

KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

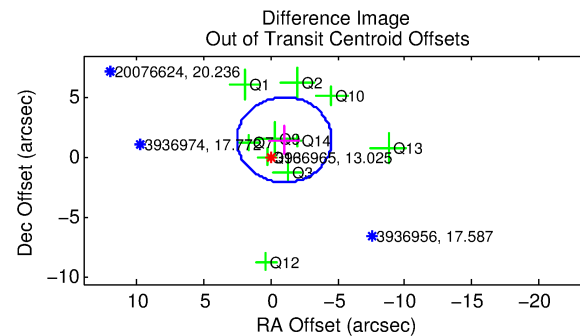
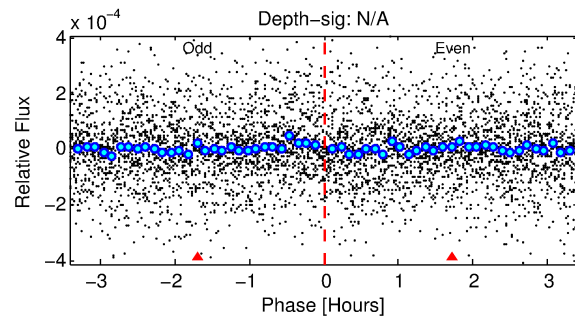
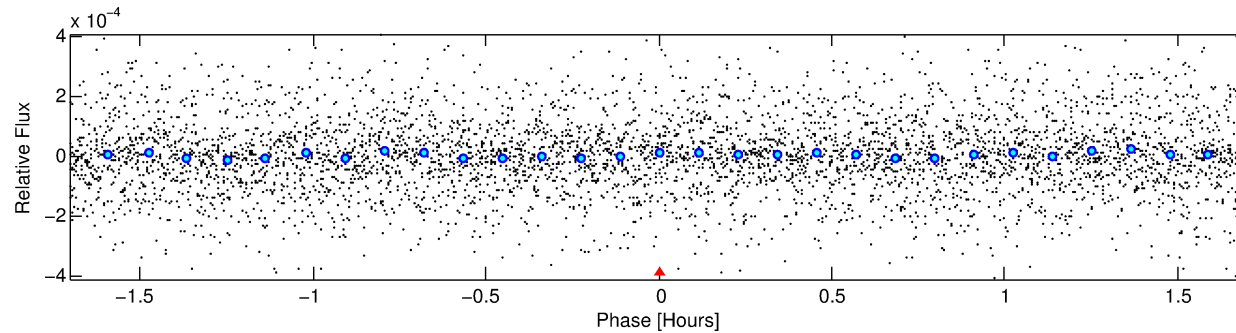
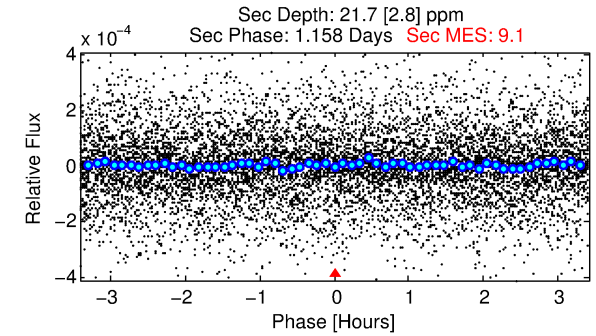
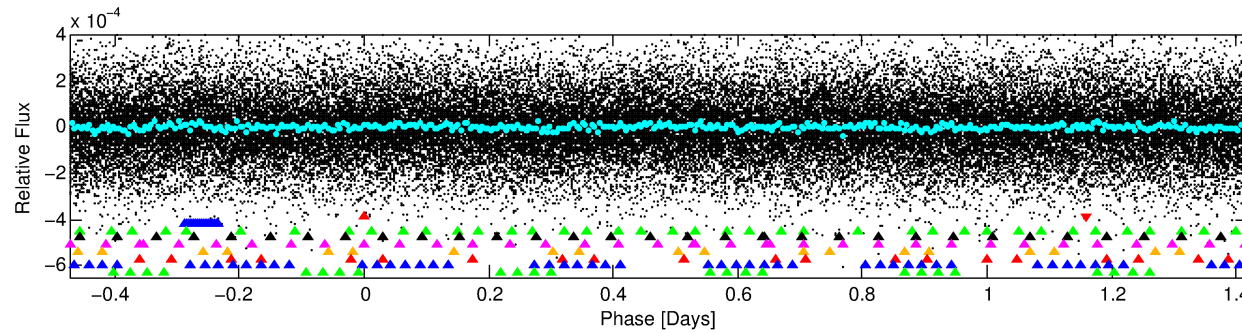
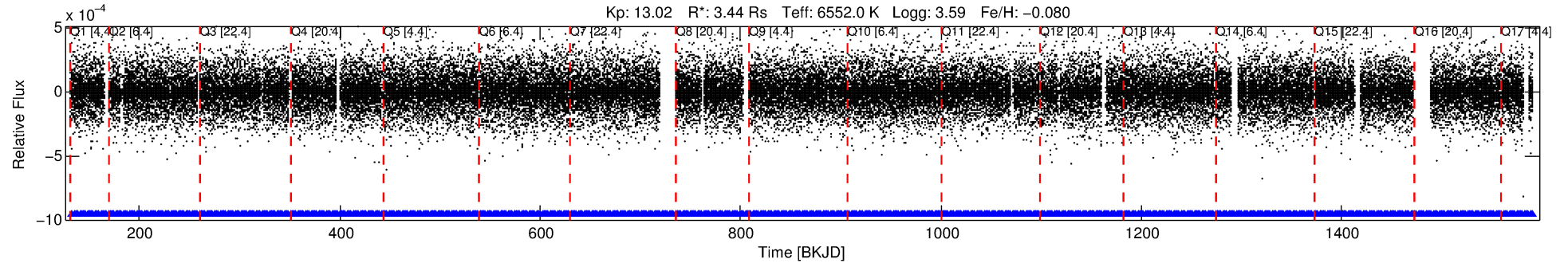
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-01

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 1 of 9 Period: 1.892 d



TPS TCE Results:

Period = 1.89177 d
Epoch = 131.7937 BKJD

DV fit results are unavailable

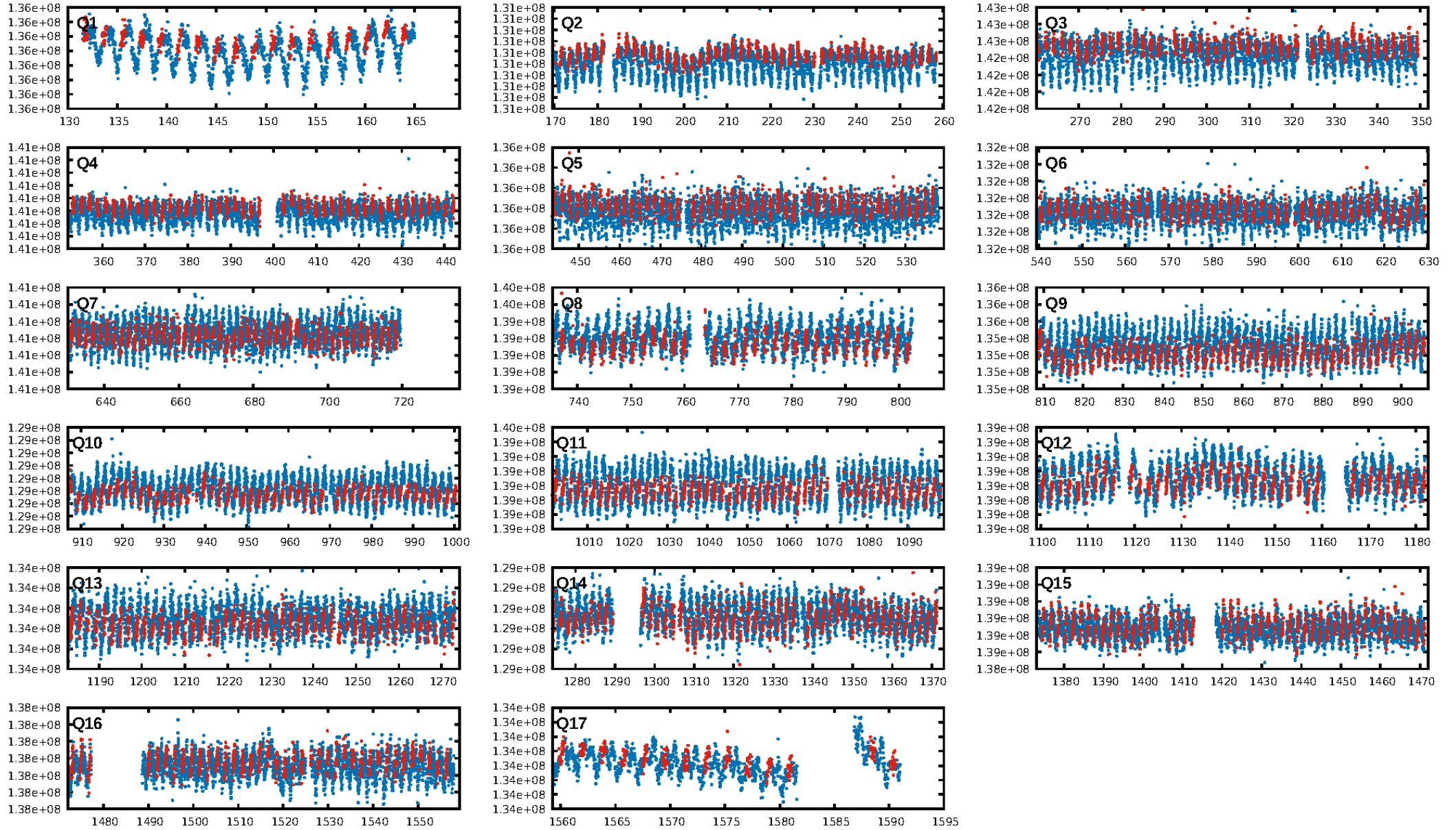
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.20e-15
RollingBand-fgt: 1.00 [677/677]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.799 arcsec [1.52 σ]
KicOffset-rm: 1.705 arcsec [1.27 σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 0.00 [0/17]

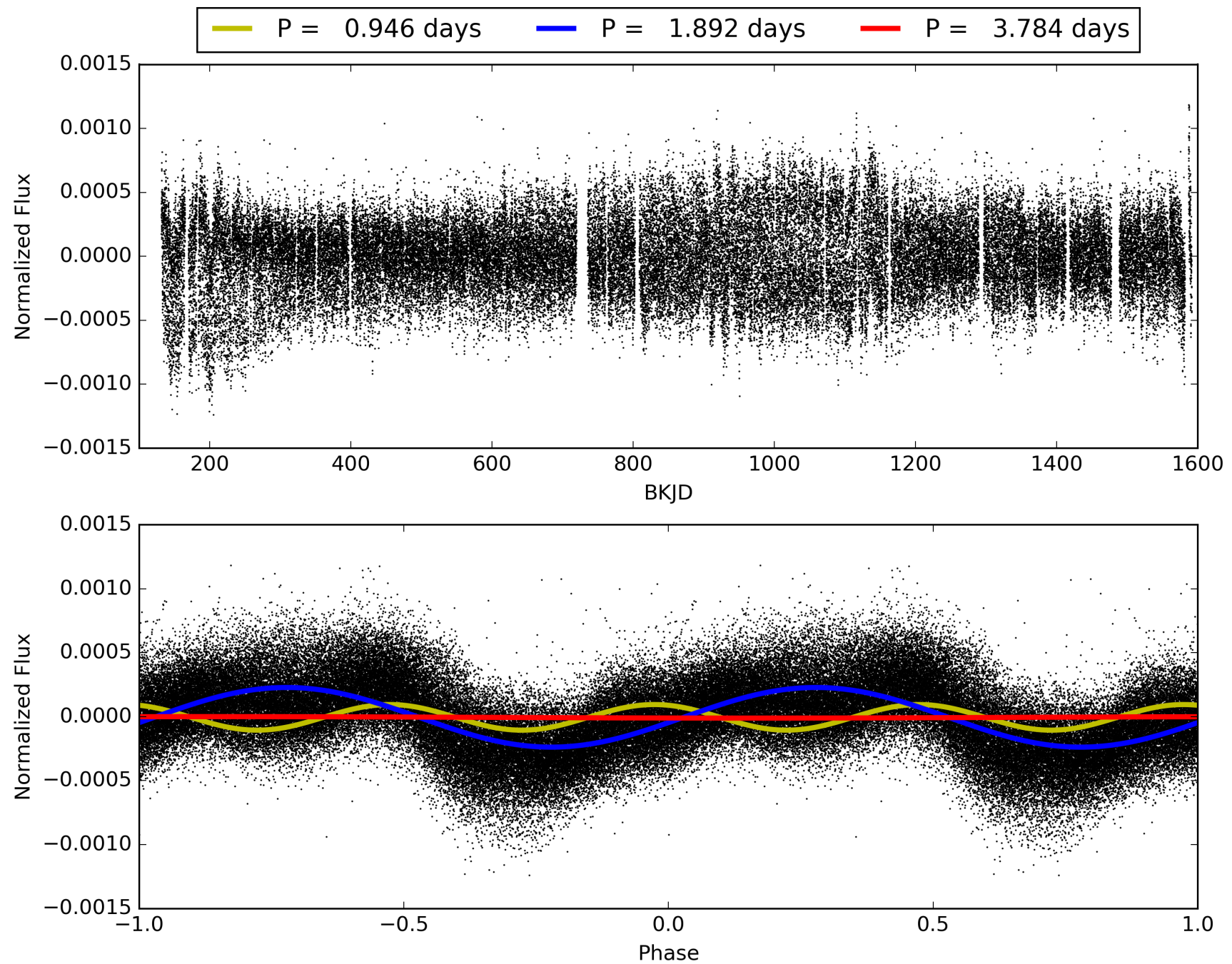
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:06 Z

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

TCE 003936965-01, PDC Light Curves

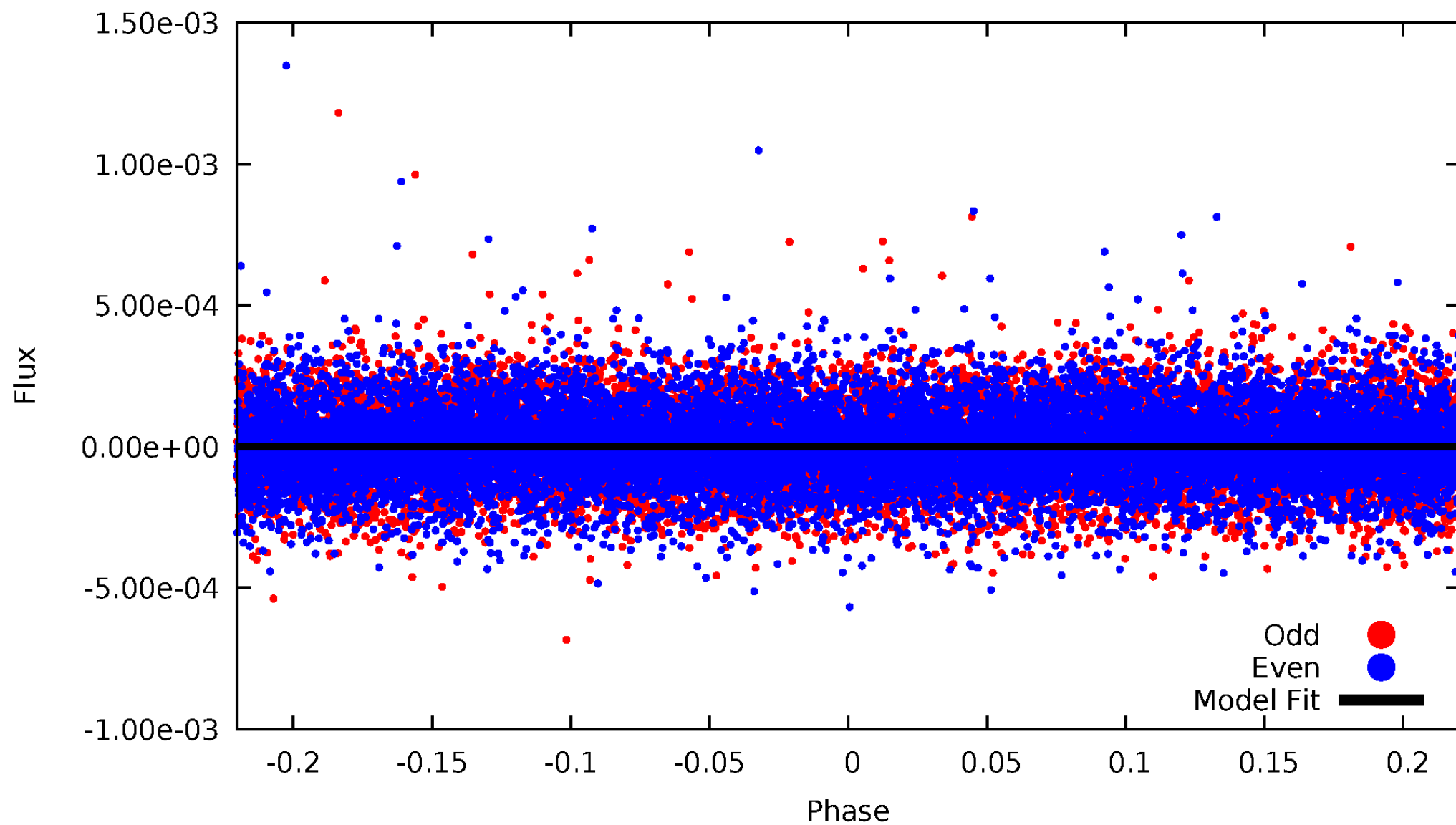


TCE 003936965-01



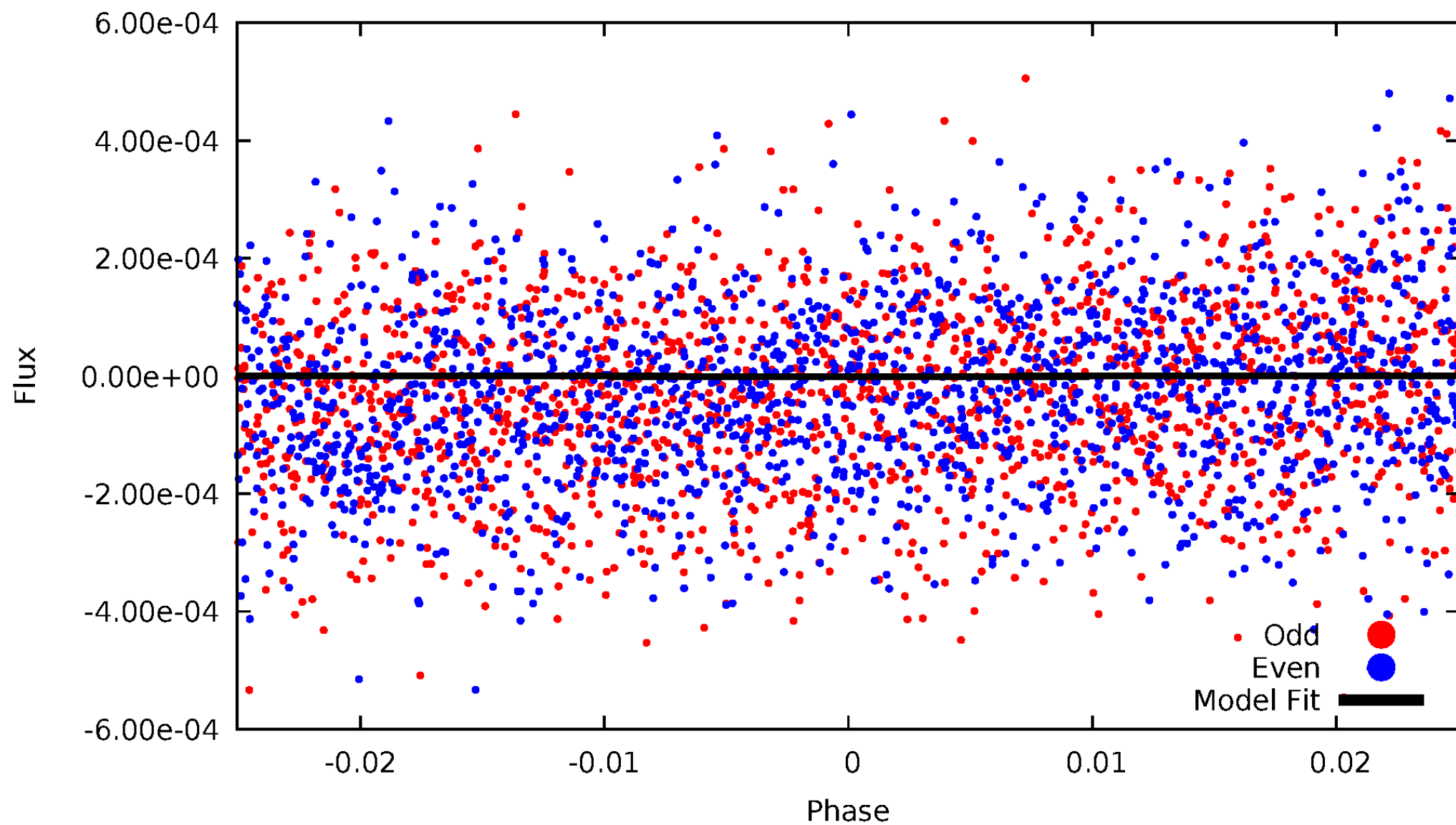
DV Odd/Even

TCE 003936965-01

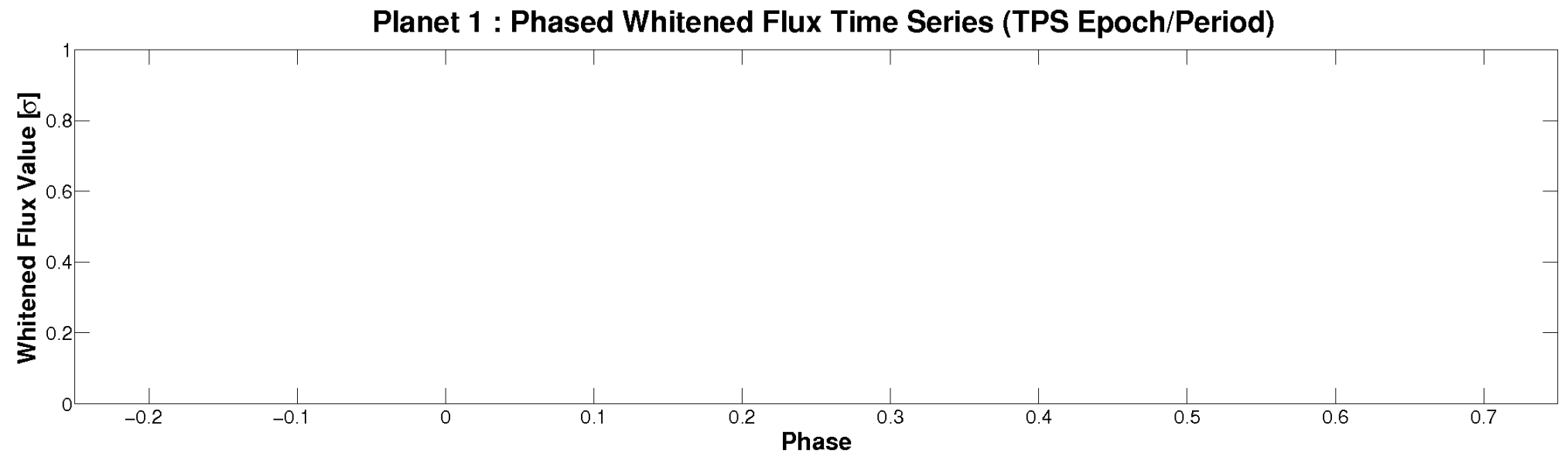
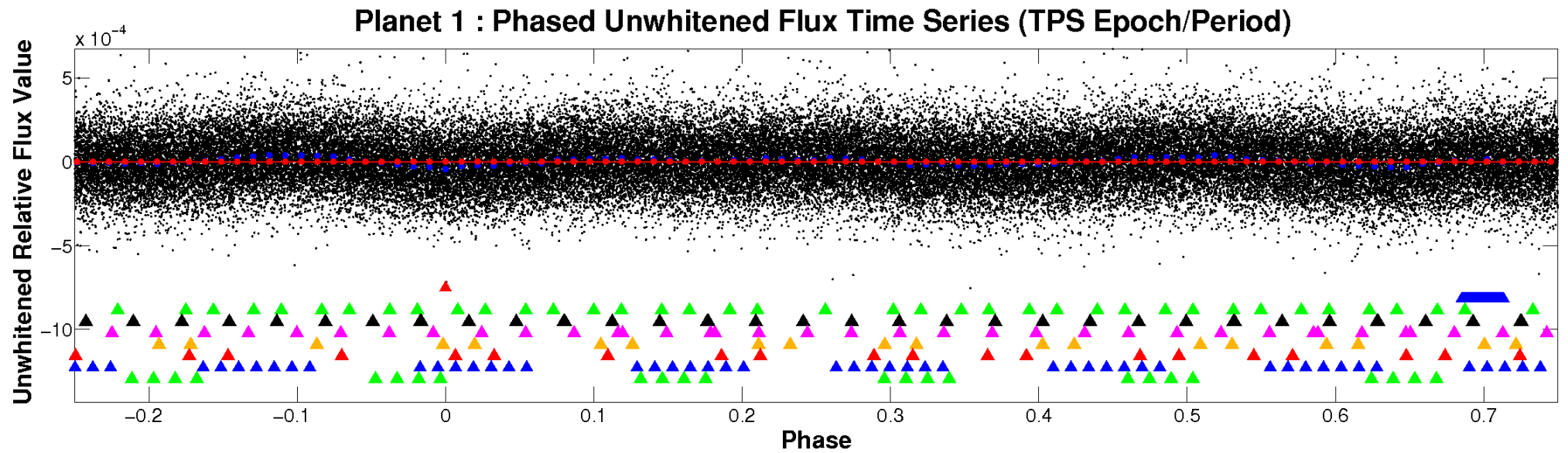


ALT Odd/Even

TCE 003936965-01

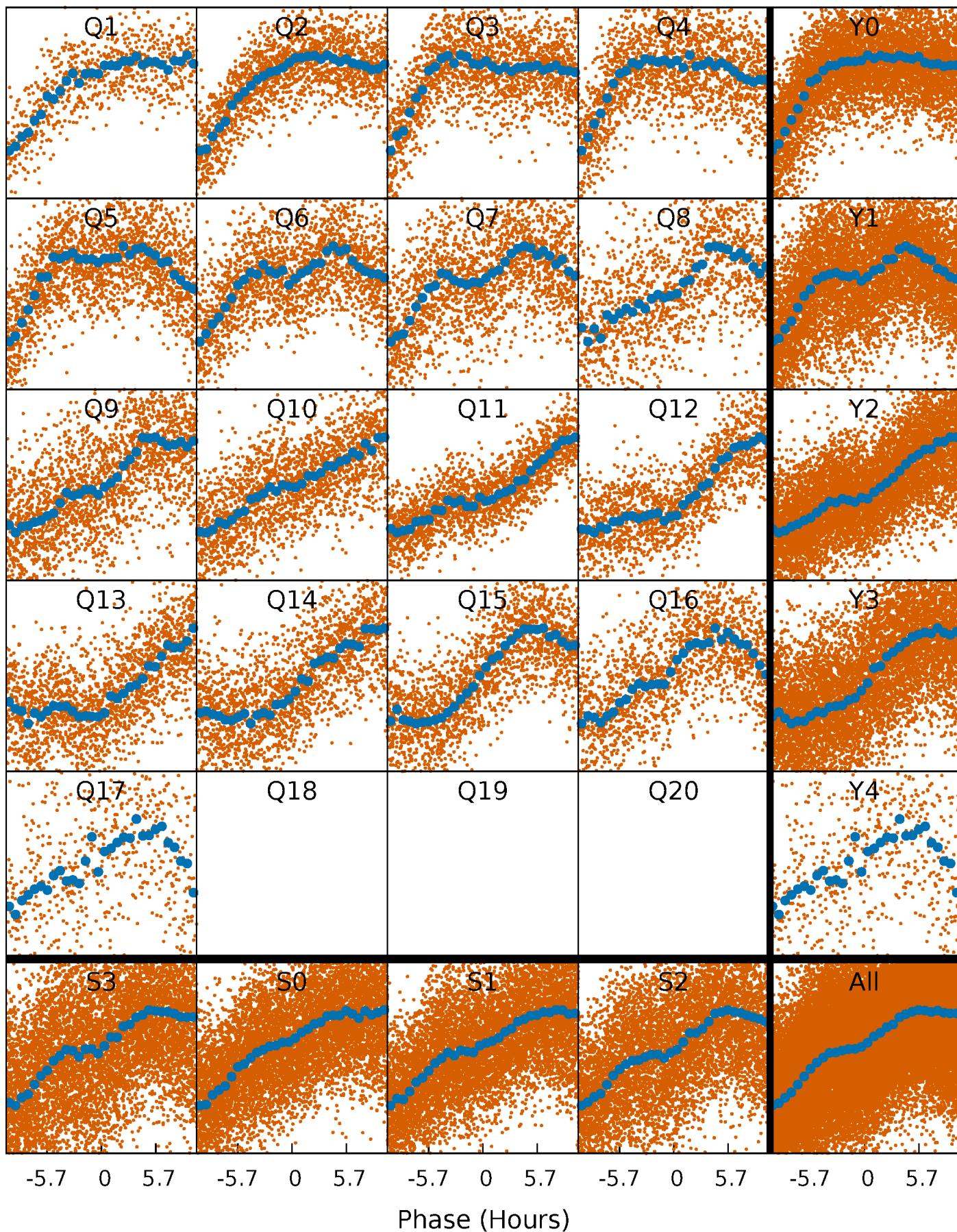


Non-Whitened Vs. Whitened Light Curve



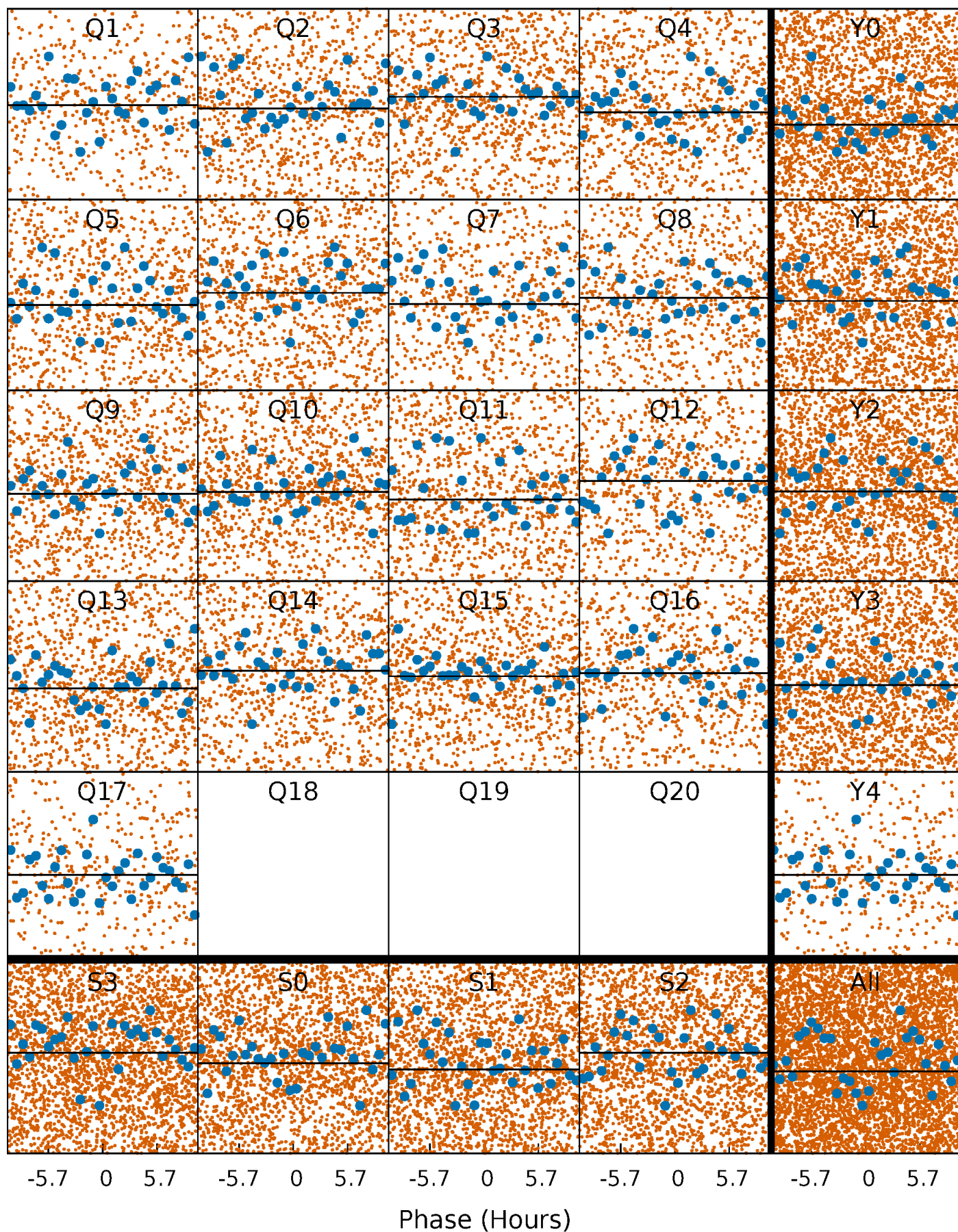
PDC Quarter-Phased Transit Curves

TCE 003936965-01 P= 1.891773 Days $T_0=131.793658$ (BKJD)



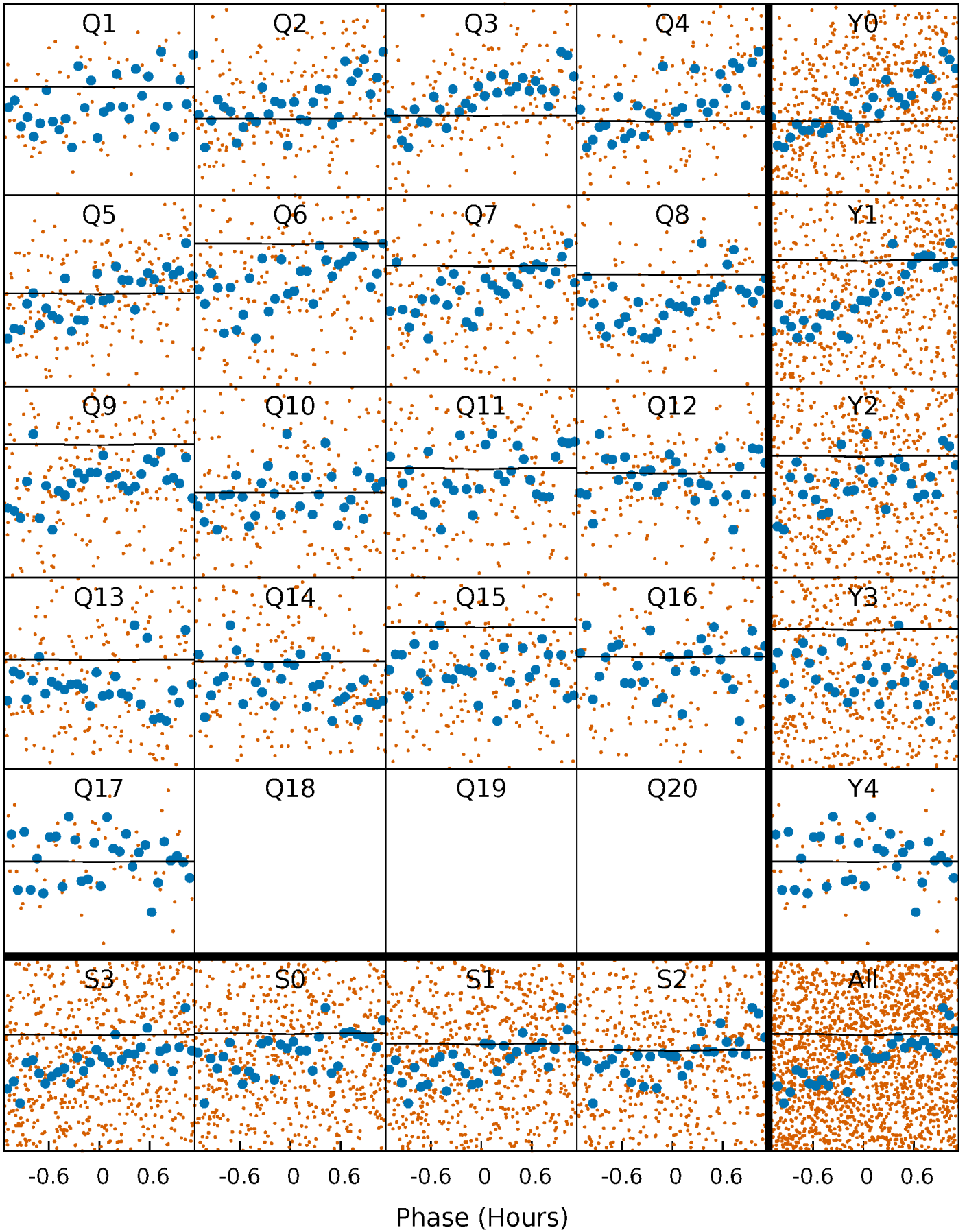
DV Quarter-Phased Transit Curves

TCE 003936965-01 P= 1.891773 Days $T_0=131.793658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

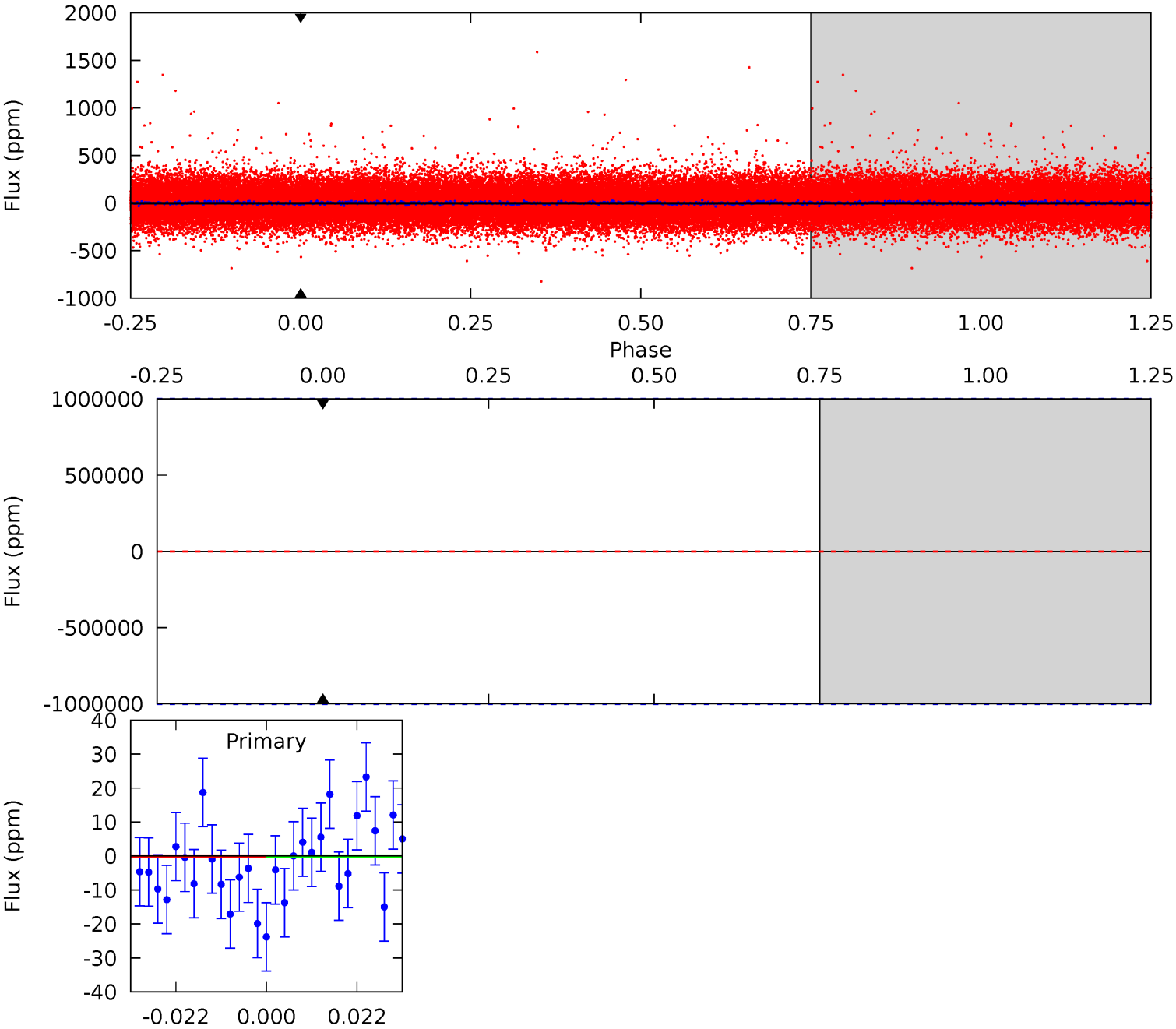
TCE 003936965-01 P= 1.891773 Days $T_0=133.378323$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-01, P = 1.891773 Days, E = 129.901885 Days

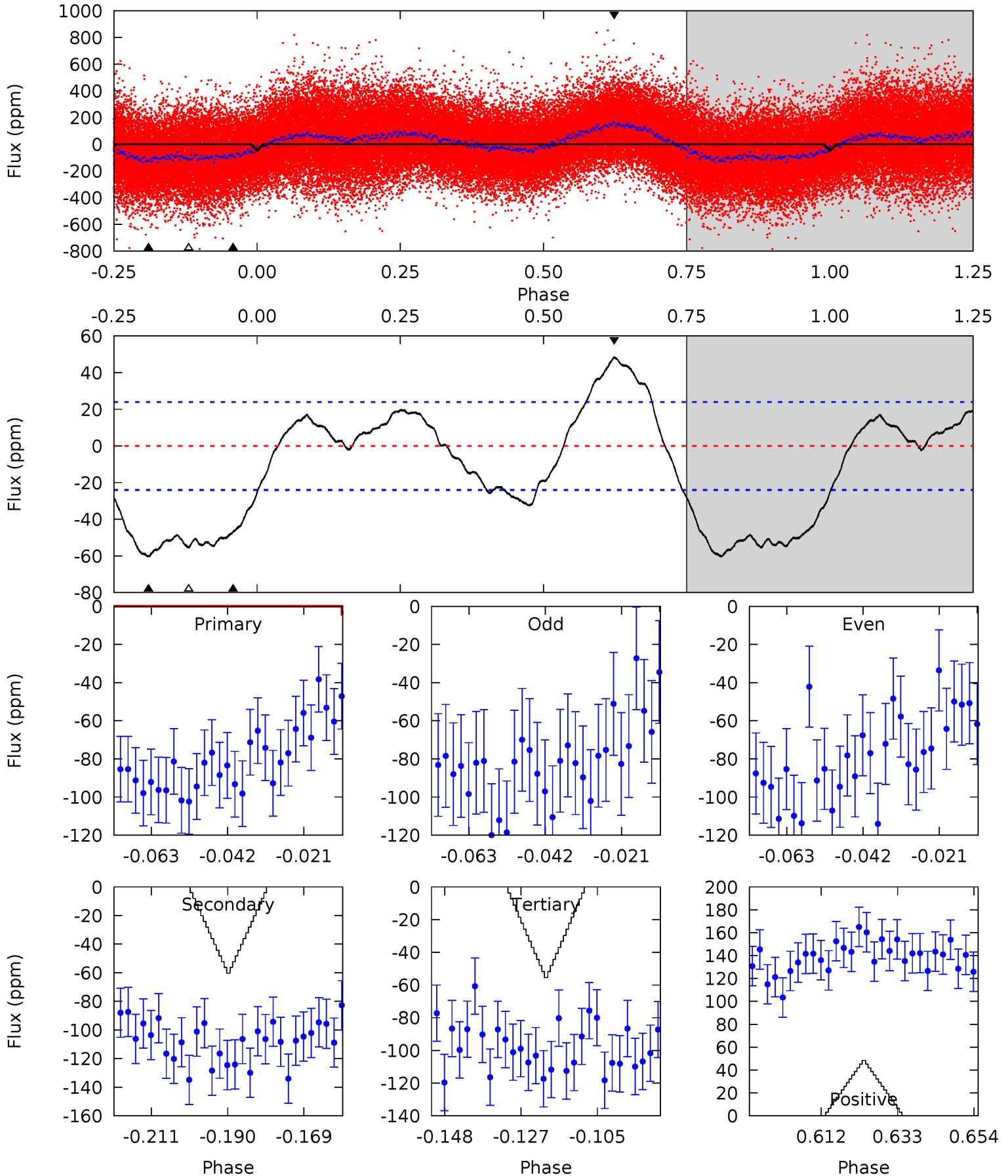
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003936965-01, P = 1.891773 Days, E = 131.486550 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.55	12.3	11.3	9.84	4.88	2.31	5.58	-1.73	-0.29	0.98	2.42	1.08	1.20	0.45	3.05



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$25.18^{+28.65}_{-17.53}$	3881^{+192}_{-350}	-4882^{+34212}_{-28052}	$-1.379^{+204.890}_{-236.413}$
Alt.	-60 ± 5	$22.92^{+24.62}_{-16.30}$	3864^{+187}_{-347}	-3343^{+7461}_{-271}	$0.084^{+0.846}_{-0.065}$

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

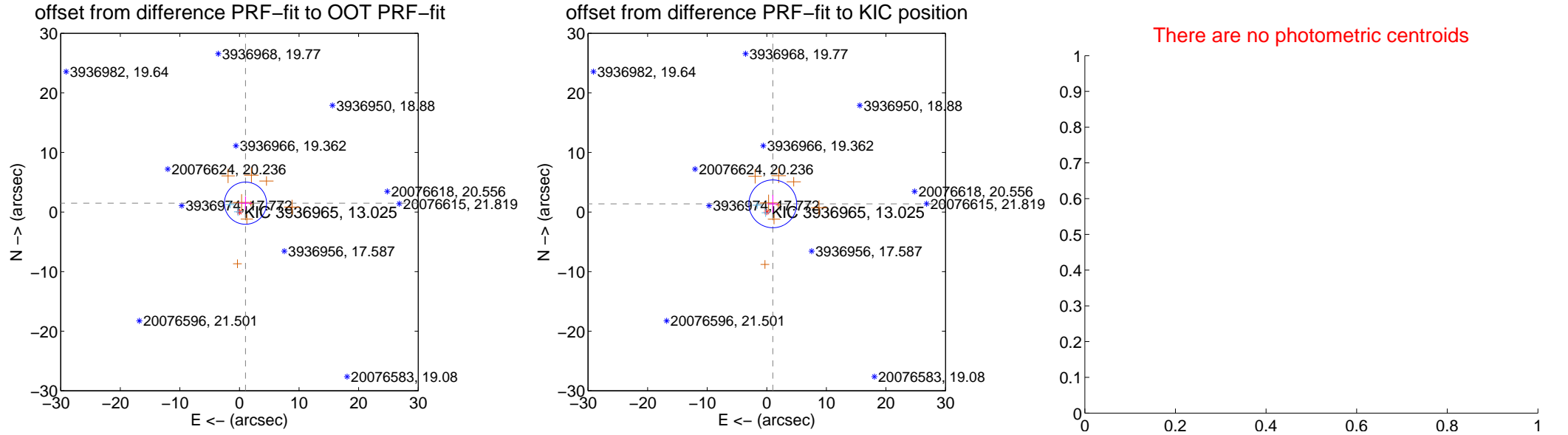
DV Centroid Data

Supplemental centroid analysis for 003936965-01. Kepler magnitude: 13.03. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

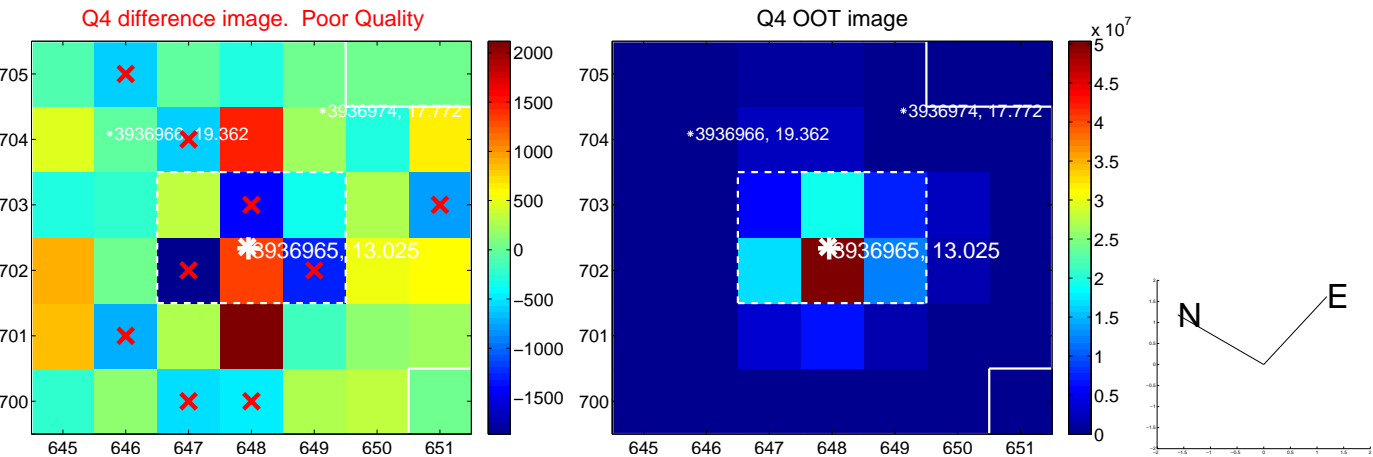
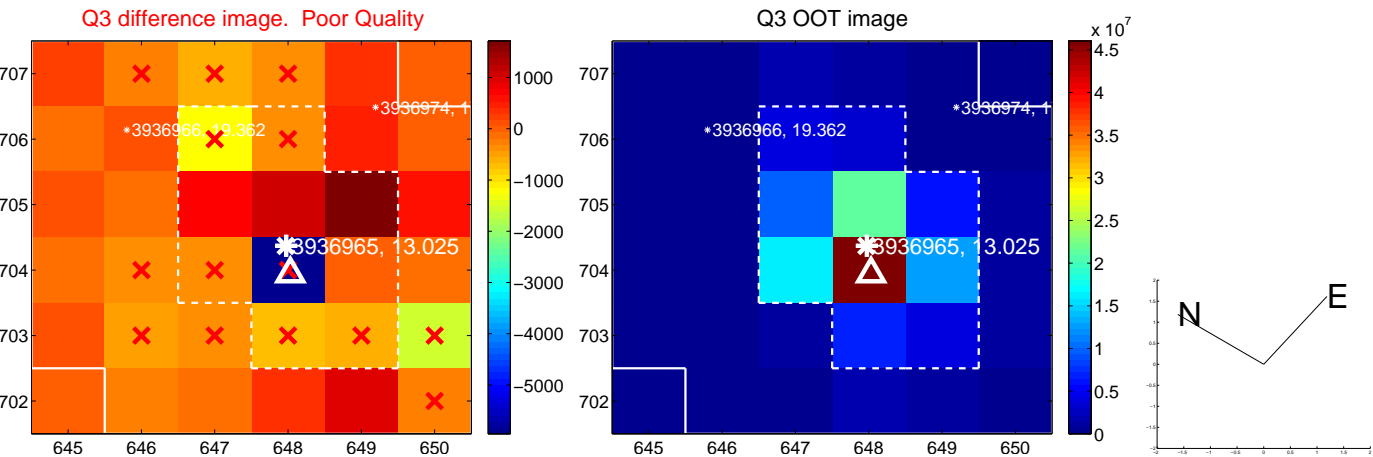
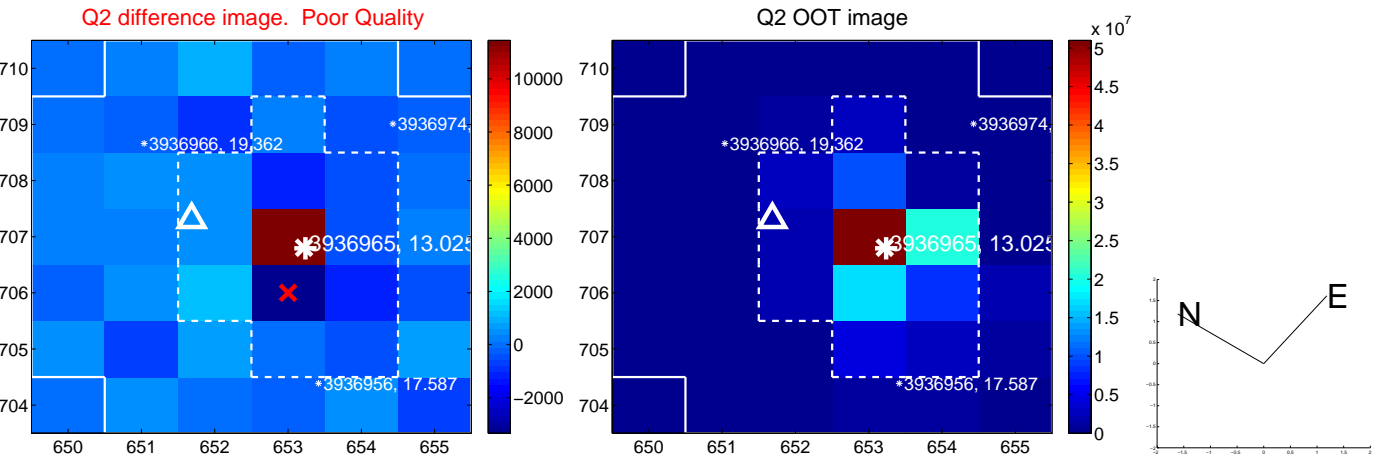
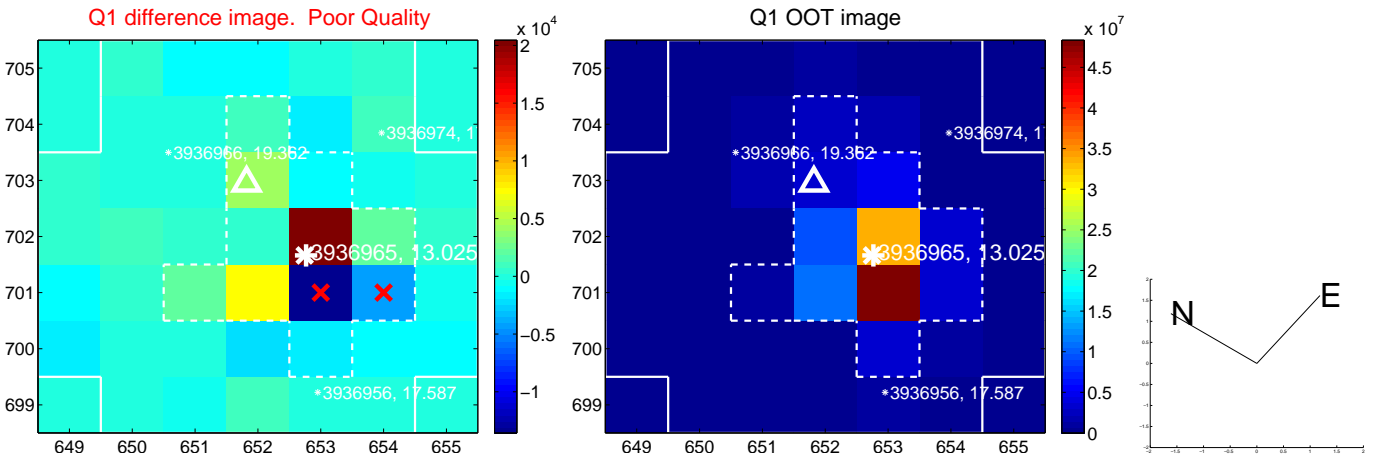
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.799 ± 1.180	1.52	-1.012 ± 1.071	1.488 ± 1.137
PRF-fit source offset from KIC position	1.705 ± 1.337	1.27	-1.008 ± 0.884	1.375 ± 1.483
photometric centroid source offset	—	—	—	—

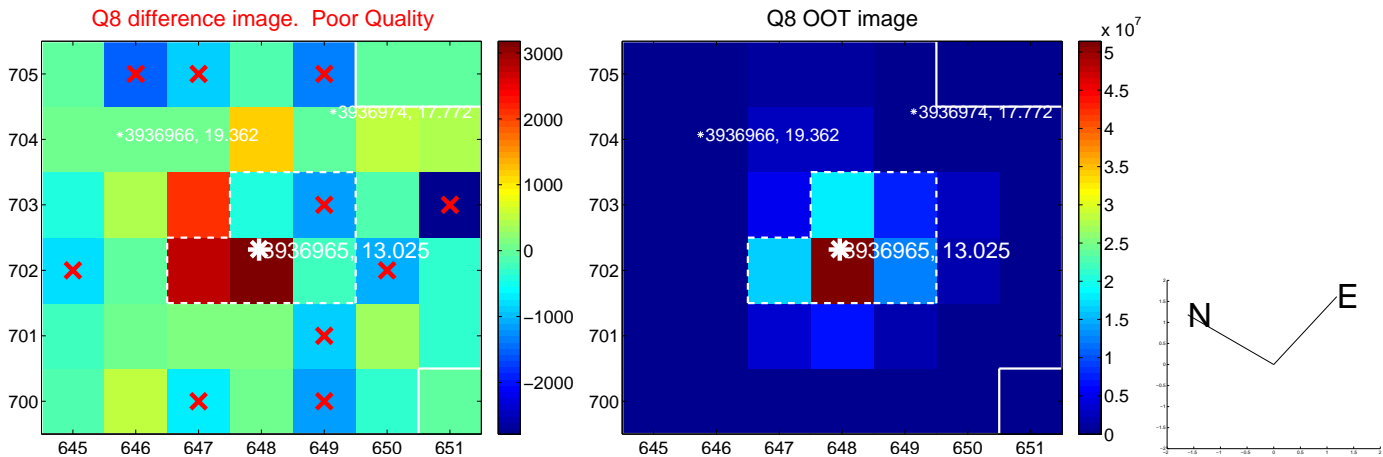
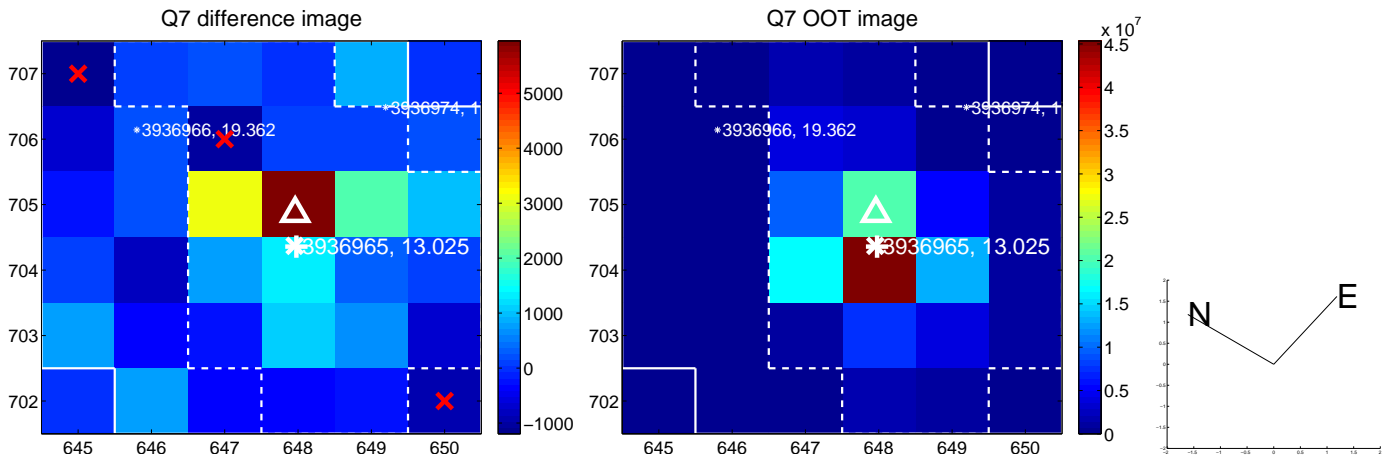
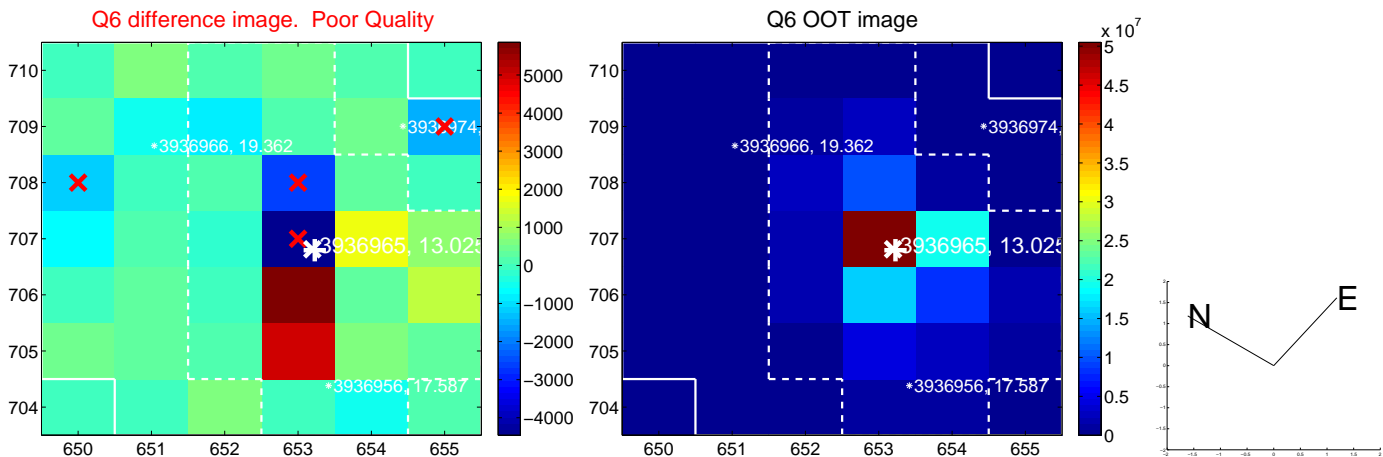
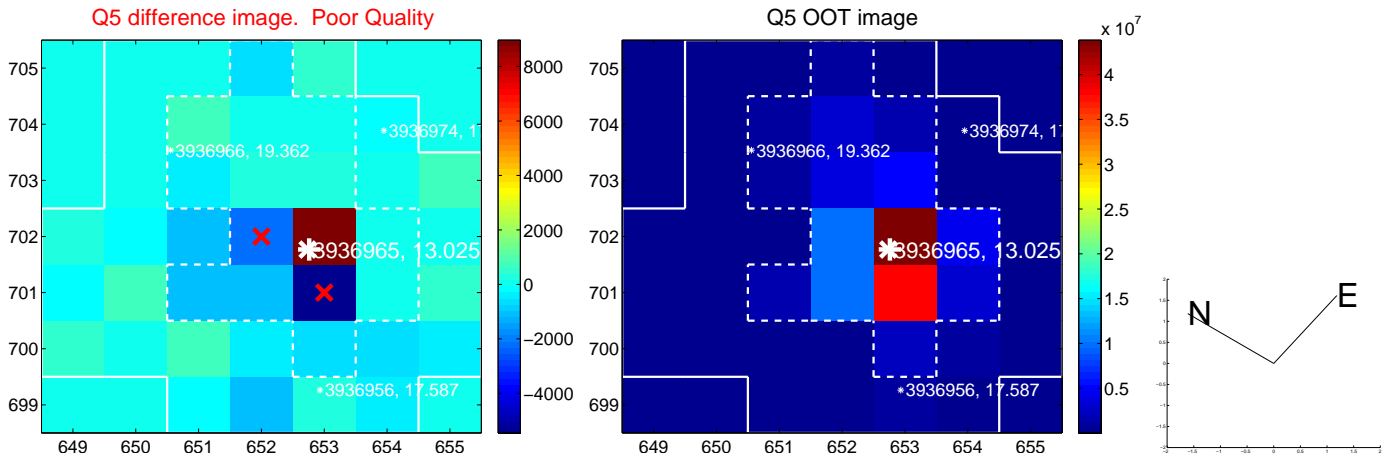


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

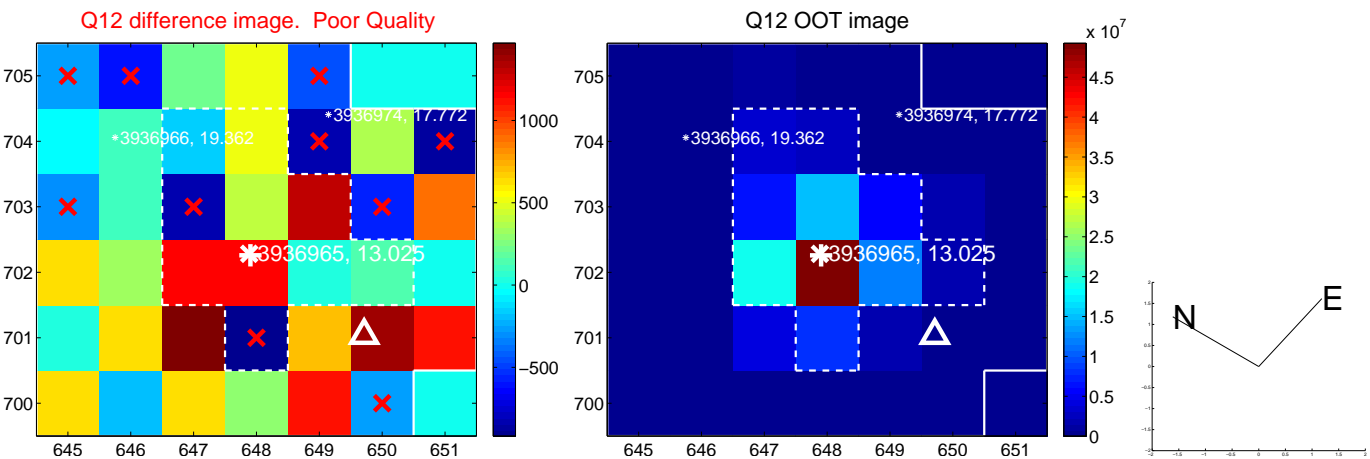
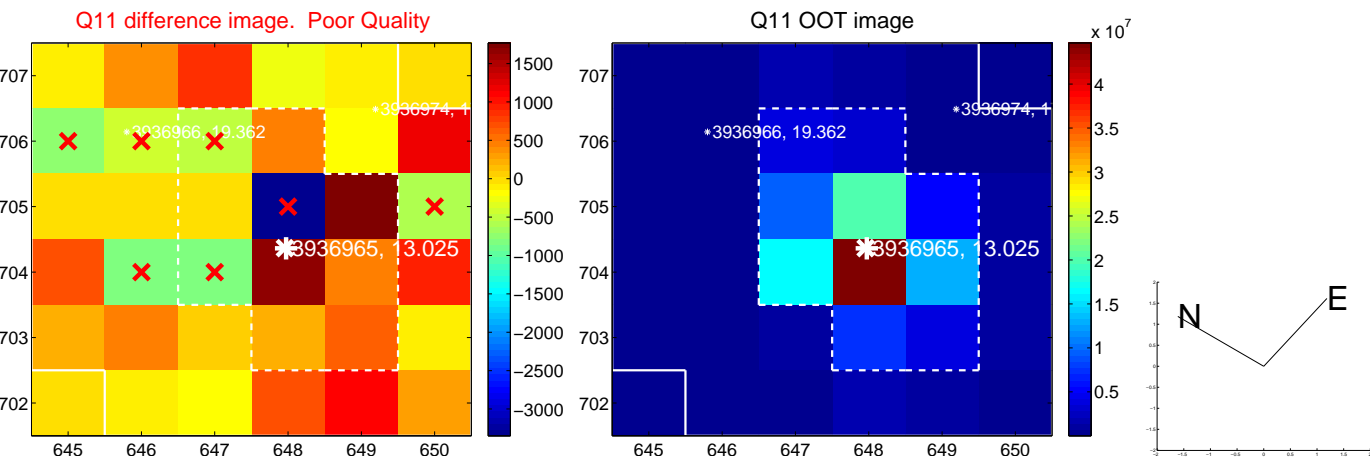
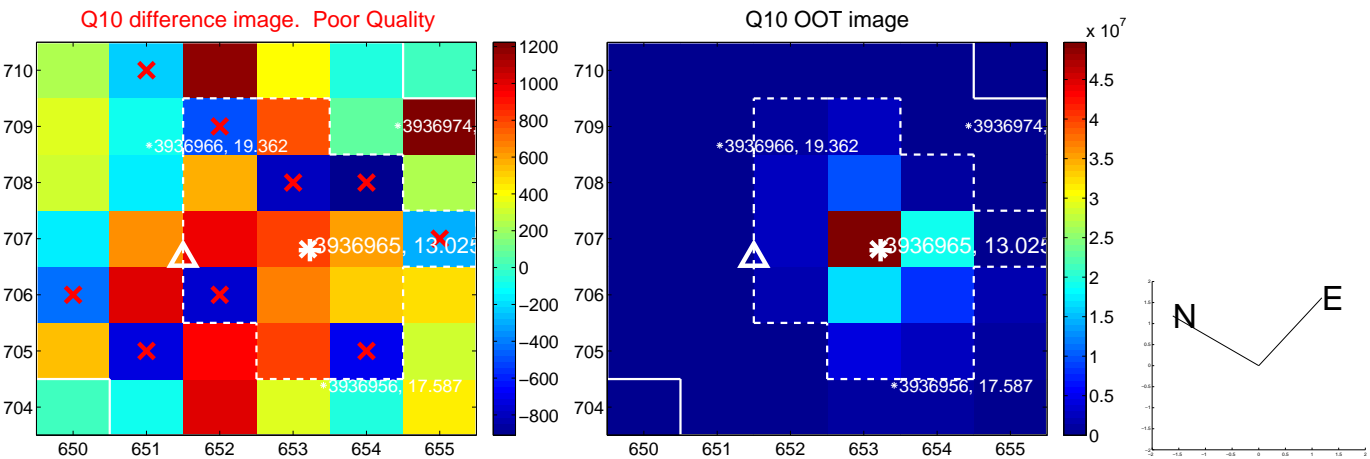
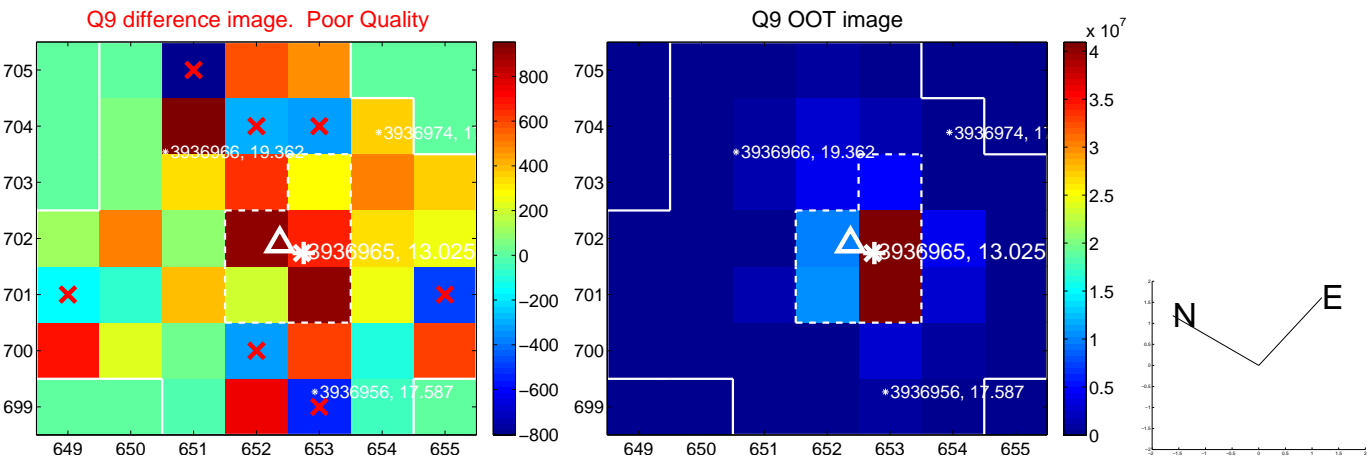
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



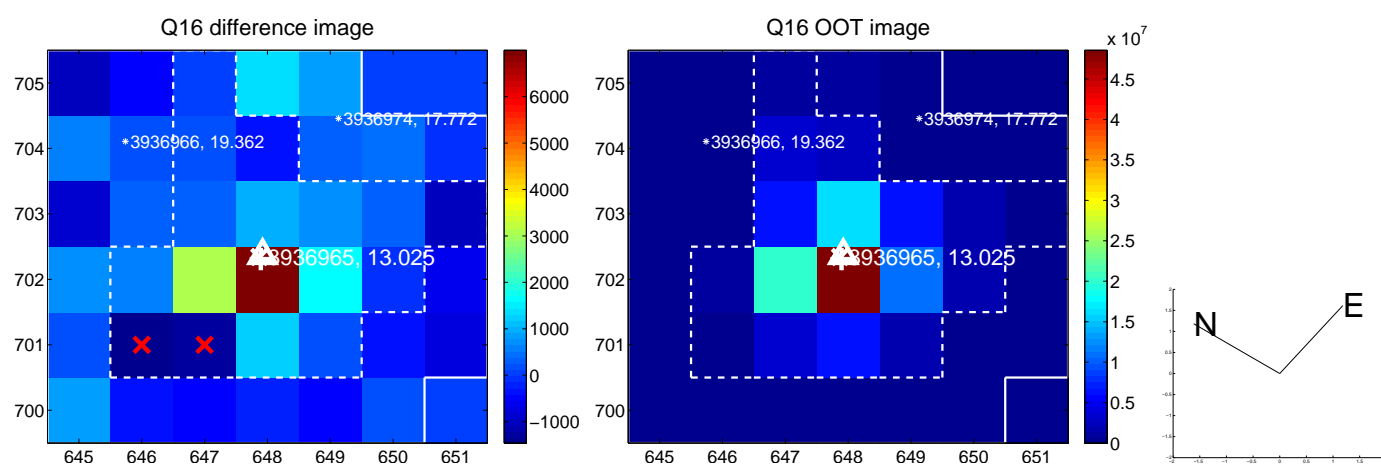
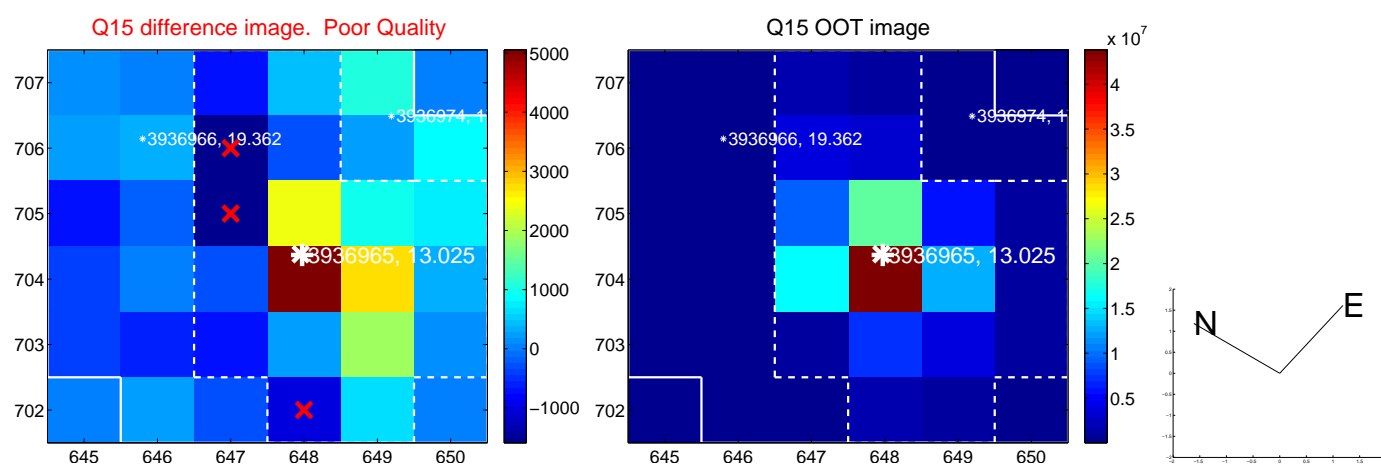
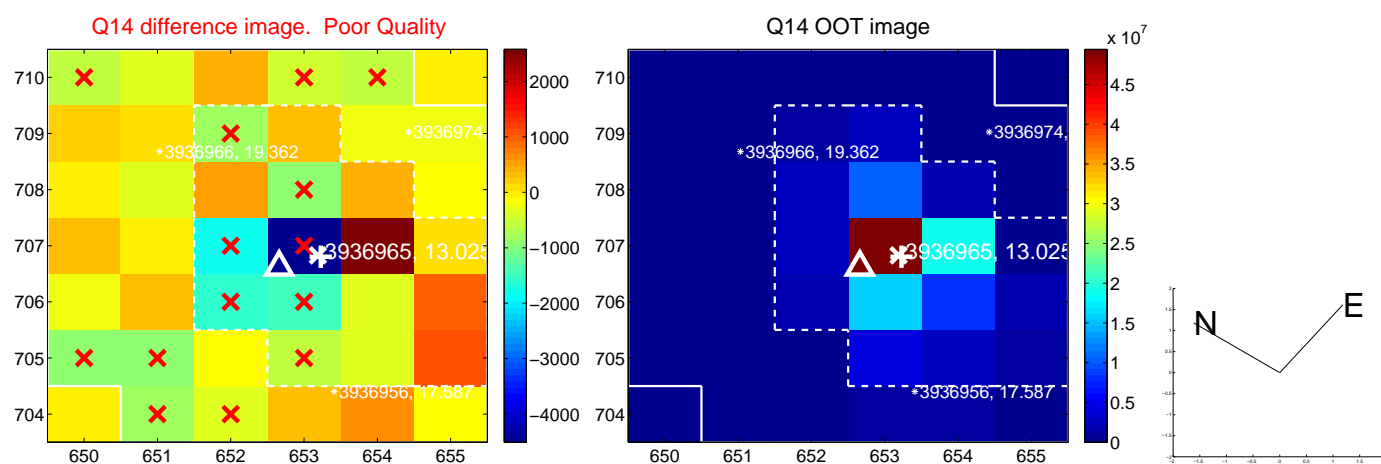
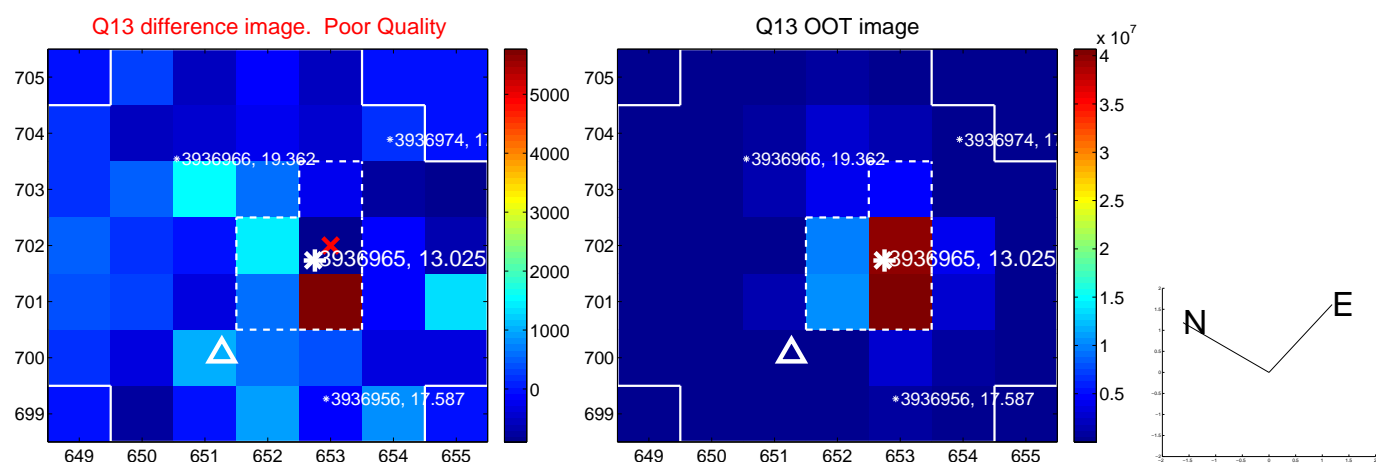
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



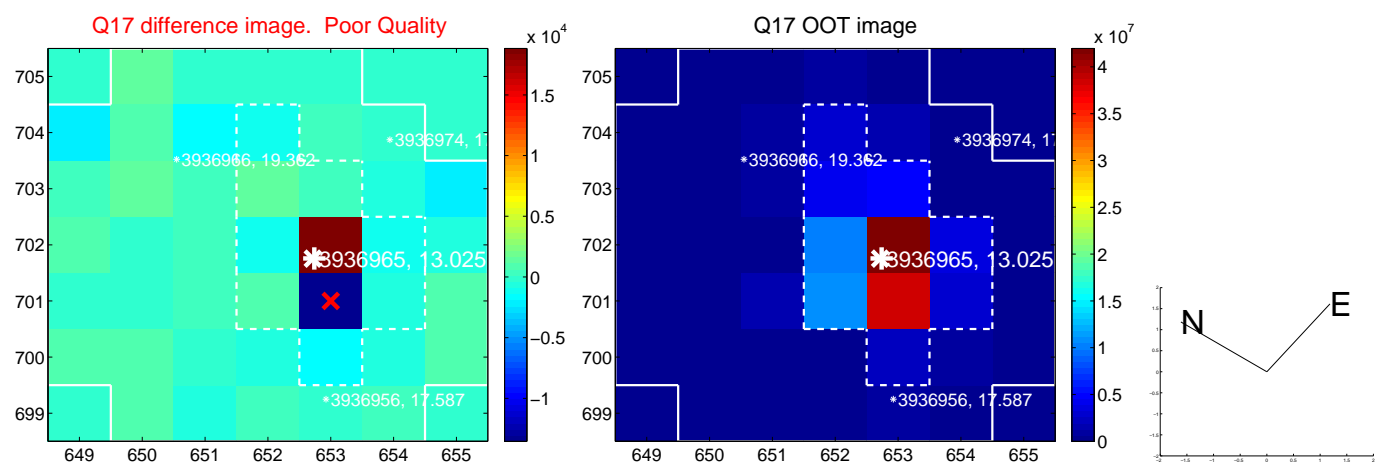
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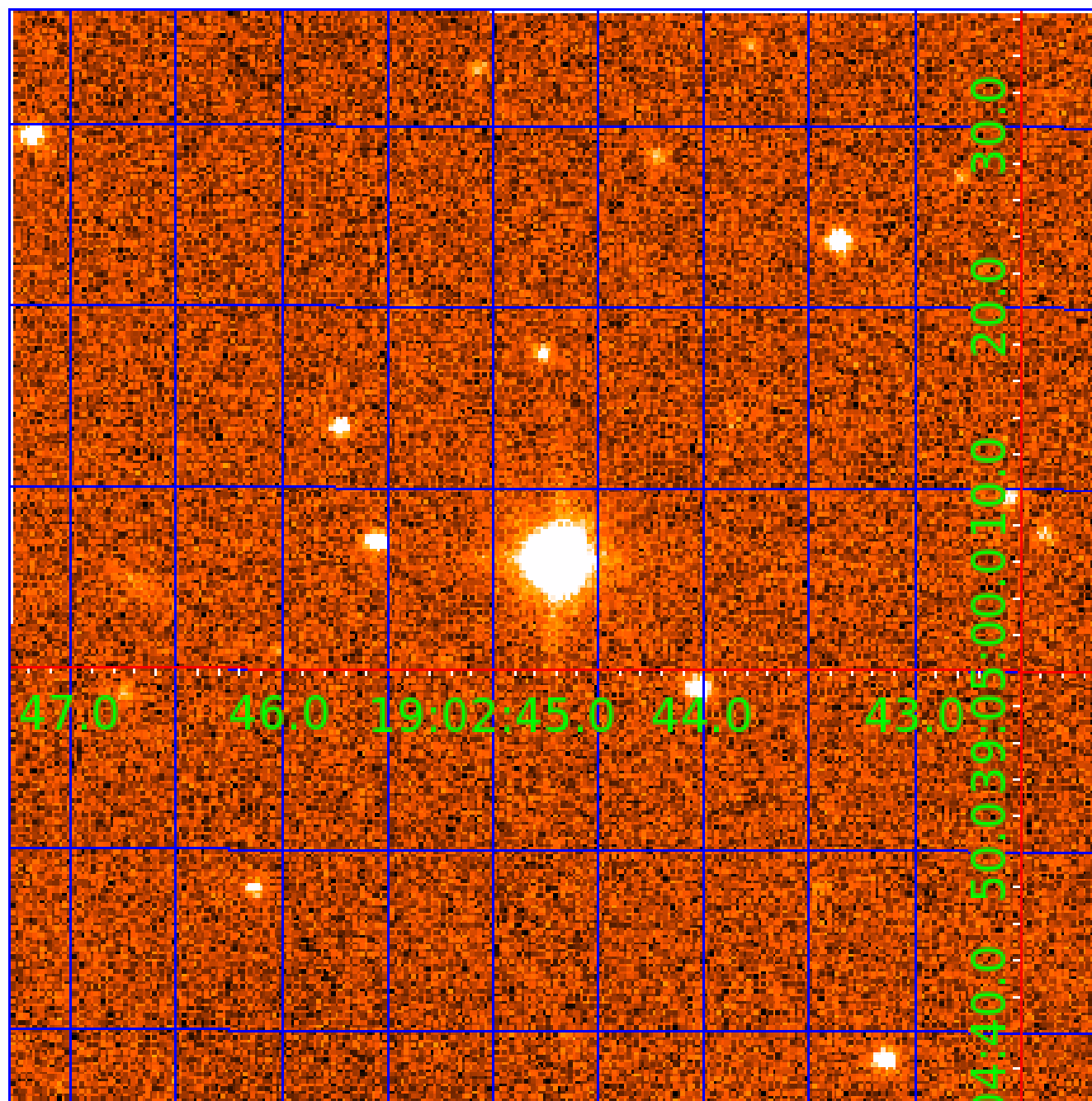
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 003936965

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
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003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

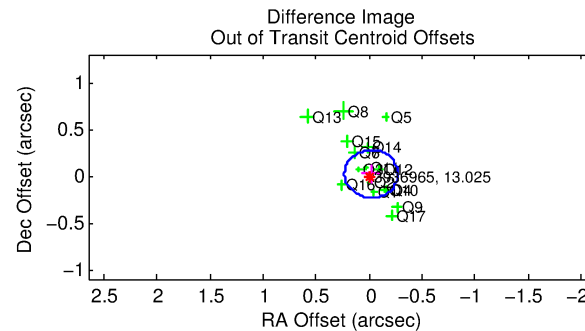
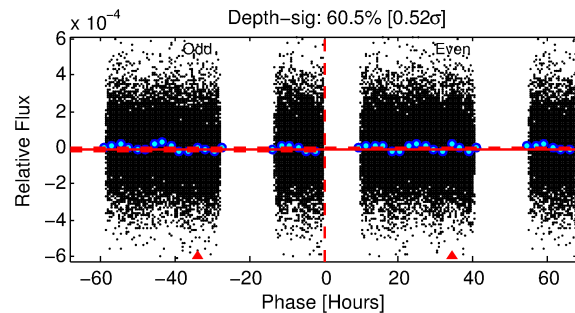
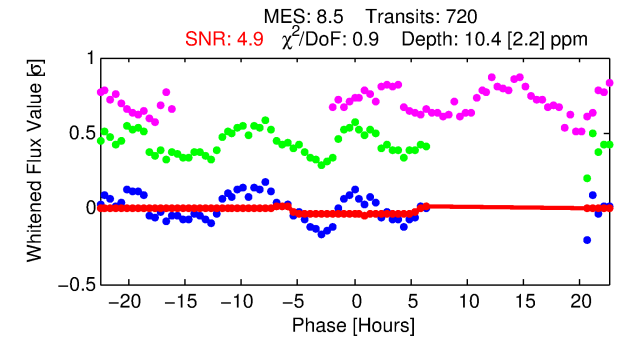
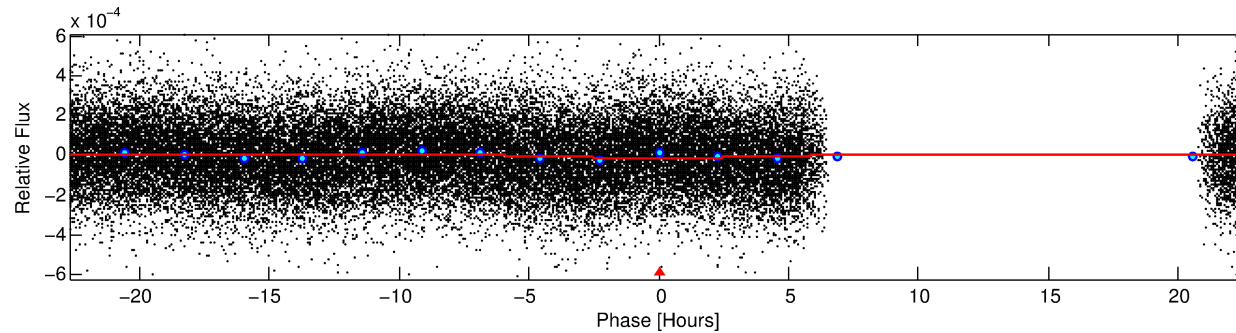
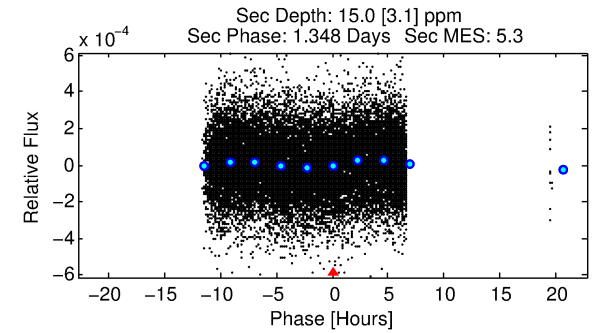
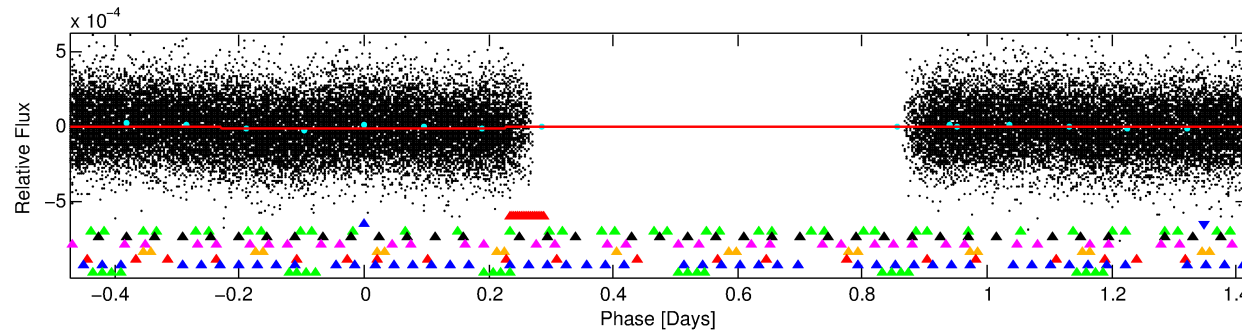
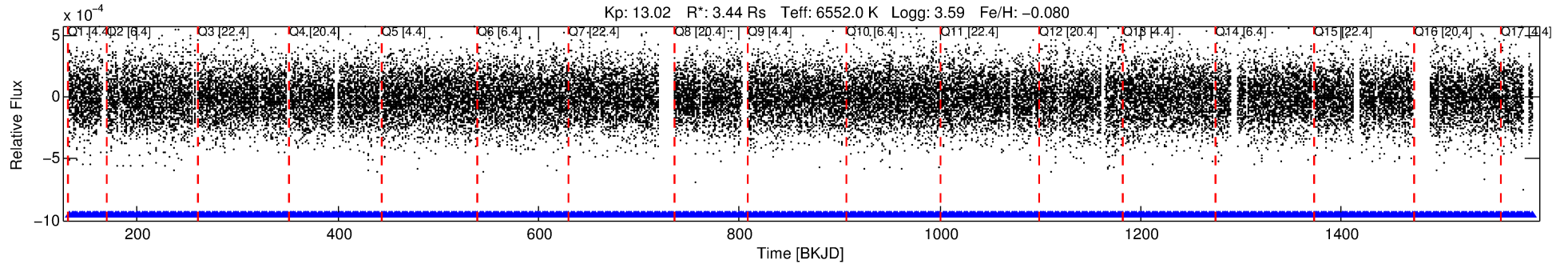
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-02

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 2 of 9 Period: 1.892 d



DV Fit Results:

Period = 1.89184 [0.00007] d
Epoch = 133.0896 [0.0158] BKJD
Rp/R* = 0.0033 [0.0020]
a/R* = 1.17 [1.06]
b = 0.80 [1.52]
Seff = 15331.41 [8676.10]
Teq = 2837 [401] K
Rp = 1.23 [0.86] Re
a = 0.0357 [0.0126] AU
Ag = 7.00 [9.33] [0.64σ]
Teffp = 7137 [2169] K [1.95σ]

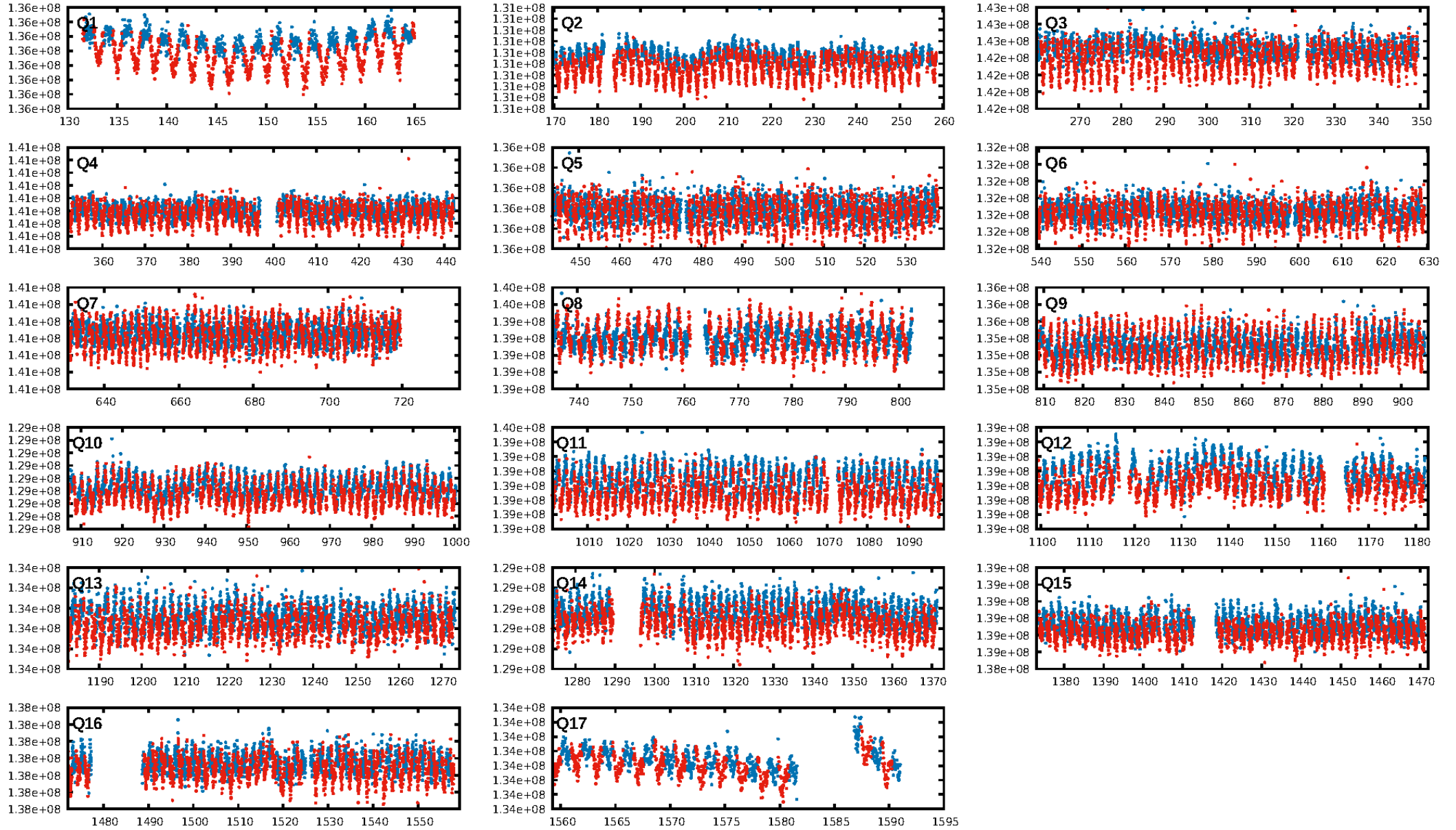
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [56.77σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.94e-11
RollingBand-fgt: 1.00 [689/689]
GhostDiagnostic-chr: 0.4986
Centroid-sig: 3.3%
Centroid-so: 2.278 arcsec [1.51σ]
OotOffset-rm: 0.029 arcsec [0.34σ]
KicOffset-rm: 0.061 arcsec [0.56σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

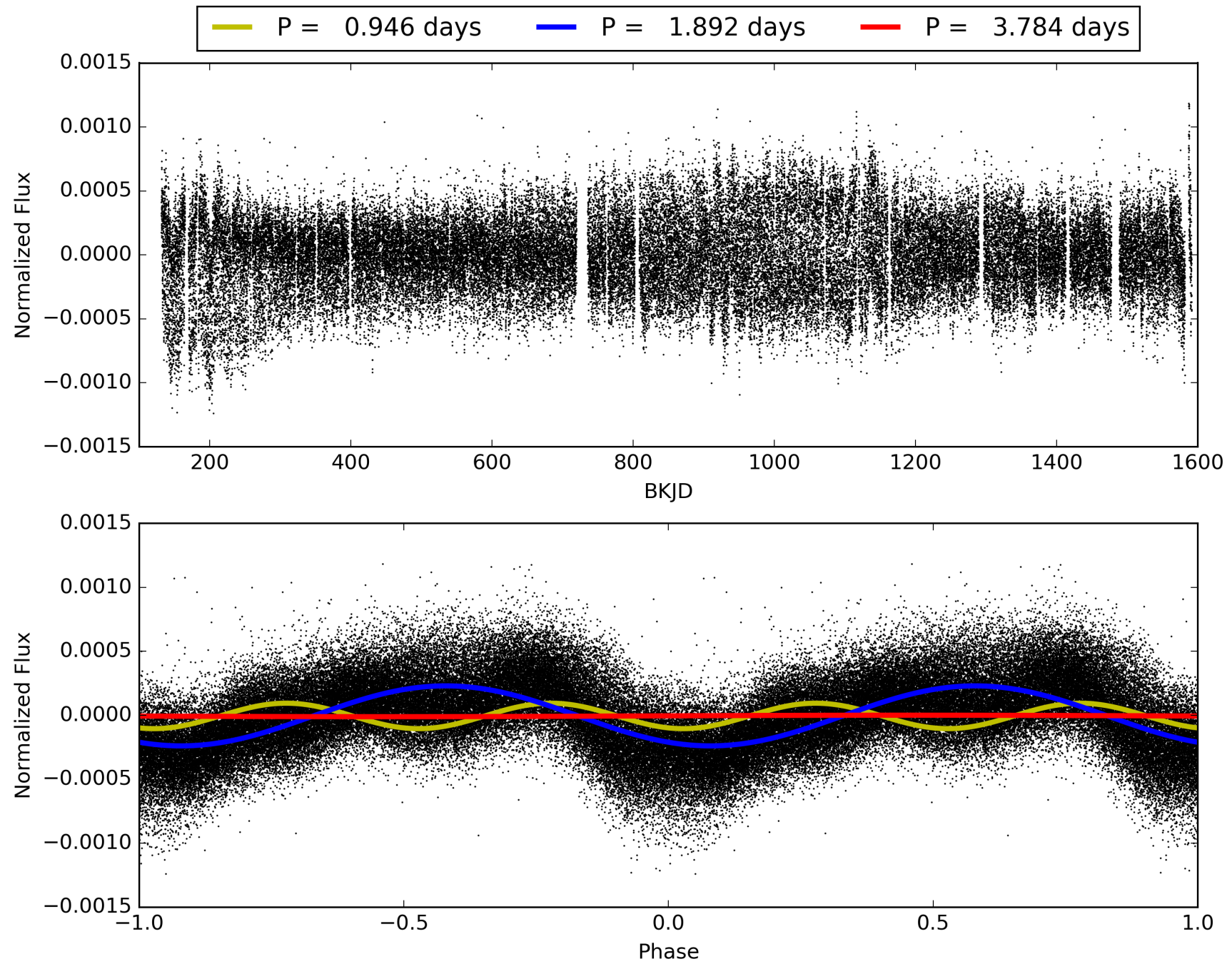
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:16 Z

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

TCE 003936965-02, PDC Light Curves

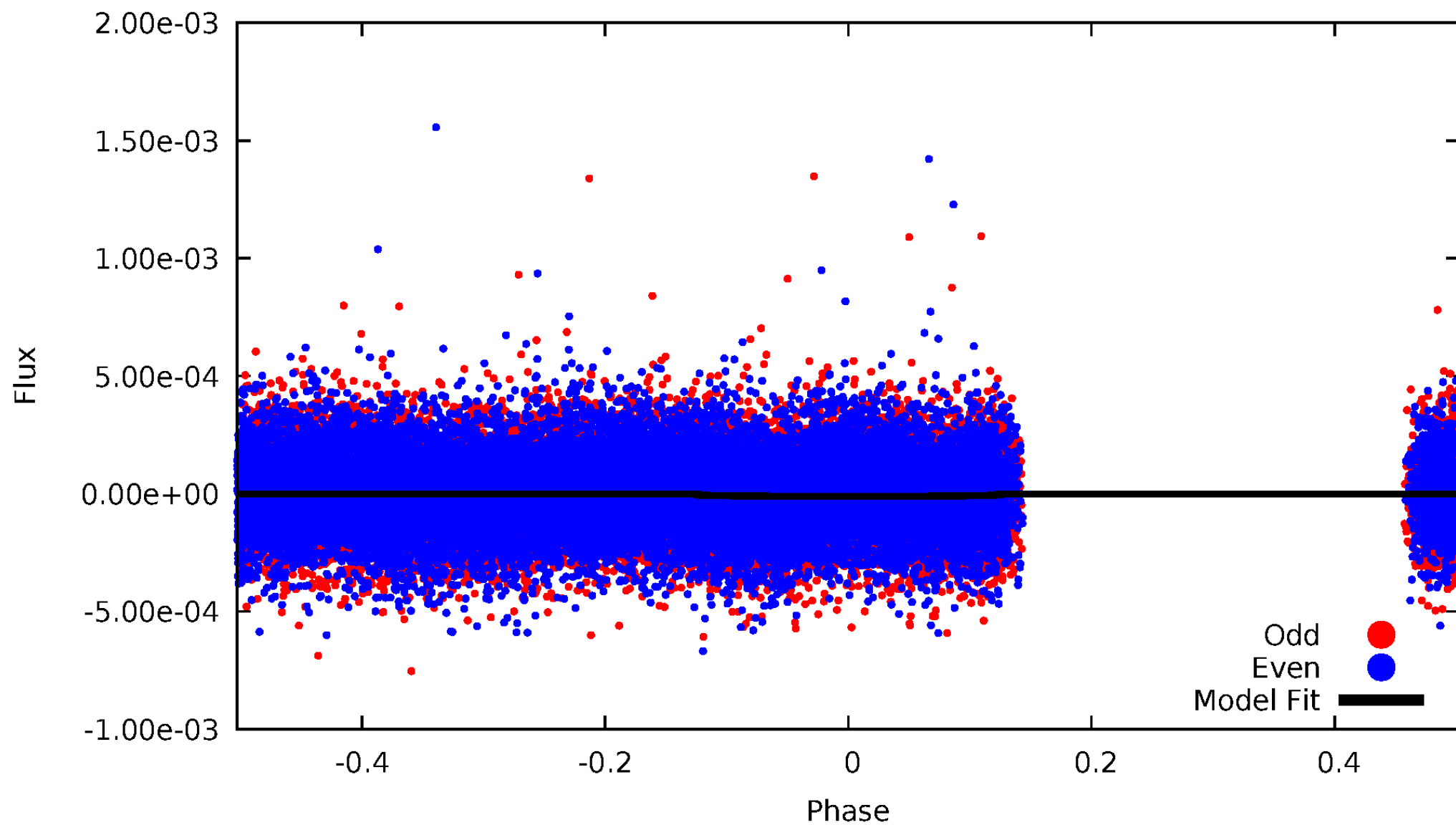


TCE 003936965-02



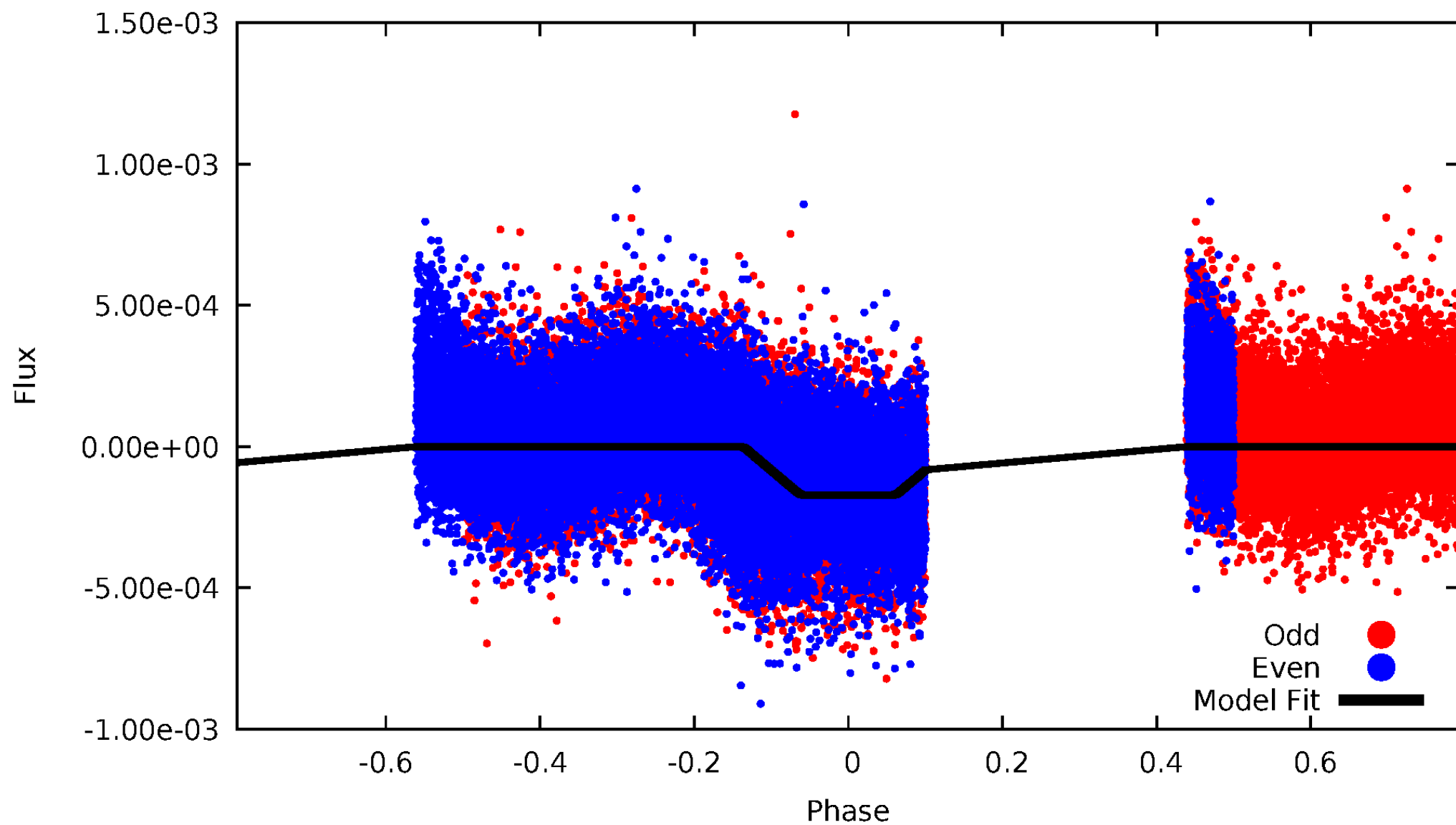
DV Odd/Even

TCE 003936965-02



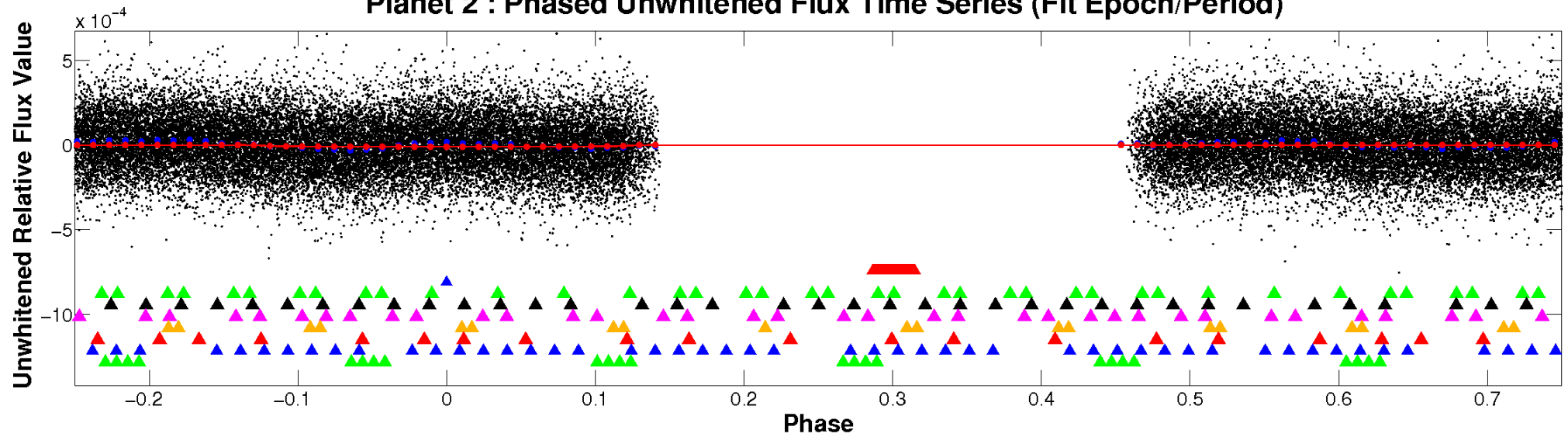
ALT Odd/Even

TCE 003936965-02

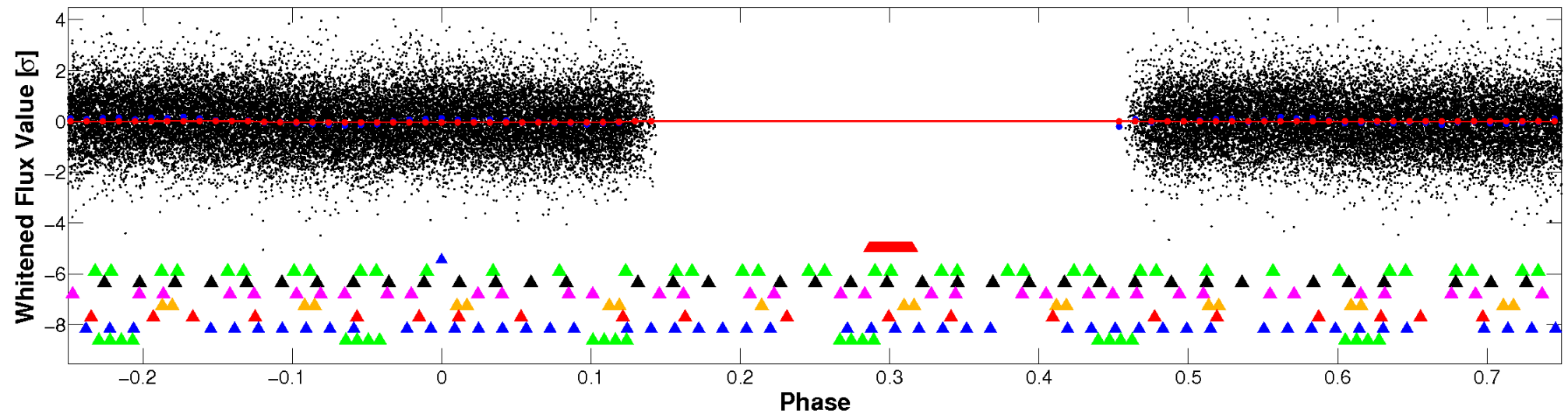


Non-Whitened Vs. Whitened Light Curve

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

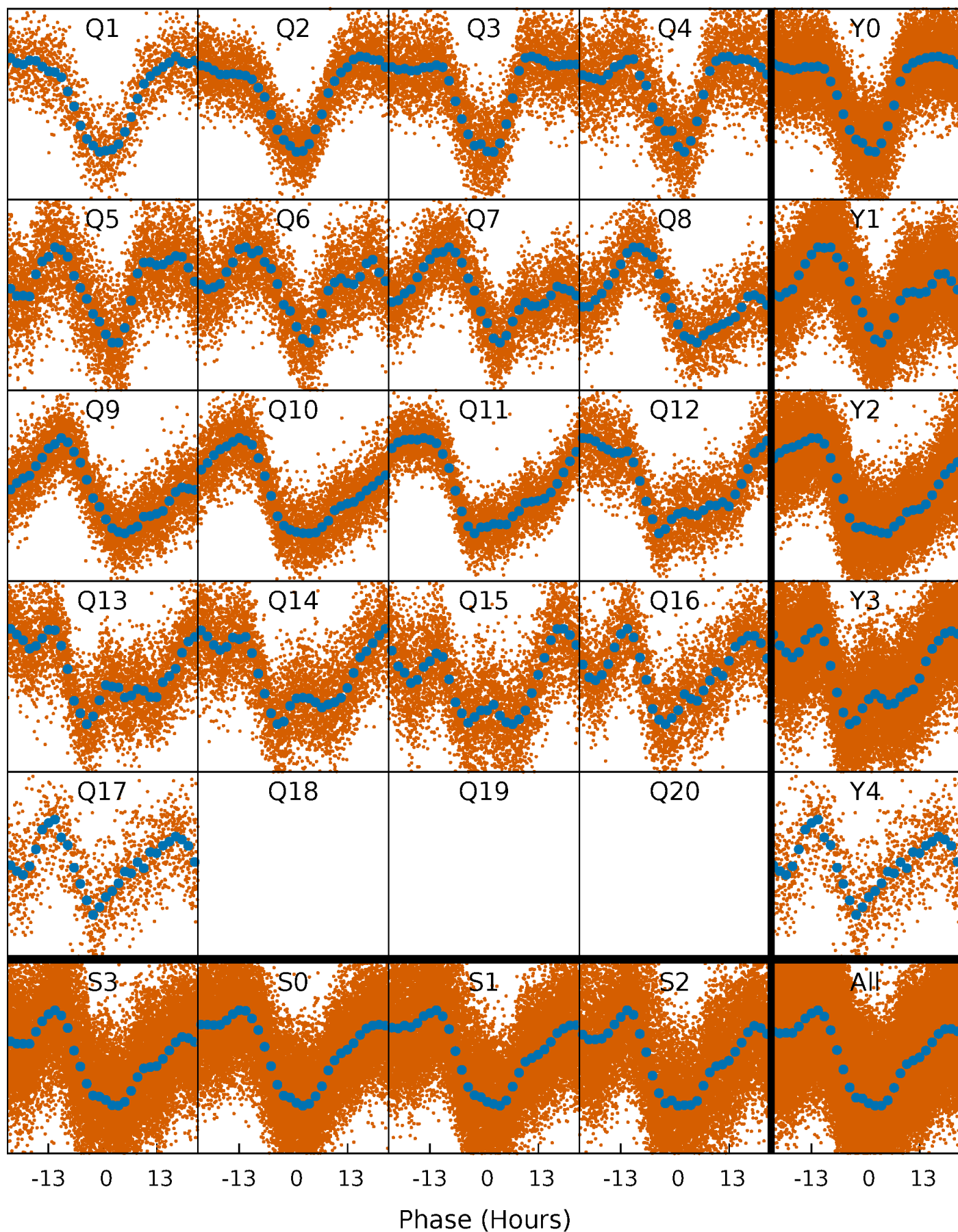


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



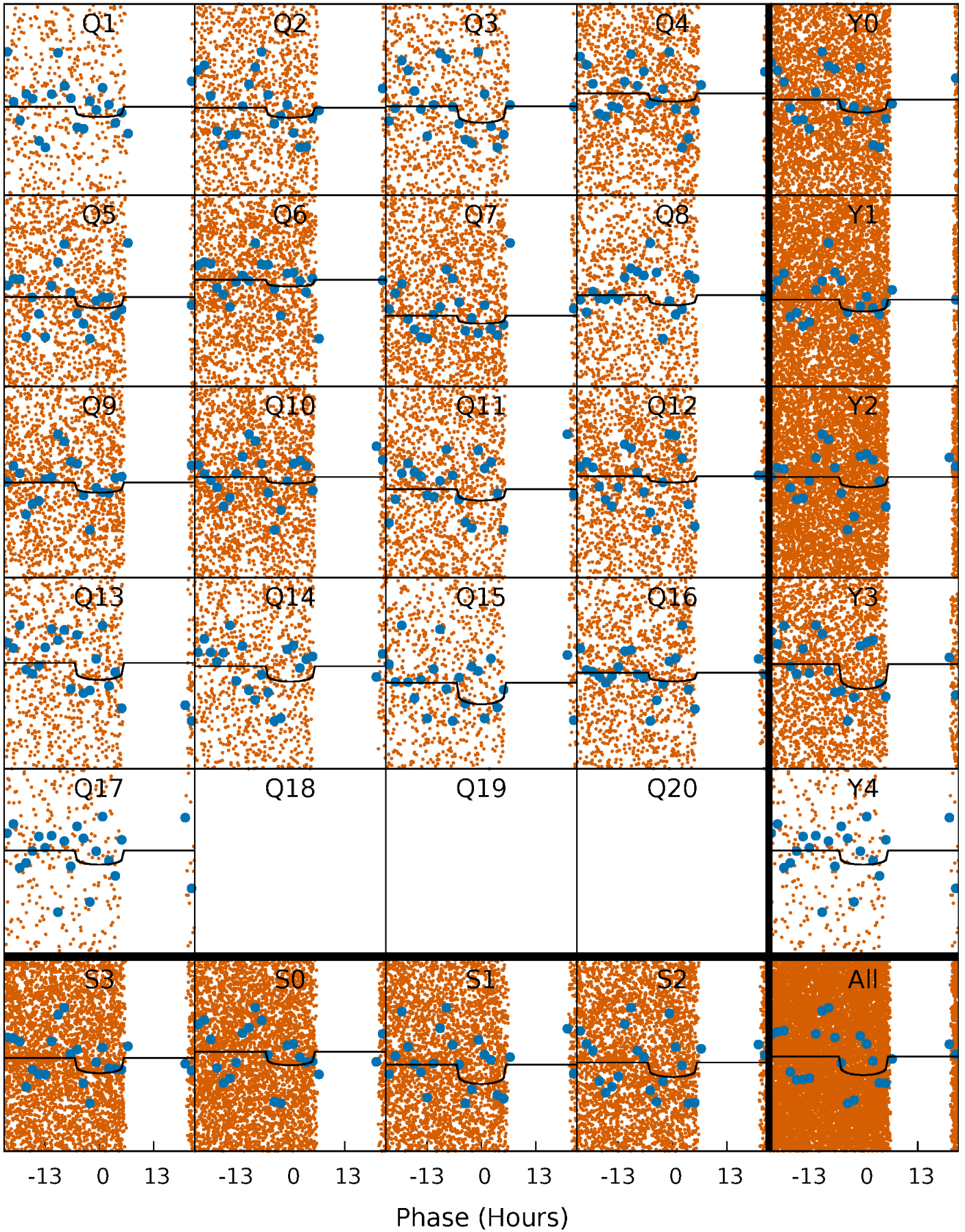
PDC Quarter-Phased Transit Curves

TCE 003936965-02 P= 1.891843 Days $T_0=133.089596$ (BKJD)



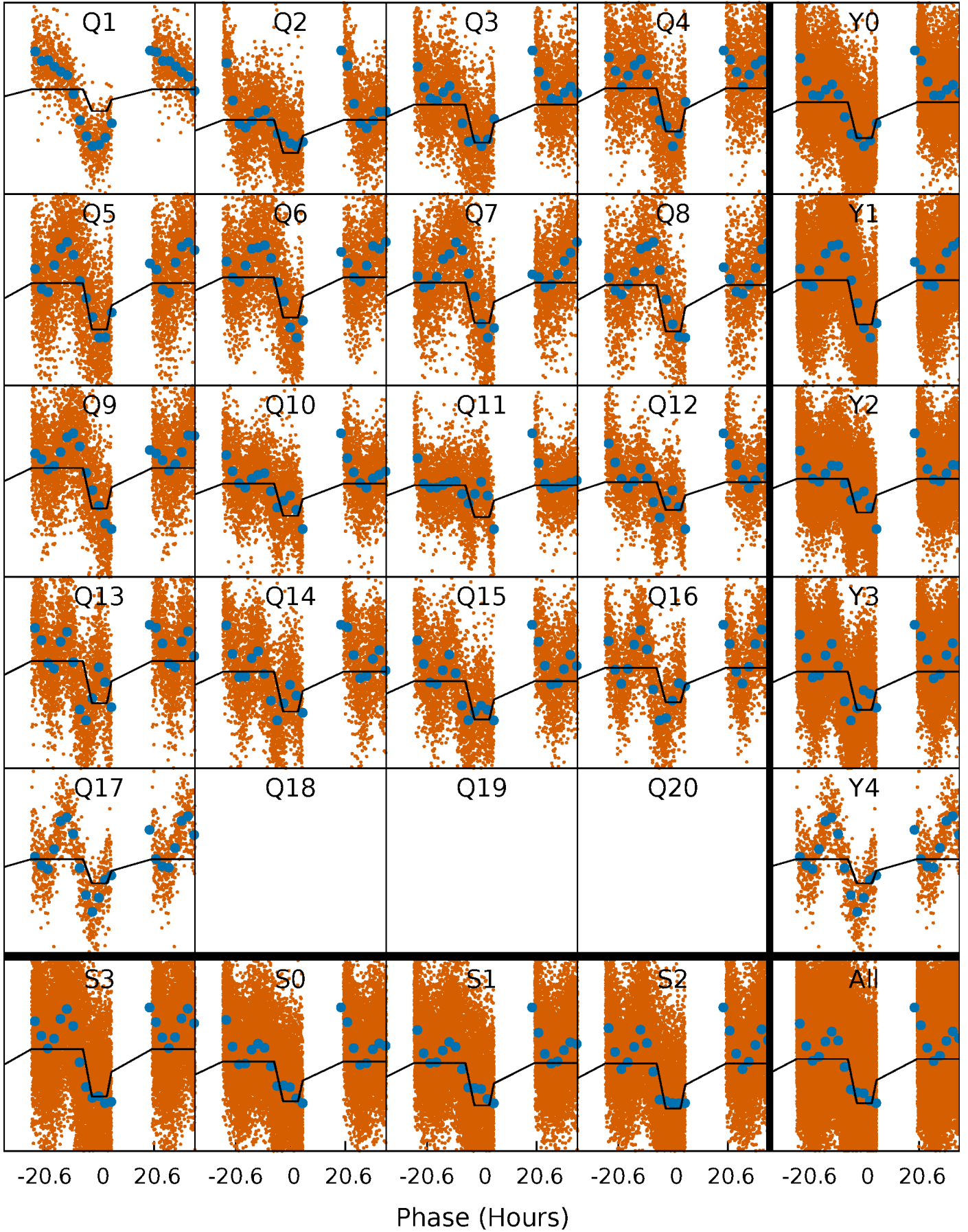
DV Quarter-Phased Transit Curves

TCE 003936965-02 P= 1.891843 Days $T_0=133.089596$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

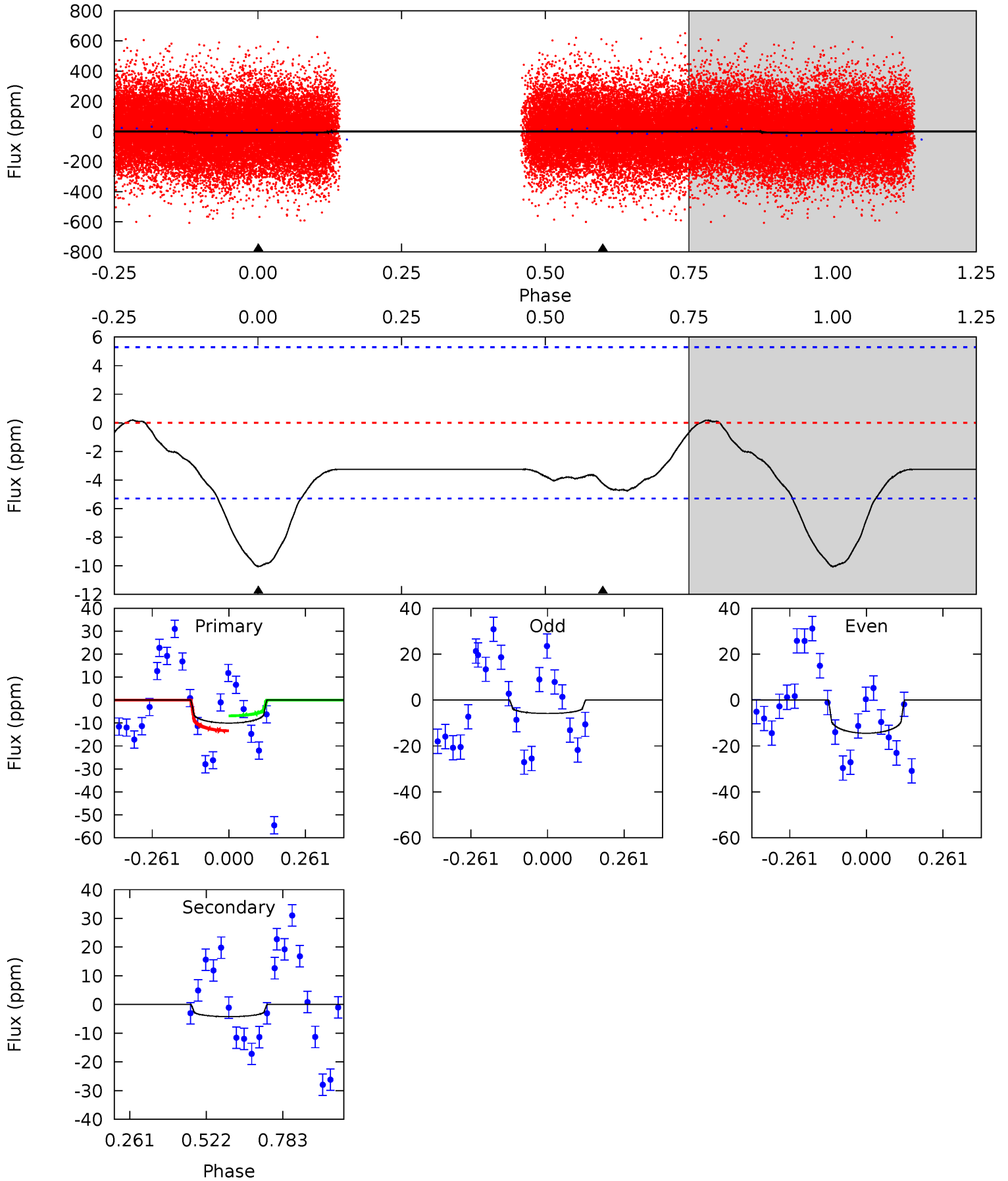
TCE 003936965-02 P= 1.891783 Days $T_0=133.171748$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-02, P = 1.891843 Days, E = 131.197753 Days

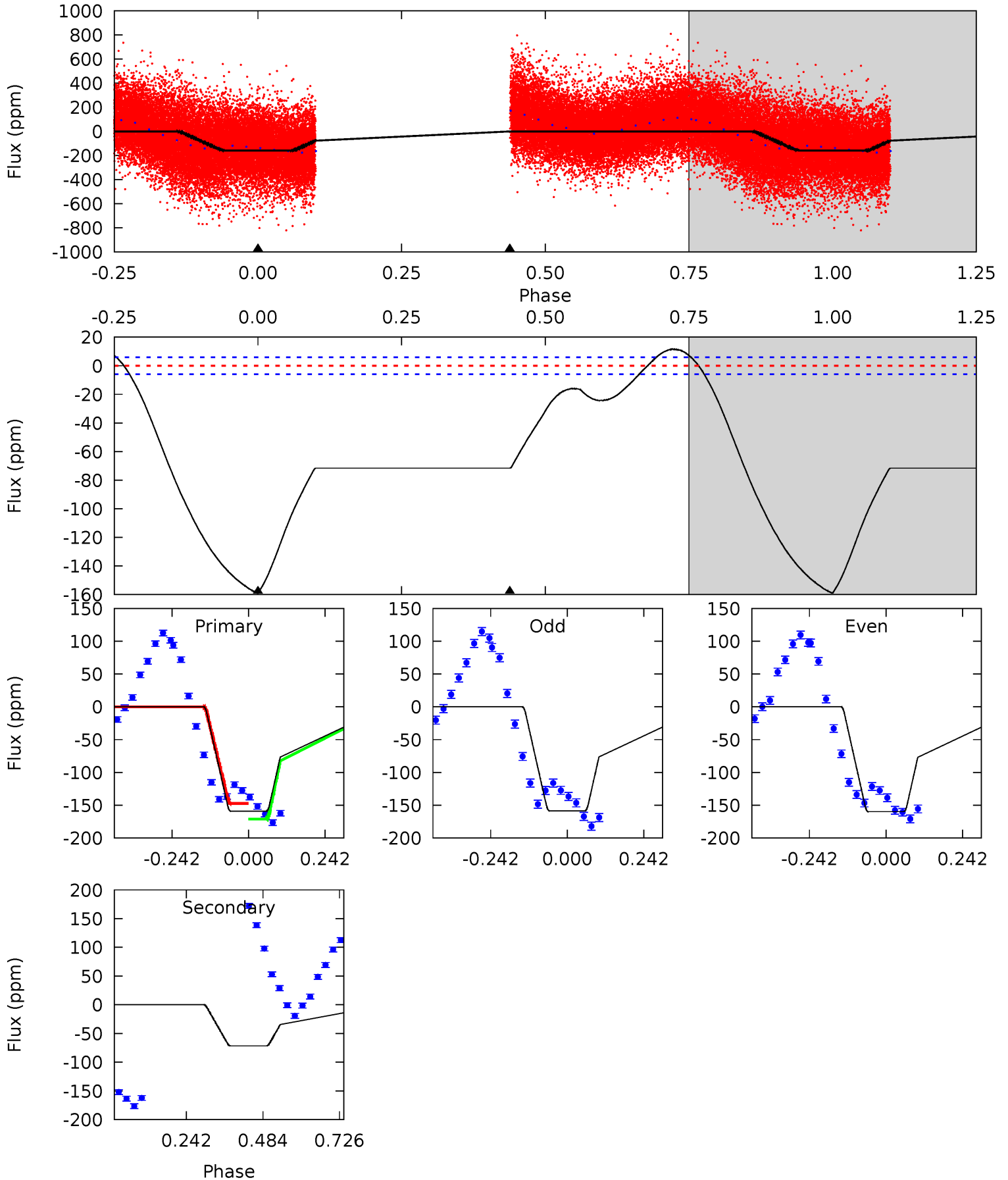
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	3.49	0	0	4.36	1.12	0.46	8.27	8.27	3.49	3.49	3.54	0.92	0.02	2.67



Alt Model-Shift Uniqueness Test

003936965-02, P = 1.891783 Days, E = 131.279965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
118.4	53.3	0	0	4.38	1.17	6.22	118.4	118.4	53.3	53.3	0.50	1.11	0.07	7.94



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.15^{+0.73}_{-0.61}$	3871^{+186}_{-344}	5024^{+2486}_{-1121}	$2.155^{+7.377}_{-1.344}$
Alt.	-72 ± 1	$4.61^{+1.01}_{-1.00}$	3867^{+205}_{-361}	5147^{+444}_{-370}	$2.403^{+1.370}_{-0.739}$

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

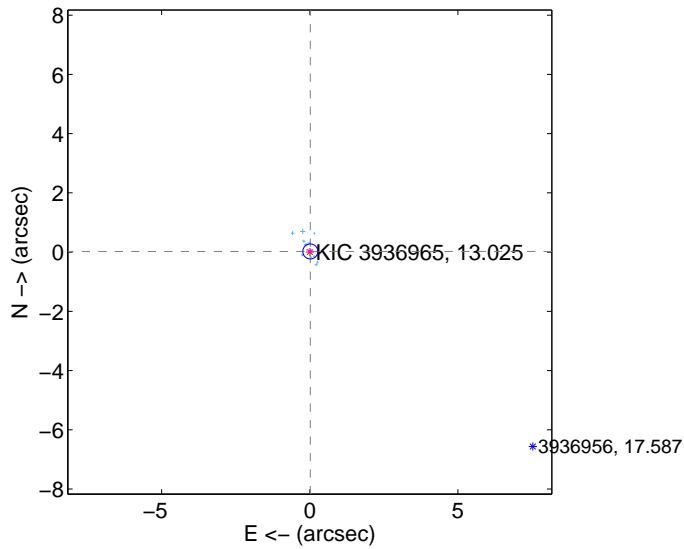
Supplemental centroid analysis for 003936965-02. Kepler magnitude: 13.03. Transit SNR 4.88

There are 17 quarters with good PRF difference image offsets

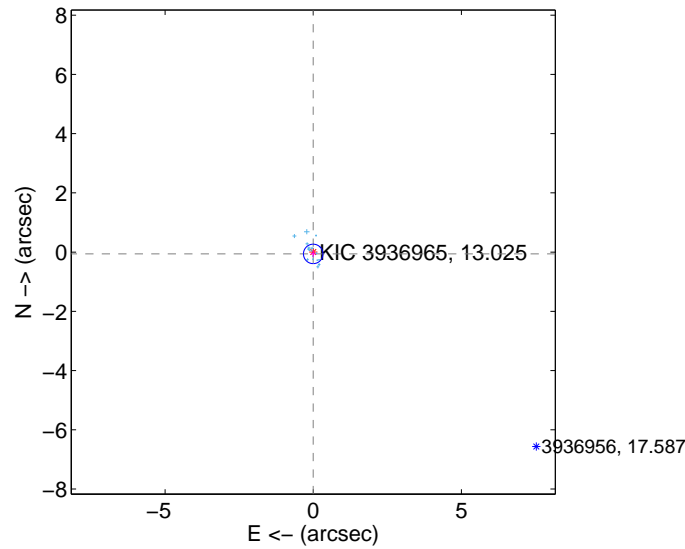
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.084	0.34	-0.019 ± 0.076	0.022 ± 0.090
PRF-fit source offset from KIC position	0.061 ± 0.110	0.56	0.001 ± 0.083	-0.061 ± 0.110
photometric centroid source offset	2.28 ± 1.51	1.51	-1.74 ± 1.47	1.46 ± 1.56

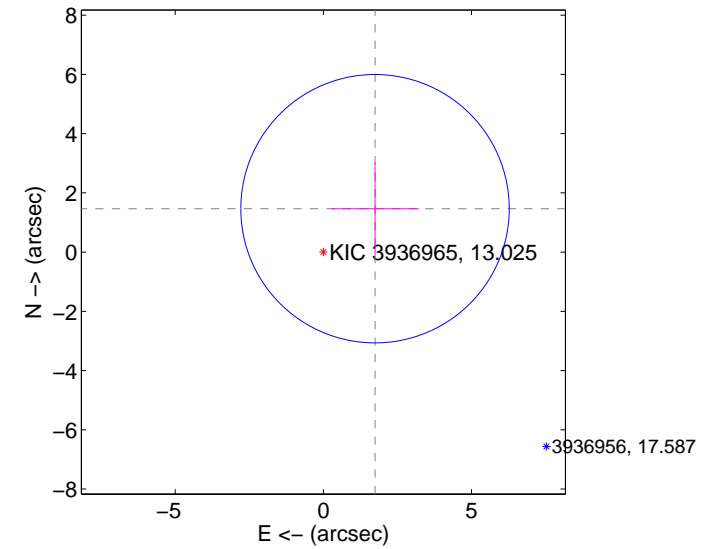
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

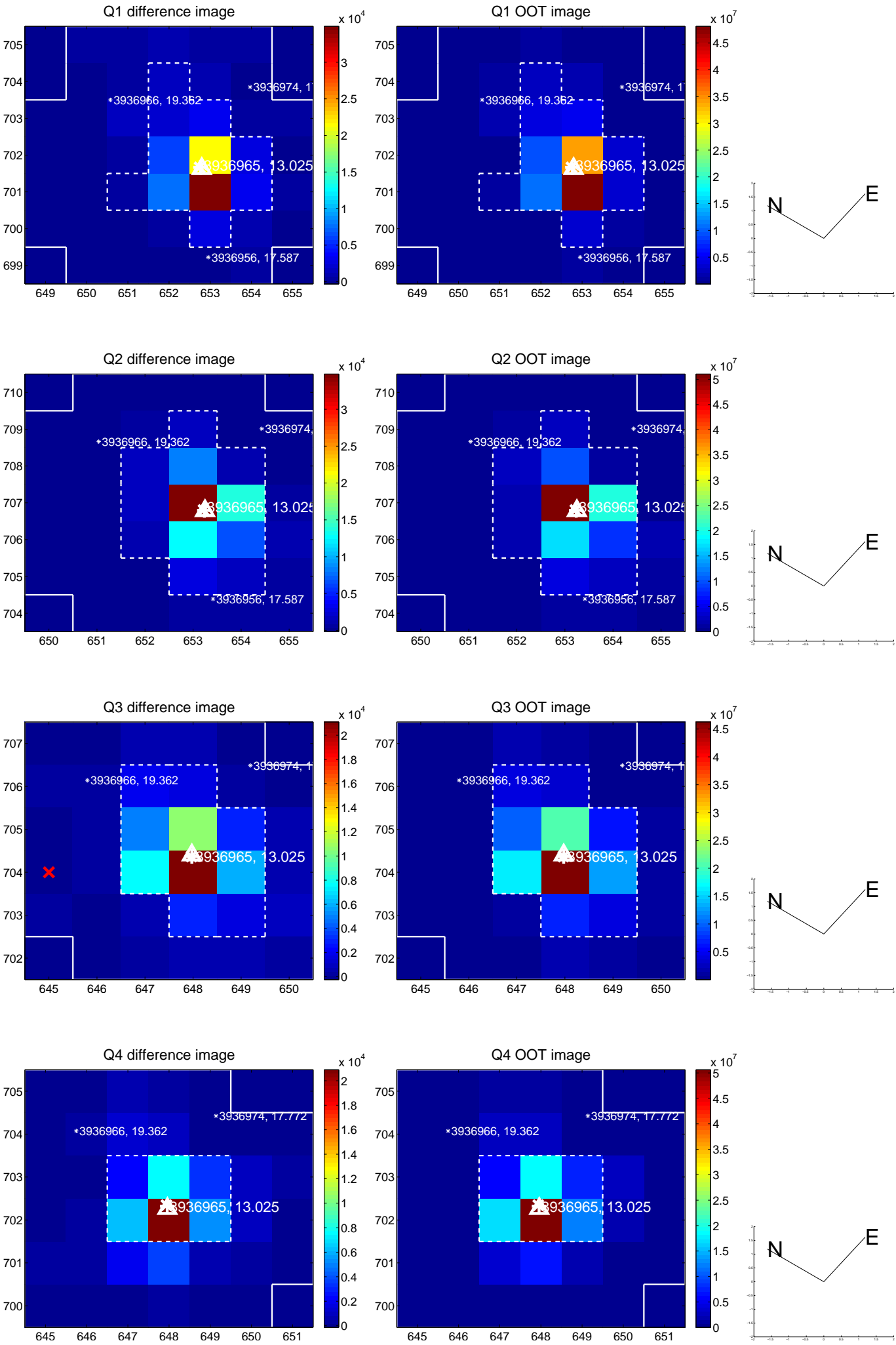


offset from photometric centroids

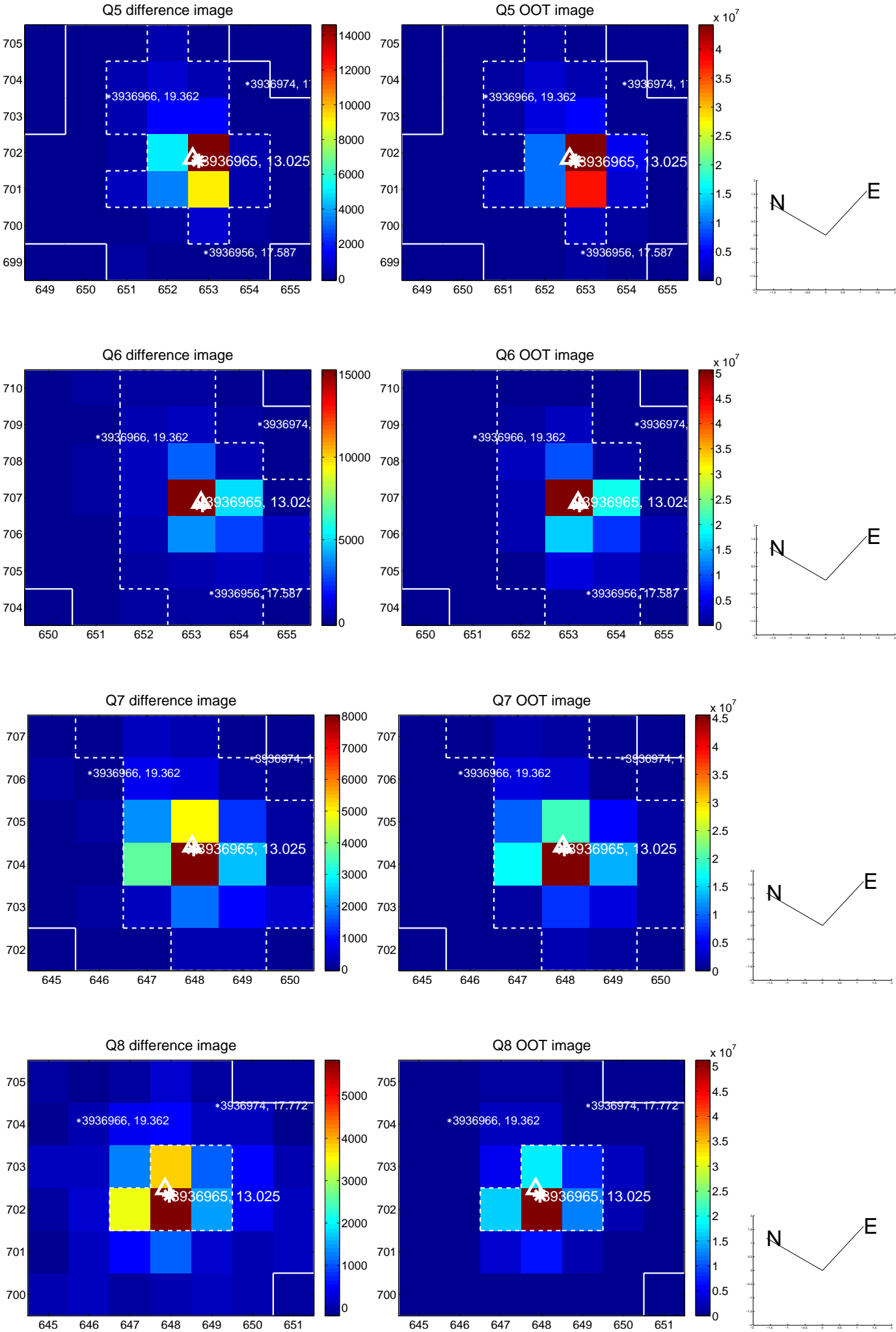


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

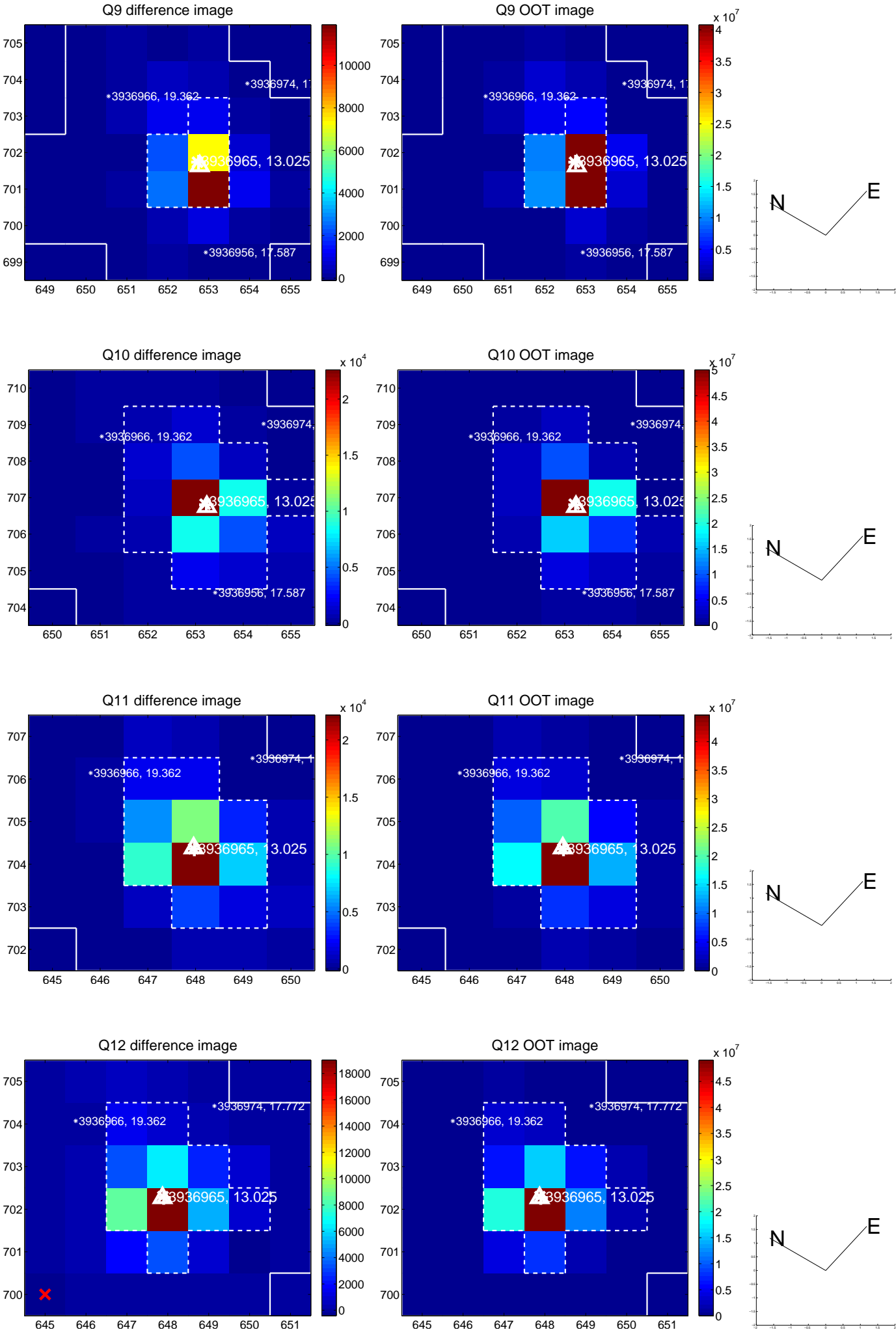
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



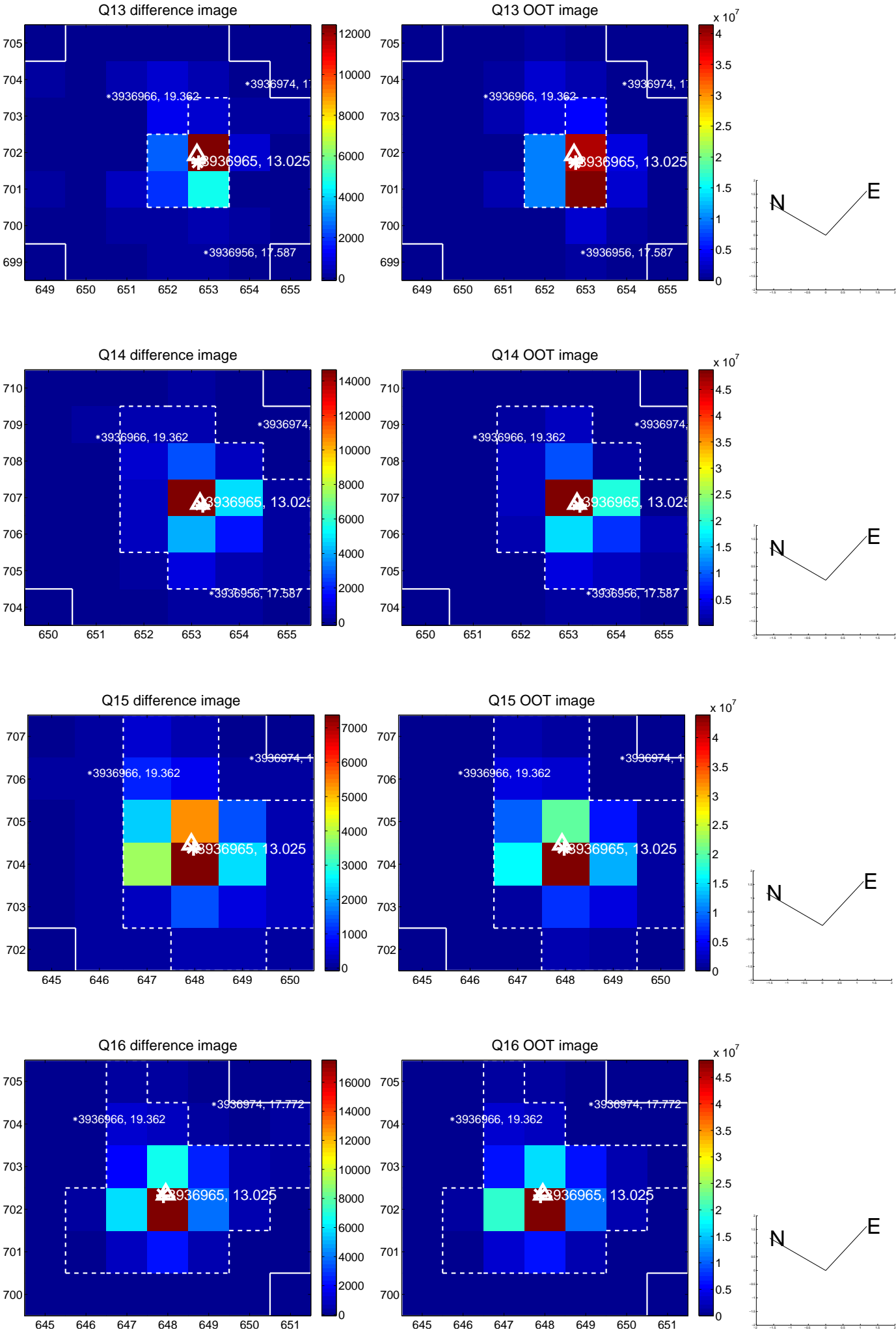
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



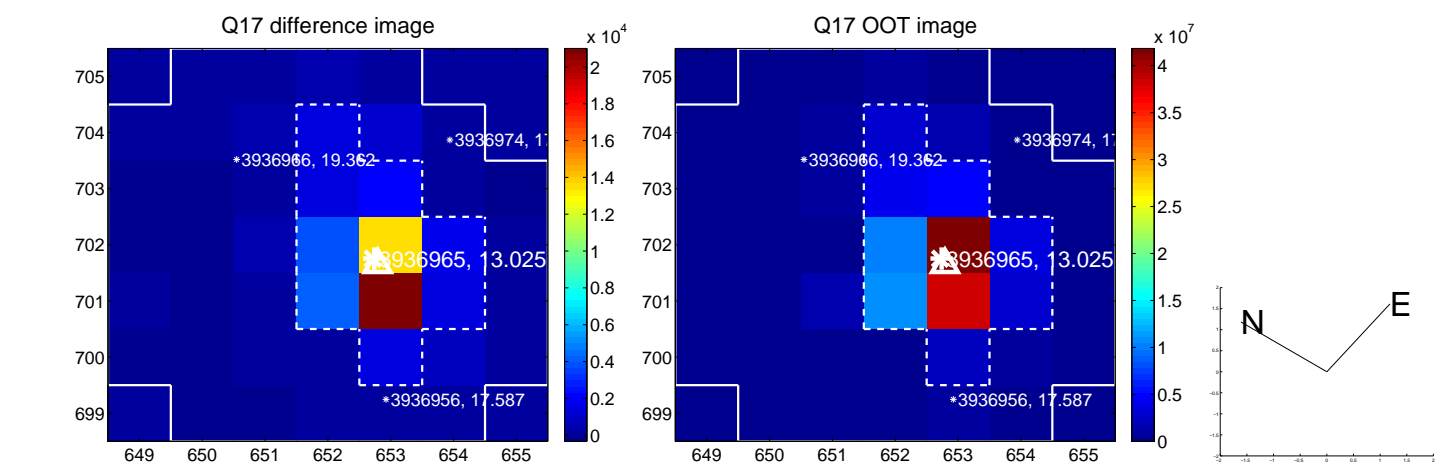
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



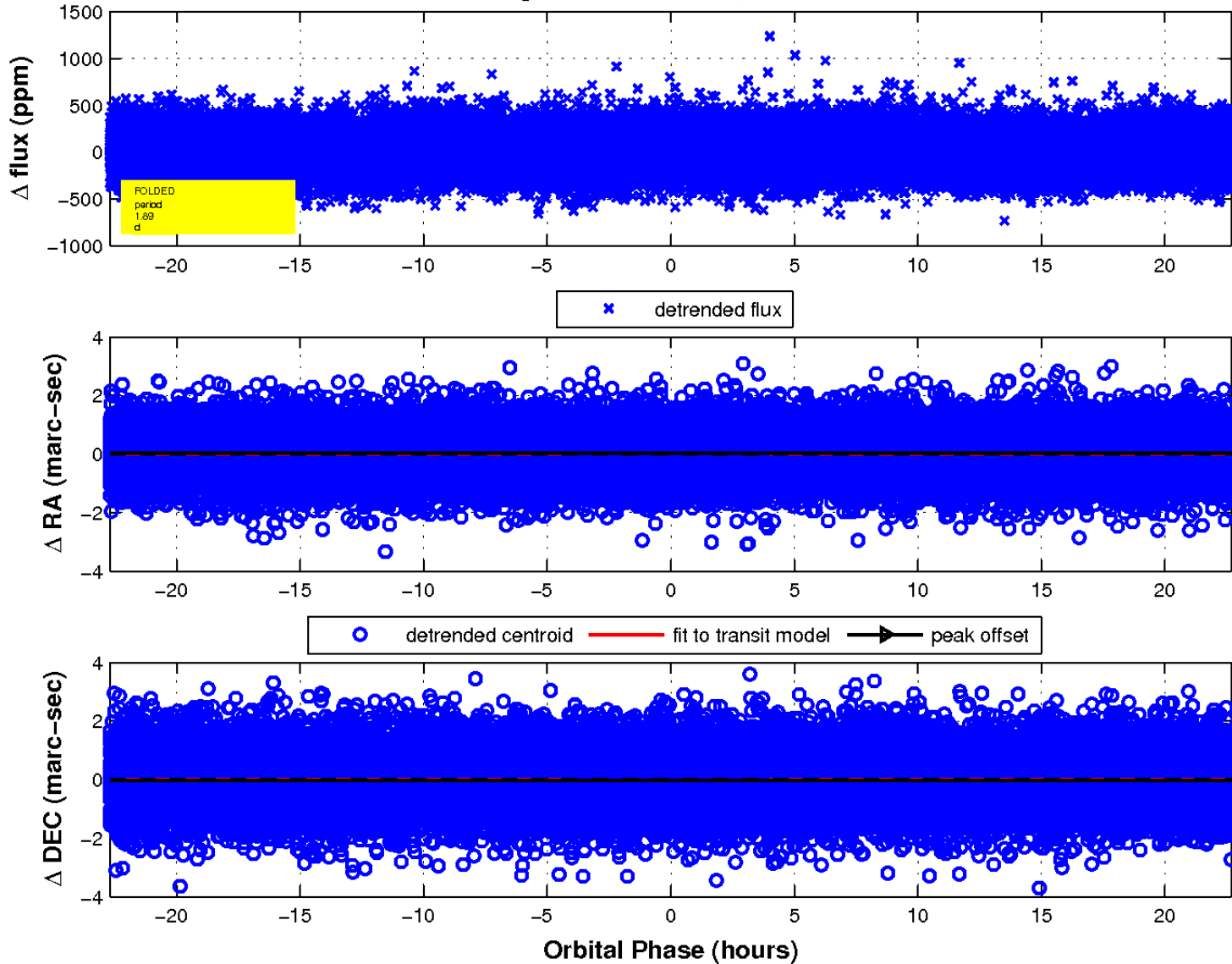
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

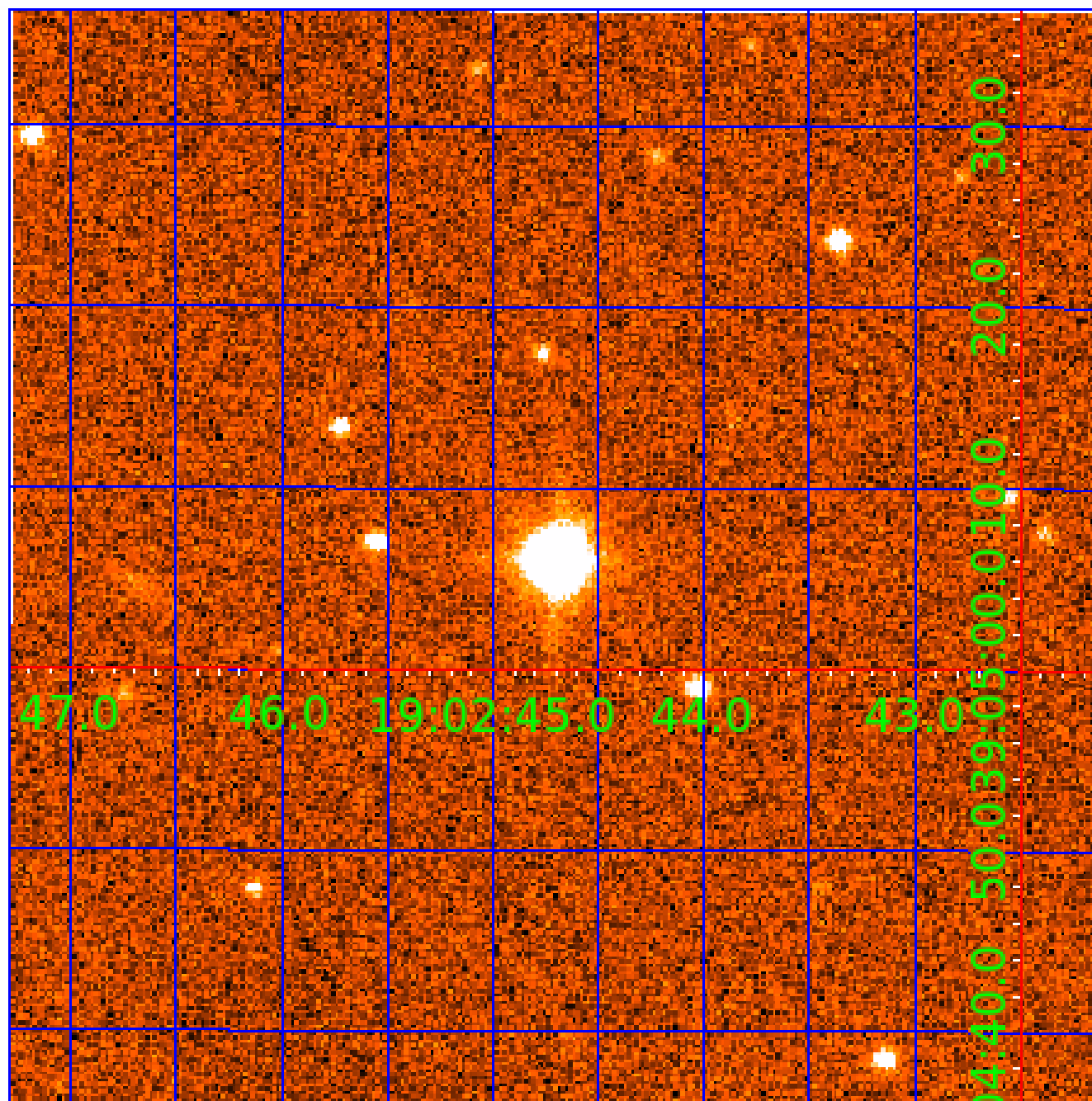


fluxWeightedCentroids, Planet 2 of 9



UKIRT Image

Declination



KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

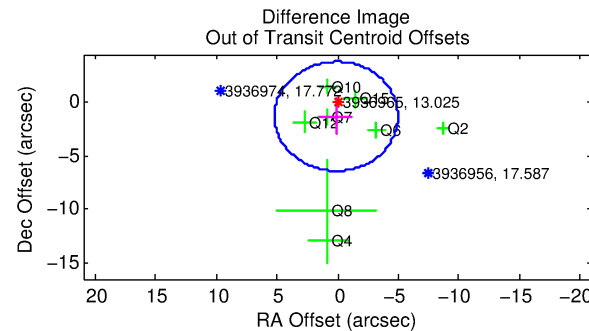
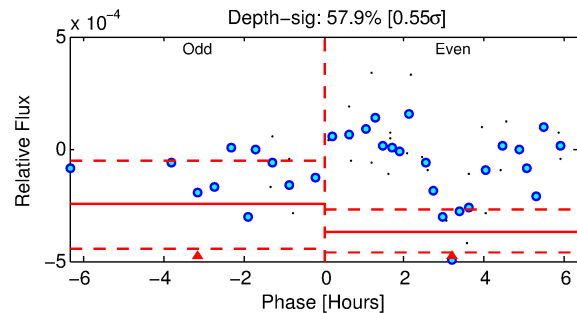
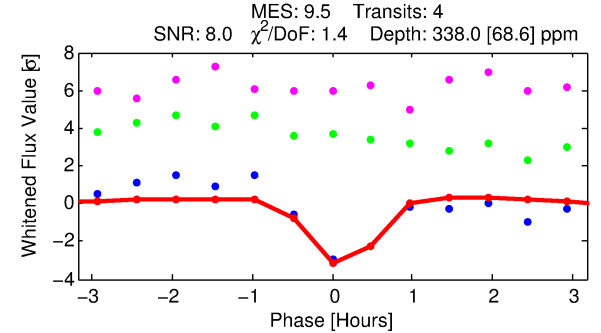
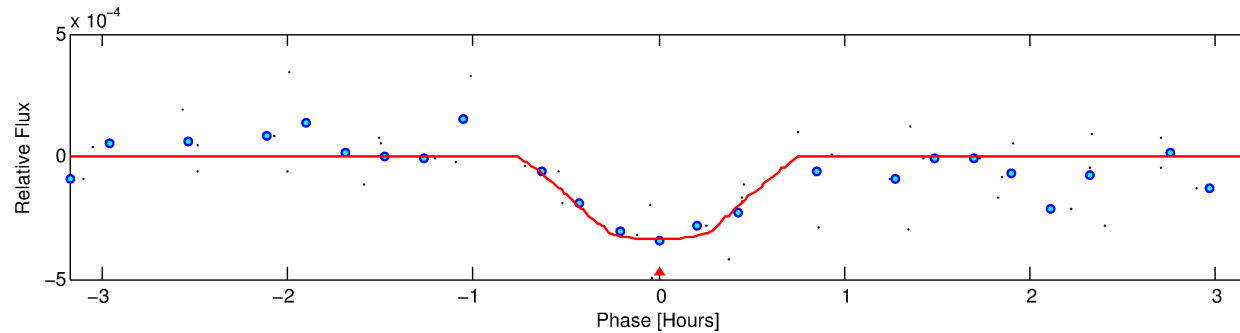
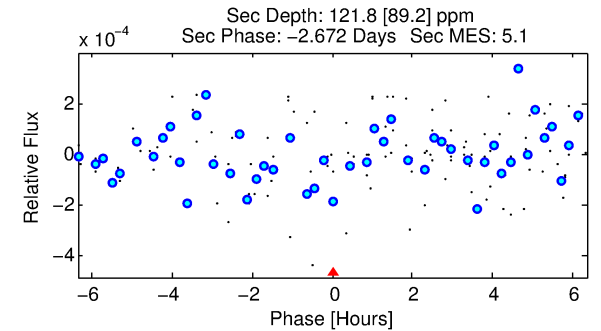
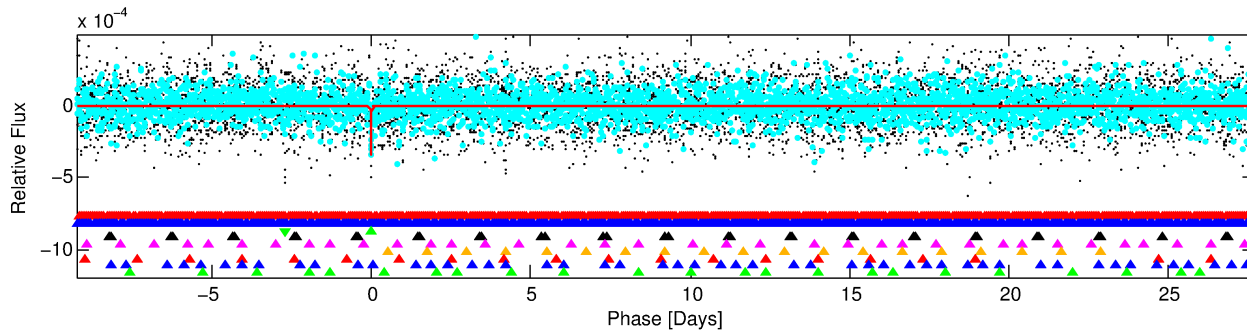
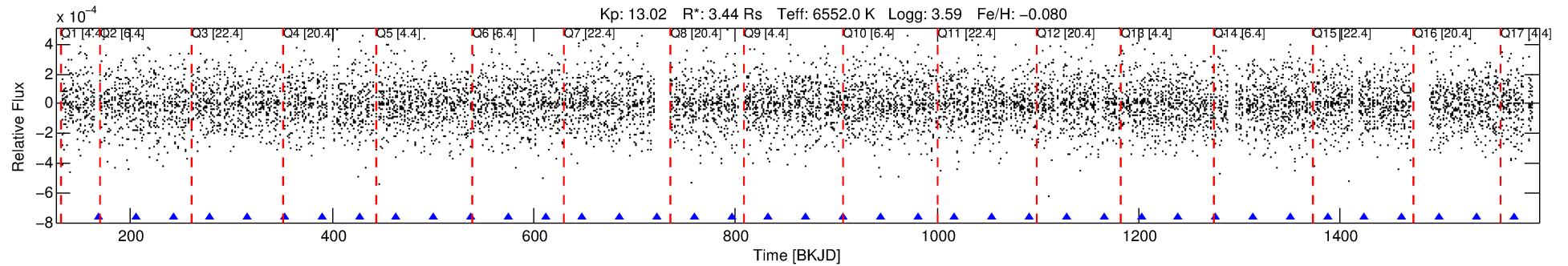
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-03

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 3 of 9 Period: 36.933 d



DV Fit Results:

Period = 36.93294 [0.00040] d
Epoch = 168.3438 [0.0102] BKJD
Rp/R* = 0.0171 [0.0417]
a/R* = 269.06 [3450.02]
b = 0.12 [108.53]
Seff = 291.66 [165.05]
Teq = 1054 [149] K
Rp = 6.41 [15.85] Re
a = 0.2588 [0.0912] AU
Ag = 109.18 [542.74] [0.20σ]
Teffp = 5266 [6506] K [0.65σ]

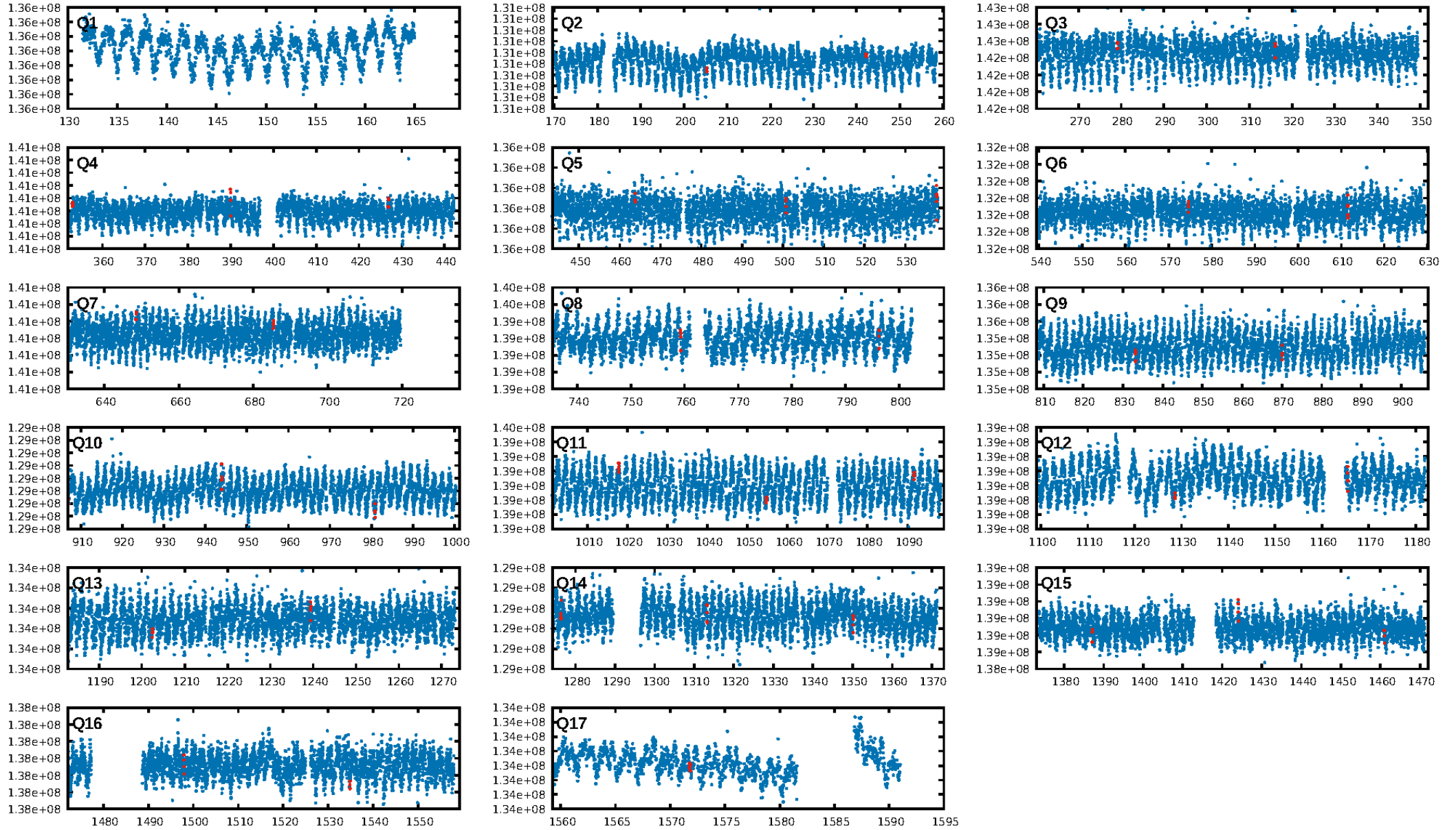
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [93.02σ]
LongPeriod-sig: 100.0% [12.18σ]
ModelChiSquare2-sig: 70.1%
ModelChiSquareGof-sig: 92.1%
Bootstrap-pfa: 2.05e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.404
Centroid-sig: 74.8%
Centroid-so: 0.168 arcsec [0.26σ]
OotOffset-rm: 1.299 arcsec [0.76σ]
KicOffset-rm: 1.397 arcsec [0.93σ]
OotOffset-st: 3/2/3/0 [8]
KicOffset-st: 3/2/3/0 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.94 [15/16]

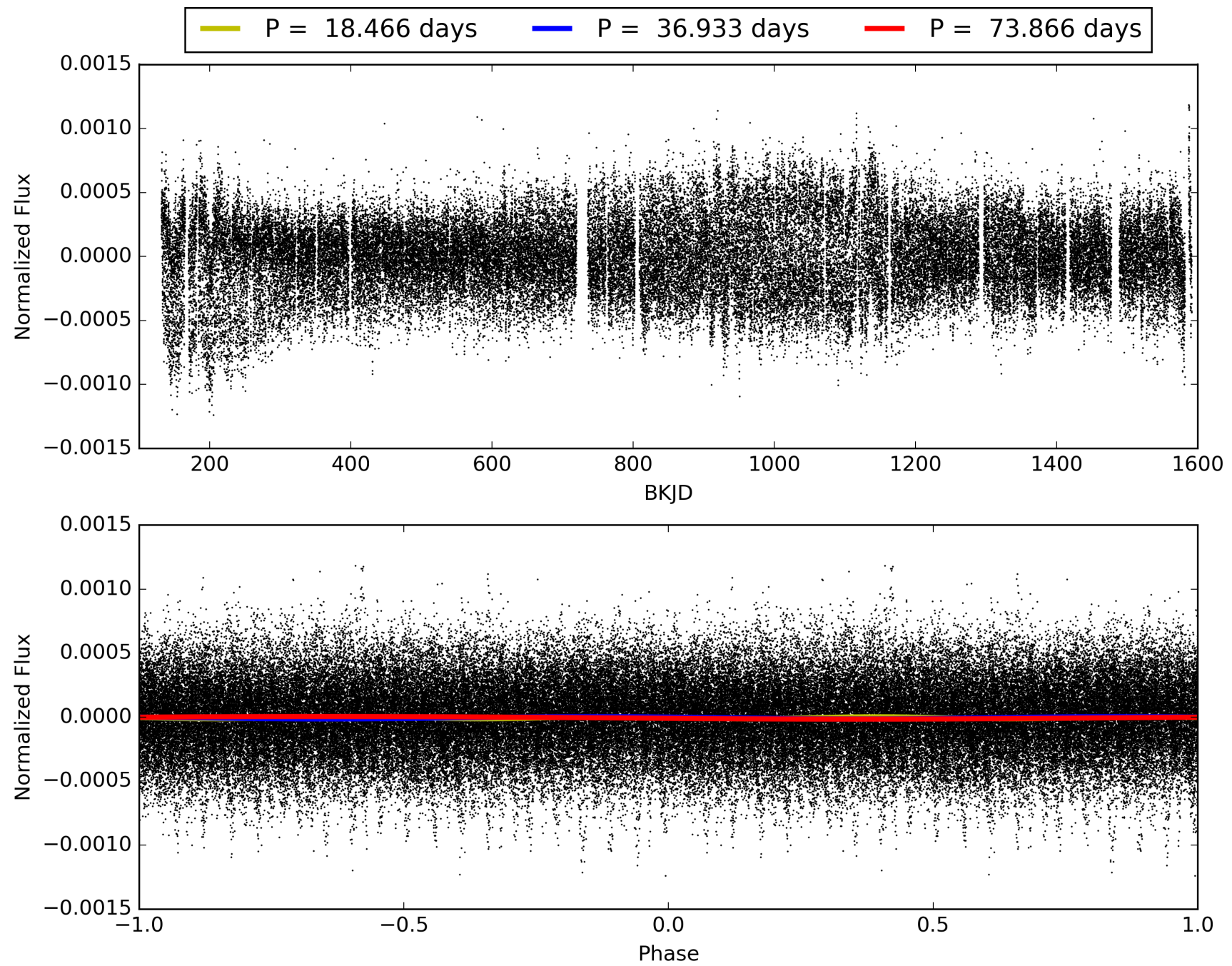
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:25 Z

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

TCE 003936965-03, PDC Light Curves

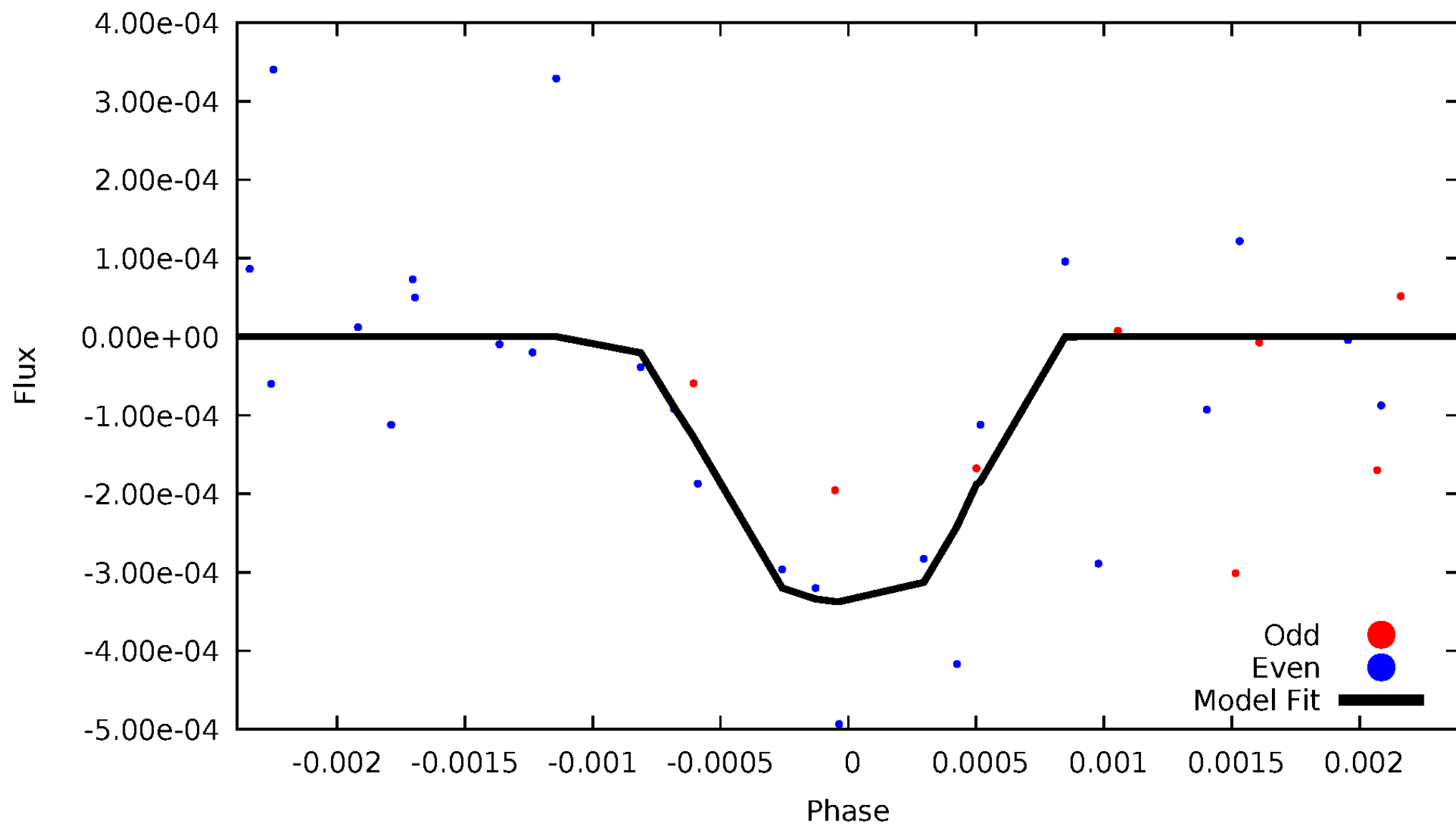


TCE 003936965-03



DV Odd/Even

TCE 003936965-03

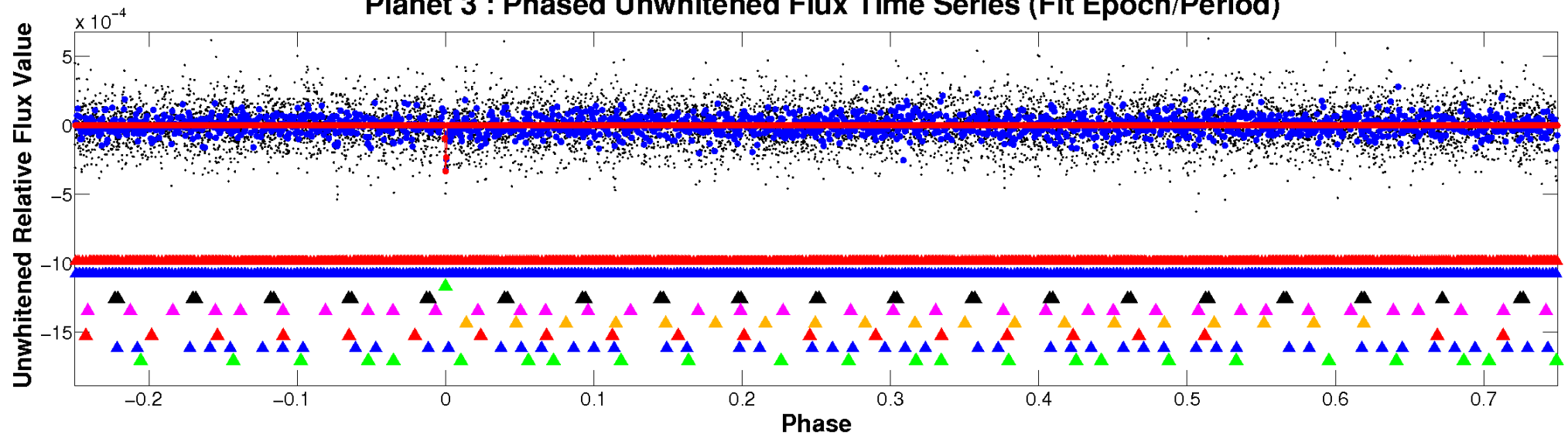


ALT Odd/Even

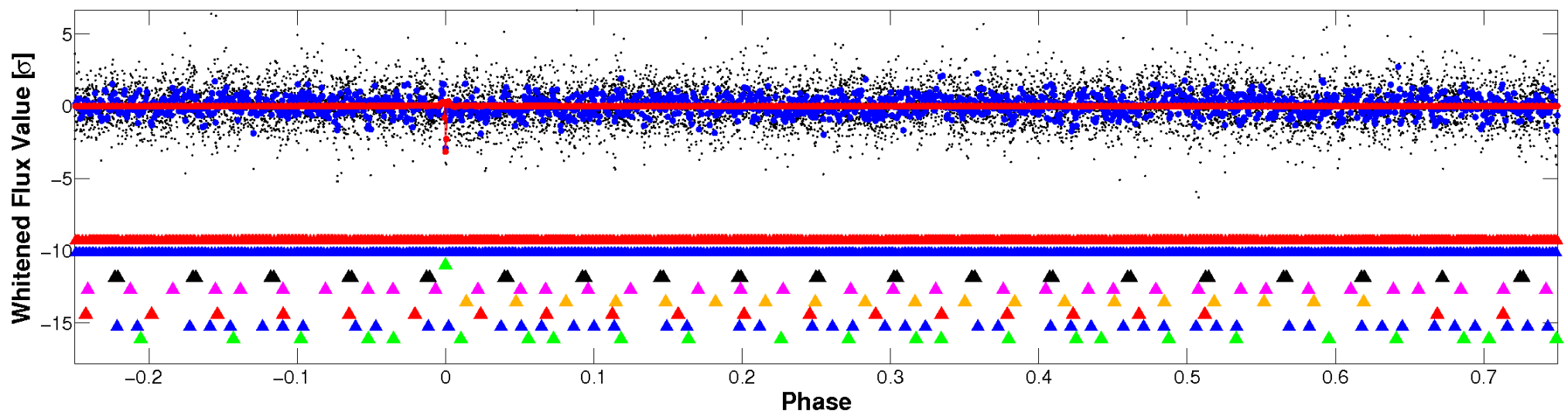
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

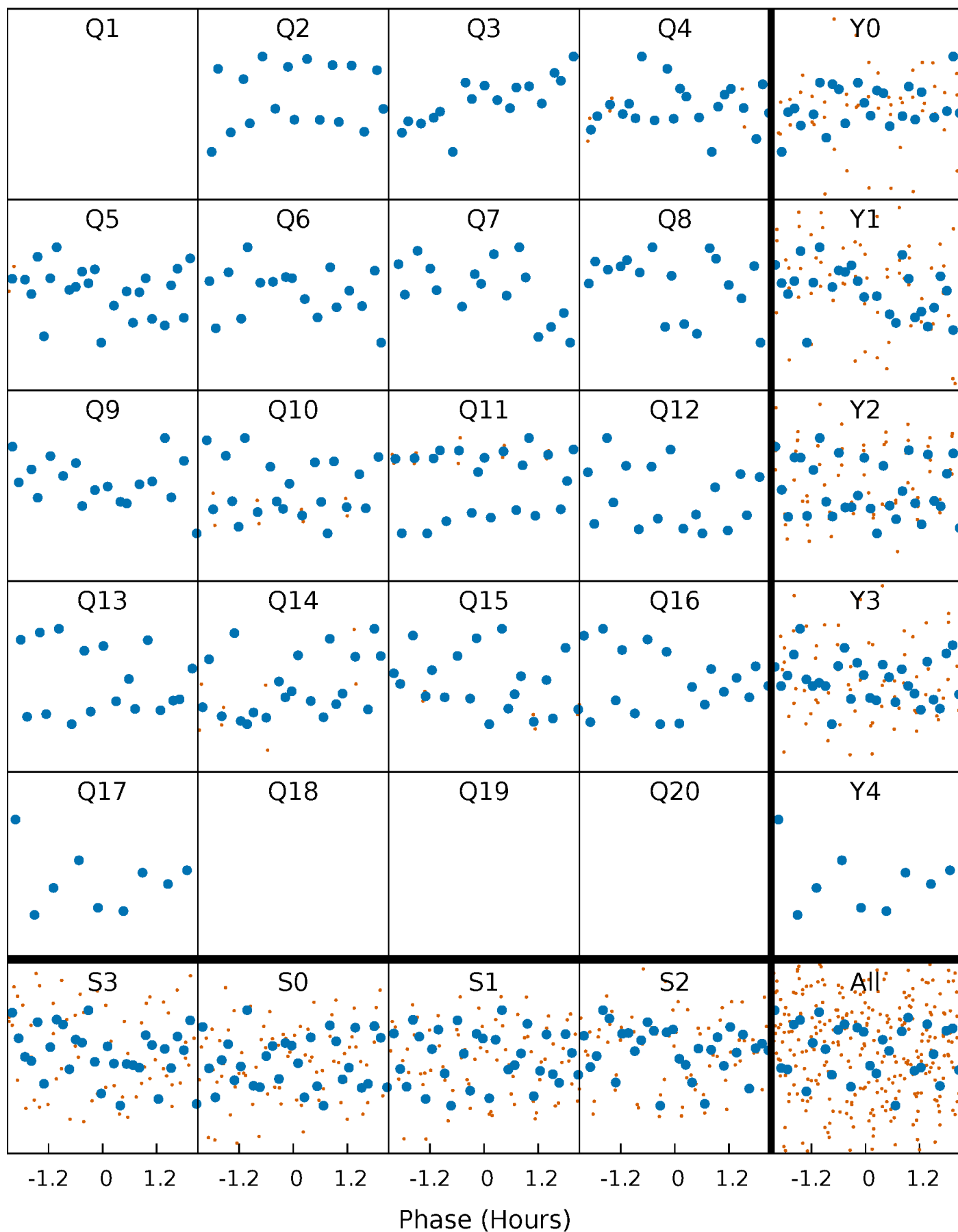


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



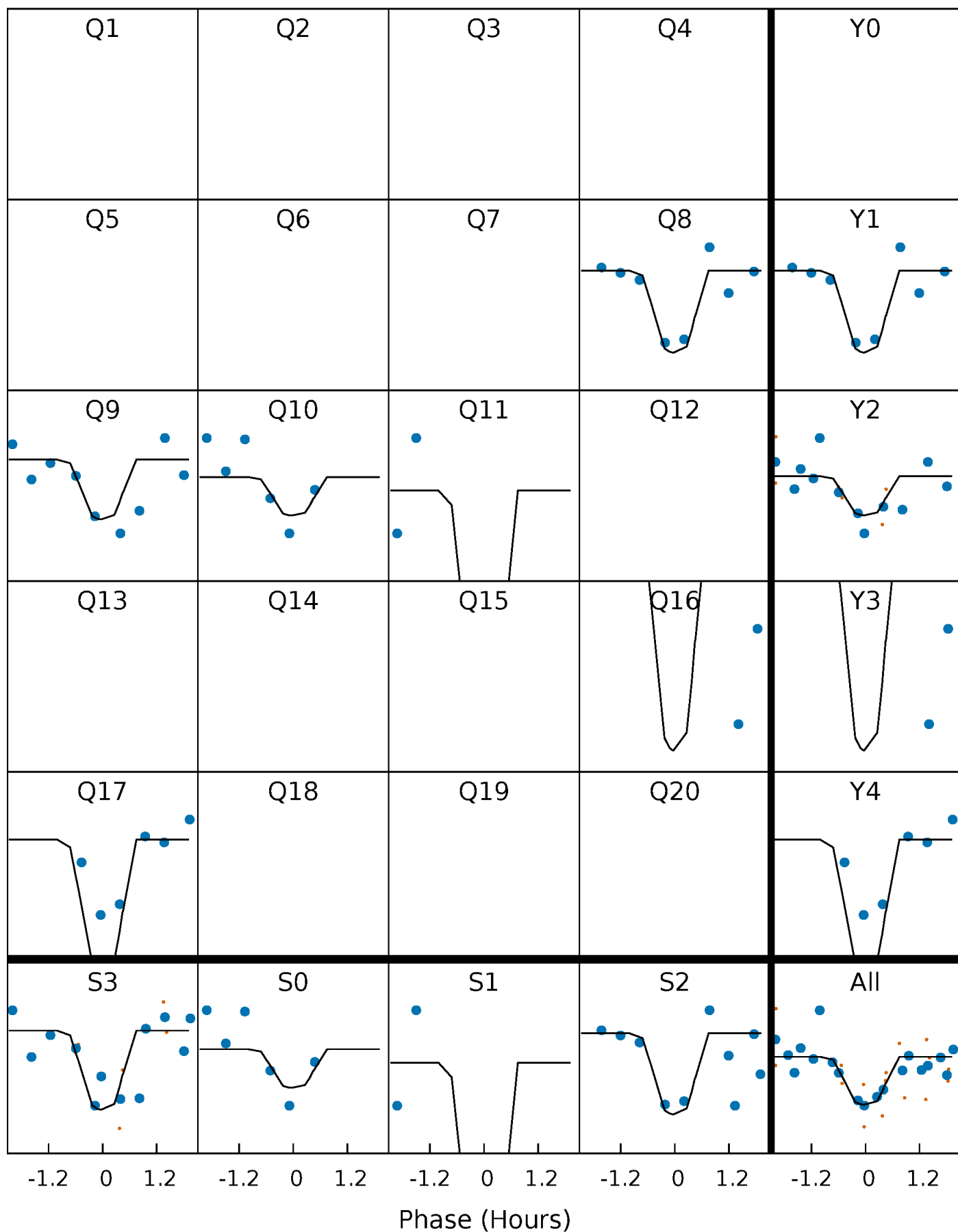
PDC Quarter-Phased Transit Curves

TCE 003936965-03 P= 36.932937 Days $T_0=168.343758$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003936965-03 P= 36.932937 Days $T_0=168.343758$ (BKJD)

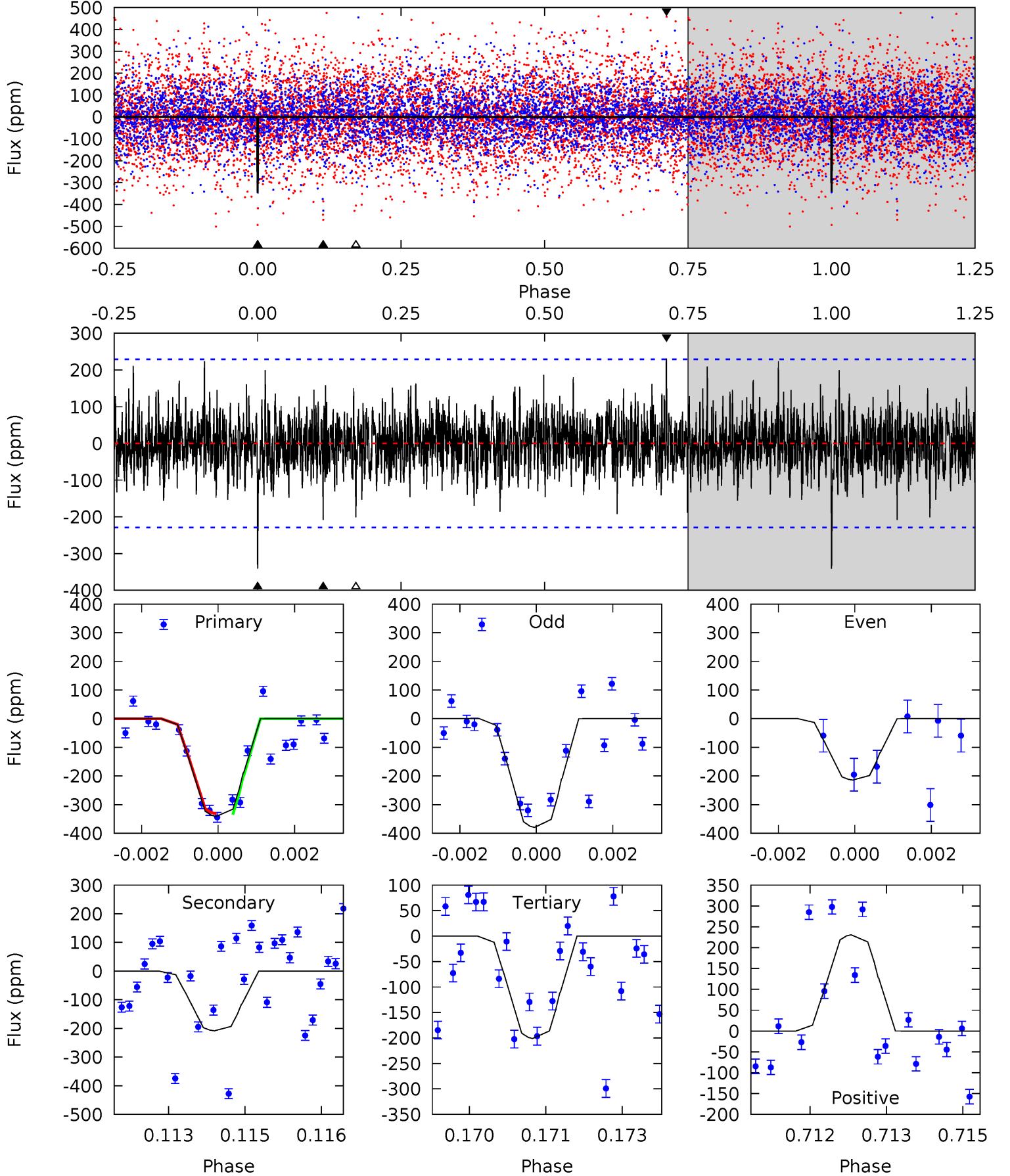


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003936965-03, P = 36.932937 Days, E = 131.410821 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.01	4.89	4.72	5.42	5.38	3.17	1.31	3.29	2.59	0.17	-0.53	1.78	0.95	0.40	0.04



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-208 ± 43	$12.15^{+13.02}_{-8.33}$	1437^{+67}_{-114}	4348^{+3196}_{-938}	50^{+506}_{-38}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

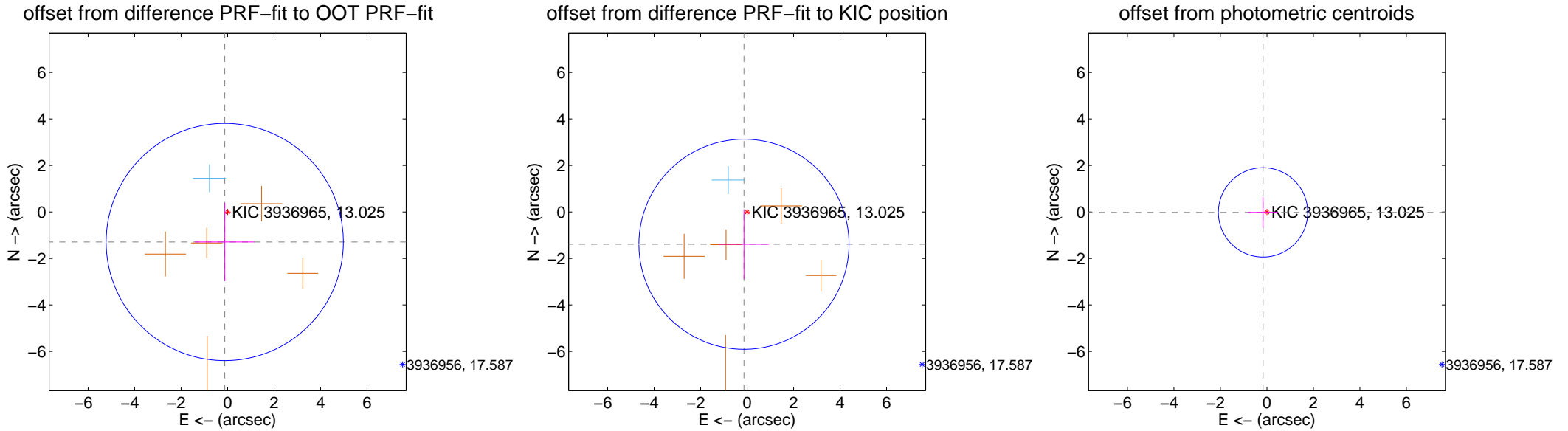
DV Centroid Data

Supplemental centroid analysis for 003936965-03. Kepler magnitude: 13.03. Transit SNR 8.01

There are 1 quarters with good PRF difference image offsets

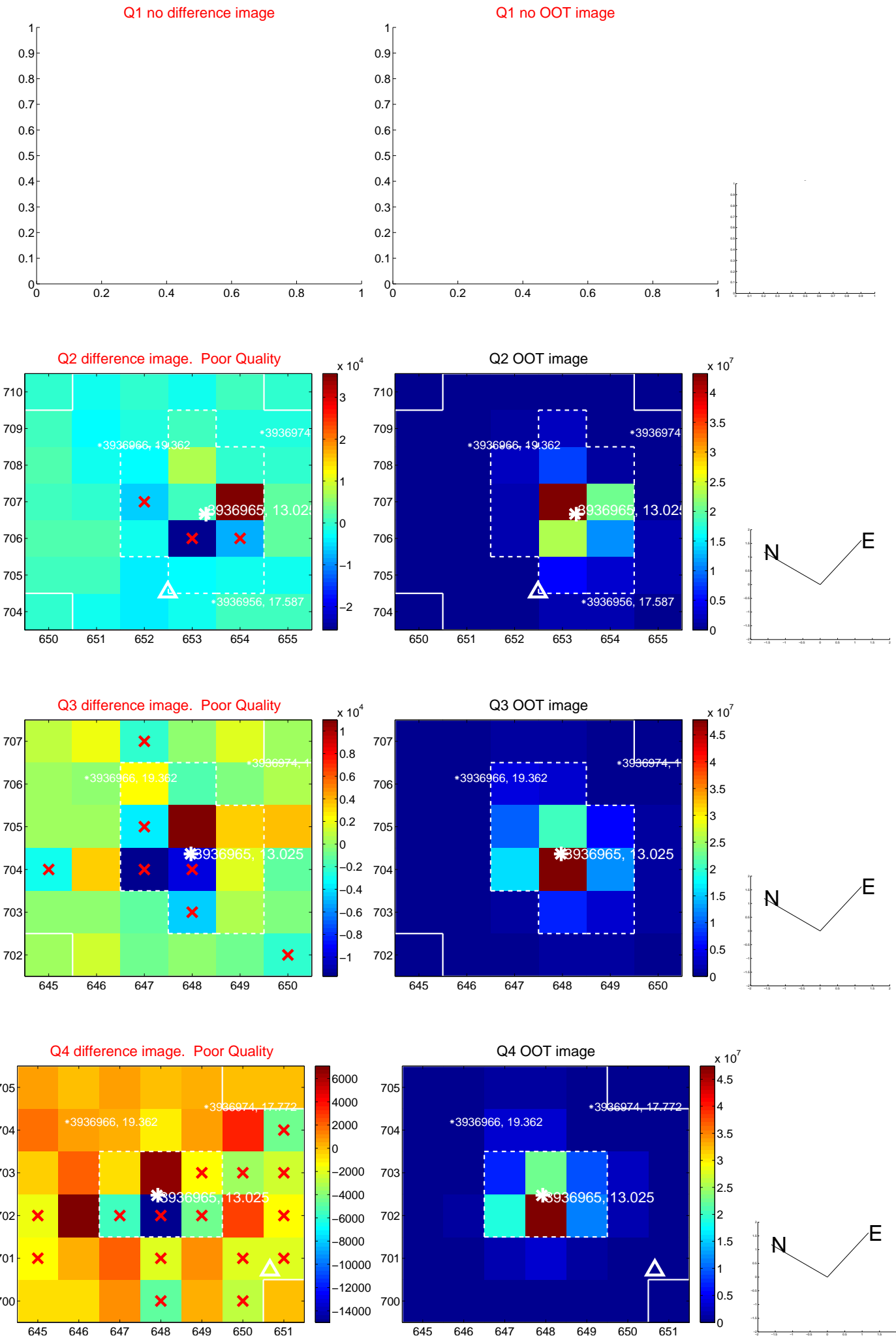
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.299 ± 1.701	0.76	0.123 ± 1.280	-1.293 ± 1.681
PRF-fit source offset from KIC position	1.397 ± 1.507	0.93	0.136 ± 1.080	-1.390 ± 1.499
photometric centroid source offset	0.17 ± 0.64	0.26	0.17 ± 0.64	-0.02 ± 0.66

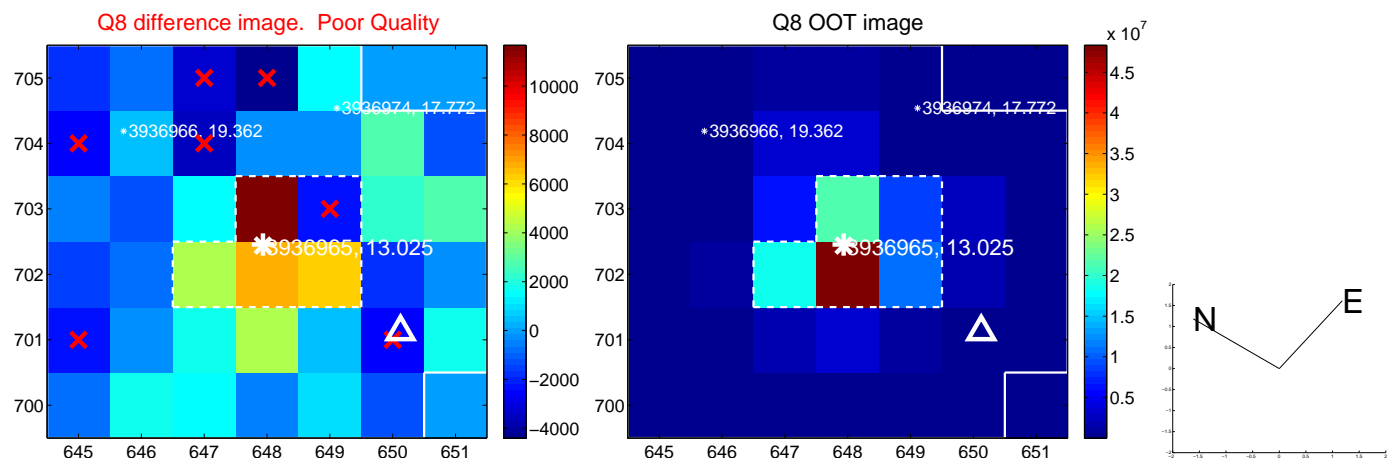
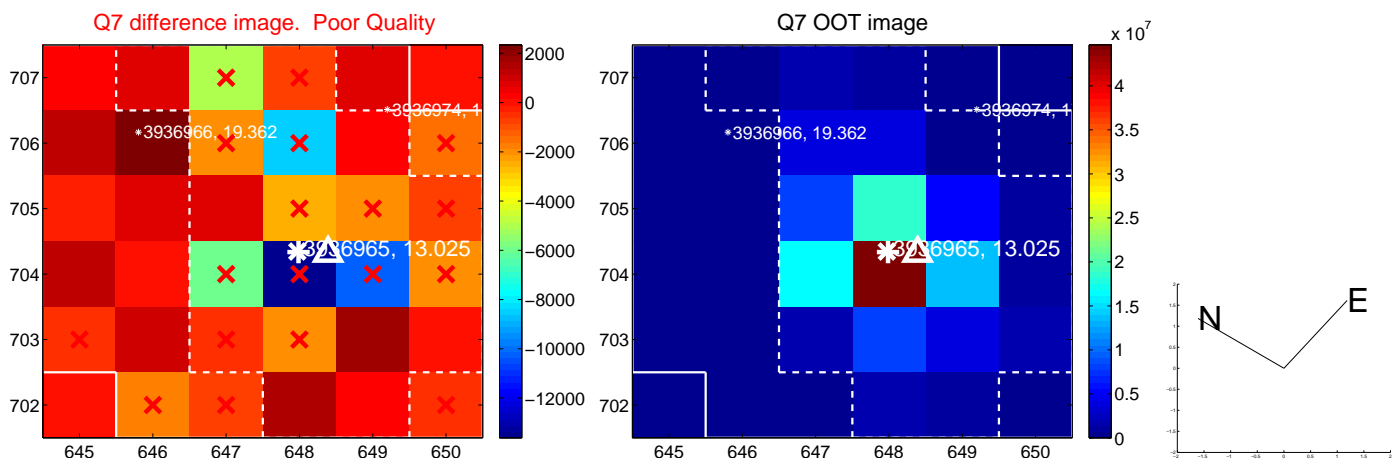
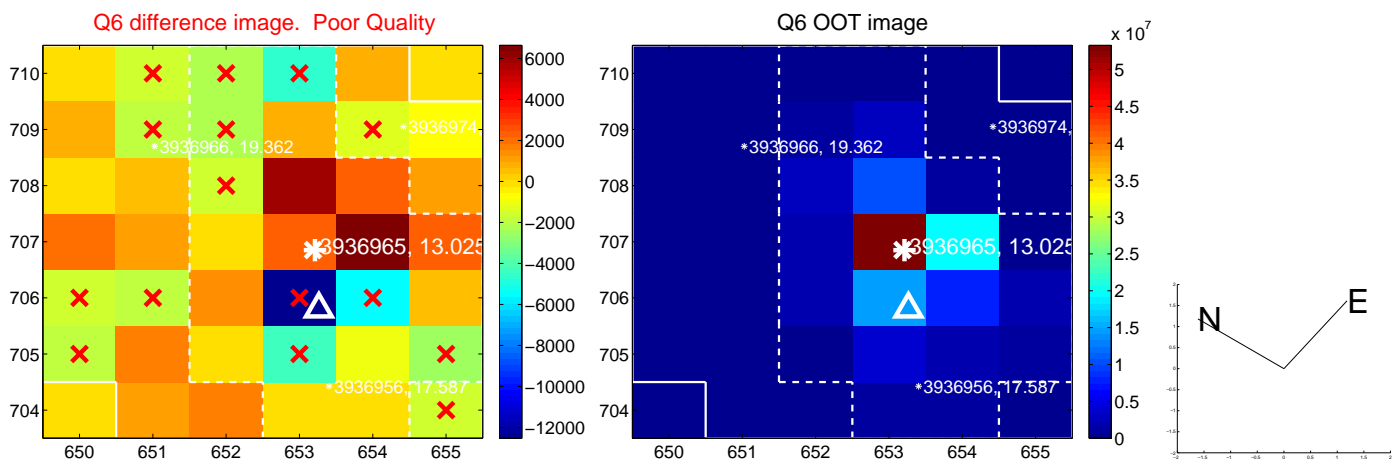
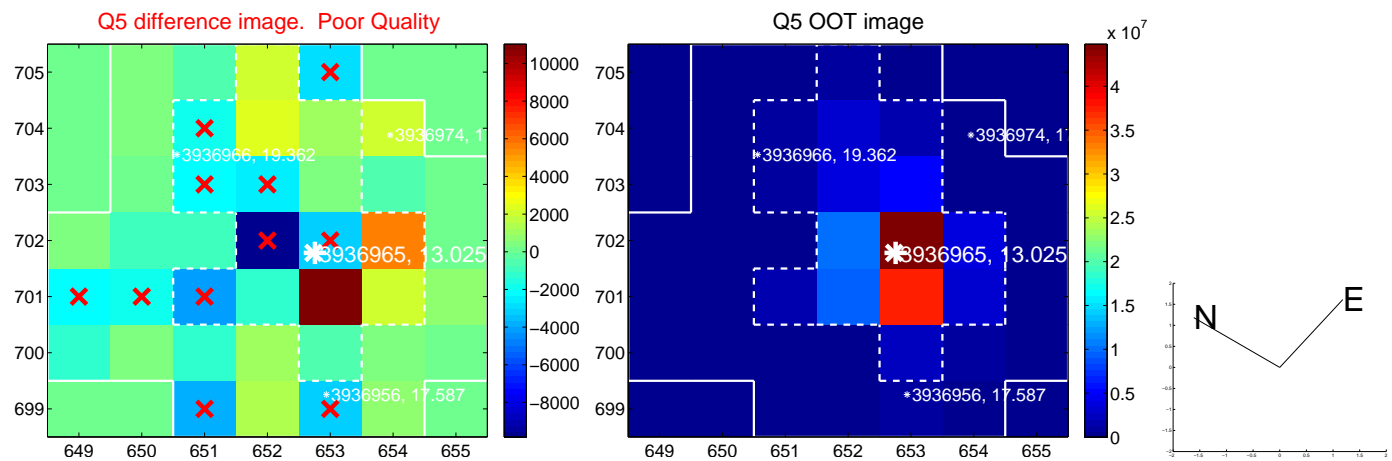


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

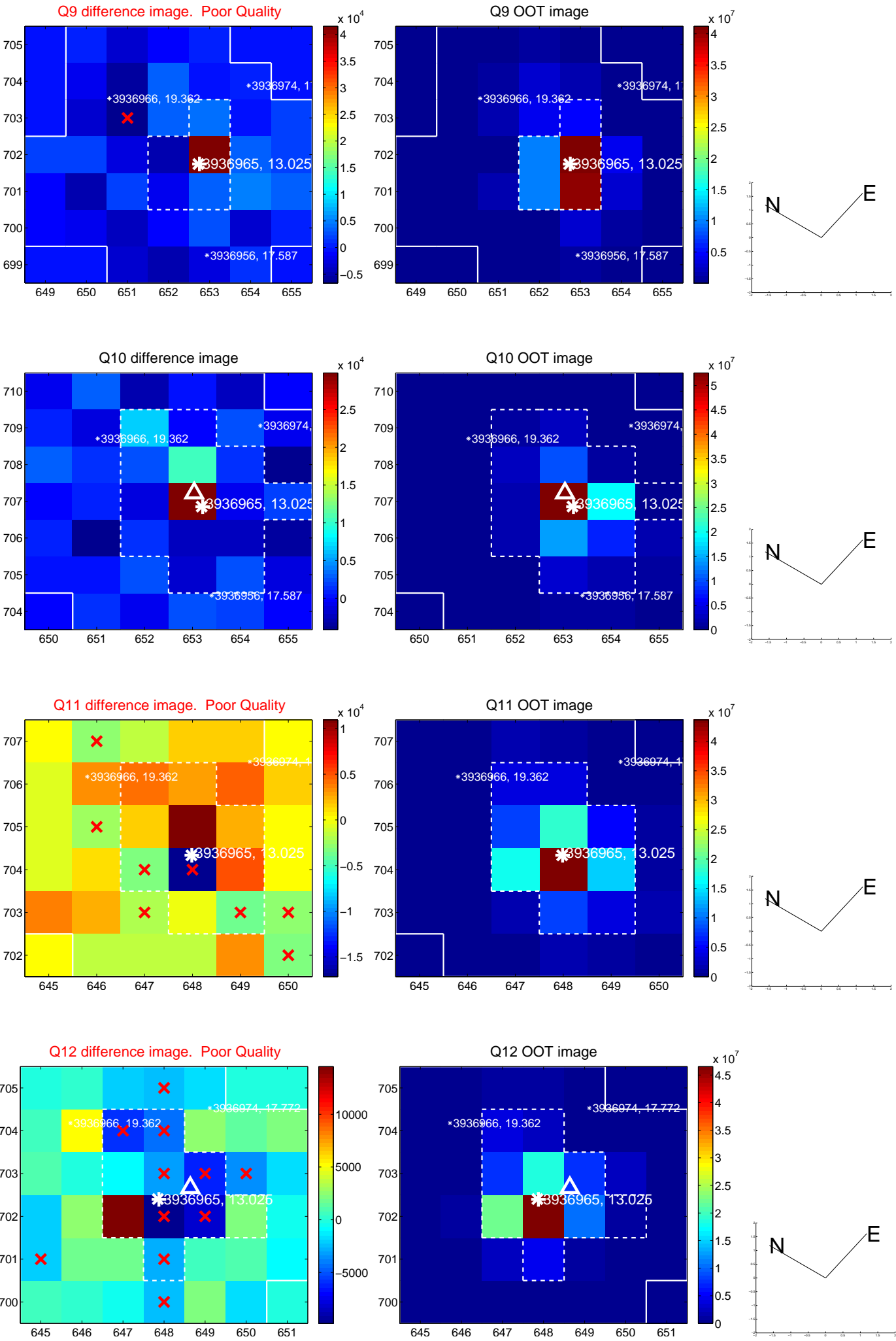
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



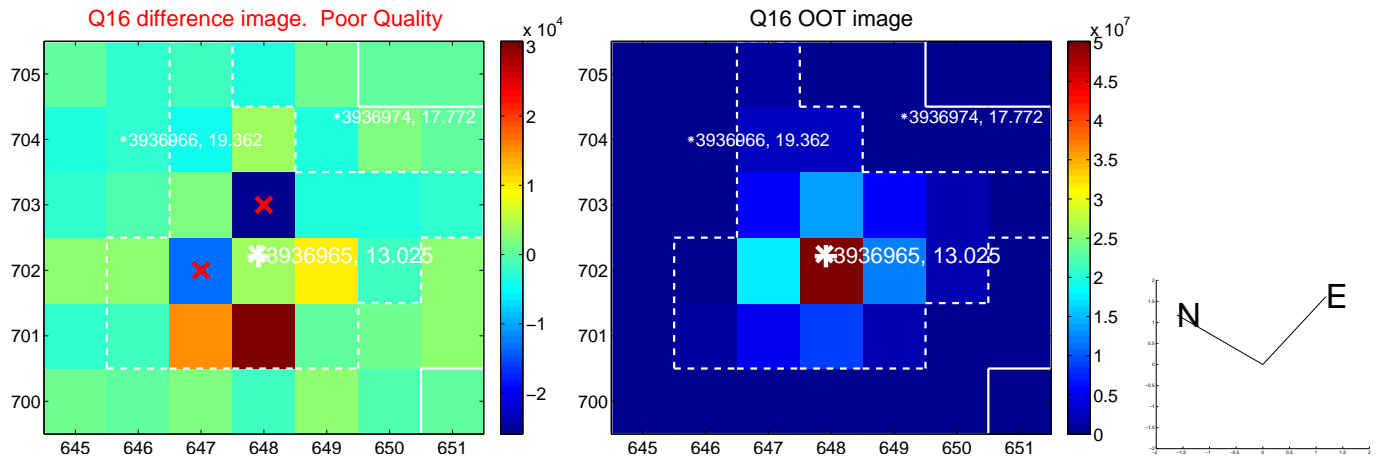
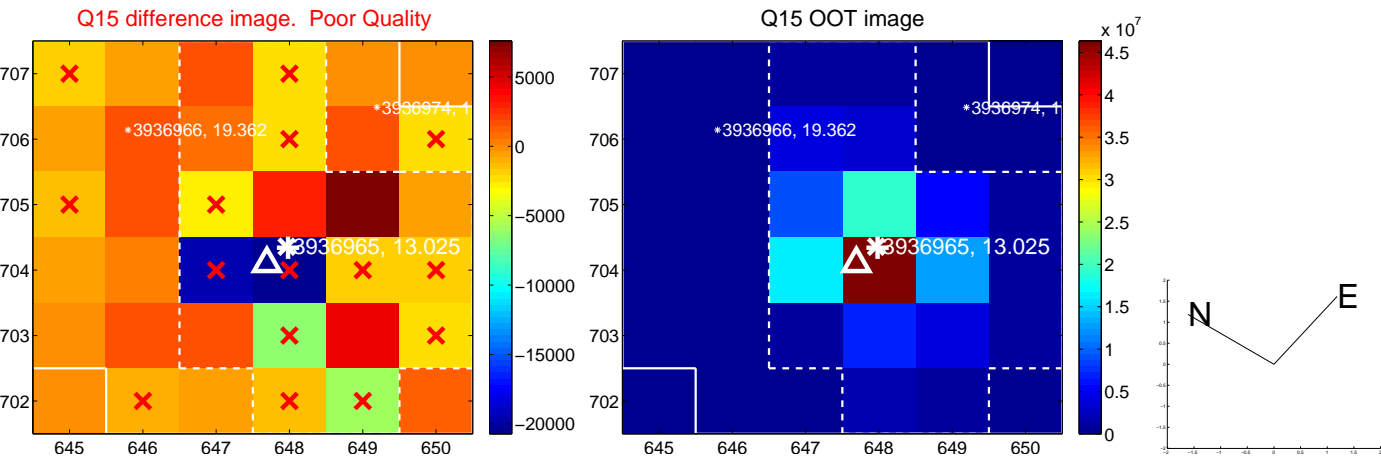
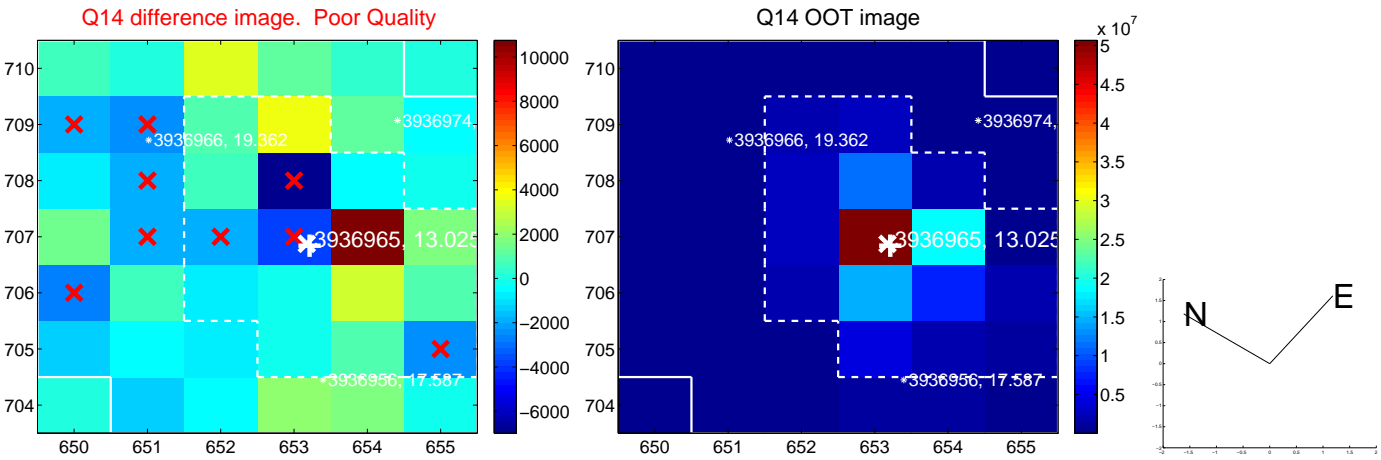
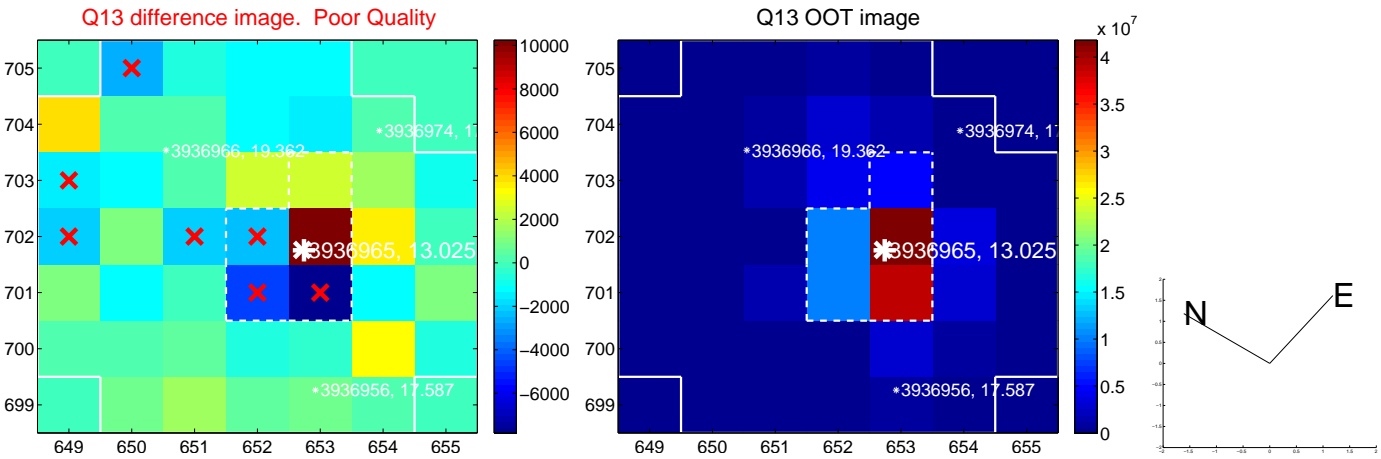
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



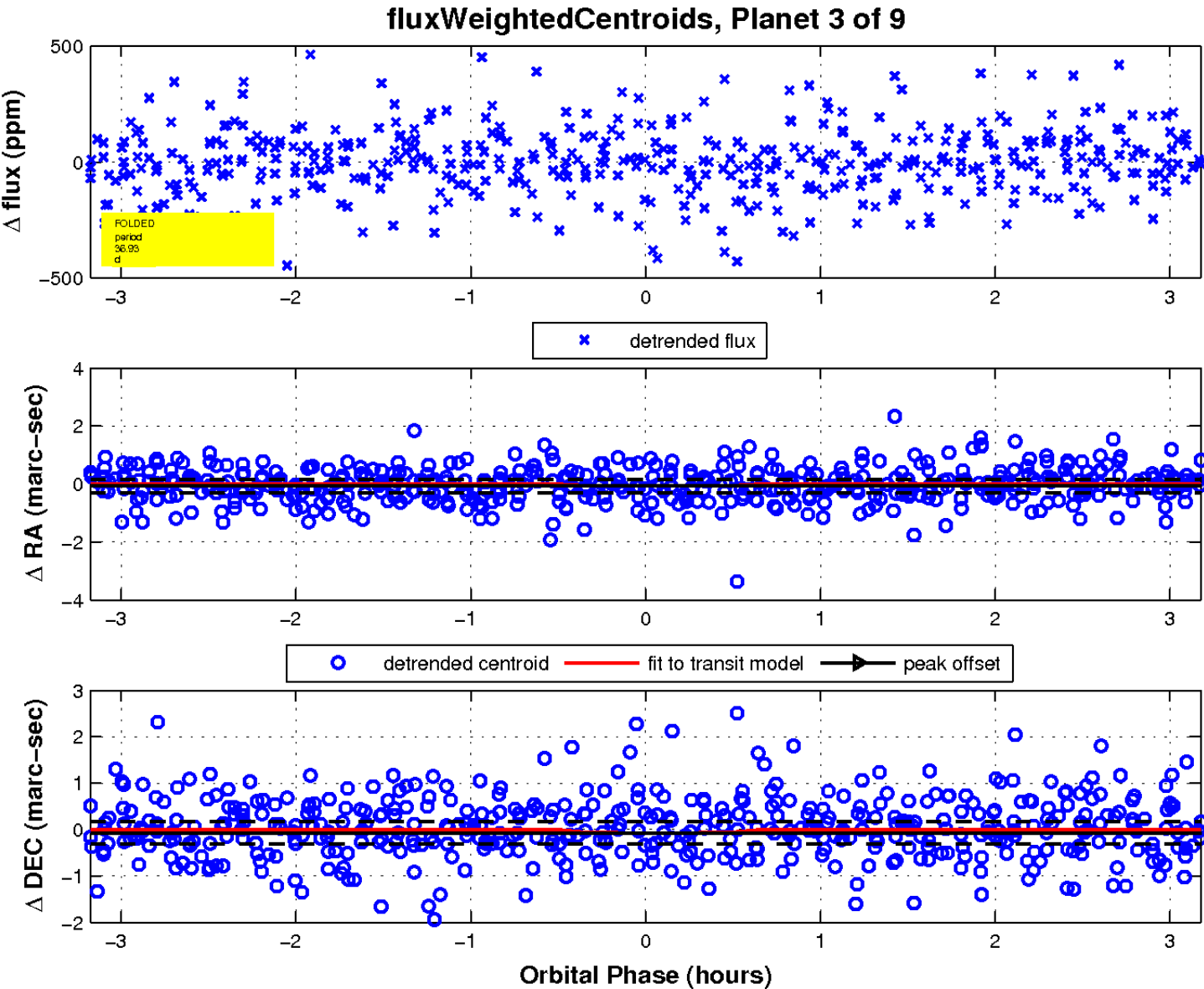
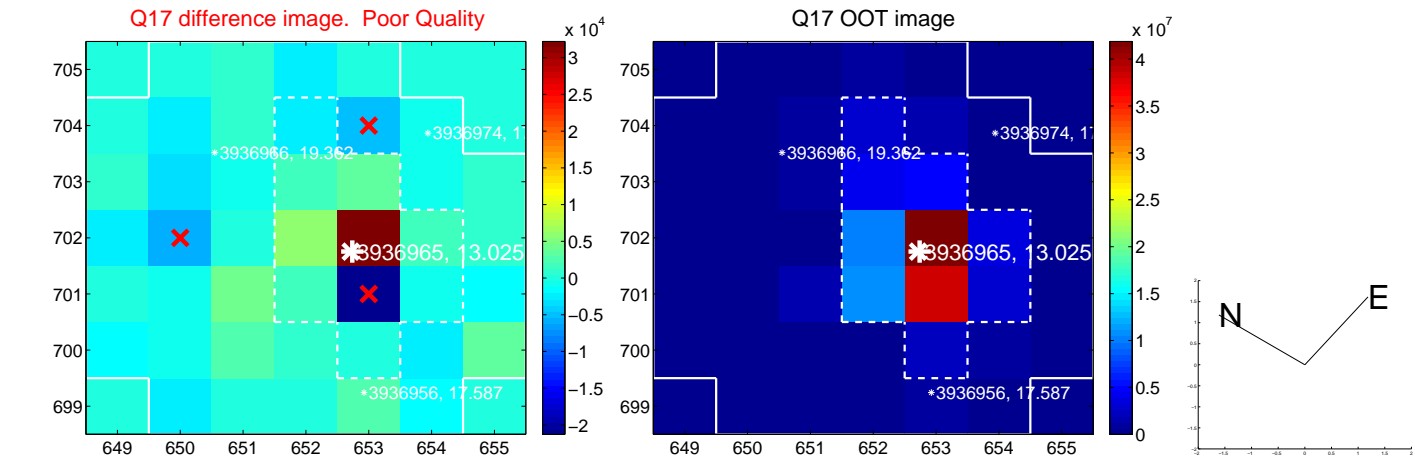
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

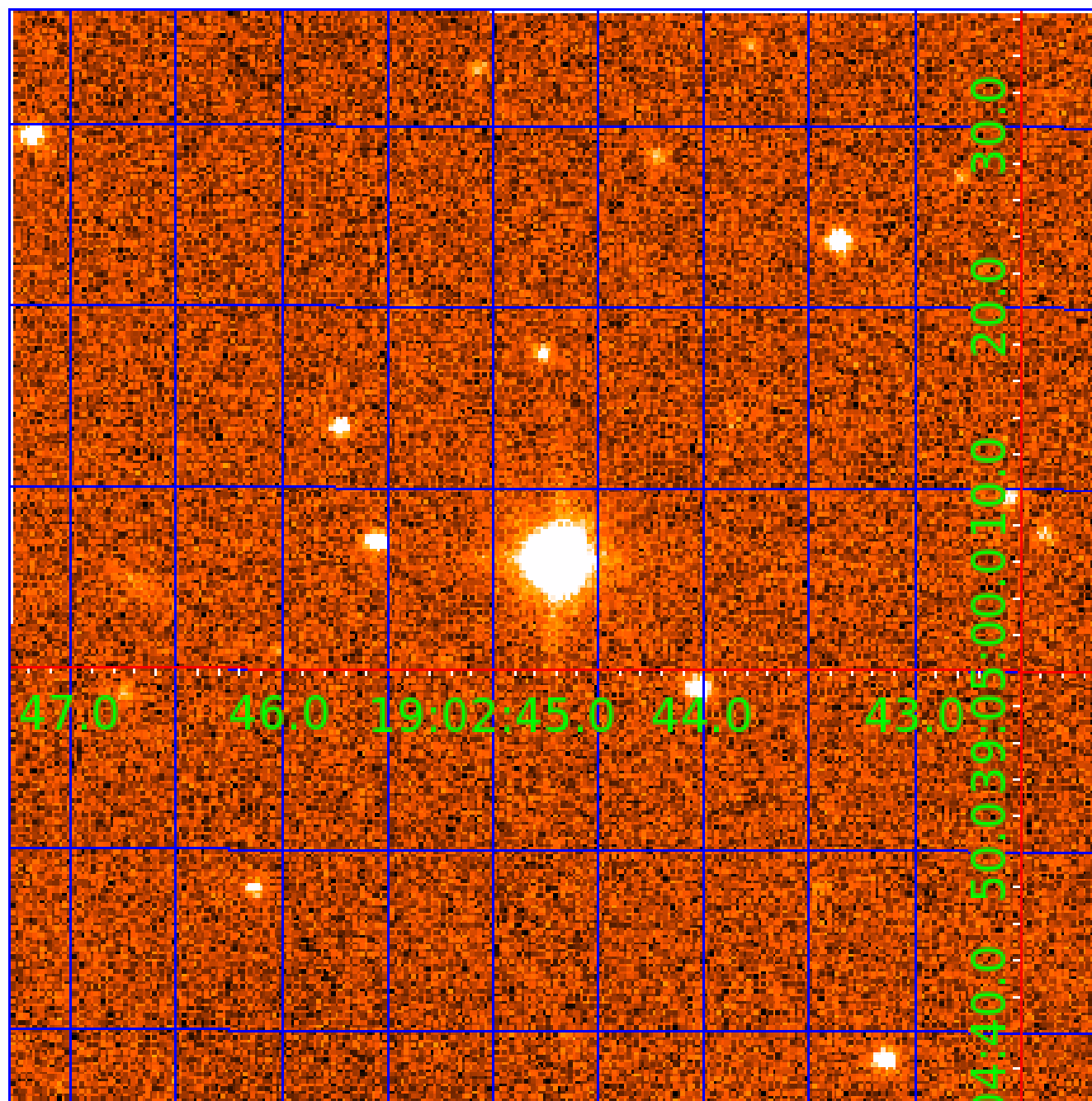


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

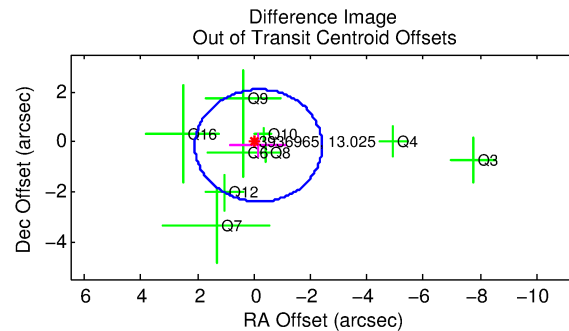
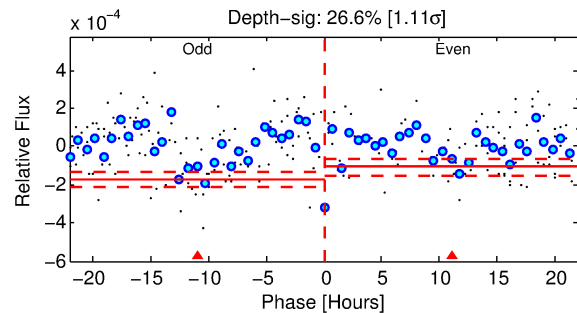
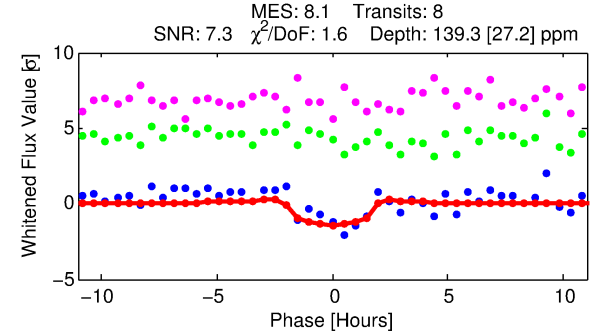
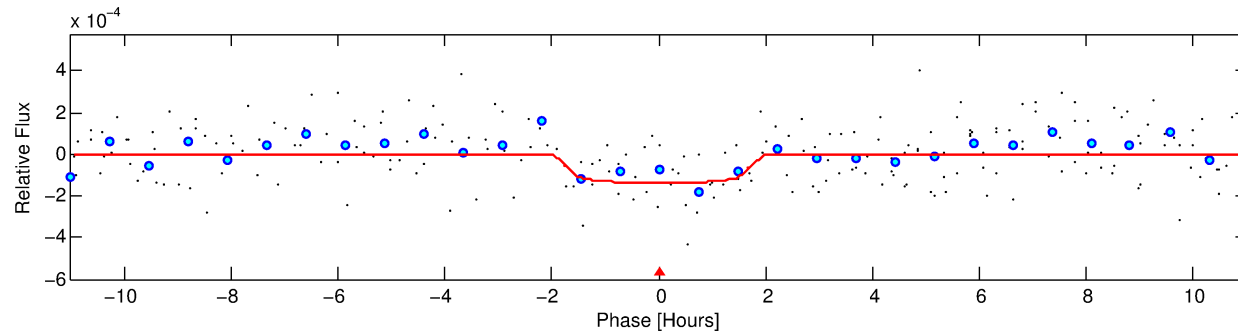
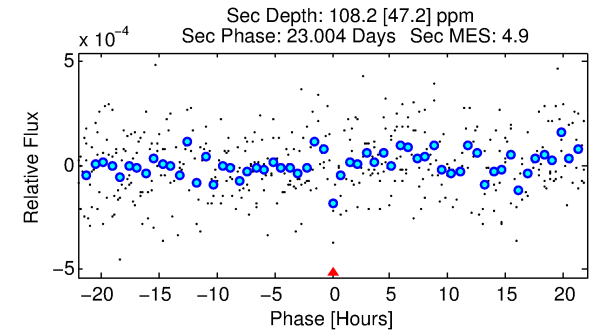
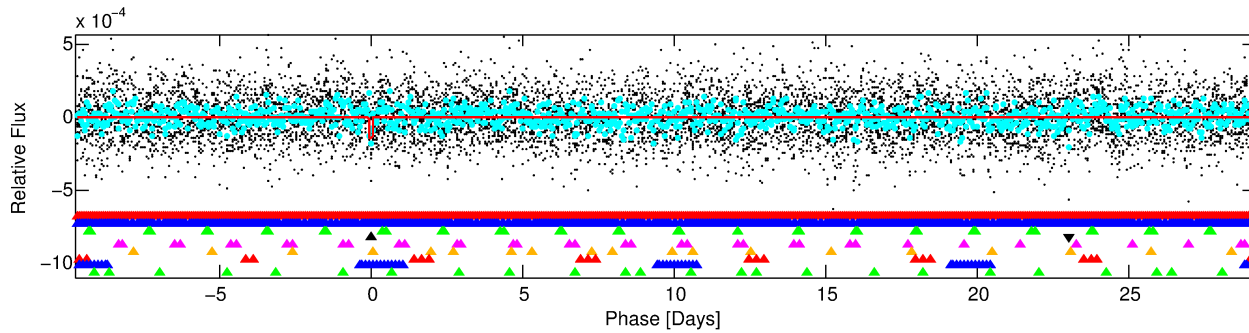
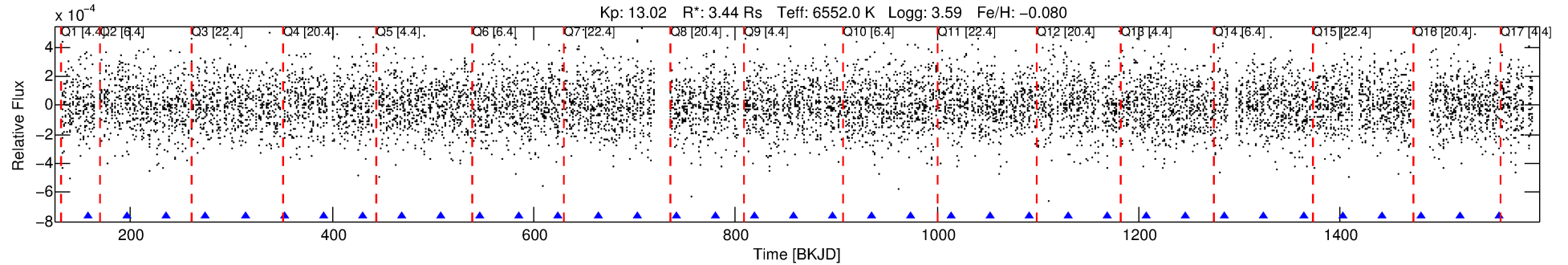
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-04

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 4 of 9 Period: 38.873 d



DV Fit Results:

Period = 38.87284 [0.00087] d
Epoch = 158.2477 [0.0181] BKJD
Rp/R* = 0.0122 [0.0215]
a/R* = 45.57 [460.96]
b = 0.84 [3.58]
Seff = 272.42 [154.16]
Teff = 1036 [147] K
Rp = 4.57 [8.27] Re
a = 0.2678 [0.0943] AU
Ag = 204.73 [739.37] [0.28σ]
Teffp = 6059 [5407] K [0.93σ]

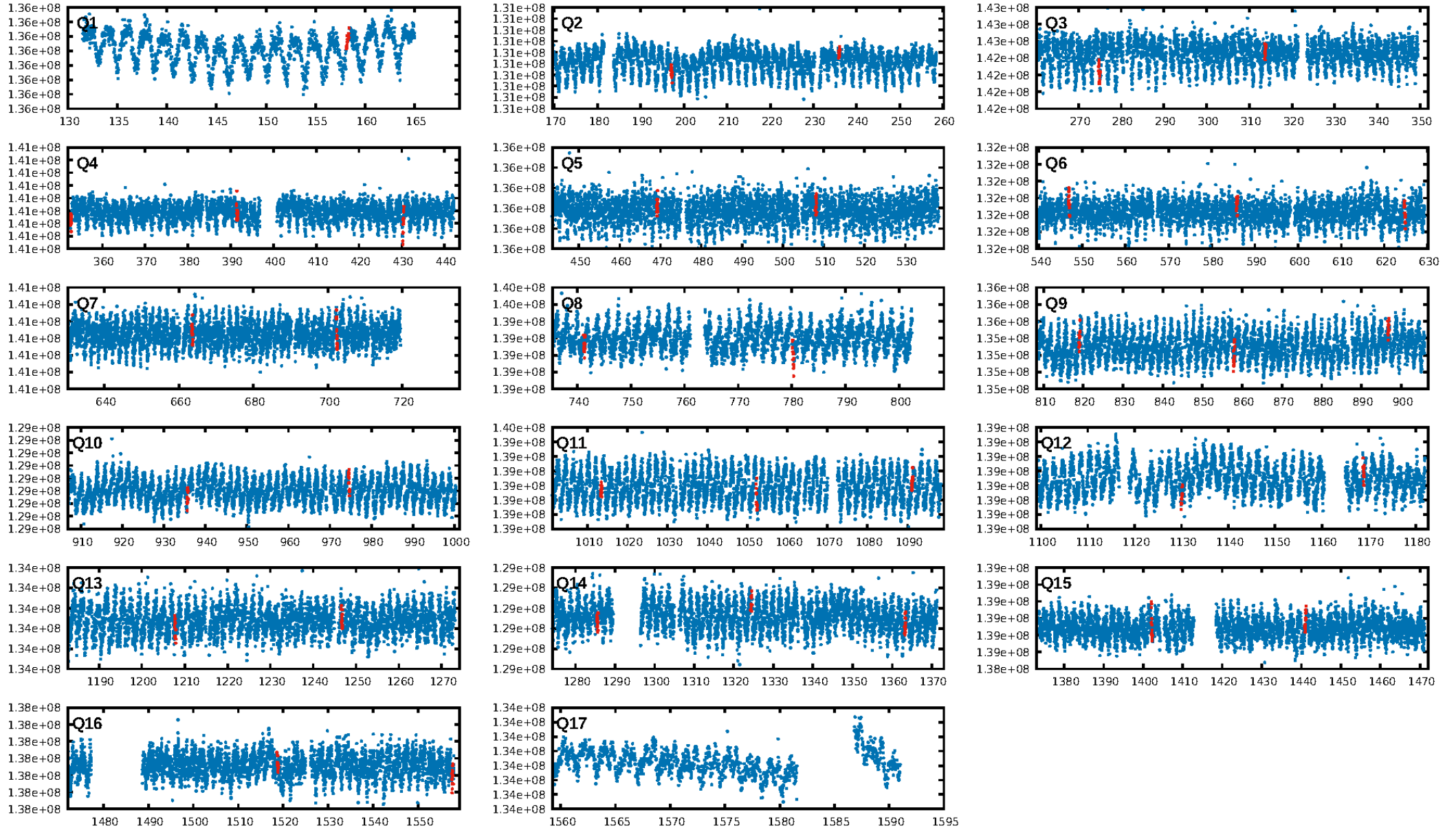
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.18σ]
LongPeriod-sig: 100.0% [5.69σ]
ModelChiSquare2-sig: 22.8%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: 4.30e-08
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 1.123
Centroid-sig: 93.1%
Centroid-so: 0.088 arcsec [0.10σ]
OotOffset-rm: 0.225 arcsec [0.30σ]
KicOffset-rm: 0.279 arcsec [0.46σ]
OotOffset-st: 2/2/4/1 [9]
KicOffset-st: 2/2/4/1 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 0.50 [8/16]

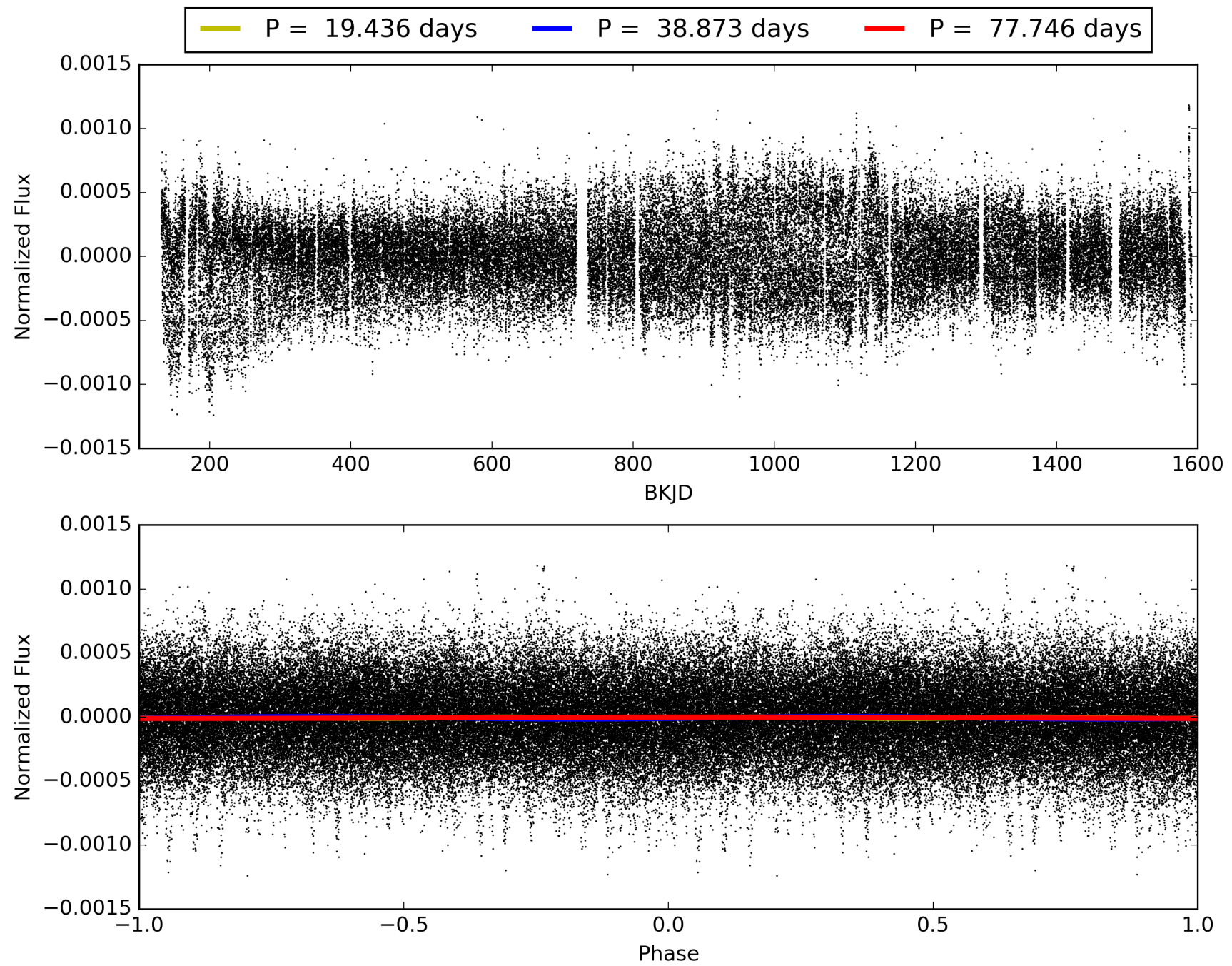
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:28 Z

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

TCE 003936965-04, PDC Light Curves

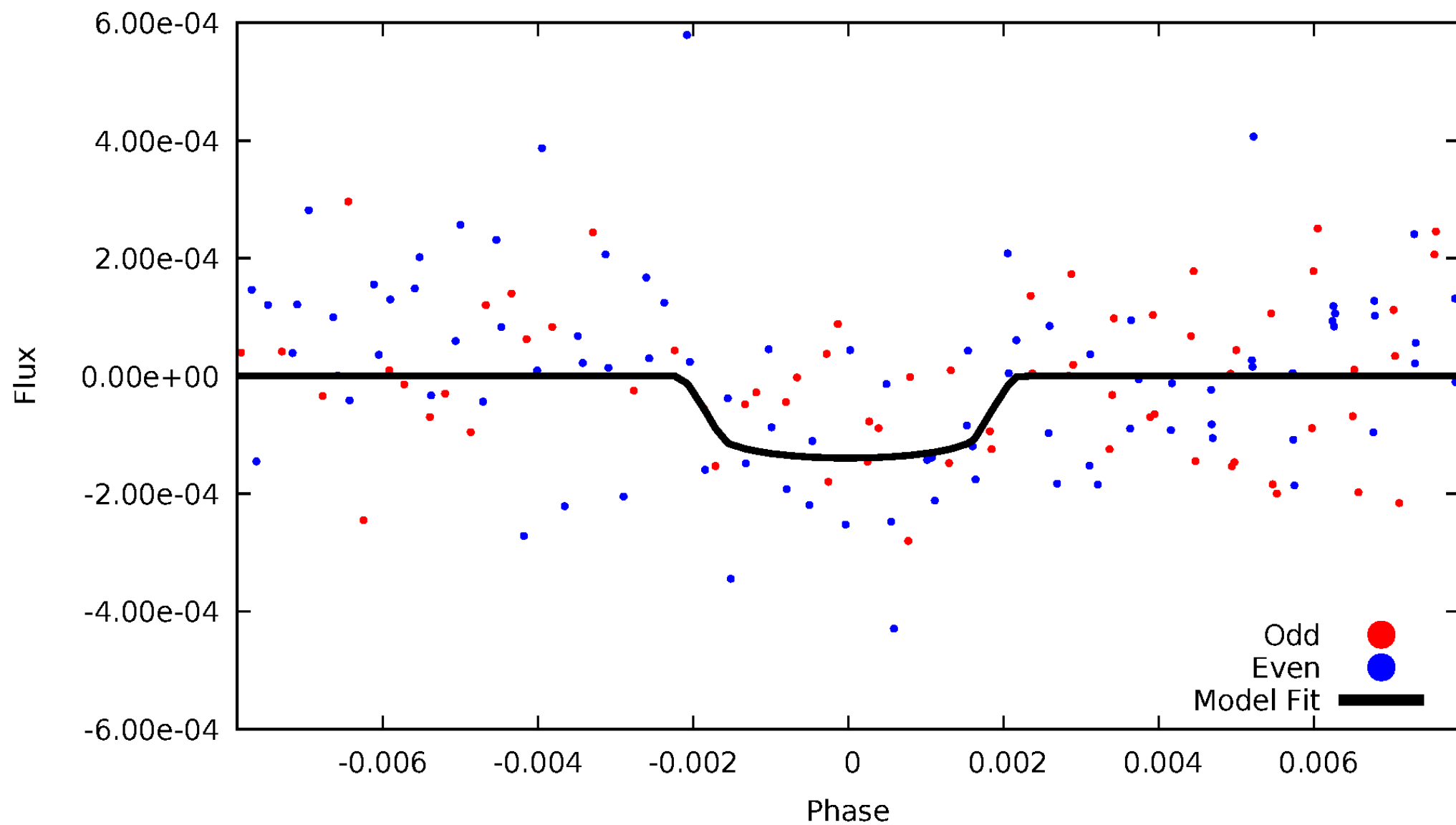


TCE 003936965-04



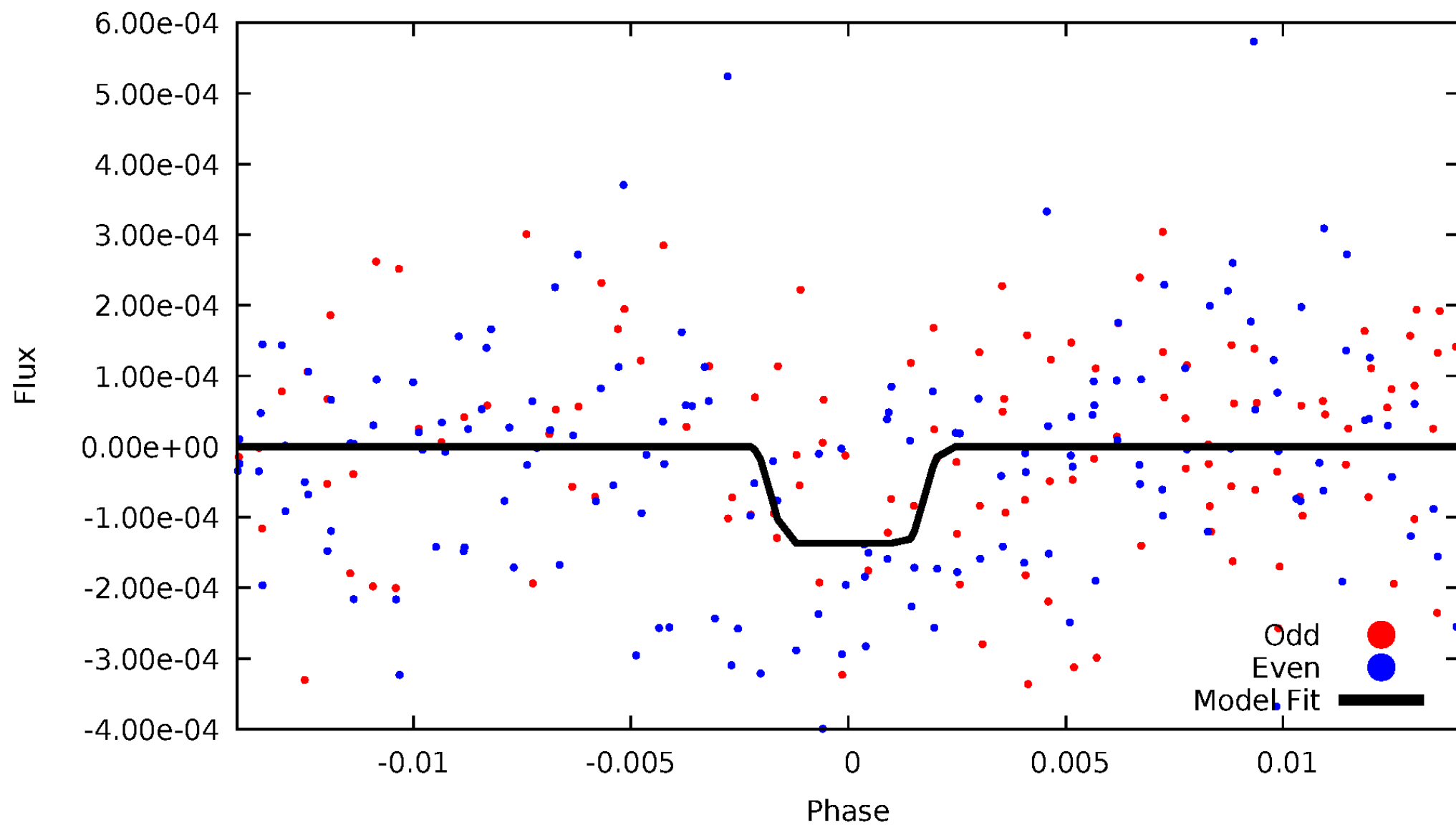
DV Odd/Even

TCE 003936965-04



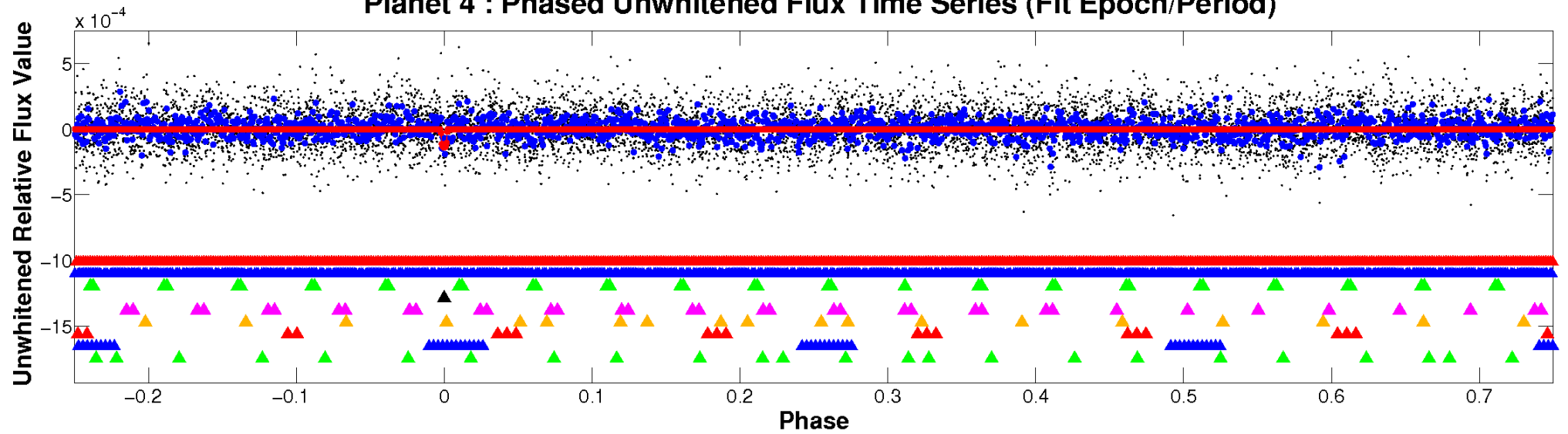
ALT Odd/Even

TCE 003936965-04

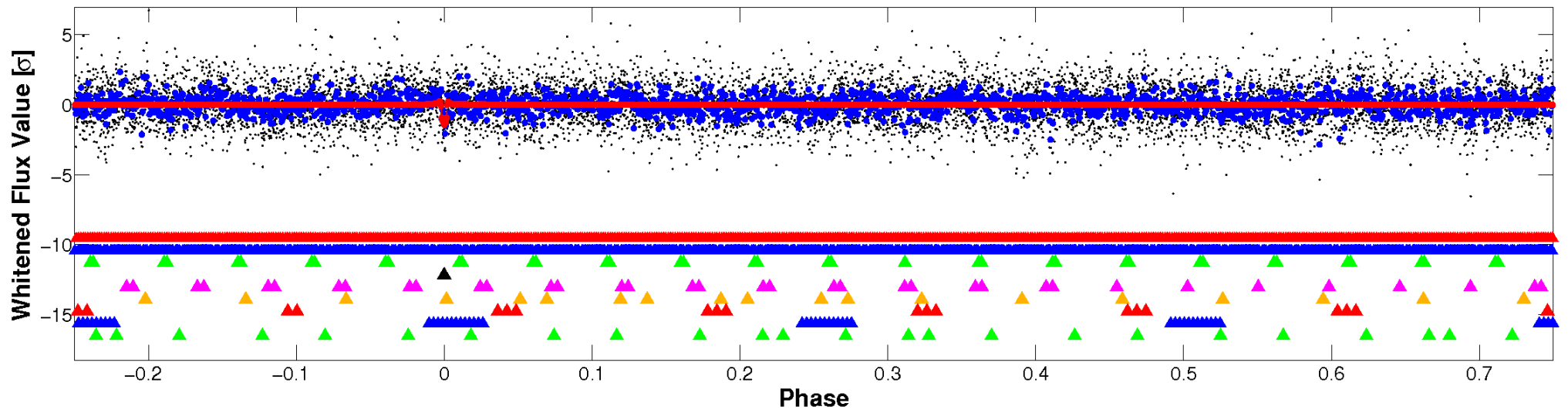


Non-Whitened Vs. Whitened Light Curve

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

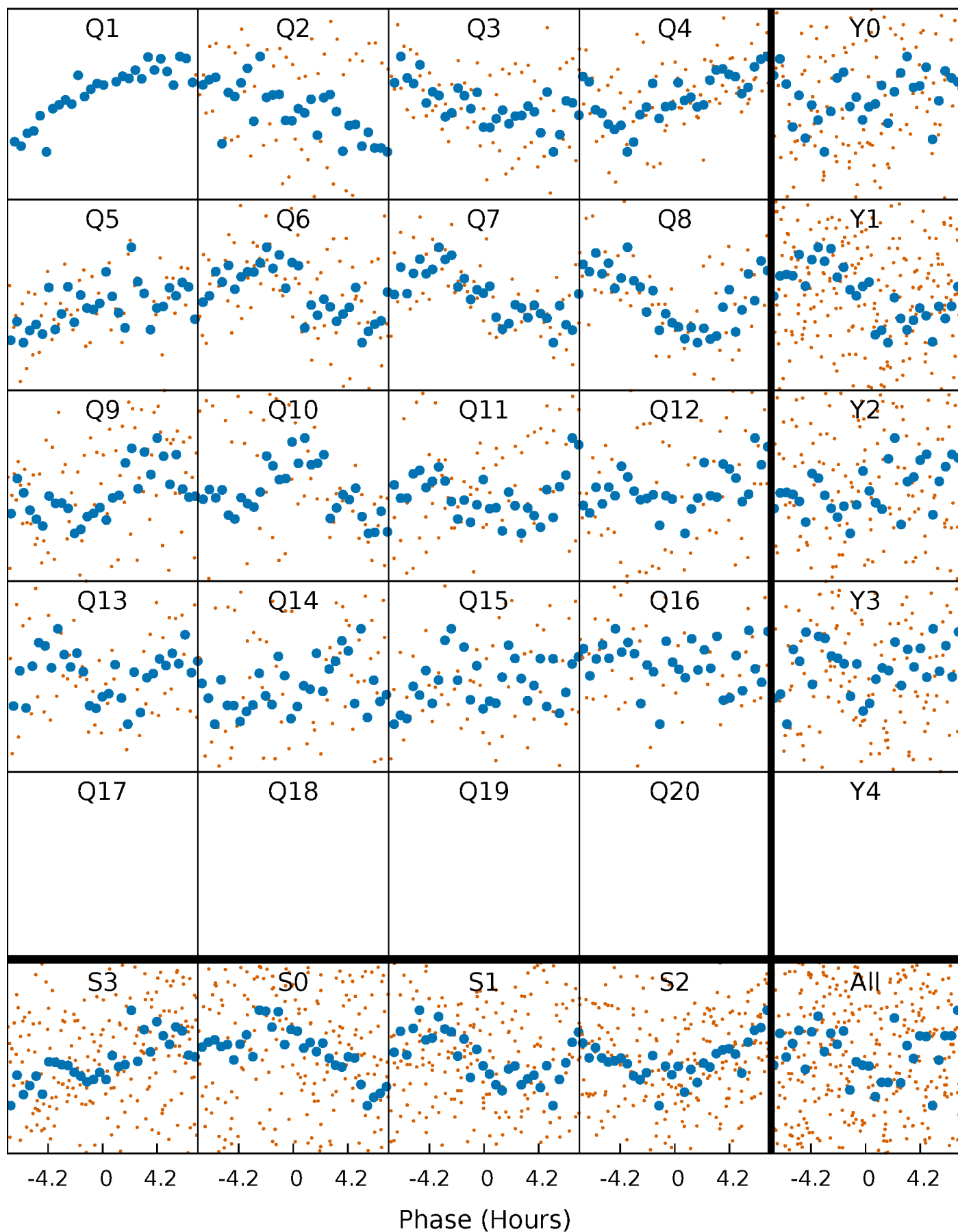


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



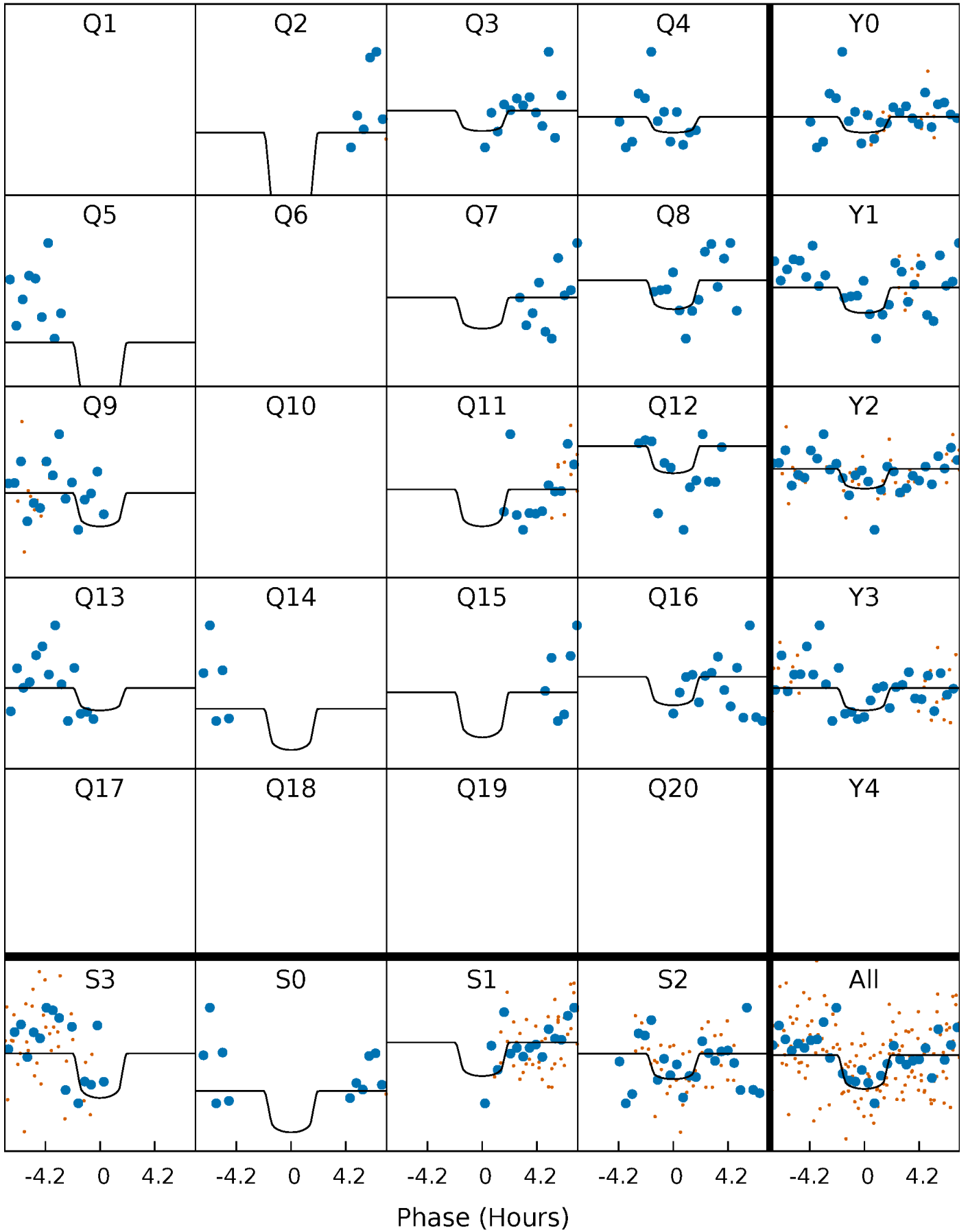
PDC Quarter-Phased Transit Curves

TCE 003936965-04 P= 38.872837 Days $T_0=158.247691$ (BKJD)



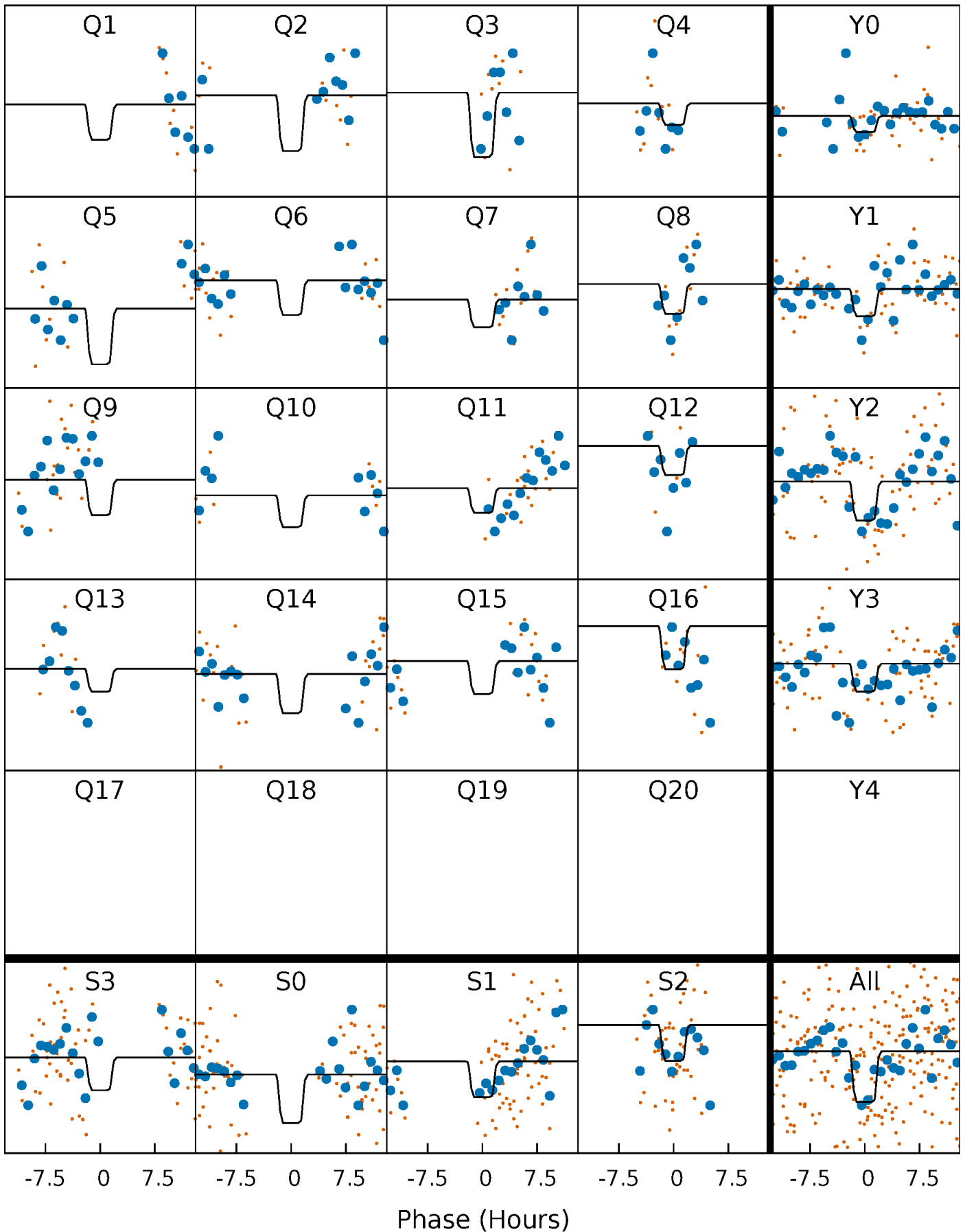
DV Quarter-Phased Transit Curves

TCE 003936965-04 P= 38.872837 Days $T_0=158.247691$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

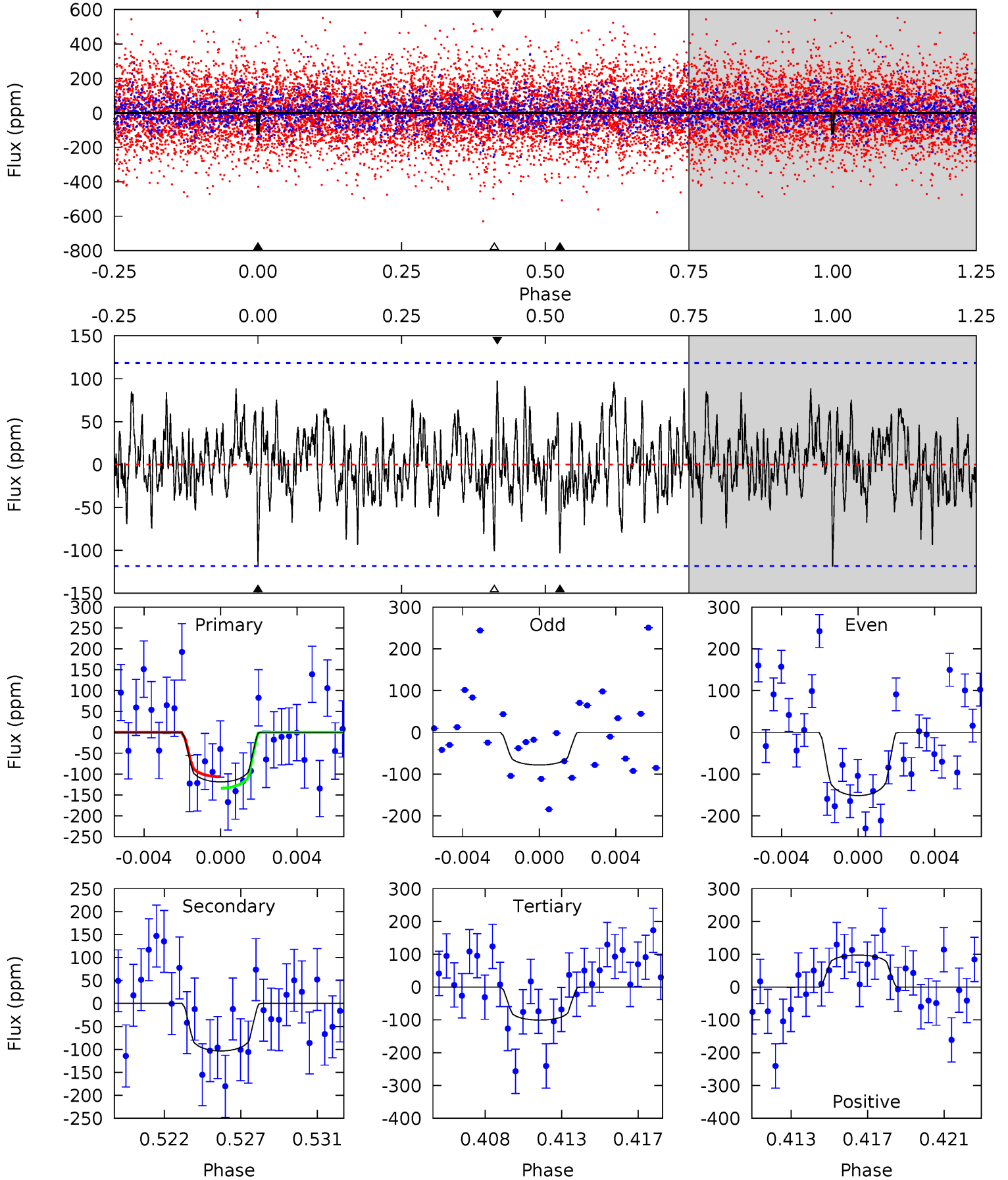
TCE 003936965-04 P= 38.873756 Days $T_0=158.269401$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-04, P = 38.872837 Days, E = 119.374854 Days

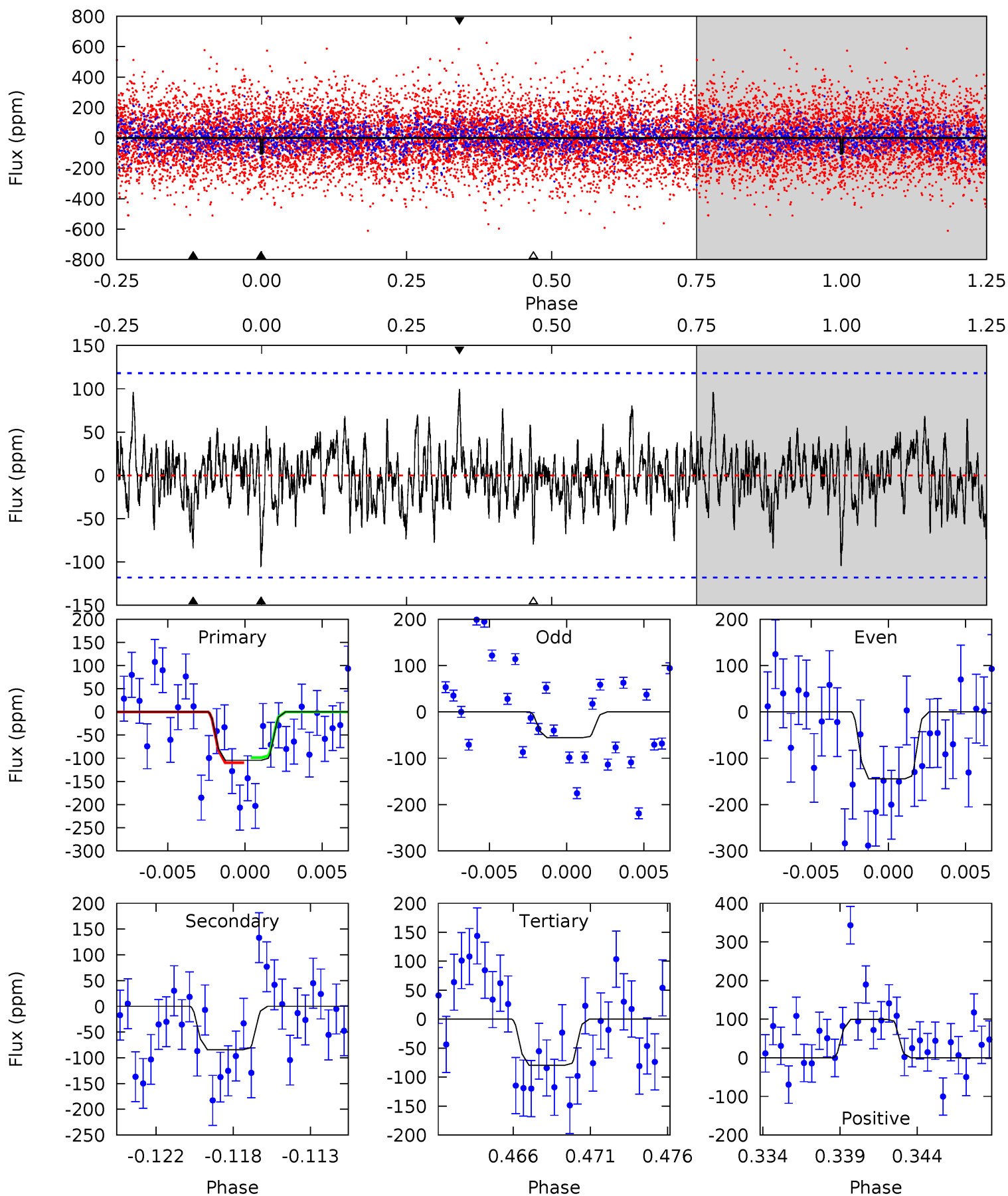
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.20	4.53	4.41	4.27	5.18	2.85	1.40	0.79	0.93	0.11	0.26	1.58	1.17	0.45	0.60



Alt Model-Shift Uniqueness Test

003936965-04, P = 38.873756 Days, E = 119.395645 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.57	3.68	3.48	4.36	5.17	2.83	1.17	1.09	0.21	0.20	-0.68	1.94	0.75	0.49	0.23



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-103 ± 23	$6.78^{+6.44}_{-4.26}$	1417^{+67}_{-128}	4830^{+3090}_{-1098}	88^{+609}_{-65}
Alt.	-84 ± 23	$6.80^{+6.39}_{-4.57}$	1413^{+70}_{-113}	4609^{+3391}_{-964}	69^{+608}_{-50}

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

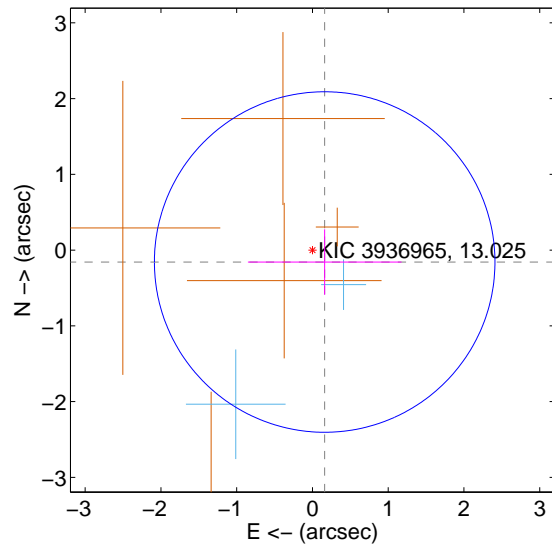
Supplemental centroid analysis for 003936965-04. Kepler magnitude: 13.03. Transit SNR 7.28

There are 3 quarters with good PRF difference image offsets

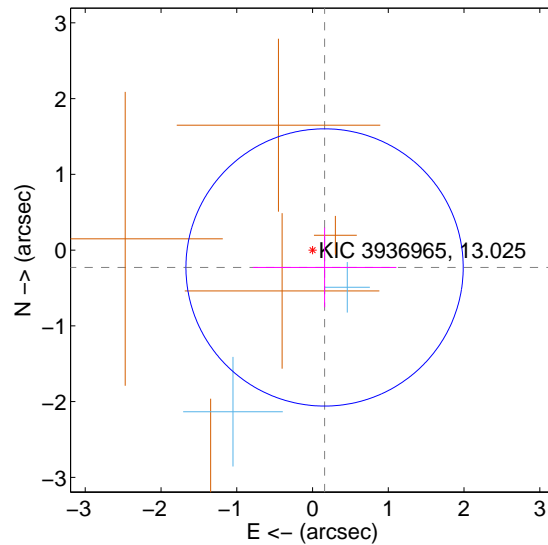
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.225 ± 0.749	0.30	-0.162 ± 1.013	-0.157 ± 0.432
PRF-fit source offset from KIC position	0.279 ± 0.610	0.46	-0.159 ± 0.948	-0.229 ± 0.524
photometric centroid source offset	0.09 ± 0.86	0.10	-0.07 ± 0.85	-0.05 ± 0.88

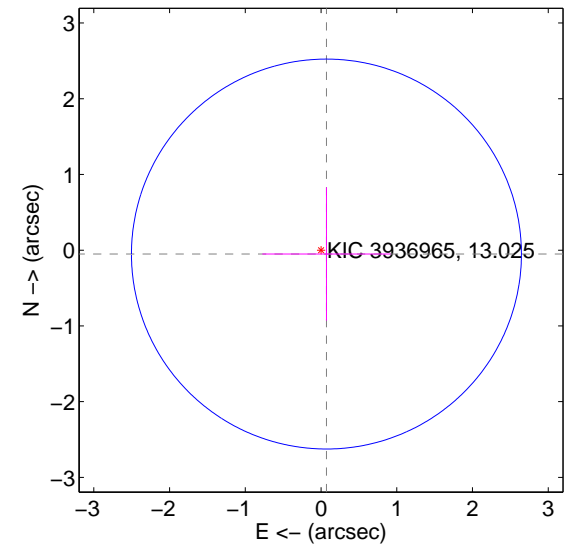
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

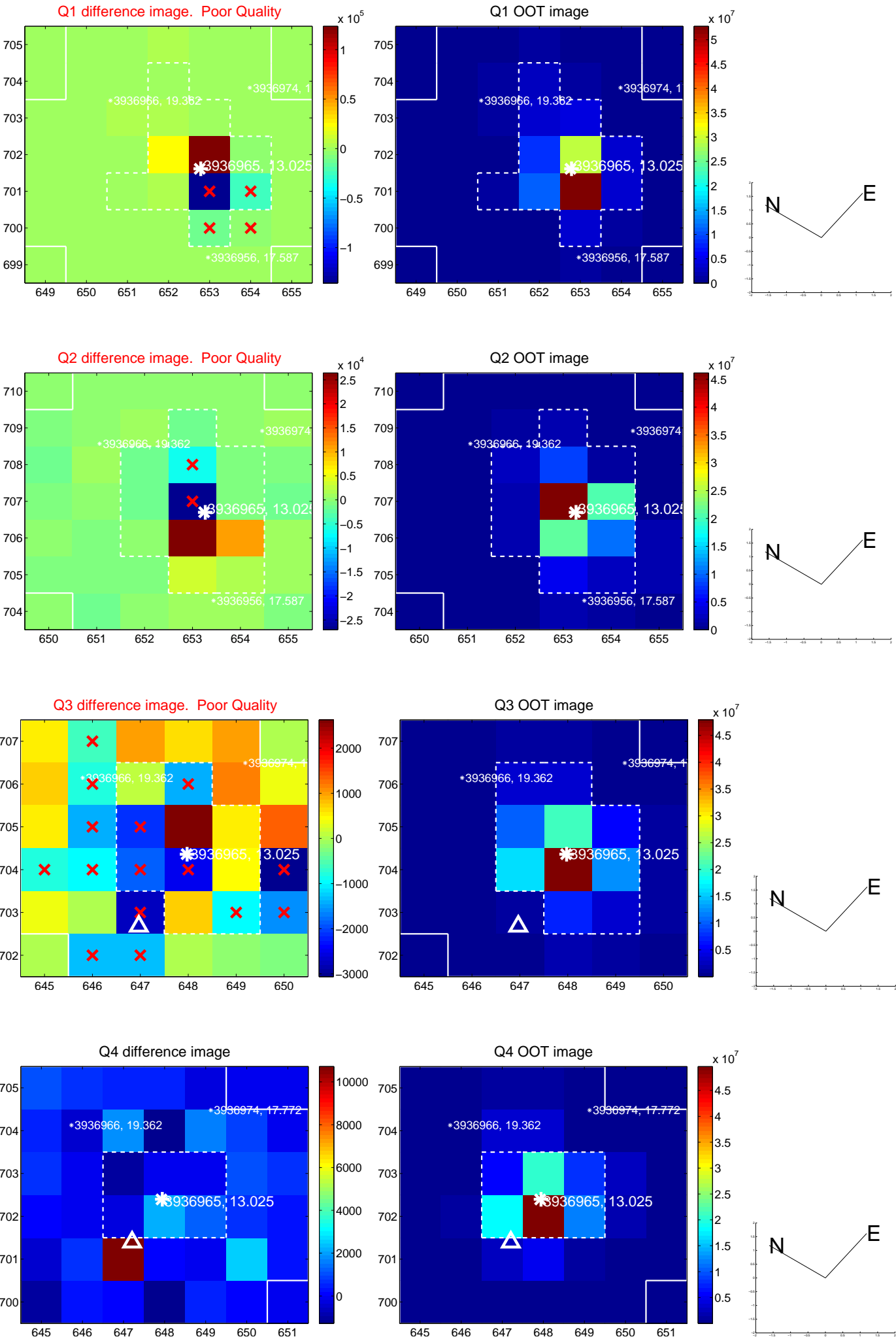


offset from photometric centroids

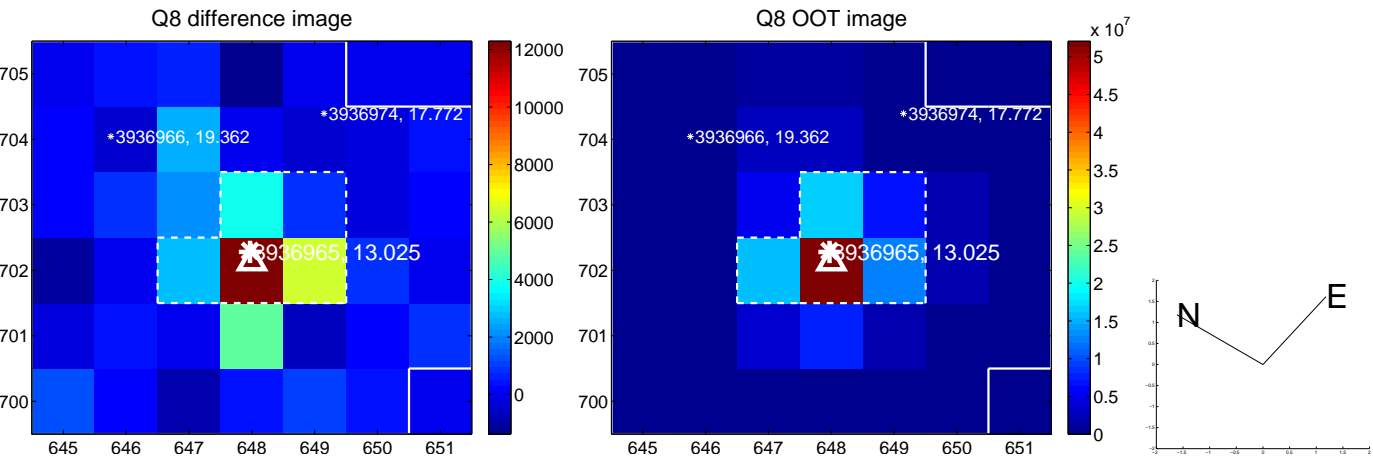
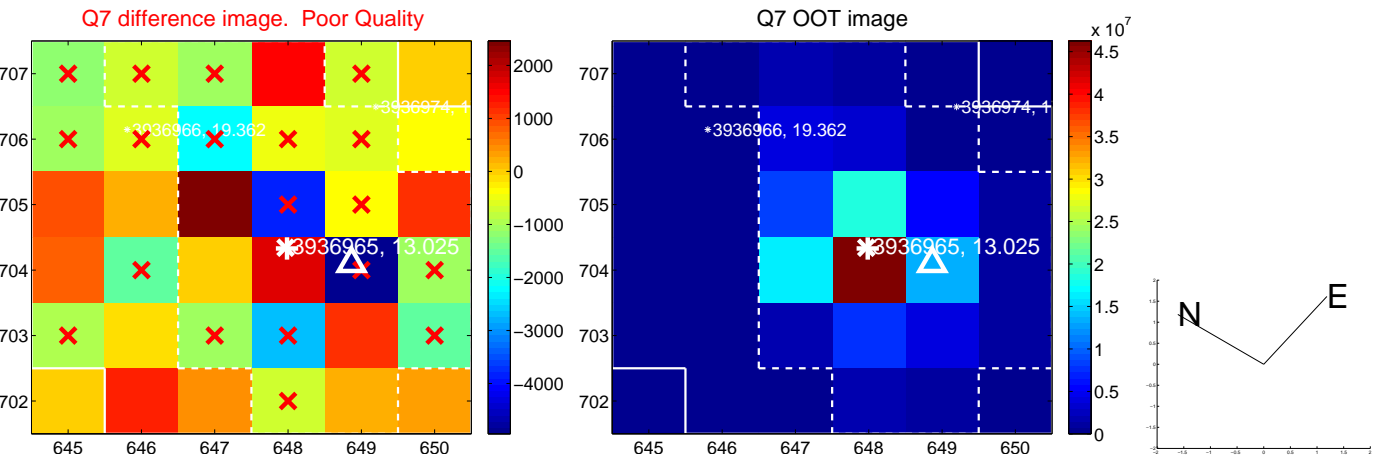
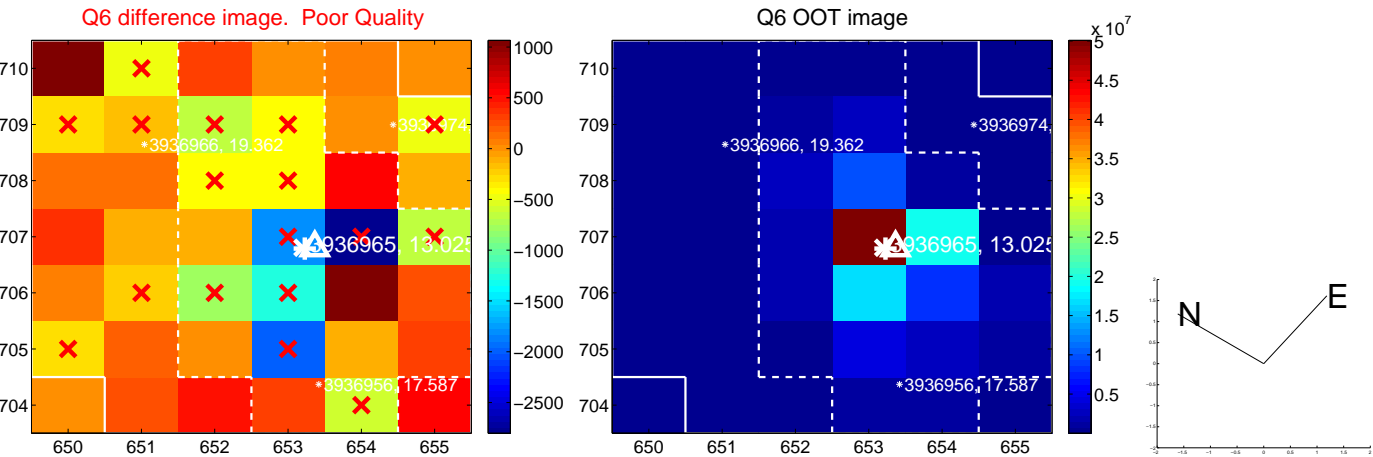
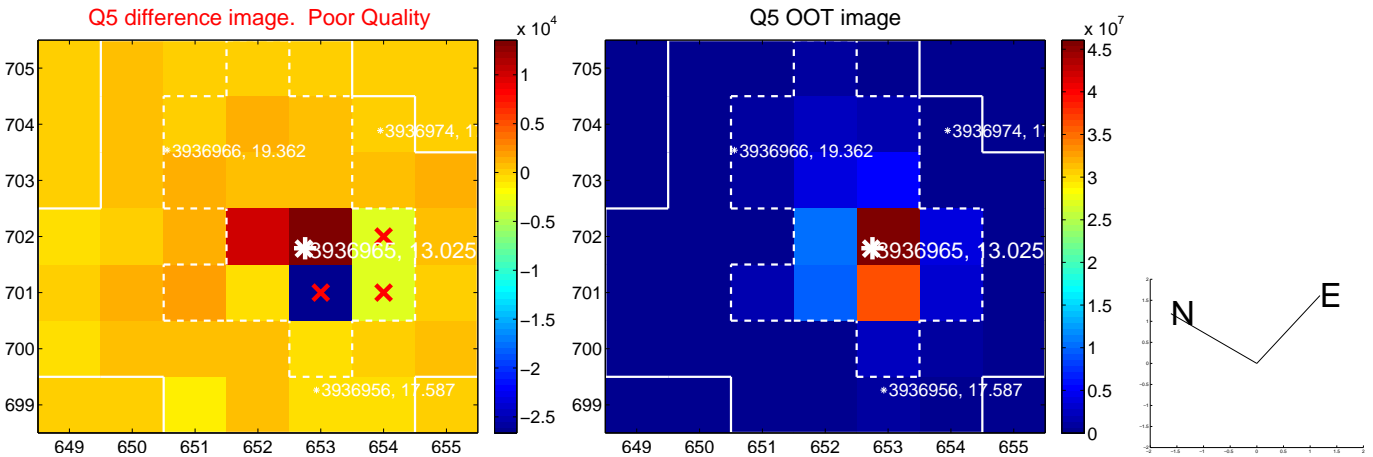


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

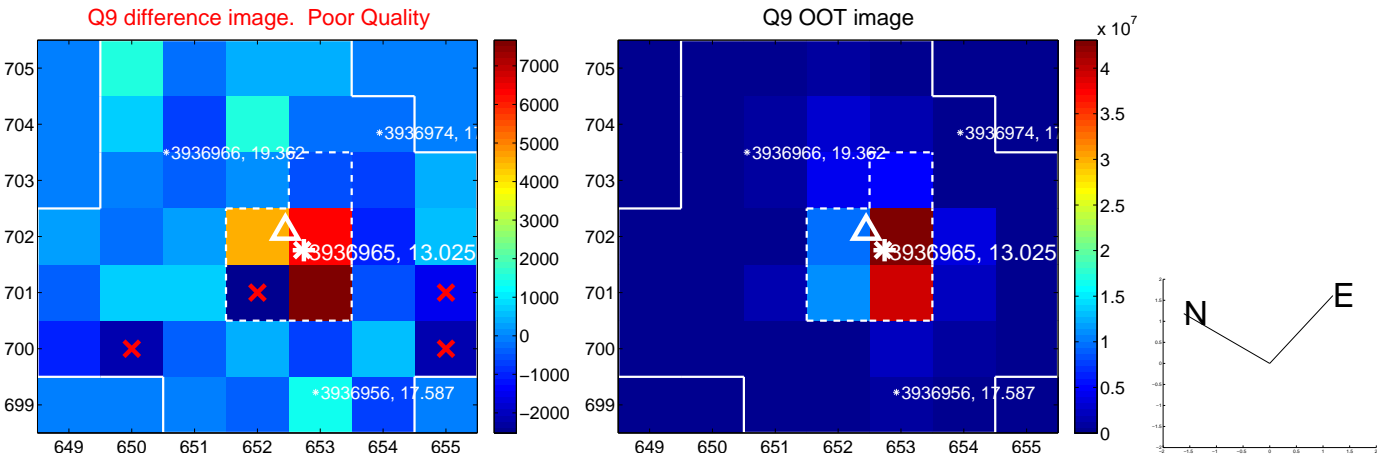
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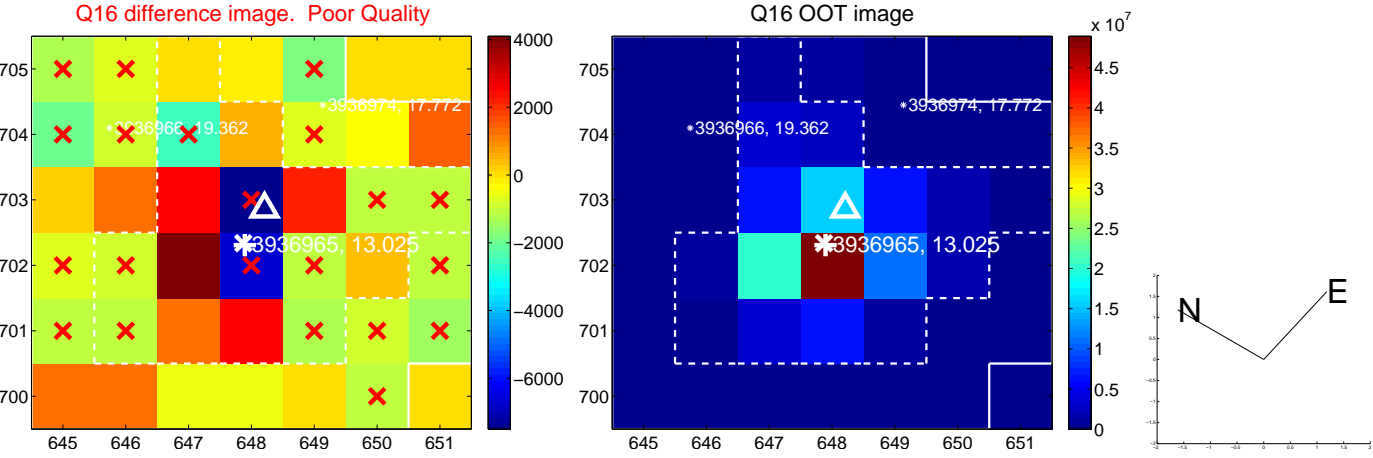
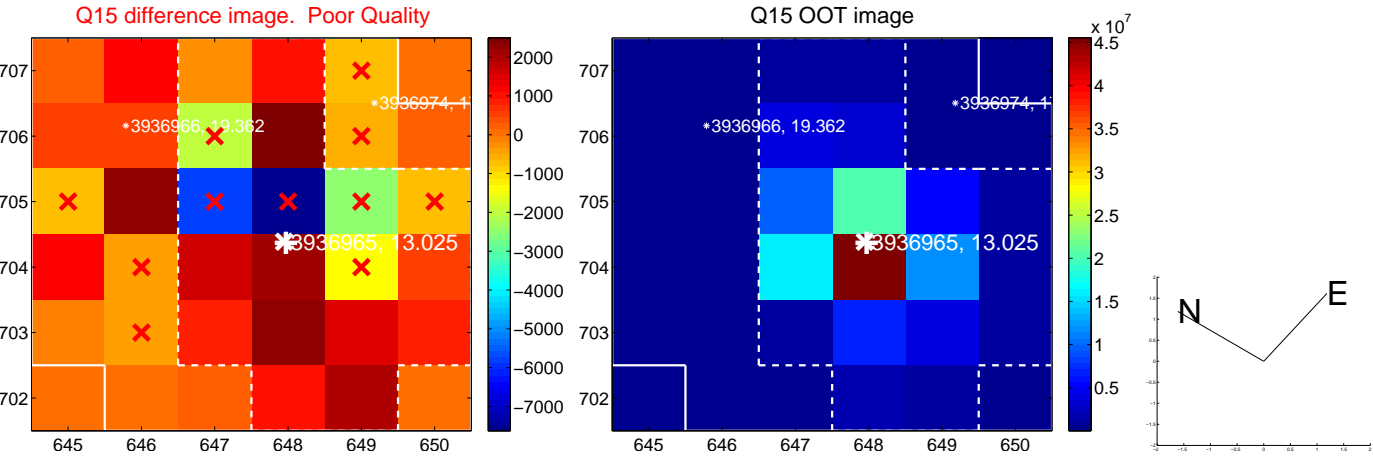
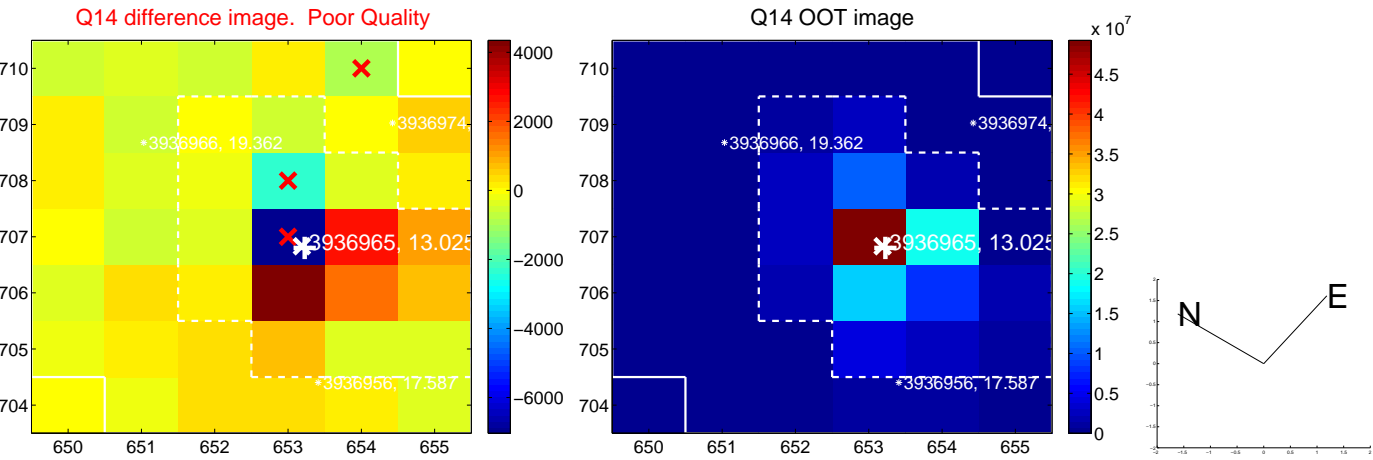
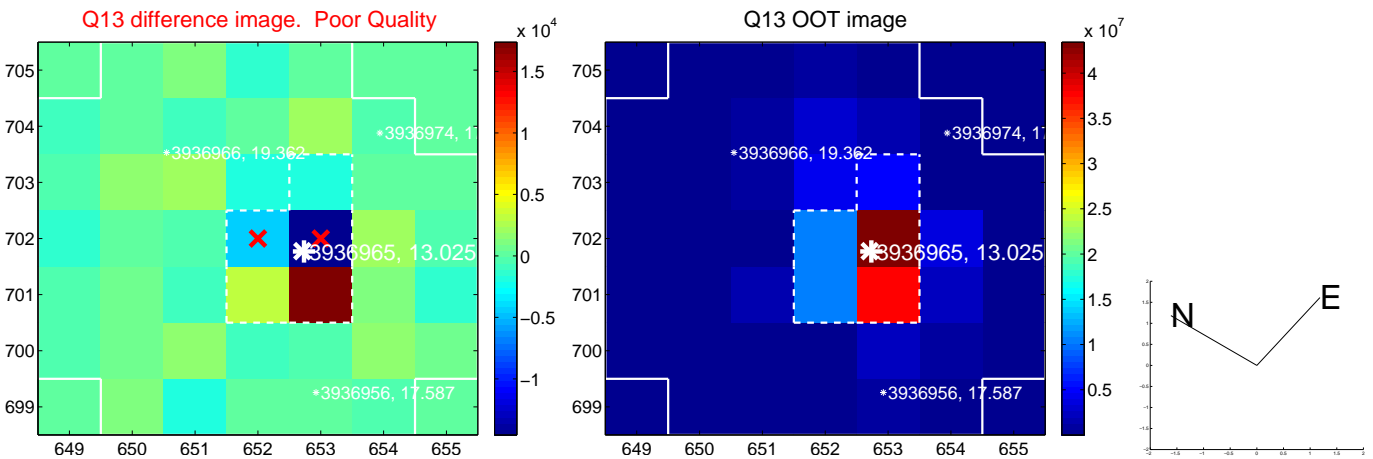
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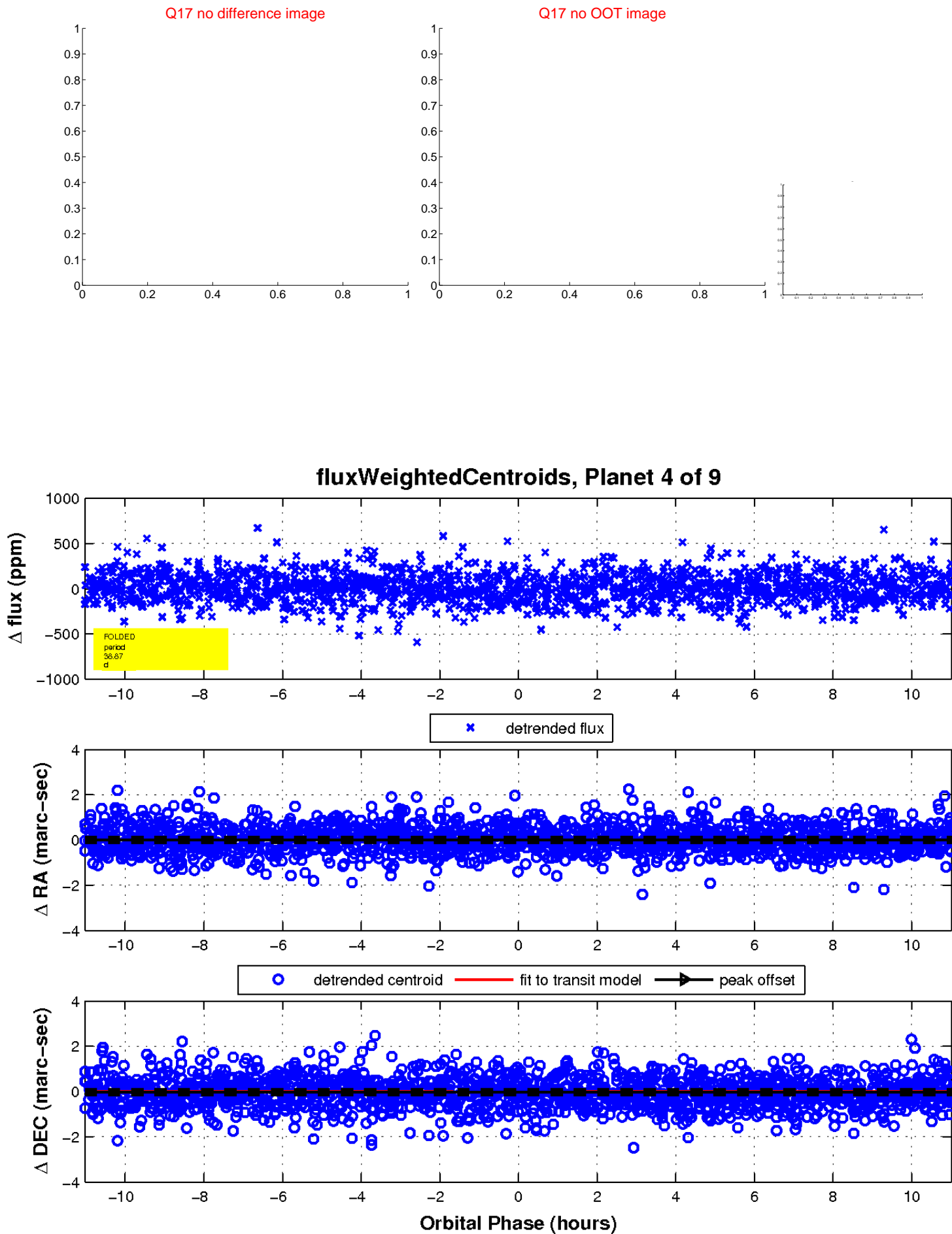
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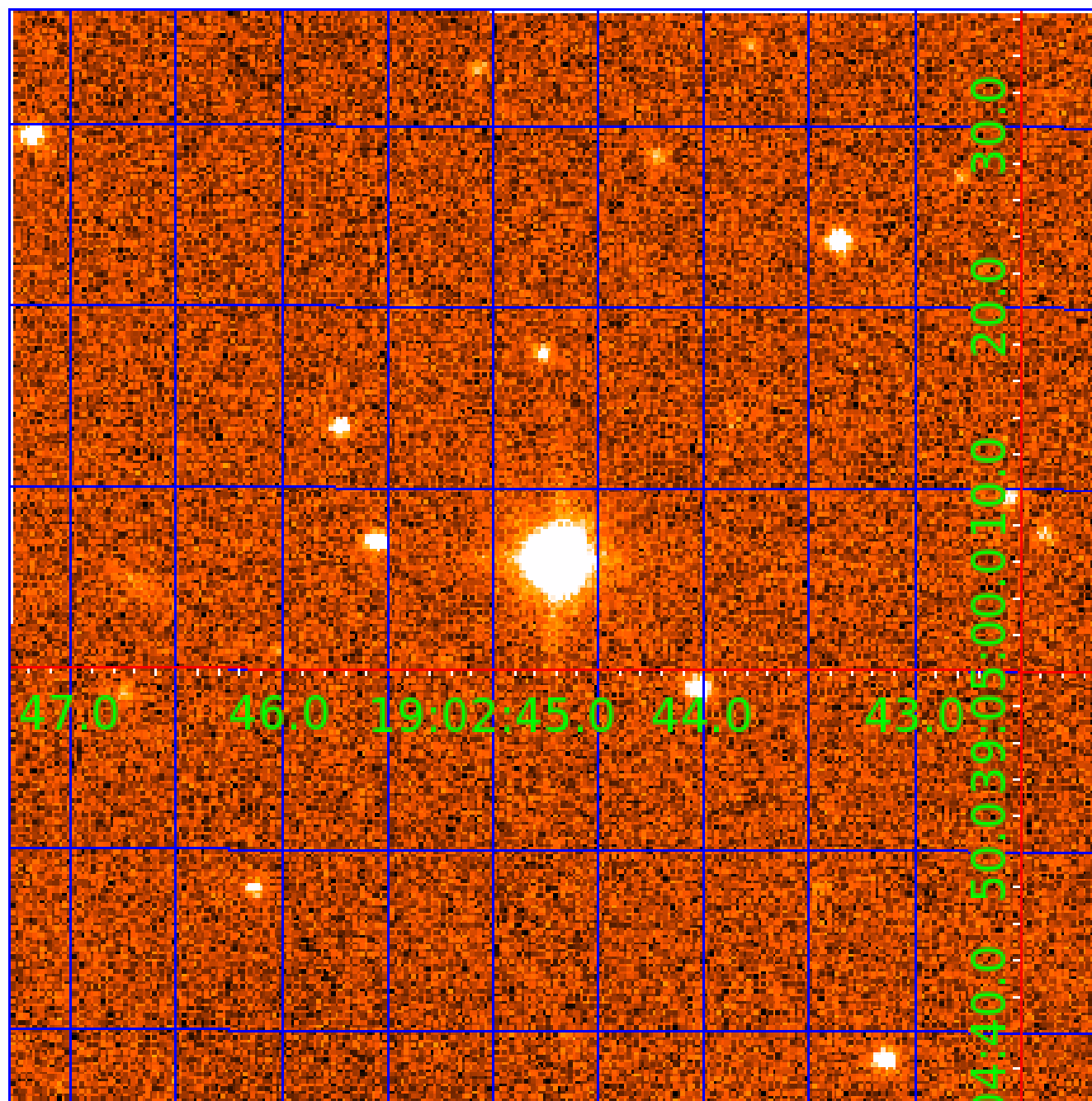


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UKIRT Image

Declination



KIC 003936965

Q1-17 DR25 TCE Parameters

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003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

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003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

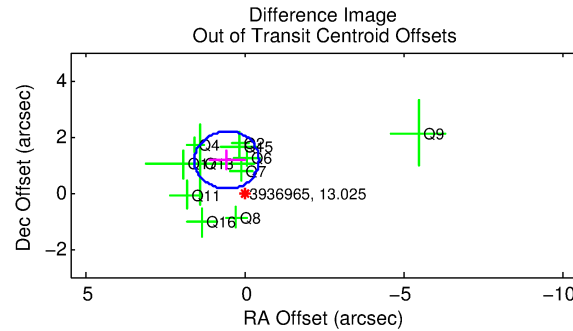
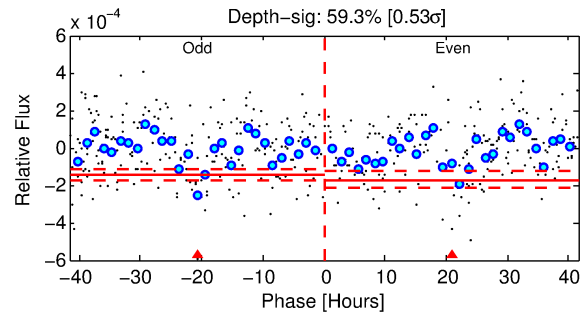
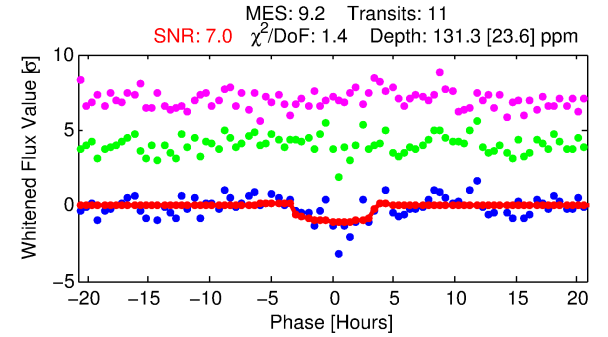
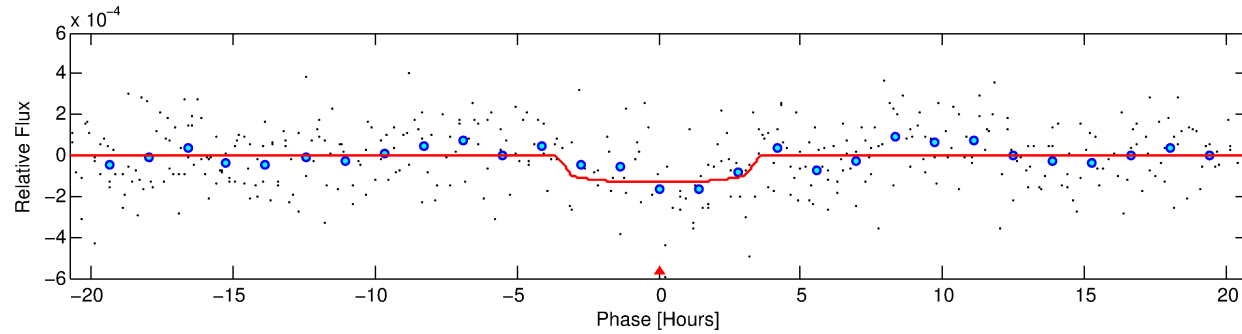
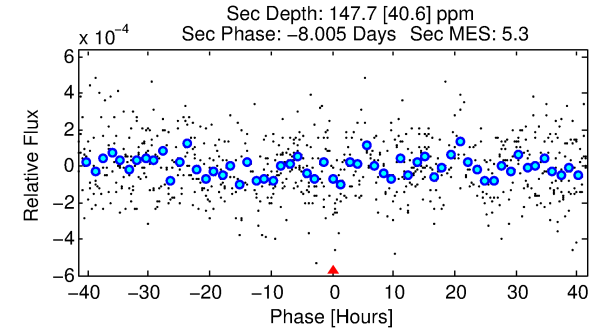
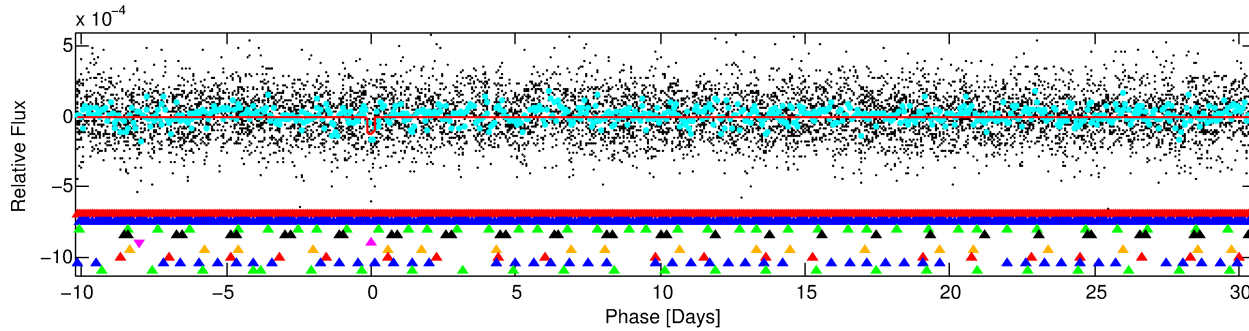
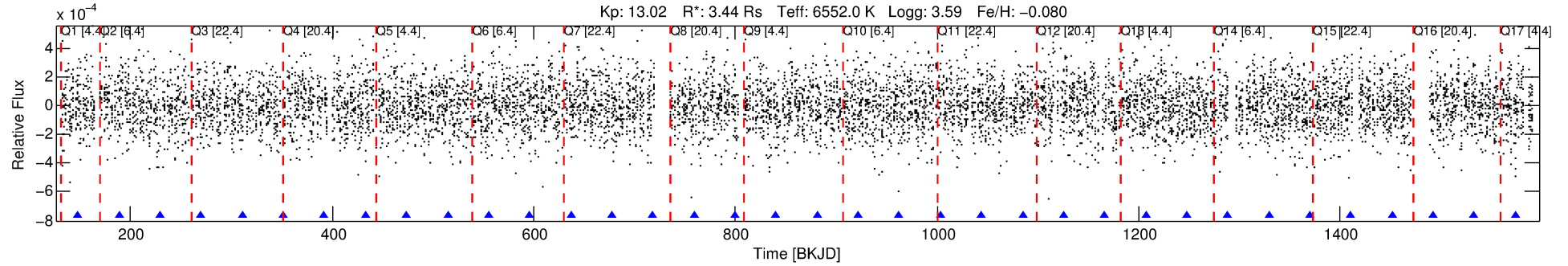
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-05

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 5 of 9 Period: 40.732 d



DV Fit Results:

Period = 40.73205 [0.00095] d
Epoch = 148.0407 [0.0200] BKJD
Rp/R* = 0.0116 [0.0069]
a/R* = 27.77 [91.94]
b = 0.80 [1.49]
Seff = 255.96 [144.85]
Teff = 1020 [144] K
Rp = 4.35 [3.06] Re
a = 0.2763 [0.0973] AU
Ag = 327.18 [439.21] [0.74 σ]
Teffp = 6707 [2057] K [2.76 σ]

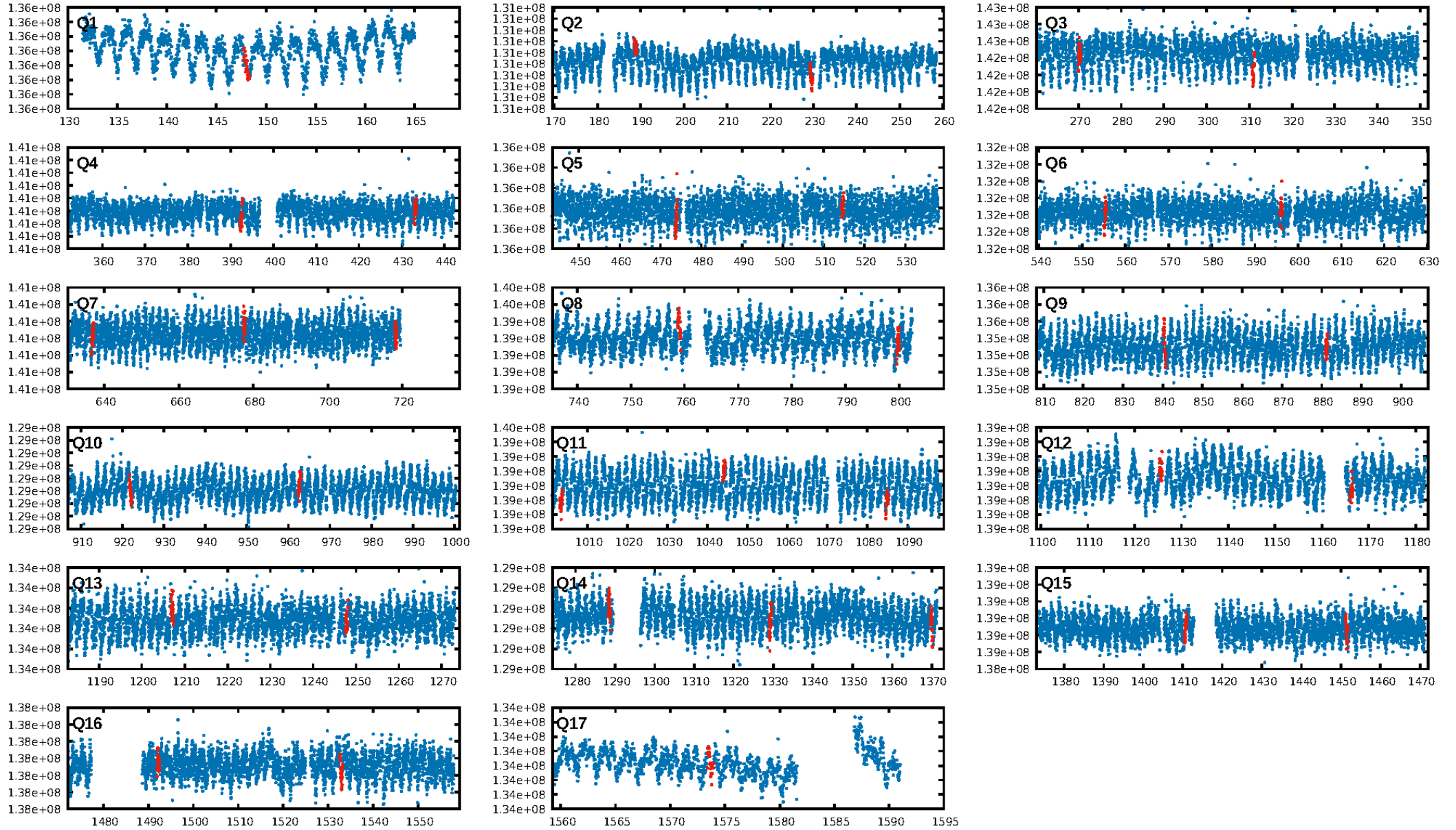
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.69 σ]
LongPeriod-sig: 100.0% [61.46 σ]
ModelChiSquare2-sig: 22.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.04e-09
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 1.163
Centroid-sig: 73.9%
Centroid-so: 0.537 arcsec [0.74 σ]
OotOffset-rm: 1.297 arcsec [3.80 σ]
KicOffset-rm: 1.220 arcsec [3.70 σ]
OotOffset-st: 2/3/3/3 [11]
KicOffset-st: 2/3/3/3 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.31 [5/16]

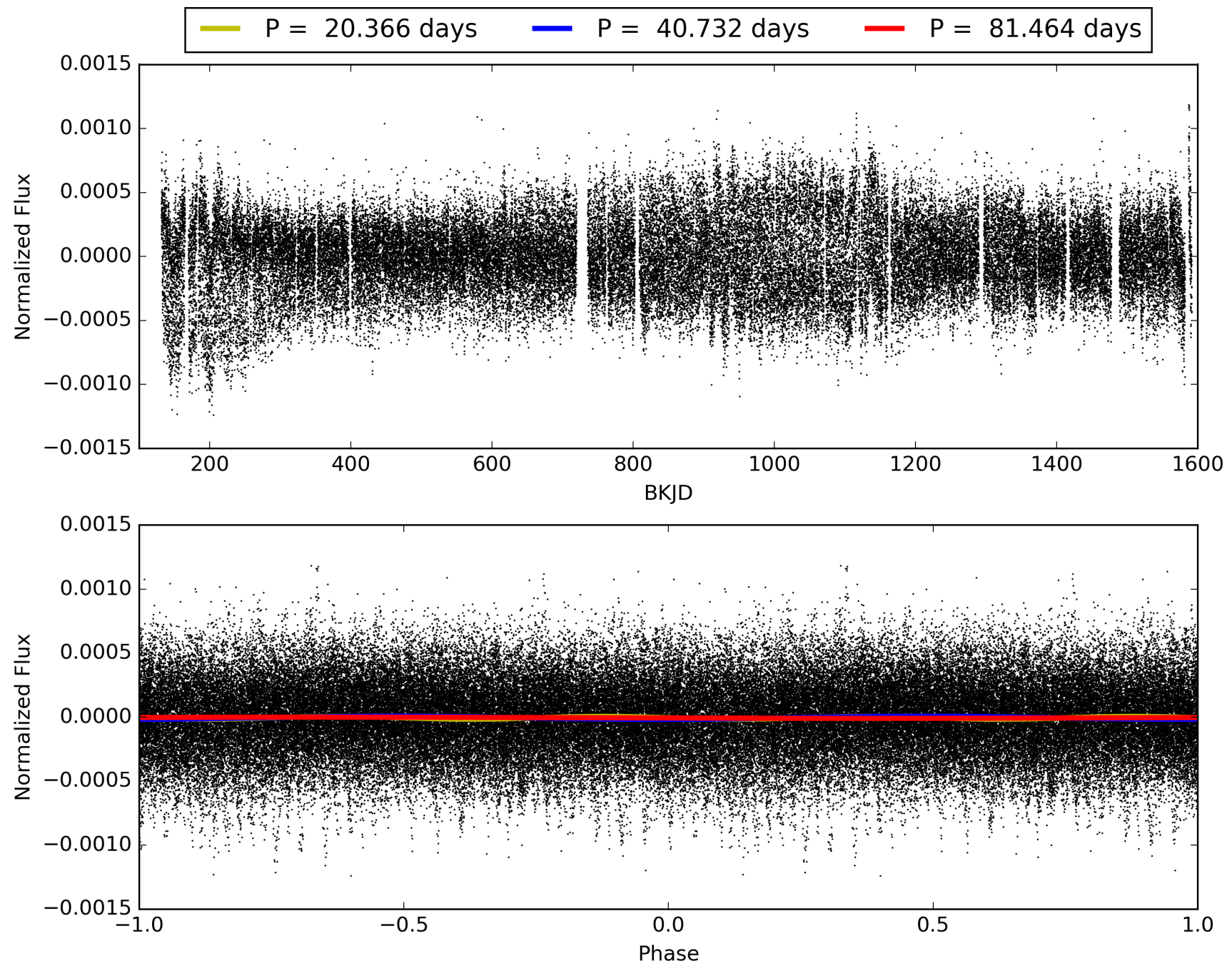
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:32 Z

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

TCE 003936965-05, PDC Light Curves

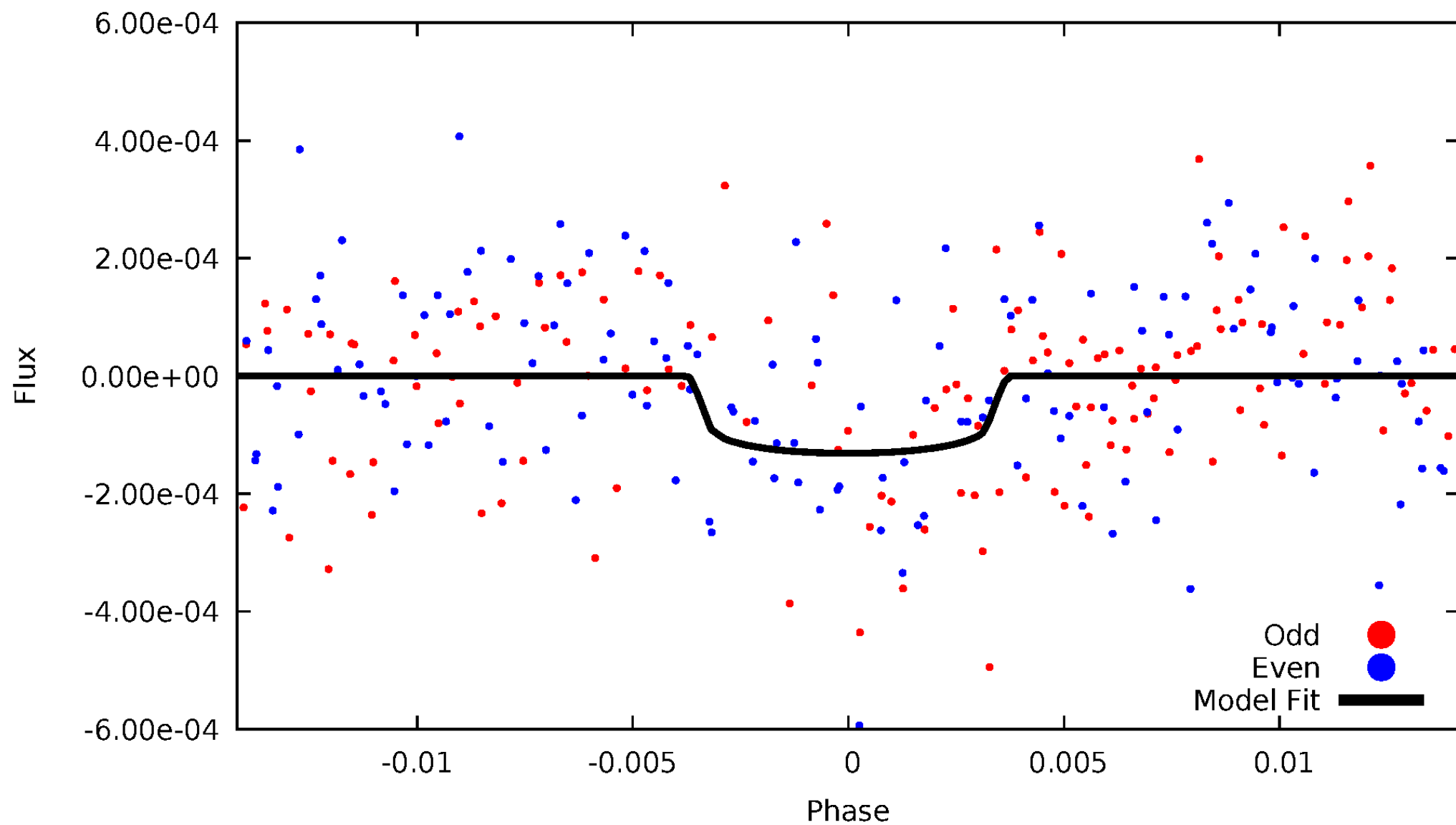


TCE 003936965-05



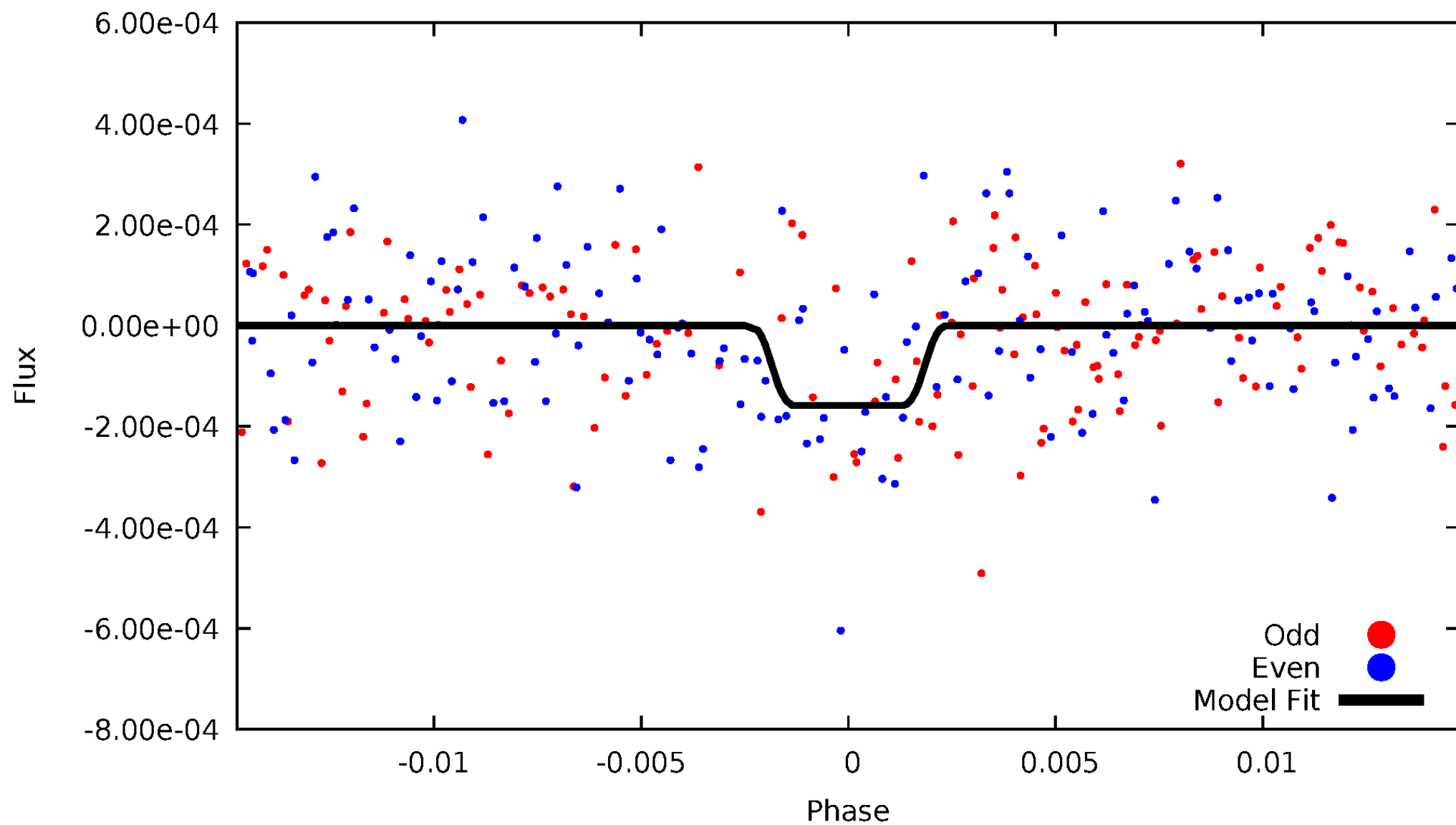
DV Odd/Even

TCE 003936965-05



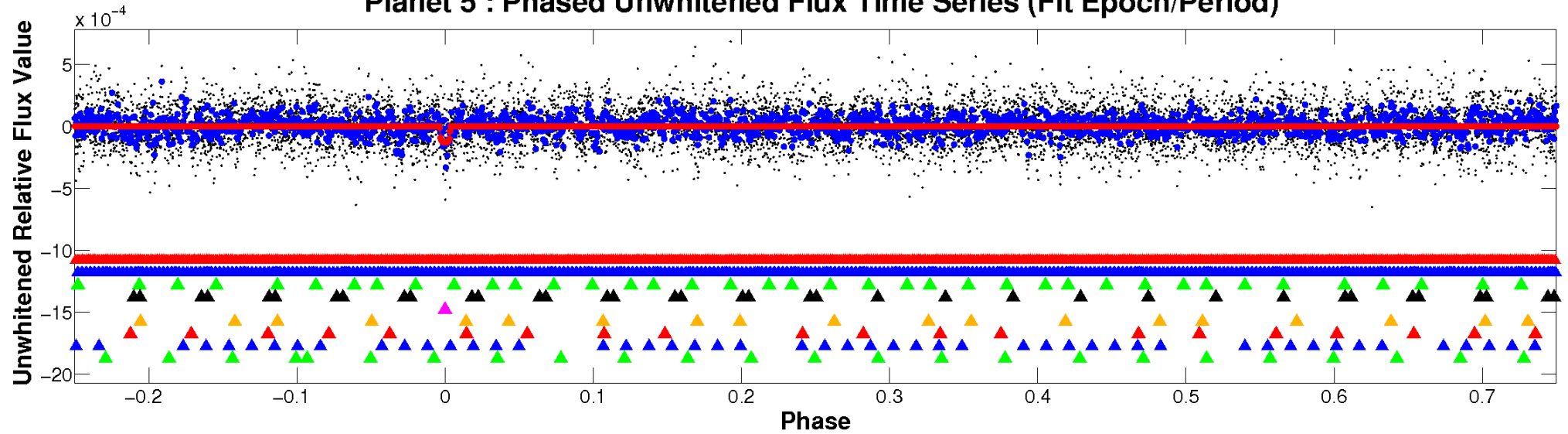
ALT Odd/Even

TCE 003936965-05

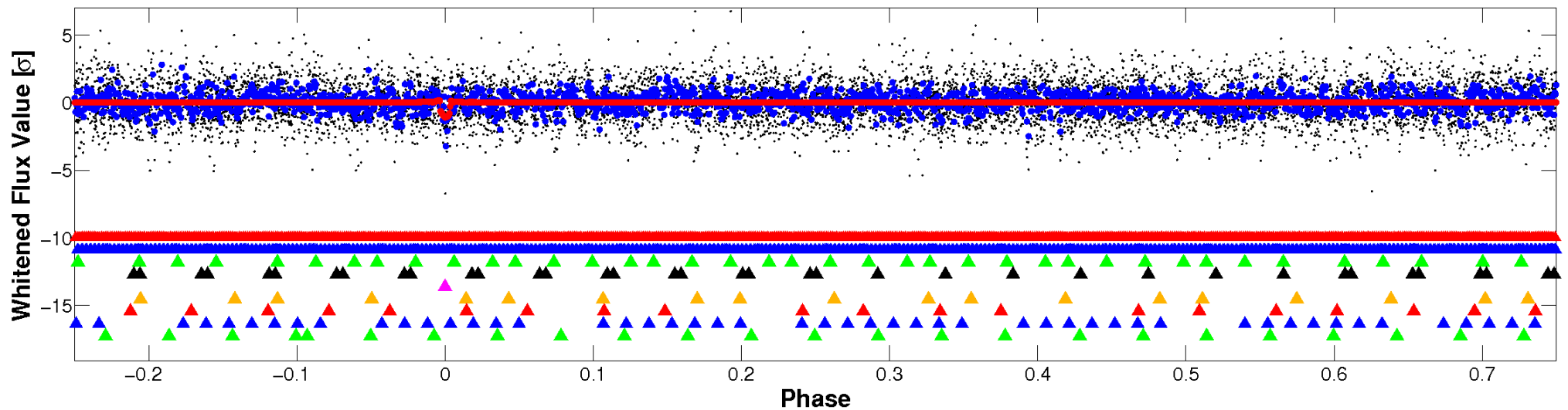


Non-Whitened Vs. Whitened Light Curve

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

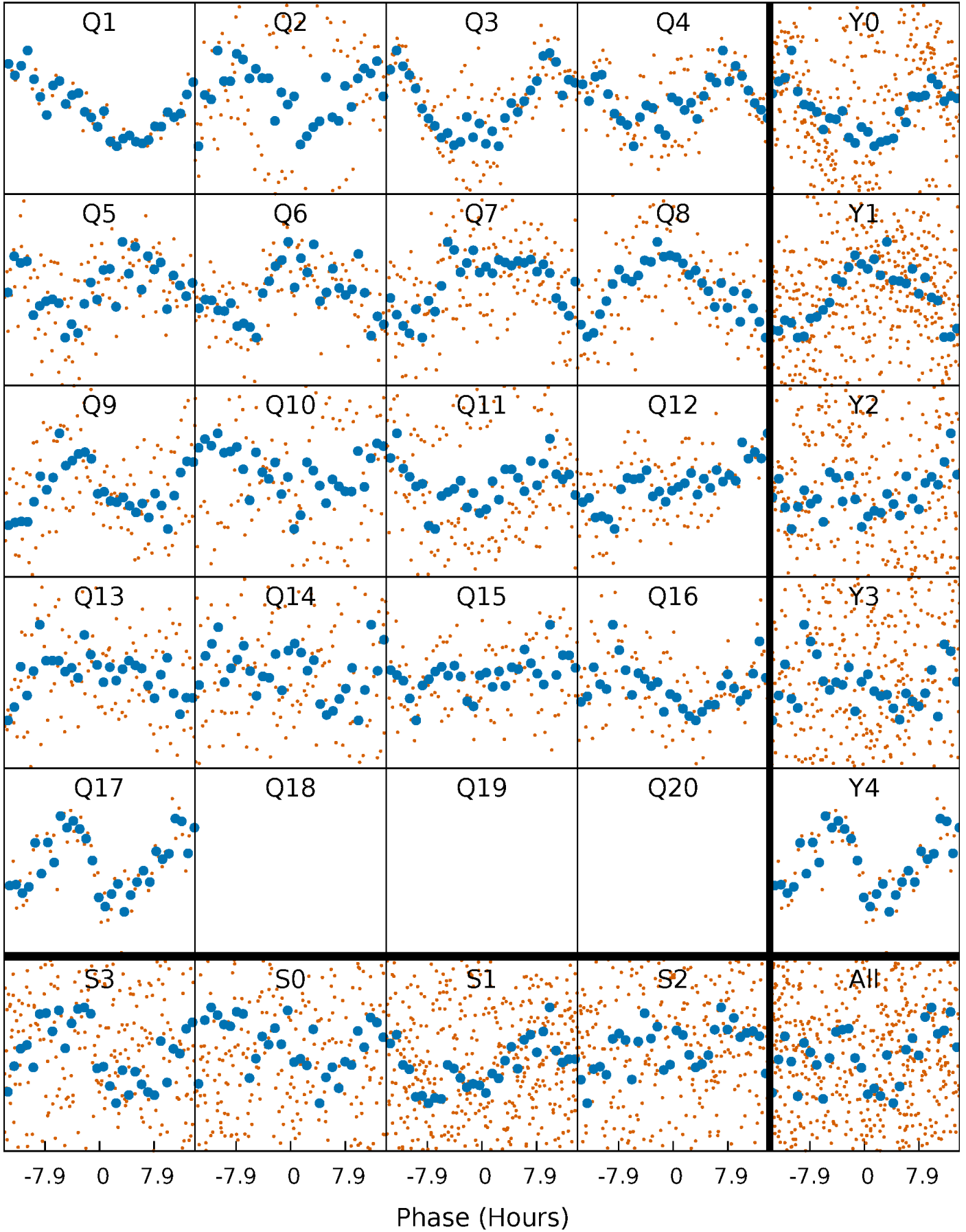


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



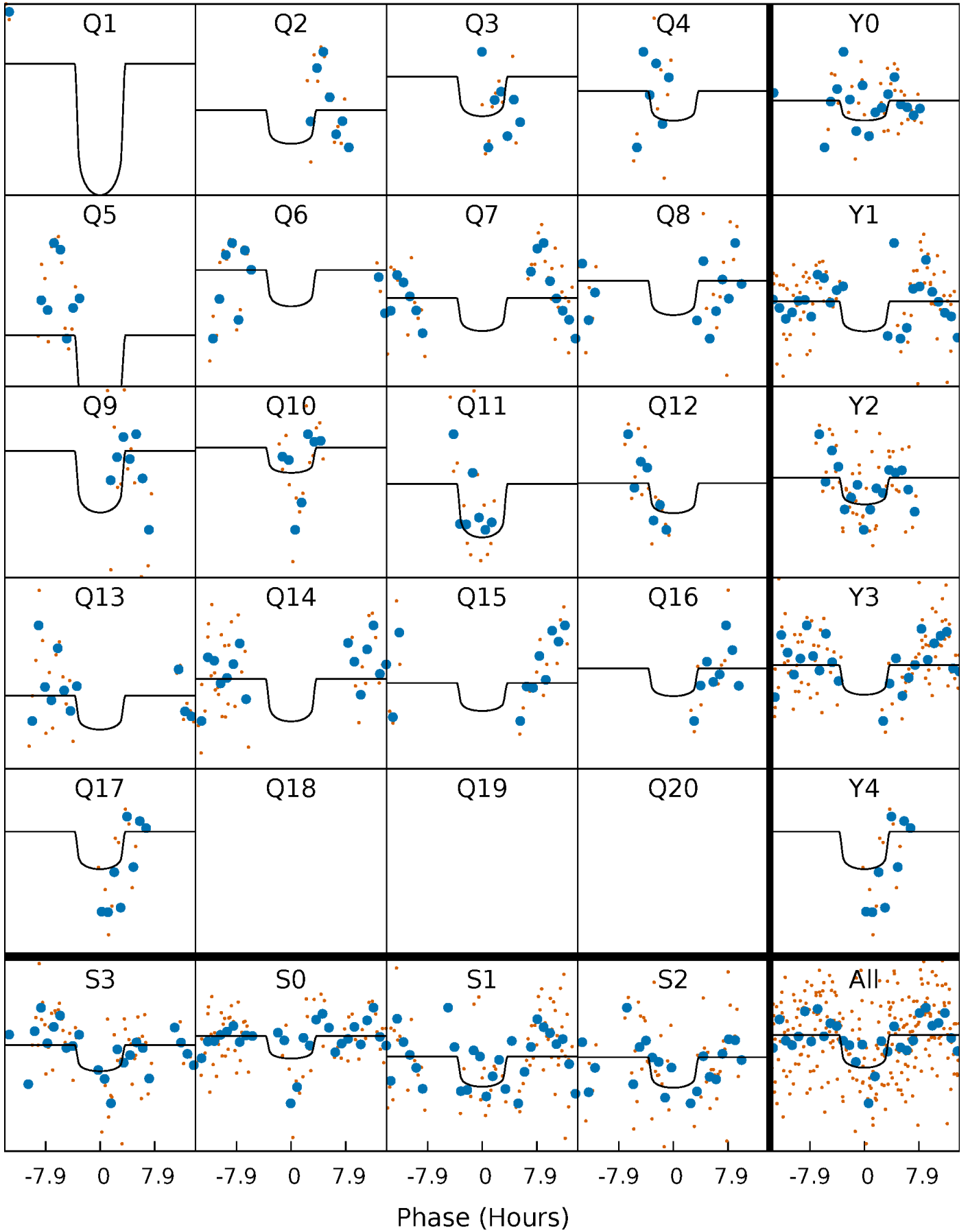
PDC Quarter-Phased Transit Curves

TCE 003936965-05 $P = 40.732054$ Days $T_0 = 148.040665$ (BKJD)



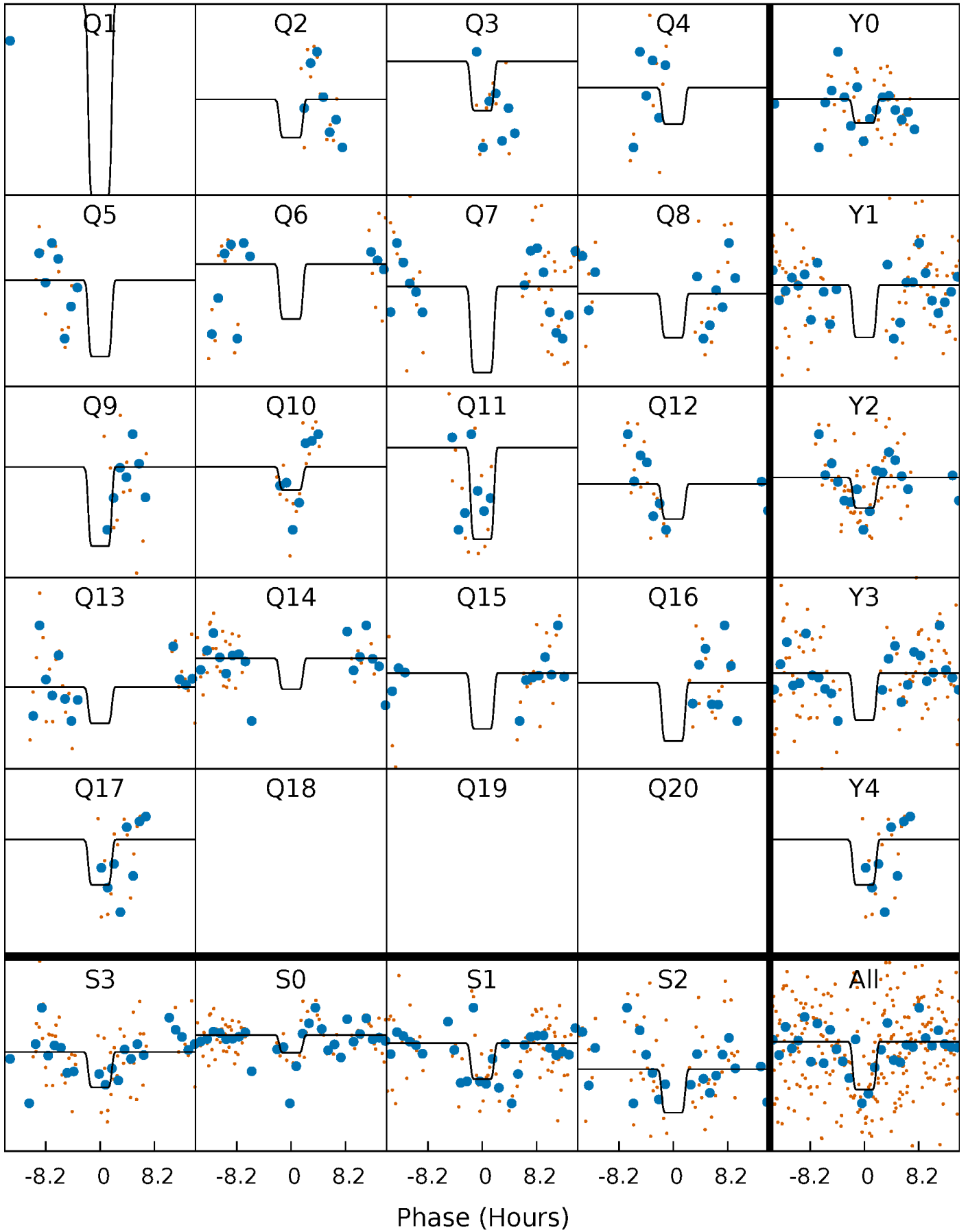
DV Quarter-Phased Transit Curves

TCE 003936965-05 $P = 40.732054$ Days $T_0 = 148.040665$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

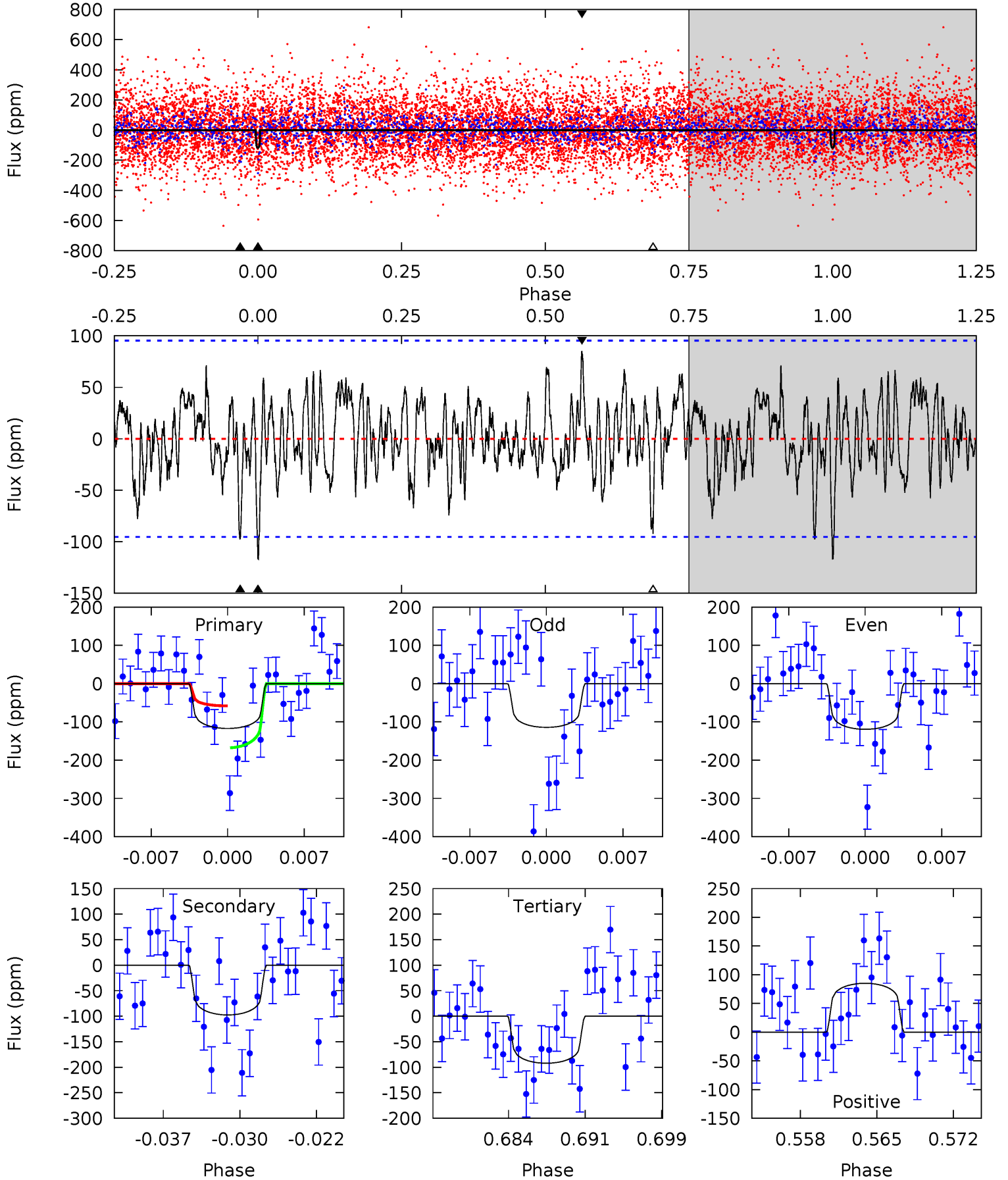
TCE 003936965-05 $P = 40.731051$ Days $T_0 = 148.078489$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-05, $P = 40.732054$ Days, $E = 107.308611$ Days

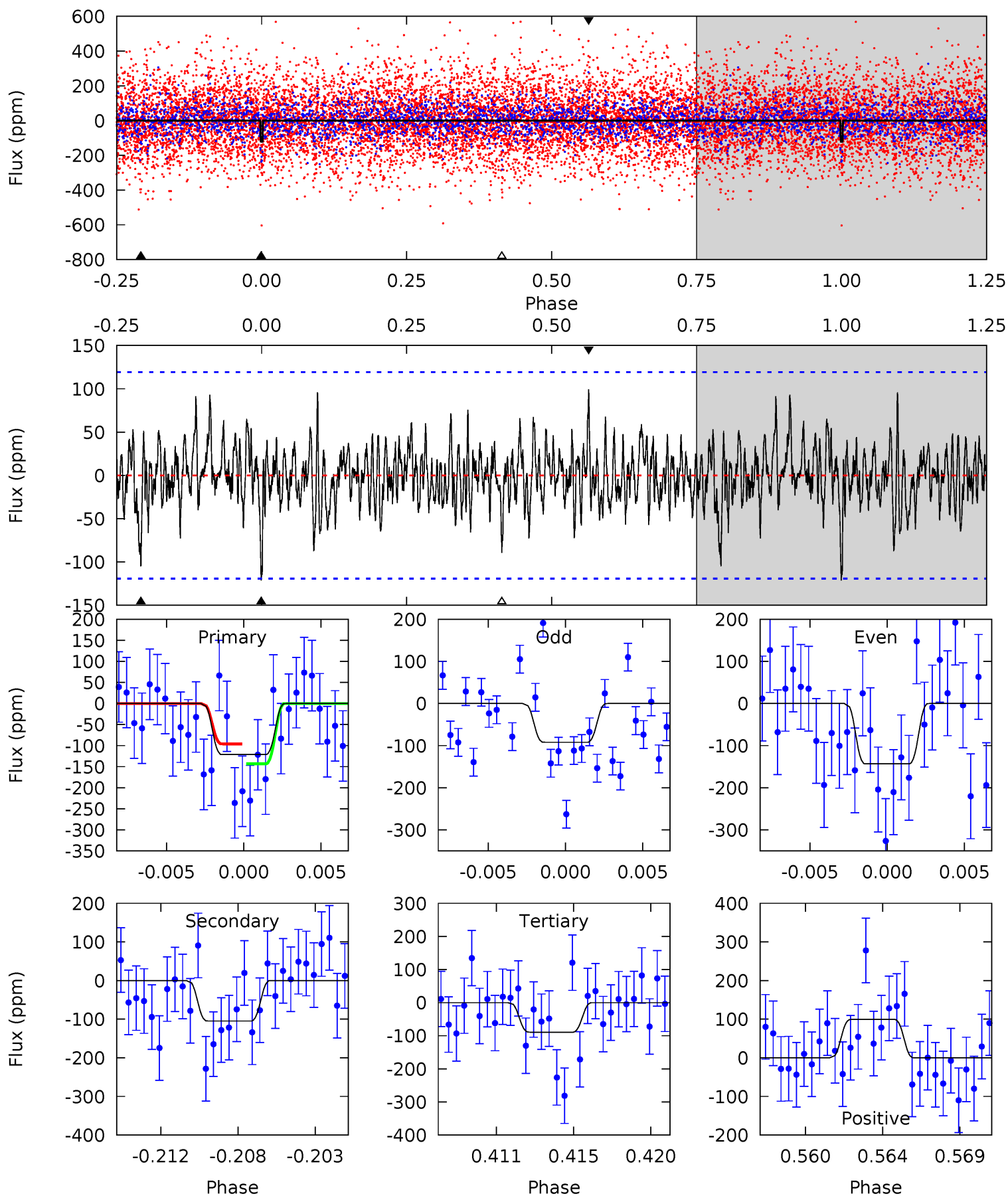
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.26	5.20	4.92	4.54	5.08	2.68	1.56	1.34	1.71	0.29	0.66	0.13	1.17	0.42	2.91



Alt Model-Shift Uniqueness Test

003936965-05, $P = 40.731051$ Days, $E = 107.347438$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.26	4.55	3.87	4.31	5.18	2.84	1.22	1.39	0.95	0.68	0.24	1.12	0.79	0.45	1.02



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-97 ± 19	$3.90^{+2.57}_{-2.13}$	1390^{+71}_{-116}	6008^{+3285}_{-1146}	258^{+981}_{-164}
Alt.	-105 ± 23	$4.35^{+2.73}_{-2.39}$	1391^{+68}_{-123}	5858^{+3147}_{-1085}	236^{+950}_{-149}

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

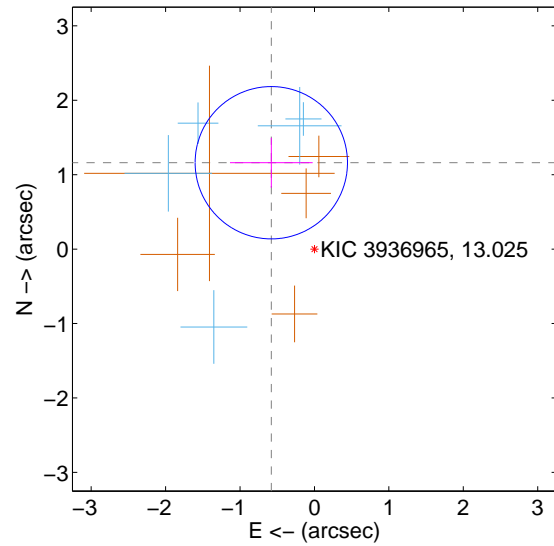
Supplemental centroid analysis for 003936965-05. Kepler magnitude: 13.03. Transit SNR 7.00

There are 5 quarters with good PRF difference image offsets

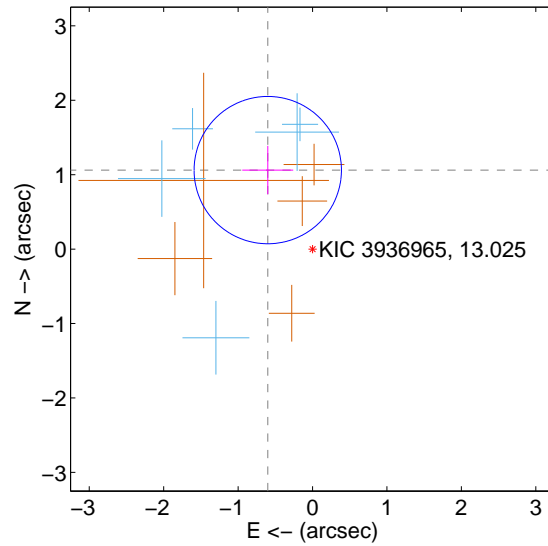
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.297 ± 0.341	3.80	0.580 ± 0.556	1.161 ± 0.335
PRF-fit source offset from KIC position	1.220 ± 0.330	3.70	0.602 ± 0.342	1.062 ± 0.326
photometric centroid source offset	0.54 ± 0.72	0.74	-0.01 ± 0.69	-0.54 ± 0.72

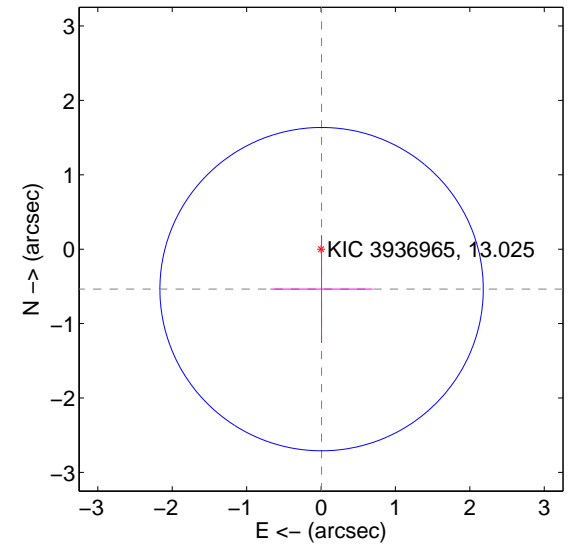
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

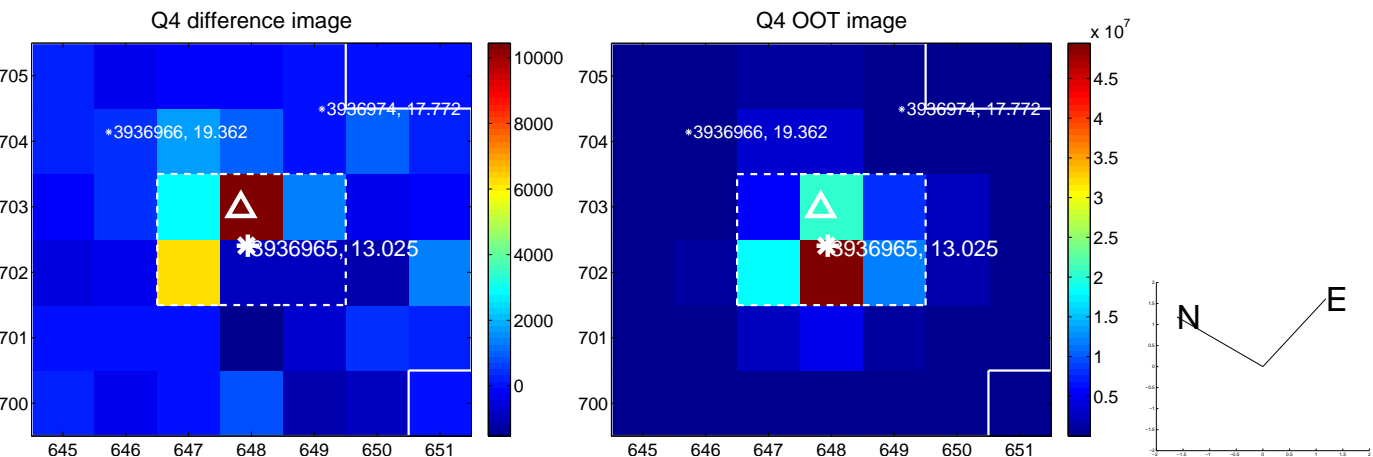
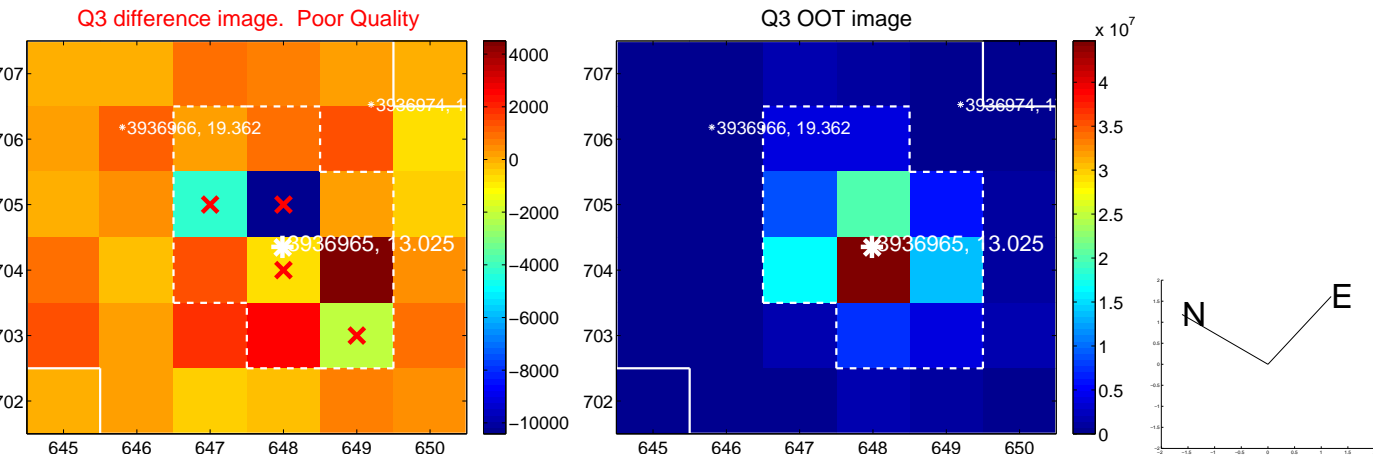
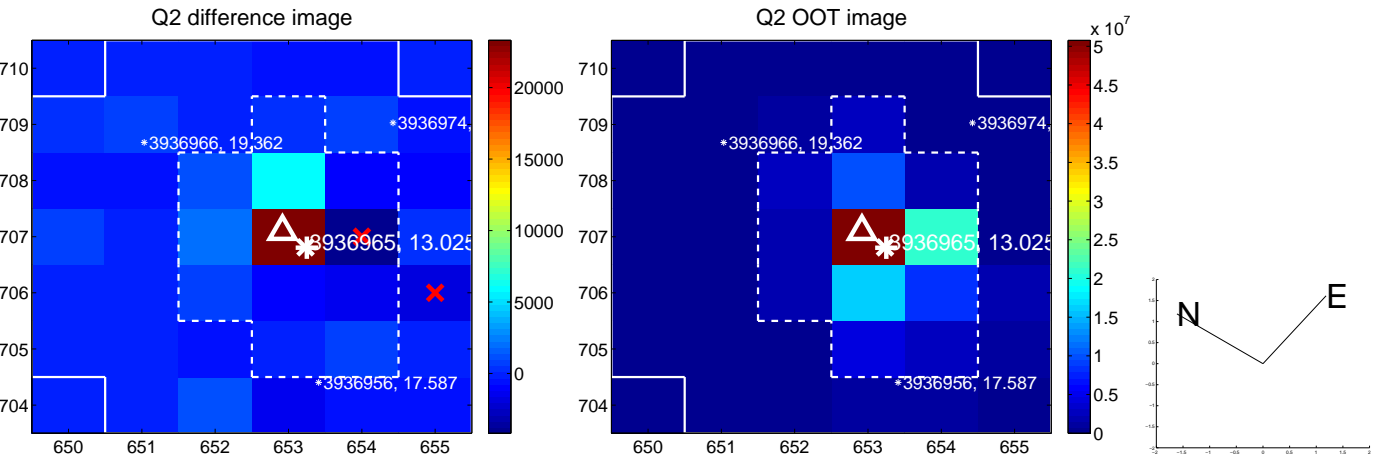
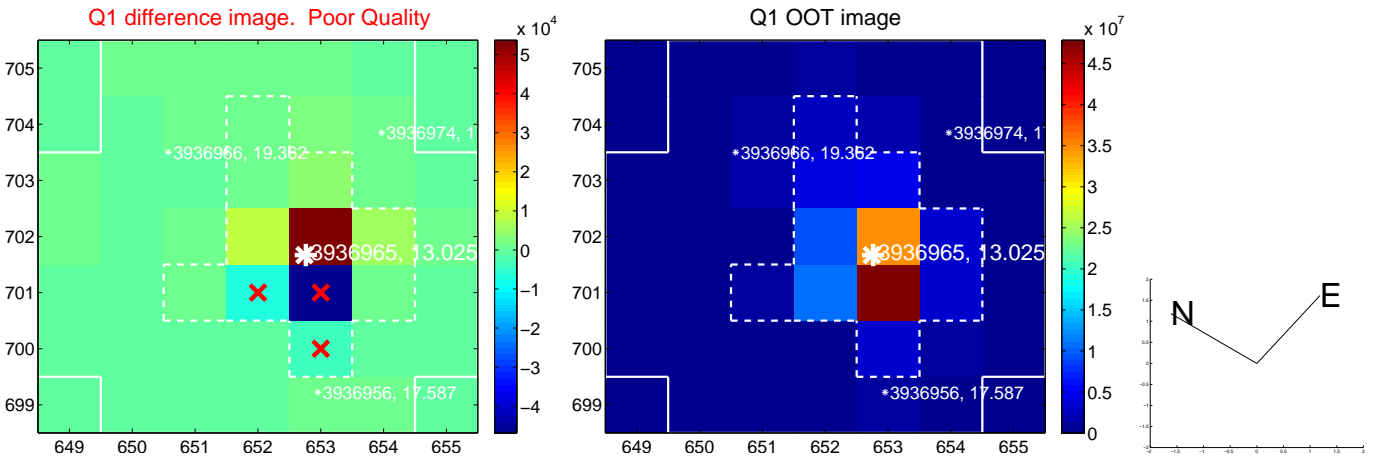


offset from photometric centroids

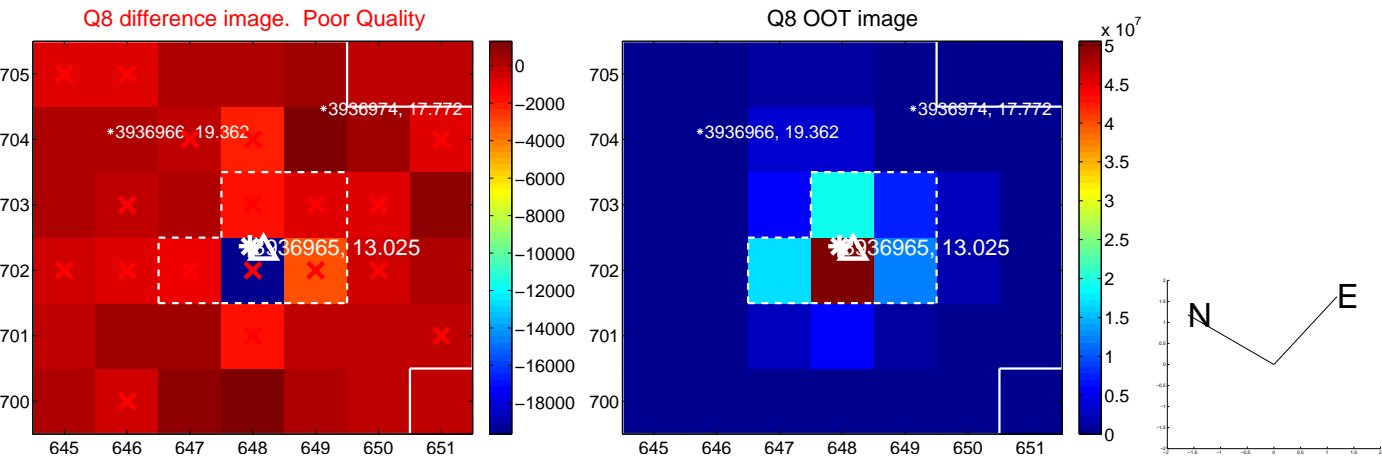
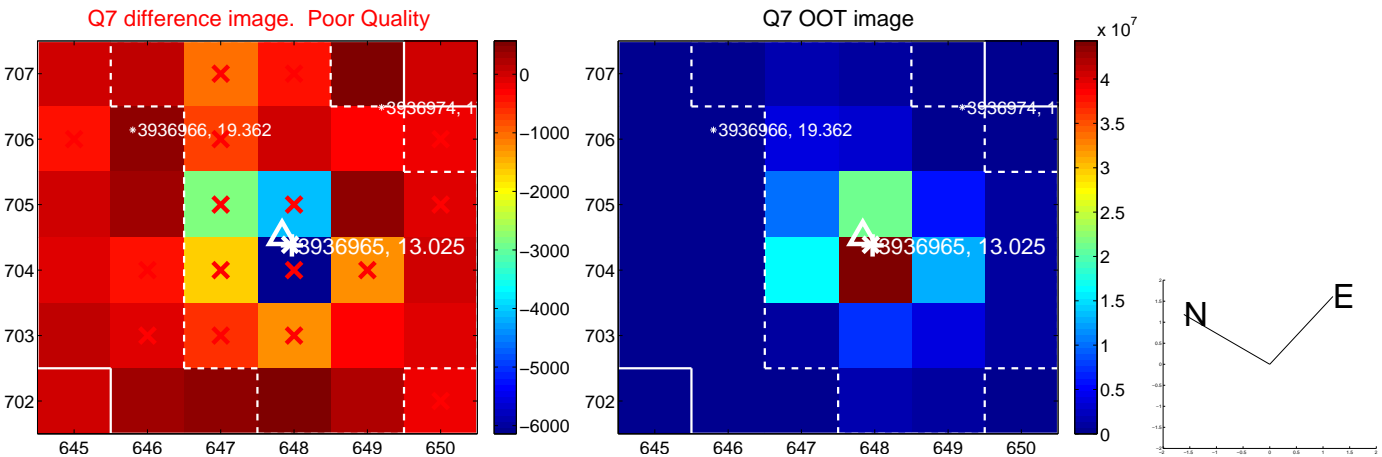
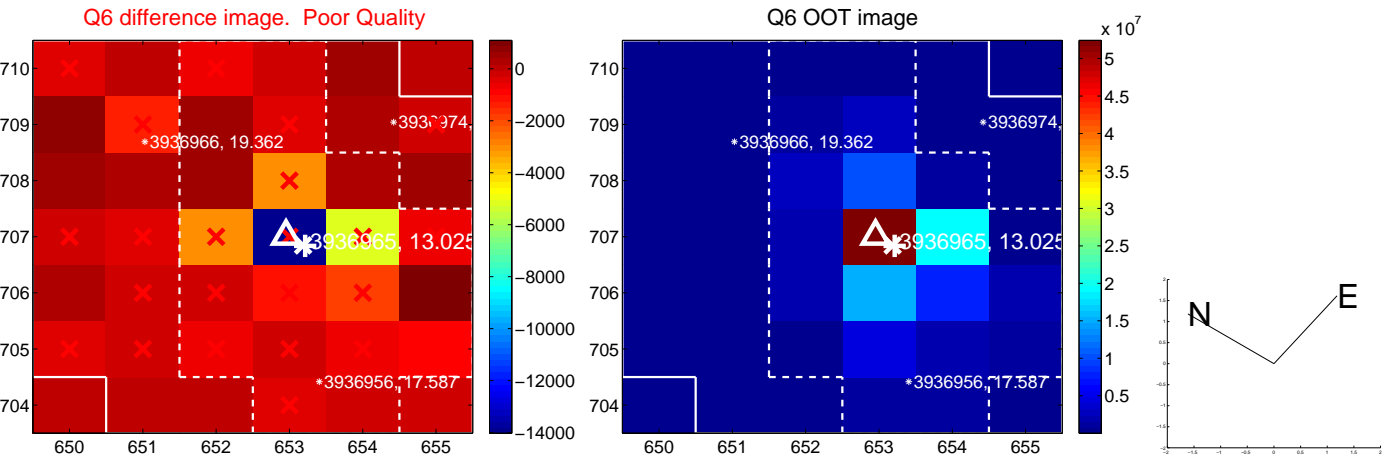
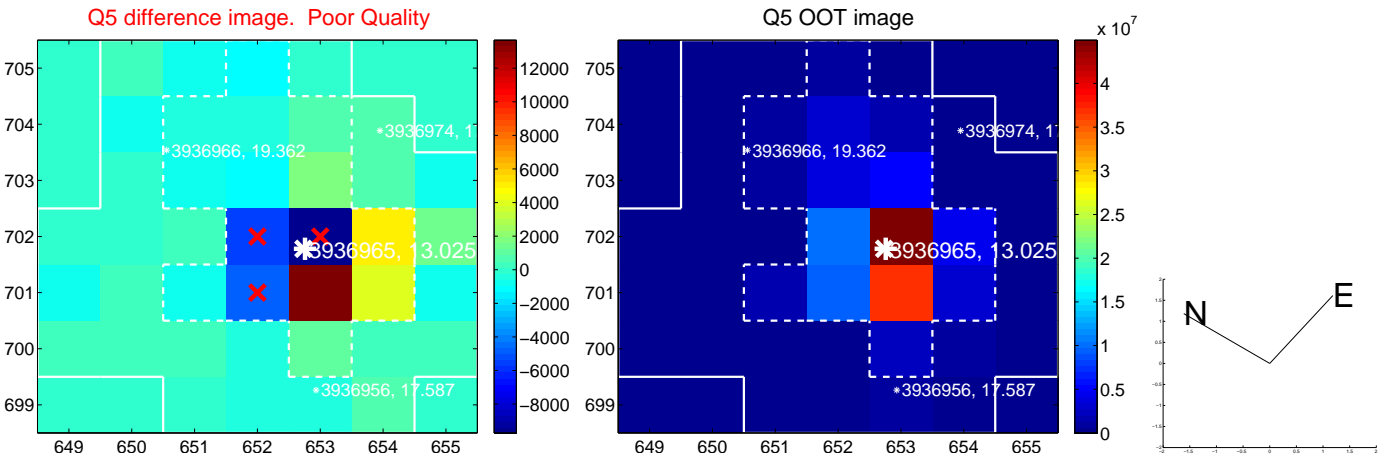


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

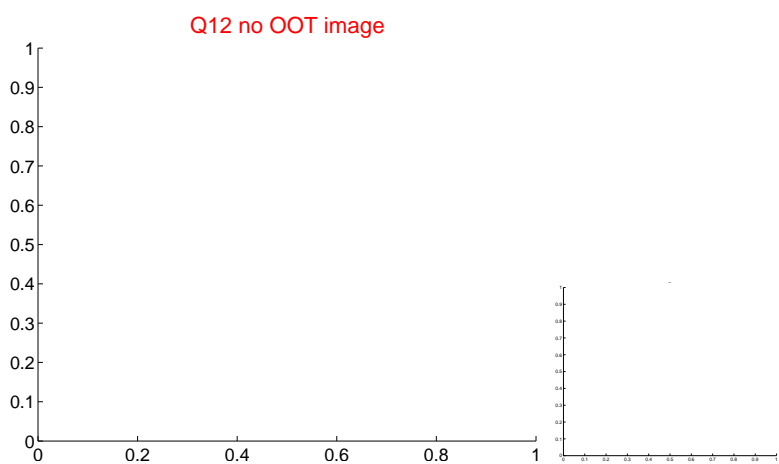
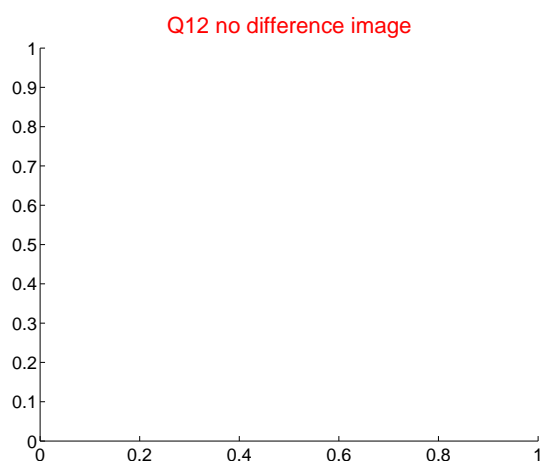
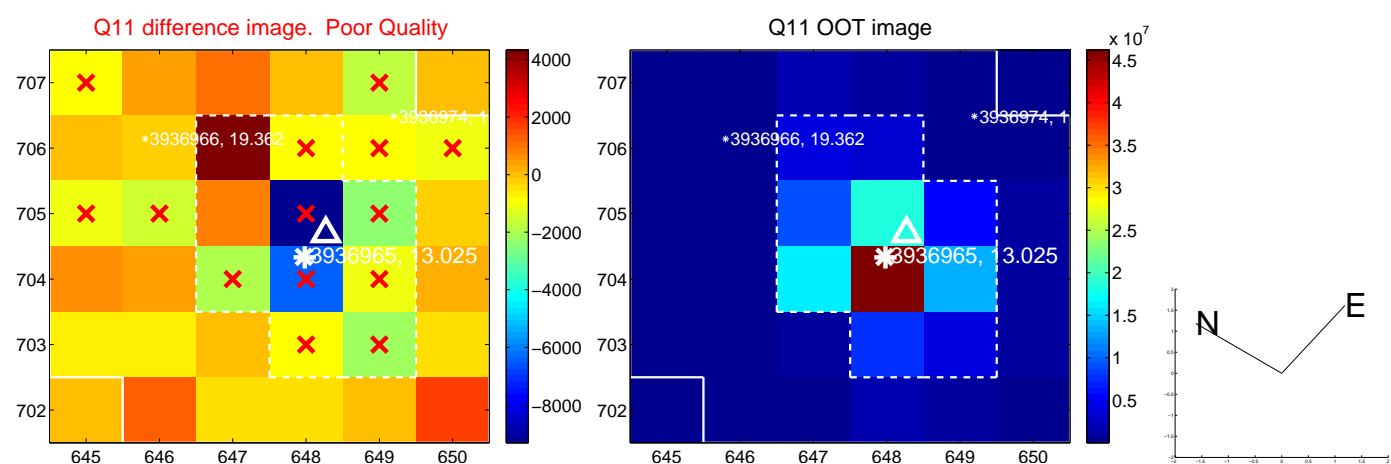
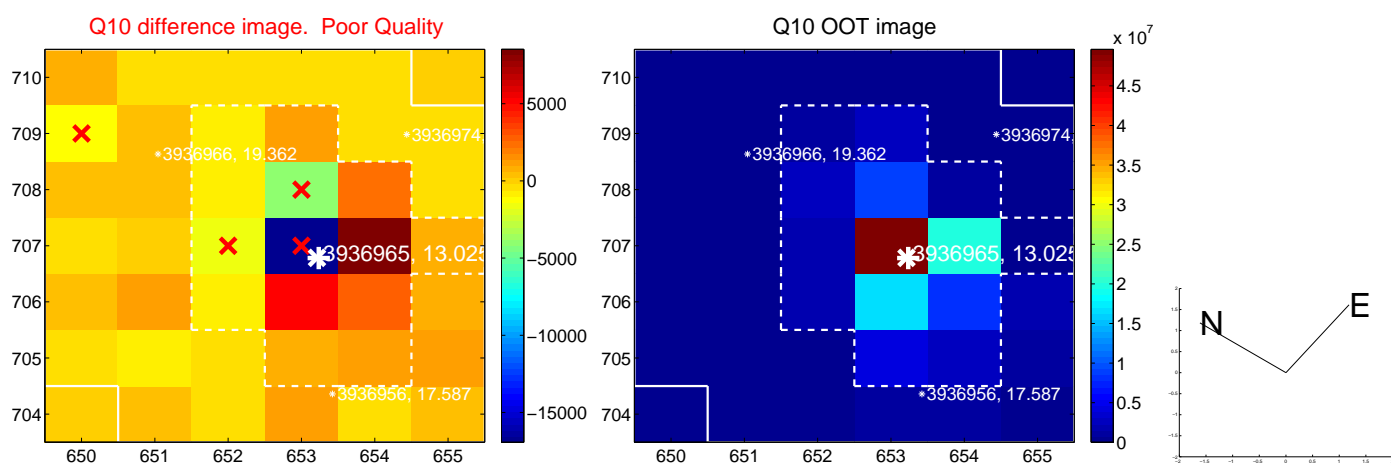
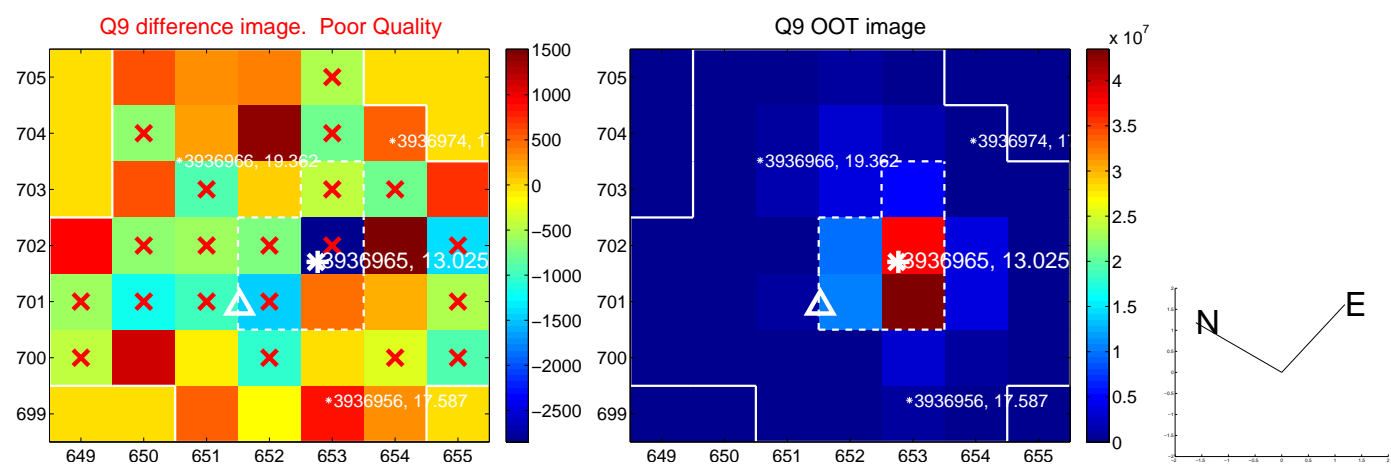
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



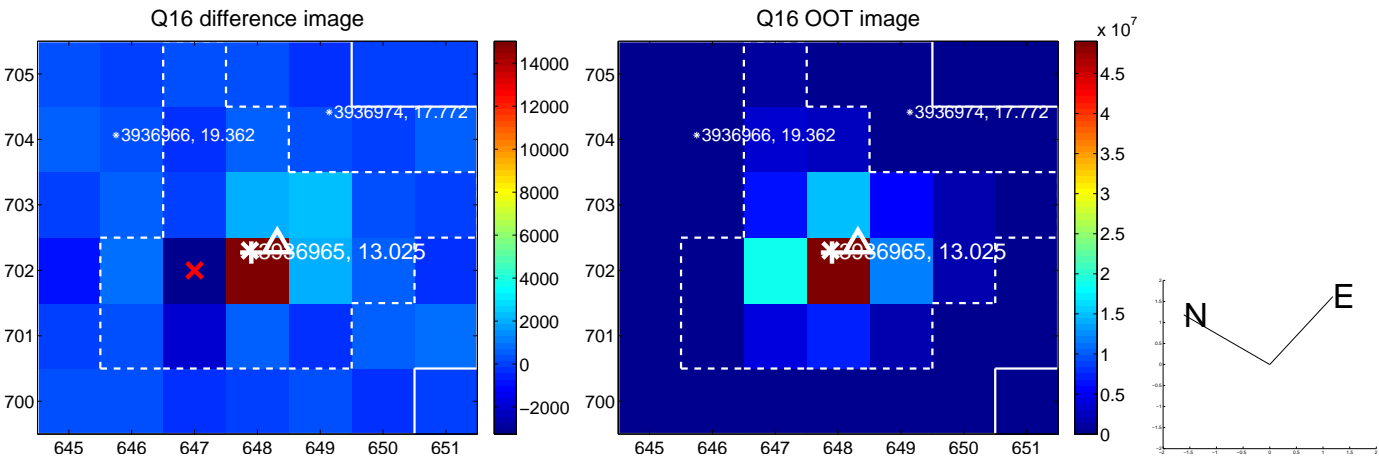
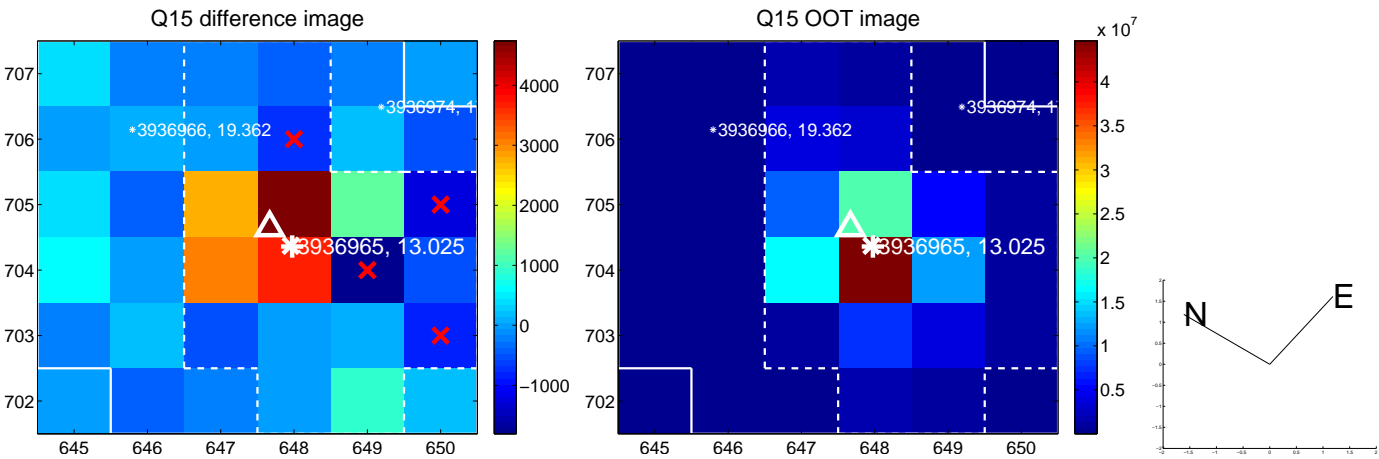
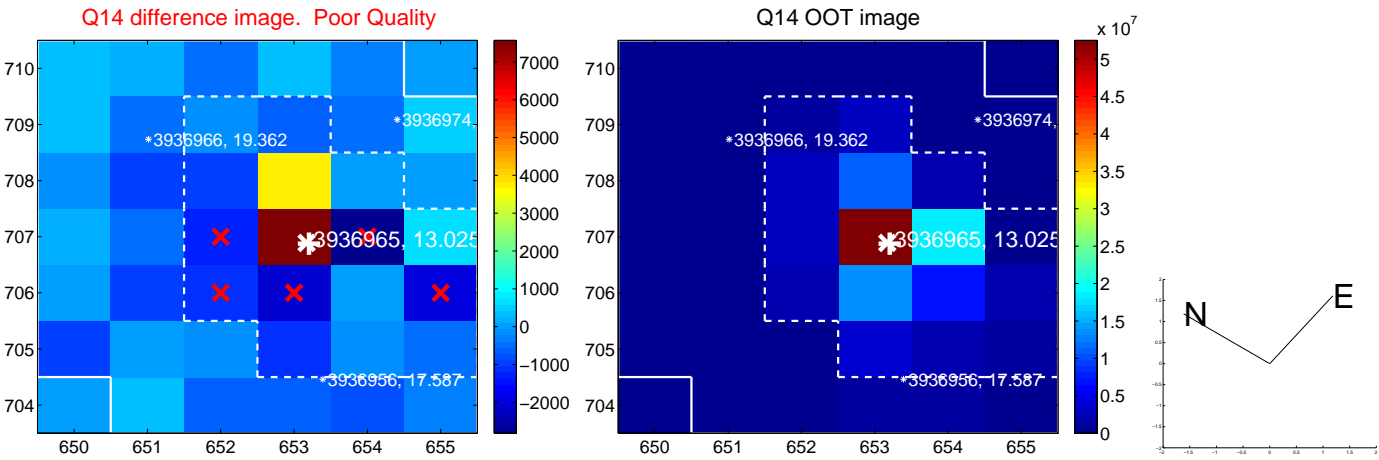
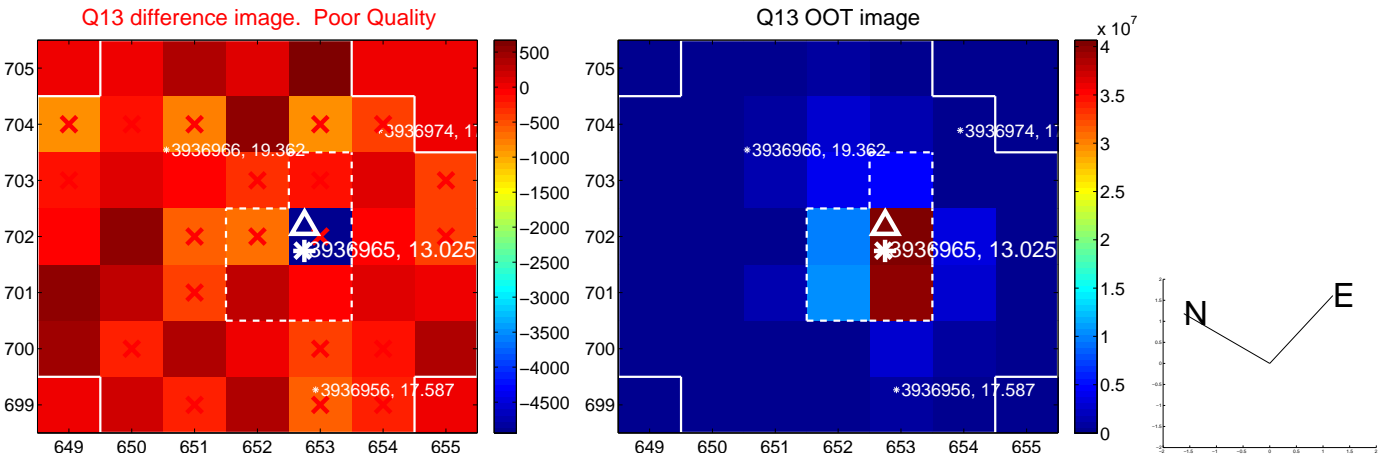
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



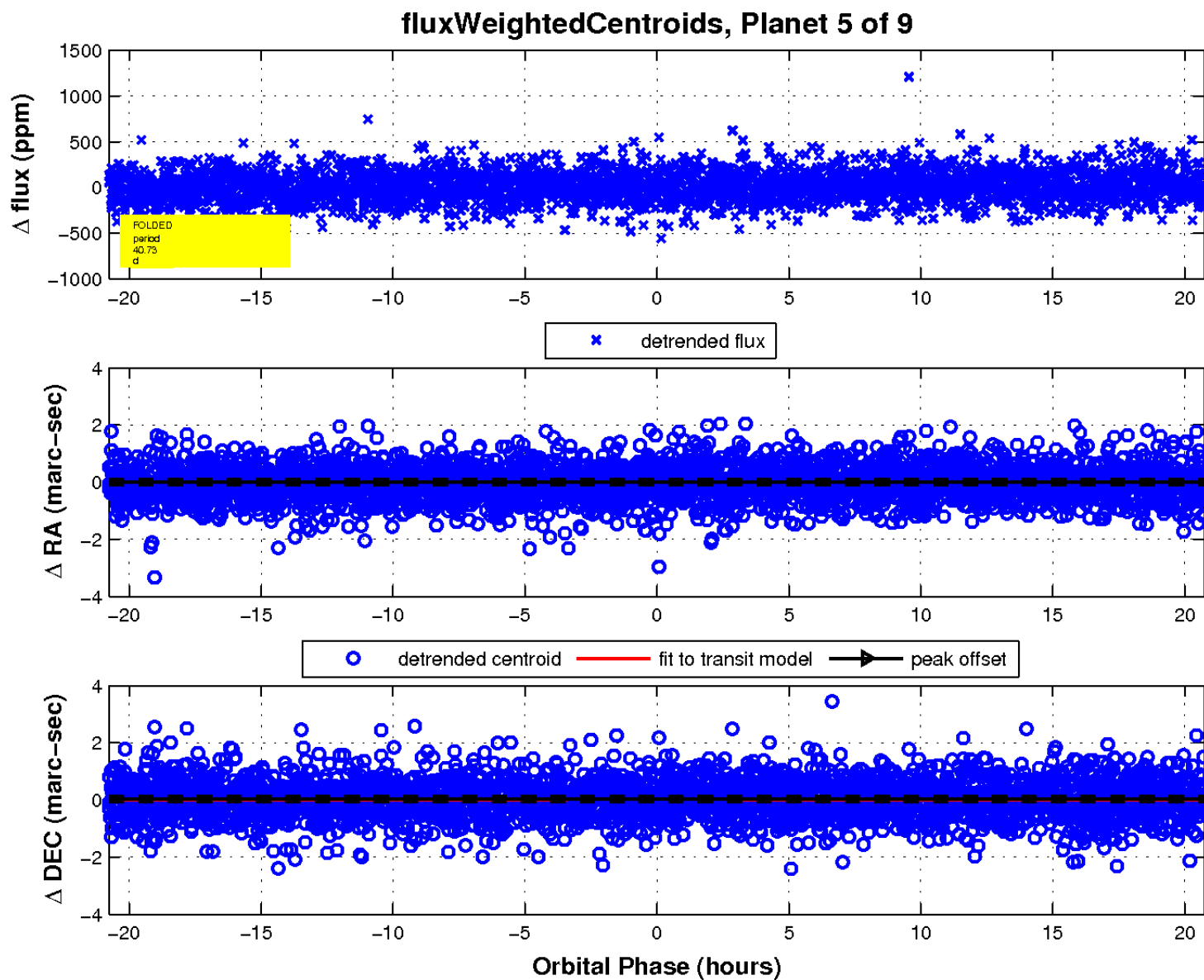
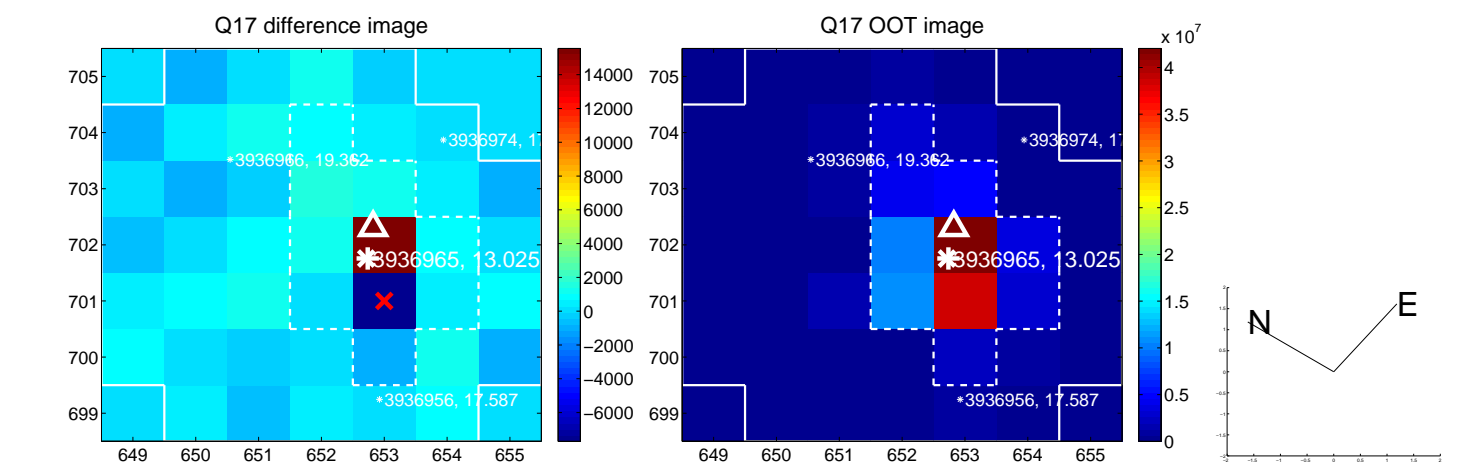
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

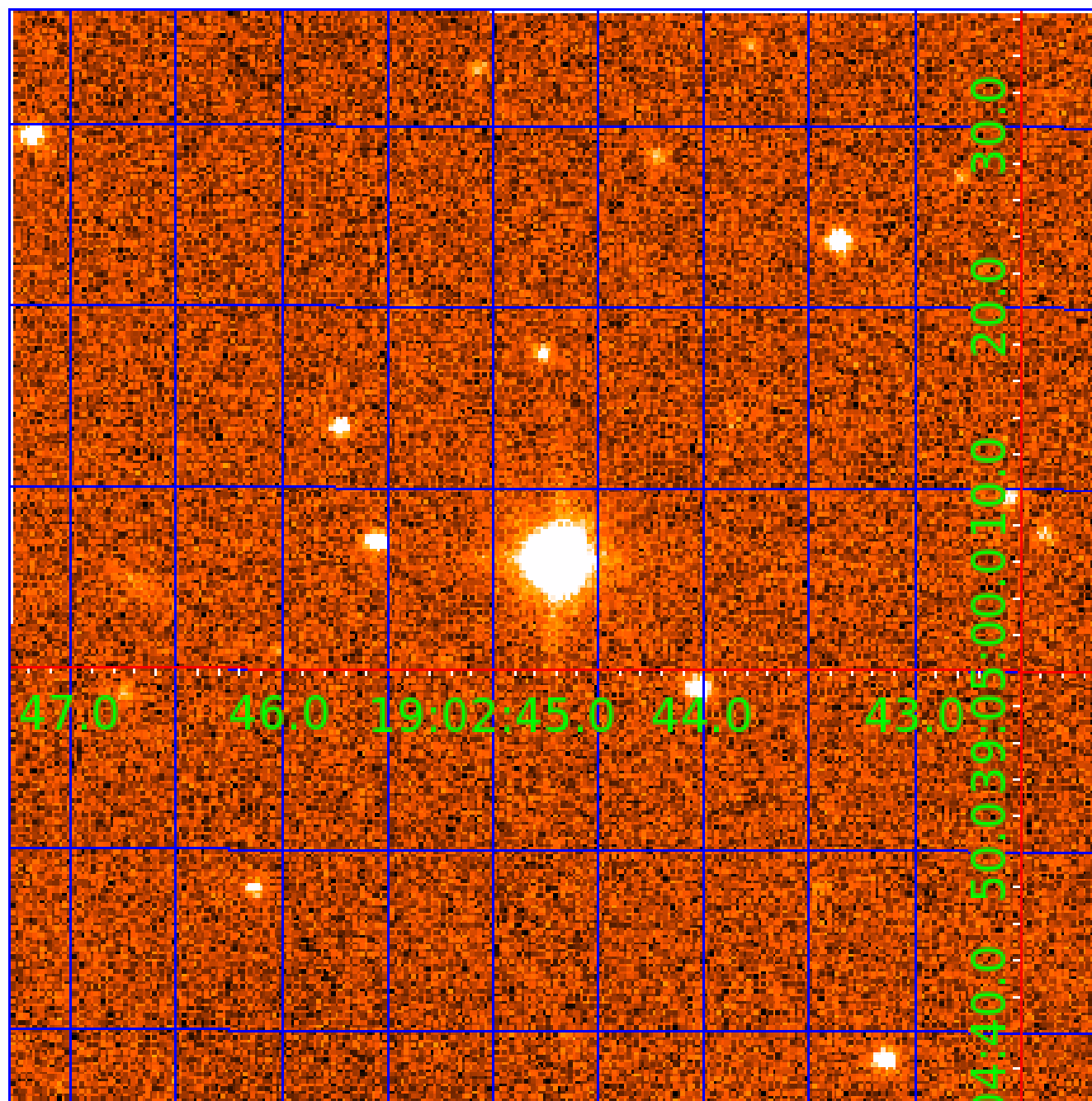


white \times : KIC target position; +: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

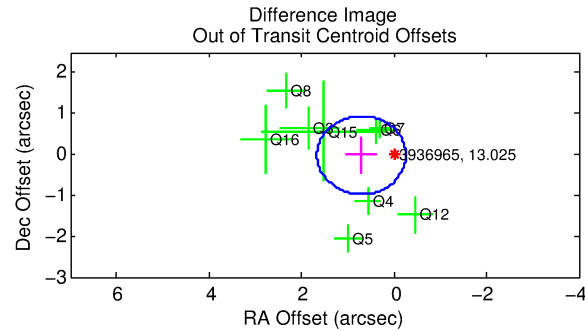
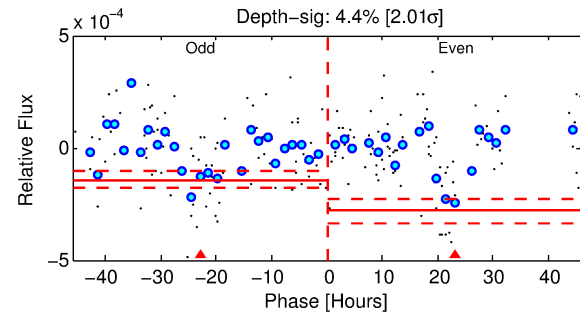
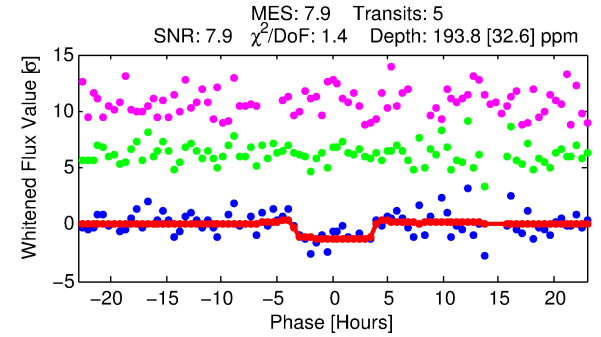
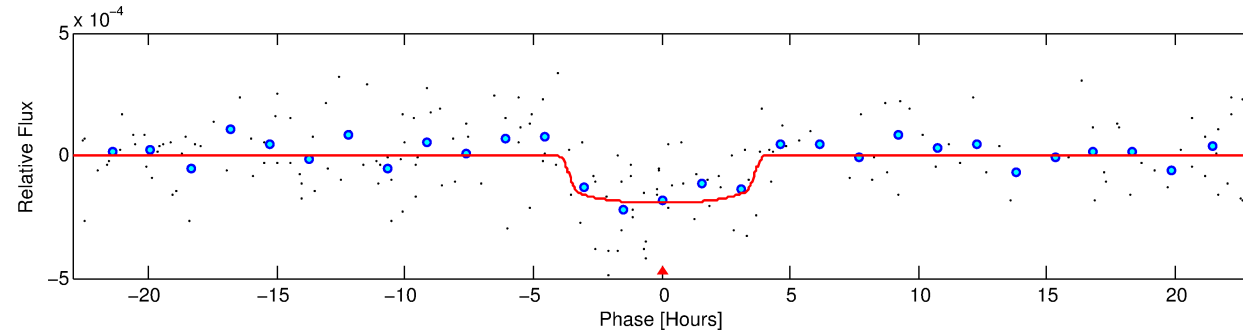
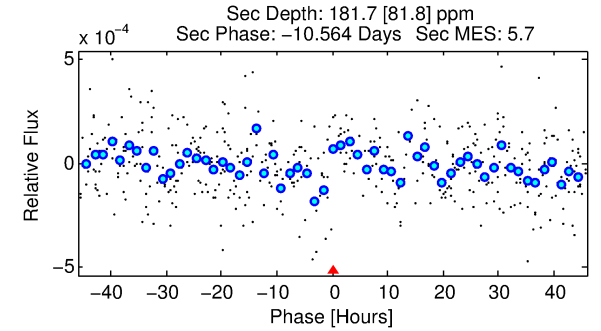
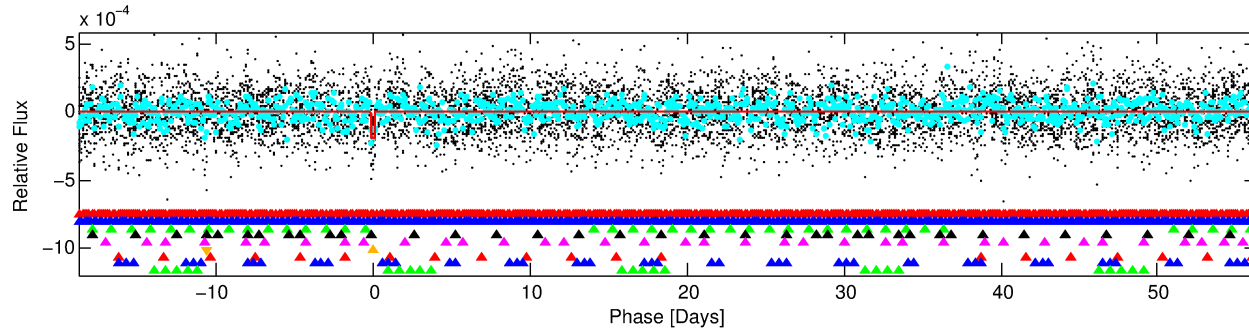
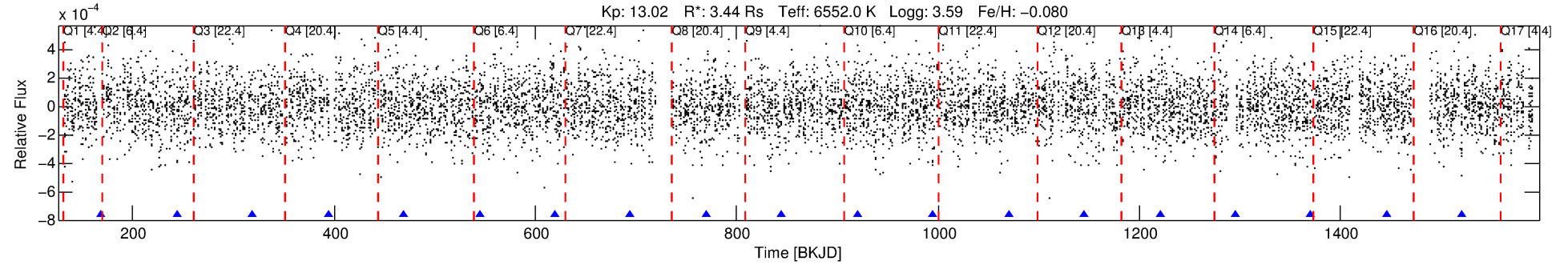
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-06

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 6 of 9 Period: 75.107 d



DV Fit Results:

Period = 75.10742 [0.00194] d
Epoch = 168.8612 [0.0178] BKJD
Rp/R* = 0.0143 [0.0072]
a/R* = 43.37 [121.33]
b = 0.83 [1.04]
Seff = 113.20 [64.06]
Teq = 832 [118] K
Rp = 5.37 [3.38] Re
a = 0.4155 [0.1463] AU
Ag = 599.32 [742.84] [0.81σ]
Teffp = 6363 [1771] K [3.12σ]

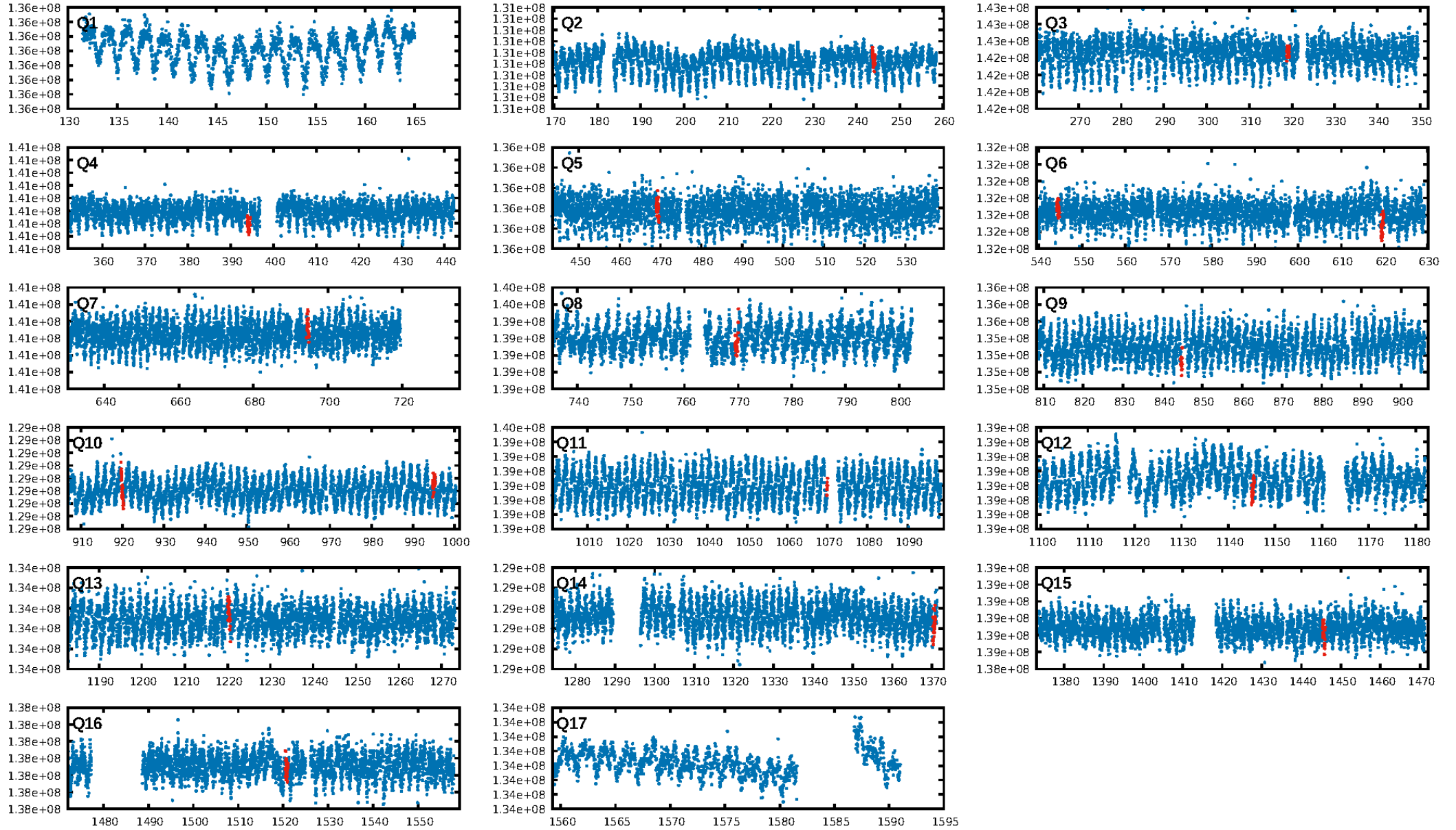
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.75σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.51e-08
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -1.159
Centroid-sig: 9.4%
Centroid-so: 0.920 arcsec [1.34σ]
OotOffset-rm: 0.708 arcsec [2.21σ]
KicOffset-rm: 0.739 arcsec [2.18σ]
OotOffset-st: 1/3/4/1 [9]
KicOffset-st: 1/3/4/1 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.18 [2/11]

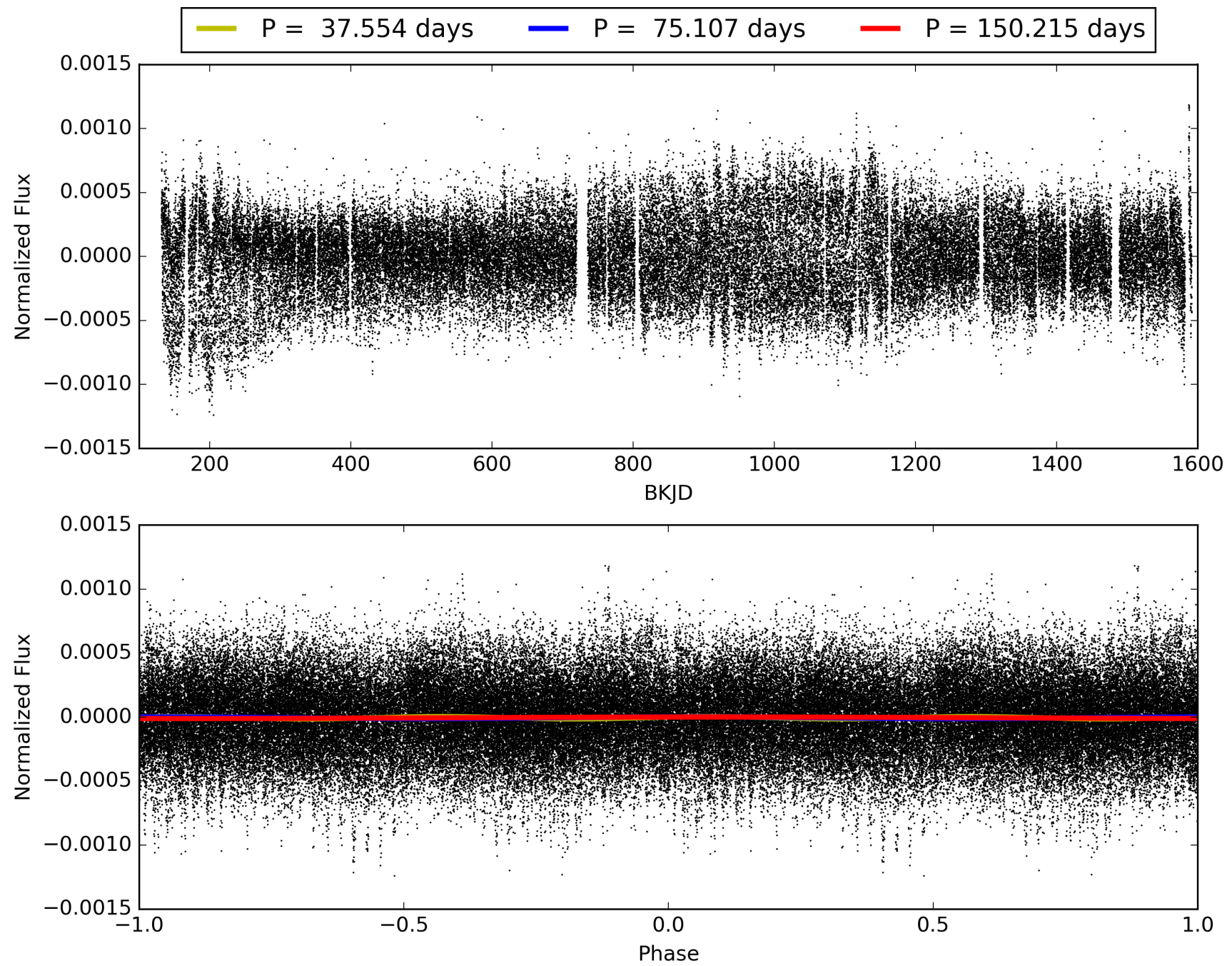
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:35 Z

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

TCE 003936965-06, PDC Light Curves

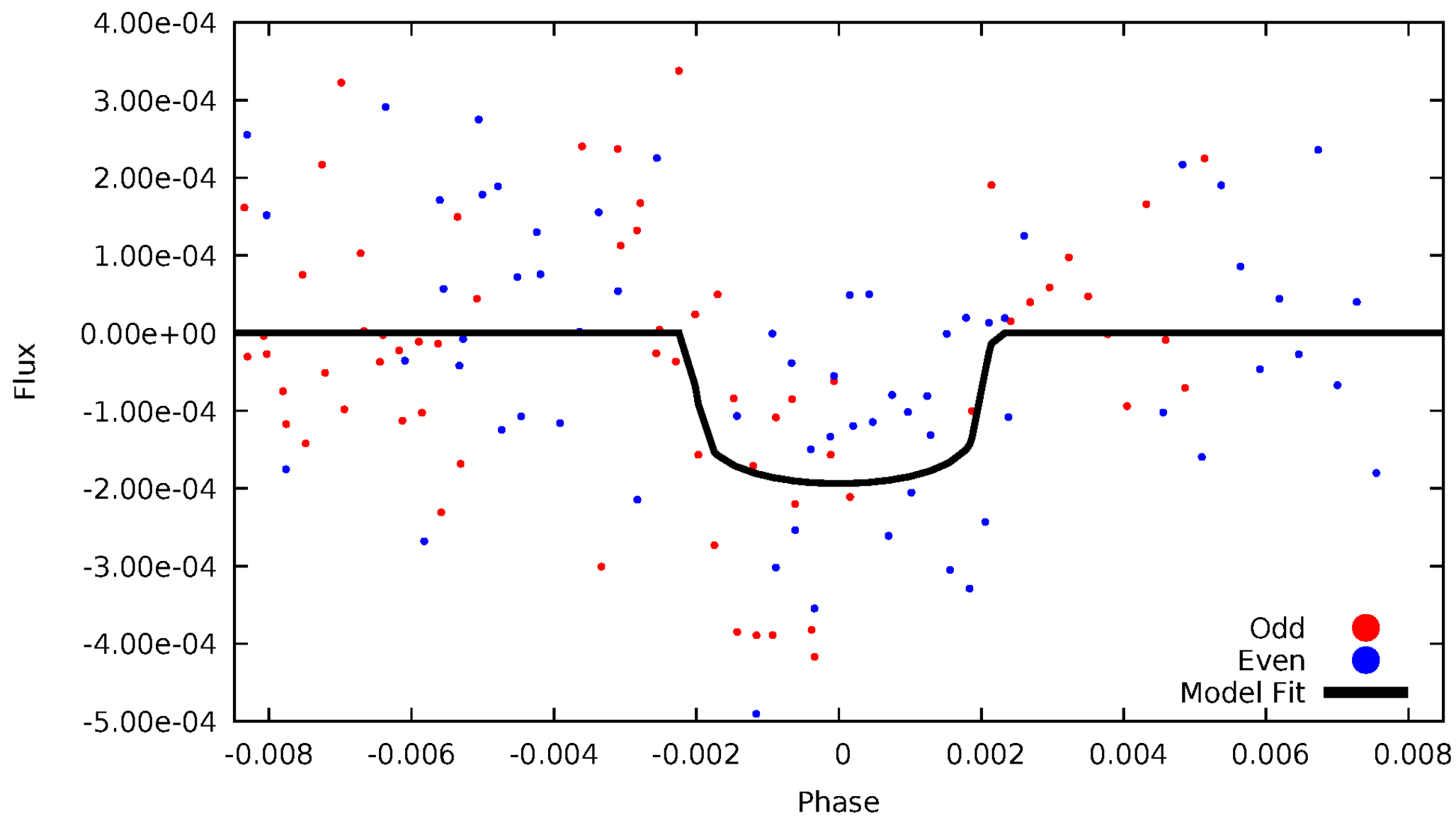


TCE 003936965-06



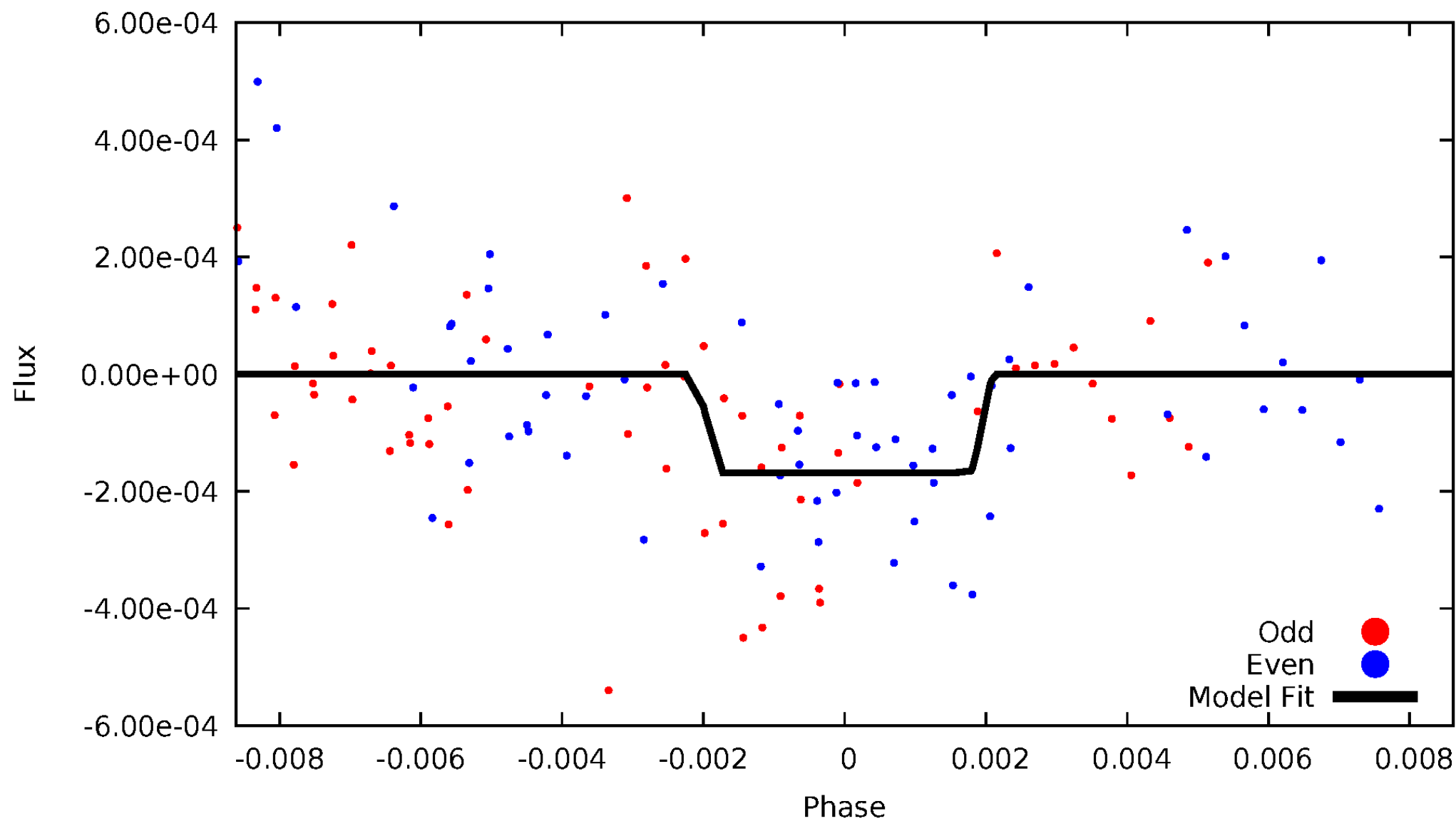
DV Odd/Even

TCE 003936965-06



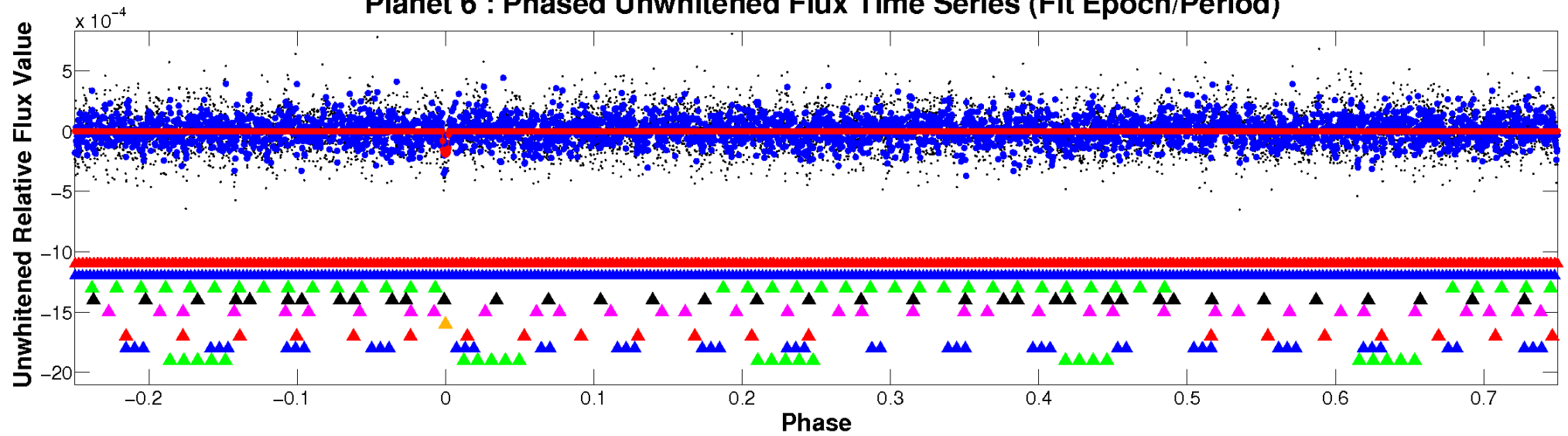
ALT Odd/Even

TCE 003936965-06

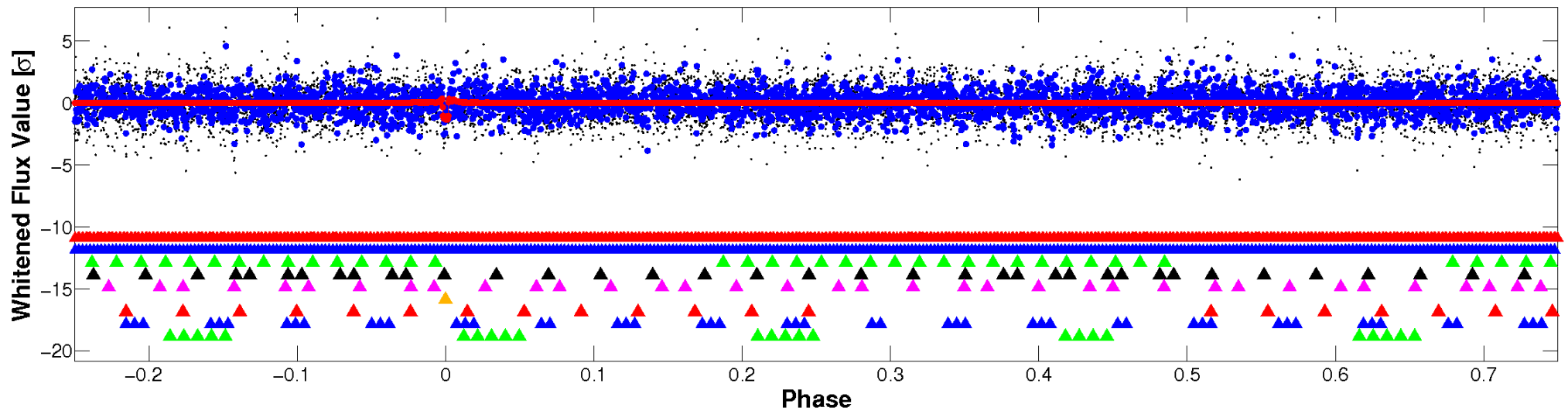


Non-Whitened Vs. Whitened Light Curve

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

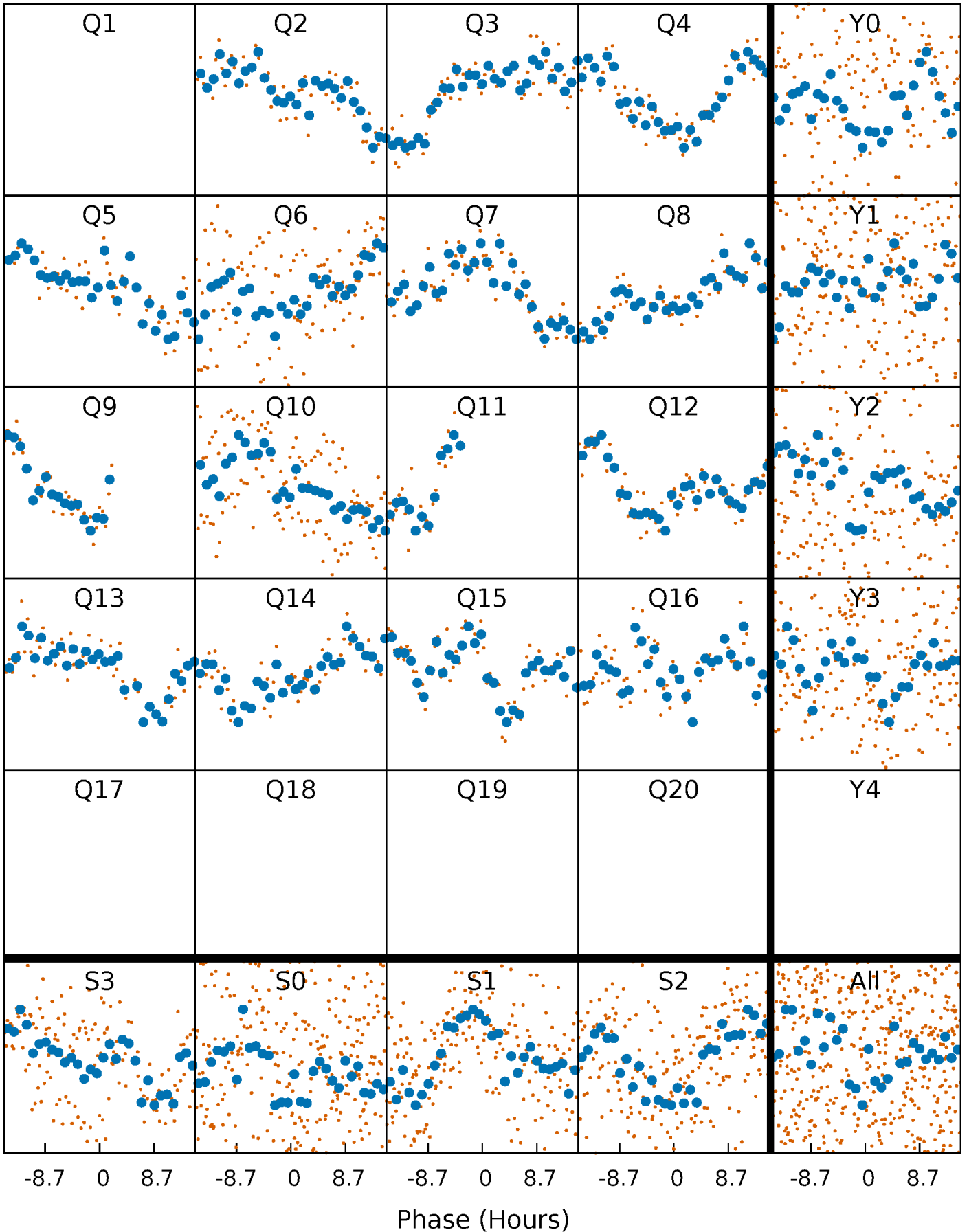


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



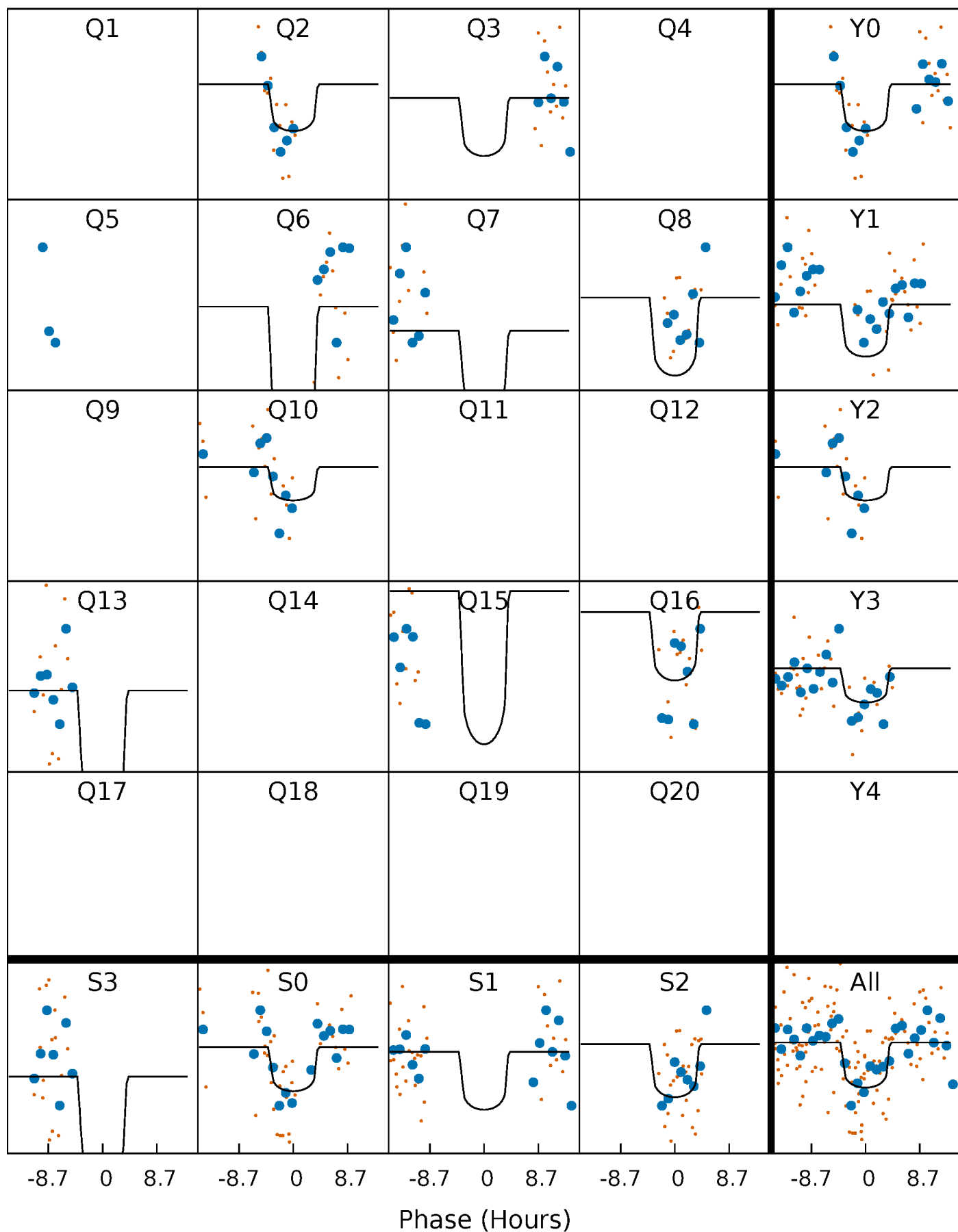
PDC Quarter-Phased Transit Curves

TCE 003936965-06 P= 75.107419 Days $T_0=168.861175$ (BKJD)



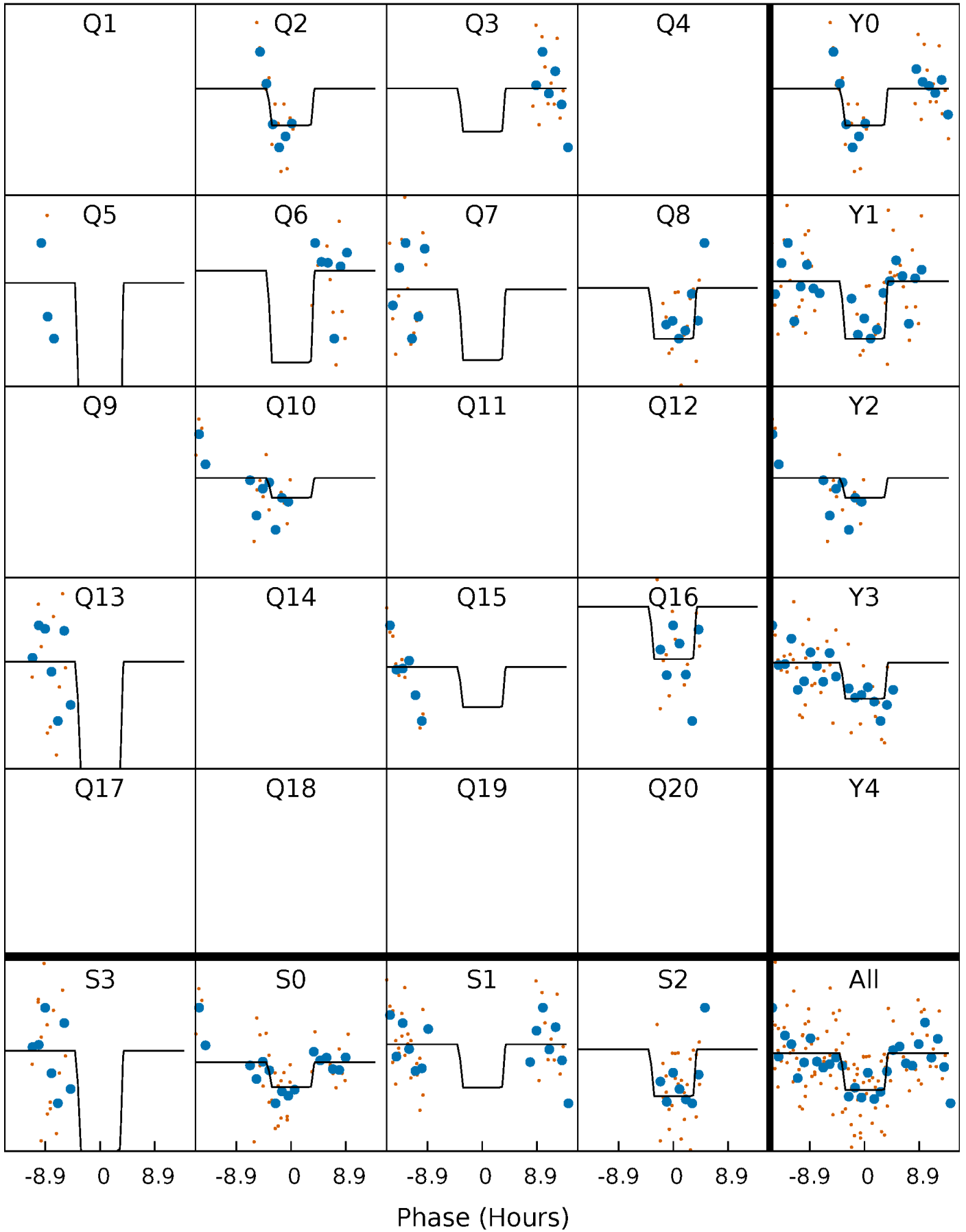
DV Quarter-Phased Transit Curves

TCE 003936965-06 P= 75.107419 Days $T_0=168.861175$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

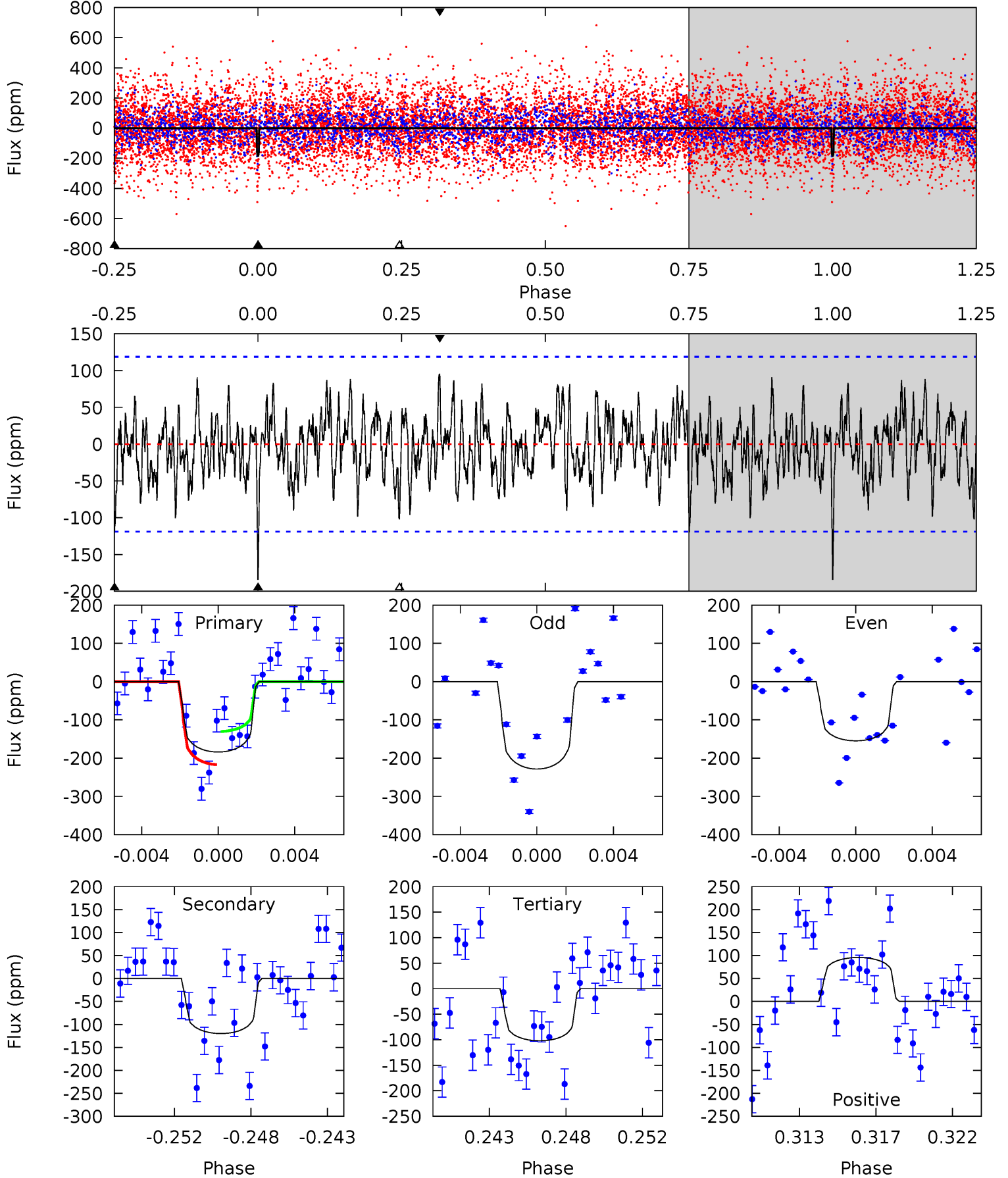
TCE 003936965-06 P= 75.107646 Days $T_0=168.859151$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-06, P = 75.107419 Days, E = 93.753756 Days

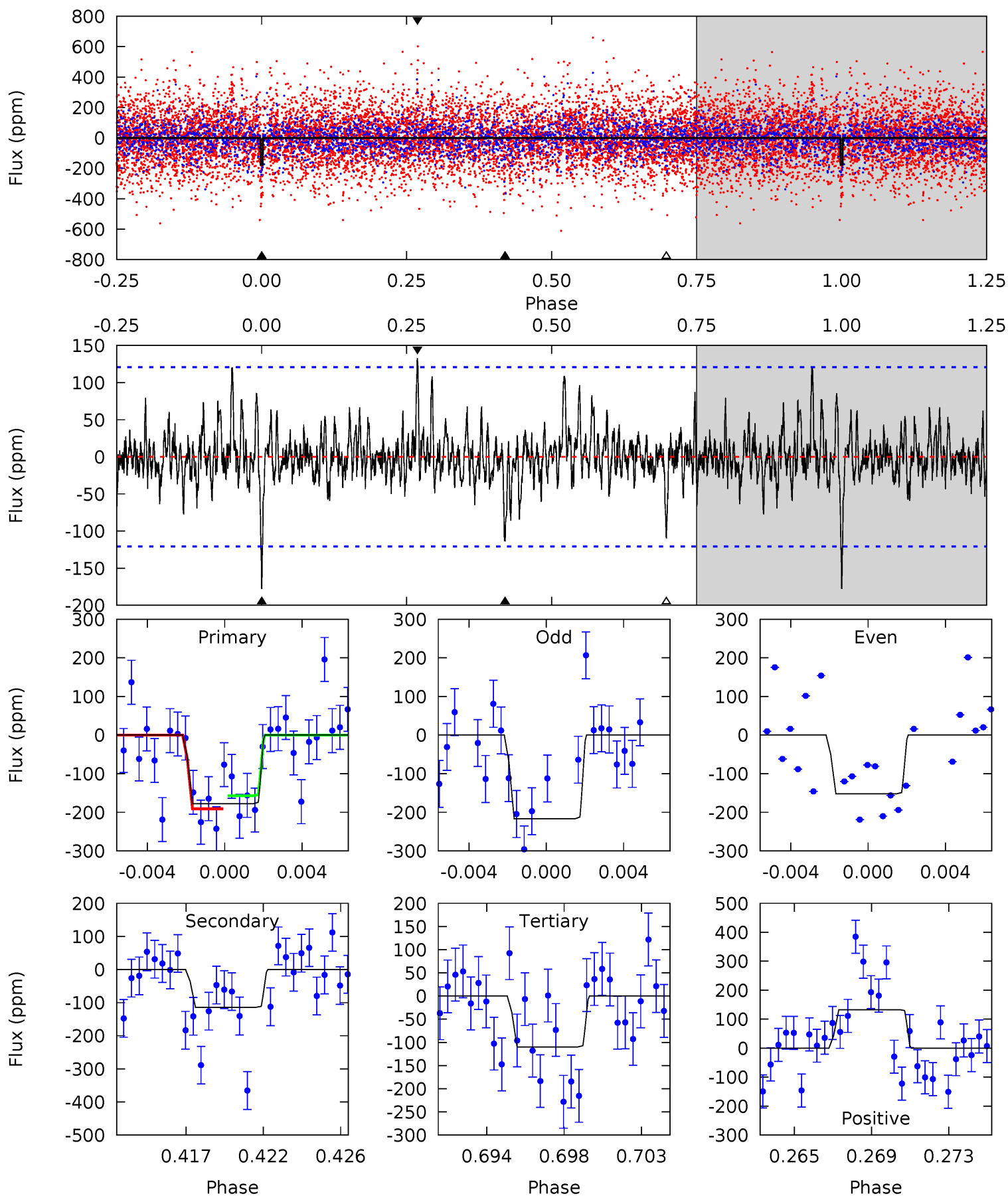
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.03	5.23	4.45	4.17	5.18	2.85	1.58	3.57	3.85	0.78	1.06	1.57	0.78	0.34	1.88



Alt Model-Shift Uniqueness Test

003936965-06, P = 75.107646 Days, E = 93.751505 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.65	4.90	4.72	5.71	5.19	2.87	1.22	2.93	1.94	0.18	-0.81	1.35	0.98	0.43	0.71



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-120 ± 23	$5.14^{+2.59}_{-2.42}$	1135^{+55}_{-106}	5648^{+2149}_{-926}	428^{+1121}_{-238}
Alt.	-114 ± 23	$4.43^{+2.74}_{-2.13}$	1130^{+55}_{-103}	5879^{+2701}_{-1072}	553^{+1428}_{-348}

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 $A_{obs} \gg 1.0$

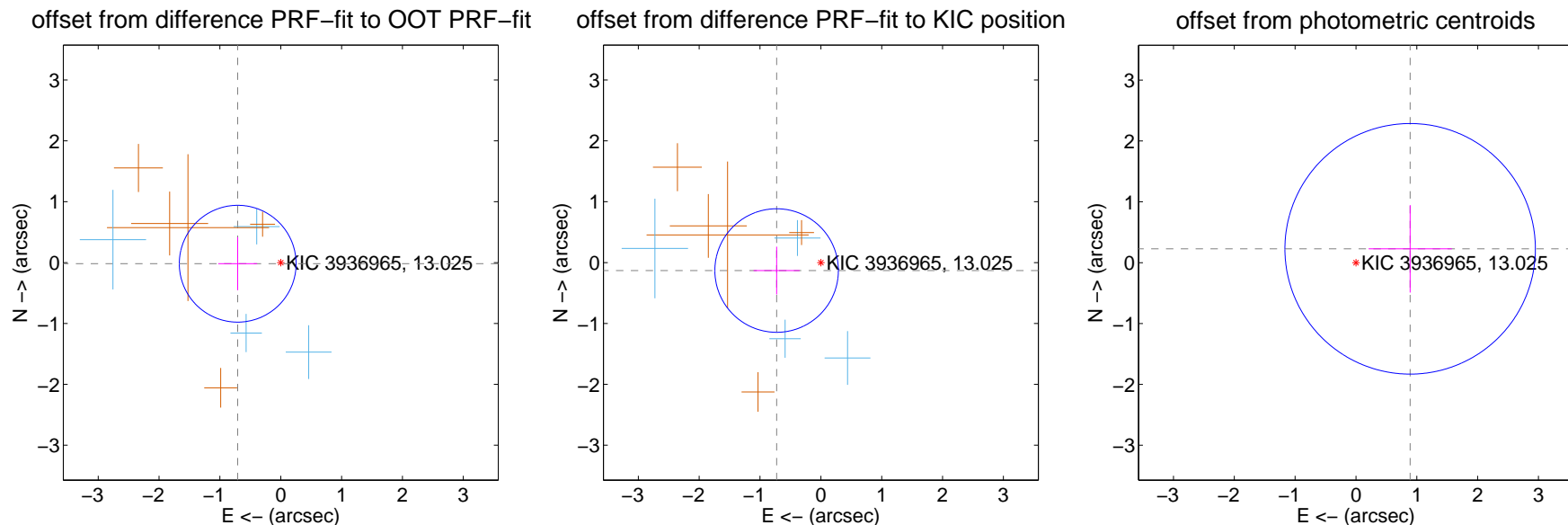
DV Centroid Data

Supplemental centroid analysis for 003936965-06. Kepler magnitude: 13.03. Transit SNR 7.90

There are 4 quarters with good PRF difference image offsets

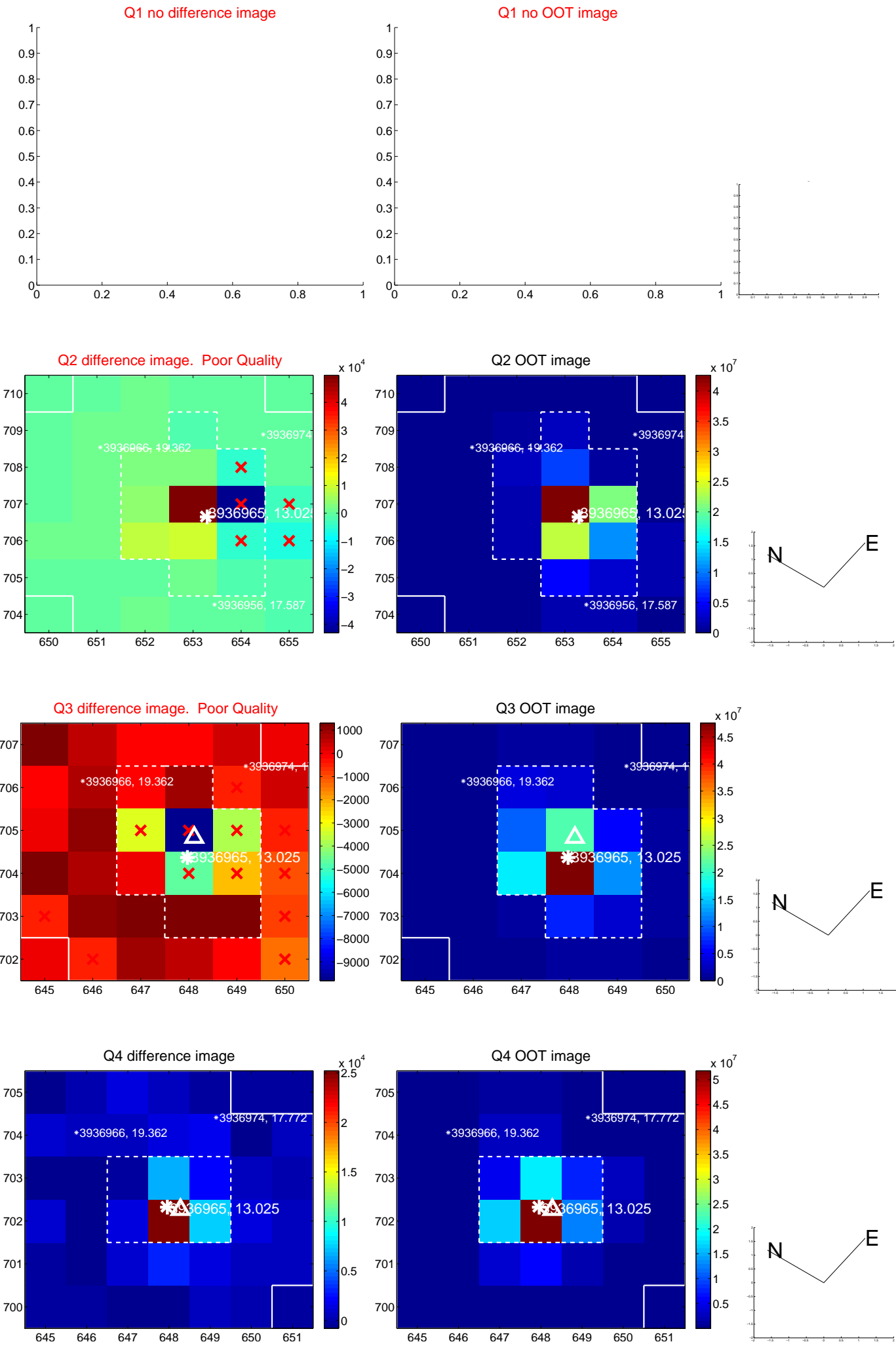
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.708 ± 0.320	2.21	0.708 ± 0.320	-0.019 ± 0.436
PRF-fit source offset from KIC position	0.739 ± 0.338	2.18	0.727 ± 0.378	-0.131 ± 0.393
photometric centroid source offset	0.92 ± 0.69	1.34	-0.89 ± 0.68	0.23 ± 0.72

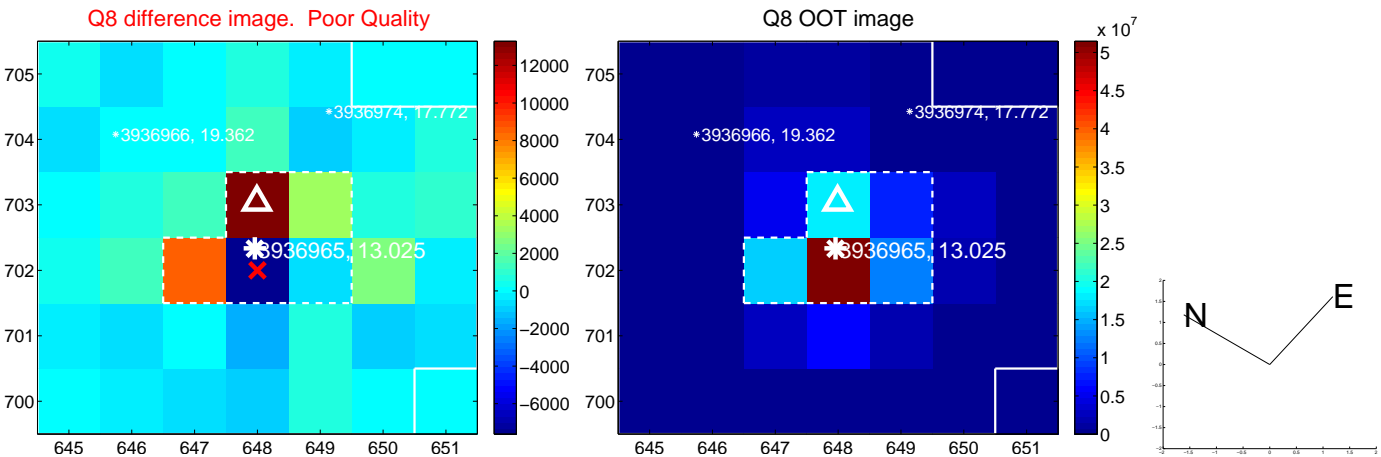
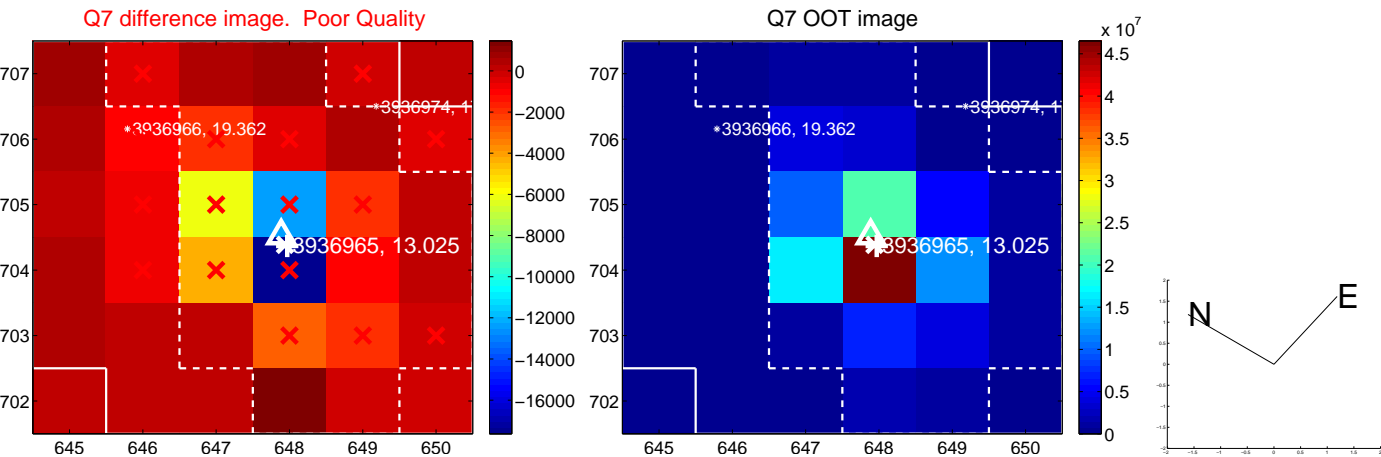
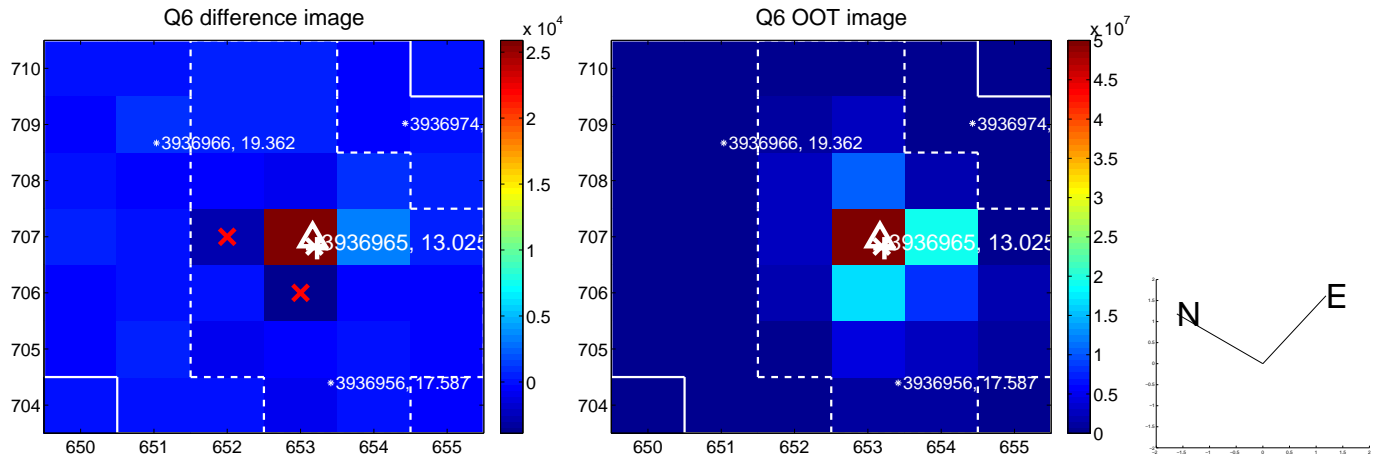
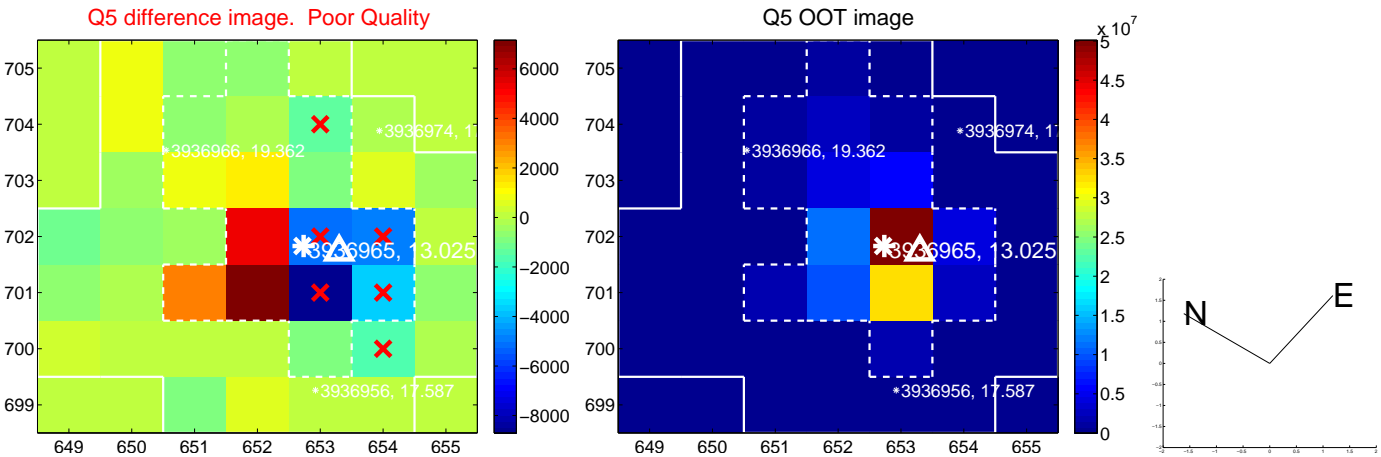


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

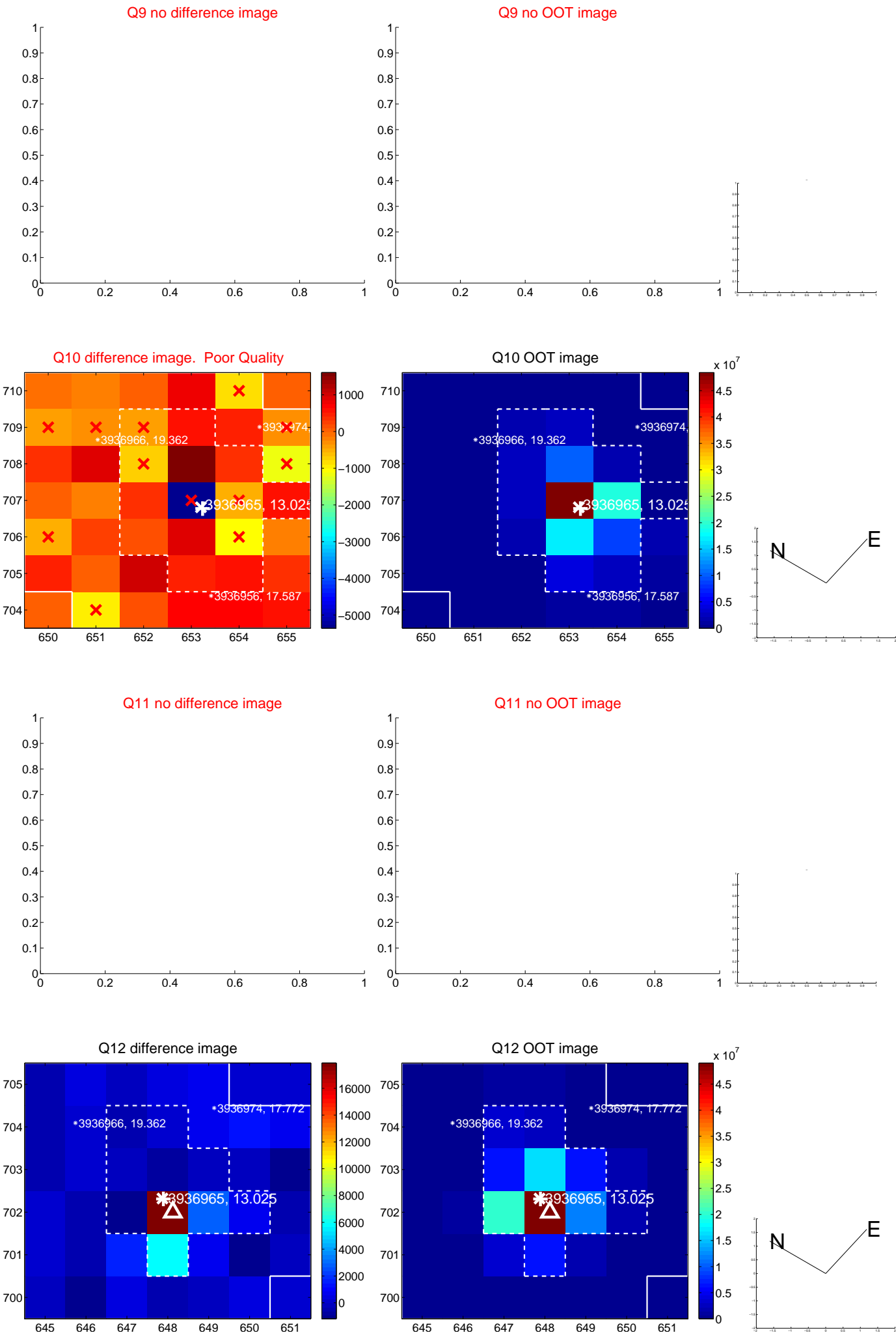
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

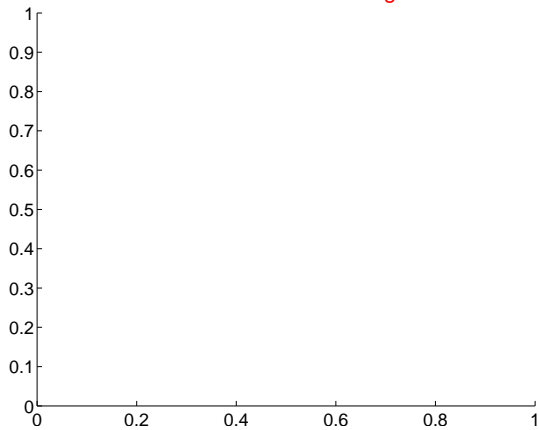


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

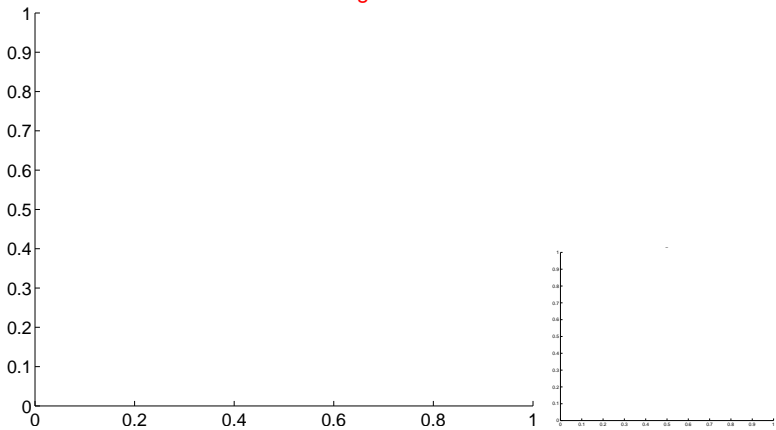


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

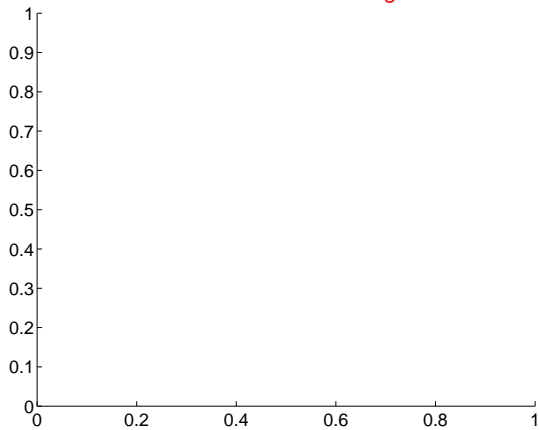
Q13 no difference image



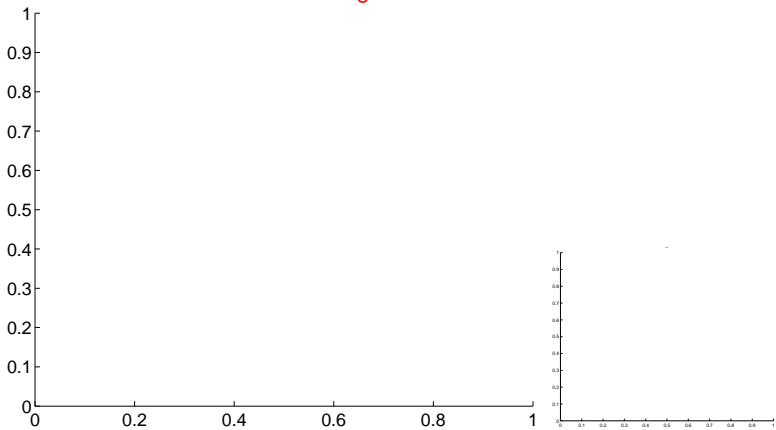
Q13 no OOT image



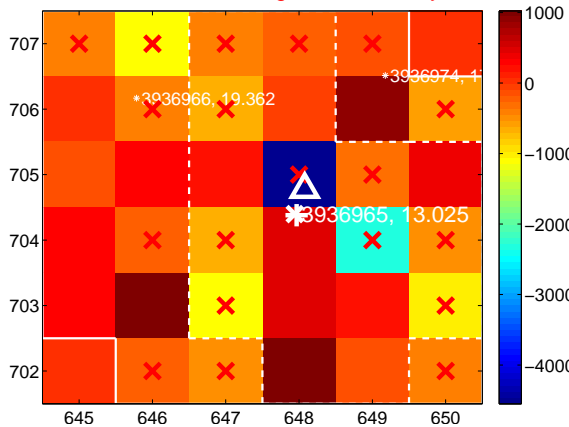
Q14 no difference image



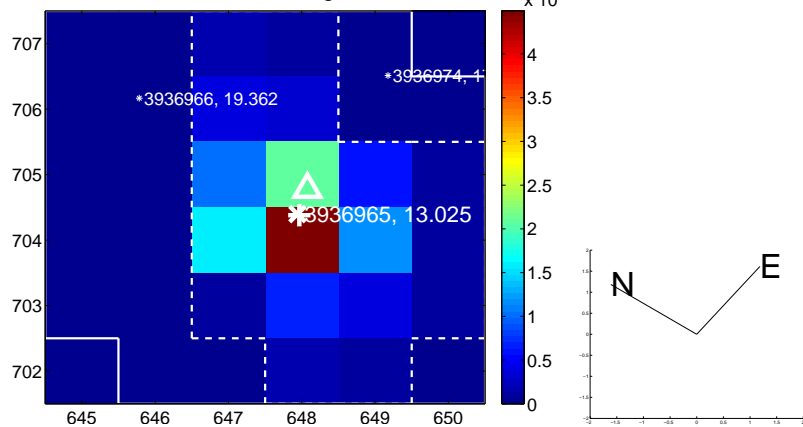
Q14 no OOT image



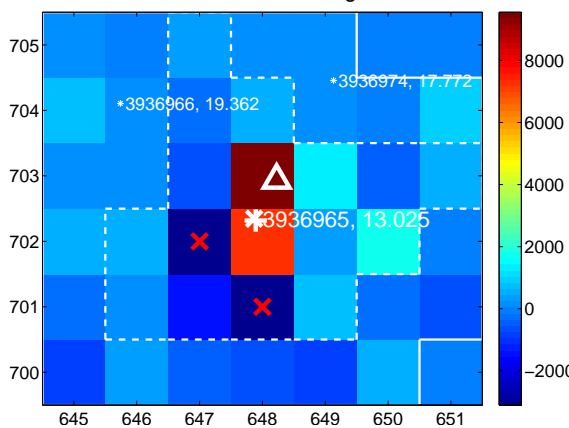
Q15 difference image. Poor Quality



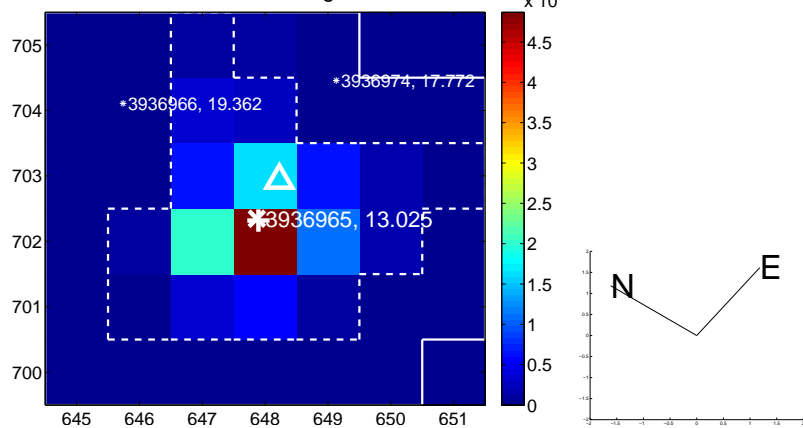
Q15 OOT image



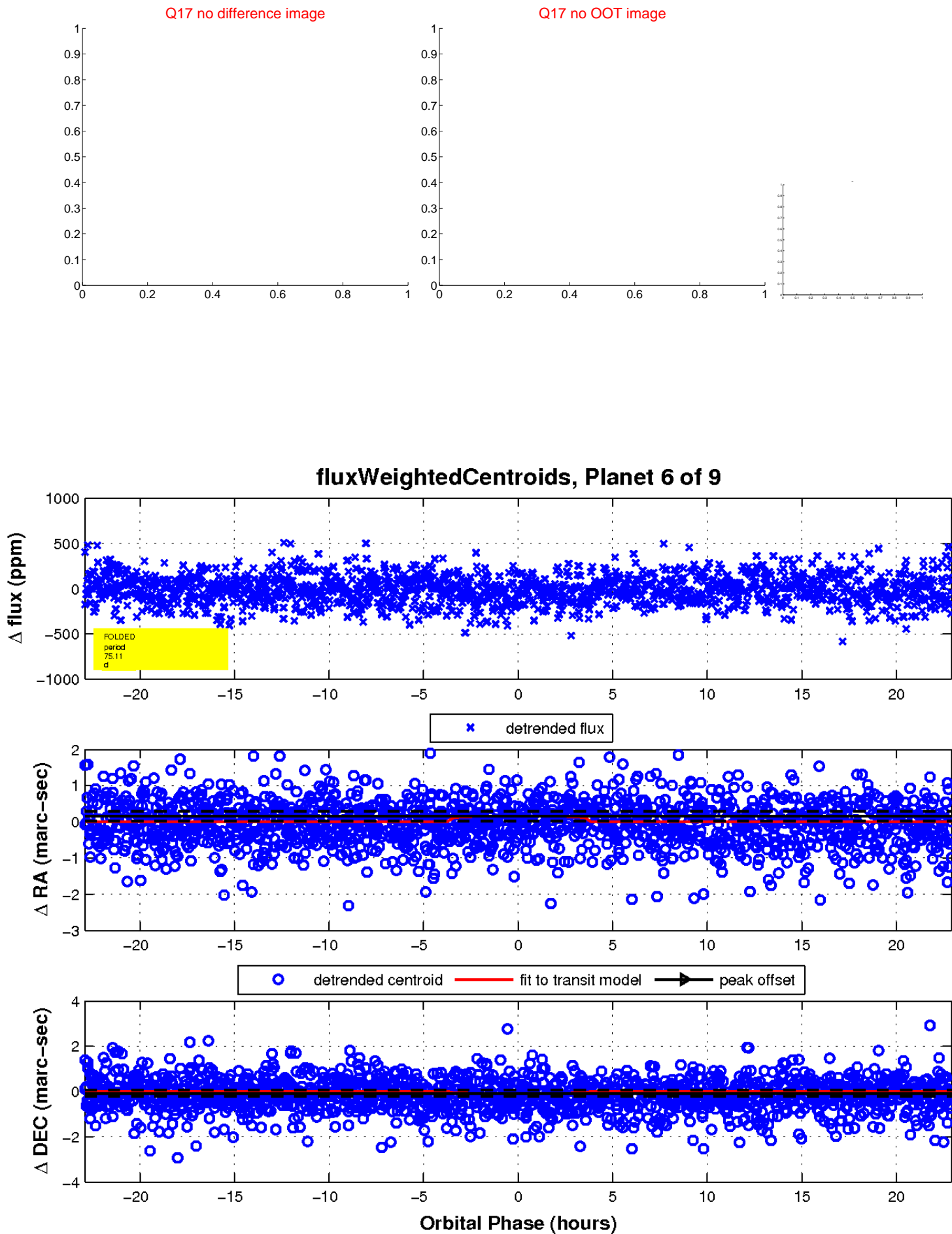
Q16 difference image



Q16 OOT image

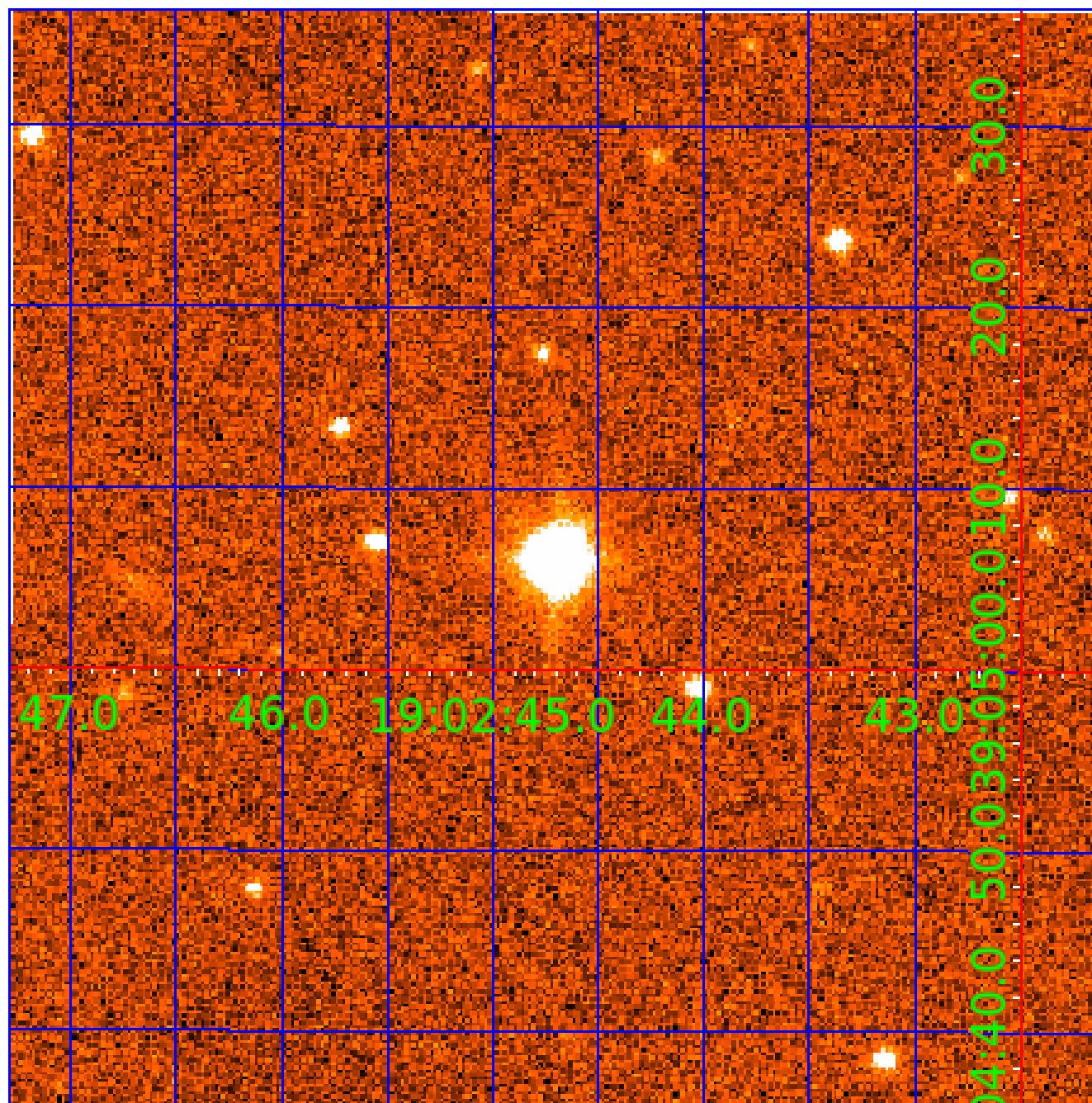


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

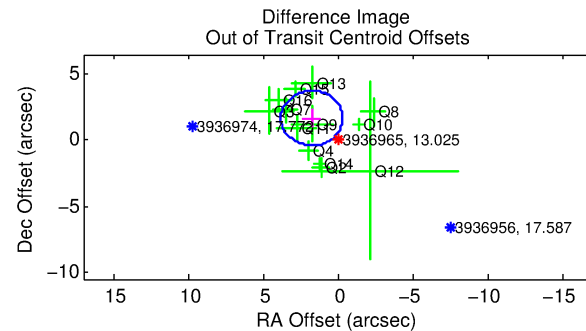
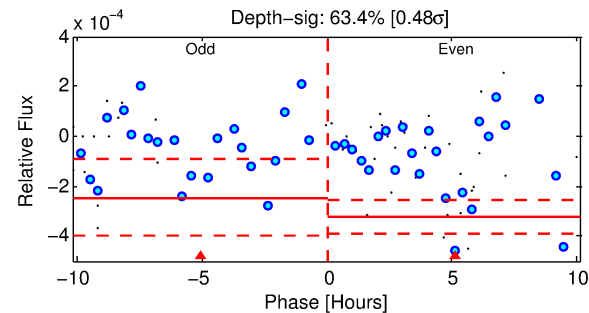
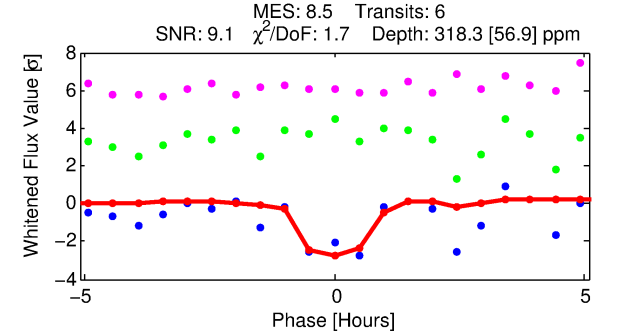
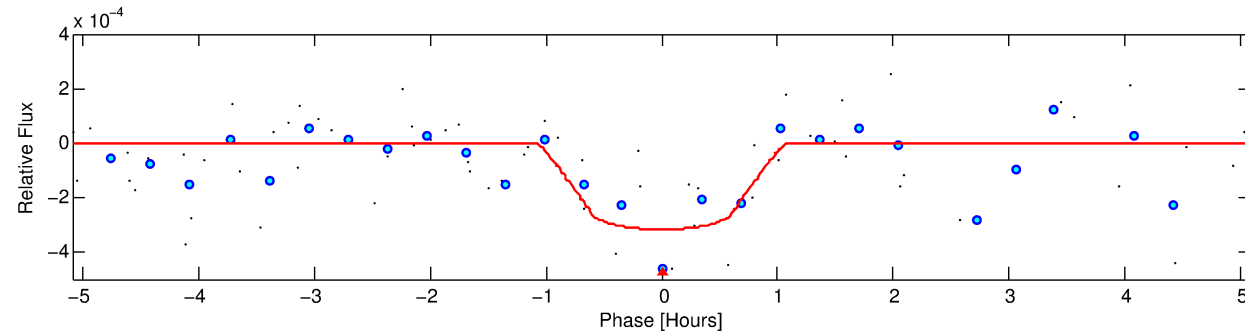
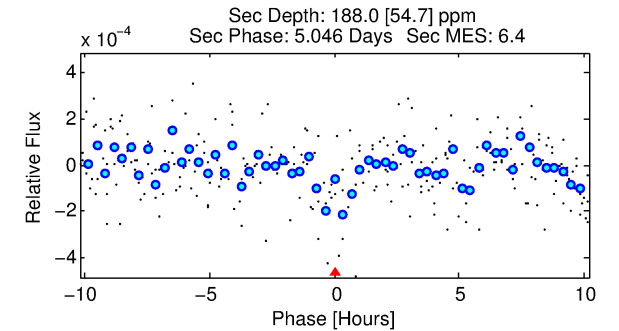
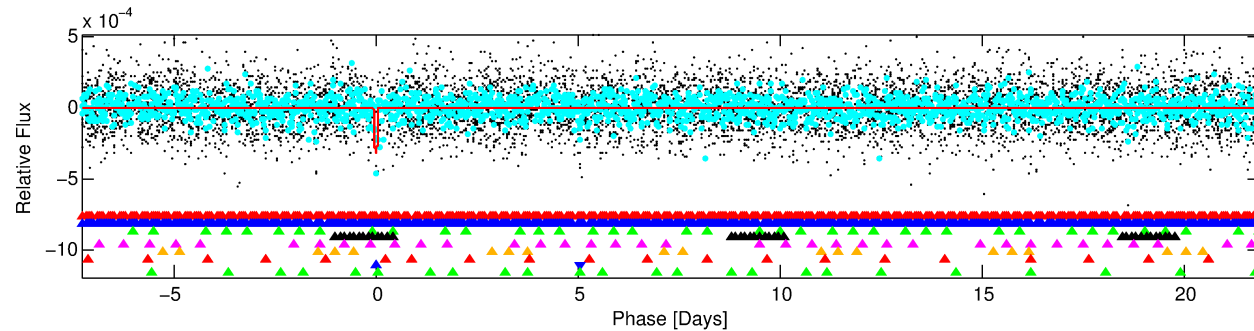
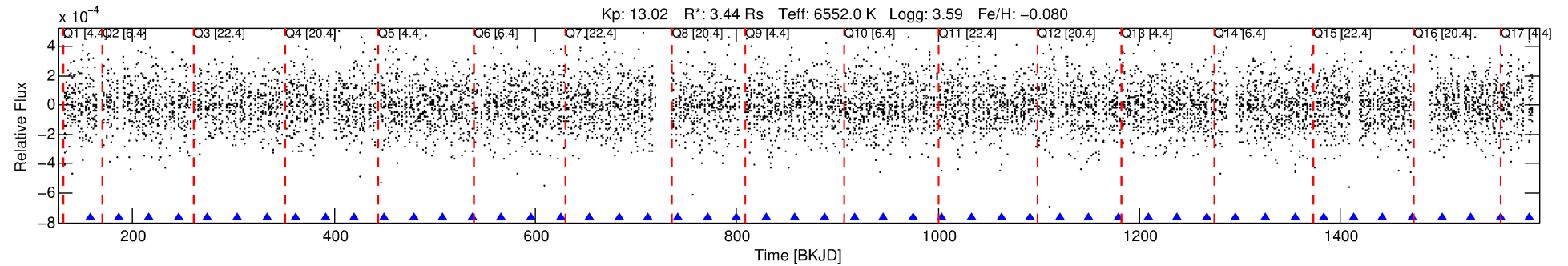
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-08

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 8 of 9 Period: 29.184 d



DV Fit Results:

Period = 29.18411 [0.00045] d
Epoch = 157.8513 [0.0144] BKJD
Rp/R* = 0.0165 [0.0229]
a/R* = 133.26 [972.67]
b = 0.08 [90.51]
Seff = 399.24 [225.93]
Teq = 1140 [161] K
Rp = 6.19 [8.90] Re
a = 0.2212 [0.0779] AU
Ag = 132.18 [376.44] [0.35σ]
Teffp = 5975 [4176] K [1.16σ]

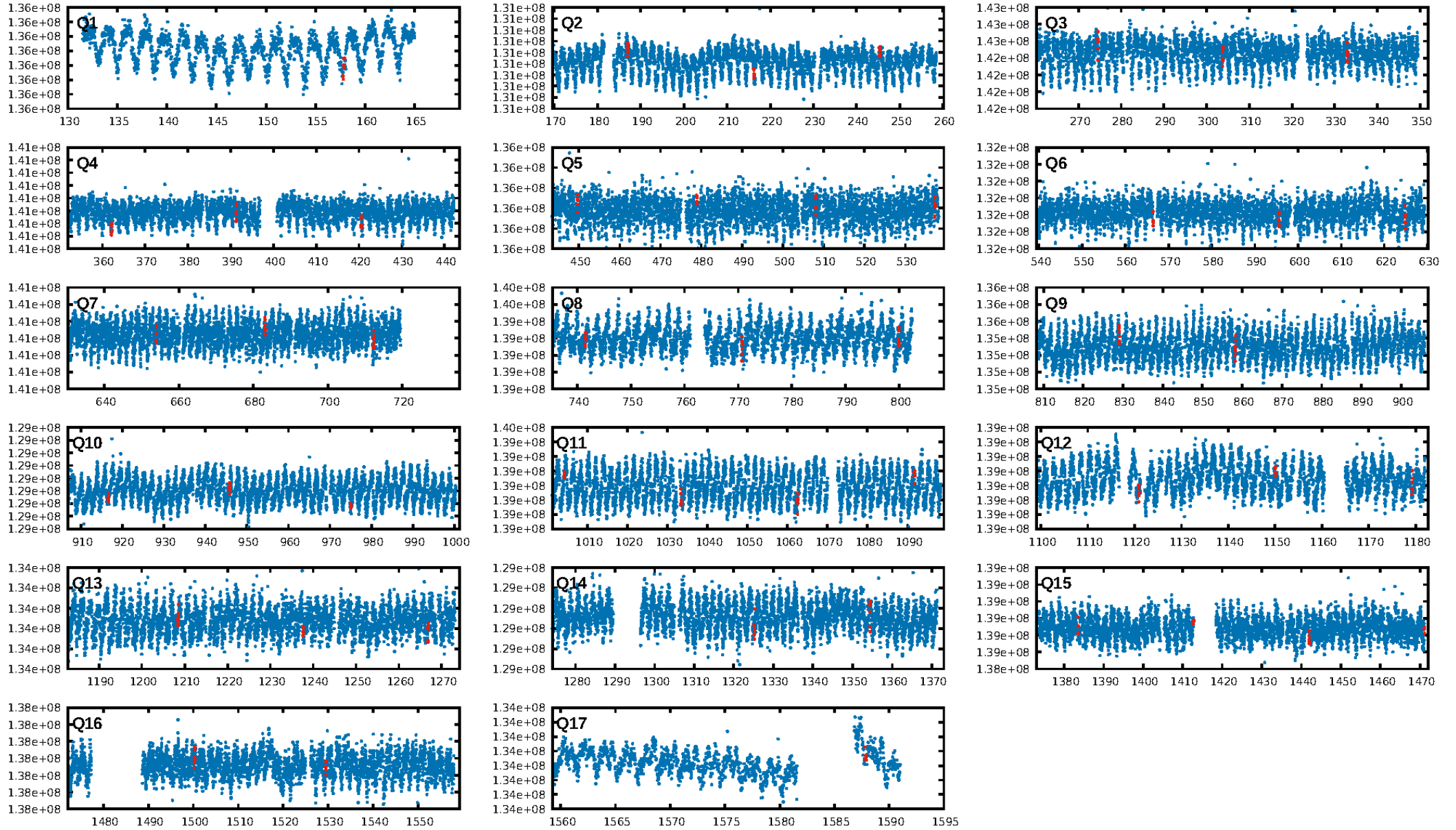
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.77σ]
LongPeriod-sig: 100.0% [93.02σ]
ModelChiSquare2-sig: 24.2%
ModelChiSquareGof-sig: 86.9%
Bootstrap-pfa: 1.21e-09
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 3.129
Centroid-sig: 68.1%
Centroid-so: 0.237 arcsec [0.50σ]
OotOffset-rm: 2.412 arcsec [3.51σ]
KicOffset-rm: 2.395 arcsec [3.03σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-st: 3/4/4/2 [13]
DiffImageQuality-fgm: 0.31 [4/13]
DiffImageOverlap-fno: 0.75 [12/16]

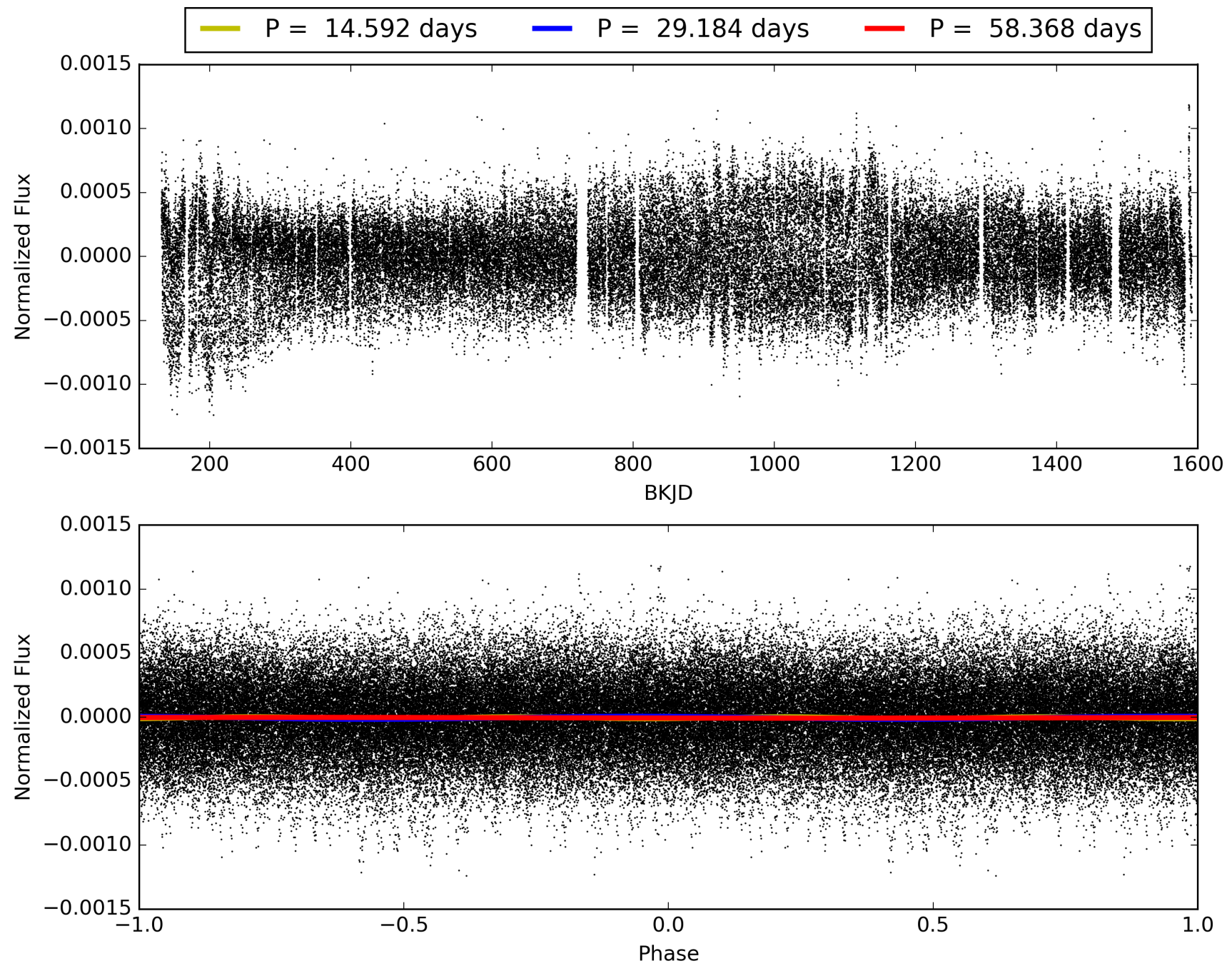
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:42 Z

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

TCE 003936965-08, PDC Light Curves

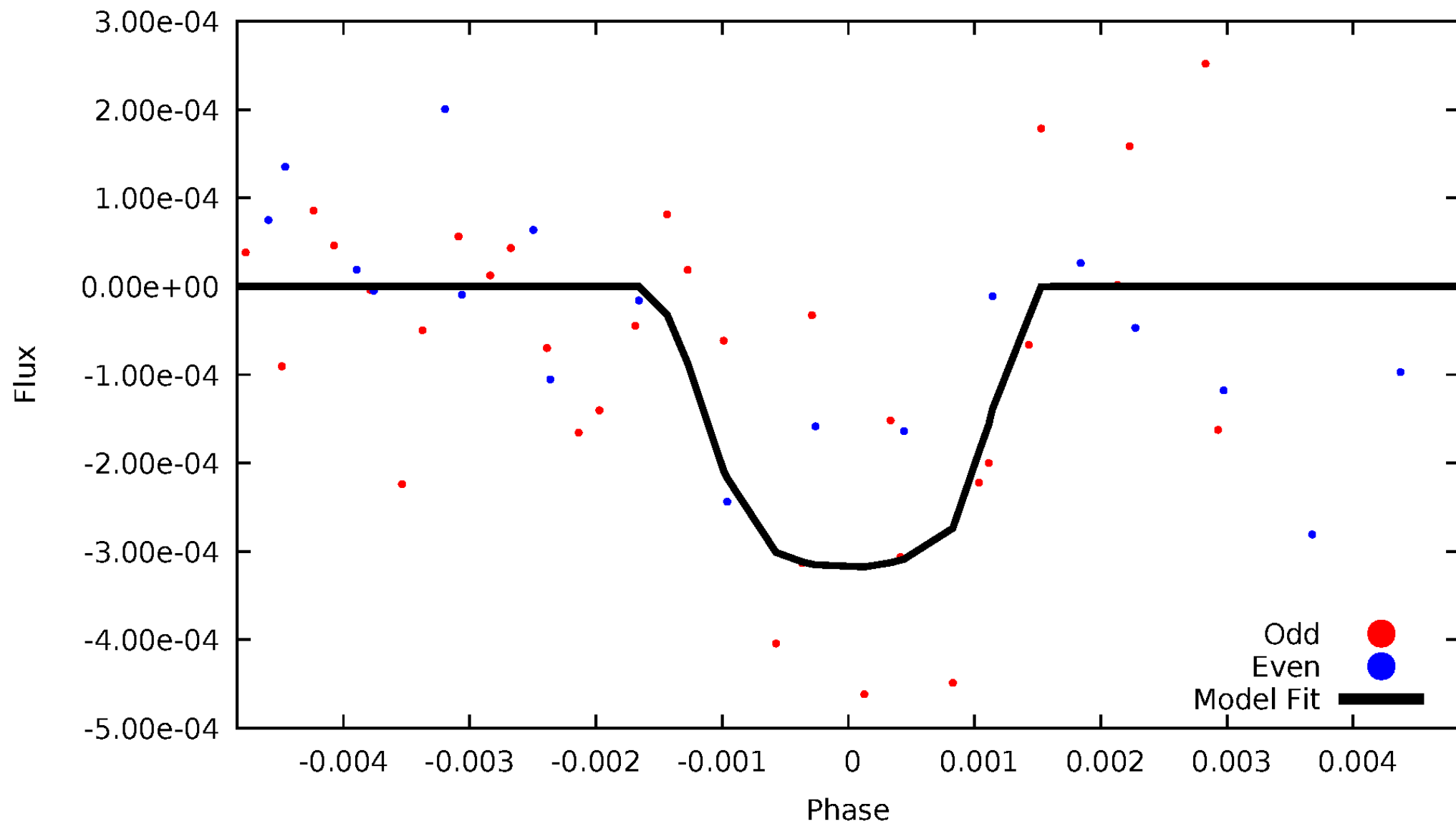


TCE 003936965-08



DV Odd/Even

TCE 003936965-08

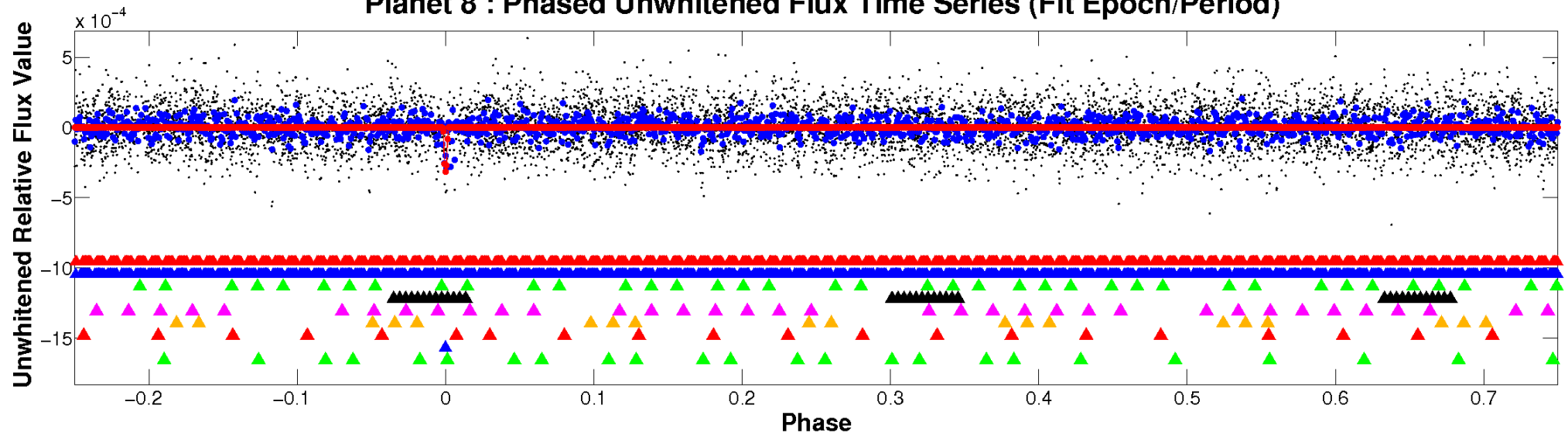


ALT Odd/Even

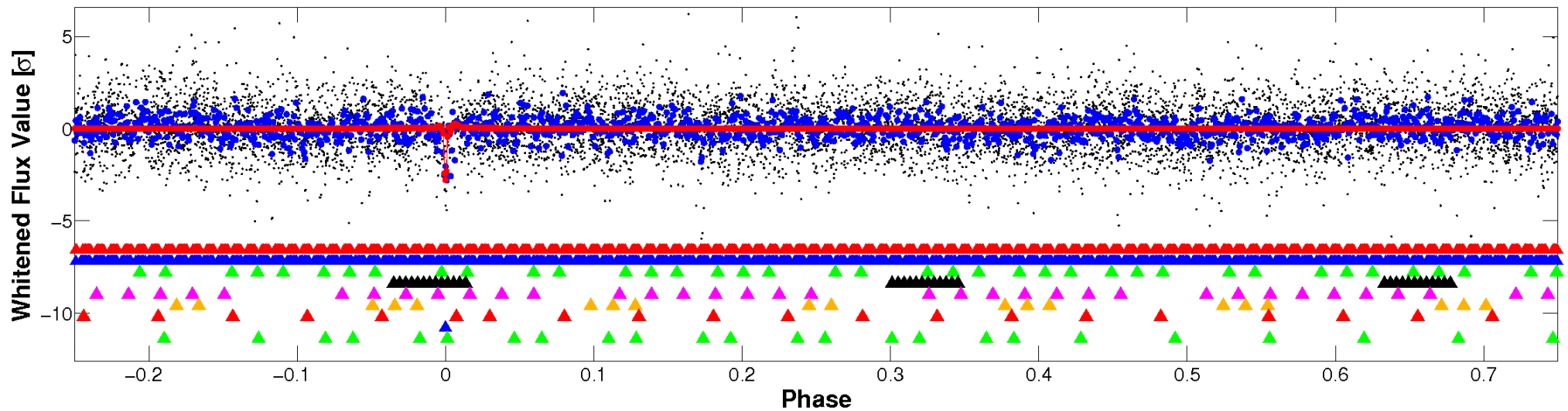
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

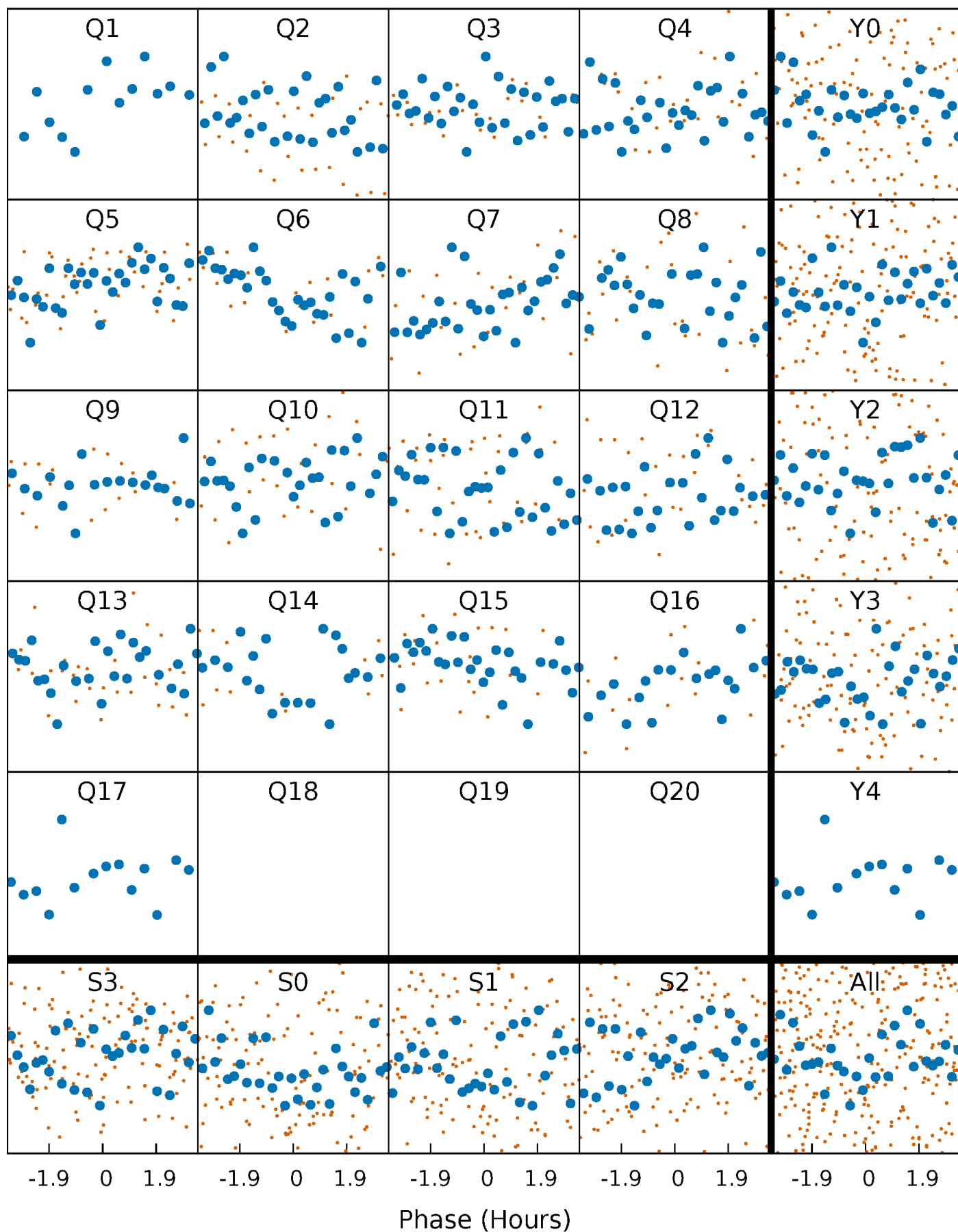


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



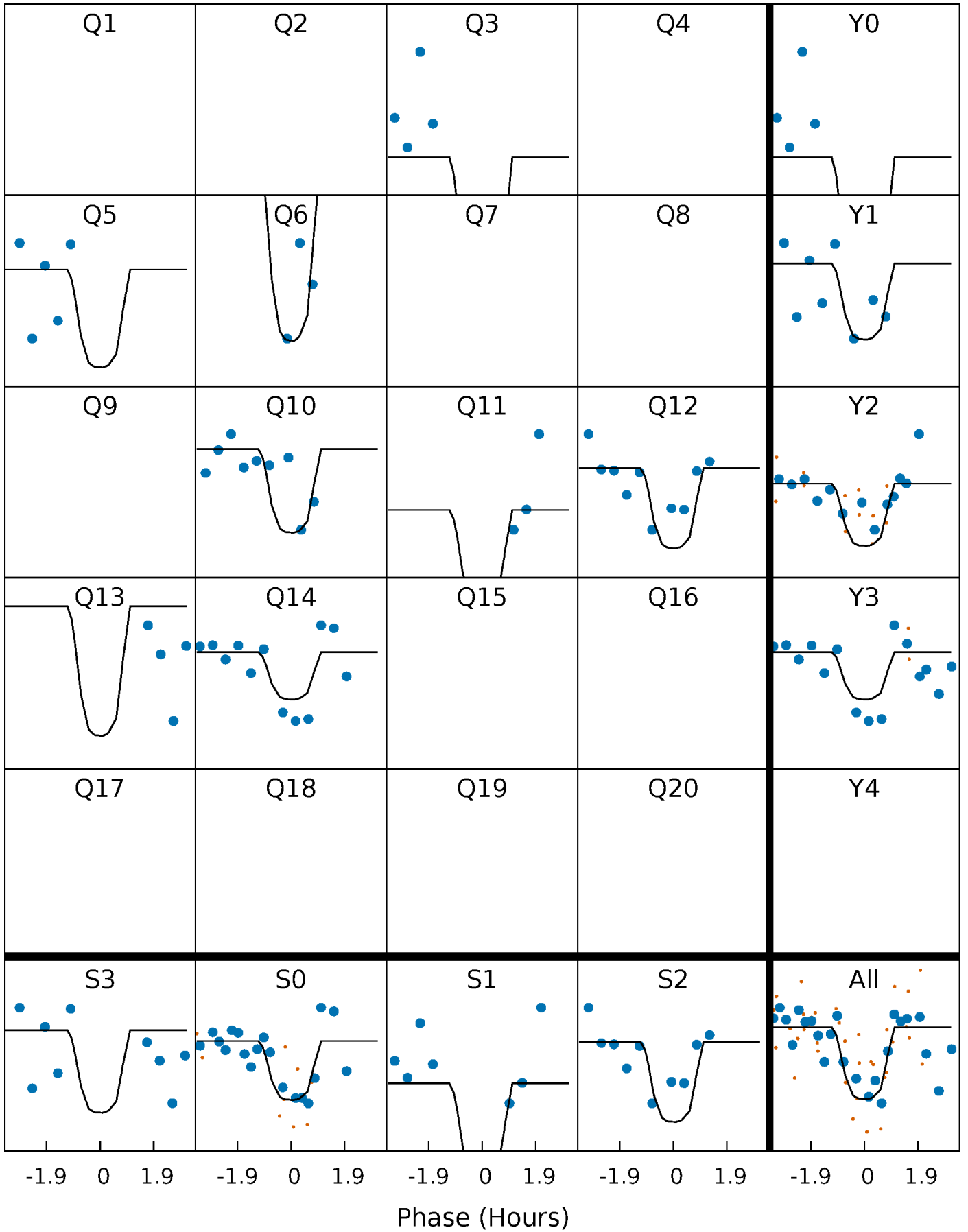
PDC Quarter-Phased Transit Curves

TCE 003936965-08 P= 29.184115 Days $T_0=157.851288$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003936965-08 P= 29.184115 Days $T_0=157.851288$ (BKJD)

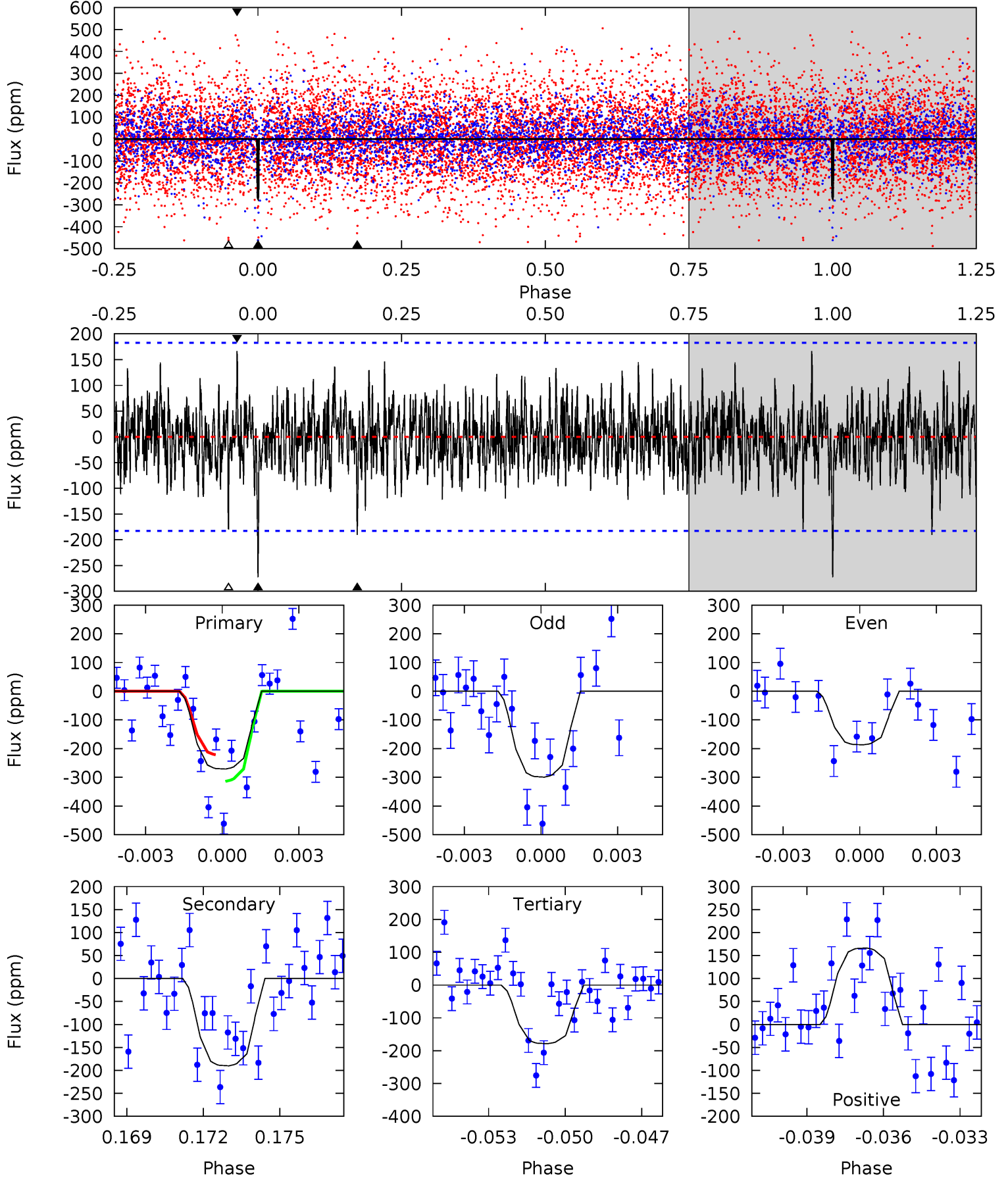


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003936965-08, P = 29.184115 Days, E = 128.667173 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.80	5.47	5.14	4.79	5.25	2.97	1.37	2.66	3.02	0.33	0.68	1.41	1.21	0.38	1.33



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-190 ± 35	$8.24^{+7.55}_{-5.53}$	1551^{+79}_{-143}	4926^{+3992}_{-976}	71^{+606}_{-51}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

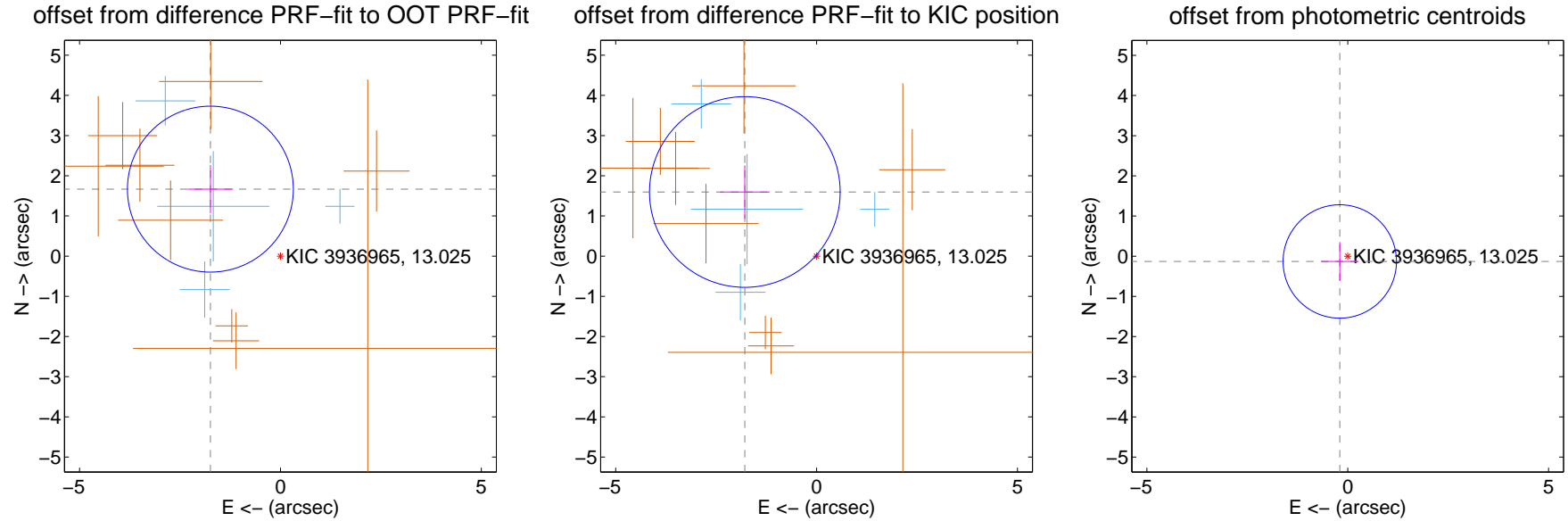
DV Centroid Data

Supplemental centroid analysis for 003936965-08. Kepler magnitude: 13.03. Transit SNR 9.09

There are 4 quarters with good PRF difference image offsets

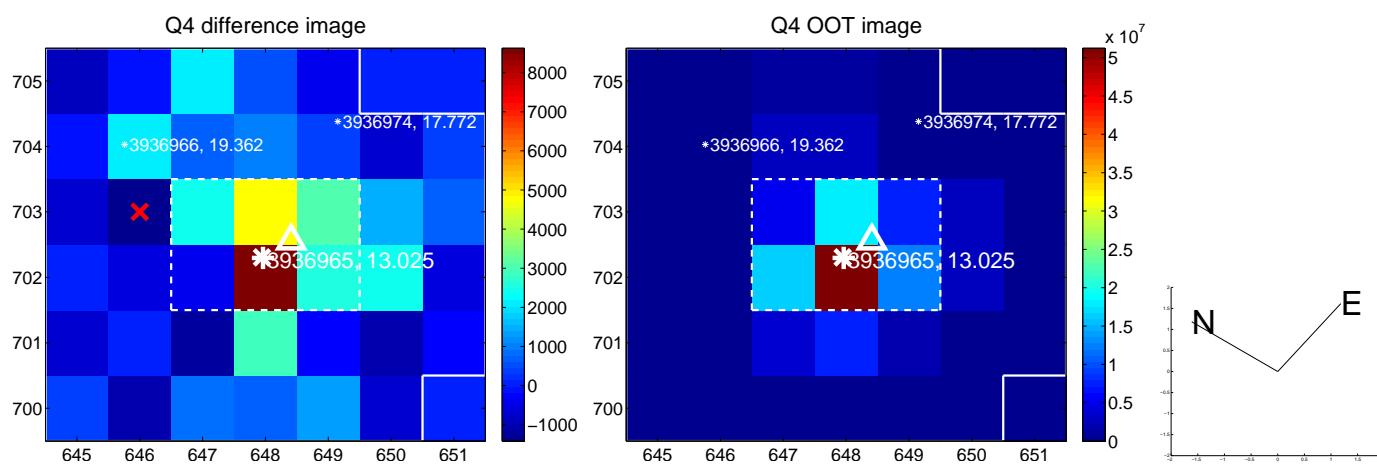
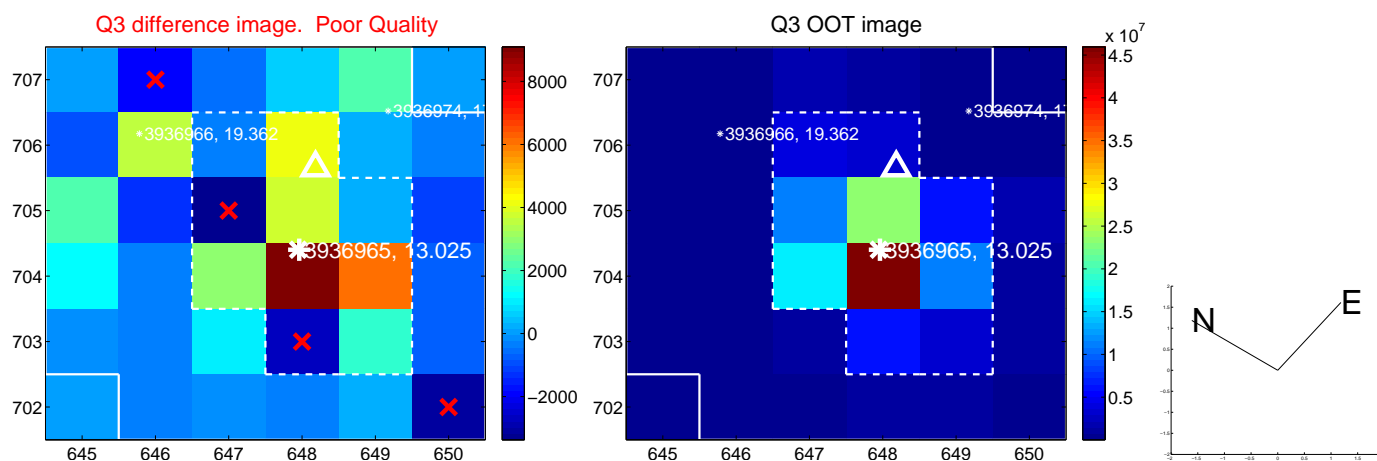
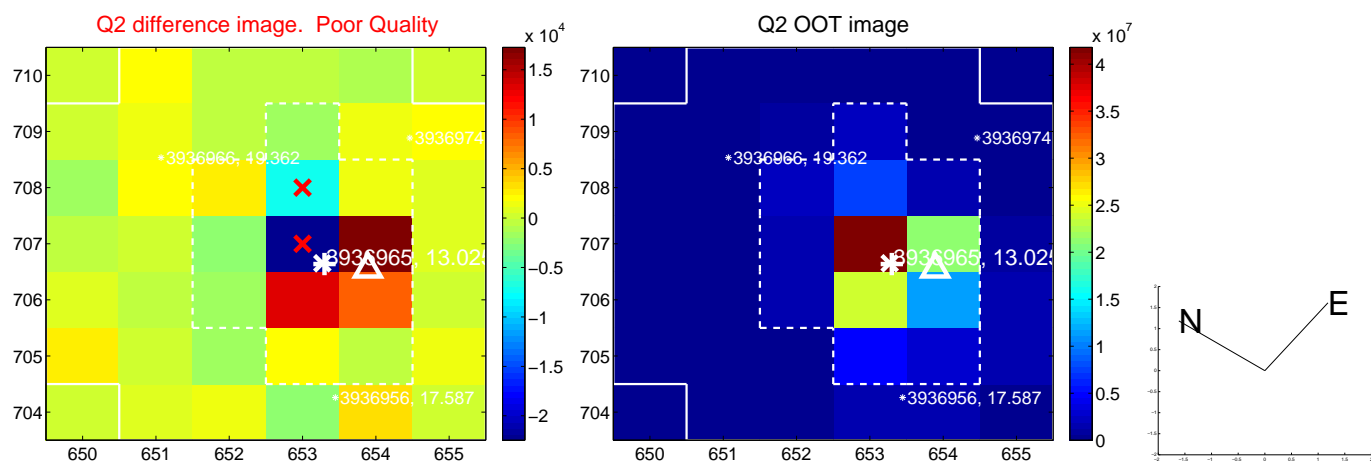
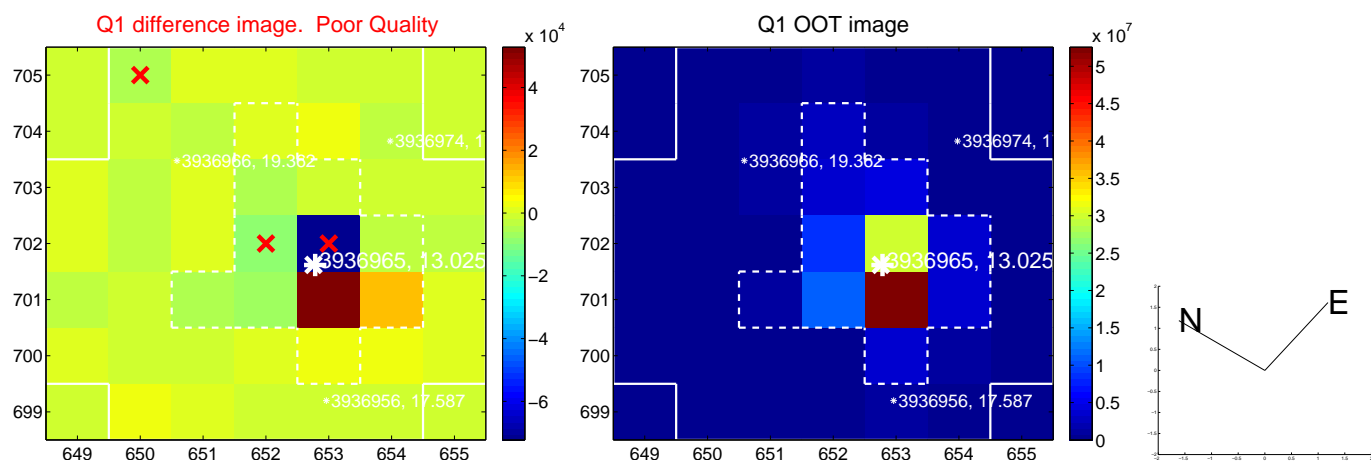
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.412 ± 0.688	3.51	1.744 ± 0.566	1.667 ± 0.600
PRF-fit source offset from KIC position	2.395 ± 0.791	3.03	1.785 ± 0.616	1.596 ± 0.664
photometric centroid source offset	0.24 ± 0.47	0.50	0.20 ± 0.46	-0.13 ± 0.48

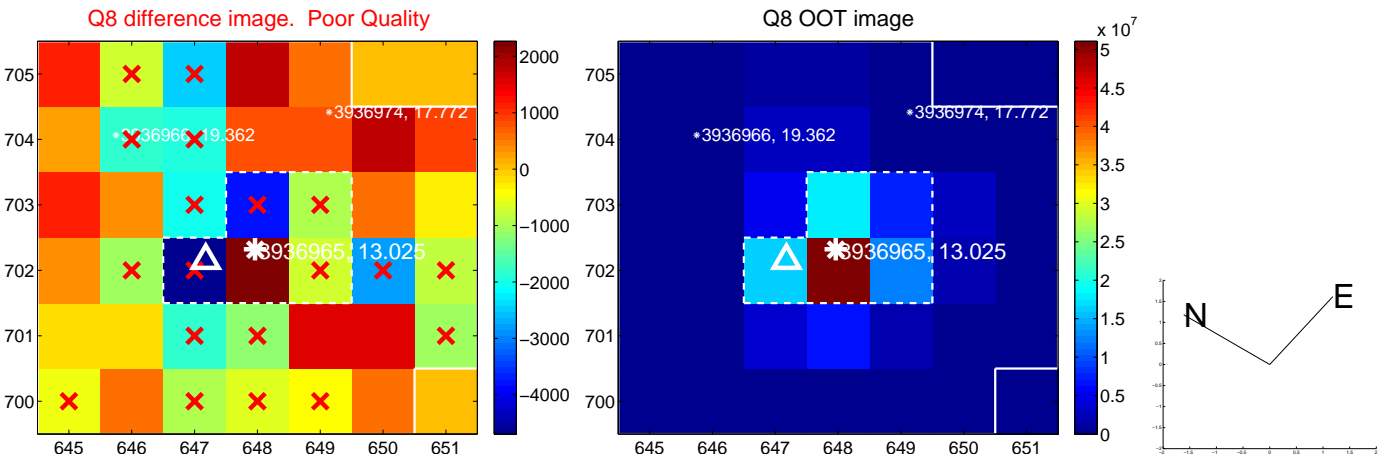
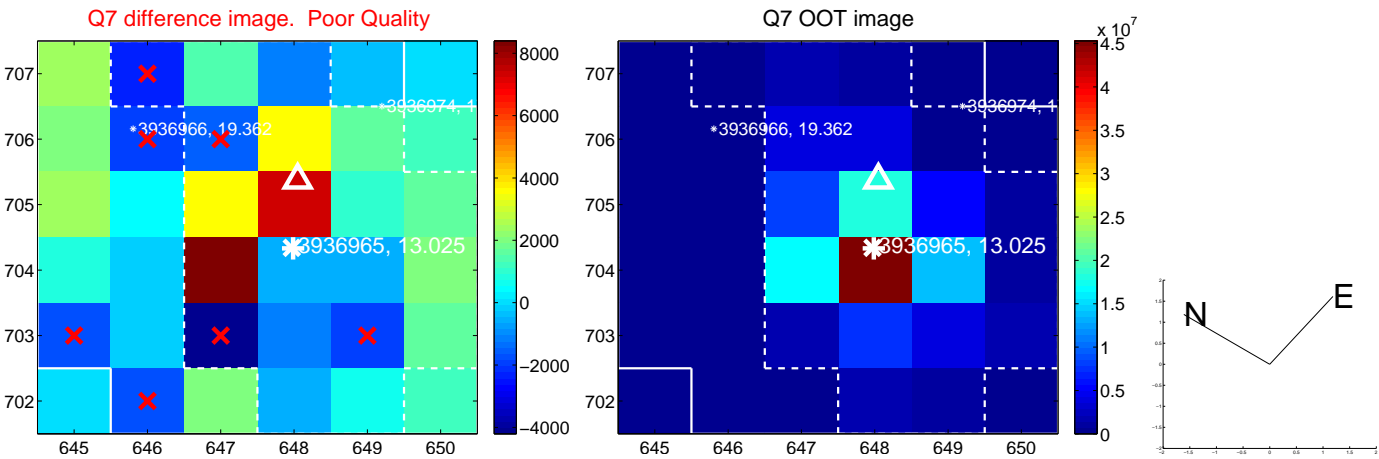
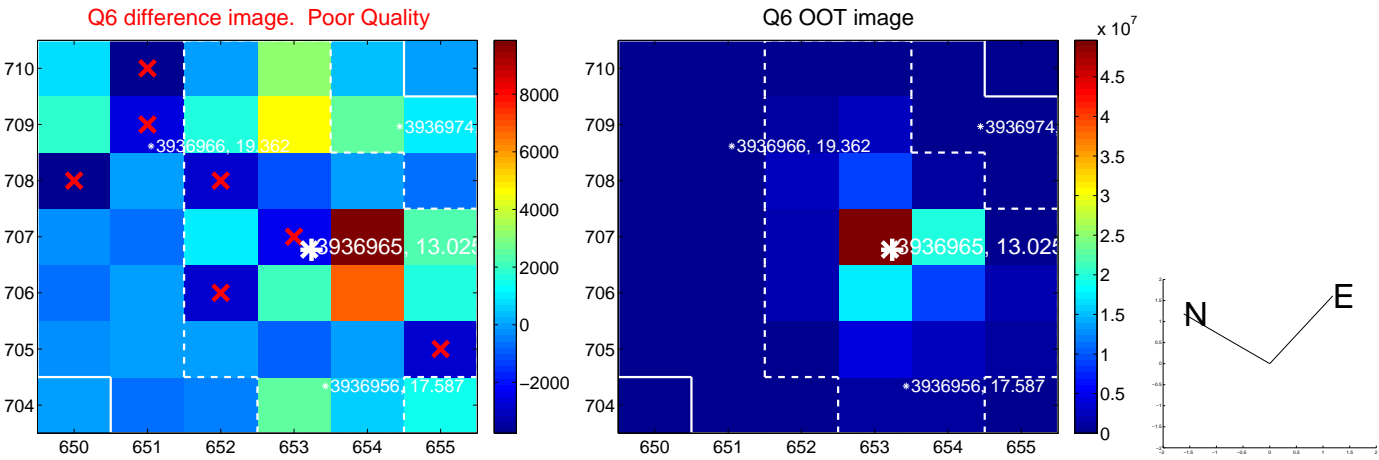
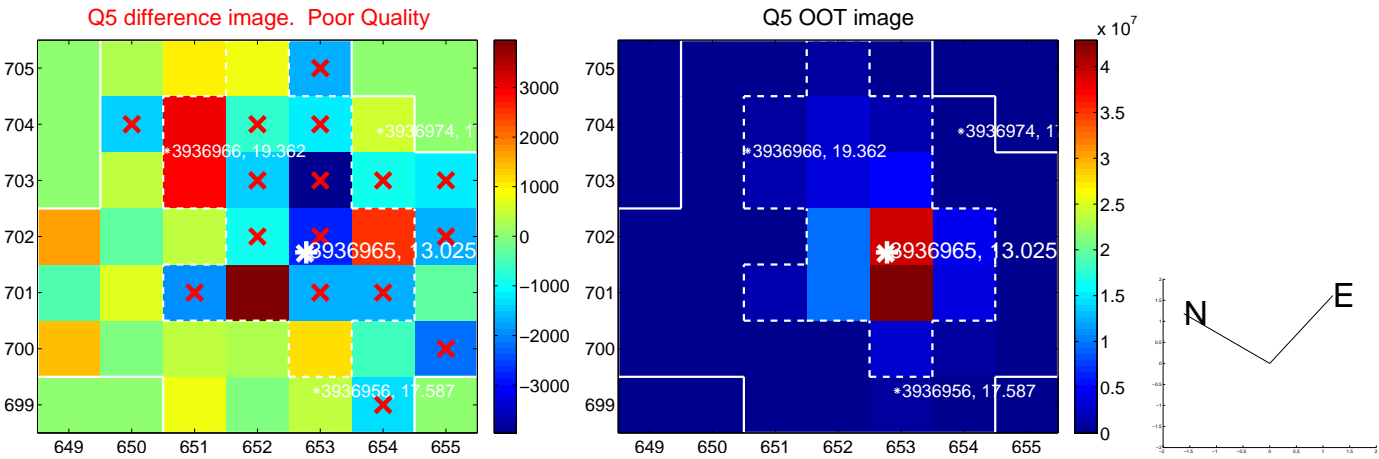


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

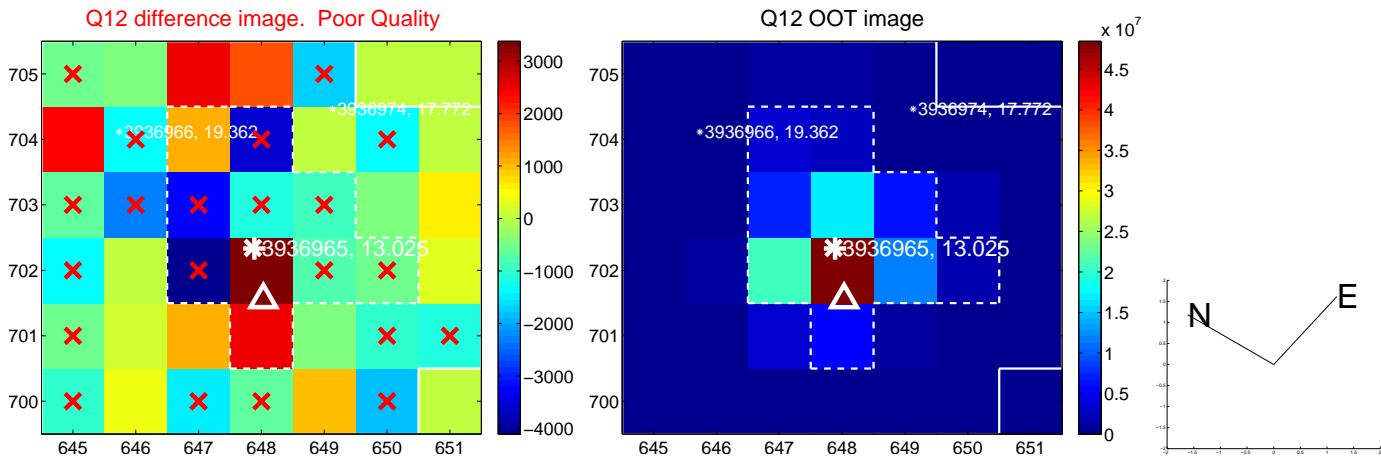
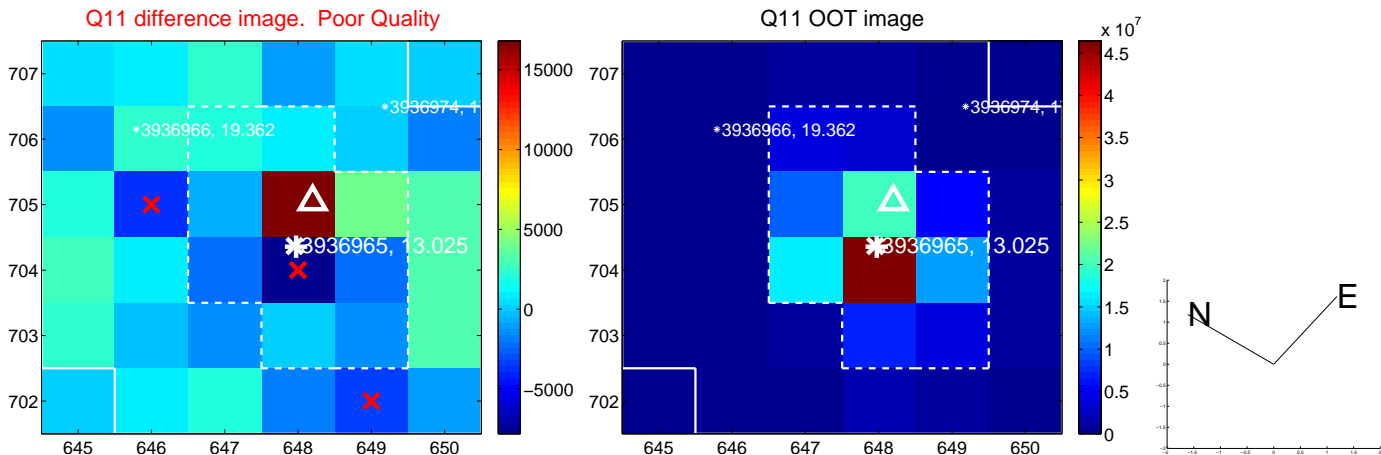
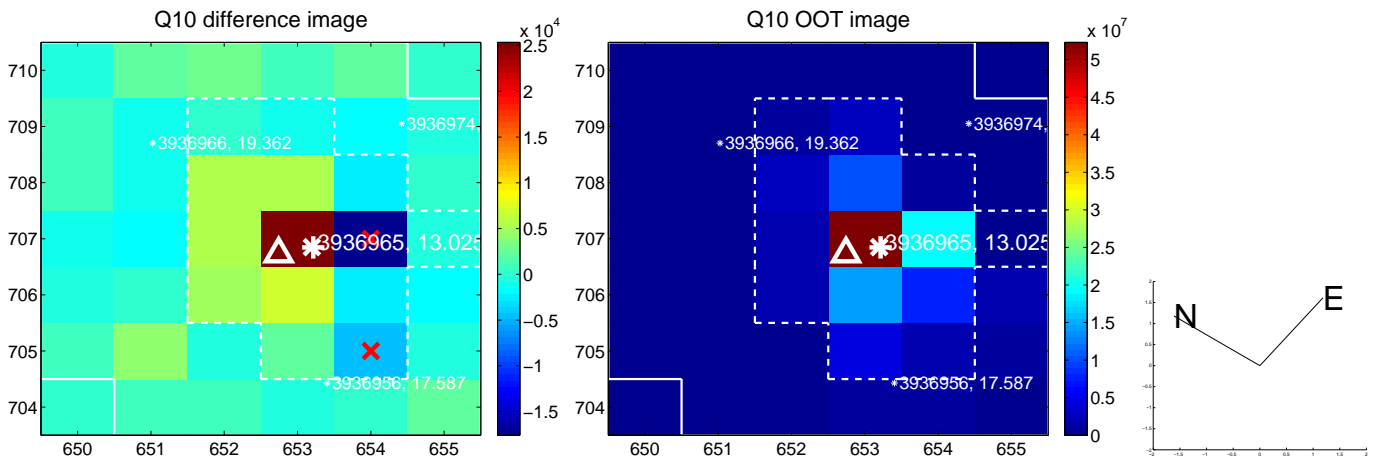
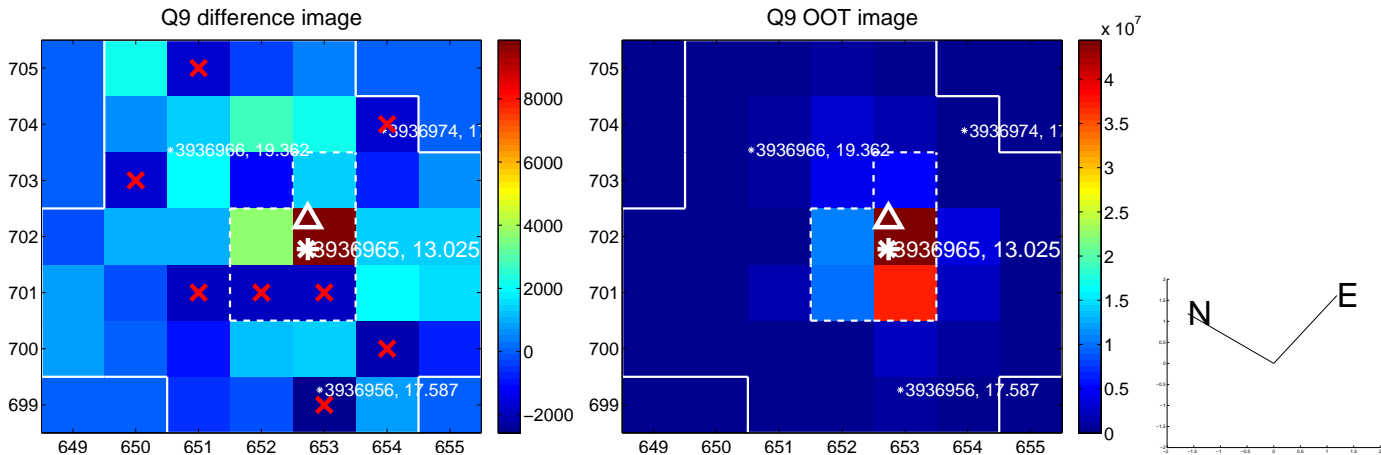
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



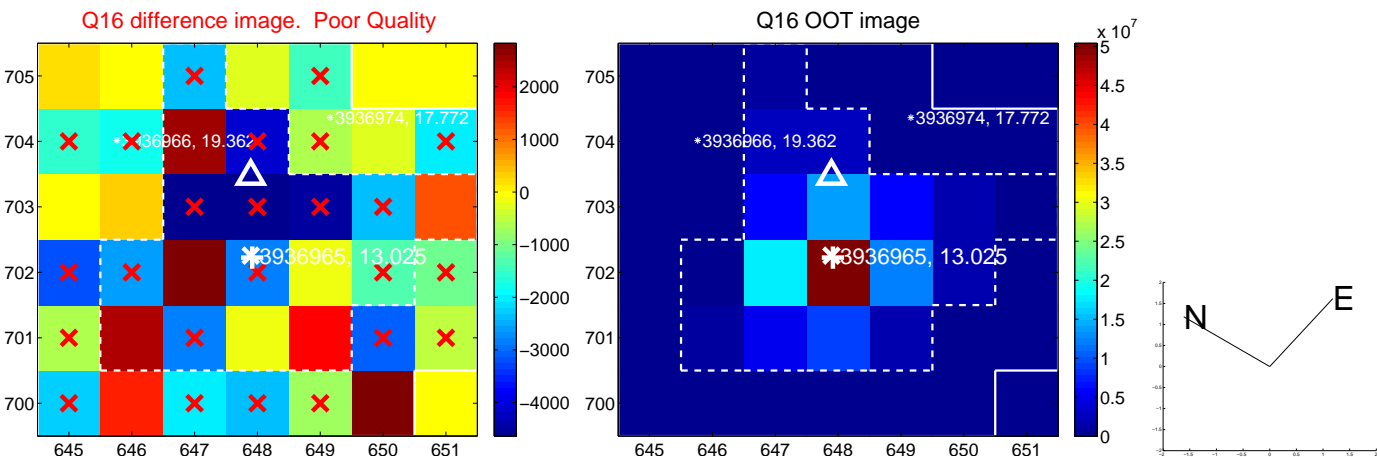
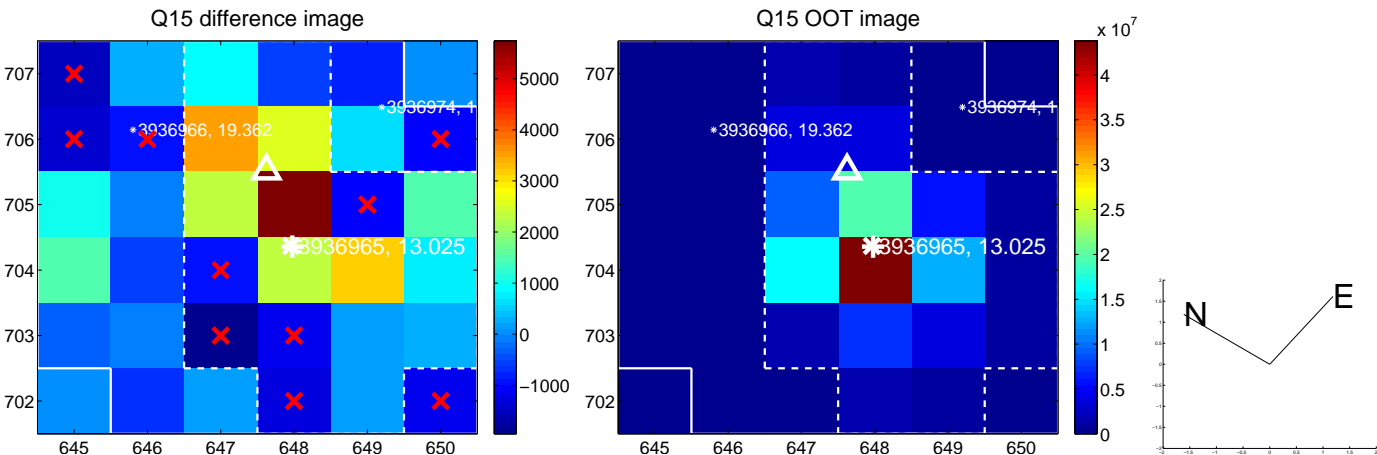
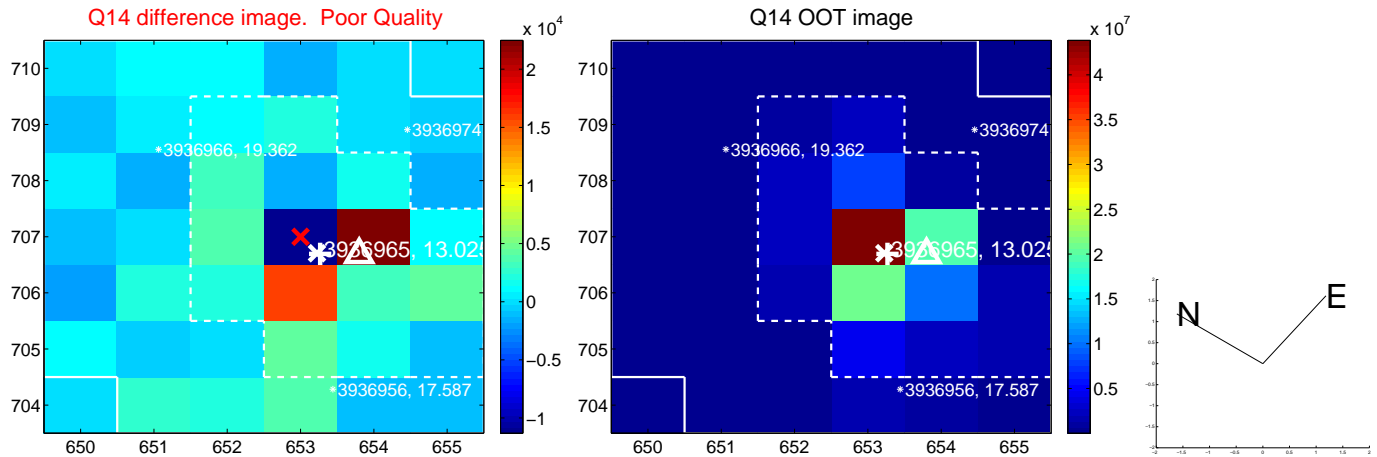
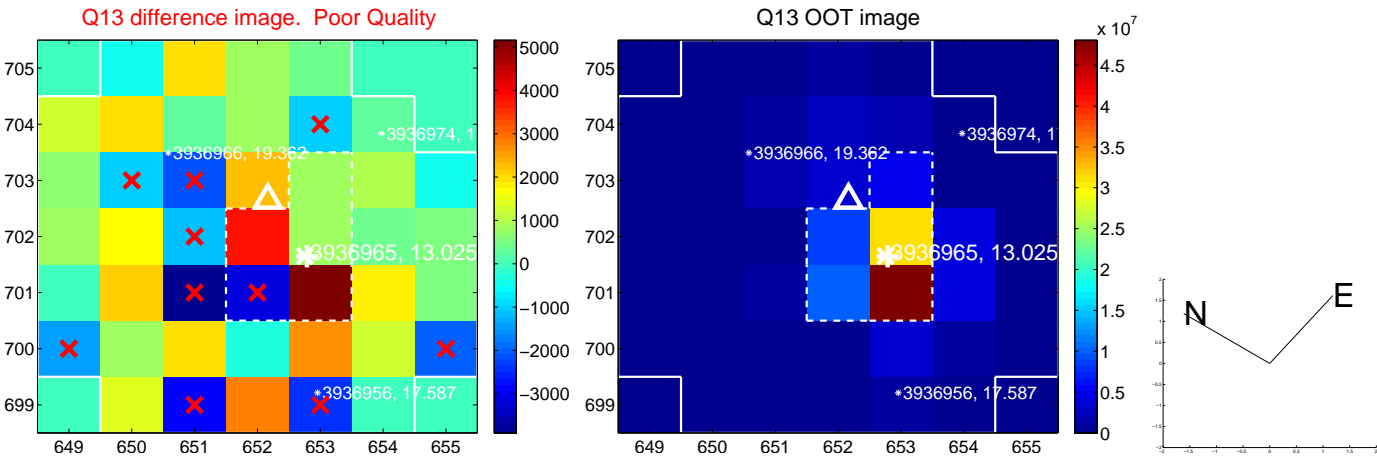
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



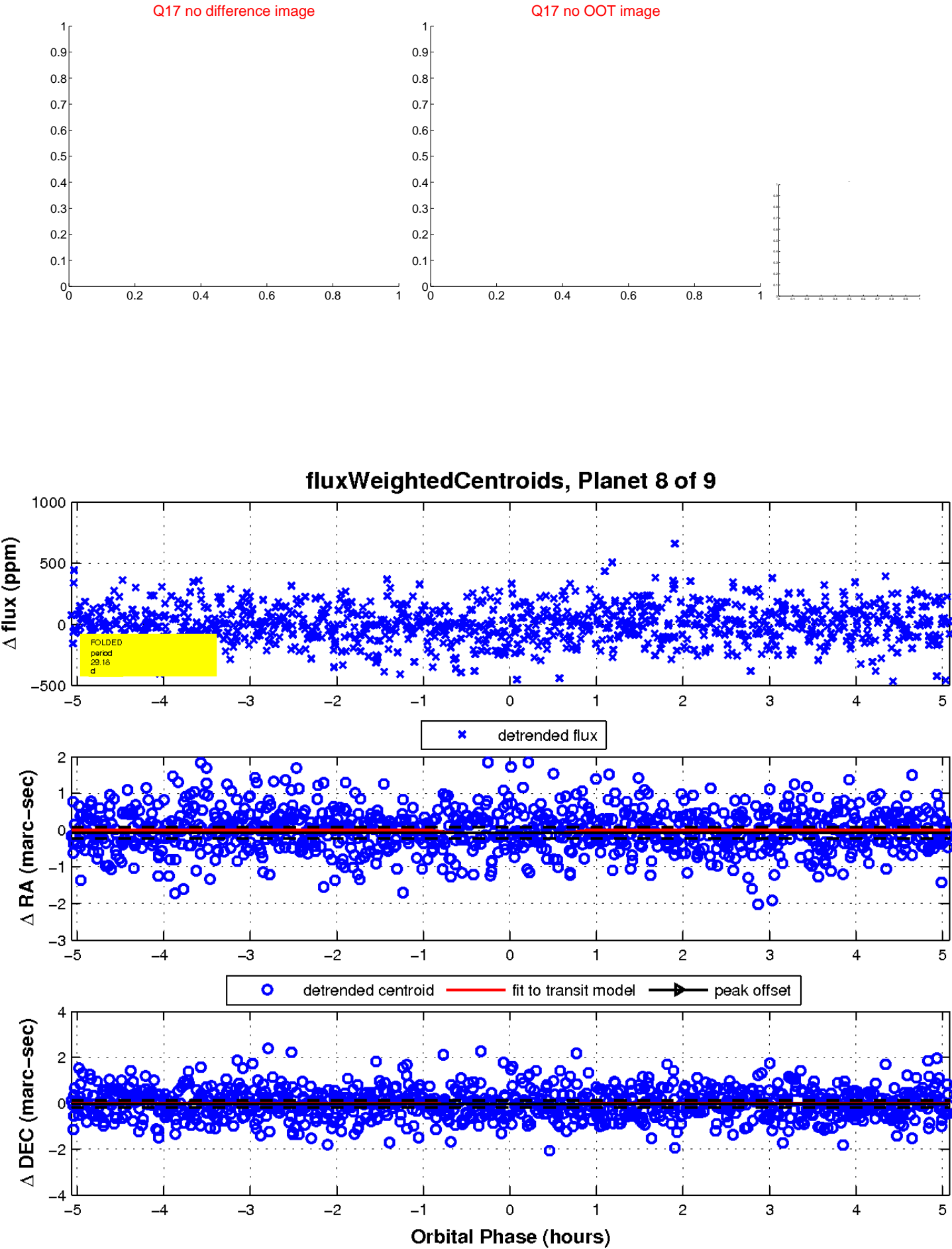
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

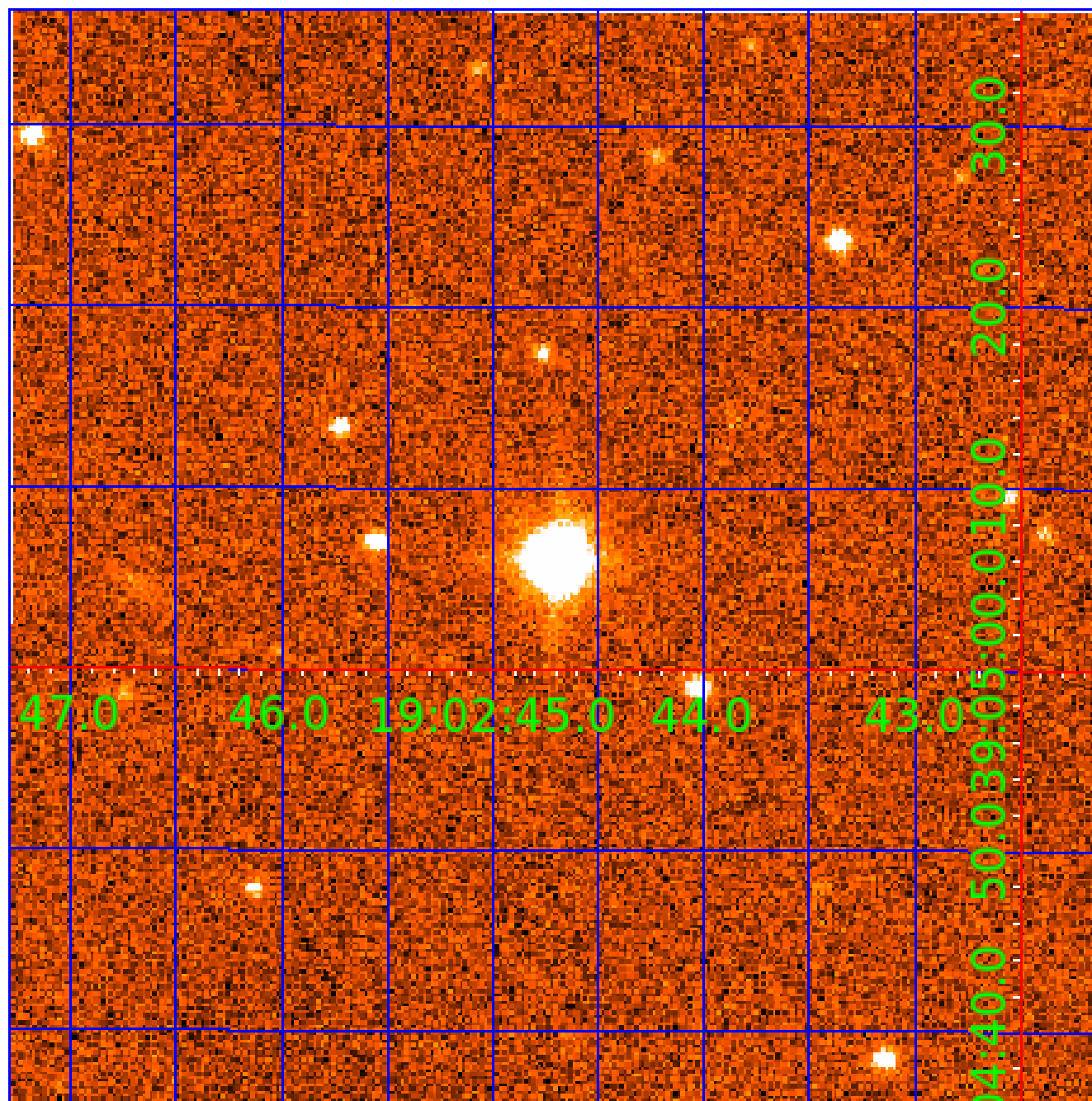


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003936965

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})
003936965-01	OBS	No	1.891773	131.793658	136.9	5.000	9.3	-1.0	3.44	6552	4.05	15332.17
003936965-02	OBS	No	1.891843	133.089596	10.4	11.413	8.5	4.9	3.44	6552	1.23	15331.41
003936965-03	OBS	No	36.932937	168.343758	338.0	1.060	9.5	8.0	3.44	6552	6.41	291.66
003936965-04	OBS	No	38.872837	158.247691	139.3	3.674	8.1	7.3	3.44	6552	4.57	272.42
003936965-05	OBS	No	40.732054	148.040665	131.3	6.925	9.2	7.0	3.44	6552	4.35	255.97
003936965-06	OBS	No	75.107419	168.861175	193.8	7.647	8.0	7.9	3.44	6552	5.37	113.20
003936965-08	OBS	No	29.184115	157.851288	318.3	1.695	8.5	9.1	3.44	6552	6.19	399.24
003936965-09	OBS	No	60.226036	184.674019	271.9	3.162	7.7	8.0	3.44	6552	6.31	151.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003936965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003936965-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003936965-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_MEAS
003936965-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003936965-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
003936965-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003936965-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
003936965-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

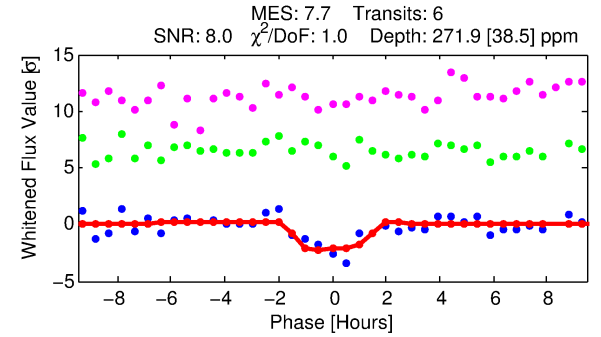
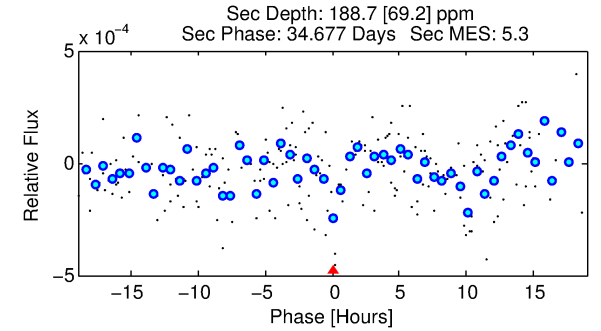
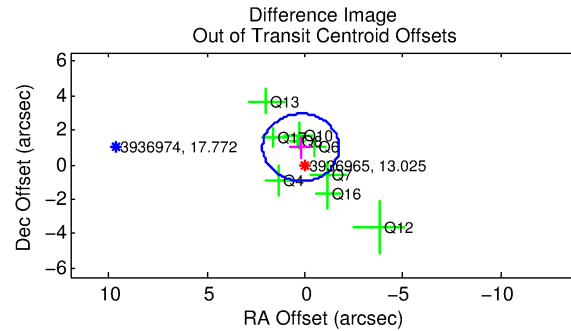
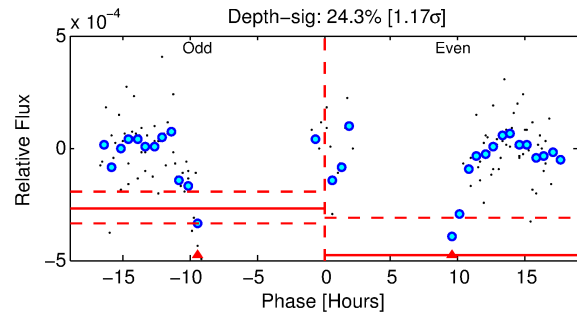
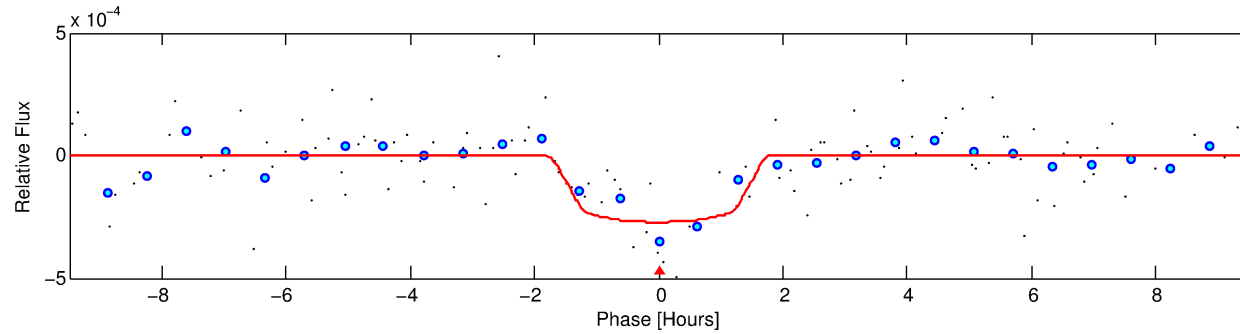
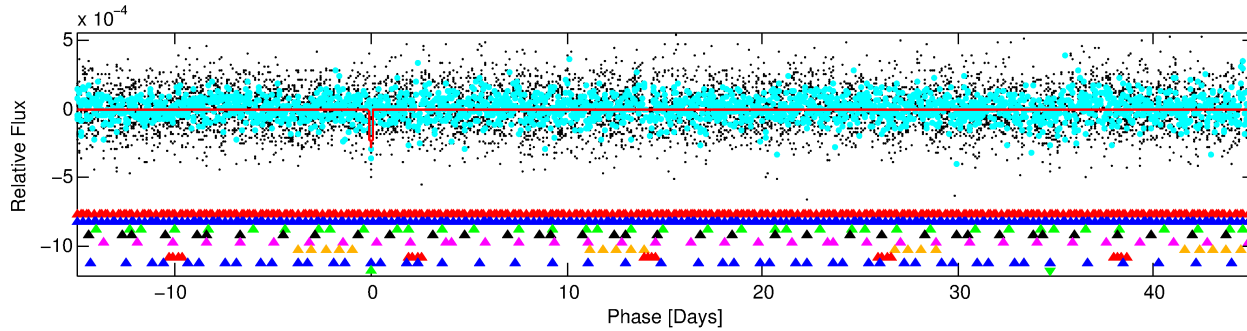
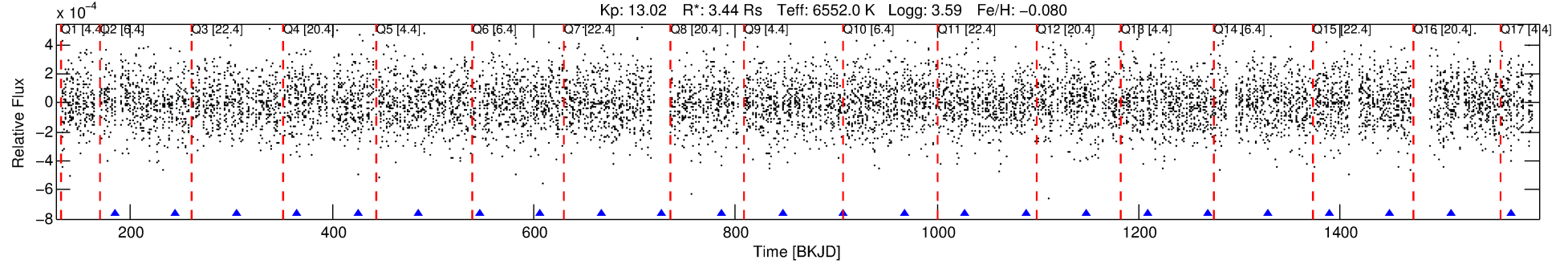
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003936965-09

No Significant Match Found

DV One-Page Summary

KIC: 3936965 Candidate: 9 of 9 Period: 60.226 d



DV Fit Results:

Period = 60.22604 [0.00085] d
Epoch = 184.6740 [0.0136] BKJD
Rp/R* = 0.0168 [0.0449]
a/R* = 87.94 [1340.91]
b = 0.82 [6.23]
Seff = 151.96 [85.99]
Teq = 895 [127] K
Rp = 6.31 [17.02] Re
a = 0.3586 [0.1263] AU
Ag = 334.75 [1800.92] [0.19 σ]
Teffp = 5921 [7922] K [0.63 σ]

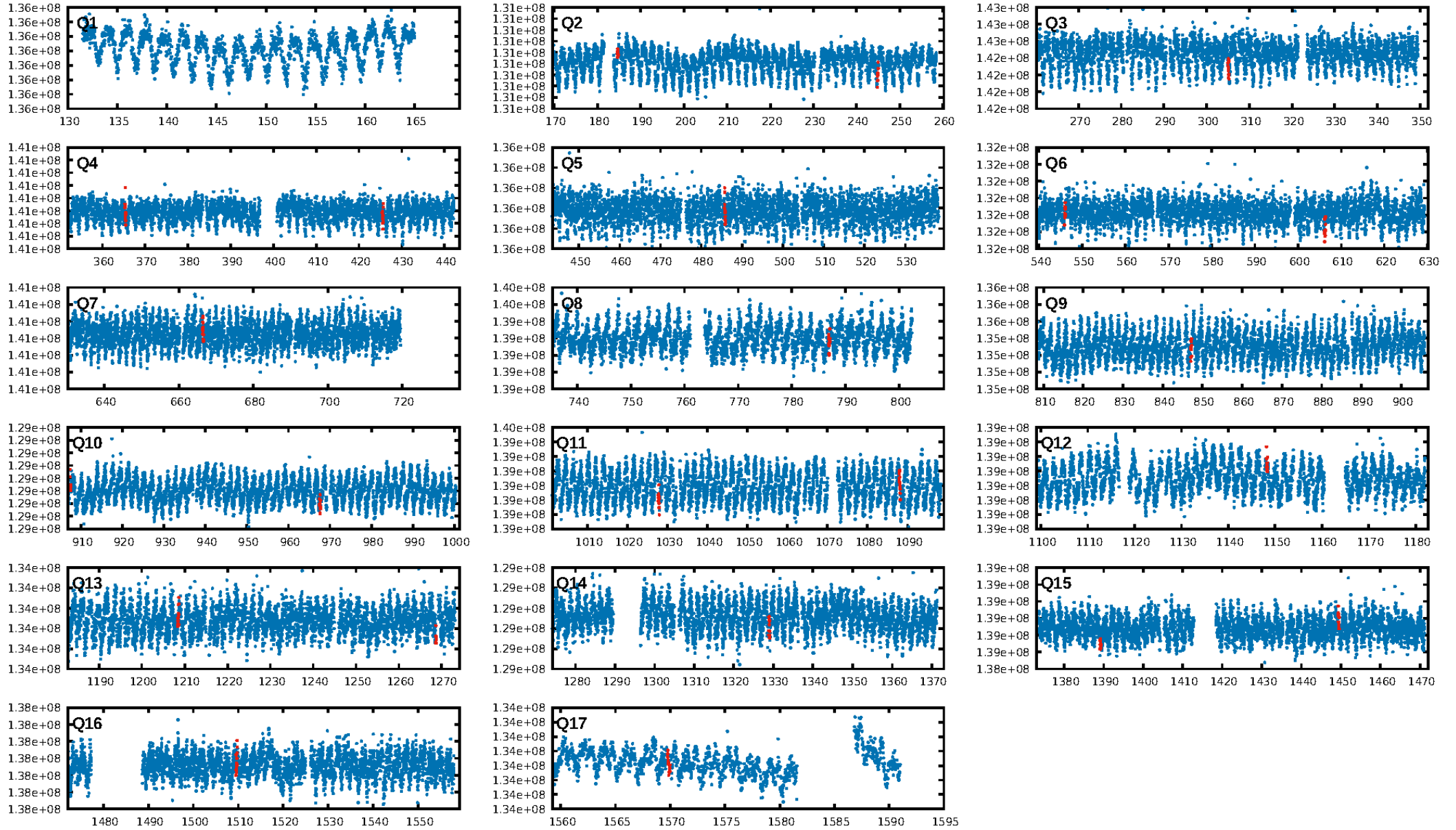
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [61.46 σ]
LongPeriod-sig: 100.0% [51.70 σ]
ModelChiSquare2-sig: 33.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.30e-07
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 7.535
Centroid-sig: 10.8%
Centroid-so: 0.898 arcsec [1.48 σ]
OotOffset-rm: 1.018 arcsec [1.57 σ]
OotOffset-st: 2/1/4/2 [9]
KicOffset-rm: 0.984 arcsec [1.17 σ]
KicOffset-st: 2/1/4/2 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 0.44 [7/16]

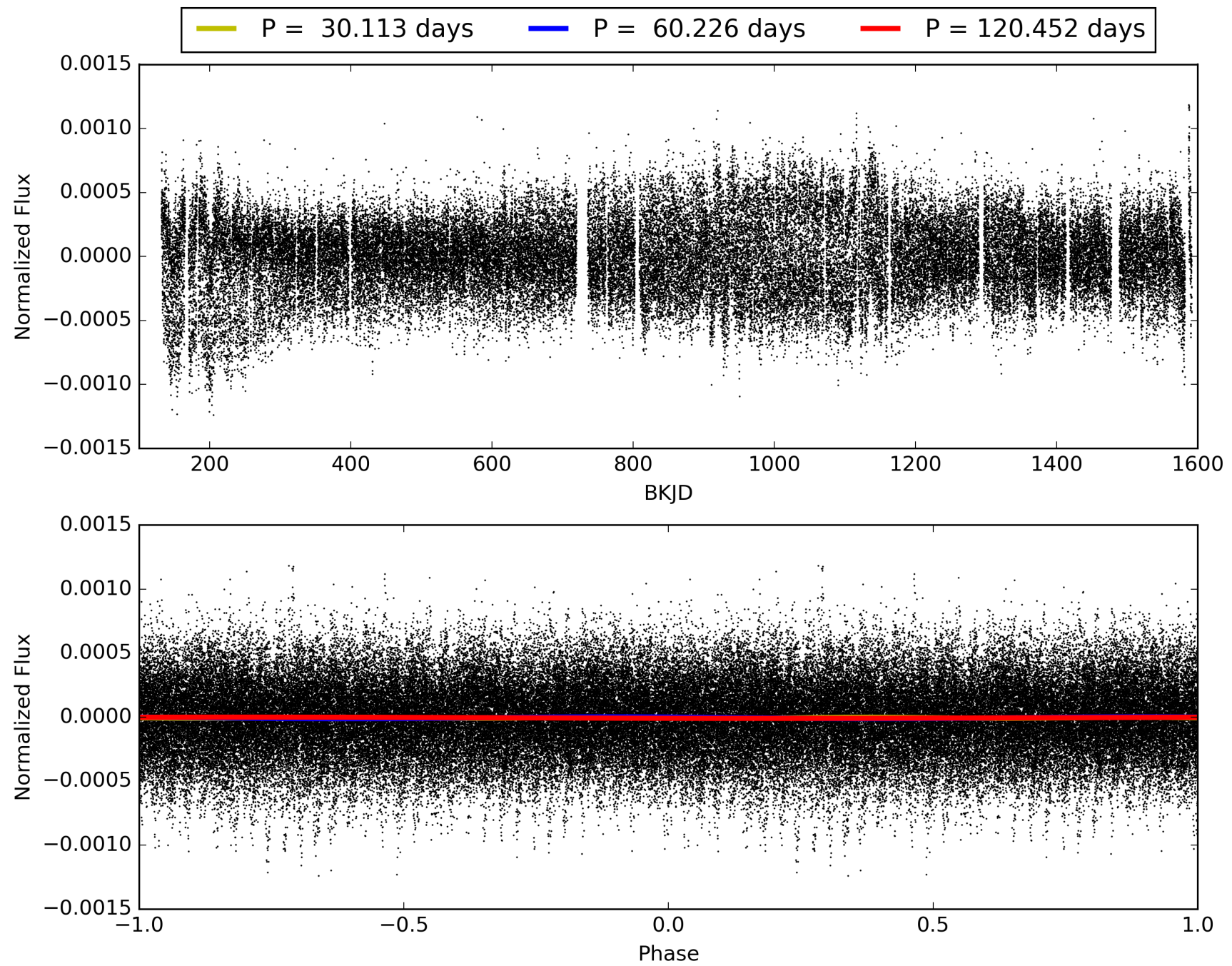
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:44:46 Z

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

TCE 003936965-09, PDC Light Curves

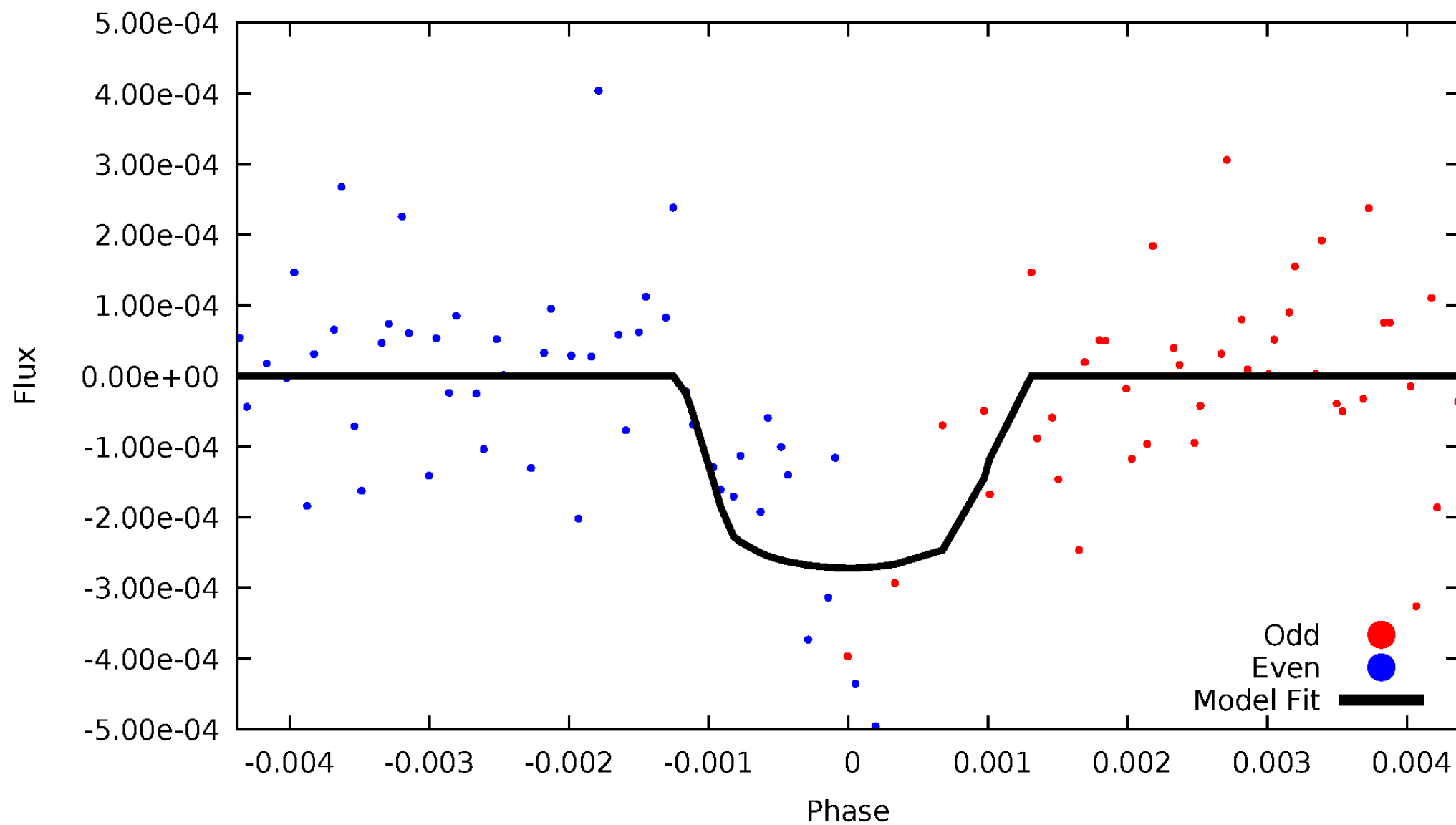


TCE 003936965-09



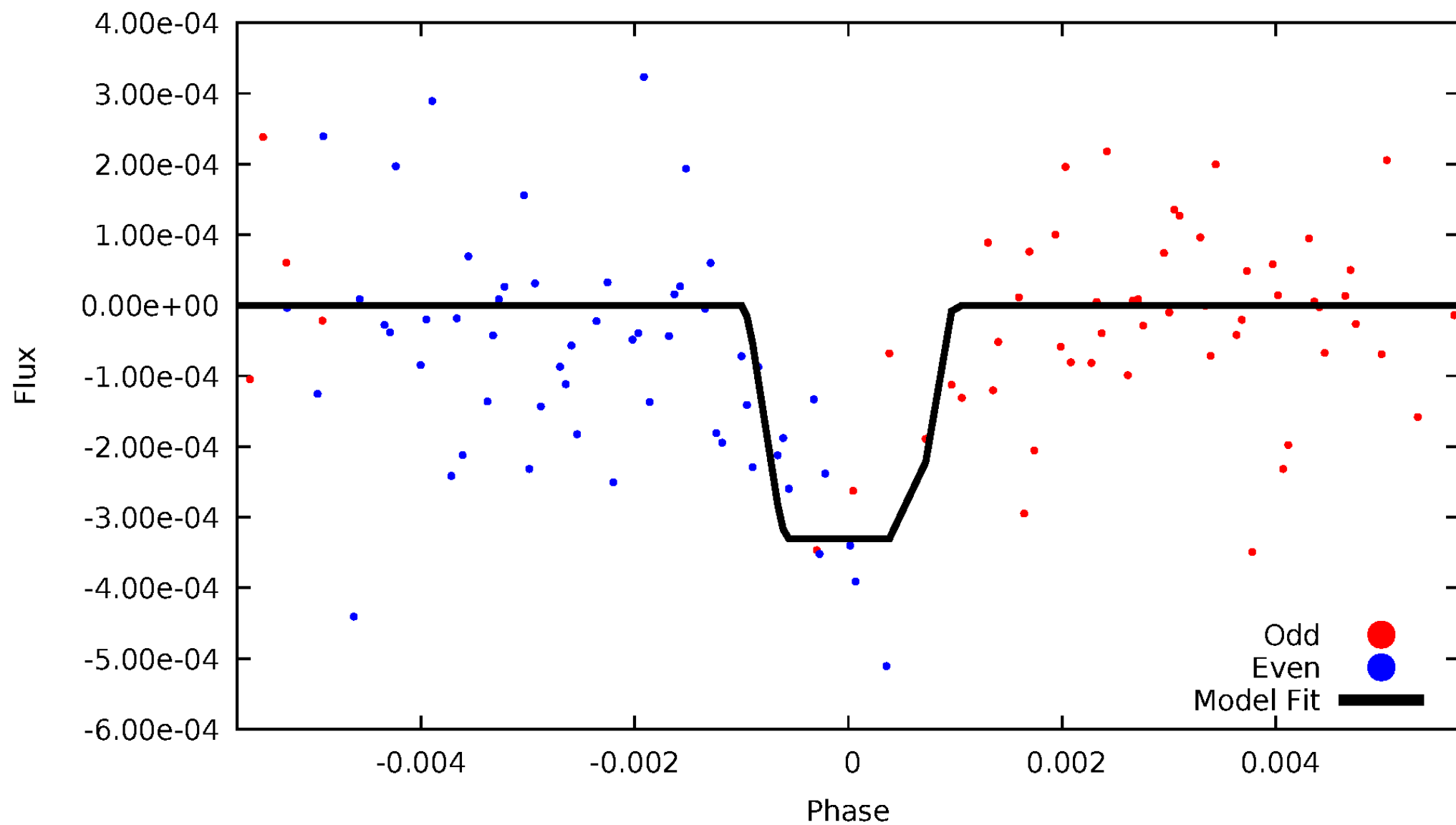
DV Odd/Even

TCE 003936965-09



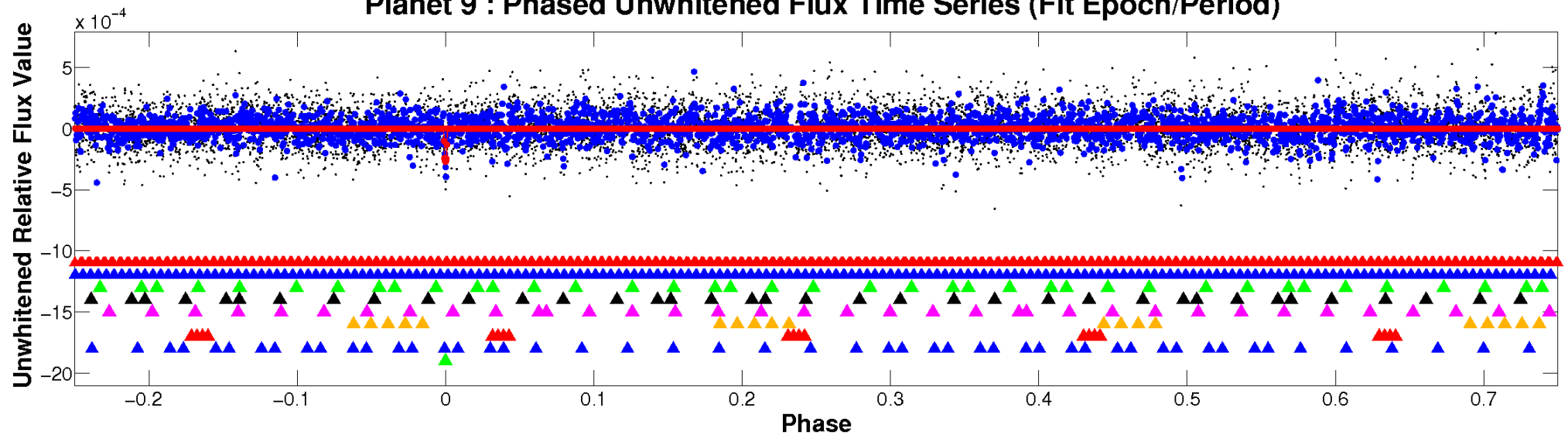
ALT Odd/Even

TCE 003936965-09

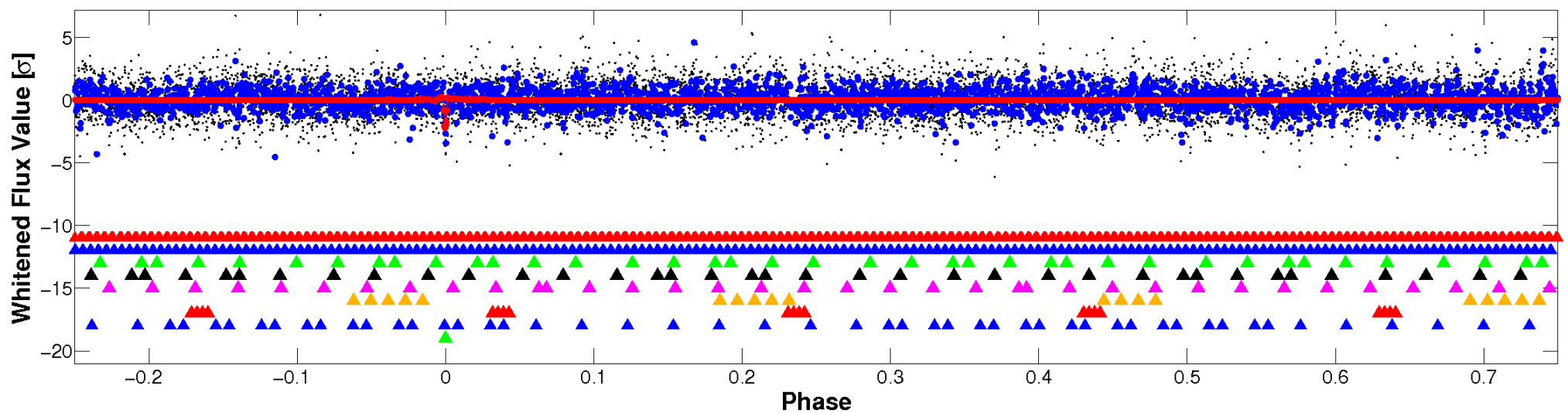


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

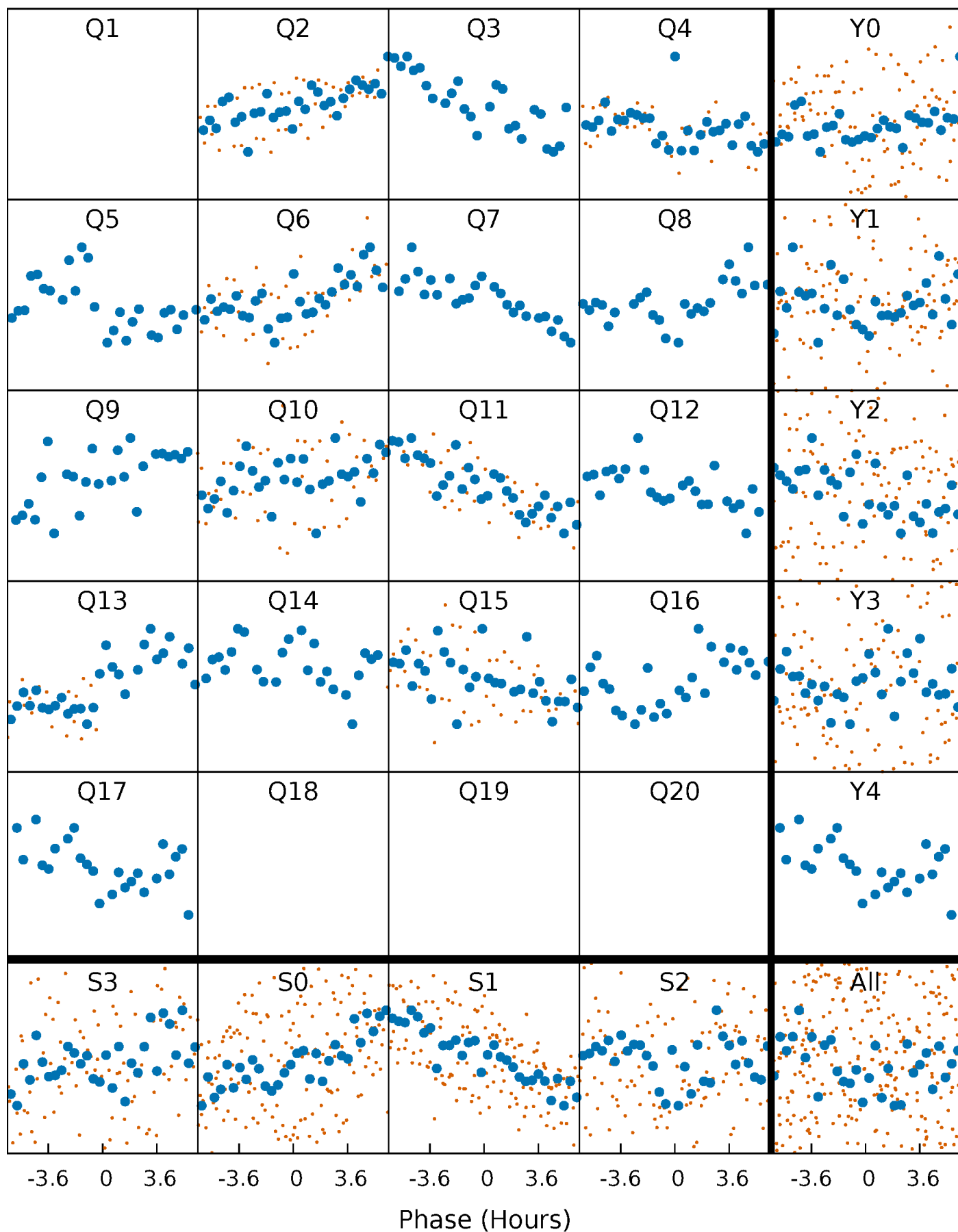


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



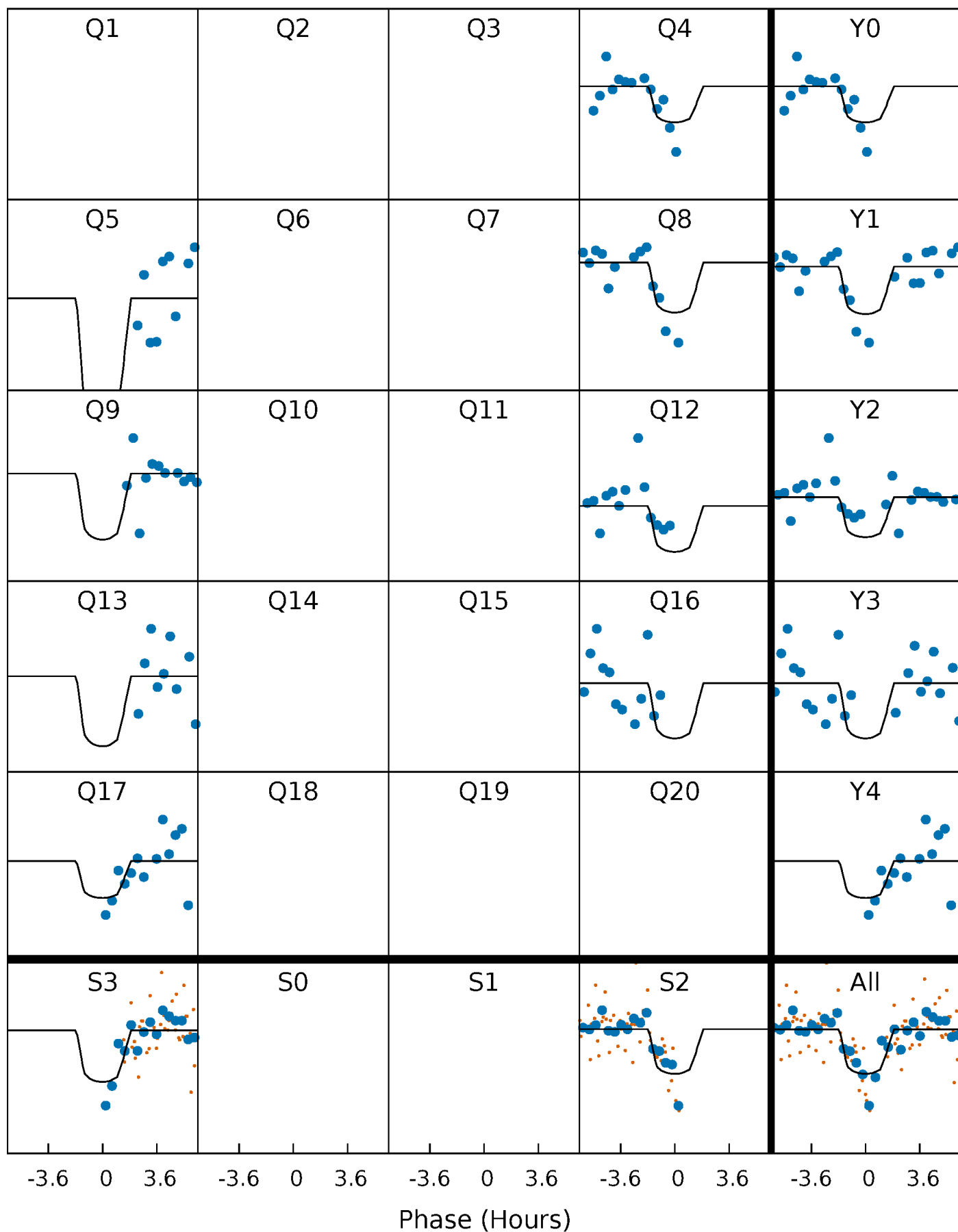
PDC Quarter-Phased Transit Curves

TCE 003936965-09 P= 60.226036 Days $T_0=184.674019$ (BKJD)



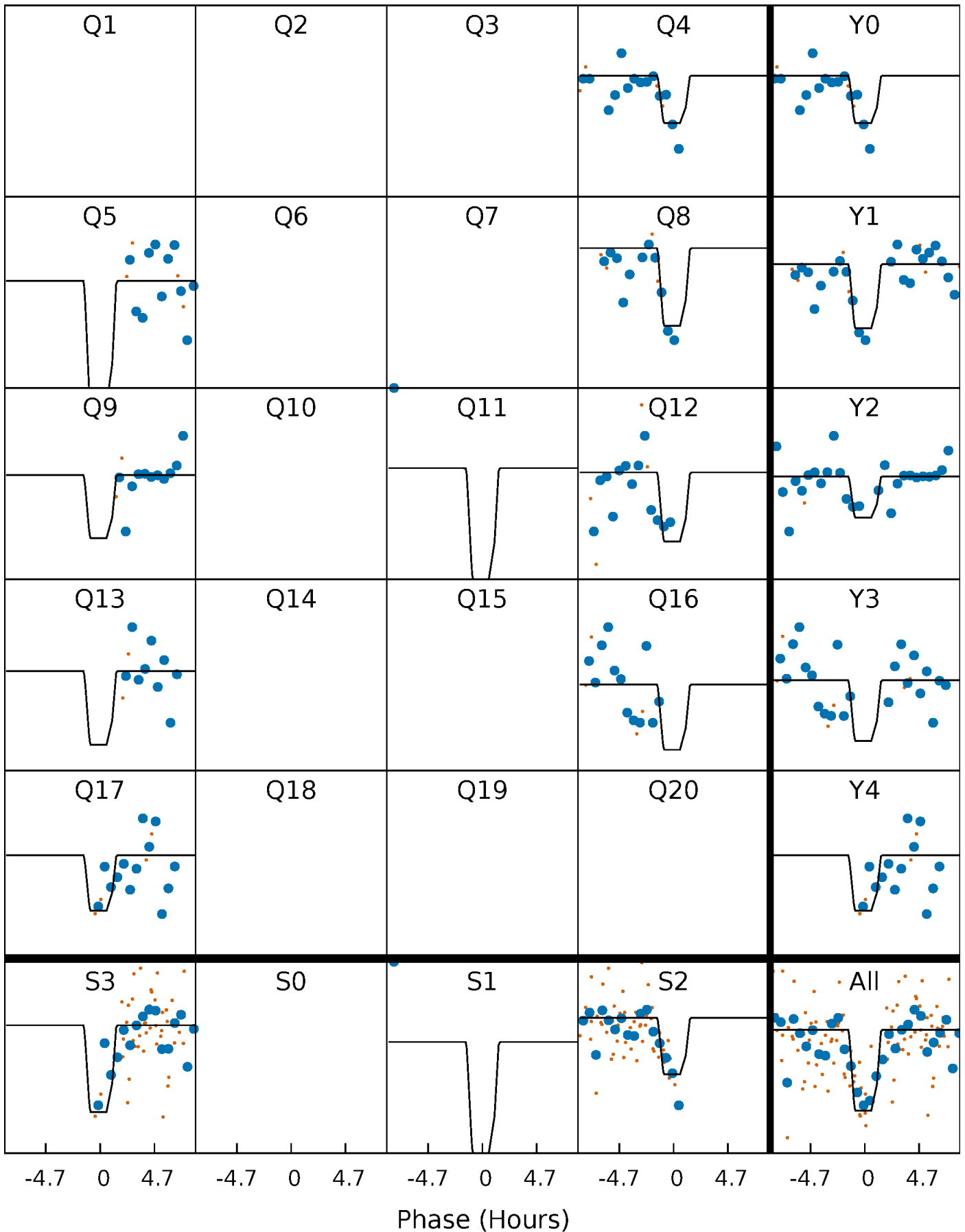
DV Quarter-Phased Transit Curves

TCE 003936965-09 $P = 60.226036$ Days $T_0 = 184.674019$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

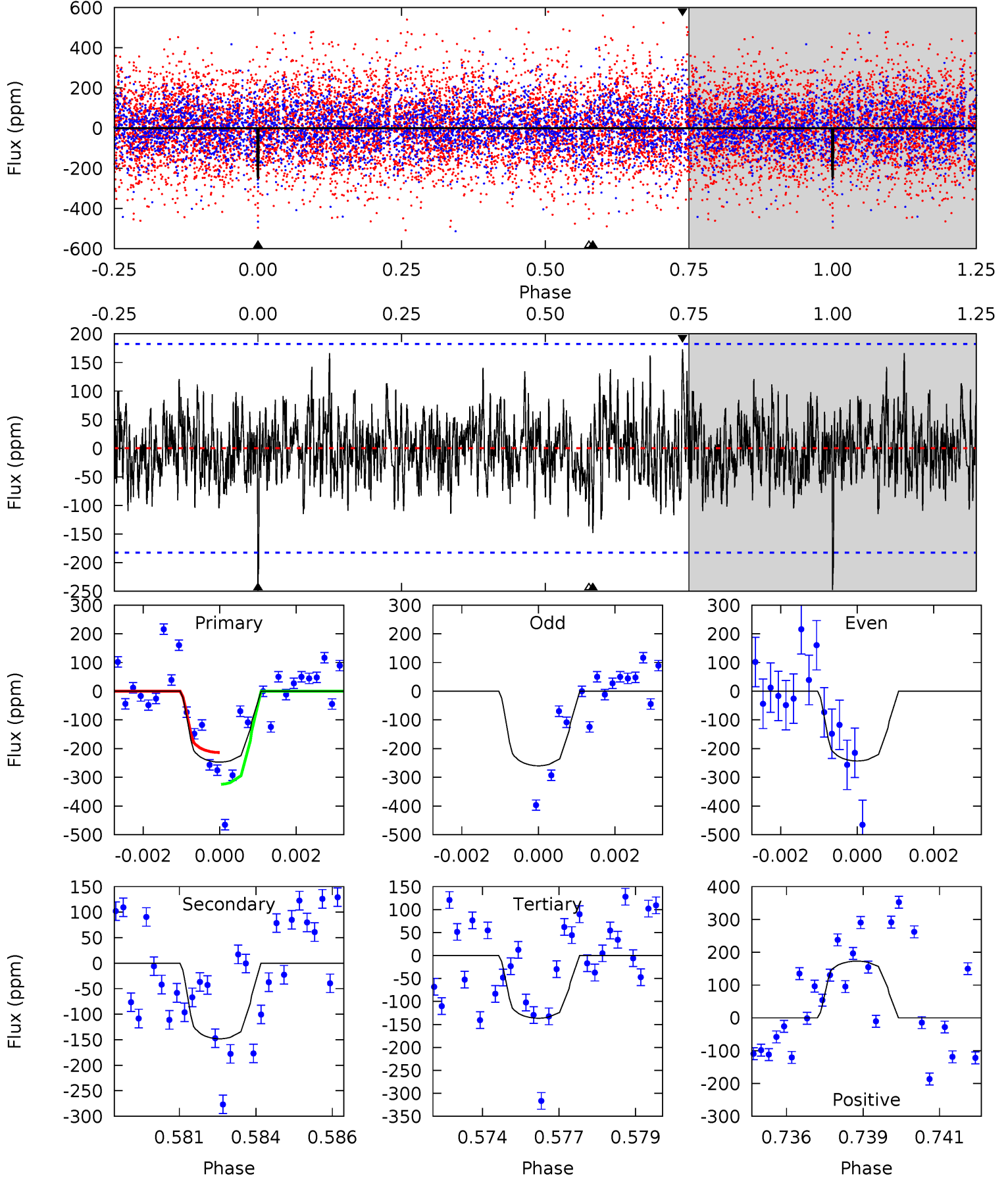
TCE 003936965-09 $P = 60.227463$ Days $T_0 = 184.658662$ (BKJD)



DV Model-Shift Uniqueness Test

003936965-09, P = 60.226036 Days, E = 124.447983 Days

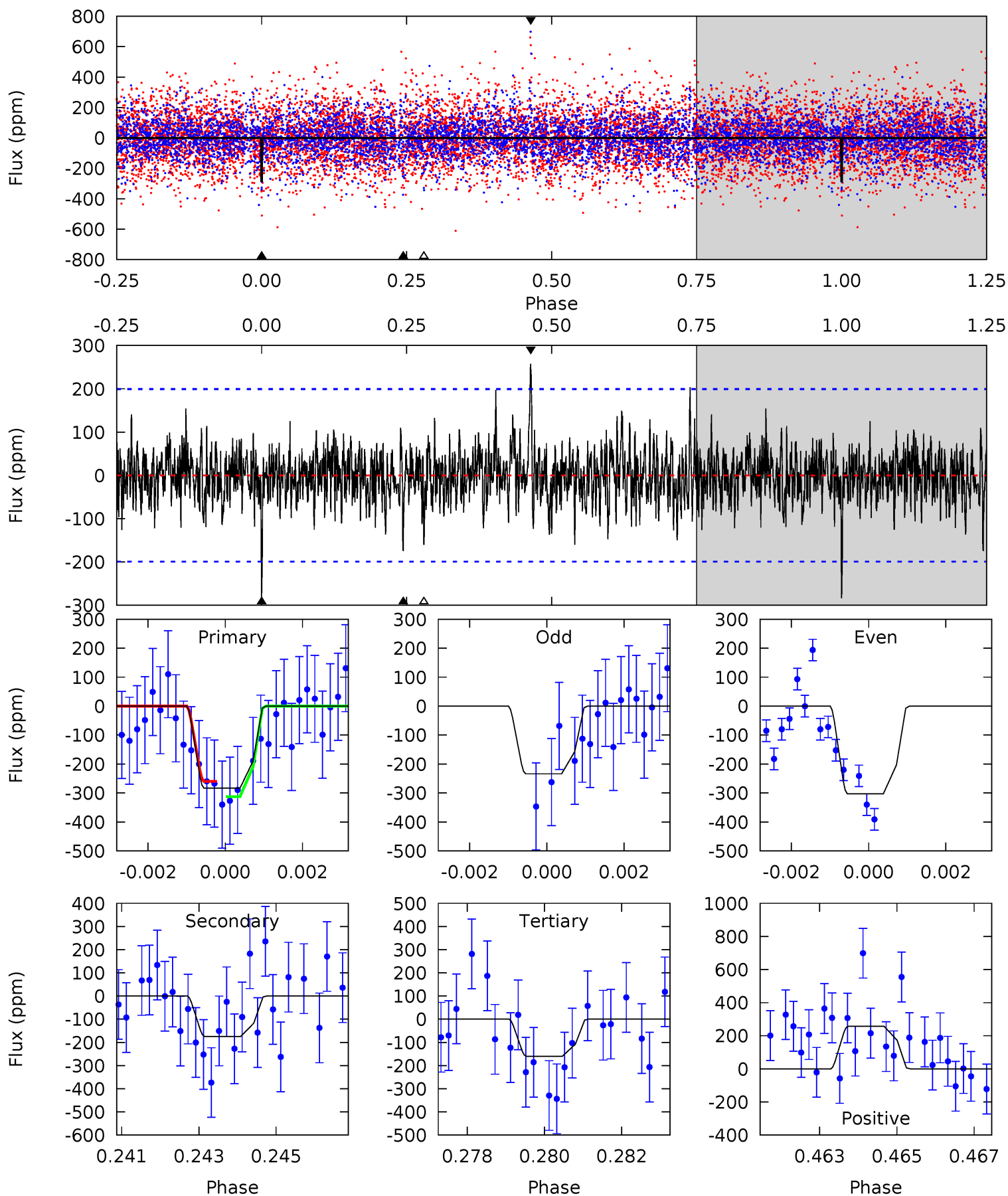
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.17	4.30	3.96	5.02	5.29	3.03	1.35	3.21	2.15	0.34	-0.72	0.22	0.84	0.41	1.52



Alt Model-Shift Uniqueness Test

003936965-09, P = 60.227463 Days, E = 124.431199 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.57	4.67	4.29	6.89	5.33	3.09	1.31	3.29	0.69	0.39	-2.21	0.86	0.98	0.48	0.69



Stellar Parameters For KIC 003936965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+158}_{-178}	$3.594^{+0.323}_{-0.057}$	$-0.080^{+0.300}_{-0.250}$	$3.440^{+0.323}_{-1.291}$	$1.694^{+0.216}_{-0.324}$	$0.059^{+0.137}_{-0.011}$
	+2%/-3%	+9%/-2%	+375%/-312%	+9%/-38%	+13%/-19%	+233%/-19%
Source	PHO1	FLK73	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 003936965-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-148 ± 34	$13.66^{+12.79}_{-8.95}$	1228^{+56}_{-105}	3965^{+2215}_{-758}	57^{+415}_{-43}
Alt.	-175 ± 37	$11.86^{+13.01}_{-7.66}$	1231^{+58}_{-110}	4288^{+2686}_{-982}	86^{+628}_{-67}

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 $A_{obs} \gg 1.0$

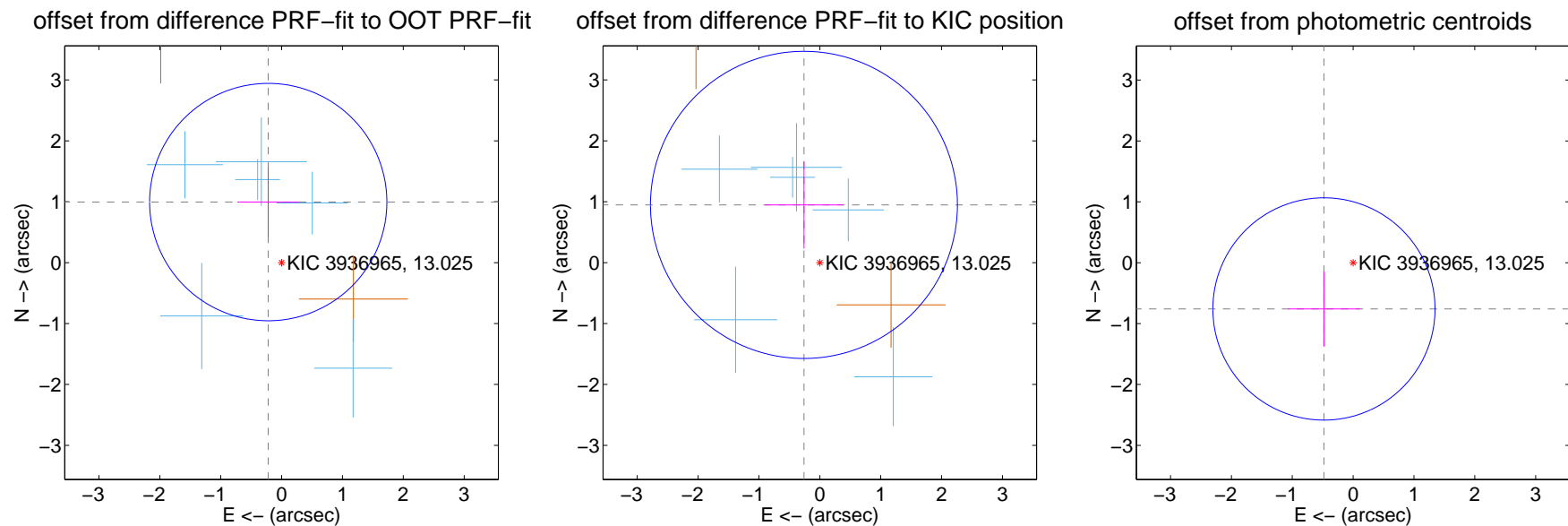
DV Centroid Data

Supplemental centroid analysis for 003936965-09. Kepler magnitude: 13.03. Transit SNR 8.03

There are 6 quarters with good PRF difference image offsets

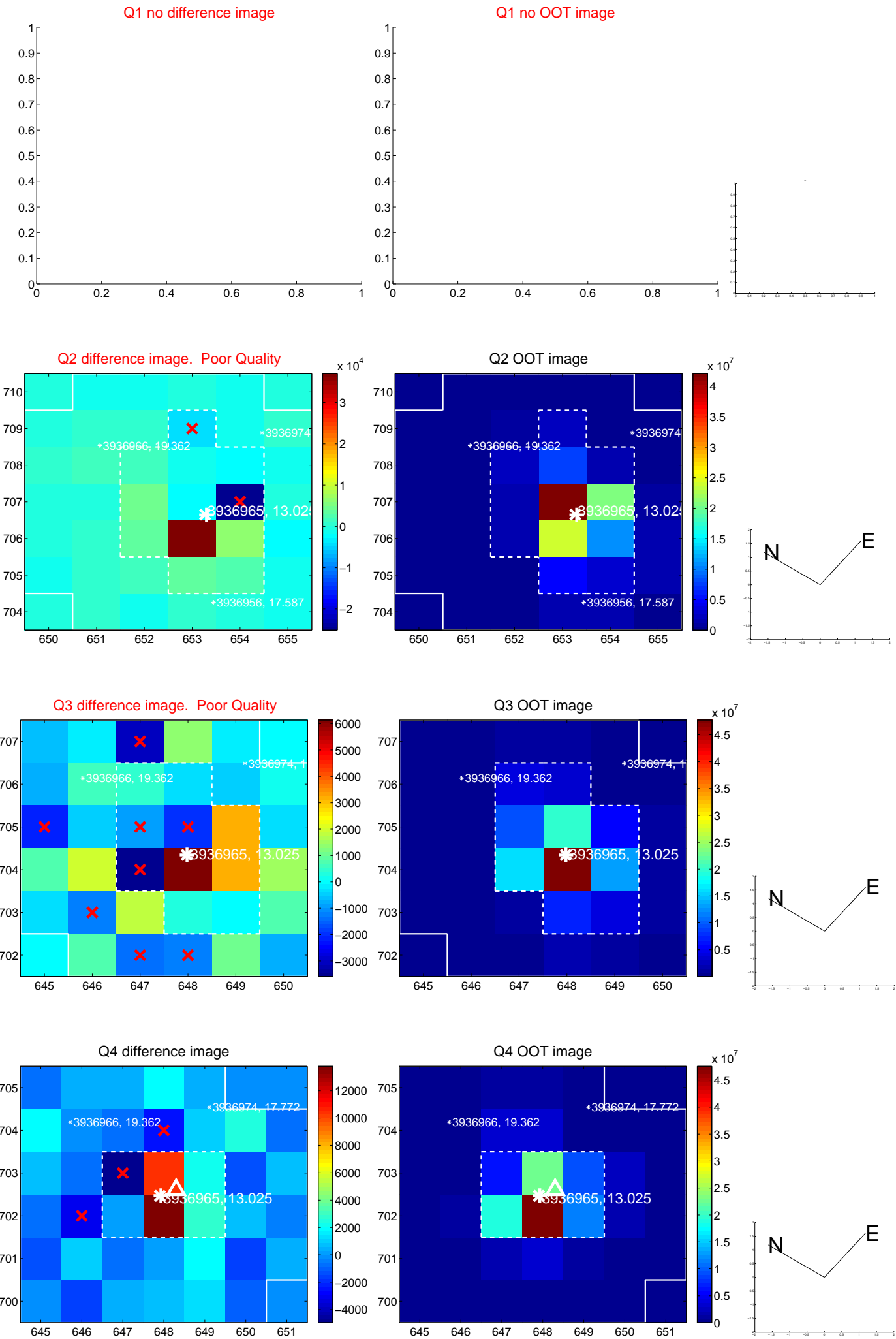
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.018 ± 0.650	1.57	0.219 ± 0.508	0.995 ± 0.574
PRF-fit source offset from KIC position	0.984 ± 0.841	1.17	0.261 ± 0.641	0.948 ± 0.717
photometric centroid source offset	0.90 ± 0.61	1.48	0.48 ± 0.59	-0.76 ± 0.62

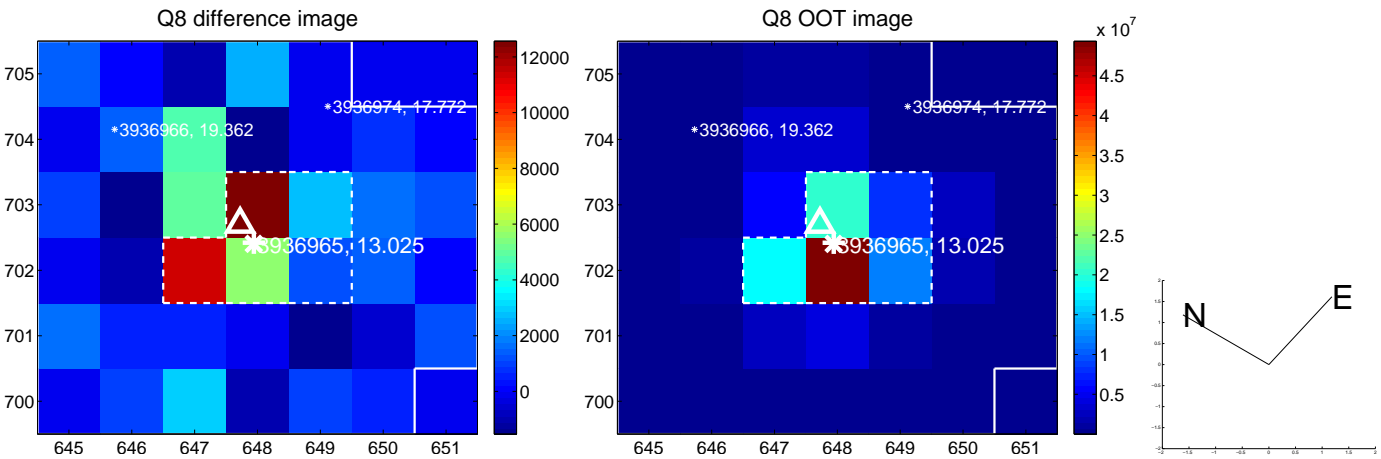
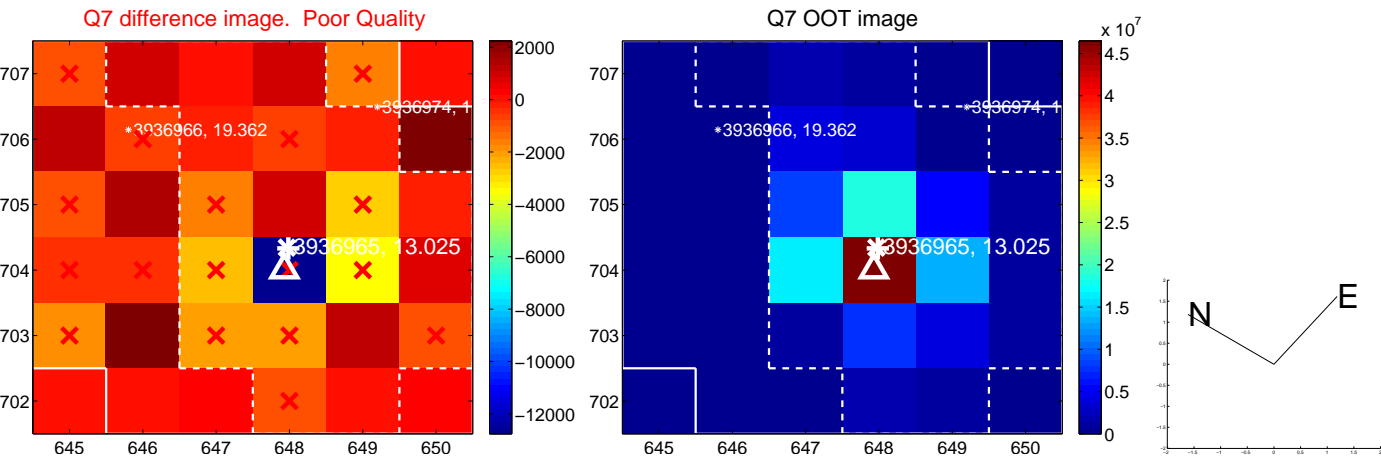
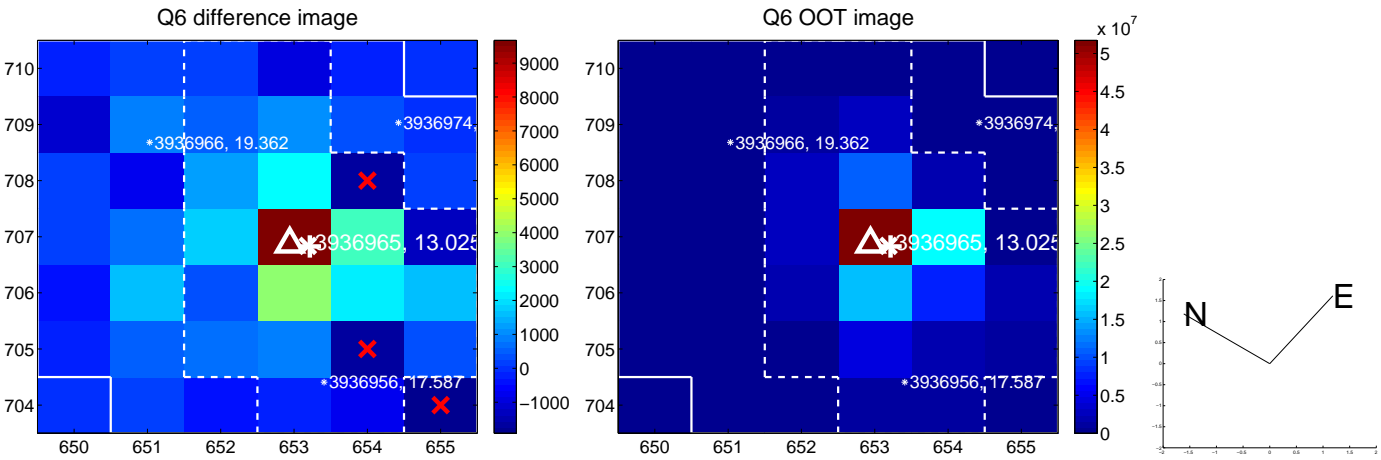
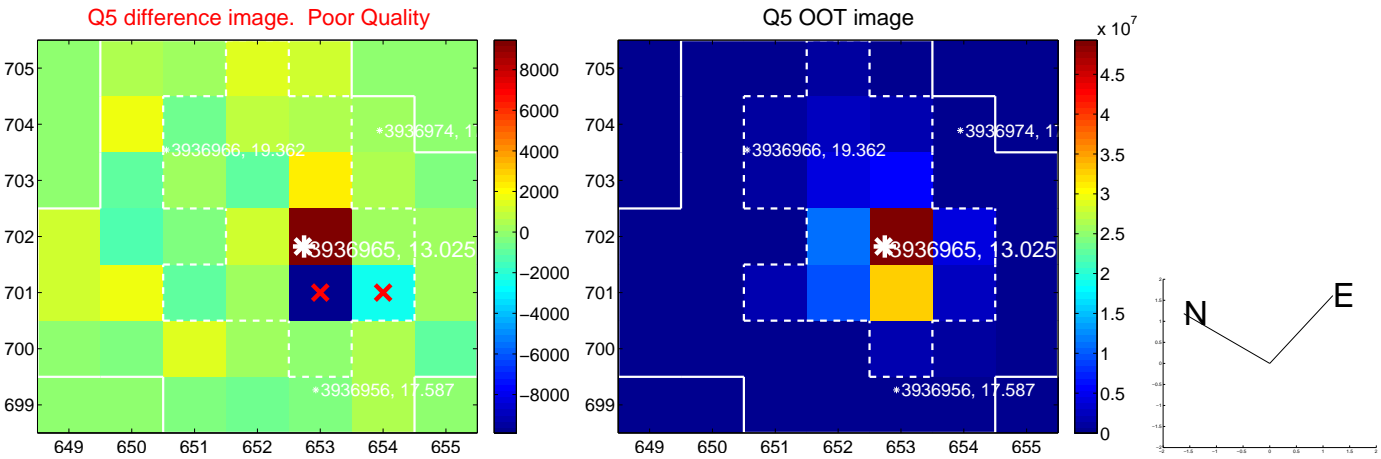


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

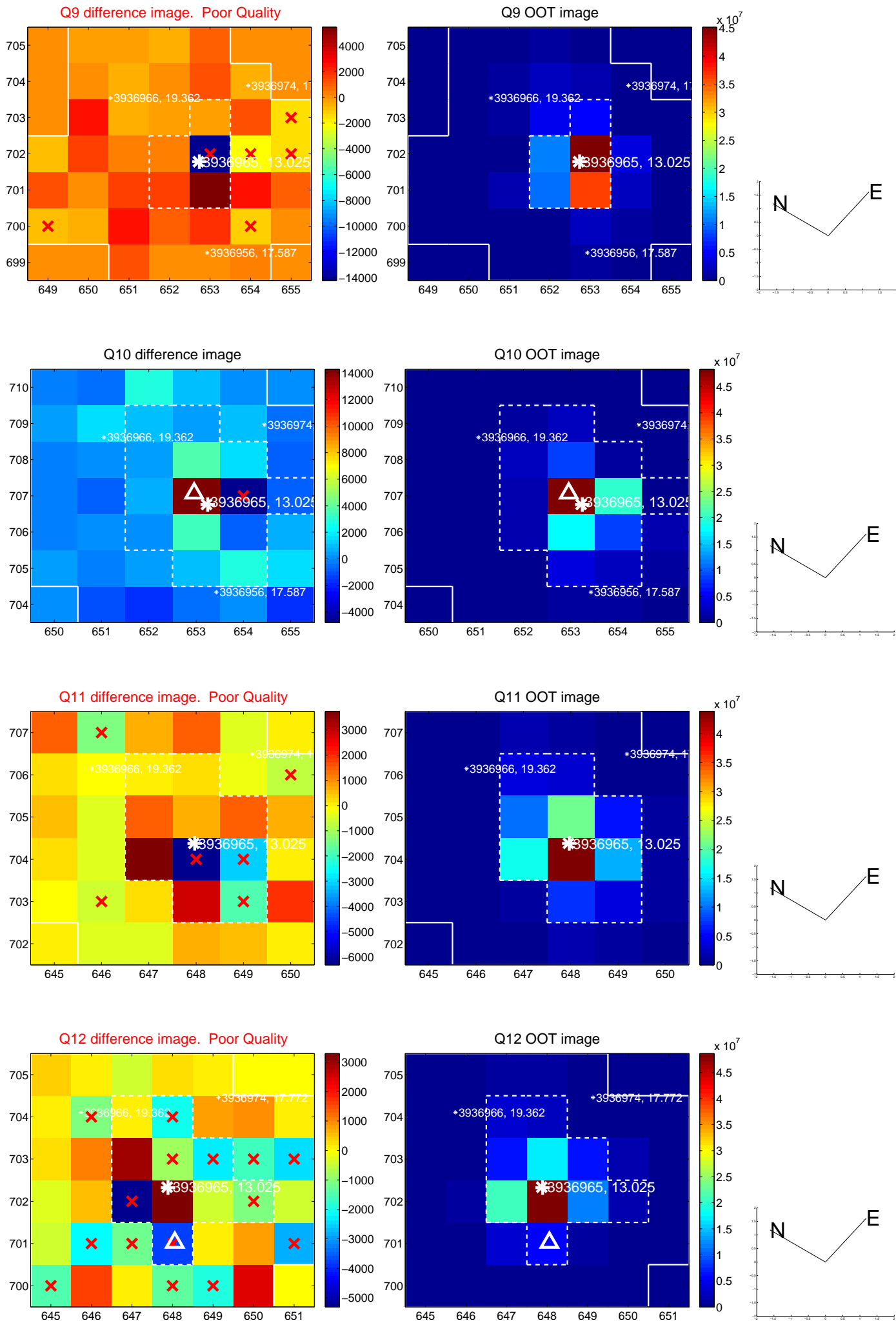
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



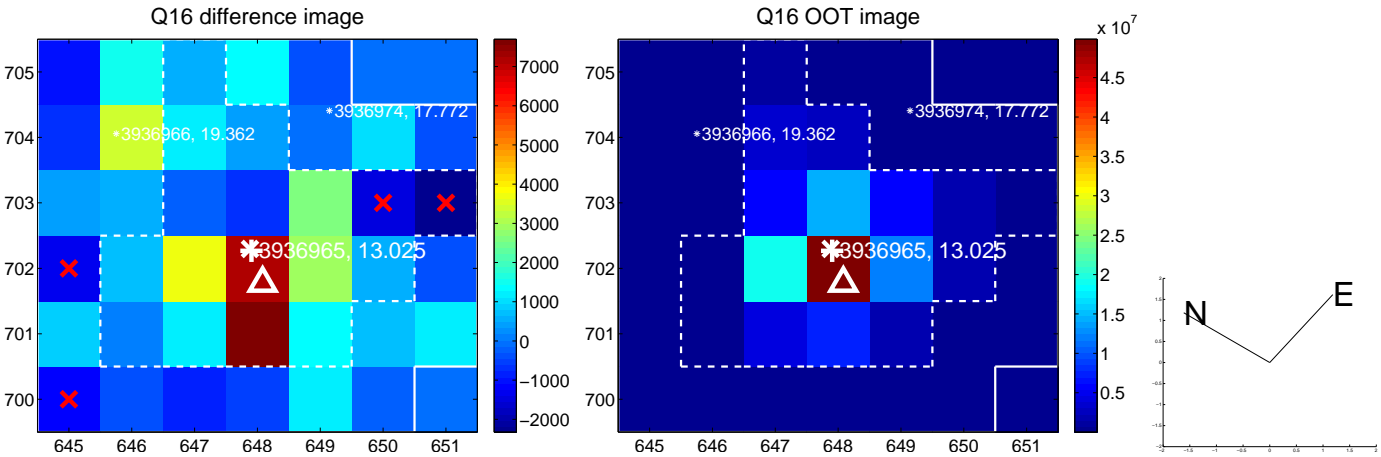
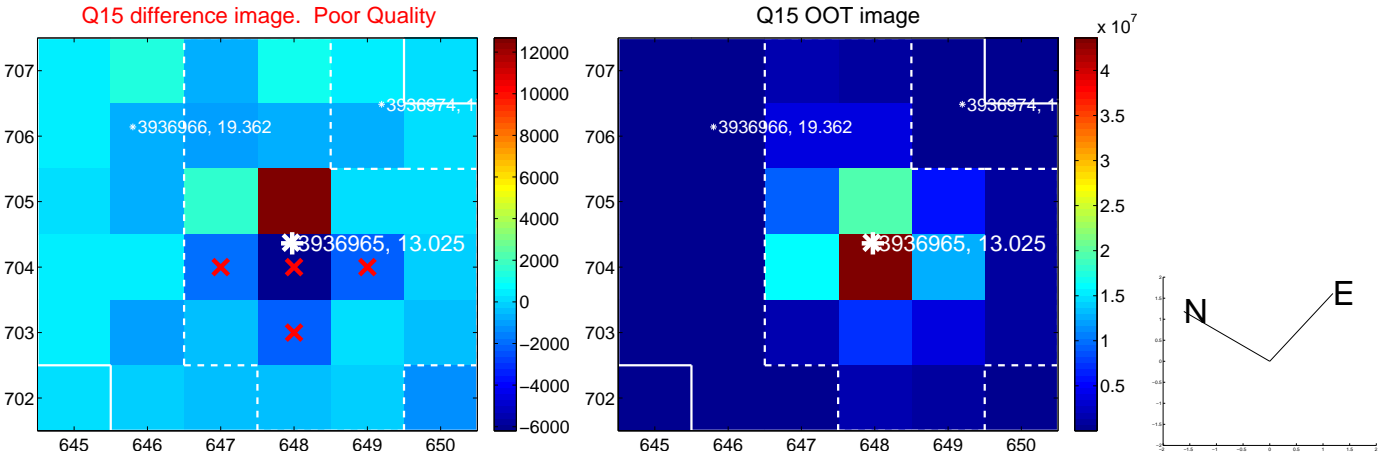
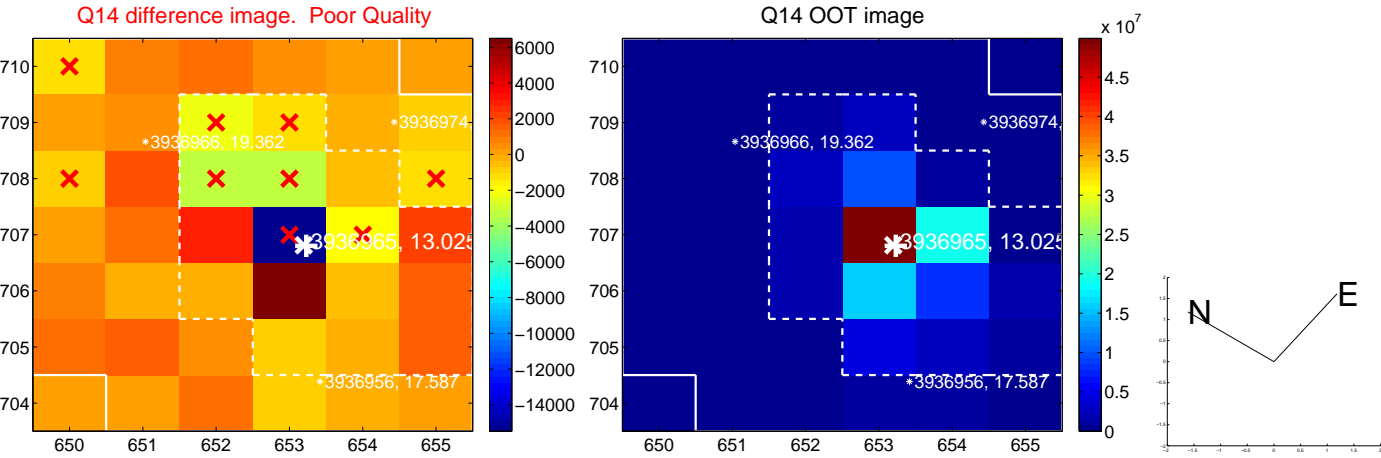
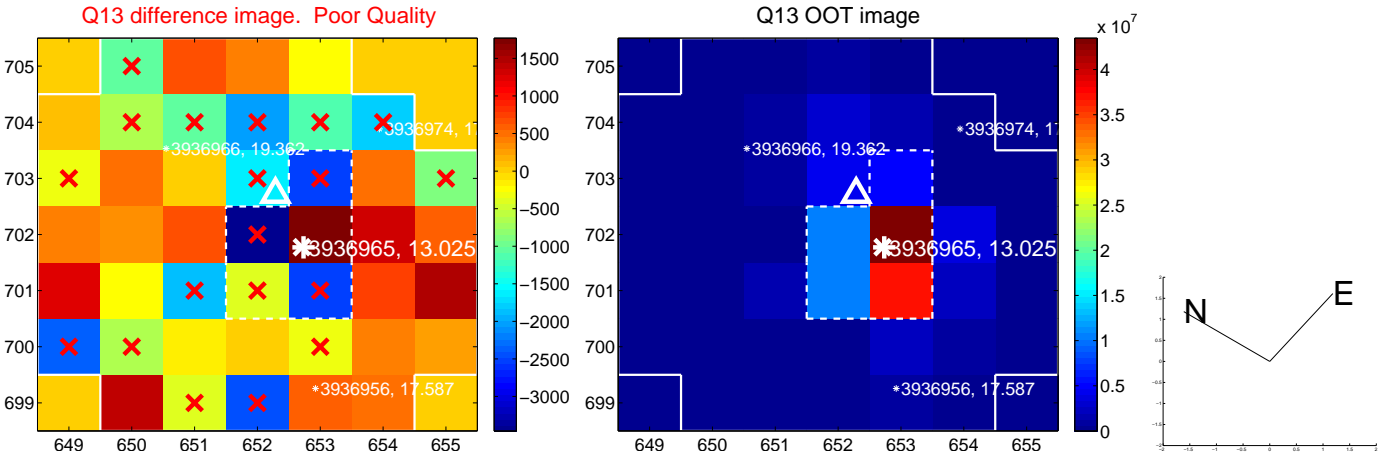
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



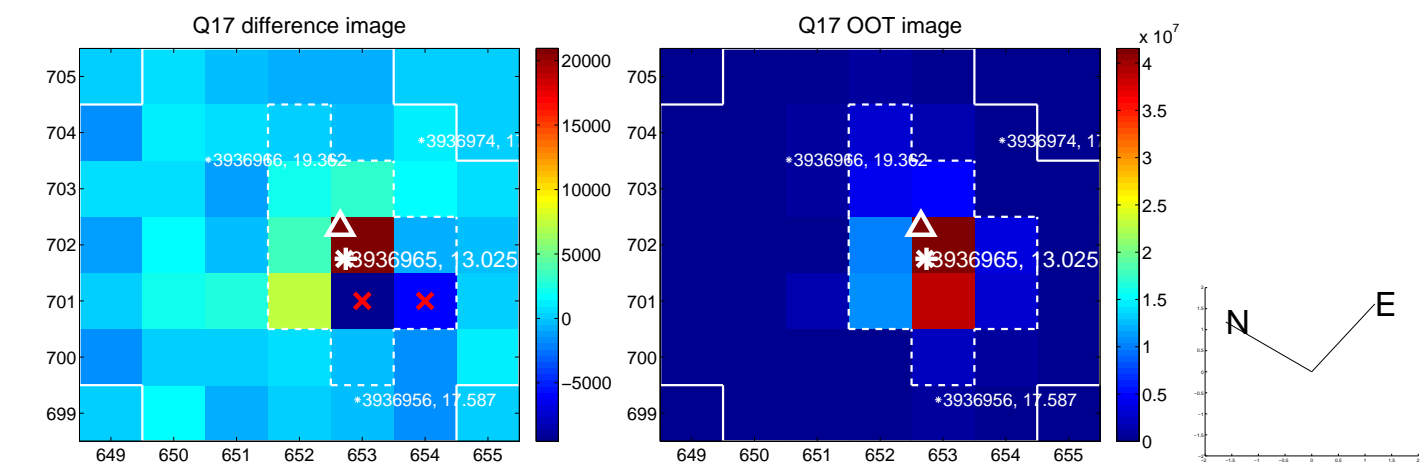
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



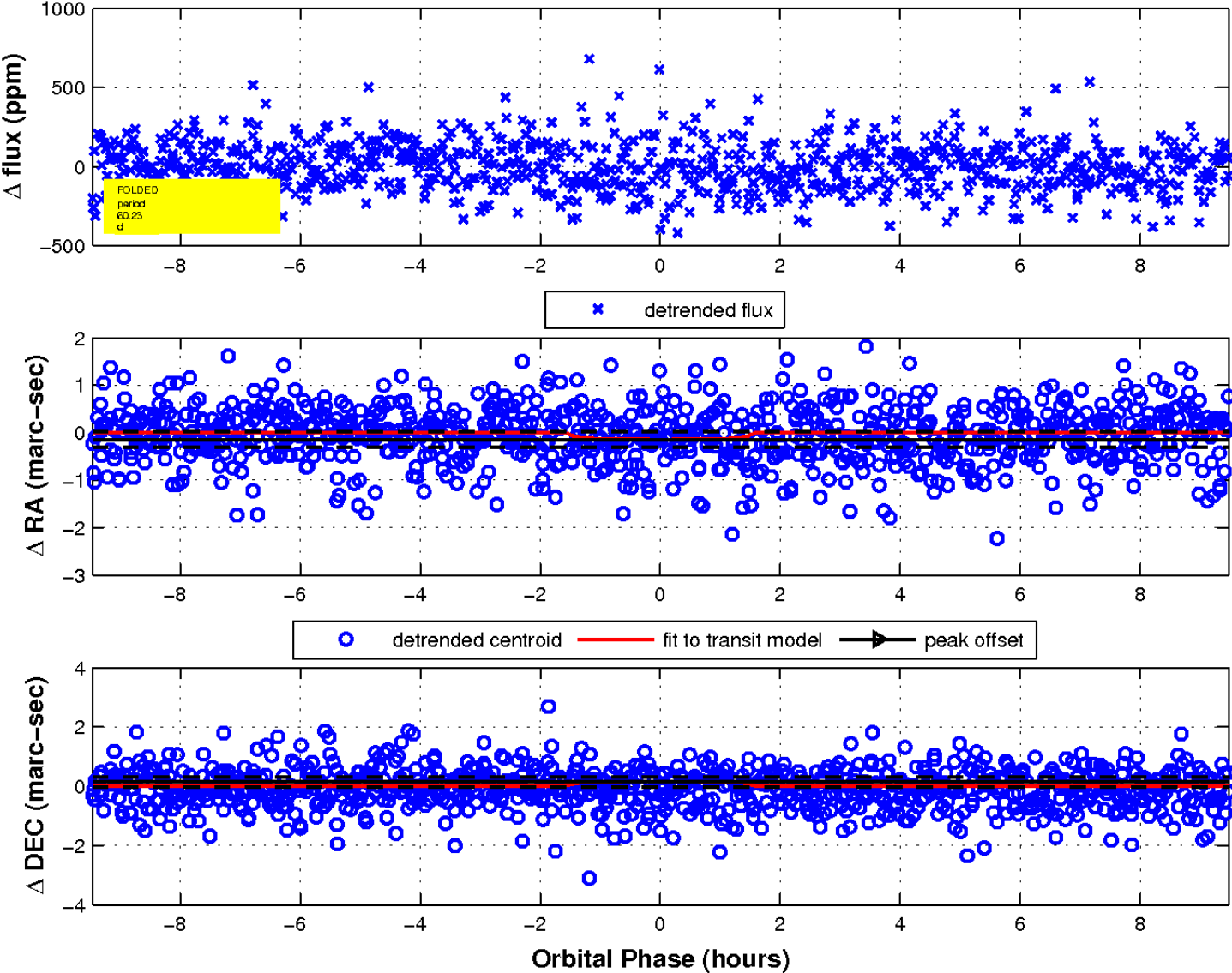
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 9 of 9



UKIRT Image

Declination

