

KIC 011073223

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})
011073223-01	OBS	7406.01	11.579020	131.788277	297845.6	3.000	8824.0	-1.0	1.01	6028	50.65	135.12
011073223-02	OBS	No	11.578938	139.381988	140975.8	8.605	4335.3	3621.2	1.01	6028	55.62	135.12
011073223-03	OBS	No	4.631467	131.825762	3227.8	43.838	390.5	44.1	1.01	6028	7.24	458.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011073223-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
011073223-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011073223-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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.

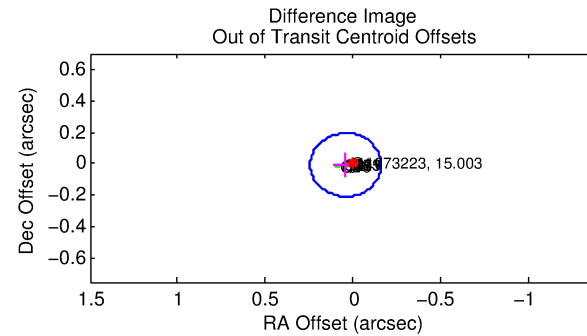
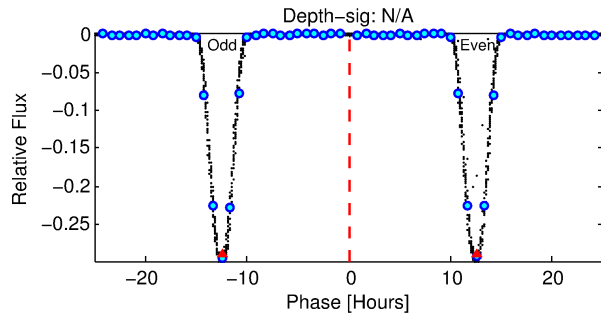
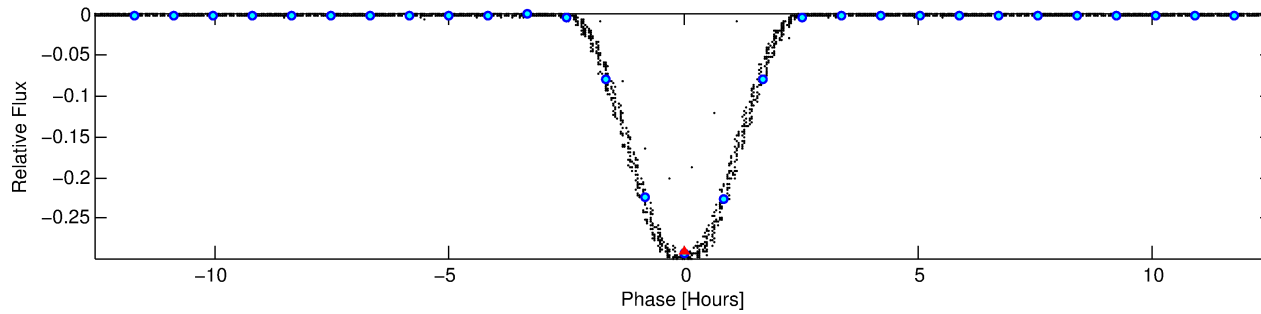
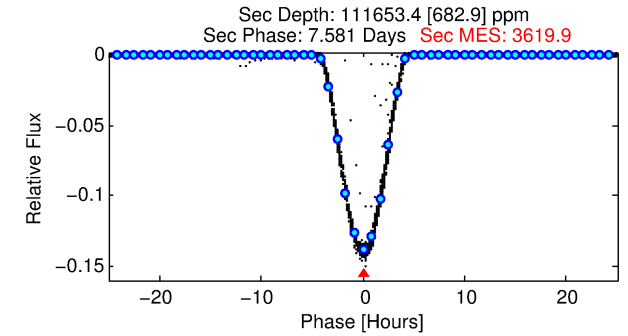
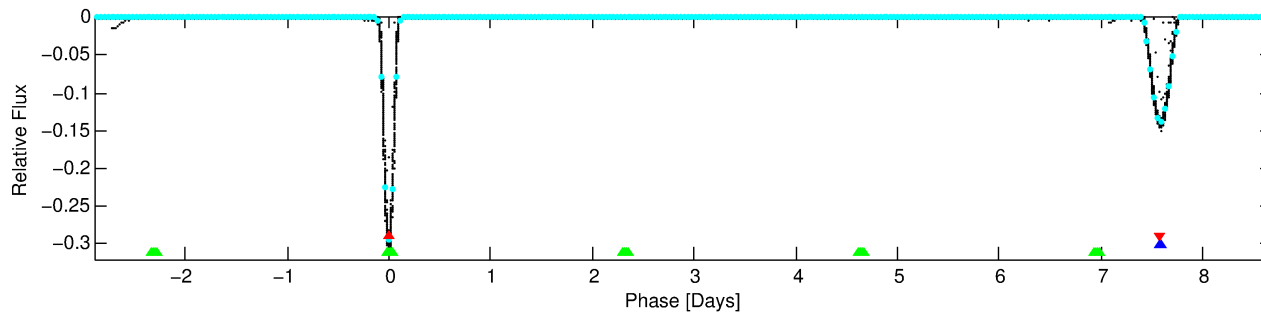
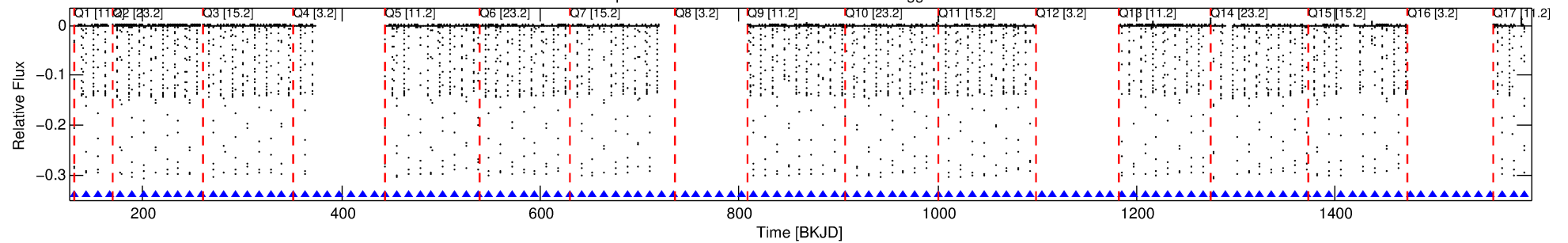
Ephemeris Match Information For 011073223-01

No Significant Match Found

DV One-Page Summary

KIC: 11073223 Candidate: 1 of 3 Period: 11.579 d
KOI: K07406.01 Corr: 0.804

Kp: 15.00 R*: 1.01 Rs Teff: 6028.0 K Logg: 4.36 Fe/H: -0.560



TPS TCE Results:

Period = 11.57902 d
Epoch = 131.7883 BKJD

DV fit results are unavailable

DV Diagnostic Results:

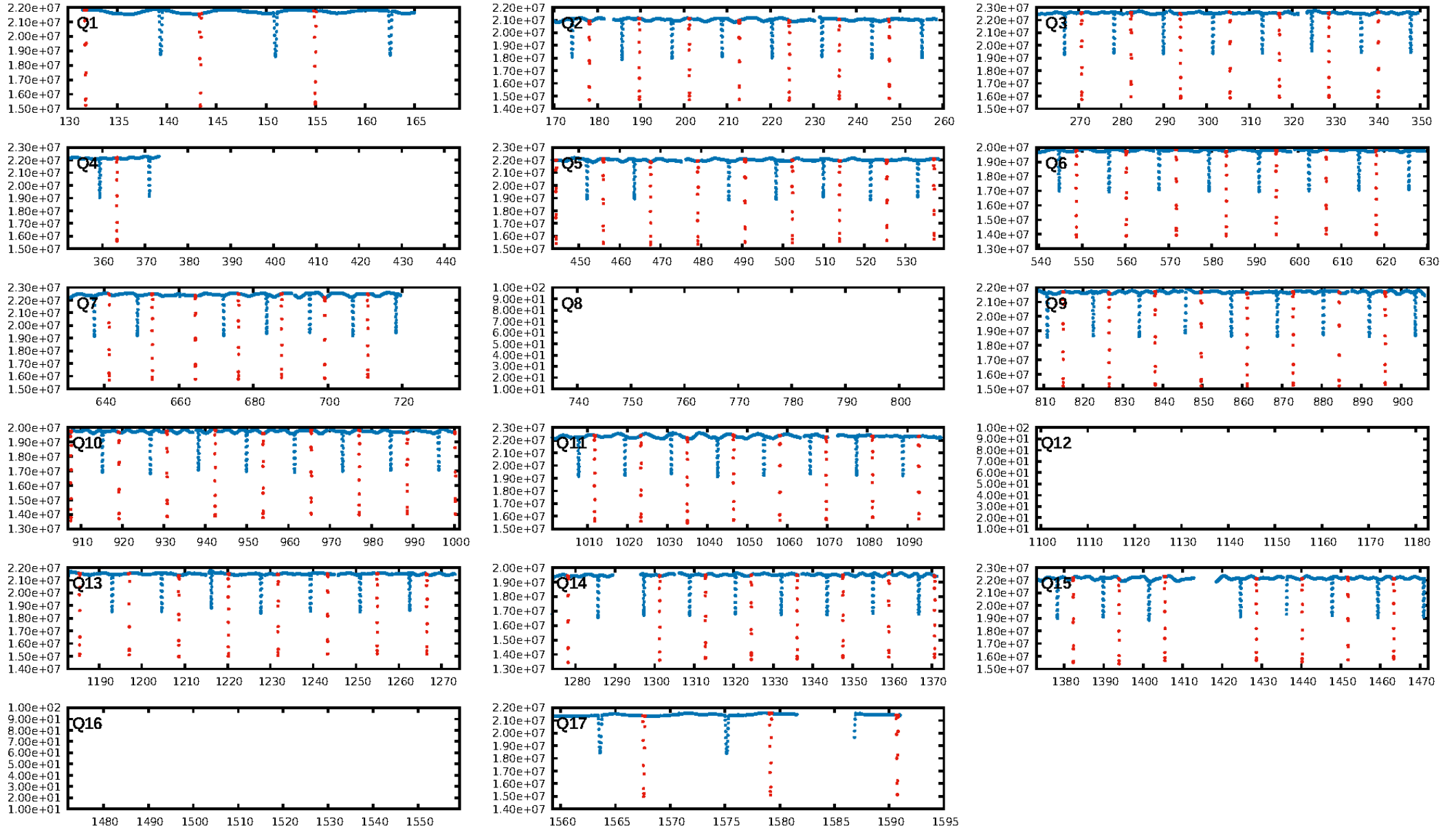
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [85/85]
GhostDiagnostic-chr: 1.076

Centroid-sig: 0.0%
Centroid-so: 0.228 arcsec [219.77σ]
OotOffset-rm: 0.044 arcsec [0.65σ]
KicOffset-rm: 0.167 arcsec [2.40σ]
OotOffset-st: 4/4/0/5 [13]
KicOffset-st: 4/4/0/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

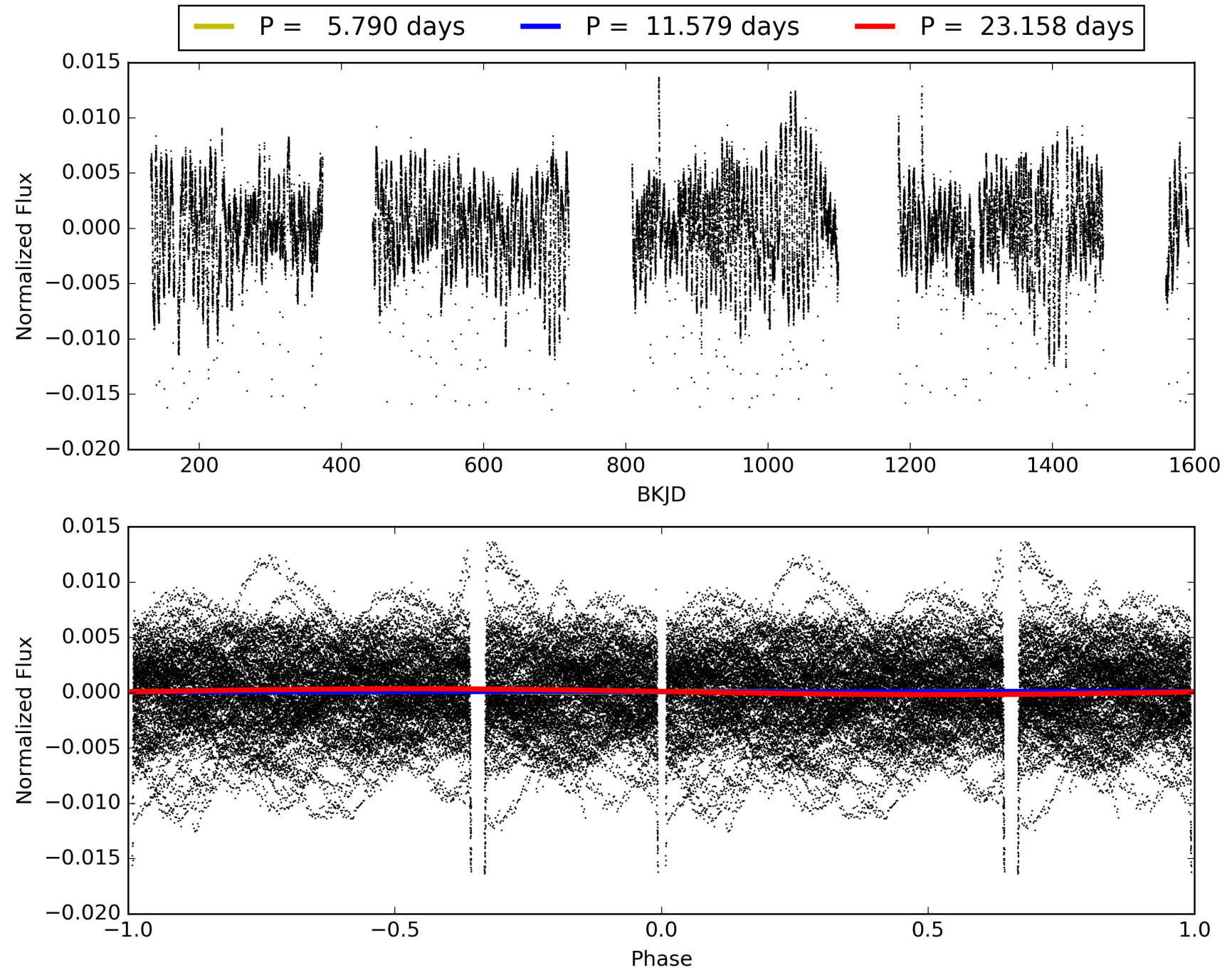
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:34:12 Z

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

TCE 011073223-01, PDC Light Curves

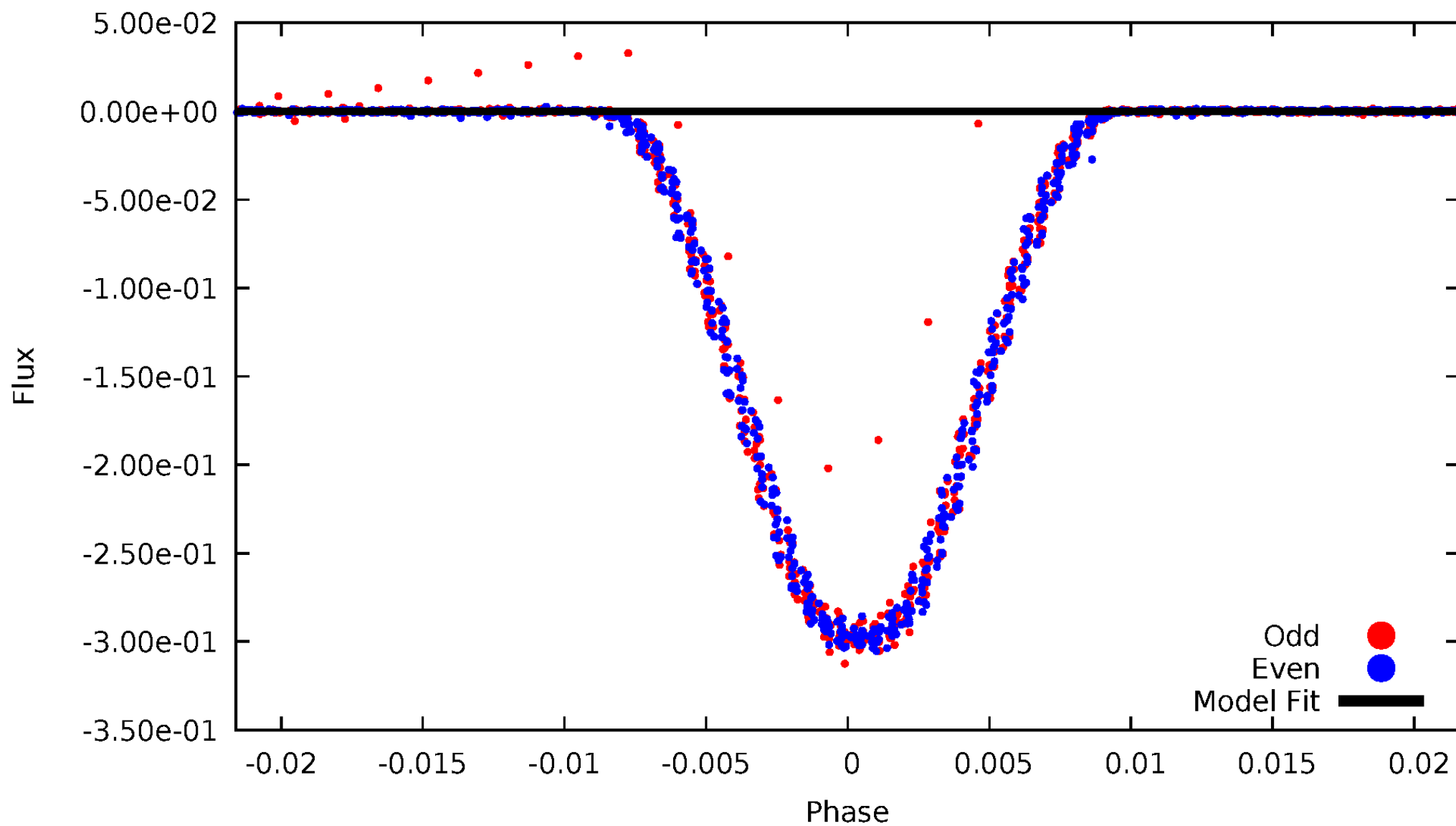


TCE 011073223-01



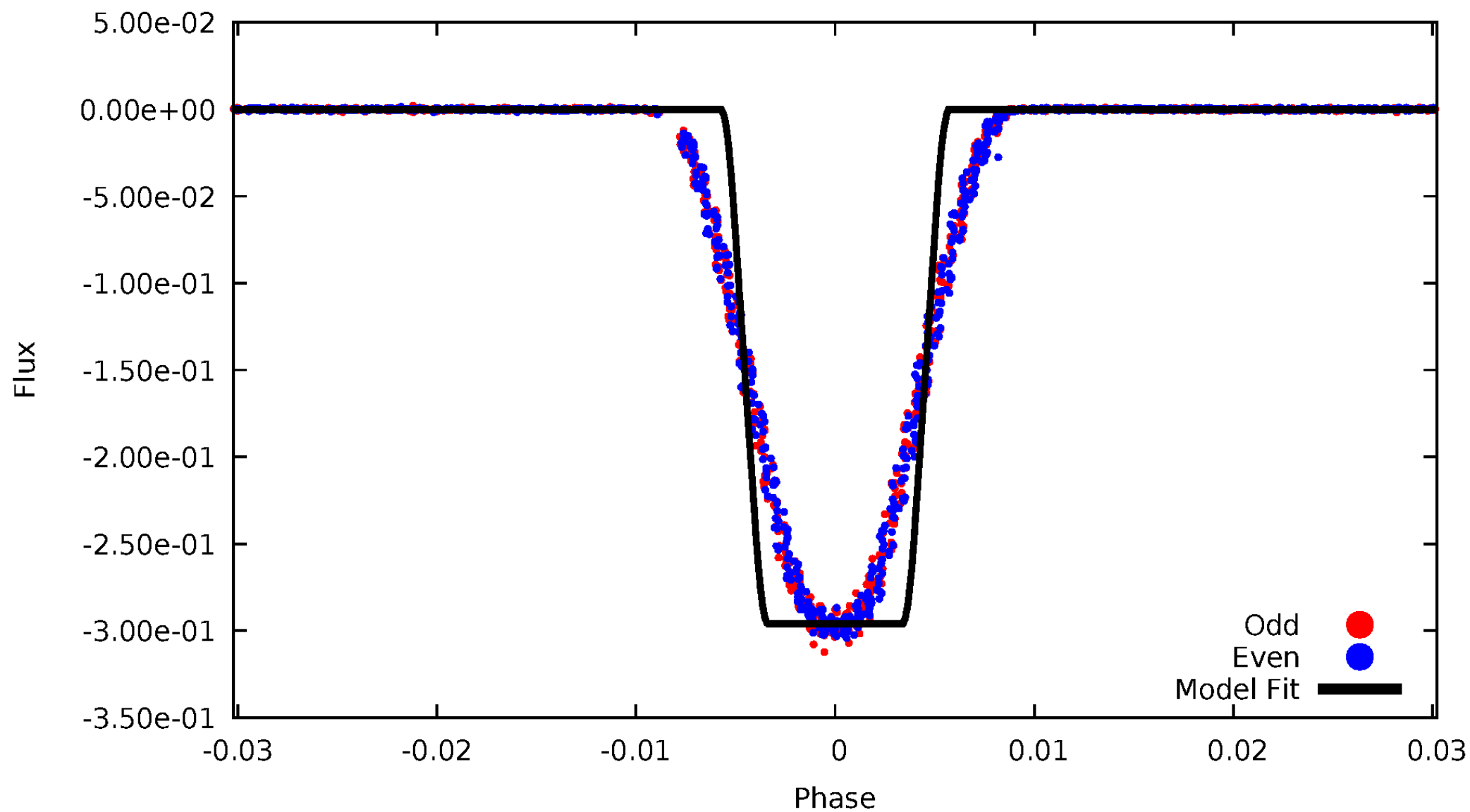
DV Odd/Even

TCE 011073223-01



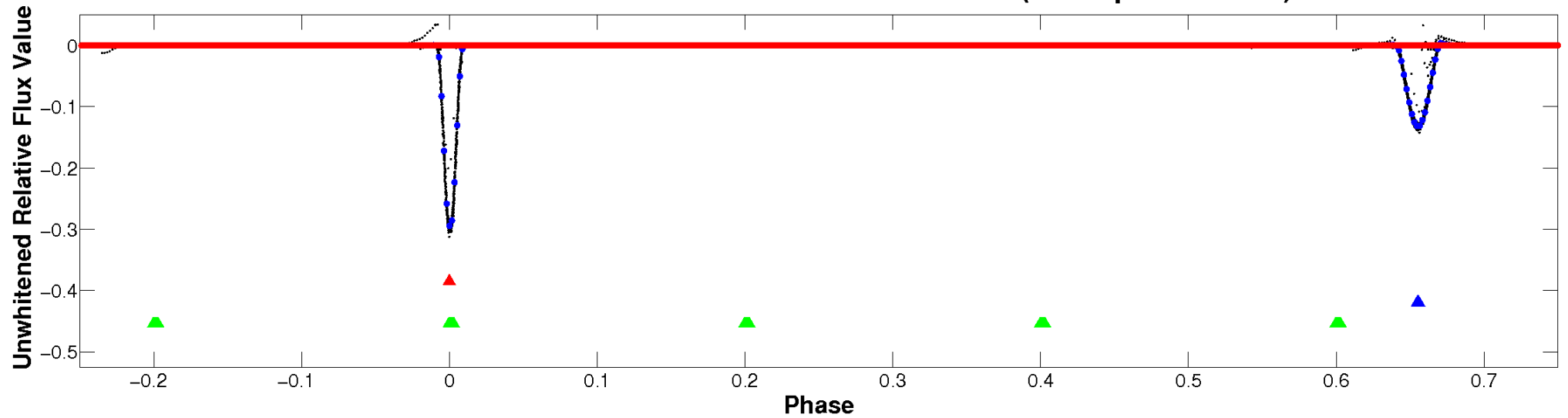
ALT Odd/Even

TCE 011073223-01



Non-Whitened Vs. Whitened Light Curve

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

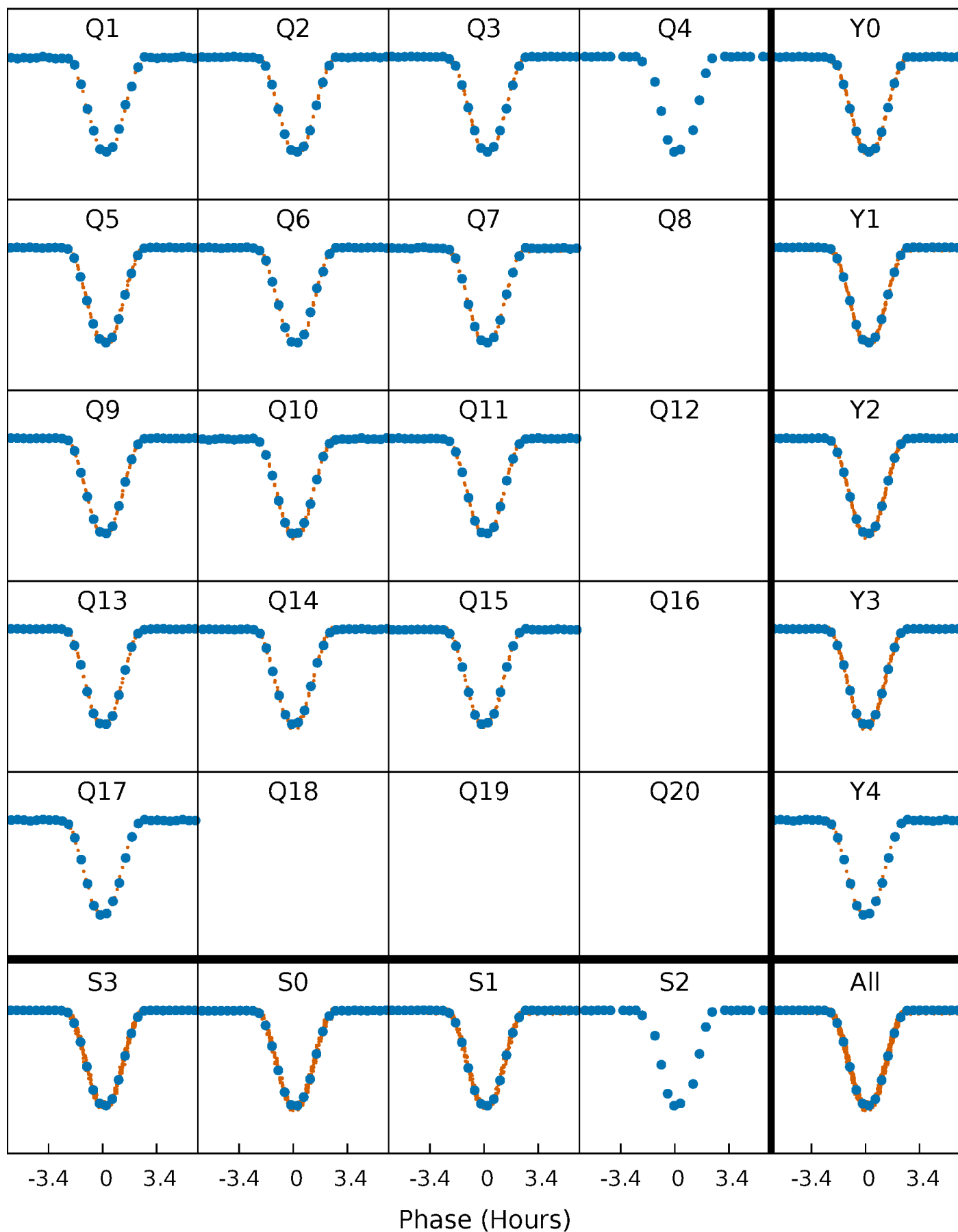


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



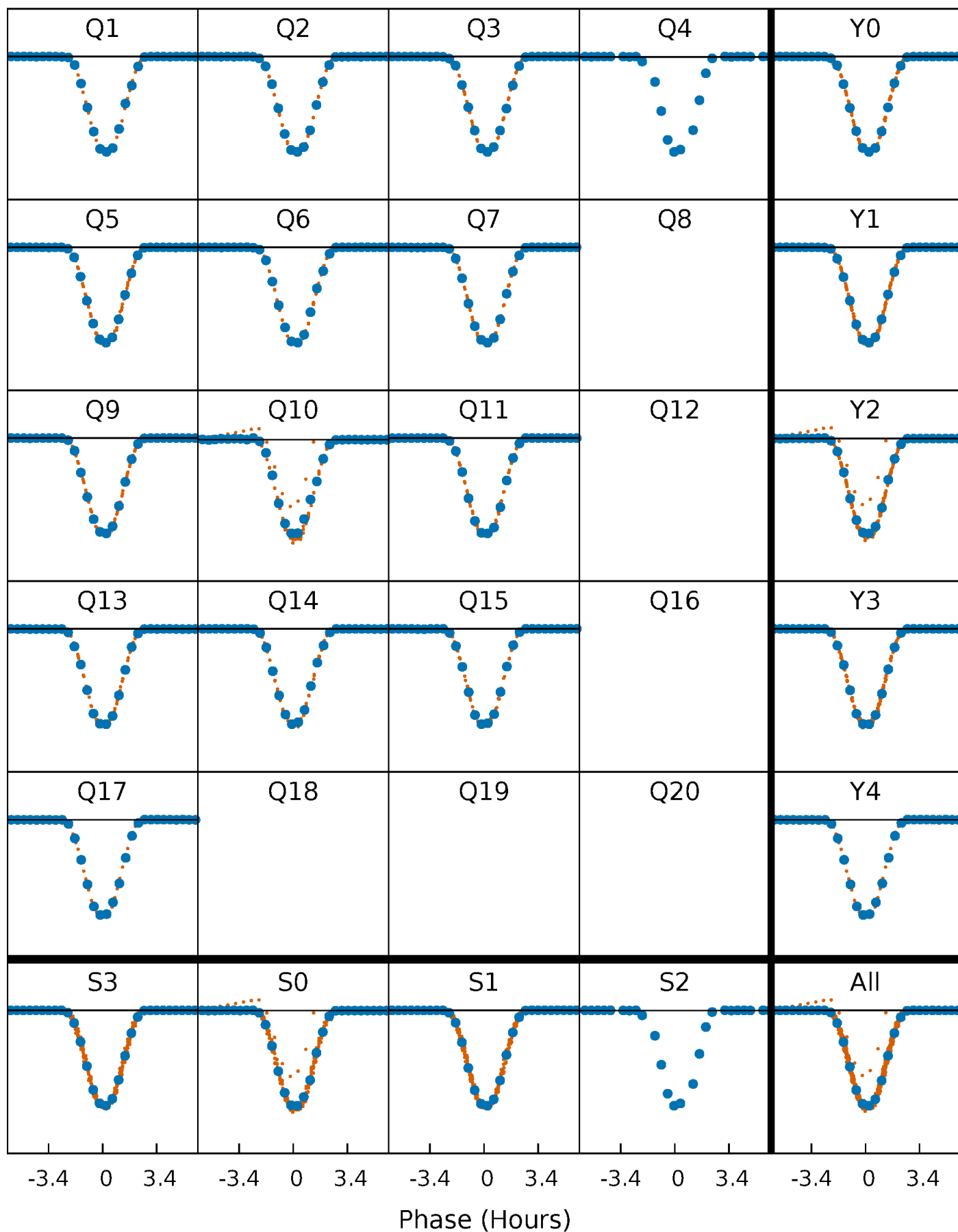
PDC Quarter-Phased Transit Curves

TCE 011073223-01 P= 11.579020 Days $T_0=131.788277$ (BKJD)



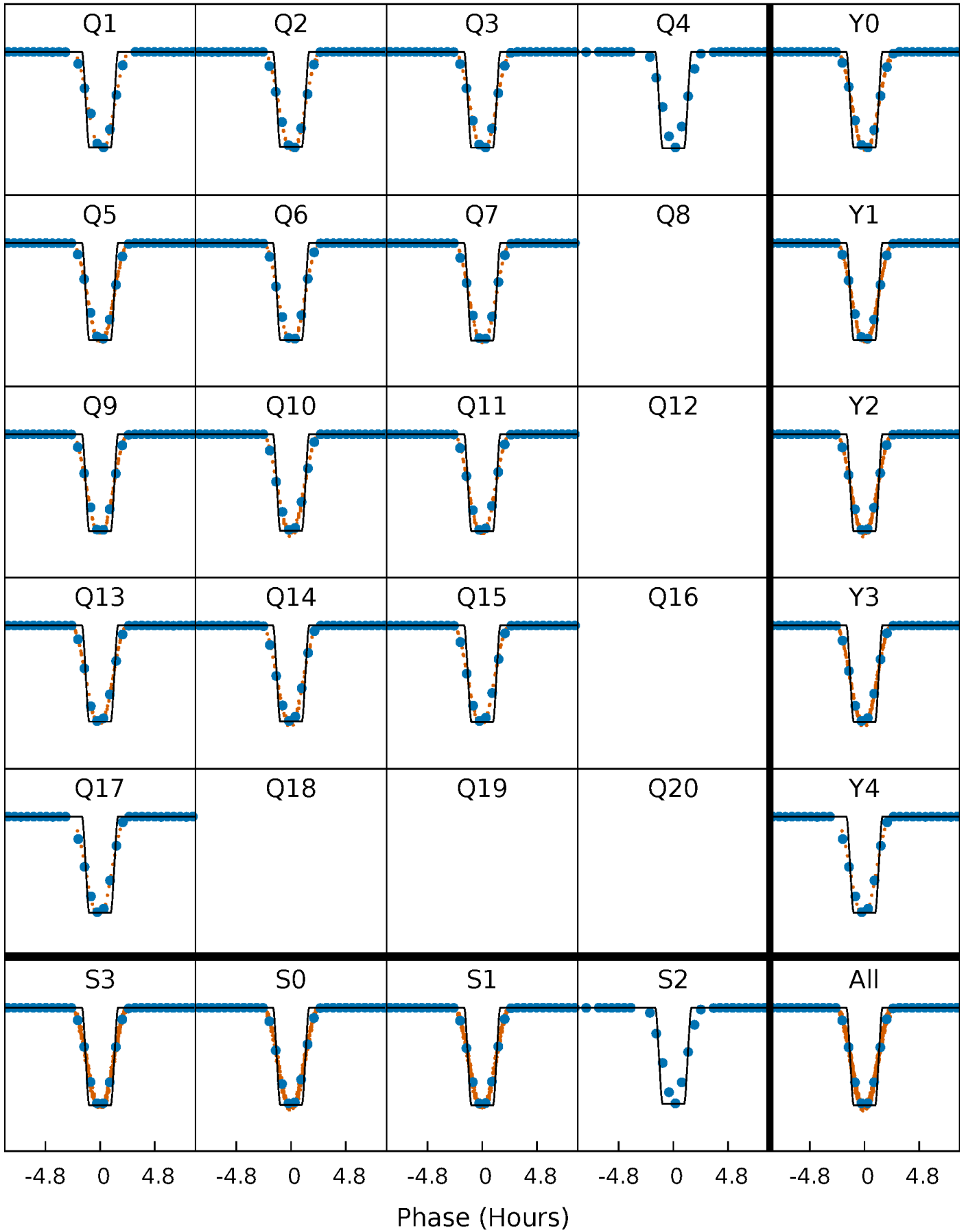
DV Quarter-Phased Transit Curves

TCE 011073223-01 P= 11.579020 Days $T_0=131.788277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

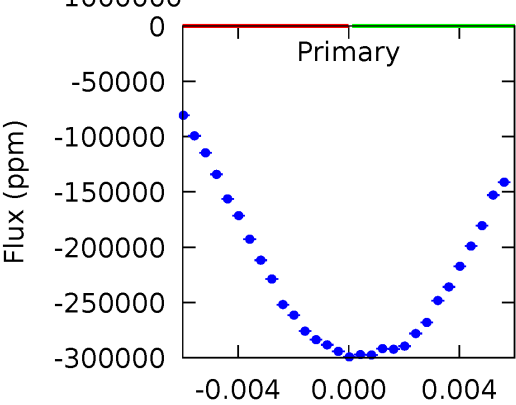
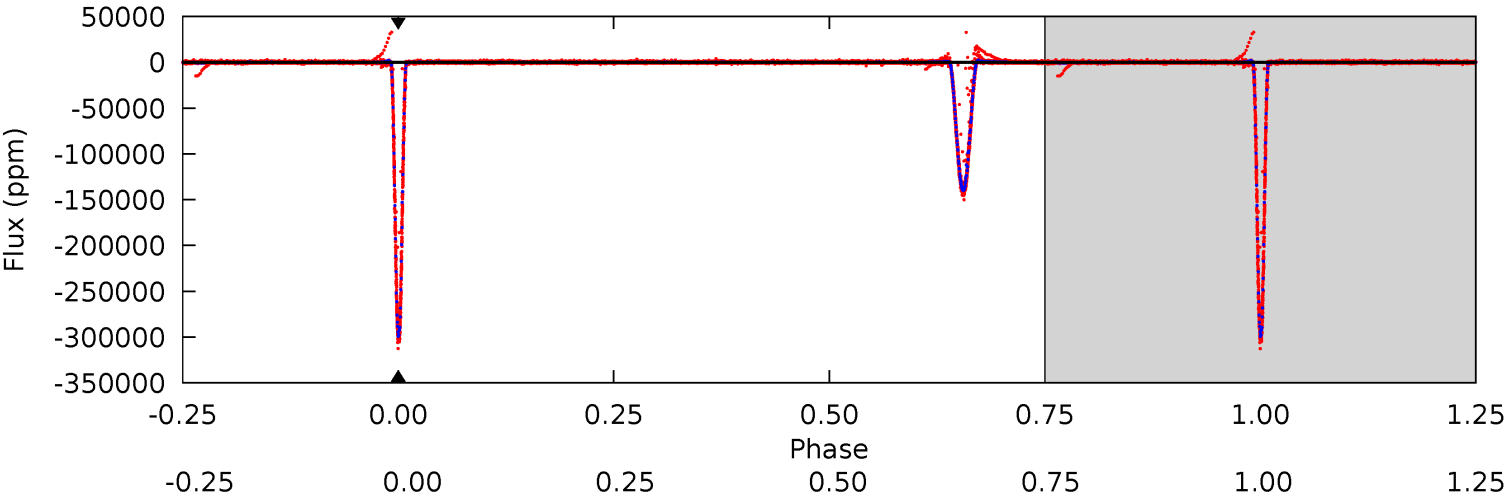
TCE 011073223-01 P= 11.579020 Days $T_0=131.793313$ (BKJD)



DV Model-Shift Uniqueness Test

011073223-01, P = 11.579020 Days, E = 120.209257 Days

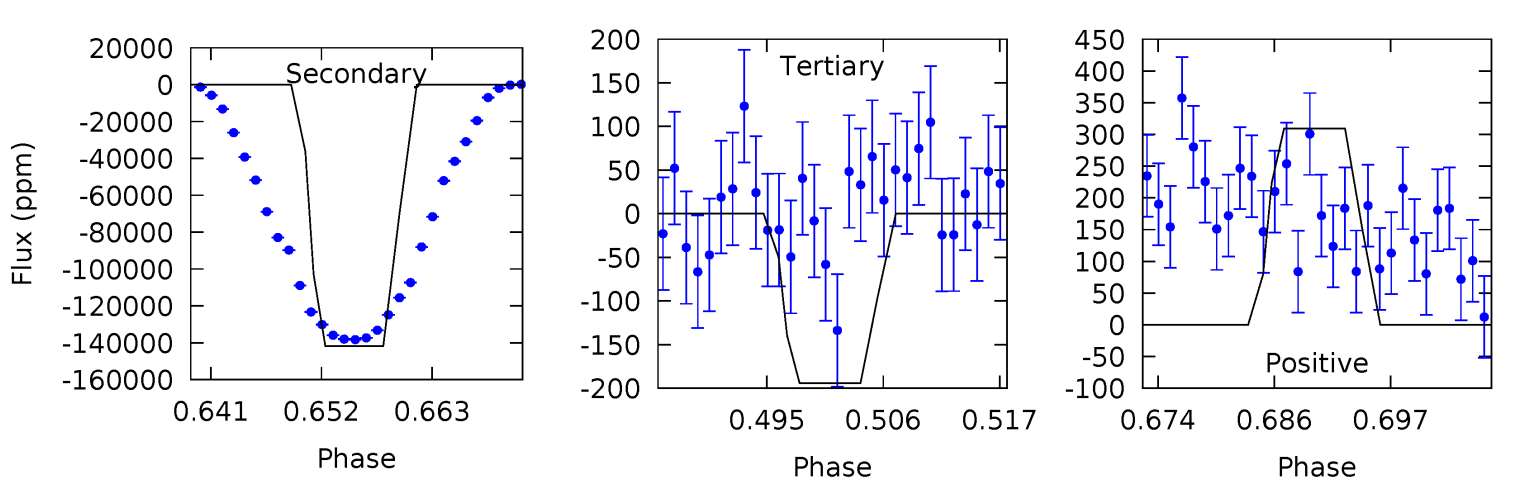
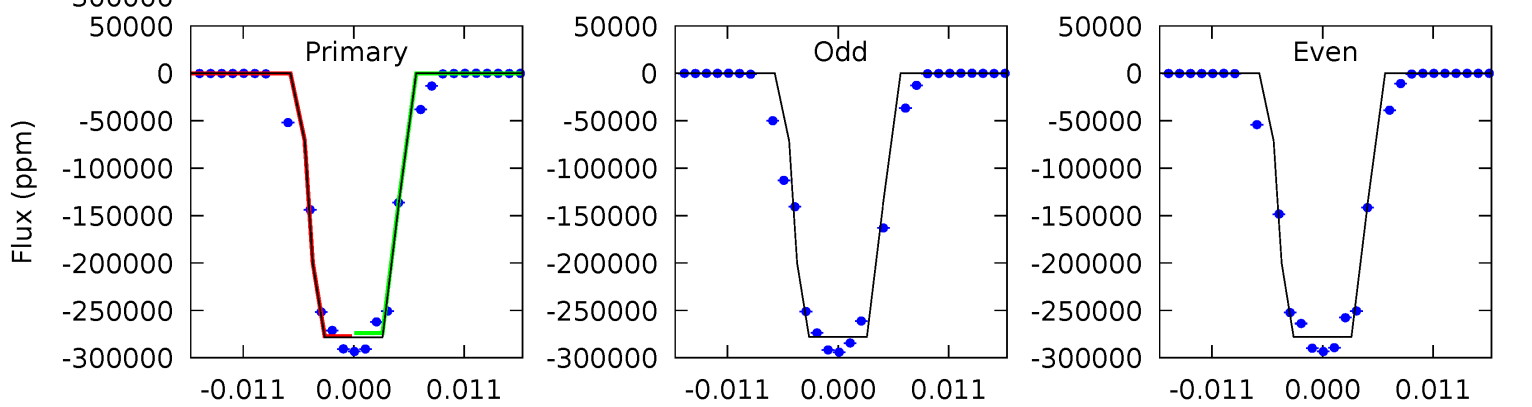
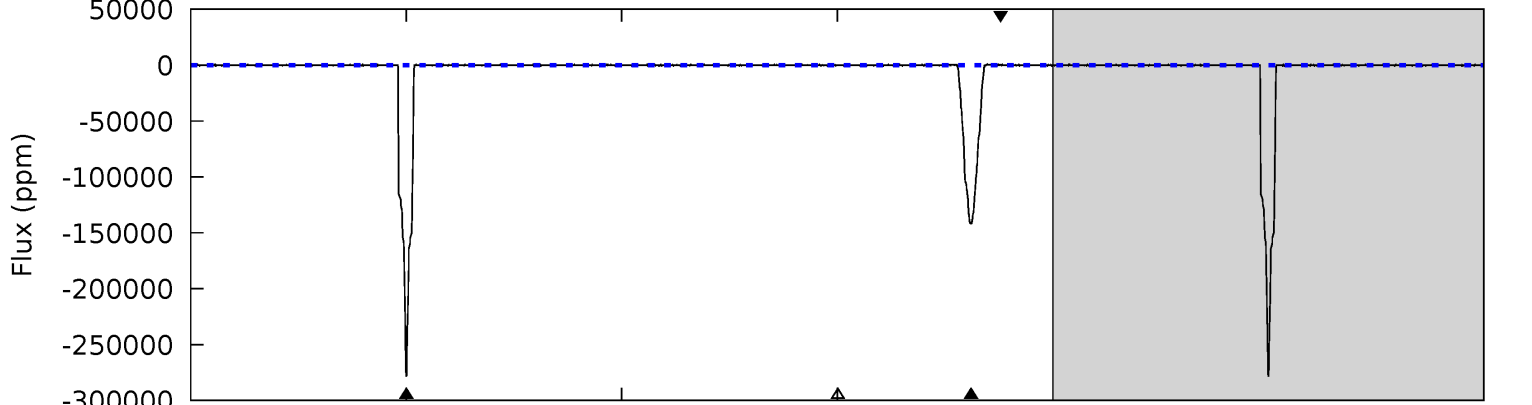
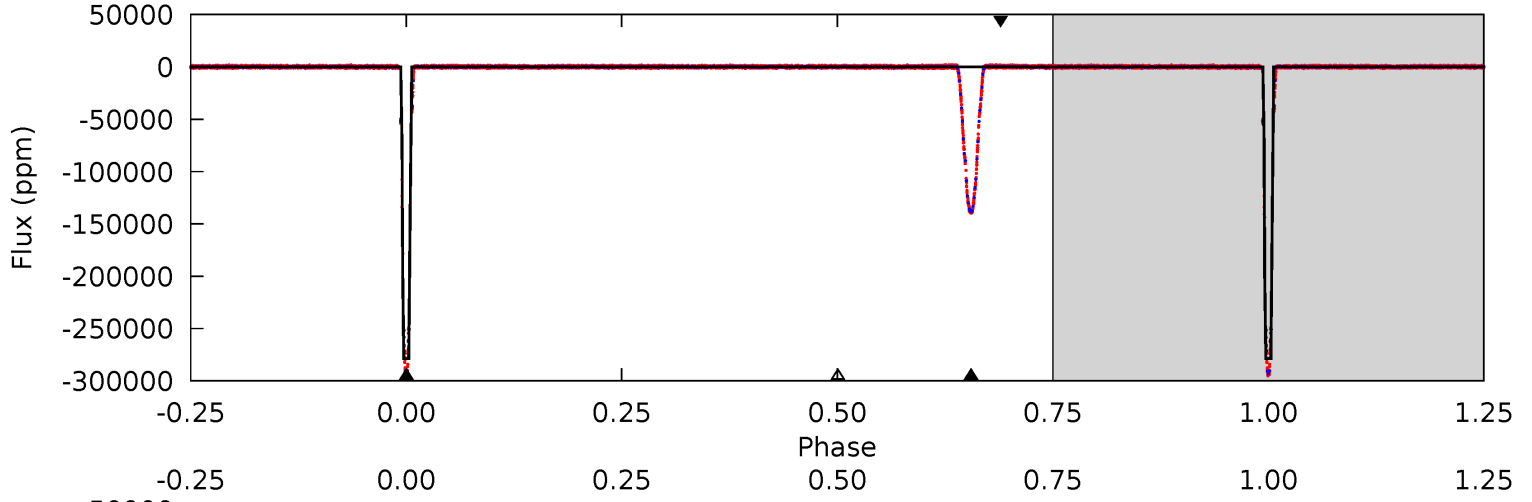
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011073223-01, P = 11.579020 Days, E = 120.214293 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2554	1300	1.78	2.84	5.00	2.54	8.64	2552	2551	1298	1297	0.09	1.00	0.00	0



Stellar Parameters For KIC 011073223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+163}_{-181}	$4.355^{+0.158}_{-0.193}$	$-0.560^{+0.300}_{-0.300}$	$1.014^{+0.280}_{-0.187}$	$0.849^{+0.108}_{-0.072}$	$1.146^{+0.990}_{-0.526}$
	+3%/-3%	+4%/-4%	+54%/-54%	+28%/-18%	+13%/-8%	+86%/-46%
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 011073223-01 / KOI 7406.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$50.43^{+14.99}_{-11.36}$	1219^{+92}_{-77}	-2557^{+7781}_{-2556}	$-2.137^{+209.944}_{-189.721}$
Alt.	-141822 ± 109	$60.14^{+15.19}_{-12.09}$	1220^{+91}_{-72}	5286^{+544}_{-400}	227^{+127}_{-81}

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 $A_{obs} \gg 1.0$

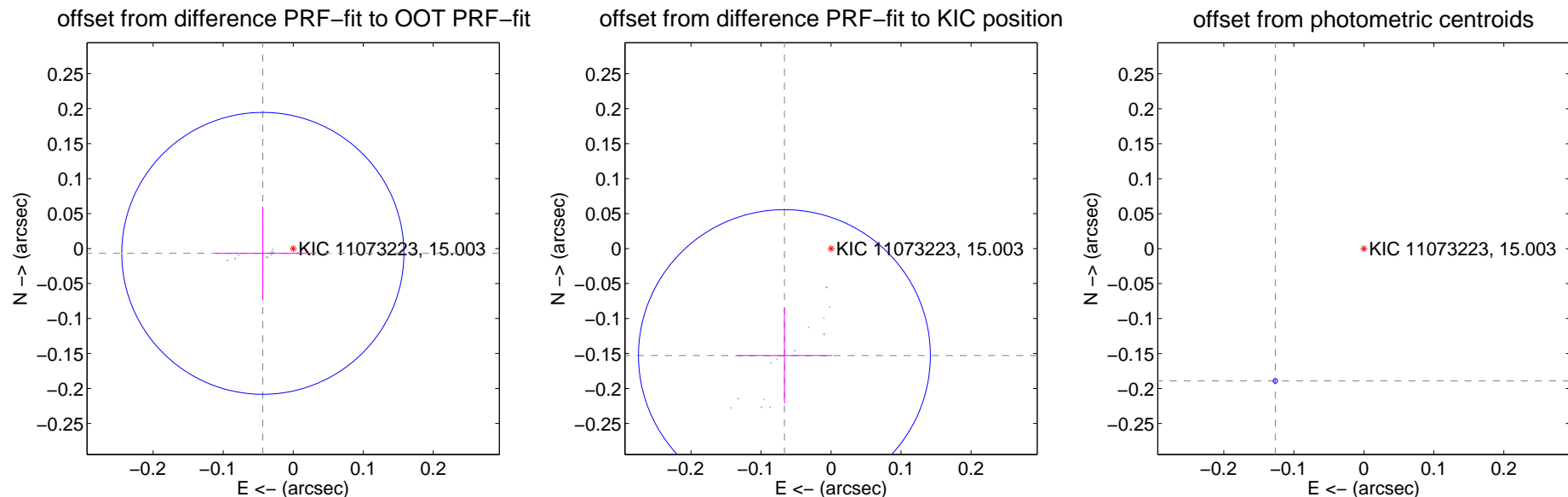
DV Centroid Data

Supplemental centroid analysis for 011073223-01. Kepler magnitude: 15.00. Transit SNR -1.00

There are 13 quarters with good PRF difference image offsets

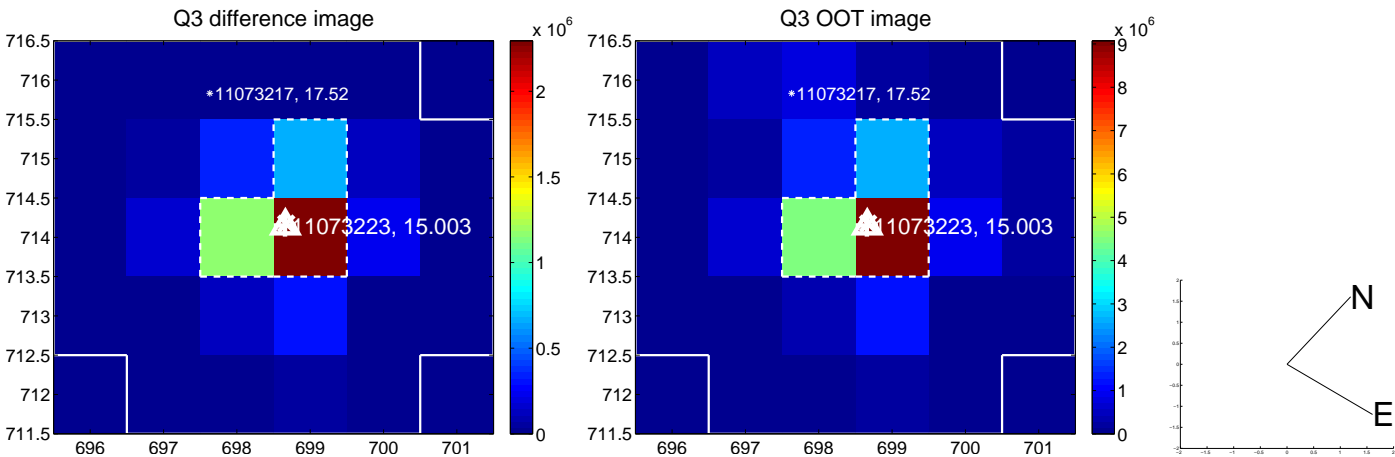
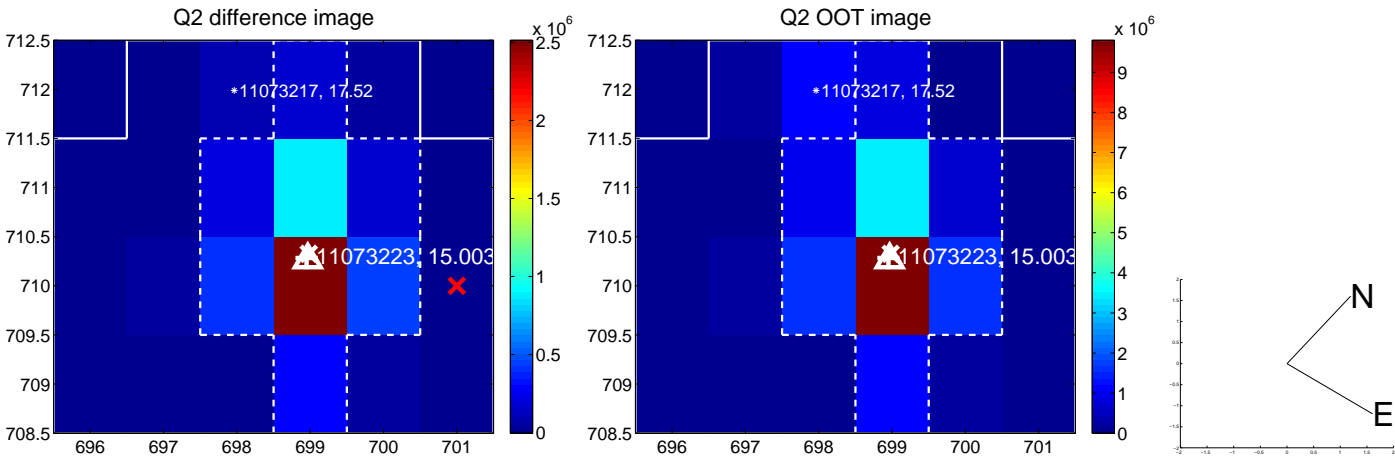
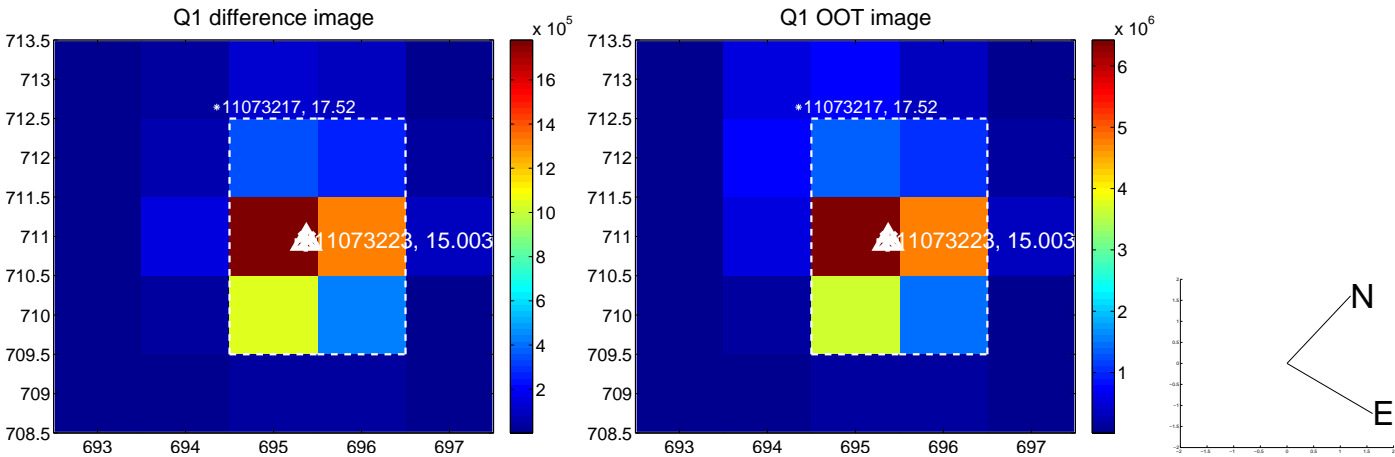
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.067	0.65	0.043 ± 0.067	-0.007 ± 0.067
PRF-fit source offset from KIC position	0.167 ± 0.069	2.40	0.067 ± 0.068	-0.153 ± 0.069
photometric centroid source offset	0.23 ± 0.00	219.77	0.13 ± 0.00	-0.19 ± 0.00

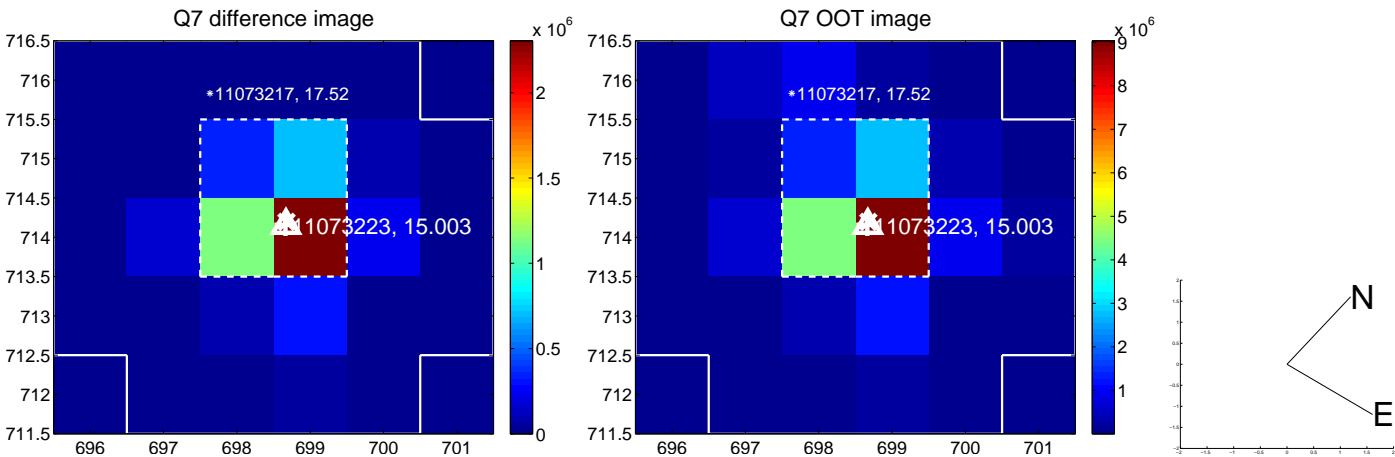
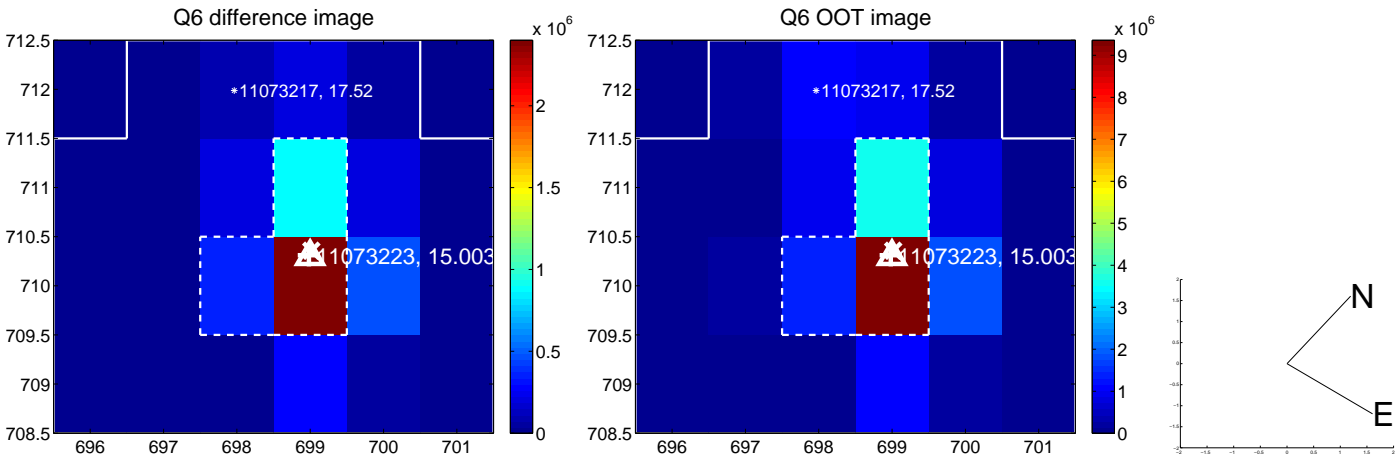
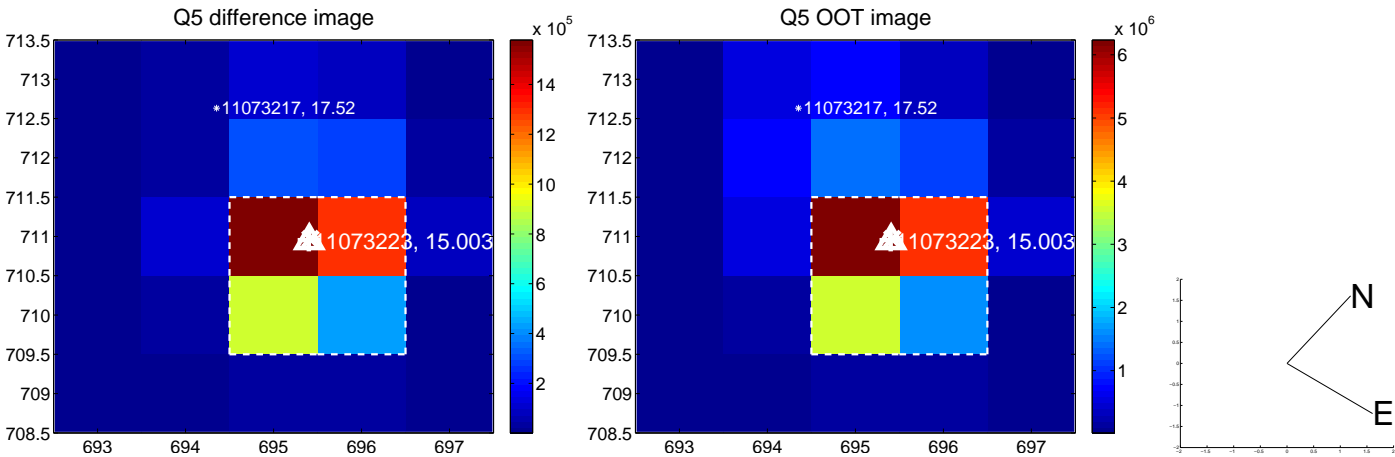


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

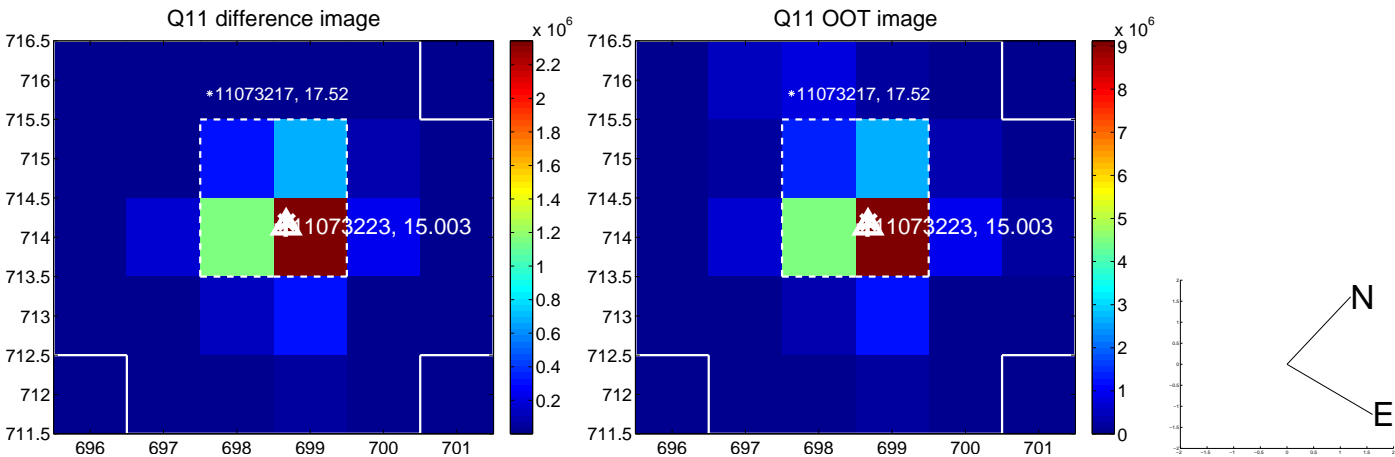
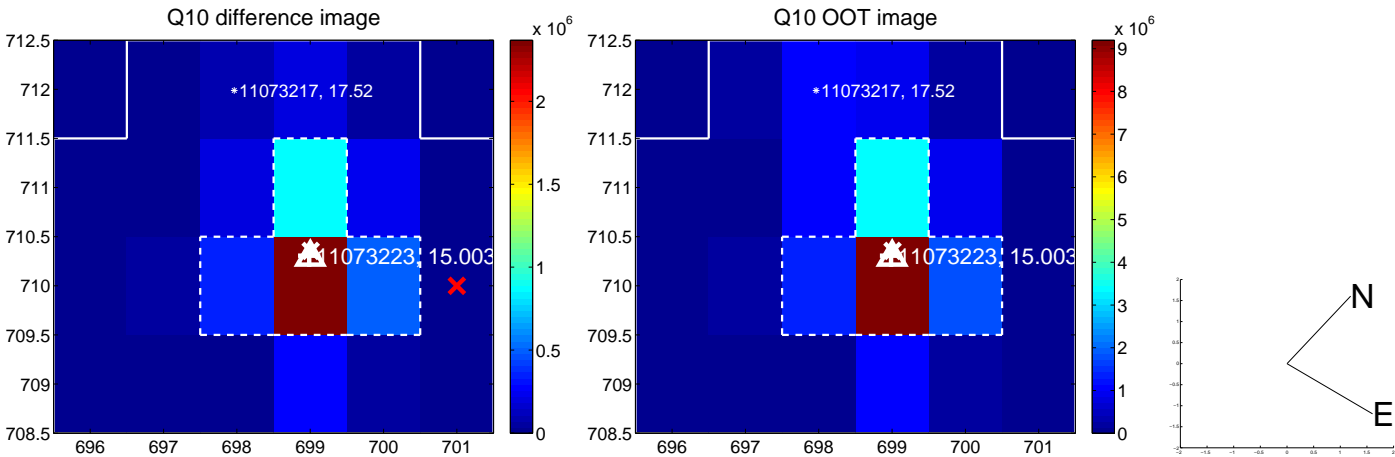
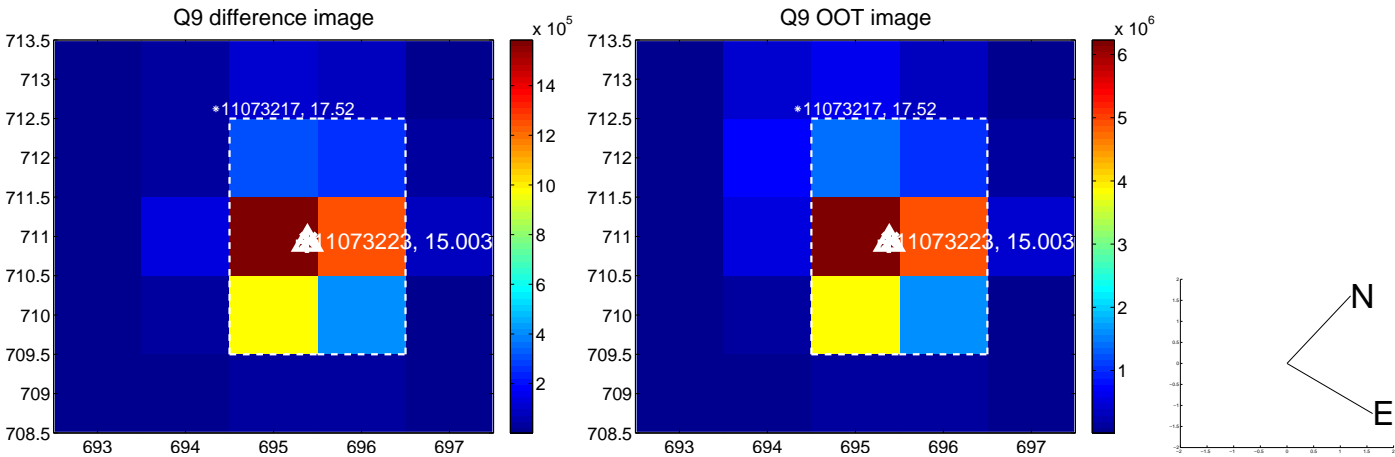
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



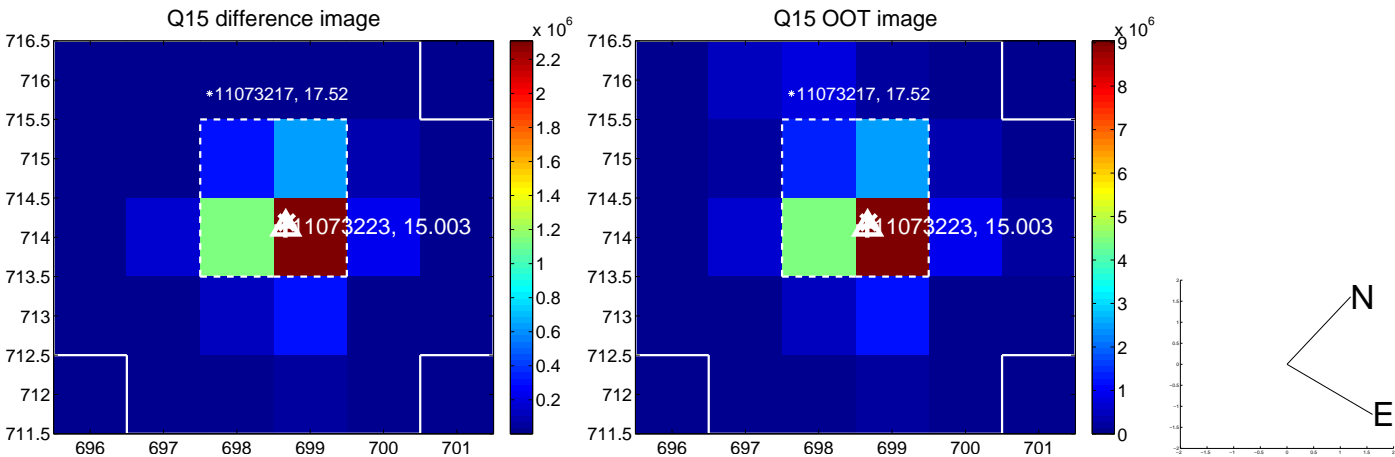
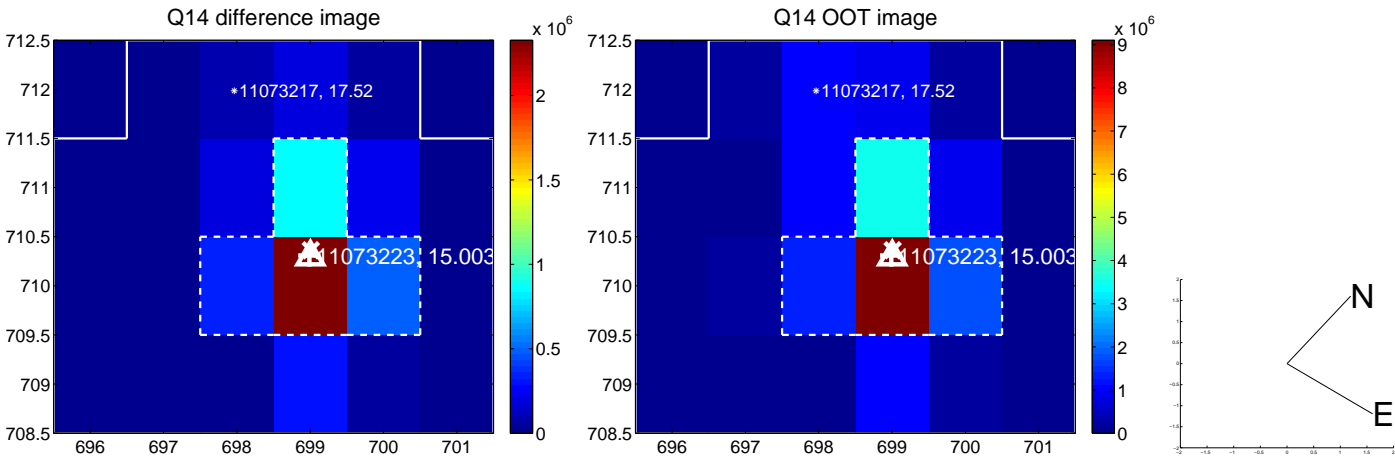
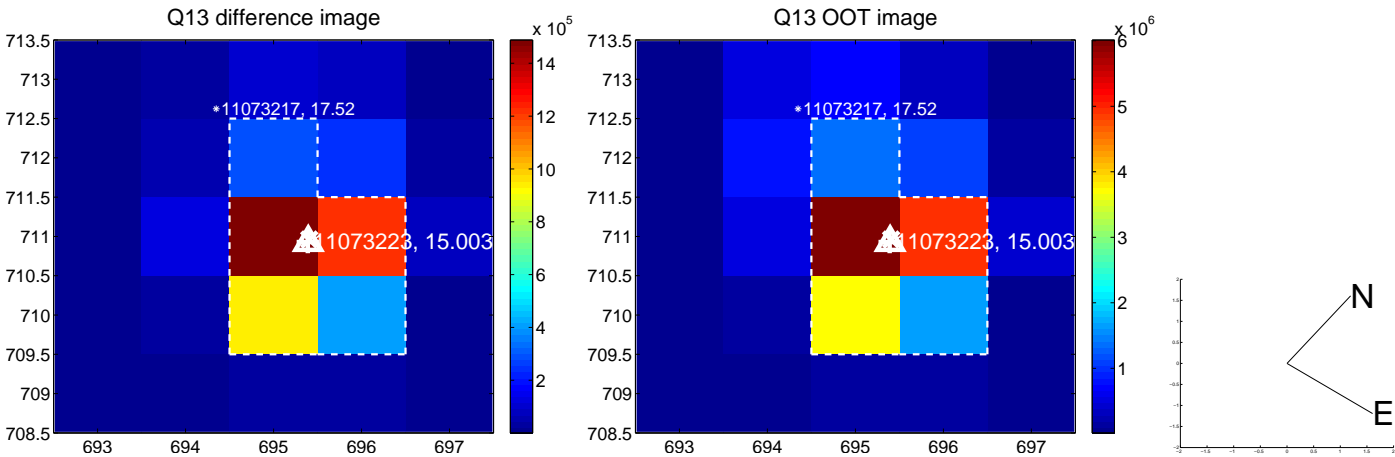
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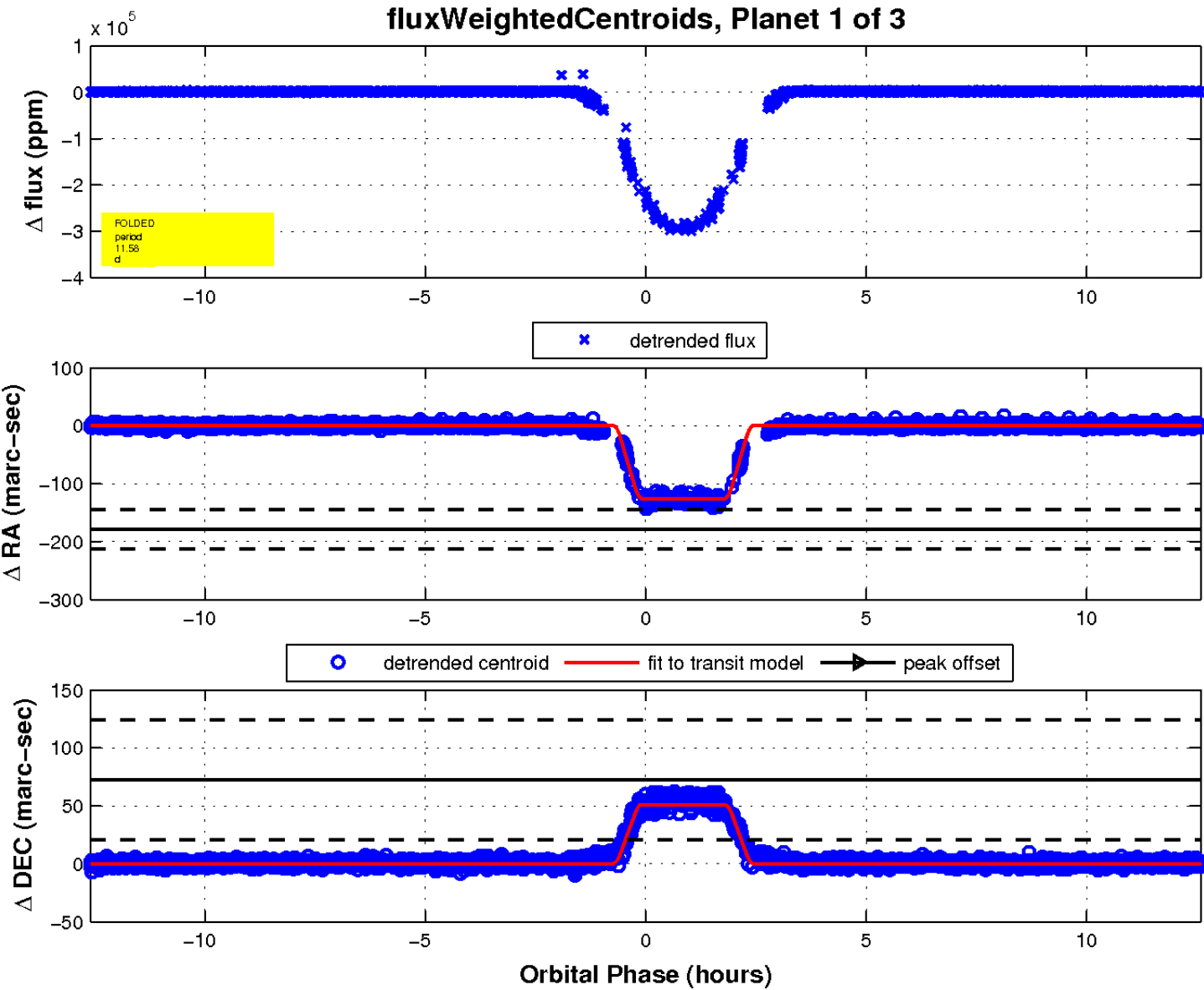
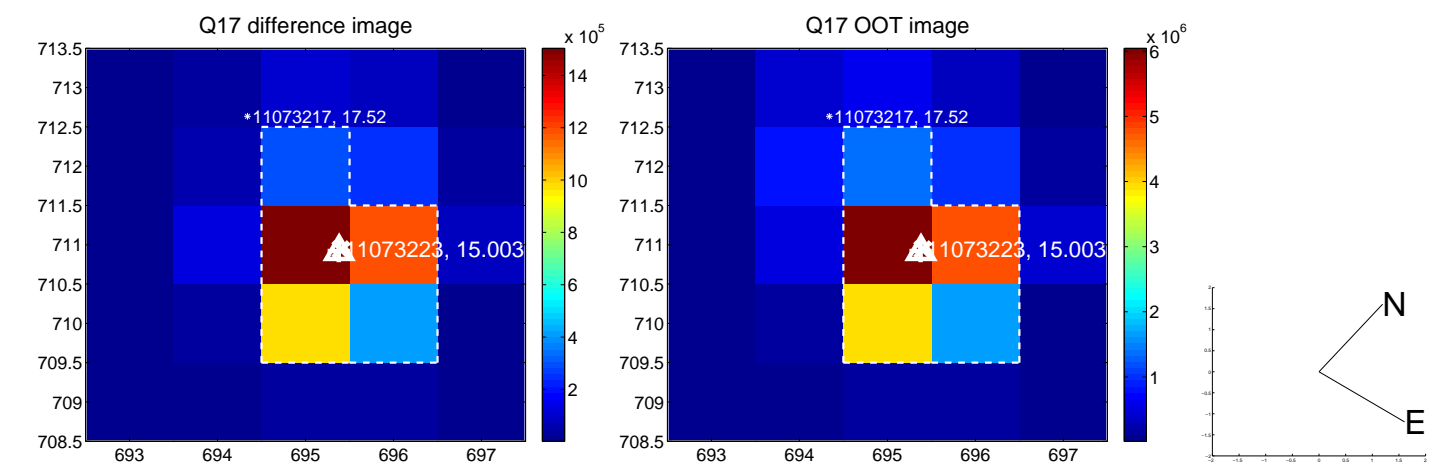
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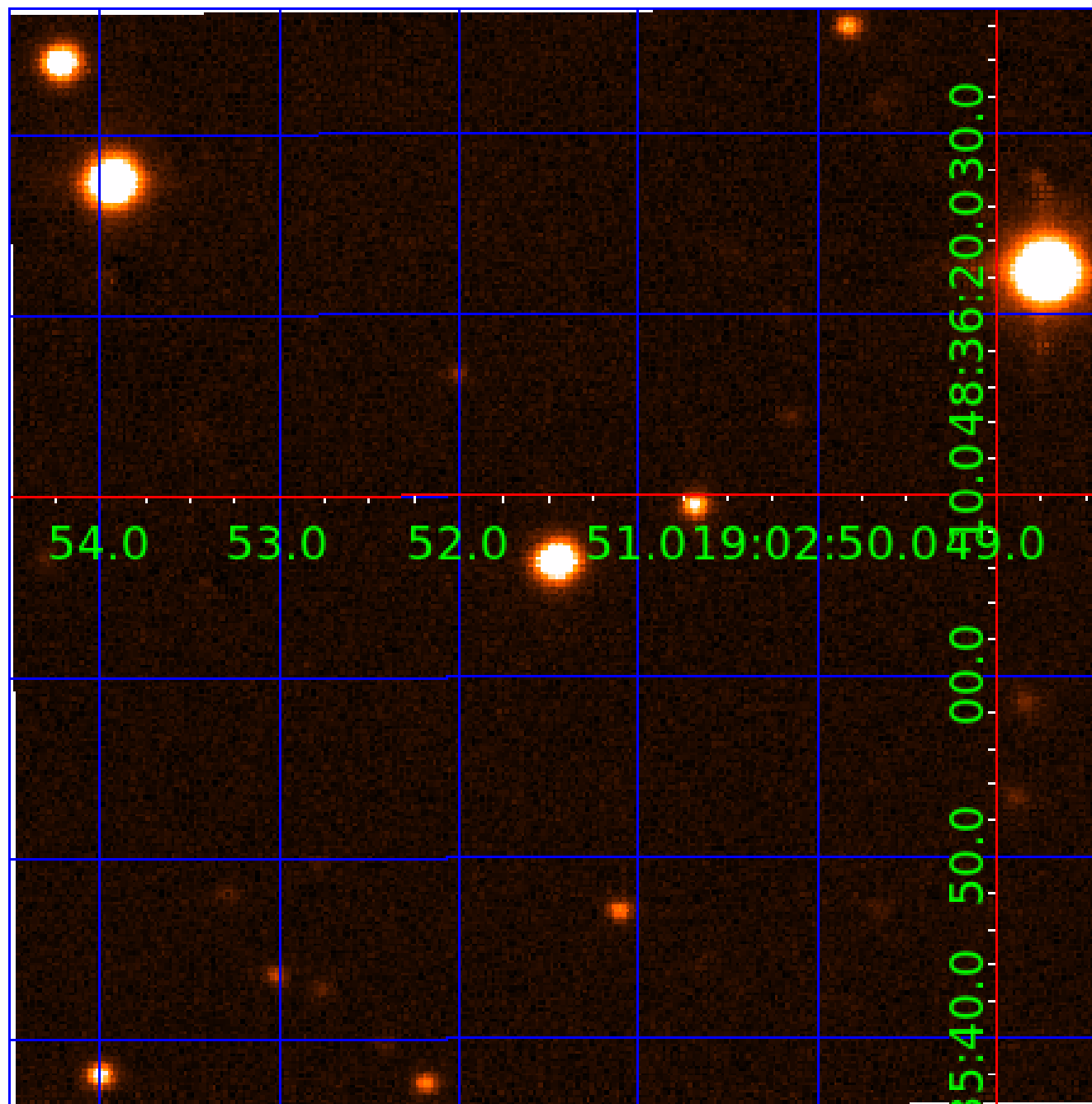


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011073223

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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011073223-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011073223-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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.

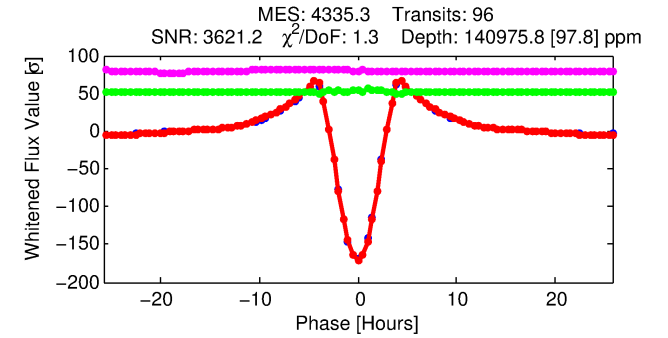
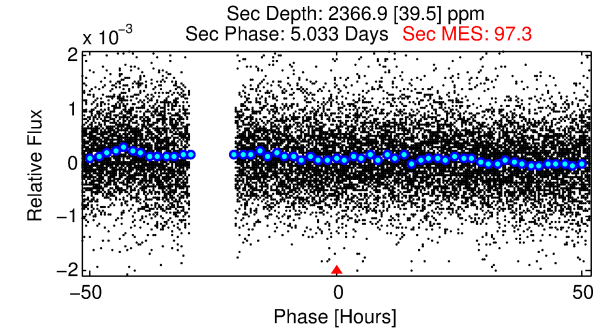
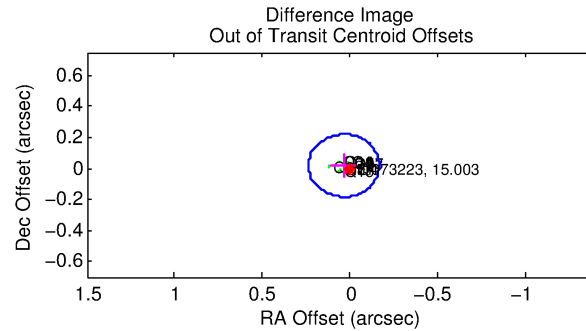
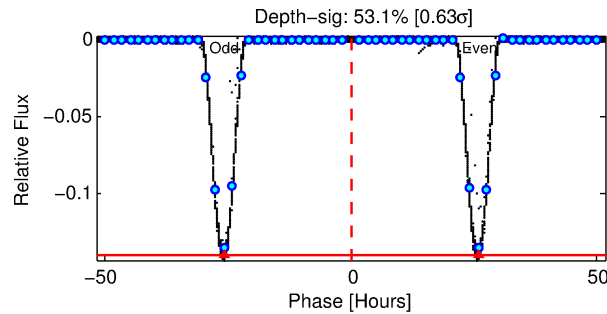
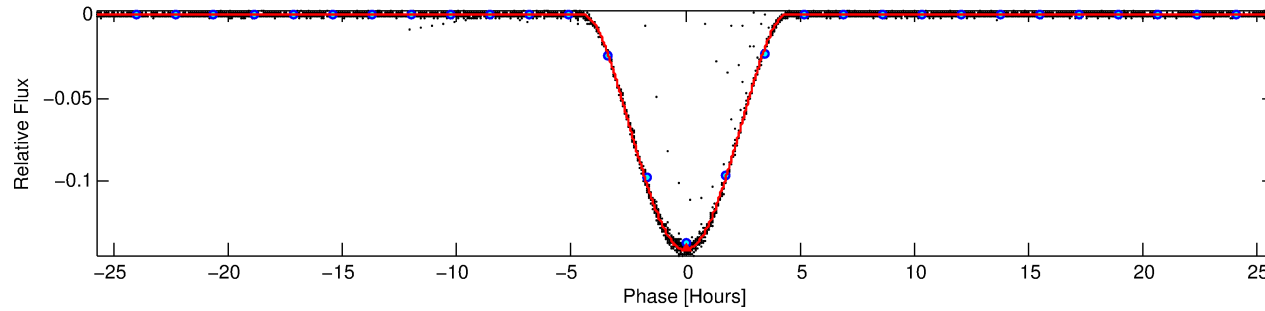
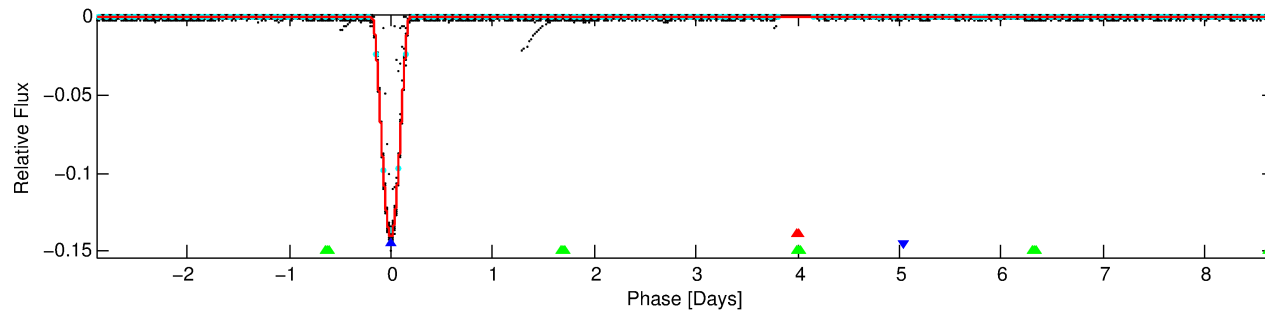
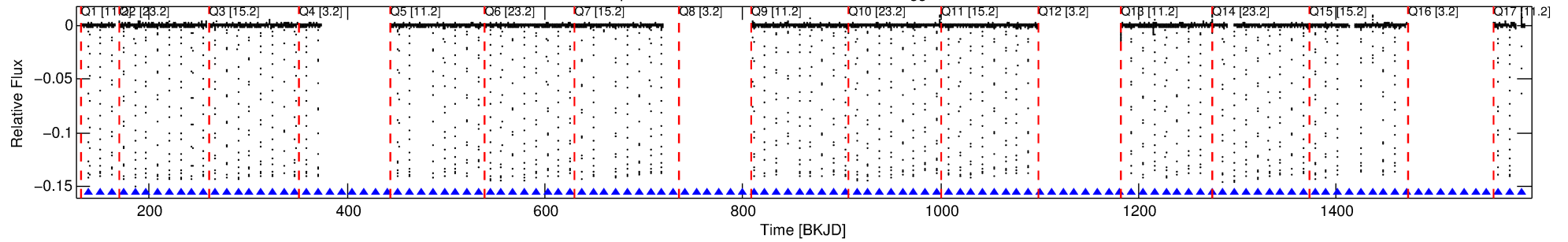
Ephemeris Match Information For 011073223-02

No Significant Match Found

DV One-Page Summary

KIC: 11073223 Candidate: 2 of 3 Period: 11.579 d
KOI: K07406 Corr: No Ephemeris Match

Kp: 15.00 R*: 1.01 Rs Teff: 6028.0 K Logg: 4.36 Fe/H: -0.560



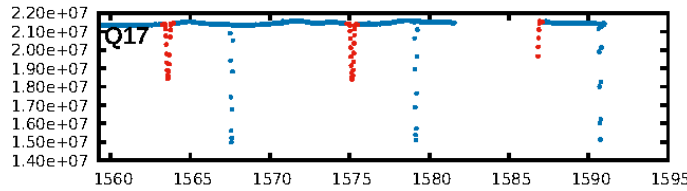
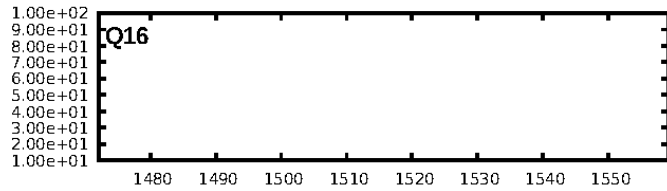
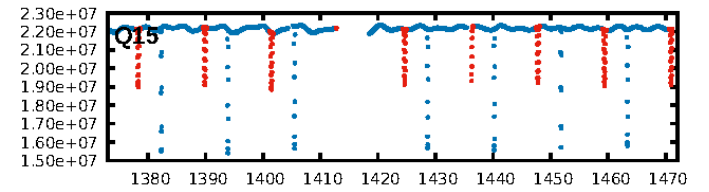
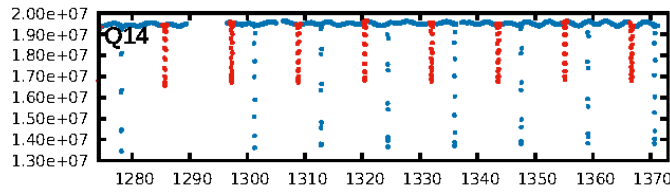
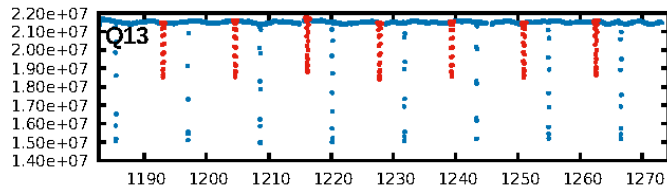
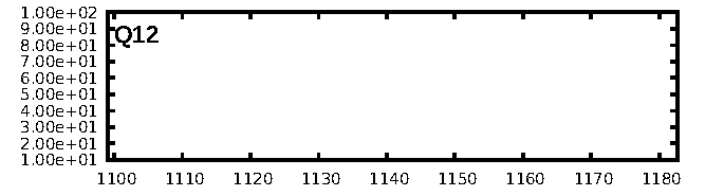
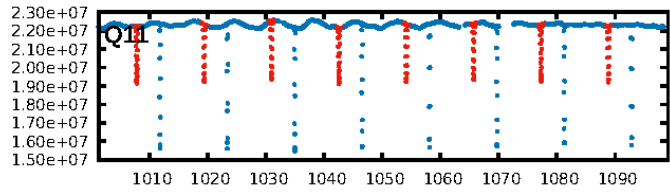
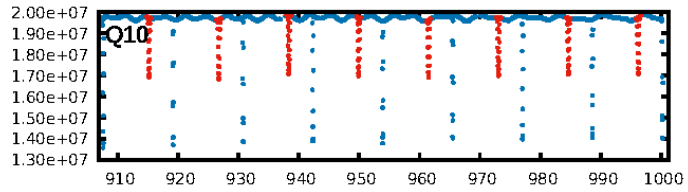
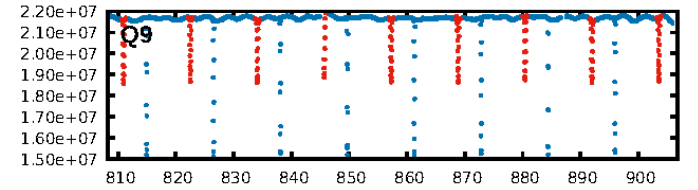
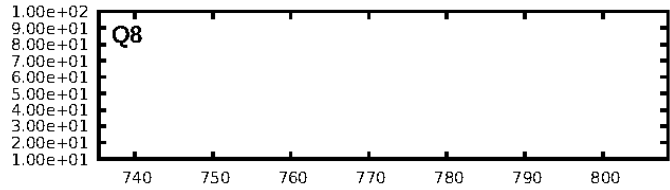
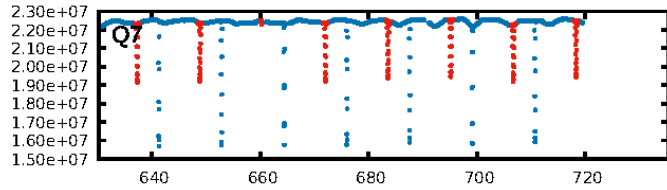
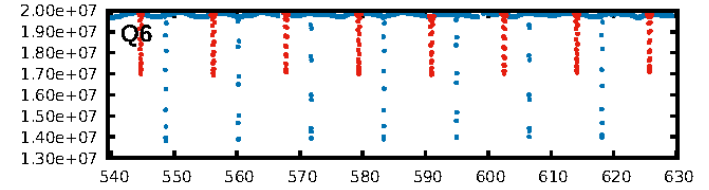
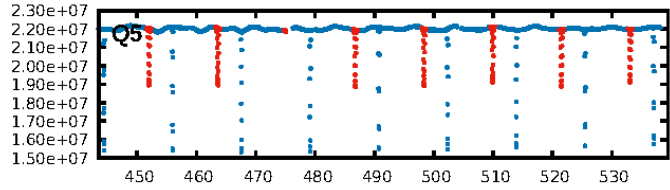
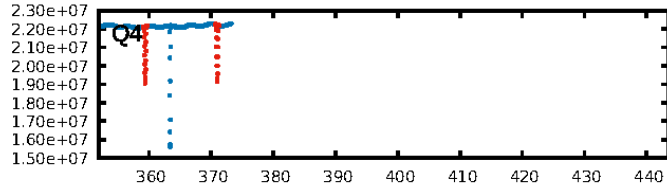
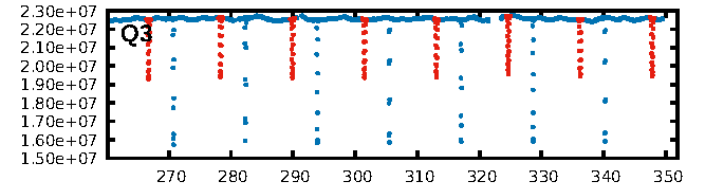
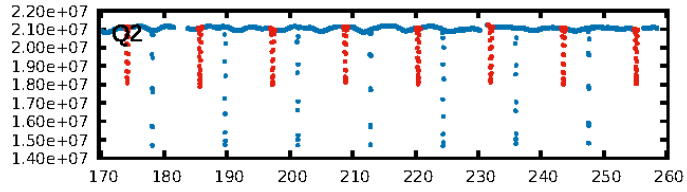
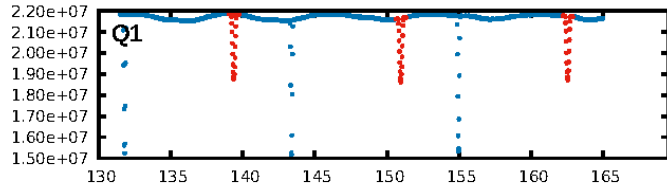
DV Fit Results:

Period = 11.57894 [0.00000] d
Epoch = 139.3820 [0.0000] BKJD
Rp/R* = 0.5027 [0.0344]
a/R* = 12.48 [0.07]
b = 0.89 [0.05]
Seff = 135.12 [49.85]
Teff = 869 [80] K
Rp = 55.62 [15.82] Re
a = 0.0949 [0.0224] AU
Ag = 3.79 [1.42] [1.96σ]
Teffp = 1875 [86] K [8.57σ]

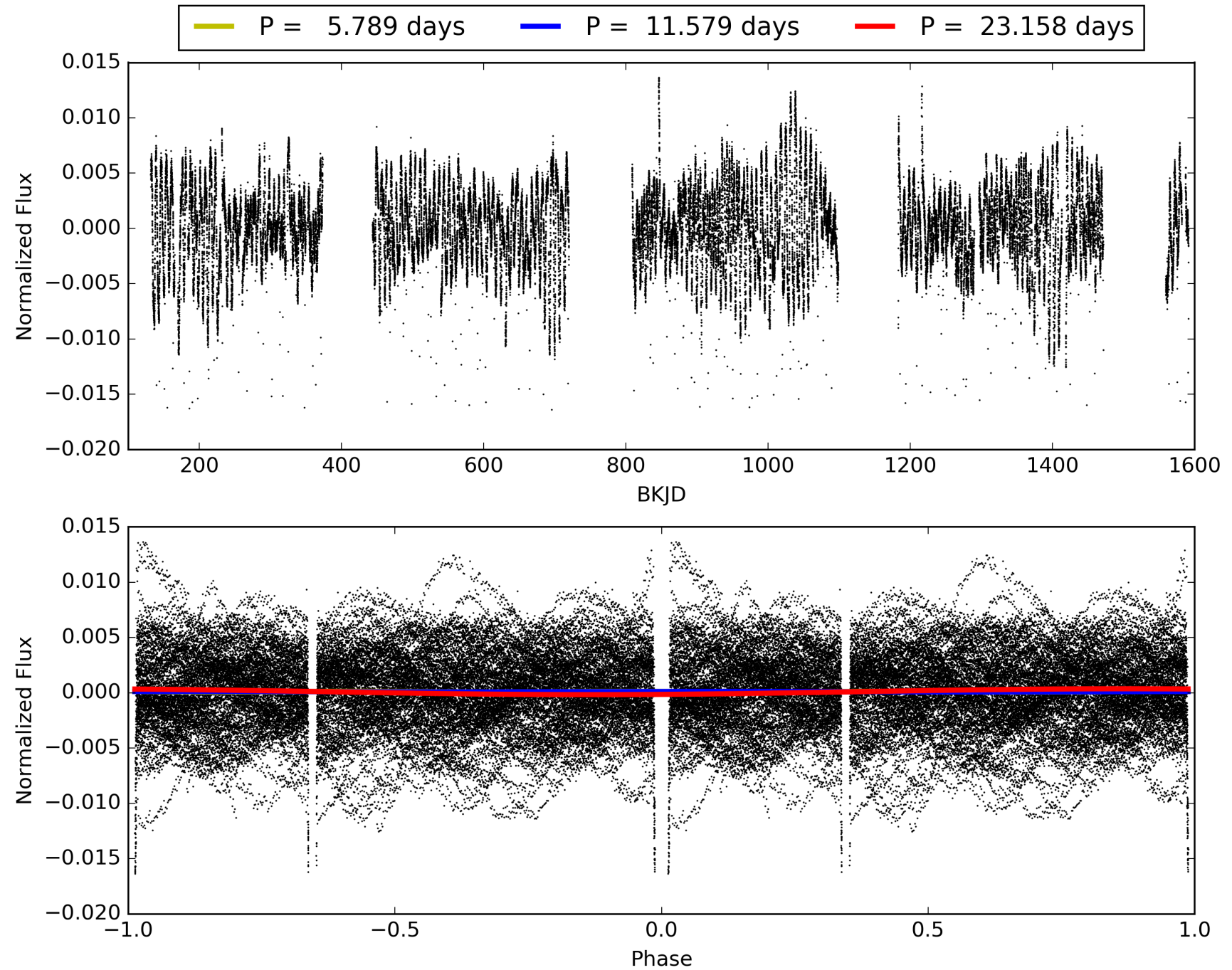
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.73σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 18.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [88/88]
GhostDiagnostic-chr: 3.07
Centroid-sig: 0.0%
Centroid-so: 0.186 arcsec [105.28σ]
OotOffset-rm: 0.041 arcsec [0.61σ]
KicOffset-rm: 0.129 arcsec [1.85σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011073223-02, PDC Light Curves

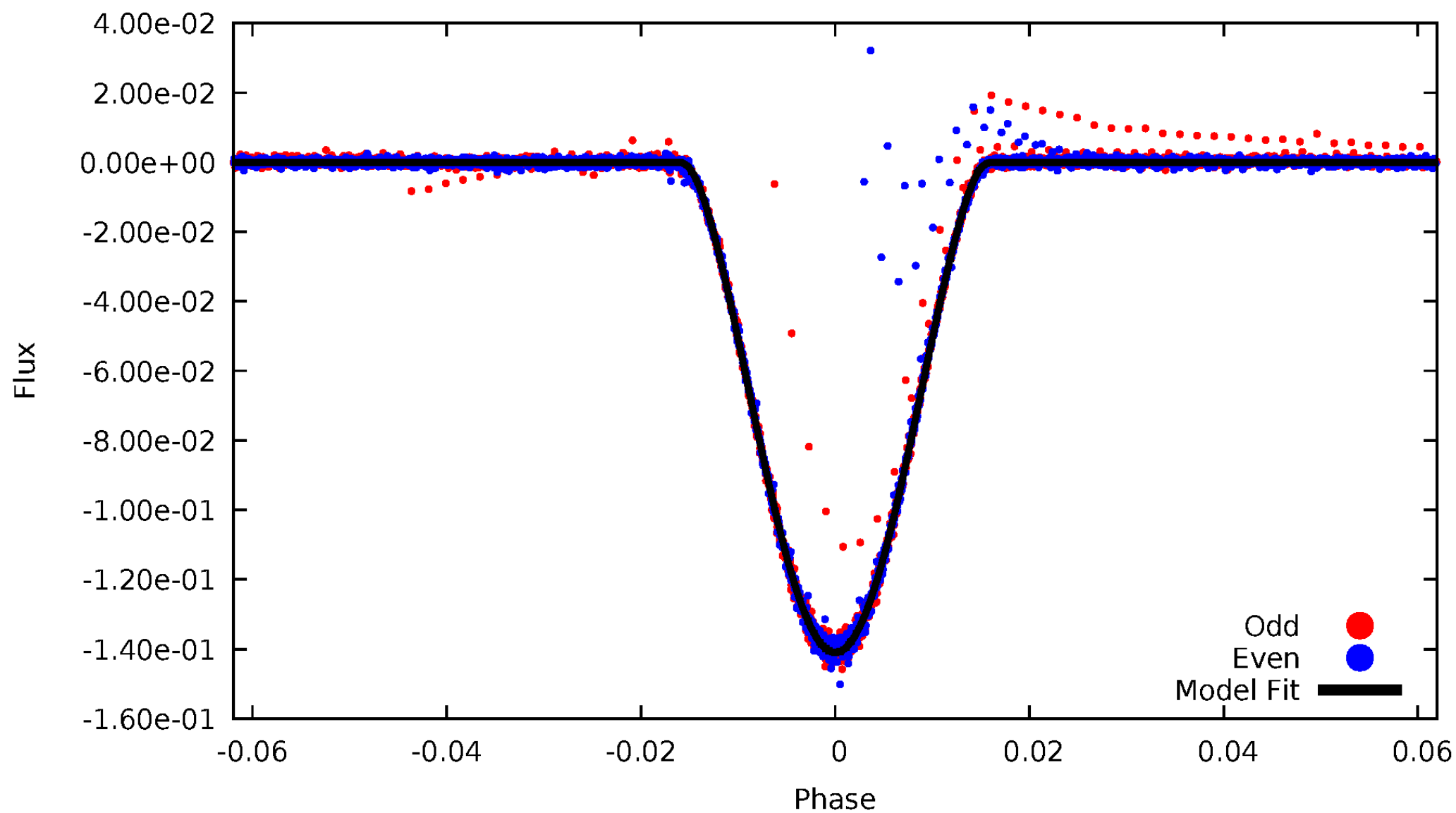


TCE 011073223-02



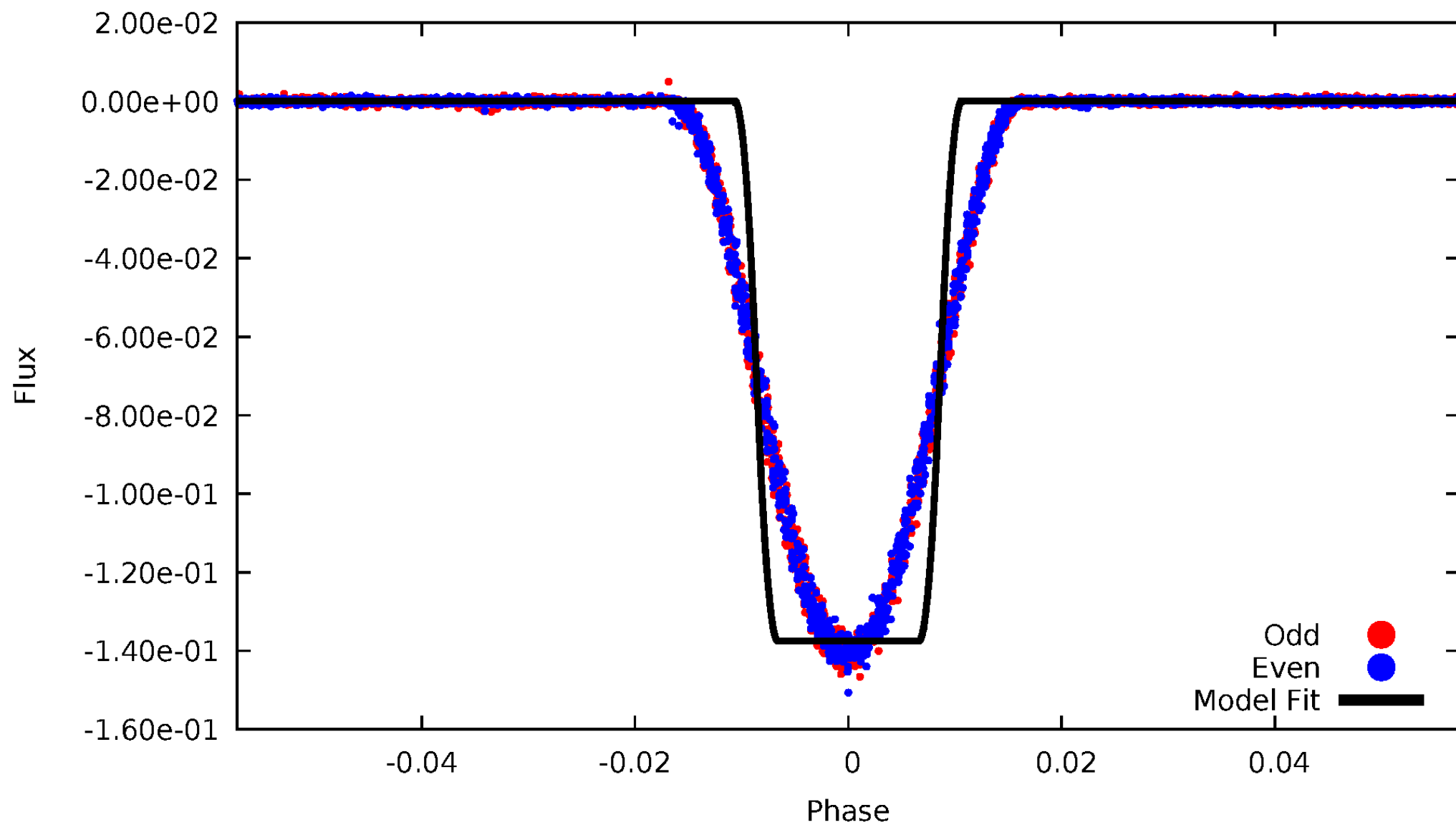
DV Odd/Even

TCE 011073223-02



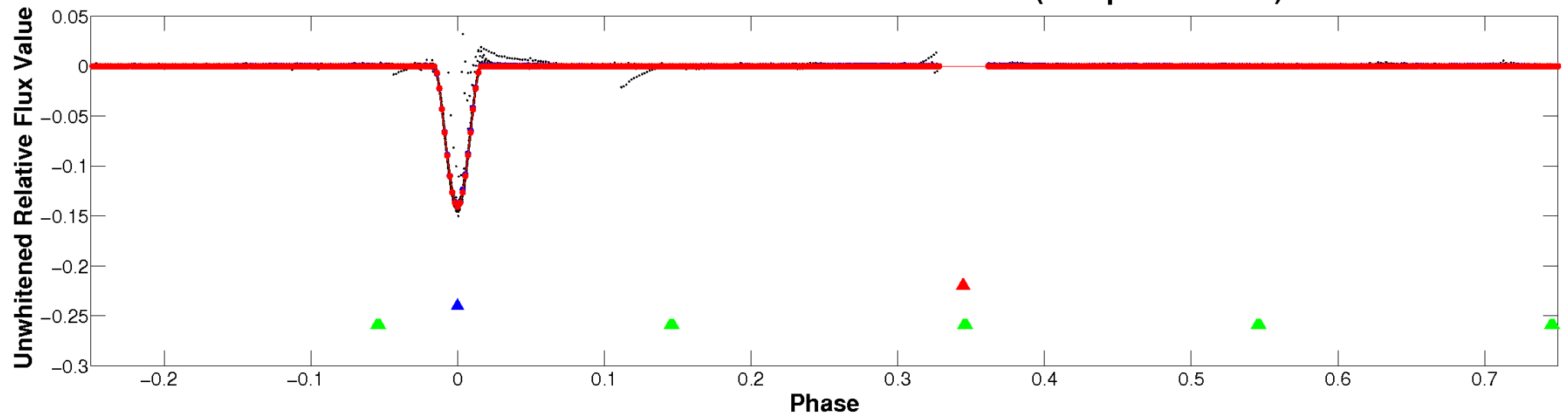
ALT Odd/Even

TCE 011073223-02

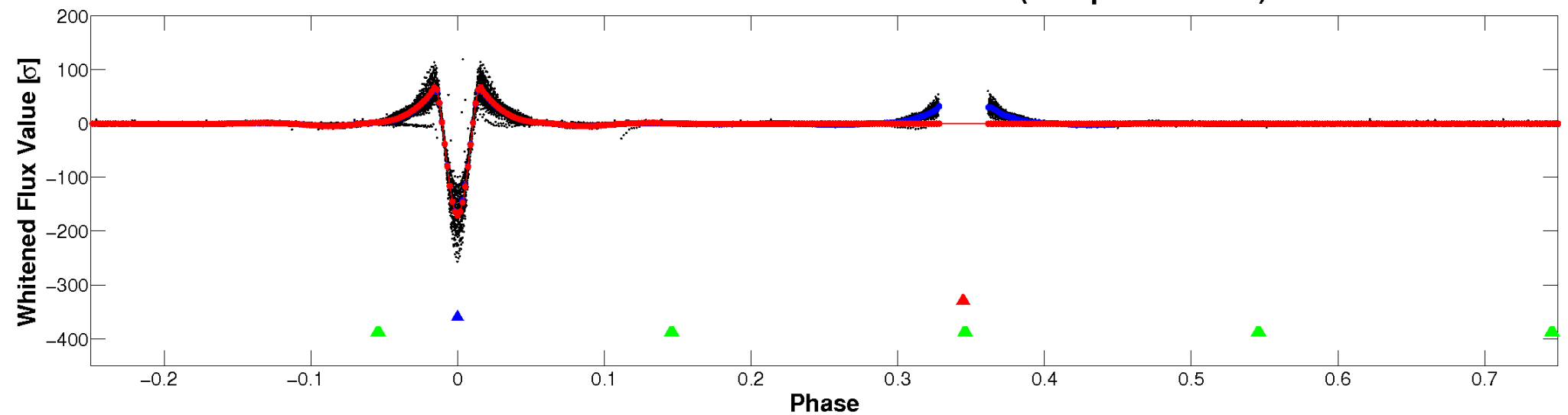


Non-Whitened Vs. Whitened Light Curve

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

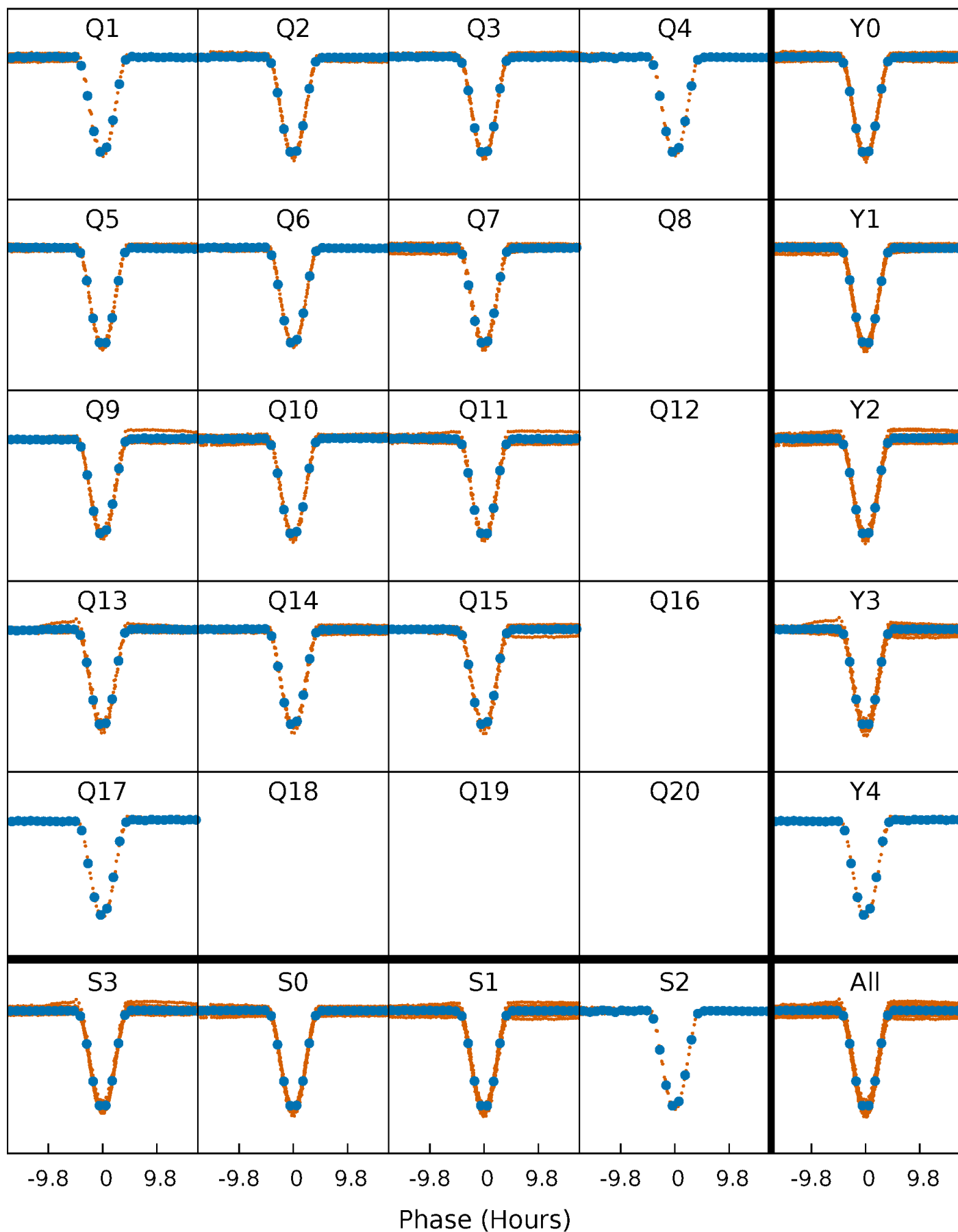


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



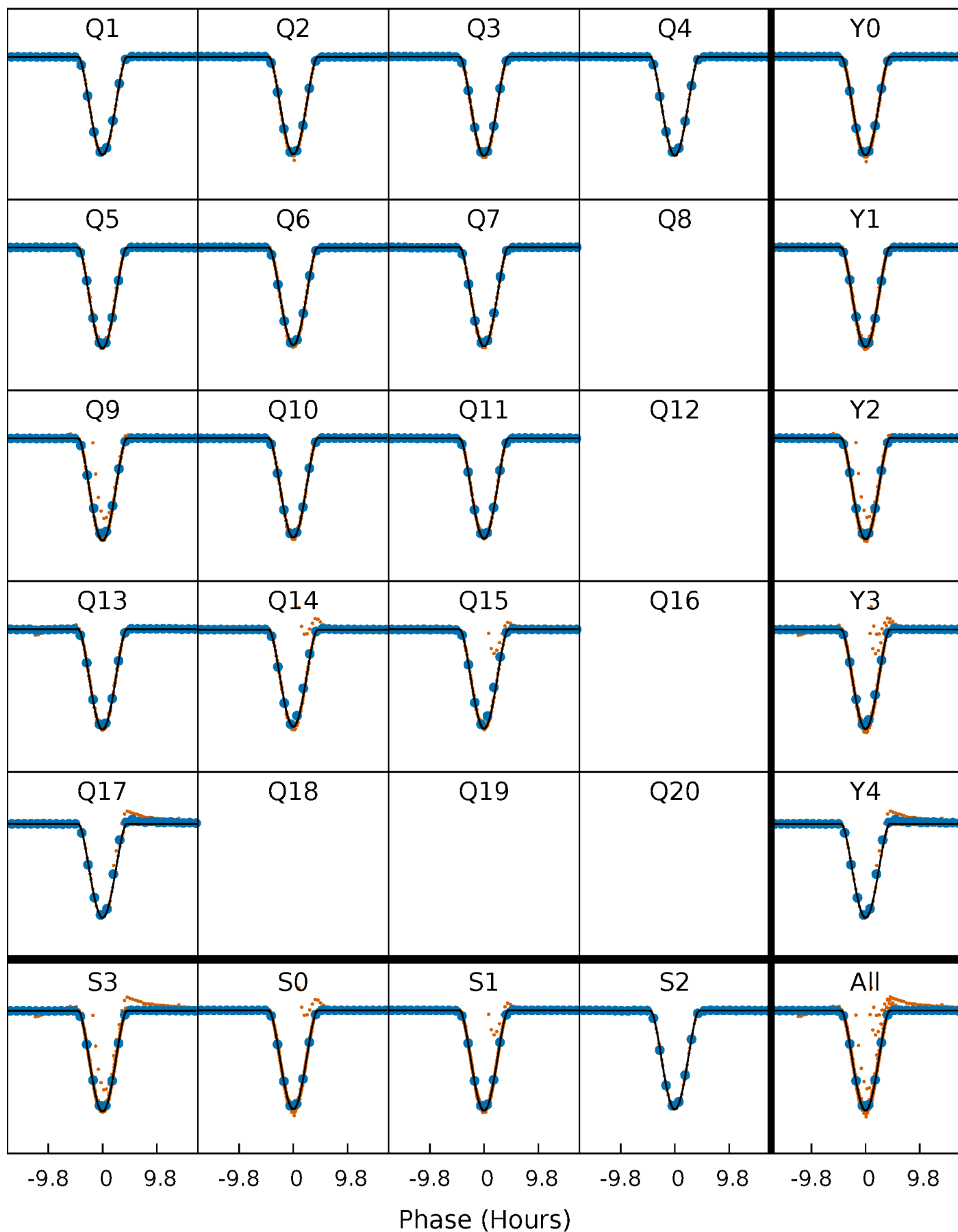
PDC Quarter-Phased Transit Curves

TCE 011073223-02 P= 11.578938 Days $T_0=139.381989$ (BKJD)



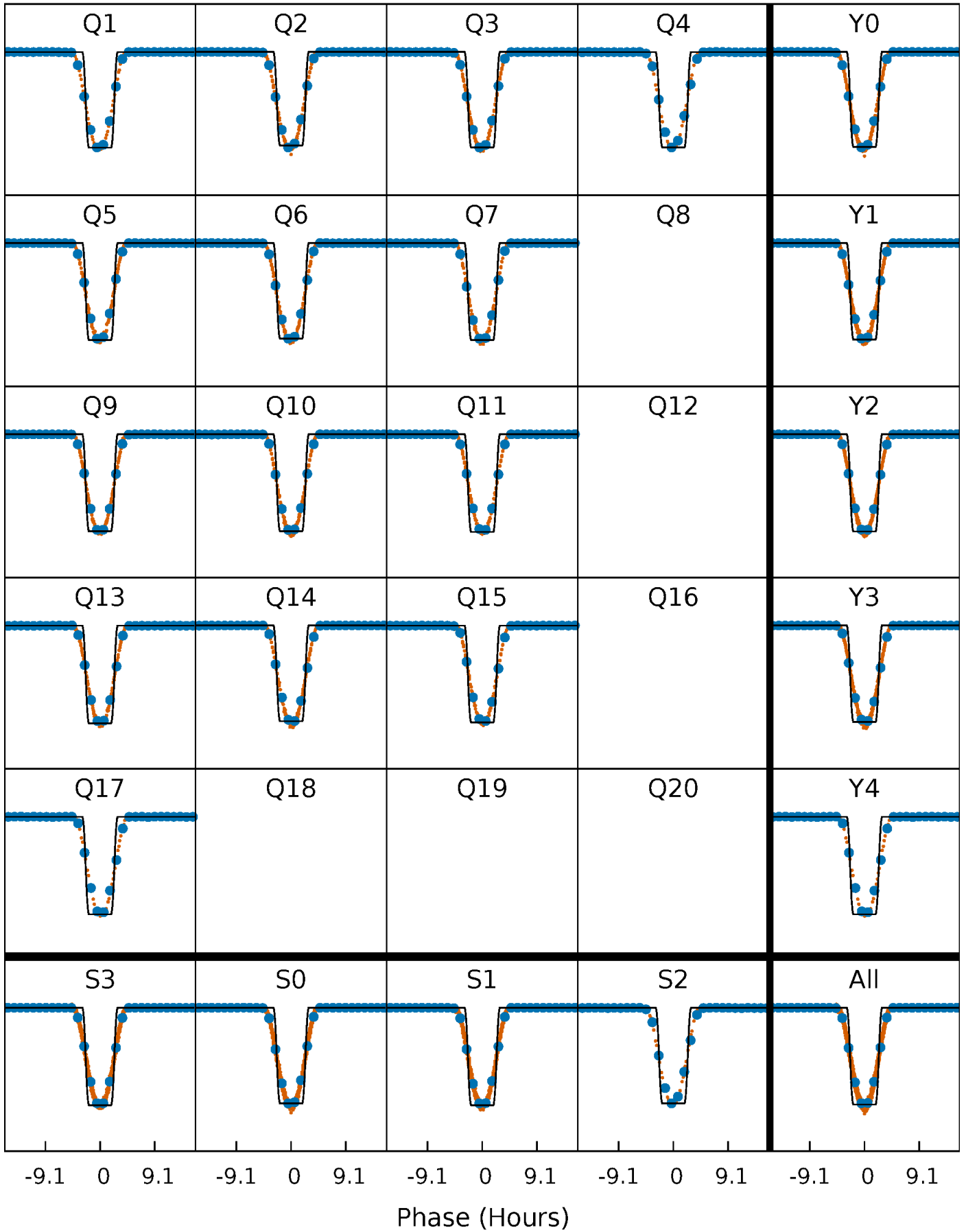
DV Quarter-Phased Transit Curves

TCE 011073223-02 P= 11.578938 Days $T_0=139.381989$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

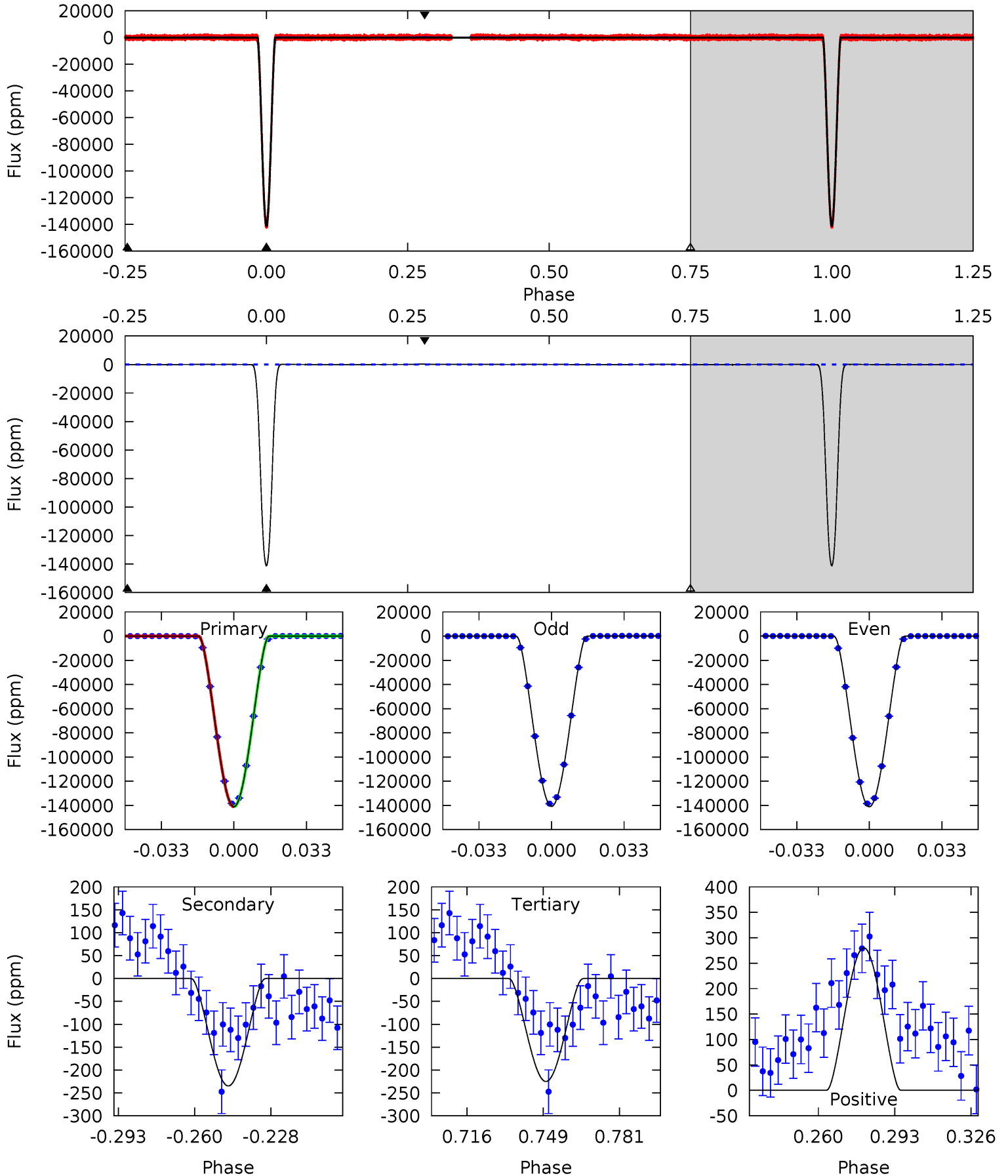
TCE 011073223-02 P= 11.578834 Days $T_0=139.388113$ (BKJD)



DV Model-Shift Uniqueness Test

011073223-02, P = 11.578938 Days, E = 127.803051 Days

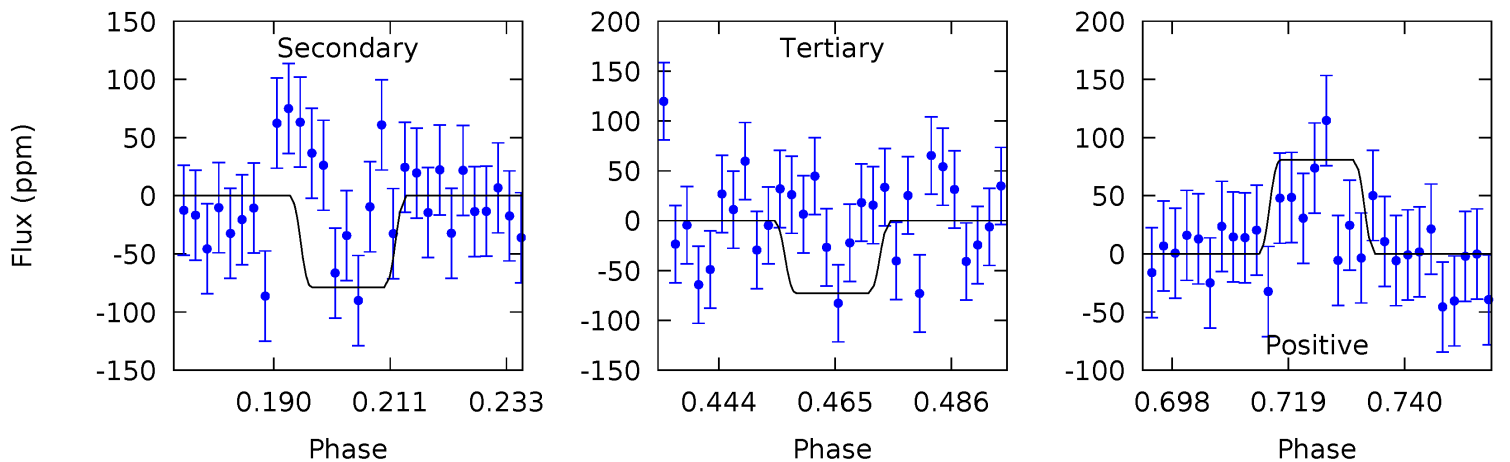
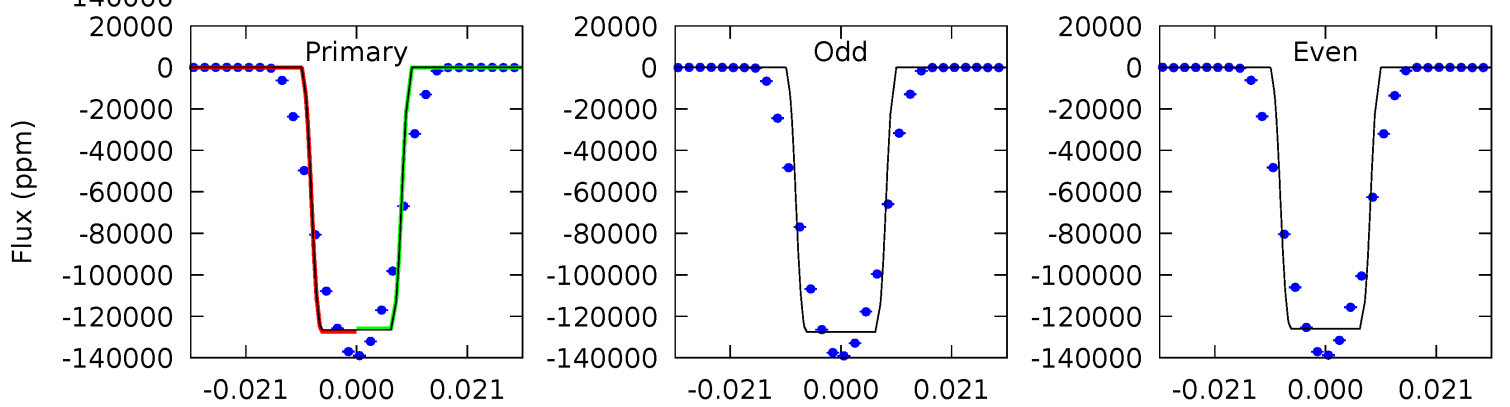
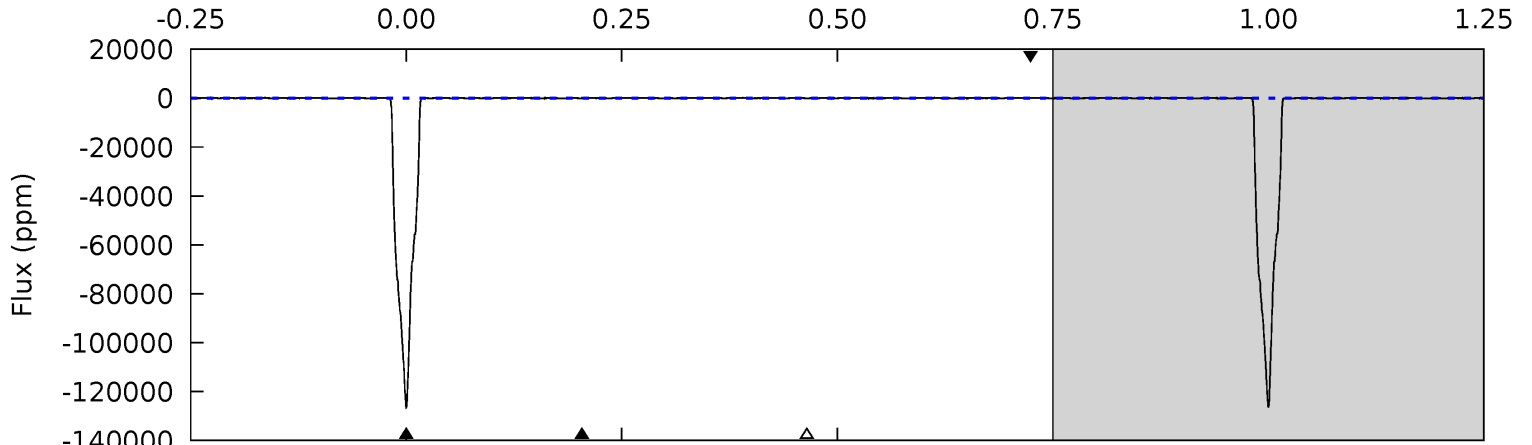
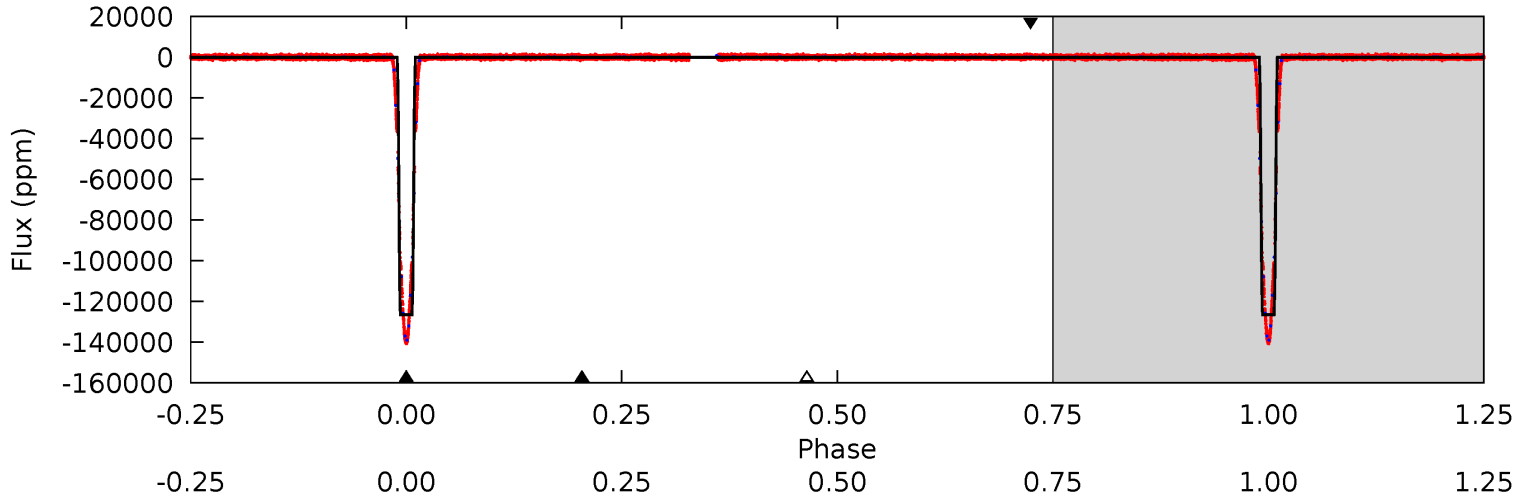
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8936	14.9	14.3	17.8	4.79	2.14	6.03	8922	8919	0.61	-2.89	9.44	0.97	0.00	3.49



Alt Model-Shift Uniqueness Test

011073223-02, P = 11.578834 Days, E = 127.809279 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5719	3.56	3.29	3.66	4.88	2.31	1.08	5716	5715	0.27	-0.10	33.2	1.00	0.00	33.7



Stellar Parameters For KIC 011073223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+163}_{-181}	$4.355^{+0.158}_{-0.193}$	$-0.560^{+0.300}_{-0.300}$	$1.014^{+0.280}_{-0.187}$	$0.849^{+0.108}_{-0.072}$	$1.146^{+0.990}_{-0.526}$
	+3%/-3%	+4%/-4%	+54%/-54%	+28%/-18%	+13%/-8%	+86%/-46%
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 011073223-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-235 ± 16	$56.02^{+10.28}_{-7.17}$	1221^{+89}_{-81}	1742^{+143}_{-3388}	$0.372^{+0.114}_{-0.101}$
Alt.	-79 ± 22	$41.50^{+7.15}_{-5.99}$	1217^{+90}_{-74}	-1751^{+3399}_{-160}	$0.224^{+0.120}_{-0.083}$

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 $A_{obs} \gg 1.0$

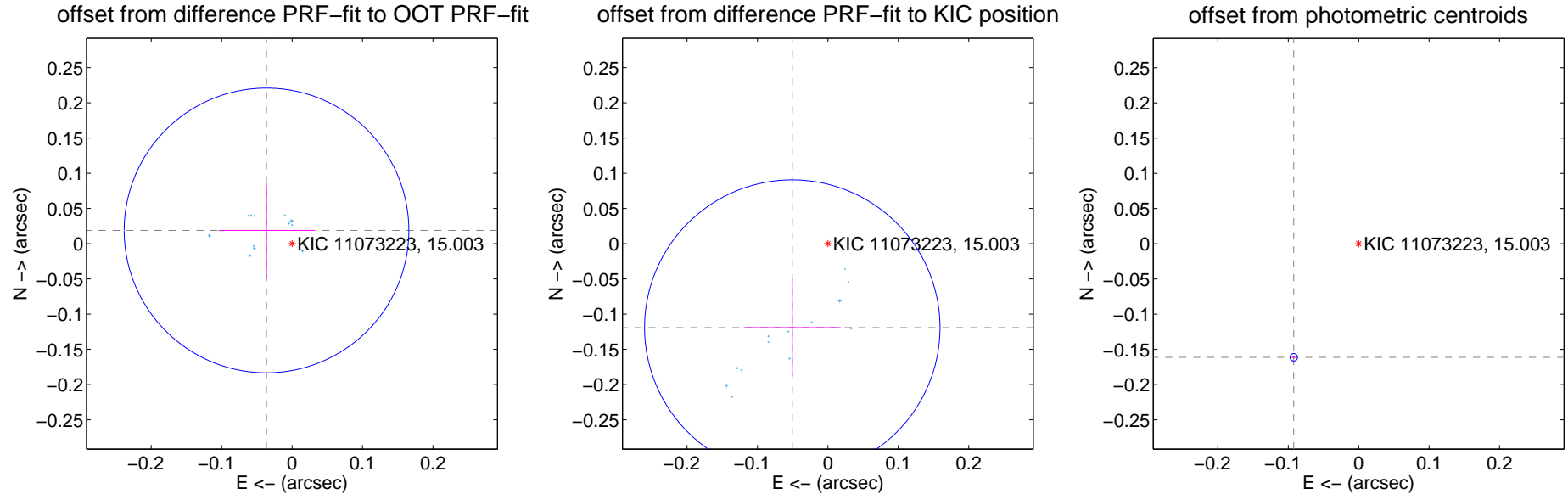
DV Centroid Data

Supplemental centroid analysis for 011073223-02. Kepler magnitude: 15.00. Transit SNR 3621.22

There are 14 quarters with good PRF difference image offsets

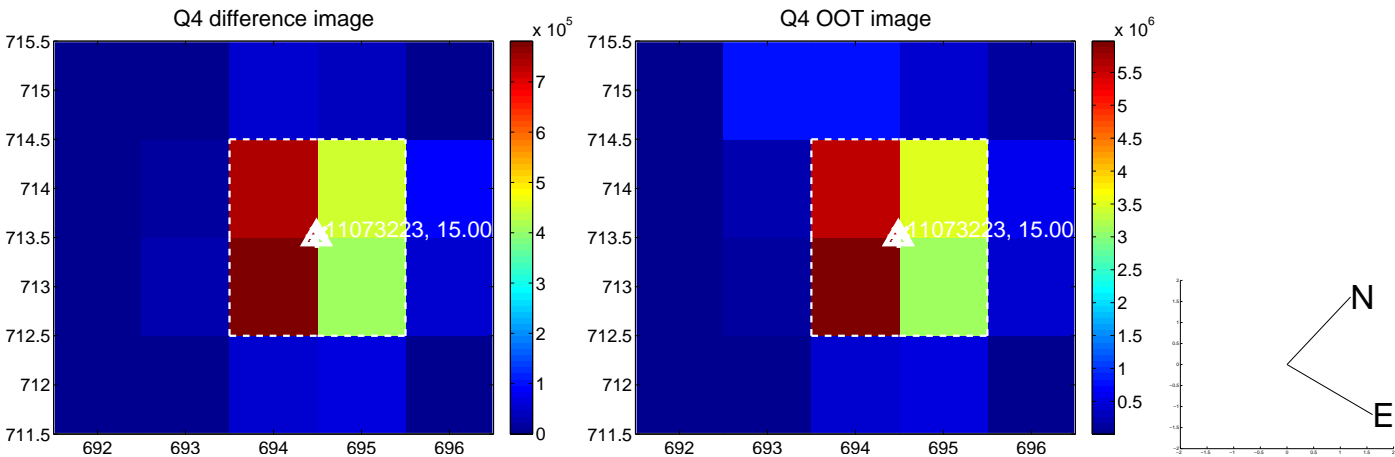
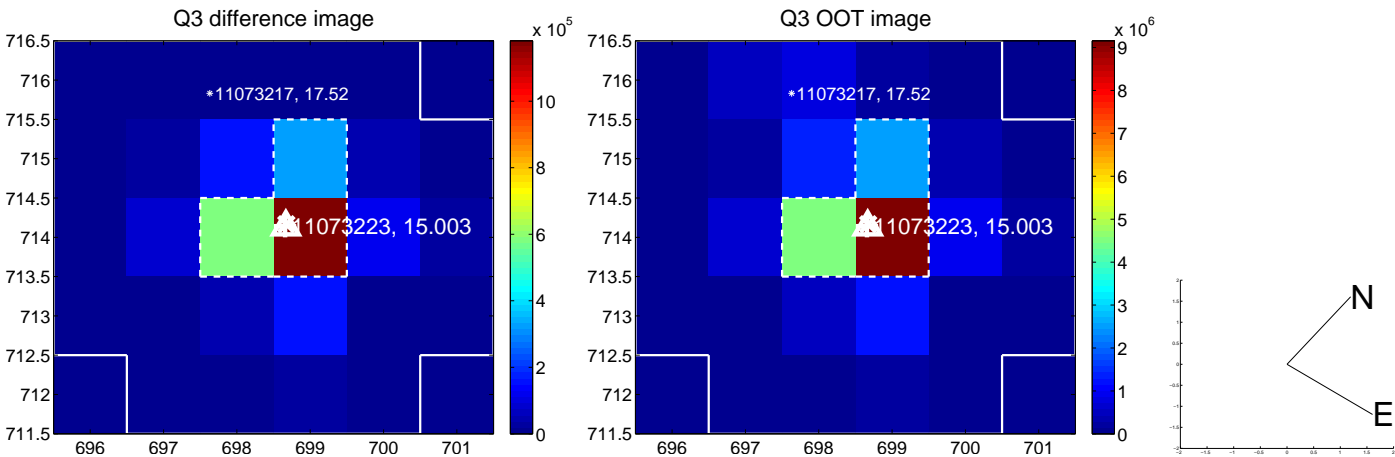
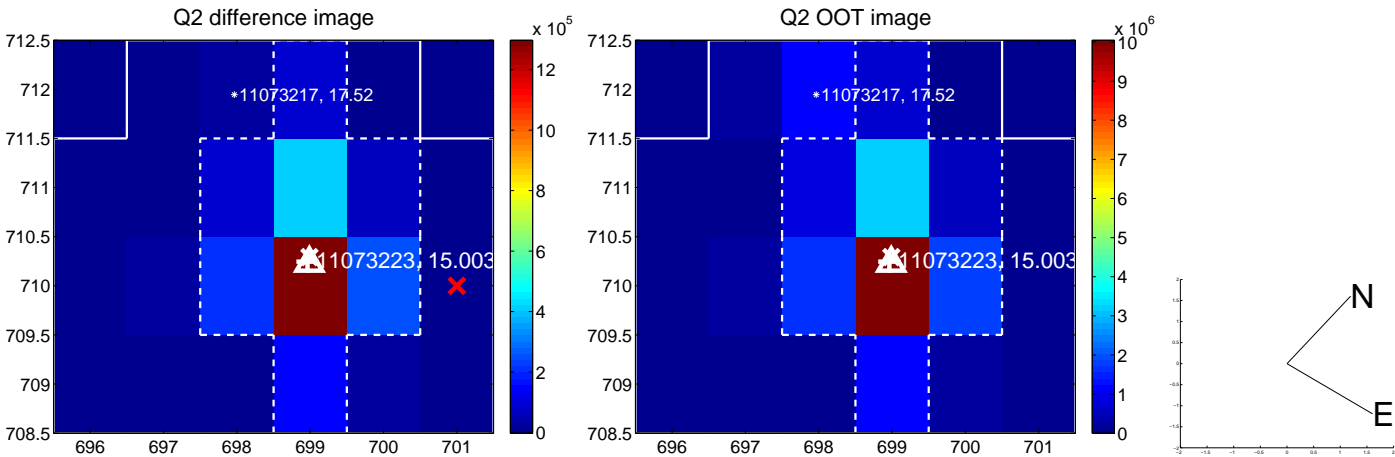
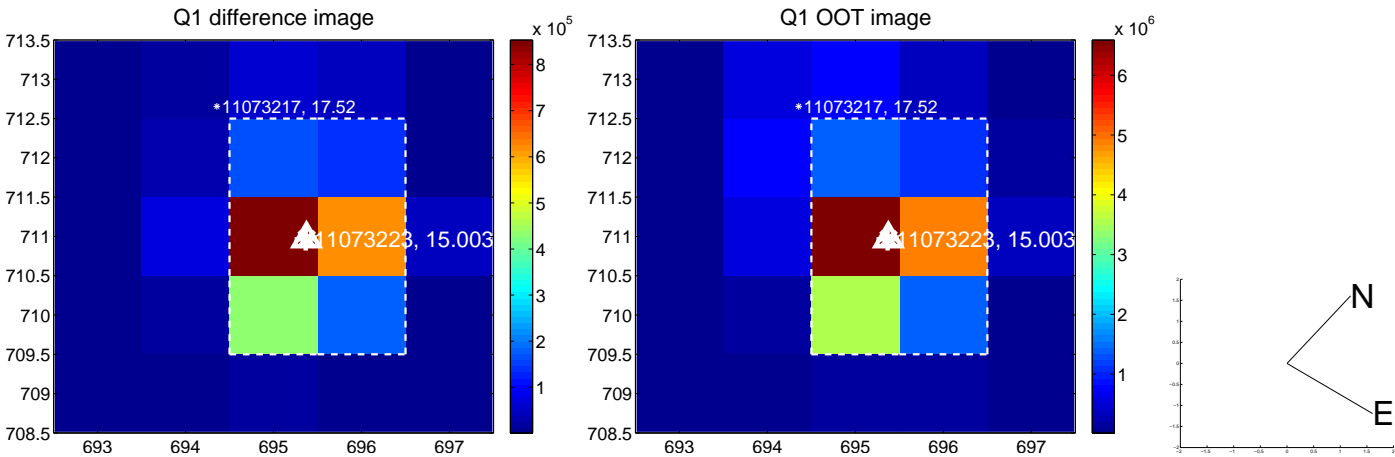
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.067	0.61	0.036 ± 0.067	0.019 ± 0.067
PRF-fit source offset from KIC position	0.129 ± 0.070	1.85	0.051 ± 0.069	-0.119 ± 0.069
photometric centroid source offset	0.19 ± 0.00	105.28	0.09 ± 0.00	-0.16 ± 0.00

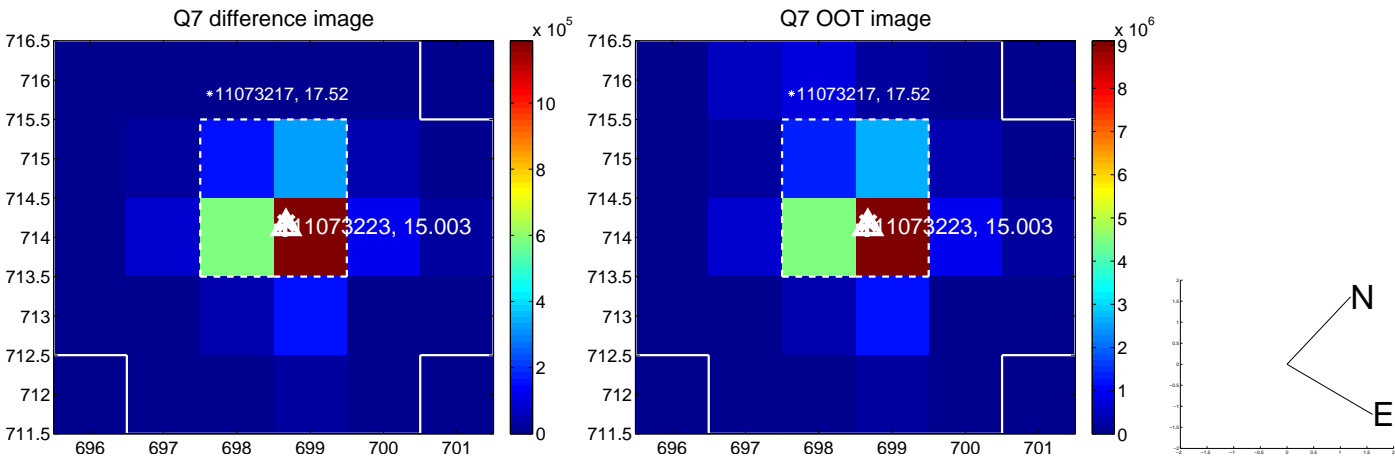
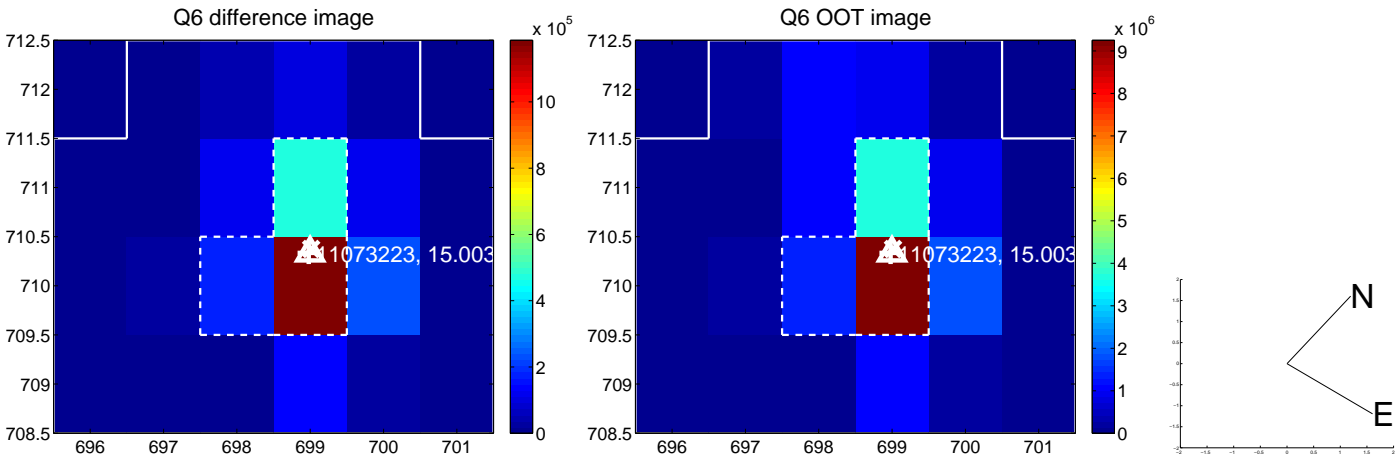
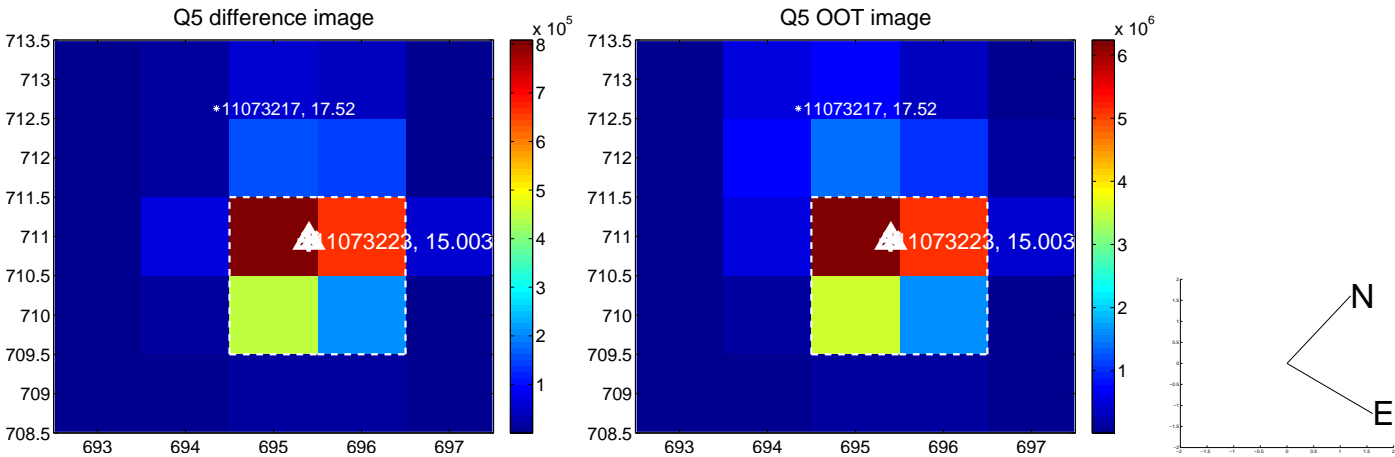


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

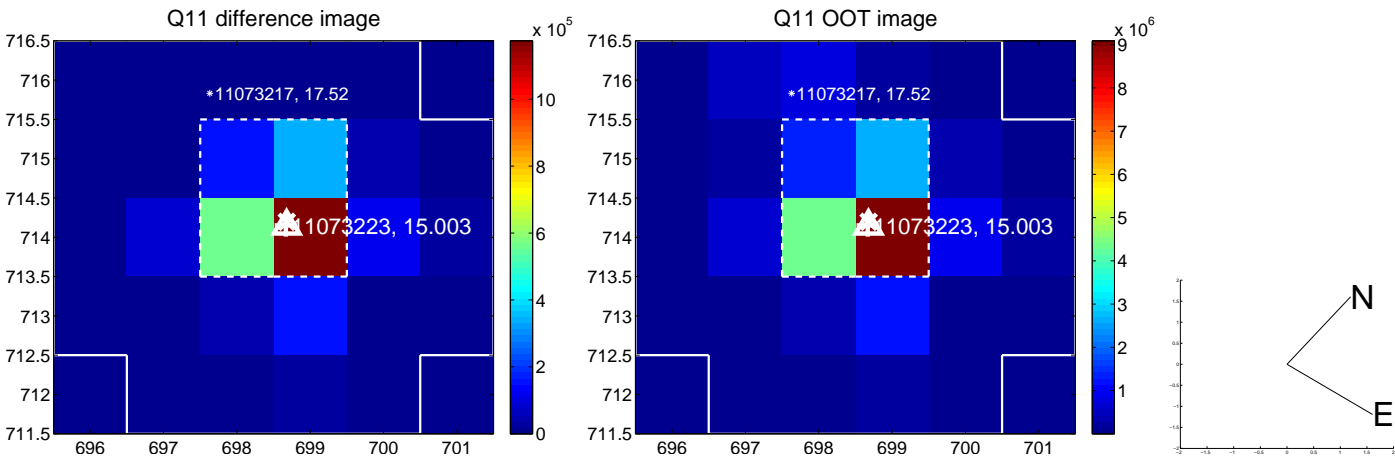
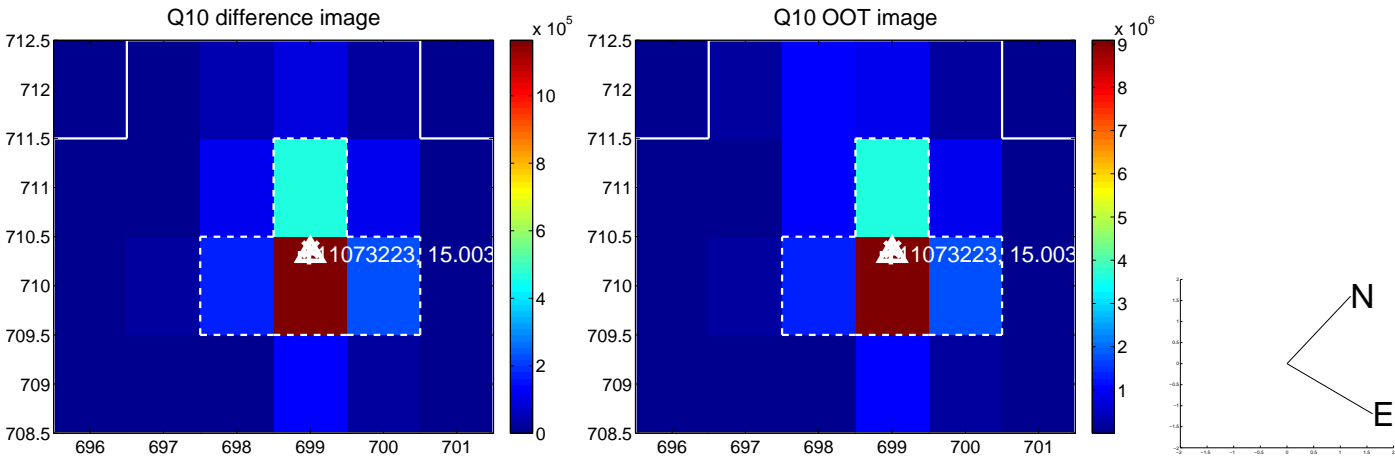
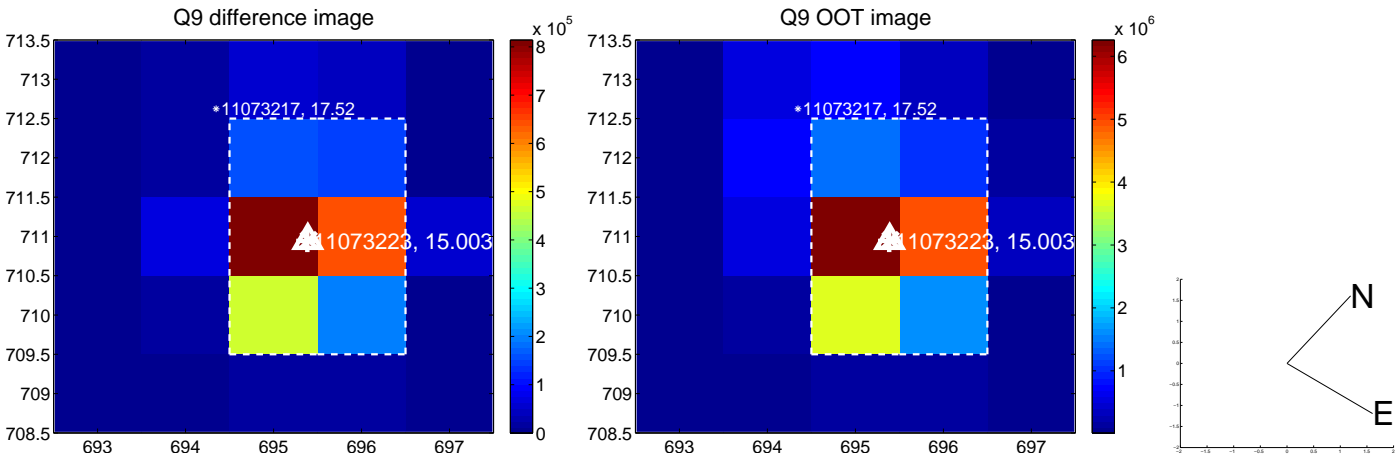
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



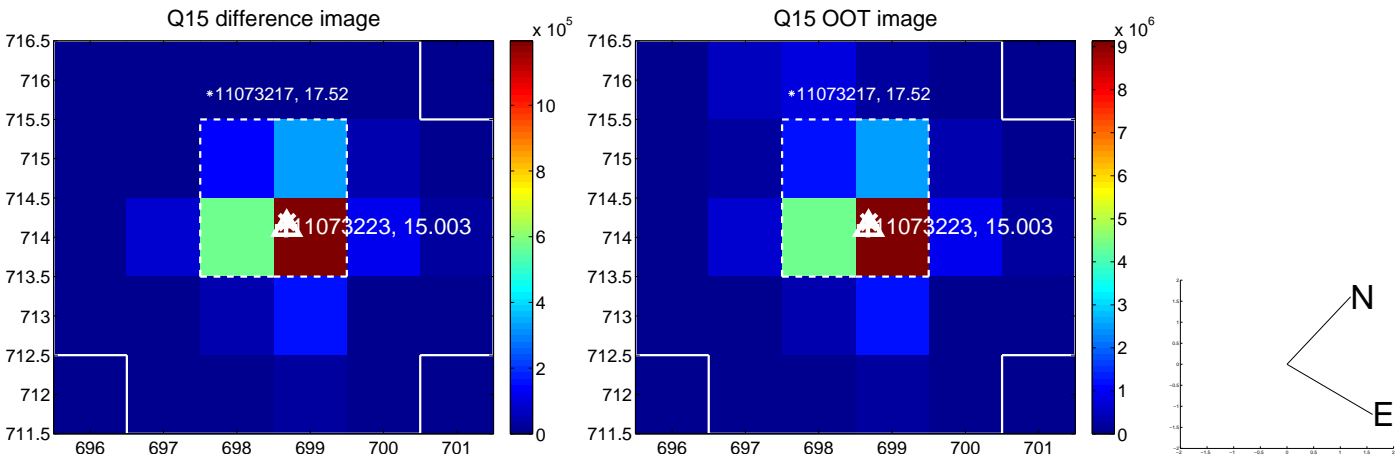
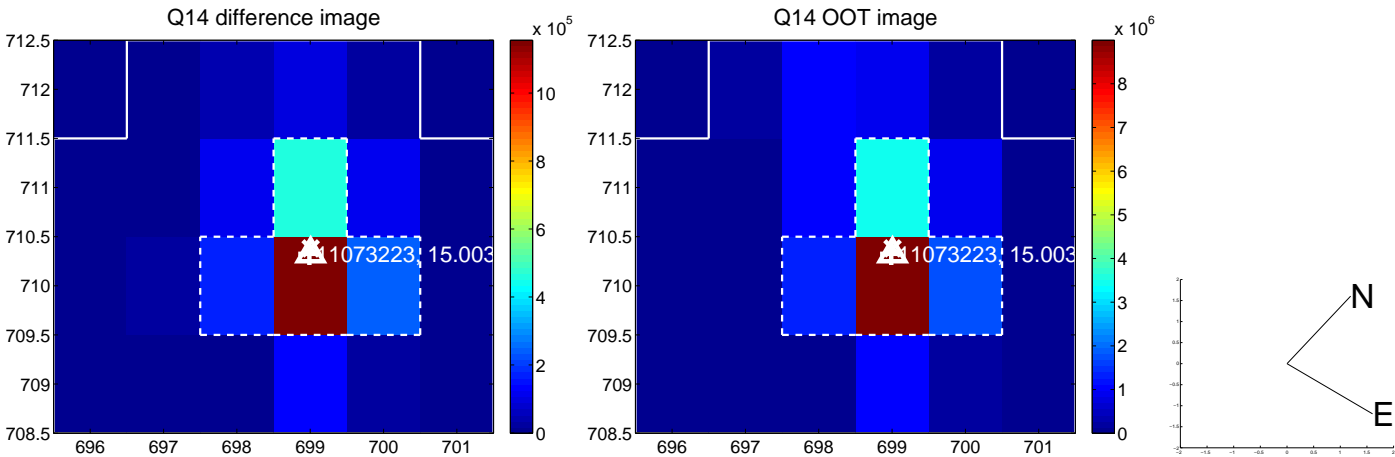
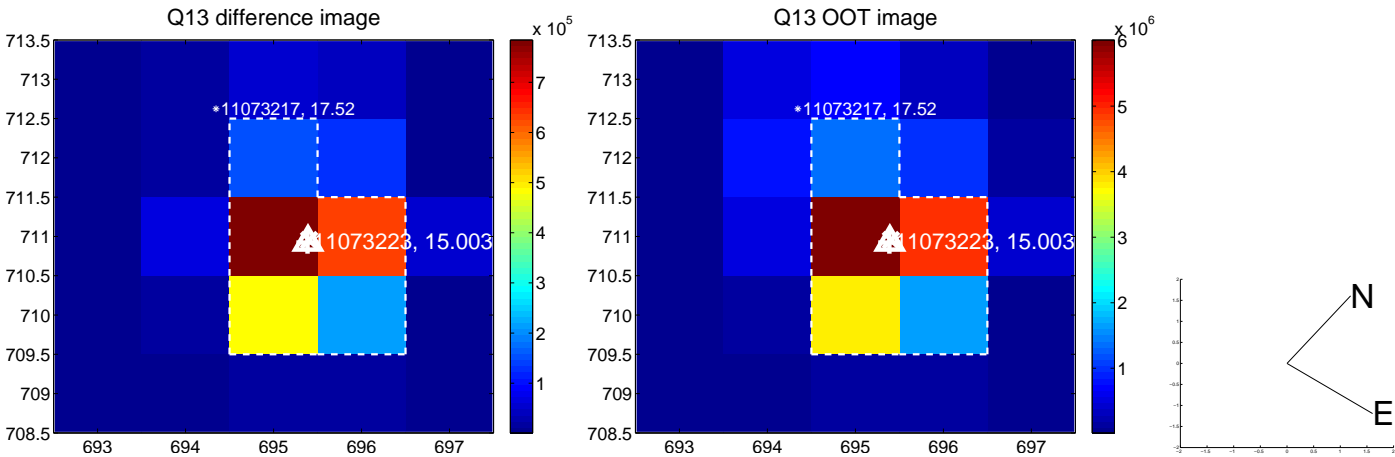
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



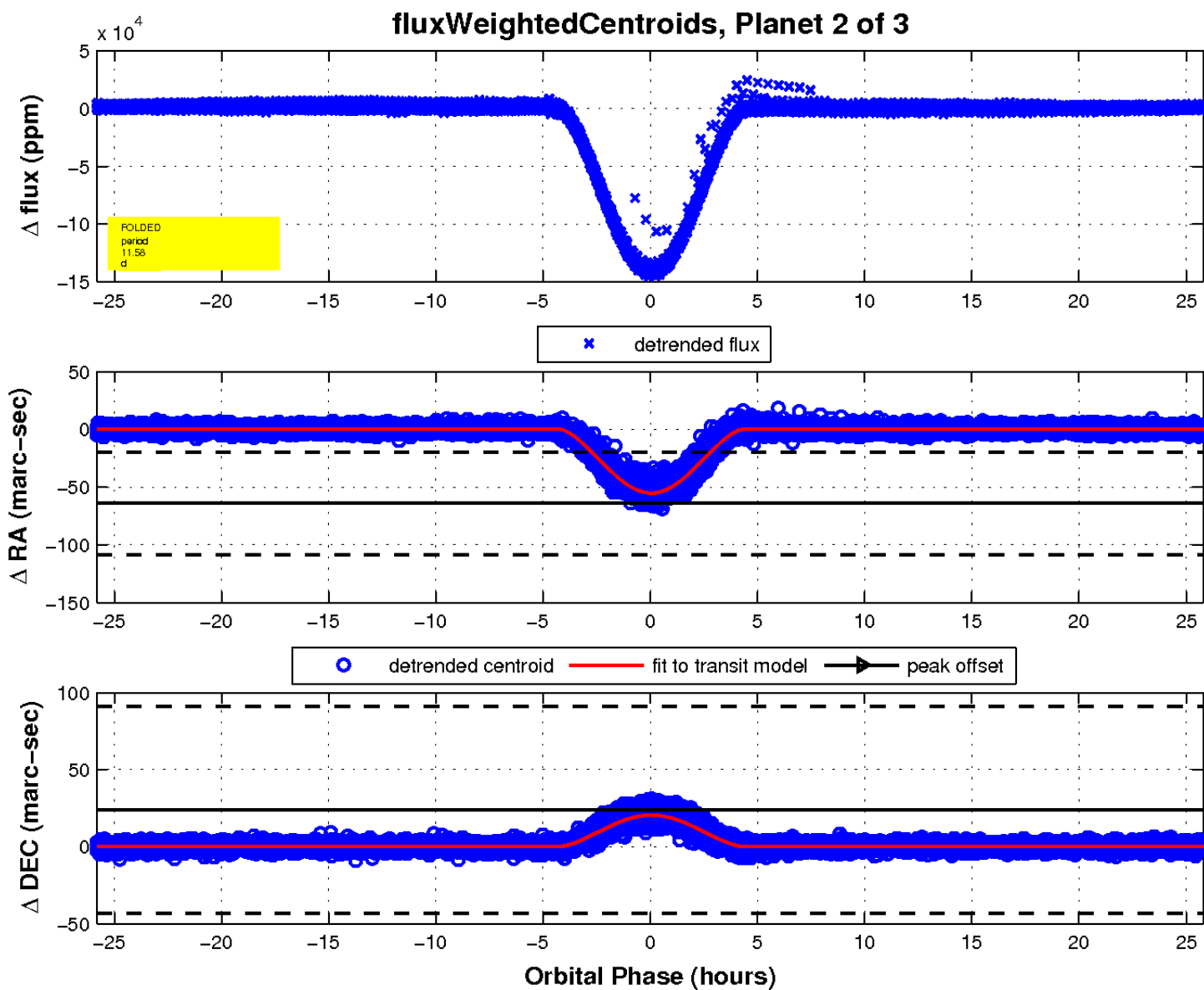
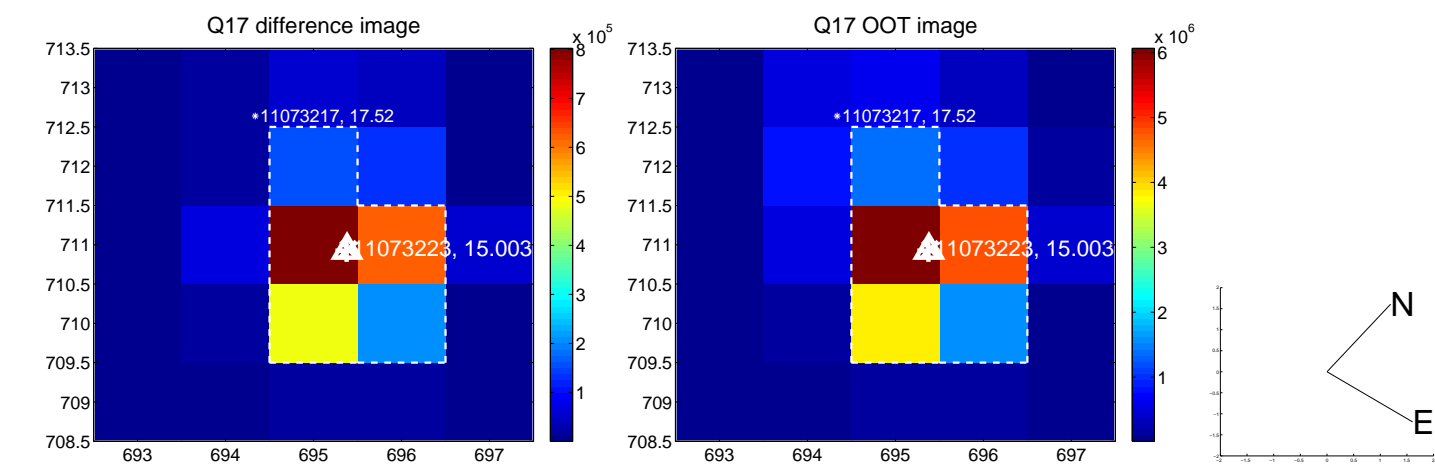
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

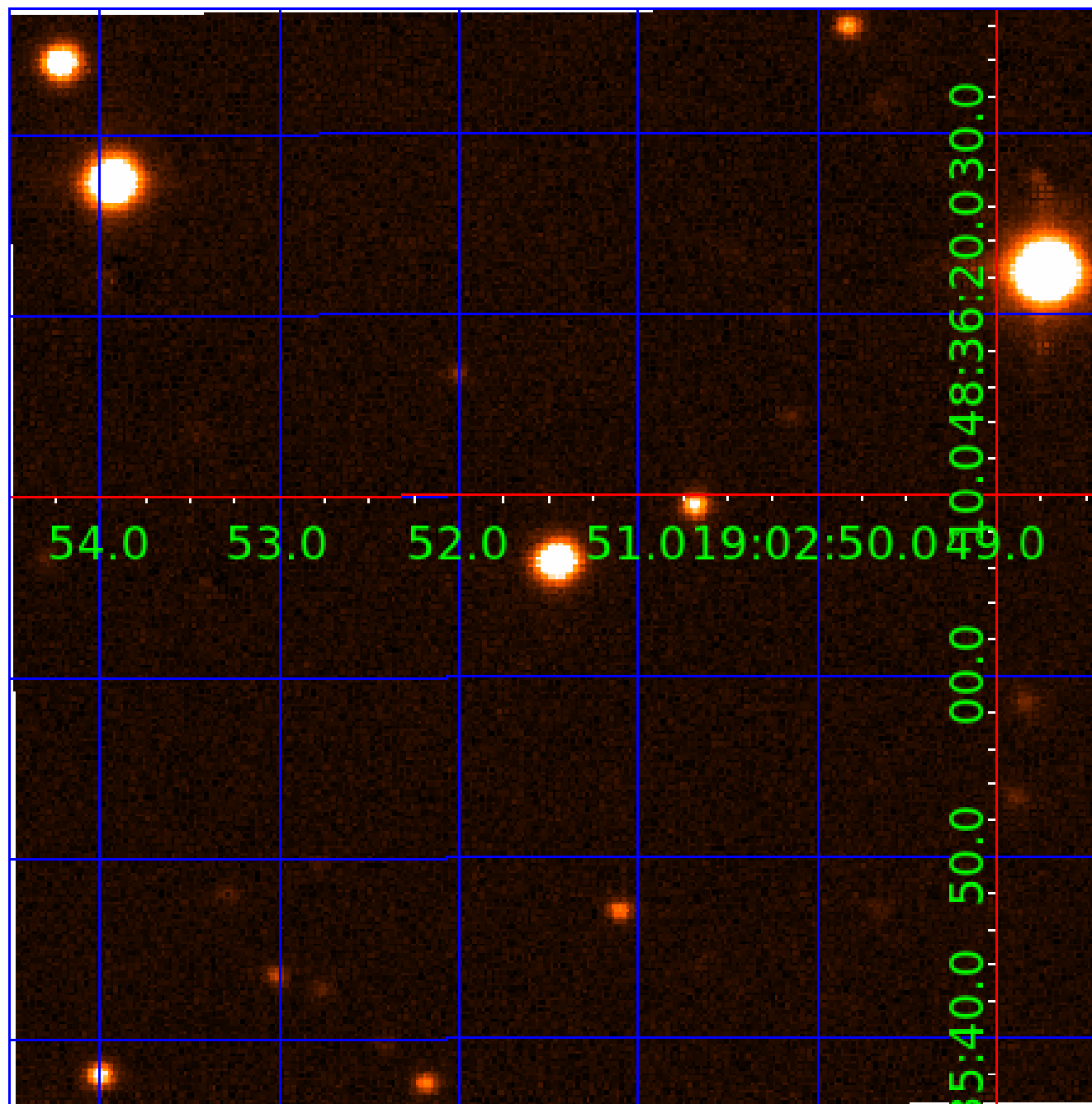


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011073223

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})
011073223-01	OBS	7406.01	11.579020	131.788277	297845.6	3.000	8824.0	-1.0	1.01	6028	50.65	135.12
011073223-02	OBS	No	11.578938	139.381988	140975.8	8.605	4335.3	3621.2	1.01	6028	55.62	135.12
011073223-03	OBS	No	4.631467	131.825762	3227.8	43.838	390.5	44.1	1.01	6028	7.24	458.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011073223-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
011073223-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011073223-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—HALO_GHOST

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.

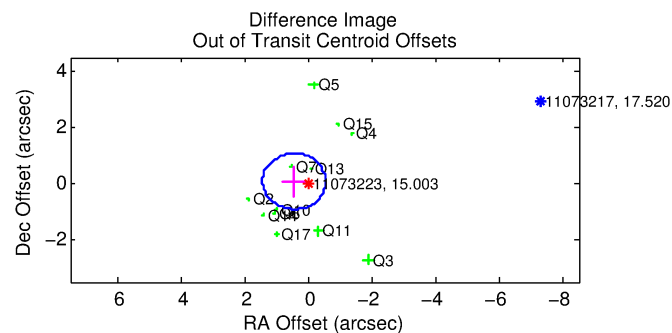
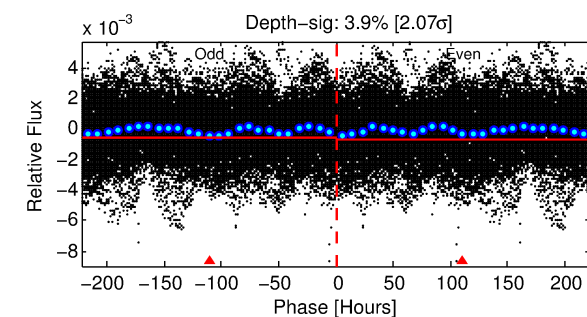
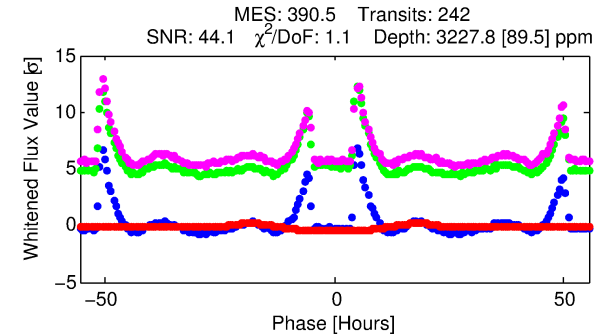
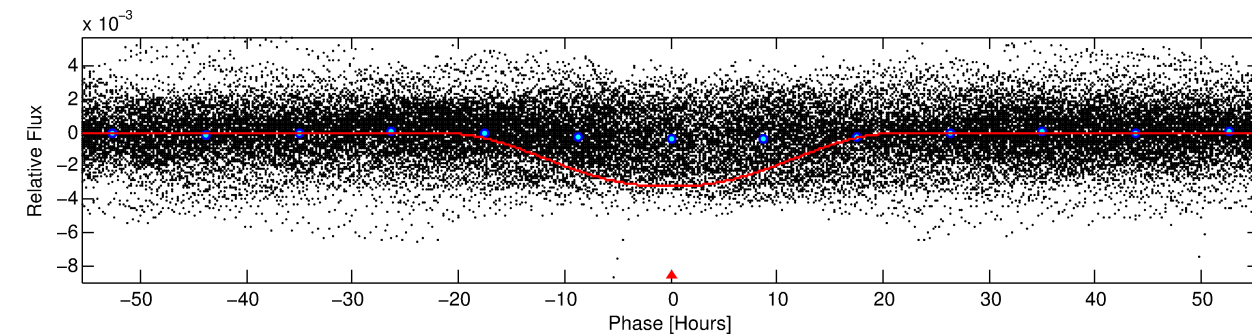
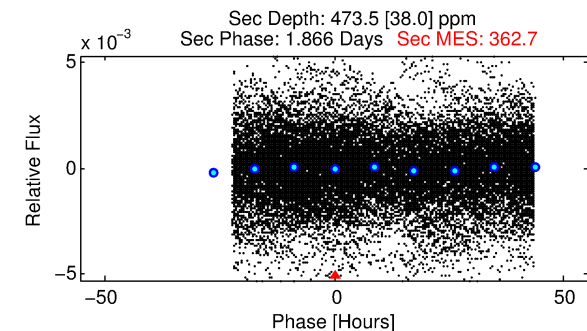
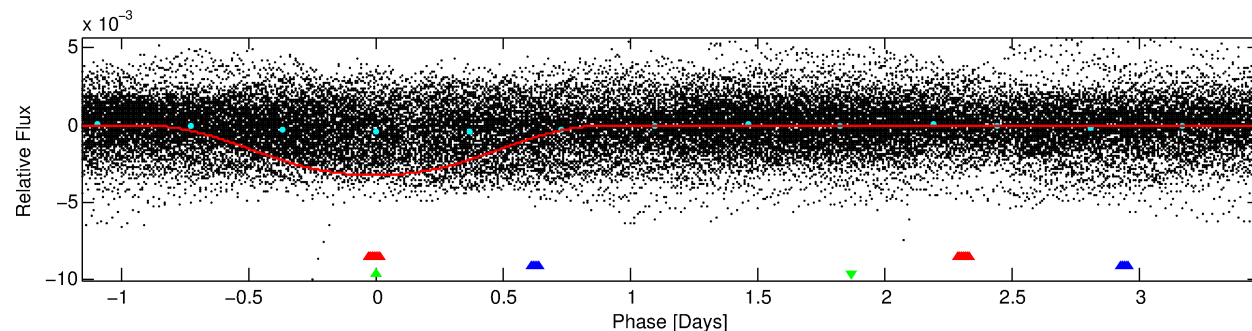
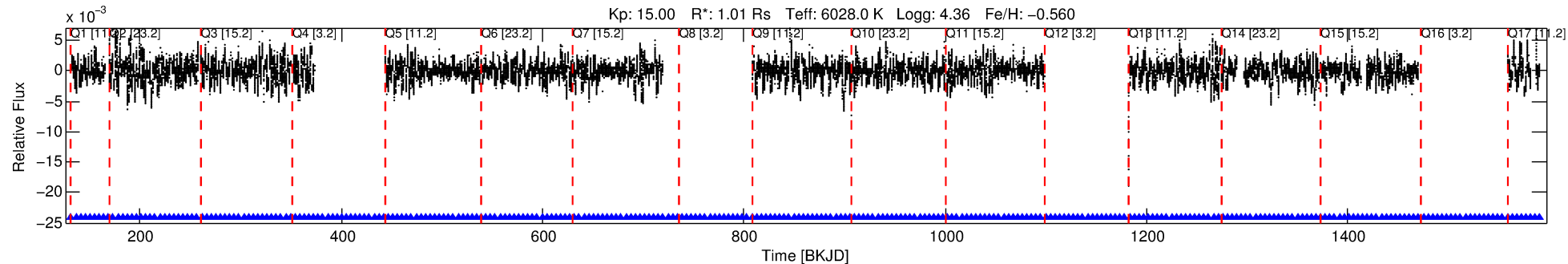
Ephemeris Match Information For 011073223-03

No Significant Match Found

DV One-Page Summary

KIC: 11073223 Candidate: 3 of 3 Period: 4.631 d
KOI: K07406 Corr: No Ephemeris Match

Kp: 15.00 R*: 1.01 Rs Teff: 6028.0 K Logg: 4.36 Fe/H: -0.560



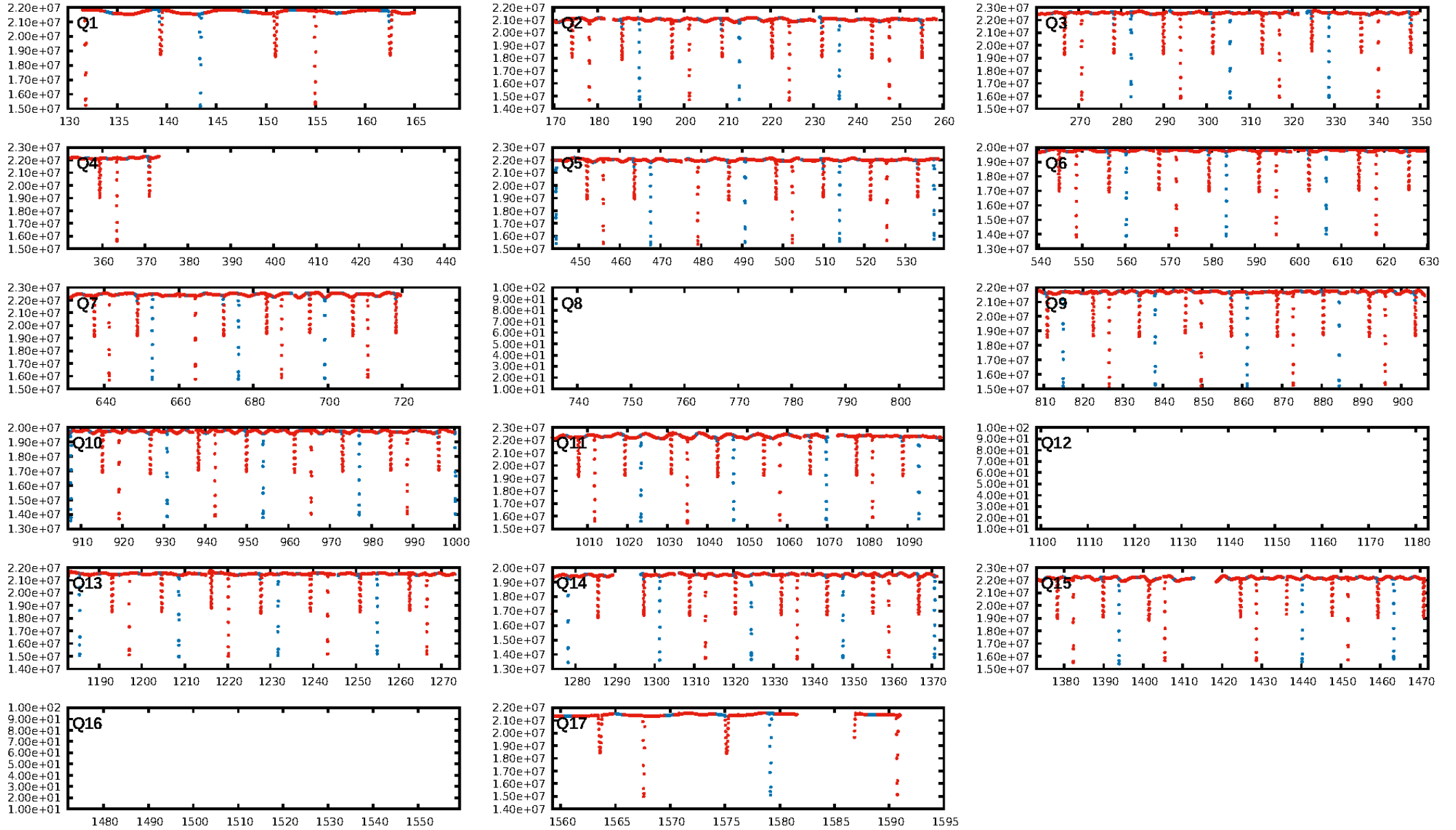
DV Fit Results:

Period = 4.63147 [0.00008] d
Epoch = 131.8258 [0.0145] BKJD
Rp/R* = 0.0654 [0.0014]
a/R* = 1.08 [0.00]
b = 0.94 [0.00]
Seff = 458.48 [169.13]
Teq = 1180 [109] K
Rp = 7.24 [2.00] Re
a = 0.0515 [0.0122] AU
Ag = 13.19 [4.75] [2.56σ]
Teffp = 3476 [131] K [13.49σ]

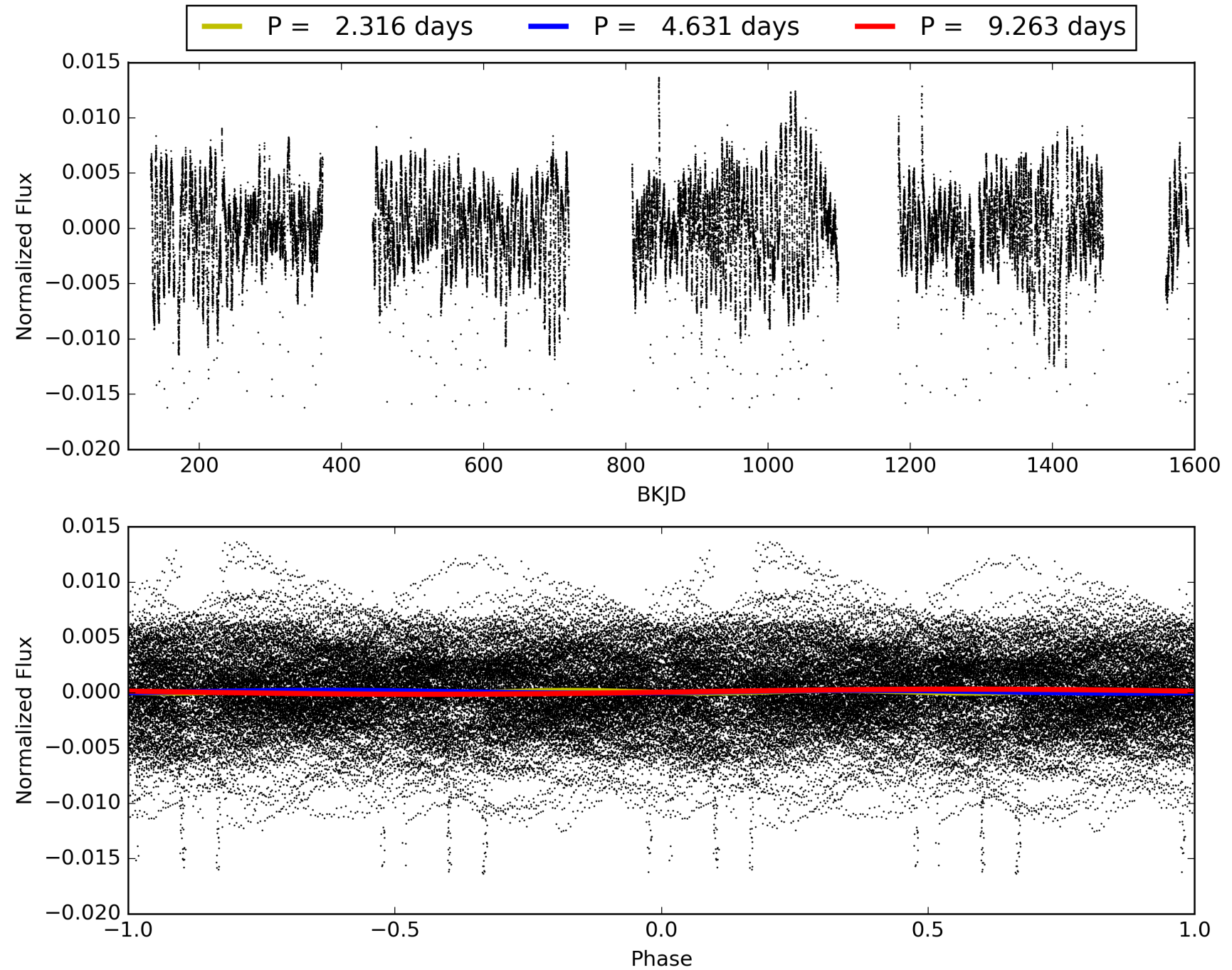
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.73σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [223/223]
GhostDiagnostic-chr: -0.02611
Centroid-sig: 5.7%
Centroid-so: 0.370 arcsec [10.81σ]
OotOffset-rm: 0.469 arcsec [1.42σ]
KicOffset-rm: 0.486 arcsec [1.43σ]
OotOffset-st: 4/4/1/3 [12]
KicOffset-st: 4/4/1/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 0.93 [13/14]

TCE 011073223-03, PDC Light Curves

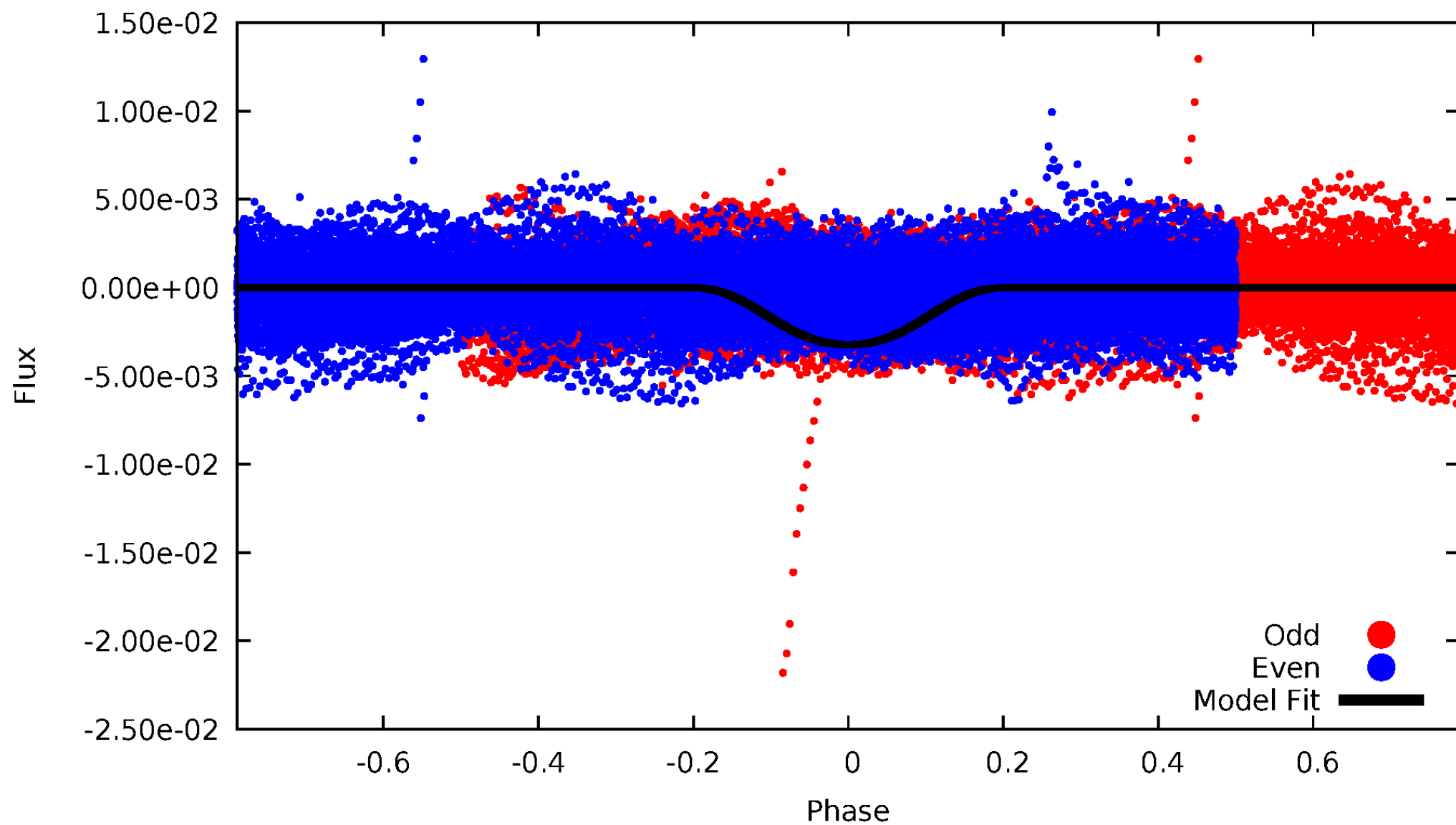


TCE 011073223-03



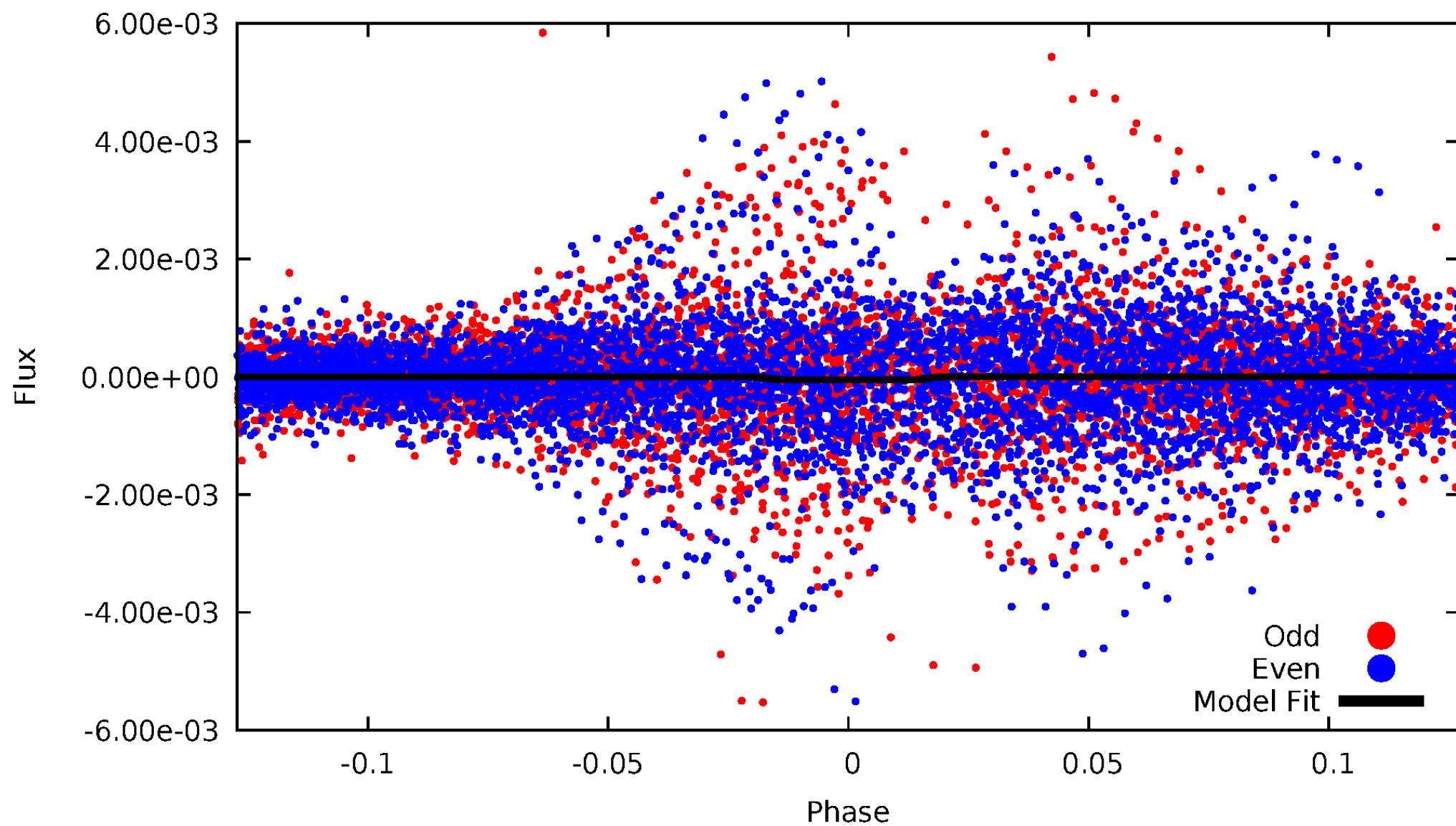
DV Odd/Even

TCE 011073223-03



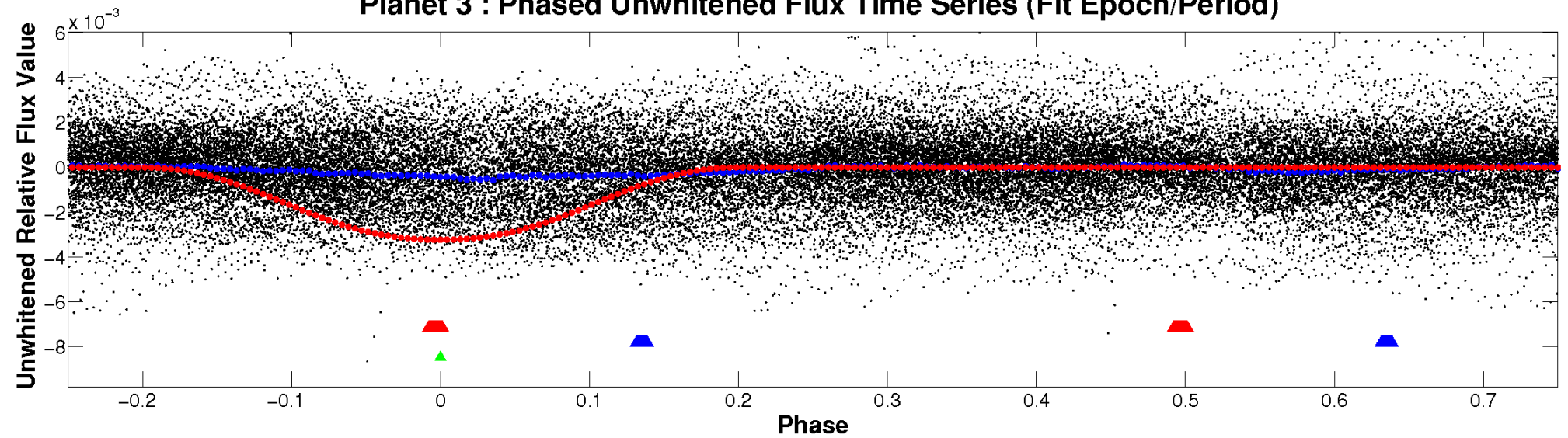
ALT Odd/Even

TCE 011073223-03

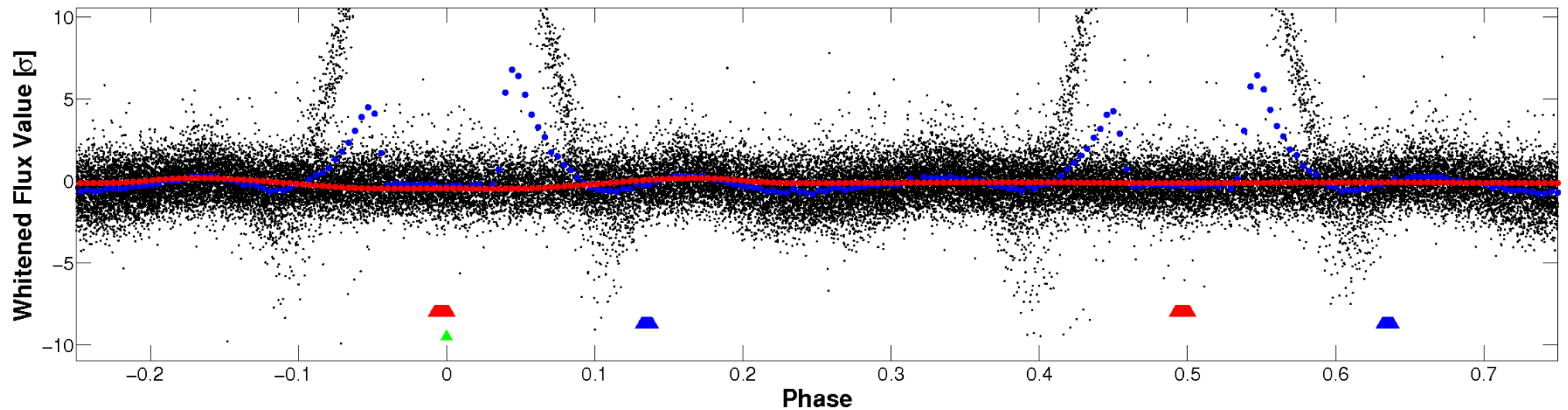


Non-Whitened Vs. Whitened Light Curve

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

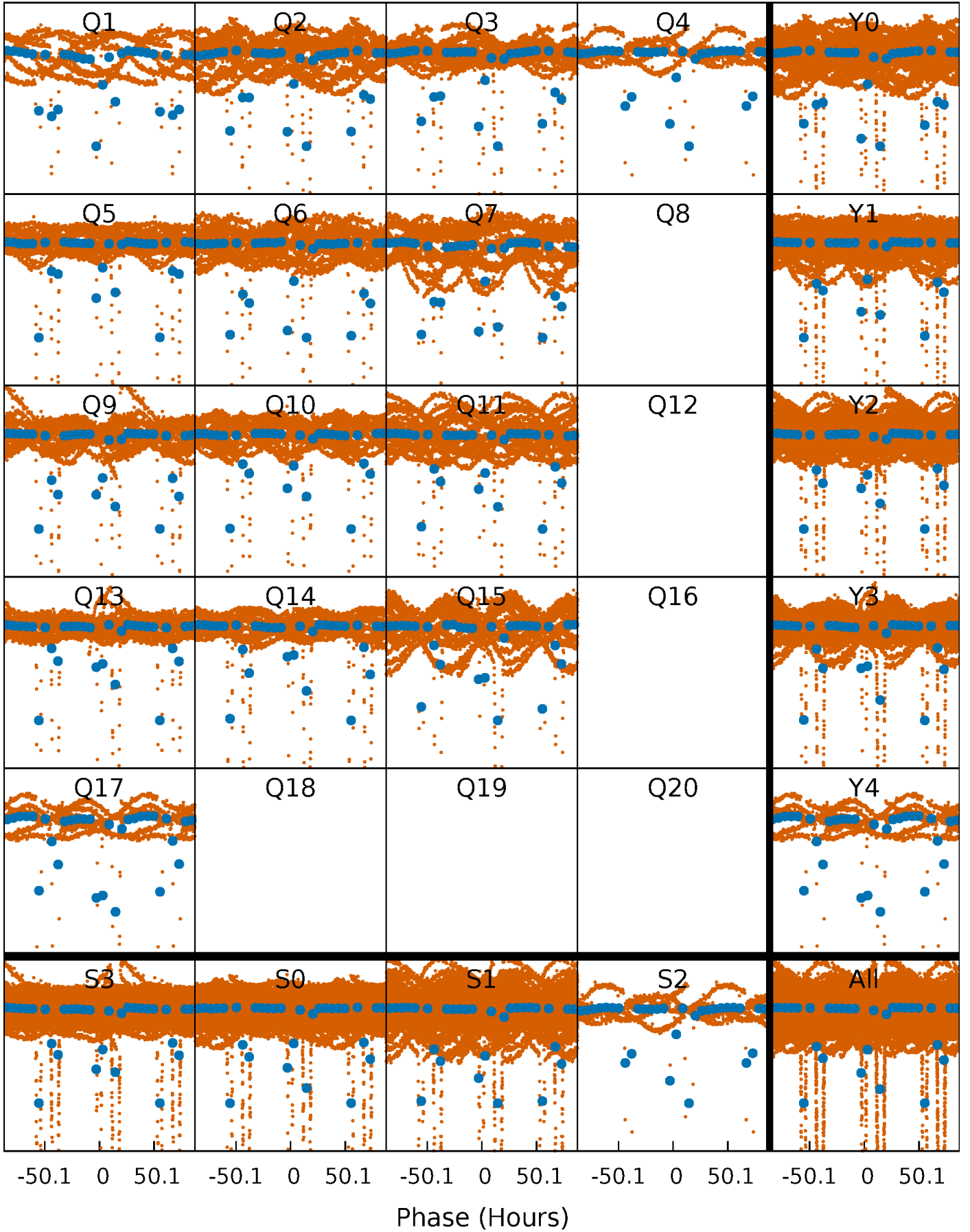


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



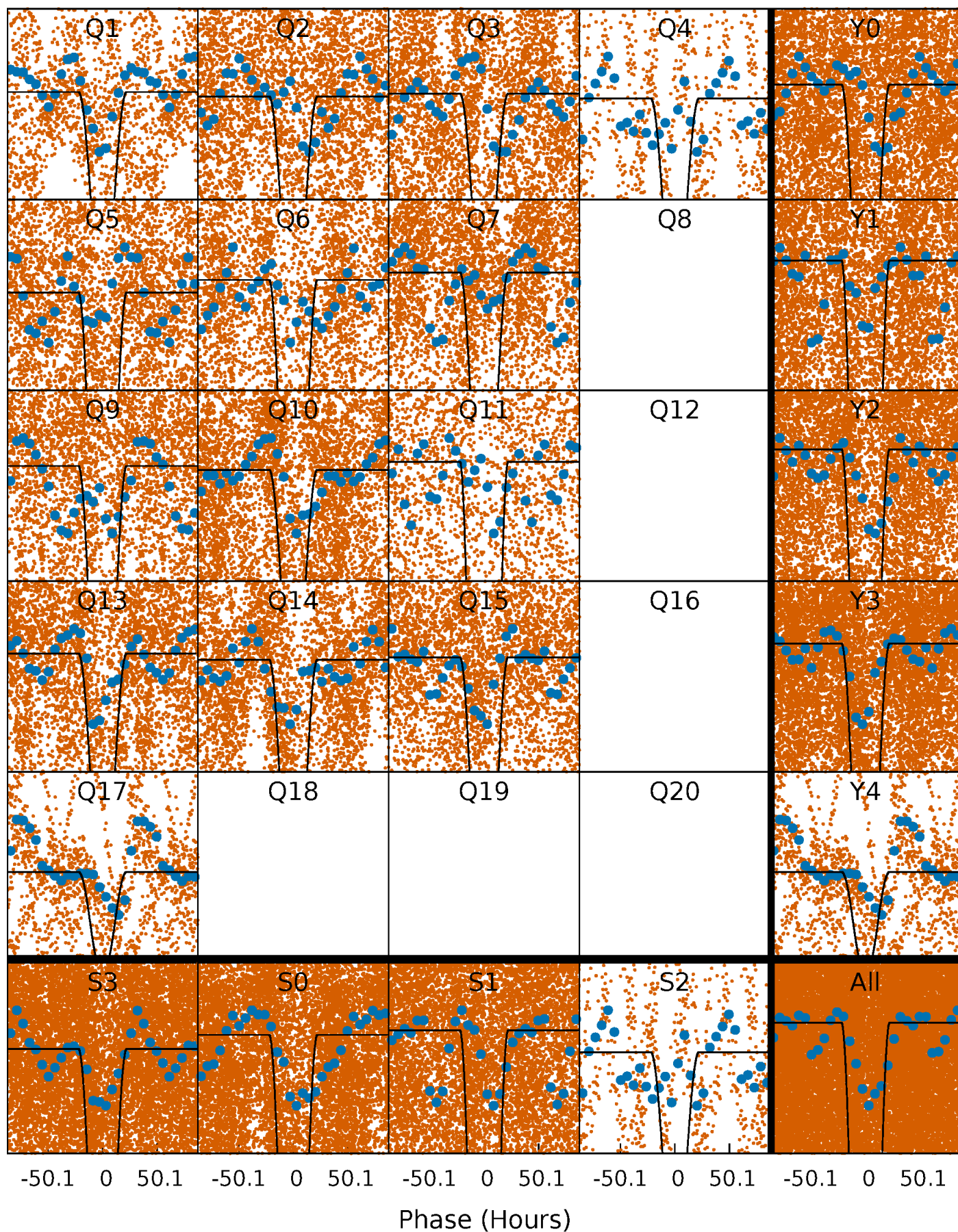
PDC Quarter-Phased Transit Curves

TCE 011073223-03 P= 4.631467 Days $T_0=131.825762$ (BKJD)



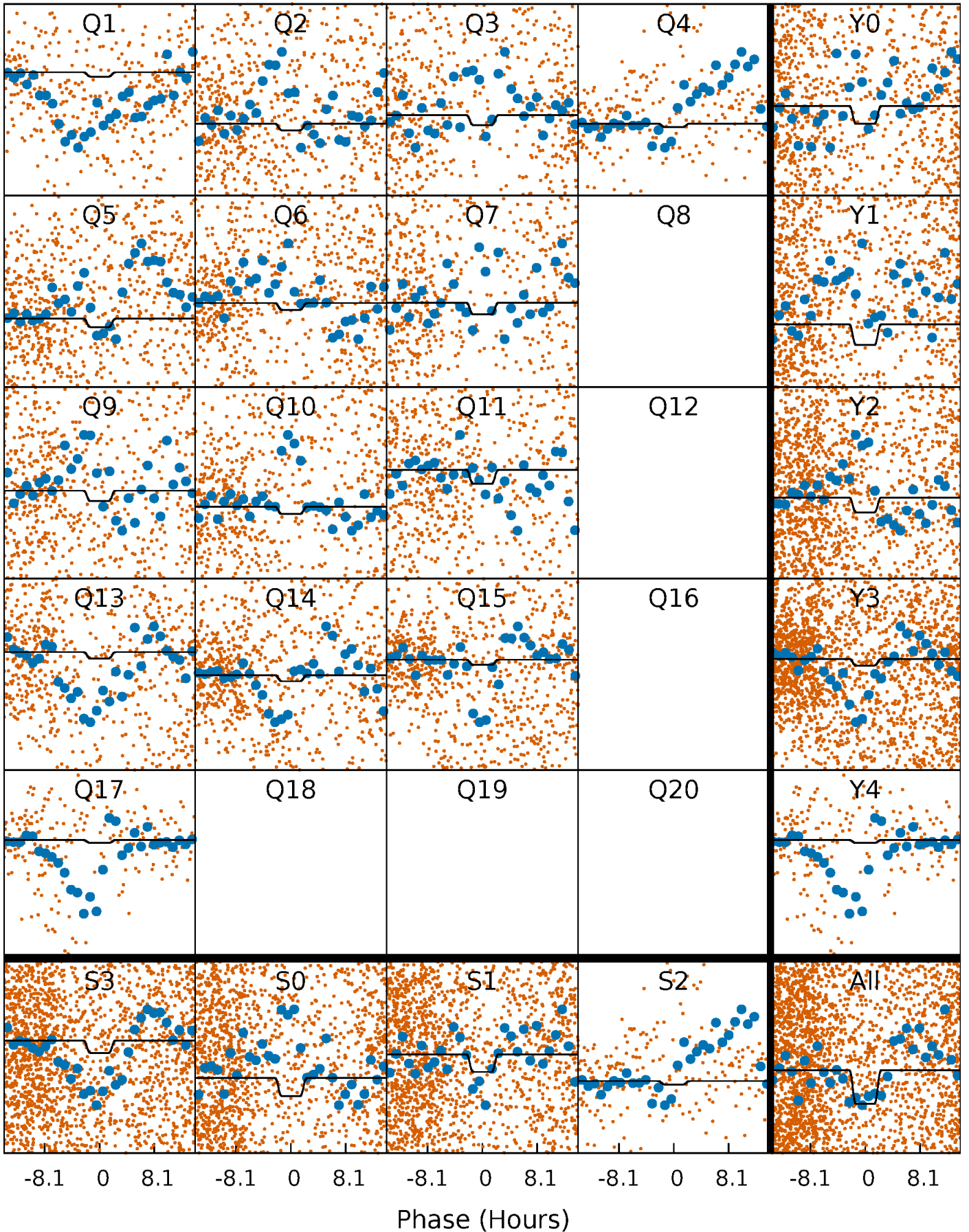
DV Quarter-Phased Transit Curves

TCE 011073223-03 P= 4.631467 Days $T_0=131.825762$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

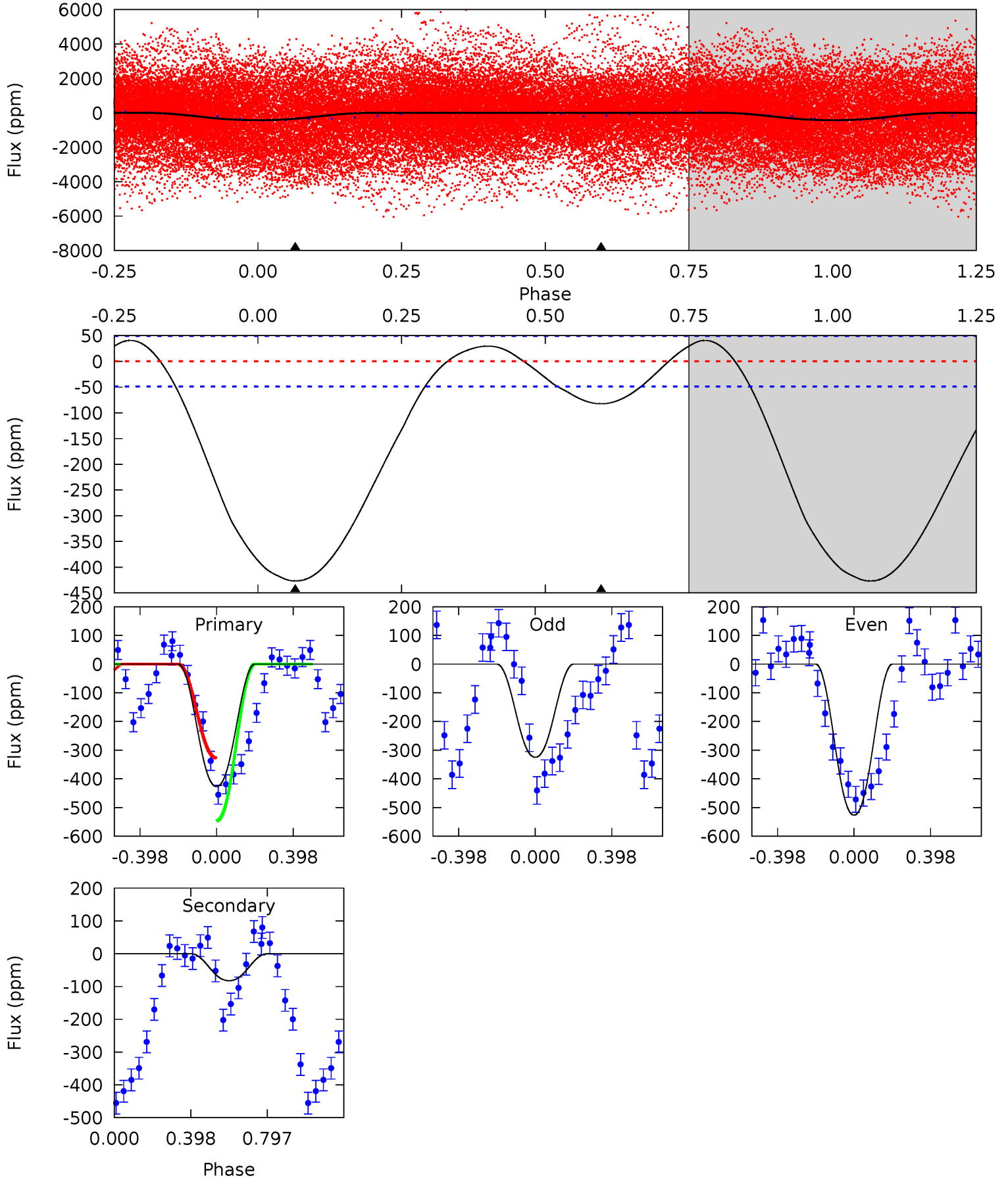
TCE 011073223-03 P= 4.631711 Days $T_0=131.837789$ (BKJD)



DV Model-Shift Uniqueness Test

011073223-03, P = 4.631467 Days, E = 127.194295 Days

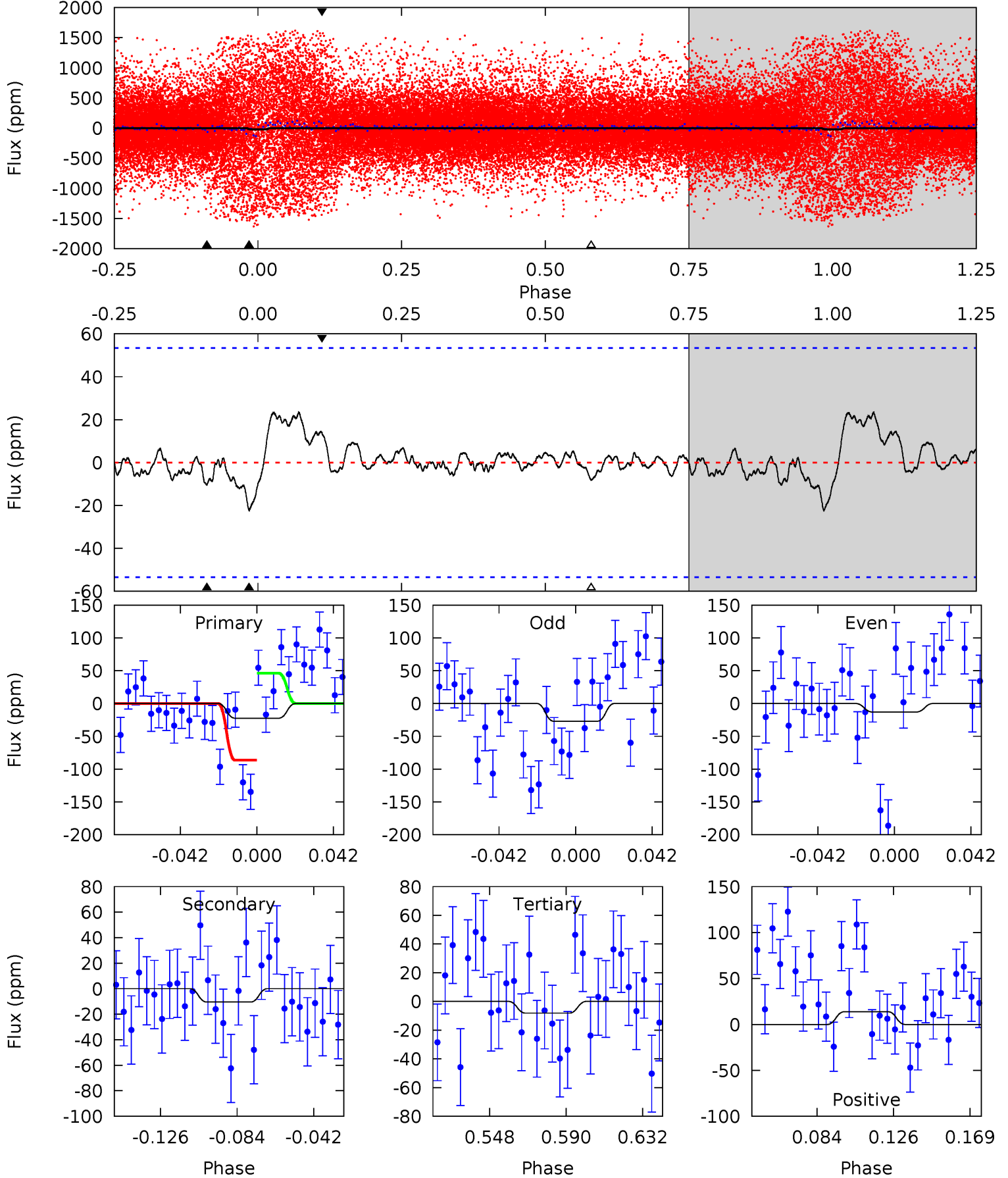
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	7.18	0	0	4.27	0.84	1.64	37.2	37.2	7.18	7.18	8.74	0.66	0.09	9.07



Alt Model-Shift Uniqueness Test

011073223-03, P = 4.631711 Days, E = 127.206078 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.99	0.93	0.72	1.23	4.74	2.03	0.53	1.27	0.76	0.21	-0.30	0.62	2.51	0.51	0



Stellar Parameters For KIC 011073223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6028^{+163}_{-181}	$4.355^{+0.158}_{-0.193}$	$-0.560^{+0.300}_{-0.300}$	$1.014^{+0.280}_{-0.187}$	$0.849^{+0.108}_{-0.072}$	$1.146^{+0.990}_{-0.526}$
	+3%/-3%	+4%/-4%	+54%/-54%	+28%/-18%	+13%/-8%	+86%/-46%
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 011073223-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 11	$7.29^{+1.19}_{-0.79}$	1653^{+119}_{-105}	2879^{+77}_{-77}	$2.268^{+0.662}_{-0.606}$
Alt.	-10 ± 11	$0.79^{+0.22}_{-0.16}$	1662^{+129}_{-101}	4253^{+853}_{-7200}	22^{+34}_{-24}

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

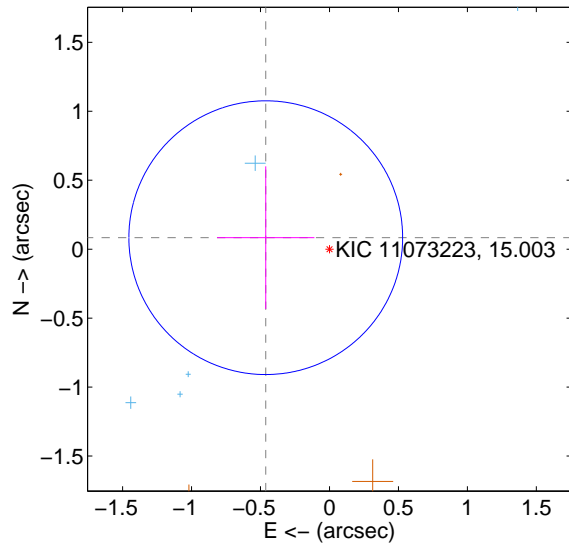
Supplemental centroid analysis for 011073223-03. Kepler magnitude: 15.00. Transit SNR 44.09

There are 7 quarters with good PRF difference image offsets

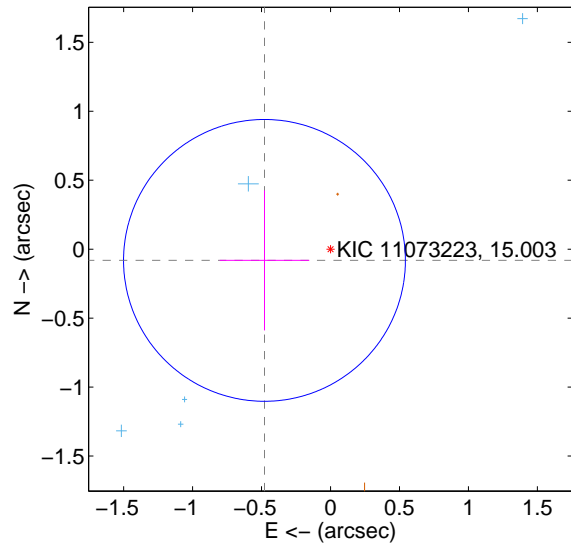
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.469 ± 0.331	1.42	0.462 ± 0.353	0.083 ± 0.517
PRF-fit source offset from KIC position	0.486 ± 0.341	1.43	0.479 ± 0.325	-0.081 ± 0.508
photometric centroid source offset	0.37 ± 0.03	10.81	-0.37 ± 0.03	-0.01 ± 0.02

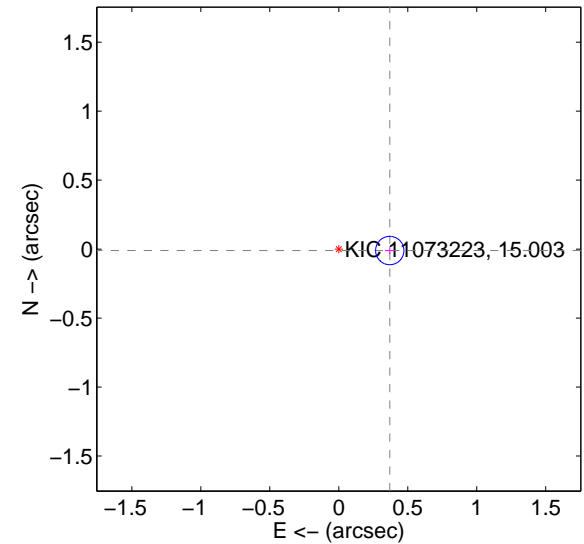
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

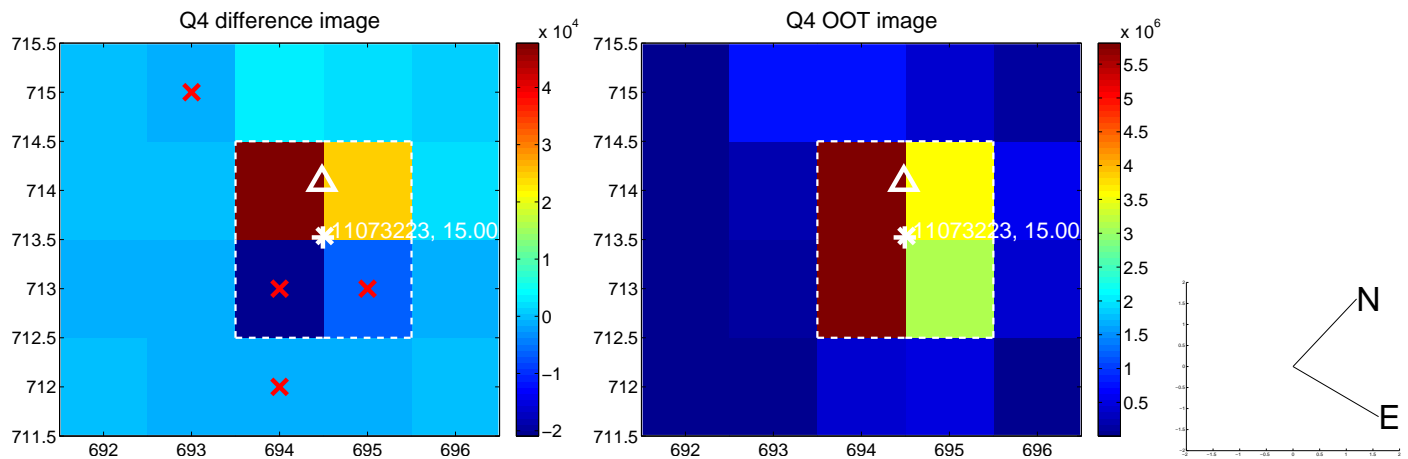
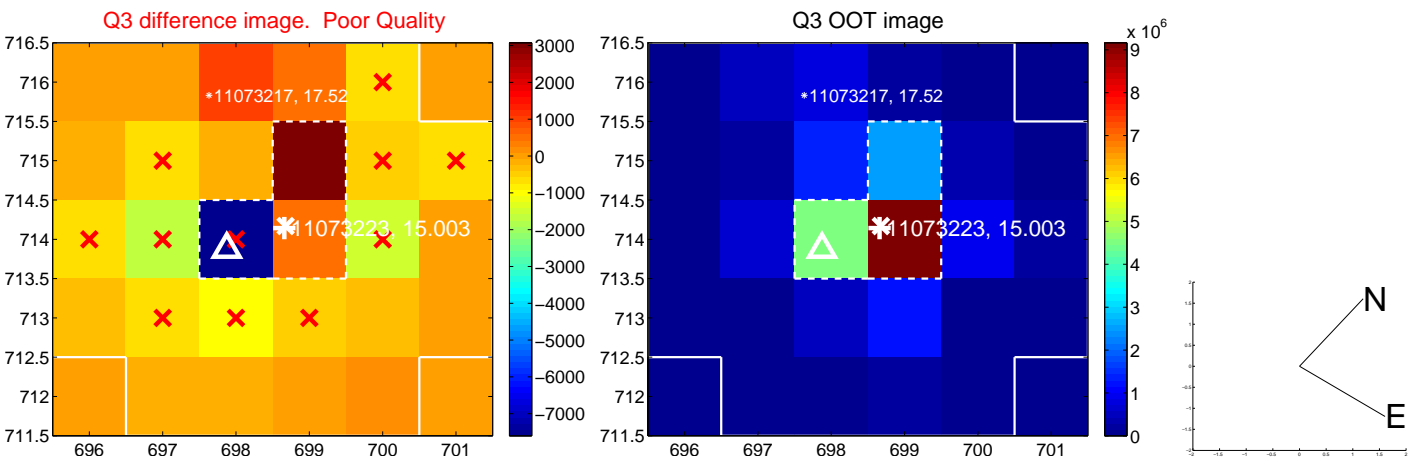
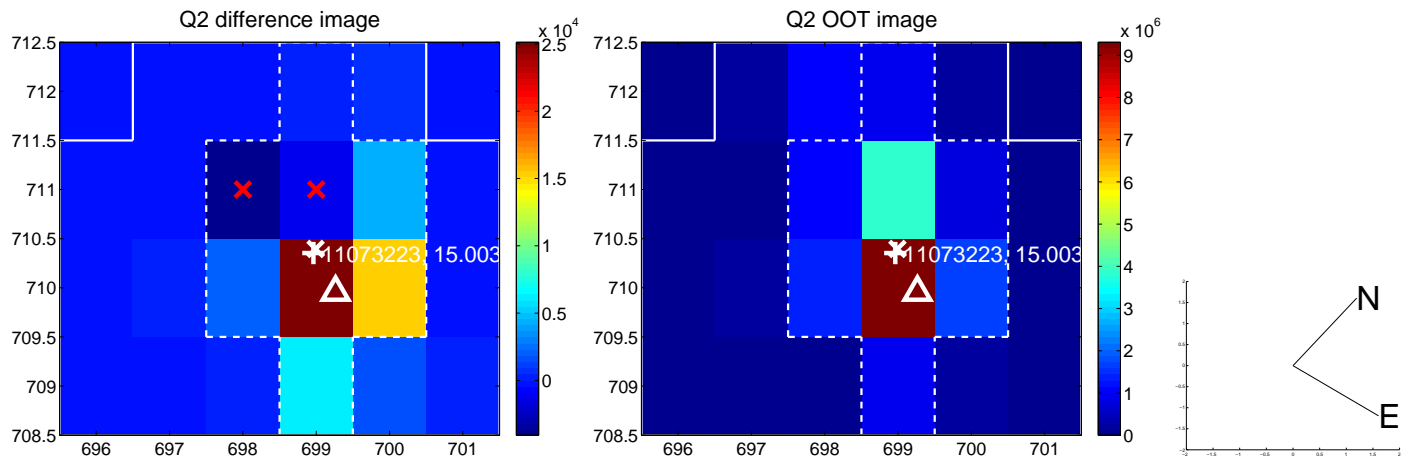
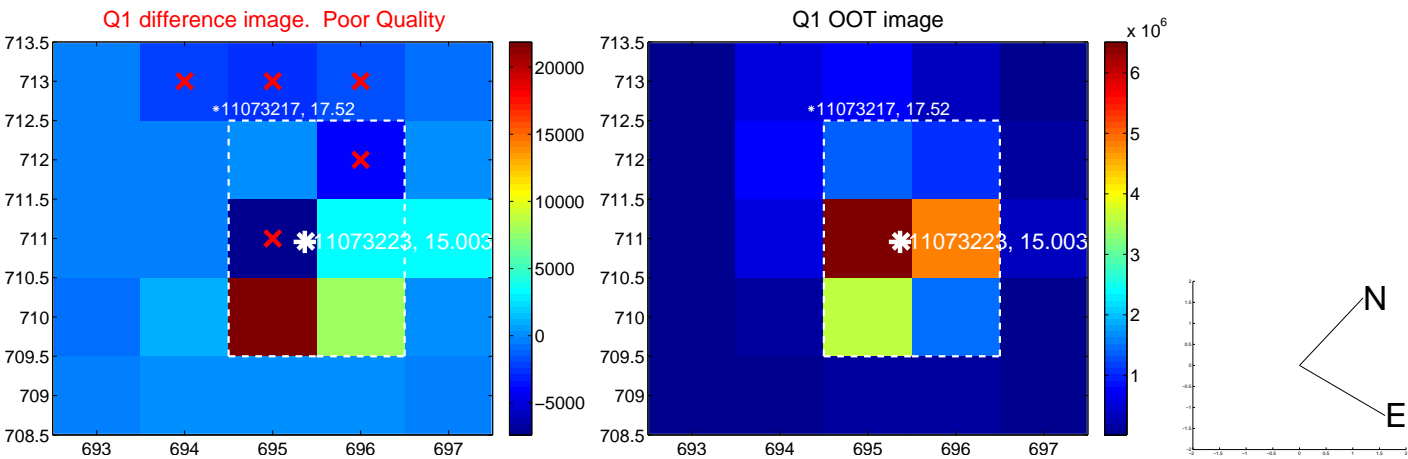


offset from photometric centroids

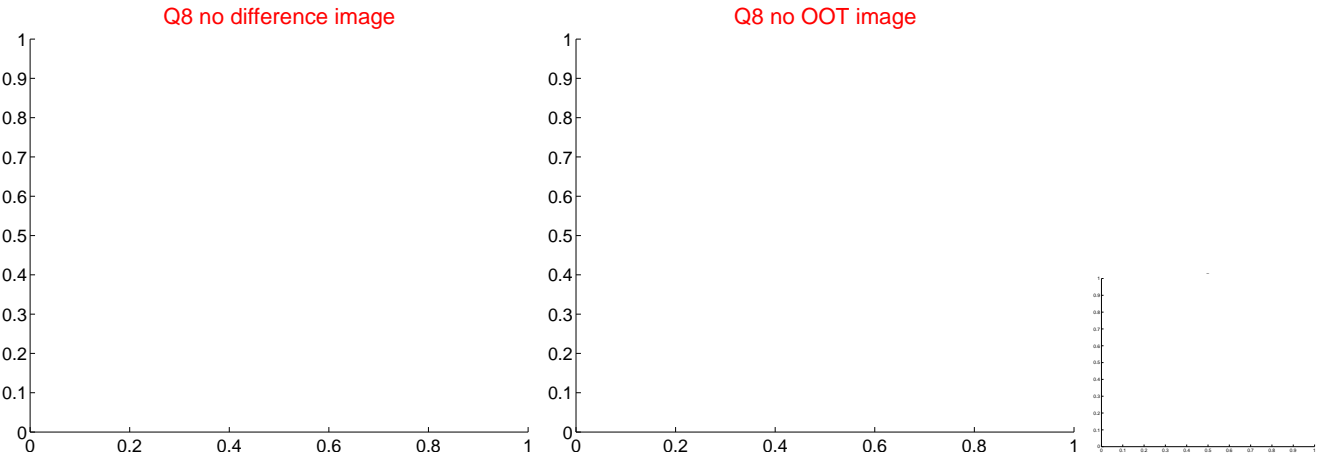
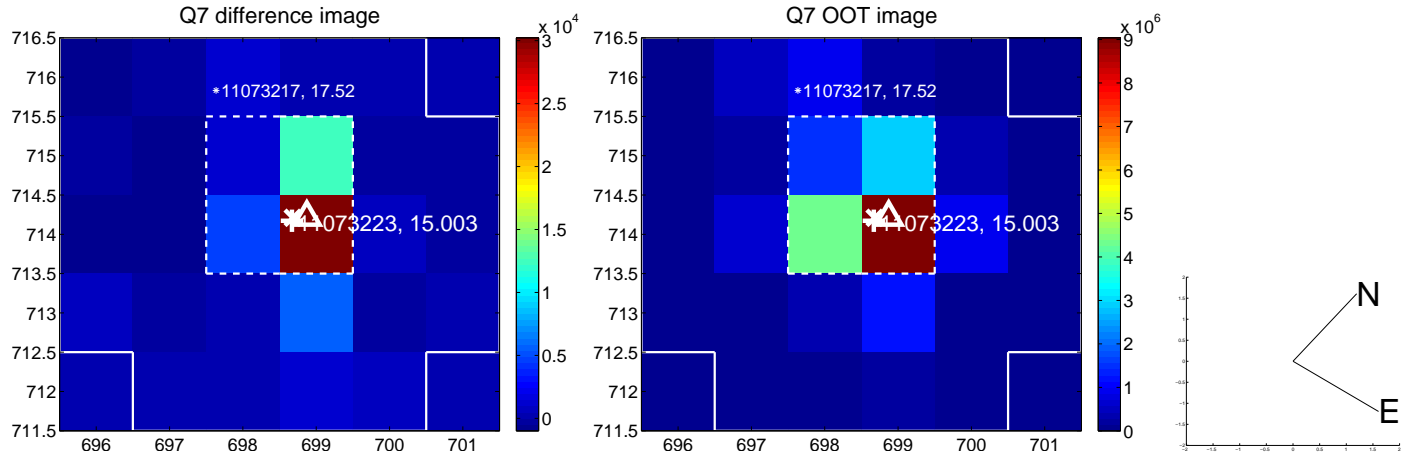
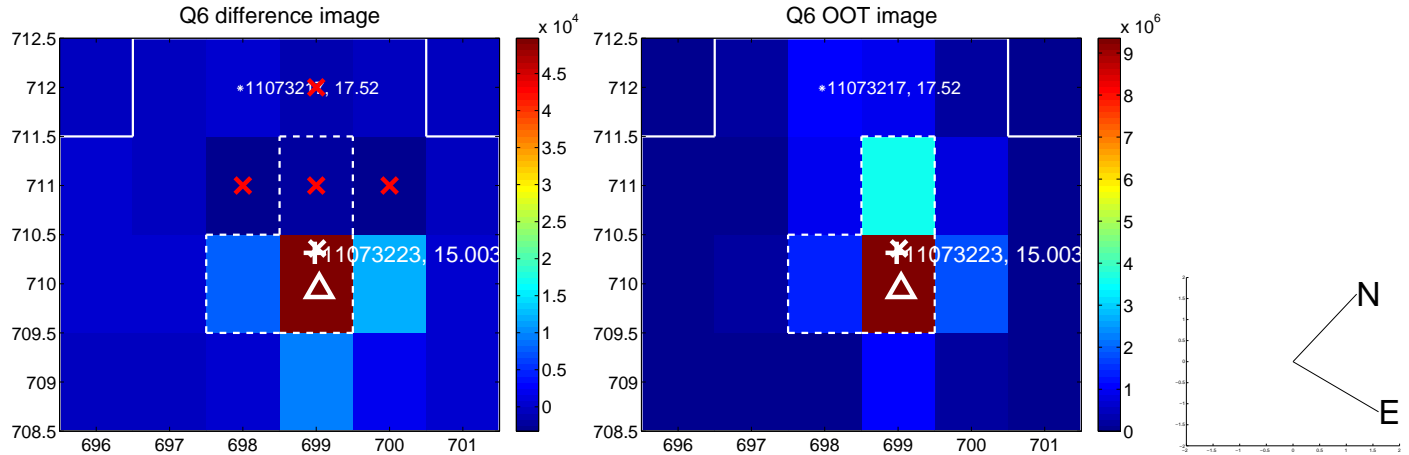
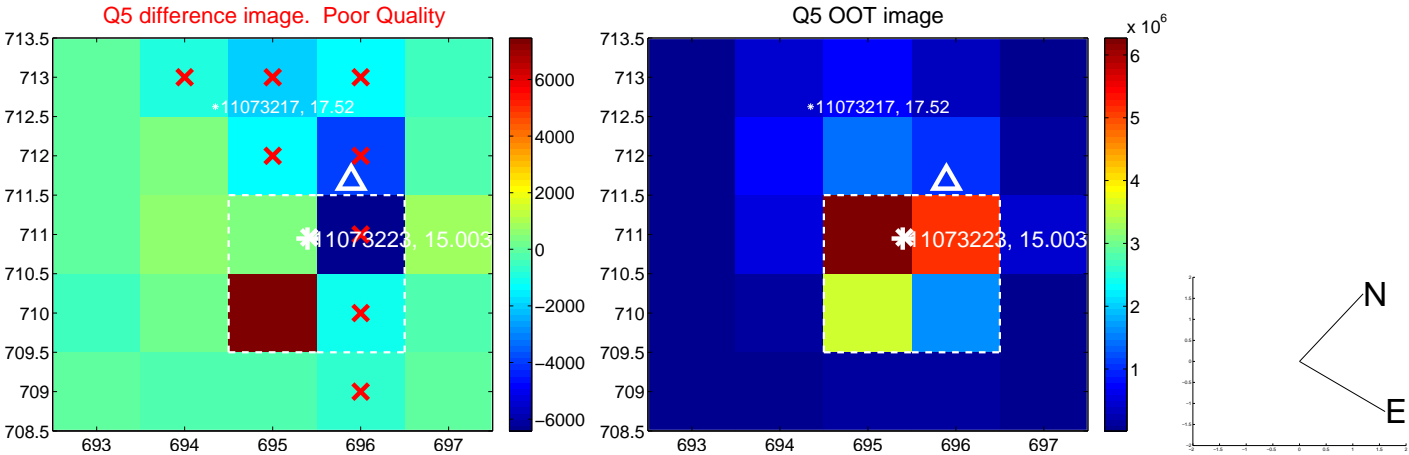


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

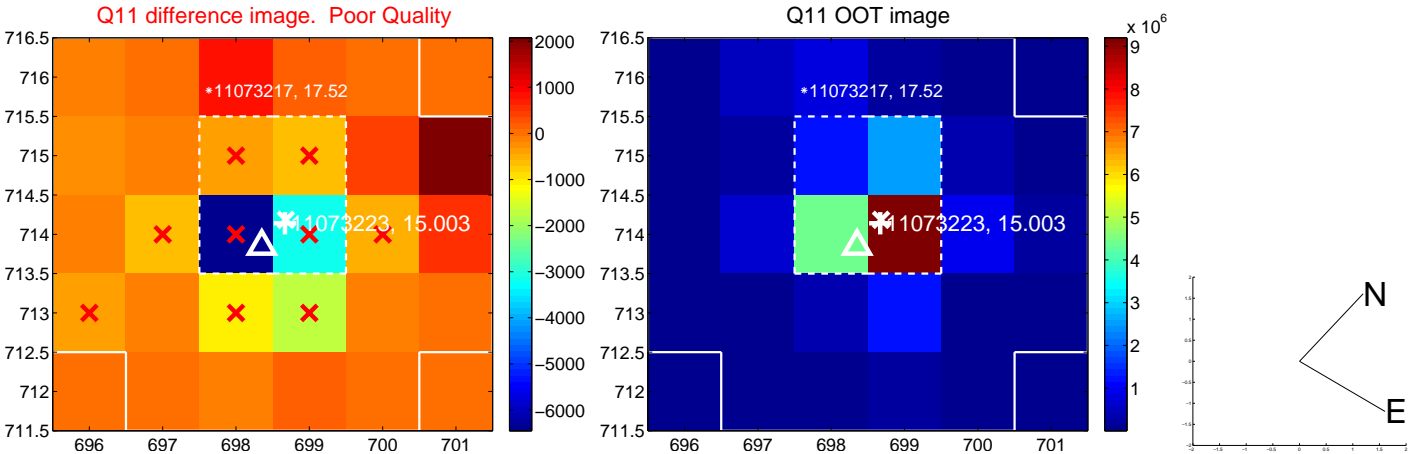
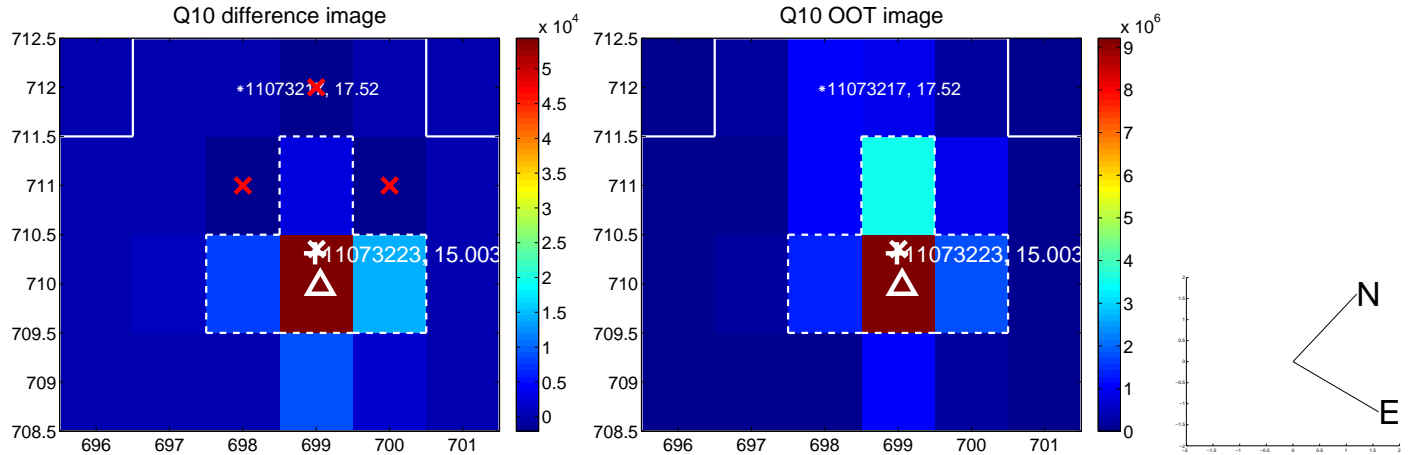
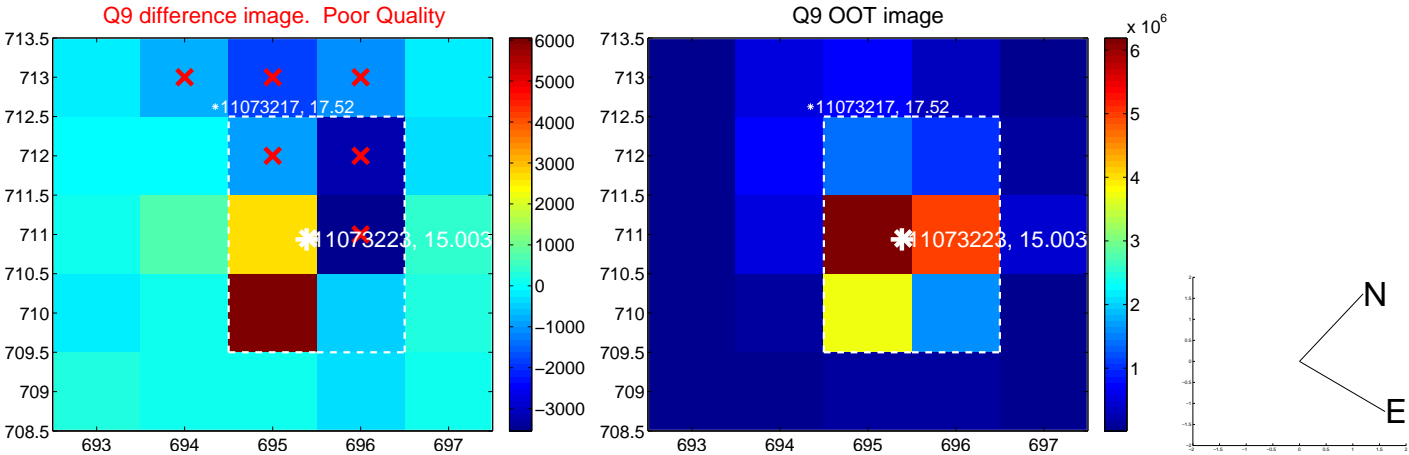
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



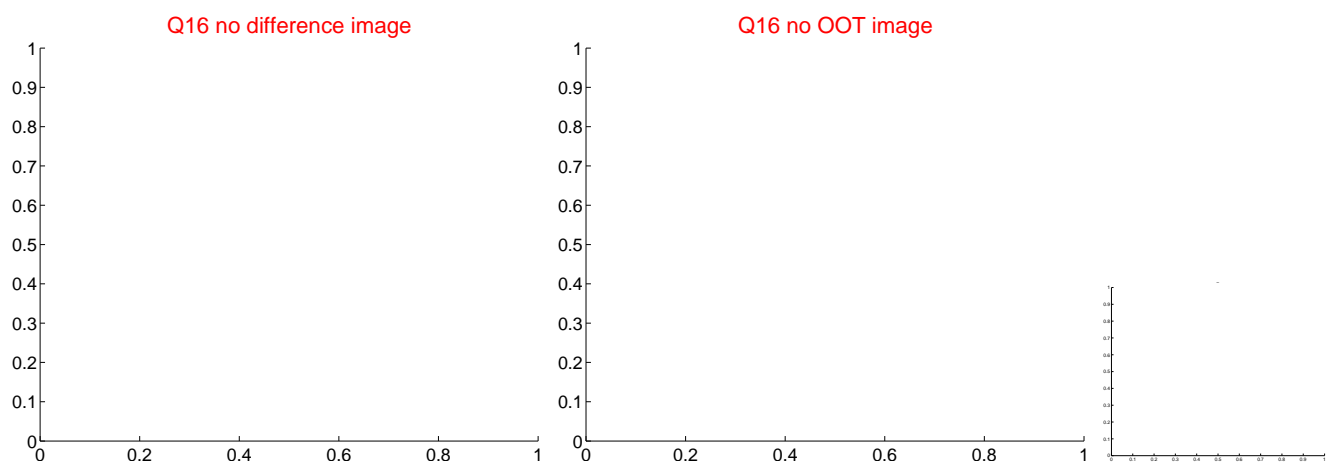
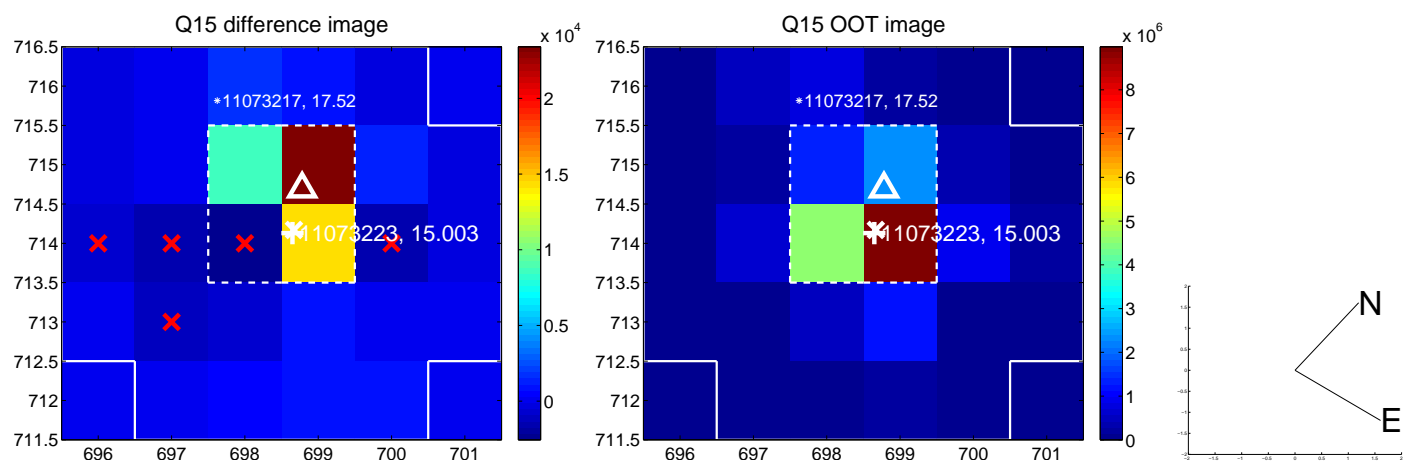
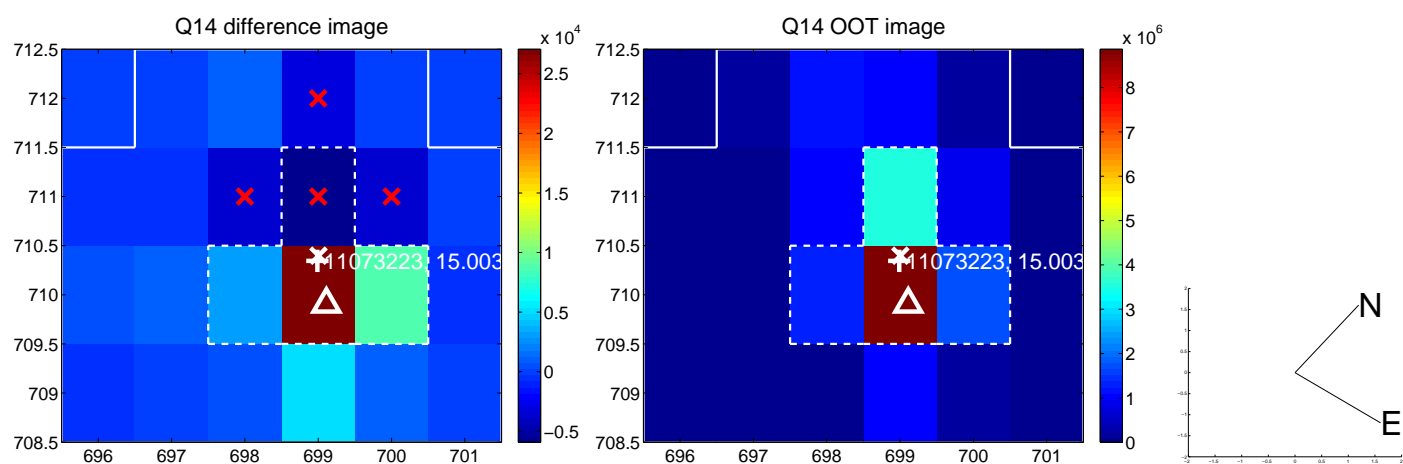
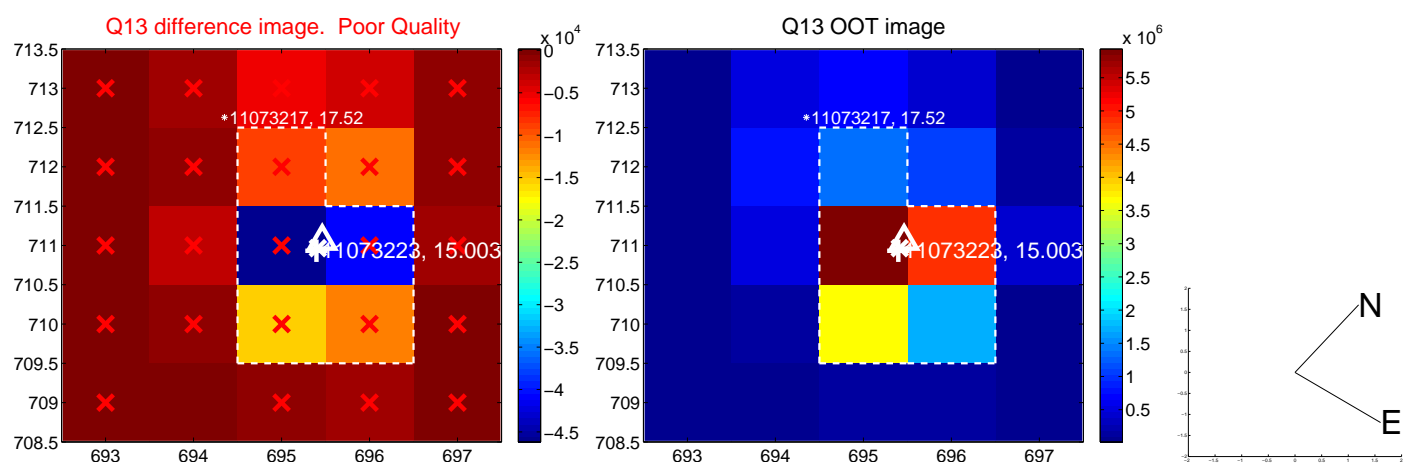
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



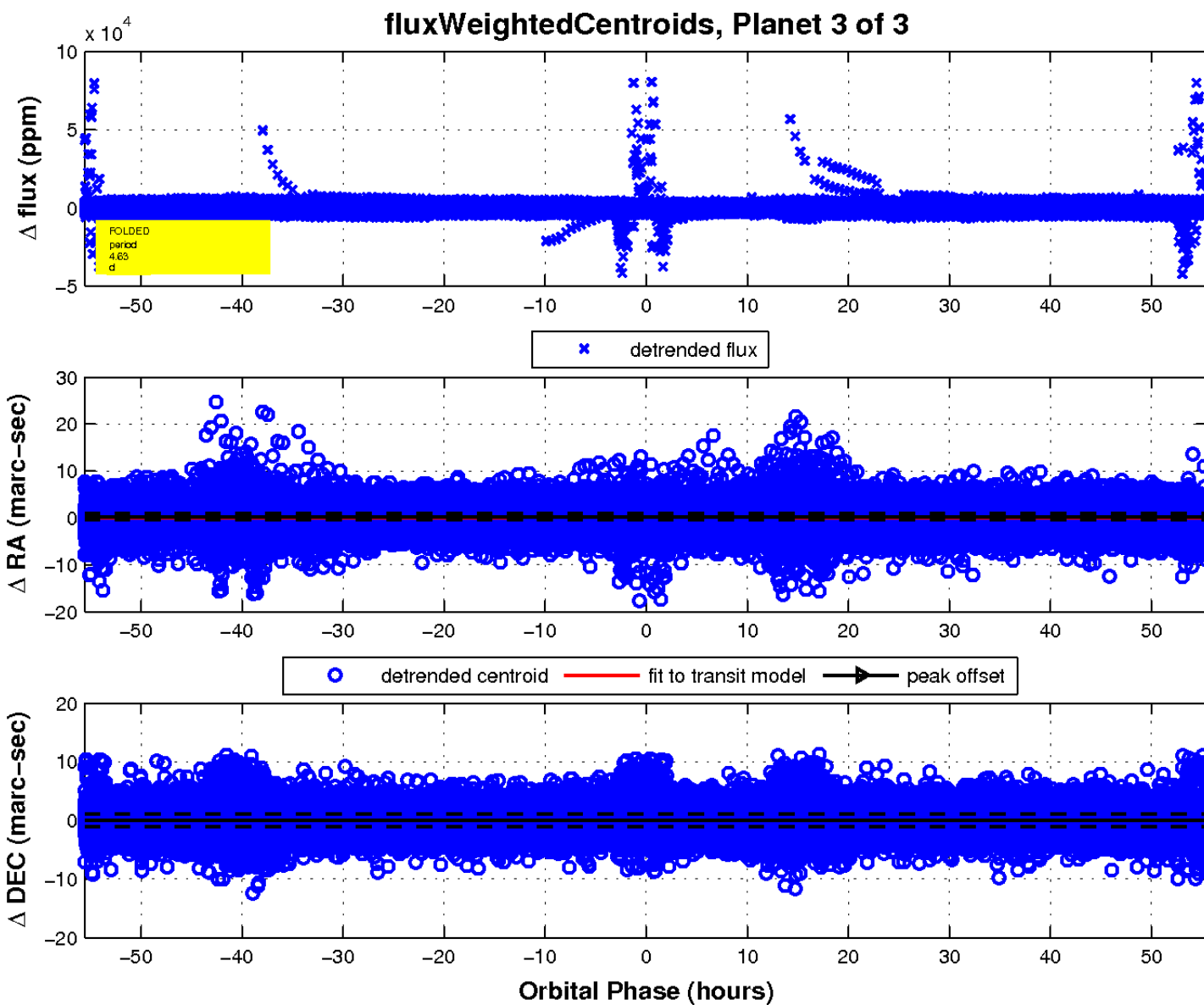
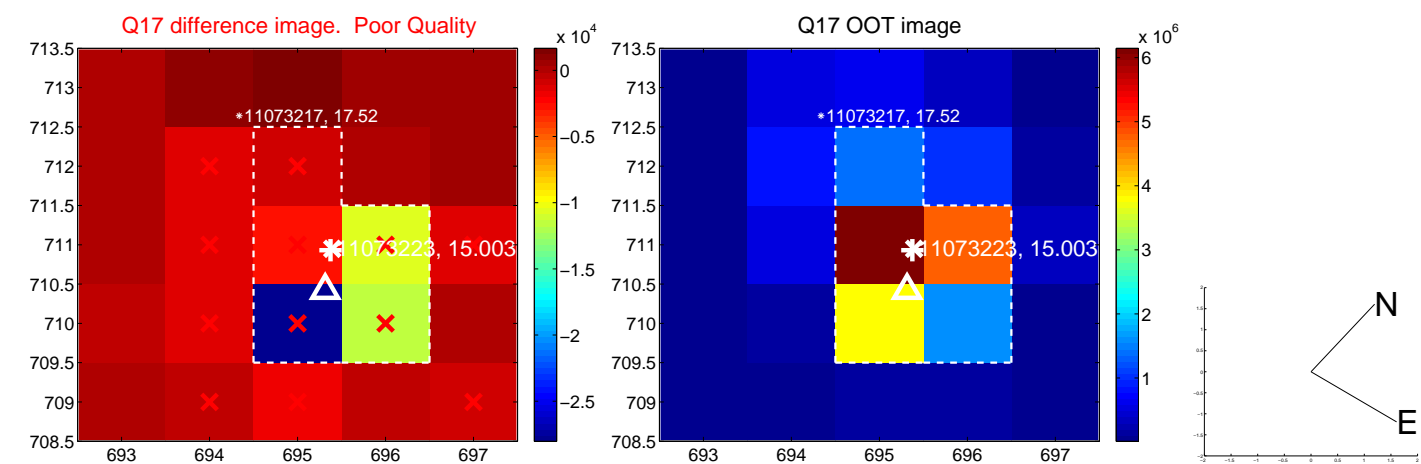
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

