

KIC 003338885

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})
003338885-01	OBS	1845.01	1.970342	131.948227	393.7	1.832	44.9	52.9	1.67	4883	4.07	1547.19
003338885-02	OBS	1845.02	5.058220	135.701618	730.8	0.905	30.2	41.0	1.67	4883	5.64	440.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003338885-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003338885-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 003338885-01

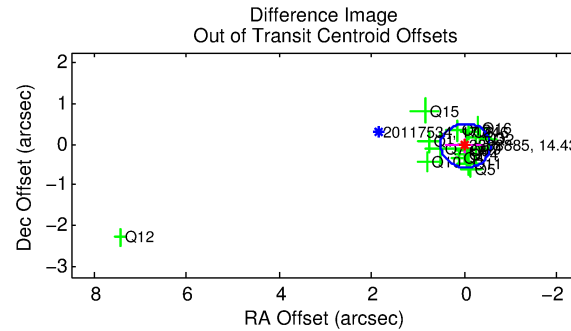
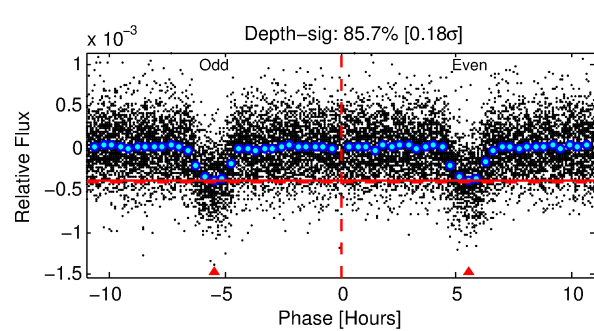
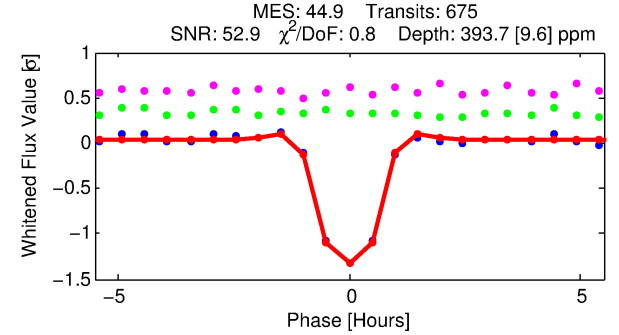
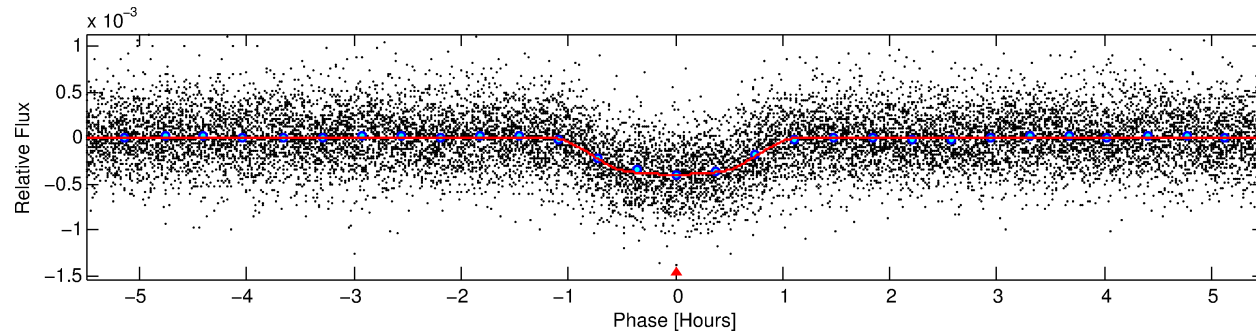
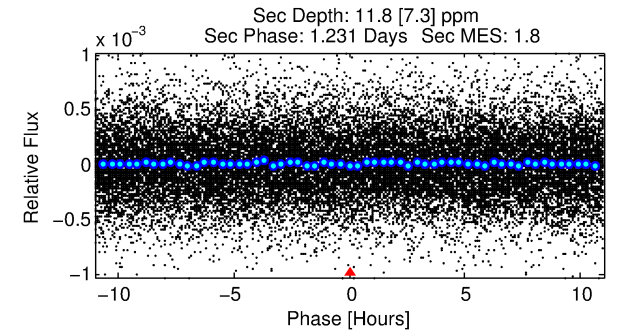
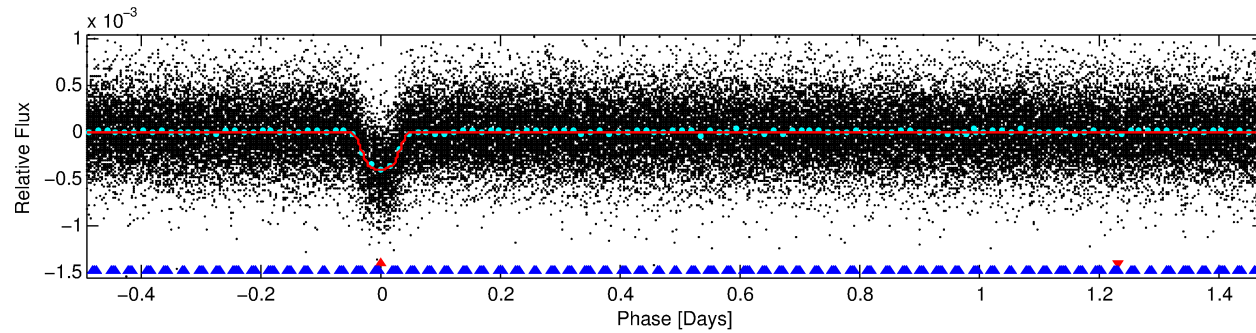
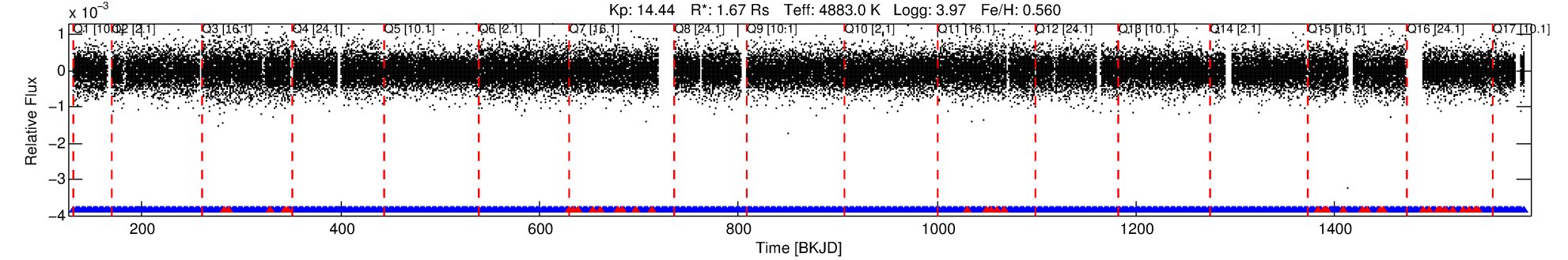
No Significant Match Found

DV One-Page Summary

KIC: 3338885 Candidate: 1 of 2 Period: 1.970 d

KOI: K01845.01 Corr: 0.974

Kp: 14.44 R*: 1.67 Rs Teff: 4883.0 K Logg: 3.97 Fe/H: 0.560



DV Fit Results:

Period = 1.97034 [0.00000] d
Epoch = 131.9482 [0.0005] BKJD
Rp/R* = 0.0224 [0.0033]
a/R* = 4.11 [2.09]
b = 0.90 [0.12]
Seff = 1547.19 [1521.55]
Teff = 1599 [393] K
Rp = 4.07 [2.71] Re
a = 0.0302 [0.0186] AU
Ag = 0.36 [0.43] [-1.51σ]
Teffp = 1912 [332] K [0.61σ]

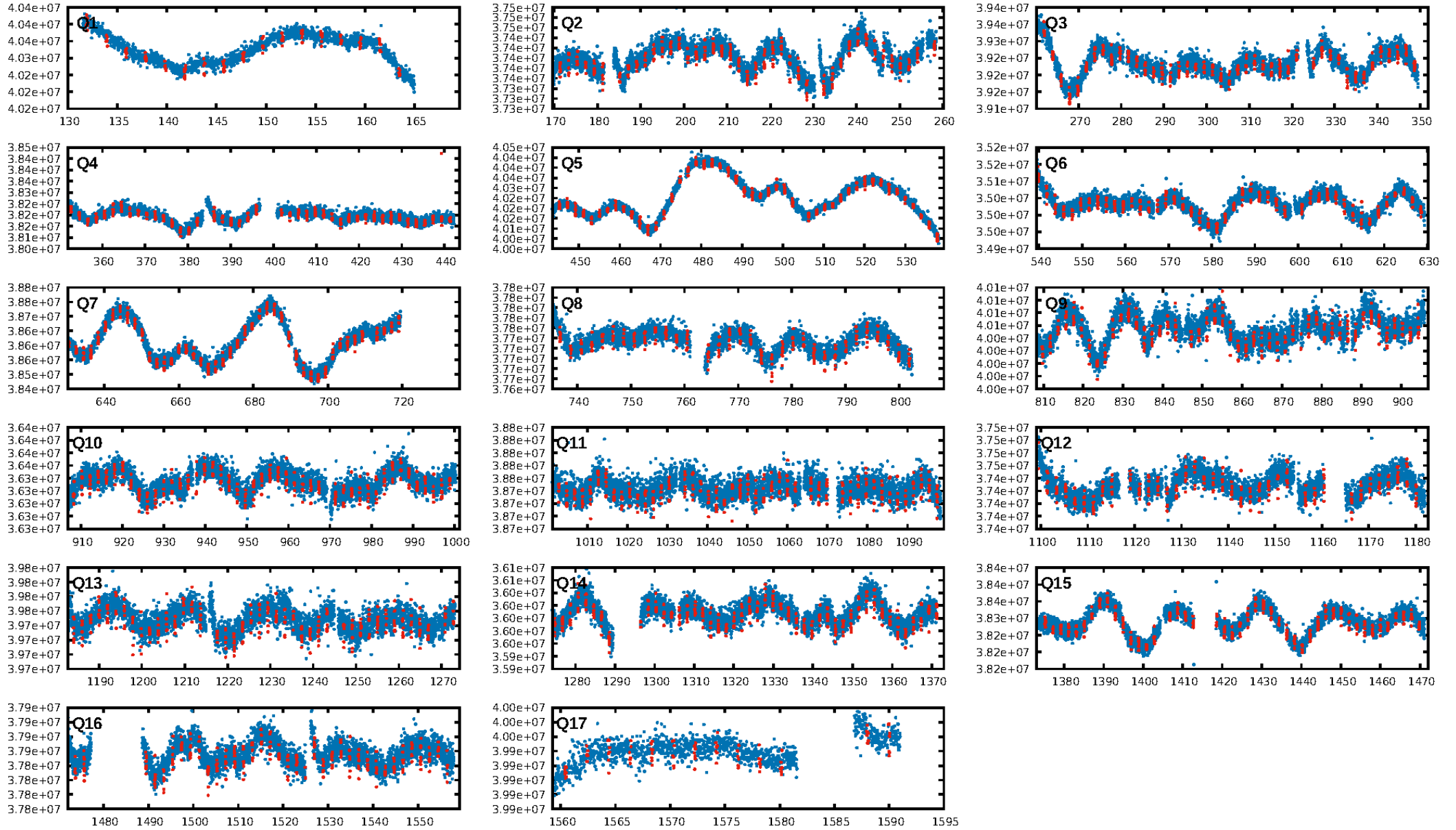
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [36.27σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [608/645]
GhostDiagnostic-chr: 2.779
Centroid-sig: 39.5%
Centroid-so: 0.293 arcsec [1.32σ]
OotOffset-rm: 0.043 arcsec [0.24σ]
KicOffset-rm: 0.107 arcsec [0.23σ]
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]

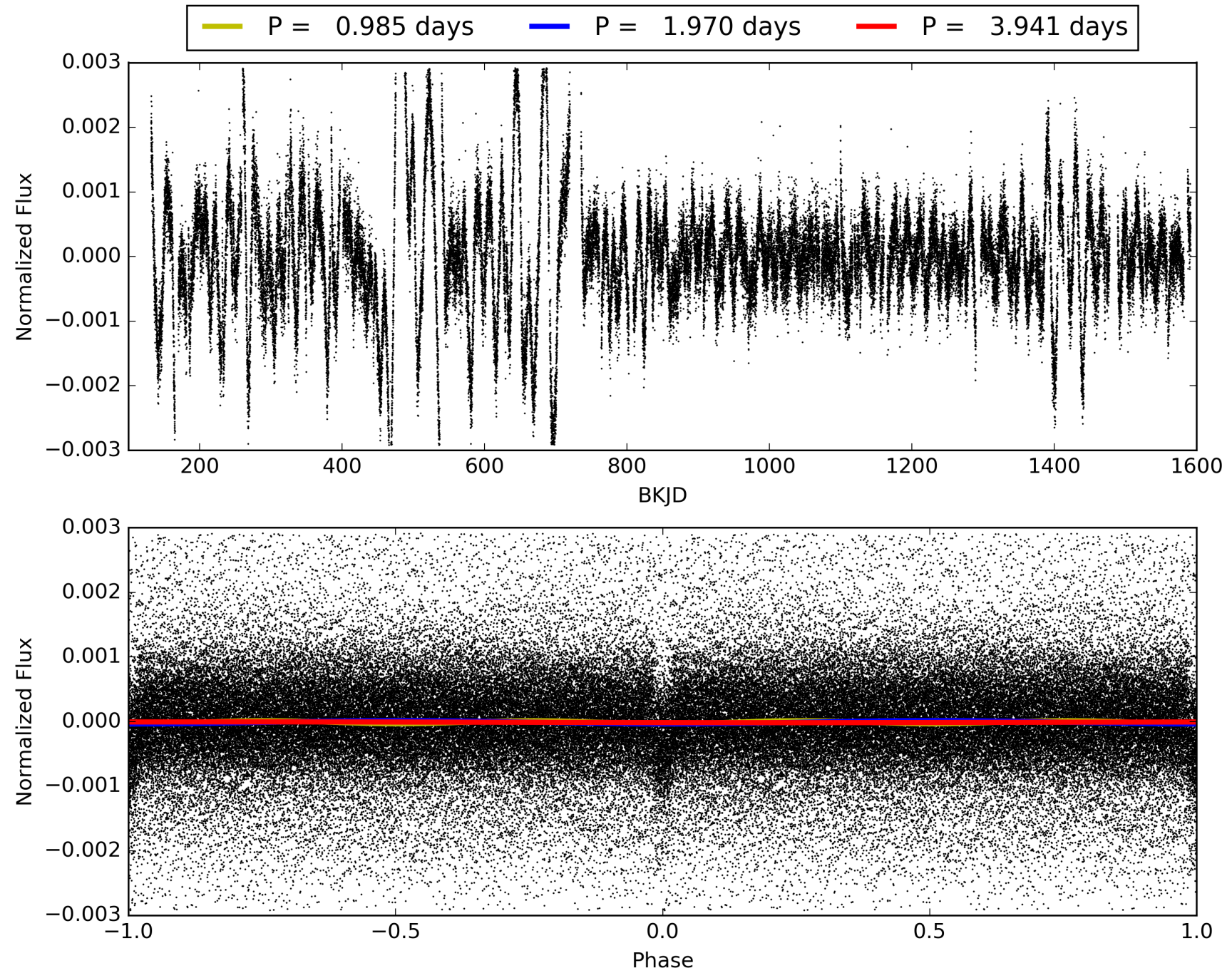
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:19:23 Z

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

TCE 003338885-01, PDC Light Curves

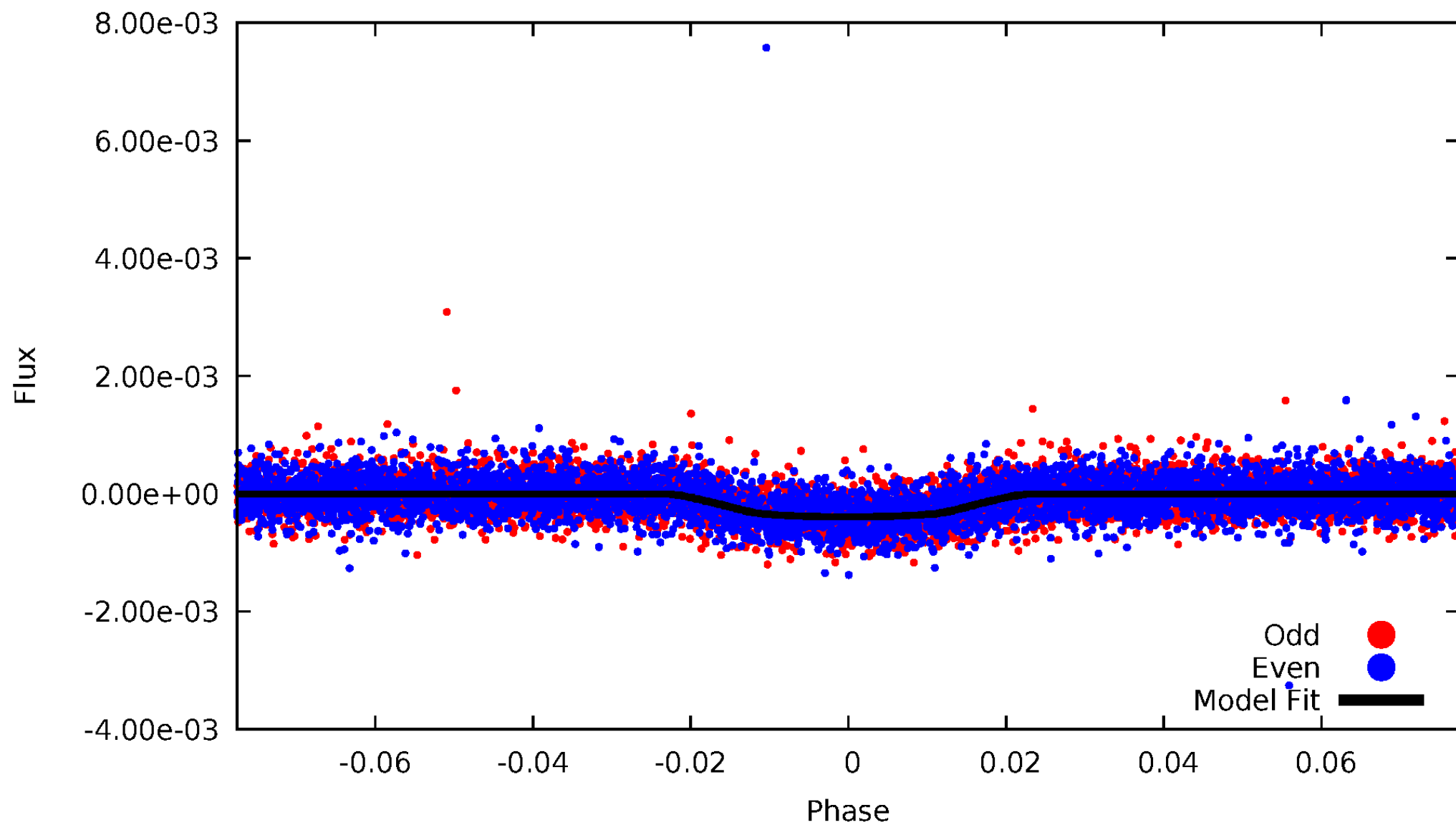


TCE 003338885-01



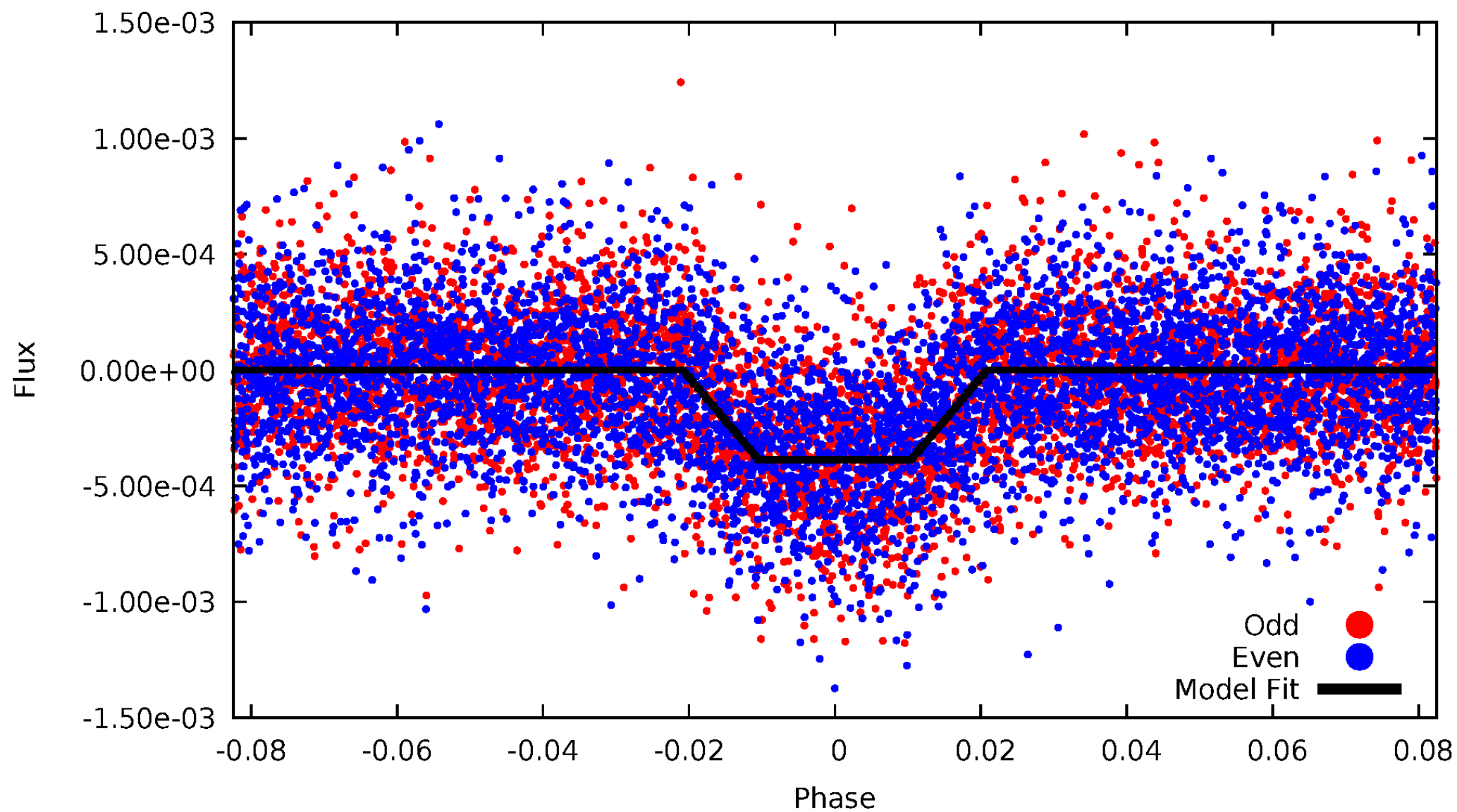
DV Odd/Even

TCE 003338885-01

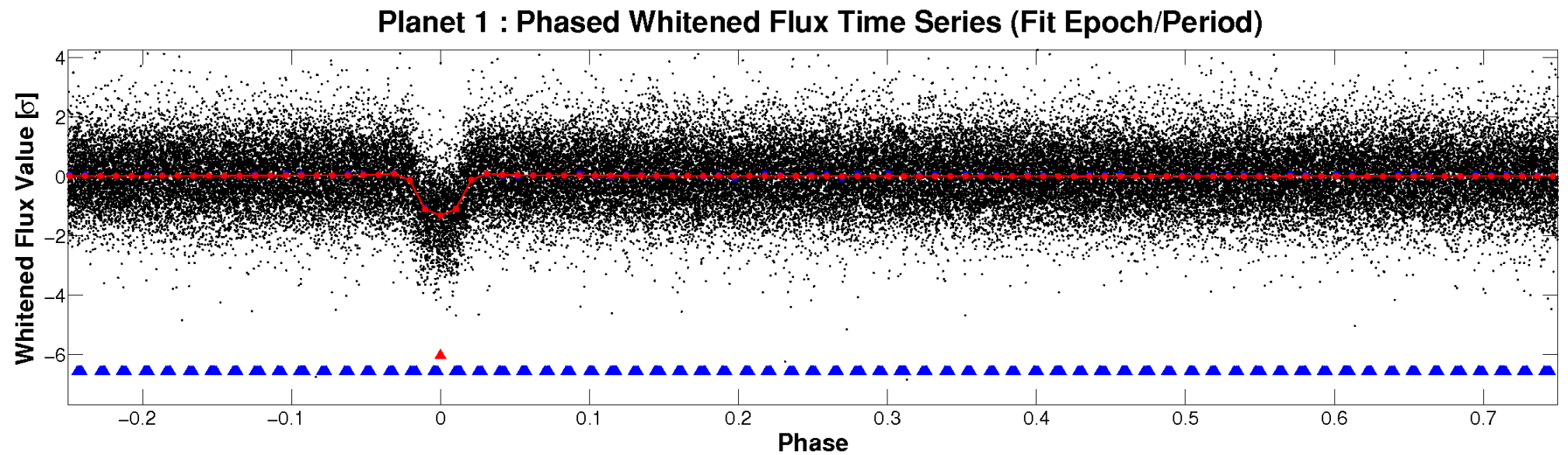
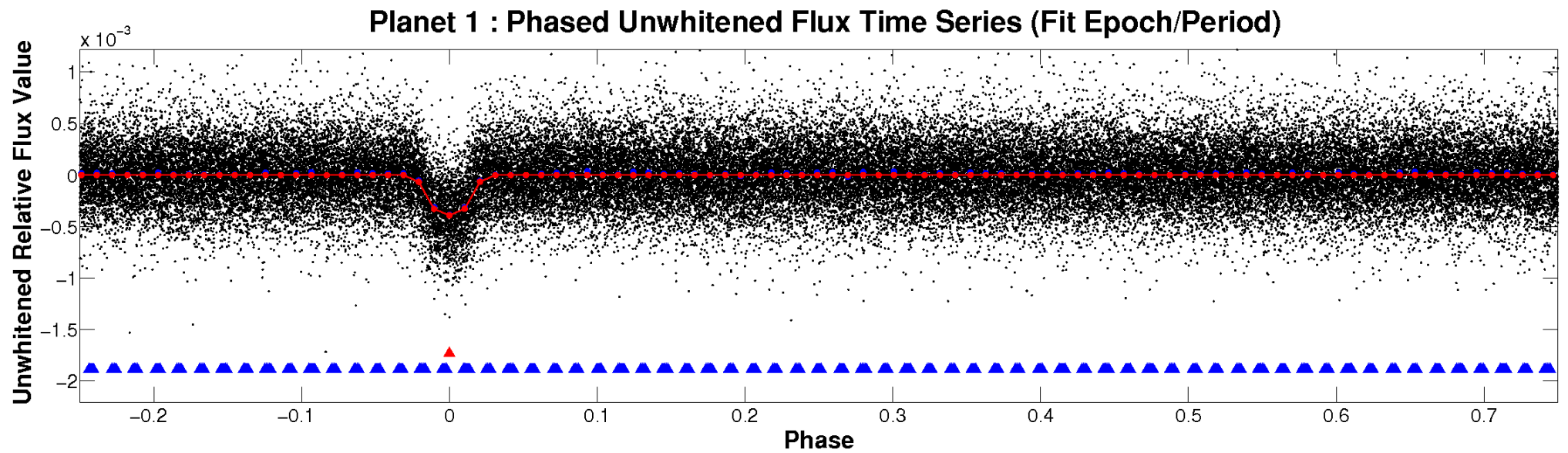


ALT Odd/Even

TCE 003338885-01

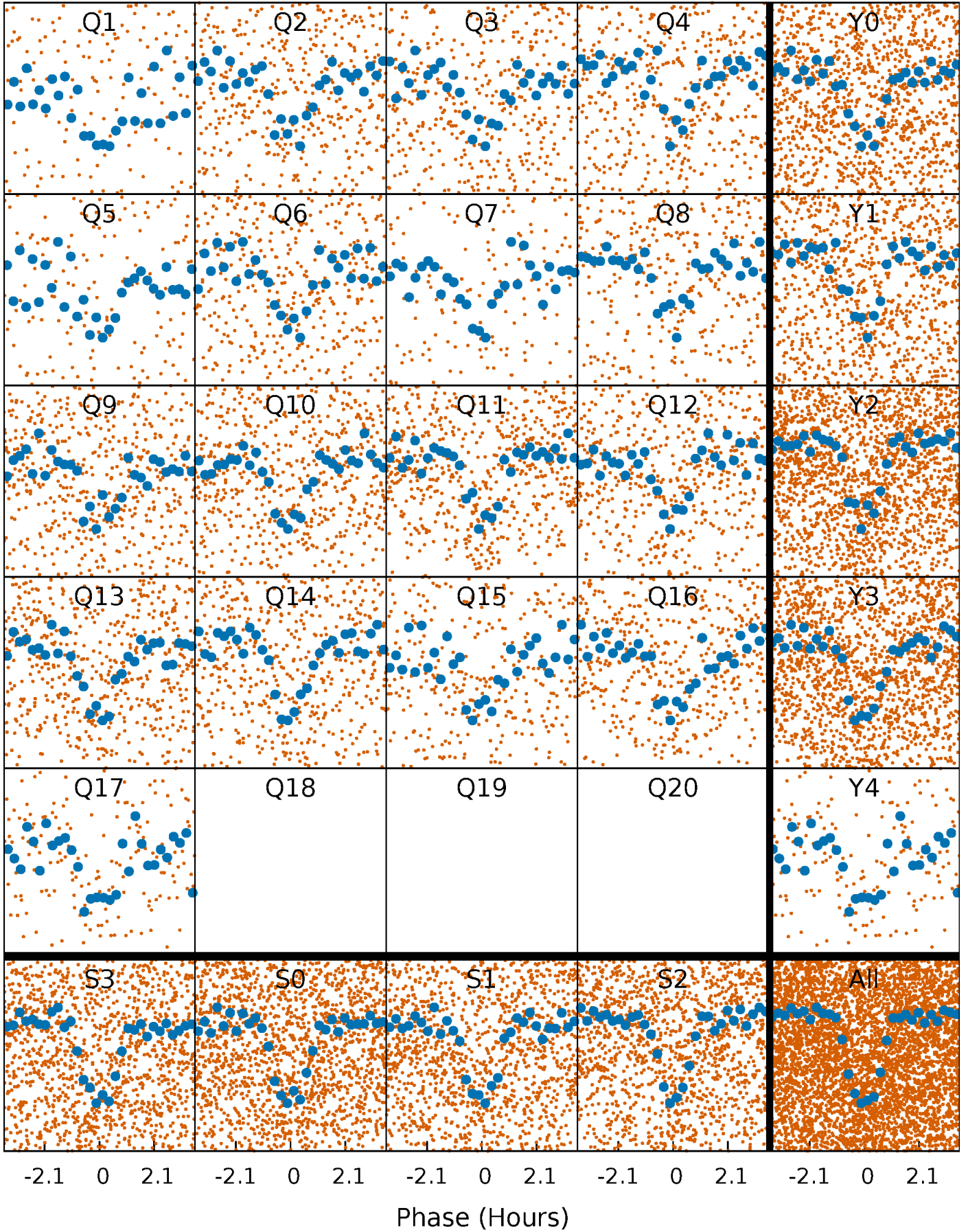


Non-Whitened Vs. Whitened Light Curve



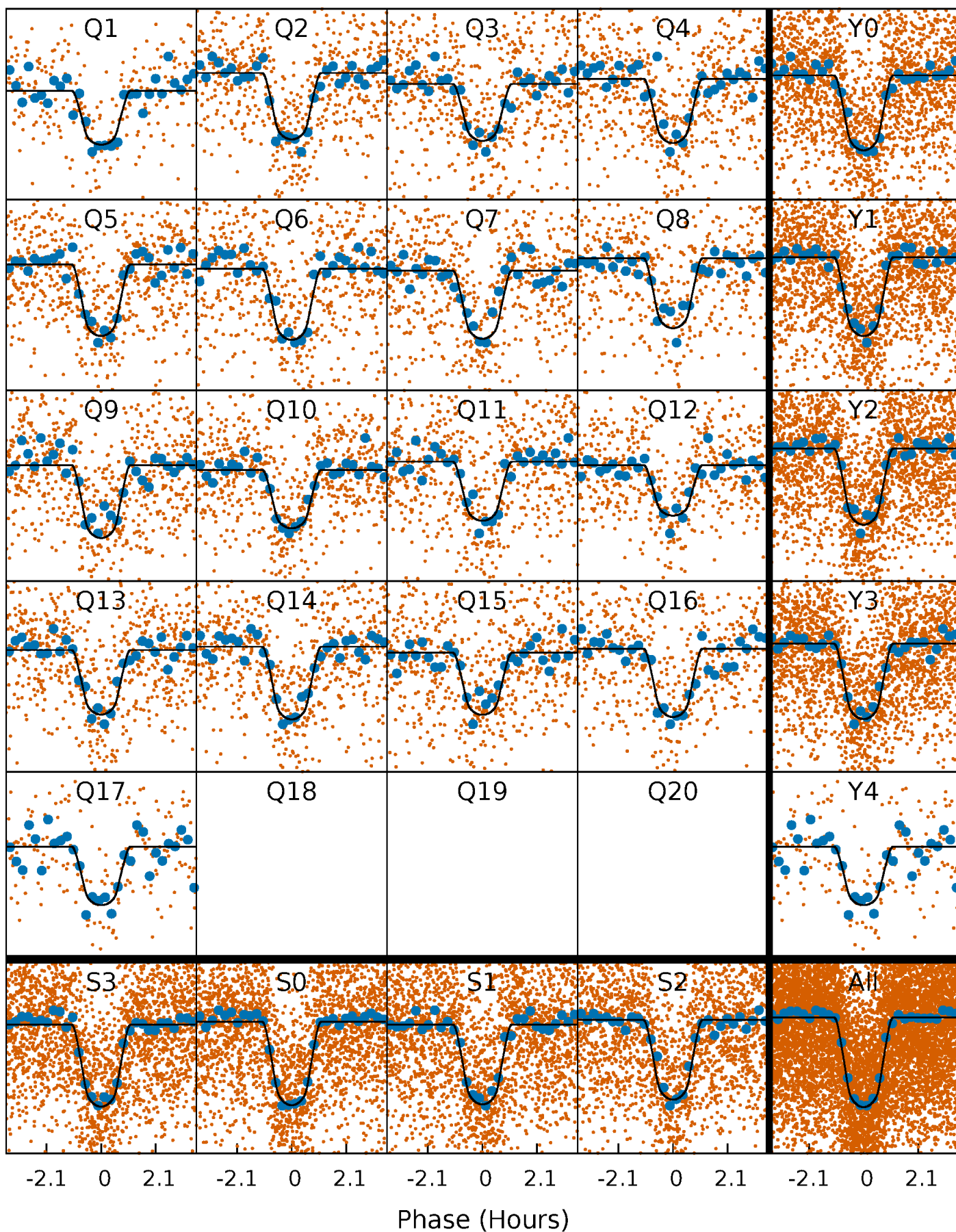
PDC Quarter-Phased Transit Curves

TCE 003338885-01 P= 1.970342 Days $T_0=131.948227$ (BKJD)



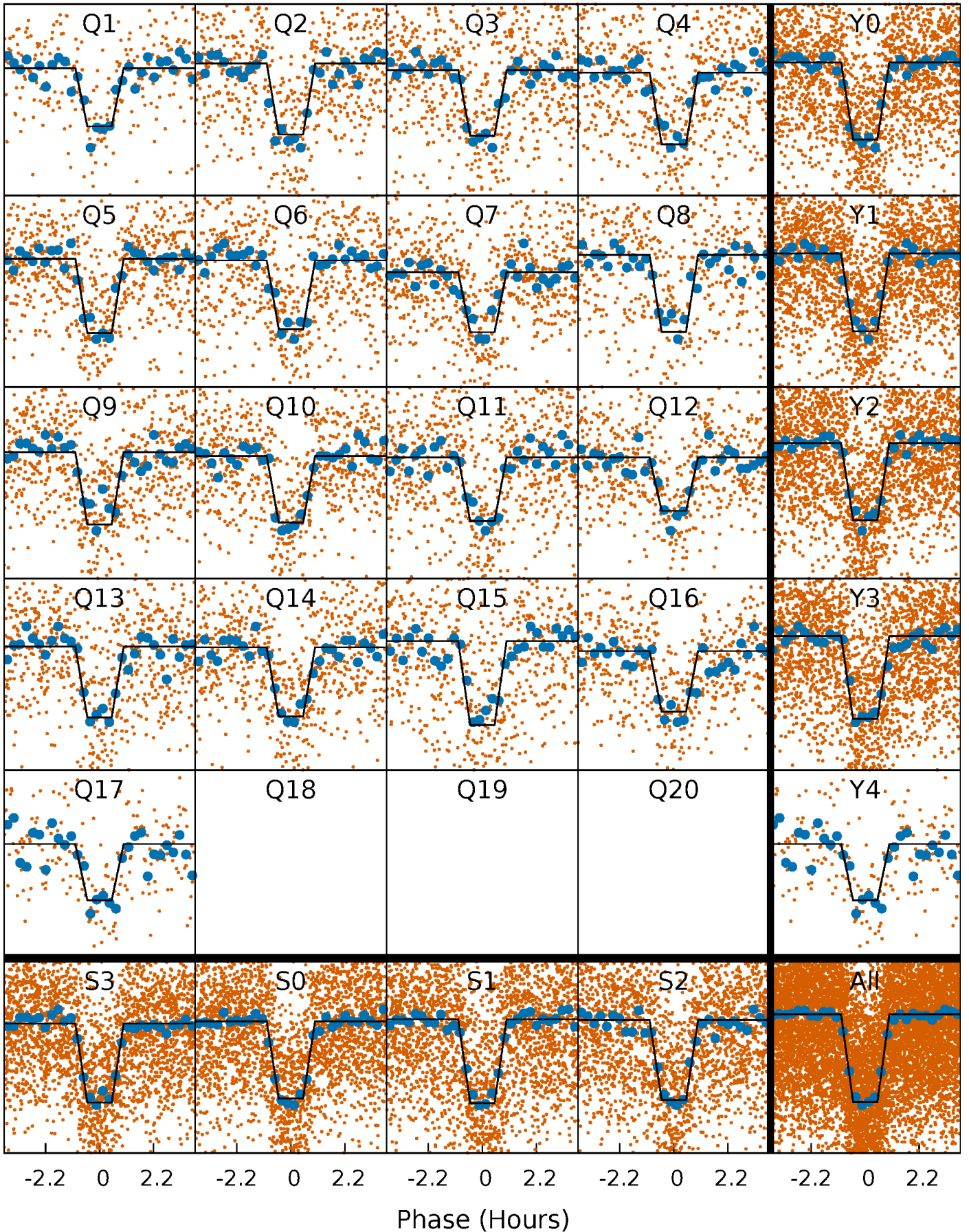
DV Quarter-Phased Transit Curves

TCE 003338885-01 P= 1.970342 Days $T_0=131.948227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

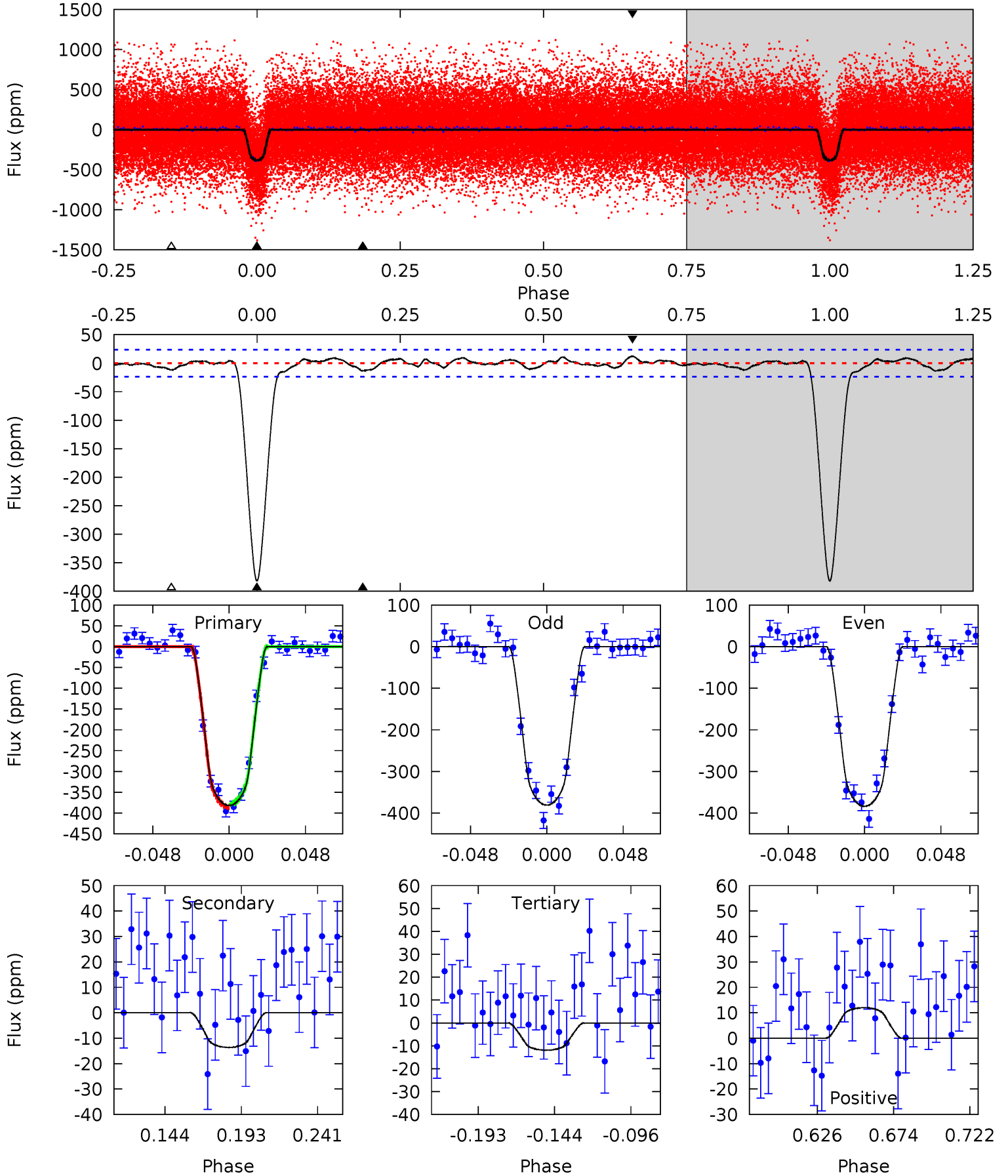
TCE 003338885-01 P= 1.970331 Days $T_0=131.951536$ (BKJD)



DV Model-Shift Uniqueness Test

003338885-01, P = 1.970342 Days, E = 129.977885 Days

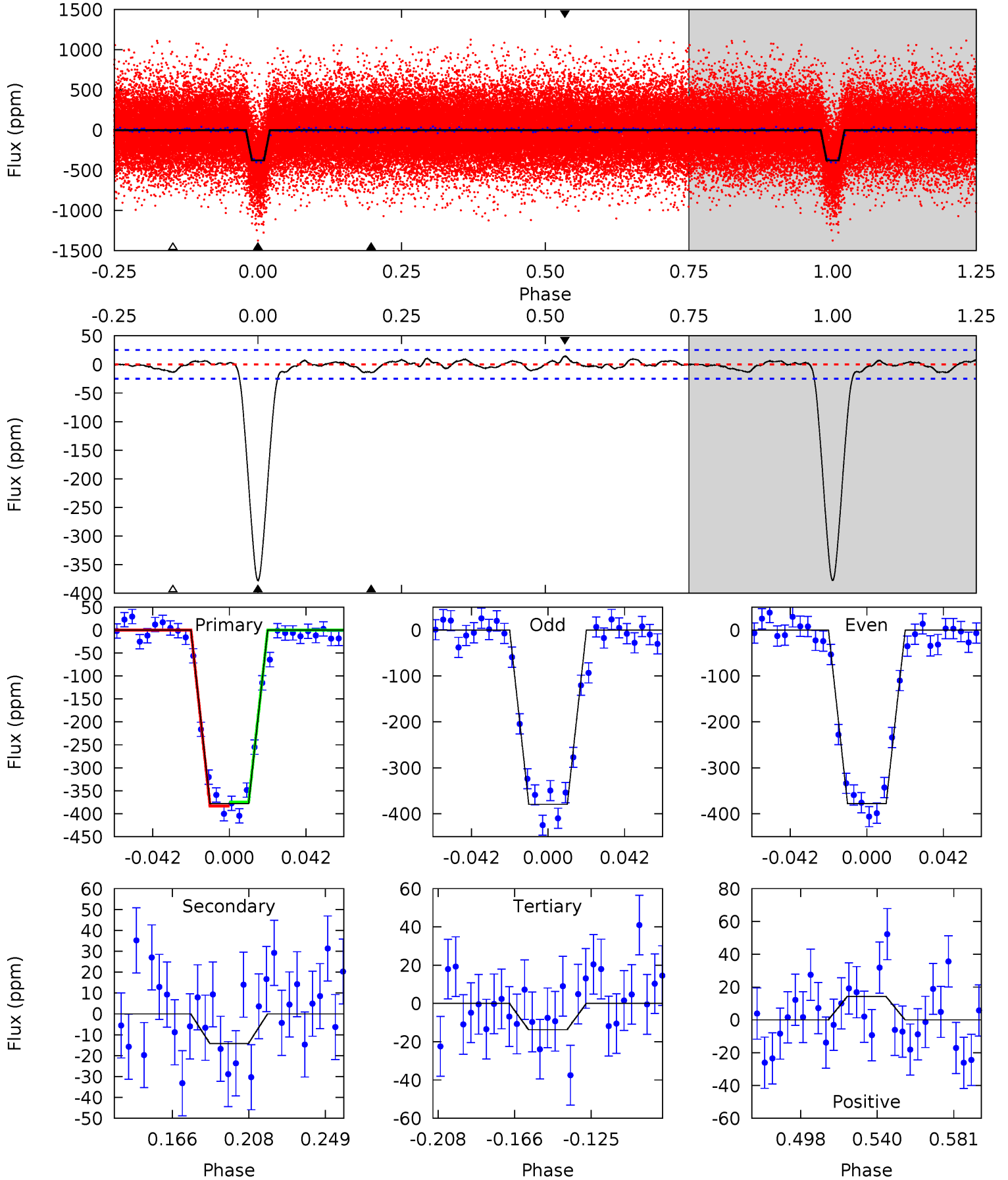
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.9	2.71	2.37	2.38	4.72	1.98	1.01	73.5	73.5	0.35	0.33	0.30	1.00	0.03	0.65



Alt Model-Shift Uniqueness Test

003338885-01, P = 1.970331 Days, E = 129.981205 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.1	2.67	2.58	2.69	4.75	2.04	0.99	68.6	68.4	0.09	-0.02	0.14	0.99	0.04	0.82



Stellar Parameters For KIC 003338885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4883^{+146}_{-132}	$3.972^{+0.570}_{-0.380}$	$0.560^{+0.050}_{-0.300}$	$1.667^{+1.082}_{-0.983}$	$0.951^{+0.198}_{-0.144}$	$0.289^{+1.975}_{-0.216}$
	+3%/-3%	+14%/-10%	+9%/-54%	+65%/-59%	+21%/-15%	+684%/-75%
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 003338885-01 / KOI 1845.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 5	$4.10^{+1.59}_{-1.29}$	2244^{+366}_{-348}	2298^{+386}_{-4796}	$0.408^{+0.493}_{-0.238}$
Alt.	-14 ± 5	$3.52^{+1.40}_{-1.13}$	2240^{+340}_{-362}	2519^{+340}_{-4751}	$0.544^{+0.772}_{-0.302}$

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 $A_{obs} \gg 1.0$

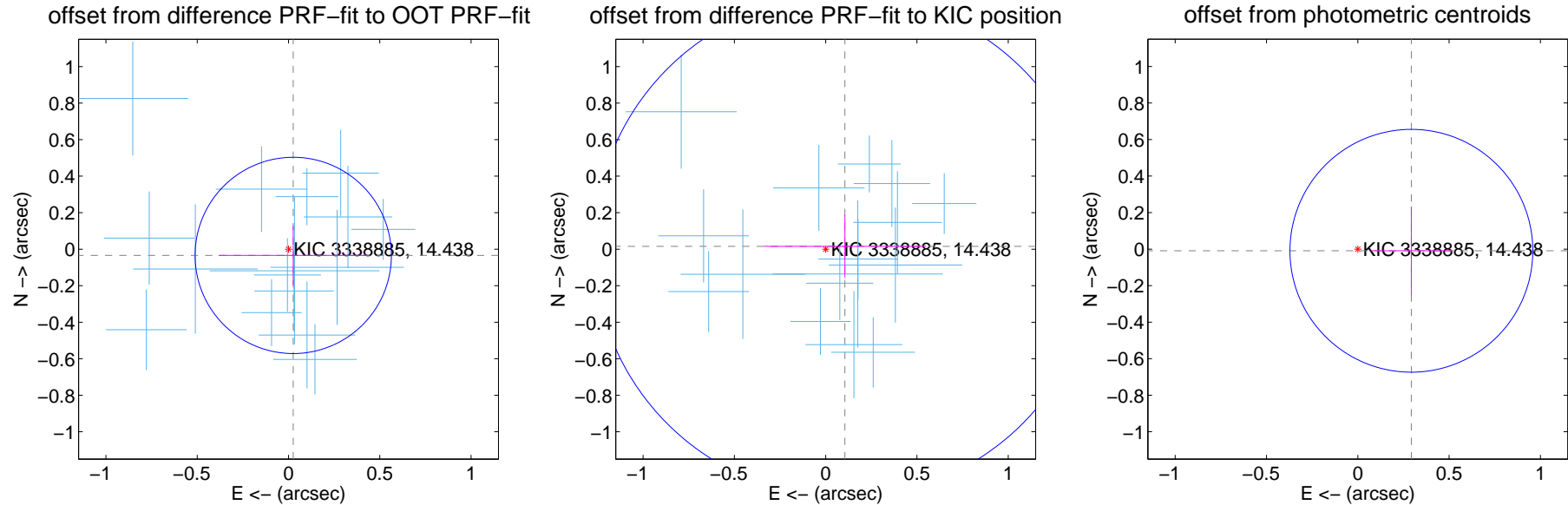
DV Centroid Data

Supplemental centroid analysis for 003338885-01. Kepler magnitude: 14.44. Transit SNR 52.88

There are 17 quarters with good PRF difference image offsets

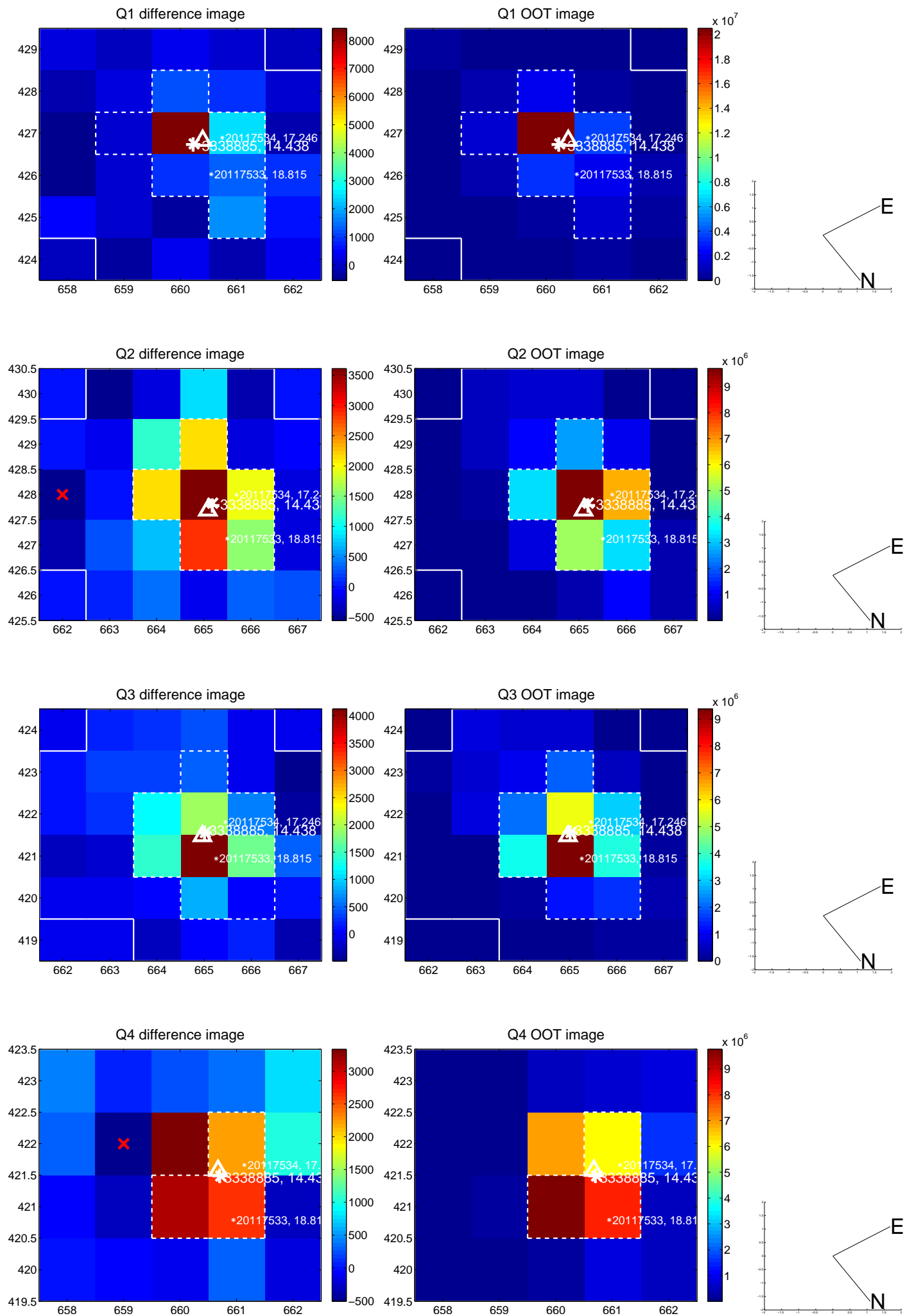
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.179	0.24	-0.026 ± 0.409	-0.034 ± 0.162
PRF-fit source offset from KIC position	0.107 ± 0.458	0.23	-0.105 ± 0.444	0.016 ± 0.171
photometric centroid source offset	0.29 ± 0.22	1.32	-0.29 ± 0.22	-0.01 ± 0.24

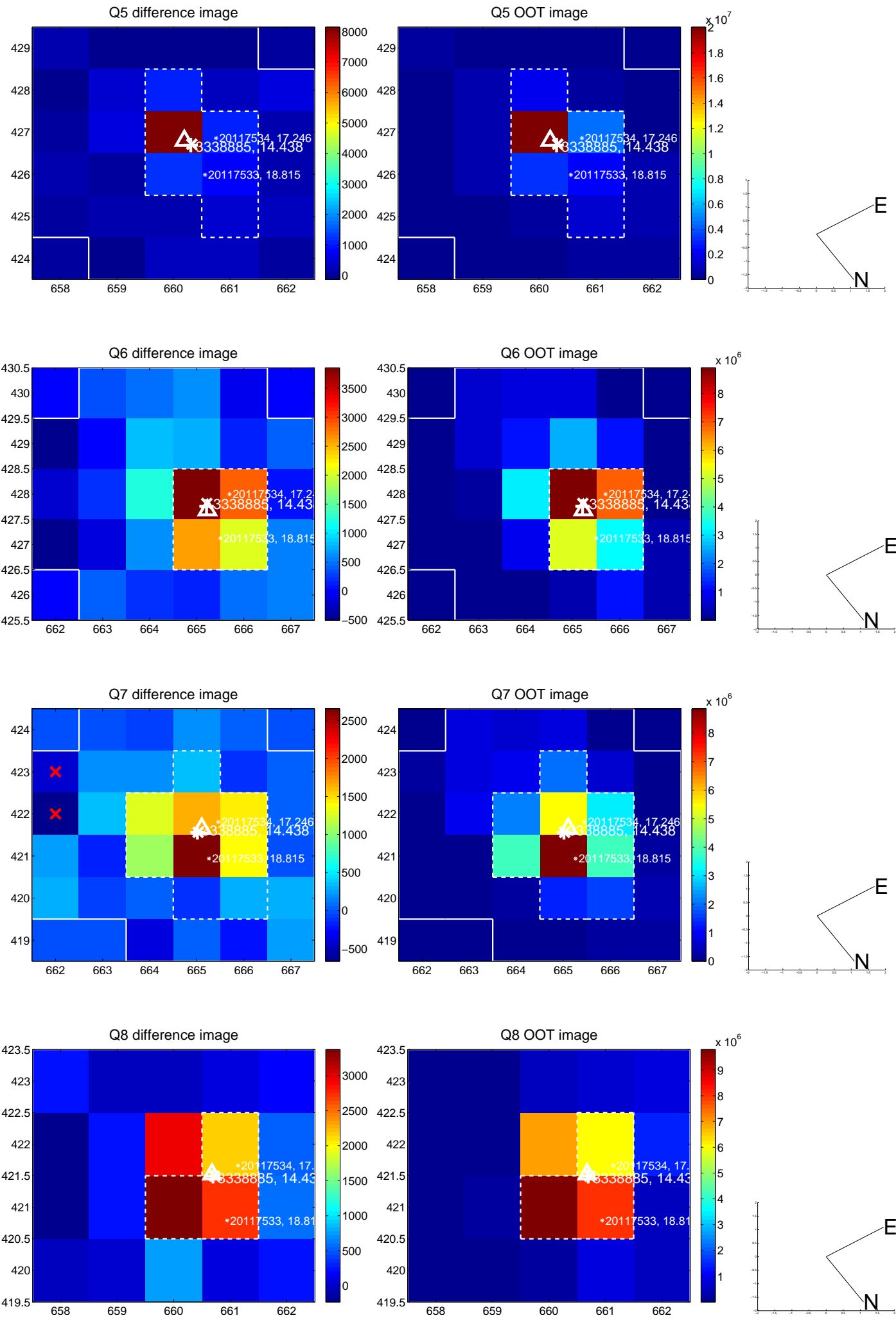


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

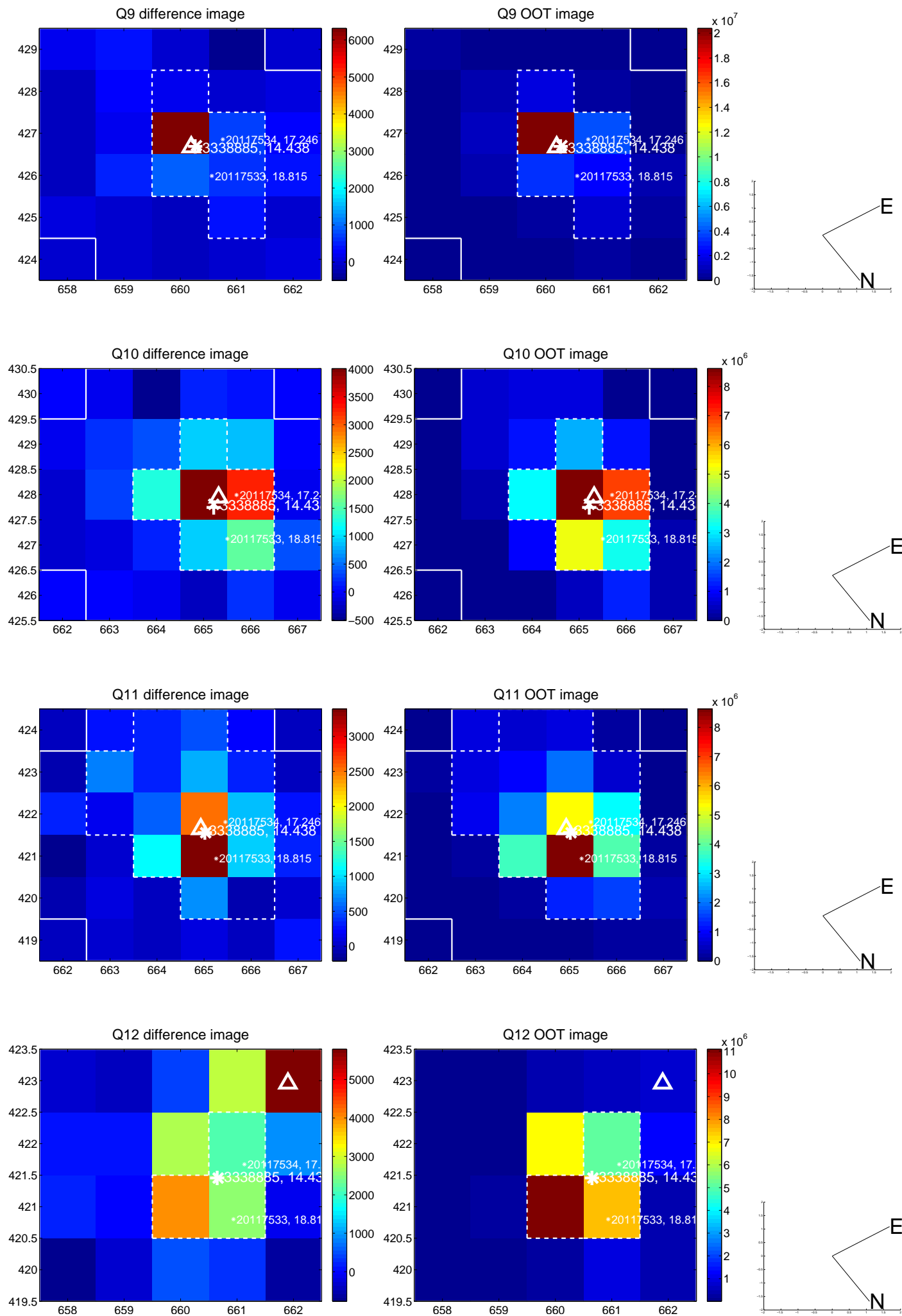
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



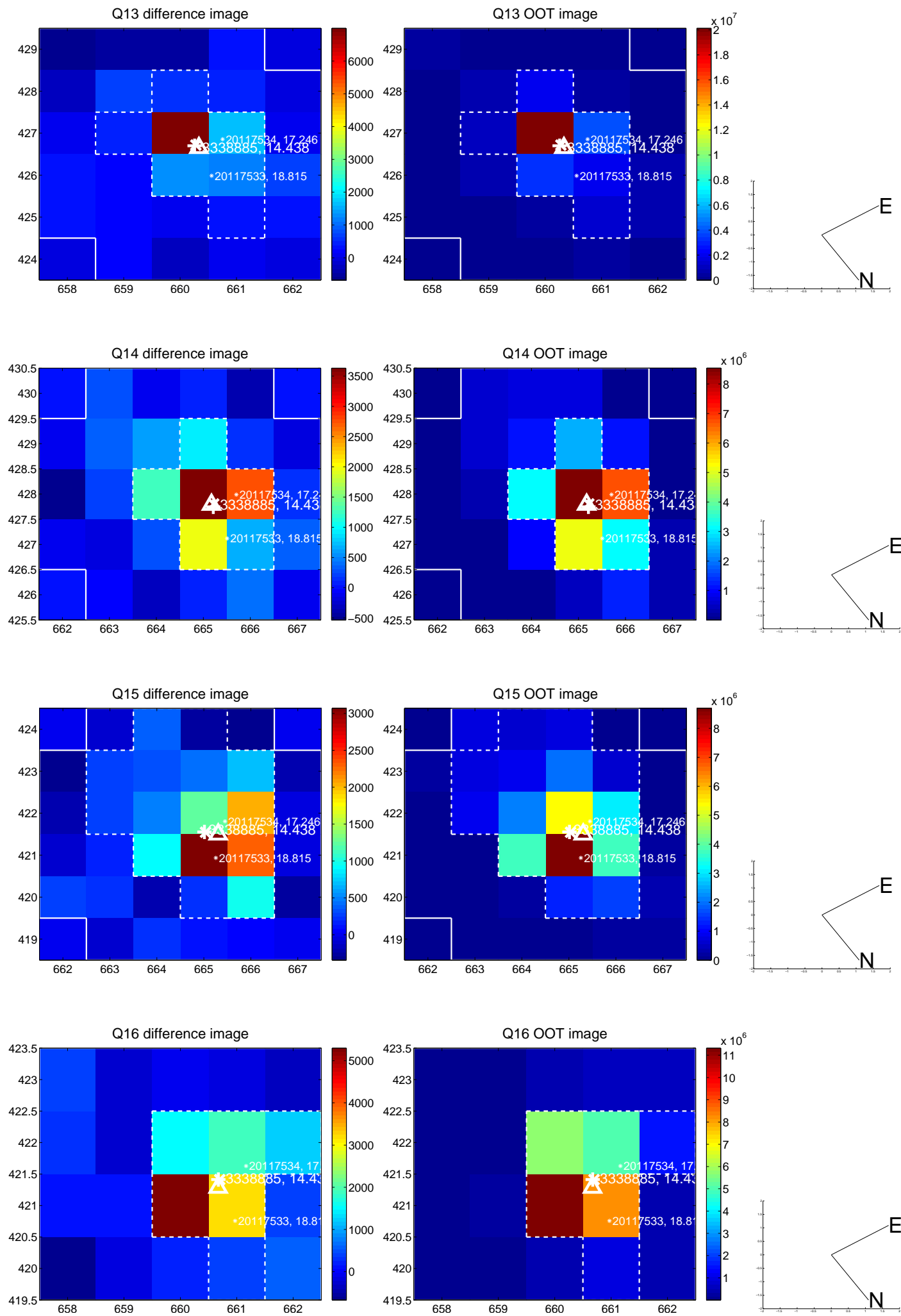
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



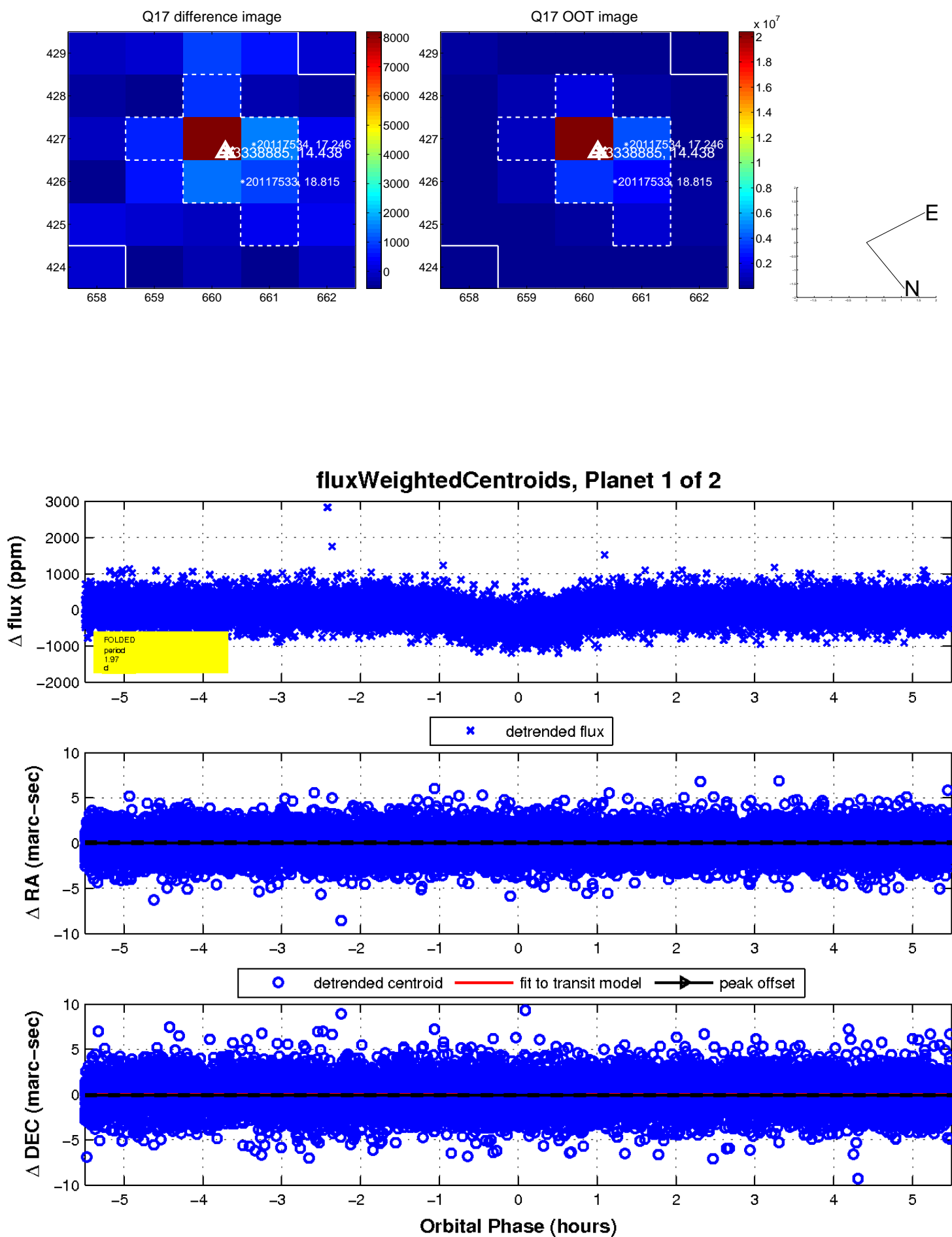
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

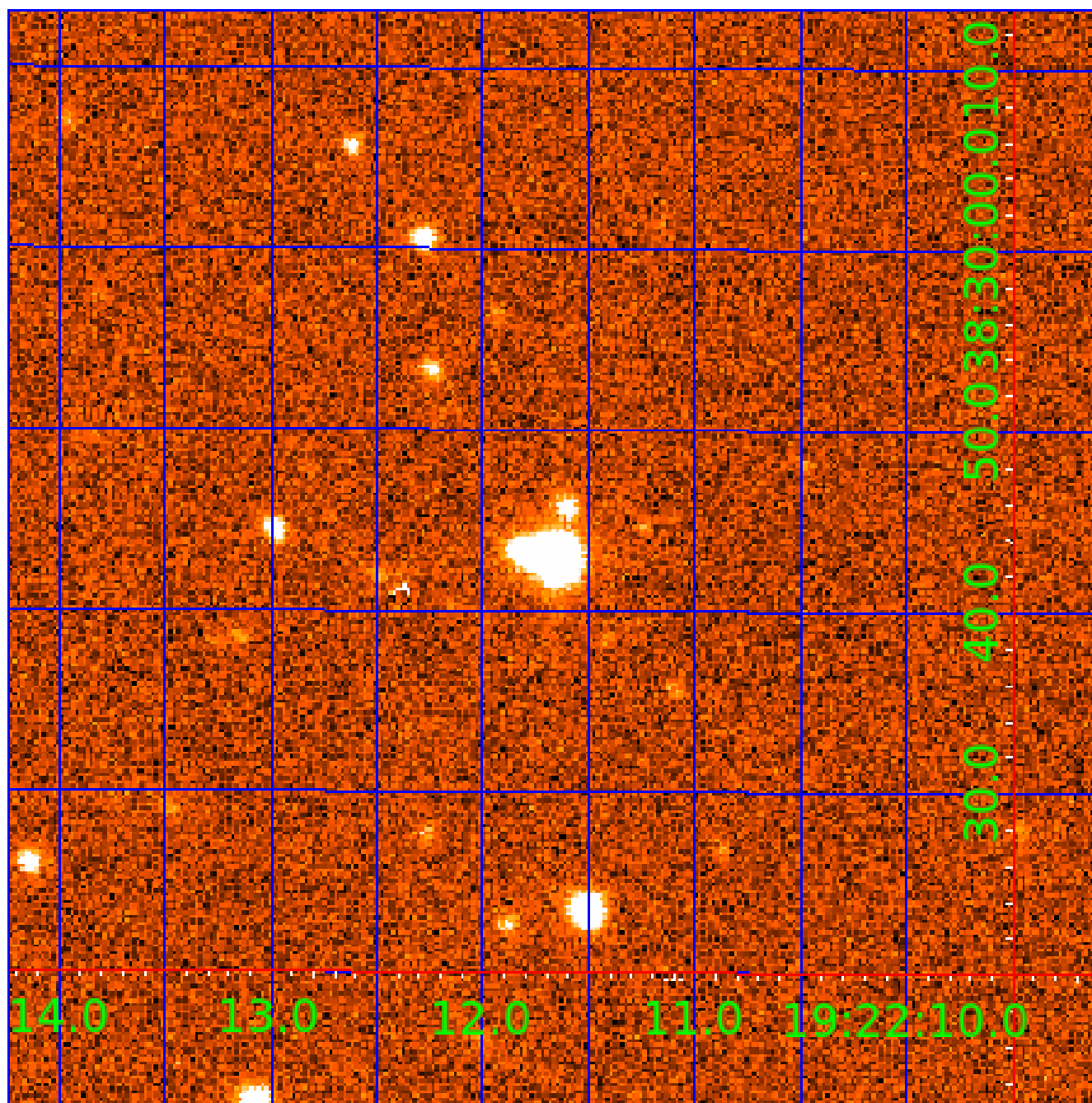


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003338885

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})
003338885-01	OBS	1845.01	1.970342	131.948227	393.7	1.832	44.9	52.9	1.67	4883	4.07	1547.19
003338885-02	OBS	1845.02	5.058220	135.701618	730.8	0.905	30.2	41.0	1.67	4883	5.64	440.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003338885-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003338885-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

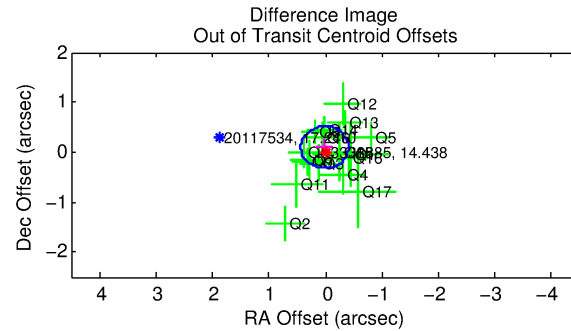
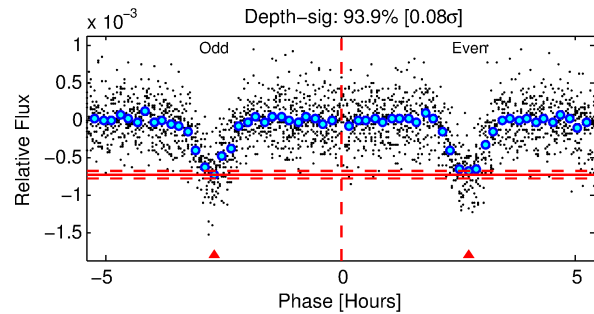
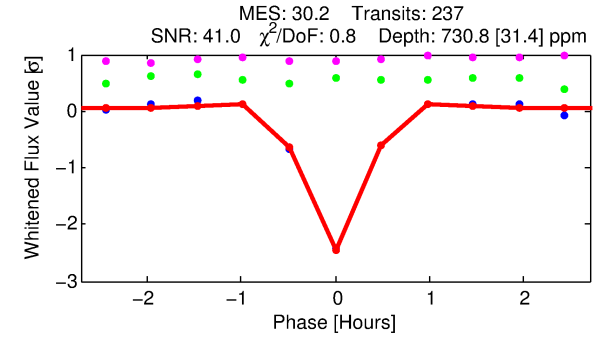
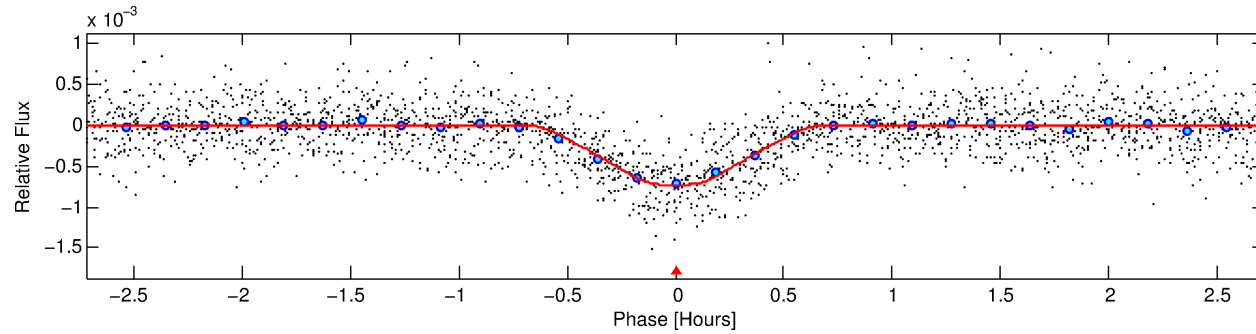
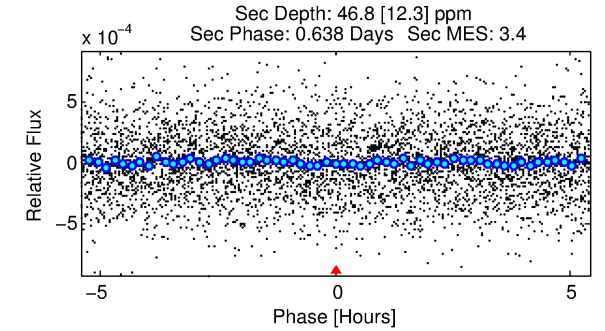
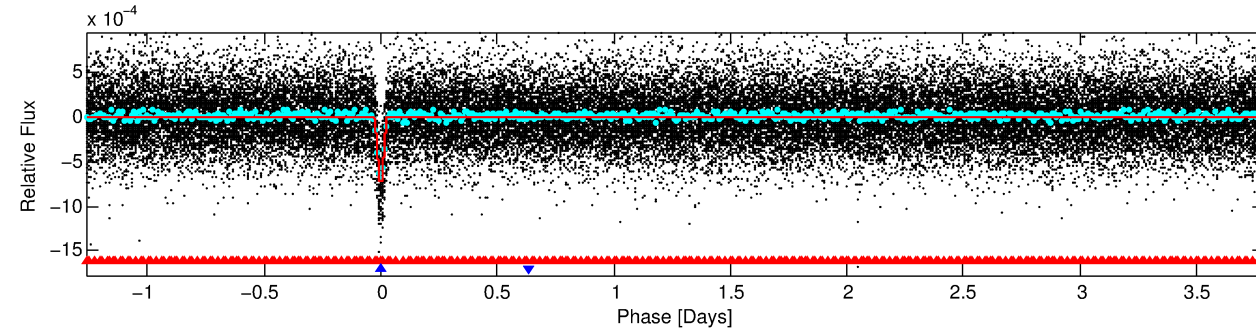
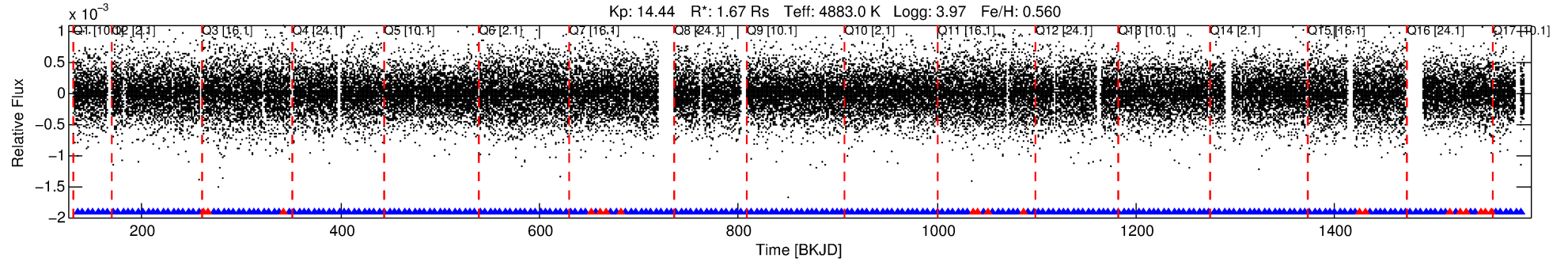
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003338885-02

No Significant Match Found

DV One-Page Summary

KIC: 3338885 Candidate: 2 of 2 Period: 5.058 d
KOI: K01845.02 Corr: 0.946



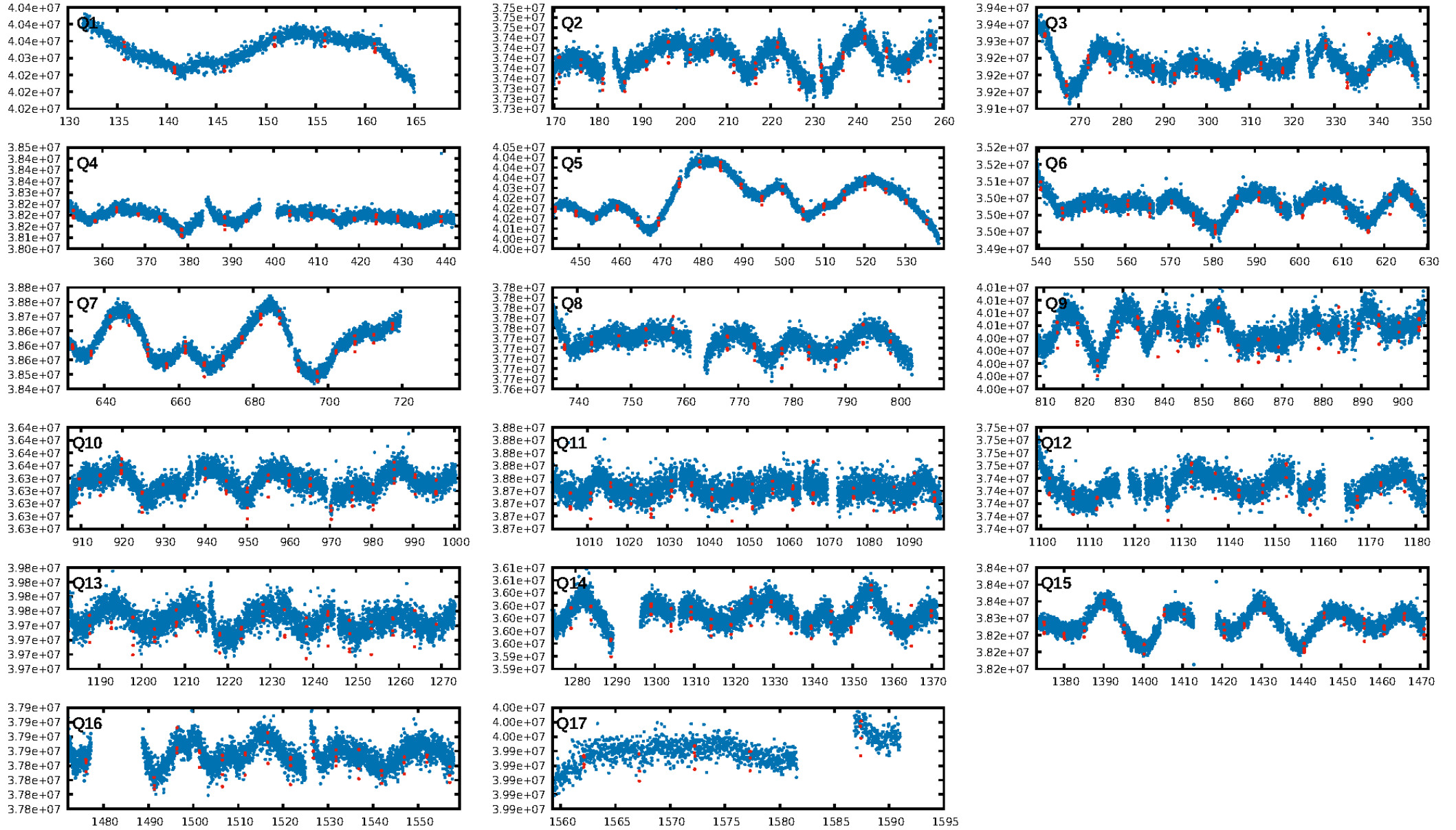
DV Fit Results:

Period = 5.05822 [0.00000] d
Epoch = 135.7016 [0.0005] BKJD
Rp/R* = 0.0310 [0.0068]
a/R* = 21.48 [16.45]
b = 0.90 [0.17]
Seff = 440.15 [432.86]
Teff = 1168 [287] K
Rp = 5.64 [3.86] Re
a = 0.0567 [0.0349] AU
Ag = 2.60 [2.86] [0.56σ]
Teffp = 2292 [300] K [2.71σ]

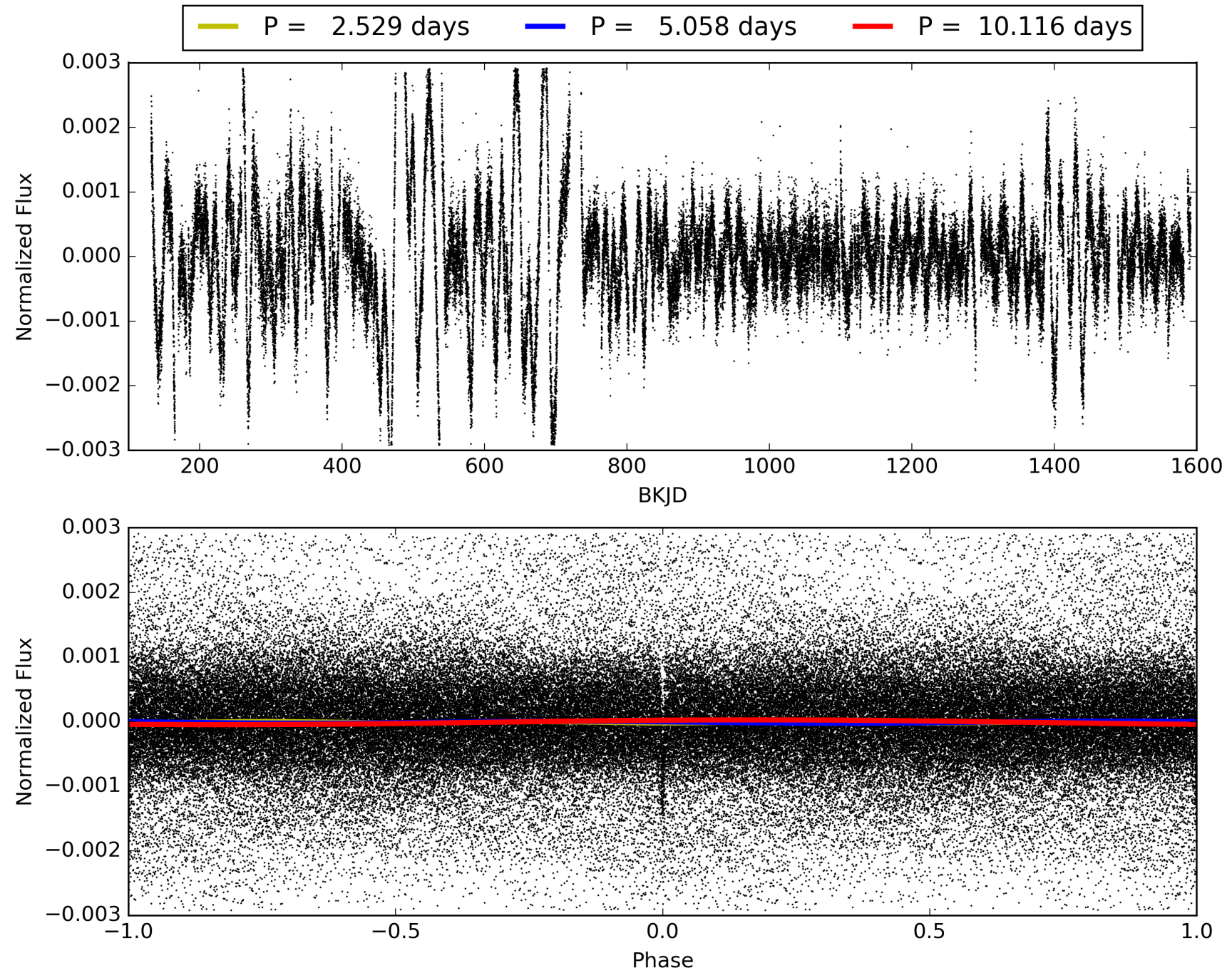
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [36.27σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.05e-195
RollingBand-fgt: 0.92 [209/228]
GhostDiagnostic-chr: 1.793
Centroid-sig: 42.3%
Centroid-so: 0.476 arcsec [1.55σ]
OotOffset-rm: 0.100 arcsec [0.71σ]
KicOffset-rm: 0.155 arcsec [0.96σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003338885-02, PDC Light Curves

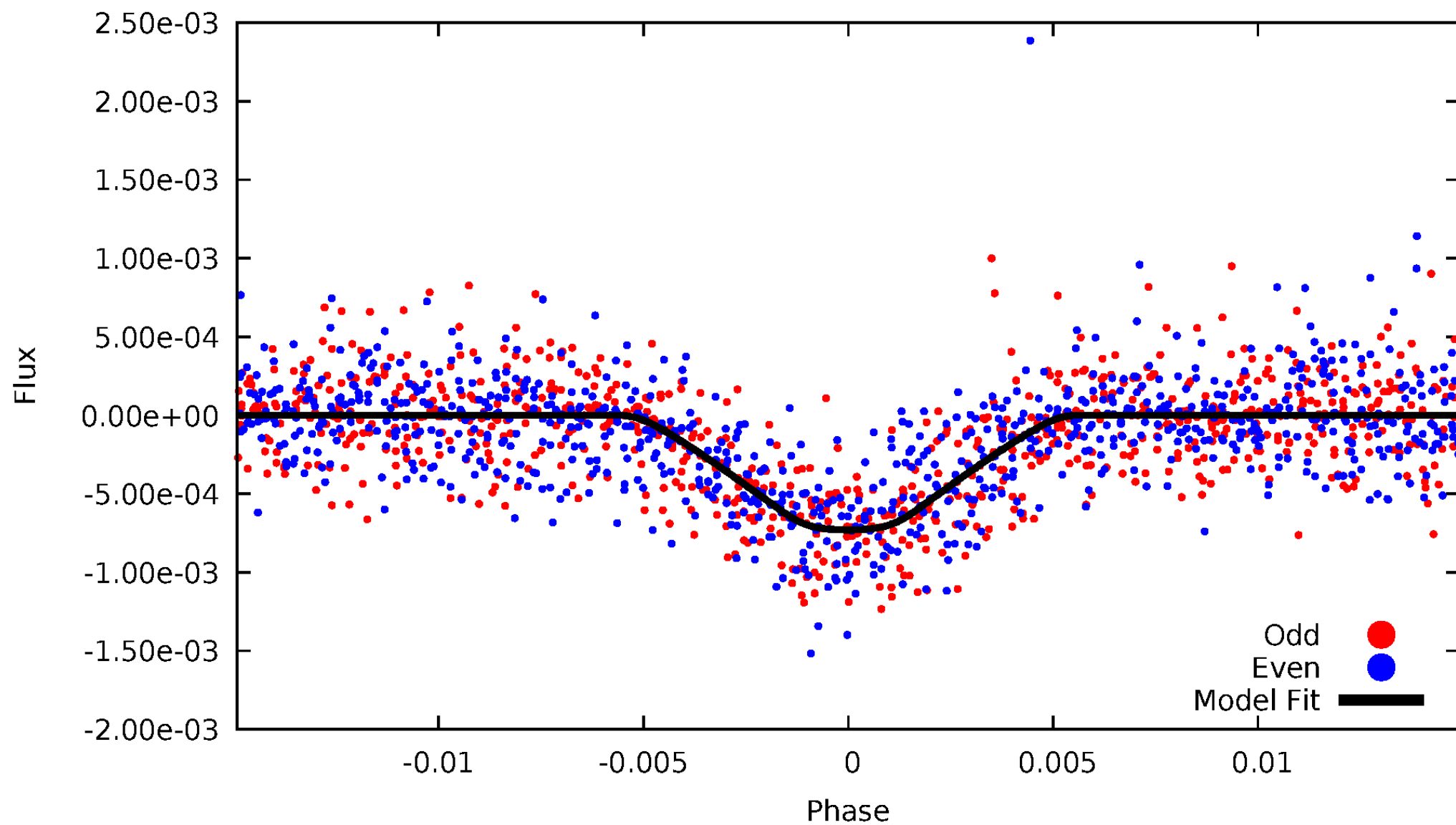


TCE 003338885-02



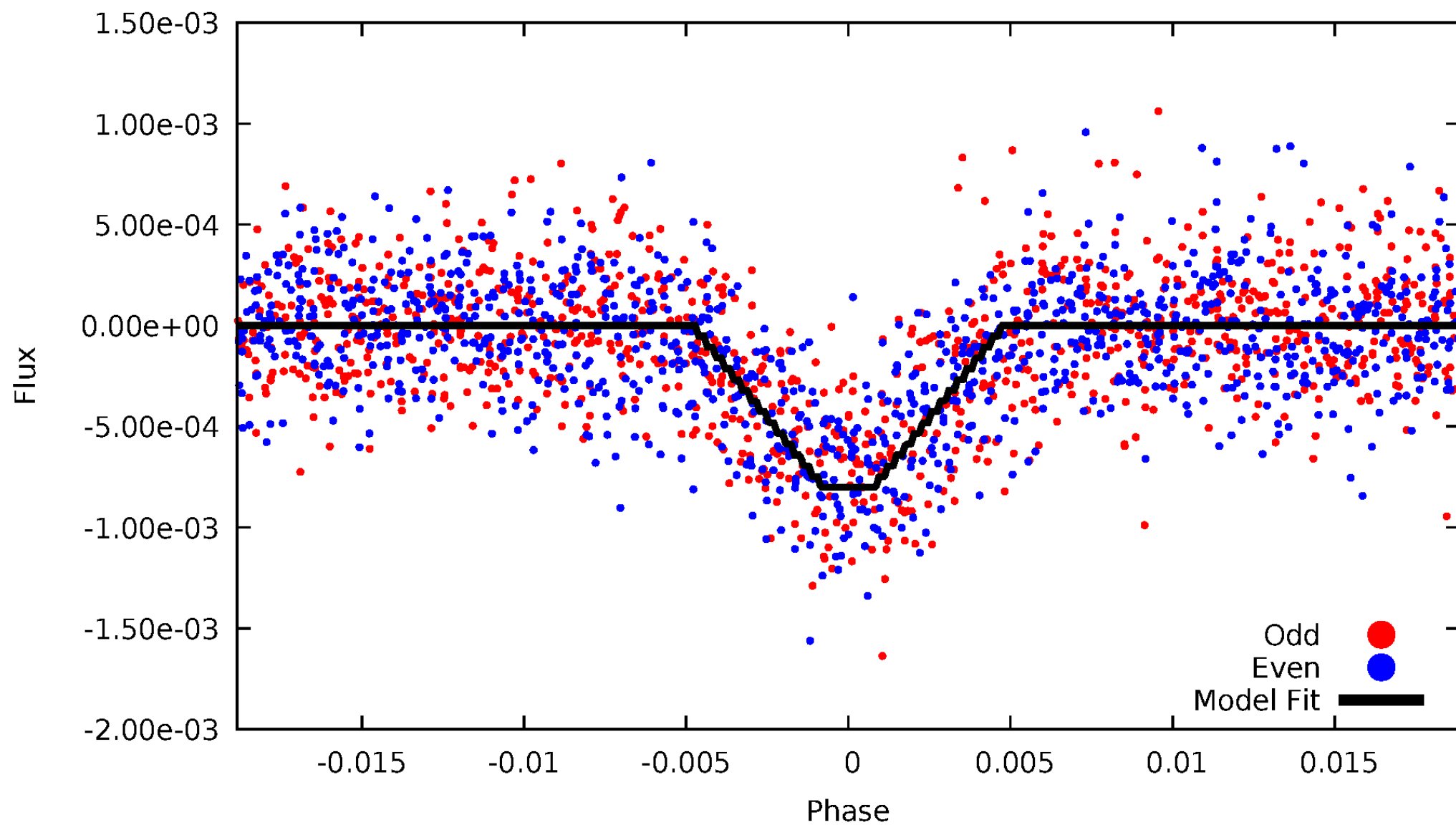
DV Odd/Even

TCE 003338885-02



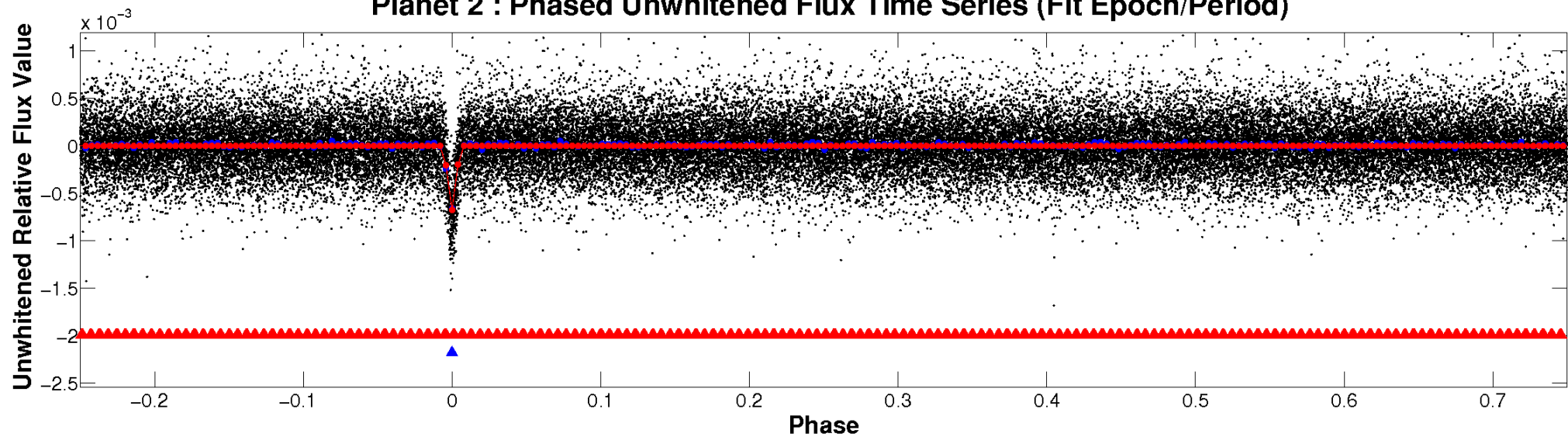
ALT Odd/Even

TCE 003338885-02

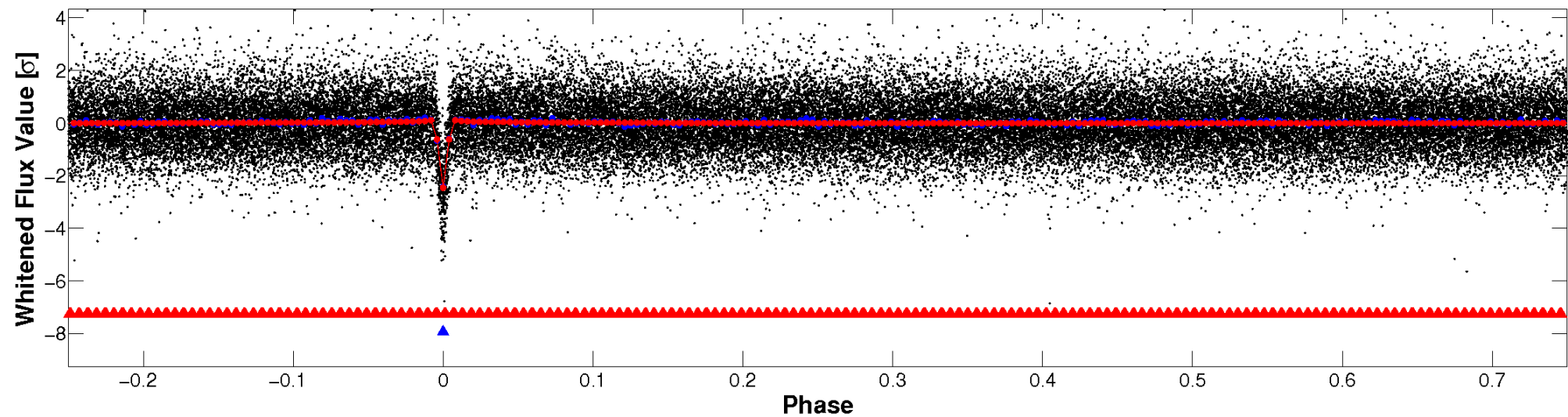


Non-Whitened Vs. Whitened Light Curve

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

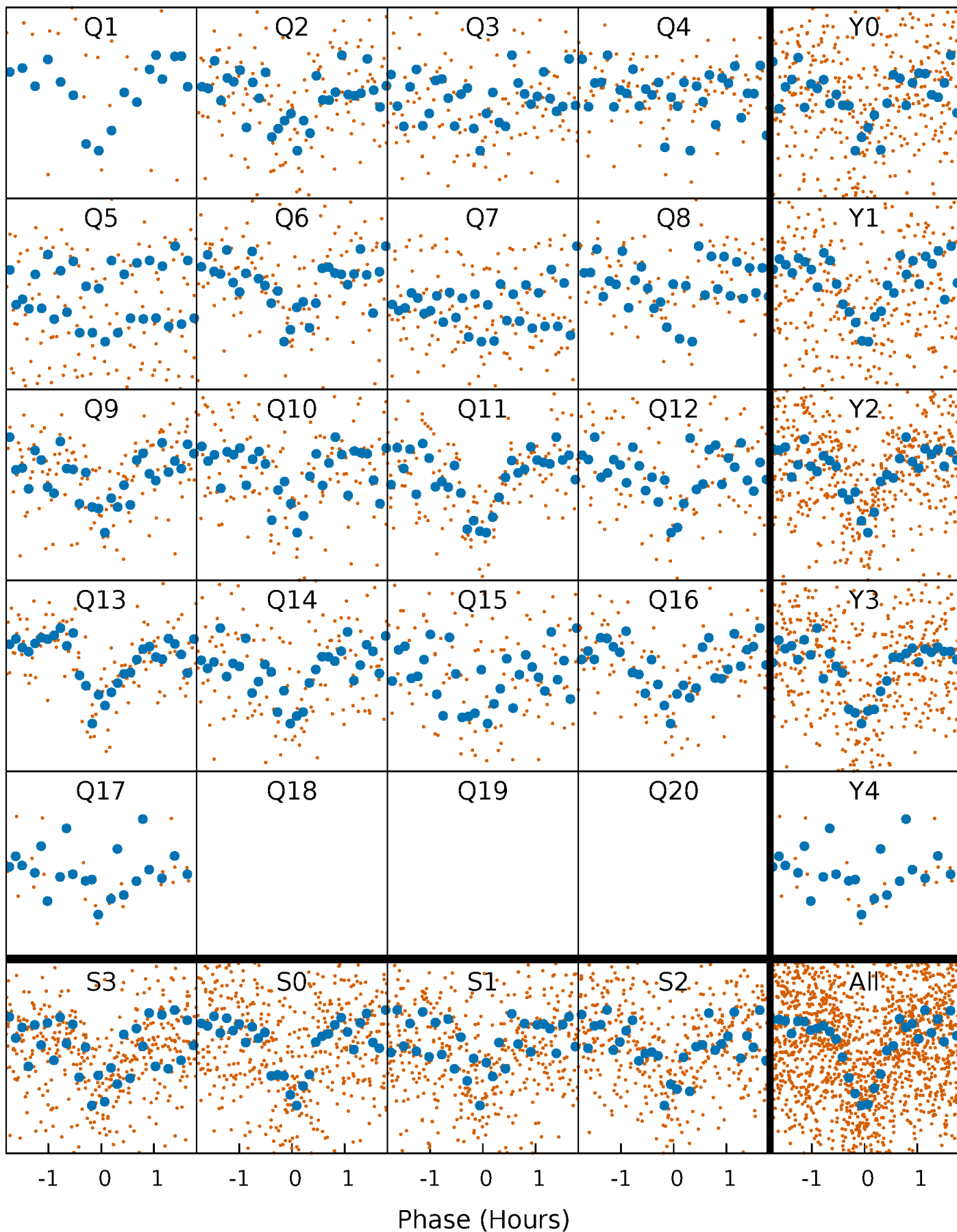


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



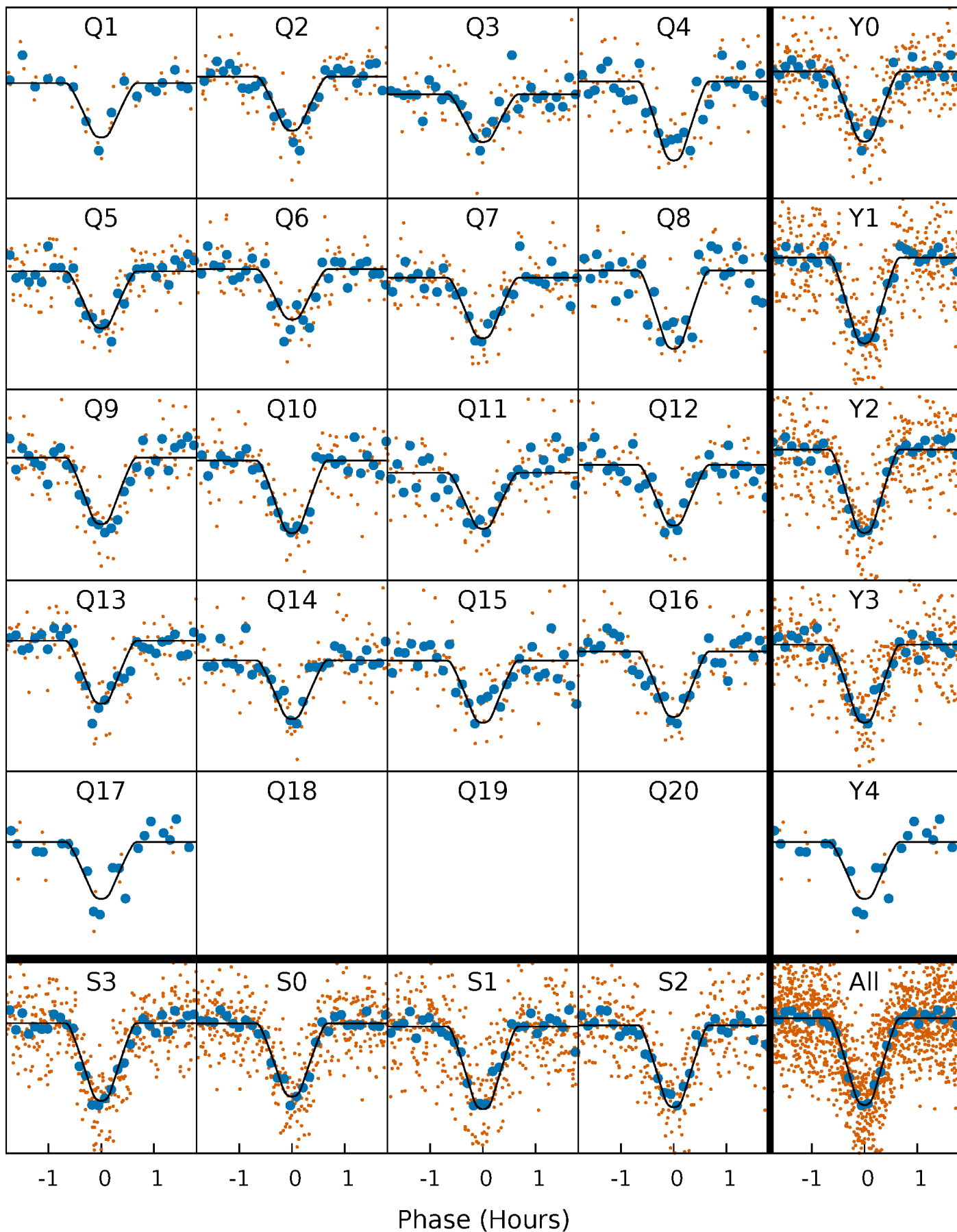
PDC Quarter-Phased Transit Curves

TCE 003338885-02 P= 5.058220 Days $T_0=135.701618$ (BKJD)



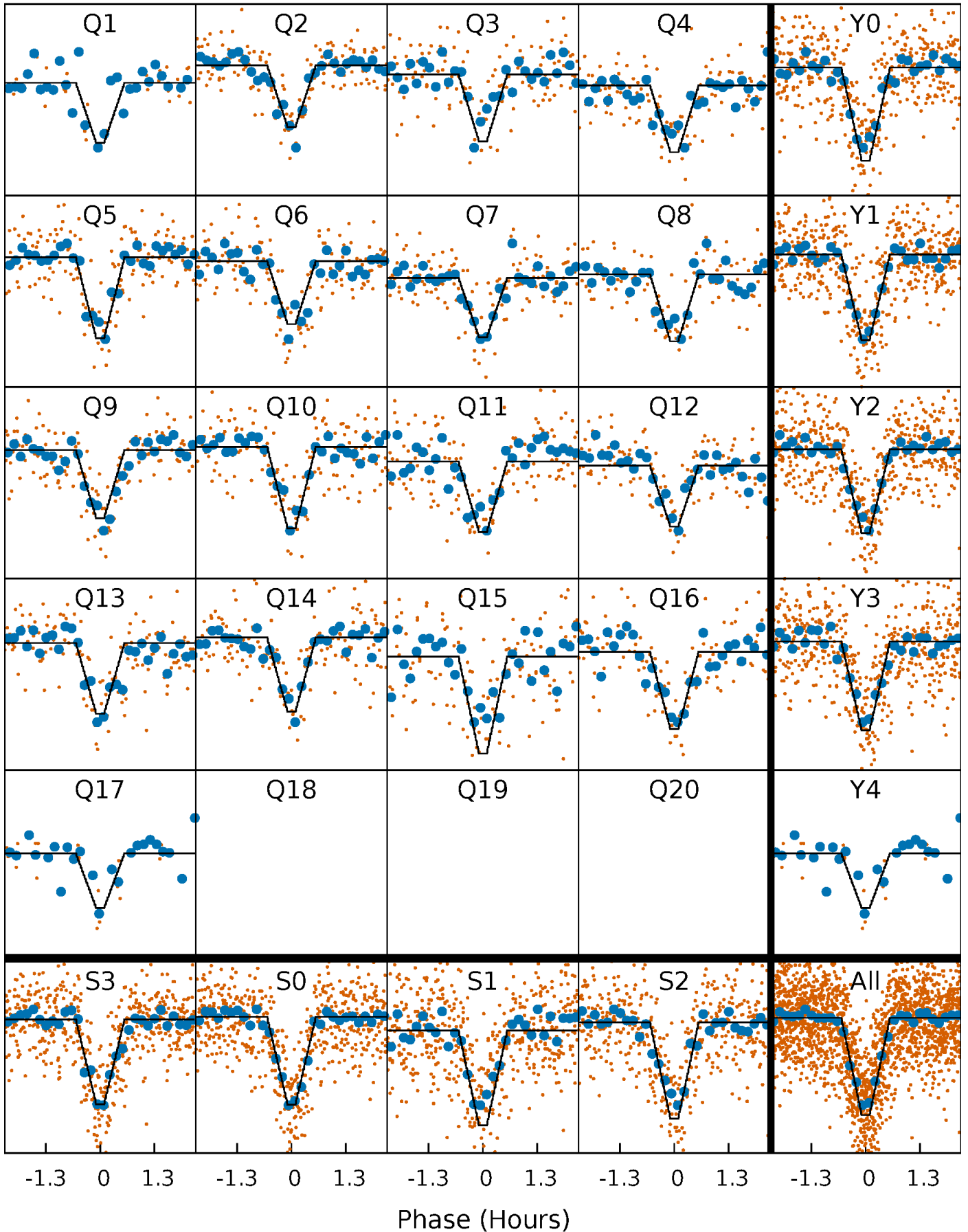
DV Quarter-Phased Transit Curves

TCE 003338885-02 P= 5.058220 Days $T_0=135.701618$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

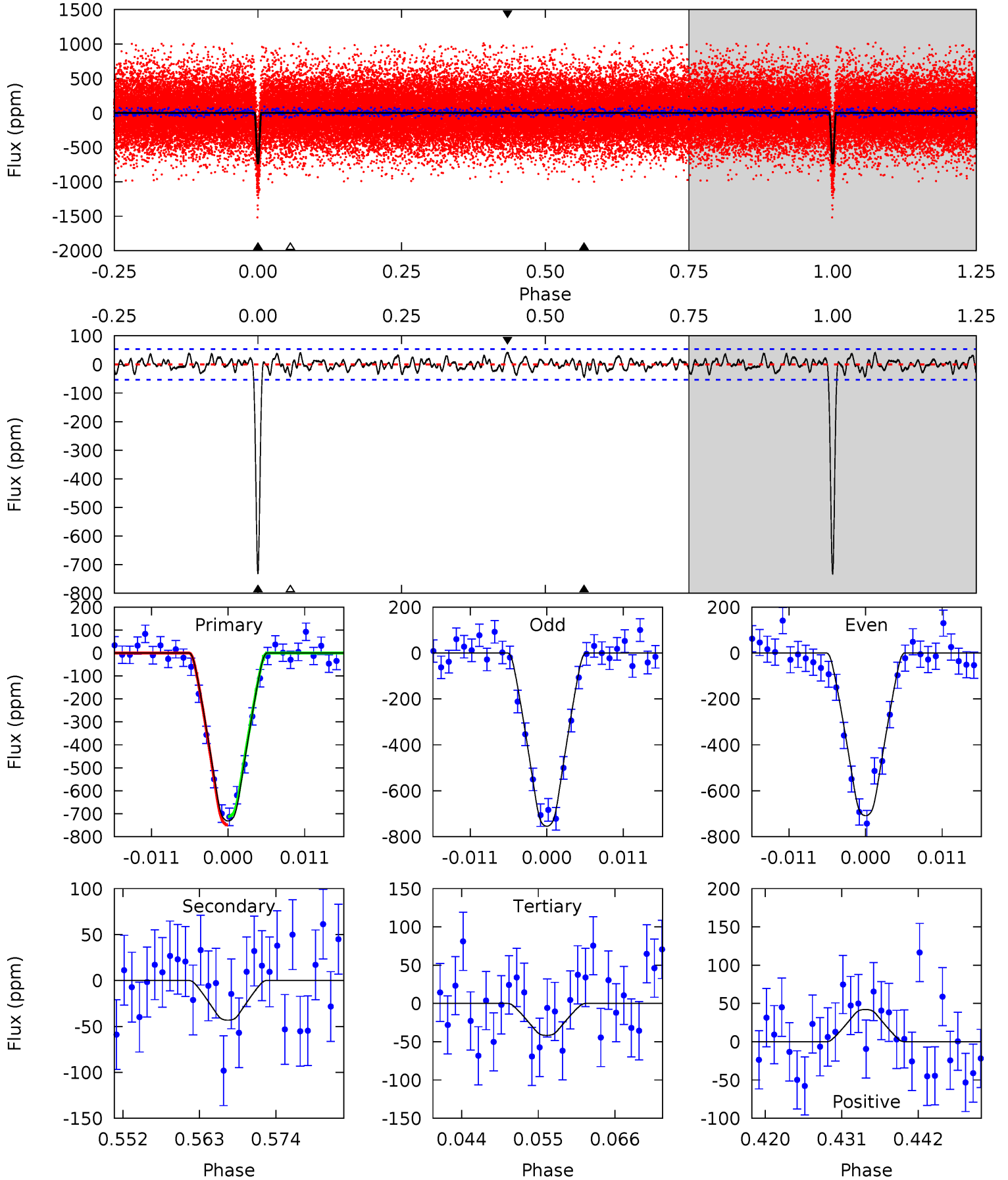
TCE 003338885-02 P= 5.058204 Days $T_0=135.703422$ (BKJD)



DV Model-Shift Uniqueness Test

003338885-02, P = 5.058220 Days, E = 130.643398 Days

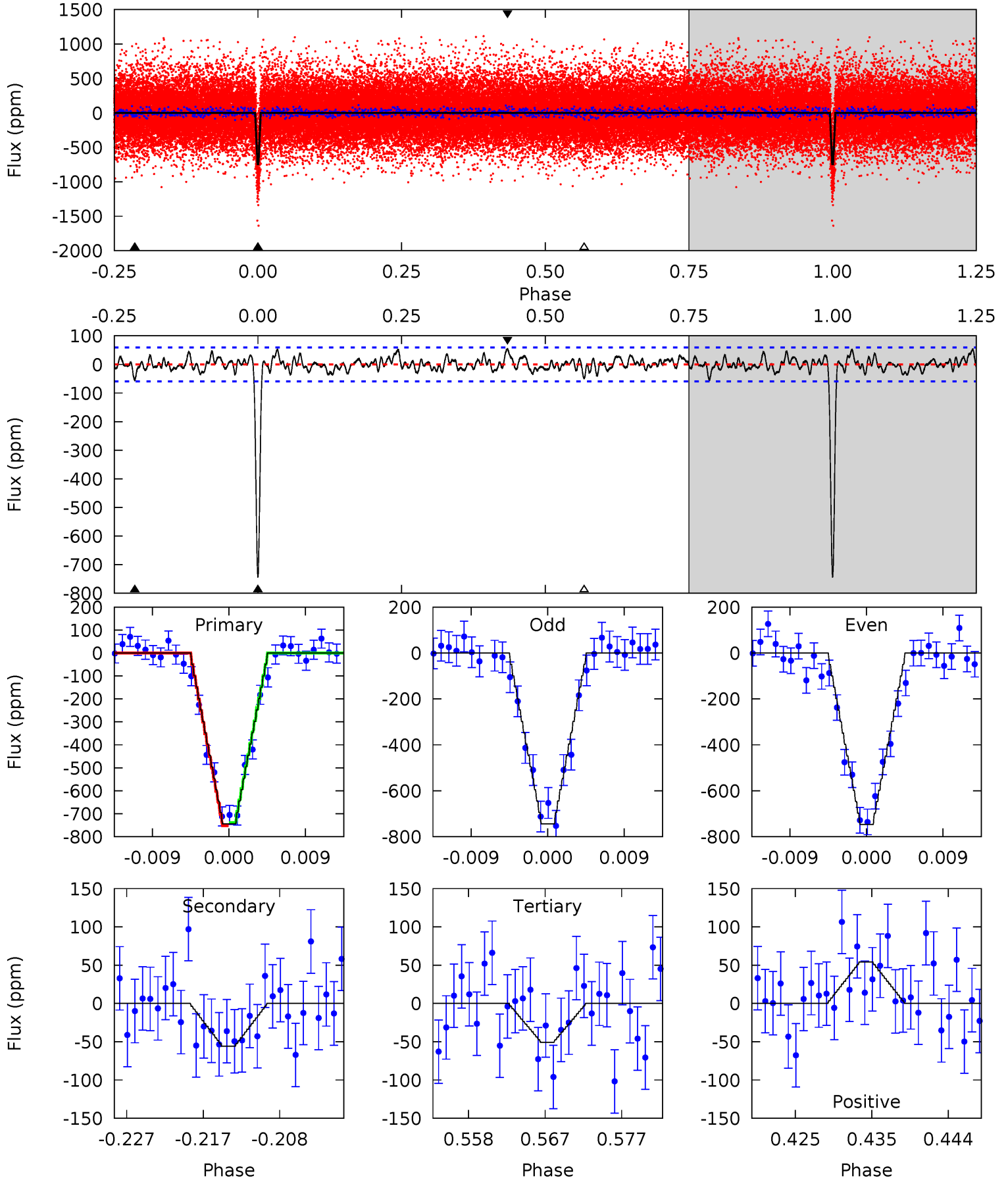
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.4	4.04	3.90	3.94	5.01	2.54	1.39	64.5	64.4	0.13	0.10	2.16	1.02	0.05	1.73



Alt Model-Shift Uniqueness Test

003338885-02, P = 5.058204 Days, E = 130.645218 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.1	4.75	4.30	4.61	5.04	2.60	1.48	58.8	58.5	0.45	0.14	0.13	1.01	0.07	0.62



Stellar Parameters For KIC 003338885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4883^{+146}_{-132}	$3.972^{+0.570}_{-0.380}$	$0.560^{+0.050}_{-0.300}$	$1.667^{+1.082}_{-0.983}$	$0.951^{+0.198}_{-0.144}$	$0.289^{+1.975}_{-0.216}$
	+3%/-3%	+14%/-10%	+9%/-54%	+65%/-59%	+21%/-15%	+684%/-75%
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 003338885-02 / KOI 1845.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-43 ± 11	$5.55^{+2.39}_{-1.91}$	1630^{+284}_{-253}	2841^{+275}_{-229}	$2.489^{+3.319}_{-1.372}$
Alt.	-56 ± 12	$5.05^{+2.30}_{-1.79}$	1635^{+262}_{-251}	3059^{+277}_{-230}	$3.919^{+5.790}_{-2.126}$

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 $A_{obs} \gg 1.0$

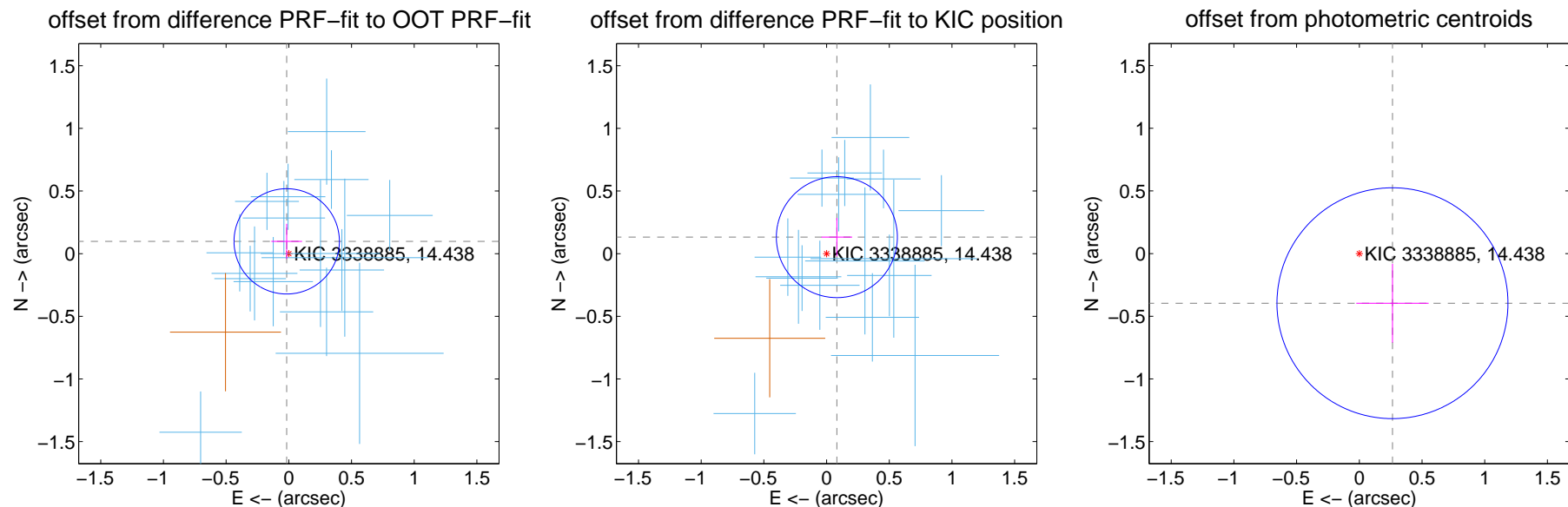
DV Centroid Data

Supplemental centroid analysis for 003338885-02. Kepler magnitude: 14.44. Transit SNR 41.04

There are 16 quarters with good PRF difference image offsets

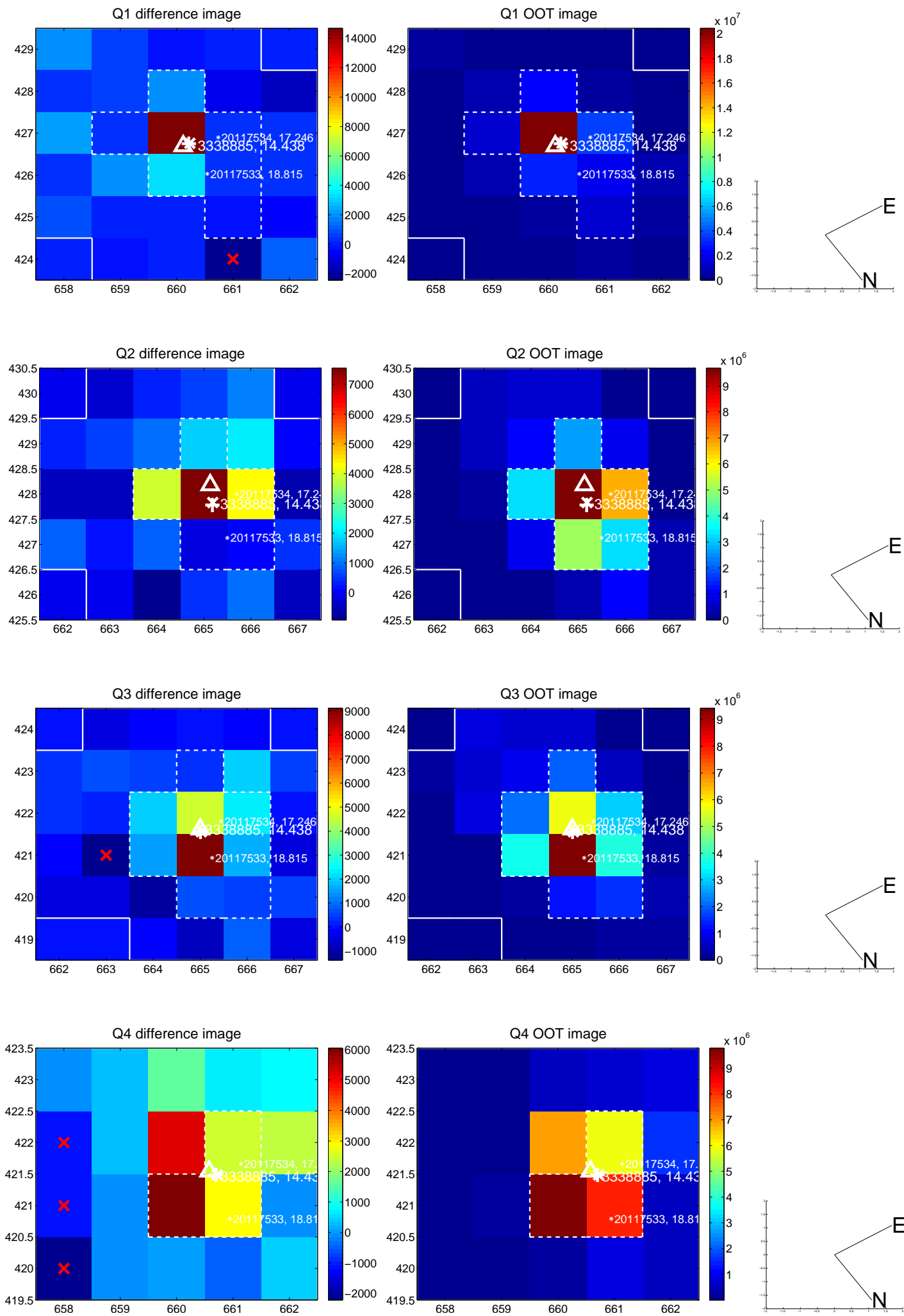
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.100 ± 0.140	0.71	0.017 ± 0.123	0.098 ± 0.141
PRF-fit source offset from KIC position	0.155 ± 0.161	0.96	-0.082 ± 0.122	0.132 ± 0.154
photometric centroid source offset	0.48 ± 0.31	1.55	-0.26 ± 0.29	-0.40 ± 0.31

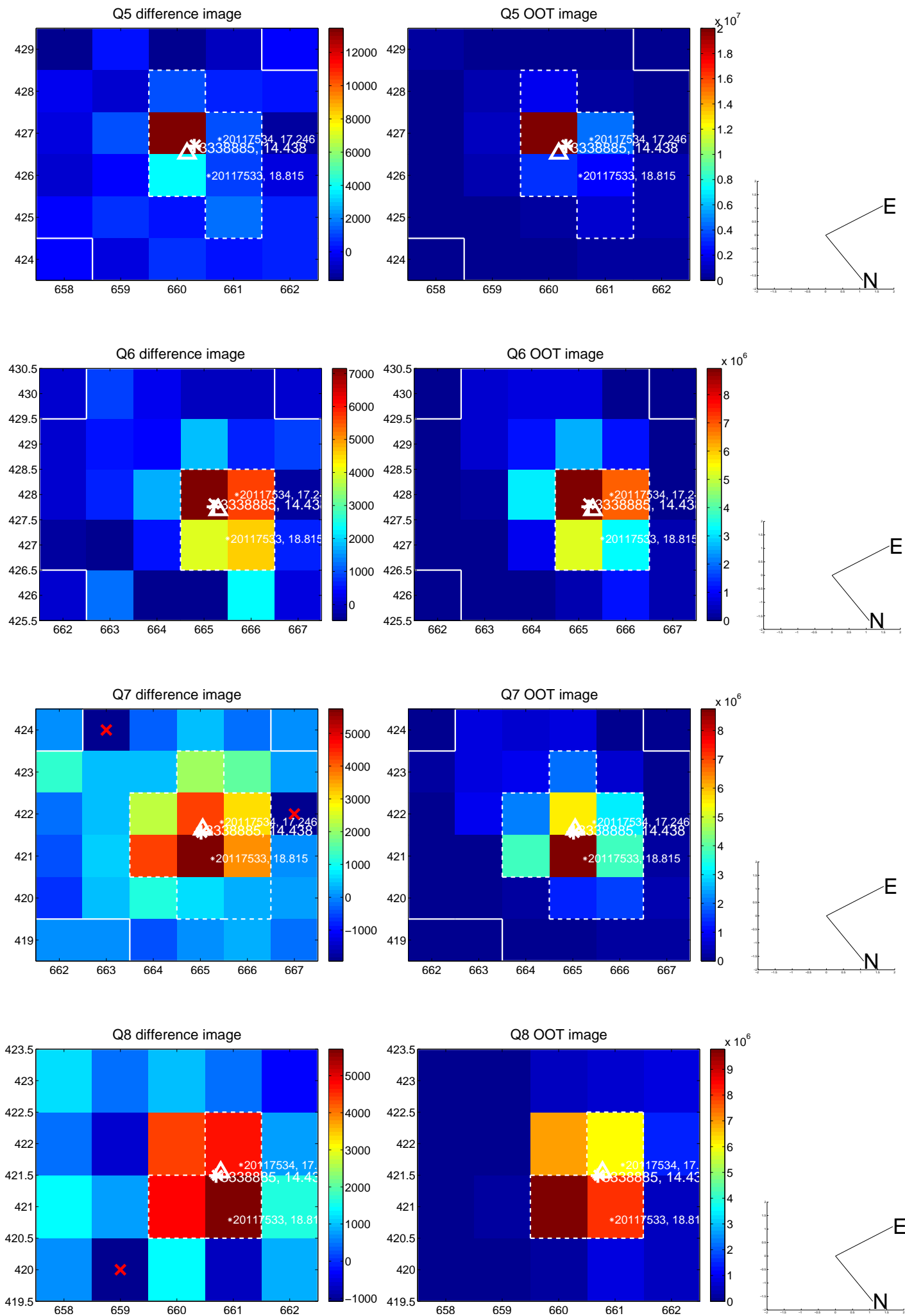


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

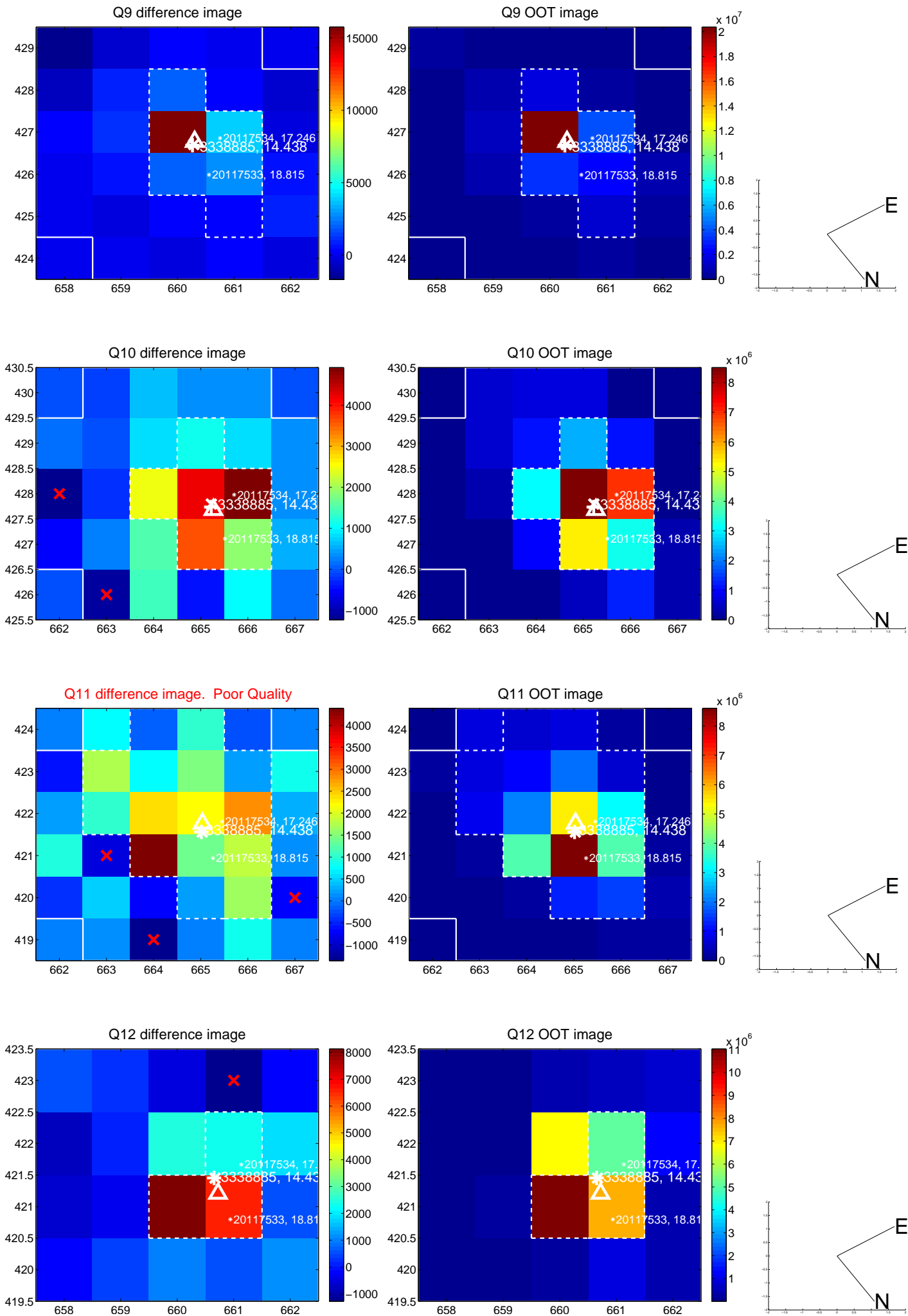
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



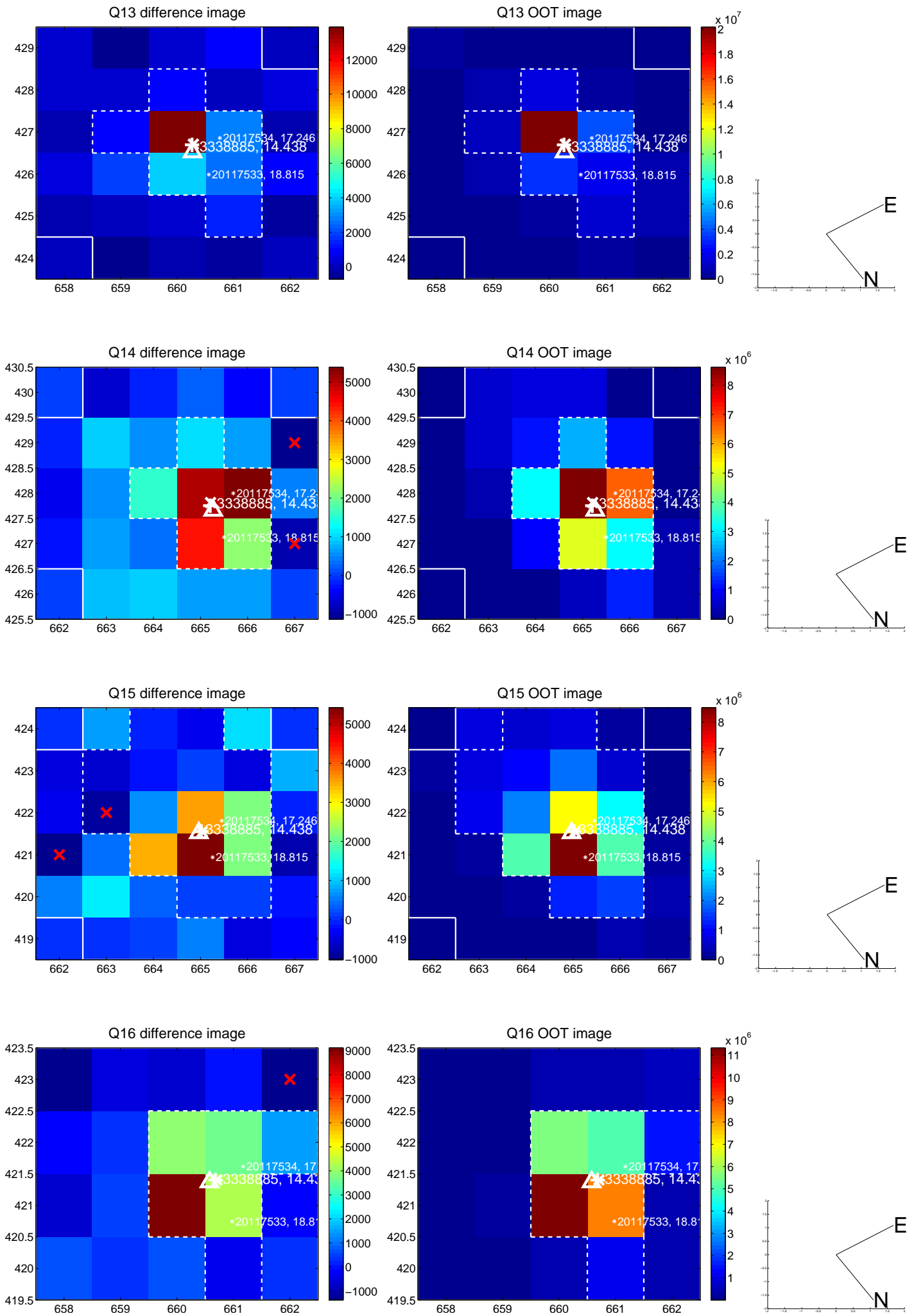
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



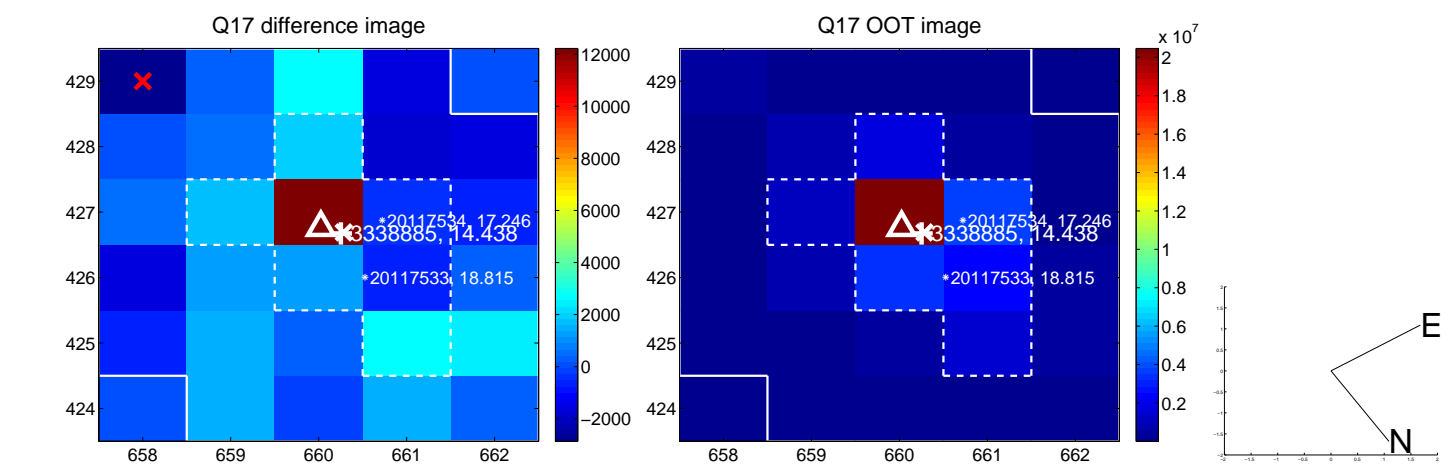
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



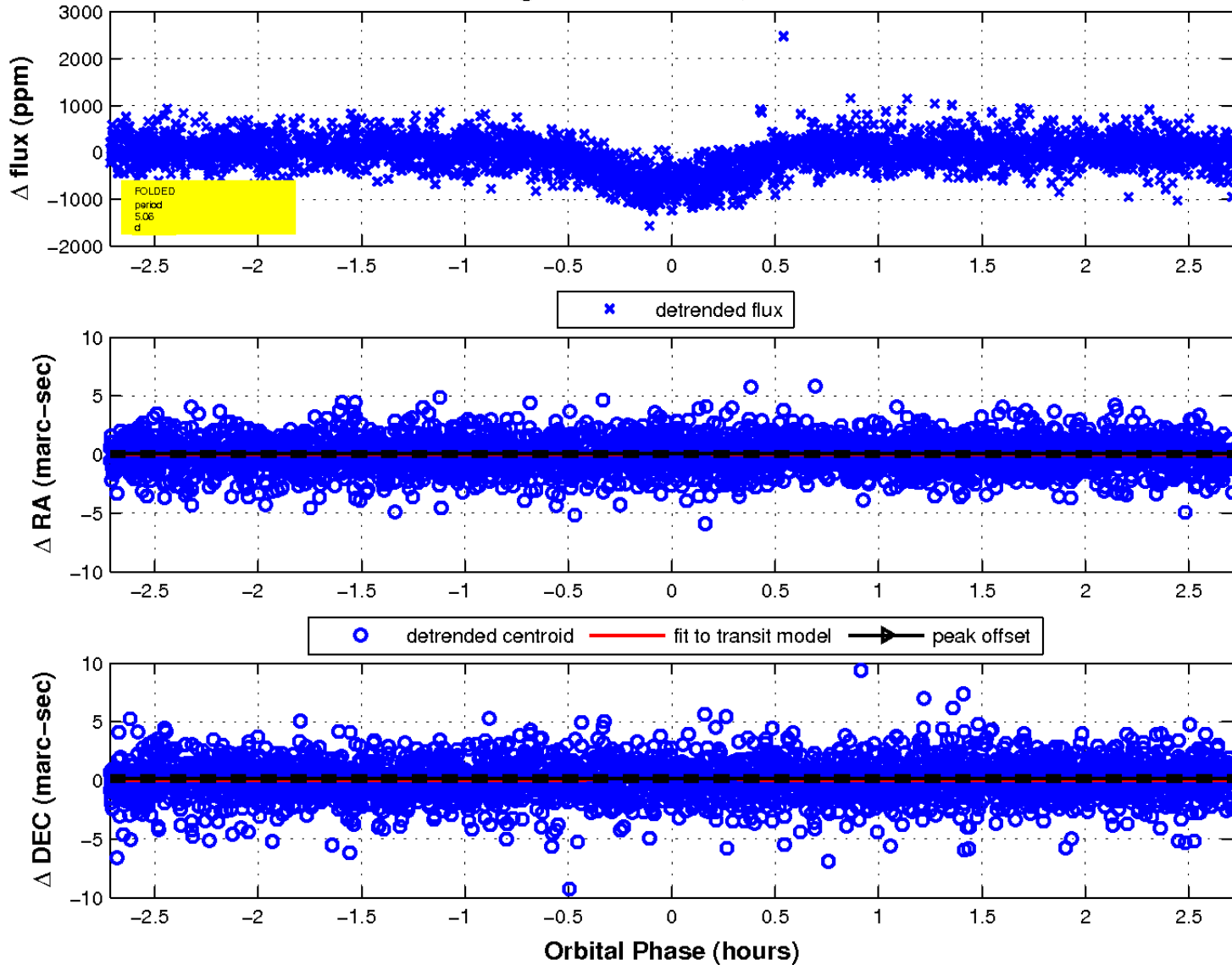
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

