

KIC 010661913

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})
010661913-01	OBS	7355.01	1.231312	131.829448	61.7	4.043	13.8	13.1	0.63	4237	0.61	312.84
010661913-02	OBS	No	182.444562	211.226794	278.9	5.746	13.0	3.6	0.63	4237	1.26	0.40
010661913-03	OBS	No	560.365176	394.574557	478.7	17.685	9.7	6.2	0.63	4237	1.52	0.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010661913-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
010661913-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010661913-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

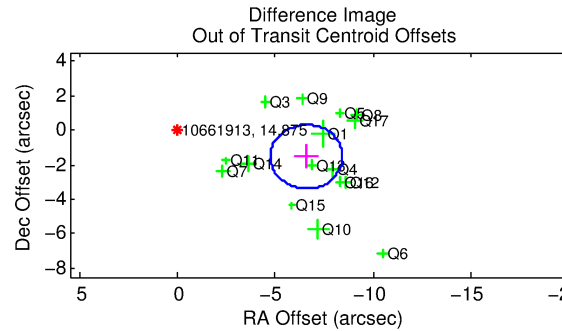
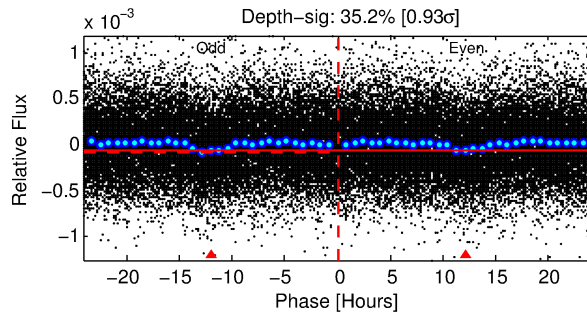
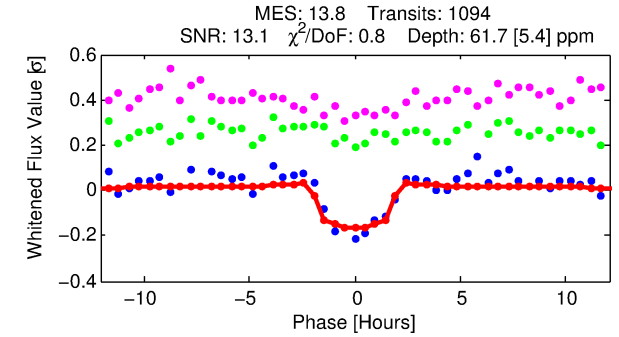
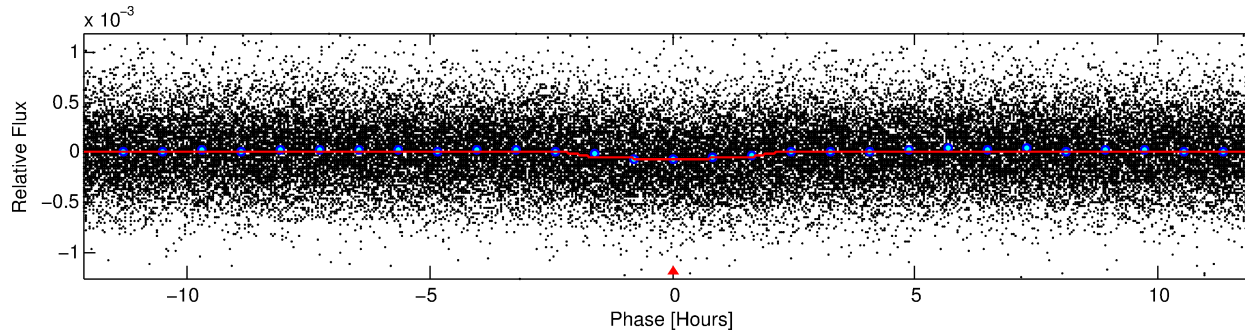
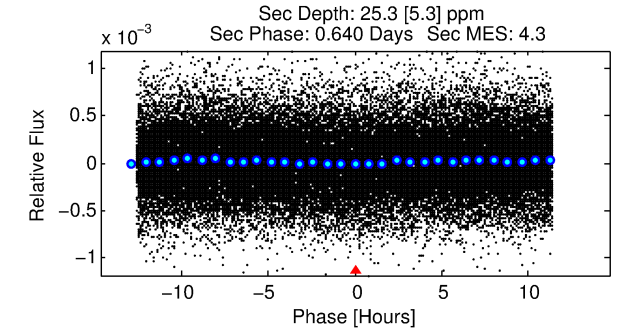
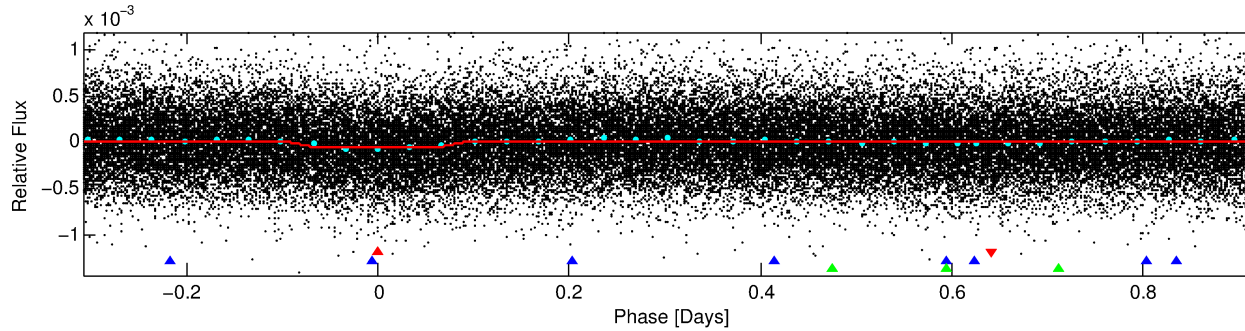
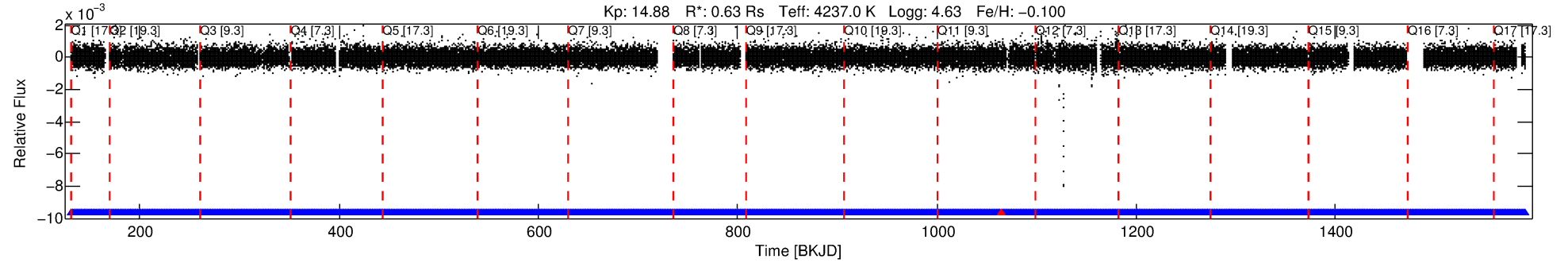
Ephemeris Match Information For 010661913-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
010661913-01	10661913	010661783-pri	10661783	1:1	124.7	27	16	9.59	14.88	3512.90	Direct-PRF	0	3.56	1.67

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10661913 Candidate: 1 of 3 Period: 1.231 d
KOI: K07355.01 Corr: 0.957



DV Fit Results:

Period = 1.23131 [0.00001] d
Epoch = 131.8294 [0.0035] BKJD
Rp/R* = 0.0088 [0.0043]
a/R* = 1.41 [1.34]
b = 0.90 [0.40]
Seff = 312.84 [49.25]
Teq = 1072 [42] K
Rp = 0.61 [0.30] Re
a = 0.0192 [0.0014] AU
Ag = 13.77 [13.67] [0.93σ]
Teffp = 3194 [794] K [2.67σ]

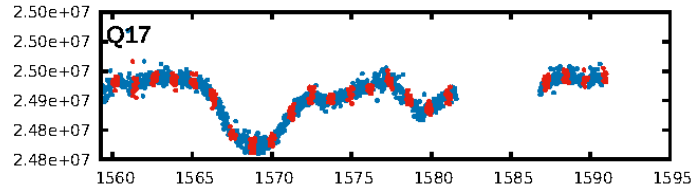
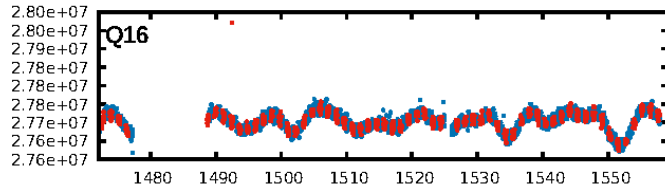
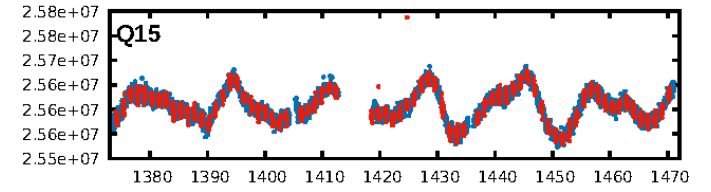
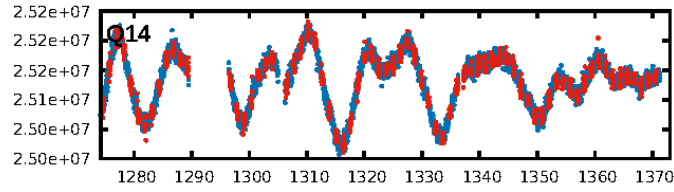
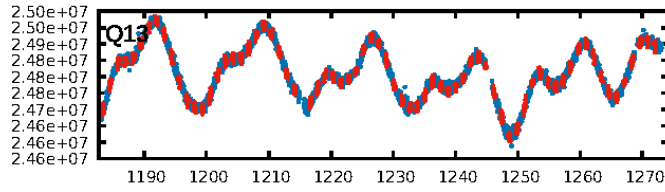
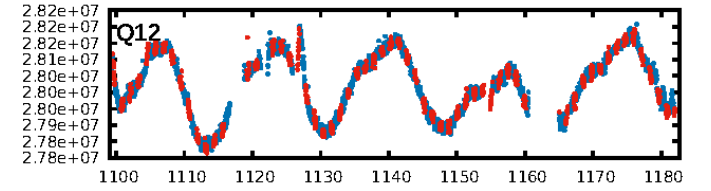
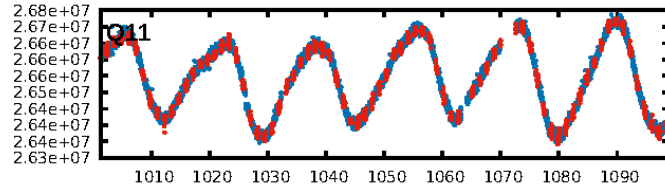
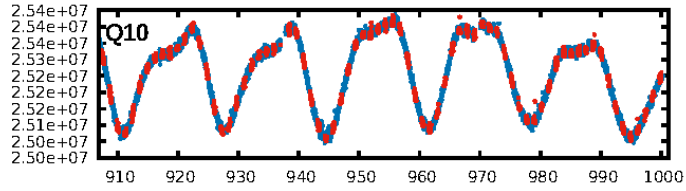
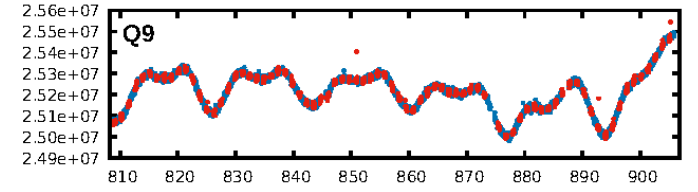
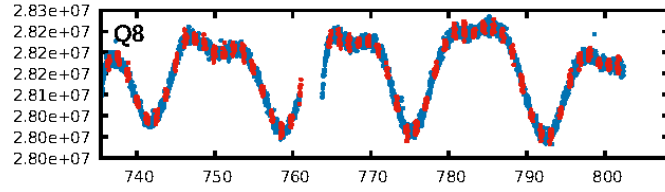
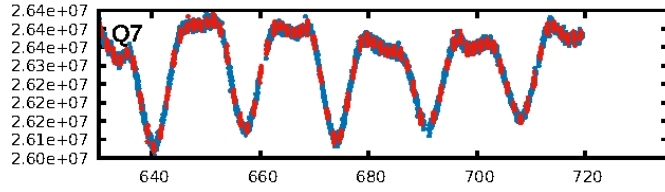
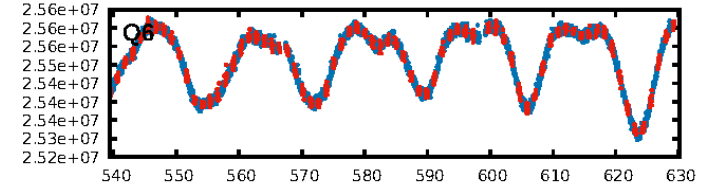
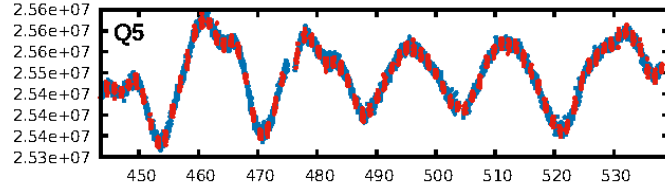
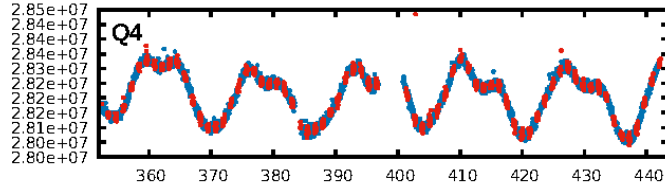
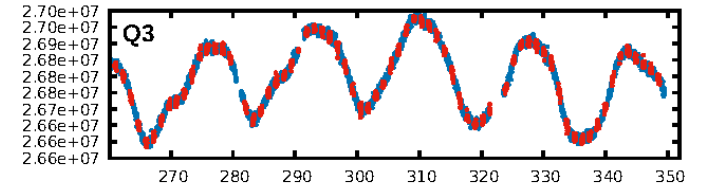
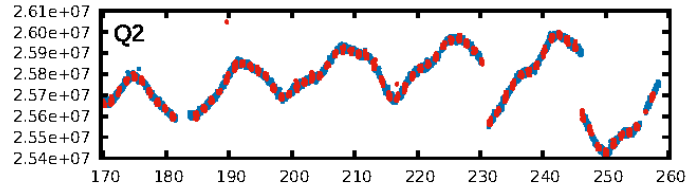
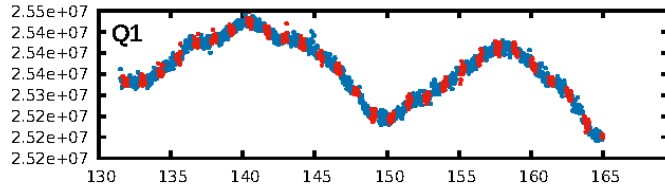
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [619.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.46e-38
RollingBand-fgt: 1.00 [1043/1044]
GhostDiagnostic-chr: 0.1266
Centroid-sig: 0.0%
Centroid-so: 2.805 arcsec [4.19σ]
OotOffset-rm: 6.765 arcsec [10.98σ]
KicOffset-rm: 5.153 arcsec [10.16σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

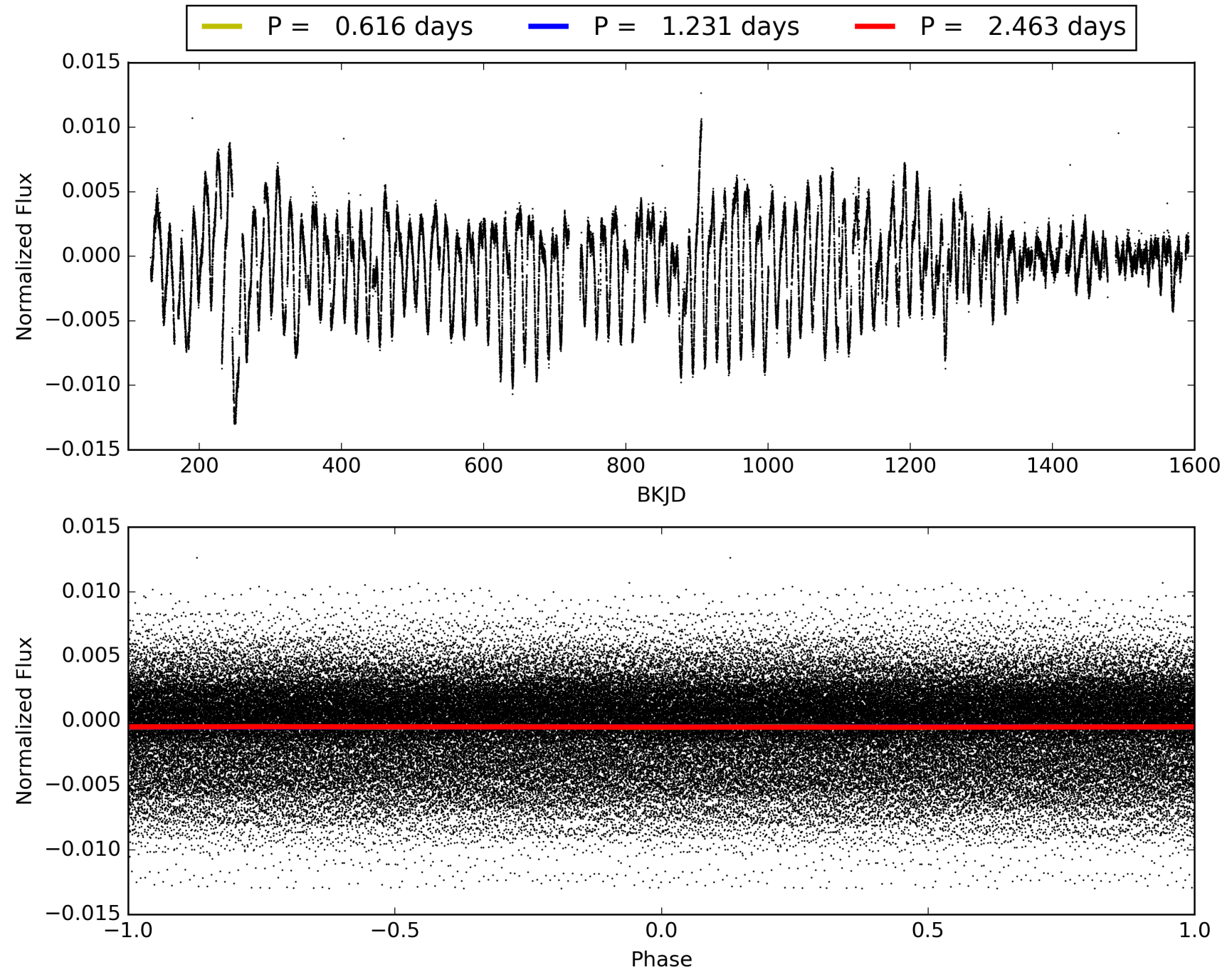
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010661913-01, PDC Light Curves

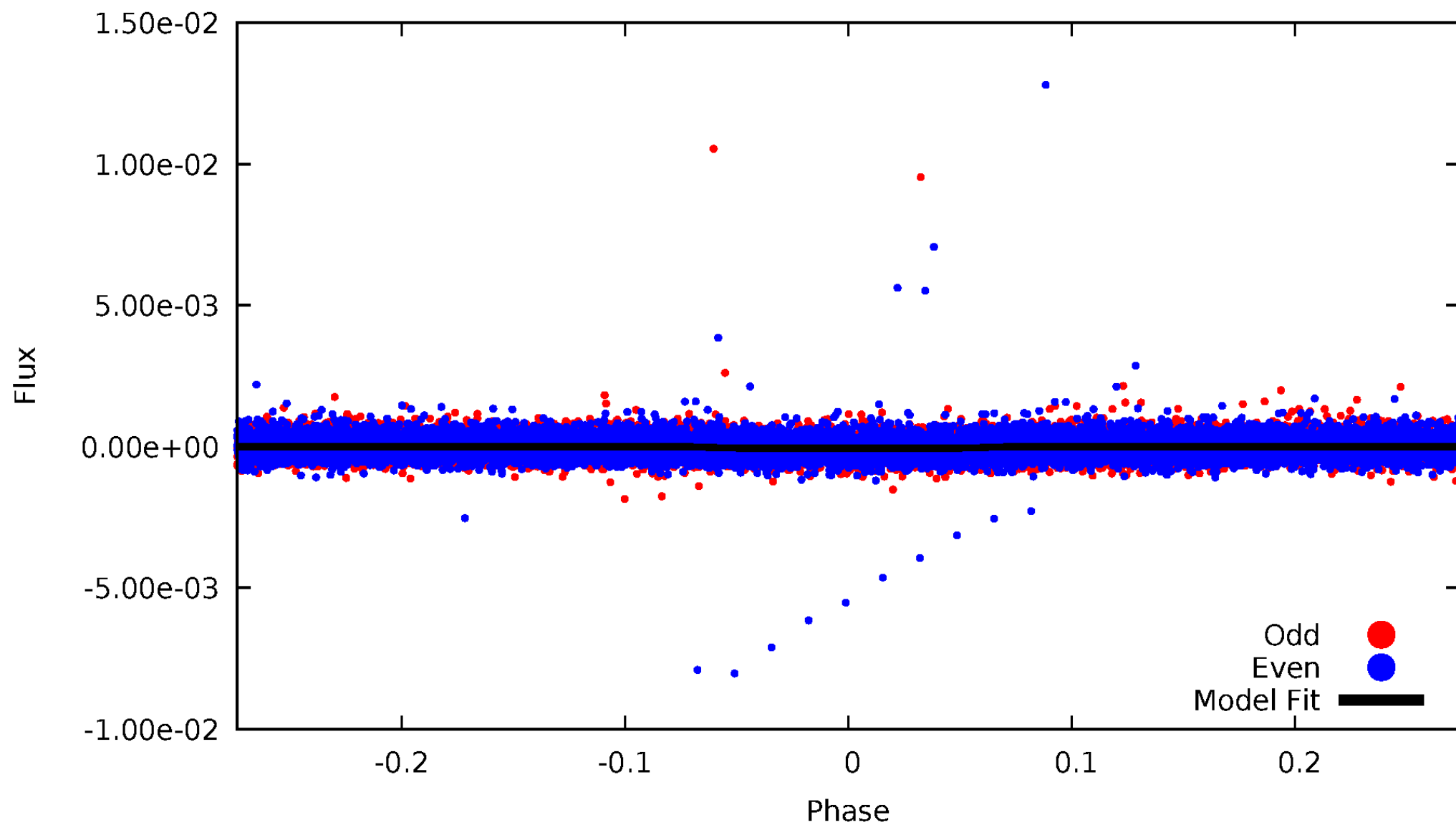


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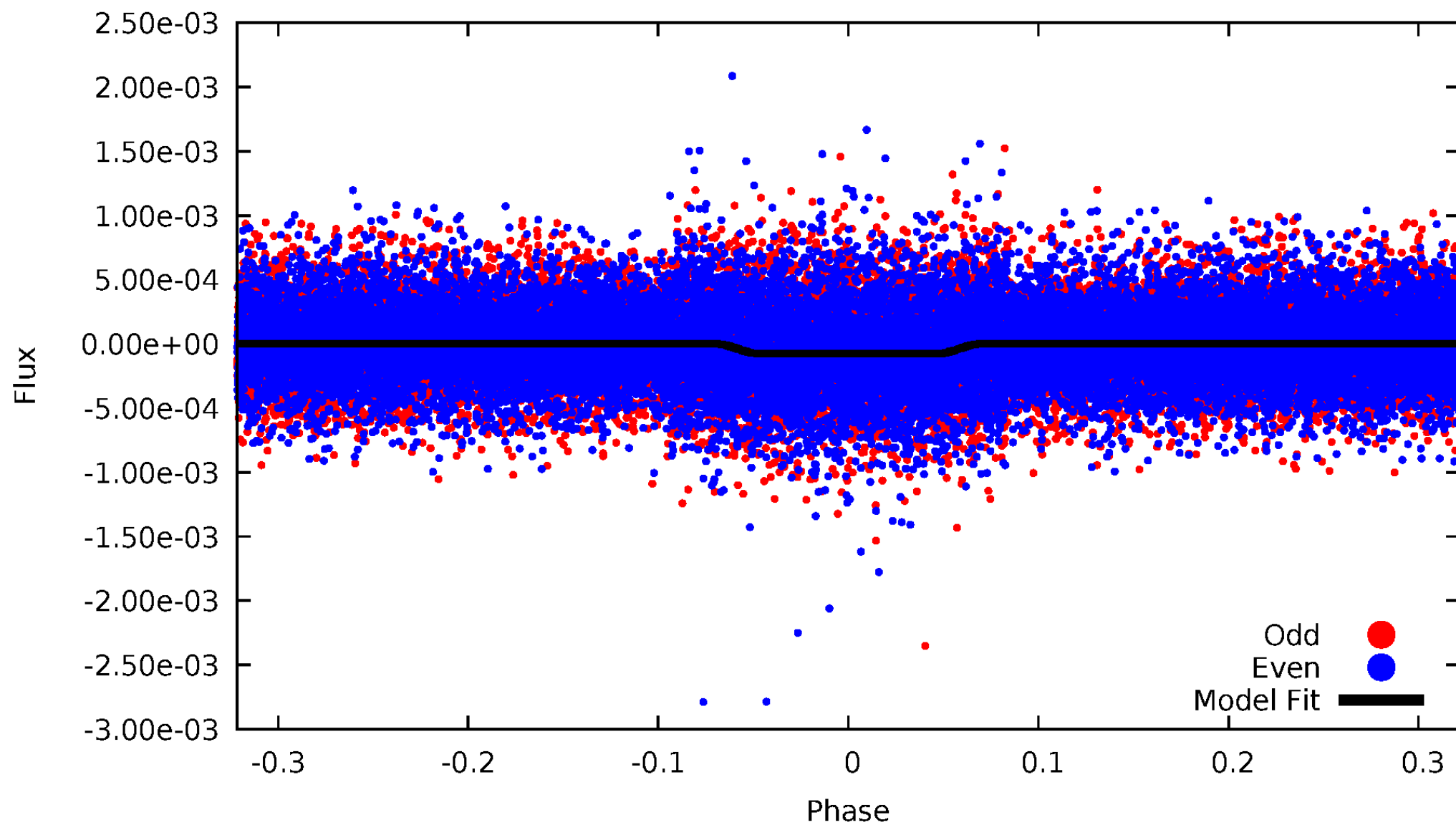
DV Odd/Even

TCE 010661913-01

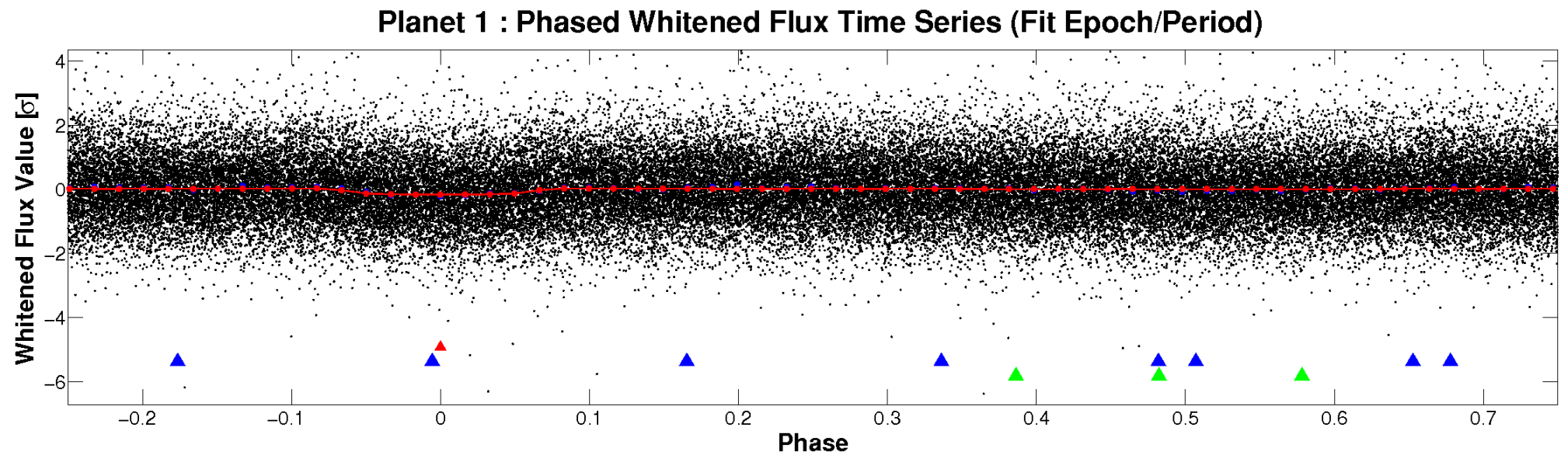
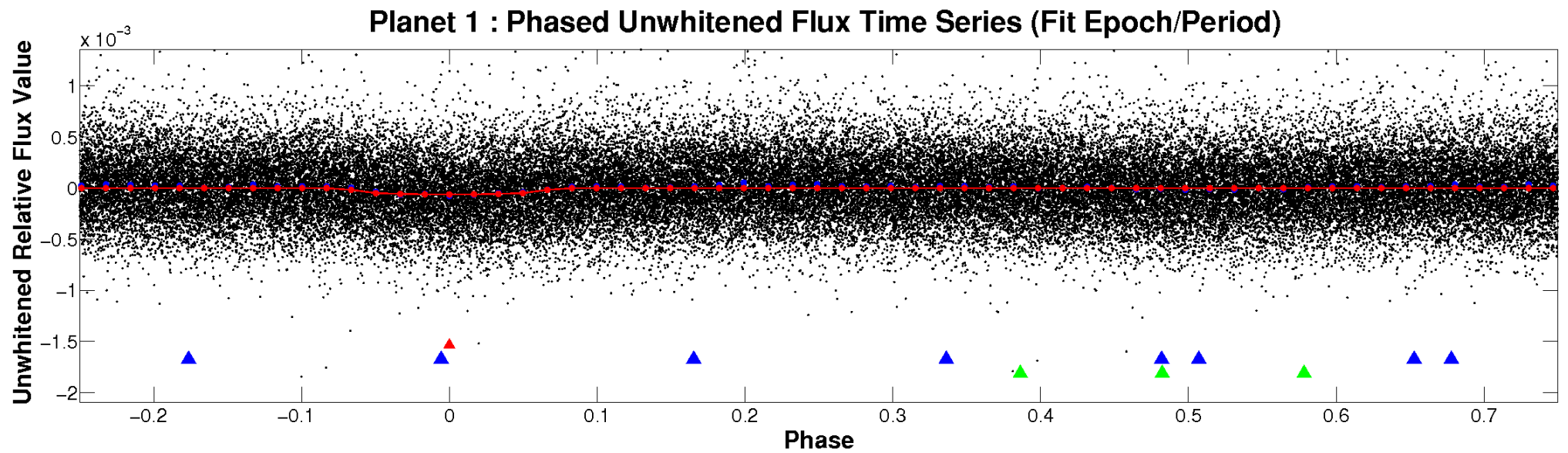


ALT Odd/Even

TCE 010661913-01

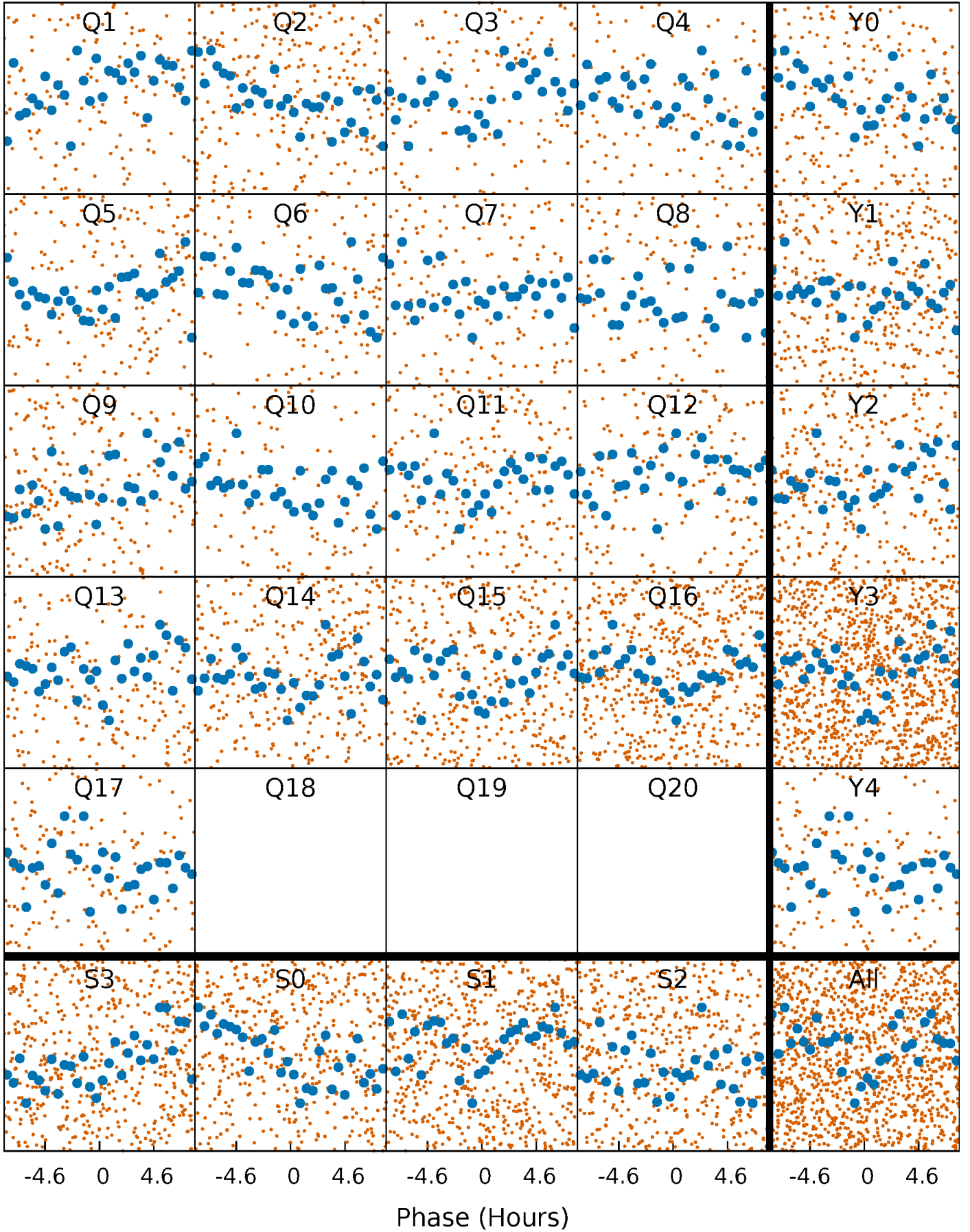


Non-Whitened Vs. Whitened Light Curve



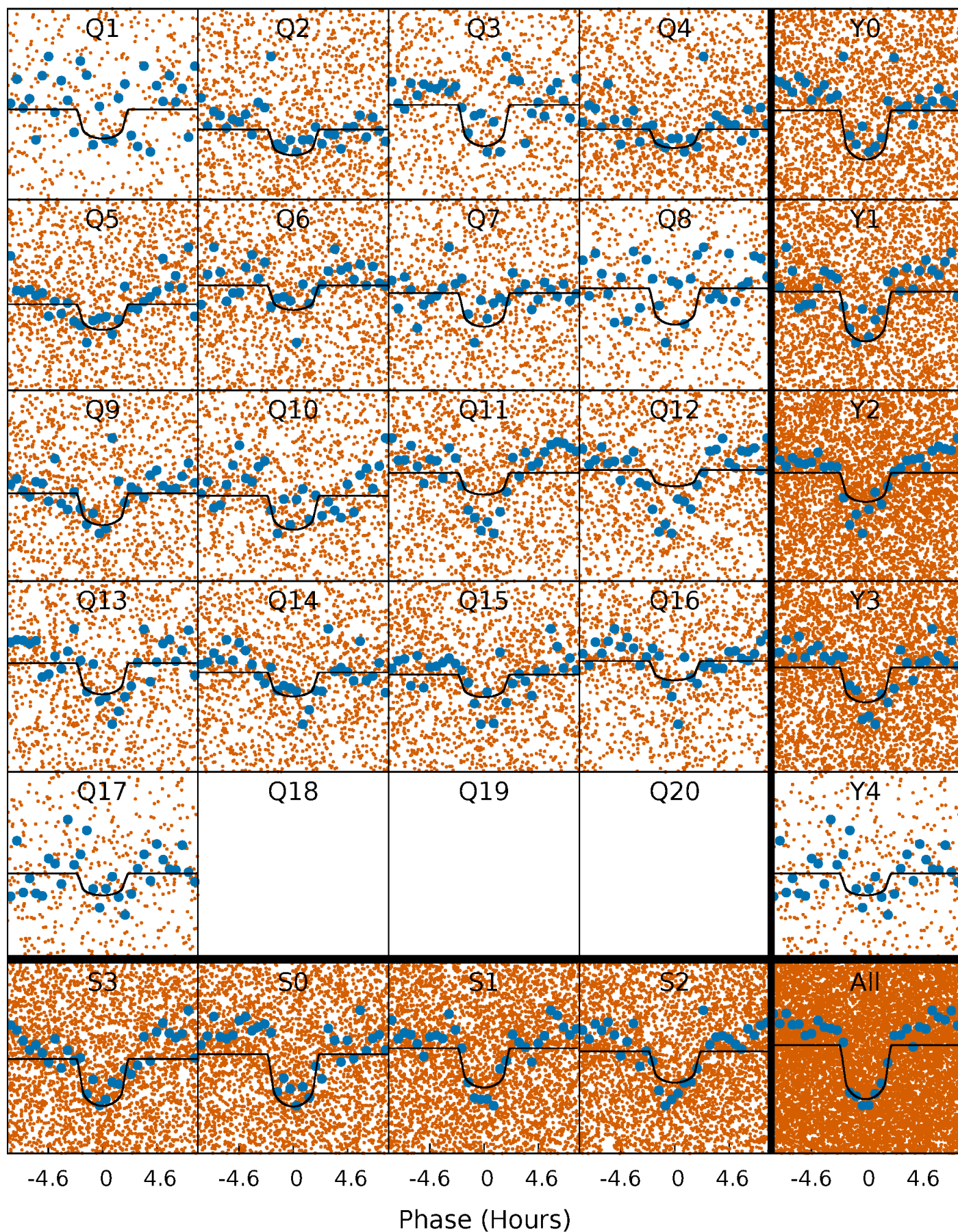
PDC Quarter-Phased Transit Curves

TCE 010661913-01 P= 1.231312 Days $T_0=131.829448$ (BKJD)



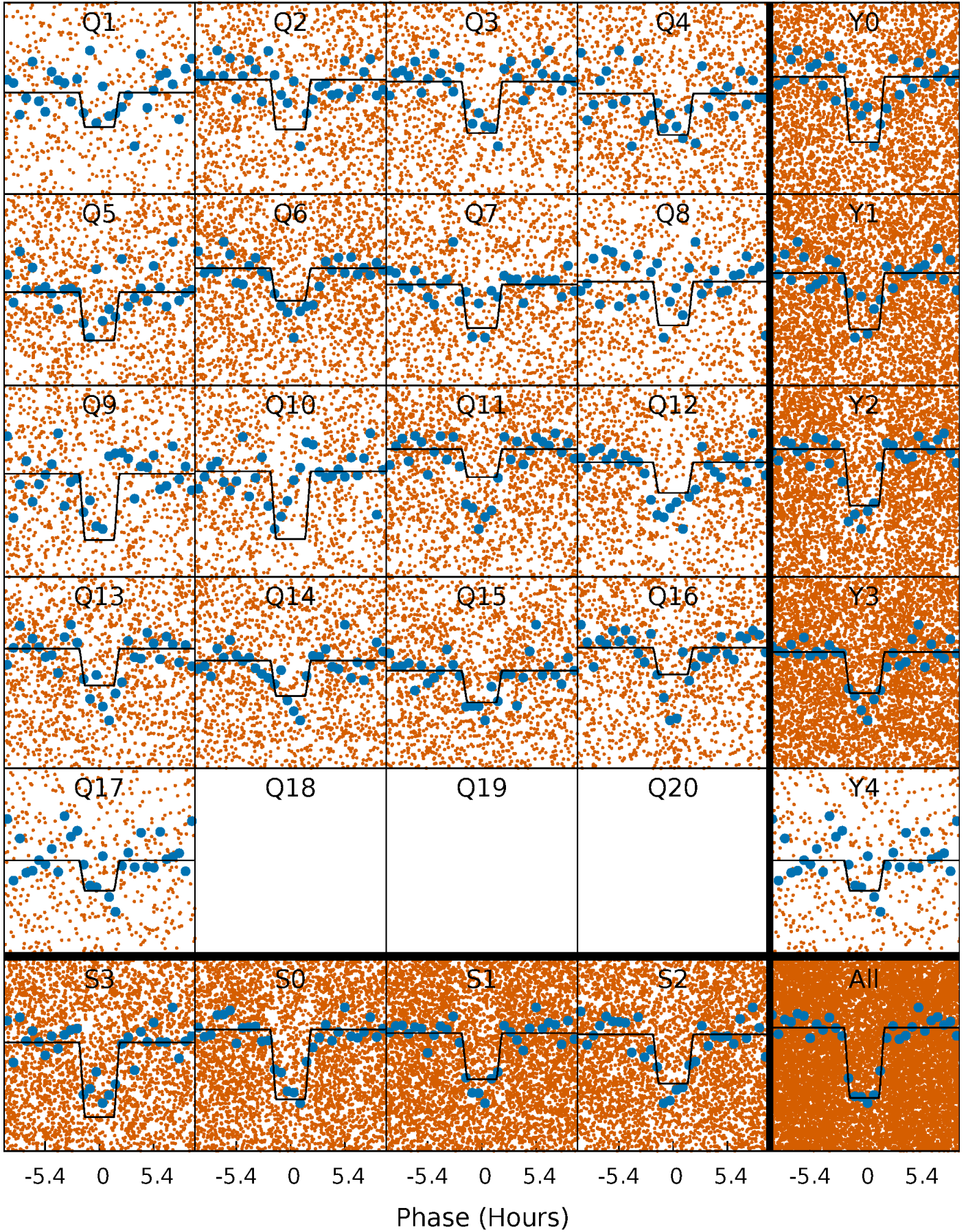
DV Quarter-Phased Transit Curves

TCE 010661913-01 P= 1.231312 Days $T_0=131.829448$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

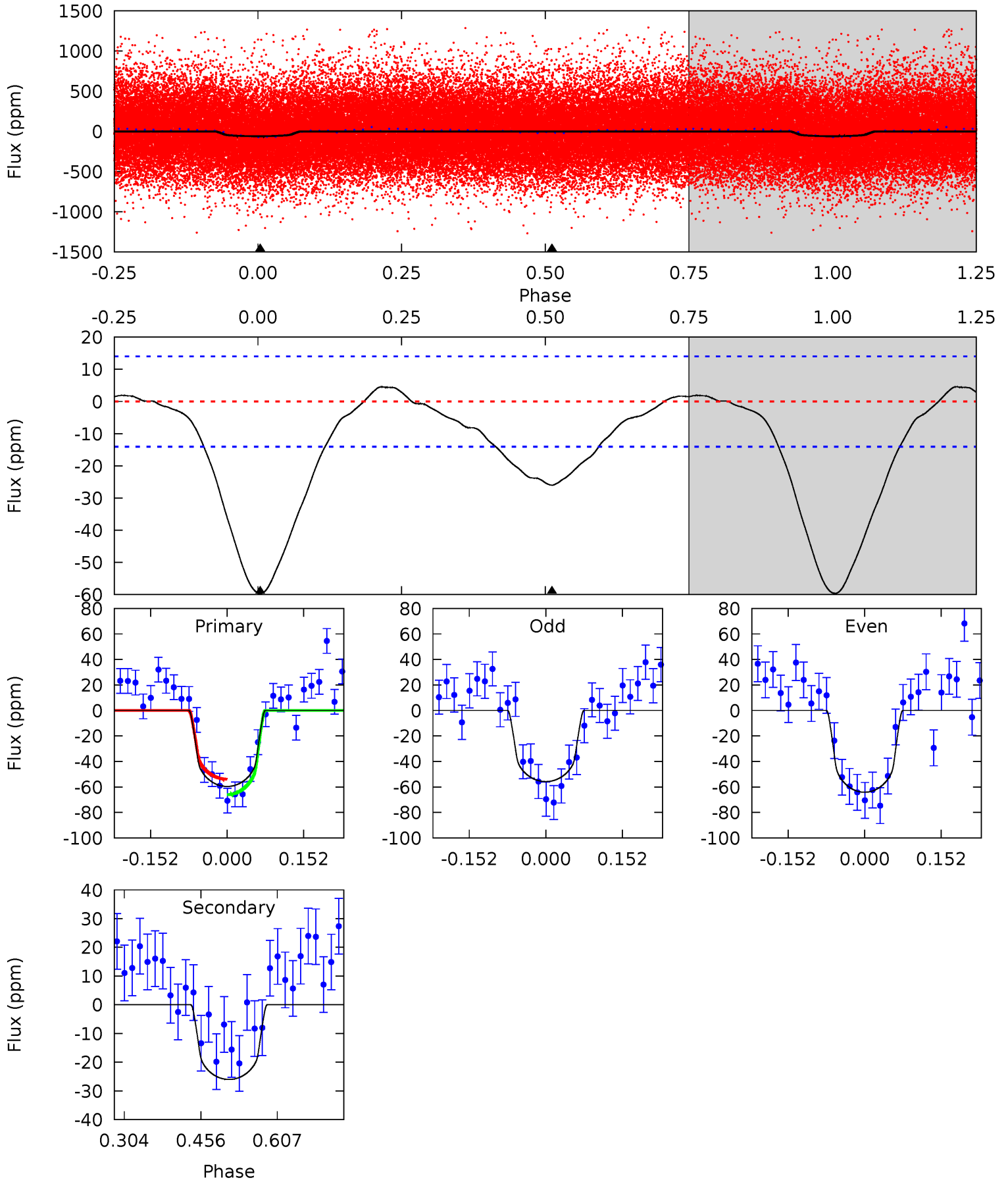
TCE 010661913-01 P= 1.231356 Days $T_0=131.804979$ (BKJD)



DV Model-Shift Uniqueness Test

010661913-01, P = 1.231312 Days, E = 130.598136 Days

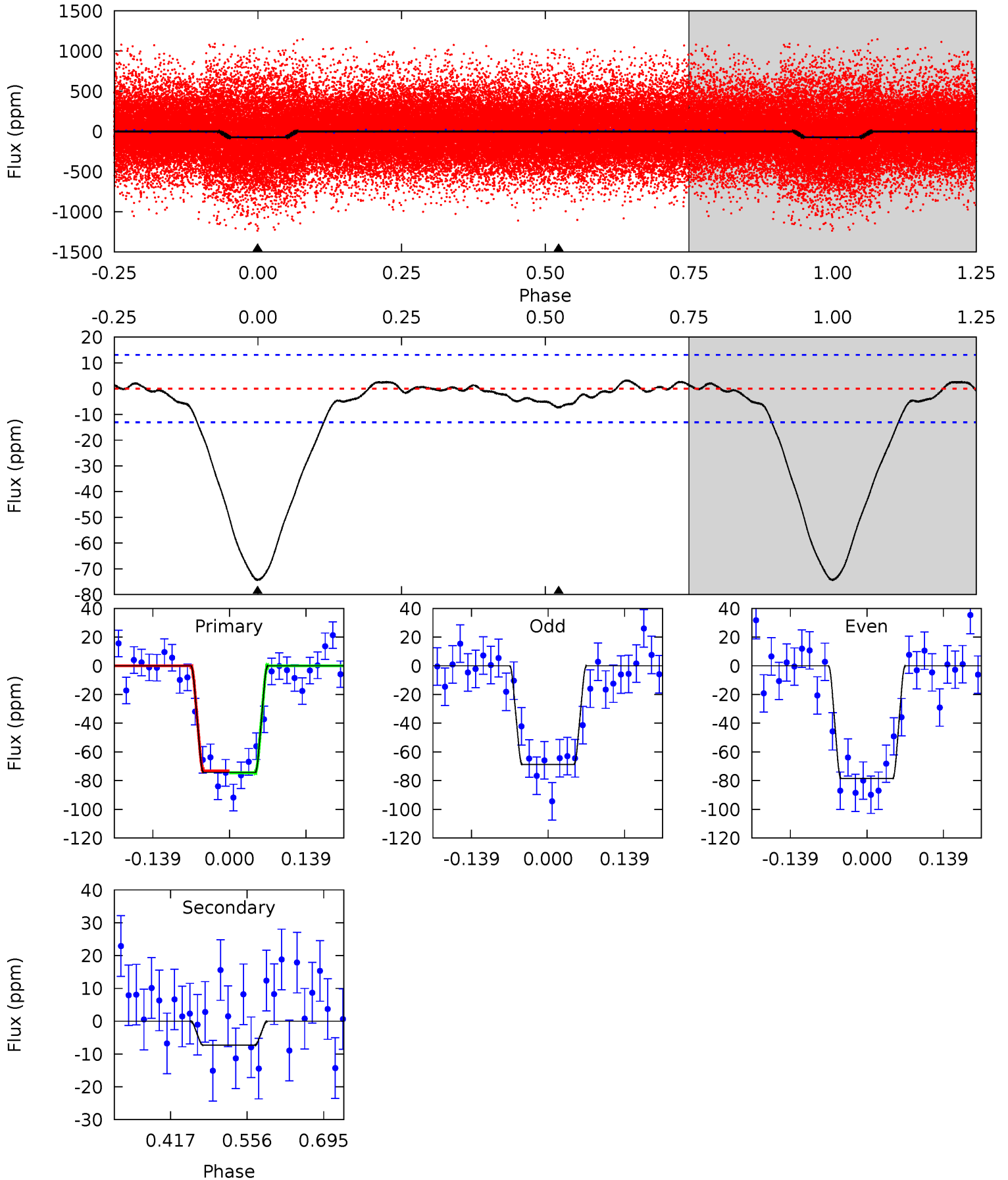
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	8.30	0	0	4.48	1.43	0.91	19.0	19.0	8.30	8.30	1.33	0.96	0.07	1.95



Alt Model-Shift Uniqueness Test

010661913-01, P = 1.231356 Days, E = 130.573623 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	2.51	0	0	4.50	1.48	0.66	25.5	25.5	2.51	2.51	1.70	0.99	0.04	0.22



Stellar Parameters For KIC 010661913

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4237^{+113}_{-126}	$4.630^{+0.053}_{-0.021}$	$-0.100^{+0.300}_{-0.300}$	$0.631^{+0.040}_{-0.060}$	$0.620^{+0.061}_{-0.055}$	$3.476^{+0.810}_{-0.345}$
	+3%/-3%	+1%/-0%	+300%/-300%	+6%/-10%	+10%/-9%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010661913-01 / KOI 7355.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 3	$0.60^{+0.30}_{-0.26}$	1489^{+47}_{-49}	3505^{+776}_{-429}	15^{+30}_{-8}
Alt.	-7 ± 3	$0.61^{+0.30}_{-0.29}$	1488^{+44}_{-48}	2857^{+682}_{-389}	$3.906^{+11.749}_{-2.446}$

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

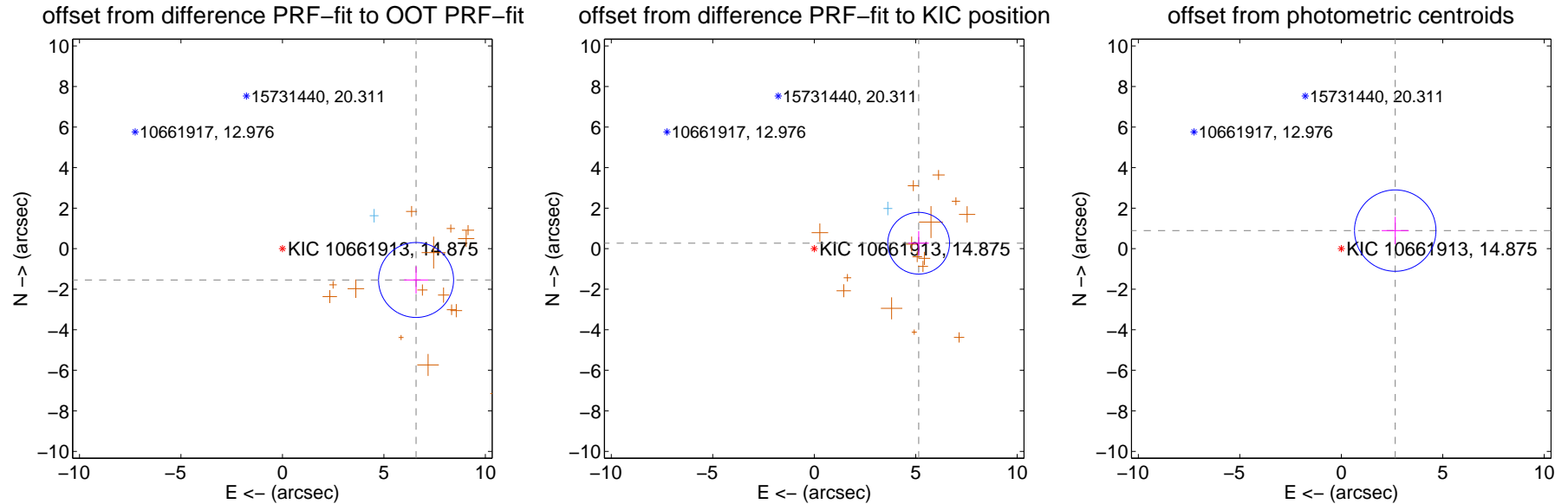
DV Centroid Data

Supplemental centroid analysis for 010661913-01. Kepler magnitude: 14.88. Transit SNR 13.15

There are 1 quarters with good PRF difference image offsets

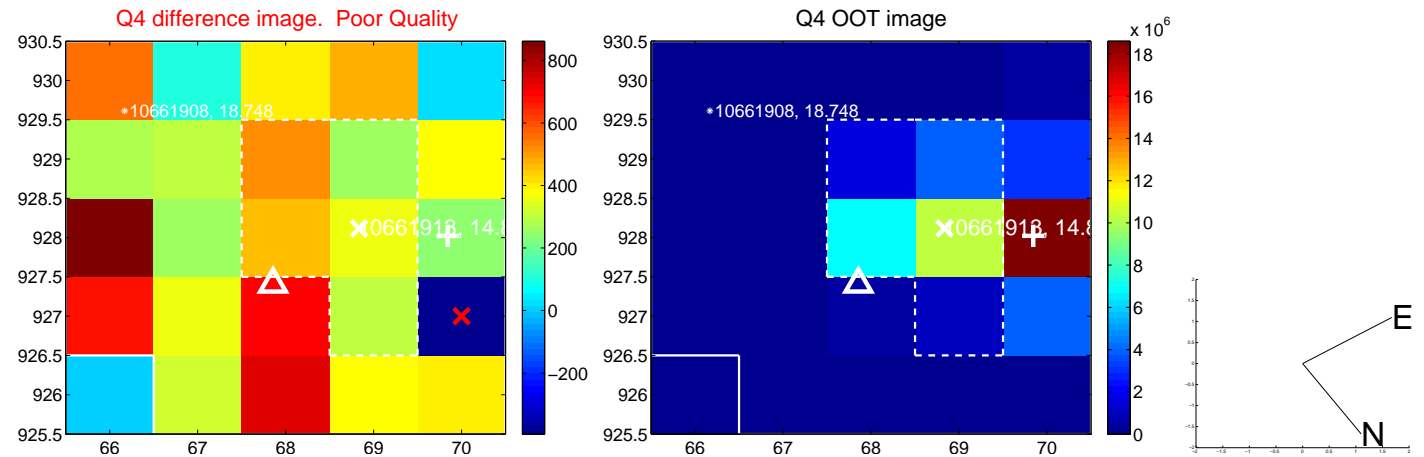
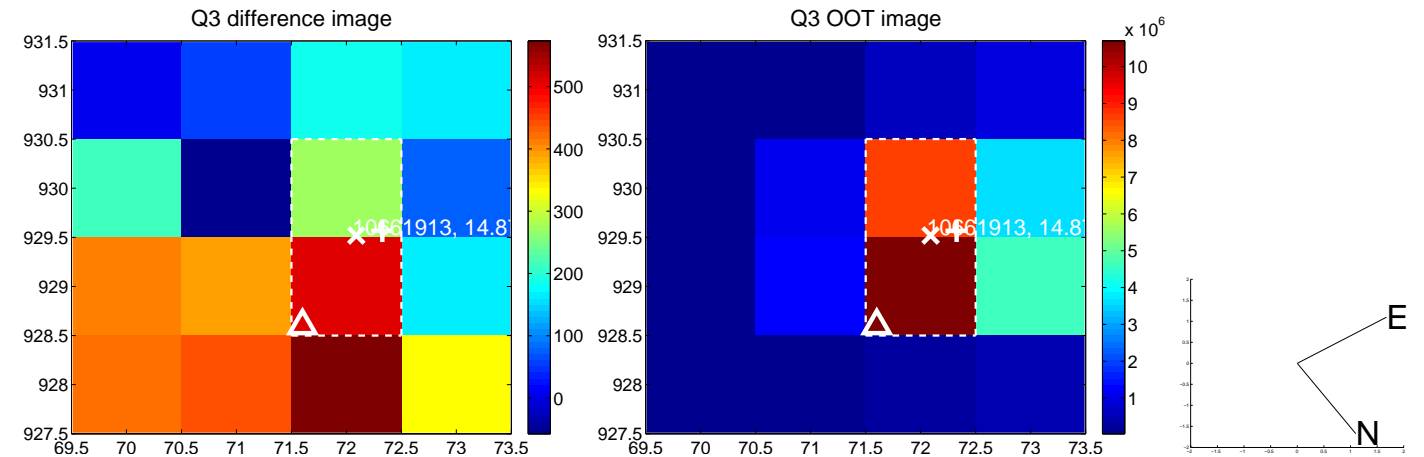
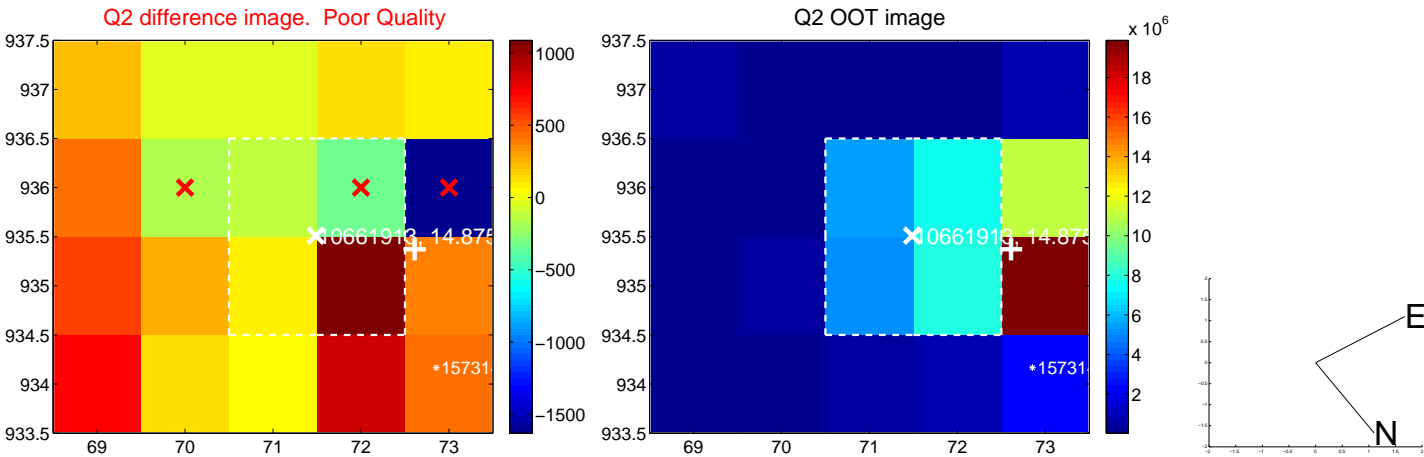
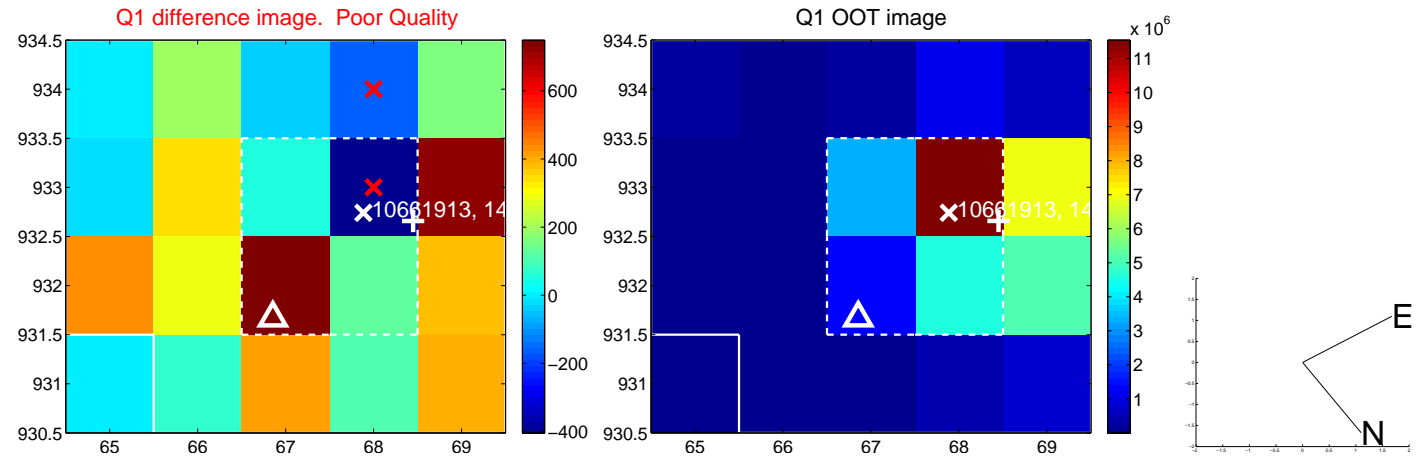
The direct PRF centroid is offset from the target star catalog position by about 1.93 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.765 ± 0.616	10.98	-6.586 ± 0.590	-1.544 ± 0.664
PRF-fit source offset from KIC position	5.153 ± 0.507	10.16	-5.146 ± 0.502	0.270 ± 0.600
photometric centroid source offset	2.80 ± 0.67	4.19	-2.66 ± 0.67	0.89 ± 0.68

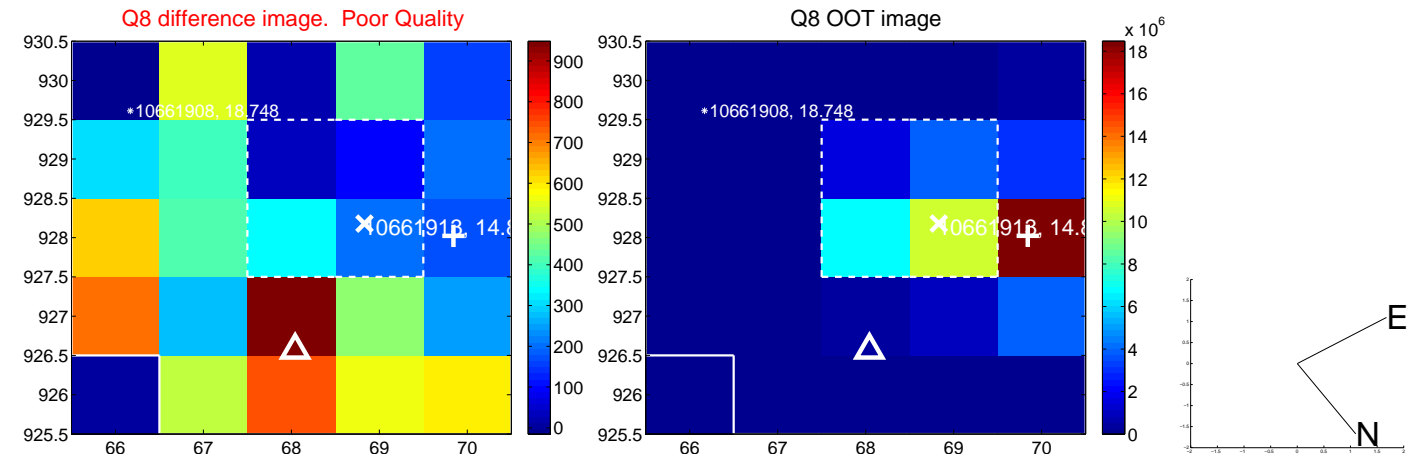
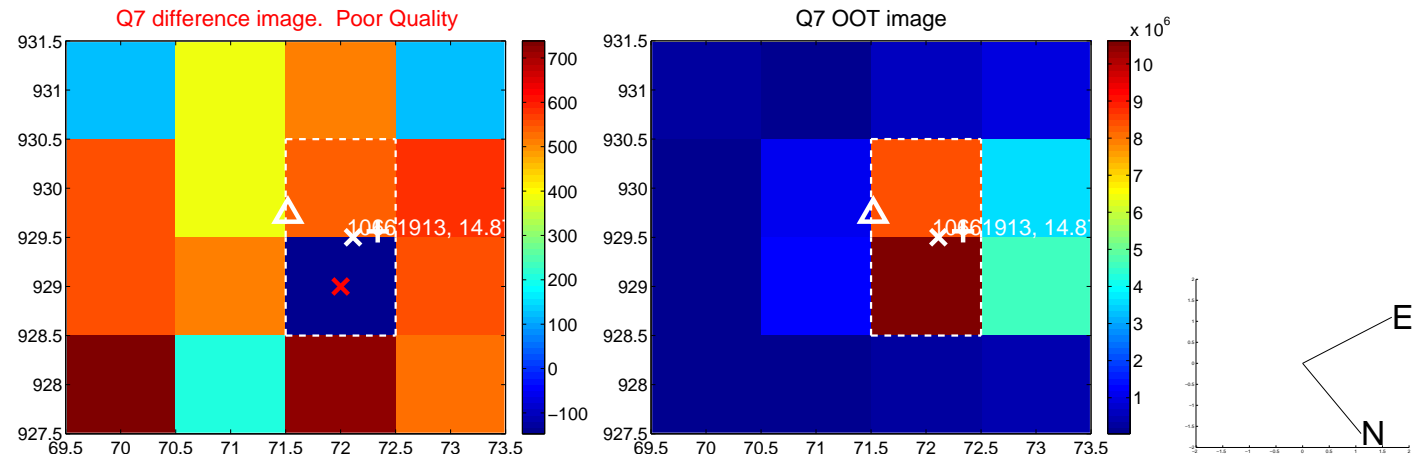
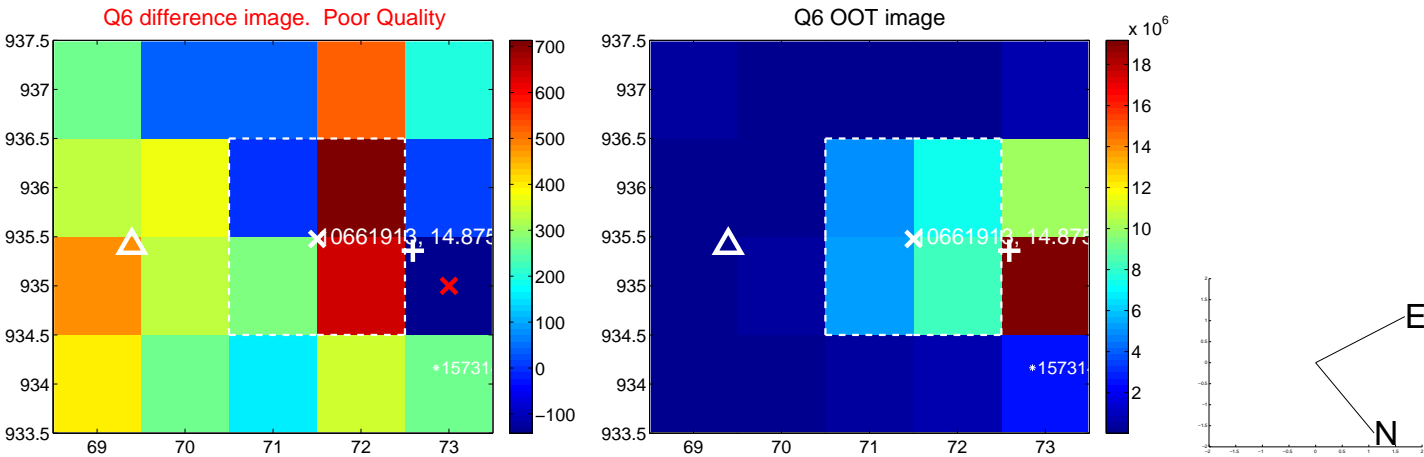
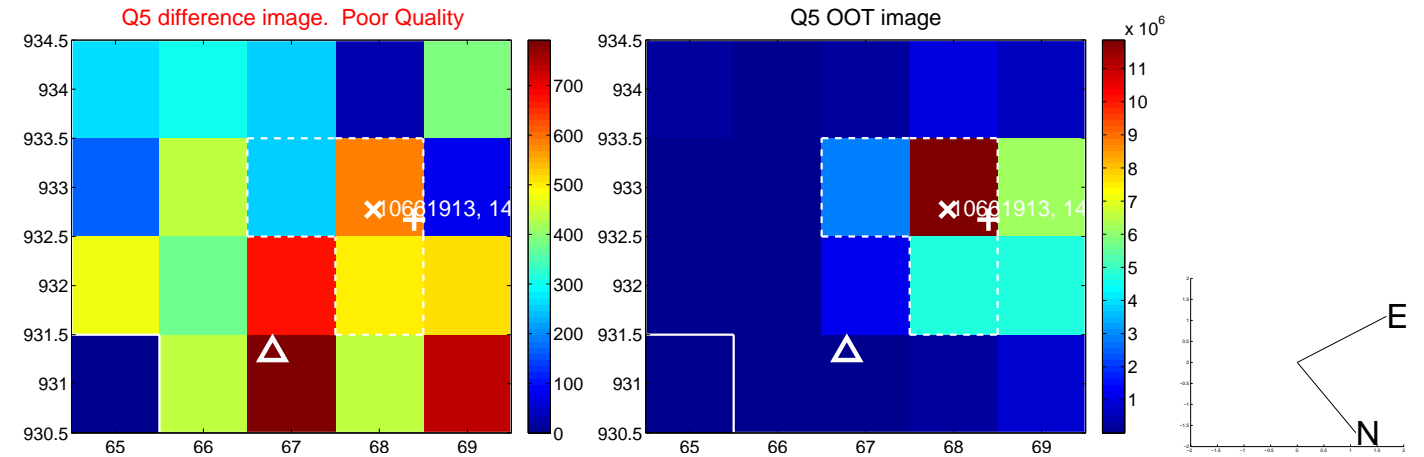


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

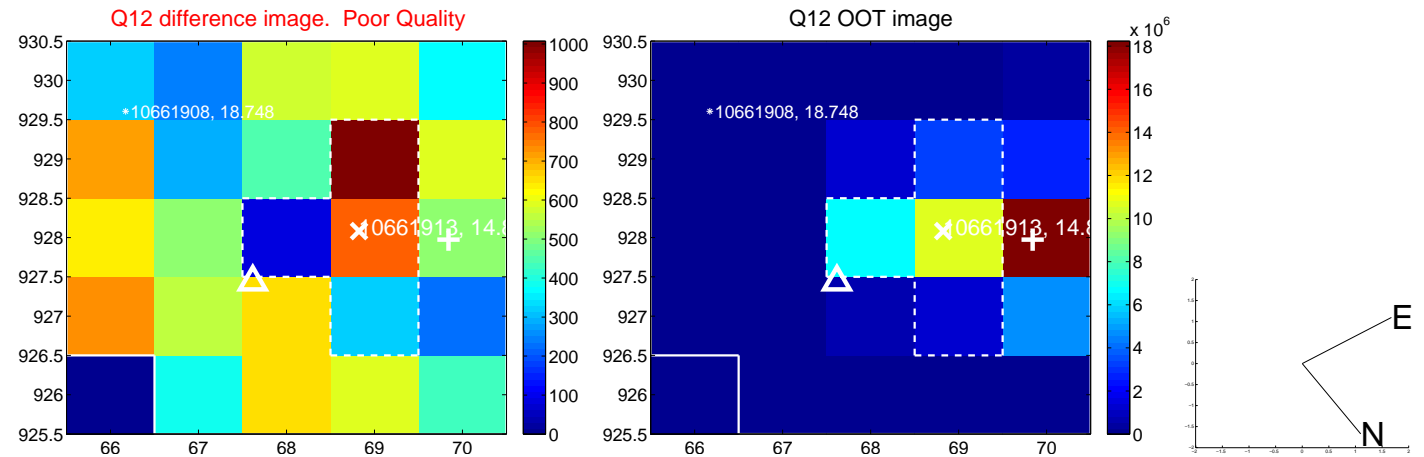
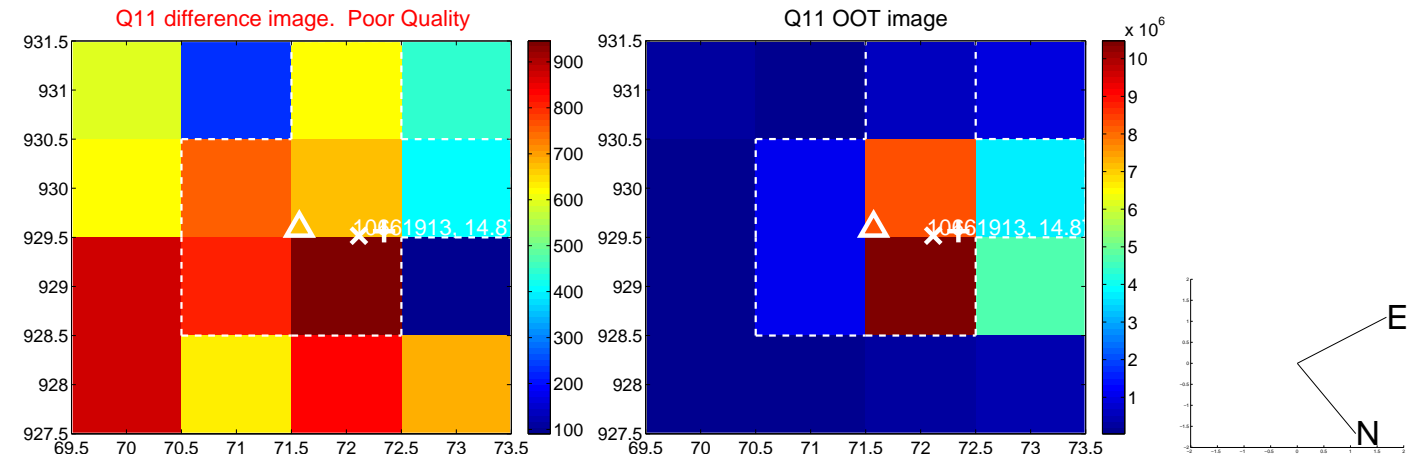
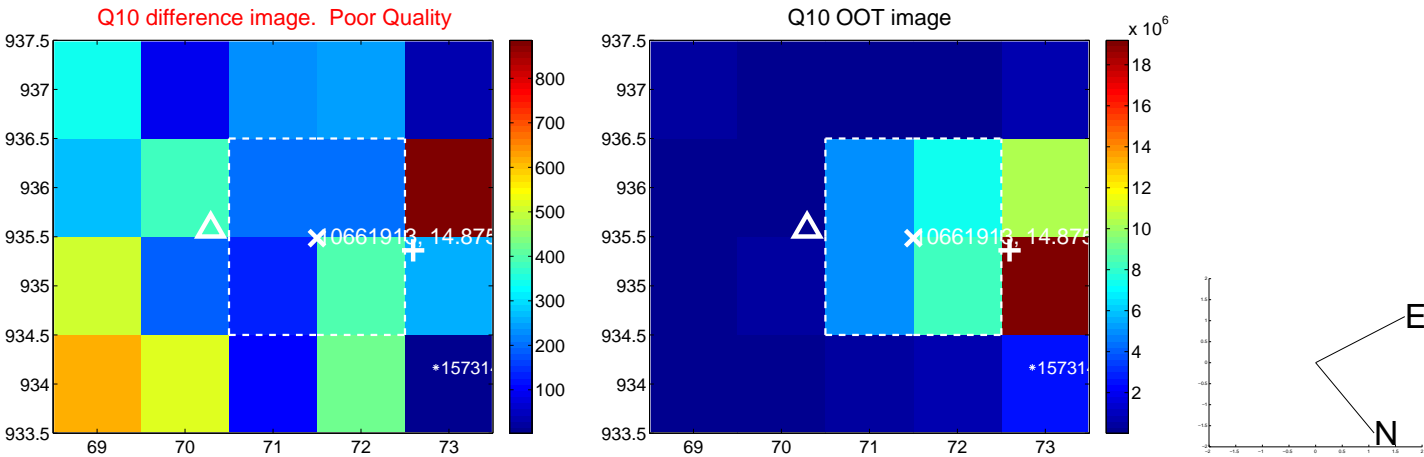
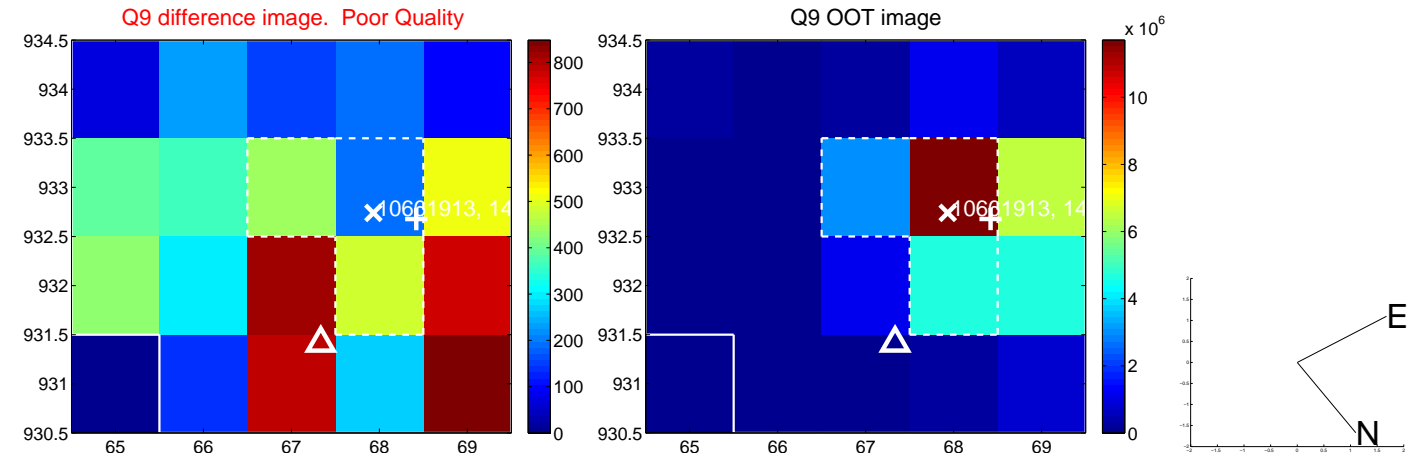
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



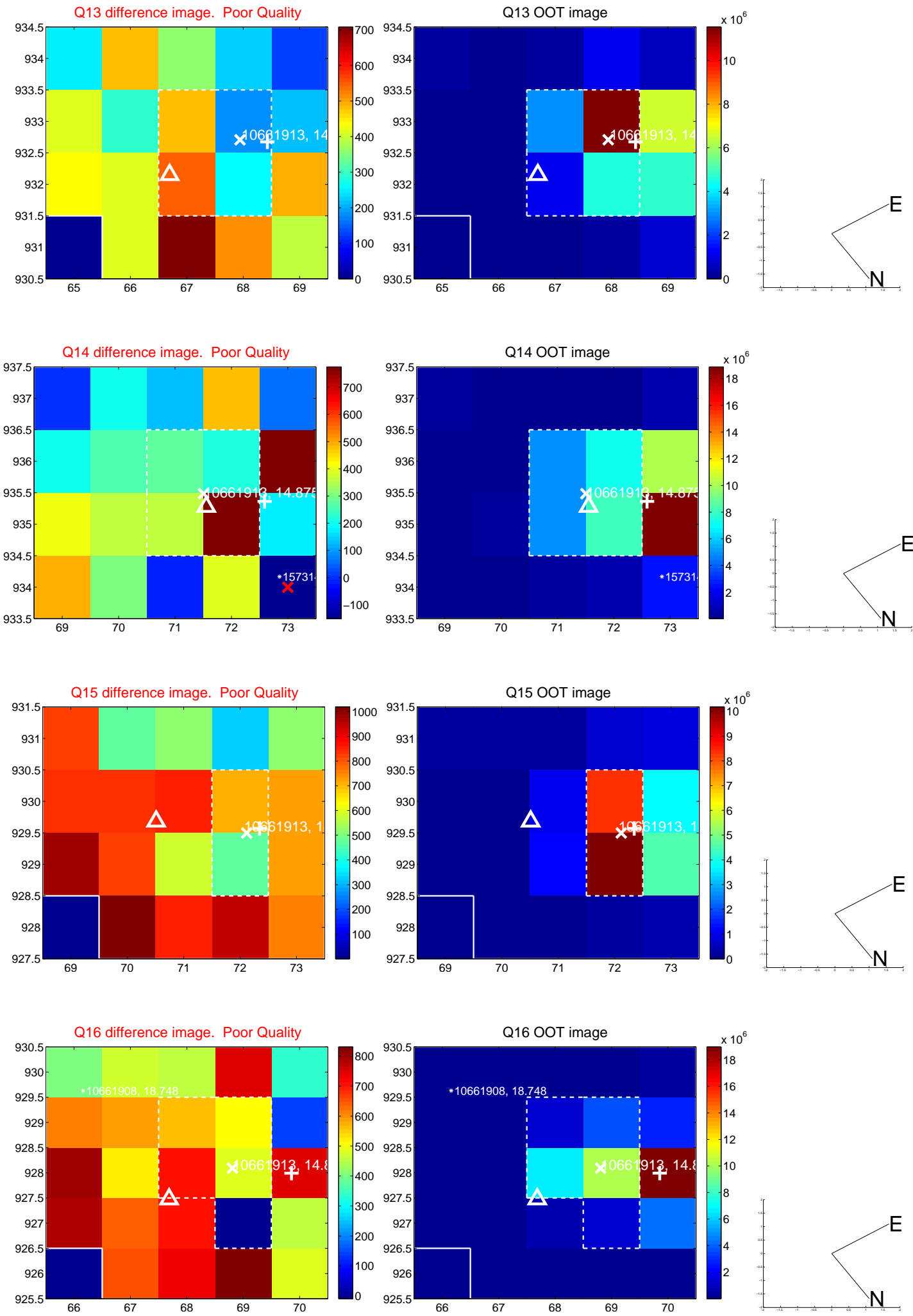
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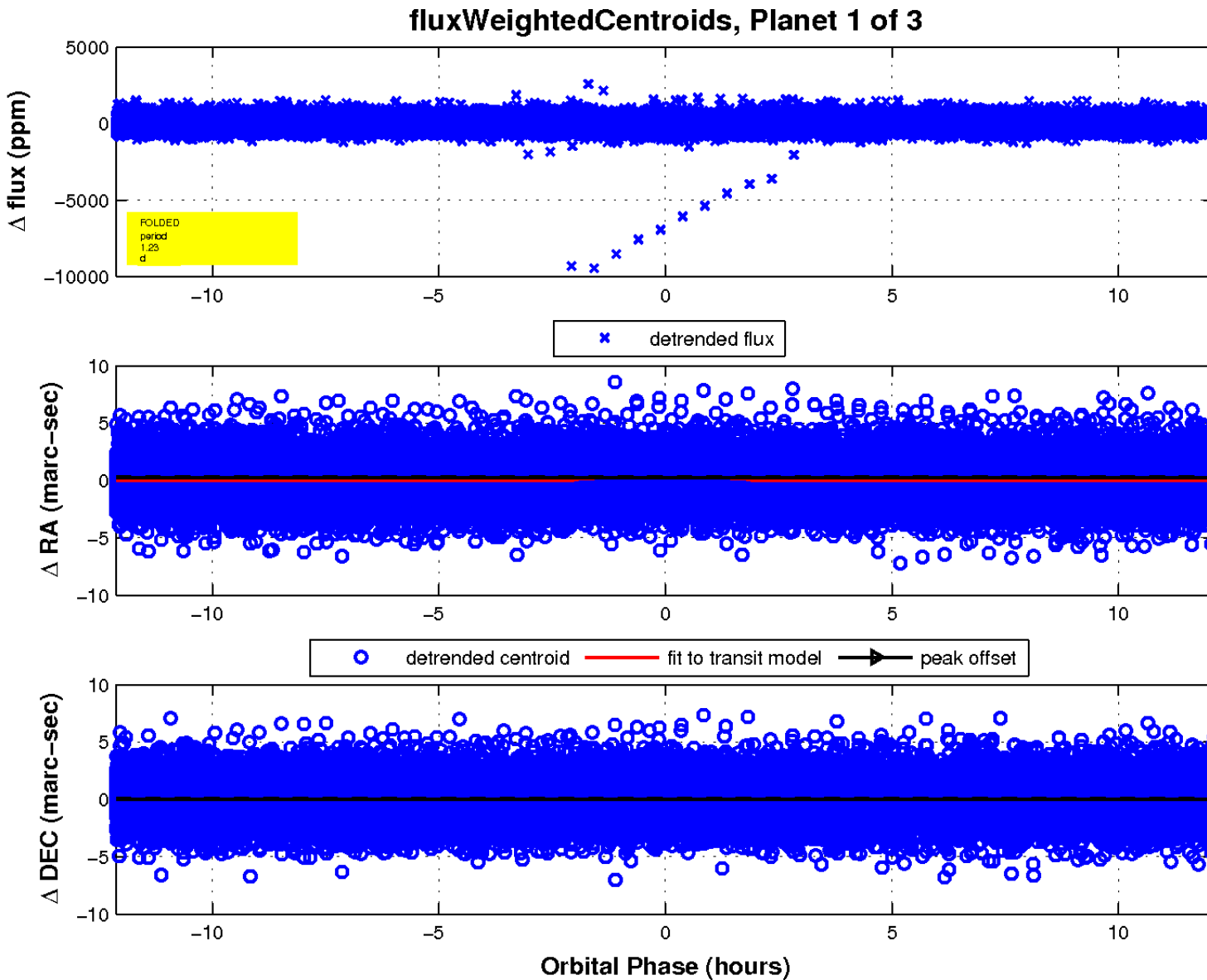
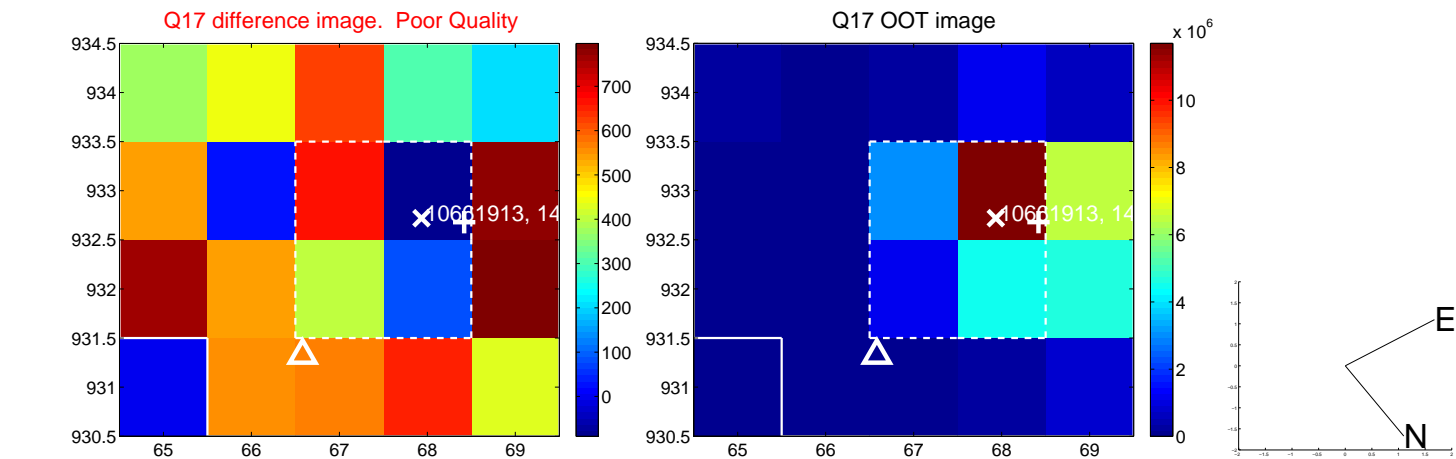
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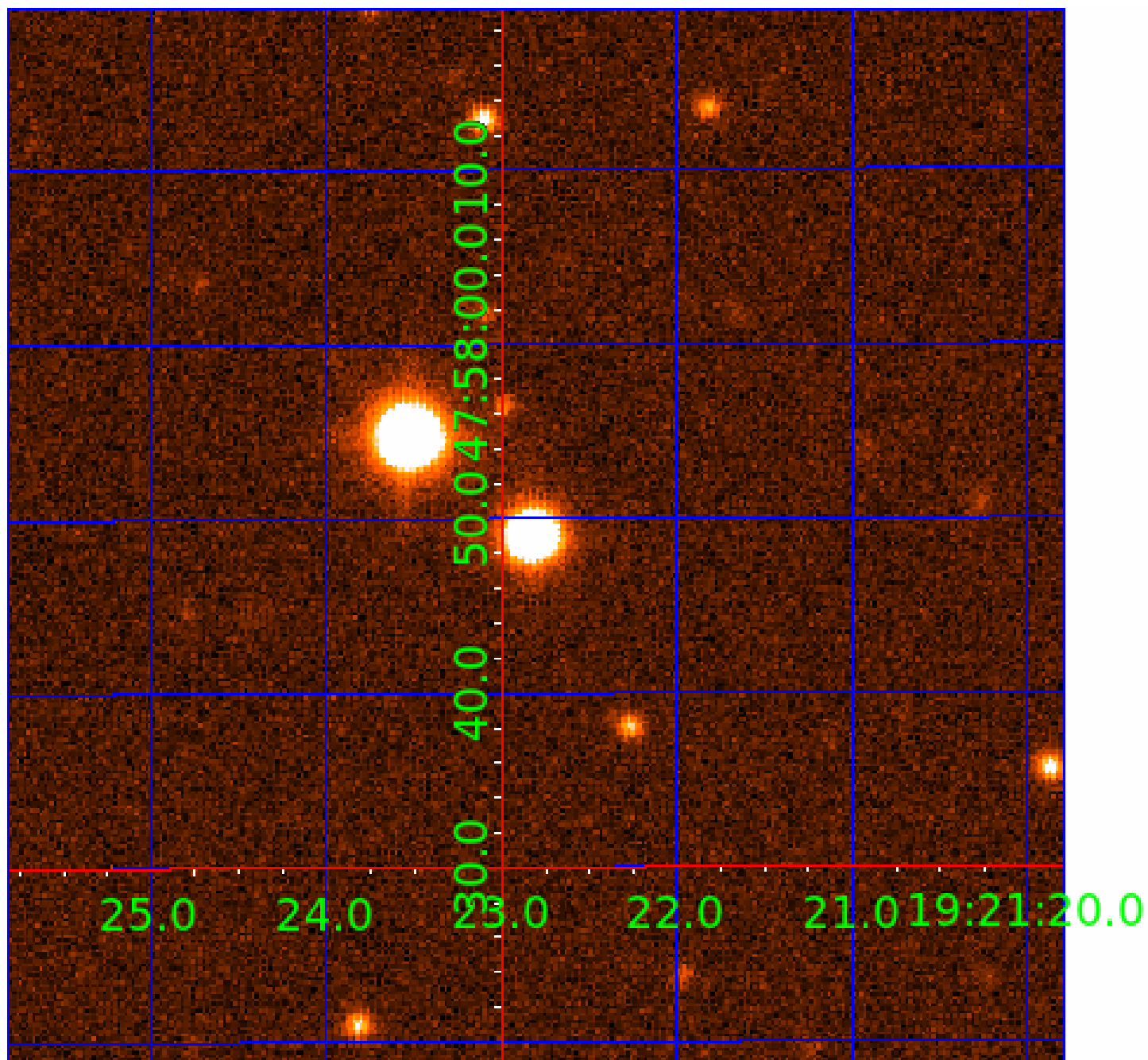


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UKIRT Image

Declination



KIC 010661913

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

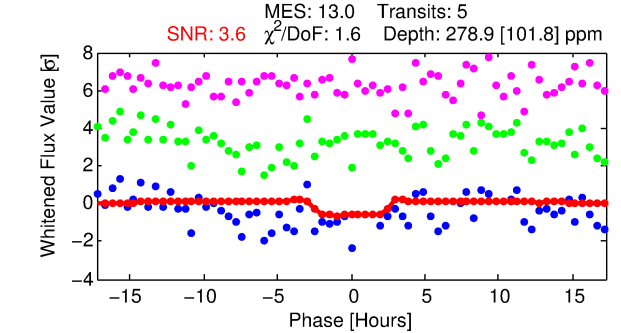
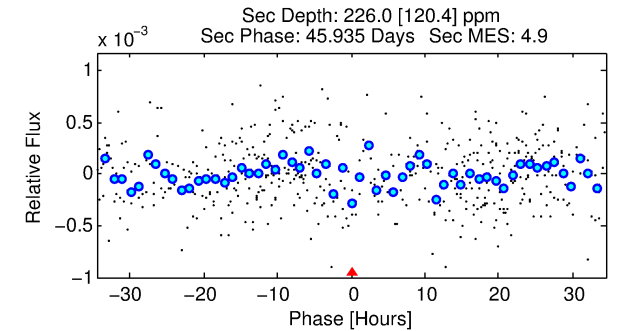
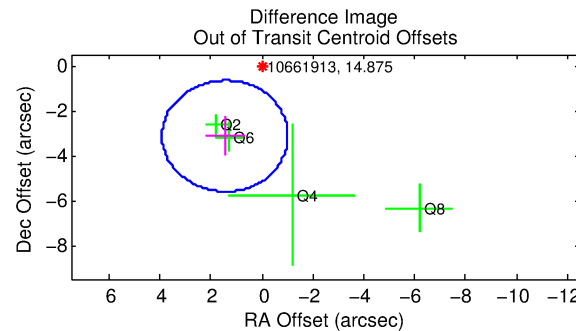
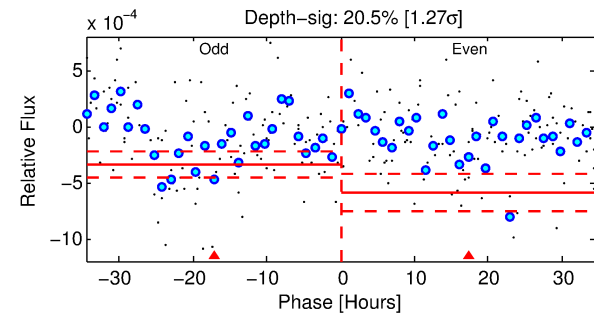
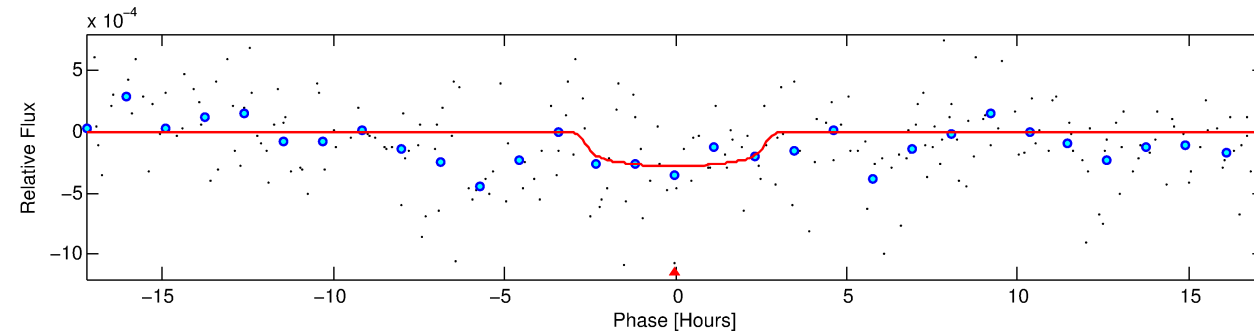
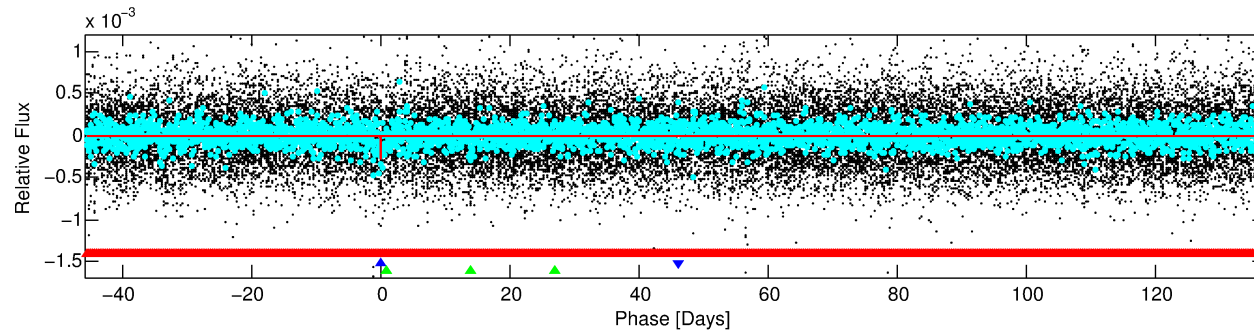
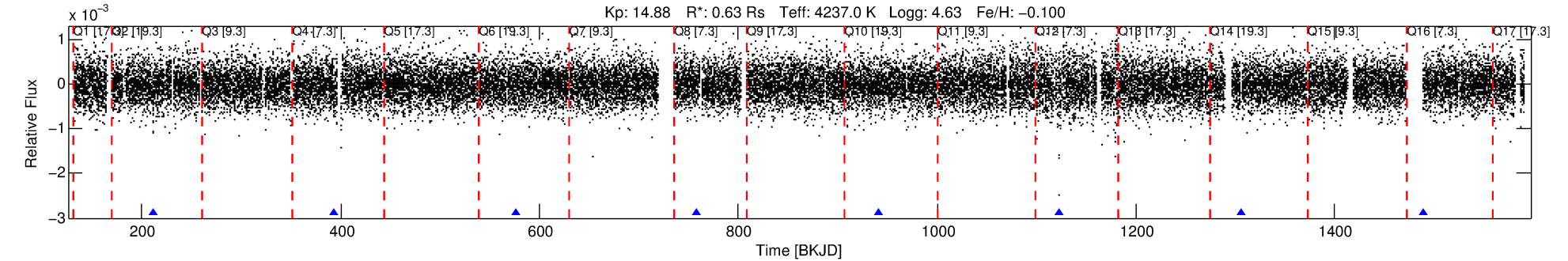
Ephemeris Match Information For 010661913-02

No Significant Match Found

DV One-Page Summary

KIC: 10661913 Candidate: 2 of 3 Period: 182.445 d
KOI: K07355 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.63 Rs Teff: 4237.0 K Logg: 4.63 Fe/H: -0.100



DV Fit Results:

Period = 182.44456 [0.00864] d
Epoch = 211.2268 [0.0246] BKJD
Rp/R* = 0.0183 [0.0174]
a/R* = 124.45 [445.16]
b = 0.88 [0.93]
Seff = 0.40 [0.06]
Teq = 203 [8] K
Rp = 1.26 [1.21] Re
a = 0.5368 [0.0404] AU
Ag = 22522.17 [44566.02] [0.51σ]
Teffp = 3839 [1900] K [1.91σ]

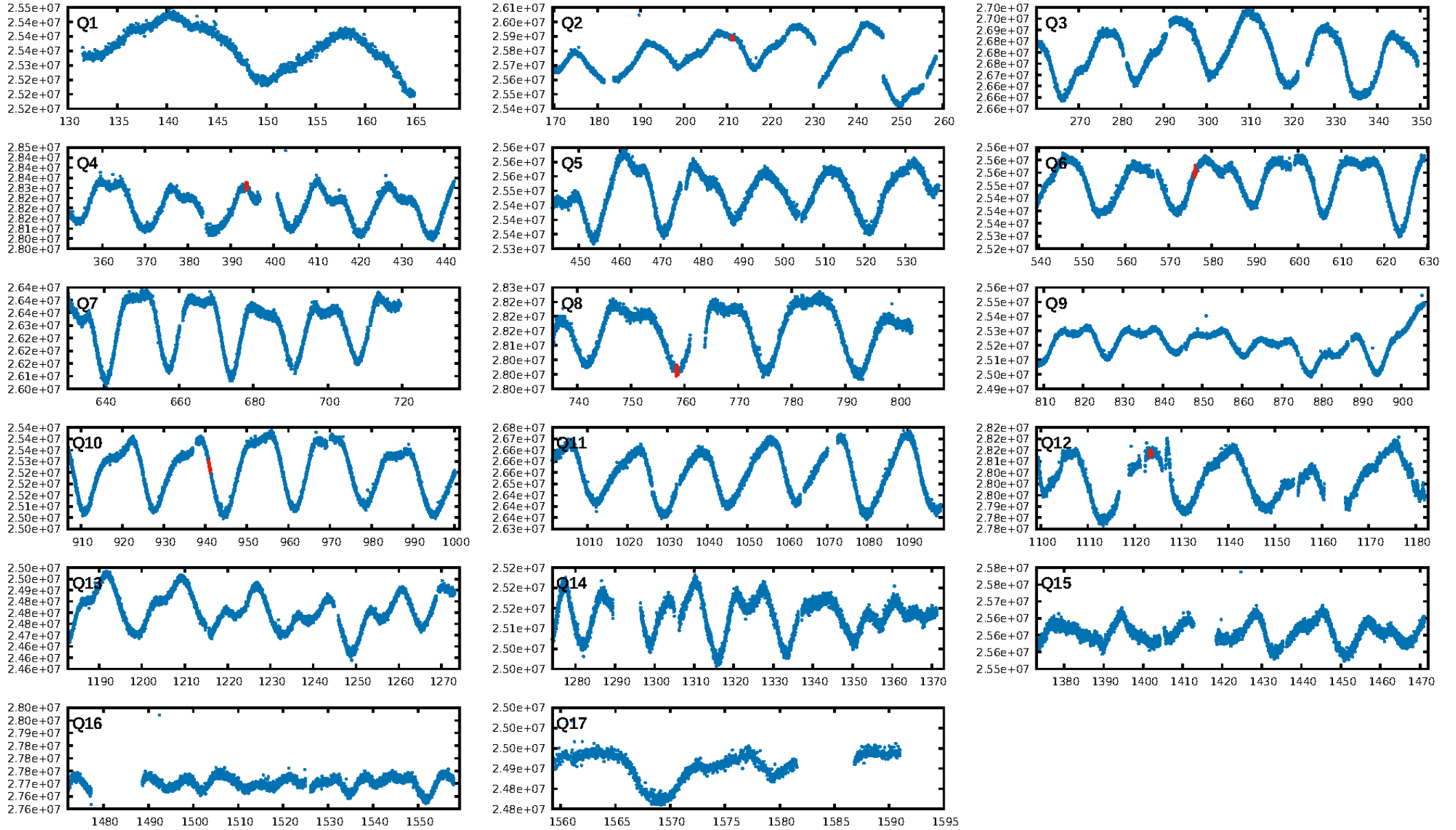
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [619.00σ]
LongPeriod-sig: 100.0% [487.78σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 71.0%
Bootstrap-pfa: 1.63e-19
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -300
Centroid-sig: 21.7%
Centroid-so: 1.310 arcsec [0.69σ]
OotOffset-rm: 3.454 arcsec [4.19σ]
KicOffset-rm: 4.778 arcsec [3.18σ]
OotOffset-st: 2/0/2/0 [4]
KicOffset-st: 2/0/2/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.20 [1/5]

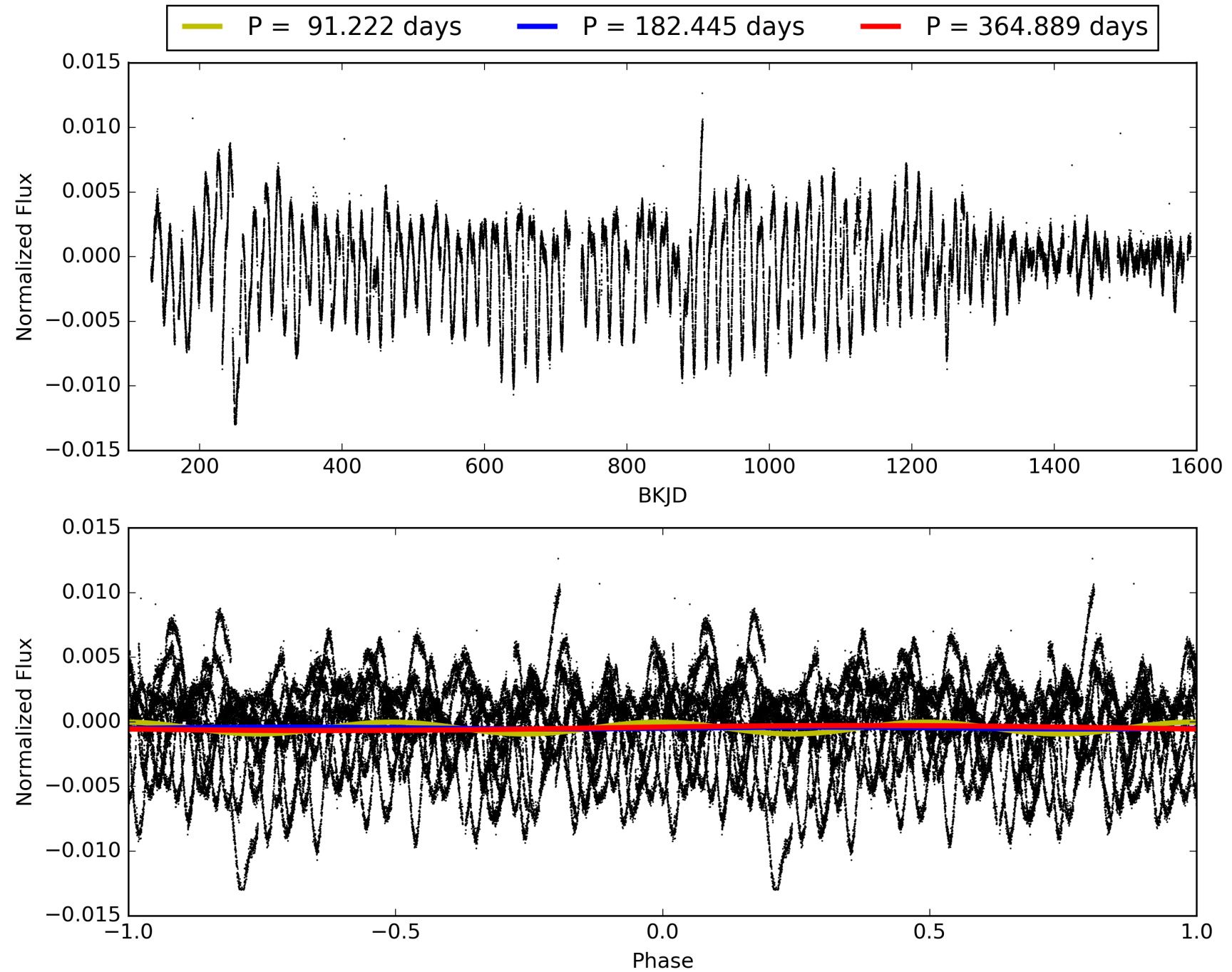
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:37:09 Z

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

TCE 010661913-02, PDC Light Curves

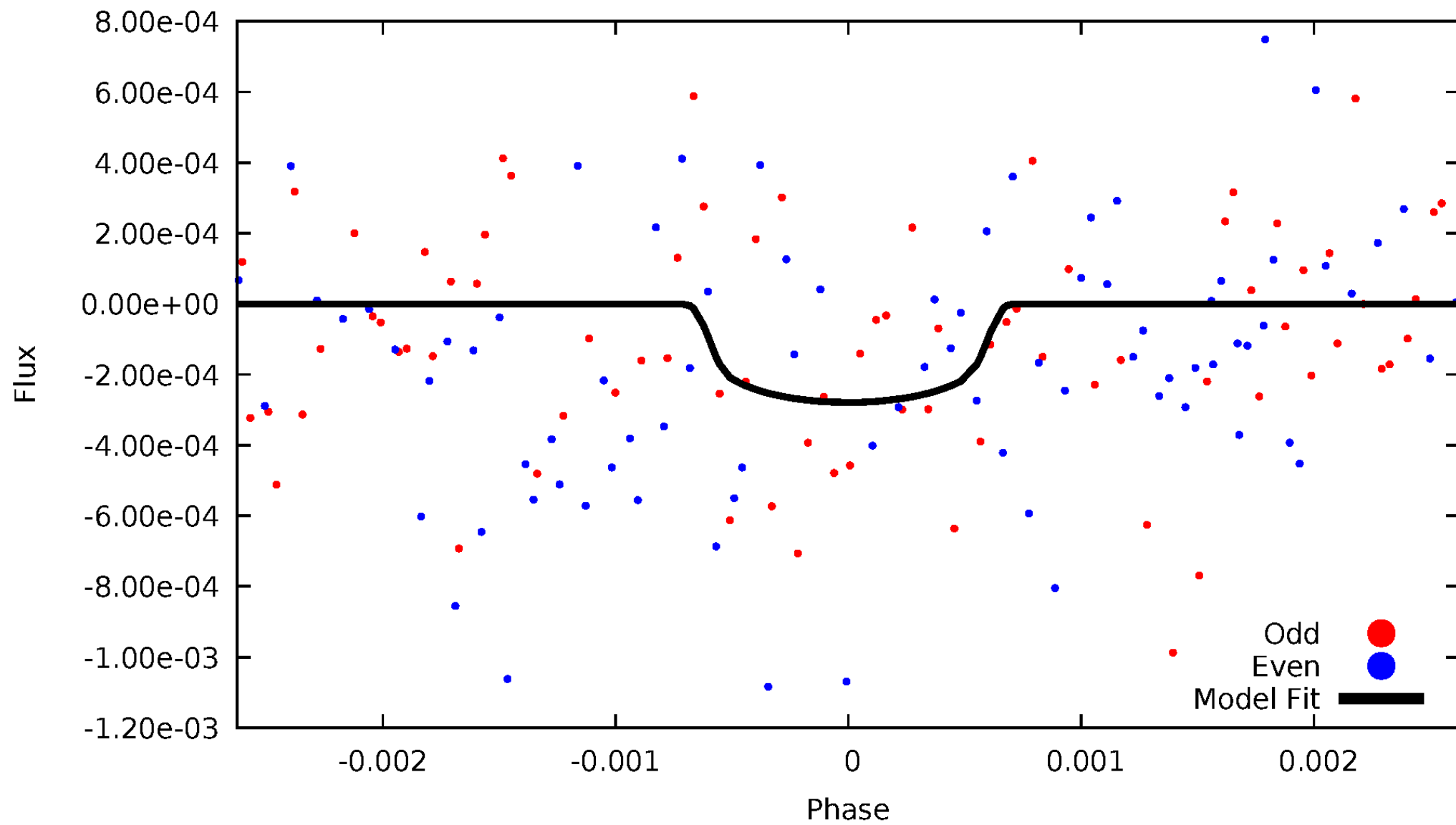


TCE 010661913-02



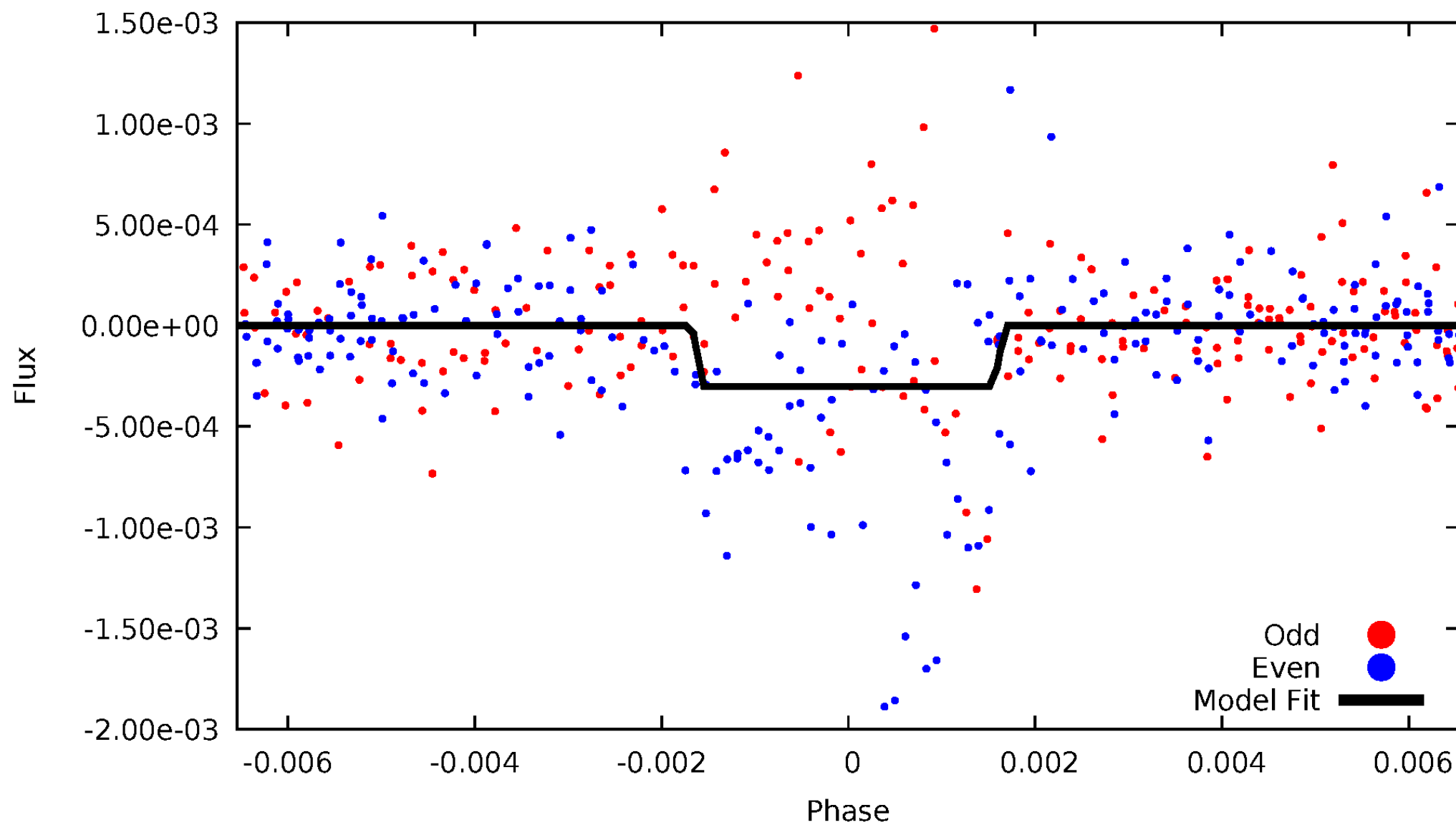
DV Odd/Even

TCE 010661913-02



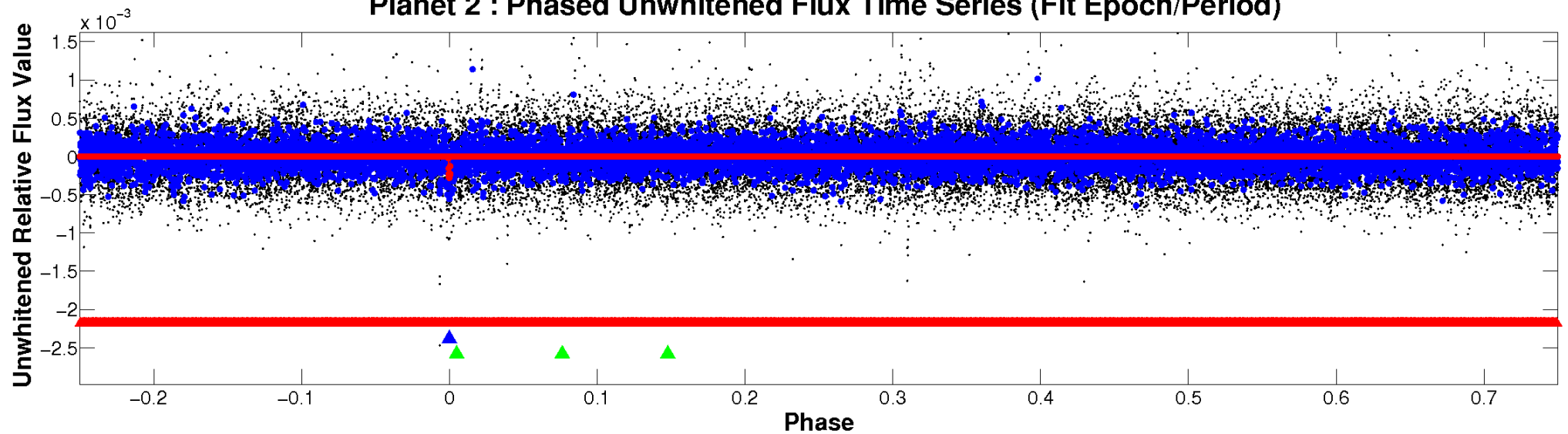
ALT Odd/Even

TCE 010661913-02

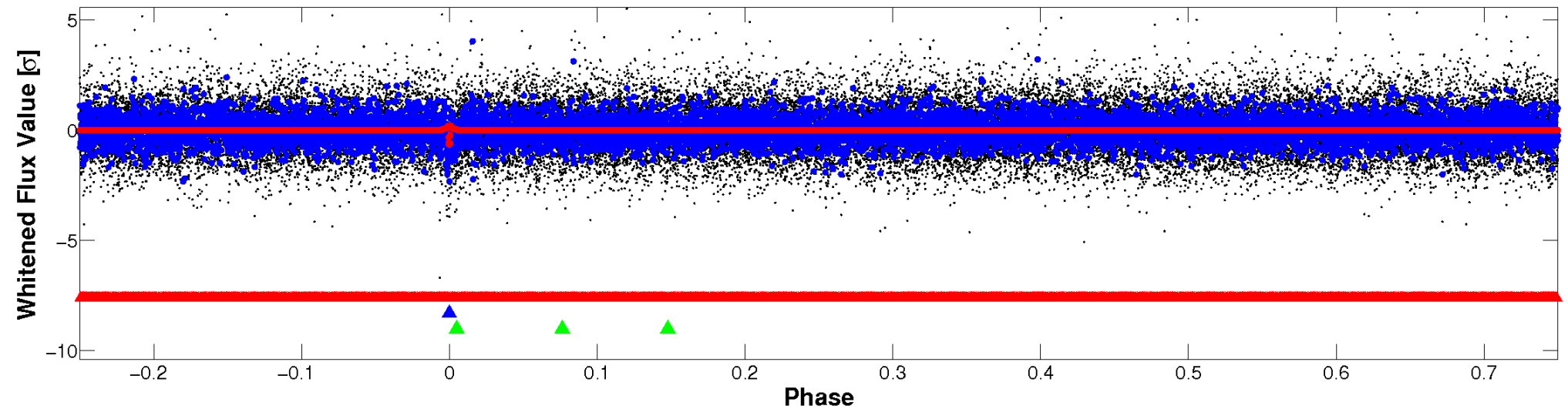


Non-Whitened Vs. Whitened Light Curve

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

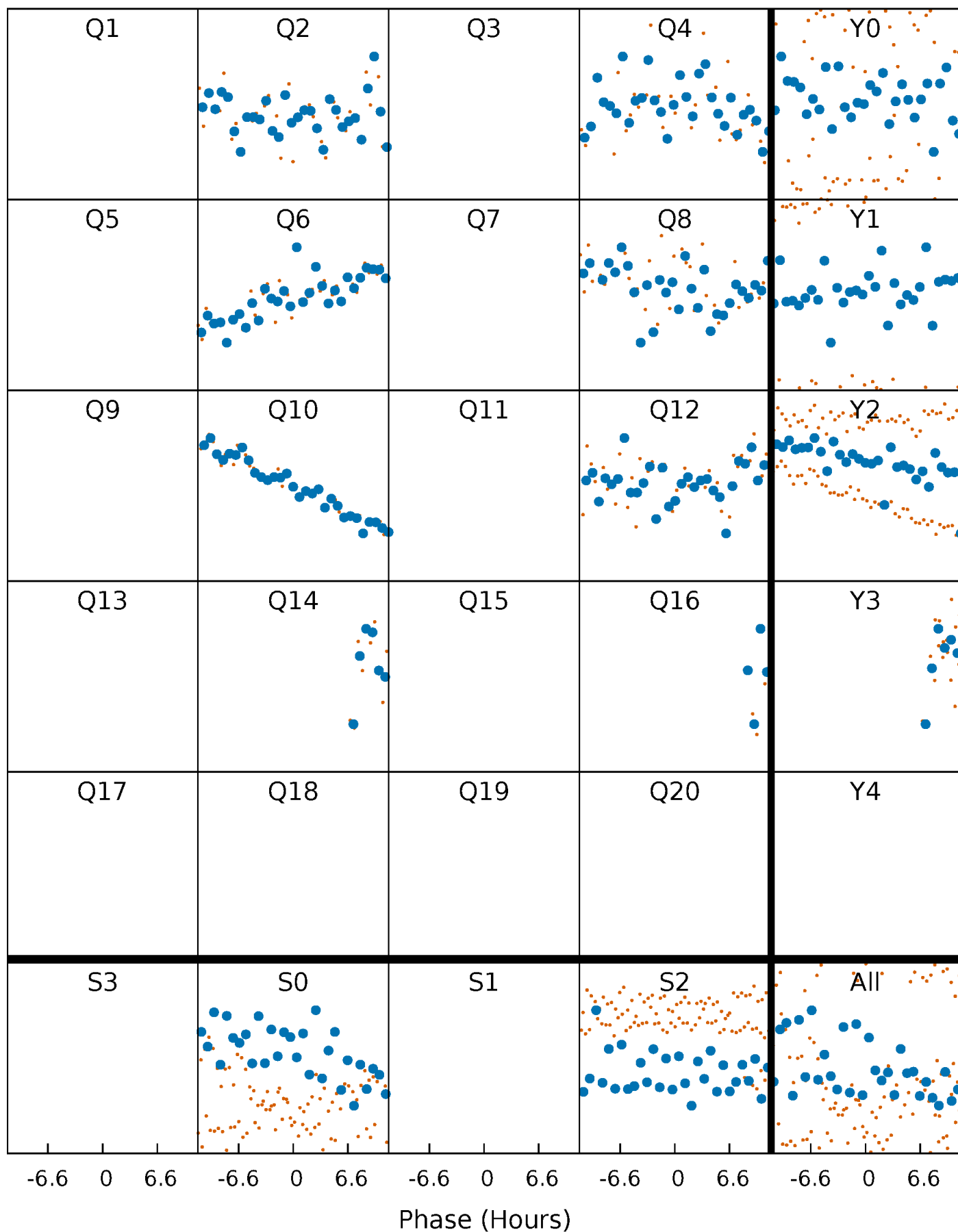


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



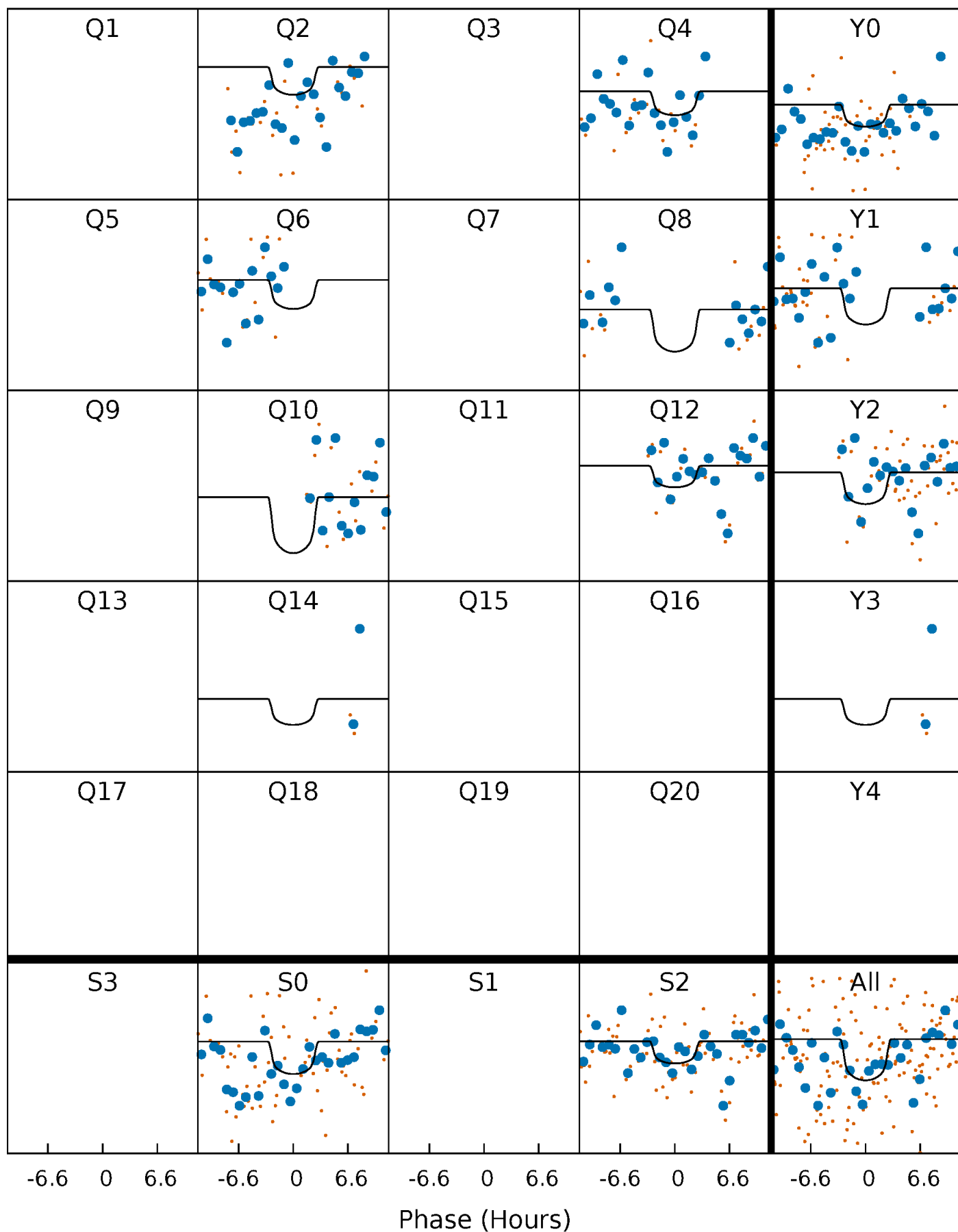
PDC Quarter-Phased Transit Curves

TCE 010661913-02 P=182.444561 Days $T_0=211.226794$ (BKJD)



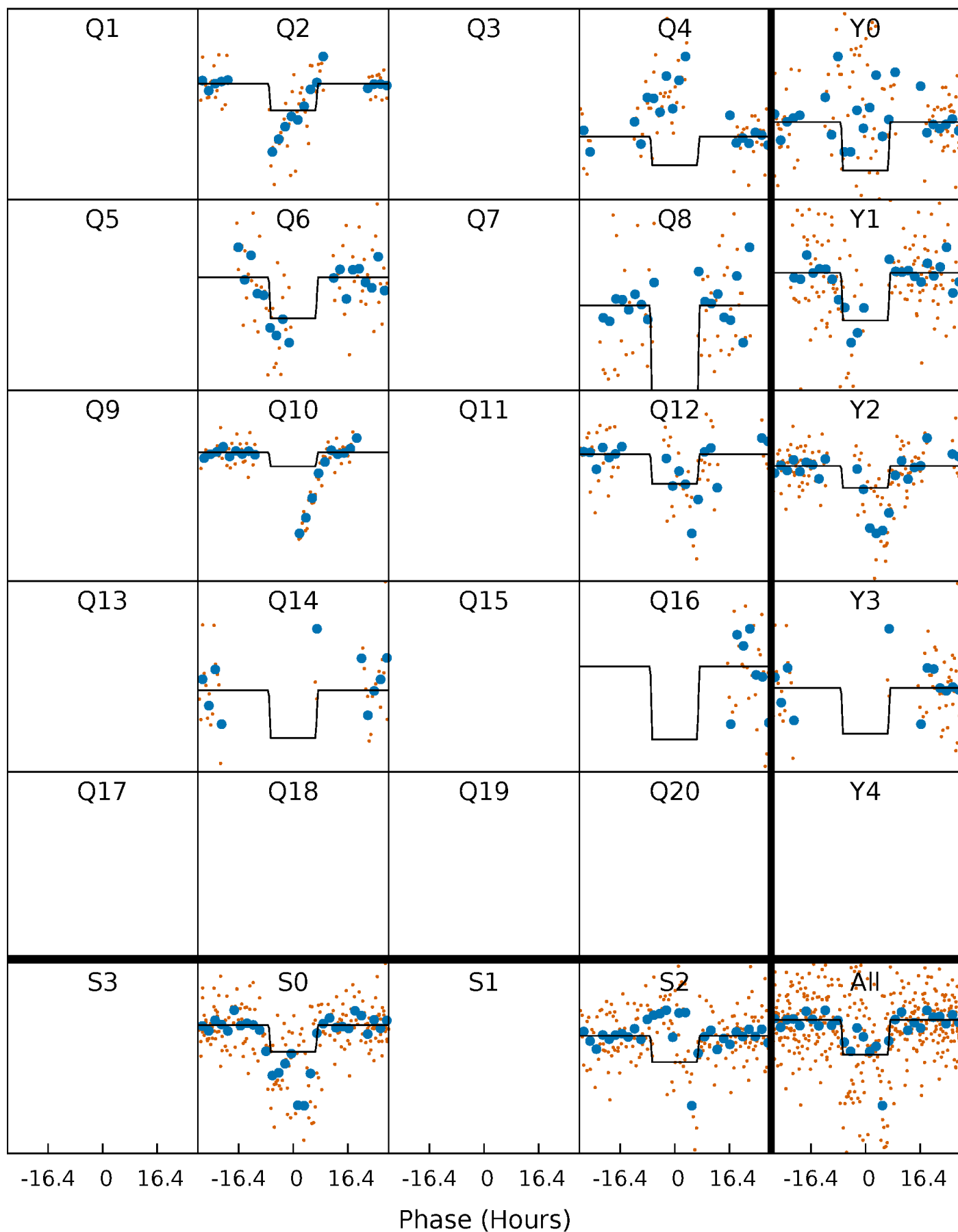
DV Quarter-Phased Transit Curves

TCE 010661913-02 P=182.444561 Days $T_0=211.226794$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

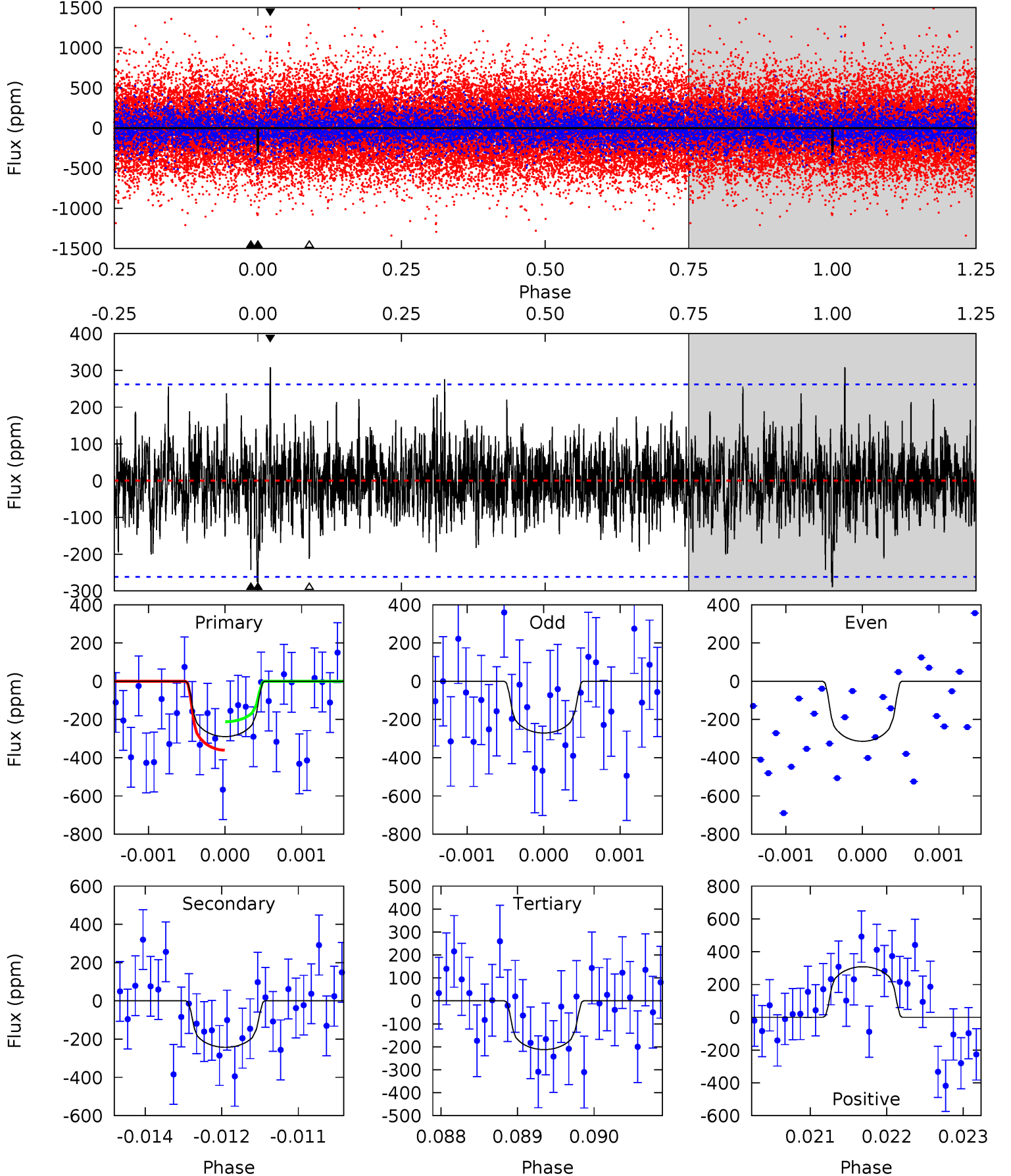
TCE 010661913-02 P=182.451257 Days $T_0=211.197007$ (BKJD)



DV Model-Shift Uniqueness Test

010661913-02, $P = 182.444561$ Days, $E = 28.782233$ Days

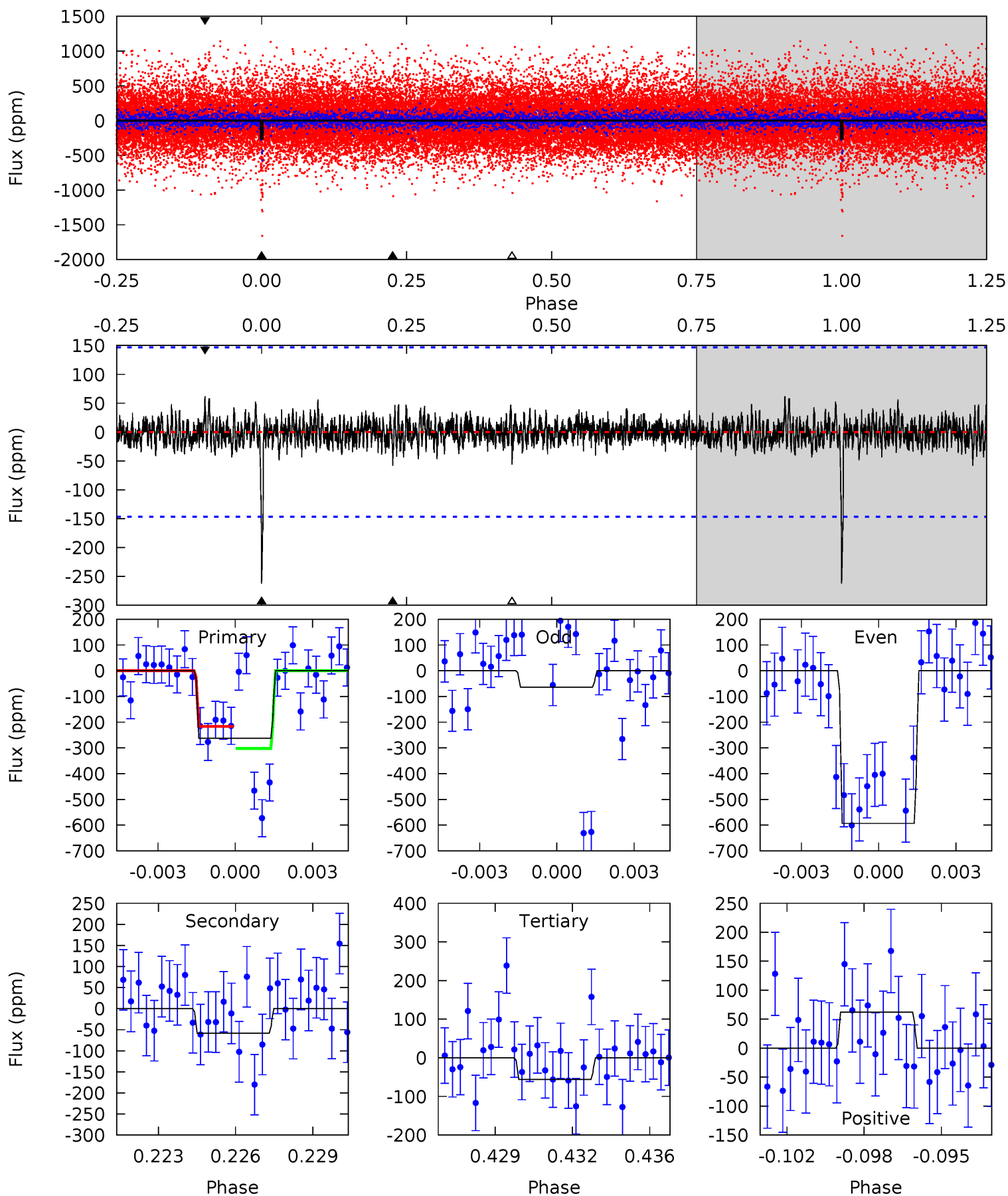
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.97	5.00	4.37	6.35	5.39	3.20	1.38	1.59	-0.38	0.63	-1.35	0.45	1.69	0.52	1.54



Alt Model-Shift Uniqueness Test

010661913-02, $P = 182.451257$ Days, $E = 28.745750$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.36	2.07	2.00	2.22	5.24	2.94	0.54	7.36	7.14	0.07	-0.15	9.73	0.76	0.19	1.51



Stellar Parameters For KIC 010661913

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4237^{+113}_{-126}	$4.630^{+0.053}_{-0.021}$	$-0.100^{+0.300}_{-0.300}$	$0.631^{+0.040}_{-0.060}$	$0.620^{+0.061}_{-0.055}$	$3.476^{+0.810}_{-0.345}$
	+3%/-3%	+1%/-0%	+300%/-300%	+6%/-10%	+10%/-9%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010661913-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-243 ± 49	$1.52^{+0.99}_{-0.93}$	281^{+9}_{-10}	3725^{+1581}_{-591}	17271^{+84482}_{-11363}
Alt.	-58 ± 28	$1.36^{+1.13}_{-0.87}$	281^{+9}_{-10}	3046^{+1156}_{-512}	4430^{+31697}_{-3303}

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

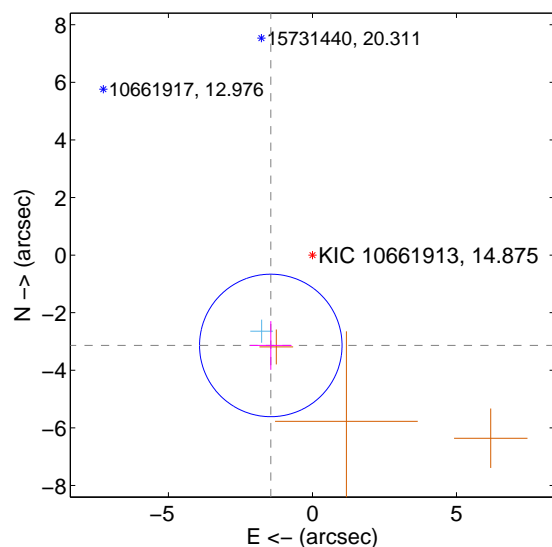
Supplemental centroid analysis for 010661913-02. Kepler magnitude: 14.88. Transit SNR 3.60

There are 1 quarters with good PRF difference image offsets

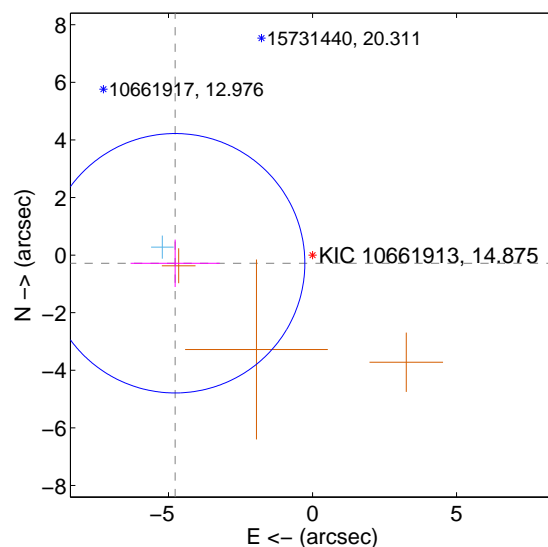
The OOT PRF centroid is offset from the target star catalog position by about 3.95 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.454 ± 0.824	4.19	1.446 ± 0.721	-3.137 ± 0.845
PRF-fit source offset from KIC position	4.778 ± 1.501	3.18	4.770 ± 1.546	-0.283 ± 0.823
photometric centroid source offset	1.31 ± 1.90	0.69	-1.24 ± 1.89	0.43 ± 1.92

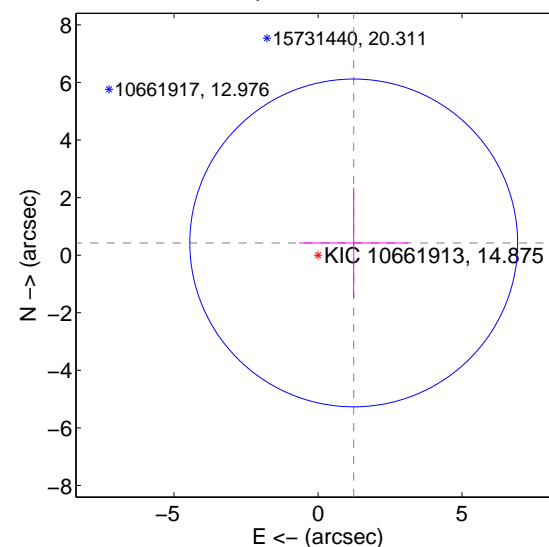
offset from difference PRF-fit to OOT PRF-fit



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.

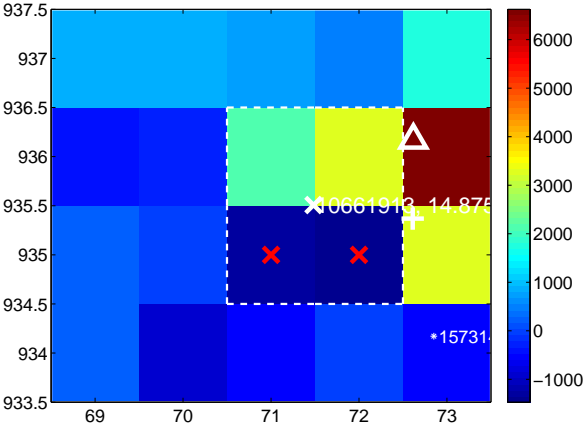
Q1 no difference image



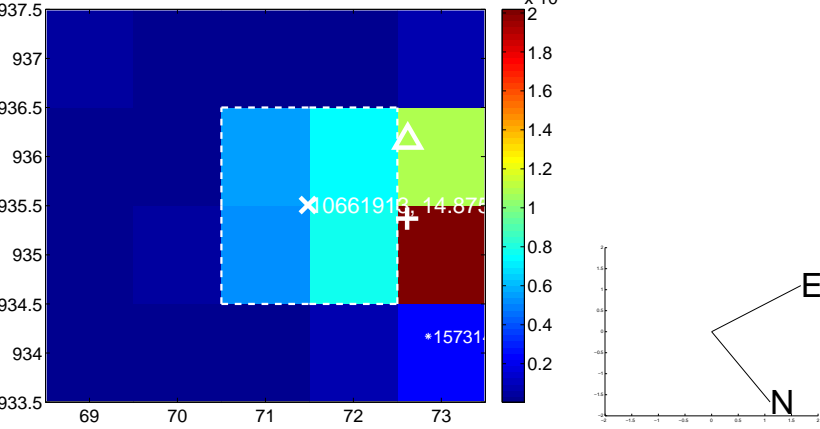
Q1 no OOT image



Q2 difference image



Q2 OOT image



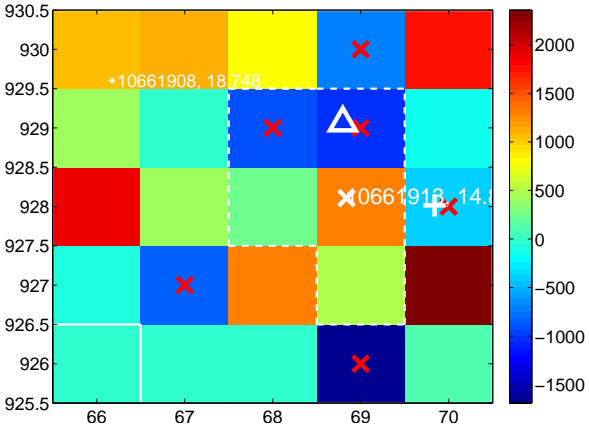
Q3 no difference image



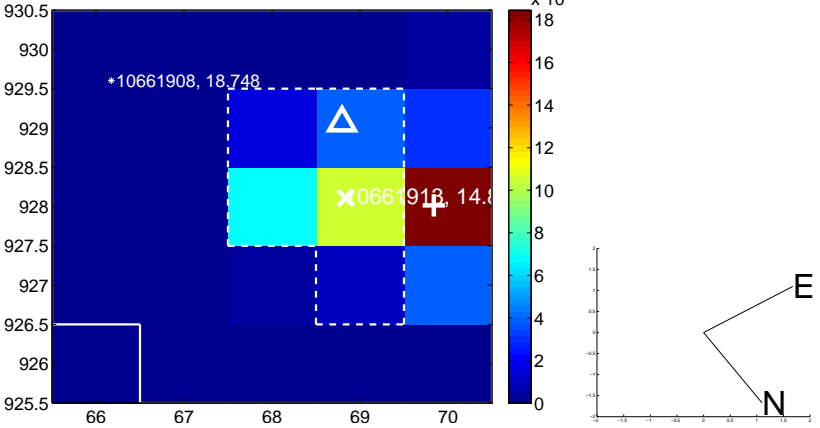
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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

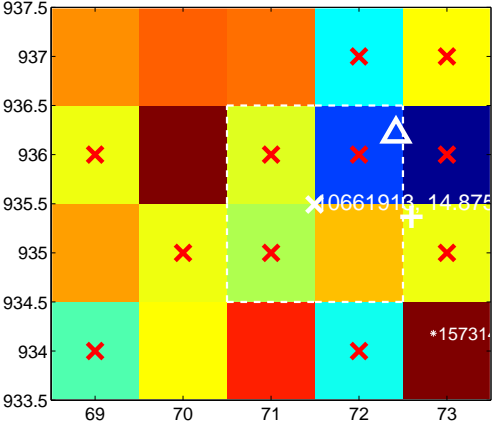
Q5 no difference image



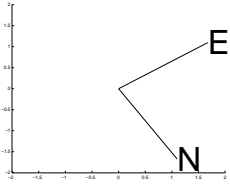
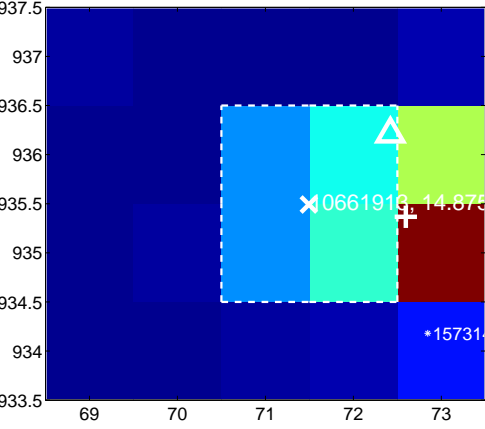
Q5 no OOT image



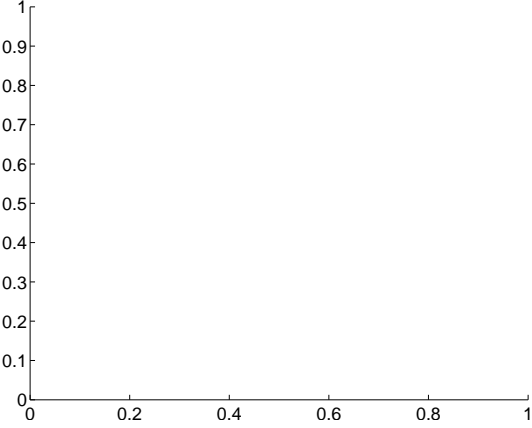
Q6 difference image. Poor Quality



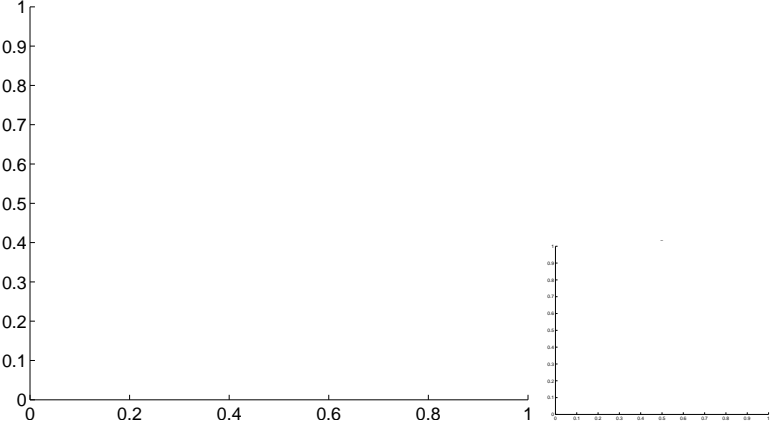
Q6 OOT image



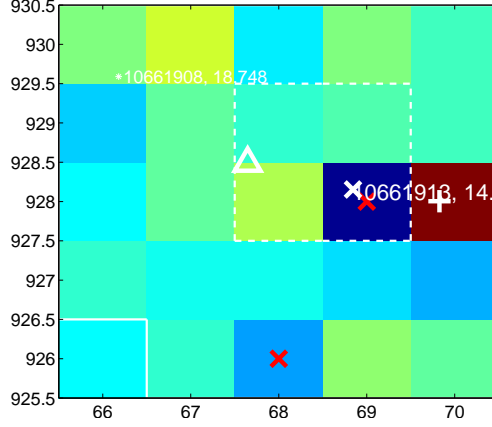
Q7 no difference image



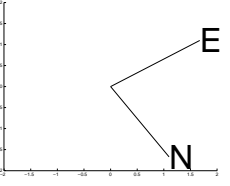
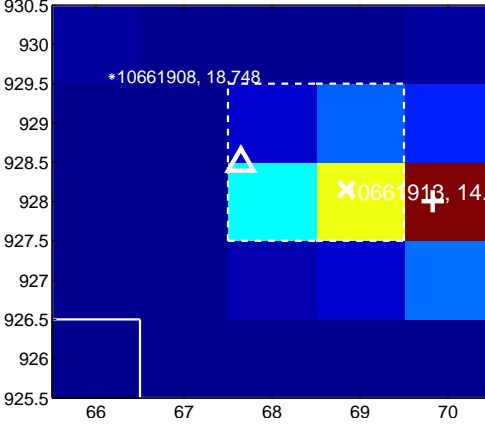
Q7 no OOT image



Q8 difference image. Poor Quality



Q8 OOT image



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

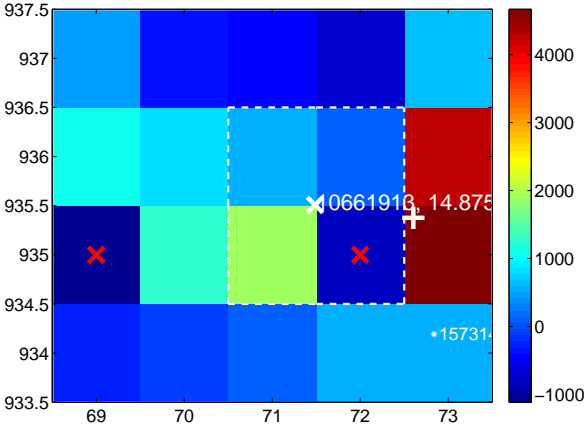
Q9 no difference image



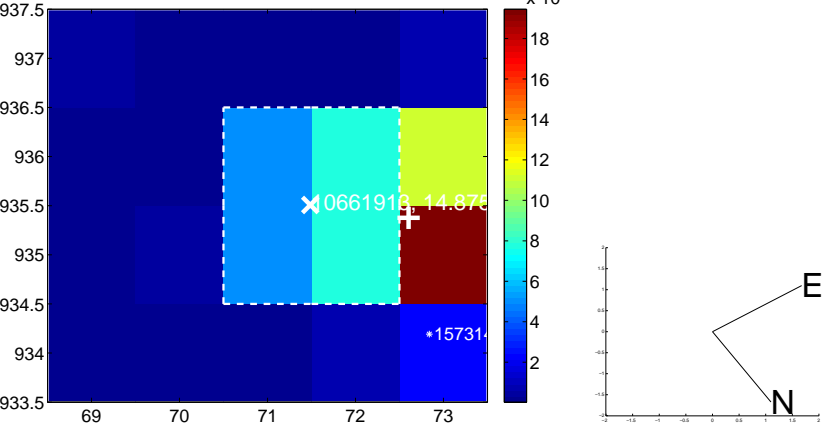
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



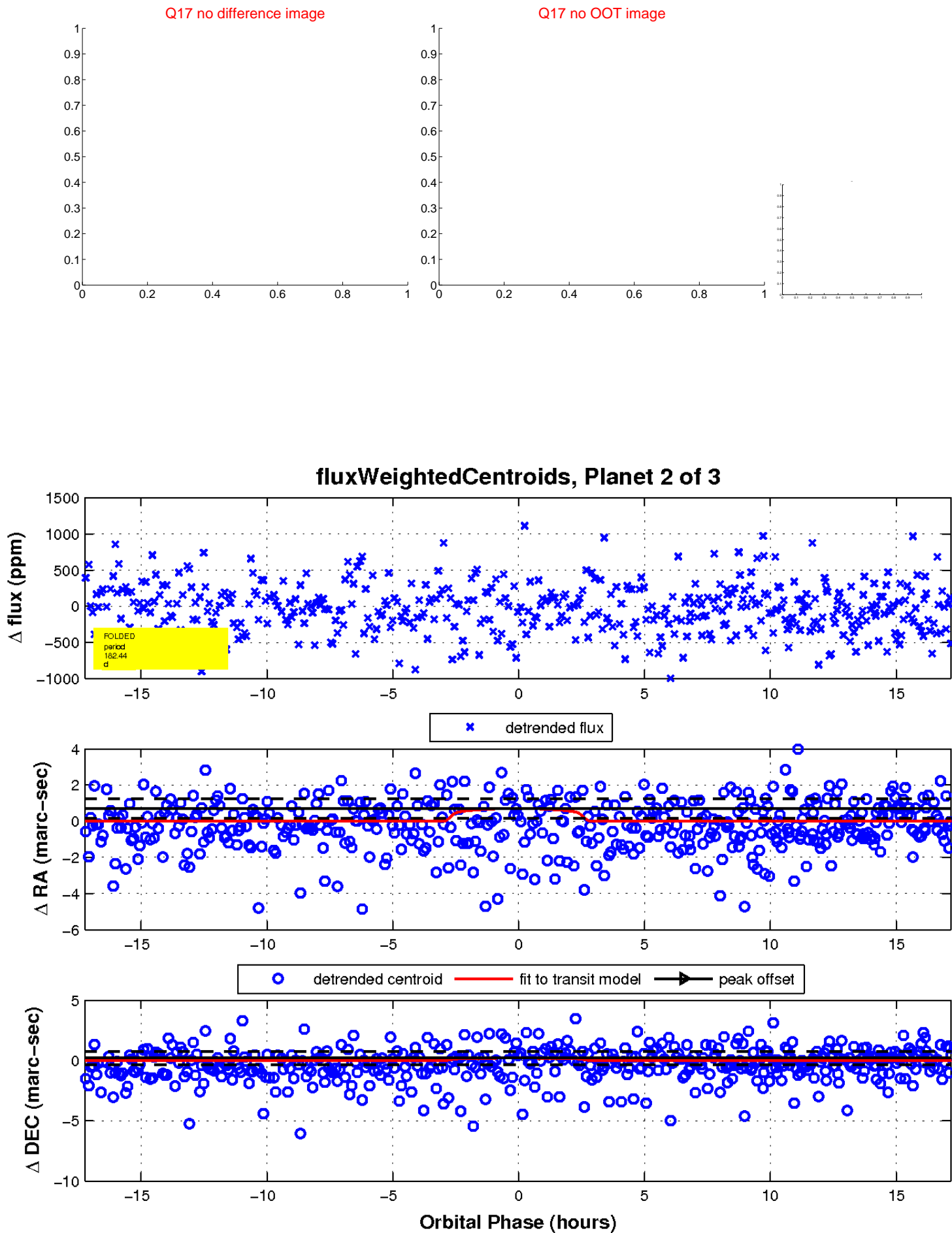
Q12 no OOT image



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

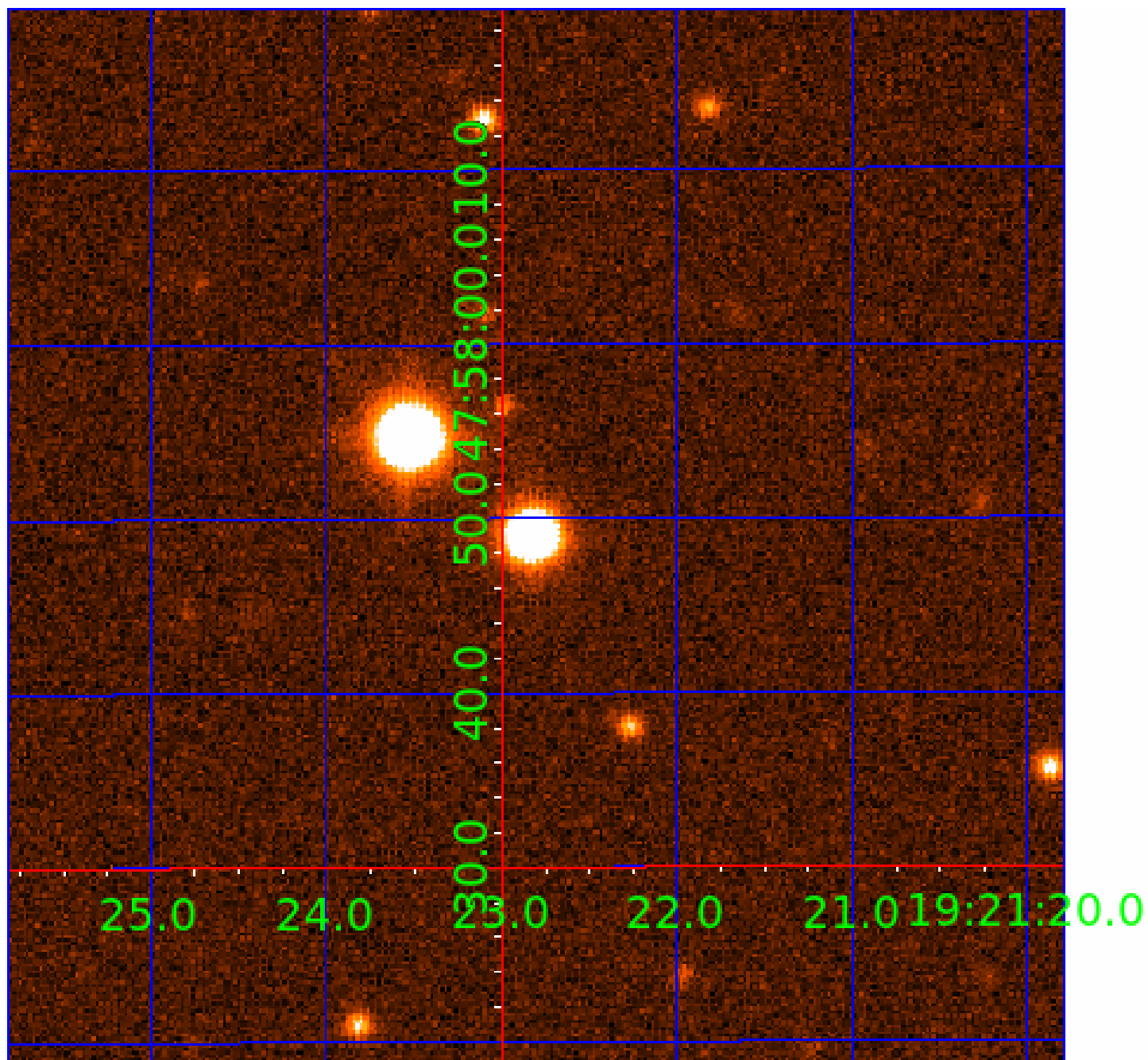


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010661913

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})
010661913-01	OBS	7355.01	1.231312	131.829448	61.7	4.043	13.8	13.1	0.63	4237	0.61	312.84
010661913-02	OBS	No	182.444562	211.226794	278.9	5.746	13.0	3.6	0.63	4237	1.26	0.40
010661913-03	OBS	No	560.365176	394.574557	478.7	17.685	9.7	6.2	0.63	4237	1.52	0.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010661913-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
010661913-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010661913-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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 010661913-03

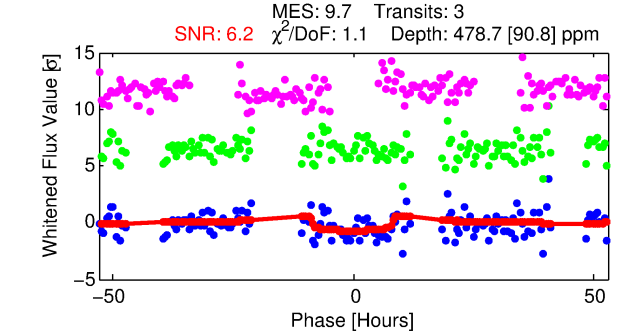
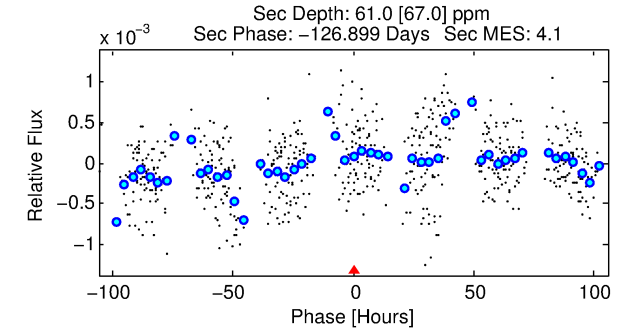
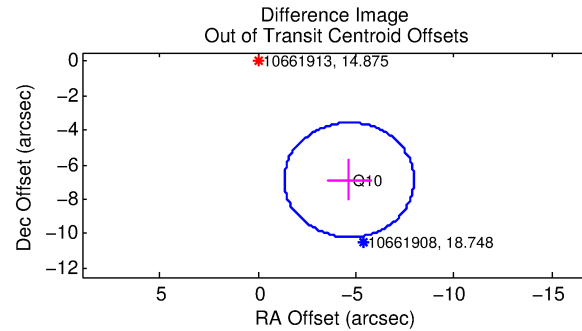
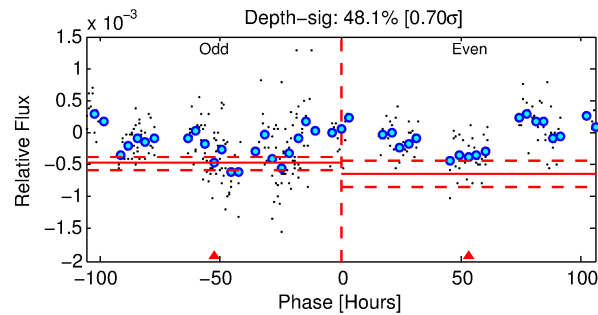
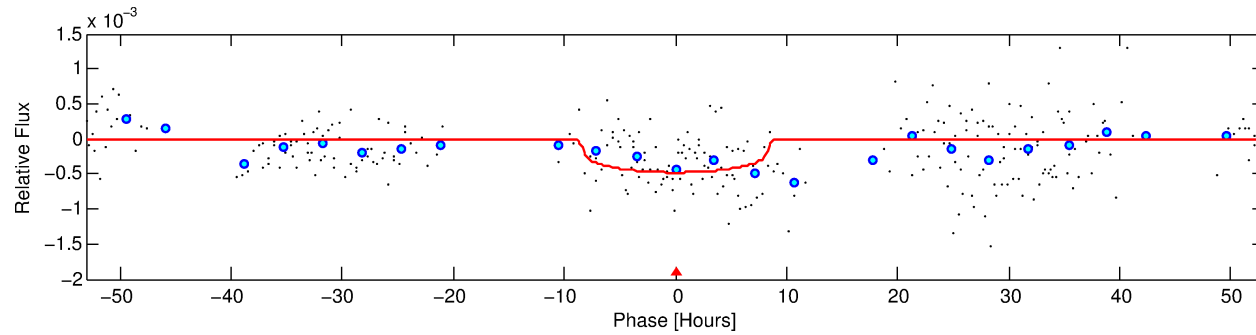
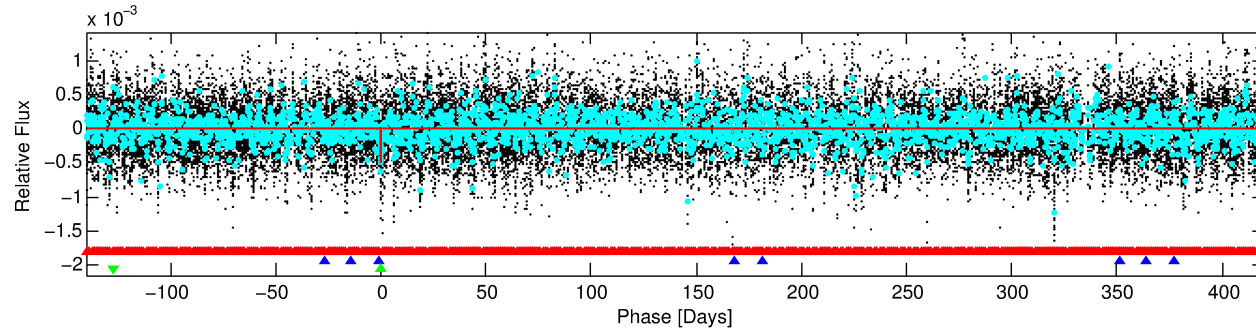
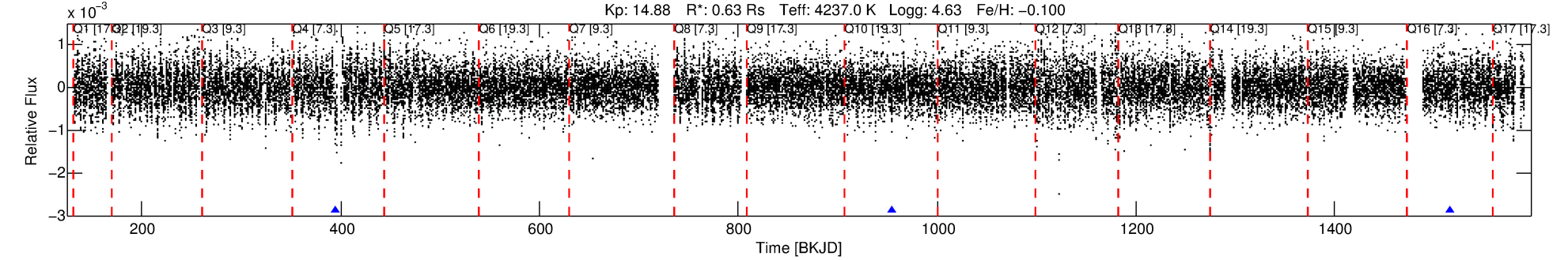
No Significant Match Found

DV One-Page Summary

KIC: 10661913 Candidate: 3 of 3 Period: 560.365 d

KOI: K07355 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.63 Rs Teff: 4237.0 K Logg: 4.63 Fe/H: -0.100



DV Fit Results:

Period = 560.36518 [0.04238] d
Epoch = 394.5746 [0.0571] BKJD
Rp/R* = 0.0220 [0.0084]
a/R* = 165.00 [208.62]
b = 0.76 [0.70]
Seff = 0.09 [0.01]
Teq = 139 [5] K
Rp = 1.52 [0.60] Re
a = 1.1342 [0.0854] AU
Ag = 18774.89 [25192.16] [0.75σ]
Teffp = 2523 [847] K [2.81σ]

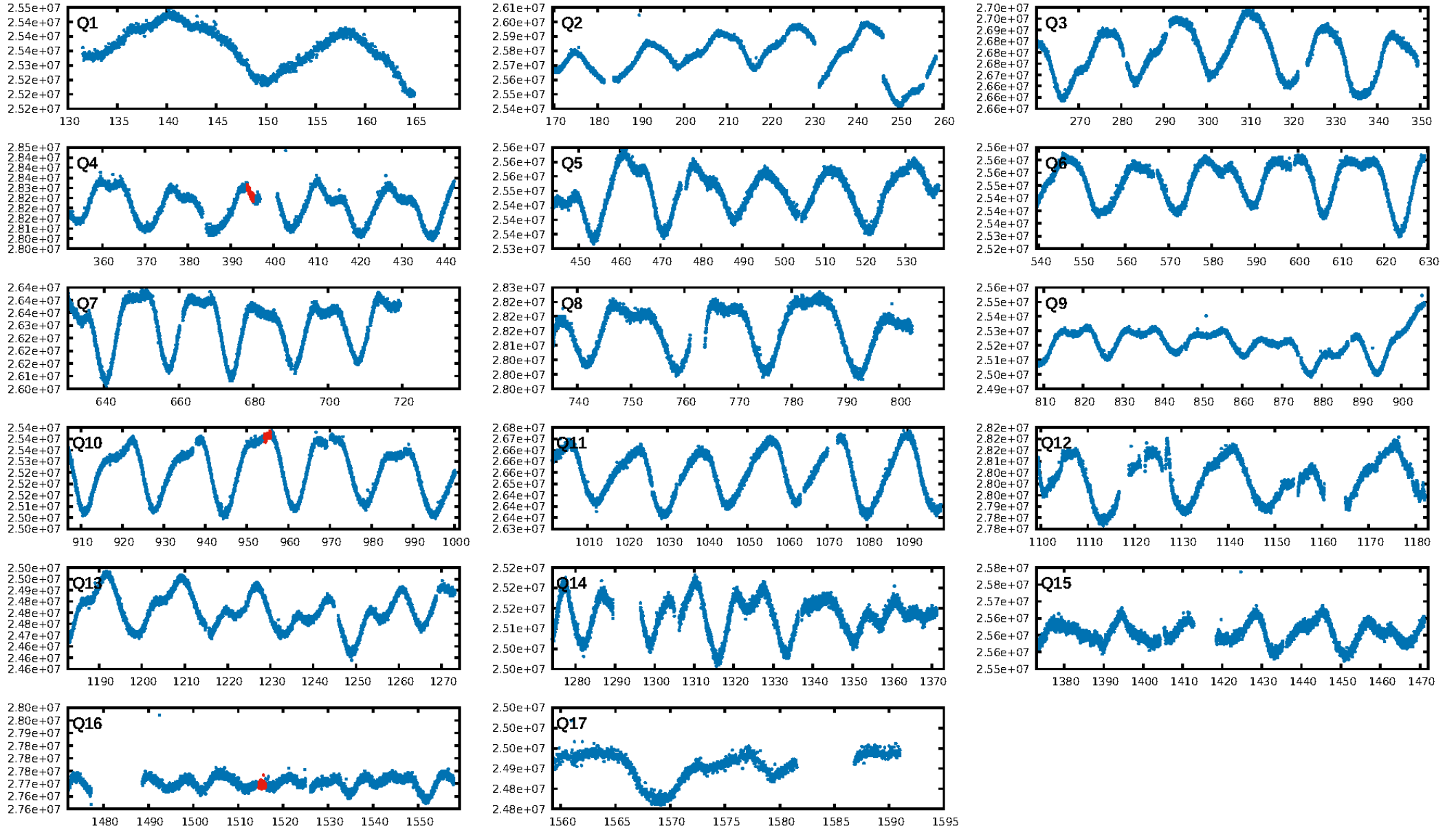
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [487.78σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.7%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.64e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.6298
Centroid-sig: 91.6%
Centroid-so: 1.764 arcsec [1.34σ]
OotOffset-rm: 8.305 arcsec [7.51σ]
KicOffset-rm: 4.286 arcsec [3.87σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/2]

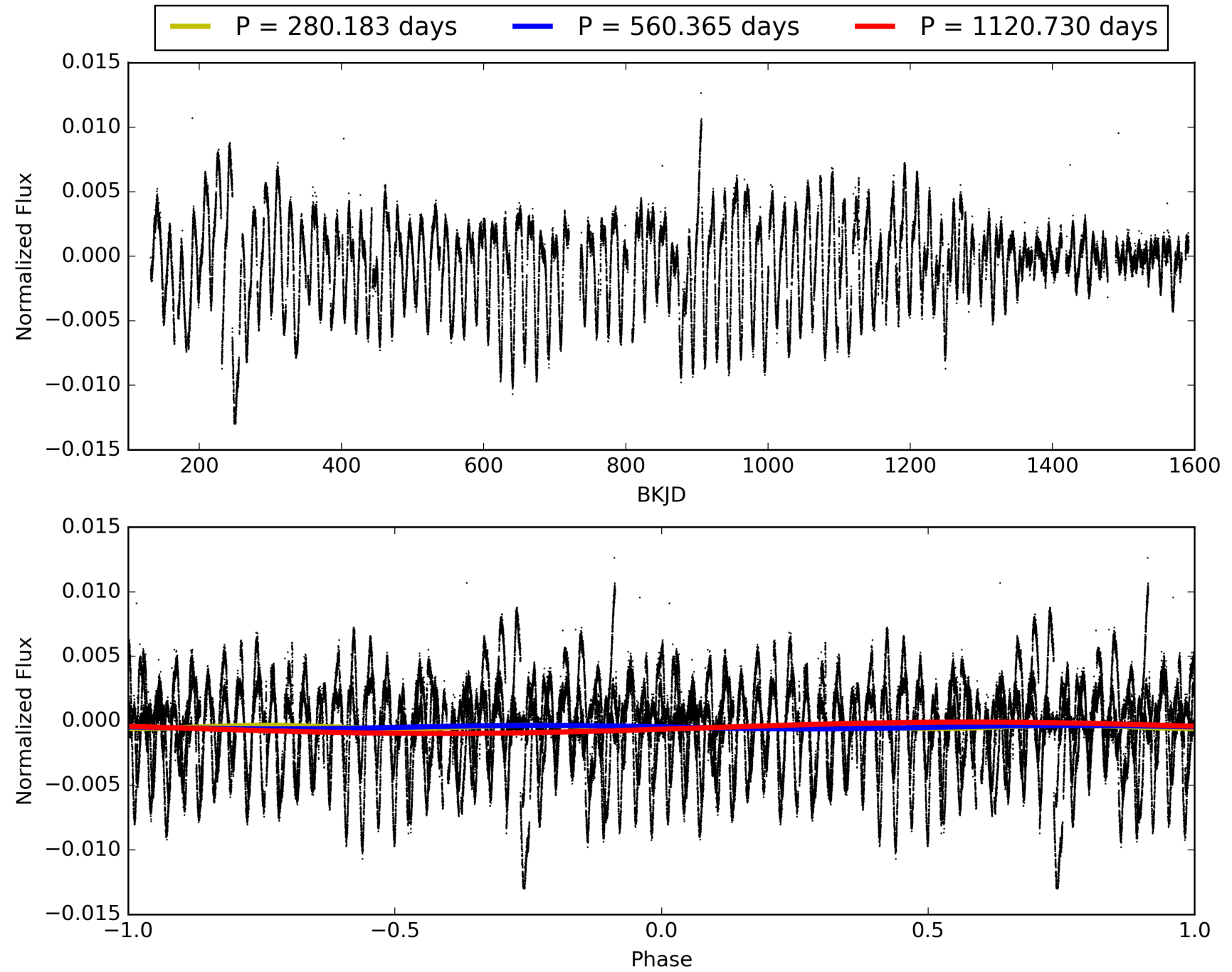
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:37:16 Z

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

TCE 010661913-03, PDC Light Curves

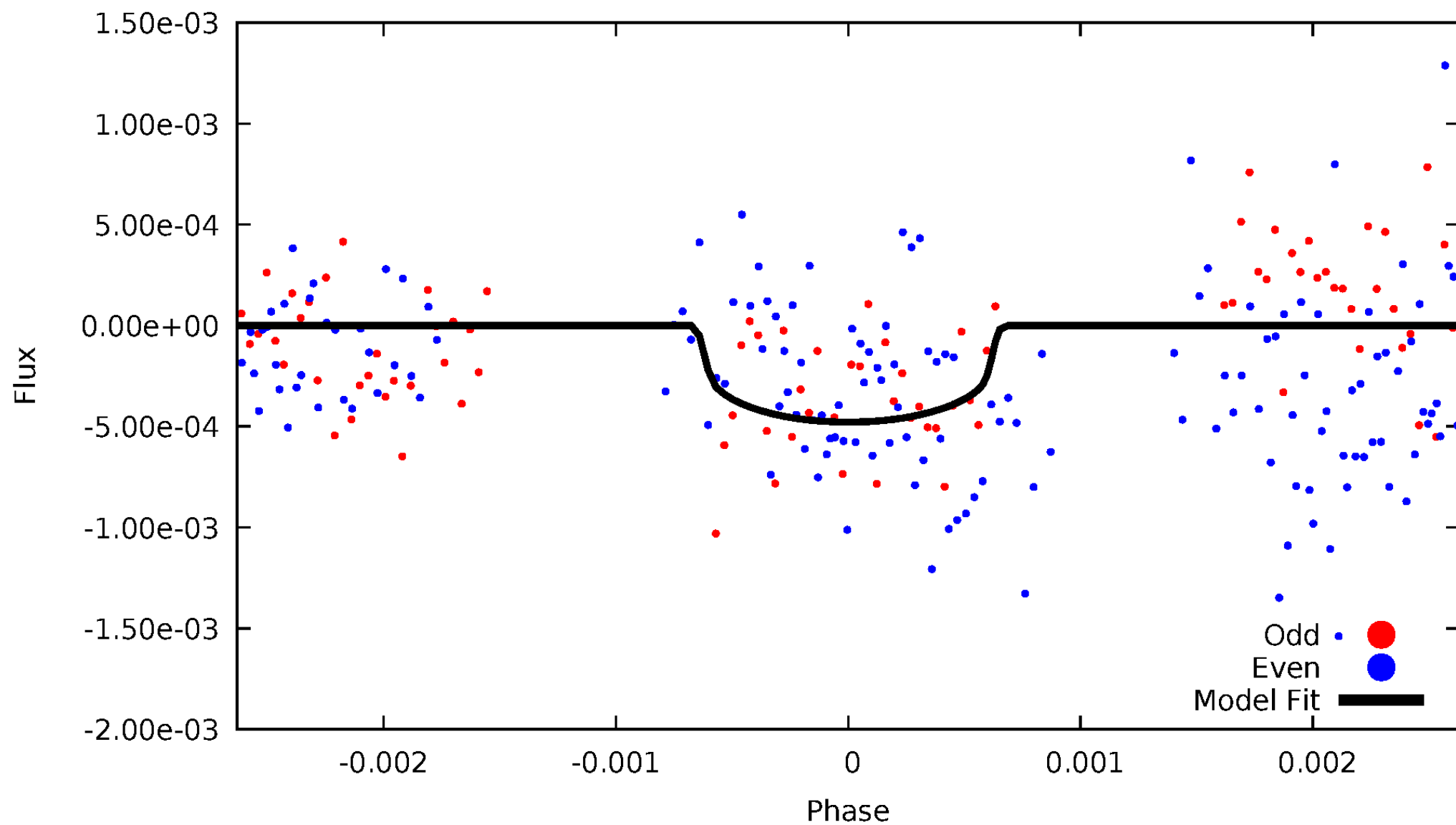


TCE 010661913-03



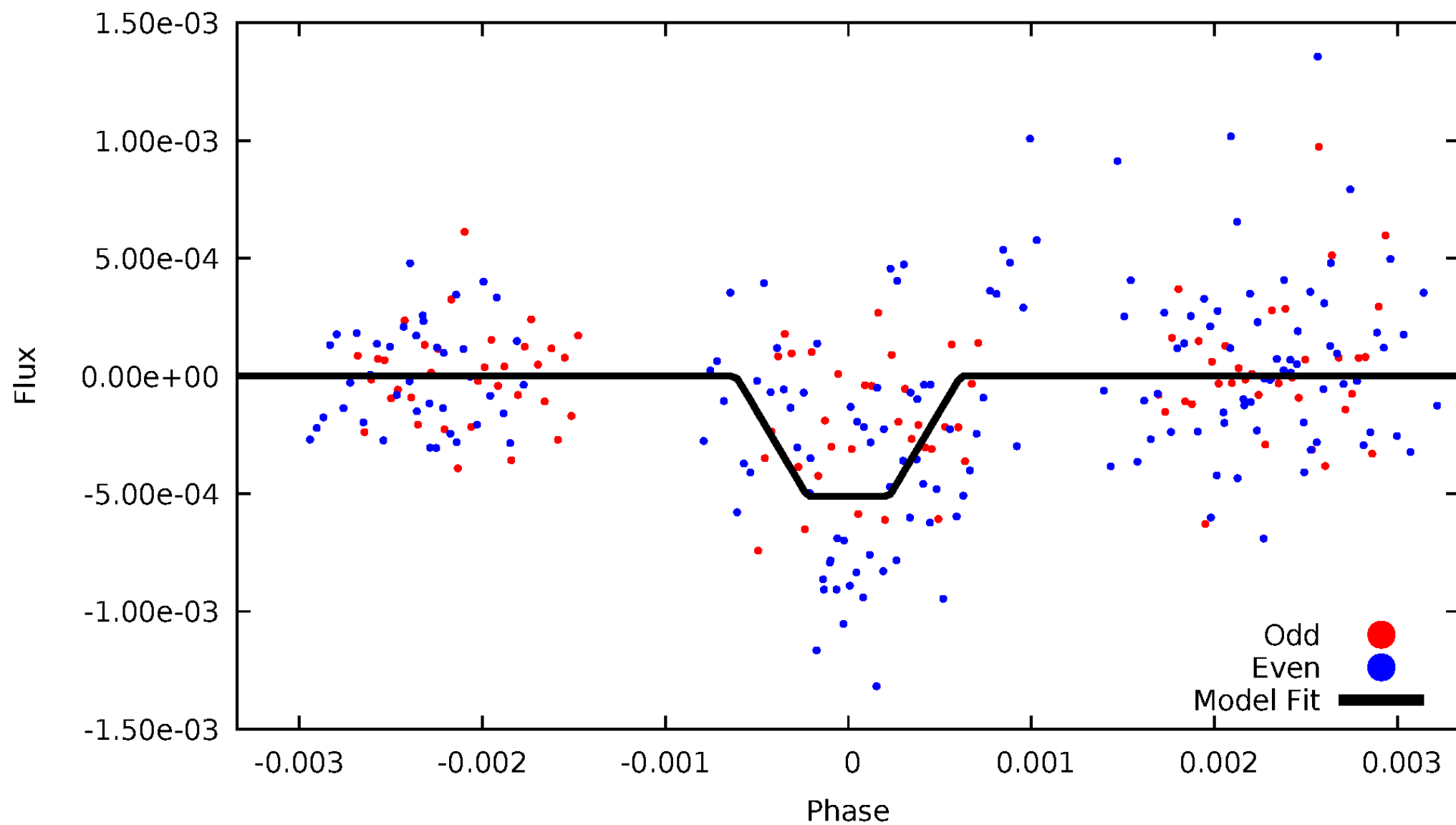
DV Odd/Even

TCE 010661913-03



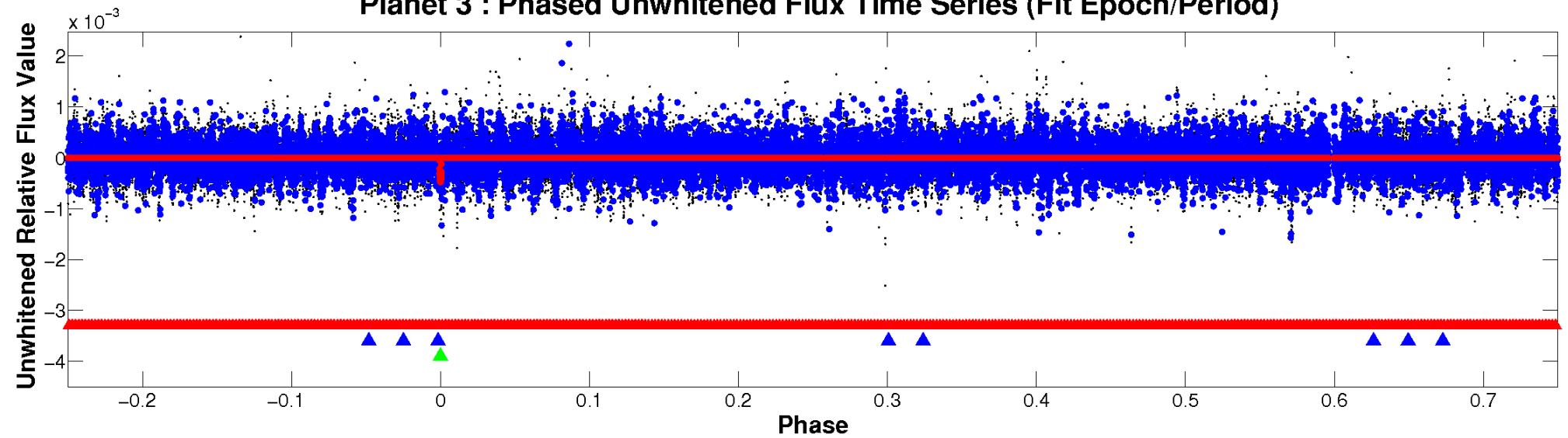
ALT Odd/Even

TCE 010661913-03

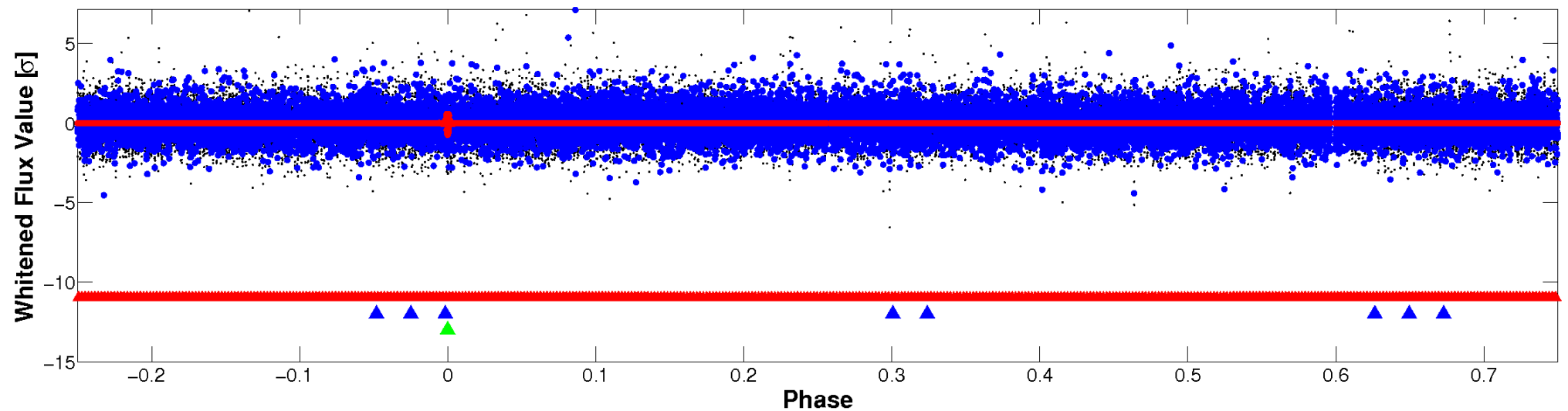


Non-Whitened Vs. Whitened Light Curve

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

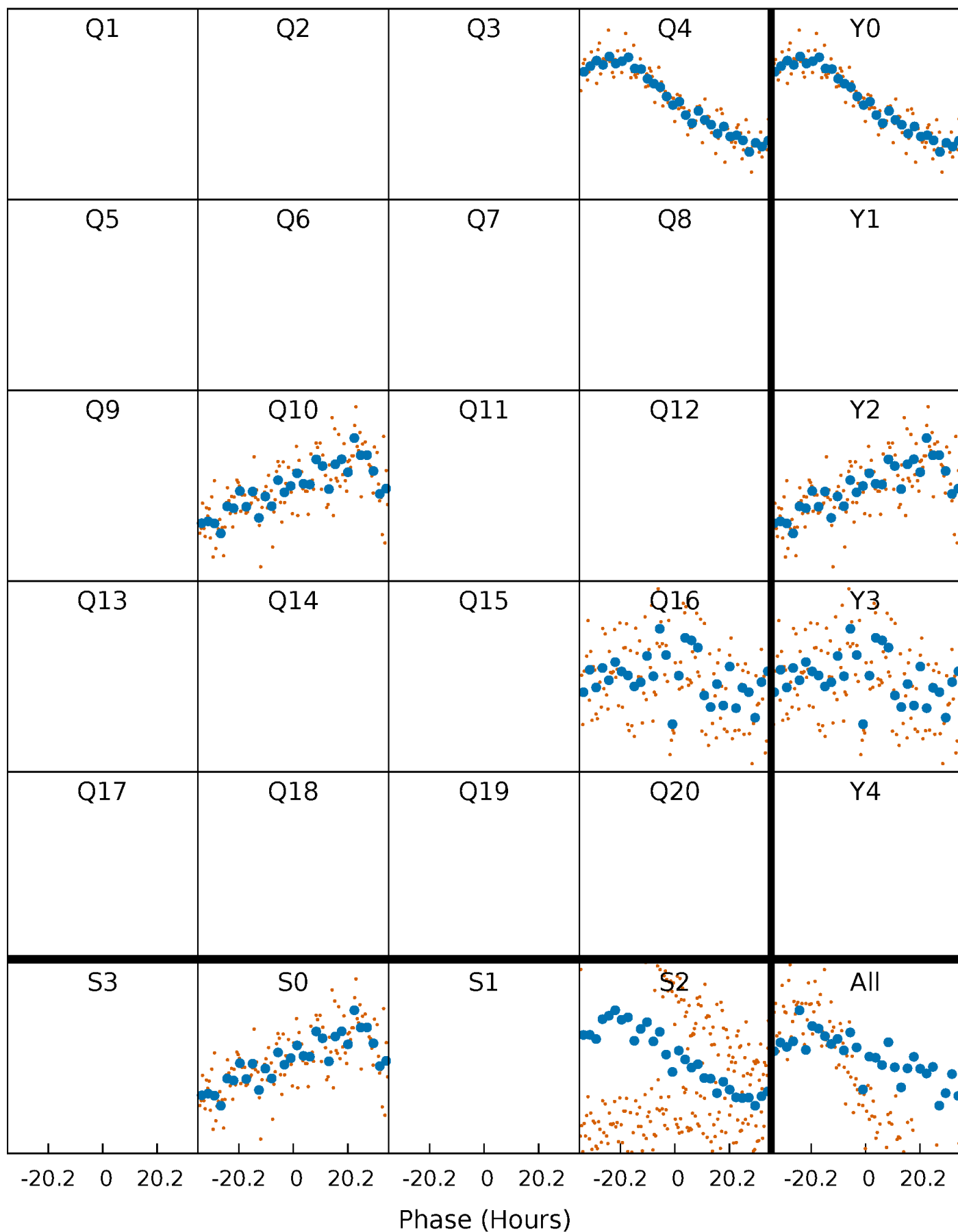


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010661913-03 $P=560.365176$ Days $T_0=394.574557$ (BKJD)



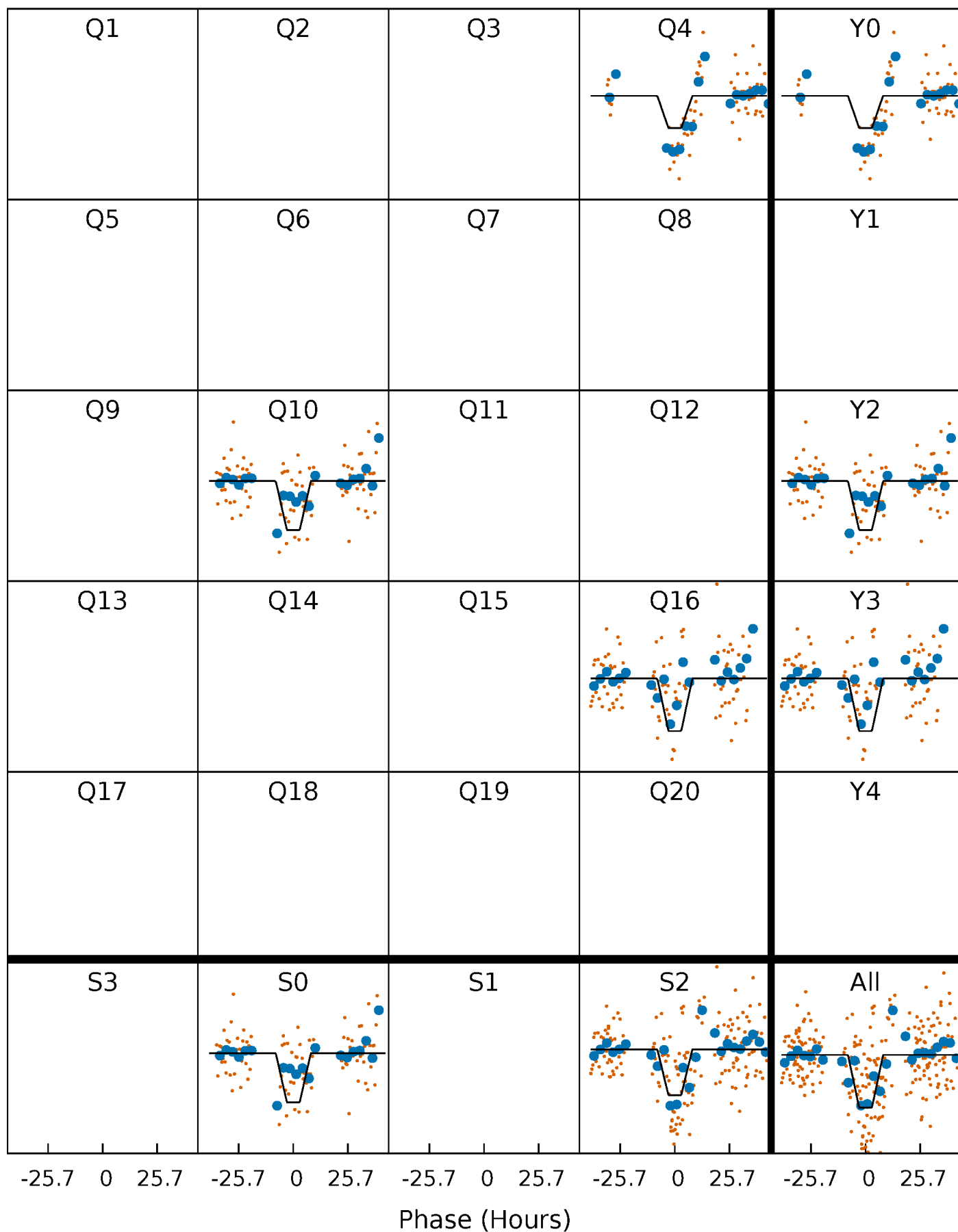
DV Quarter-Phased Transit Curves

TCE 010661913-03 P=560.365176 Days $T_0=394.574557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

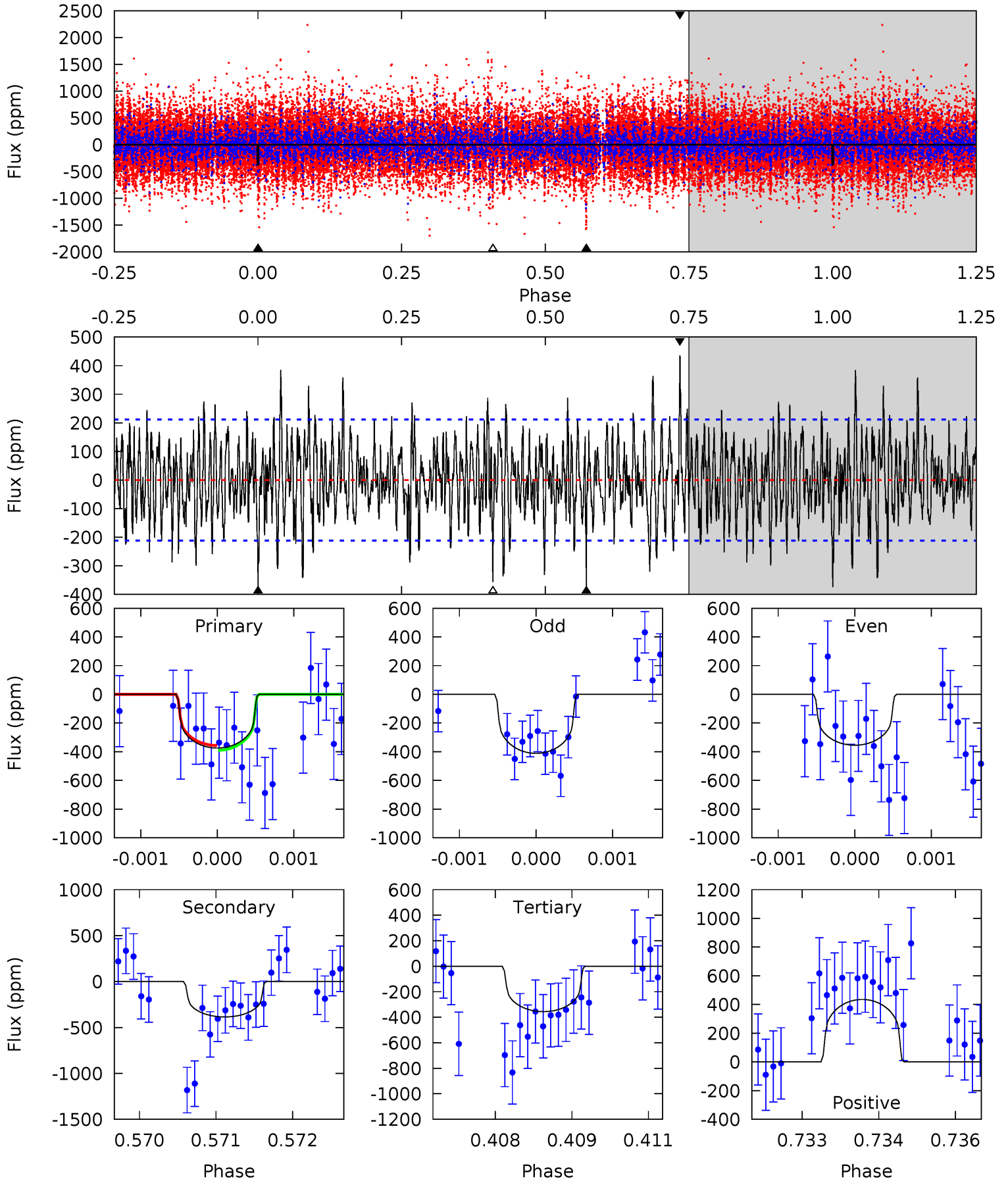
TCE 010661913-03 P=560.410817 Days $T_0=394.485385$ (BKJD)



DV Model-Shift Uniqueness Test

010661913-03, P = 560.365176 Days, E = 394.574557 Days

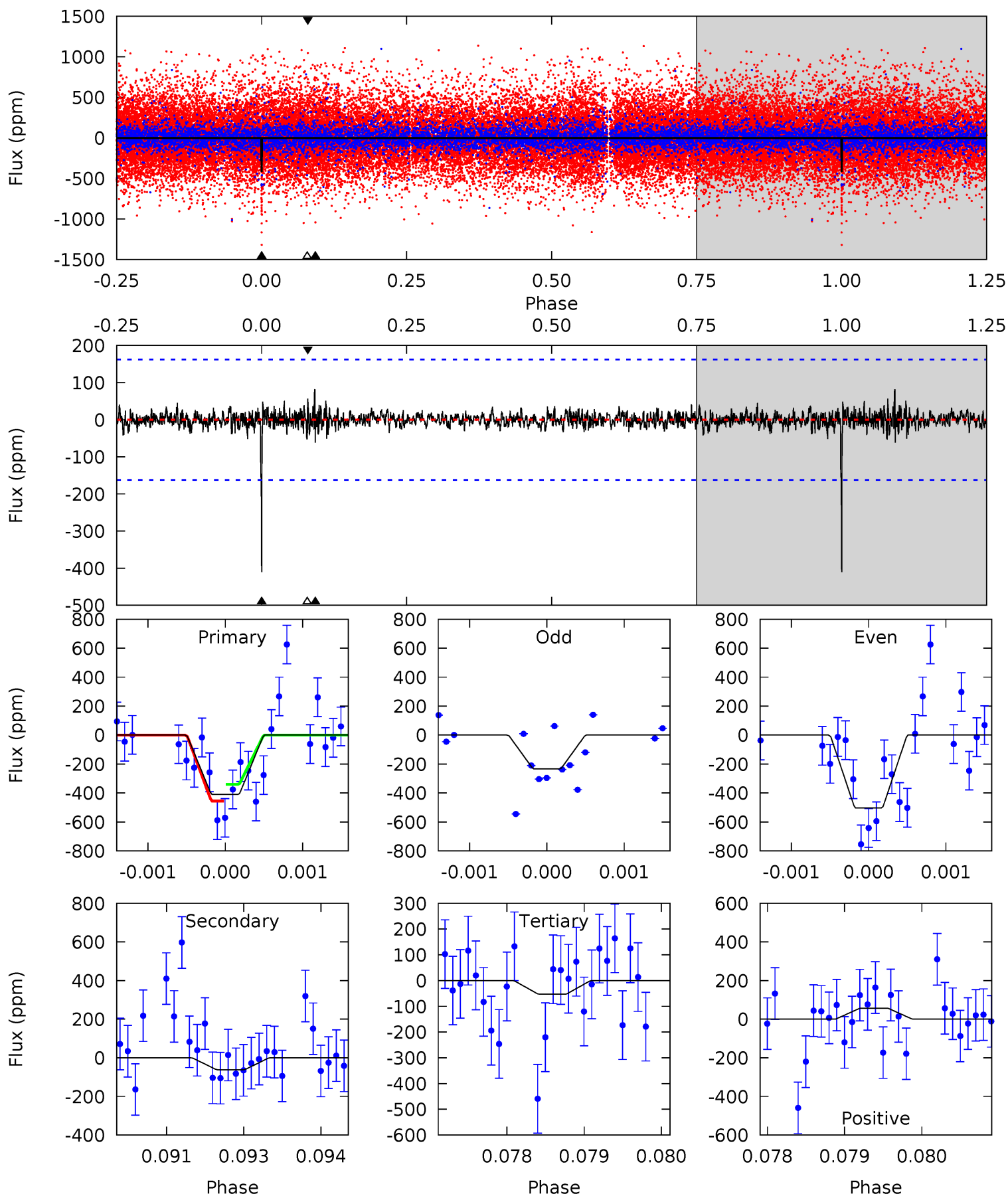
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	9.87	9.11	11.1	5.41	3.23	2.95	0.47	-1.55	0.75	-1.26	0.70	0.92	0.53	0.43



Alt Model-Shift Uniqueness Test

010661913-03, P = 560.410817 Days, E = 394.485385 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	2.06	1.77	1.90	5.41	3.23	0.47	11.9	11.8	0.30	0.17	4.38	1.86	0.17	1.90



Stellar Parameters For KIC 010661913

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4237^{+113}_{-126}	$4.630^{+0.053}_{-0.021}$	$-0.100^{+0.300}_{-0.300}$	$0.631^{+0.040}_{-0.060}$	$0.620^{+0.061}_{-0.055}$	$3.476^{+0.810}_{-0.345}$
	+3%/-3%	+1%/-0%	+300%/-300%	+6%/-10%	+10%/-9%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010661913-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-386 ± 39	$1.48^{+0.60}_{-0.55}$	193^{+7}_{-7}	4077^{+826}_{-480}	$125618^{+190526}_{-63551}$
Alt.	-62 ± 30	$1.51^{+0.58}_{-0.56}$	193^{+6}_{-6}	3003^{+510}_{-363}	17974^{+35631}_{-11064}

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

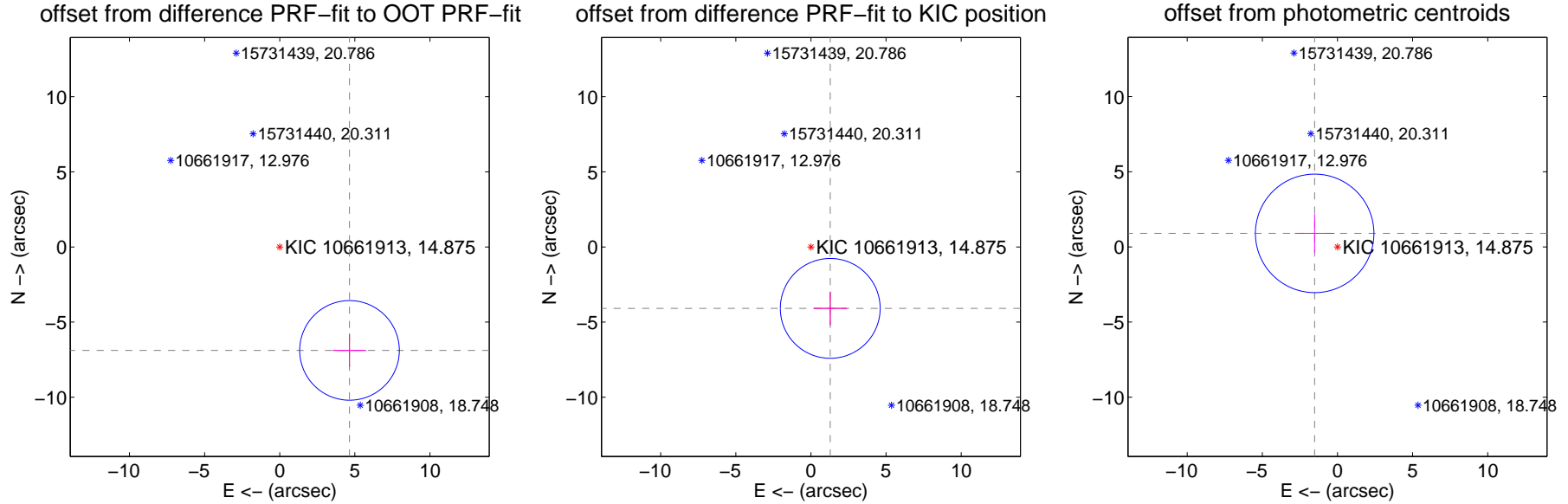
DV Centroid Data

Supplemental centroid analysis for 010661913-03. Kepler magnitude: 14.88. Transit SNR 6.18

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.37 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.305 ± 1.105	7.51	-4.645 ± 1.098	-6.884 ± 1.108
PRF-fit source offset from KIC position	4.286 ± 1.108	3.87	-1.285 ± 1.098	-4.089 ± 1.108
photometric centroid source offset	1.76 ± 1.31	1.34	1.52 ± 1.32	0.90 ± 1.28



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



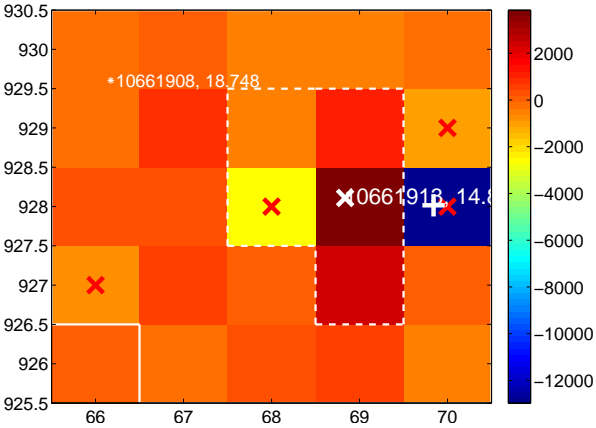
Q3 no difference image



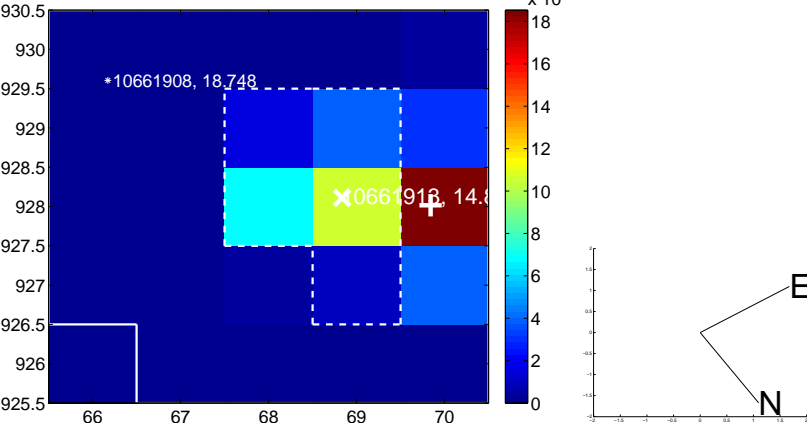
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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



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

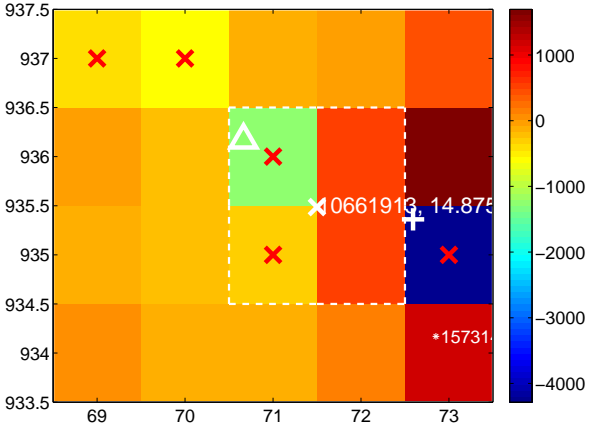
Q9 no difference image



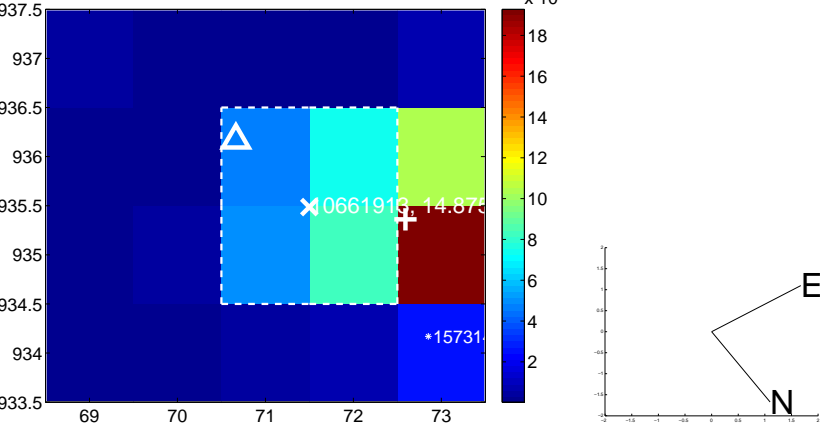
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



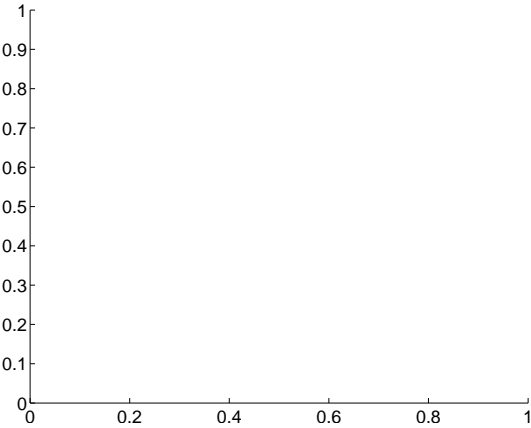
Q11 no difference image



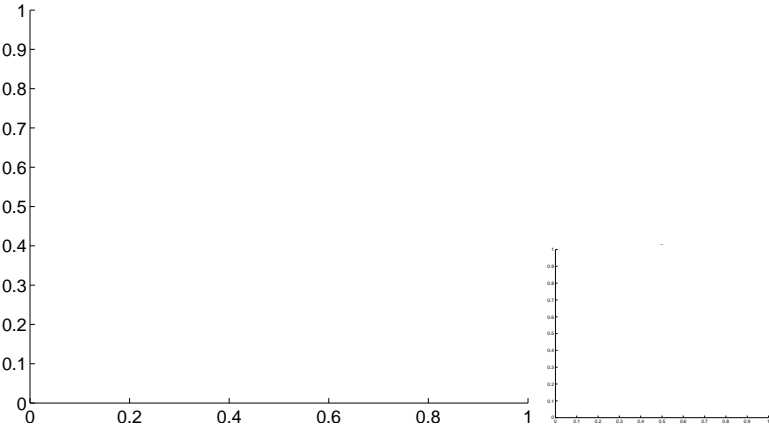
Q11 no OOT image



Q12 no difference image



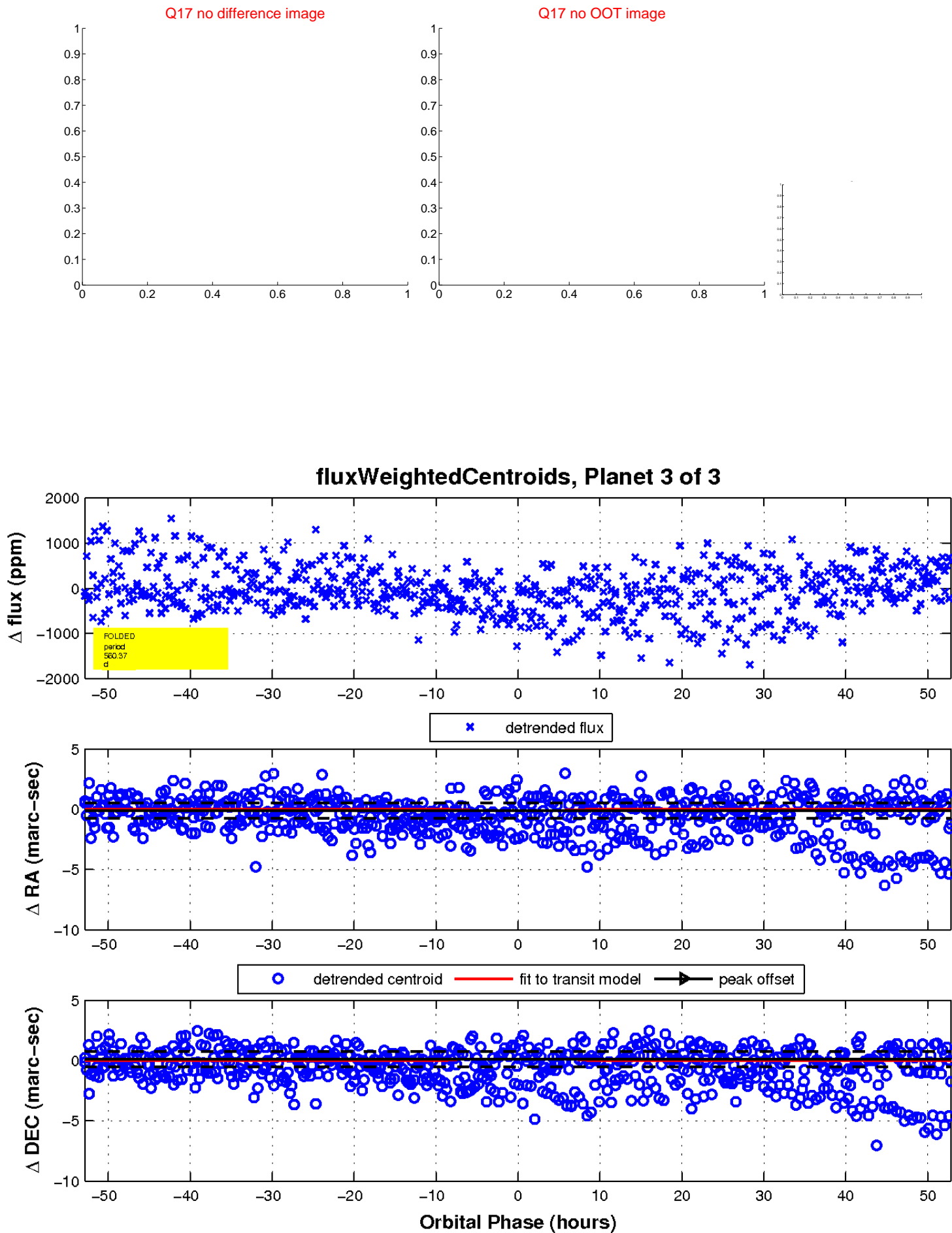
Q12 no OOT image



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

