

KIC 006937257

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})
006937257-01	OBS	No	0.525788	131.781408	31.2	1.645	8.2	7.0	6.92	4875	4.43	0.00
006937257-02	OBS	No	122.240534	249.836185	920.0	4.224	7.9	6.9	6.92	4875	41.60	118.42
006937257-03	OBS	No	162.626054	223.629630	1032.6	4.534	7.4	8.2	6.92	4875	44.93	80.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006937257-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006937257-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
006937257-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV

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

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

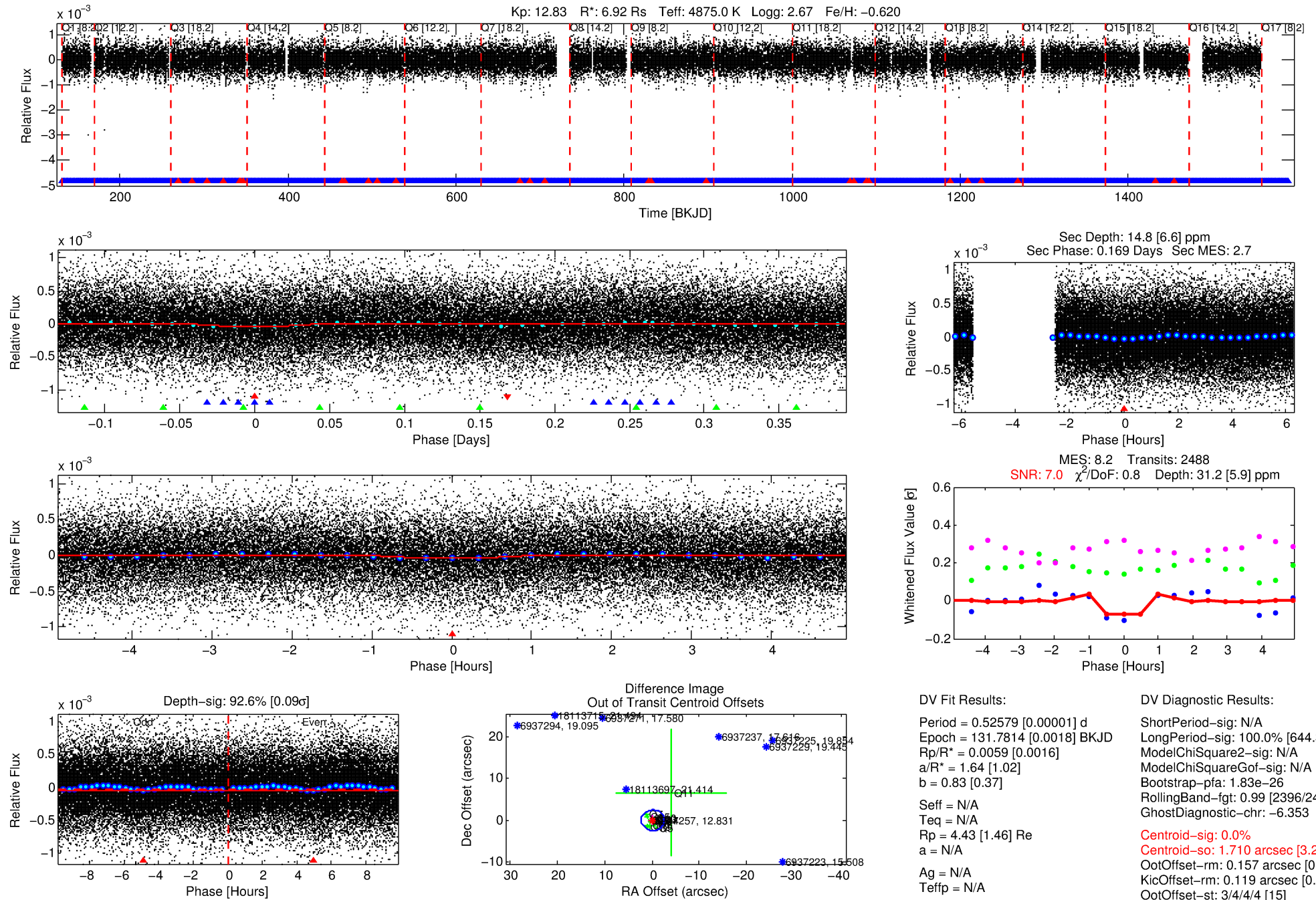
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006937257-01

No Significant Match Found

DV One-Page Summary

KIC: 6937257 Candidate: 1 of 3 Period: 0.526 d



DV Fit Results:

Period = 0.52579 [0.00001] d
Epoch = 131.7814 [0.0018] BKJD
Rp/R* = 0.0059 [0.0016]
a/R* = 1.64 [1.02]
b = 0.83 [0.37]
Seff = N/A
Teq = N/A
Rp = 4.43 [1.46] Re
a = N/A
Ag = N/A
Teffp = N/A

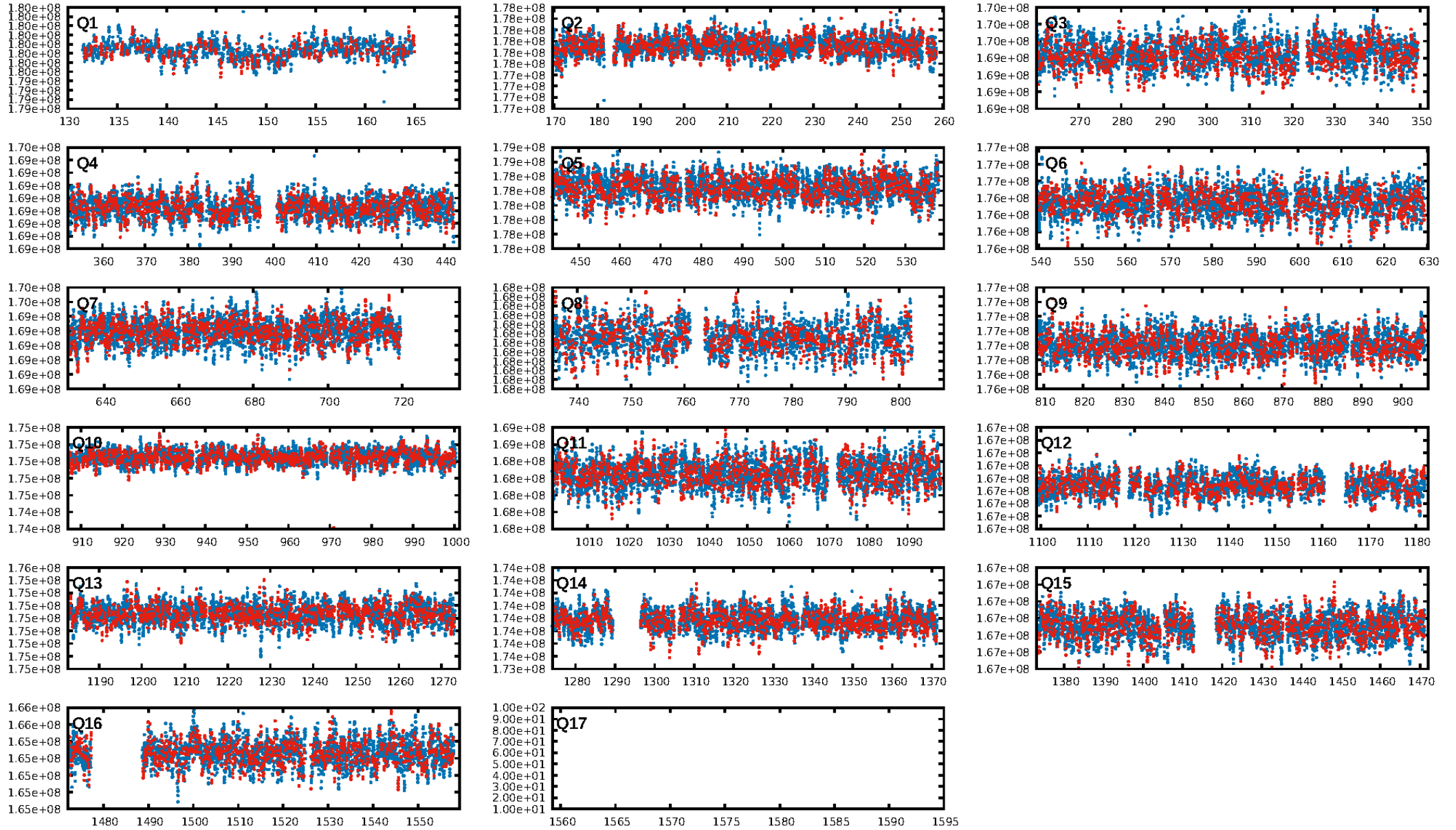
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [644.35 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.83e-26
RollingBand-fgt: 0.99 [2396/2424]
GhostDiagnostic-chr: -6.353
Centroid-sig: 0.0%
Centroid-so: 1.710 arcsec [3.27 σ]
OotOffset-rm: 0.157 arcsec [0.19 σ]
KicOffset-rm: 0.119 arcsec [0.14 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [16/16]

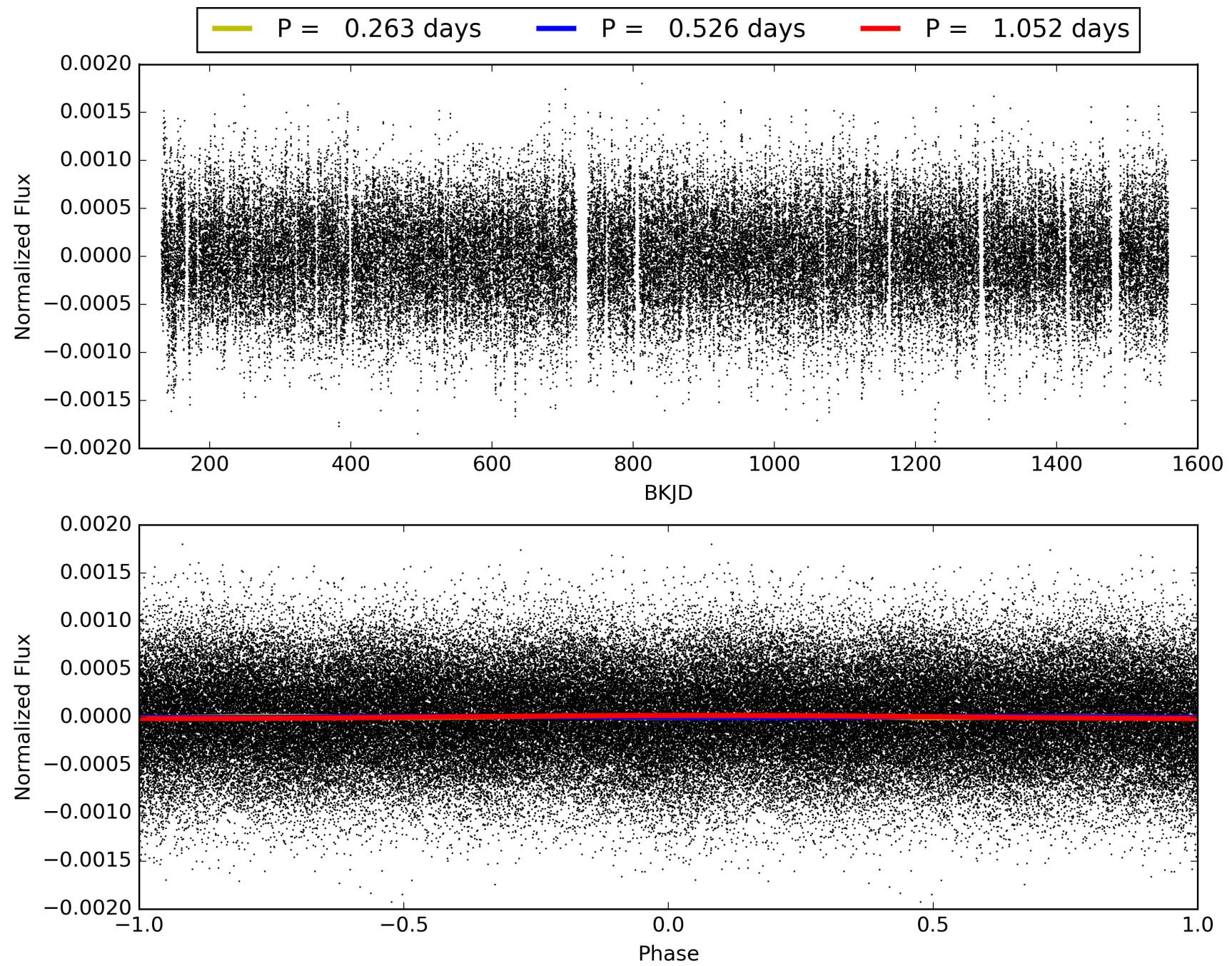
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:18:55 Z

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

TCE 006937257-01, PDC Light Curves

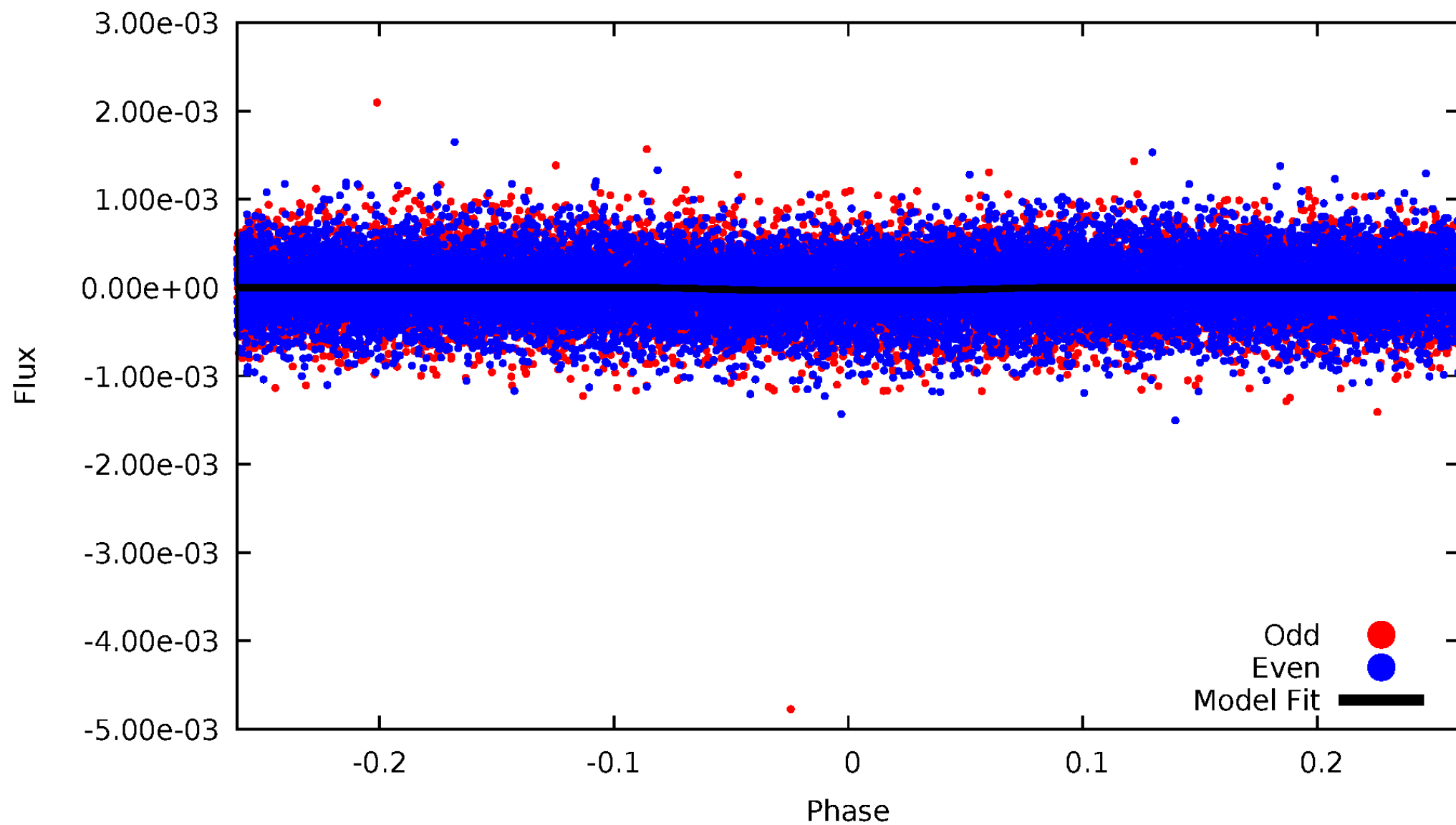


TCE 006937257-01



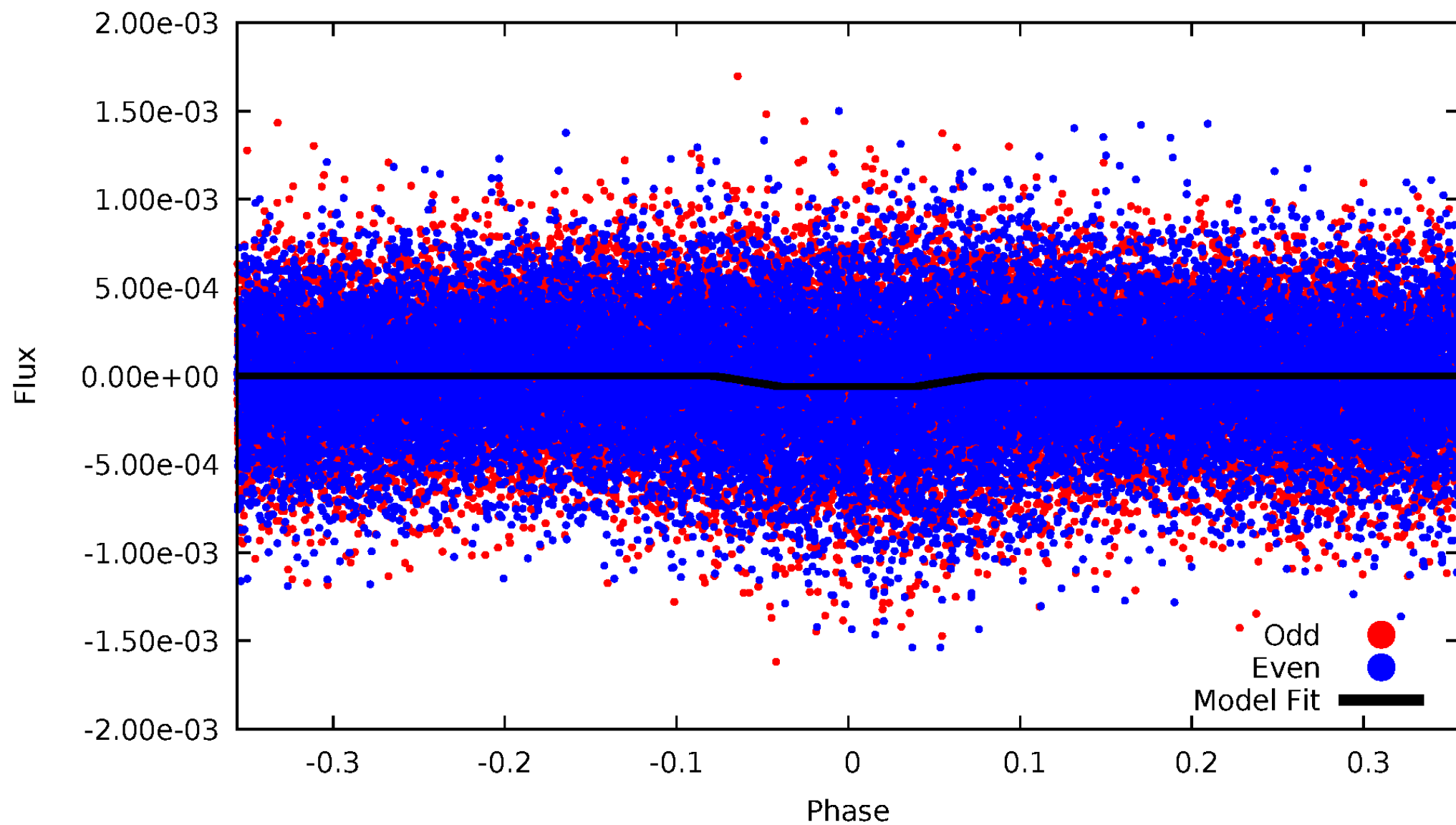
DV Odd/Even

TCE 006937257-01

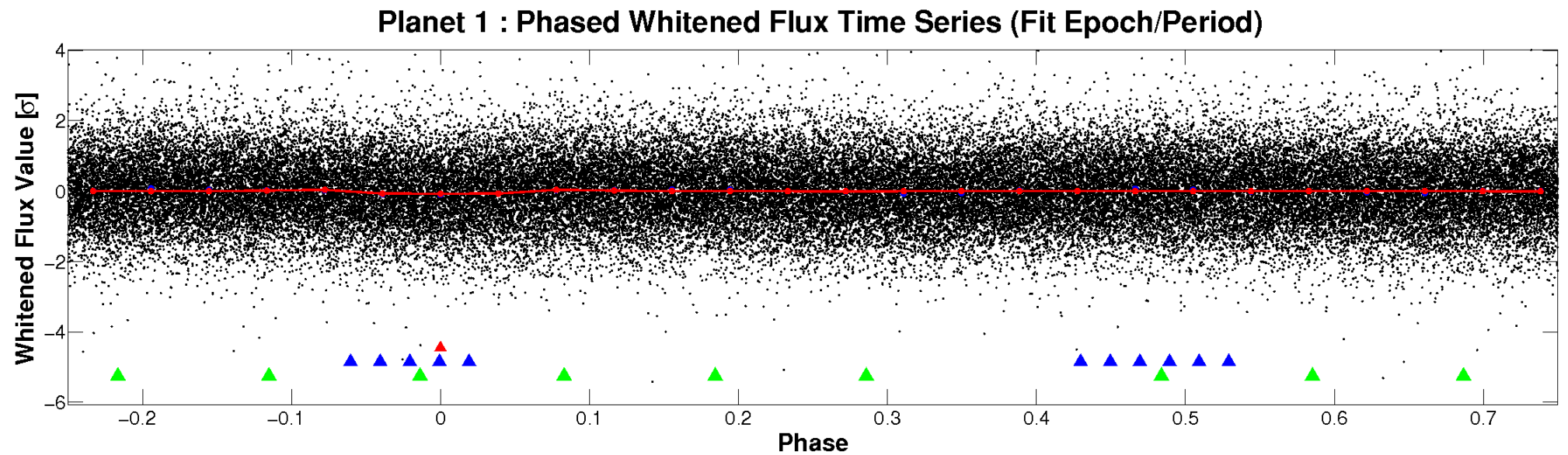
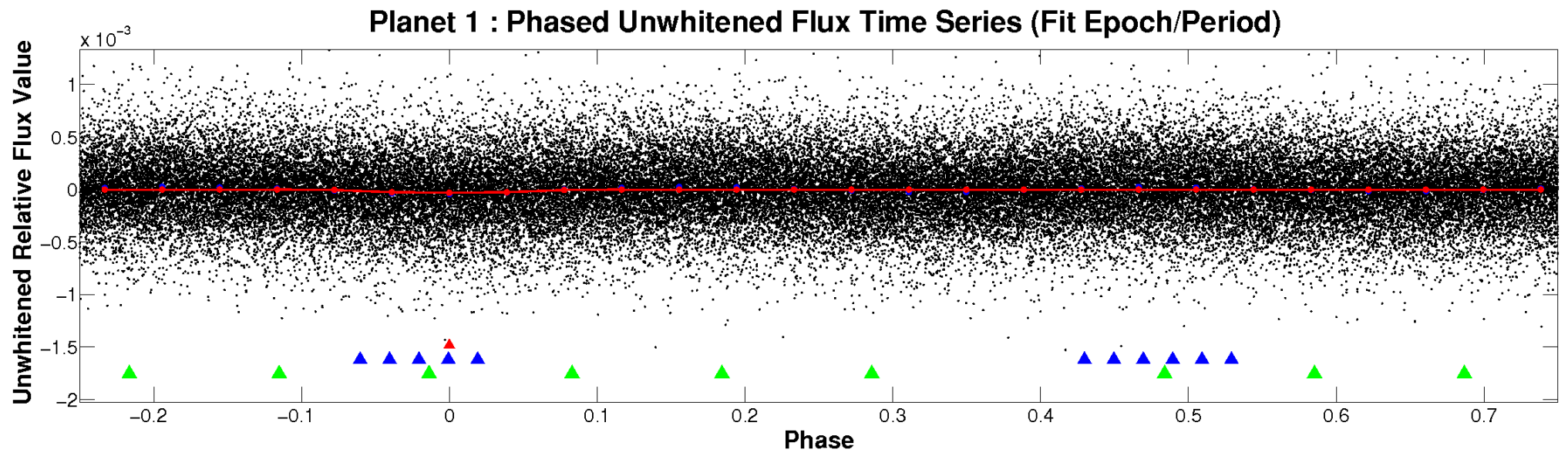


ALT Odd/Even

TCE 006937257-01

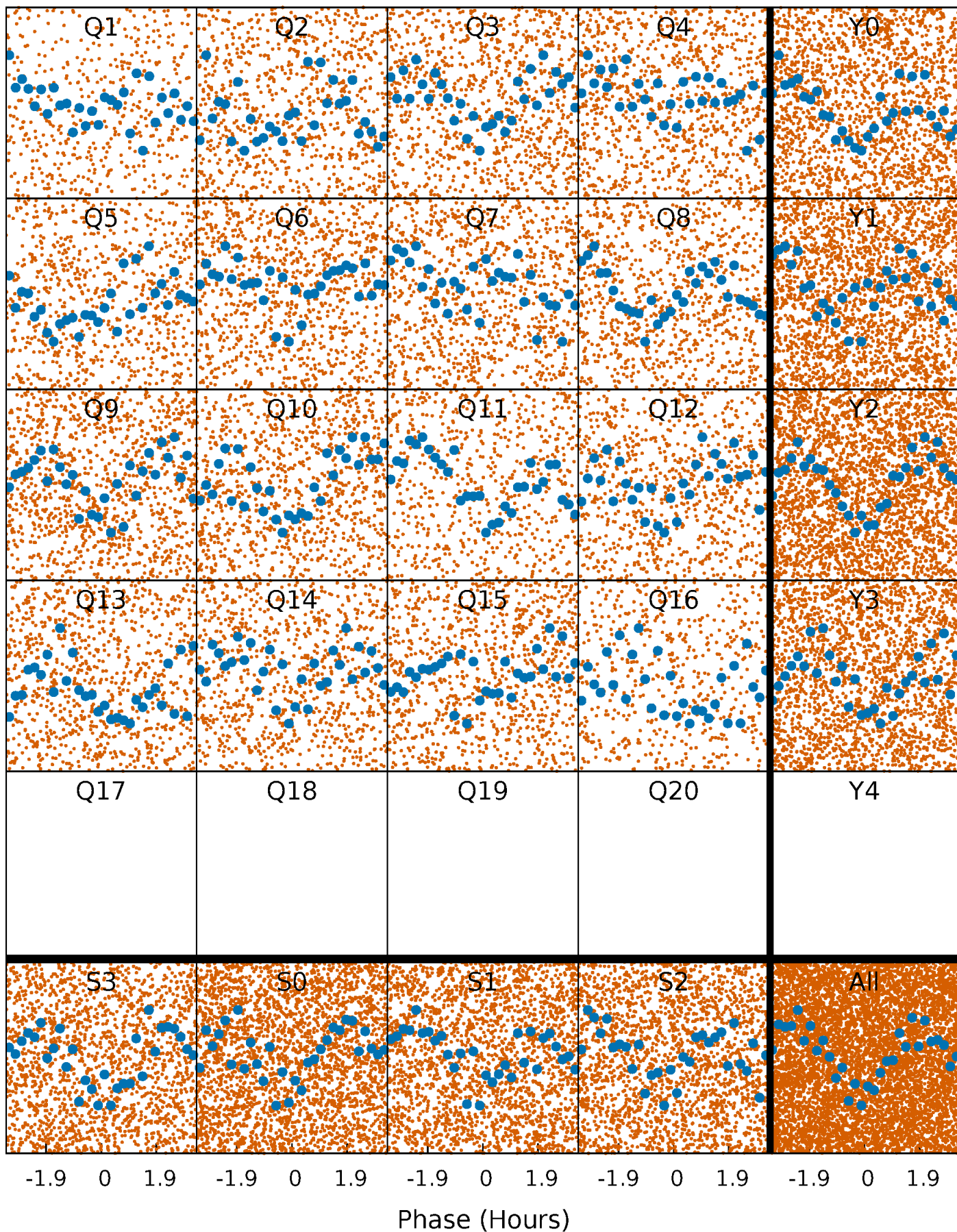


Non-Whitened Vs. Whitened Light Curve



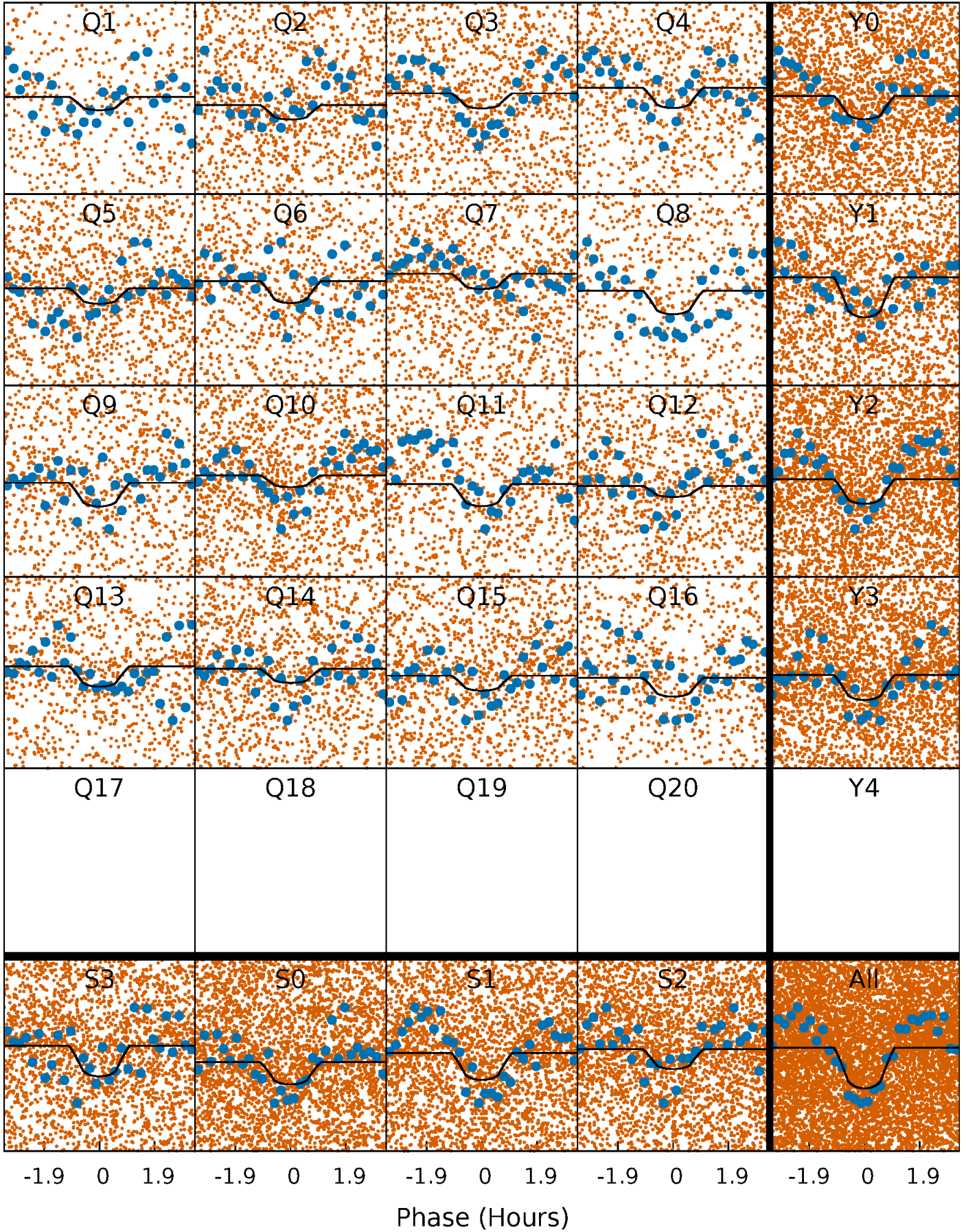
PDC Quarter-Phased Transit Curves

TCE 006937257-01 P= 0.525788 Days $T_0=131.781408$ (BKJD)



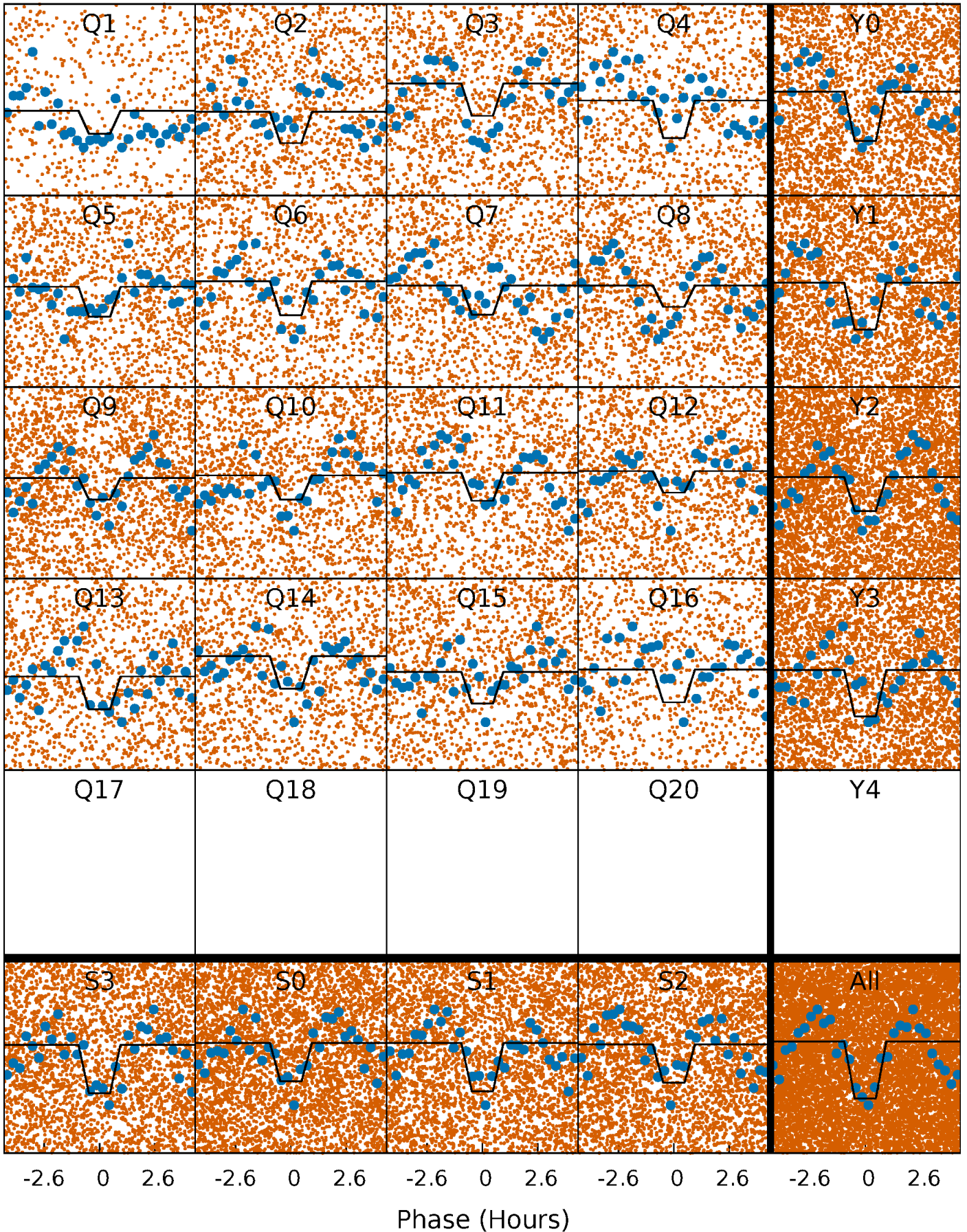
DV Quarter-Phased Transit Curves

TCE 006937257-01 P= 0.525788 Days $T_0=131.781408$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

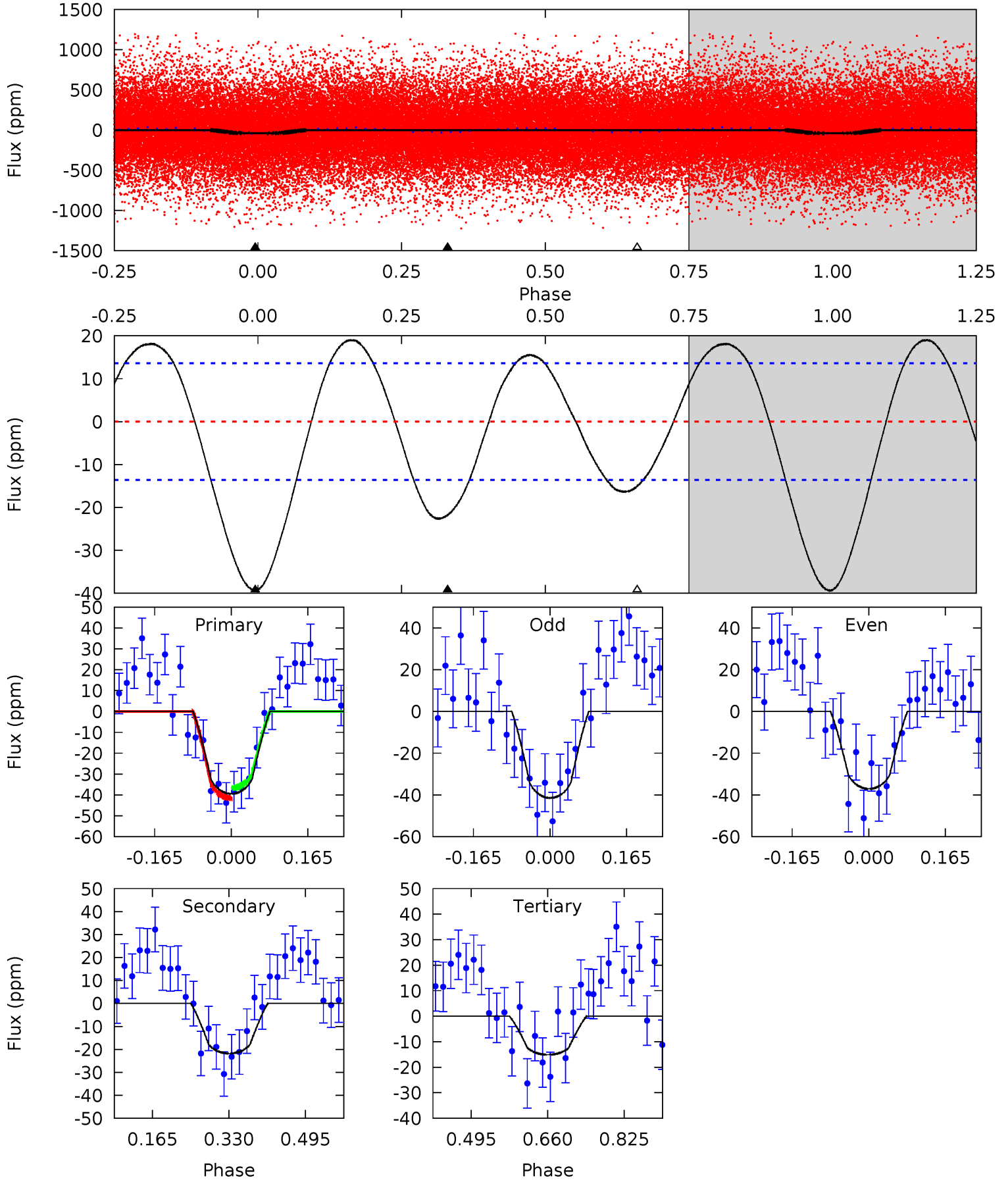
TCE 006937257-01 P= 0.525784 Days $T_0=131.780102$ (BKJD)



DV Model-Shift Uniqueness Test

006937257-01, P = 0.525788 Days, E = 131.255620 Days

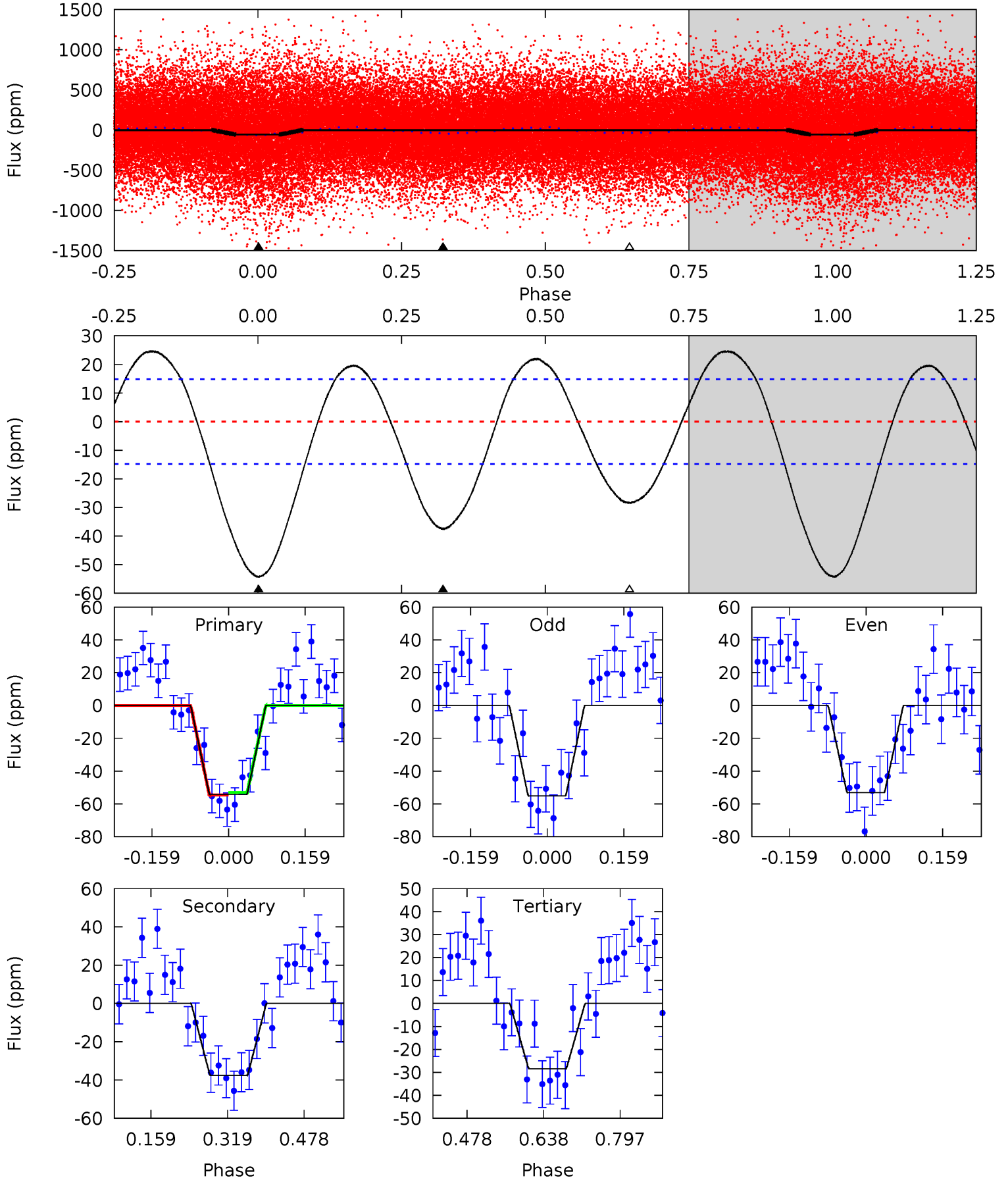
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.14	4.95	0	4.46	1.39	3.97	7.99	12.9	2.19	7.14	0.72	1.11	0.33	0.80



Alt Model-Shift Uniqueness Test

006937257-01, P = 0.525784 Days, E = 131.254318 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	11.3	8.57	0	4.47	1.41	5.71	7.78	16.3	2.74	11.3	0.30	1.07	0.31	0.22



Stellar Parameters For KIC 006937257

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4875^{+88}_{-78}	$2.675^{+0.033}_{-0.027}$	$-0.620^{+0.250}_{-0.150}$	$6.924^{+1.308}_{-0.245}$	$0.826^{+0.353}_{-0.019}$	$0.004^{+0.000}_{-0.001}$
	+2%/-2%	+1%/-1%	+40%/-24%	+19%/-4%	+43%/-2%	+9%/-18%
Source	PHO56	AST56	PHO56	DSEP		

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

Secondary Eclipse Parameters for KIC 006937257-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 3	$4.37^{+1.32}_{-1.19}$	7213^{+155}_{-139}	-5302^{+548}_{-246}	$0.091^{+0.083}_{-0.038}$
Alt.	-38 ± 3	$5.84^{+1.35}_{-1.26}$	7216^{+156}_{-148}	-5315^{+354}_{-232}	$0.088^{+0.055}_{-0.029}$

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

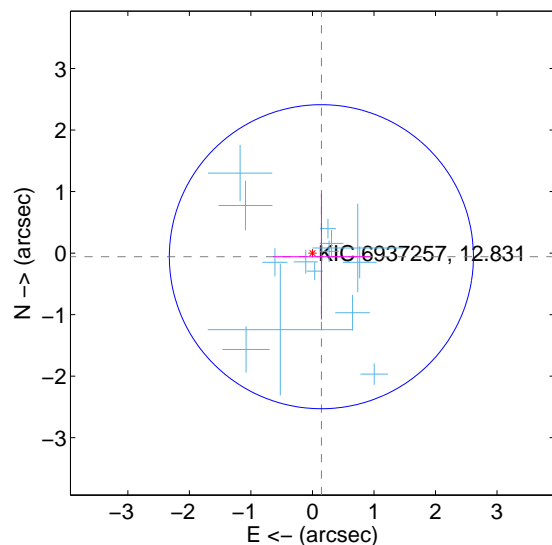
Supplemental centroid analysis for 006937257-01. Kepler magnitude: 12.83. Transit SNR 7.01

There are 14 quarters with good PRF difference image offsets

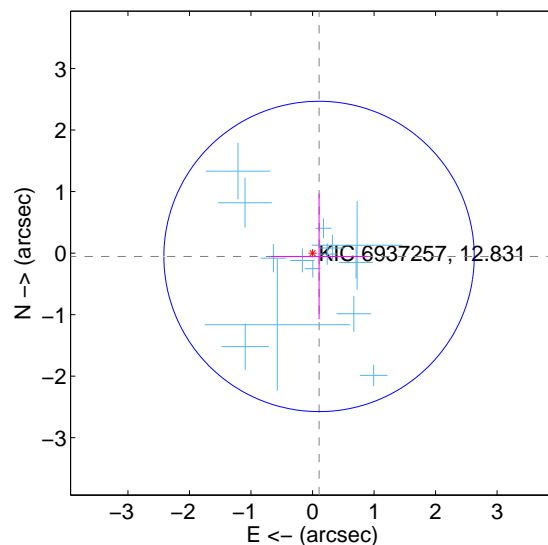
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.157 ± 0.824	0.19	-0.145 ± 0.787	-0.059 ± 1.020
PRF-fit source offset from KIC position	0.119 ± 0.841	0.14	-0.106 ± 0.787	-0.054 ± 1.020
photometric centroid source offset	1.71 ± 0.52	3.27	-1.70 ± 0.52	0.19 ± 0.50

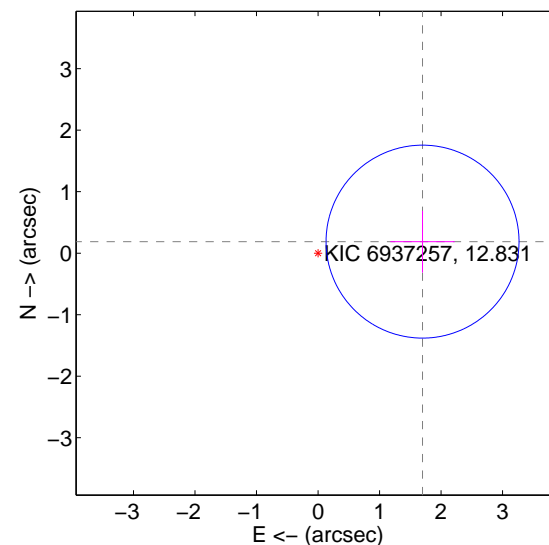
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

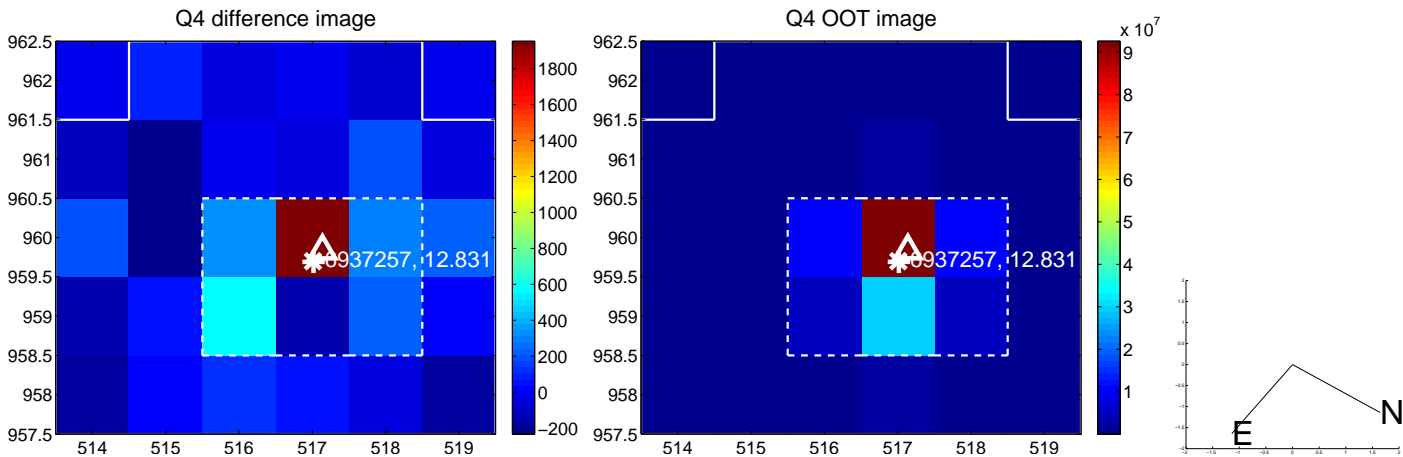
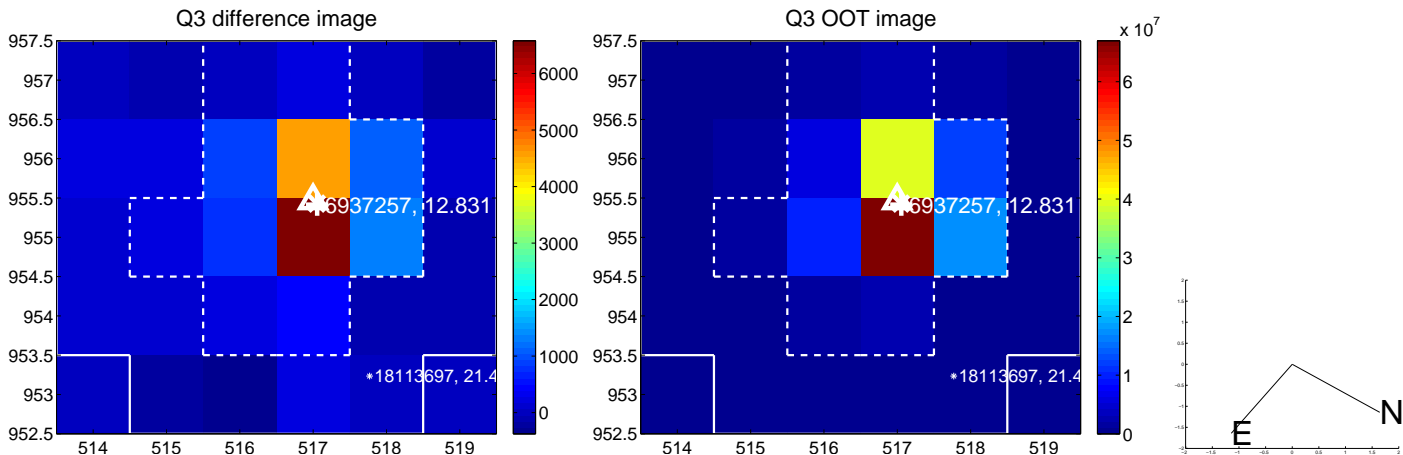
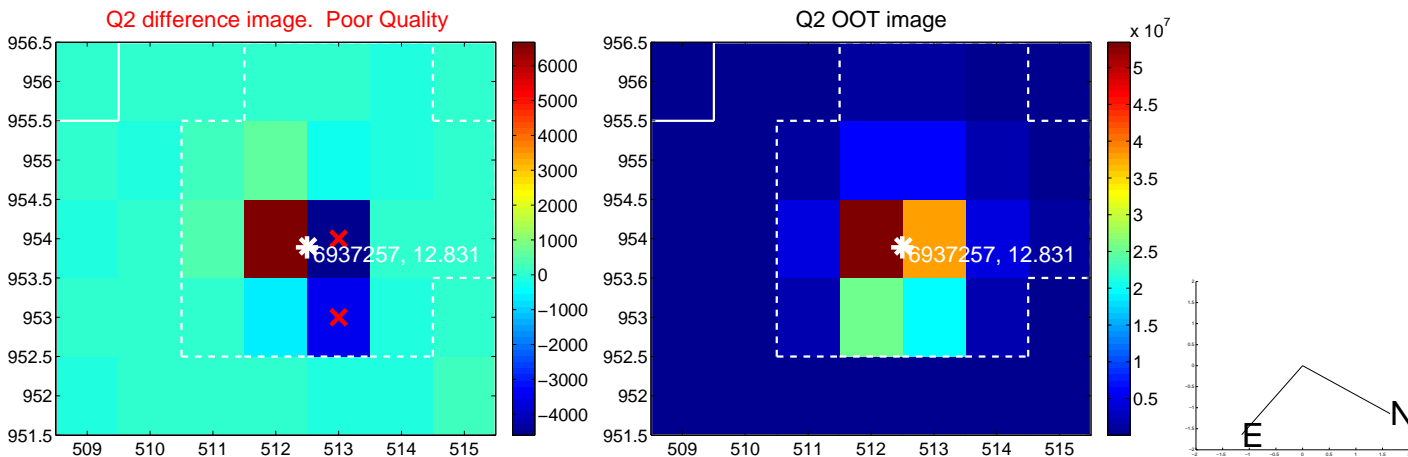
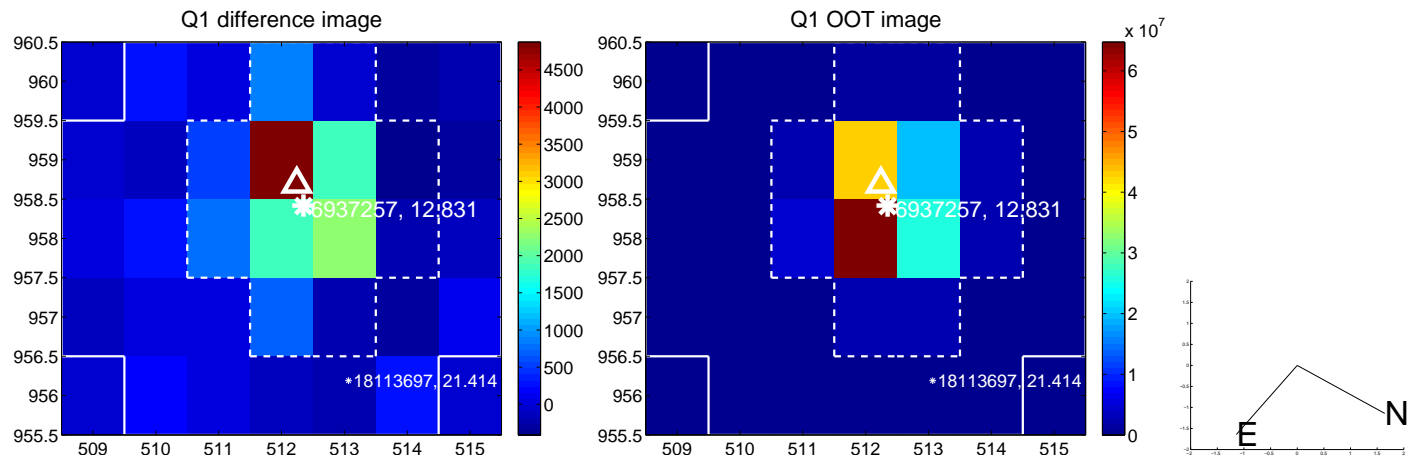


offset from photometric centroids

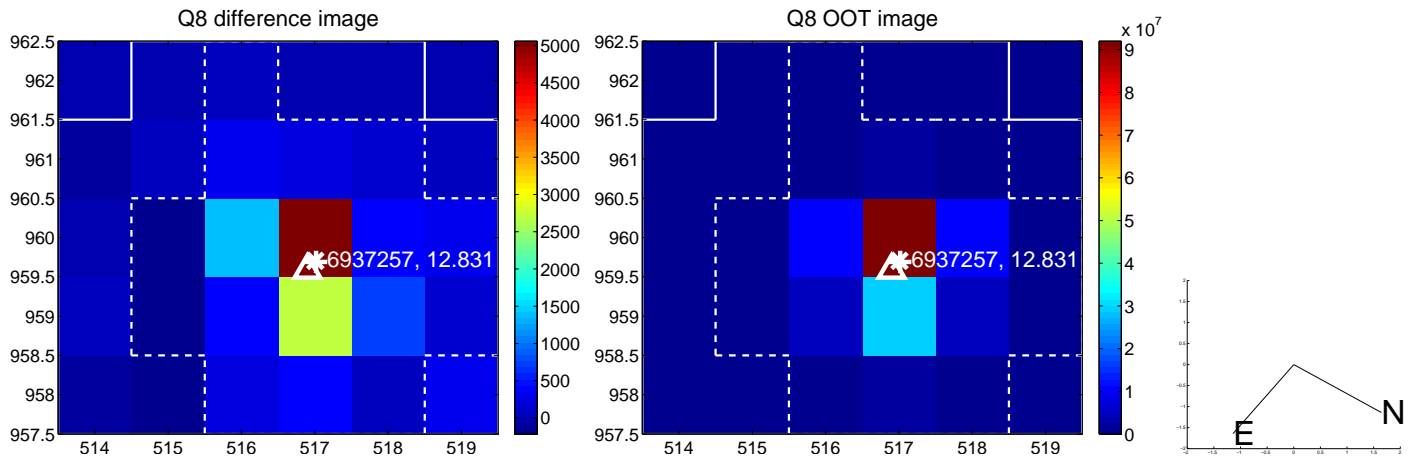
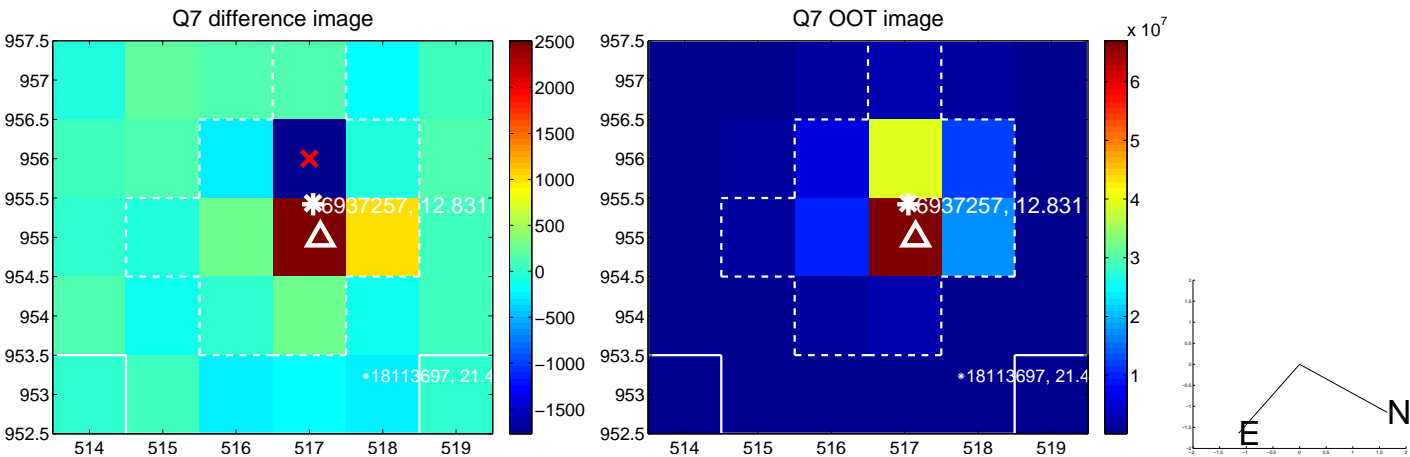
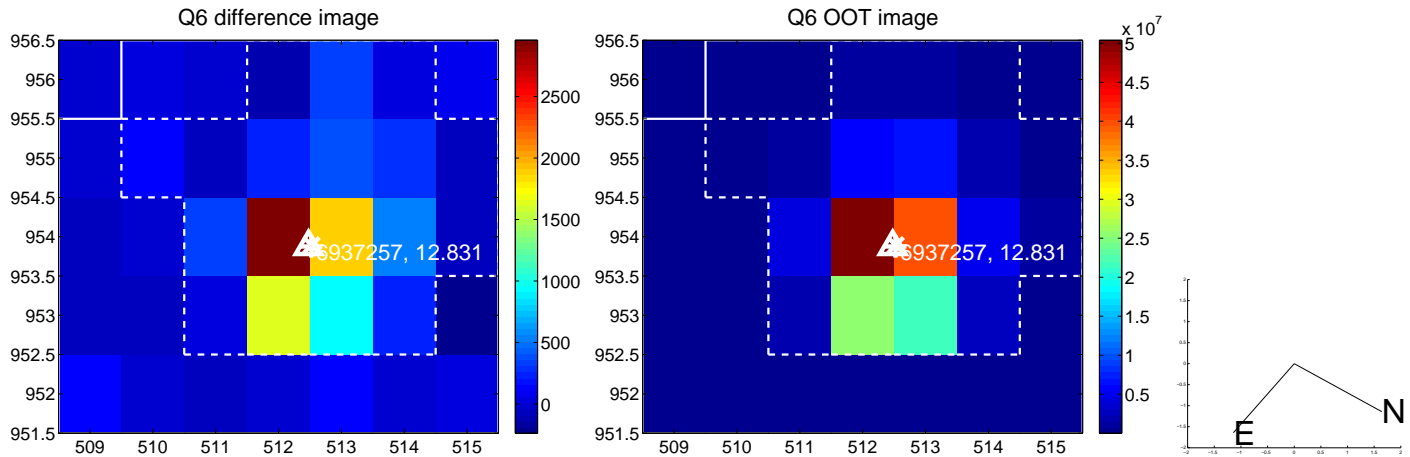
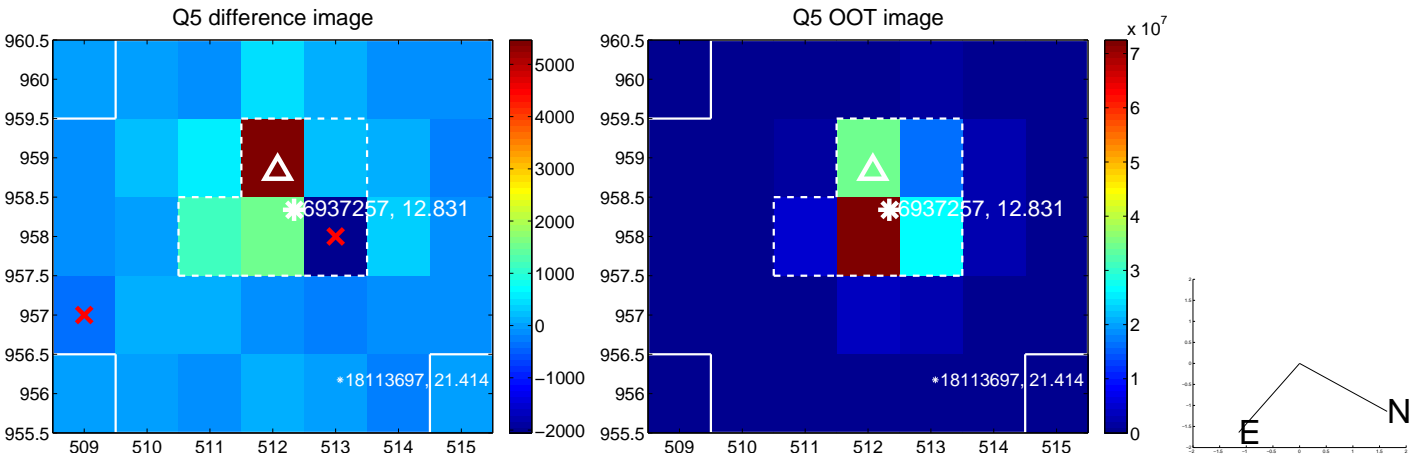


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

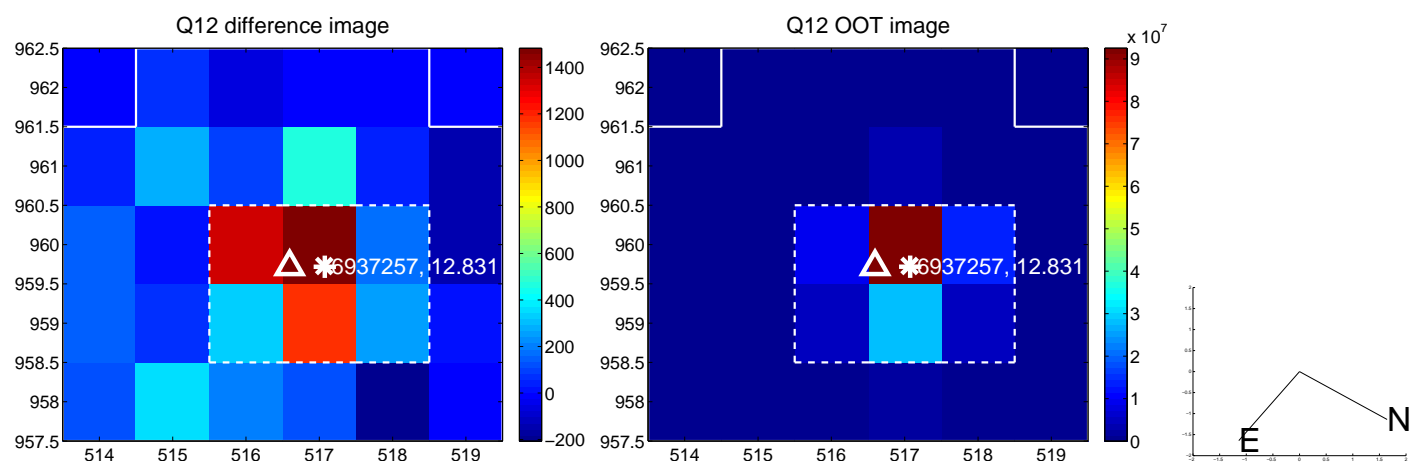
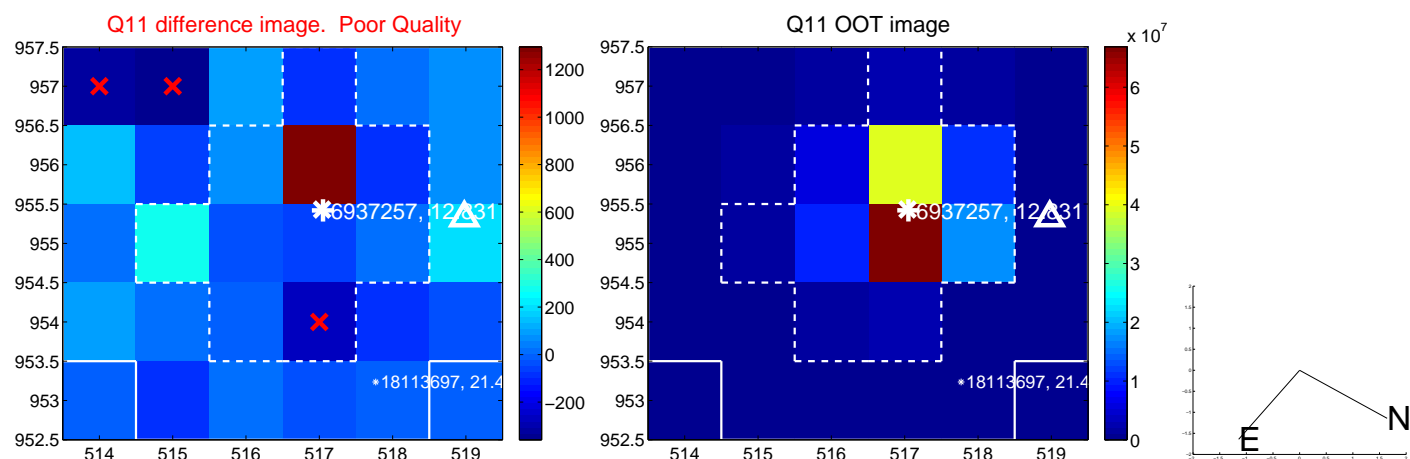
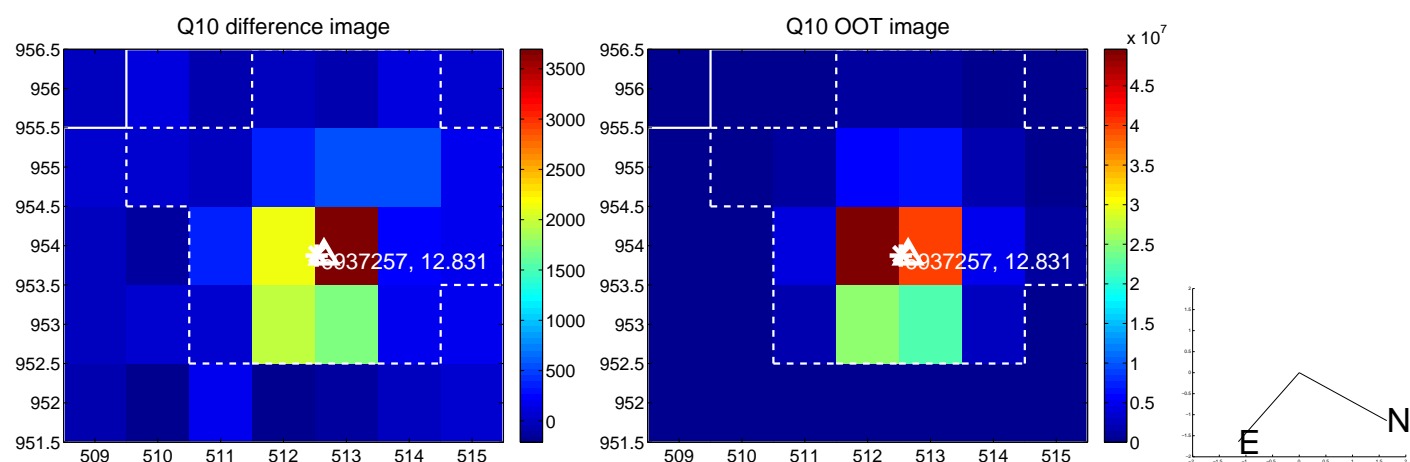
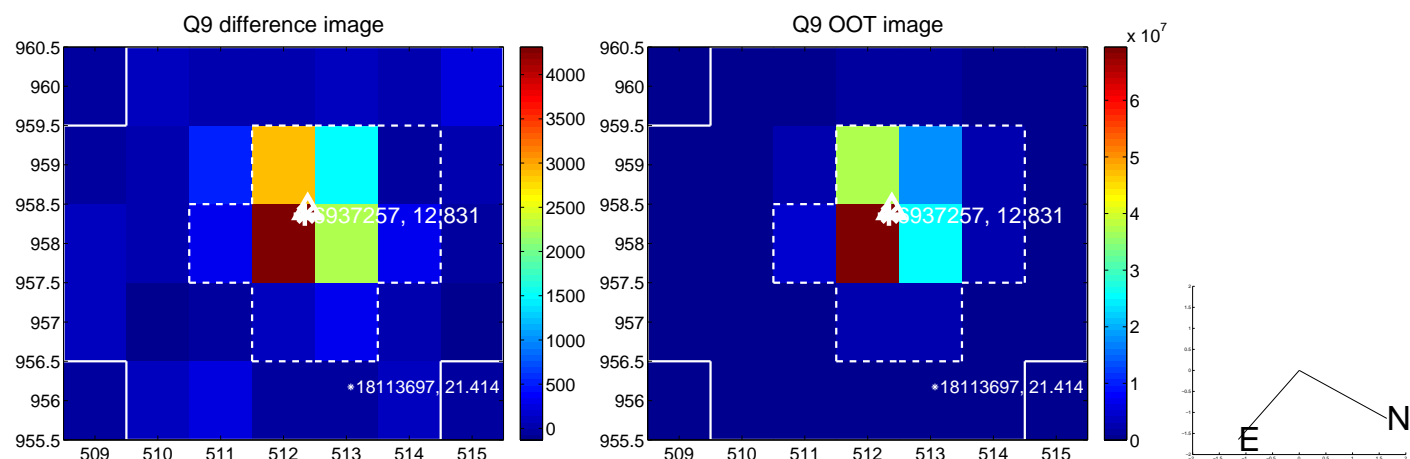
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



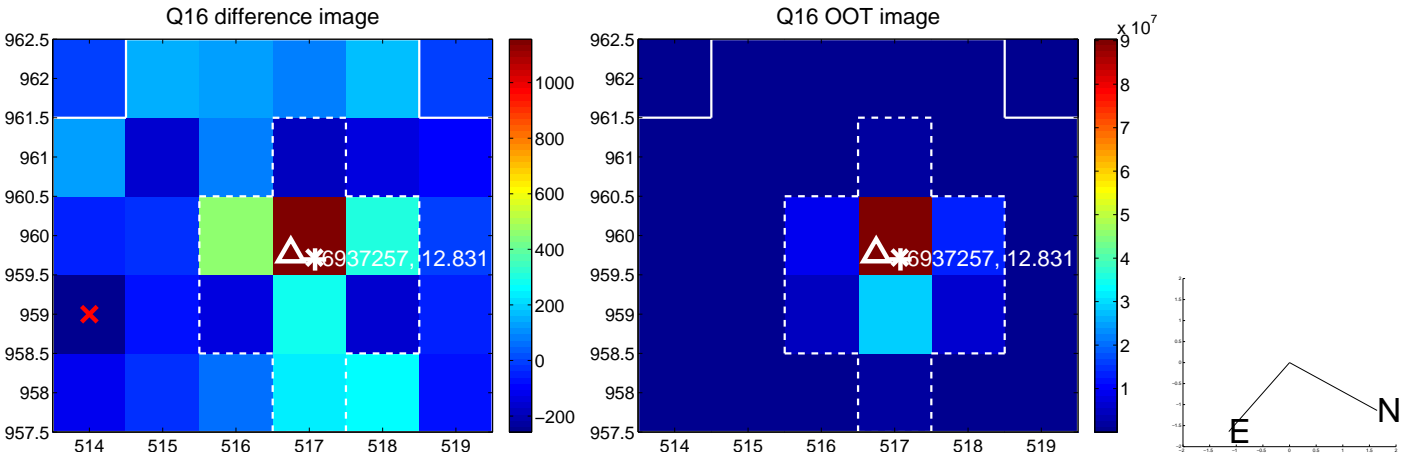
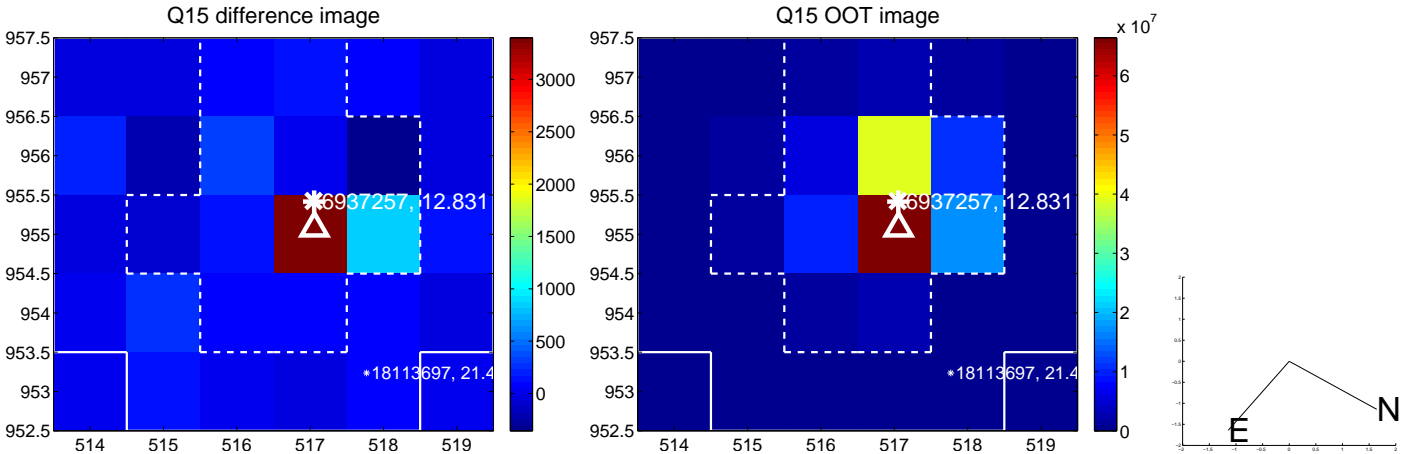
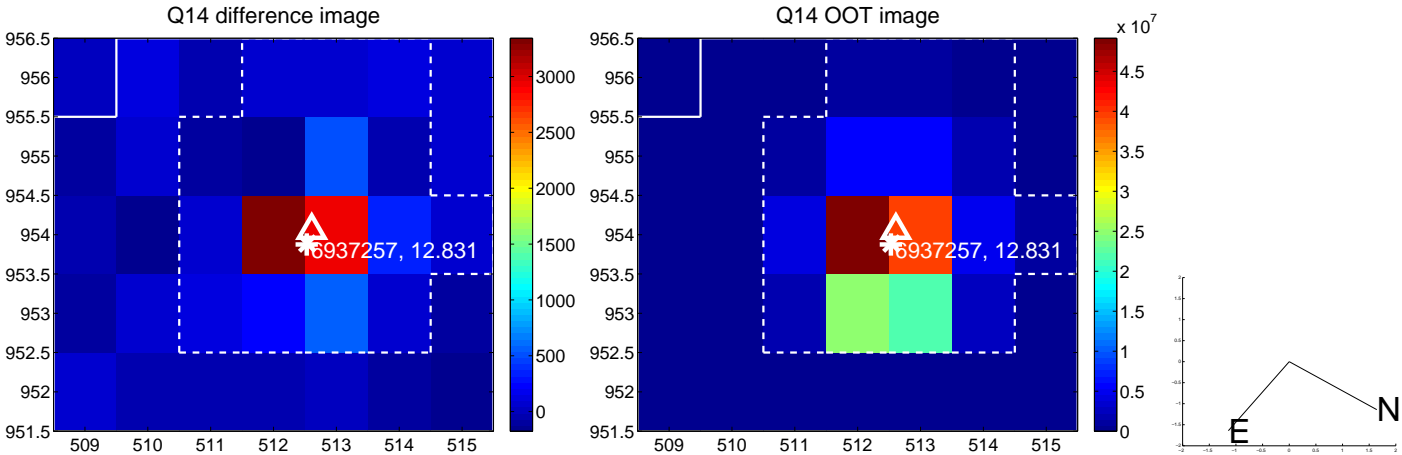
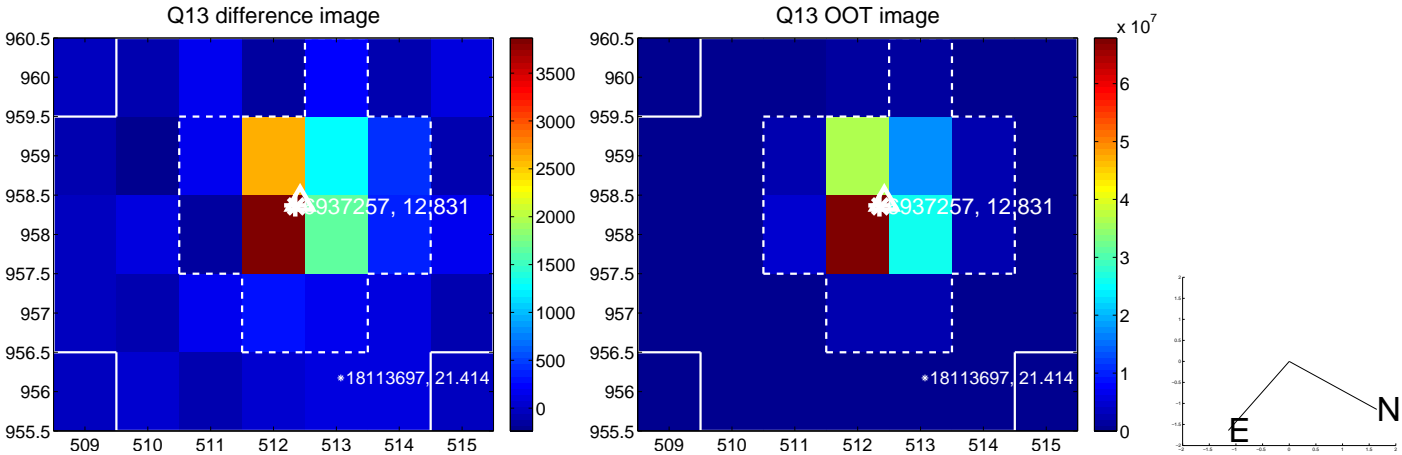
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



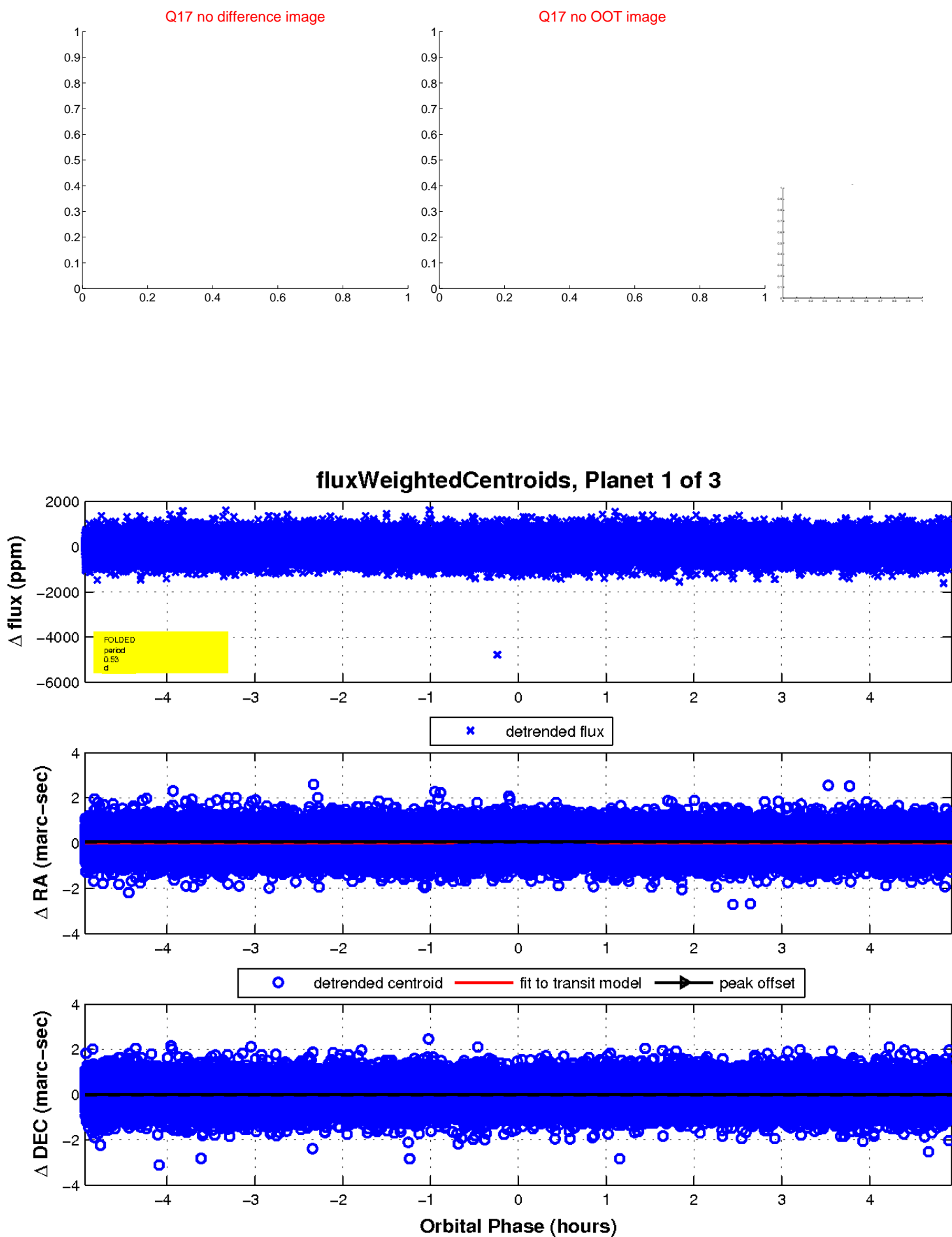
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



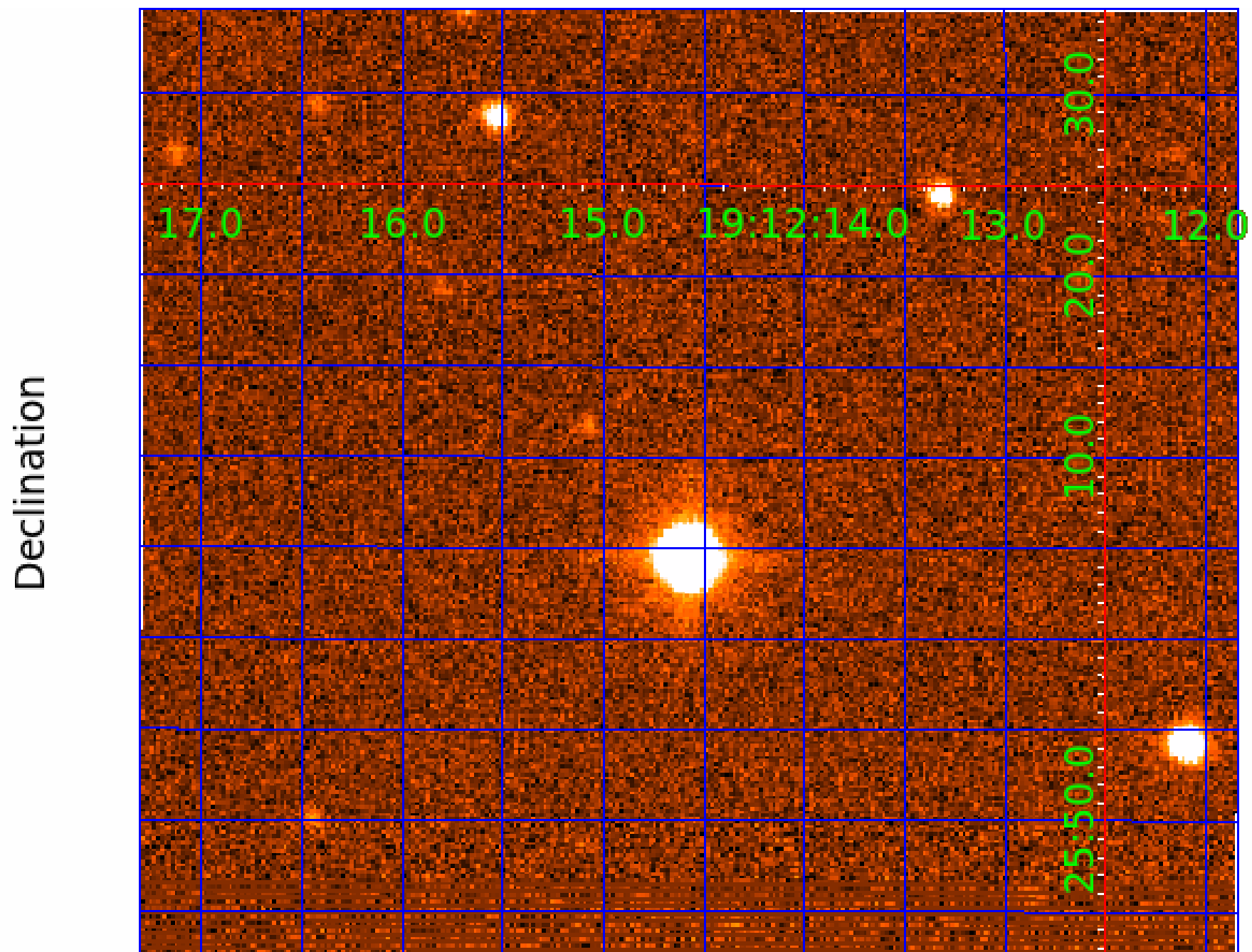
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006937257

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})
006937257-01	OBS	No	0.525788	131.781408	31.2	1.645	8.2	7.0	6.92	4875	4.43	0.00
006937257-02	OBS	No	122.240534	249.836185	920.0	4.224	7.9	6.9	6.92	4875	41.60	118.42
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006937257-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006937257-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
006937257-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV

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

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

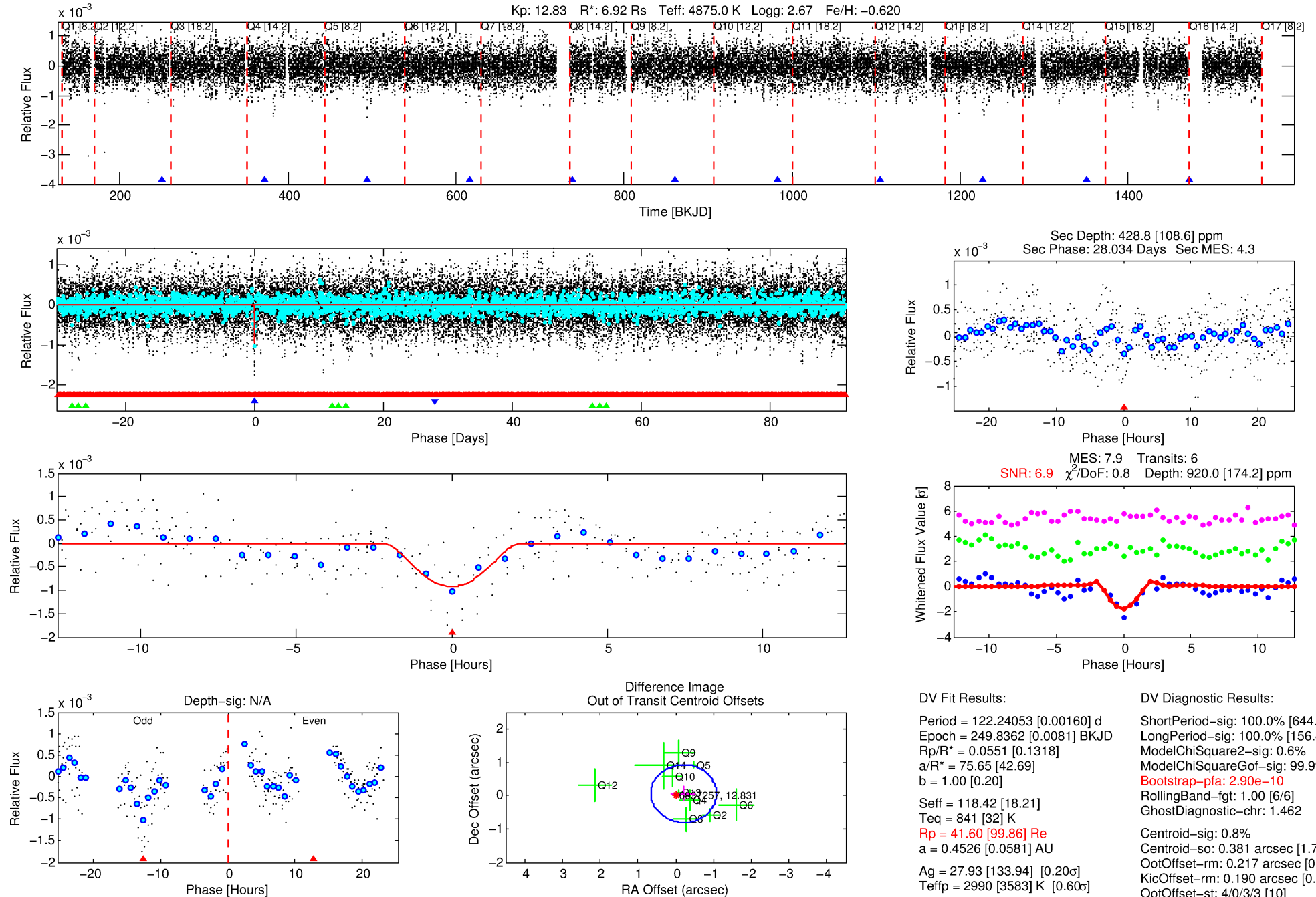
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006937257-02

No Significant Match Found

DV One-Page Summary

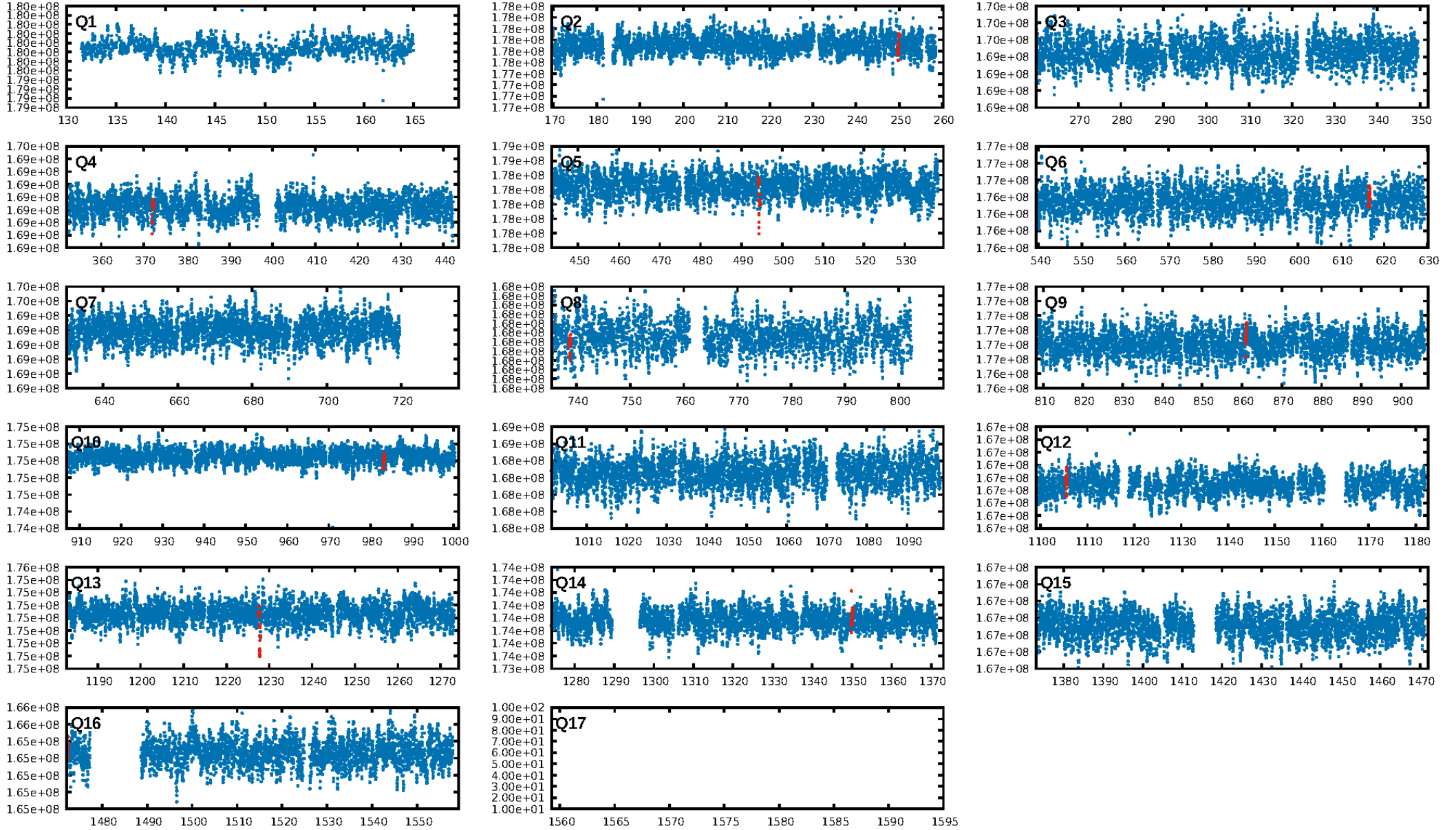
KIC: 6937257 Candidate: 2 of 3 Period: 122.241 d



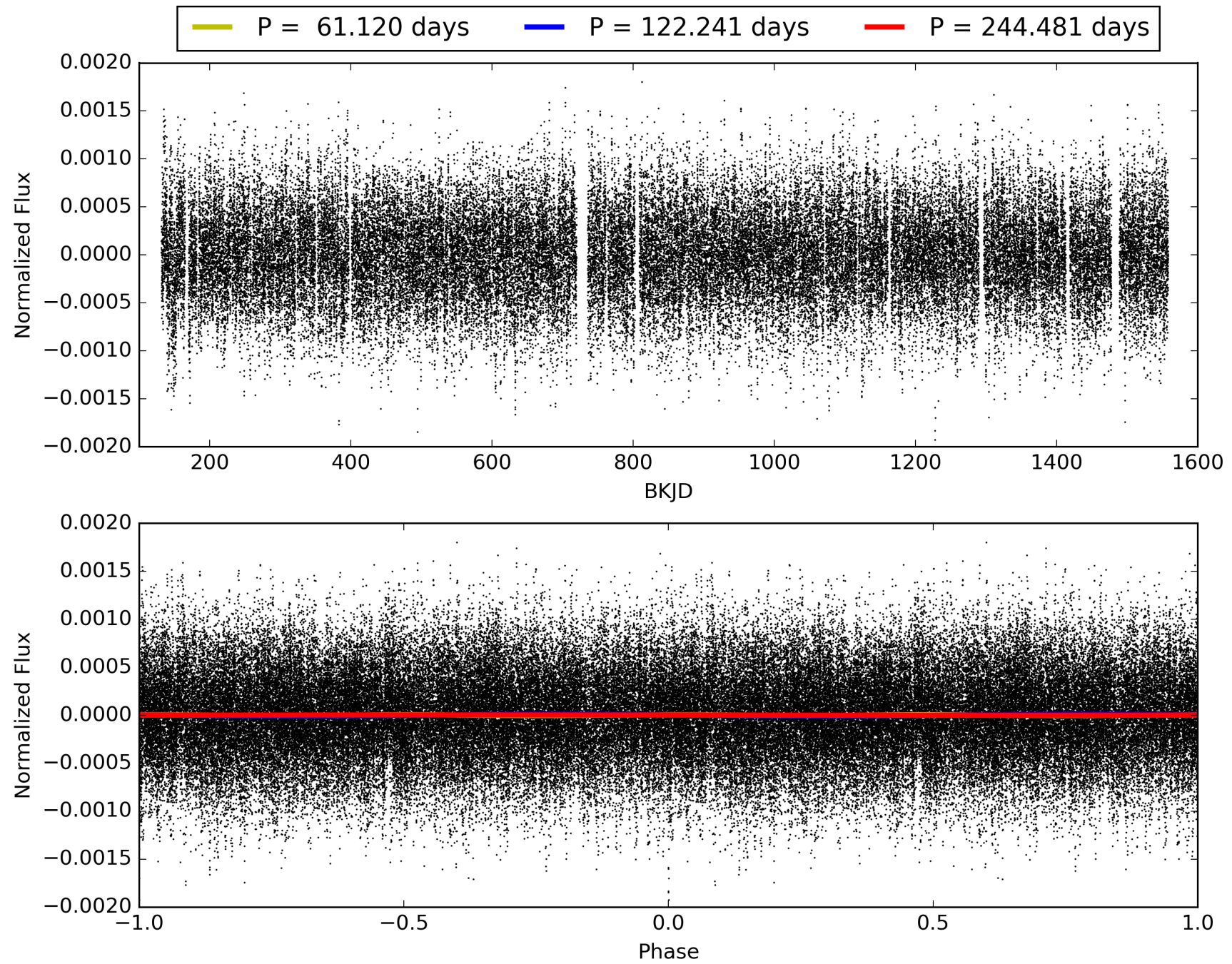
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:19:06 Z

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

TCE 006937257-02, PDC Light Curves

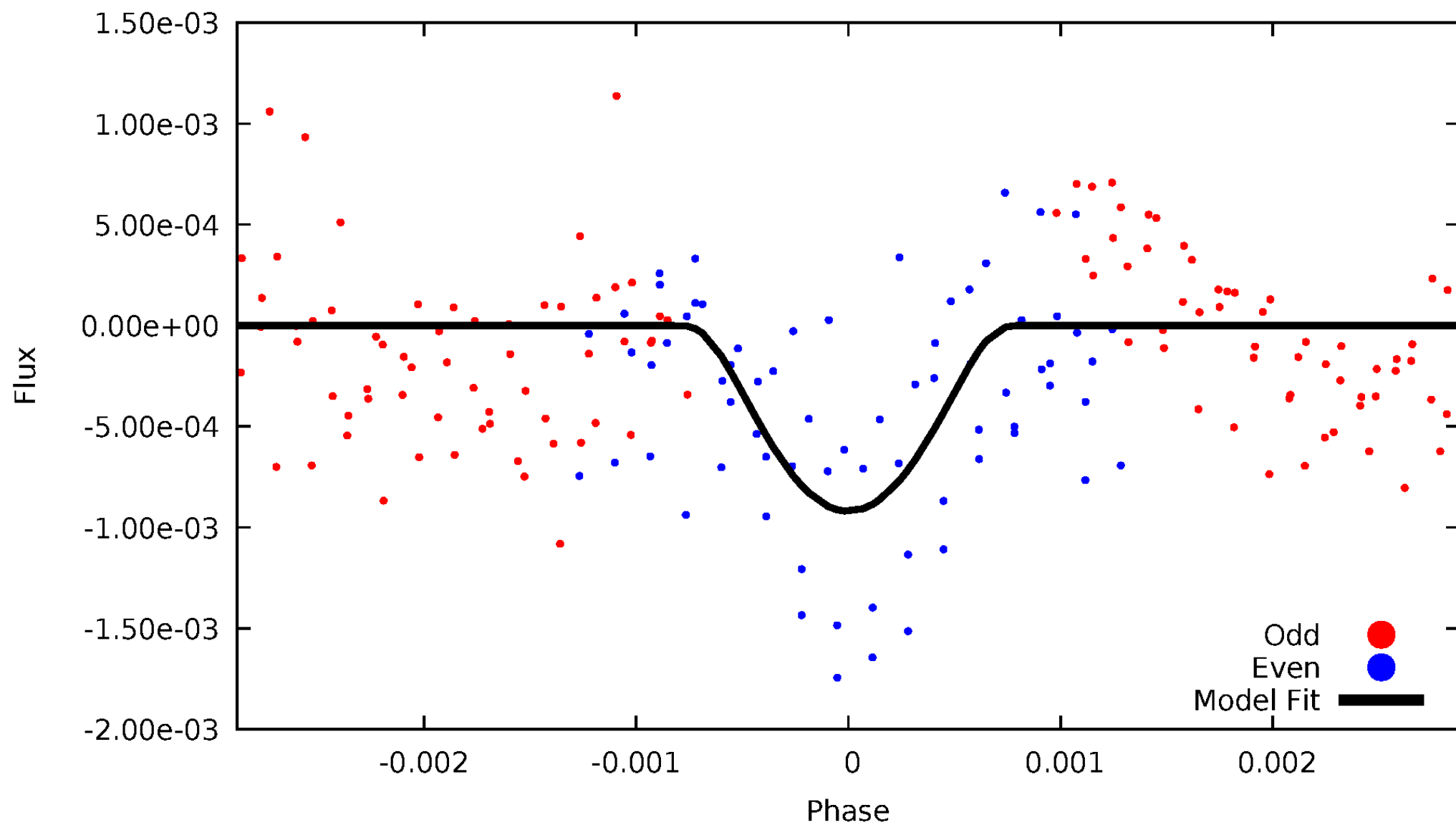


TCE 006937257-02



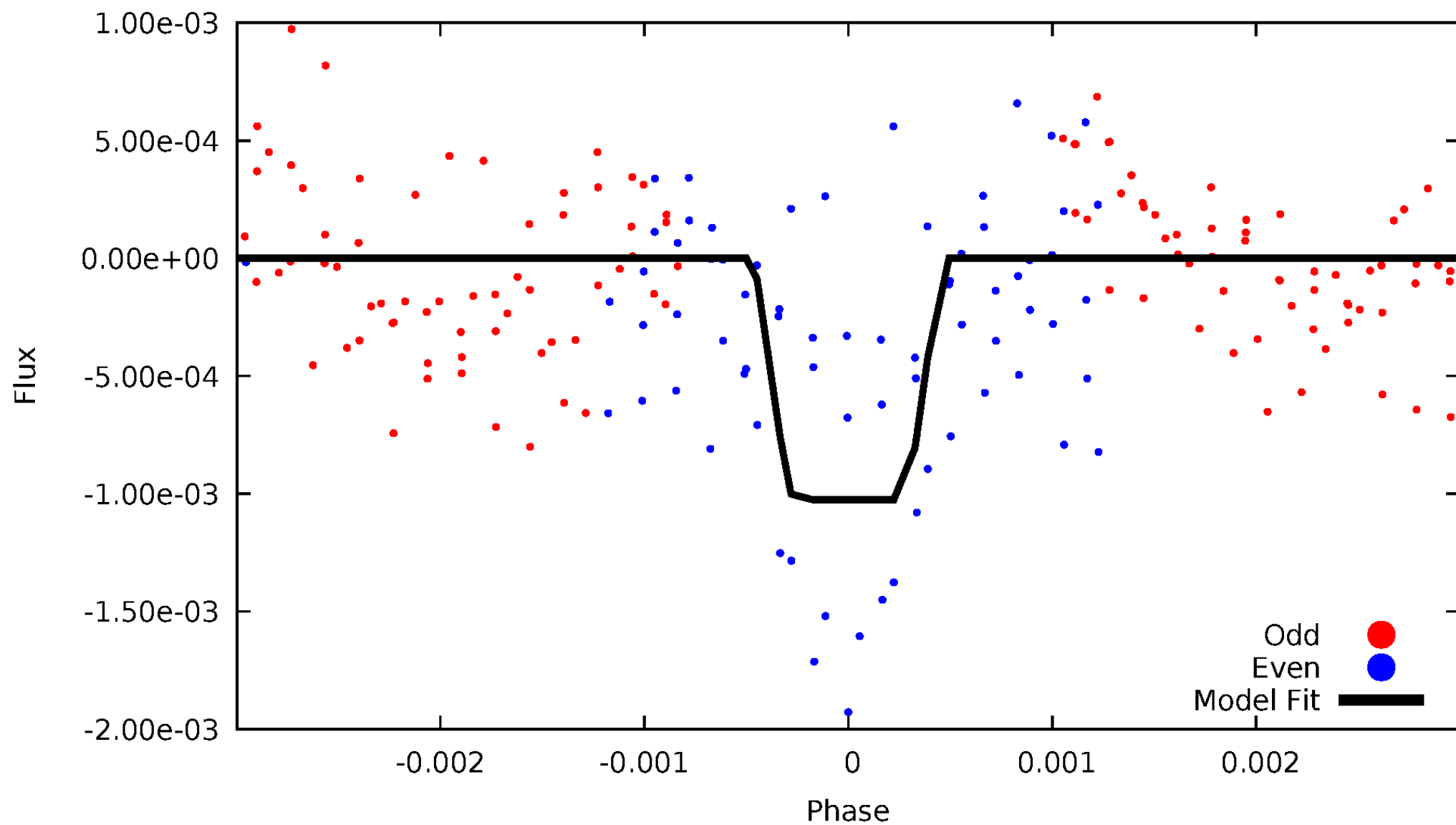
DV Odd/Even

TCE 006937257-02



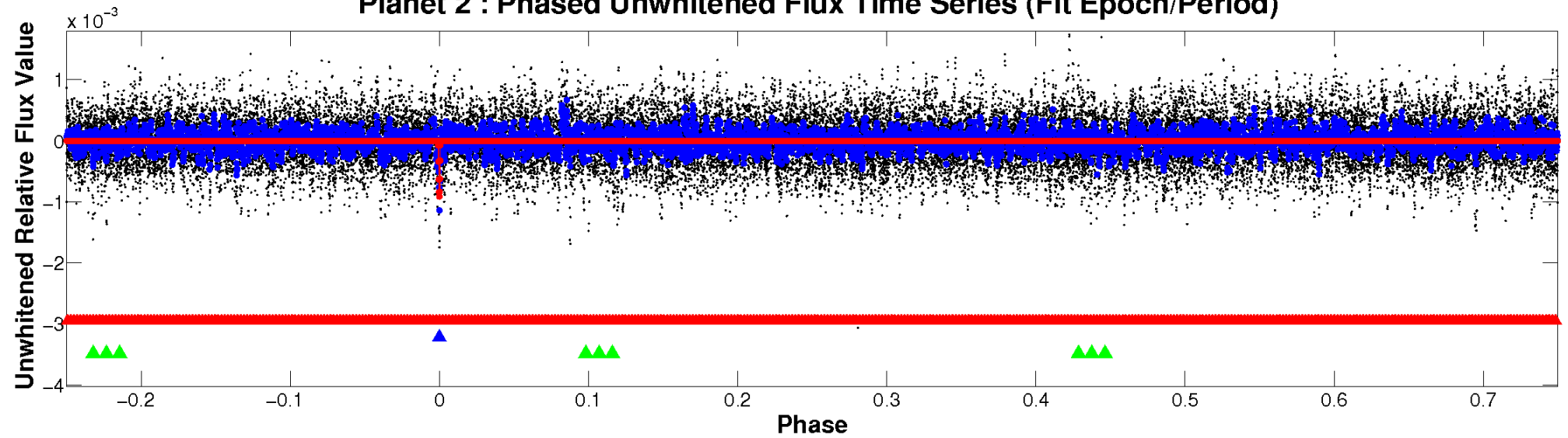
ALT Odd/Even

TCE 006937257-02

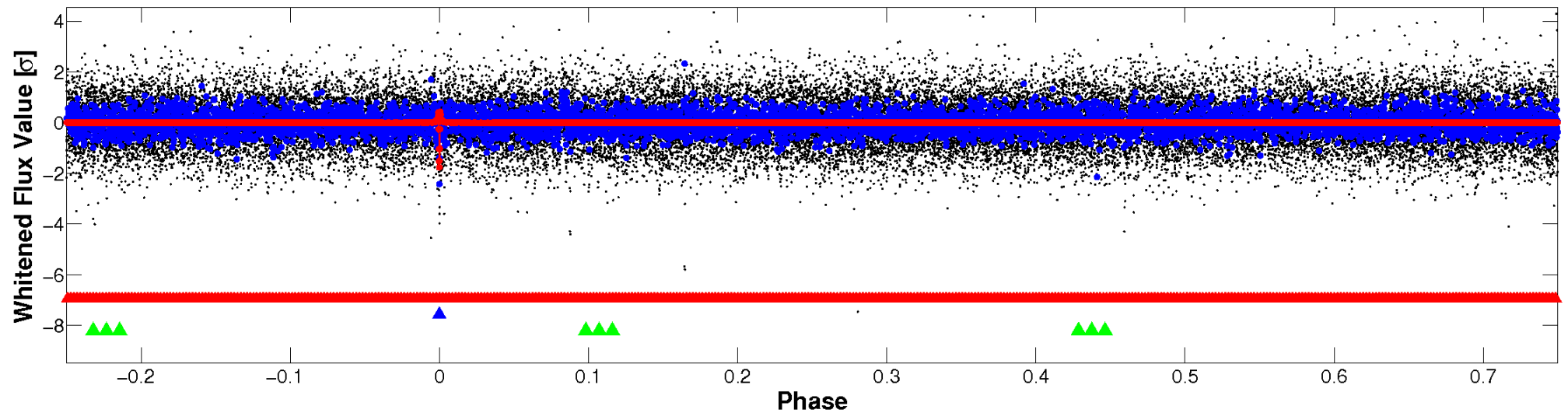


Non-Whitened Vs. Whitened Light Curve

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

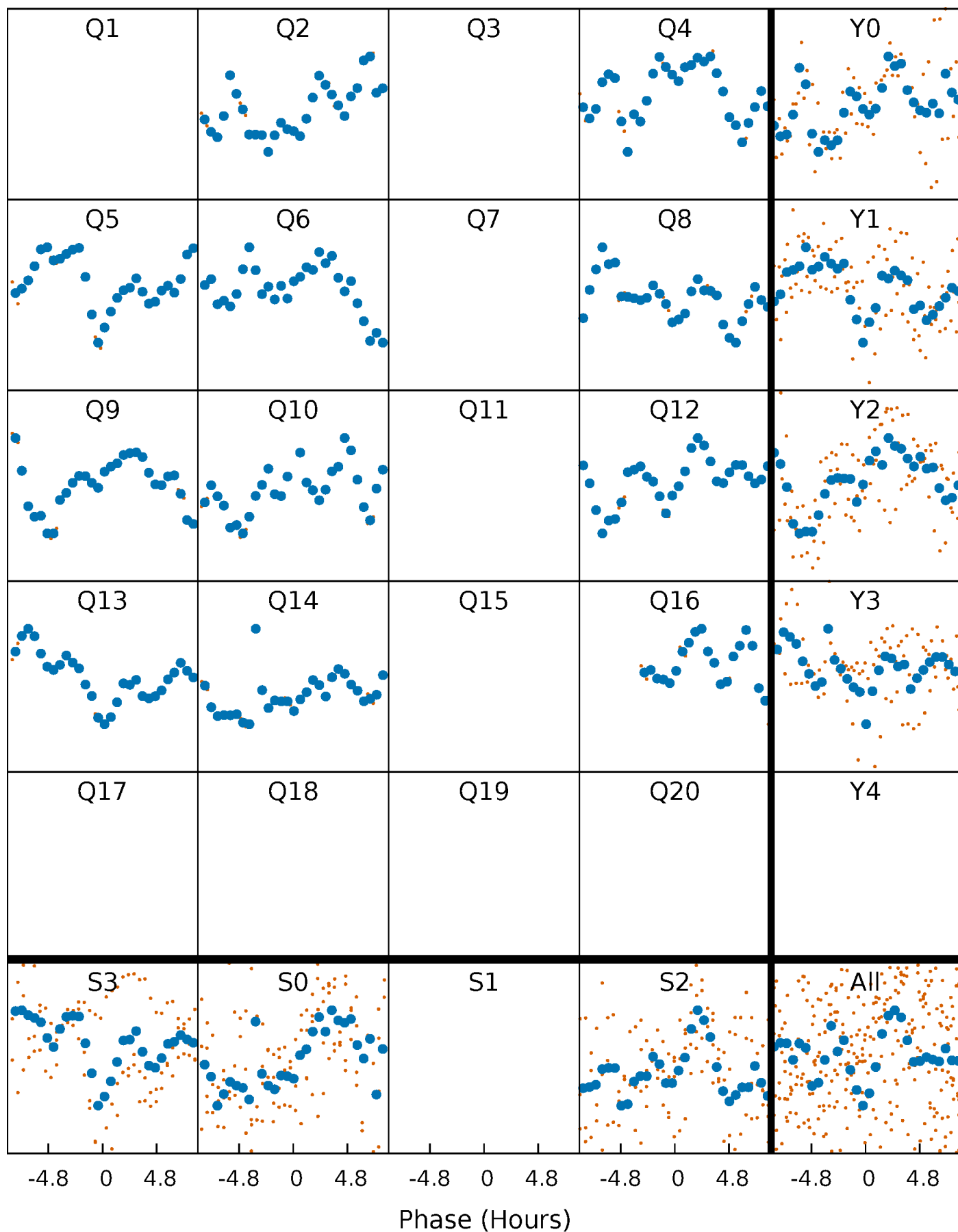


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



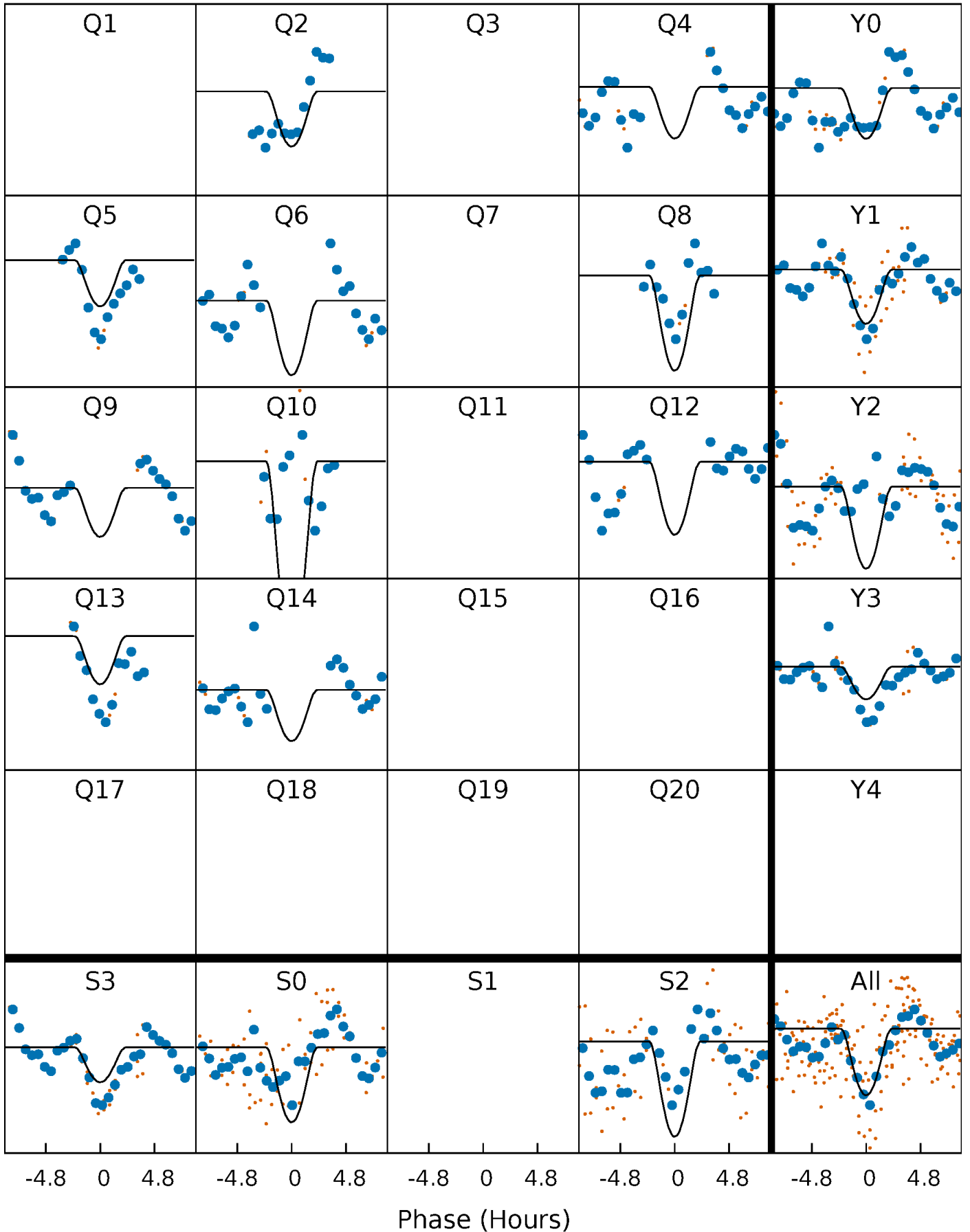
PDC Quarter-Phased Transit Curves

TCE 006937257-02 P=122.240534 Days $T_0=249.836185$ (BKJD)



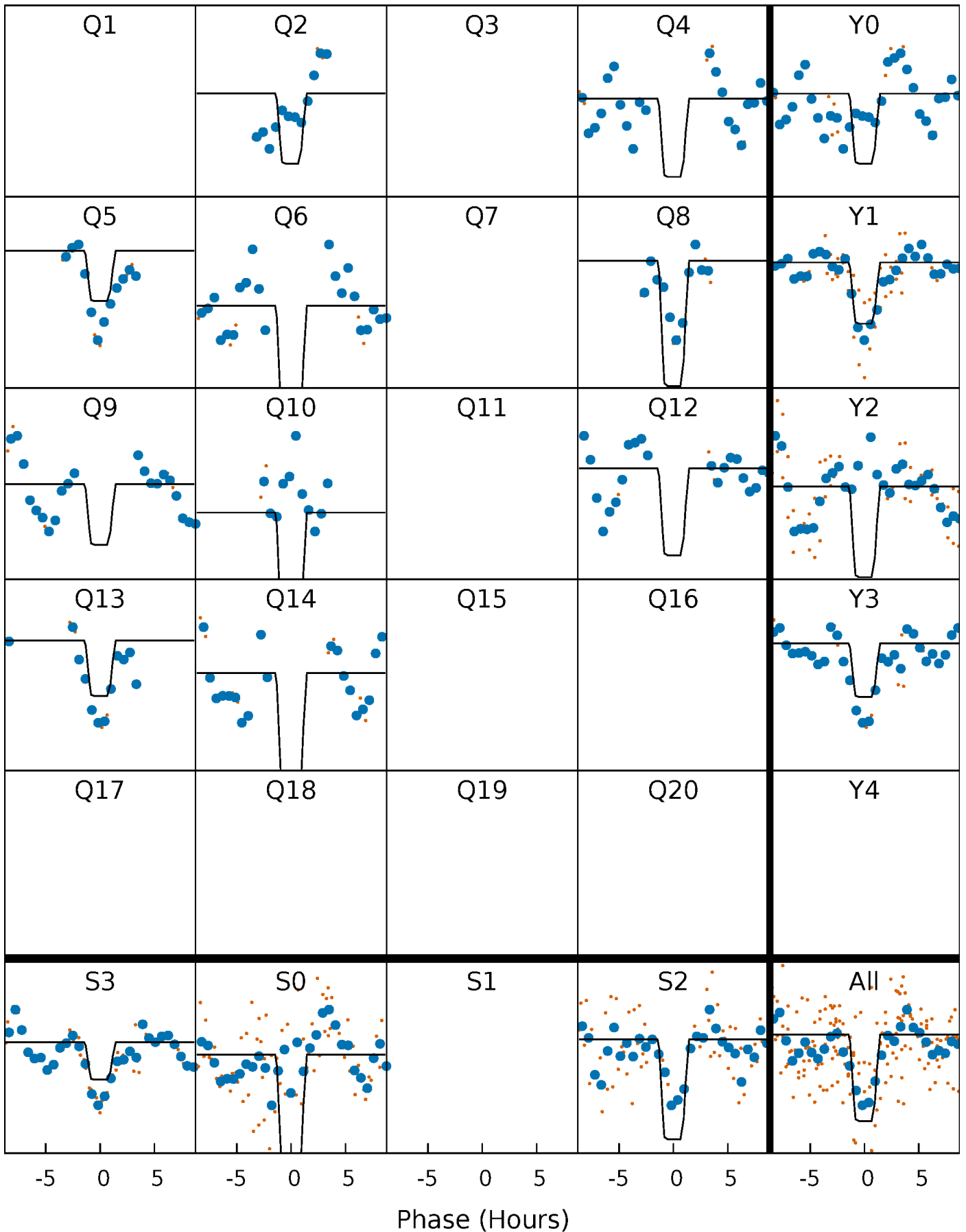
DV Quarter-Phased Transit Curves

TCE 006937257-02 P=122.240534 Days $T_0=249.836185$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

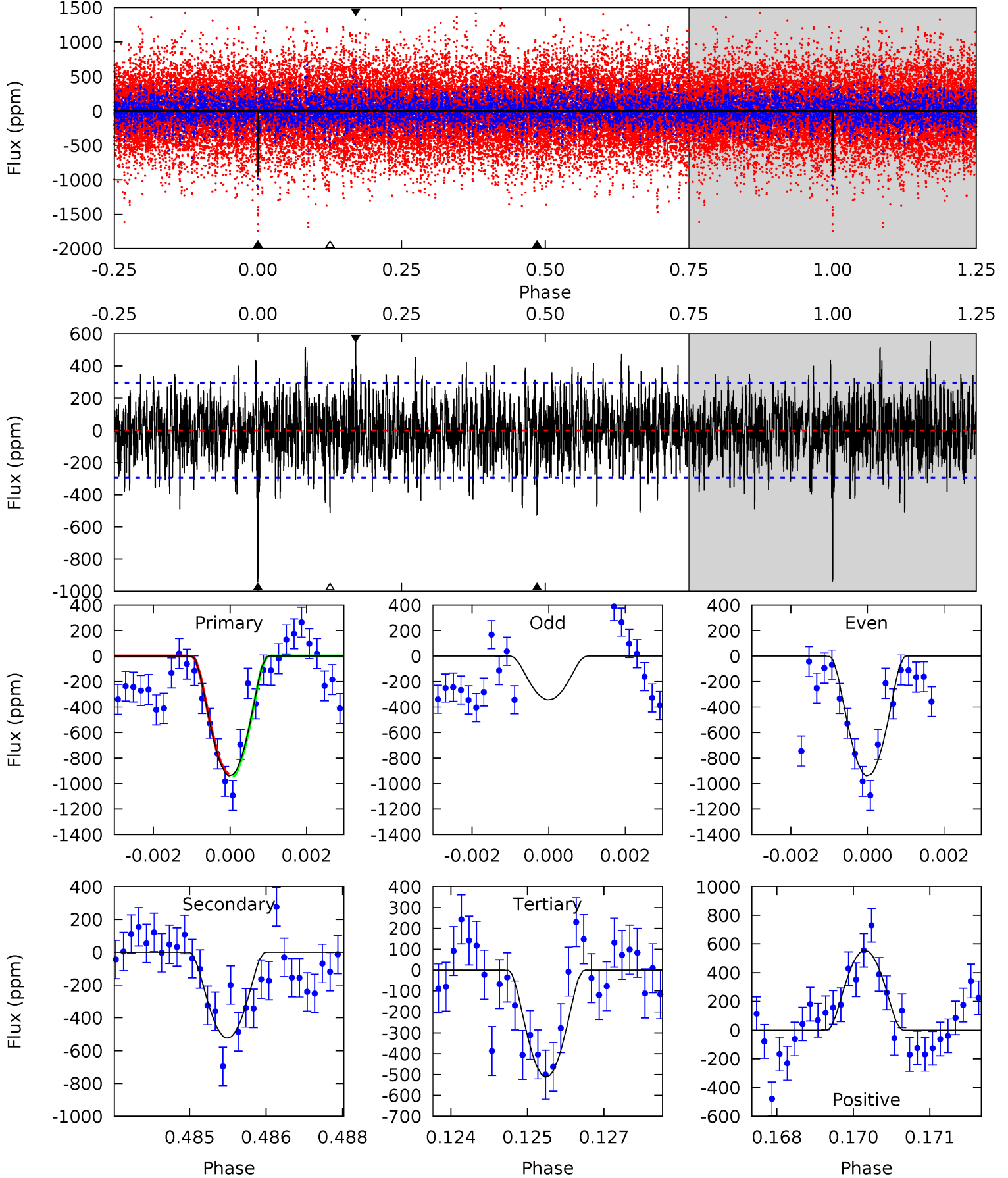
TCE 006937257-02 P=122.242809 Days $T_0=249.825190$ (BKJD)



DV Model-Shift Uniqueness Test

006937257-02, P = 122.240534 Days, E = 127.595651 Days

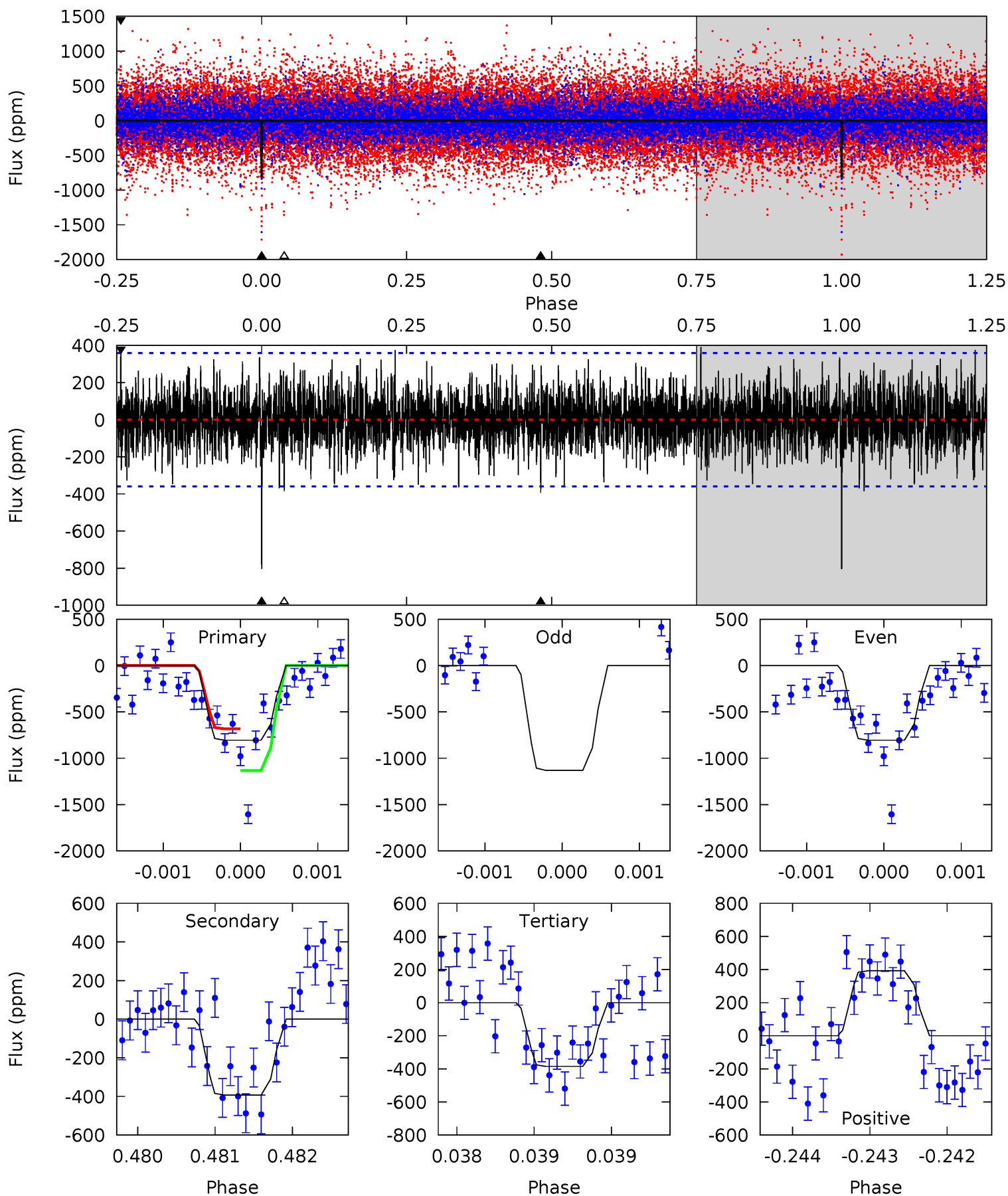
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	9.49	9.28	10.1	5.37	3.17	2.74	7.75	6.95	0.21	-0.59	1.57	1.15	0.37	0.18



Alt Model-Shift Uniqueness Test

006937257-02, P = 122.242809 Days, E = 127.582381 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	5.99	5.87	5.98	5.48	3.34	1.63	6.40	6.29	0.12	0.01	2.69	1.33	0.33	3.33



Stellar Parameters For KIC 006937257

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4875^{+88}_{-78}	$2.675^{+0.033}_{-0.027}$	$-0.620^{+0.250}_{-0.150}$	$6.924^{+1.308}_{-0.245}$	$0.826^{+0.353}_{-0.019}$	$0.004^{+0.000}_{-0.001}$
	+2%/-2%	+1%/-1%	+40%/-24%	+19%/-4%	+43%/-2%	+9%/-18%
Source	PHO56	AST56	PHO56	DSEP		

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

Secondary Eclipse Parameters for KIC 006937257-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-523 ± 55	$88.09^{+80.63}_{-58.32}$	1173^{+26}_{-22}	2827^{+1136}_{-457}	$7.593^{+58.611}_{-5.502}$
Alt.	-393 ± 66	$77.41^{+78.01}_{-53.45}$	1174^{+25}_{-24}	2820^{+1216}_{-490}	$7.325^{+70.816}_{-5.488}$

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

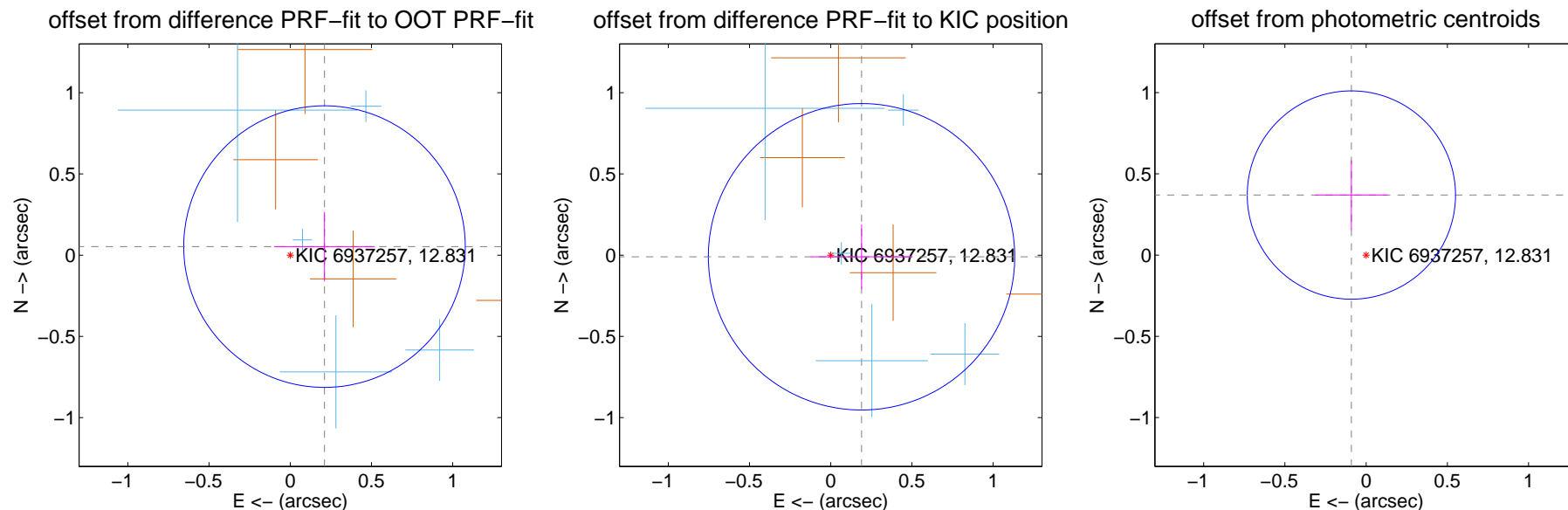
DV Centroid Data

Supplemental centroid analysis for 006937257-02. Kepler magnitude: 12.83. Transit SNR 6.93

There are 6 quarters with good PRF difference image offsets

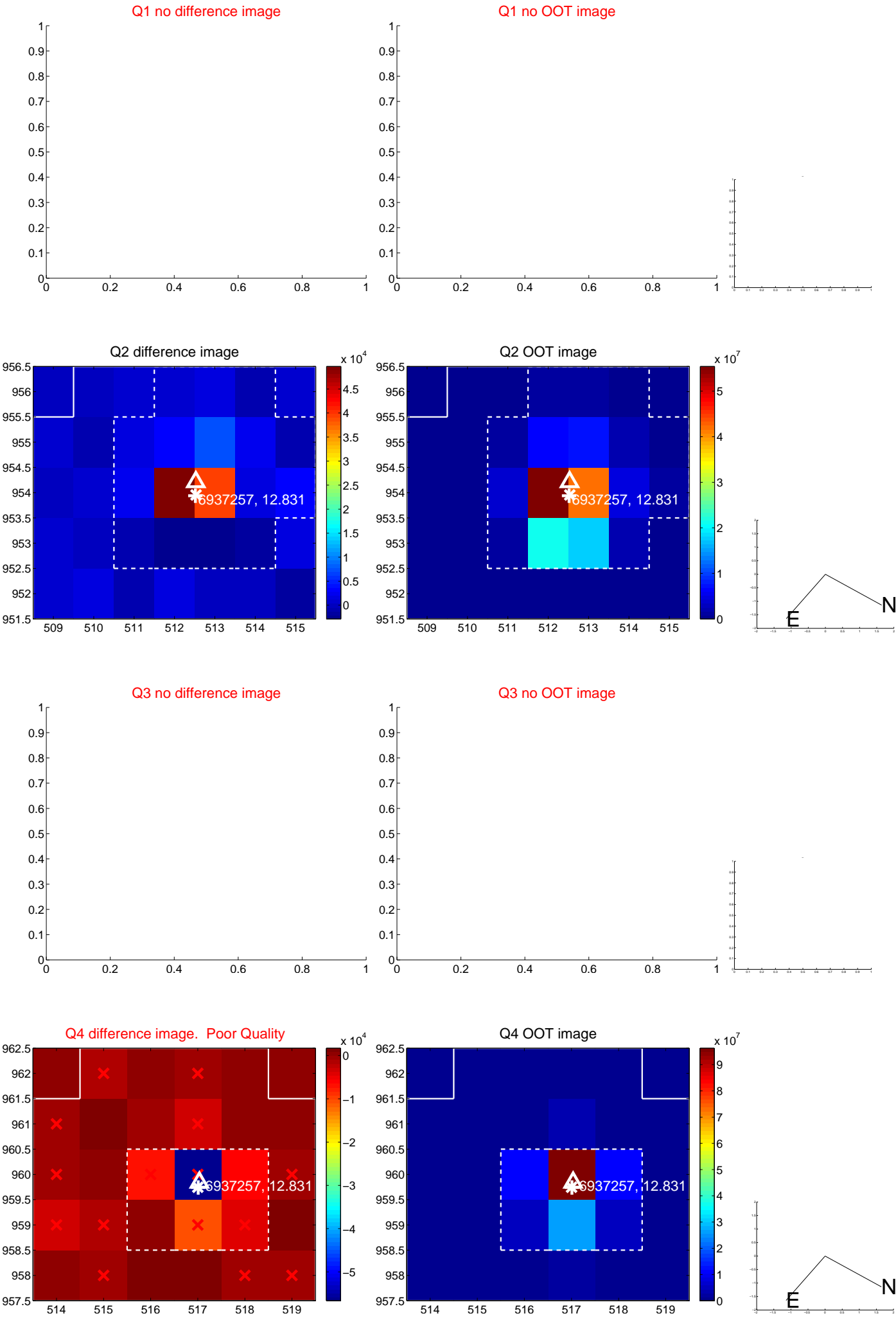
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.217 ± 0.289	0.75	-0.211 ± 0.310	0.053 ± 0.214
PRF-fit source offset from KIC position	0.190 ± 0.314	0.60	-0.190 ± 0.311	-0.010 ± 0.199
photometric centroid source offset	0.38 ± 0.21	1.78	0.09 ± 0.22	0.37 ± 0.21

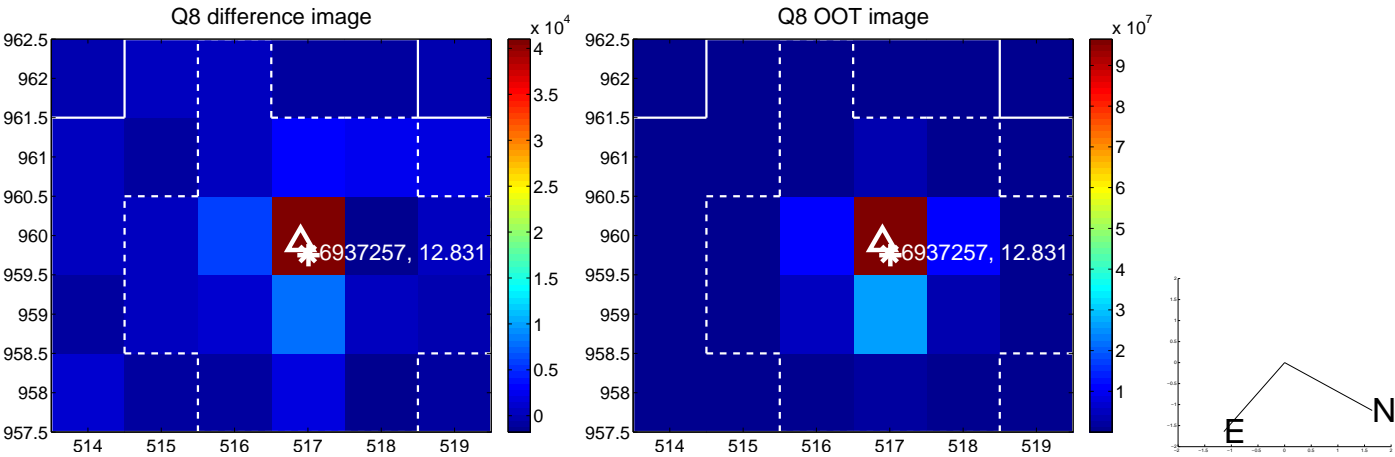
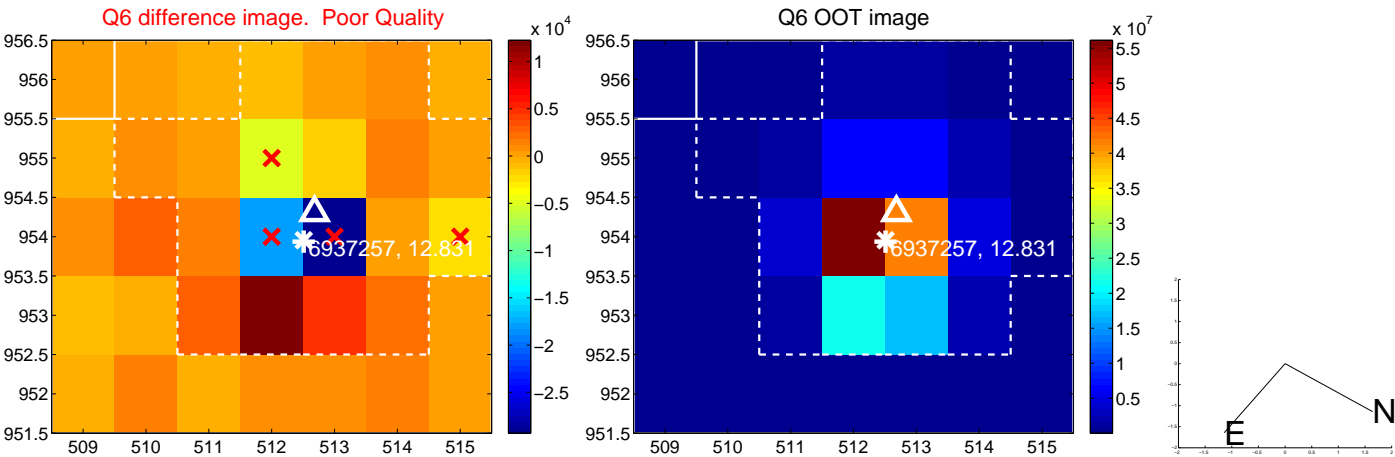
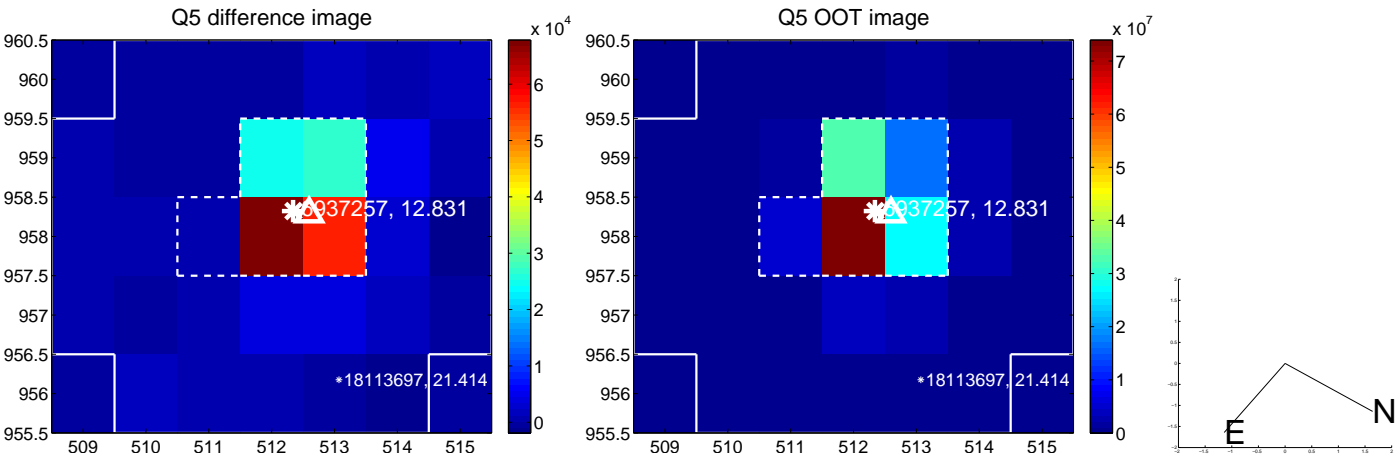


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

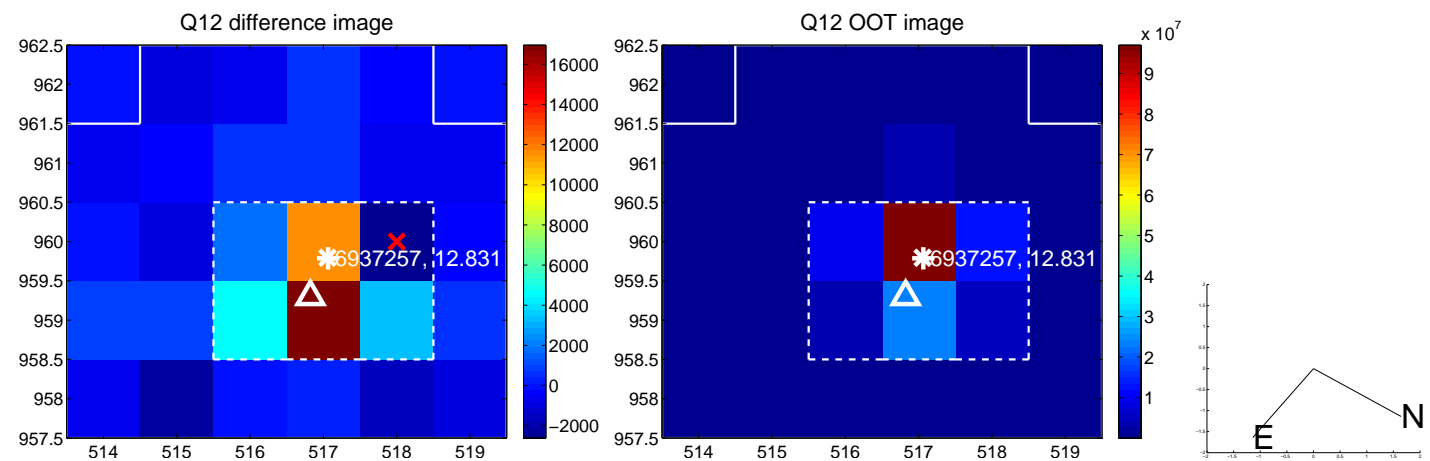
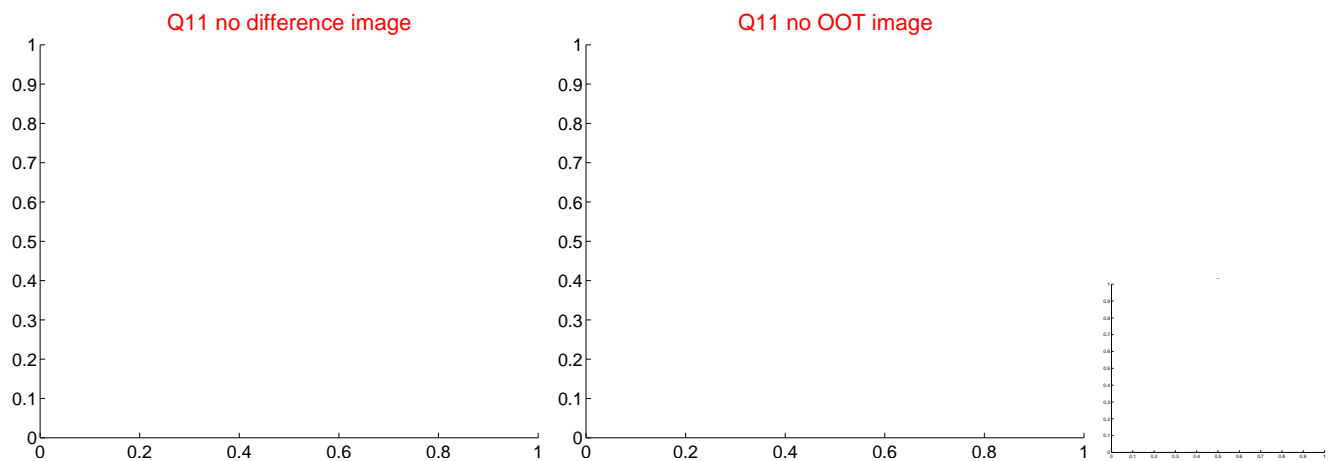
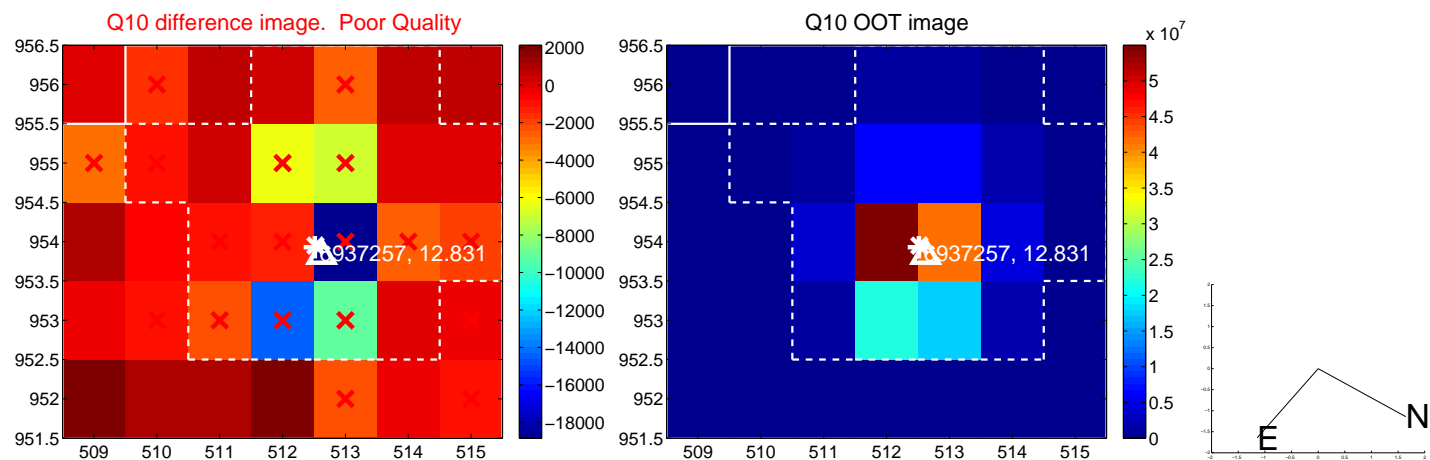
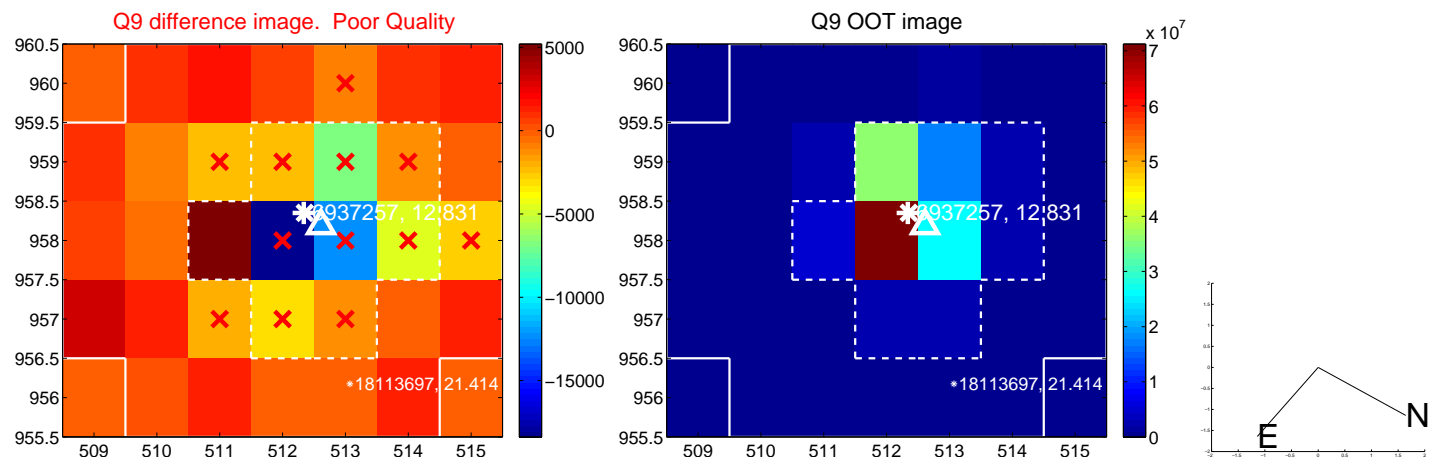
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



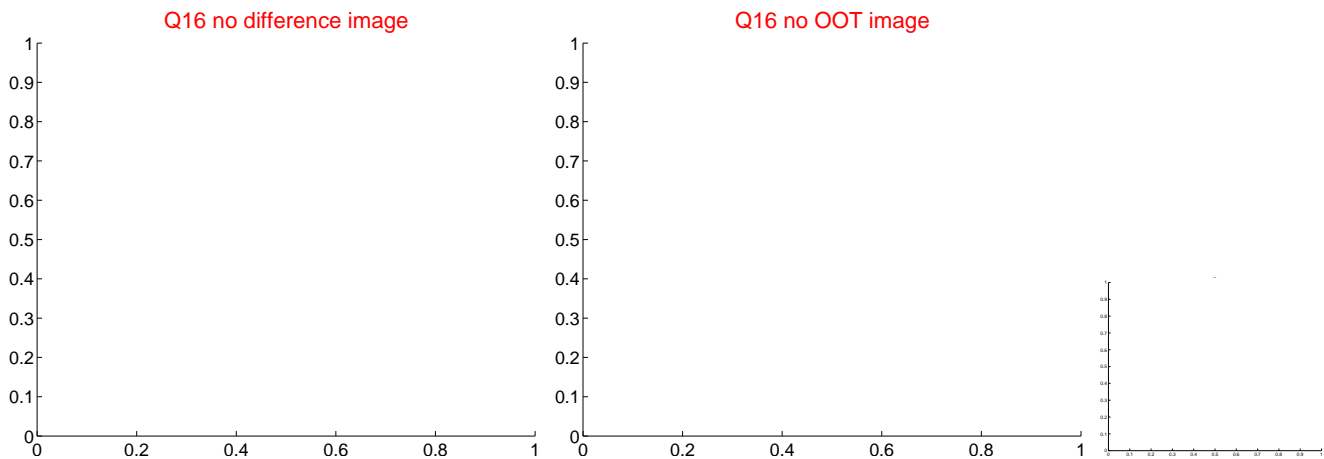
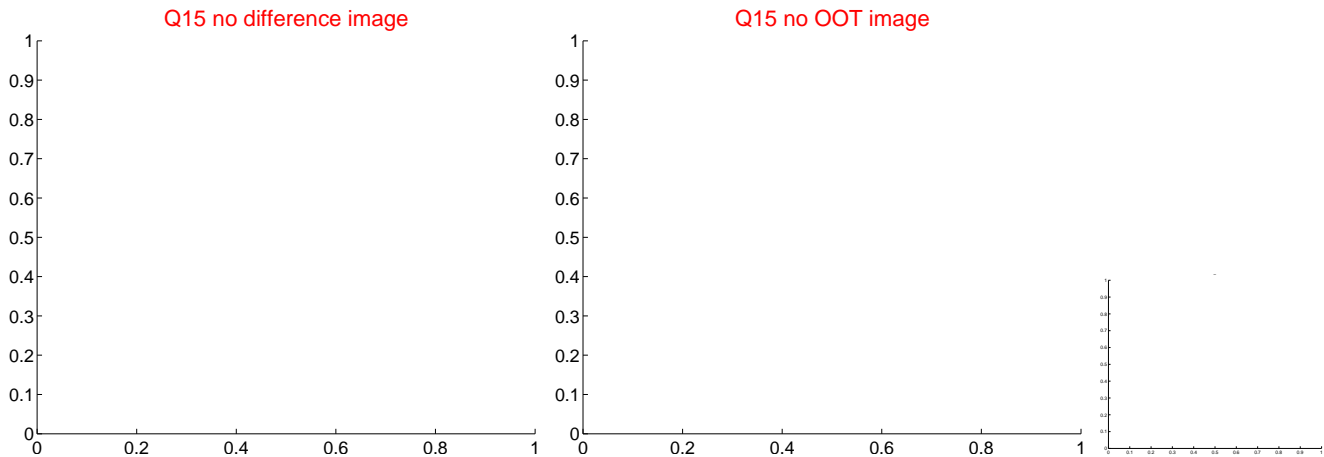
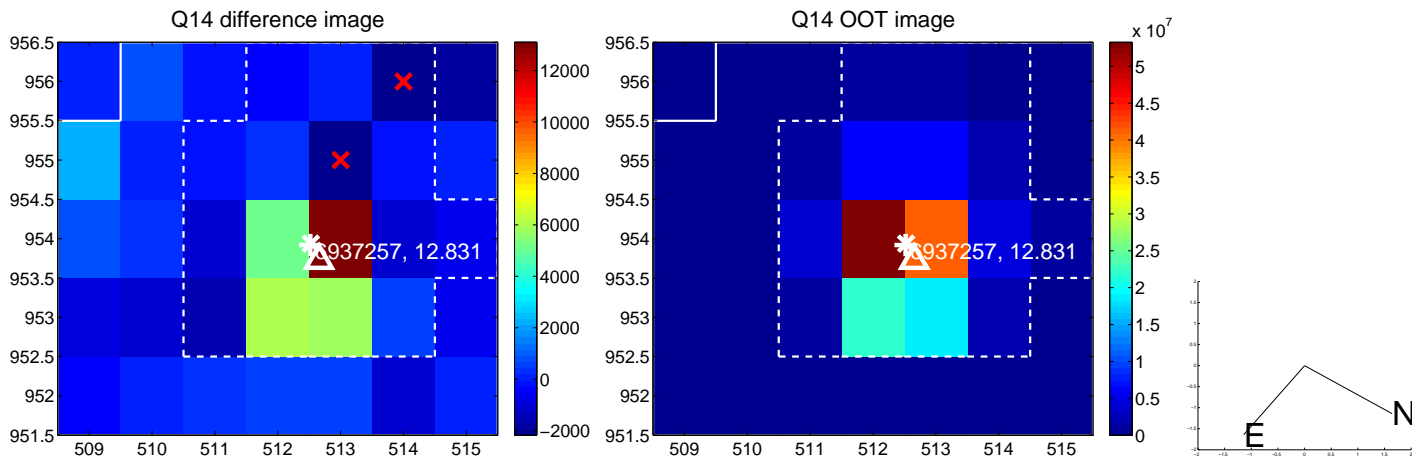
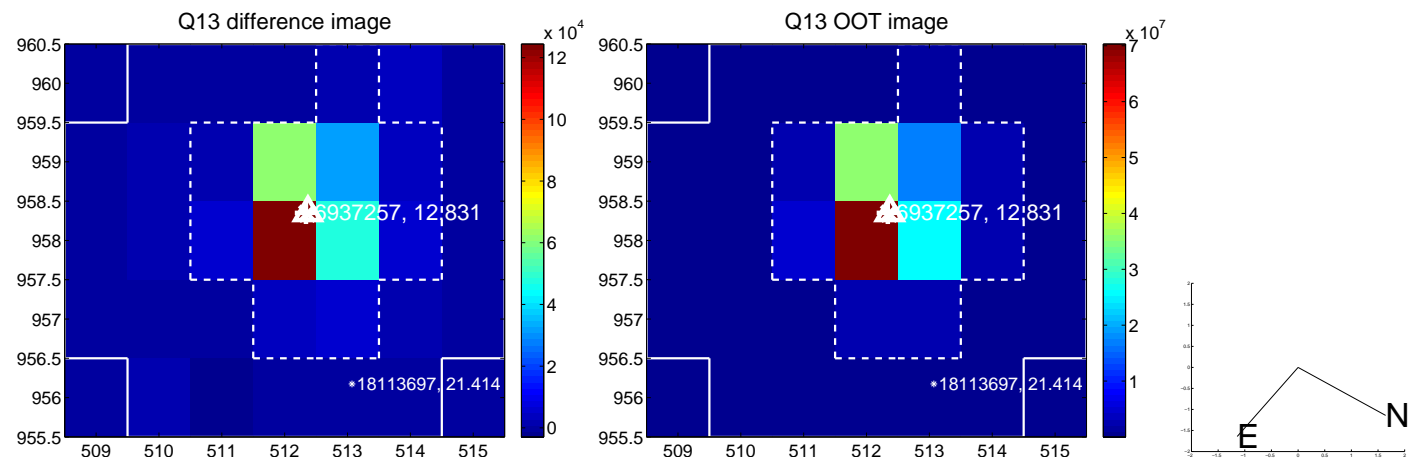
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



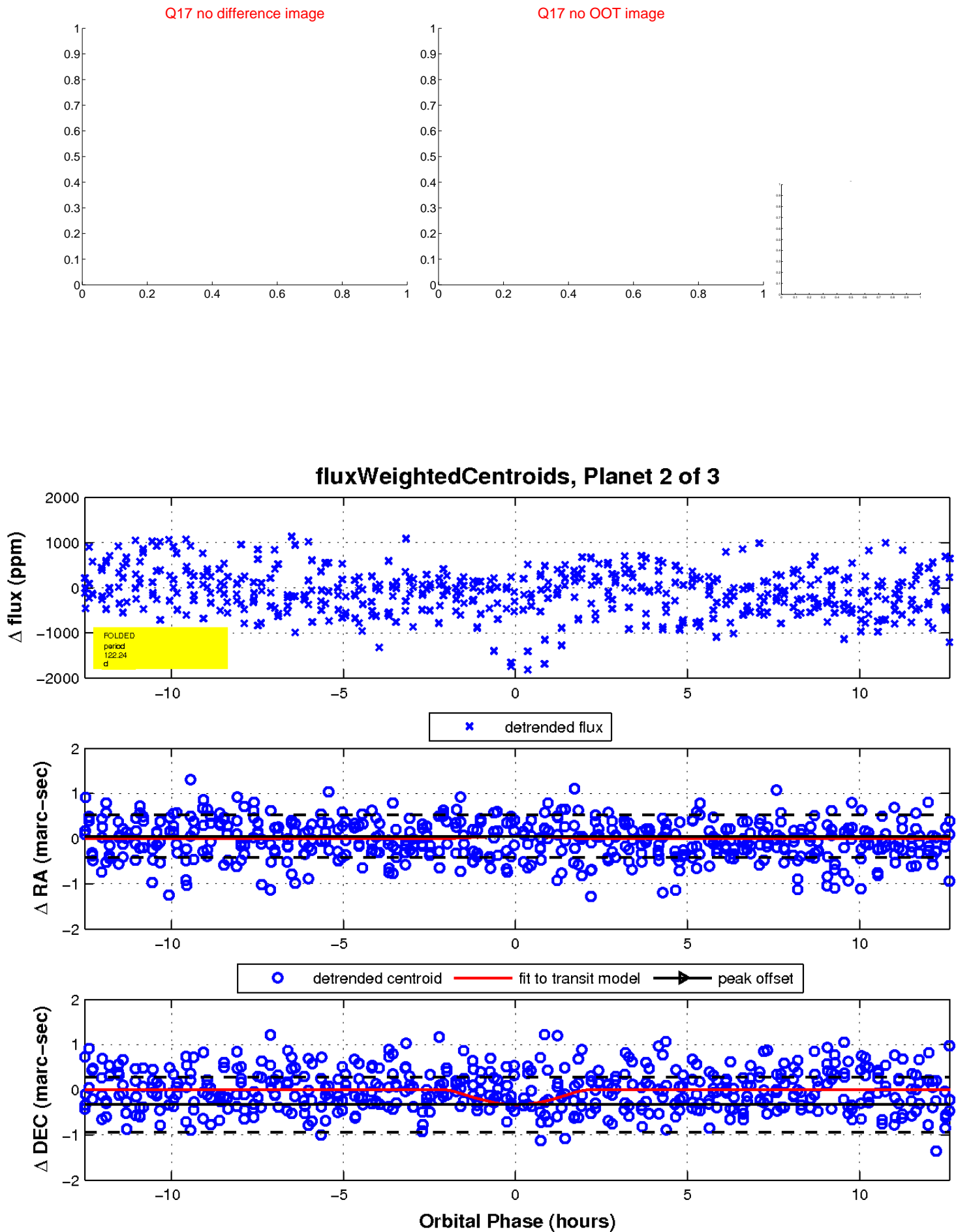
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



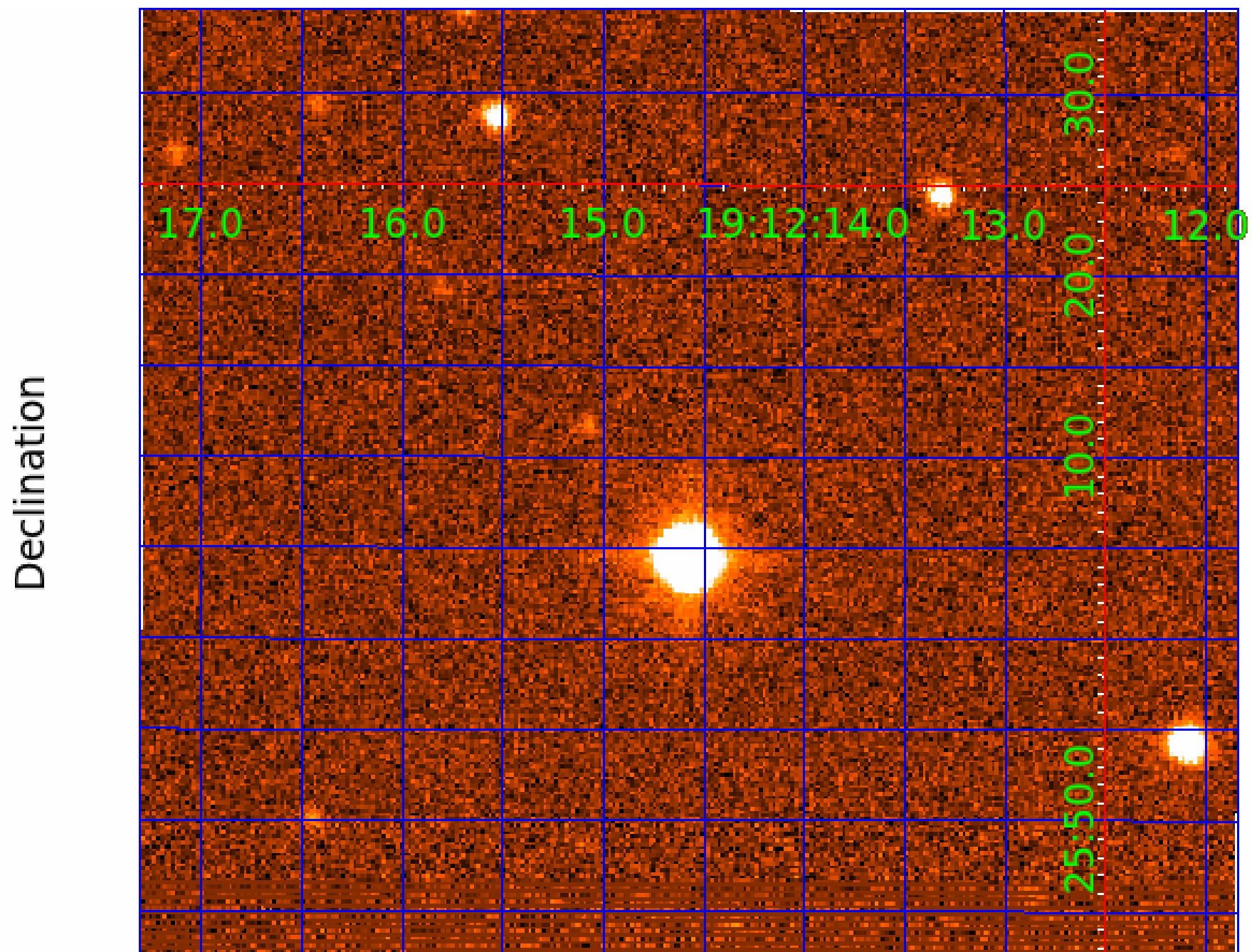
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006937257

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})
006937257-01	OBS	No	0.525788	131.781408	31.2	1.645	8.2	7.0	6.92	4875	4.43	0.00
006937257-02	OBS	No	122.240534	249.836185	920.0	4.224	7.9	6.9	6.92	4875	41.60	118.42
006937257-03	OBS	No	162.626054	223.629630	1032.6	4.534	7.4	8.2	6.92	4875	44.93	80.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006937257-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006937257-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
006937257-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV

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

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

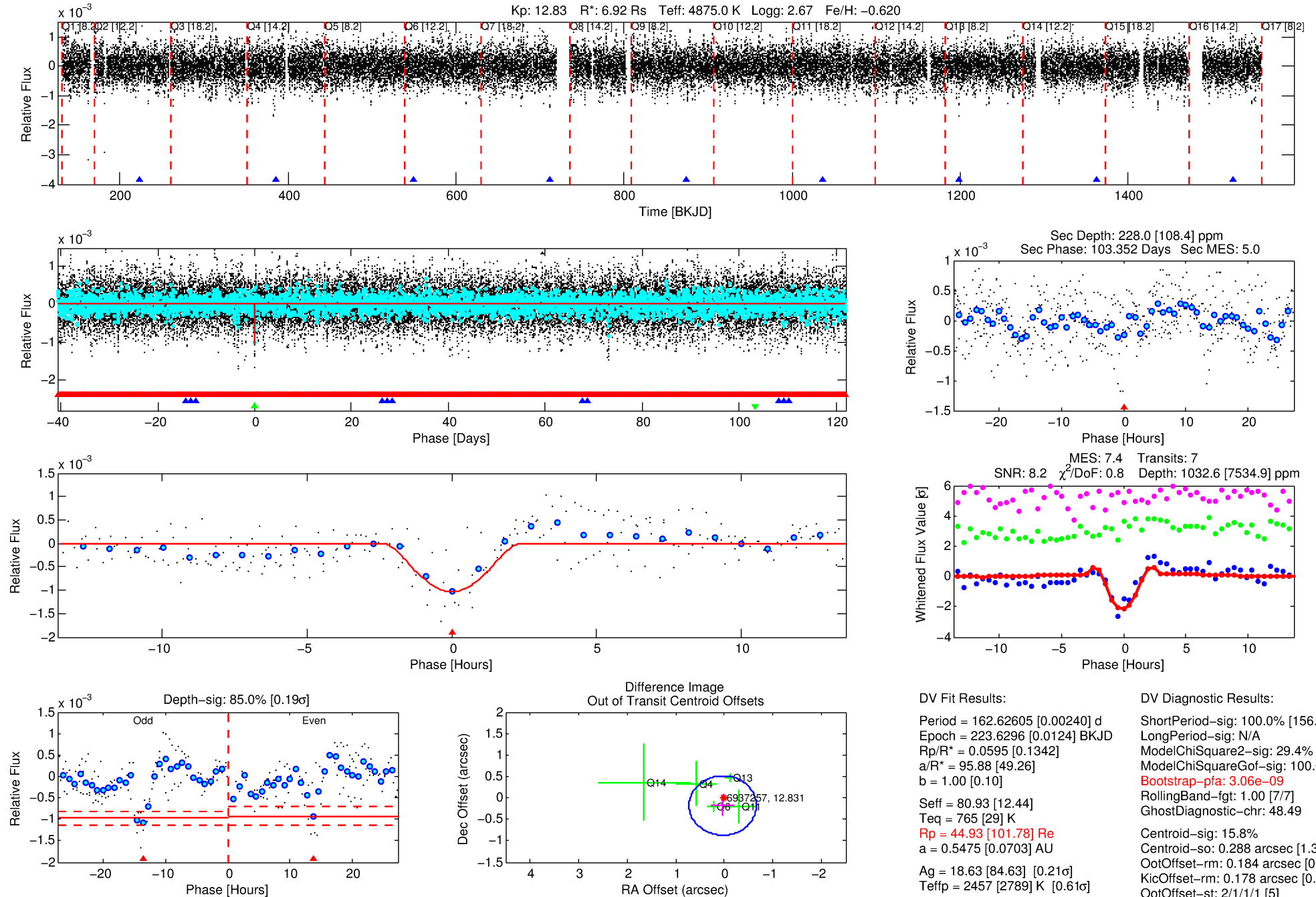
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006937257-03

No Significant Match Found

DV One-Page Summary

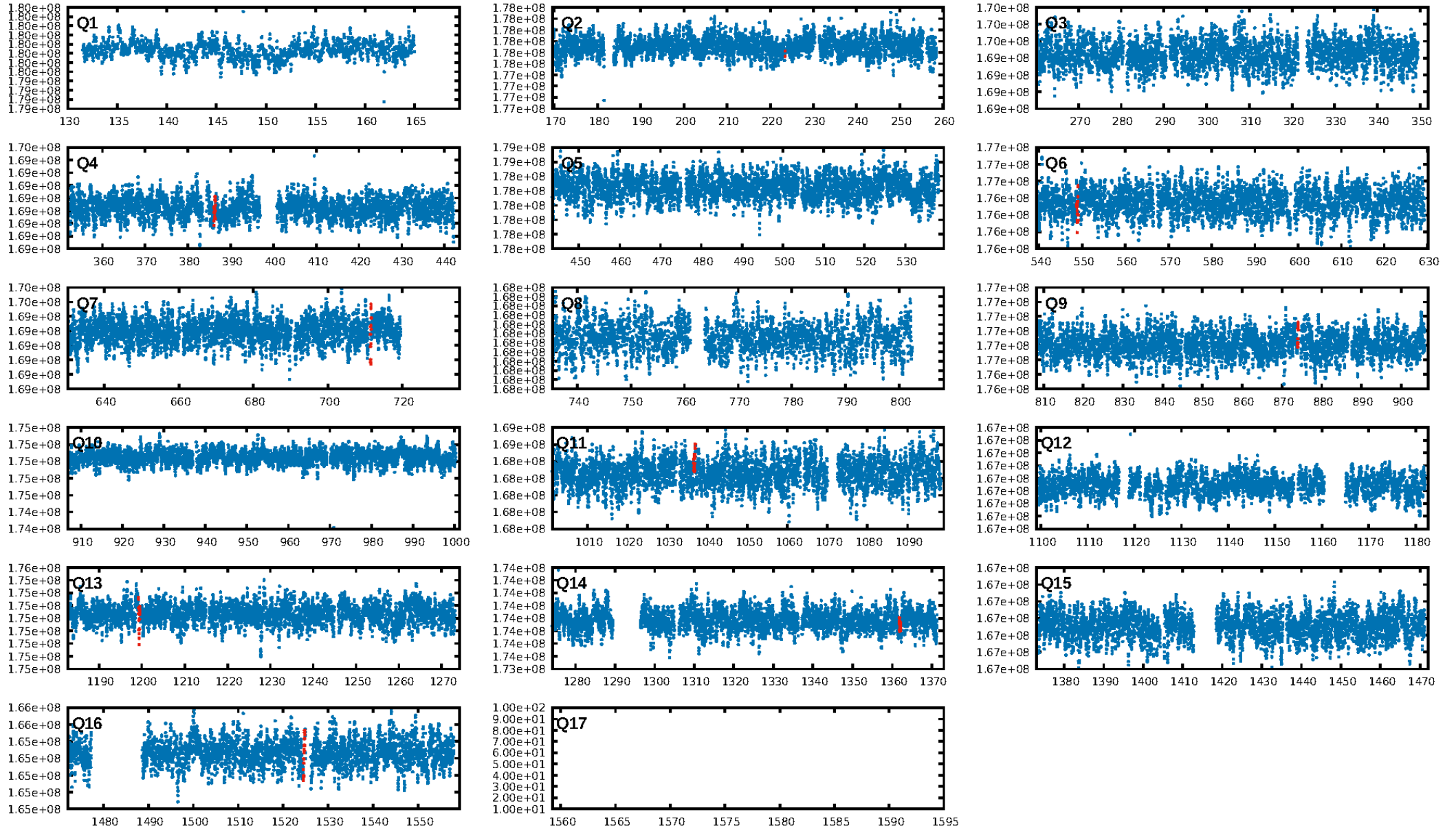
KIC: 6937257 Candidate: 3 of 3 Period: 162.626 d



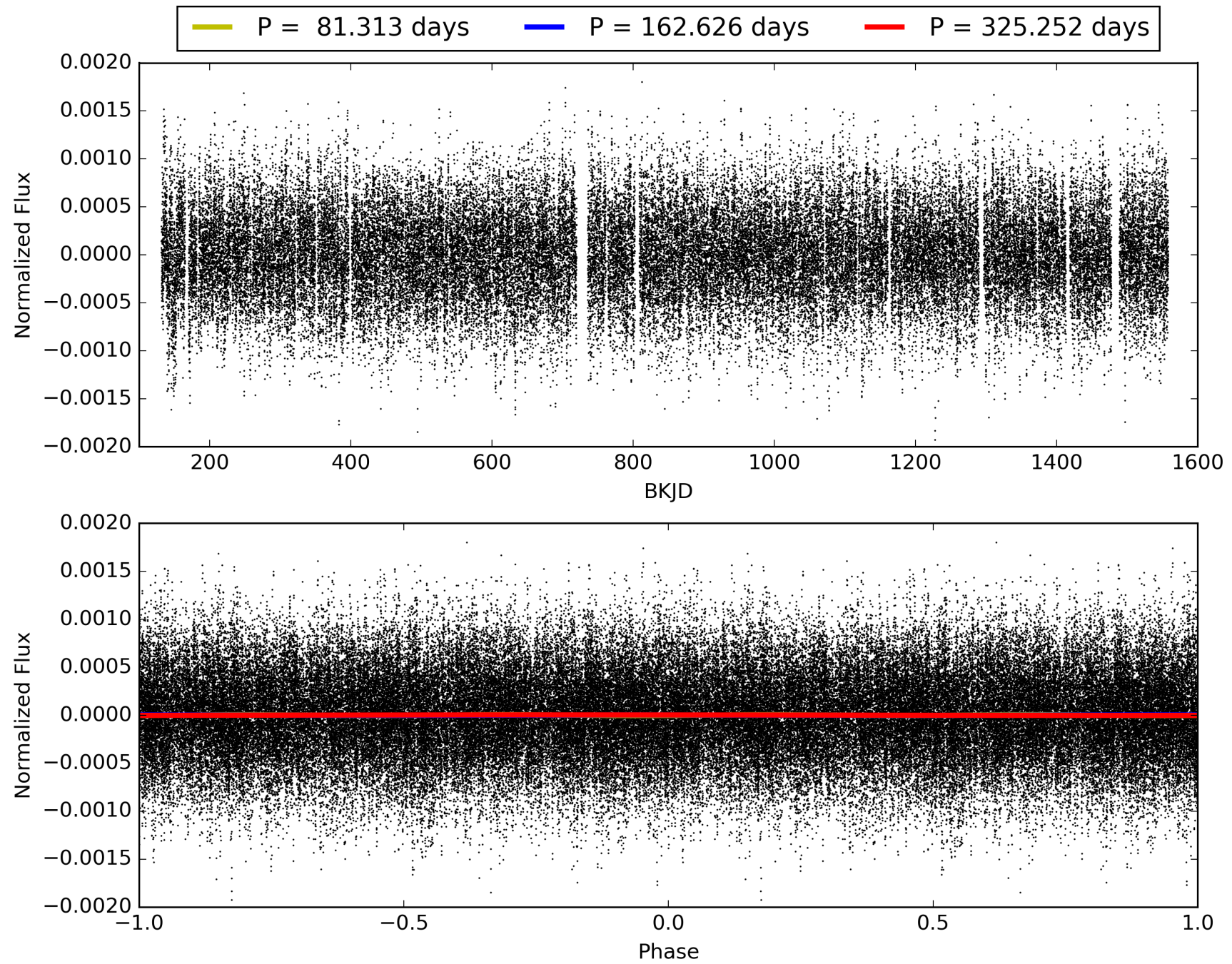
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:19:12 Z

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

TCE 006937257-03, PDC Light Curves

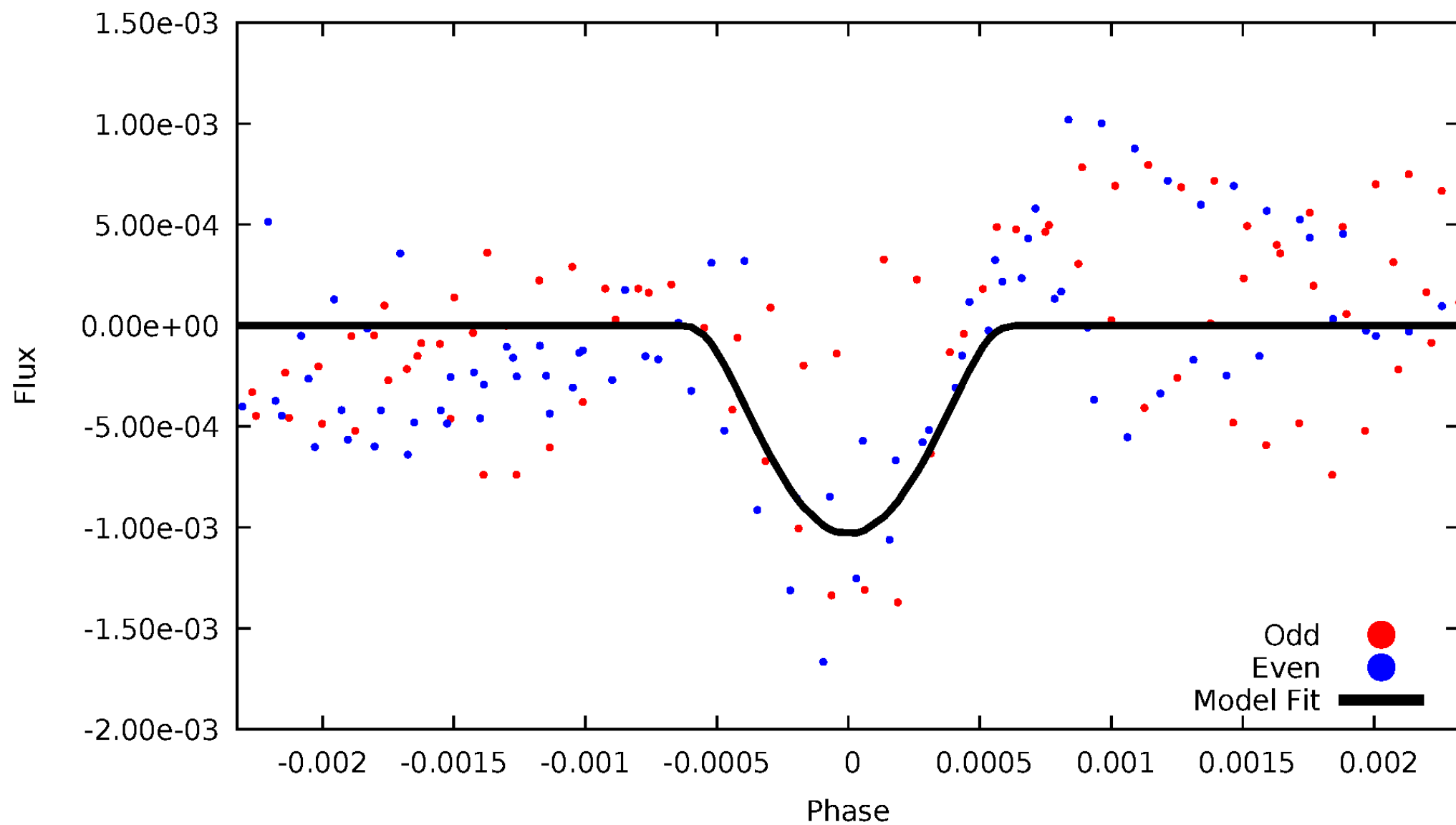


TCE 006937257-03



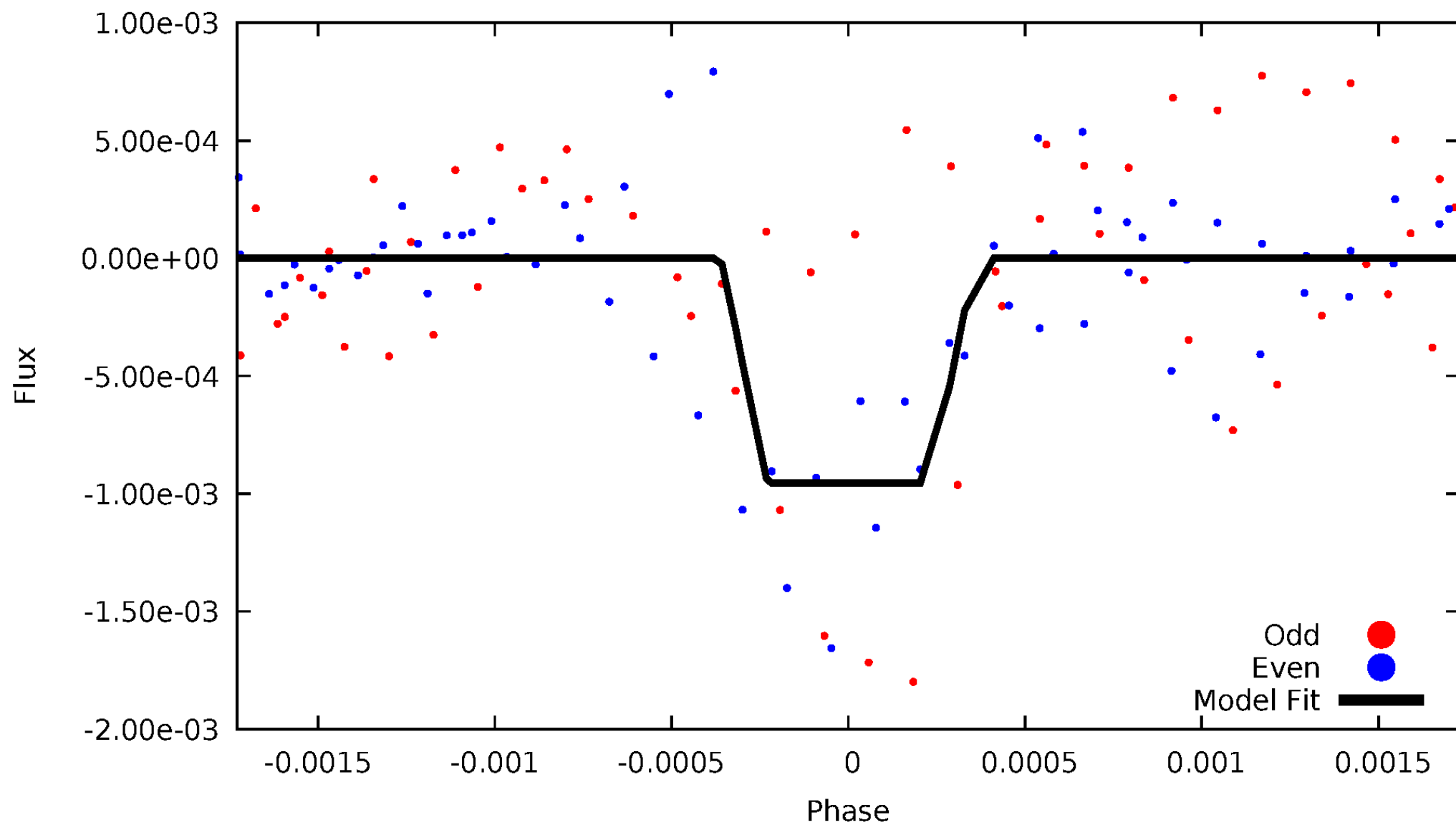
DV Odd/Even

TCE 006937257-03



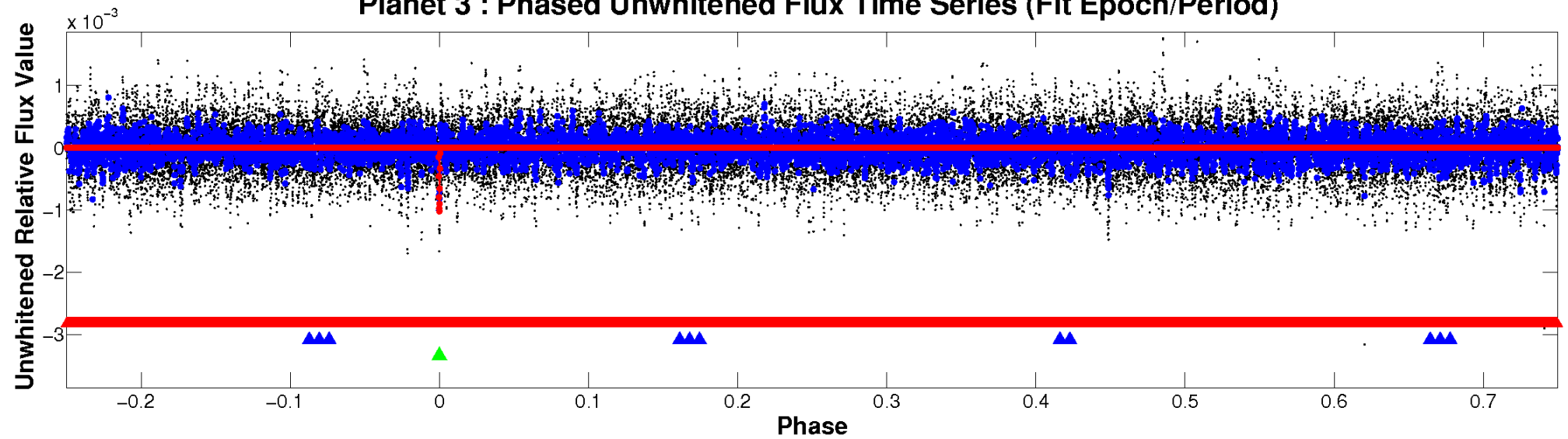
ALT Odd/Even

TCE 006937257-03

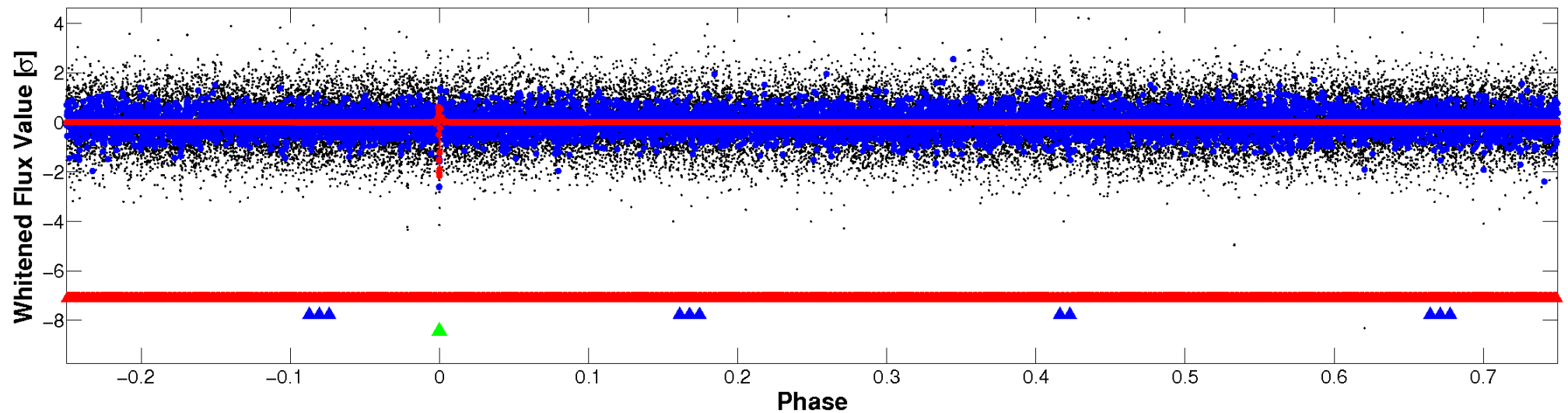


Non-Whitened Vs. Whitened Light Curve

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

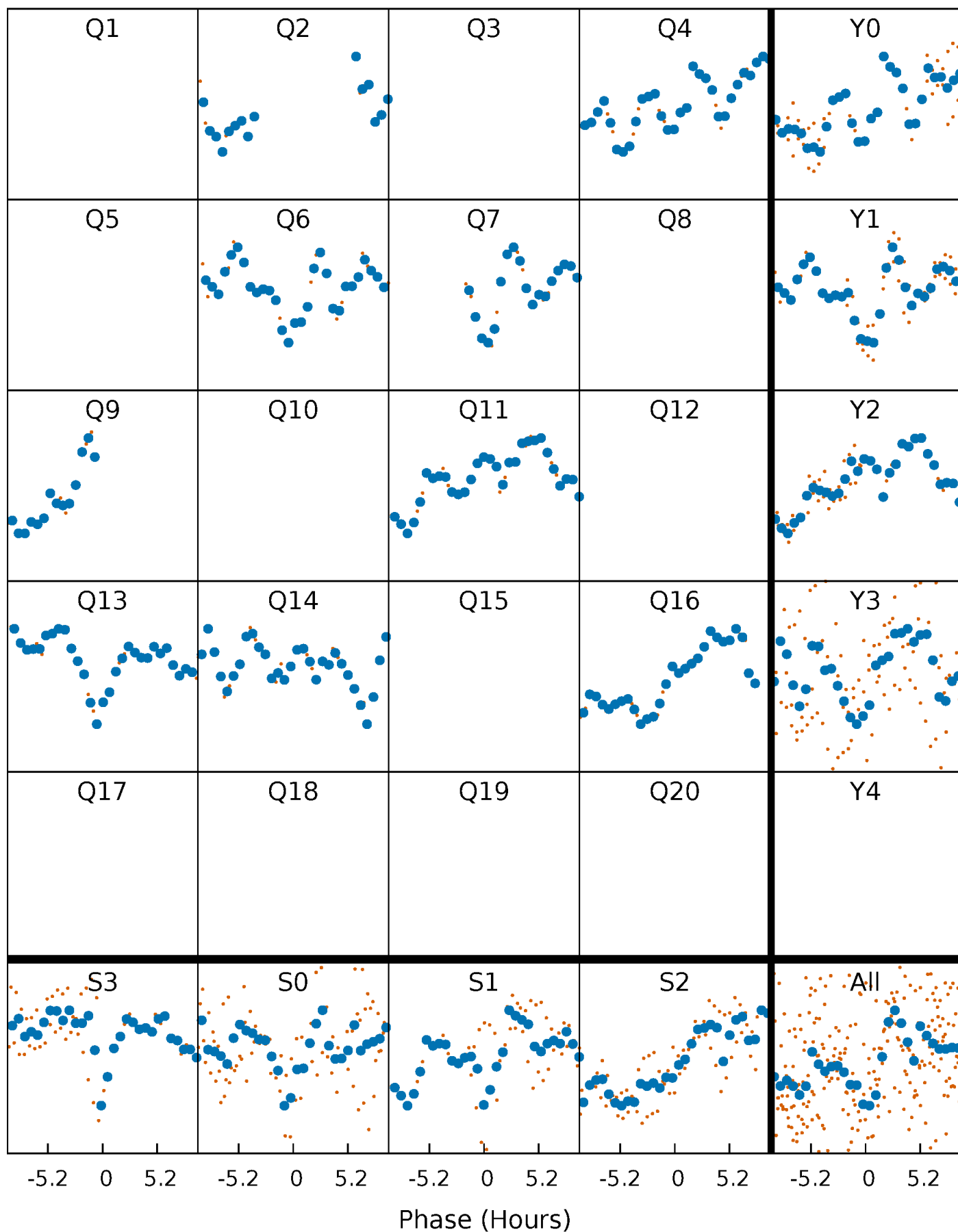


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



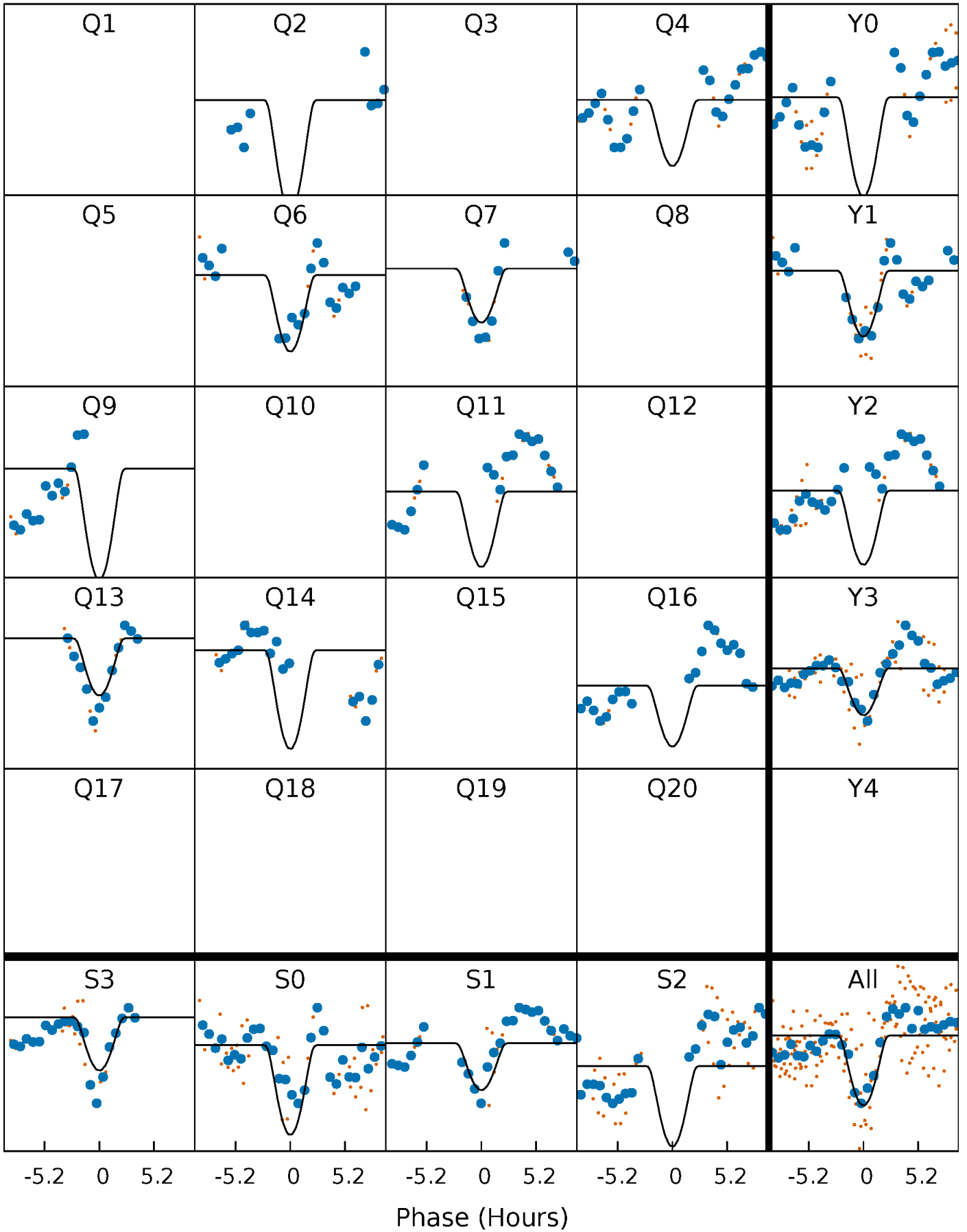
PDC Quarter-Phased Transit Curves

TCE 006937257-03 $P=162.626054$ Days $T_0=223.629630$ (BKJD)



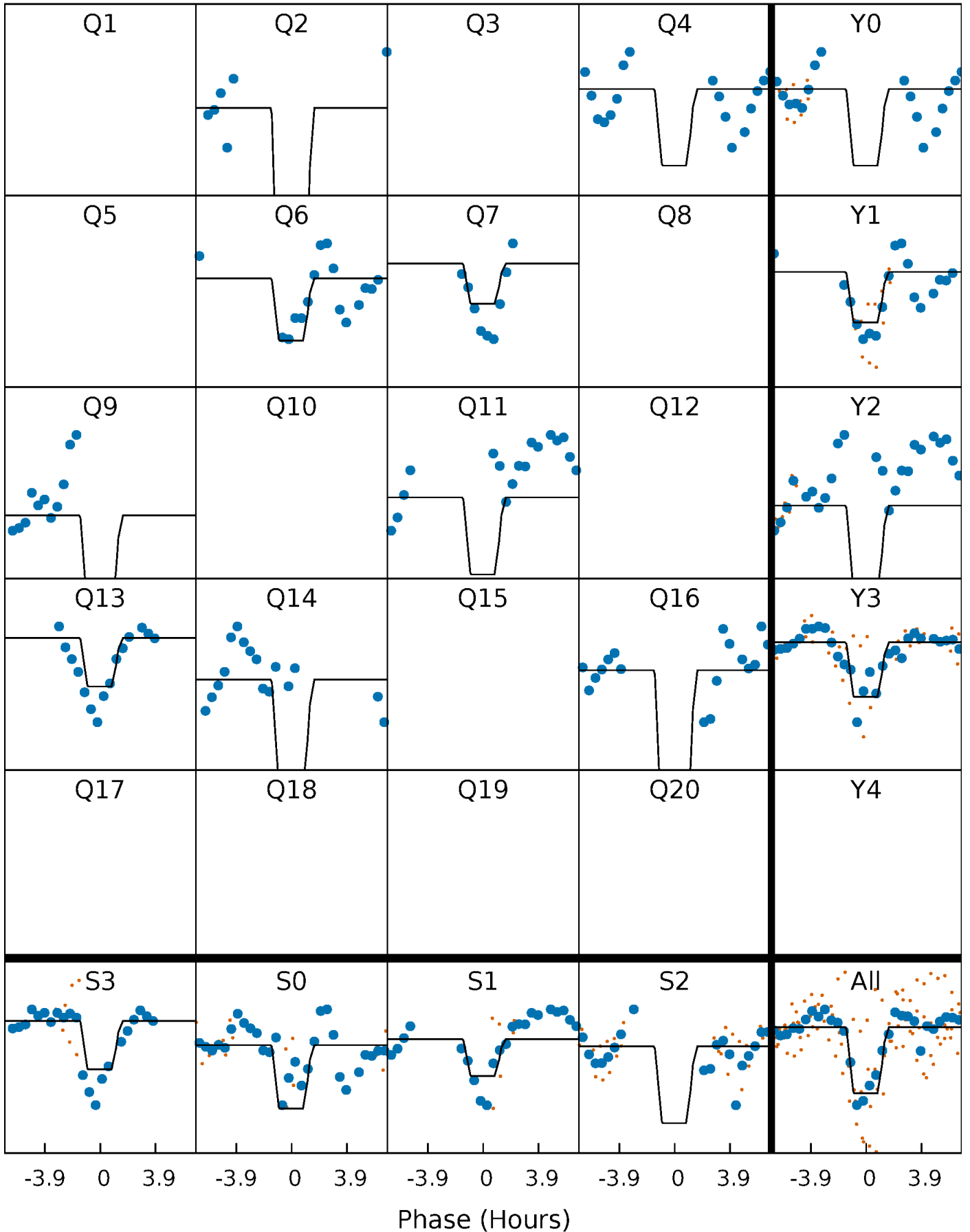
DV Quarter-Phased Transit Curves

TCE 006937257-03 P=162.626054 Days $T_0=223.629630$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

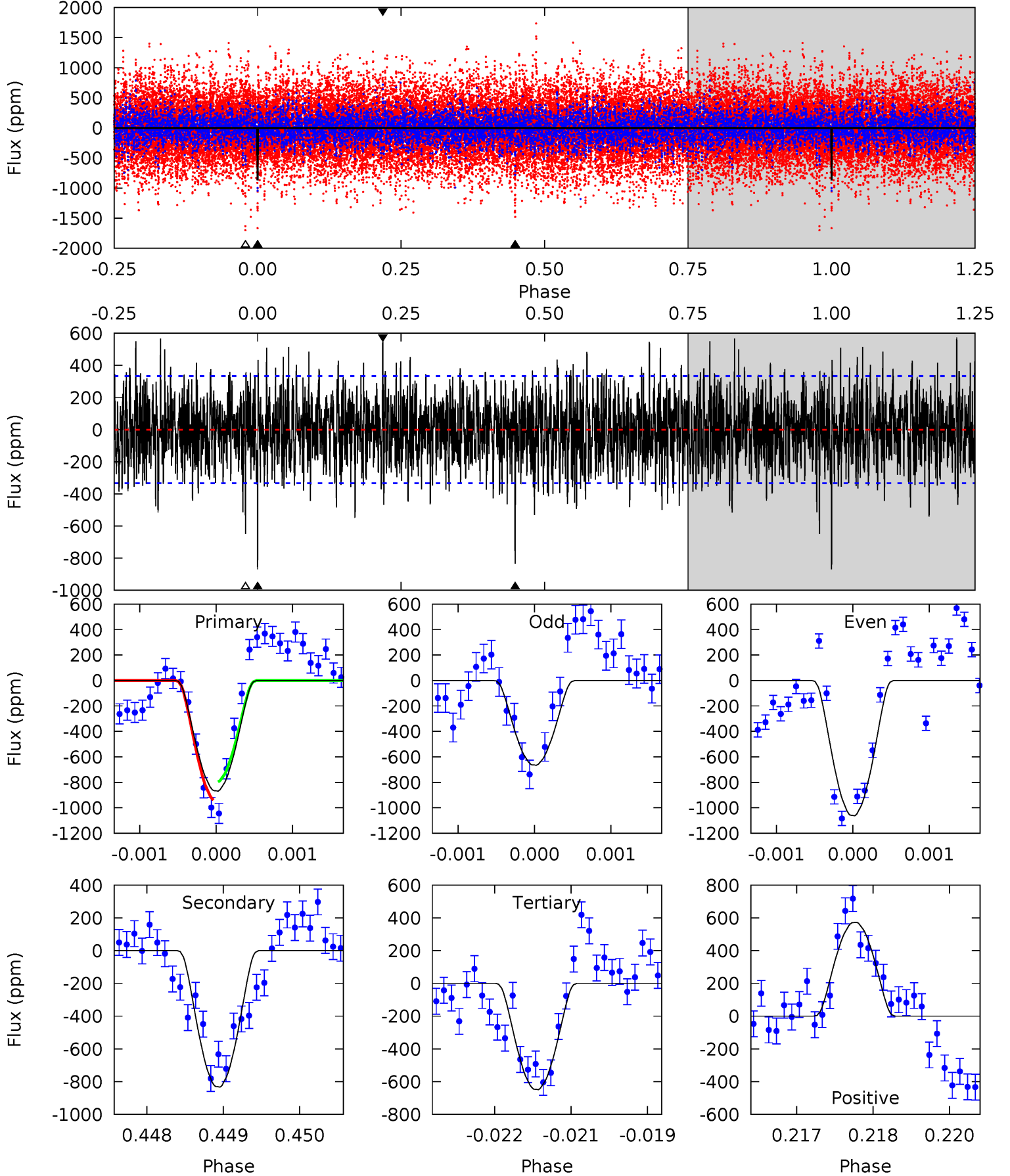
TCE 006937257-03 P=162.623290 Days $T_0=223.638573$ (BKJD)



DV Model-Shift Uniqueness Test

006937257-03, $P = 162.626054$ Days, $E = 61.003576$ Days

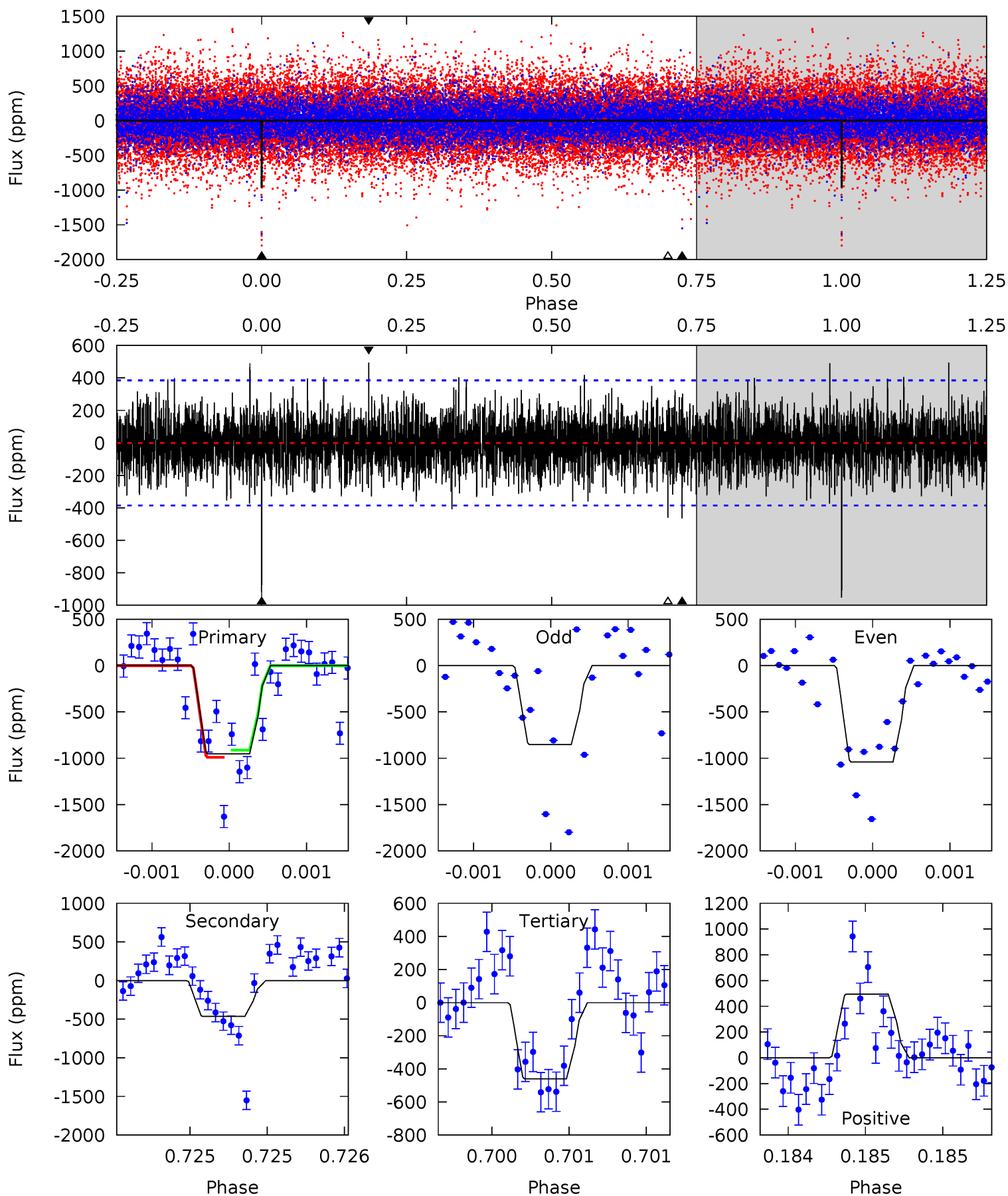
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	13.5	10.5	9.31	5.42	3.24	2.77	3.57	4.79	3.00	4.22	3.21	2.07	0.40	1.14



Alt Model-Shift Uniqueness Test

006937257-03, $P = 162.623290$ Days, $E = 61.015283$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	6.62	6.56	7.06	5.50	3.36	1.69	7.03	6.54	0.06	-0.44	1.35	0.81	0.34	0.56



Stellar Parameters For KIC 006937257

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4875^{+88}_{-78}	$2.675^{+0.033}_{-0.027}$	$-0.620^{+0.250}_{-0.150}$	$6.924^{+1.308}_{-0.245}$	$0.826^{+0.353}_{-0.019}$	$0.004^{+0.000}_{-0.001}$
	+2%/-2%	+1%/-1%	+40%/-24%	+19%/-4%	+43%/-2%	+9%/-18%
Source	PHO56	AST56	PHO56	DSEP		

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

Secondary Eclipse Parameters for KIC 006937257-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-833 ± 62	$87.06^{+88.16}_{-55.85}$	1065^{+27}_{-20}	3044^{+1247}_{-537}	18^{+134}_{-14}
Alt.	-464 ± 70	$82.24^{+77.47}_{-57.41}$	1068^{+24}_{-22}	2845^{+1307}_{-449}	12^{+120}_{-9}

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

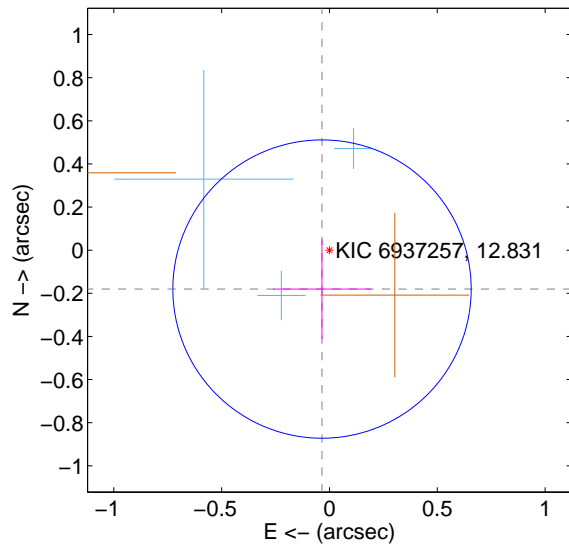
Supplemental centroid analysis for 006937257-03. Kepler magnitude: 12.83. Transit SNR 8.21

There are 3 quarters with good PRF difference image offsets

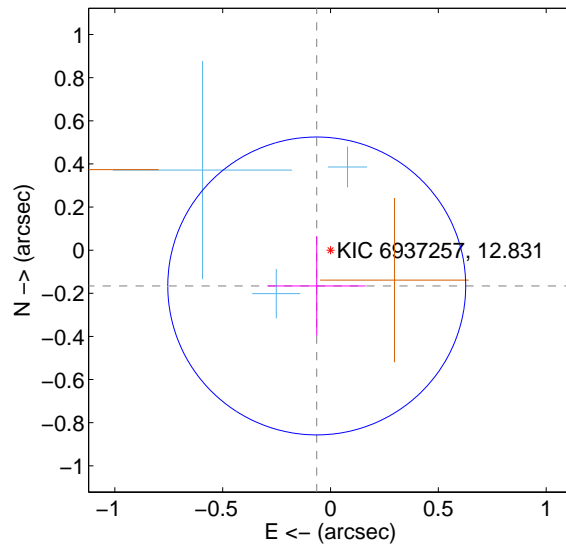
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.184 ± 0.231	0.80	0.035 ± 0.227	-0.180 ± 0.231
PRF-fit source offset from KIC position	0.178 ± 0.230	0.77	0.064 ± 0.227	-0.166 ± 0.231
photometric centroid source offset	0.29 ± 0.22	1.33	0.17 ± 0.22	0.23 ± 0.21

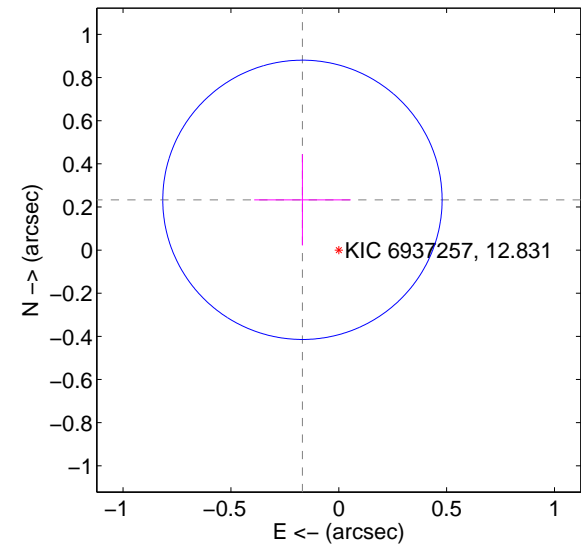
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

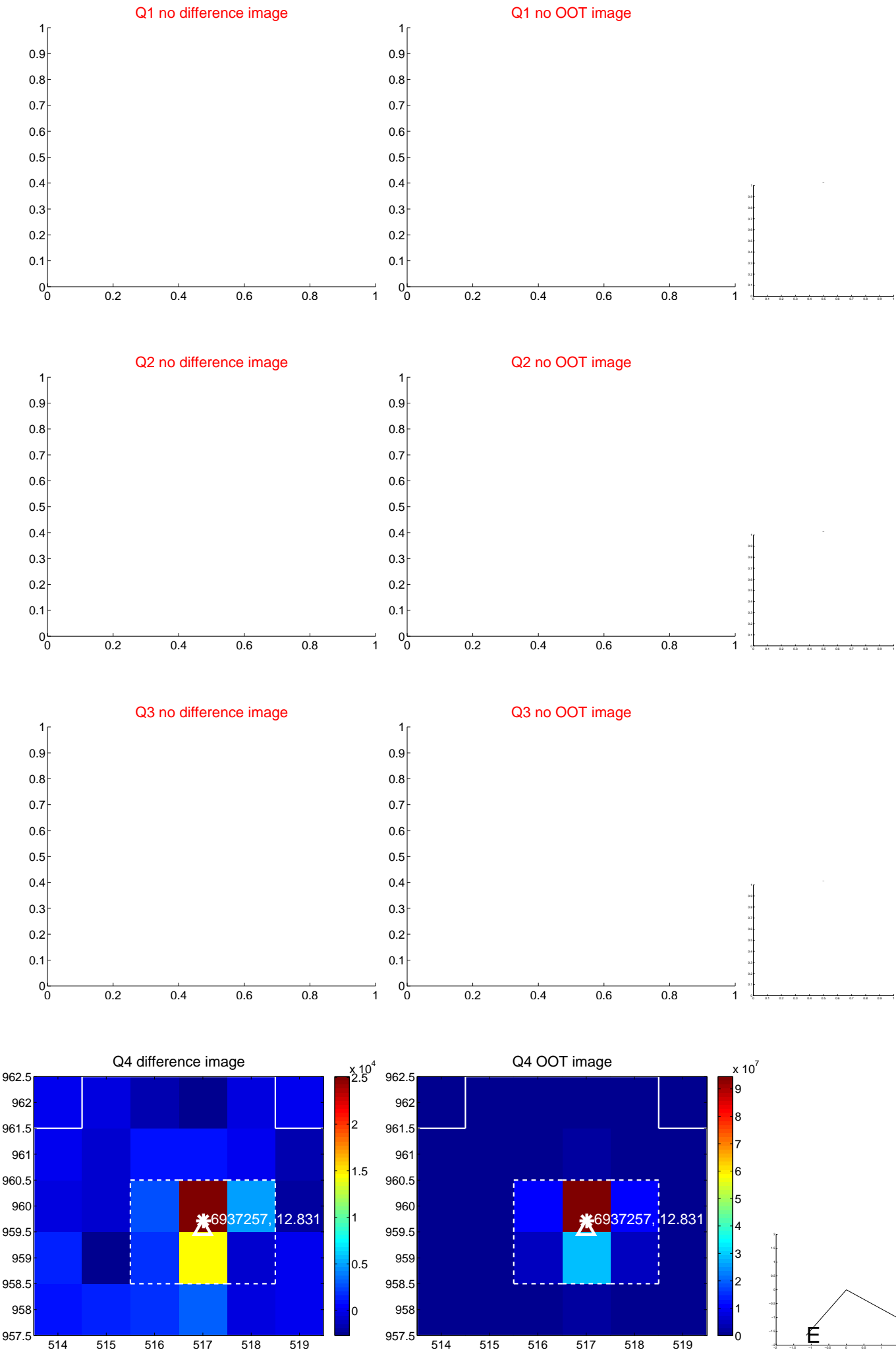


offset from photometric centroids

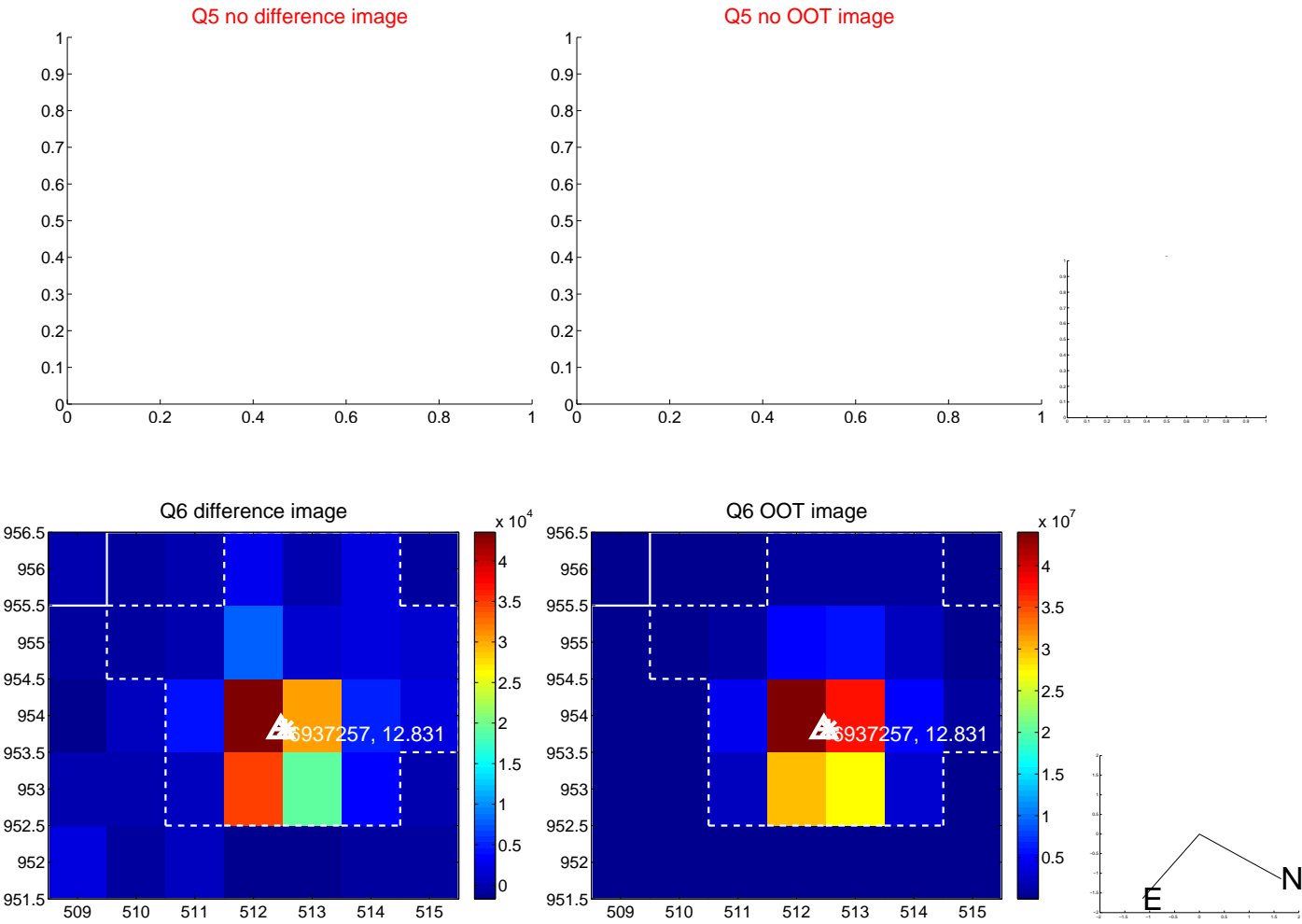


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

Q9 no difference image



Q9 no OOT image



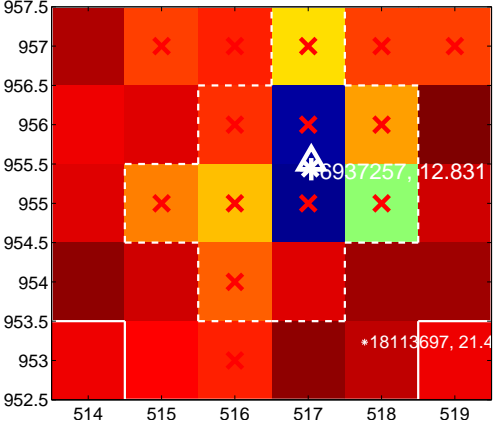
Q10 no difference image



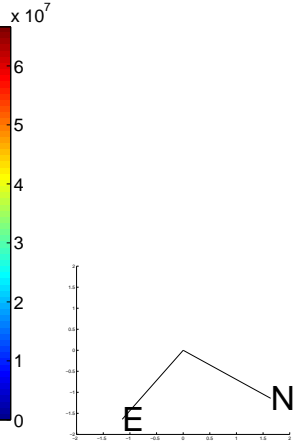
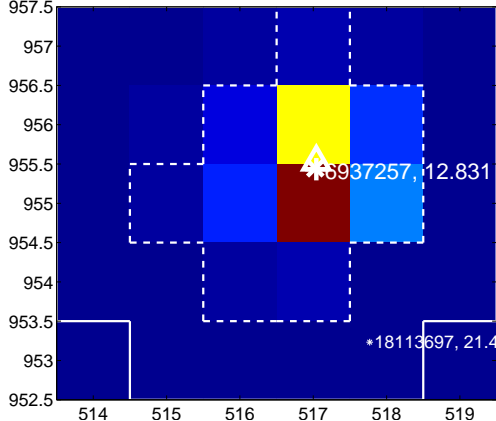
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



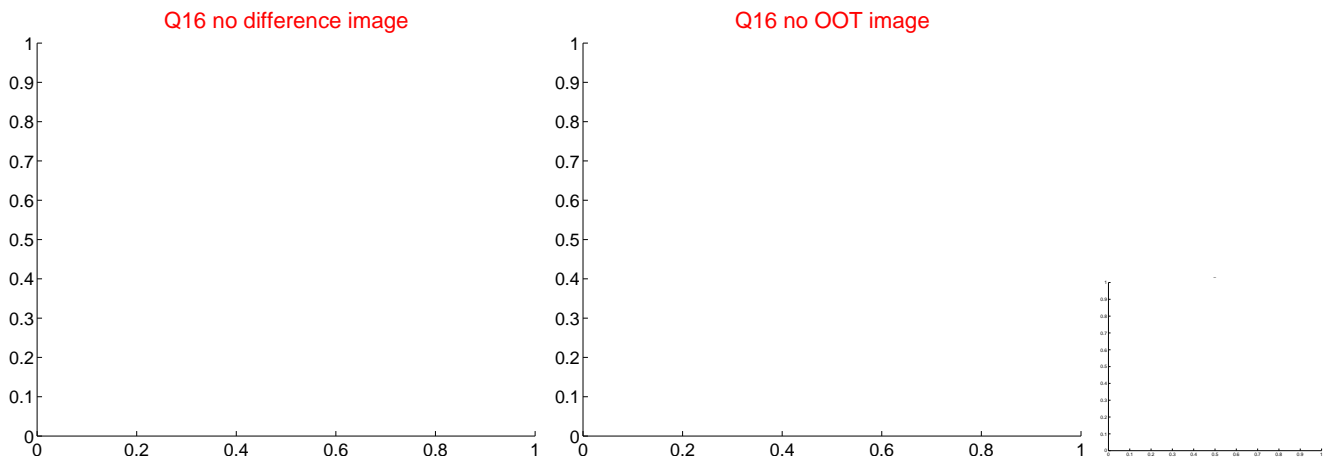
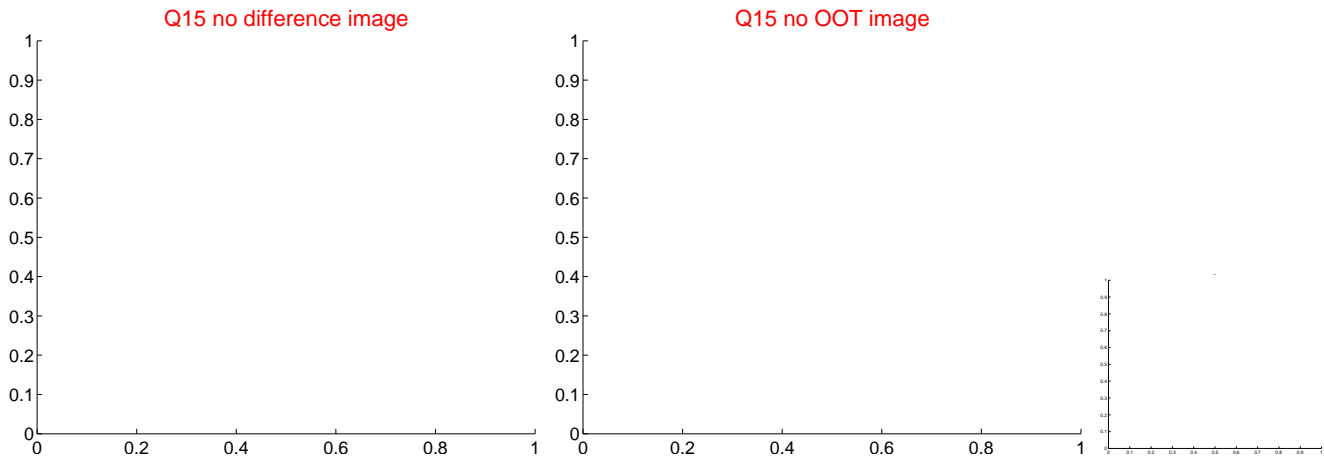
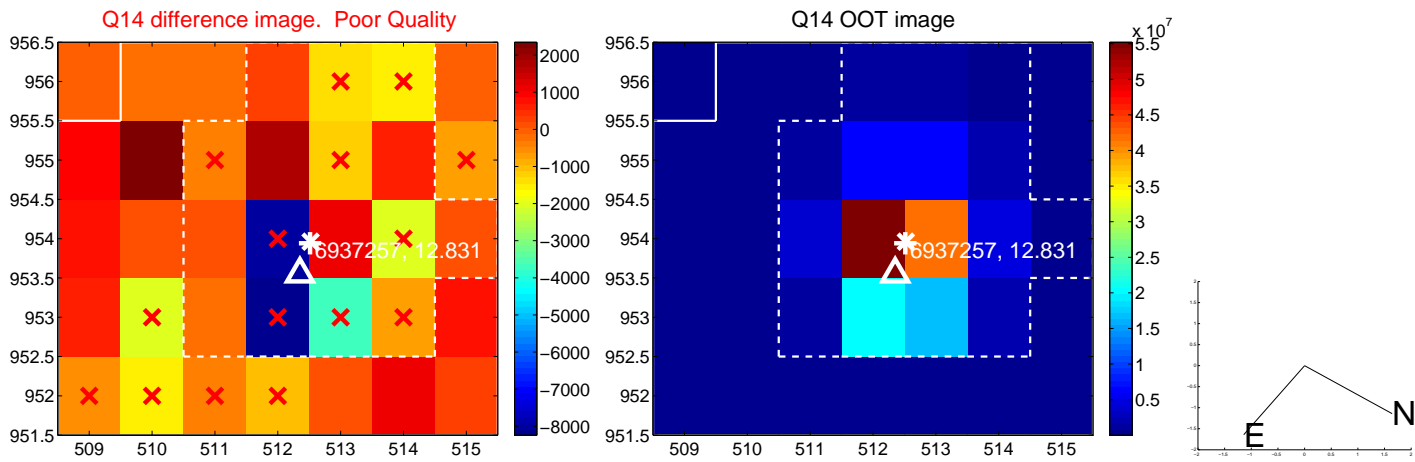
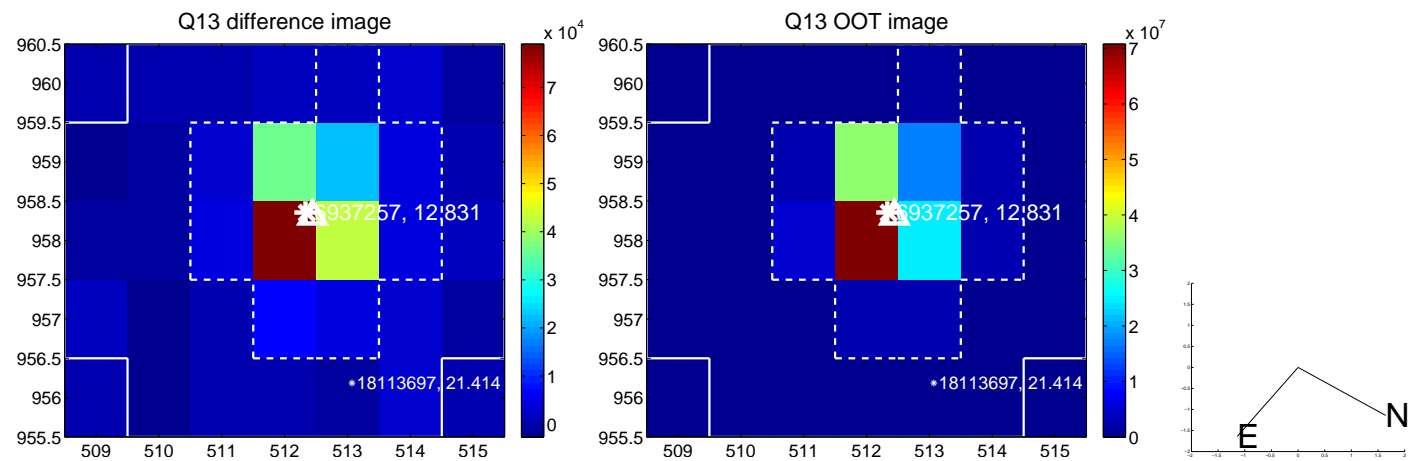
Q12 no difference image



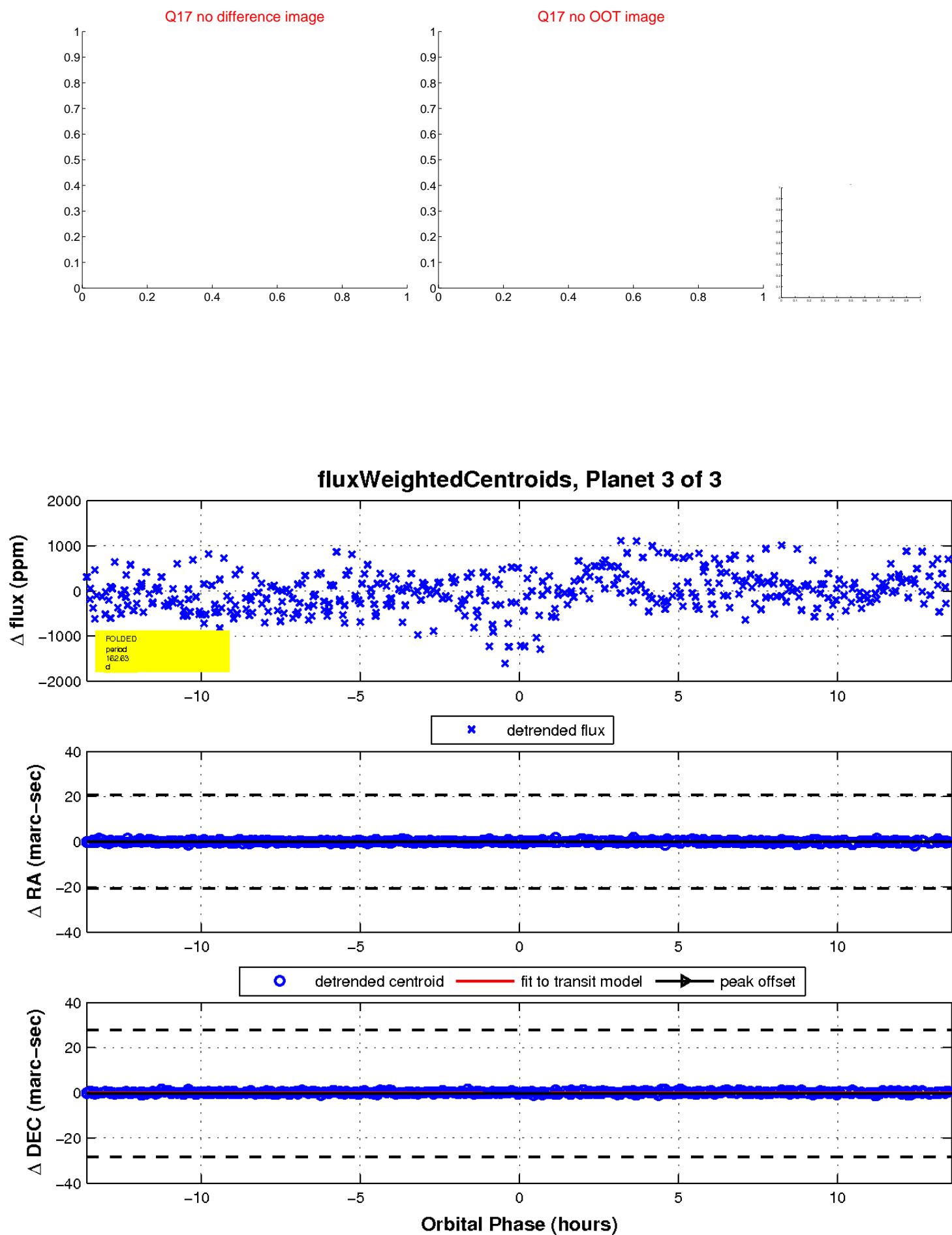
Q12 no OOT image



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



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



UKIRT Image

