

KIC 006864569

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})
006864569-01	OBS	No	383.578788	254.418857	253.6	12.500	40.8	-1.0	2.90	11076	4.75	51.11
006864569-02	OBS	6780.01	2.325124	133.330803	24.1	1.659	24.5	24.6	2.90	11076	1.63	46241.34
006864569-03	OBS	No	378.819760	480.959452	186.6	11.000	16.2	7.9	2.90	11076	7.25	51.97
006864569-04	OBS	No	2.325161	133.578527	5.2	5.161	8.1	6.8	2.90	11076	0.75	46240.35
006864569-05	OBS	No	97.584463	183.122074	46.7	4.275	10.8	4.8	2.90	11076	2.25	317.04
006864569-06	OBS	No	0.775060	132.000777	74.5	2.000	8.9	-1.0	2.90	11076	2.58	200068.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—NO_FITS—INCONSISTENT_TRANS—CENT_SATURATED
006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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 006864569-01

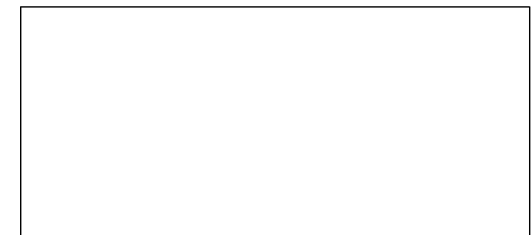
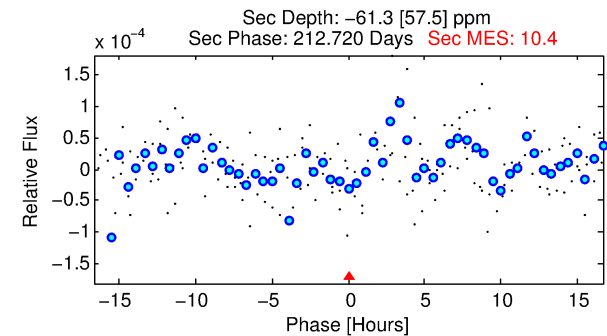
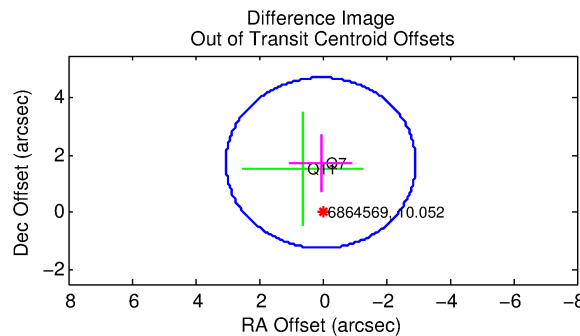
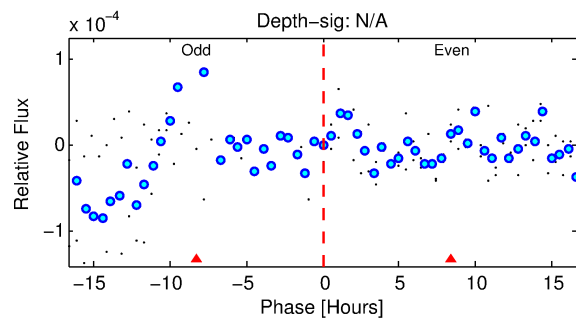
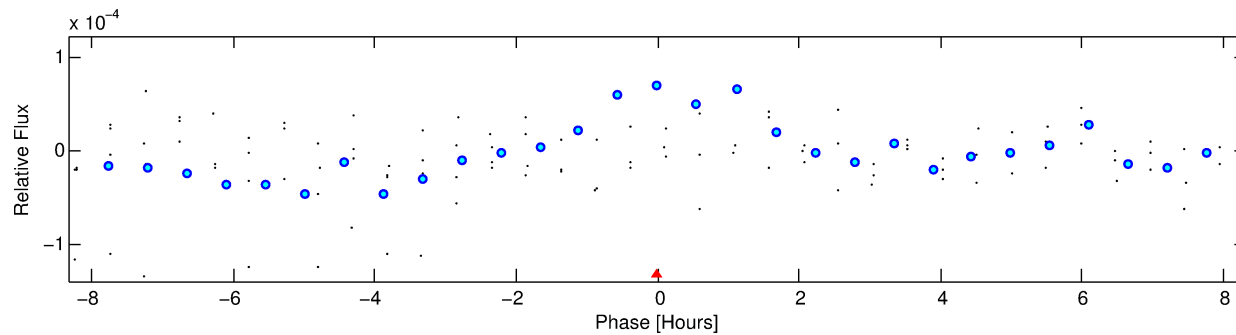
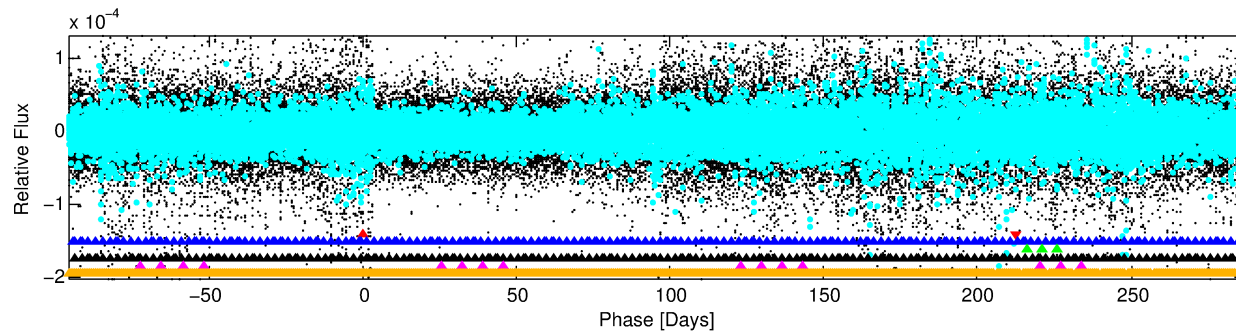
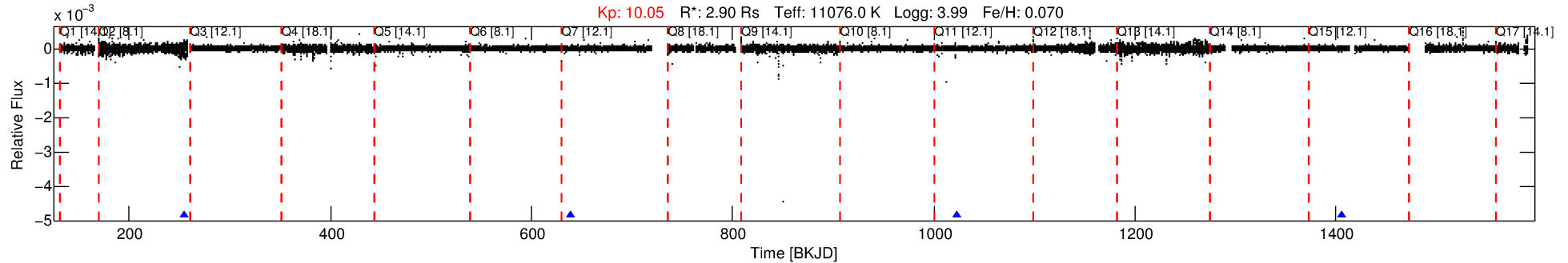
No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 1 of 6 Period: 383.579 d

KOI: K06780 Corr: No Ephemeris Match

Kp: 10.05 R*: 2.90 Rs Teff: 11076.0 K Logg: 3.99 Fe/H: 0.070



TPS TCE Results:

Period = 383.57879 d
Epoch = 254.4189 BKJD

DV fit results are unavailable

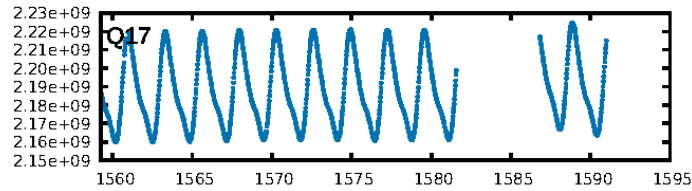
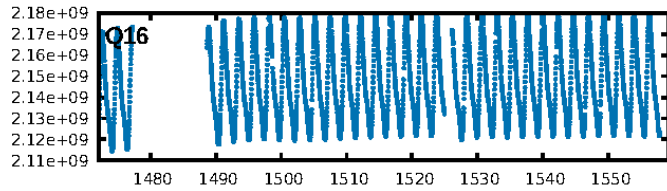
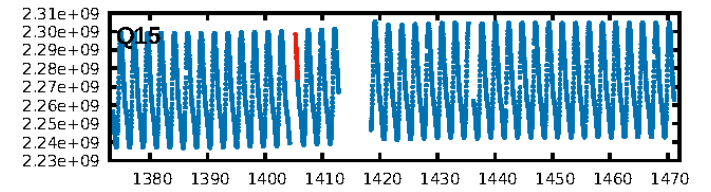
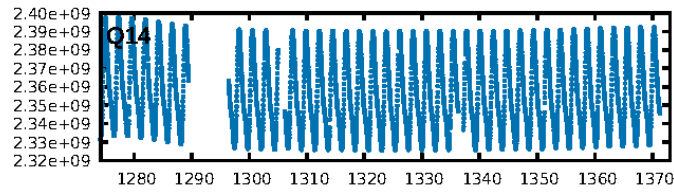
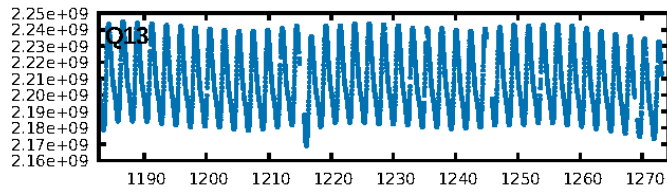
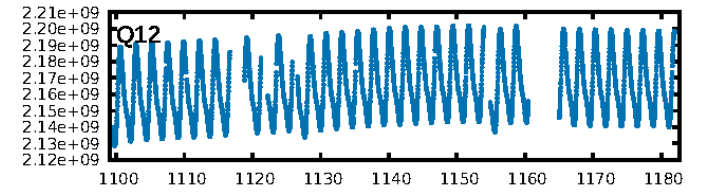
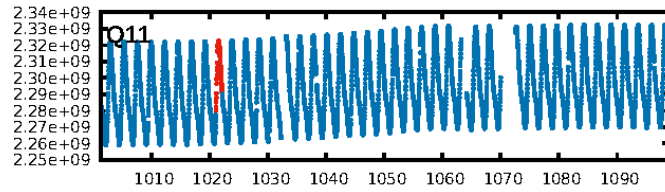
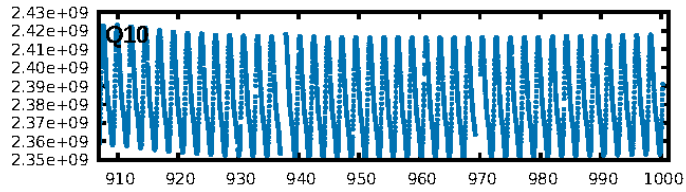
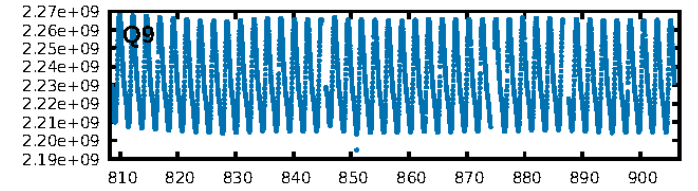
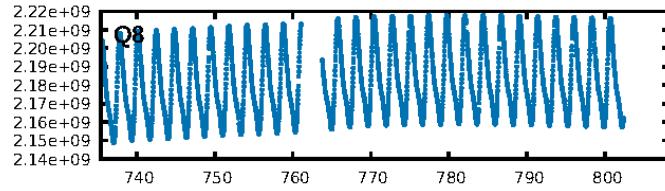
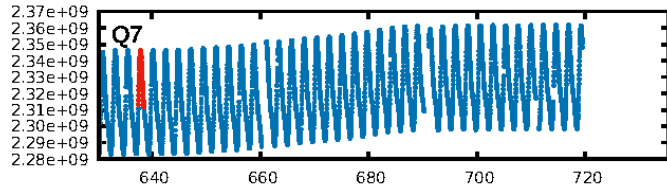
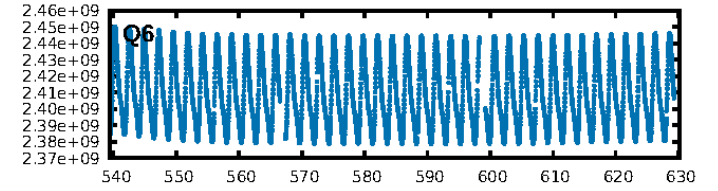
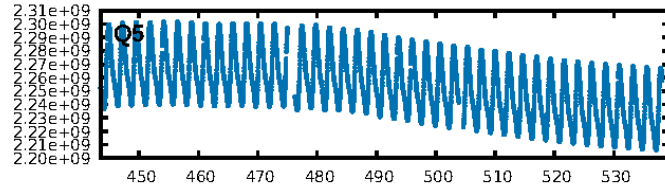
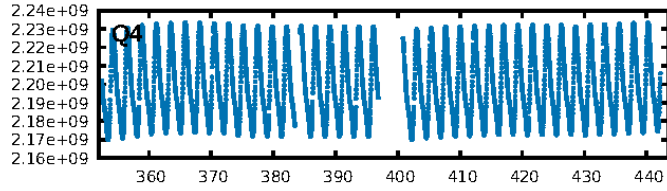
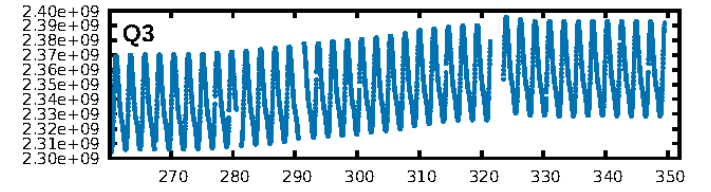
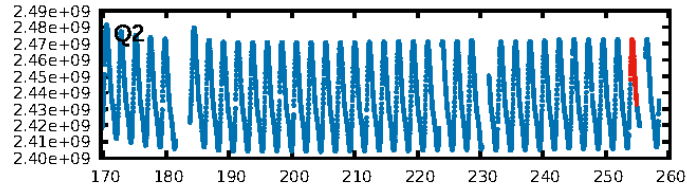
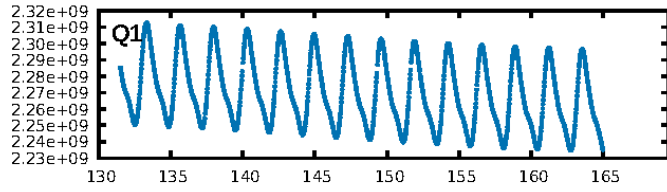
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.86 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 87.4%
Centroid-so: 5.200 arcsec [0.22 σ]
OotOffset-rm: 1.741 arcsec [1.75 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-rm: 3.603 arcsec [3.62 σ]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/2]

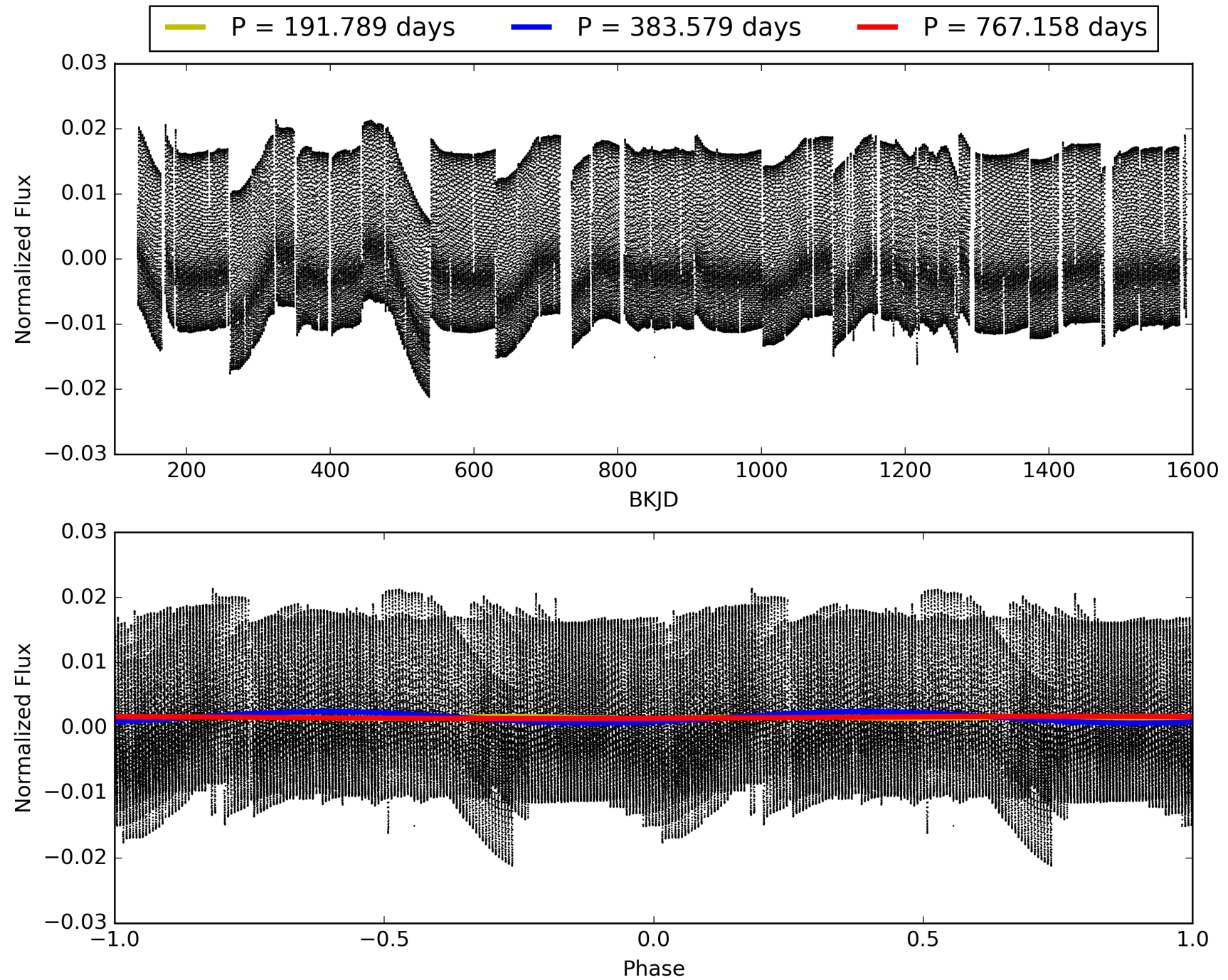
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006864569-01, PDC Light Curves

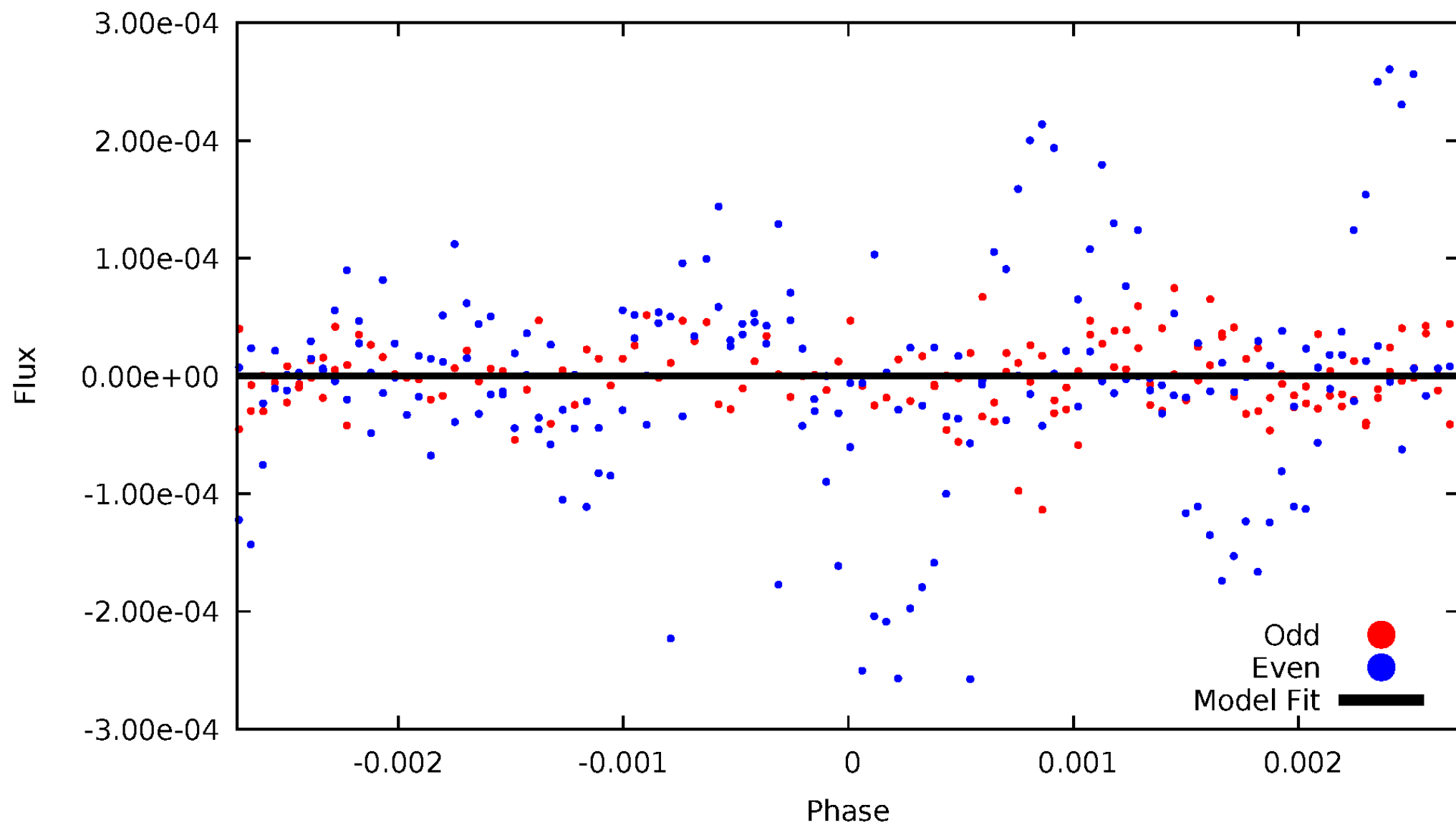


TCE 006864569-01



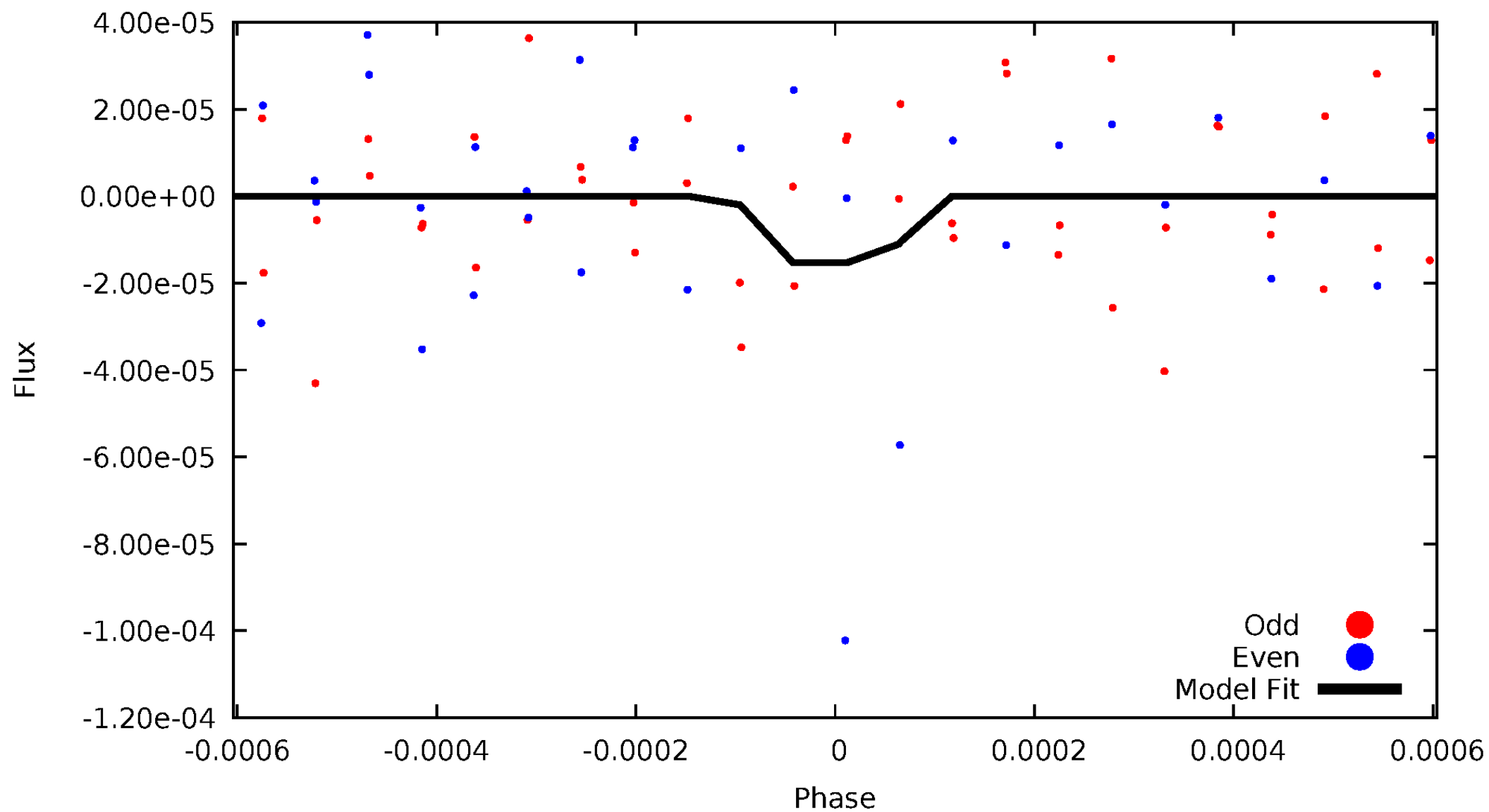
DV Odd/Even

TCE 006864569-01

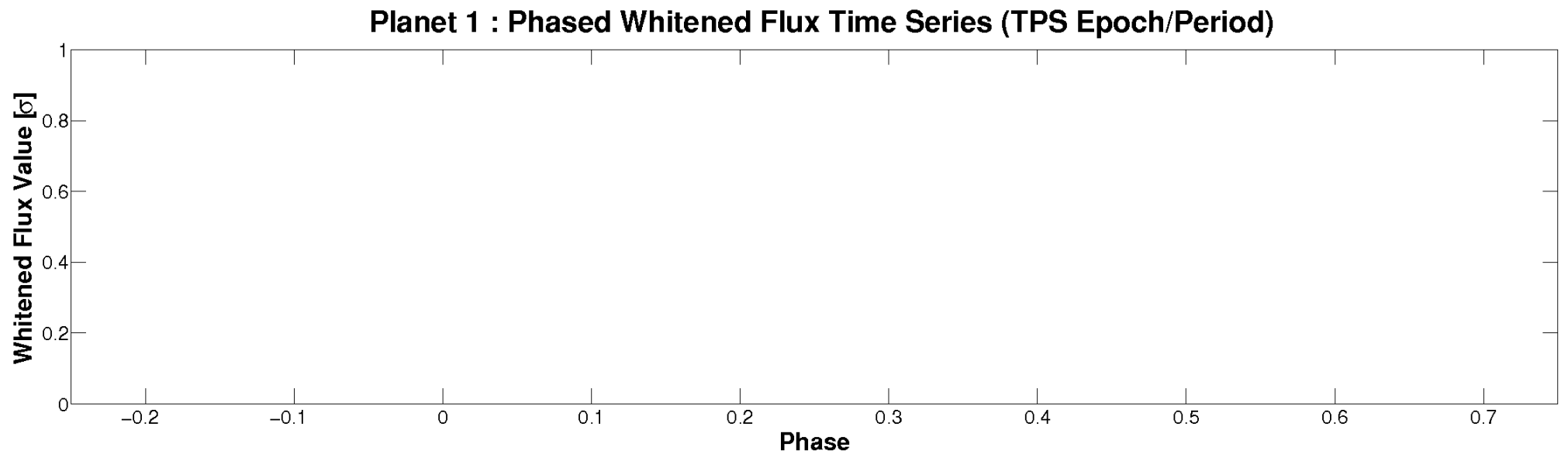
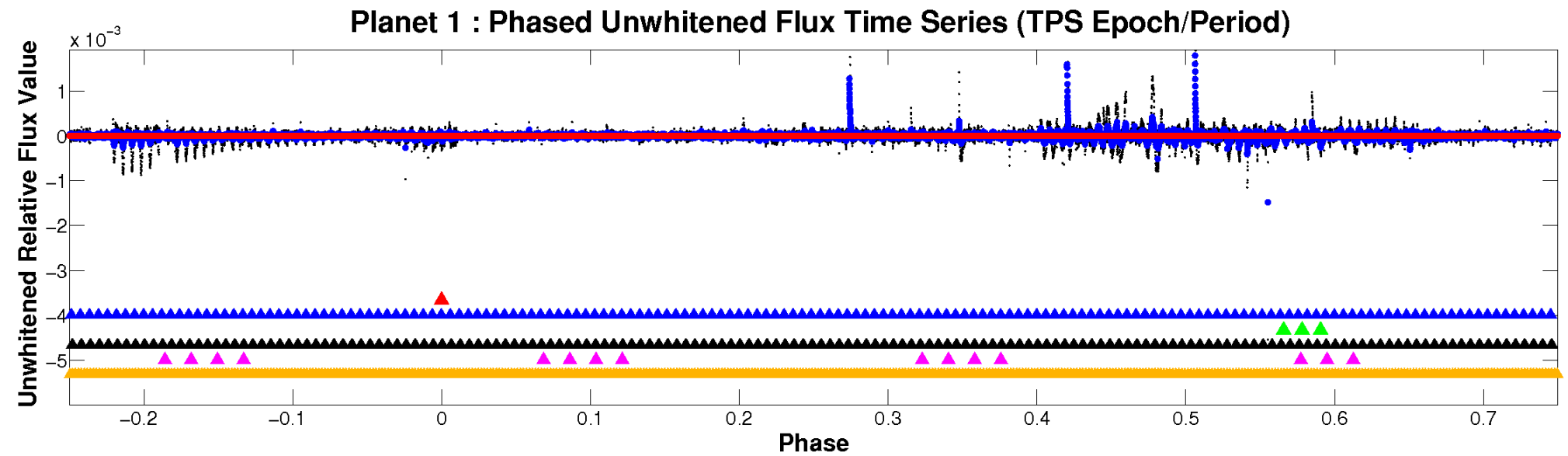


ALT Odd/Even

TCE 006864569-01

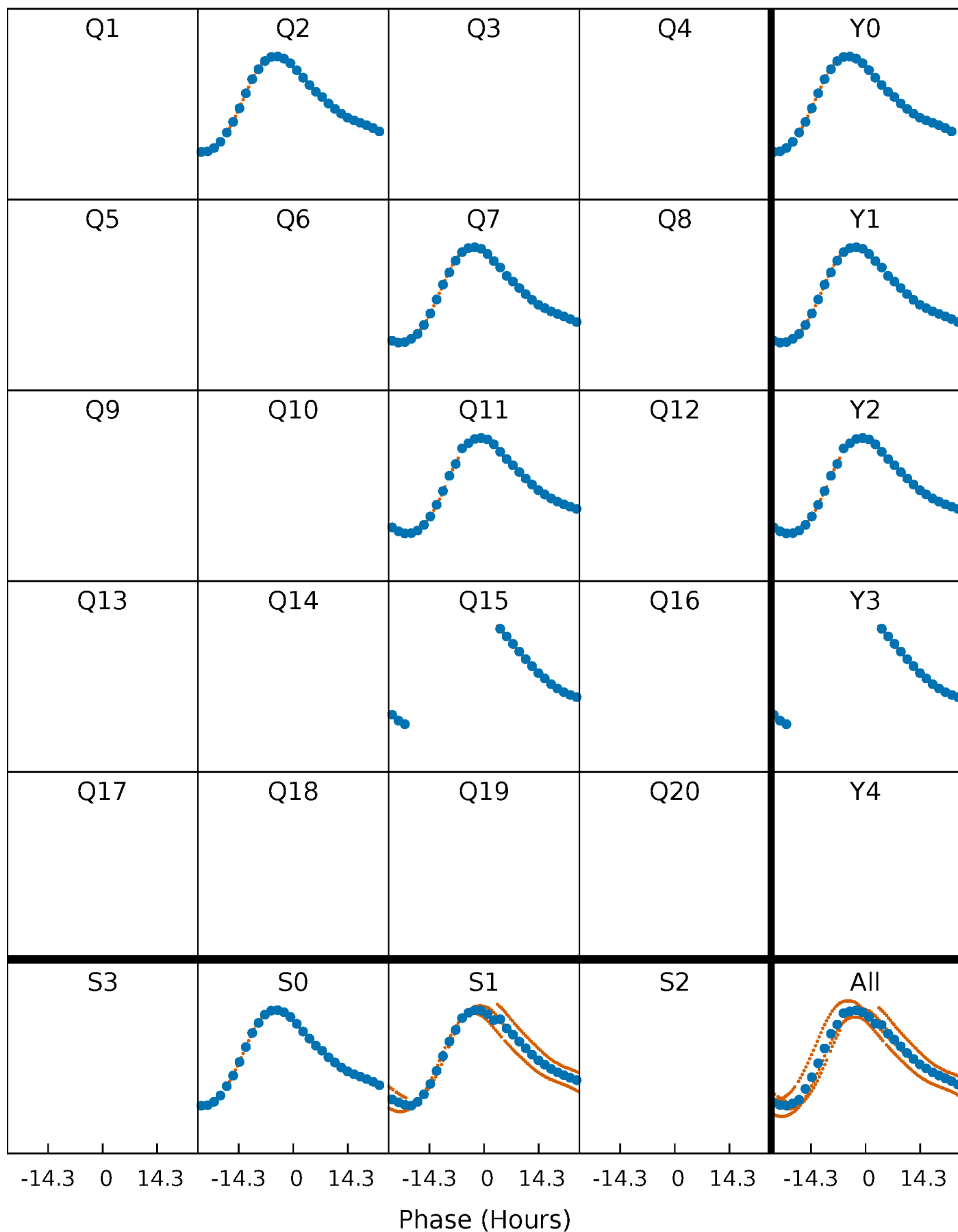


Non-Whitened Vs. Whitened Light Curve



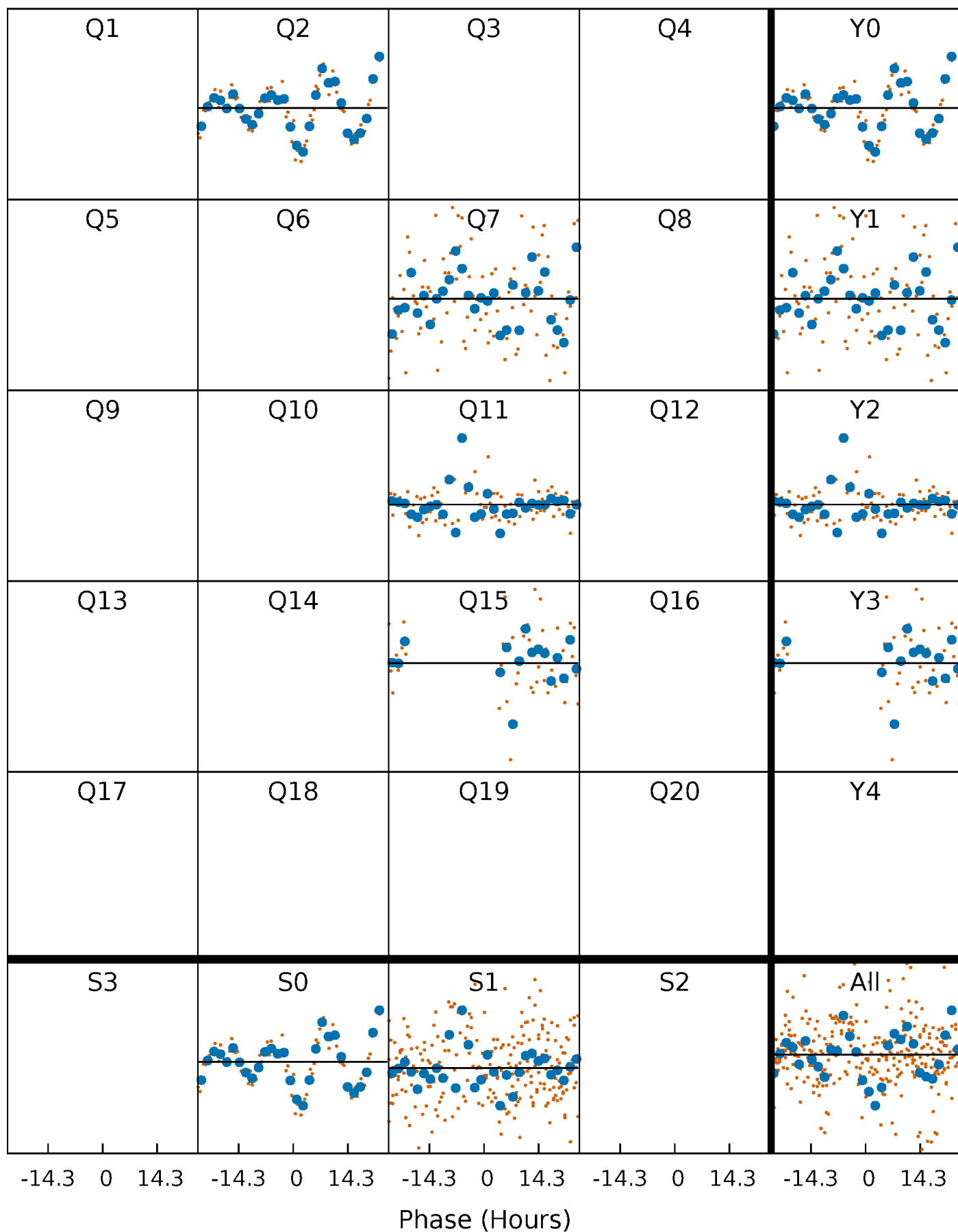
PDC Quarter-Phased Transit Curves

TCE 006864569-01 P=383.578788 Days $T_0=254.418857$ (BKJD)



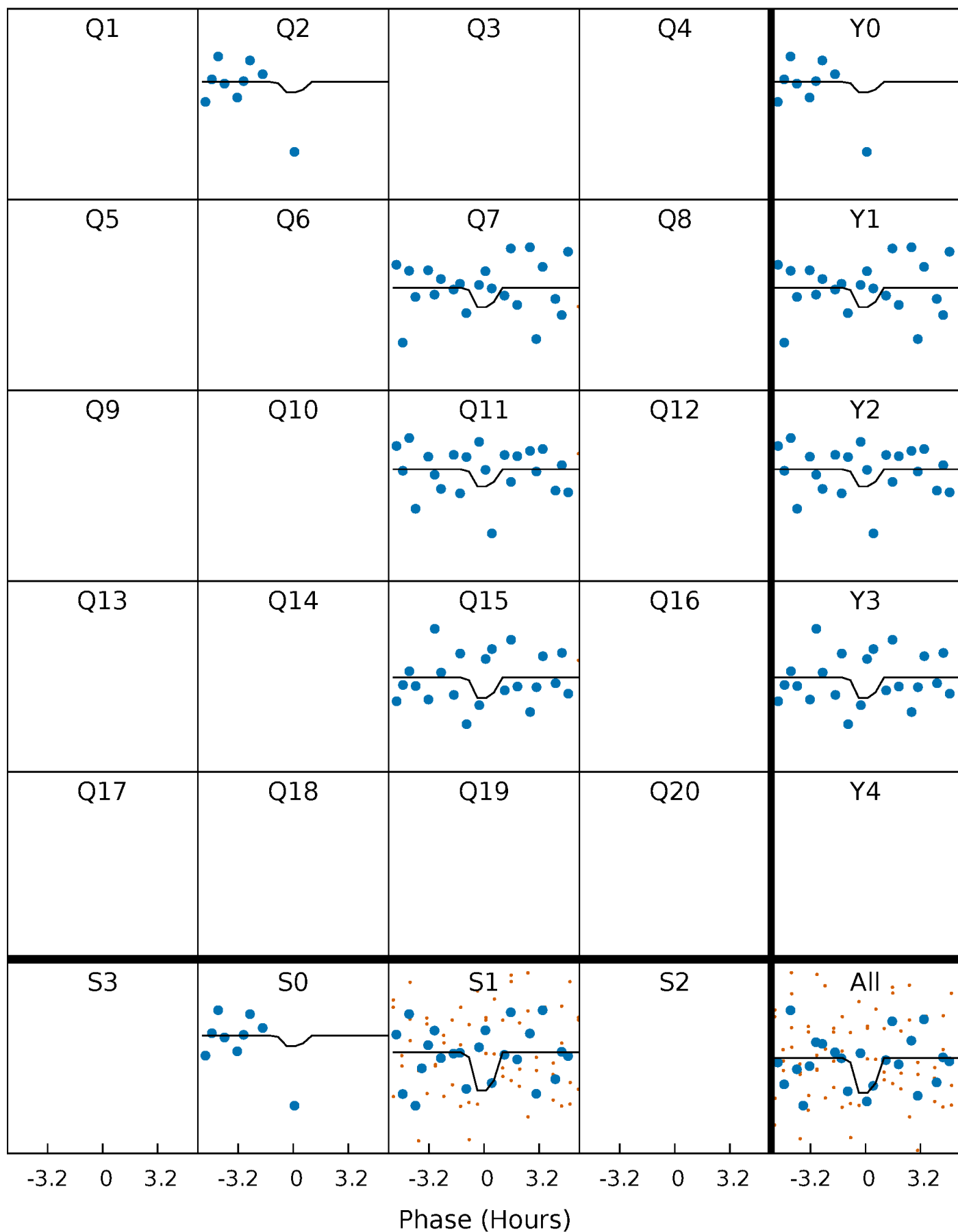
DV Quarter-Phased Transit Curves

TCE 006864569-01 P=383.578788 Days $T_0=254.418857$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

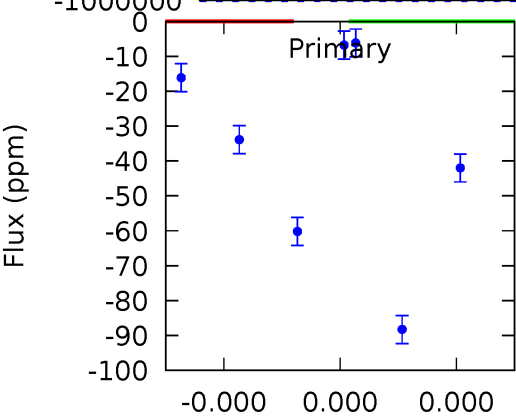
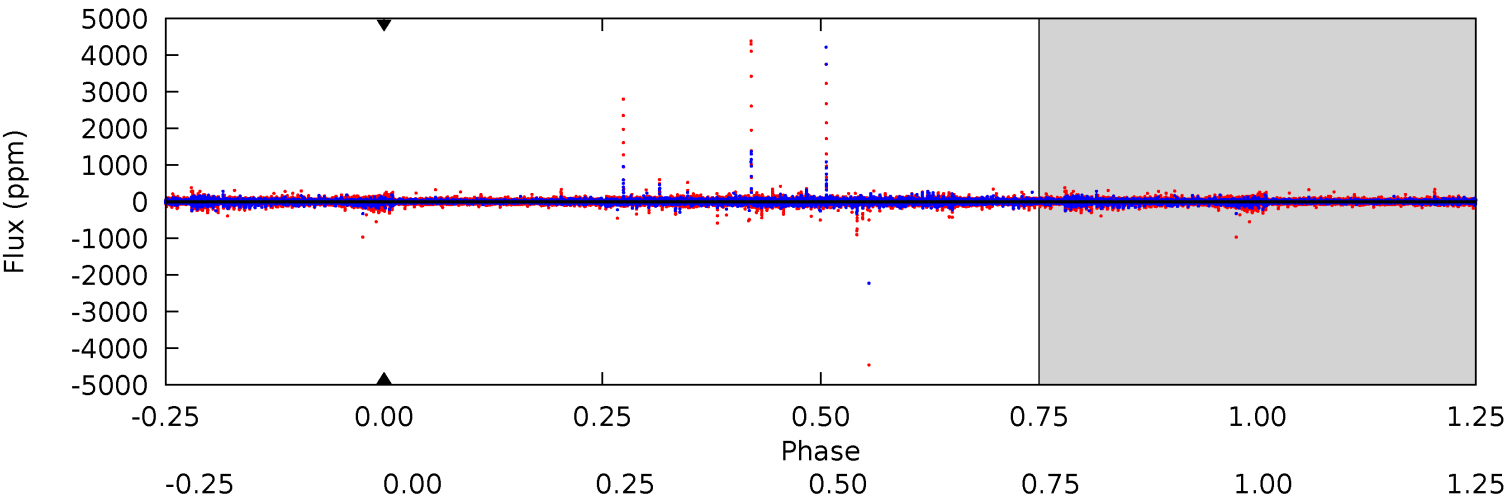
TCE 006864569-01 P=383.578788 Days $T_0=255.337578$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-01, P = 383.578788 Days, E = 254.418857 Days

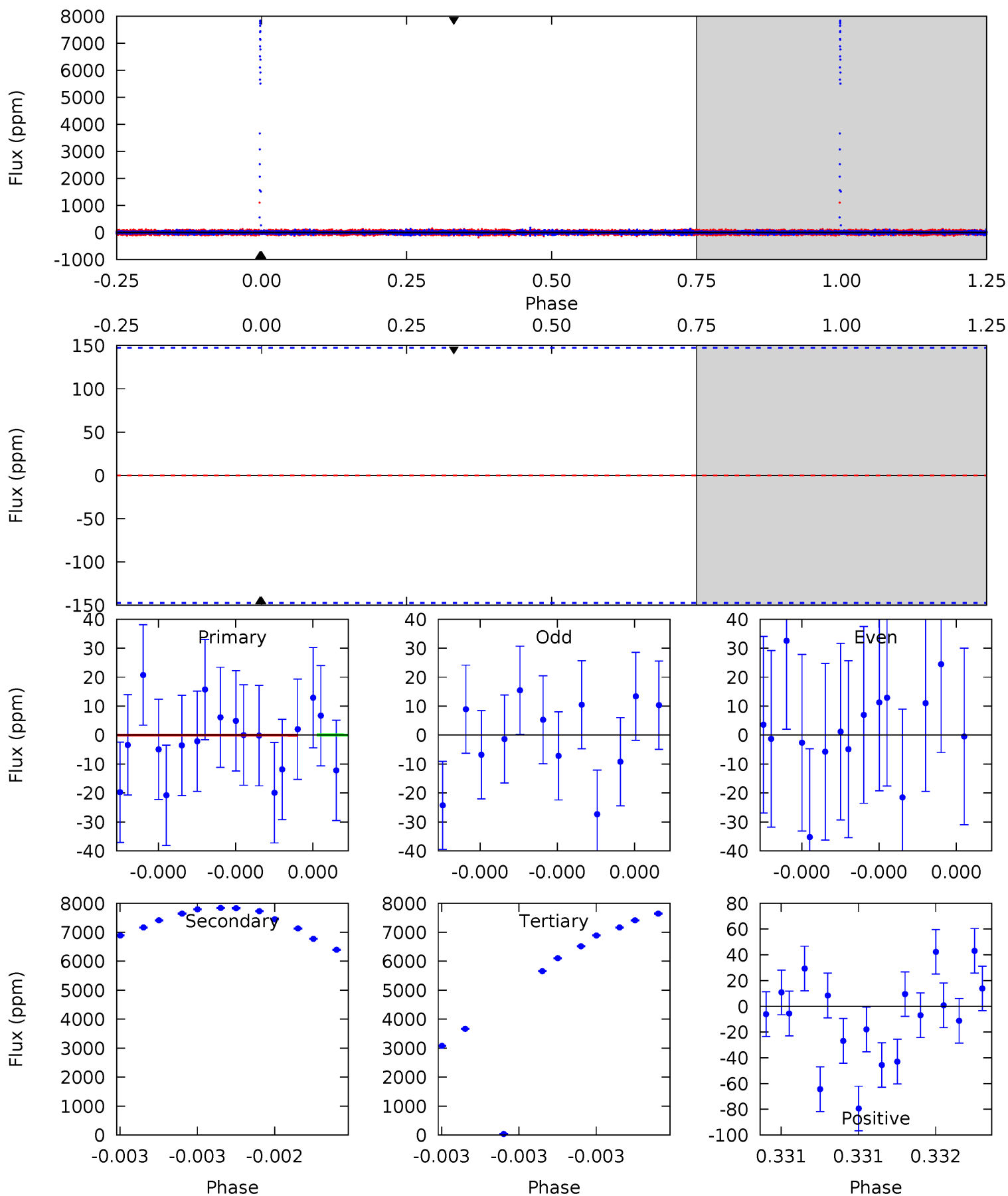
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006864569-01, P = 383.578788 Days, E = 255.337578 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	5.72	3.70	0.00	0	0	0	0	0.04	-0.01	0.01	0.00



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$21.53^{+24.36}_{-15.18}$	947^{+65}_{-96}	$8077^{+153764}_{-113693}$	$6308^{+709660}_{-444735}$
Alt.	-0 ± 26	$21.05^{+22.51}_{-15.17}$	941^{+74}_{-85}	1997^{+1622}_{-5495}	$1.440^{+128.662}_{-120.907}$

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 $A_{obs} \gg 1.0$

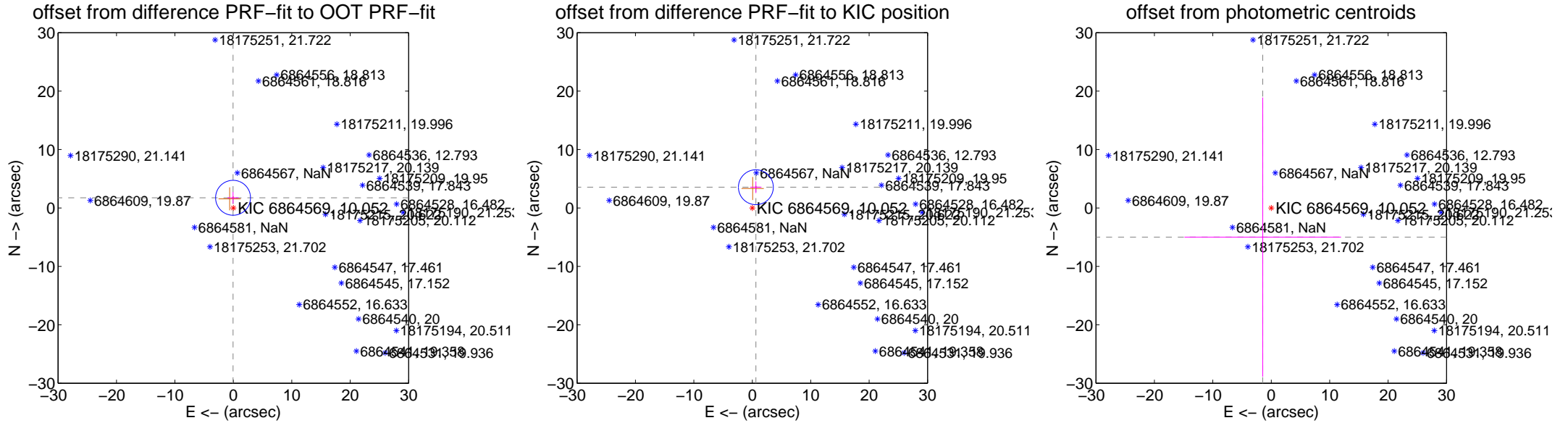
DV Centroid Data

Supplemental centroid analysis for 006864569-01. **Kepler magnitude: 10.05.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.90 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.741 ± 0.996	1.75	0.050 ± 0.958	1.741 ± 0.996
PRF-fit source offset from KIC position	3.603 ± 0.995	3.62	-0.613 ± 0.958	3.550 ± 0.996
photometric centroid source offset	5.20 ± 23.25	0.22	1.45 ± 13.41	-4.99 ± 23.90

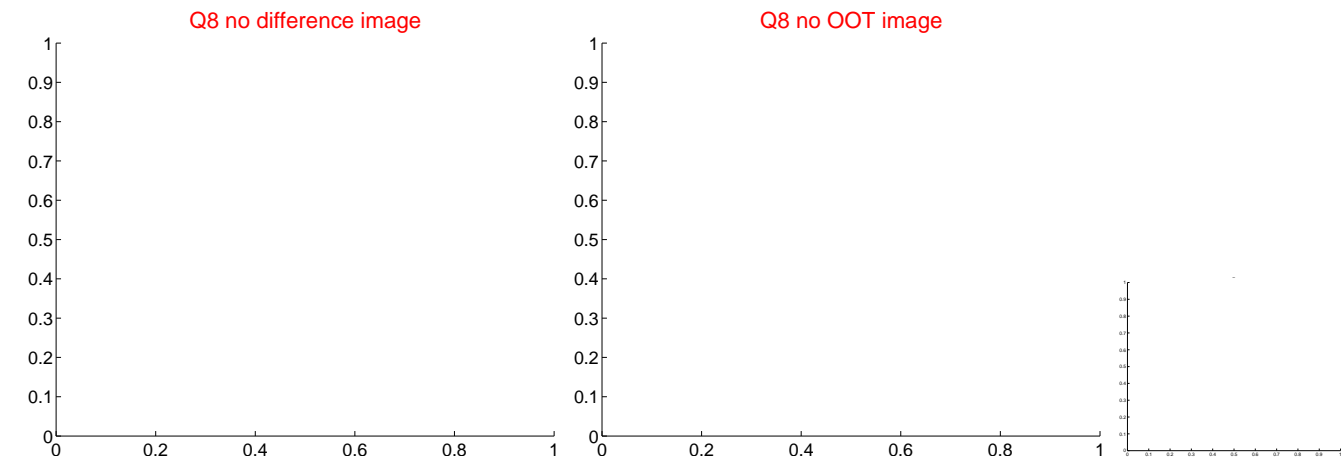
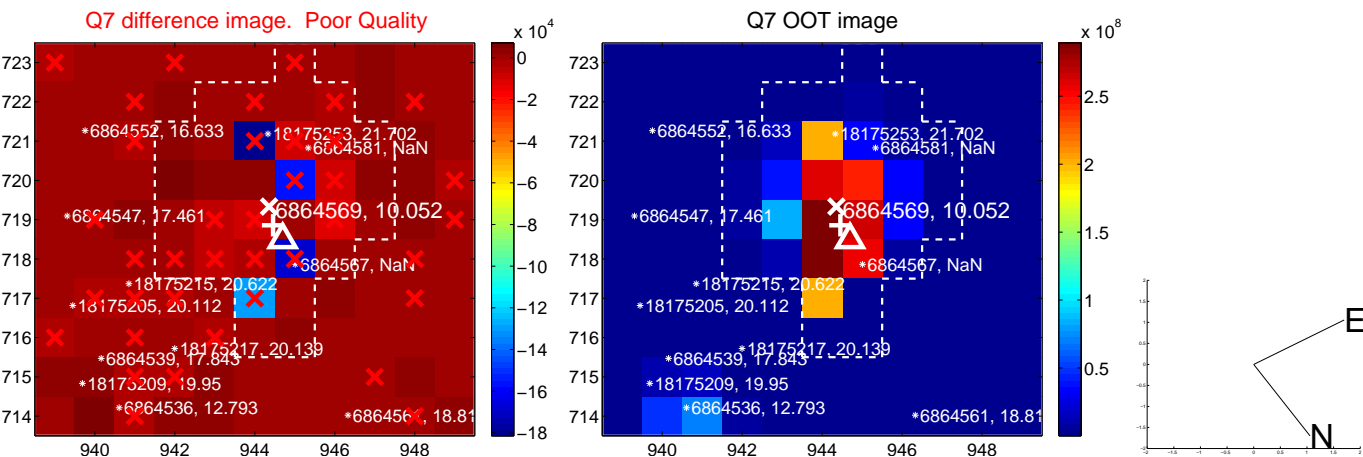


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

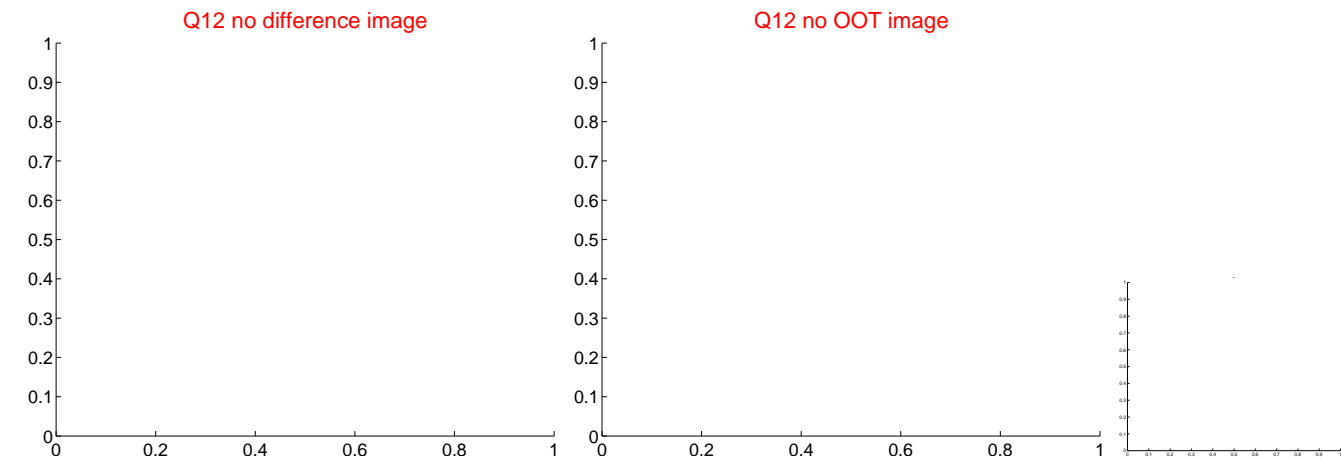
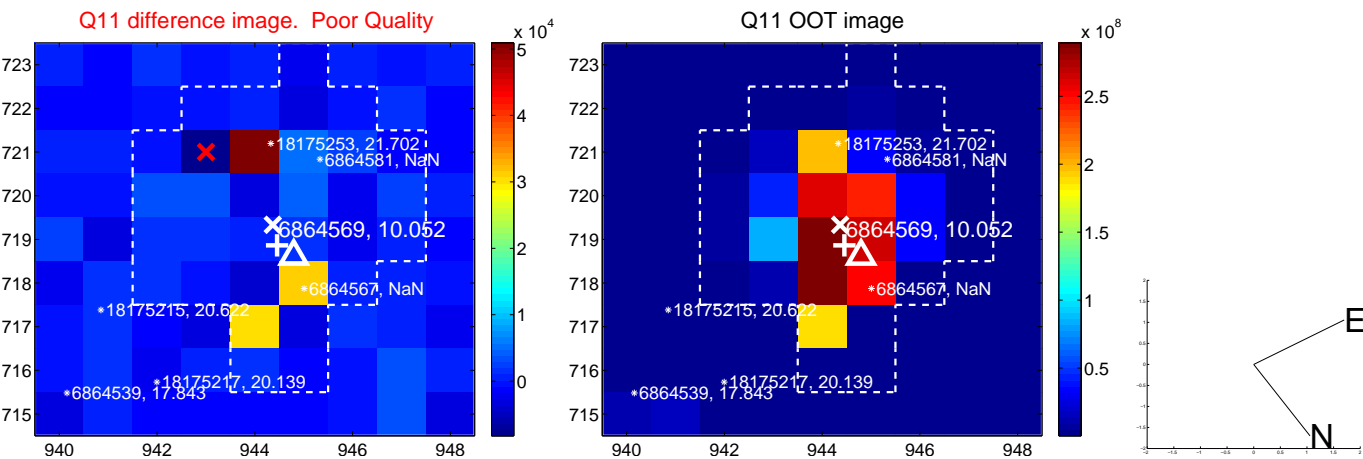
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



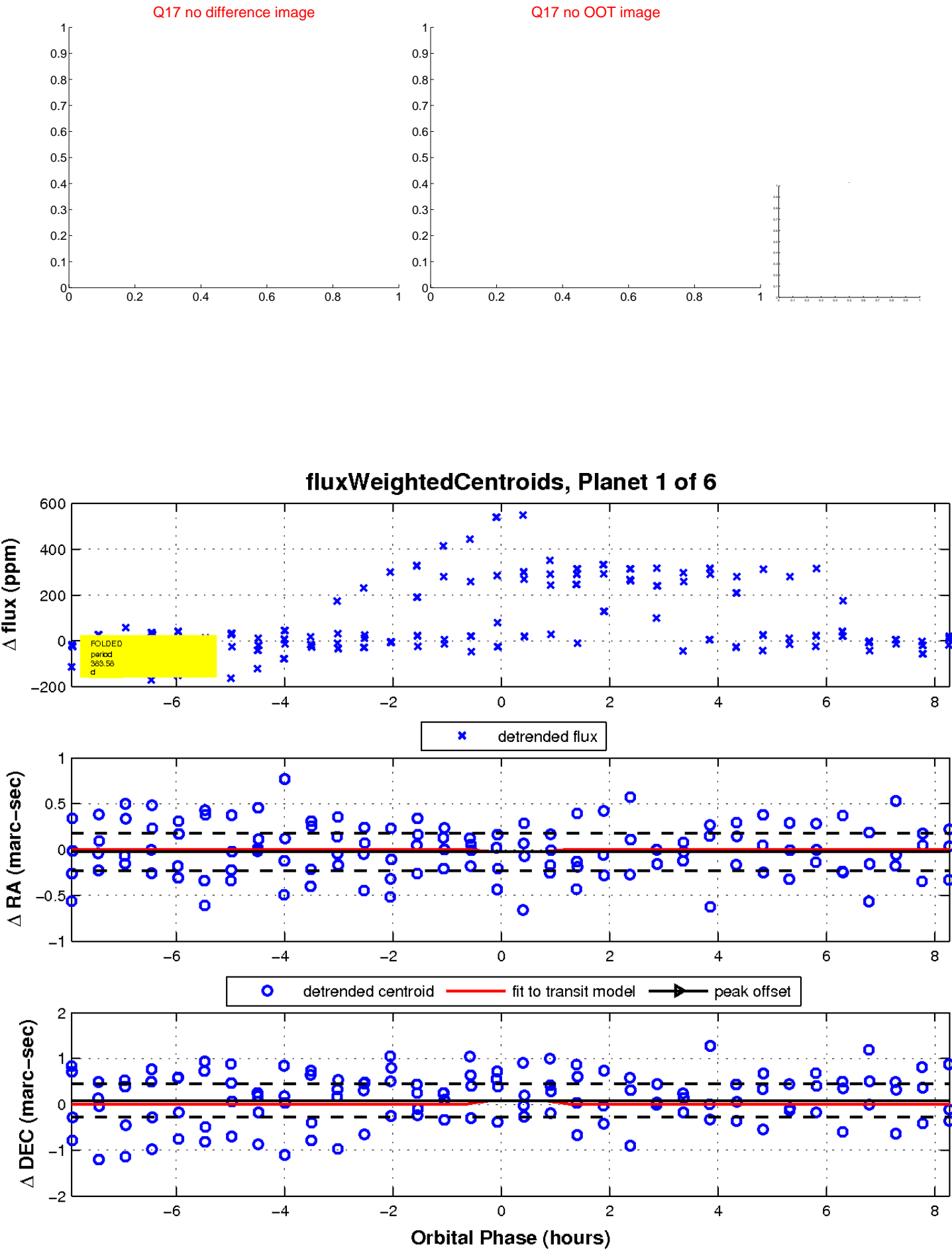
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

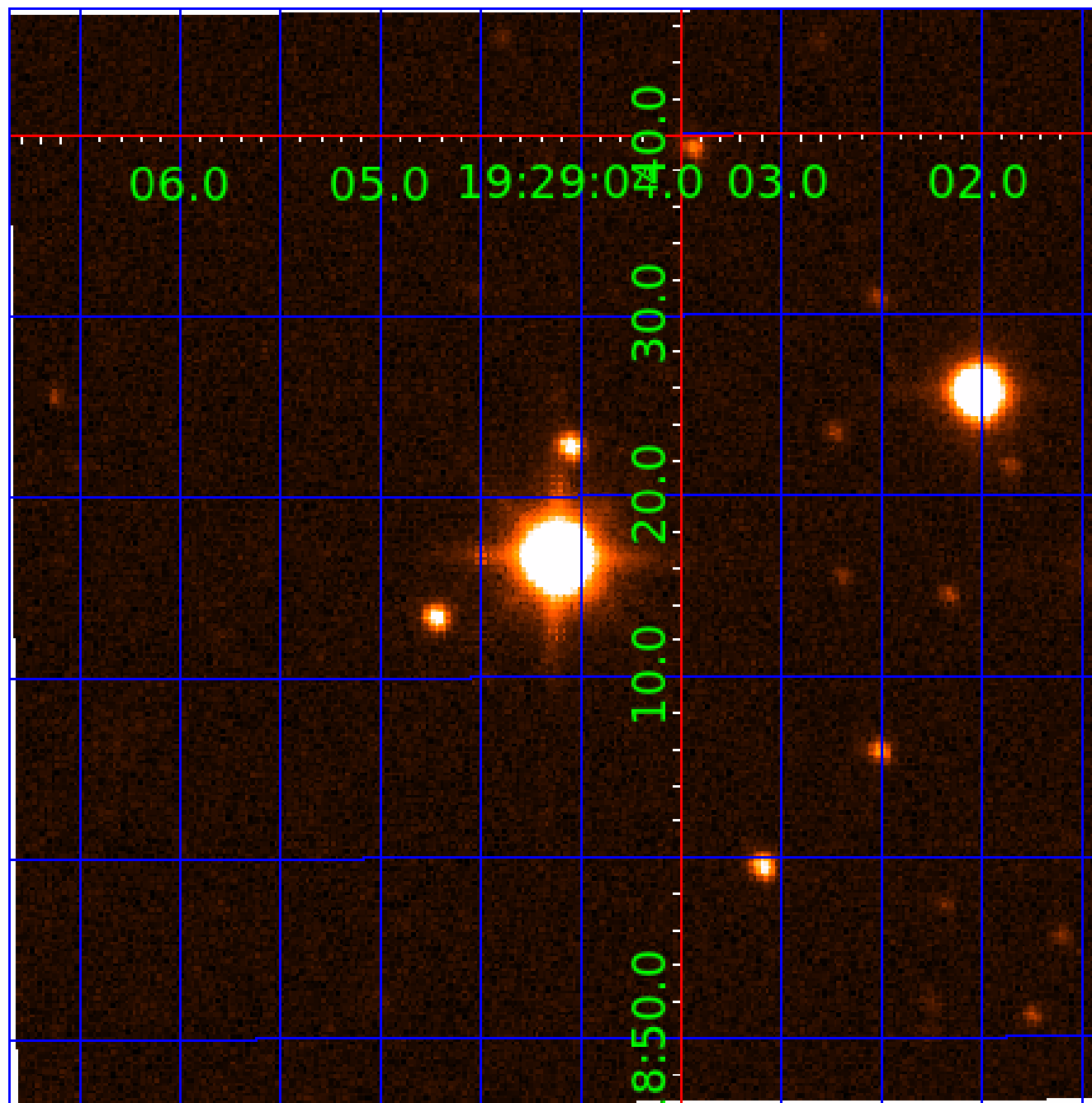


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006864569

Q1-17 DR25 TCE Parameters

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006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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.

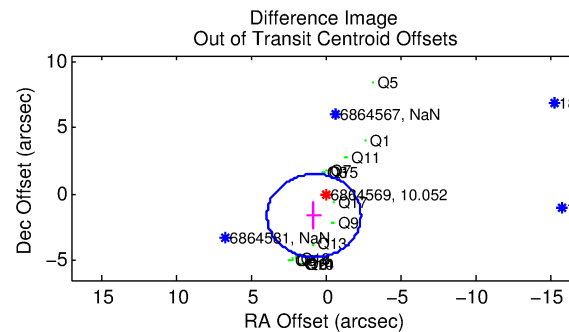
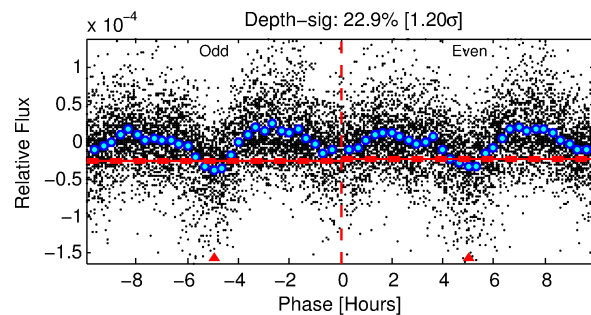
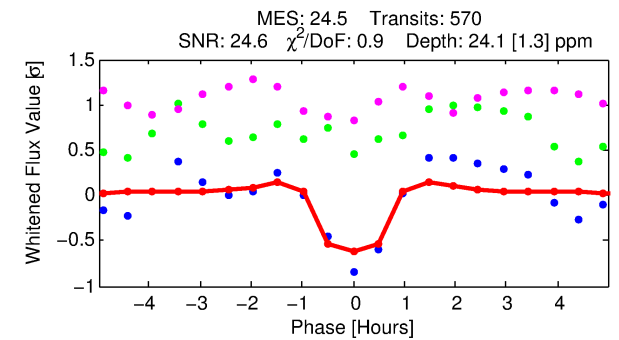
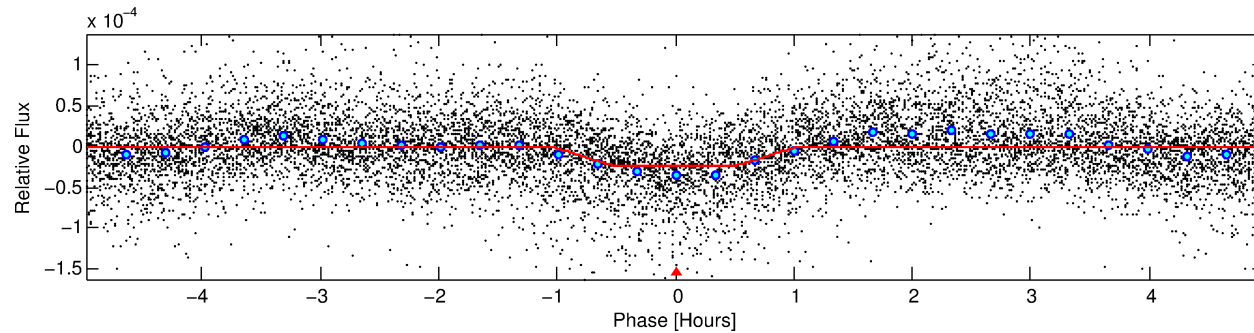
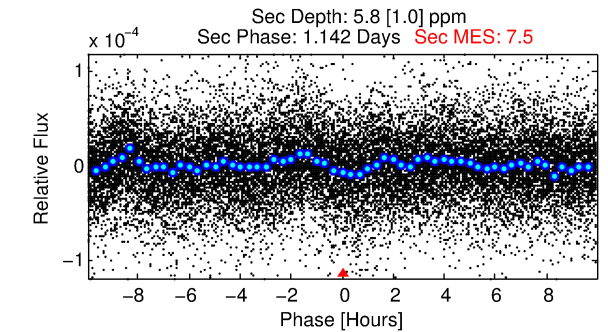
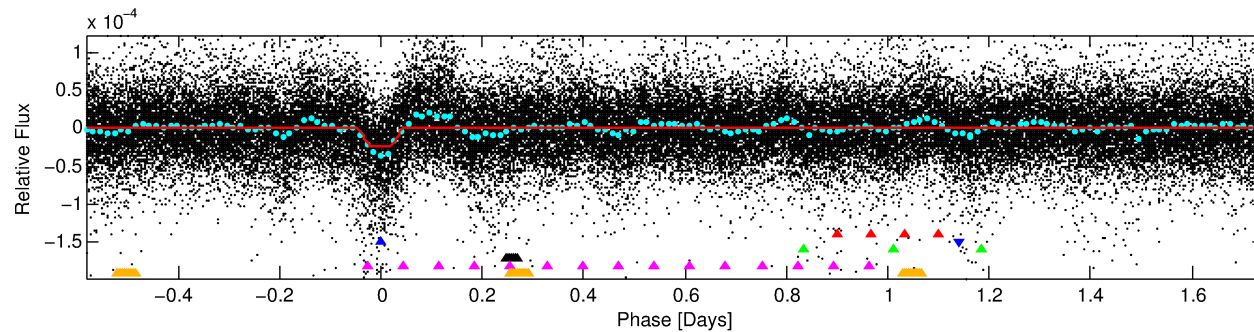
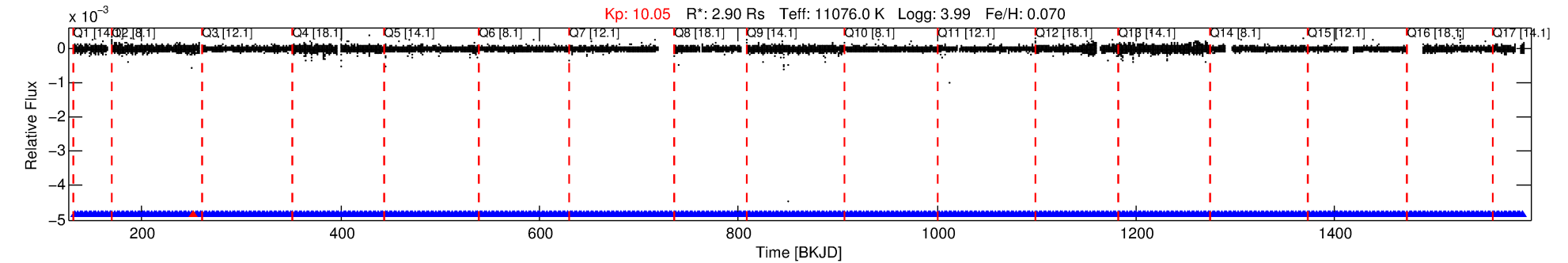
Ephemeris Match Information For 006864569-02

No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 2 of 6 Period: 2.325 d

KOI: K06780.01 Corr: 0.904



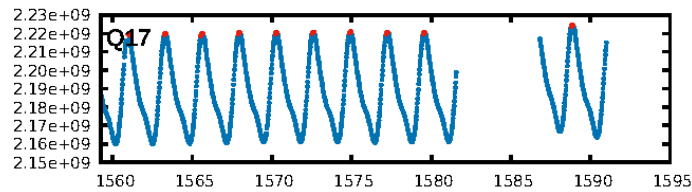
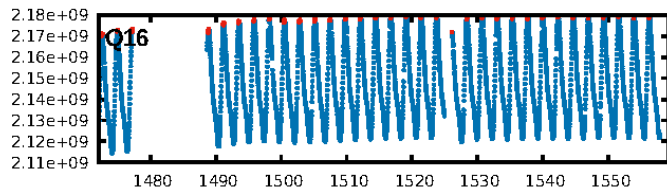
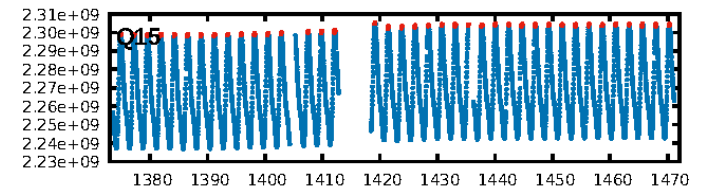
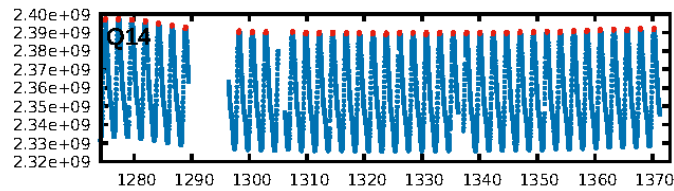
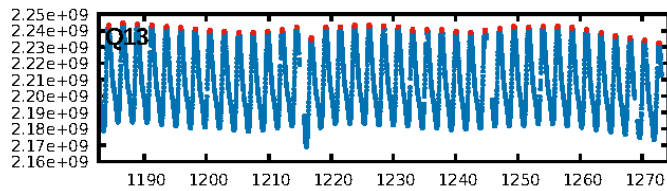
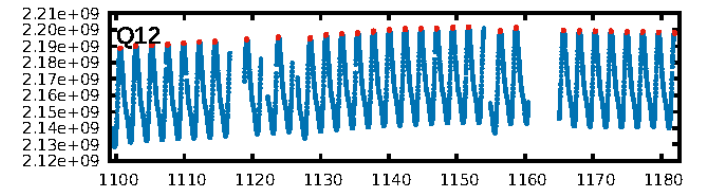
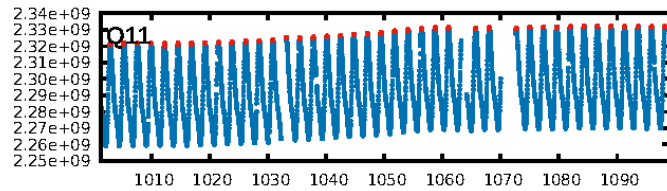
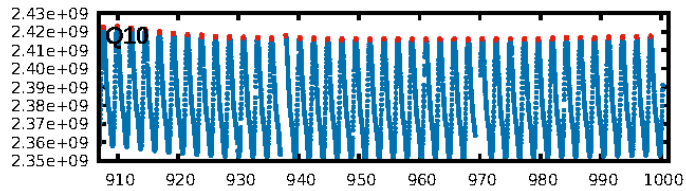
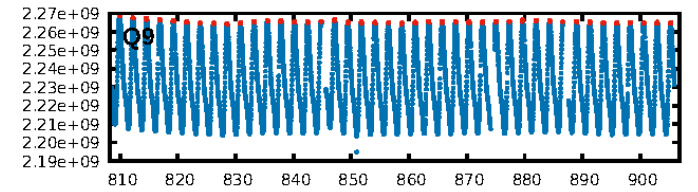
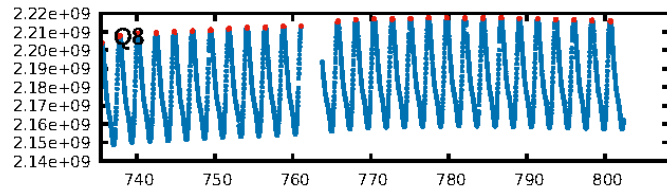
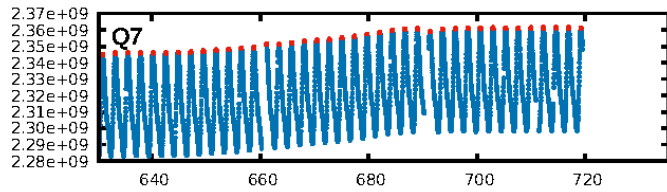
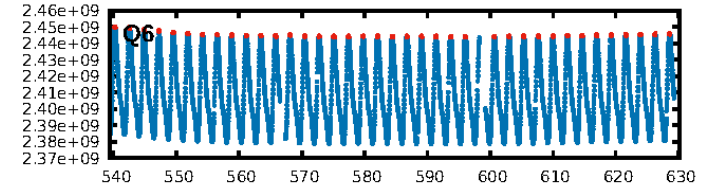
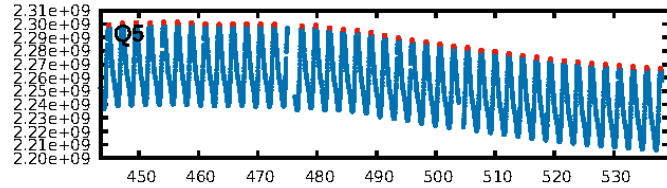
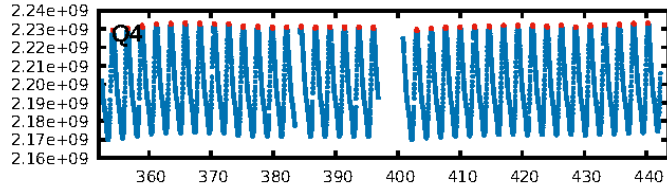
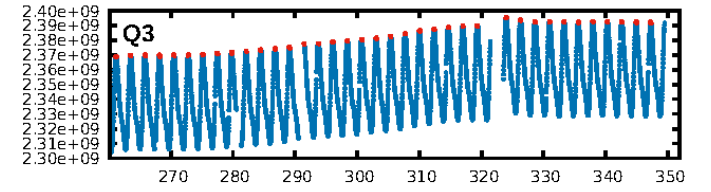
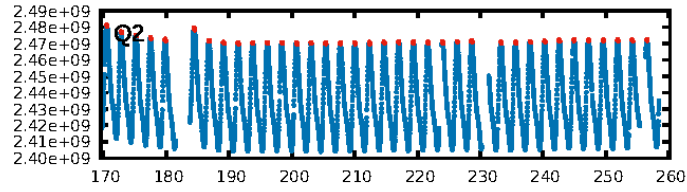
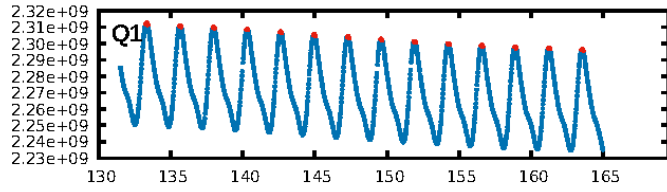
DV Fit Results:

Period = 2.32512 [0.00001] d
Epoch = 133.3308 [0.0010] BKJD
Rp/R* = 0.0052 [0.0003]
a/R* = 4.84 [1.94]
b = 0.90 [0.09]
Seff = 46241.34 [22580.99]
Teq = 3739 [456] K
Rp = 1.63 [0.56] Re
a = 0.0495 [0.0147] AU
Ag = 2.96 [1.45] [1.35σ]
Teffp = 7581 [525] K [5.52σ]

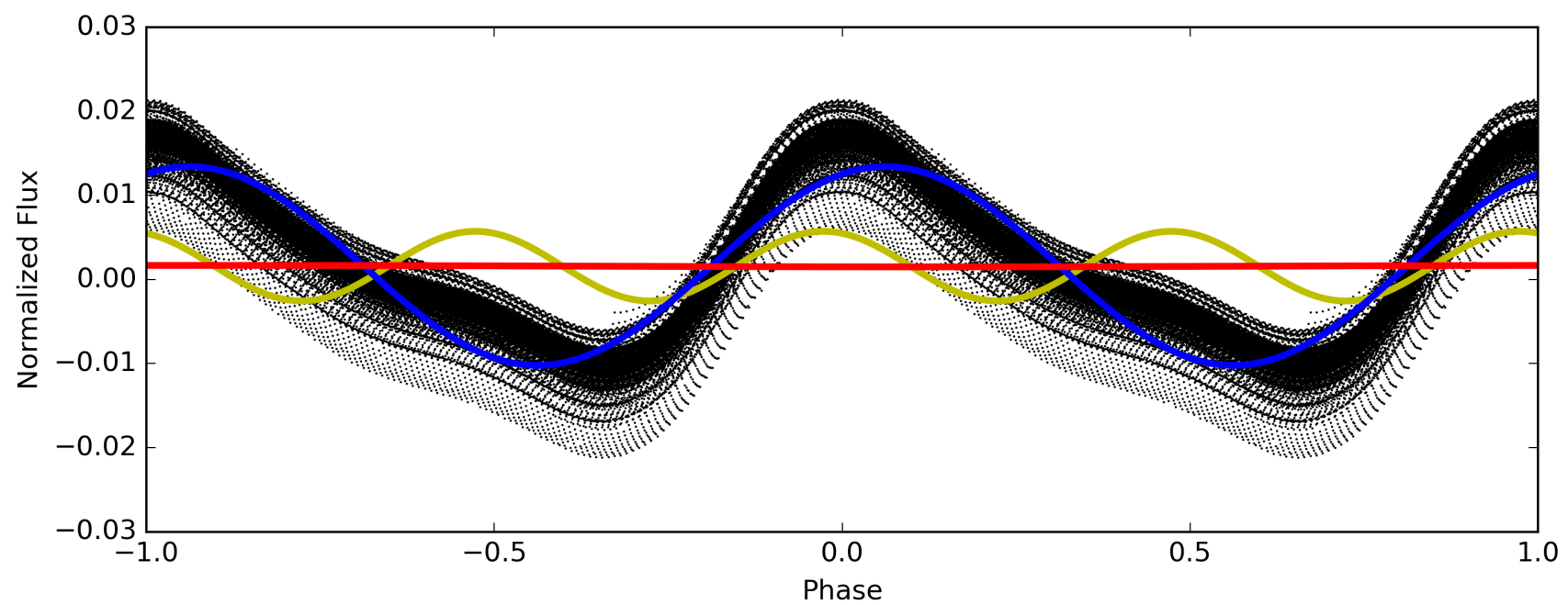
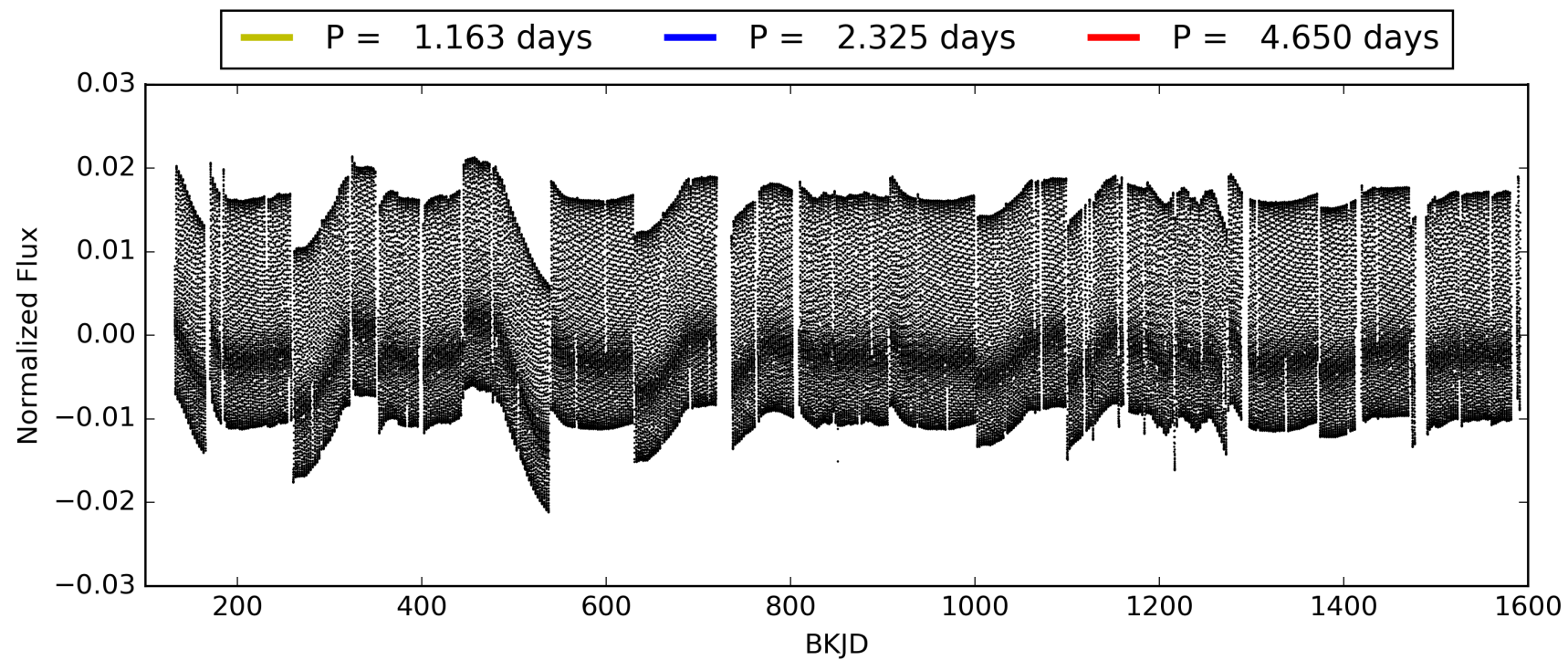
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.32σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [545/546]
GhostDiagnostic-chr: N/A
Centroid-sig: 75.6%
Centroid-so: 0.273 arcsec [0.29σ]
OotOffset-rm: 1.808 arcsec [1.73σ]
KicOffset-rm: 0.259 arcsec [0.25σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 006864569-02, PDC Light Curves

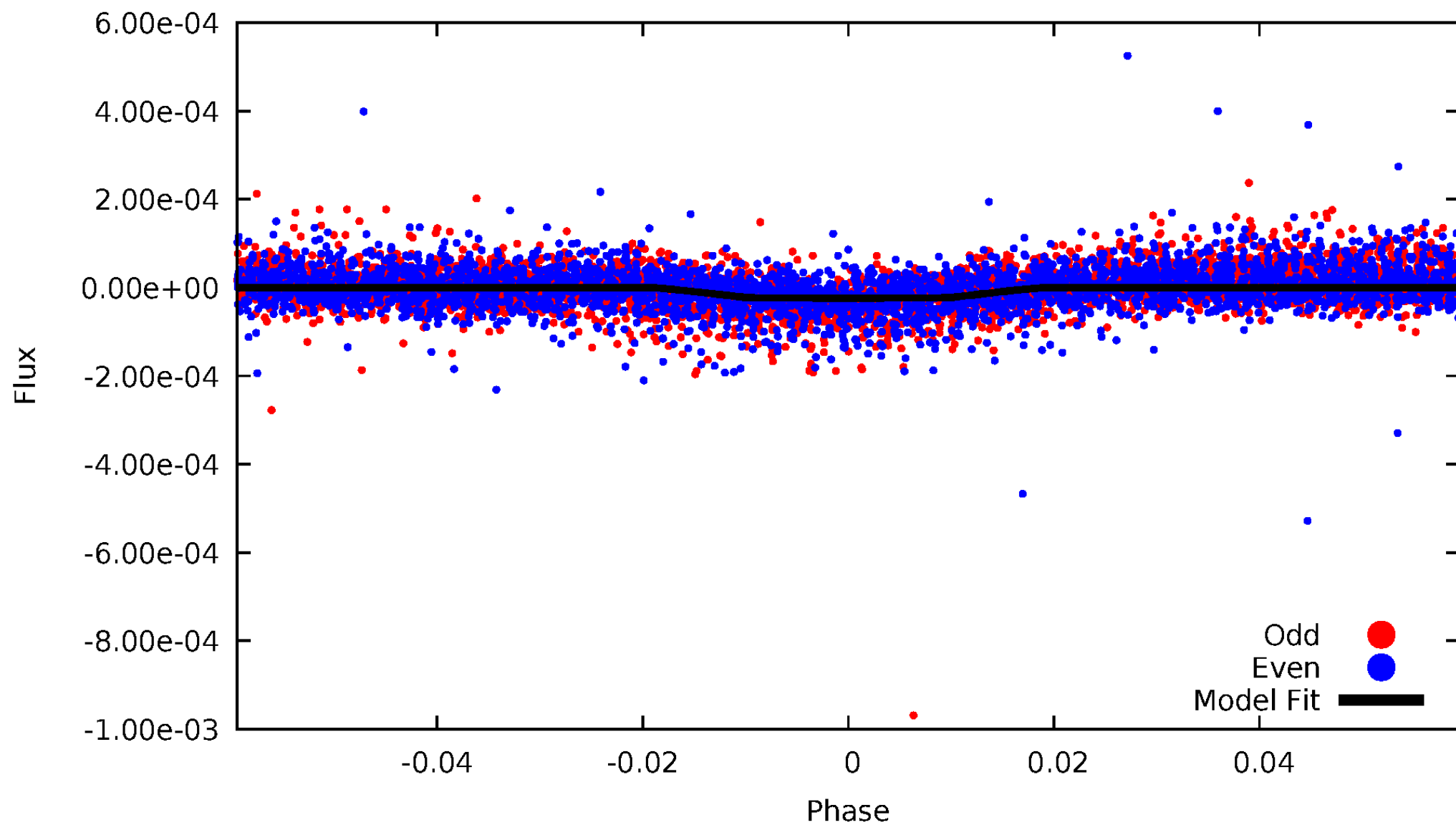


TCE 006864569-02



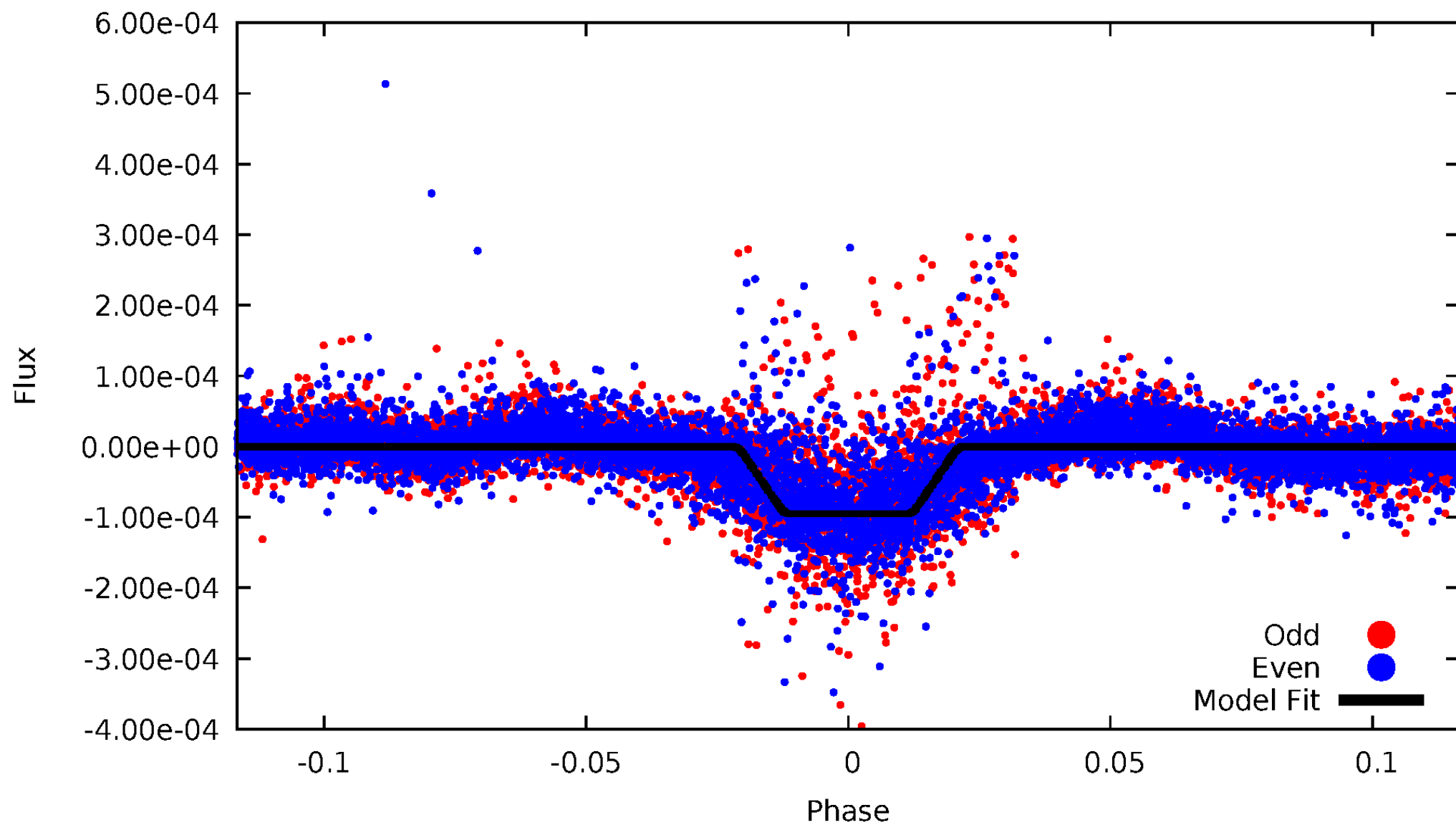
DV Odd/Even

TCE 006864569-02



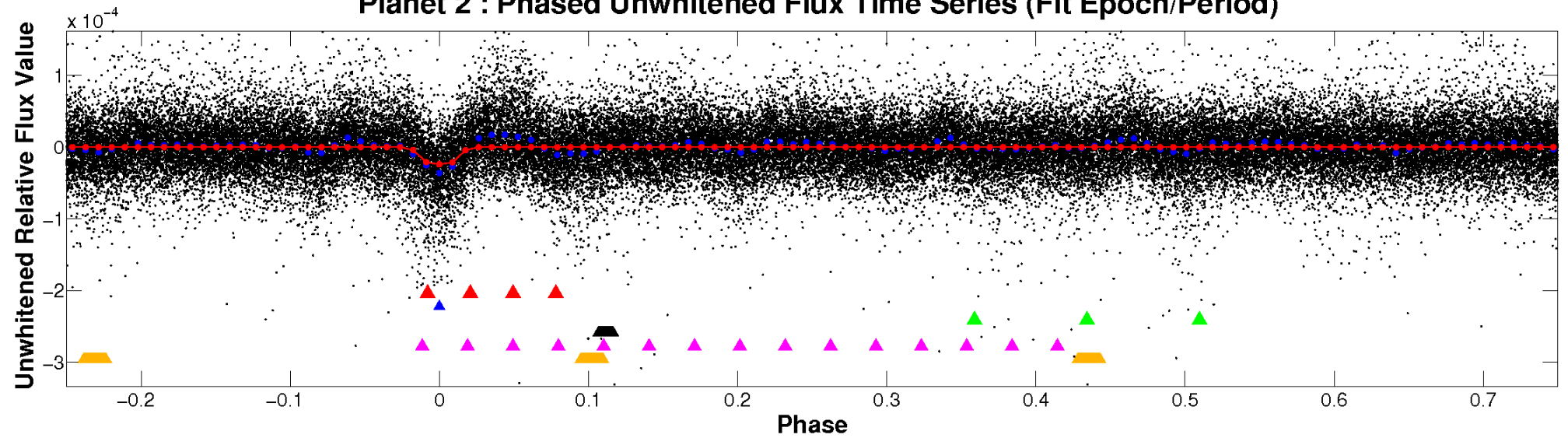
ALT Odd/Even

TCE 006864569-02

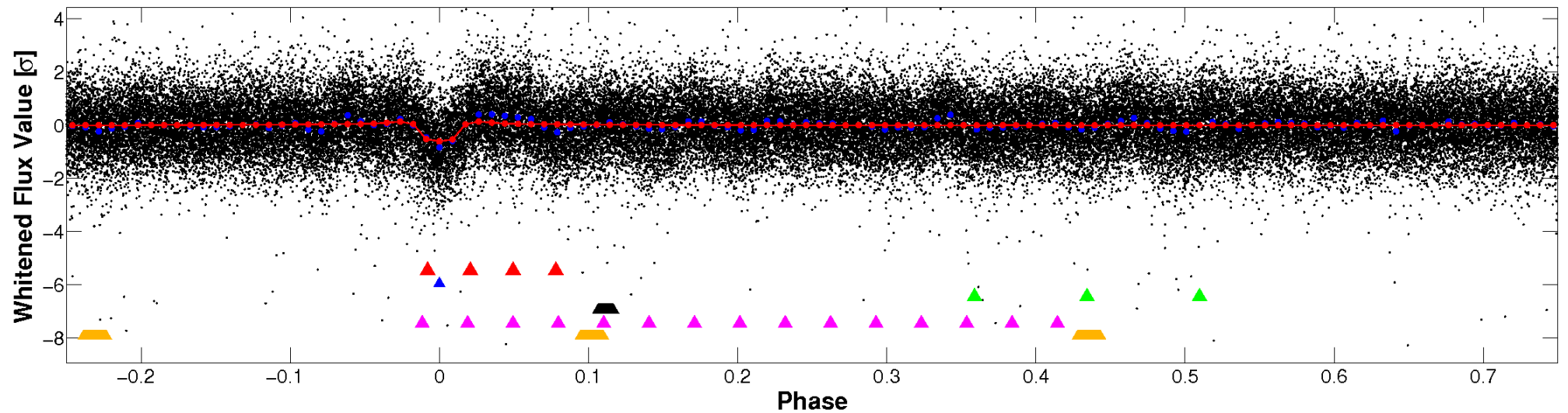


Non-Whitened Vs. Whitened Light Curve

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

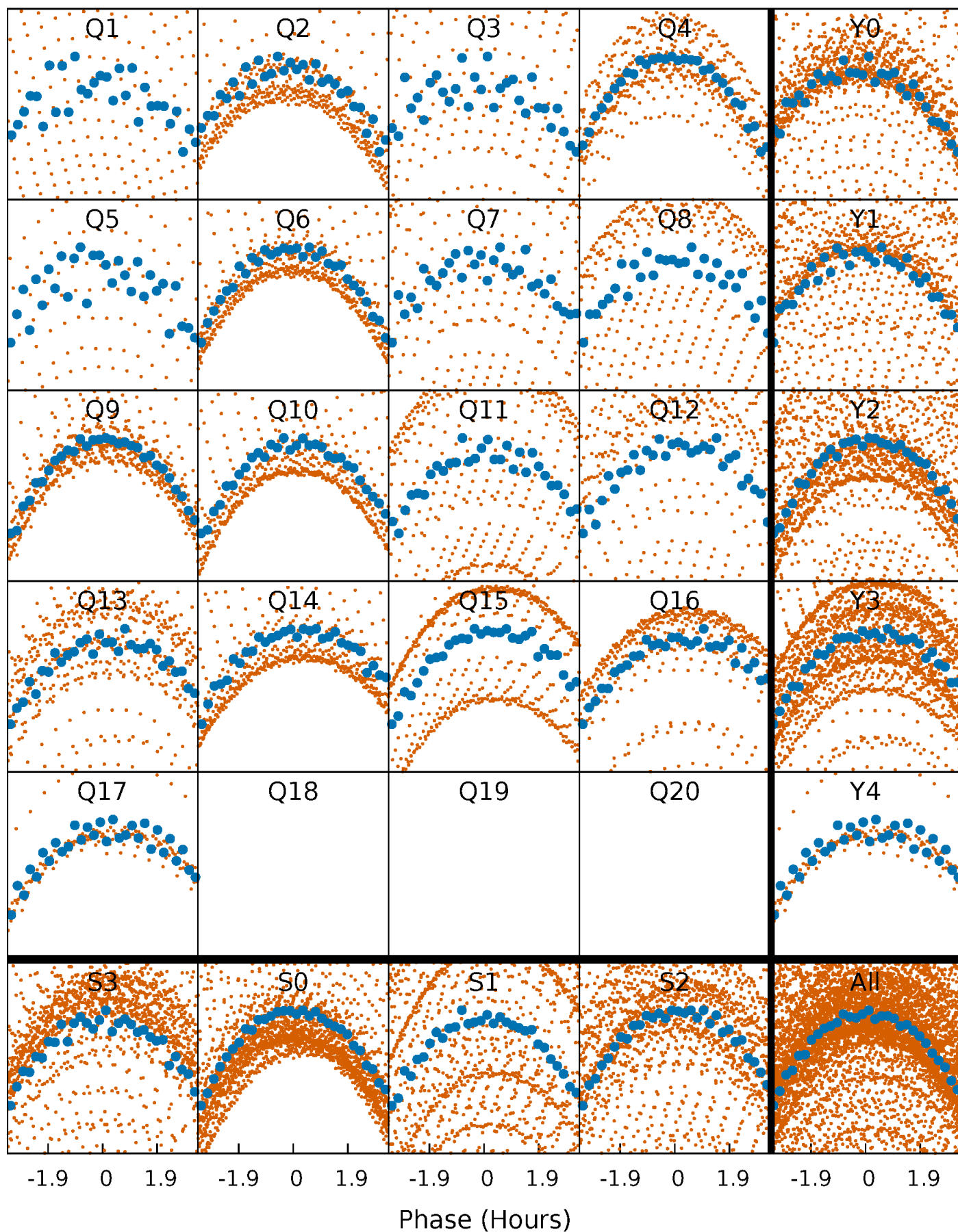


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



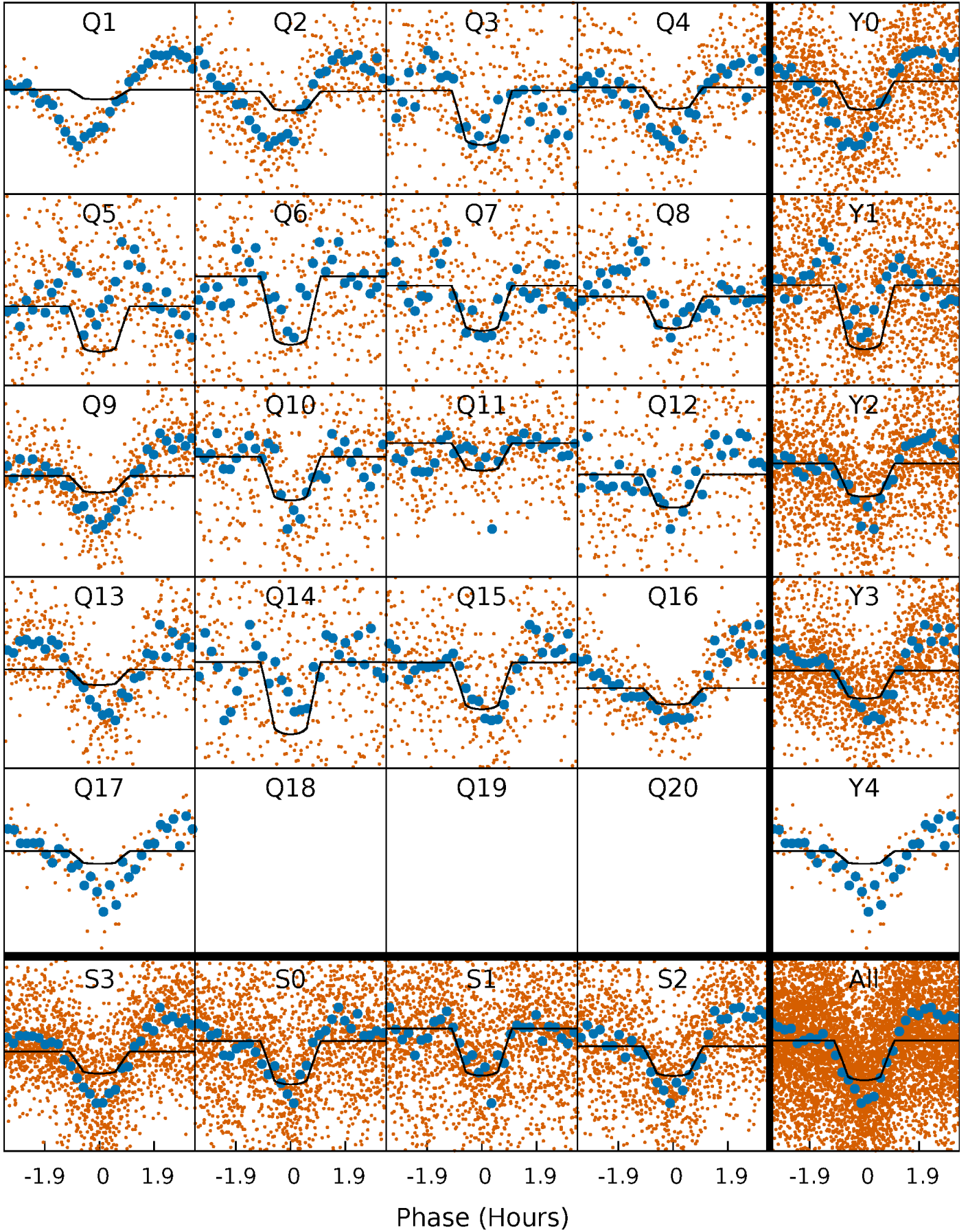
PDC Quarter-Phased Transit Curves

TCE 006864569-02 P= 2.325124 Days $T_0=133.330803$ (BKJD)



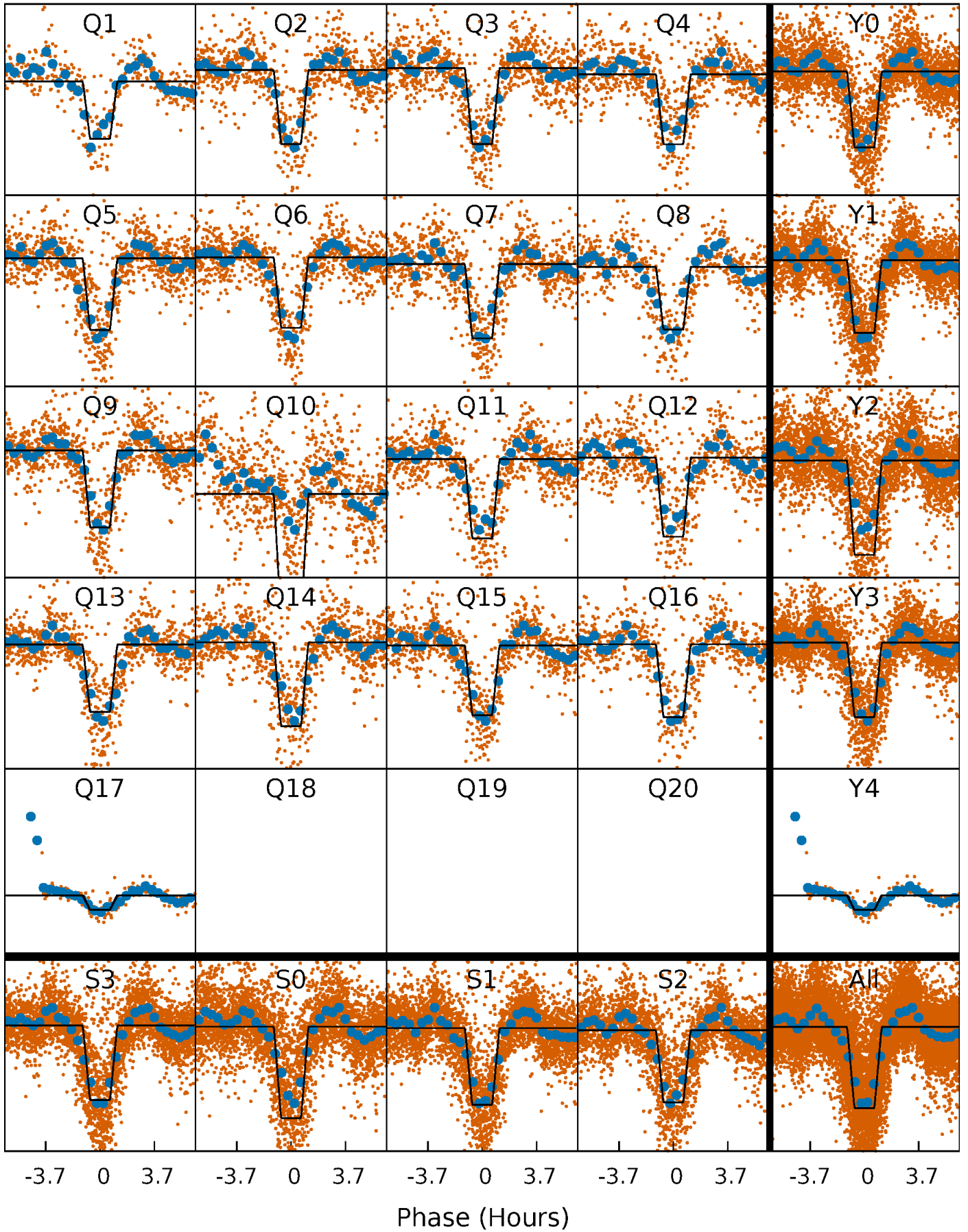
DV Quarter-Phased Transit Curves

TCE 006864569-02 P= 2.325124 Days $T_0=133.330803$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

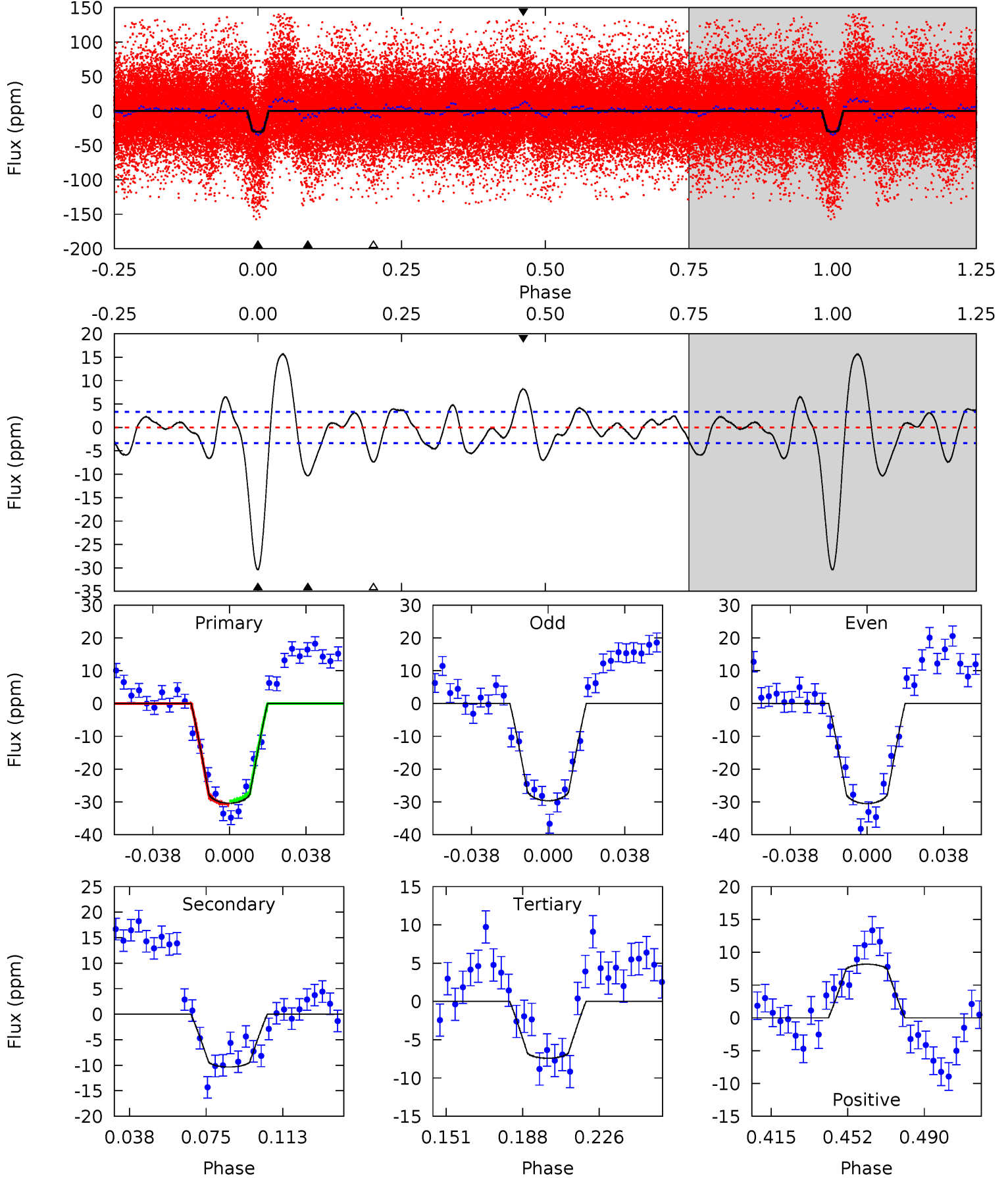
TCE 006864569-02 P= 2.325153 Days $T_0=133.319522$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-02, P = 2.325124 Days, E = 131.005679 Days

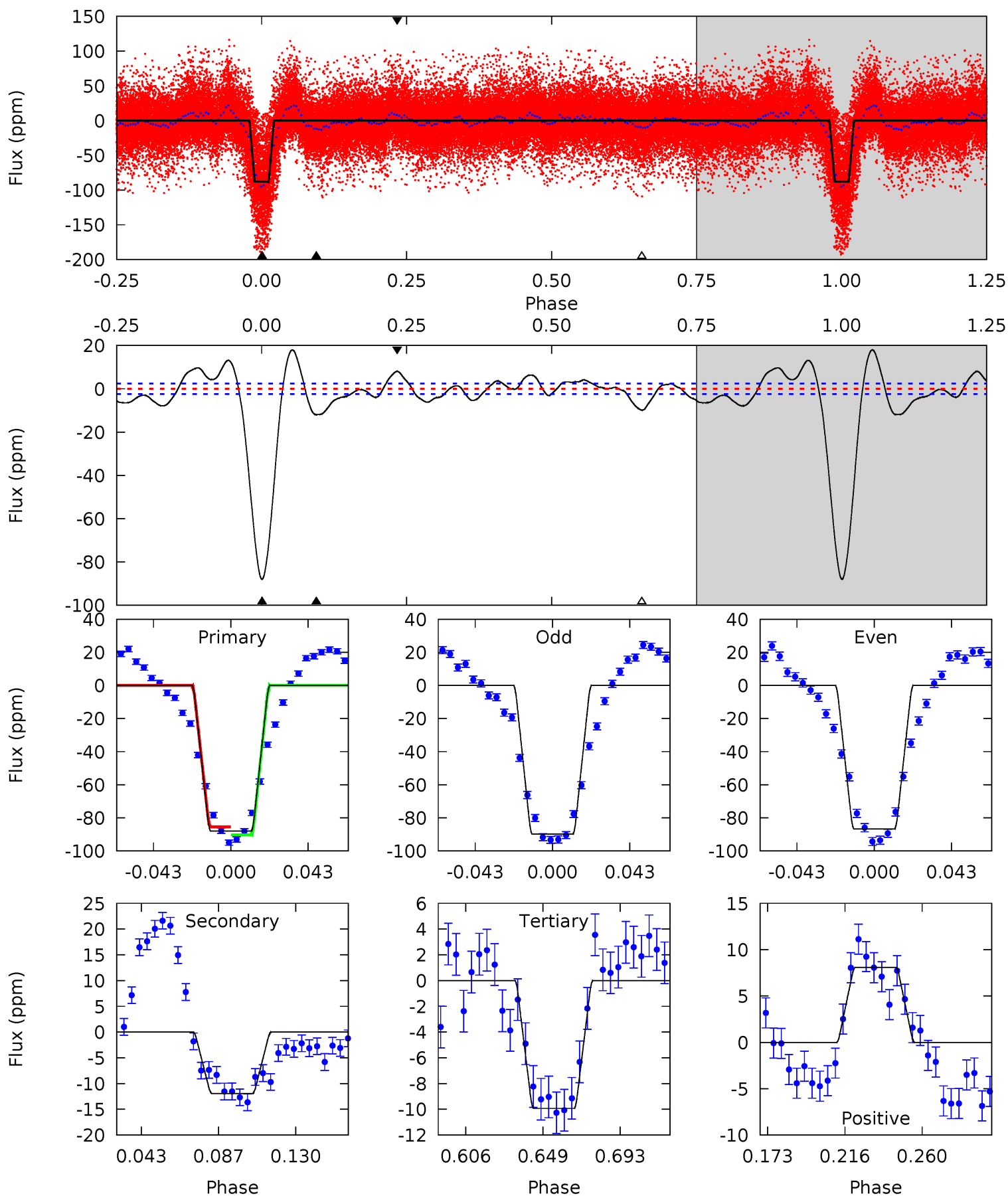
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.5	14.8	10.6	11.7	4.77	2.08	5.22	32.9	31.8	4.17	3.09	0.63	1.37	0.34	0.63



Alt Model-Shift Uniqueness Test

006864569-02, P = 2.325153 Days, E = 130.994369 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
172.7	23.4	19.5	15.9	4.74	2.02	9.65	153.2	156.9	3.92	7.56	3.13	0.91	0.17	4.61



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-02 / KOI 6780.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 1	$1.58^{+0.25}_{-0.26}$	5136^{+414}_{-448}	7783^{+382}_{-408}	$5.363^{+2.153}_{-1.327}$
Alt.	-12 ± 1	$3.05^{+0.41}_{-0.56}$	5163^{+404}_{-462}	5583^{+187}_{-200}	$1.702^{+0.766}_{-0.372}$

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

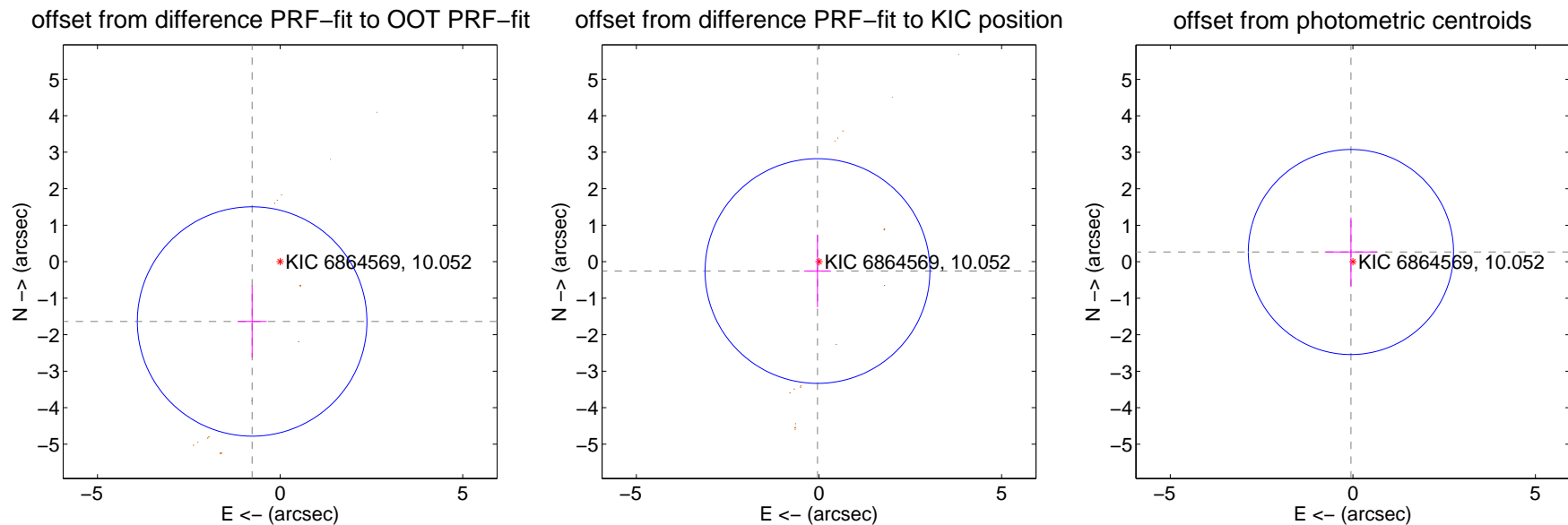
DV Centroid Data

Supplemental centroid analysis for 006864569-02. **Kepler magnitude: 10.05.** Transit SNR 24.58

There are 0 quarters with good PRF difference image offsets

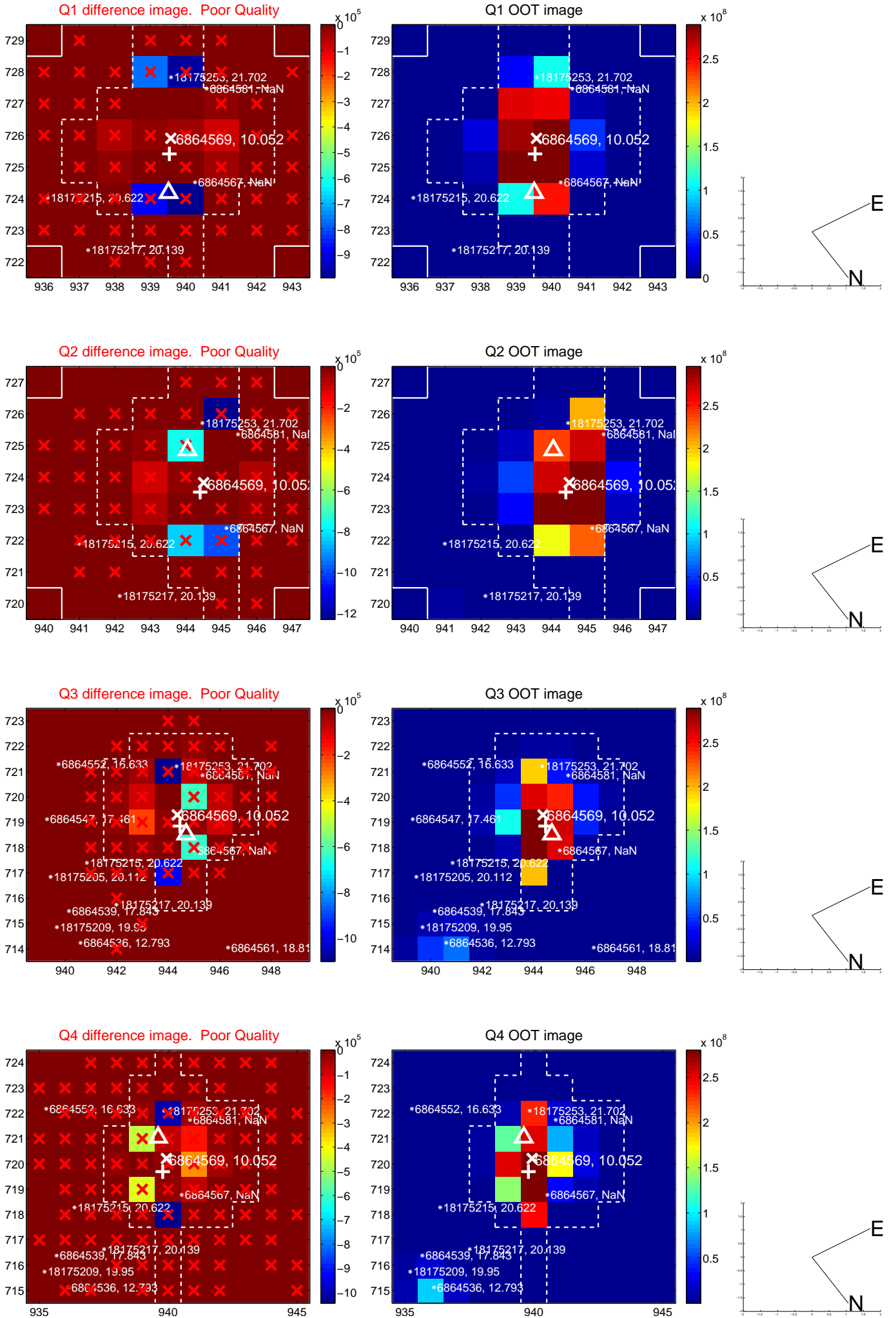
The direct PRF centroid is offset from the target star catalog position by about 1.98 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.808 ± 1.047	1.73	0.766 ± 0.400	-1.638 ± 0.983
PRF-fit source offset from KIC position	0.259 ± 1.026	0.25	0.041 ± 0.368	-0.256 ± 0.988
photometric centroid source offset	0.27 ± 0.94	0.29	0.05 ± 0.72	0.27 ± 0.94

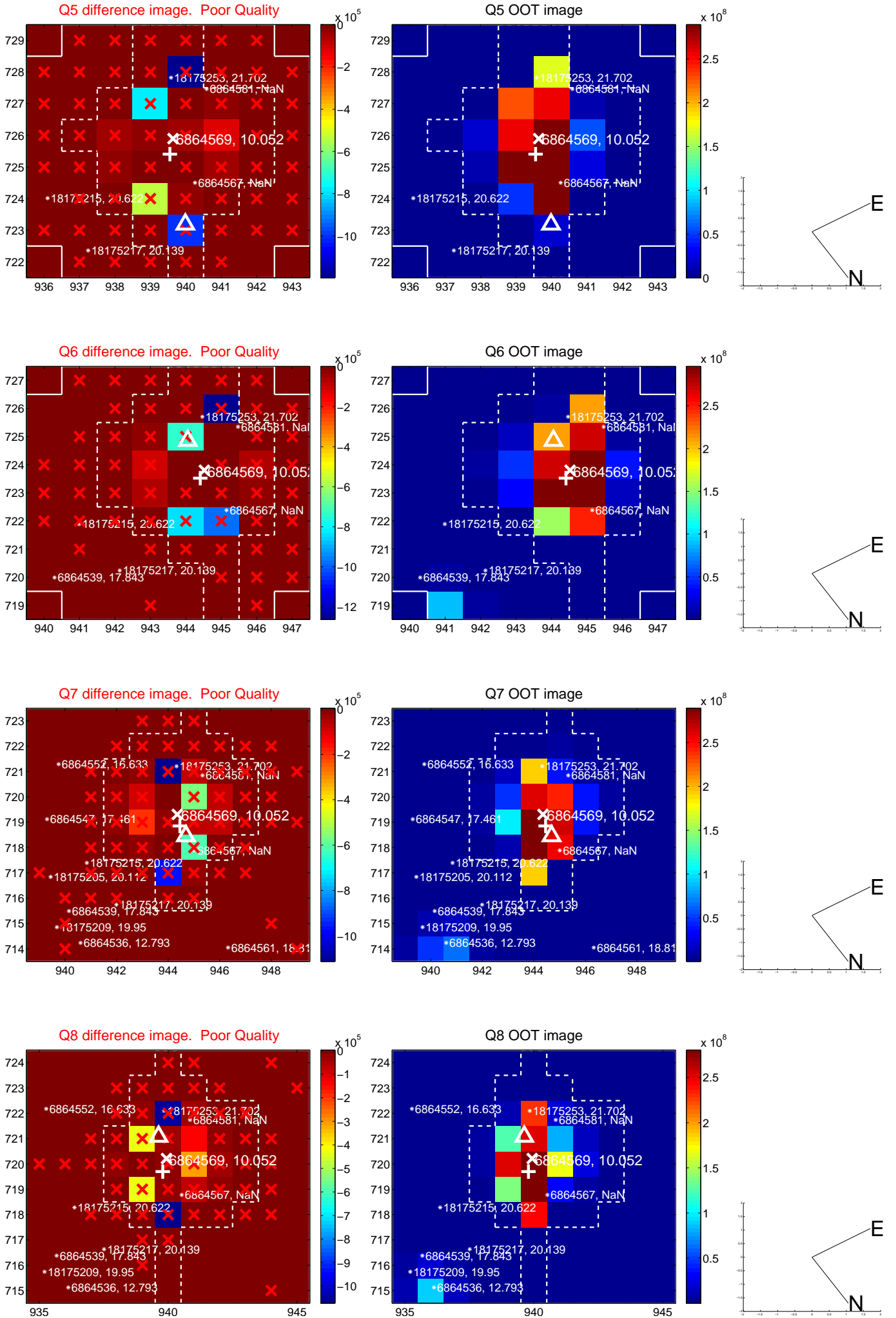


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

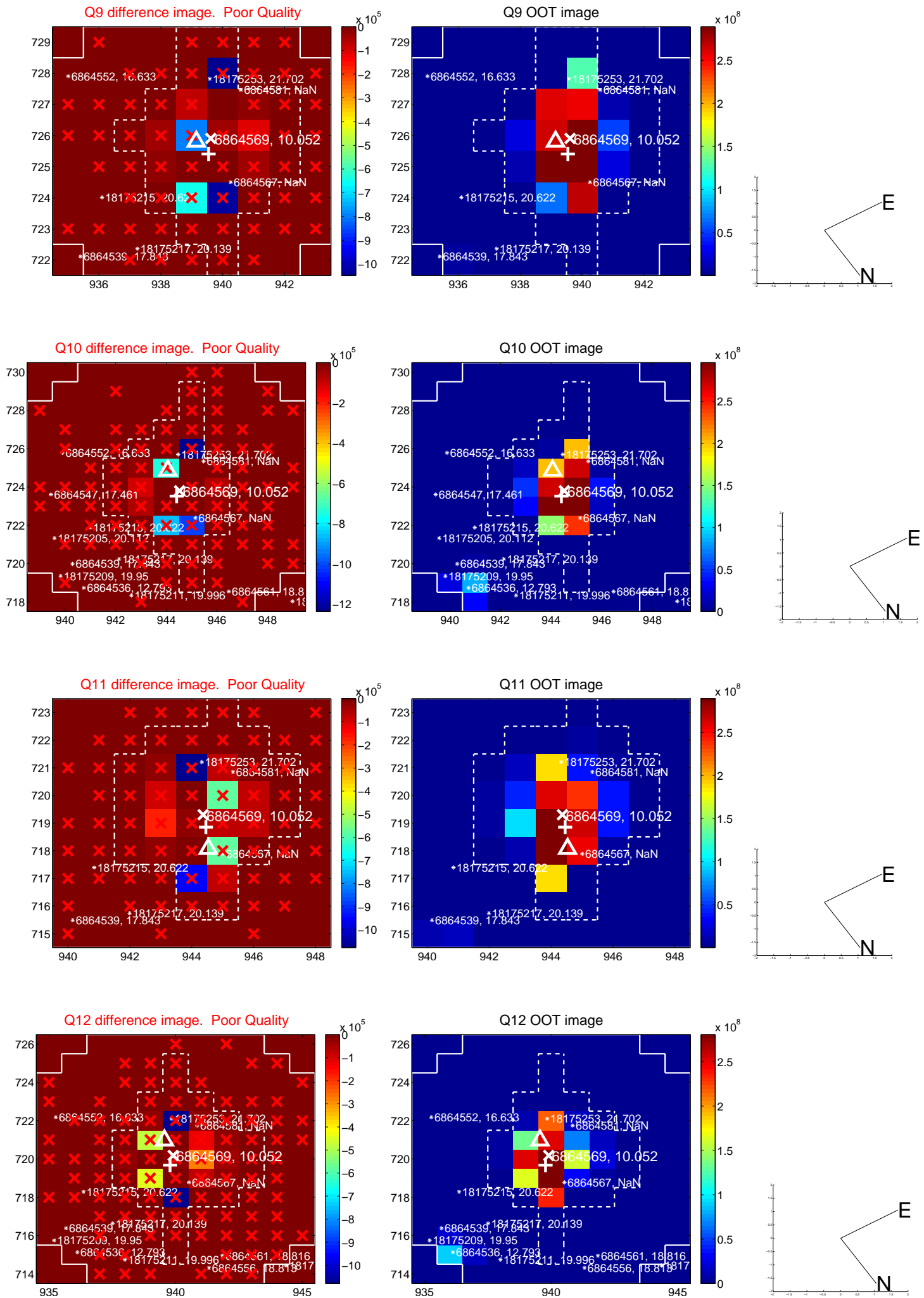
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



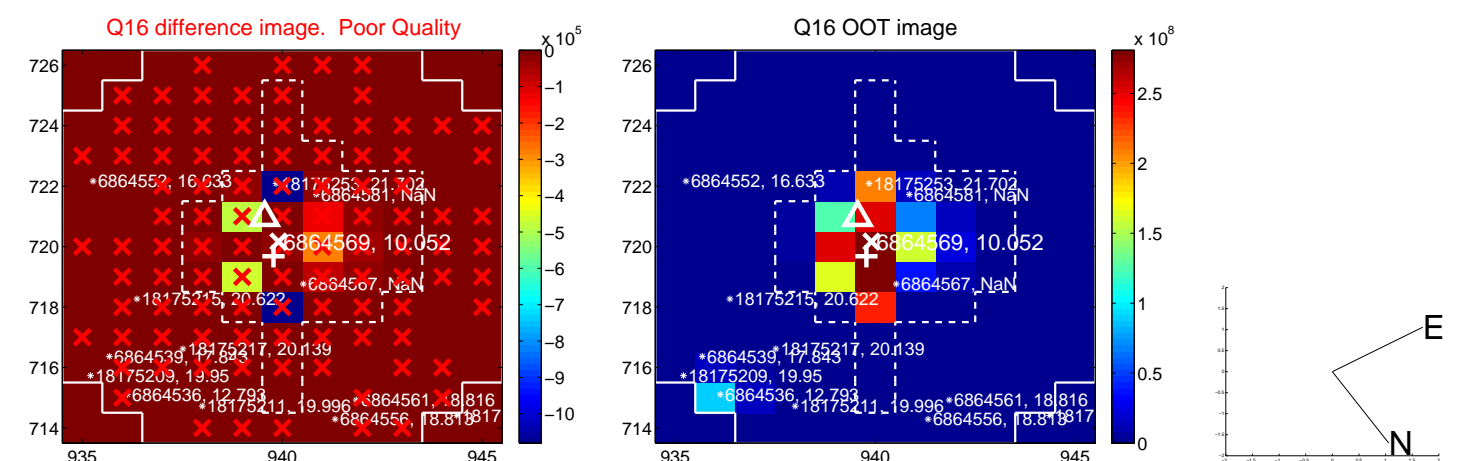
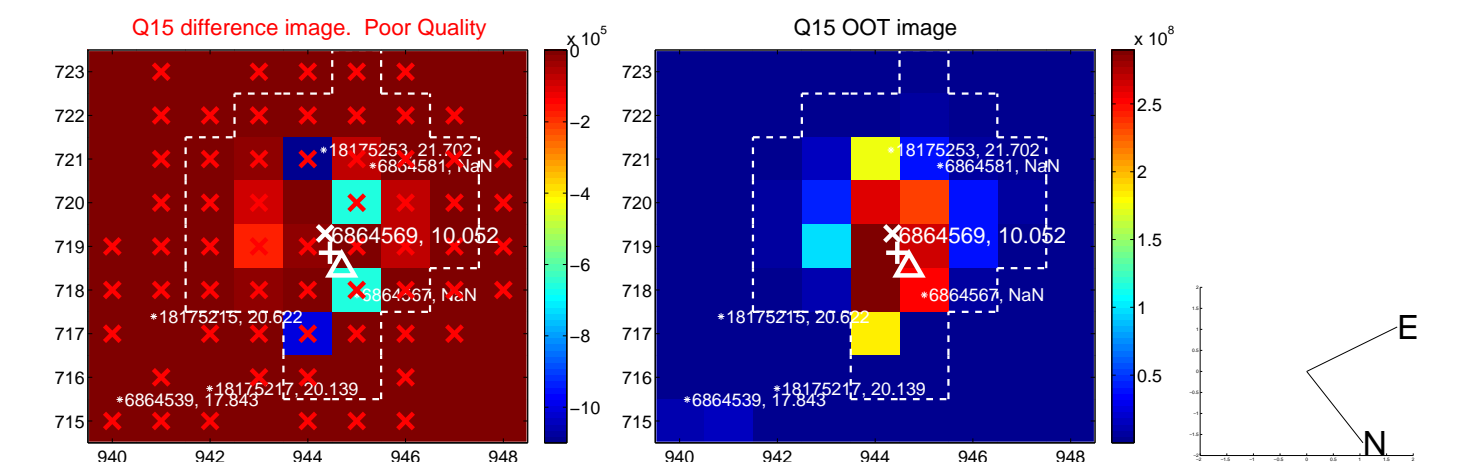
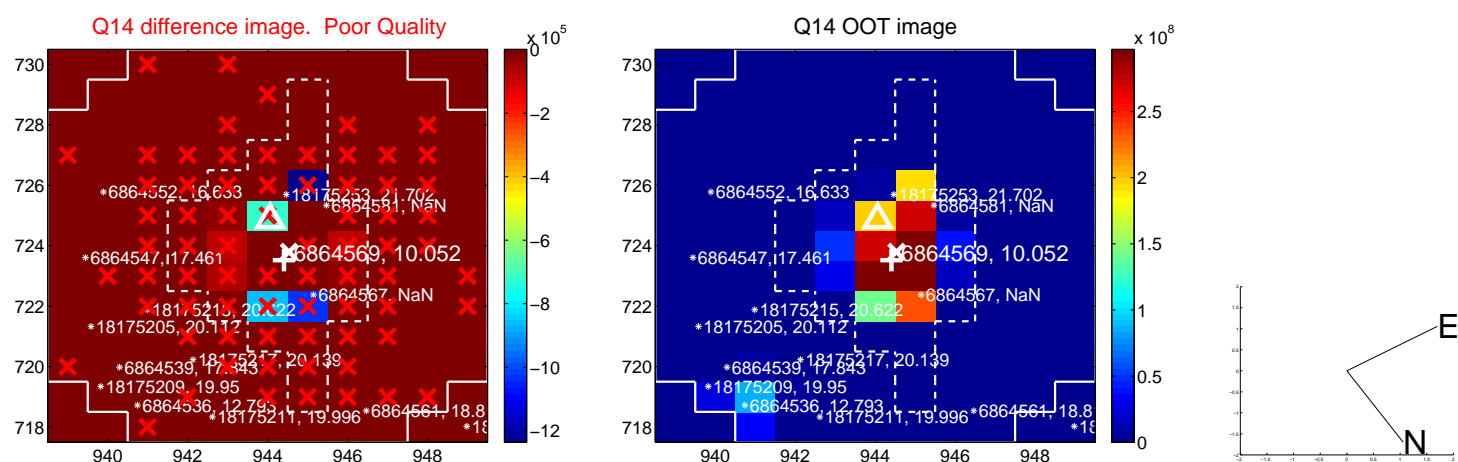
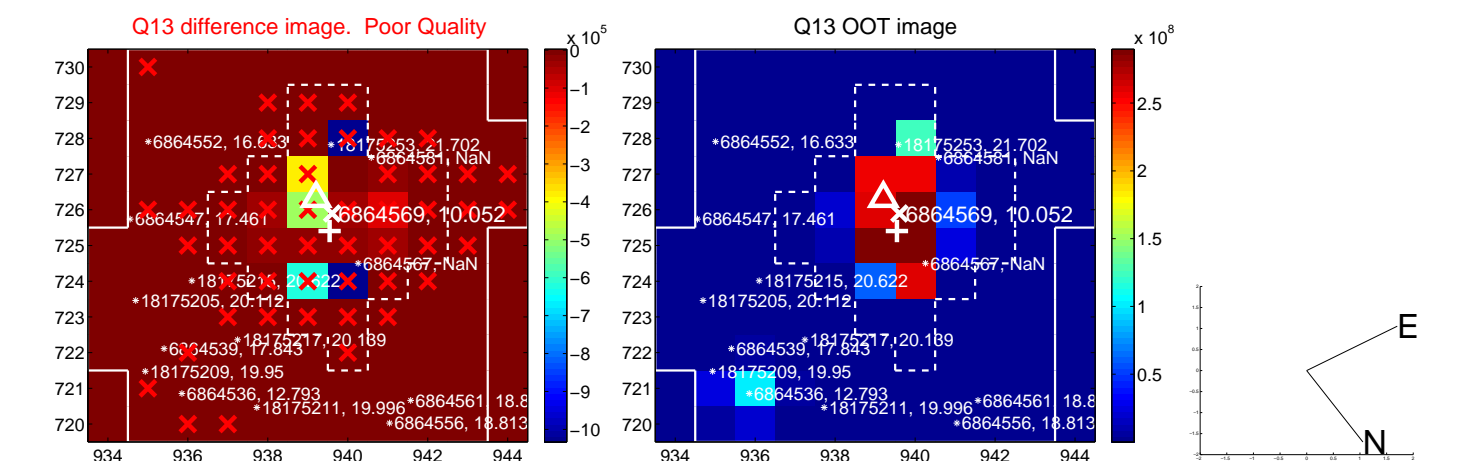
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



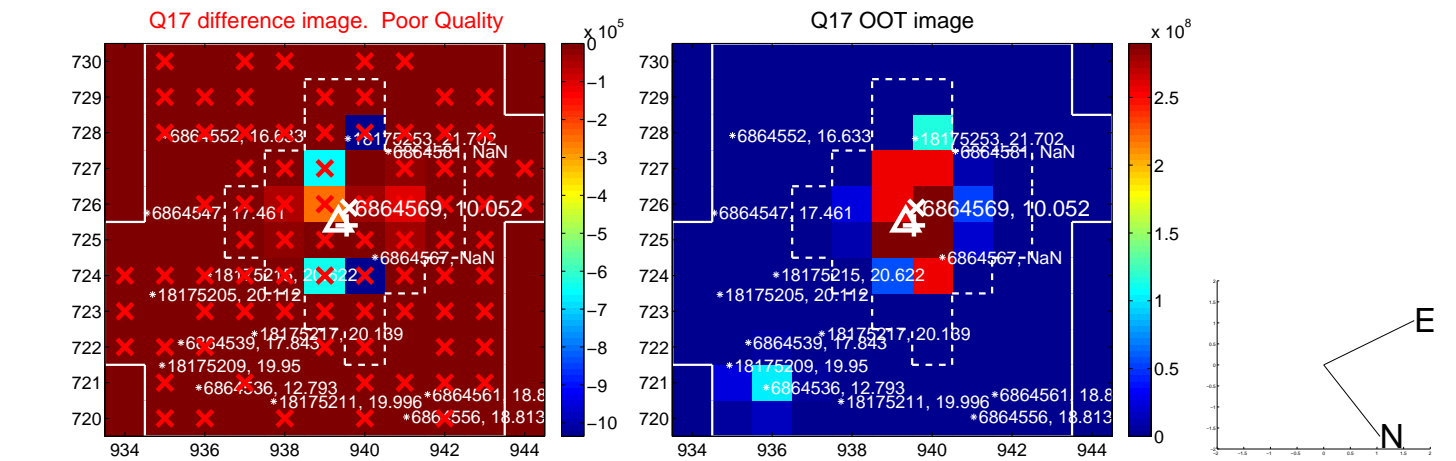
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



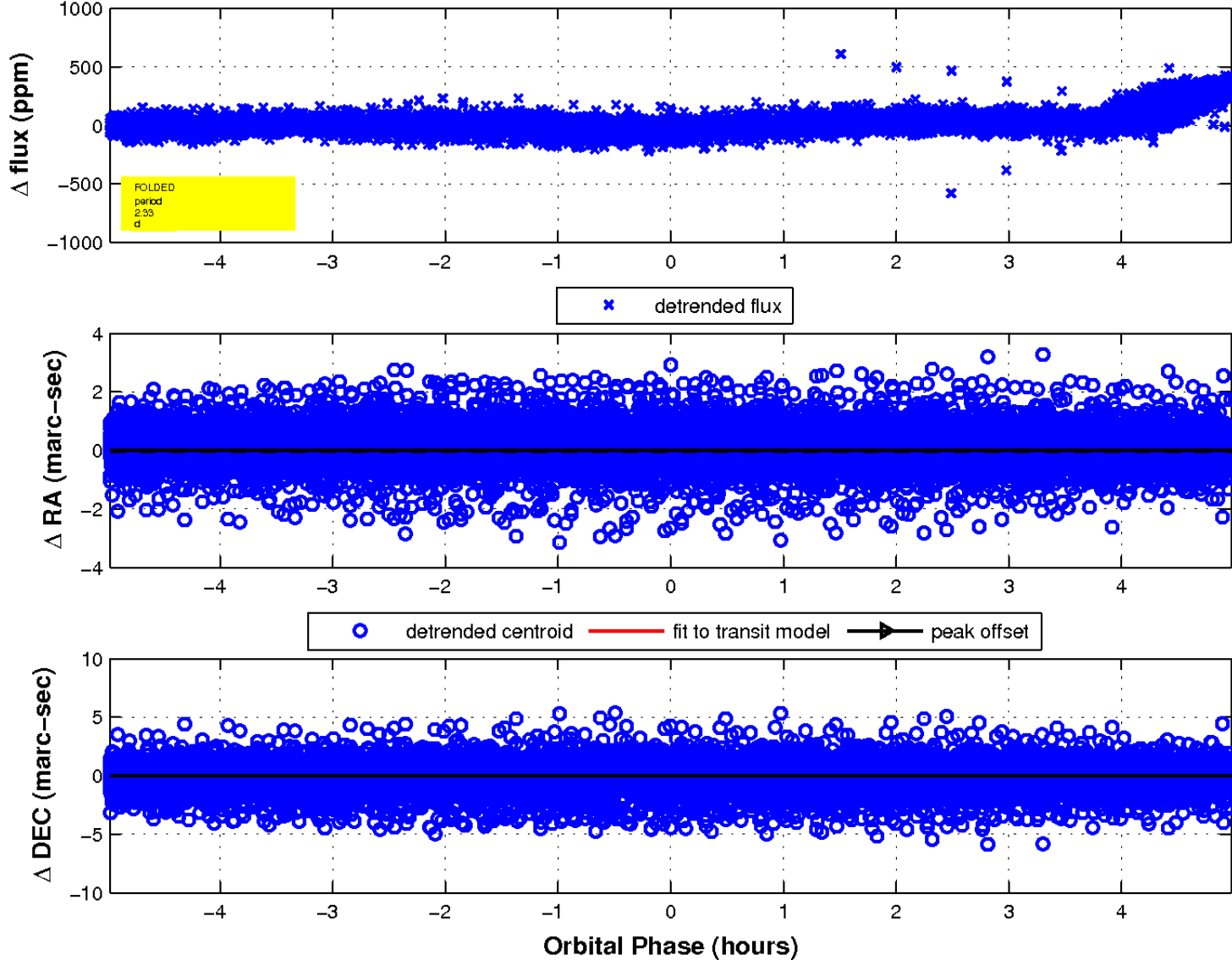
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

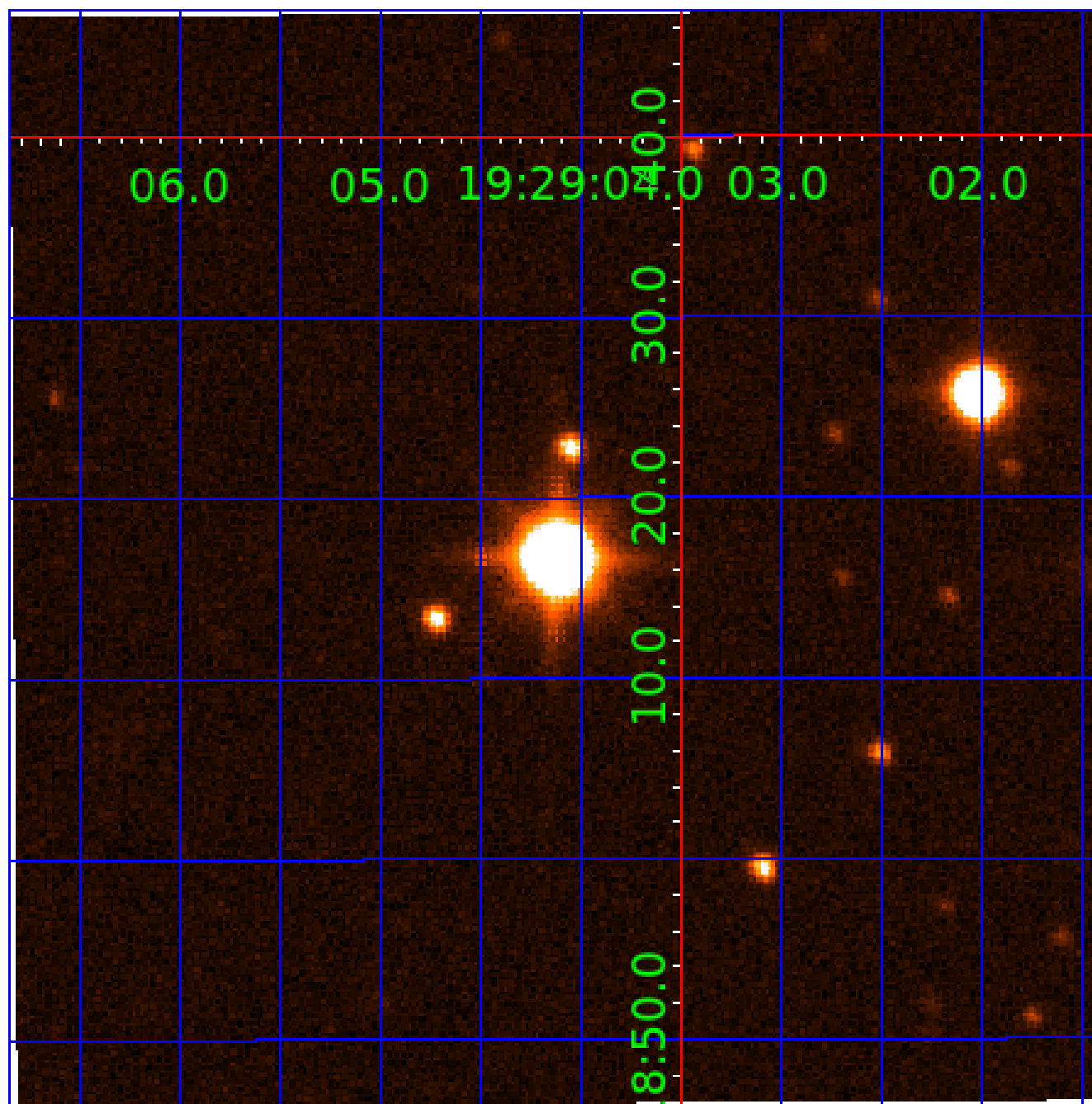


fluxWeightedCentroids, Planet 2 of 6



UKIRT Image

Declination



KIC 006864569

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})
006864569-01	OBS	No	383.578788	254.418857	253.6	12.500	40.8	-1.0	2.90	11076	4.75	51.11
006864569-02	OBS	6780.01	2.325124	133.330803	24.1	1.659	24.5	24.6	2.90	11076	1.63	46241.34
006864569-03	OBS	No	378.819760	480.959452	186.6	11.000	16.2	7.9	2.90	11076	7.25	51.97
006864569-04	OBS	No	2.325161	133.578527	5.2	5.161	8.1	6.8	2.90	11076	0.75	46240.35
006864569-05	OBS	No	97.584463	183.122074	46.7	4.275	10.8	4.8	2.90	11076	2.25	317.04
006864569-06	OBS	No	0.775060	132.000777	74.5	2.000	8.9	-1.0	2.90	11076	2.58	200068.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—NO_FITS—INCONSISTENT_TRANS—CENT_SATURATED
006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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 006864569-03

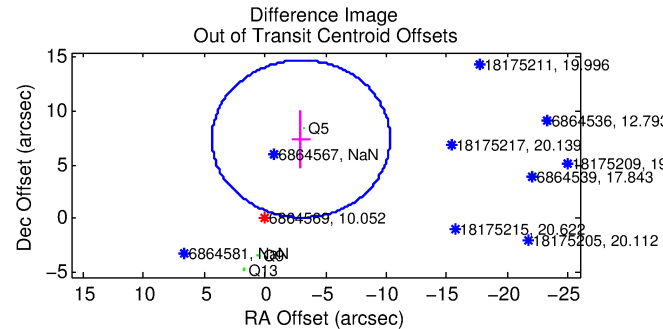
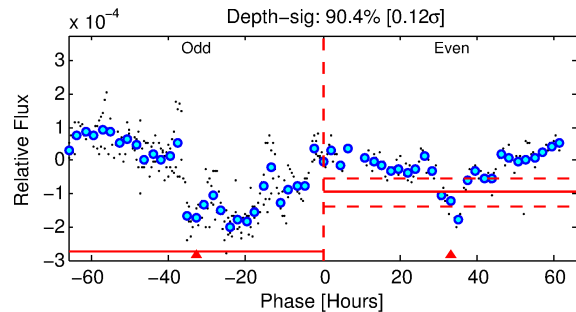
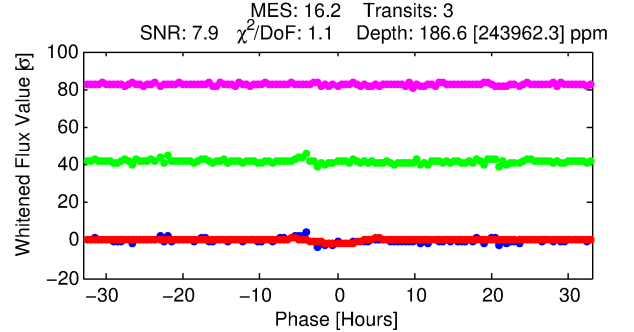
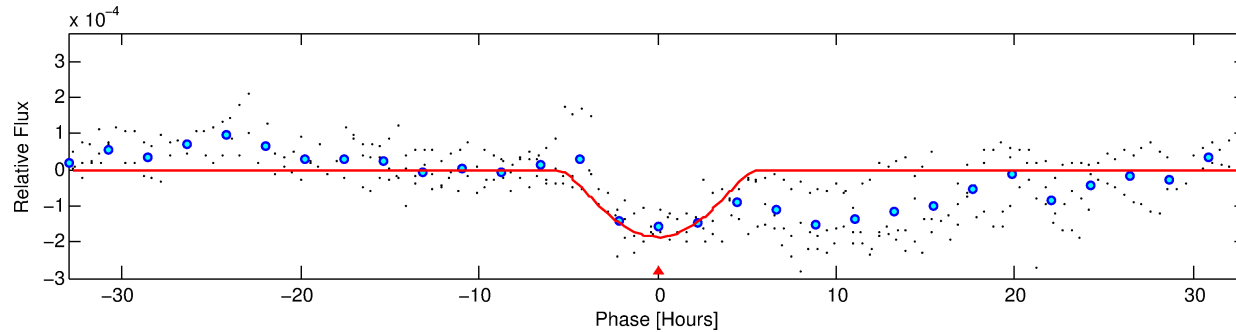
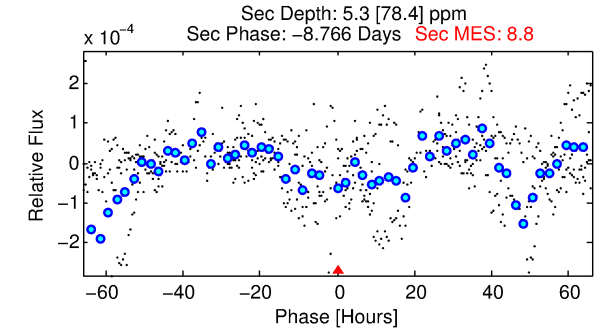
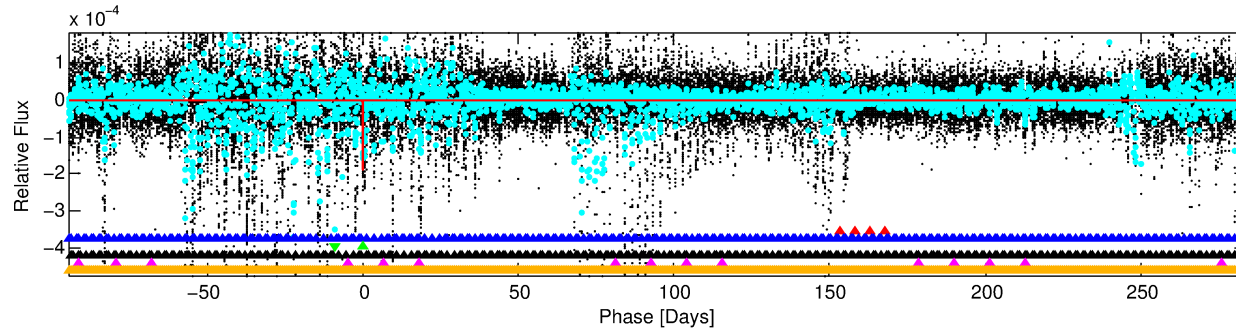
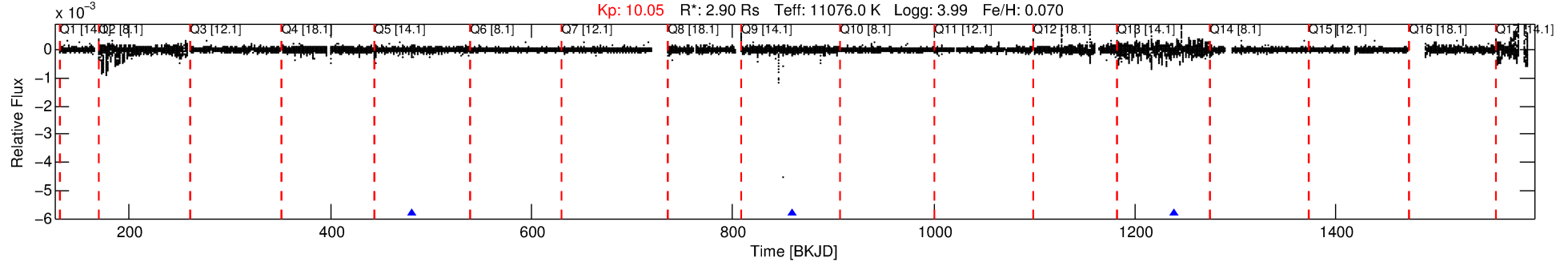
No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 3 of 6 Period: 378.820 d

KOI: K06780 Corr: No Ephemeris Match

Kp: 10.05 R*: 2.90 Rs Teff: 11076.0 K Logg: 3.99 Fe/H: 0.070



DV Fit Results:

Period = 378.81976 [0.01605] d
Epoch = 480.9595 [0.0138] BKJD
Rp/R* = 0.0229 [0.0419]
a/R* = 56.69 [28.55]
b = 1.00 [21.80]
Seff = 51.97 [25.38]
Teq = 685 [84] K
Rp = 7.25 [13.48] Re
a = 1.4752 [0.4394] AU
Ag = 121.86 [1840.74] [0.07σ]
Teffp = 3517 [13276] K [0.21σ]

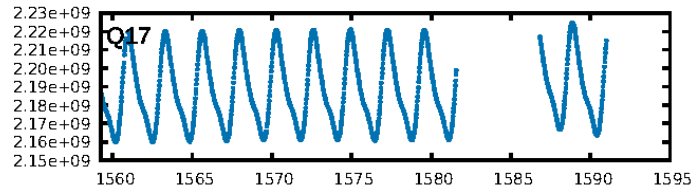
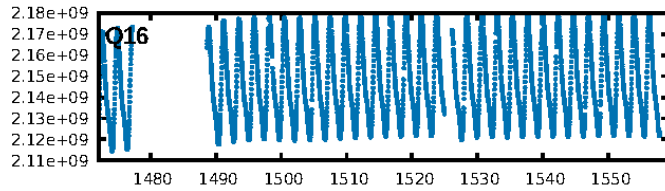
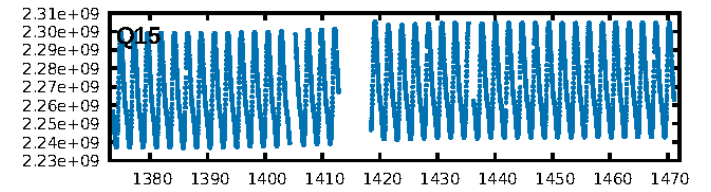
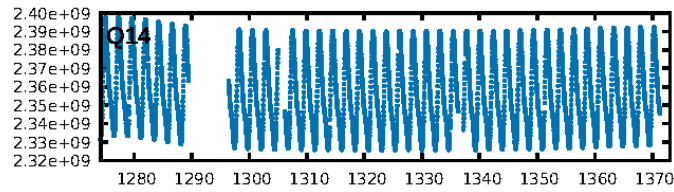
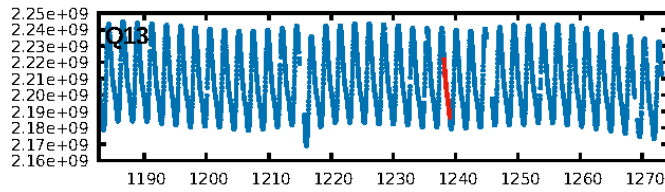
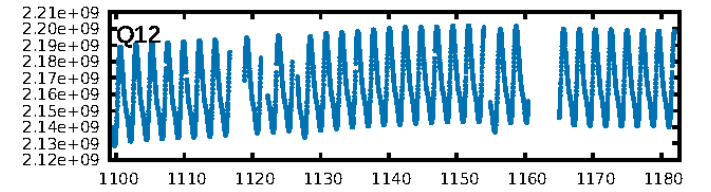
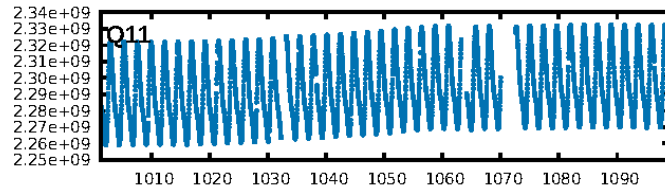
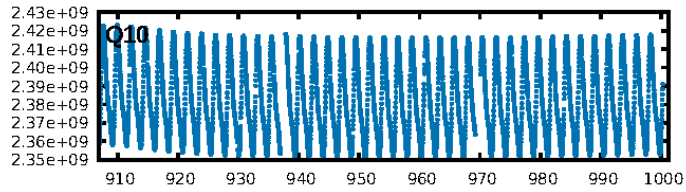
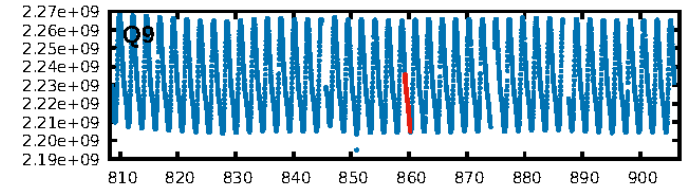
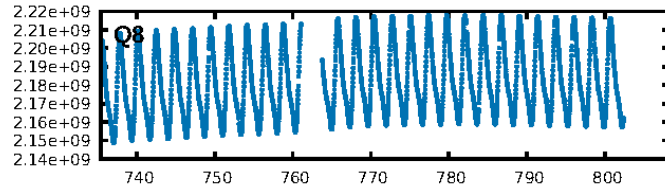
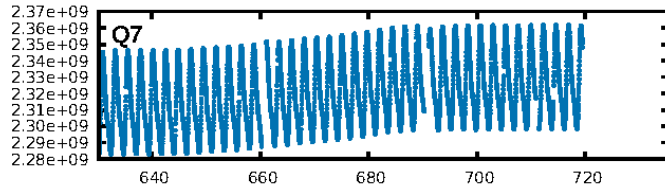
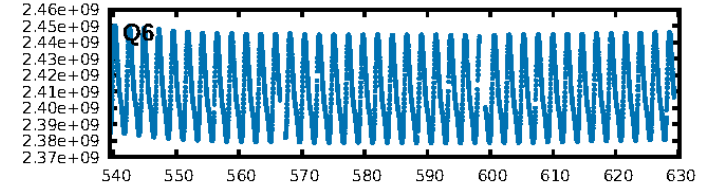
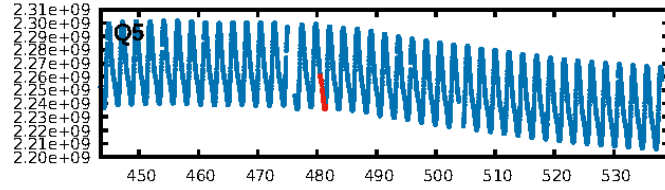
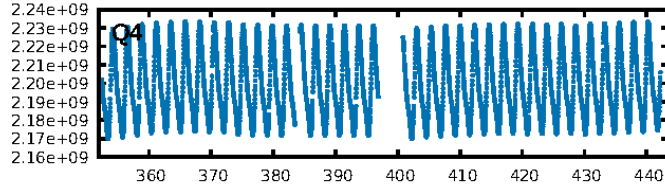
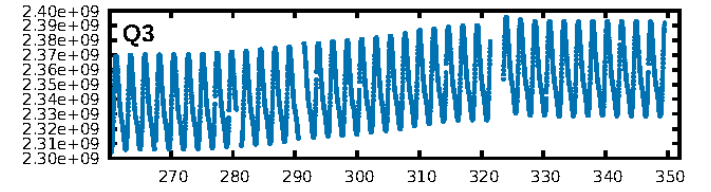
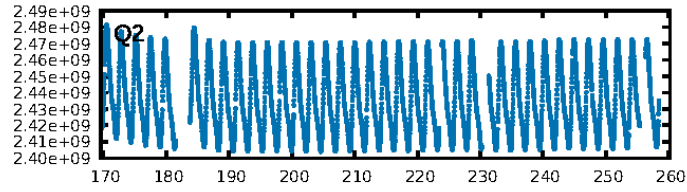
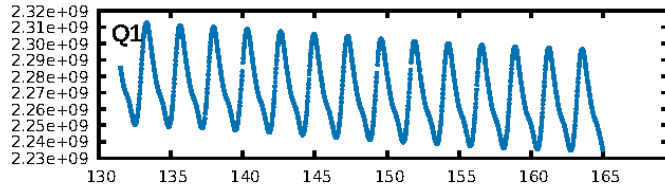
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [571.94σ]
LongPeriod-sig: 100.0% [6.86σ]
ModelChiSquare2-sig: 7.5%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 48.8%
Centroid-so: 1.591 arcsec [1.11σ]
OotOffset-rm: 7.987 arcsec [3.26σ]
KicOffset-rm: 9.817 arcsec [2.36σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/3]

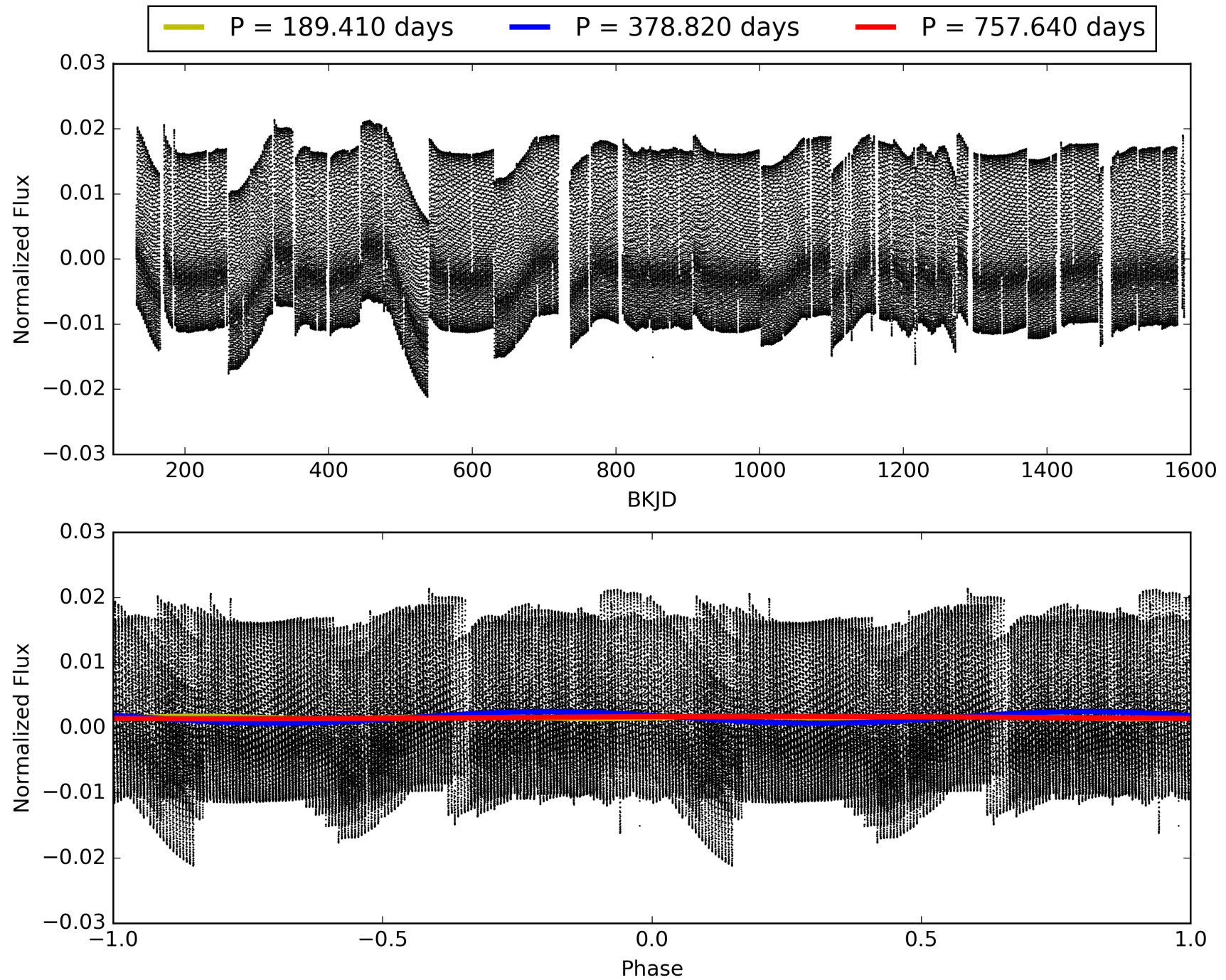
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:48:02 Z

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

TCE 006864569-03, PDC Light Curves

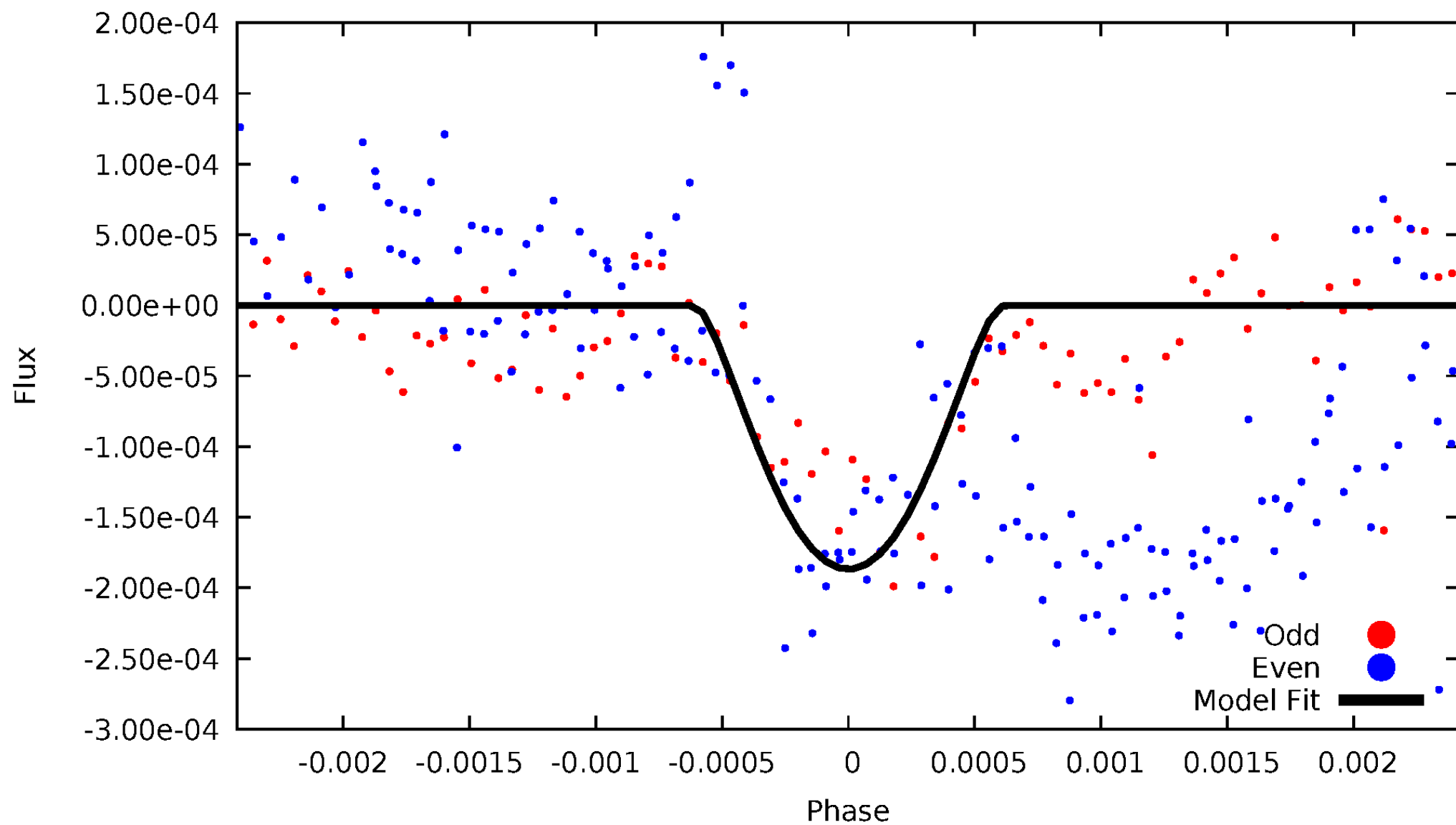


TCE 006864569-03



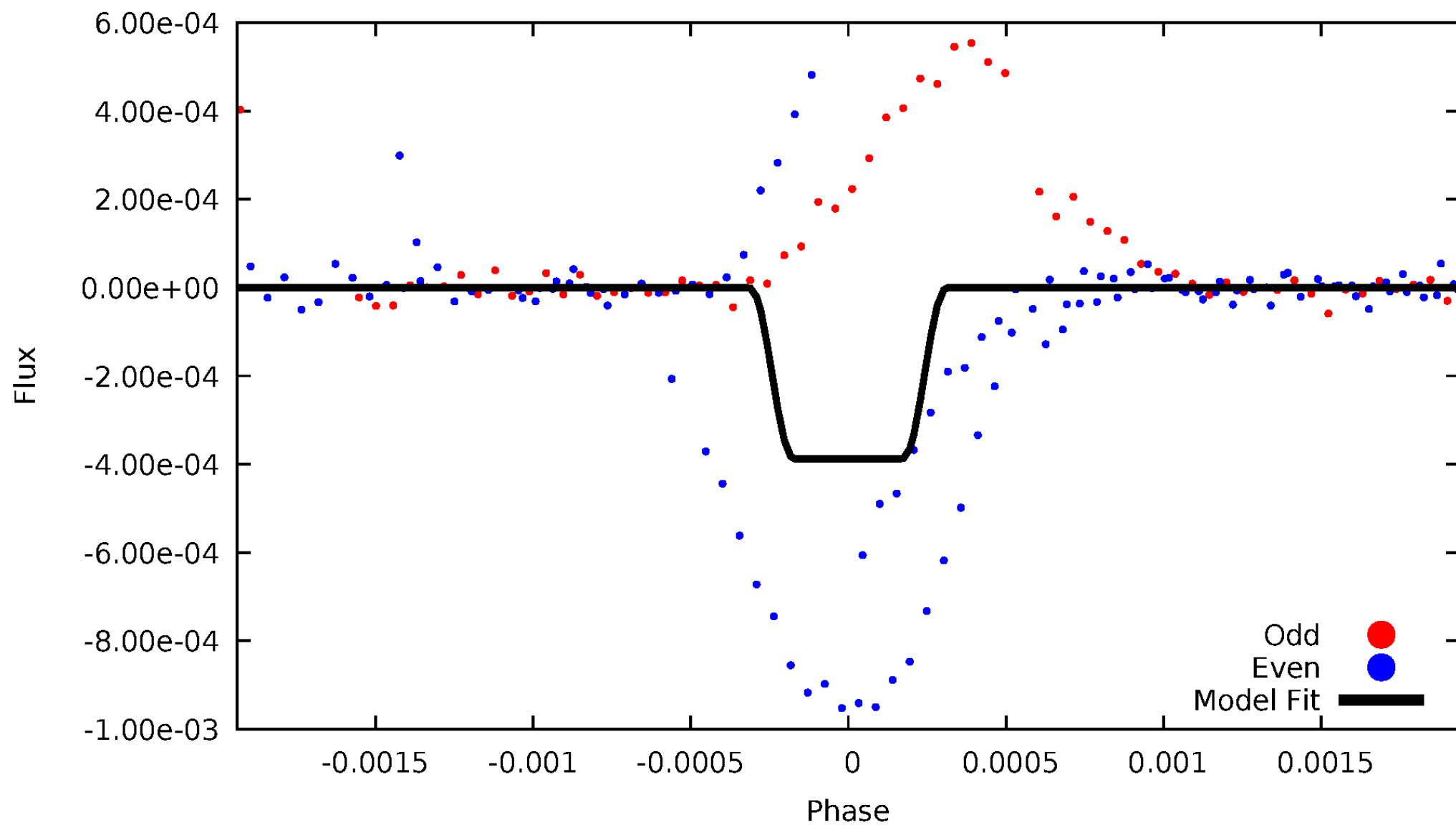
DV Odd/Even

TCE 006864569-03



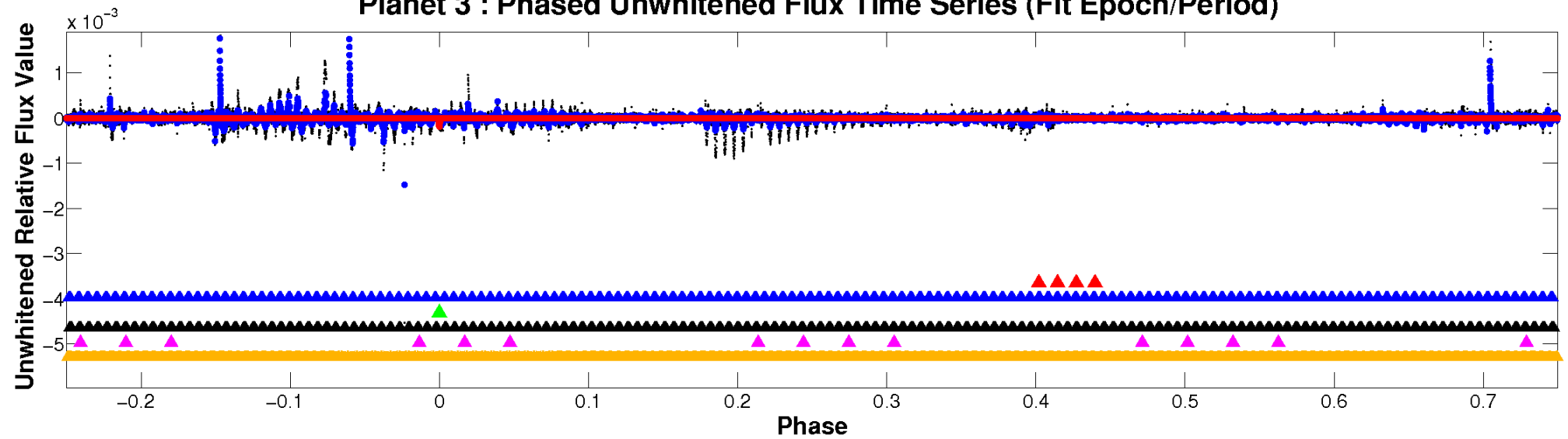
ALT Odd/Even

TCE 006864569-03

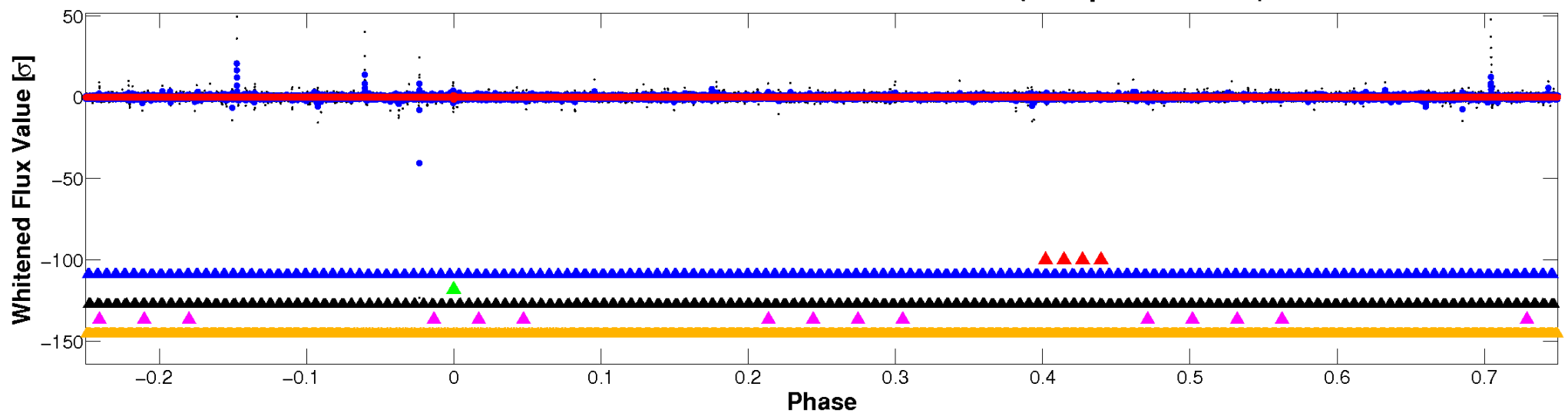


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

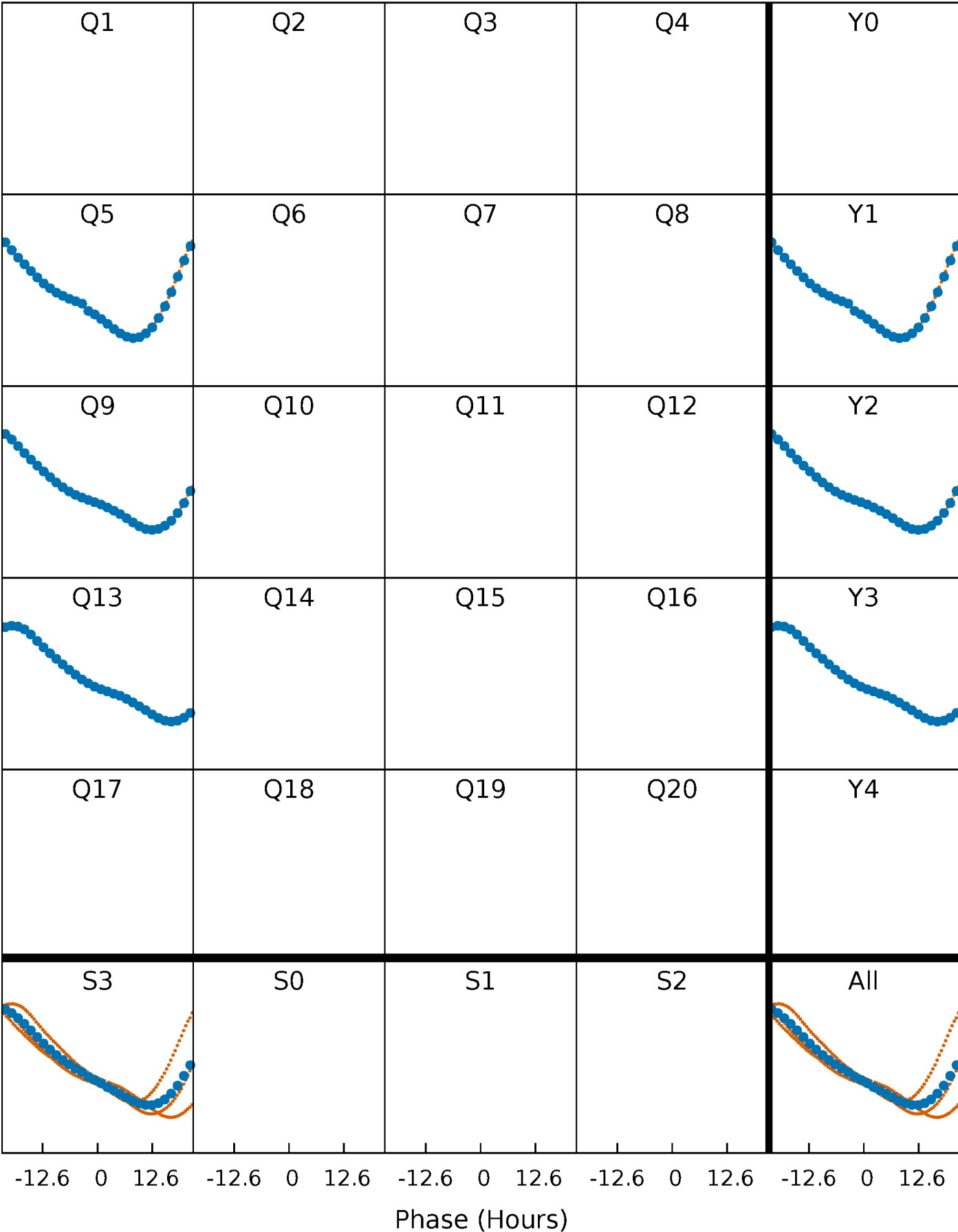


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



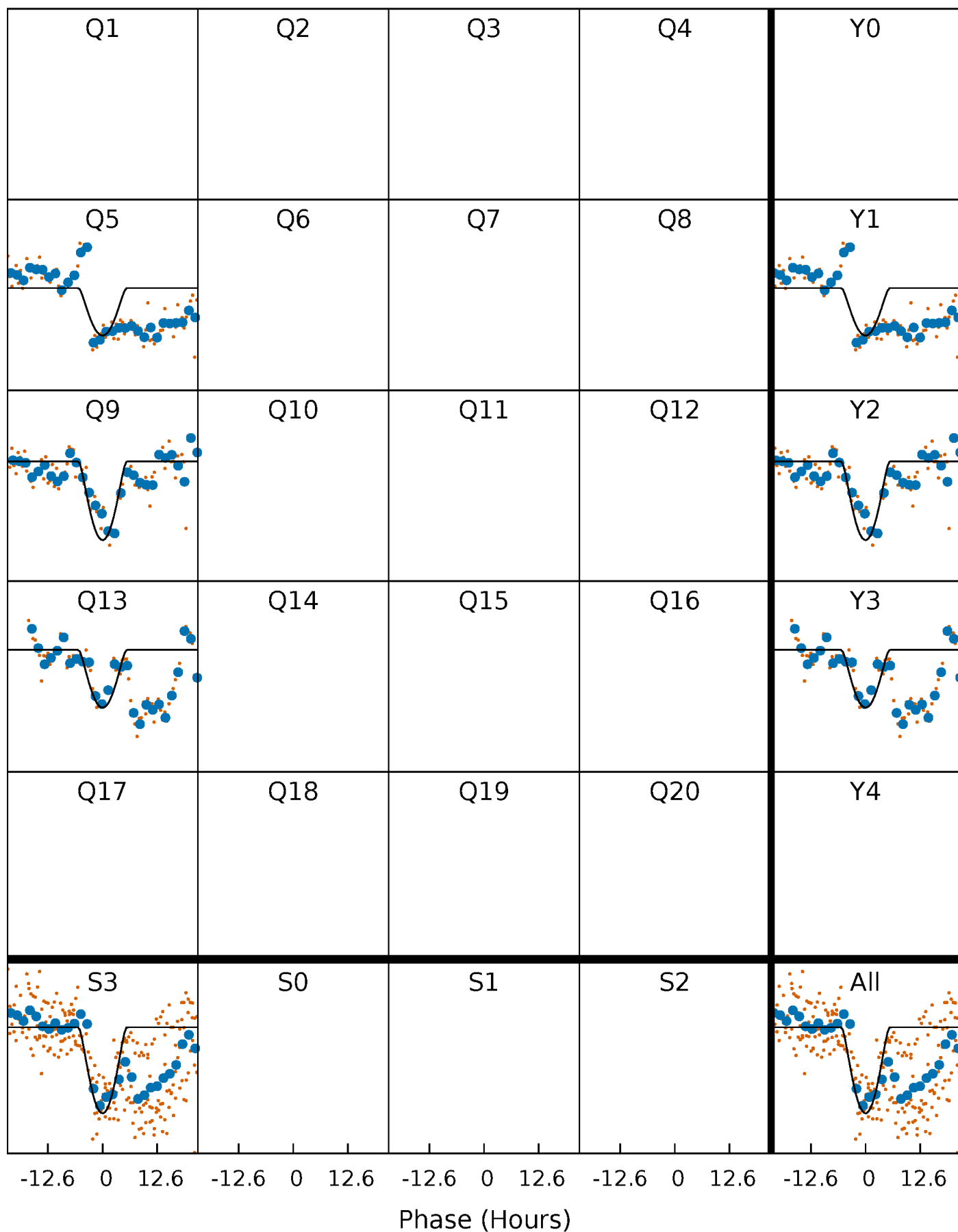
PDC Quarter-Phased Transit Curves

TCE 006864569-03 P=378.819760 Days T₀=480.959452 (BKJD)



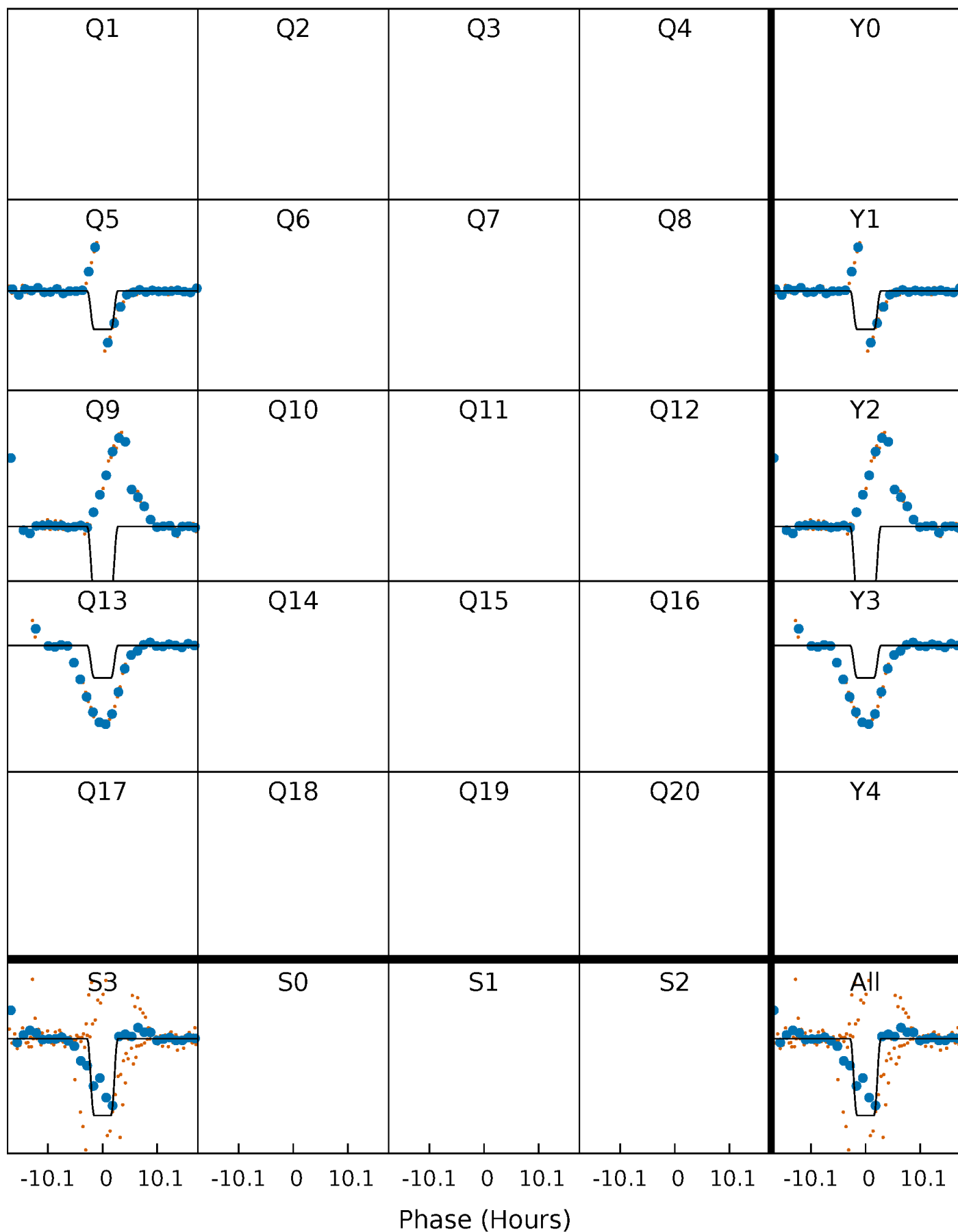
DV Quarter-Phased Transit Curves

TCE 006864569-03 $P=378.819760$ Days $T_0=480.959452$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

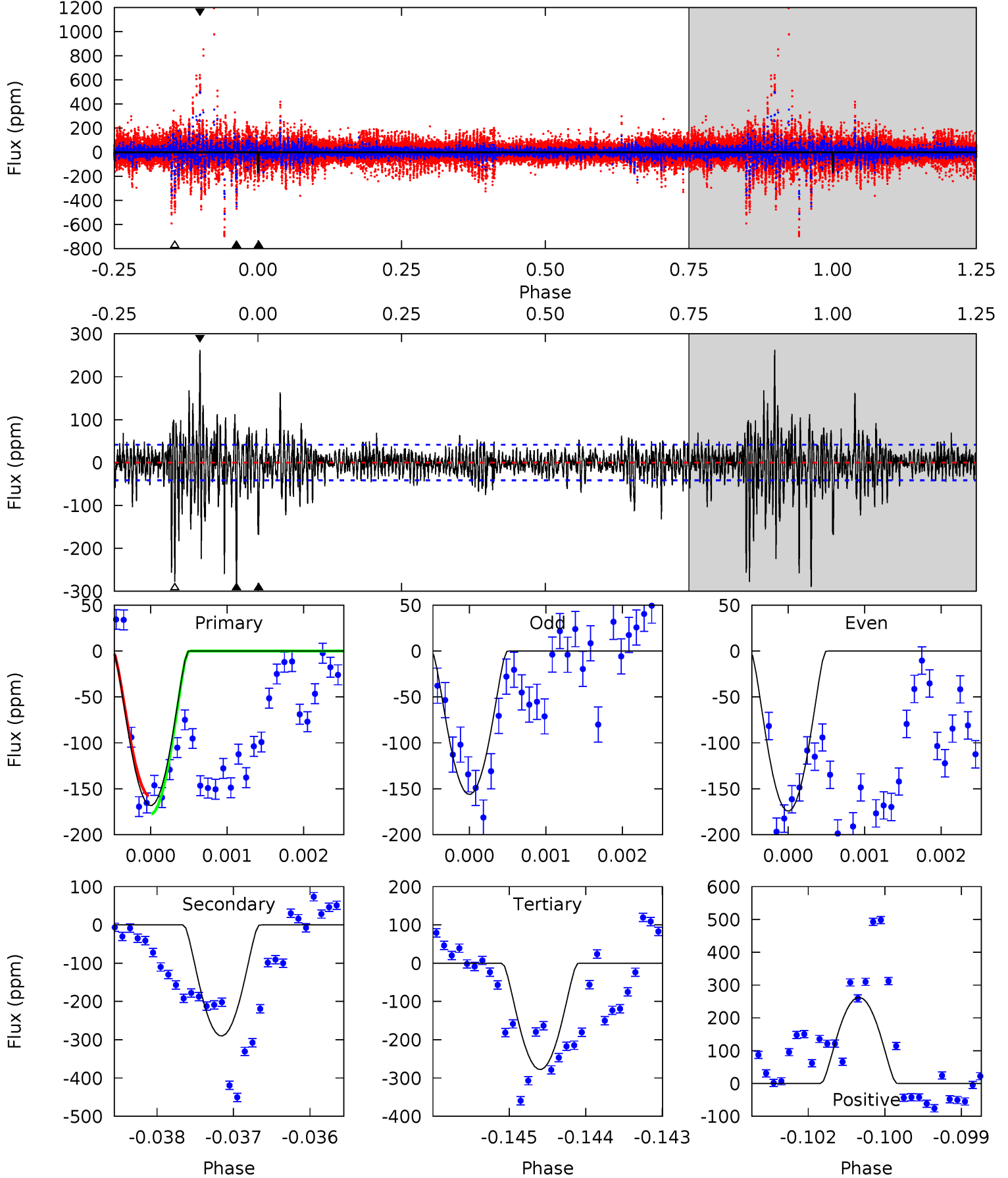
TCE 006864569-03 $P=378.810958$ Days $T_0=480.847418$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-03, P = 378.819760 Days, E = 102.139692 Days

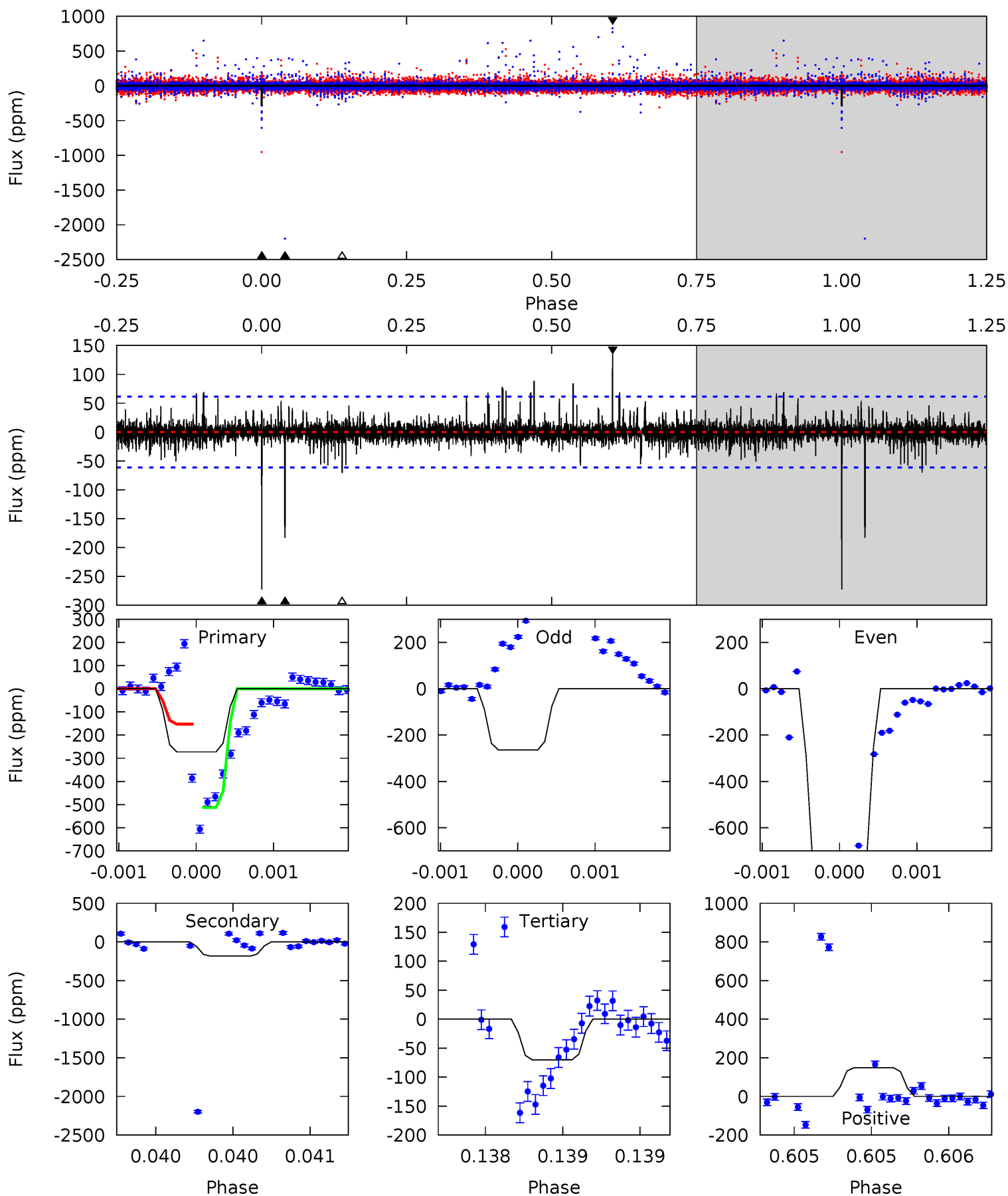
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	37.8	36.2	34.2	5.41	3.23	4.43	-14.3	-12.3	1.60	3.62	0.80	1.08	0.47	1.25



Alt Model-Shift Uniqueness Test

006864569-03, P = 378.810958 Days, E = 102.036460 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	16.5	6.35	13.4	5.54	3.43	0.83	18.2	11.2	10.2	3.14	25.2	2.03	0.35	15.6



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-290 ± 8	$11.91^{+11.49}_{-7.86}$	950^{+71}_{-87}	6345^{+6639}_{-1579}	2394^{+17852}_{-1770}
Alt.	-183 ± 11	$11.00^{+11.05}_{-7.26}$	947^{+74}_{-80}	5974^{+6066}_{-1525}	1774^{+14323}_{-1336}

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 $A_{obs} \gg 1.0$

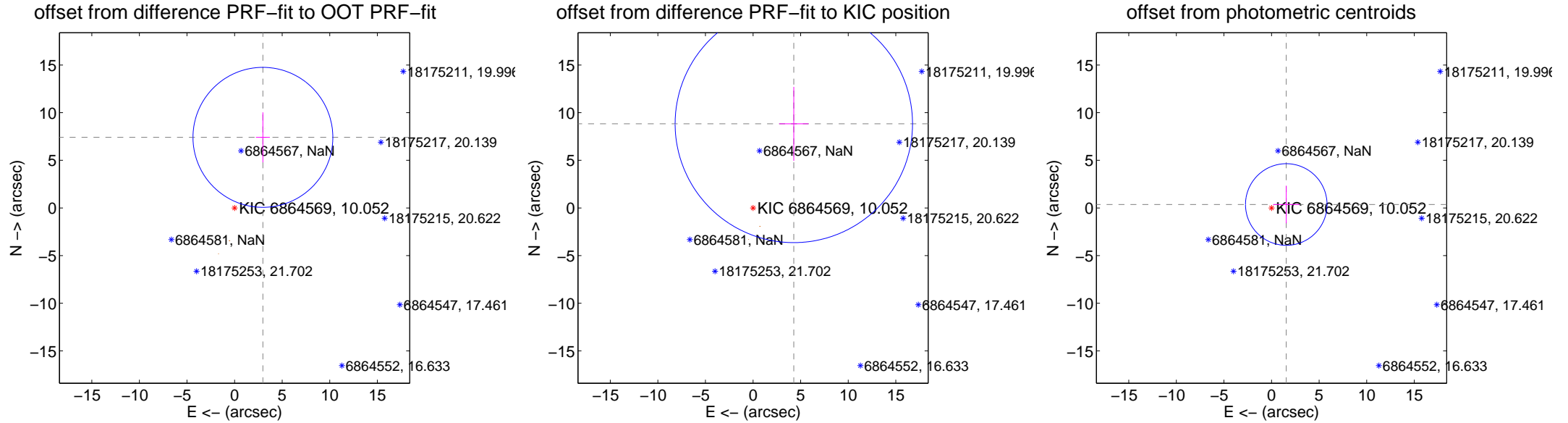
DV Centroid Data

Supplemental centroid analysis for 006864569-03. **Kepler magnitude: 10.05.** Transit SNR 7.92

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.95 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.987 ± 2.449	3.26	-2.977 ± 0.733	7.411 ± 2.623
PRF-fit source offset from KIC position	9.817 ± 4.157	2.36	-4.284 ± 1.537	8.833 ± 3.879
photometric centroid source offset	1.59 ± 1.43	1.11	-1.55 ± 1.39	0.36 ± 1.97

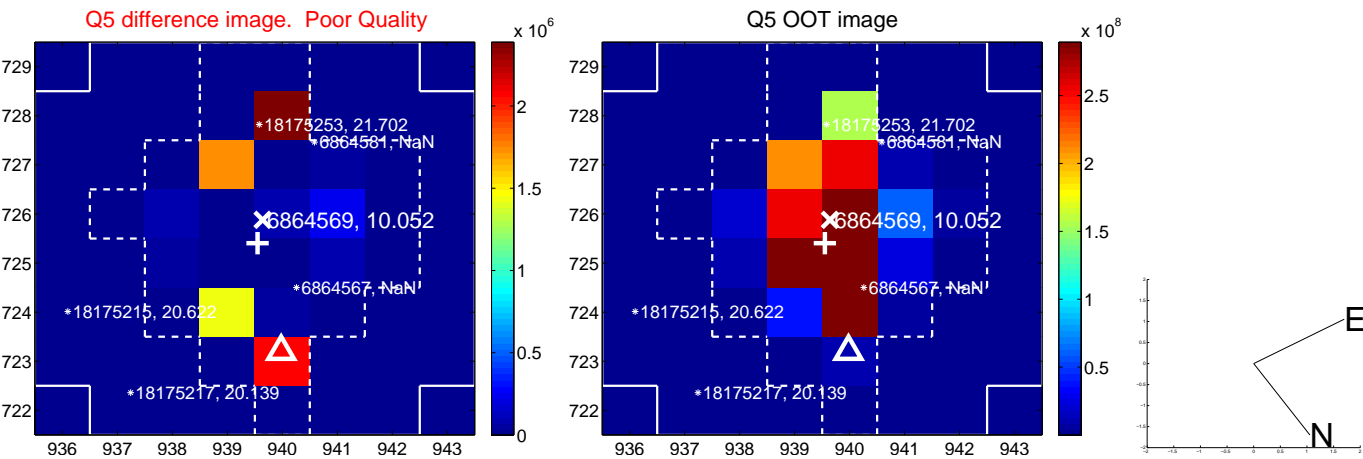


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

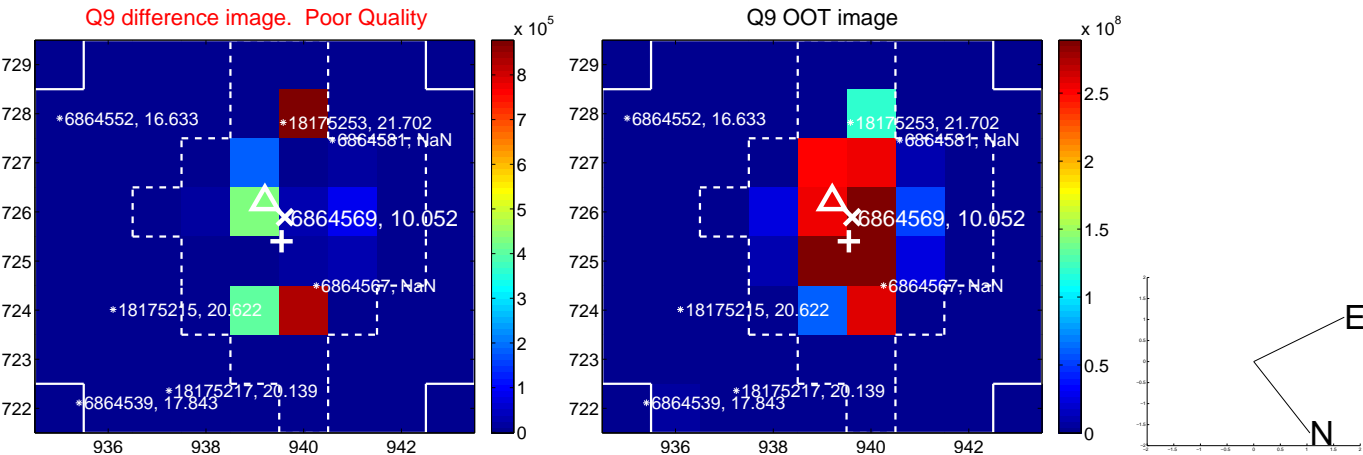
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



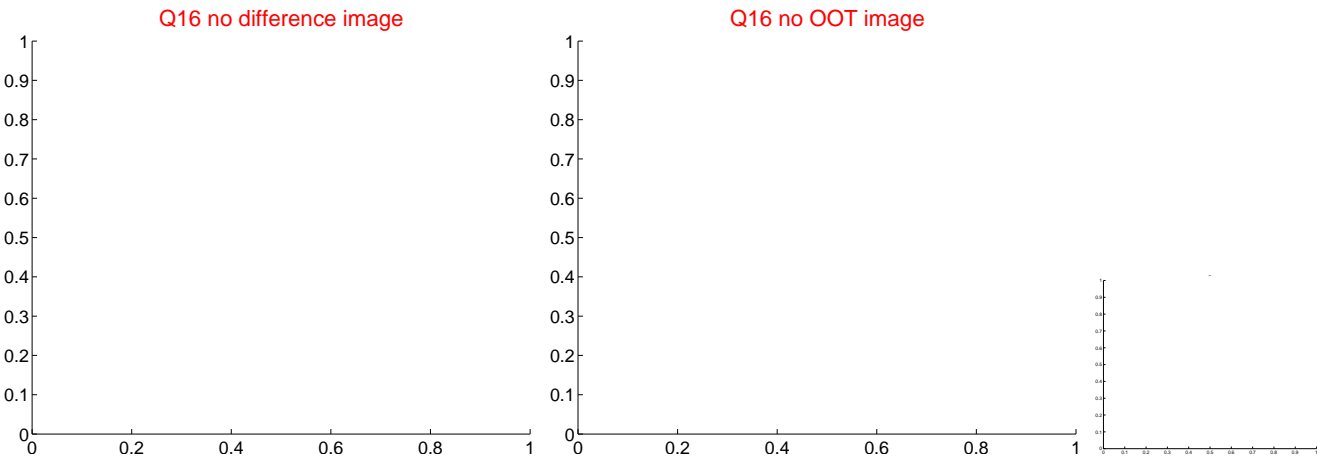
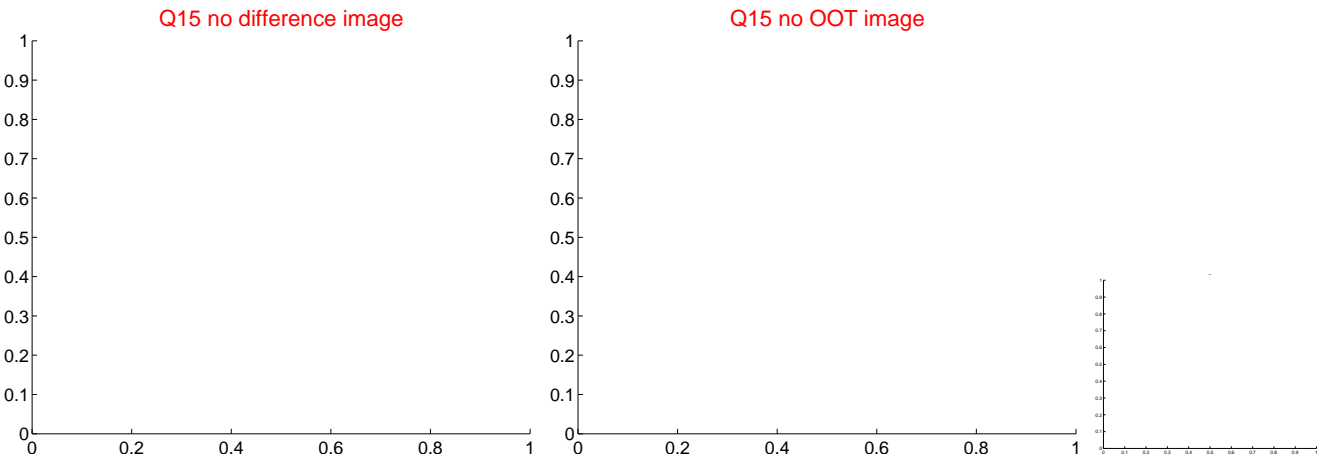
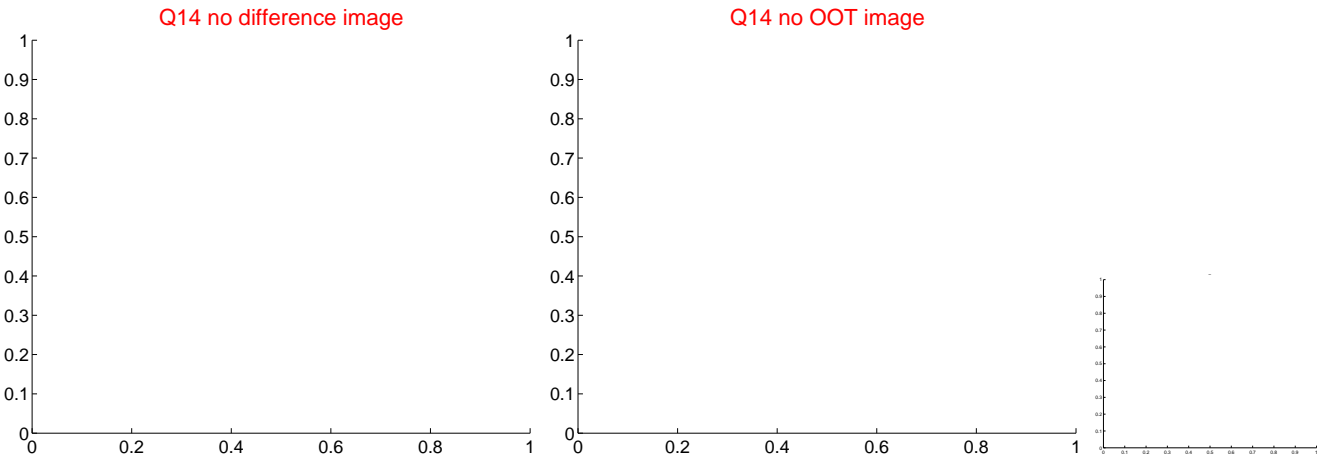
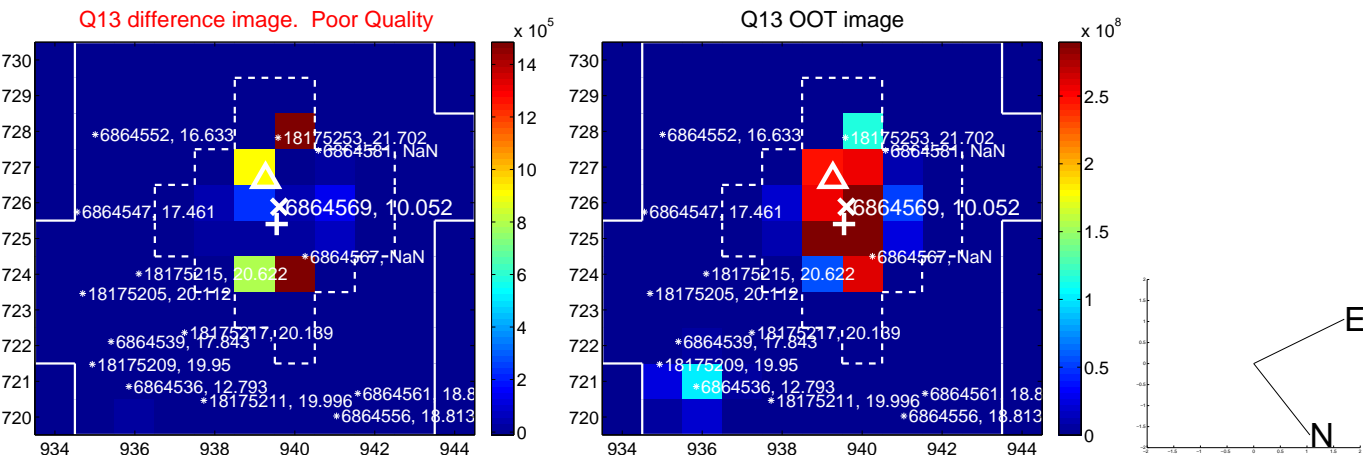
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



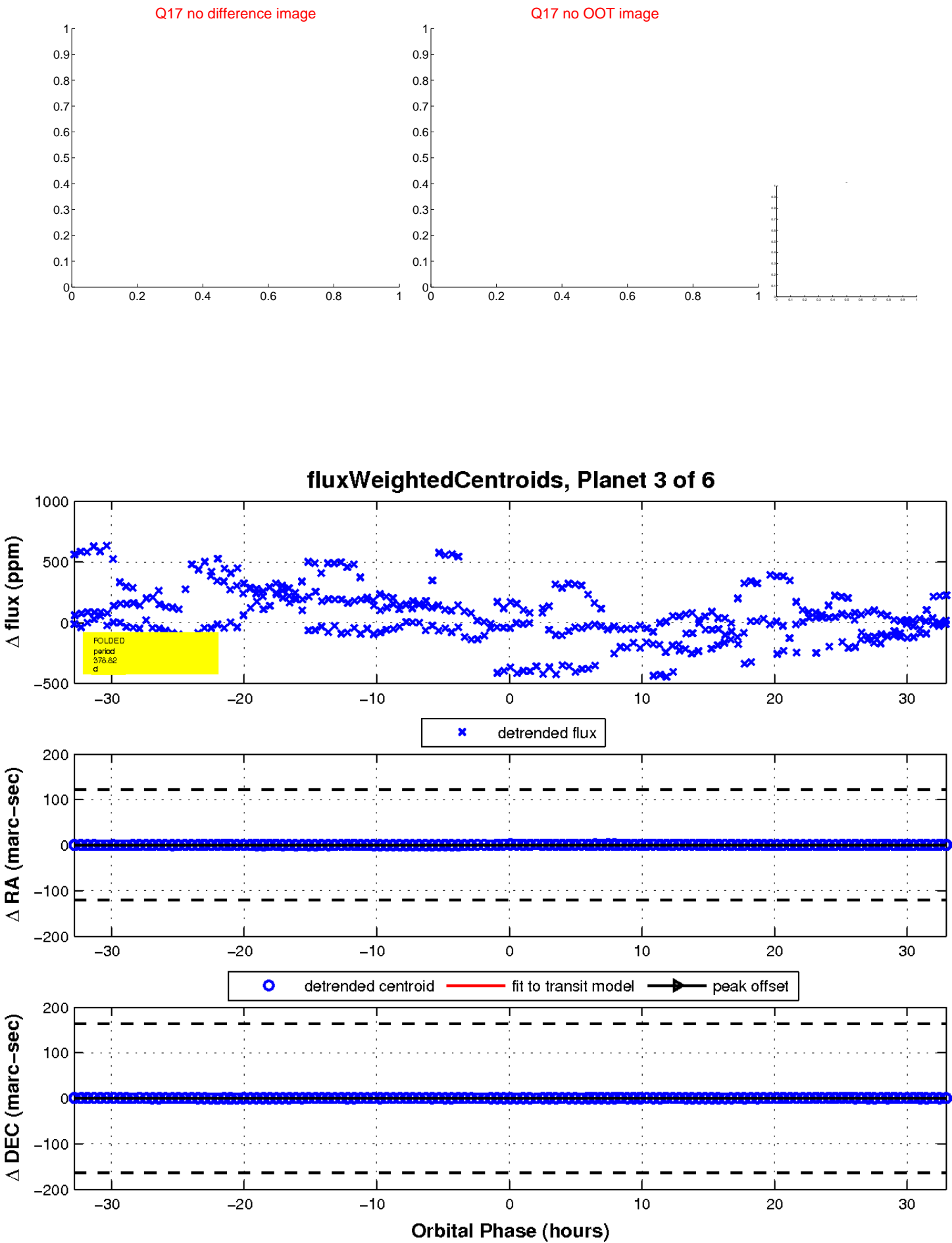
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

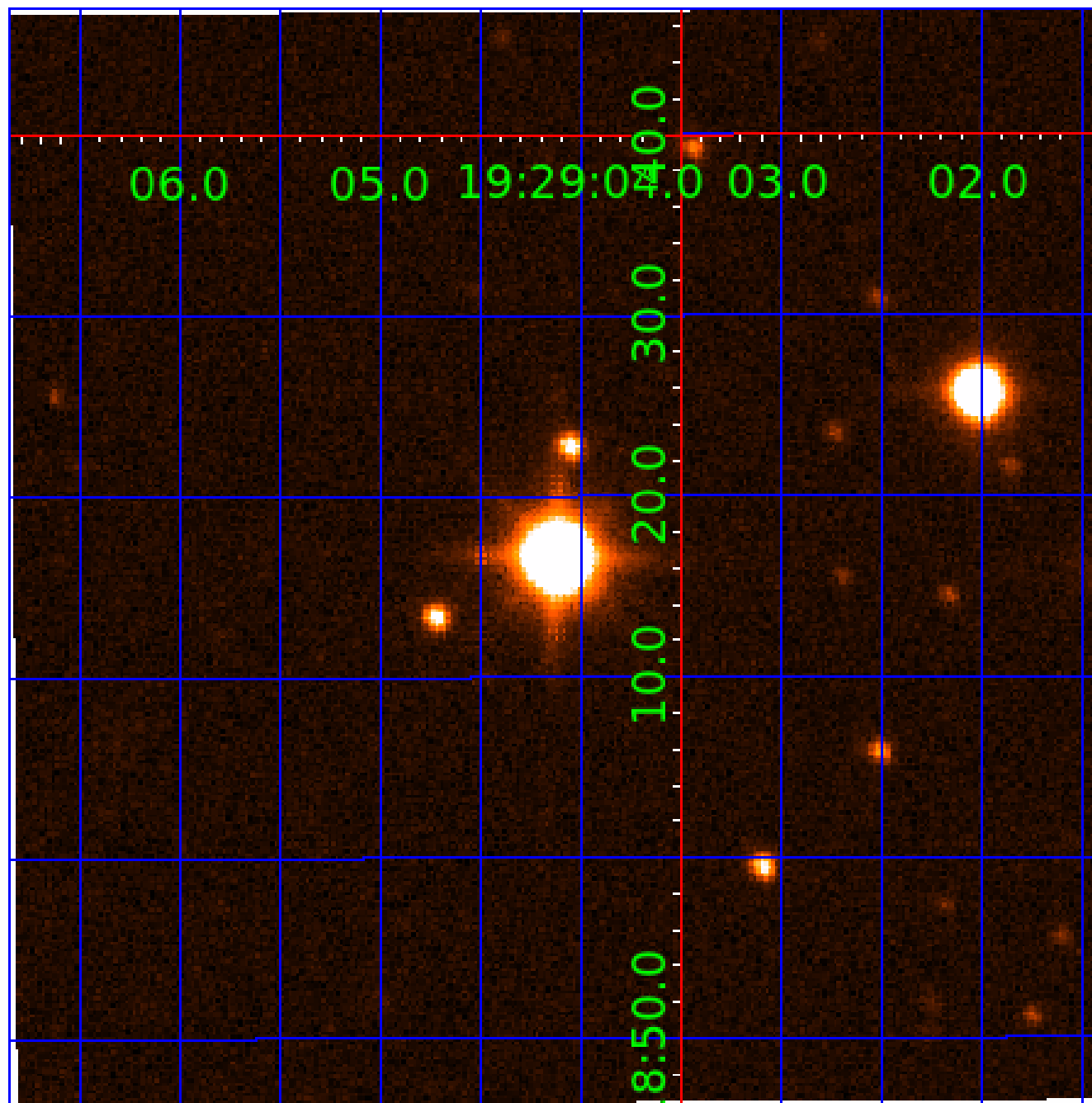


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006864569

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})
006864569-01	OBS	No	383.578788	254.418857	253.6	12.500	40.8	-1.0	2.90	11076	4.75	51.11
006864569-02	OBS	6780.01	2.325124	133.330803	24.1	1.659	24.5	24.6	2.90	11076	1.63	46241.34
006864569-03	OBS	No	378.819760	480.959452	186.6	11.000	16.2	7.9	2.90	11076	7.25	51.97
006864569-04	OBS	No	2.325161	133.578527	5.2	5.161	8.1	6.8	2.90	11076	0.75	46240.35
006864569-05	OBS	No	97.584463	183.122074	46.7	4.275	10.8	4.8	2.90	11076	2.25	317.04
006864569-06	OBS	No	0.775060	132.000777	74.5	2.000	8.9	-1.0	2.90	11076	2.58	200068.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—NO_FITS—INCONSISTENT_TRANS—CENT_SATURATED
006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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 006864569-04

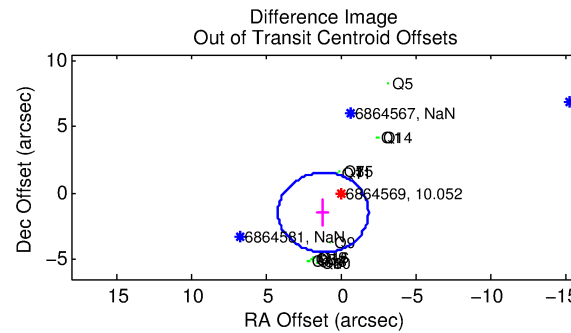
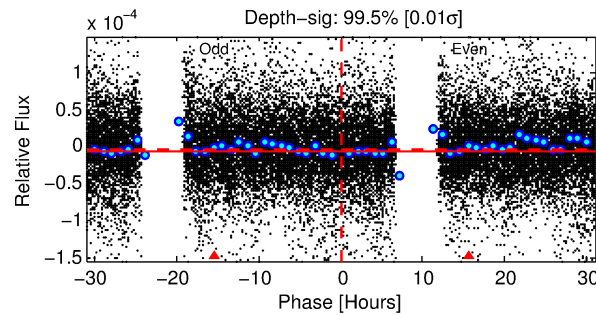
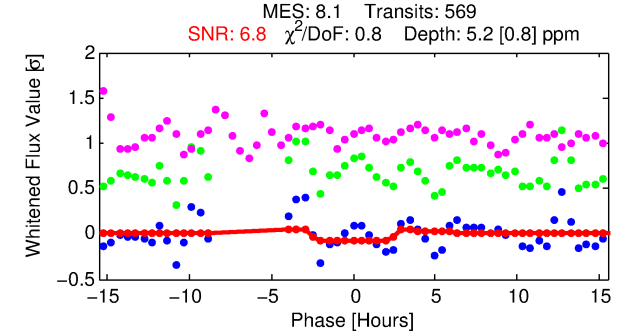
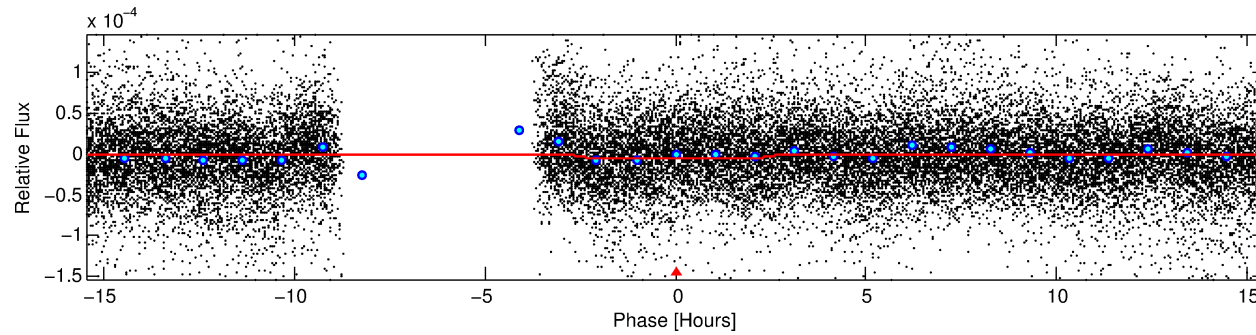
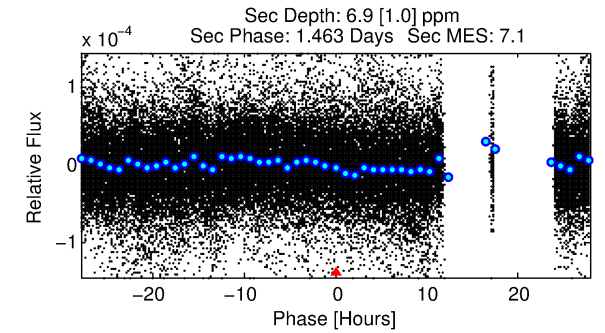
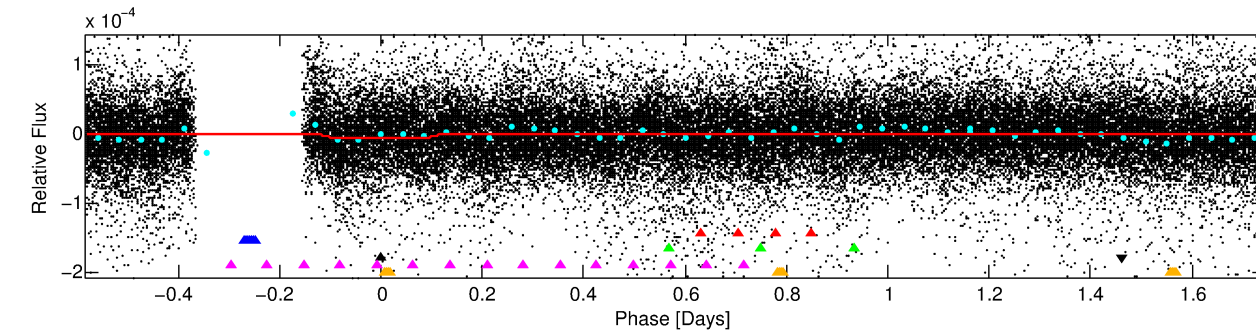
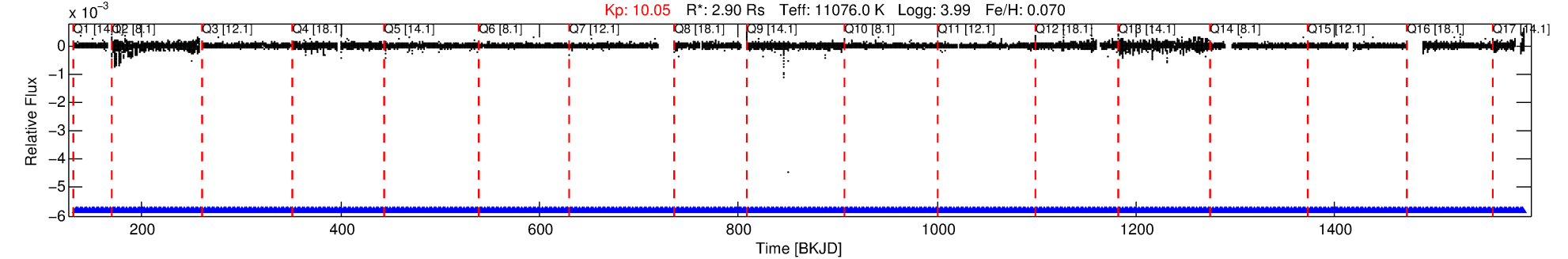
No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 4 of 6 Period: 2.325 d

KOI: K06780 Corr: No Ephemeris Match

Kp: 10.05 R*: 2.90 Rs Teff: 11076.0 K Logg: 3.99 Fe/H: 0.070



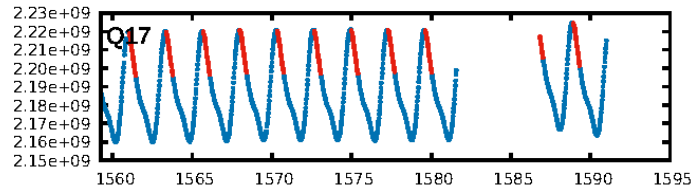
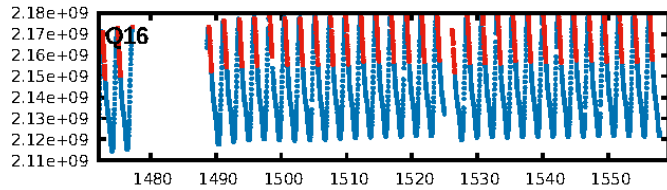
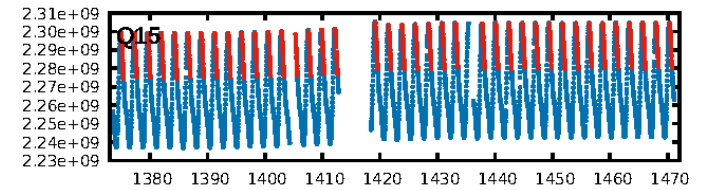
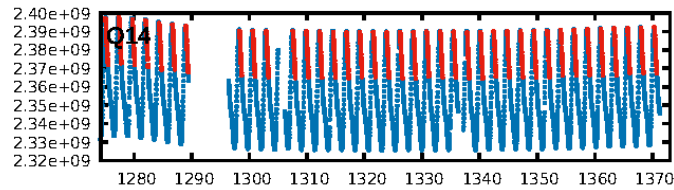
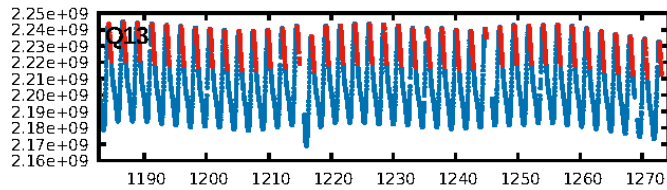
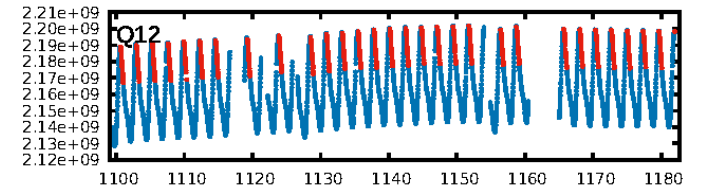
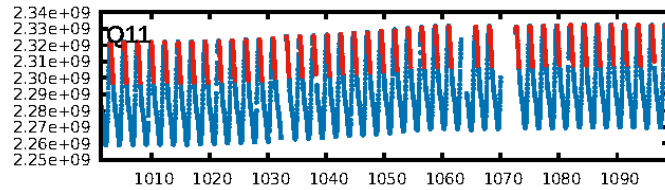
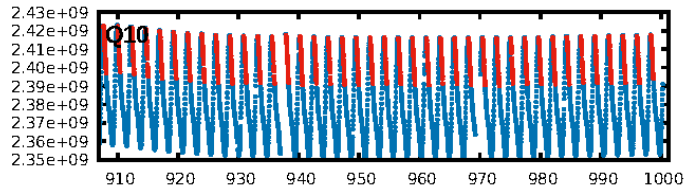
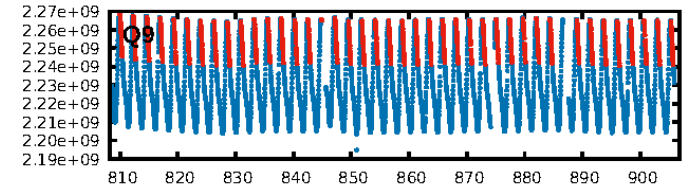
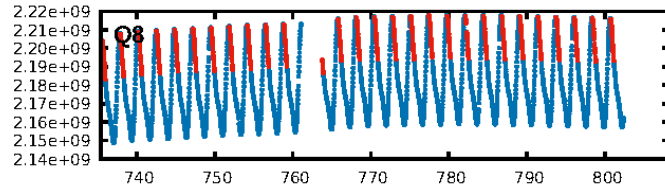
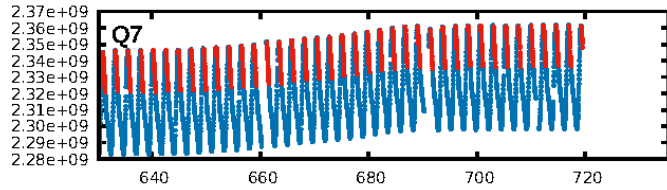
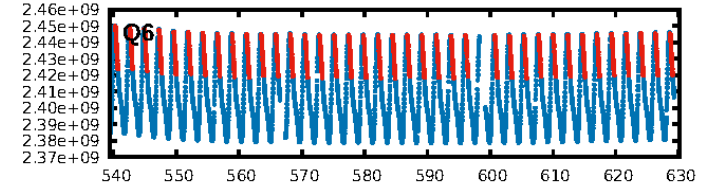
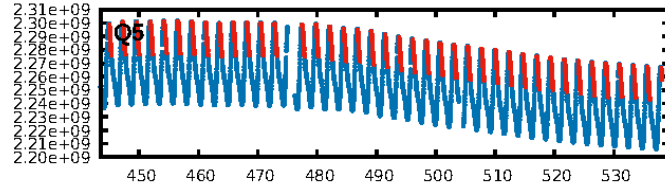
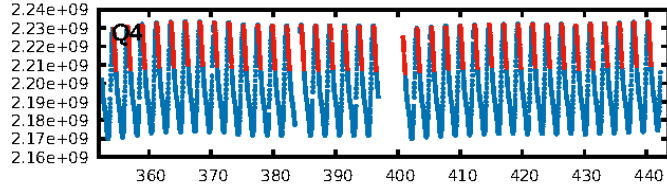
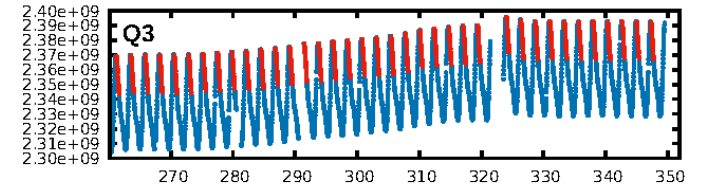
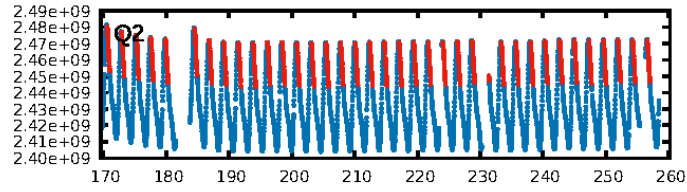
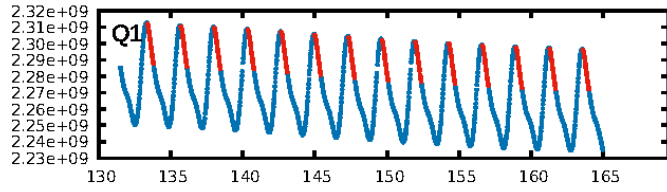
DV Fit Results:

Period = 2.32516 [0.00002] d
Epoch = 133.5785 [0.0049] BKJD
Rp/R* = 0.0024 [0.0003]
a/R* = 1.79 [0.77]
b = 0.90 [0.14]
Seff = 46240.35 [22580.50]
Teff = 3739 [456] K
Rp = 0.75 [0.27] Re
a = 0.0495 [0.0147] AU
Ag = 16.55 [8.56] [1.82σ]
Teffp = 11661 [931] K [7.64σ]

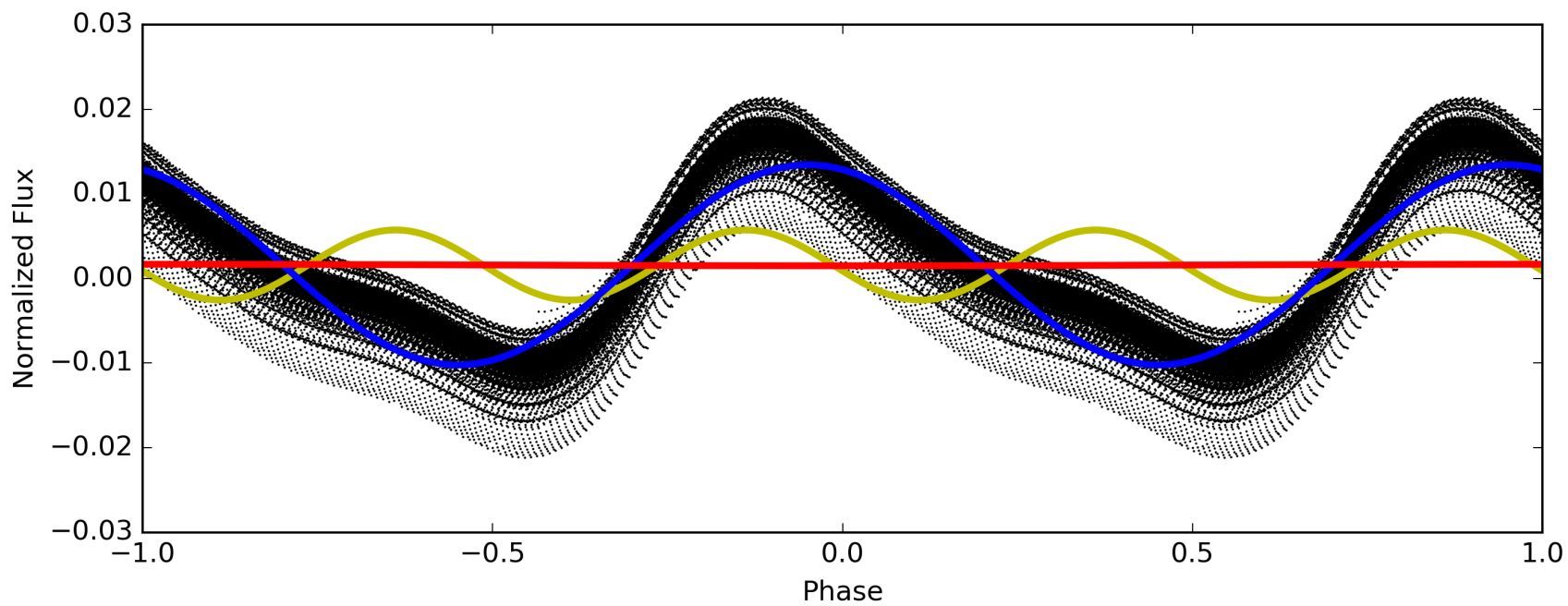
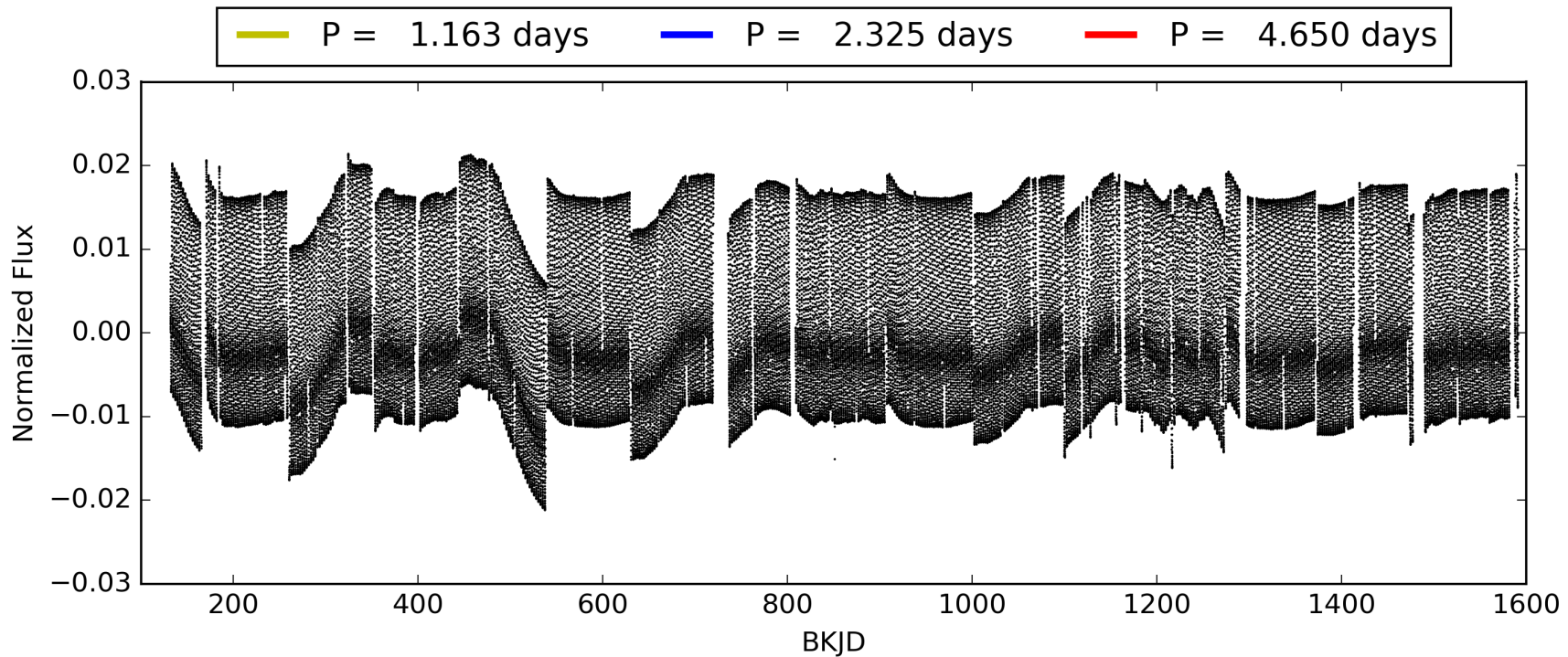
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [341.13σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [544/544]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.1%
Centroid-so: 7.270 arcsec [2.18σ]
OotOffset-rm: 1.863 arcsec [1.85σ]
KicOffset-rm: 0.151 arcsec [0.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 006864569-04, PDC Light Curves

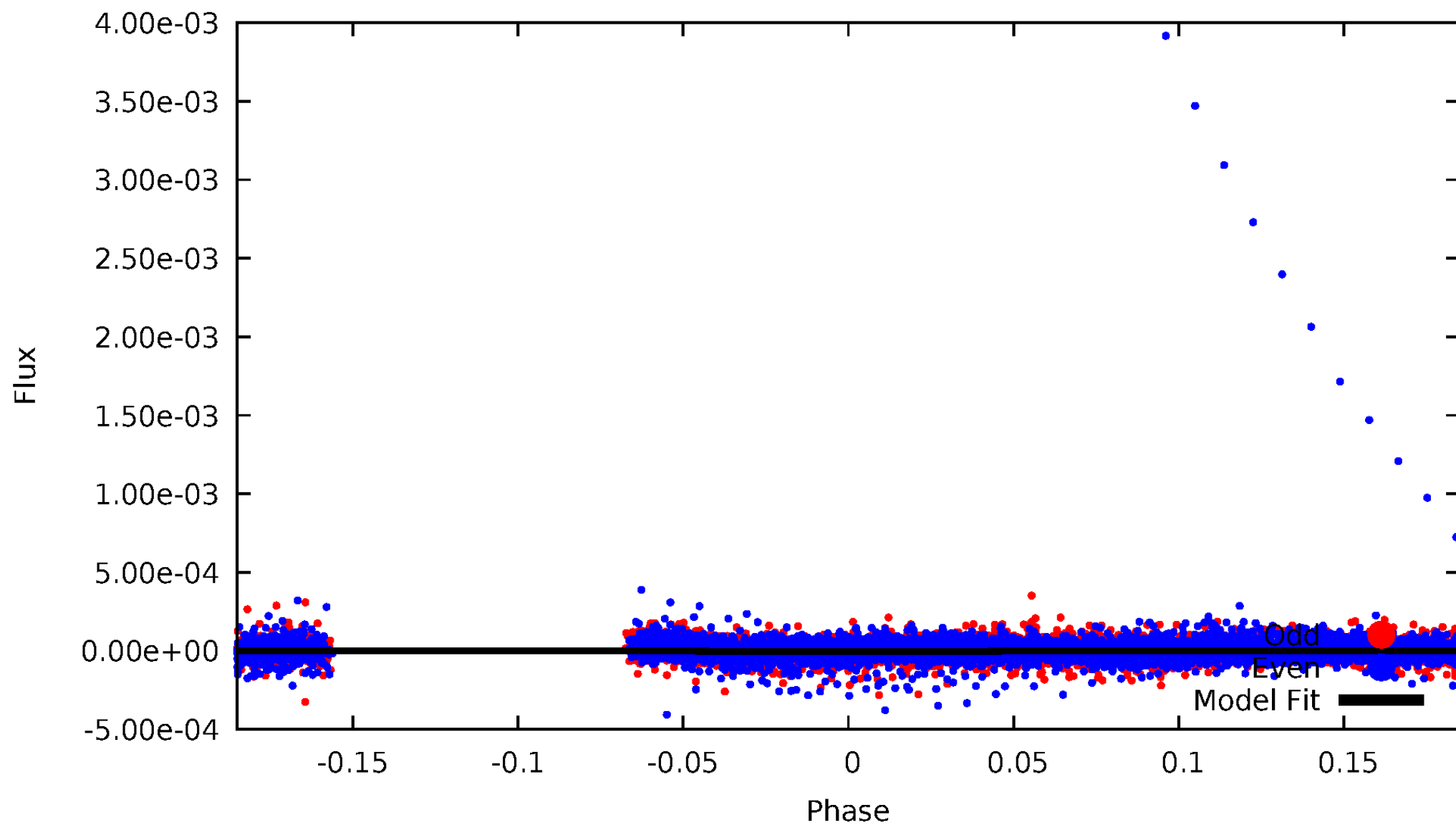


TCE 006864569-04



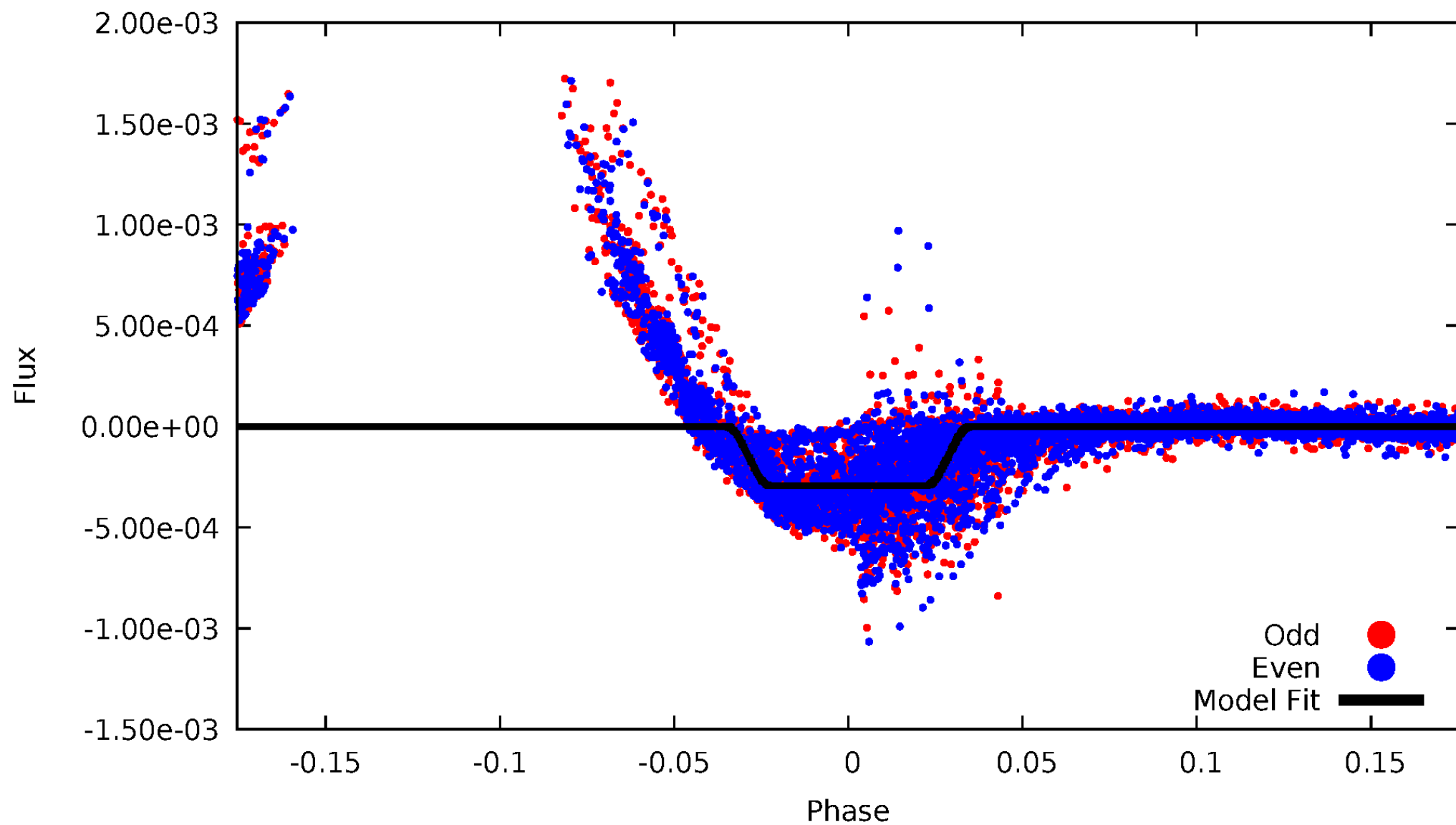
DV Odd/Even

TCE 006864569-04



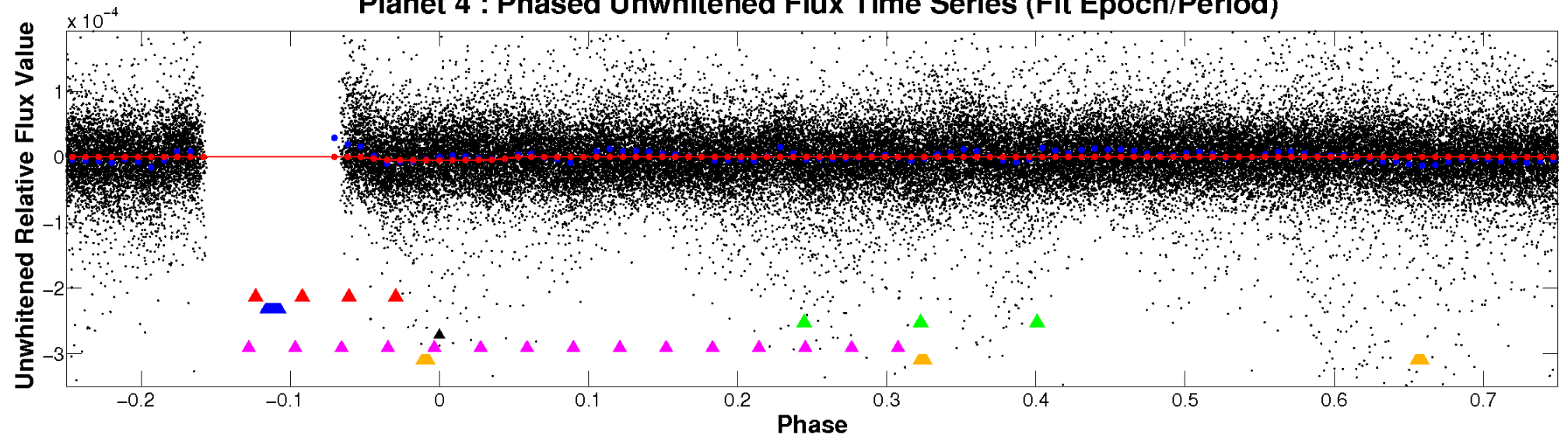
ALT Odd/Even

TCE 006864569-04

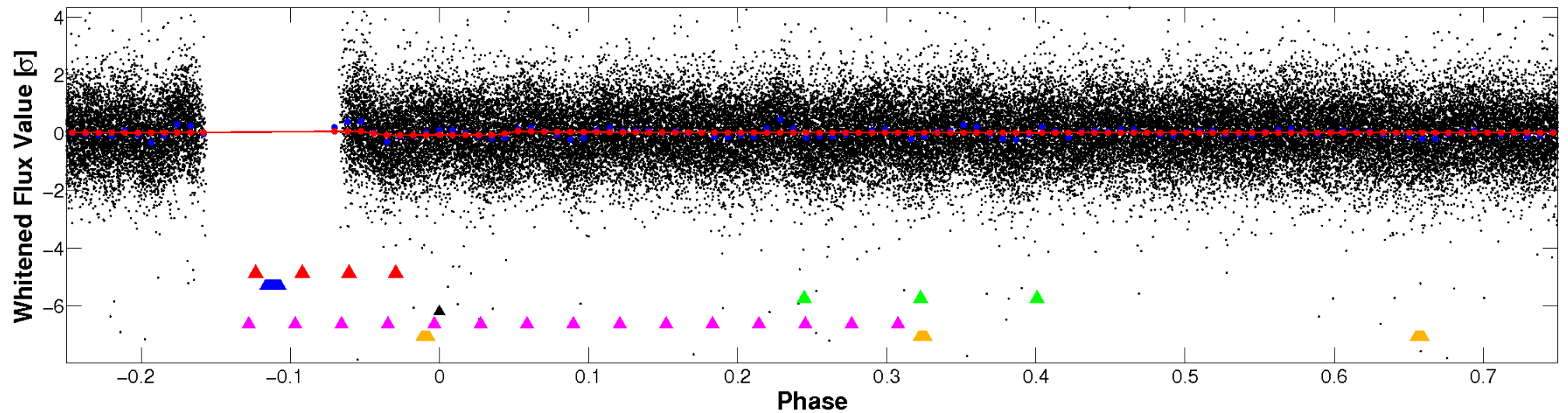


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

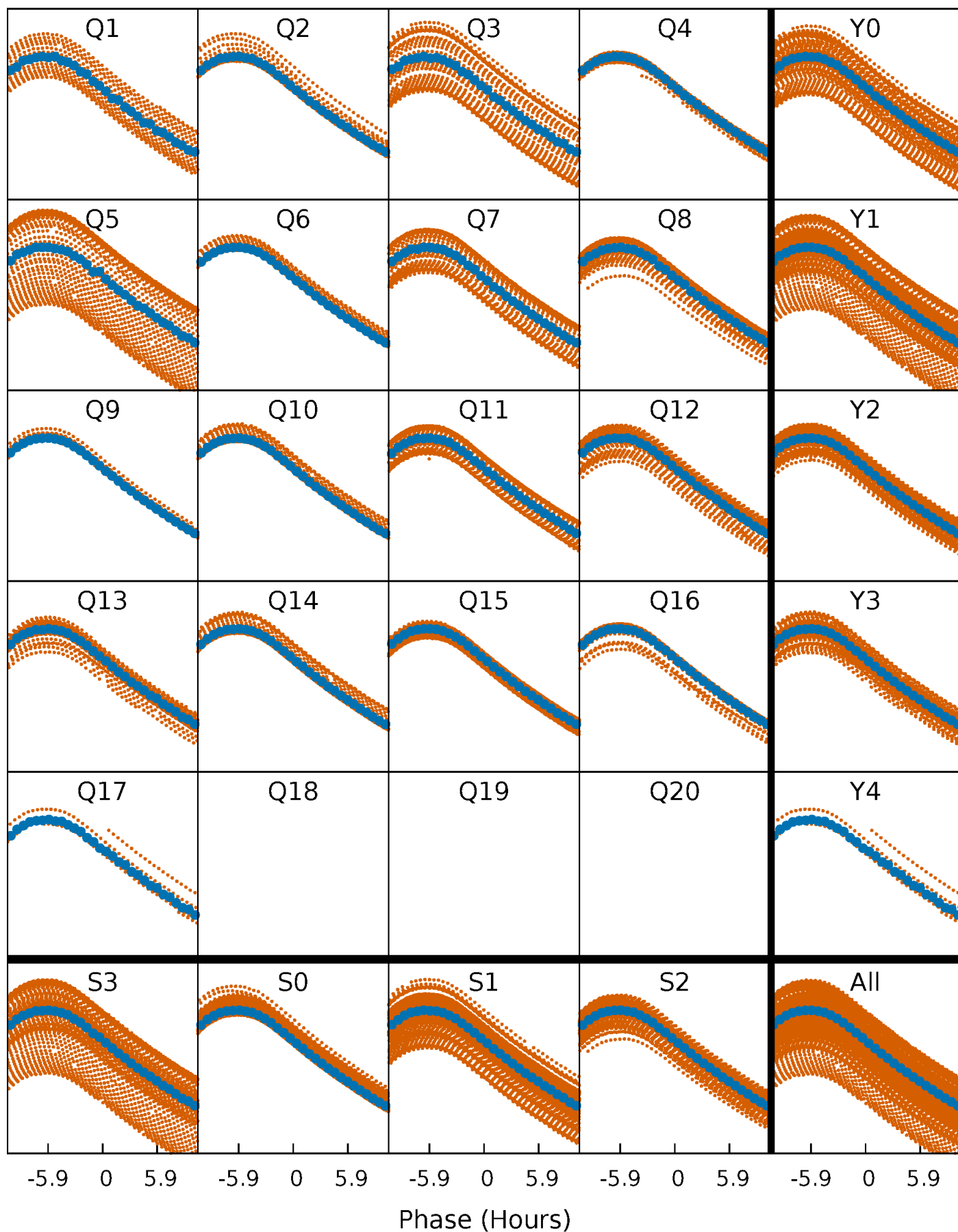


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



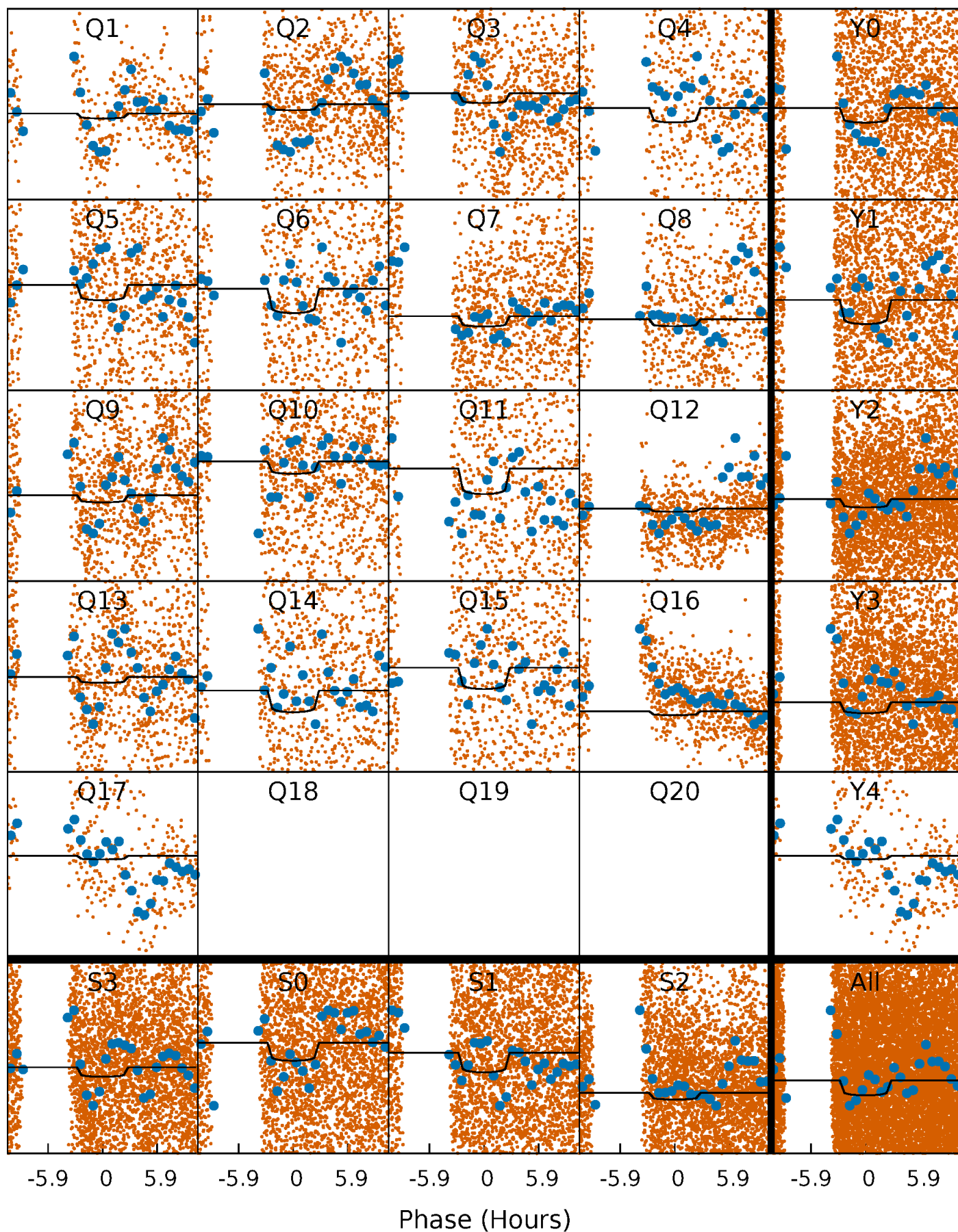
PDC Quarter-Phased Transit Curves

TCE 006864569-04 P= 2.325161 Days $T_0=133.578527$ (BKJD)



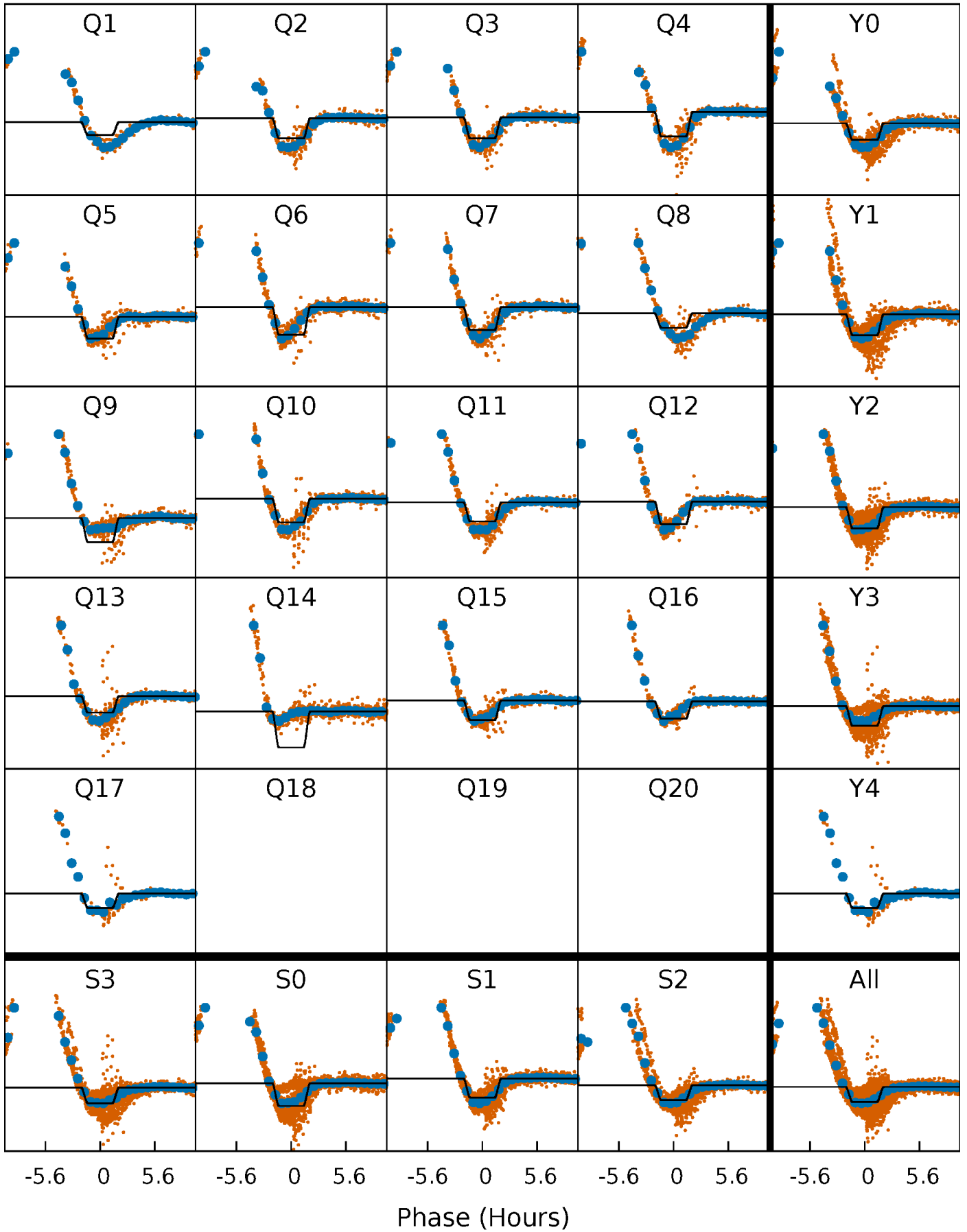
DV Quarter-Phased Transit Curves

TCE 006864569-04 $P = 2.325161$ Days $T_0 = 133.578527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

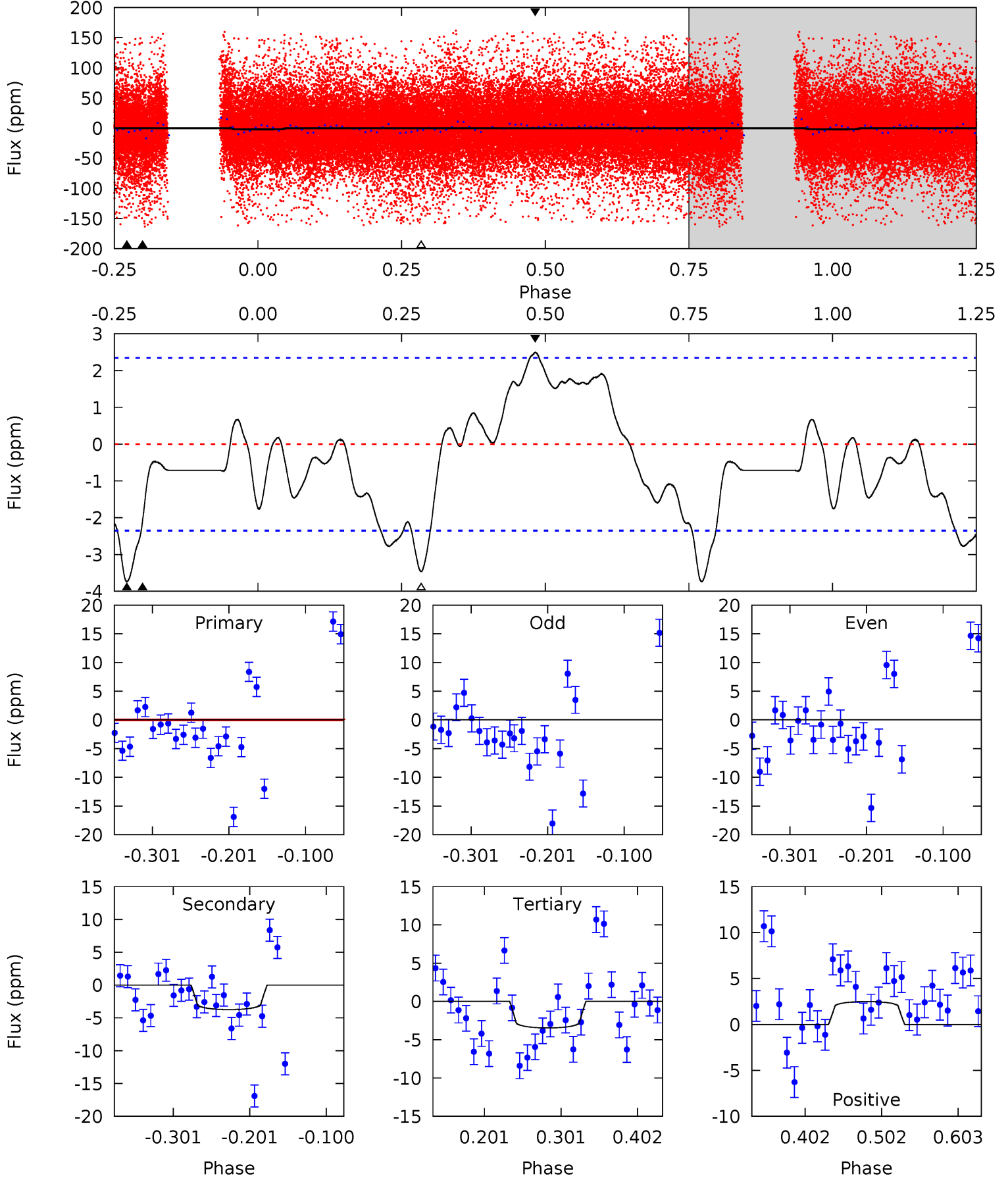
TCE 006864569-04 P= 2.325213 Days $T_0=133.582247$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-04, P = 2.325161 Days, E = 131.253366 Days

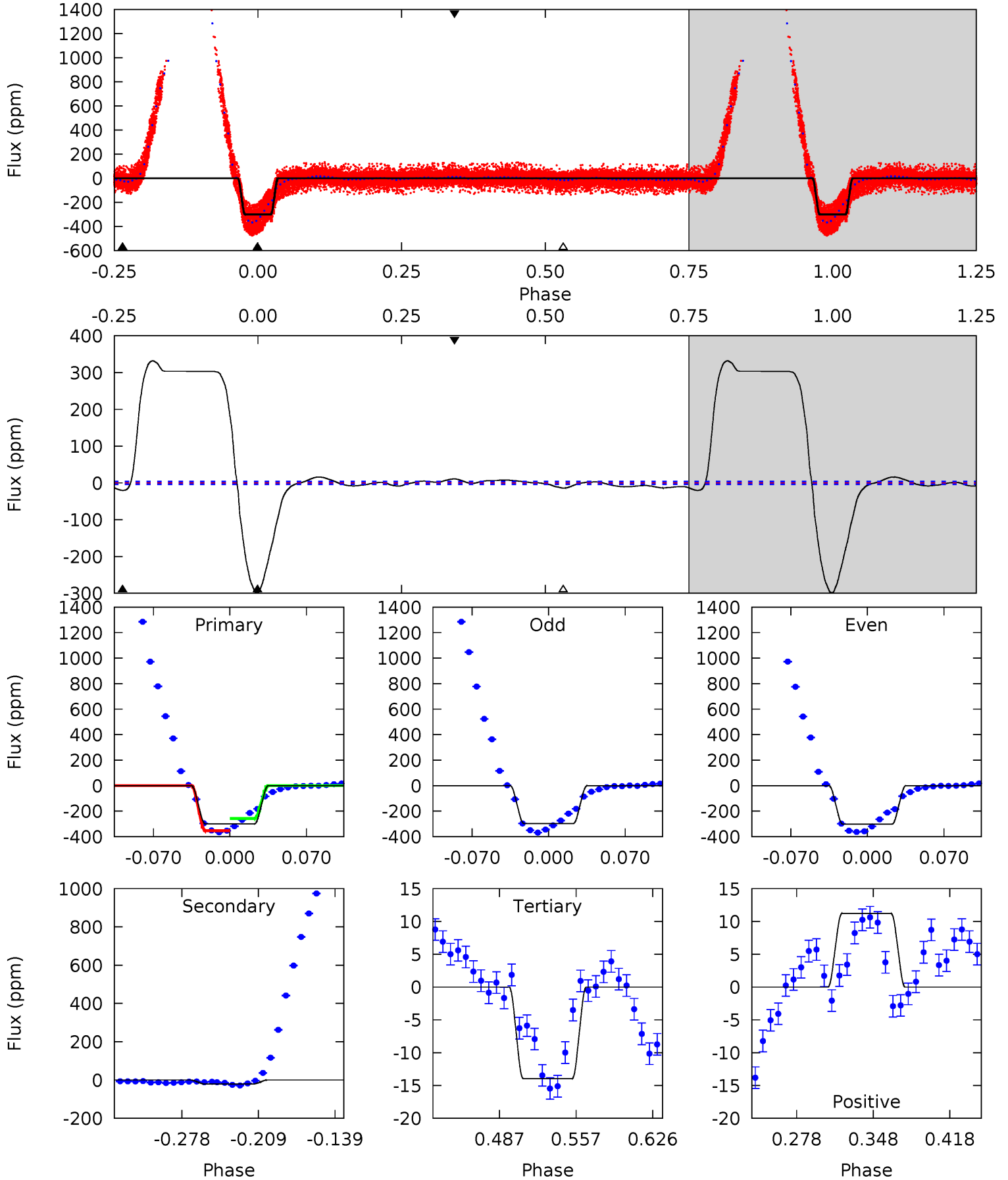
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.07	7.26	6.73	4.84	4.56	1.64	2.84	-2.66	-0.78	0.54	2.42	0.90	1.58	0.40	4.05



Alt Model-Shift Uniqueness Test

006864569-04, P = 2.325213 Days, E = 131.257034 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
374.3	25.4	17.5	14.1	4.64	1.81	12.4	356.8	360.2	7.94	11.3	3.09	0.99	0.53	0



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.74^{+0.13}_{-0.15}$	5157^{+380}_{-416}	9246^{+1101}_{-828}	$8.947^{+4.947}_{-2.698}$
Alt.	-20 ± 1	$5.32^{+0.73}_{-0.99}$	5154^{+383}_{-494}	4716^{+158}_{-185}	$0.946^{+0.428}_{-0.218}$

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 $A_{obs} \gg 1.0$

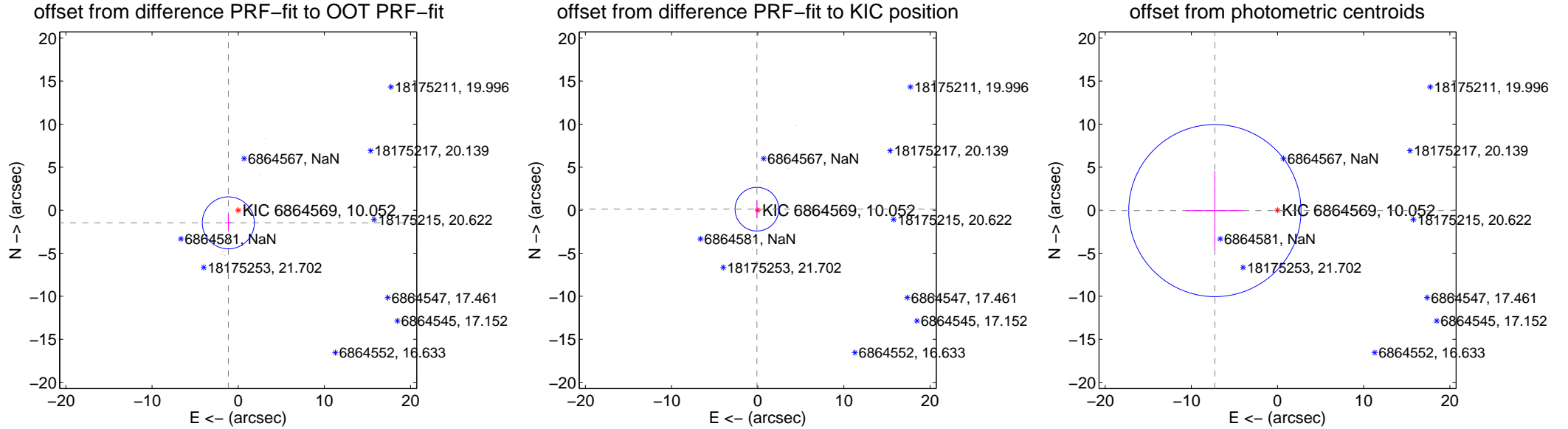
DV Centroid Data

Supplemental centroid analysis for 006864569-04. **Kepler magnitude: 10.05.** Transit SNR 6.81

There are 0 quarters with good PRF difference image offsets

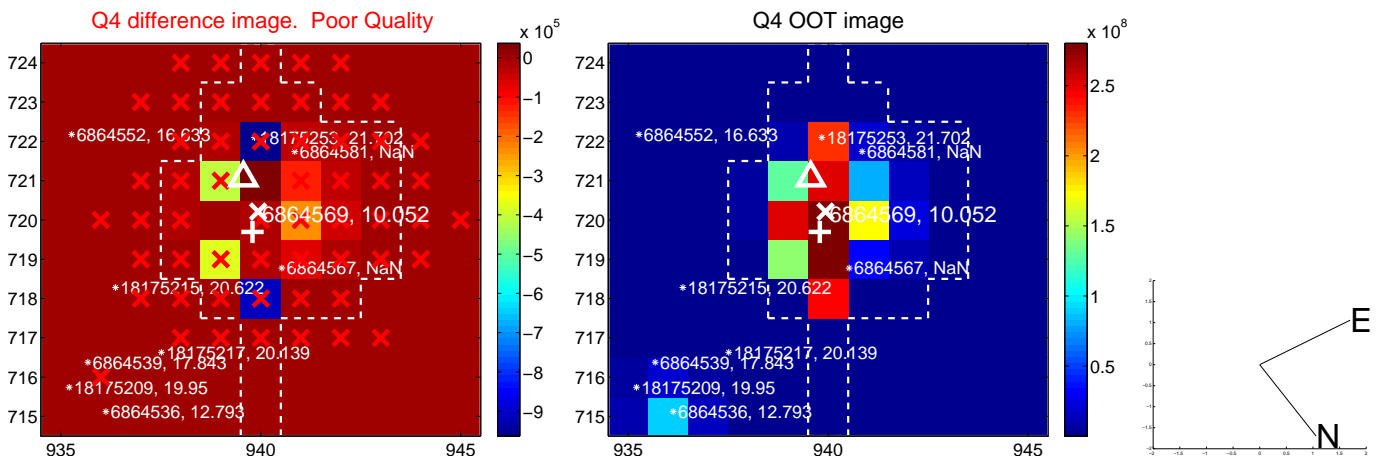
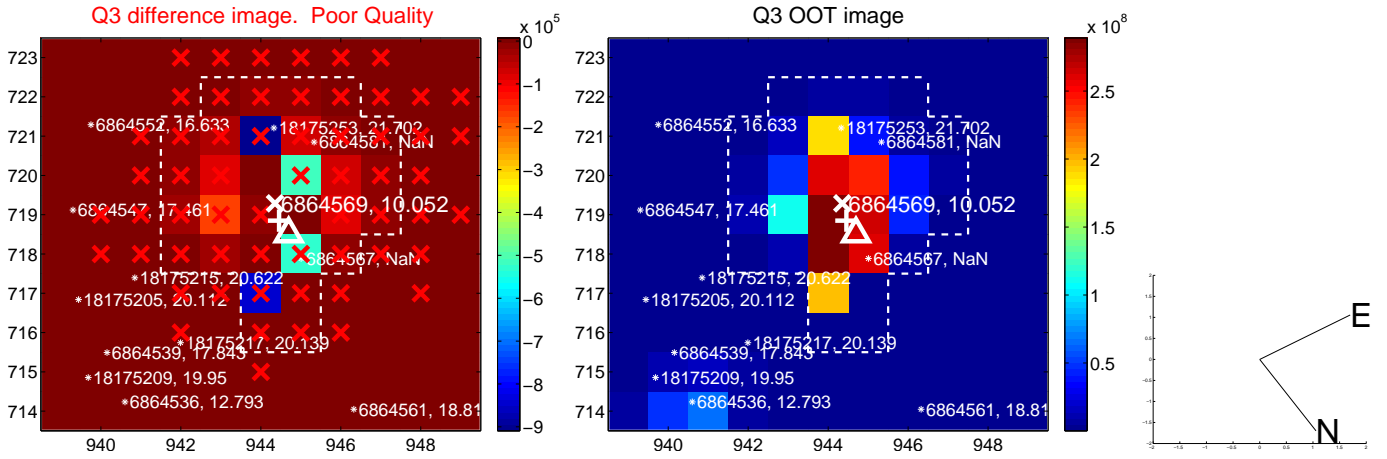
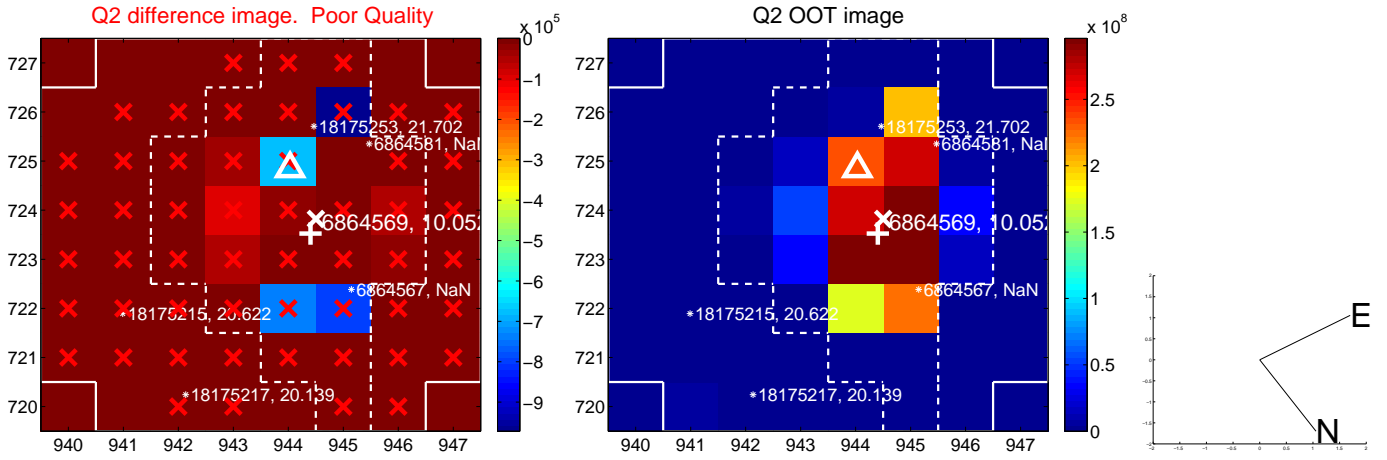
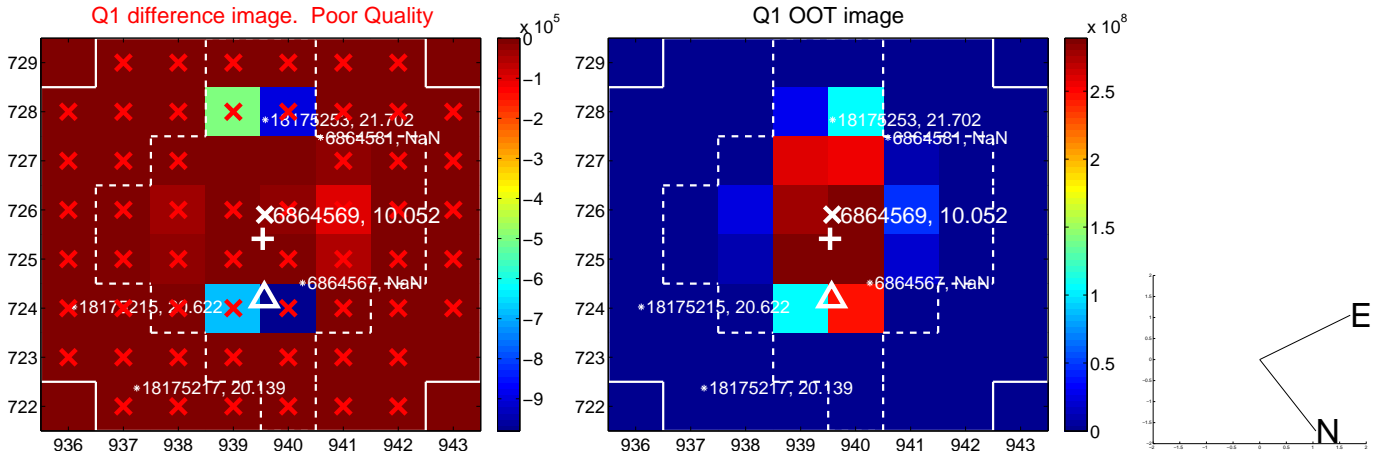
The direct PRF centroid is offset from the target star catalog position by about 1.98 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.863 ± 1.007	1.85	1.145 ± 0.390	-1.470 ± 0.988
PRF-fit source offset from KIC position	0.151 ± 0.846	0.18	0.092 ± 0.176	0.120 ± 1.057
photometric centroid source offset	7.27 ± 3.33	2.18	7.27 ± 3.33	-0.04 ± 4.59

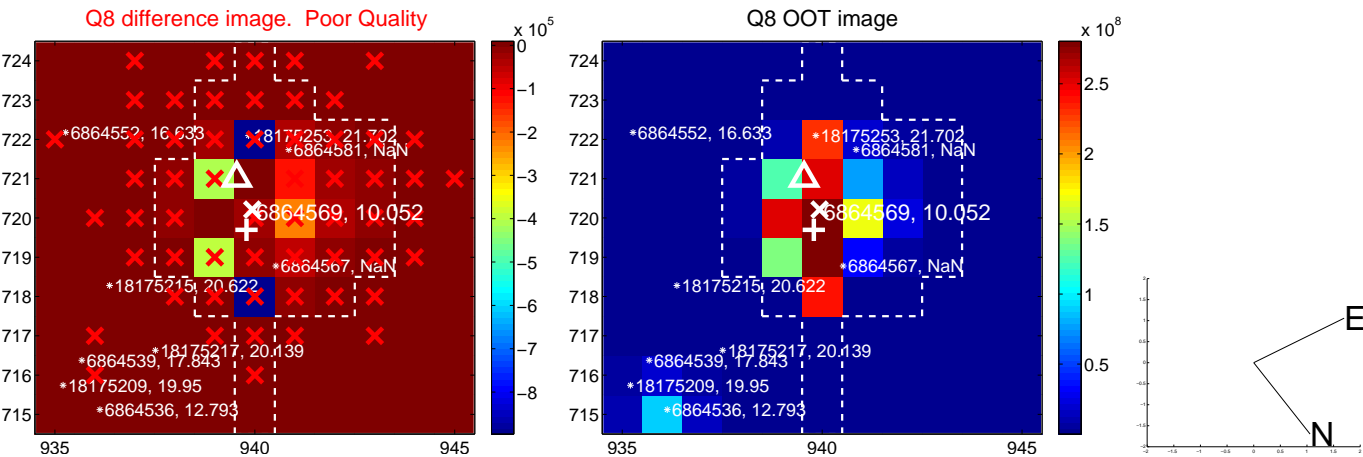
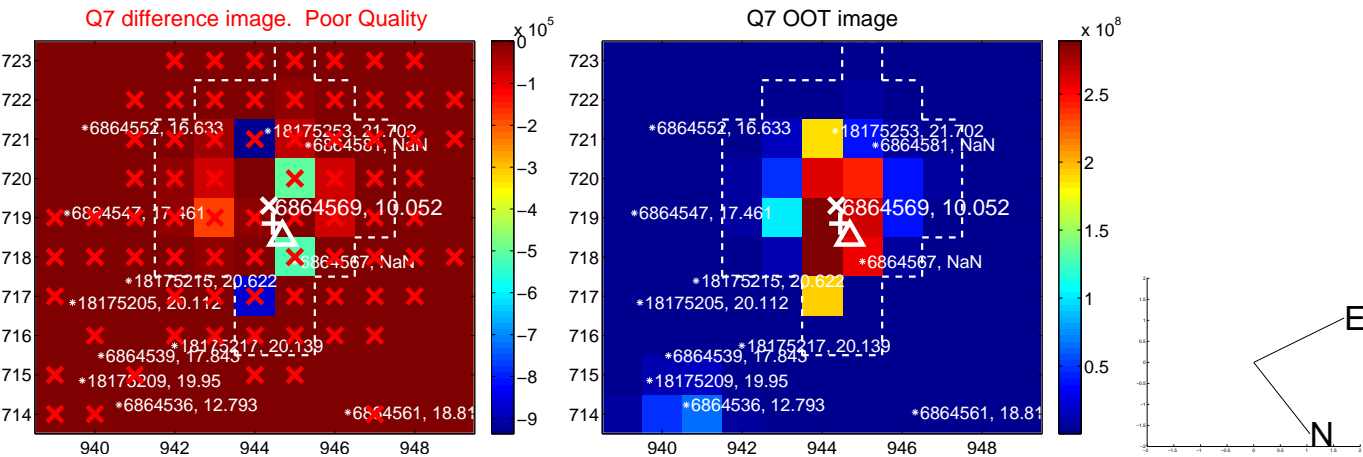
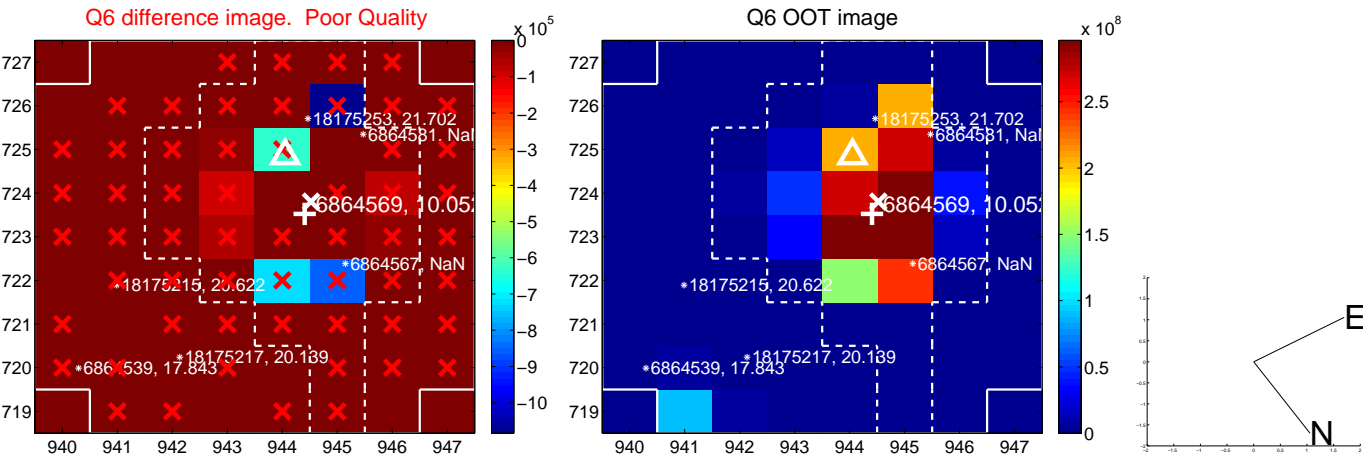
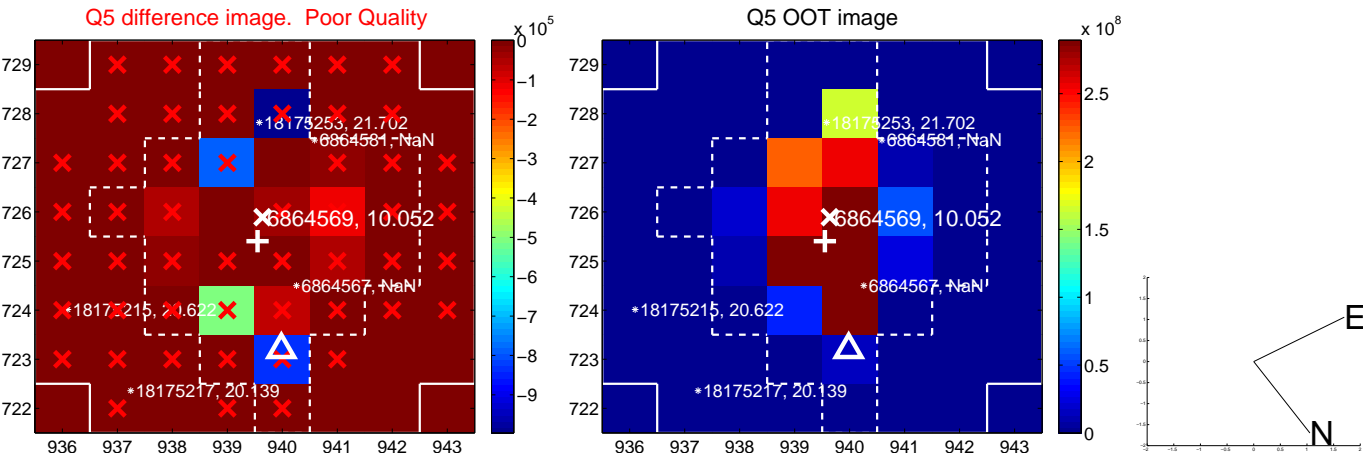


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

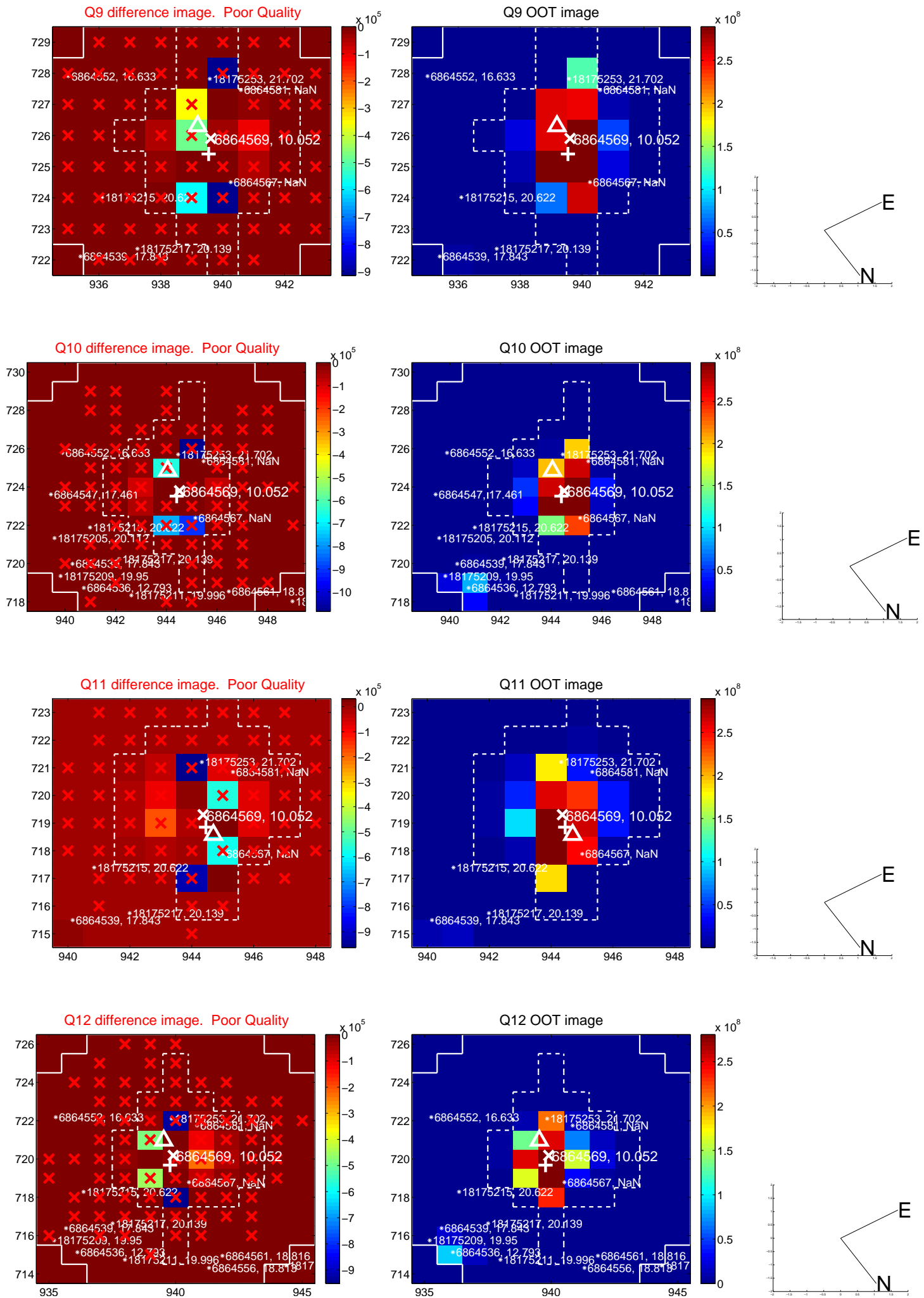
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



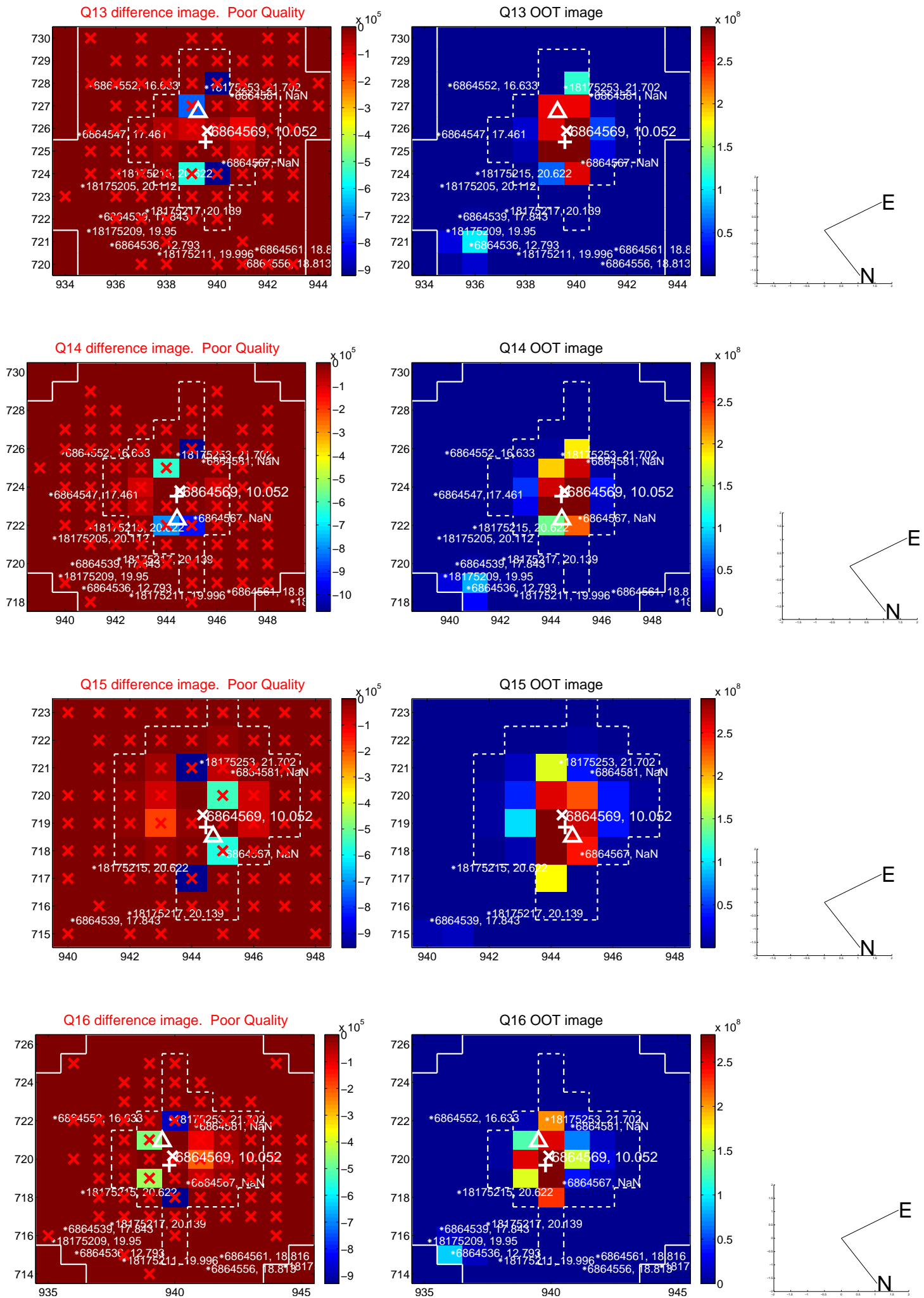
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



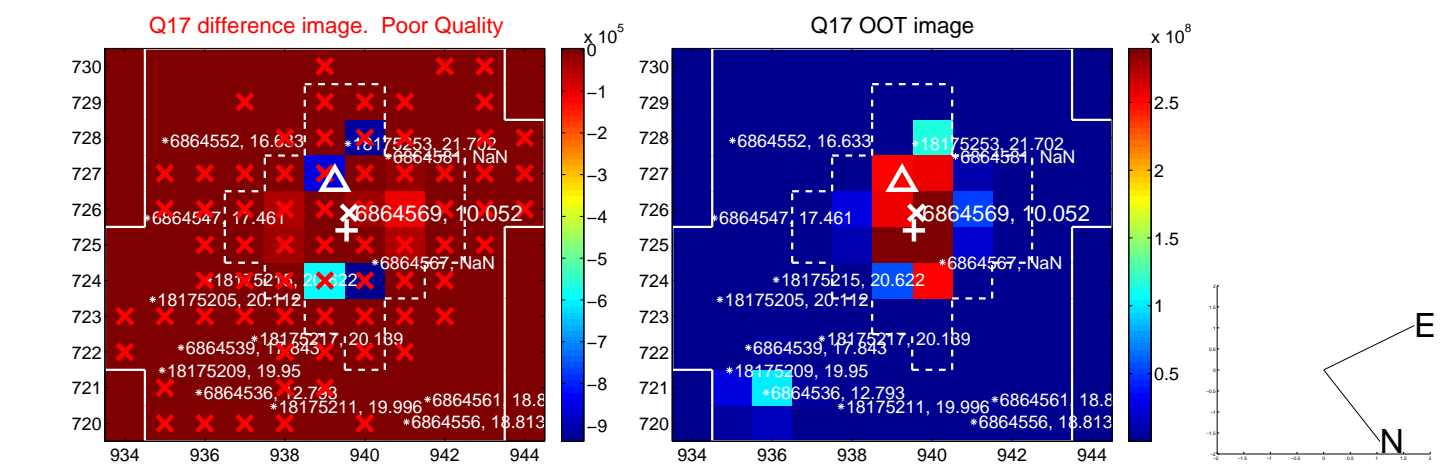
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



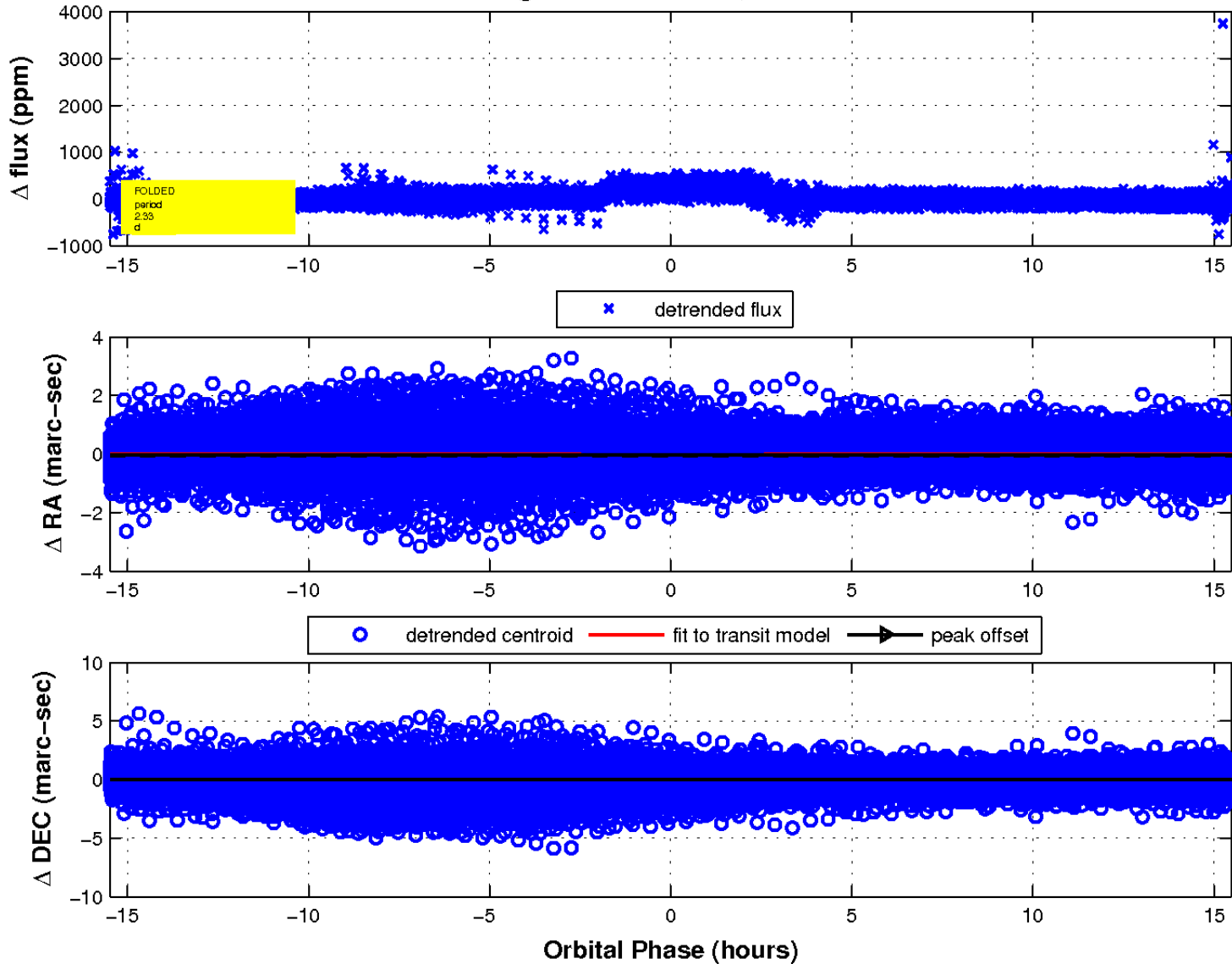
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

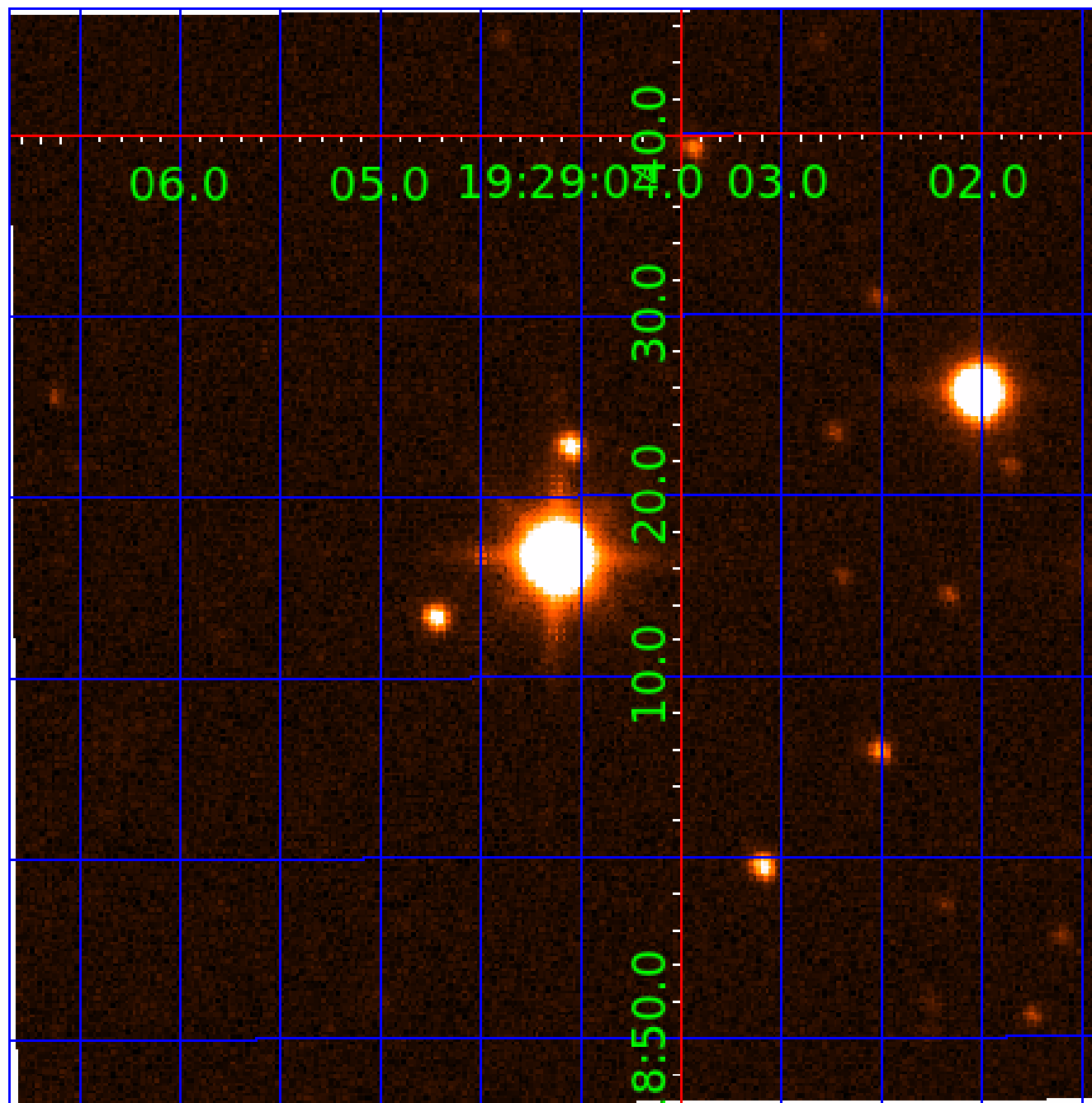


fluxWeightedCentroids, Planet 4 of 6



UKIRT Image

Declination



KIC 006864569

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})
006864569-01	OBS	No	383.578788	254.418857	253.6	12.500	40.8	-1.0	2.90	11076	4.75	51.11
006864569-02	OBS	6780.01	2.325124	133.330803	24.1	1.659	24.5	24.6	2.90	11076	1.63	46241.34
006864569-03	OBS	No	378.819760	480.959452	186.6	11.000	16.2	7.9	2.90	11076	7.25	51.97
006864569-04	OBS	No	2.325161	133.578527	5.2	5.161	8.1	6.8	2.90	11076	0.75	46240.35
006864569-05	OBS	No	97.584463	183.122074	46.7	4.275	10.8	4.8	2.90	11076	2.25	317.04
006864569-06	OBS	No	0.775060	132.000777	74.5	2.000	8.9	-1.0	2.90	11076	2.58	200068.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—NO_FITS—INCONSISTENT_TRANS—CENT_SATURATED
006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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 006864569-05

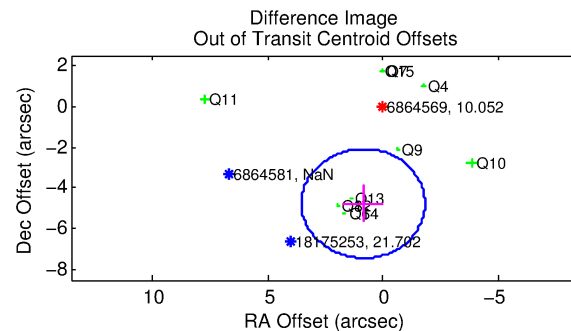
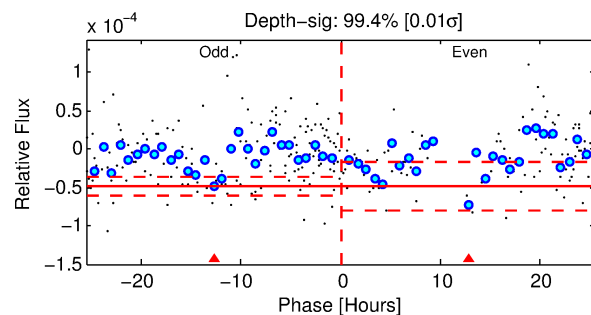
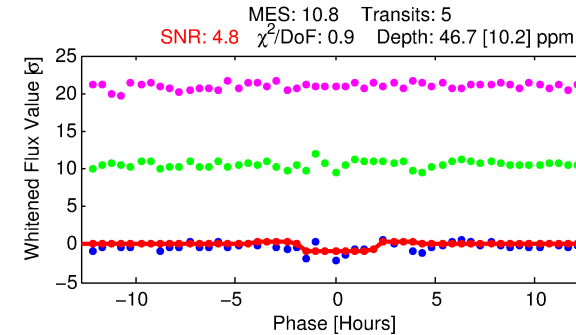
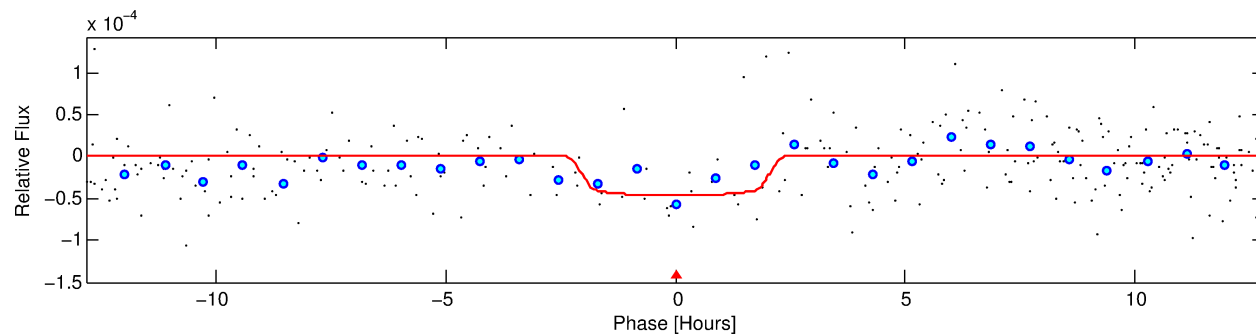
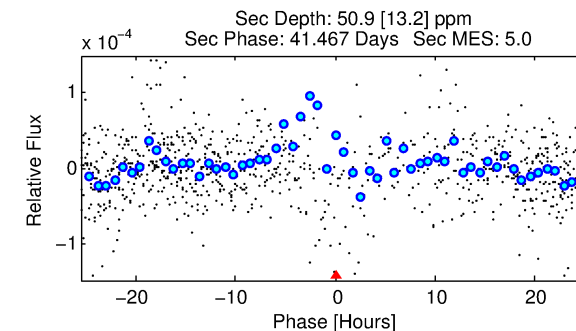
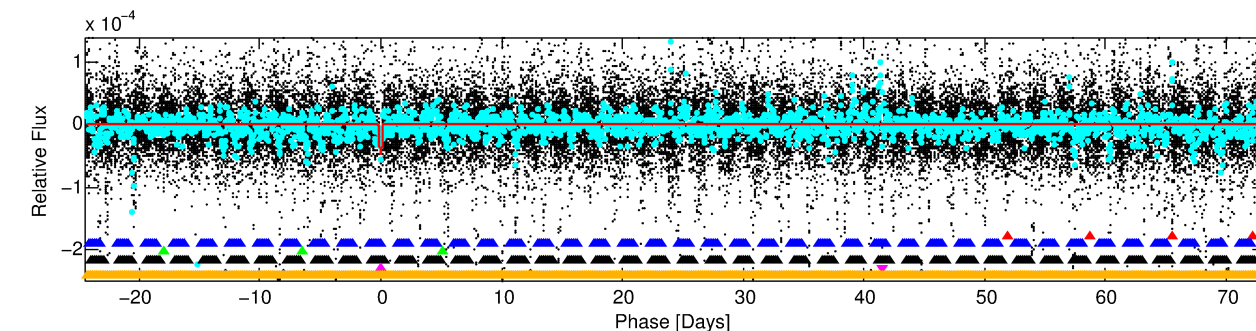
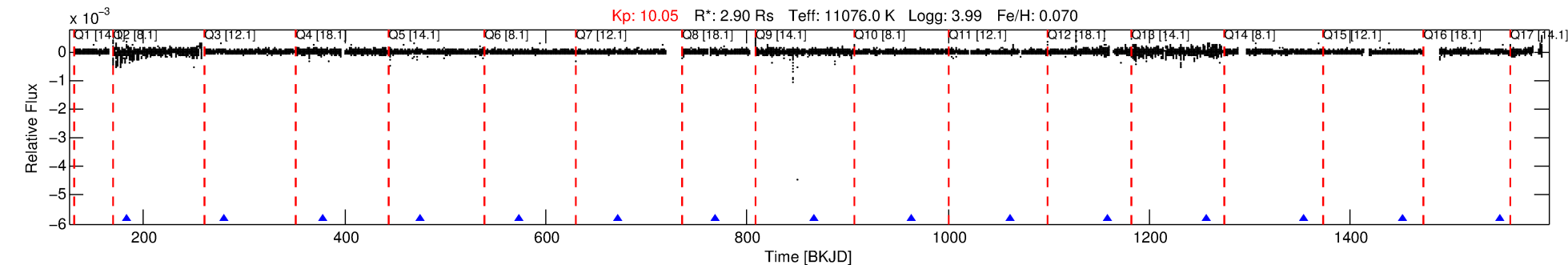
No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 5 of 6 Period: 97.584 d

KOI: K06780 Corr: No Ephemeris Match

Kp: 10.05 R*: 2.90 Rs Teff: 11076.0 K Logg: 3.99 Fe/H: 0.070



DV Fit Results:

Period = 97.58446 [0.00178] d
Epoch = 183.1221 [0.0122] BKJD
Rp/R* = 0.0071 [0.0024]
a/R* = 82.66 [214.38]
b = 0.89 [0.62]
Seff = 317.04 [154.82]
Teff = 1076 [131] K
Rp = 2.25 [1.08] Re
a = 0.5972 [0.1779] AU
Ag = 1978.61 [1692.18] [1.17 sigma]
Teffp = 11095 [2087] K [4.79 sigma]

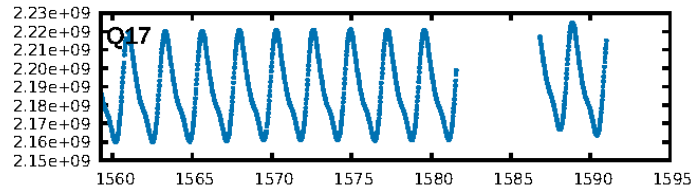
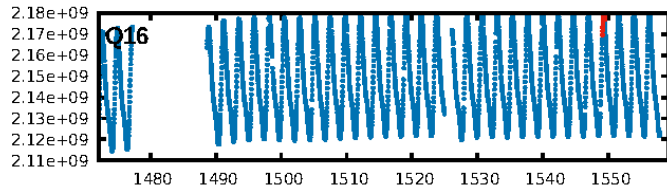
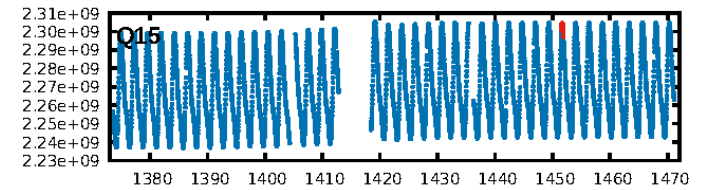
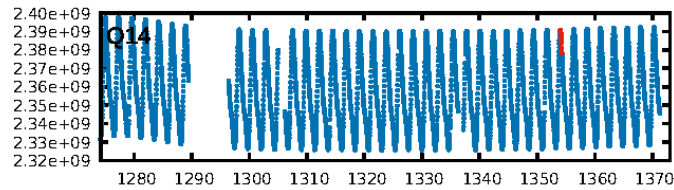
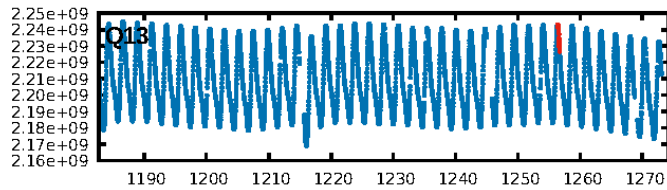
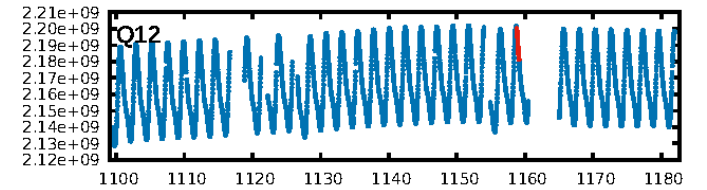
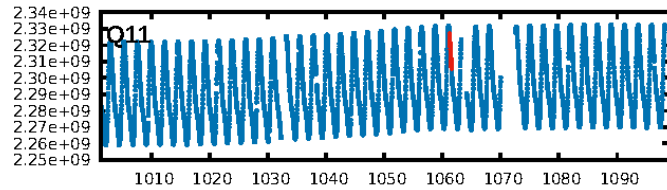
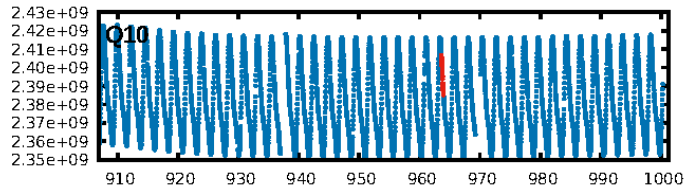
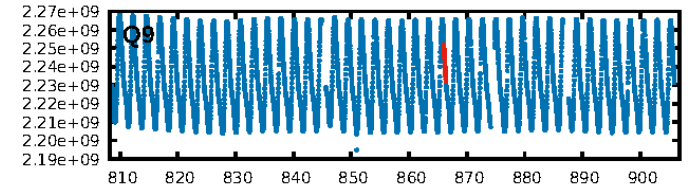
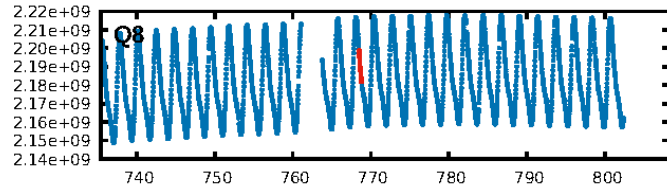
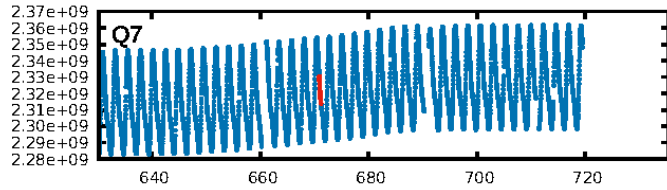
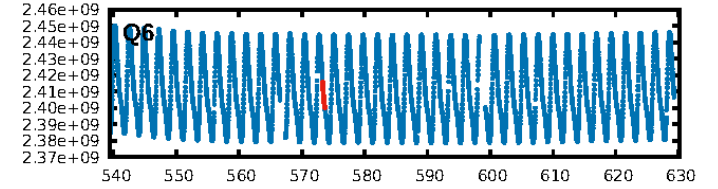
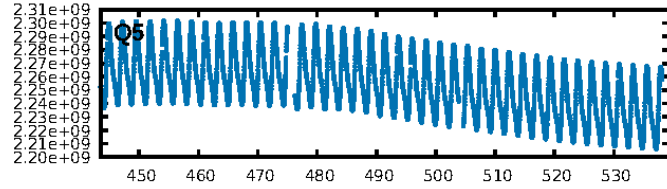
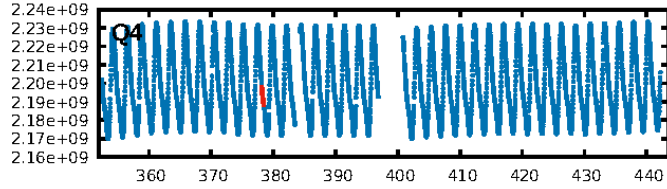
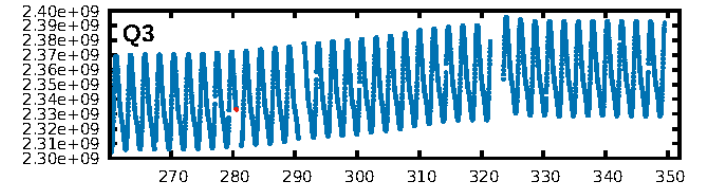
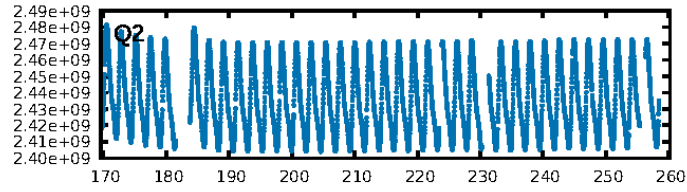
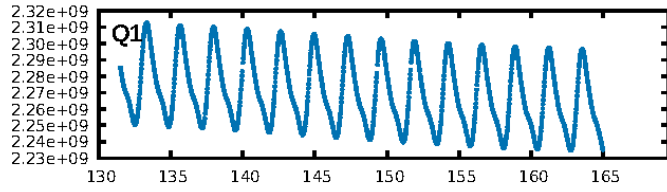
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [341.13 sigma]
LongPeriod-sig: 100.0% [571.94 sigma]
ModelChiSquare2-sig: 23.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: 15.4%
Centroid-so: 3.151 arcsec [1.46 sigma]
OotOffset-rm: 4.837 arcsec [5.43 sigma]
KicOffset-rm: 3.534 arcsec [3.54 sigma]
OotOffset-st: 3/3/2 [11]
KicOffset-st: 3/3/2 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 0.00 [0/11]

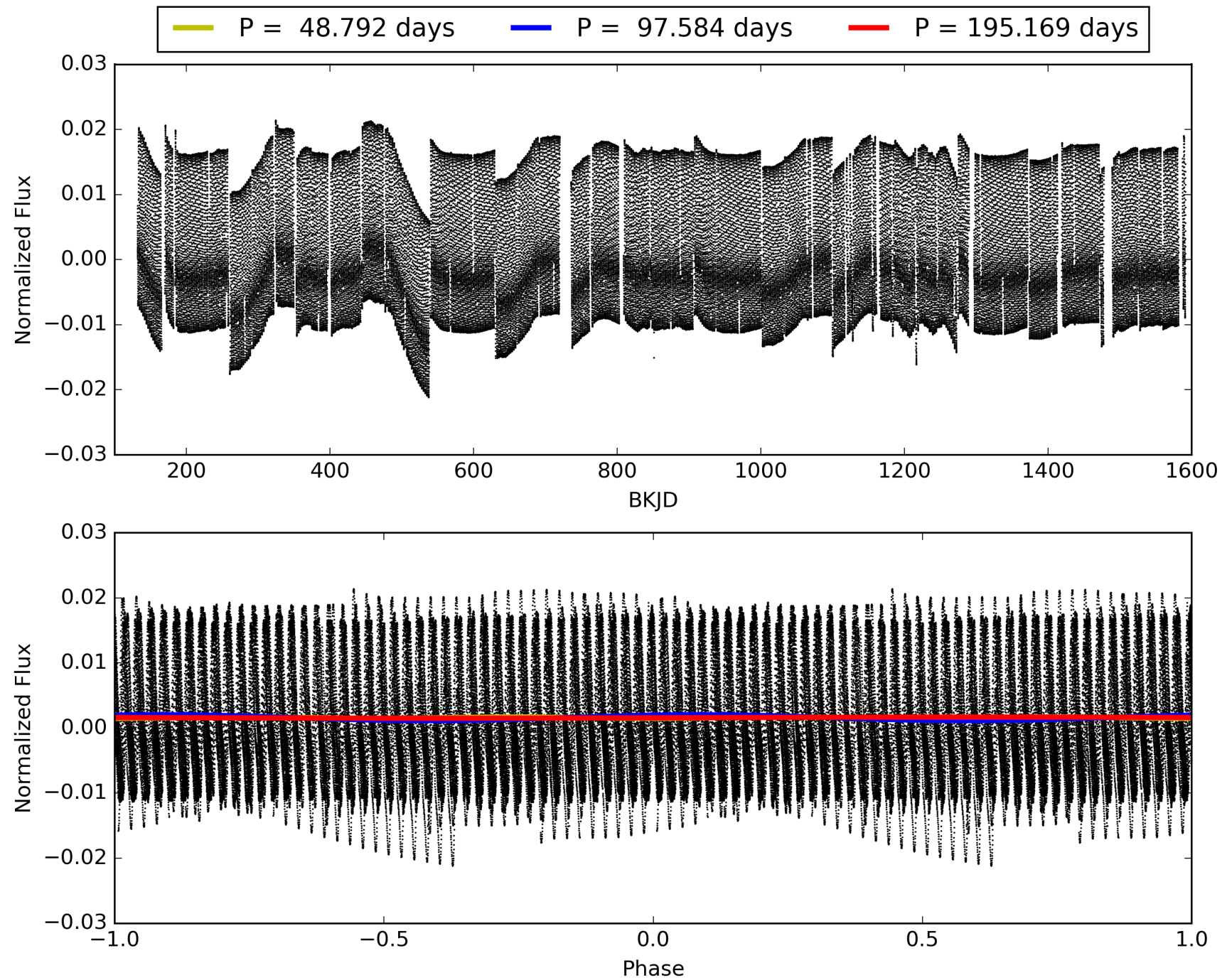
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:48:18 Z

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

TCE 006864569-05, PDC Light Curves

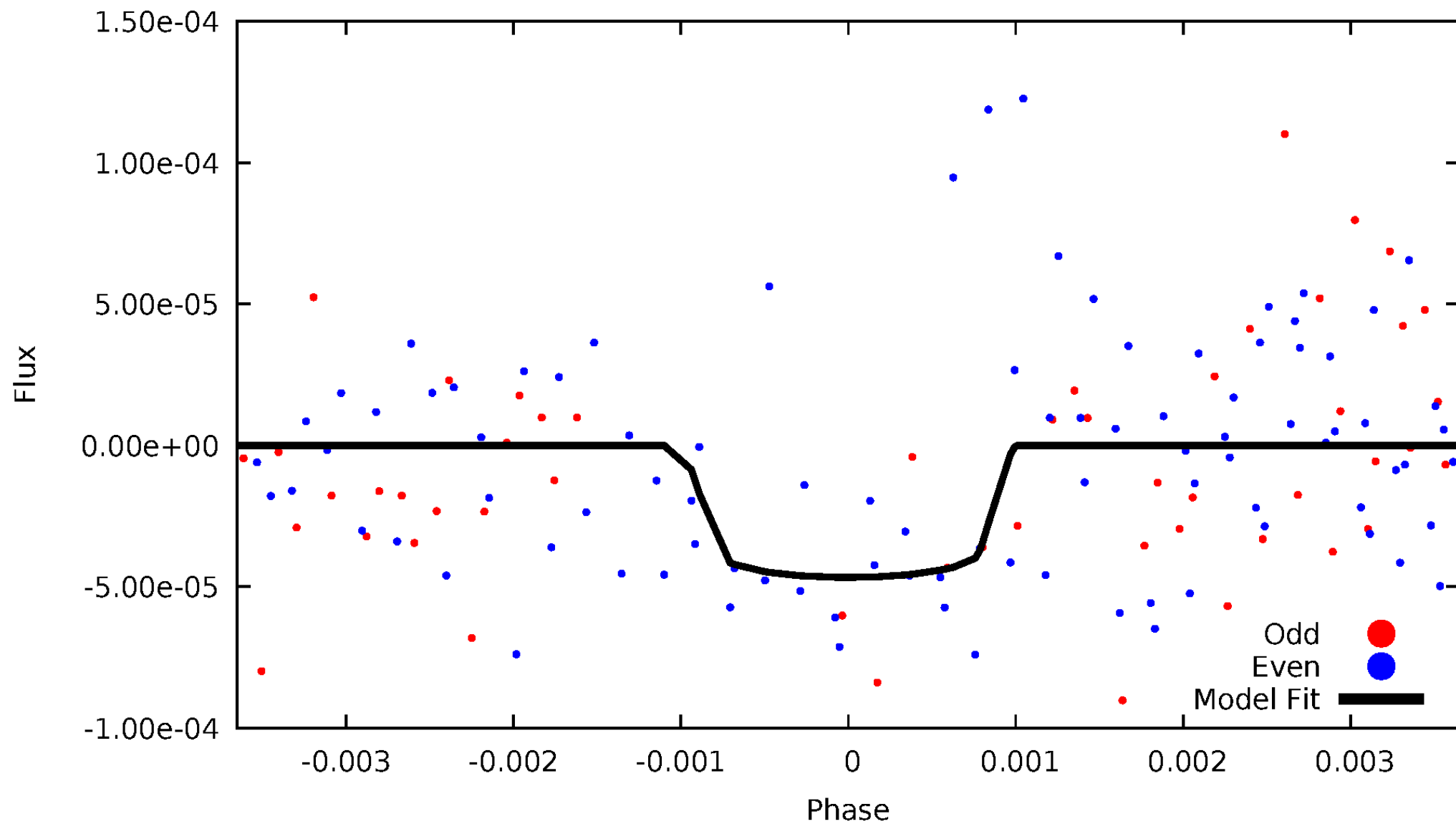


TCE 006864569-05



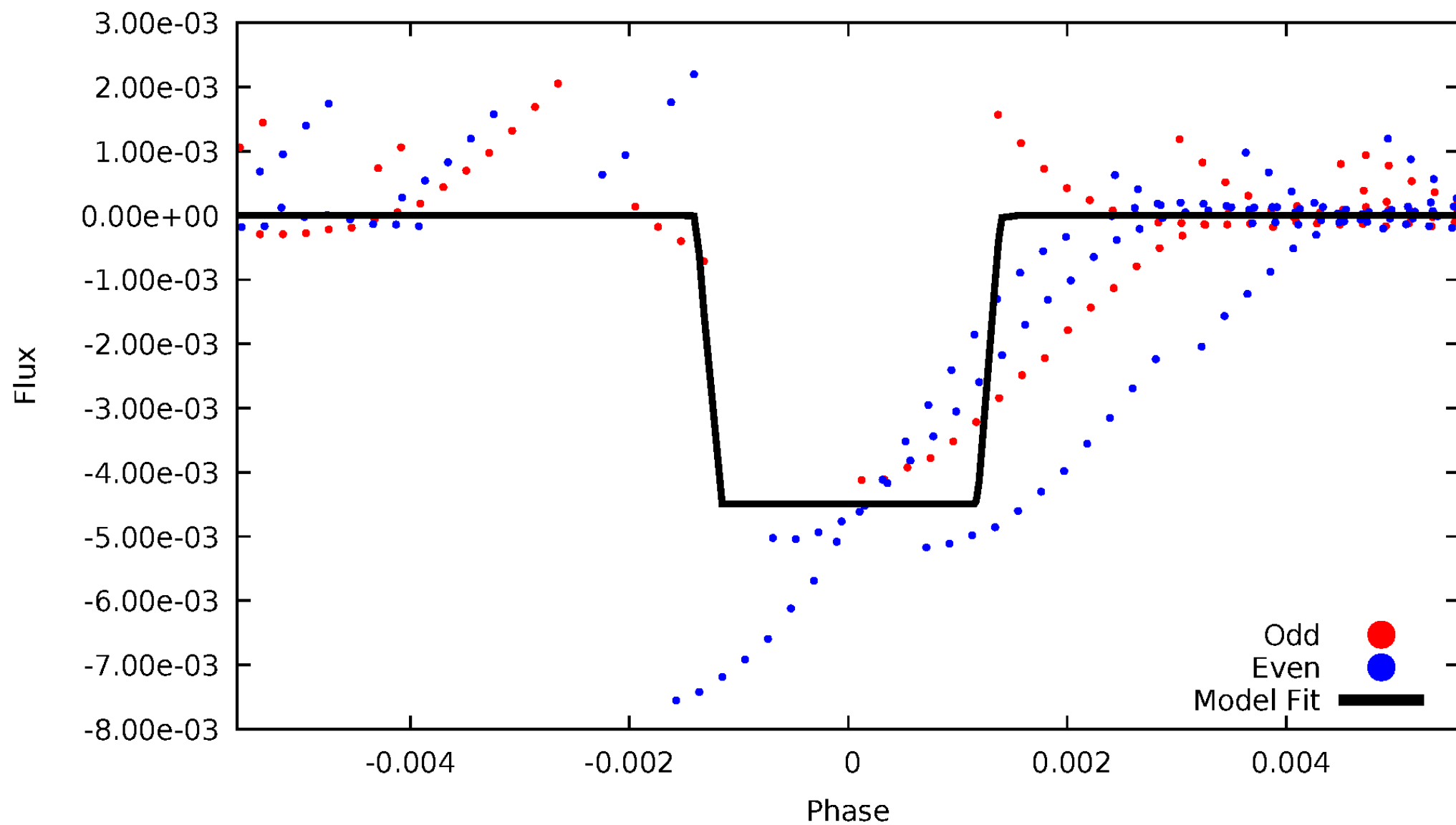
DV Odd/Even

TCE 006864569-05



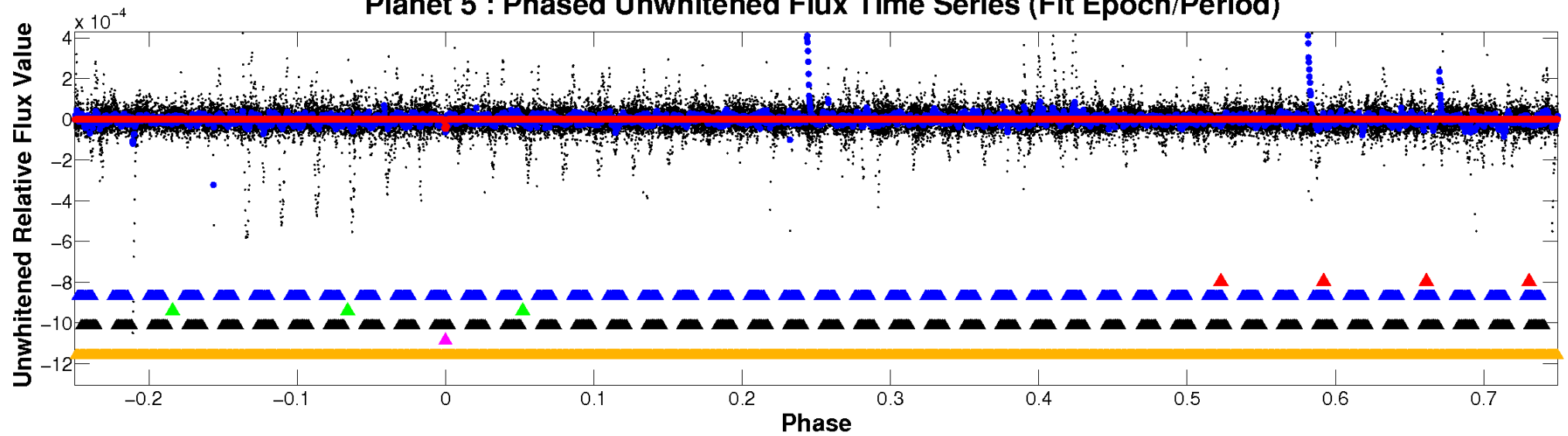
ALT Odd/Even

TCE 006864569-05

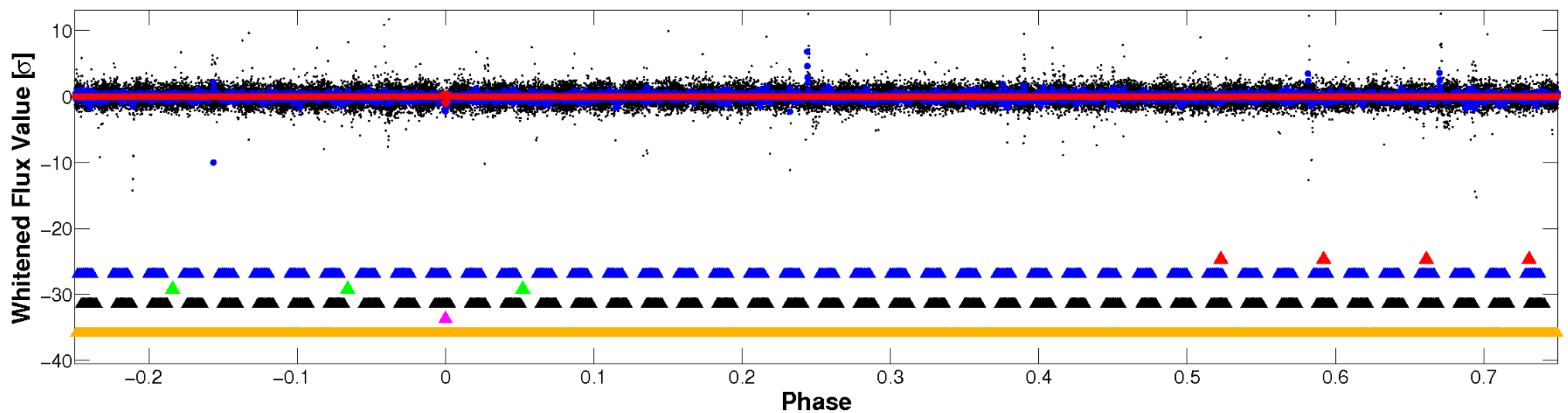


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

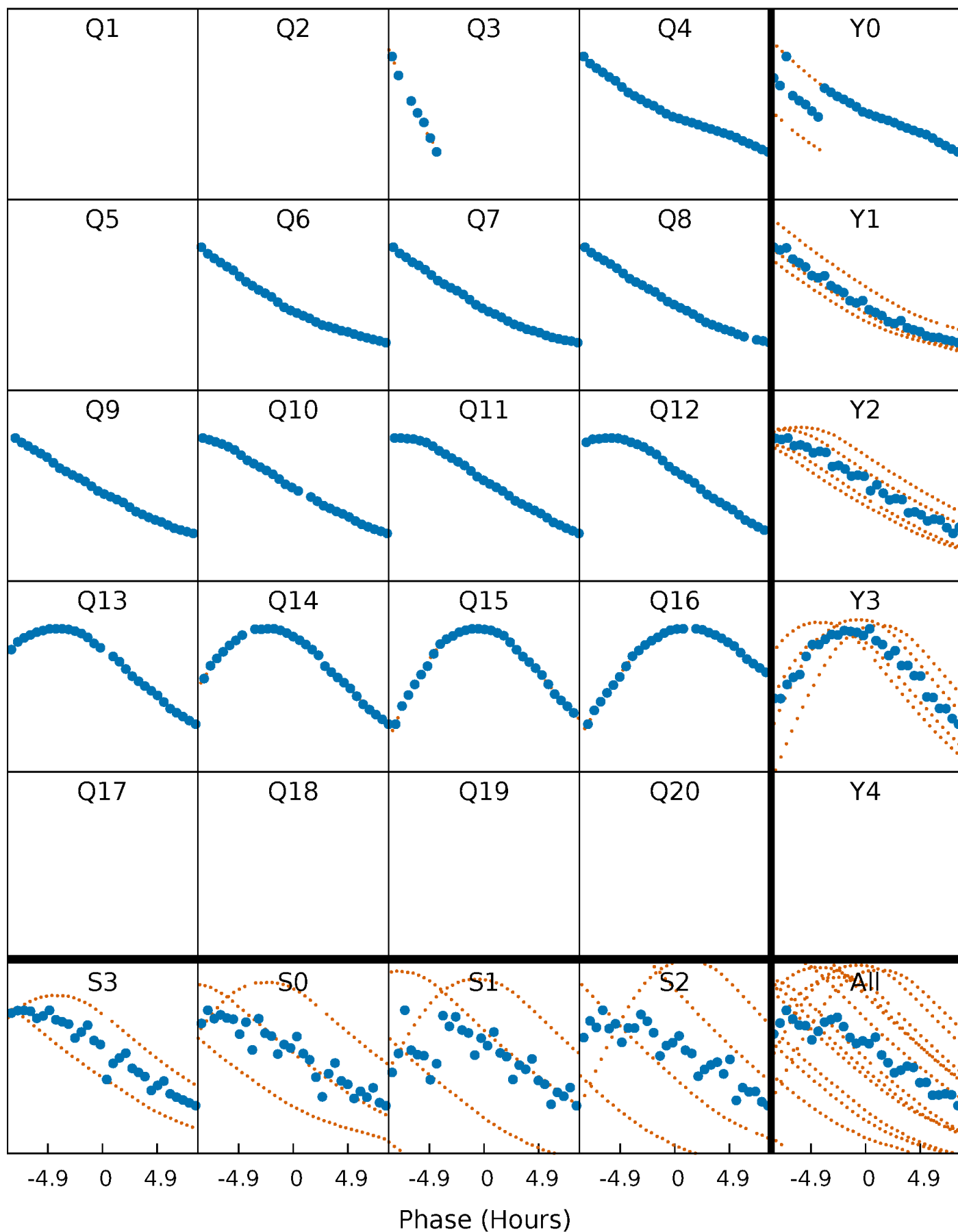


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



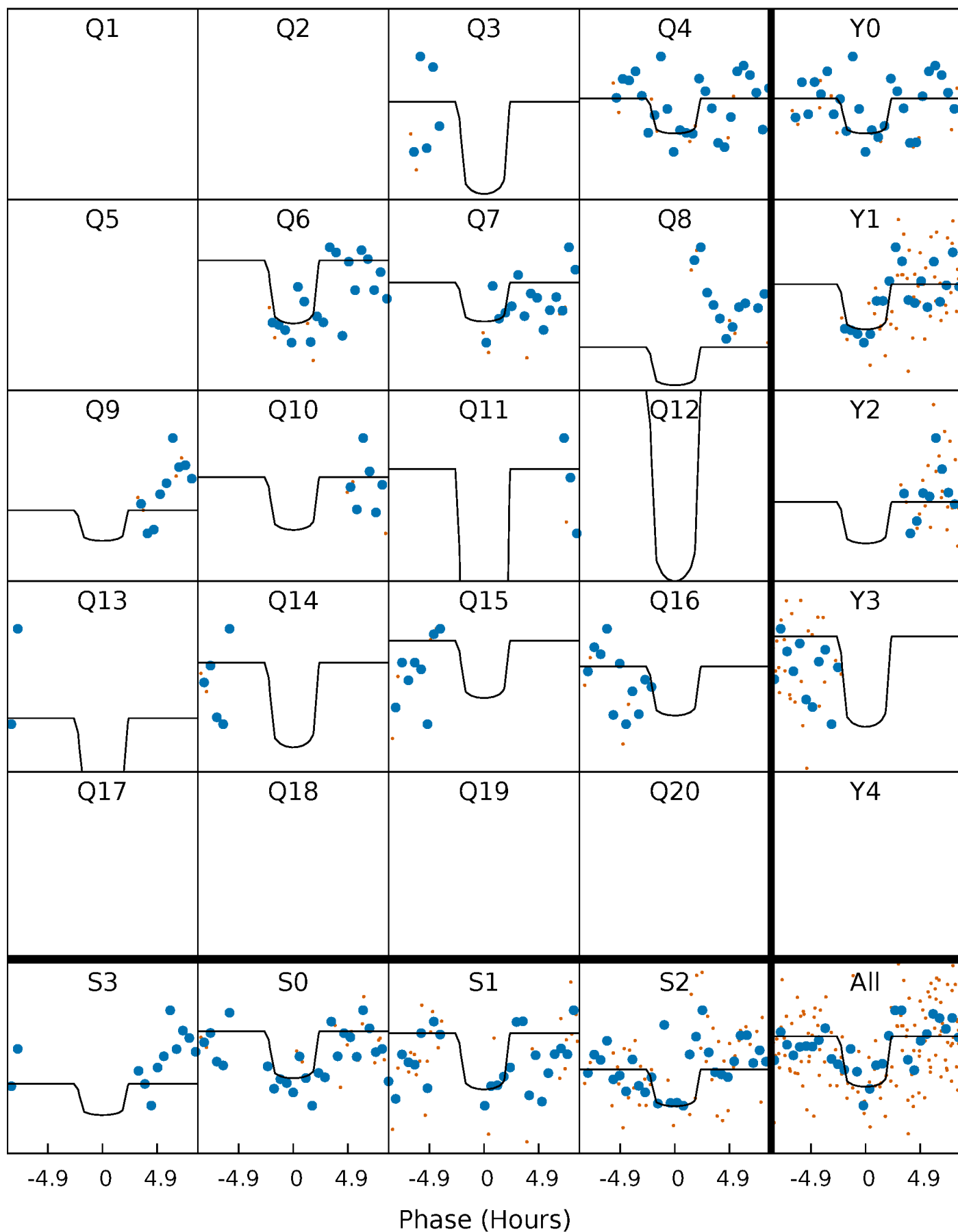
PDC Quarter-Phased Transit Curves

TCE 006864569-05 P= 97.584463 Days $T_0=183.122074$ (BKJD)



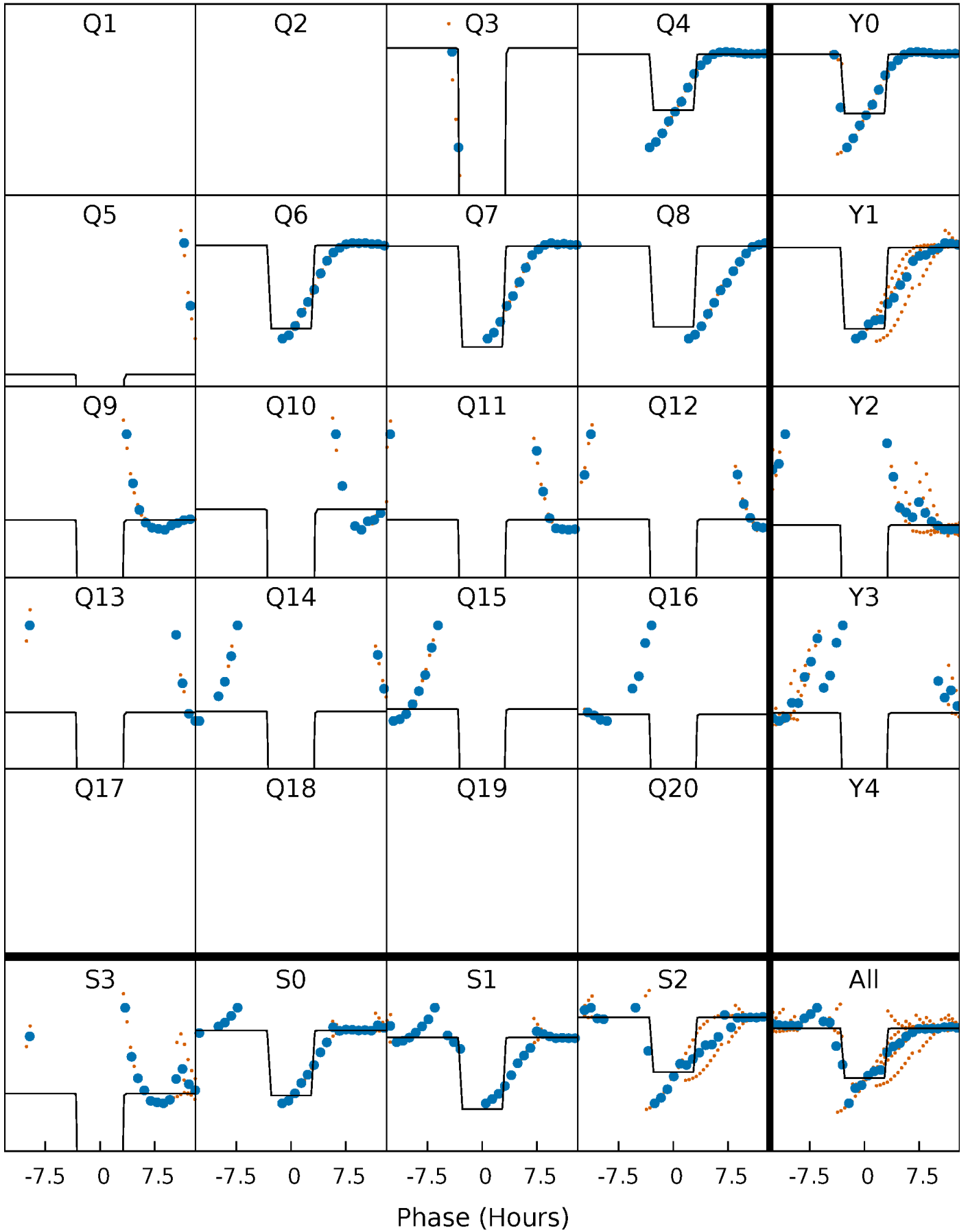
DV Quarter-Phased Transit Curves

TCE 006864569-05 P= 97.584463 Days $T_0=183.122074$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

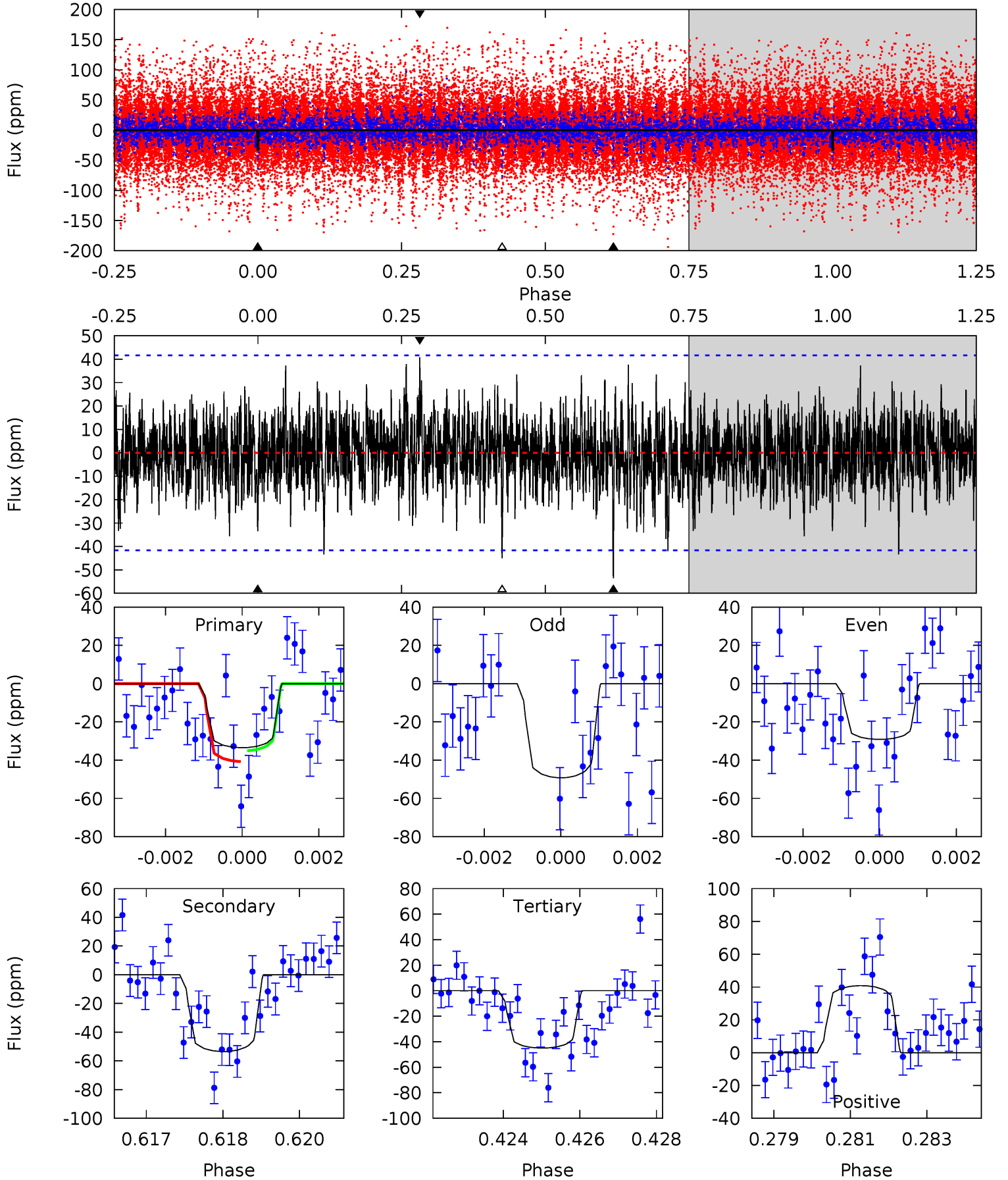
TCE 006864569-05 P= 97.591285 Days $T_0=183.072684$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-05, P = 97.584463 Days, E = 85.537611 Days

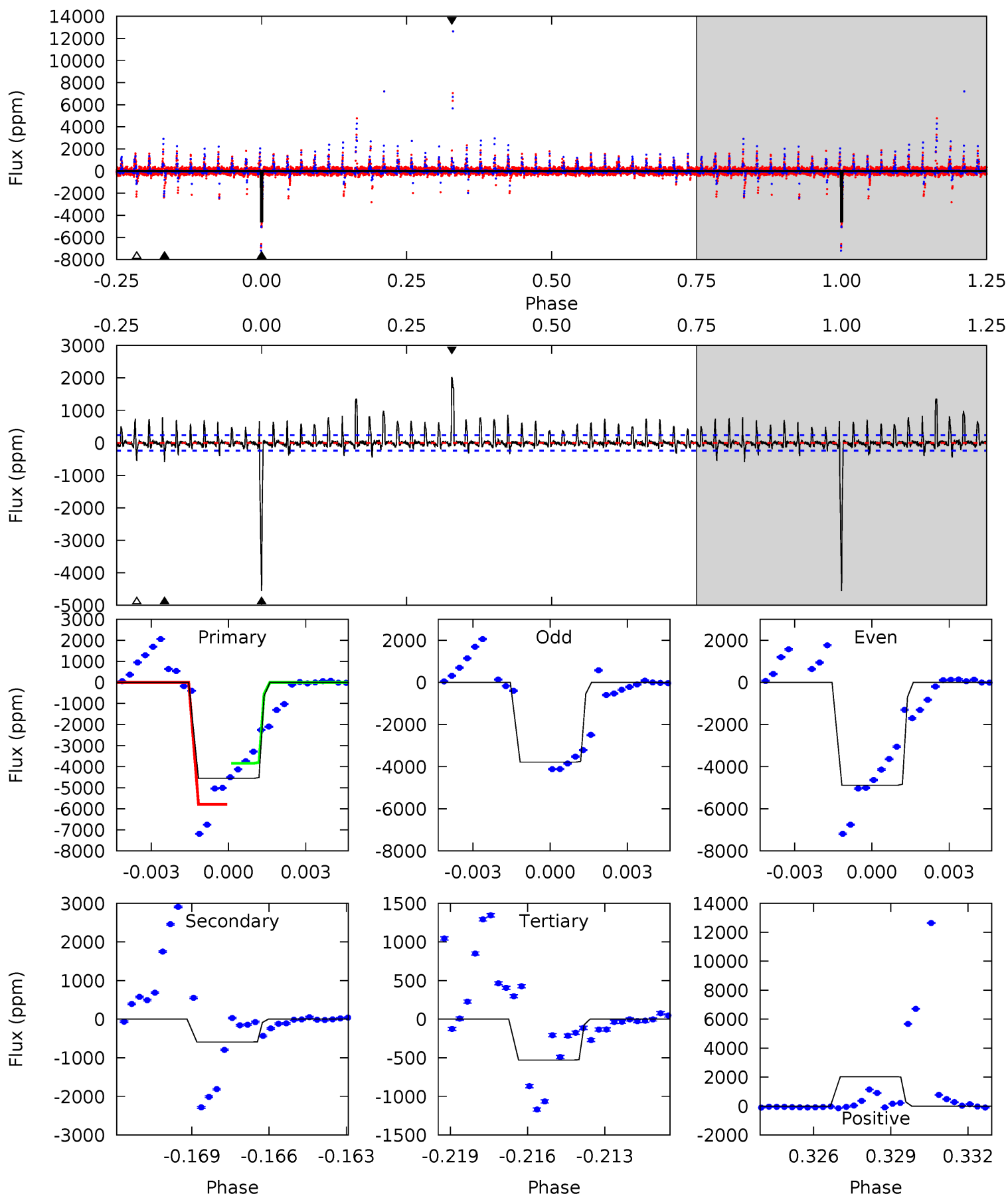
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.29	6.85	5.76	5.23	5.33	3.10	1.31	-1.47	-0.95	1.09	1.62	0.99	0.01	0.43	0.35



Alt Model-Shift Uniqueness Test

006864569-05, P = 97.591285 Days, E = 85.481399 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
100.0	13.0	11.6	44.5	5.26	2.97	2.35	88.4	55.4	1.39	-31.6	8.14	1.01	0.31	20.8



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-54 ± 8	$2.10^{+0.89}_{-0.78}$	1489^{+113}_{-140}	11379^{+5608}_{-2324}	2259^{+3686}_{-1121}
Alt.	-592 ± 46	$20.73^{+2.94}_{-3.67}$	1489^{+104}_{-140}	5910^{+217}_{-208}	270^{+101}_{-66}

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

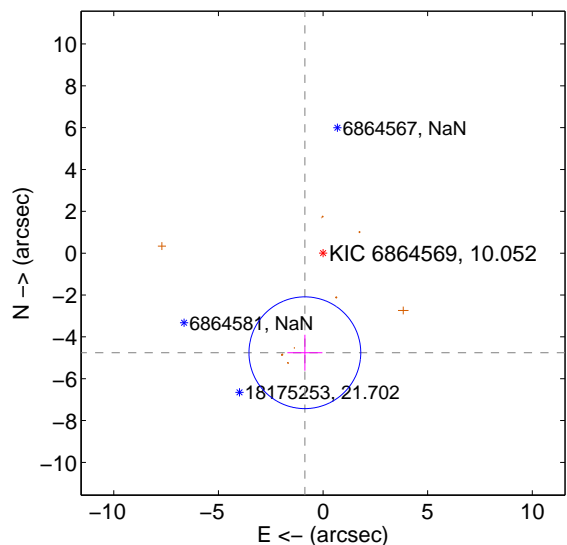
Supplemental centroid analysis for 006864569-05. **Kepler magnitude: 10.05.** Transit SNR 4.82

There are 0 quarters with good PRF difference image offsets

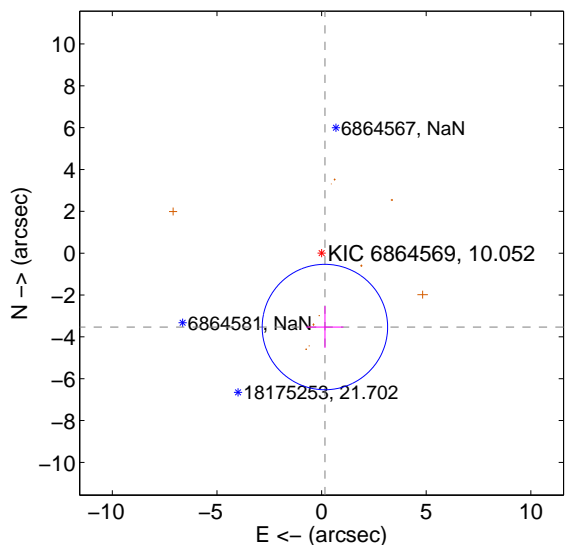
The direct PRF centroid is offset from the target star catalog position by about 1.71 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.837 ± 0.890	5.43	0.868 ± 0.836	-4.758 ± 0.859
PRF-fit source offset from KIC position	3.534 ± 0.999	3.54	-0.159 ± 0.882	-3.530 ± 0.998
photometric centroid source offset	3.15 ± 2.16	1.46	-2.89 ± 2.02	1.26 ± 2.78

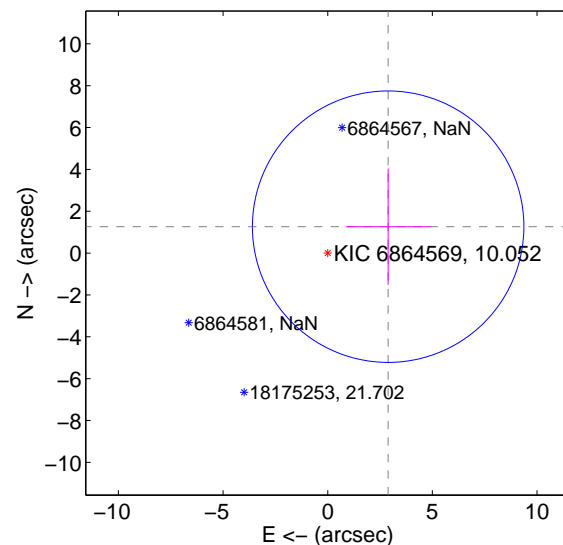
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

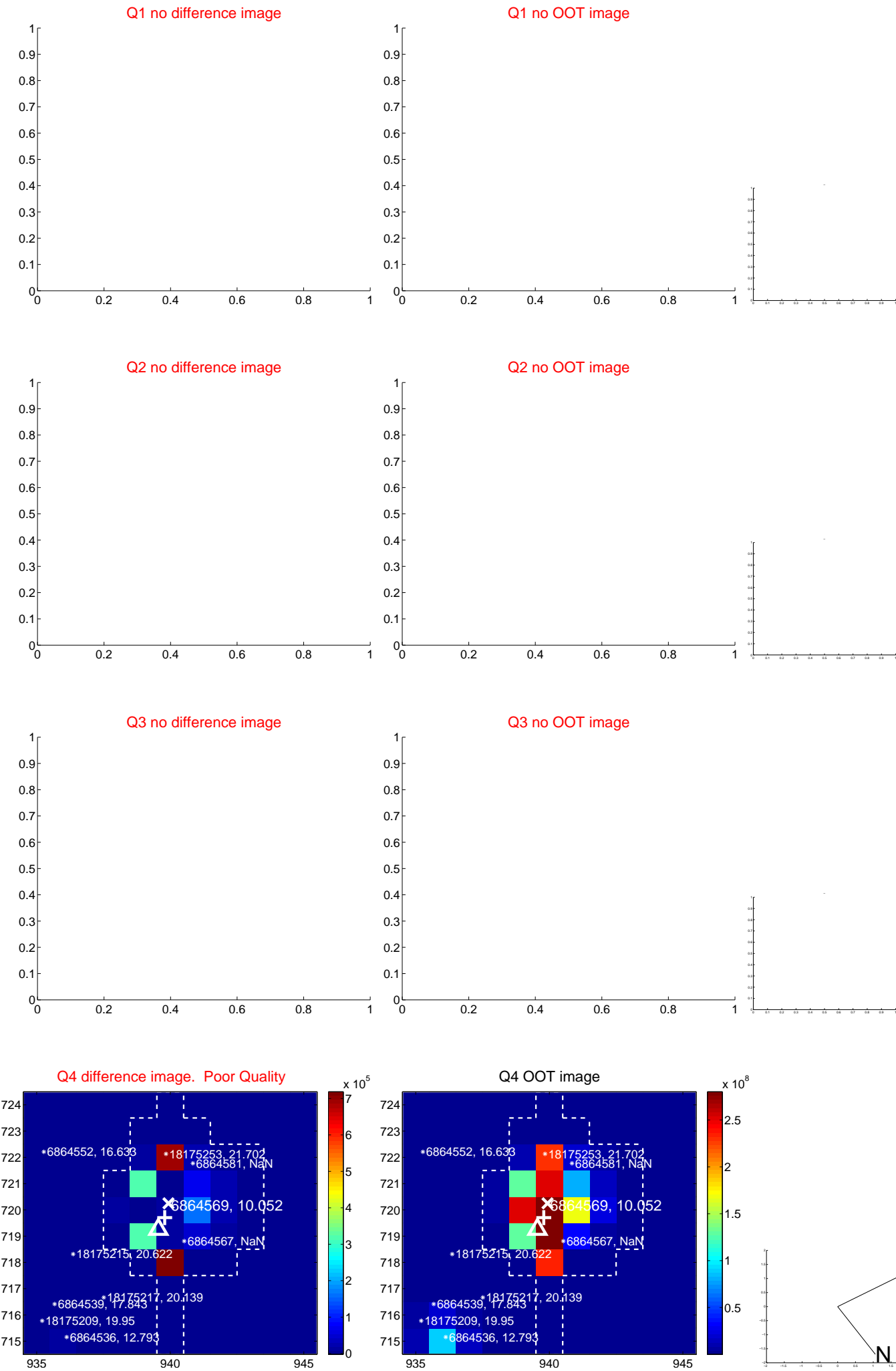


offset from photometric centroids

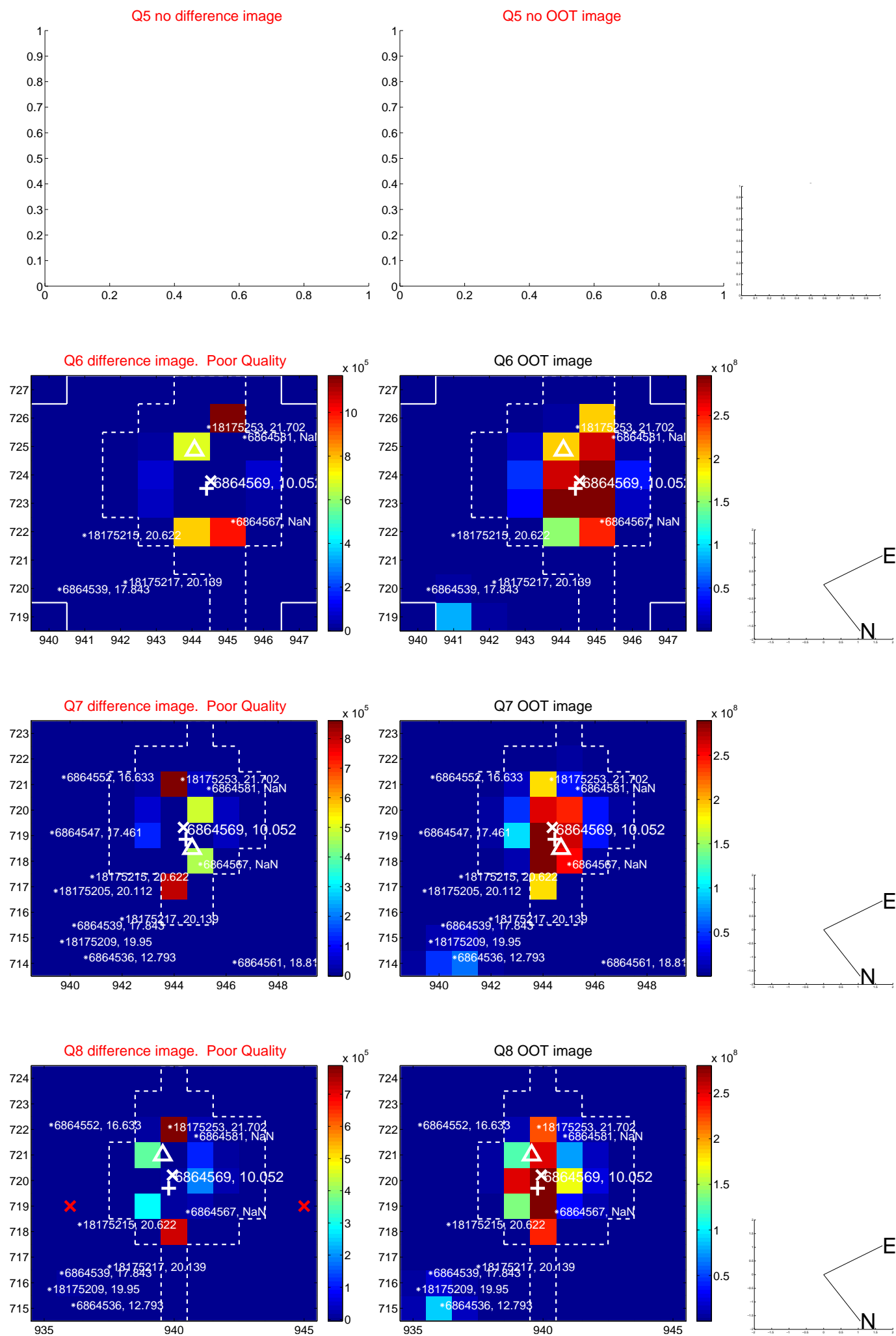


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

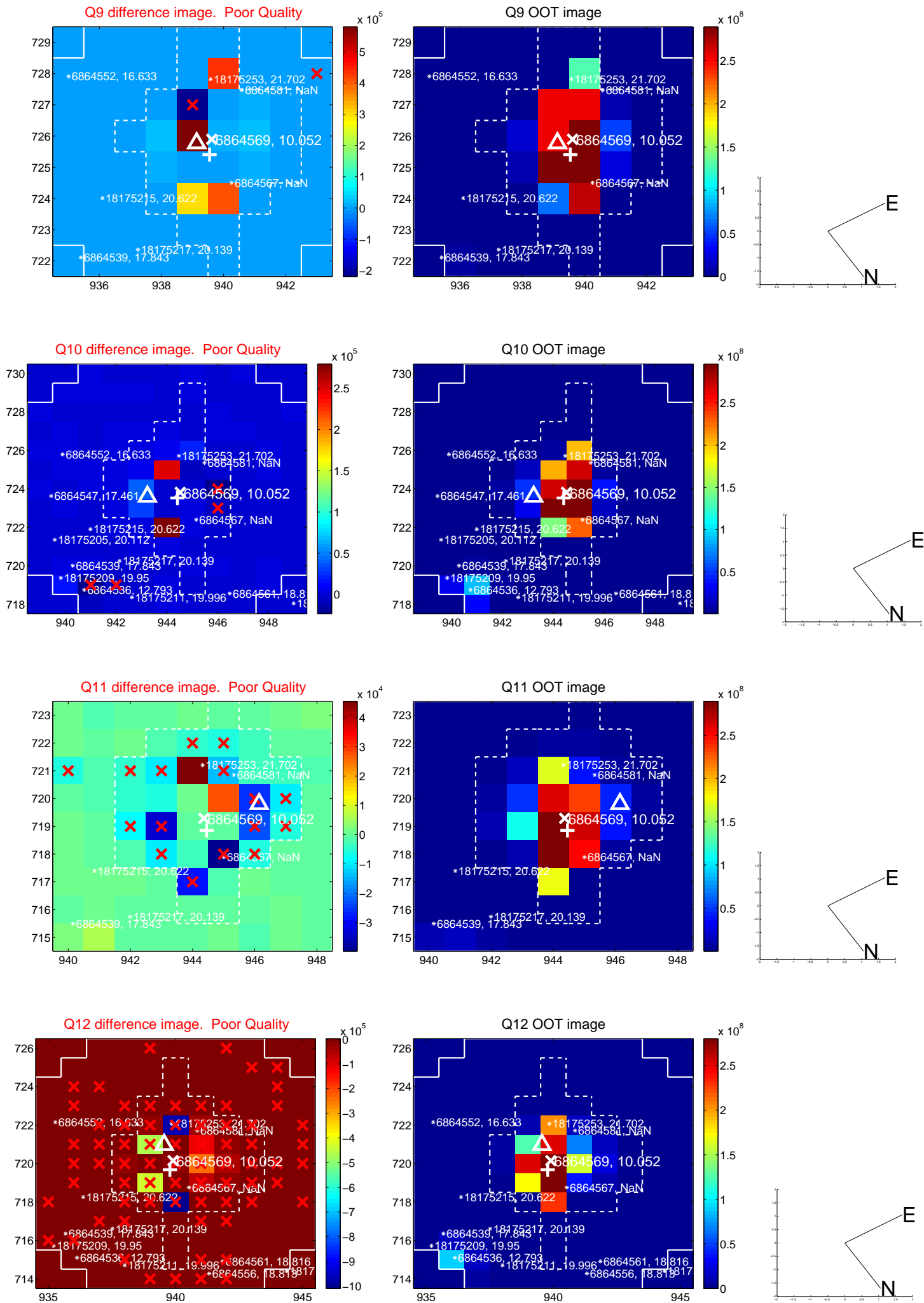
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



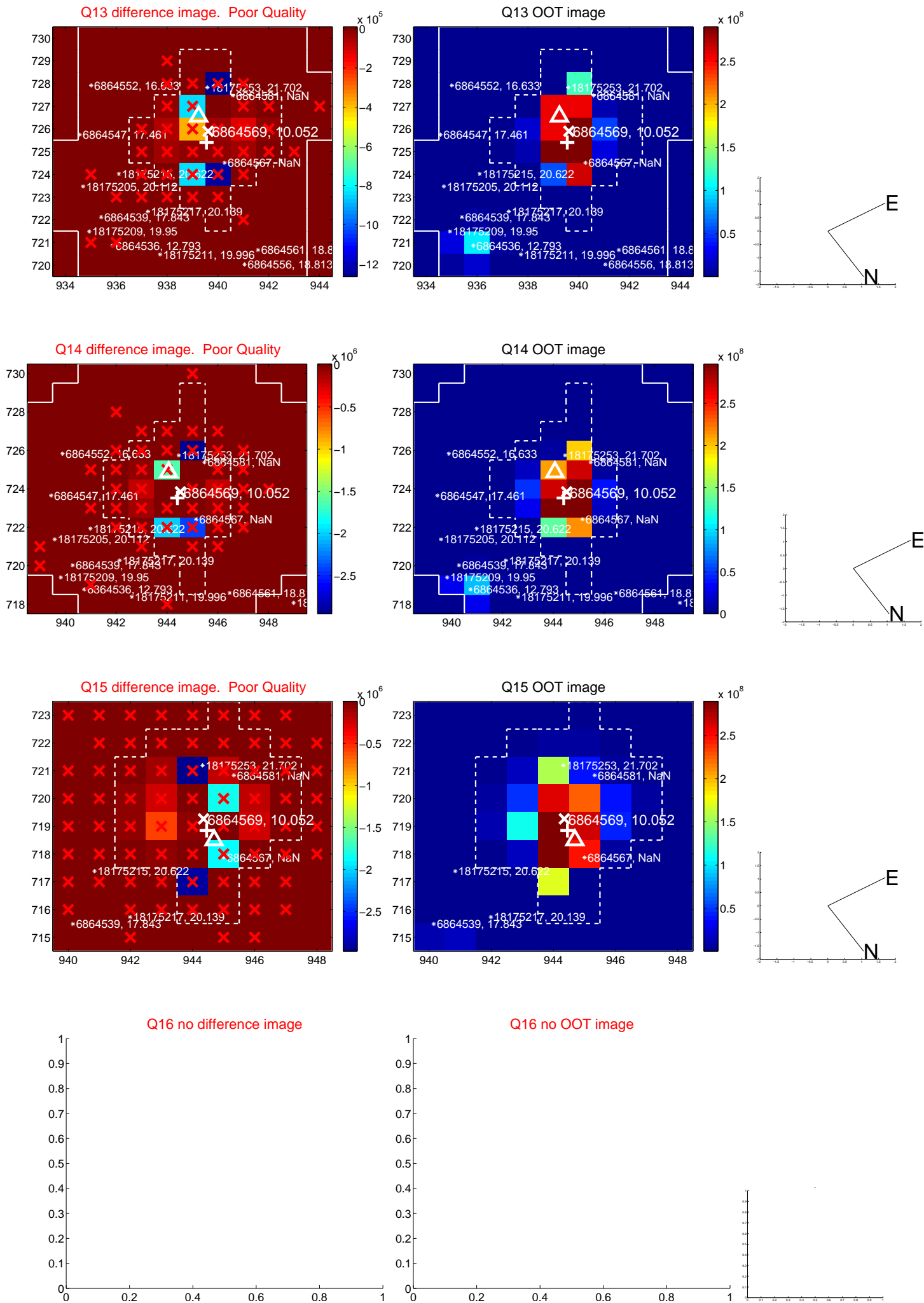
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



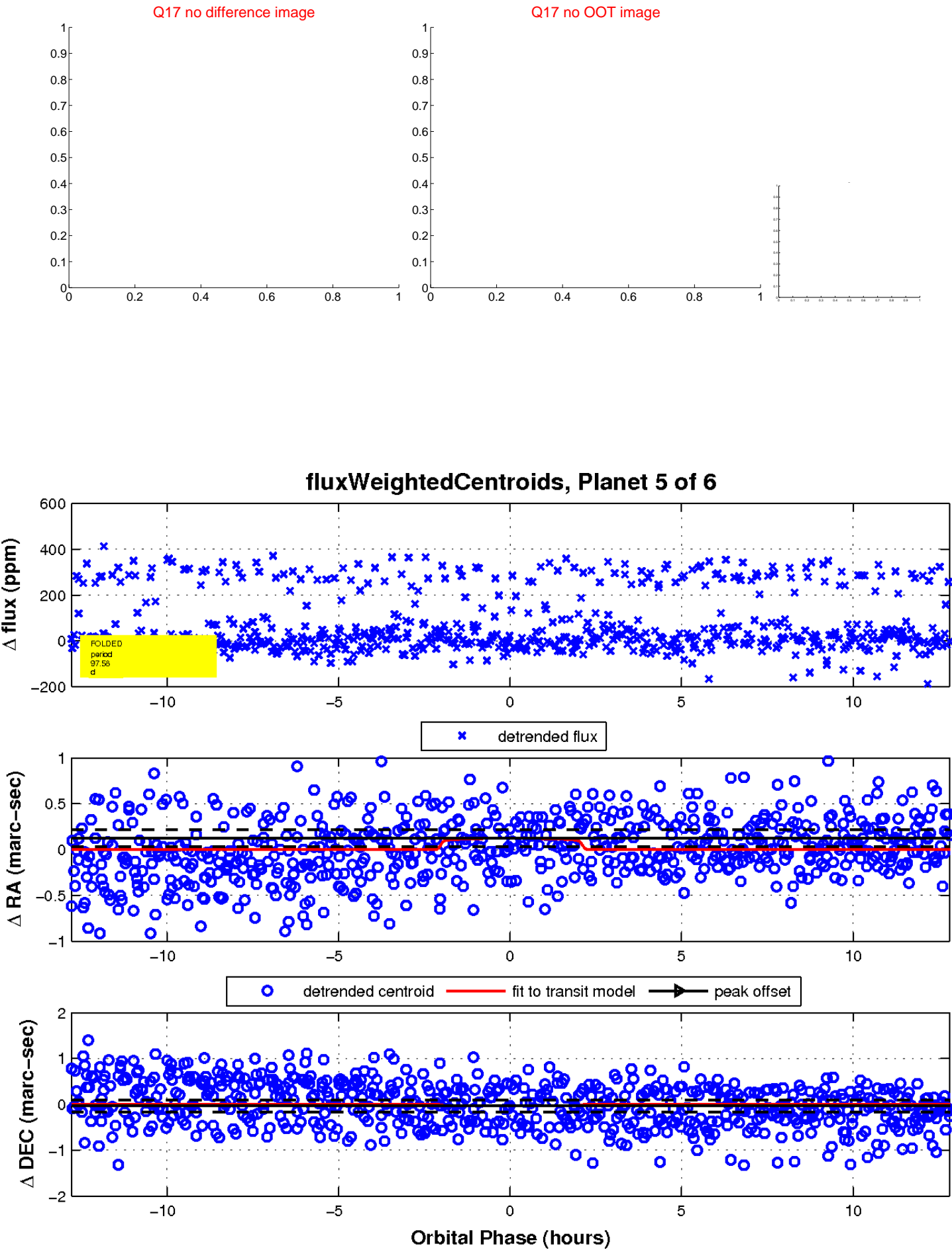
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

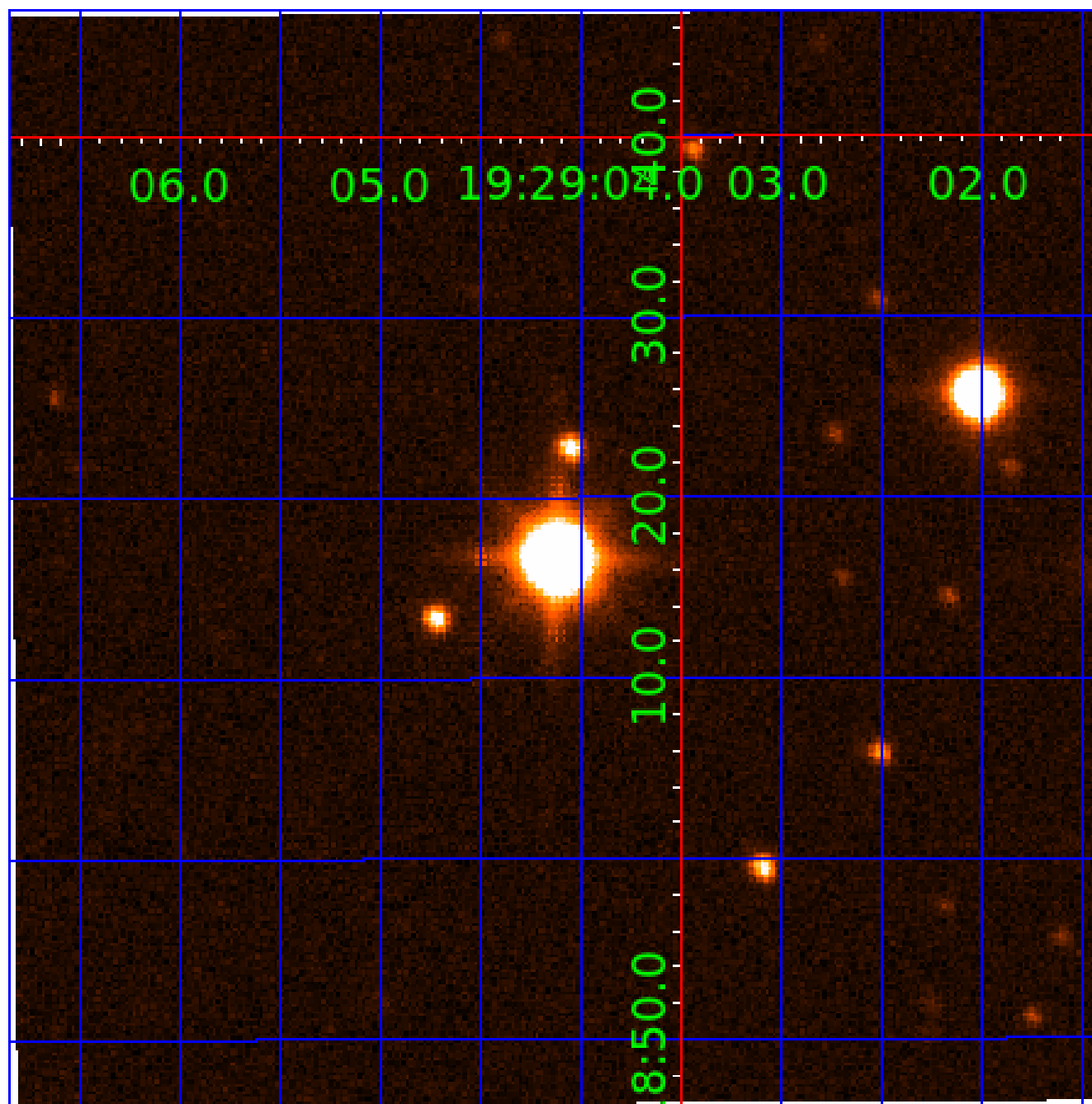


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006864569

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})
006864569-01	OBS	No	383.578788	254.418857	253.6	12.500	40.8	-1.0	2.90	11076	4.75	51.11
006864569-02	OBS	6780.01	2.325124	133.330803	24.1	1.659	24.5	24.6	2.90	11076	1.63	46241.34
006864569-03	OBS	No	378.819760	480.959452	186.6	11.000	16.2	7.9	2.90	11076	7.25	51.97
006864569-04	OBS	No	2.325161	133.578527	5.2	5.161	8.1	6.8	2.90	11076	0.75	46240.35
006864569-05	OBS	No	97.584463	183.122074	46.7	4.275	10.8	4.8	2.90	11076	2.25	317.04
006864569-06	OBS	No	0.775060	132.000777	74.5	2.000	8.9	-1.0	2.90	11076	2.58	200068.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—NO_FITS—INCONSISTENT_TRANS—CENT_SATURATED
006864569-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED
006864569-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
006864569-04	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_SATURATED
006864569-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
006864569-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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.

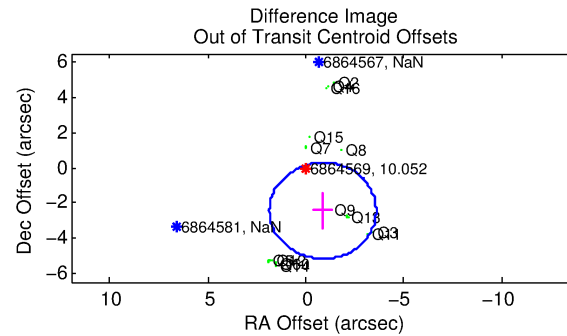
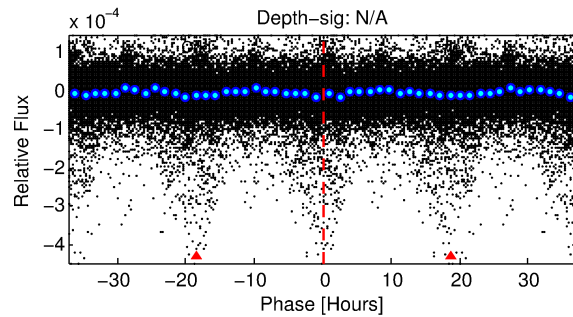
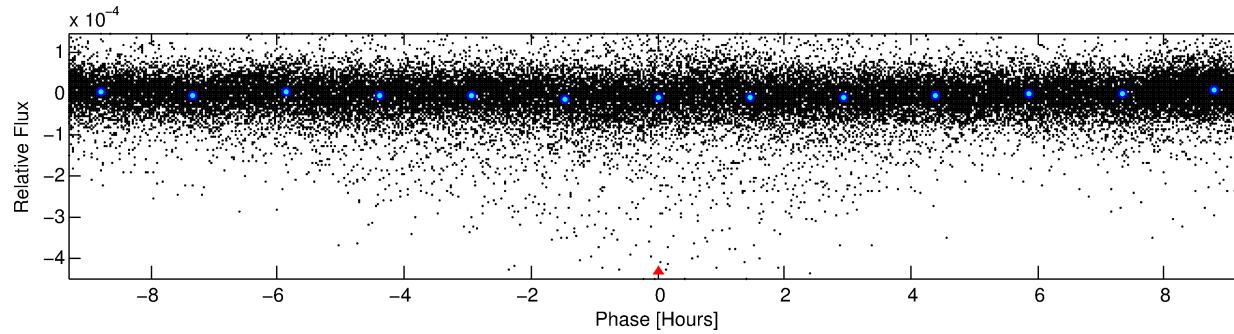
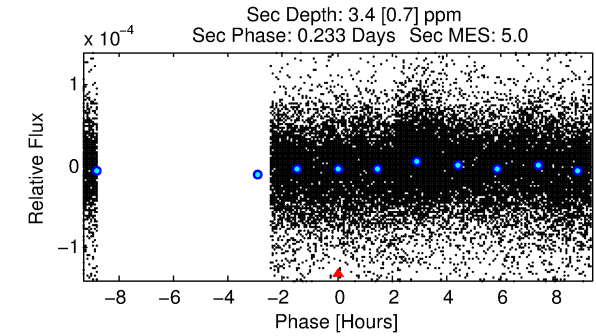
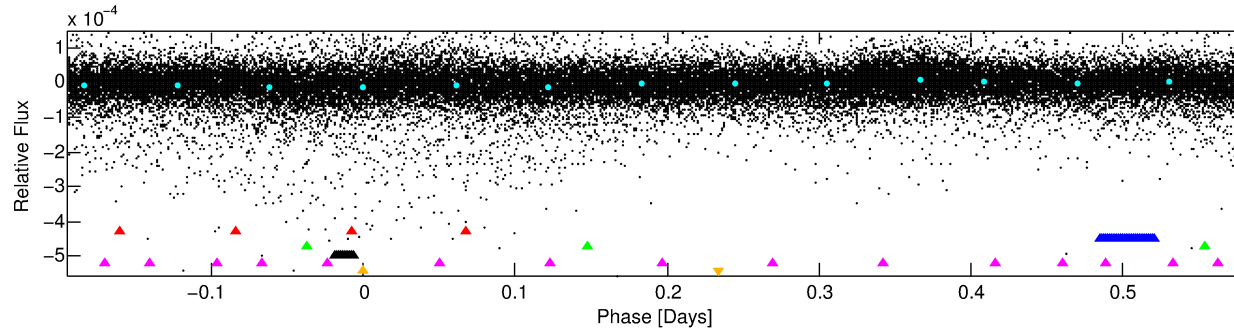
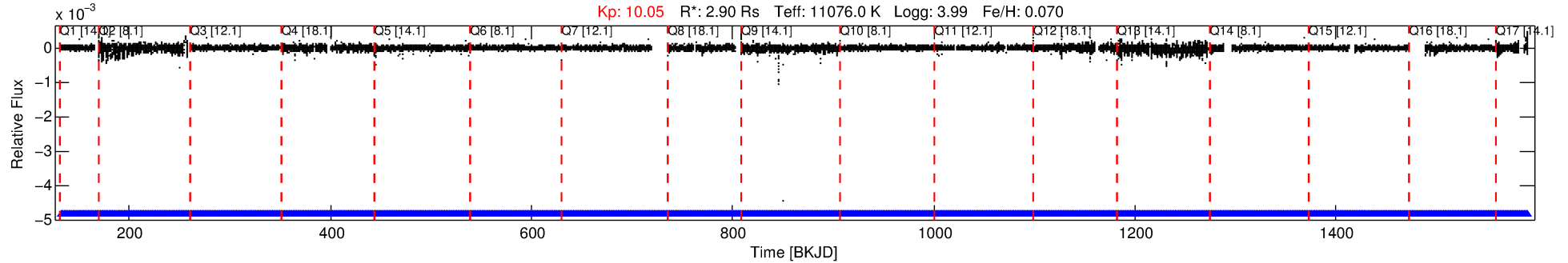
Ephemeris Match Information For 006864569-06

No Significant Match Found

DV One-Page Summary

KIC: 6864569 Candidate: 6 of 6 Period: 0.775 d
KOI: K06780 Corr: No Ephemeris Match

Kp: 10.05 R*: 2.90 Rs Teff: 11076.0 K Logg: 3.99 Fe/H: 0.070



TPS TCE Results:

Period = 0.77506 d
Epoch = 132.0008 BKJD

DV fit results are unavailable

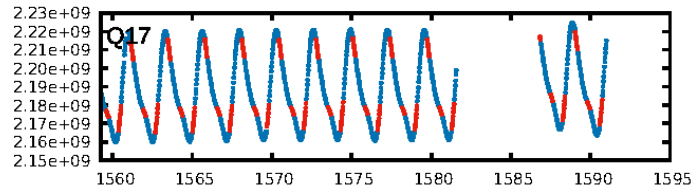
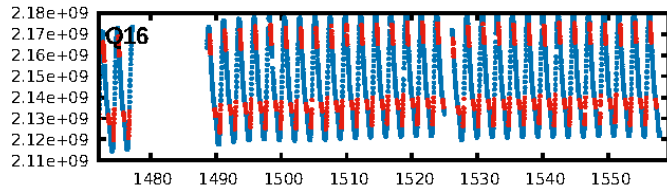
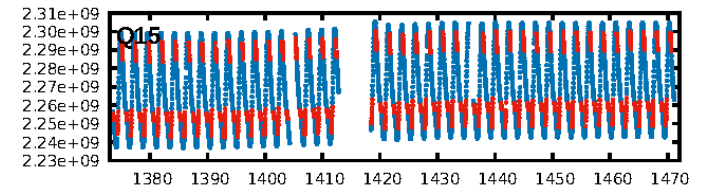
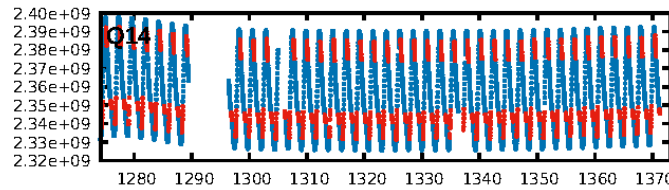
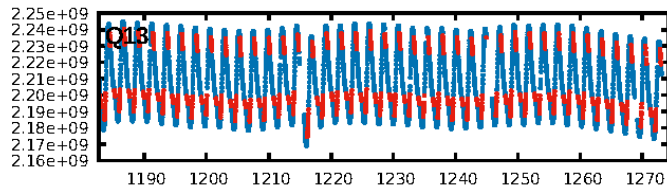
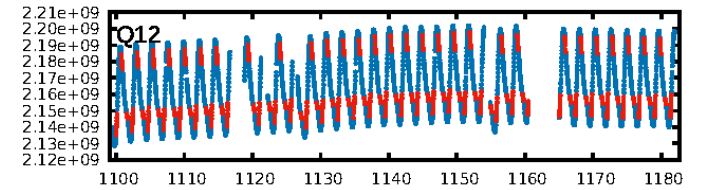
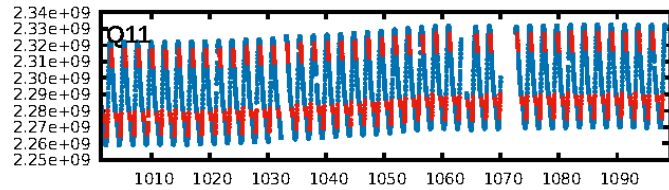
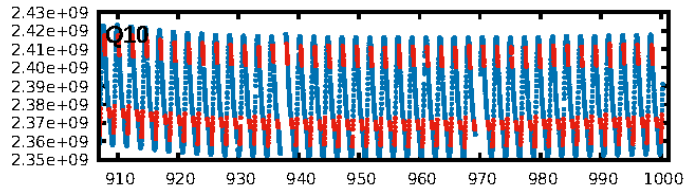
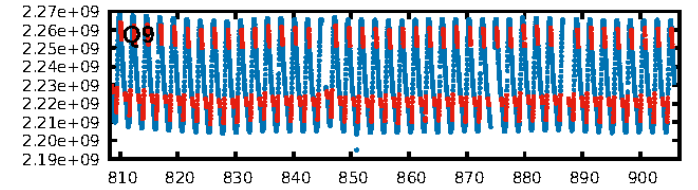
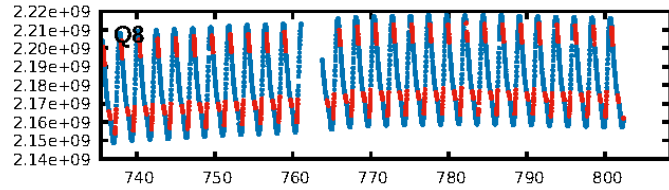
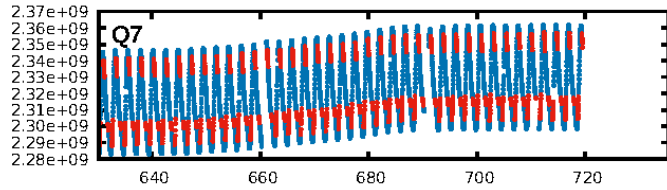
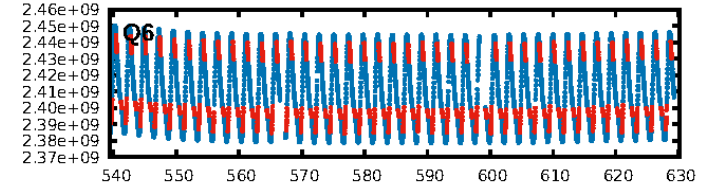
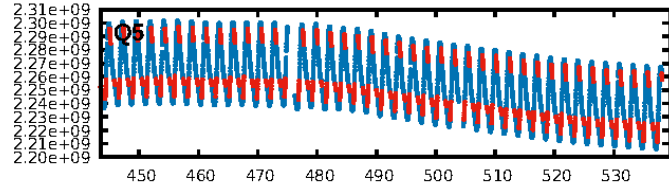
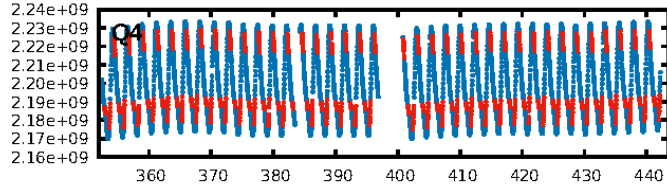
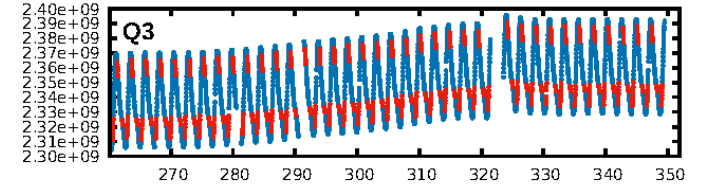
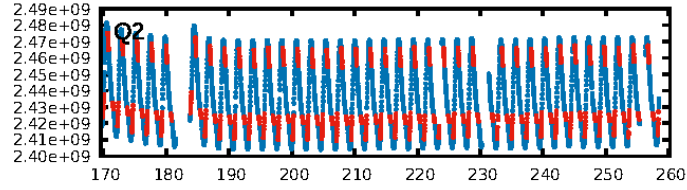
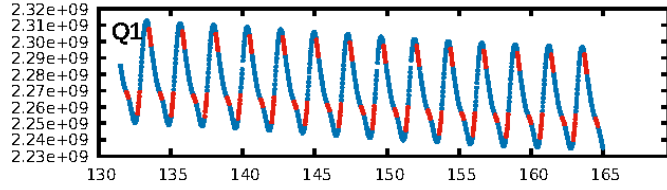
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [14.32σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1105/1105]
GhostDiagnostic-chr: N/A
Centroid-sig: 50.2%
Centroid-so: 0.559 arcsec [13.47σ]
OotOffset-rm: 2.594 arcsec [2.85σ]
KicOffset-rm: 2.229 arcsec [3.83σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [17/17]

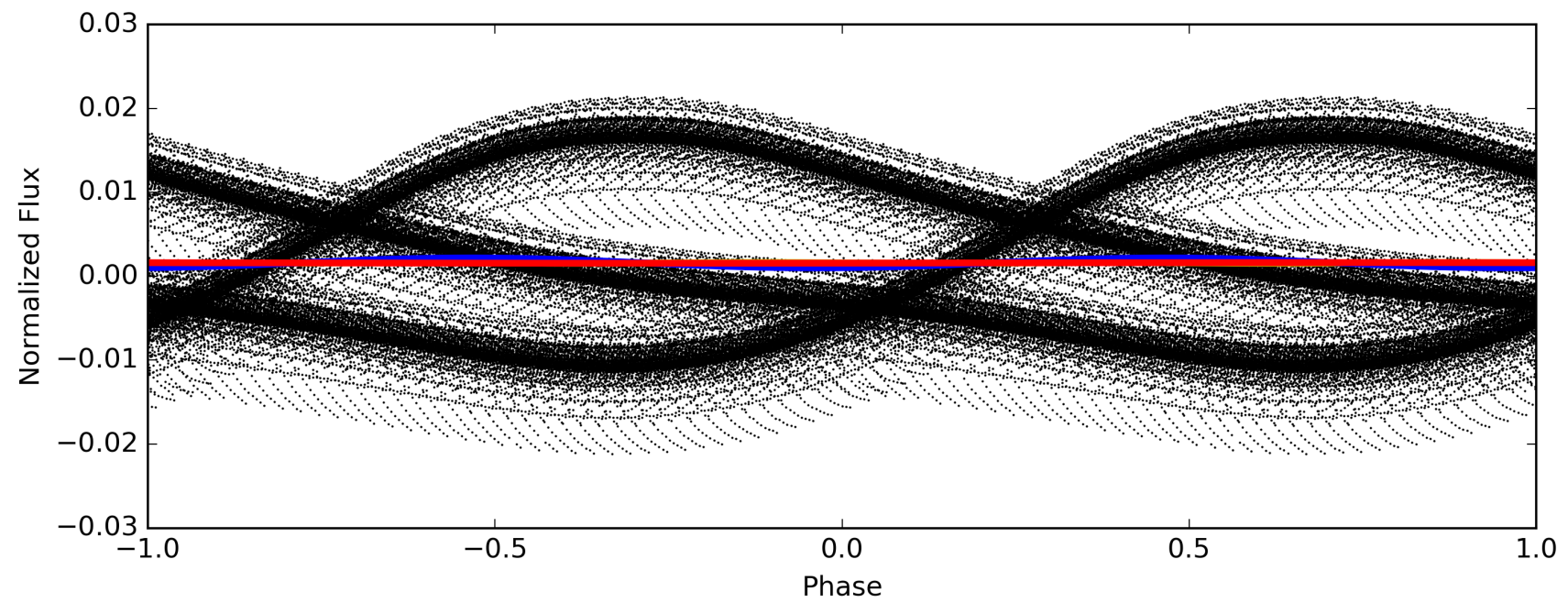
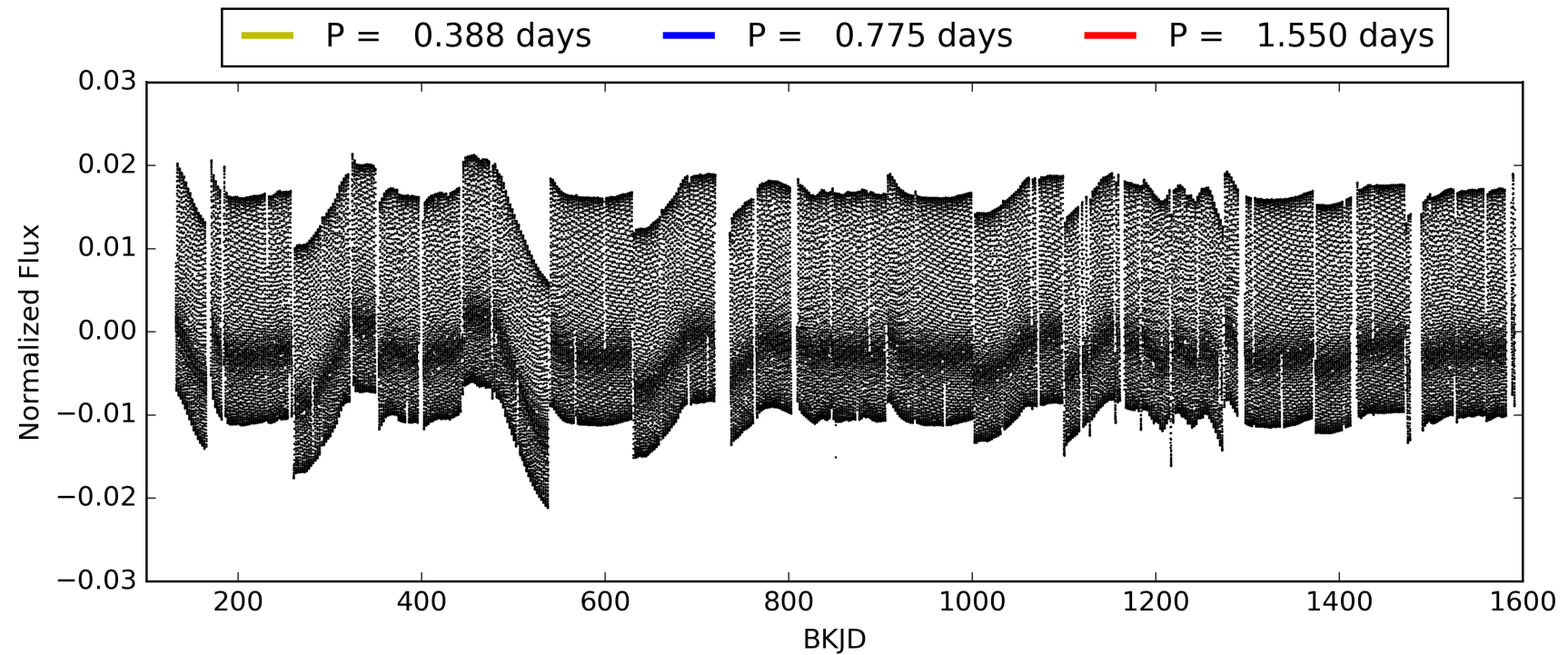
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:48:26 Z

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

TCE 006864569-06, PDC Light Curves

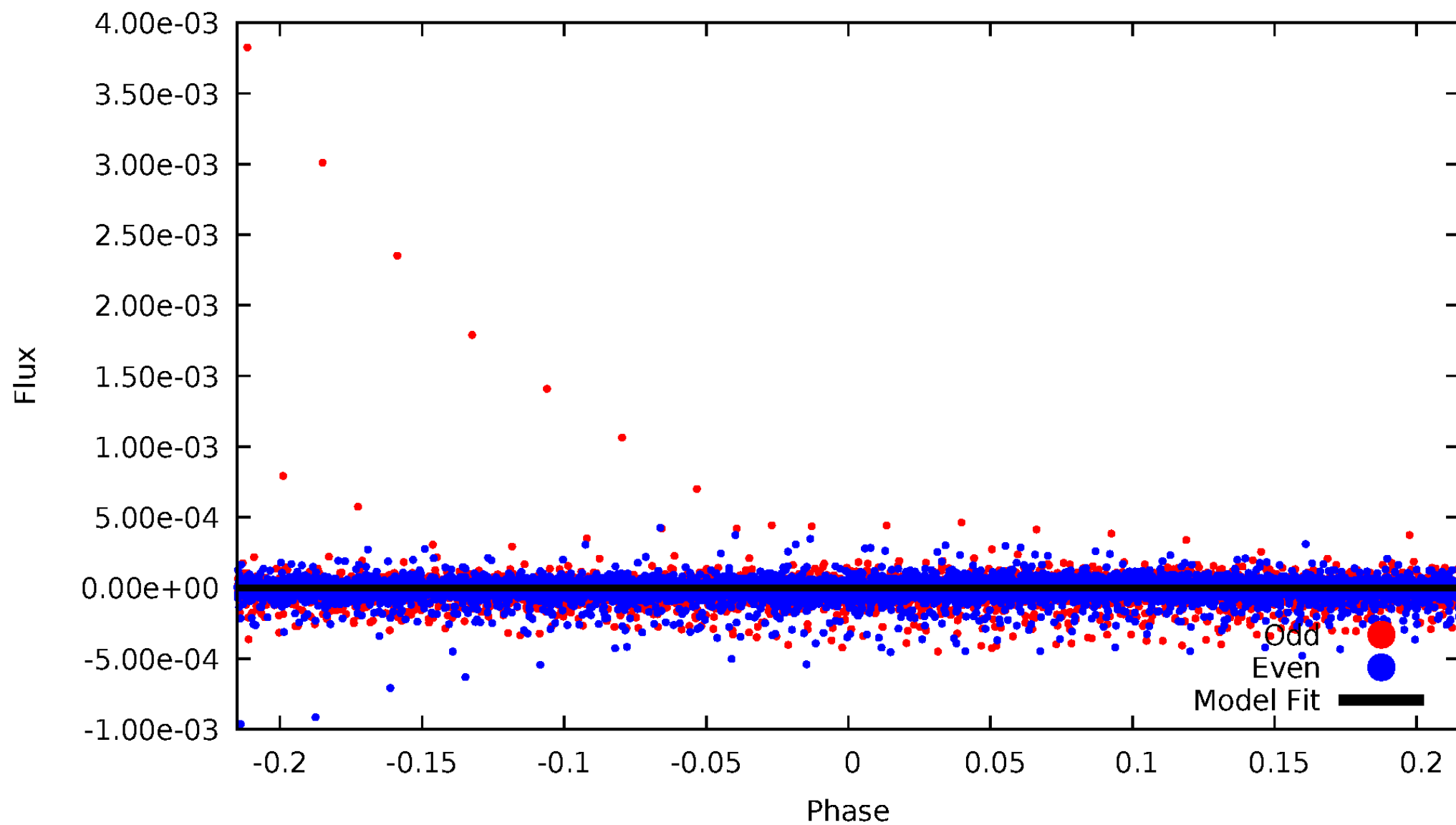


TCE 006864569-06



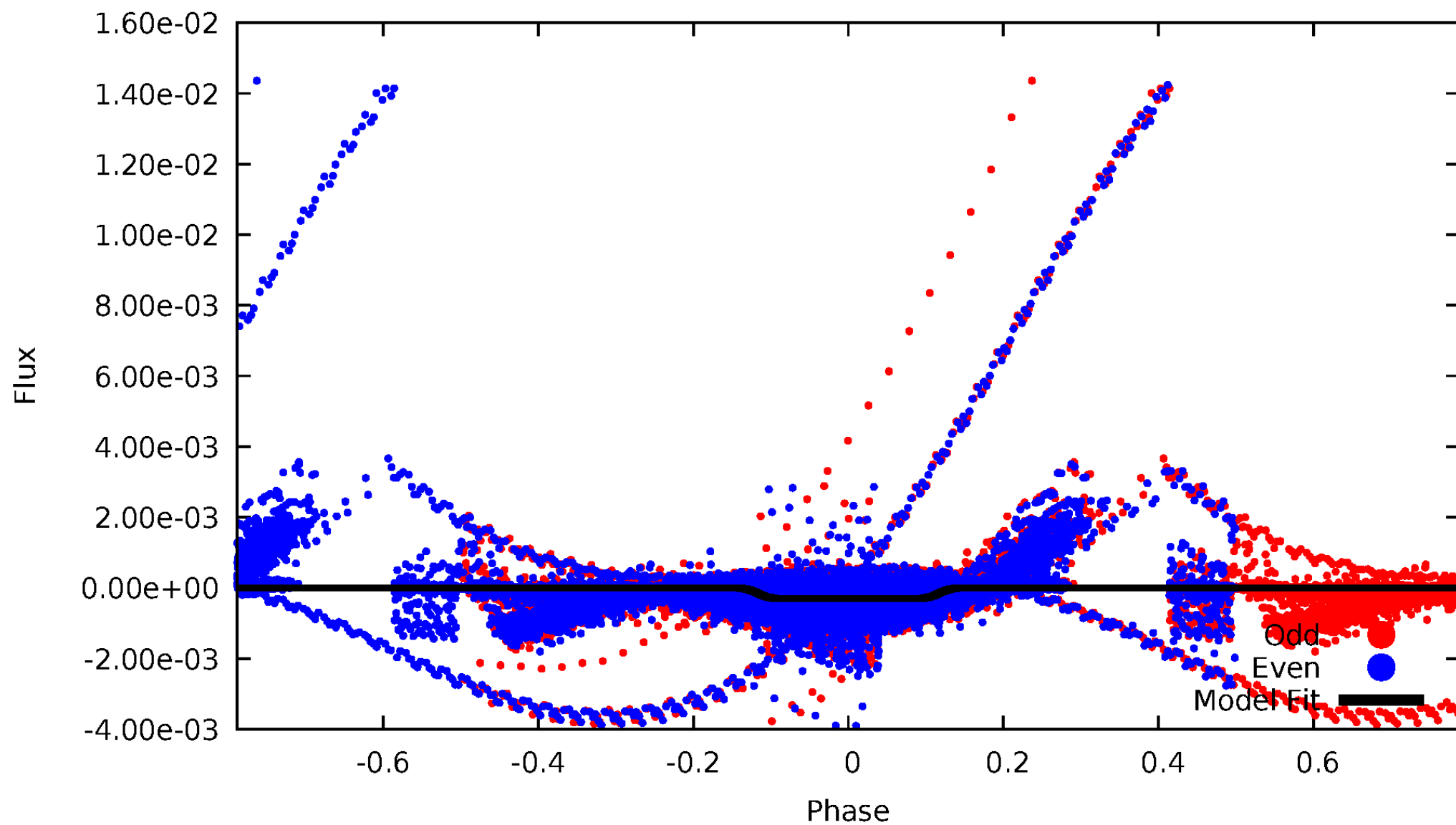
DV Odd/Even

TCE 006864569-06



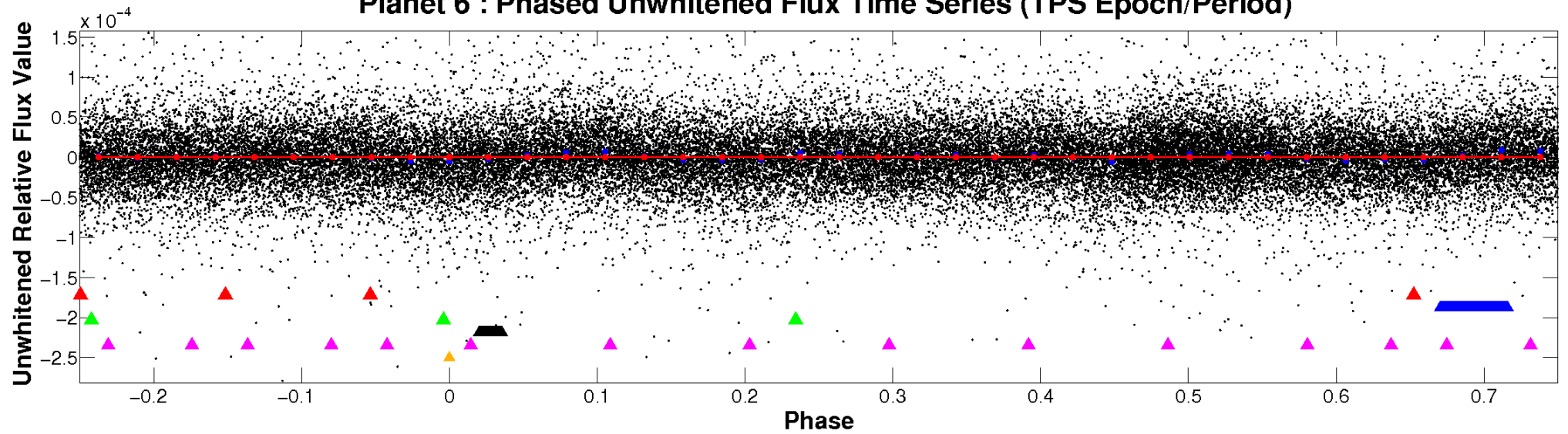
ALT Odd/Even

TCE 006864569-06



Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

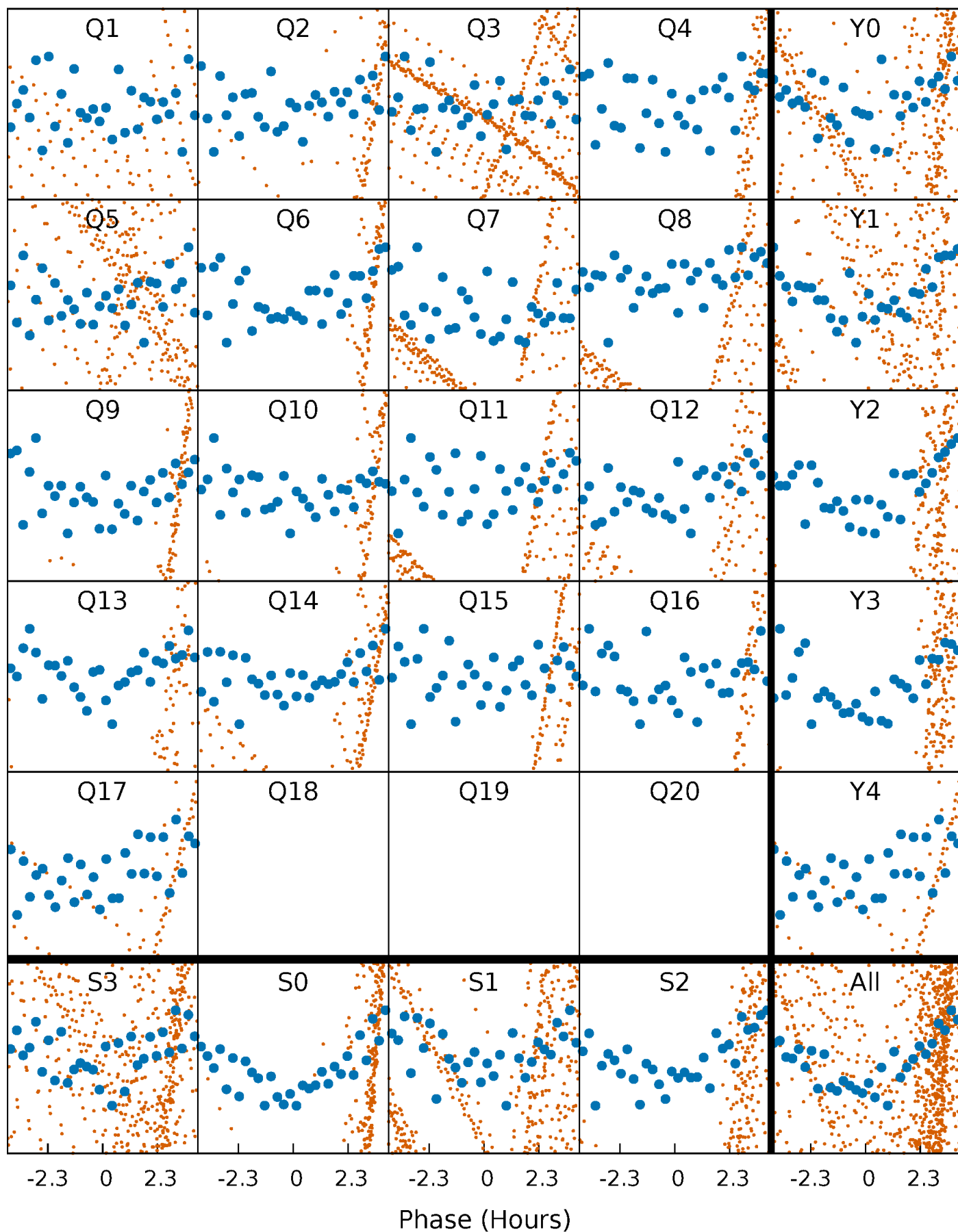


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



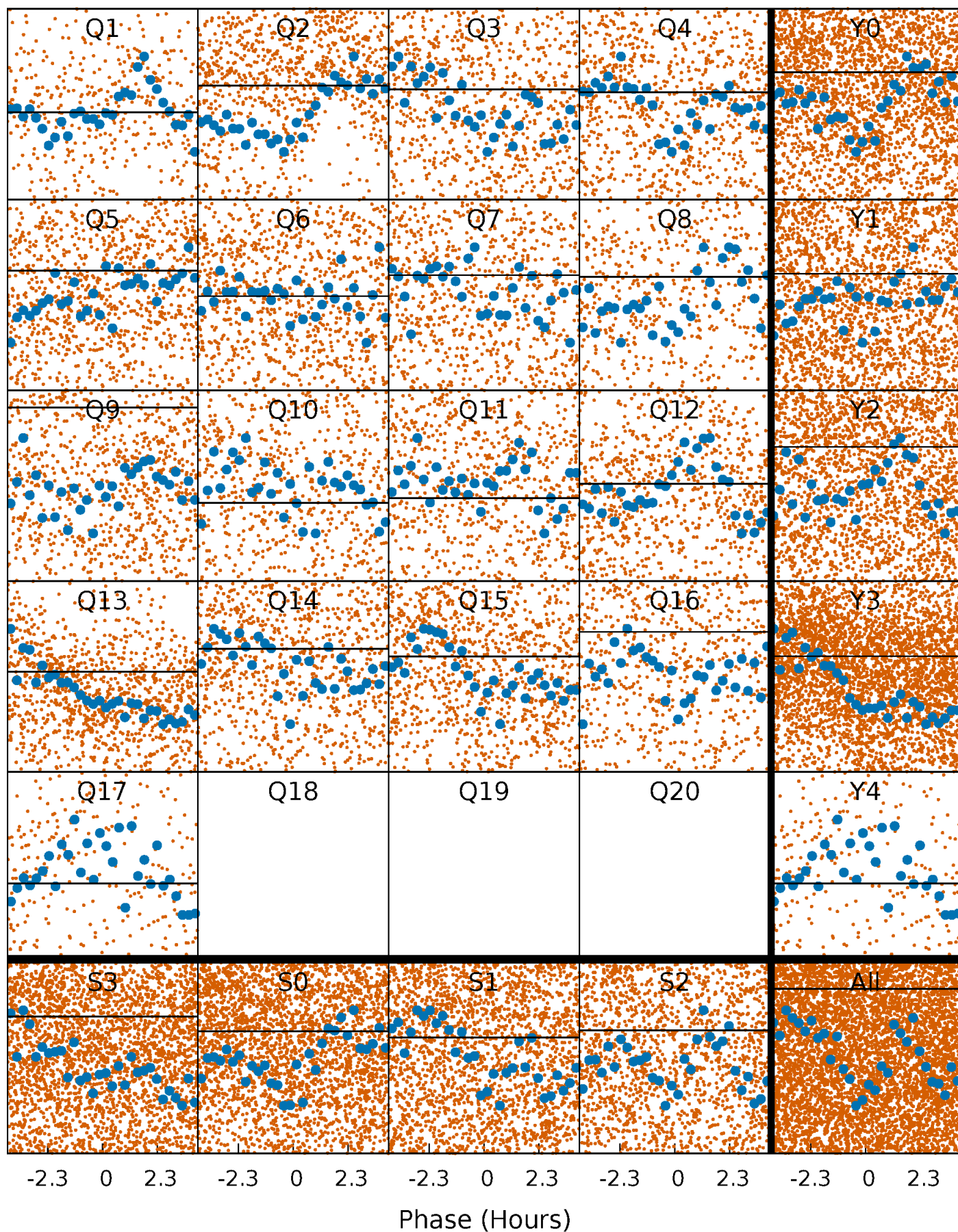
PDC Quarter-Phased Transit Curves

TCE 006864569-06 P= 0.775060 Days $T_0=132.000777$ (BKJD)



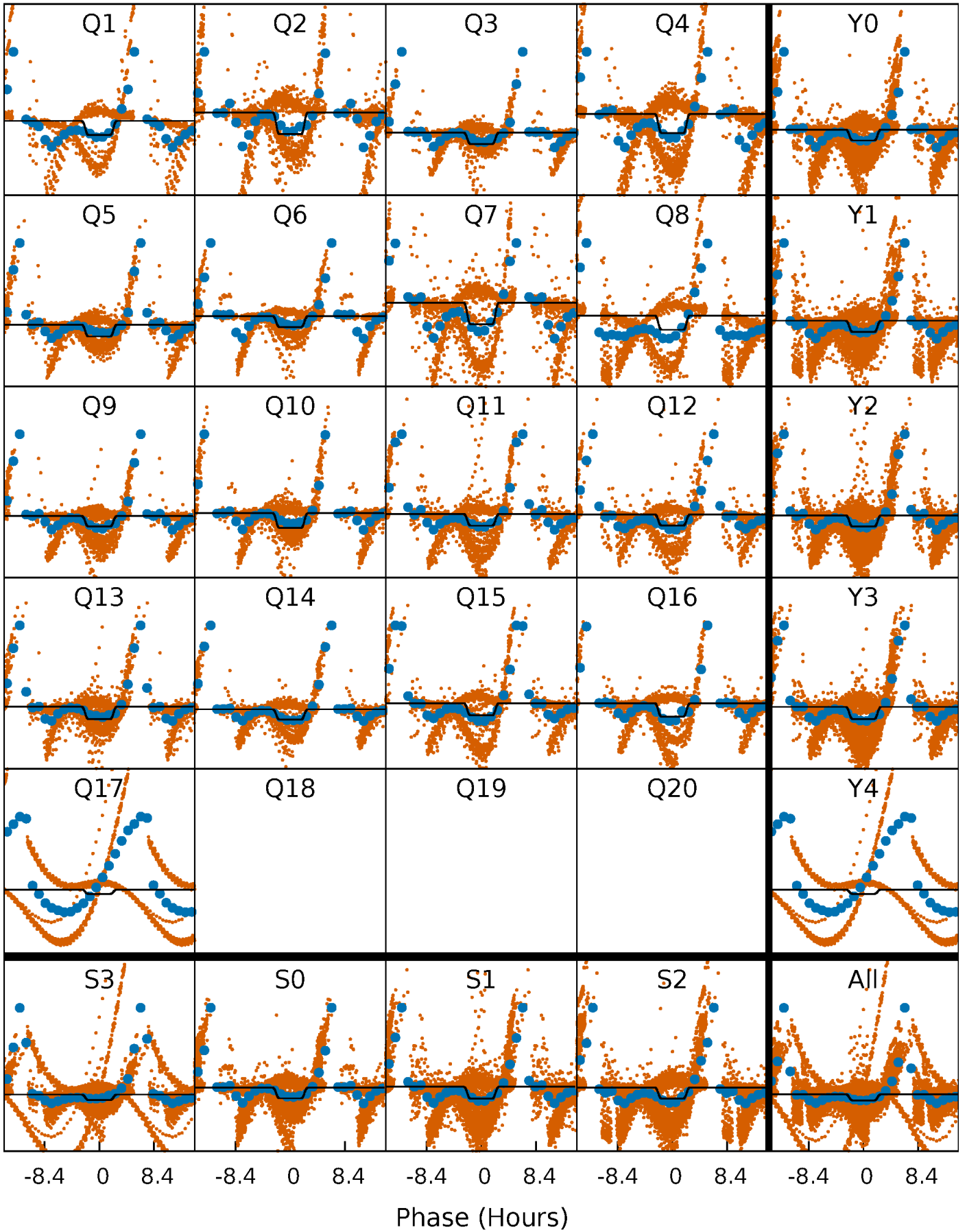
DV Quarter-Phased Transit Curves

TCE 006864569-06 P= 0.775060 Days $T_0=132.000777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

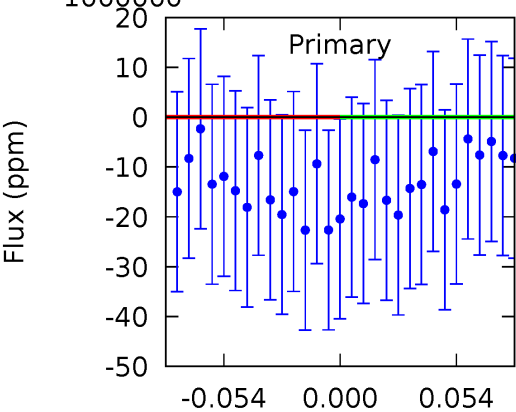
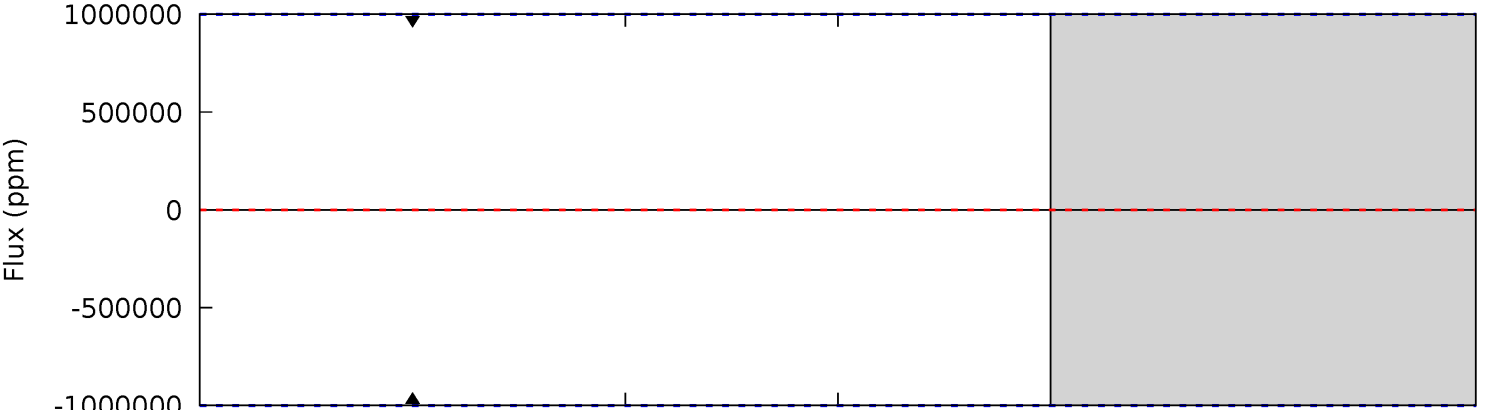
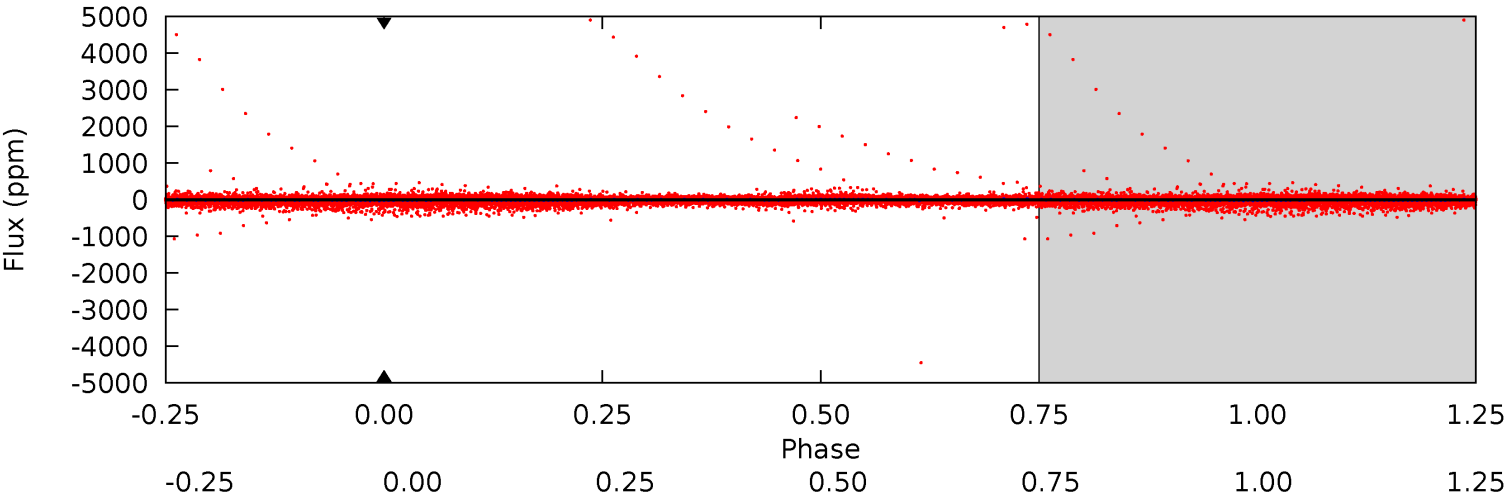
TCE 006864569-06 P= 0.775060 Days $T_0=132.034991$ (BKJD)



DV Model-Shift Uniqueness Test

006864569-06, P = 0.775060 Days, E = 131.225717 Days

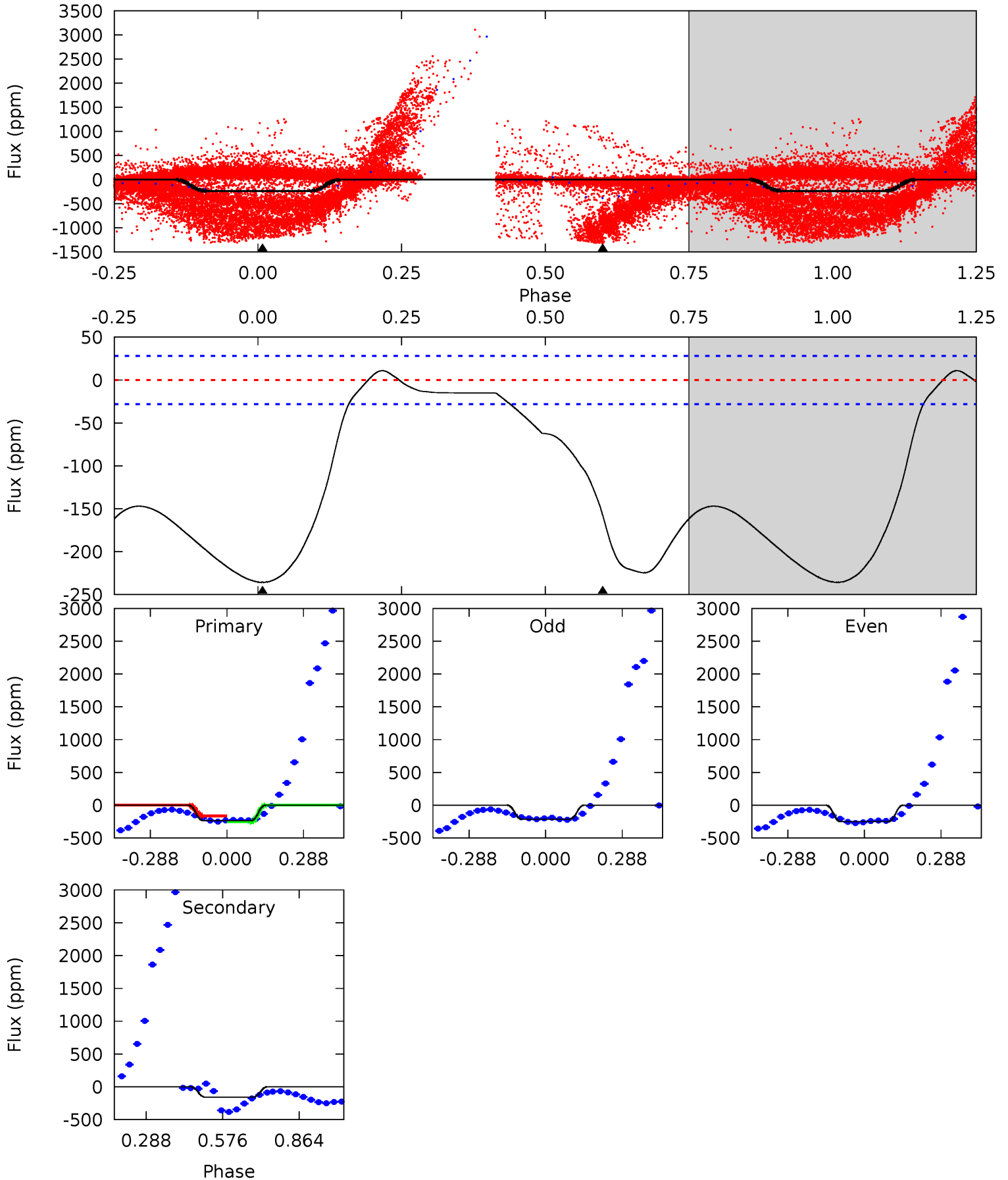
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006864569-06, P = 0.775060 Days, E = 131.259931 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.4	24.4	0	0	4.34	1.06	10.2	36.4	36.4	24.4	24.4	3.57	-14.4	0.04	6.84



Stellar Parameters For KIC 006864569

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11076^{+309}_{-530}	$3.989^{+0.253}_{-0.156}$	$0.070^{+0.150}_{-0.550}$	$2.896^{+0.654}_{-0.981}$	$2.984^{+0.221}_{-0.707}$	$0.173^{+0.289}_{-0.070}$
	+3%/-5%	+6%/-4%	+214%/-786%	+23%/-34%	+7%/-24%	+167%/-40%
Source	KIC0	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 006864569-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$21.05^{+22.59}_{-14.65}$	7432^{+544}_{-684}	$7729^{+115044}_{-108808}$	$1.684^{+136.113}_{-110.772}$
Alt.	-158 ± 6	$22.50^{+23.81}_{-15.88}$	7446^{+539}_{-635}	-4849^{+11641}_{-664}	$0.093^{+0.919}_{-0.071}$

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 $A_{obs} \gg 1.0$

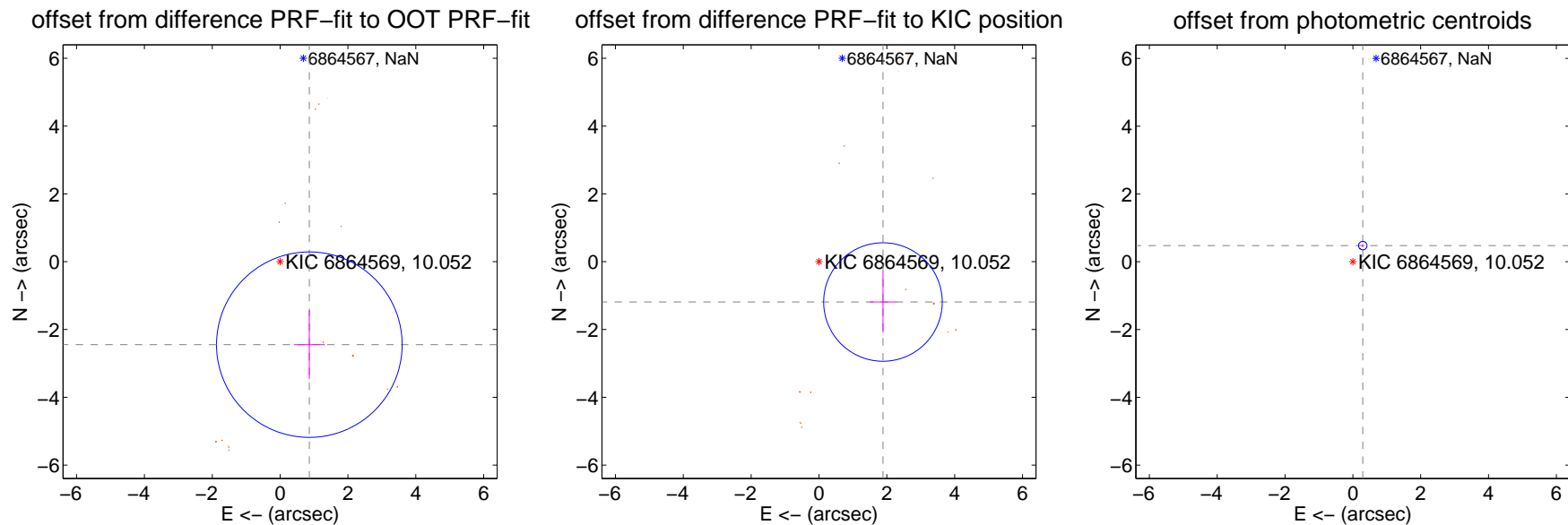
DV Centroid Data

Supplemental centroid analysis for 006864569-06. **Kepler magnitude: 10.05.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

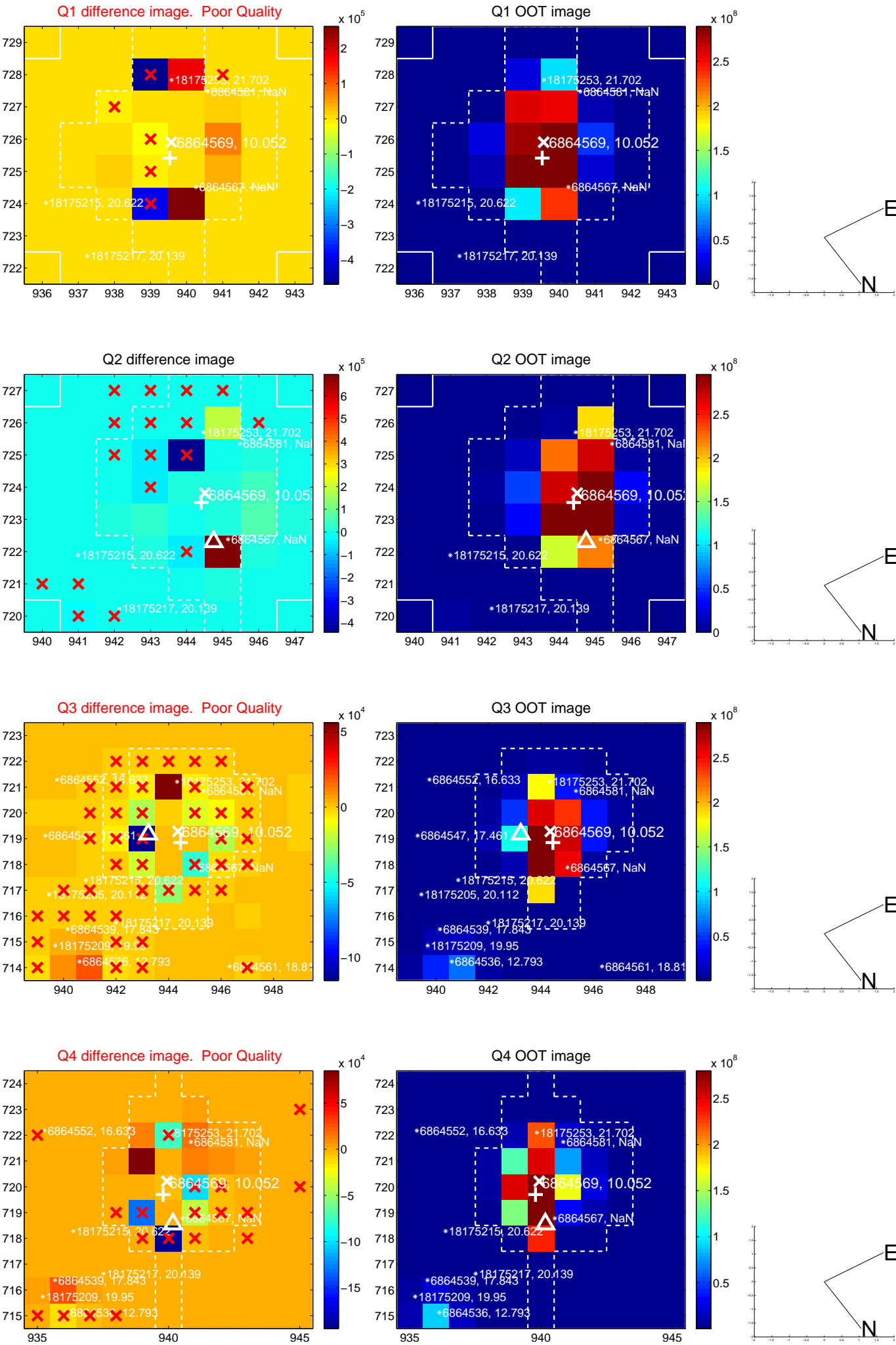
The direct PRF centroid is offset from the target star catalog position by about 1.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.594 ± 0.912	2.85	-0.861 ± 0.458	-2.446 ± 1.013
PRF-fit source offset from KIC position	2.229 ± 0.582	3.83	-1.885 ± 0.387	-1.189 ± 0.903
photometric centroid source offset	0.56 ± 0.04	13.47	-0.29 ± 0.03	0.48 ± 0.04

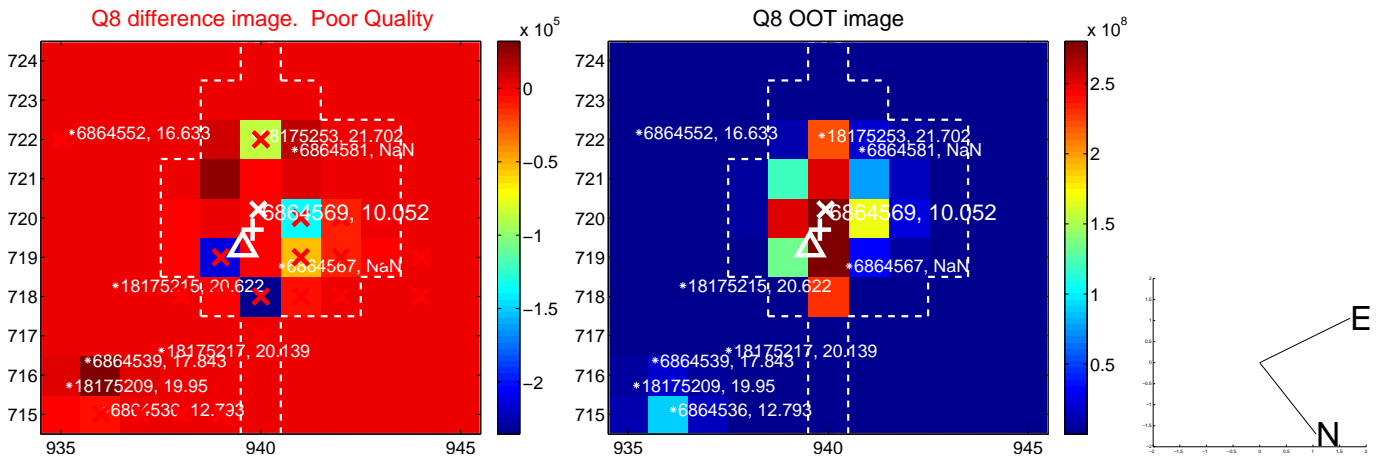
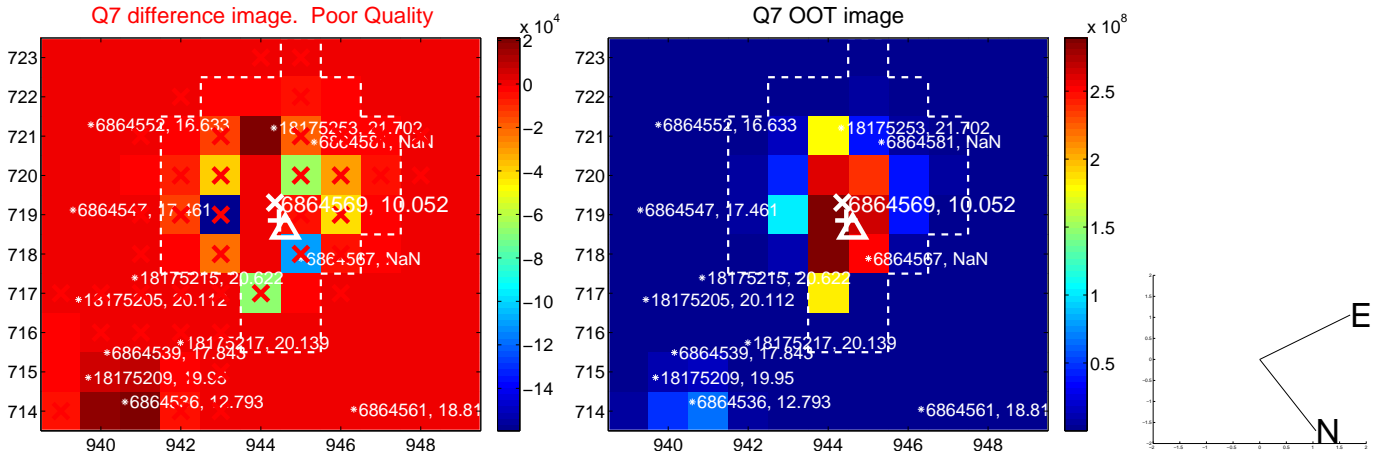
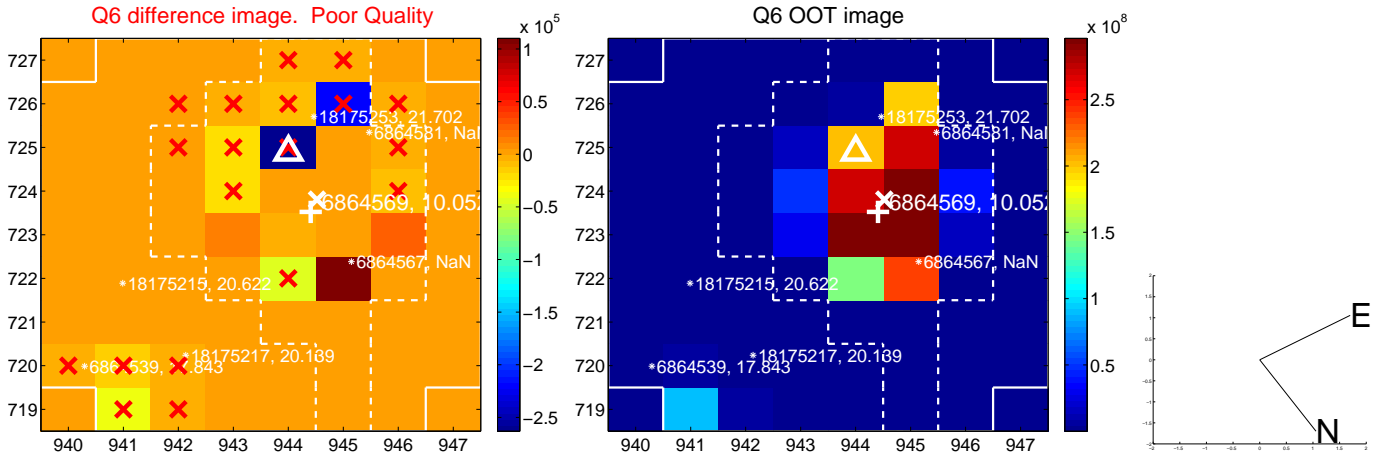
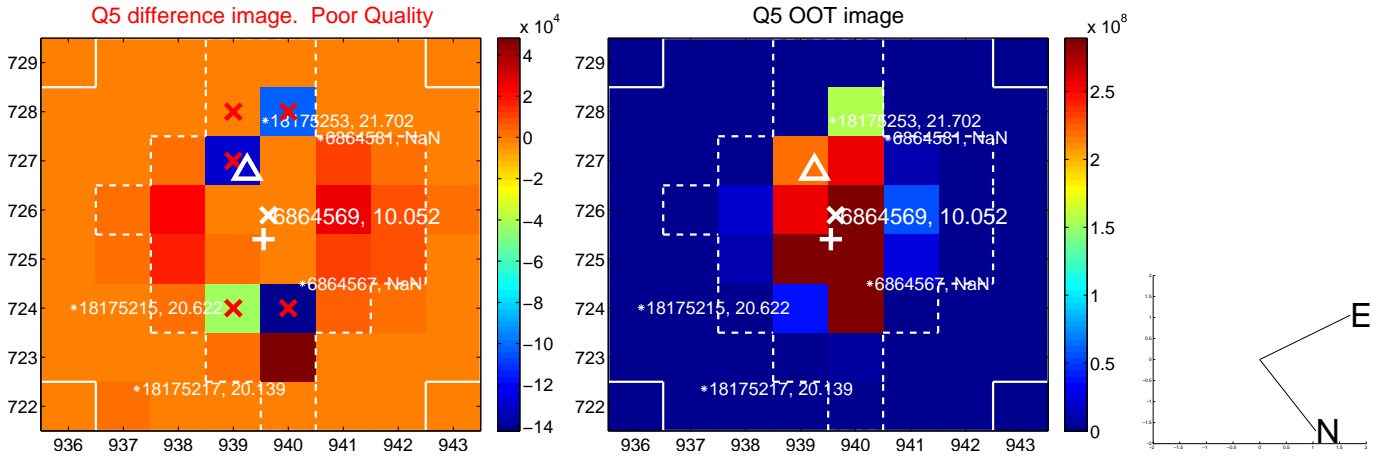


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

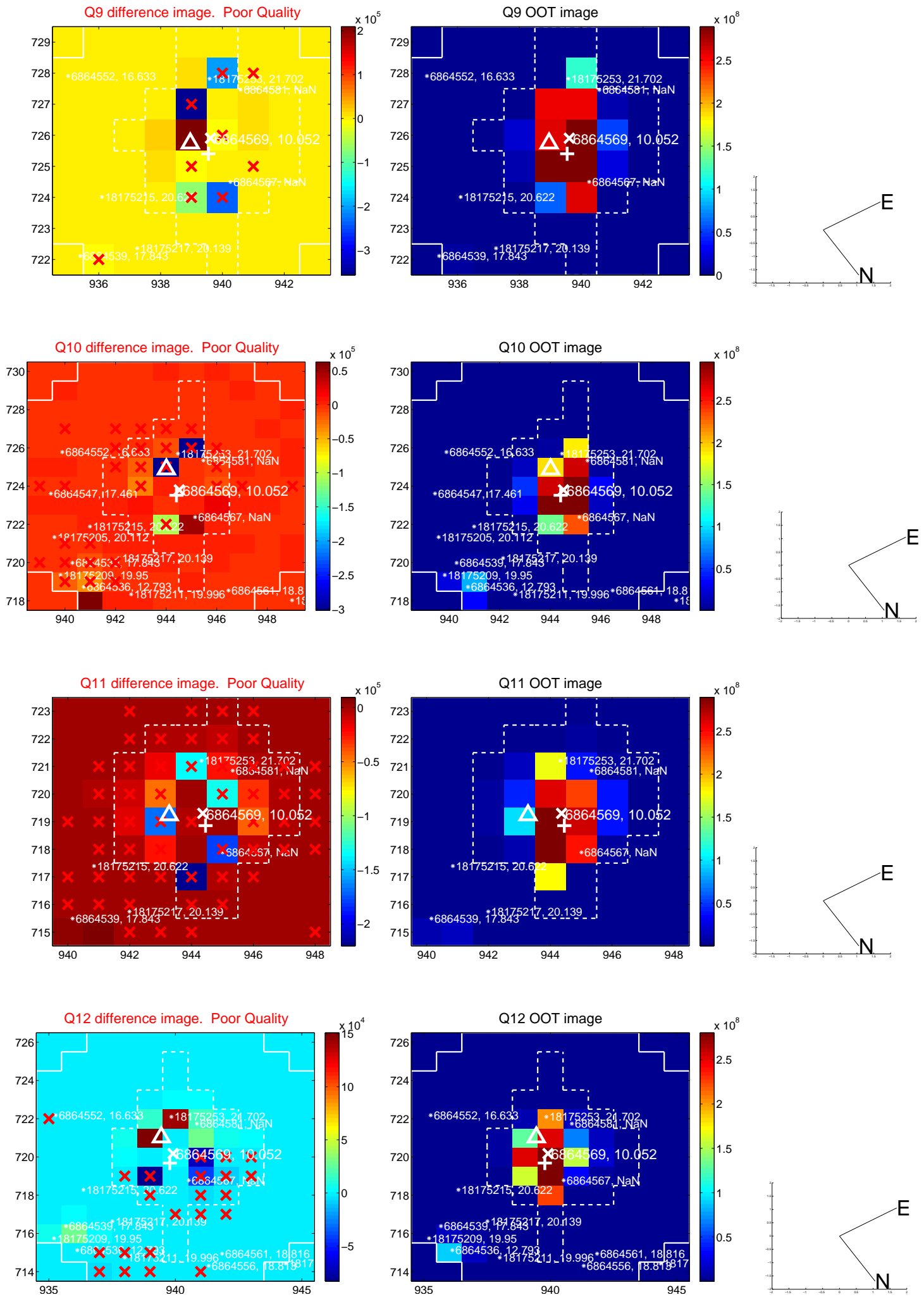
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



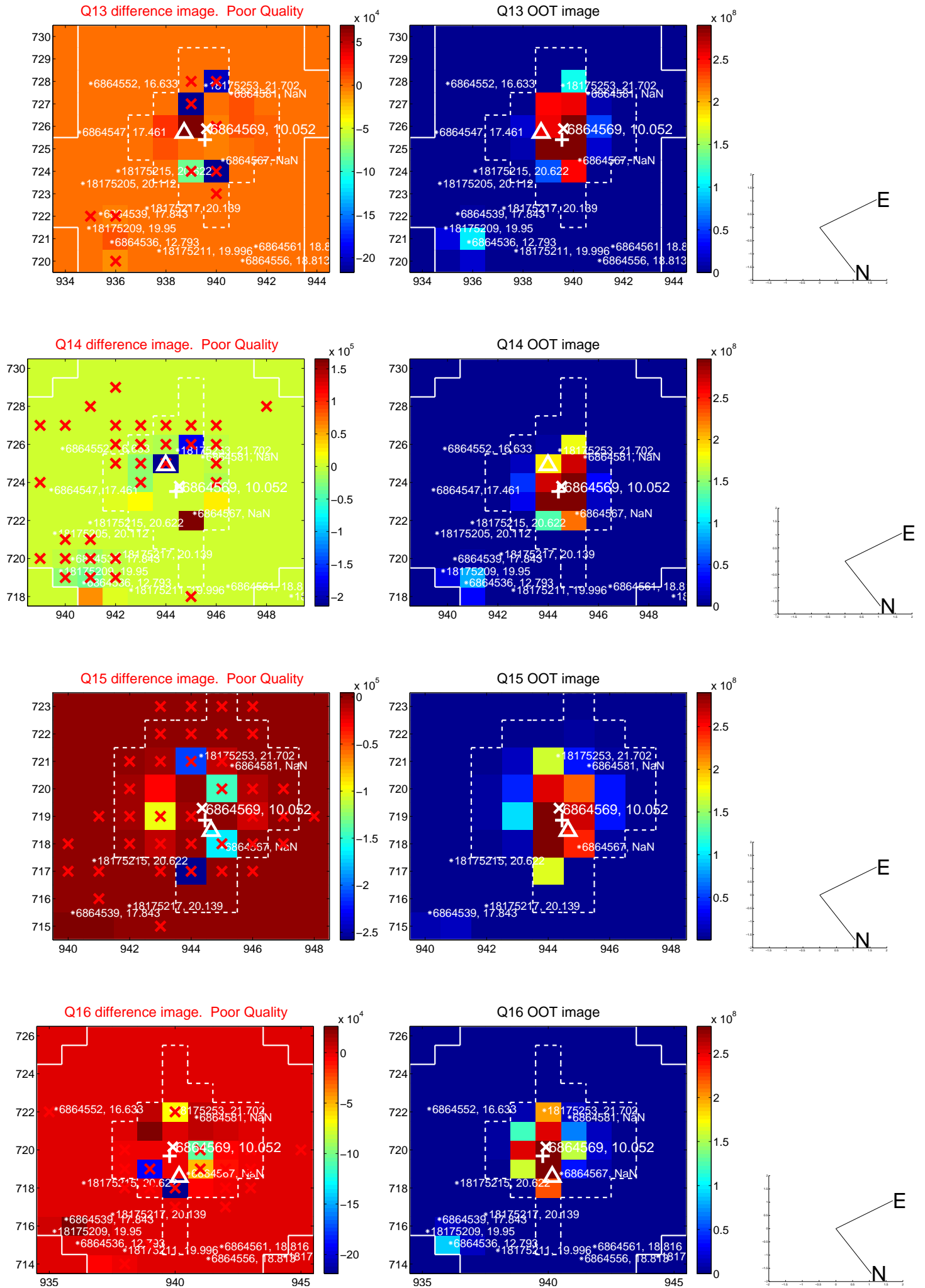
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



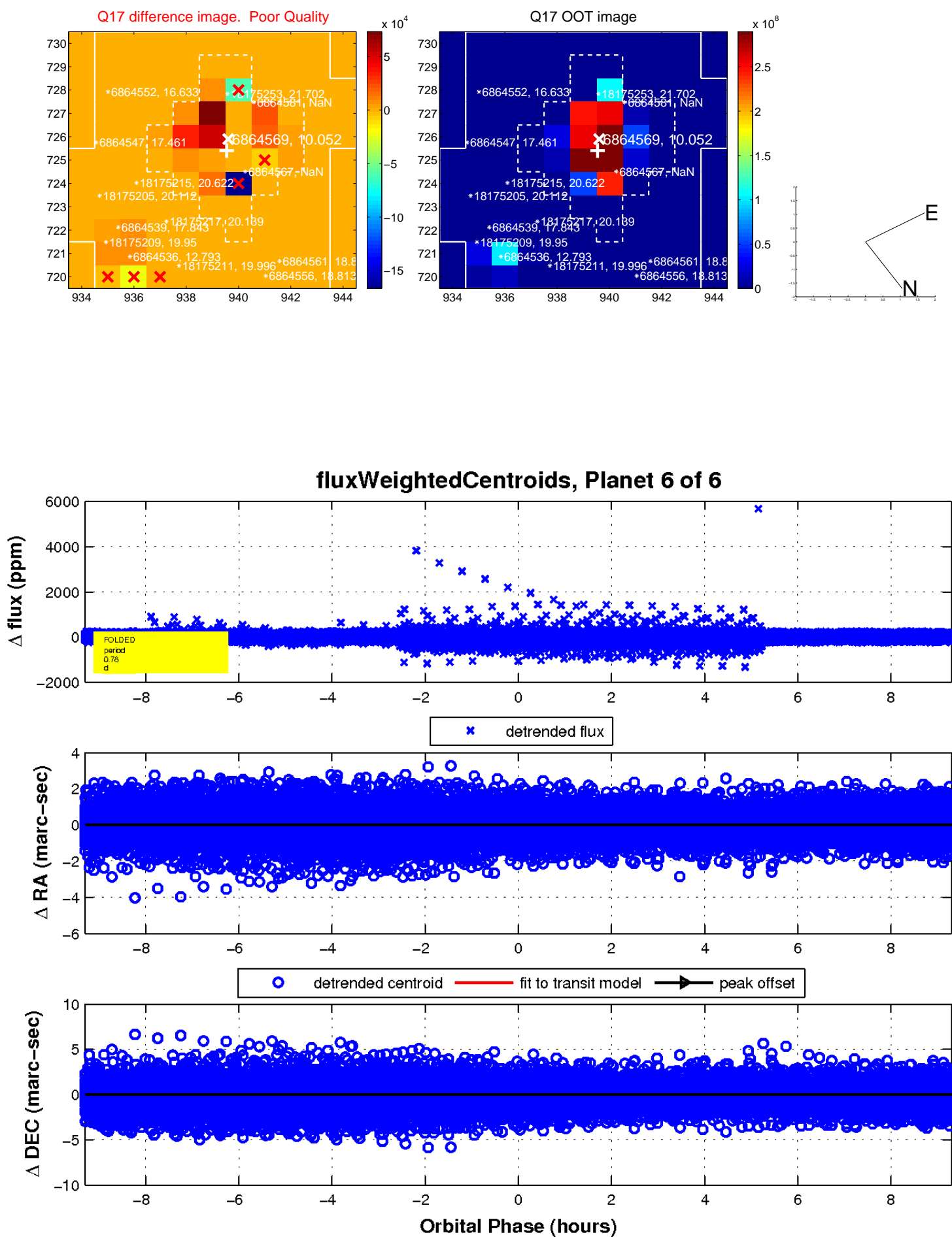
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

