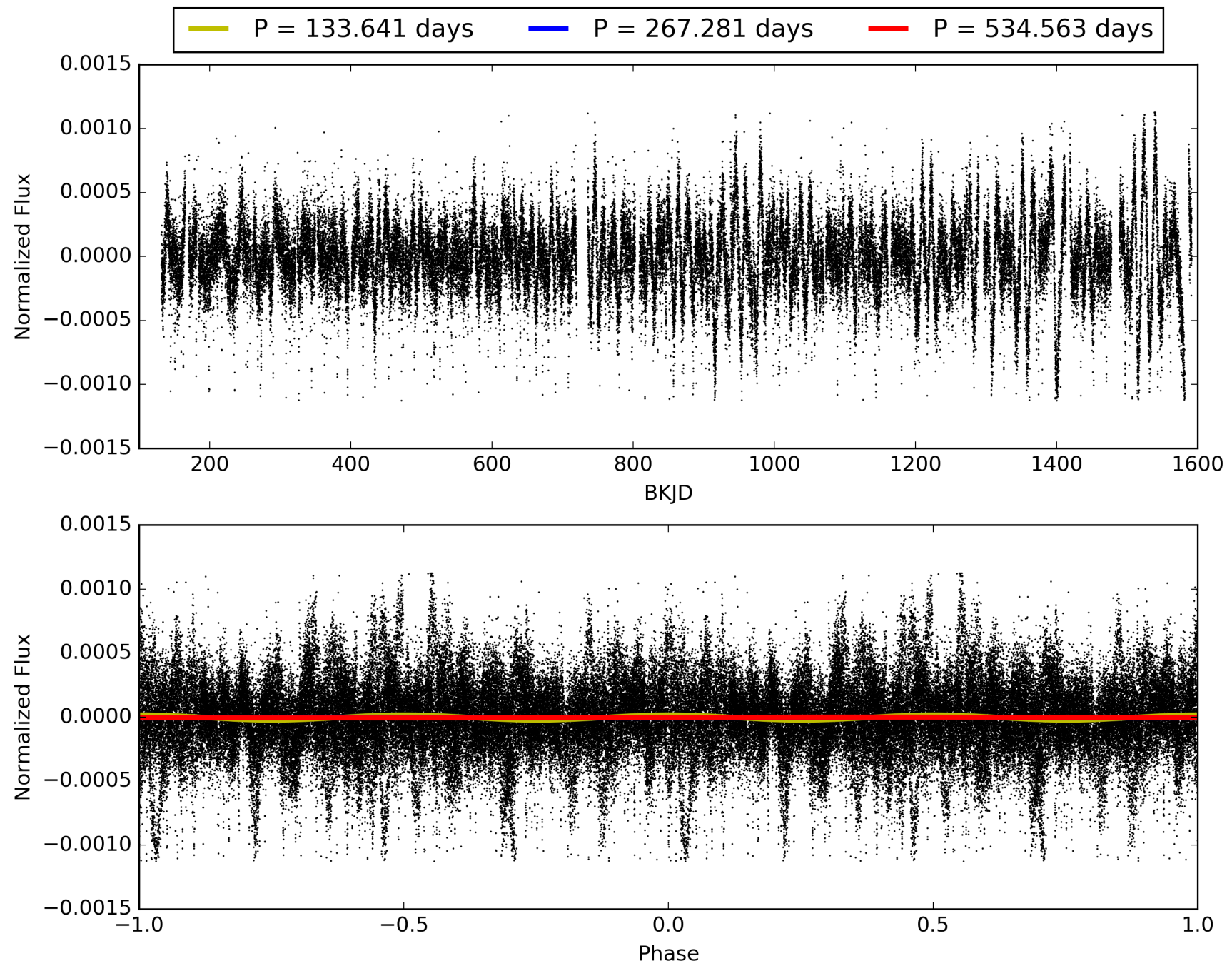
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [323.09 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.64e-38
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 4.193
Centroid-sig: 27.7%
Centroid-so: 1.082 arcsec [1.50 σ]
OotOffset-rm: 0.849 arcsec [3.60 σ]
KicOffset-rm: 1.322 arcsec [6.60 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.50 [2/4]

TCE 009002278-04, PDC Light Curves

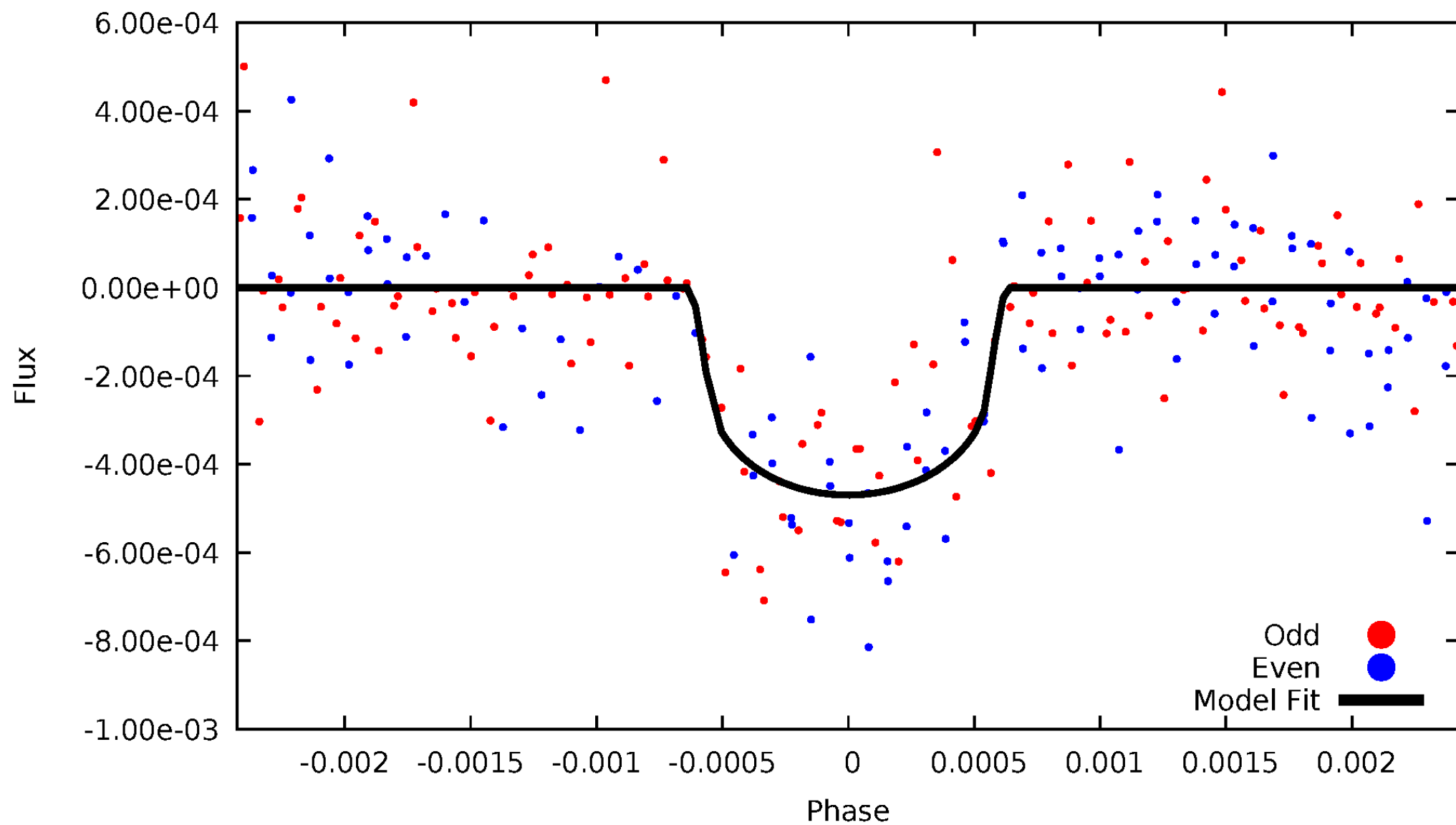


TCE 009002278-04



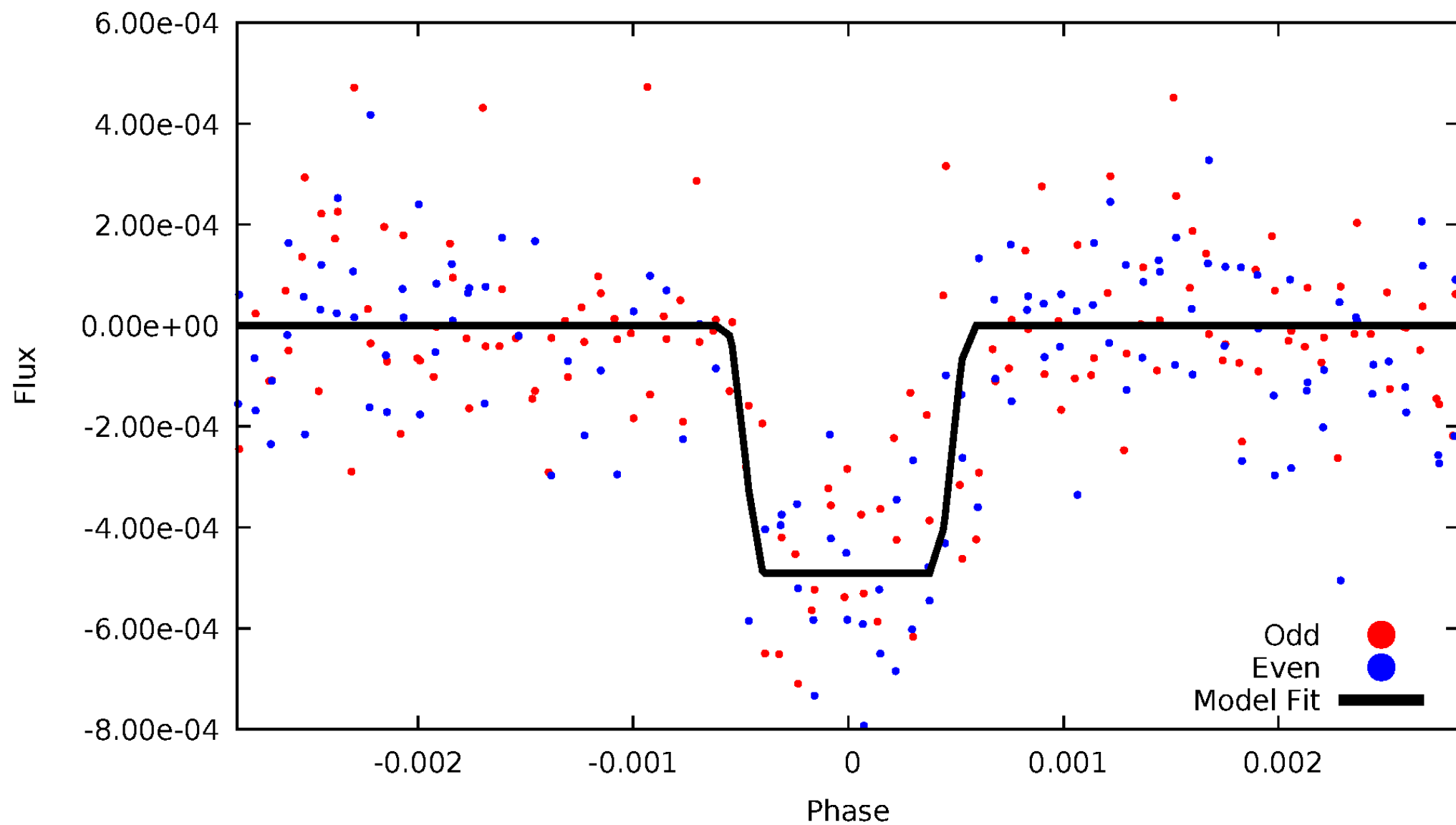
DV Odd/Even

TCE 009002278-04



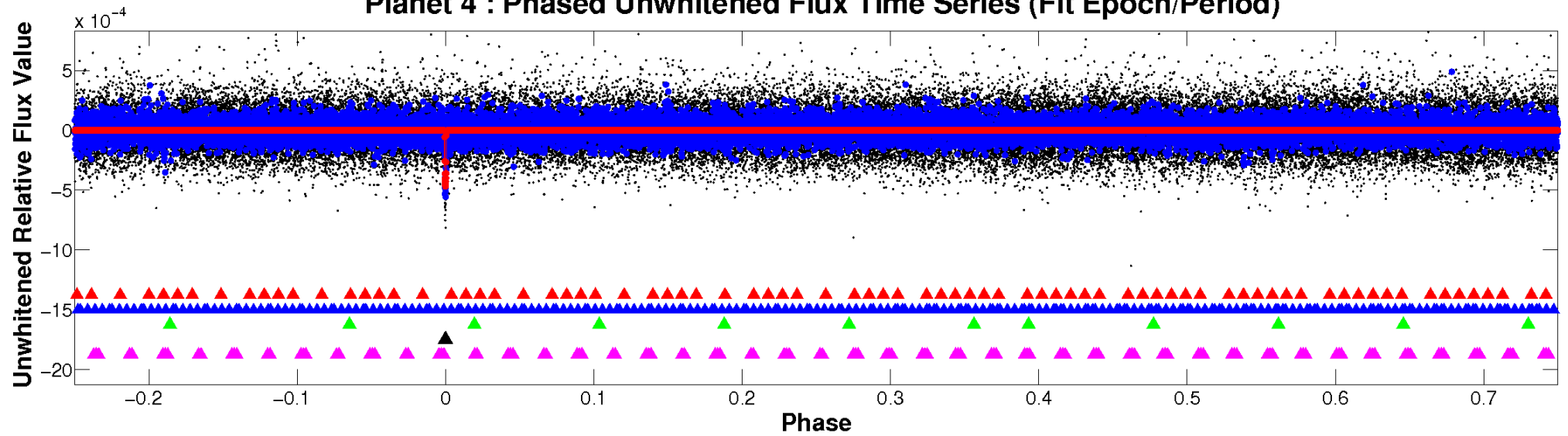
ALT Odd/Even

TCE 009002278-04

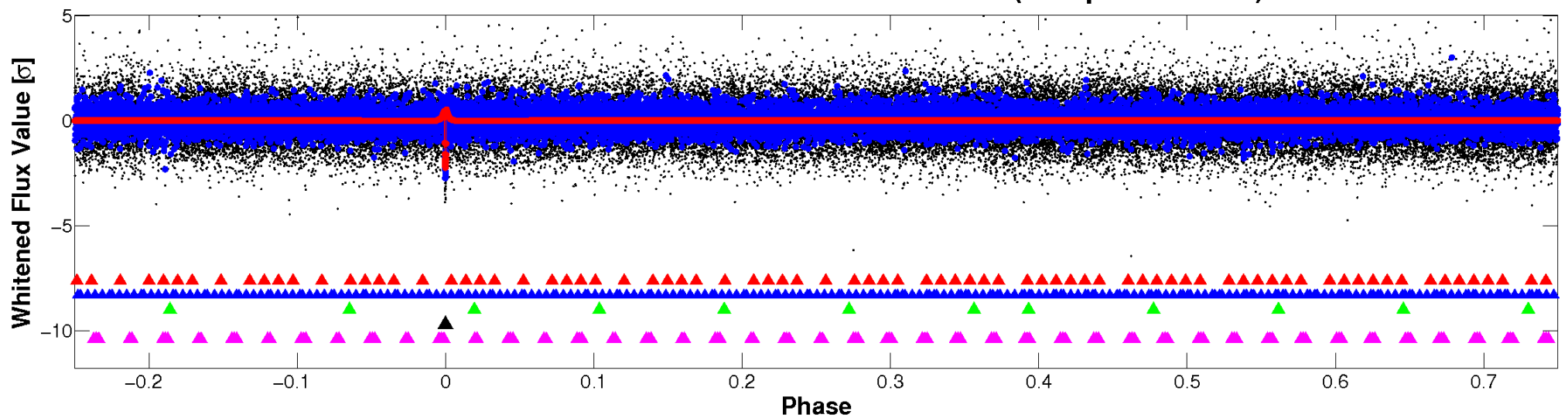


Non-Whitened Vs. Whitened Light Curve

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



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



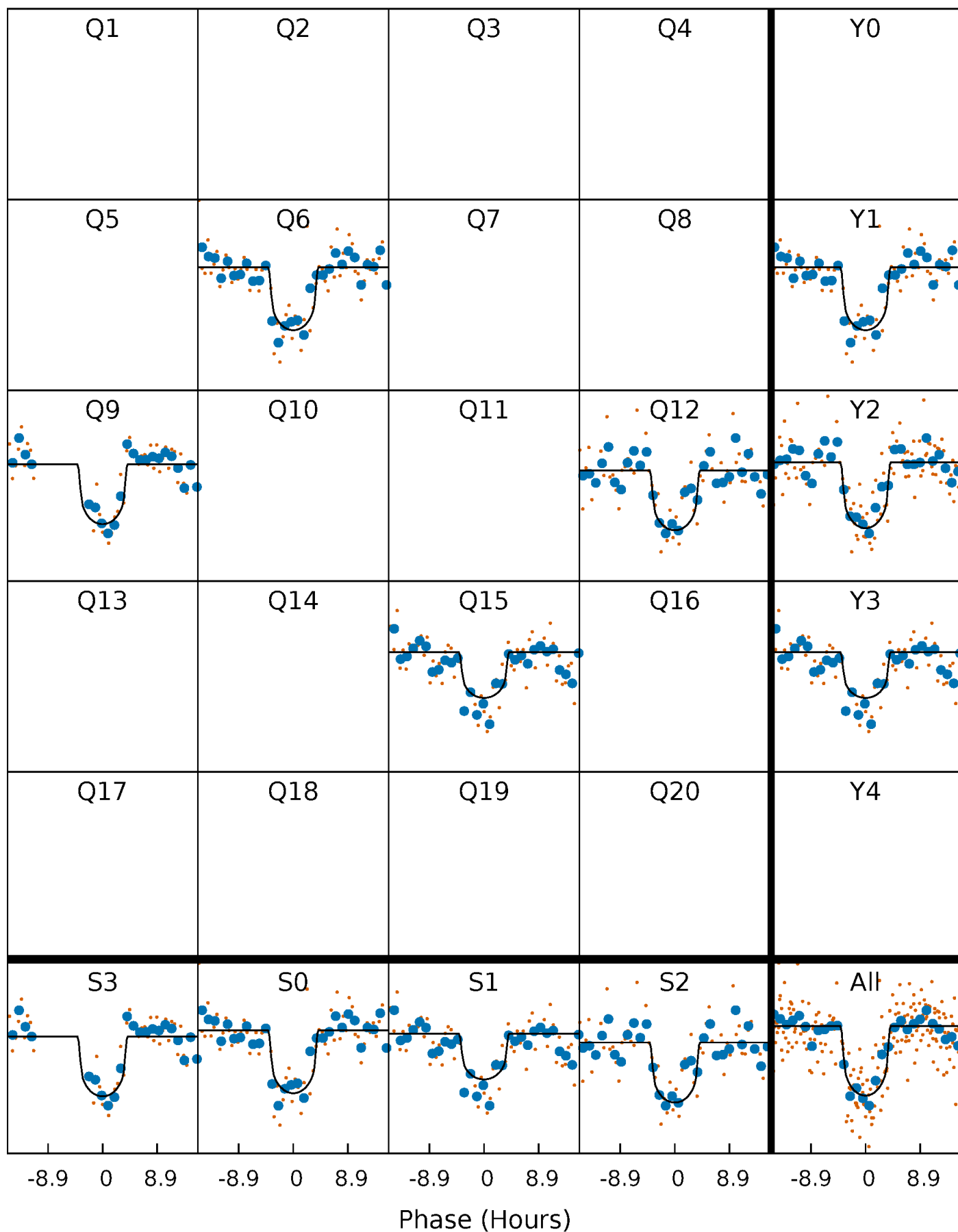
PDC Quarter-Phased Transit Curves

TCE 009002278-04 $P=267.281495$ Days $T_0=322.443502$ (BKJD)



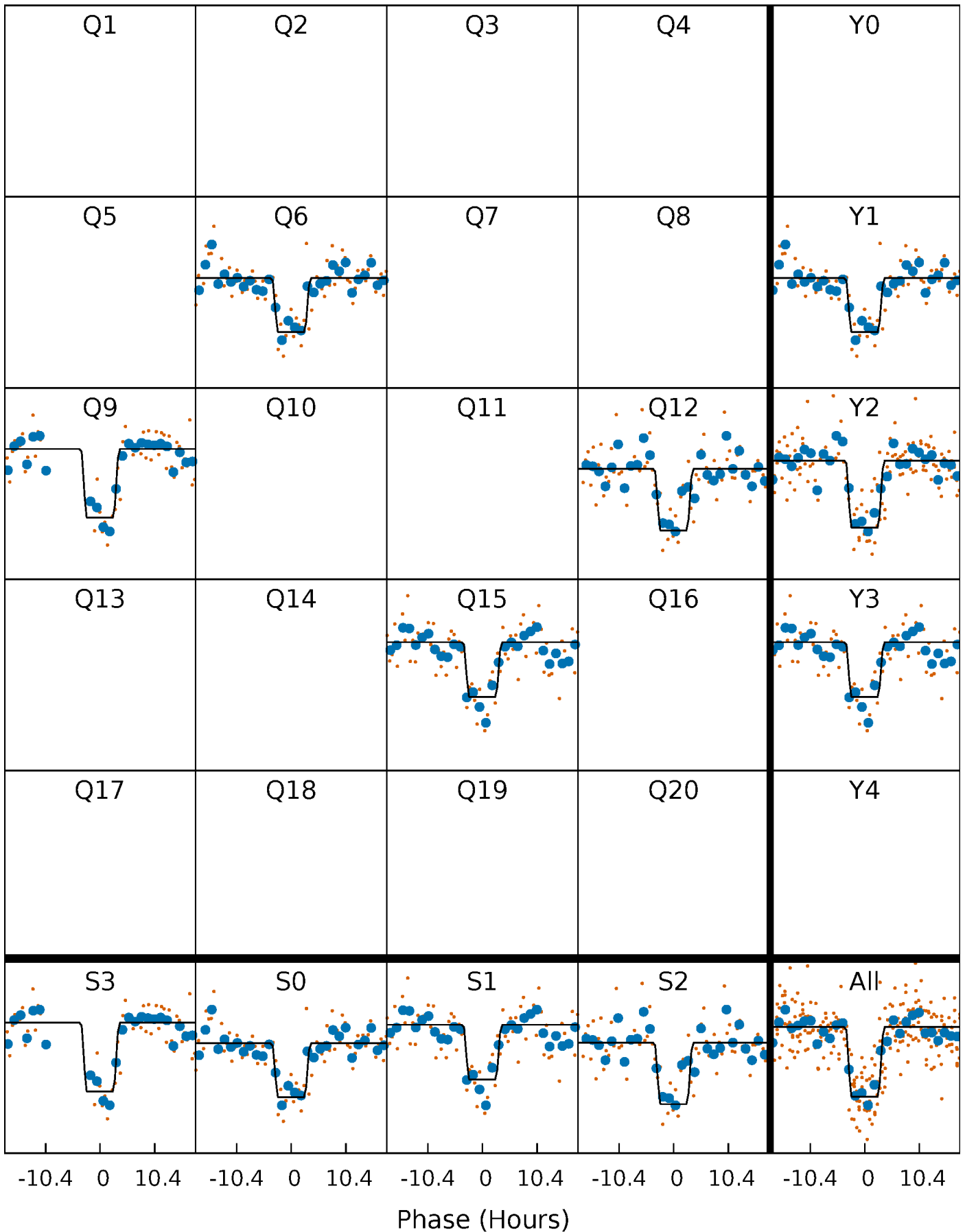
DV Quarter-Phased Transit Curves

TCE 009002278-04 $P=267.281495$ Days $T_0=322.443502$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

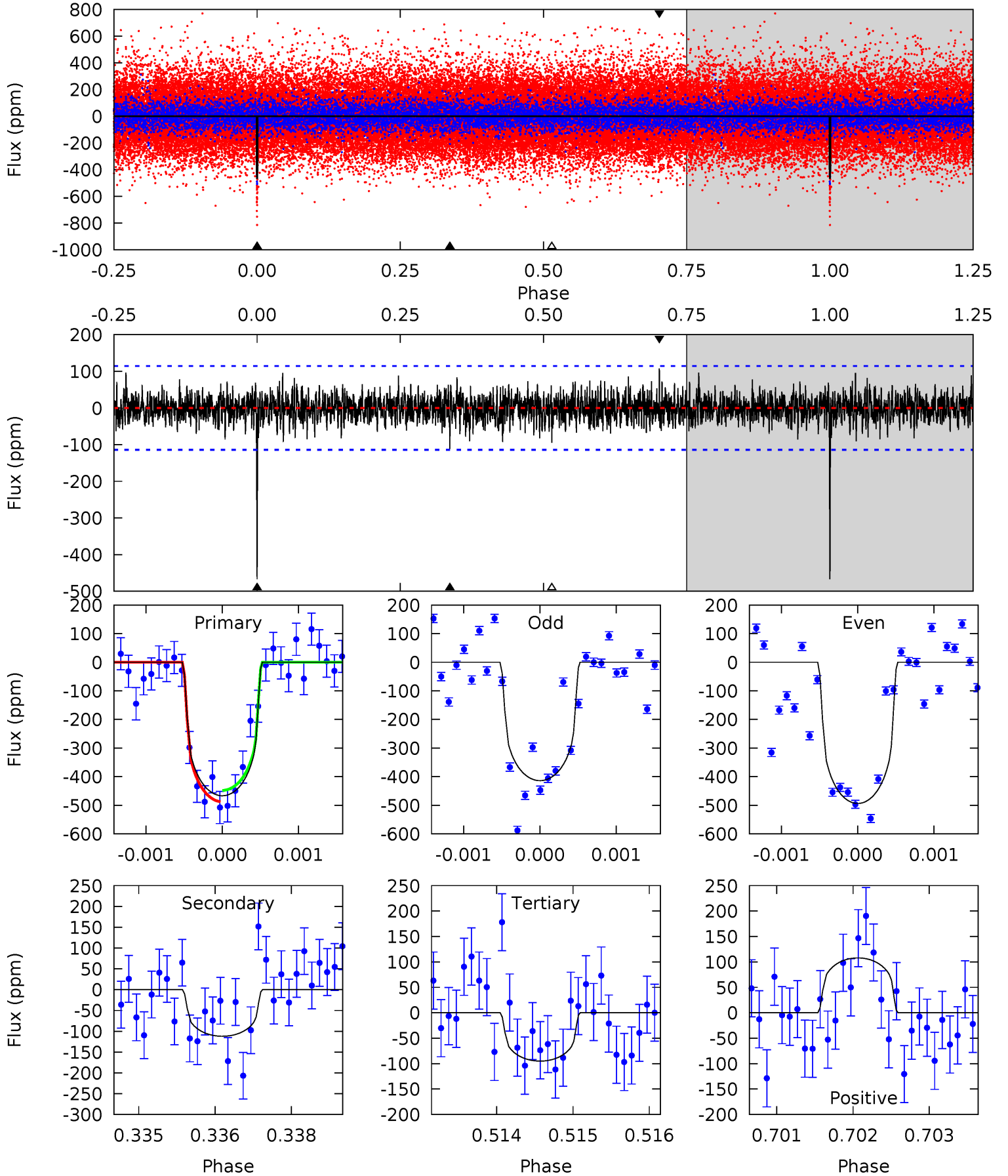
TCE 009002278-04 $P=267.291398$ Days $T_0=322.406364$ (BKJD)



DV Model-Shift Uniqueness Test

009002278-04, P = 267.281495 Days, E = 55.162007 Days

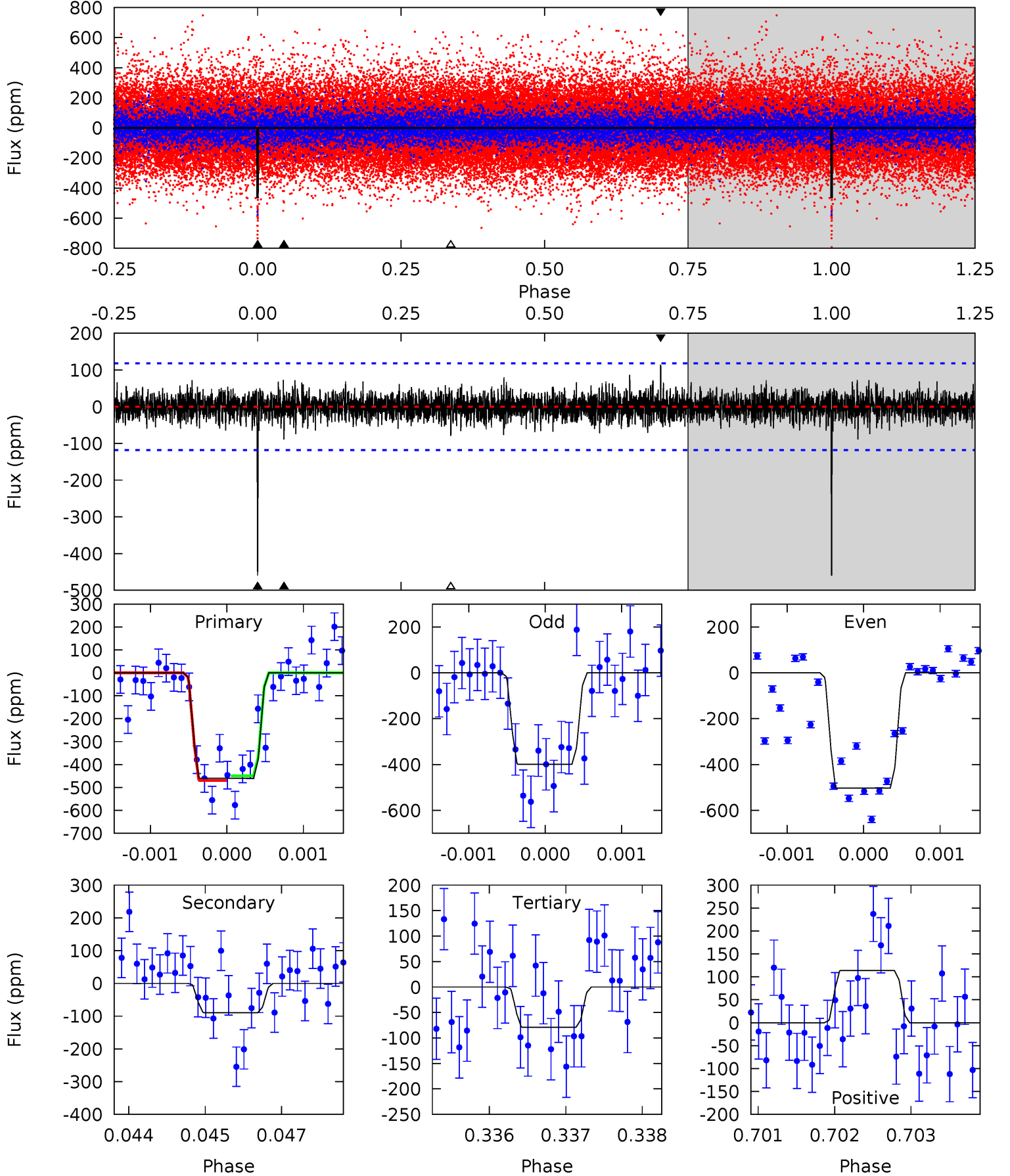
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	5.31	4.50	5.11	5.42	3.23	1.28	17.6	17.0	0.81	0.20	1.91	1.03	0.19	0.93



Alt Model-Shift Uniqueness Test

009002278-04, P = 267.291398 Days, E = 55.114966 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	4.11	3.64	5.24	5.44	3.27	1.01	17.5	15.9	0.47	-1.13	2.39	0.97	0.20	0.48



Stellar Parameters For KIC 009002278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4926^{+98}_{-98}	$4.653^{+0.017}_{-0.049}$	$-0.360^{+0.150}_{-0.150}$	$0.662^{+0.041}_{-0.027}$	$0.727^{+0.029}_{-0.059}$	$3.535^{+0.298}_{-0.564}$
	+2%/-2%	+0%/-1%	+42%/-42%	+6%/-4%	+4%/-8%	+8%/-16%
Source	SPE62	SPE62	SPE62	DSEP		

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

Secondary Eclipse Parameters for KIC 009002278-04 / KOI 0701.04

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-112 ± 21	$1.53^{+0.82}_{-0.74}$	291^{+7}_{-7}	3816^{+1139}_{-535}	13626^{+40694}_{-8078}
Alt.	-89 ± 22	$1.67^{+0.82}_{-0.78}$	292^{+7}_{-7}	3561^{+872}_{-459}	9055^{+22366}_{-5197}

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

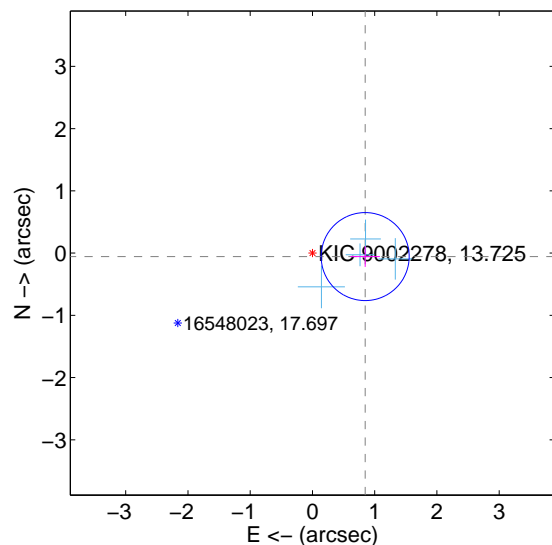
Supplemental centroid analysis for 009002278-04. Kepler magnitude: 13.72. Transit SNR 14.59

There are 4 quarters with good PRF difference image offsets

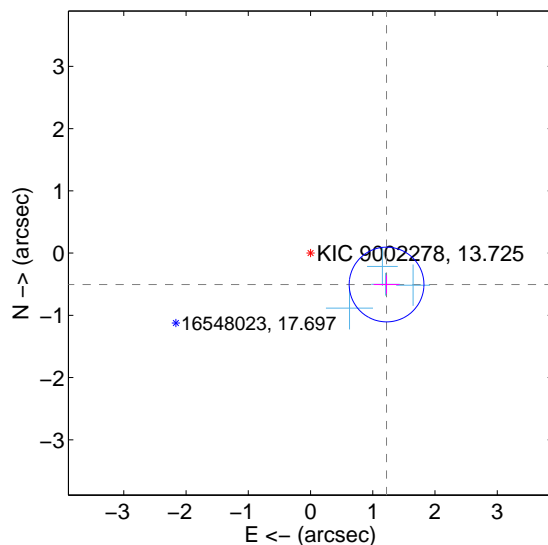
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.849 ± 0.236	3.60	-0.847 ± 0.236	-0.056 ± 0.166
PRF-fit source offset from KIC position	1.322 ± 0.200	6.60	-1.222 ± 0.208	-0.505 ± 0.147
photometric centroid source offset	1.08 ± 0.72	1.50	-0.50 ± 0.78	-0.96 ± 0.70

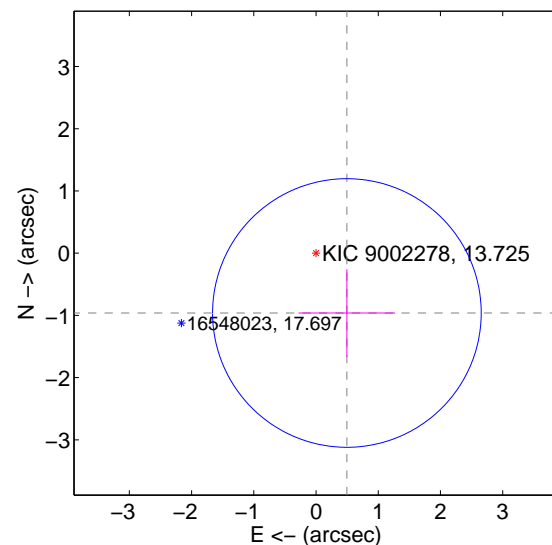
offset from difference PRF-fit to OOT PRF-fit



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.

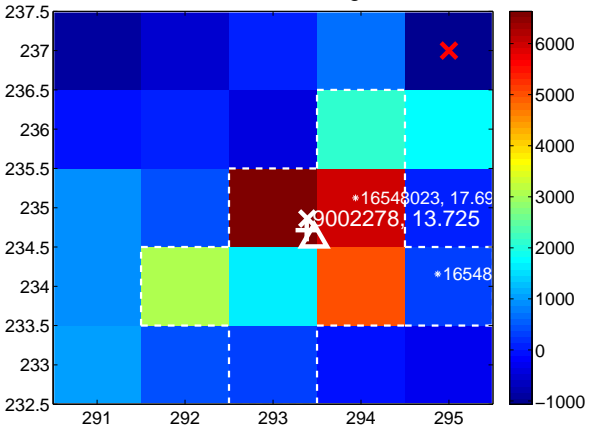
Q5 no difference image



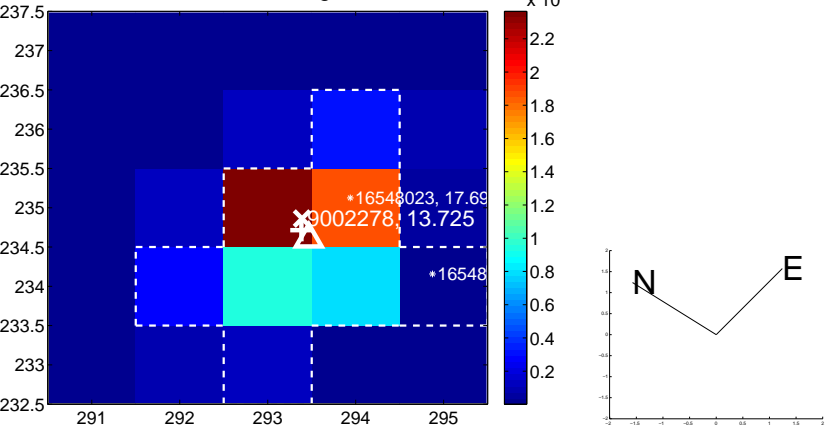
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



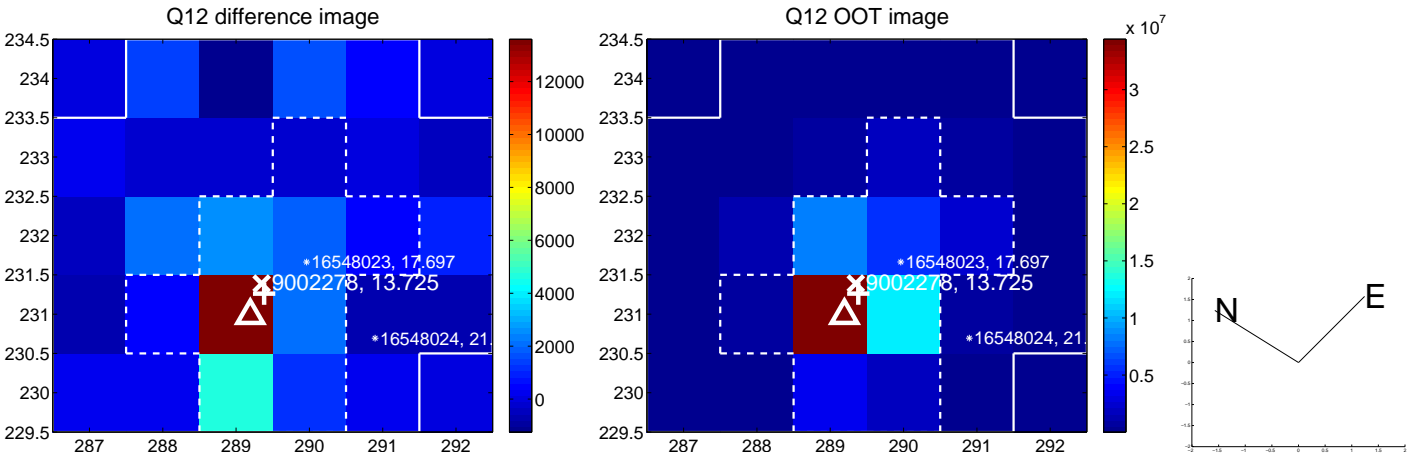
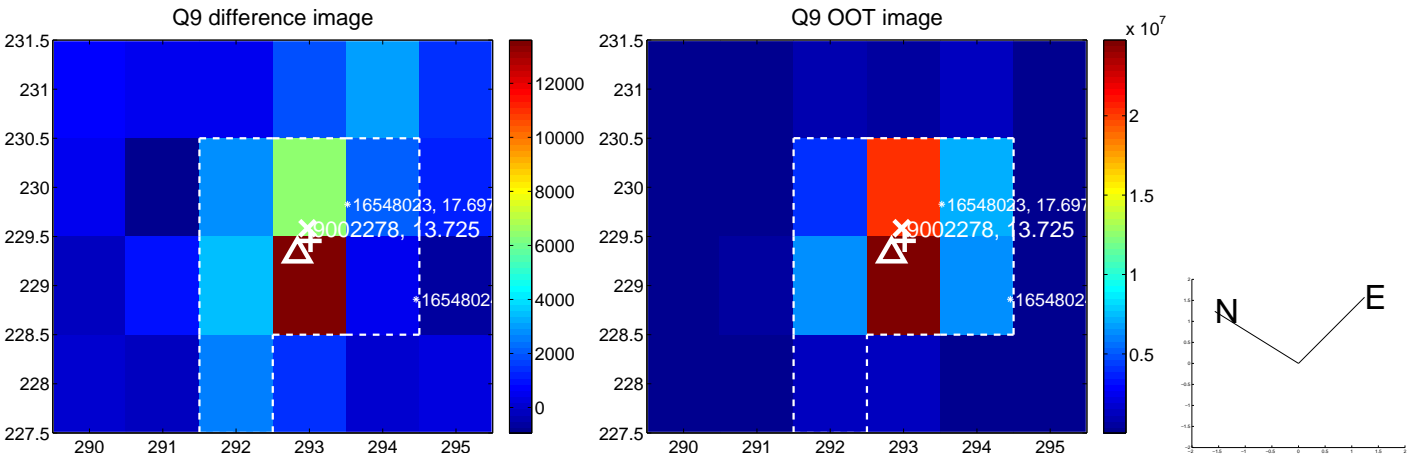
Q8 no difference image



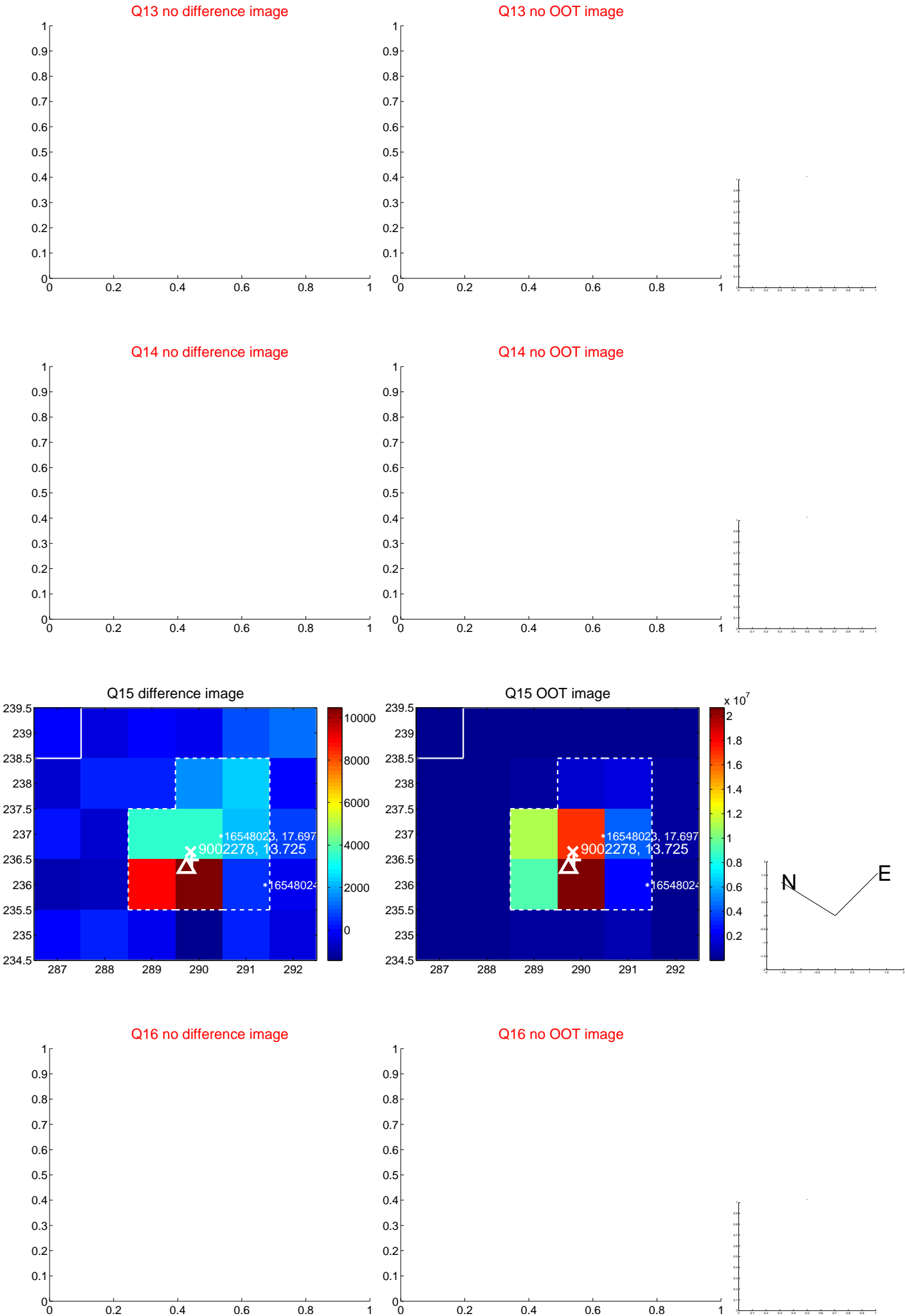
Q8 no OOT image



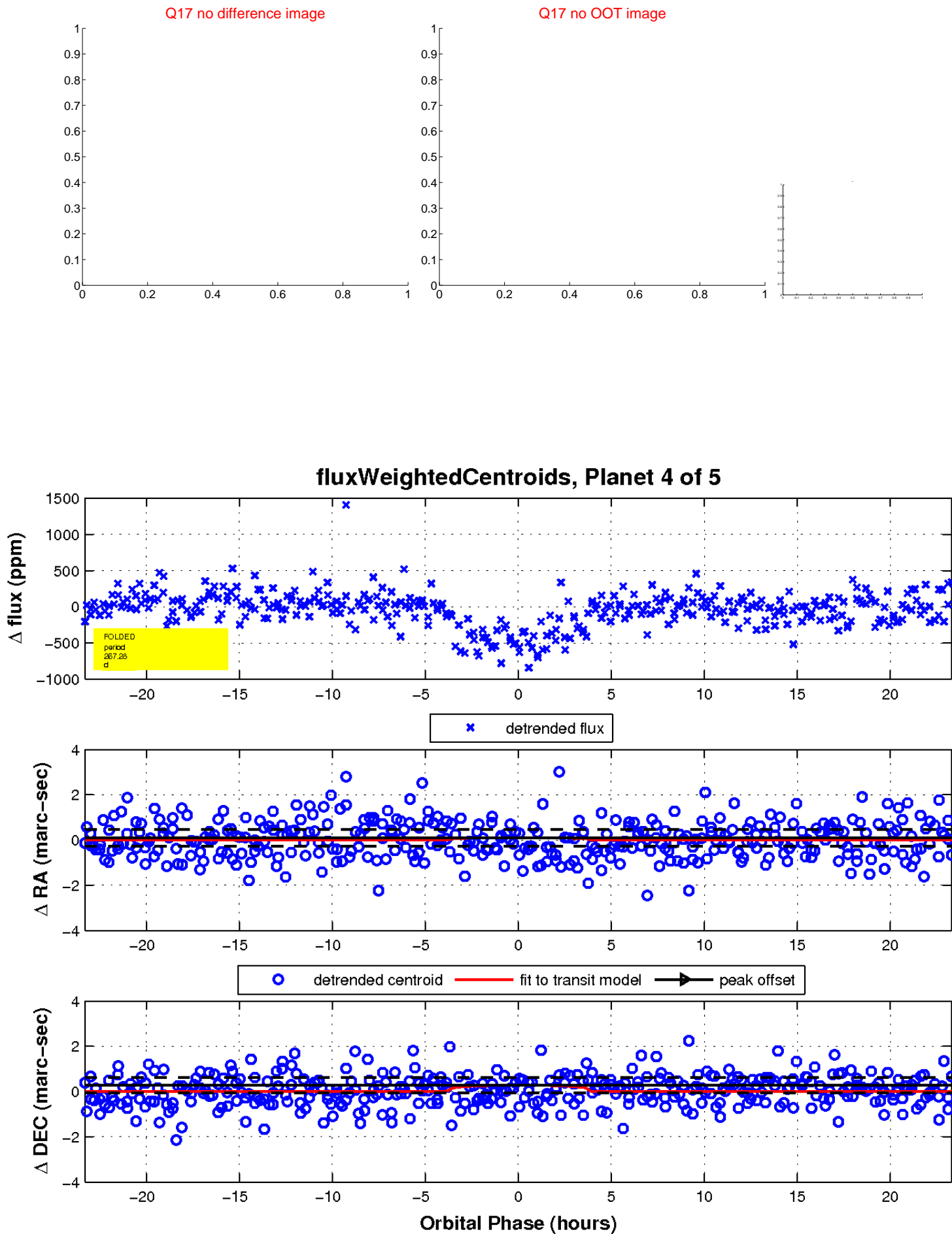
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

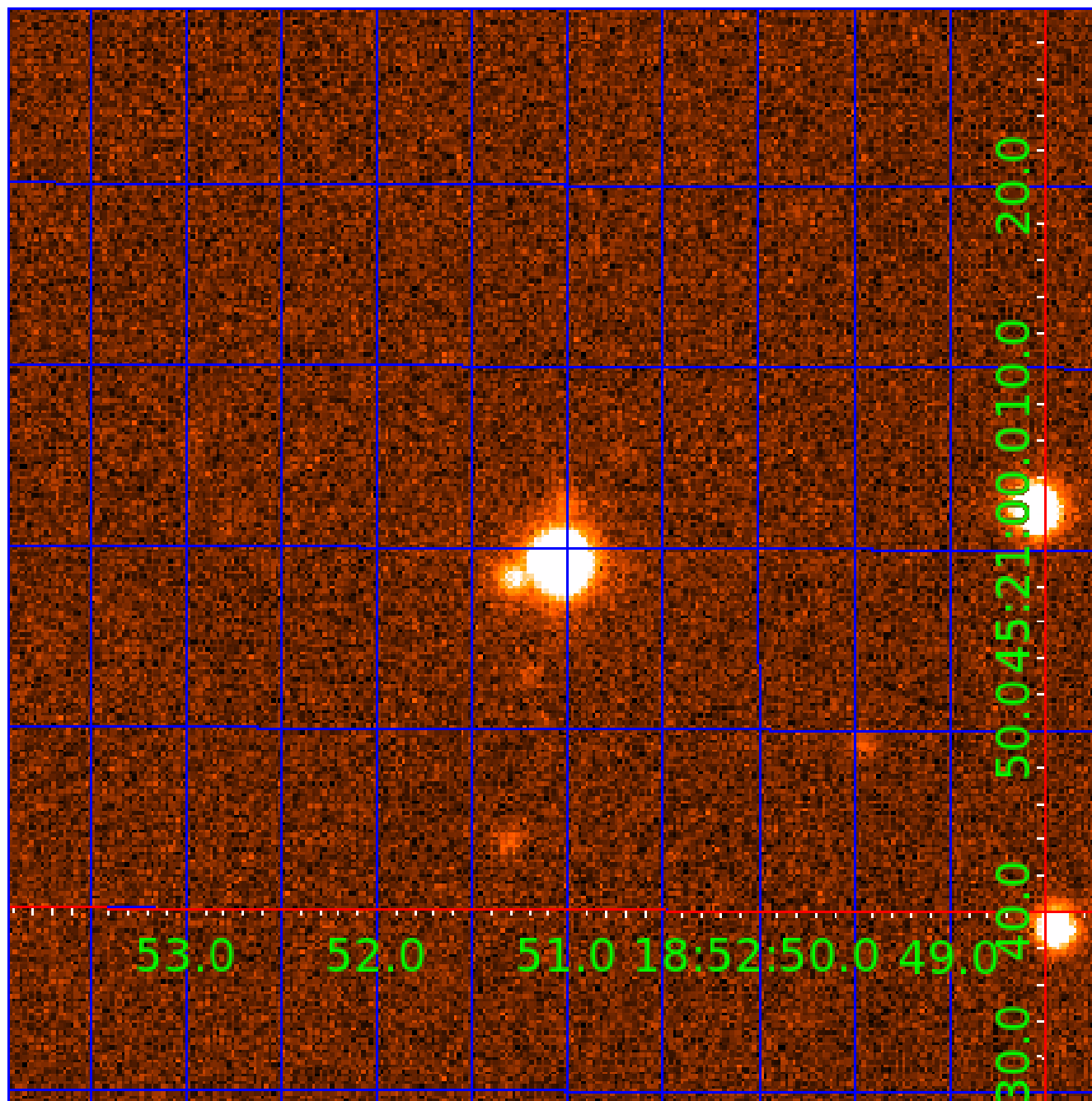


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009002278

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})
009002278-01	OBS	0701.01	18.164044	144.484811	937.3	3.044	81.6	82.2	0.66	4926	2.25	15.75
009002278-02	OBS	0701.02	5.714886	136.634086	428.6	2.518	57.2	64.8	0.66	4926	1.67	73.58
009002278-03	OBS	0701.03	122.385753	150.411809	719.0	7.435	35.9	36.9	0.66	4926	1.97	1.24
009002278-04	OBS	0701.04	267.281495	322.443501	469.6	7.783	14.3	14.6	0.66	4926	1.53	0.44
009002278-05	OBS	0701.05	12.441950	134.648628	74.8	3.821	8.5	9.1	0.66	4926	0.68	26.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009002278-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-02	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
009002278-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
009002278-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—CENT_KIC_POS
009002278-05	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

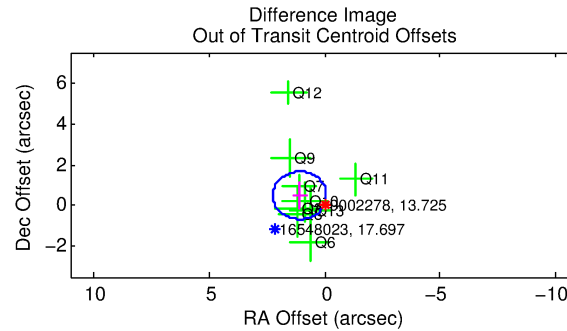
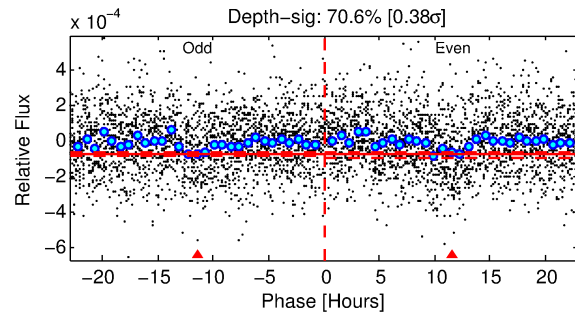
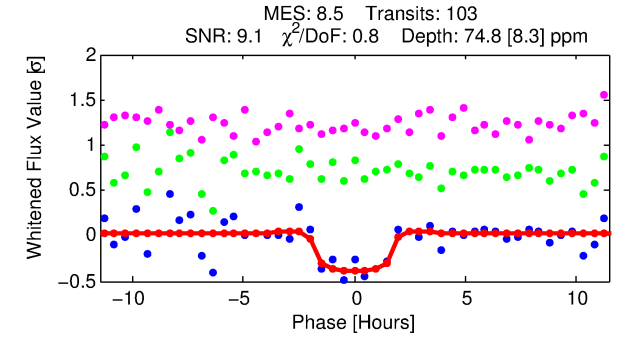
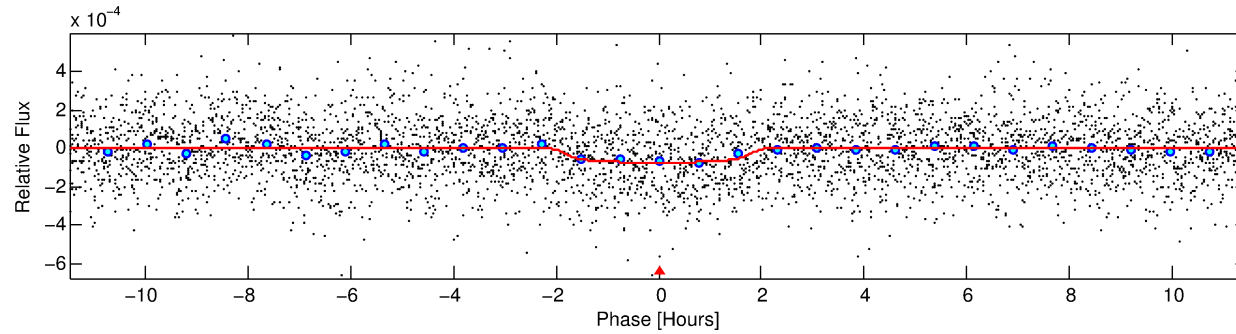
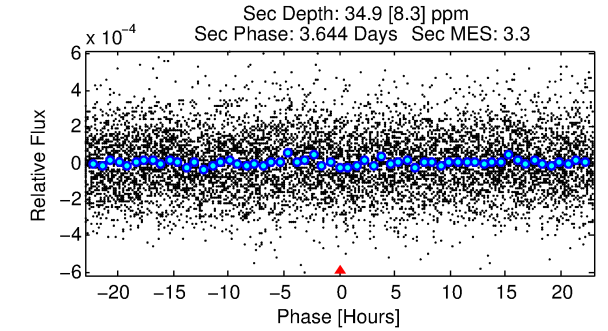
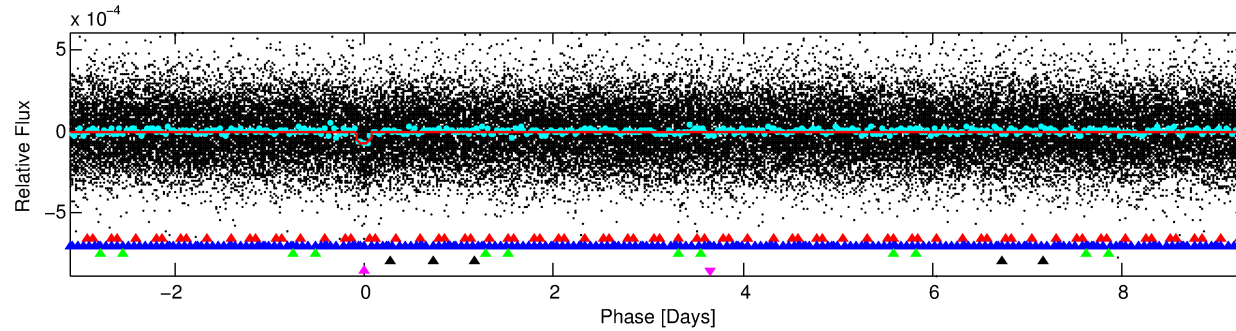
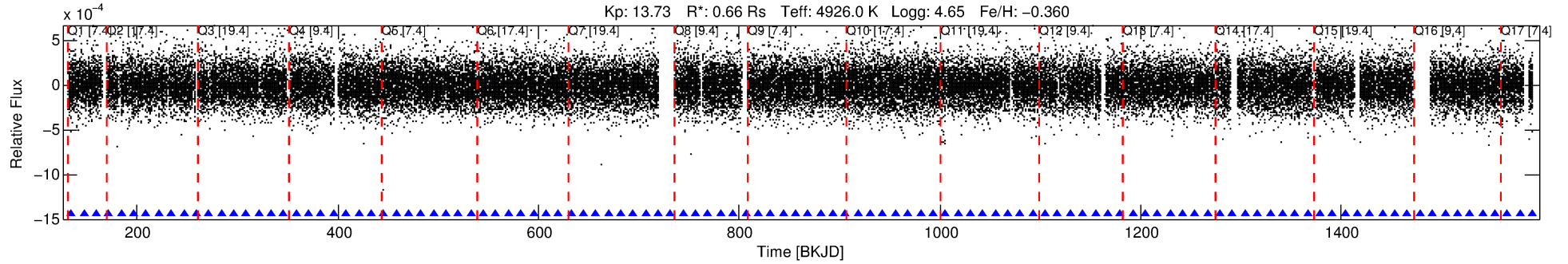
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009002278-05

No Significant Match Found

DV One-Page Summary

KIC: 9002278 Candidate: 5 of 5 Period: 12.442 d
KOI: K00701.05 Name: Kepler-62c Corr: 0.914



DV Fit Results:

Period = 12.44195 [0.00013] d
Epoch = 134.6486 [0.0081] BKJD
Rp/R* = 0.0093 [0.0063]
a/R* = 12.74 [33.63]
b = 0.87 [0.76]
Seff = 26.08 [3.05]
Teq = 576 [17] K
Rp = 0.68 [0.46] Re
a = 0.0942 [0.0053] AU
Ag = 372.90 [513.99] [0.72σ]
Teffp = 3915 [1349] K [2.48σ]

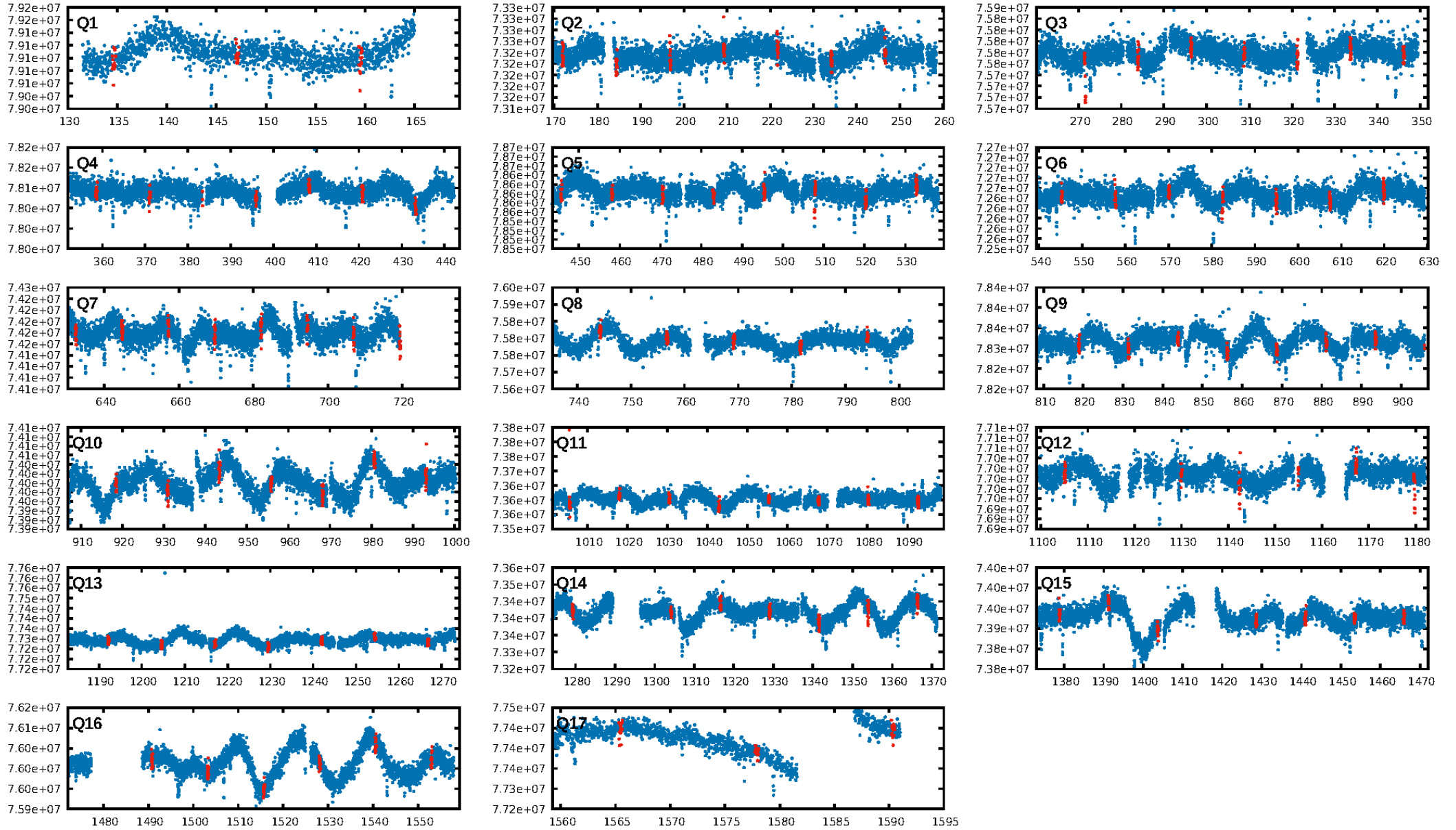
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.29σ]
LongPeriod-sig: 100.0% [28.11σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.27e-17
RollingBand-fgt: 1.00 [98/98]
GhostDiagnostic-chr: 2.242
Centroid-sig: 23.9%
Centroid-so: 1.756 arcsec [1.56σ]
OotOffset-rm: 1.194 arcsec [3.07σ]
KicOffset-rm: 0.743 arcsec [2.56σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.89 [8/9]
DiffImageOverlap-fno: 1.00 [17/17]

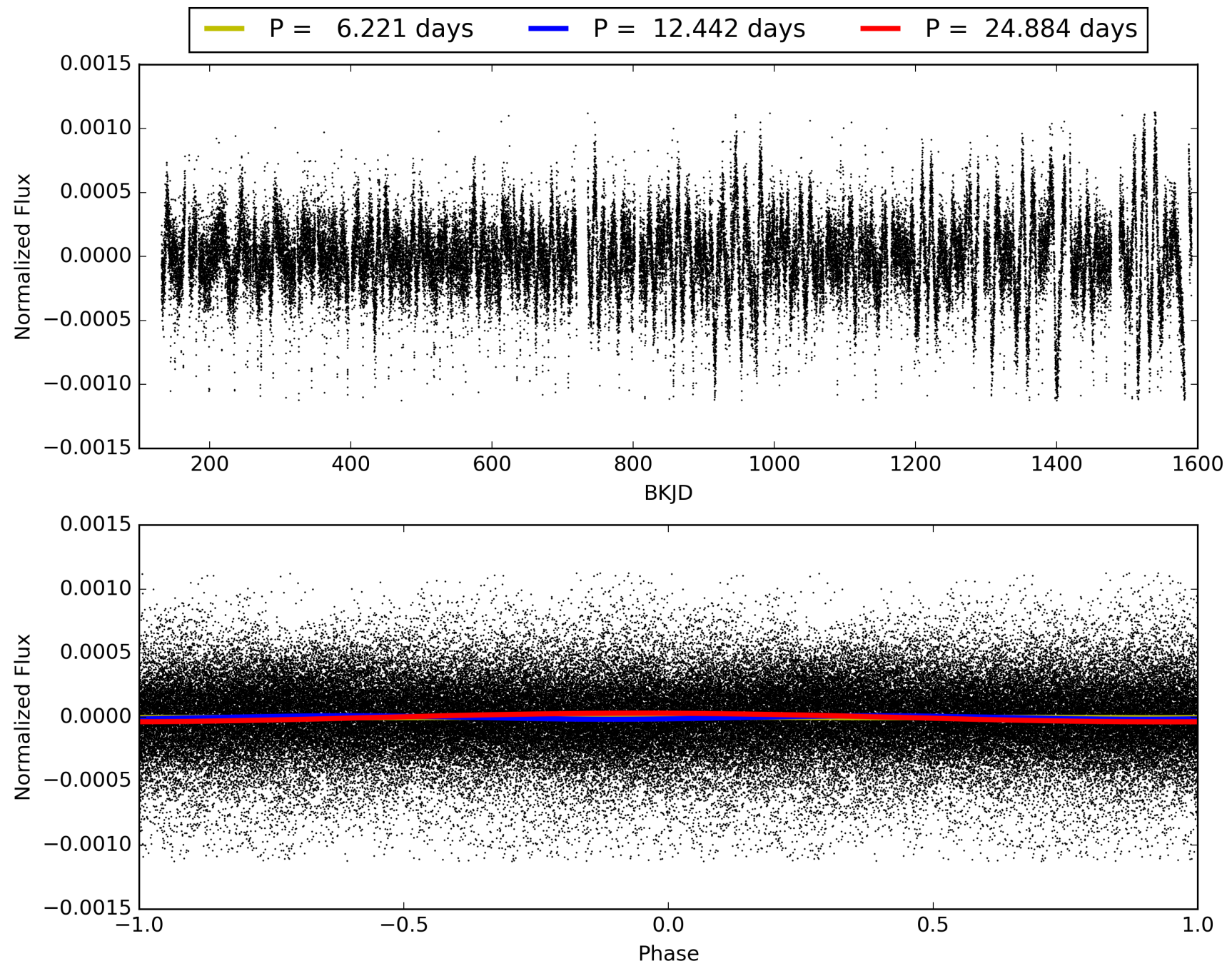
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:58:56 Z

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

TCE 009002278-05, PDC Light Curves

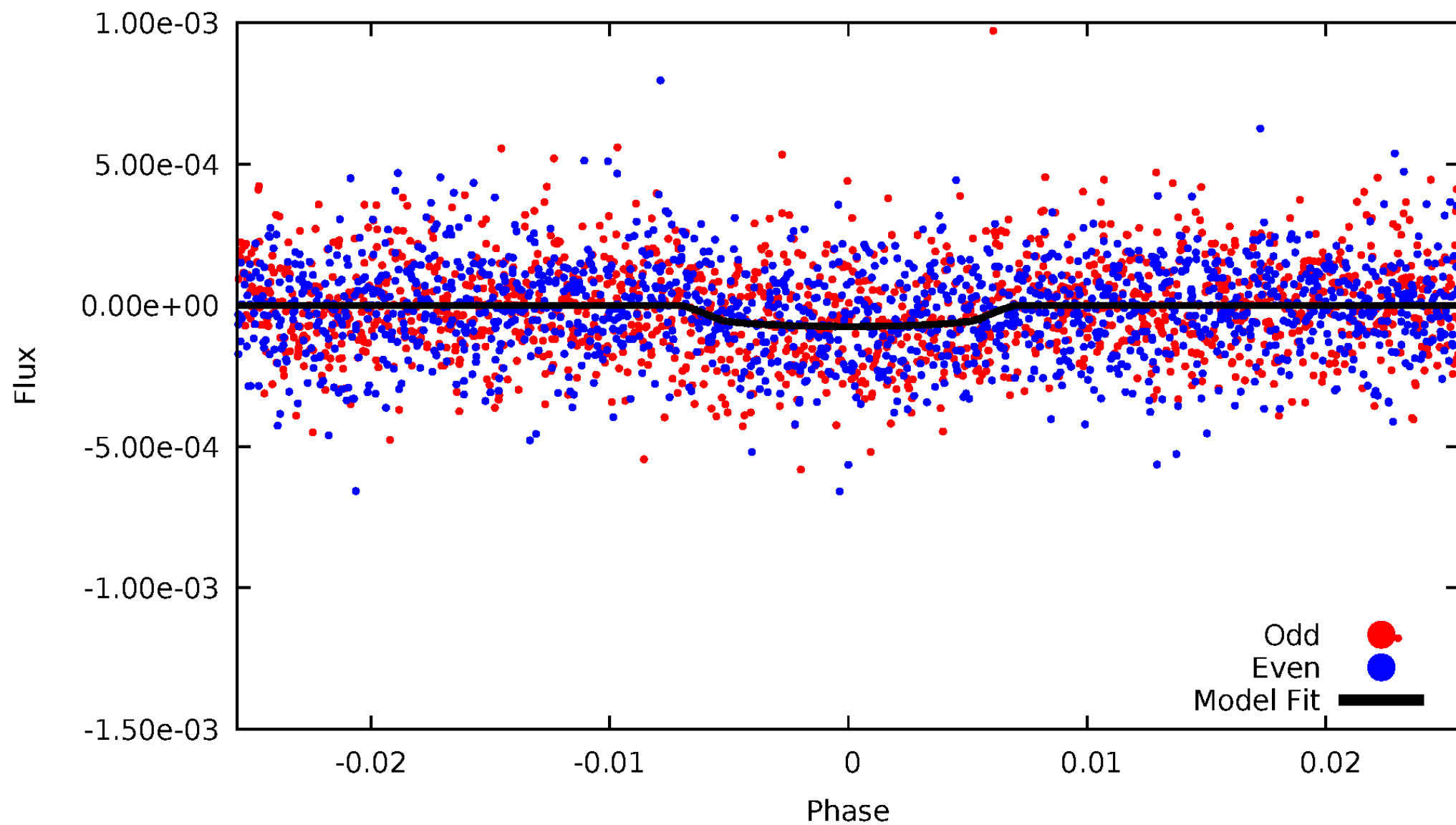


TCE 009002278-05



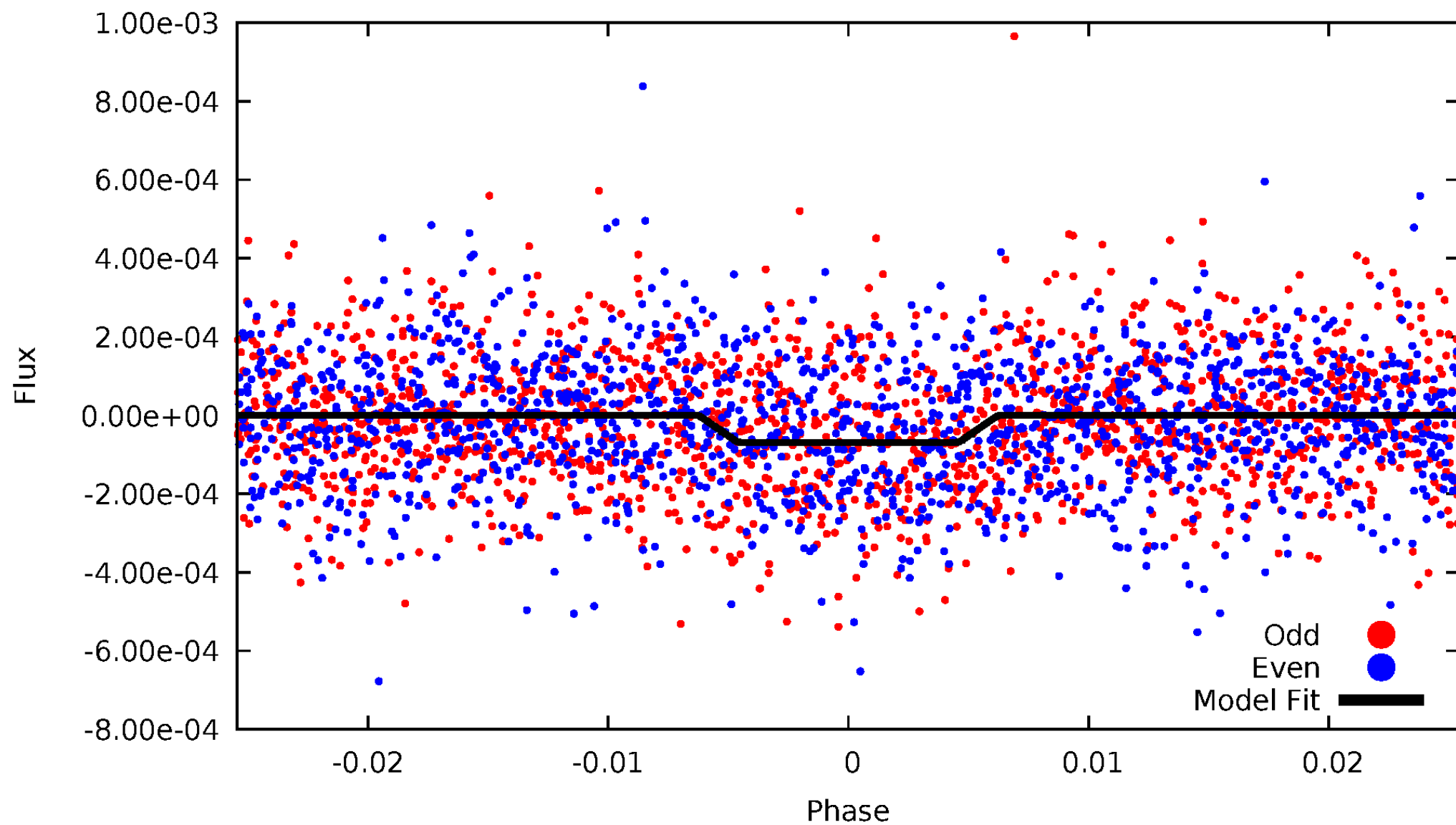
DV Odd/Even

TCE 009002278-05



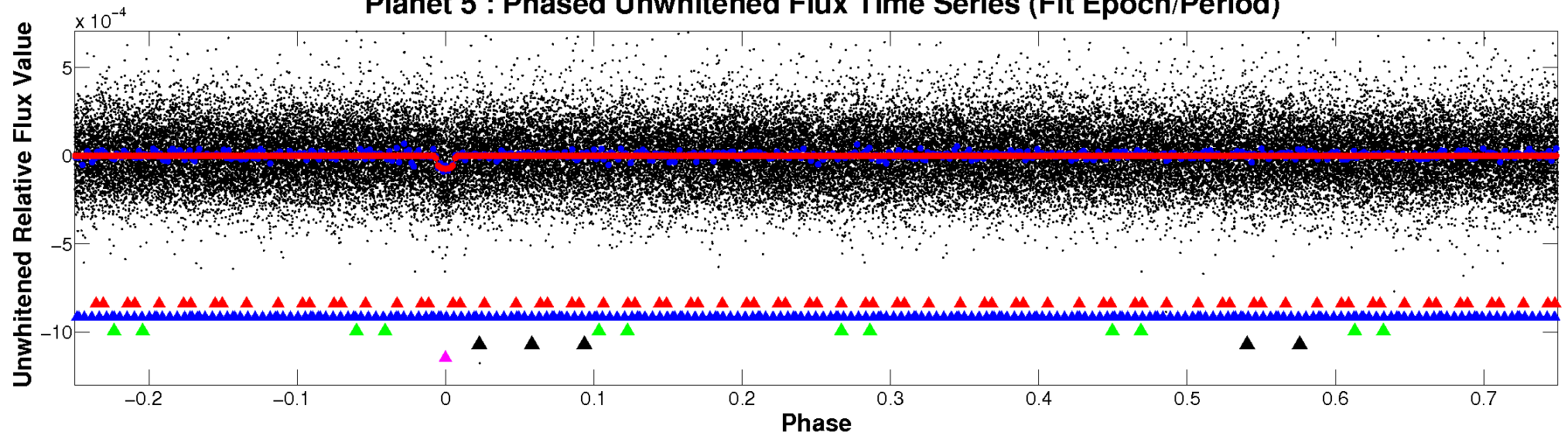
ALT Odd/Even

TCE 009002278-05

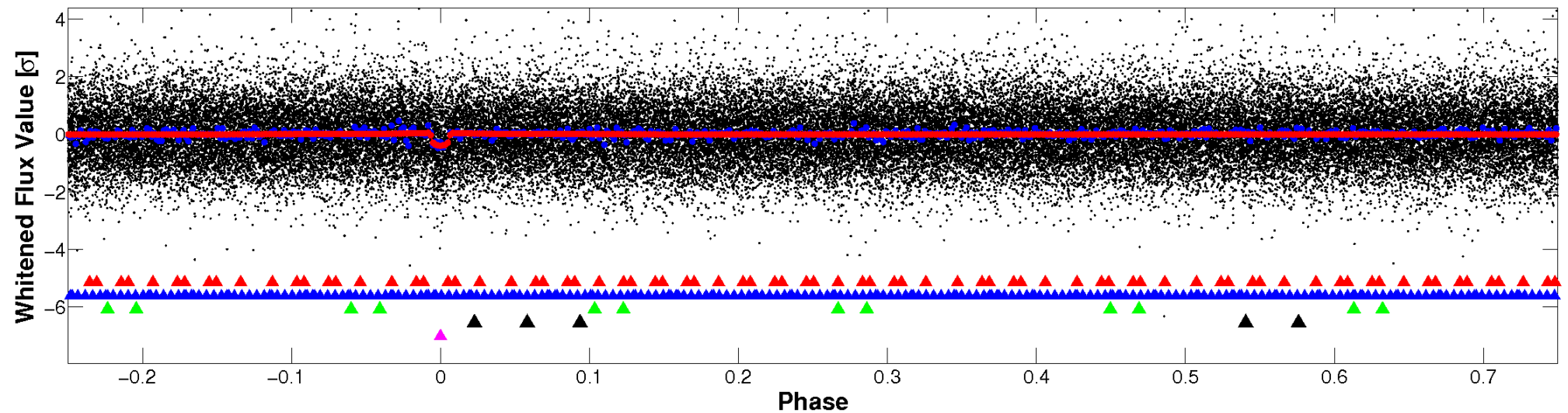


Non-Whitened Vs. Whitened Light Curve

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

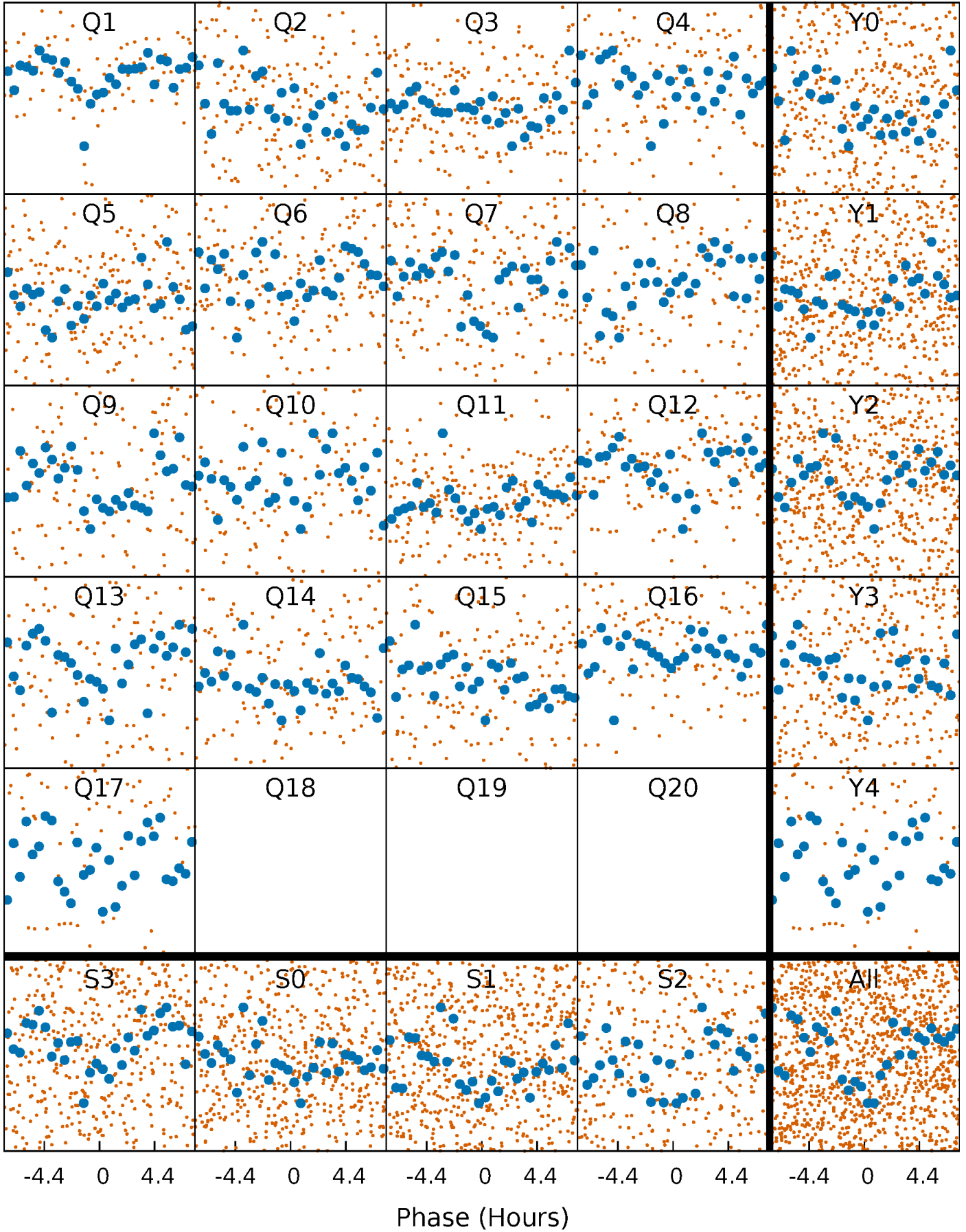


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



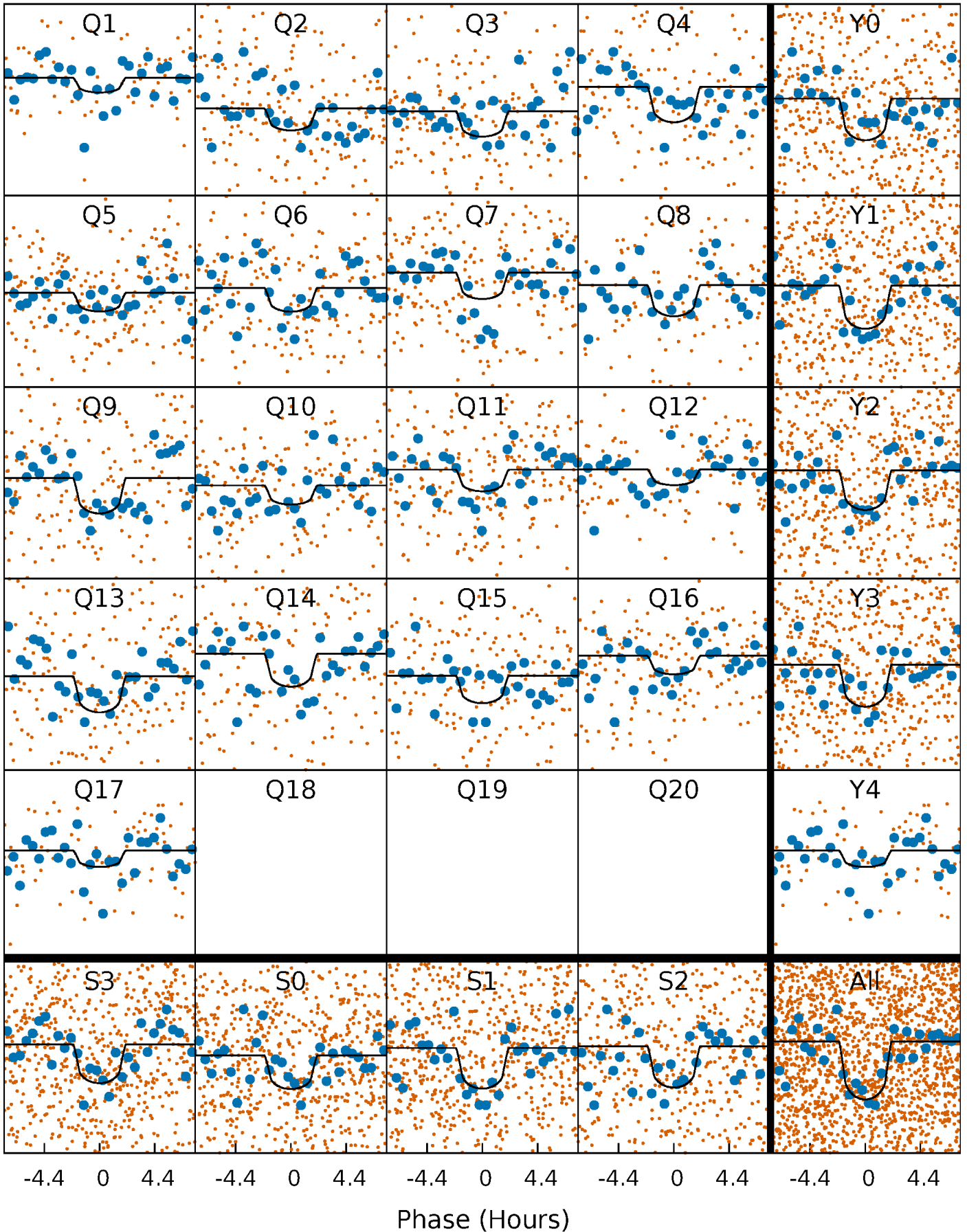
PDC Quarter-Phased Transit Curves

TCE 009002278-05 $P = 12.441950$ Days $T_0 = 134.648628$ (BKJD)



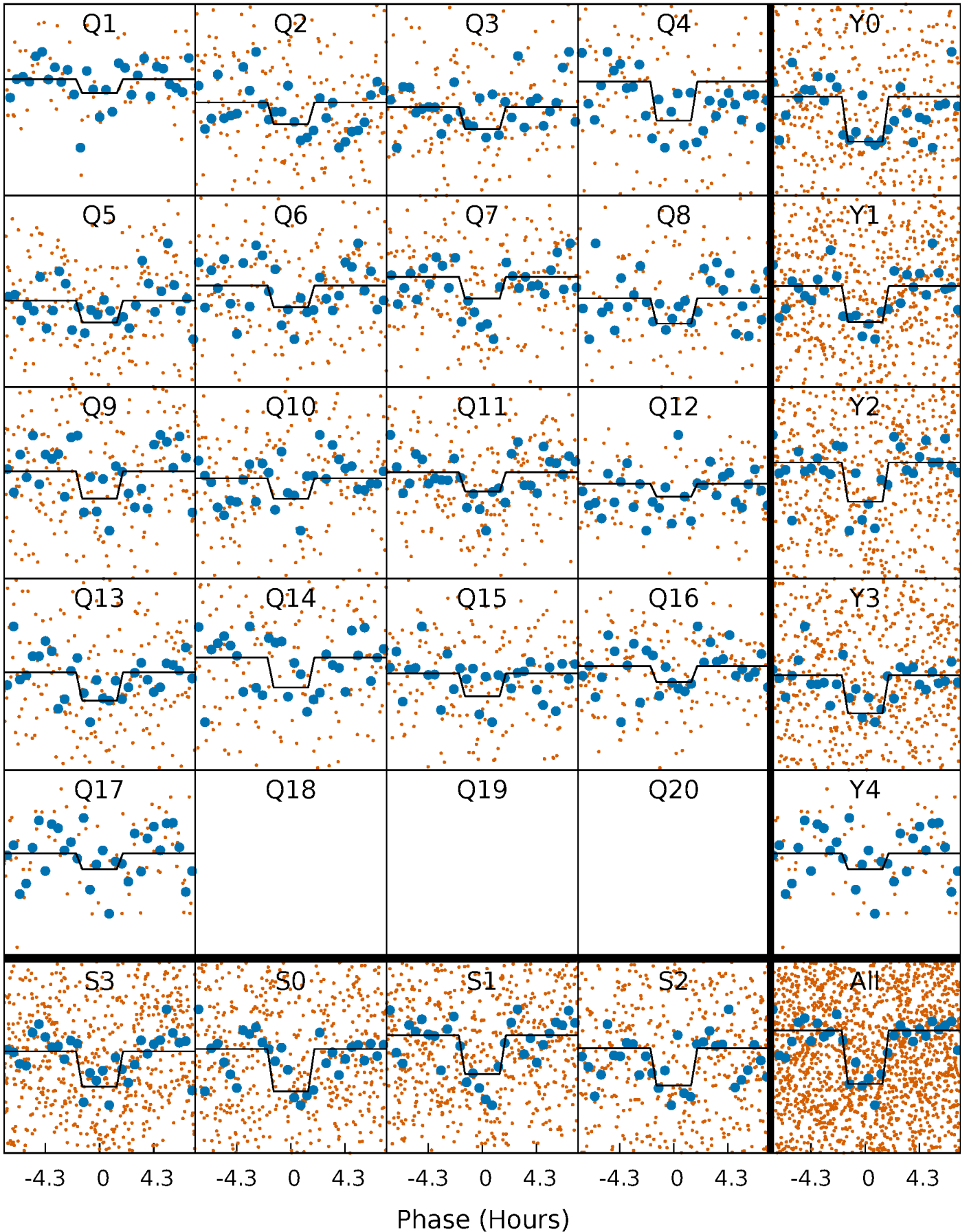
DV Quarter-Phased Transit Curves

TCE 009002278-05 $P = 12.441950$ Days $T_0 = 134.648628$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

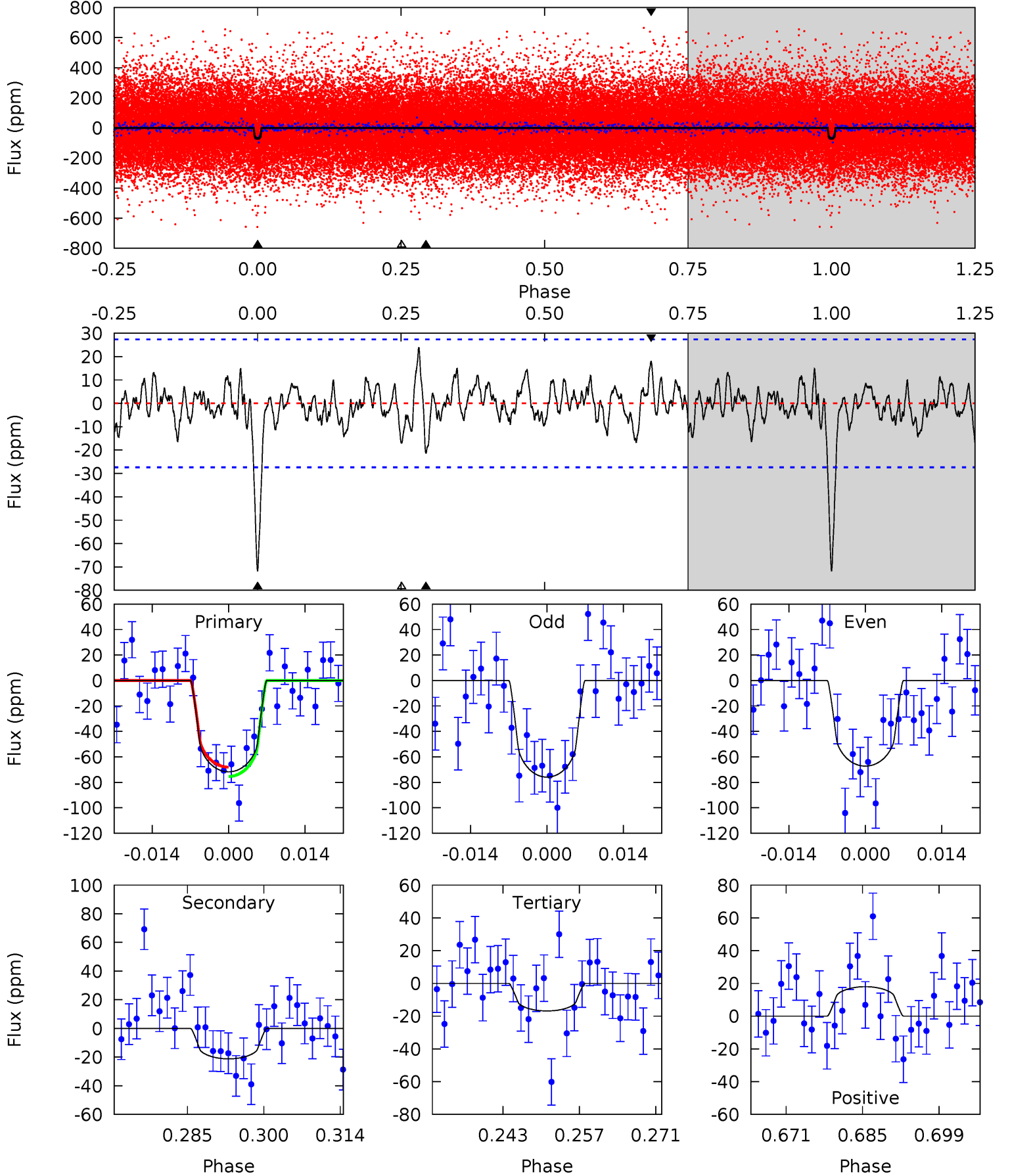
TCE 009002278-05 P= 12.441647 Days $T_0=134.659051$ (BKJD)



DV Model-Shift Uniqueness Test

009002278-05, P = 12.441950 Days, E = 122.206678 Days

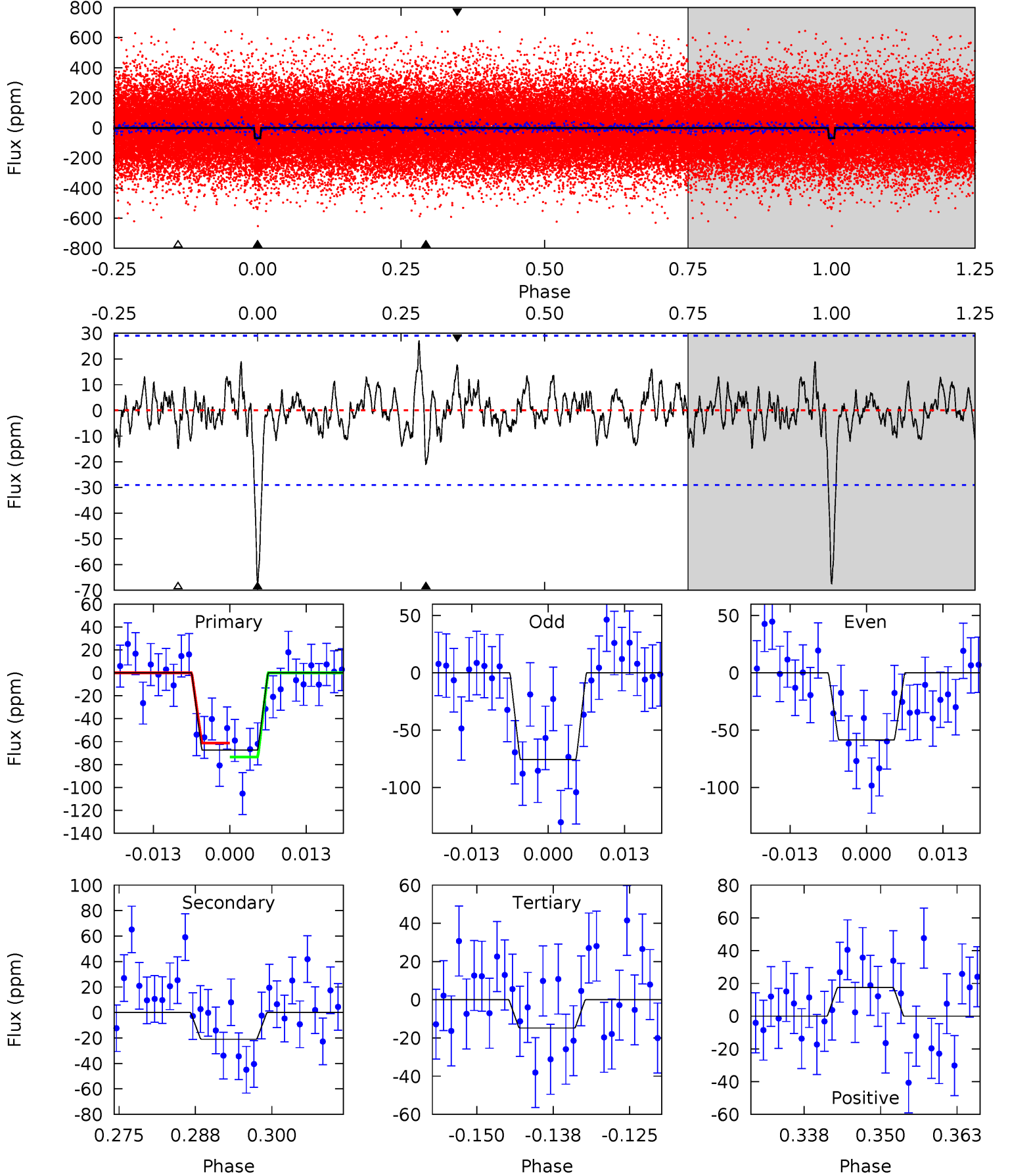
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	3.85	3.05	3.26	4.96	2.45	1.14	9.94	9.74	0.80	0.59	0.78	1.00	0.25	0.66



Alt Model-Shift Uniqueness Test

009002278-05, $P = 12.441647$ Days, $E = 122.217404$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	3.61	2.53	3.01	4.98	2.50	1.04	9.03	8.56	1.08	0.61	1.48	1.14	0.29	1.04



Stellar Parameters For KIC 009002278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4926^{+98}_{-98}	$4.653^{+0.017}_{-0.049}$	$-0.360^{+0.150}_{-0.150}$	$0.662^{+0.041}_{-0.027}$	$0.727^{+0.029}_{-0.059}$	$3.535^{+0.298}_{-0.564}$
	+2%/-2%	+0%/-1%	+42%/-42%	+6%/-4%	+4%/-8%	+8%/-16%
Source	SPE62	SPE62	SPE62	DSEP		

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

Secondary Eclipse Parameters for KIC 009002278-05 / KOI 0701.05

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 6	$0.72^{+0.43}_{-0.39}$	811^{+20}_{-19}	3686^{+1341}_{-504}	195^{+774}_{-122}
Alt.	-21 ± 6	$0.66^{+0.43}_{-0.39}$	811^{+19}_{-19}	3851^{+1432}_{-644}	242^{+1020}_{-165}

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

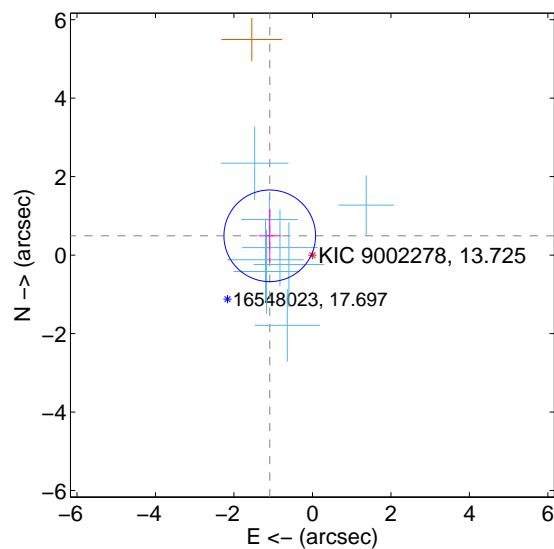
Supplemental centroid analysis for 009002278-05. Kepler magnitude: 13.72. Transit SNR 9.08

There are 8 quarters with good PRF difference image offsets

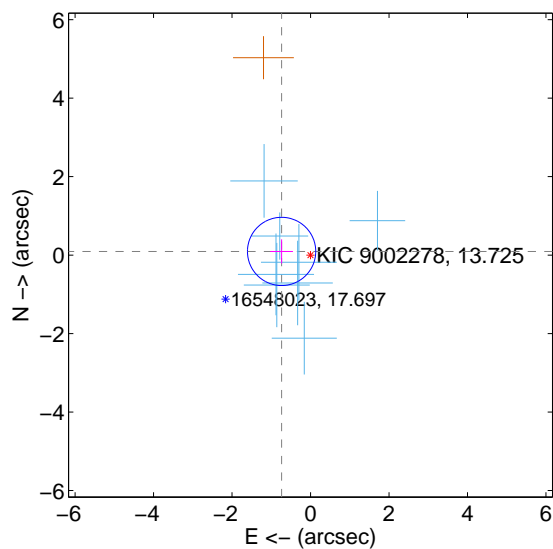
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.194 ± 0.389	3.07	1.088 ± 0.281	0.492 ± 0.675
PRF-fit source offset from KIC position	0.743 ± 0.290	2.56	0.737 ± 0.290	0.093 ± 0.308
photometric centroid source offset	1.76 ± 1.13	1.56	-1.37 ± 1.15	-1.10 ± 1.09

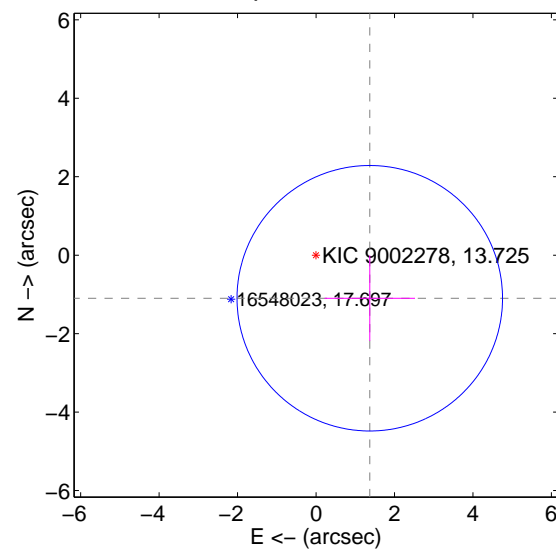
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

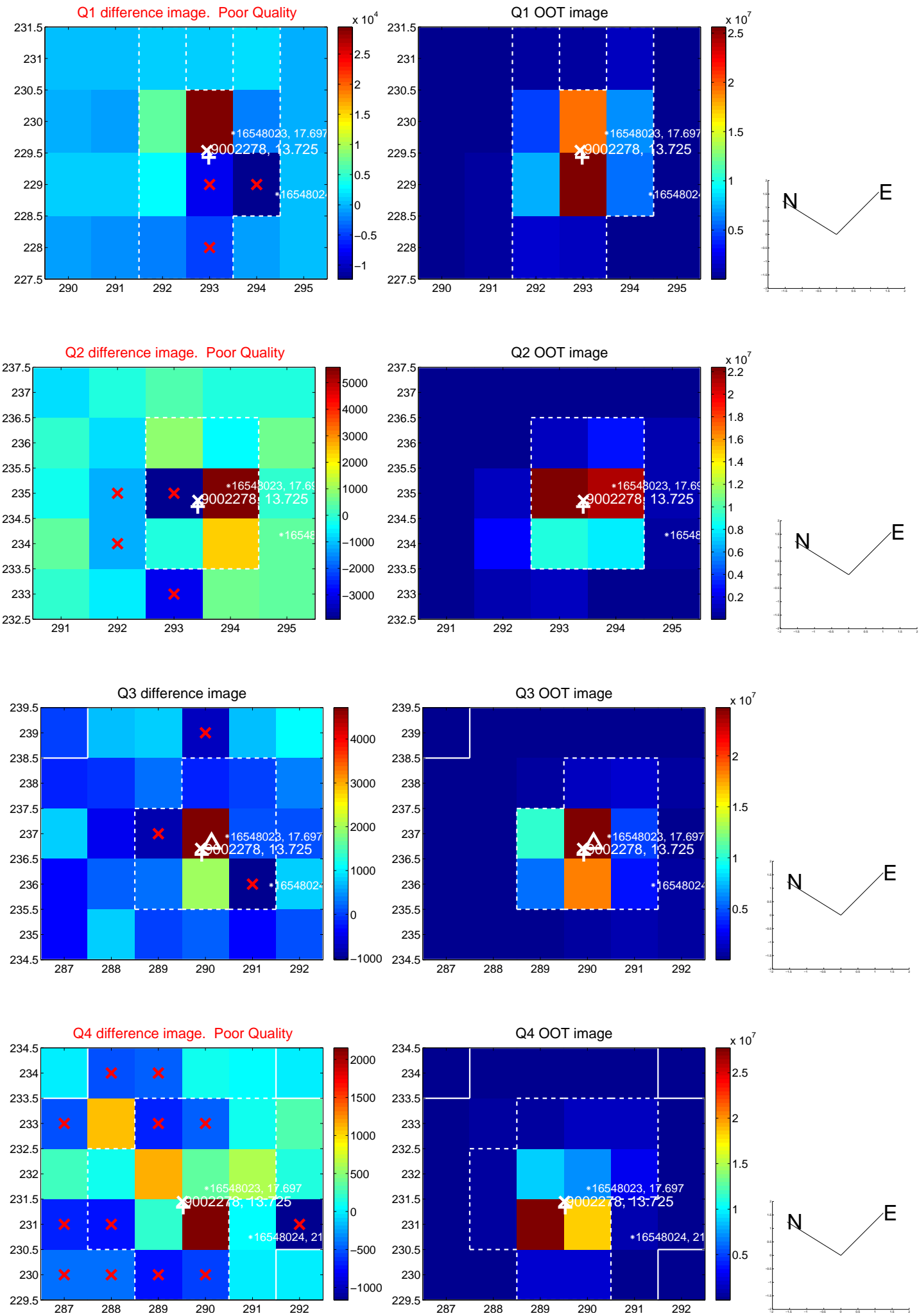


offset from photometric centroids

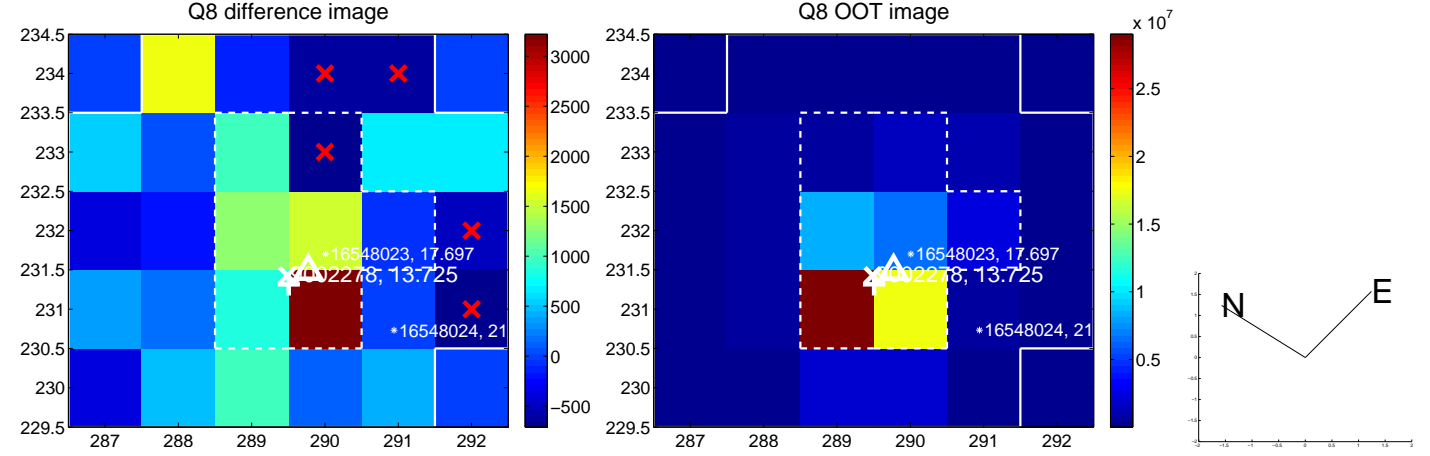
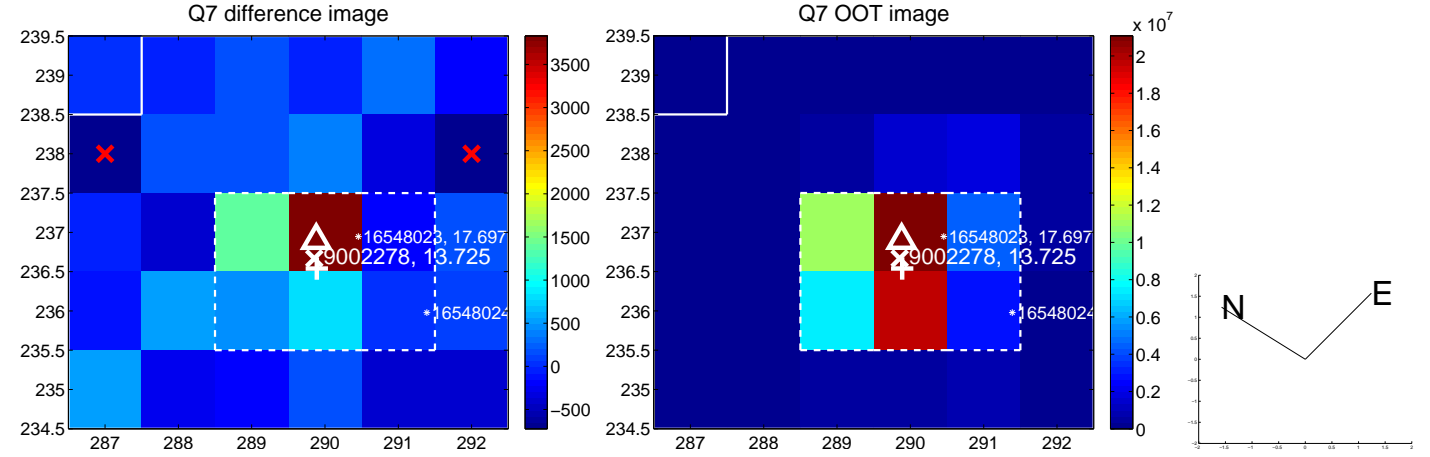
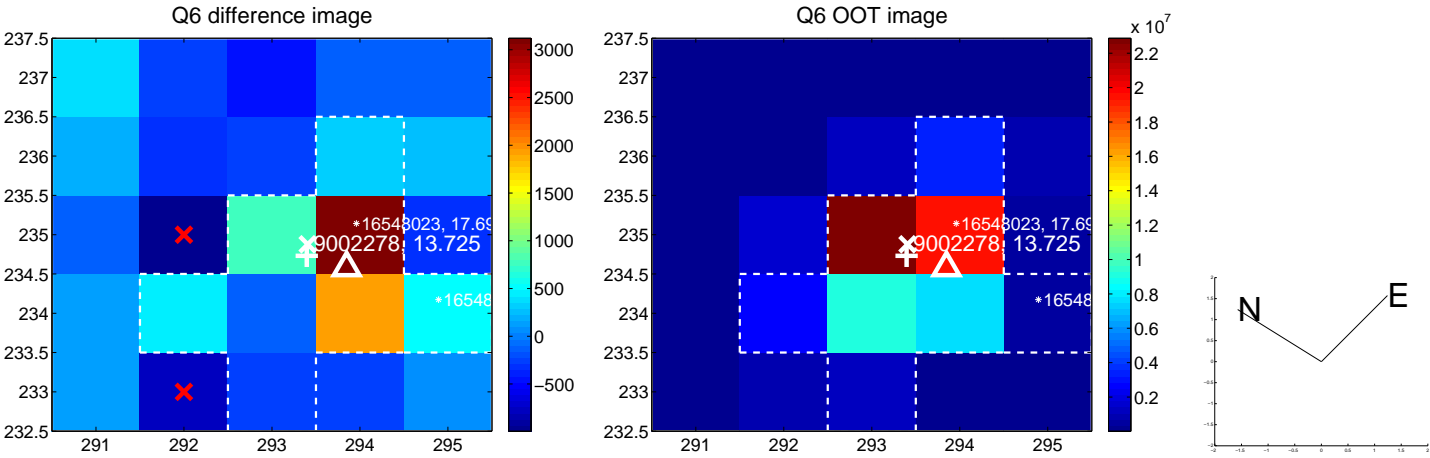
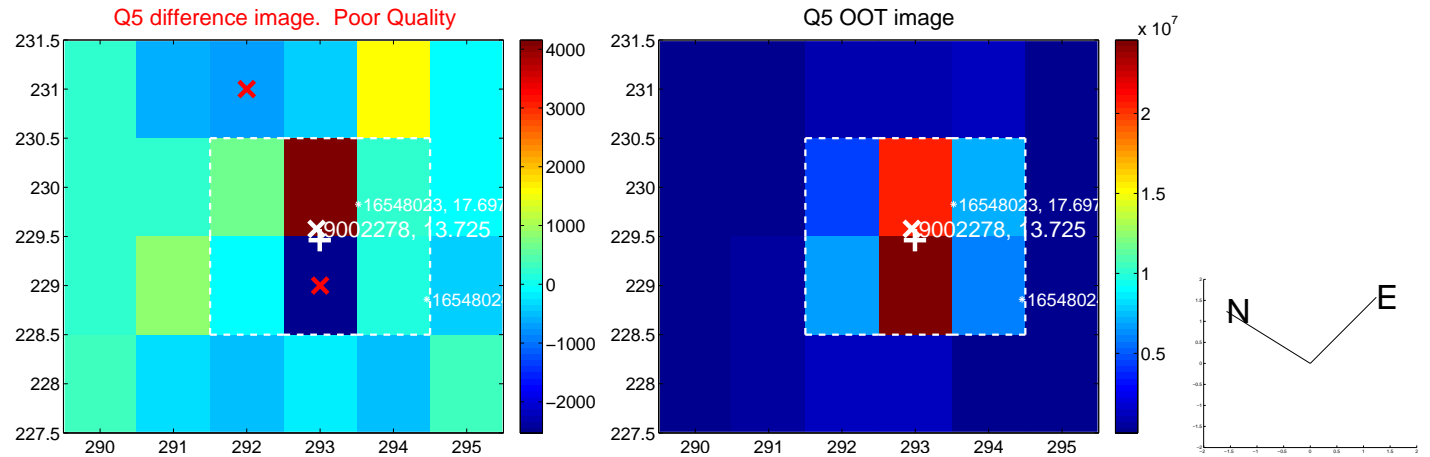


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

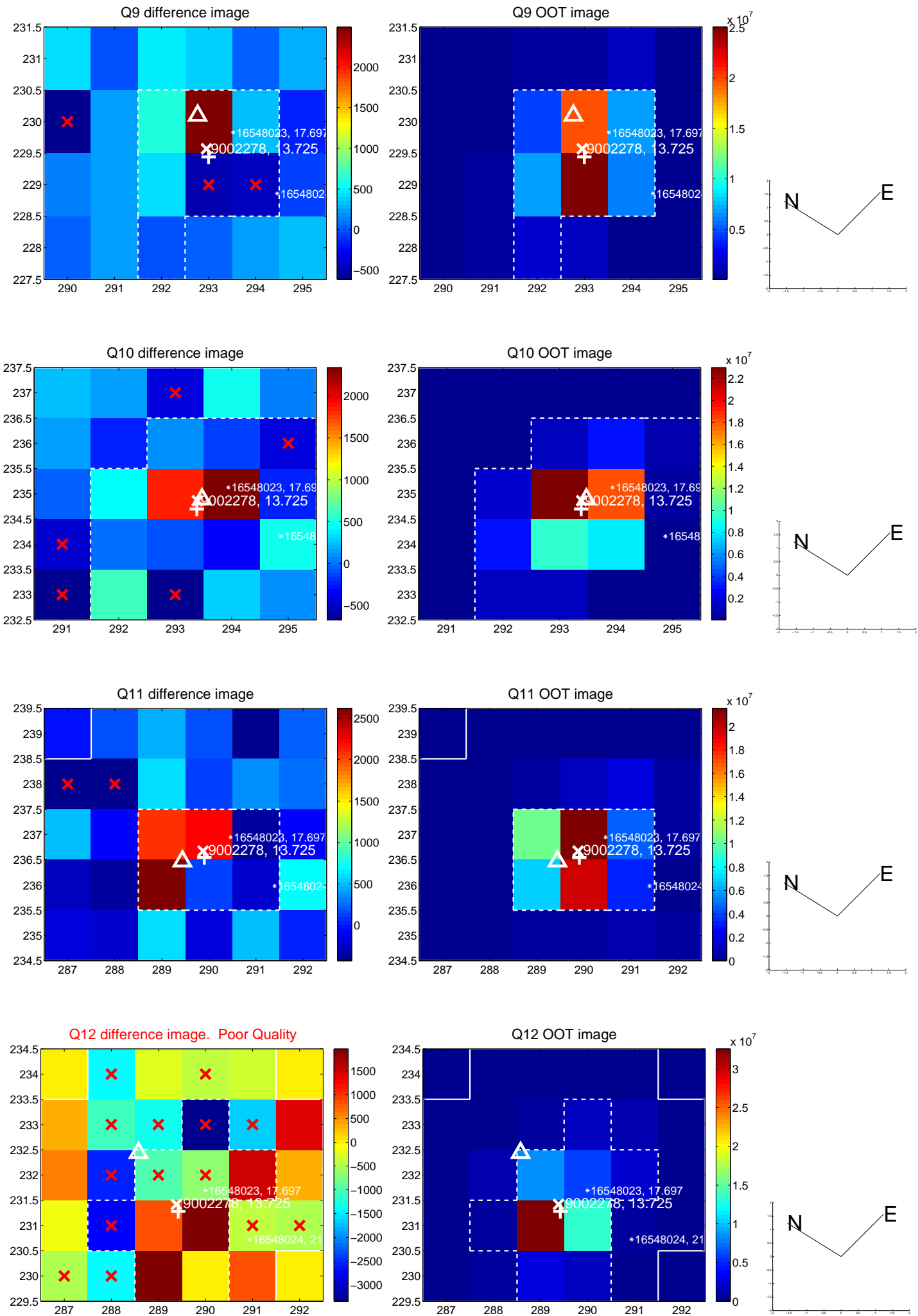
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



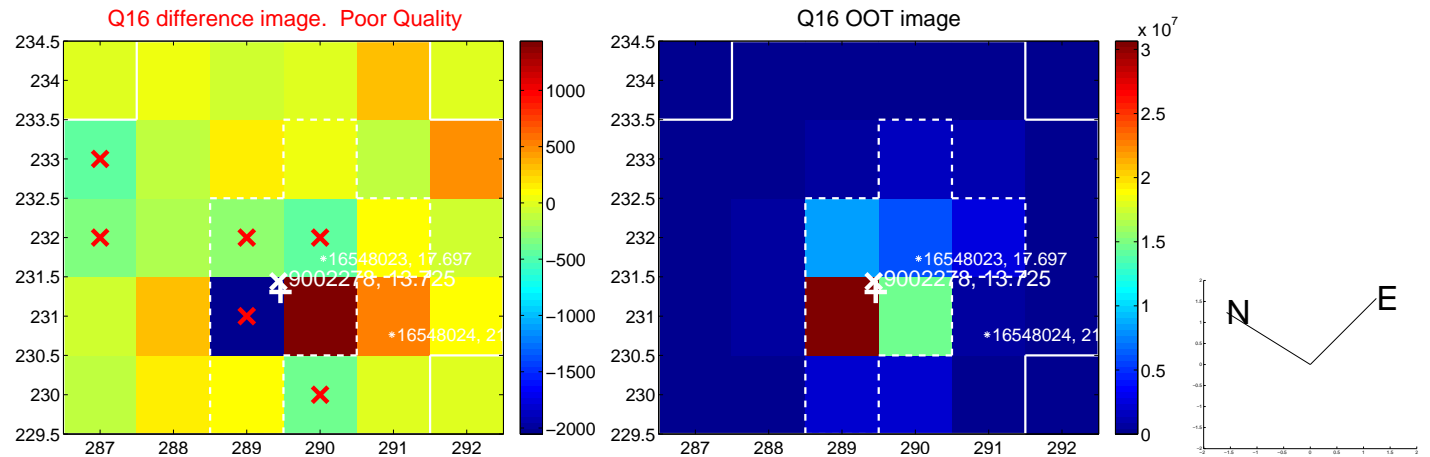
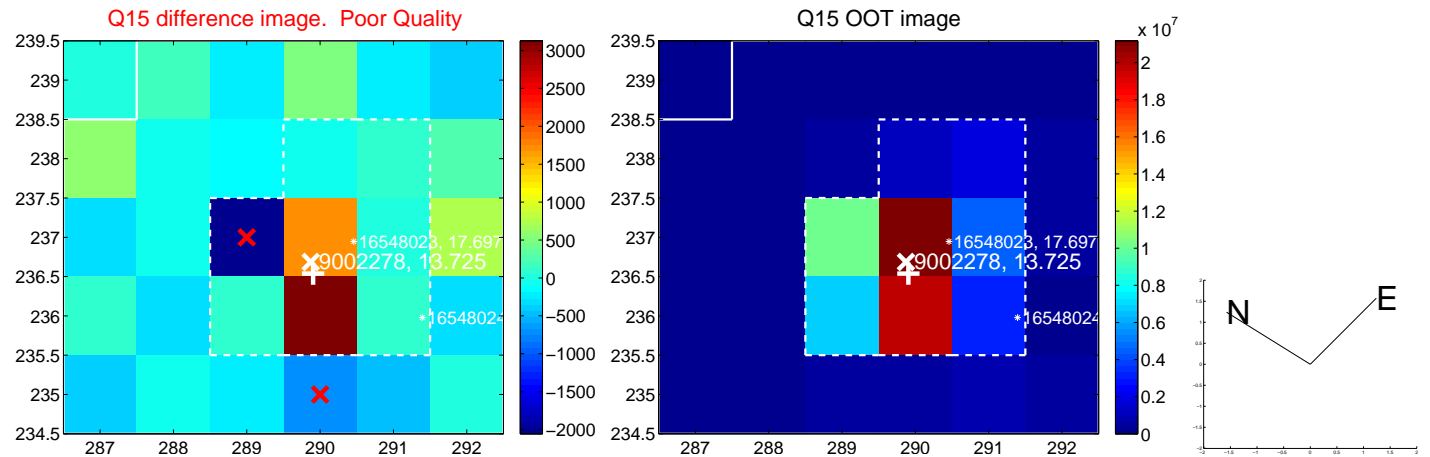
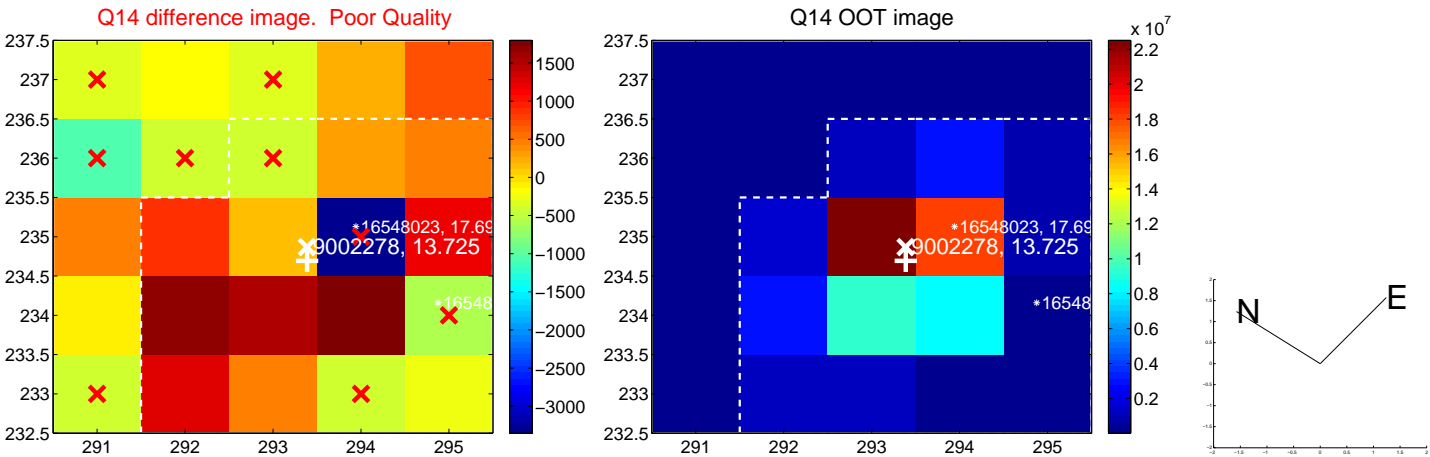
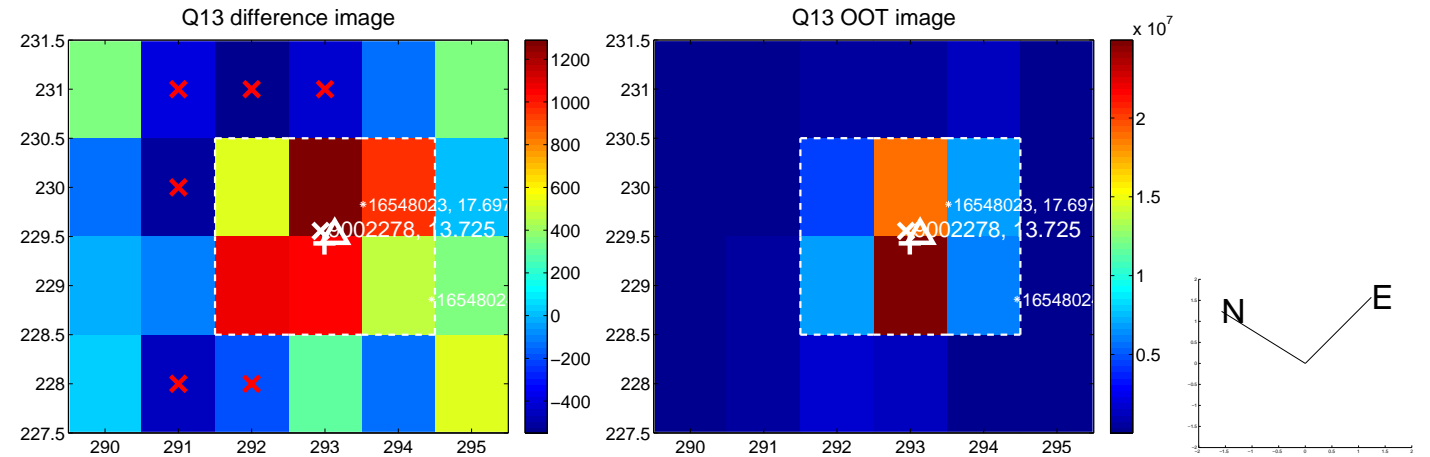
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



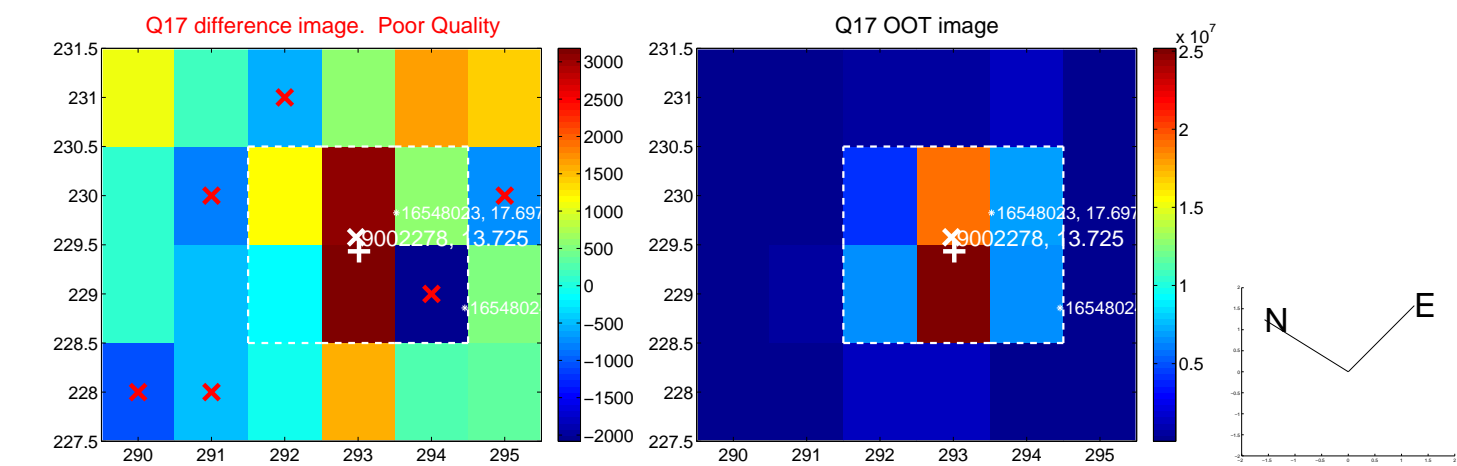
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



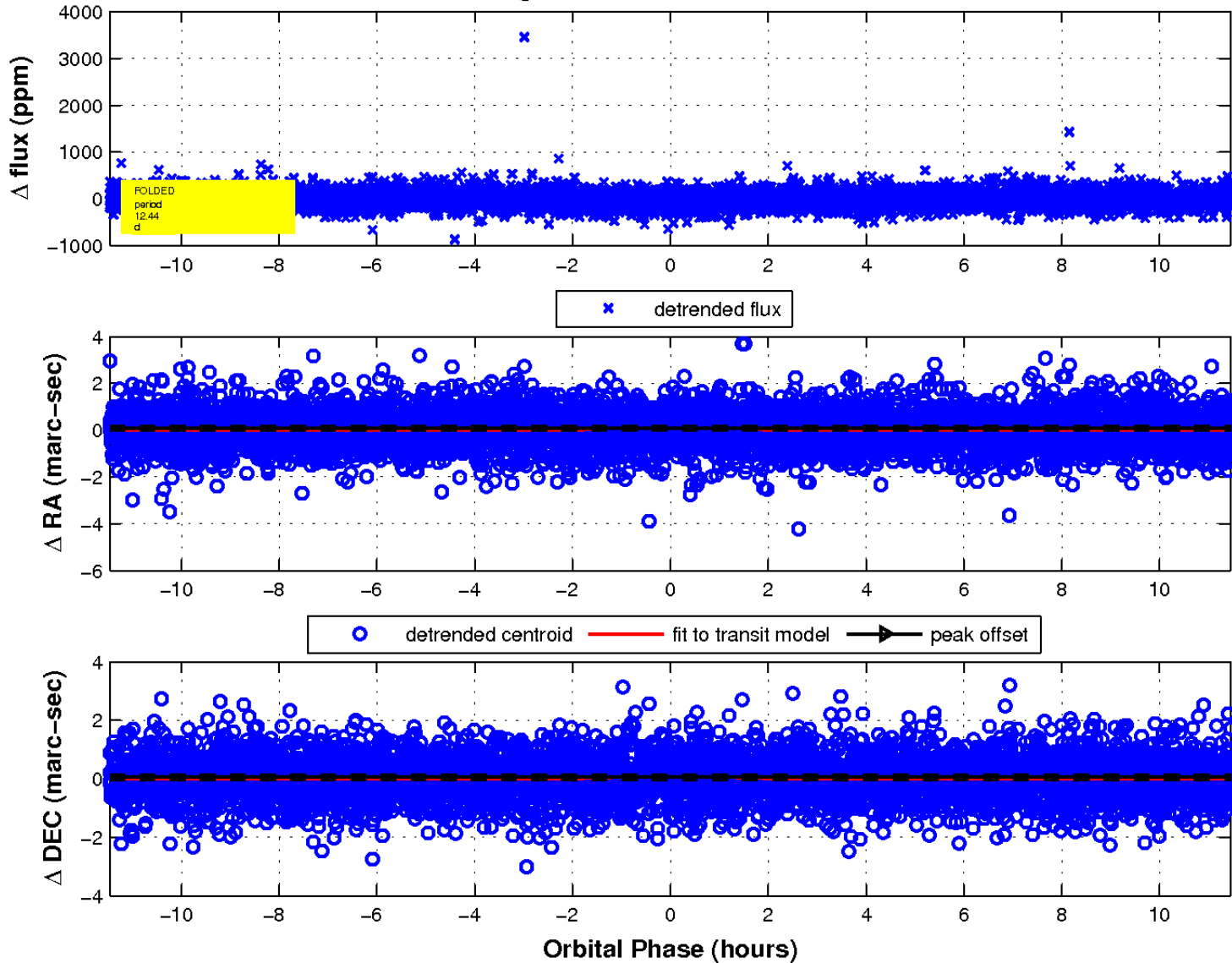
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

