

KIC 004264634

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})
004264634-01	OBS	No	0.886596	132.301867	26.1	4.144	9.2	3.8	0.55	3940	0.28	293.42
004264634-03	OBS	No	143.242928	214.903682	784.0	9.554	10.2	7.0	0.55	3940	1.62	0.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004264634-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
004264634-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

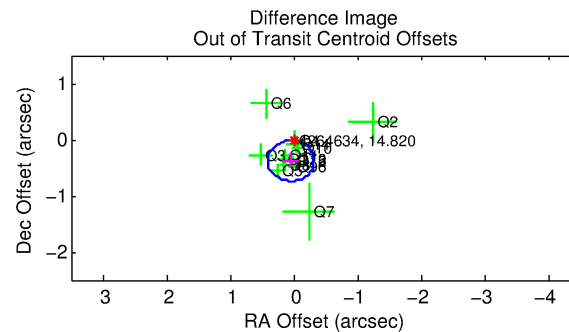
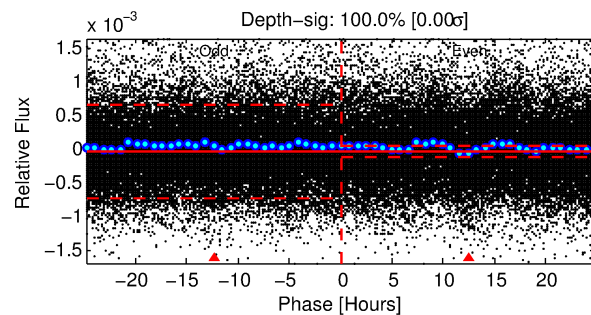
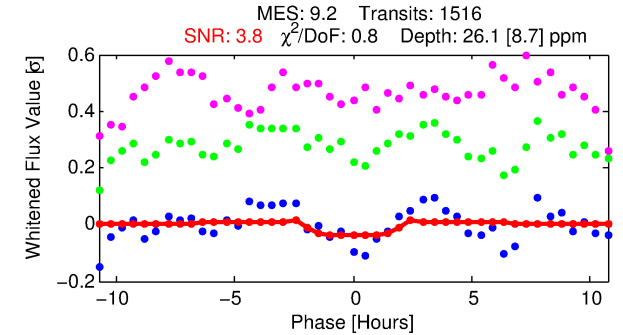
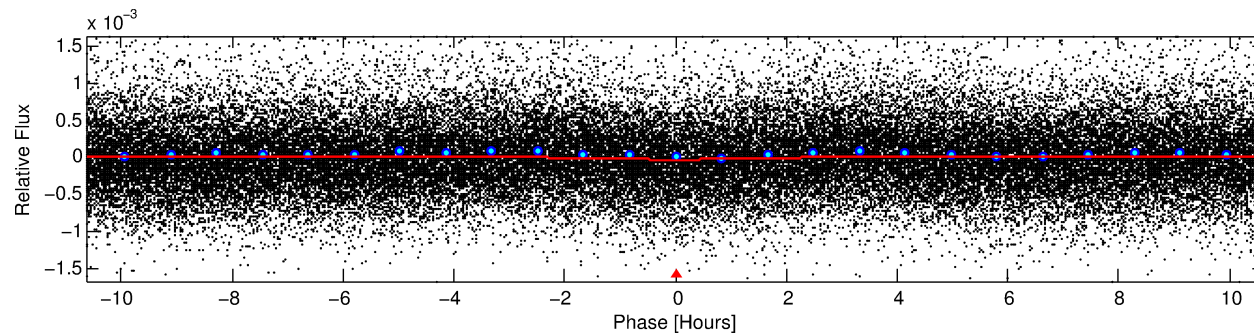
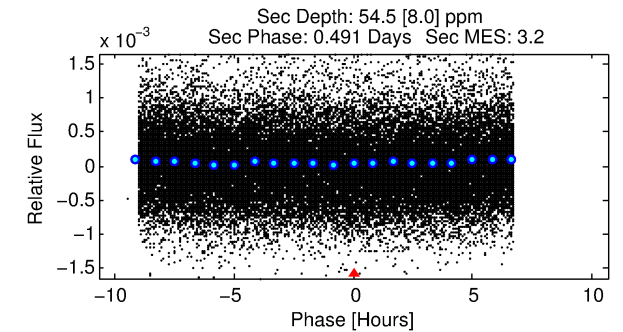
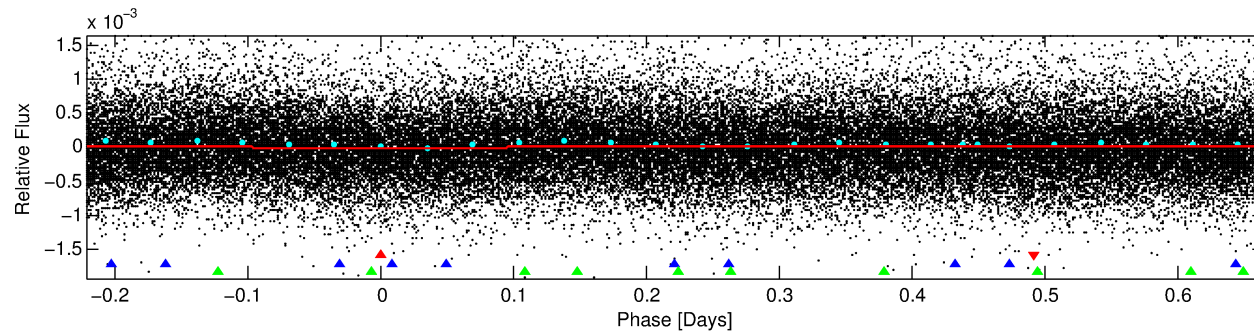
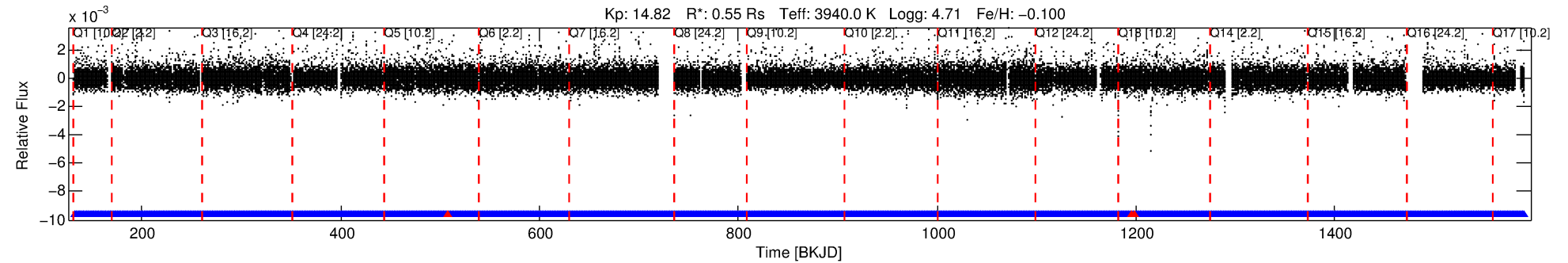
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004264634-01

No Significant Match Found

DV One-Page Summary

KIC: 4264634 Candidate: 1 of 3 Period: 0.887 d



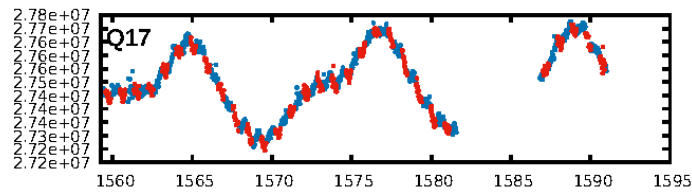
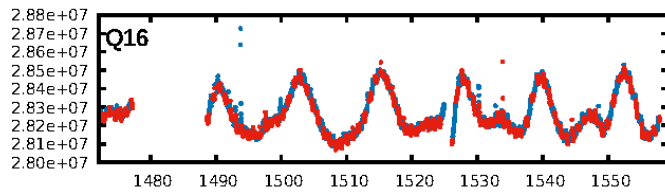
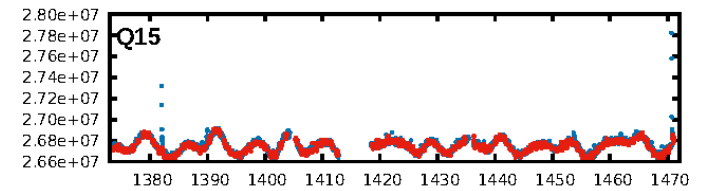
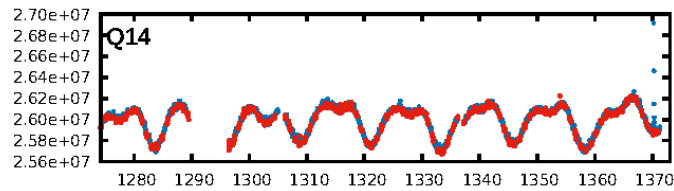
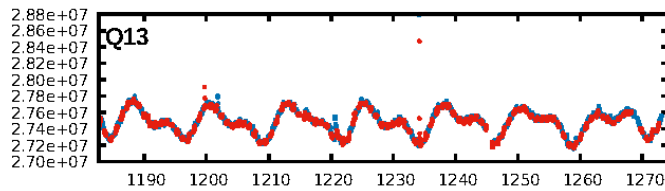
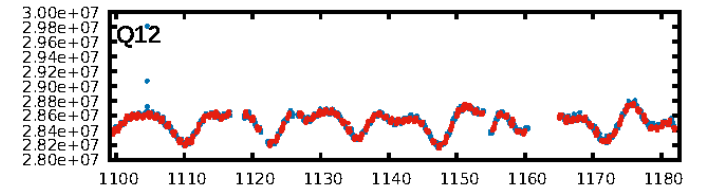
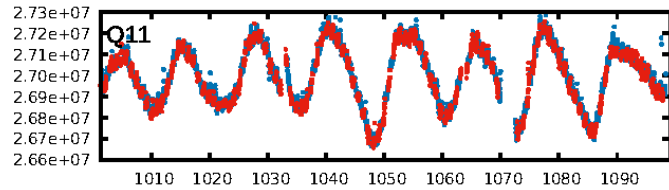
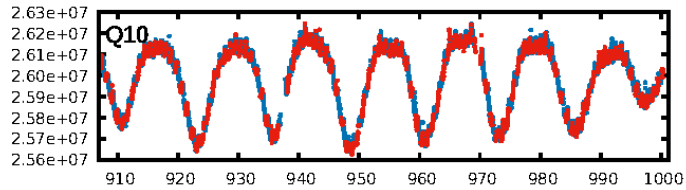
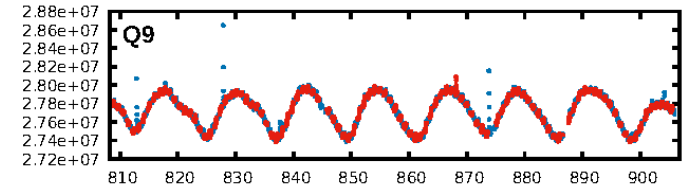
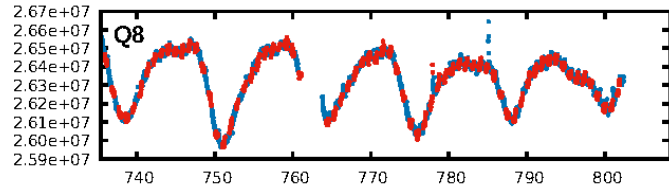
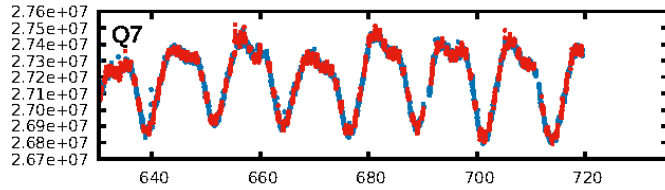
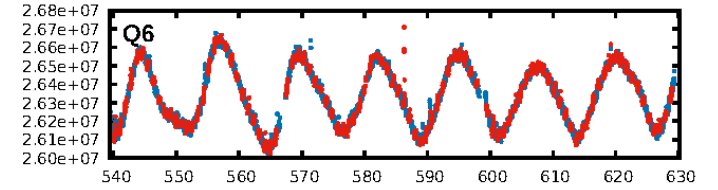
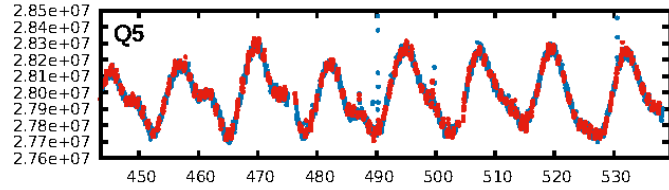
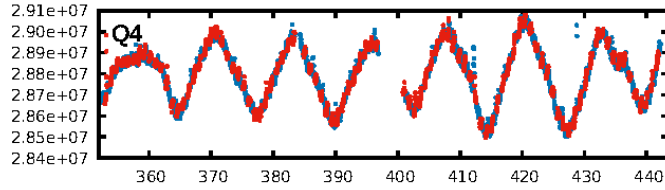
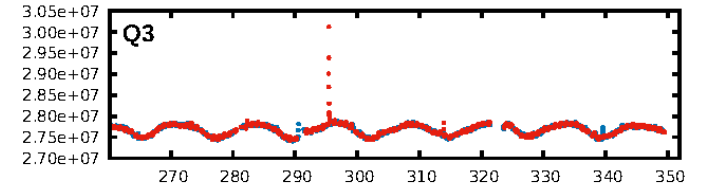
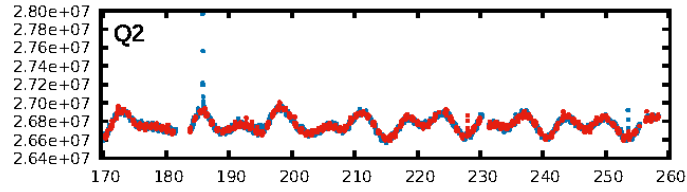
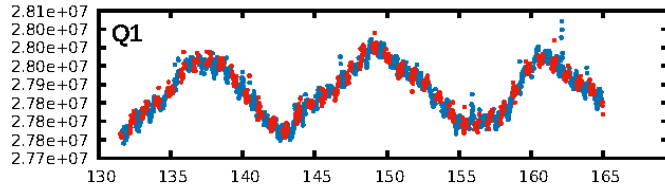
DV Fit Results:

Period = 0.88660 [0.00003] d
Epoch = 132.3019 [0.0092] BKJD
Rp/R* = 0.0047 [0.0079]
a/R* = 1.70 [7.65]
b = 0.30 [21.19]
Seff = 293.42 [30.68]
Teff = 1055 [28] K
Rp = 0.28 [0.48] Re
a = 0.0149 [0.0006] AU
Ag = 85.35 [290.99] [0.29 σ]
Teffp = 4960 [4228] K [0.92 σ]

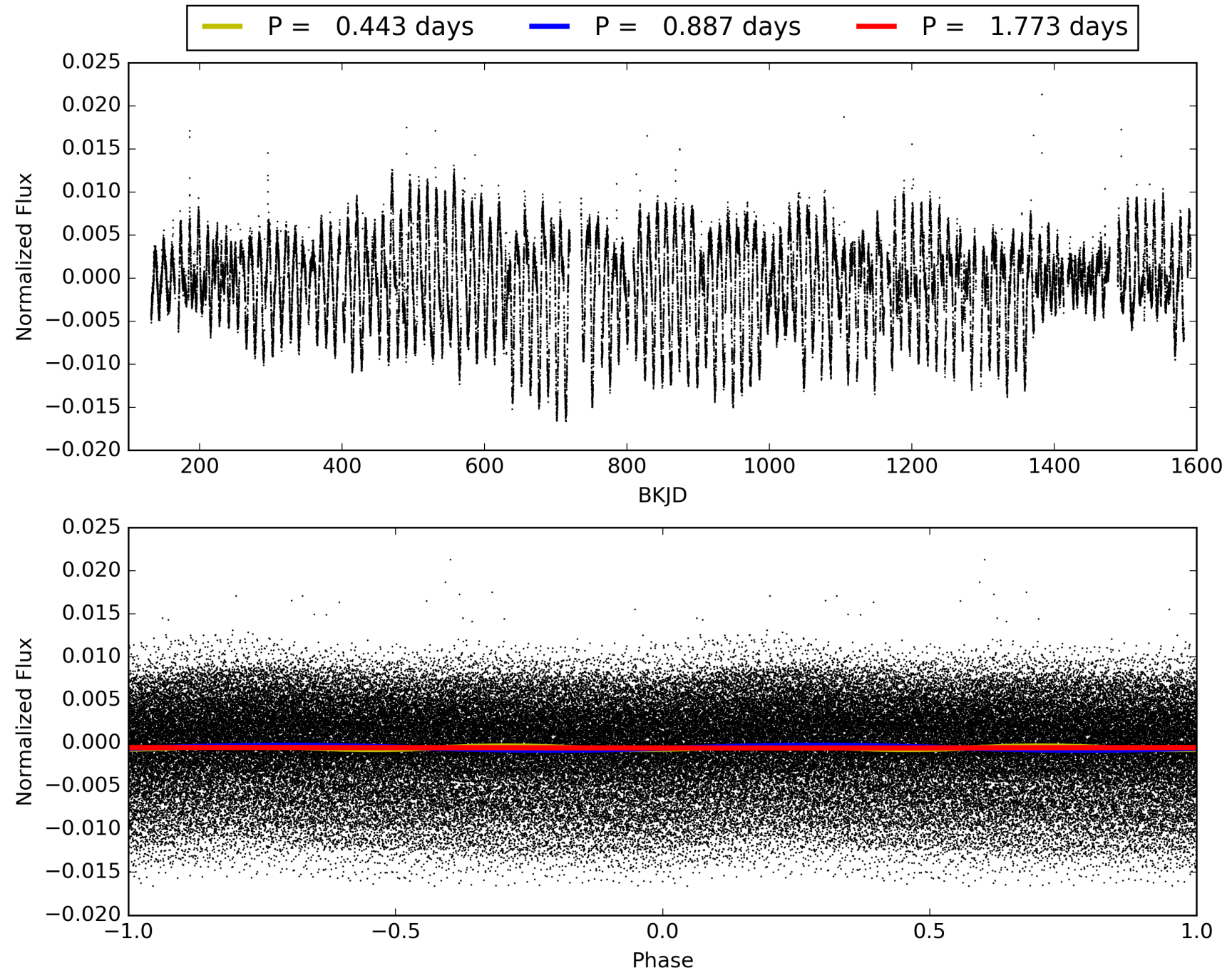
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [328.07 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.06e-18
RollingBand-fgt: 1.00 [1446/1449]
GhostDiagnostic-chr: 1.165
Centroid-sig: 0.0%
Centroid-so: 4.646 arcsec [1.69 σ]
OotOffset-rm: 0.380 arcsec [3.14 σ]
KicOffset-rm: 0.755 arcsec [6.87 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004264634-01, PDC Light Curves

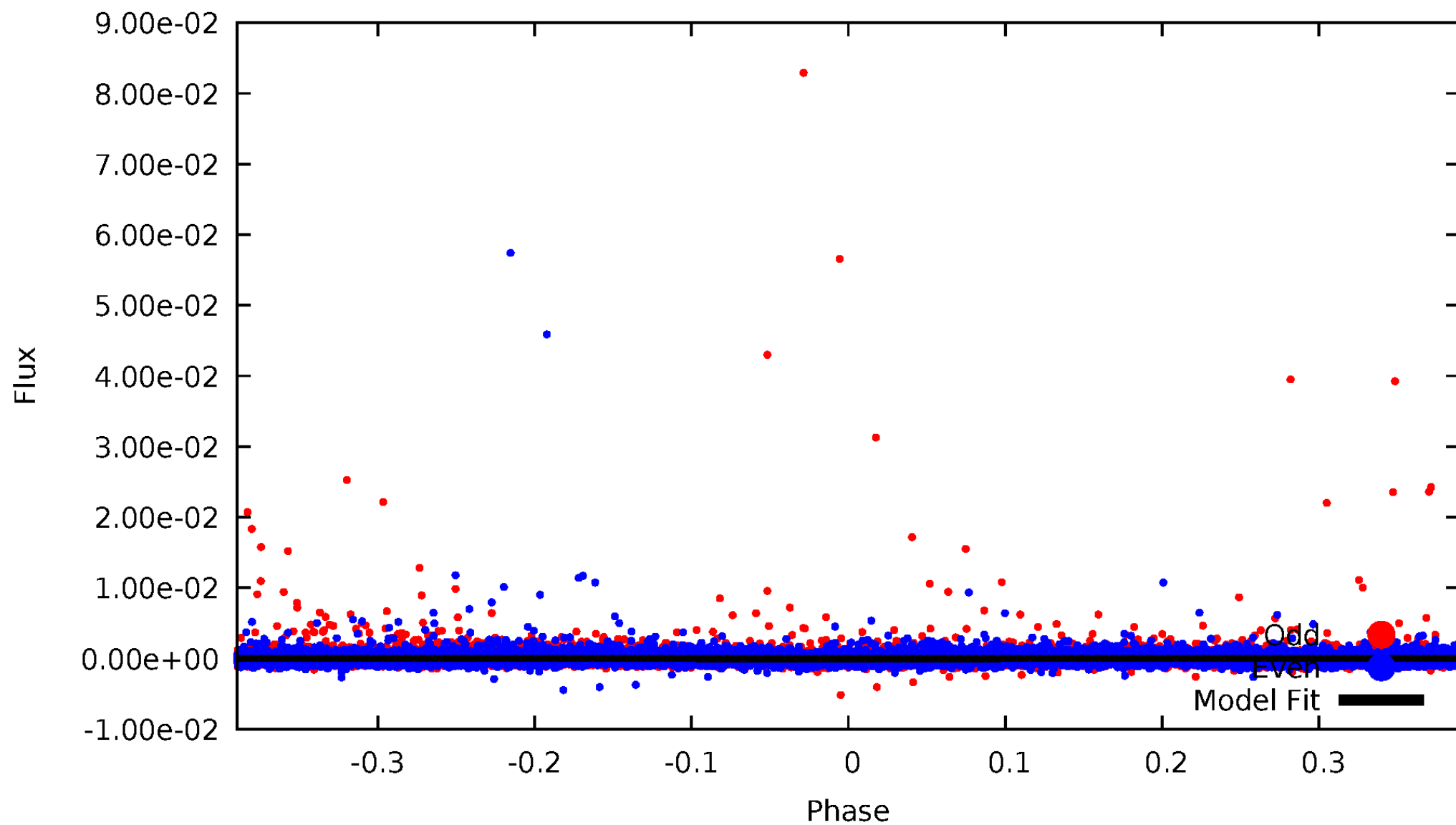


TCE 004264634-01



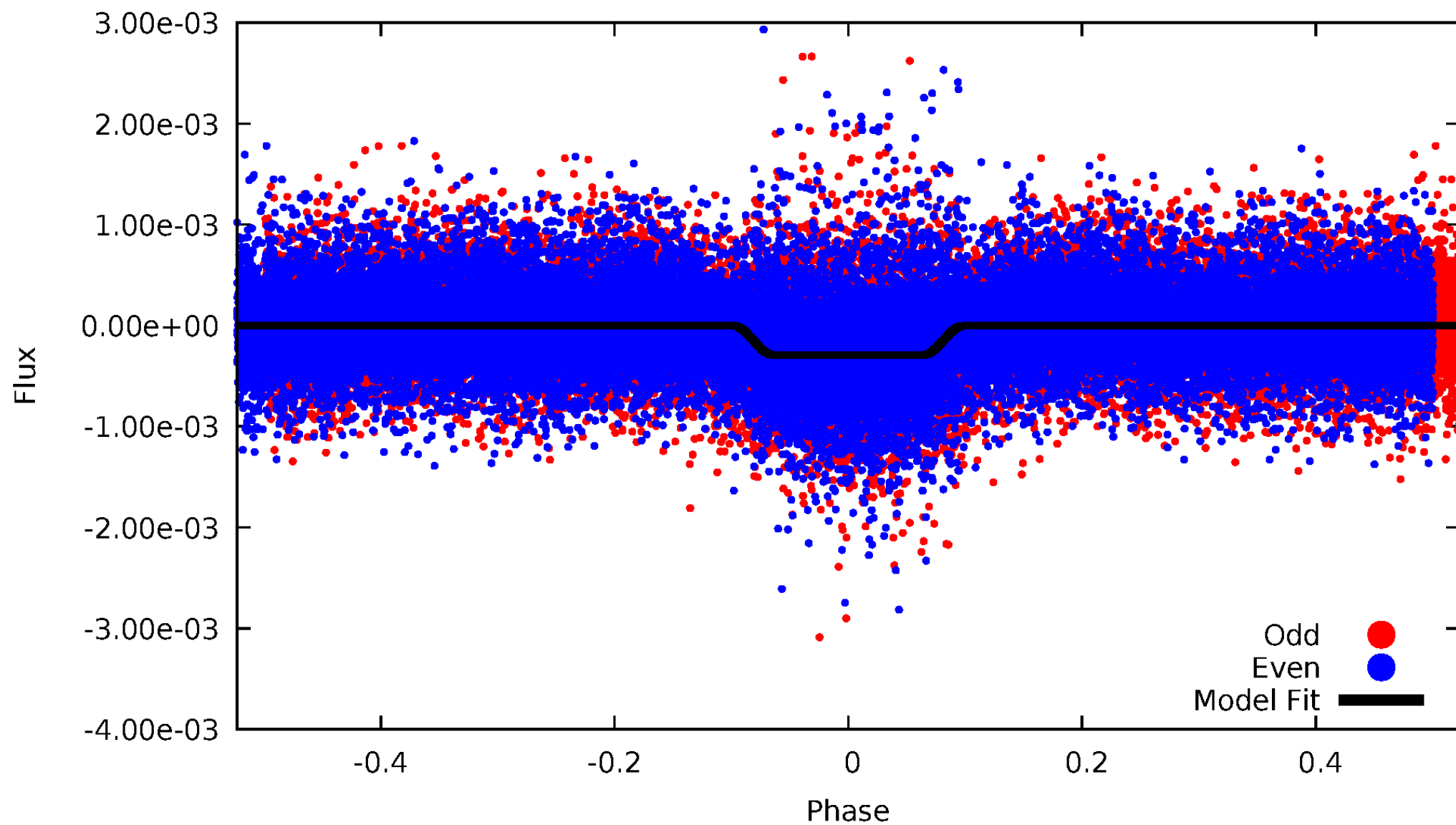
DV Odd/Even

TCE 004264634-01



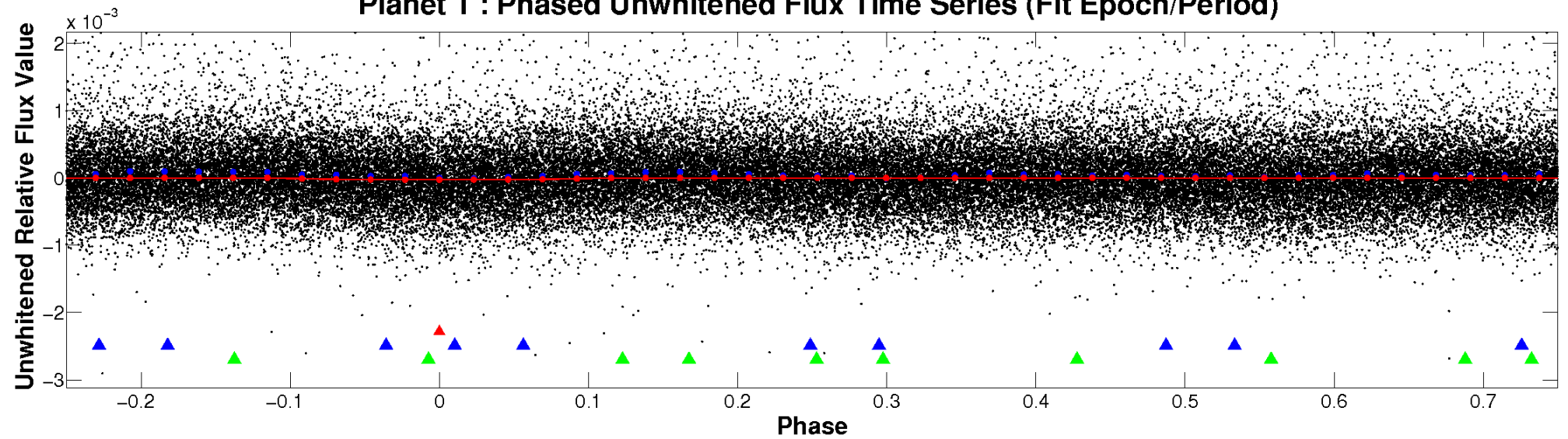
ALT Odd/Even

TCE 004264634-01

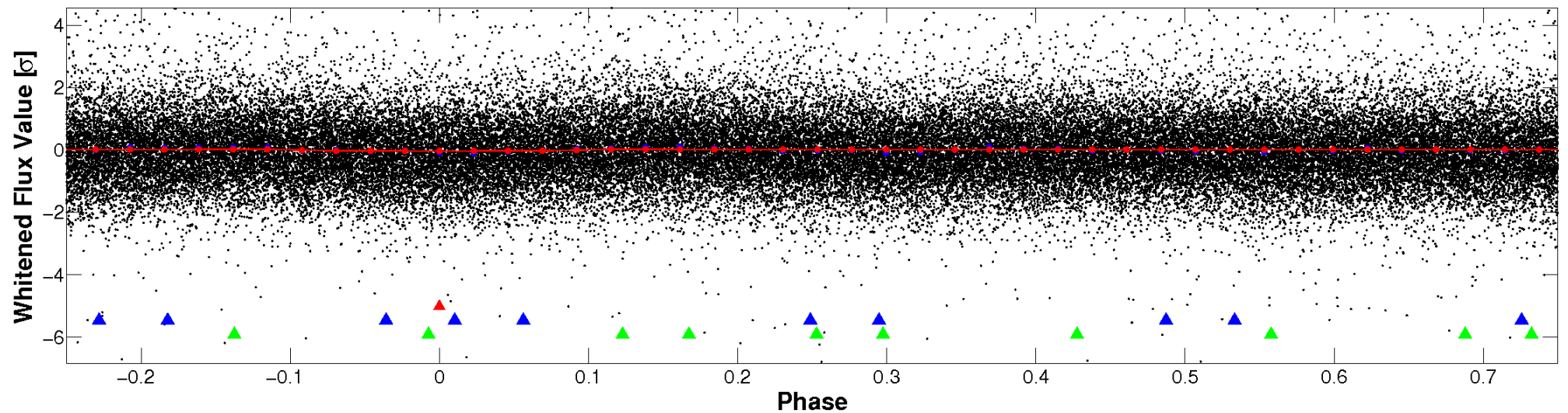


Non-Whitened Vs. Whitened Light Curve

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

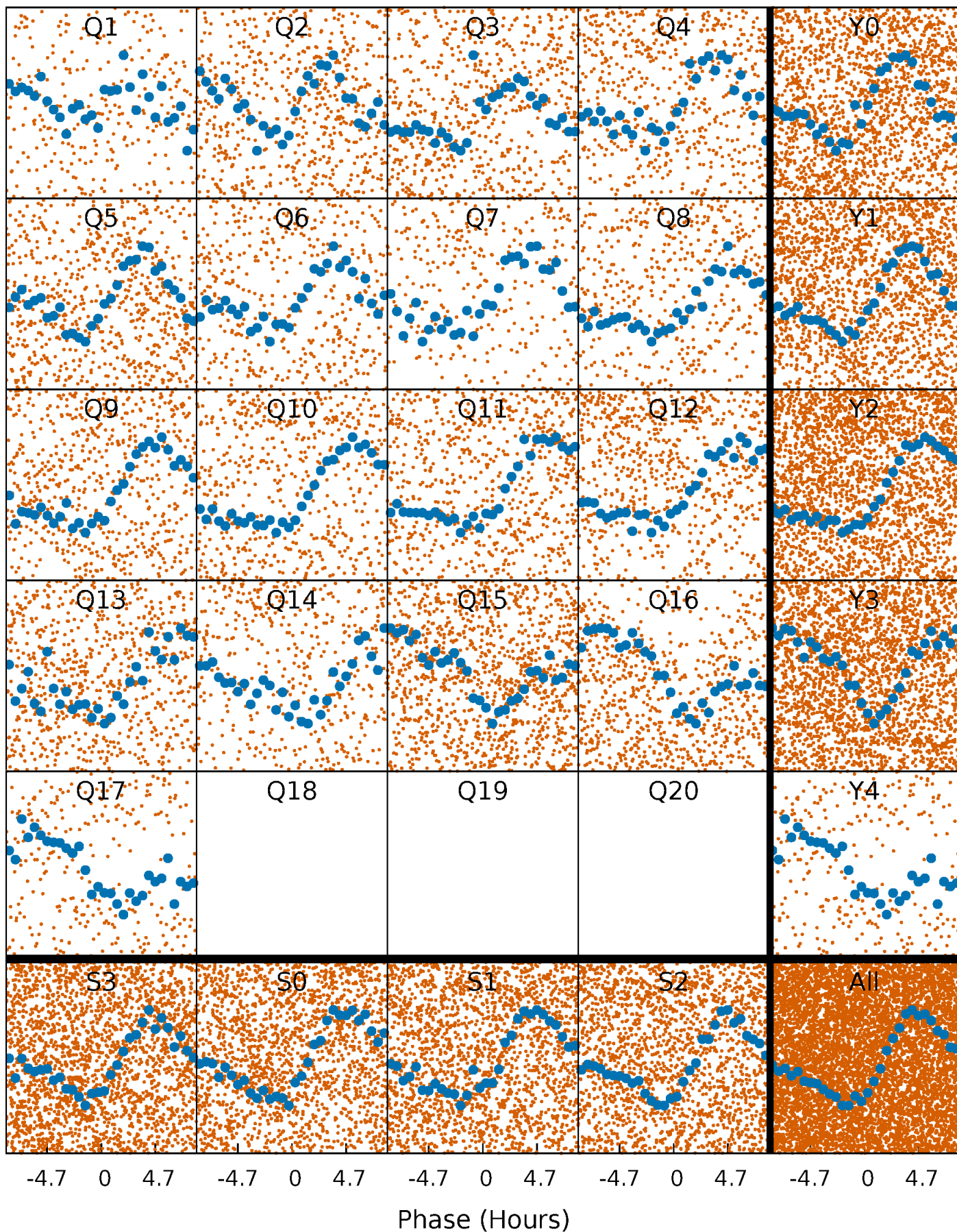


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



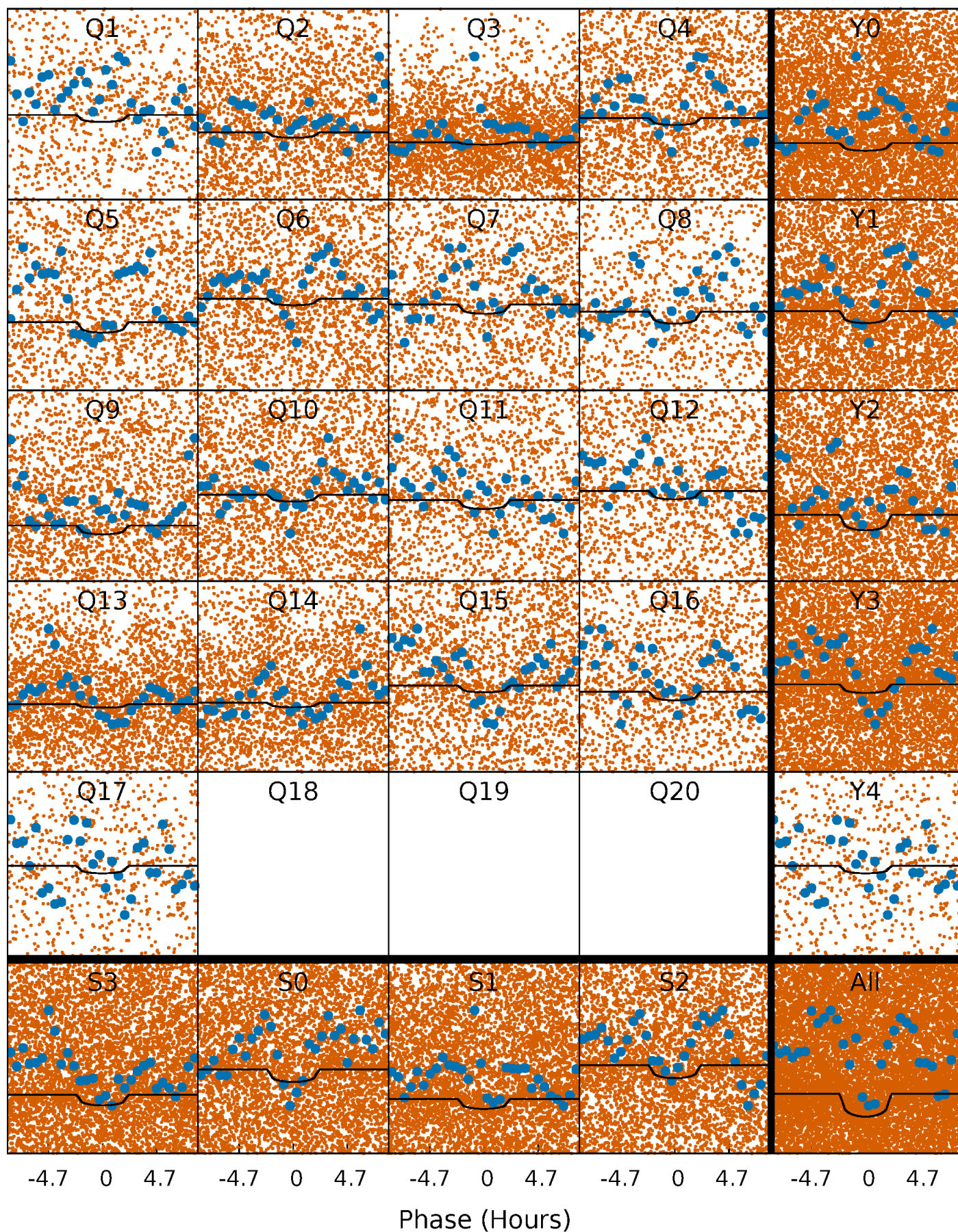
PDC Quarter-Phased Transit Curves

TCE 004264634-01 P= 0.886596 Days $T_0=132.301867$ (BKJD)



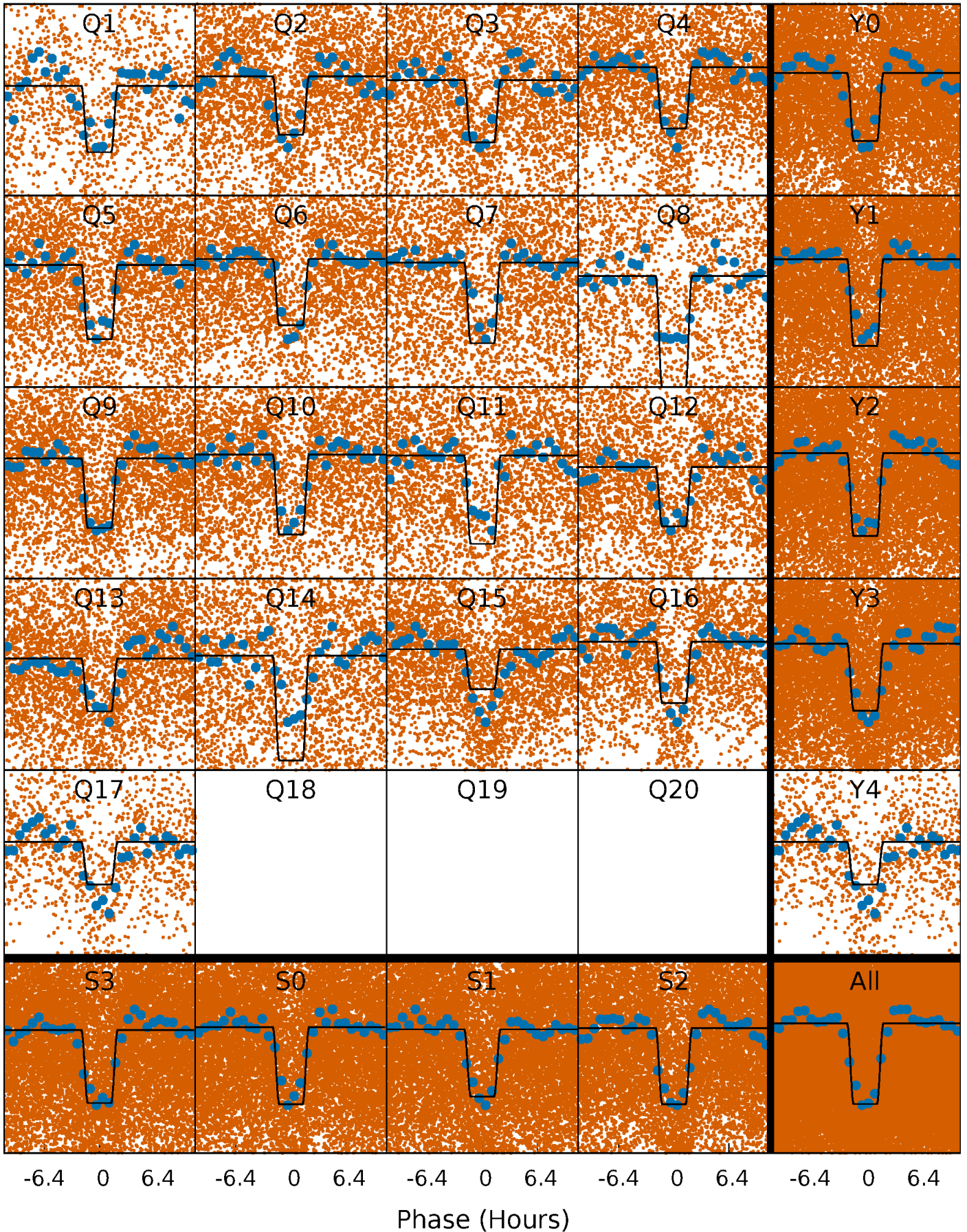
DV Quarter-Phased Transit Curves

TCE 004264634-01 P= 0.886596 Days $T_0=132.301867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

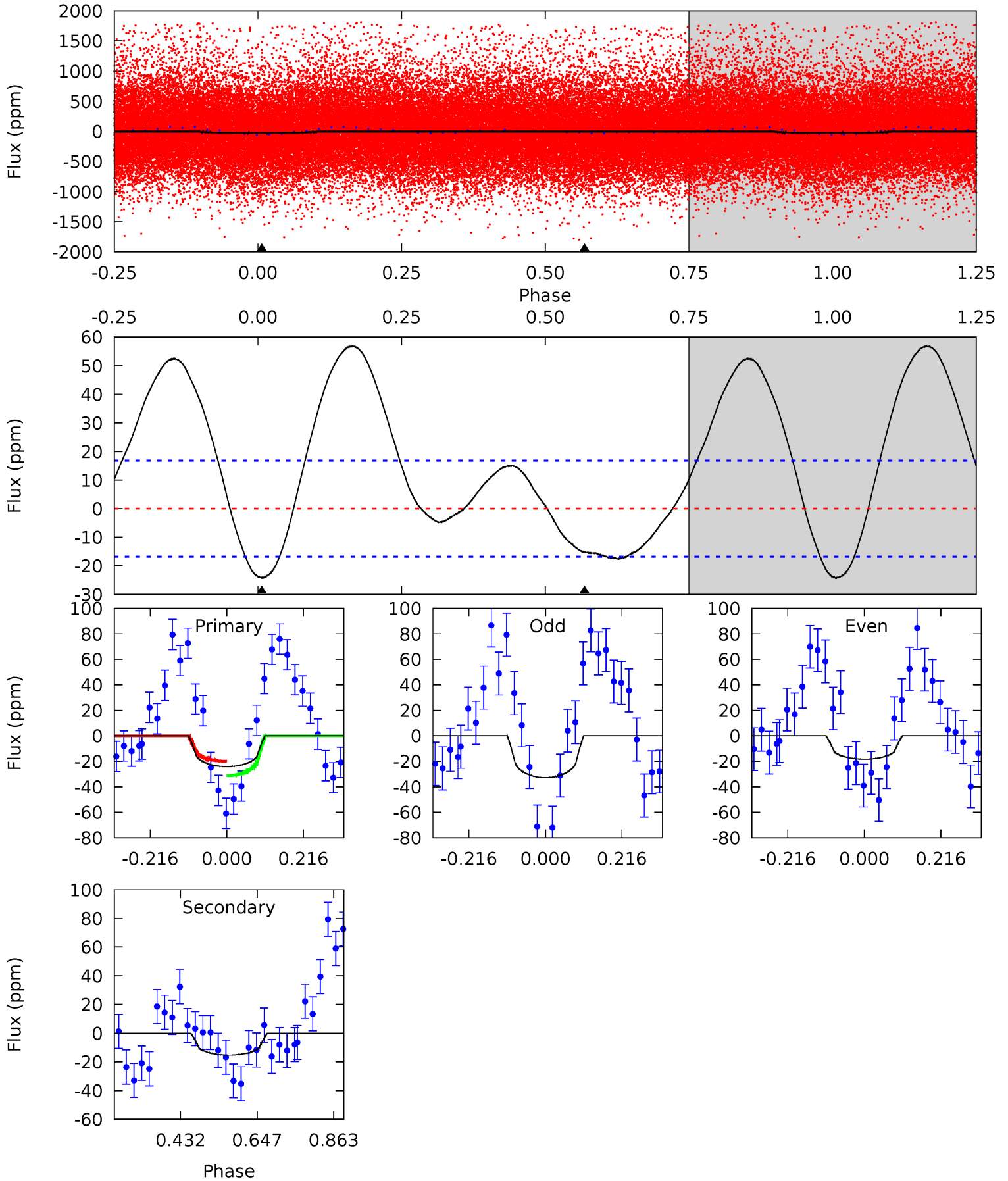
TCE 004264634-01 P= 0.886643 Days $T_0=132.262189$ (BKJD)



DV Model-Shift Uniqueness Test

004264634-01, P = 0.886596 Days, E = 131.415271 Days

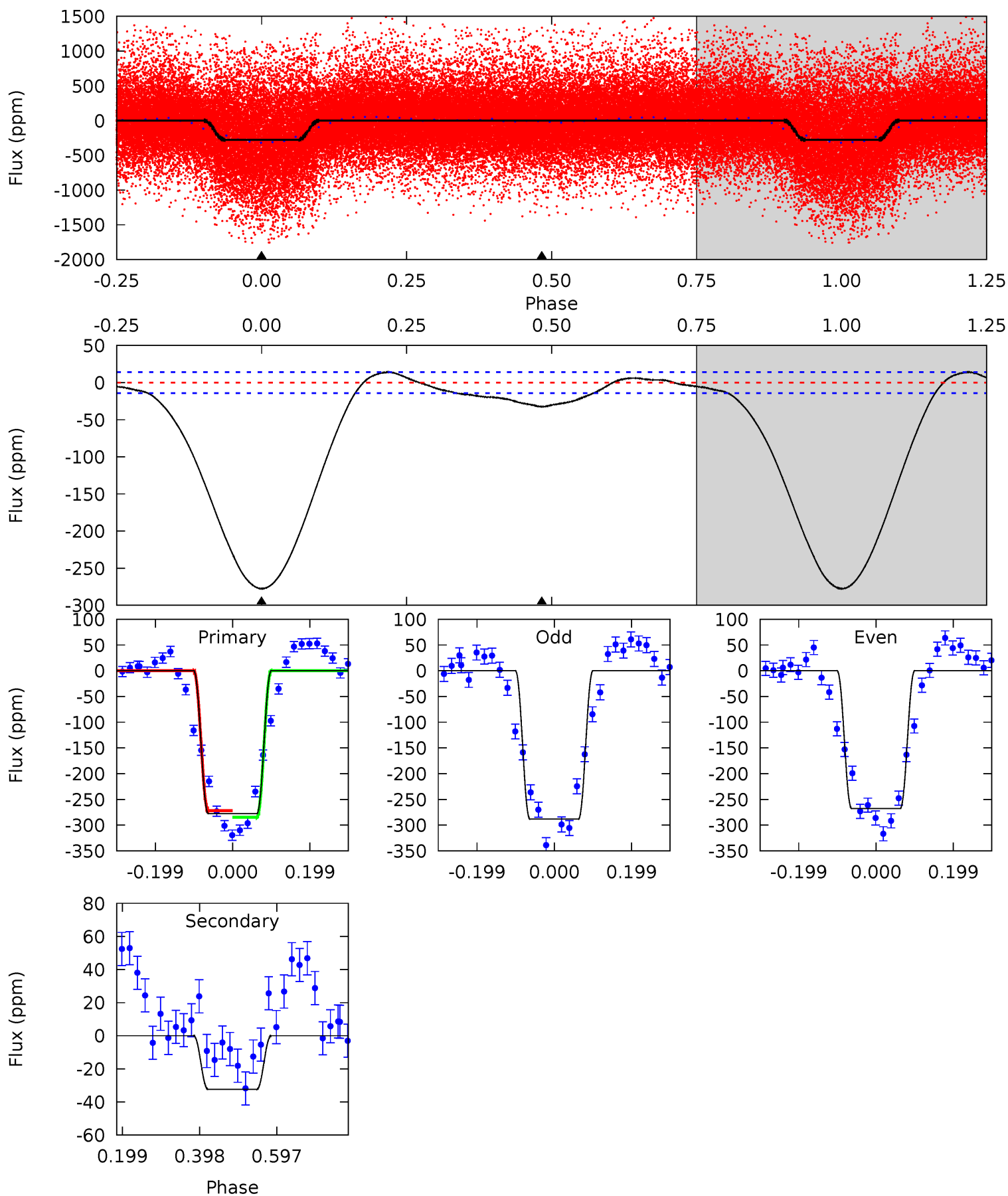
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.34	4.00	0	0	4.40	1.24	3.12	6.34	6.34	4.00	4.00	1.90	-2.16	0.70	1.47



Alt Model-Shift Uniqueness Test

004264634-01, P = 0.886643 Days, E = 131.375546 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.5	10.1	0	0	4.42	1.28	2.43	86.5	86.5	10.1	10.1	3.22	0.97	0.05	2.03



Stellar Parameters For KIC 004264634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3940^{+79}_{-87}	$4.708^{+0.027}_{-0.022}$	$-0.100^{+0.100}_{-0.100}$	$0.550^{+0.025}_{-0.031}$	$0.564^{+0.026}_{-0.029}$	$4.767^{+0.577}_{-0.425}$
	+2%/-2%	+1%/-0%	+100%/-100%	+5%/-6%	+5%/-5%	+12%/-9%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 004264634-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 4	$0.44^{+0.40}_{-0.30}$	1475^{+33}_{-35}	3200^{+1637}_{-577}	$9.693^{+82.274}_{-7.241}$
Alt.	-32 ± 3	$1.04^{+0.47}_{-0.47}$	1476^{+32}_{-39}	2764^{+568}_{-269}	$3.622^{+8.989}_{-1.904}$

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

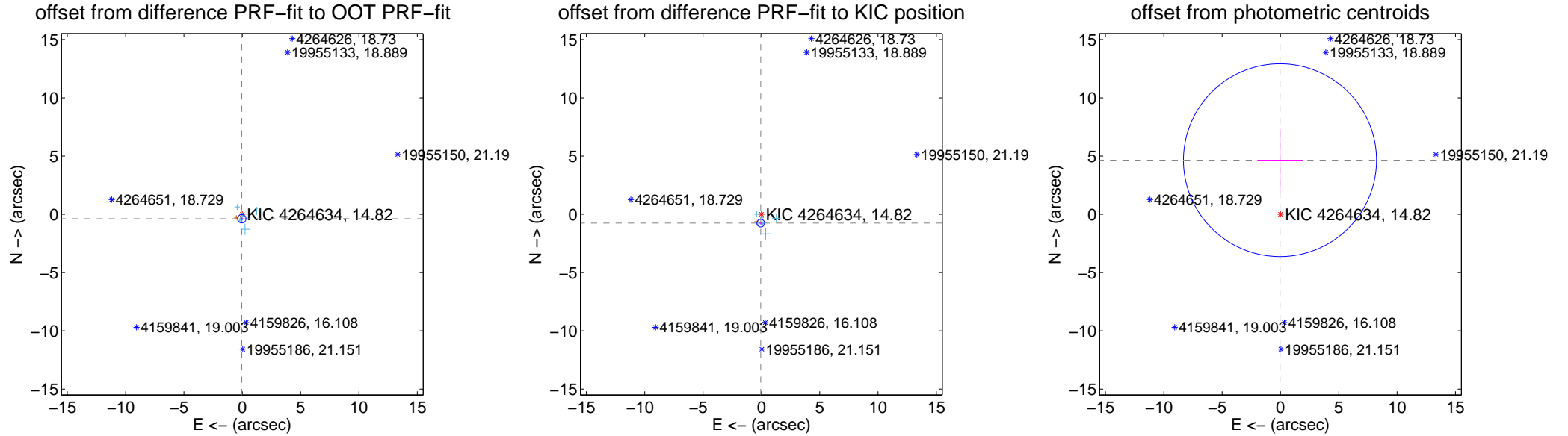
DV Centroid Data

Supplemental centroid analysis for 004264634-01. Kepler magnitude: 14.82. Transit SNR 3.81

There are 15 quarters with good PRF difference image offsets

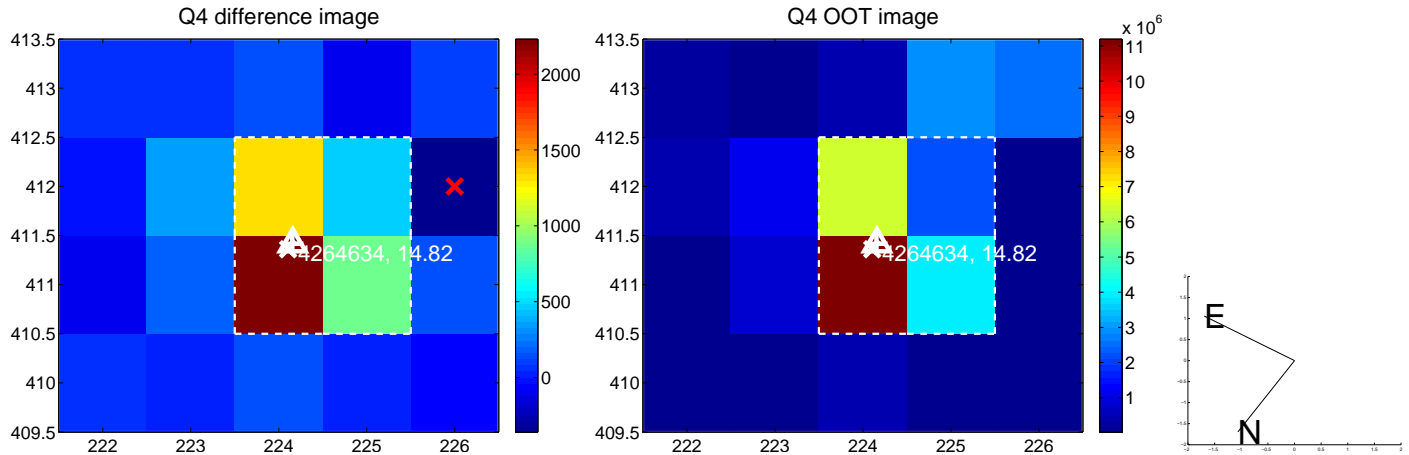
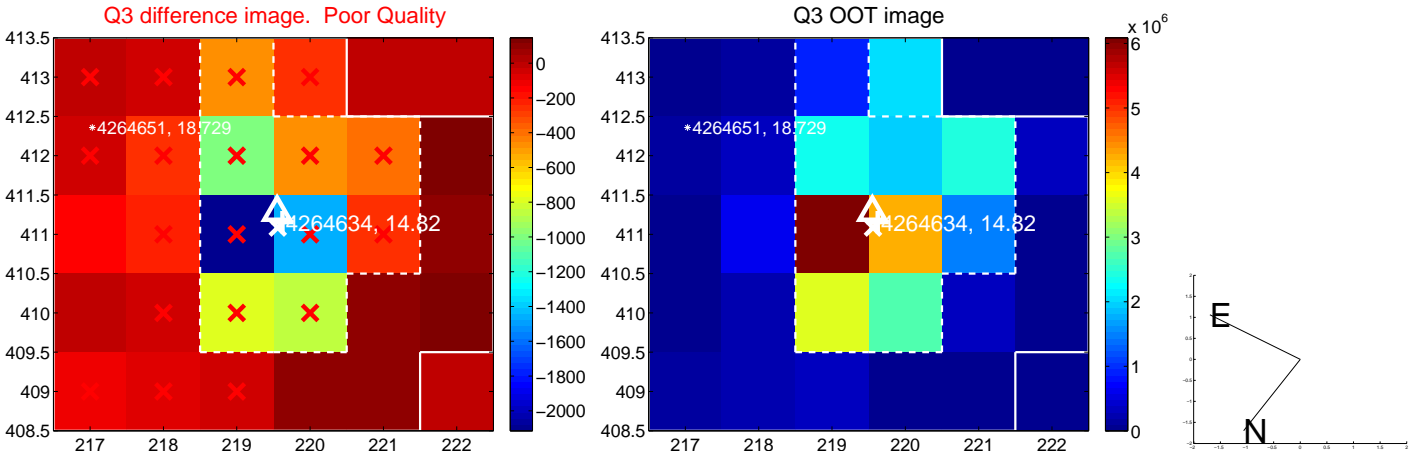
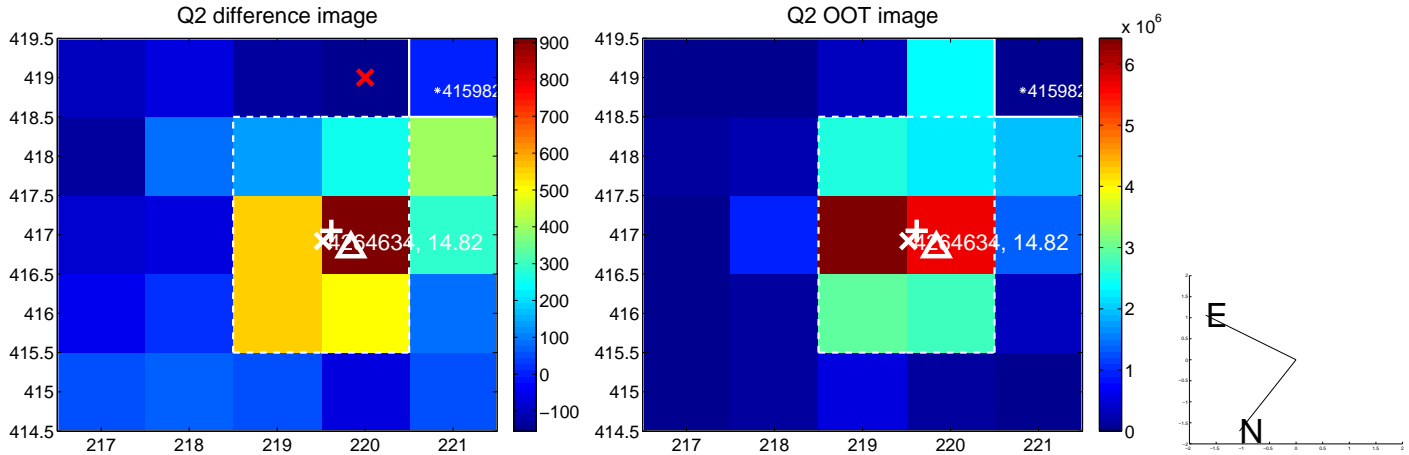
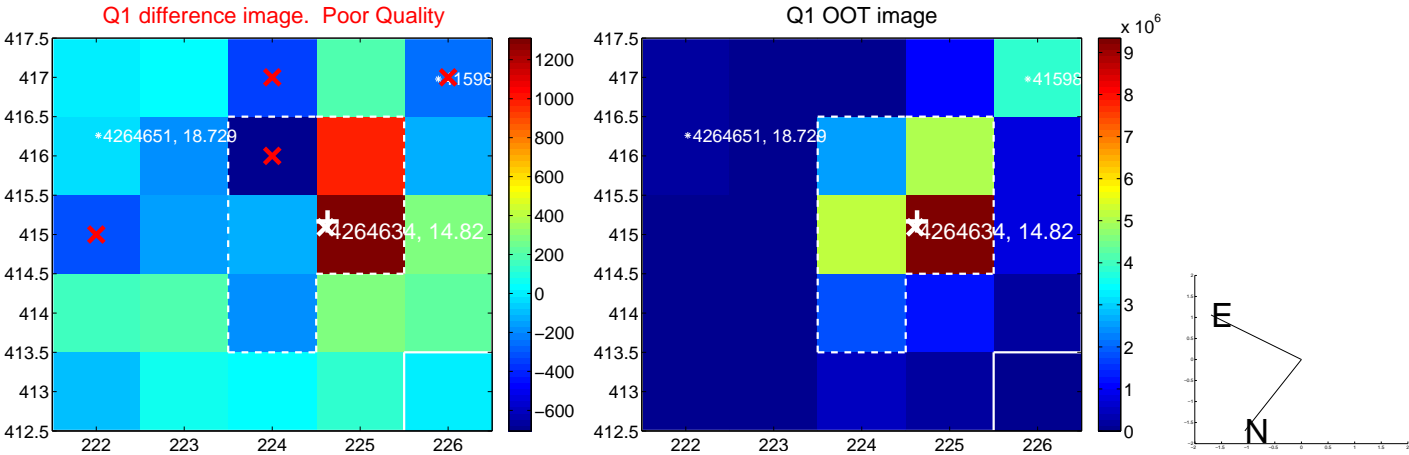
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 ± 0.121	3.14	0.043 ± 0.116	-0.377 ± 0.119
PRF-fit source offset from KIC position	0.755 ± 0.110	6.87	0.054 ± 0.115	-0.753 ± 0.110
photometric centroid source offset	4.65 ± 2.76	1.69	0.04 ± 1.94	4.65 ± 2.76

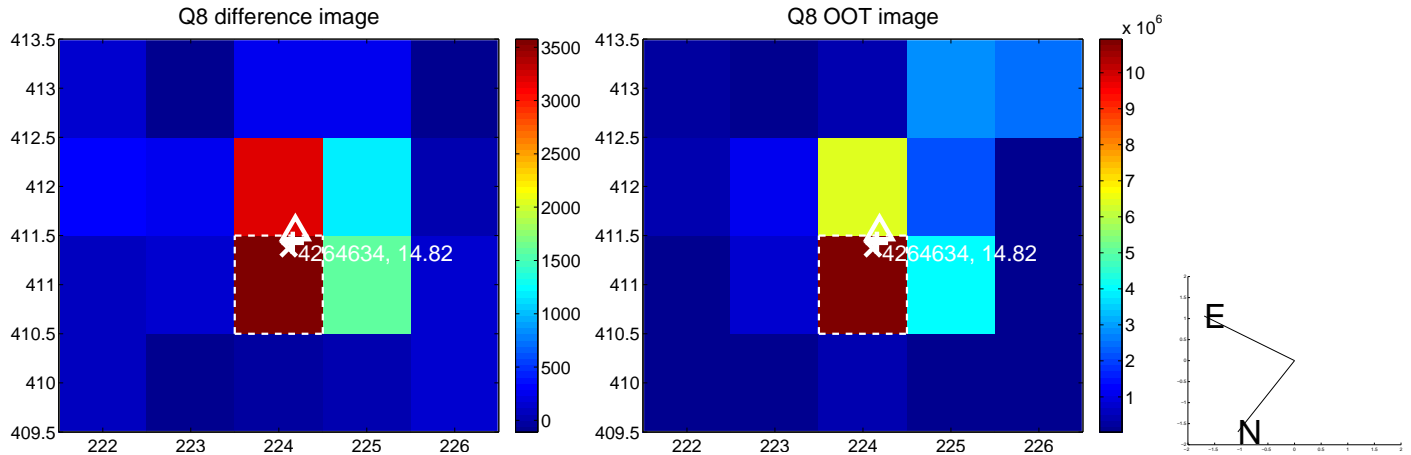
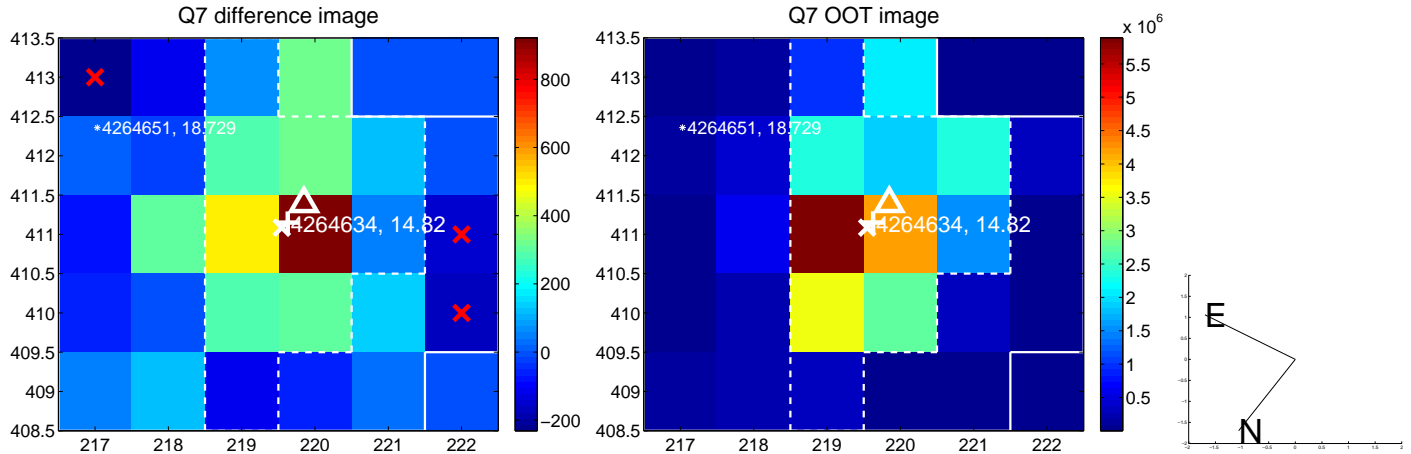
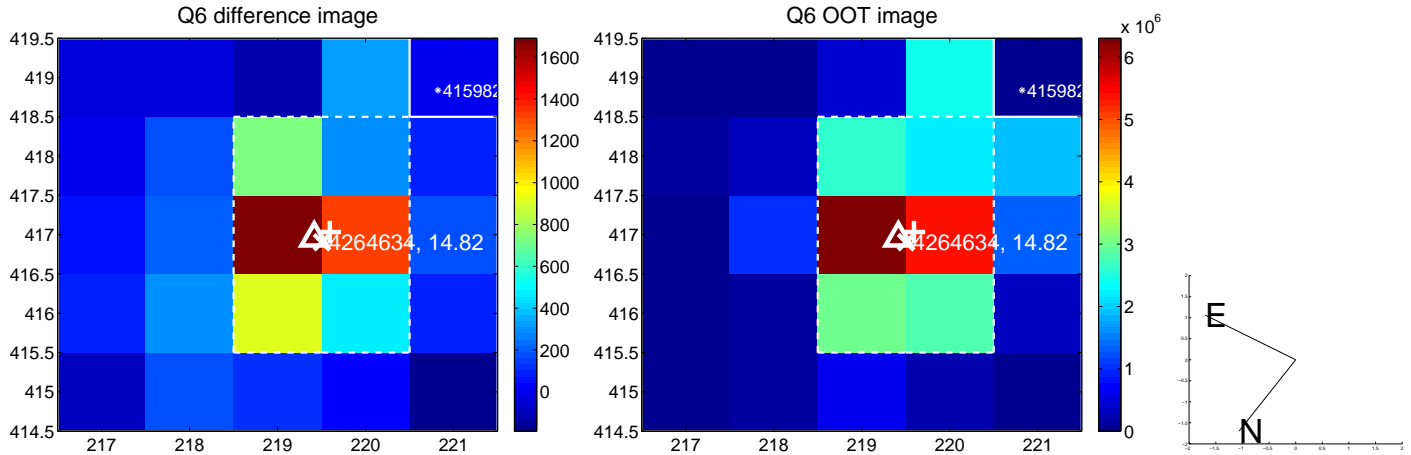
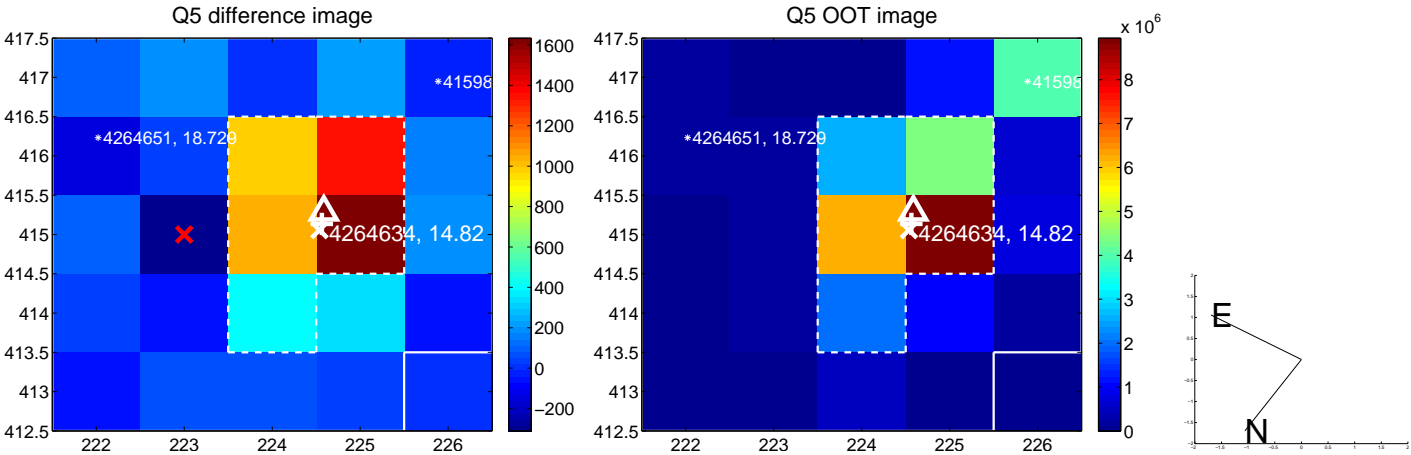


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

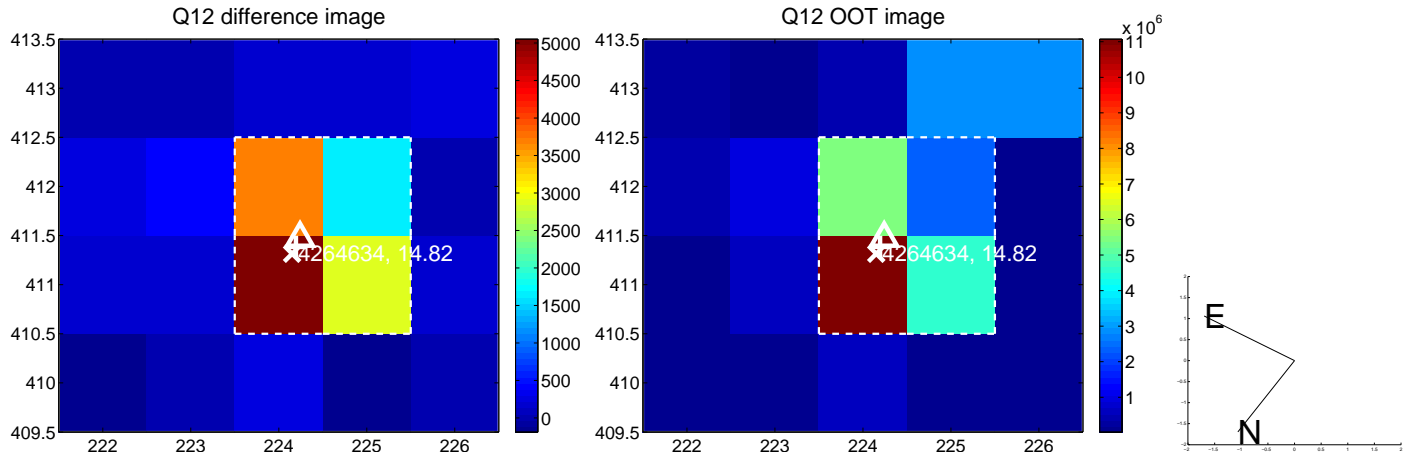
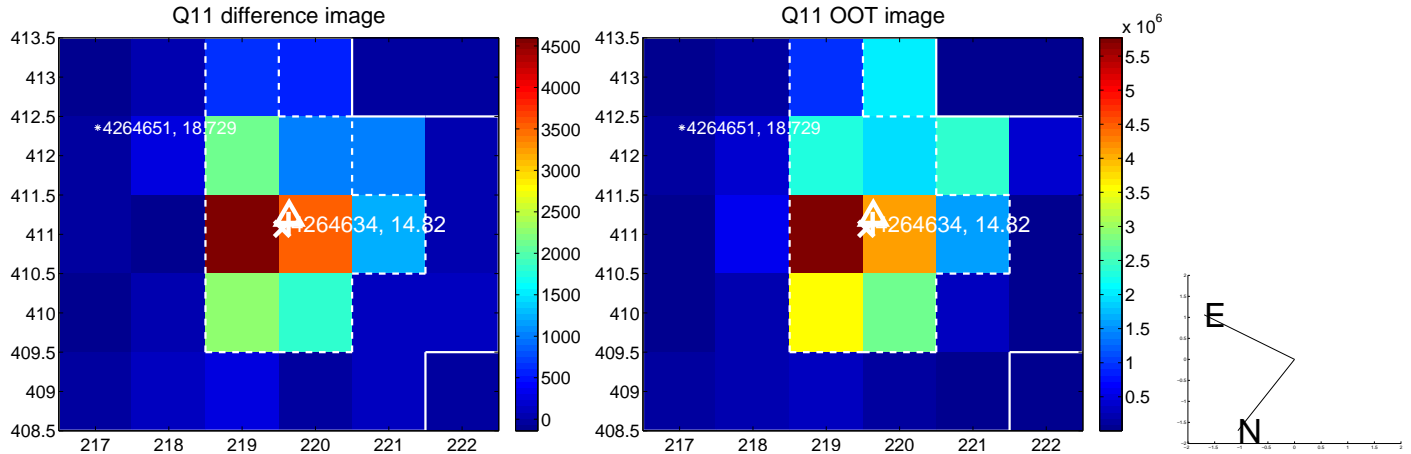
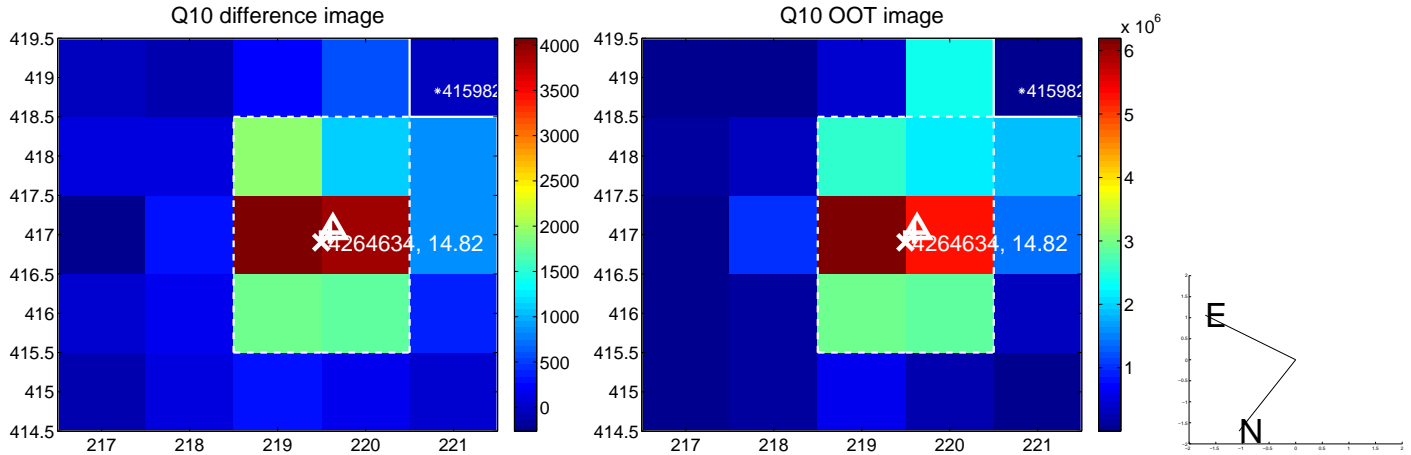
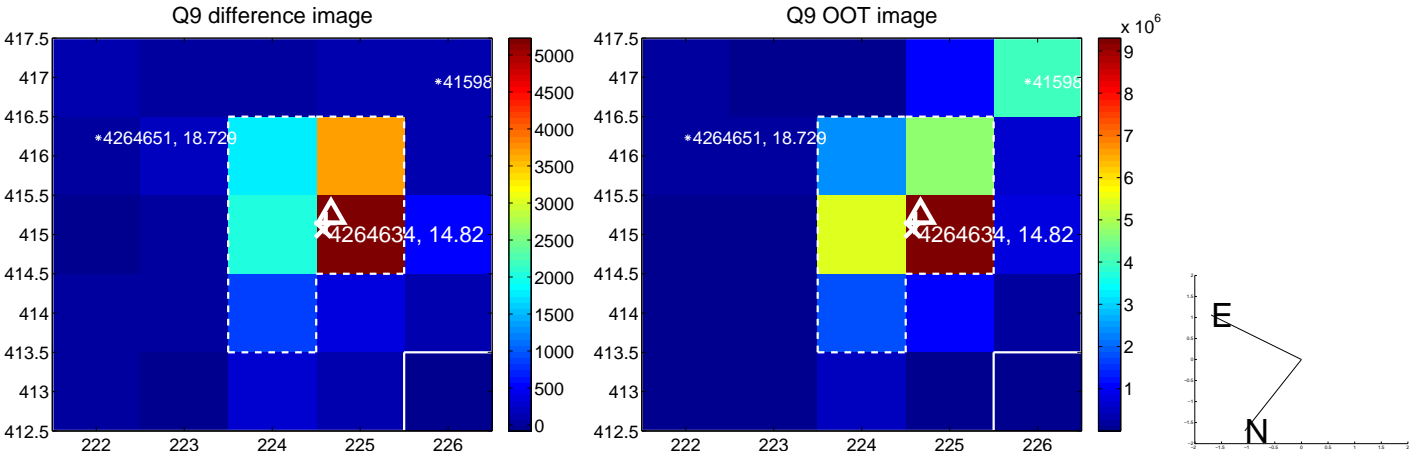
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



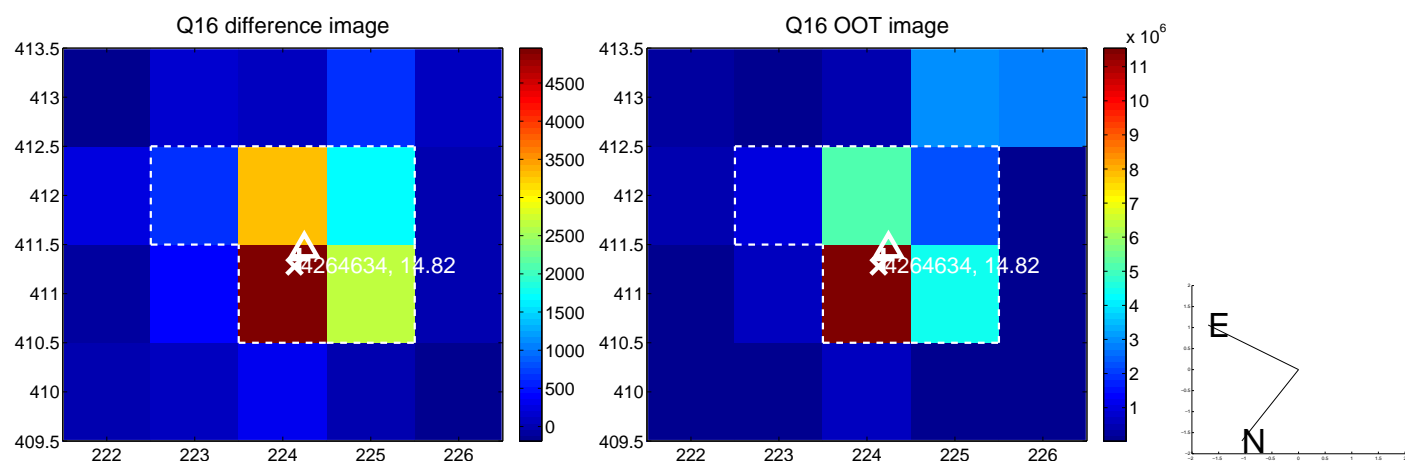
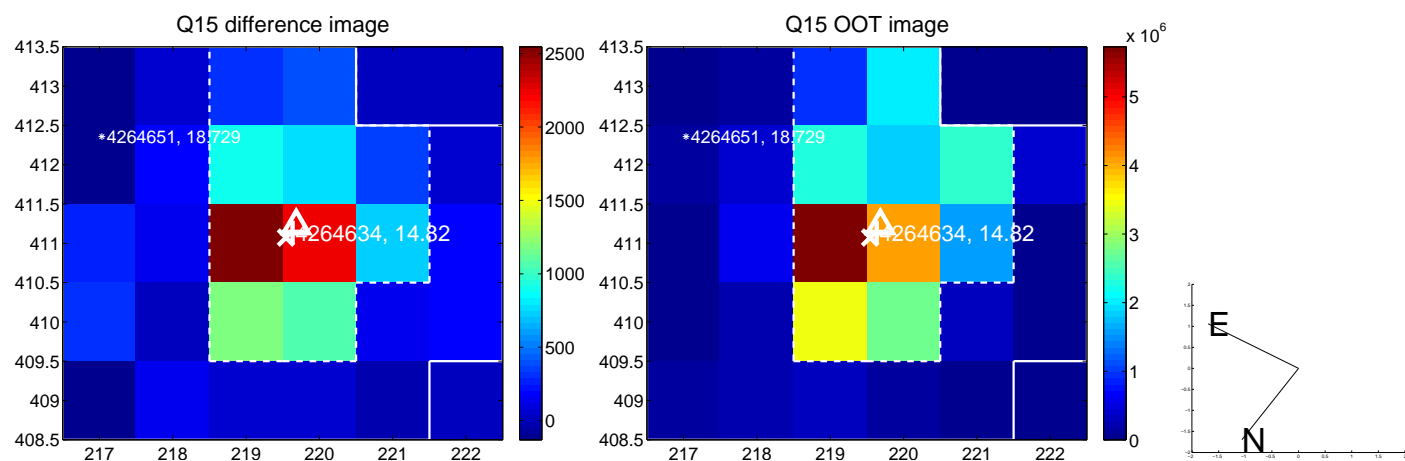
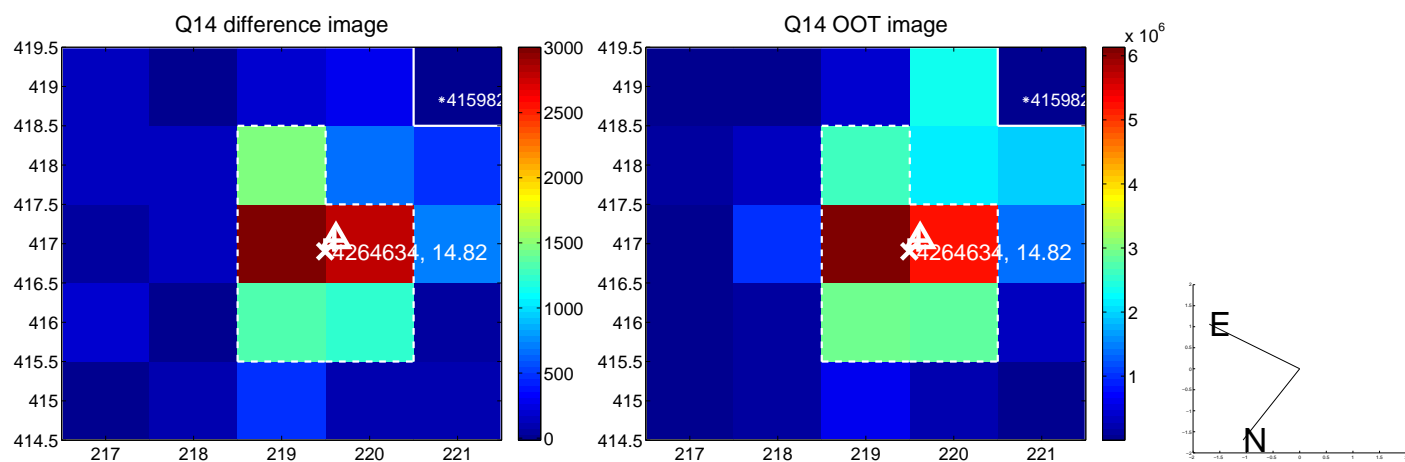
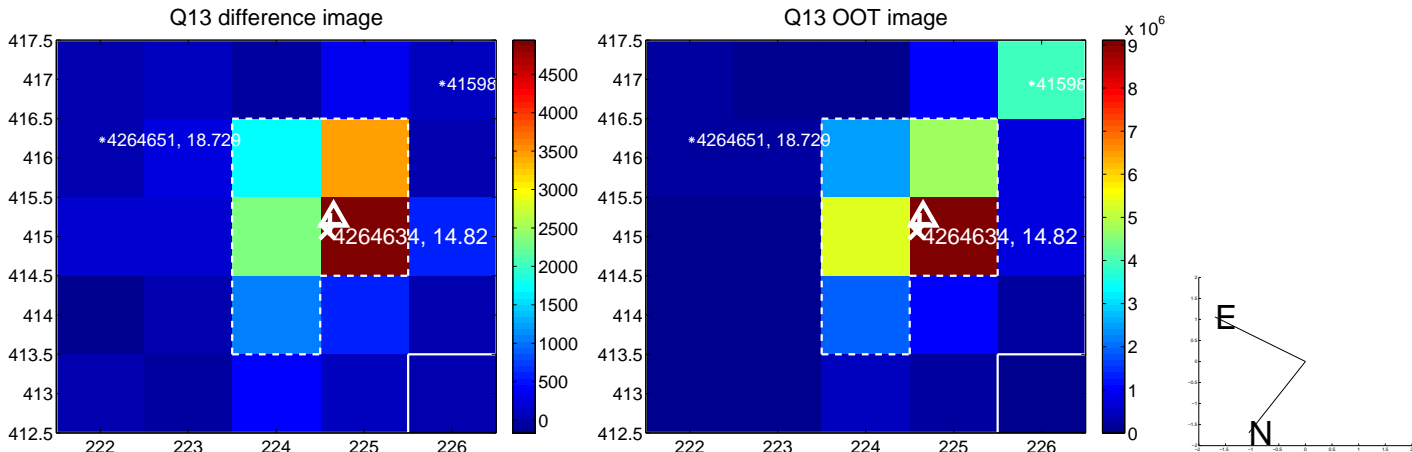
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



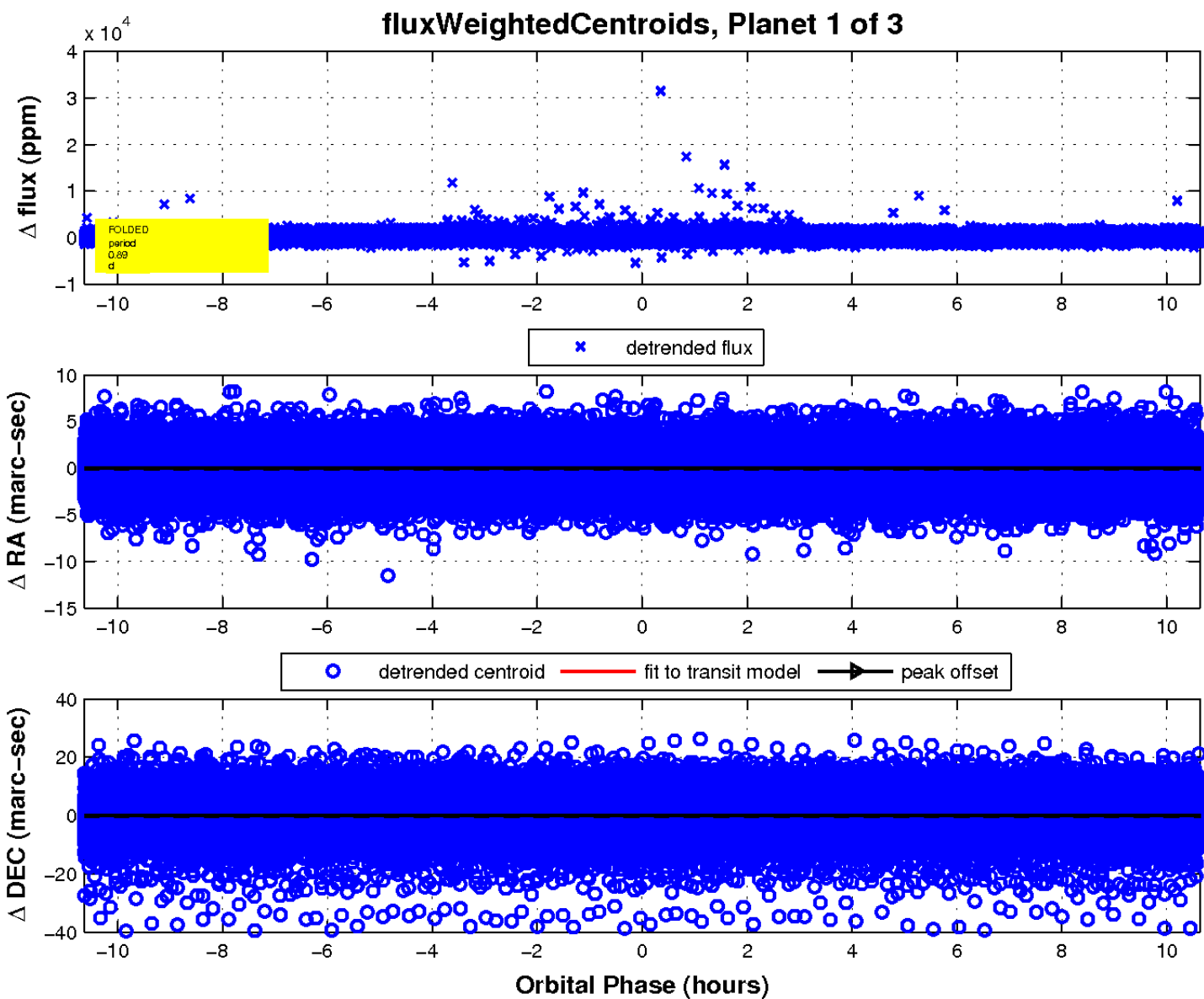
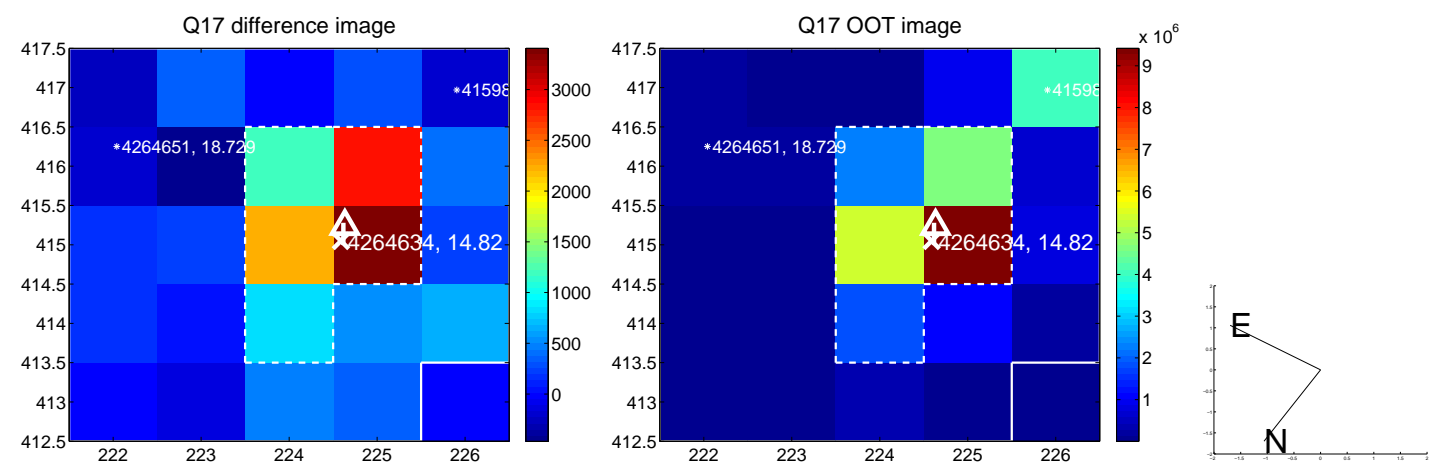
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

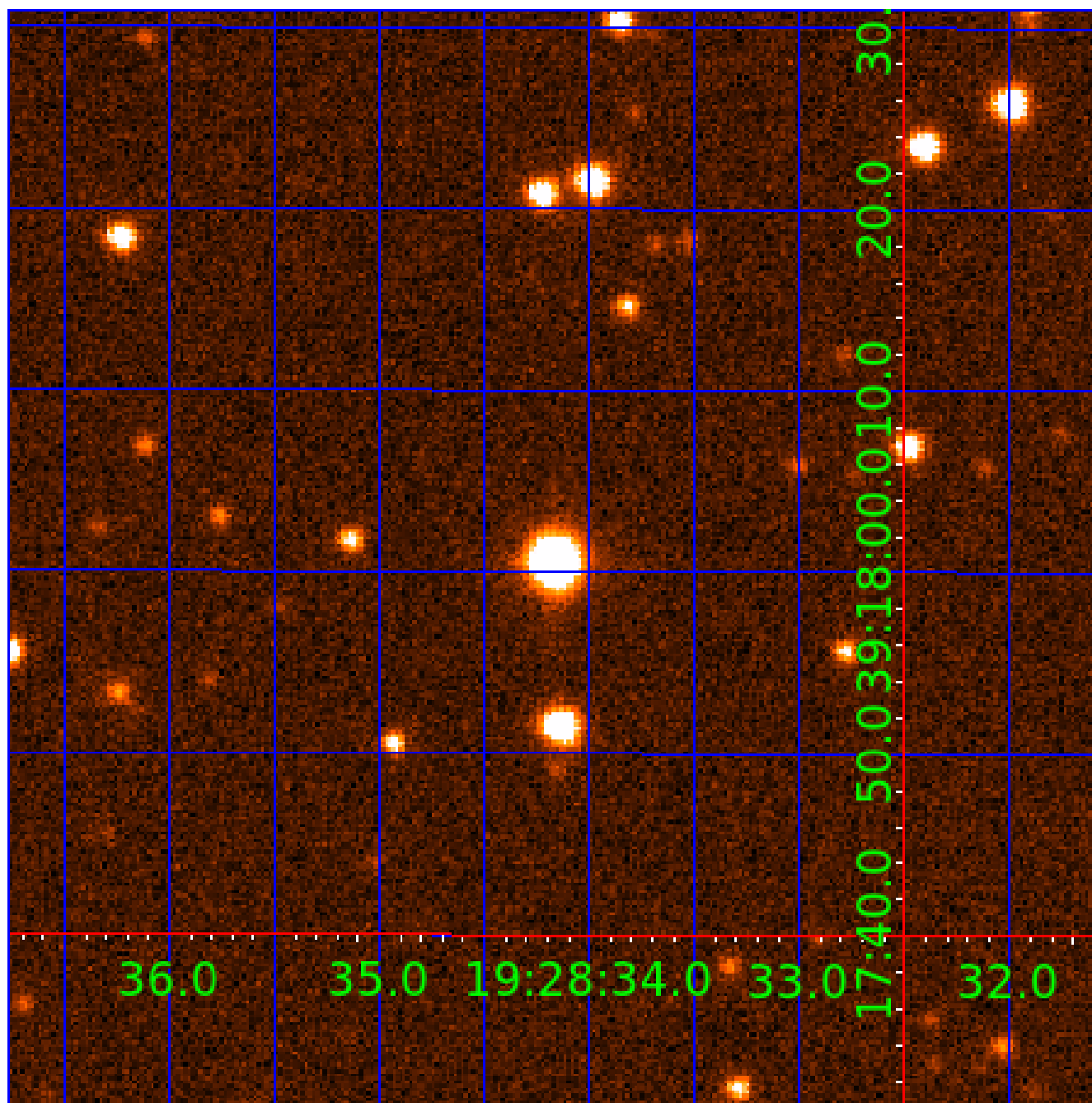


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004264634

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})
004264634-01	OBS	No	0.886596	132.301867	26.1	4.144	9.2	3.8	0.55	3940	0.28	293.42
004264634-03	OBS	No	143.242928	214.903682	784.0	9.554	10.2	7.0	0.55	3940	1.62	0.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004264634-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
004264634-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

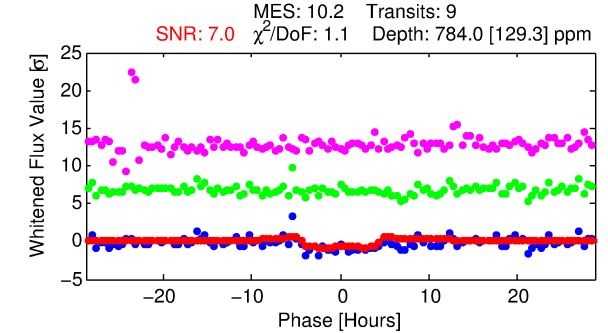
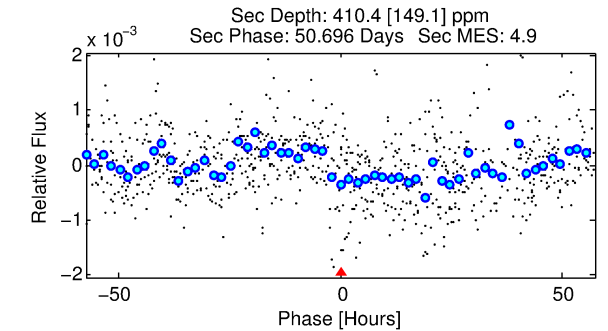
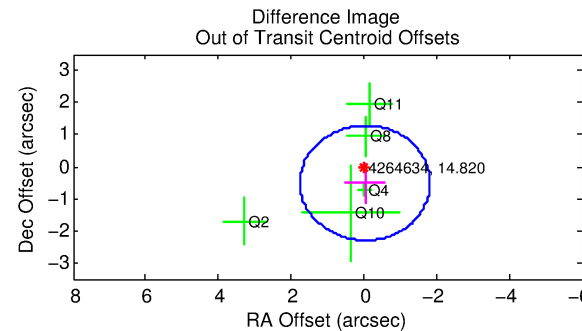
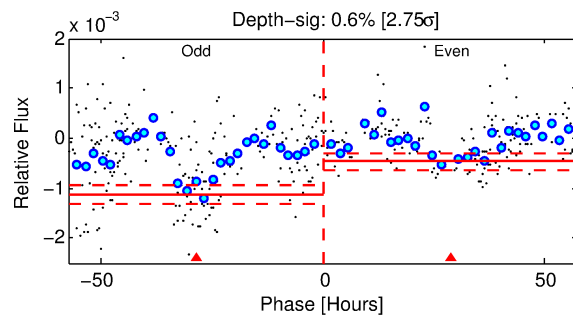
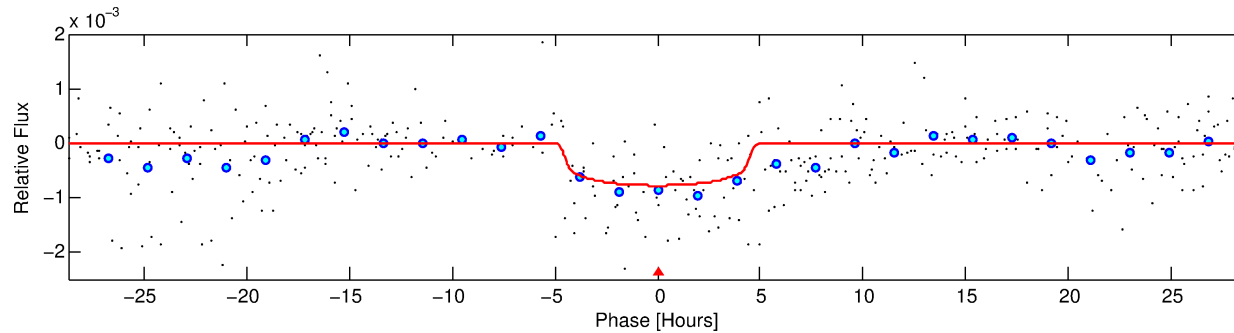
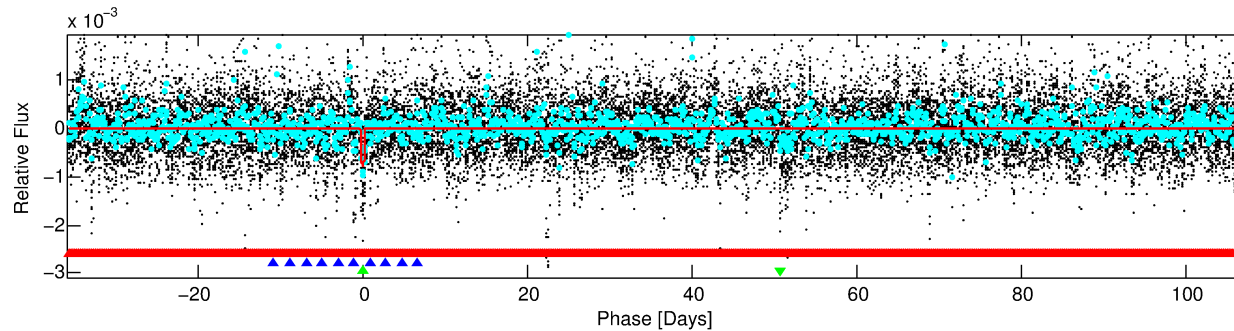
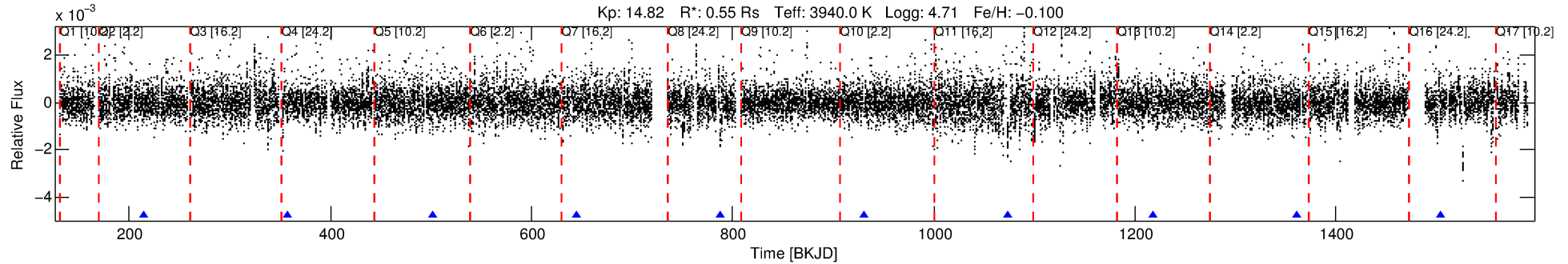
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004264634-03

No Significant Match Found

DV One-Page Summary

KIC: 4264634 Candidate: 3 of 3 Period: 143.243 d



DV Fit Results:

Period = 143.24293 [0.00212] d
Epoch = 214.9037 [0.0120] BKJD
Rp/R* = 0.0271 [0.0141]
a/R* = 89.66 [188.65]
b = 0.66 [1.78]
Seff = 0.33 [0.03]
Teq = 194 [5] K
Rp = 1.62 [0.85] Re
a = 0.4426 [0.0190] AU
Ag = 16750.89 [18469.80] [0.91 σ]
Teffp = 3408 [941] K [3.41 σ]

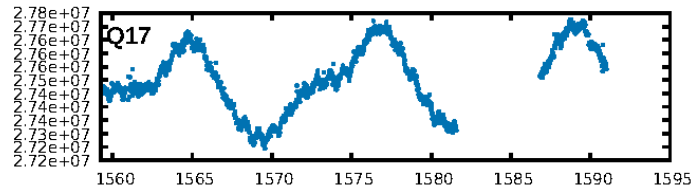
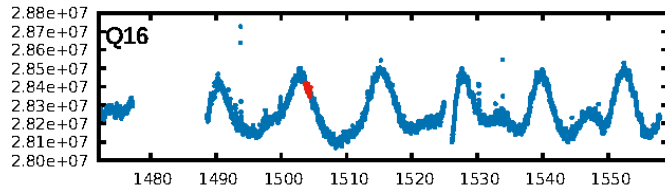
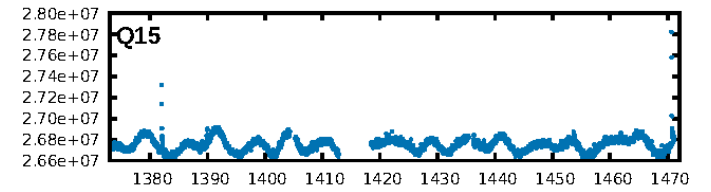
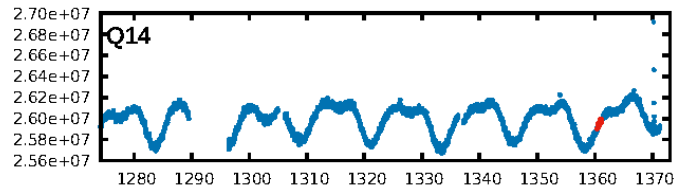
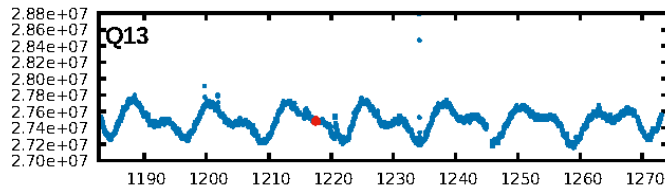
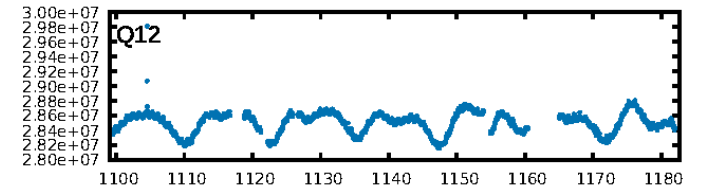
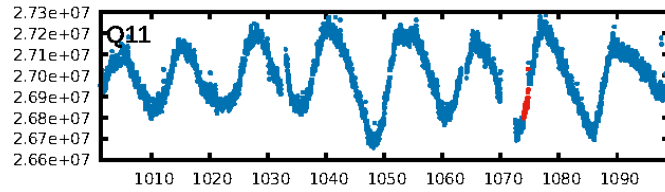
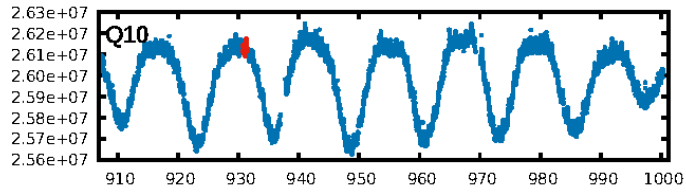
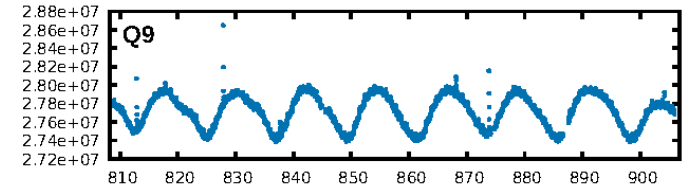
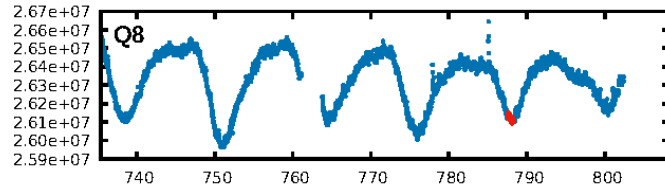
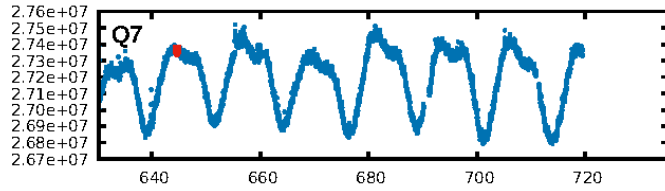
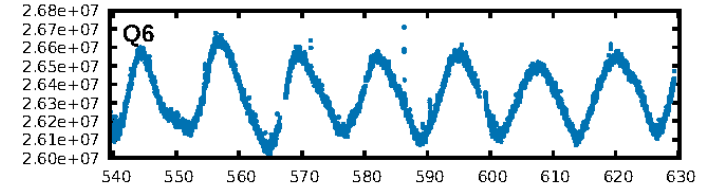
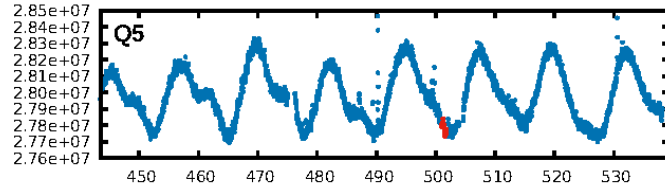
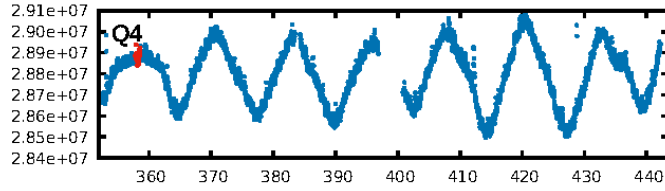
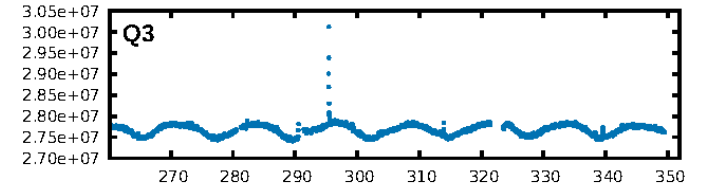
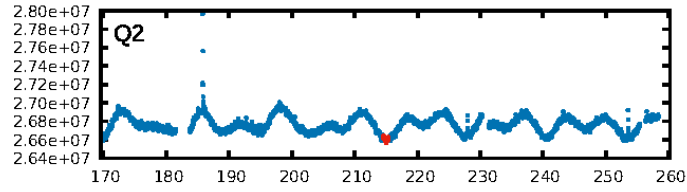
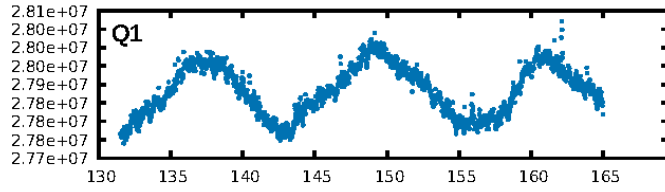
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [328.07 σ]
LongPeriod-sig: 99.7% [2.99 σ]
ModelChiSquare2-sig: 38.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.88e-14
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5785
Centroid-sig: 2.7%
Centroid-so: 0.897 arcsec [1.30 σ]
OotOffset-rm: 0.509 arcsec [0.85 σ]
OotOffset-st: 2/1/2/0 [5]
KicOffset-rm: 0.836 arcsec [1.35 σ]
KicOffset-st: 2/1/2/0 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/8]

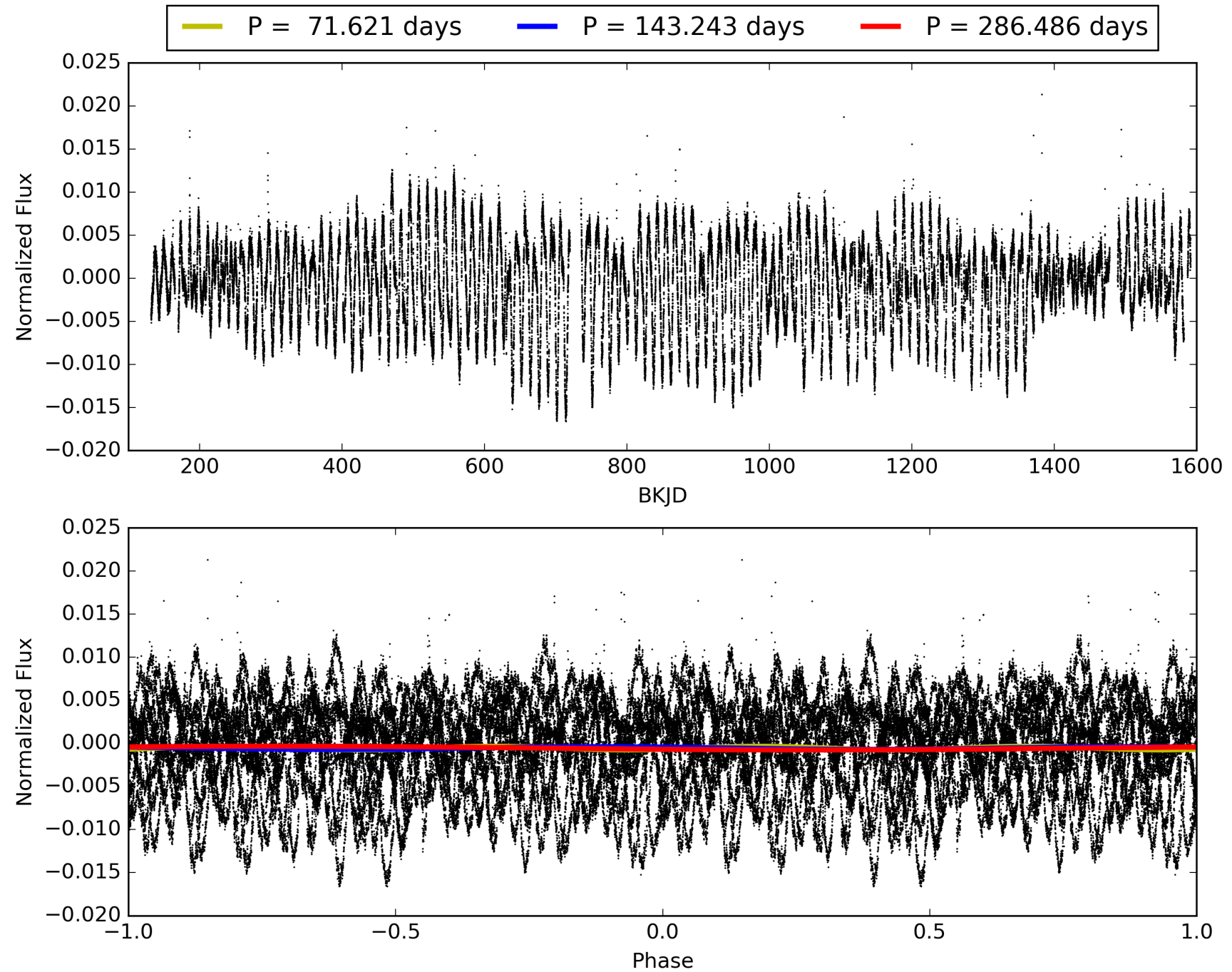
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:05:34 Z

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

TCE 004264634-03, PDC Light Curves

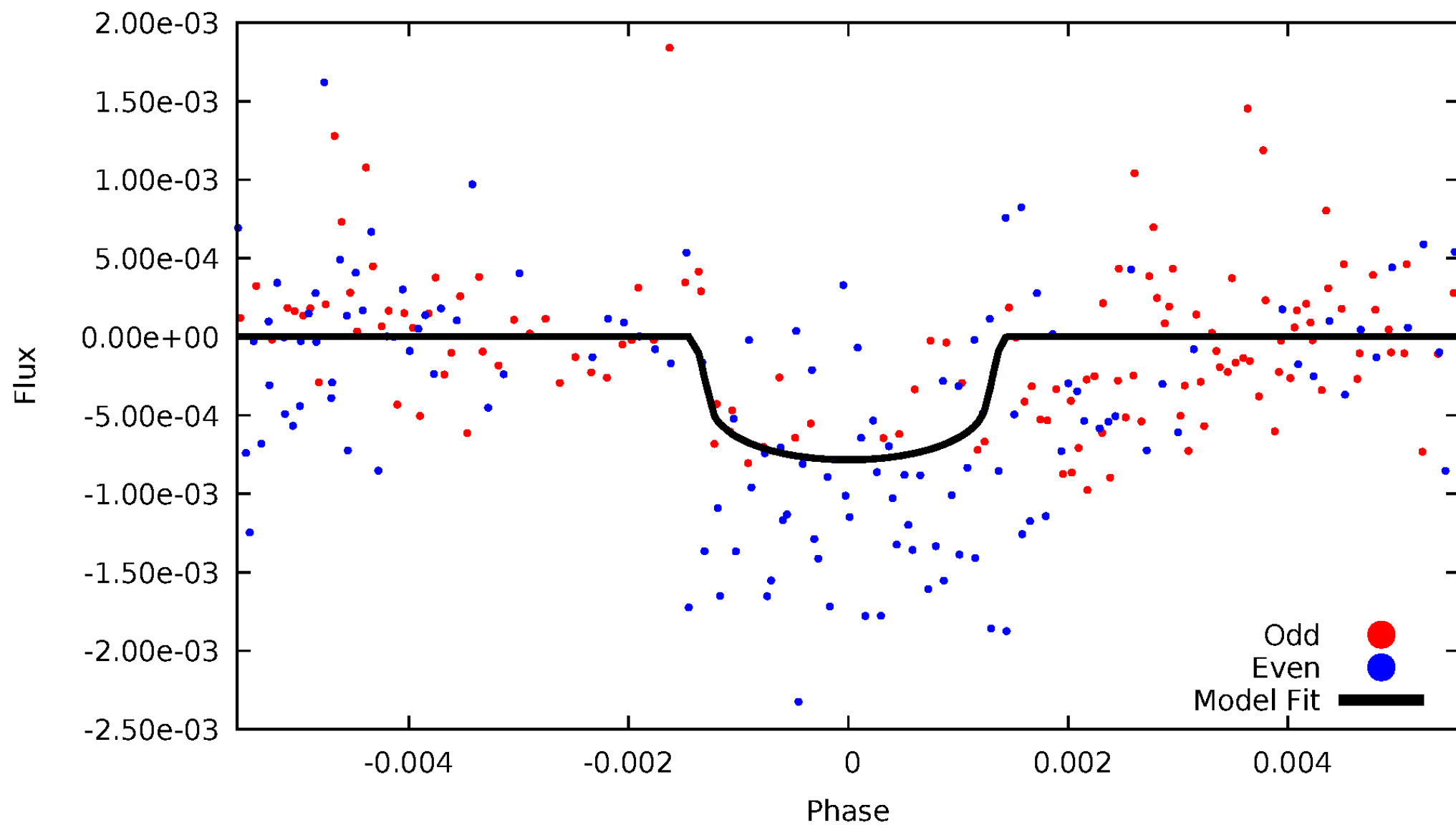


TCE 004264634-03



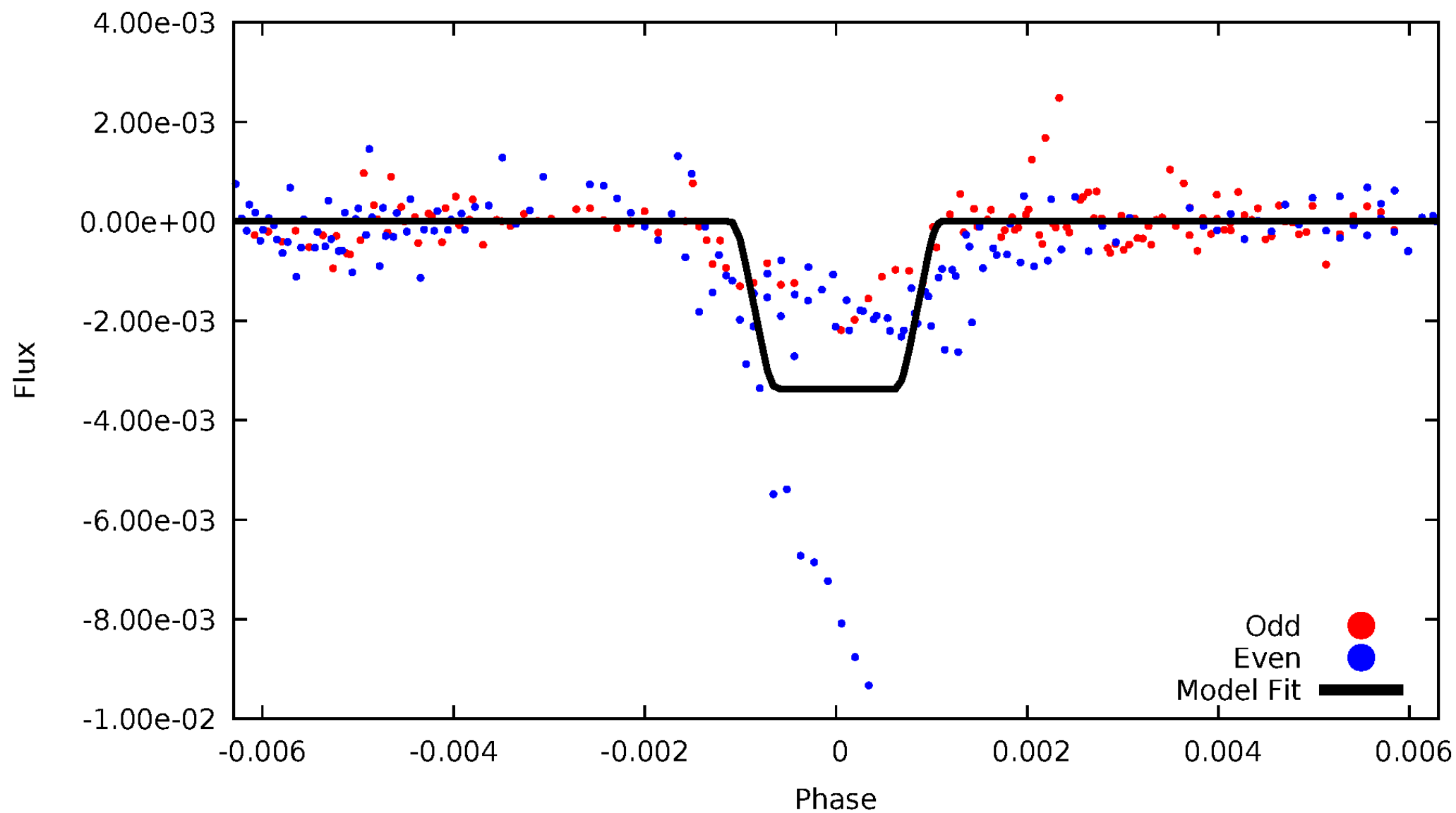
DV Odd/Even

TCE 004264634-03



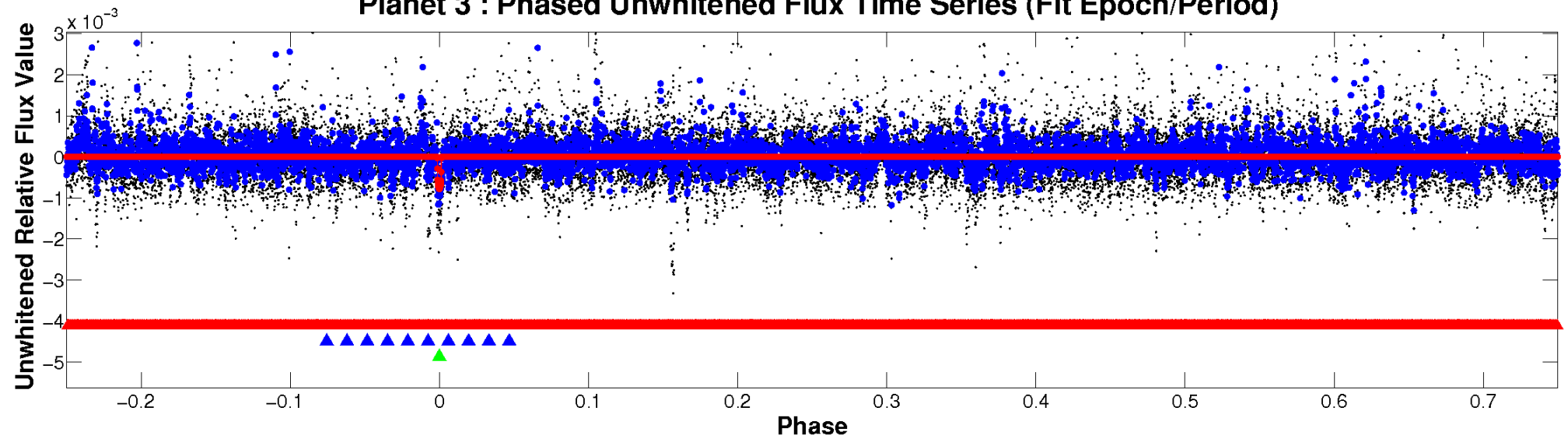
ALT Odd/Even

TCE 004264634-03

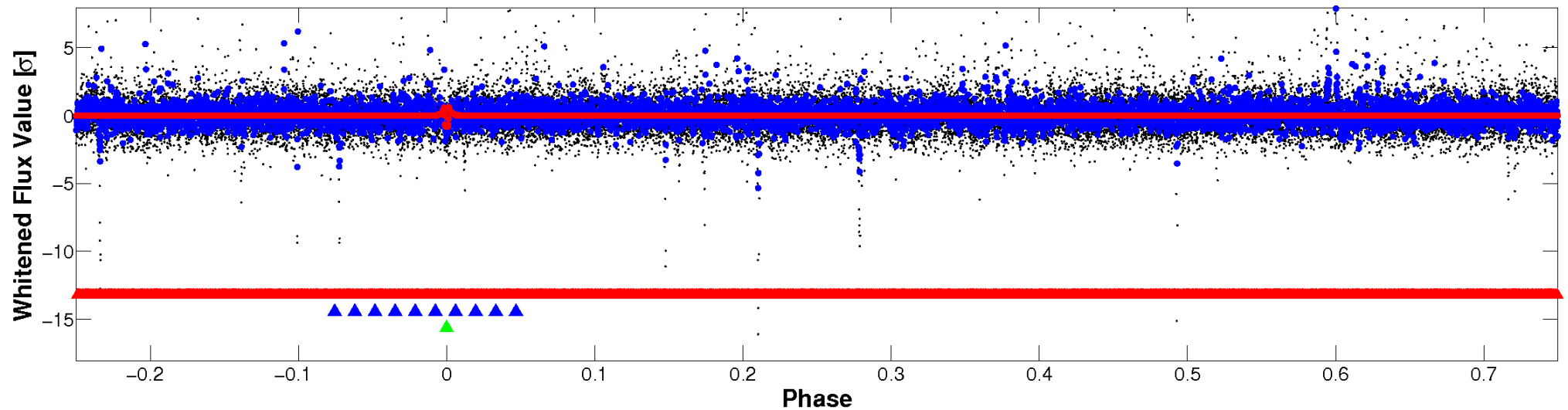


Non-Whitened Vs. Whitened Light Curve

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

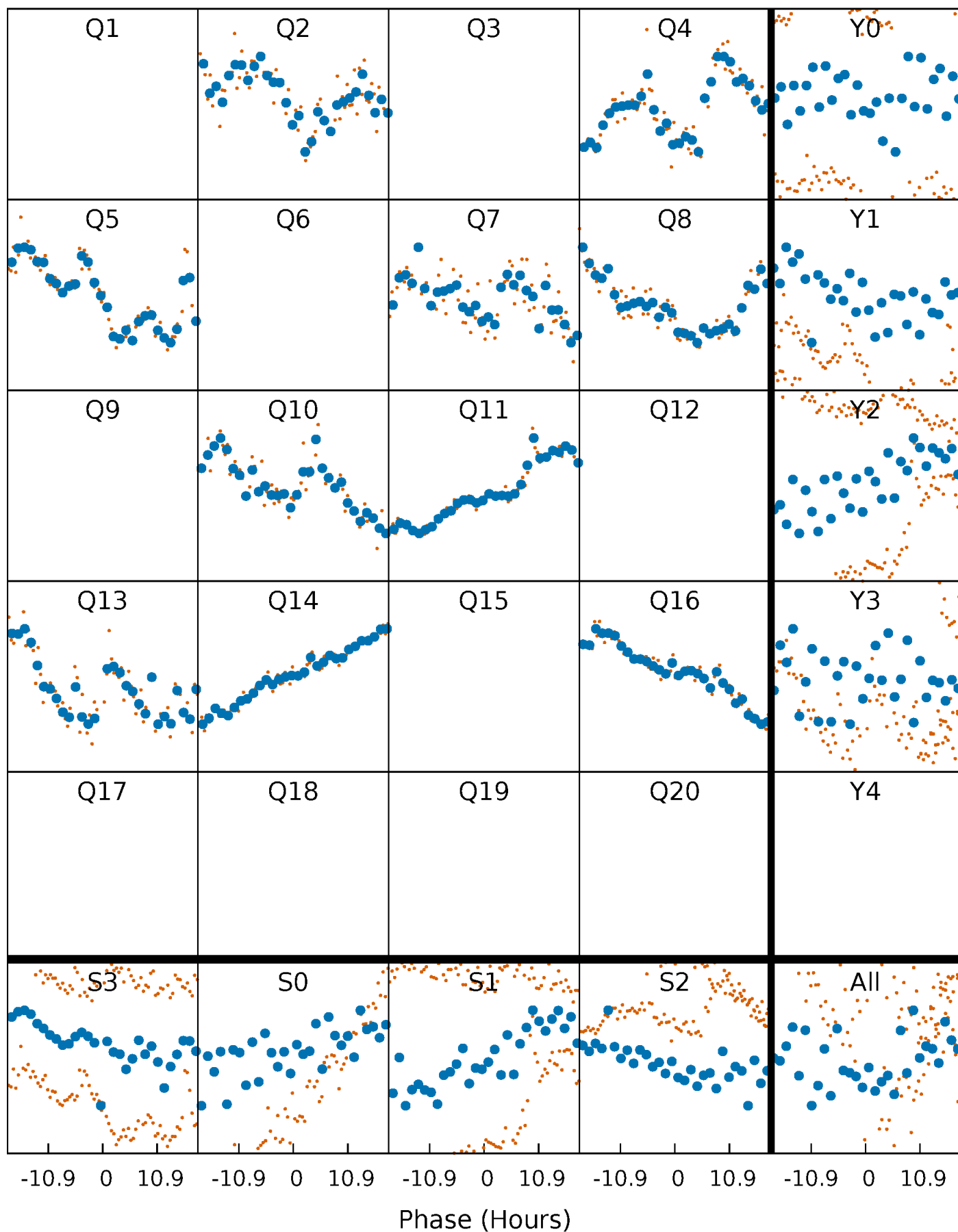


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



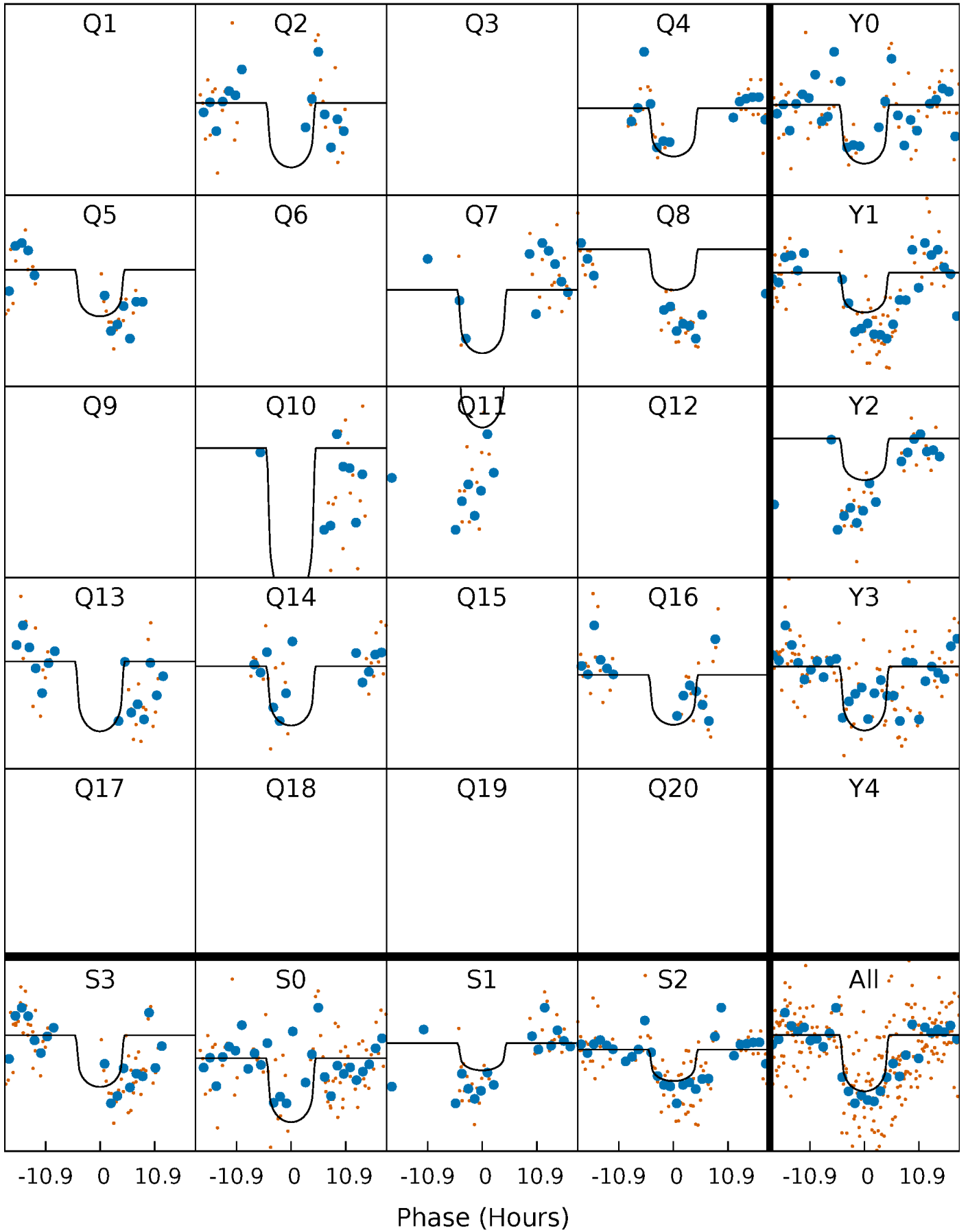
PDC Quarter-Phased Transit Curves

TCE 004264634-03 $P=143.242928$ Days $T_0=214.903682$ (BKJD)



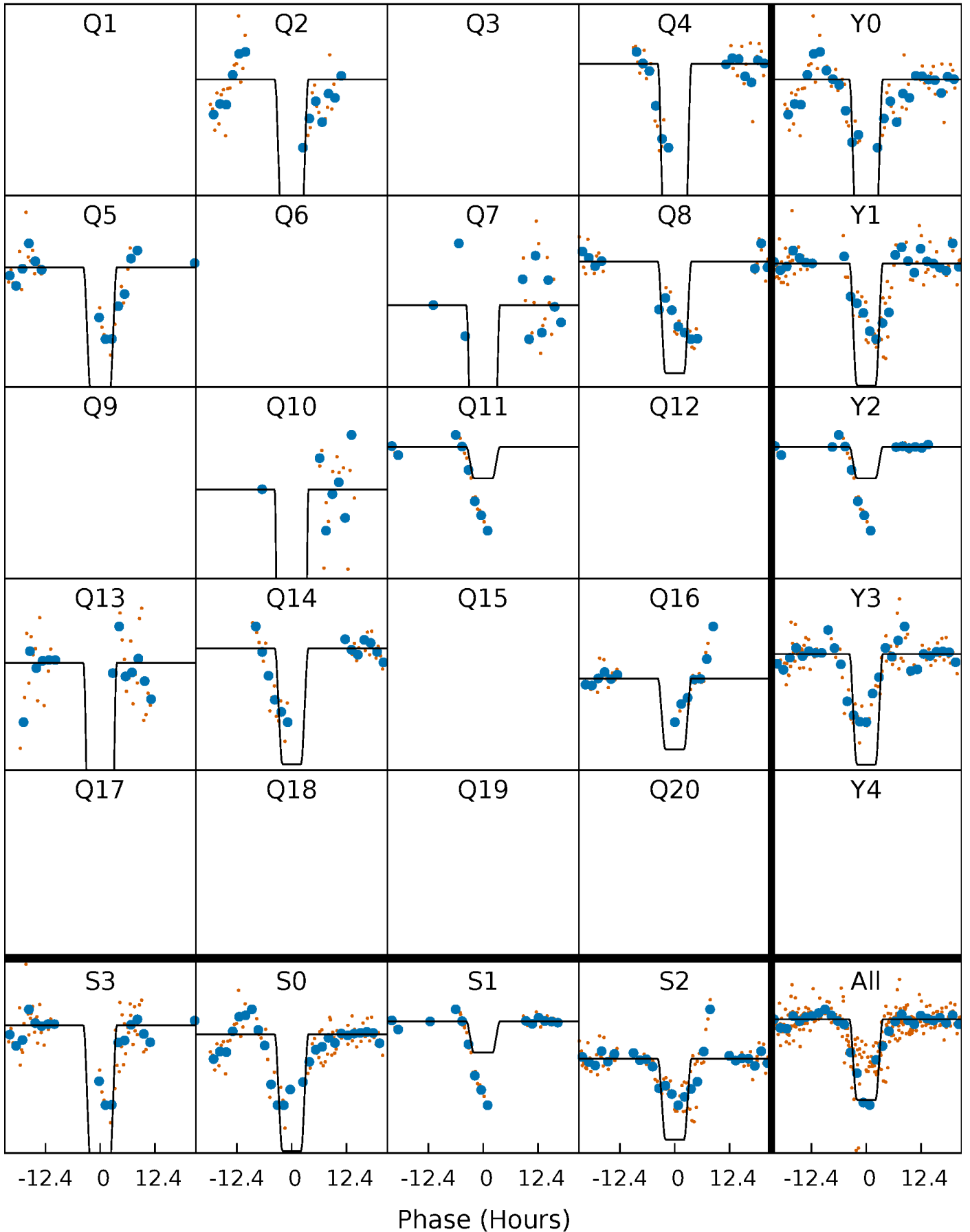
DV Quarter-Phased Transit Curves

TCE 004264634-03 $P=143.242928$ Days $T_0=214.903682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

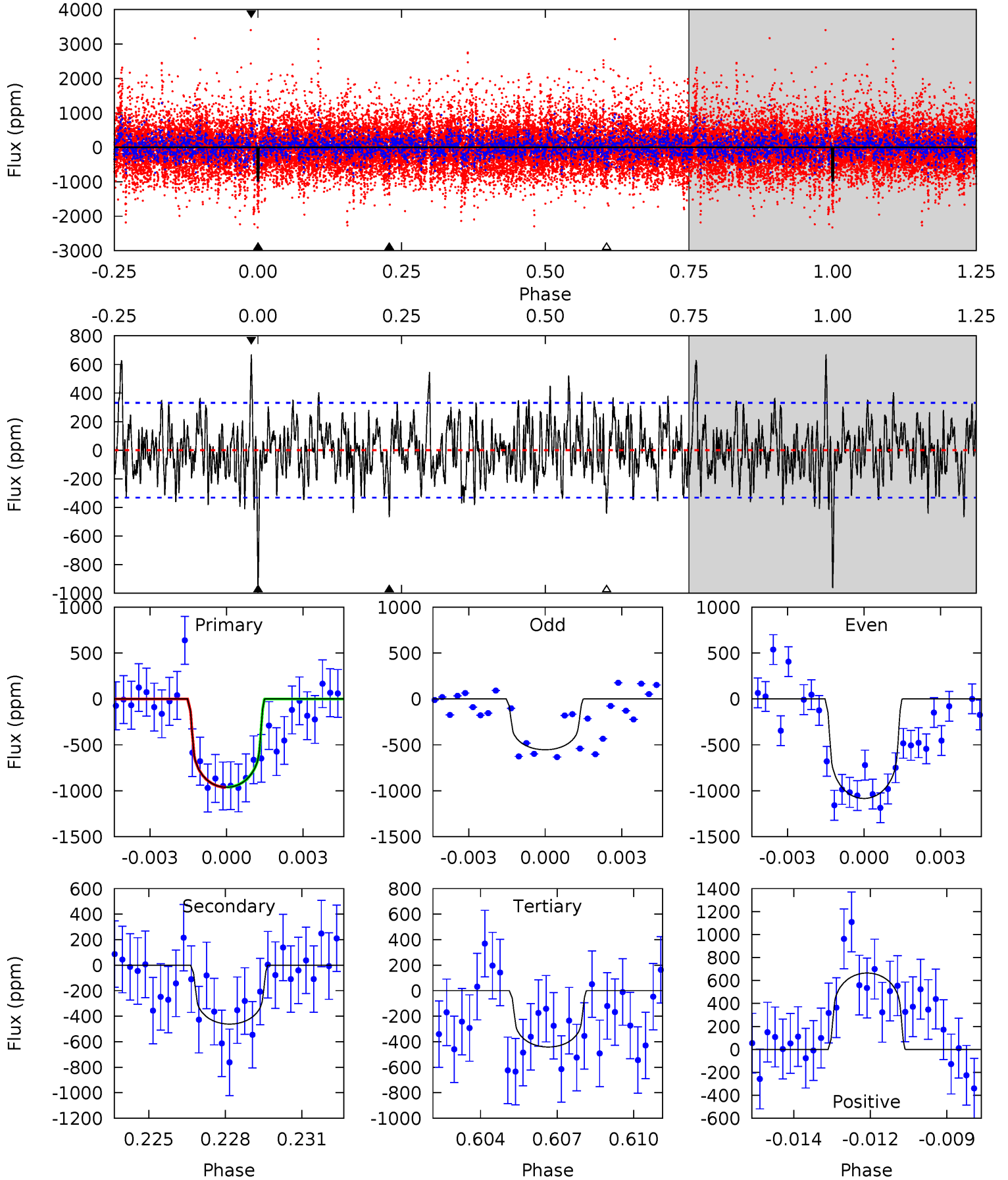
TCE 004264634-03 P=143.246067 Days $T_0=214.913811$ (BKJD)



DV Model-Shift Uniqueness Test

004264634-03, P = 143.242928 Days, E = 71.660754 Days

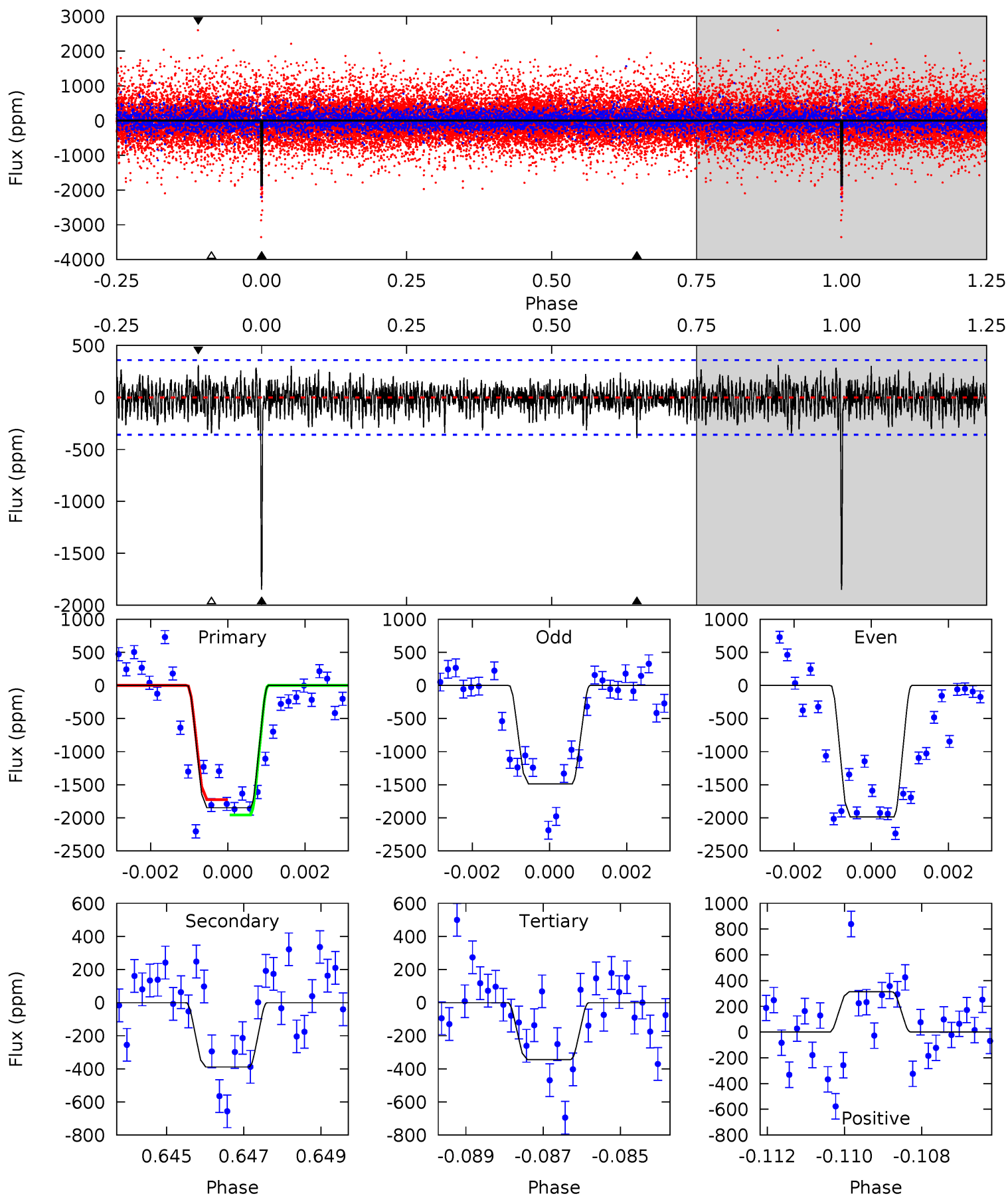
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	7.34	7.01	10.6	5.26	2.98	2.59	8.27	4.72	0.33	-3.23	3.69	1.09	0.41	0.02



Alt Model-Shift Uniqueness Test

004264634-03, P = 143.246067 Days, E = 71.667744 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	5.76	5.09	4.63	5.32	3.07	1.44	22.3	22.8	0.66	1.13	3.44	1.38	0.14	1.72



Stellar Parameters For KIC 004264634

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3940^{+79}_{-87}	$4.708^{+0.027}_{-0.022}$	$-0.100^{+0.100}_{-0.100}$	$0.550^{+0.025}_{-0.031}$	$0.564^{+0.026}_{-0.029}$	$4.767^{+0.577}_{-0.425}$
	+2%/-2%	+1%/-0%	+100%/-100%	+5%/-6%	+5%/-5%	+12%/-9%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 004264634-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-462 ± 63	$1.66^{+0.83}_{-0.81}$	271^{+6}_{-7}	3628^{+980}_{-455}	18254^{+52804}_{-10459}
Alt.	-389 ± 67	$3.47^{+0.88}_{-0.90}$	270^{+6}_{-7}	2828^{+265}_{-176}	3455^{+2982}_{-1304}

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

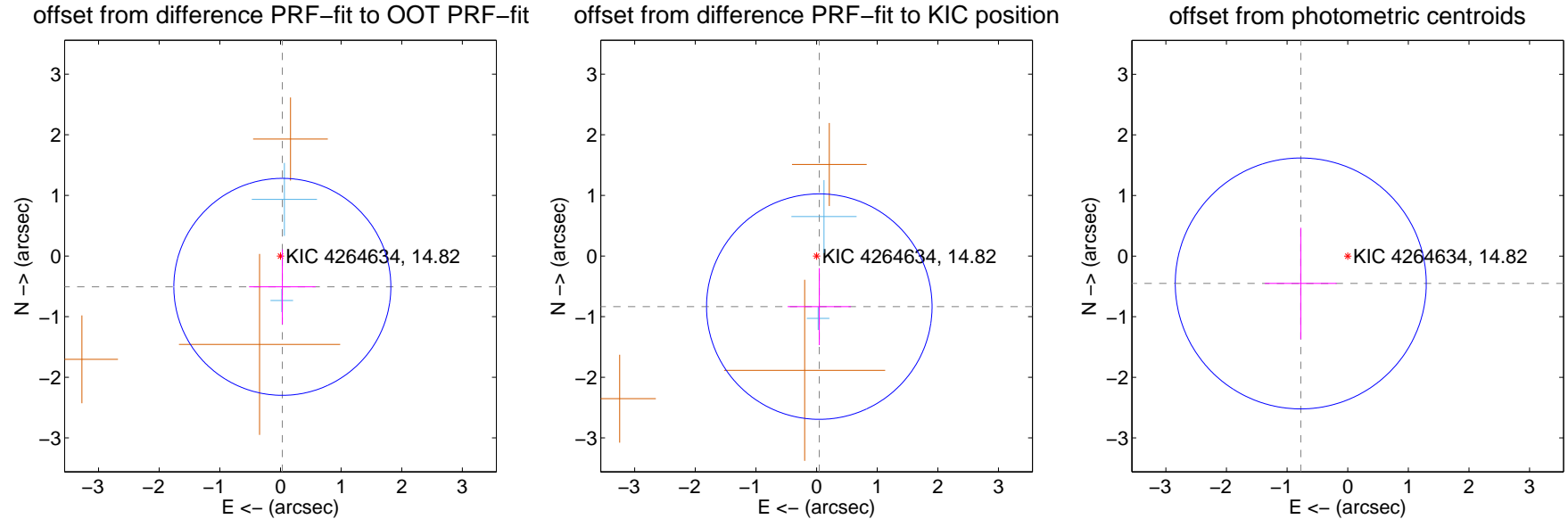
DV Centroid Data

Supplemental centroid analysis for 004264634-03. Kepler magnitude: 14.82. Transit SNR 7.00

There are 2 quarters with good PRF difference image offsets

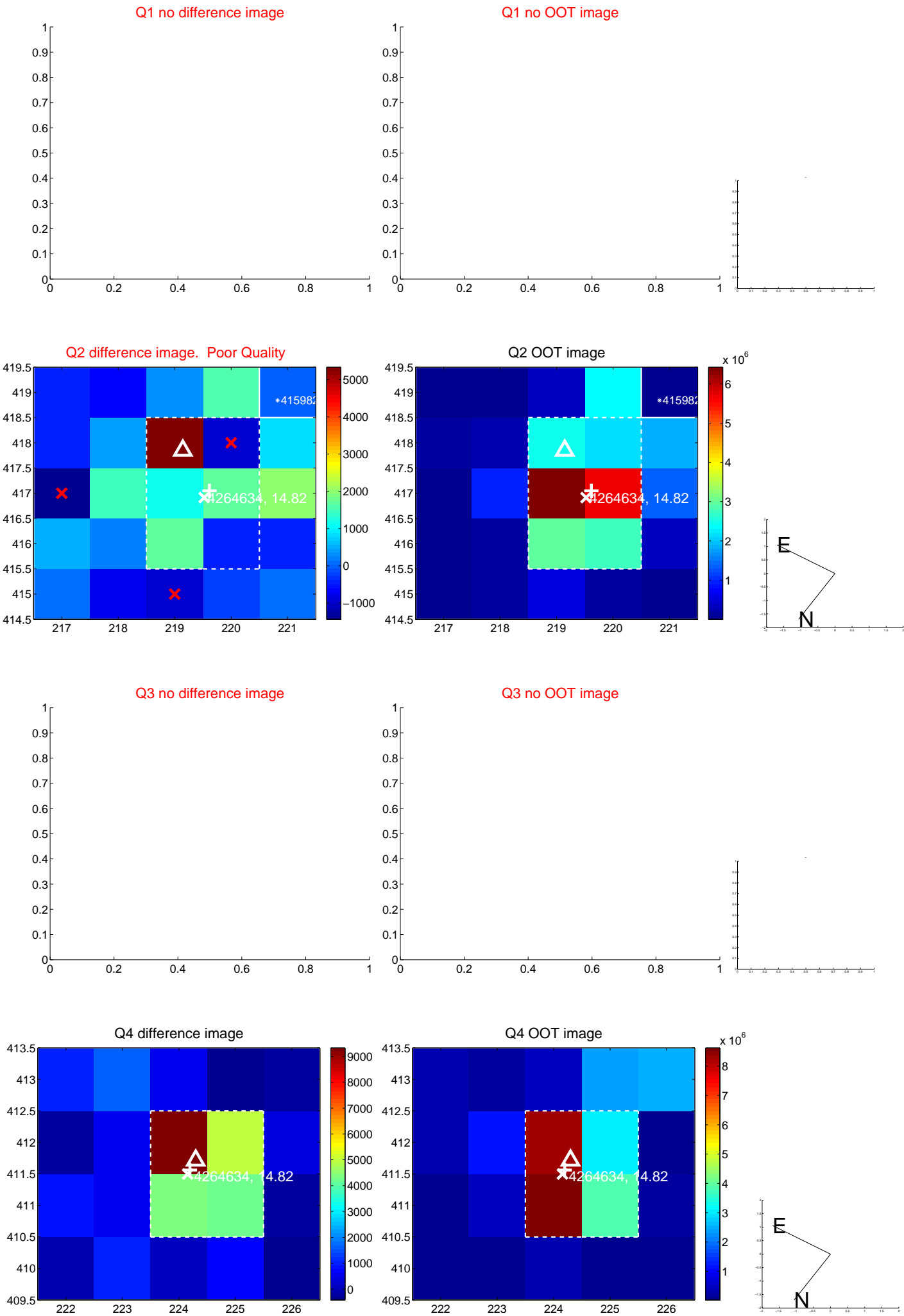
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.509 ± 0.597	0.85	-0.031 ± 0.549	-0.508 ± 0.619
PRF-fit source offset from KIC position	0.836 ± 0.620	1.35	-0.045 ± 0.522	-0.834 ± 0.635
photometric centroid source offset	0.90 ± 0.69	1.30	0.77 ± 0.59	-0.45 ± 0.92

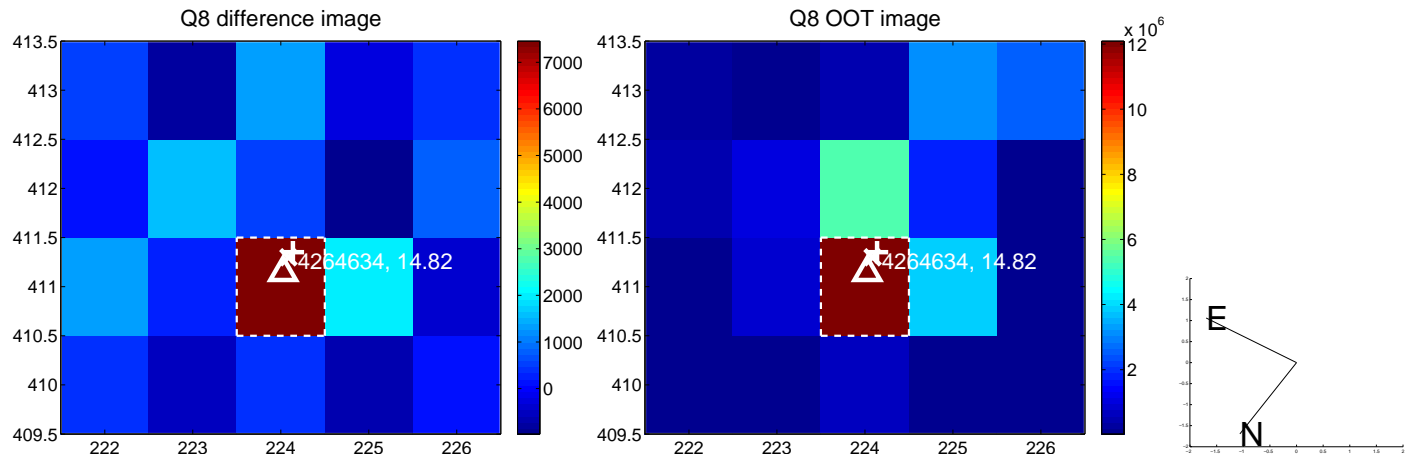
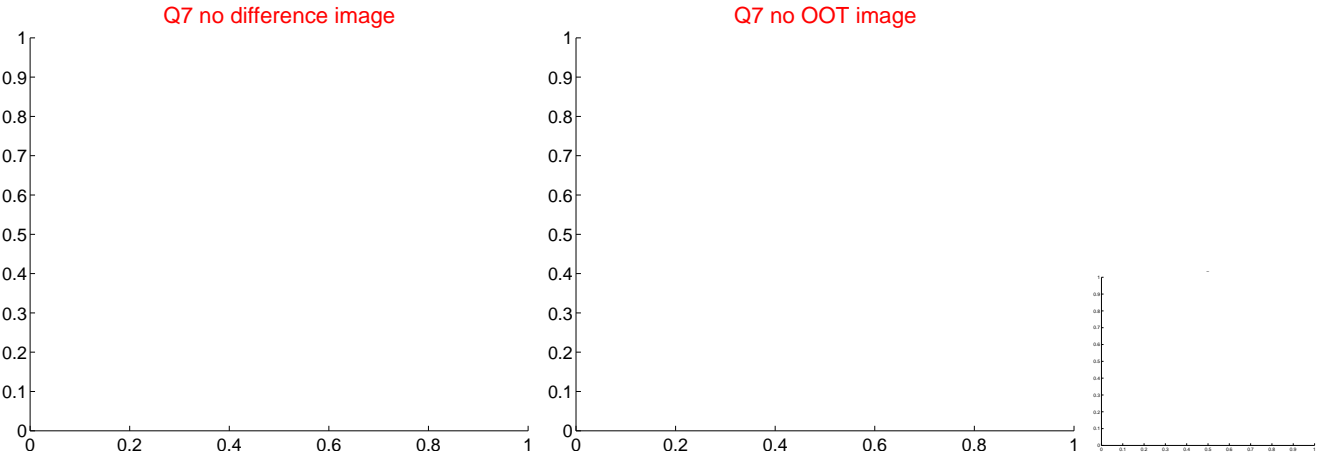
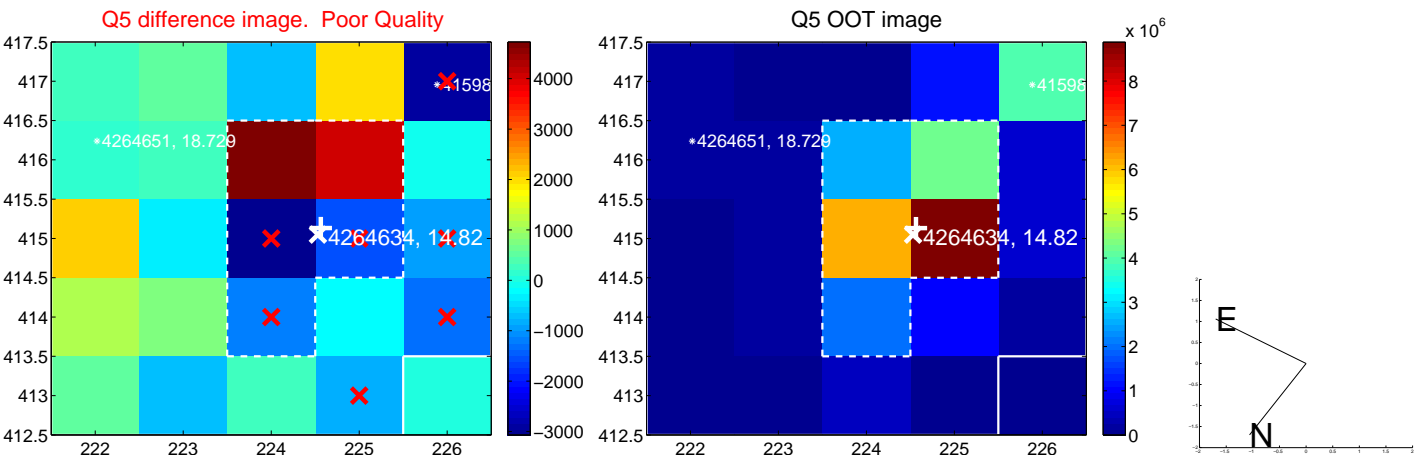


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

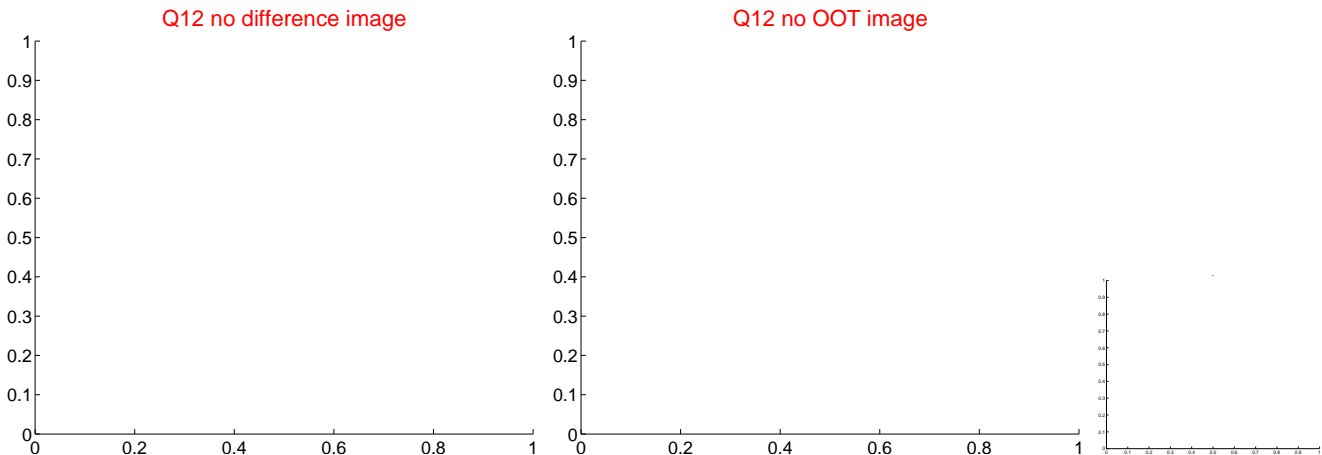
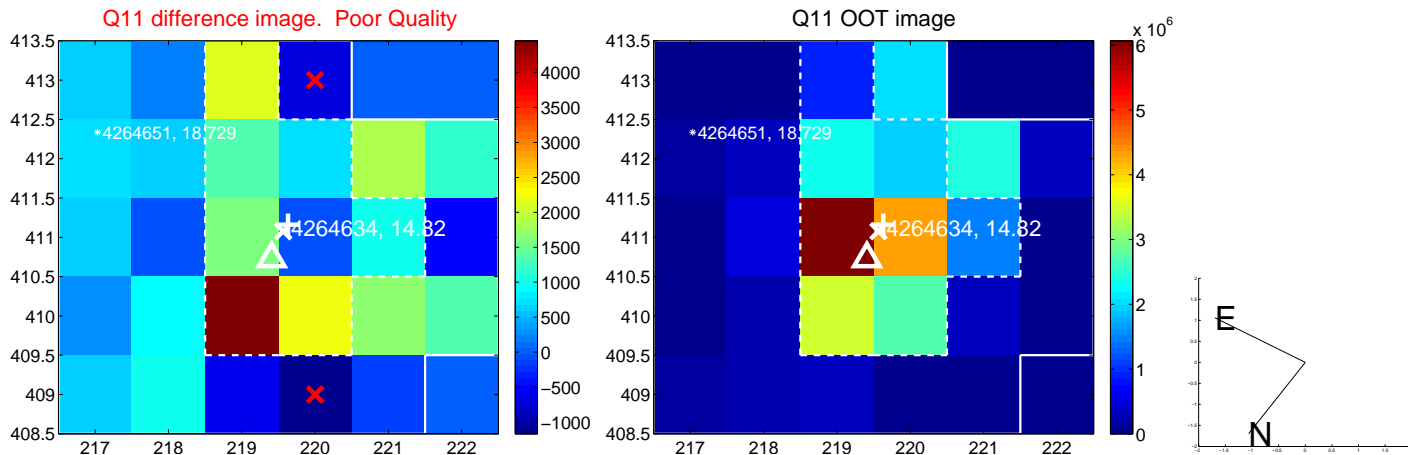
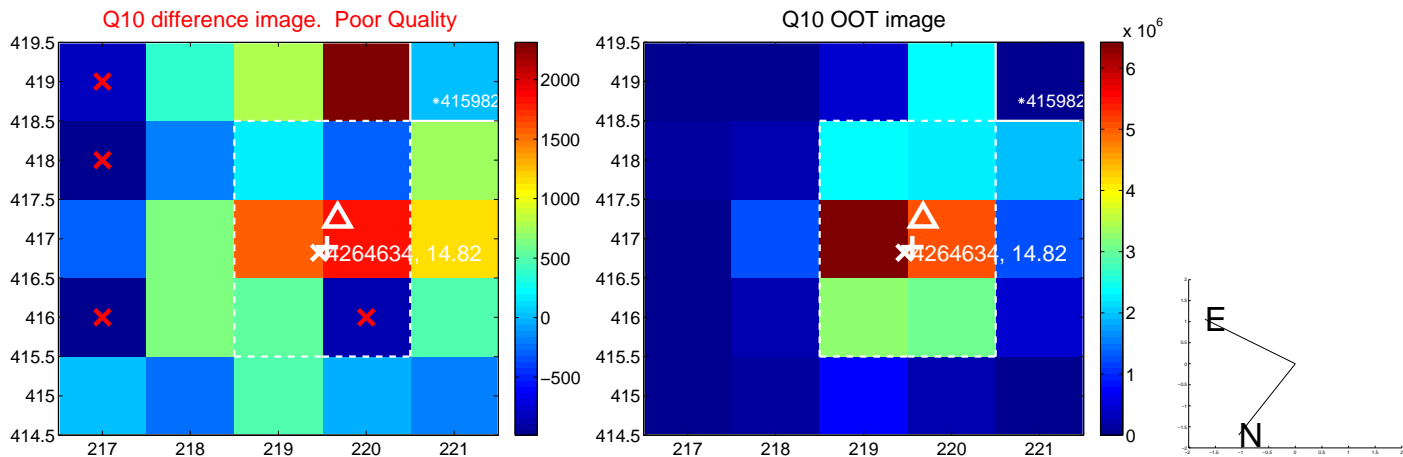
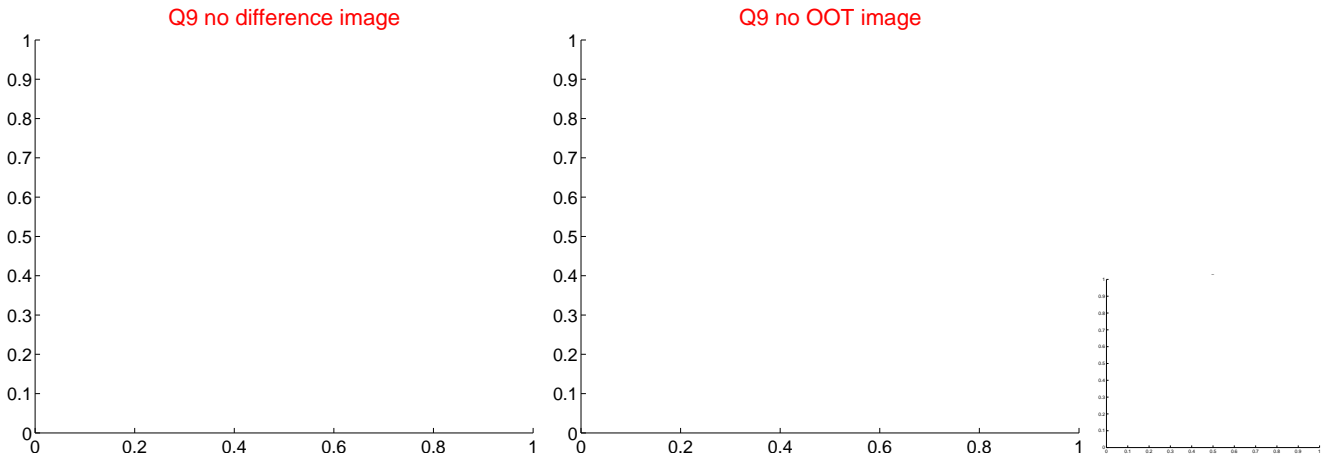
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



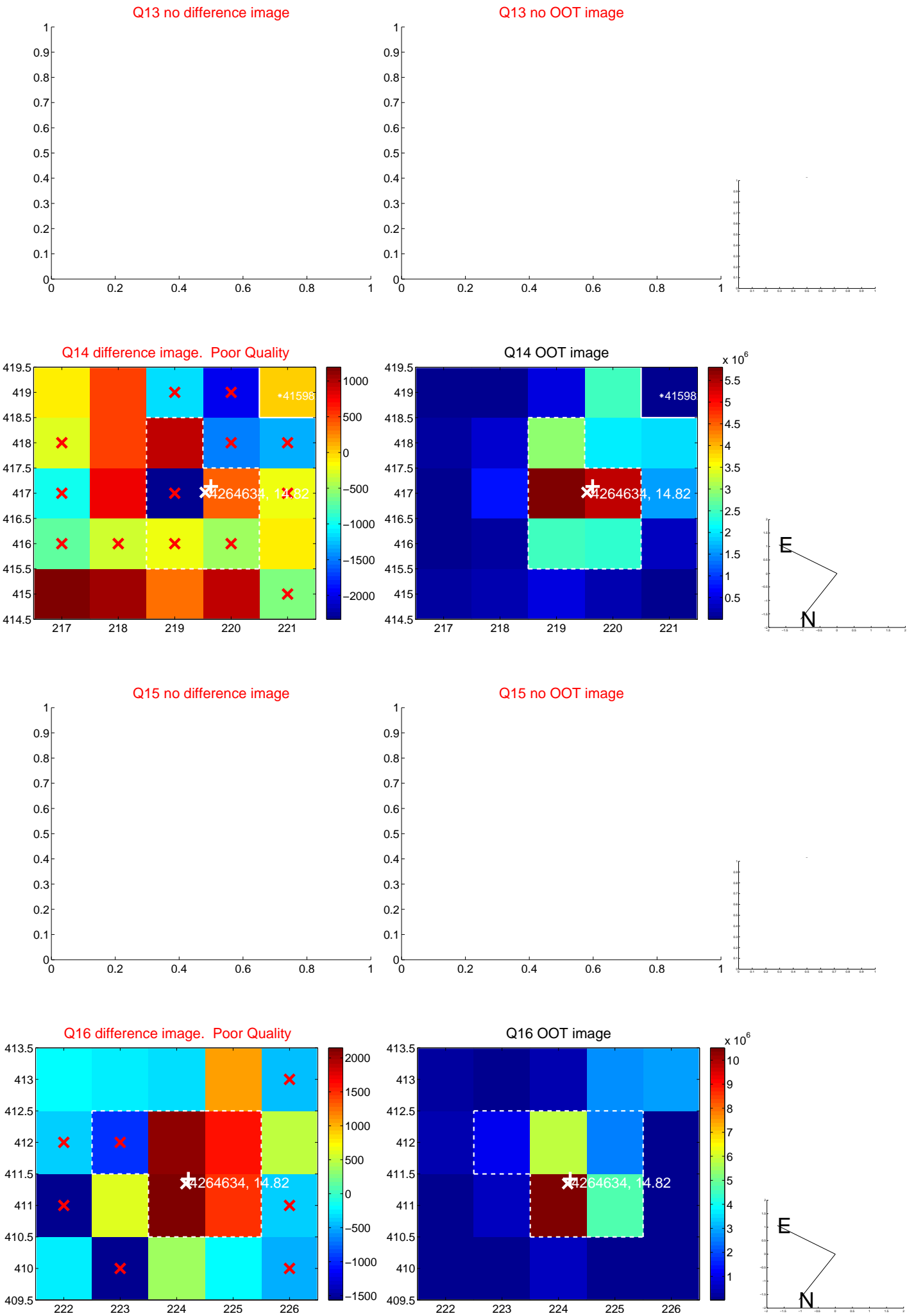
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



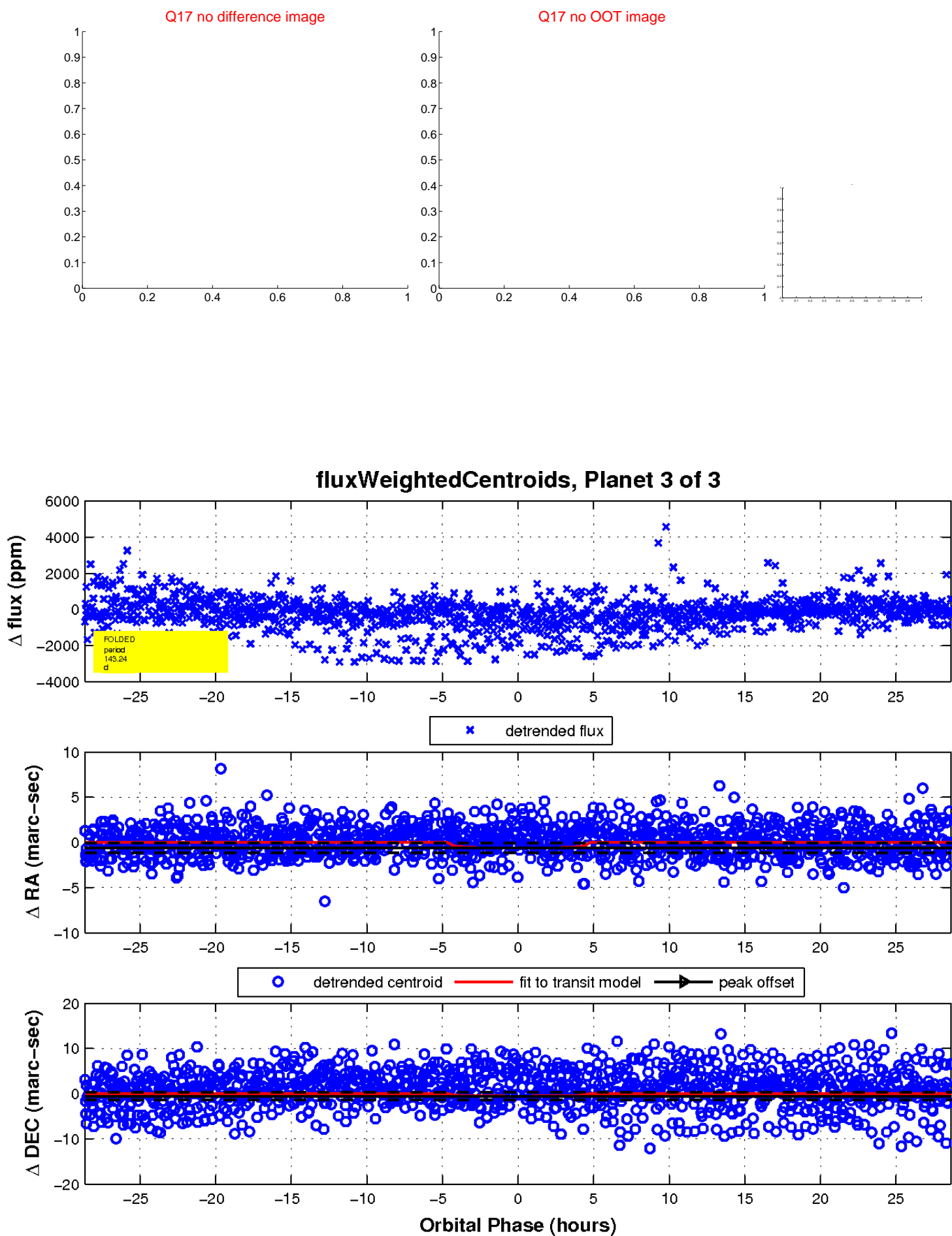
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

