

KIC 007985167

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})
007985167-01	OBS	6947.01	1.384492	132.271826	86369.0	2.816	5744.8	4270.7	1.36	6163	58.00	4255.42
007985167-02	OBS	No	1.384475	131.584110	20934.1	2.000	4279.6	-1.0	1.36	6163	19.78	4255.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007985167-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
007985167-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

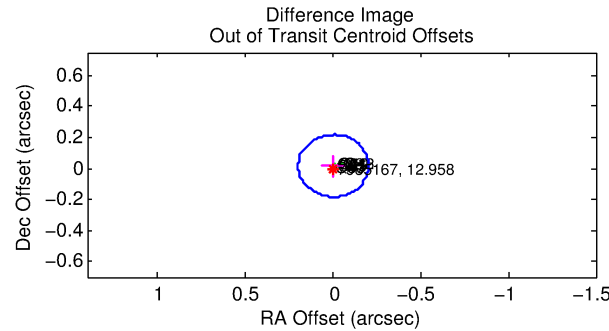
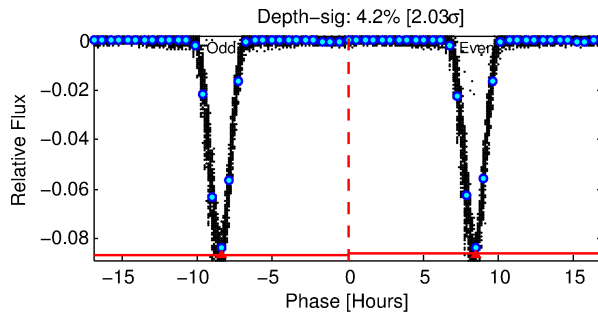
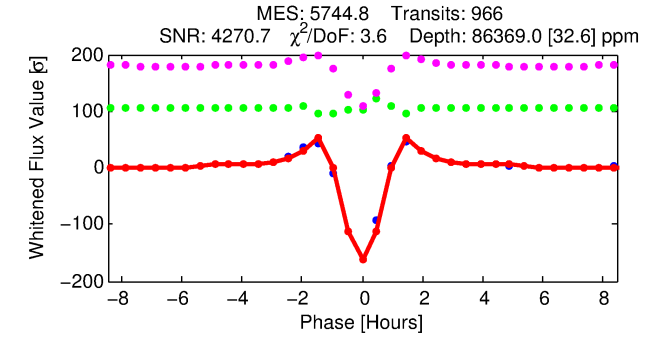
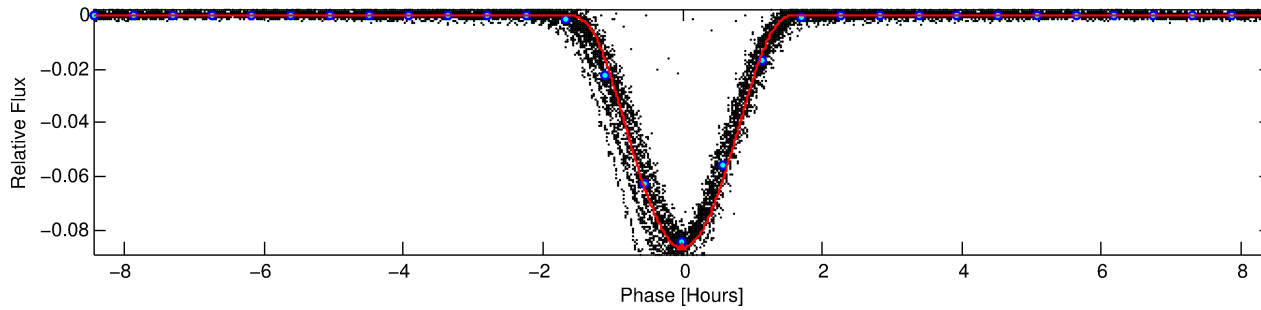
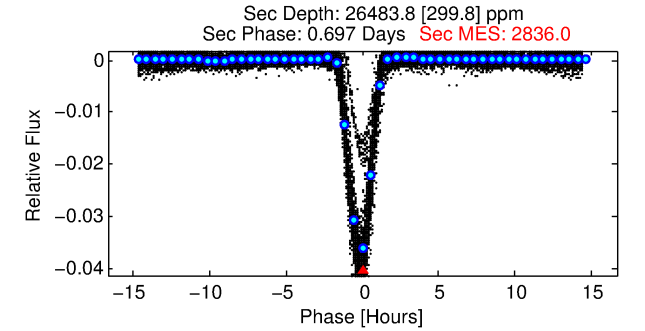
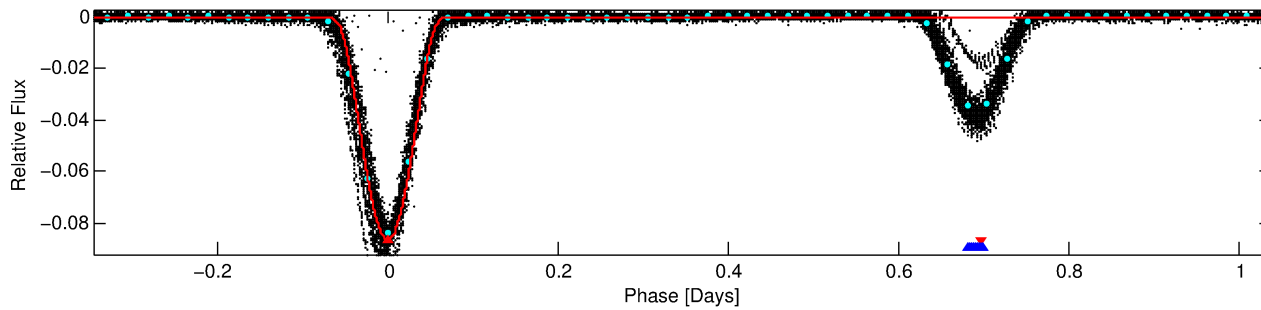
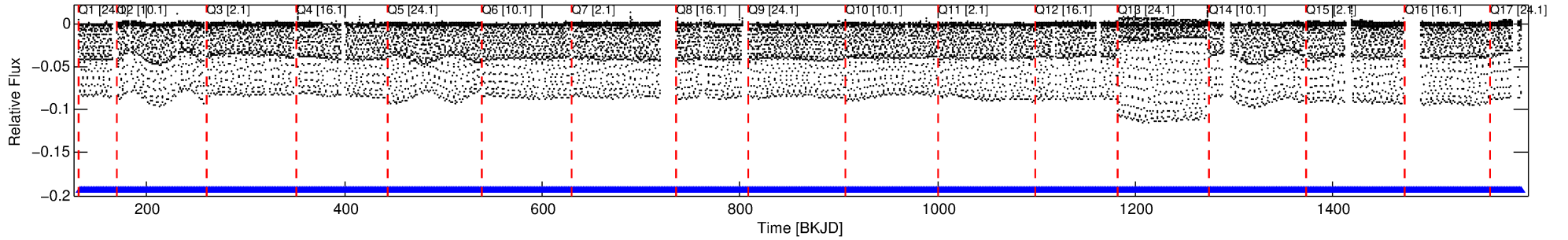
Ephemeris Match Information For 007985167-01

No Significant Match Found

DV One-Page Summary

KIC: 7985167 Candidate: 1 of 2 Period: 1.384 d
KOI: K06947 Corr: No Ephemeris Match

Kp: 12.96 R*: 1.36 Rs Teff: 6163.0 K Logg: 4.14 Fe/H: -0.520



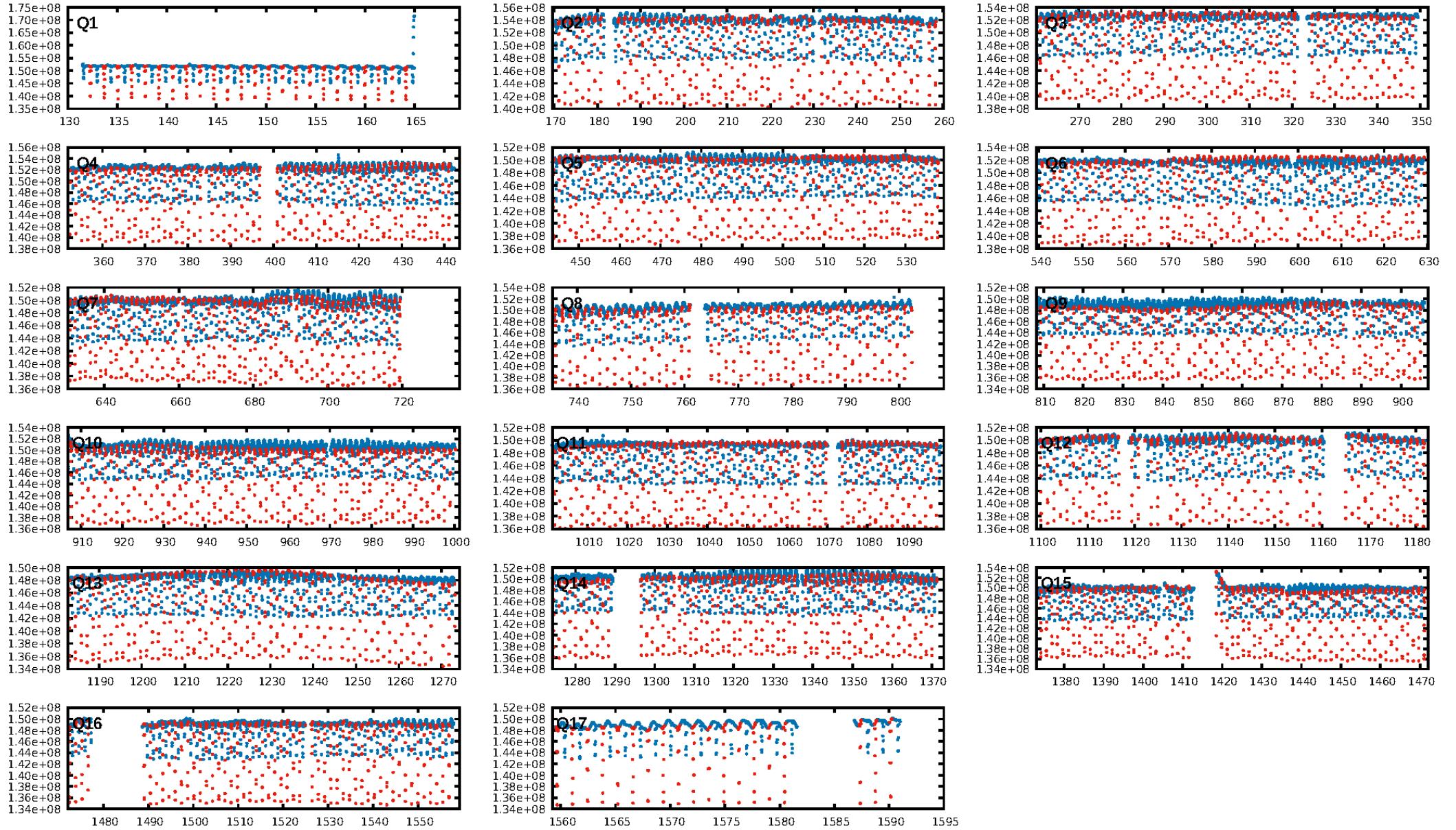
DV Fit Results:

Period = 1.38449 [0.00000] d
Epoch = 132.2718 [0.0000] BKJD
Rp/R* = 0.3914 [0.0045]
a/R* = 4.12 [0.00]
b = 0.90 [0.01]
Seff = 4255.42 [2294.25]
Teq = 2059 [278] K
Rp = 58.00 [18.85] Re
a = 0.0237 [0.0076] AU
Ag = 2.43 [1.28] [1.12σ]
Teffp = 3974 [122] K [6.31σ]

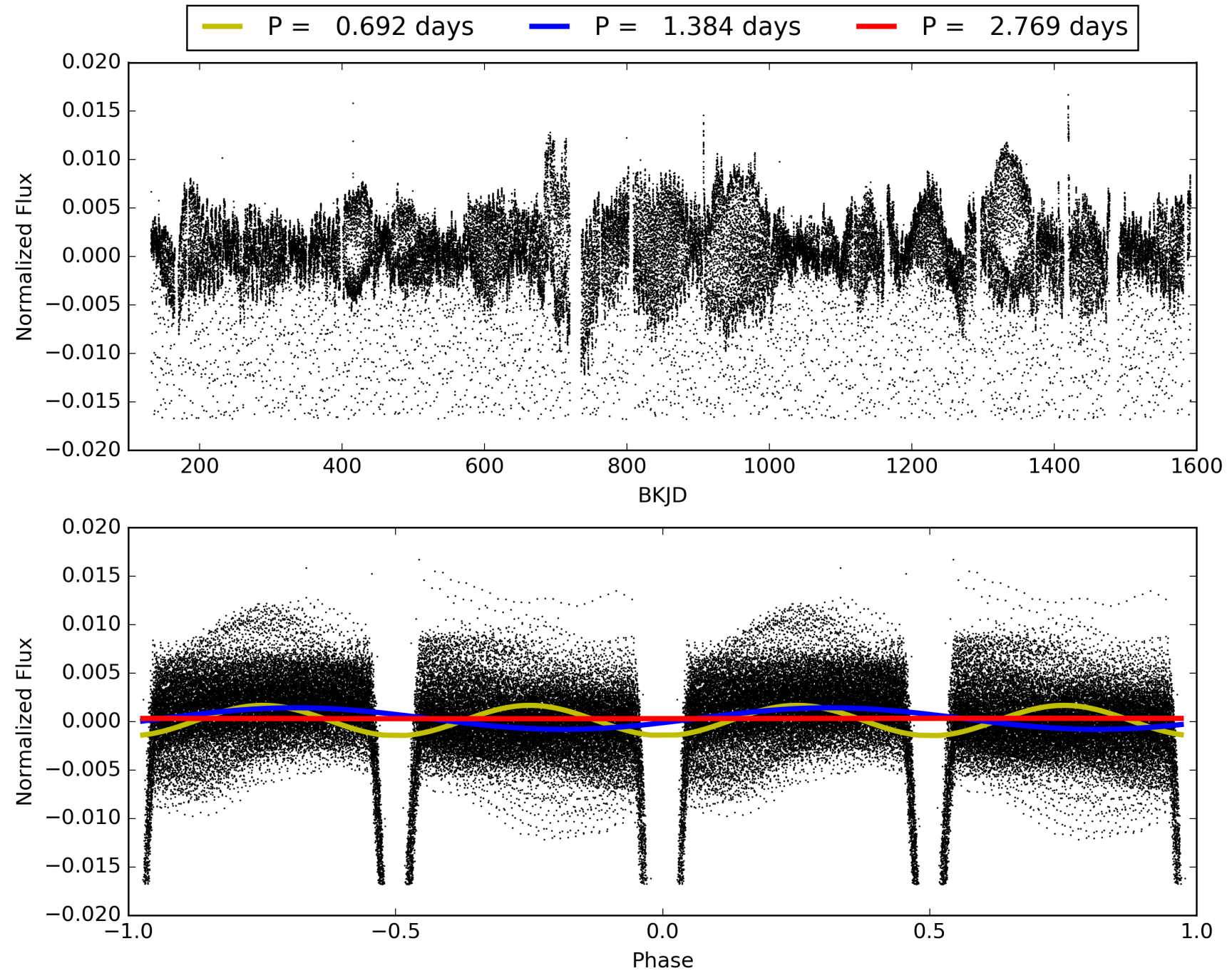
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [923/923]
GhostDiagnostic-chr: 2.11
Centroid-sig: 0.0%
Centroid-so: 0.036 arcsec [69.54σ]
OotOffset-rm: 0.018 arcsec [0.27σ]
KicOffset-rm: 0.043 arcsec [0.63σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007985167-01, PDC Light Curves

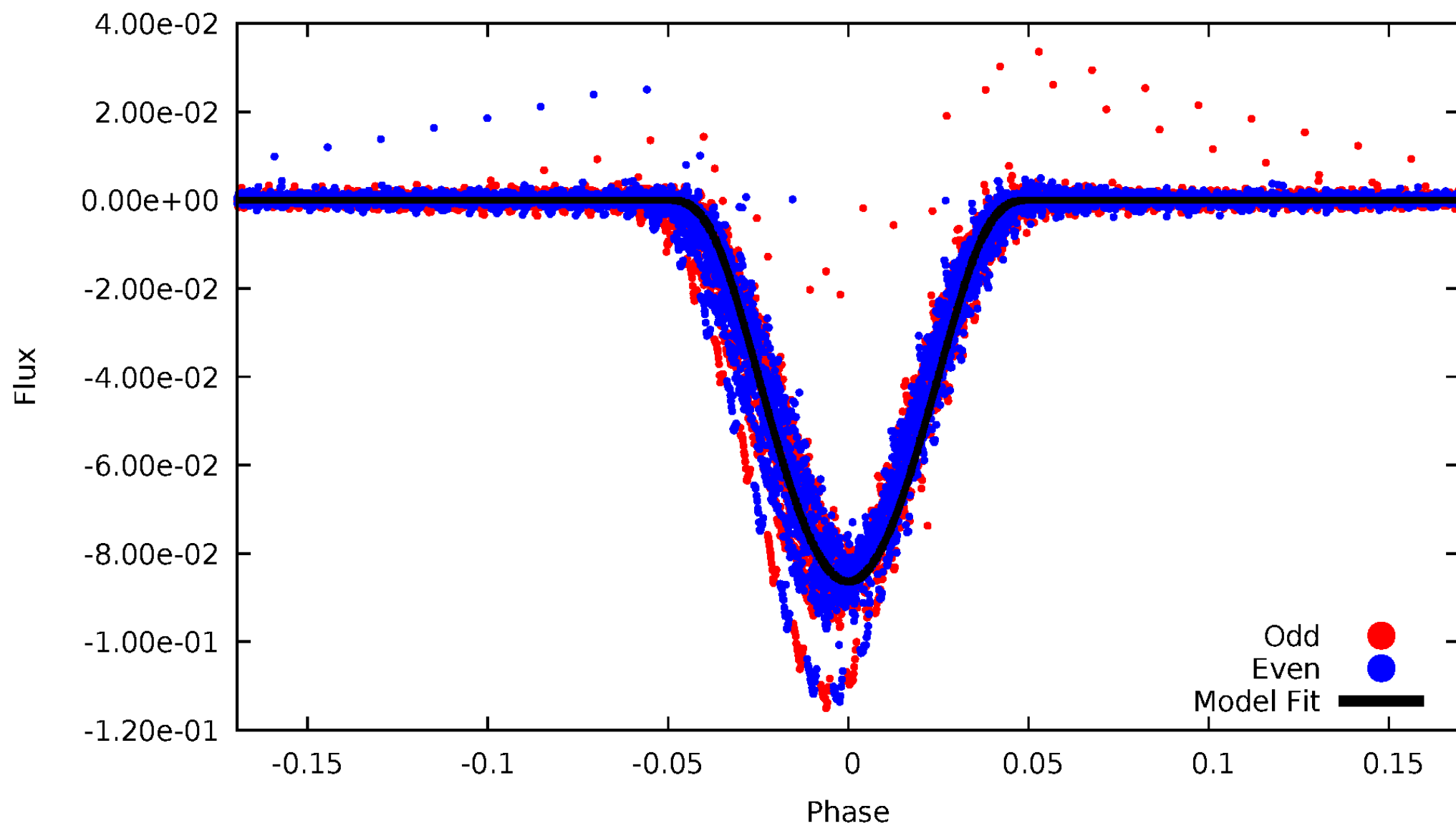


TCE 007985167-01



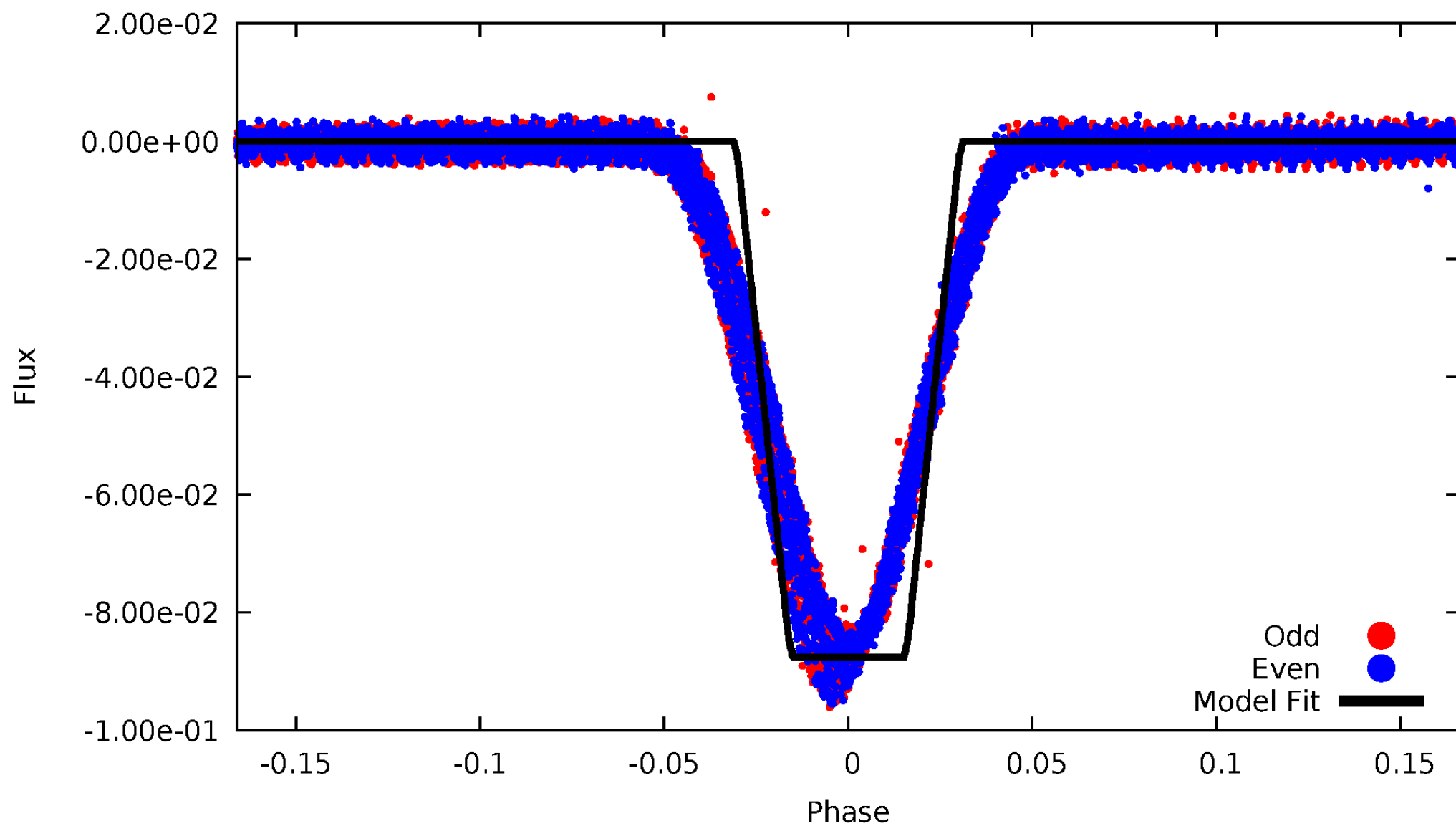
DV Odd/Even

TCE 007985167-01



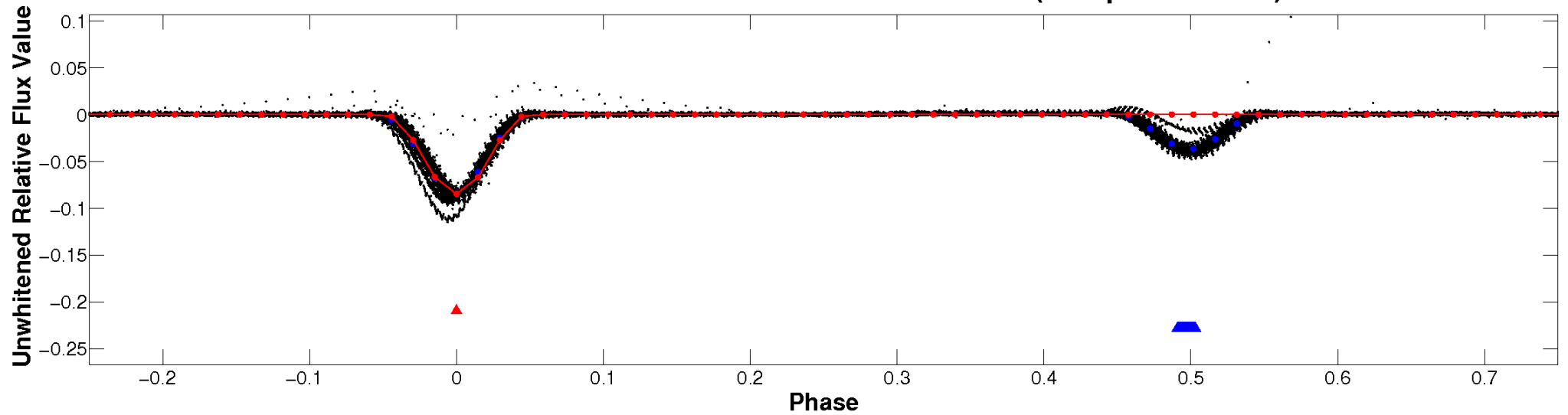
ALT Odd/Even

TCE 007985167-01

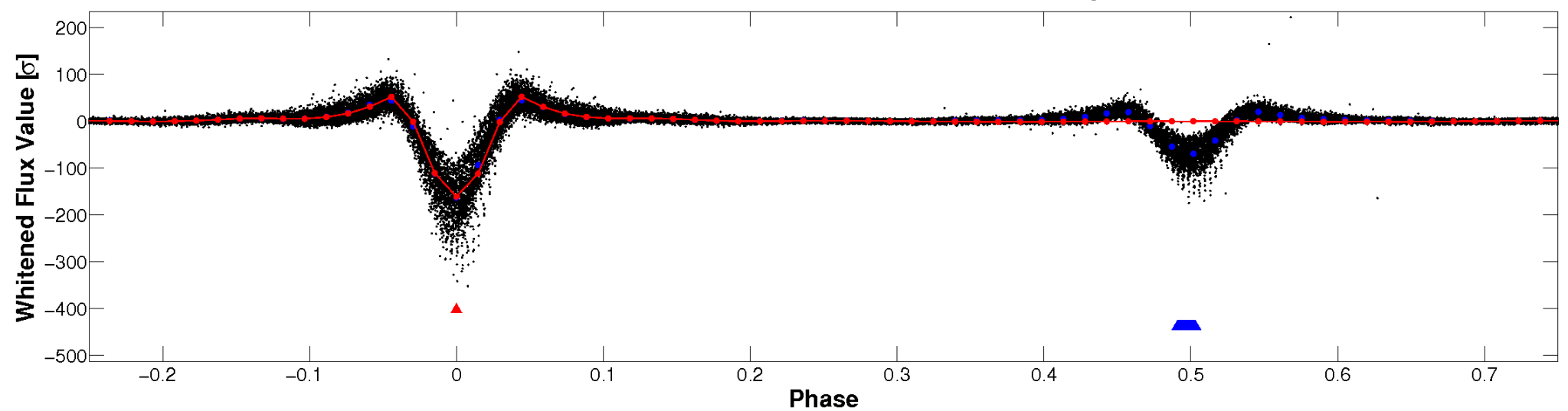


Non-Whitened Vs. Whitened Light Curve

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

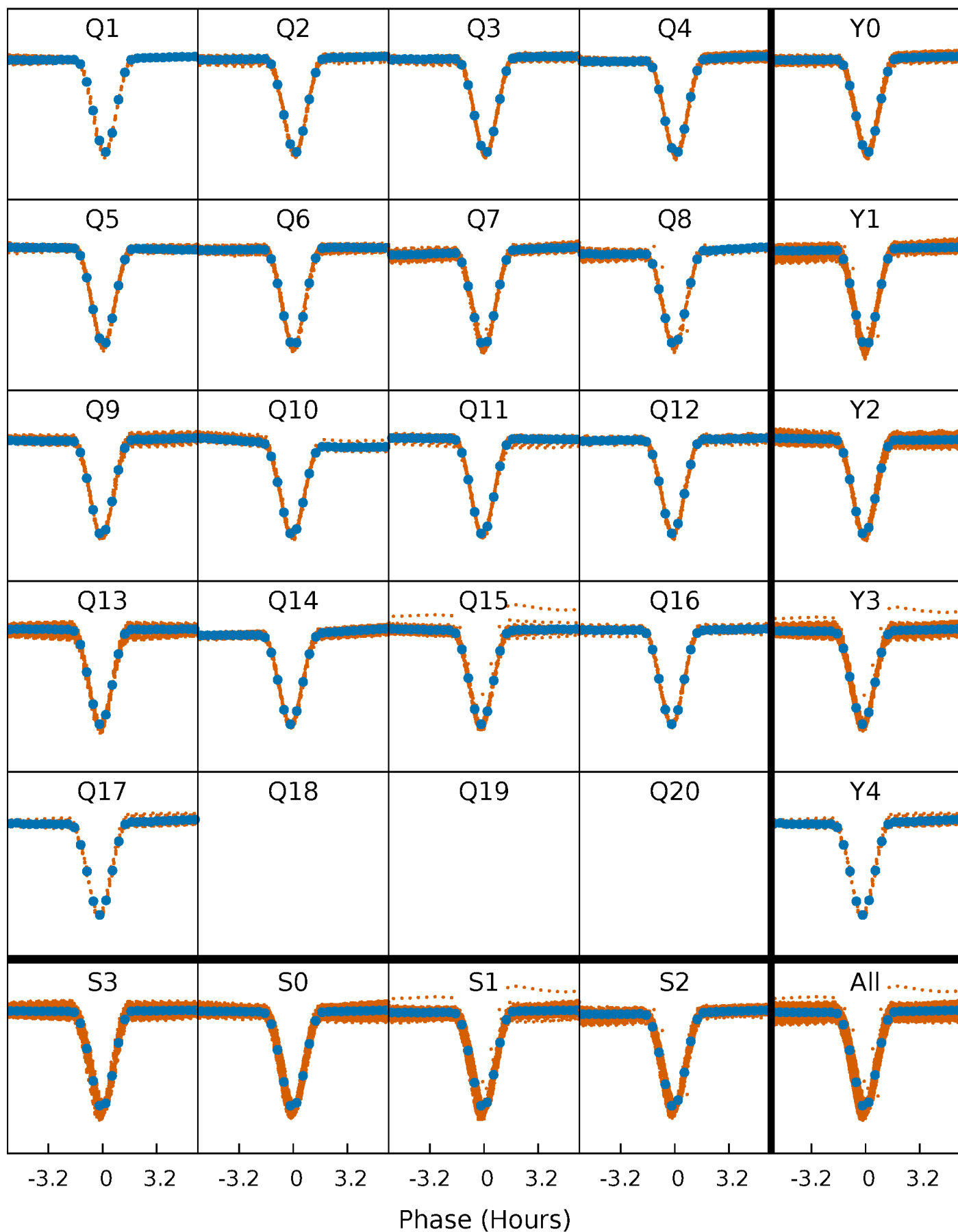


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



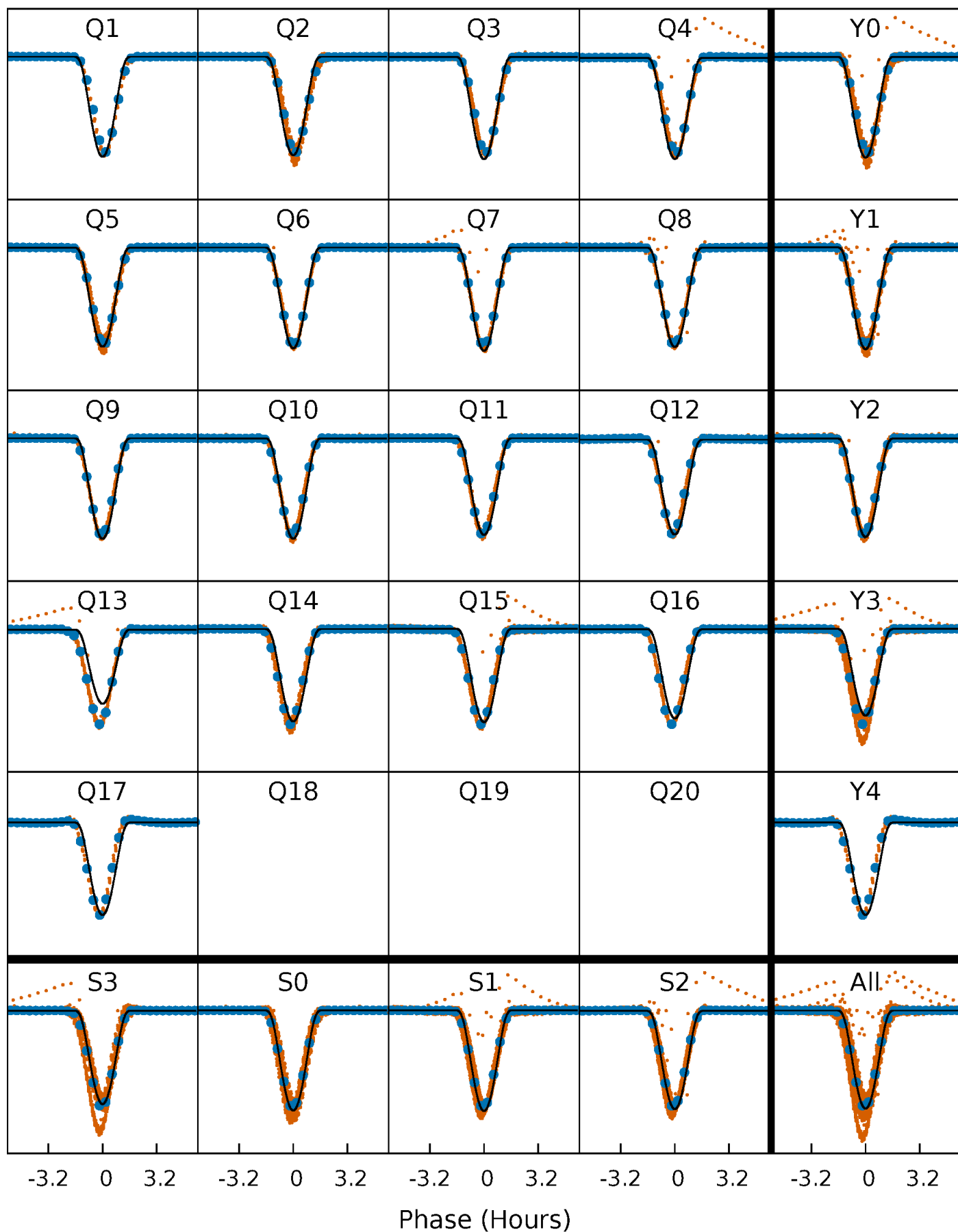
PDC Quarter-Phased Transit Curves

TCE 007985167-01 P= 1.384492 Days $T_0=132.271826$ (BKJD)



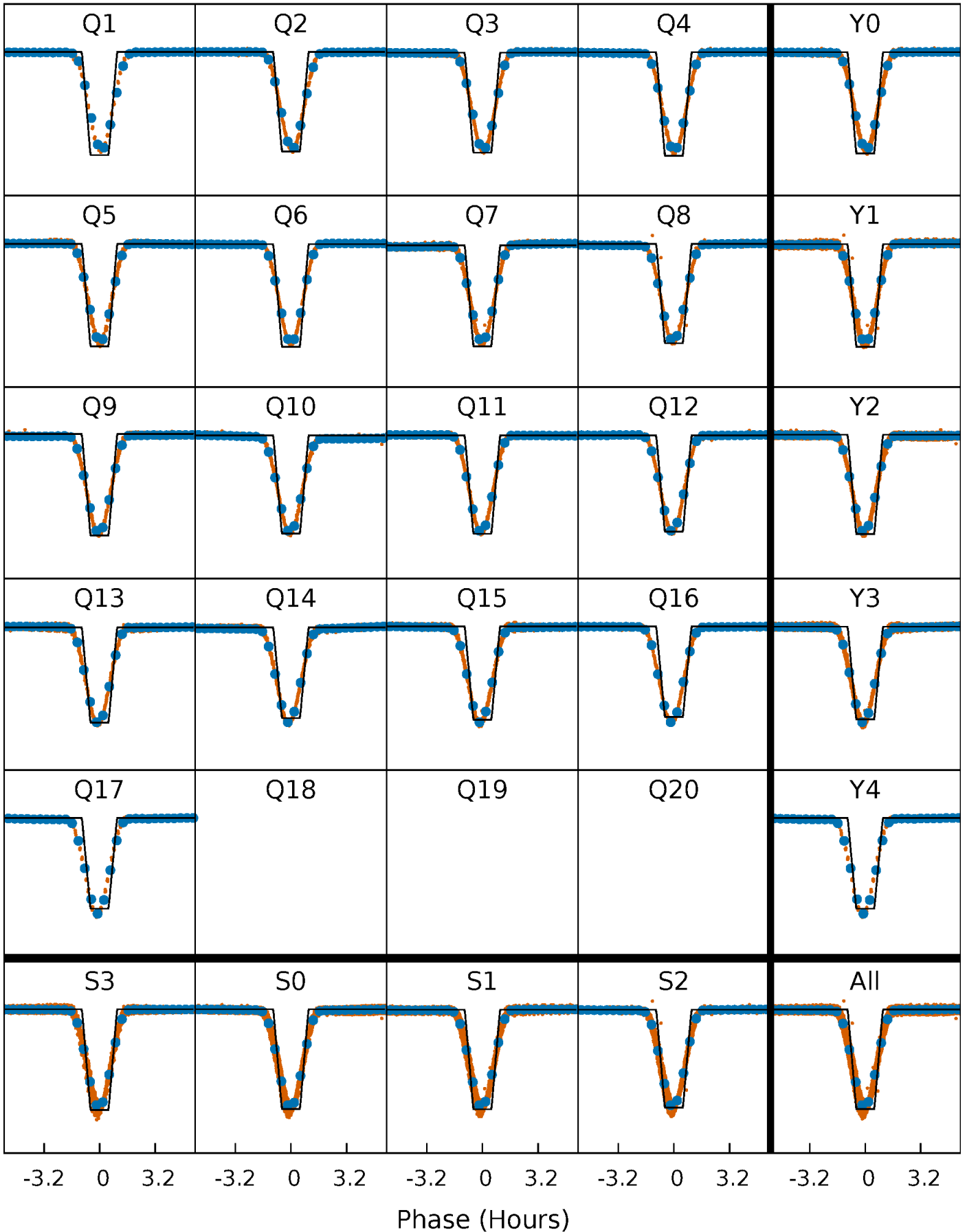
DV Quarter-Phased Transit Curves

TCE 007985167-01 P= 1.384492 Days $T_0=132.271826$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

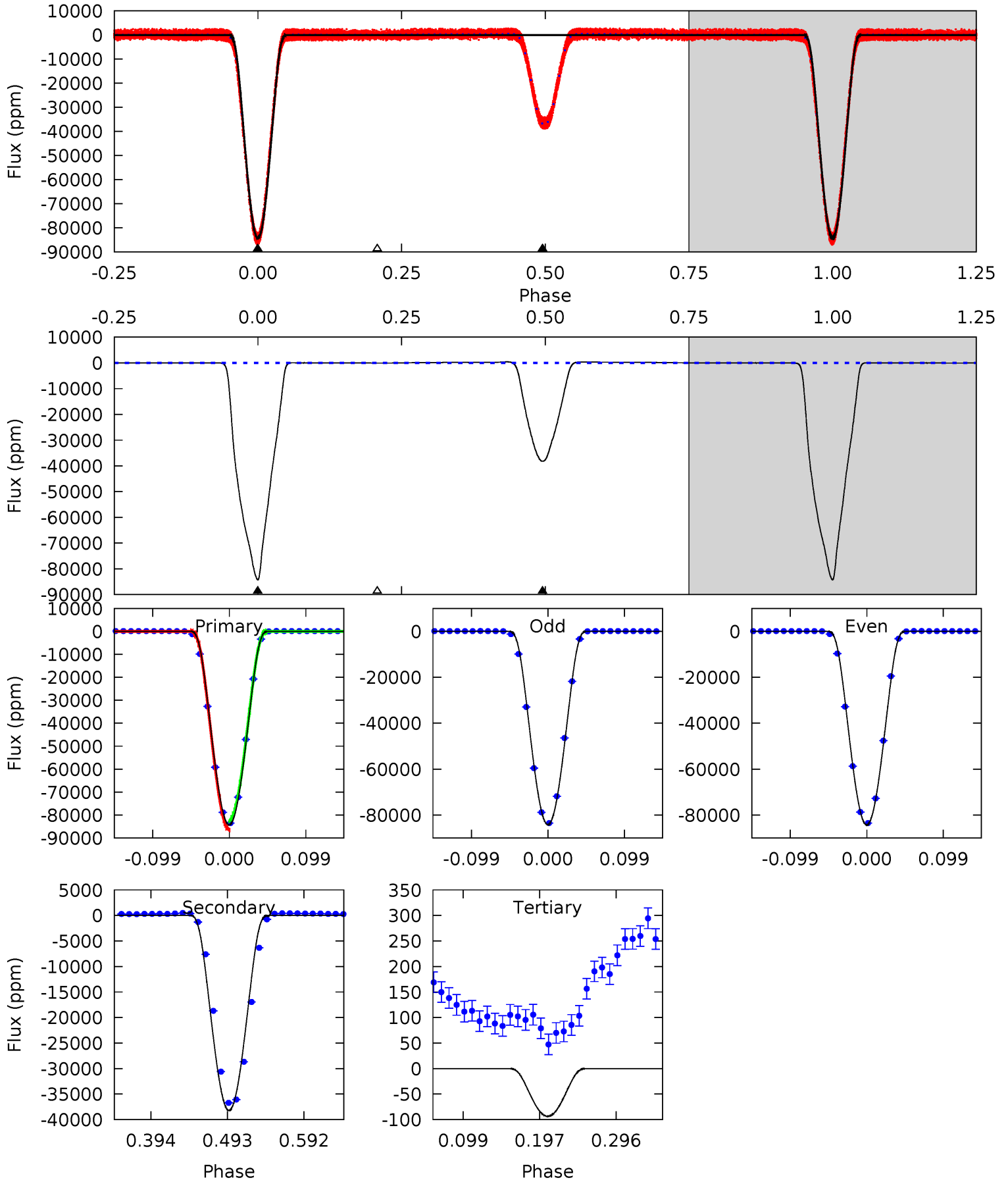
TCE 007985167-01 P= 1.384488 Days $T_0=132.273708$ (BKJD)



DV Model-Shift Uniqueness Test

007985167-01, P = 1.384492 Days, E = 130.887334 Days

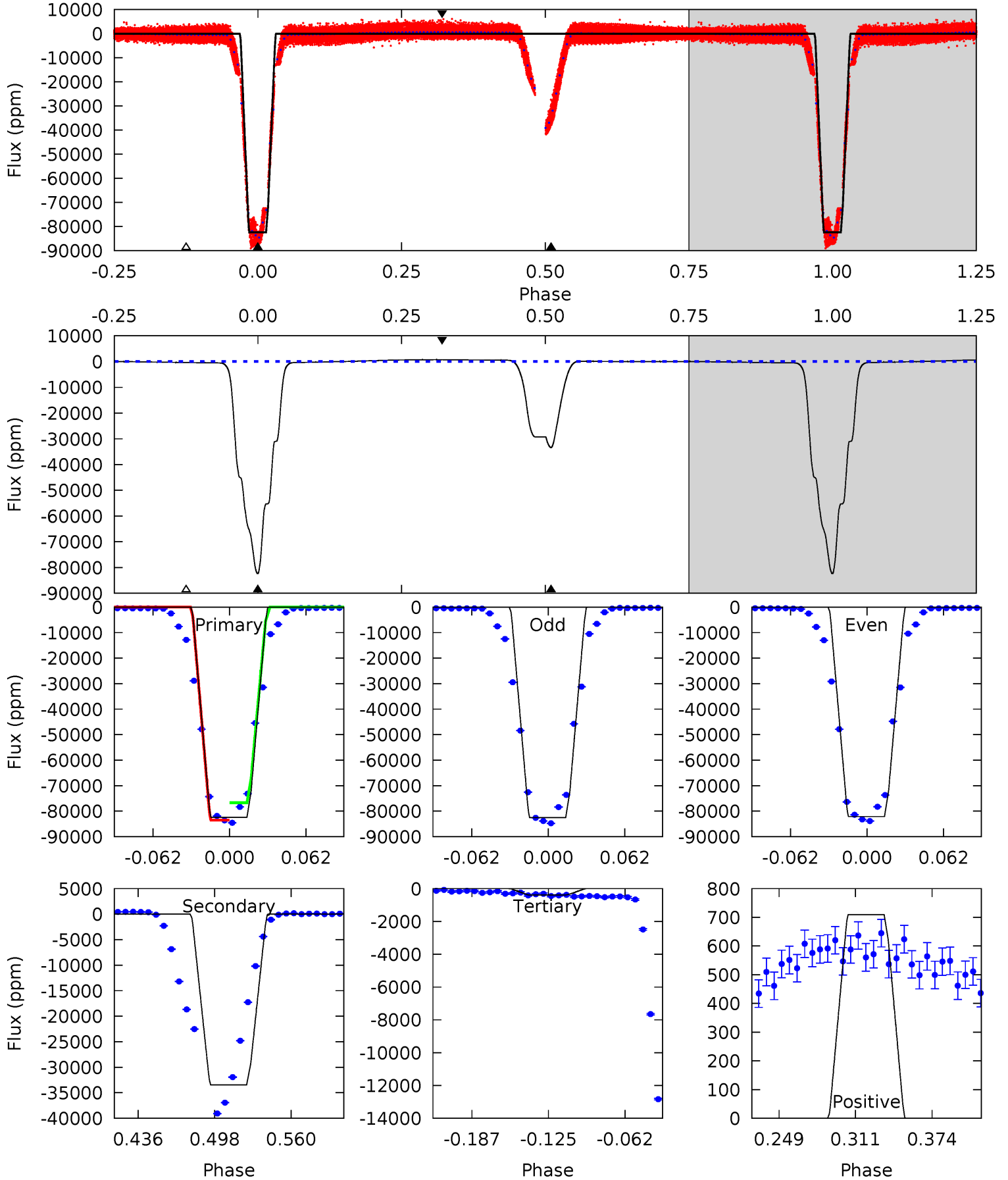
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7336	3327	8.15	0	4.57	1.65	9.30	7328	7336	3319	3327	4.24	1.01	0.00	165.1



Alt Model-Shift Uniqueness Test

007985167-01, P = 1.384488 Days, E = 130.889220 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2826	1147	13.5	24.3	4.66	1.86	13.0	2813	2802	1133	1122	7.19	1.00	0.01	103.2



Stellar Parameters For KIC 007985167

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6163^{+167}_{-185}	$4.137^{+0.312}_{-0.168}$	$-0.520^{+0.300}_{-0.300}$	$1.358^{+0.361}_{-0.441}$	$0.922^{+0.127}_{-0.092}$	$0.519^{+1.087}_{-0.235}$
	+3%/-3%	+8%/-4%	+58%/-58%	+27%/-32%	+14%/-10%	+210%/-45%
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 007985167-01 / KOI 6947.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38216 ± 11	$58.19^{+8.75}_{-10.29}$	2868^{+222}_{-263}	4498^{+103}_{-107}	$3.697^{+1.566}_{-0.905}$
Alt.	-33433 ± 29	$43.20^{+6.58}_{-7.61}$	2837^{+222}_{-271}	4921^{+117}_{-126}	$5.800^{+2.701}_{-1.405}$

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

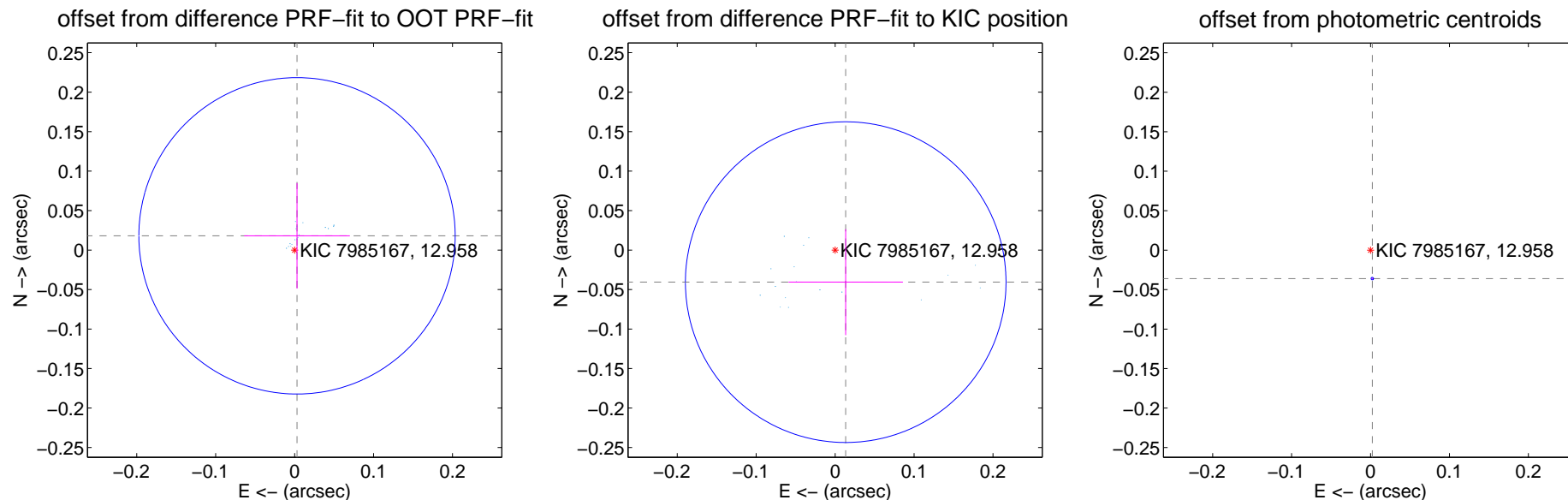
DV Centroid Data

Supplemental centroid analysis for 007985167-01. Kepler magnitude: 12.96. Transit SNR 4270.67

There are 17 quarters with good PRF difference image offsets

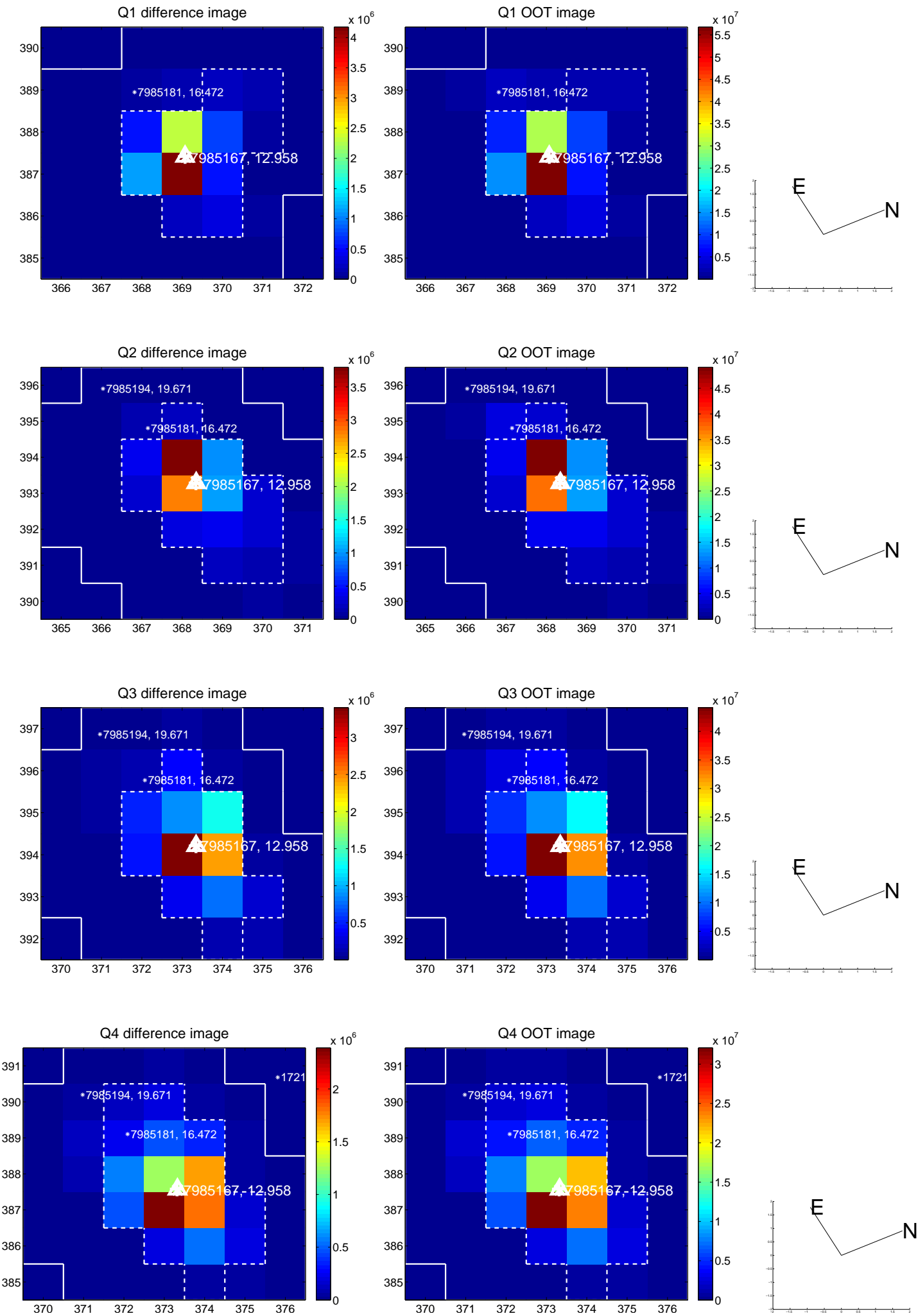
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.067	0.27	-0.003 ± 0.067	0.018 ± 0.067
PRF-fit source offset from KIC position	0.043 ± 0.068	0.63	-0.013 ± 0.072	-0.041 ± 0.067
photometric centroid source offset	0.04 ± 0.00	69.54	-0.00 ± 0.00	-0.04 ± 0.00

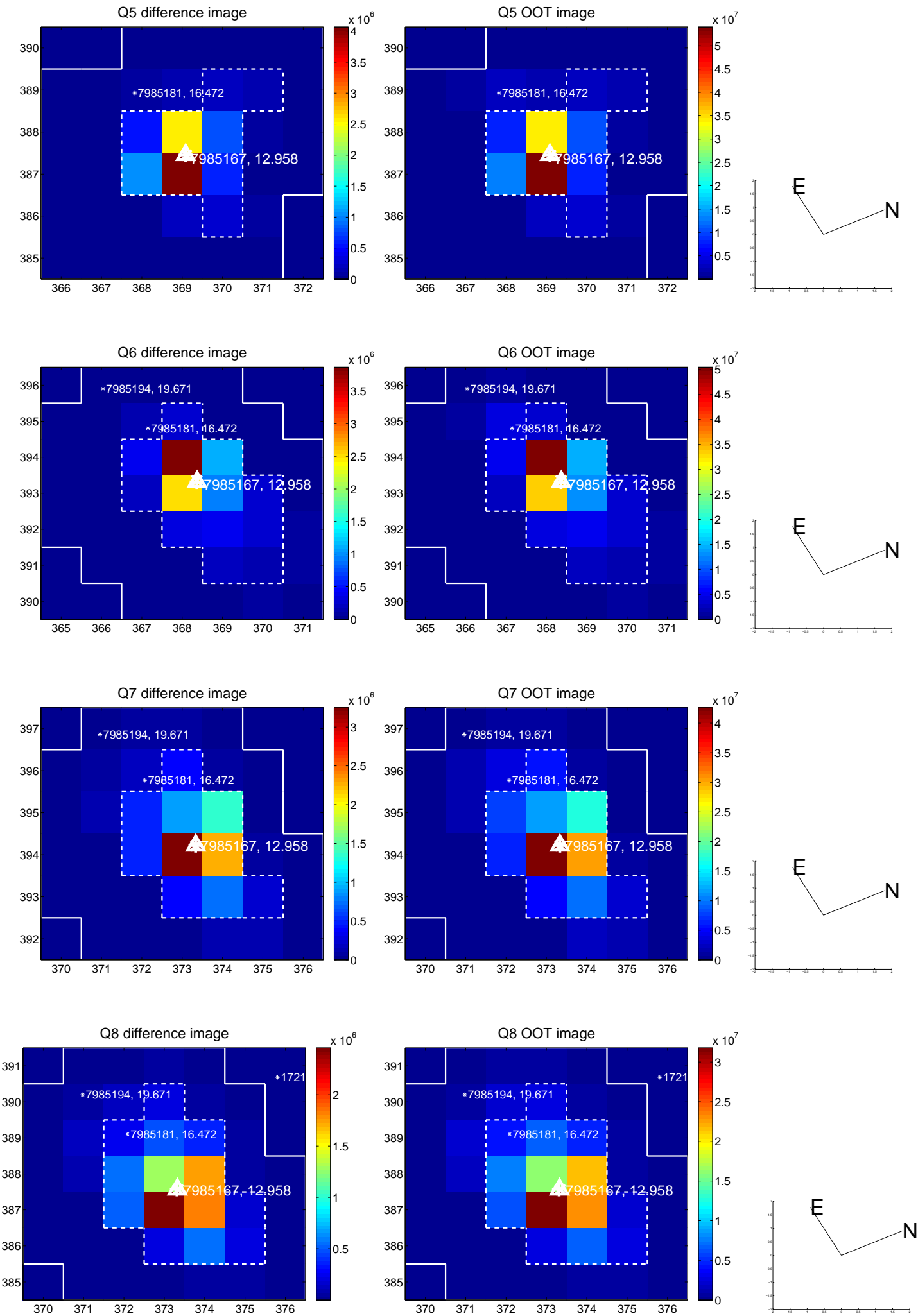


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

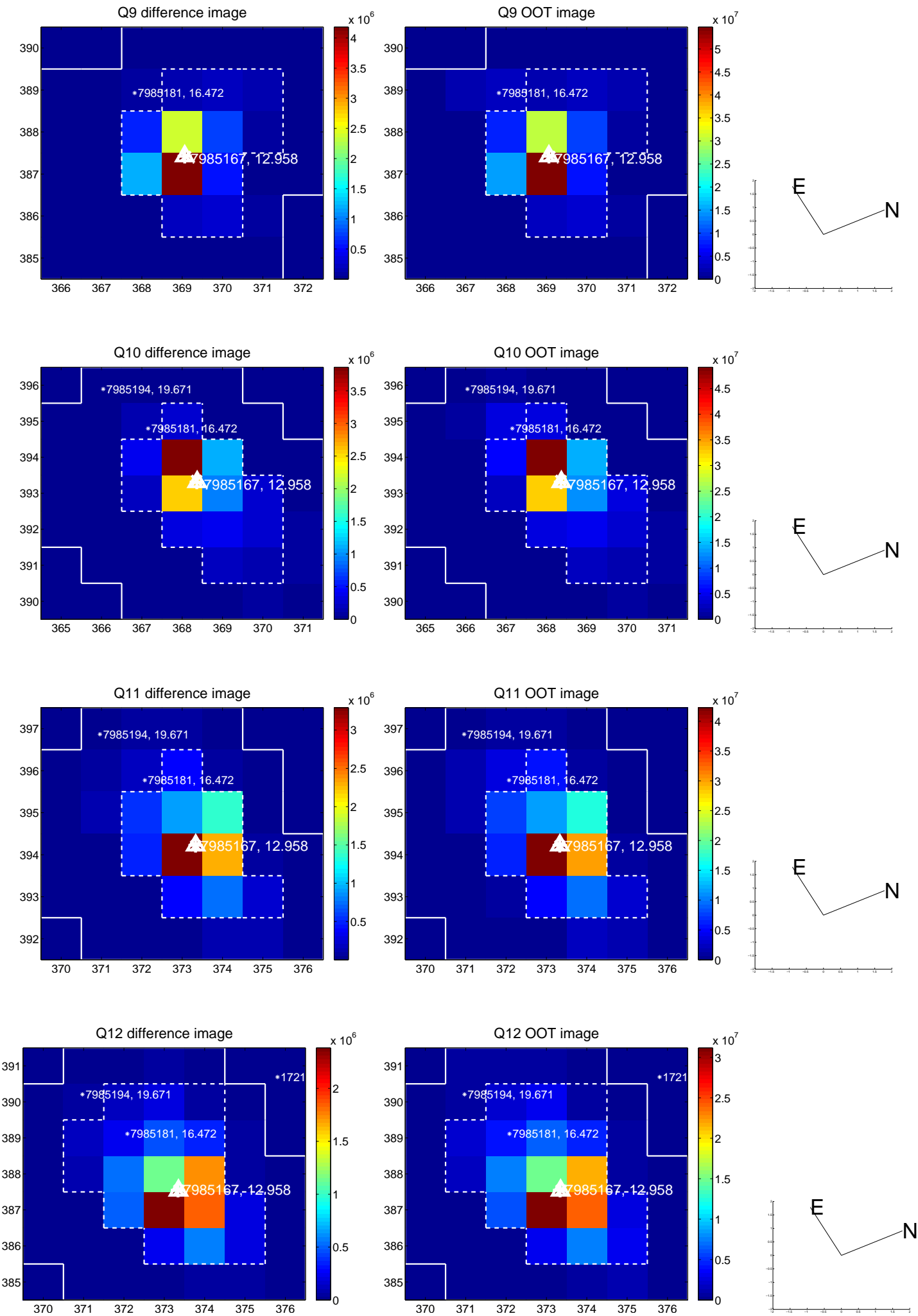
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



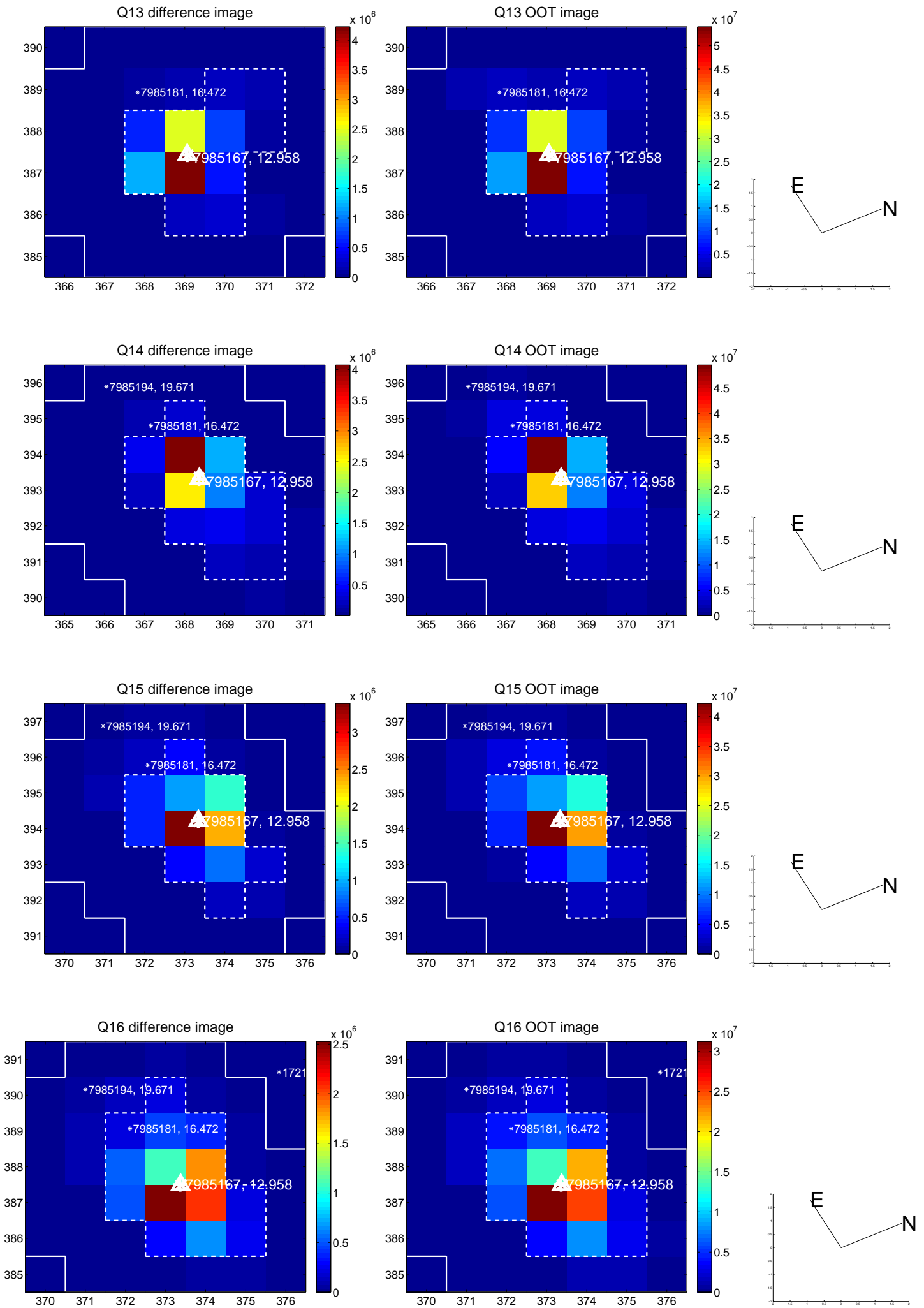
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



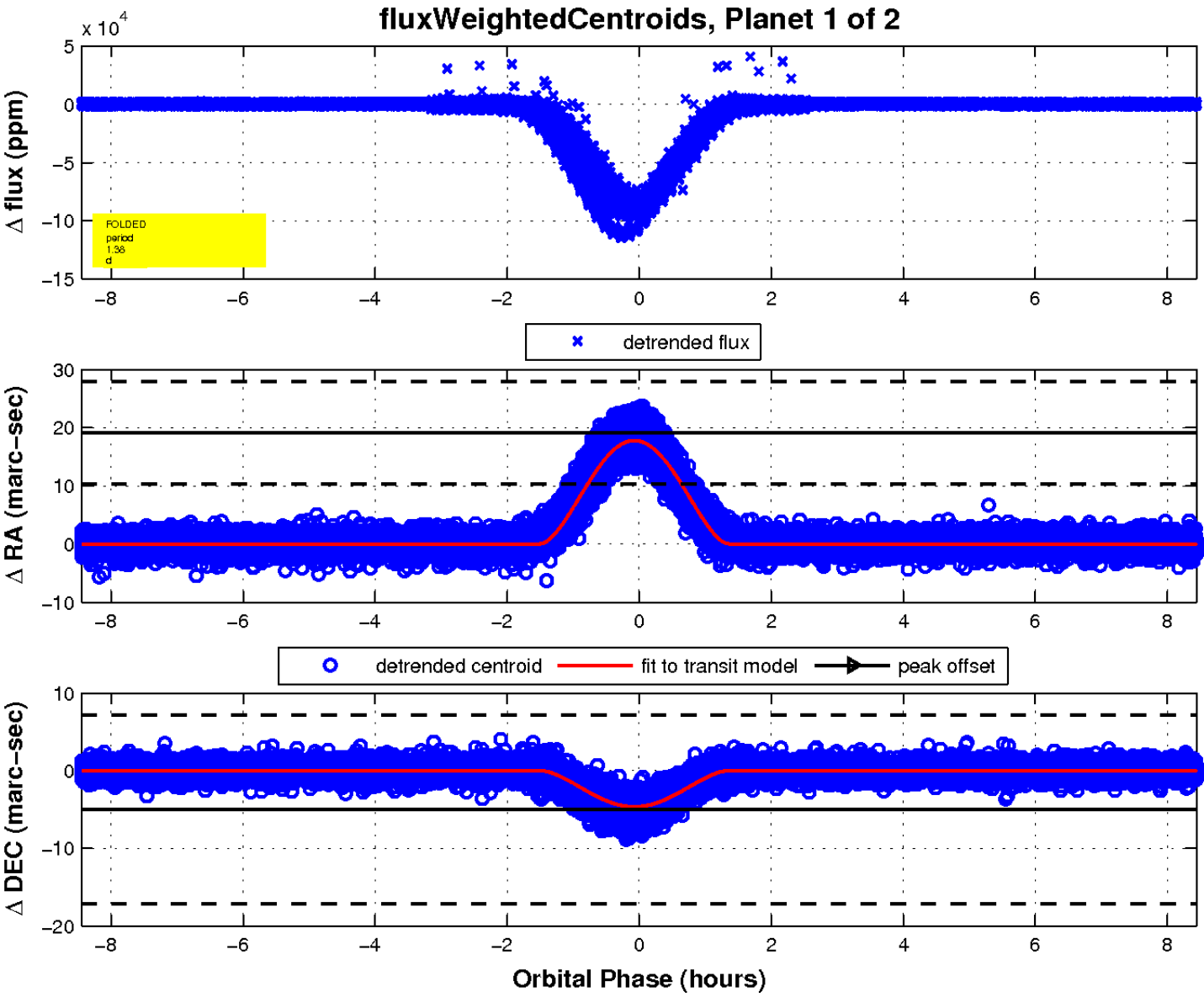
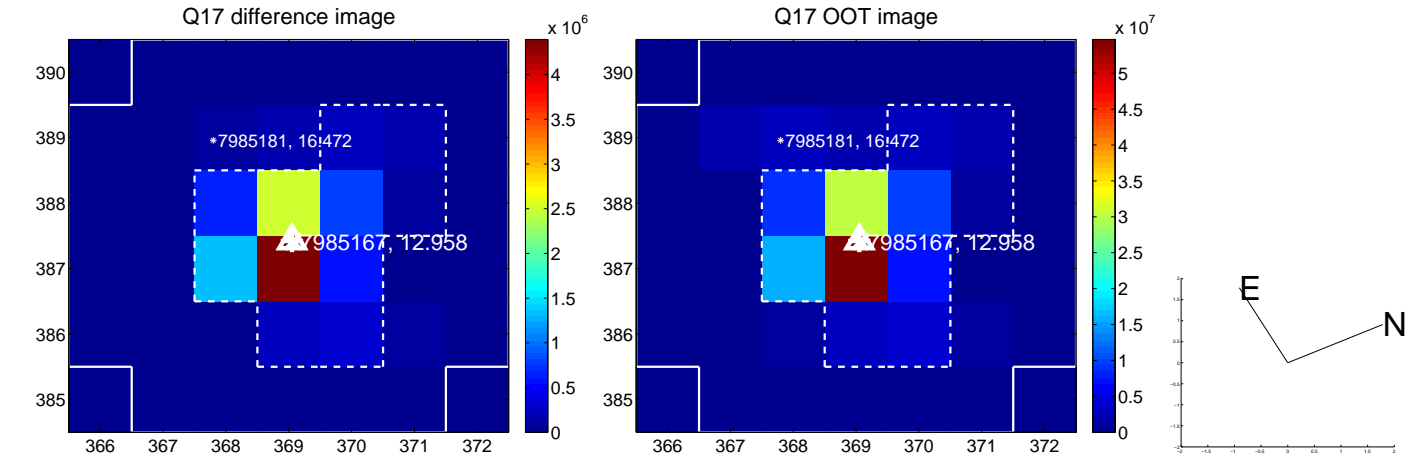
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

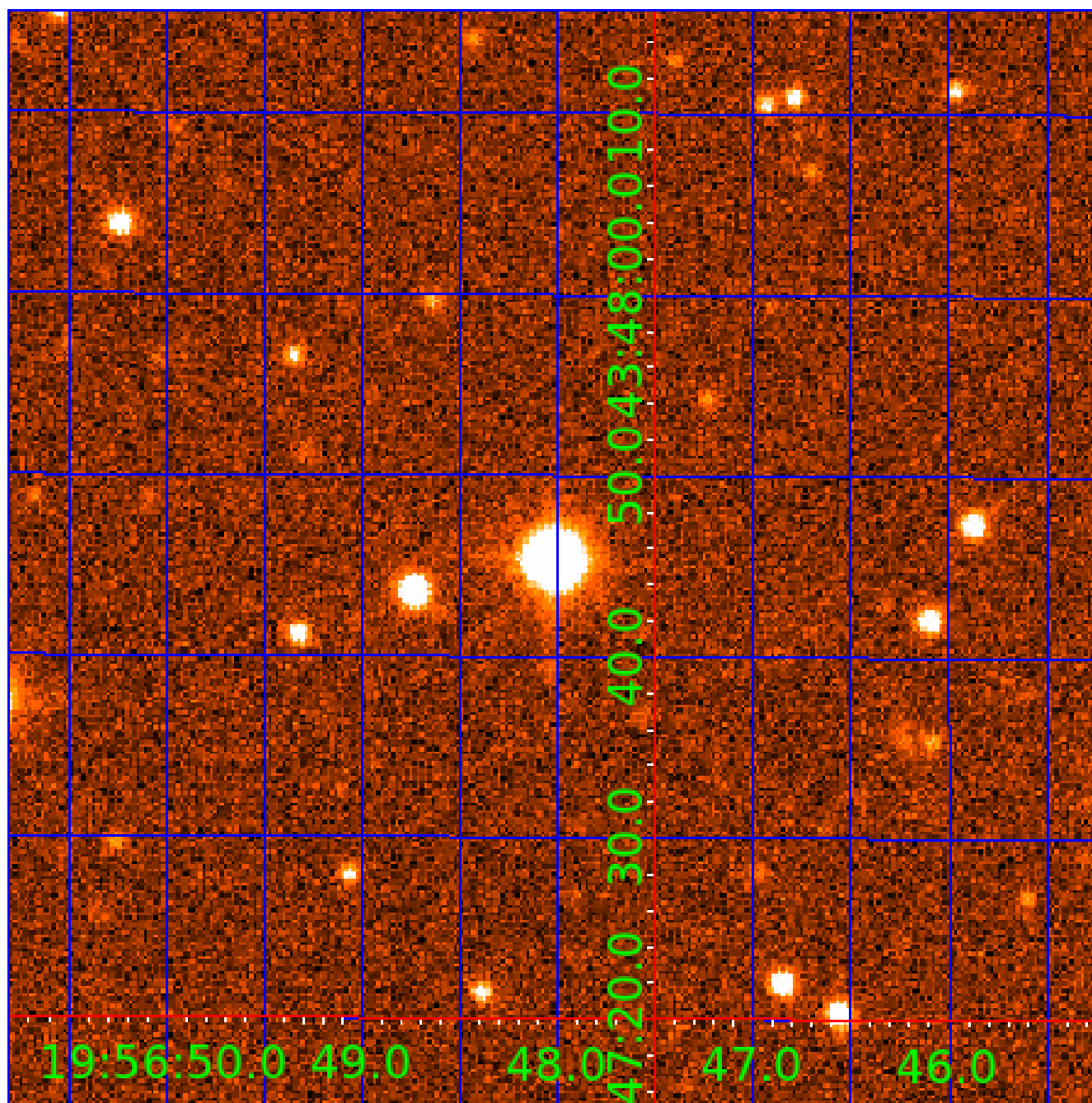


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007985167

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})
007985167-01	OBS	6947.01	1.384492	132.271826	86369.0	2.816	5744.8	4270.7	1.36	6163	58.00	4255.42
007985167-02	OBS	No	1.384475	131.584110	20934.1	2.000	4279.6	-1.0	1.36	6163	19.78	4255.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007985167-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
007985167-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

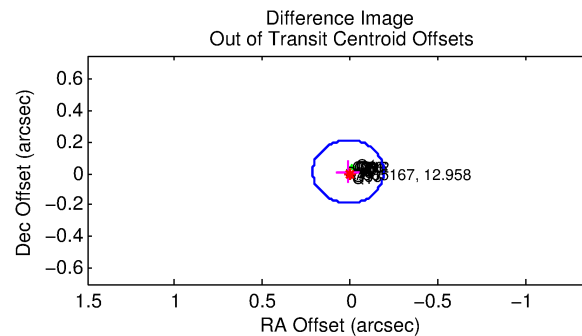
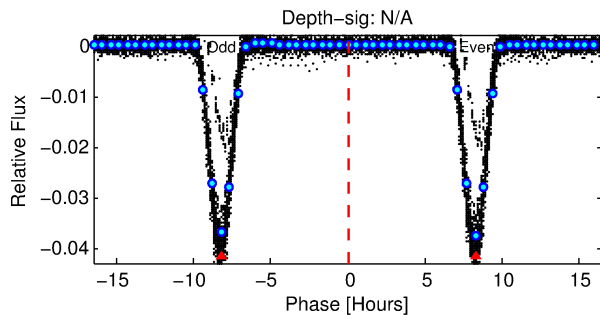
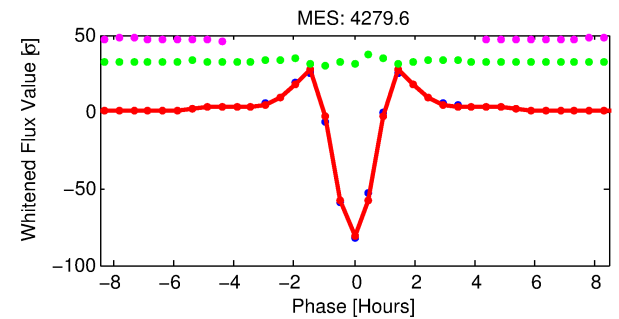
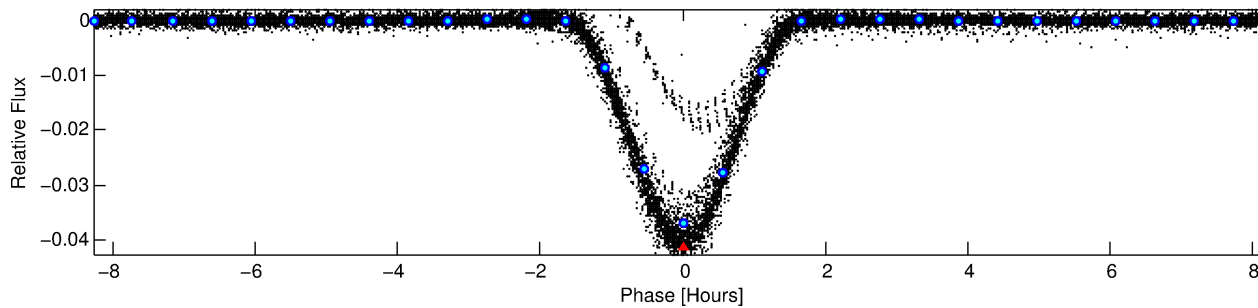
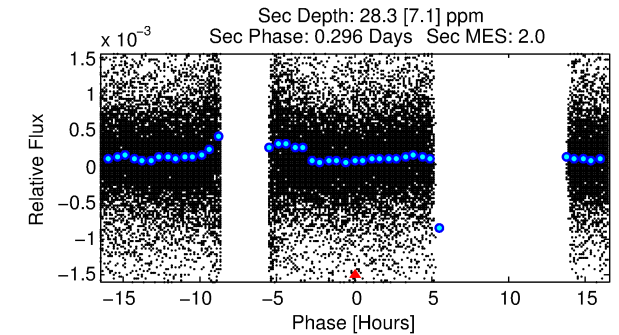
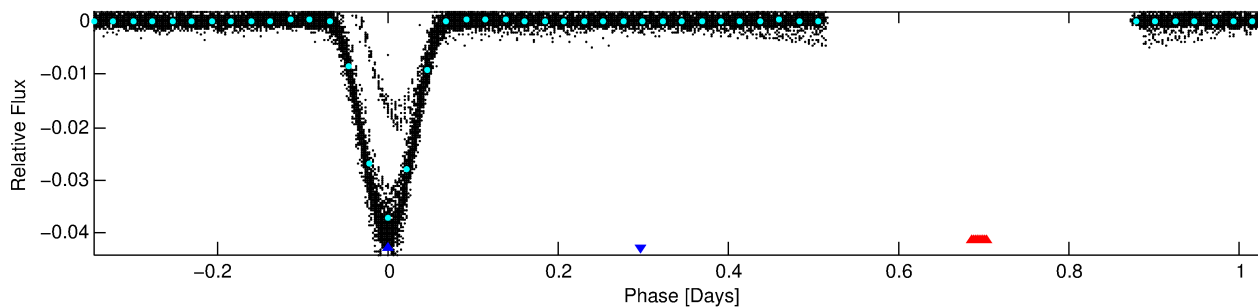
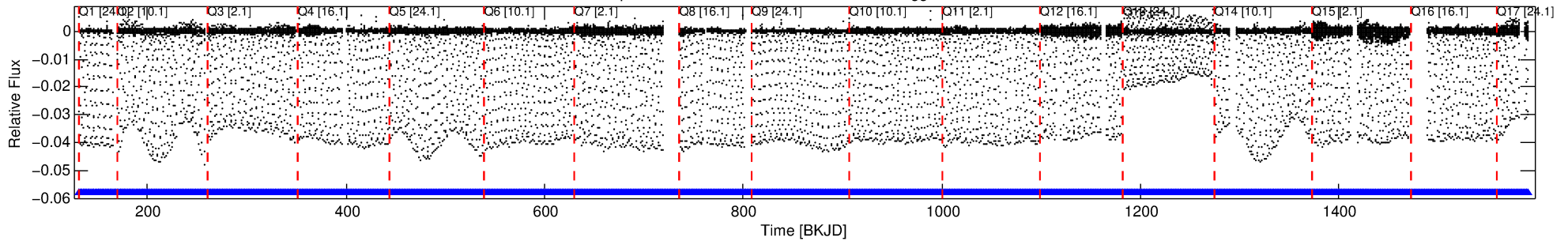
Ephemeris Match Information For 007985167-02

No Significant Match Found

DV One-Page Summary

KIC: 7985167 Candidate: 2 of 2 Period: 1.384 d
KOI: K06947 Corr: No Ephemeris Match

Kp: 12.96 R*: 1.36 Rs Teff: 6163.0 K Logg: 4.14 Fe/H: -0.520



TPS TCE Results:

Period = 1.38448 d
Epoch = 131.5841 BKJD

DV fit results are unavailable

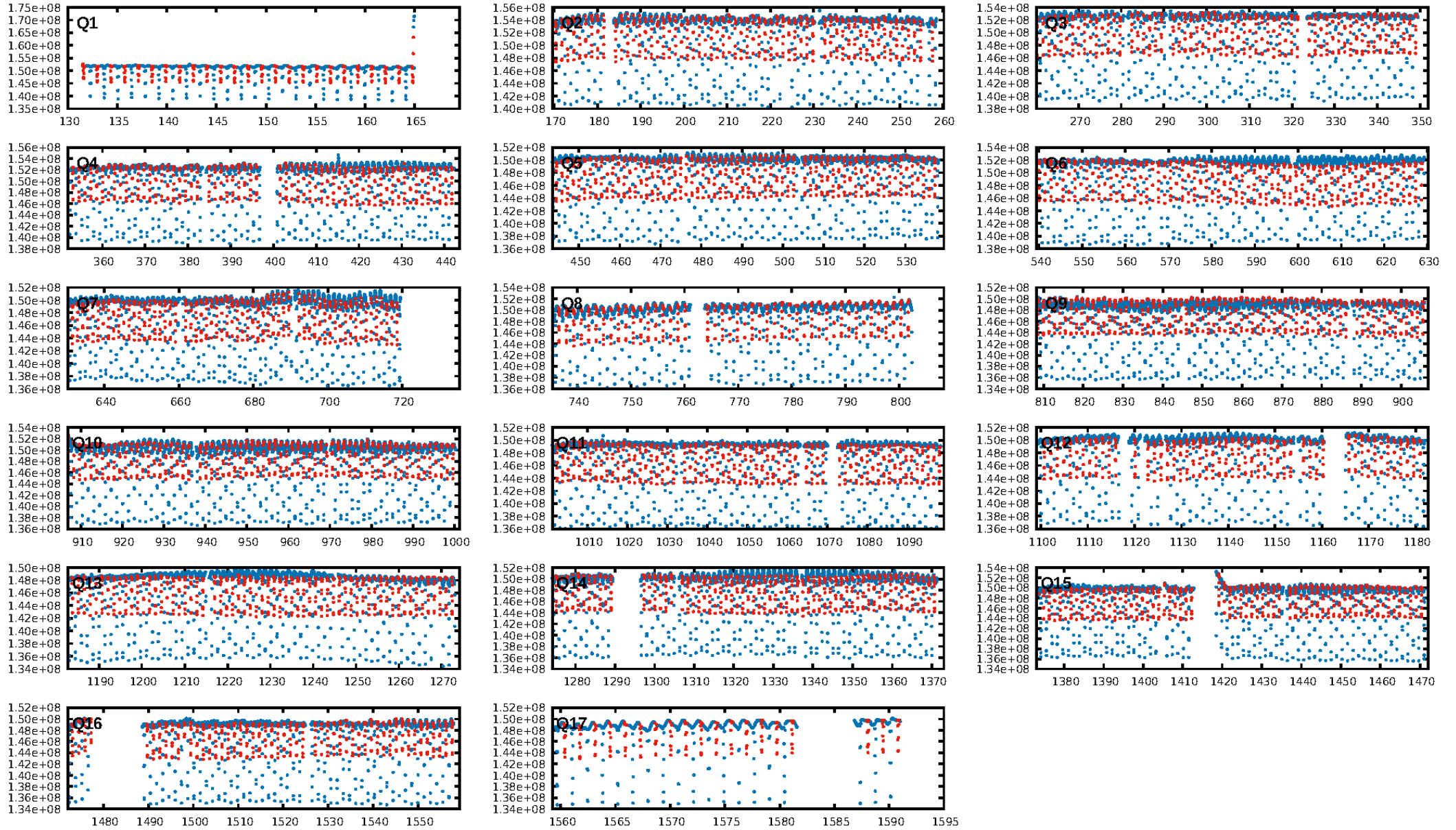
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [922/922]
GhostDiagnostic-chr: 1.838
Centroid-sig: 0.0%
Centroid-so: 0.095 arcsec [93.29σ]
OotOffset-rm: 0.018 arcsec [0.27σ]
KicOffset-rm: 0.045 arcsec [0.66σ]
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]

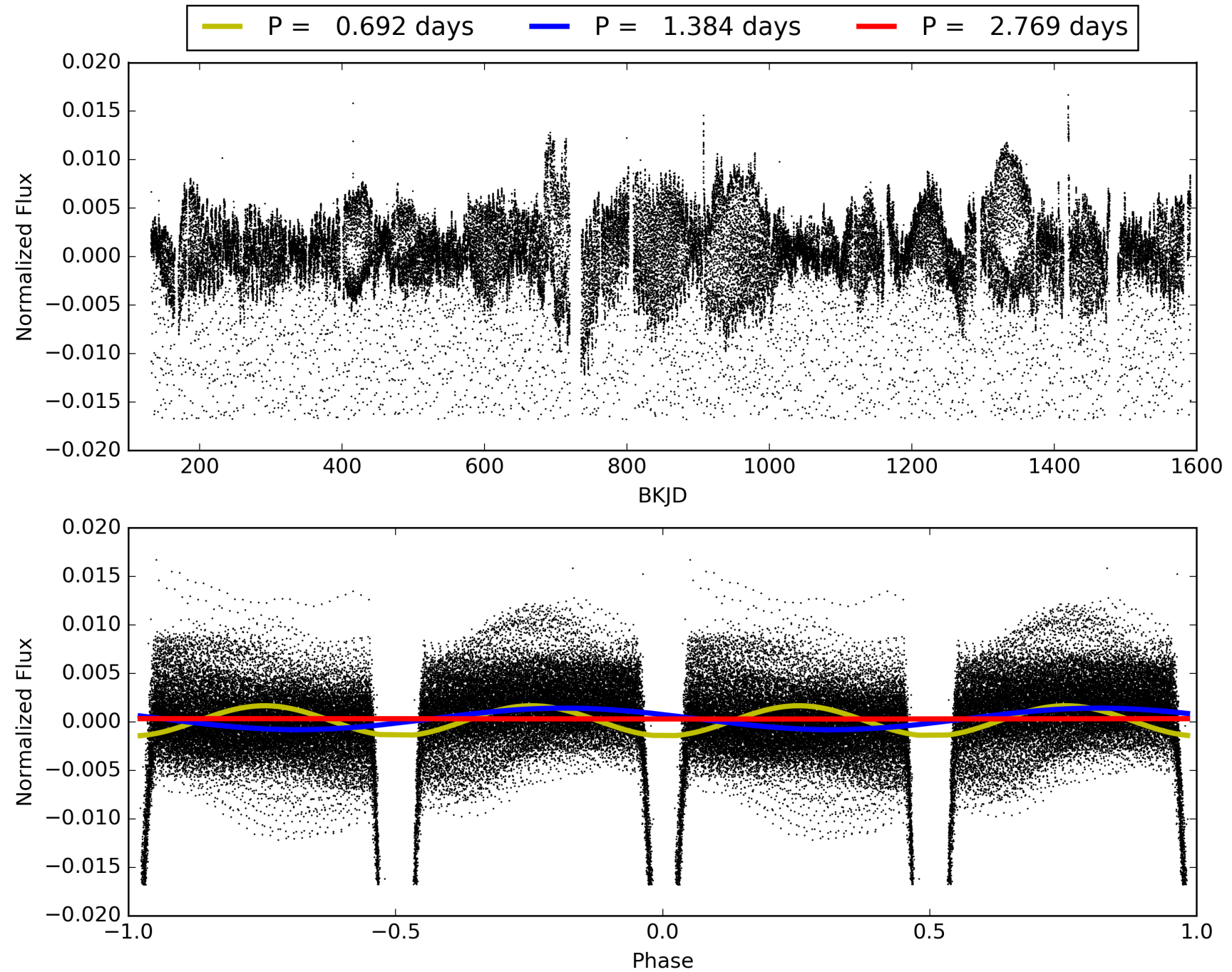
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:48:46 Z

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

TCE 007985167-02, PDC Light Curves

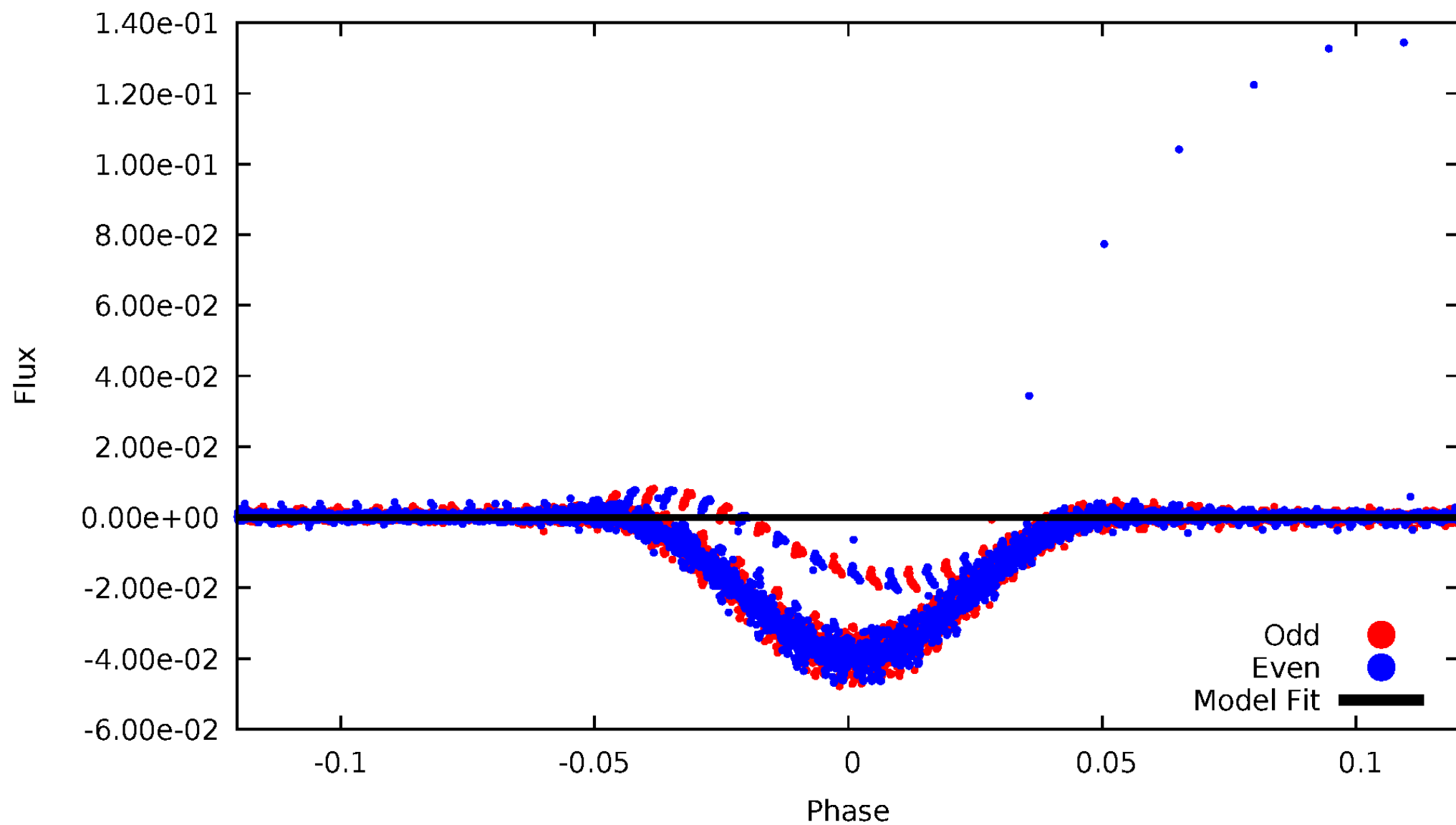


TCE 007985167-02



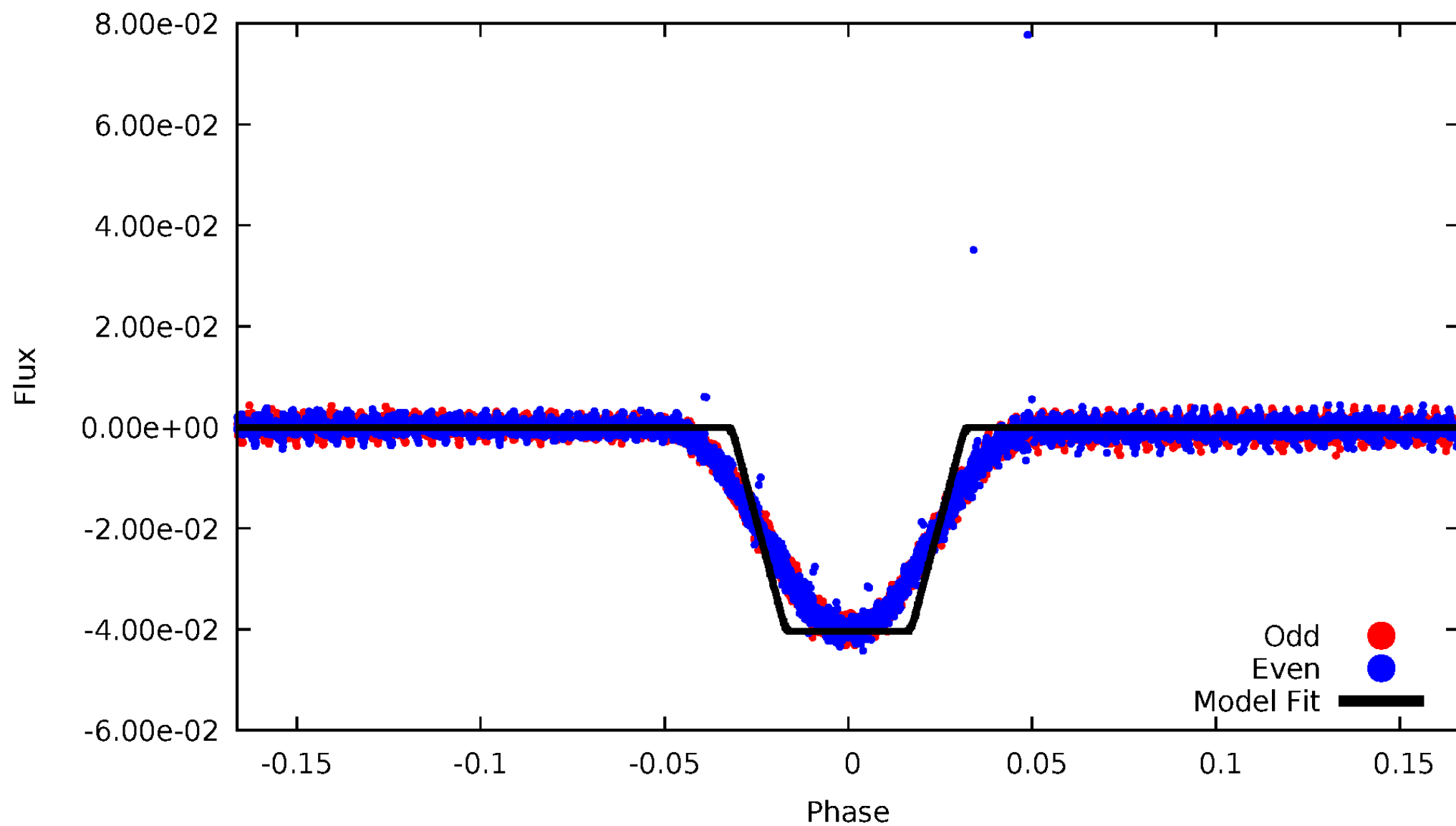
DV Odd/Even

TCE 007985167-02



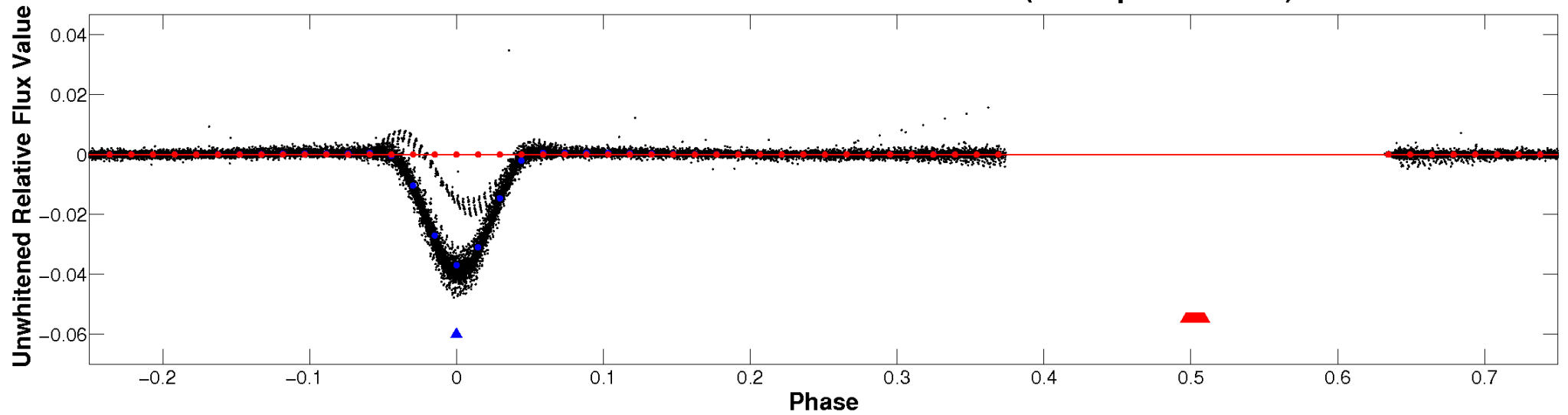
ALT Odd/Even

TCE 007985167-02

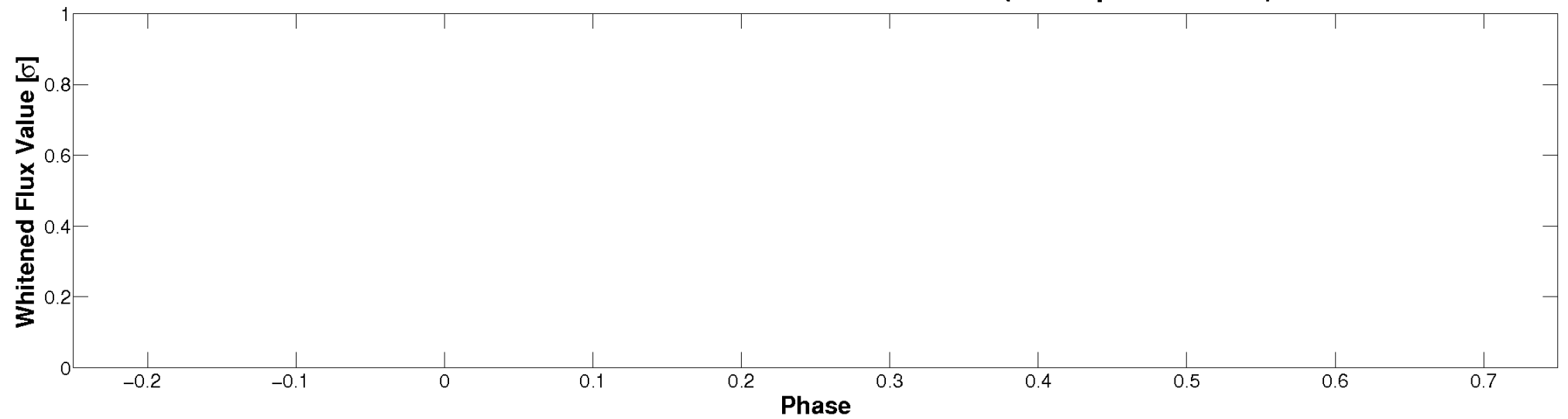


Non-Whitened Vs. Whitened Light Curve

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

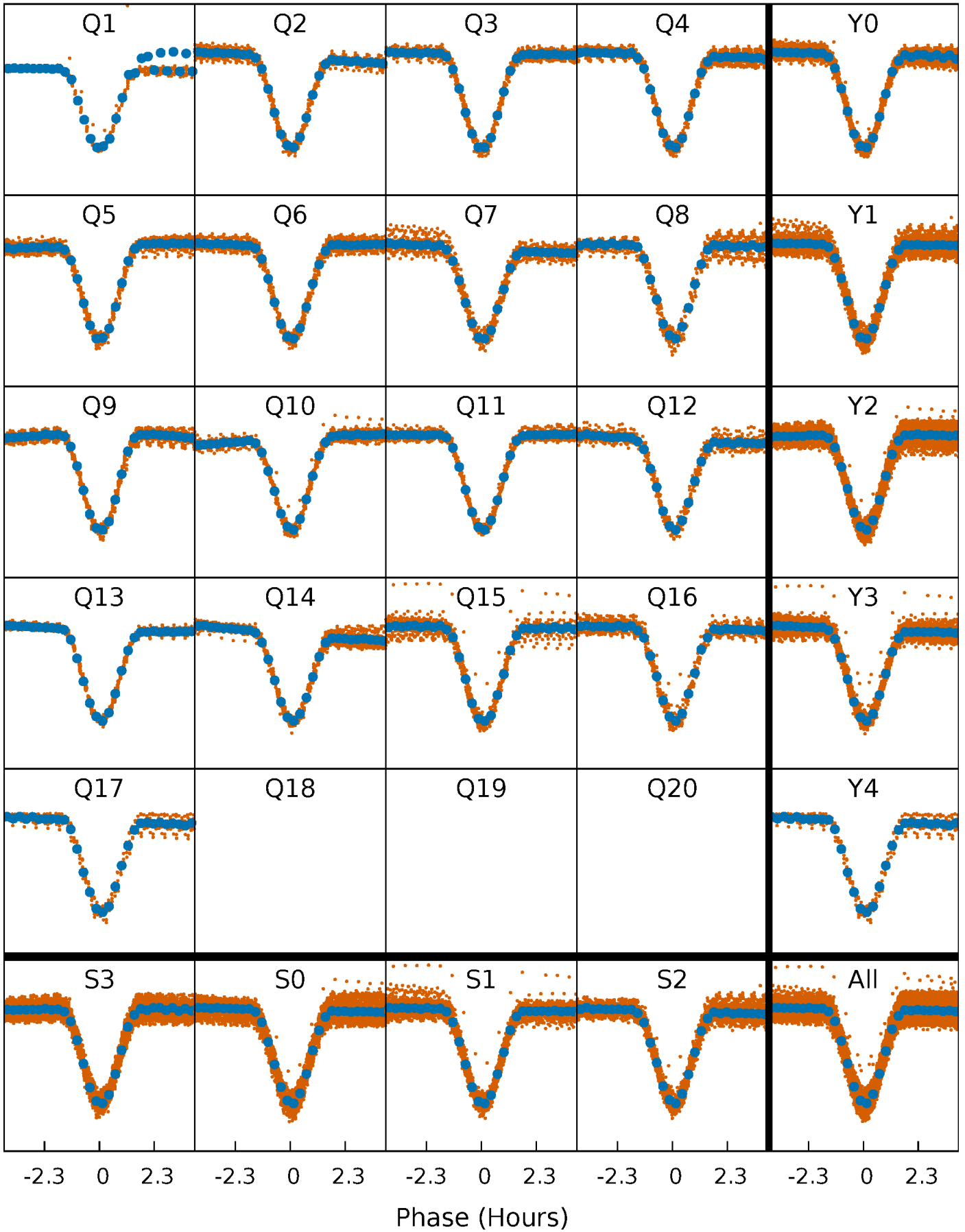


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



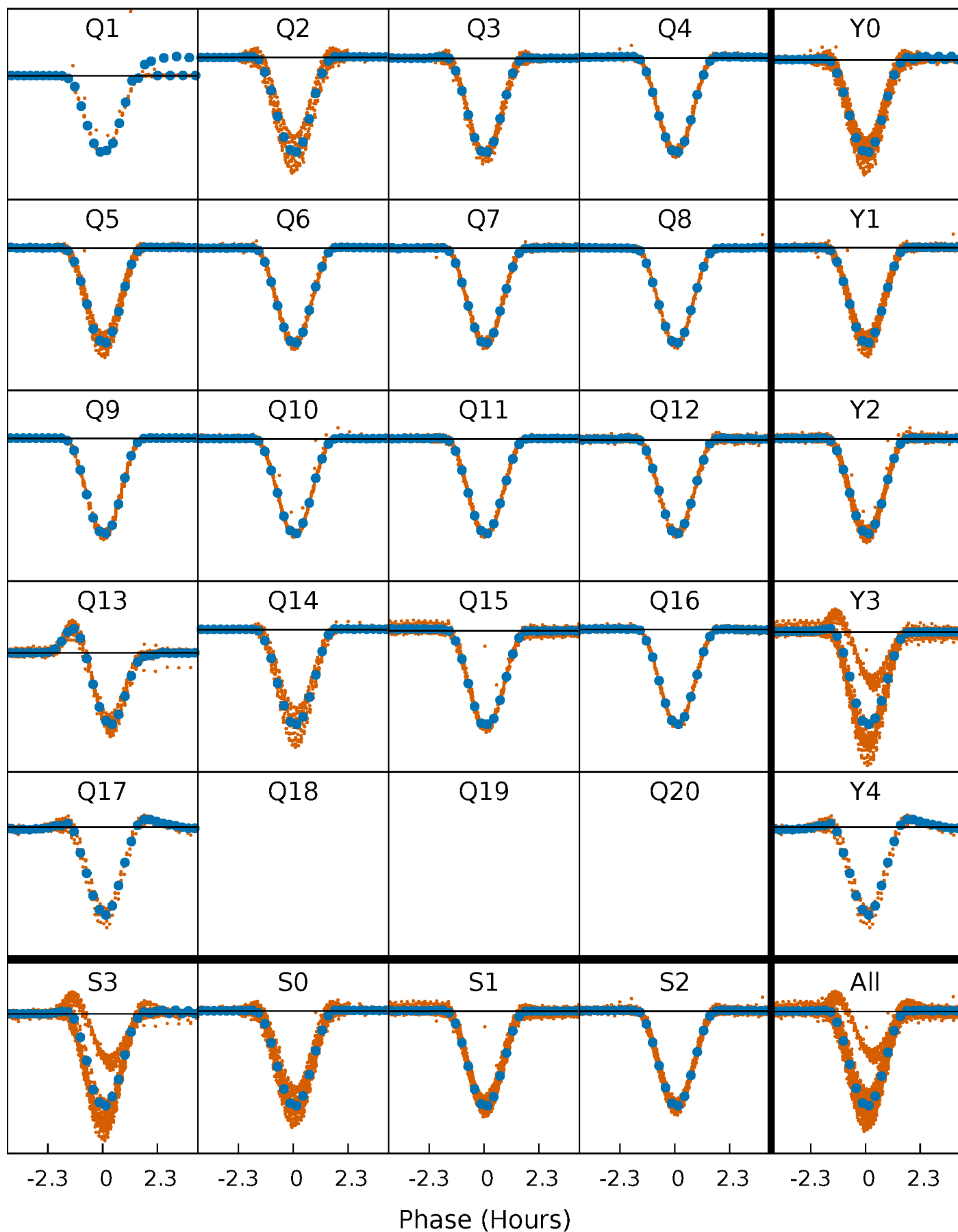
PDC Quarter-Phased Transit Curves

TCE 007985167-02 P= 1.384475 Days $T_0=131.584110$ (BKJD)



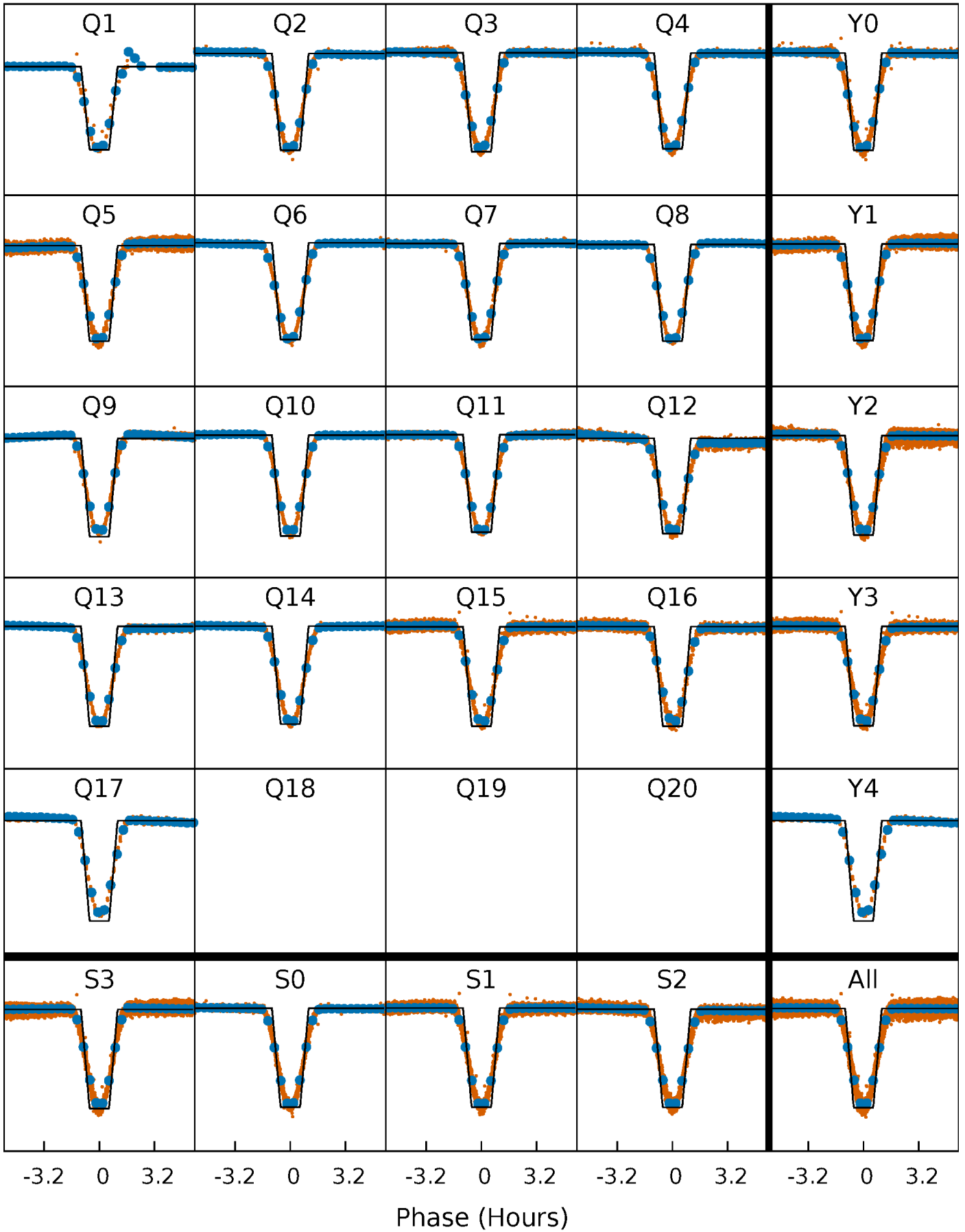
DV Quarter-Phased Transit Curves

TCE 007985167-02 P= 1.384475 Days $T_0=131.584110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

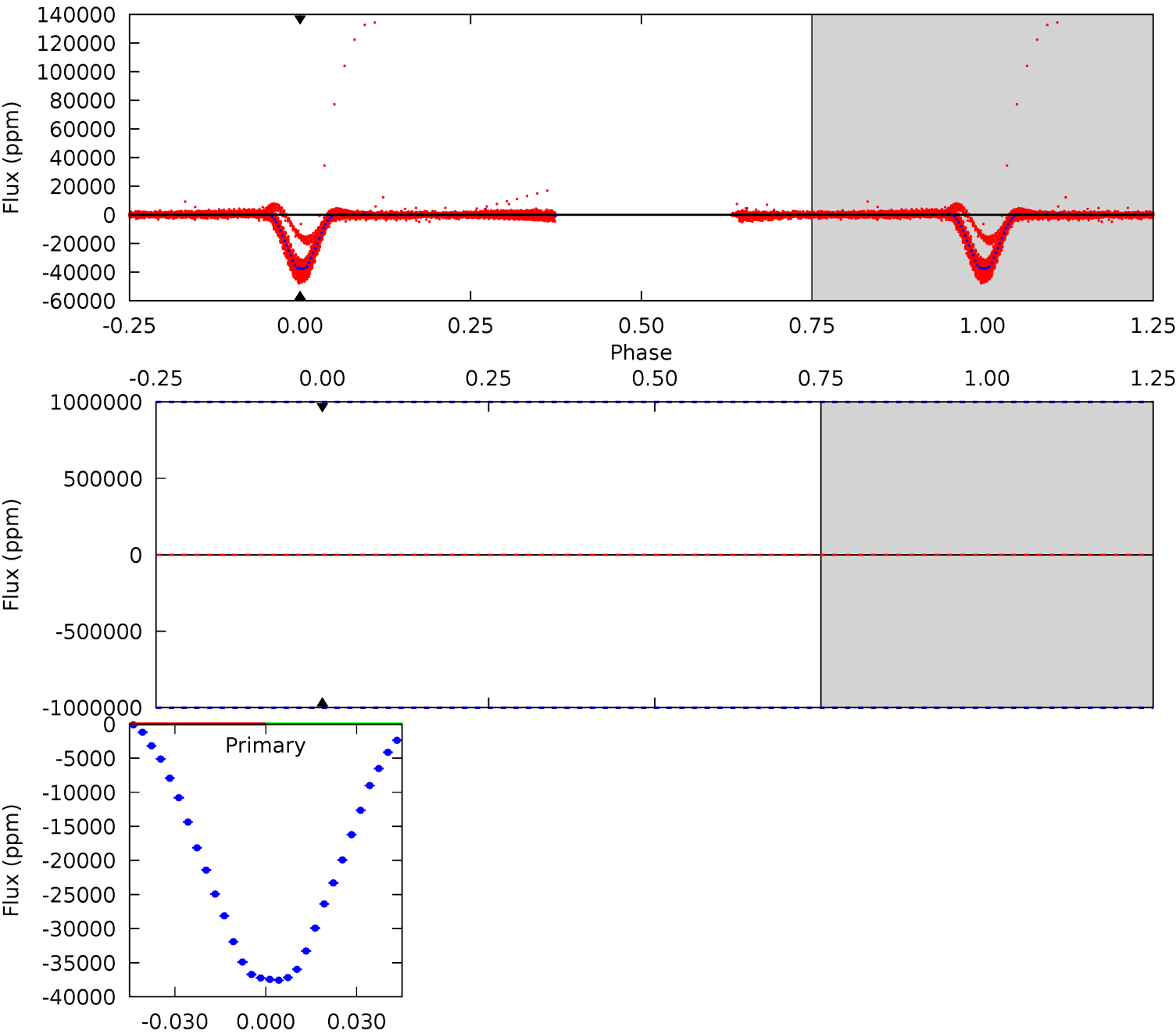
TCE 007985167-02 P= 1.384475 Days $T_0=131.586370$ (BKJD)



DV Model-Shift Uniqueness Test

007985167-02, P = 1.384475 Days, E = 130.199635 Days

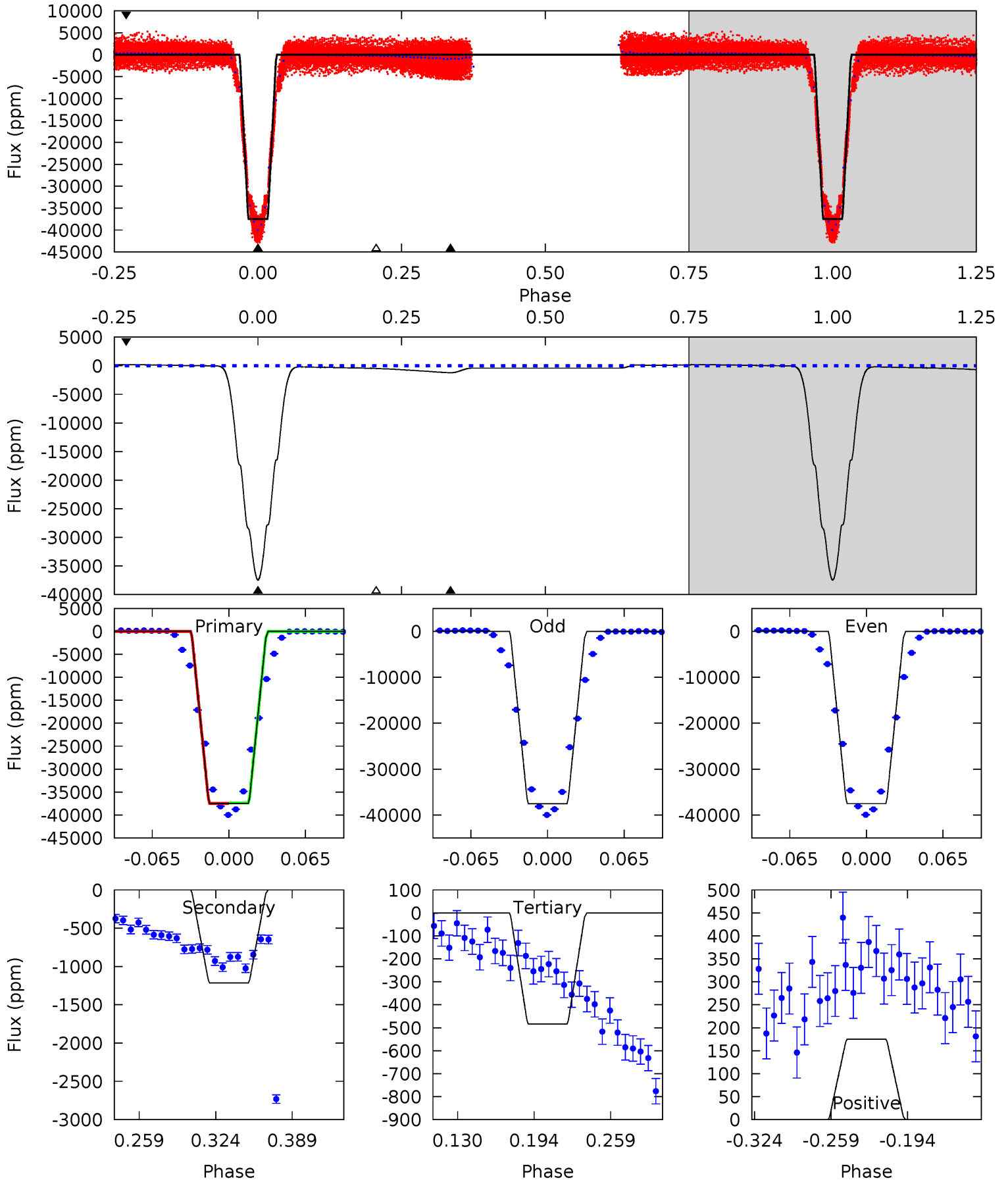
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007985167-02, P = 1.384475 Days, E = 130.201895 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1714	55.6	22.2	8.02	4.66	1.85	12.6	1692	1706	33.5	47.6	1.11	1.00	0.00	2.80



Stellar Parameters For KIC 007985167

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6163^{+167}_{-185}	$4.137^{+0.312}_{-0.168}$	$-0.520^{+0.300}_{-0.300}$	$1.358^{+0.361}_{-0.441}$	$0.922^{+0.127}_{-0.092}$	$0.519^{+1.087}_{-0.235}$
	+3%/-3%	+8%/-4%	+58%/-58%	+27%/-32%	+14%/-10%	+210%/-45%
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 007985167-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$20.91^{+15.07}_{-12.38}$	2857^{+209}_{-263}	4176^{+8065}_{-14981}	$2.542^{+127.135}_{-89.312}$
Alt.	-1216 ± 22	$30.20^{+14.68}_{-14.47}$	2845^{+219}_{-257}	2607^{+1032}_{-5279}	$0.419^{+1.095}_{-0.234}$

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 $A_{obs} \gg 1.0$

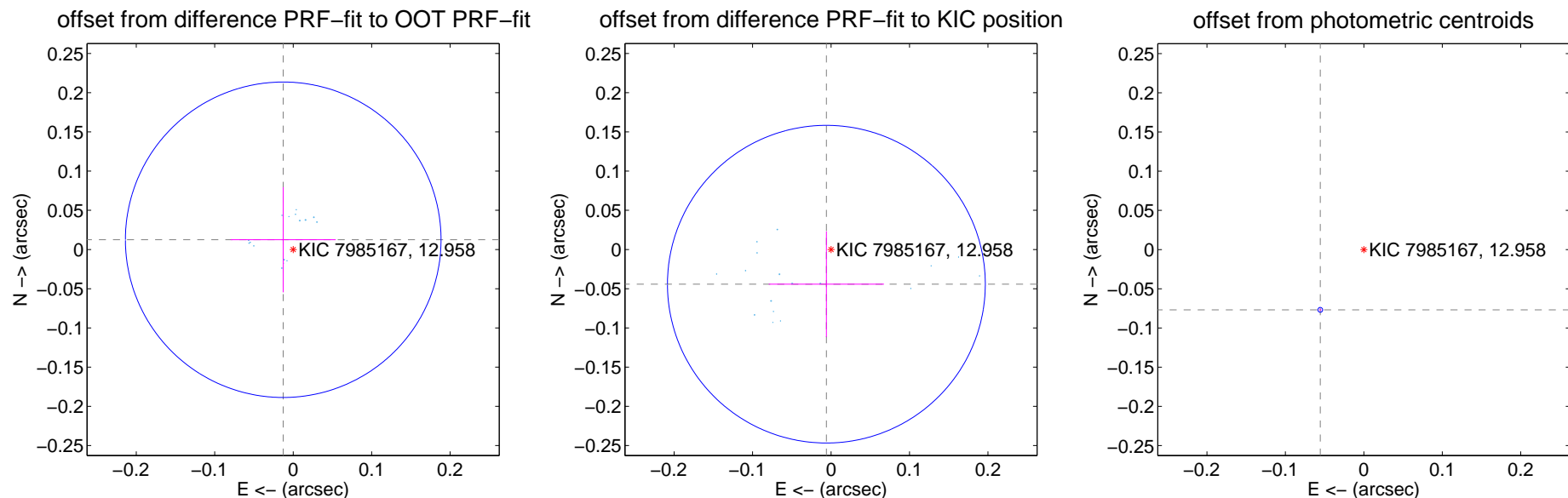
DV Centroid Data

Supplemental centroid analysis for 007985167-02. Kepler magnitude: 12.96. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

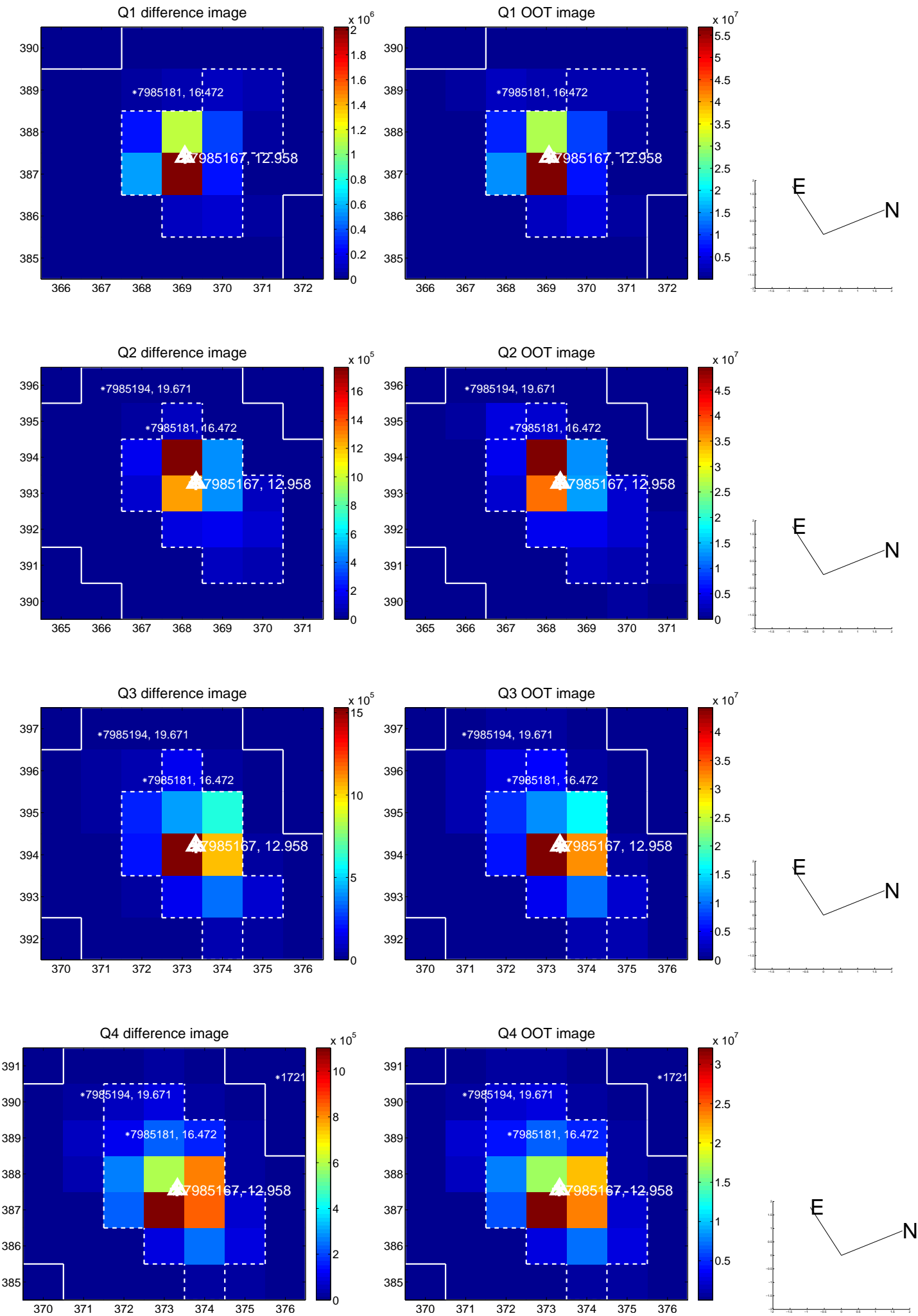
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.067	0.27	0.013 ± 0.067	0.012 ± 0.067
PRF-fit source offset from KIC position	0.045 ± 0.068	0.66	0.006 ± 0.073	-0.044 ± 0.067
photometric centroid source offset	0.09 ± 0.00	93.29	0.06 ± 0.00	-0.08 ± 0.00

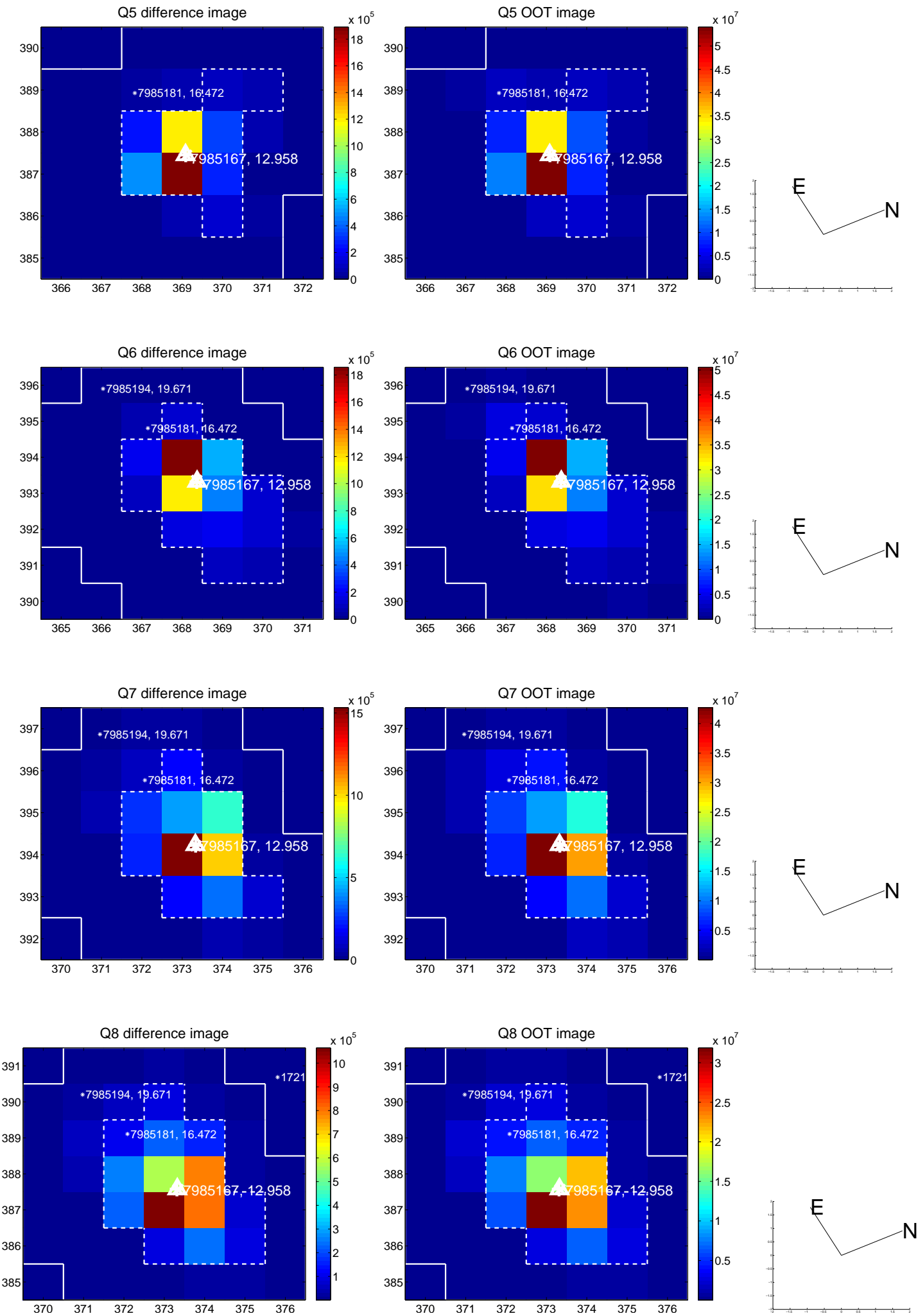


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

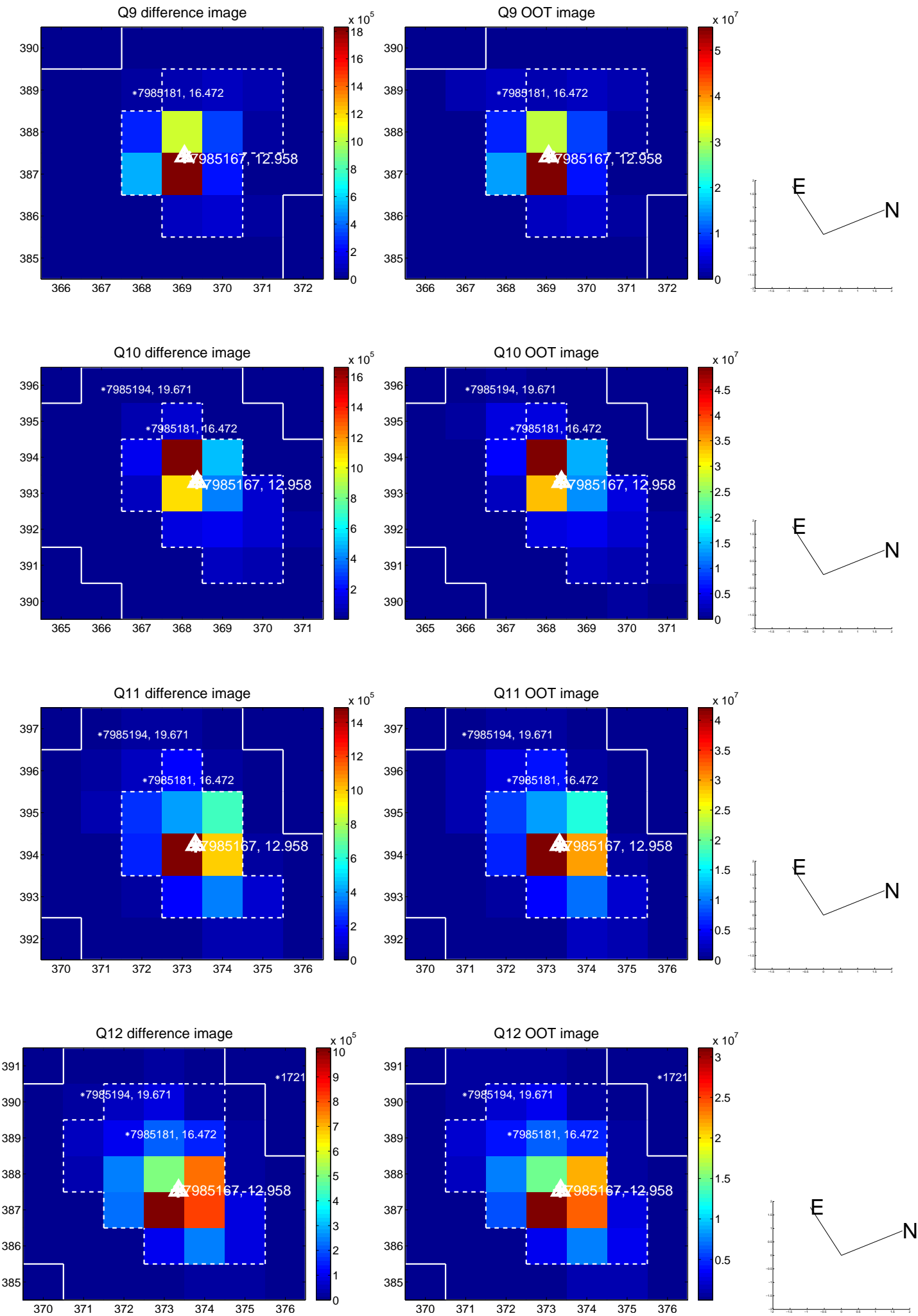
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



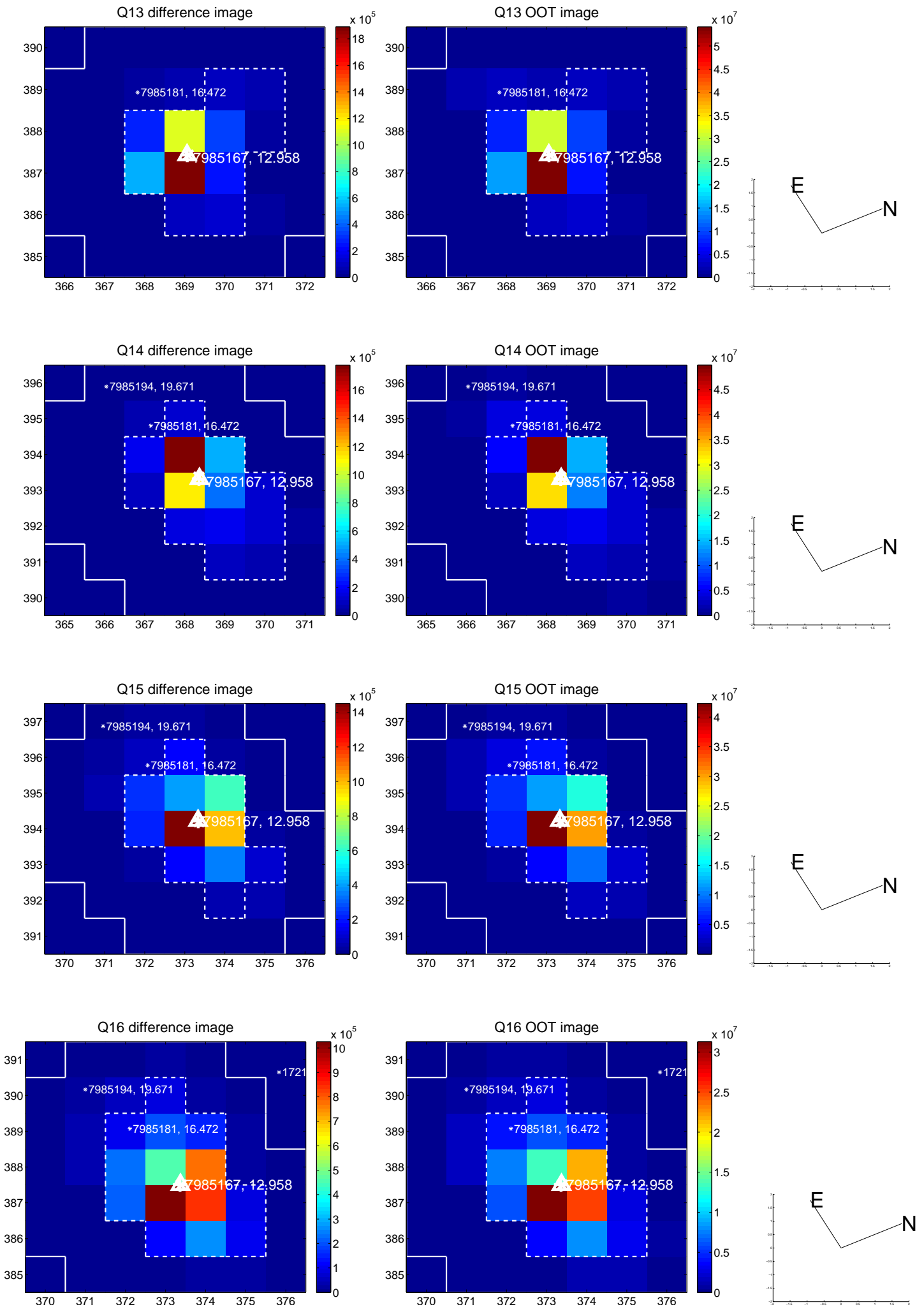
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



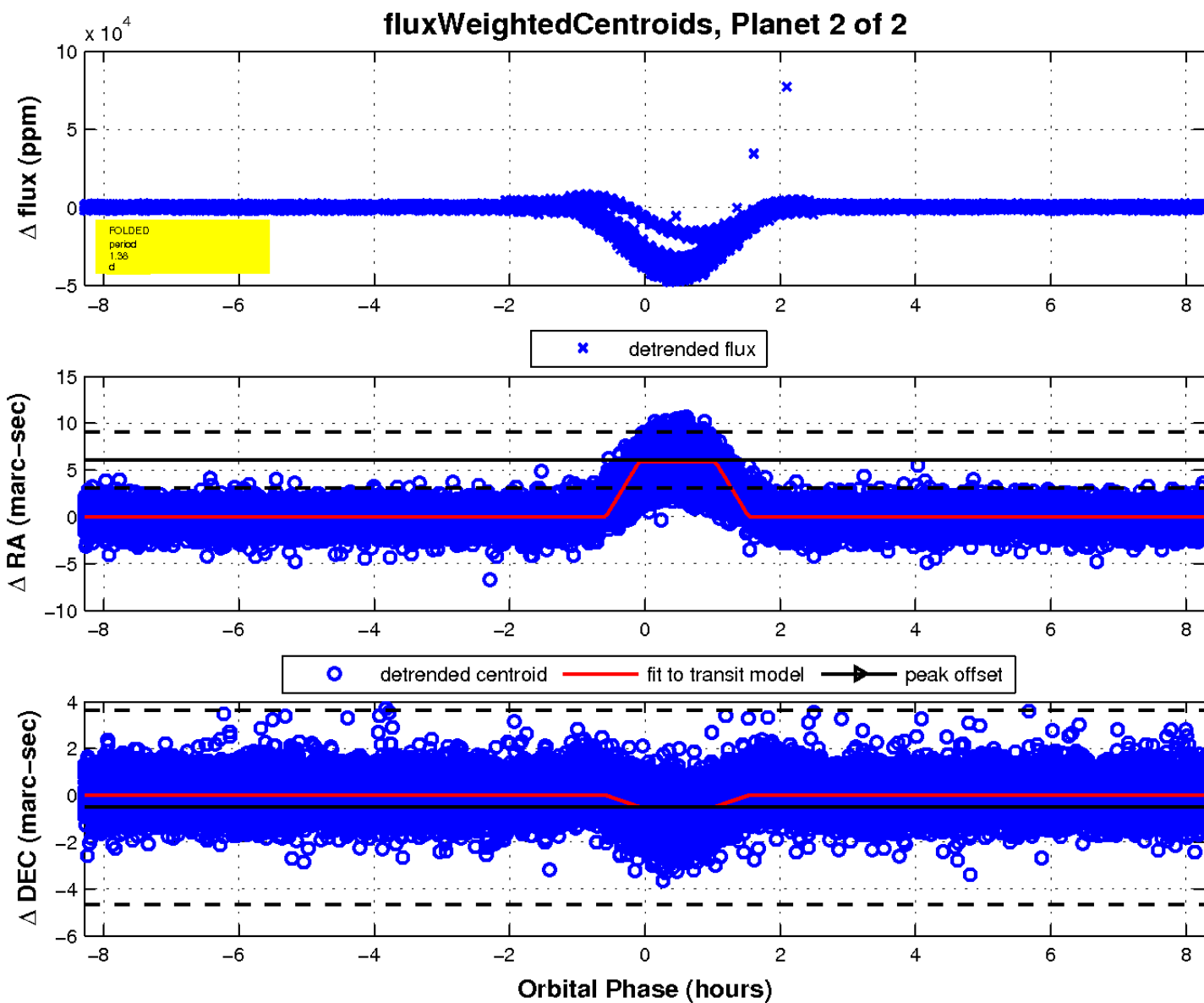
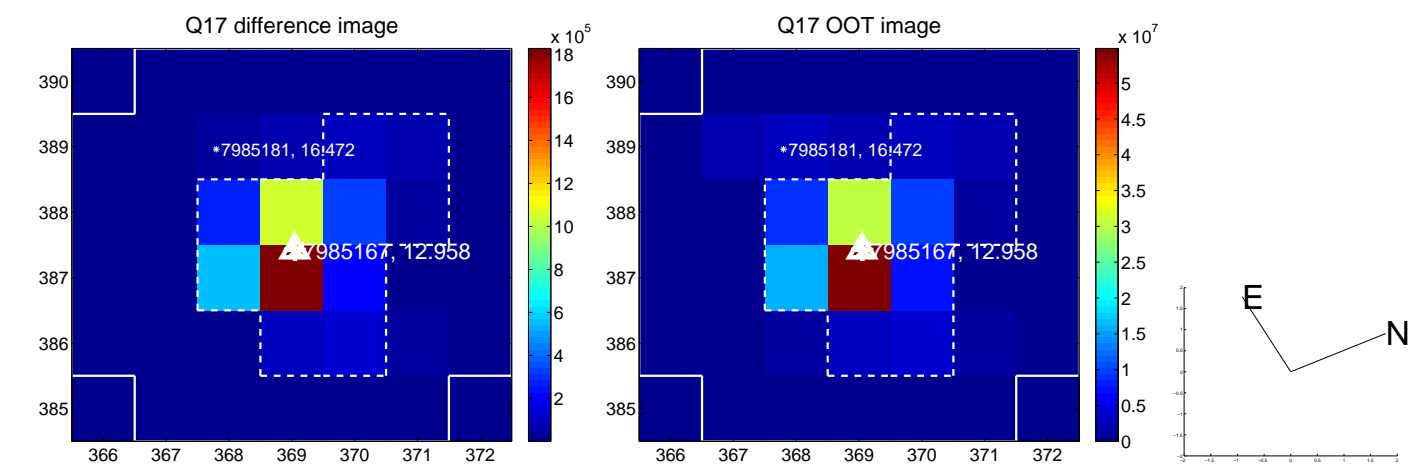
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

