

KIC 010794405

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})
010794405-01	OBS	No	1.428518	131.881324	535.4	2.250	40.8	58.0	0.86	5662	2.48	1186.50
010794405-02	OBS	7373.01	0.952373	132.335994	4385.8	1.500	140.9	-1.0	0.86	5662	5.68	2037.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010794405-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
010794405-02	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_NOFITS—HALO_GHOST—EPHEM_MATCH

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.

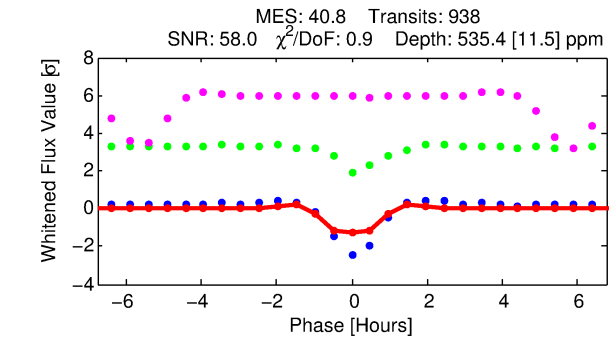
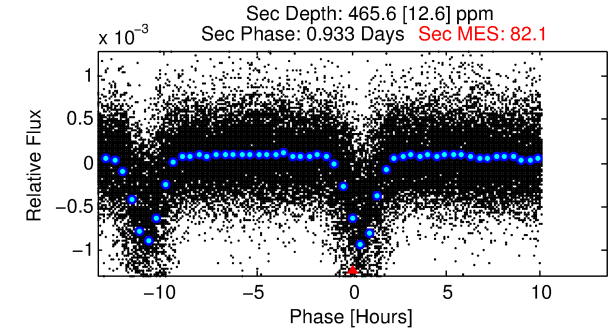
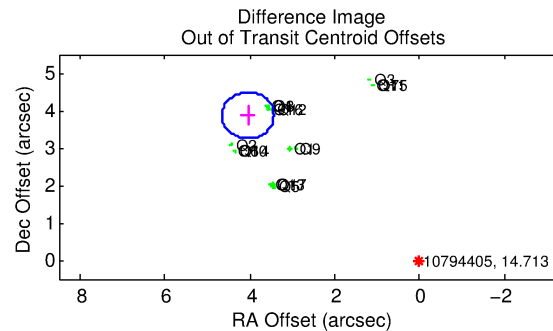
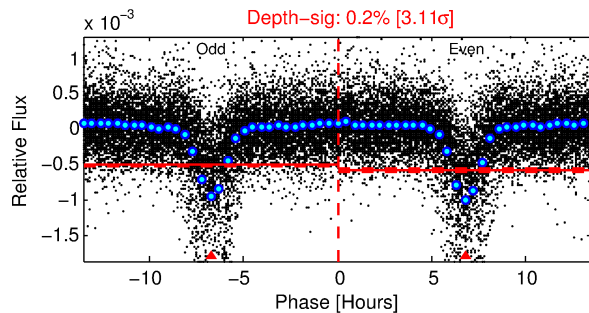
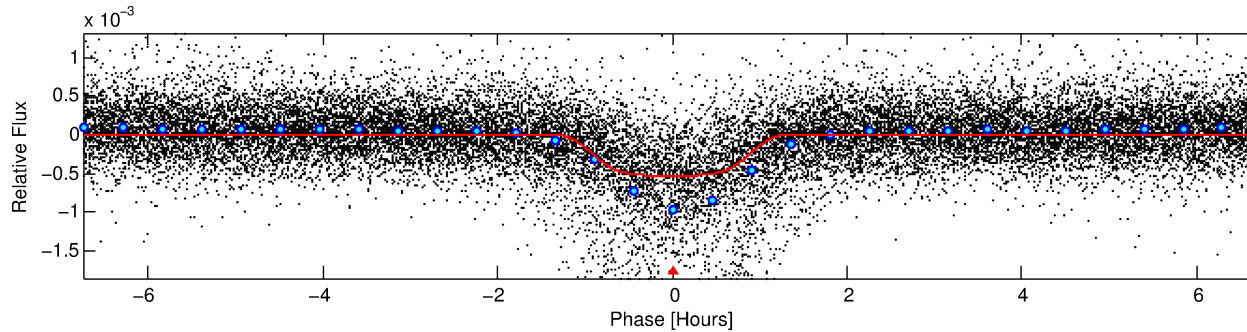
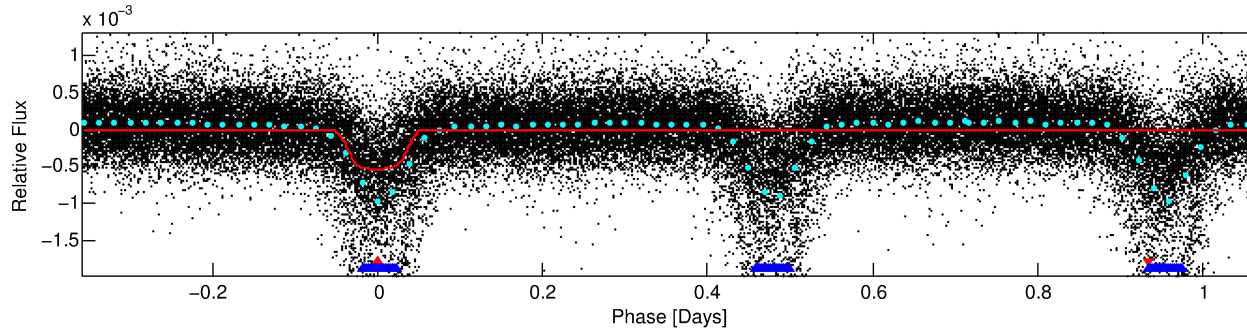
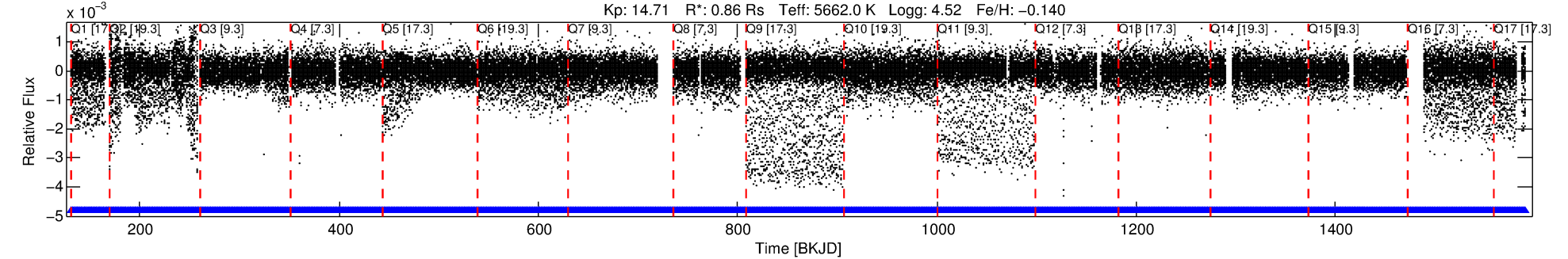
Ephemeris Match Information For 010794405-01

No Significant Match Found

DV One-Page Summary

KIC: 10794405 Candidate: 1 of 2 Period: 1.429 d
KOI: K07373 Corr: No Ephemeris Match

Kp: 14.71 R*: 0.86 Rs Teff: 5662.0 K Logg: 4.52 Fe/H: -0.140



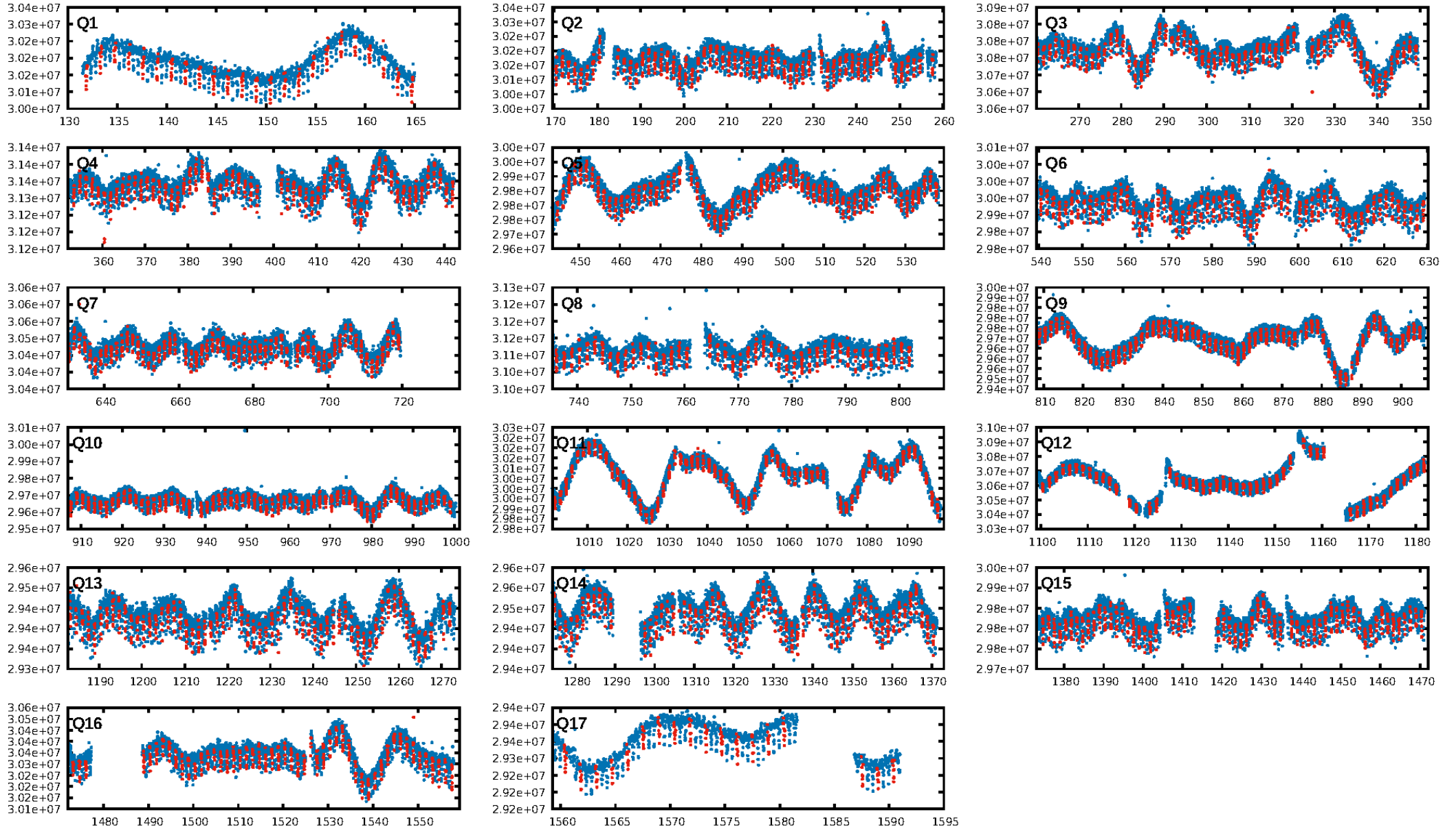
DV Fit Results:

Period = 1.42852 [0.00000] d
Epoch = 131.8813 [0.0004] BKJD
Rp/R* = 0.0263 [0.0008]
a/R* = 2.29 [0.22]
b = 0.93 [0.02]
Seff = 1186.50 [406.15]
Teq = 1497 [128] K
Rp = 2.48 [0.67] Re
a = 0.0240 [0.0054] AU
Ag = 24.09 [7.88] [2.93σ]
Teffp = 5126 [173] K [16.86σ]

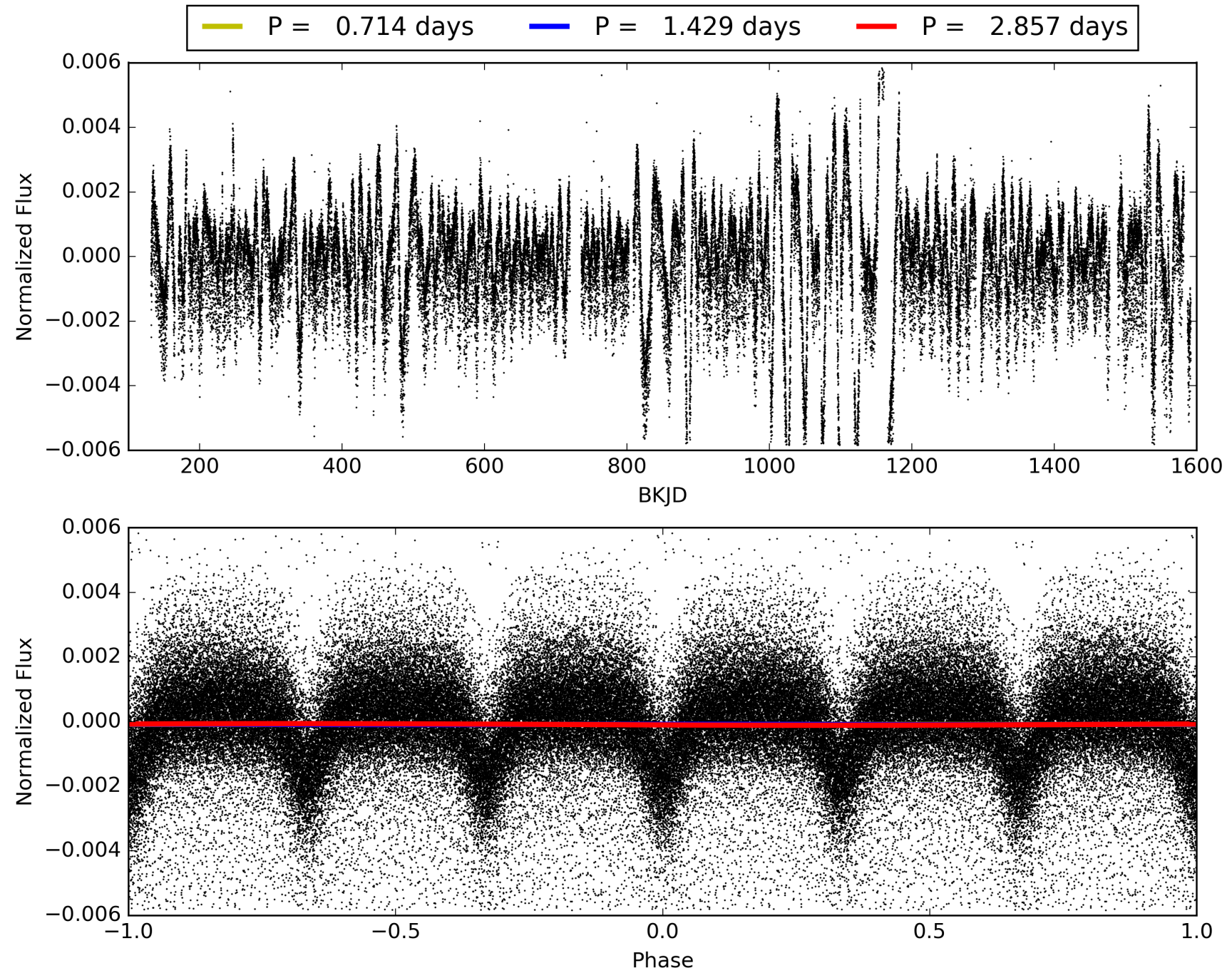
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.23σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [896/896]
GhostDiagnostic-chr: 0.006515
Centroid-sig: N/A
Centroid-so: 5.464 arcsec [27.43σ]
OotOffset-rm: 5.597 arcsec [27.20σ]
KicOffset-rm: 5.814 arcsec [28.24σ]
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 010794405-01, PDC Light Curves

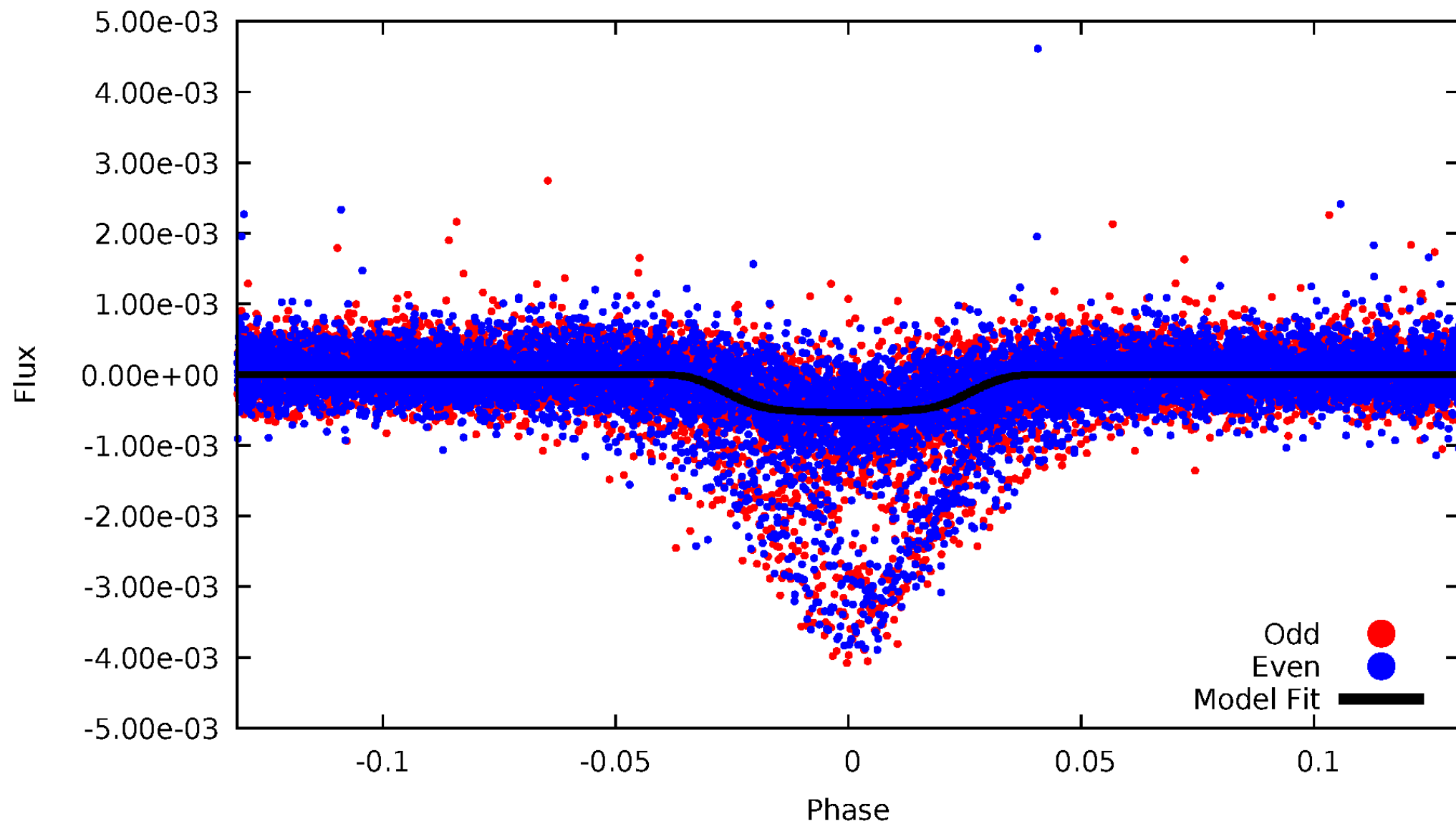


TCE 010794405-01



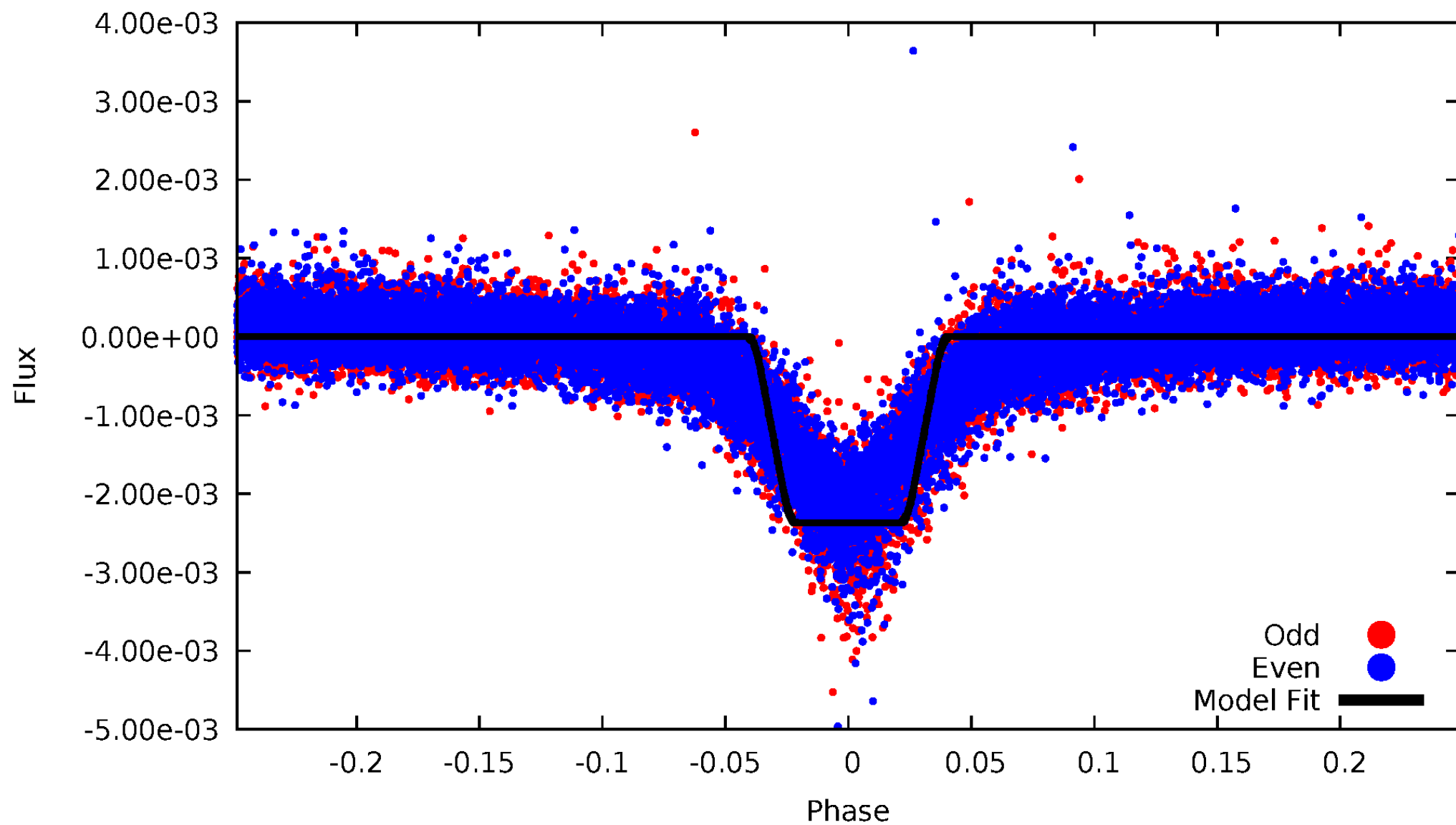
DV Odd/Even

TCE 010794405-01

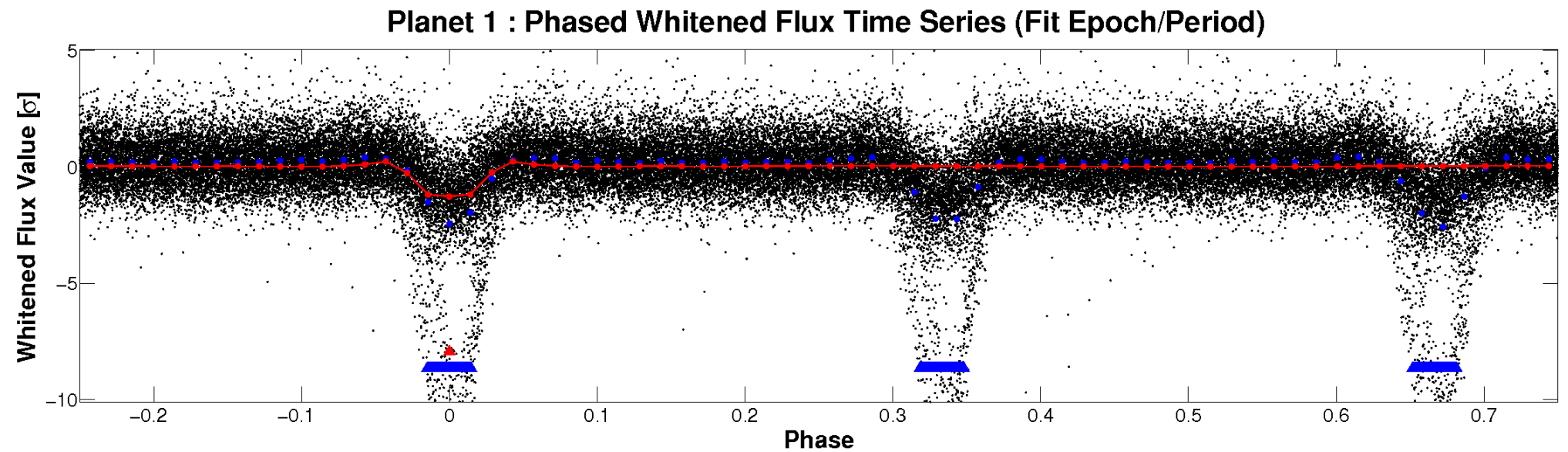
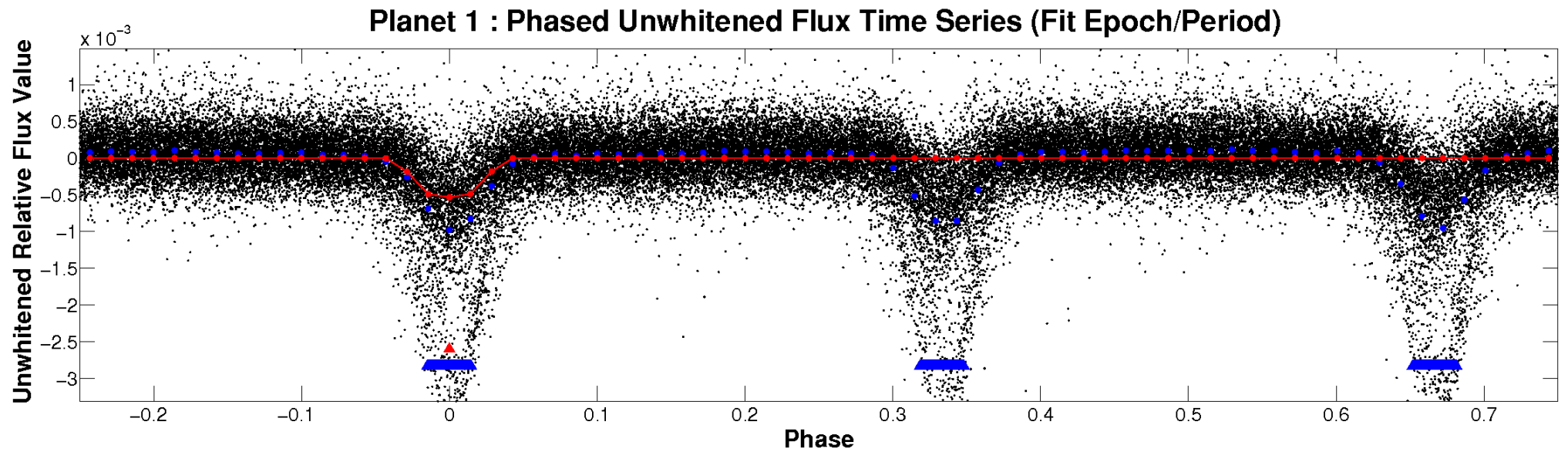


ALT Odd/Even

TCE 010794405-01

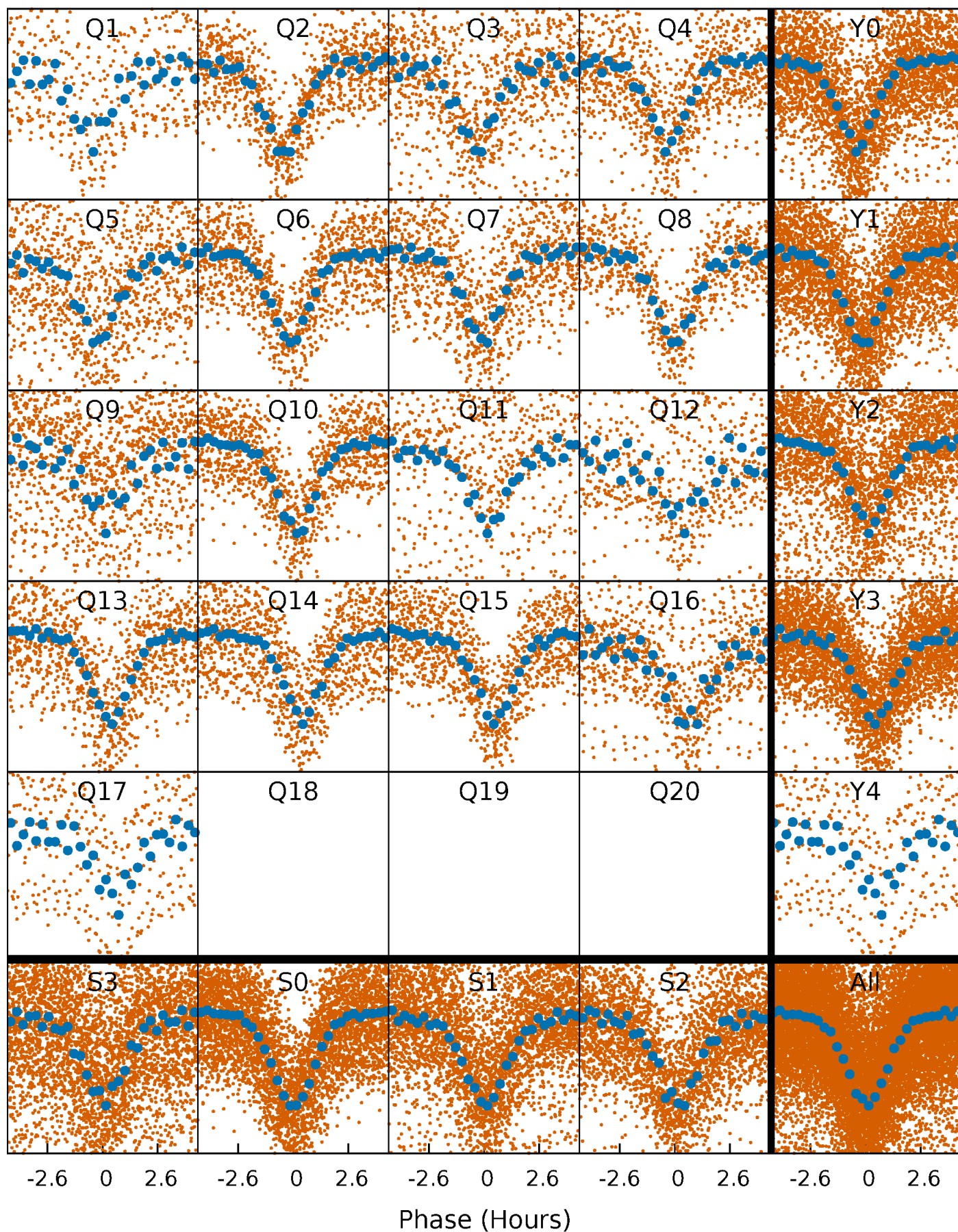


Non-Whitened Vs. Whitened Light Curve



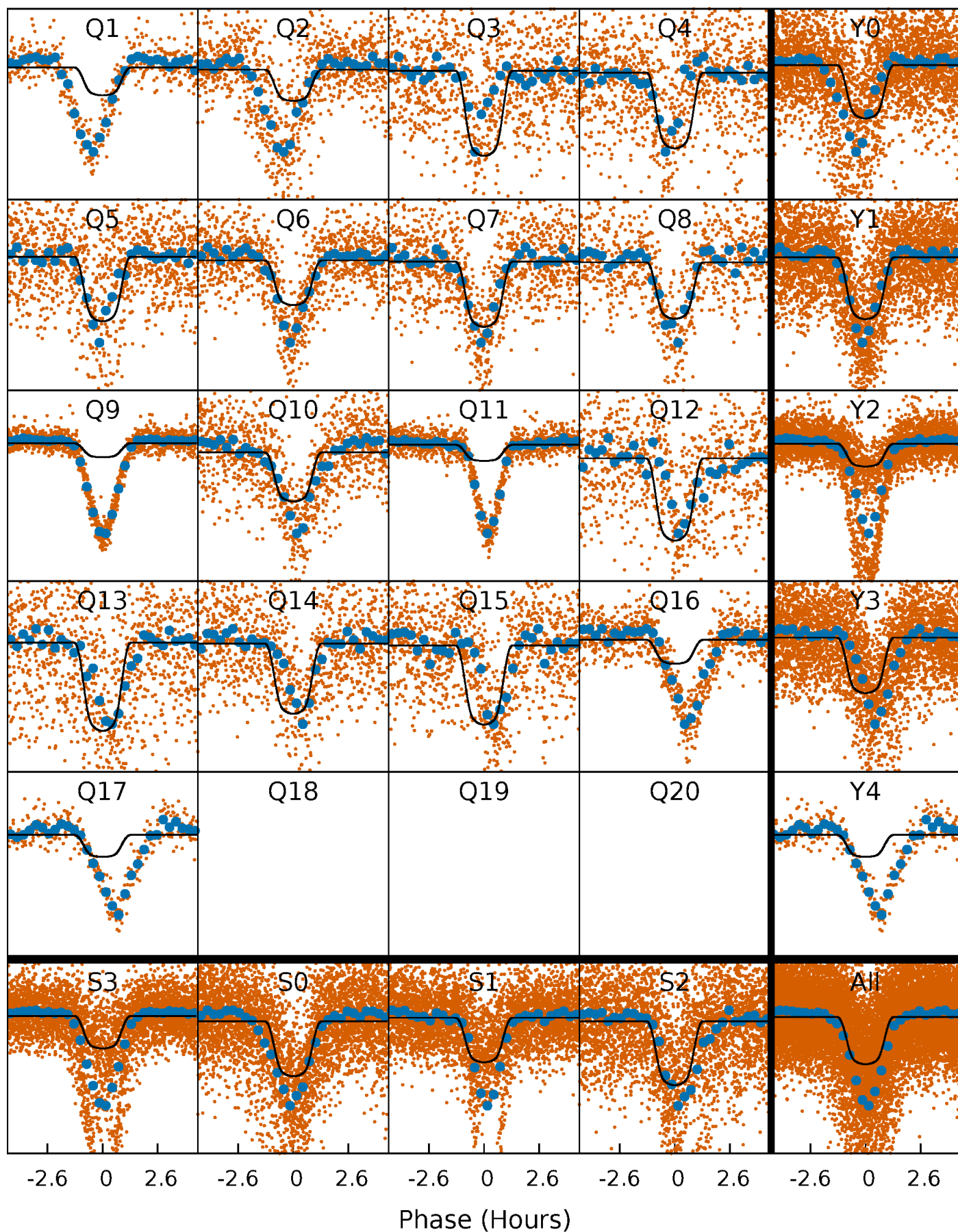
PDC Quarter-Phased Transit Curves

TCE 010794405-01 P= 1.428518 Days $T_0=131.881324$ (BKJD)



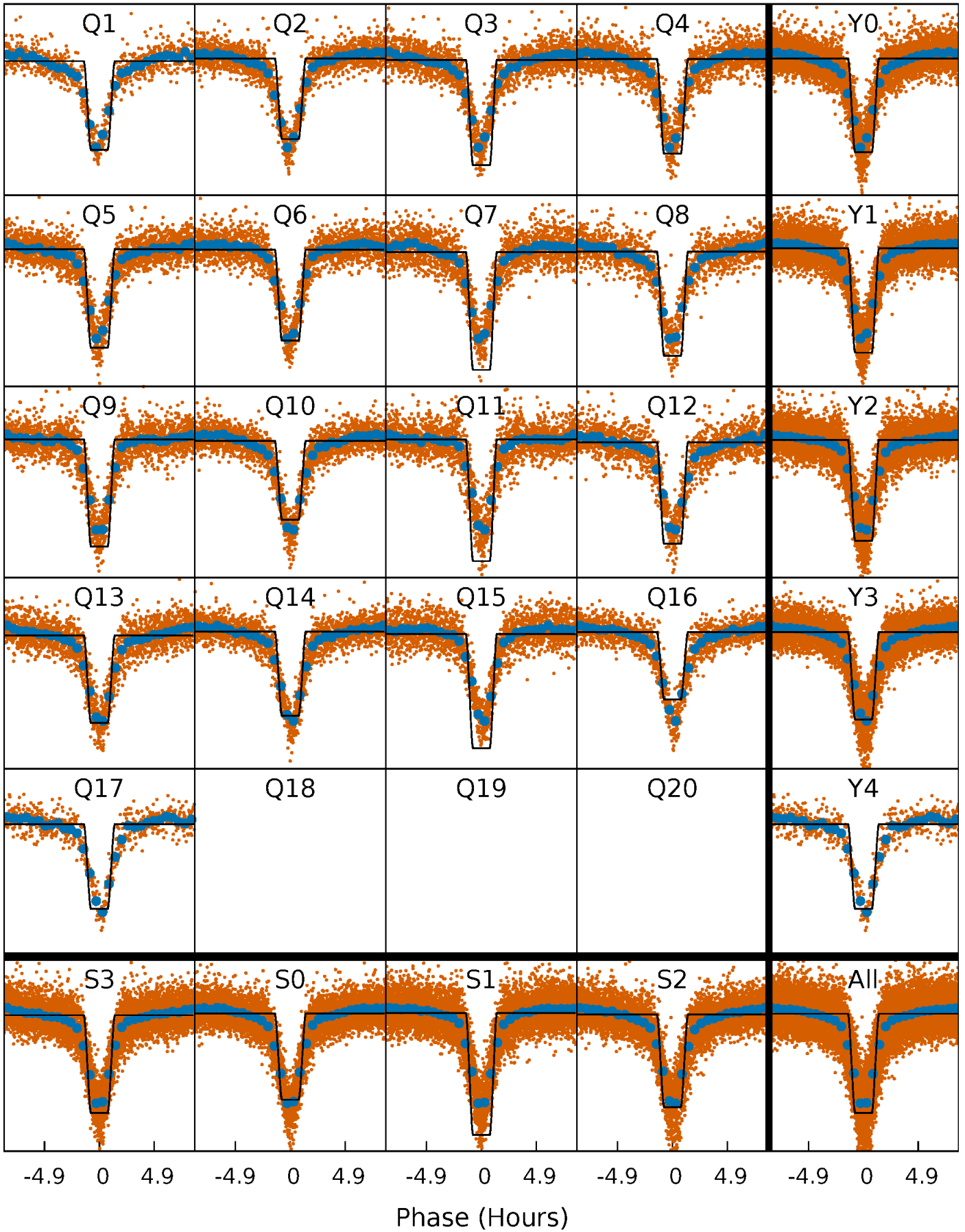
DV Quarter-Phased Transit Curves

TCE 010794405-01 P= 1.428518 Days $T_0=131.881324$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

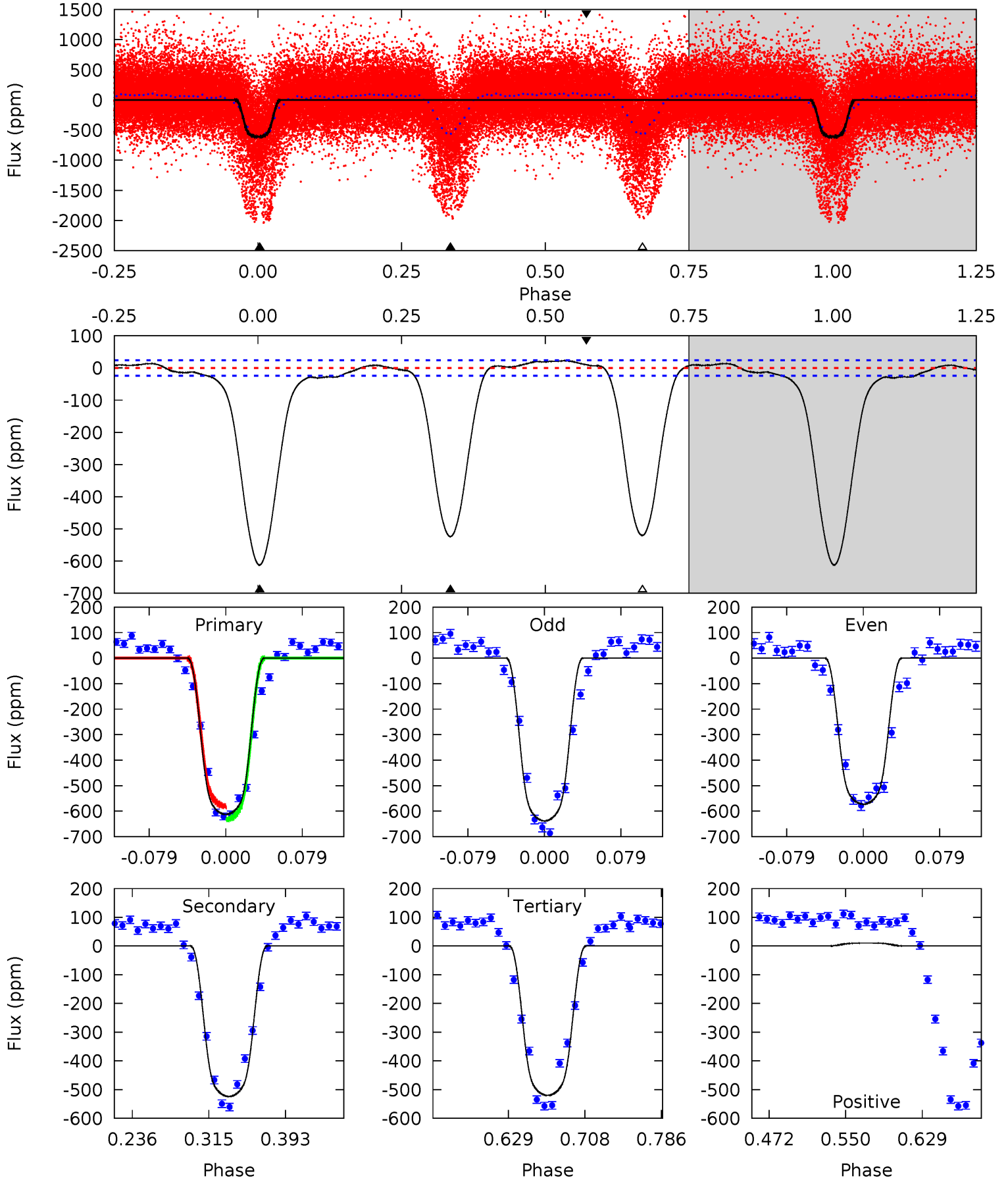
TCE 010794405-01 P= 1.428555 Days $T_0=131.864959$ (BKJD)



DV Model-Shift Uniqueness Test

010794405-01, P = 1.428518 Days, E = 130.452806 Days

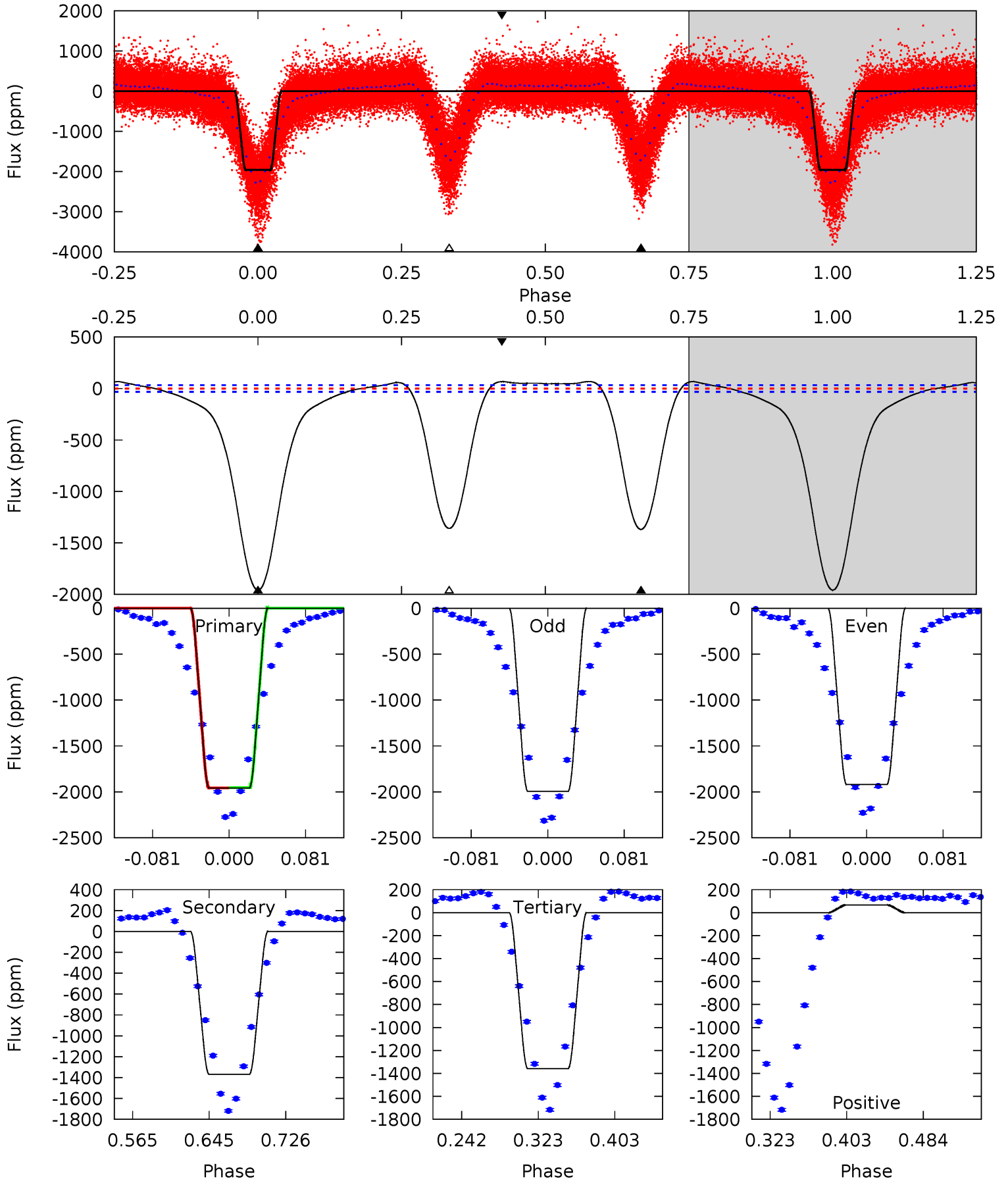
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
116.6	99.8	99.1	1.95	4.61	1.76	23.6	17.5	114.6	0.71	97.8	6.26	1.48	0.04	4.93



Alt Model-Shift Uniqueness Test

010794405-01, P = 1.428555 Days, E = 130.436404 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
276.5	193.2	191.8	9.45	4.61	1.75	50.3	84.7	267.1	1.38	183.8	5.13	1.02	0.03	0.13



Stellar Parameters For KIC 010794405

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5662^{+152}_{-169}	$4.524^{+0.058}_{-0.173}$	$-0.140^{+0.300}_{-0.300}$	$0.863^{+0.233}_{-0.093}$	$0.909^{+0.104}_{-0.095}$	$1.988^{+0.488}_{-0.960}$
	+3%/-3%	+1%/-4%	+214%/-214%	+27%/-11%	+11%/-10%	+25%/-48%
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 010794405-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-524 ± 5	$2.54^{+0.36}_{-0.19}$	2124^{+135}_{-91}	5300^{+153}_{-163}	26^{+4}_{-5}
Alt.	-1368 ± 7	$4.63^{+0.73}_{-0.31}$	2121^{+126}_{-102}	4988^{+128}_{-129}	20^{+3}_{-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 $A_{\text{obs}} \gg 1.0$

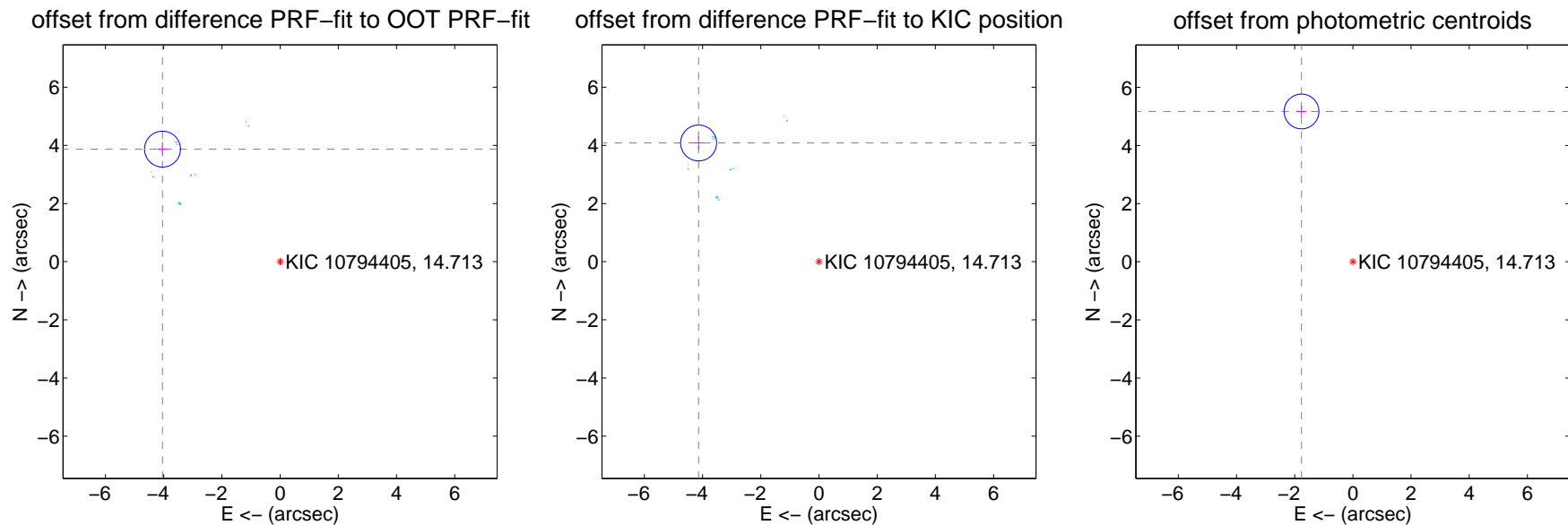
DV Centroid Data

Supplemental centroid analysis for 010794405-01. Kepler magnitude: 14.71. Transit SNR 57.97

There are 17 quarters with good PRF difference image offsets

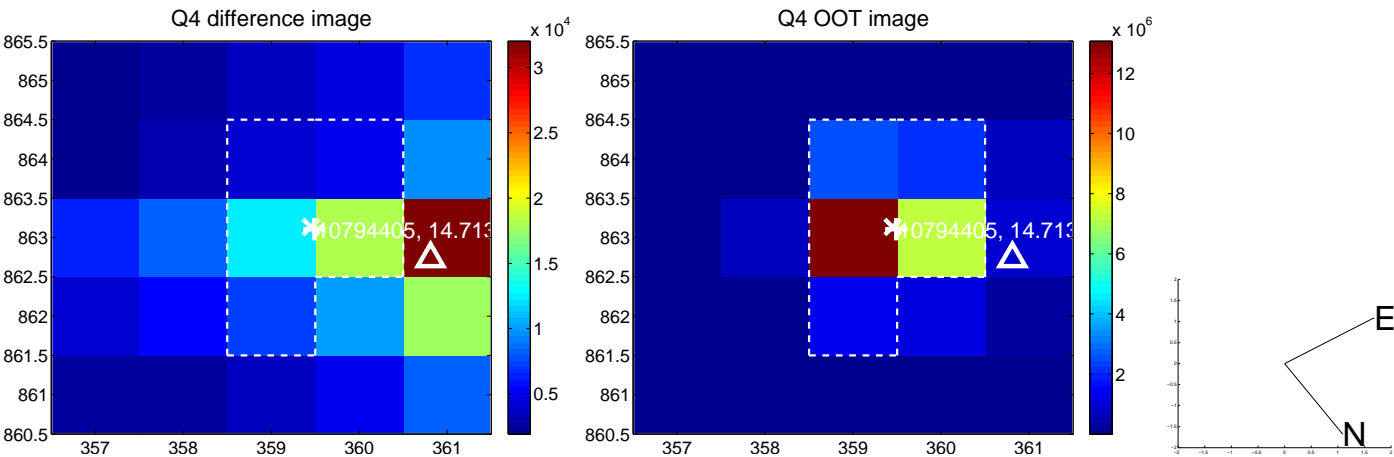
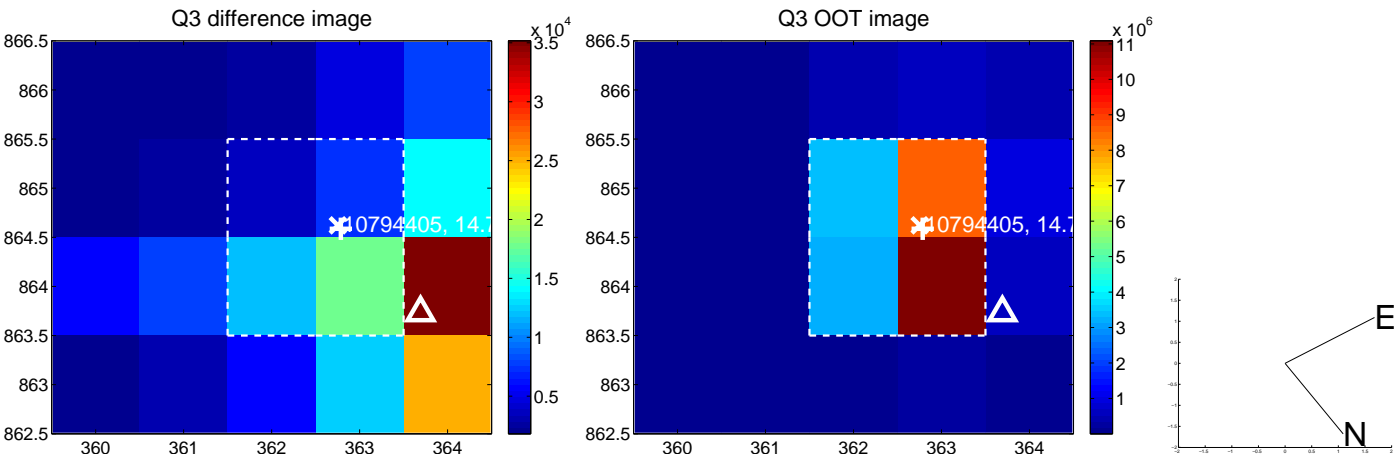
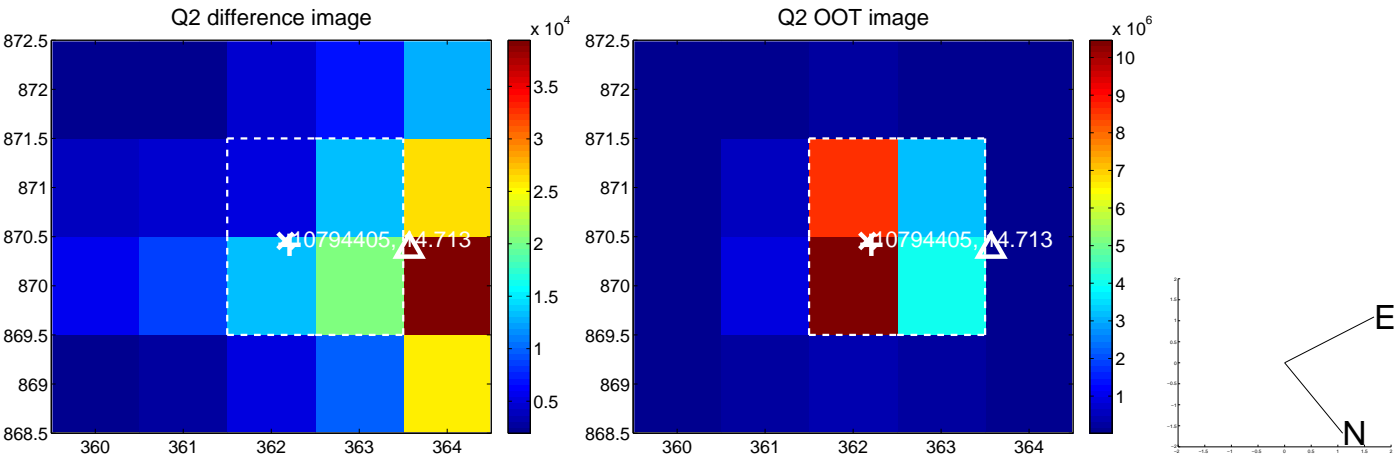
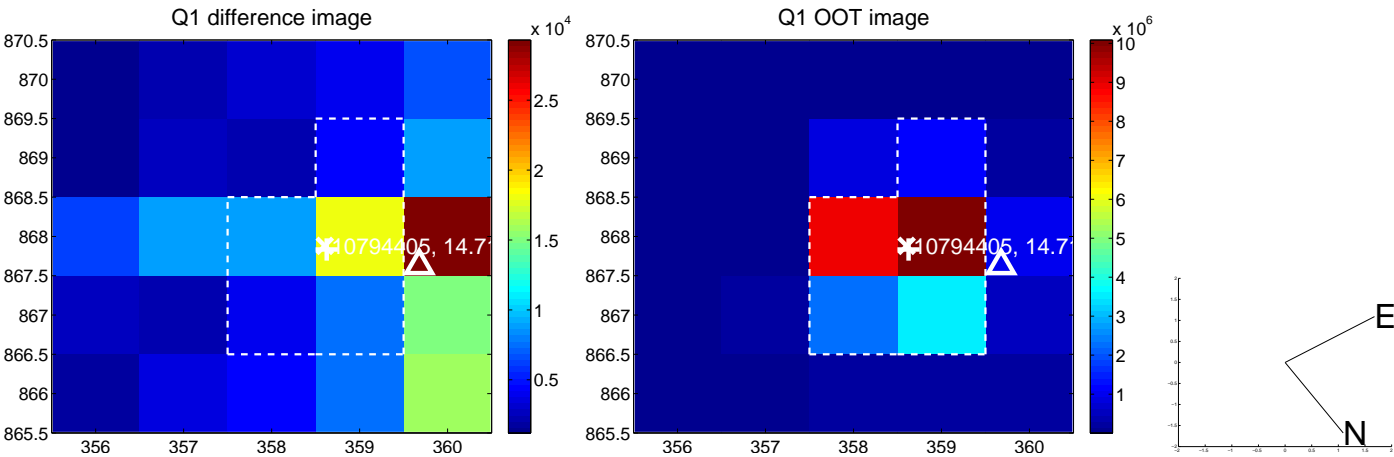
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.597 ± 0.206	27.20	4.042 ± 0.171	3.872 ± 0.238
PRF-fit source offset from KIC position	5.814 ± 0.206	28.24	4.138 ± 0.180	4.084 ± 0.229
photometric centroid source offset	5.46 ± 0.20	27.43	1.77 ± 0.17	5.17 ± 0.20

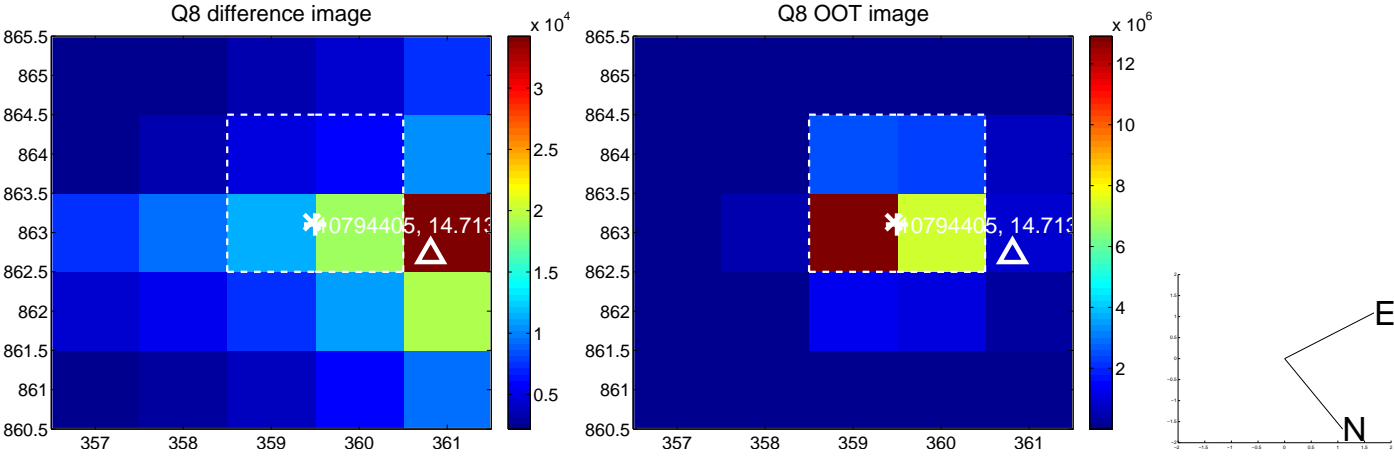
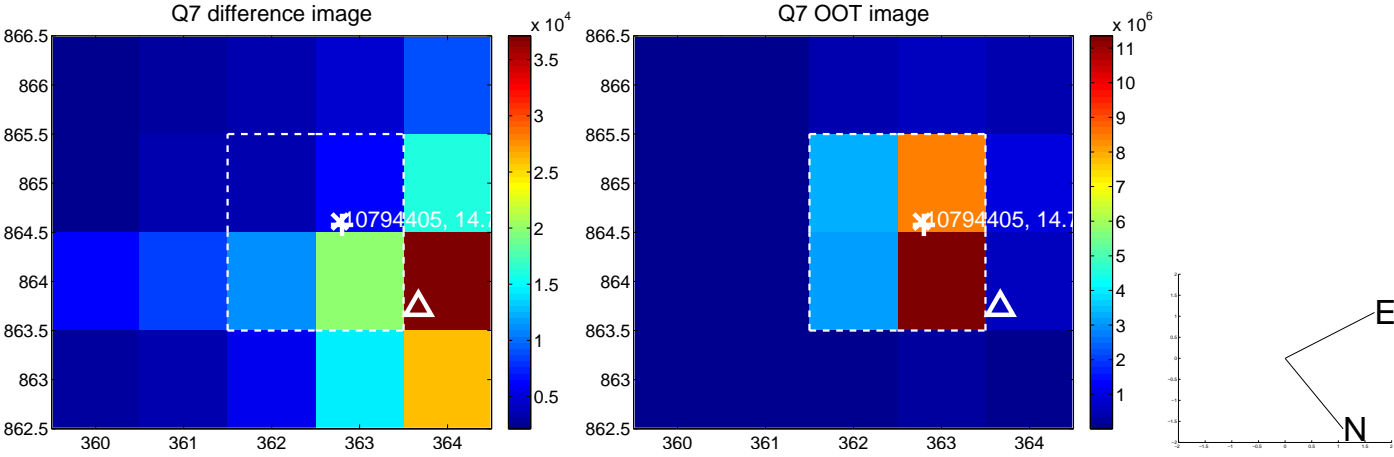
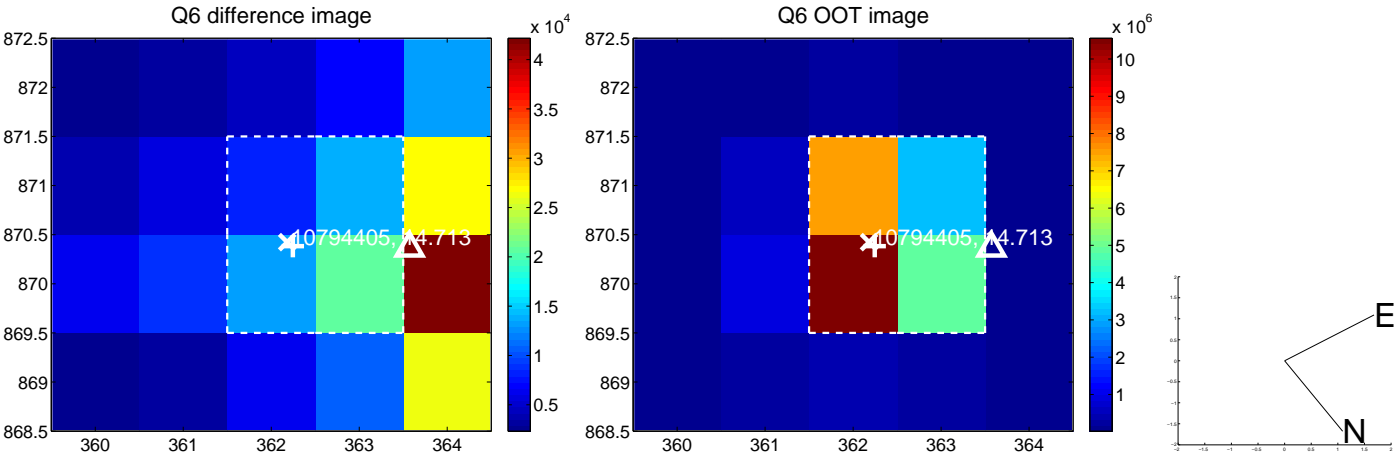
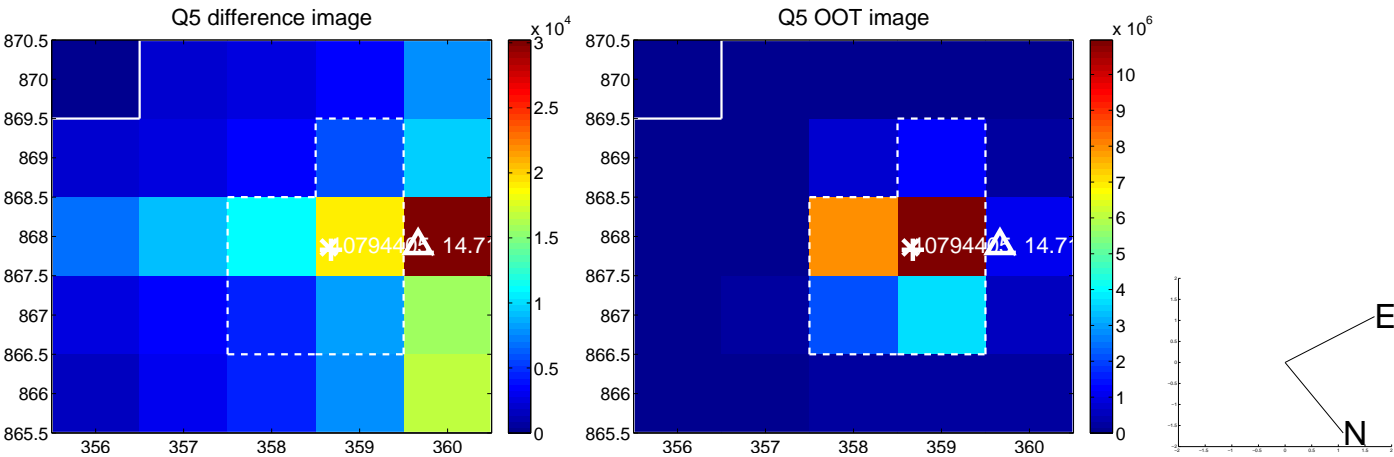


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

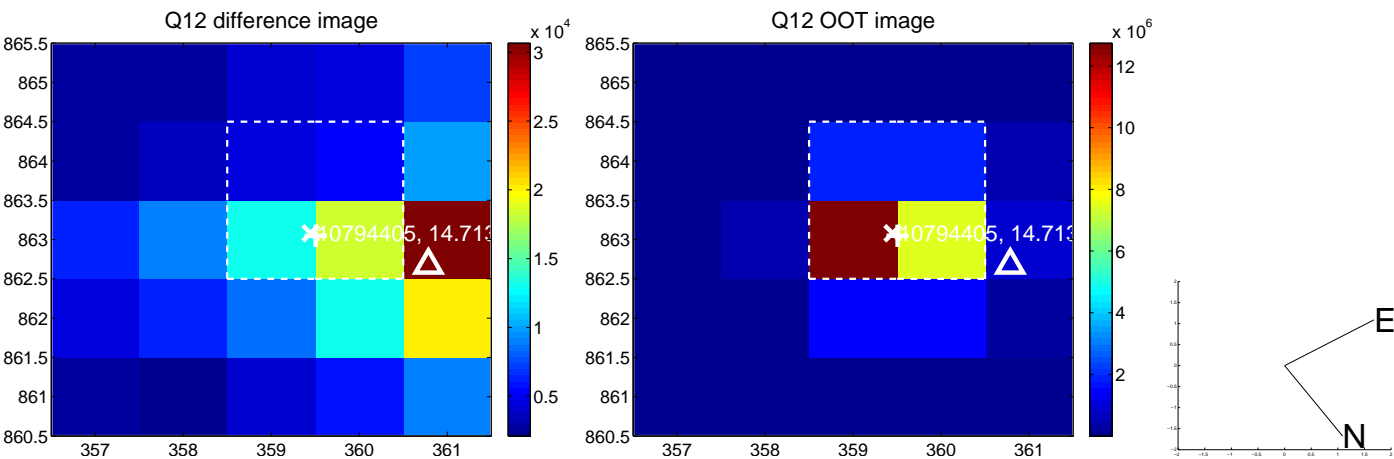
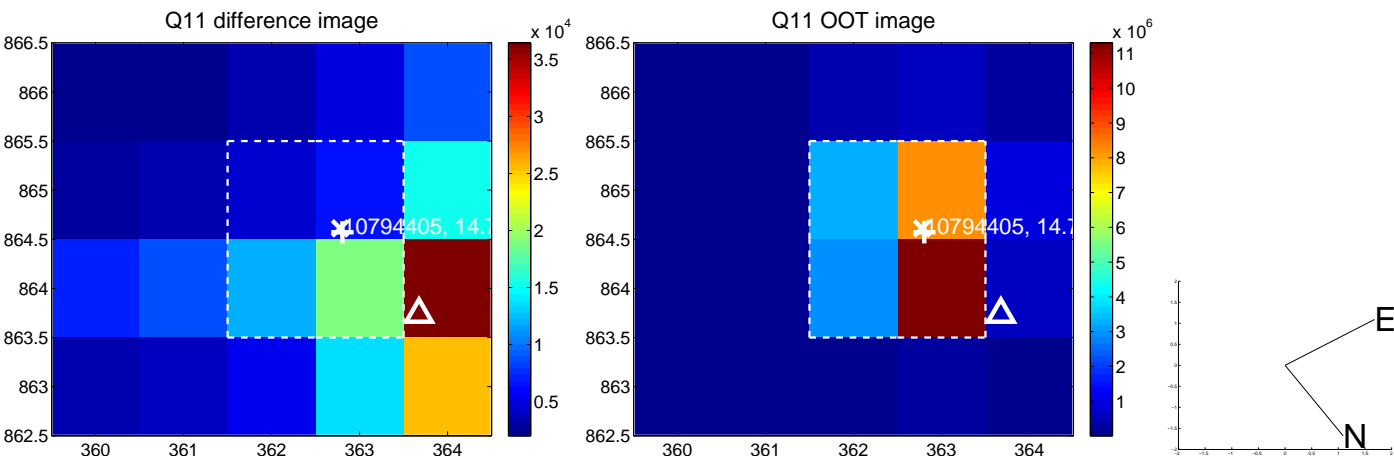
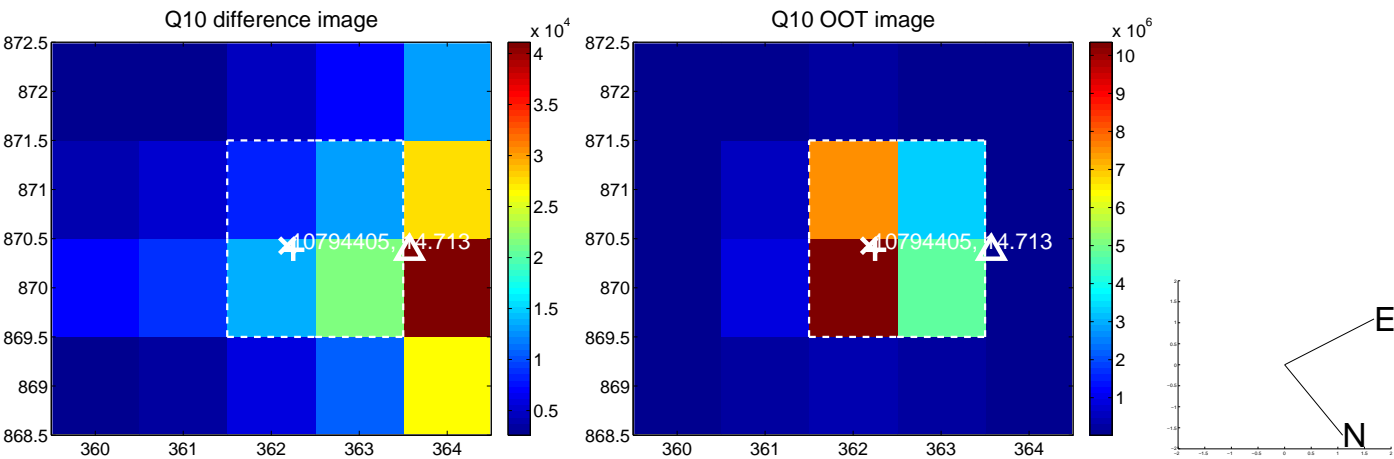
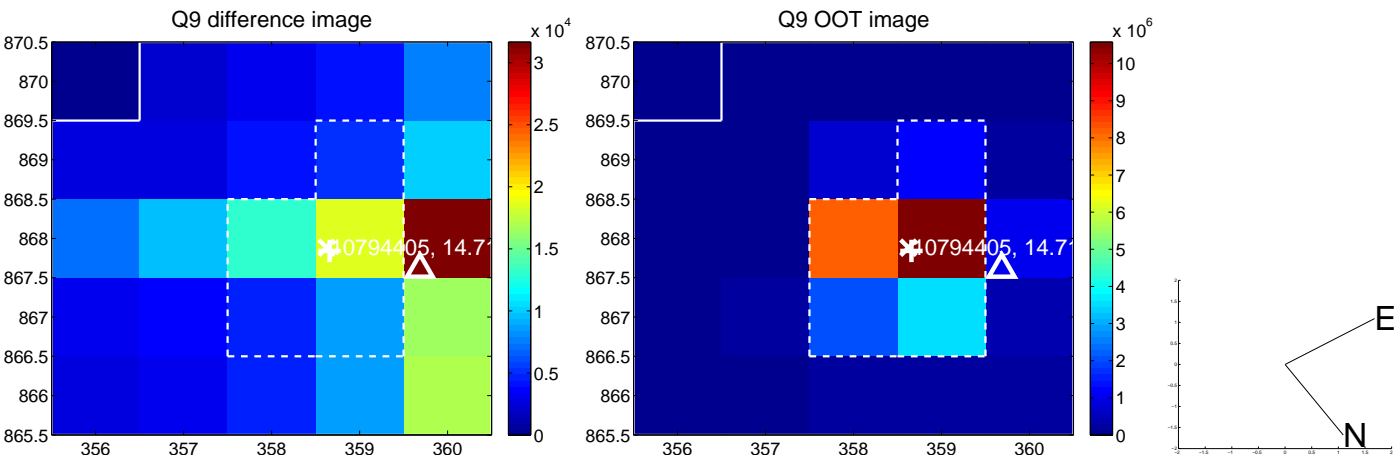
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



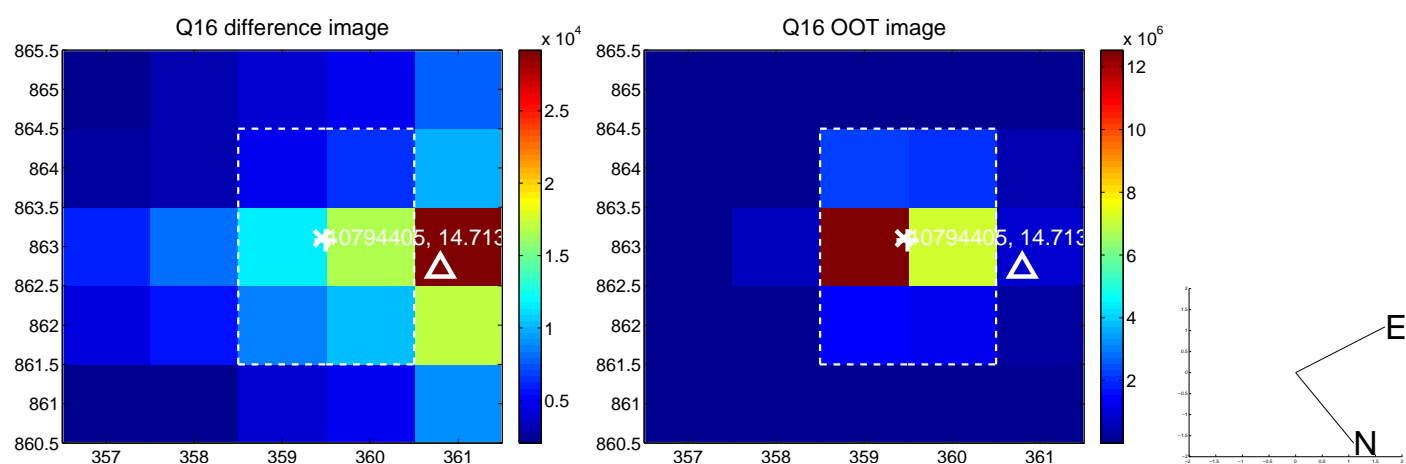
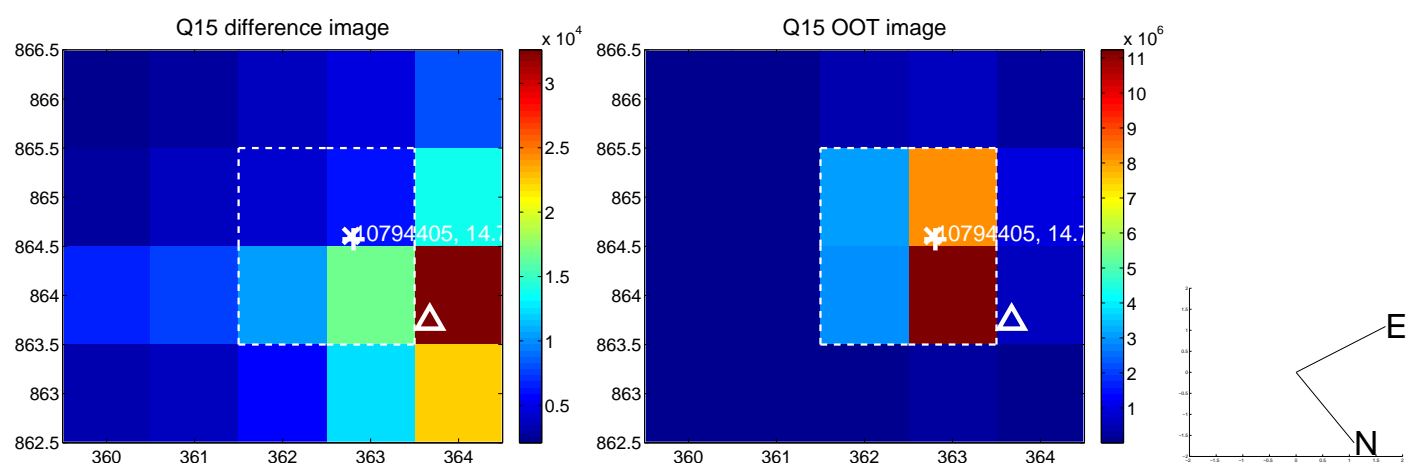
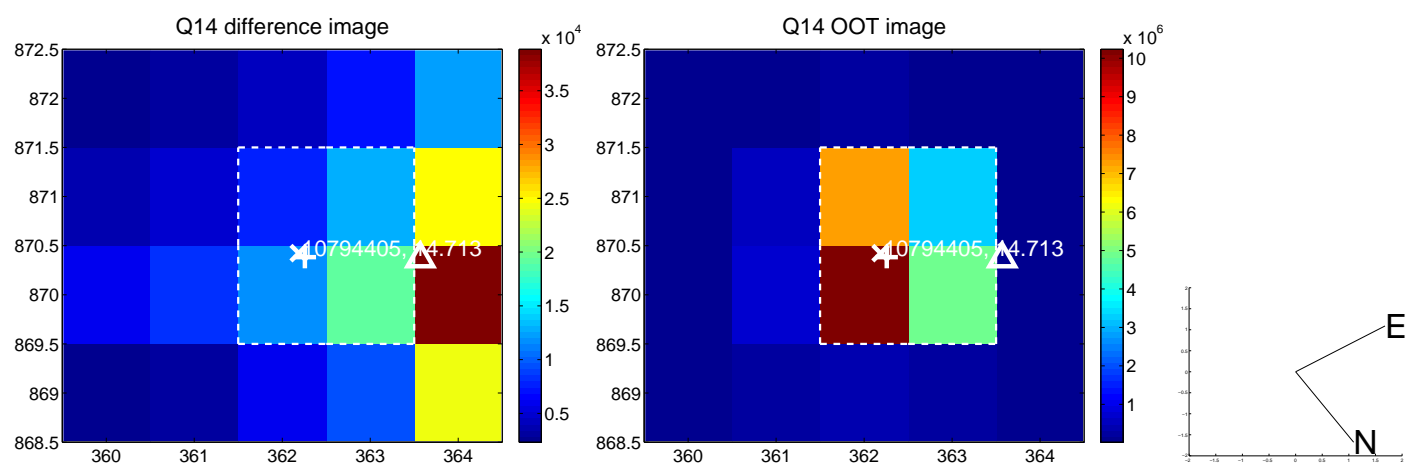
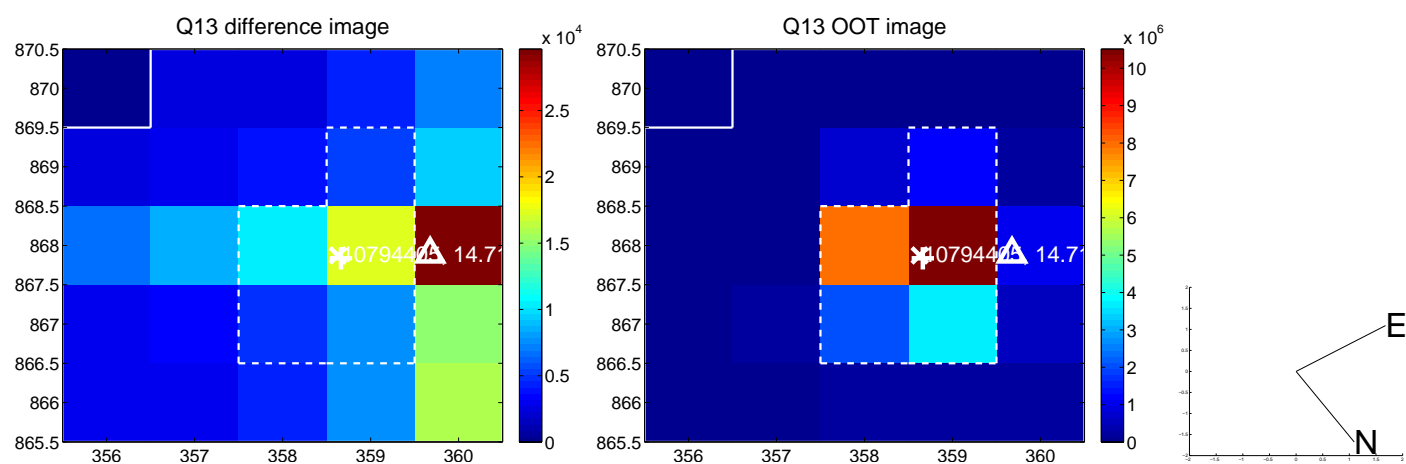
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



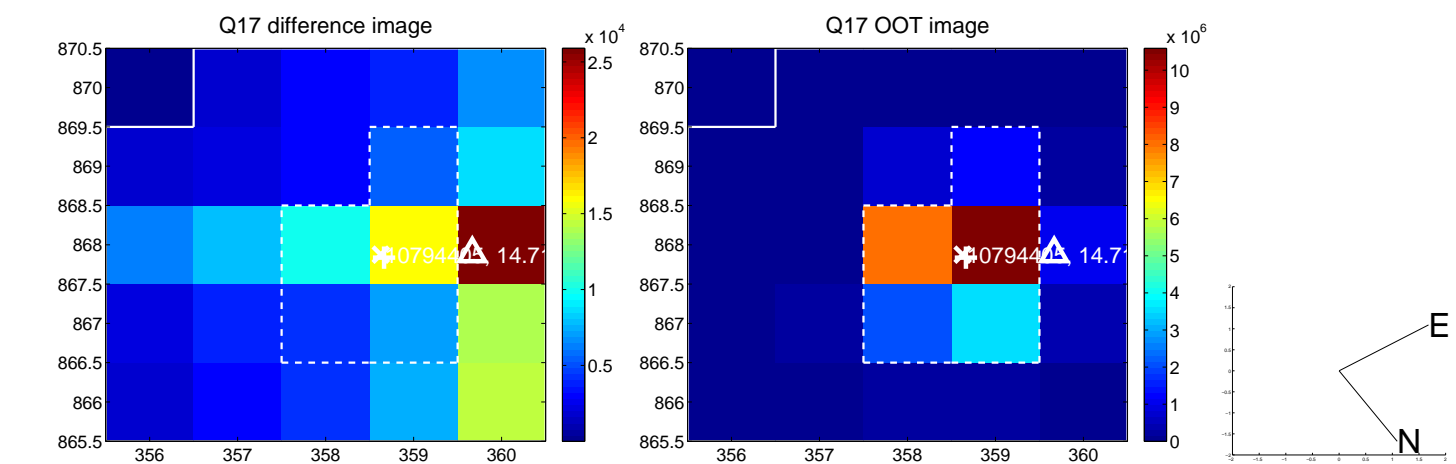
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



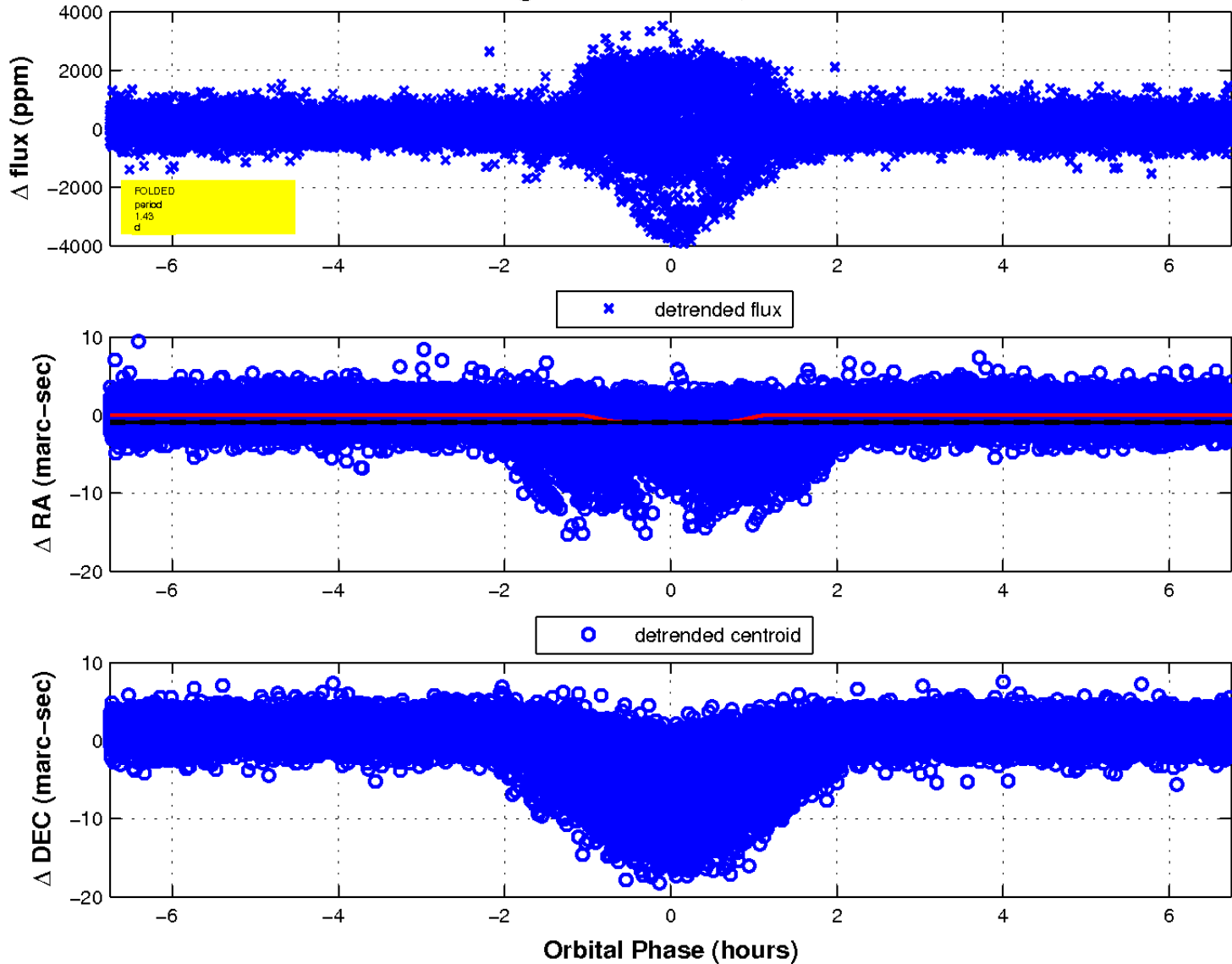
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



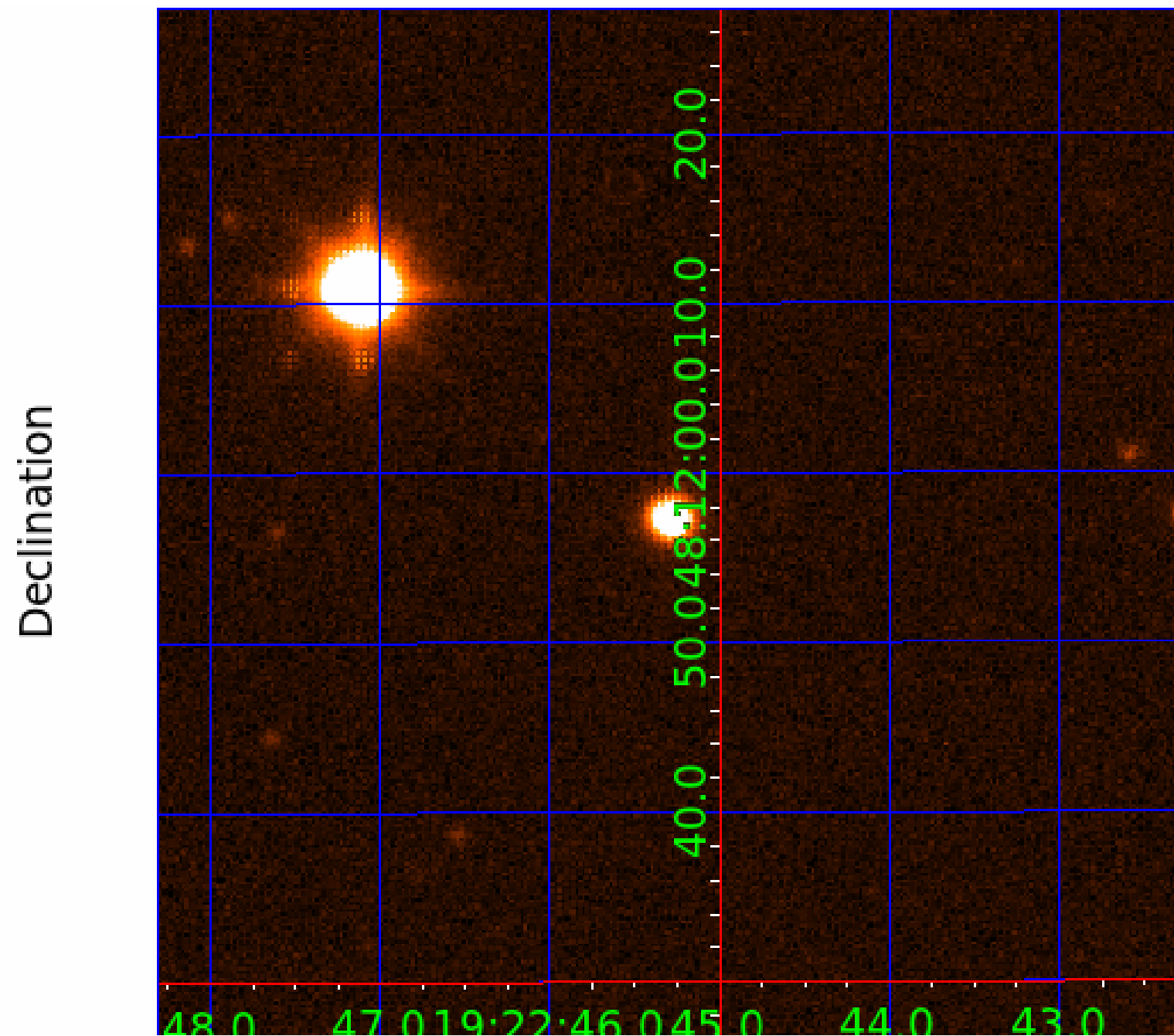
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 010794405

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})
010794405-01	OBS	No	1.428518	131.881324	535.4	2.250	40.8	58.0	0.86	5662	2.48	1186.50
010794405-02	OBS	7373.01	0.952373	132.335994	4385.8	1.500	140.9	-1.0	0.86	5662	5.68	2037.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010794405-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
010794405-02	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_NOFITS—HALO_GHOST—EPHEM_MATCH

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 010794405-02

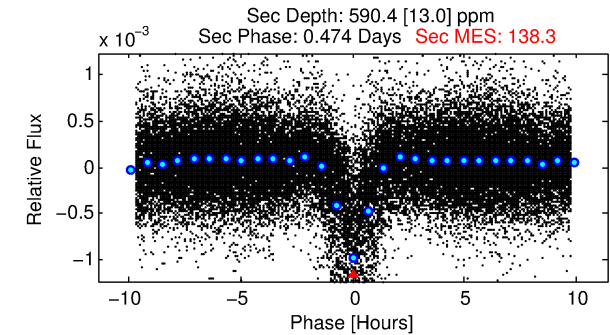
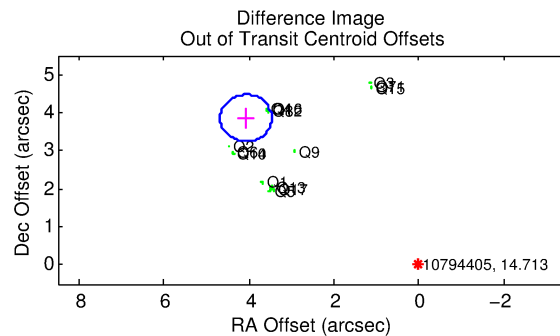
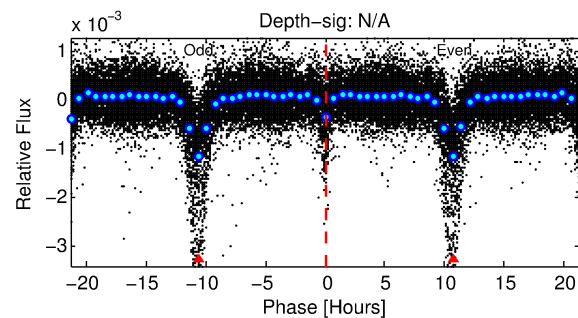
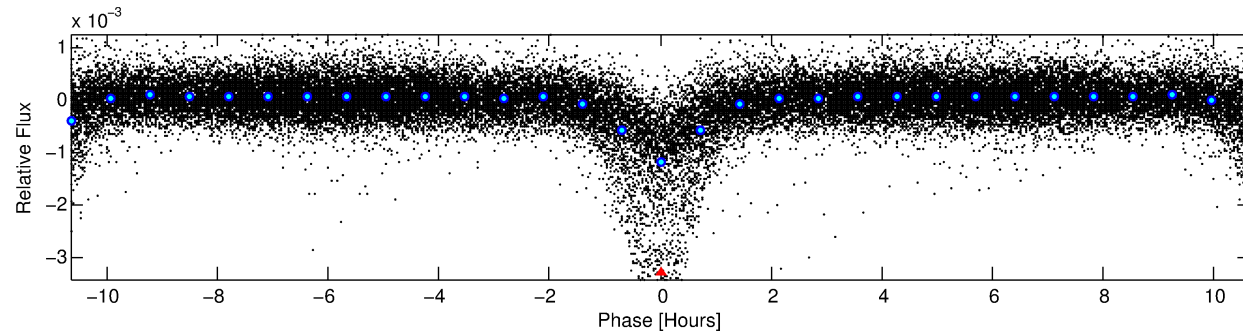
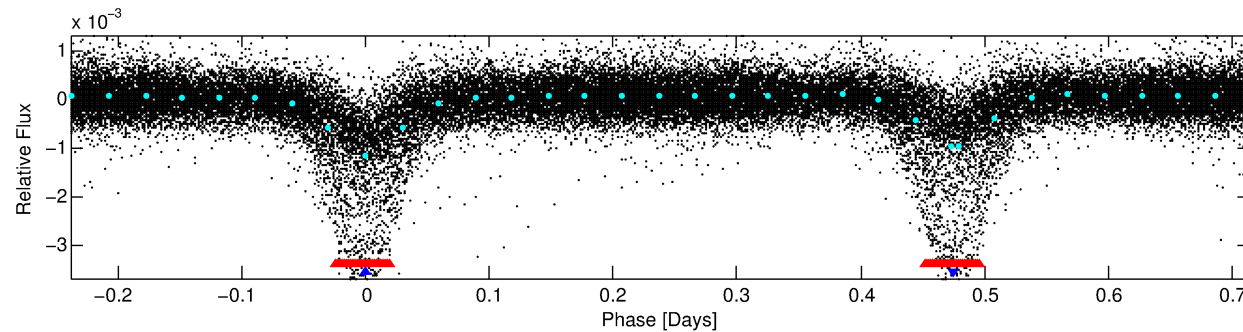
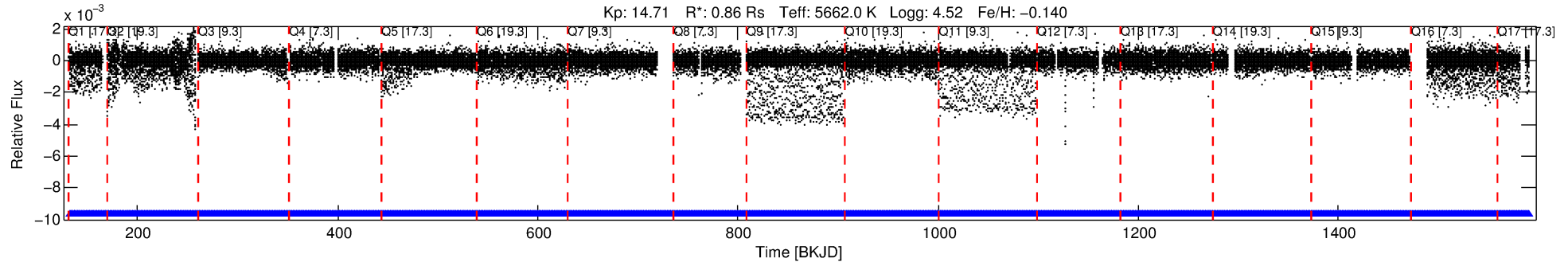
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010794405-02	10794405	010858720-pri	10858720	1:1	22.8	1	-6	10.97	14.71	109.19	Direct-PRF	0	0.41	0.07

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10794405 Candidate: 2 of 2 Period: 0.952 d
KOI: K07373 Corr: No Ephemeris Match

Kp: 14.71 R*: 0.86 Rs Teff: 5662.0 K Logg: 4.52 Fe/H: -0.140



TPS TCE Results:

Period = 0.95237 d
Epoch = 132.3360 BKJD

DV fit results are unavailable

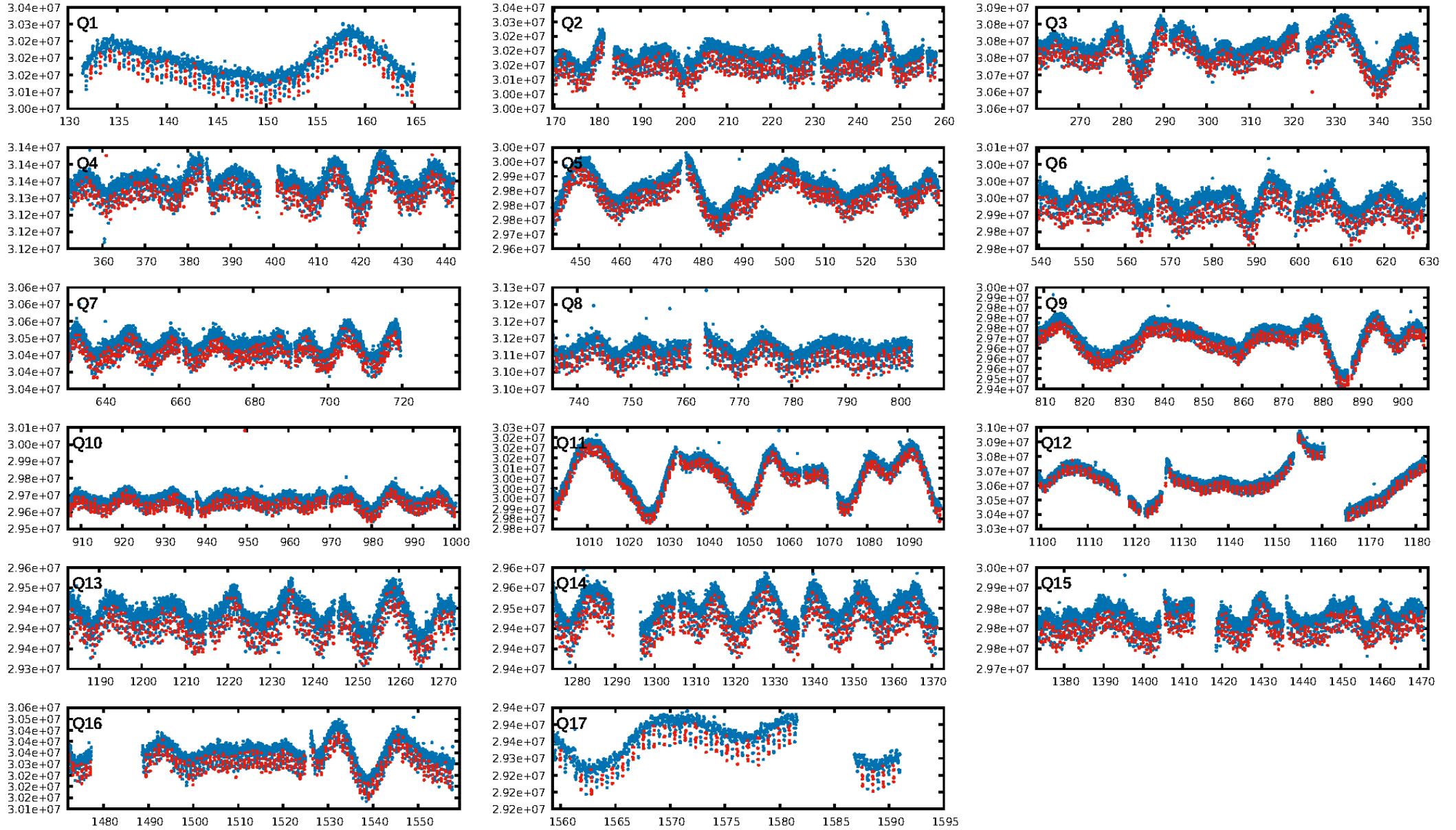
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.23σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [899/899]
GhostDiagnostic-chr: 0.0142
Centroid-sig: N/A
Centroid-so: 2.178 arcsec [55.73σ]
OotOffset-rm: 5.610 arcsec [27.45σ]
KicOffset-rm: 5.653 arcsec [23.39σ]
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]

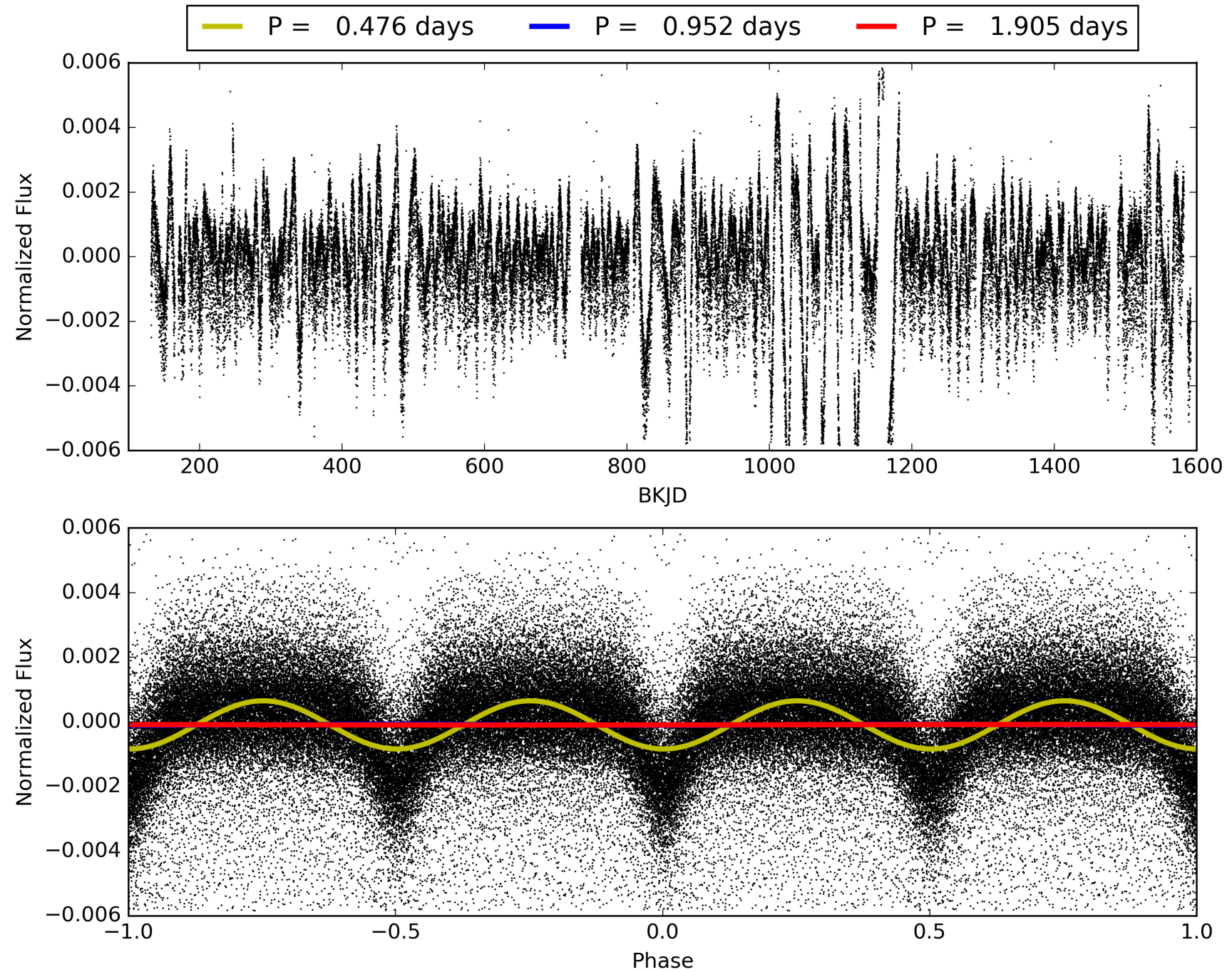
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:29:06 Z

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

TCE 010794405-02, PDC Light Curves

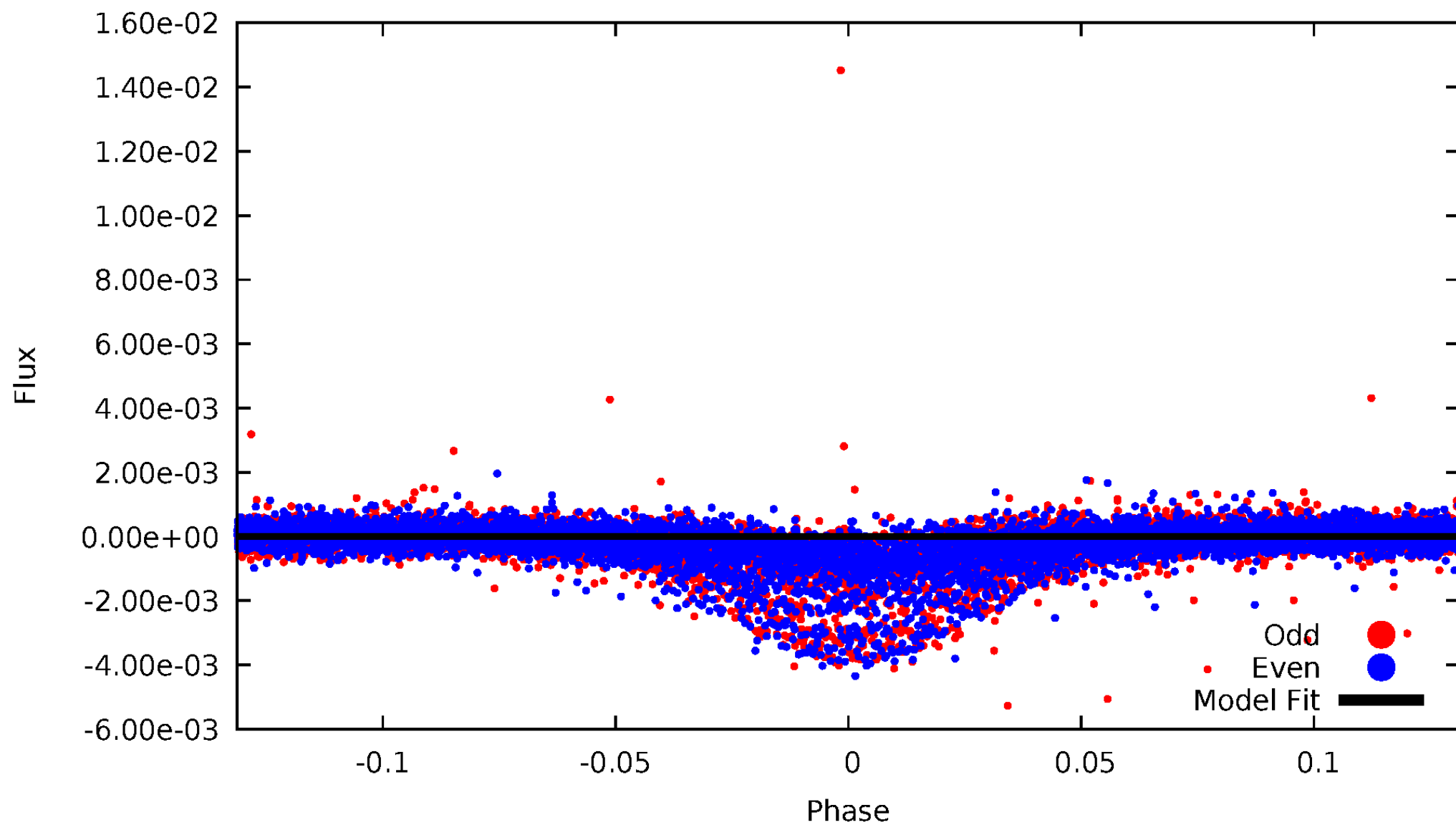


TCE 010794405-02



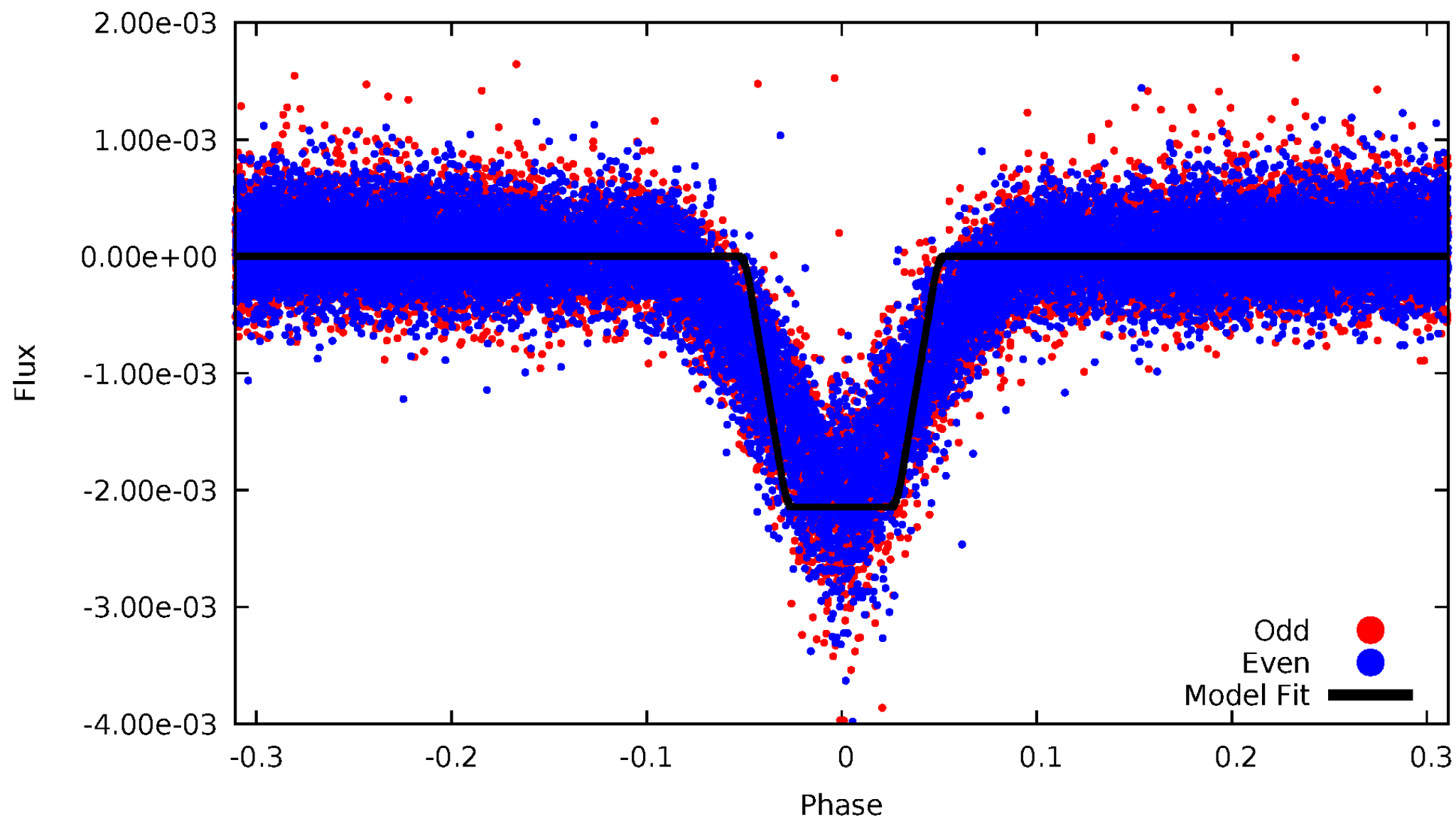
DV Odd/Even

TCE 010794405-02



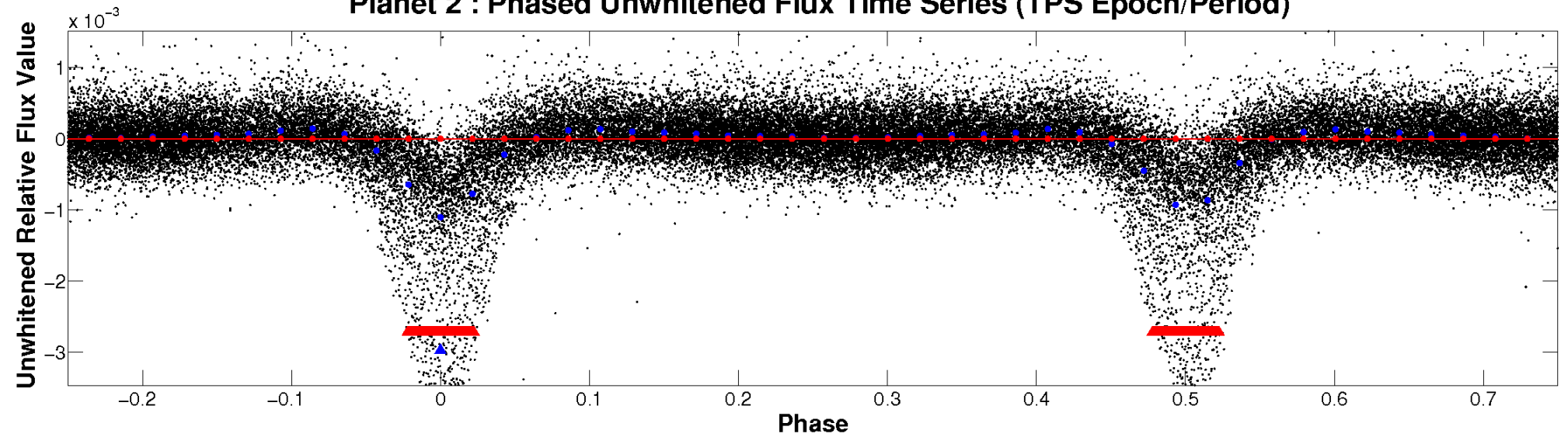
ALT Odd/Even

TCE 010794405-02



Non-Whitened Vs. Whitened Light Curve

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

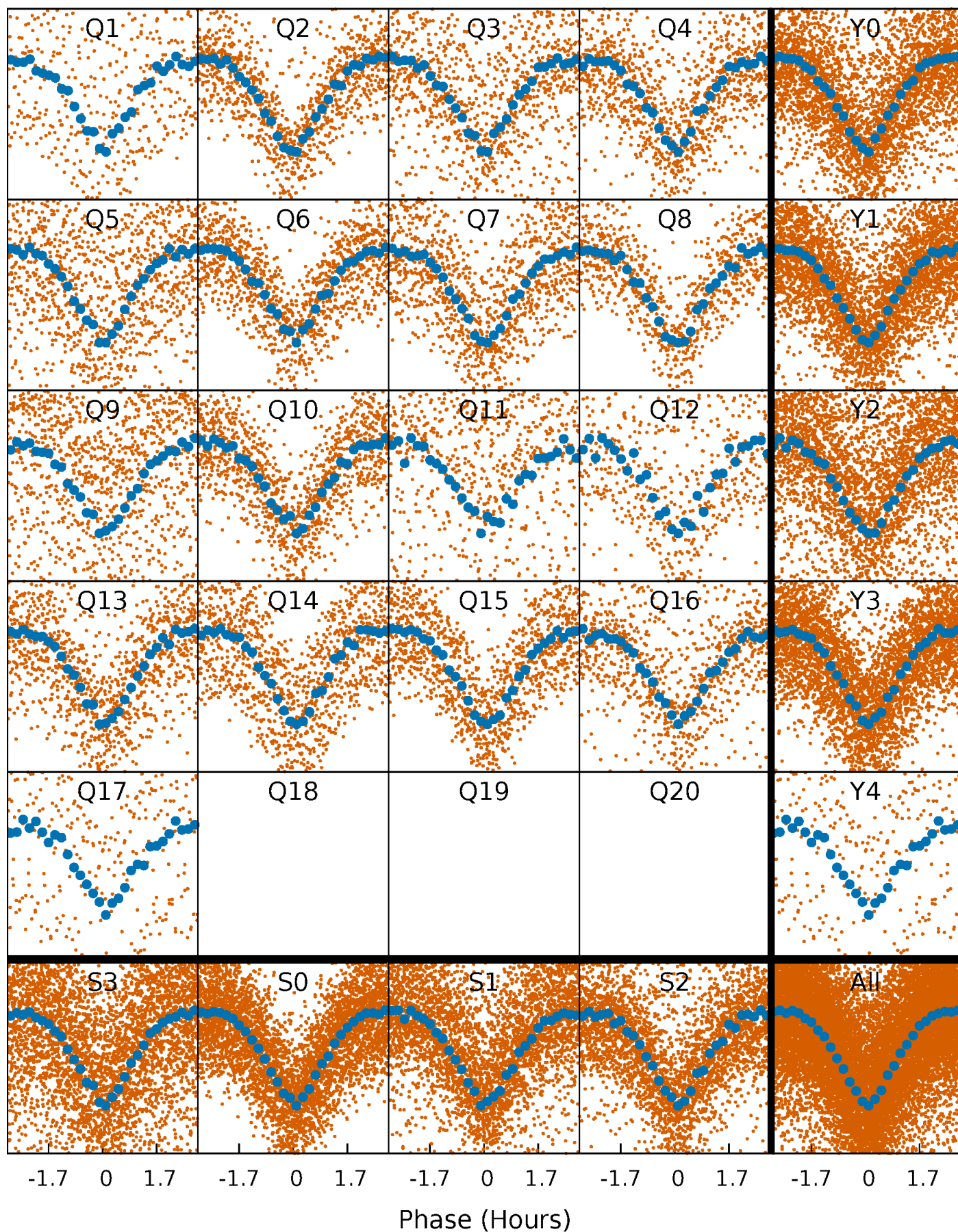


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



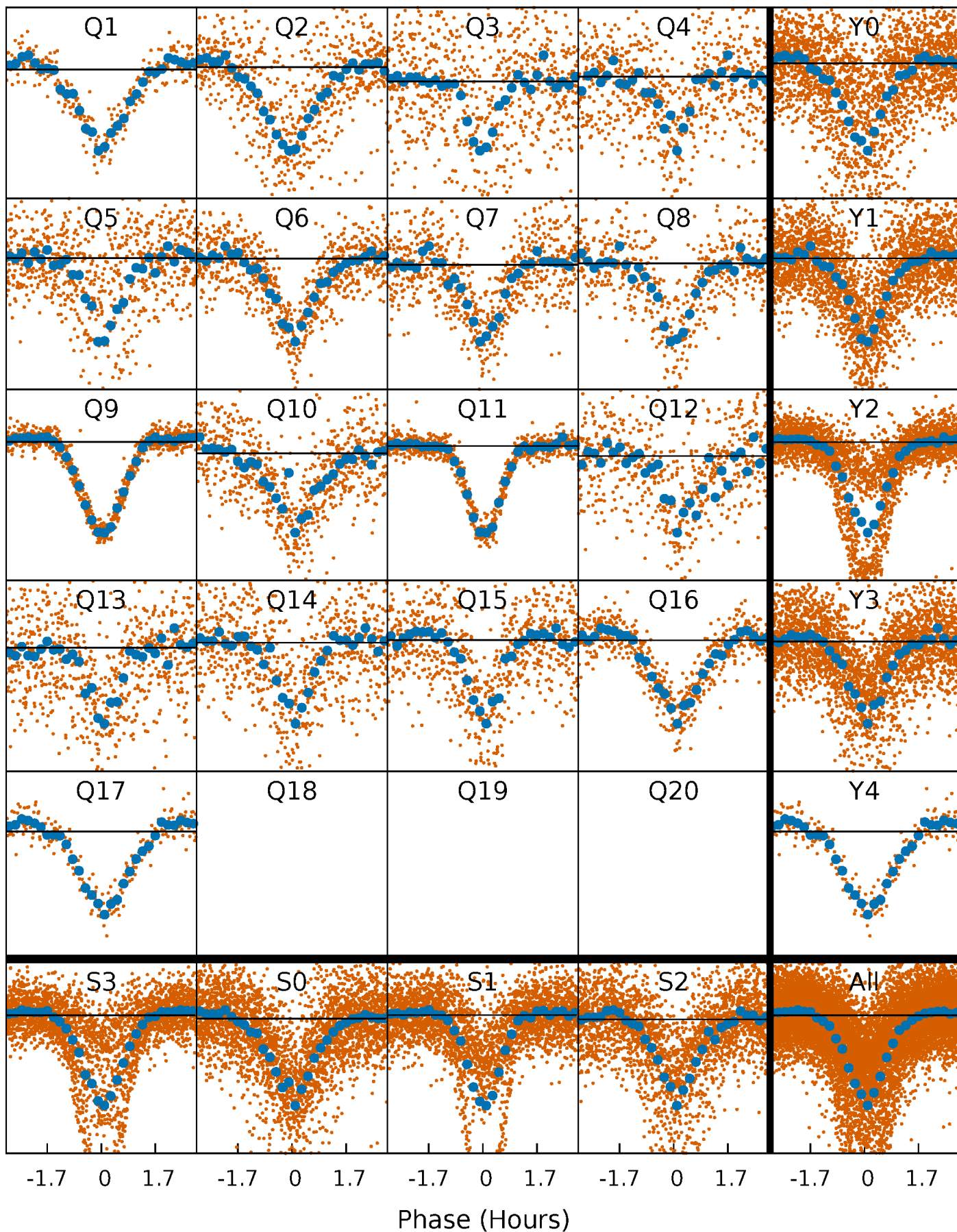
PDC Quarter-Phased Transit Curves

TCE 010794405-02 P= 0.952373 Days $T_0=132.335994$ (BKJD)



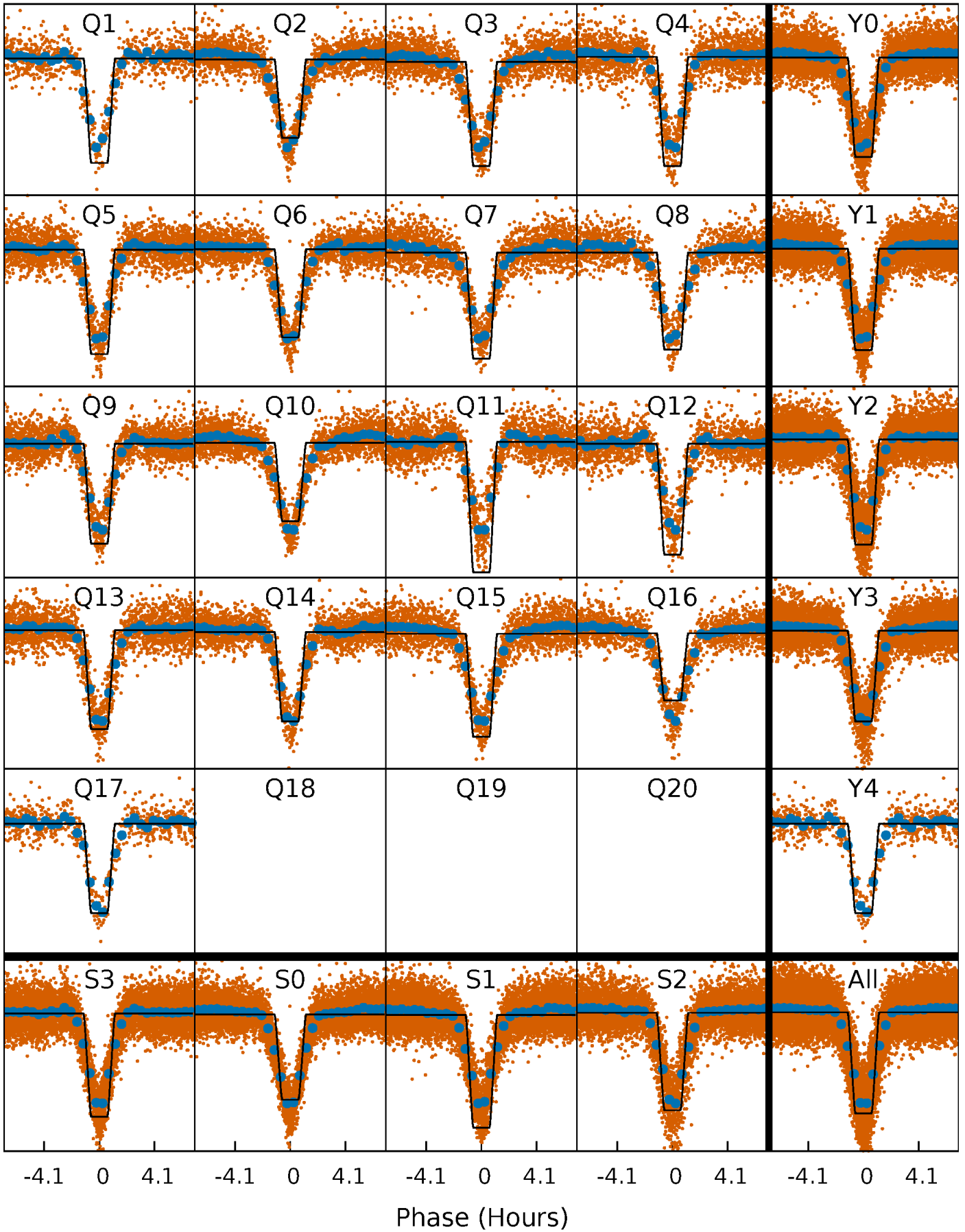
DV Quarter-Phased Transit Curves

TCE 010794405-02 $P = 0.952373$ Days $T_0 = 132.335994$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

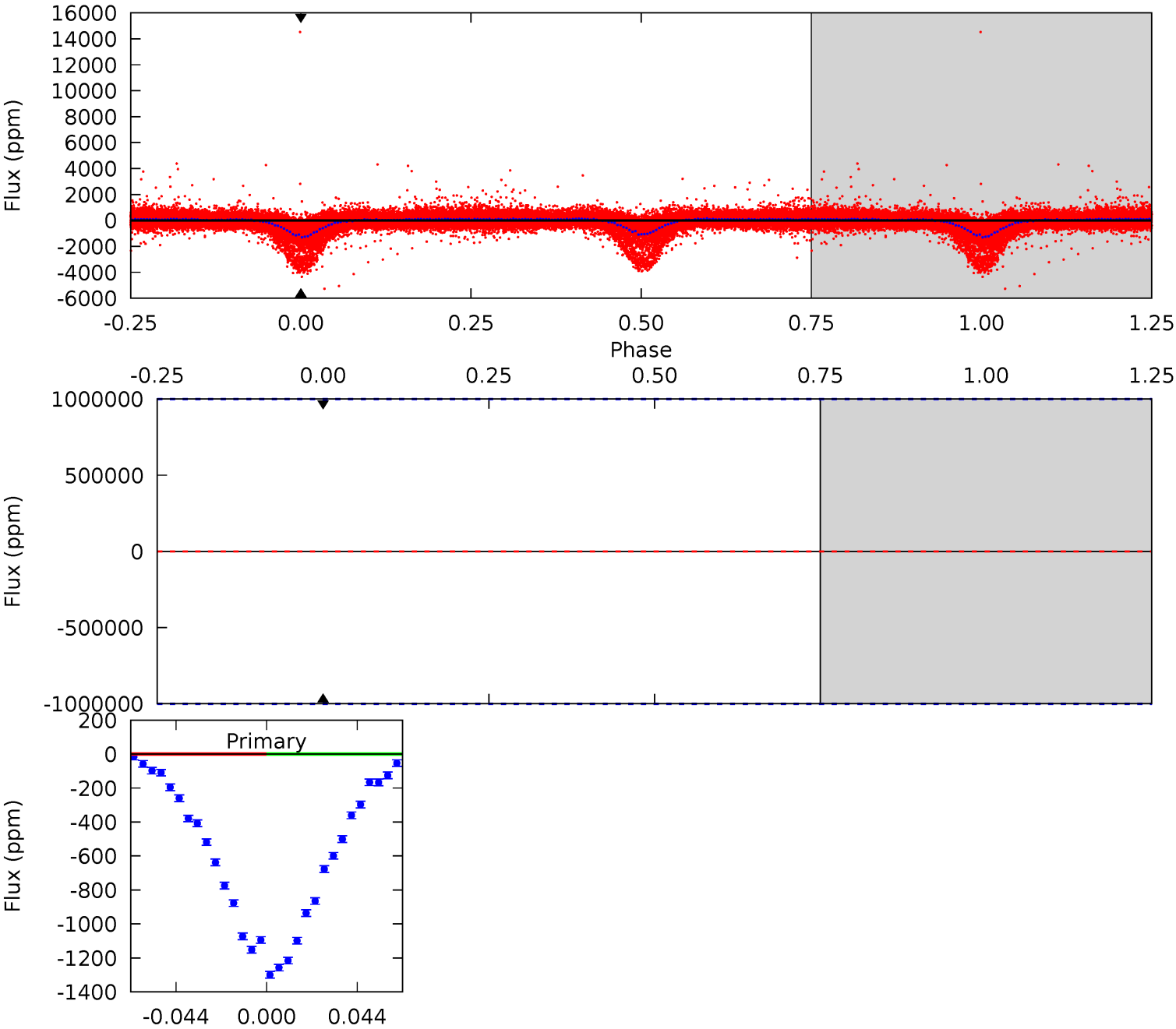
TCE 010794405-02 $P = 0.952373$ Days $T_0 = 132.338533$ (BKJD)



DV Model-Shift Uniqueness Test

010794405-02, P = 0.952373 Days, E = 131.383621 Days

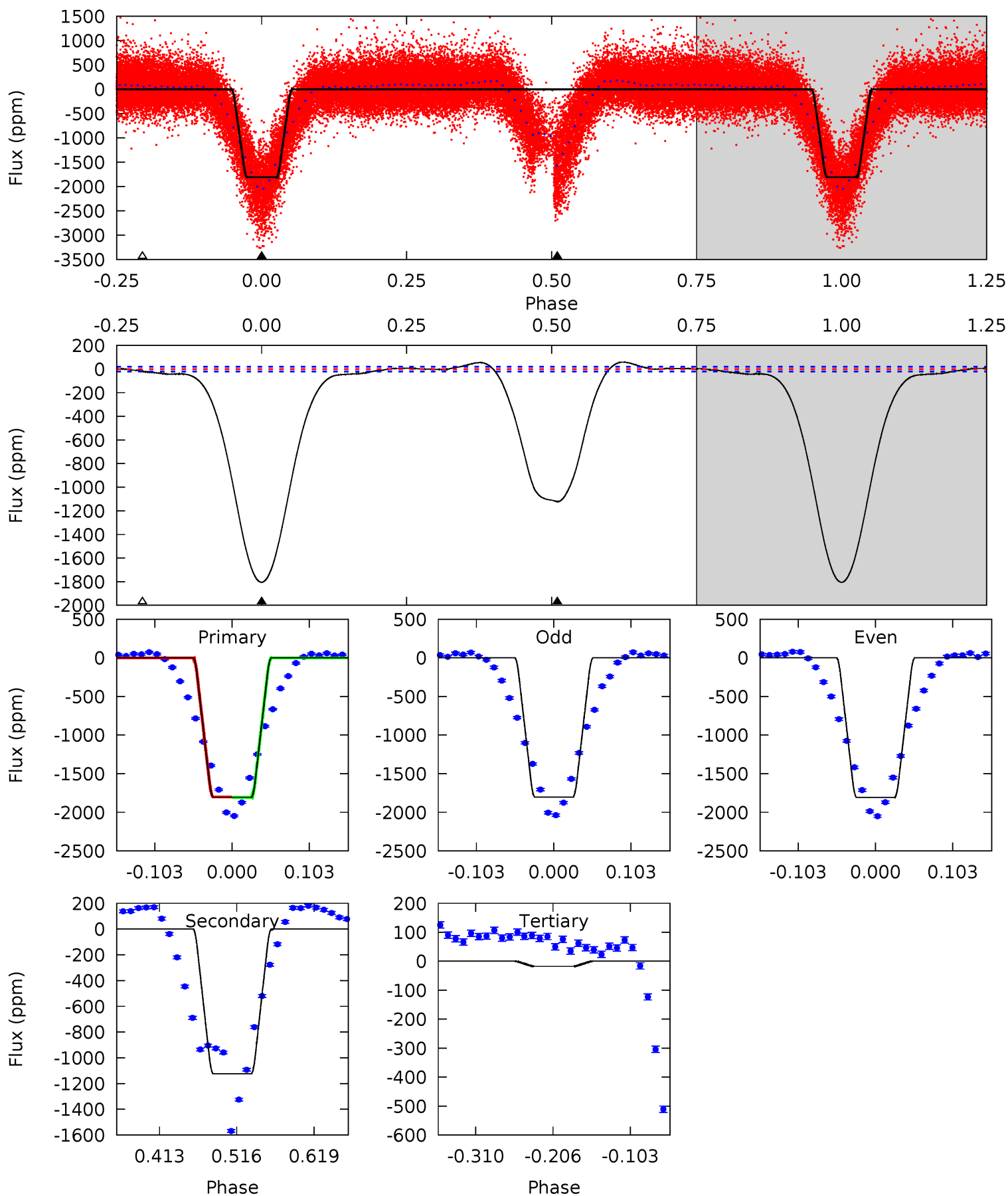
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010794405-02, P = 0.952373 Days, E = 131.386160 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
408.6	254.1	4.03	0	4.56	1.63	7.17	404.5	408.6	250.1	254.1	0.58	1.03	0.03	0.68



Stellar Parameters For KIC 010794405

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5662^{+152}_{-169}	$4.524^{+0.058}_{-0.173}$	$-0.140^{+0.300}_{-0.300}$	$0.863^{+0.233}_{-0.093}$	$0.909^{+0.104}_{-0.095}$	$1.988^{+0.488}_{-0.960}$
	+3%/-3%	+1%/-4%	+214%/-214%	+27%/-11%	+11%/-10%	+25%/-48%
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 010794405-02 / KOI 7373.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$8.91^{+8.03}_{-5.58}$	2433^{+163}_{-108}	4307^{+12118}_{-18187}	$4.487^{+436.566}_{-319.651}$
Alt.	-1123 ± 4	$8.07^{+8.02}_{-5.39}$	2442^{+154}_{-113}	3856^{+2365}_{-906}	$3.123^{+24.954}_{-2.330}$

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

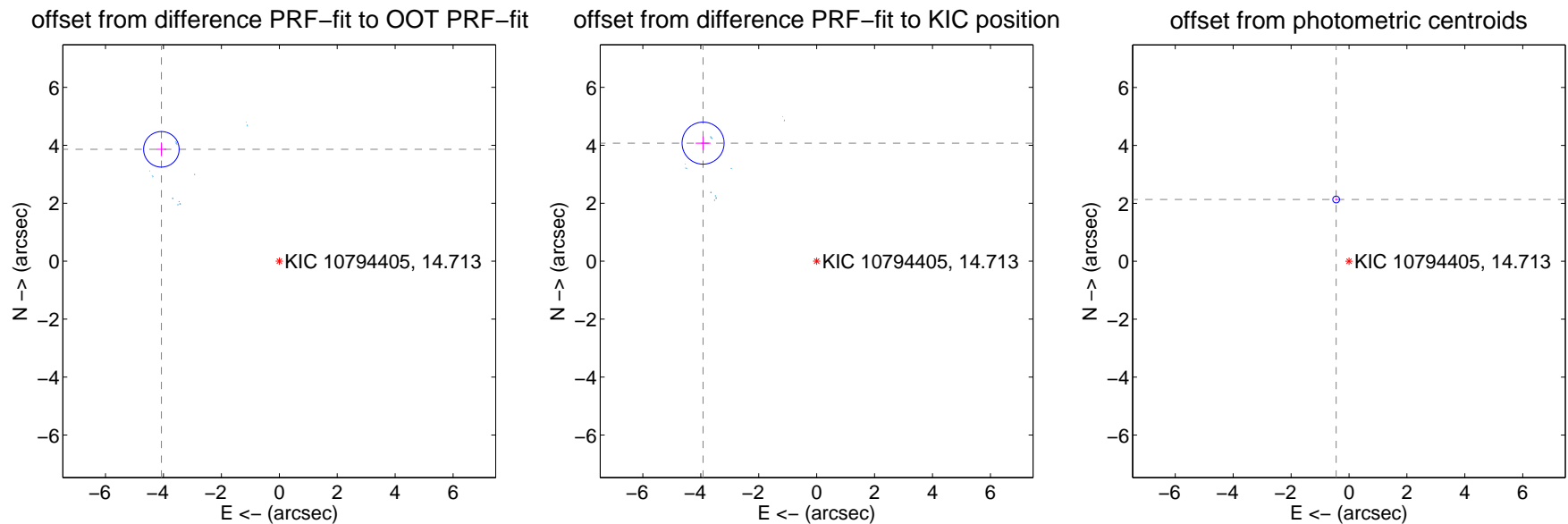
DV Centroid Data

Supplemental centroid analysis for 010794405-02. Kepler magnitude: 14.71. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

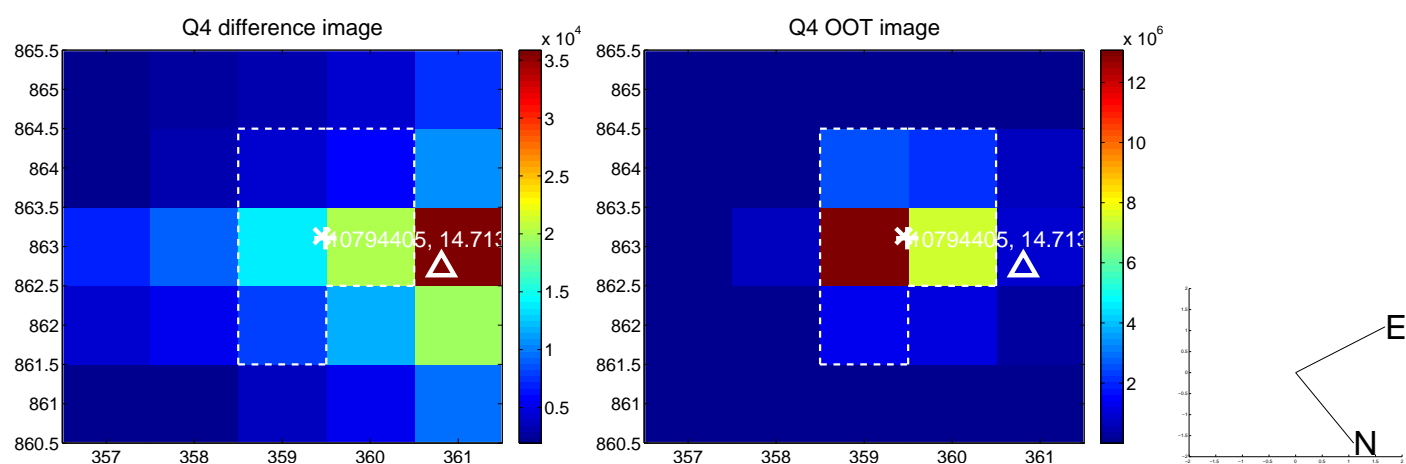
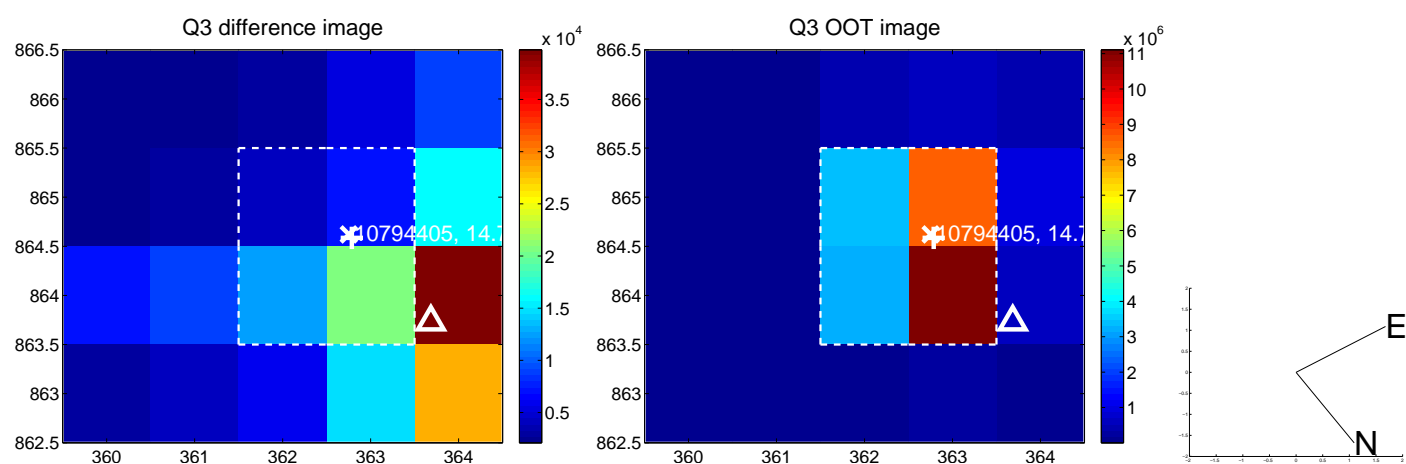
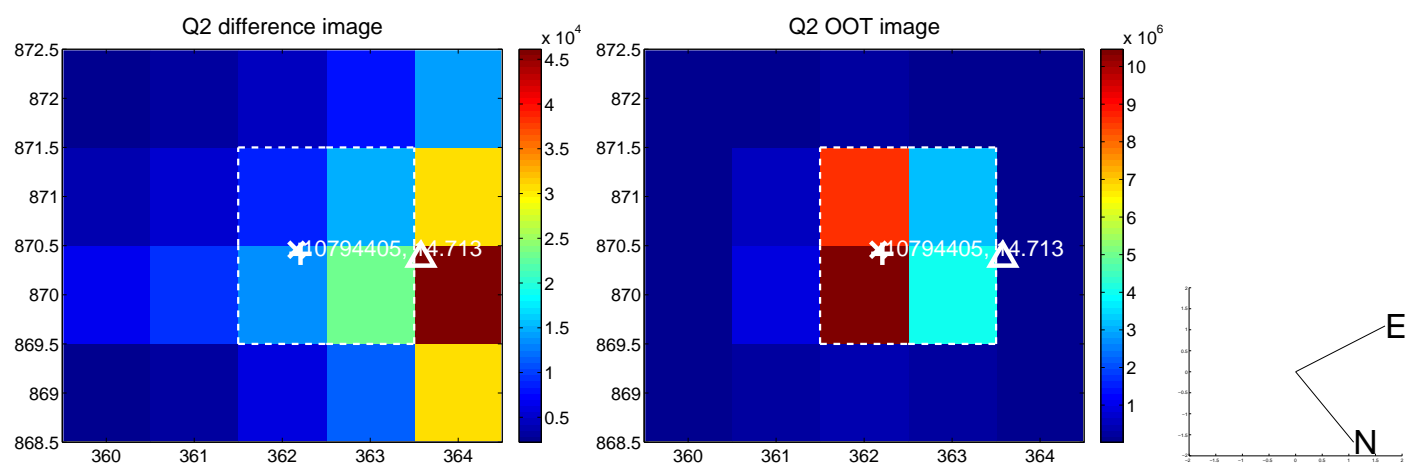
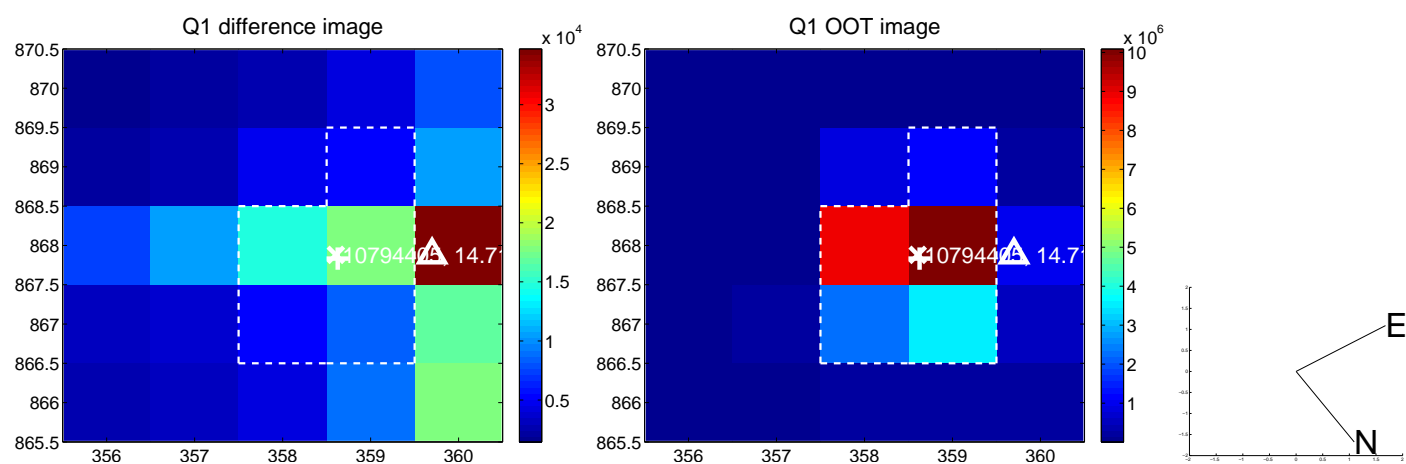
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.610 ± 0.204	27.45	4.070 ± 0.170	3.860 ± 0.237
PRF-fit source offset from KIC position	5.653 ± 0.242	23.39	3.920 ± 0.255	4.074 ± 0.229
photometric centroid source offset	2.18 ± 0.04	55.73	0.44 ± 0.03	2.13 ± 0.04

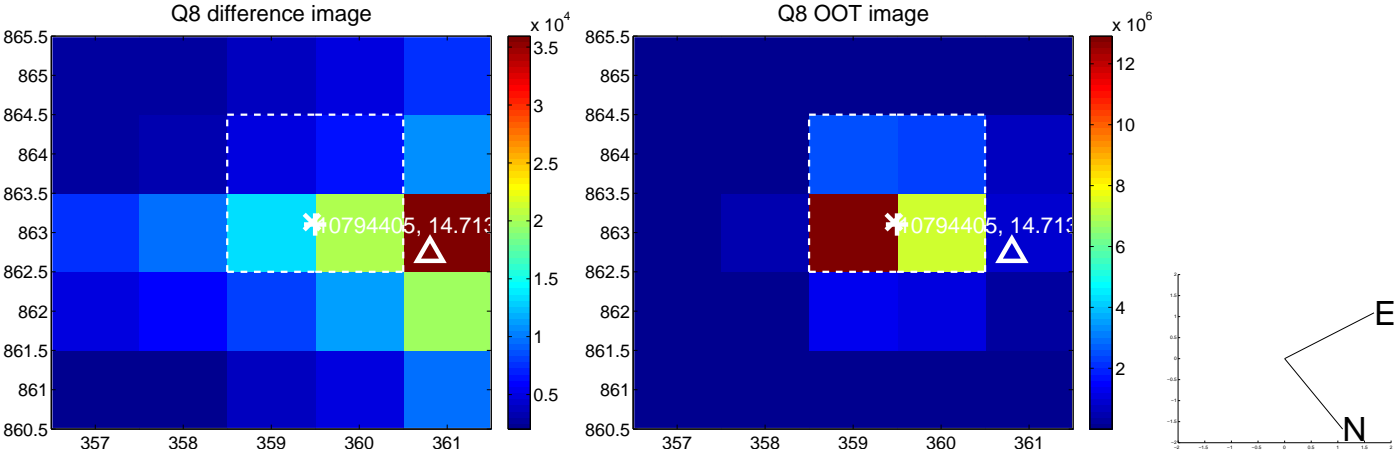
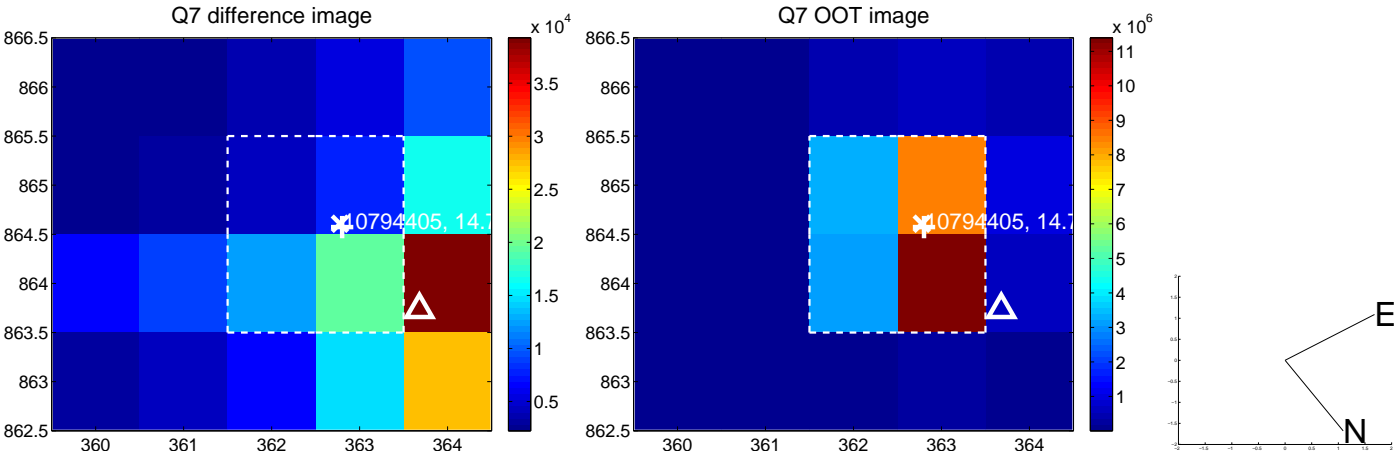
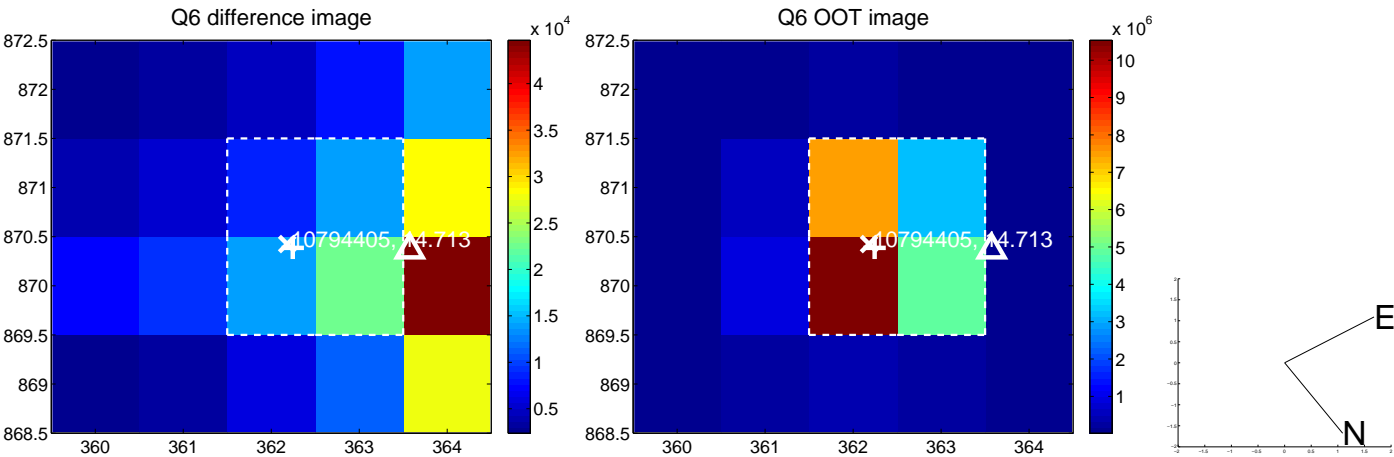
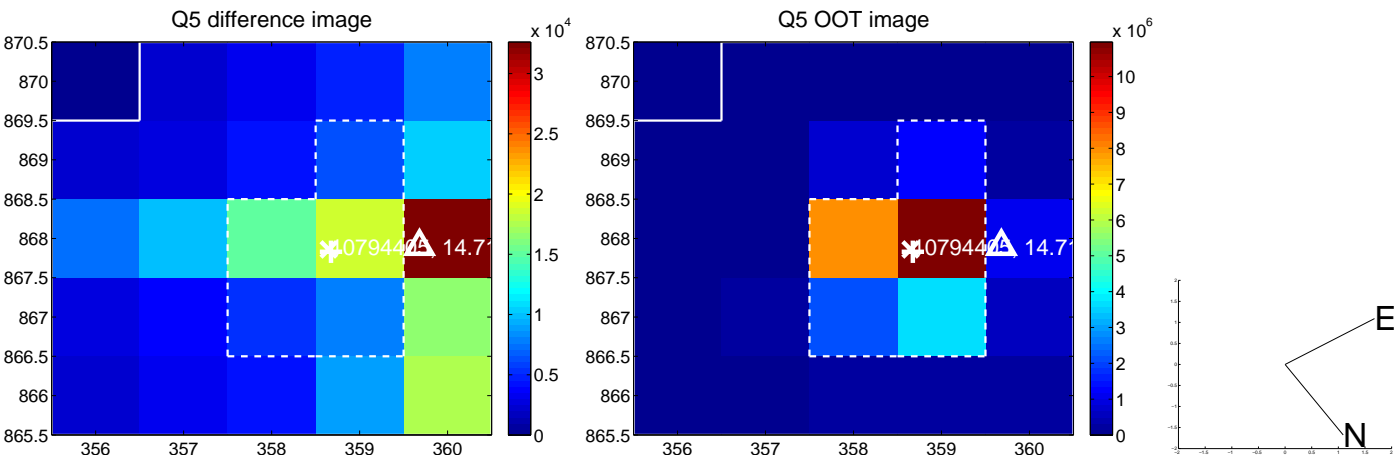


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

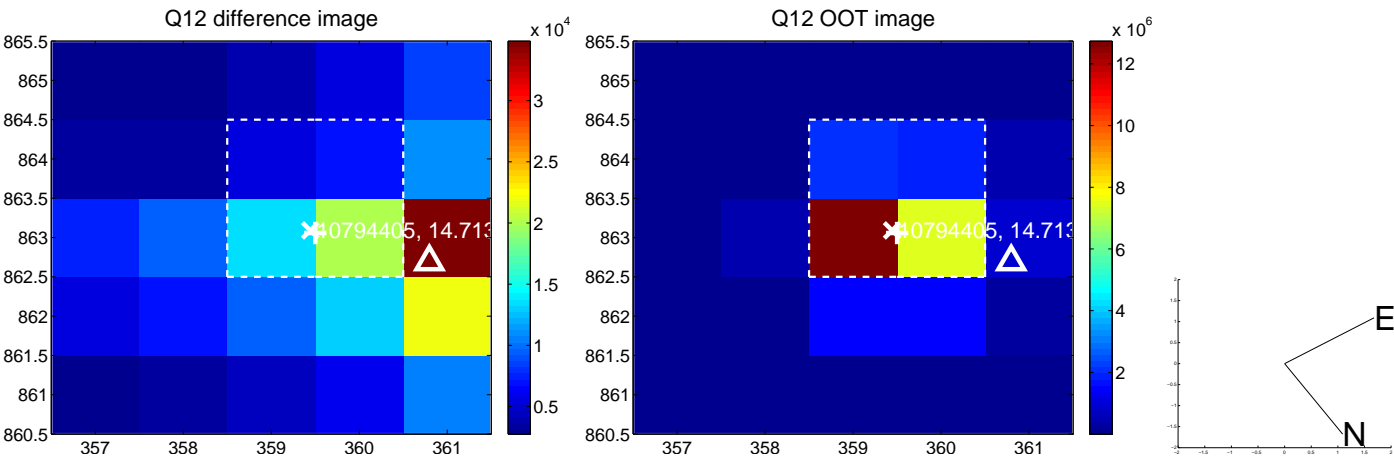
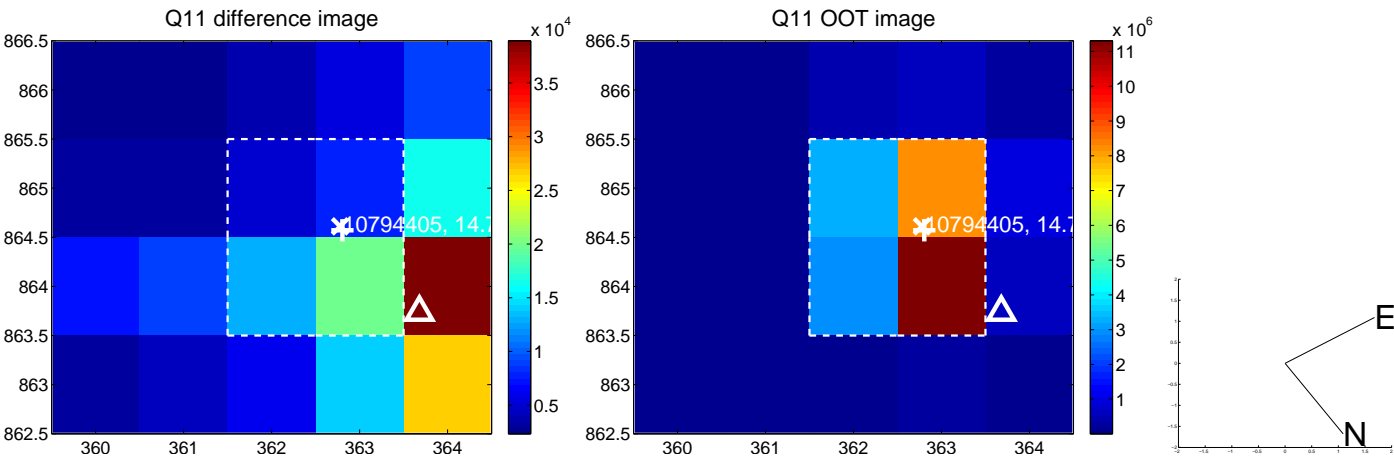
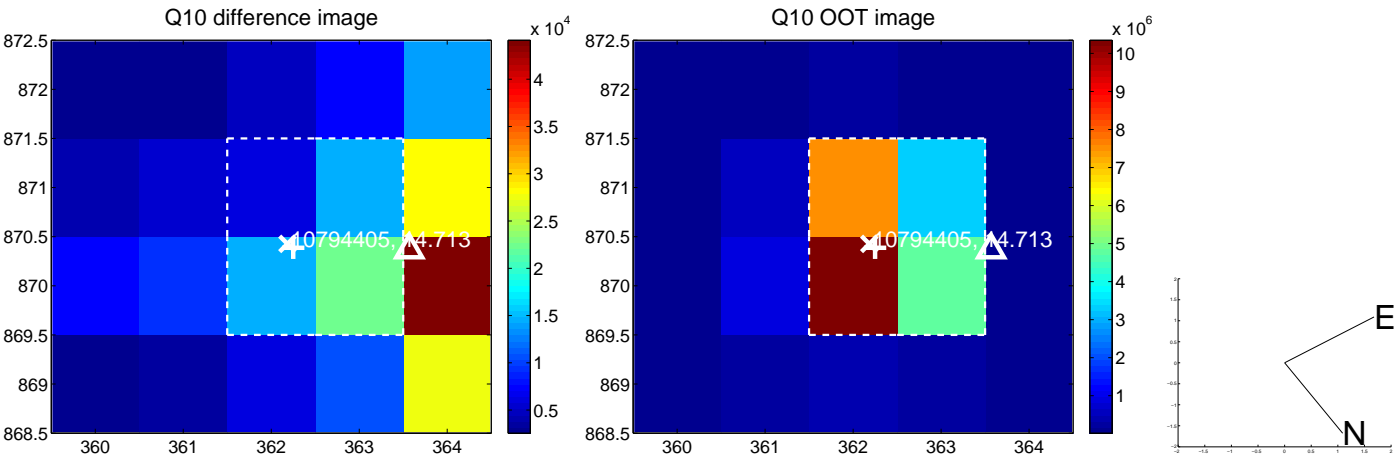
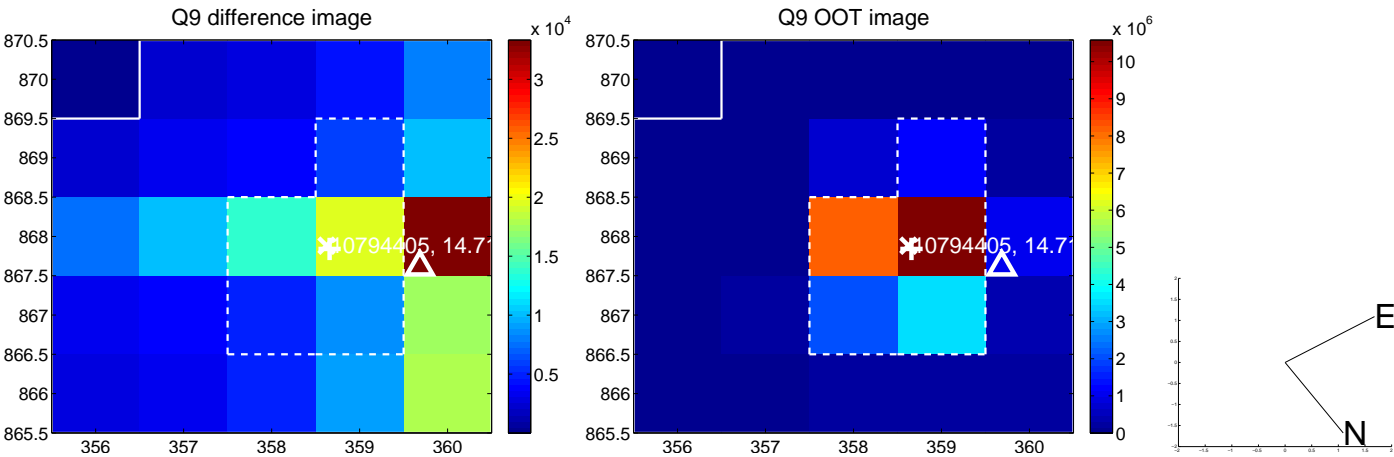
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



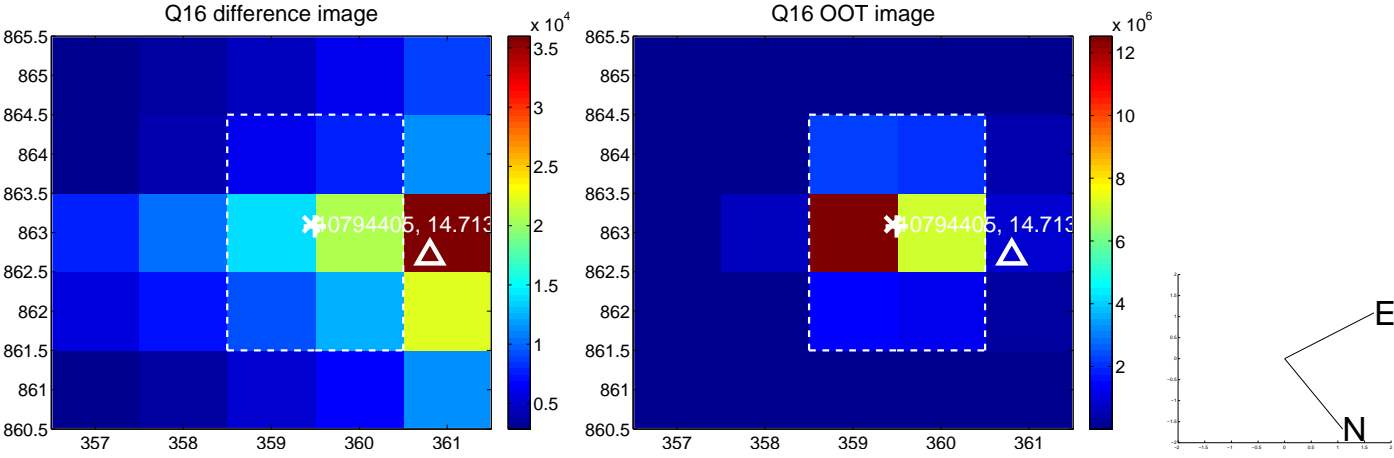
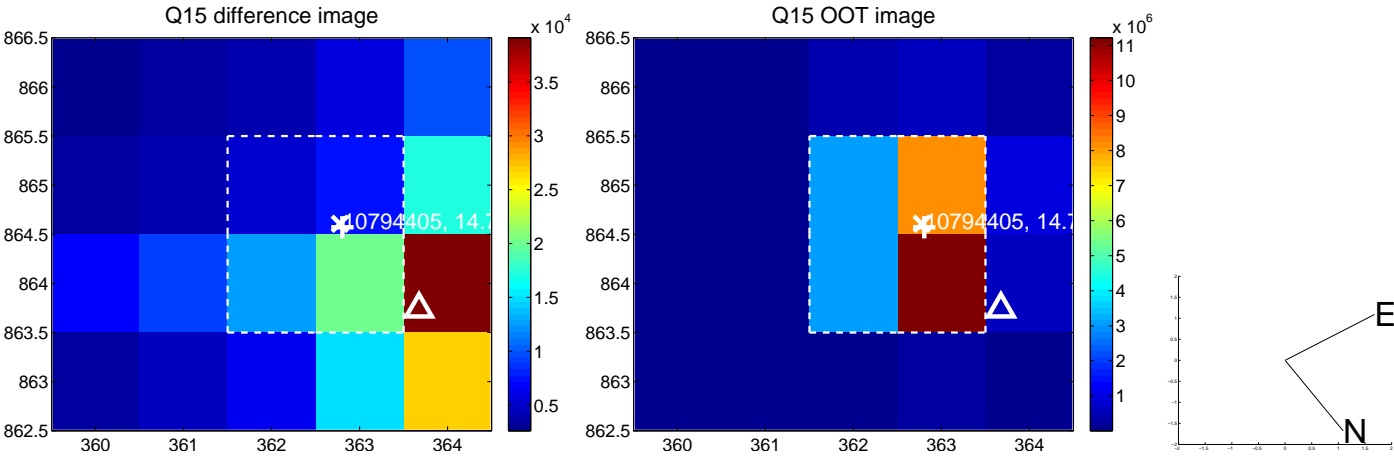
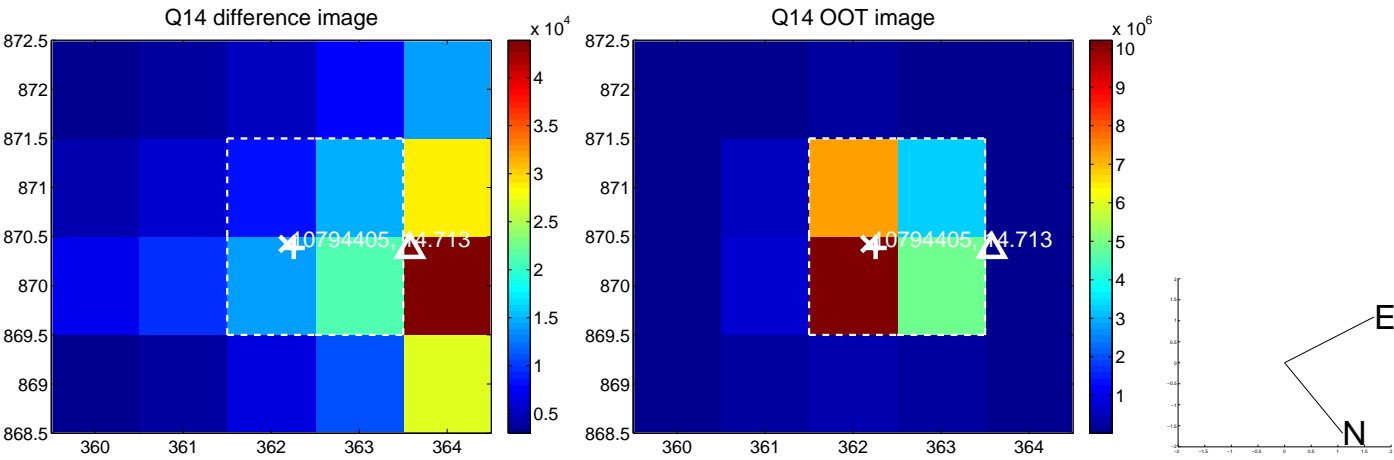
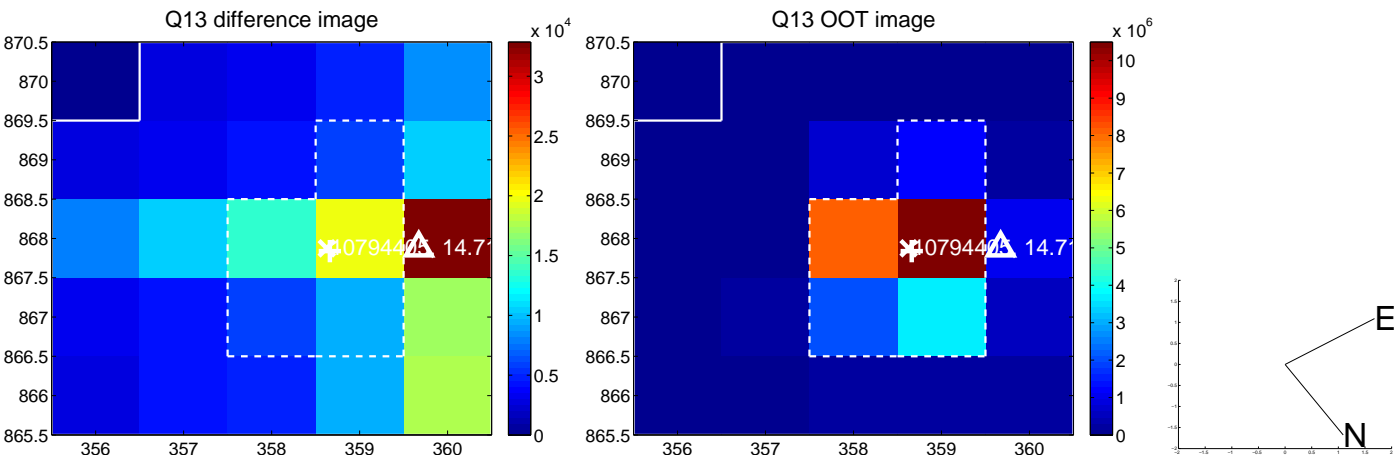
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



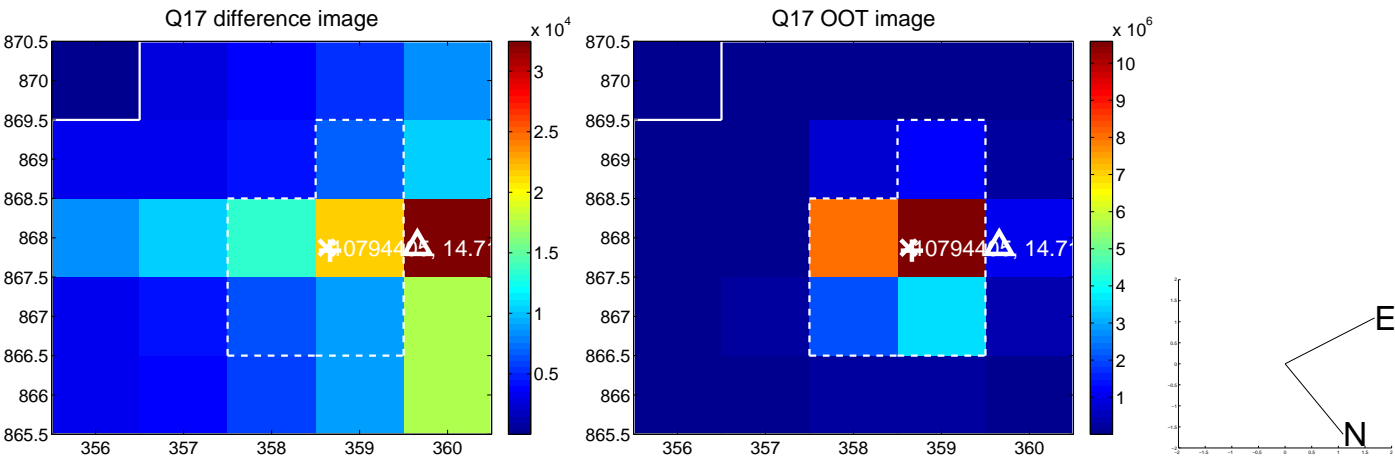
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



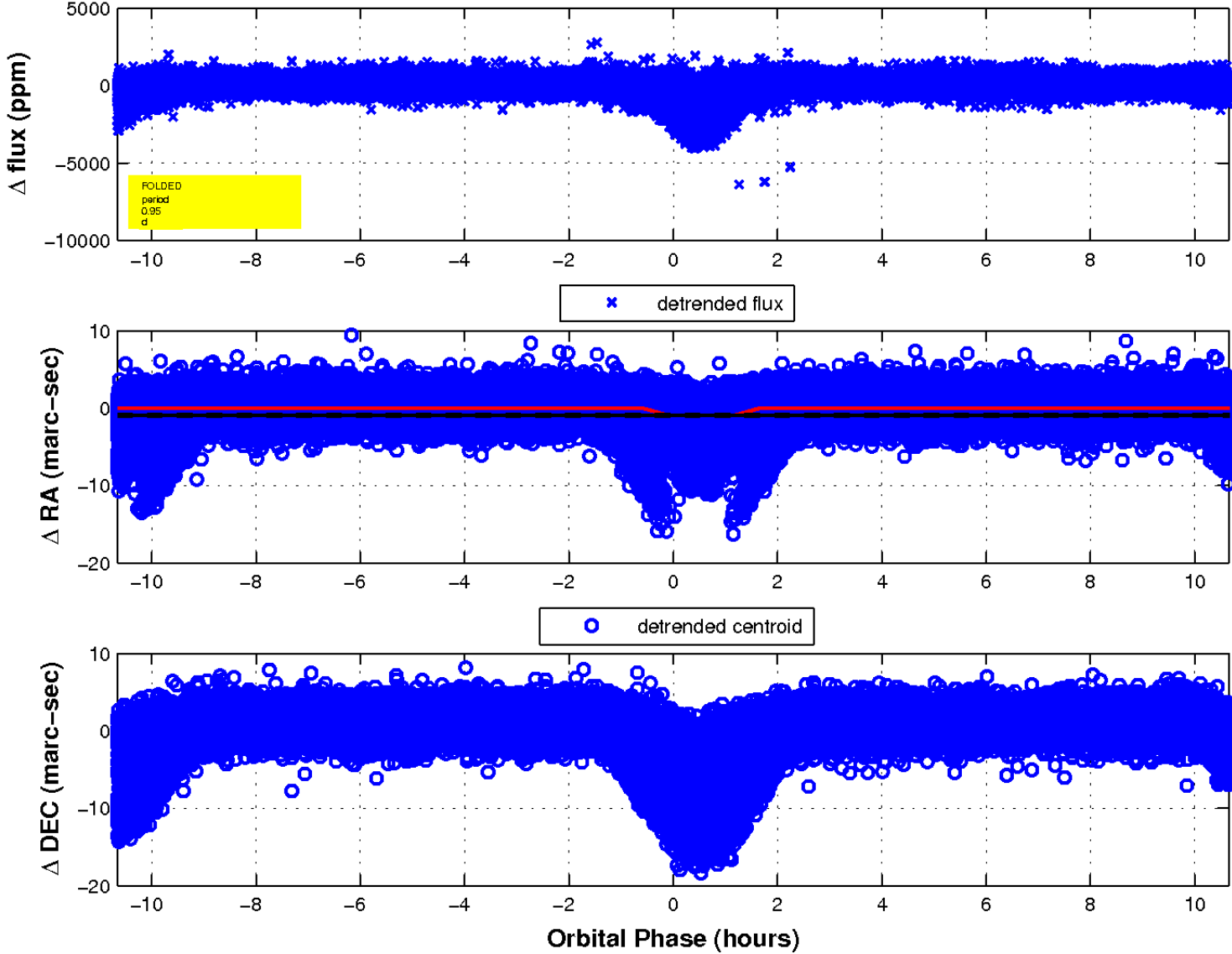
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

