

KIC 008581658

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})
008581658-01	OBS	7064.01	3.481631	134.188278	345473.4	3.000	27916.8	-1.0	1.29	6225	63.13	1152.64
008581658-02	OBS	No	3.481658	132.442901	90929.4	4.666	9186.6	5781.1	1.29	6225	41.75	1152.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008581658-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008581658-02	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.

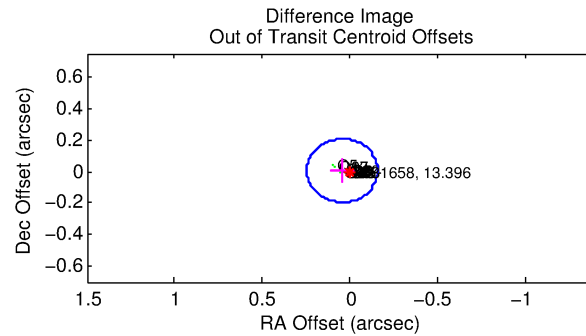
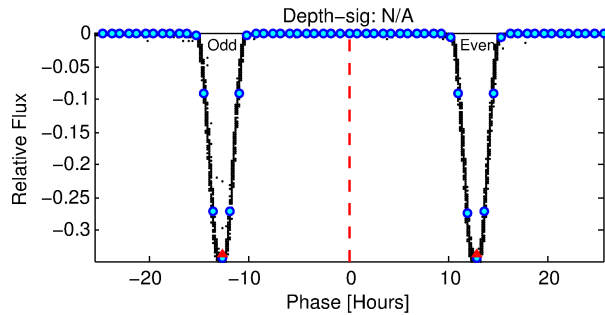
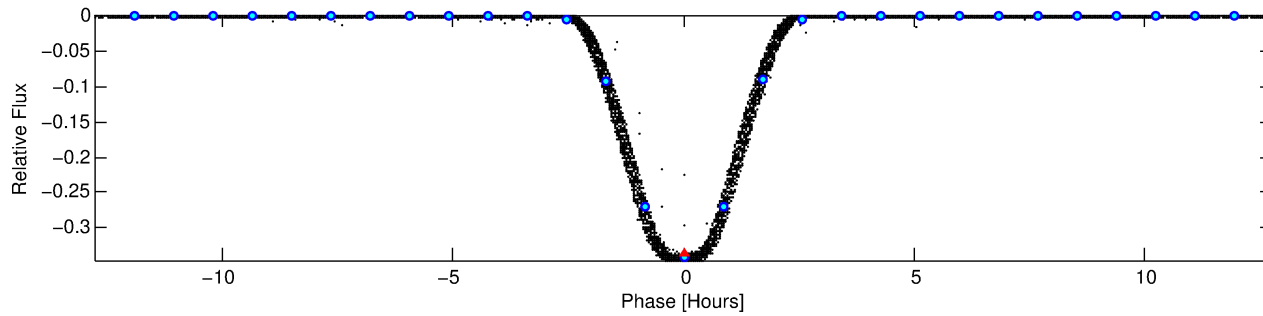
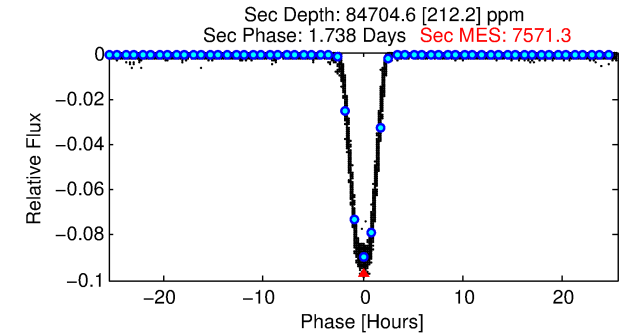
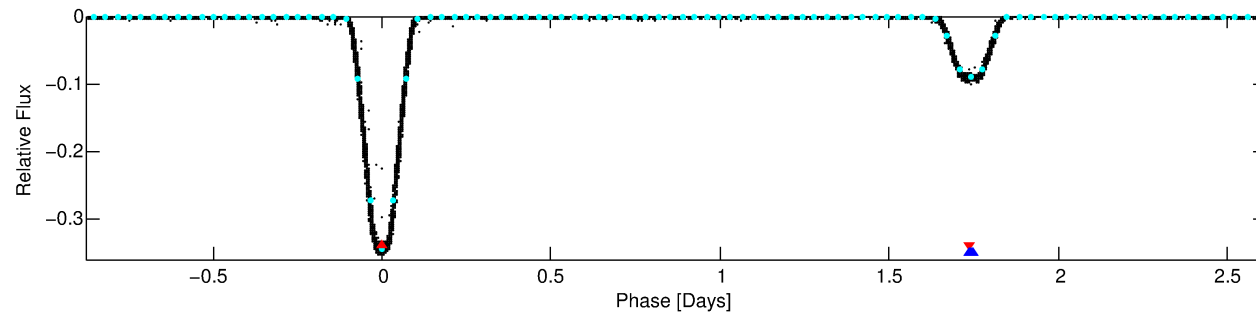
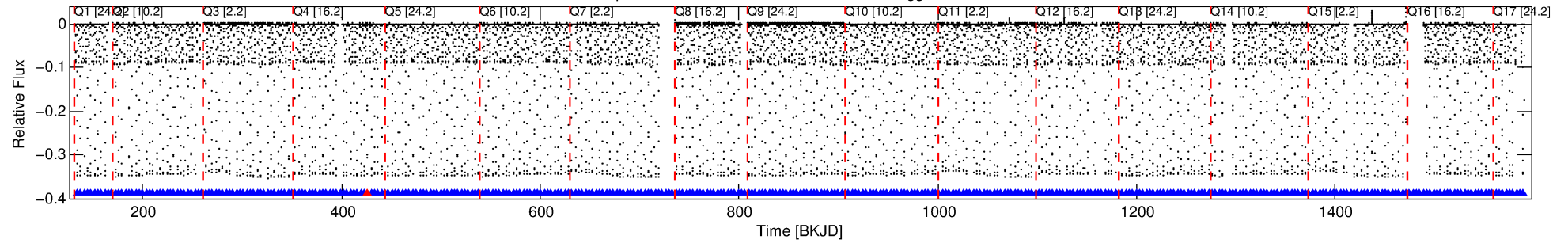
Ephemeris Match Information For 008581658-01

No Significant Match Found

DV One-Page Summary

KIC: 8581658 Candidate: 1 of 2 Period: 3.482 d
KOI: K07064.01 Corr: 0.794

Kp: 13.40 R*: 1.29 Rs Teff: 6225.0 K Logg: 4.19 Fe/H: -0.480



TPS TCE Results:

Period = 3.48163 d
Epoch = 134.1883 BKJD

DV fit results are unavailable

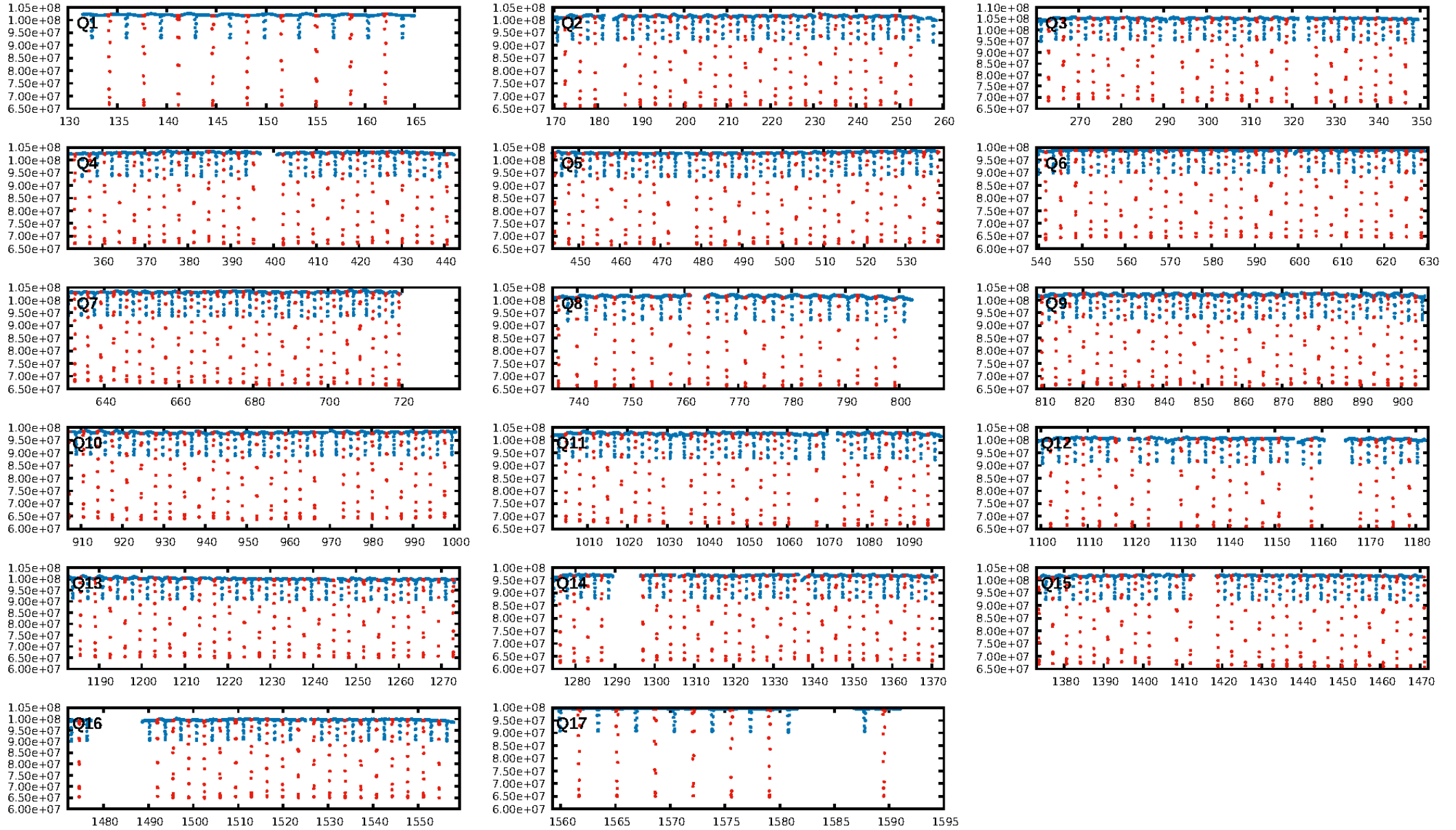
DV Diagnostic Results:

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 [363/364]
GhostDiagnostic-chr: 1.692
Centroid-sig: 0.0%
Centroid-so: 0.043 arcsec [156.04σ]
OotOffset-rm: 0.046 arcsec [0.69σ]
KicOffset-rm: 0.102 arcsec [1.50σ]
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]

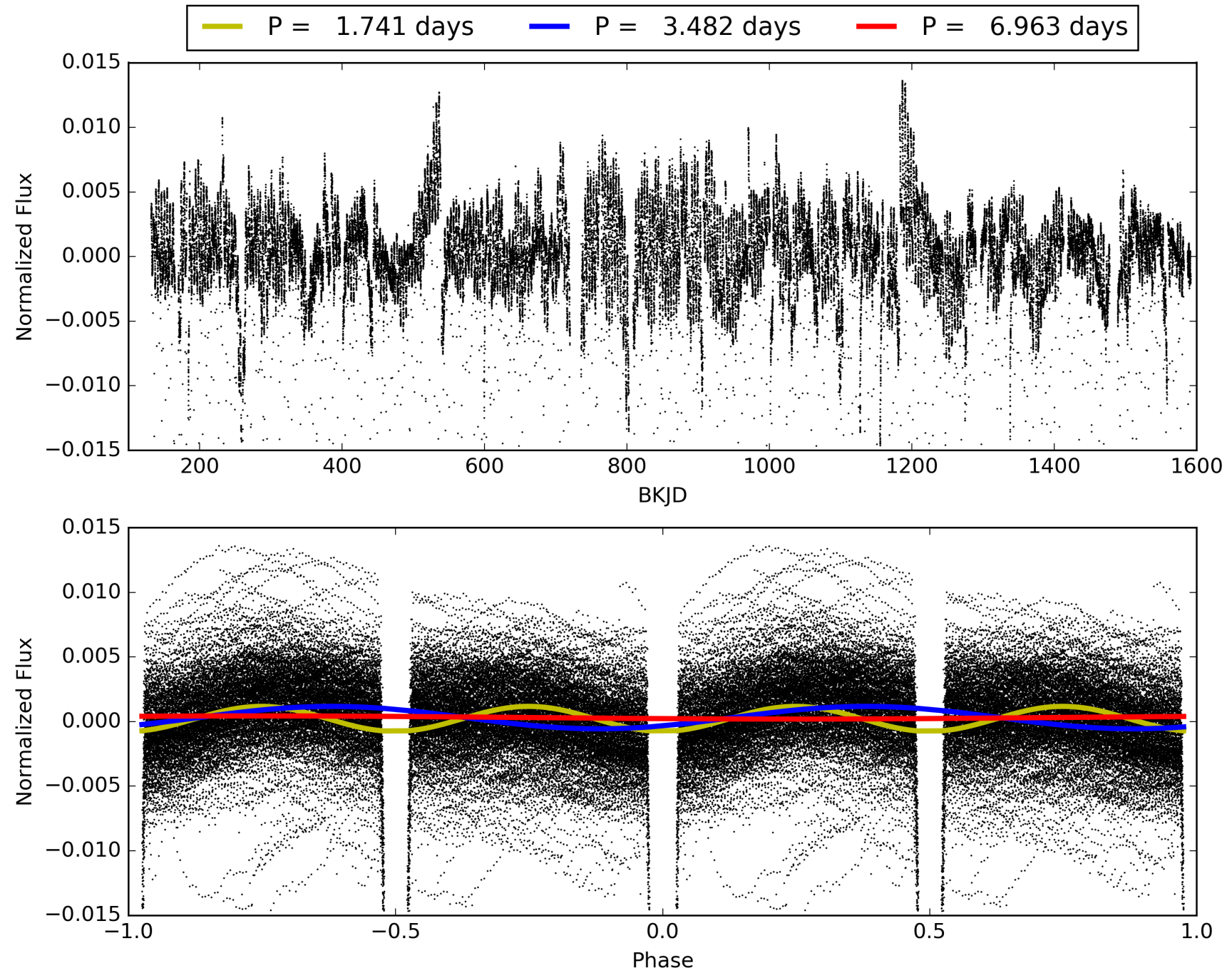
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:56:47 Z

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

TCE 008581658-01, PDC Light Curves

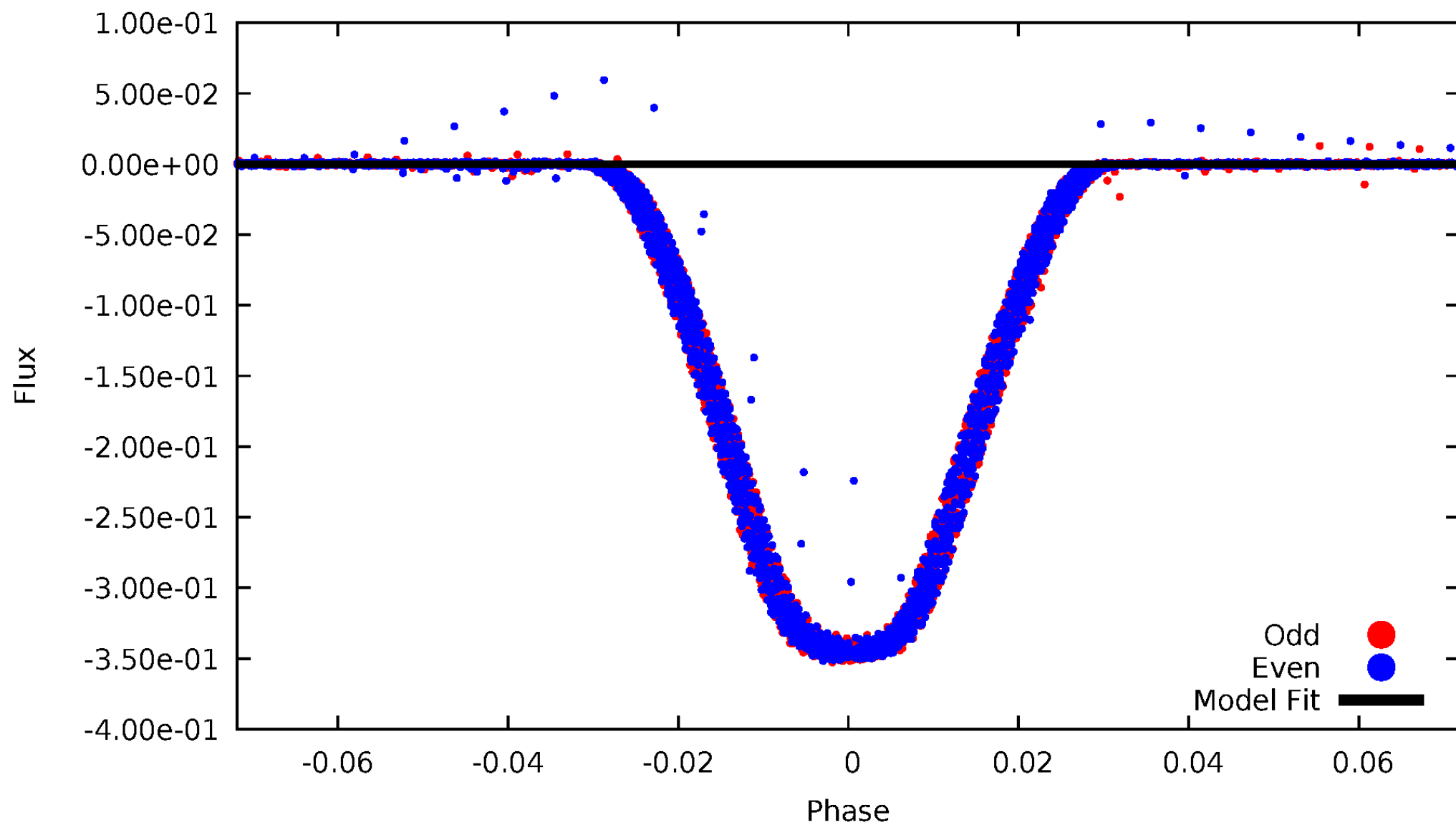


TCE 008581658-01



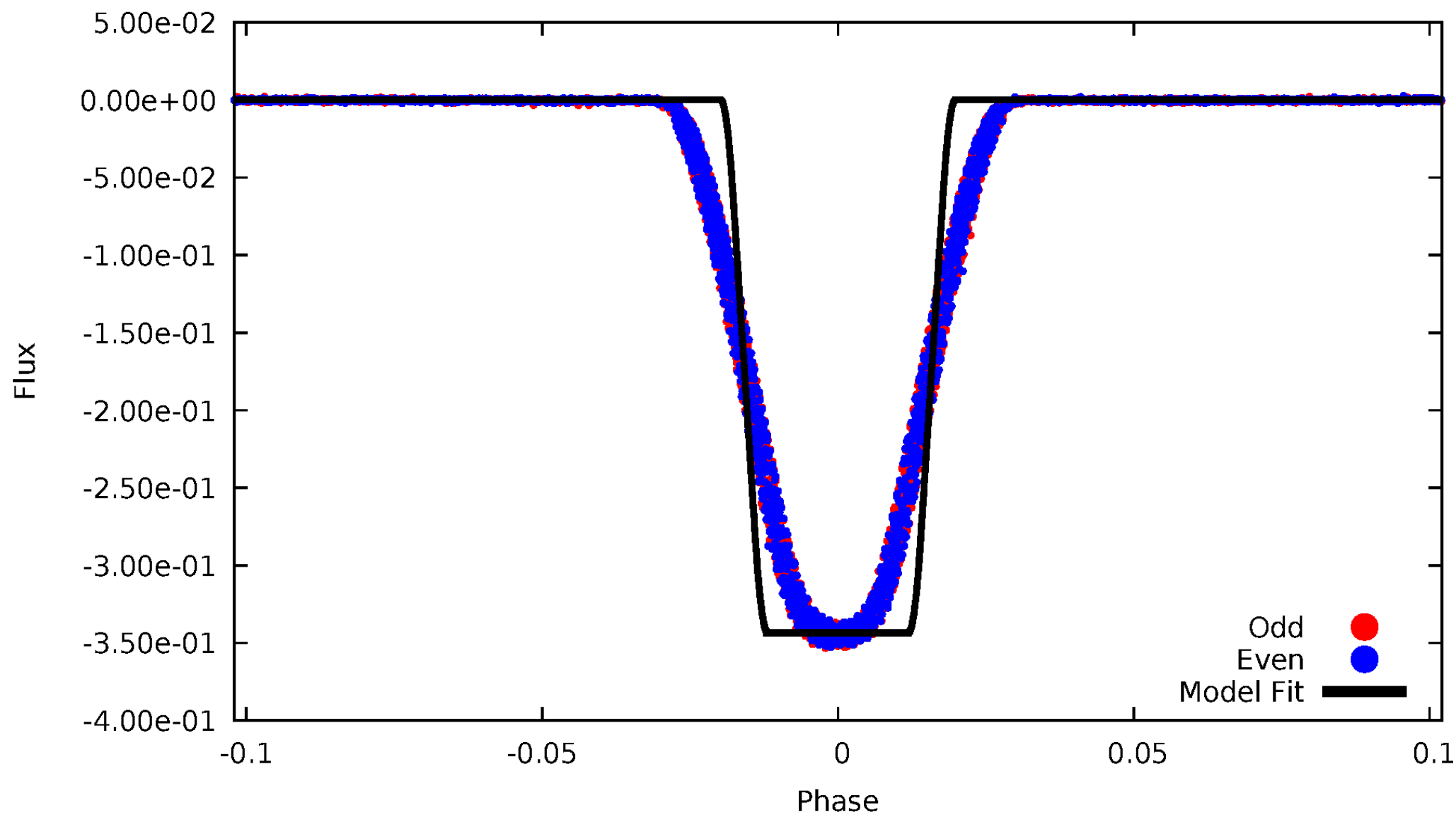
DV Odd/Even

TCE 008581658-01



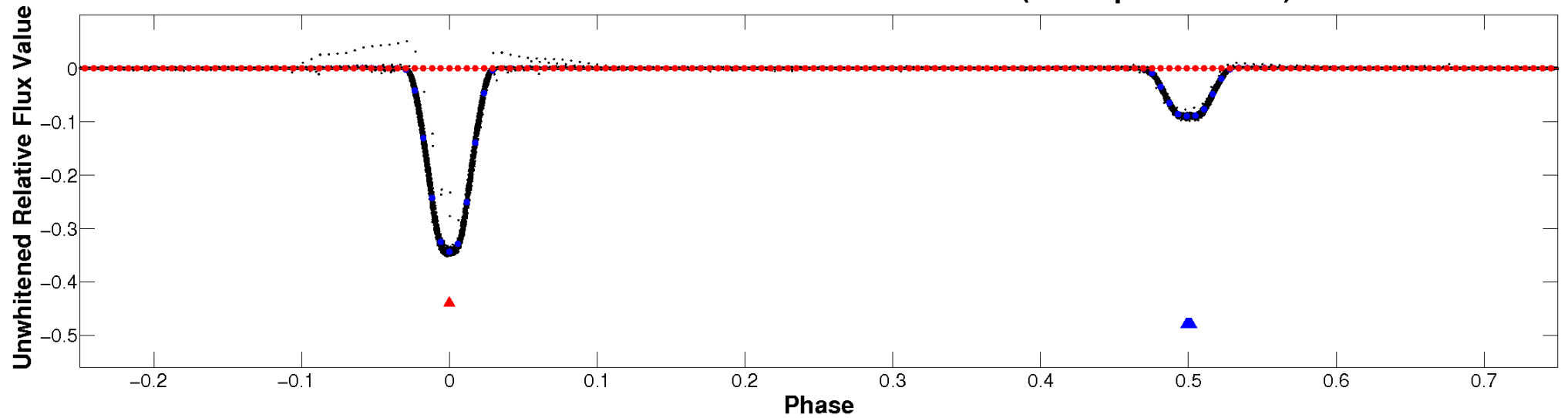
ALT Odd/Even

TCE 008581658-01



Non-Whitened Vs. Whitened Light Curve

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

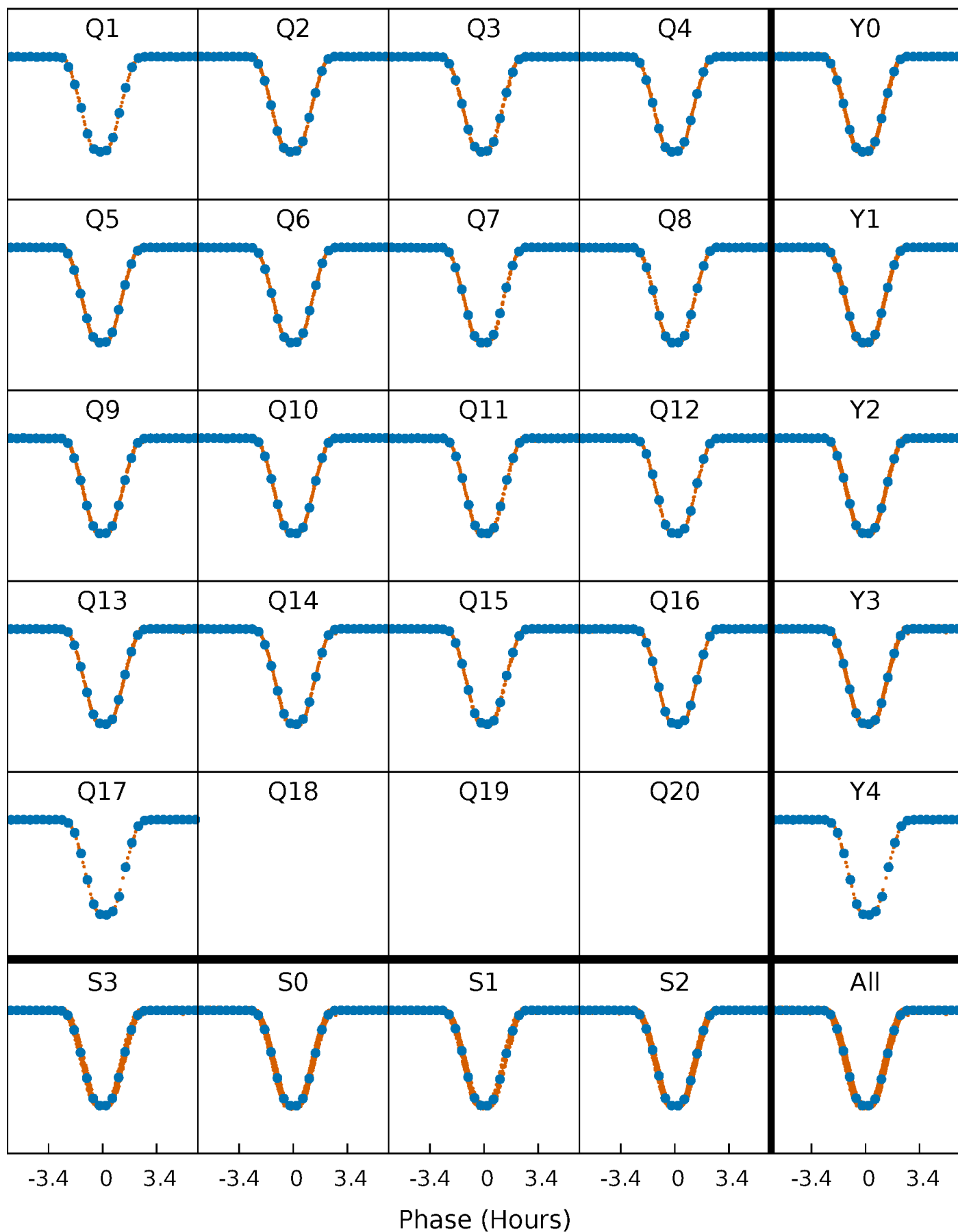


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



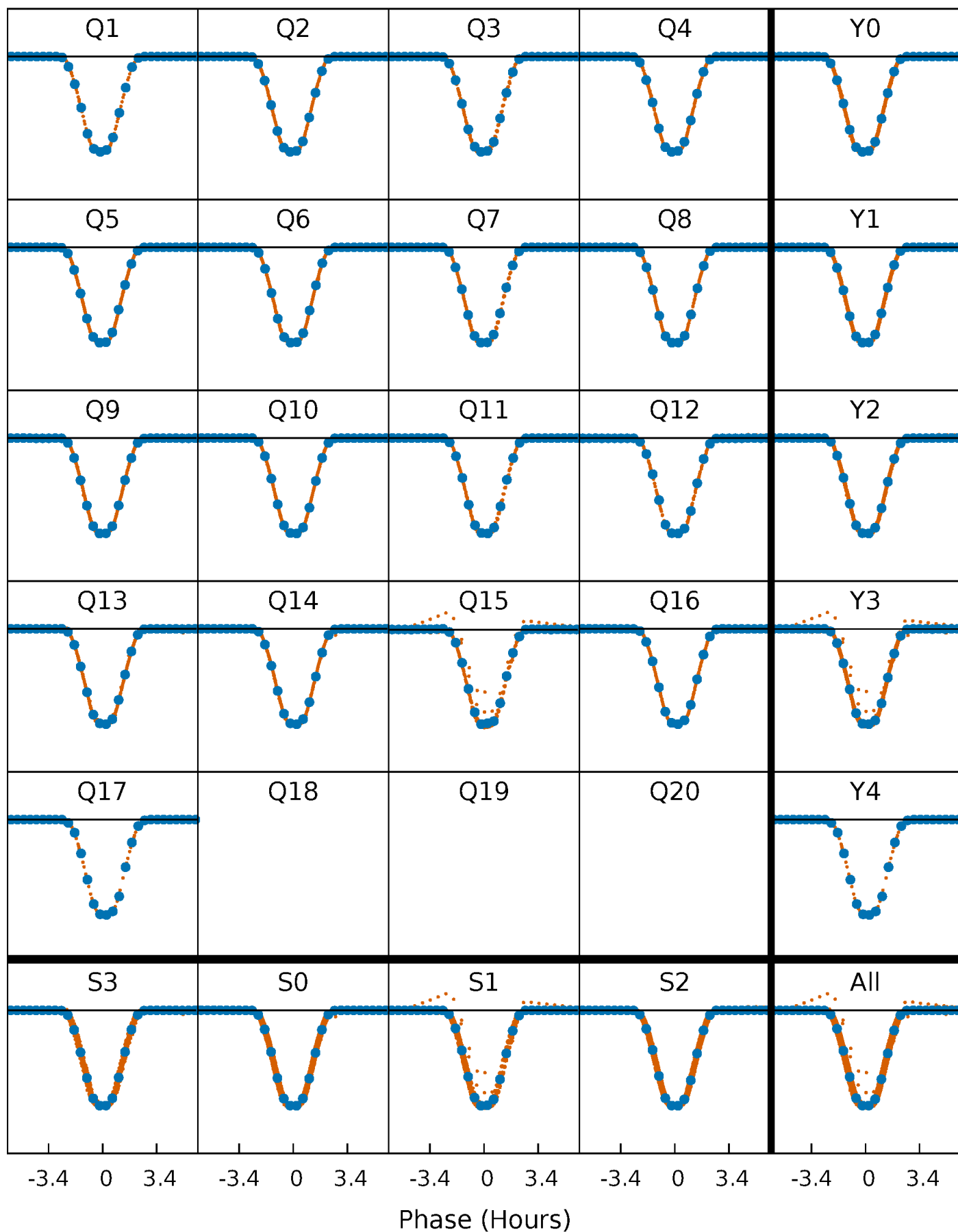
PDC Quarter-Phased Transit Curves

TCE 008581658-01 P= 3.481631 Days $T_0=134.188278$ (BKJD)



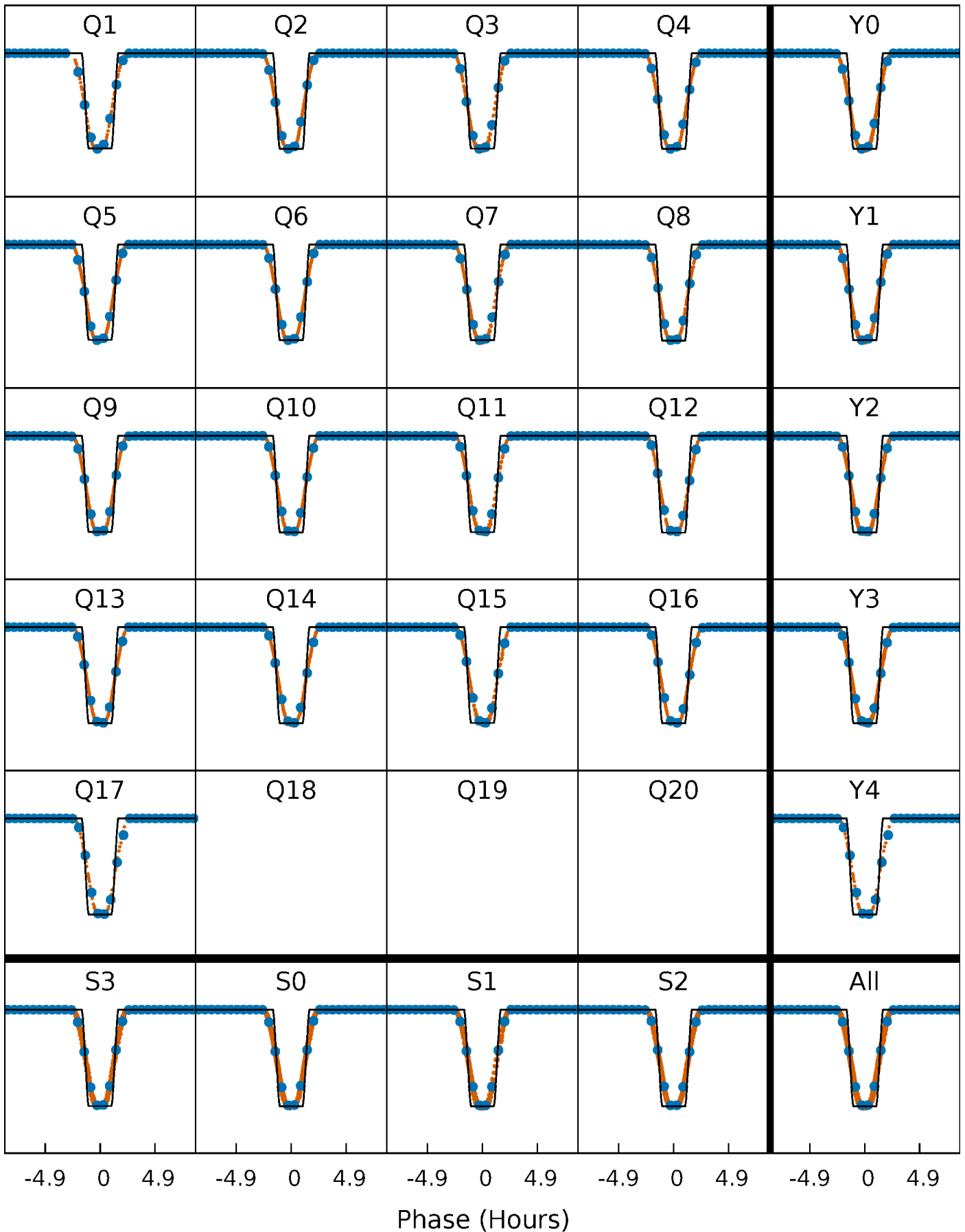
DV Quarter-Phased Transit Curves

TCE 008581658-01 P= 3.481631 Days $T_0=134.188278$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

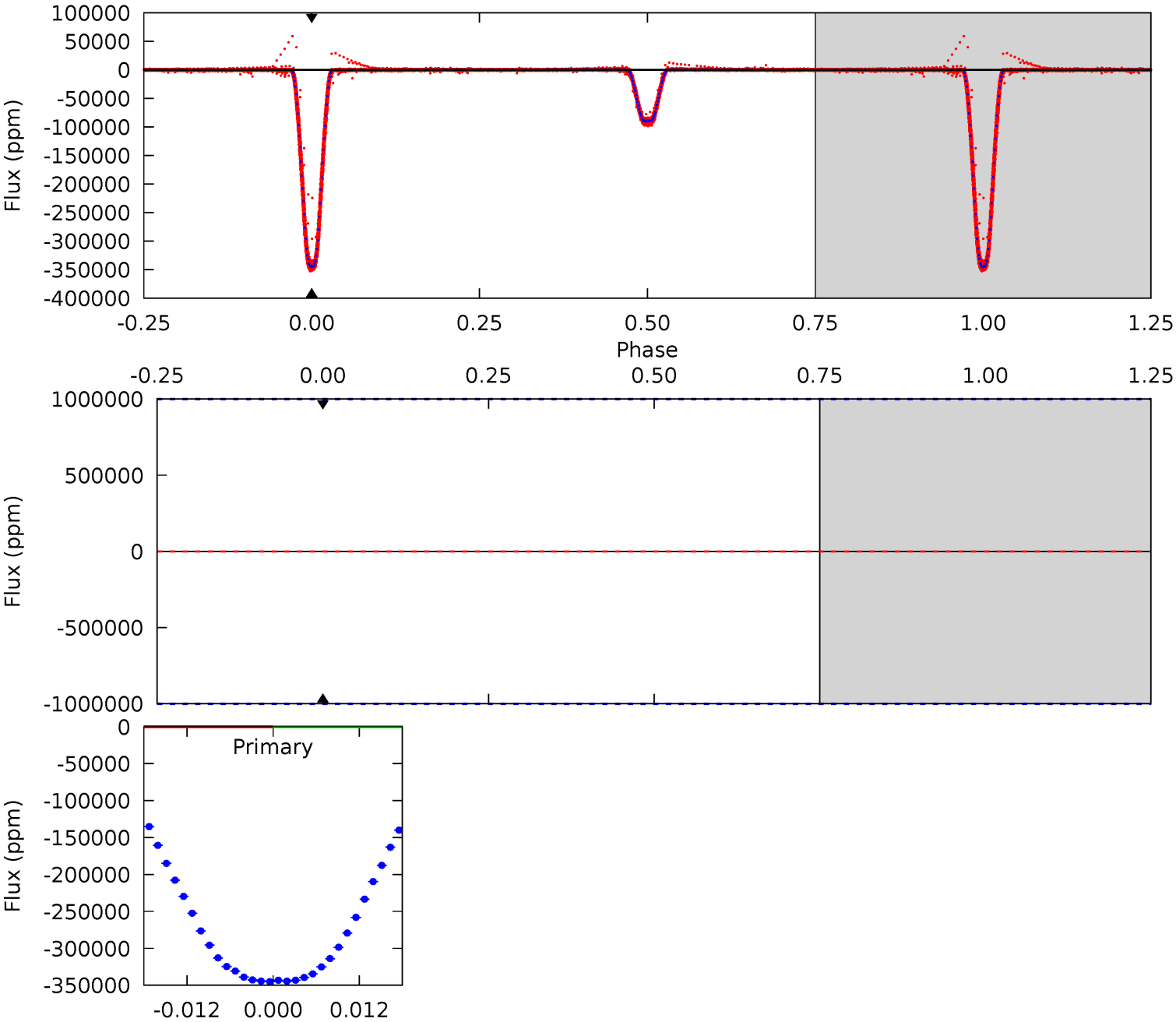
TCE 008581658-01 P= 3.481631 Days $T_0=134.189097$ (BKJD)



DV Model-Shift Uniqueness Test

008581658-01, P = 3.481631 Days, E = 130.706647 Days

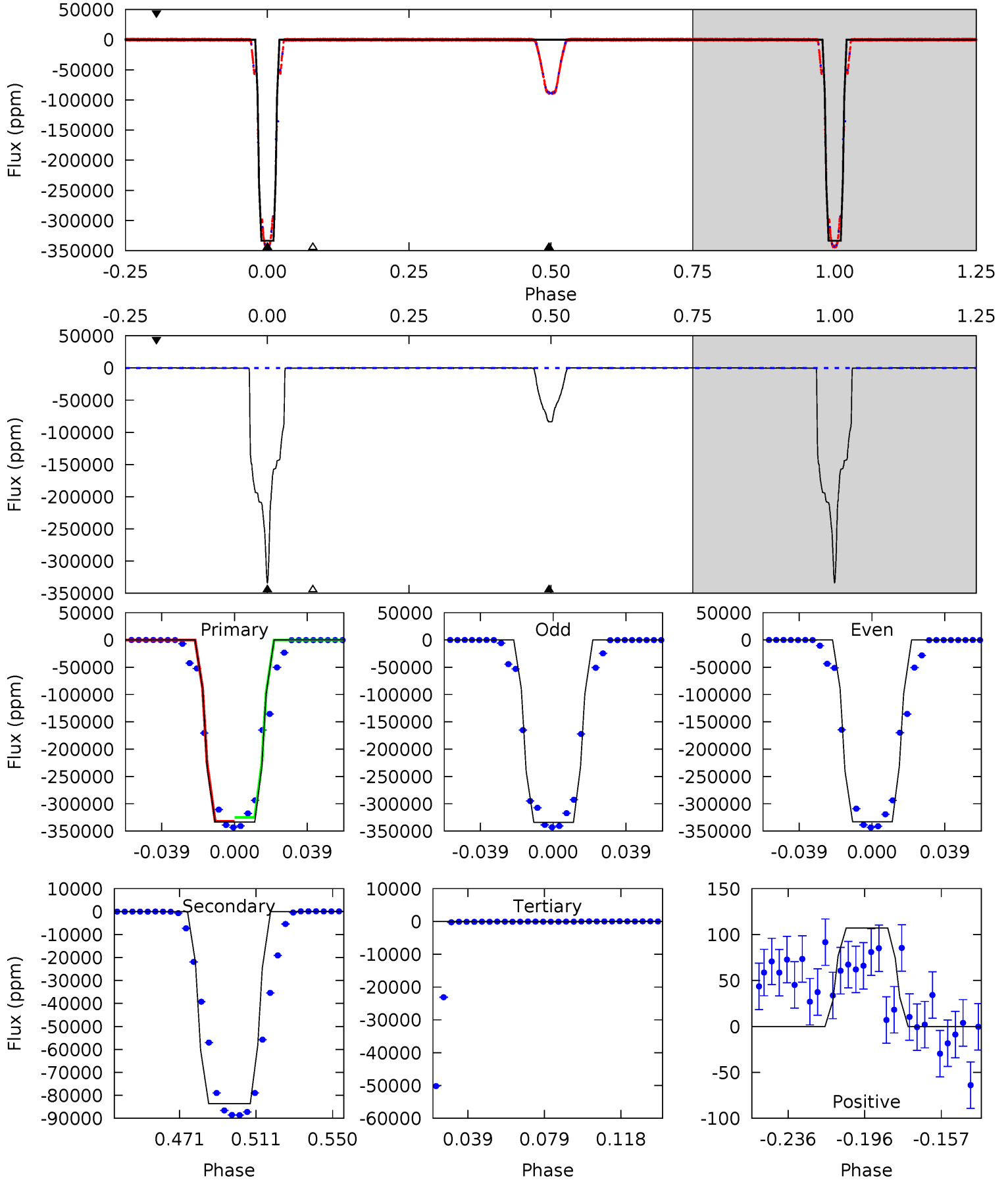
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008581658-01, P = 3.481631 Days, E = 130.707466 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13239	3317	5.50	4.24	4.76	2.06	1.93	13233	13235	3312	3313	23.6	1.00	0.00	0



Stellar Parameters For KIC 008581658

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6225^{+188}_{-188}	$4.191^{+0.258}_{-0.172}$	$-0.480^{+0.300}_{-0.300}$	$1.291^{+0.349}_{-0.349}$	$0.943^{+0.148}_{-0.098}$	$0.617^{+0.924}_{-0.279}$
	+3%/-3%	+6%/-4%	+62%/-62%	+27%/-27%	+16%/-10%	+150%/-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 008581658-01 / KOI 7064.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$60.67^{+17.34}_{-15.77}$	2060^{+166}_{-153}	2323^{+3215}_{-7687}	$0.431^{+37.577}_{-30.127}$
Alt.	-83622 ± 25	$80.06^{+19.98}_{-17.81}$	2055^{+159}_{-163}	4616^{+388}_{-294}	16^{+9}_{-6}

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

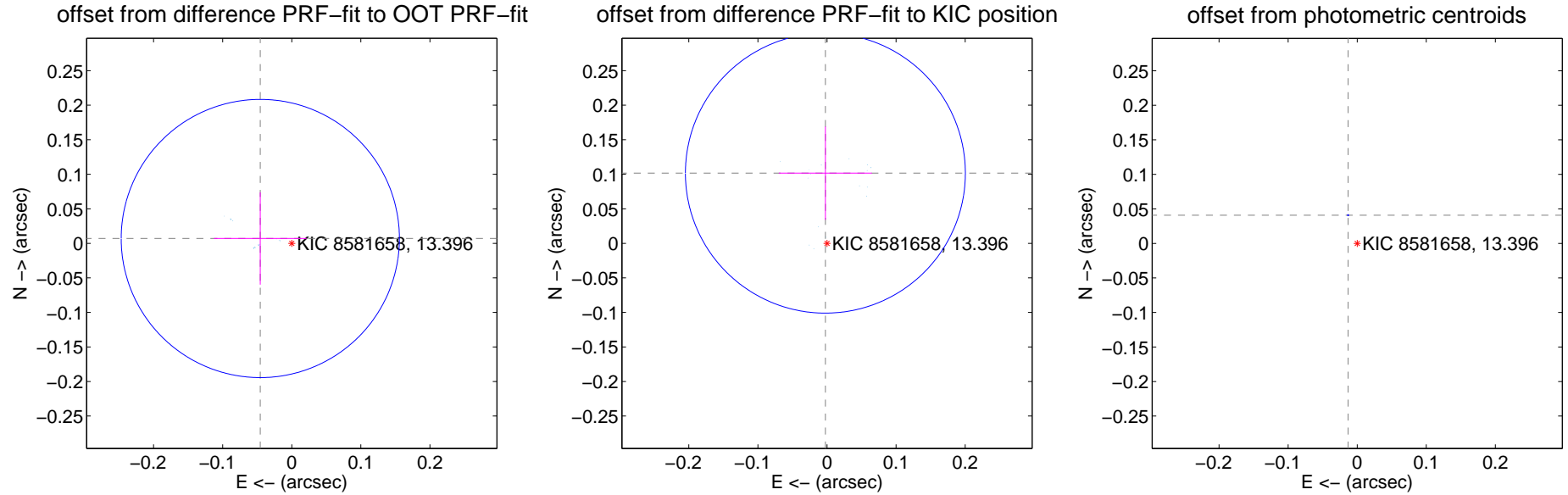
DV Centroid Data

Supplemental centroid analysis for 008581658-01. Kepler magnitude: 13.40. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

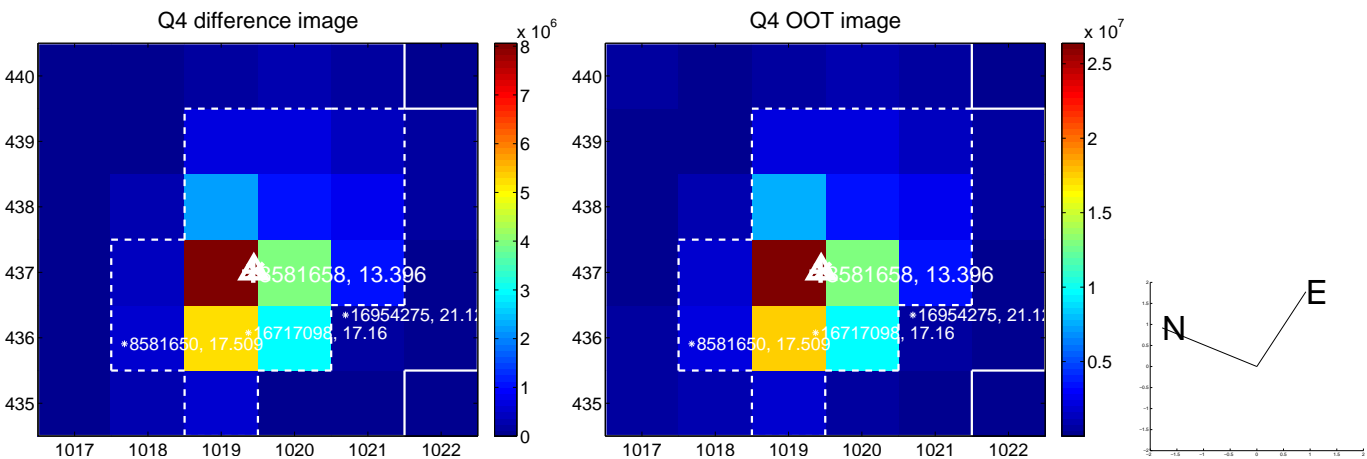
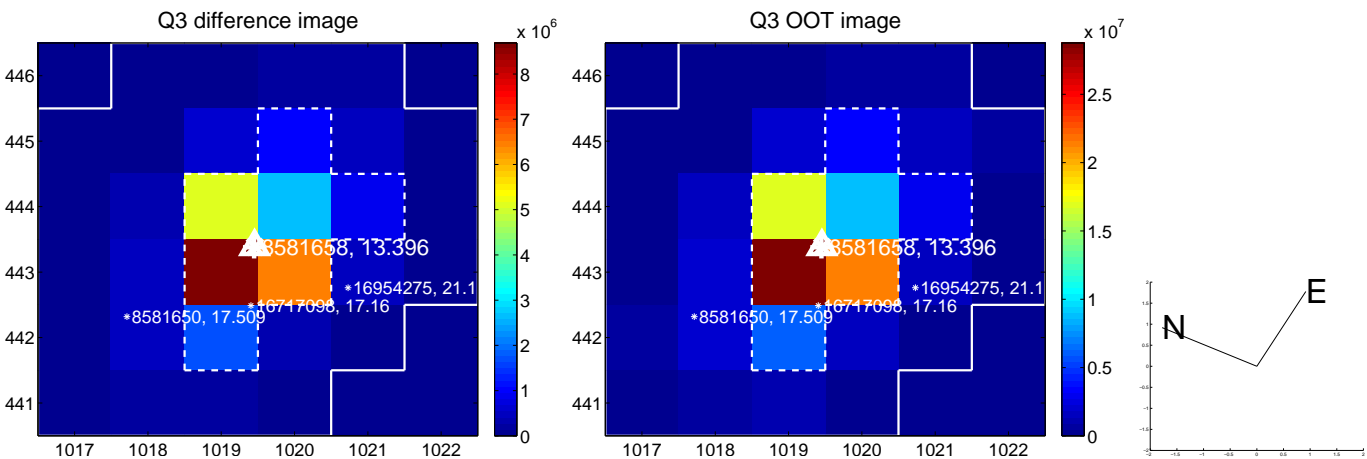
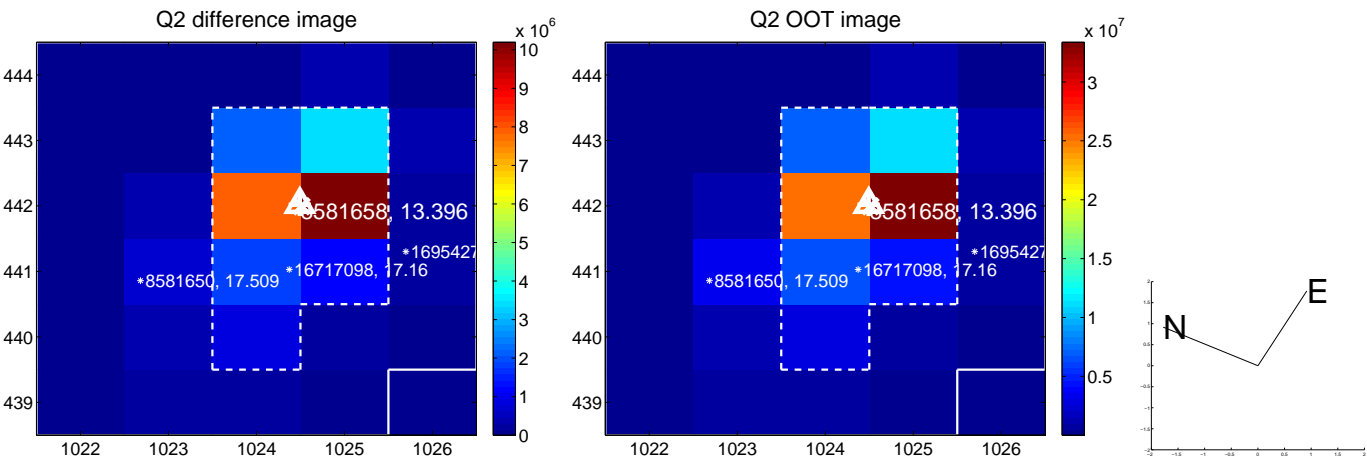
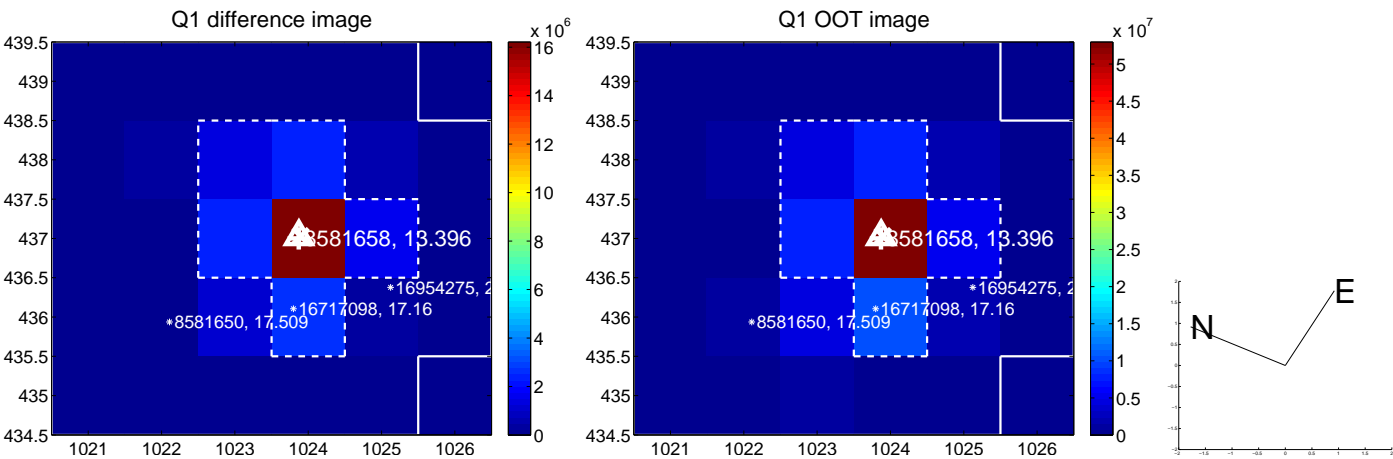
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.067	0.69	0.046 ± 0.067	0.007 ± 0.067
PRF-fit source offset from KIC position	0.102 ± 0.068	1.50	0.002 ± 0.067	0.102 ± 0.068
photometric centroid source offset	0.04 ± 0.00	156.04	0.01 ± 0.00	0.04 ± 0.00

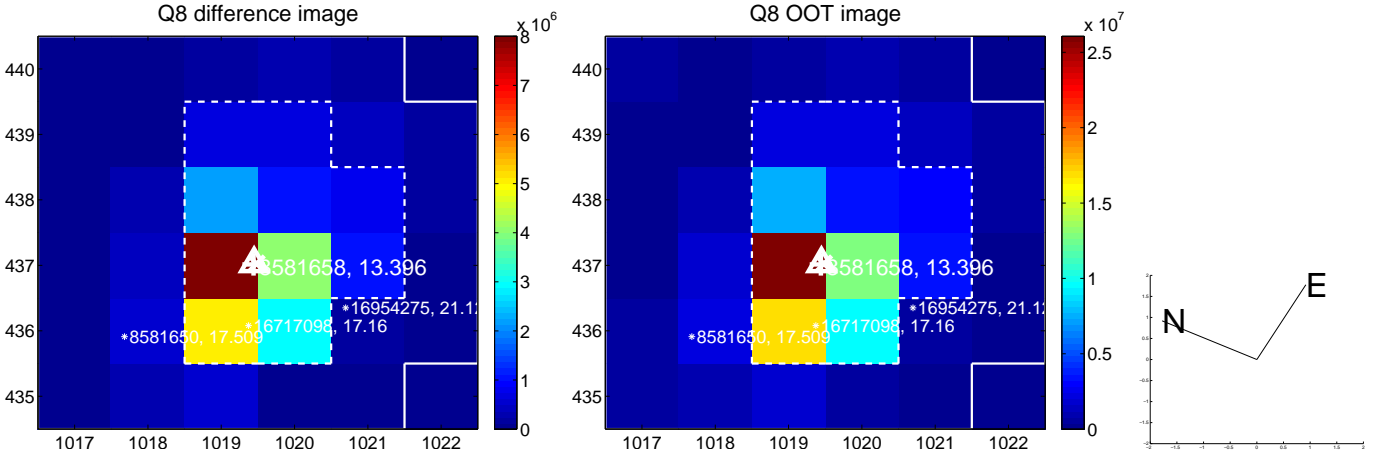
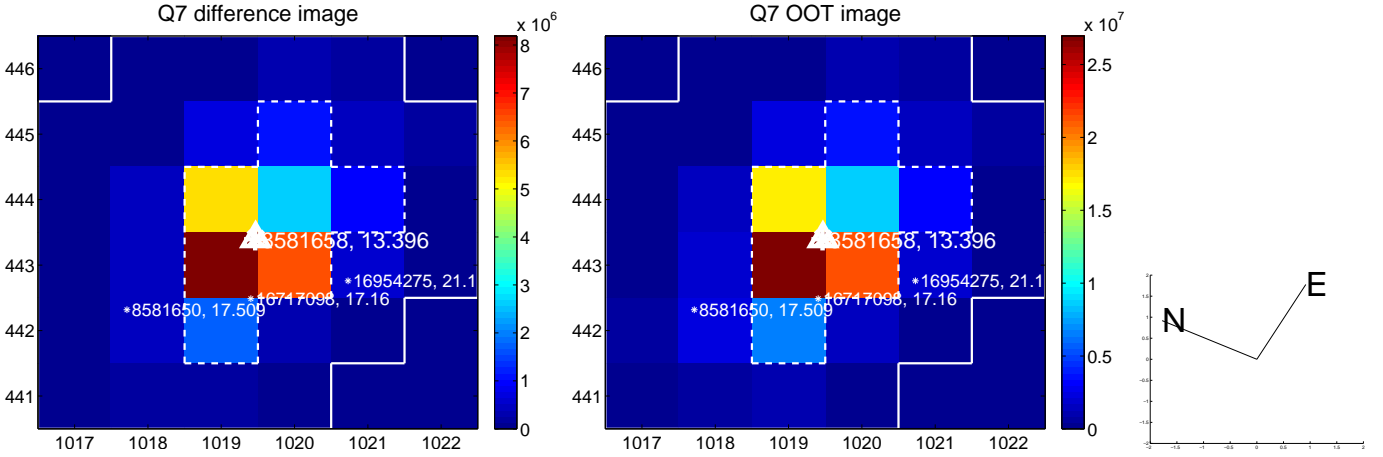
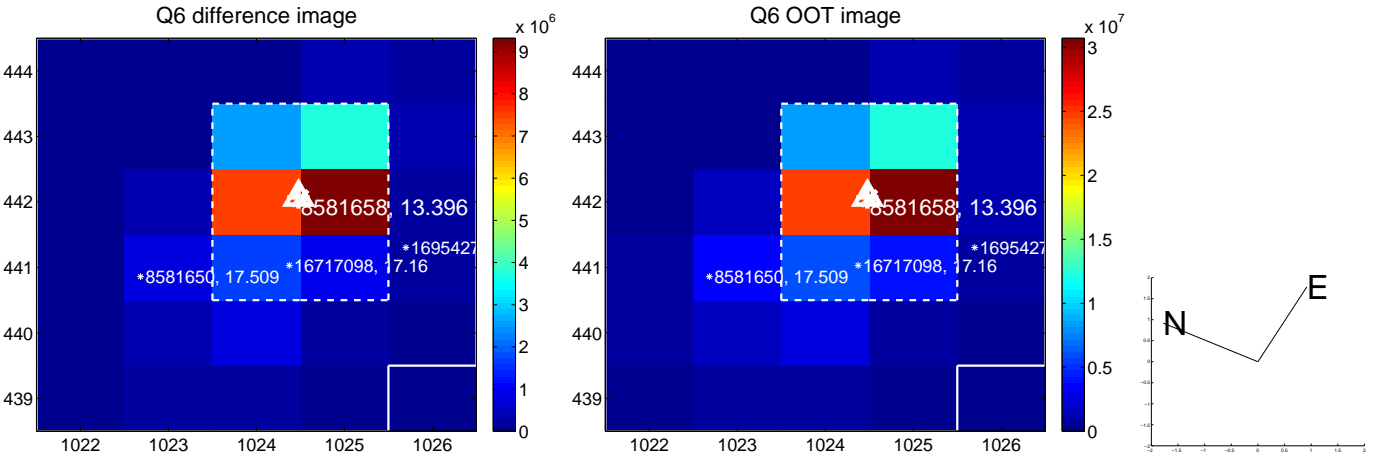
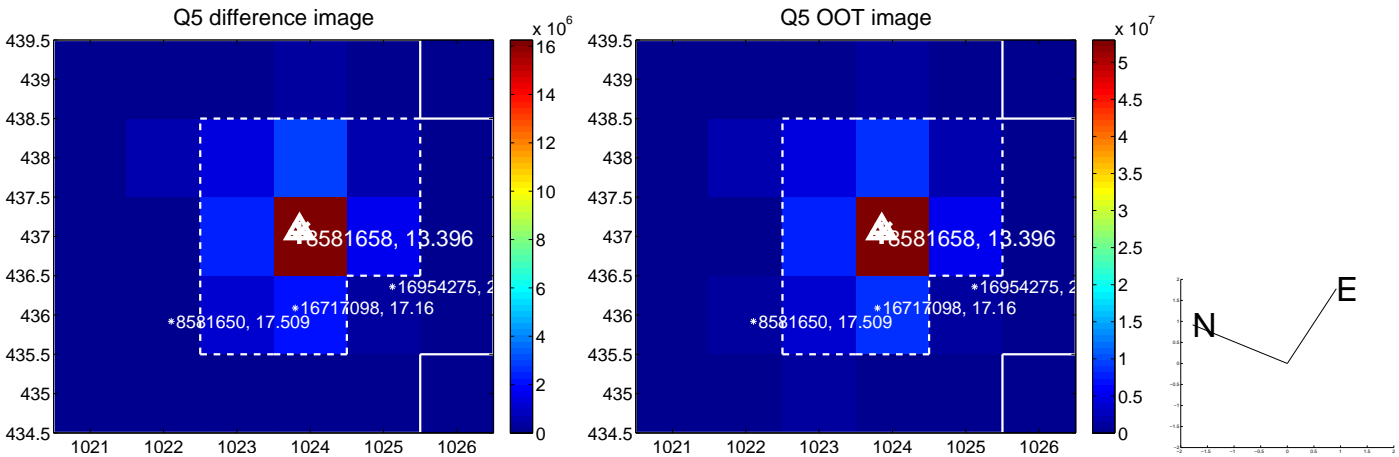


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

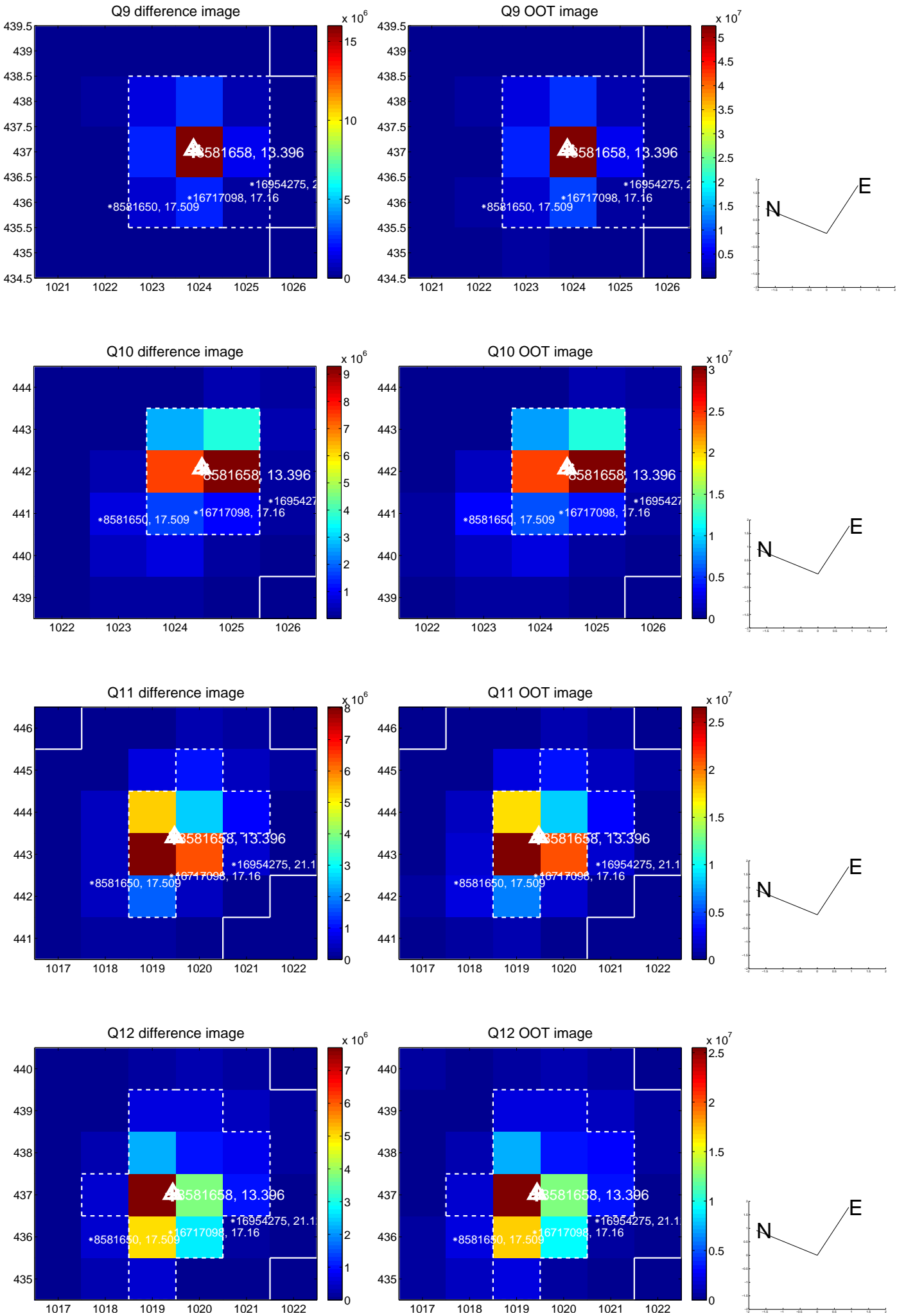
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



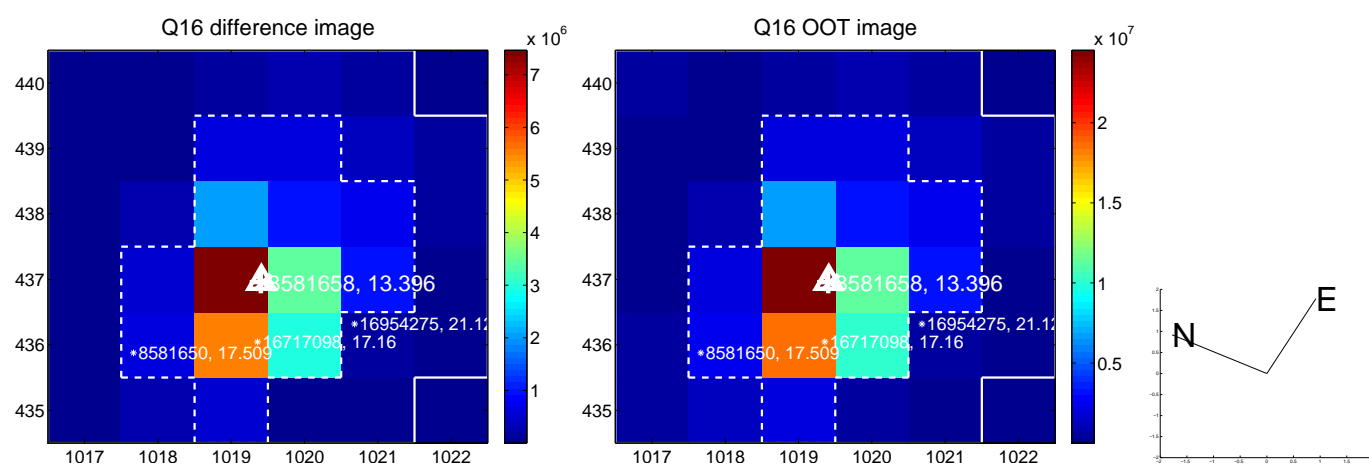
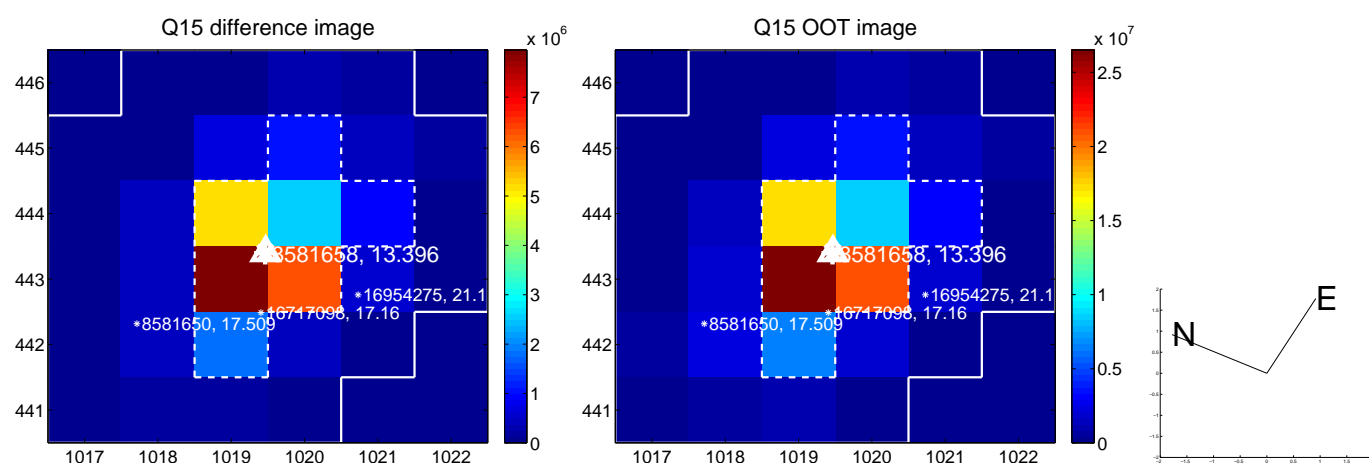
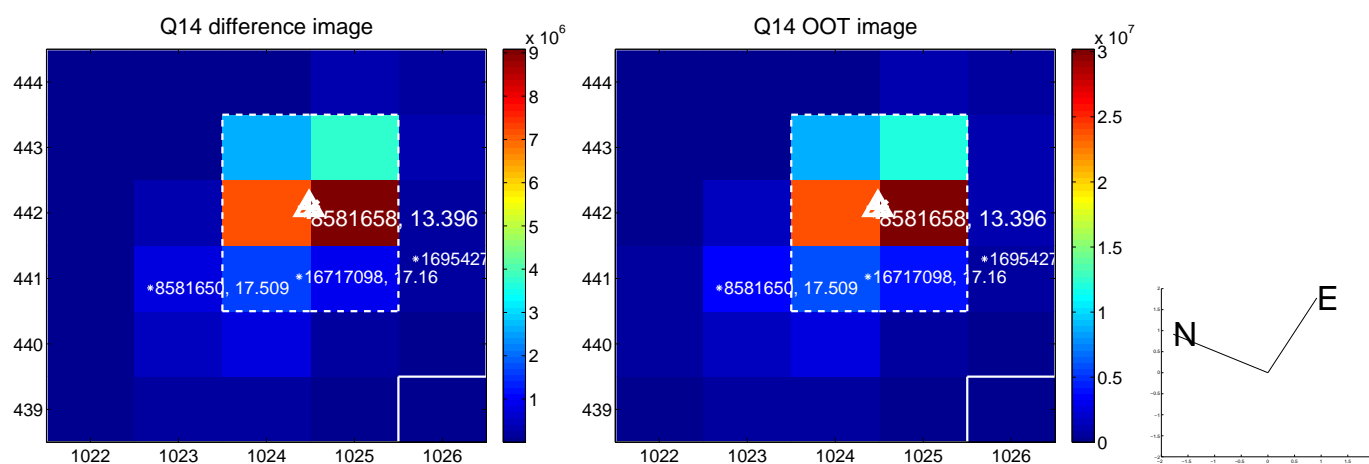
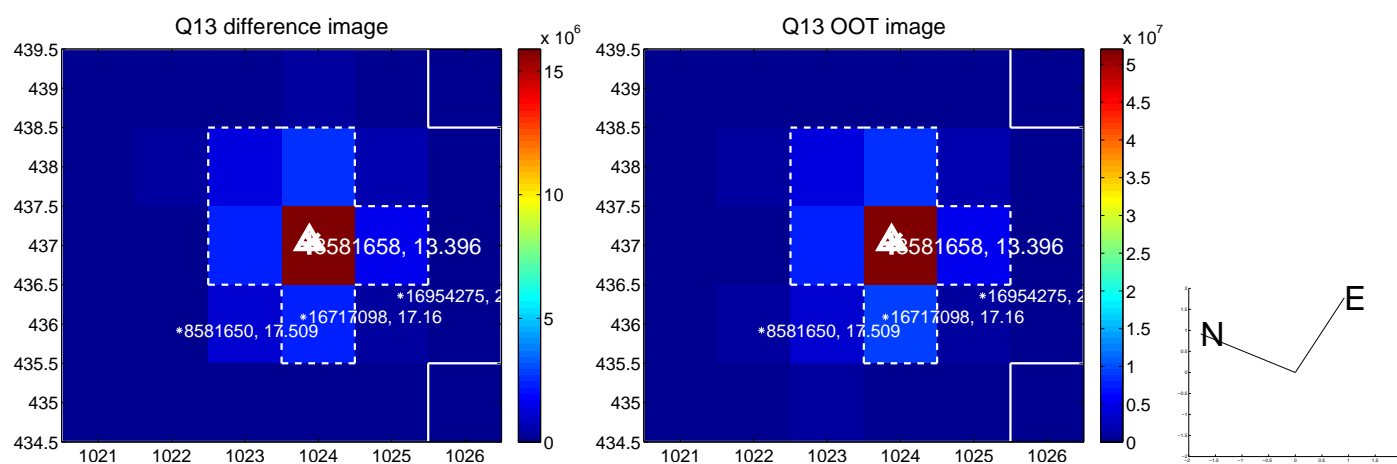
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



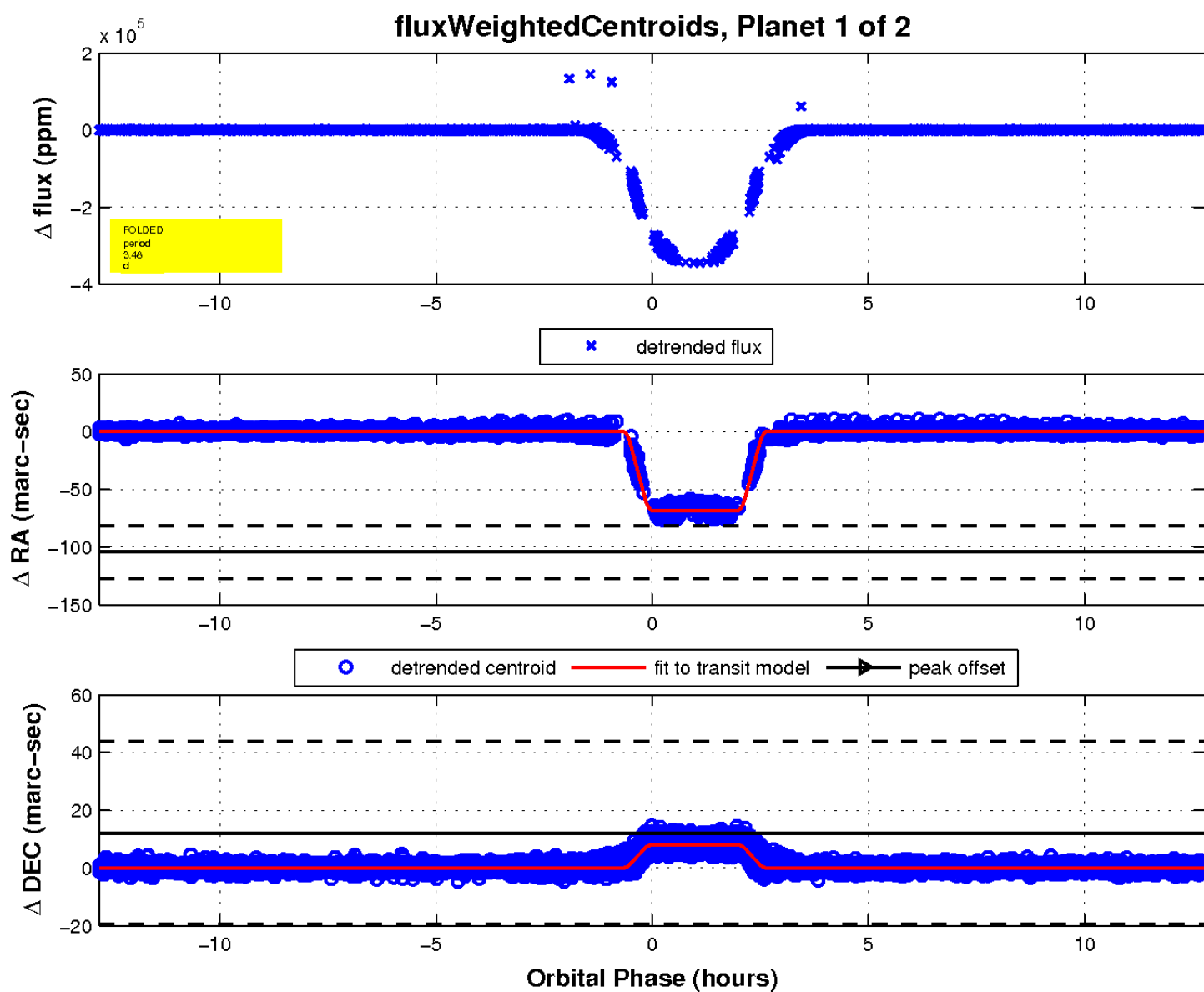
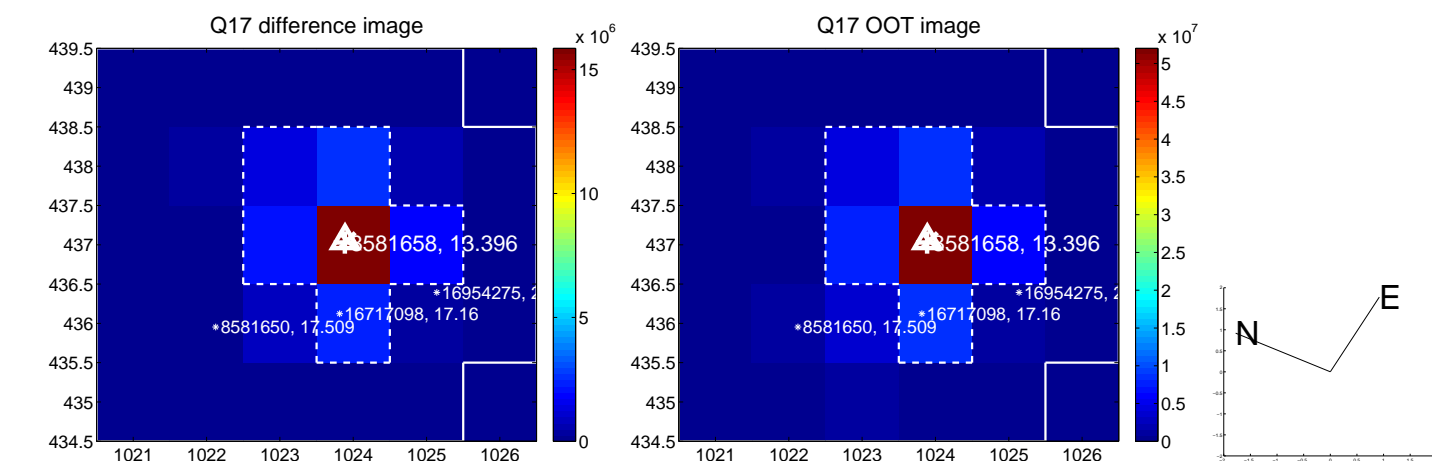
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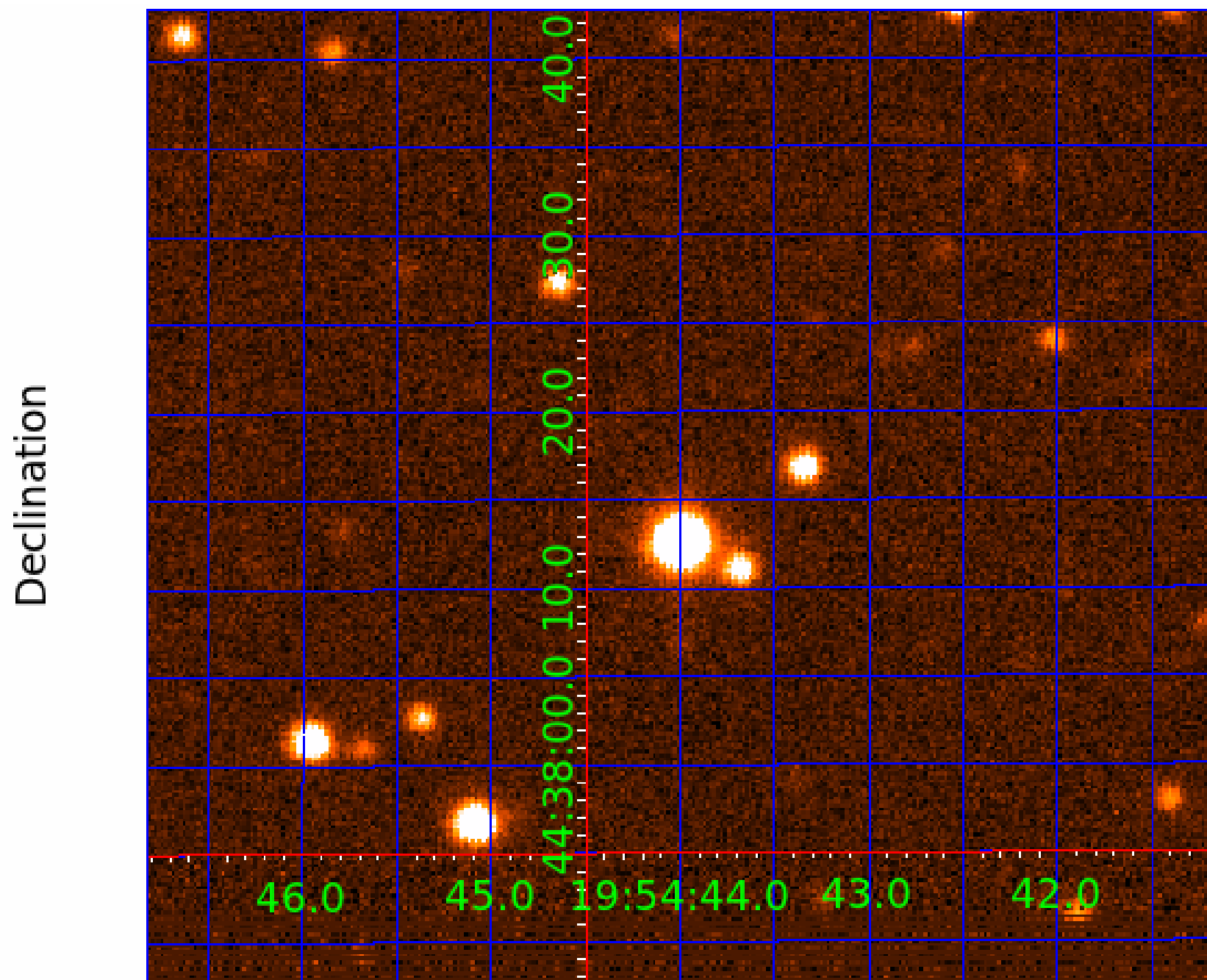
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008581658

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})
008581658-01	OBS	7064.01	3.481631	134.188278	345473.4	3.000	27916.8	-1.0	1.29	6225	63.13	1152.64
008581658-02	OBS	No	3.481658	132.442901	90929.4	4.666	9186.6	5781.1	1.29	6225	41.75	1152.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008581658-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
008581658-02	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.

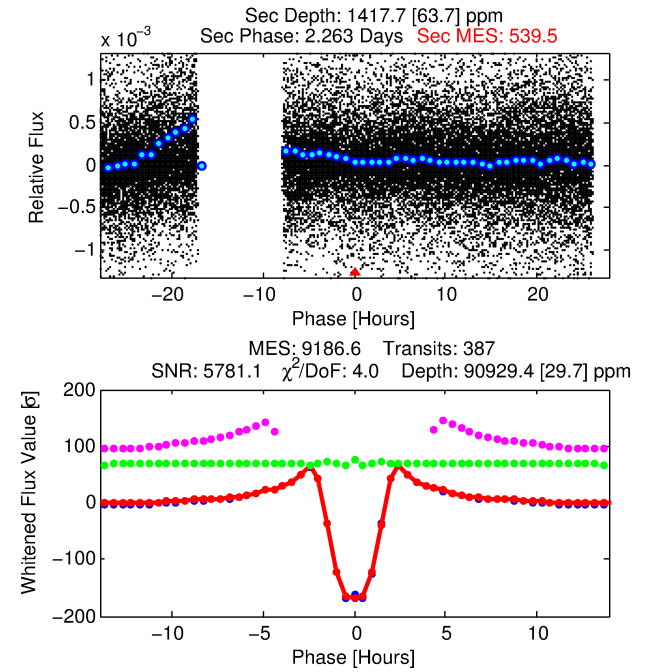
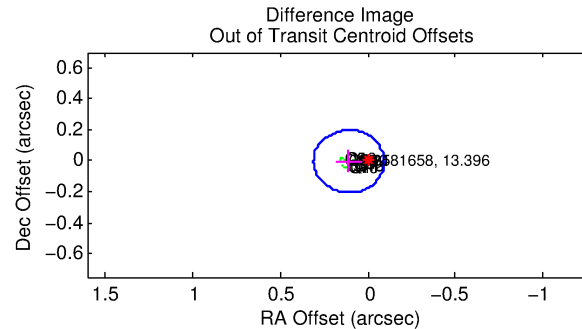
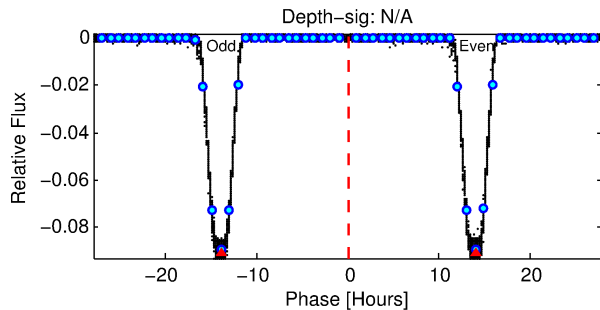
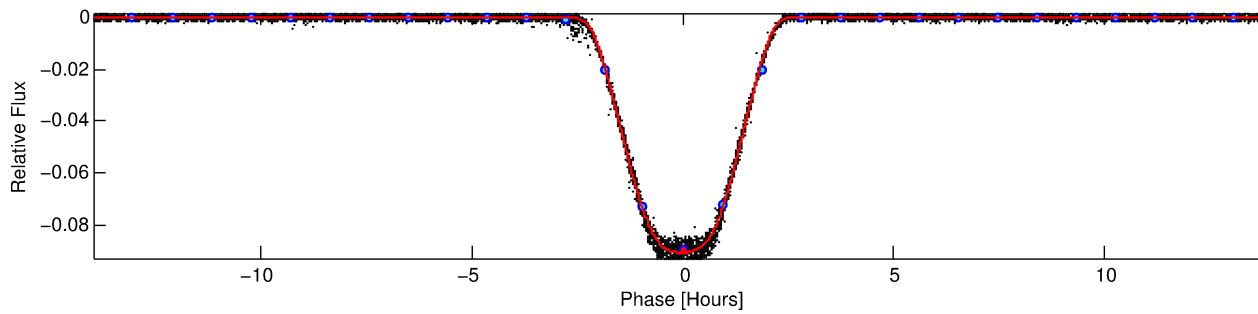
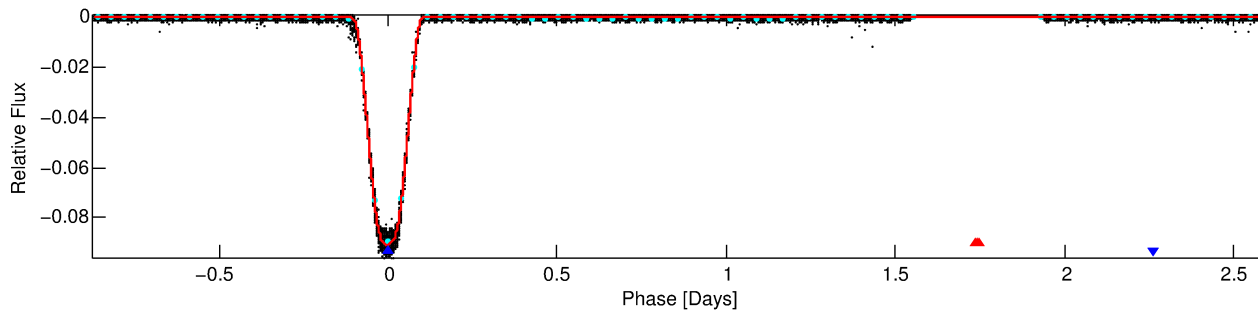
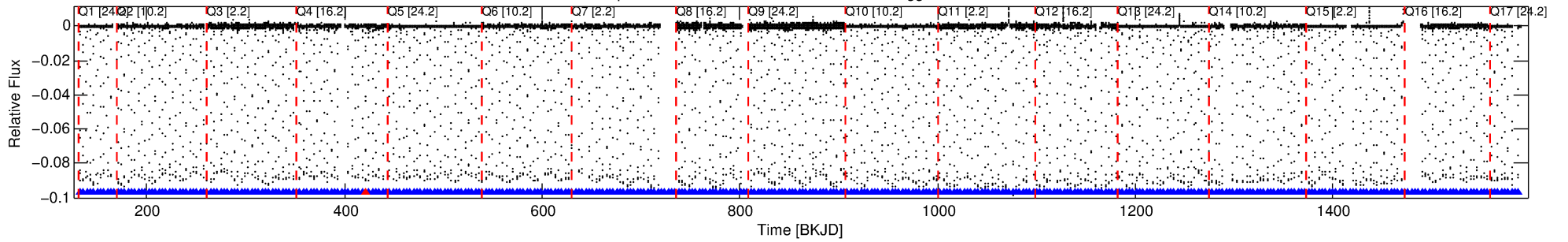
Ephemeris Match Information For 008581658-02

No Significant Match Found

DV One-Page Summary

KIC: 8581658 Candidate: 2 of 2 Period: 3.482 d
KOI: K07064 Corr: No Ephemeris Match

Kp: 13.40 R*: 1.29 Rs Teff: 6225.0 K Logg: 4.19 Fe/H: -0.480



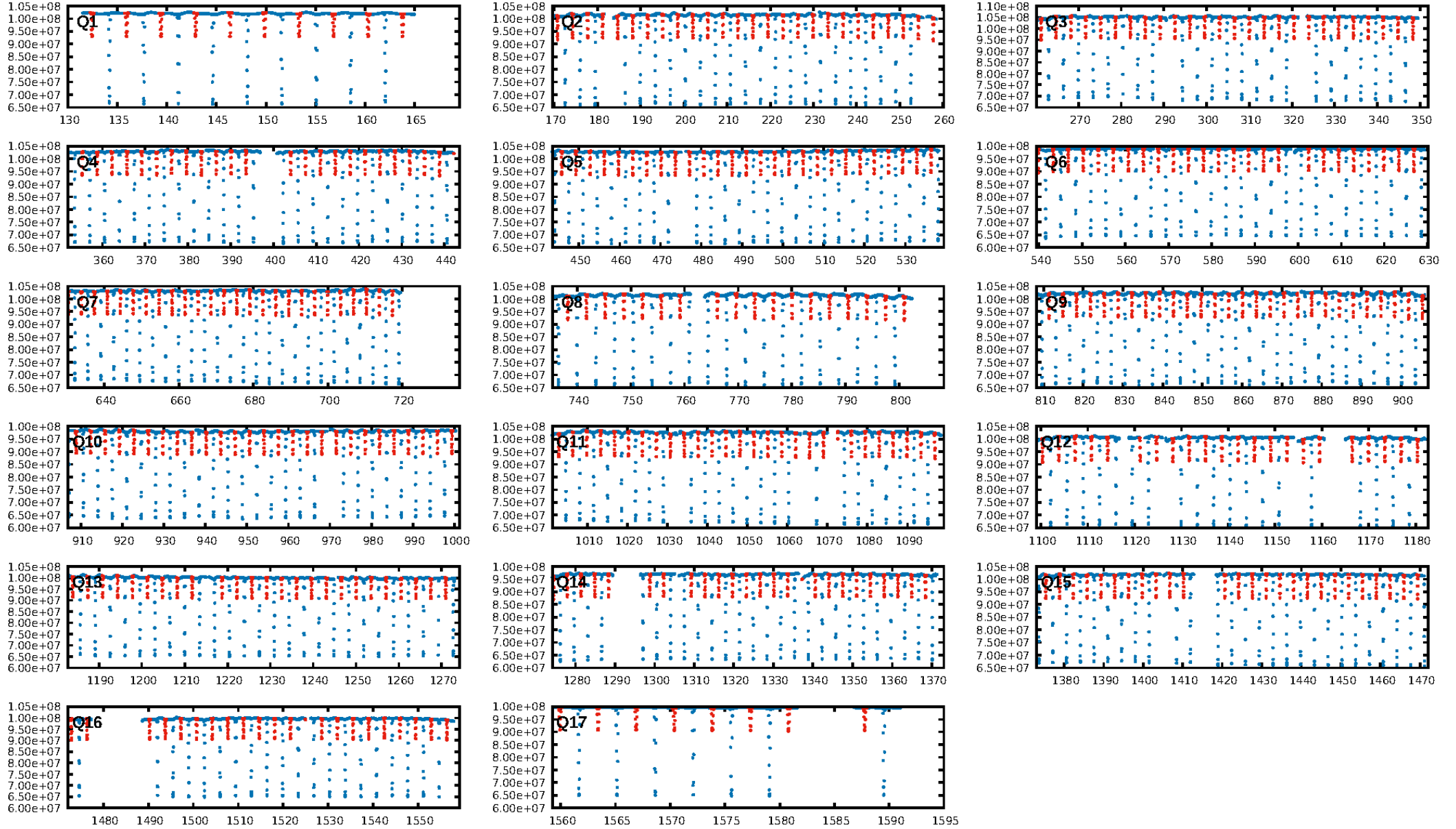
DV Fit Results:

Period = 3.48166 [0.00000] d
Epoch = 132.4429 [0.0000] BKJD
Rp/R* = 0.2964 [0.0001]
a/R* = 6.46 [0.00]
b = 0.65 [0.00]
Seff = 1152.62 [520.50]
Teq = 1486 [168] K
Rp = 41.75 [11.29] Re
a = 0.0441 [0.0118] AU
Ag = 0.87 [0.38] [-0.34σ]
Teffp = 2219 [71] K [4.02σ]

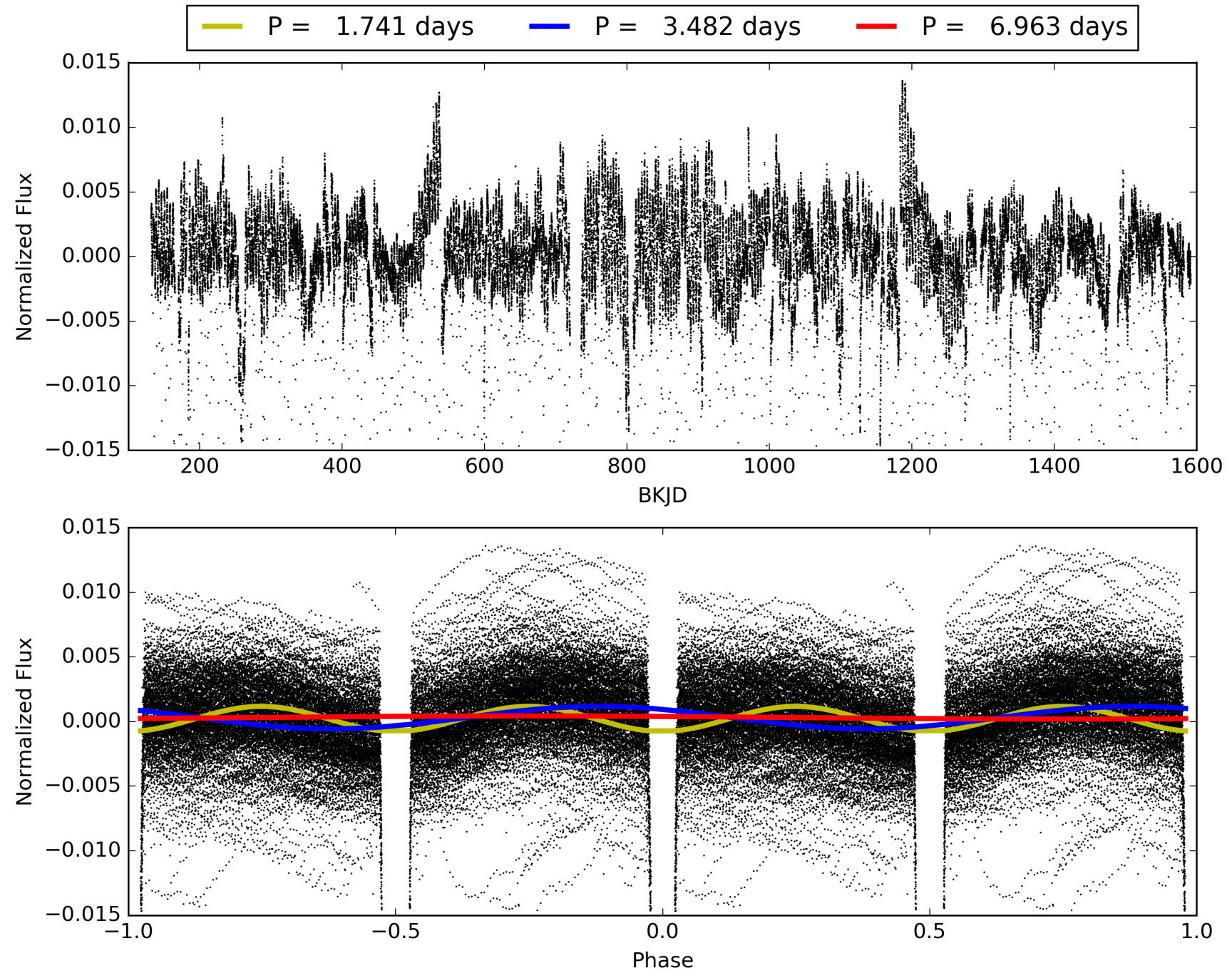
DV Diagnostic Results:

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 [368/369]
GhostDiagnostic-chr: 2.469
Centroid-sig: 0.0%
Centroid-so: 0.052 arcsec [80.28σ]
OotOffset-rm: 0.109 arcsec [1.62σ]
KicOffset-rm: 0.105 arcsec [1.55σ]
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 008581658-02, PDC Light Curves

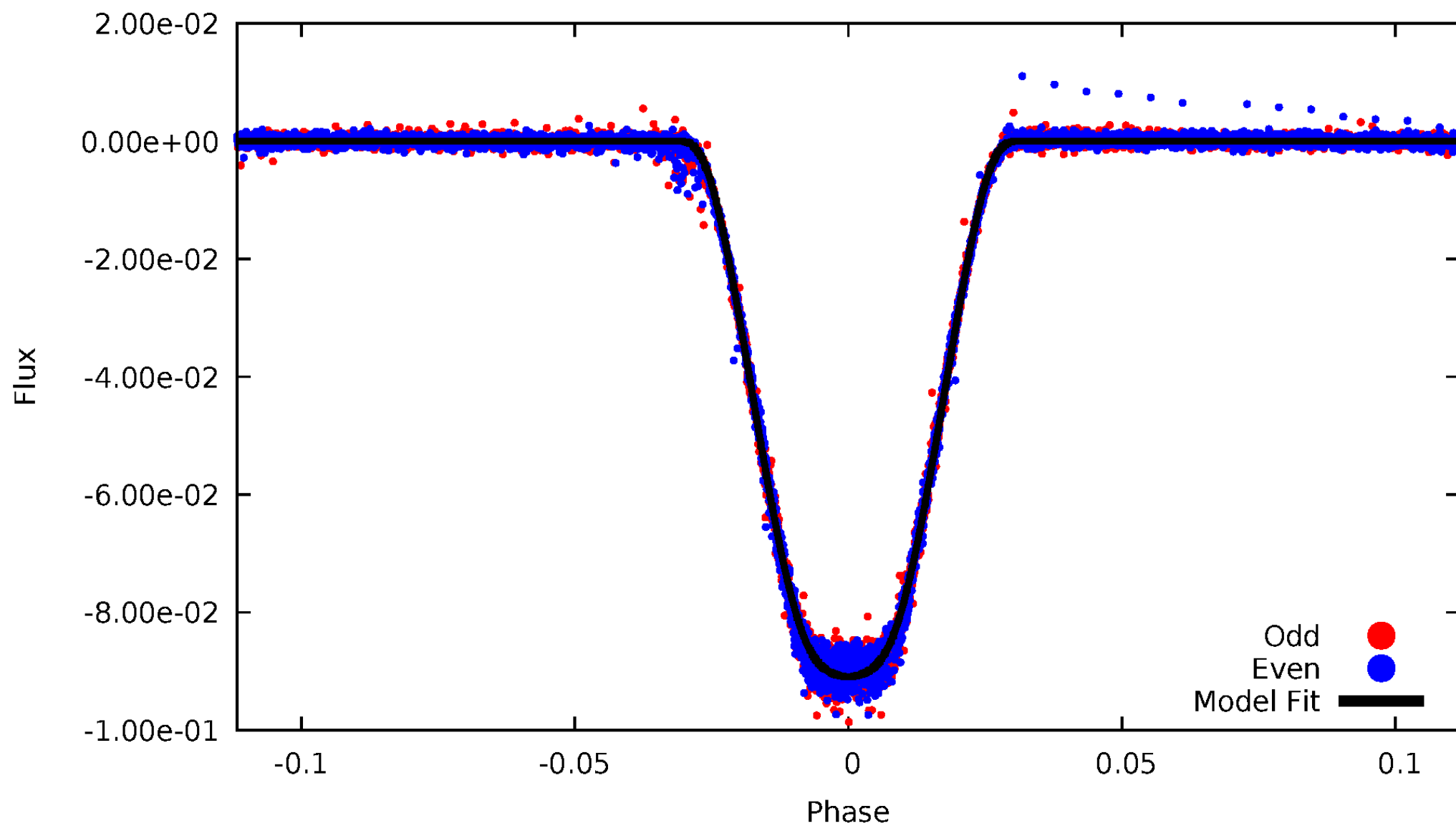


TCE 008581658-02



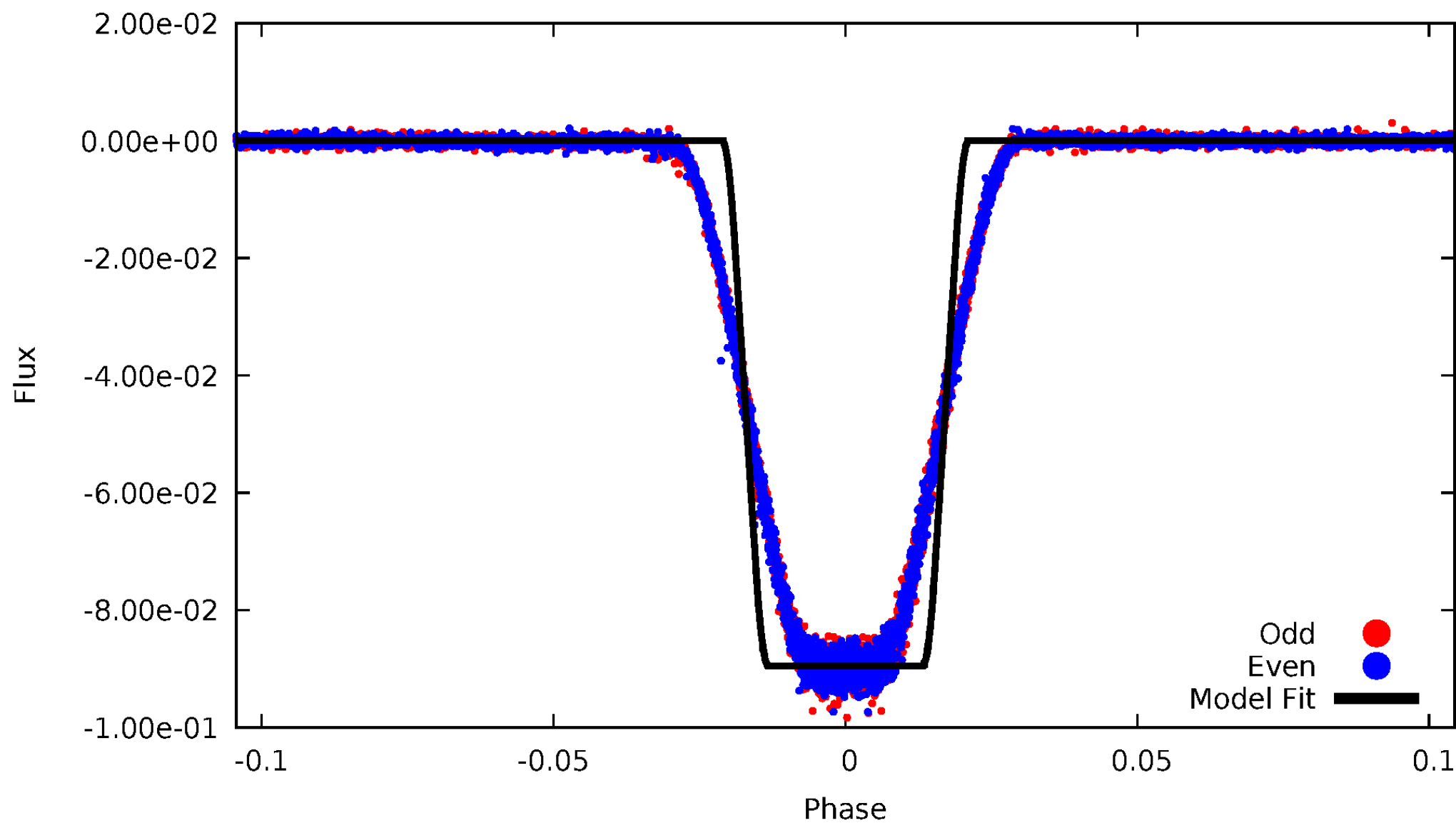
DV Odd/Even

TCE 008581658-02



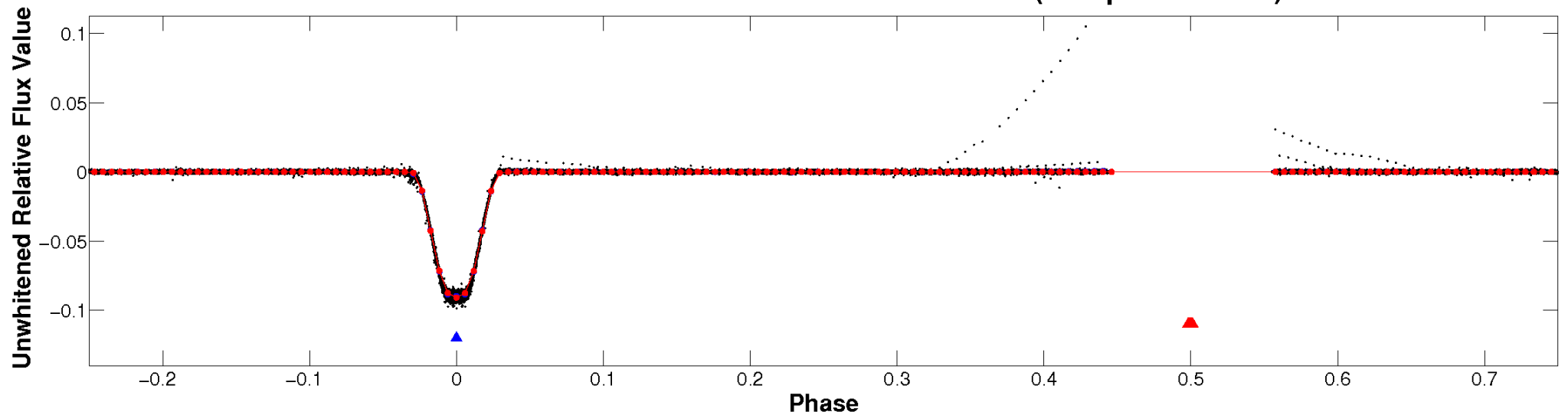
ALT Odd/Even

TCE 008581658-02

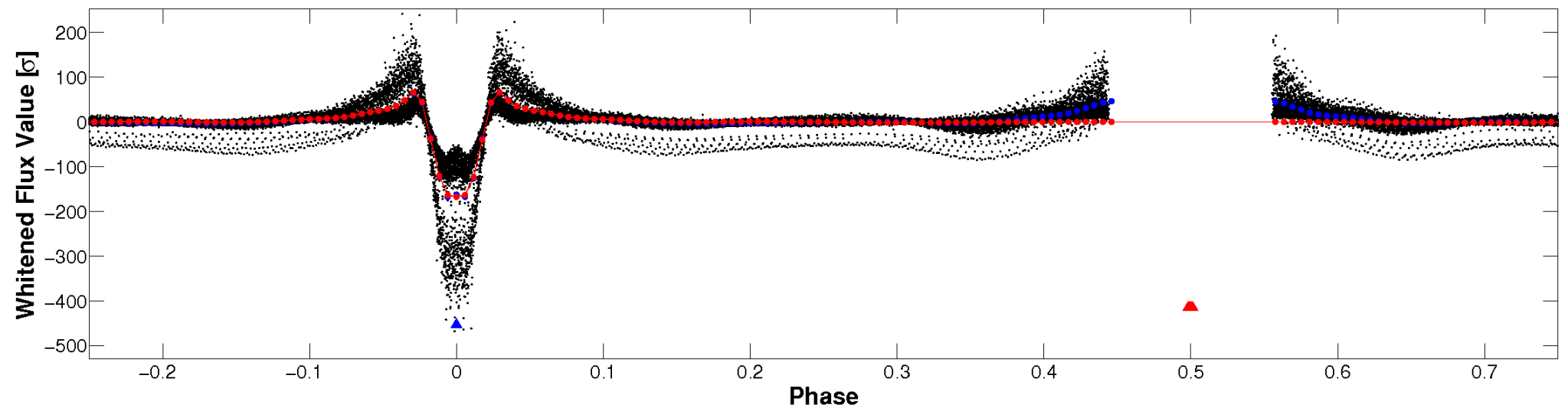


Non-Whitened Vs. Whitened Light Curve

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

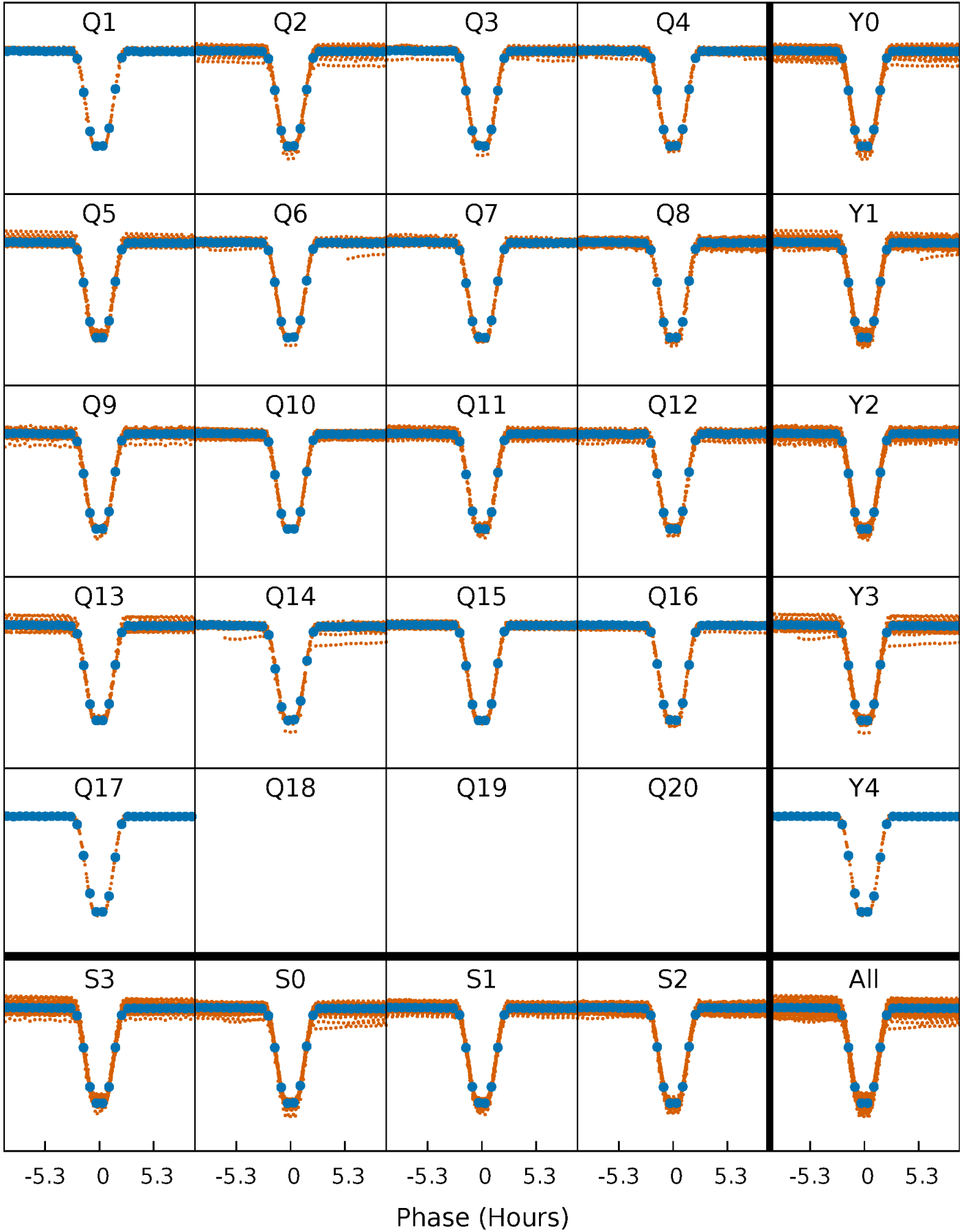


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



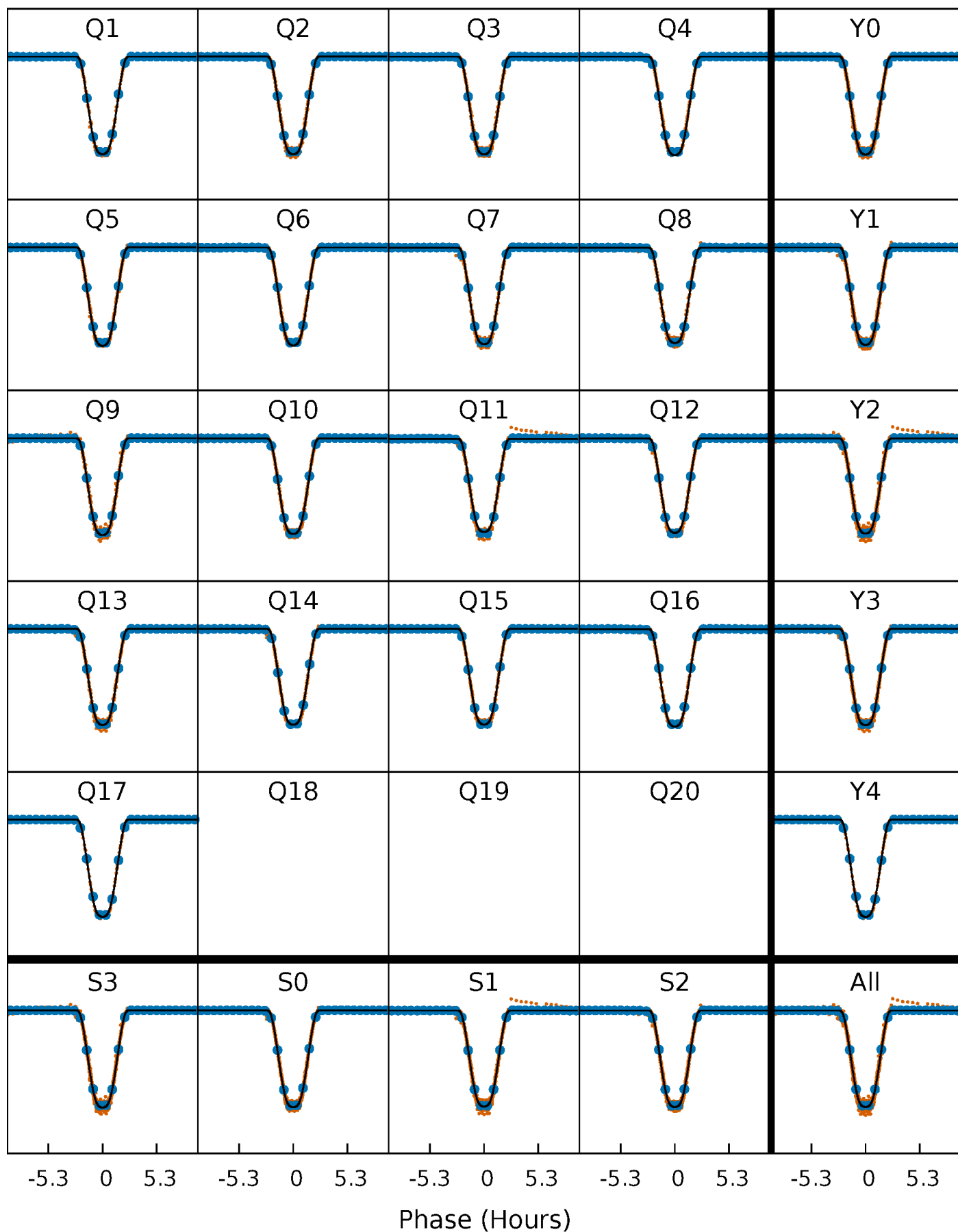
PDC Quarter-Phased Transit Curves

TCE 008581658-02 P= 3.481658 Days $T_0=132.442901$ (BKJD)



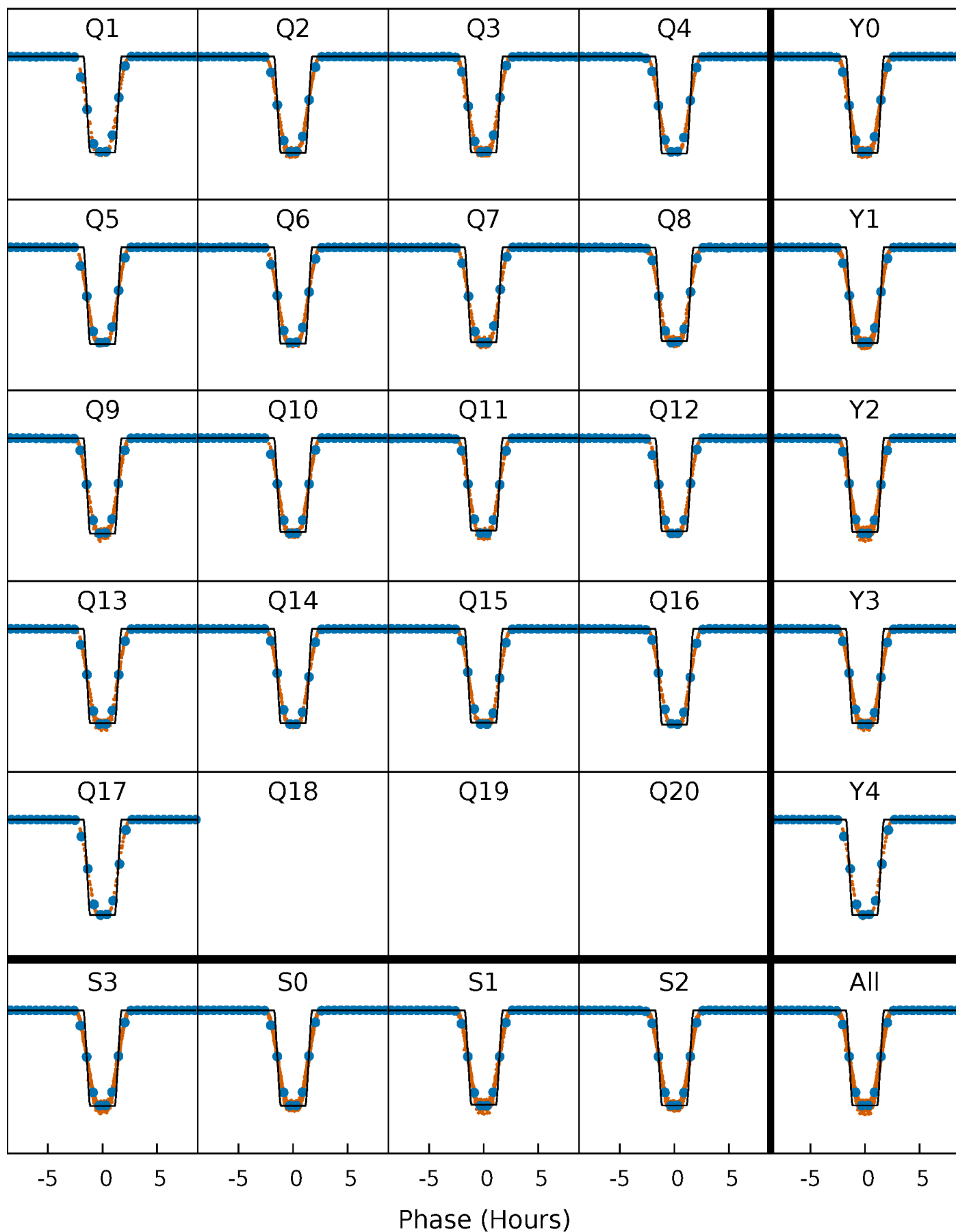
DV Quarter-Phased Transit Curves

TCE 008581658-02 P= 3.481658 Days $T_0=132.442901$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

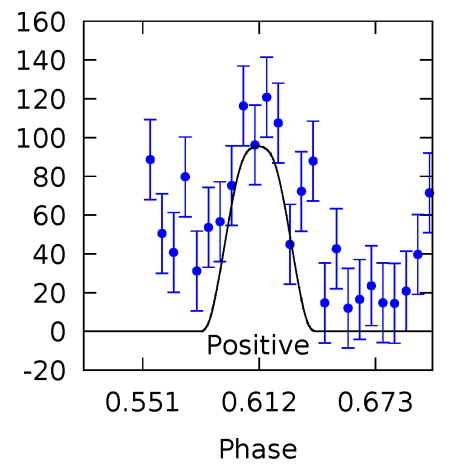
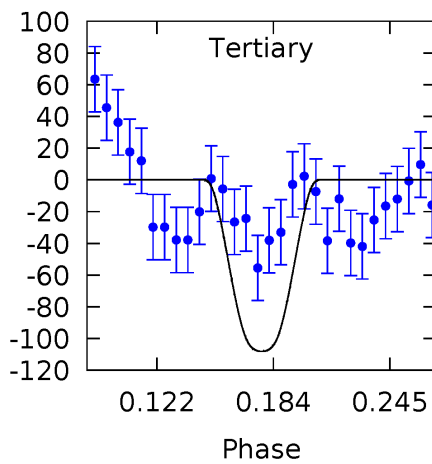
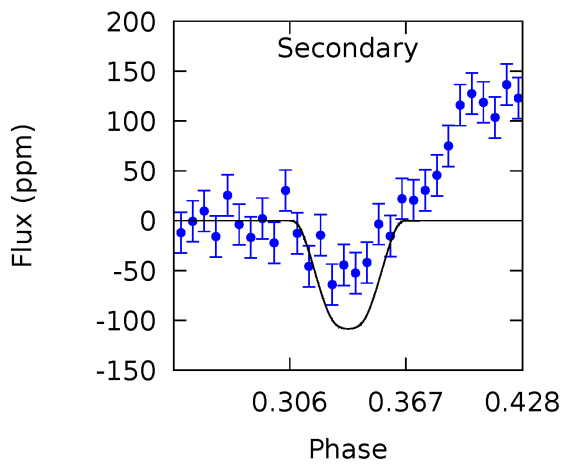
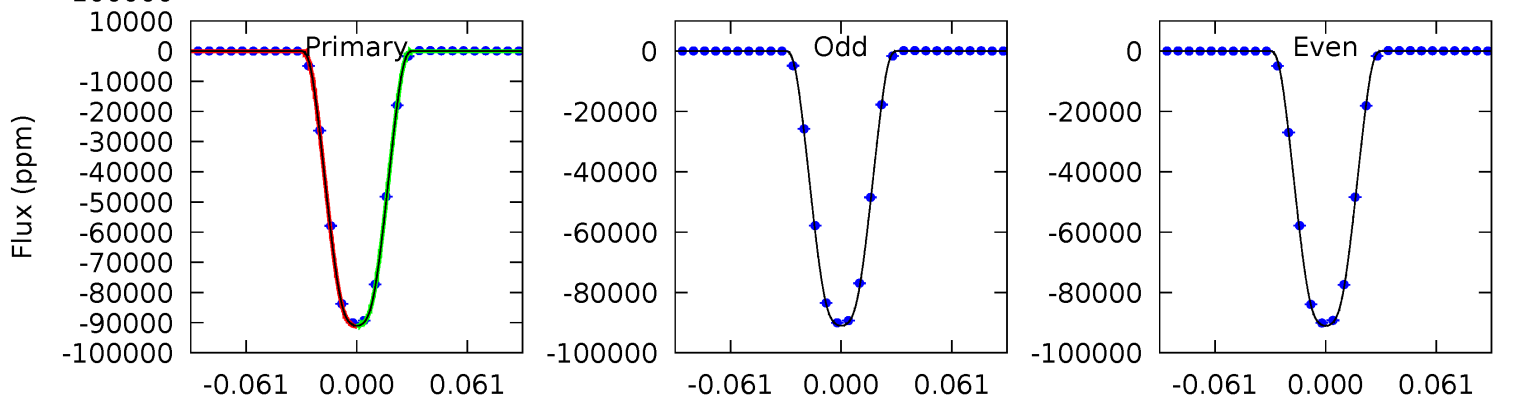
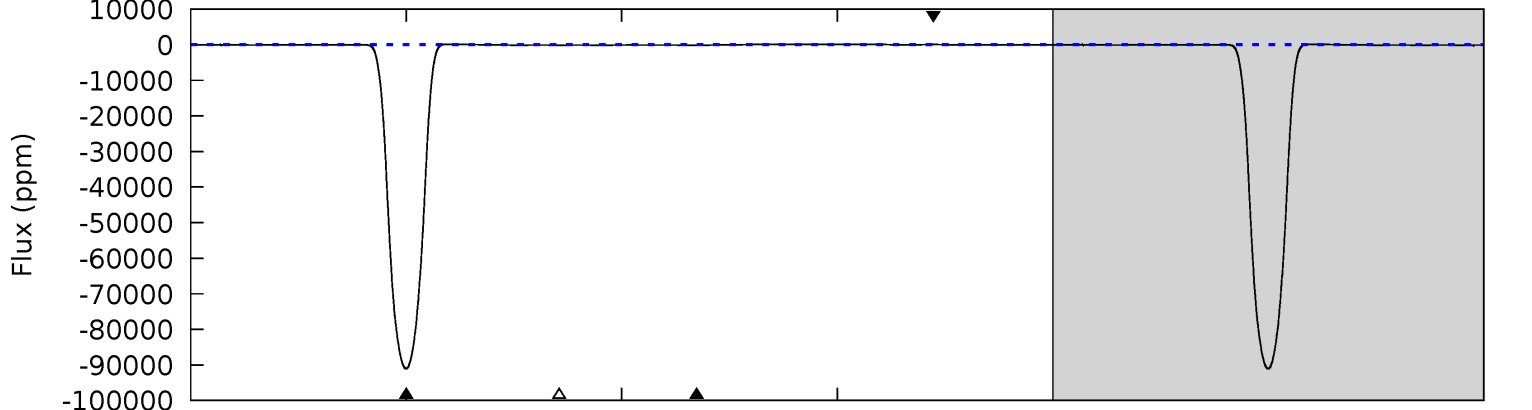
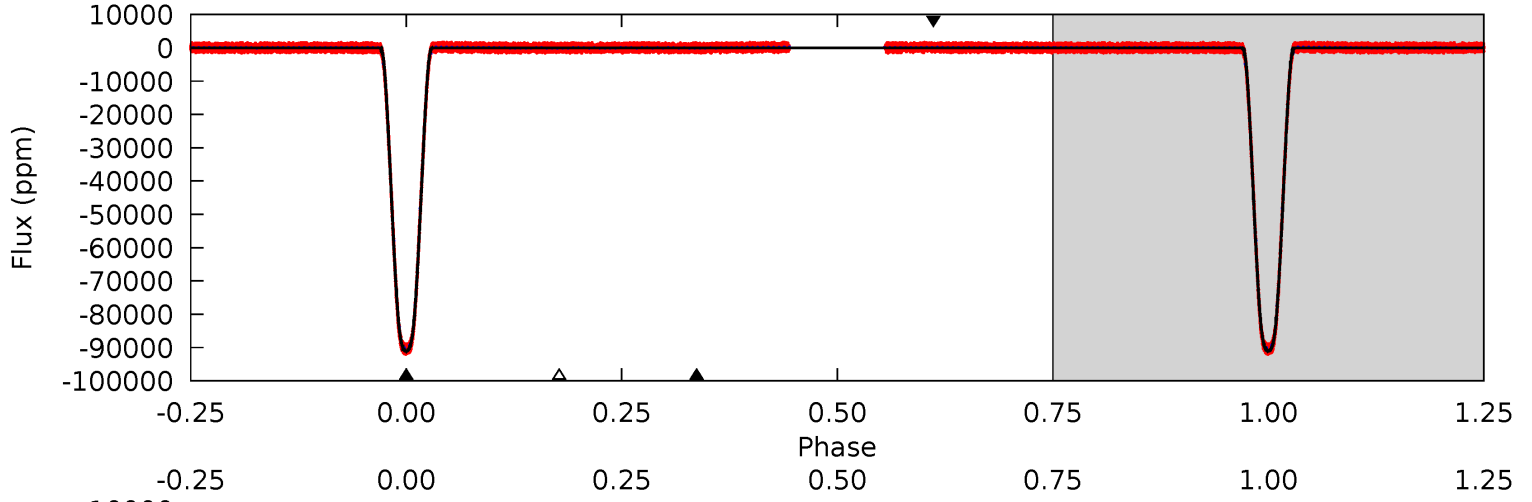
TCE 008581658-02 $P = 3.481649$ Days $T_0 = 132.444581$ (BKJD)



DV Model-Shift Uniqueness Test

008581658-02, P = 3.481658 Days, E = 128.961243 Days

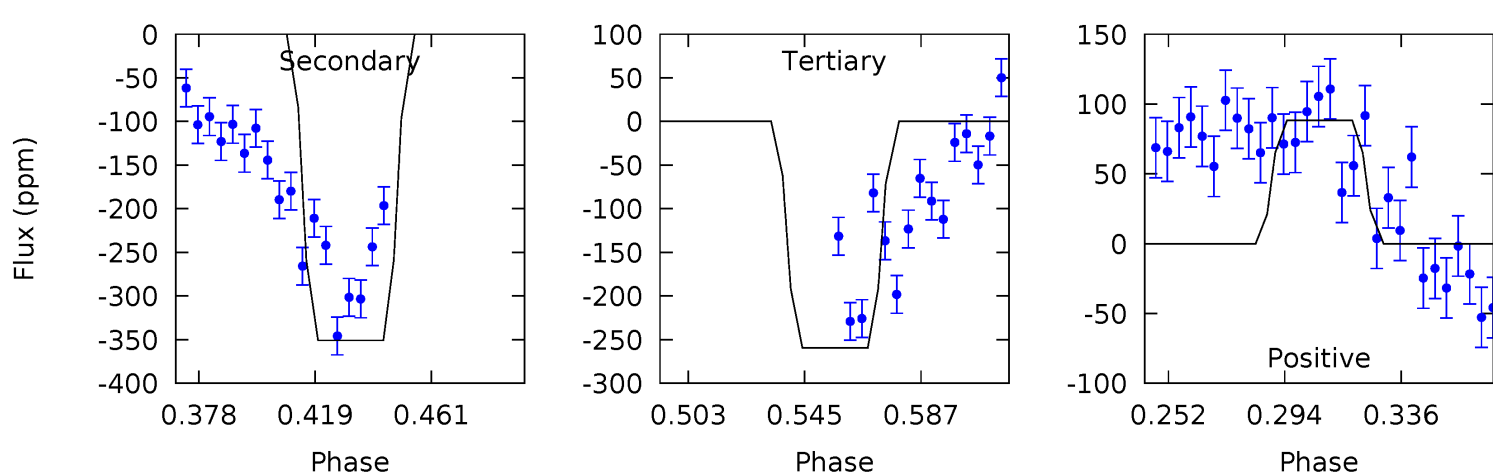
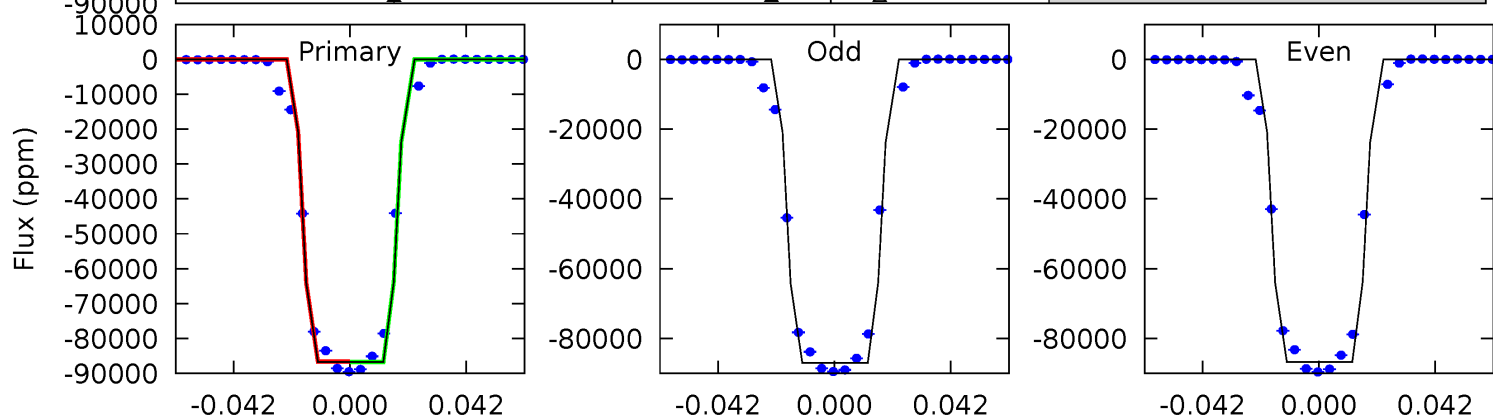
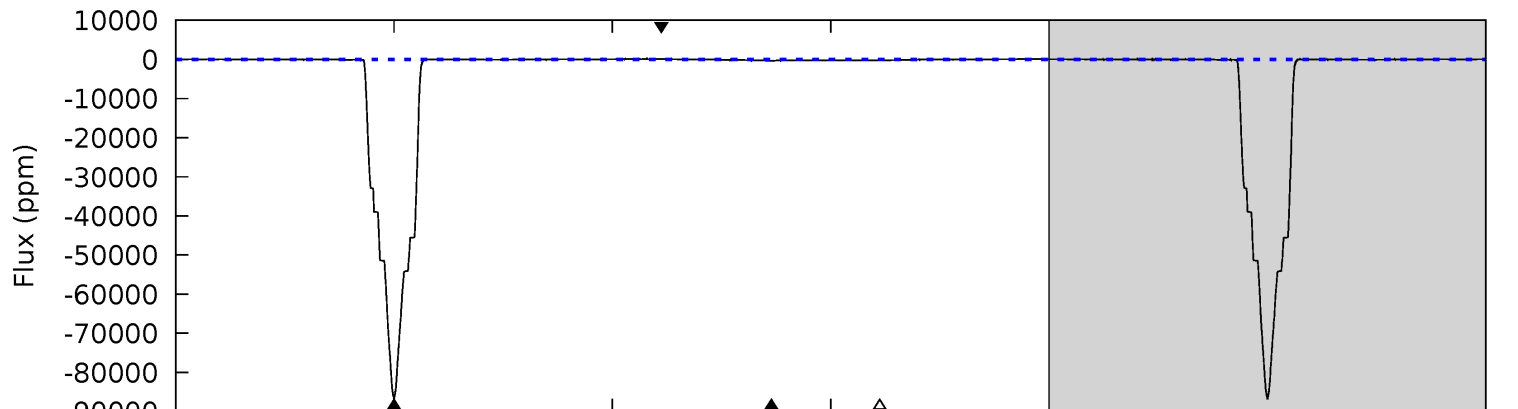
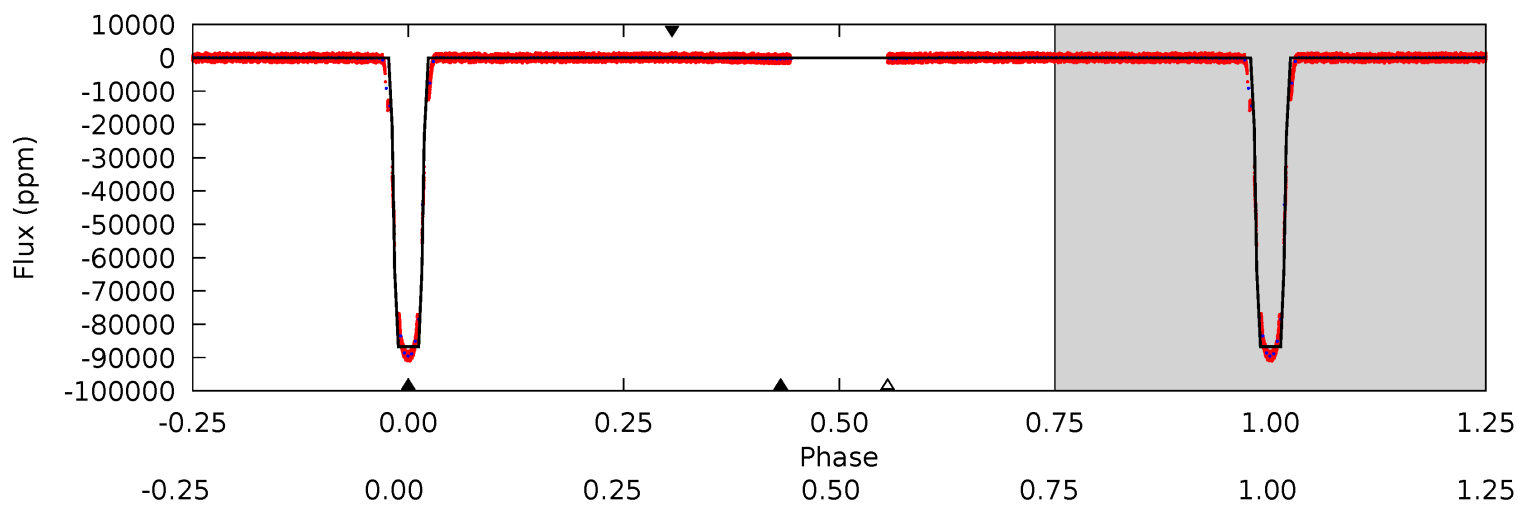
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10605	12.6	12.6	11.1	4.67	1.87	7.02	10592	10594	0.04	1.52	1.05	1.00	0.00	11.1



Alt Model-Shift Uniqueness Test

008581658-02, P = 3.481649 Days, E = 128.962932 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5941	24.0	17.8	6.05	4.74	2.03	4.18	5924	5935	6.26	18.0	9.85	1.00	0.00	0



Stellar Parameters For KIC 008581658

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6225^{+188}_{-188}	$4.191^{+0.258}_{-0.172}$	$-0.480^{+0.300}_{-0.300}$	$1.291^{+0.349}_{-0.349}$	$0.943^{+0.148}_{-0.098}$	$0.617^{+0.924}_{-0.279}$
	+3%/-3%	+6%/-4%	+62%/-62%	+27%/-27%	+16%/-10%	+150%/-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 008581658-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-108 ± 9	$41.51^{+6.68}_{-6.39}$	2062^{+162}_{-171}	-2457^{+132}_{-110}	$0.067^{+0.029}_{-0.016}$
Alt.	-351 ± 15	$42.20^{+6.44}_{-6.42}$	2071^{+153}_{-172}	-2199^{+510}_{-186}	$0.213^{+0.079}_{-0.050}$

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

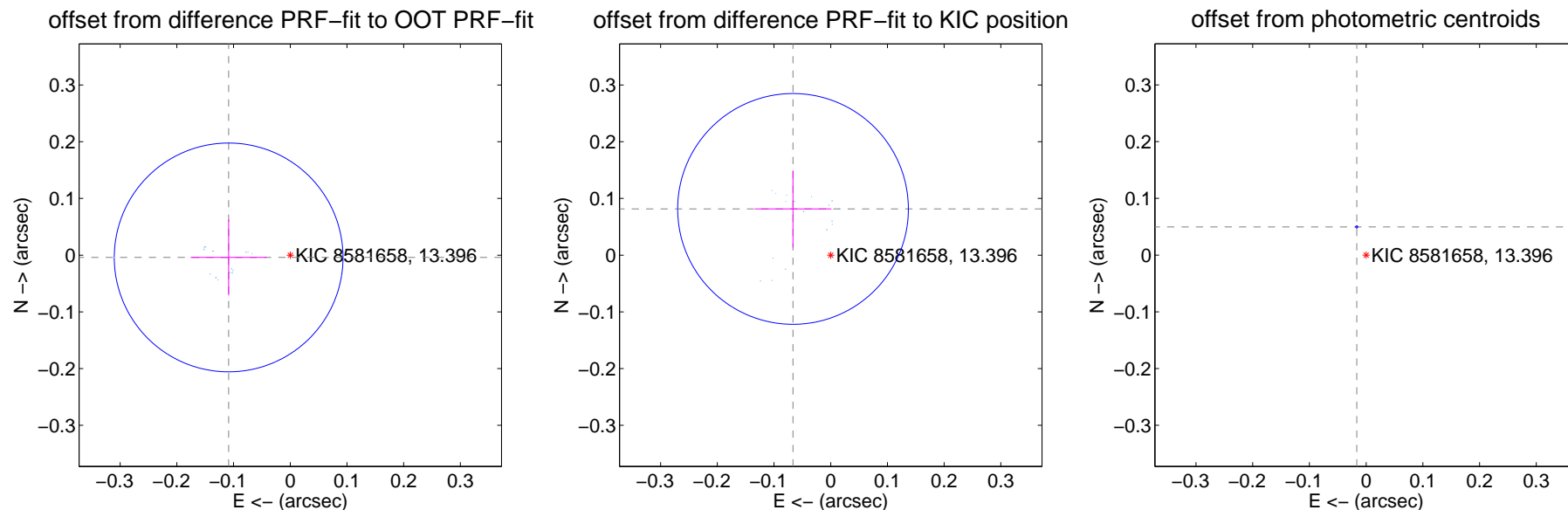
DV Centroid Data

Supplemental centroid analysis for 008581658-02. Kepler magnitude: 13.40. Transit SNR 5781.13

There are 17 quarters with good PRF difference image offsets

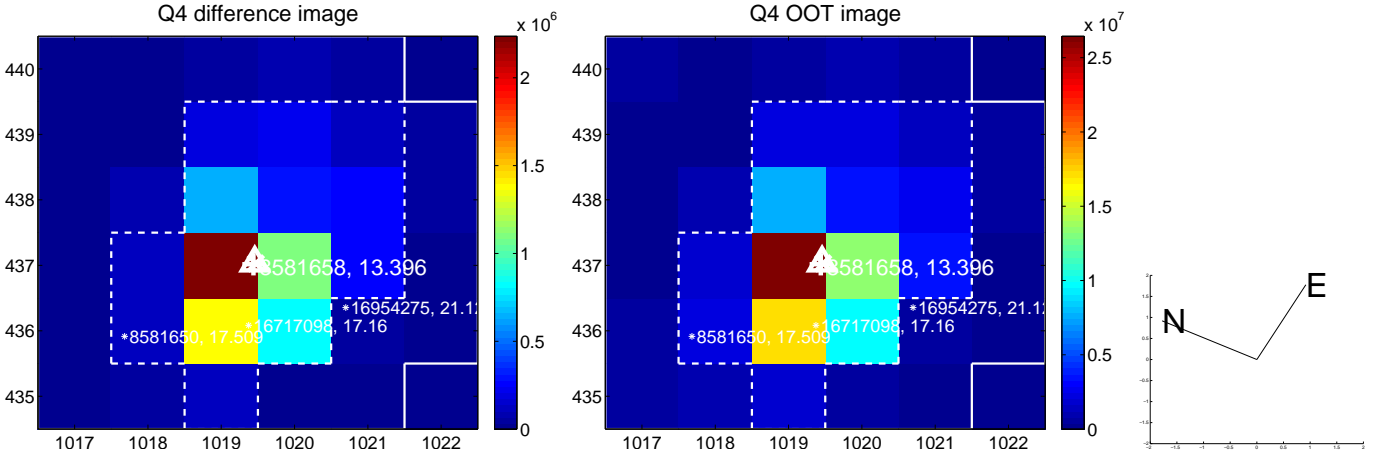
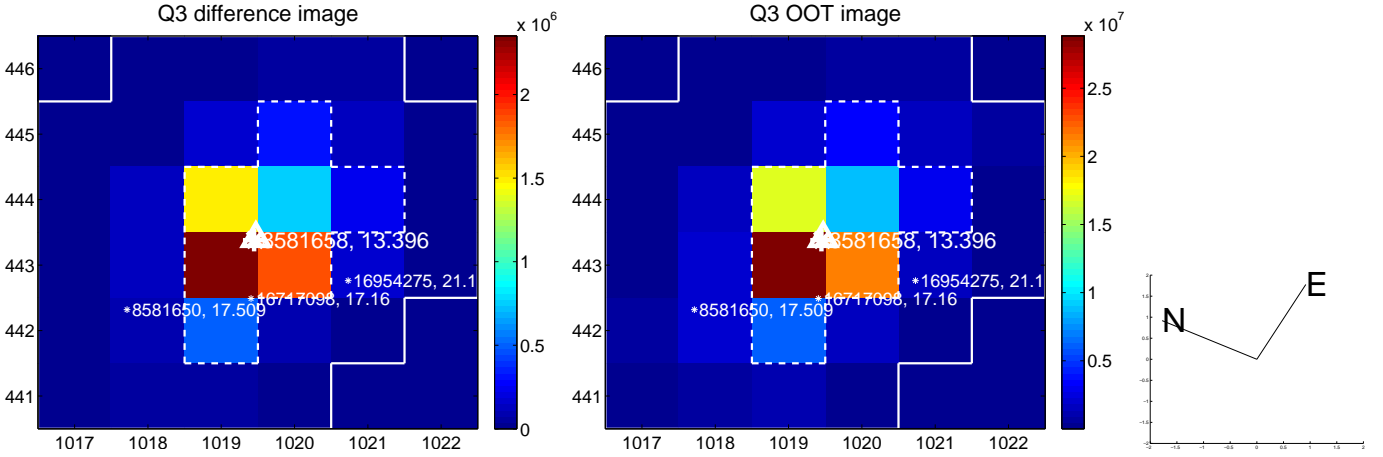
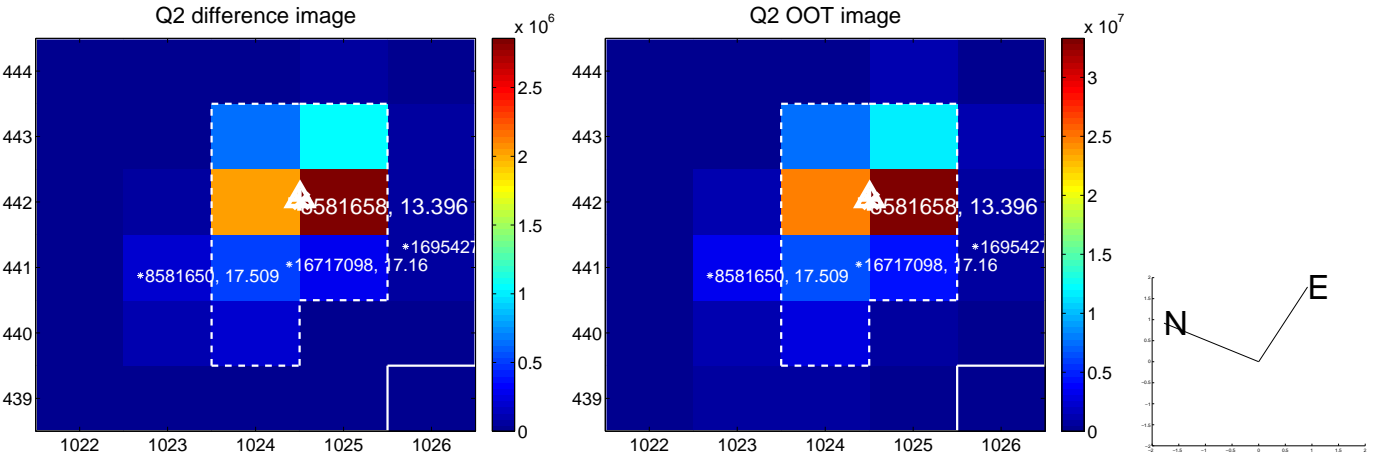
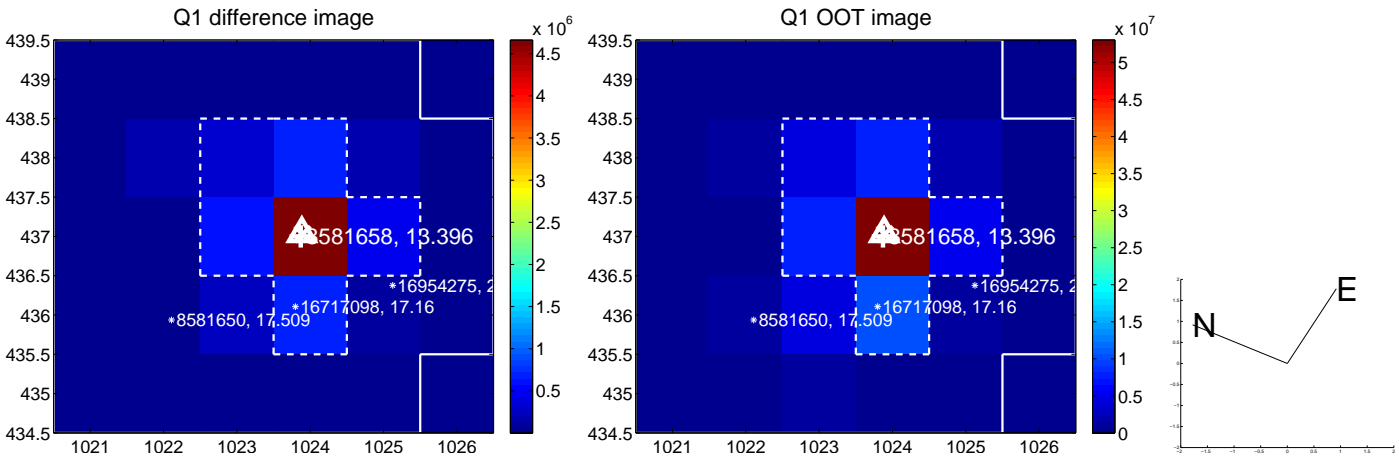
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.109 ± 0.067	1.62	0.109 ± 0.067	-0.004 ± 0.067
PRF-fit source offset from KIC position	0.105 ± 0.068	1.55	0.066 ± 0.068	0.082 ± 0.068
photometric centroid source offset	0.05 ± 0.00	80.28	0.02 ± 0.00	0.05 ± 0.00

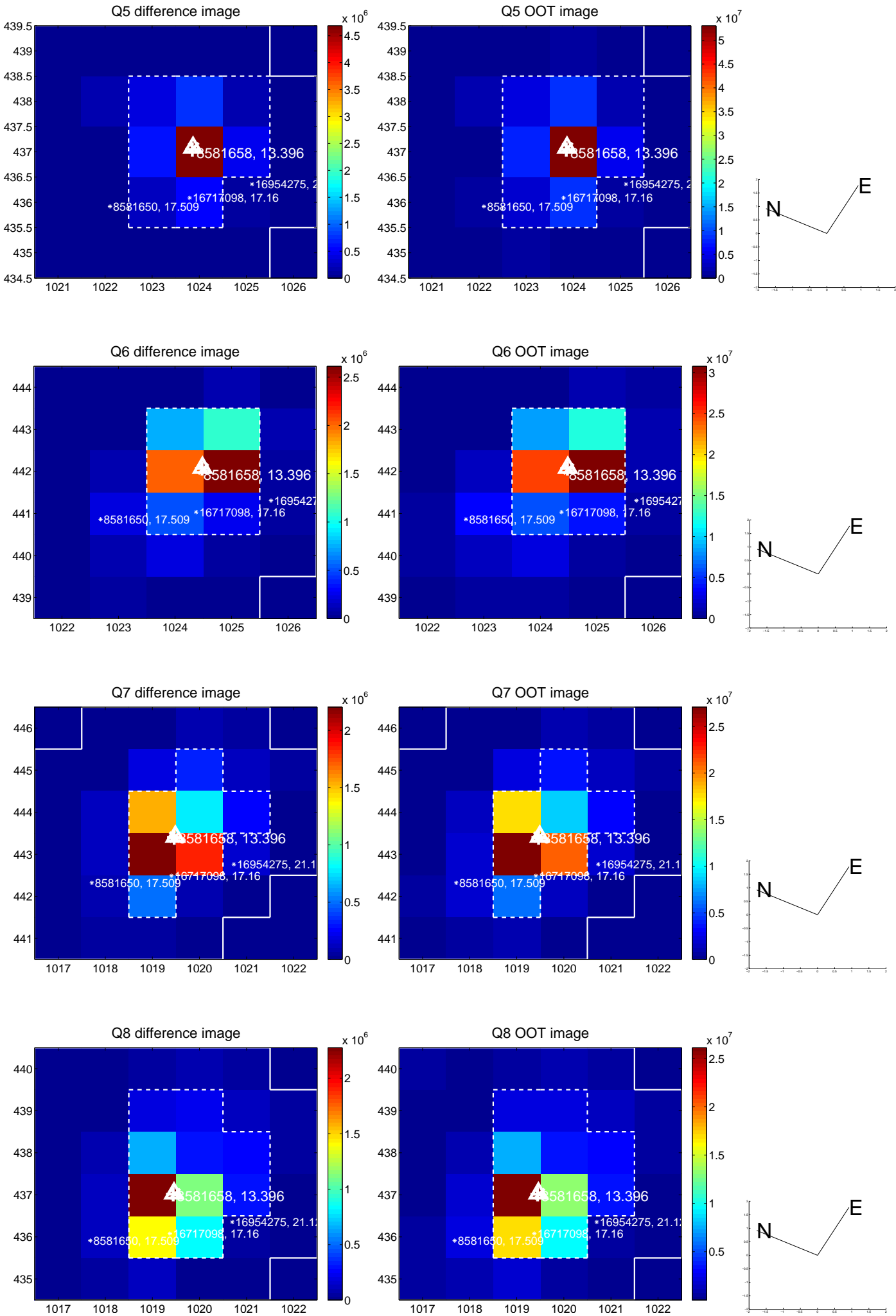


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

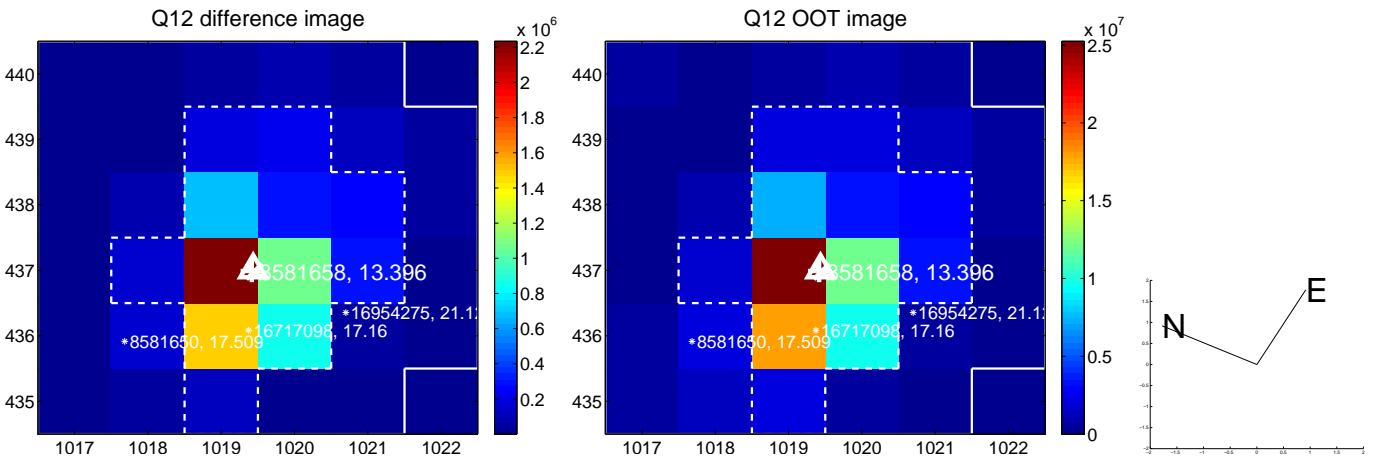
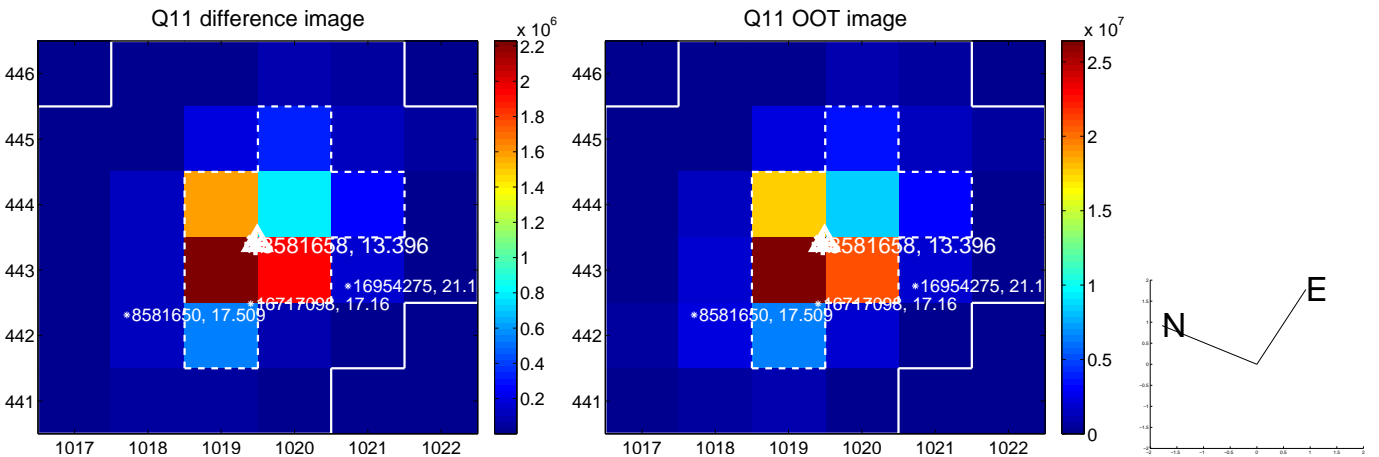
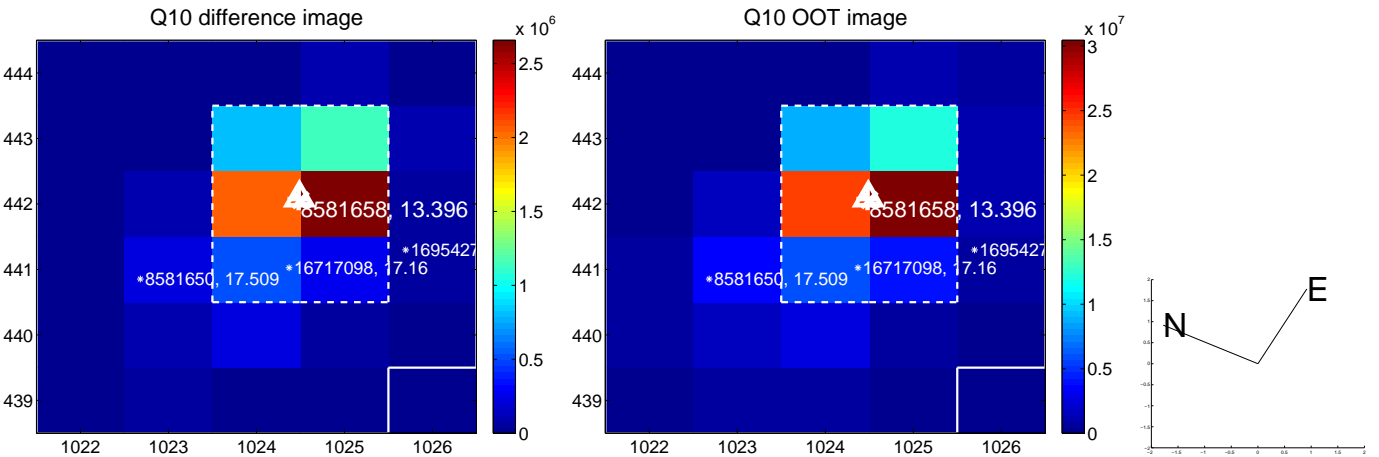
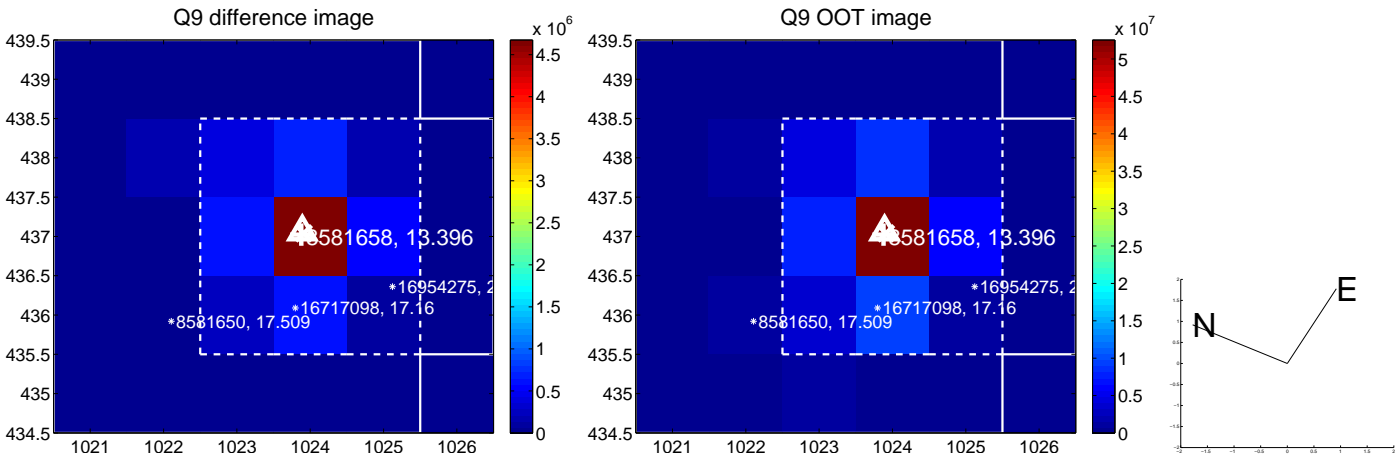
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



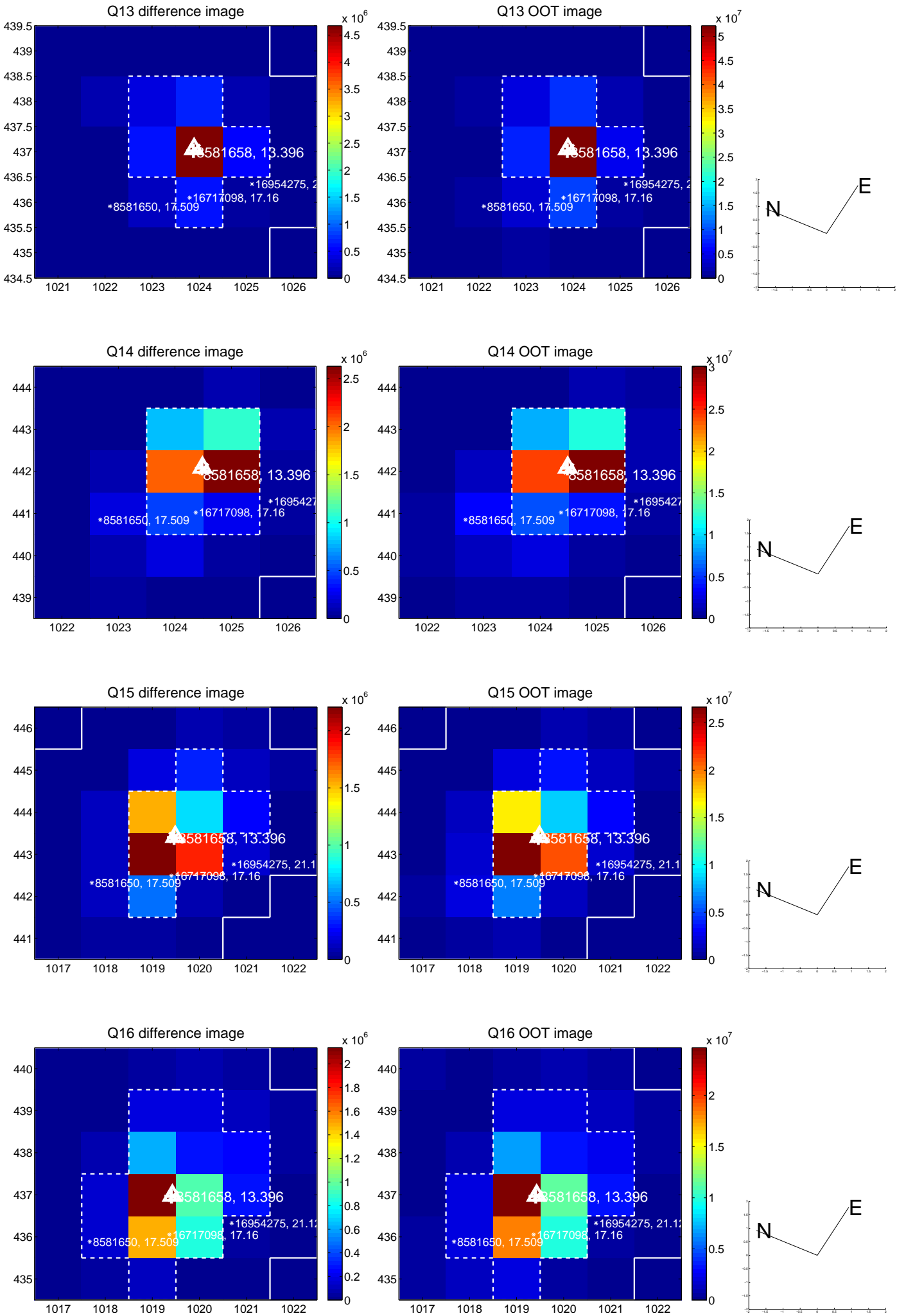
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



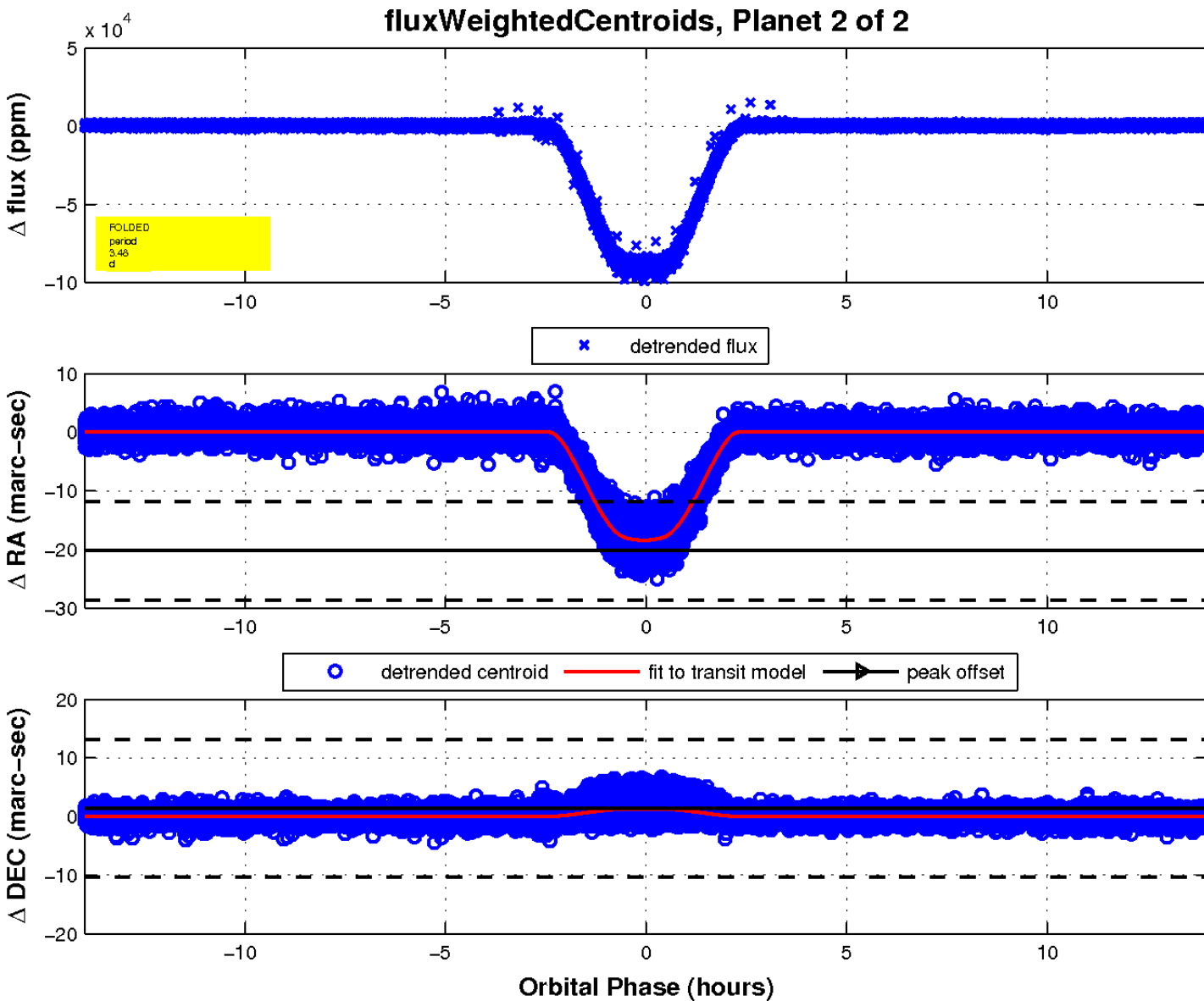
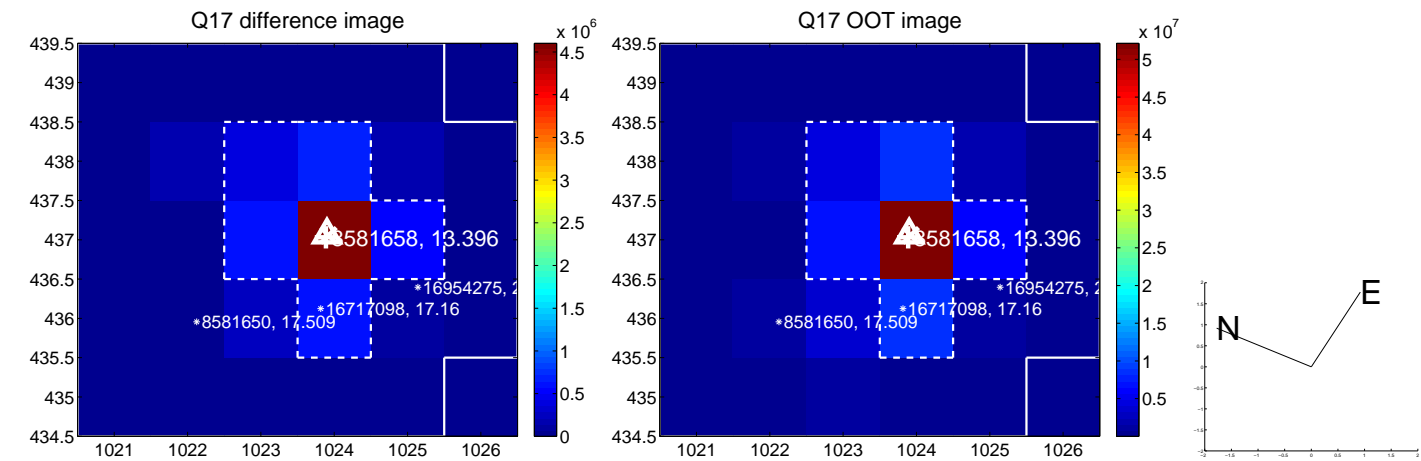
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



This astronomical image shows a field of stars against a dark background. A blue grid is overlaid on the image. Green text labels are present: '46.0', '45.0', '19:54:44.0', '43.0', and '42.0' along the bottom edge, and '40.0', '30.0', '20.0', '10.0', and '44:38:00.0' along the left edge. A red horizontal line is drawn across the image at the level of the '44:38:00.0' label.

Declination