

KIC 003338674

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})
003338674-01	OBS	3796.01	1.873364	131.802549	3471.2	8.655	706.3	234.3	5.72	4740	47.52	17331.10
003338674-02	OBS	No	0.936694	131.794527	861.1	3.000	71.9	-1.0	5.72	4740	16.18	43670.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003338674-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
003338674-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—CENT_NOFITS—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.

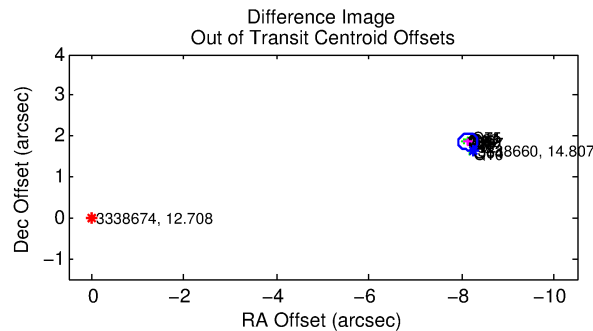
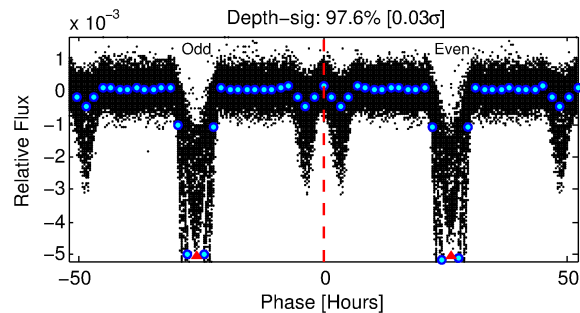
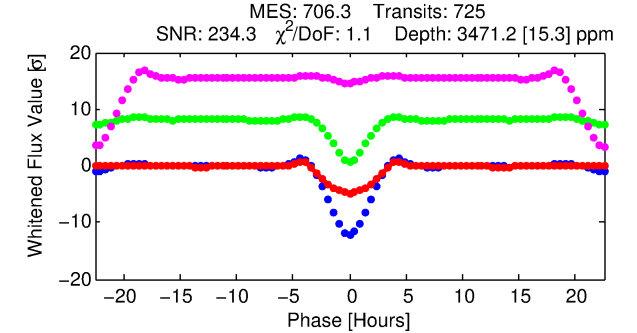
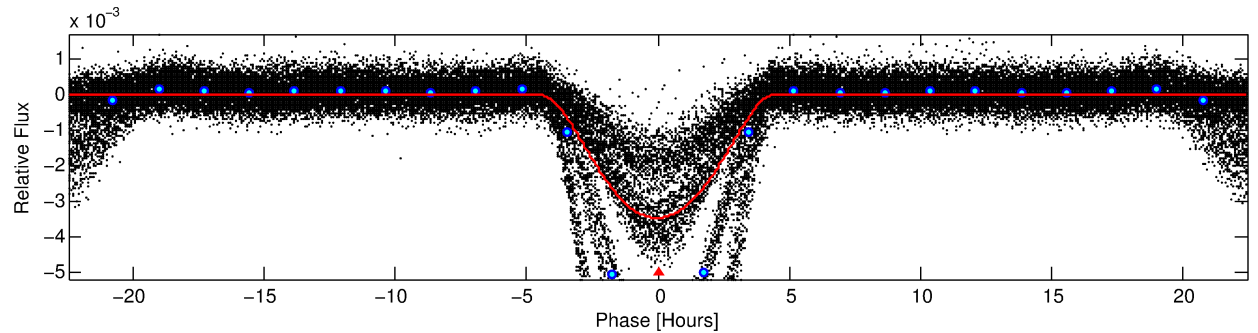
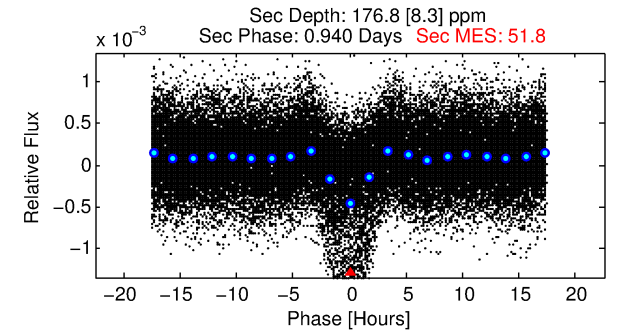
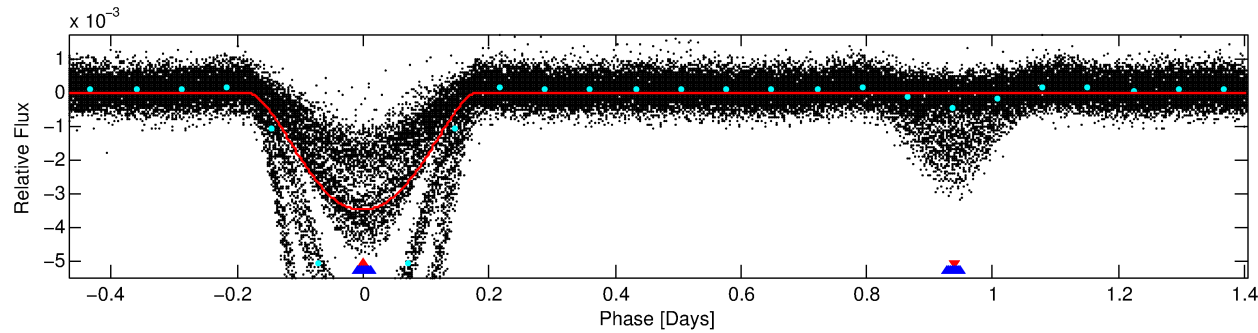
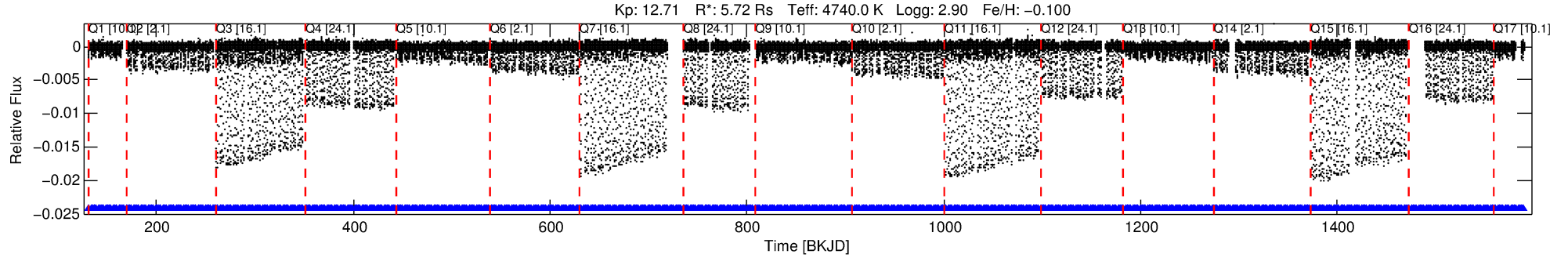
Ephemeris Match Information For 003338674-01

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
003338674-01	3338674	3795.01	3338660	1:1	8.5	2	1	14.81	12.71	160.73	Direct-PRF	0	0.63	0.39

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: 3338674 Candidate: 1 of 2 Period: 1.873 d
KOI: K03796.01 Corr: 0.981



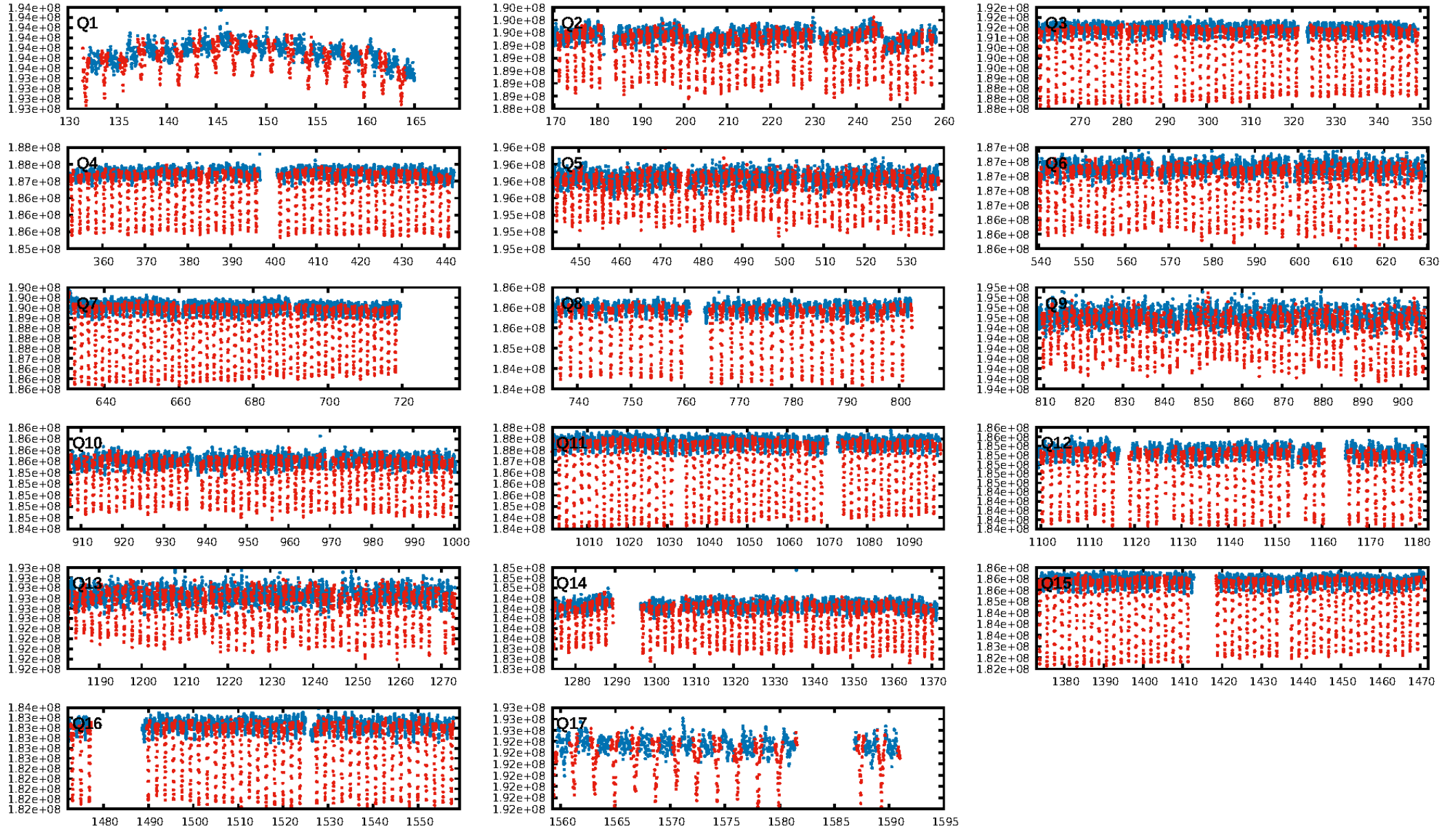
DV Fit Results:

Period = 1.87336 [0.00000] d
Epoch = 131.8025 [0.0005] BKJD
Rp/R* = 0.0761 [0.0012]
a/R* = 1.30 [0.00]
b = 0.95 [0.00]
Seff = 17331.10 [5262.48]
Teff = 2926 [222] K
Rp = 47.52 [14.57] Re
a = 0.0292 [0.0067] AU
Ag = 0.04 [0.01] [-86.72σ]
Teffp = 1981 [43] K [-4.17σ]

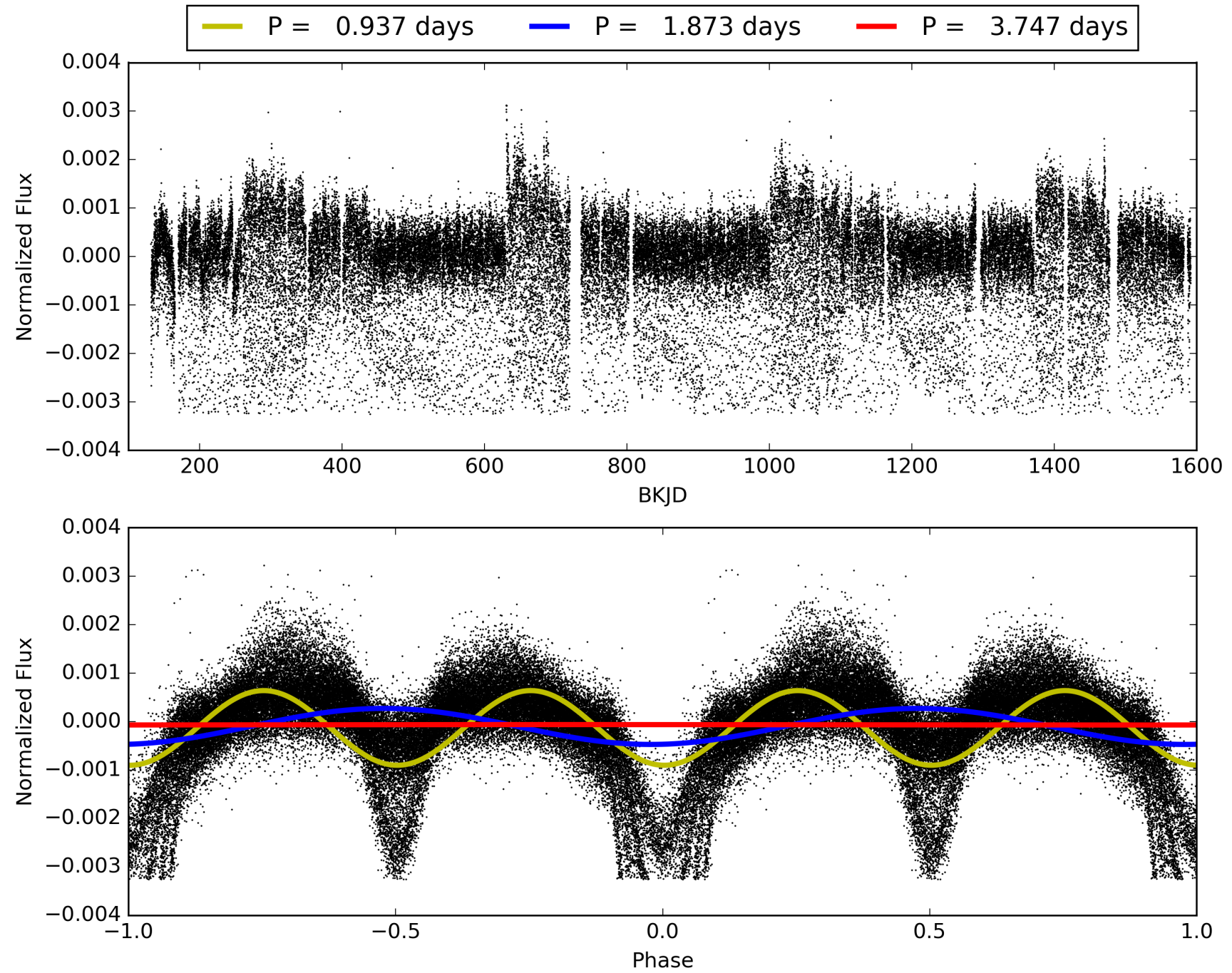
DV Diagnostic Results:

ShortPeriod-sig: 98.6% [2.45σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [692/692]
GhostDiagnostic-chr: -0.8532
Centroid-sig: N/A
Centroid-so: 90.186 arcsec [728.08σ]
OotOffset-rm: 8.338 arcsec [122.03σ]
KicOffset-rm: 8.516 arcsec [124.07σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 003338674-01, PDC Light Curves

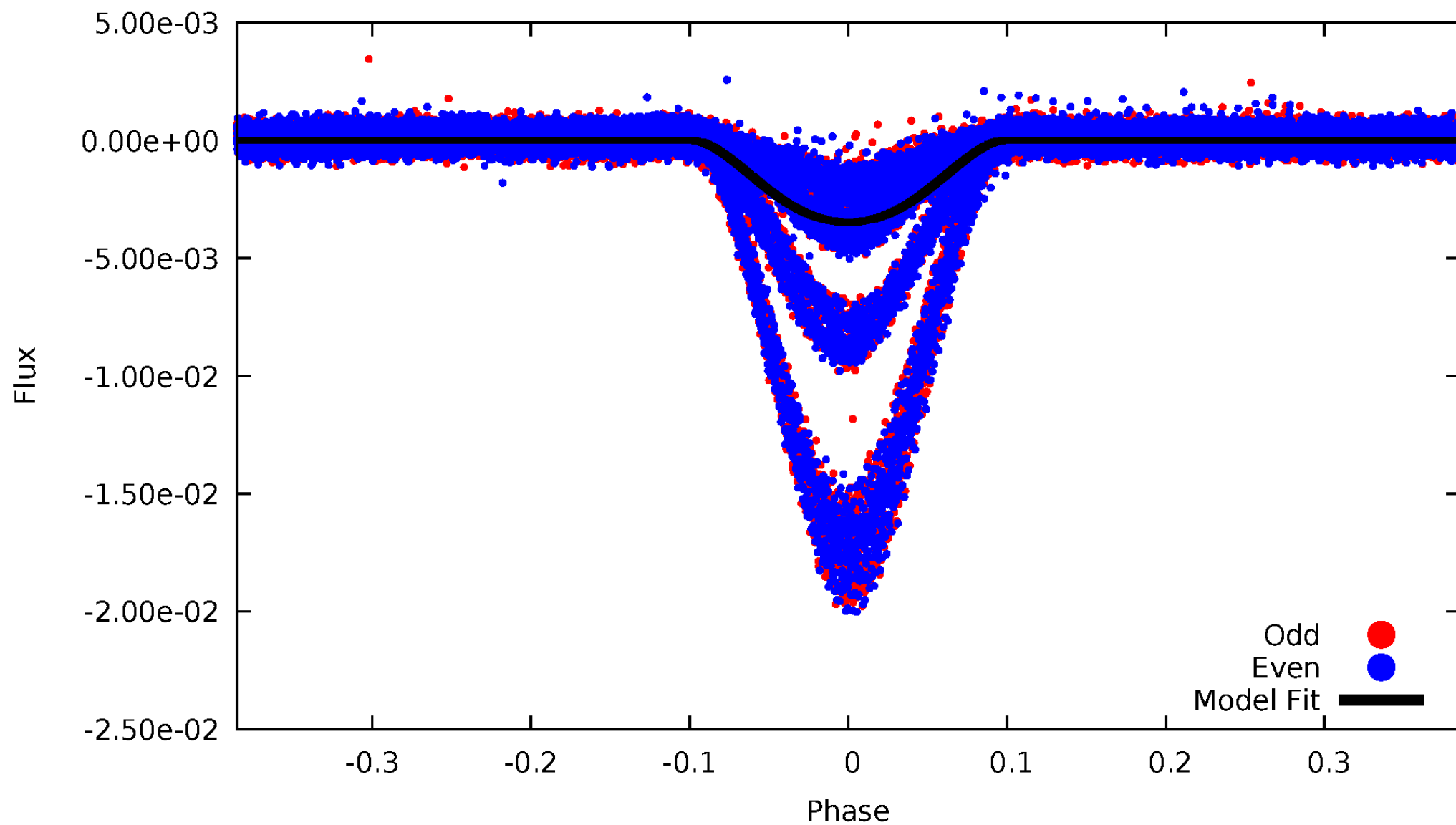


TCE 003338674-01



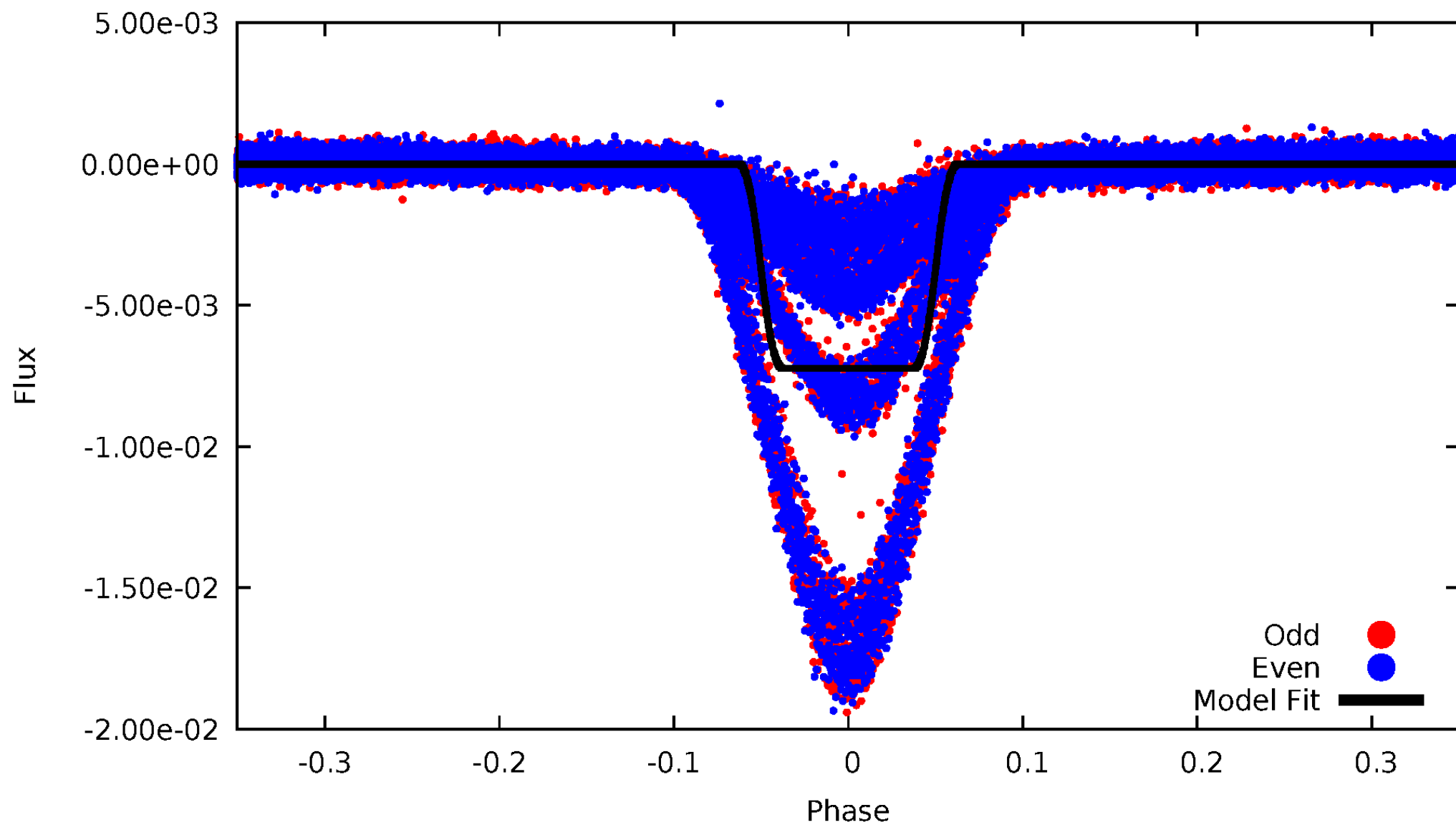
DV Odd/Even

TCE 003338674-01



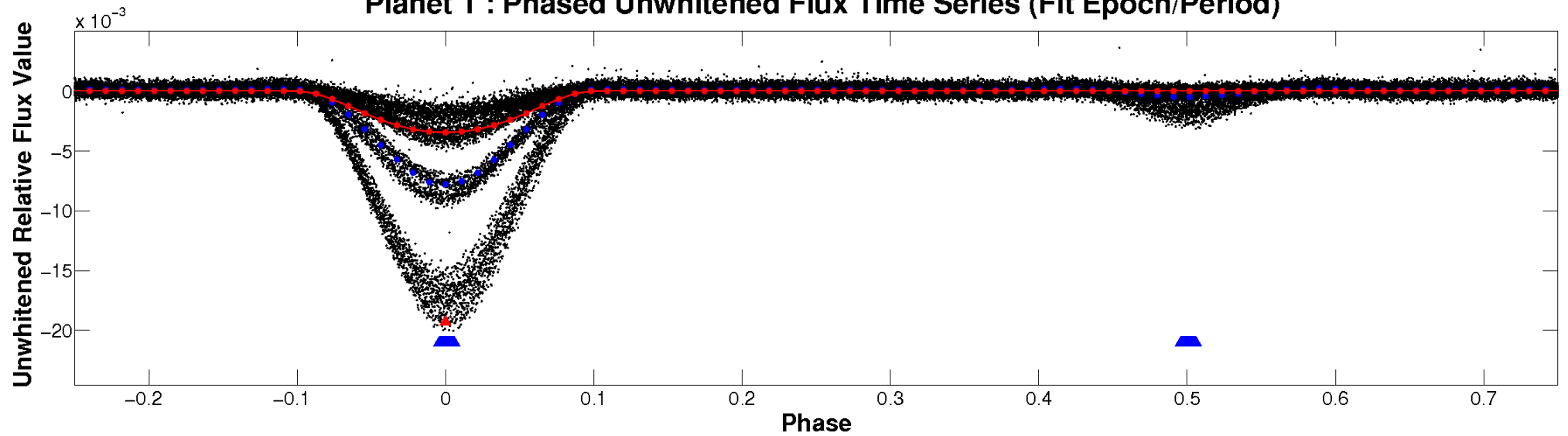
ALT Odd/Even

TCE 003338674-01

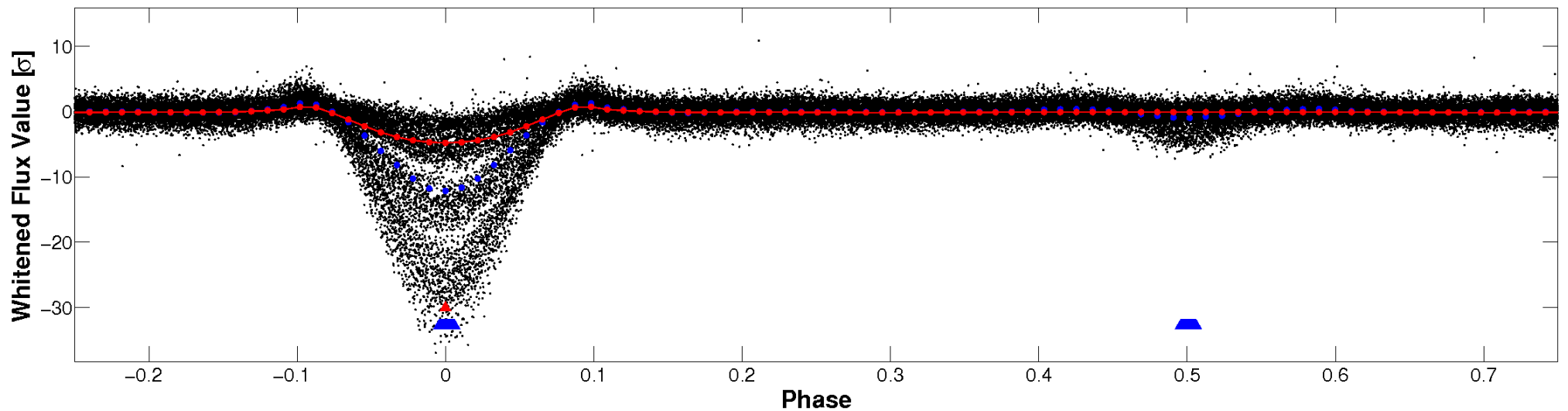


Non-Whitened Vs. Whitened Light Curve

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

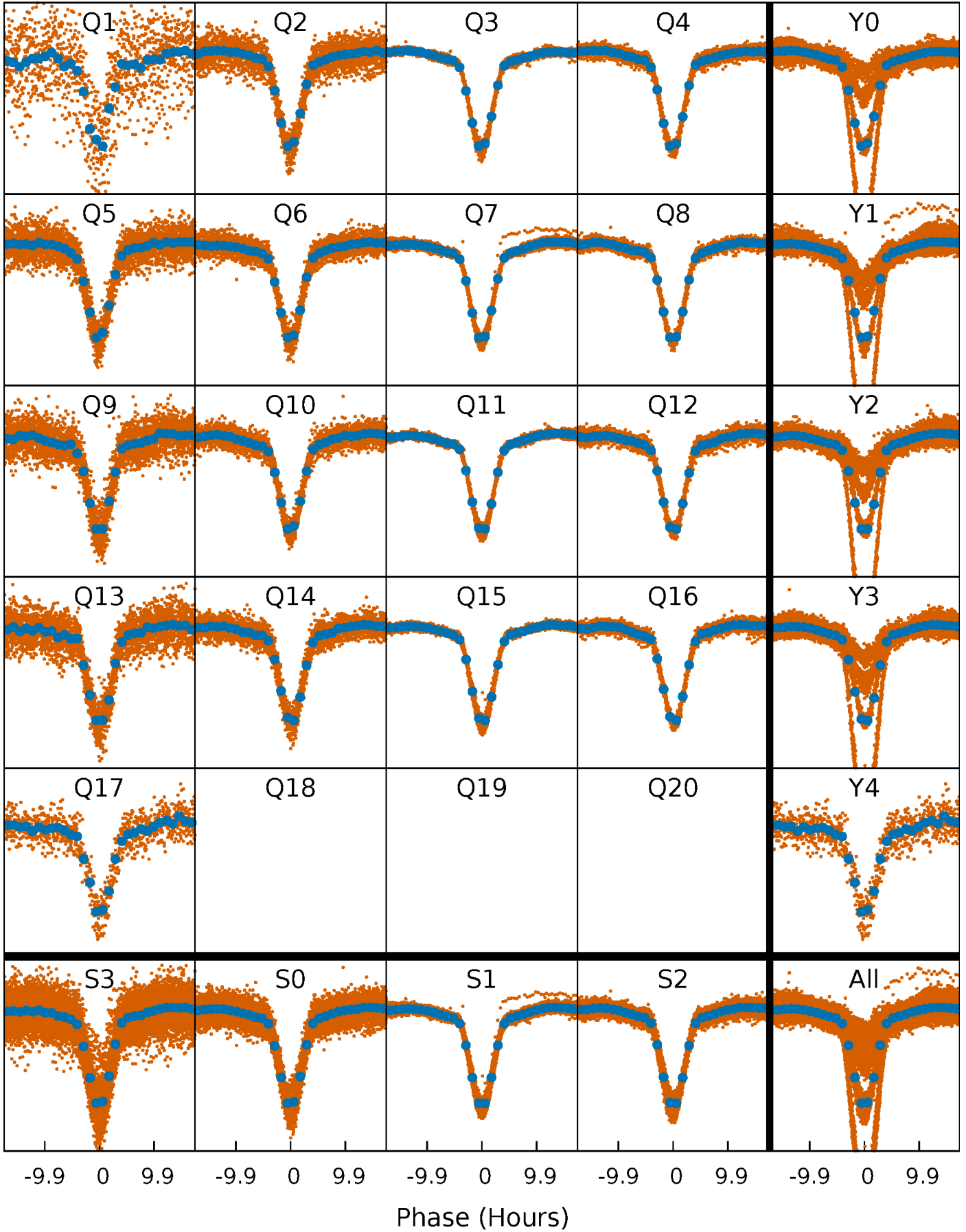


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



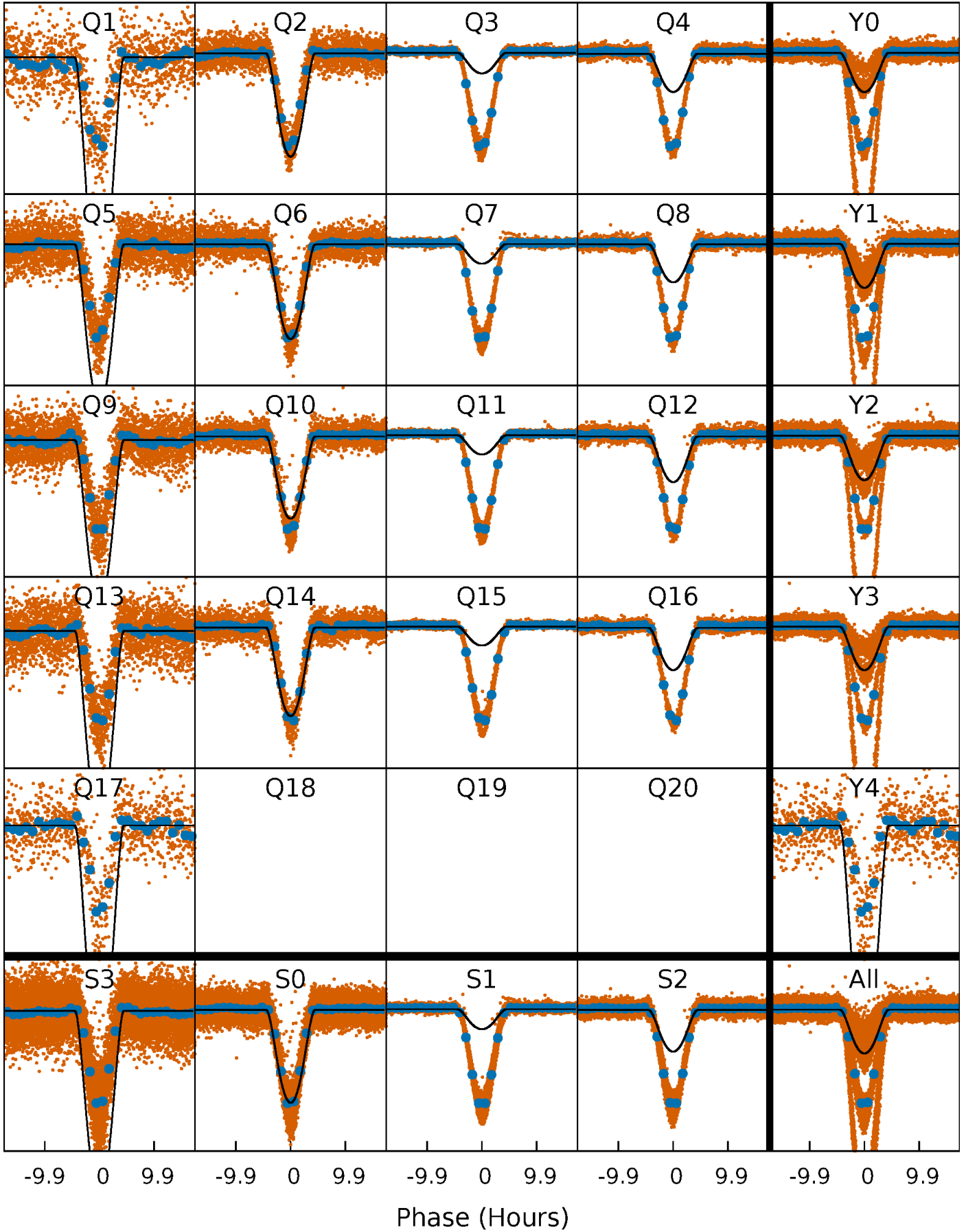
PDC Quarter-Phased Transit Curves

TCE 003338674-01 P= 1.873364 Days $T_0=131.802549$ (BKJD)



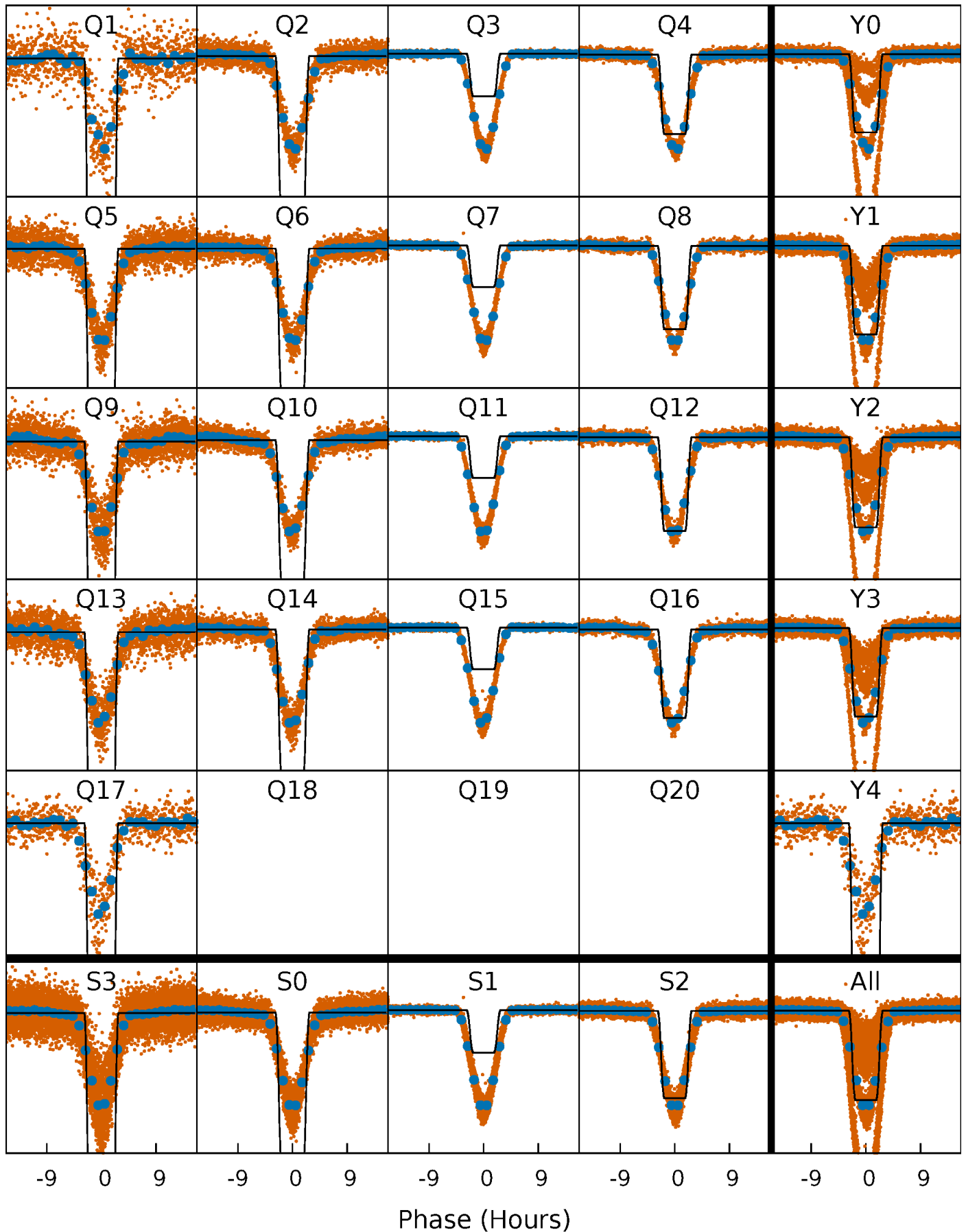
DV Quarter-Phased Transit Curves

TCE 003338674-01 P= 1.873364 Days $T_0=131.802549$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

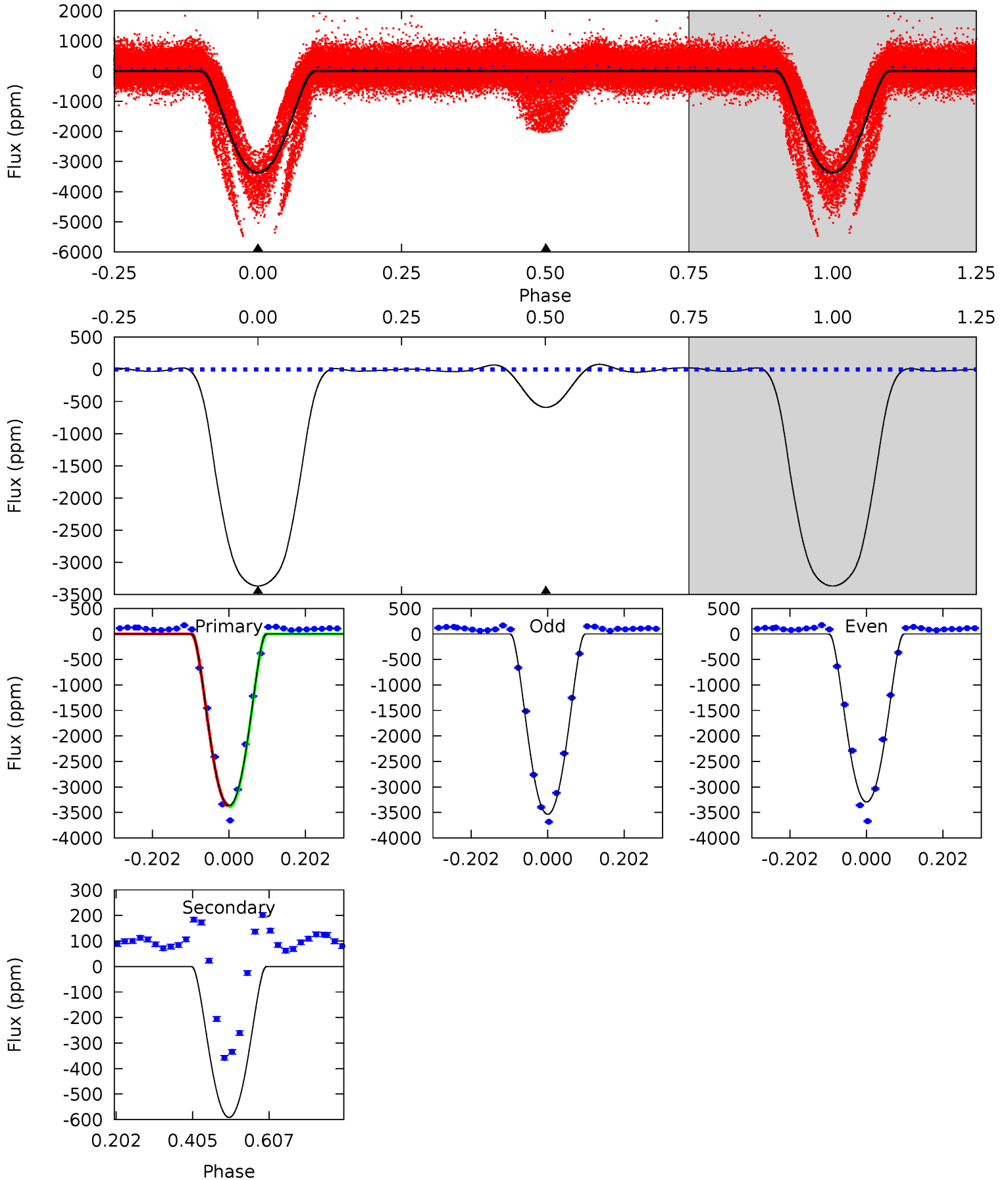
TCE 003338674-01 P= 1.873404 Days $T_0=131.786406$ (BKJD)



DV Model-Shift Uniqueness Test

003338674-01, P = 1.873364 Days, E = 129.929185 Days

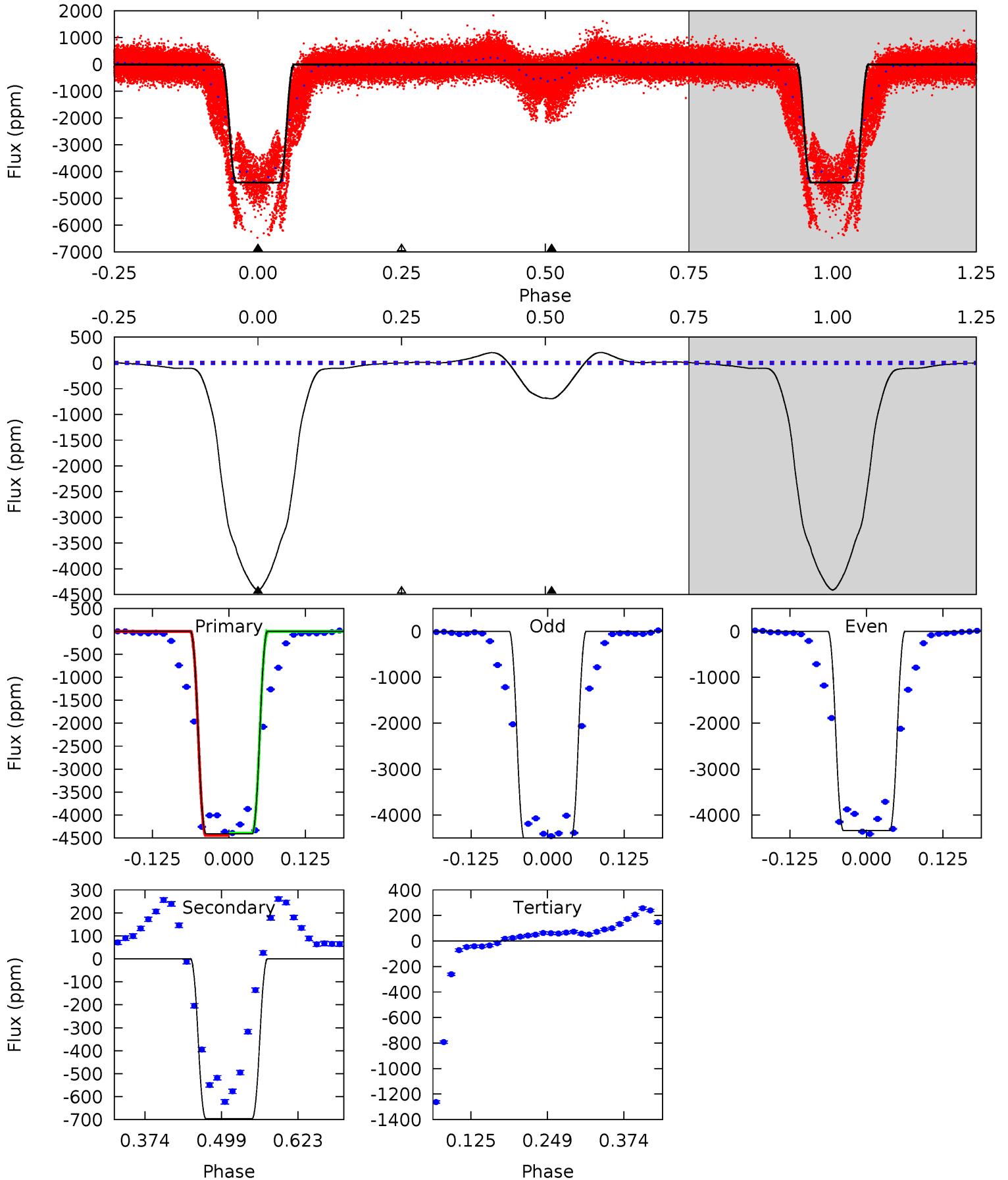
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
849.3	149.2	0	0	4.41	1.27	3.35	849.3	849.3	149.2	149.2	30.0	1.83	0.02	0



Alt Model-Shift Uniqueness Test

003338674-01, P = 1.873404 Days, E = 129.913002 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
833.9	131.6	-0.13	0	4.52	1.54	9.63	834.0	833.9	131.7	131.6	19.0	1.60	0.04	0



Stellar Parameters For KIC 003338674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4740^{+78}_{-50}	$2.900^{+0.140}_{-0.140}$	$-0.100^{+0.150}_{-0.100}$	$5.721^{+1.752}_{-0.751}$	$0.949^{+0.348}_{-0.039}$	$0.007^{+0.004}_{-0.003}$
	+2%/-1%	+5%/-5%	+150%/-100%	+31%/-13%	+37%/-4%	+58%/-43%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 003338674-01 / KOI 3796.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-591 ± 4	$47.29^{+8.53}_{-4.00}$	4073^{+264}_{-193}	-3363^{+169}_{-214}	$0.127^{+0.026}_{-0.028}$
Alt.	-696 ± 5	$53.06^{+9.00}_{-4.14}$	4072^{+242}_{-165}	-3386^{+150}_{-196}	$0.118^{+0.023}_{-0.024}$

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

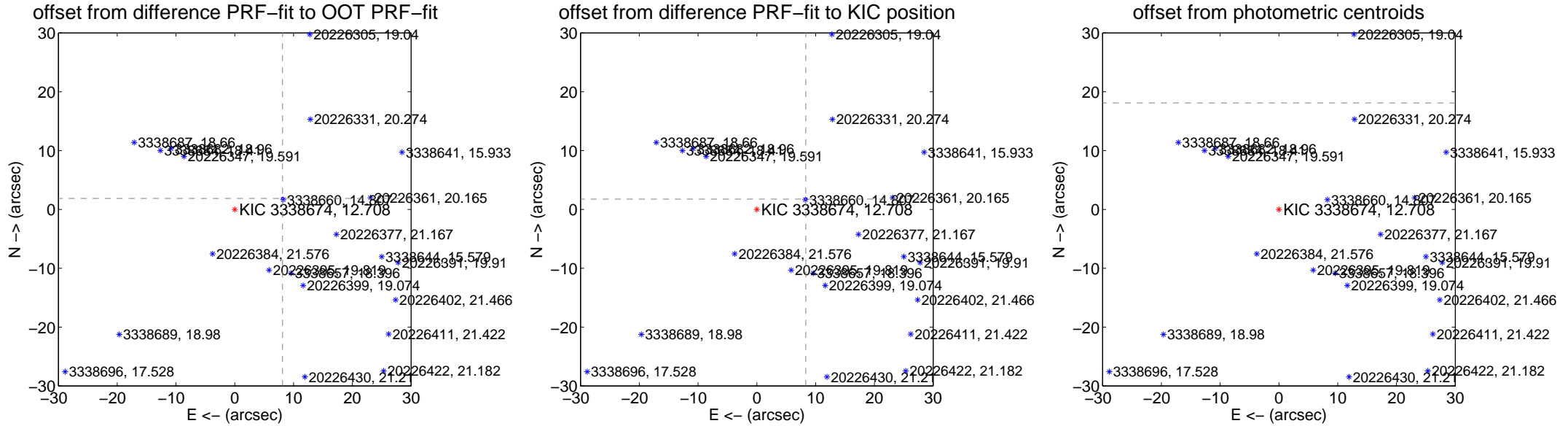
DV Centroid Data

Supplemental centroid analysis for 003338674-01. Kepler magnitude: 12.71. Transit SNR 234.29

There are 17 quarters with good PRF difference image offsets

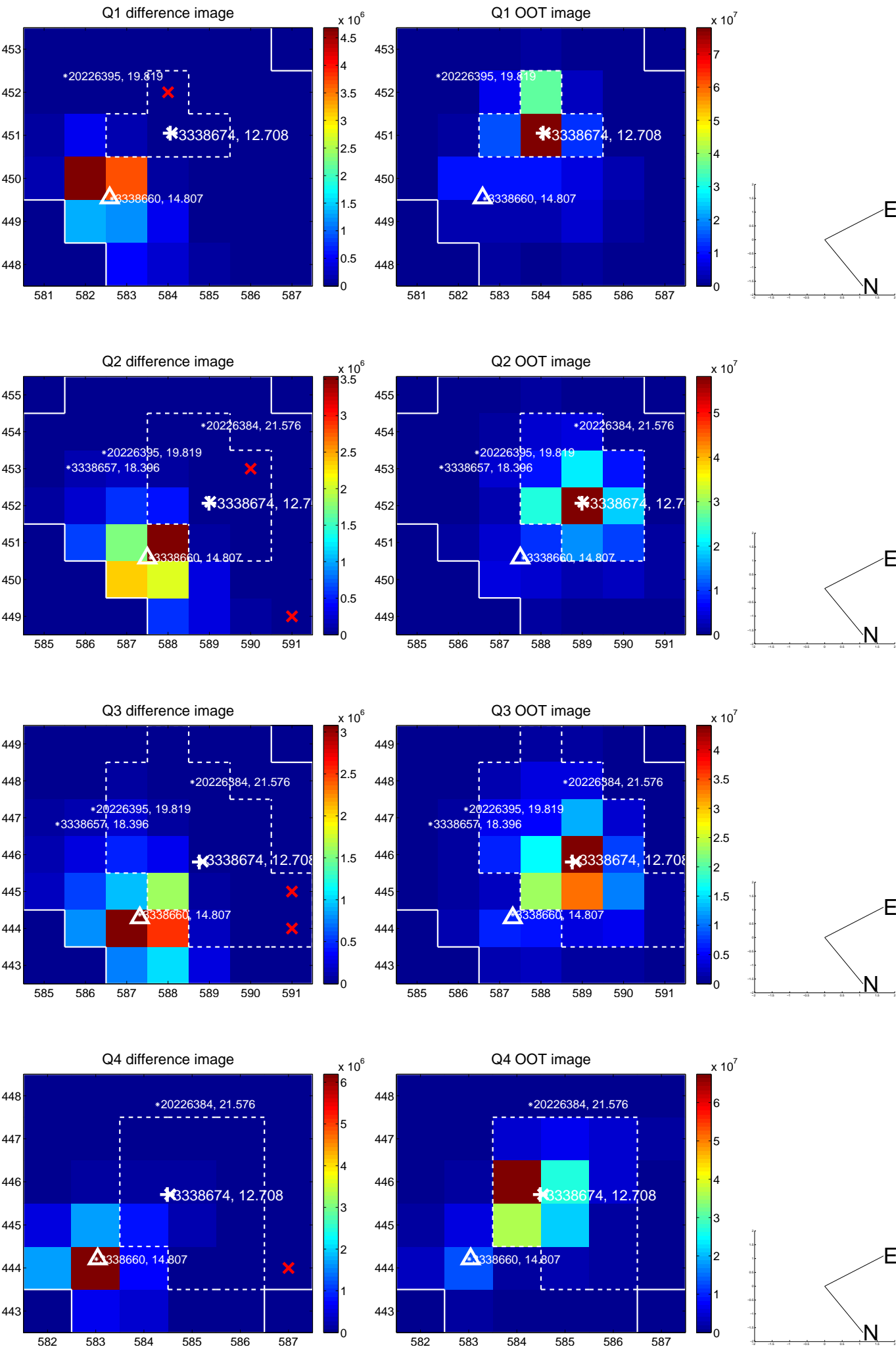
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.338 \pm 0.068	122.03	-8.127 \pm 0.068	1.863 \pm 0.068
PRF-fit source offset from KIC position	8.516 \pm 0.069	124.07	-8.334 \pm 0.069	1.752 \pm 0.067
photometric centroid source offset	90.18 \pm 0.12	728.09	-88.35 \pm 0.13	18.09 \pm 0.03

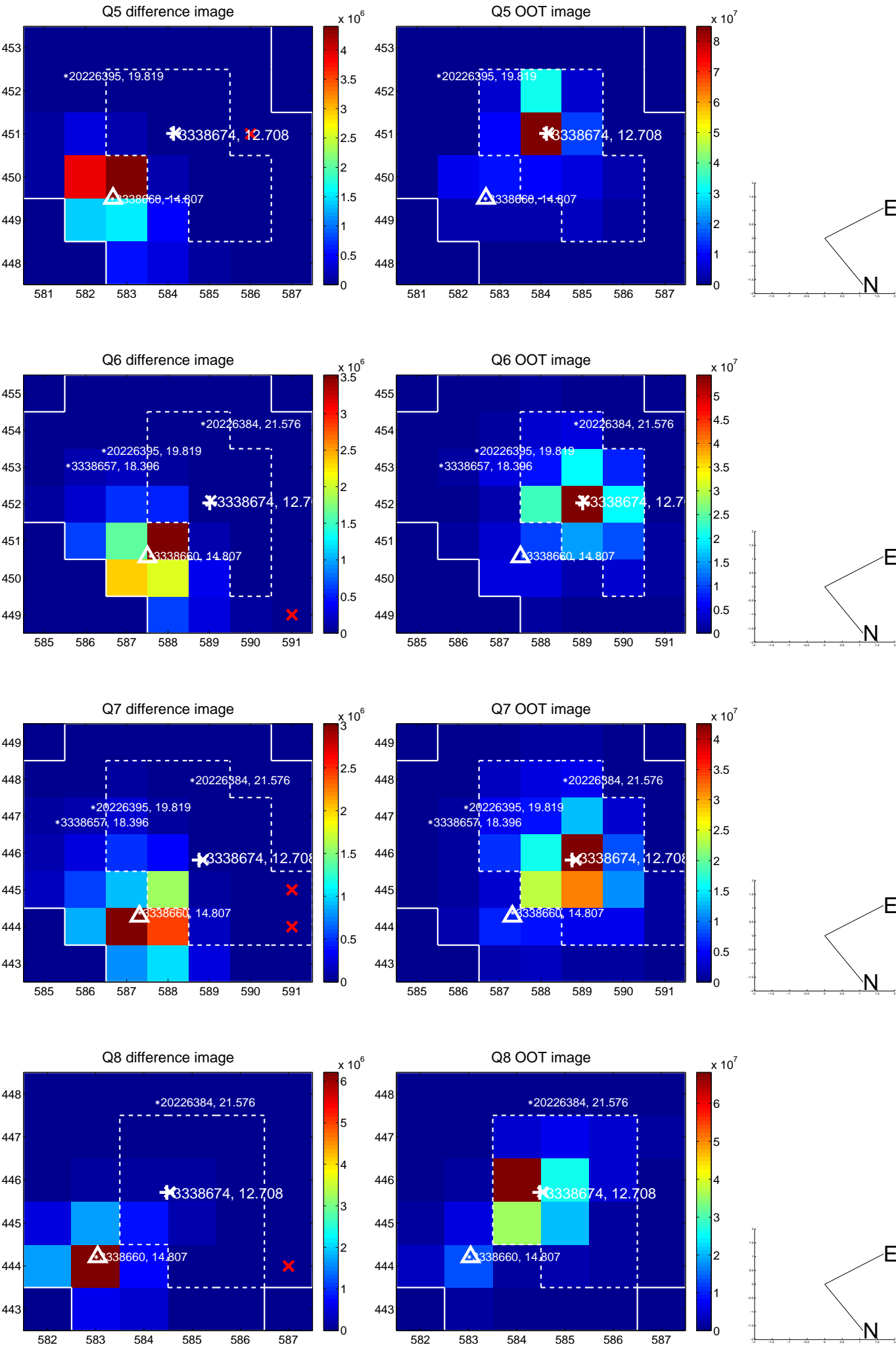


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

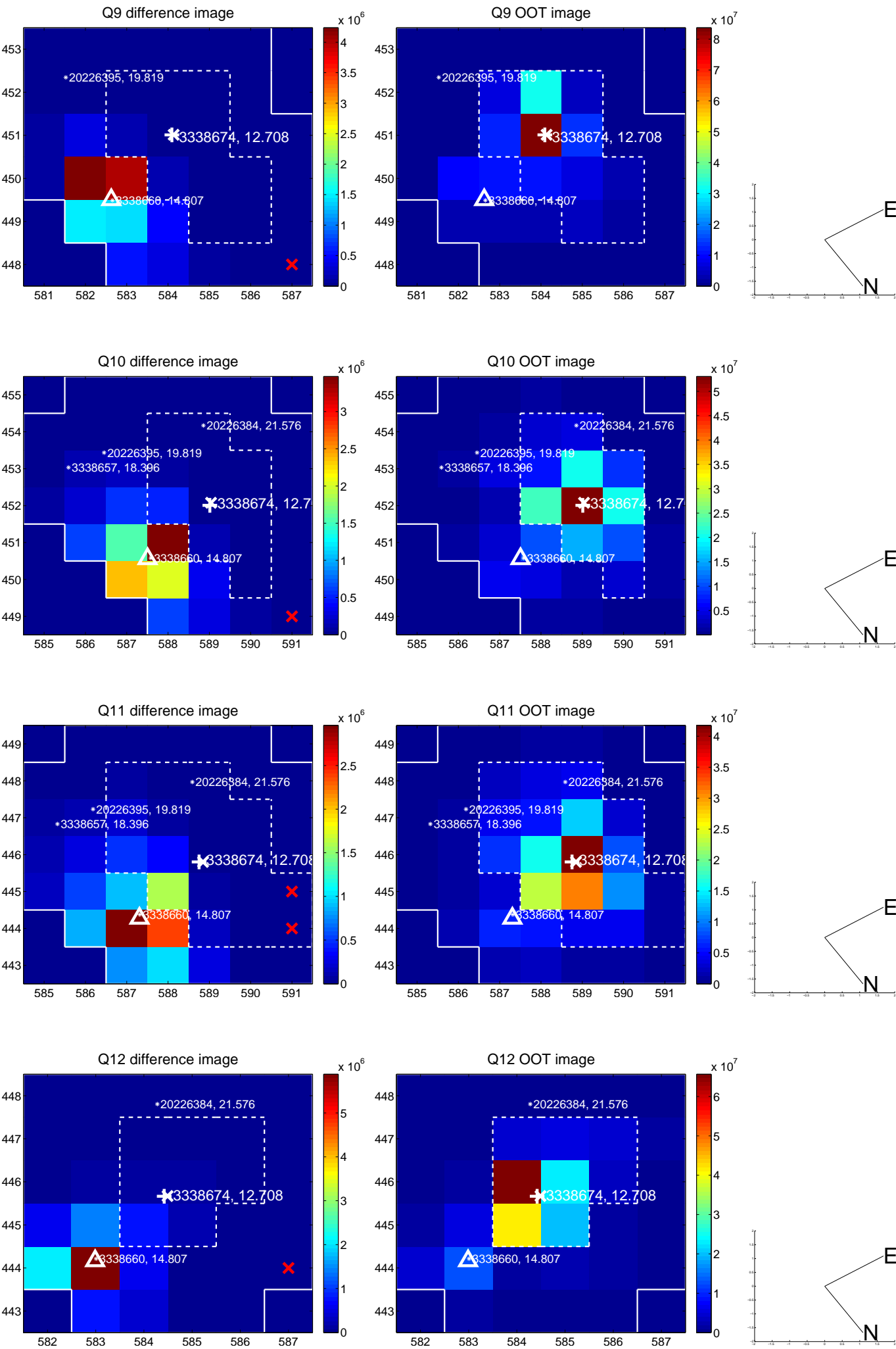
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



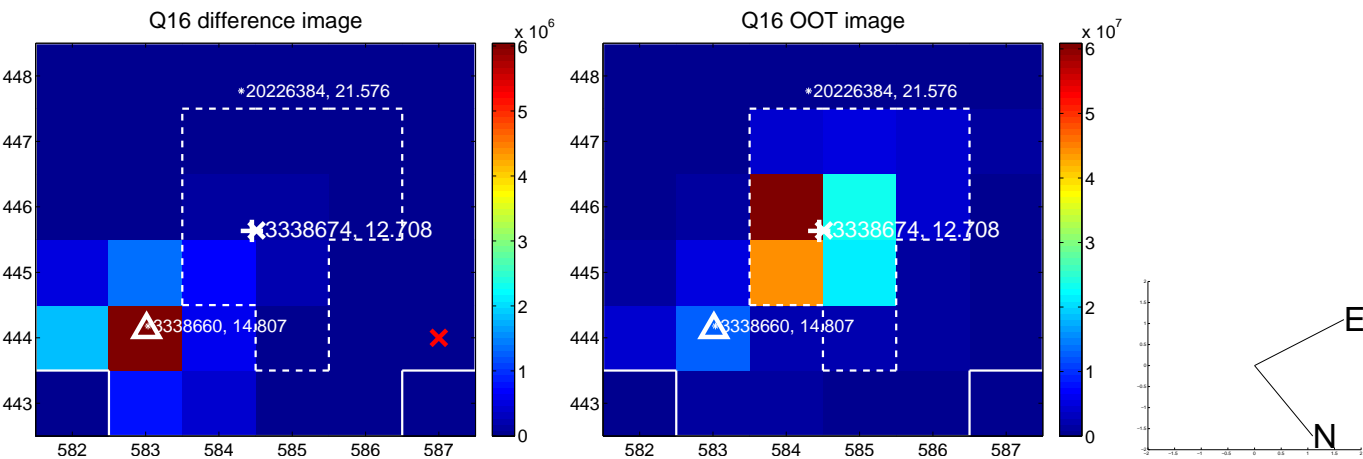
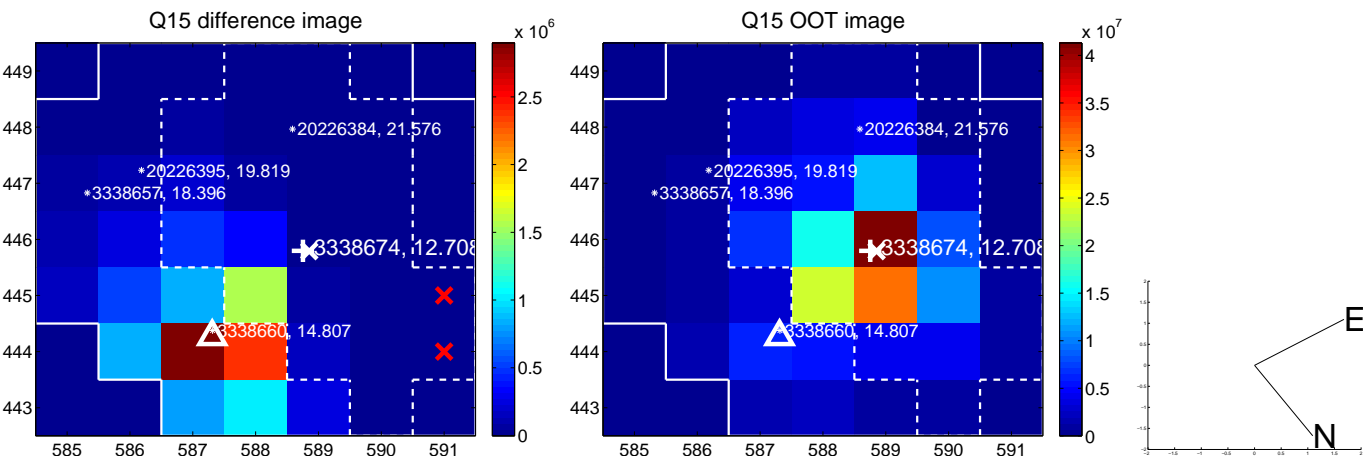
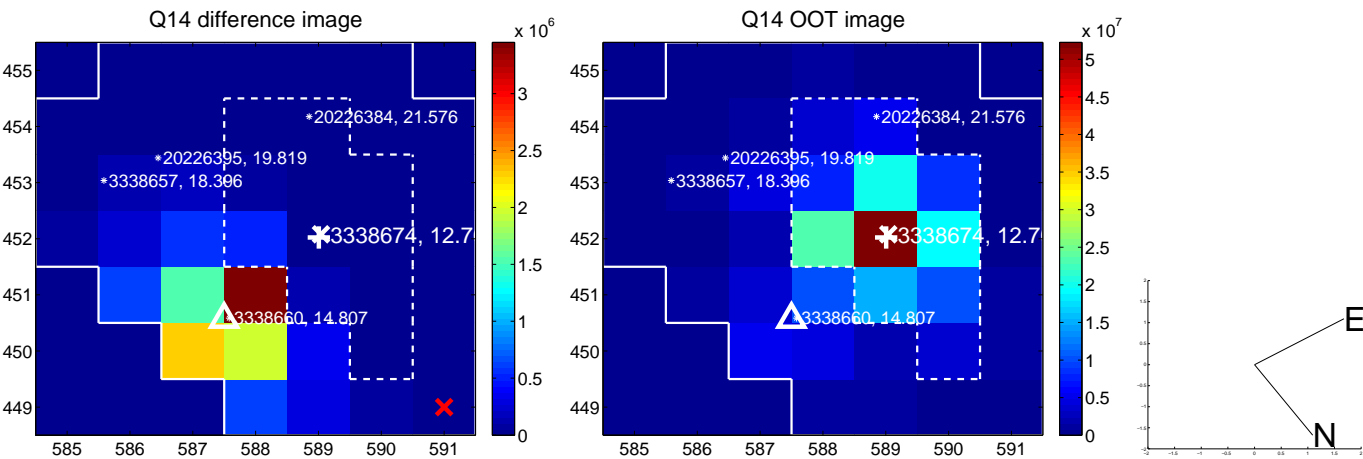
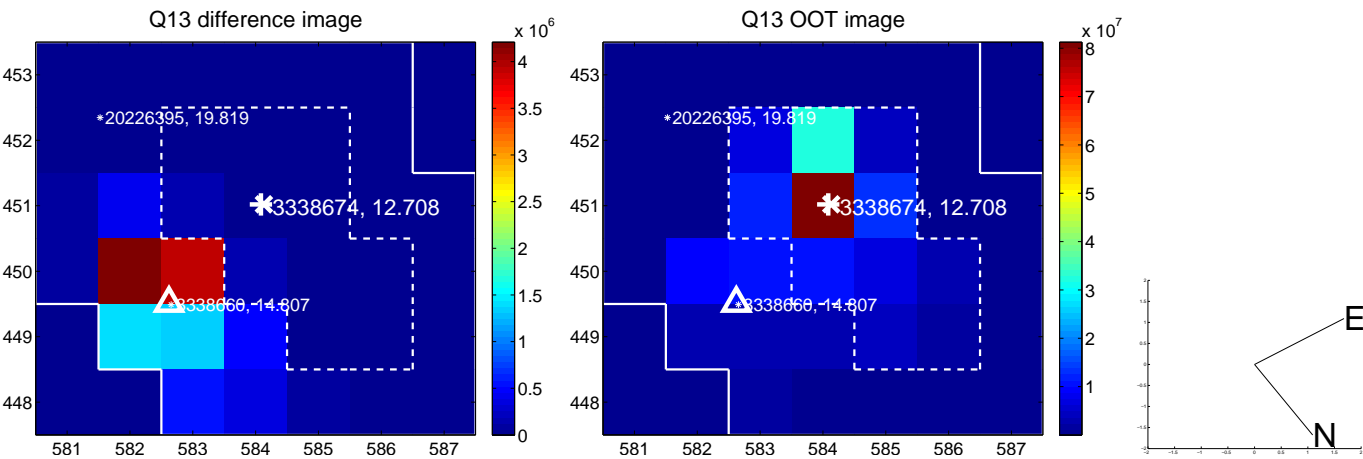
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



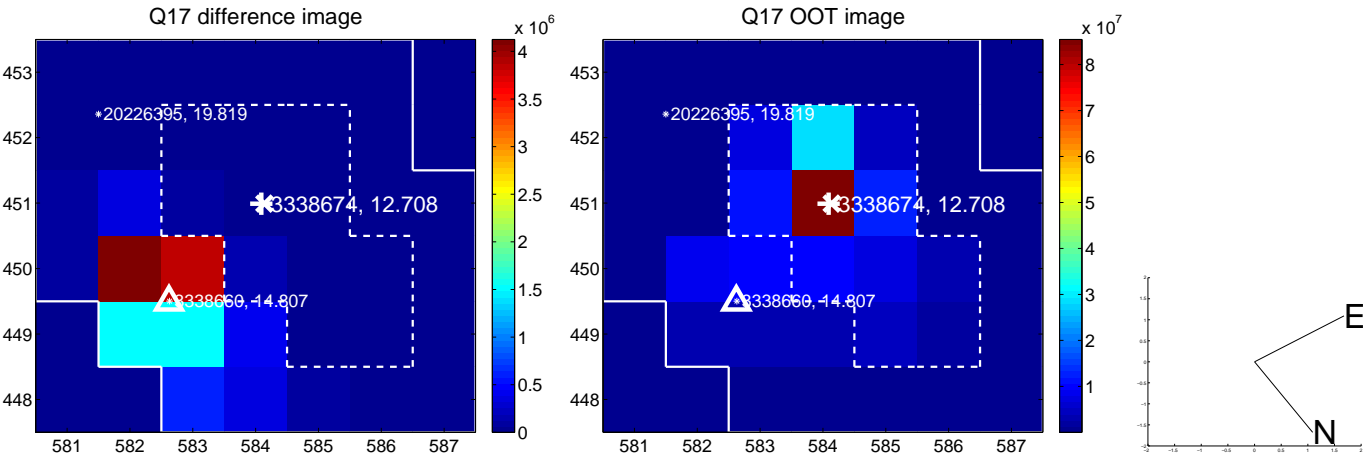
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



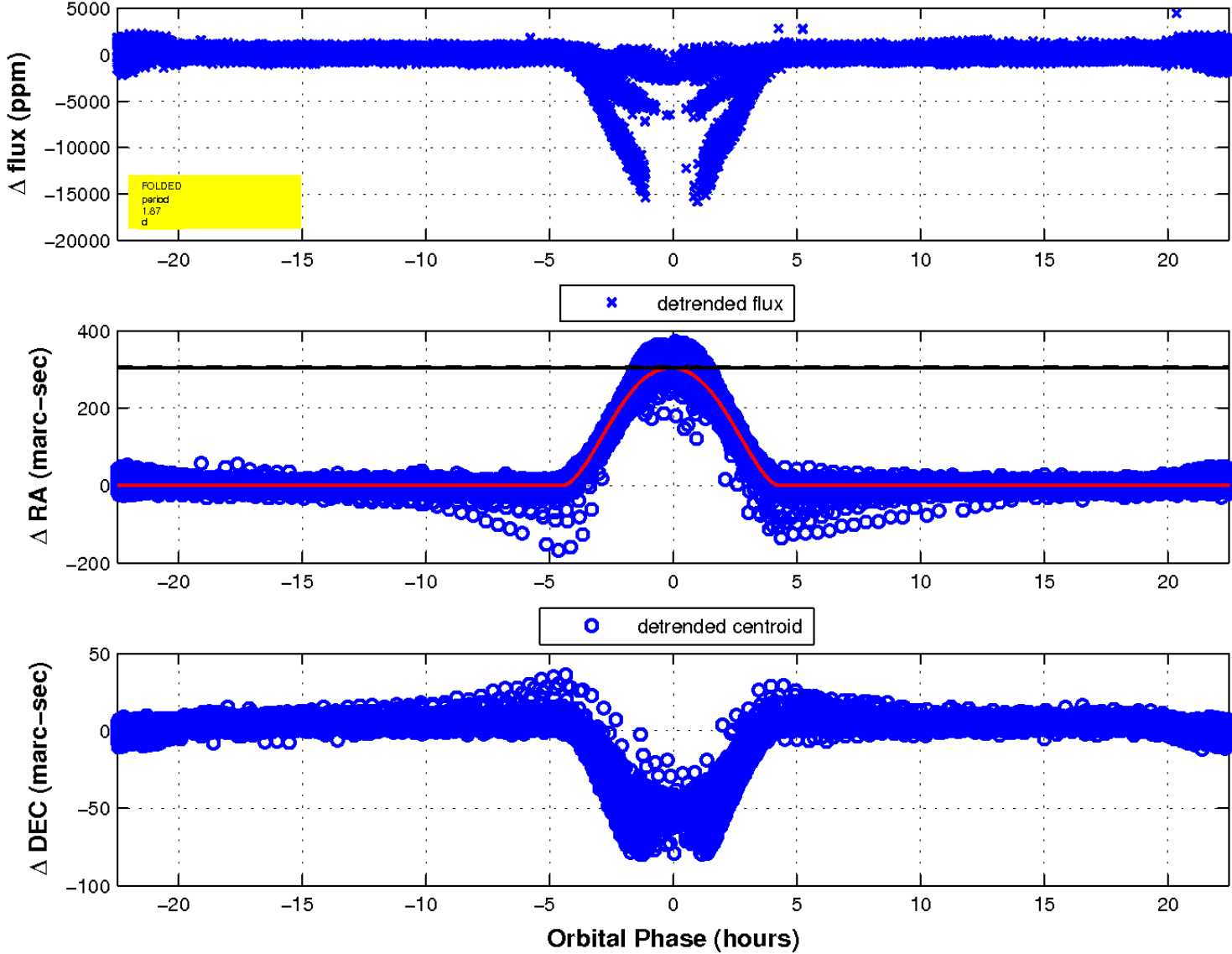
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



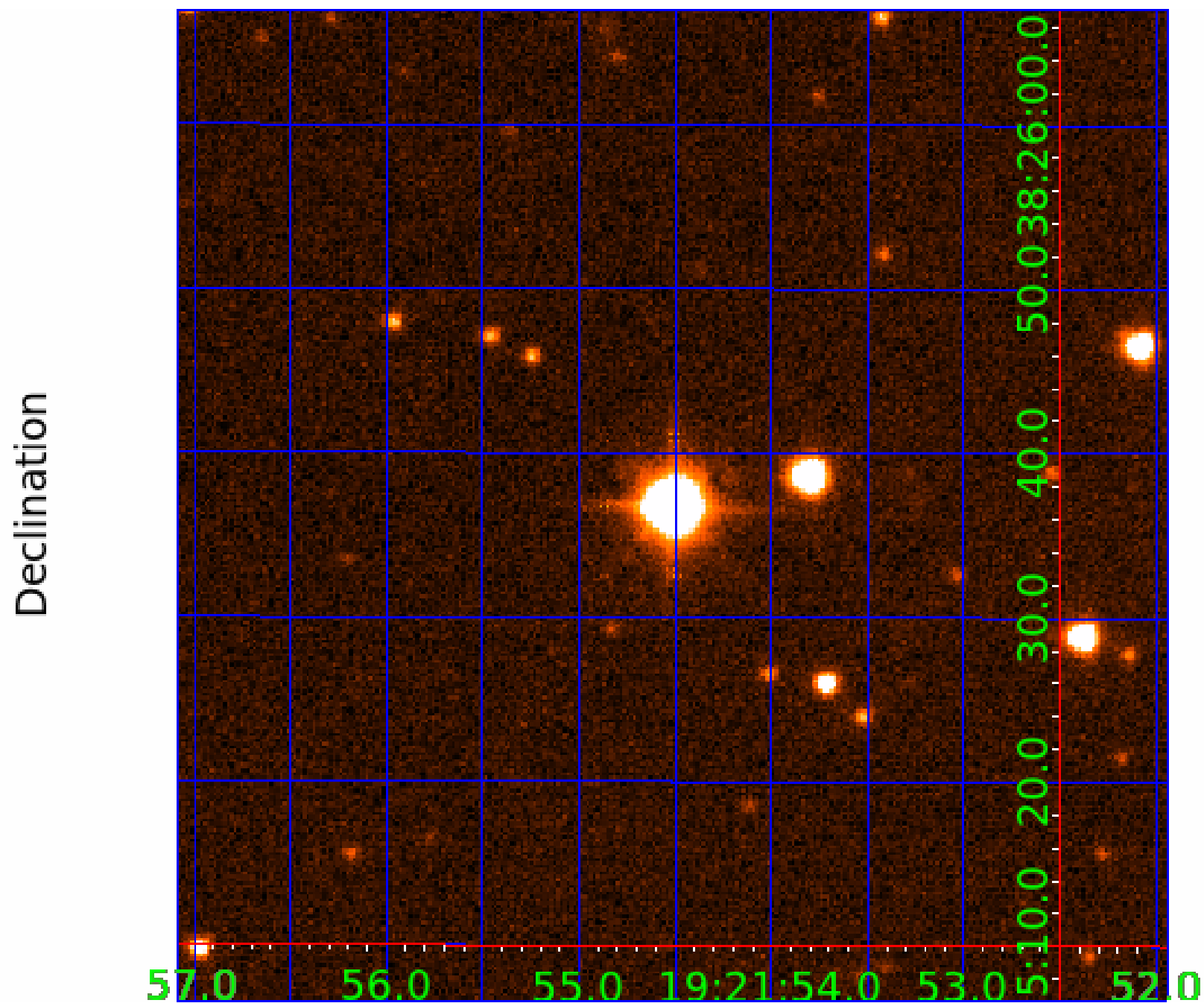
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 003338674

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})
003338674-01	OBS	3796.01	1.873364	131.802549	3471.2	8.655	706.3	234.3	5.72	4740	47.52	17331.10
003338674-02	OBS	No	0.936694	131.794527	861.1	3.000	71.9	-1.0	5.72	4740	16.18	43670.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003338674-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
003338674-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—CENT_NOFITS—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 003338674-02

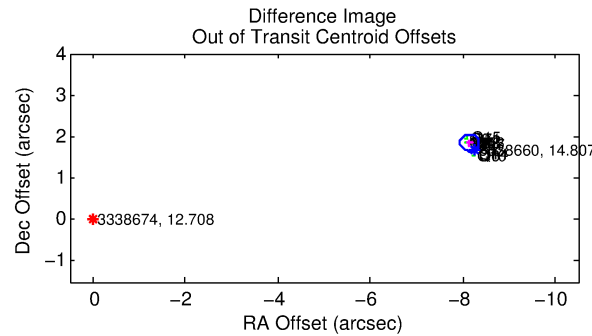
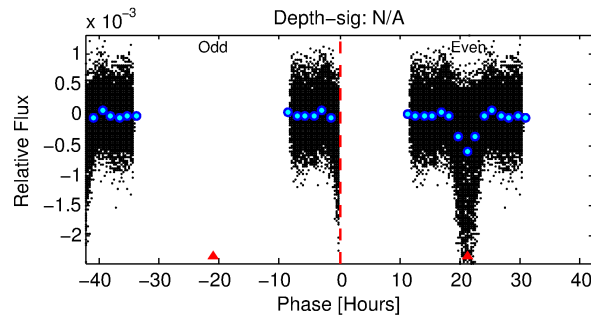
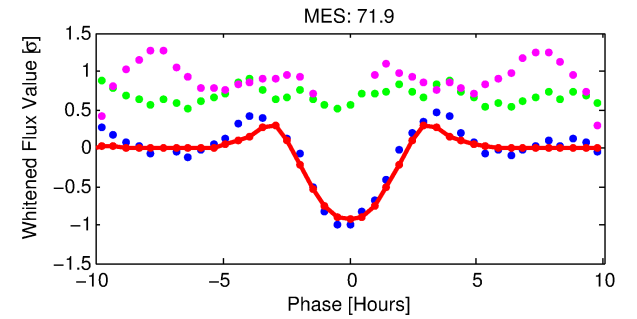
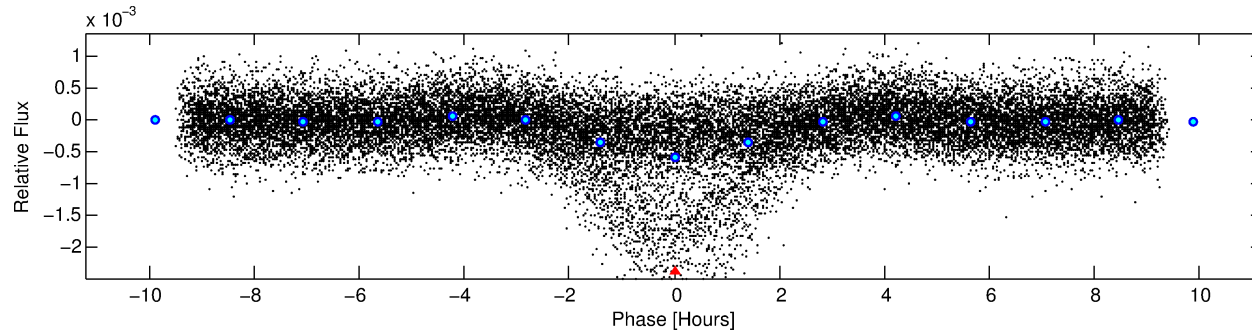
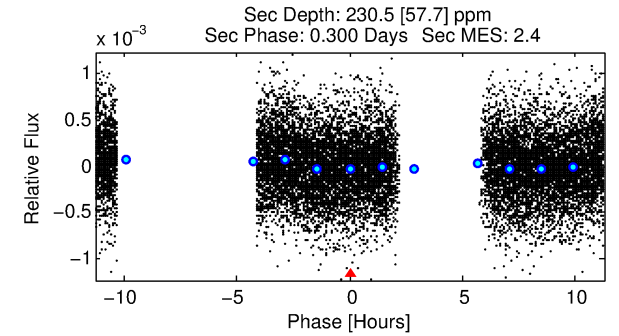
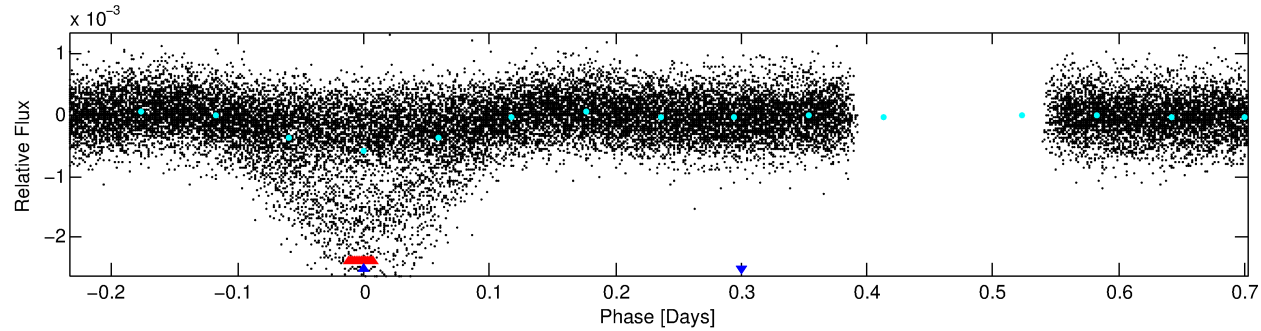
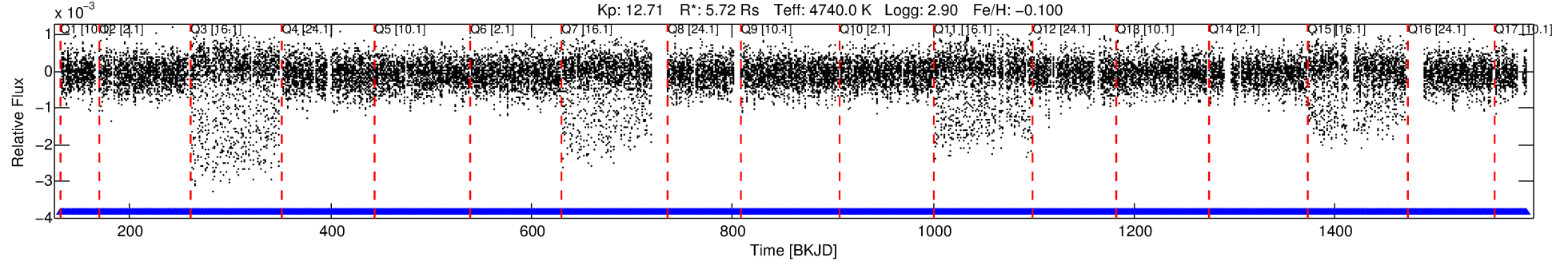
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003338674-02	3338674	3795.01	3338660	1:2	8.5	2	1	14.81	12.71	647.97	Direct-PRF	0	0.86	0.10

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: 3338674 Candidate: 2 of 2 Period: 0.937 d
KOI: K03796 Corr: No Ephemeris Match

Kp: 12.71 R*: 5.72 Rs Teff: 4740.0 K Logg: 2.90 Fe/H: -0.100



TPS TCE Results:

Period = 0.93669 d
Epoch = 131.7945 BKJD

DV fit results are unavailable

DV Diagnostic Results:

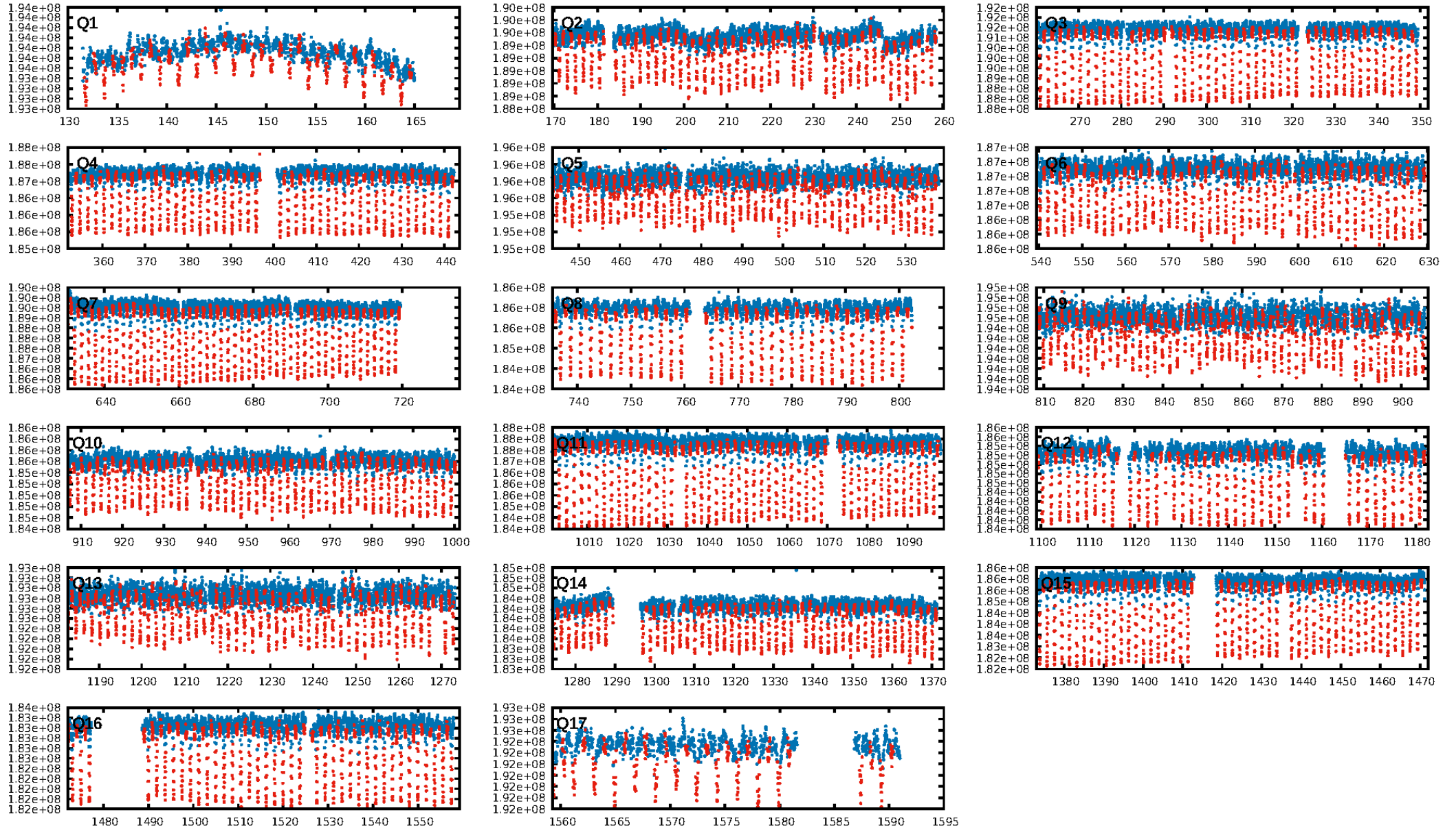
ShortPeriod-sig: N/A
LongPeriod-sig: 98.6% [2.45 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [689/689]
GhostDiagnostic-chr: -1.743

Centroid-sig: N/A
Centroid-so: 8.656 arcsec [47.41 σ]
OotOffset-rm: 8.354 arcsec [121.42 σ]
KicOffset-rm: 8.535 arcsec [123.63 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

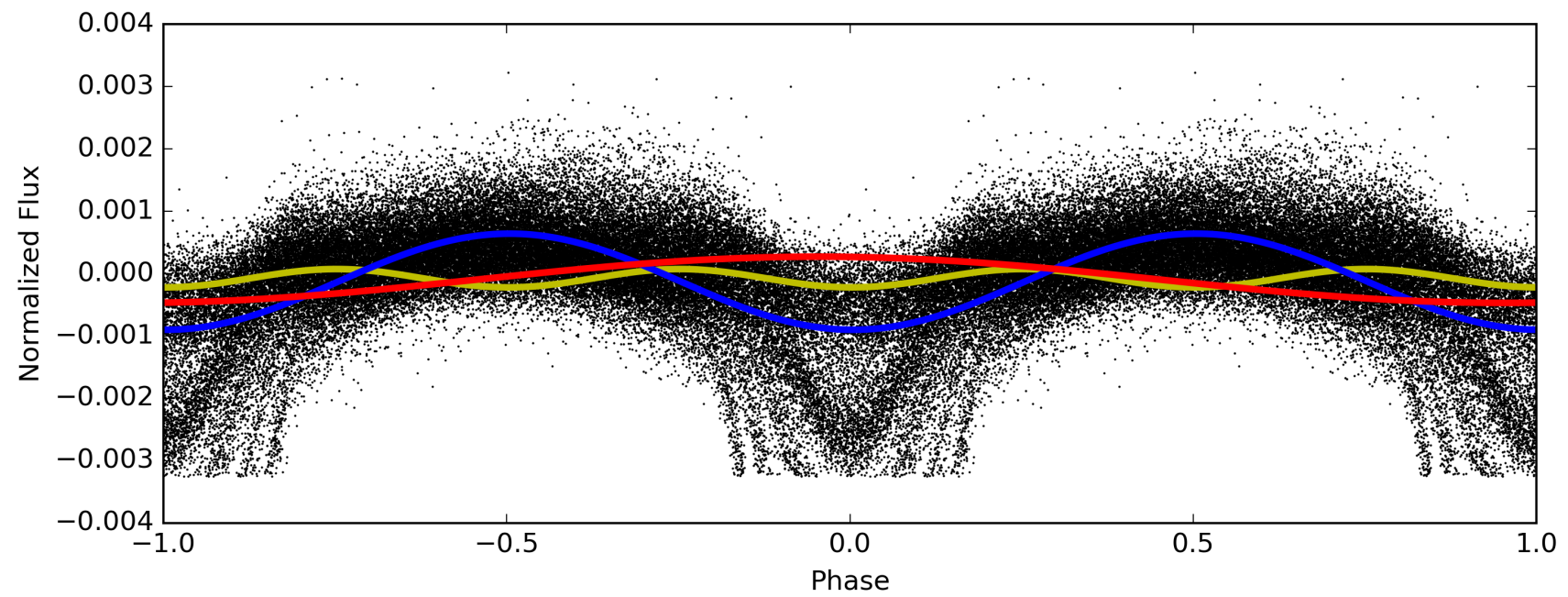
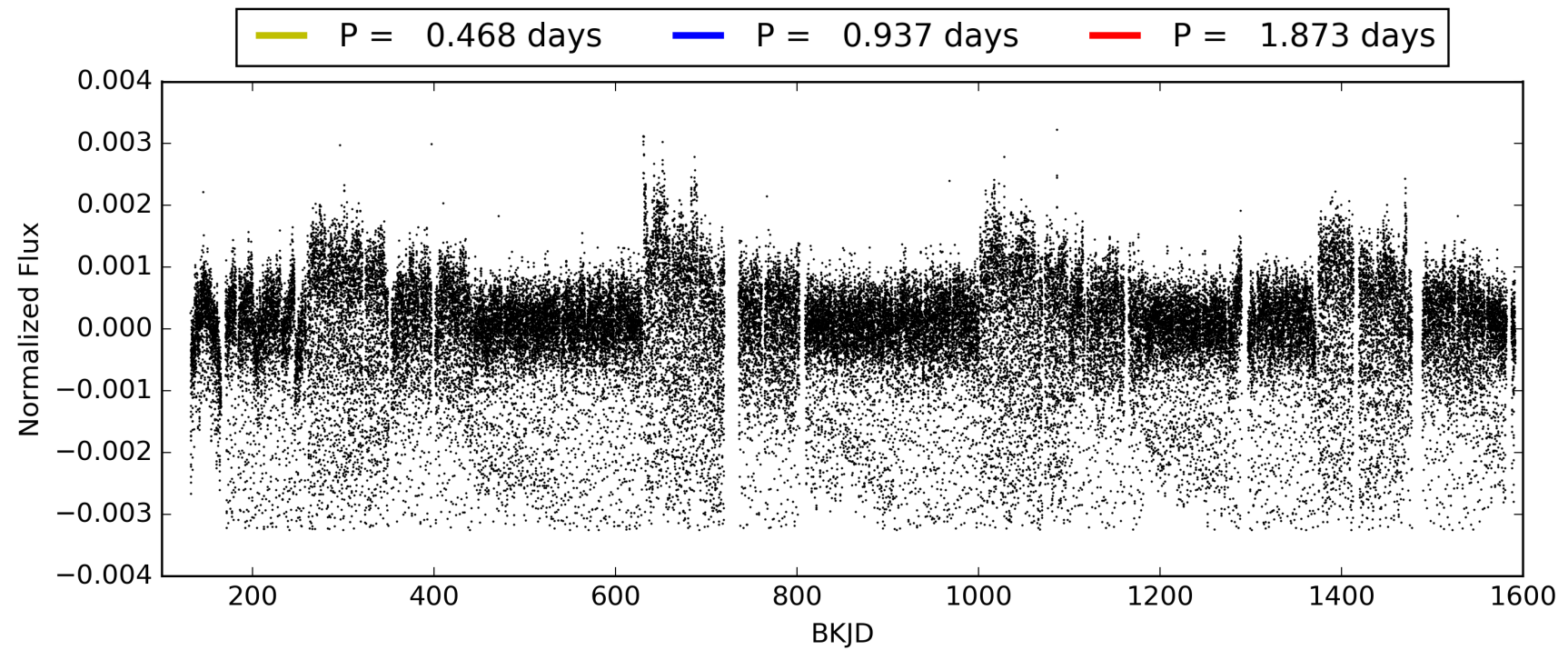
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:59:57 Z

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

TCE 003338674-02, PDC Light Curves

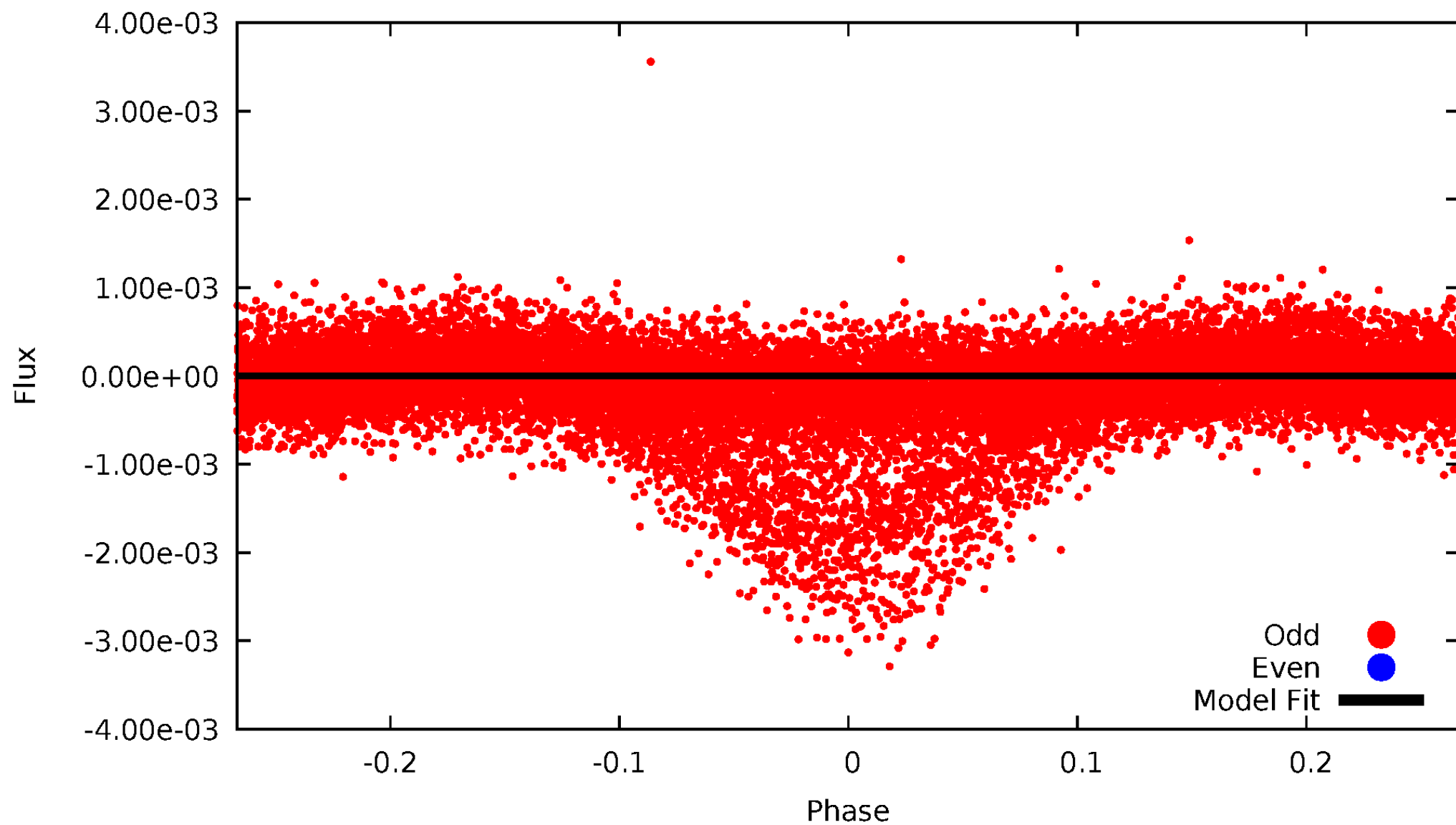


TCE 003338674-02



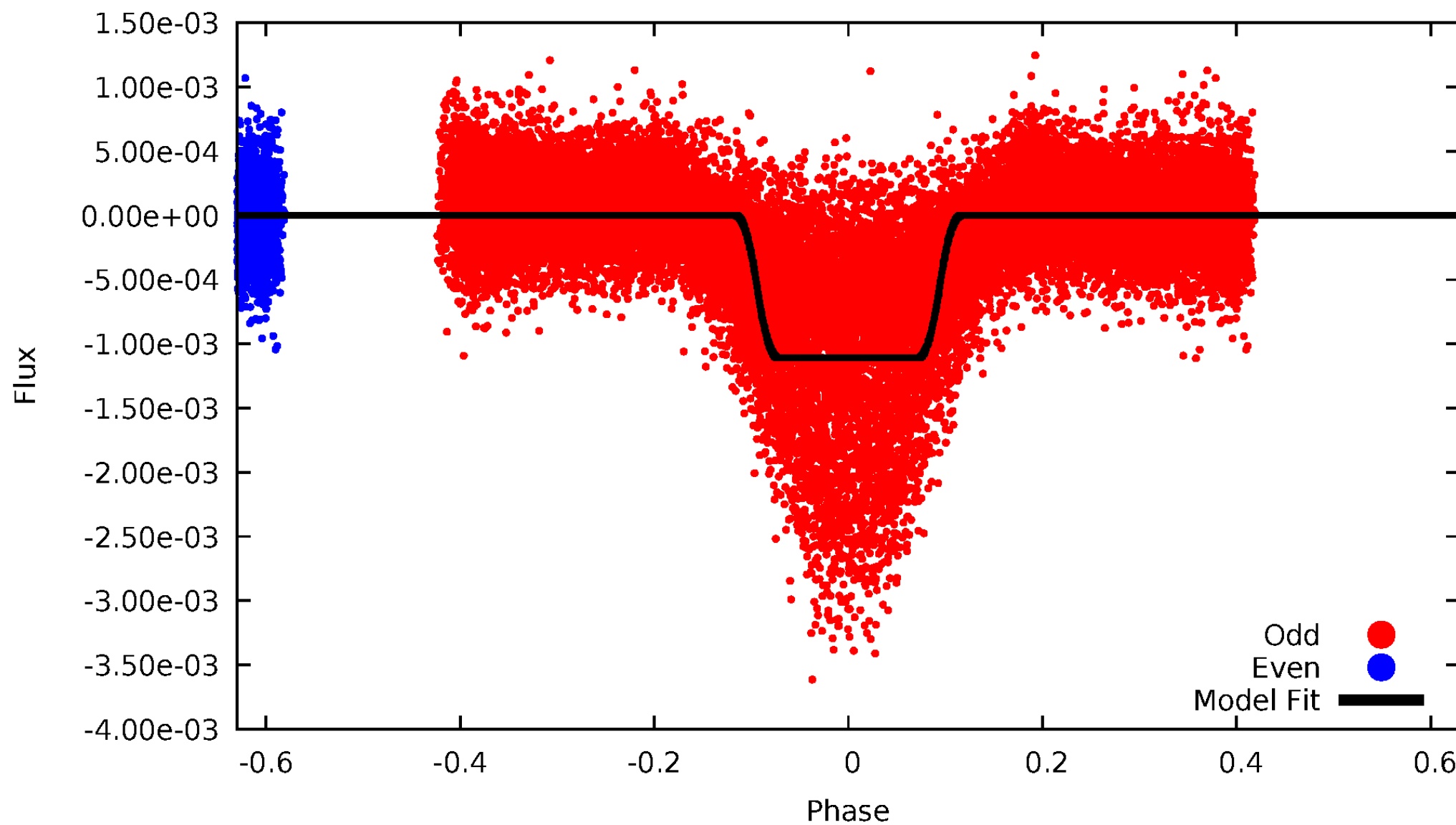
DV Odd/Even

TCE 003338674-02



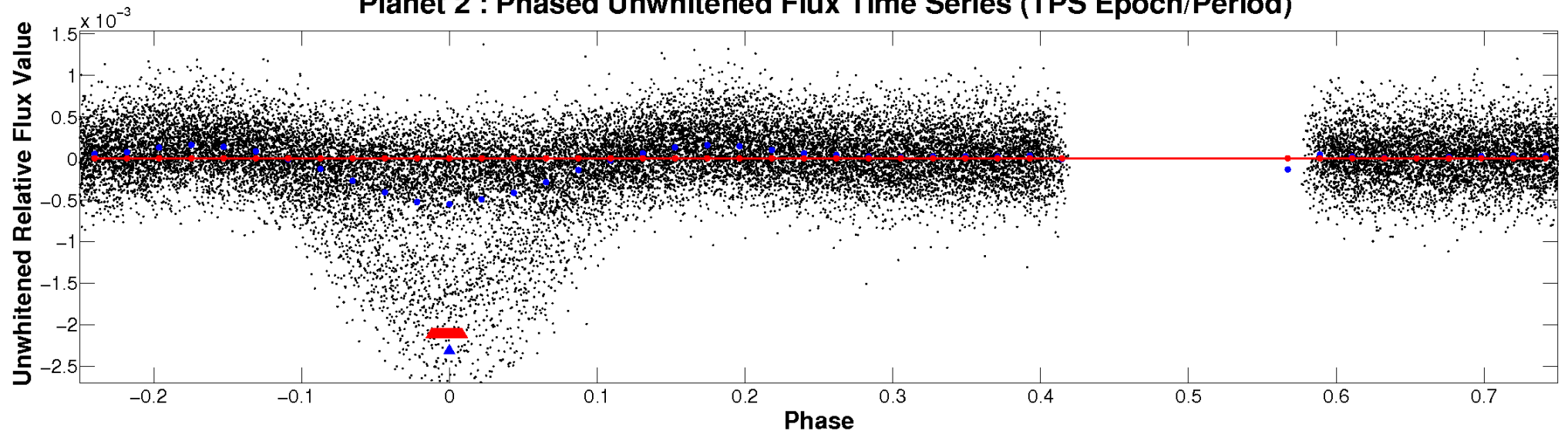
ALT Odd/Even

TCE 003338674-02

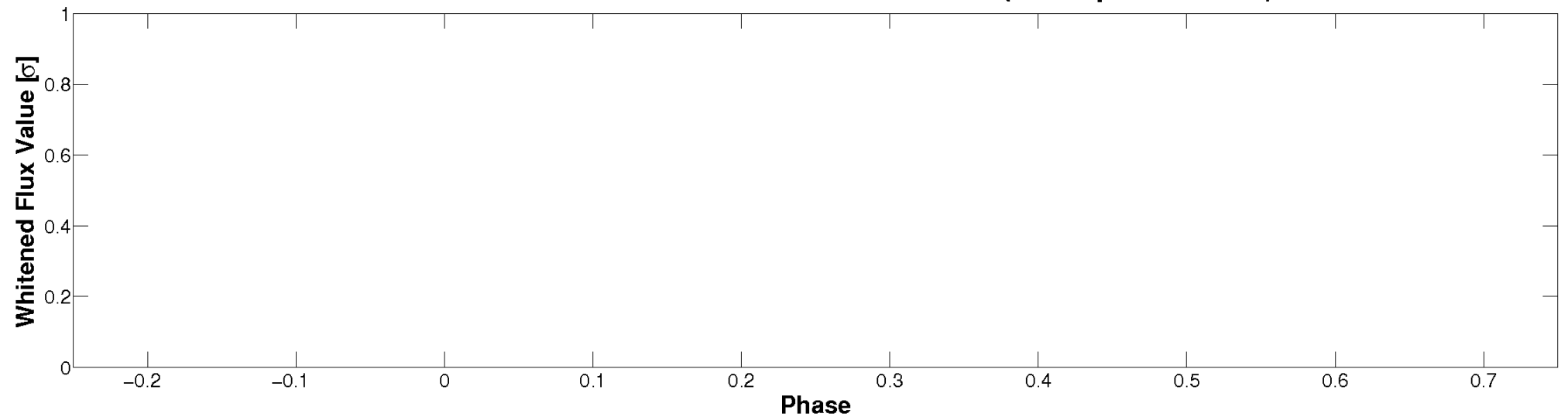


Non-Whitened Vs. Whitened Light Curve

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

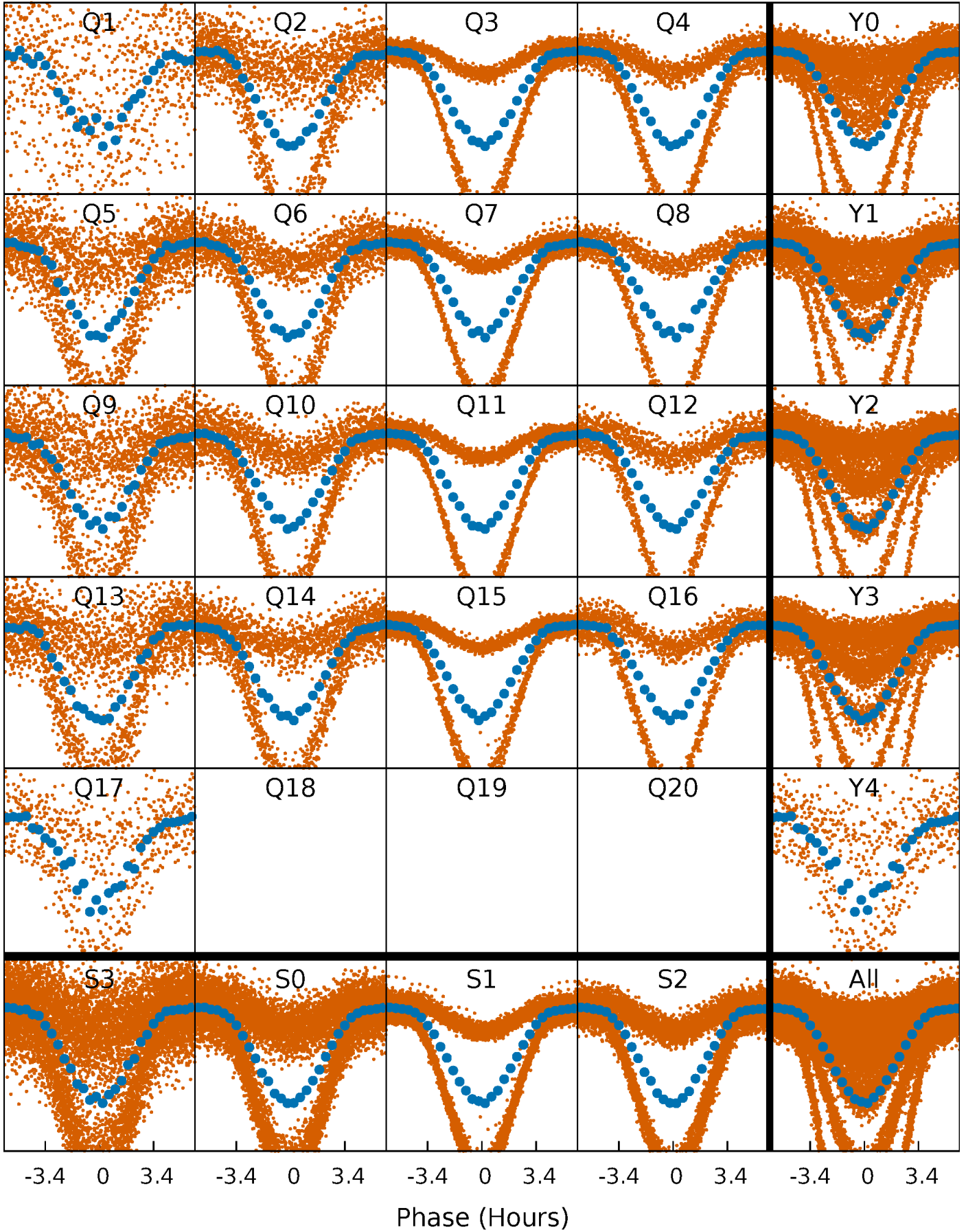


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



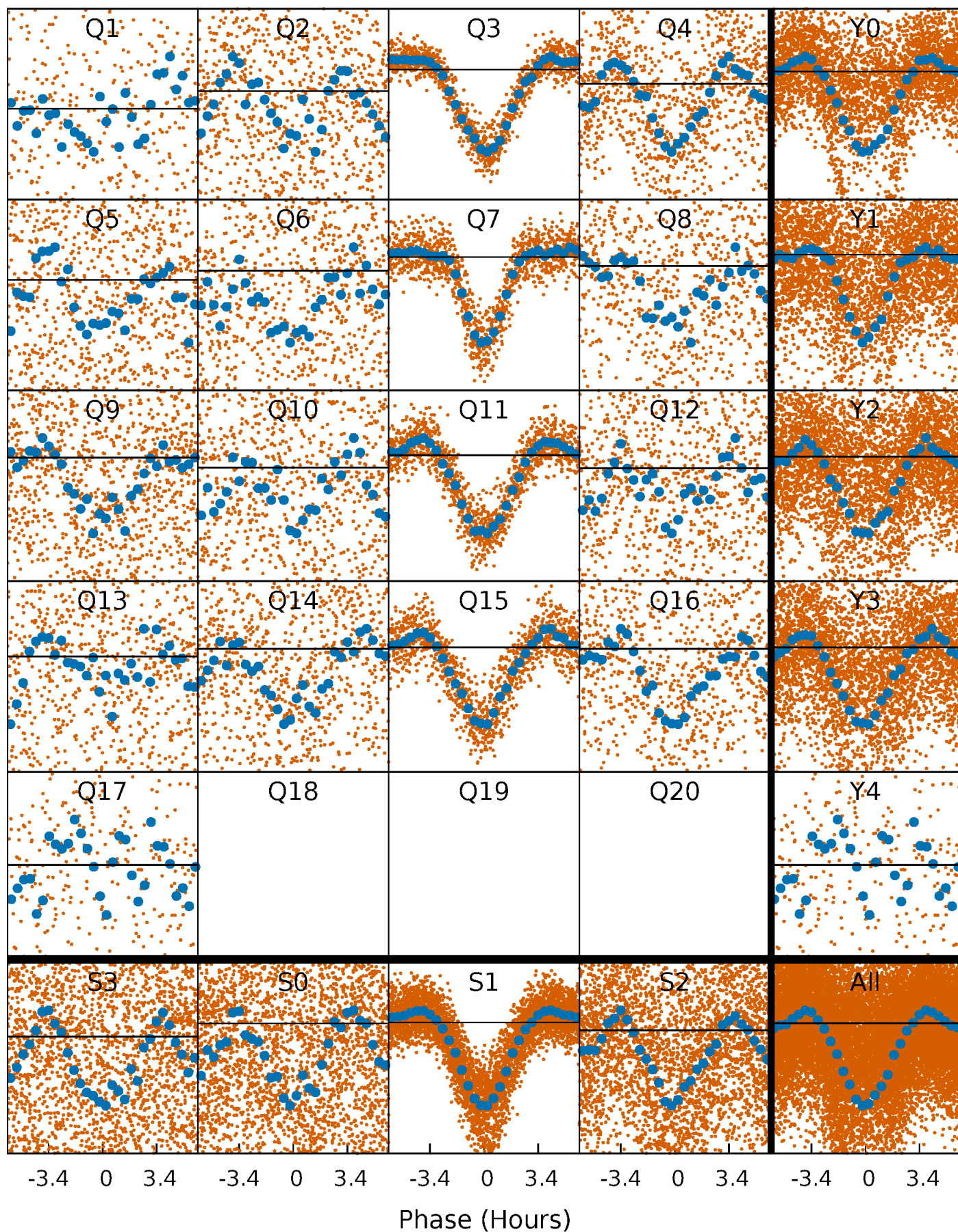
PDC Quarter-Phased Transit Curves

TCE 003338674-02 P= 0.936694 Days $T_0=131.794527$ (BKJD)



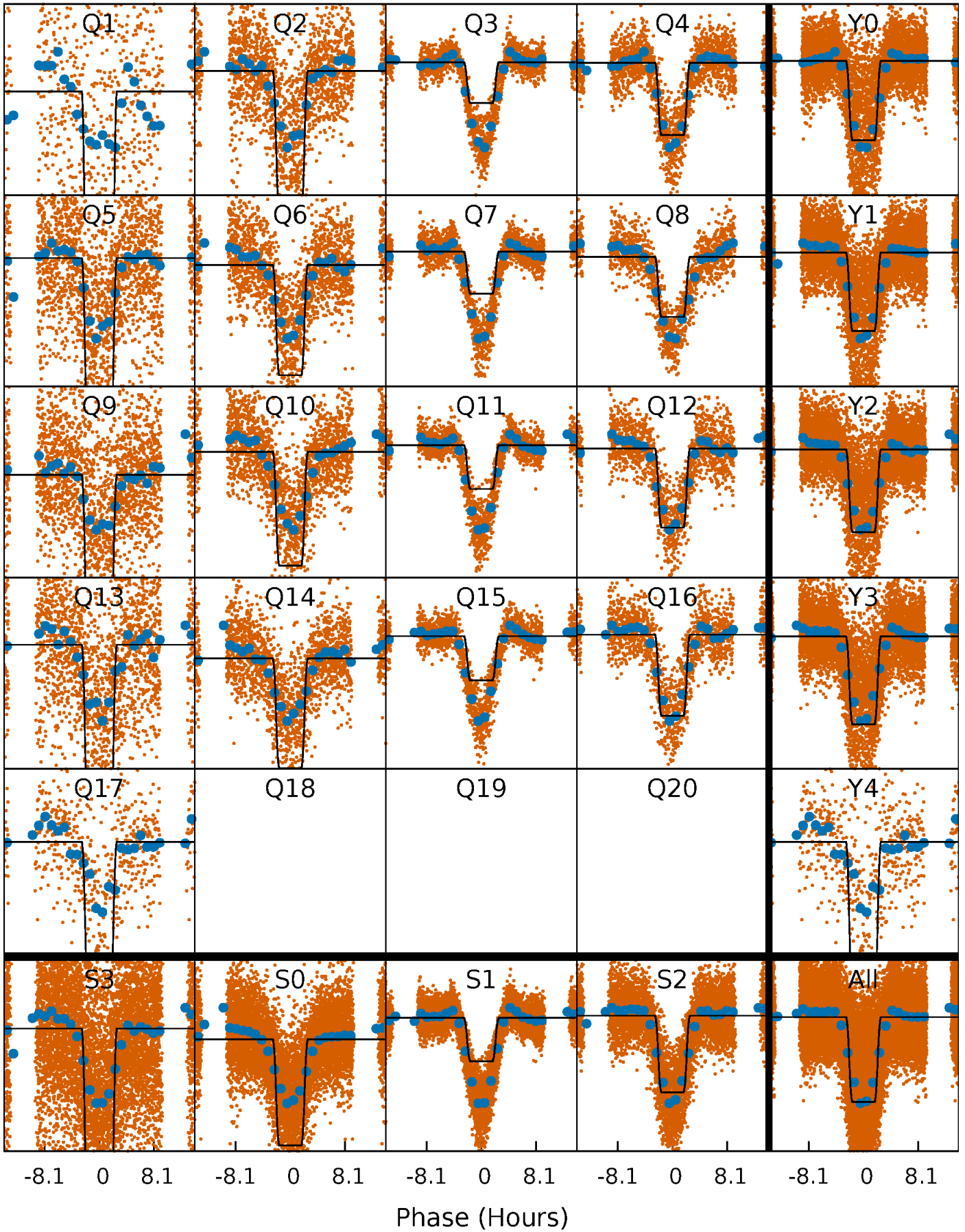
DV Quarter-Phased Transit Curves

TCE 003338674-02 P= 0.936694 Days $T_0=131.794527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

TCE 003338674-02 P= 0.936694 Days $T_0=131.794803$ (BKJD)



DV Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003338674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4740^{+78}_{-50}	$2.900^{+0.140}_{-0.140}$	$-0.100^{+0.150}_{-0.100}$	$5.721^{+1.752}_{-0.751}$	$0.949^{+0.348}_{-0.039}$	$0.007^{+0.004}_{-0.003}$
	+2%/-1%	+5%/-5%	+150%/-100%	+31%/-13%	+37%/-4%	+58%/-43%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 003338674-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	N/A	N/A	N/A	N/A	N/A
Alt.	N/A	N/A	N/A	N/A	N/A

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

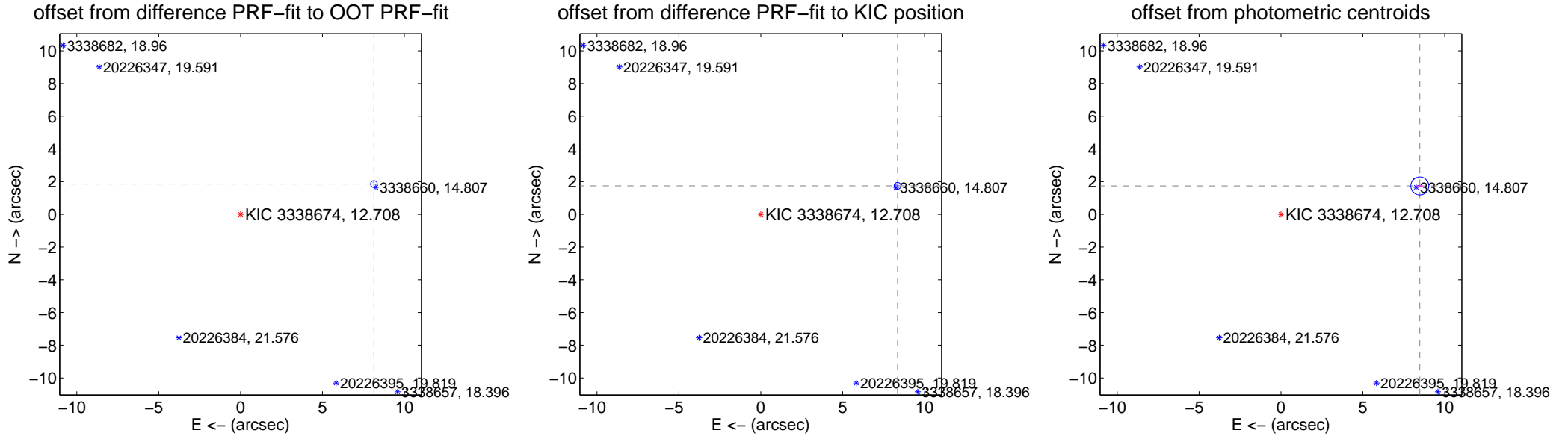
DV Centroid Data

Supplemental centroid analysis for 003338674-02. Kepler magnitude: 12.71. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

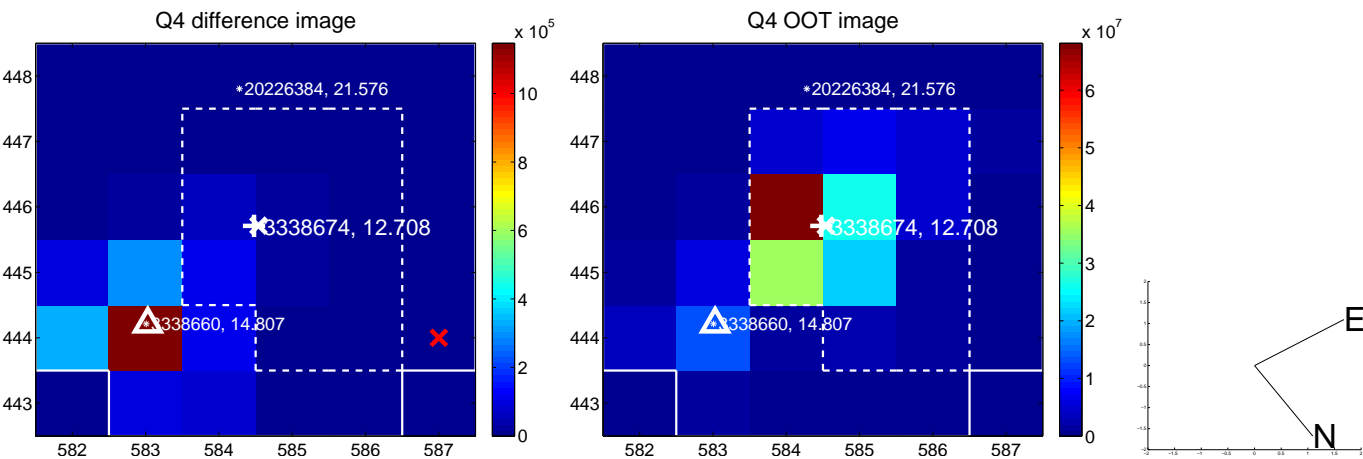
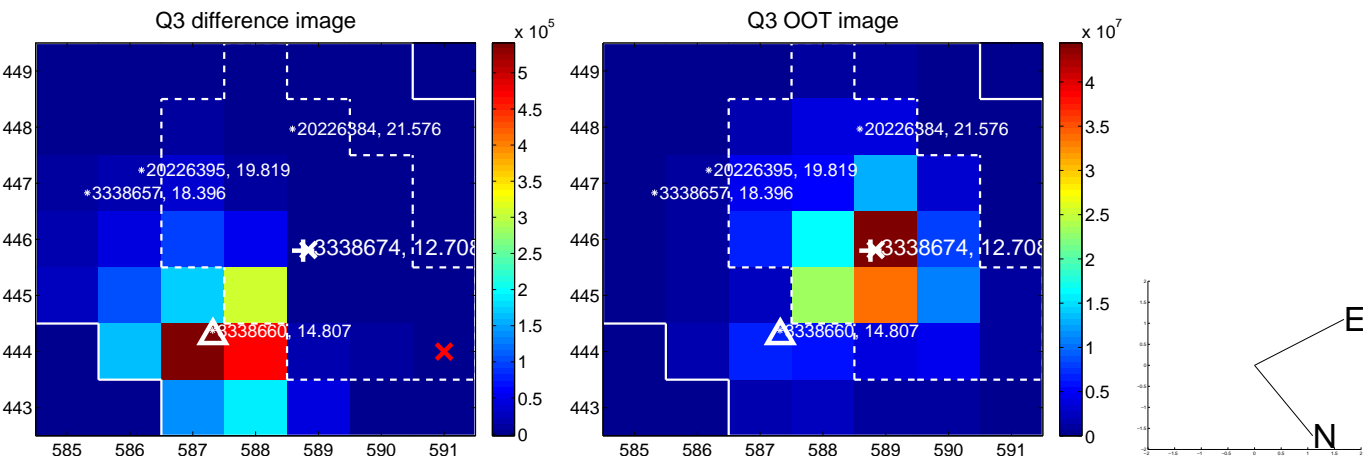
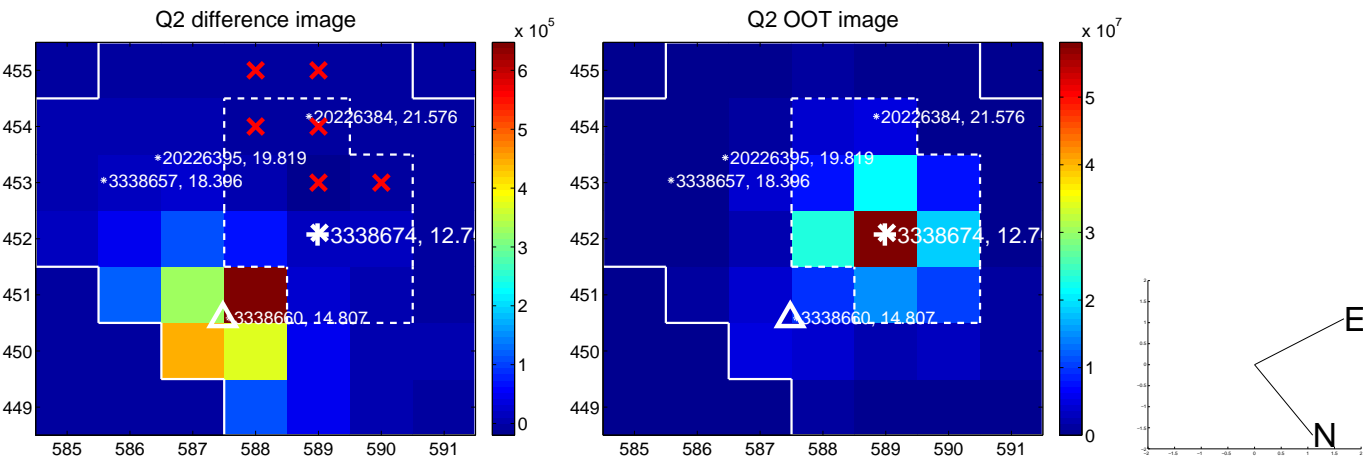
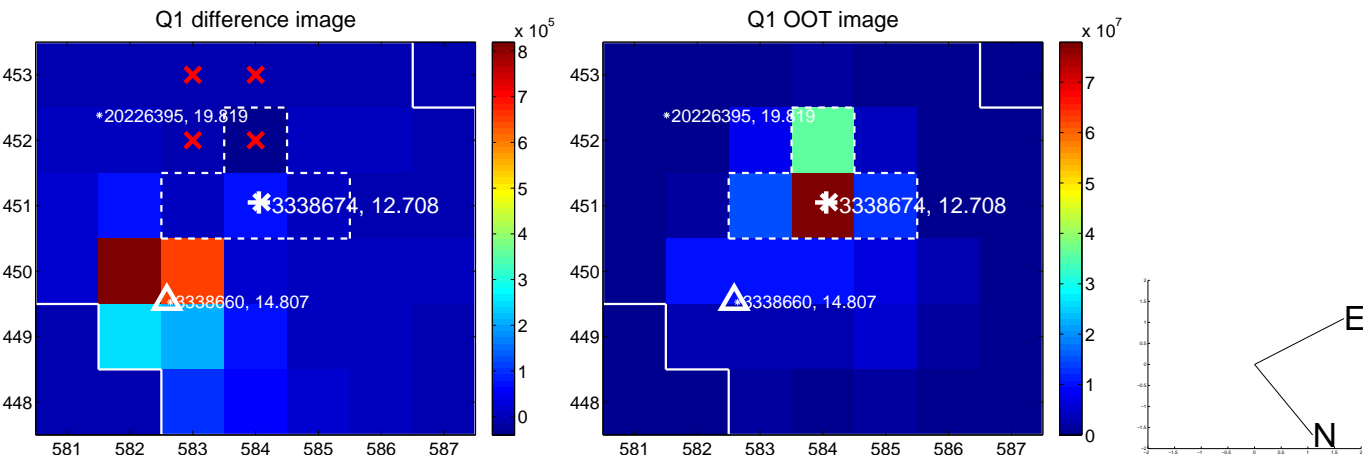
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.354 ± 0.069	121.42	-8.146 ± 0.069	1.853 ± 0.069
PRF-fit source offset from KIC position	8.535 ± 0.069	123.63	-8.355 ± 0.069	1.744 ± 0.067
photometric centroid source offset	8.66 ± 0.18	47.41	-8.48 ± 0.19	1.74 ± 0.06

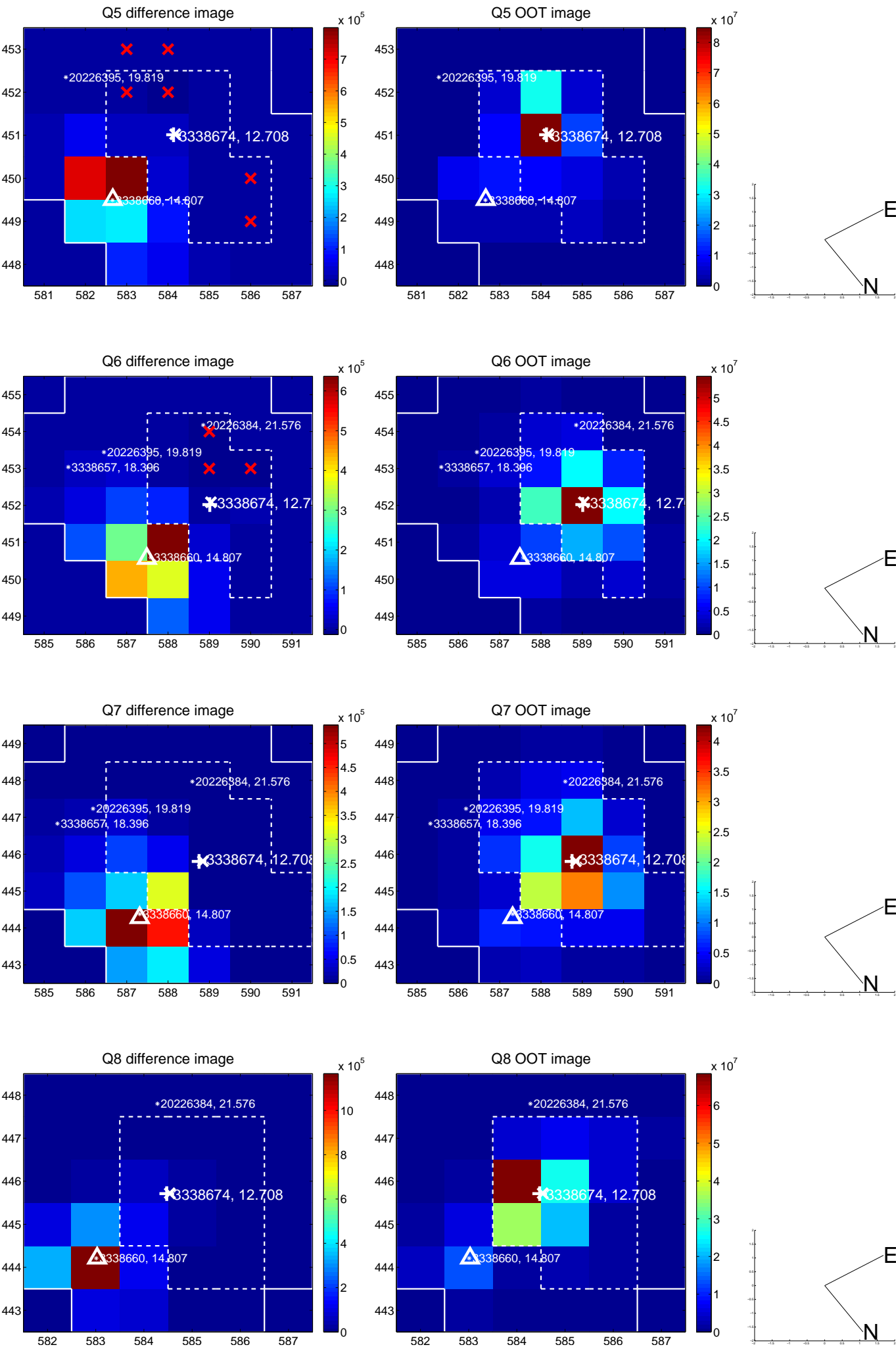


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

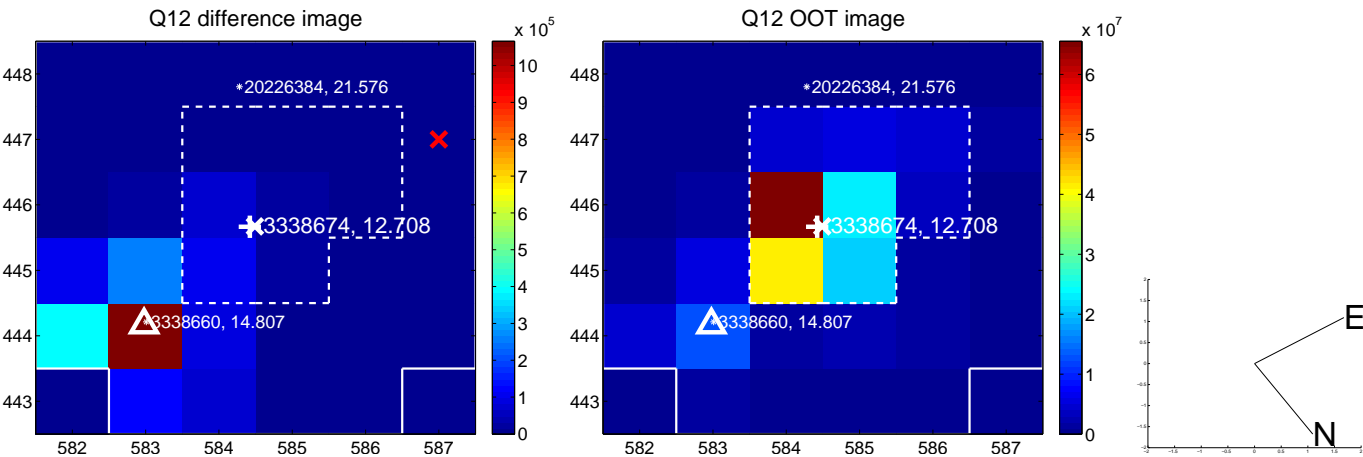
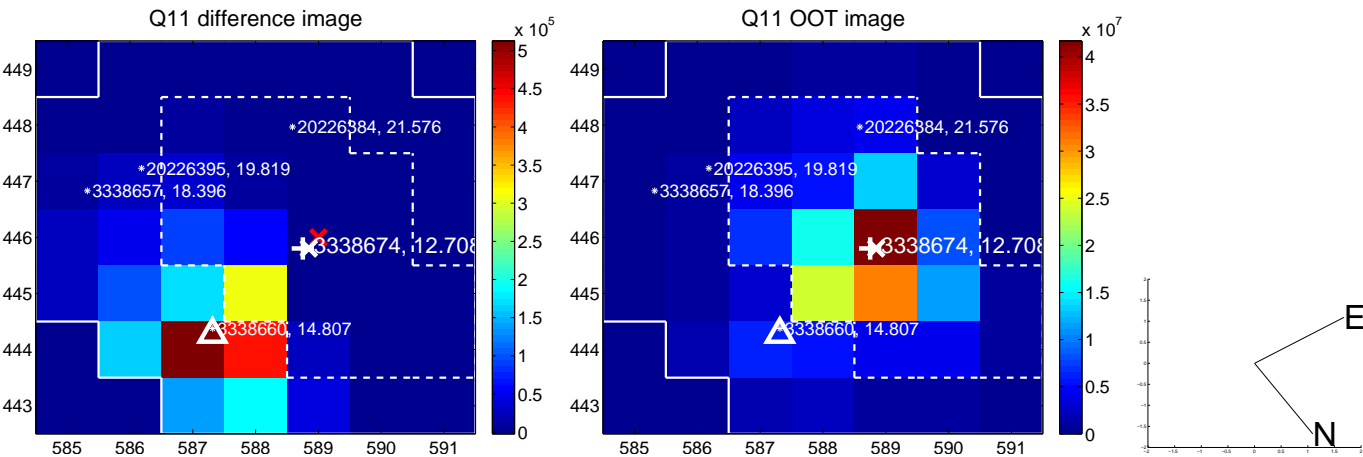
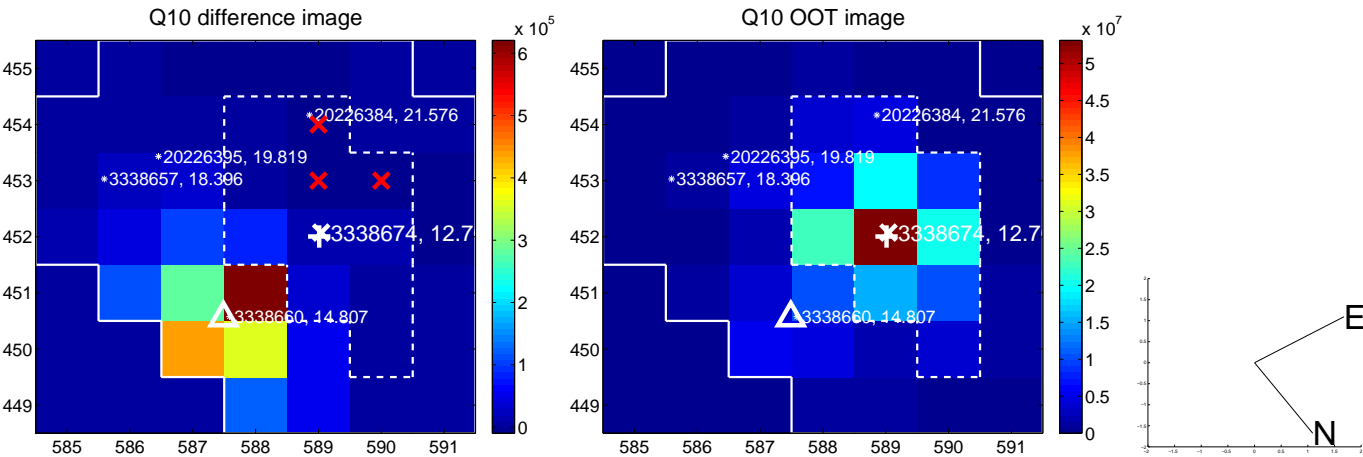
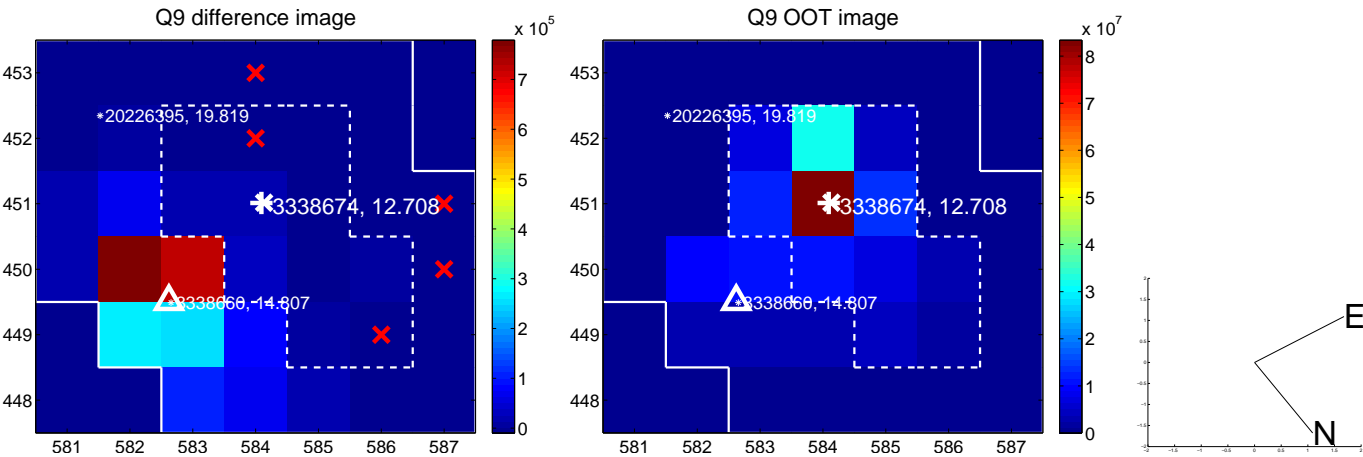
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



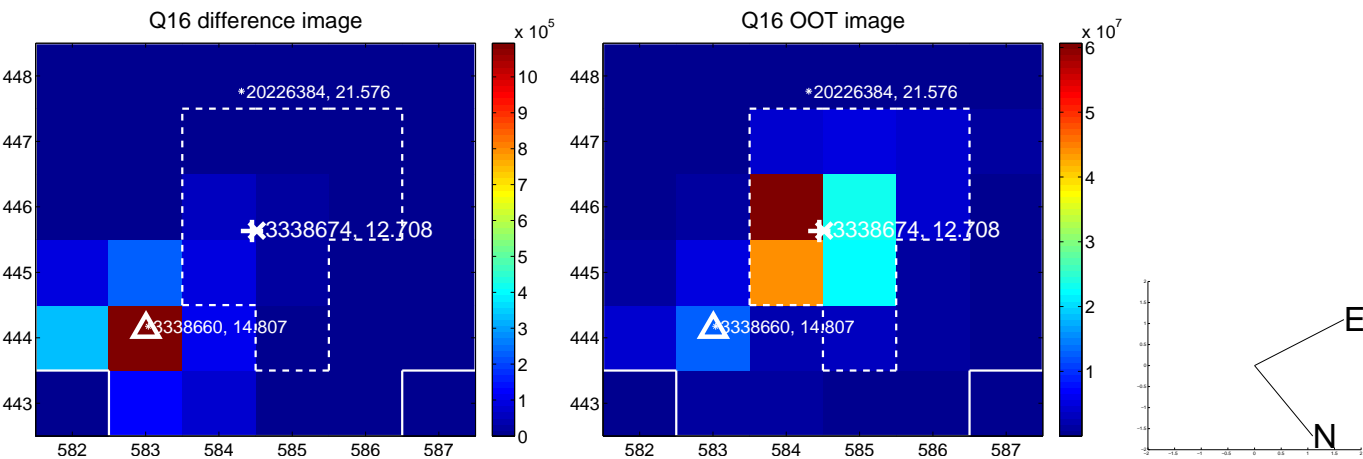
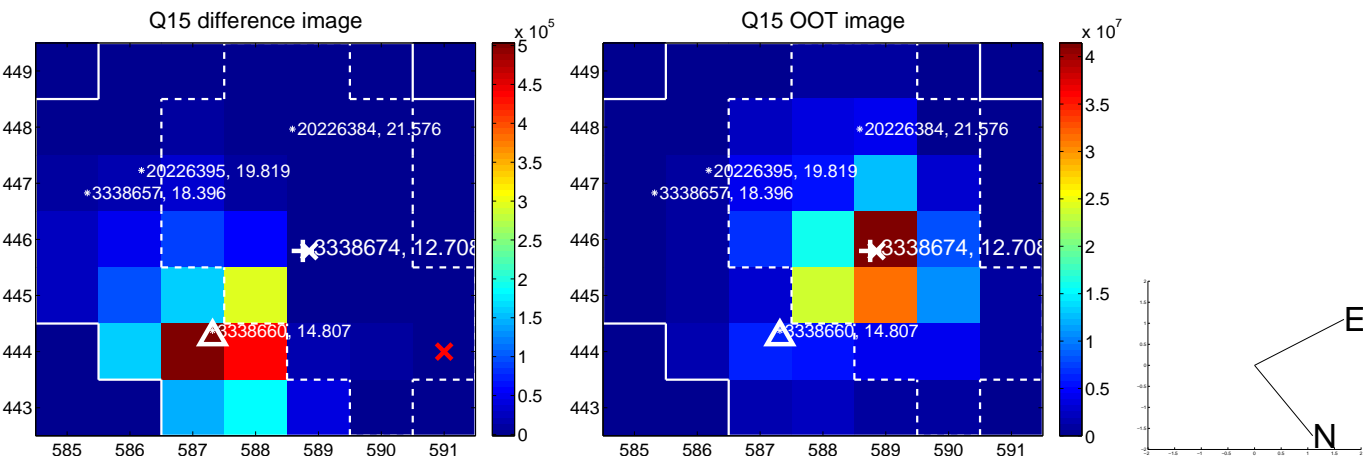
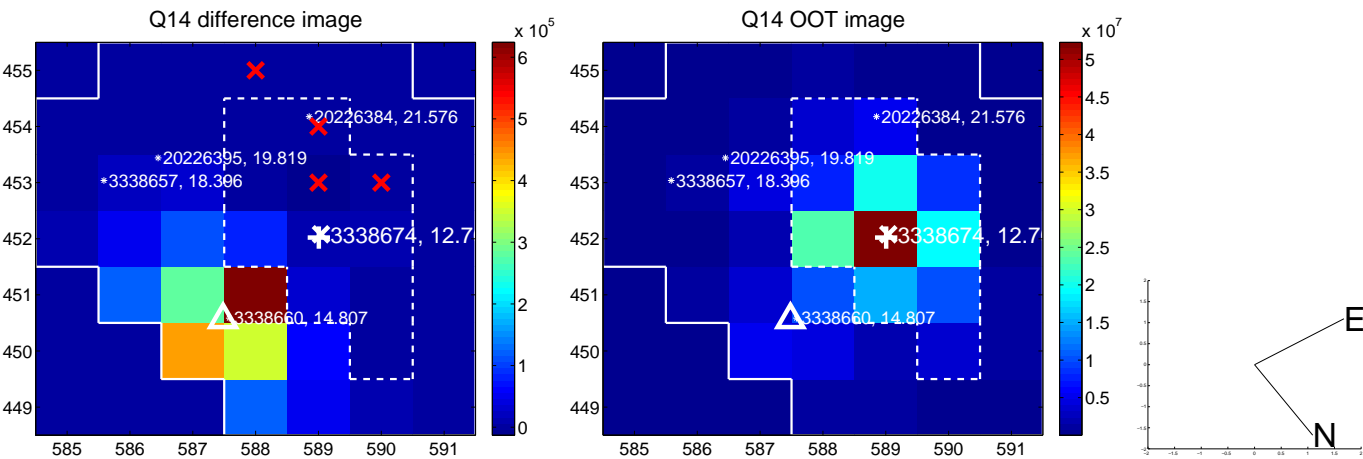
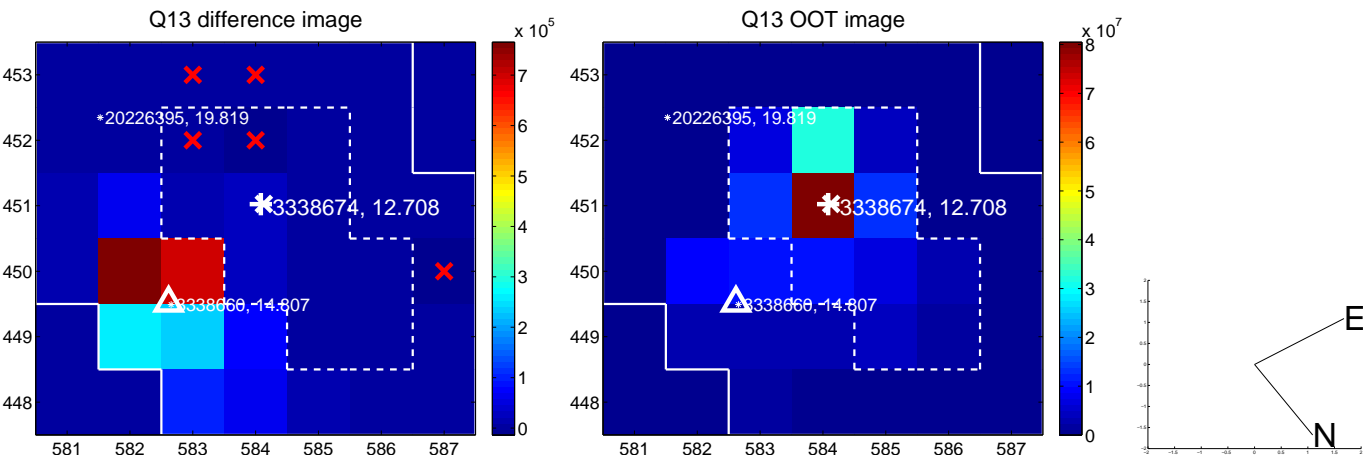
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



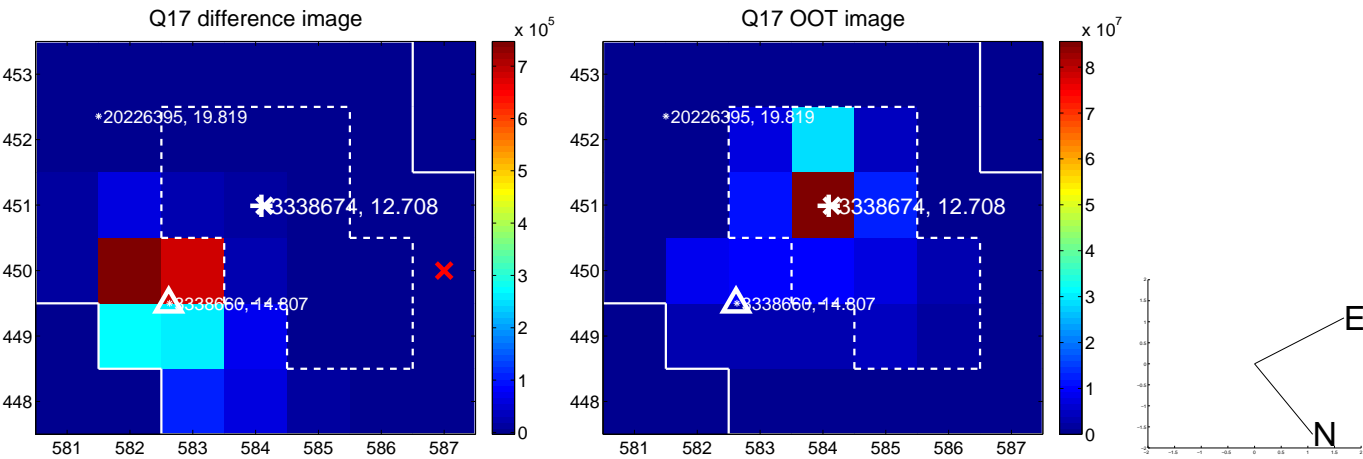
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



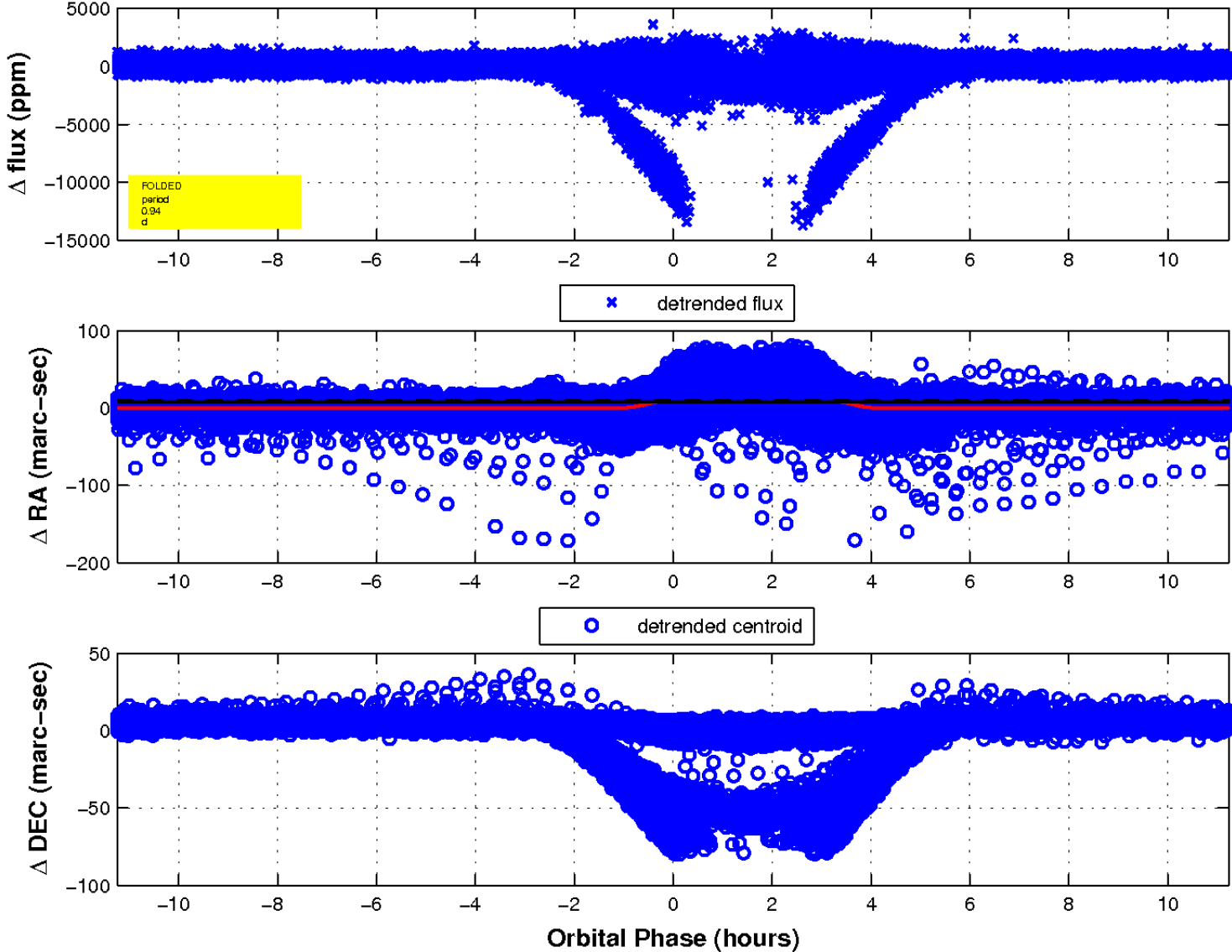
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

