

KIC 003834364

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})
003834364-01	OBS	6362.01	2.908454	132.315712	63617.7	2.575	3704.0	3108.8	0.76	5631	27.69	418.55
003834364-02	OBS	No	2.908450	133.771135	8898.9	2.445	556.7	542.7	0.76	5631	11.16	418.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003834364-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
003834364-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

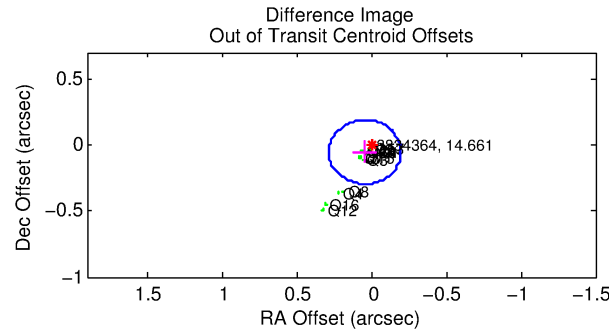
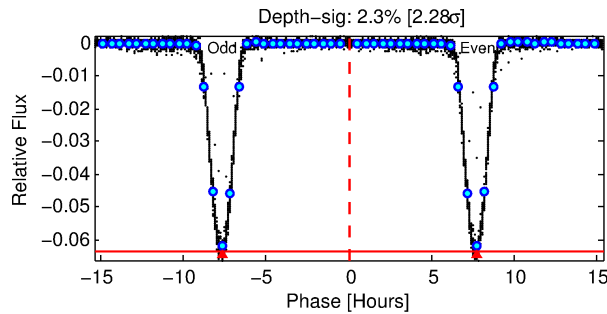
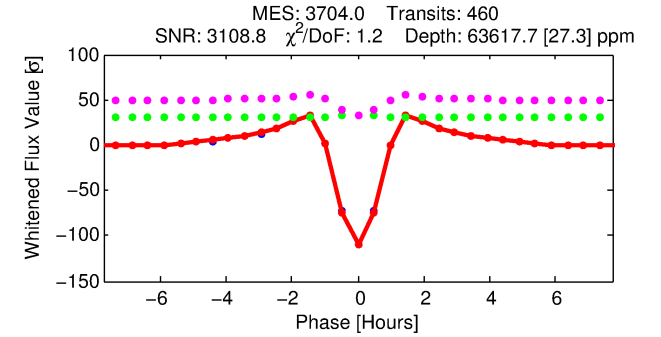
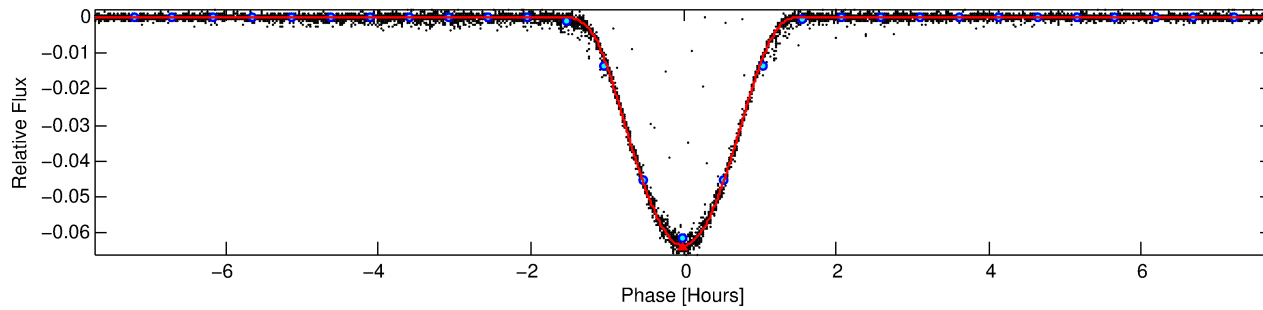
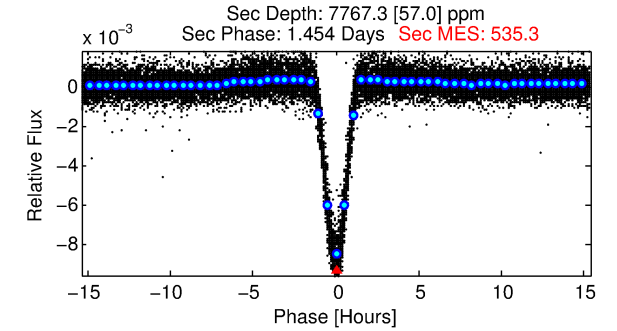
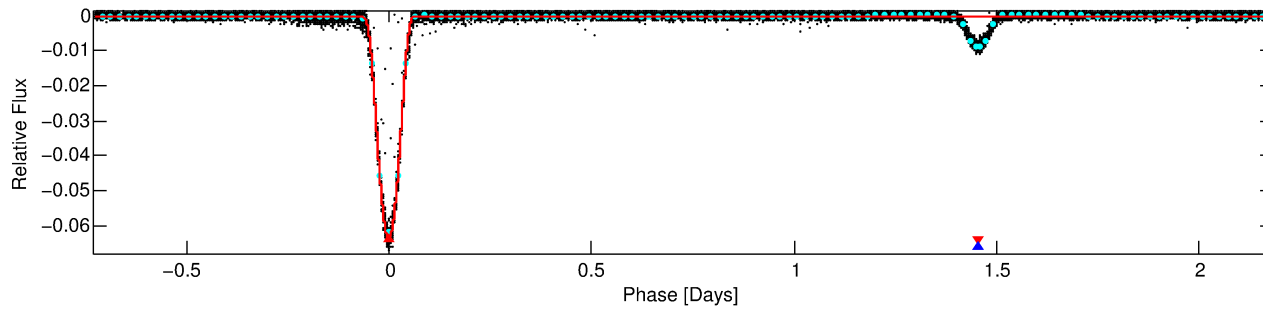
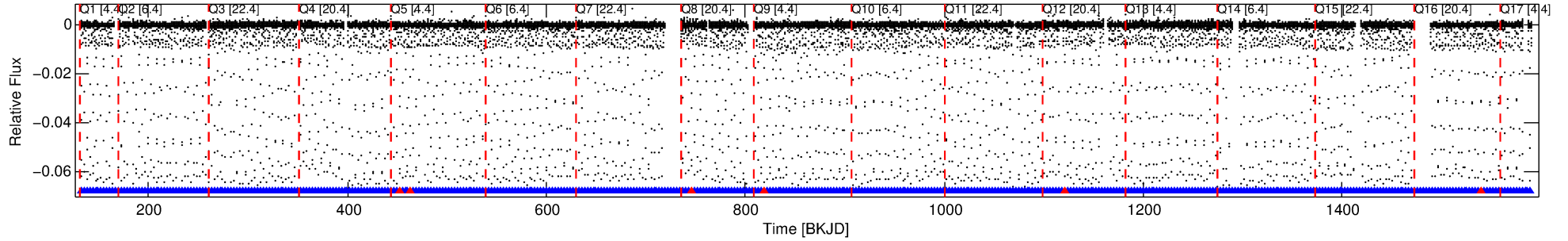
Ephemeris Match Information For 003834364-01

No Significant Match Found

DV One-Page Summary

KIC: 3834364 Candidate: 1 of 2 Period: 2.908 d
KOI: K06362.01 Corr: 0.999

Kp: 14.66 R*: 0.76 Rs Teff: 5631.0 K Logg: 4.52 Fe/H: -0.800



DV Fit Results:

Period = 2.90845 [0.00000] d
Epoch = 132.3157 [0.0000] BKJD
Rp/R* = 0.3321 [0.0053]
a/R* = 8.50 [0.01]
b = 0.90 [0.01]
Seff = 418.55 [94.72]
Teq = 1153 [65] K
Rp = 27.69 [4.44] Re
a = 0.0354 [0.0047] AU
Ag = 7.00 [1.37] [4.37σ]
Teffp = 2901 [89] K [15.86σ]

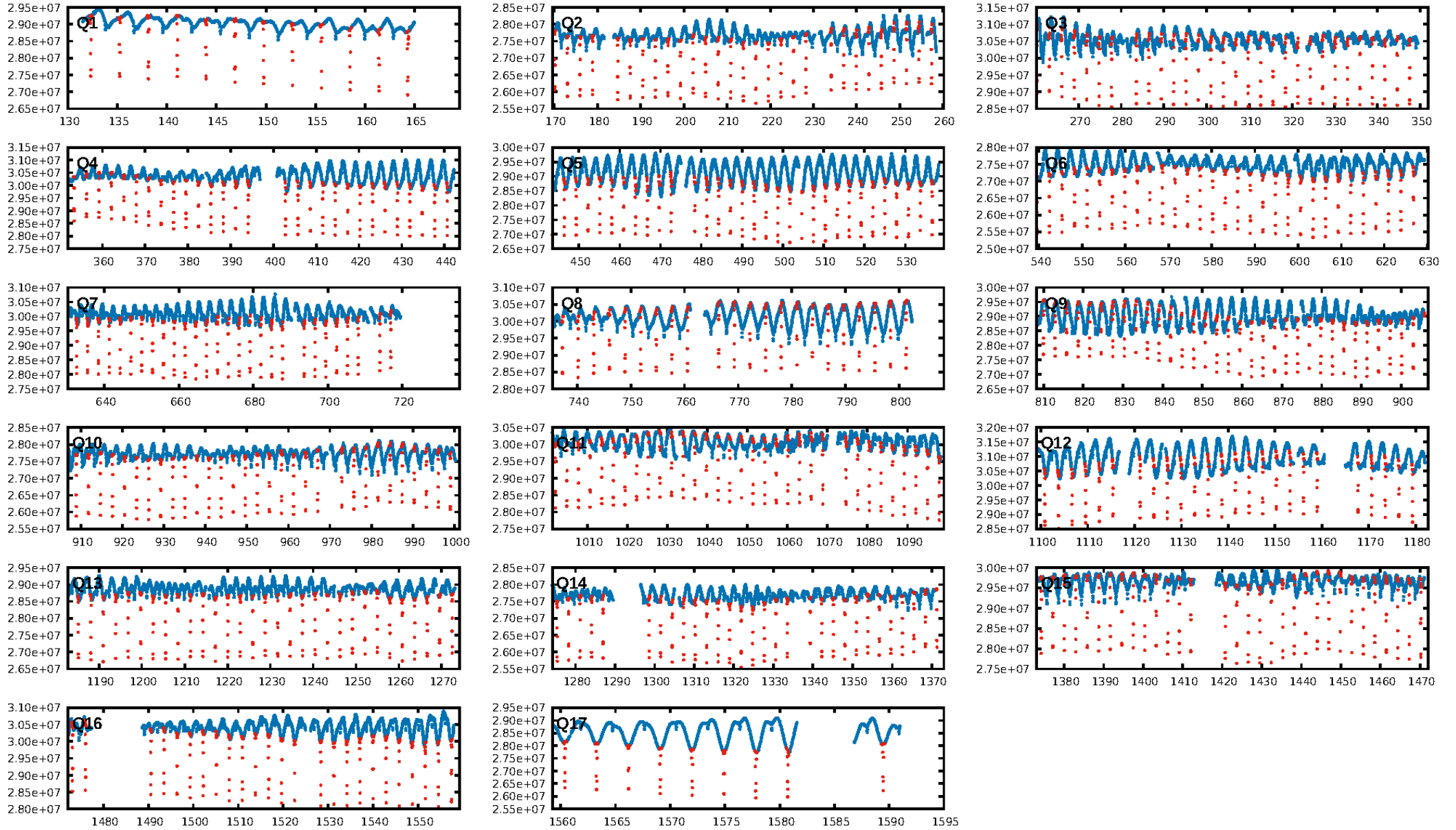
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [433/439]
GhostDiagnostic-chr: 2.752
Centroid-sig: 0.0%
Centroid-so: 0.252 arcsec [105.82σ]
OotOffset-rm: 0.070 arcsec [0.87σ]
KicOffset-rm: 0.163 arcsec [2.36σ]
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]

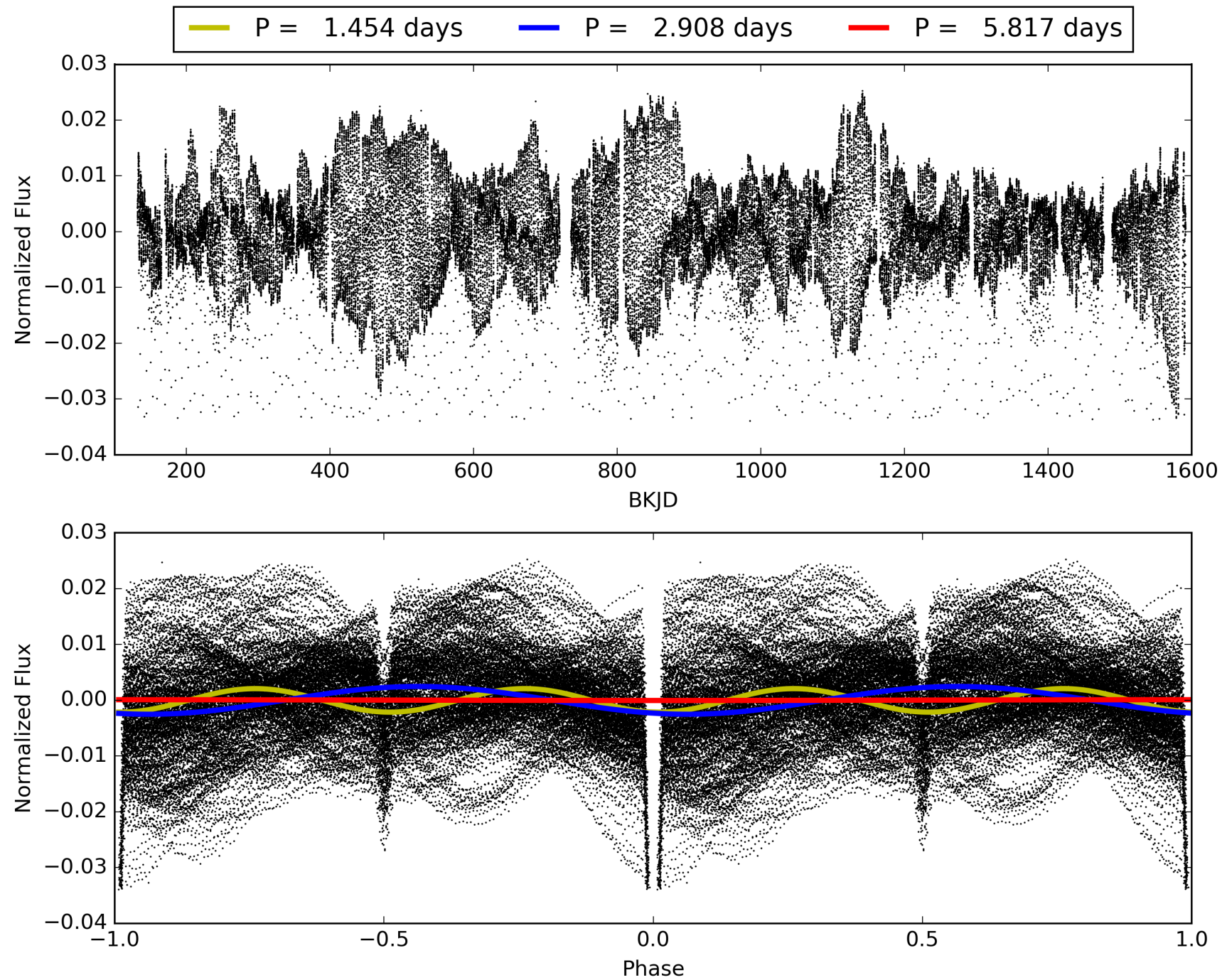
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:00:02 Z

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

TCE 003834364-01, PDC Light Curves

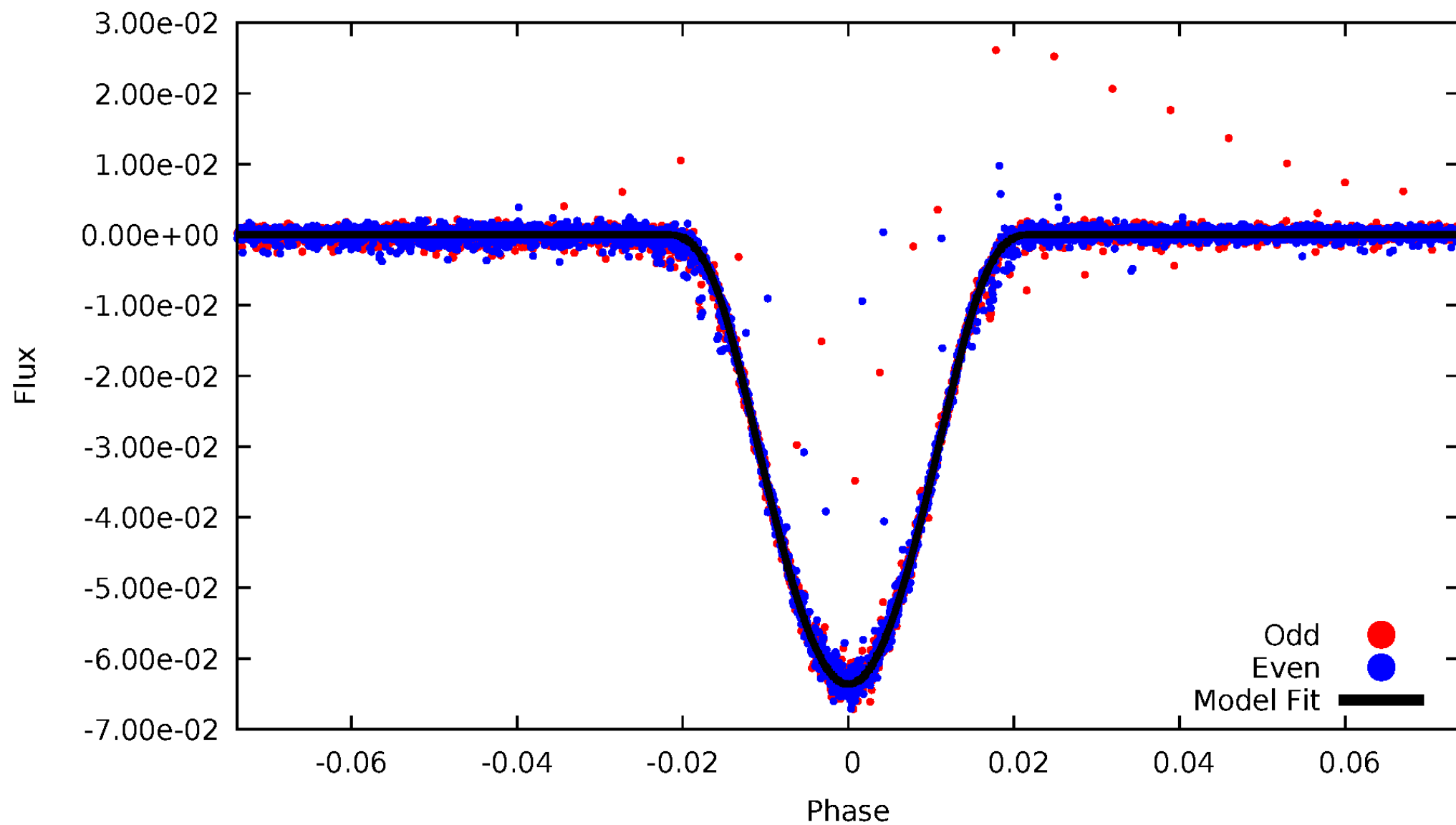


TCE 003834364-01



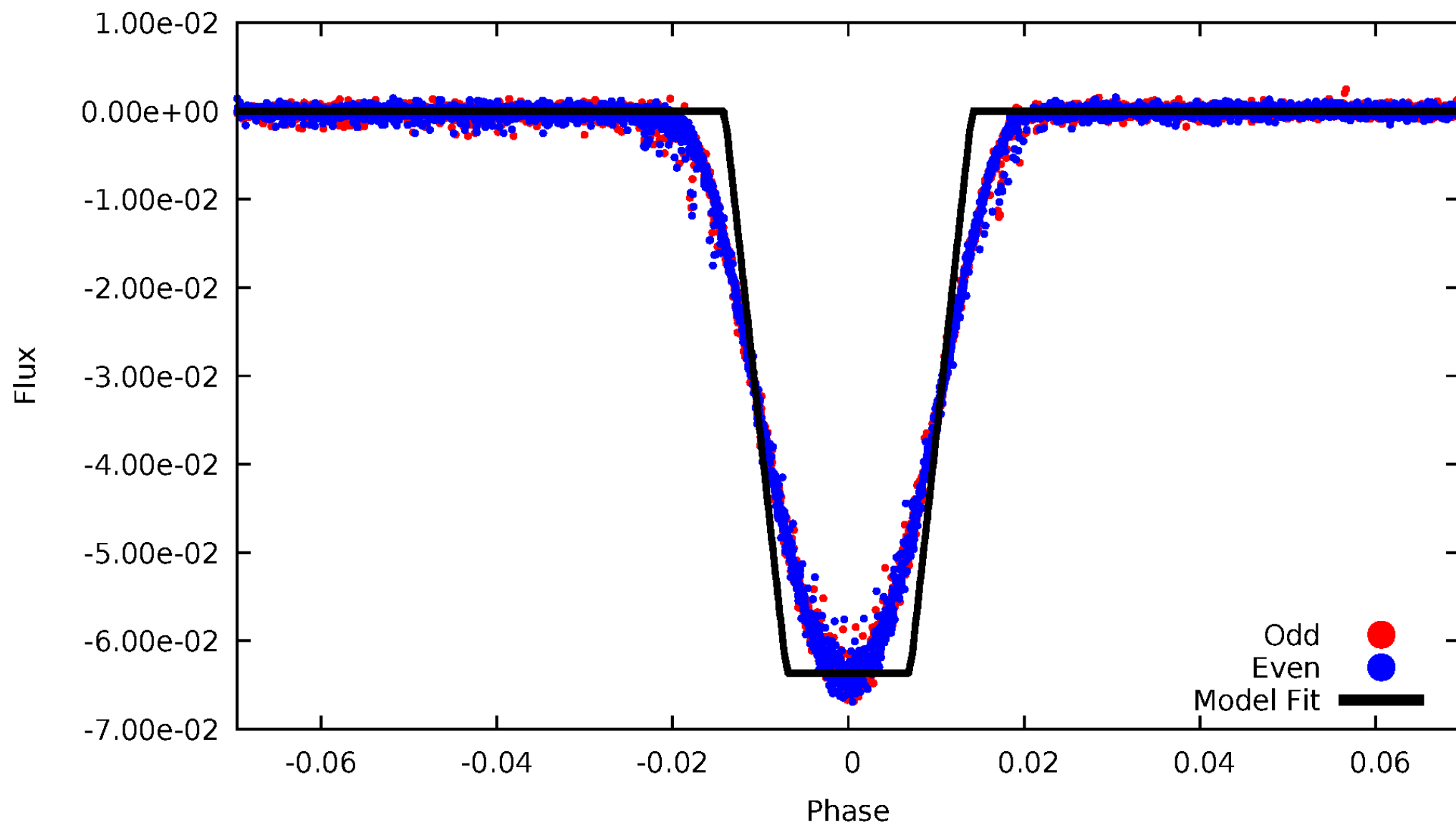
DV Odd/Even

TCE 003834364-01



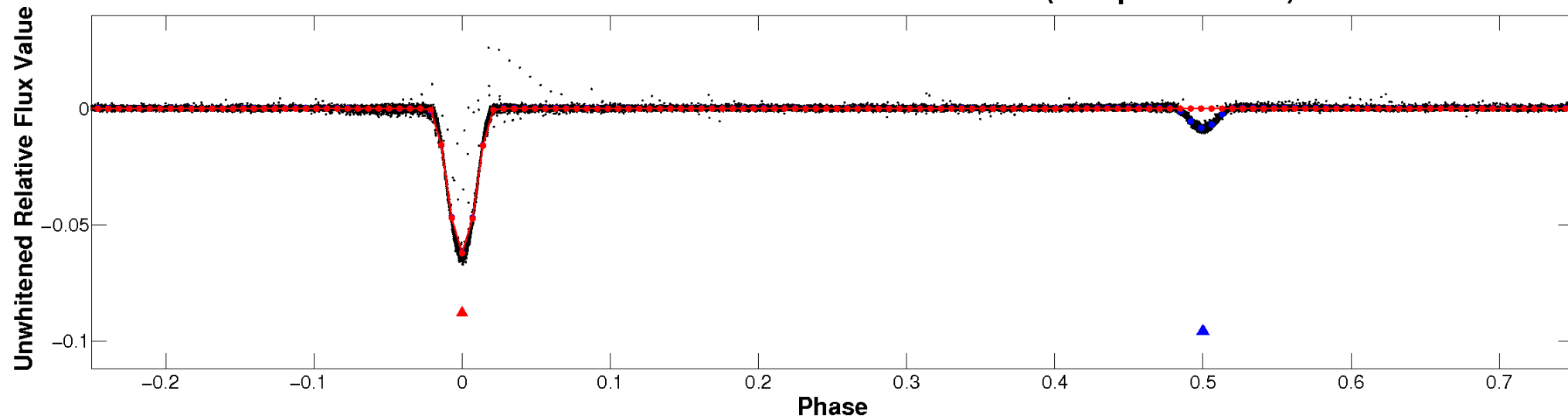
ALT Odd/Even

TCE 003834364-01

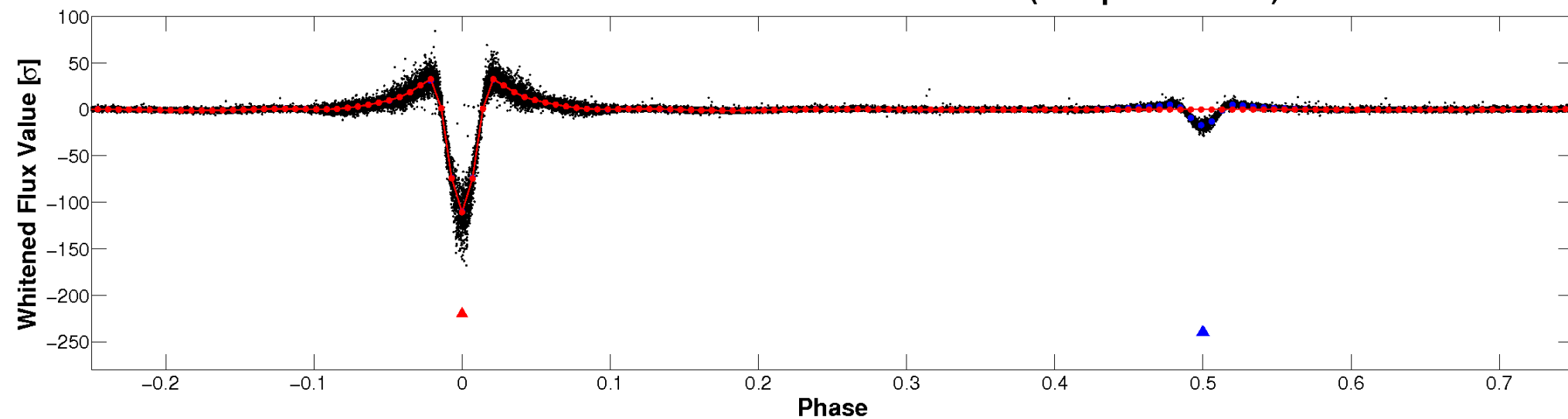


Non-Whitened Vs. Whitened Light Curve

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

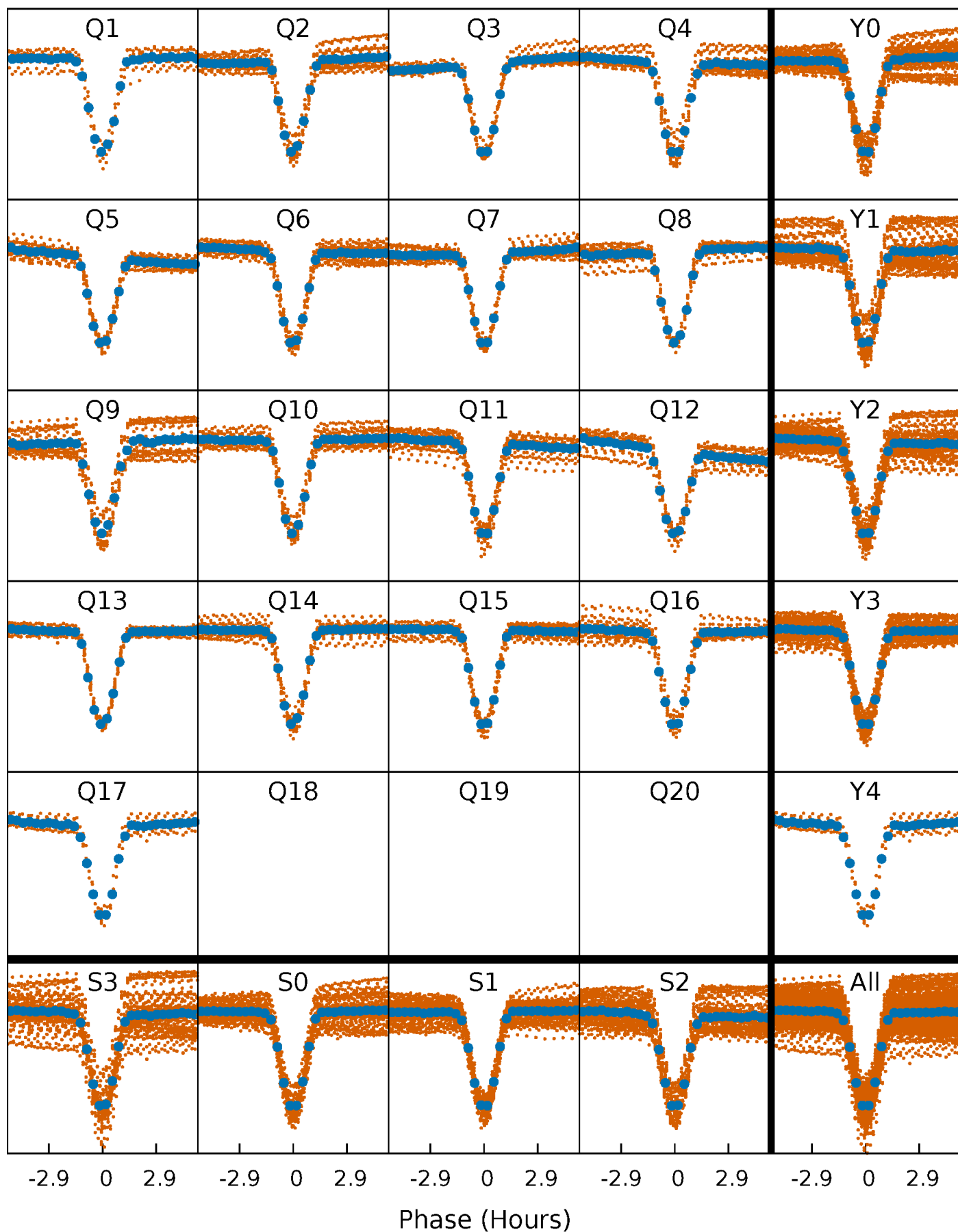


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



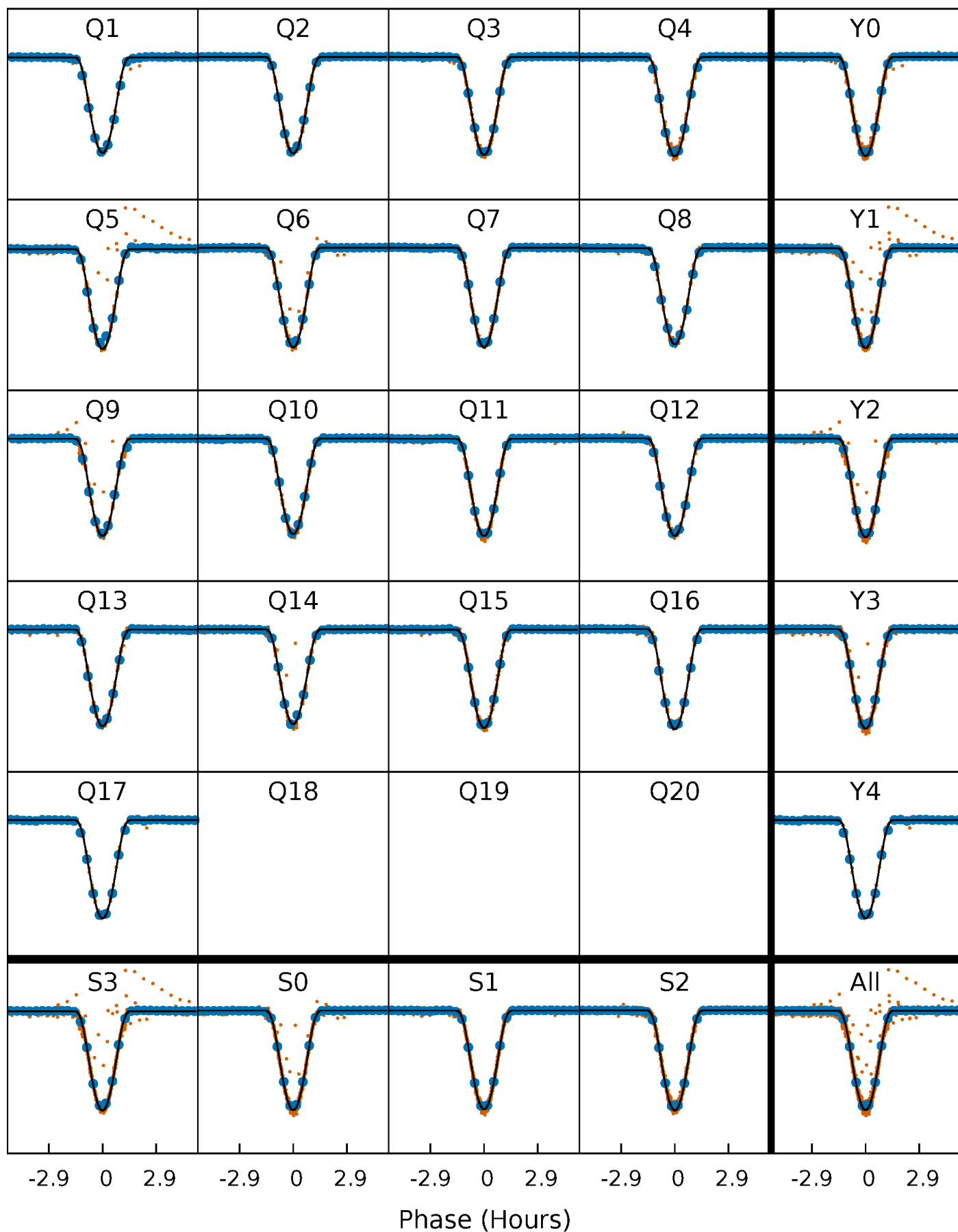
PDC Quarter-Phased Transit Curves

TCE 003834364-01 P= 2.908454 Days $T_0=132.315712$ (BKJD)



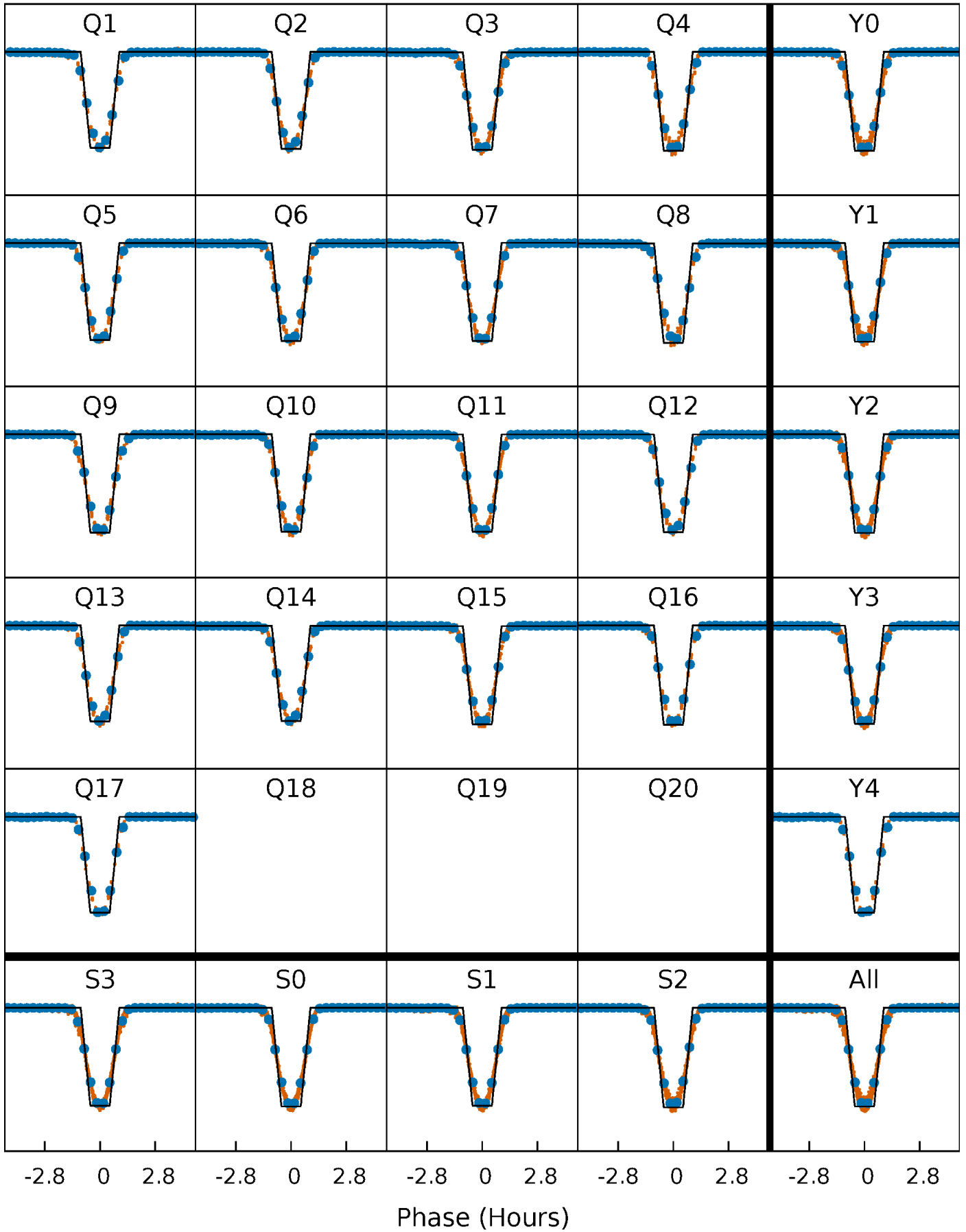
DV Quarter-Phased Transit Curves

TCE 003834364-01 P= 2.908454 Days $T_0=132.315712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

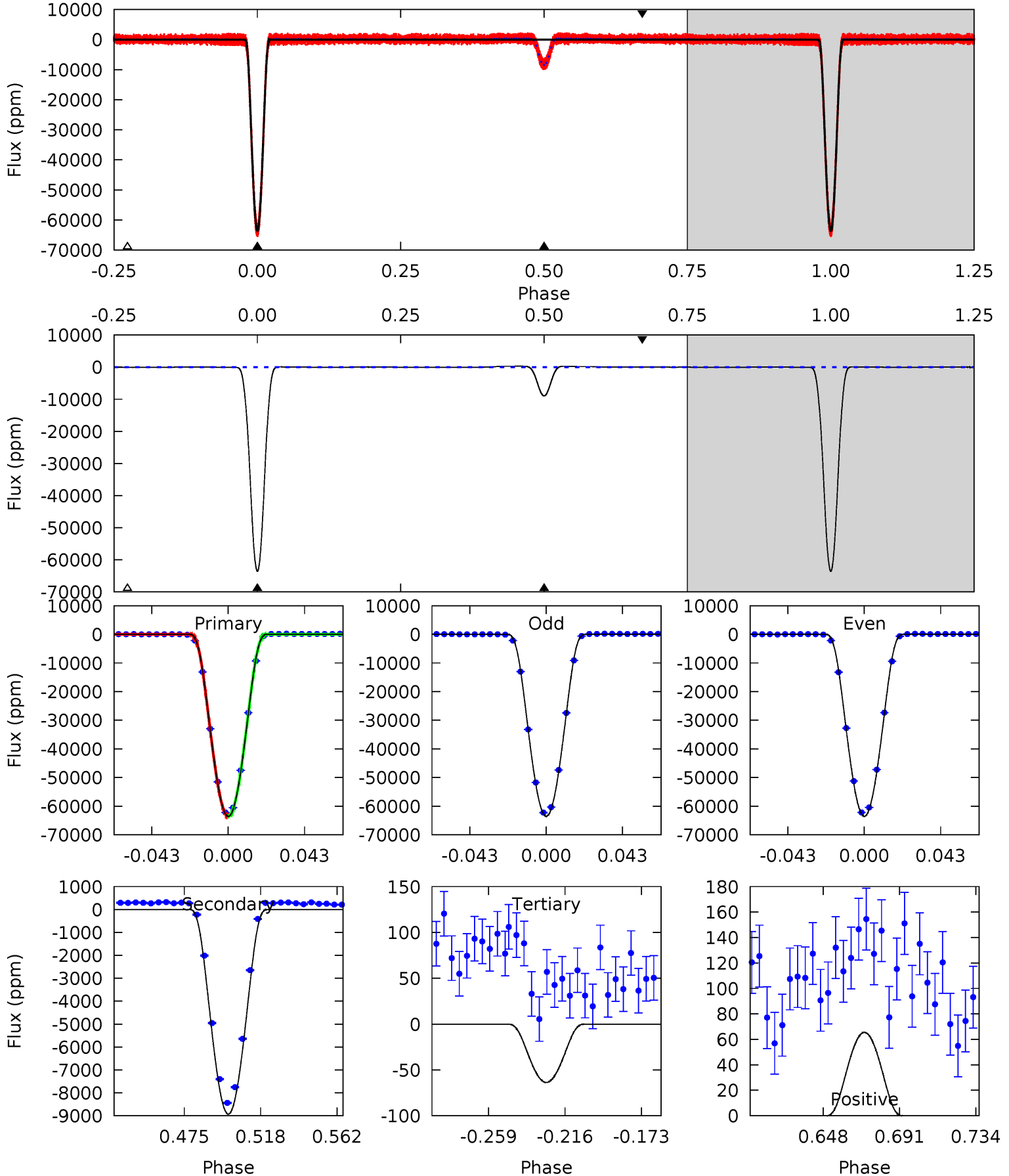
TCE 003834364-01 P= 2.908454 Days $T_0=132.315814$ (BKJD)



DV Model-Shift Uniqueness Test

003834364-01, P = 2.908454 Days, E = 129.407258 Days

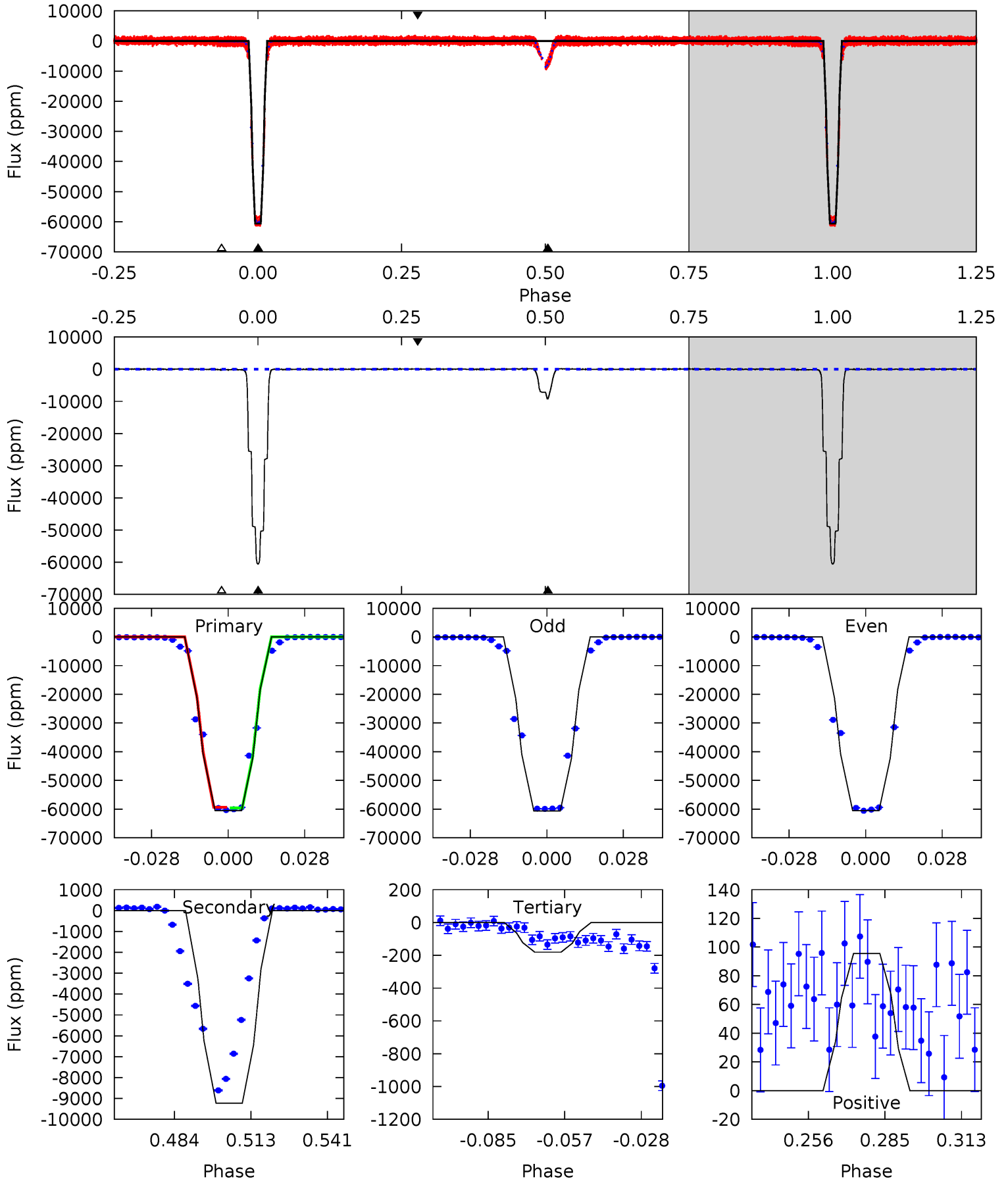
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6864	964.3	6.87	7.07	4.74	2.02	8.73	6857	6857	957.4	957.2	0.74	0.99	0.00	2.04



Alt Model-Shift Uniqueness Test

003834364-01, P = 2.908454 Days, E = 129.407360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2803	426.7	8.38	4.42	4.82	2.19	2.66	2794	2798	418.3	422.3	3.70	0.99	0.00	0



Stellar Parameters For KIC 003834364

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5631^{+166}_{-166}	$4.518^{+0.105}_{-0.105}$	$-0.800^{+0.350}_{-0.300}$	$0.764^{+0.122}_{-0.091}$	$0.702^{+0.092}_{-0.029}$	$2.216^{+0.988}_{-0.683}$
	+3%/-3%	+2%/-2%	+44%/-37%	+16%/-12%	+13%/-4%	+45%/-31%
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 003834364-01 / KOI 6362.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8930 ± 9	$27.86^{+2.41}_{-2.02}$	1609^{+79}_{-72}	3470^{+66}_{-73}	$8.132^{+1.228}_{-1.126}$
Alt.	-9224 ± 22	$21.20^{+1.87}_{-1.59}$	1609^{+76}_{-75}	3825^{+81}_{-87}	15^{+2}_{-2}

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 $A_{obs} \gg 1.0$

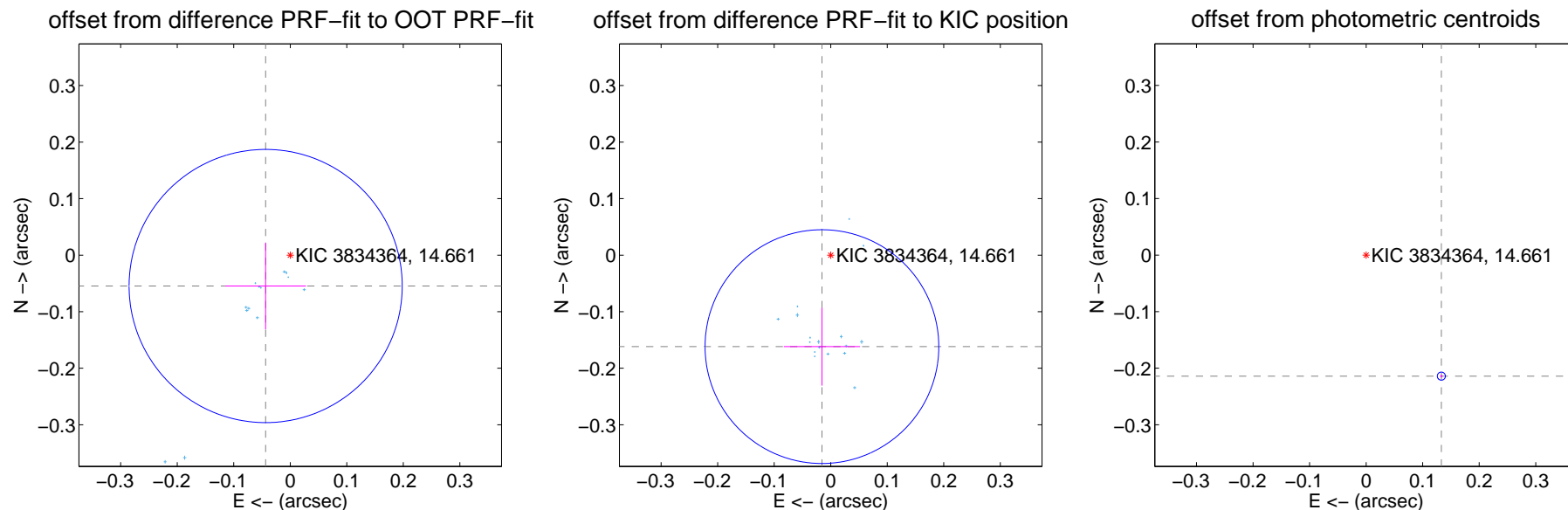
DV Centroid Data

Supplemental centroid analysis for 003834364-01. Kepler magnitude: 14.66. Transit SNR 3108.84

There are 17 quarters with good PRF difference image offsets

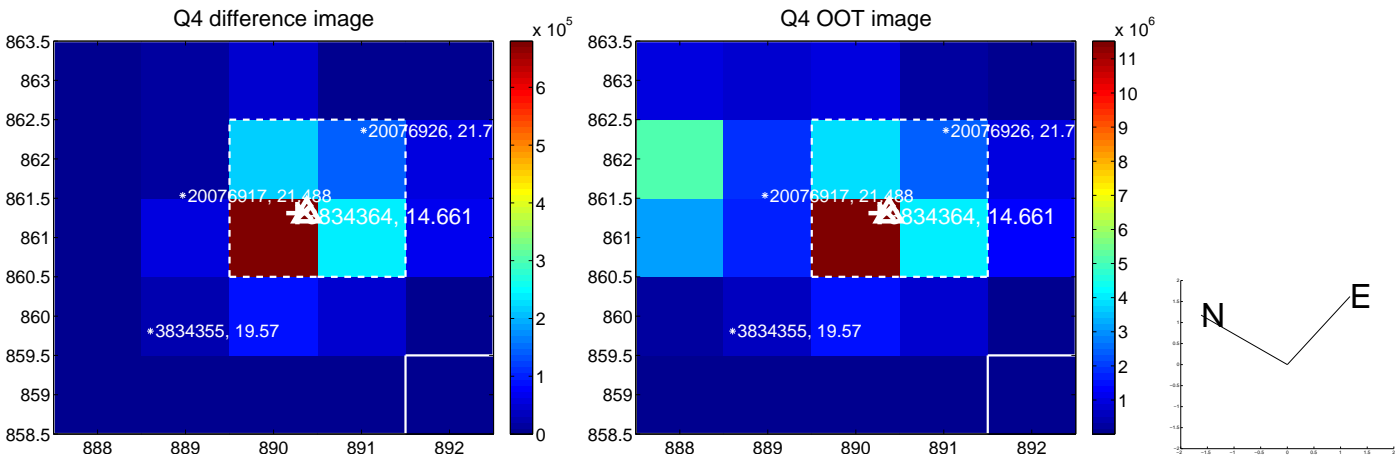
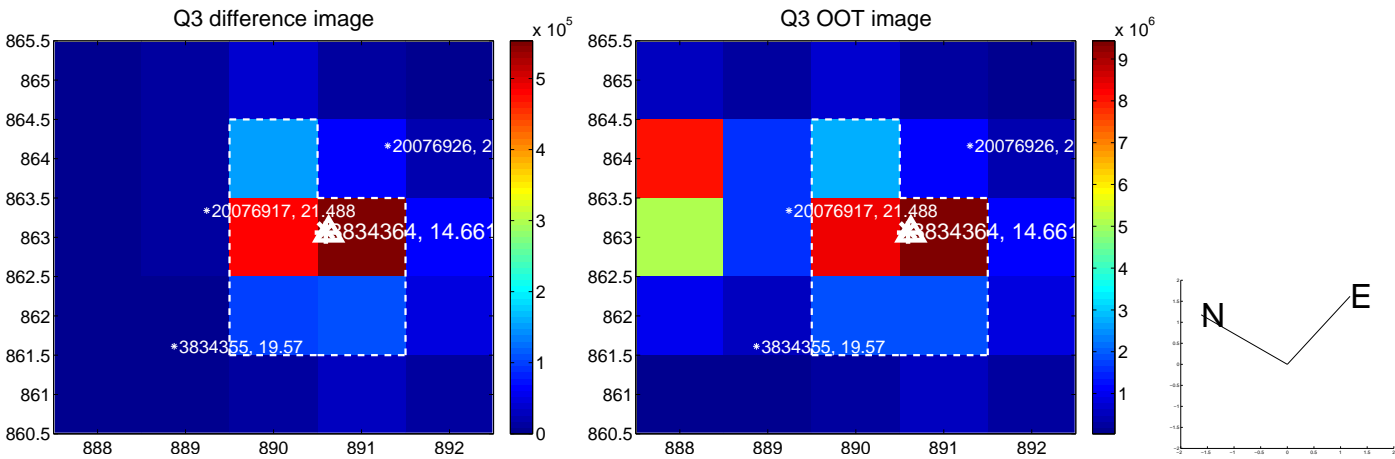
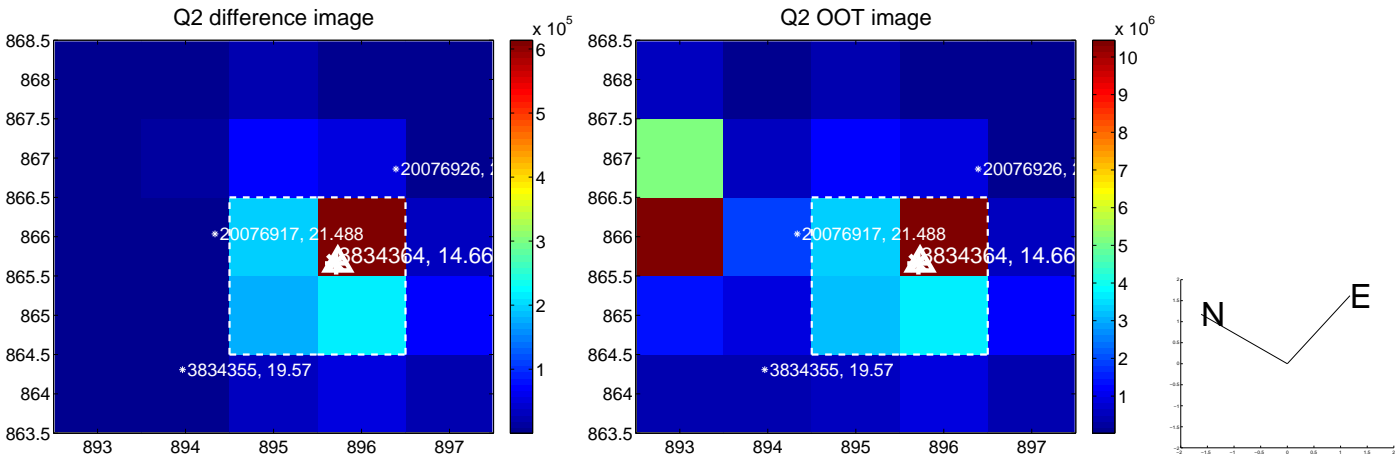
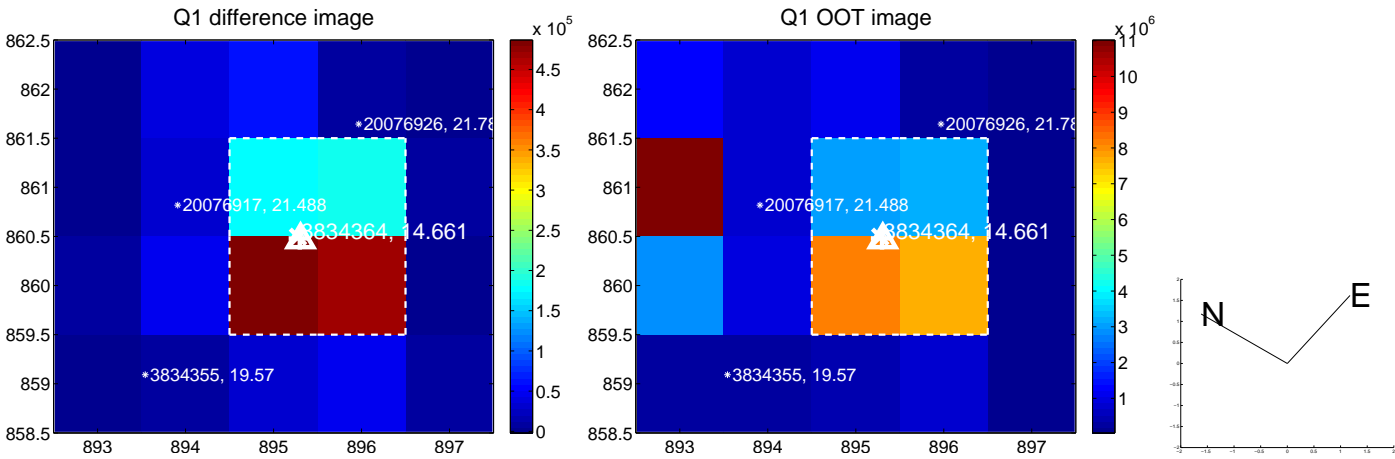
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.070 ± 0.081	0.87	0.044 ± 0.071	-0.055 ± 0.077
PRF-fit source offset from KIC position	0.163 ± 0.069	2.36	0.016 ± 0.067	-0.162 ± 0.069
photometric centroid source offset	0.25 ± 0.00	105.82	-0.13 ± 0.00	-0.21 ± 0.00

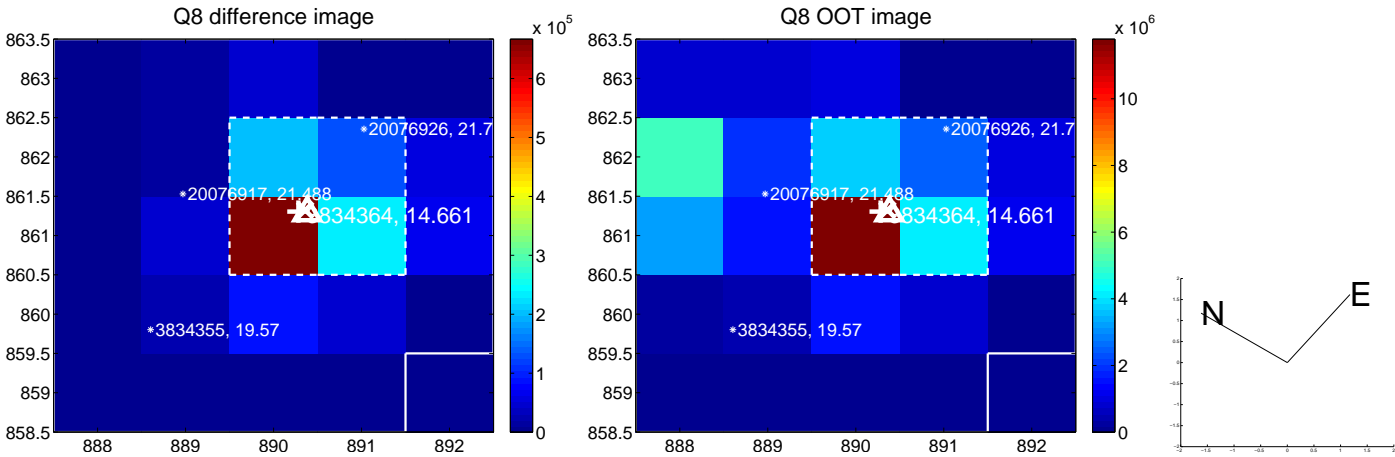
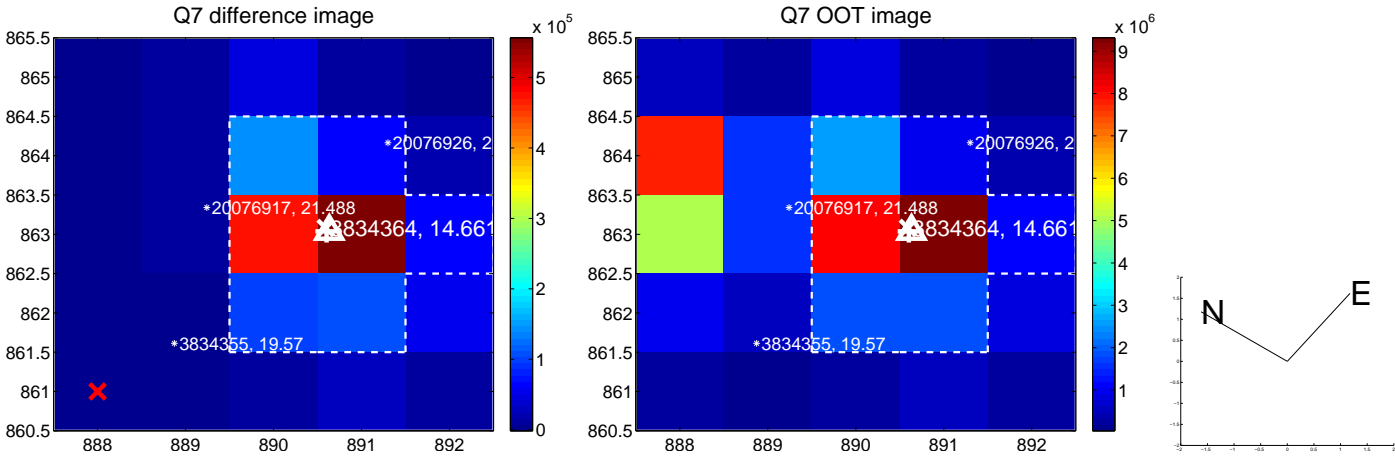
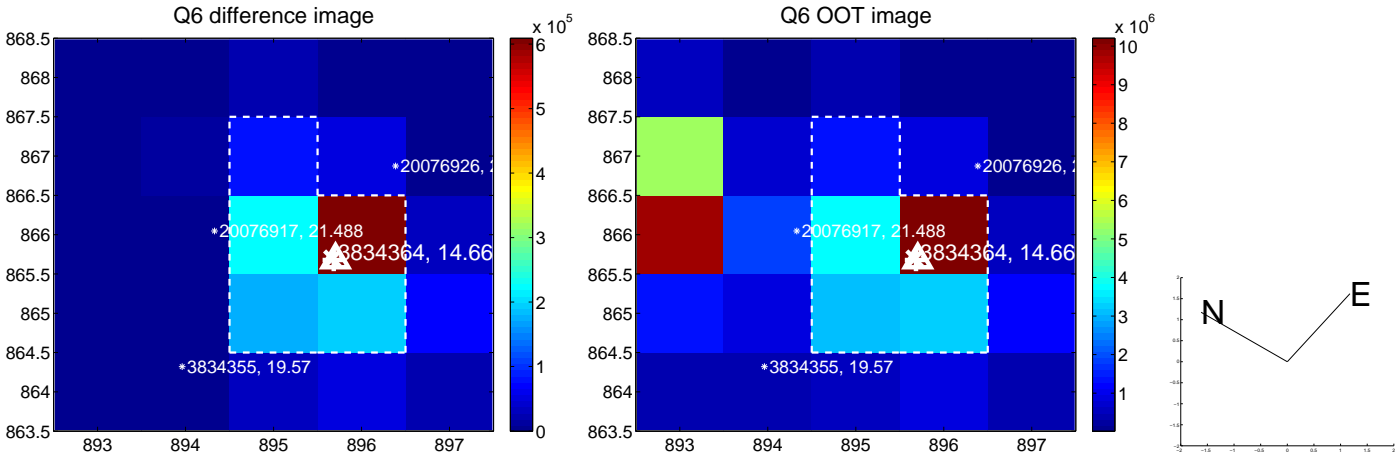
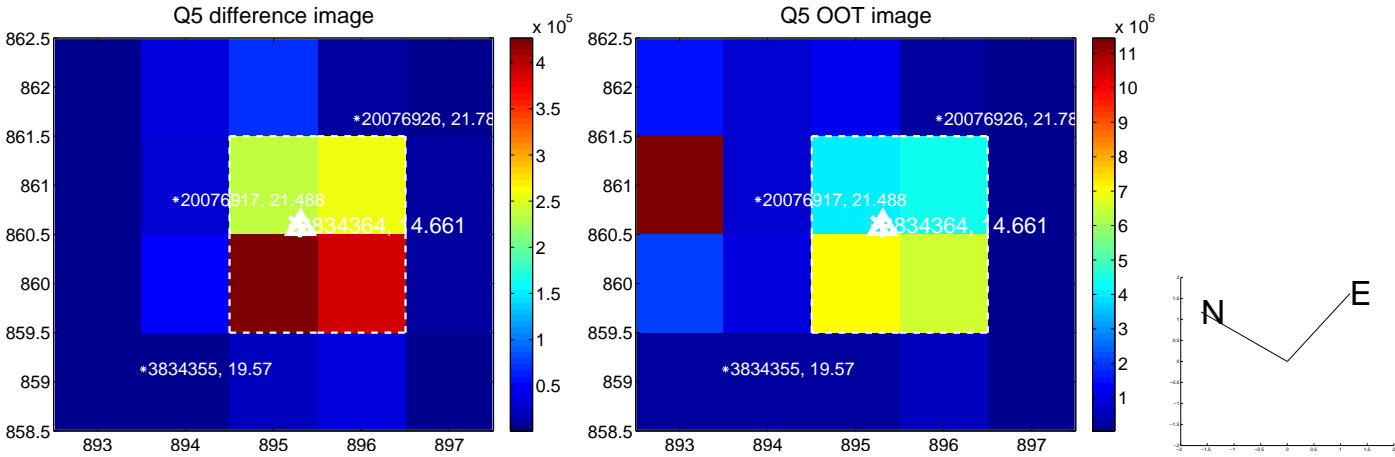


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

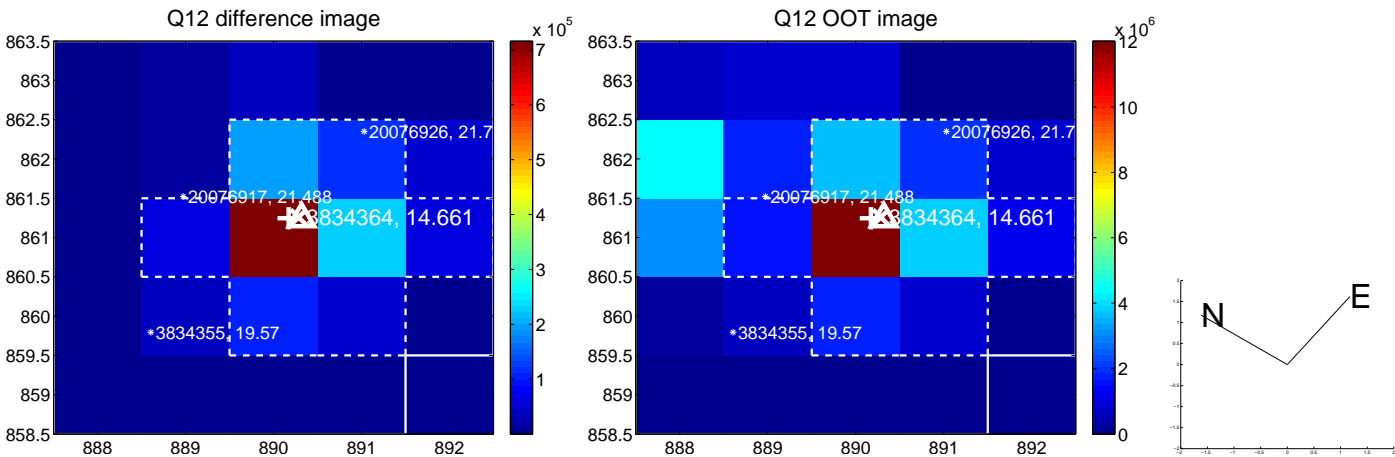
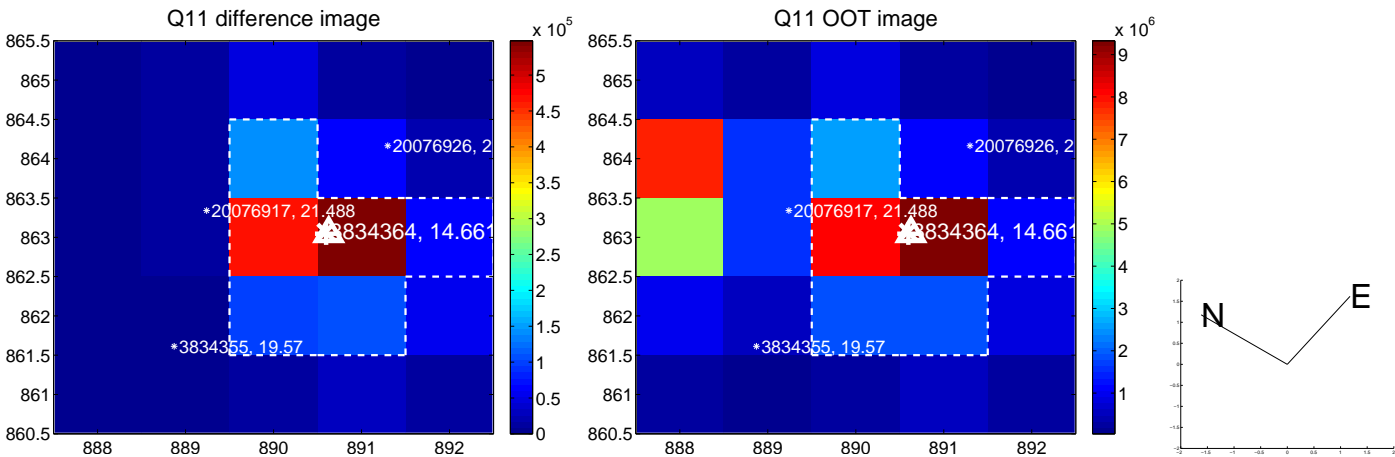
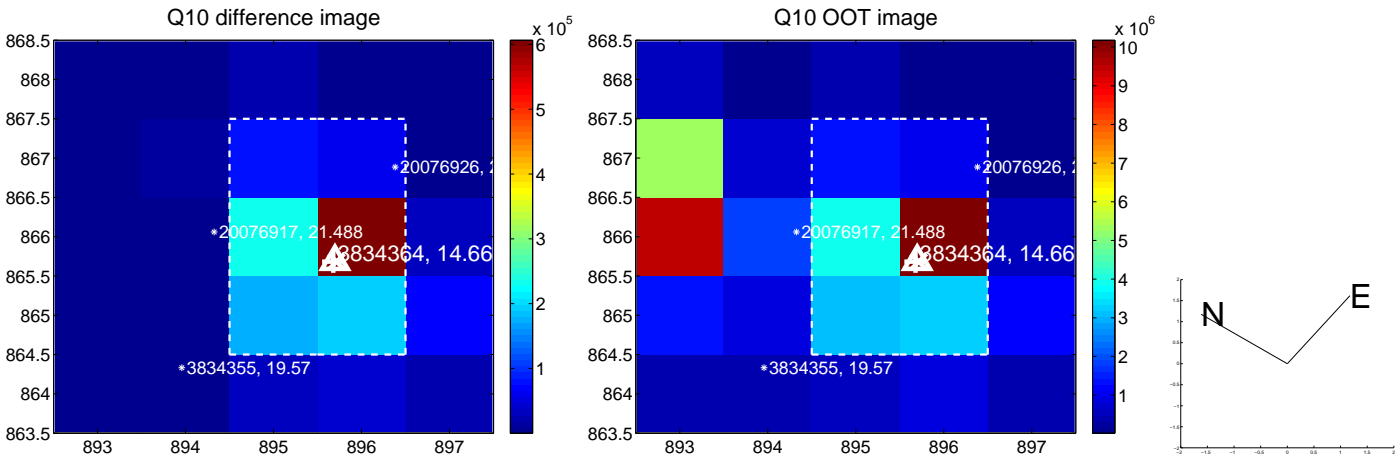
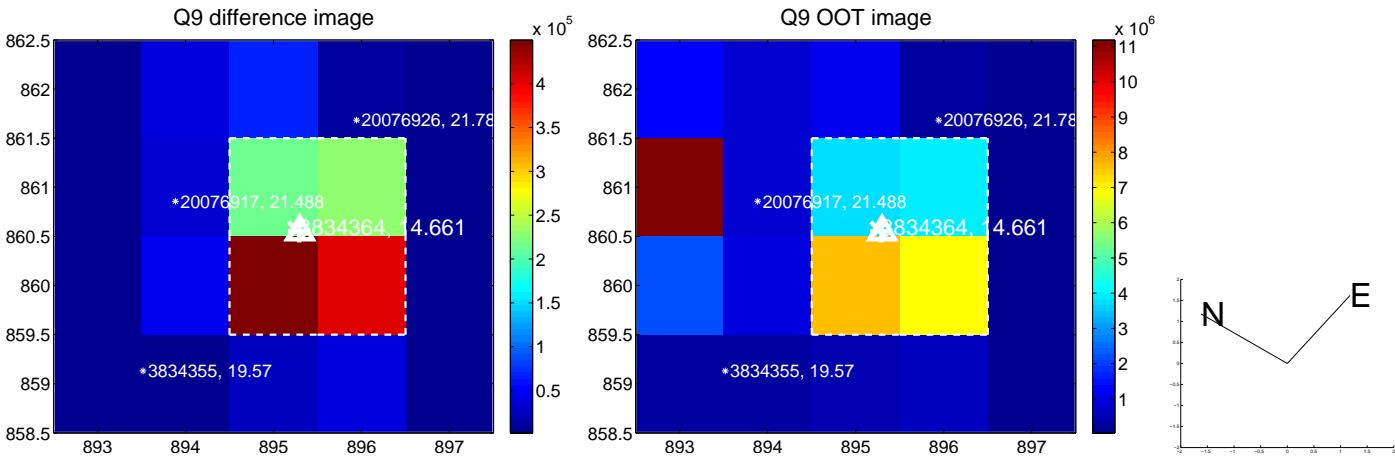
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



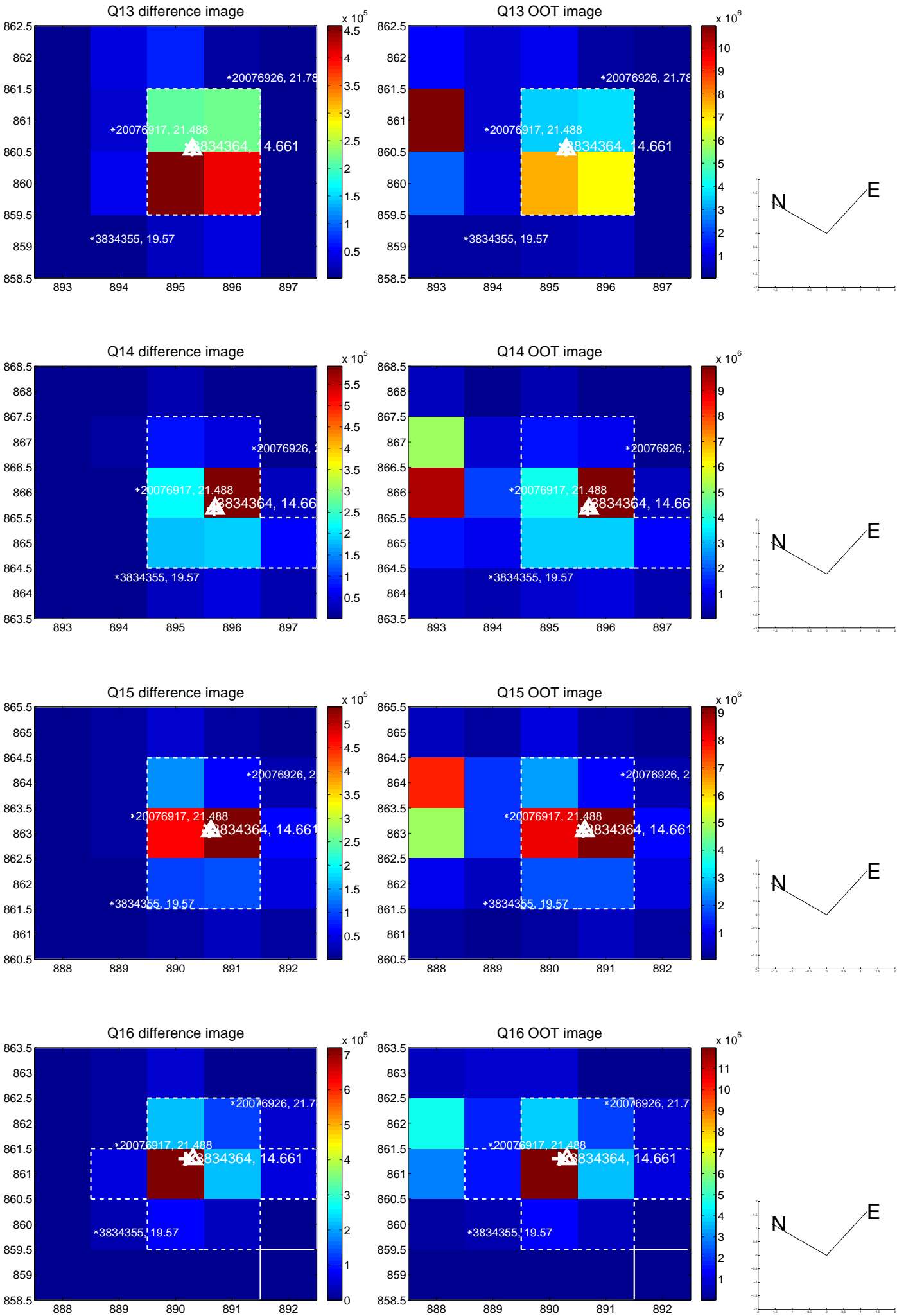
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



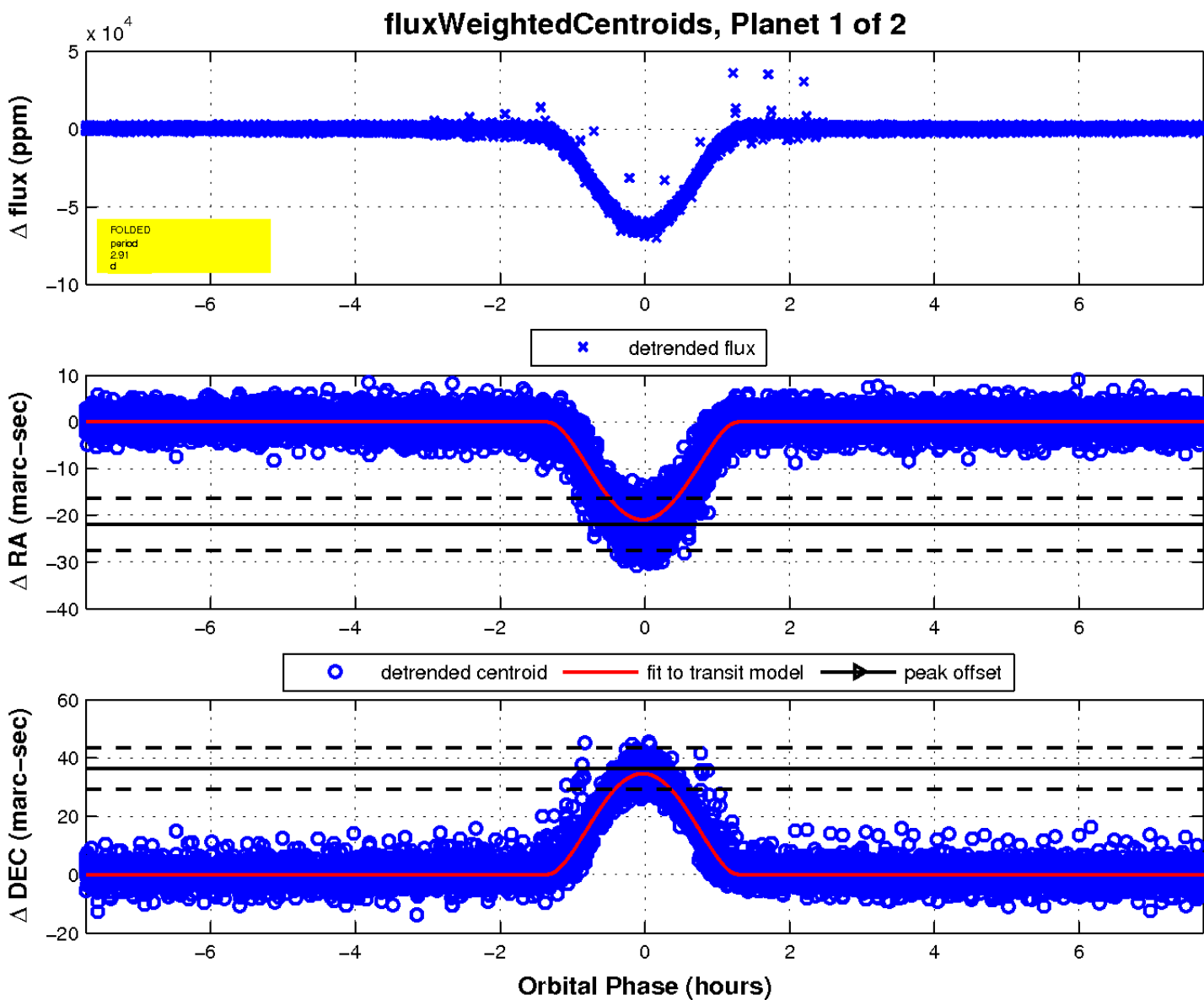
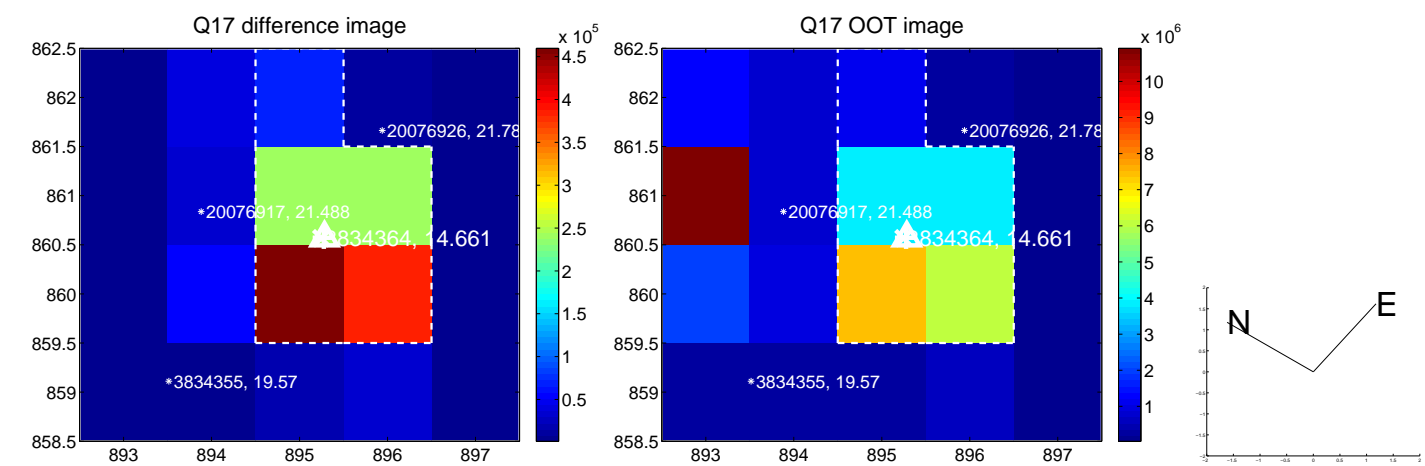
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

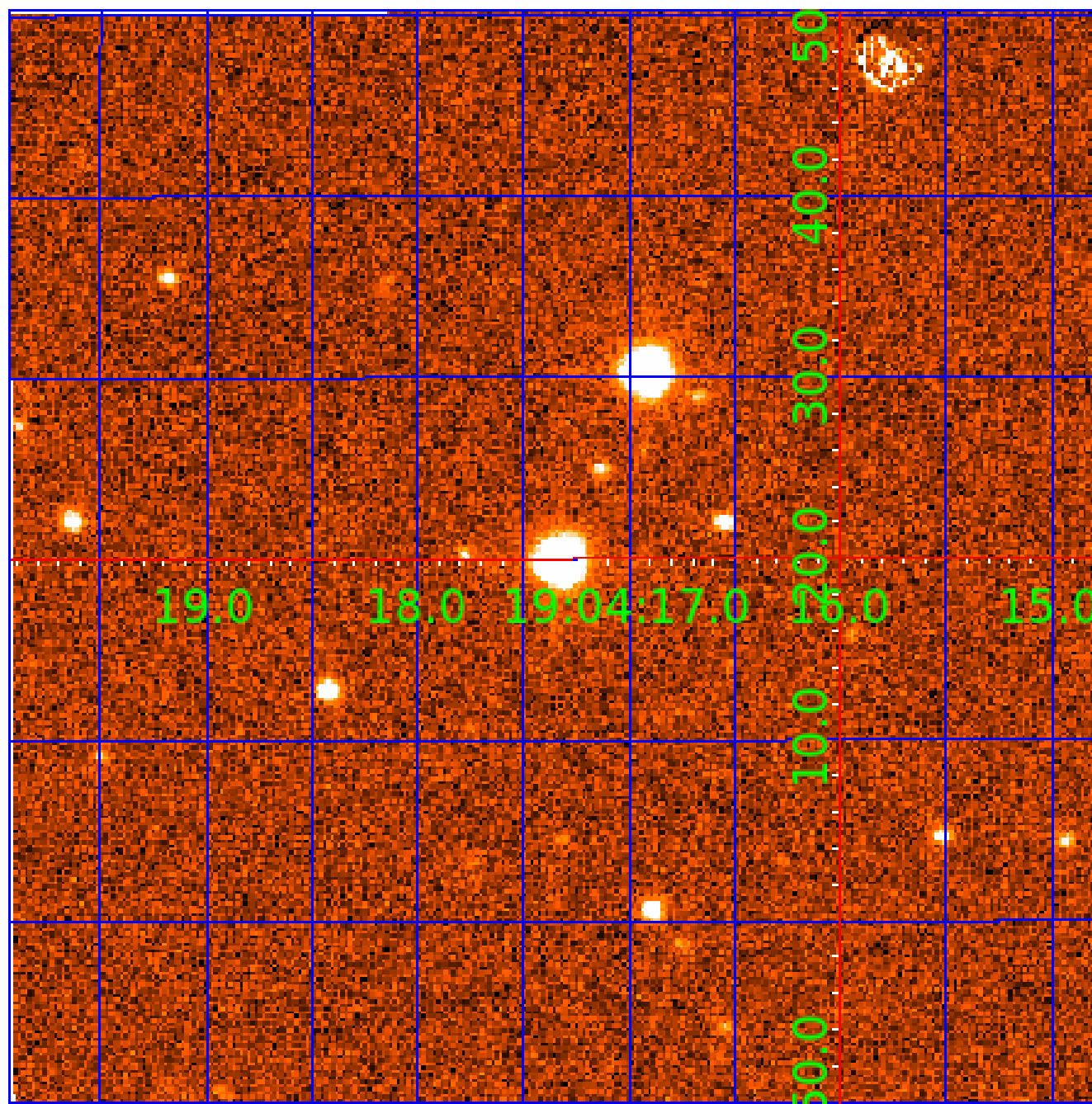


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003834364

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})
003834364-01	OBS	6362.01	2.908454	132.315712	63617.7	2.575	3704.0	3108.8	0.76	5631	27.69	418.55
003834364-02	OBS	No	2.908450	133.771135	8898.9	2.445	556.7	542.7	0.76	5631	11.16	418.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003834364-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
003834364-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 003834364-02

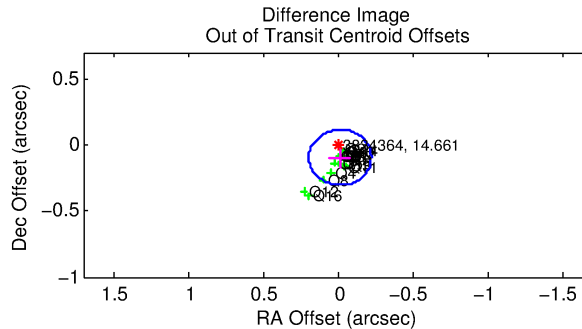
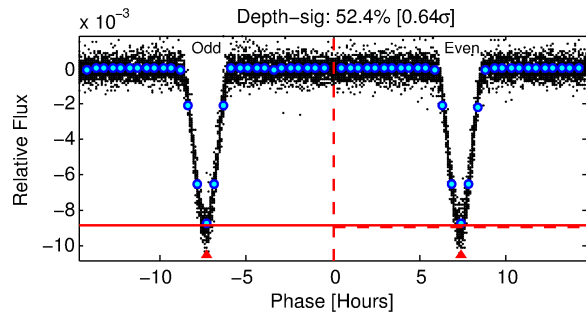
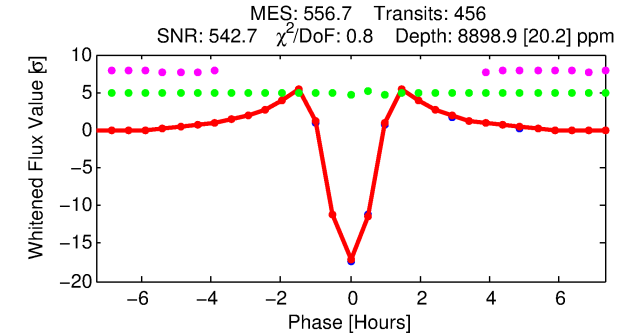
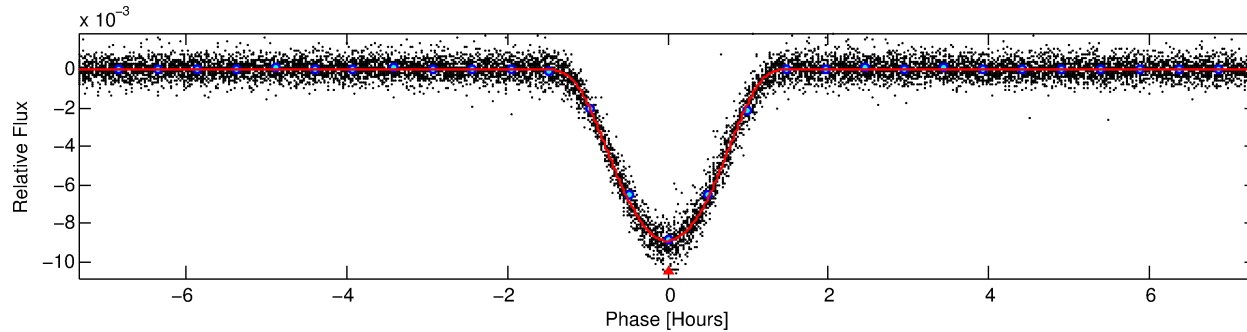
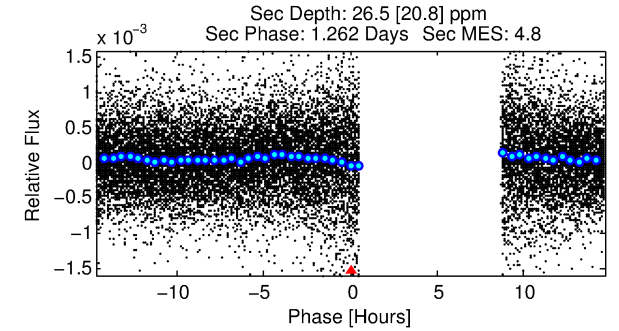
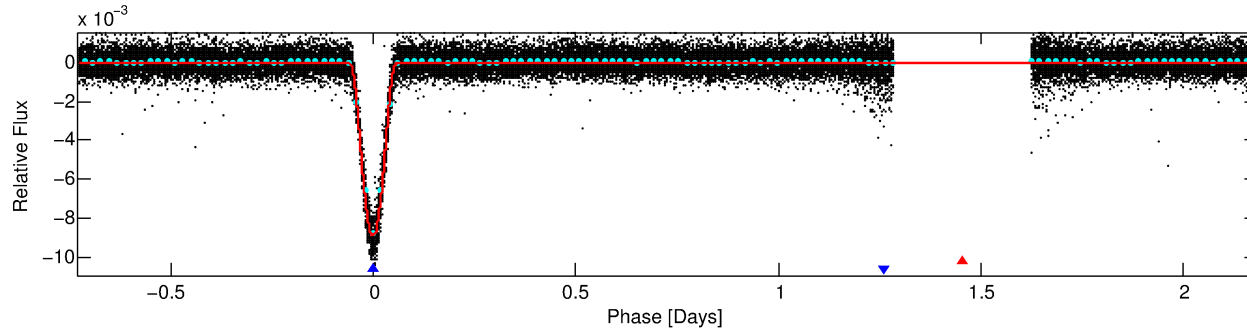
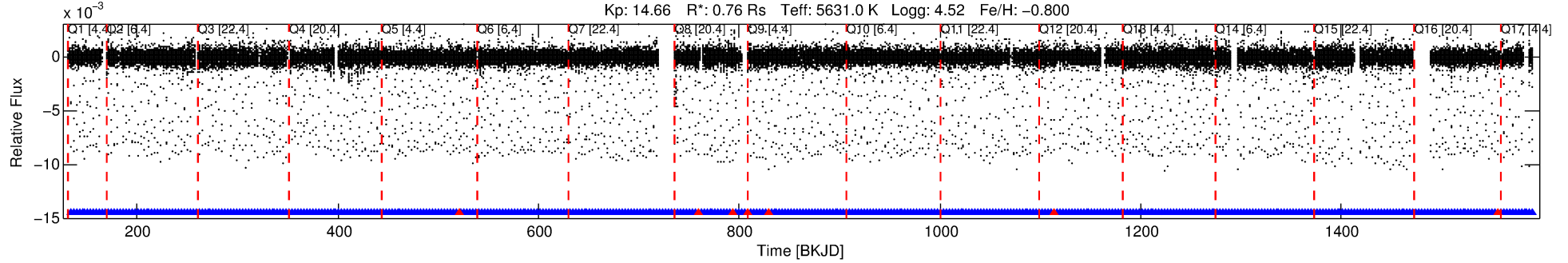
No Significant Match Found

DV One-Page Summary

KIC: 3834364 Candidate: 2 of 2 Period: 2.908 d

KOI: K06362 Corr: No Ephemeris Match

Kp: 14.66 R*: 0.76 Rs Teff: 5631.0 K Logg: 4.52 Fe/H: -0.800



DV Fit Results:

Period = 2.90845 [0.00000] d
Epoch = 133.7711 [0.0001] BKJD
Rp/R* = 0.1339 [0.0061]
a/R* = 5.50 [0.05]
b = 0.97 [0.01]
Seff = 418.55 [94.72]
Teff = 1153 [65] K
Rp = 11.16 [1.85] Re
a = 0.0354 [0.0047] AU
Ag = 0.15 [0.12] [-7.13σ]
Teffp = 1104 [221] K [-0.21σ]

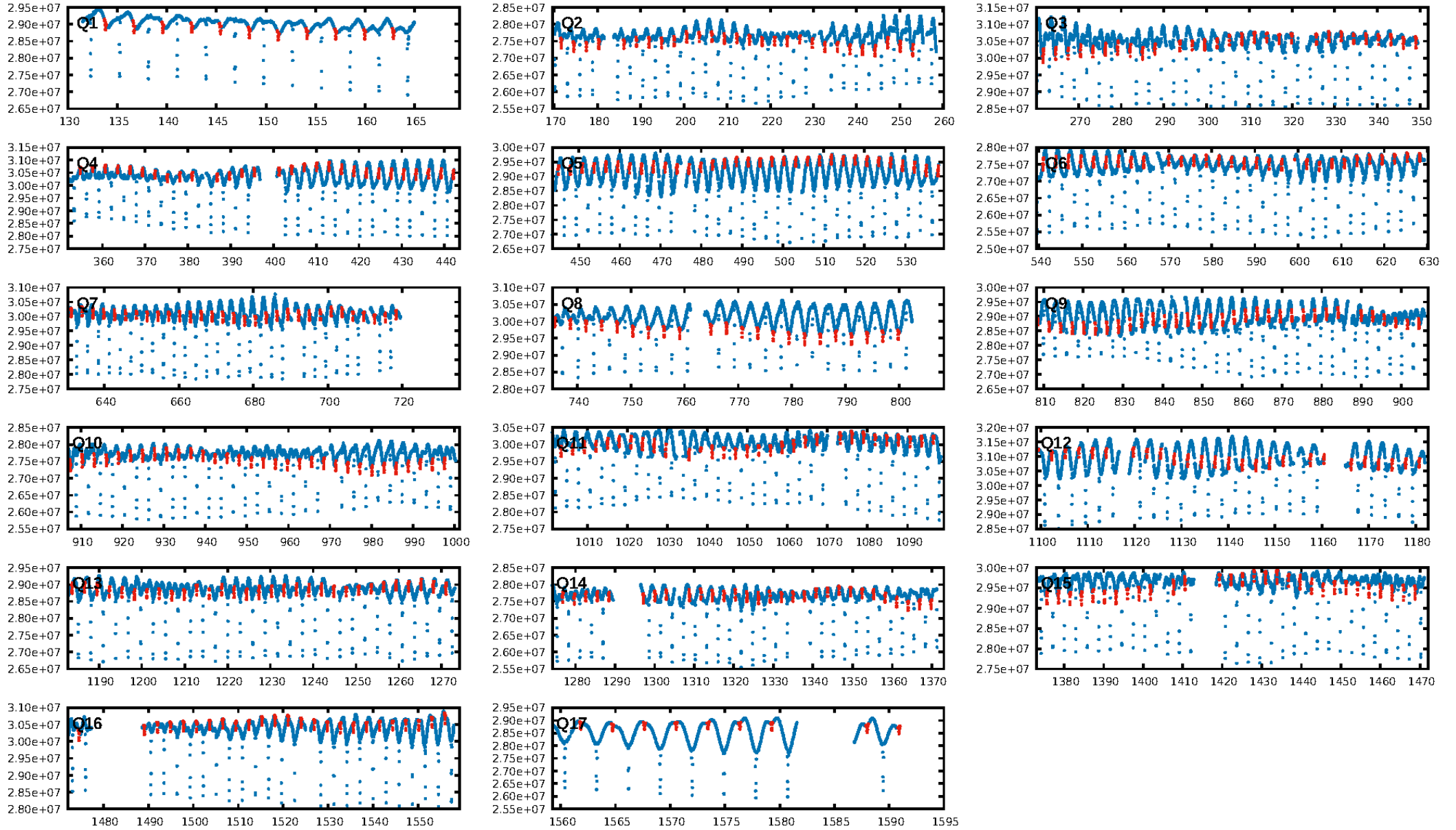
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [429/436]
GhostDiagnostic-chr: 3.165
Centroid-sig: 0.0%
Centroid-so: 0.290 arcsec [18.12σ]
OotOffset-rm: 0.097 arcsec [1.39σ]
KicOffset-rm: 0.176 arcsec [2.49σ]
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]

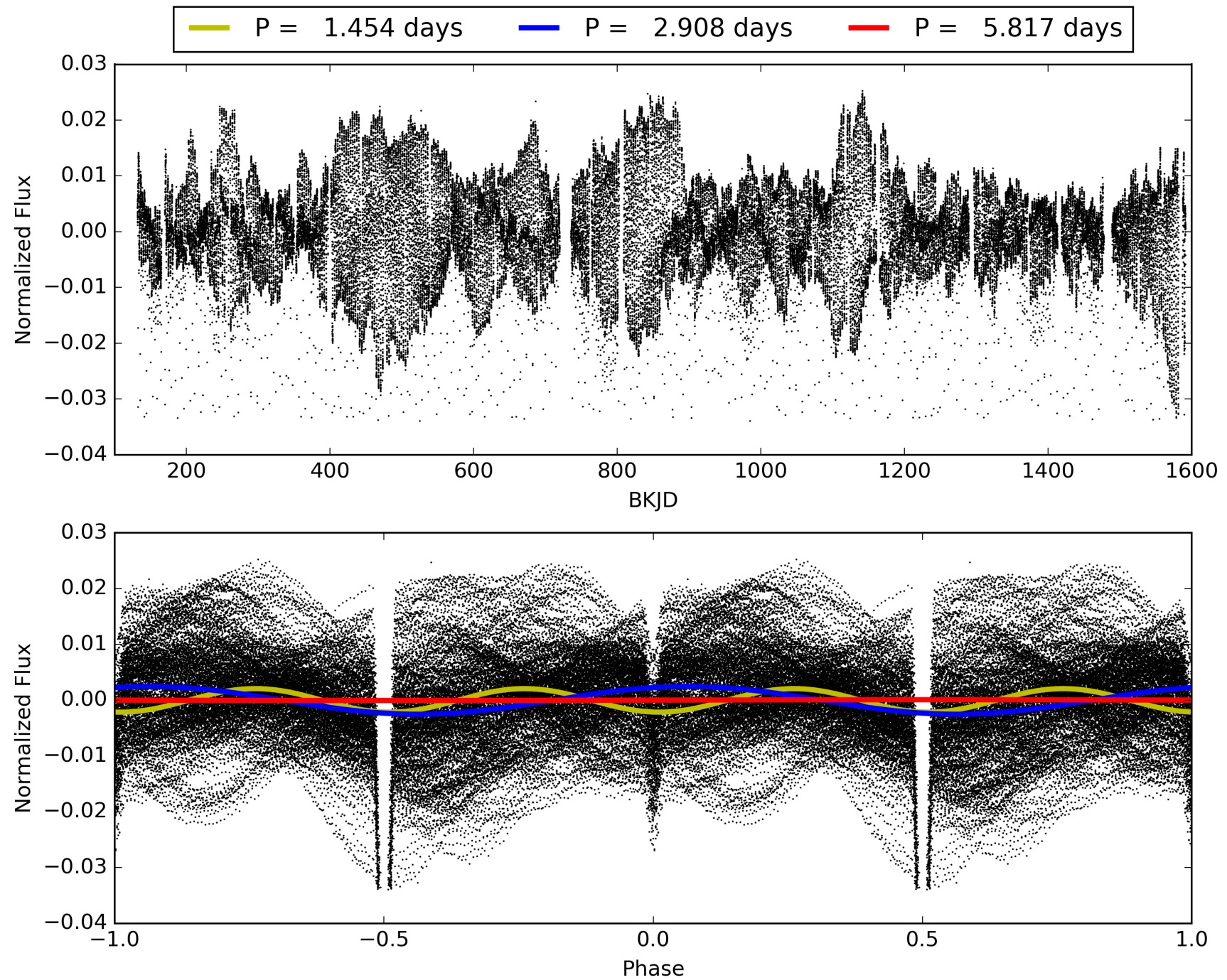
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:00:08 Z

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

TCE 003834364-02, PDC Light Curves

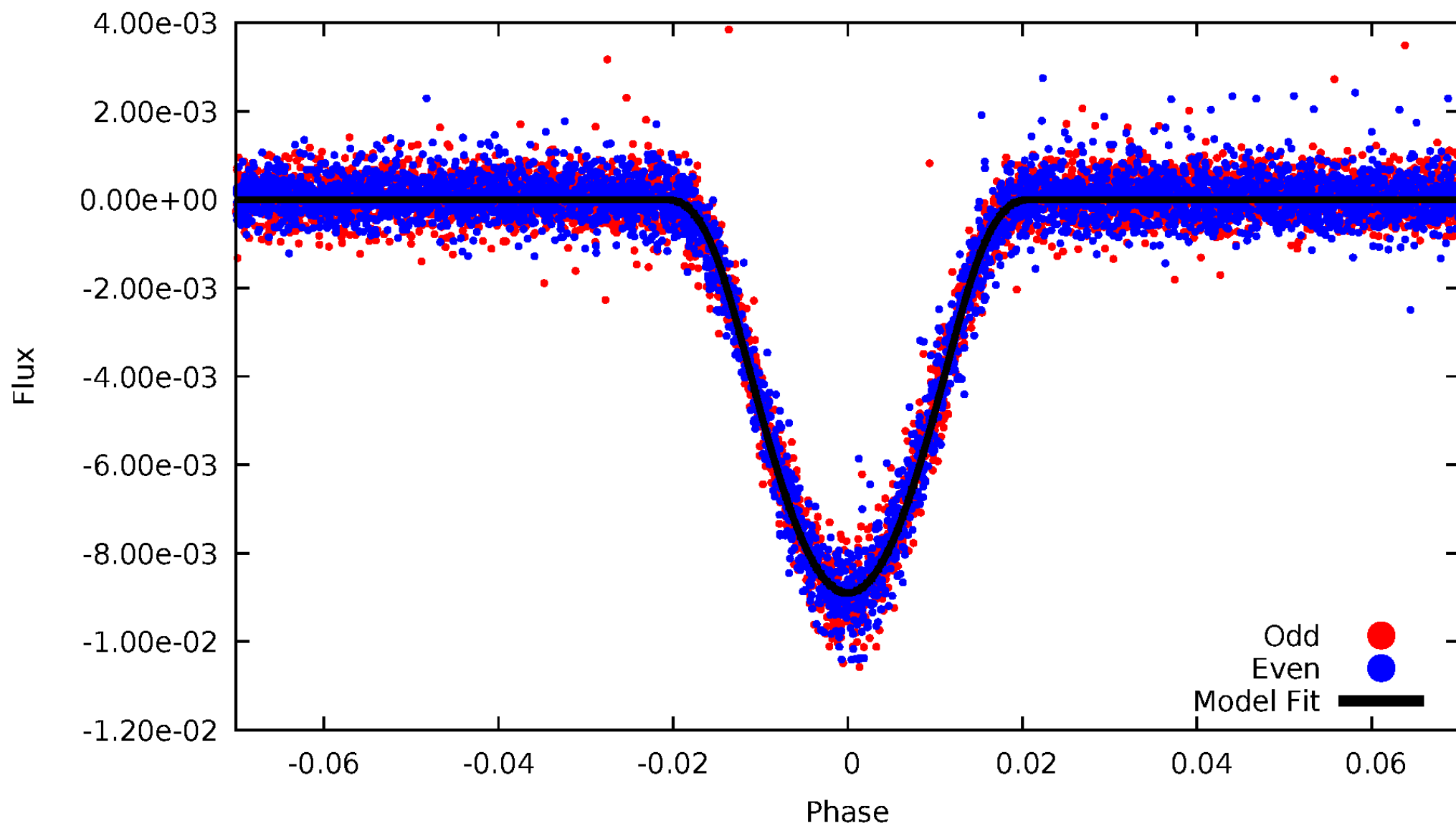


TCE 003834364-02



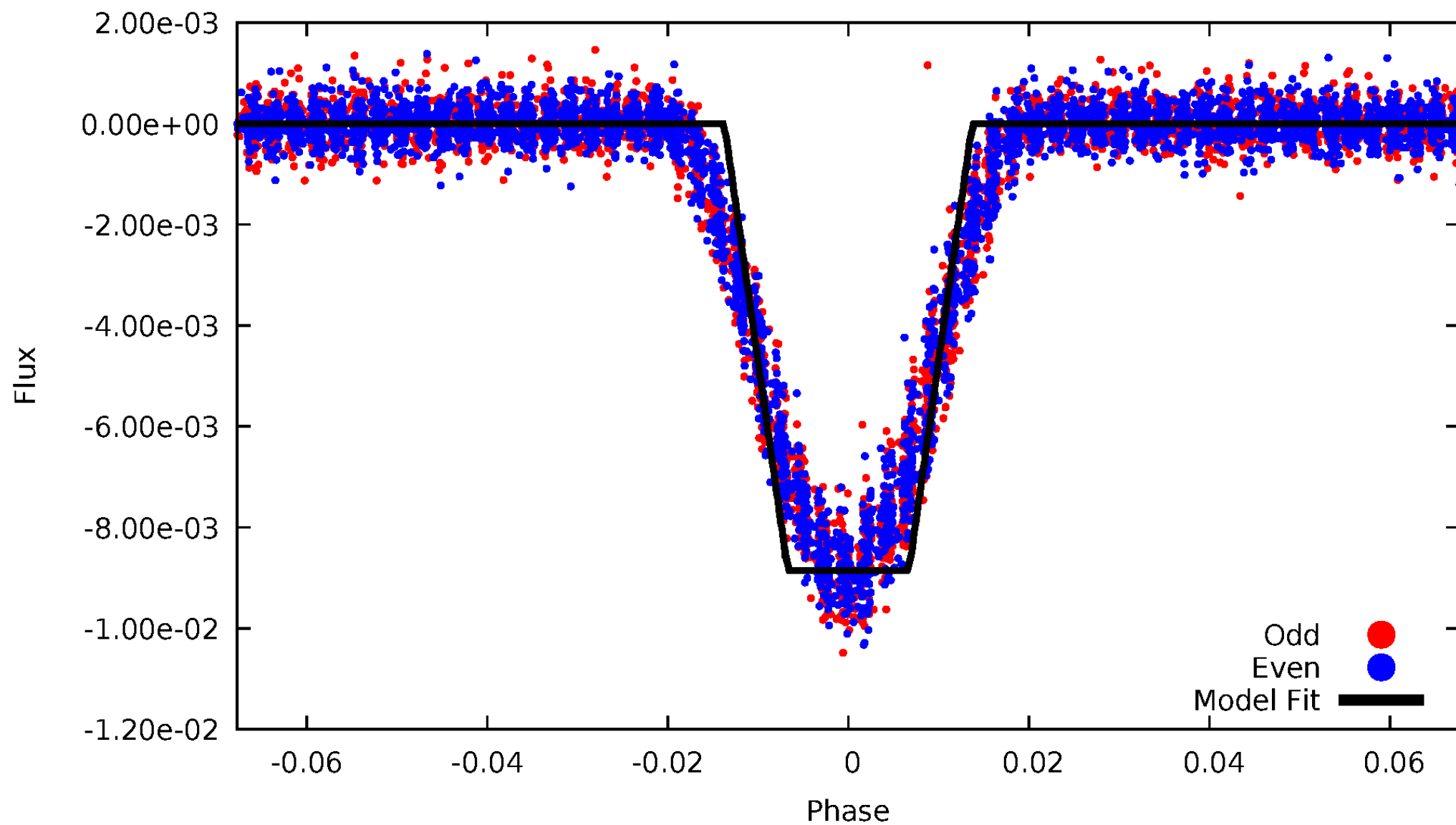
DV Odd/Even

TCE 003834364-02



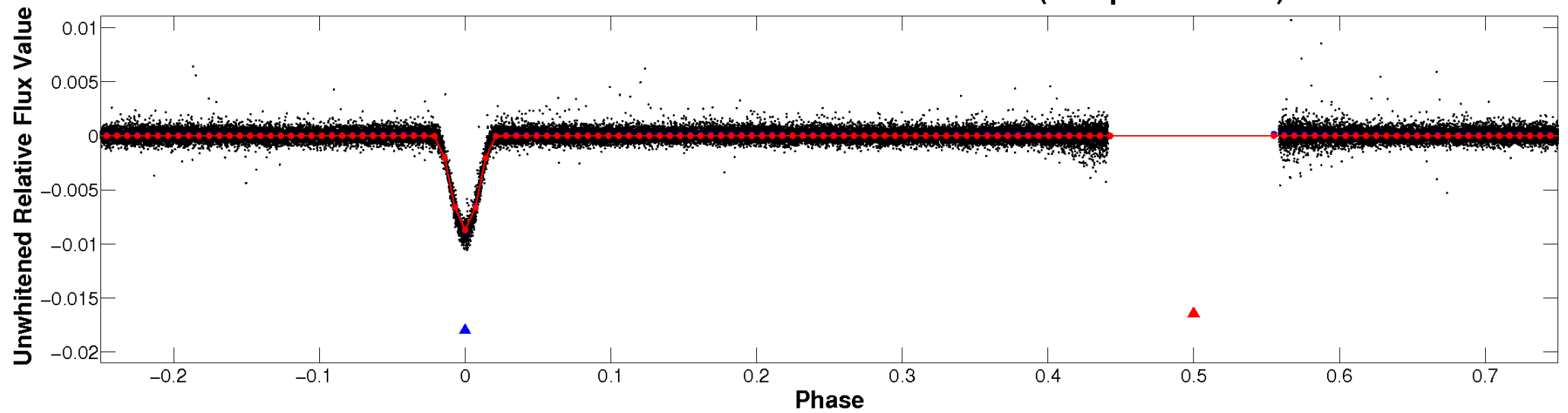
ALT Odd/Even

TCE 003834364-02

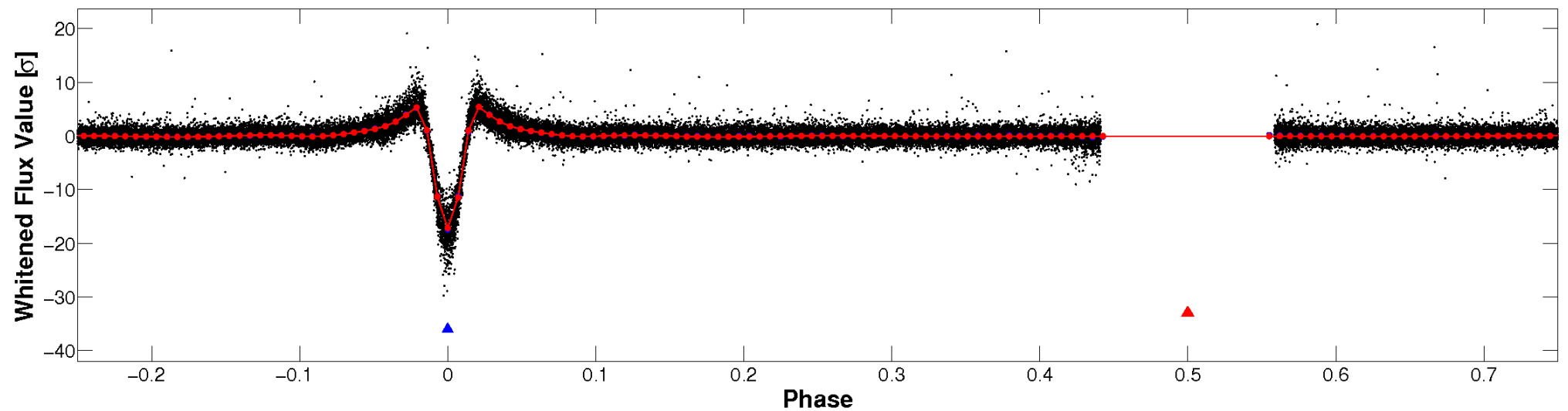


Non-Whitened Vs. Whitened Light Curve

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

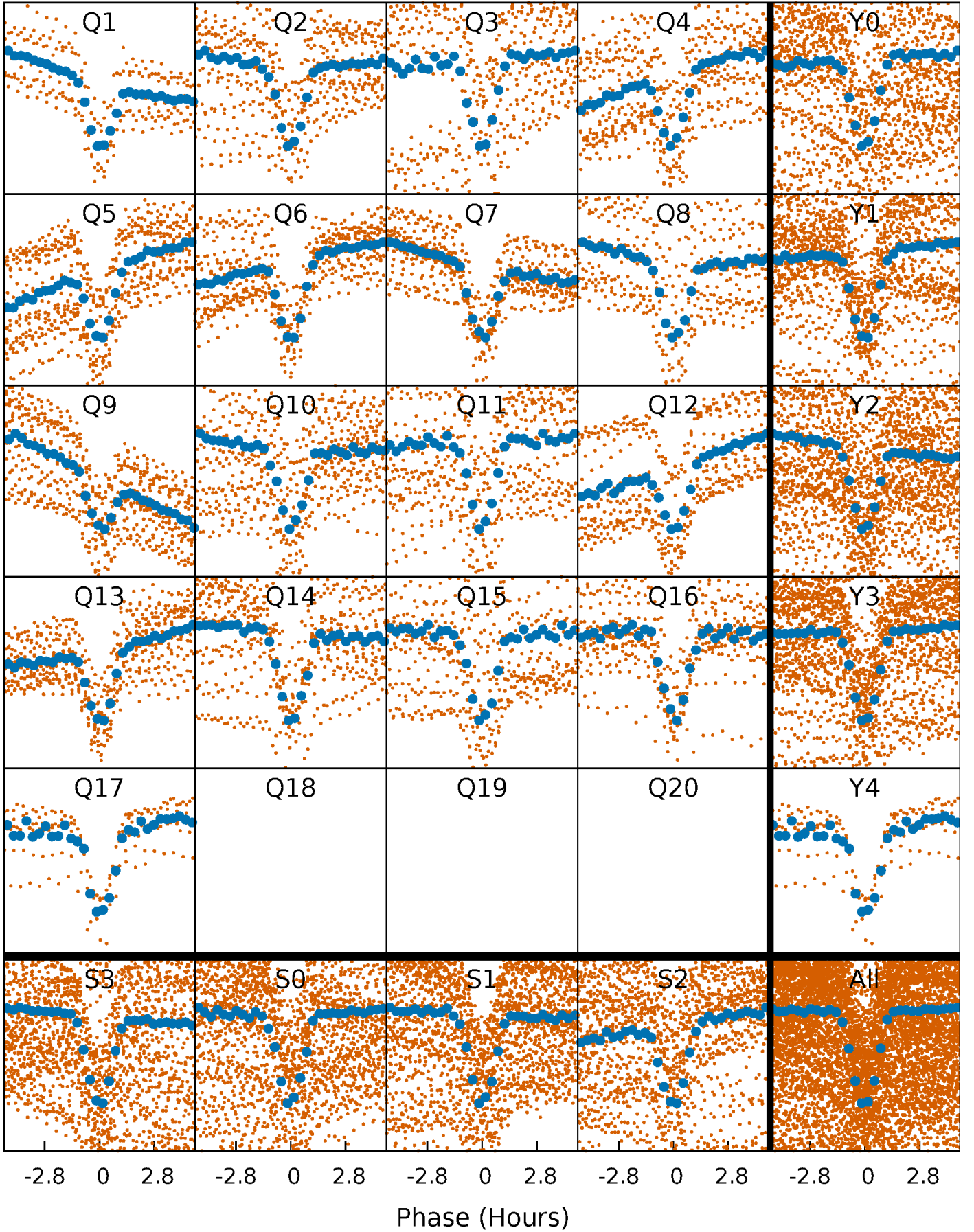


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



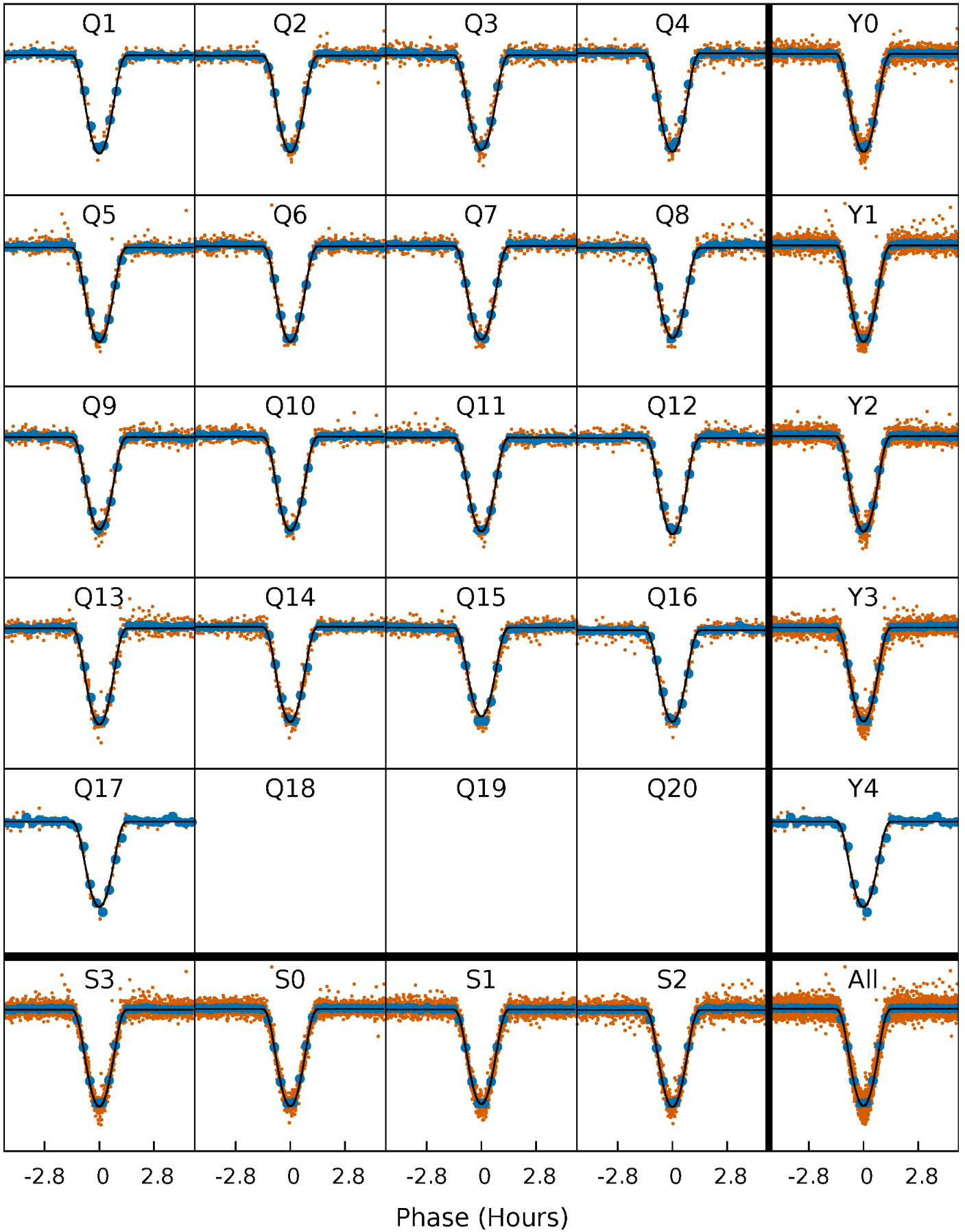
PDC Quarter-Phased Transit Curves

TCE 003834364-02 P= 2.908450 Days $T_0=133.771135$ (BKJD)



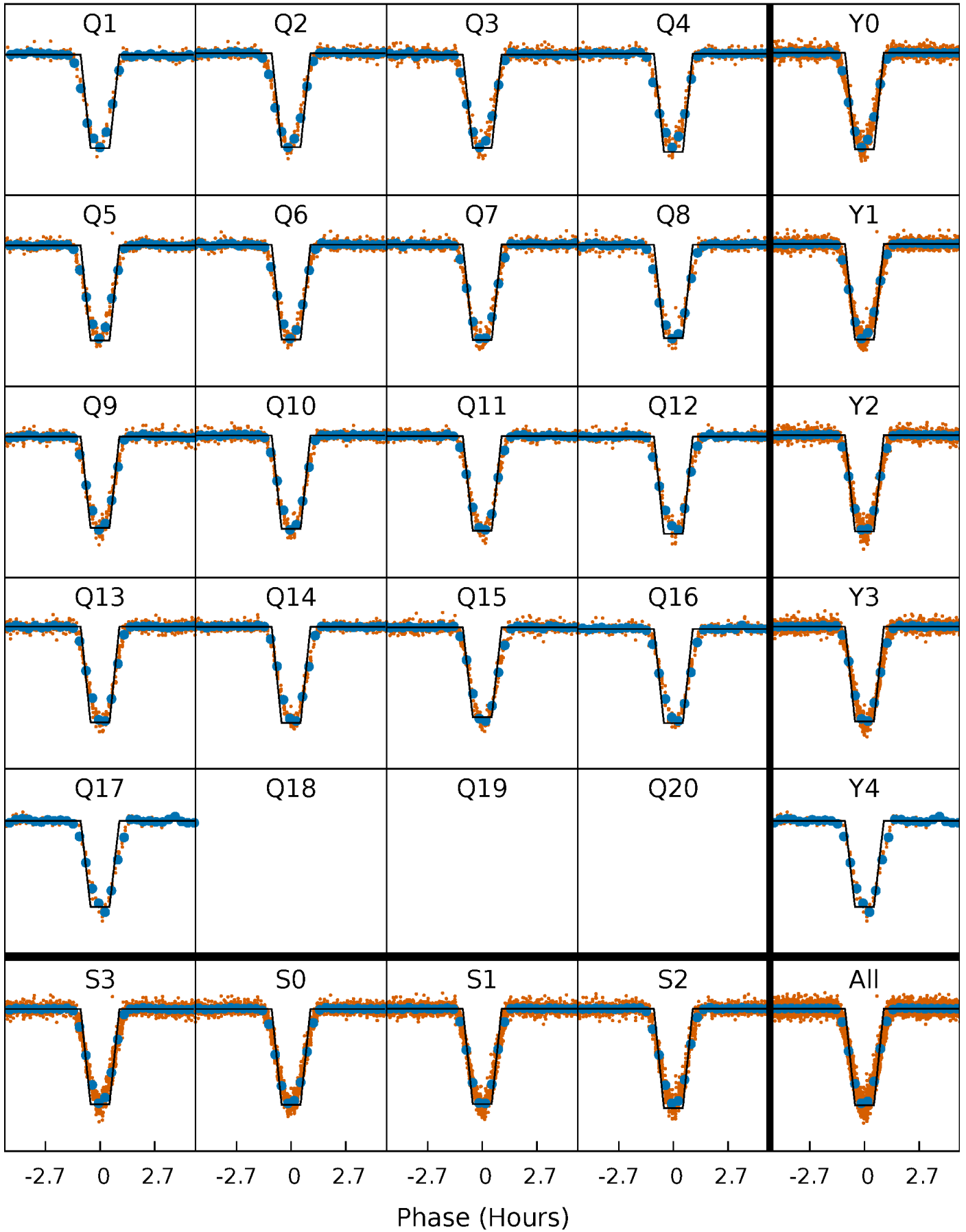
DV Quarter-Phased Transit Curves

TCE 003834364-02 P= 2.908450 Days $T_0=133.771135$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

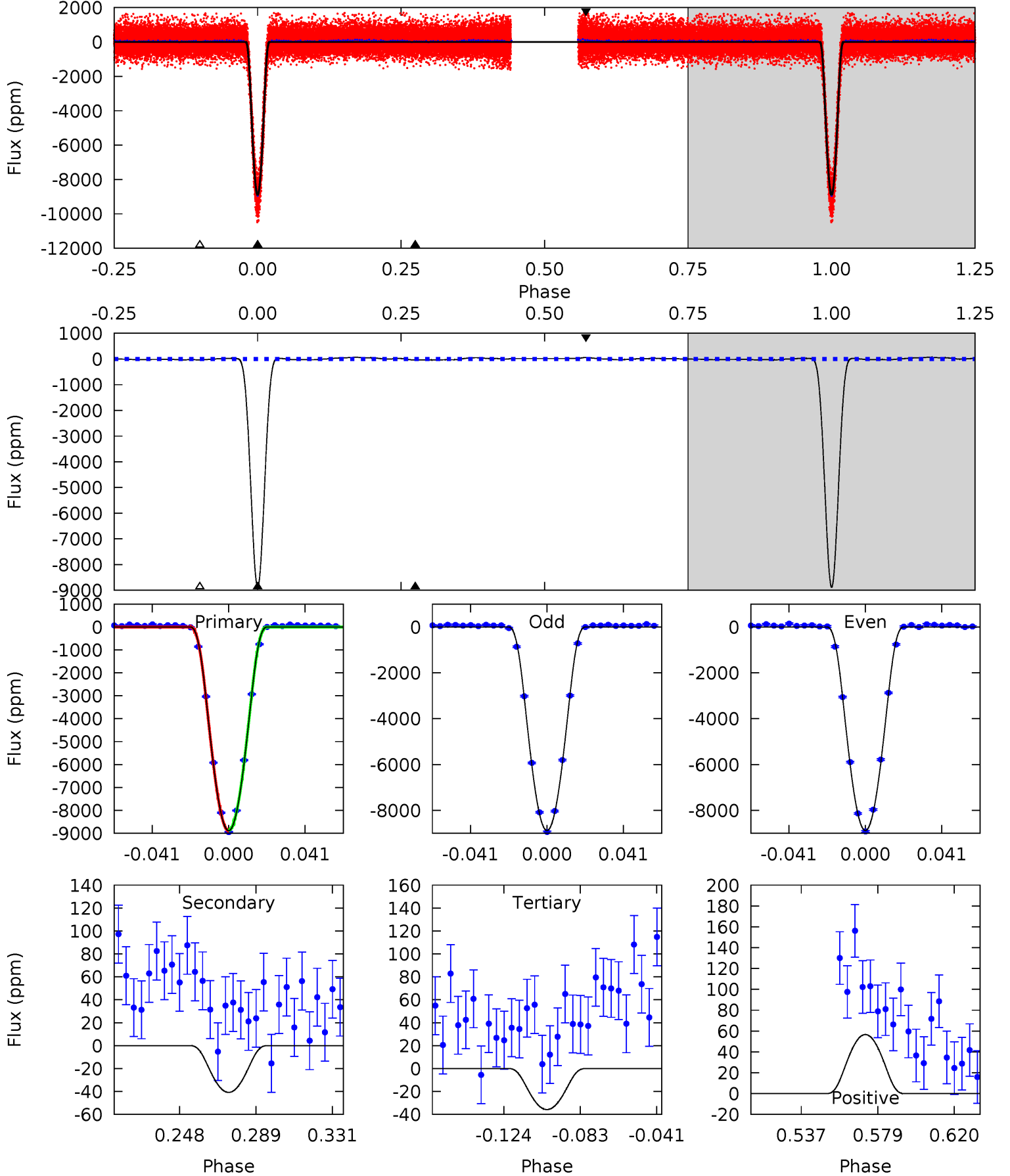
TCE 003834364-02 P= 2.908438 Days $T_0=133.774247$ (BKJD)



DV Model-Shift Uniqueness Test

003834364-02, P = 2.908450 Days, E = 130.862685 Days

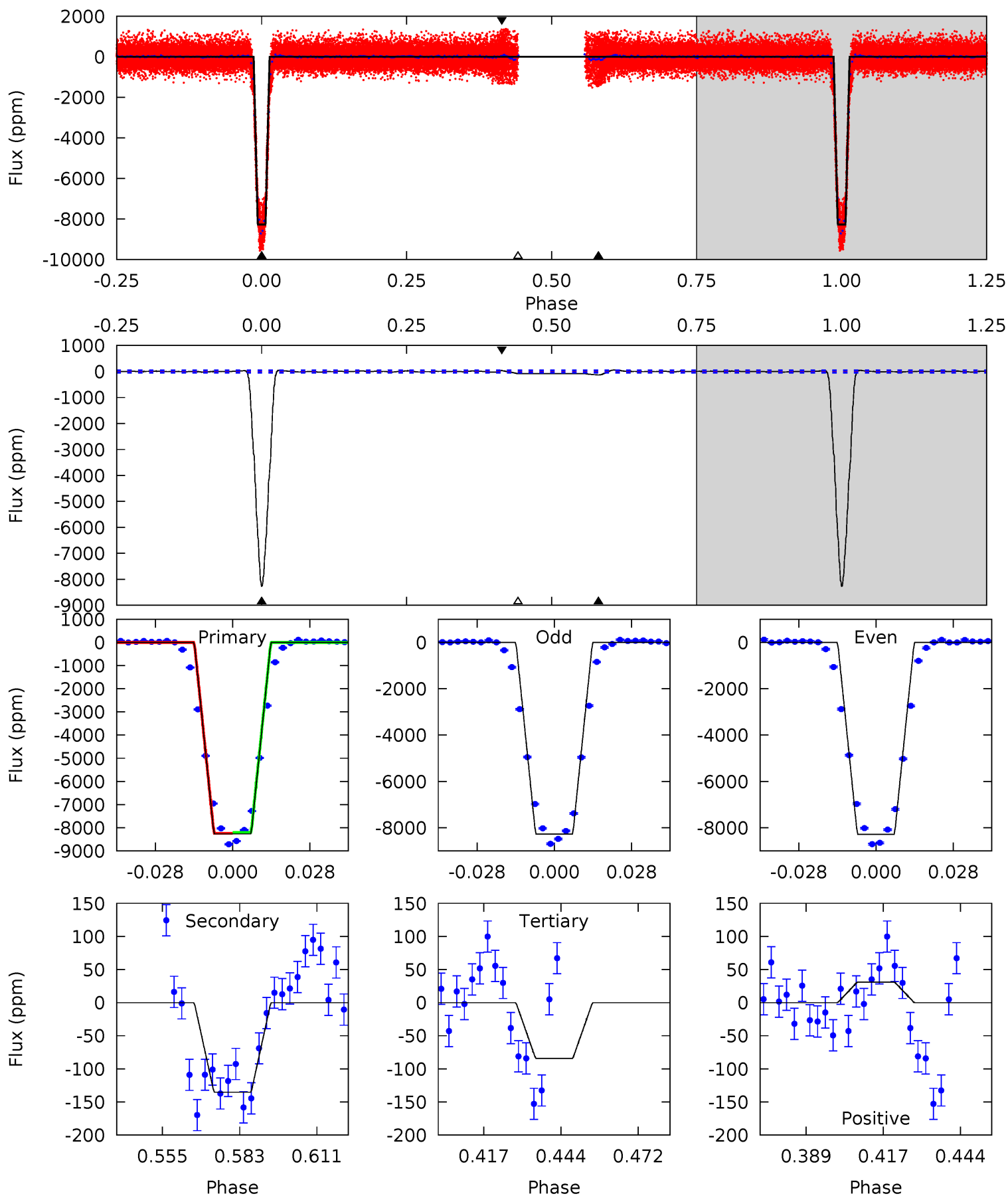
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1048	4.82	4.23	6.68	4.75	2.04	3.12	1044	1042	0.59	-1.87	0.24	1.00	0.01	0.94



Alt Model-Shift Uniqueness Test

003834364-02, P = 2.908438 Days, E = 130.865809 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
937.5	15.3	9.55	3.53	4.83	2.20	1.59	928.0	934.0	5.79	11.8	0.65	1.00	0.01	1.70



Stellar Parameters For KIC 003834364

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5631^{+166}_{-166}	$4.518^{+0.105}_{-0.105}$	$-0.800^{+0.350}_{-0.300}$	$0.764^{+0.122}_{-0.091}$	$0.702^{+0.092}_{-0.029}$	$2.216^{+0.988}_{-0.683}$
	+3%/-3%	+2%/-2%	+44%/-37%	+16%/-12%	+13%/-4%	+45%/-31%
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 003834364-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-41 ± 8	$11.26^{+1.05}_{-1.00}$	1611^{+81}_{-81}	-1939^{+3366}_{-141}	$0.227^{+0.075}_{-0.058}$
Alt.	-135 ± 9	$7.95^{+0.84}_{-0.82}$	1610^{+78}_{-75}	2664^{+78}_{-78}	$1.524^{+0.356}_{-0.305}$

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

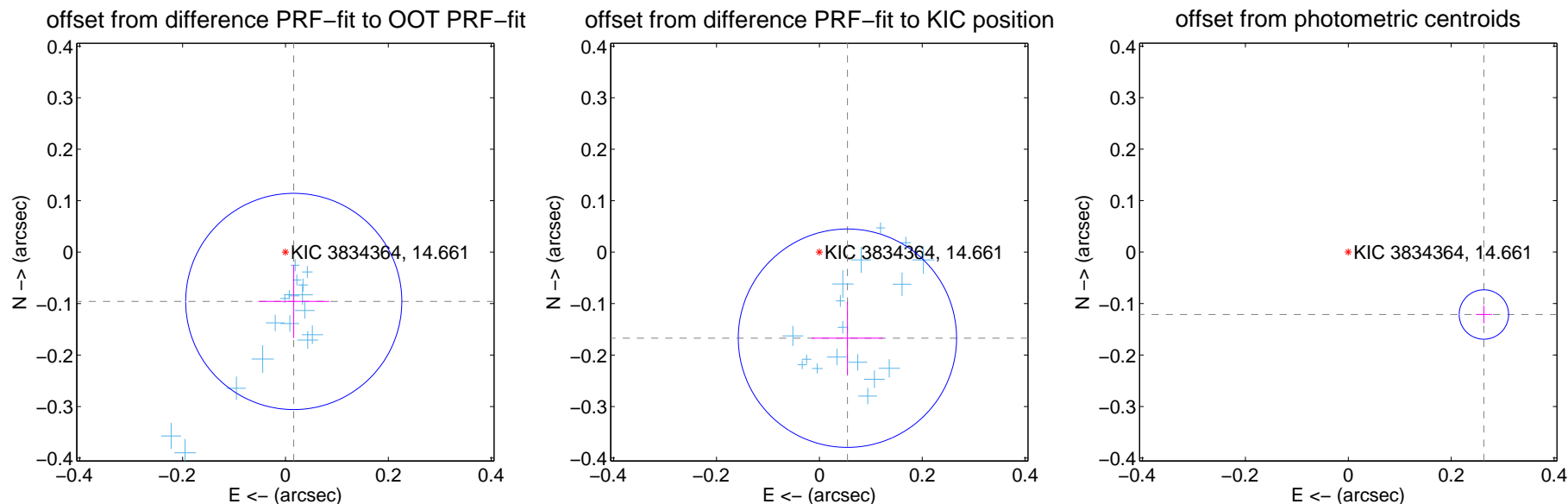
DV Centroid Data

Supplemental centroid analysis for 003834364-02. Kepler magnitude: 14.66. Transit SNR 542.74

There are 17 quarters with good PRF difference image offsets

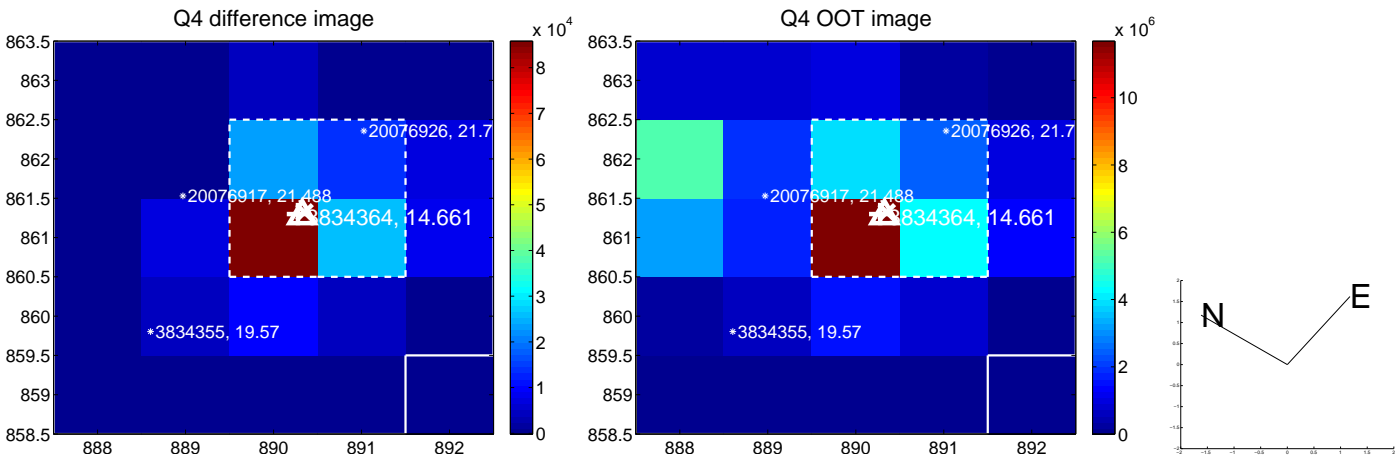
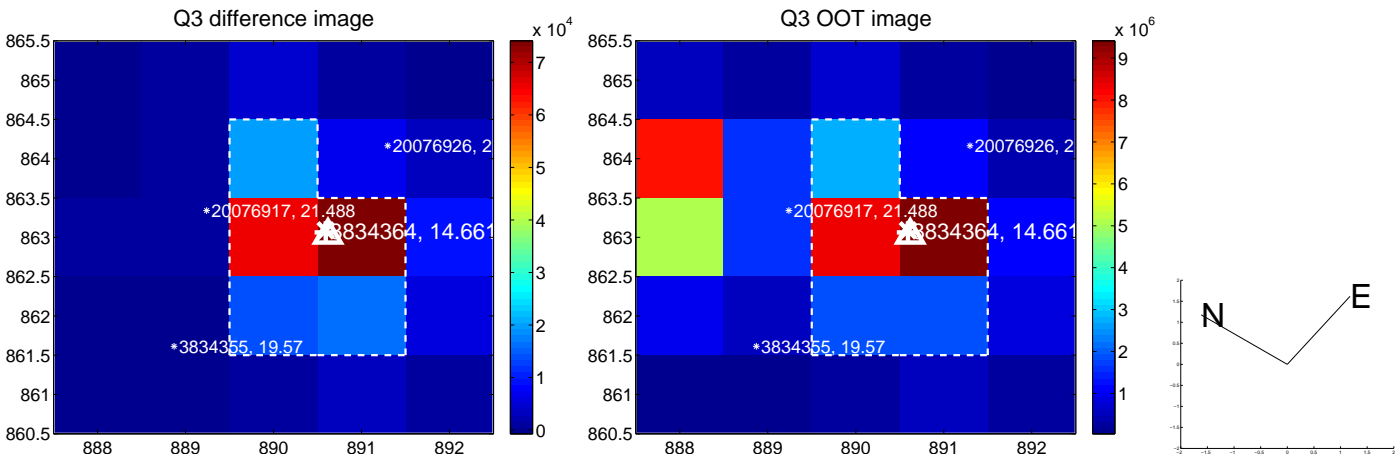
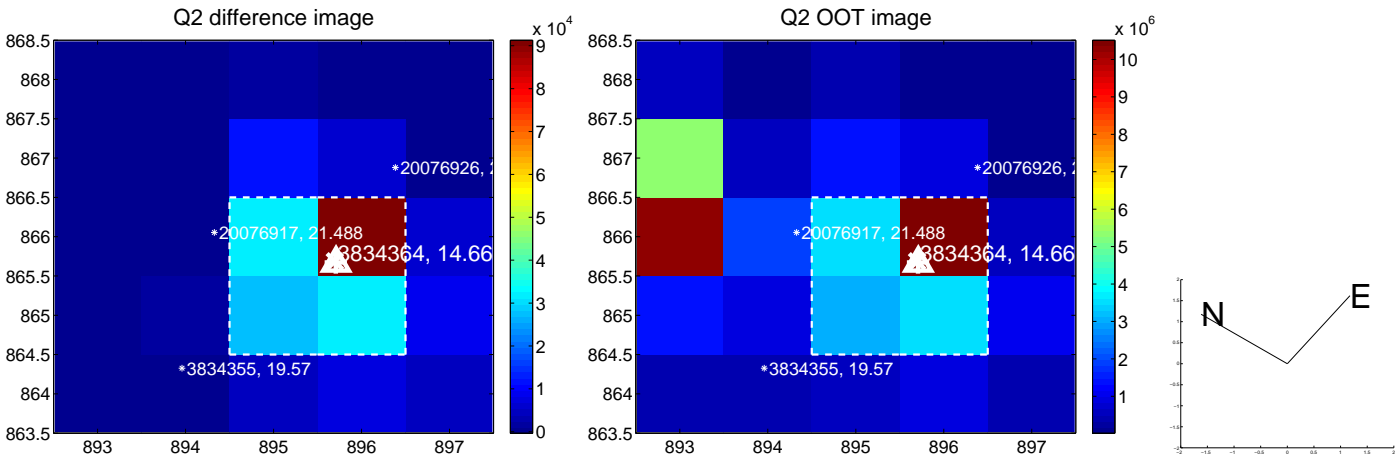
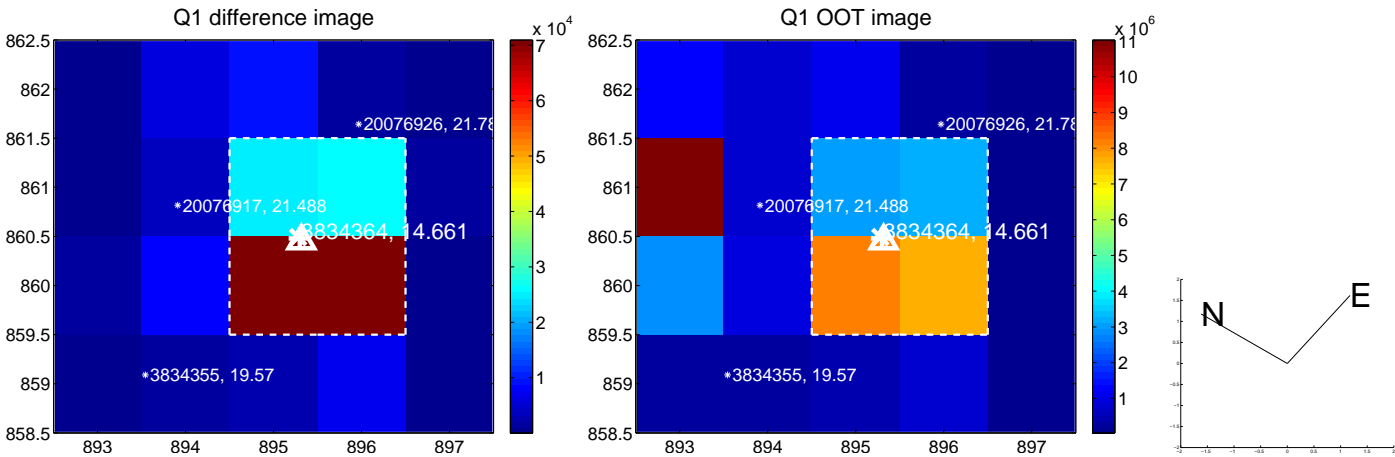
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.070	1.39	-0.016 ± 0.069	-0.096 ± 0.071
PRF-fit source offset from KIC position	0.176 ± 0.071	2.49	-0.055 ± 0.069	-0.167 ± 0.071
photometric centroid source offset	0.29 ± 0.02	18.12	-0.26 ± 0.02	-0.12 ± 0.02

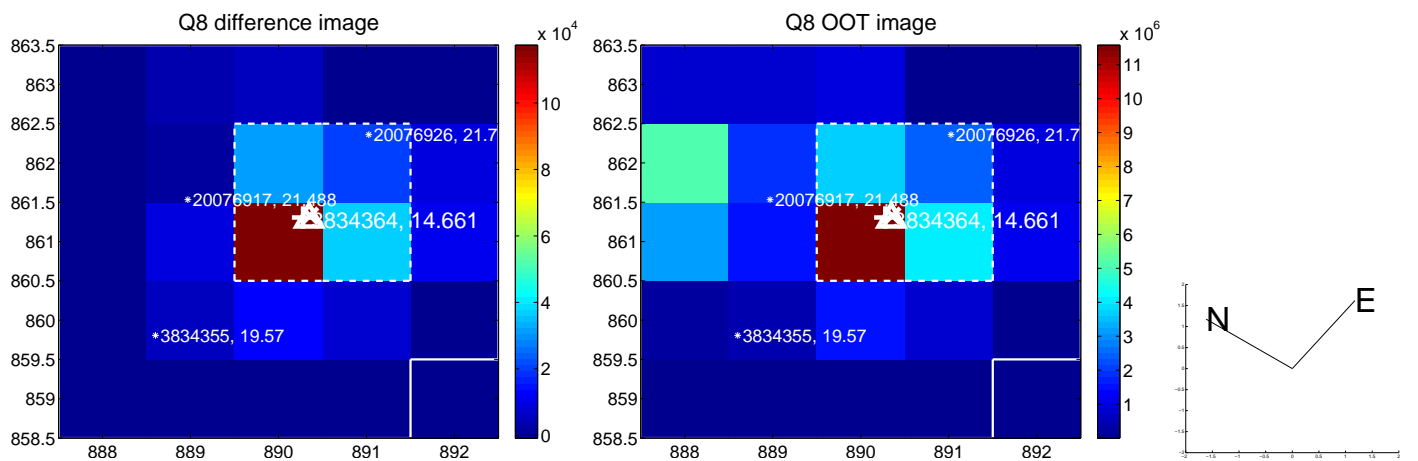
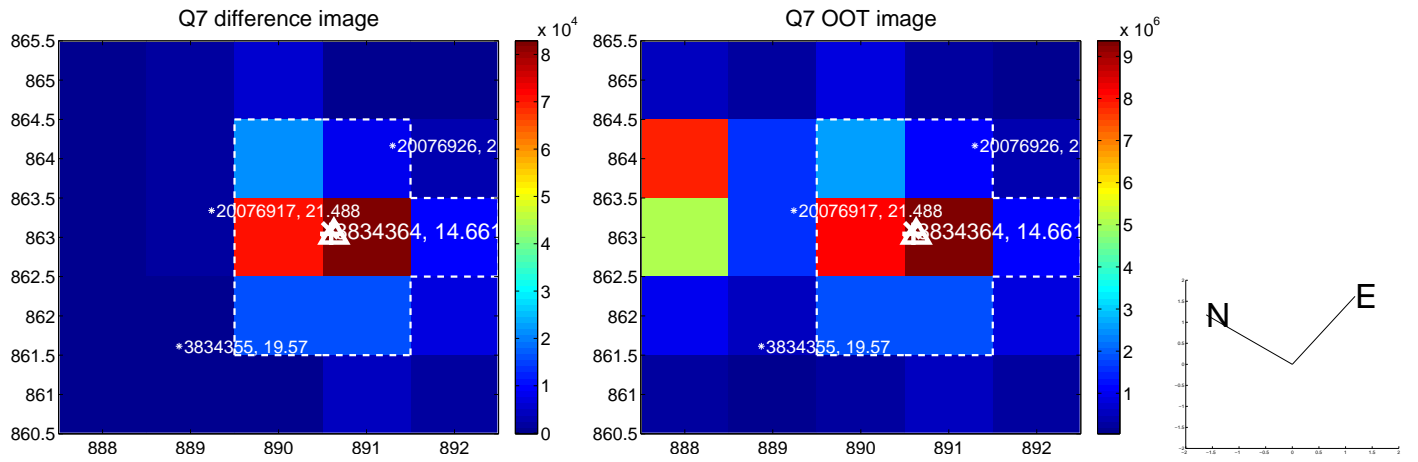
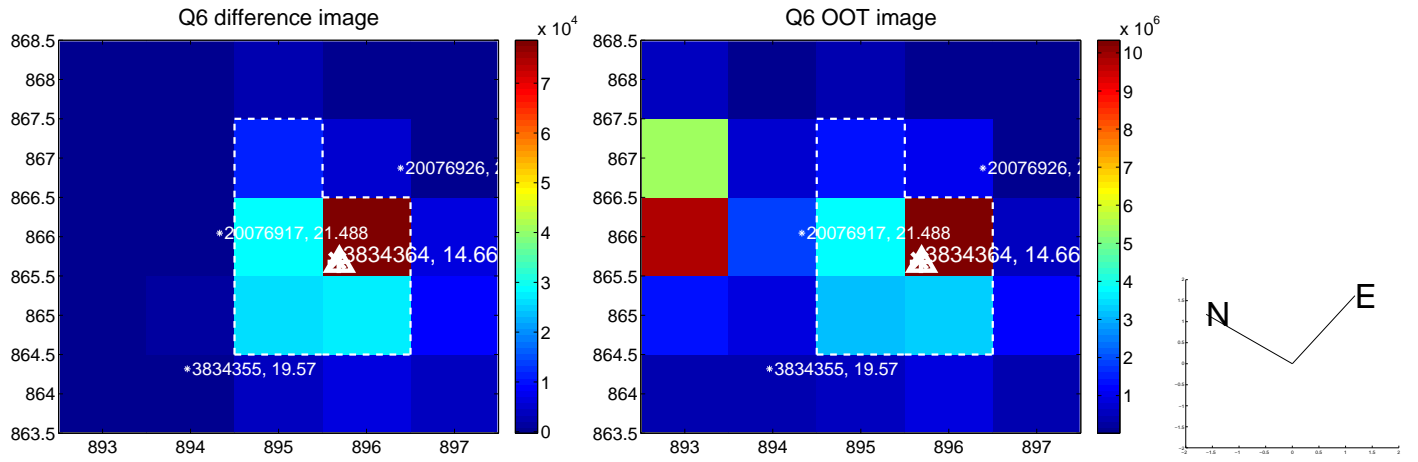
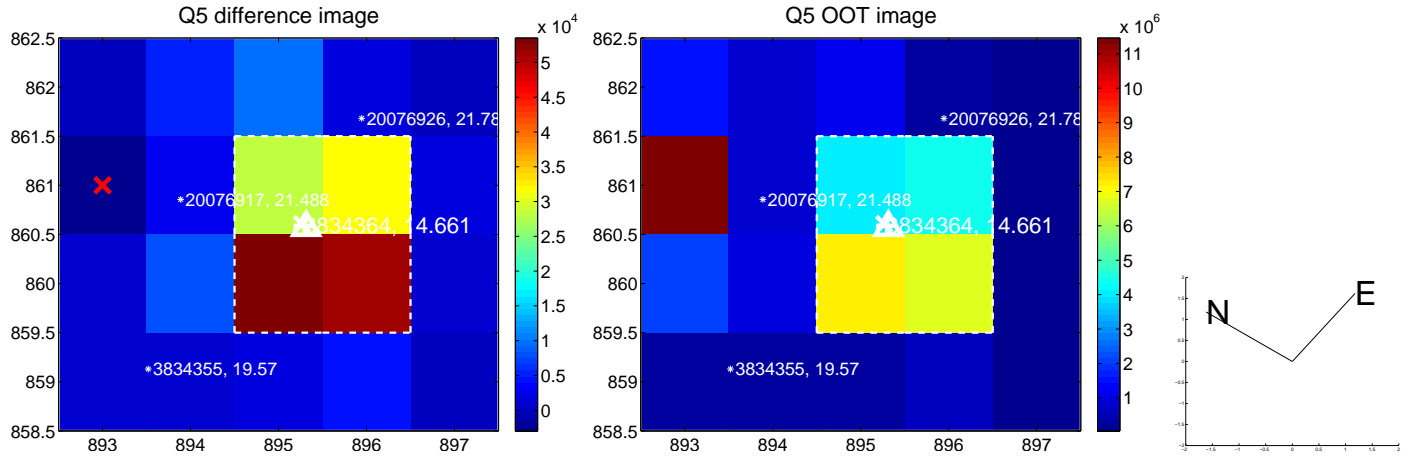


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

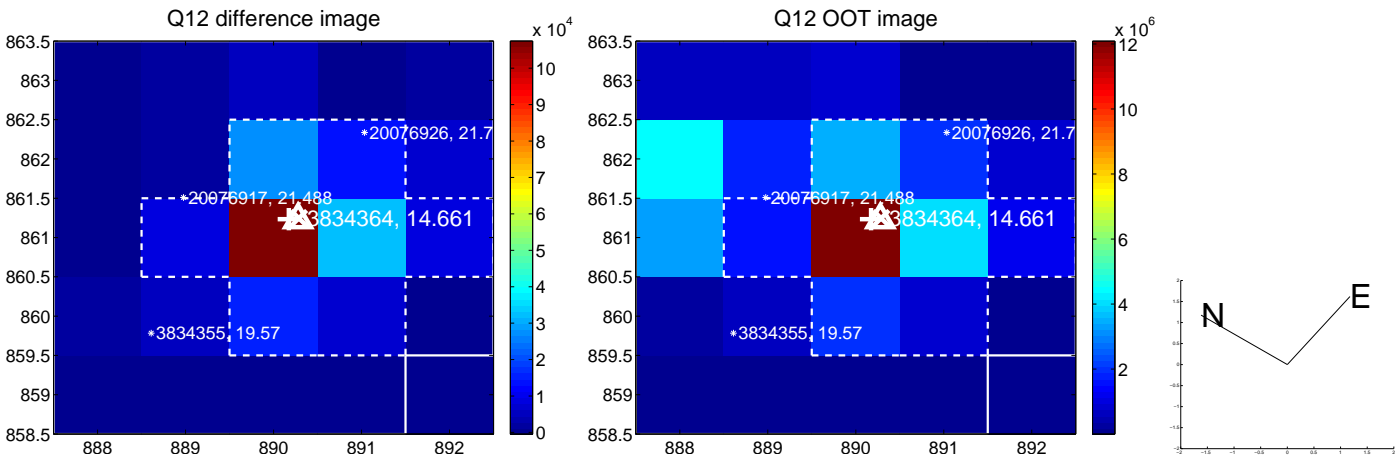
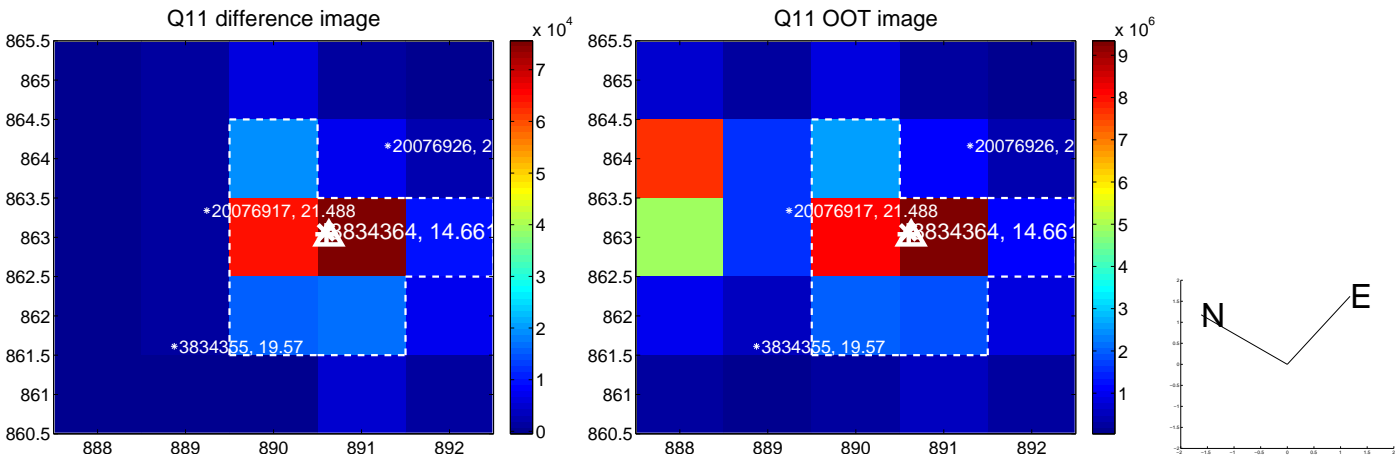
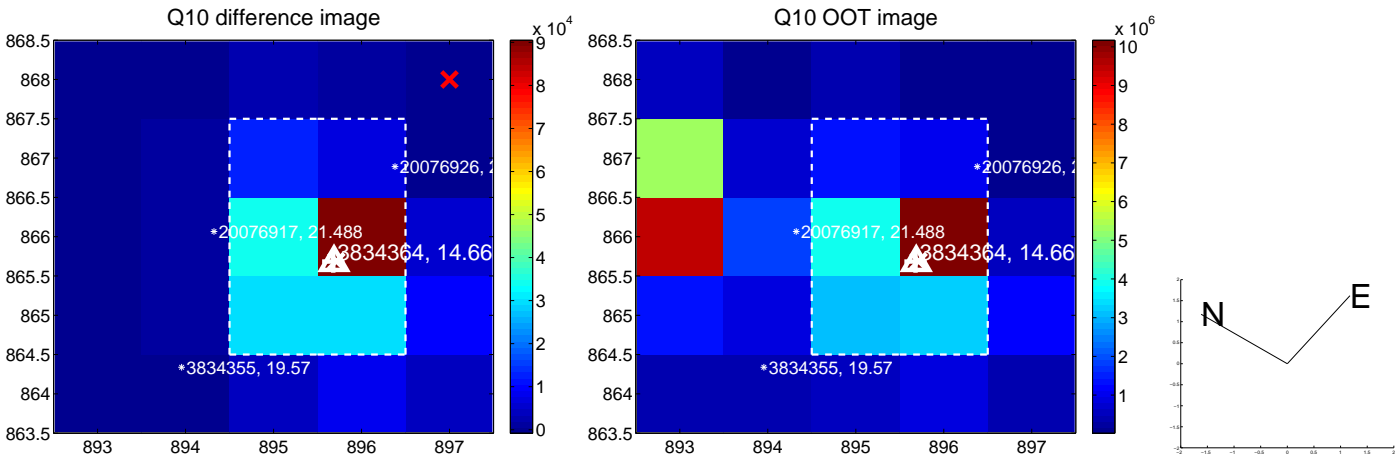
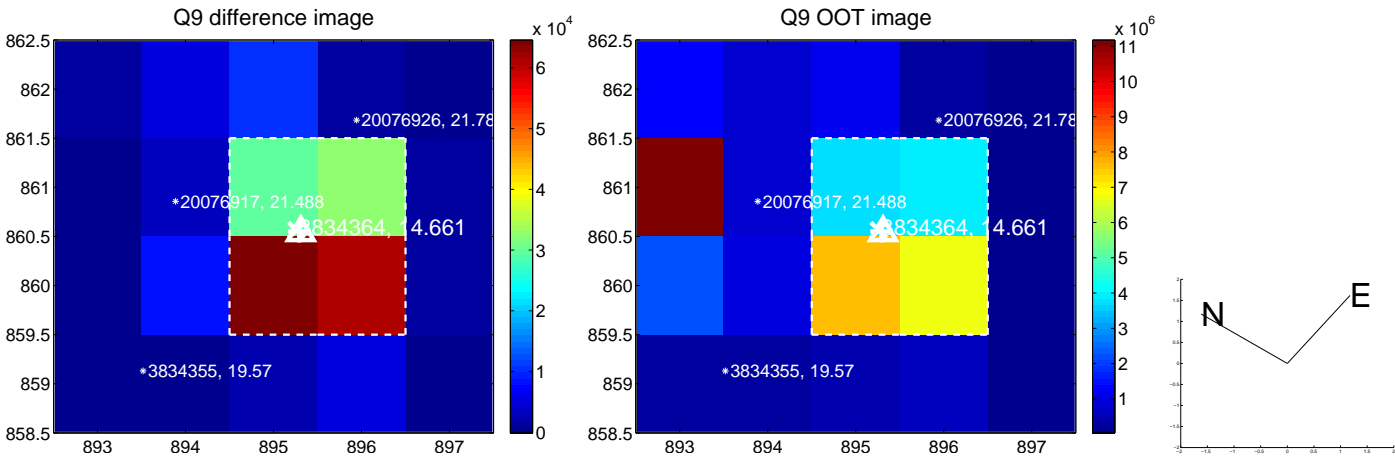
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



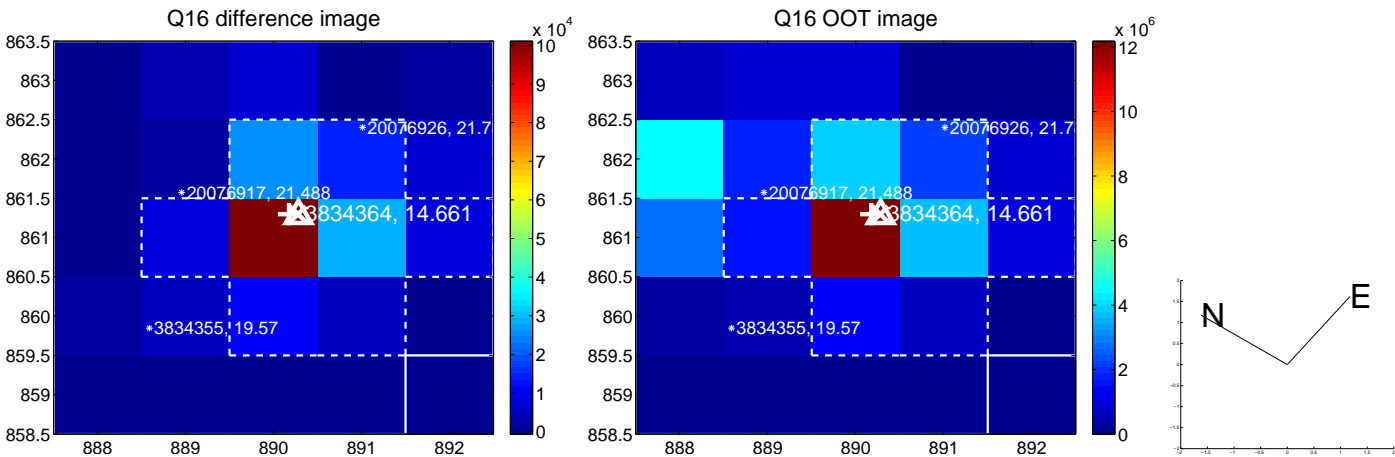
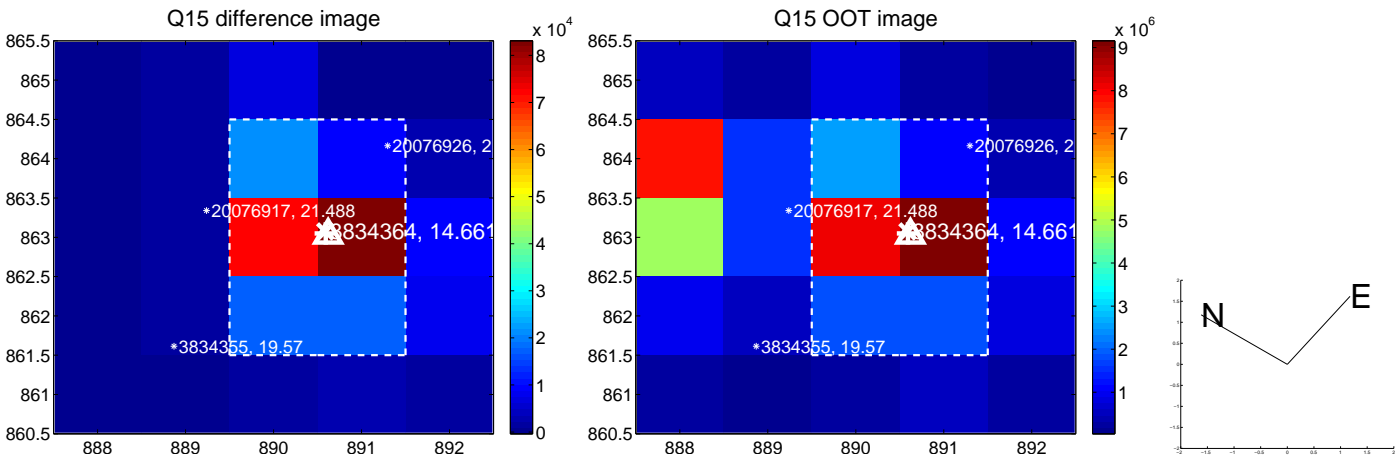
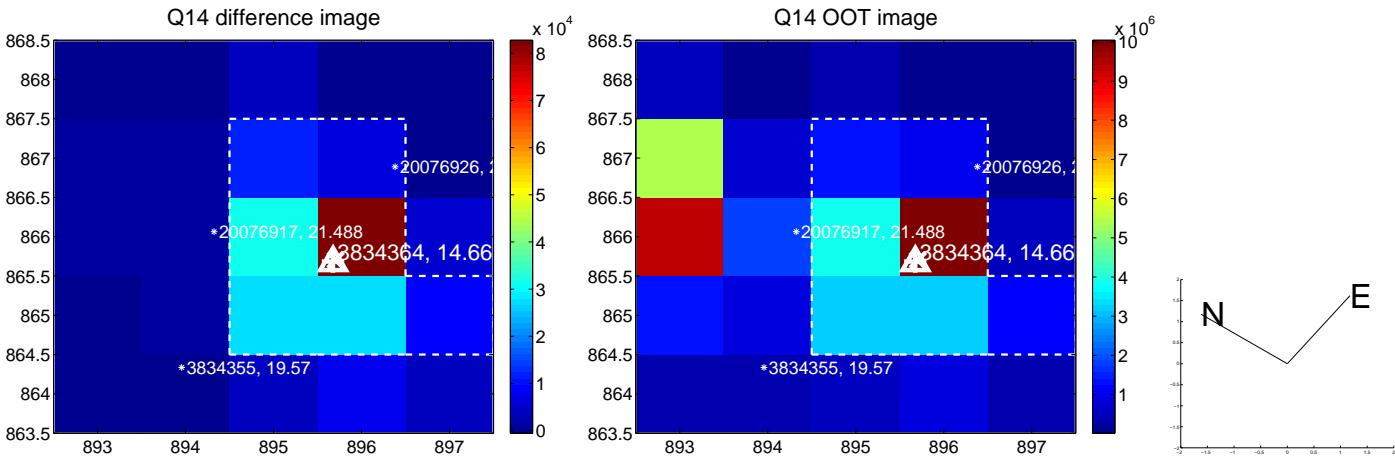
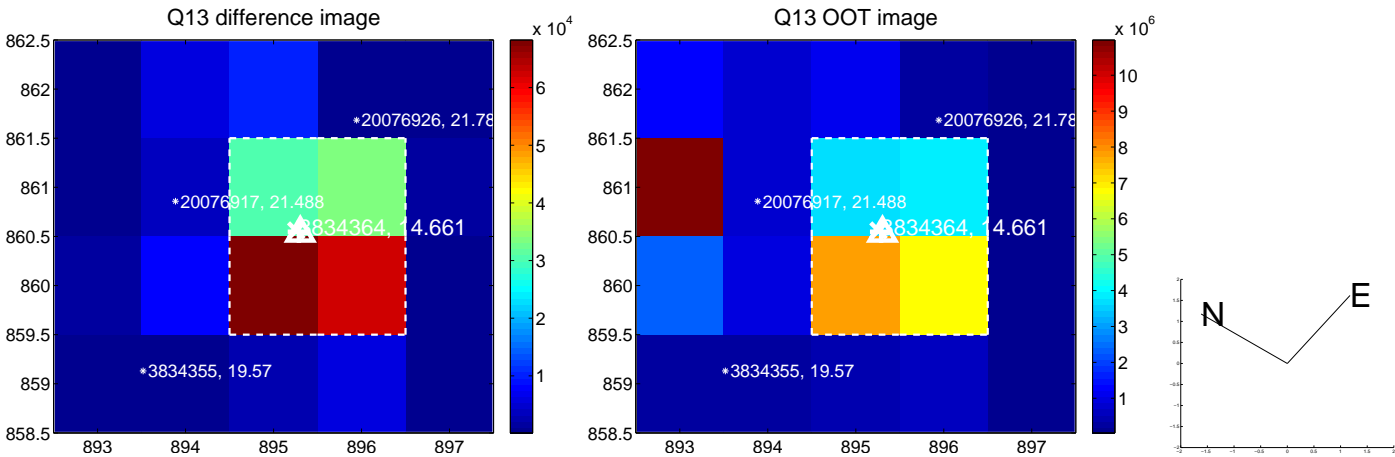
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



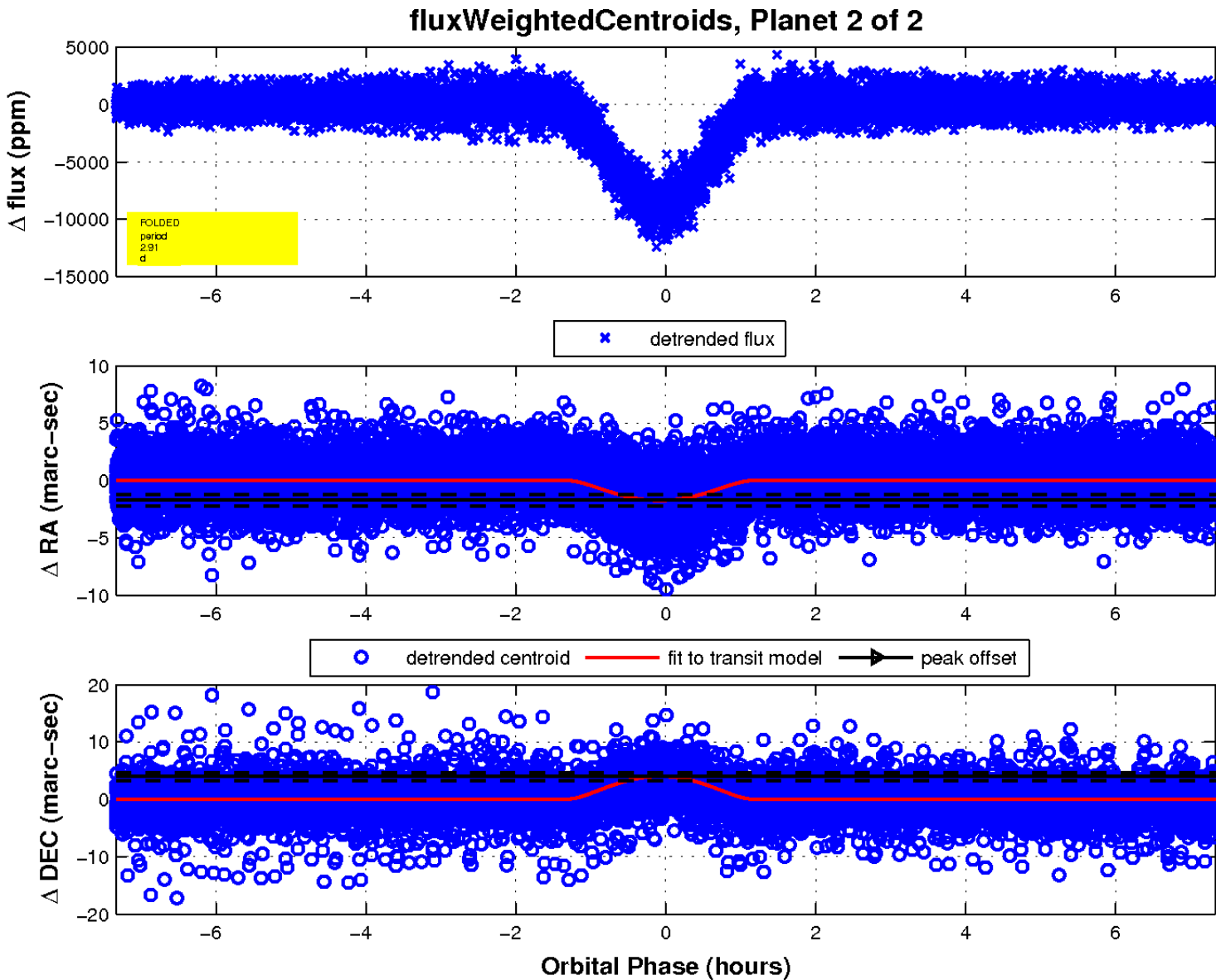
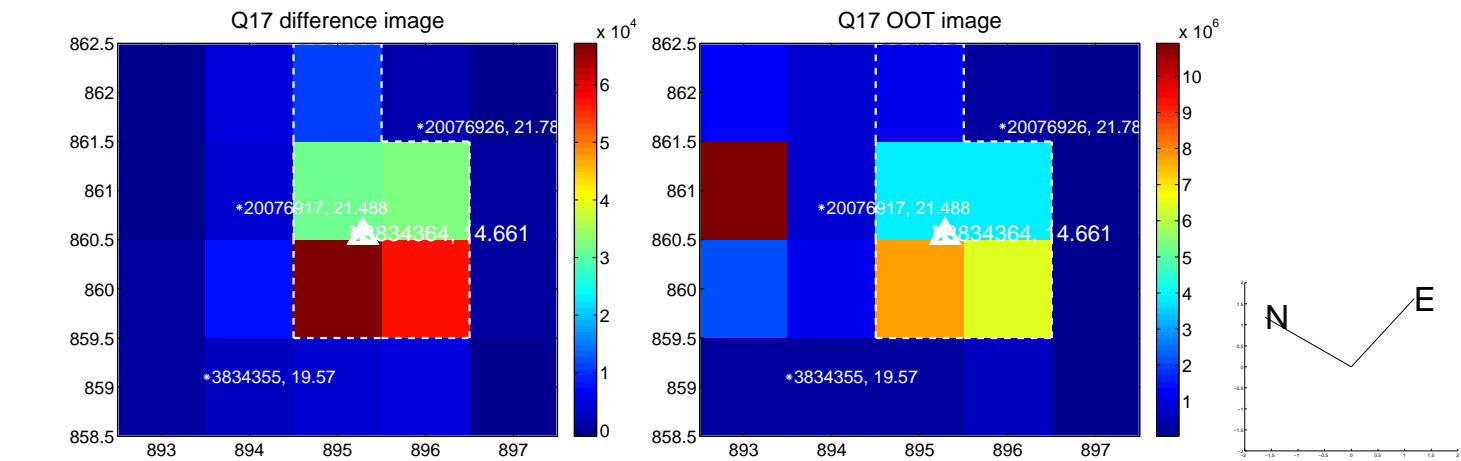
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

