

KIC 003662635

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})
003662635-01	OBS	8243.01	0.939390	131.995222	62117.4	2.753	729.6	436.0	0.98	5826	34.58	3327.68
003662635-02	OBS	No	0.939392	131.526619	65766.4	1.500	754.0	-1.0	0.98	5826	25.27	3327.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003662635-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_KIC_POS
003662635-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

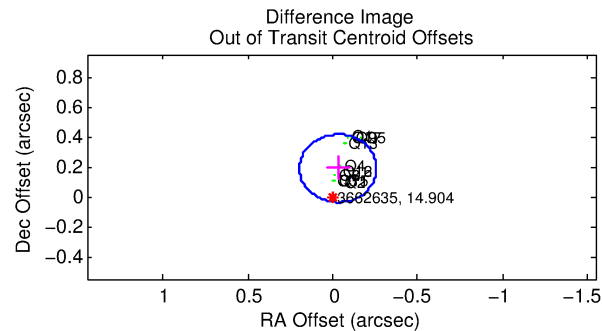
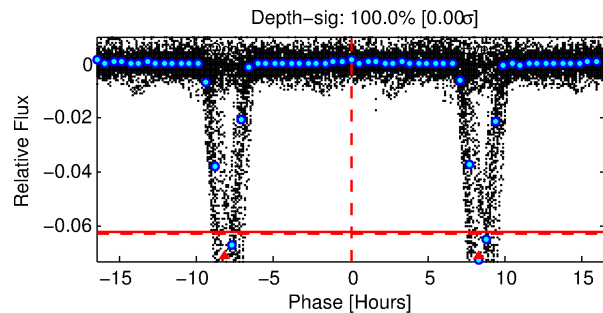
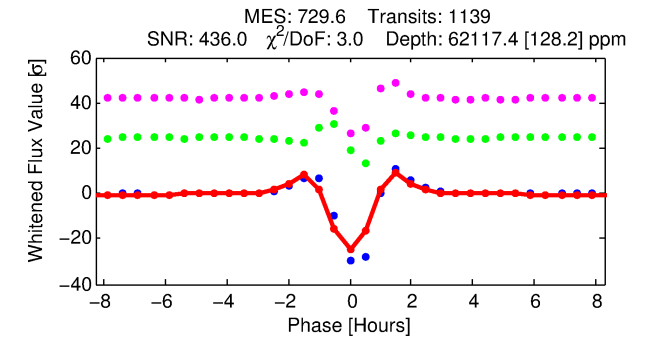
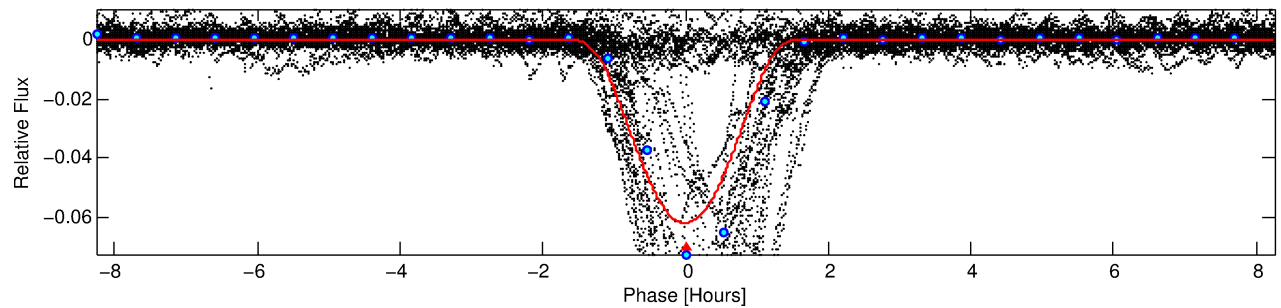
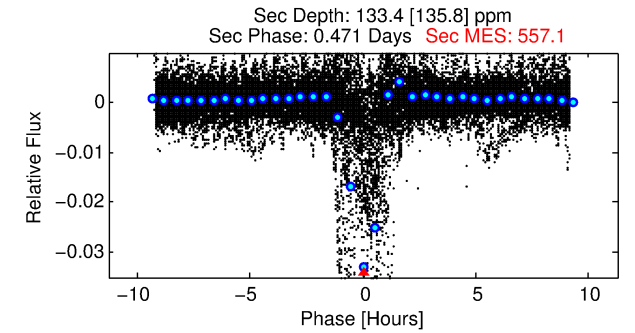
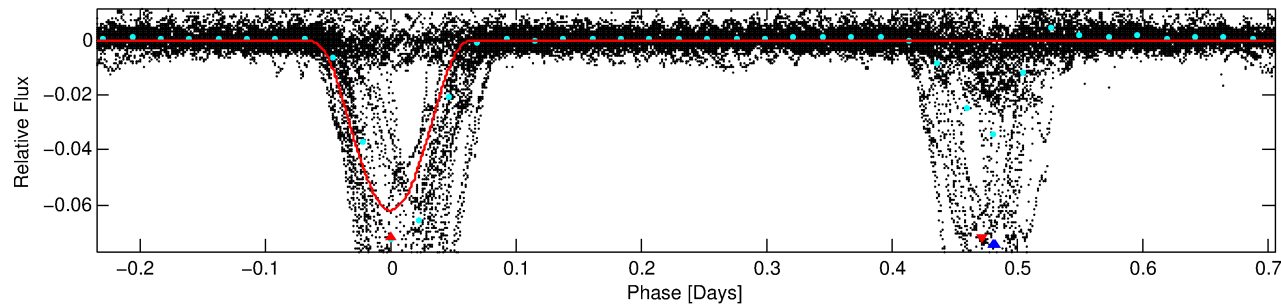
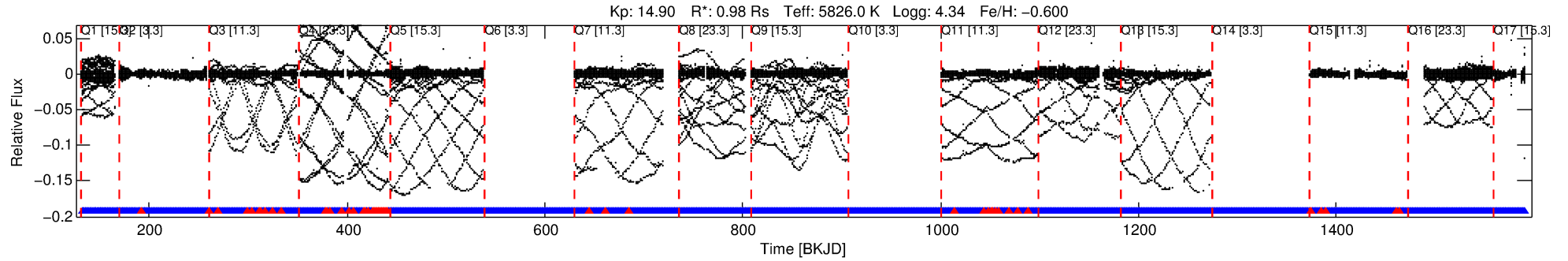
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003662635-01

No Significant Match Found

DV One-Page Summary

KIC: 3662635 Candidate: 1 of 2 Period: 0.939 d



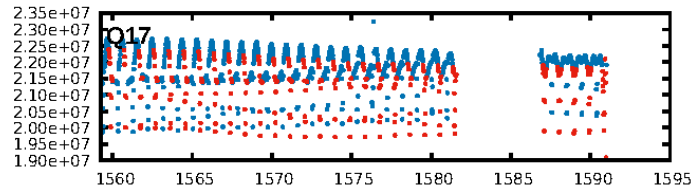
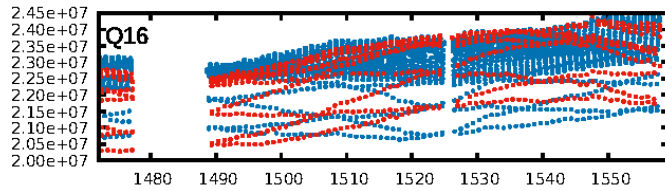
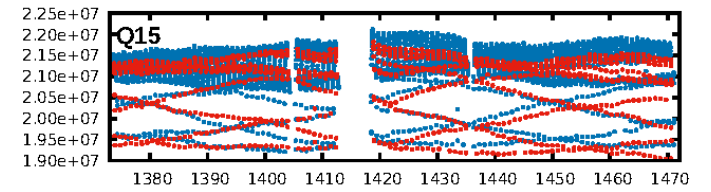
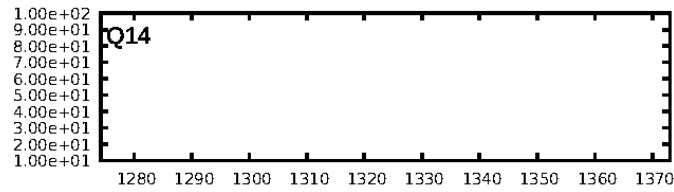
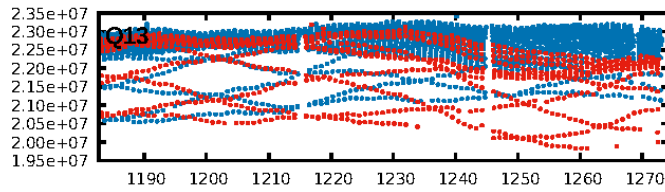
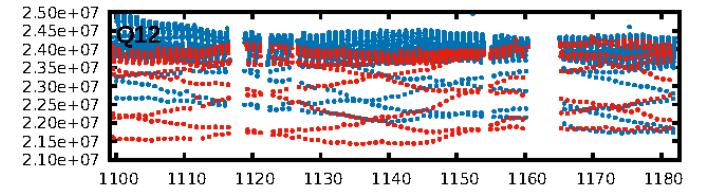
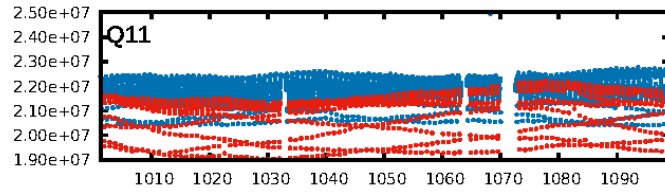
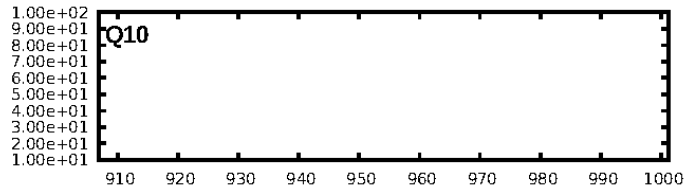
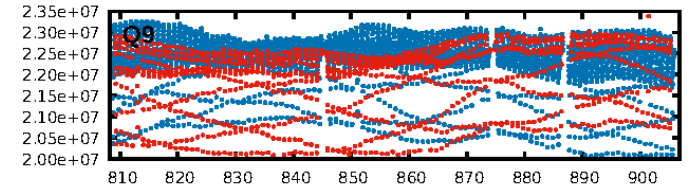
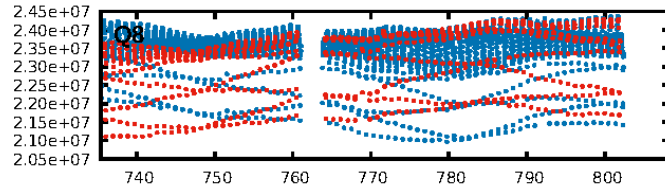
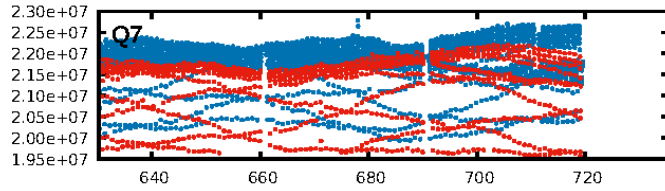
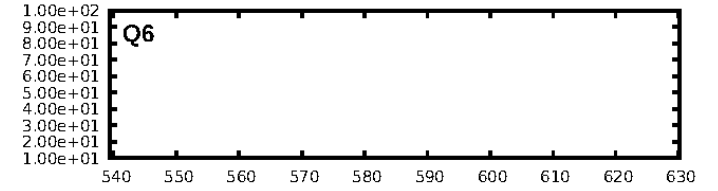
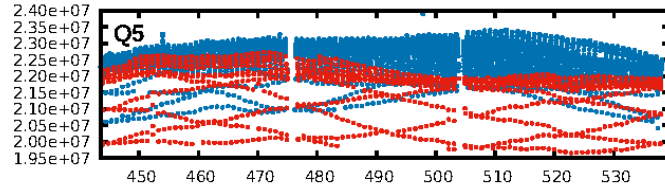
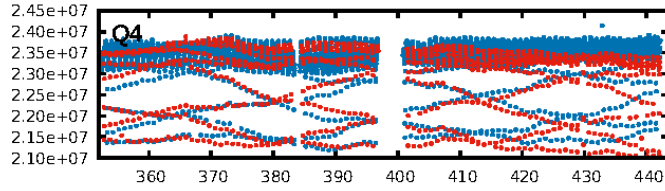
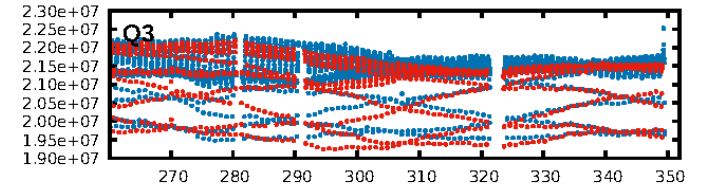
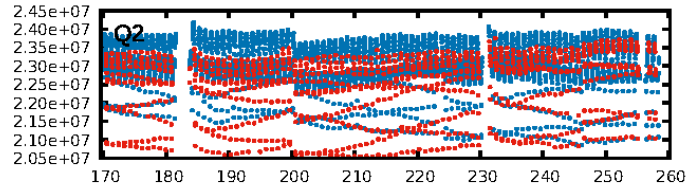
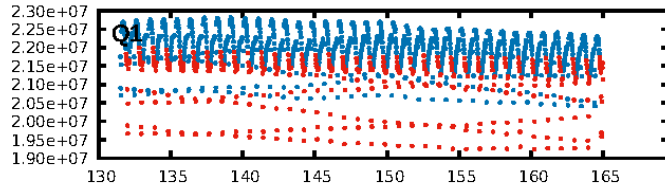
DV Fit Results:

Period = 0.93939 [0.00000] d
Epoch = 131.9952 [0.0000] BKJD
Rp/R* = 0.3241 [0.0118]
a/R* = 2.75 [0.00]
b = 0.90 [0.02]
Seff = 3327.67 [1301.28]
Teq = 1937 [189] K
Rp = 34.58 [10.40] Re
a = 0.0172 [0.0044] AU
Ag = 0.02 [0.02] [-49.65σ]
Teffp = 1100 [282] K [-2.46σ]

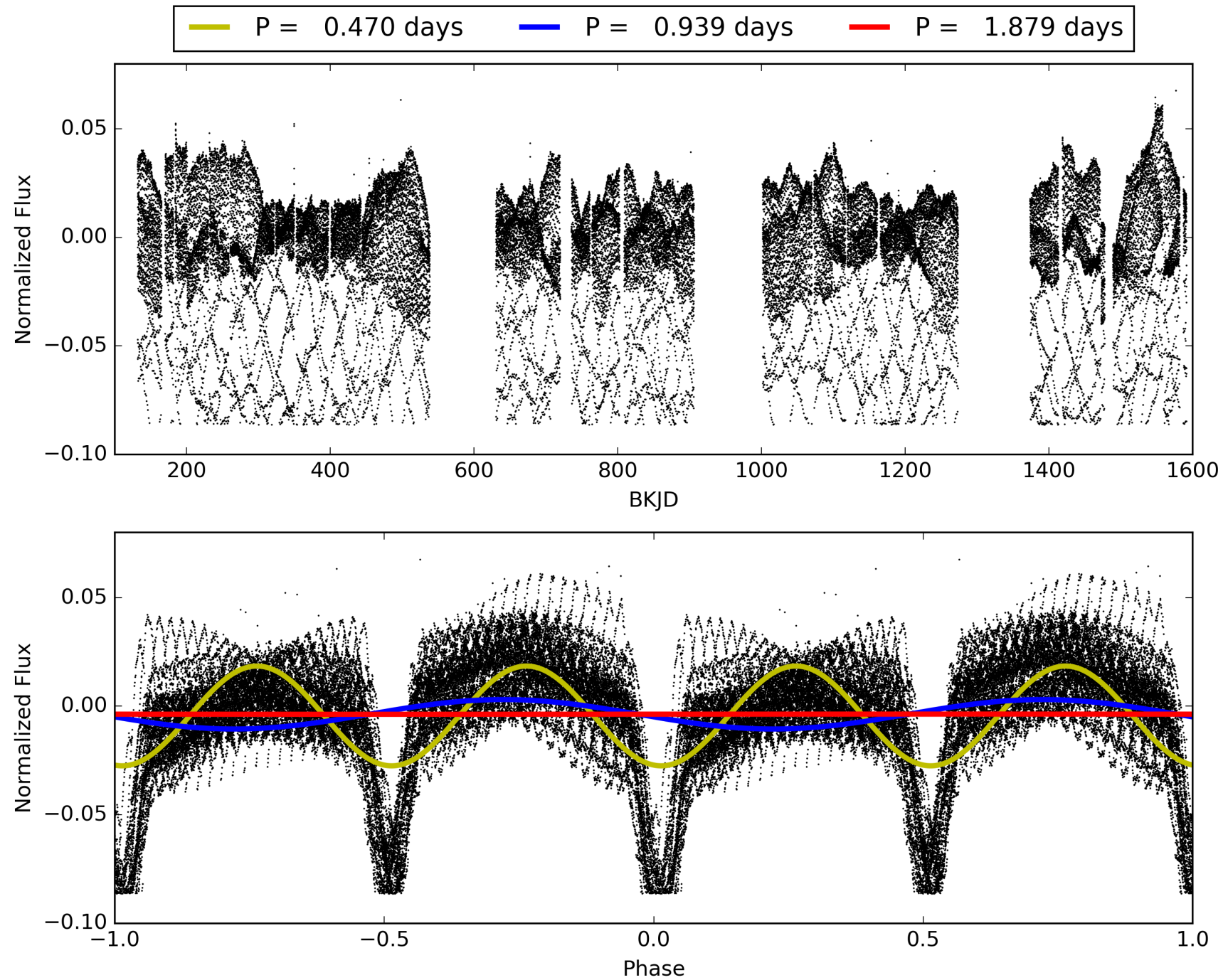
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1023/1074]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.545 arcsec [182.33σ]
OotOffset-rm: 0.191 arcsec [2.52σ]
KicOffset-rm: 0.201 arcsec [2.77σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003662635-01, PDC Light Curves

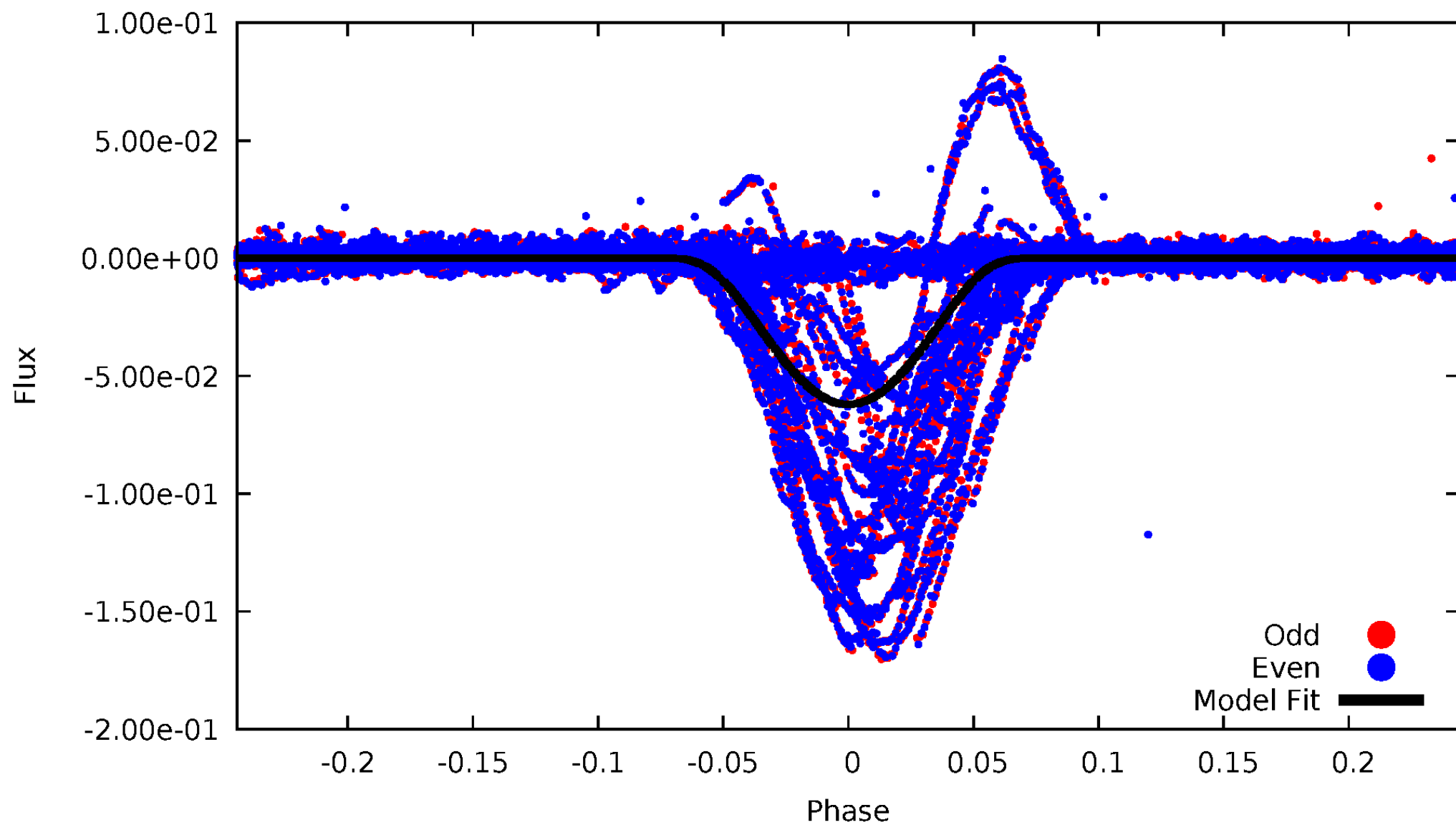


TCE 003662635-01



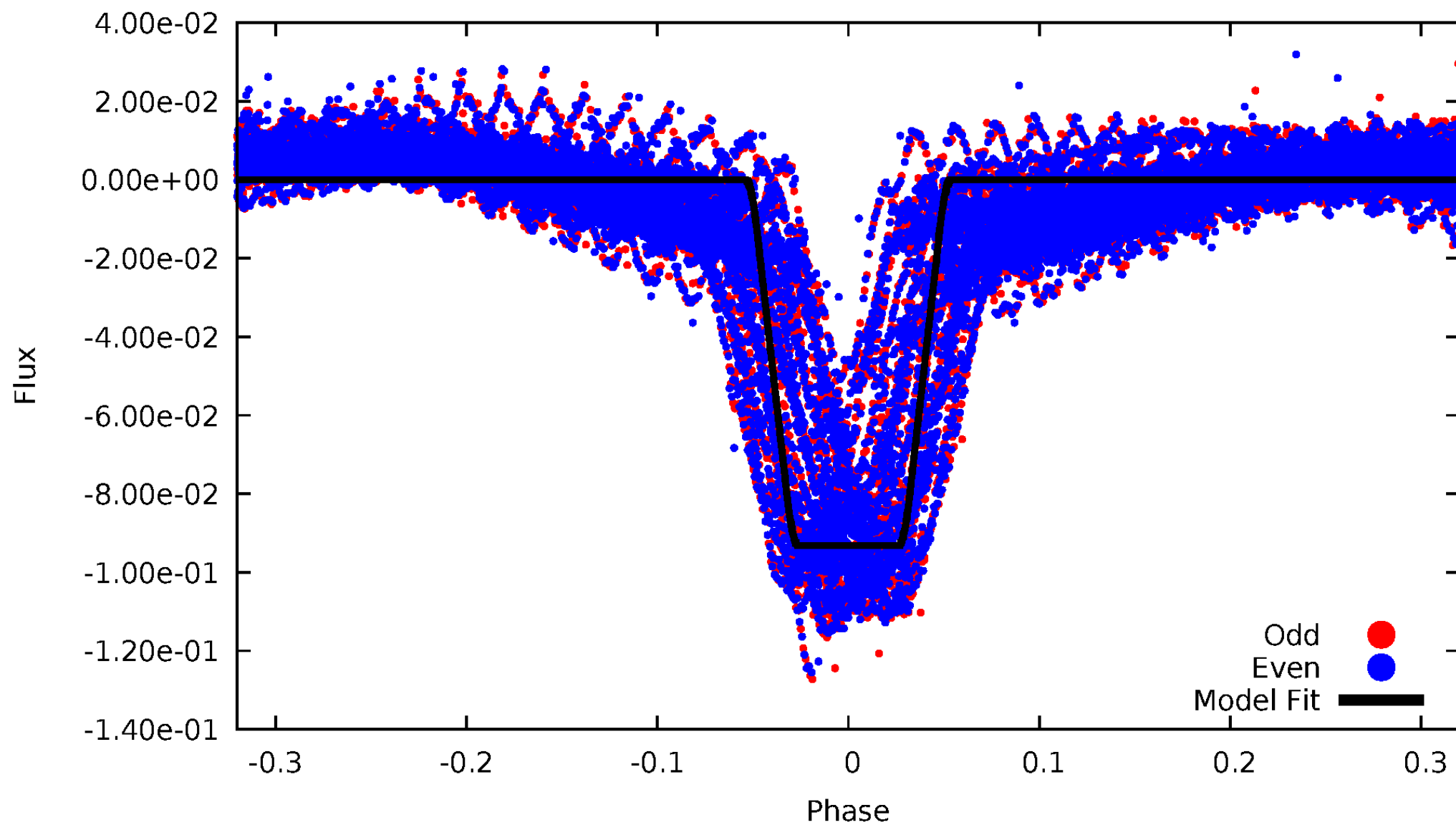
DV Odd/Even

TCE 003662635-01



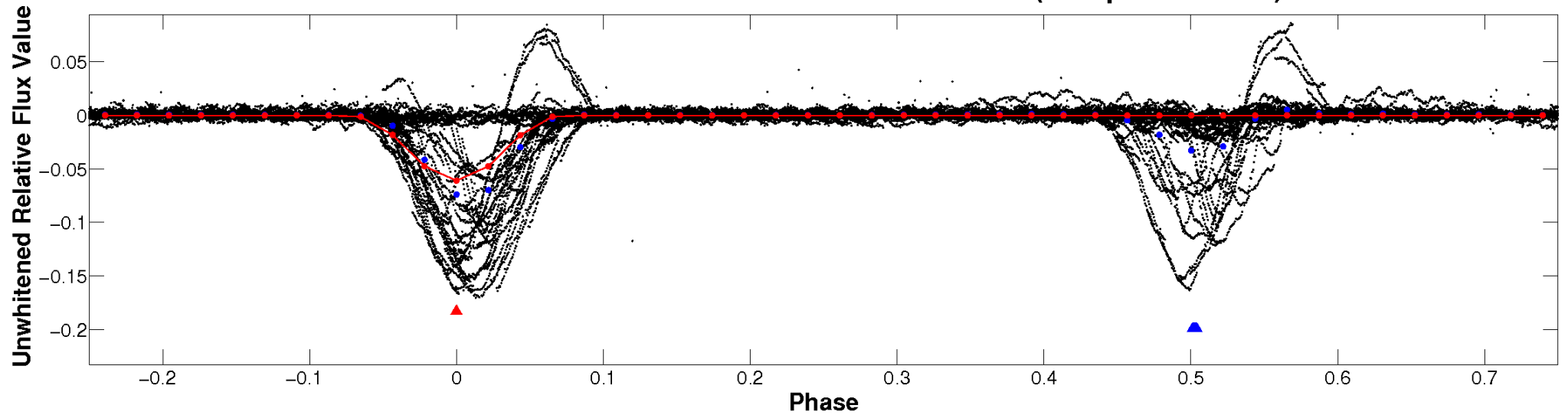
ALT Odd/Even

TCE 003662635-01

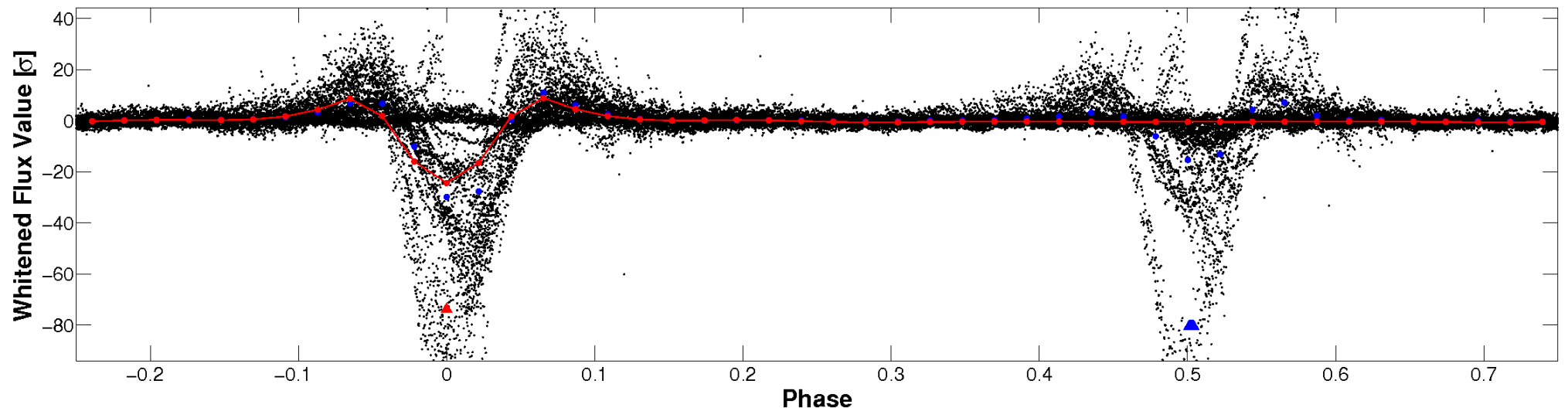


Non-Whitened Vs. Whitened Light Curve

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

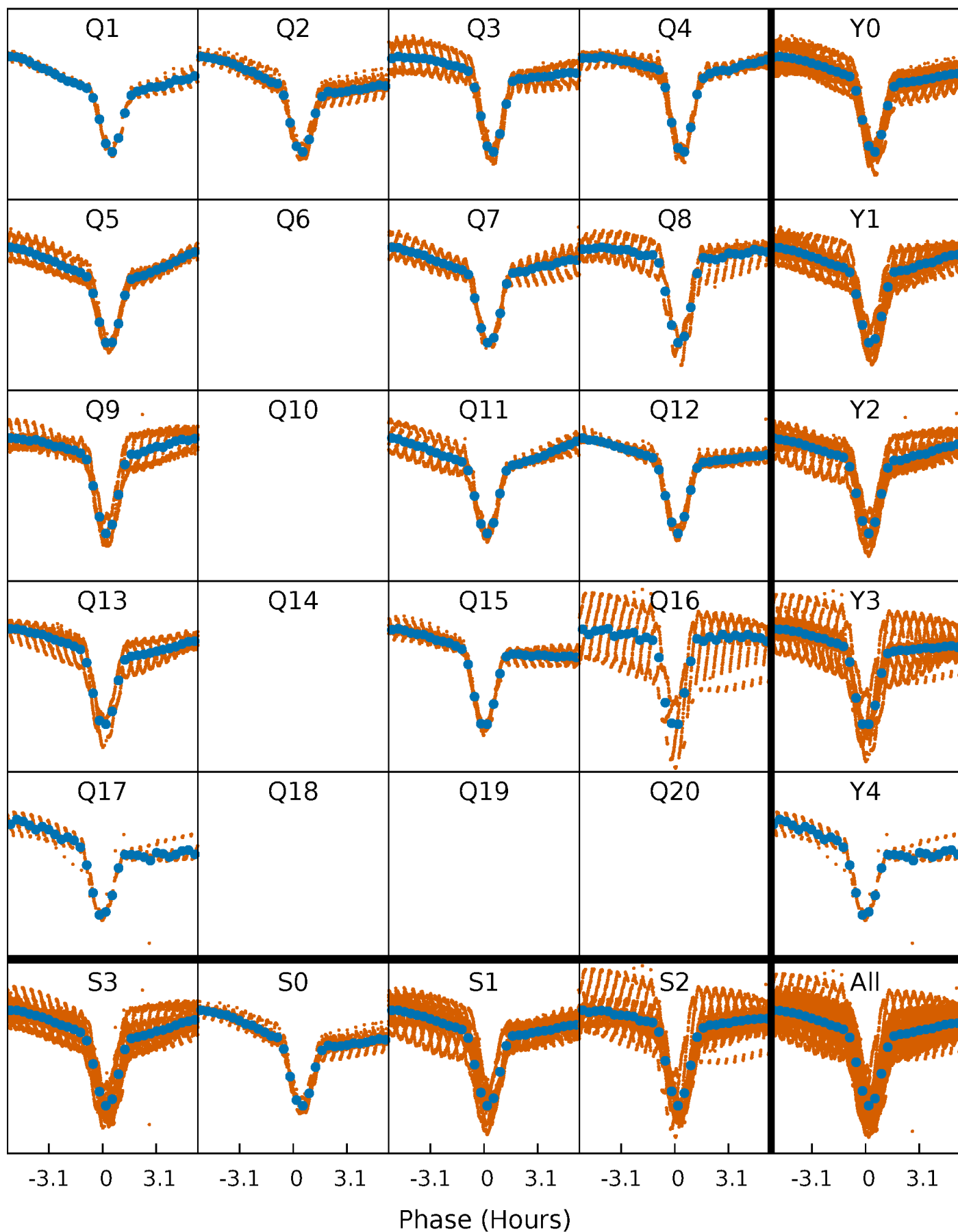


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



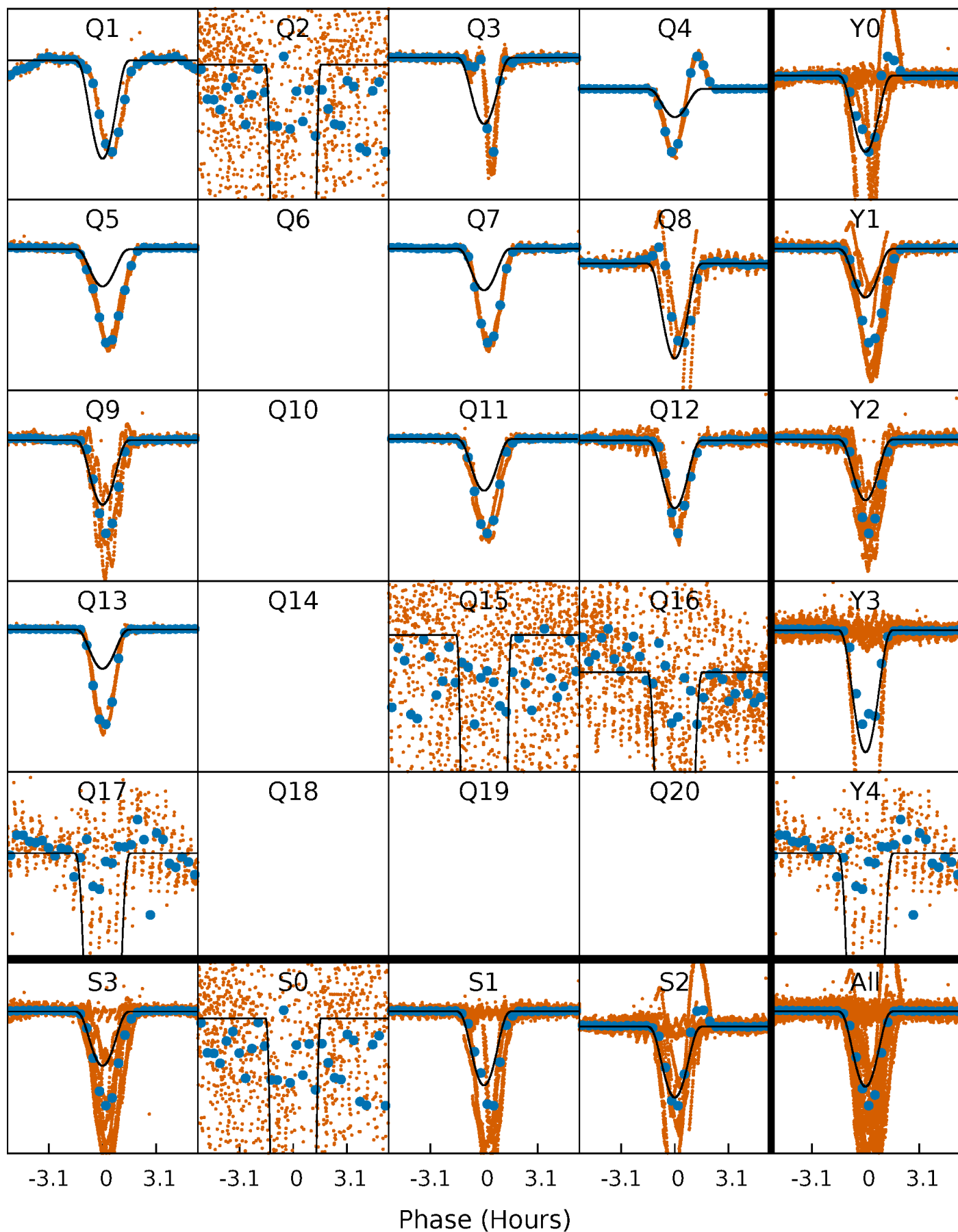
PDC Quarter-Phased Transit Curves

TCE 003662635-01 P= 0.939390 Days $T_0=131.995222$ (BKJD)



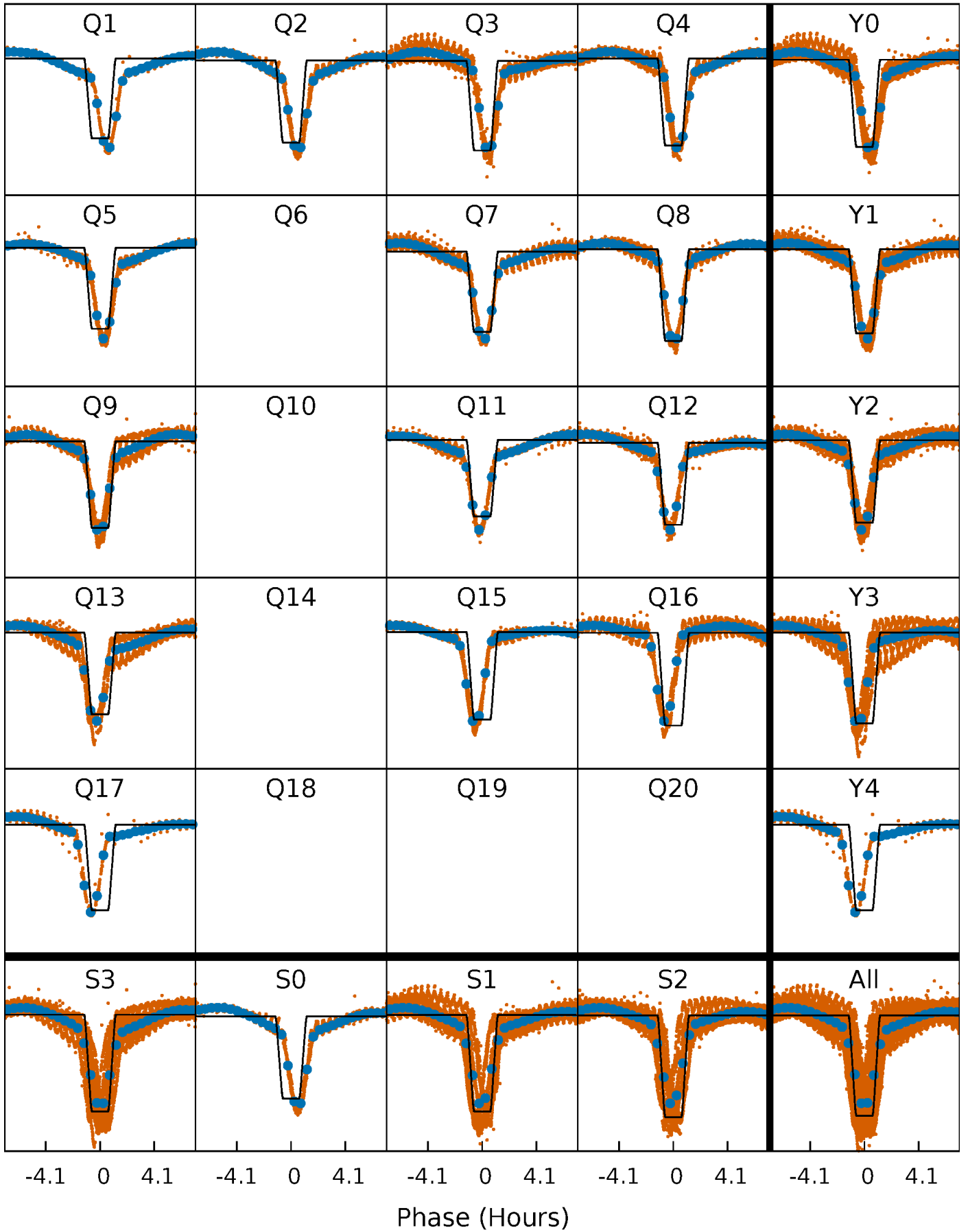
DV Quarter-Phased Transit Curves

TCE 003662635-01 P= 0.939390 Days $T_0=131.995222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

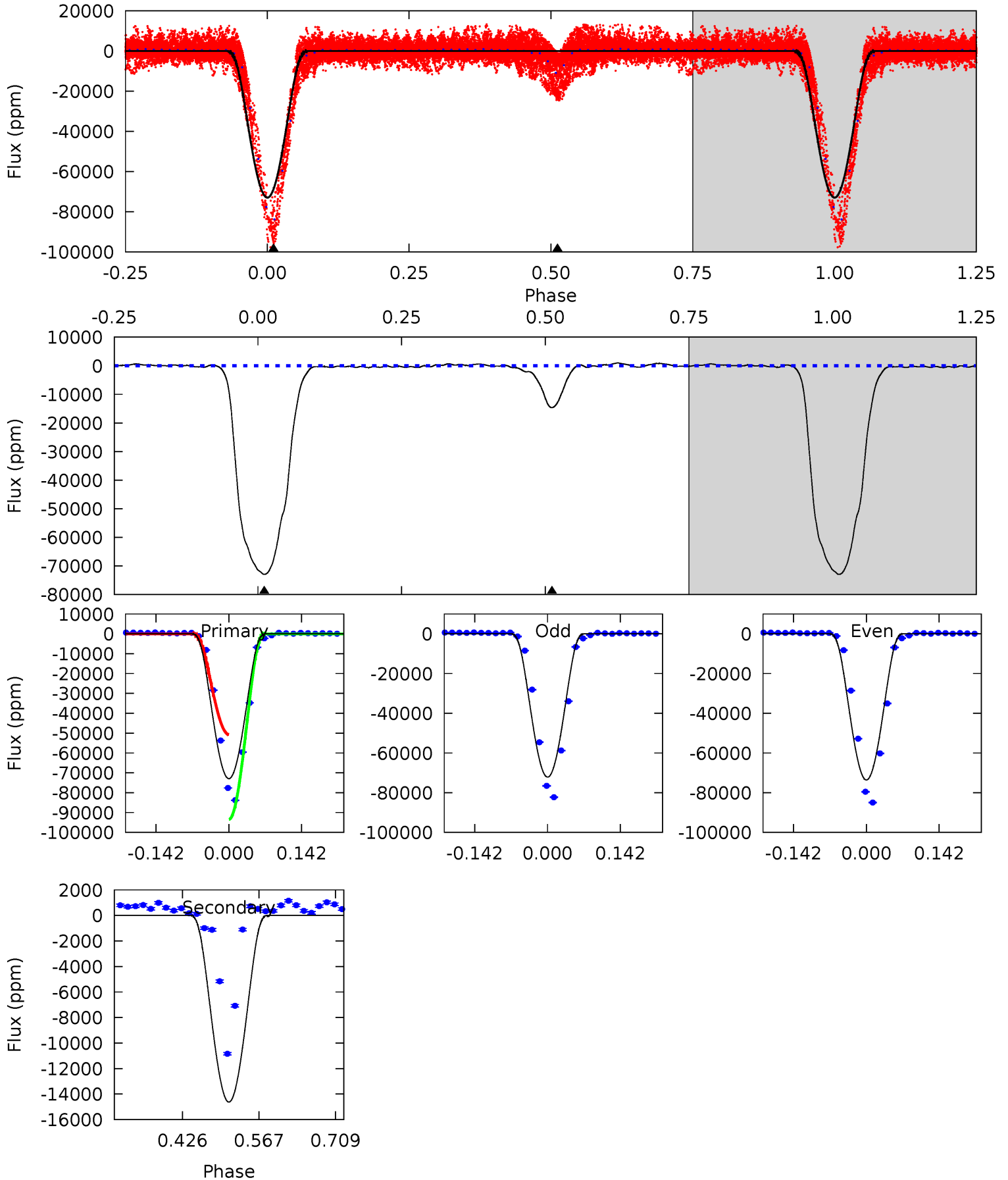
TCE 003662635-01 P= 0.939409 Days $T_0=131.991546$ (BKJD)



DV Model-Shift Uniqueness Test

003662635-01, P = 0.939390 Days, E = 131.055832 Days

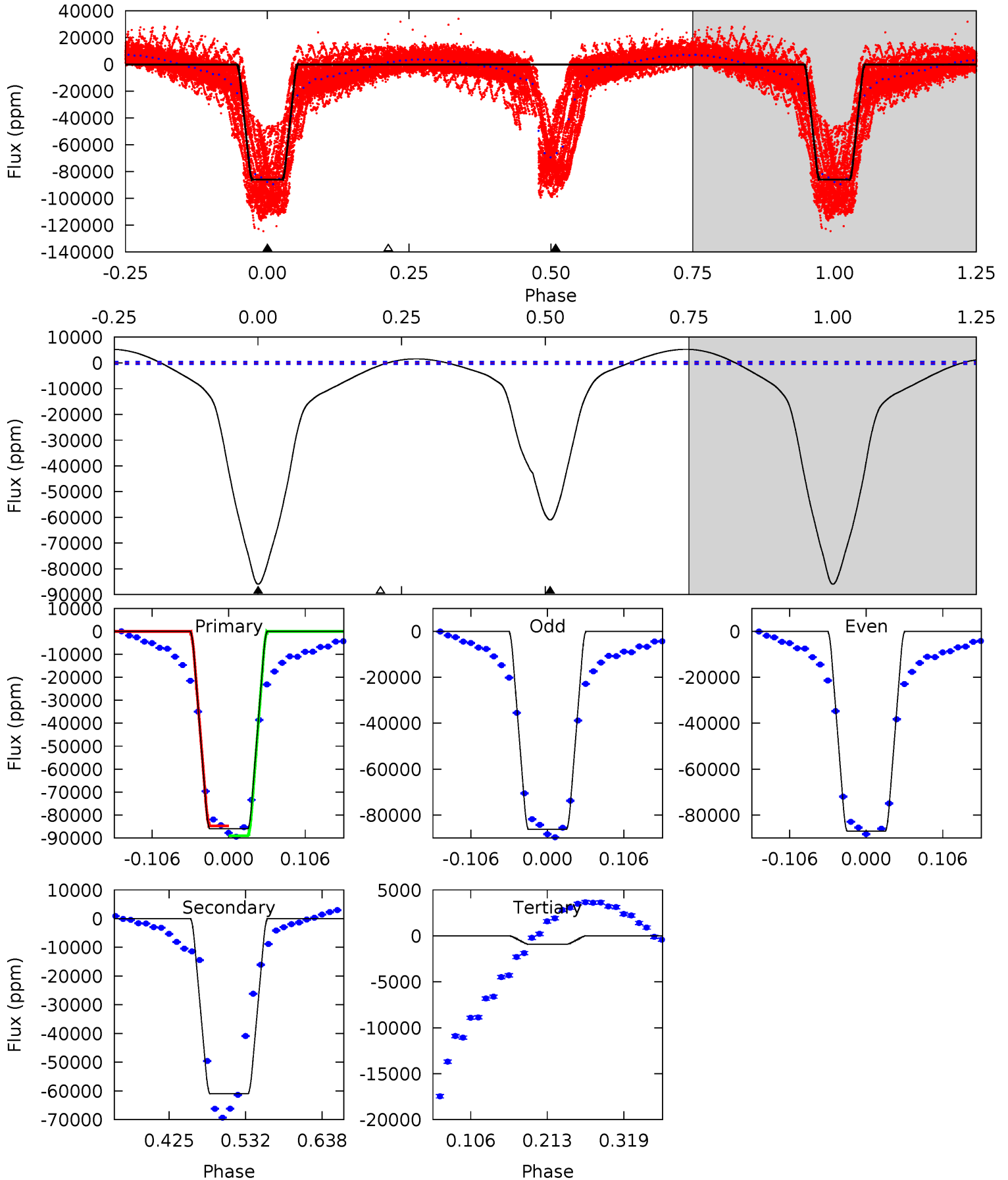
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1439	288.7	0	0	4.49	1.47	7.41	1439	1439	288.7	288.7	14.2	0.95	0.01	0



Alt Model-Shift Uniqueness Test

003662635-01, P = 0.939409 Days, E = 131.052137 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
856.0	607.4	8.99	0	4.55	1.62	41.3	847.0	856.0	598.4	607.4	4.10	0.99	0.06	21.3



Stellar Parameters For KIC 003662635

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5826^{+174}_{-174}	$4.345^{+0.205}_{-0.205}$	$-0.600^{+0.300}_{-0.300}$	$0.978^{+0.292}_{-0.219}$	$0.772^{+0.111}_{-0.043}$	$1.162^{+1.233}_{-0.597}$
	+3%/-3%	+5%/-5%	+50%/-50%	+30%/-22%	+14%/-6%	+106%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 003662635-01 / KOI 8243.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14629 ± 51	$34.53^{+6.10}_{-4.42}$	2698^{+231}_{-188}	3800^{+112}_{-104}	$2.049^{+0.641}_{-0.545}$
Alt.	-60998 ± 100	$32.94^{+6.06}_{-4.21}$	2700^{+233}_{-177}	5320^{+182}_{-167}	$9.956^{+3.215}_{-2.721}$

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

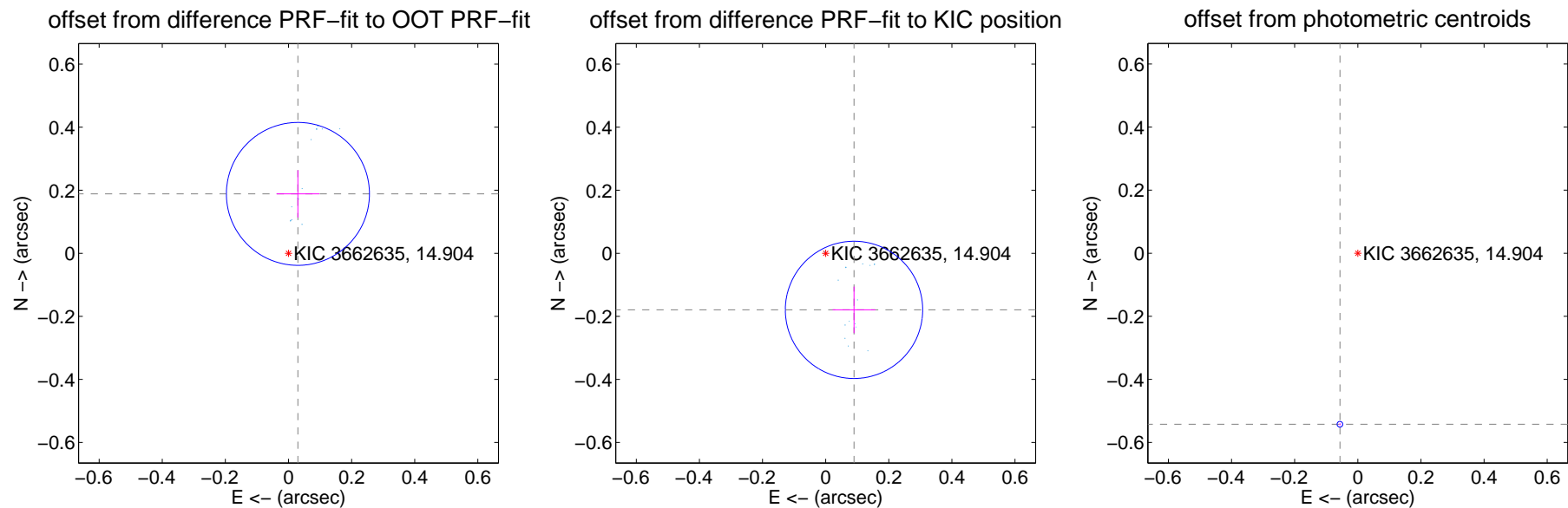
DV Centroid Data

Supplemental centroid analysis for 003662635-01. Kepler magnitude: 14.90. Transit SNR 436.00

There are 14 quarters with good PRF difference image offsets

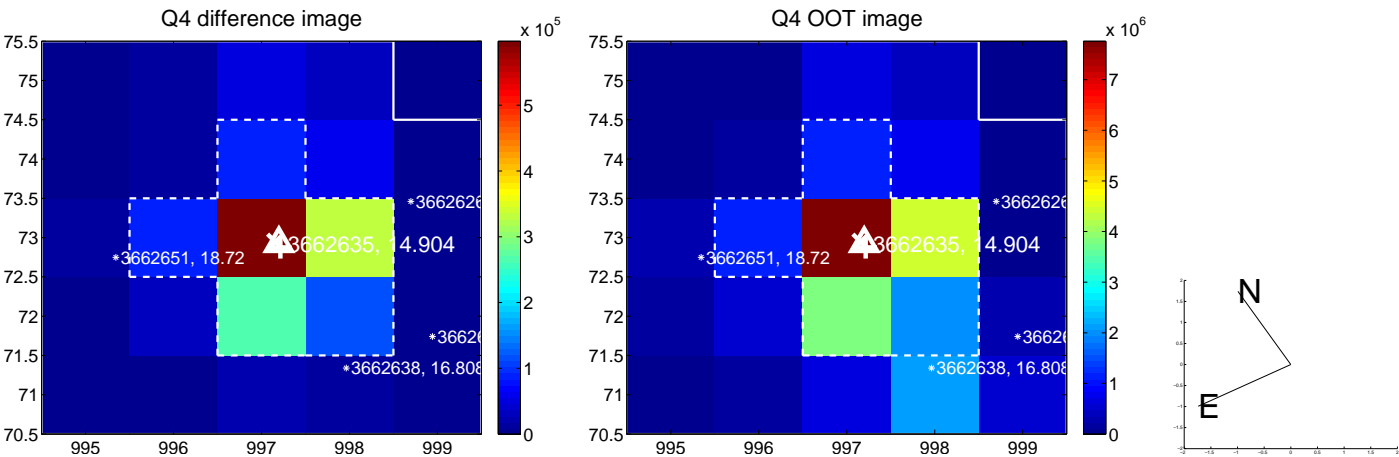
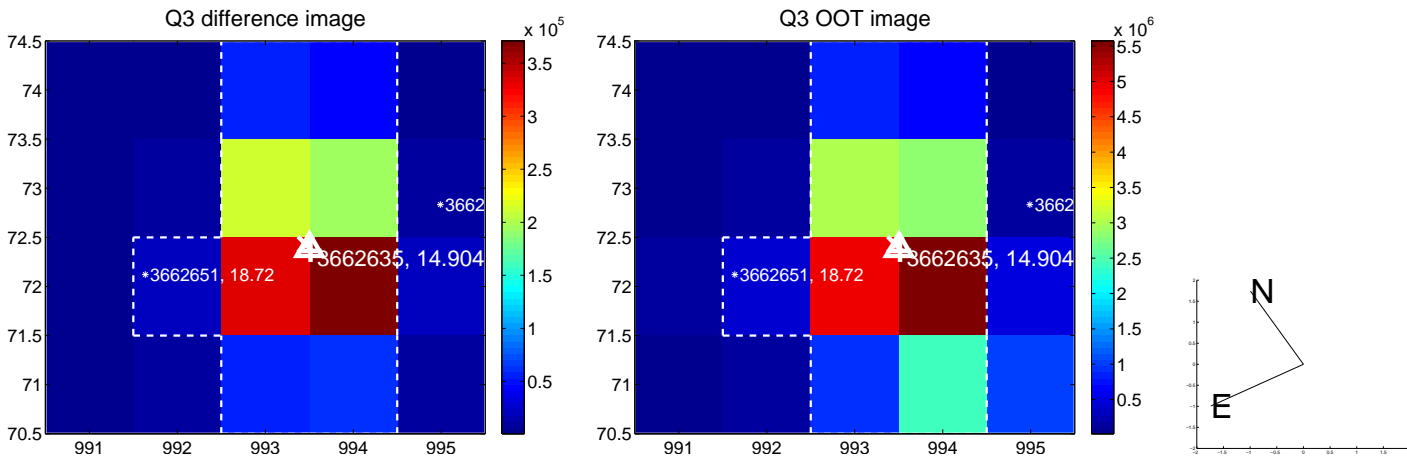
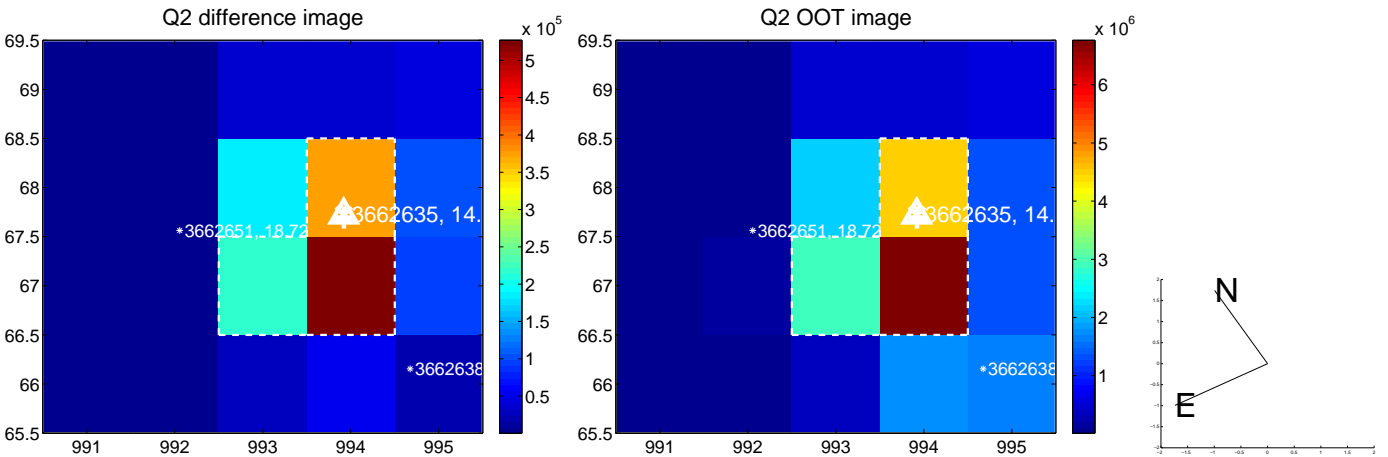
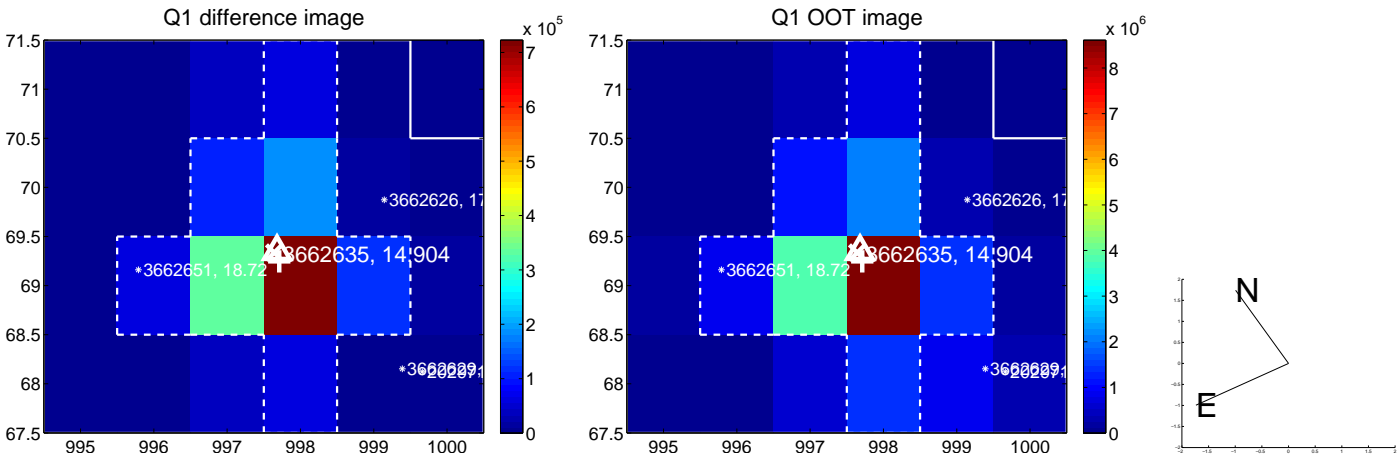
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.191 ± 0.076	2.52	-0.030 ± 0.068	0.188 ± 0.075
PRF-fit source offset from KIC position	0.201 ± 0.073	2.77	-0.090 ± 0.068	-0.179 ± 0.074
photometric centroid source offset	0.55 ± 0.00	182.33	0.06 ± 0.00	-0.54 ± 0.00

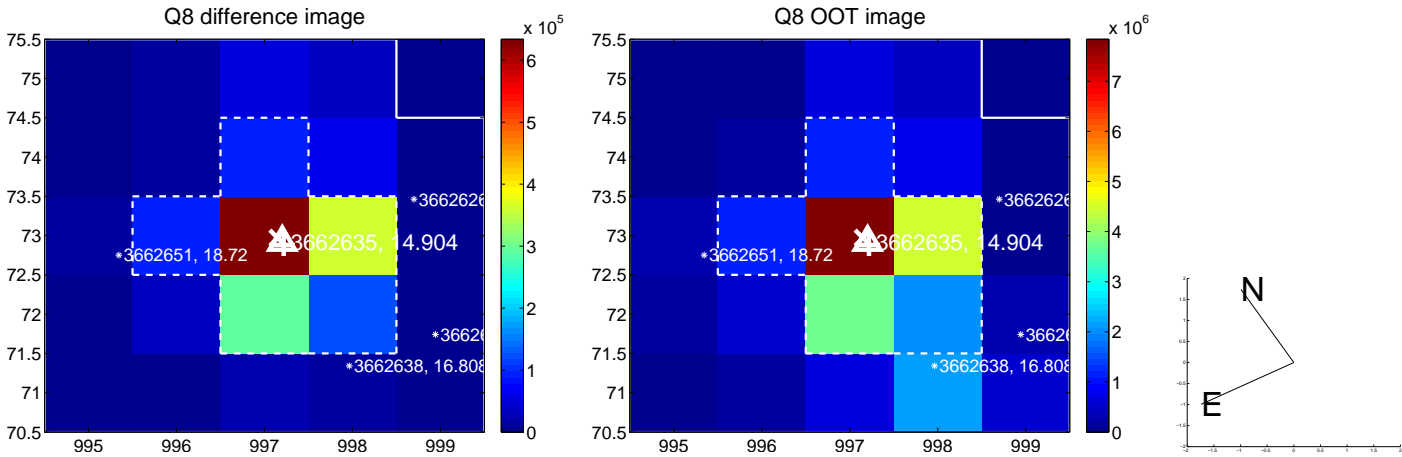
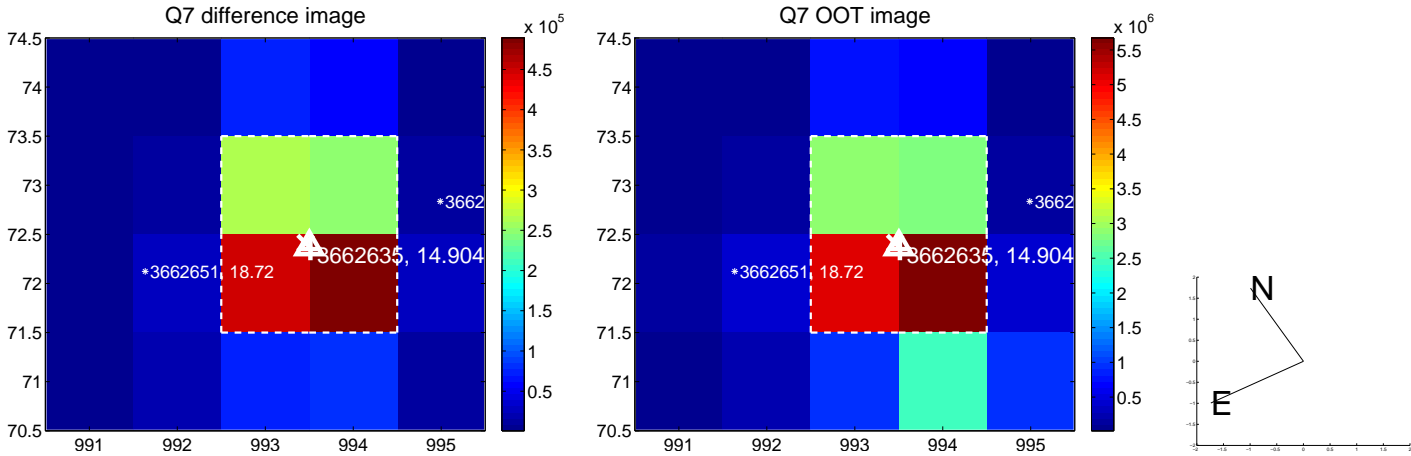
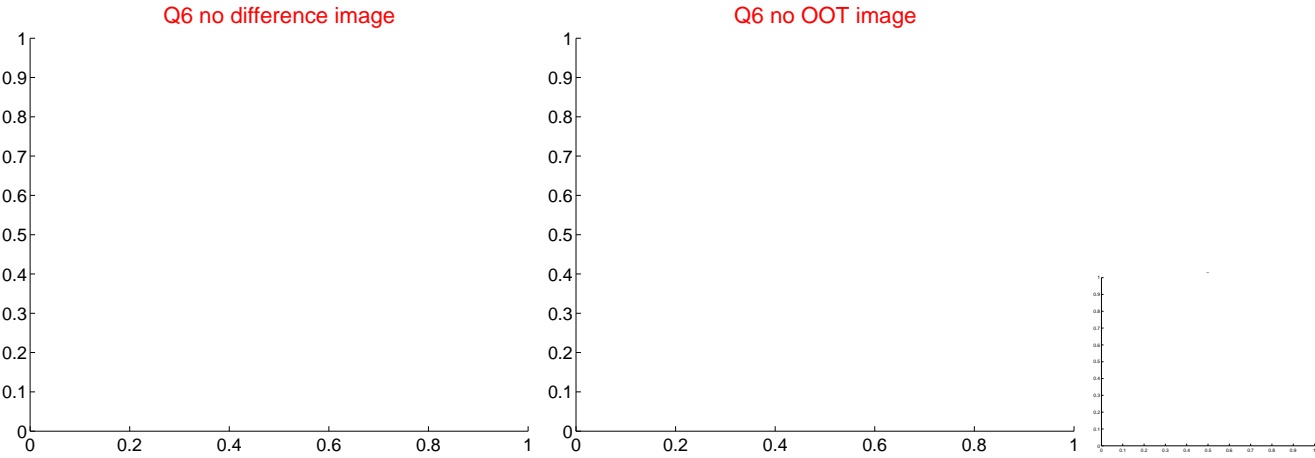
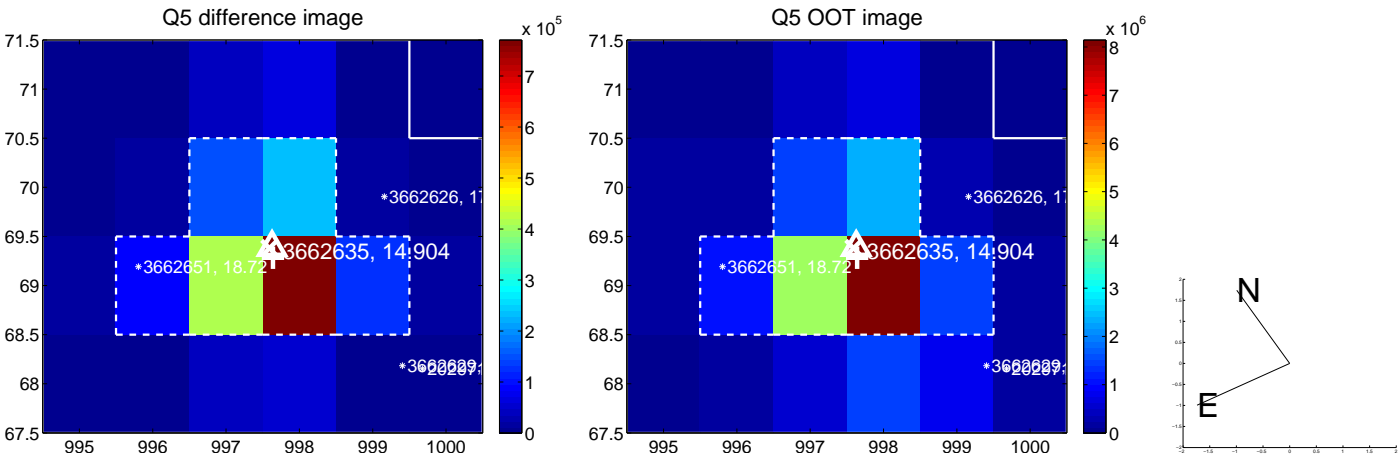


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

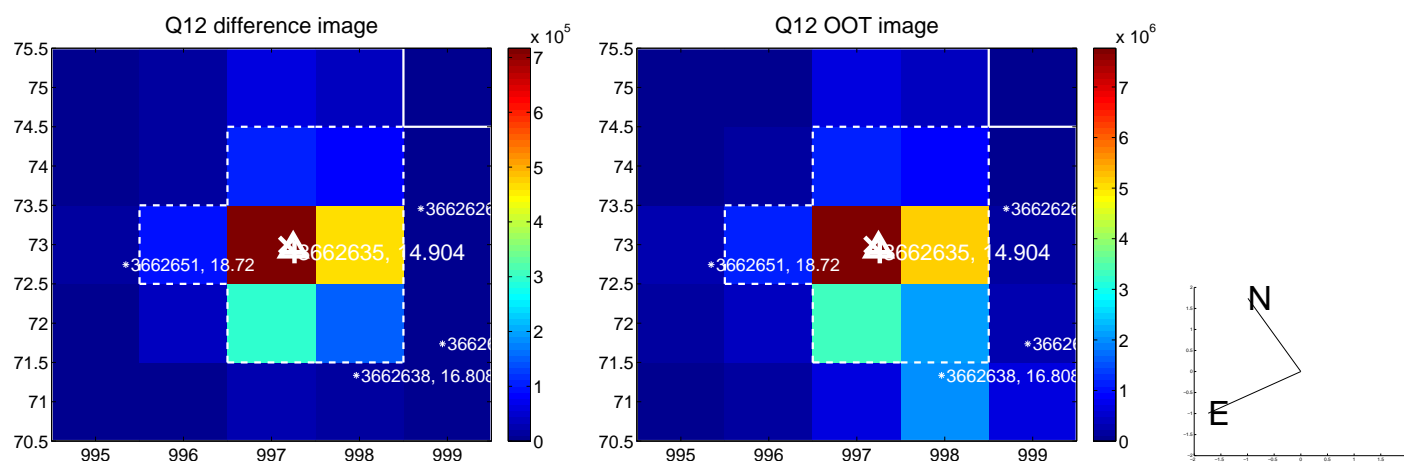
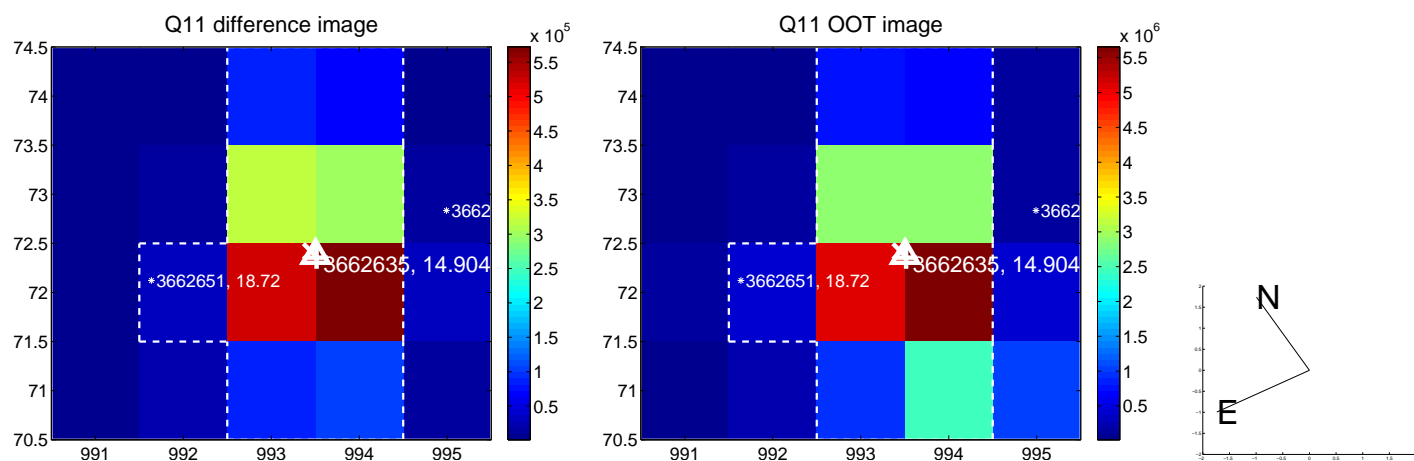
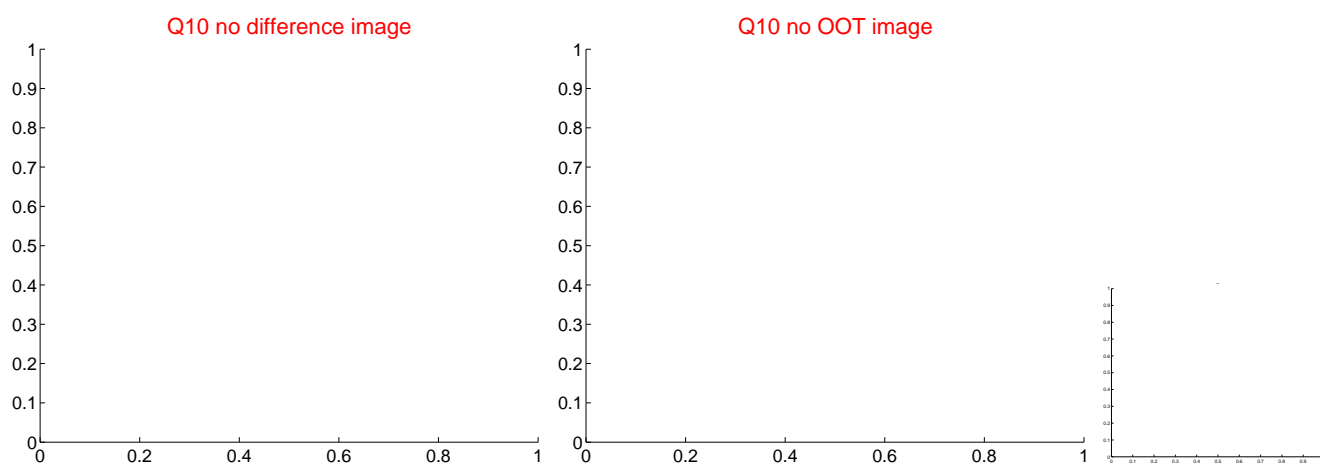
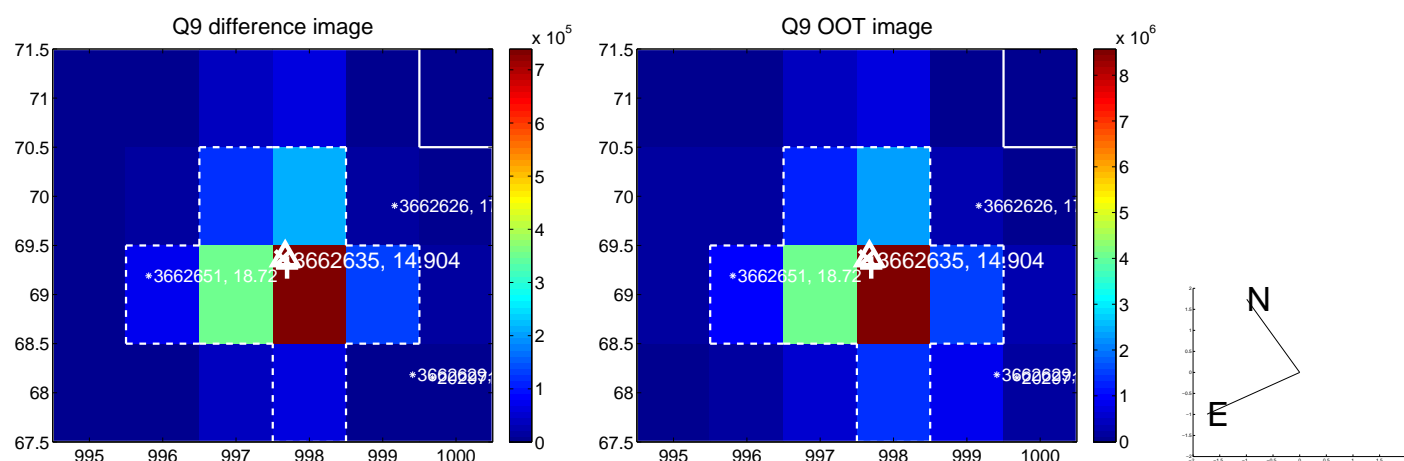
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



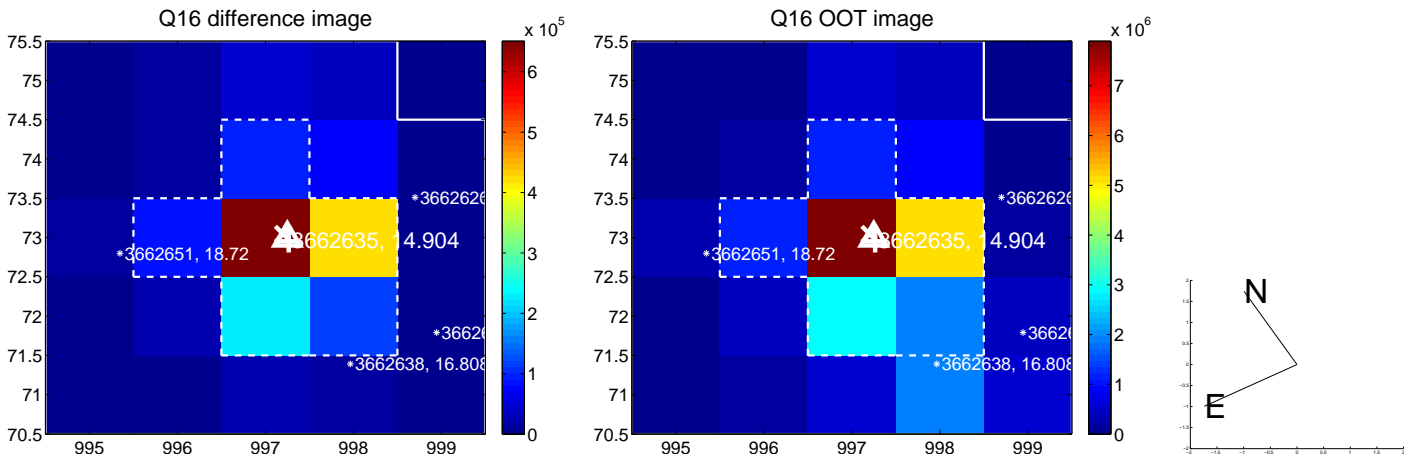
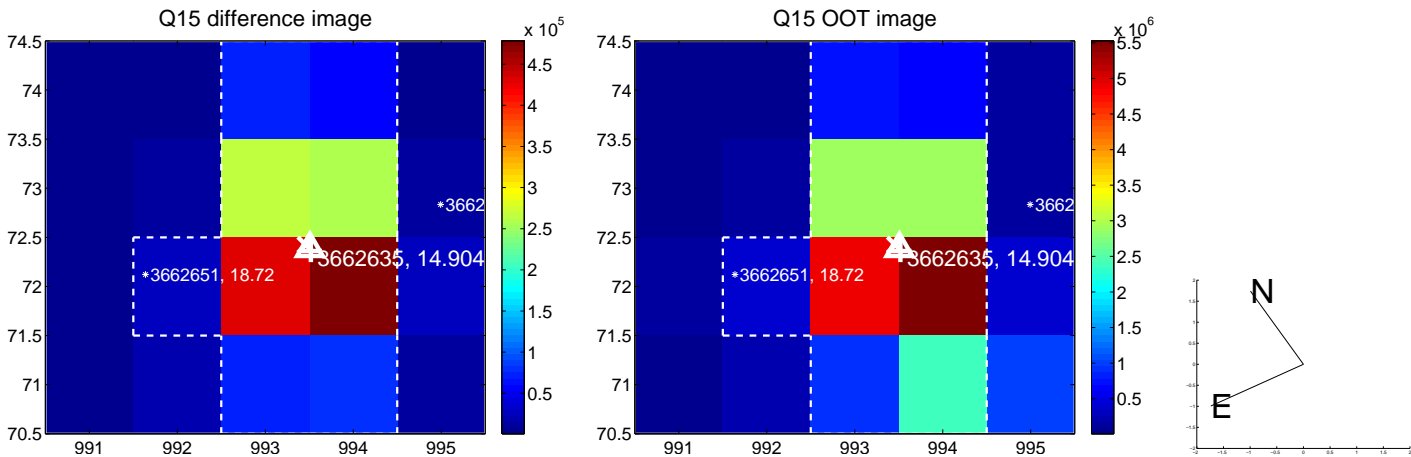
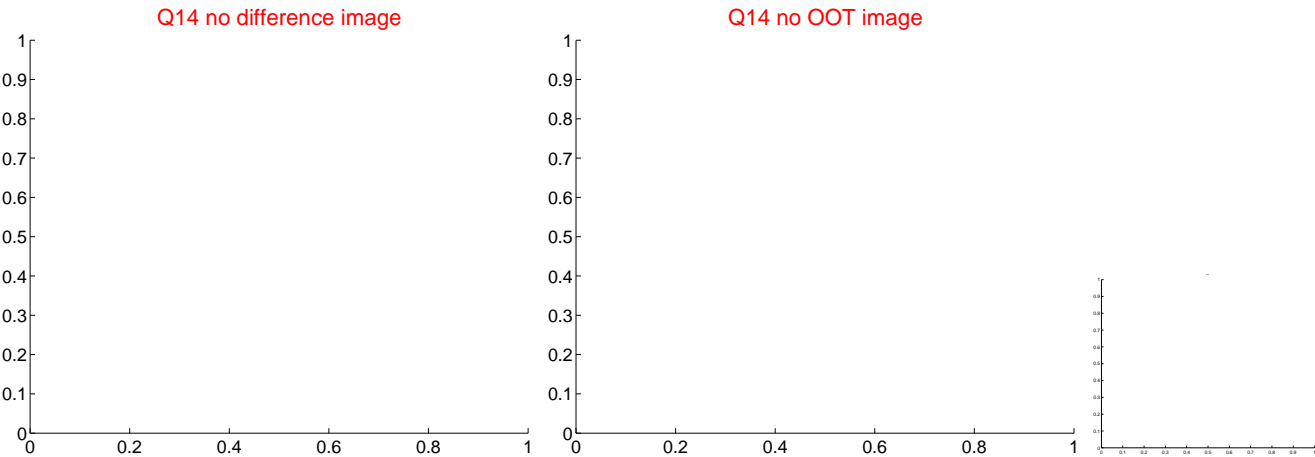
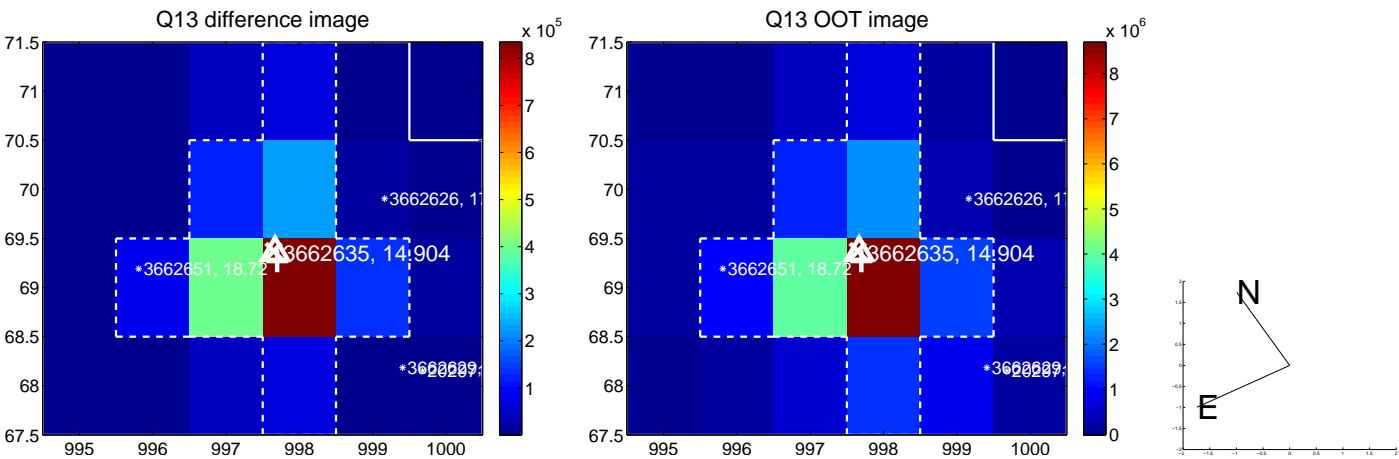
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



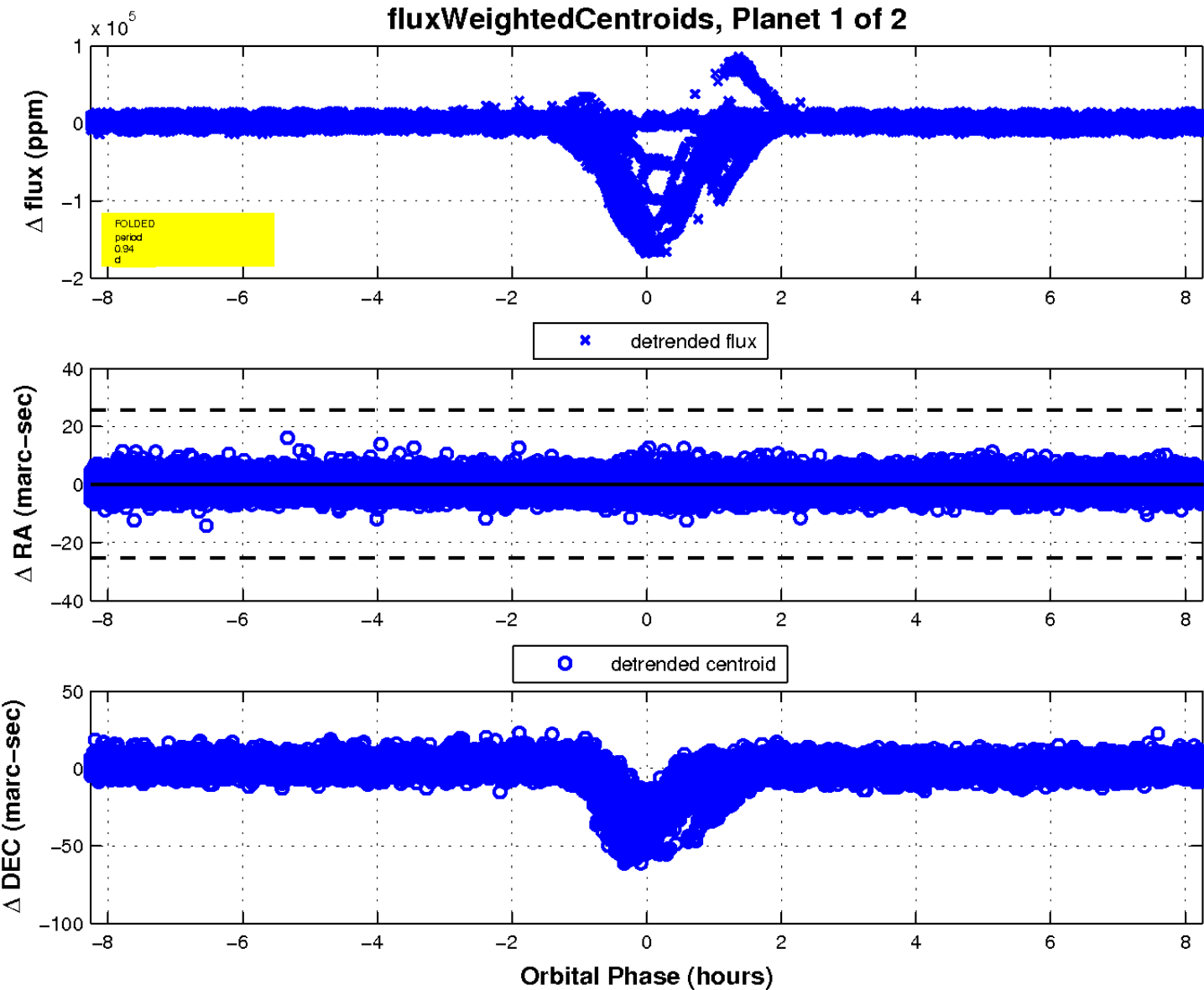
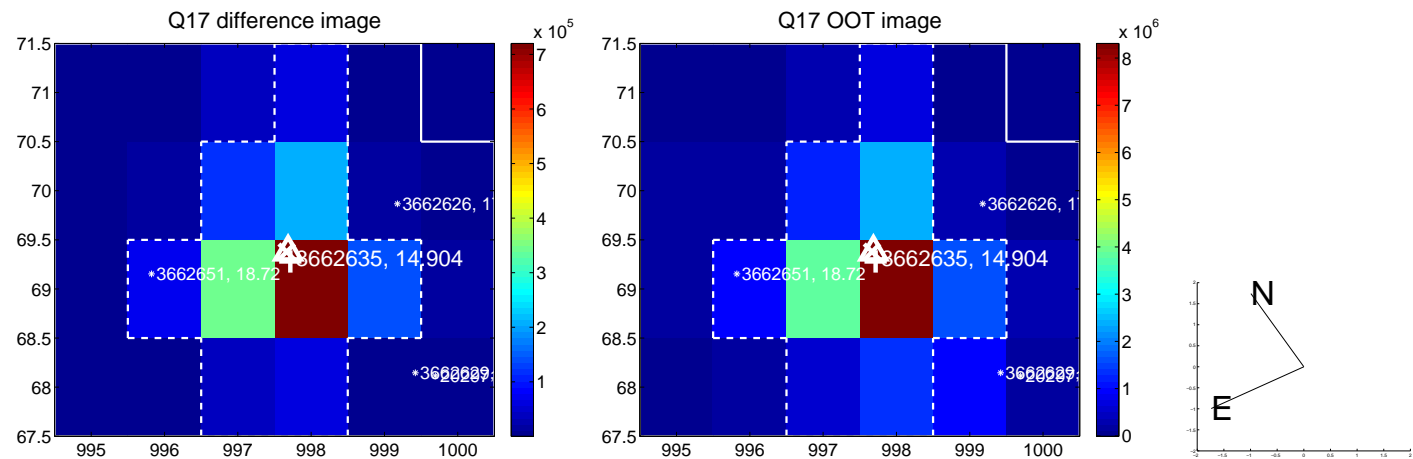
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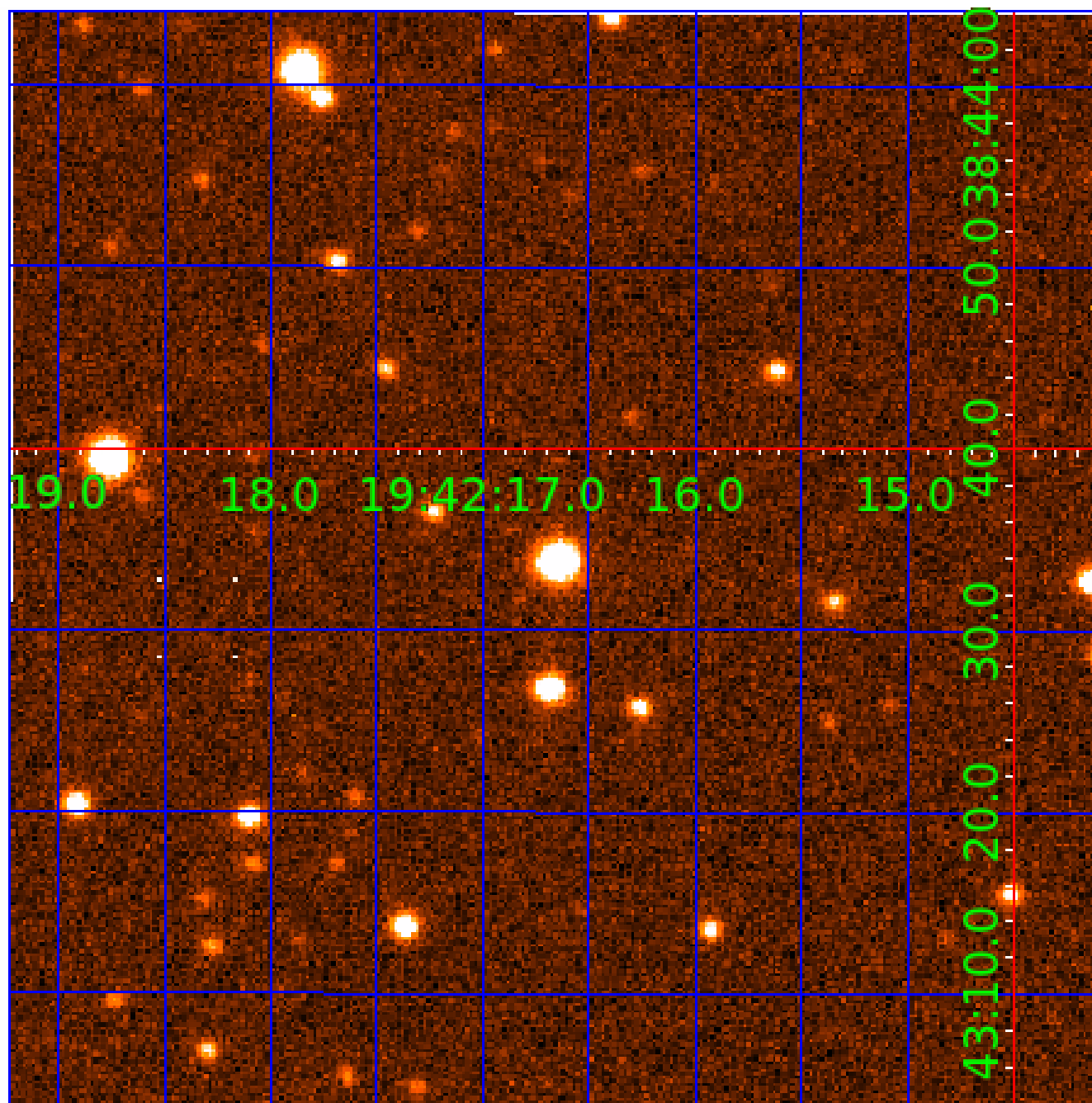


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003662635

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003662635-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_KIC_POS
003662635-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

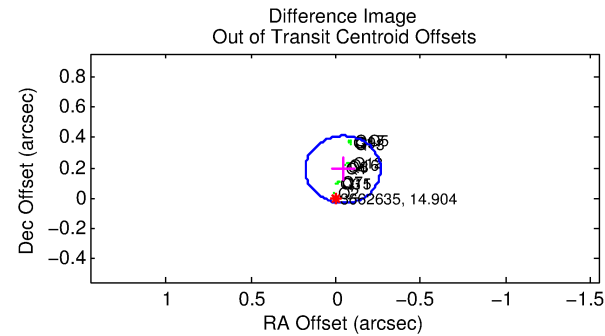
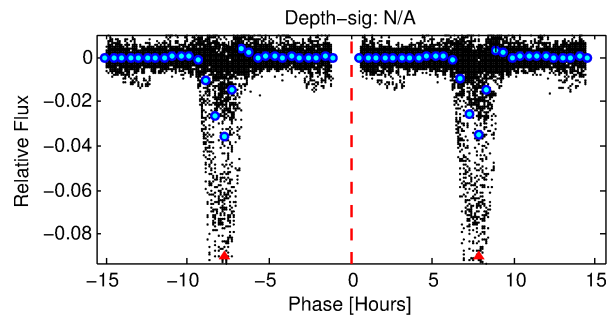
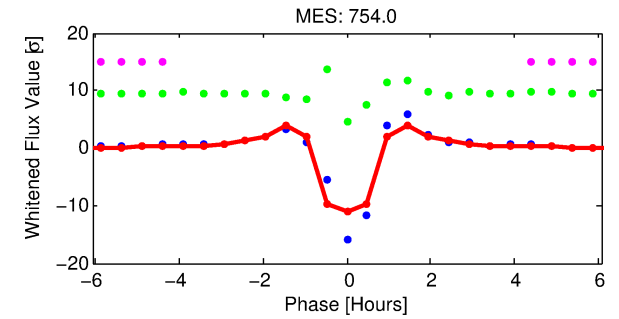
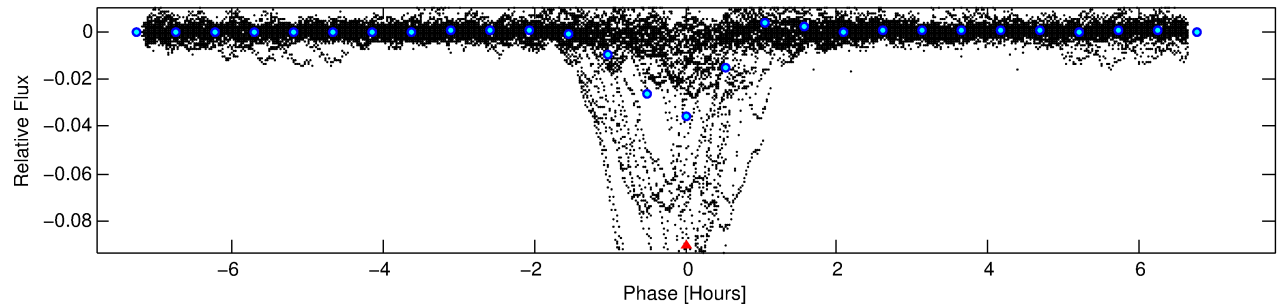
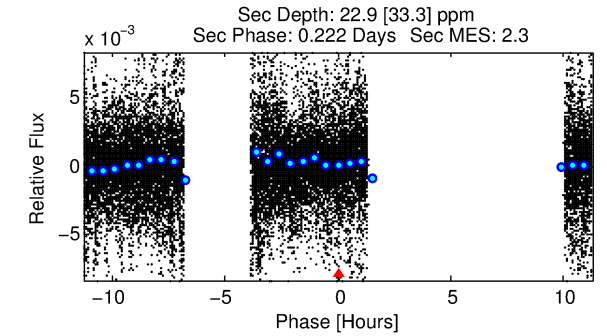
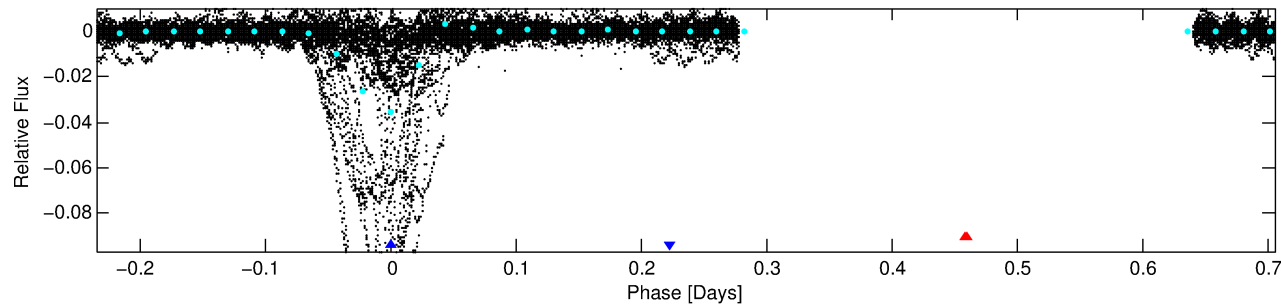
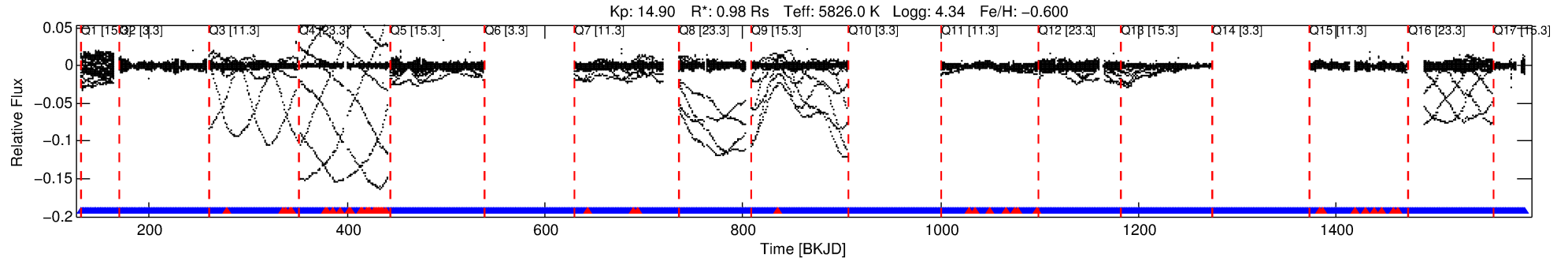
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003662635-02

No Significant Match Found

DV One-Page Summary

KIC: 3662635 Candidate: 2 of 2 Period: 0.939 d



TPS TCE Results:

Period = 0.93939 d
Epoch = 131.5266 BKJD

DV fit results are unavailable

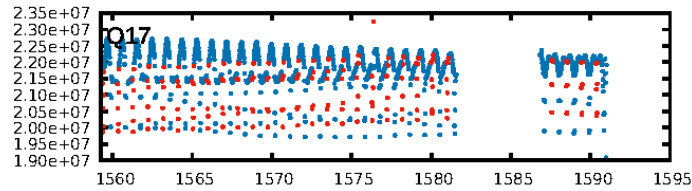
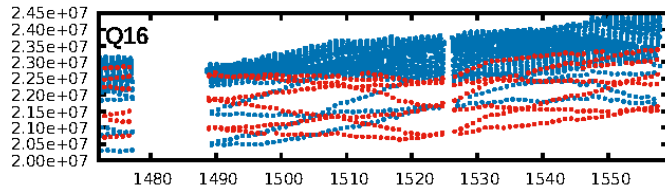
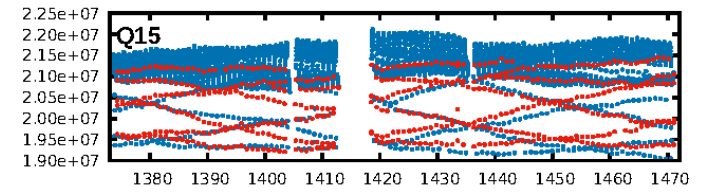
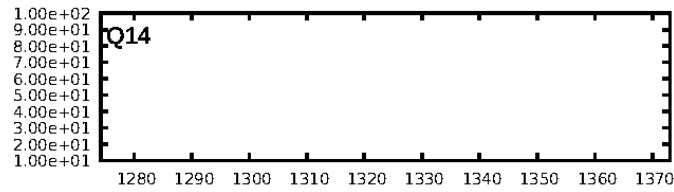
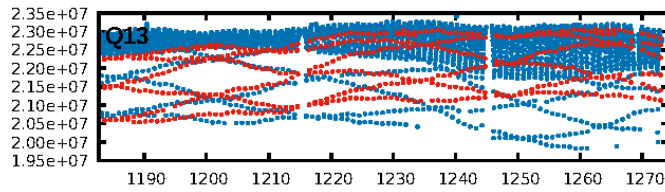
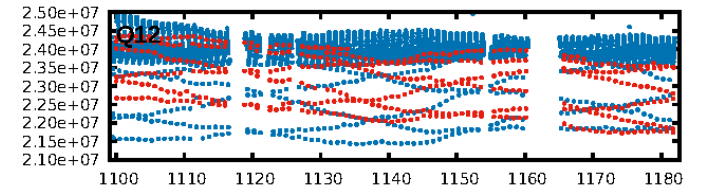
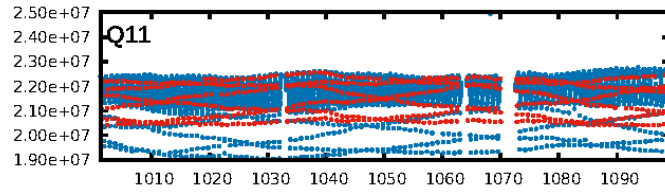
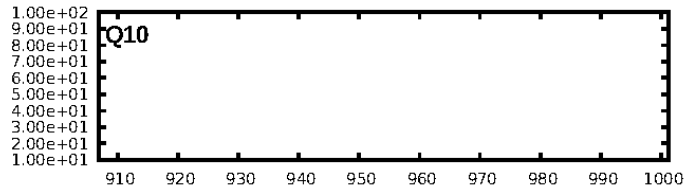
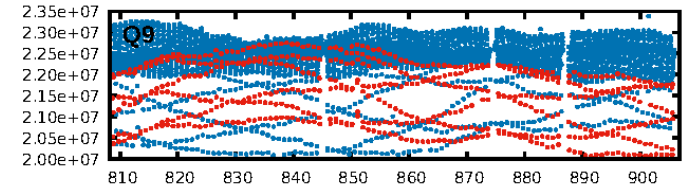
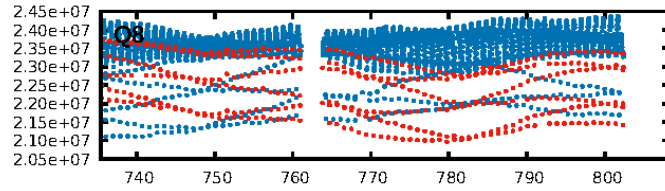
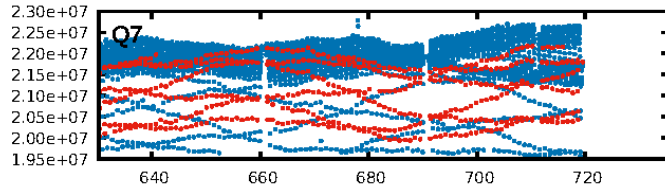
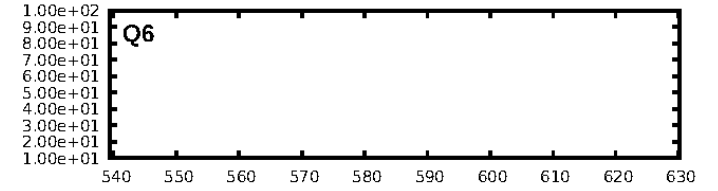
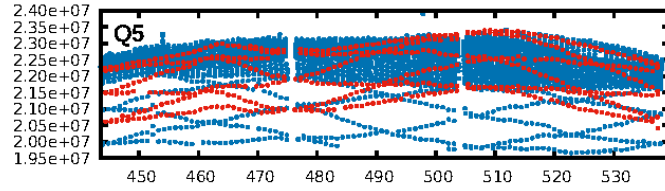
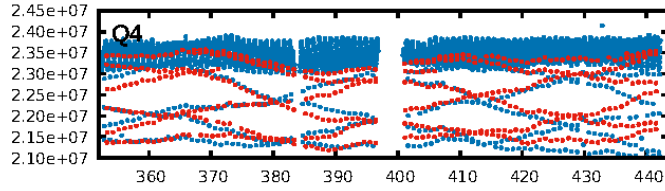
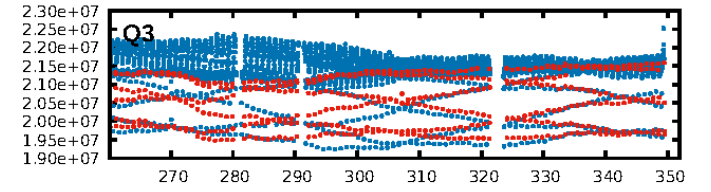
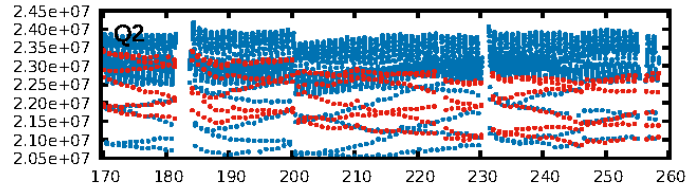
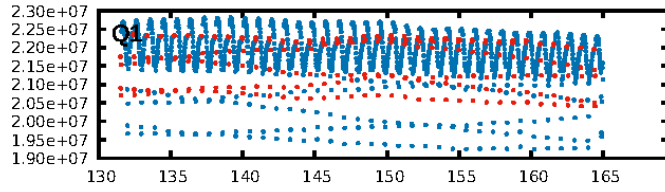
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1025/1075]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 1.102 arcsec [543.38σ]
OotOffset-rm: 0.193 arcsec [2.62σ]
KicOffset-rm: 0.206 arcsec [2.94σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

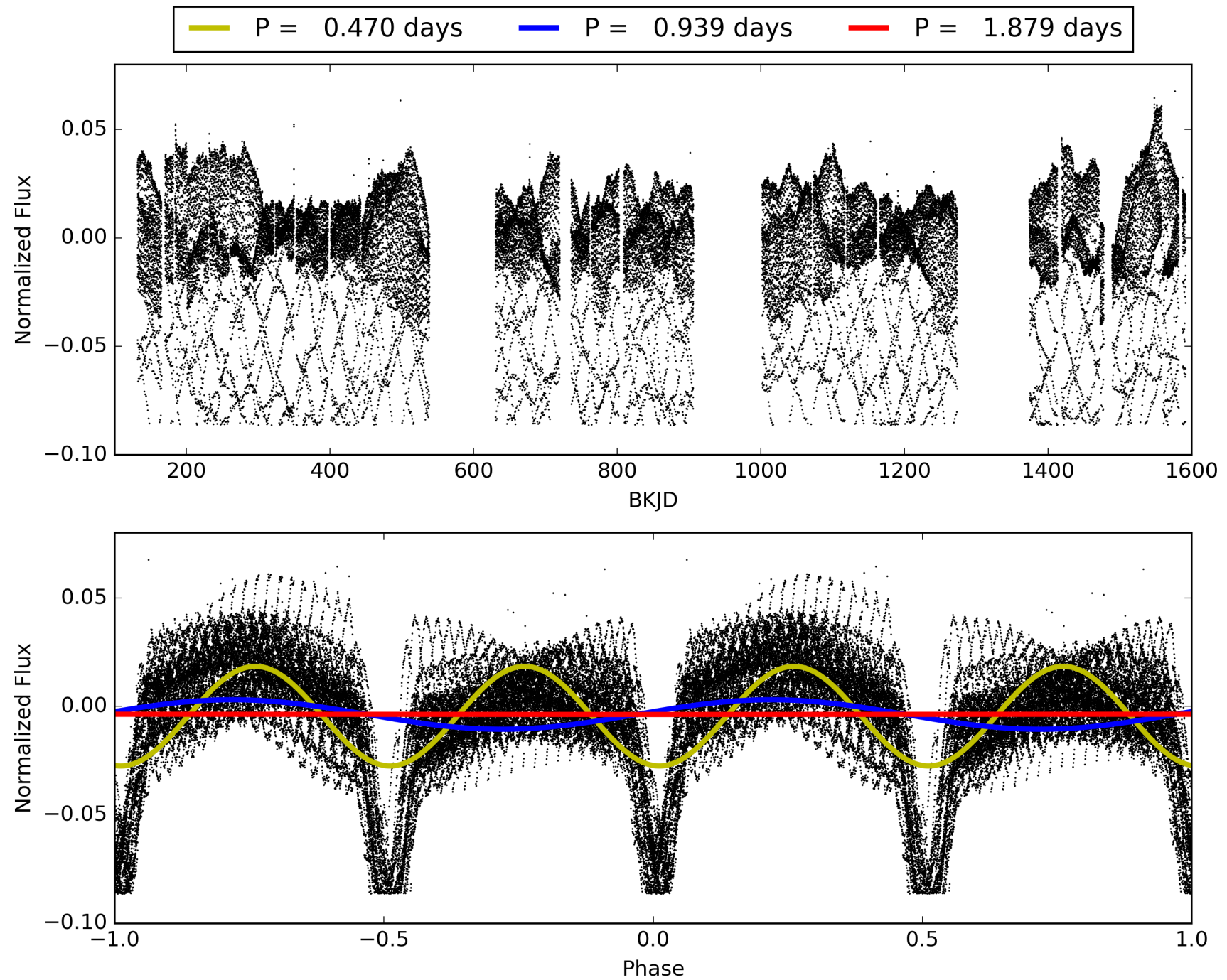
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:56:20 Z

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

TCE 003662635-02, PDC Light Curves

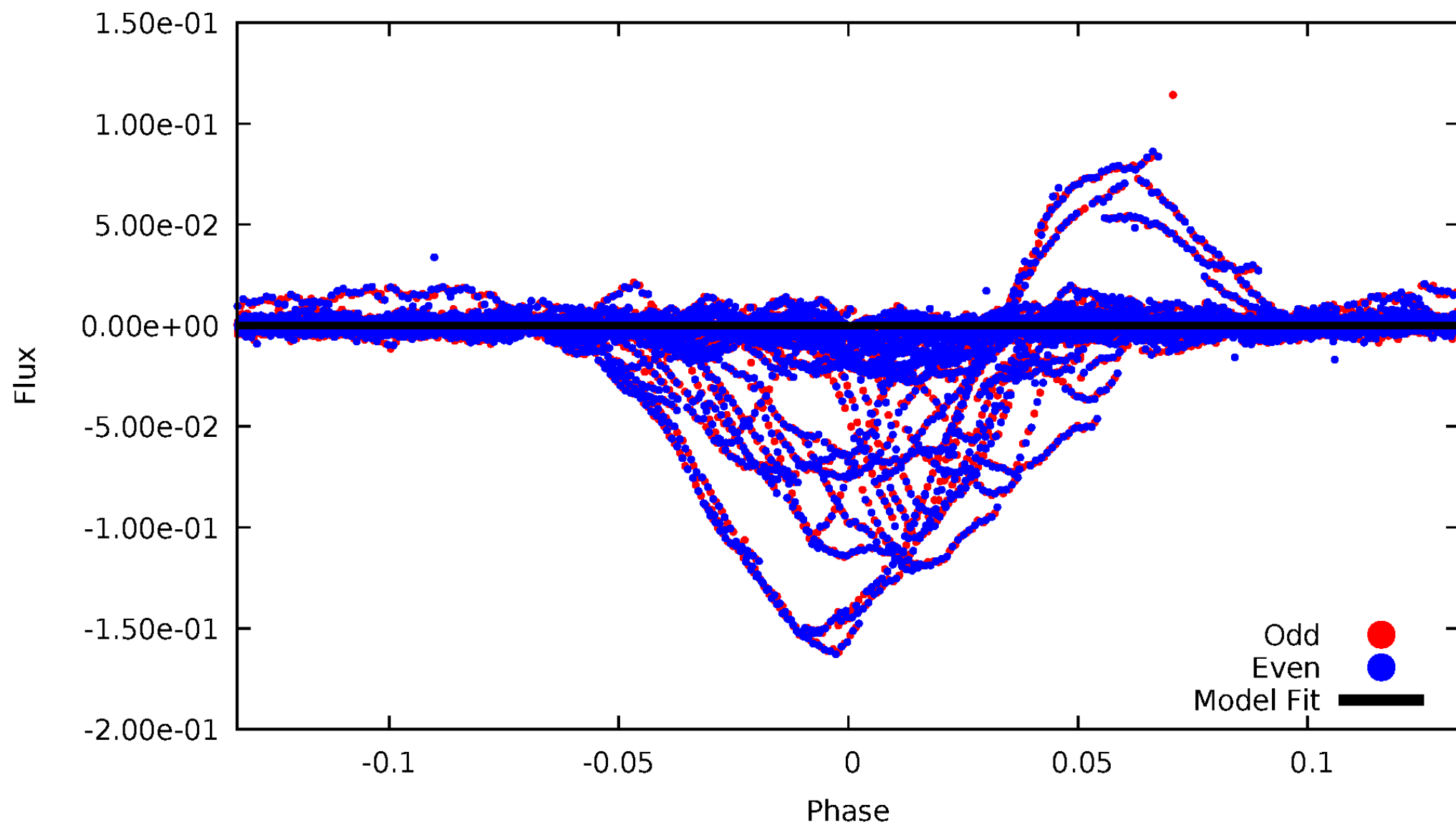


TCE 003662635-02



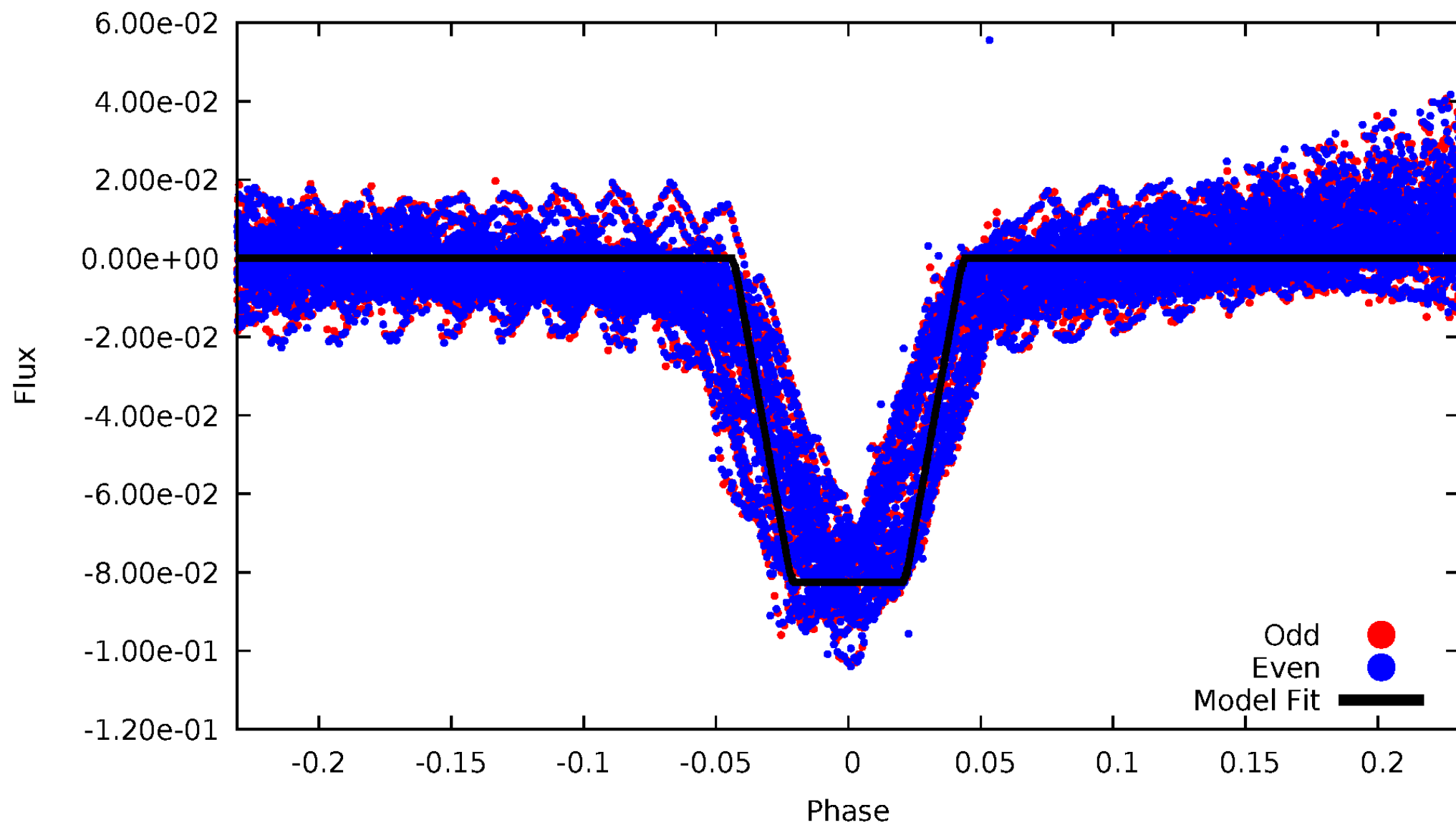
DV Odd/Even

TCE 003662635-02



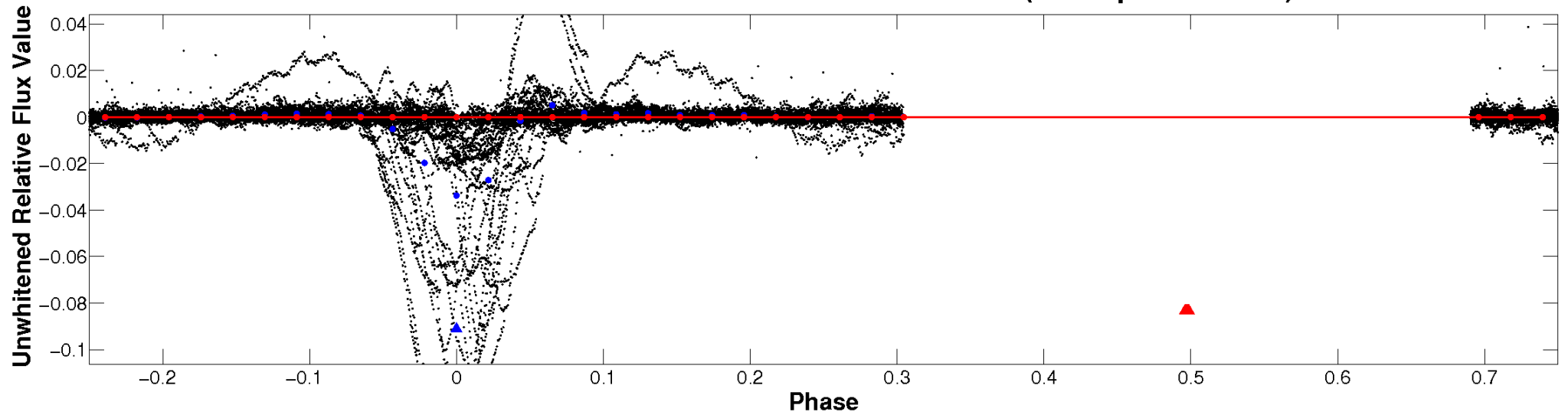
ALT Odd/Even

TCE 003662635-02

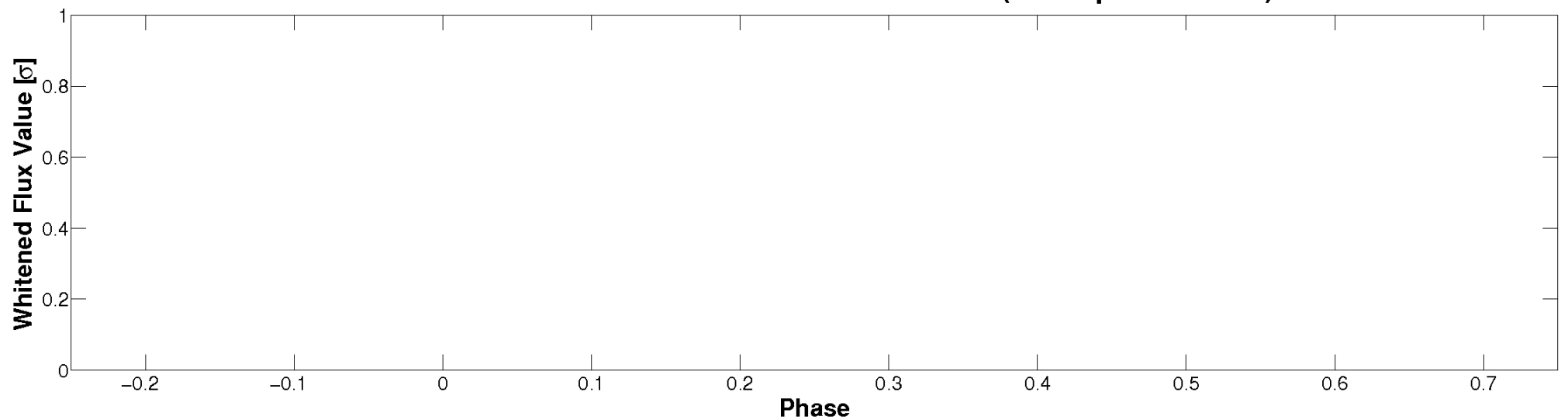


Non-Whitened Vs. Whitened Light Curve

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

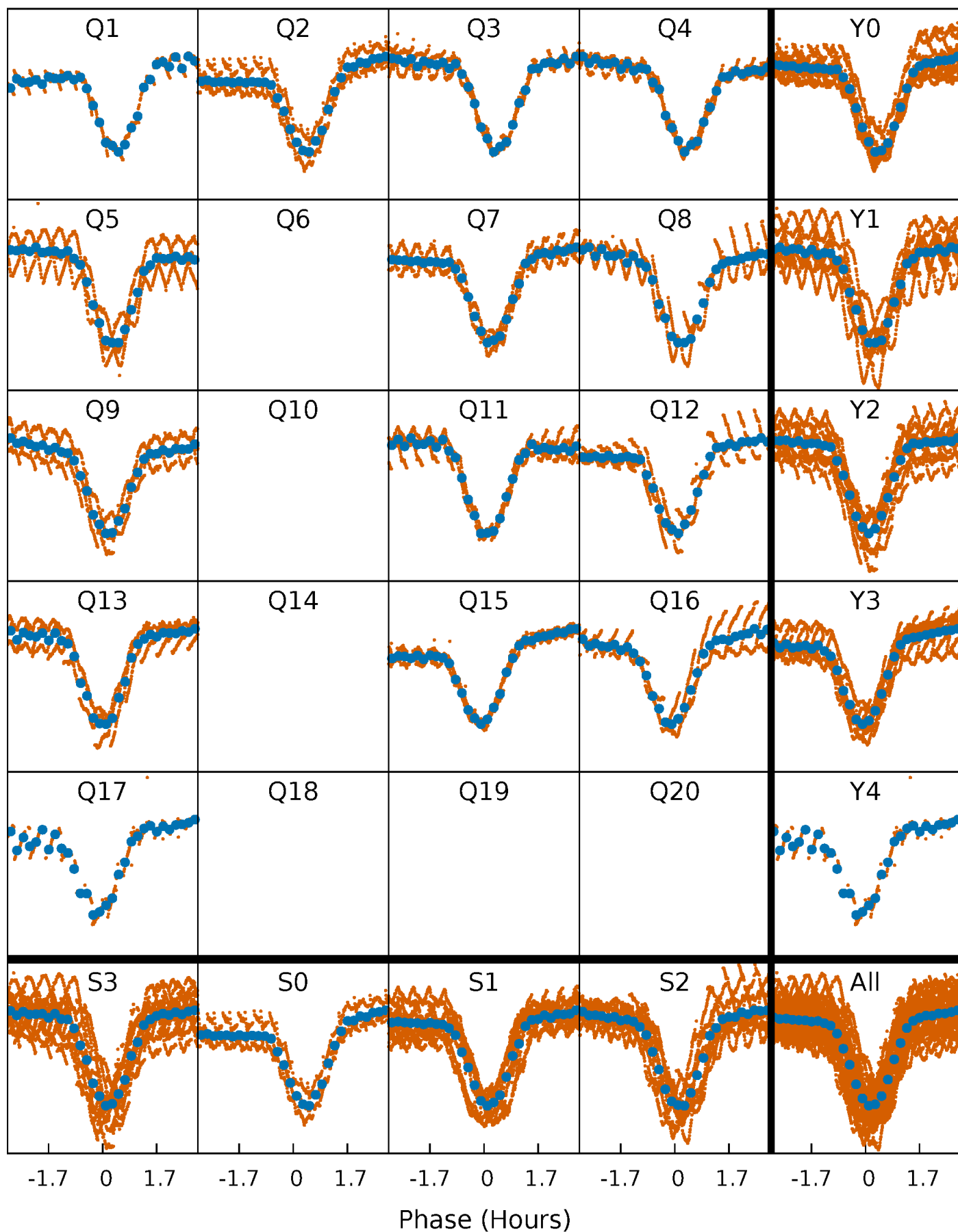


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



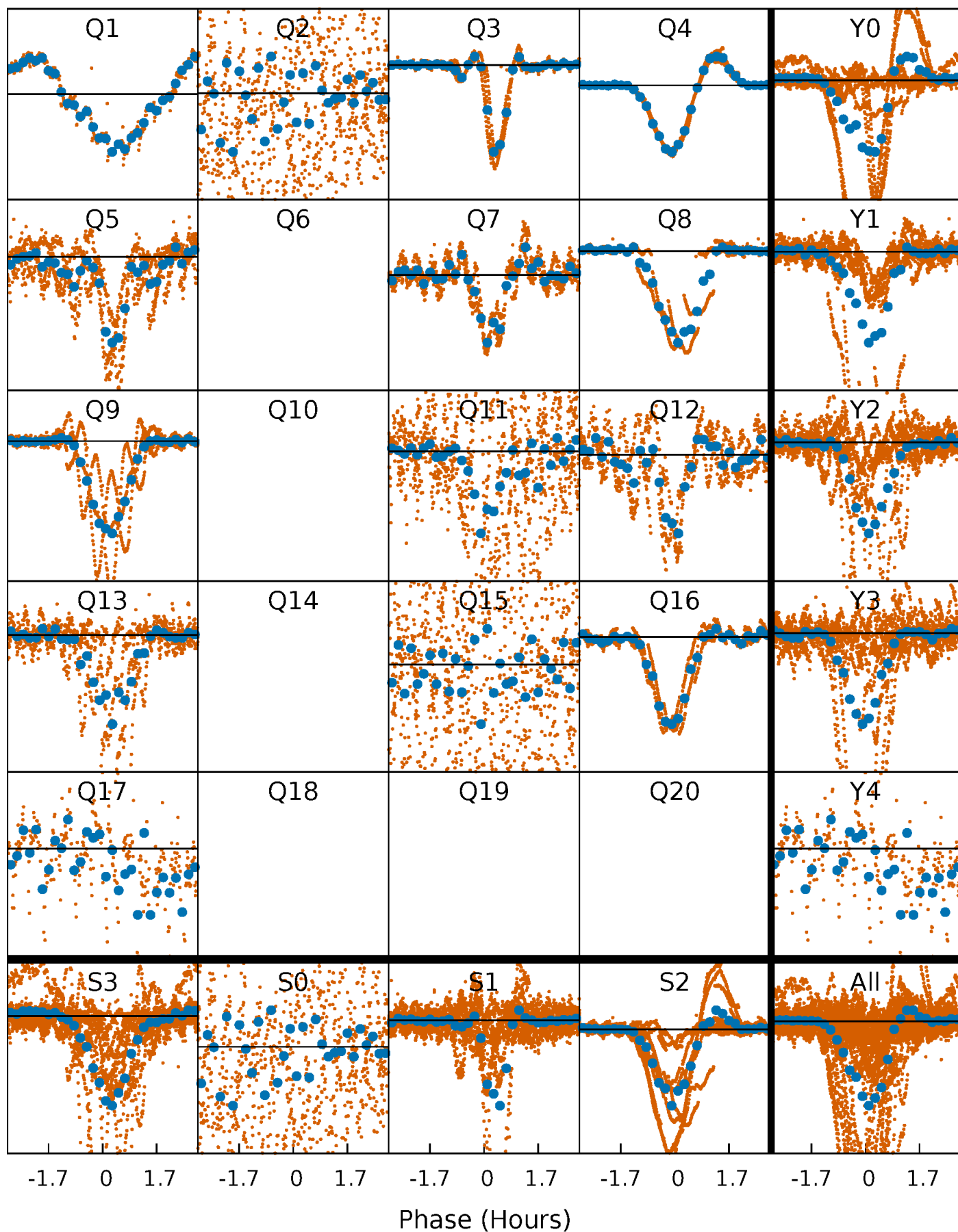
PDC Quarter-Phased Transit Curves

TCE 003662635-02 P= 0.939392 Days $T_0=131.526619$ (BKJD)



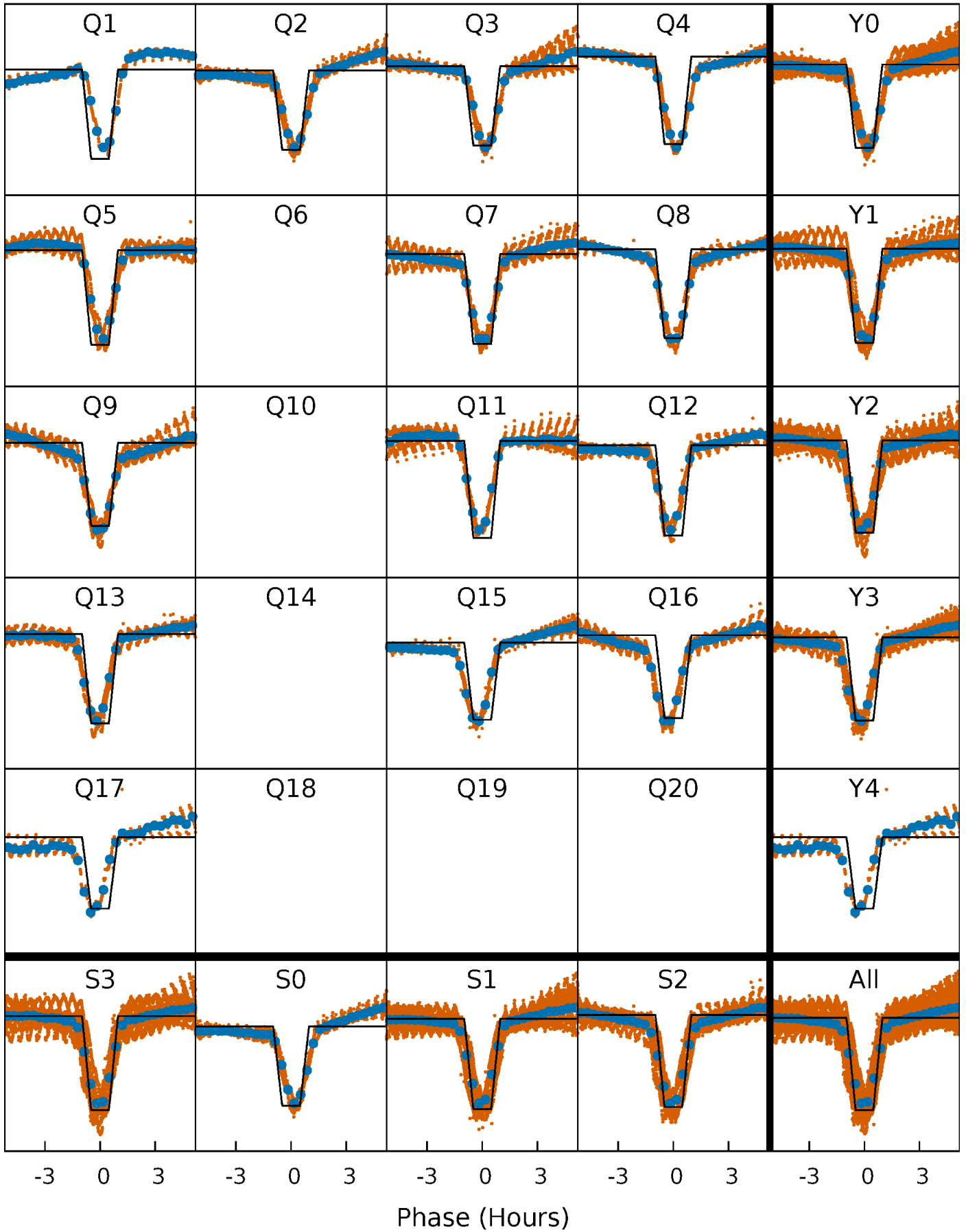
DV Quarter-Phased Transit Curves

TCE 003662635-02 P= 0.939392 Days $T_0=131.526619$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

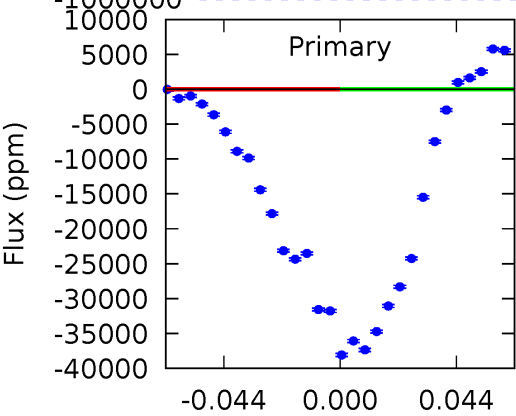
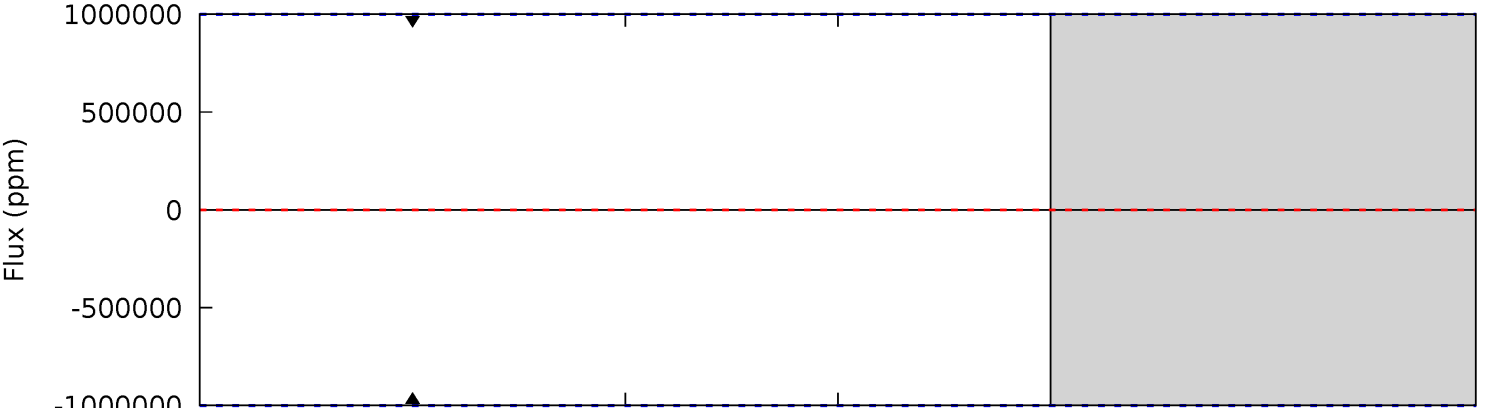
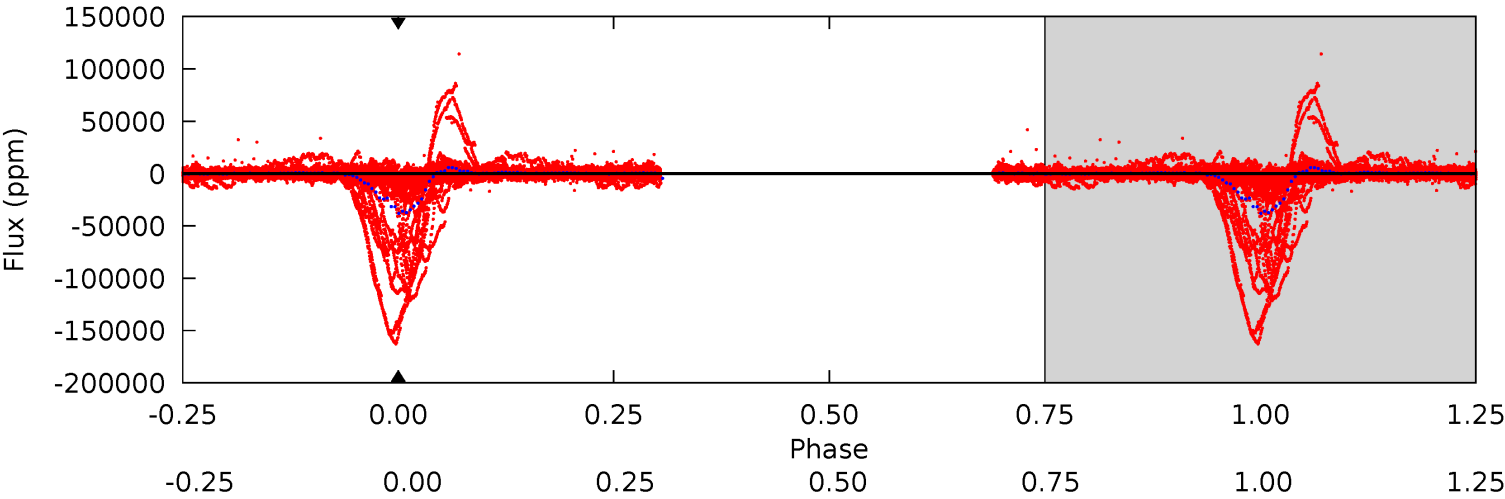
TCE 003662635-02 $P = 0.939392$ Days $T_0 = 131.535236$ (BKJD)



DV Model-Shift Uniqueness Test

003662635-02, P = 0.939392 Days, E = 130.587227 Days

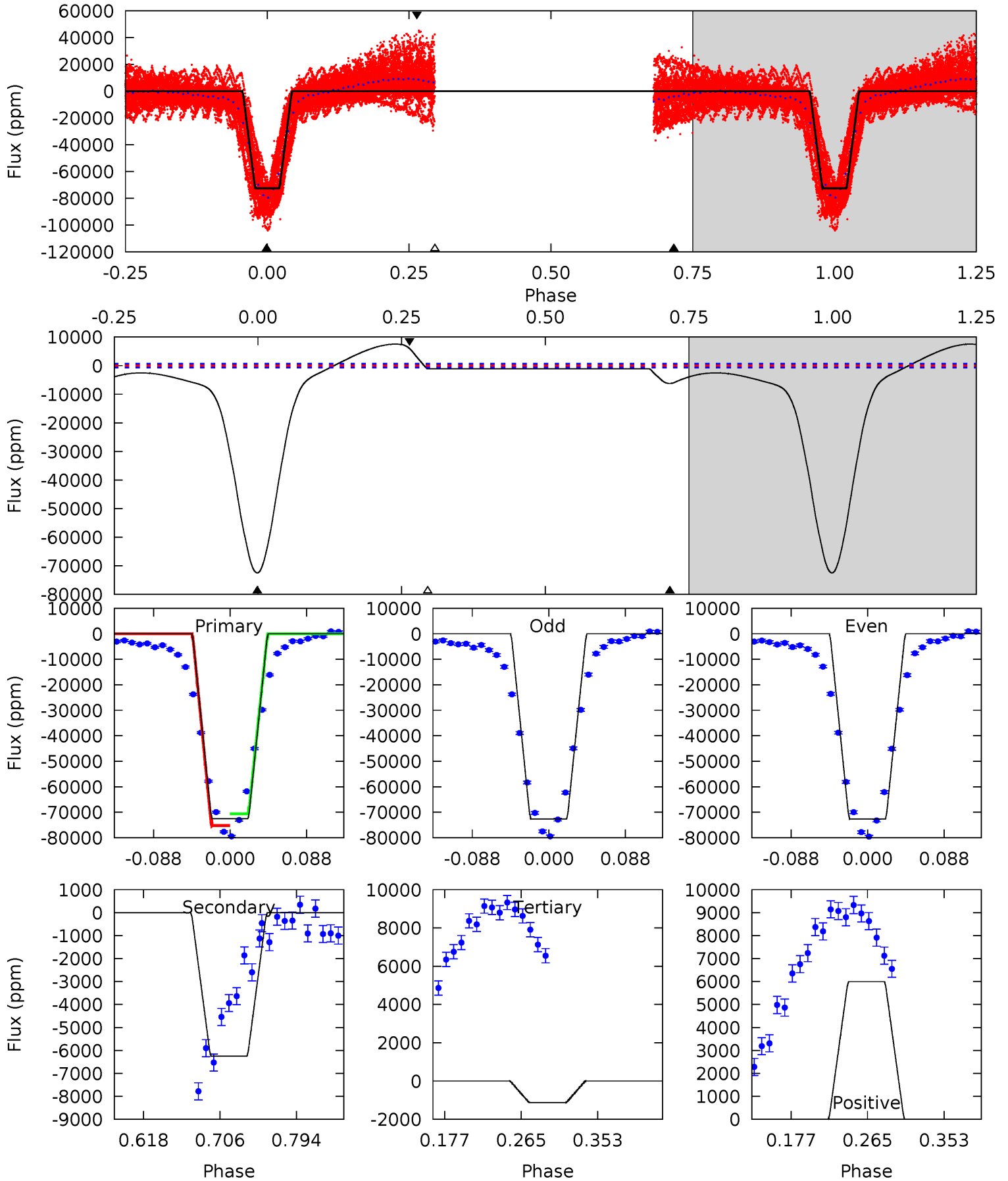
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003662635-02, P = 0.939392 Days, E = 130.595844 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
479.7	41.4	7.46	39.7	4.59	1.70	31.5	472.2	440.0	33.9	1.71	0.09	1.00	0.09	19.0



Stellar Parameters For KIC 003662635

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5826^{+174}_{-174}	$4.345^{+0.205}_{-0.205}$	$-0.600^{+0.300}_{-0.300}$	$0.978^{+0.292}_{-0.219}$	$0.772^{+0.111}_{-0.043}$	$1.162^{+1.233}_{-0.597}$
	+3%/-3%	+5%/-5%	+50%/-50%	+30%/-22%	+14%/-6%	+106%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 003662635-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$25.29^{+13.26}_{-10.95}$	2703^{+221}_{-188}	3114^{+4102}_{-9996}	$0.821^{+33.079}_{-29.830}$
Alt.	-6254 ± 151	$31.03^{+11.68}_{-11.54}$	2707^{+215}_{-188}	3338^{+656}_{-447}	$1.103^{+1.659}_{-0.531}$

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

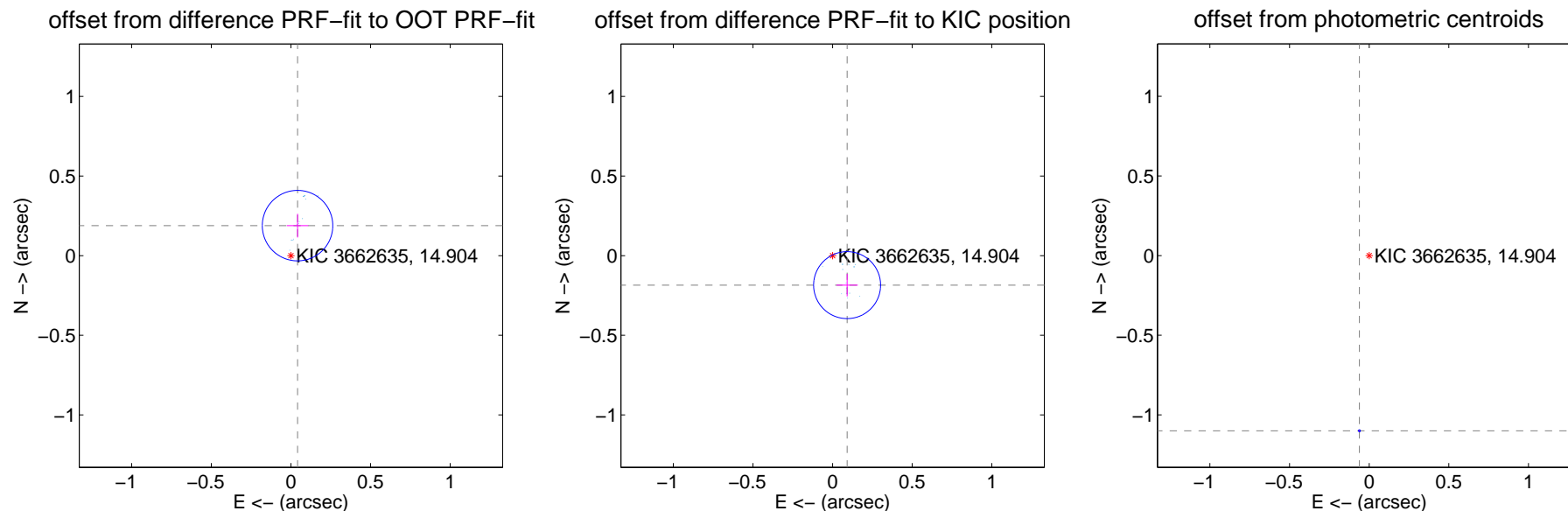
DV Centroid Data

Supplemental centroid analysis for 003662635-02. Kepler magnitude: 14.90. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

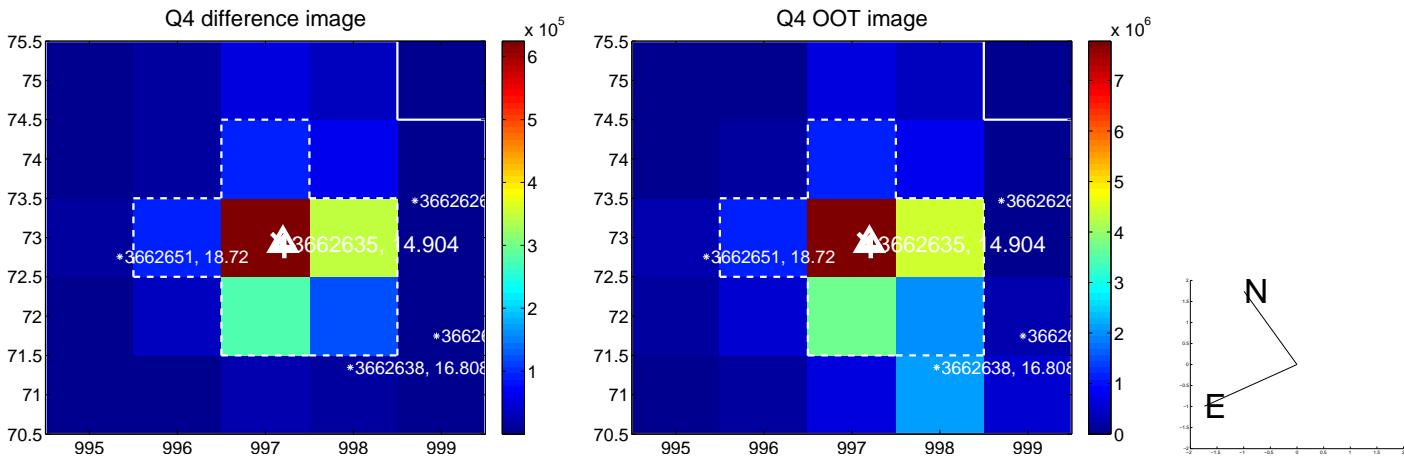
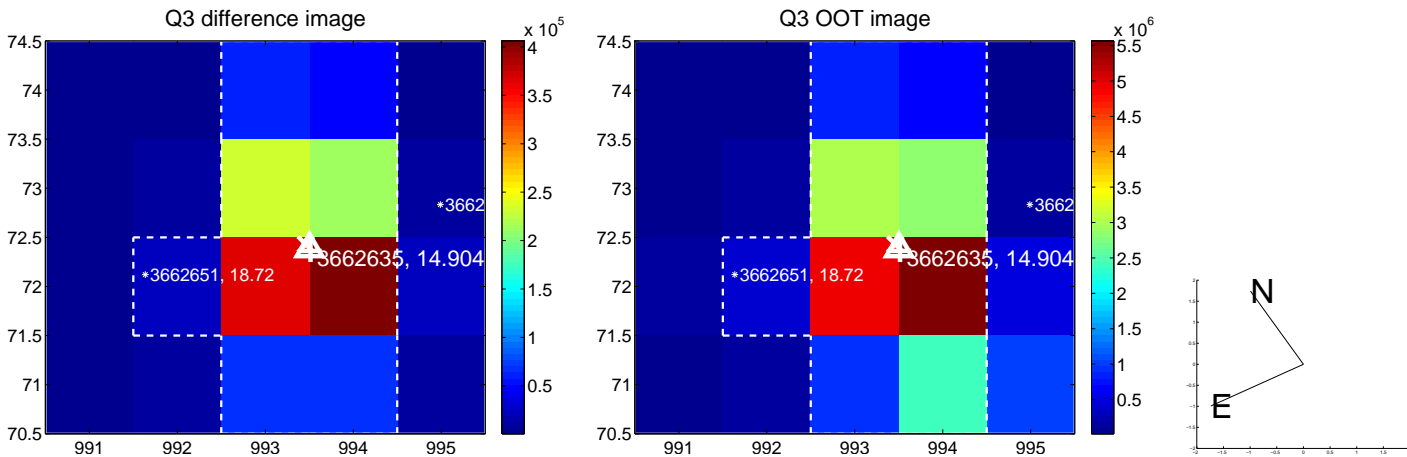
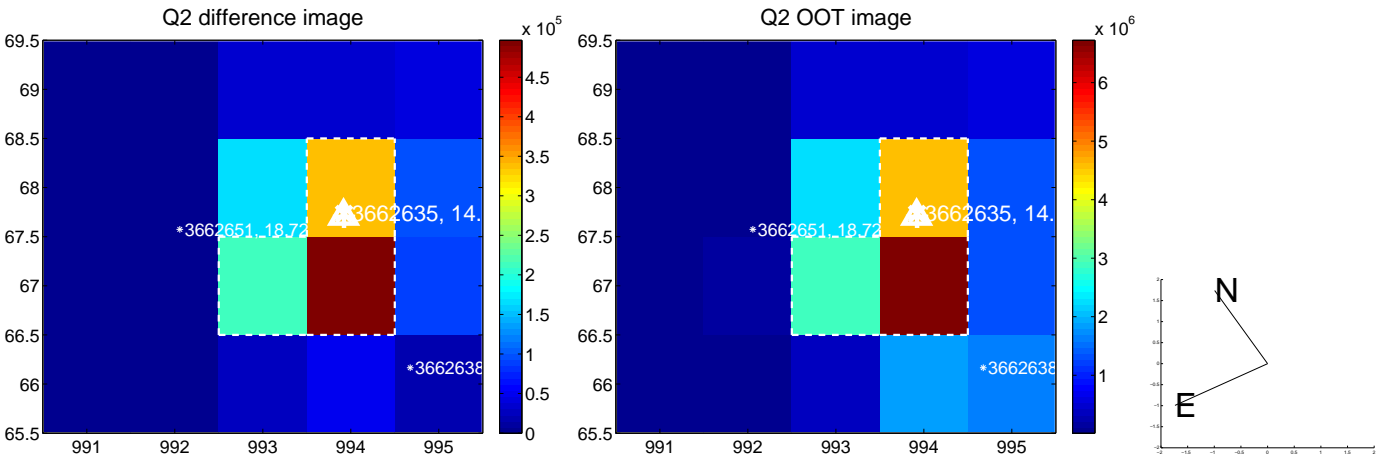
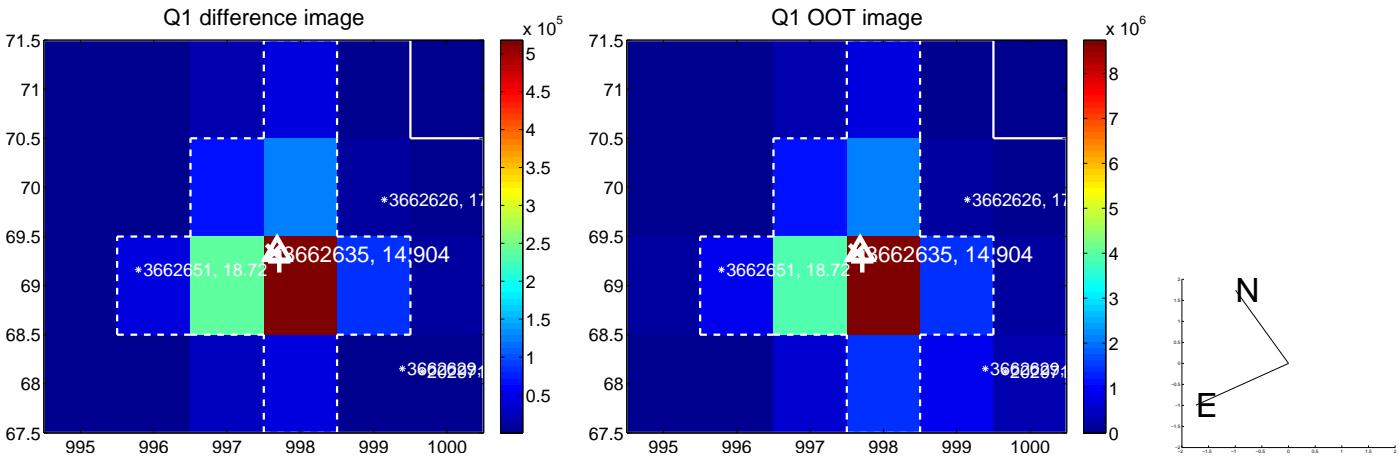
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.193 ± 0.074	2.62	-0.042 ± 0.068	0.189 ± 0.074
PRF-fit source offset from KIC position	0.206 ± 0.070	2.94	-0.091 ± 0.067	-0.185 ± 0.071
photometric centroid source offset	1.10 ± 0.00	543.38	0.06 ± 0.00	-1.10 ± 0.00

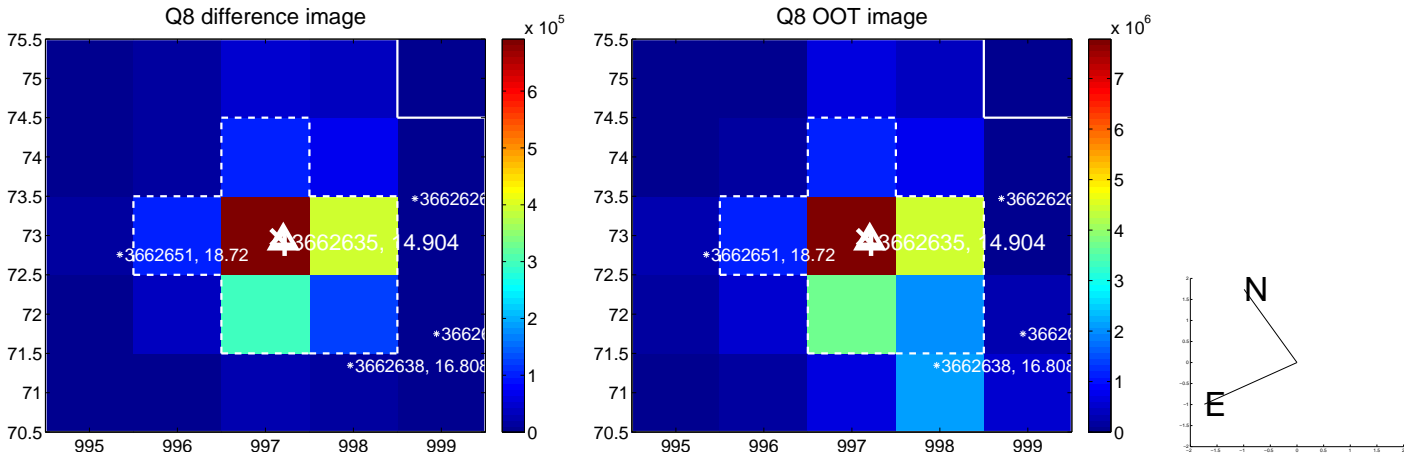
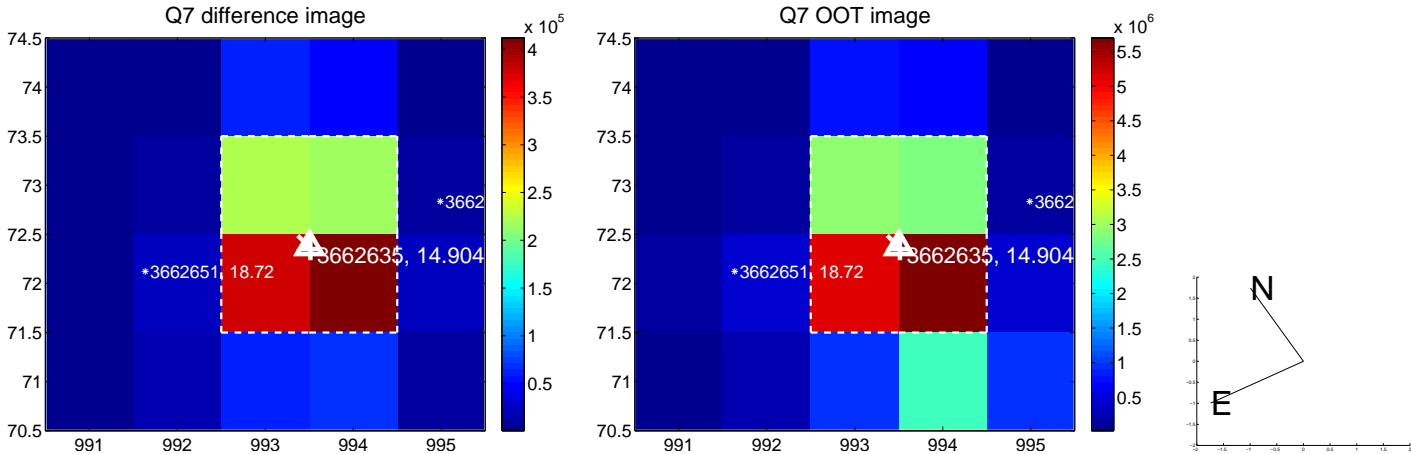
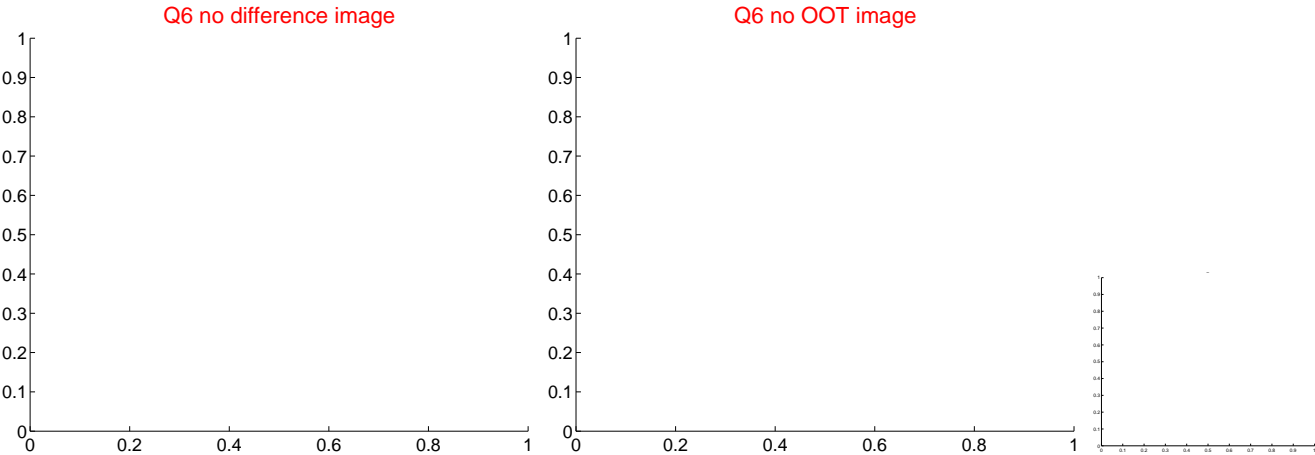
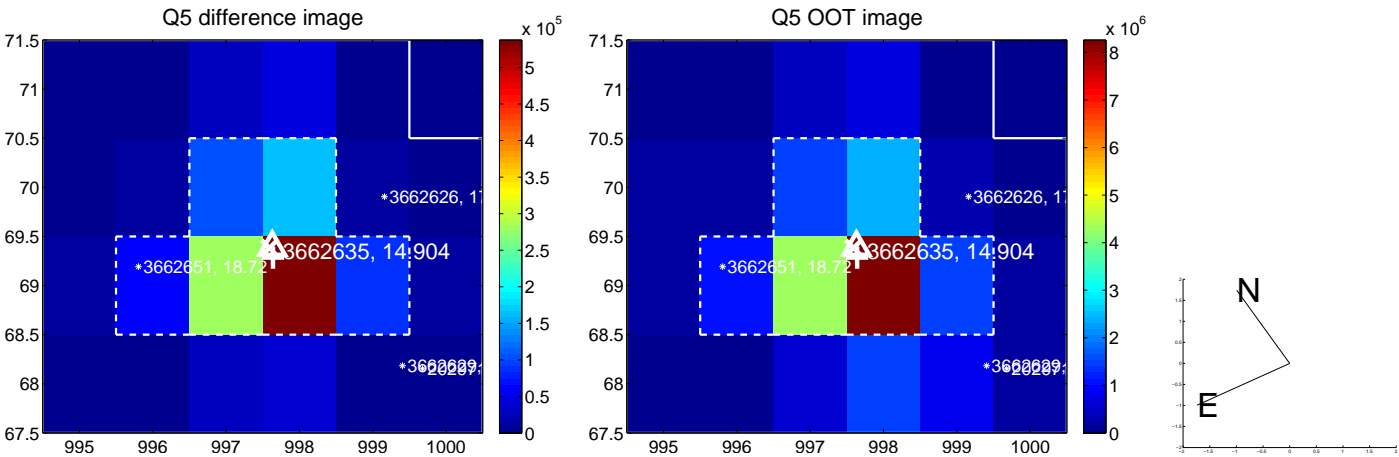


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

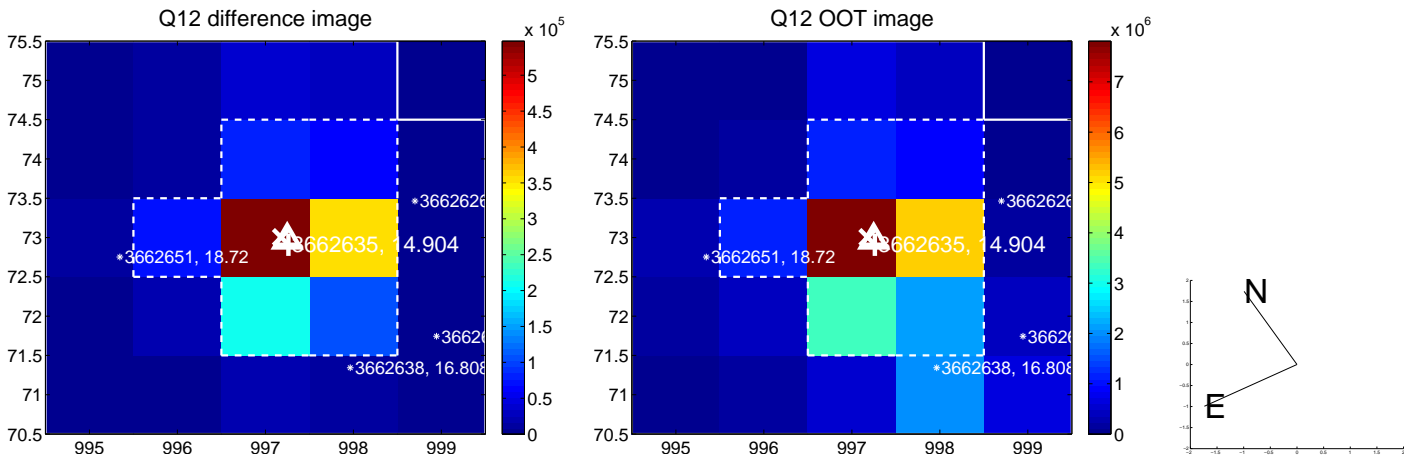
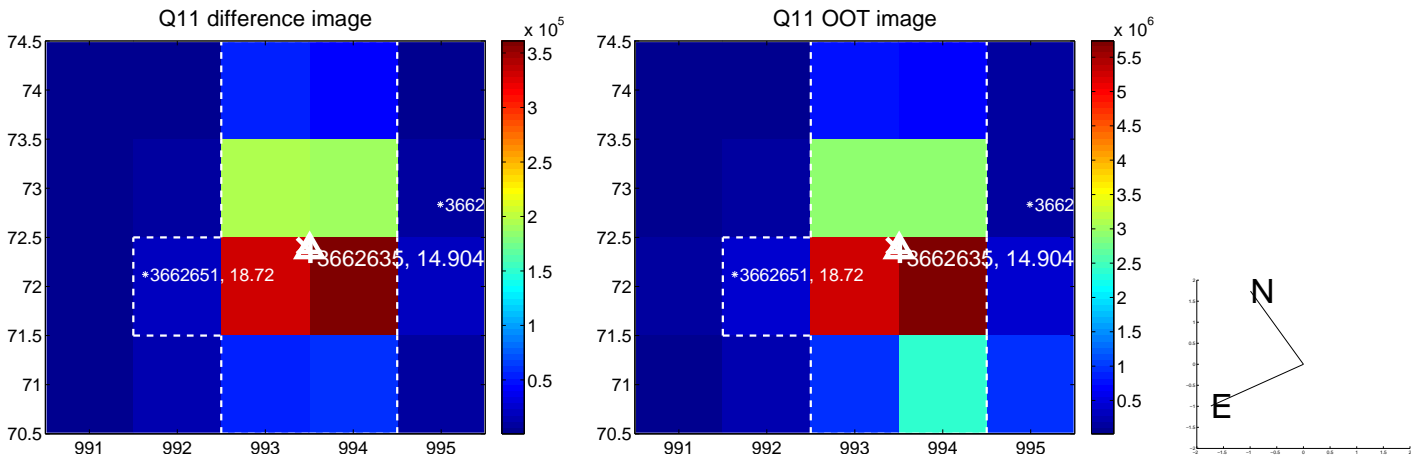
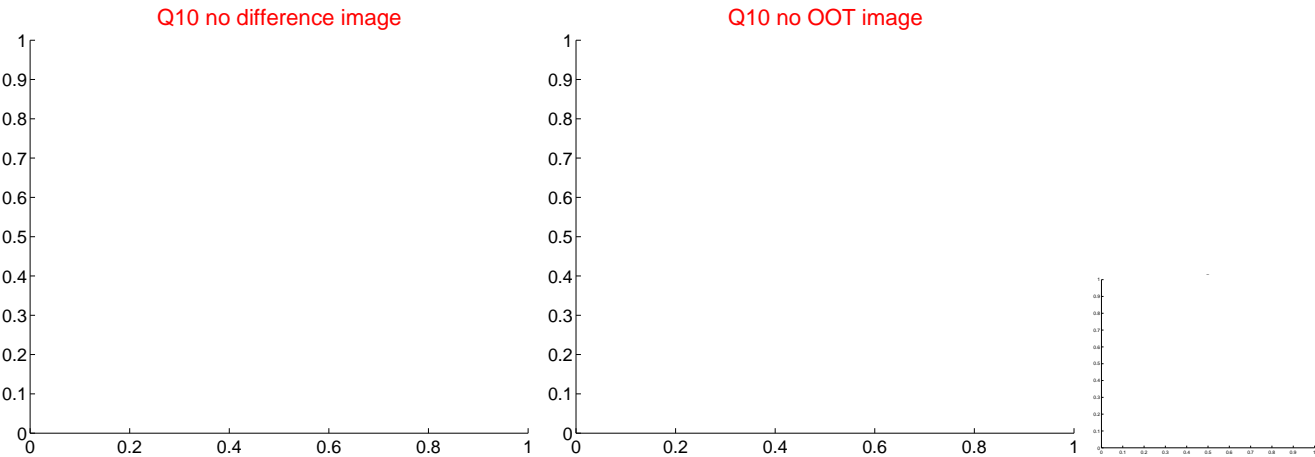
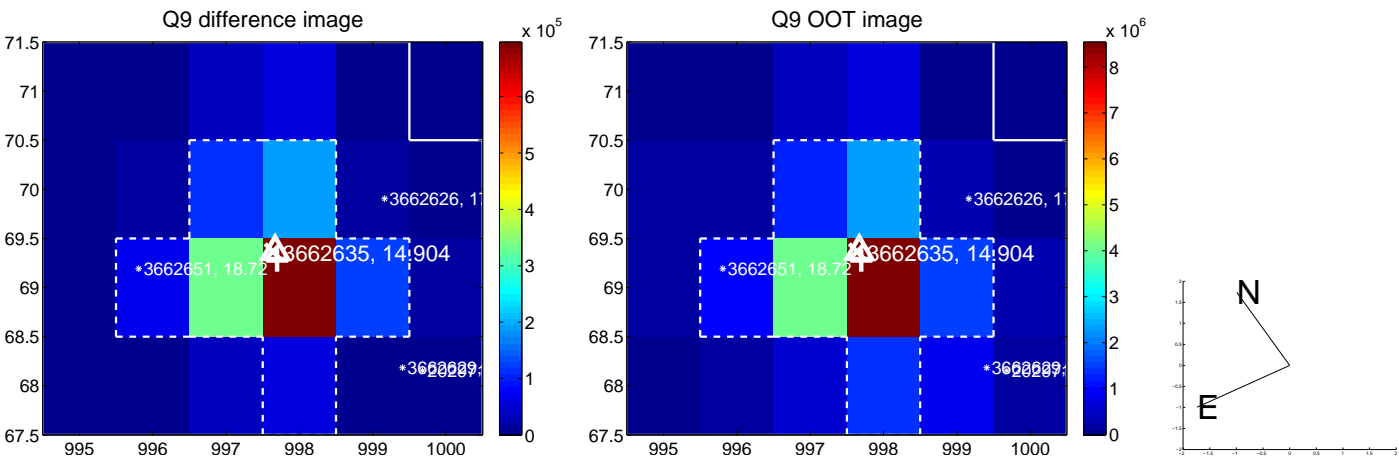
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



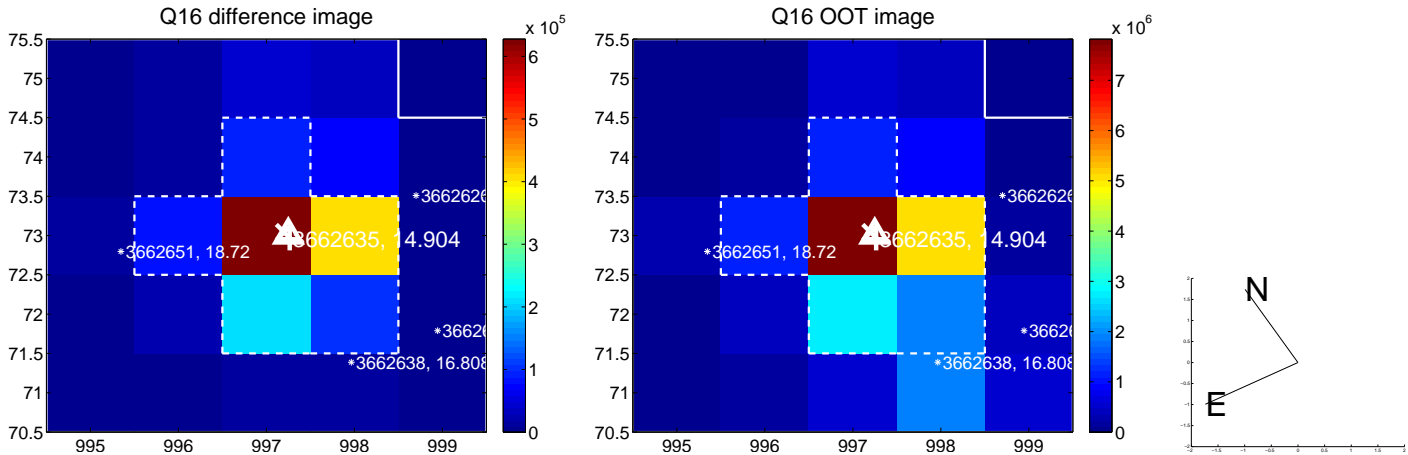
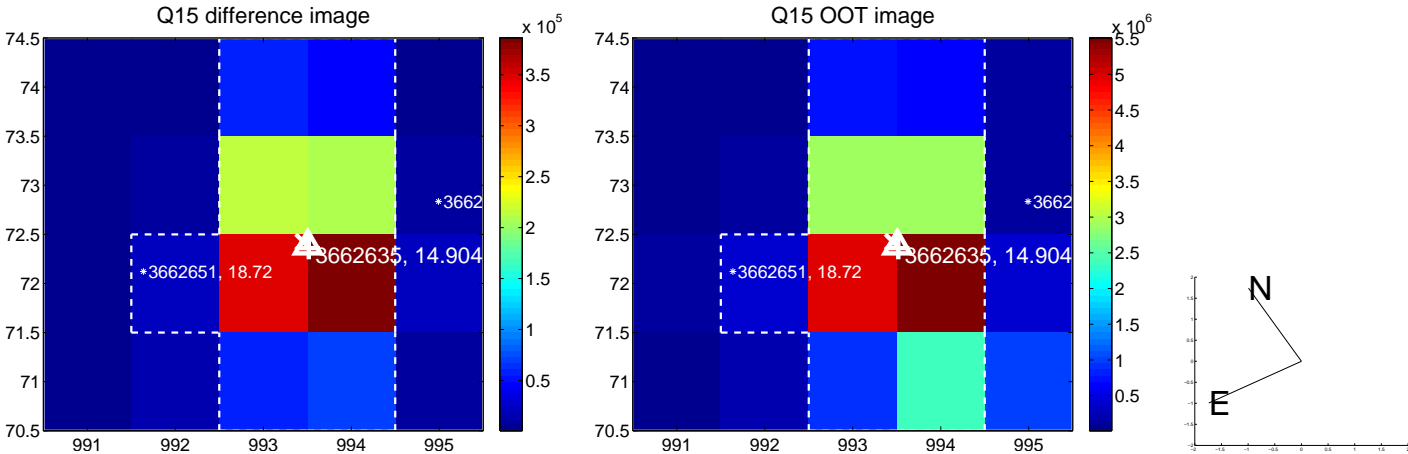
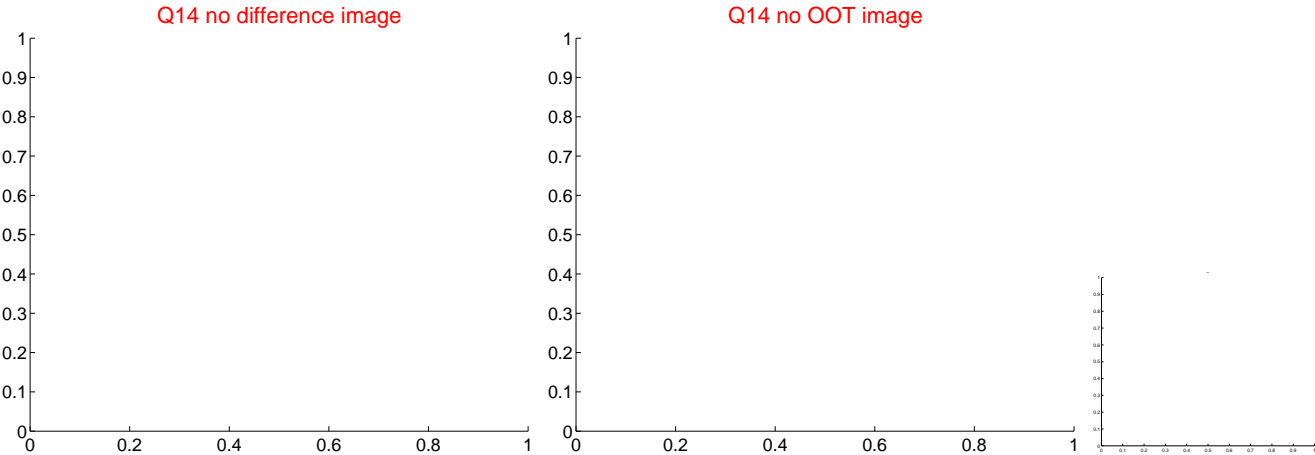
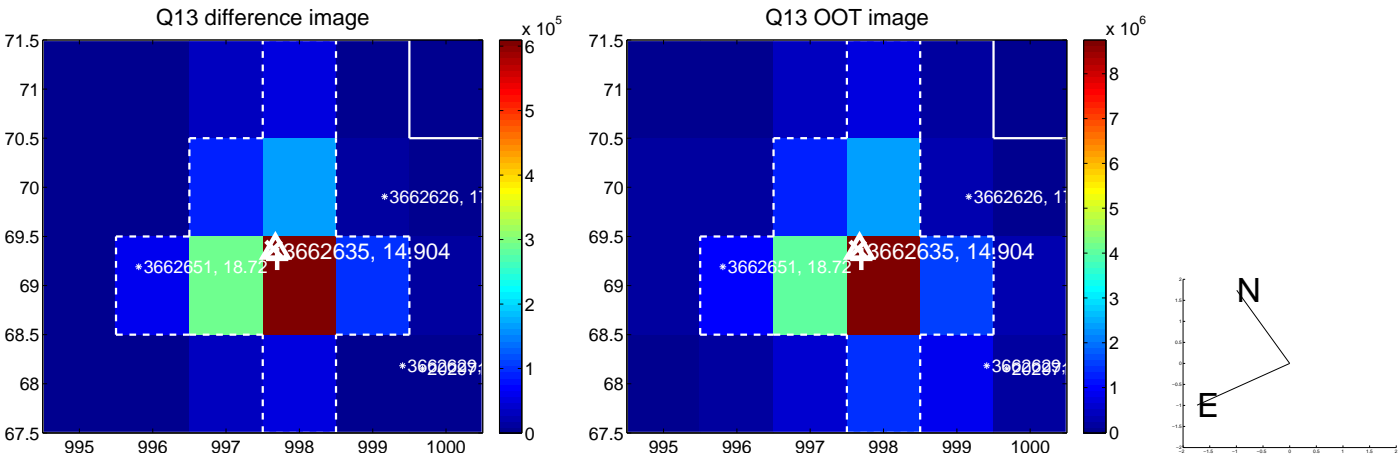
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



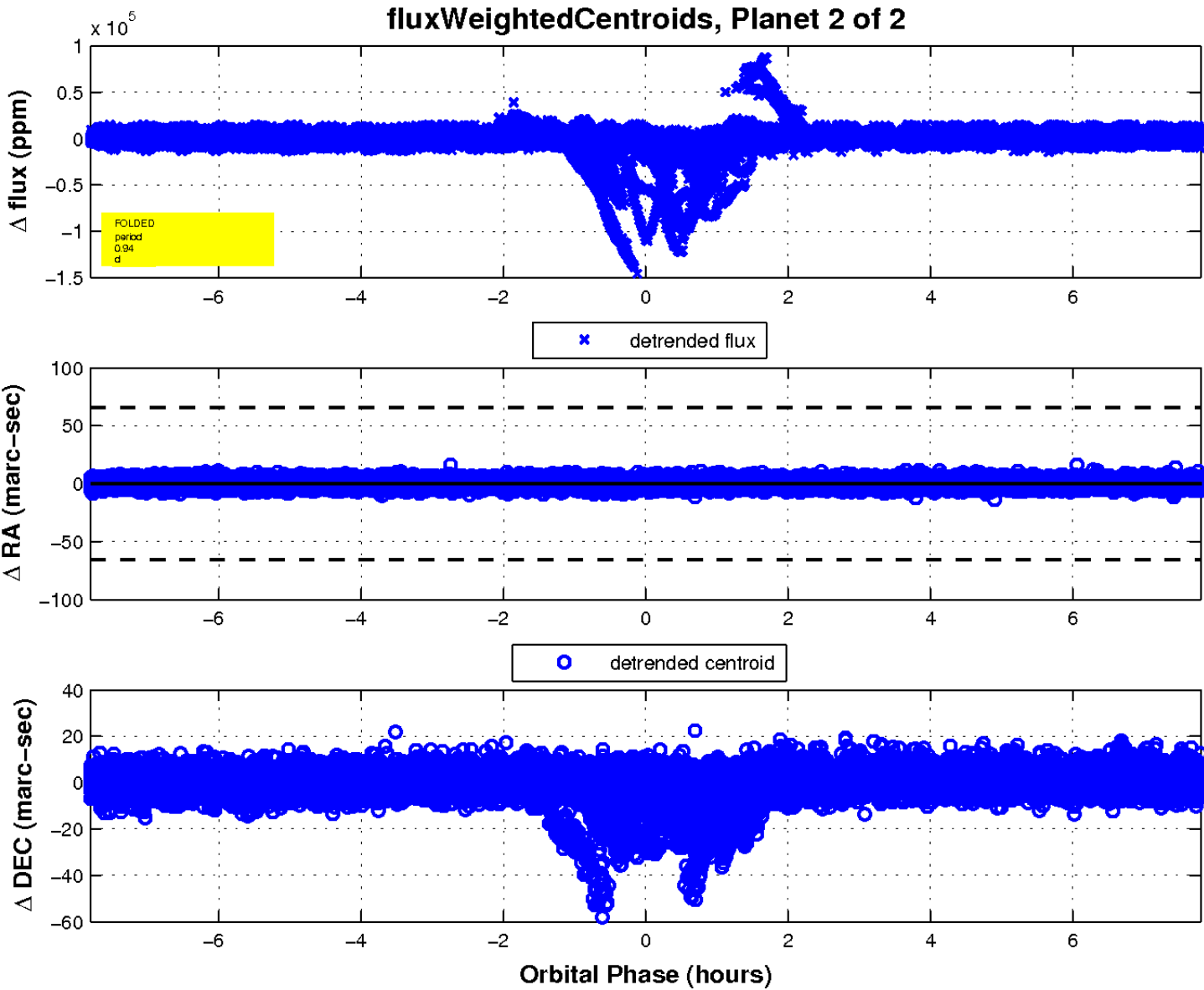
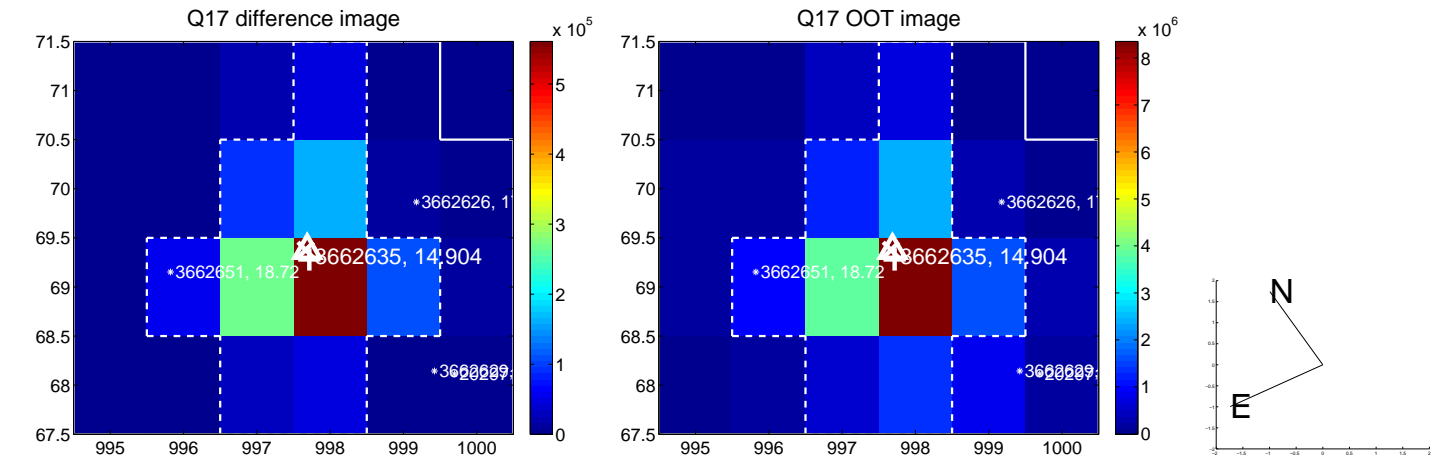
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

