

KIC 007434110

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})
007434110-01	OBS	No	2.409089	131.747452	638.1	7.315	10.8	14.1	0.23	3310	0.83	12.55
007434110-02	OBS	No	446.330855	233.854265	5032.8	4.731	13.8	9.1	0.23	3310	1.60	0.01
007434110-03	OBS	No	224.775903	251.806588	3672.8	3.861	13.5	7.3	0.23	3310	1.35	0.03
007434110-04	OBS	No	300.622796	376.824342	4033.3	5.505	11.9	8.0	0.23	3310	1.76	0.02
007434110-05	OBS	No	175.287864	253.107056	2978.7	3.000	11.5	-1.0	0.23	3310	1.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007434110-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007434110-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

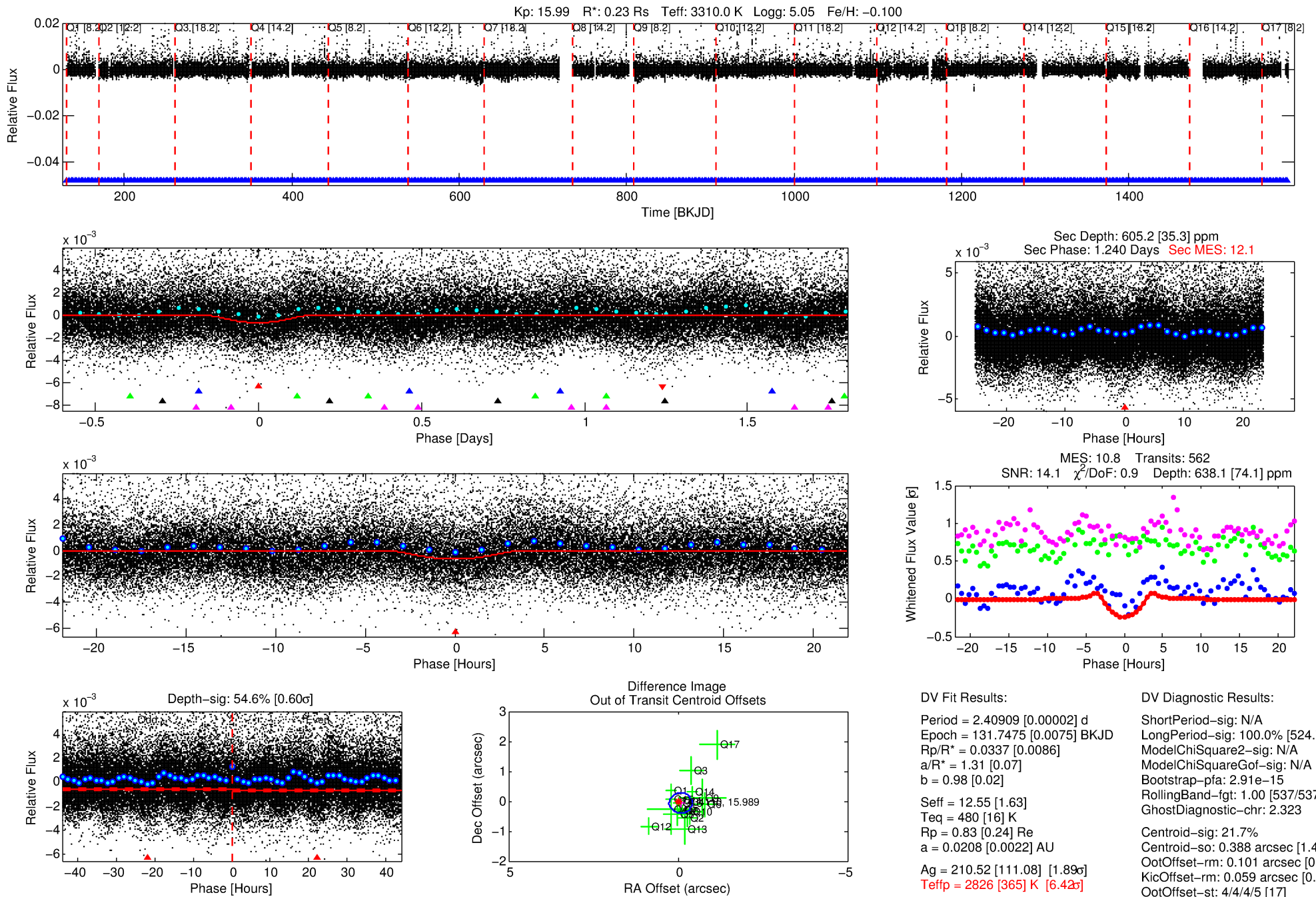
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007434110-01

No Significant Match Found

DV One-Page Summary

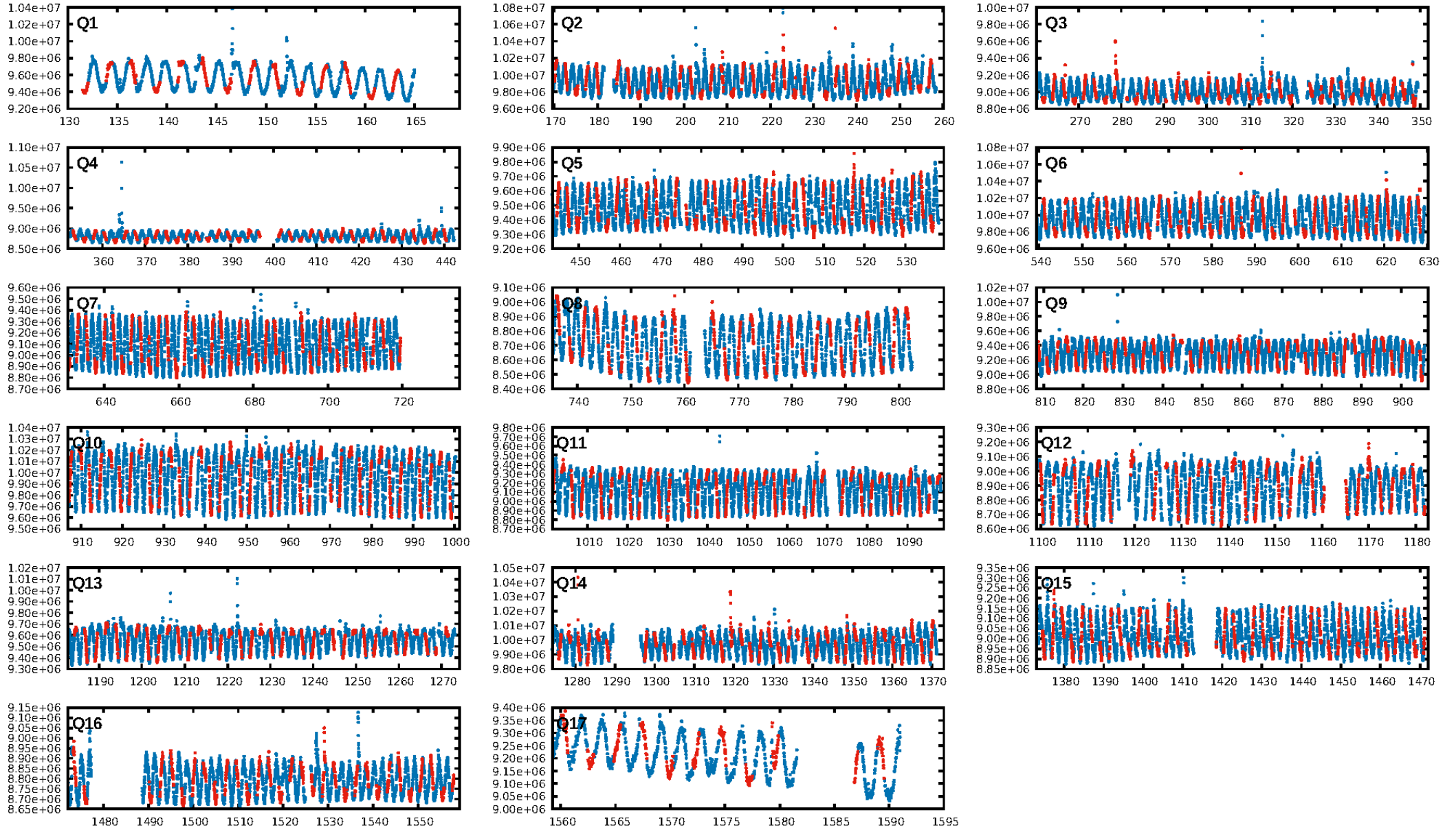
KIC: 7434110 Candidate: 1 of 5 Period: 2.409 d



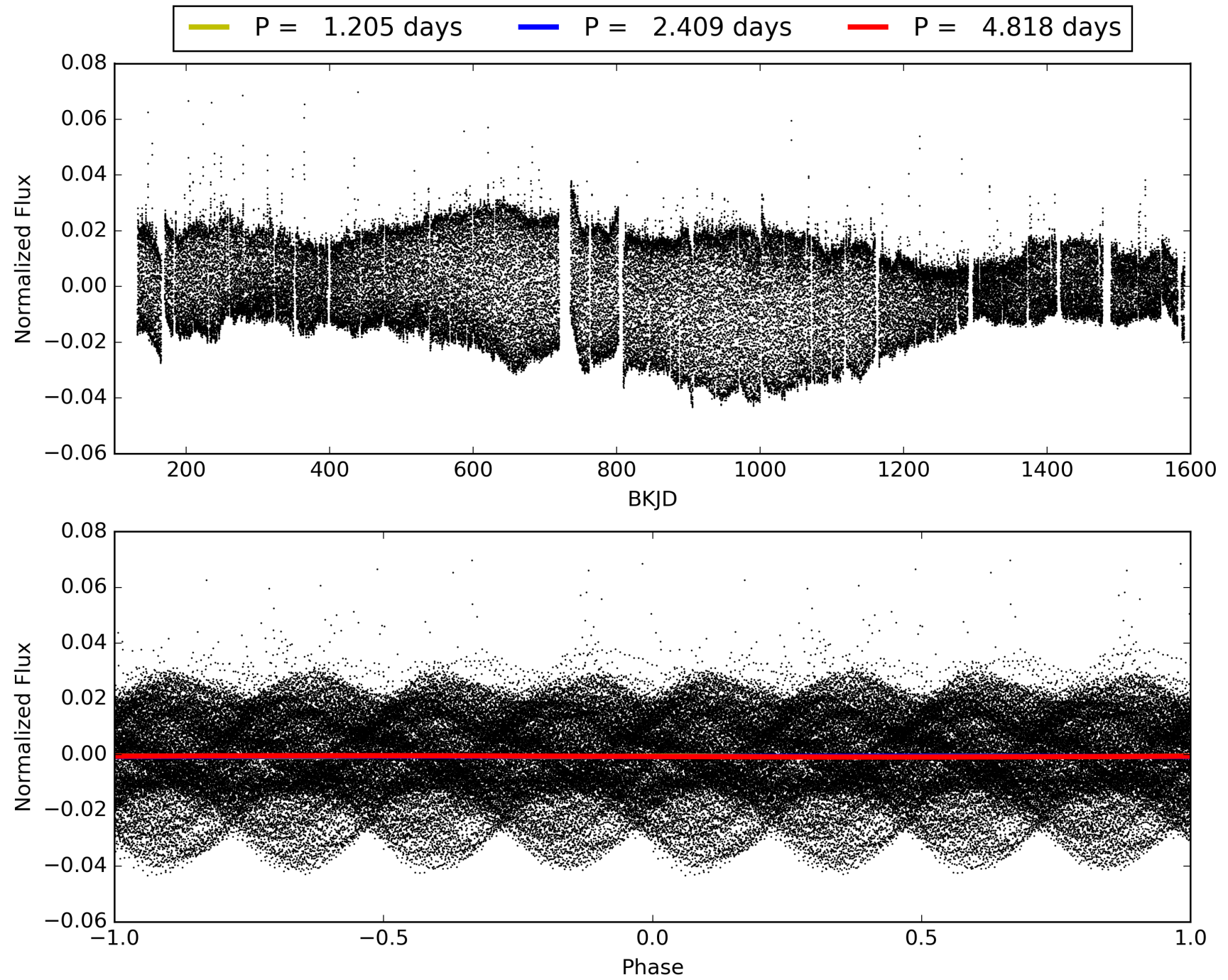
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:36:41 Z

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

TCE 007434110-01, PDC Light Curves

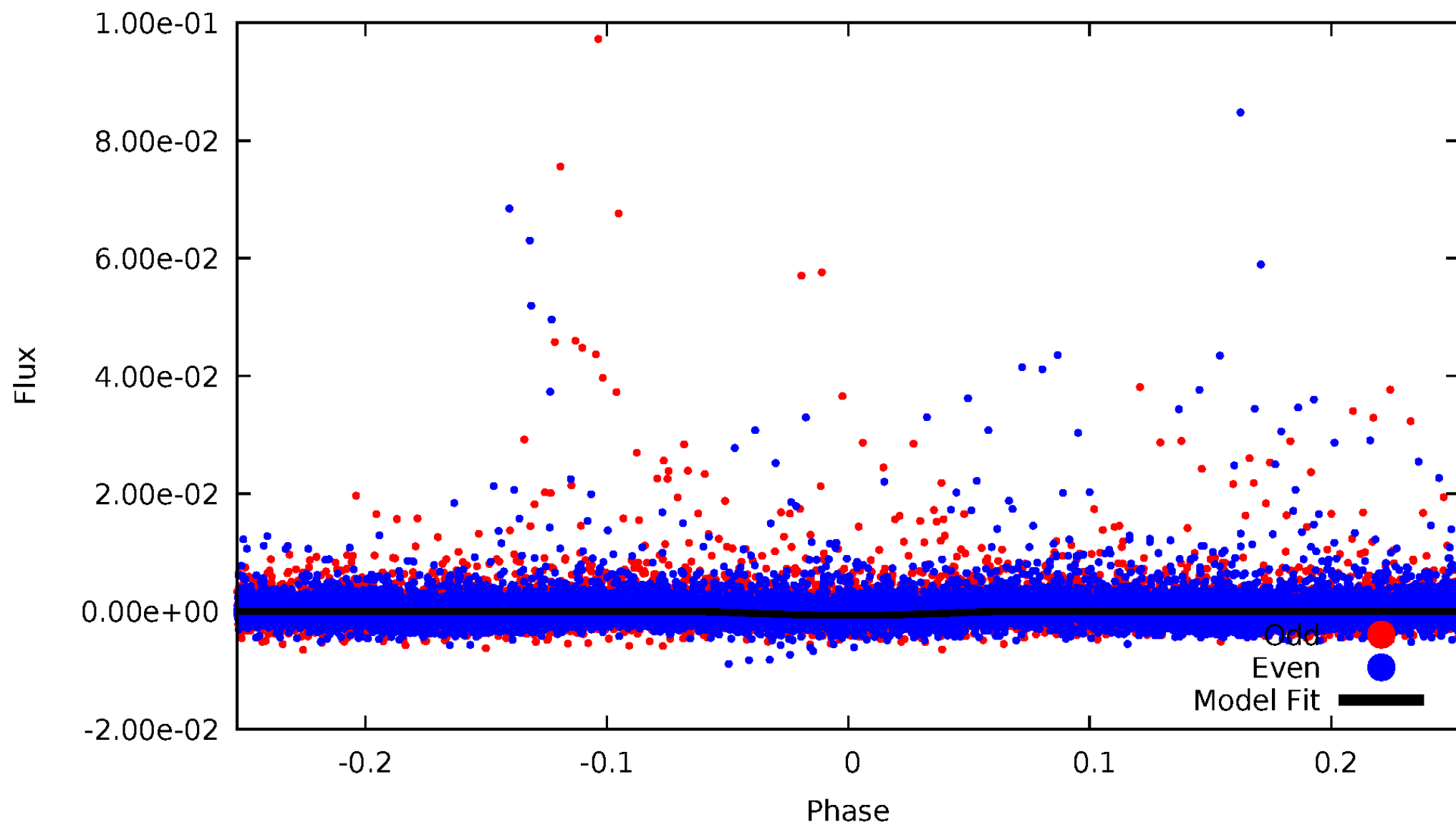


TCE 007434110-01



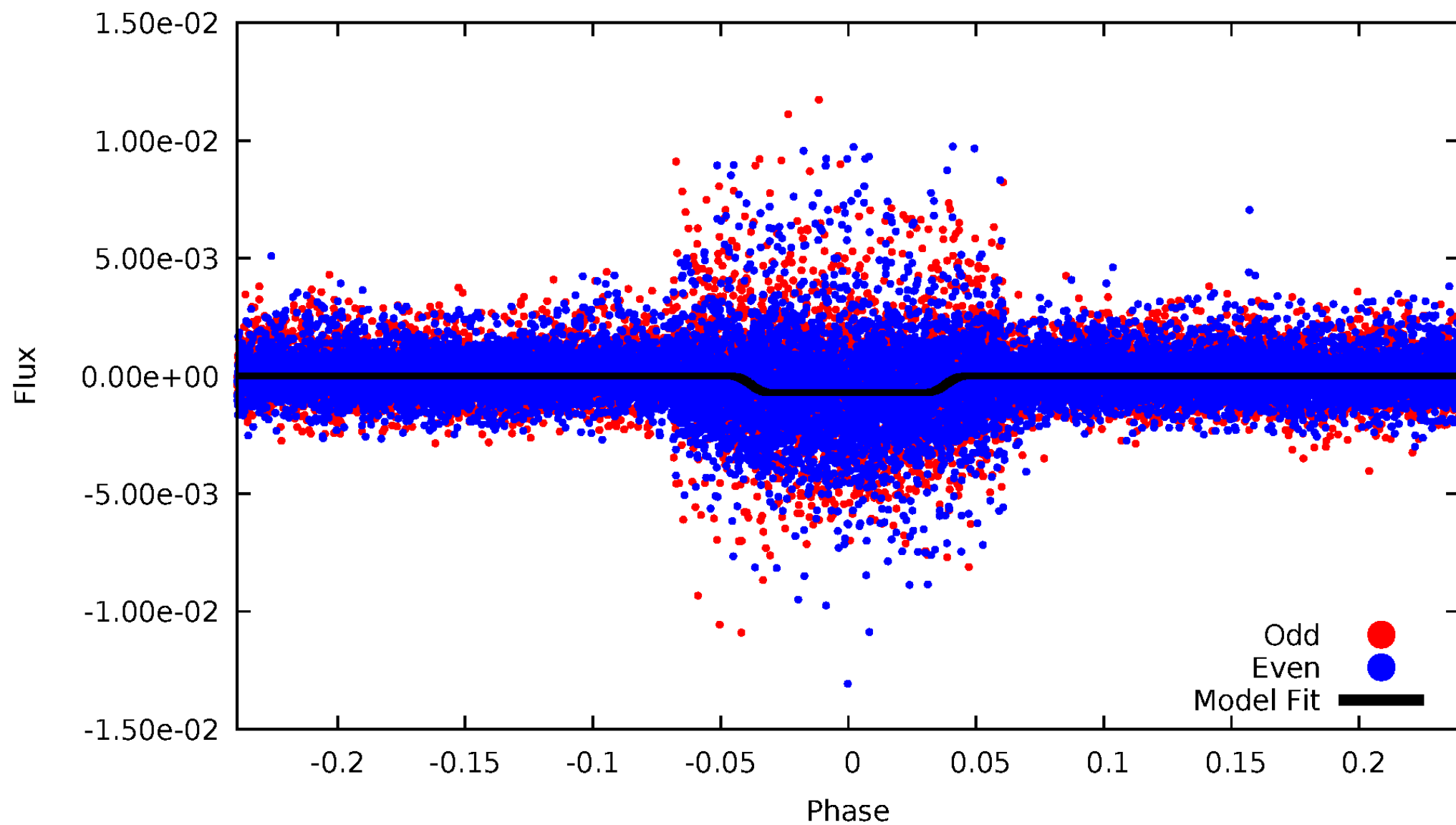
DV Odd/Even

TCE 007434110-01



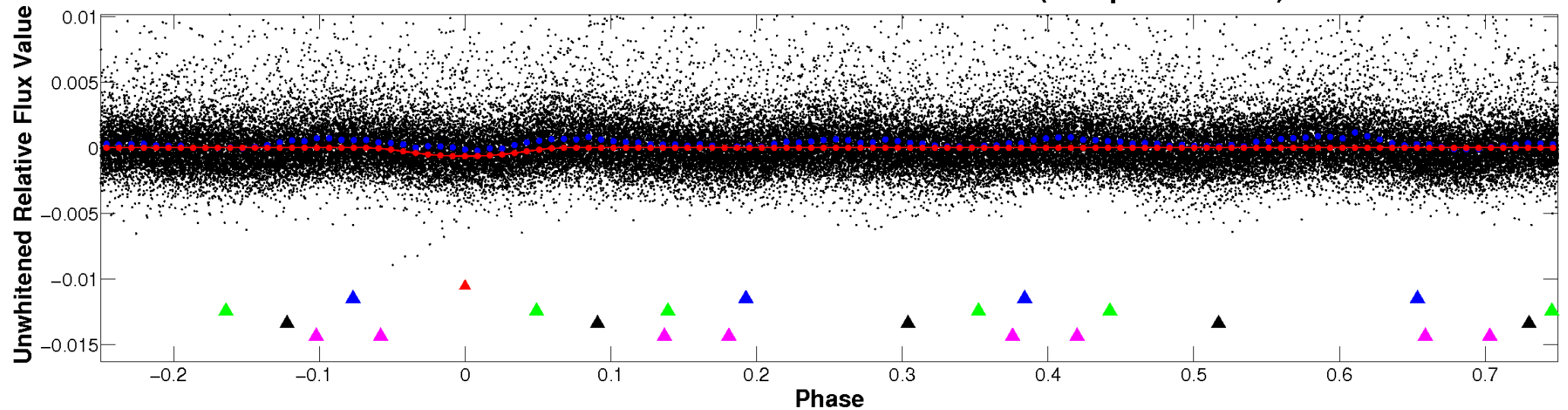
ALT Odd/Even

TCE 007434110-01

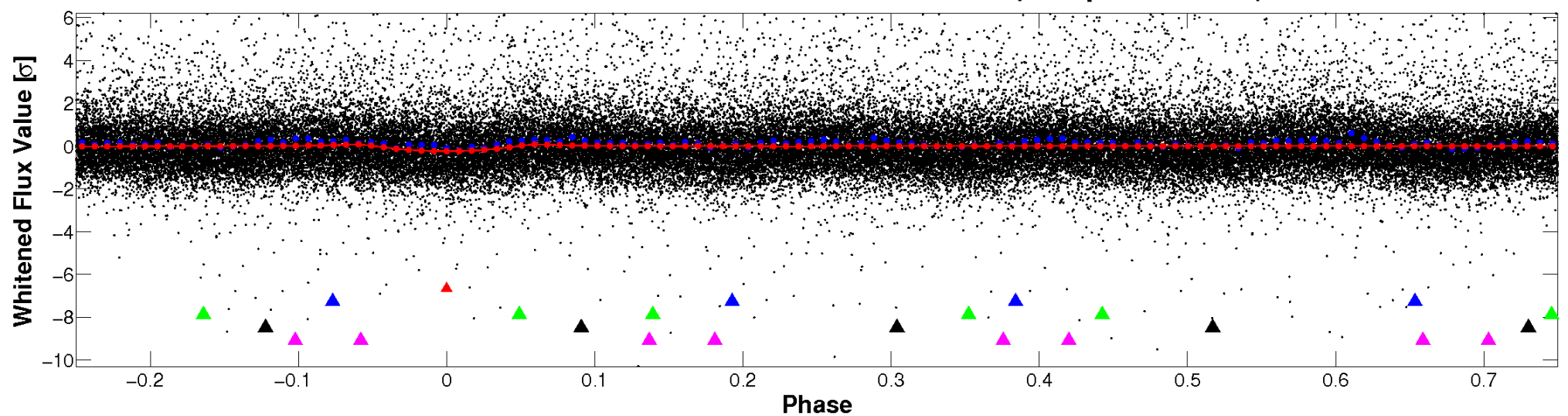


Non-Whitened Vs. Whitened Light Curve

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

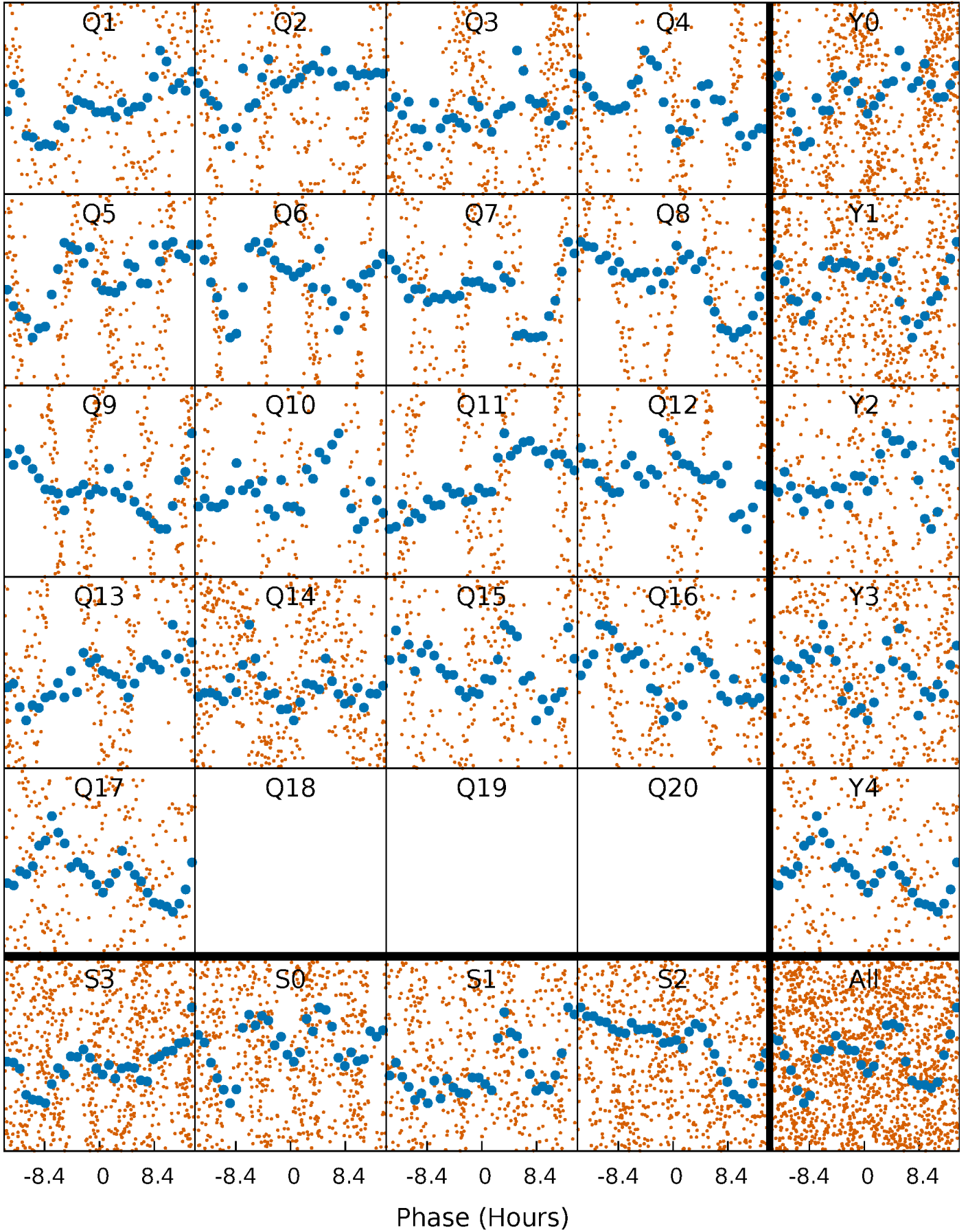


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



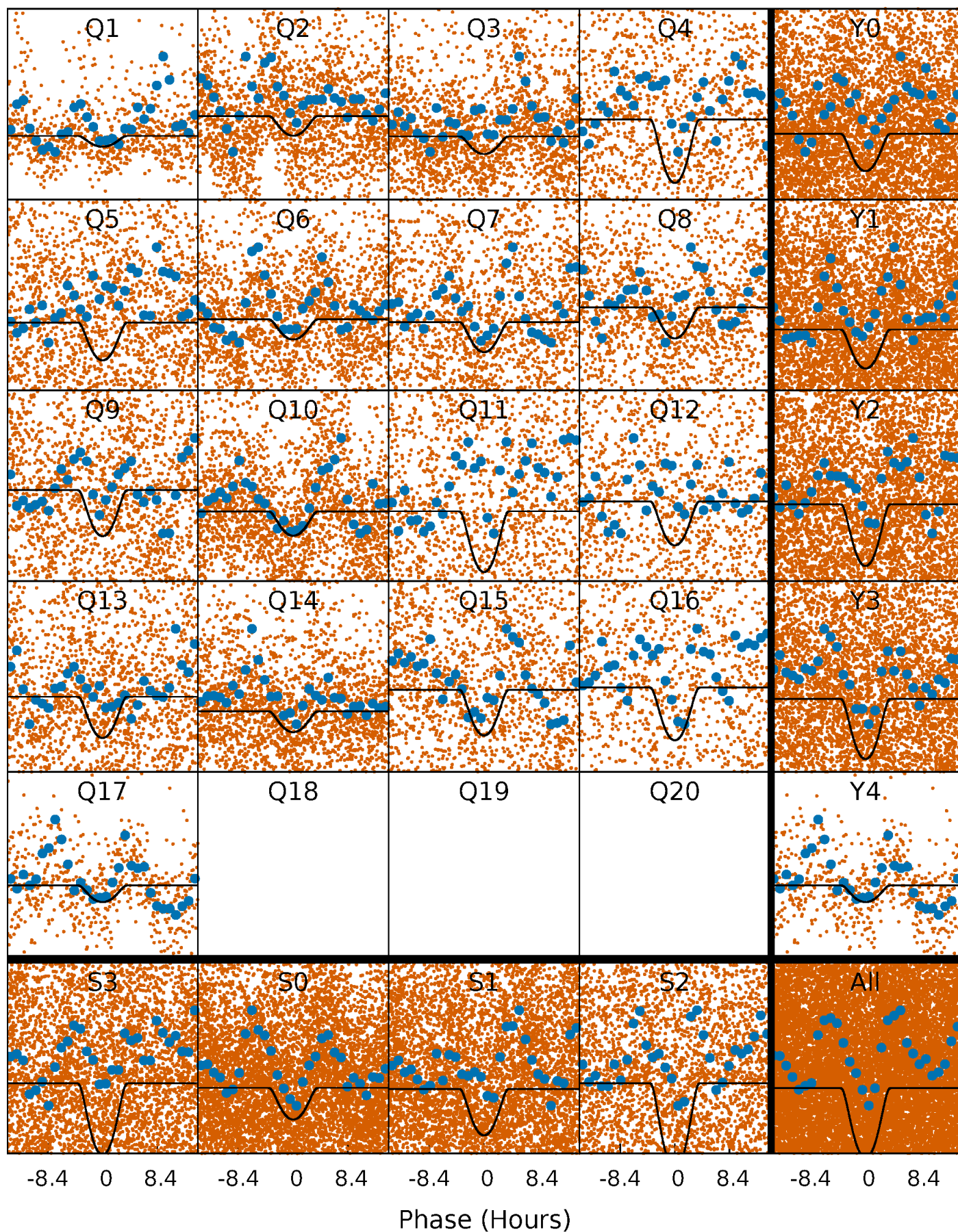
PDC Quarter-Phased Transit Curves

TCE 007434110-01 P= 2.409089 Days $T_0=131.747452$ (BKJD)



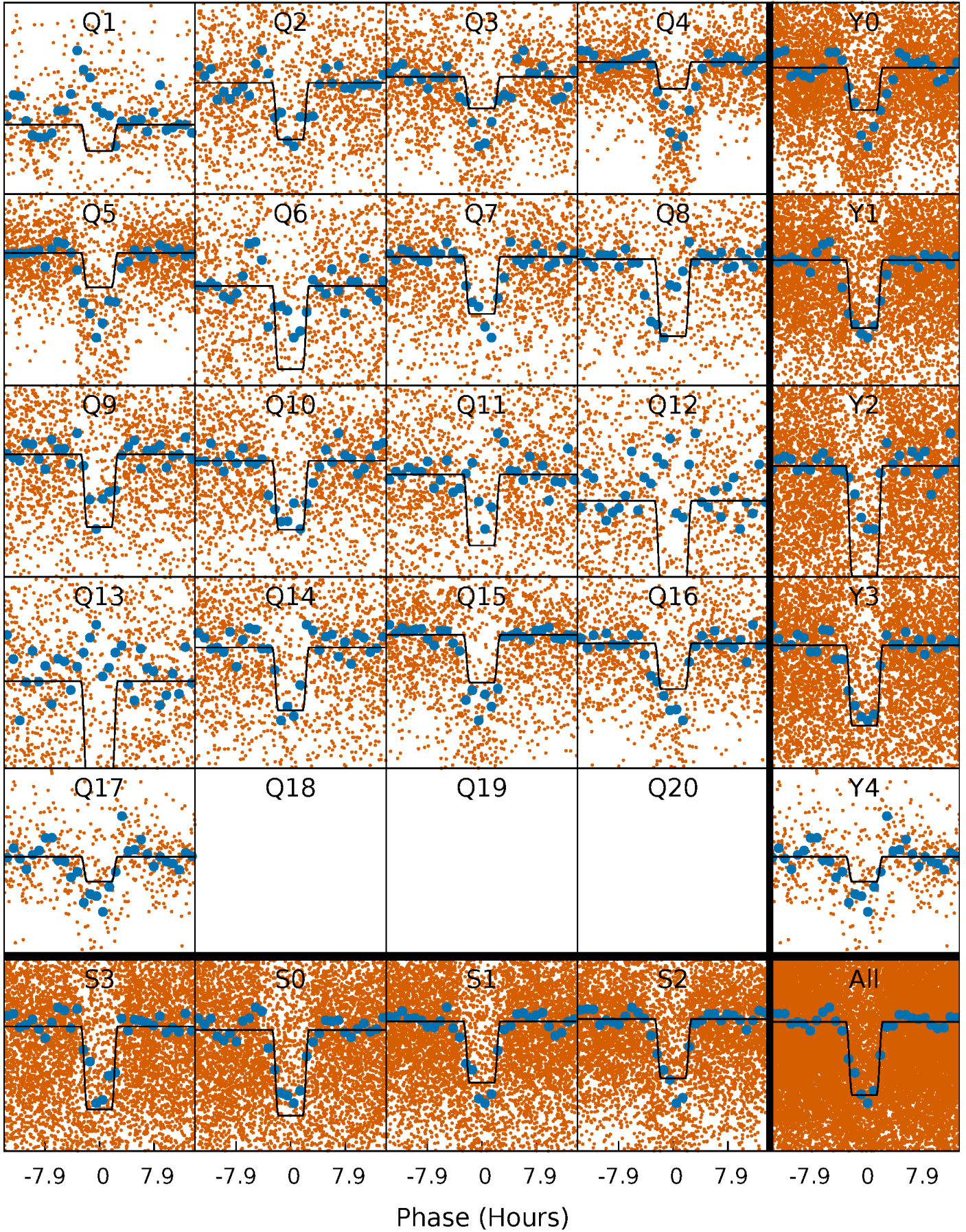
DV Quarter-Phased Transit Curves

TCE 007434110-01 P= 2.409089 Days $T_0=131.747452$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

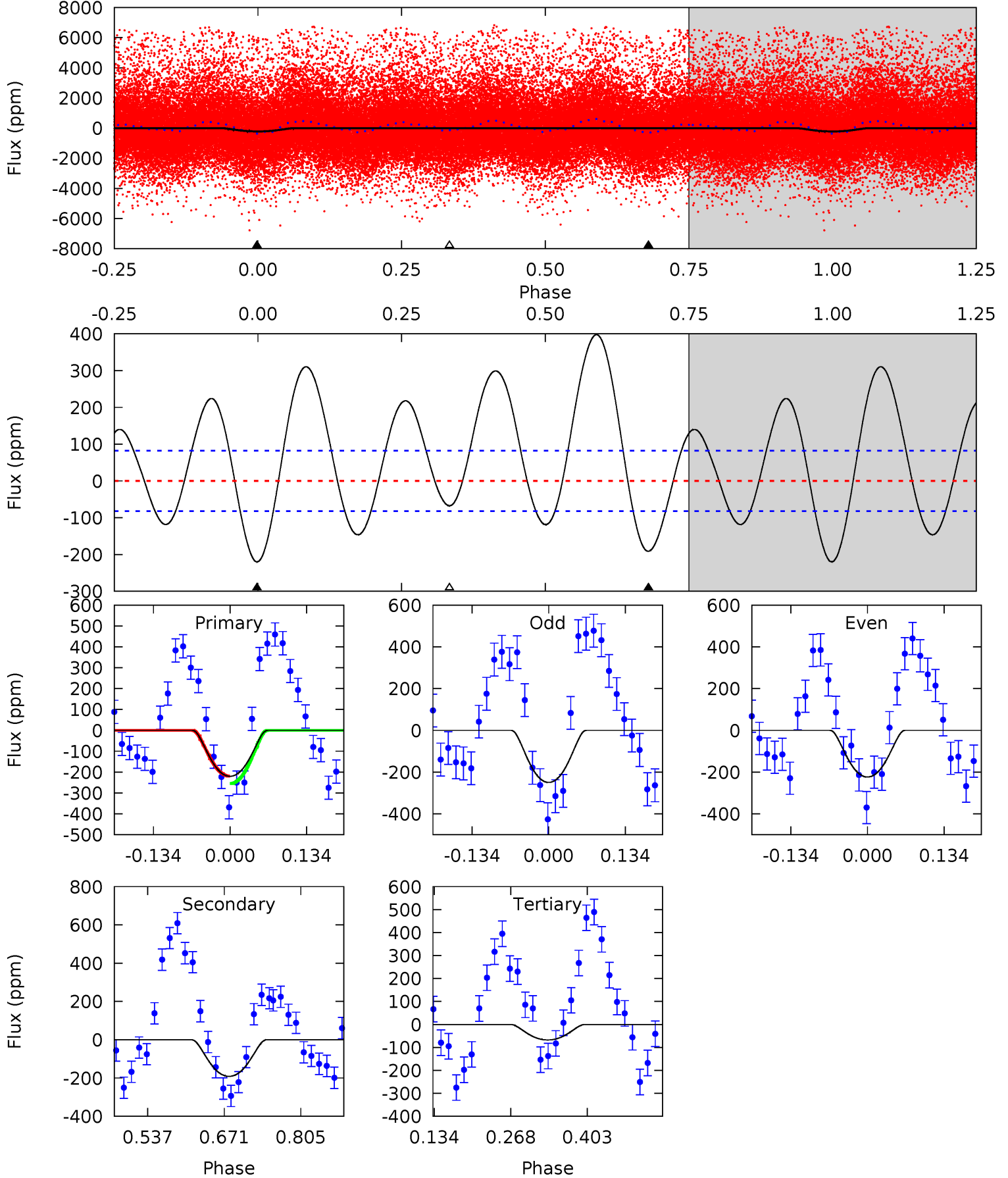
TCE 007434110-01 P= 2.409099 Days $T_0=131.747107$ (BKJD)



DV Model-Shift Uniqueness Test

007434110-01, P = 2.409089 Days, E = 129.338363 Days

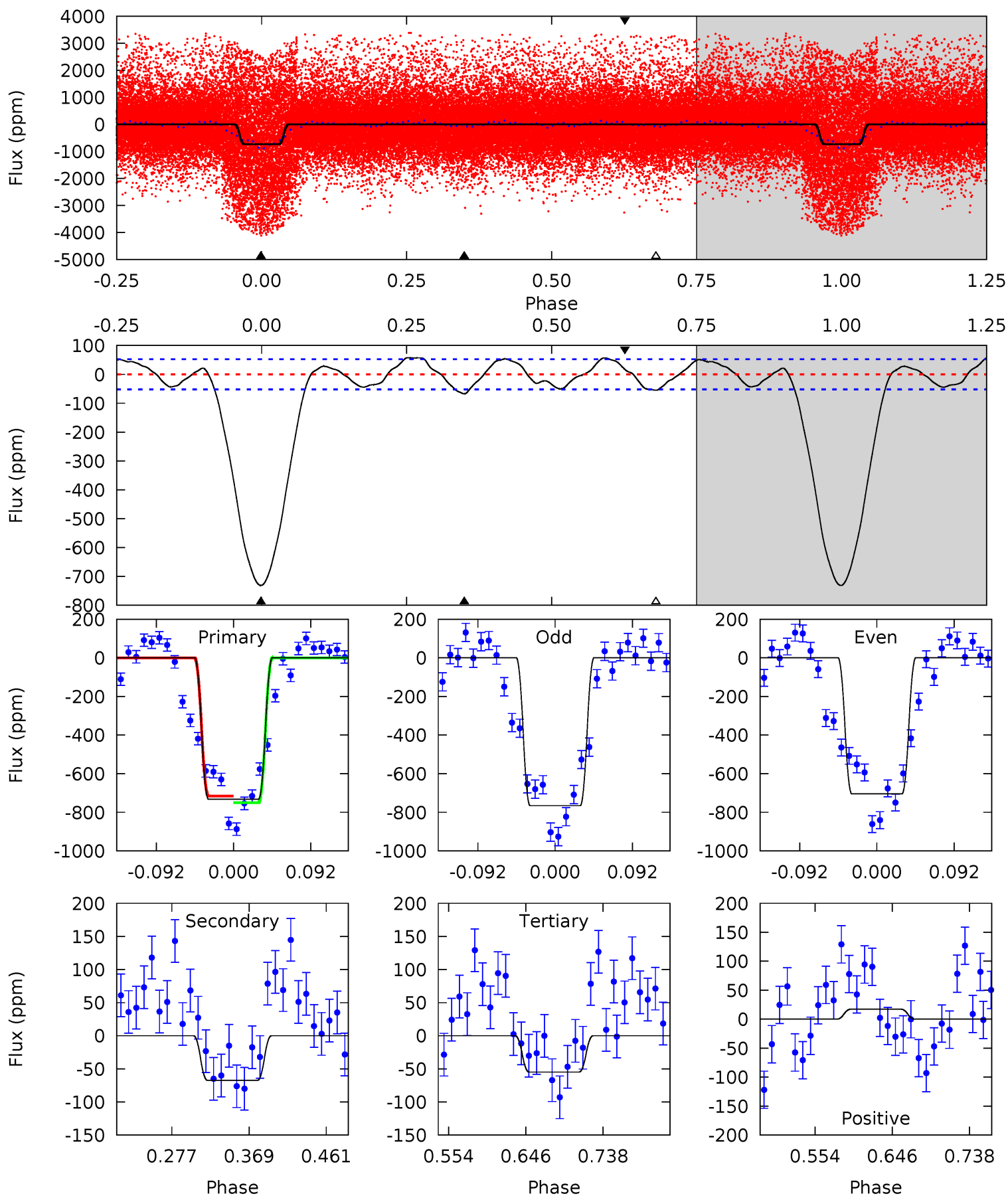
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	10.5	3.71	0	4.50	1.50	7.36	8.37	12.1	6.79	10.5	0.73	-0.54	0.64	0.99



Alt Model-Shift Uniqueness Test

007434110-01, P = 2.409099 Days, E = 129.338008 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.2	5.91	4.82	1.51	4.58	1.68	2.83	59.4	62.7	1.10	4.40	2.67	1.15	0.07	1.51



Stellar Parameters For KIC 007434110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3310^{+43}_{-36}	$5.051^{+0.040}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.225^{+0.033}_{-0.024}$	$0.207^{+0.037}_{-0.027}$	$25.630^{+6.331}_{-5.537}$
	+1%/-1%	+1%/-1%	+100%/-100%	+15%/-11%	+18%/-13%	+25%/-22%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007434110-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-191 ± 18	$0.83^{+0.22}_{-0.23}$	672^{+16}_{-14}	2591^{+215}_{-146}	67^{+58}_{-25}
Alt.	-67 ± 11	$0.66^{+0.21}_{-0.21}$	672^{+16}_{-16}	2418^{+246}_{-166}	38^{+45}_{-17}

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 $A_{obs} \gg 1.0$

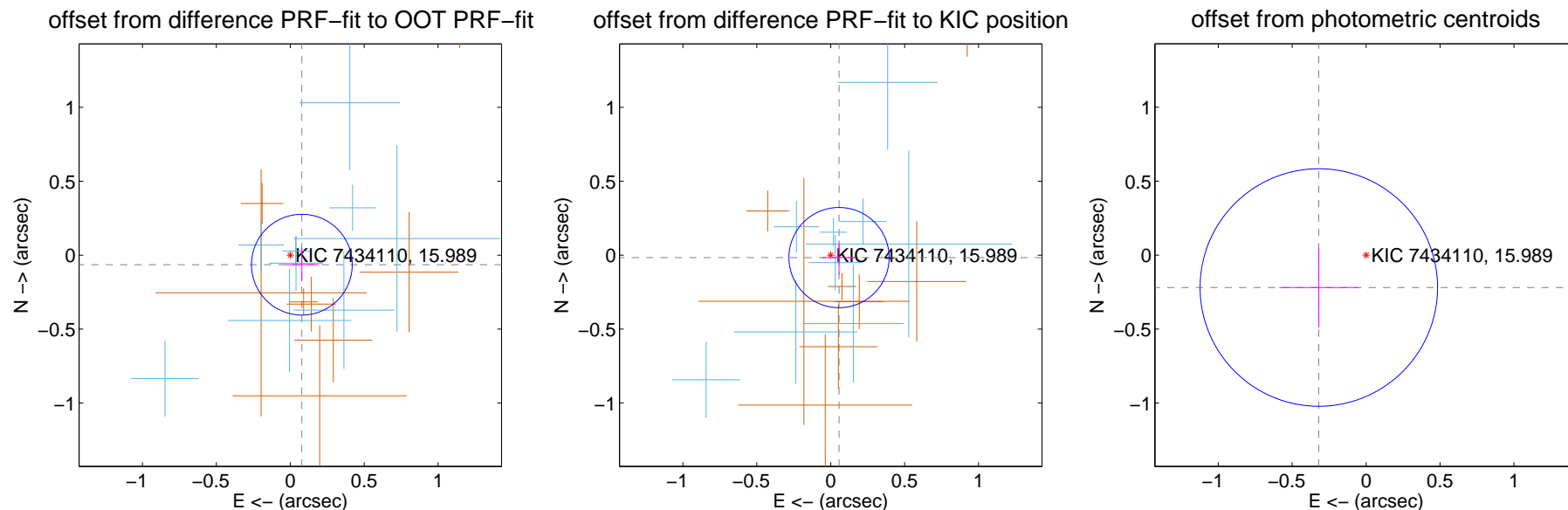
DV Centroid Data

Supplemental centroid analysis for 007434110-01. Kepler magnitude: 15.99. Transit SNR 14.12

There are 9 quarters with good PRF difference image offsets

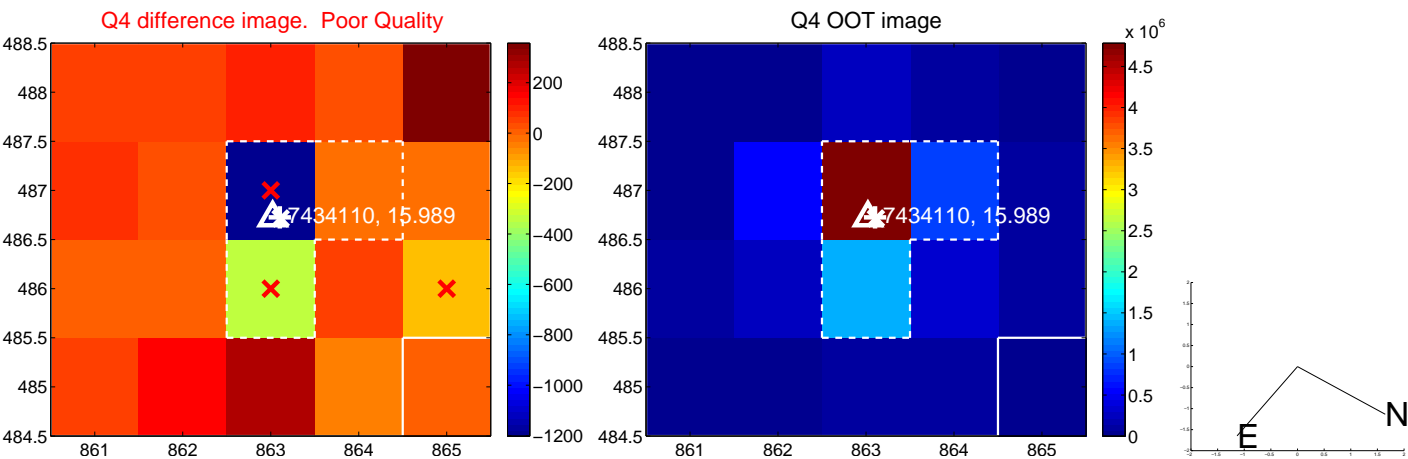
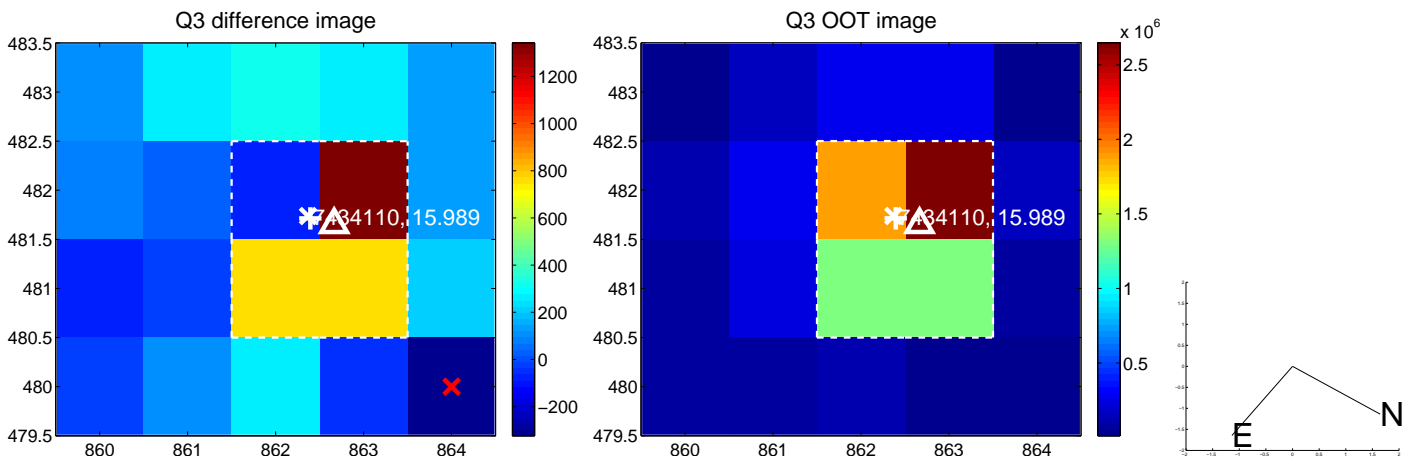
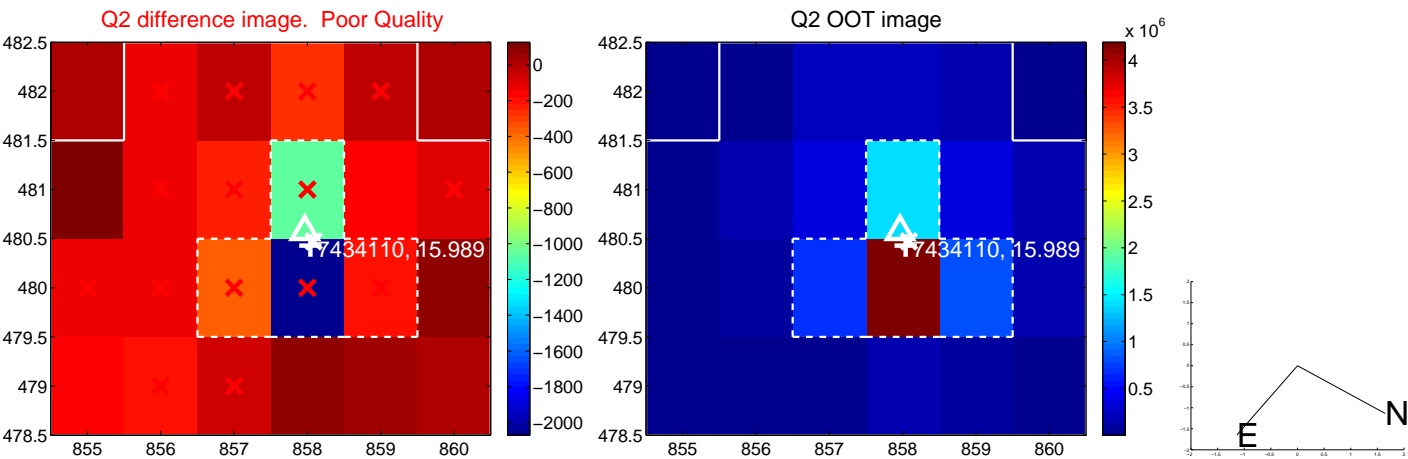
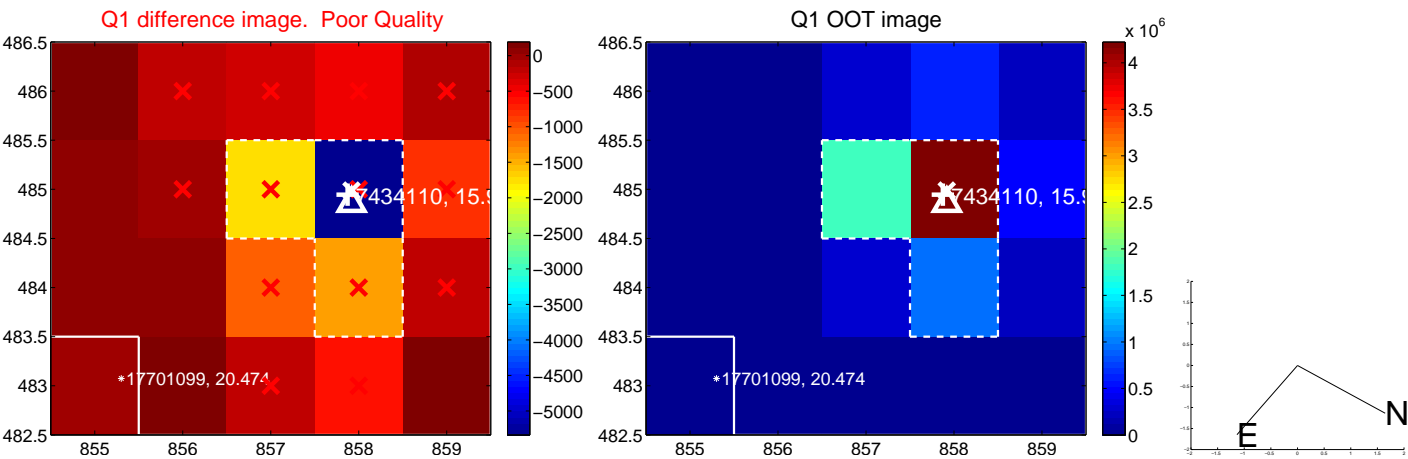
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.114	0.89	-0.078 ± 0.113	-0.064 ± 0.115
PRF-fit source offset from KIC position	0.059 ± 0.113	0.52	-0.056 ± 0.113	-0.016 ± 0.115
photometric centroid source offset	0.39 ± 0.27	1.45	0.32 ± 0.27	-0.22 ± 0.27

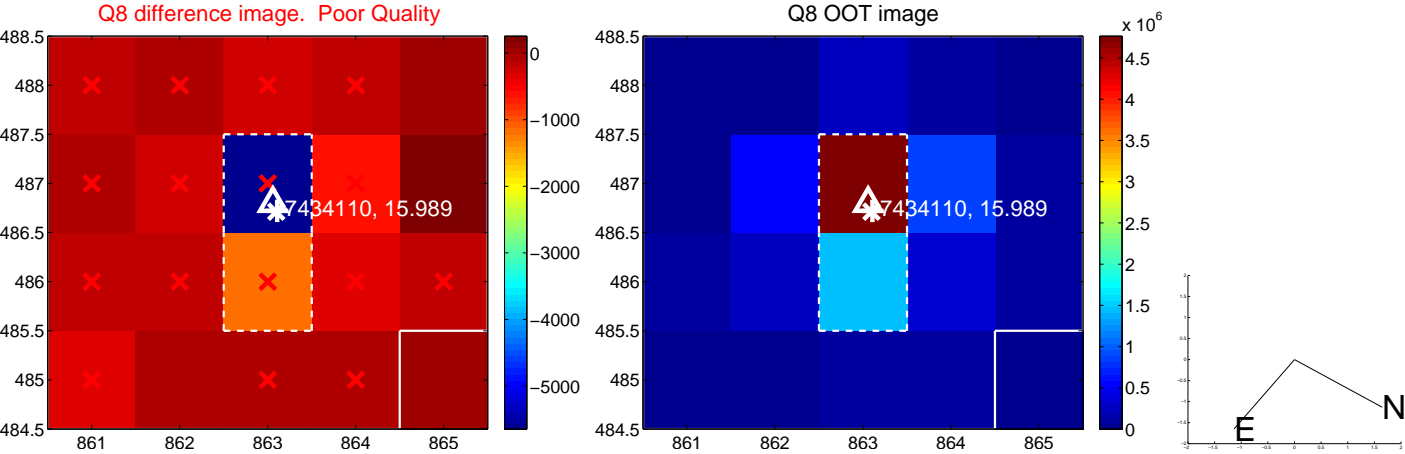
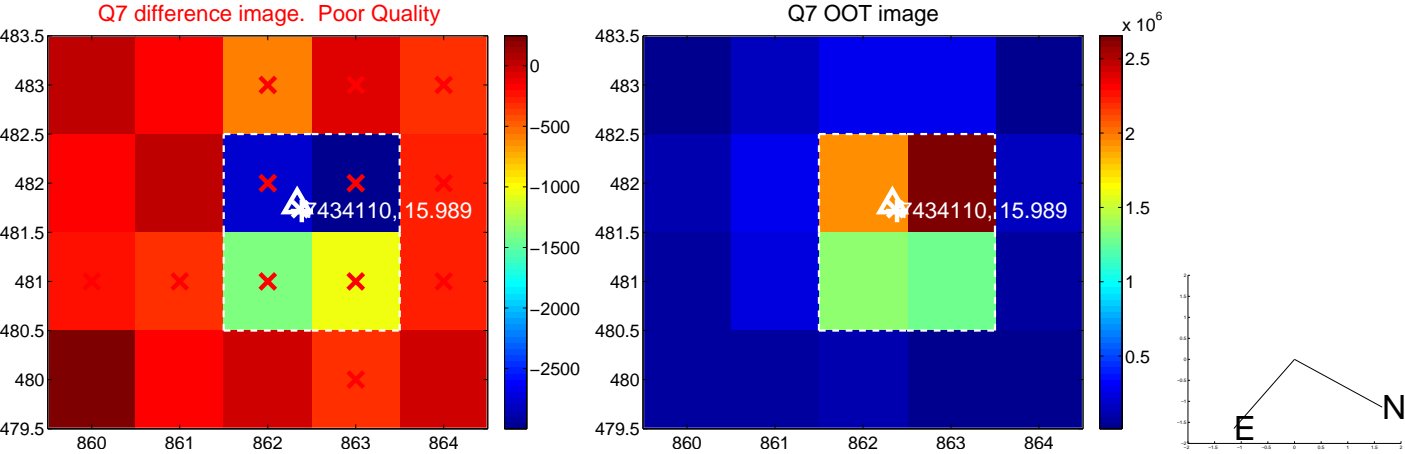
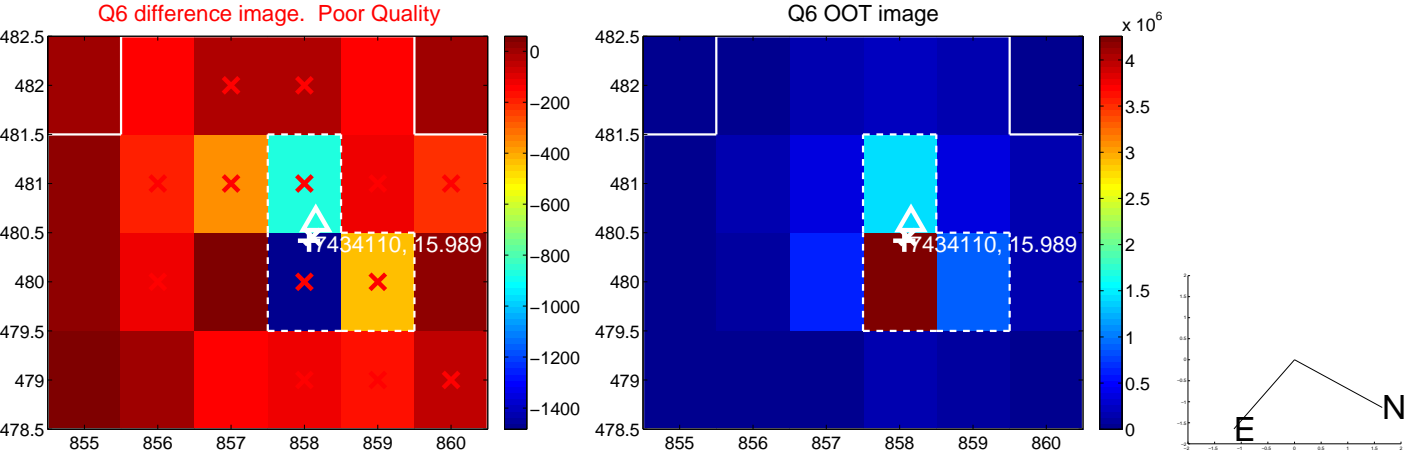
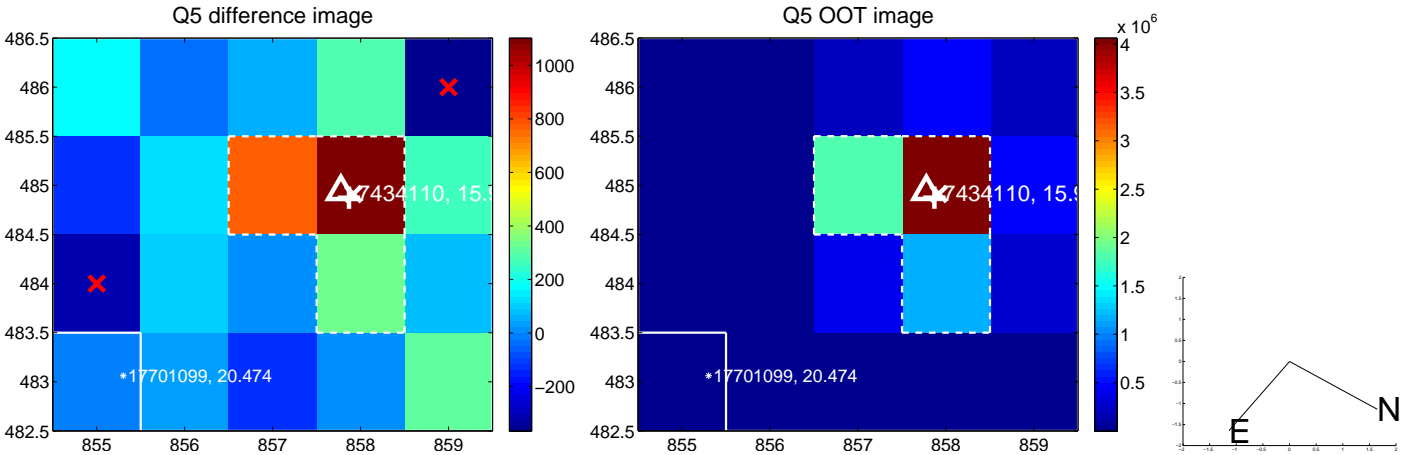


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

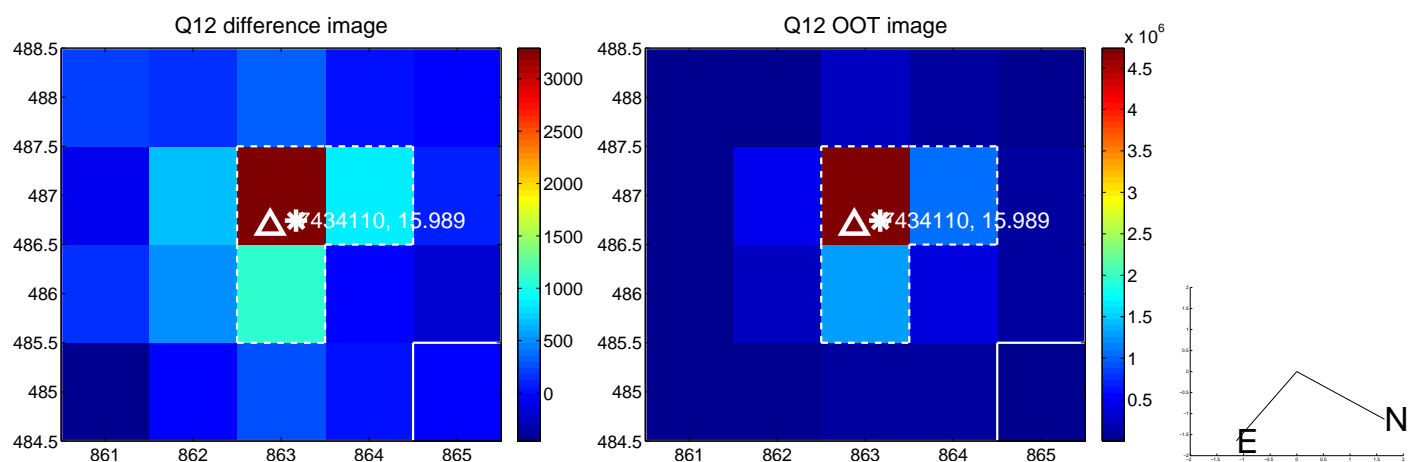
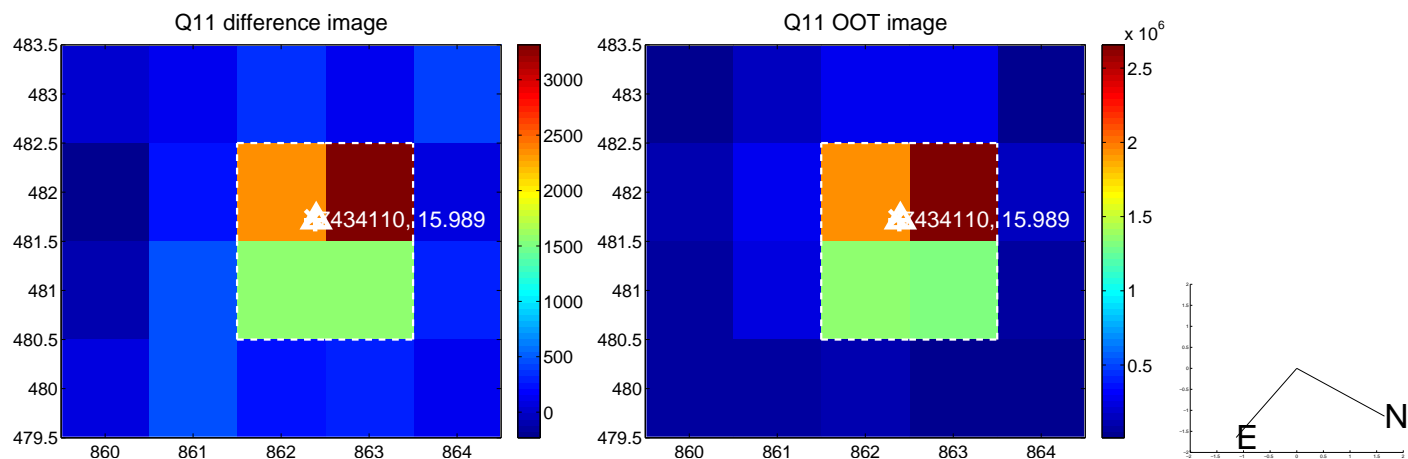
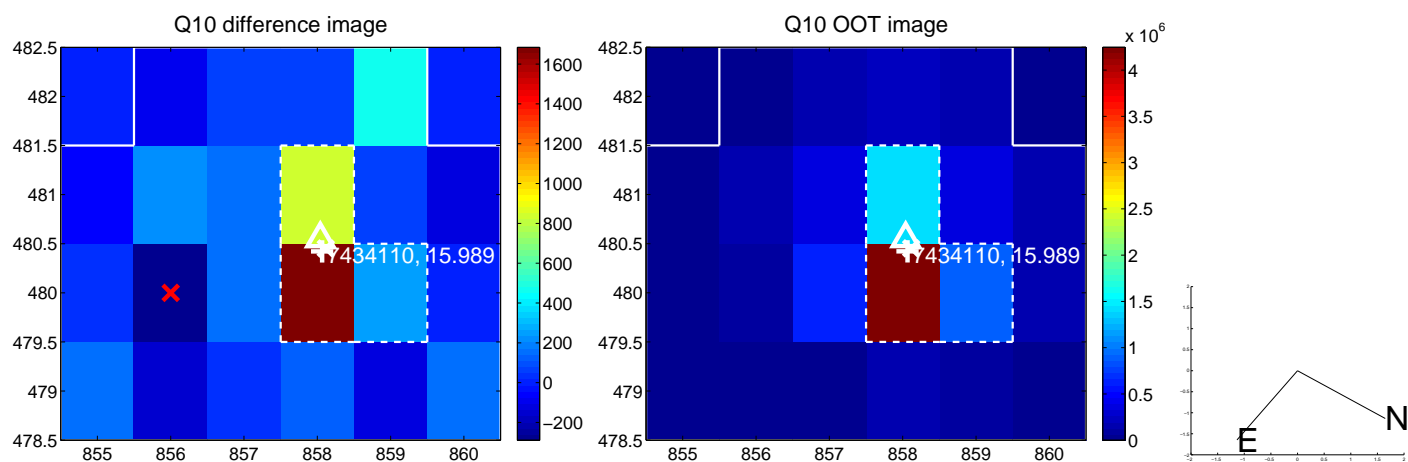
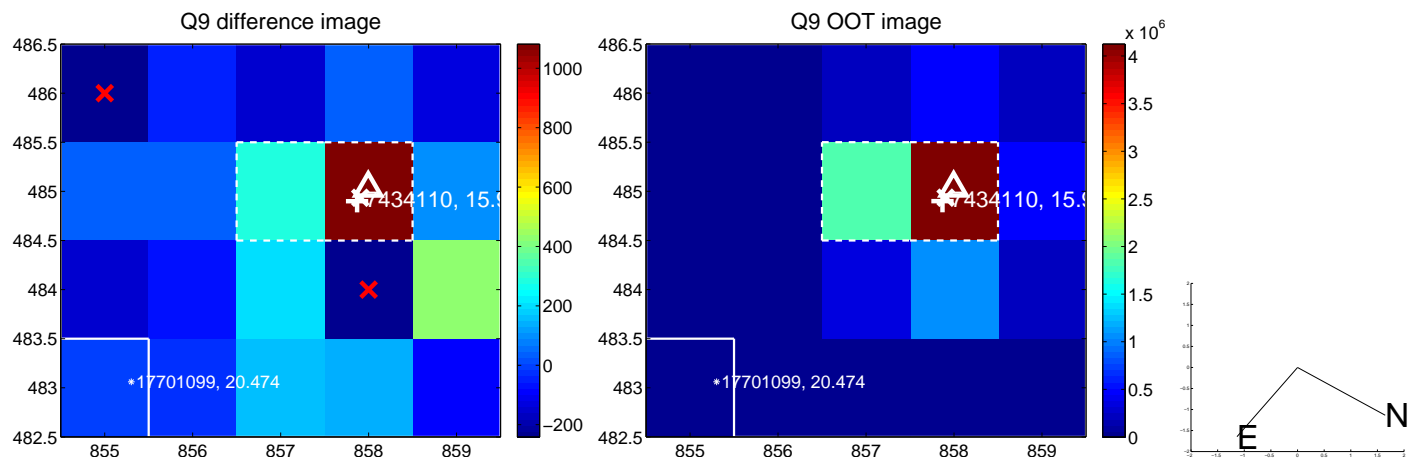
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



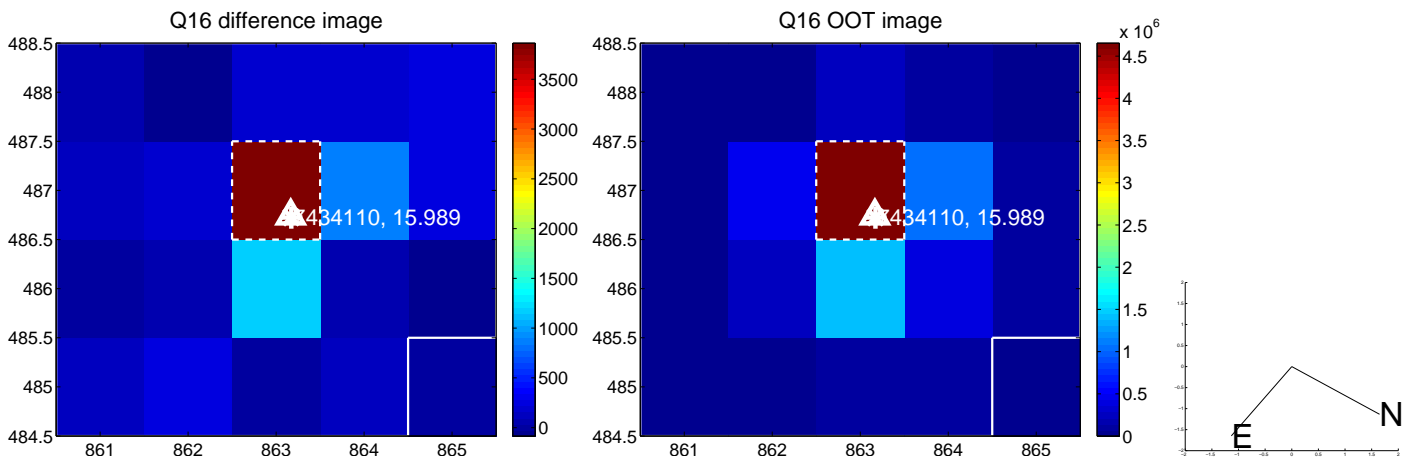
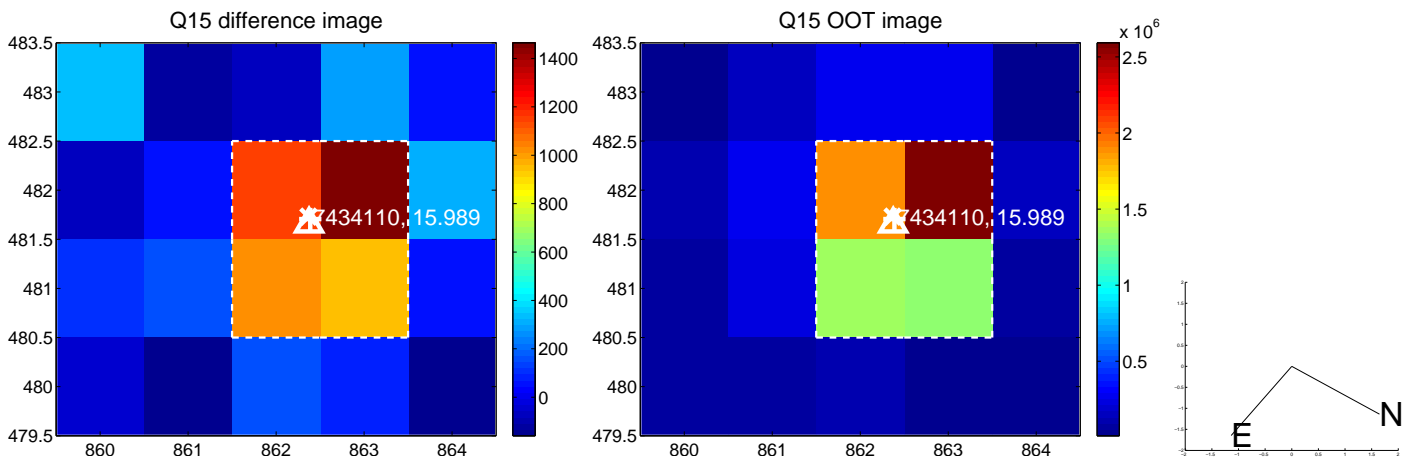
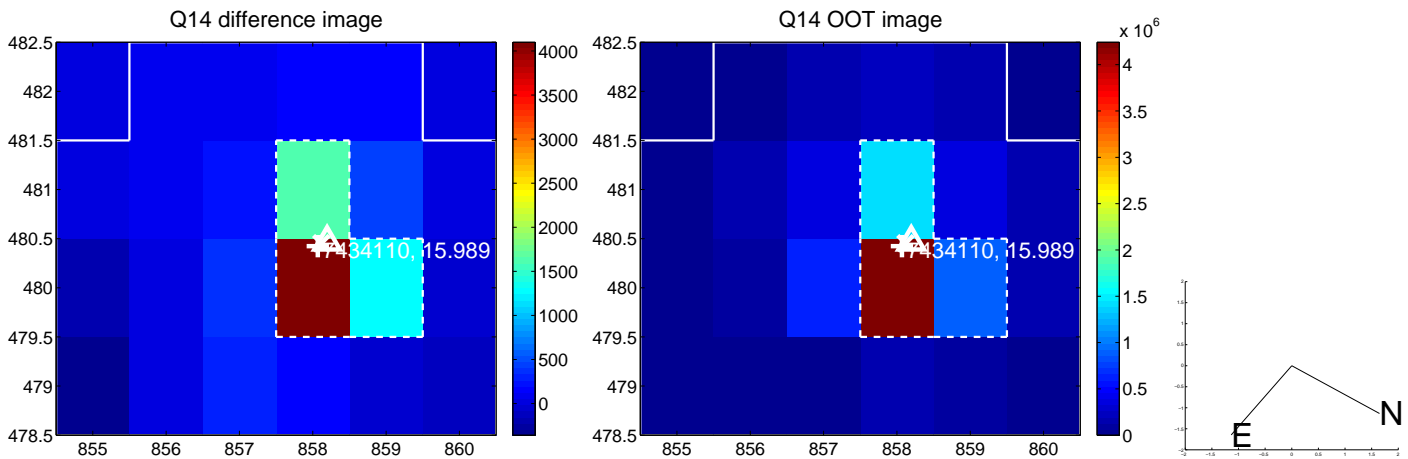
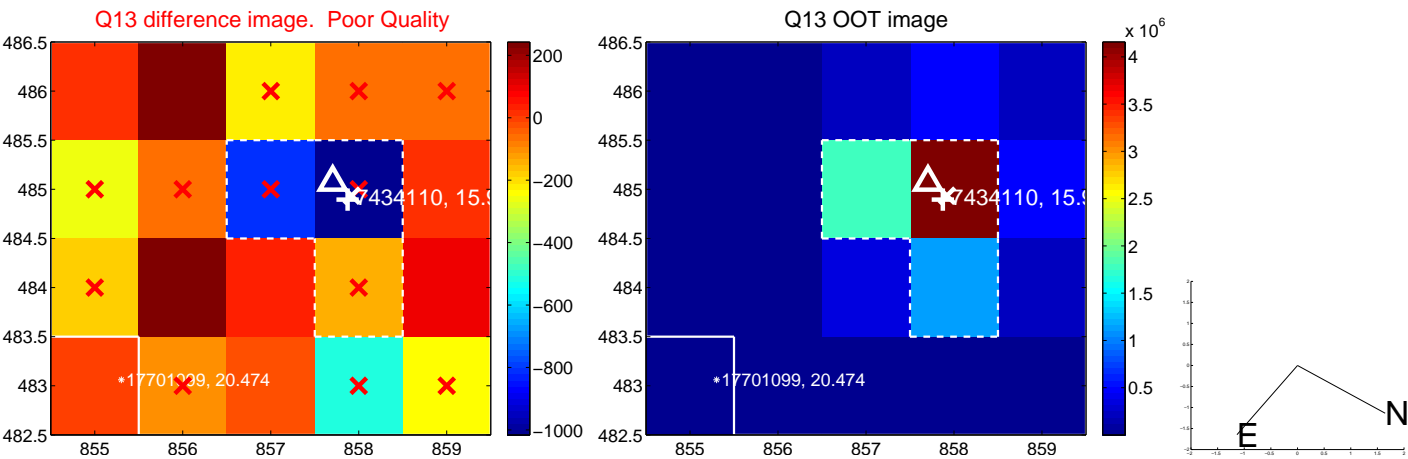
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



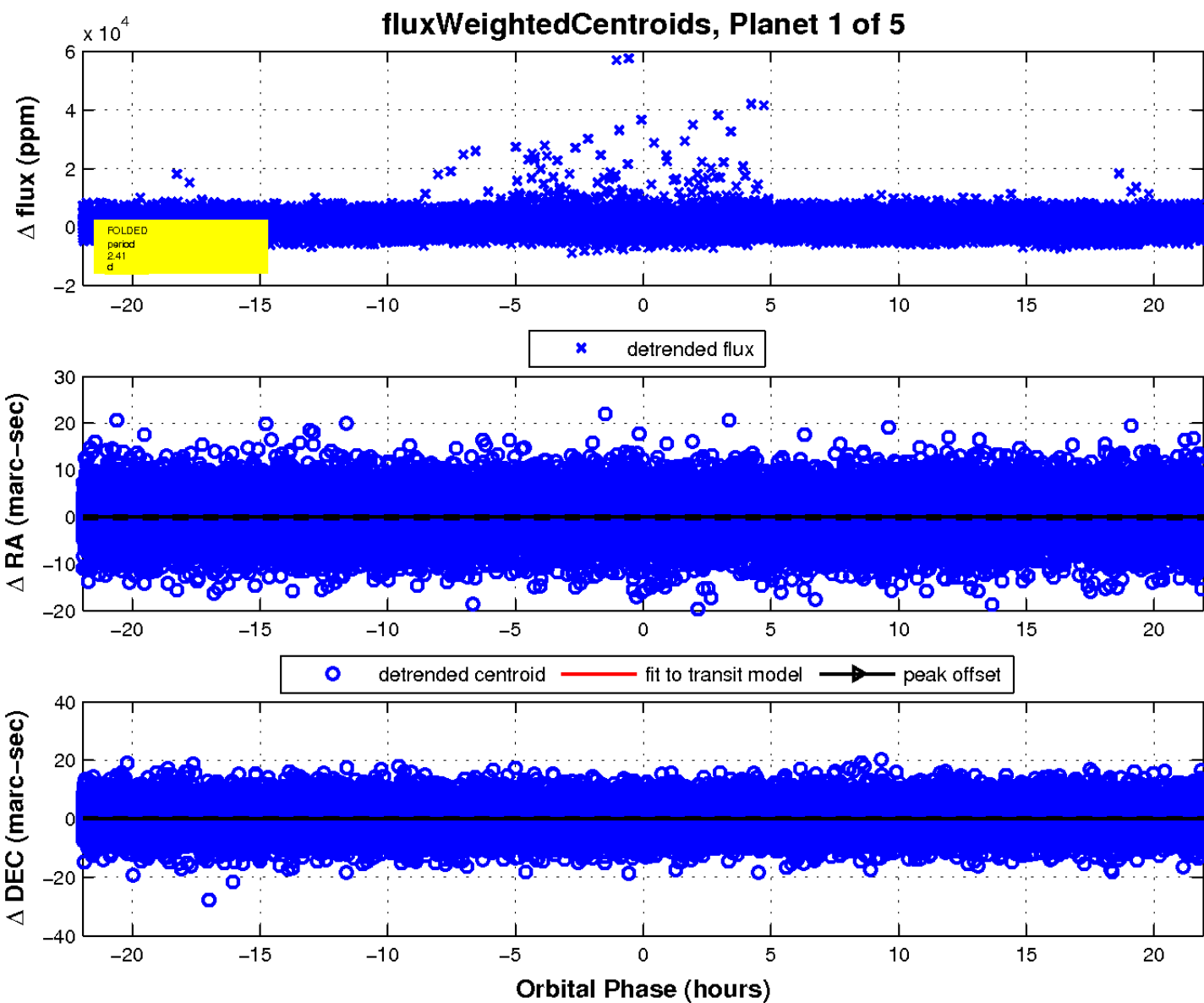
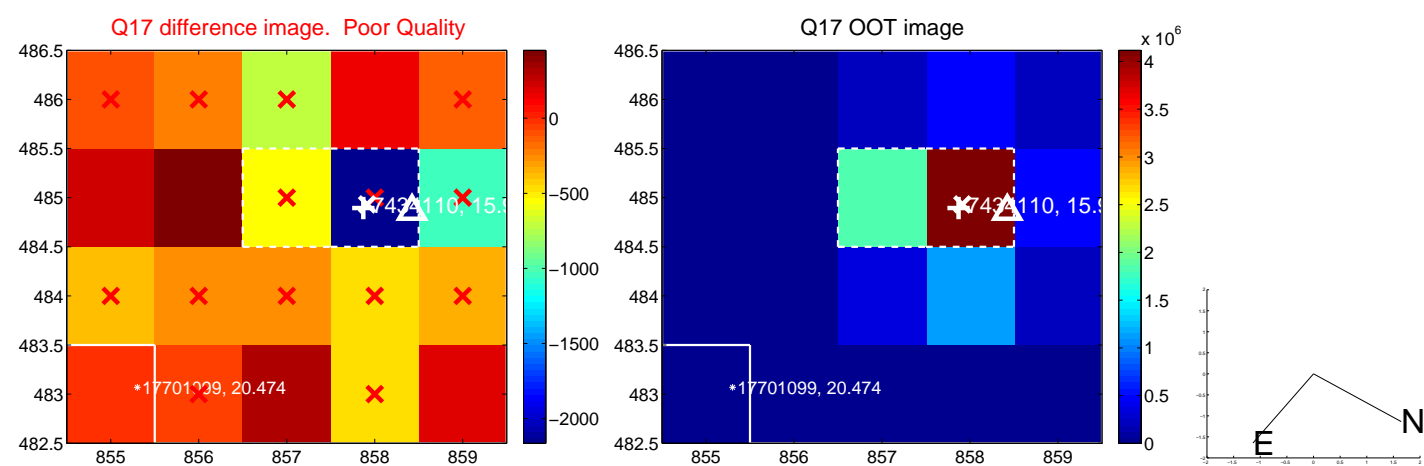
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

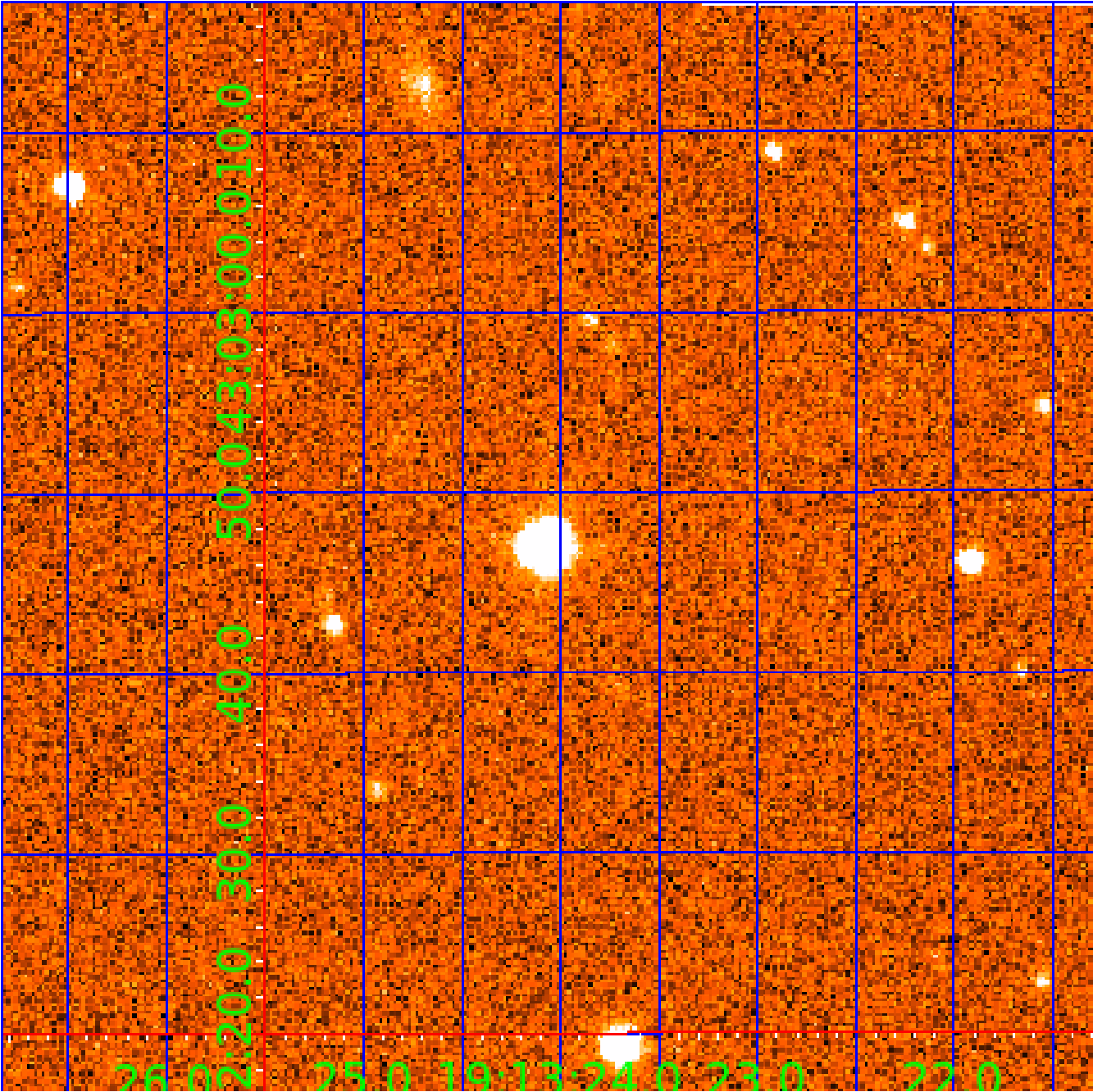


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007434110

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})
007434110-01	OBS	No	2.409089	131.747452	638.1	7.315	10.8	14.1	0.23	3310	0.83	12.55
007434110-02	OBS	No	446.330855	233.854265	5032.8	4.731	13.8	9.1	0.23	3310	1.60	0.01
007434110-03	OBS	No	224.775903	251.806588	3672.8	3.861	13.5	7.3	0.23	3310	1.35	0.03
007434110-04	OBS	No	300.622796	376.824342	4033.3	5.505	11.9	8.0	0.23	3310	1.76	0.02
007434110-05	OBS	No	175.287864	253.107056	2978.7	3.000	11.5	-1.0	0.23	3310	1.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007434110-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007434110-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

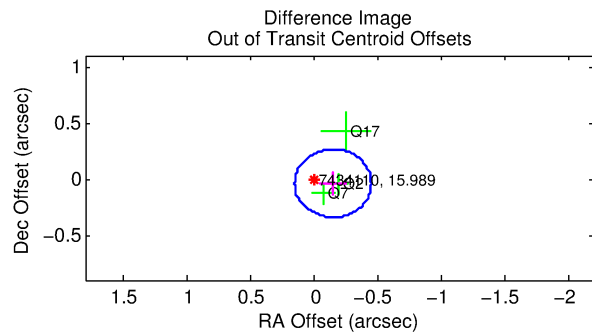
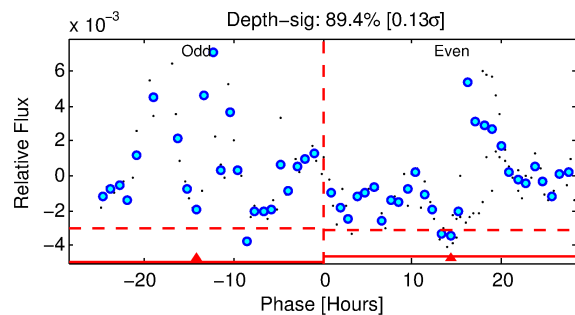
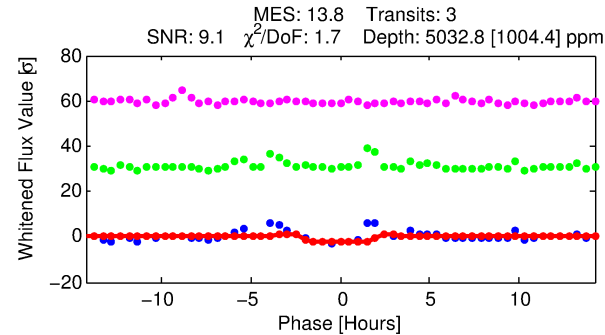
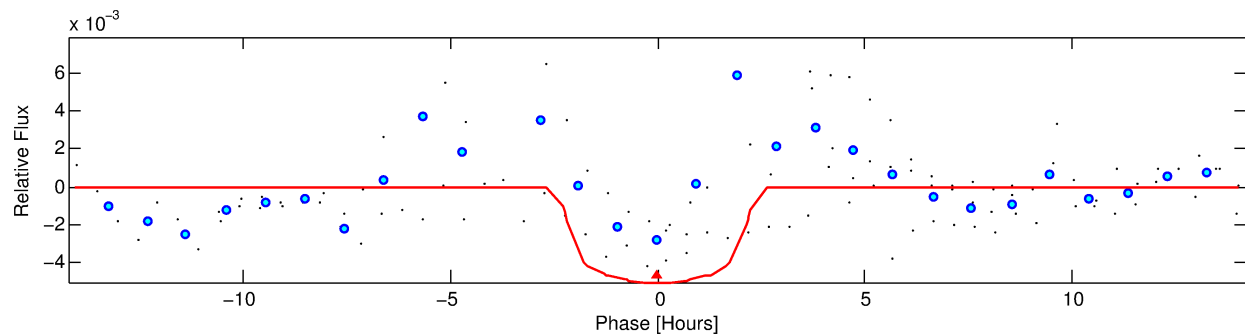
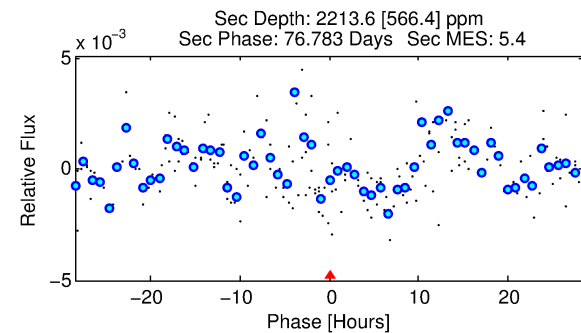
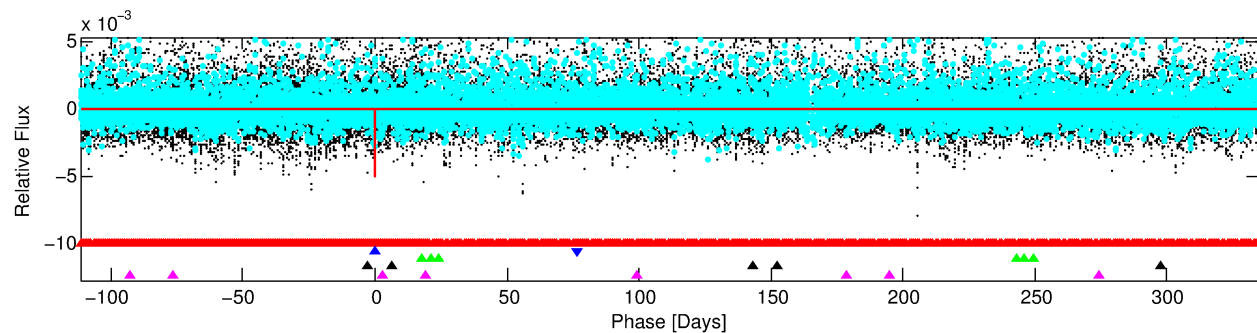
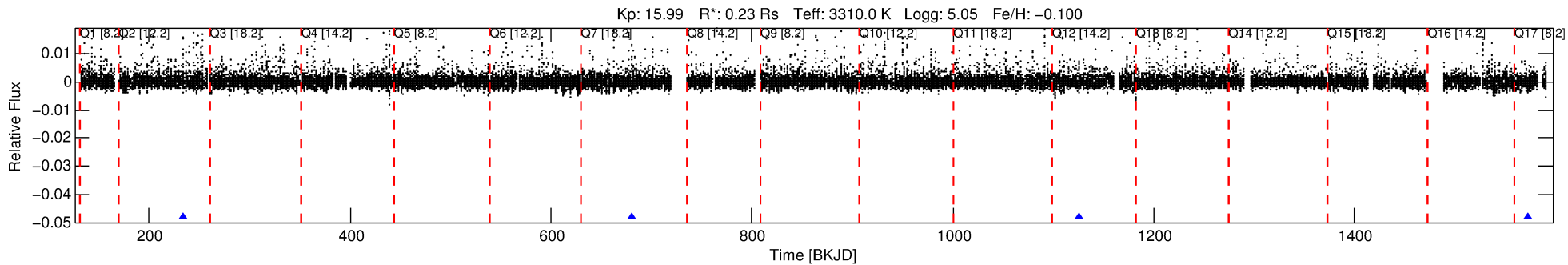
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007434110-02

No Significant Match Found

DV One-Page Summary

KIC: 7434110 Candidate: 2 of 5 Period: 446.331 d



DV Fit Results:

Period = 446.33085 [0.00437] d
Epoch = 233.8543 [0.0066] BKJD
Rp/R* = 0.0651 [0.1458]
a/R* = 732.73 [7191.90]
b = 0.32 [28.02]
Seff = 0.01 [0.00]
Teq = 84 [3] K
Rp = 1.60 [3.59] Re
a = 0.6770 [0.0700] AU
Ag = 218557.50 [981289.25] [0.22σ]
Teffp = 2814 [3158] K [0.86σ]

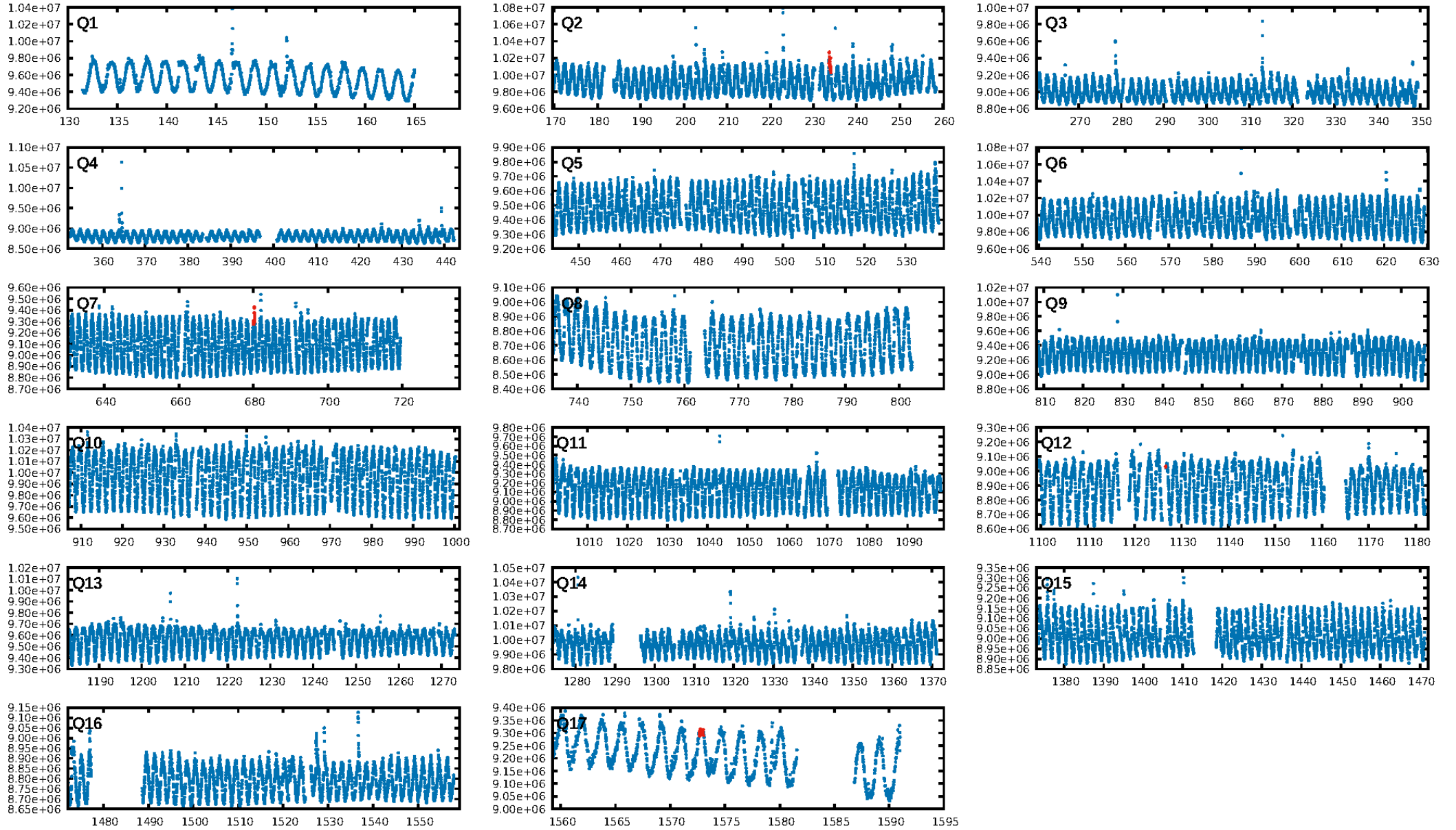
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [481.77σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.30e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.484
Centroid-sig: 82.4%
Centroid-so: 0.338 arcsec [0.76σ]
OotOffset-rm: 0.154 arcsec [1.53σ]
KicOffset-rm: 0.021 arcsec [0.20σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.67 [2/3]

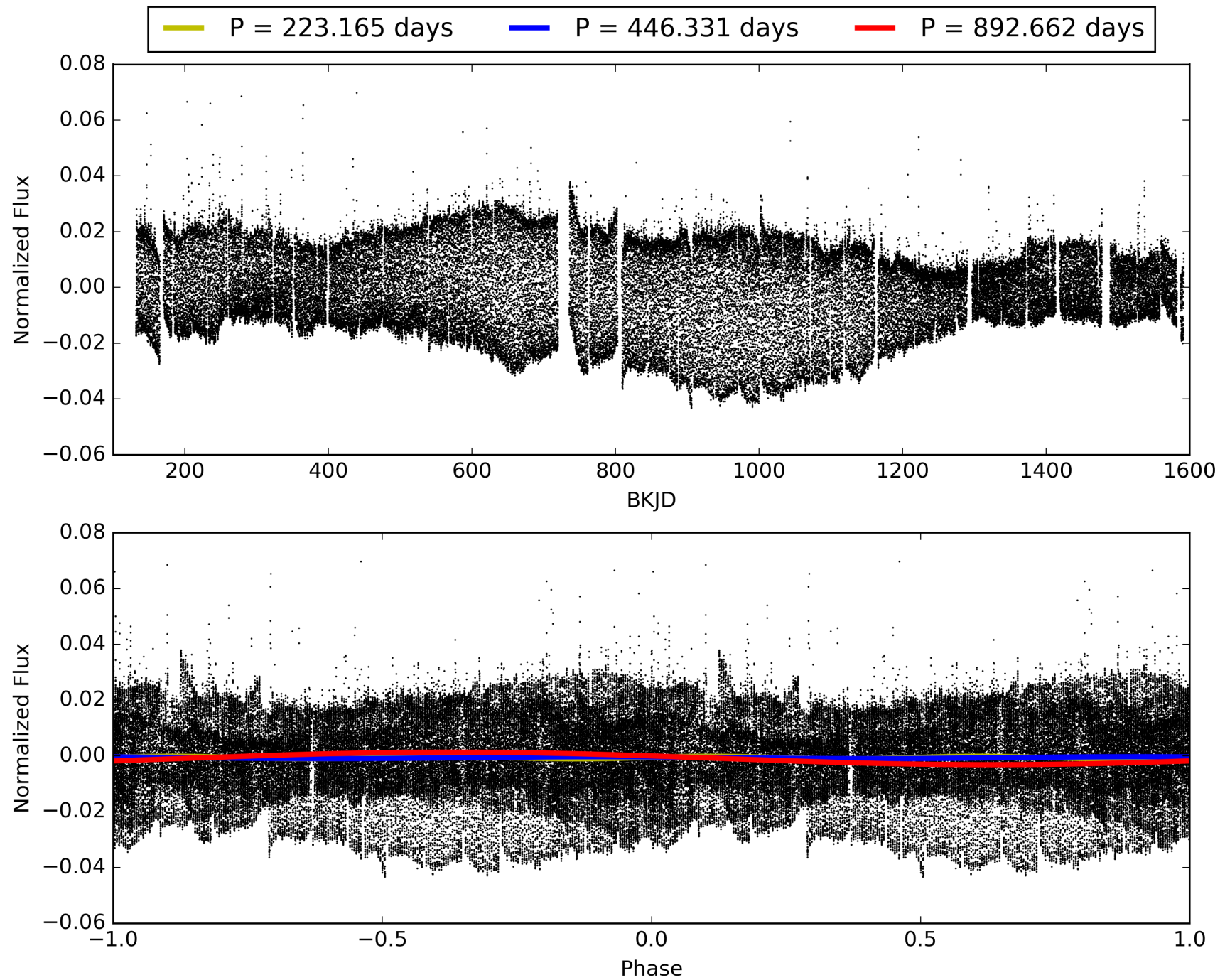
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:36:56 Z

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

TCE 007434110-02, PDC Light Curves

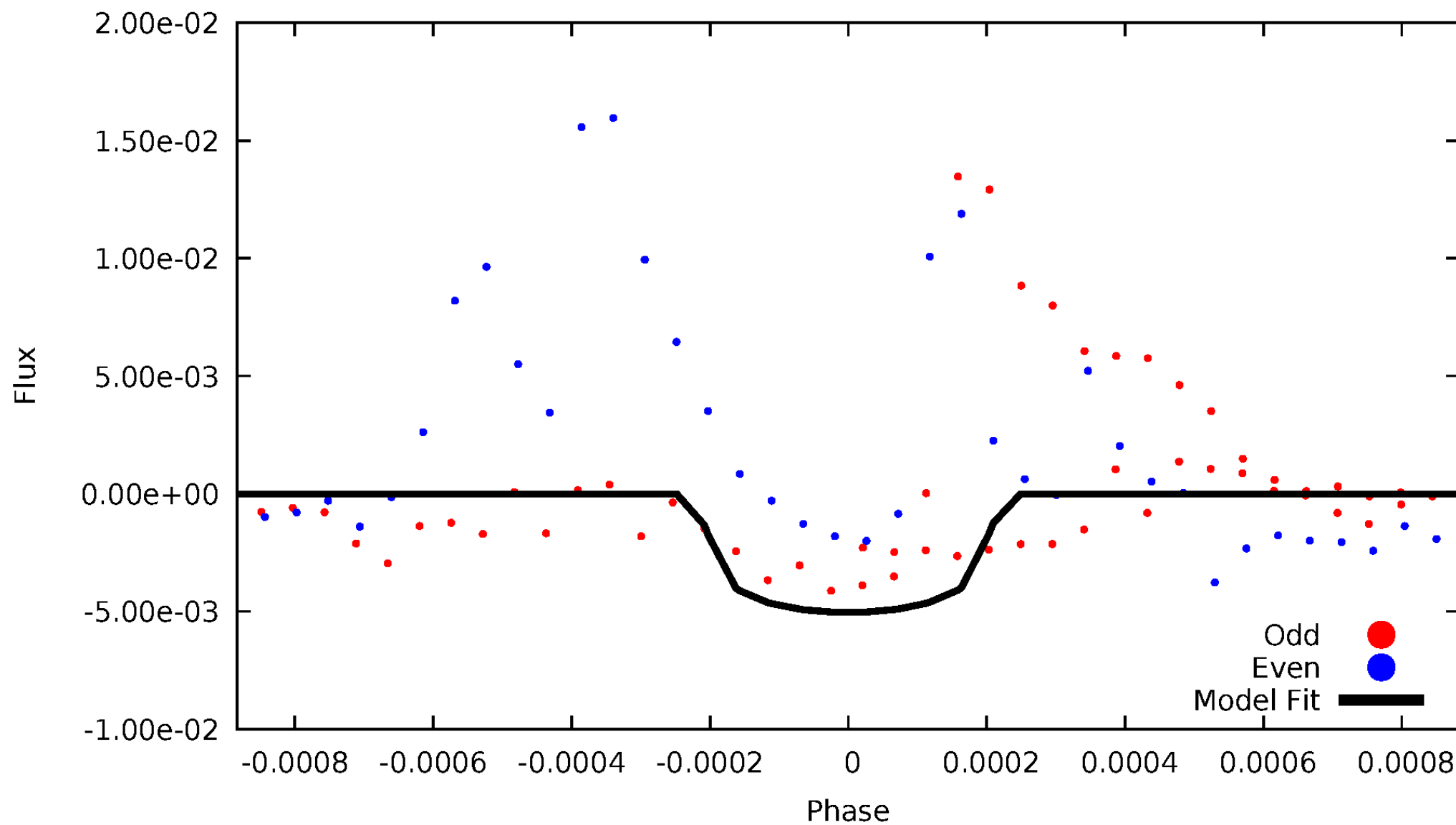


TCE 007434110-02



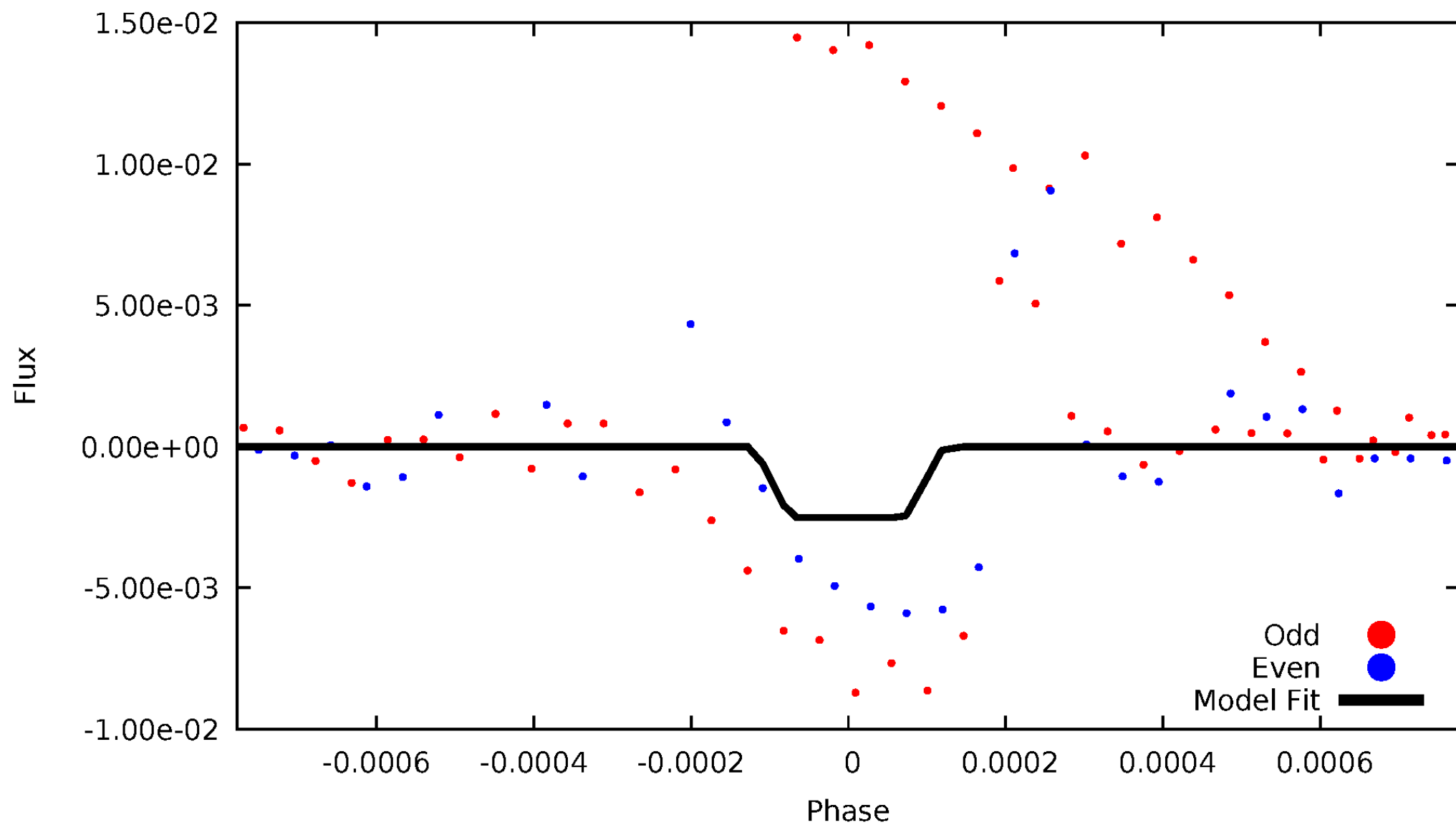
DV Odd/Even

TCE 007434110-02



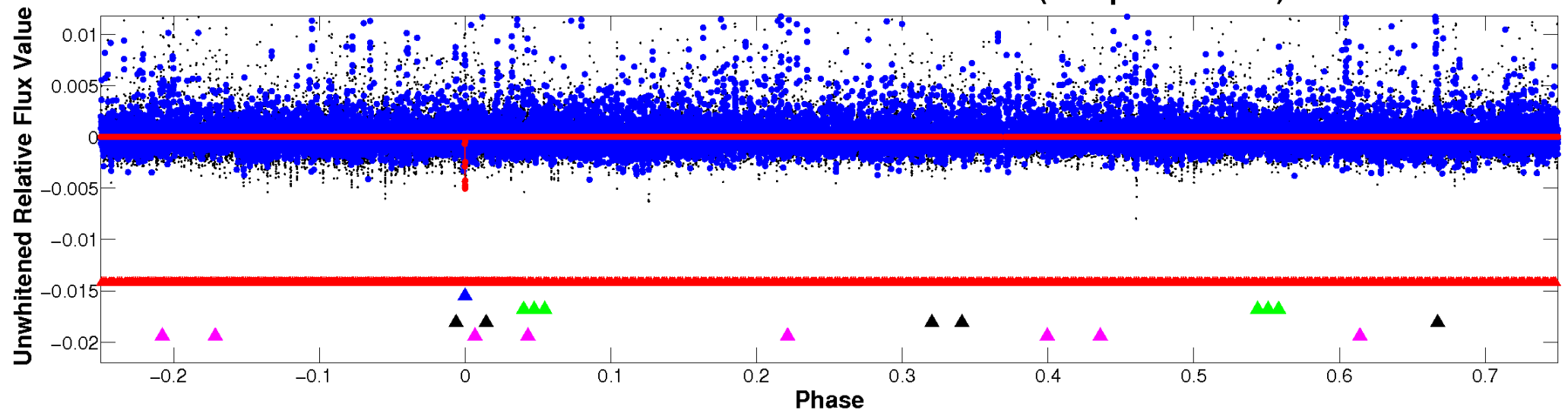
ALT Odd/Even

TCE 007434110-02

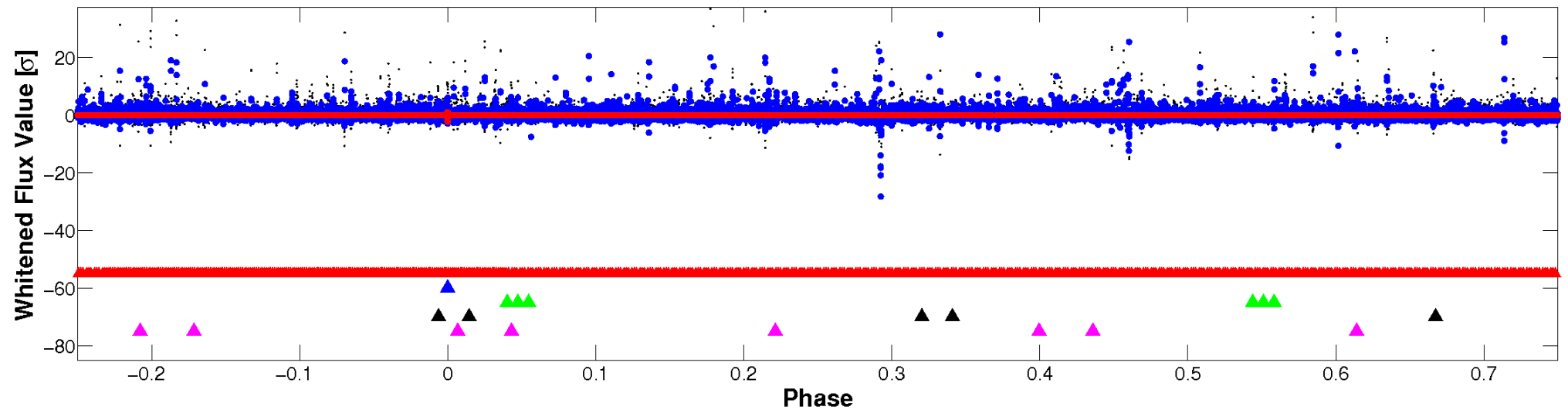


Non-Whitened Vs. Whitened Light Curve

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

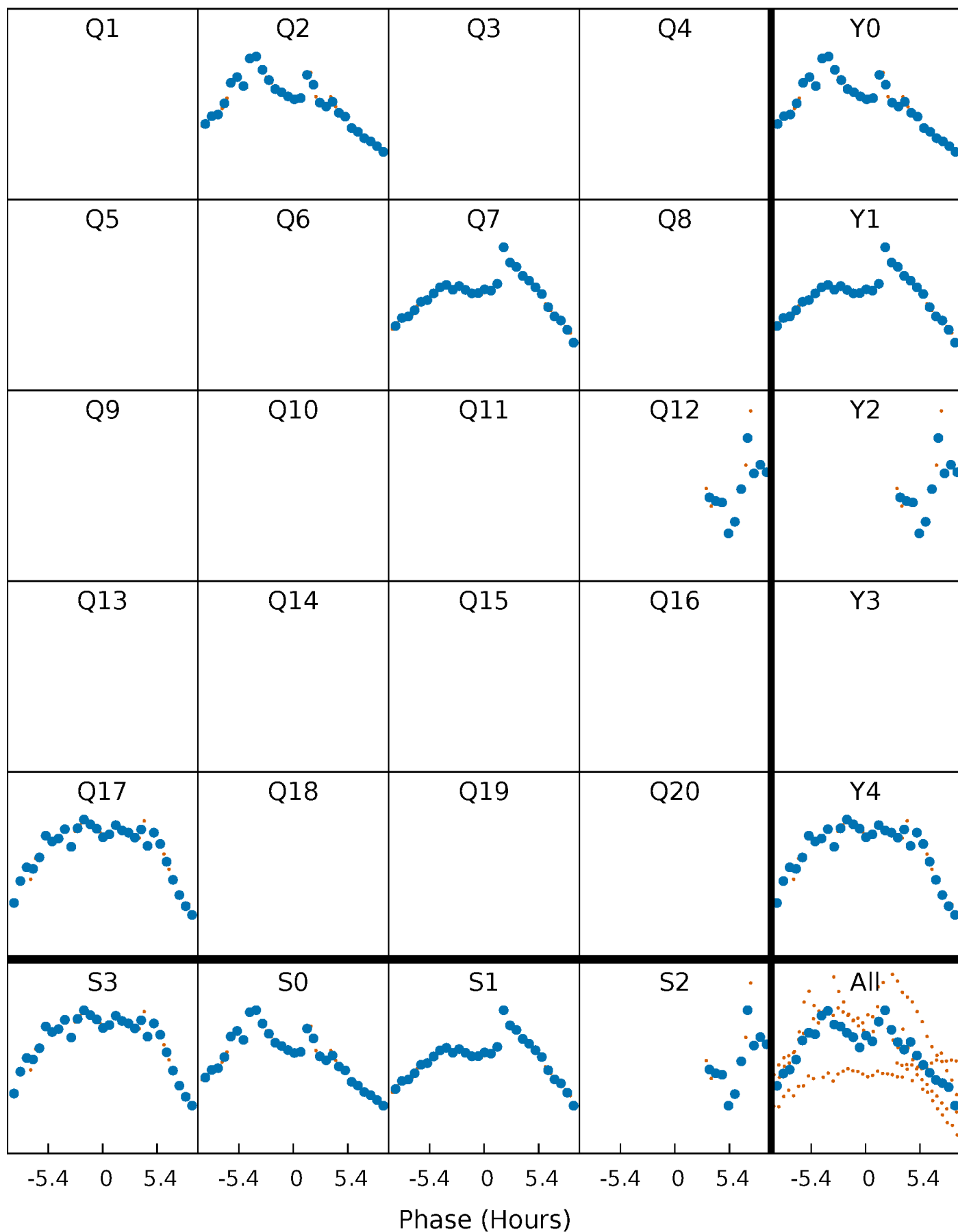


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



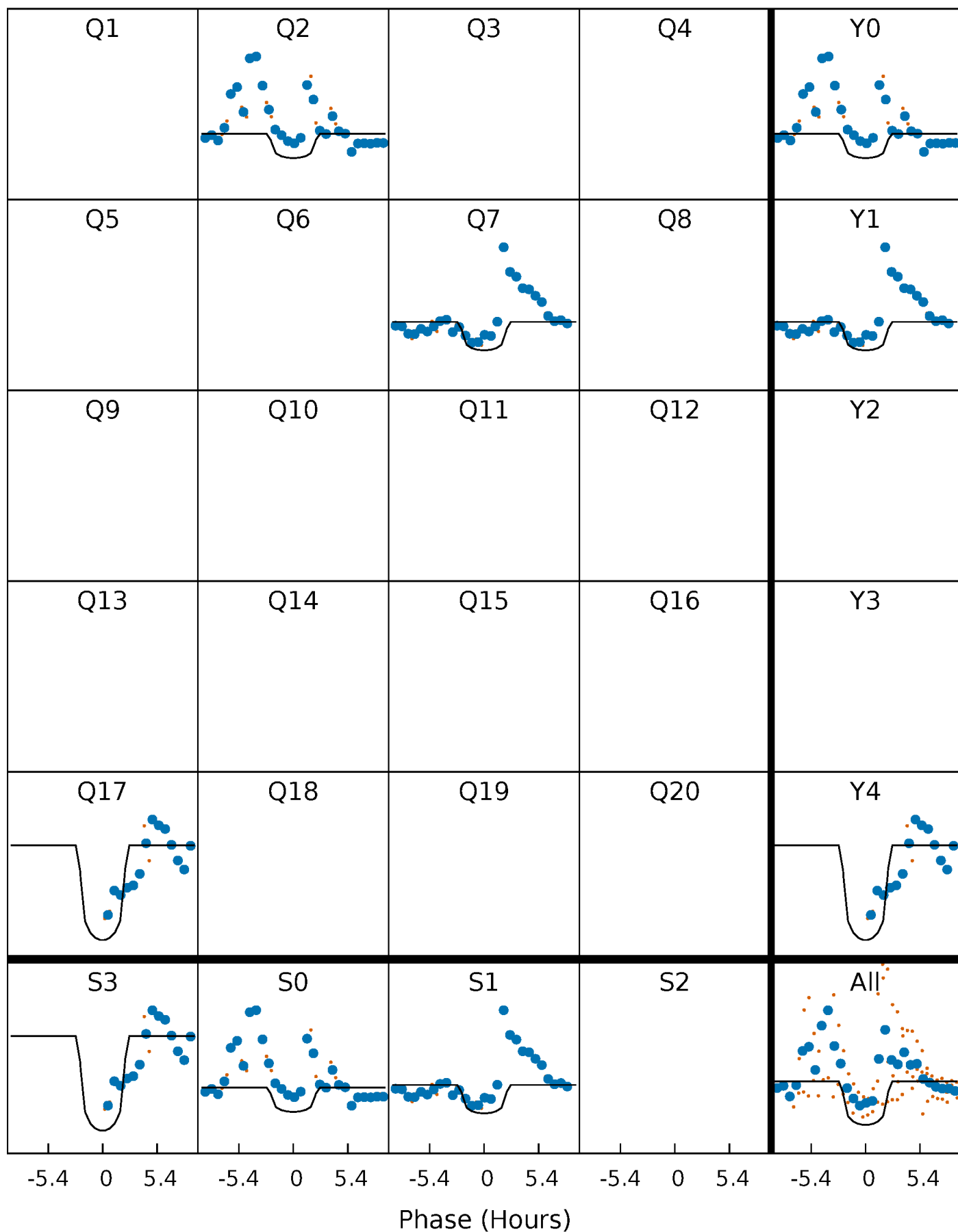
PDC Quarter-Phased Transit Curves

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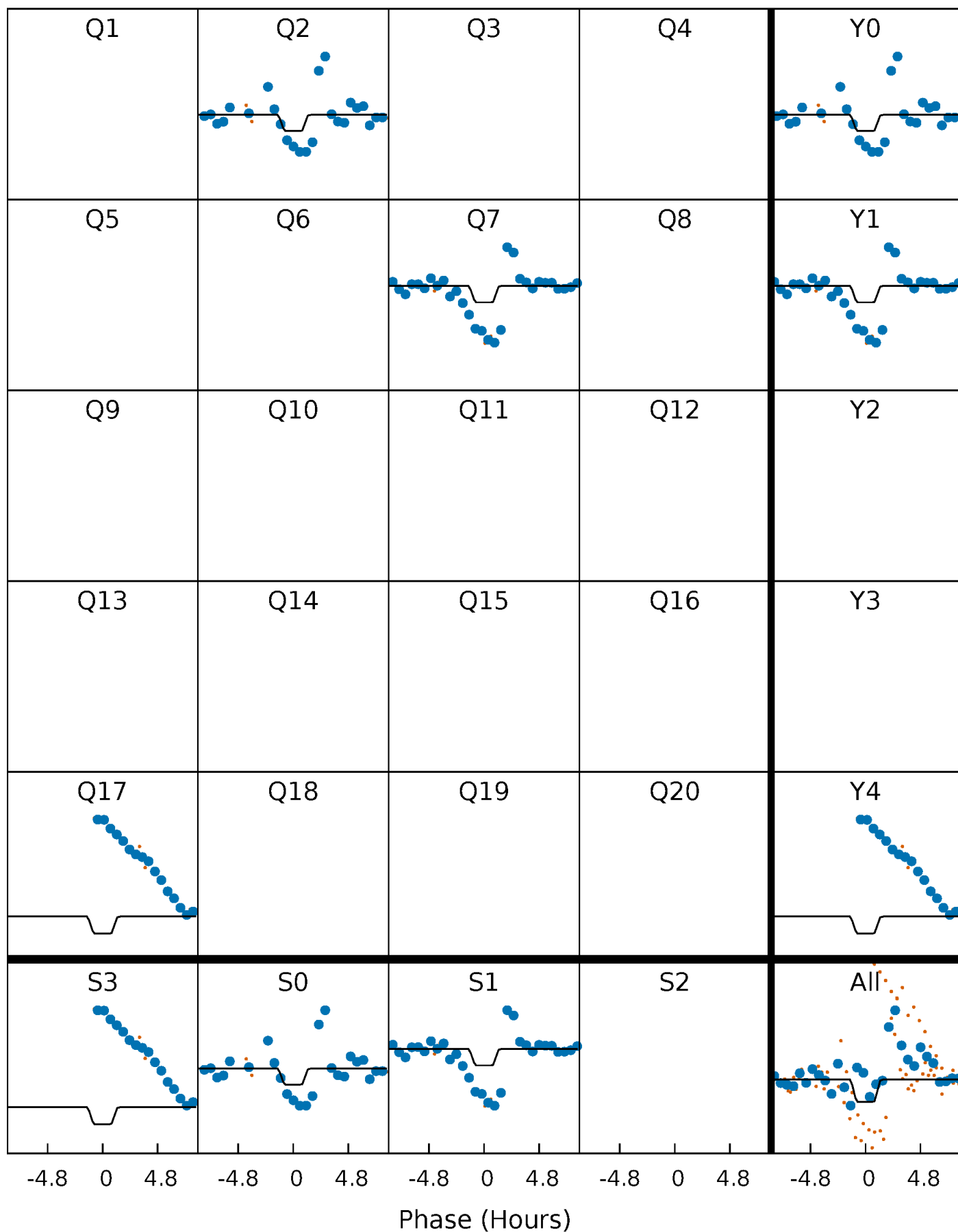
DV Quarter-Phased Transit Curves

TCE 007434110-02 P=446.330855 Days $T_0=233.854265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

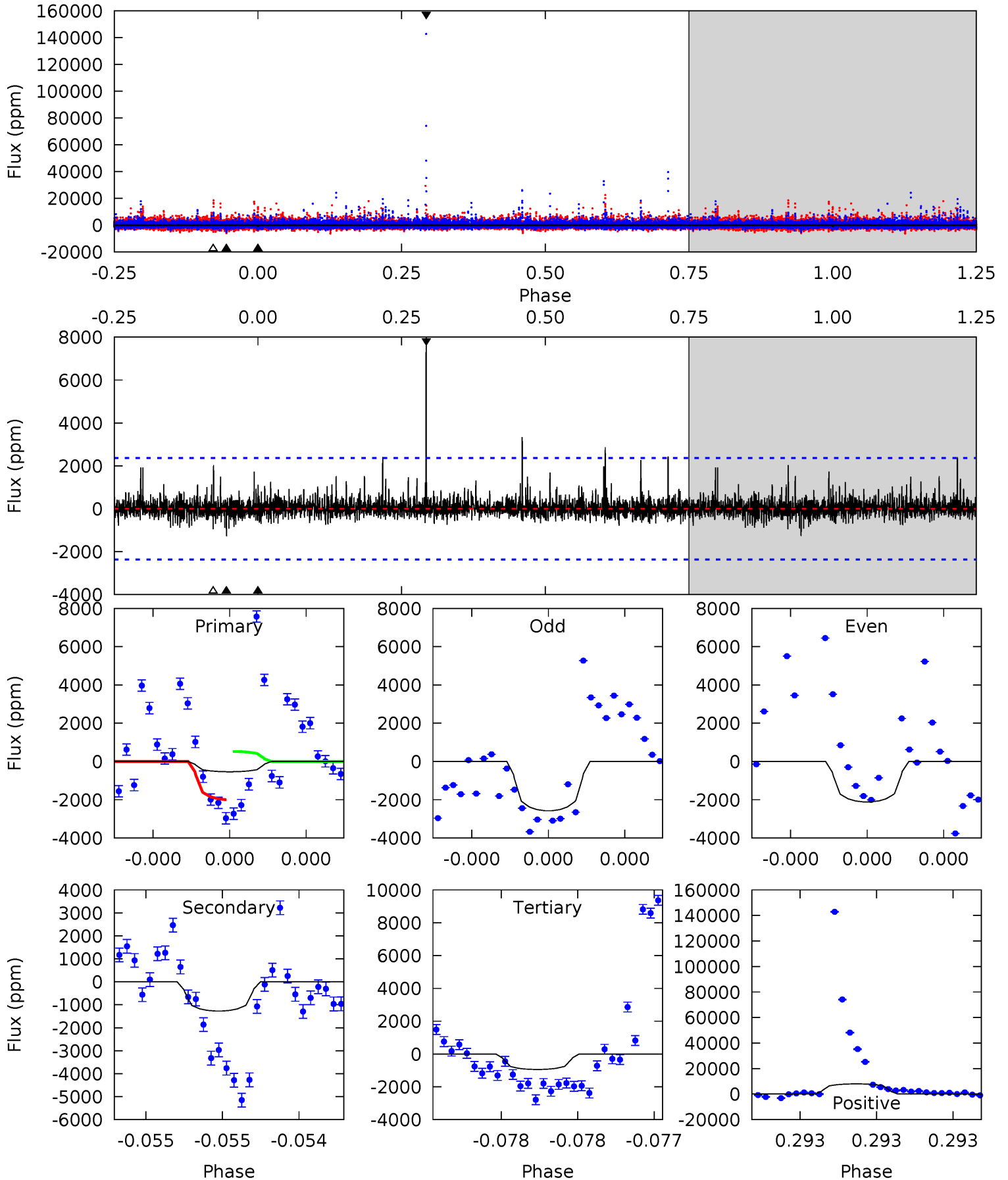
TCE 007434110-02 P=446.357496 Days $T_0=233.812446$ (BKJD)



DV Model-Shift Uniqueness Test

007434110-02, P = 446.330855 Days, E = 233.854265 Days

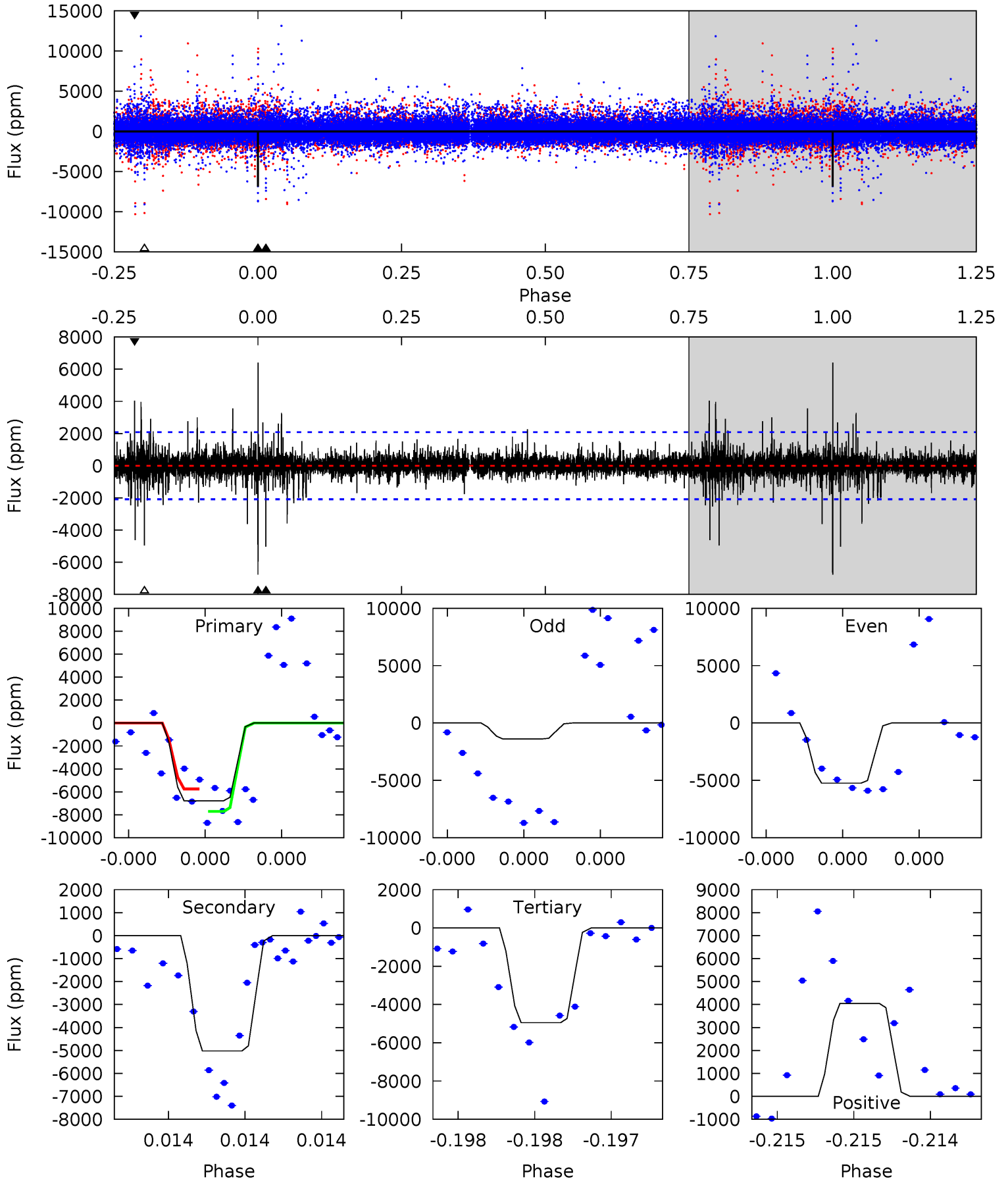
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.27	3.01	2.23	18.9	5.59	3.50	0.86	-0.96	-17.6	0.78	-15.9	0.50	1.75	0.86	1.90



Alt Model-Shift Uniqueness Test

007434110-02, P = 446.357496 Days, E = 233.812446 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	13.7	13.5	11.1	5.71	3.68	1.22	4.99	7.47	0.21	2.68	5.47	-0.04	0.49	2.70



Stellar Parameters For KIC 007434110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3310^{+43}_{-36}	$5.051^{+0.040}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.225^{+0.033}_{-0.024}$	$0.207^{+0.037}_{-0.027}$	$25.630^{+6.331}_{-5.537}$
	+1%/-1%	+1%/-1%	+100%/-100%	+15%/-11%	+18%/-13%	+25%/-22%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007434110-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1273 ± 423	$2.98^{+3.02}_{-1.96}$	118^{+3}_{-3}	2369^{+800}_{-347}	$33012^{+259503}_{-25025}$
Alt.	-5024 ± 366	$2.88^{+3.01}_{-1.90}$	118^{+3}_{-3}	2878^{+1114}_{-484}	$154507^{+1223629}_{-118973}$

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 $A_{obs} \gg 1.0$

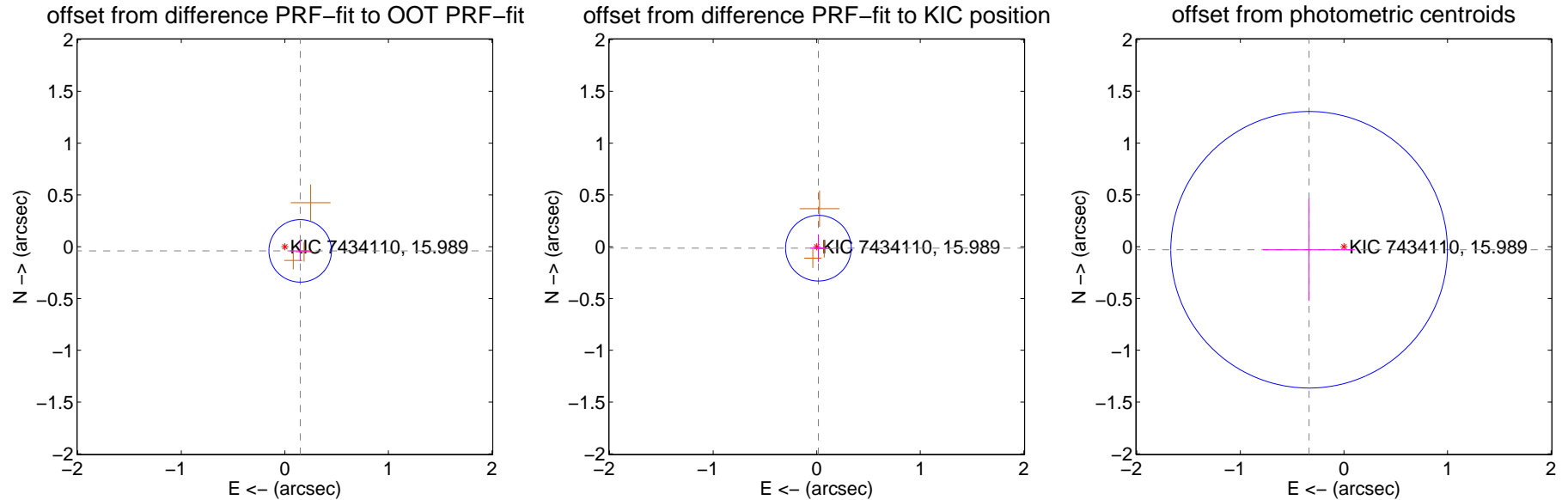
DV Centroid Data

Supplemental centroid analysis for 007434110-02. Kepler magnitude: 15.99. Transit SNR 9.15

There are 0 quarters with good PRF difference image offsets

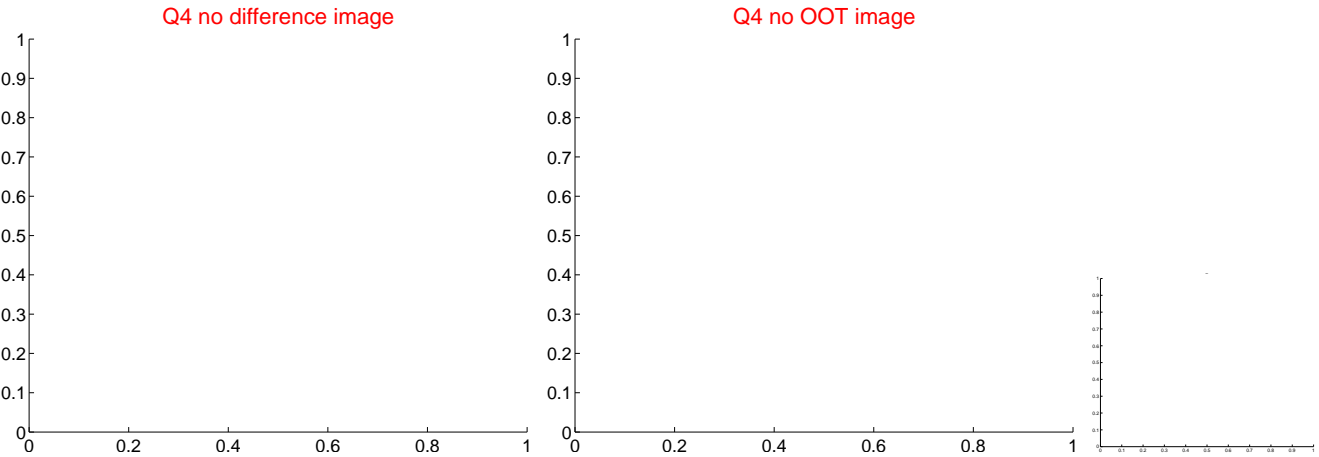
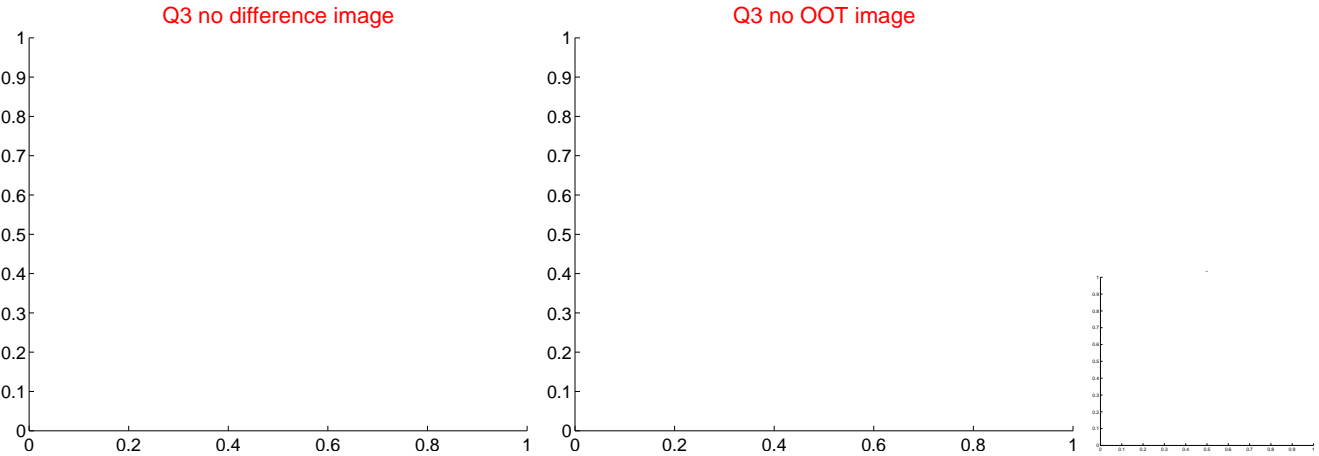
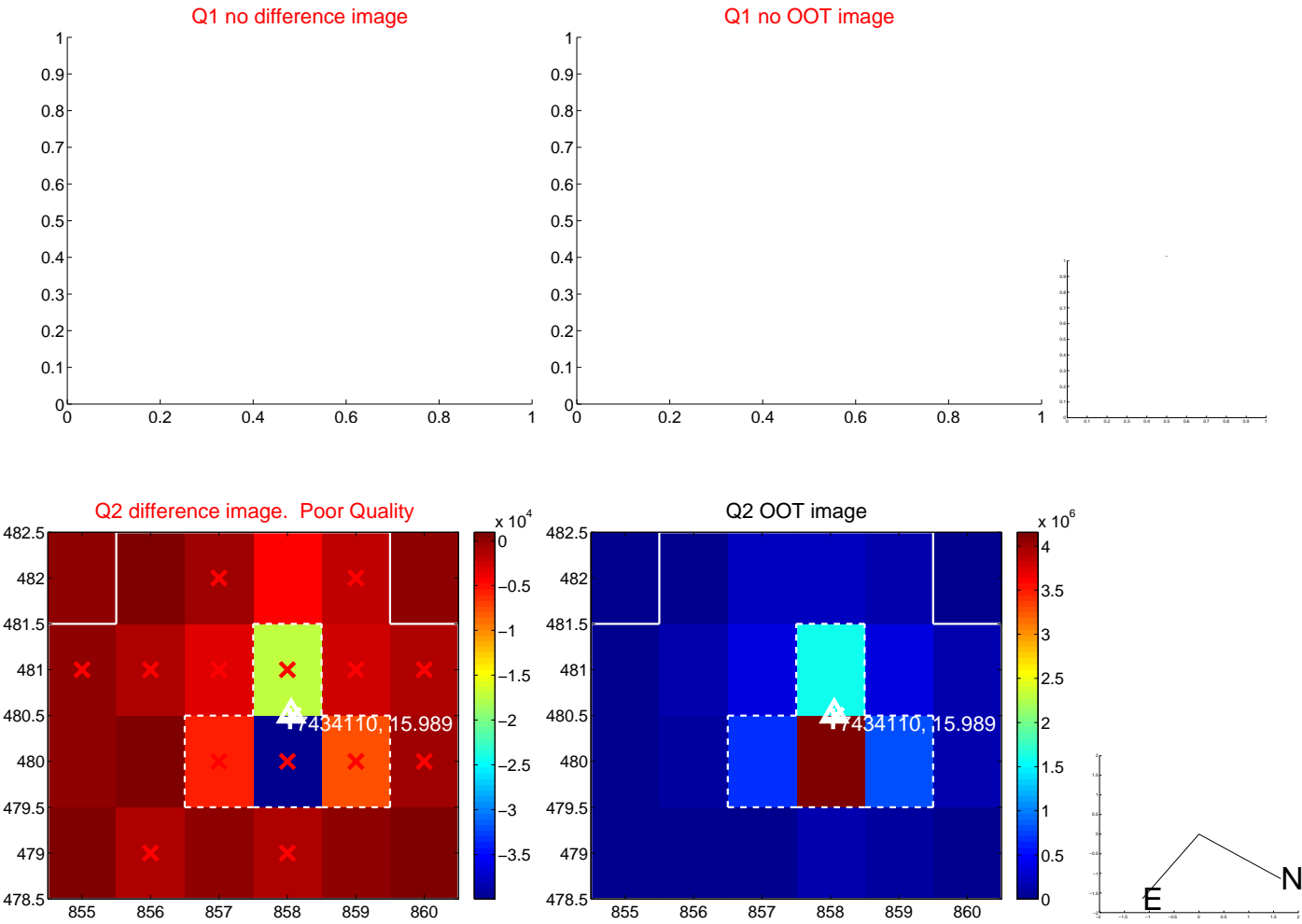
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.154 ± 0.101	1.53	-0.148 ± 0.101	-0.040 ± 0.098
PRF-fit source offset from KIC position	0.021 ± 0.106	0.20	-0.016 ± 0.078	-0.014 ± 0.133
photometric centroid source offset	0.34 ± 0.44	0.76	0.34 ± 0.44	-0.03 ± 0.49



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.

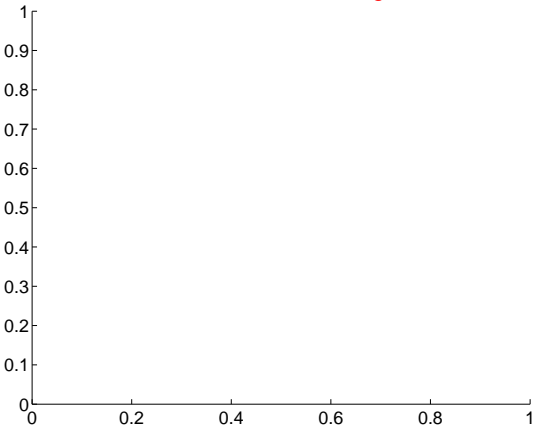
Q5 no difference image



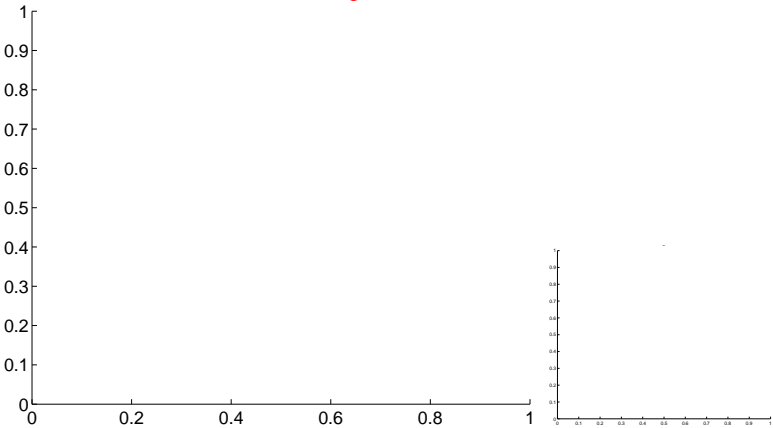
Q5 no OOT image



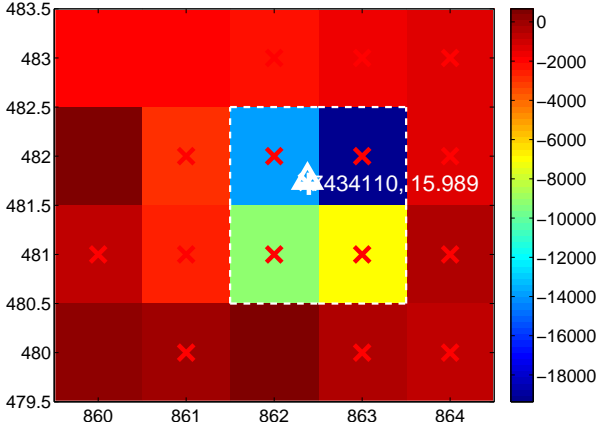
Q6 no difference image



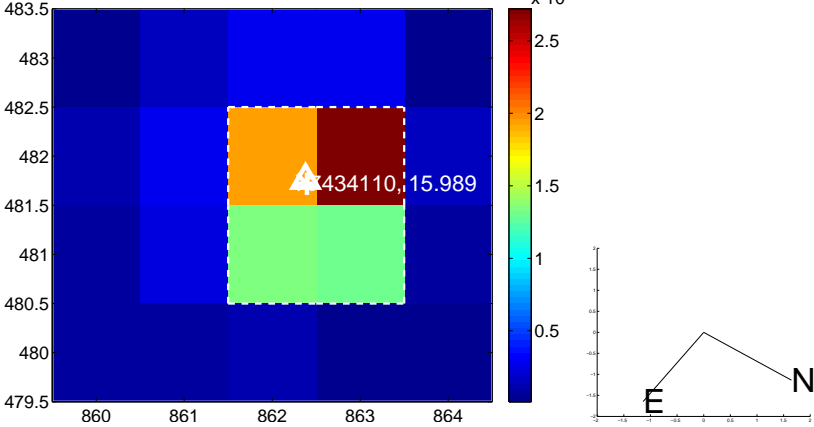
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



Q8 no OOT image



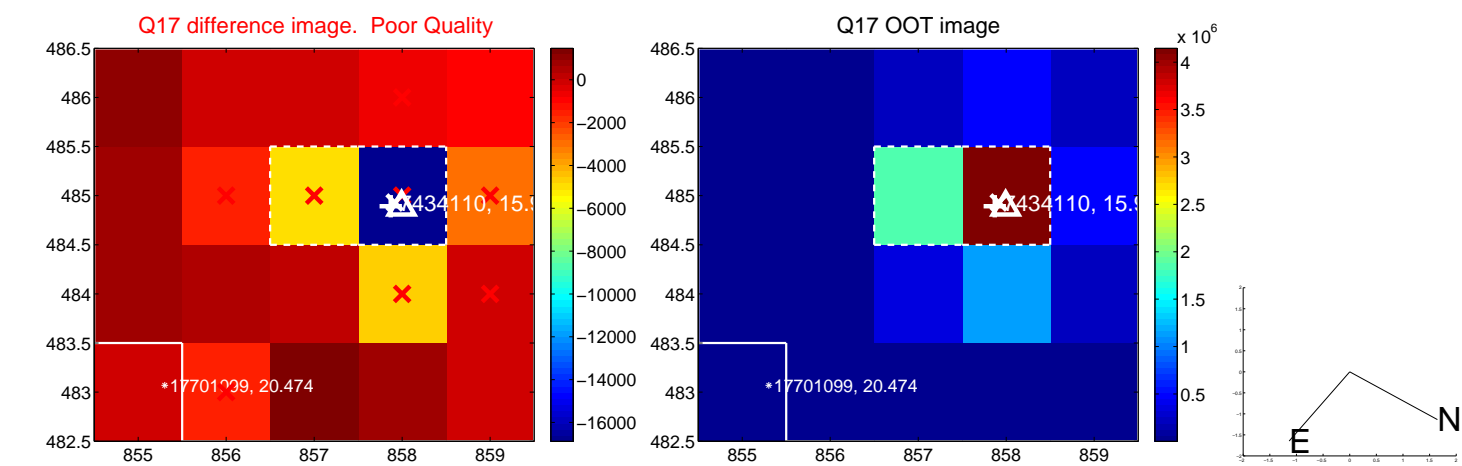
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



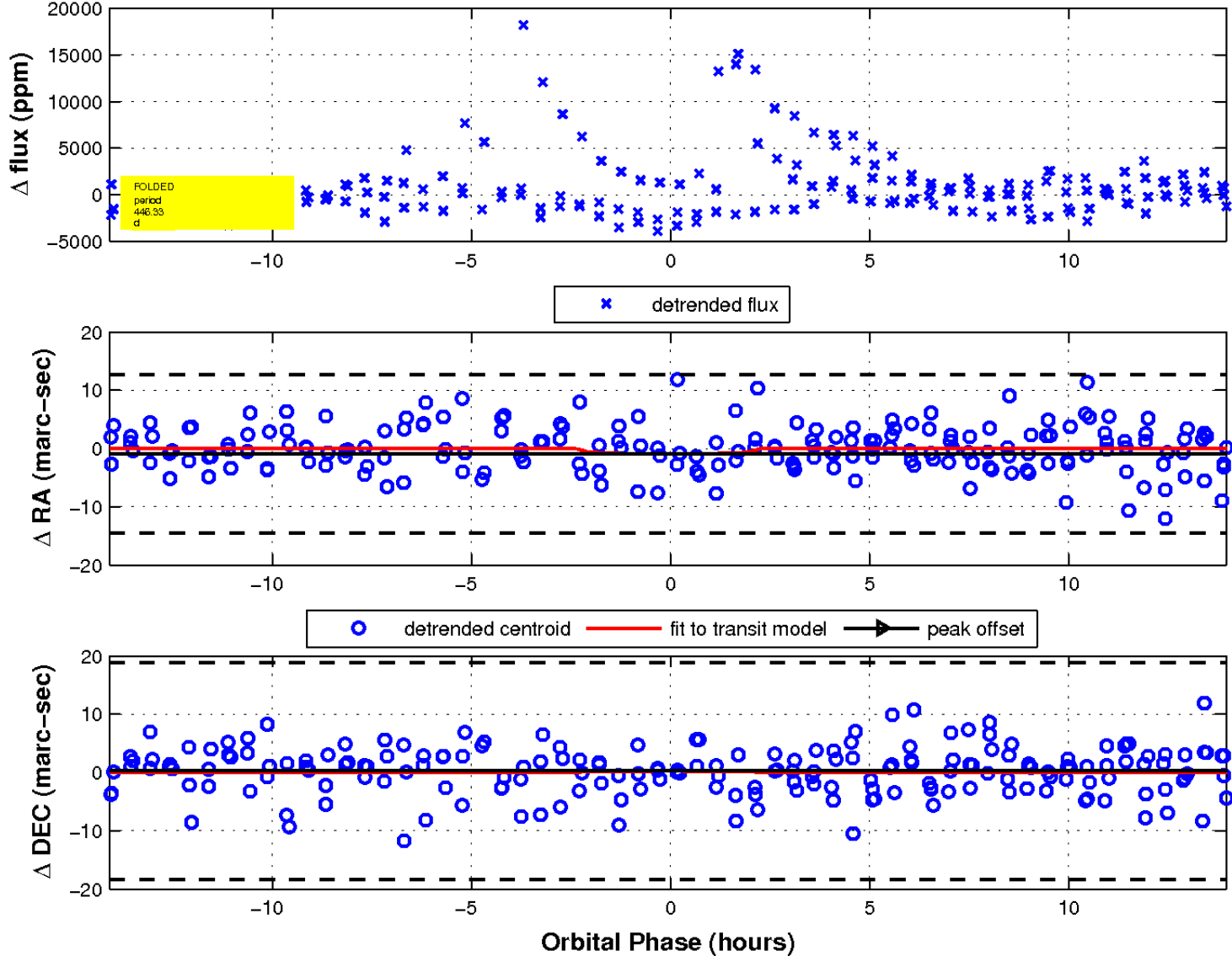
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

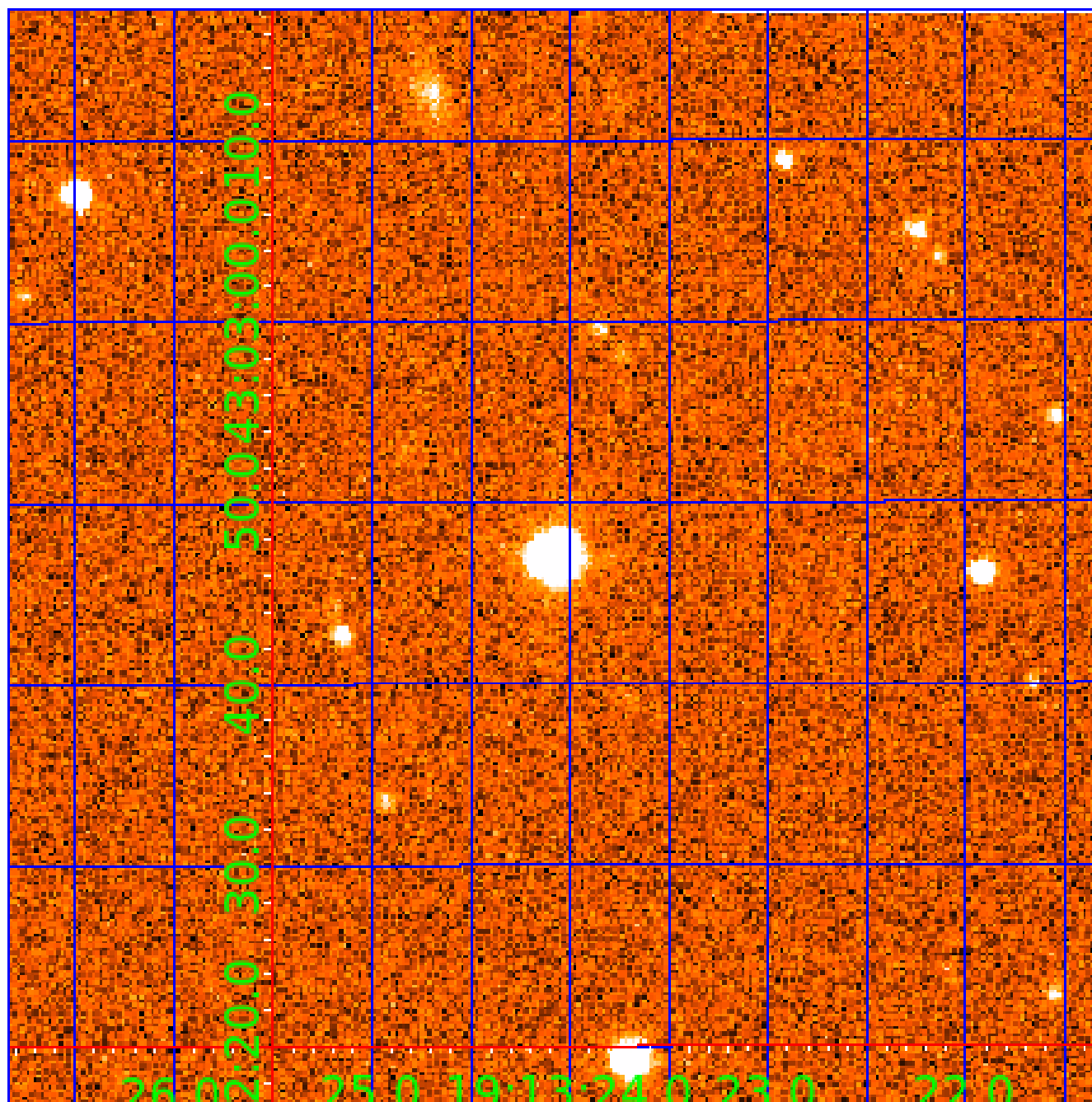


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 007434110

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})
007434110-01	OBS	No	2.409089	131.747452	638.1	7.315	10.8	14.1	0.23	3310	0.83	12.55
007434110-02	OBS	No	446.330855	233.854265	5032.8	4.731	13.8	9.1	0.23	3310	1.60	0.01
007434110-03	OBS	No	224.775903	251.806588	3672.8	3.861	13.5	7.3	0.23	3310	1.35	0.03
007434110-04	OBS	No	300.622796	376.824342	4033.3	5.505	11.9	8.0	0.23	3310	1.76	0.02
007434110-05	OBS	No	175.287864	253.107056	2978.7	3.000	11.5	-1.0	0.23	3310	1.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007434110-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007434110-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

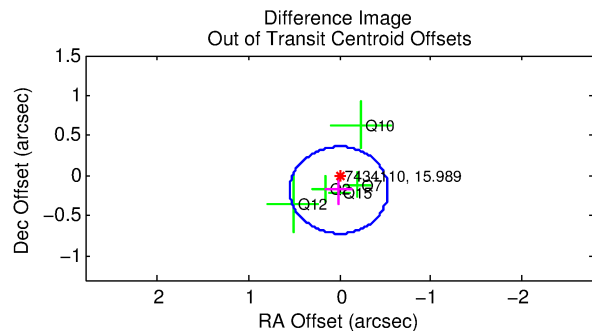
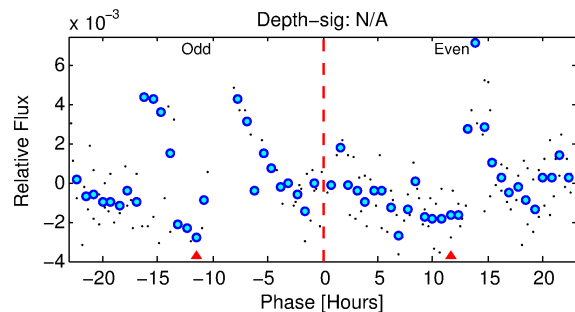
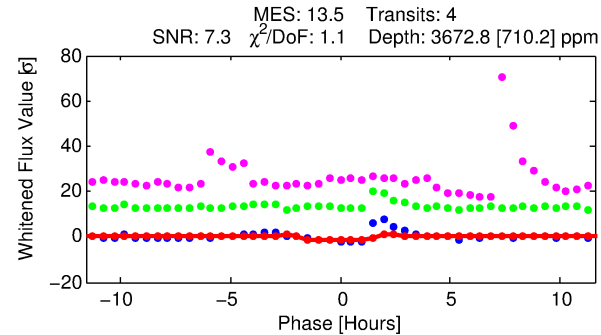
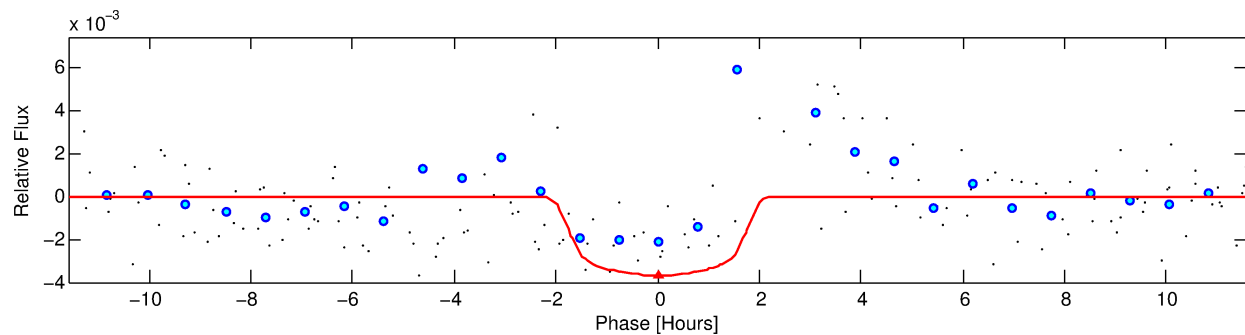
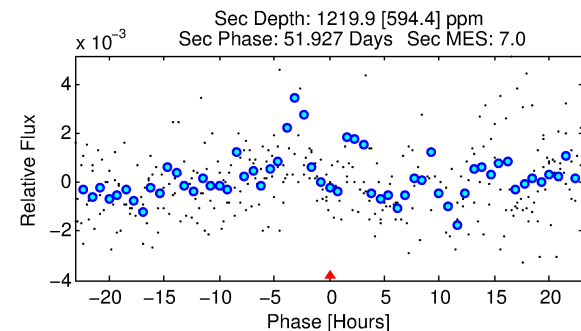
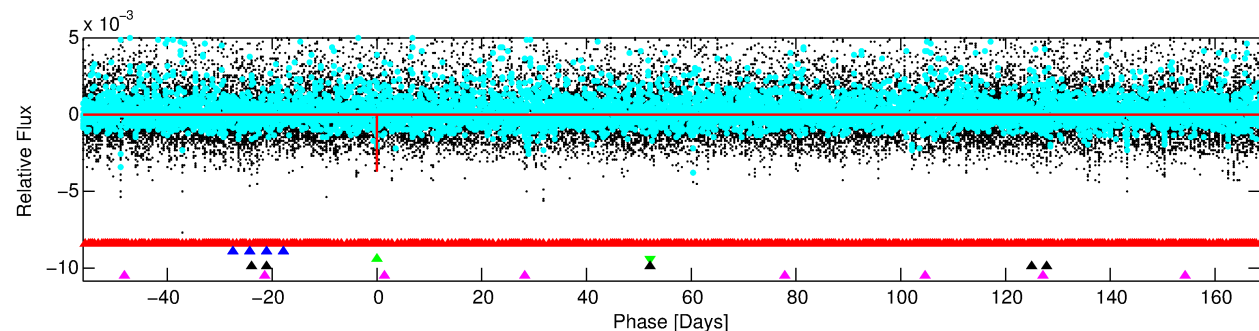
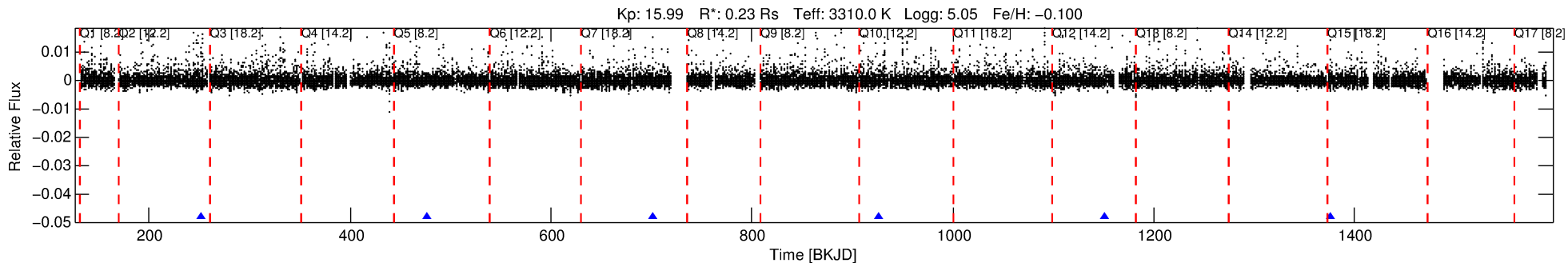
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007434110-03

No Significant Match Found

DV One-Page Summary

KIC: 7434110 Candidate: 3 of 5 Period: 224.776 d



DV Fit Results:

Period = 224.77590 [0.00368] d
Epoch = 251.8066 [0.0143] BKJD
Rp/R* = 0.0552 [0.0643]
a/R* = 460.68 [2349.63]
b = 0.20 [24.37]
Seff = 0.03 [0.00]
Teq = 106 [3] K
Rp = 1.35 [1.59] Re
a = 0.4285 [0.0443] AU
Ag = 67156.02 [160215.69] [0.42σ]
Teffp = 2634 [1569] K [1.61σ]

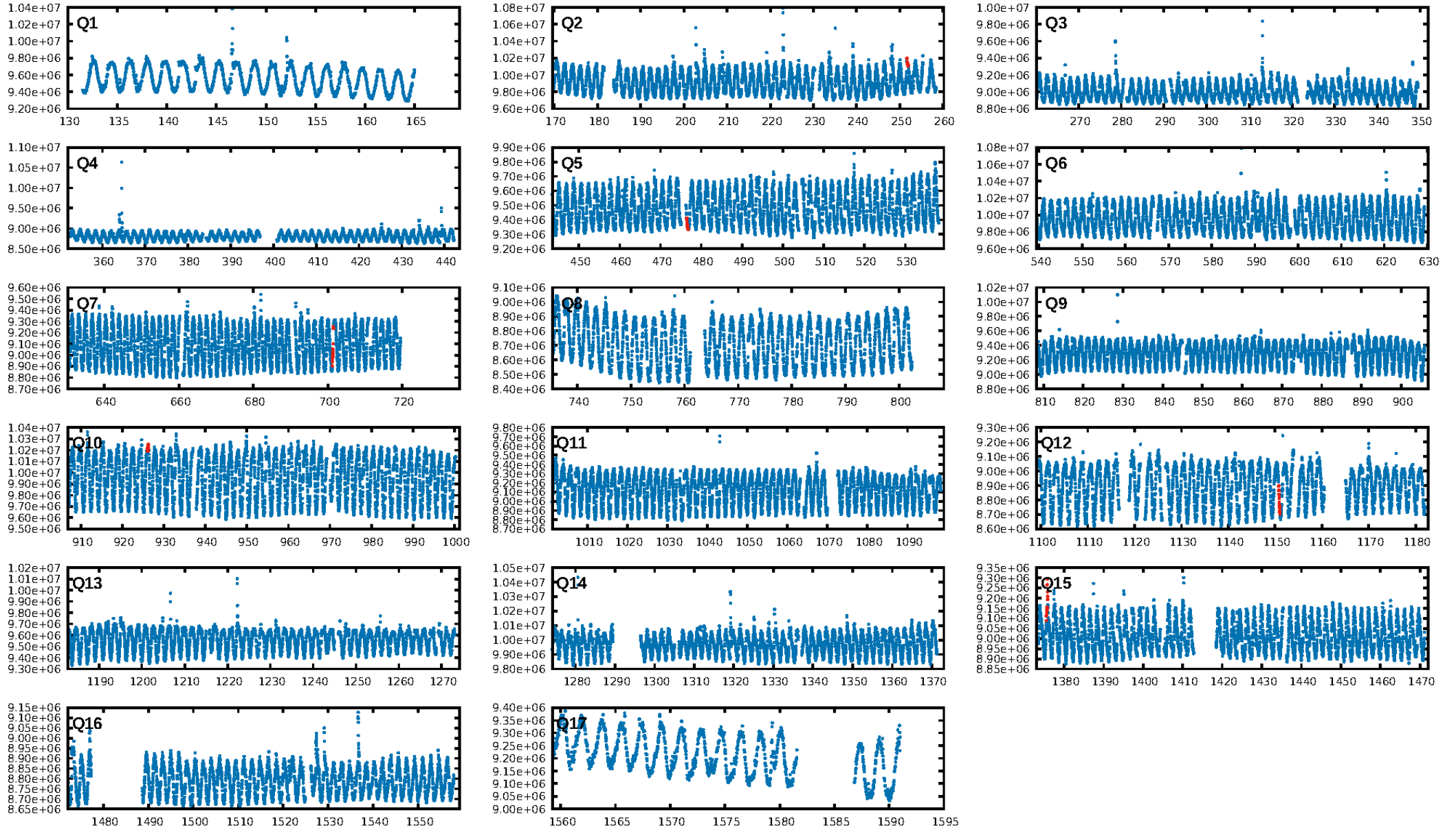
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [242.92σ]
LongPeriod-sig: 100.0% [270.74σ]
ModelChiSquare2-sig: 36.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 2.44e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.358
Centroid-sig: 34.5%
Centroid-so: 0.616 arcsec [1.17σ]
OotOffset-rm: 0.180 arcsec [1.00σ]
KicOffset-rm: 0.125 arcsec [0.65σ]
OotOffset-st: 2/2/1/0 [5]
KicOffset-st: 2/2/1/0 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.60 [3/5]

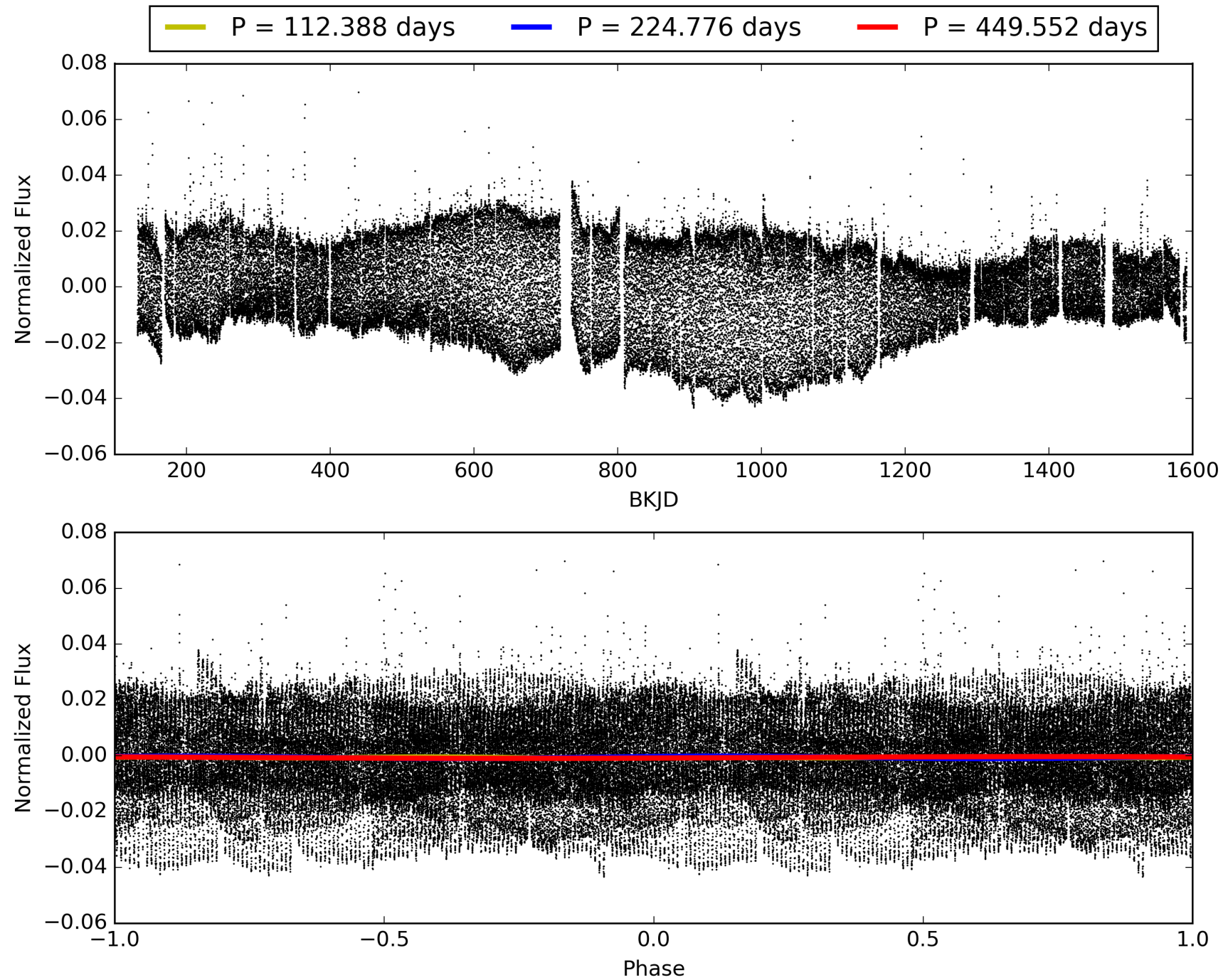
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:05 Z

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

TCE 007434110-03, PDC Light Curves

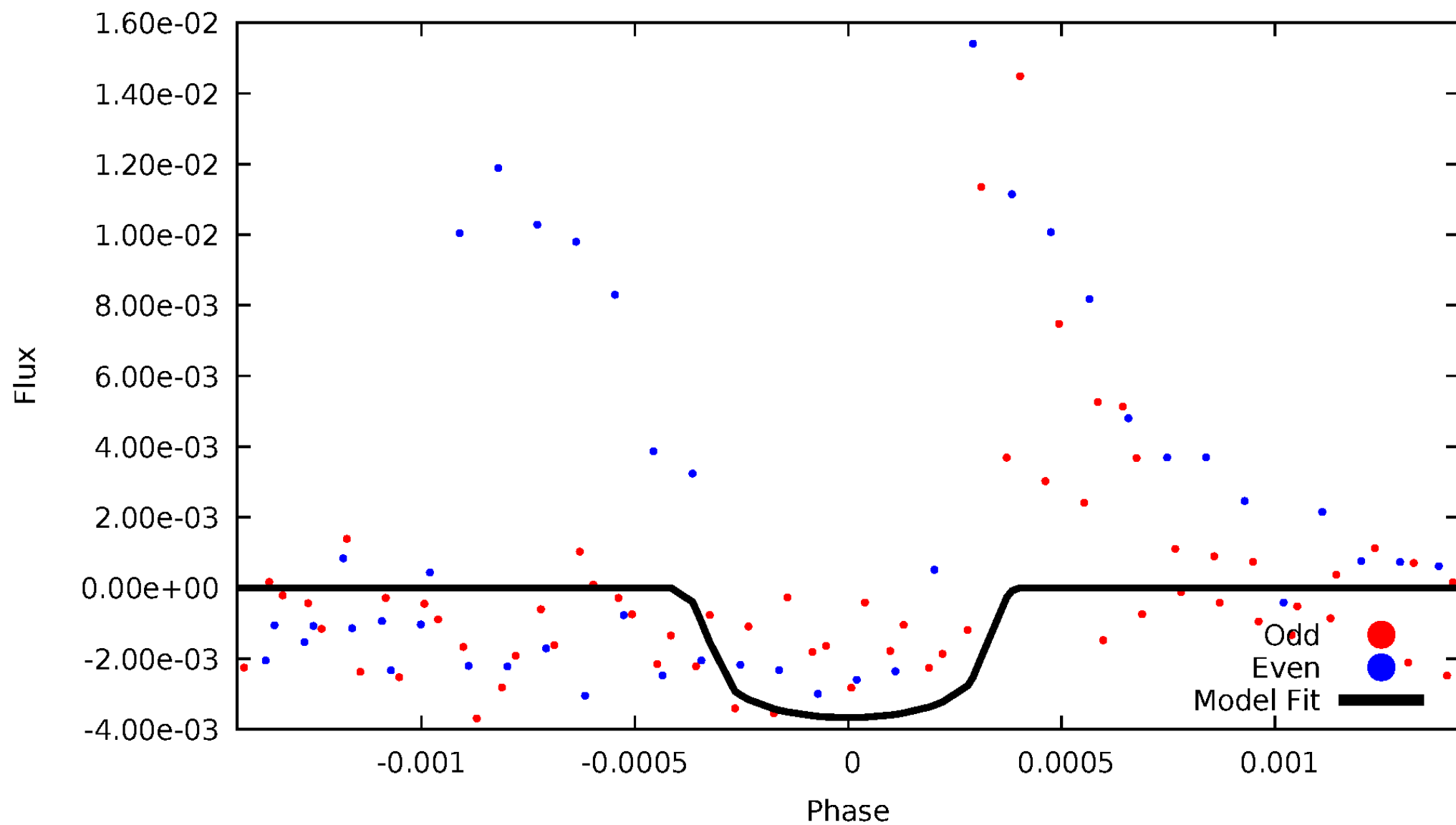


TCE 007434110-03



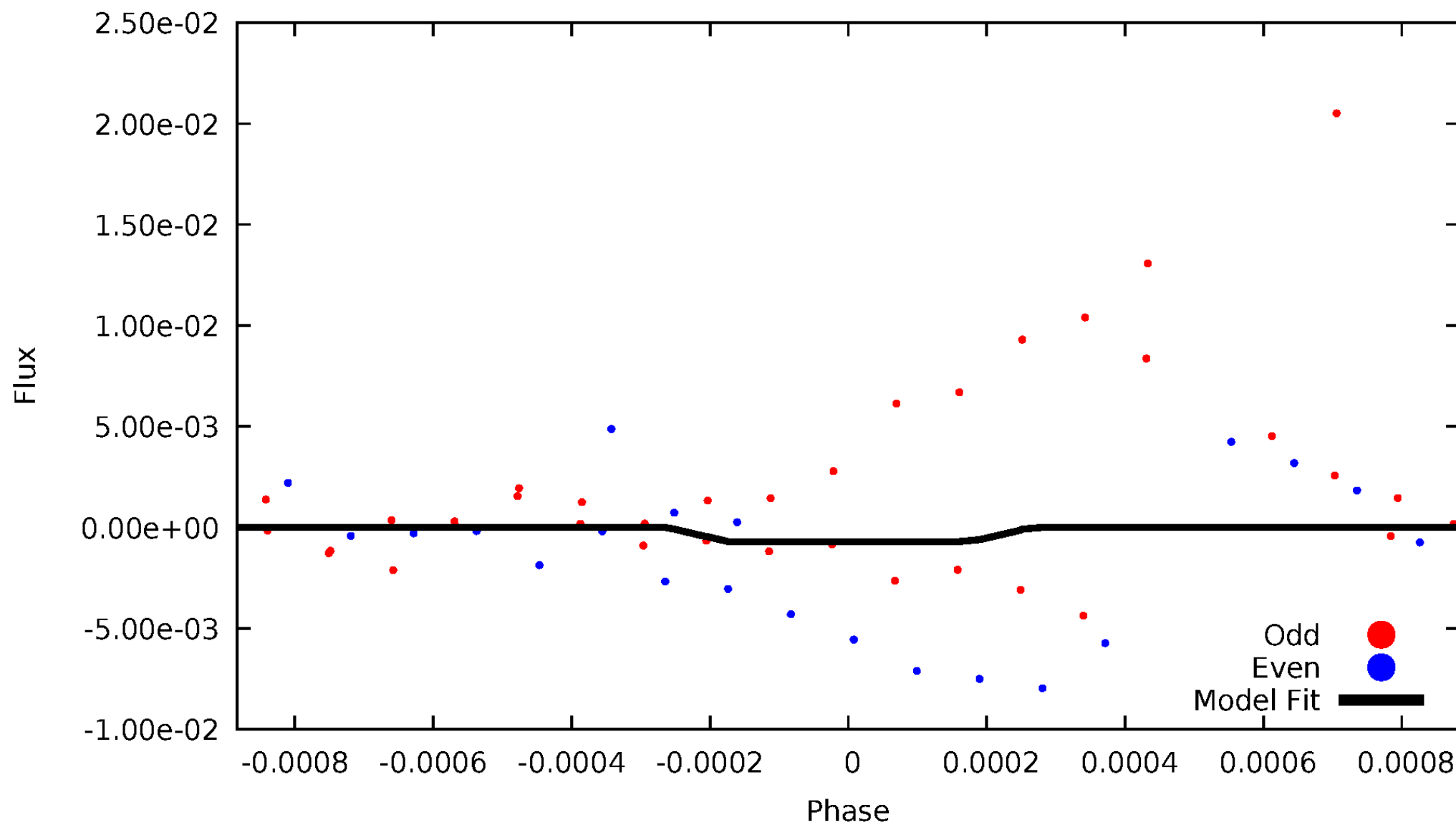
DV Odd/Even

TCE 007434110-03



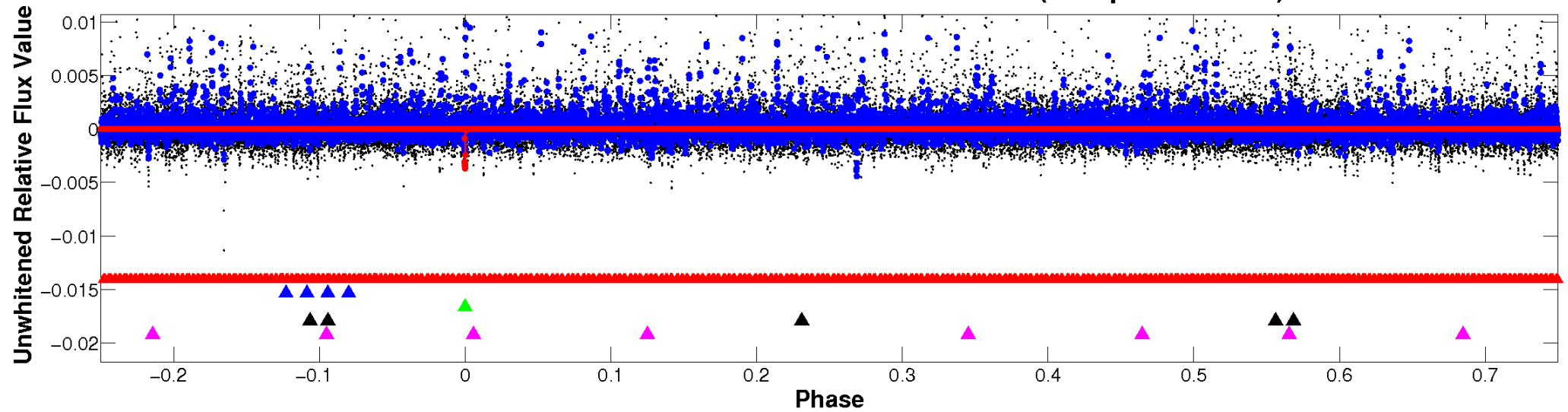
ALT Odd/Even

TCE 007434110-03

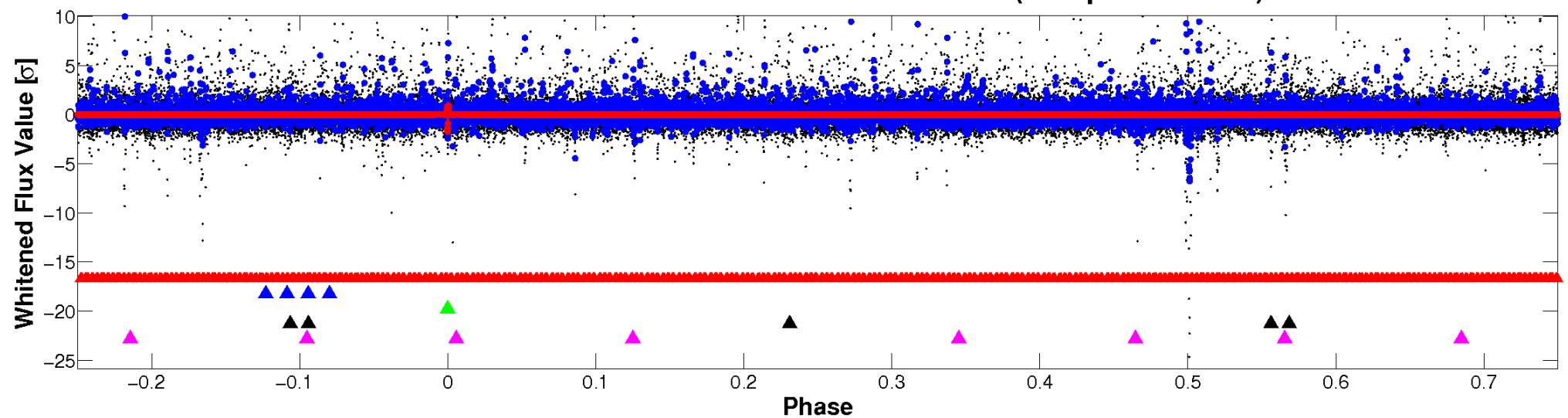


Non-Whitened Vs. Whitened Light Curve

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

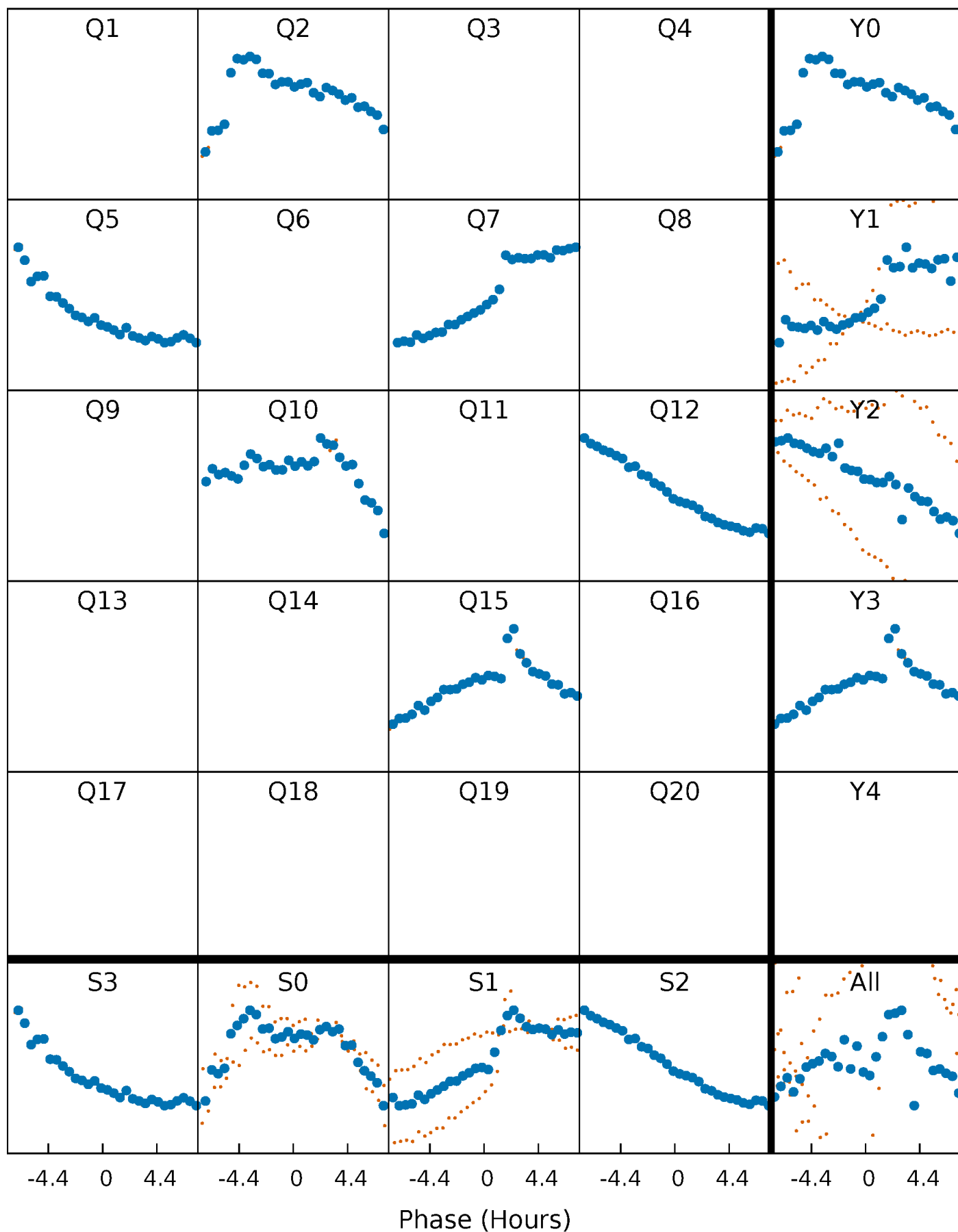


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



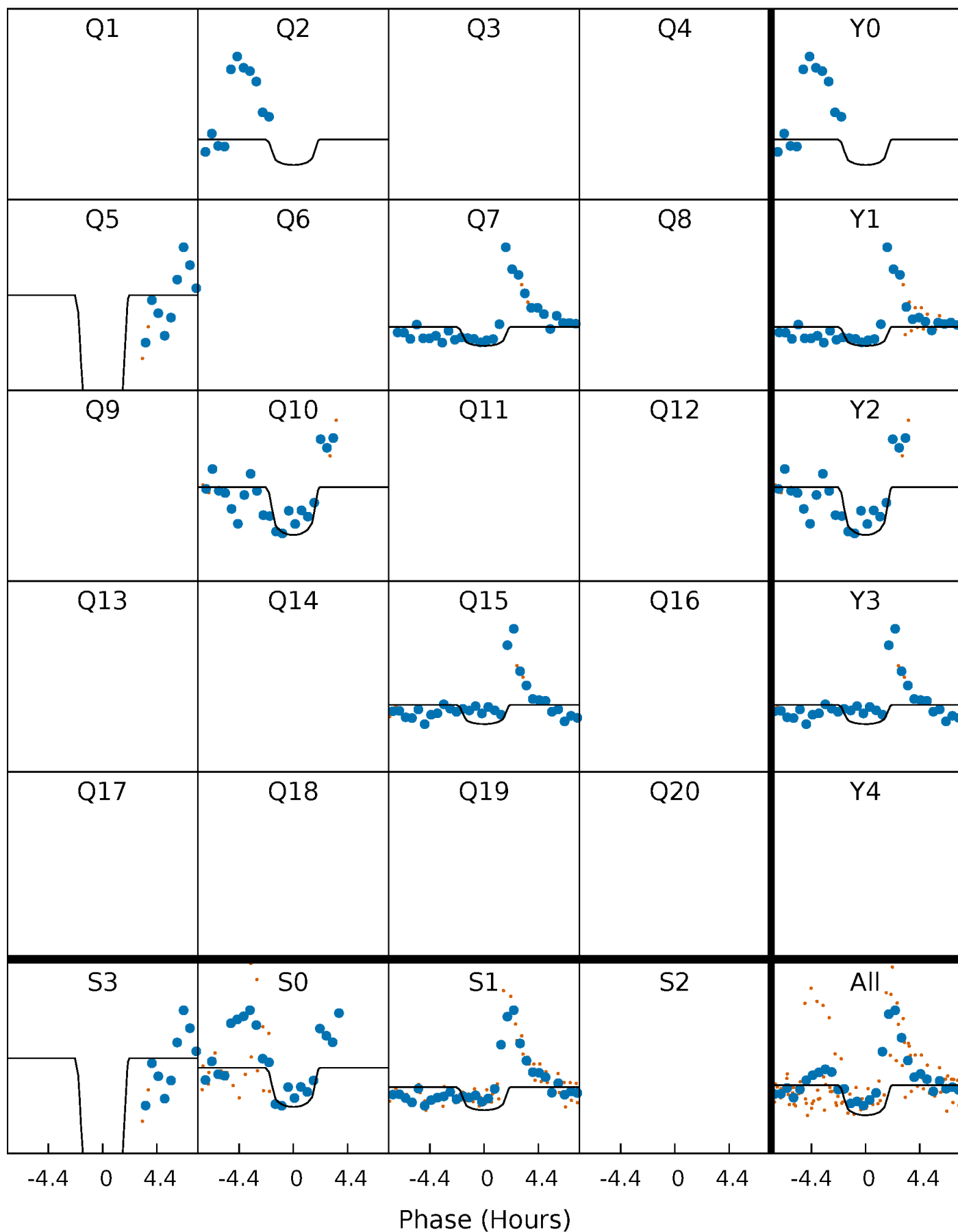
PDC Quarter-Phased Transit Curves

TCE 007434110-03 P=224.775903 Days $T_0=251.806588$ (BKJD)



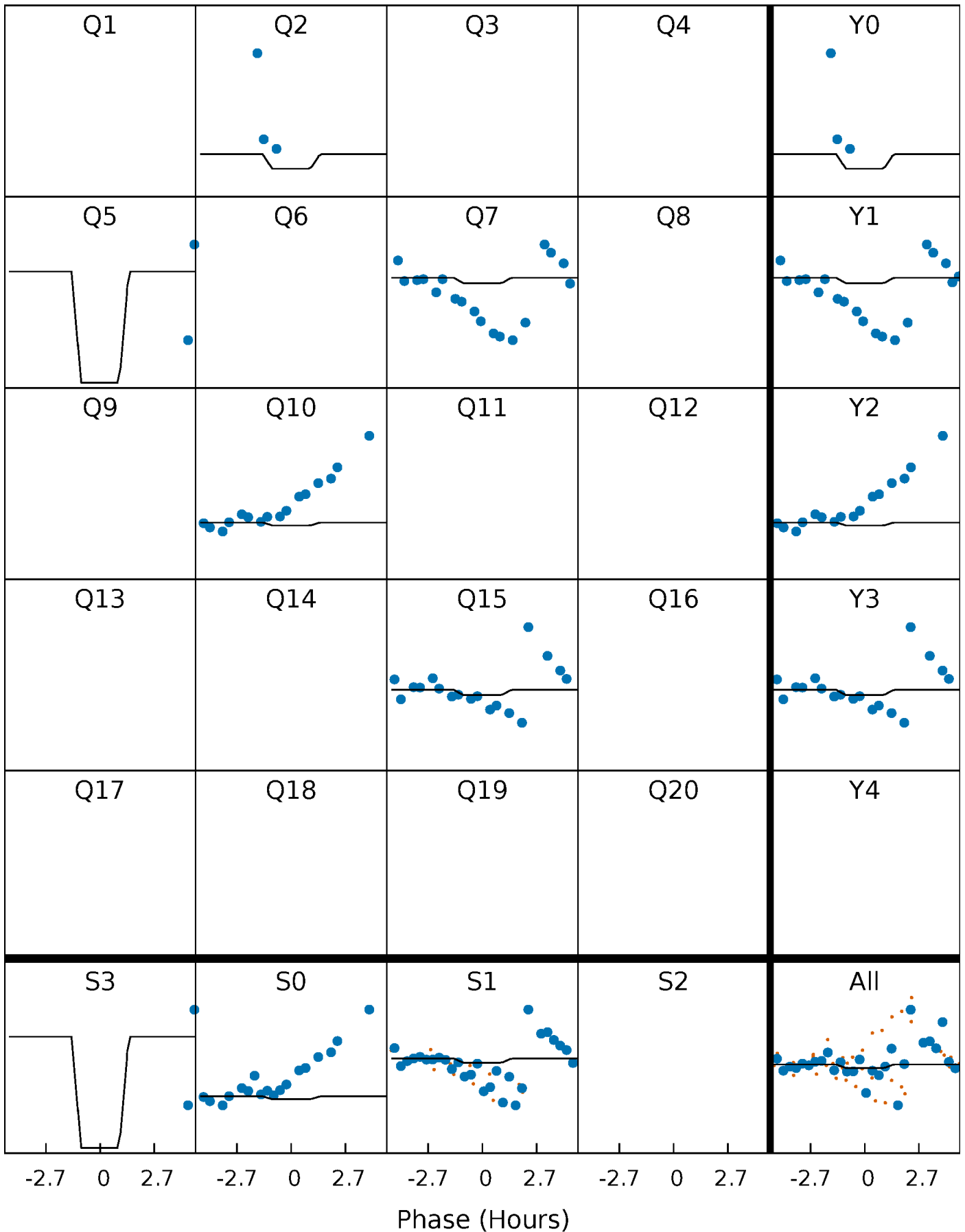
DV Quarter-Phased Transit Curves

TCE 007434110-03 P=224.775903 Days $T_0=251.806588$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

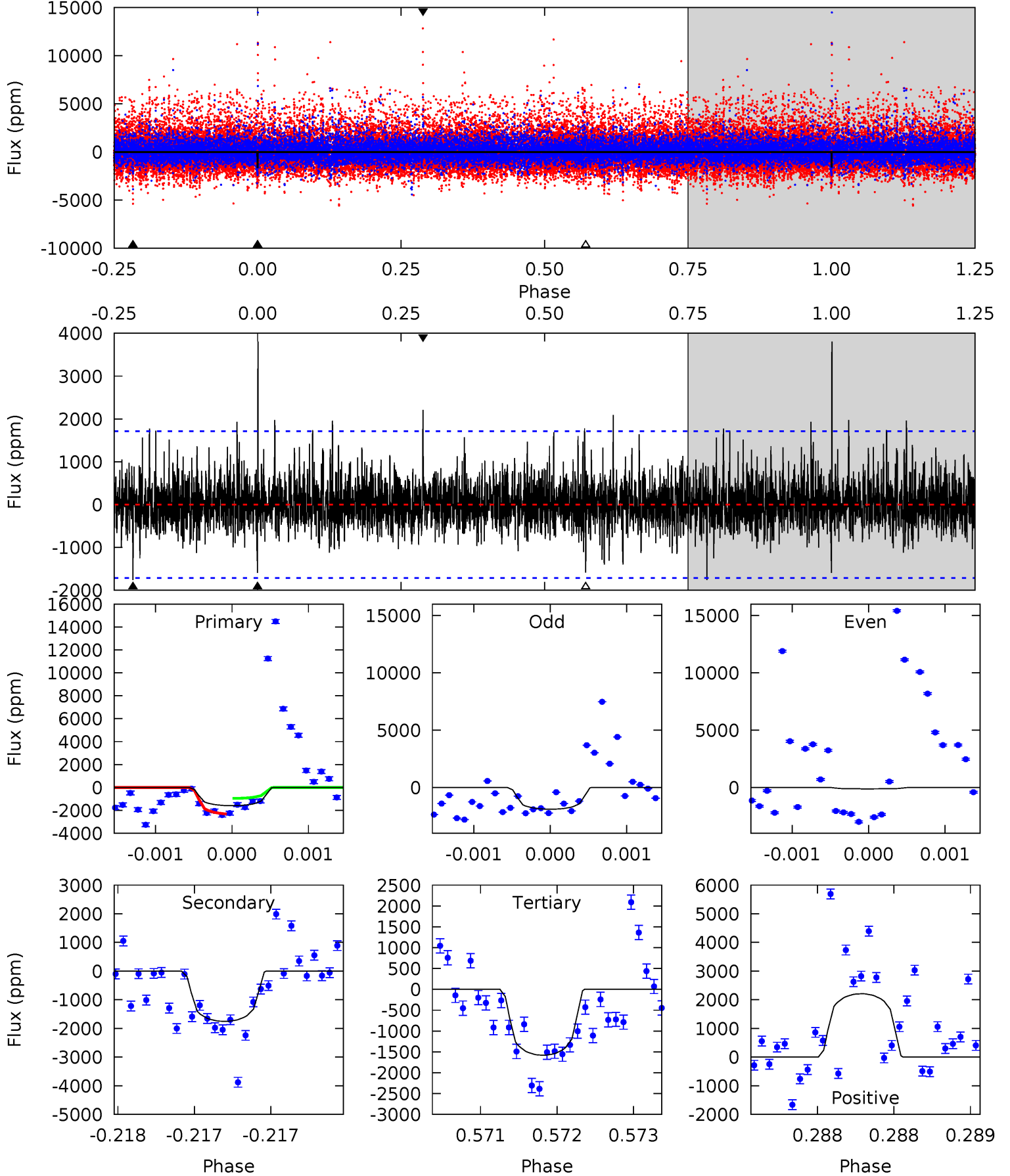
TCE 007434110-03 P=224.779721 Days $T_0=251.760693$ (BKJD)



DV Model-Shift Uniqueness Test

007434110-03, P = 224.775903 Days, E = 27.030685 Days

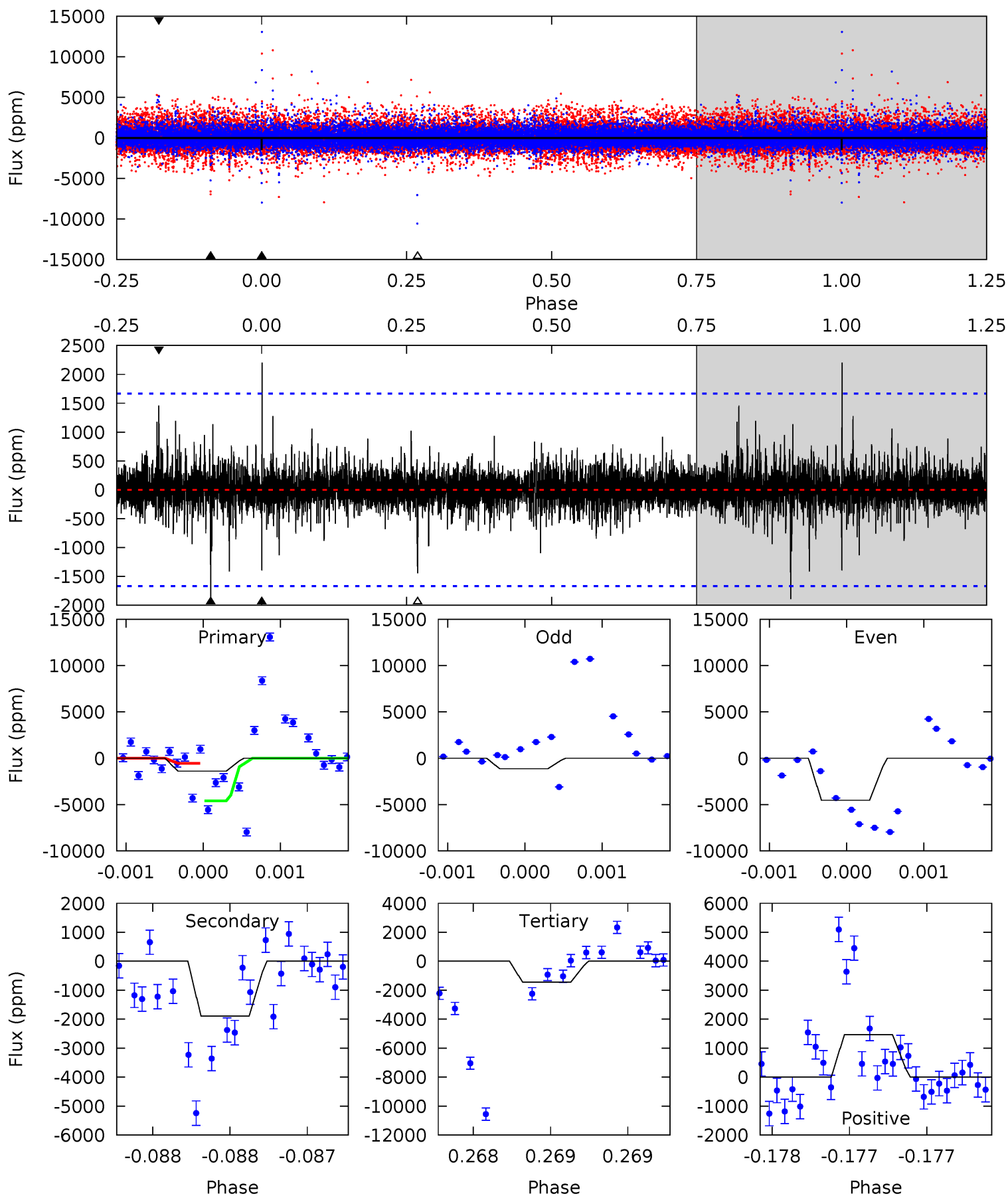
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.11	5.63	5.08	7.10	5.50	3.37	1.40	0.04	-1.98	0.56	-1.46	2.34	5.15	0.68	2.20



Alt Model-Shift Uniqueness Test

007434110-03, P = 224.779721 Days, E = 26.980972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.65	6.30	4.81	4.87	5.56	3.46	0.76	-0.16	-0.22	1.49	1.43	5.66	0.96	0.54	6.84



Stellar Parameters For KIC 007434110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3310^{+43}_{-36}	$5.051^{+0.040}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.225^{+0.033}_{-0.024}$	$0.207^{+0.037}_{-0.027}$	$25.630^{+6.331}_{-5.537}$
	+1%/-1%	+1%/-1%	+100%/-100%	+15%/-11%	+18%/-13%	+25%/-22%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007434110-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1755 ± 312	$1.73^{+1.38}_{-1.14}$	148^{+4}_{-3}	2840^{+1117}_{-404}	$56830^{+451017}_{-39990}$
Alt.	-1890 ± 300	$1.40^{+1.22}_{-0.97}$	148^{+4}_{-3}	3069^{+1479}_{-478}	$96895^{+948112}_{-69451}$

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 $A_{obs} \gg 1.0$

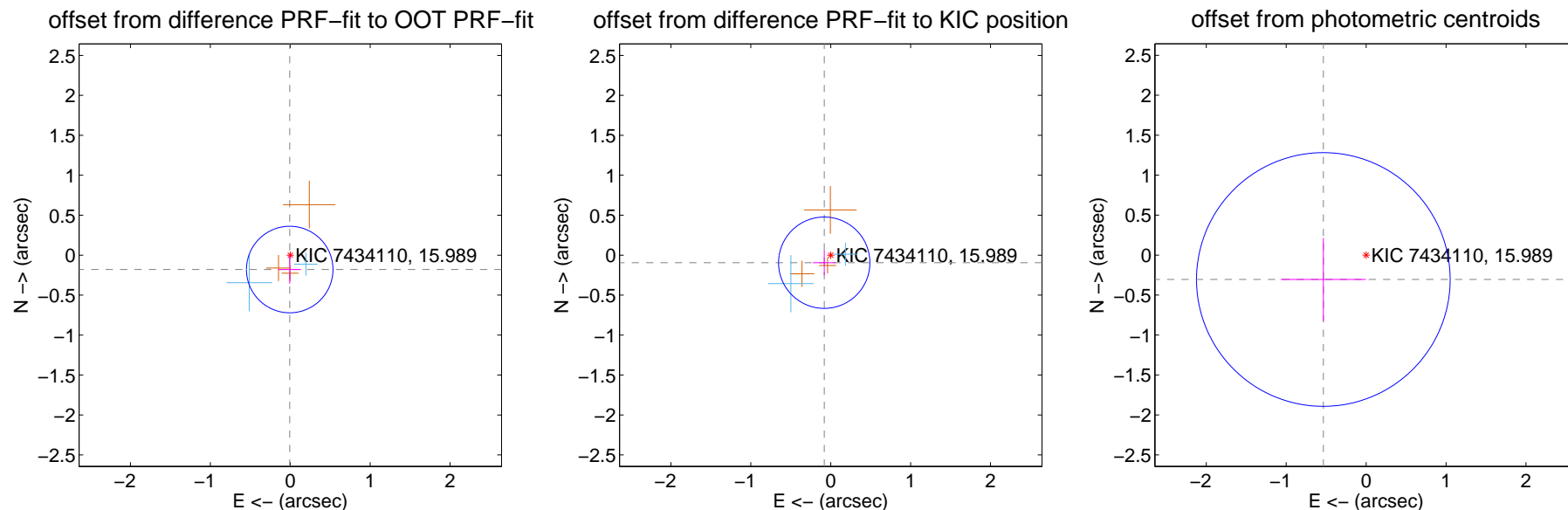
DV Centroid Data

Supplemental centroid analysis for 007434110-03. Kepler magnitude: 15.99. Transit SNR 7.31

There are 2 quarters with good PRF difference image offsets

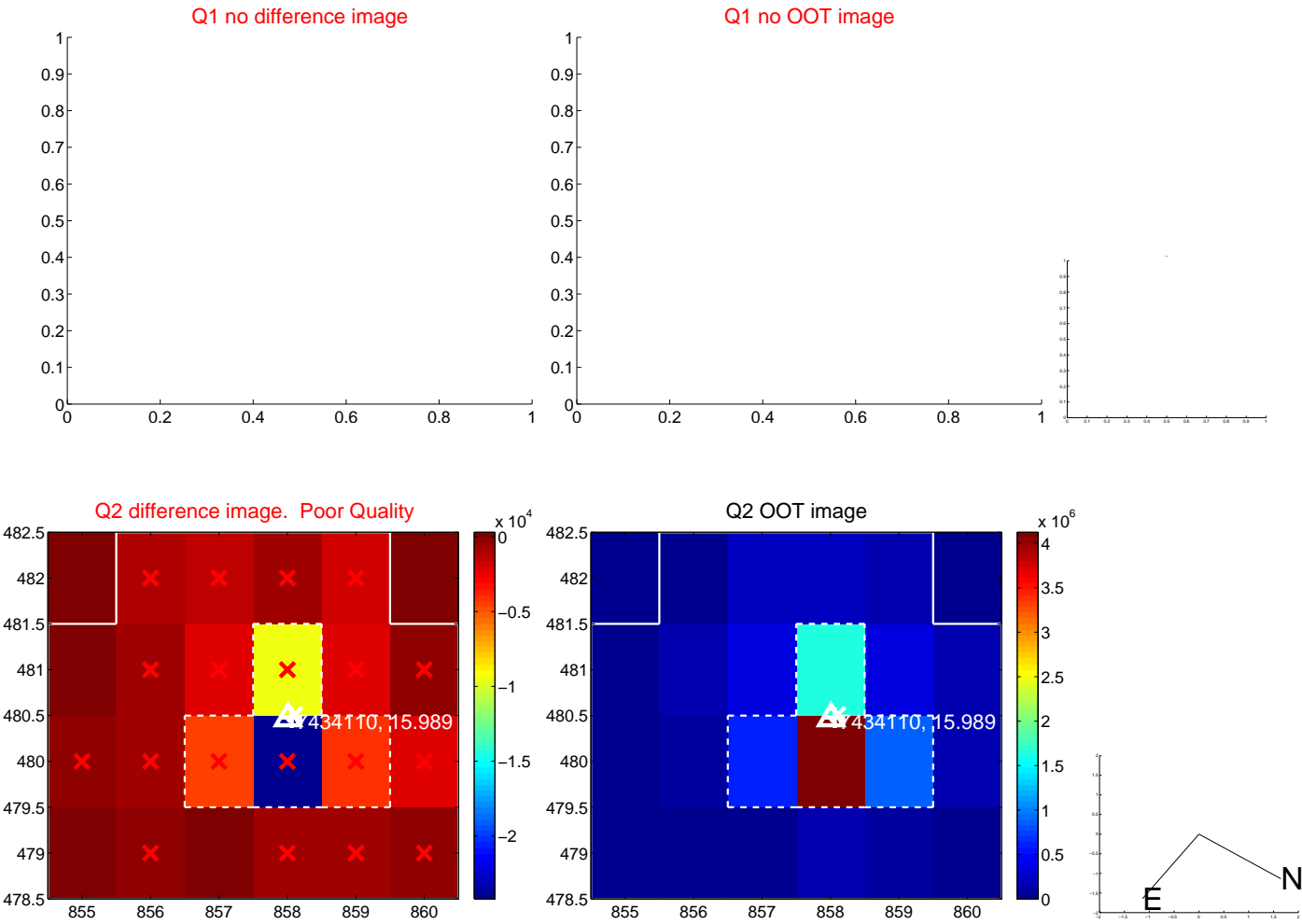
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.180 ± 0.180	1.00	0.007 ± 0.142	-0.180 ± 0.177
PRF-fit source offset from KIC position	0.125 ± 0.191	0.65	0.081 ± 0.143	-0.095 ± 0.156
photometric centroid source offset	0.62 ± 0.53	1.17	0.54 ± 0.53	-0.31 ± 0.52

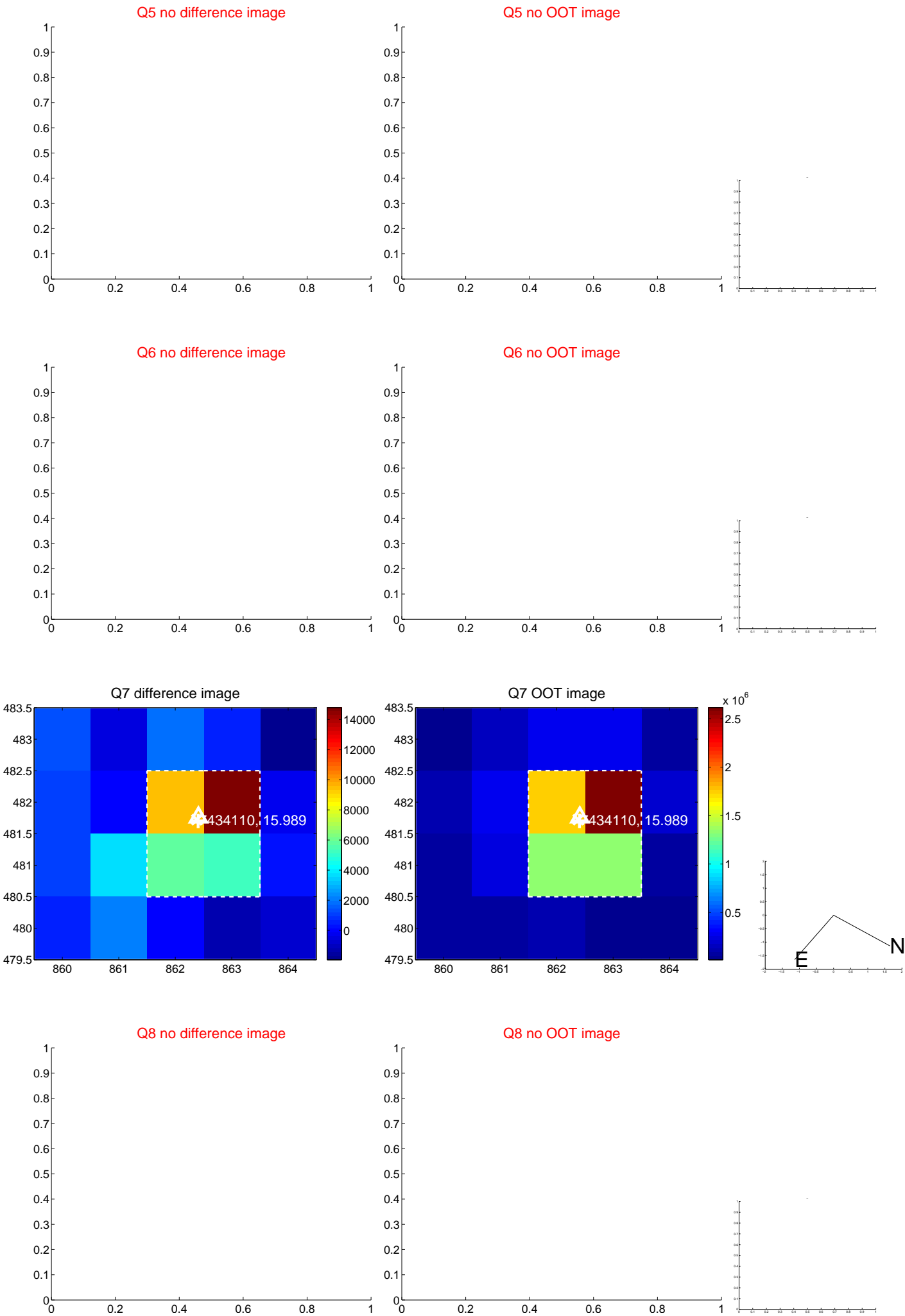


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

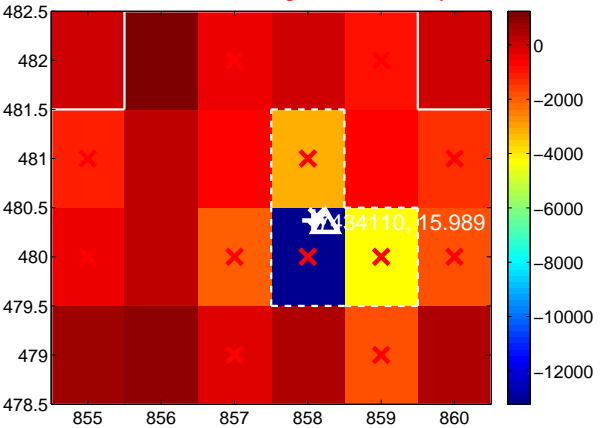
Q9 no difference image



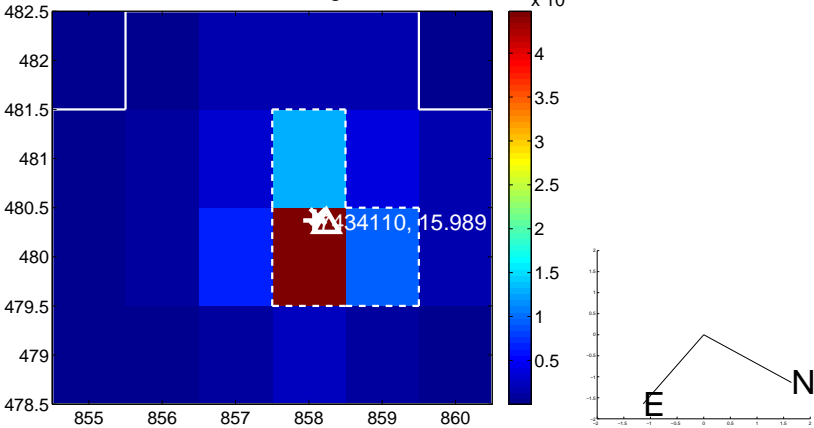
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



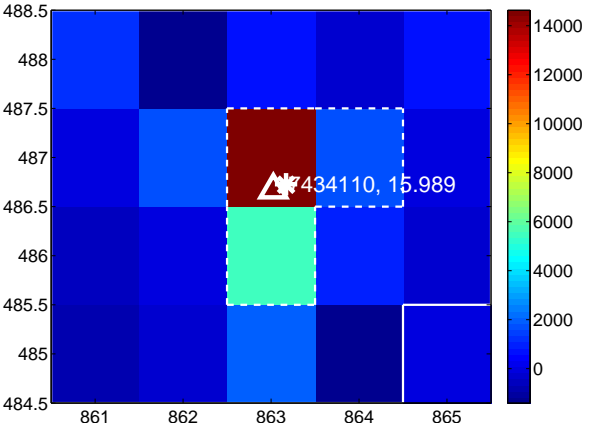
Q11 no difference image



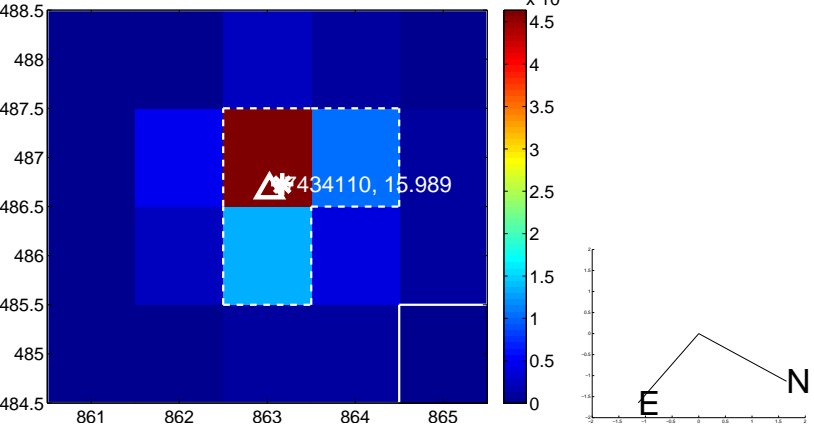
Q11 no OOT image



Q12 difference image



Q12 OOT image

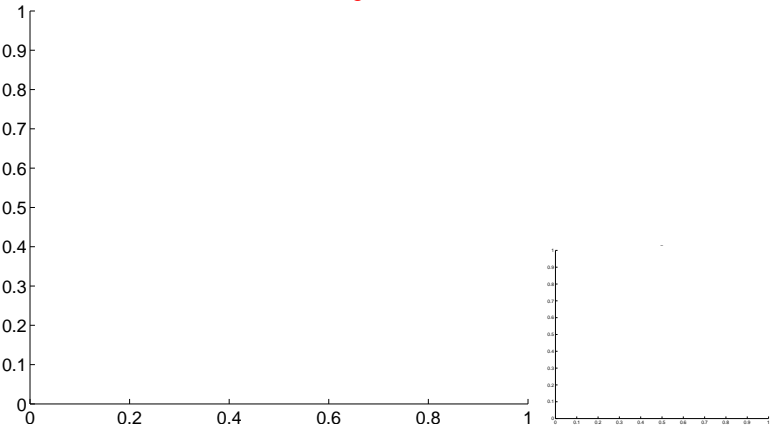


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q13 no difference image



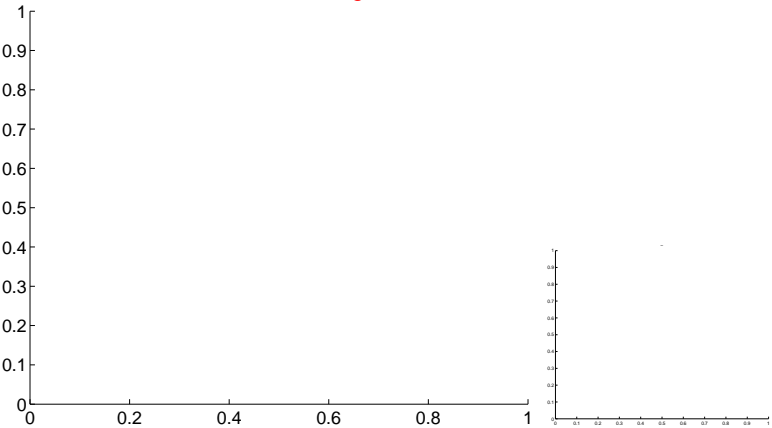
Q13 no OOT image



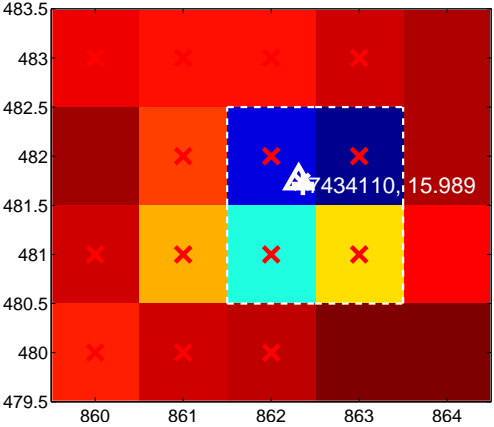
Q14 no difference image



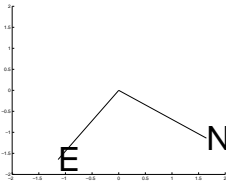
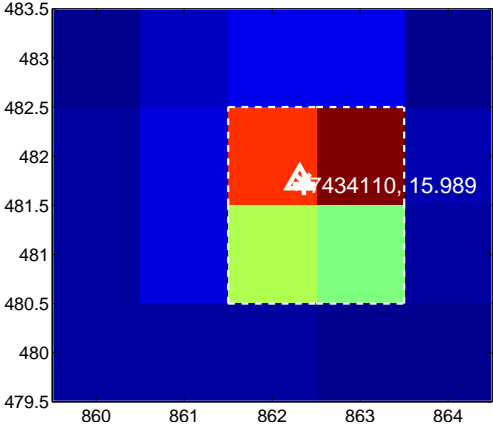
Q14 no OOT image



Q15 difference image. Poor Quality



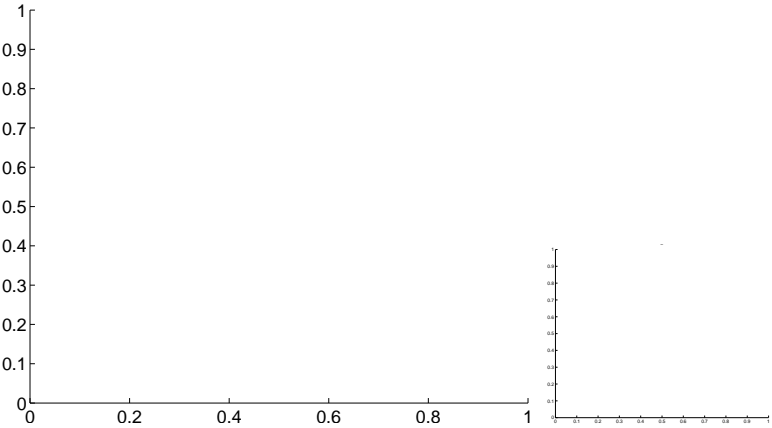
Q15 OOT image



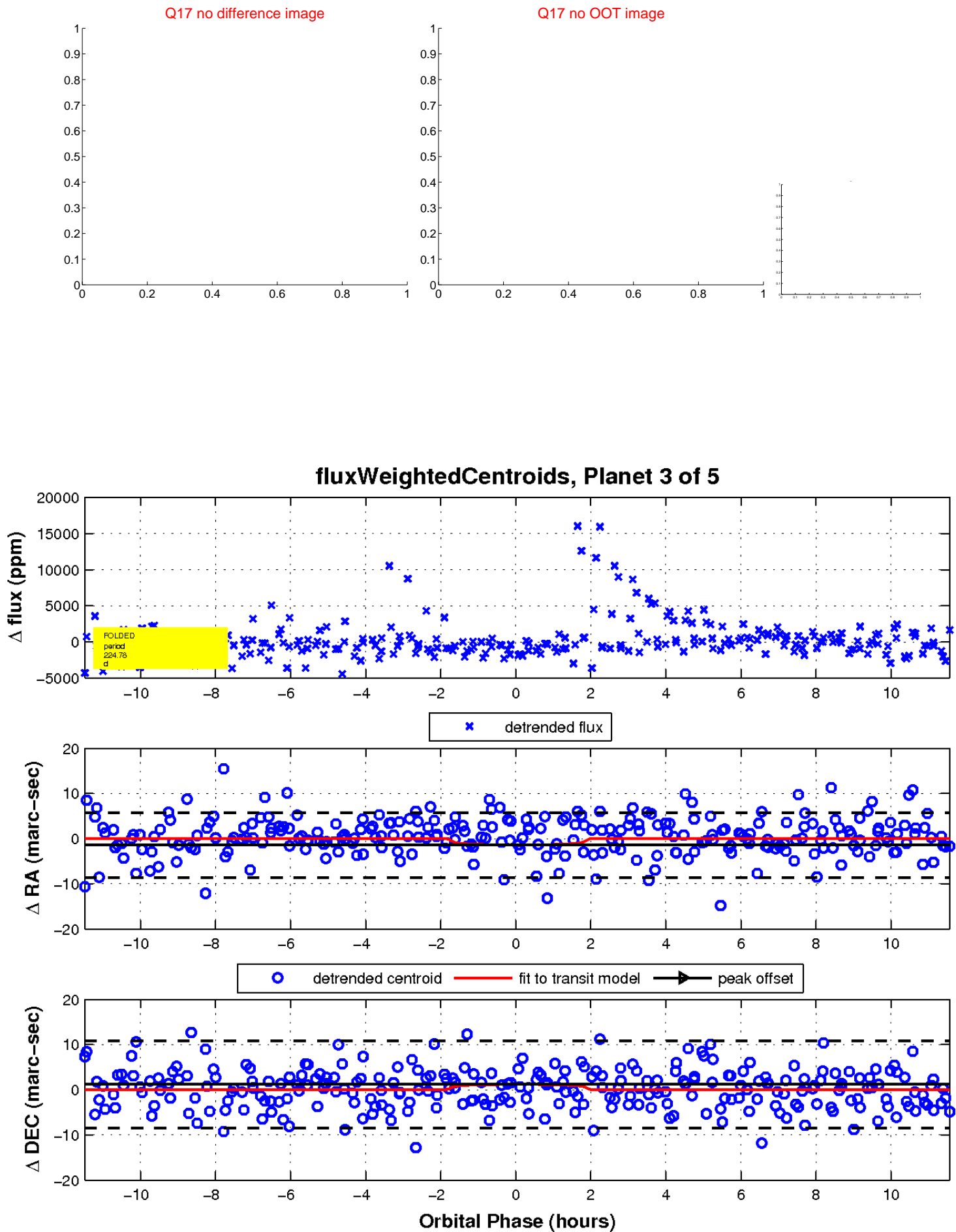
Q16 no difference image



Q16 no OOT image

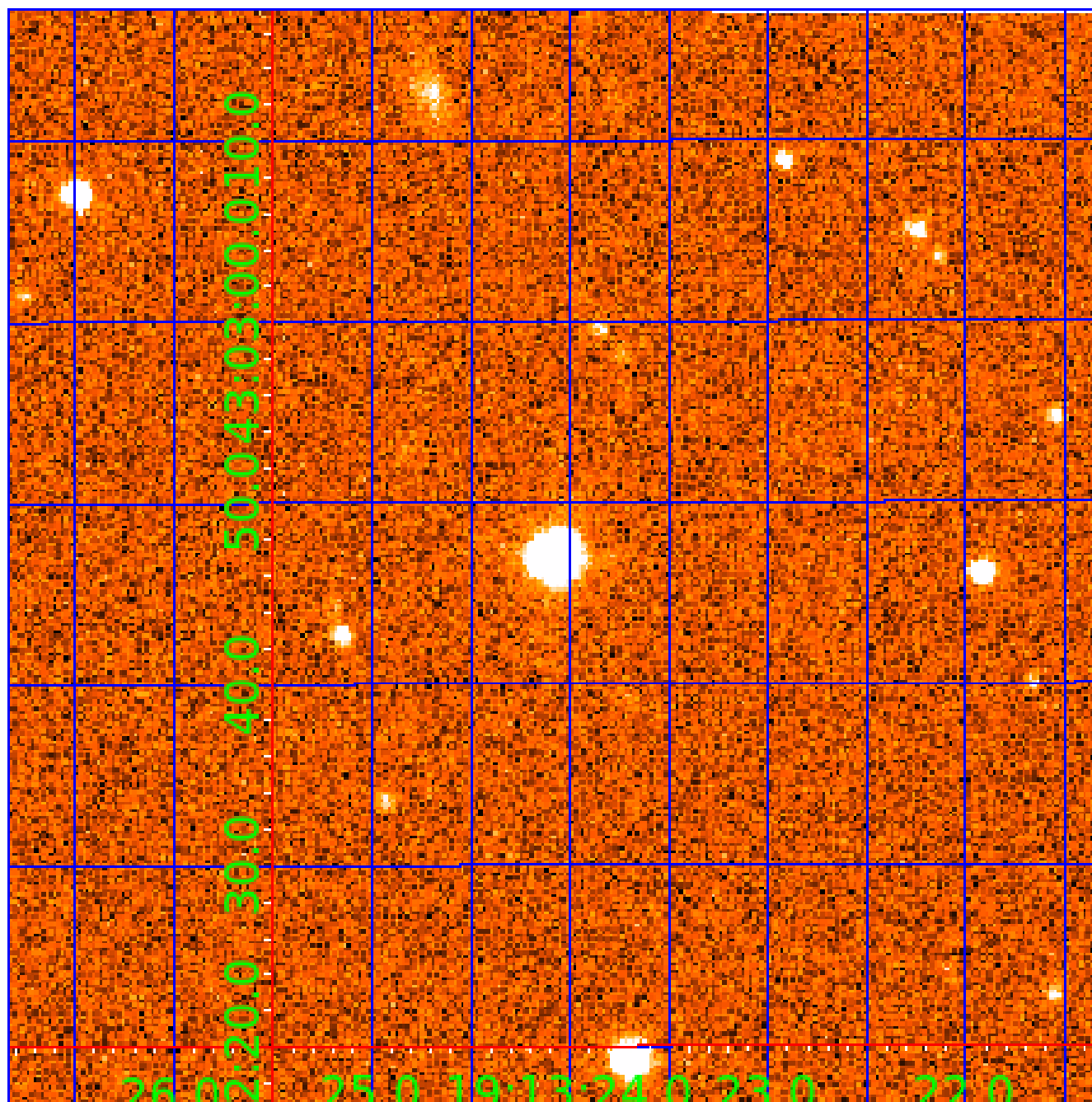


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007434110

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})
007434110-01	OBS	No	2.409089	131.747452	638.1	7.315	10.8	14.1	0.23	3310	0.83	12.55
007434110-02	OBS	No	446.330855	233.854265	5032.8	4.731	13.8	9.1	0.23	3310	1.60	0.01
007434110-03	OBS	No	224.775903	251.806588	3672.8	3.861	13.5	7.3	0.23	3310	1.35	0.03
007434110-04	OBS	No	300.622796	376.824342	4033.3	5.505	11.9	8.0	0.23	3310	1.76	0.02
007434110-05	OBS	No	175.287864	253.107056	2978.7	3.000	11.5	-1.0	0.23	3310	1.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007434110-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007434110-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

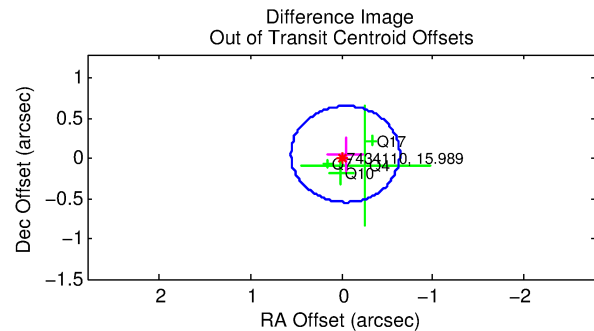
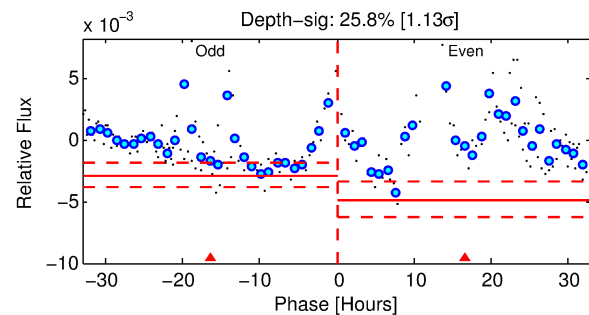
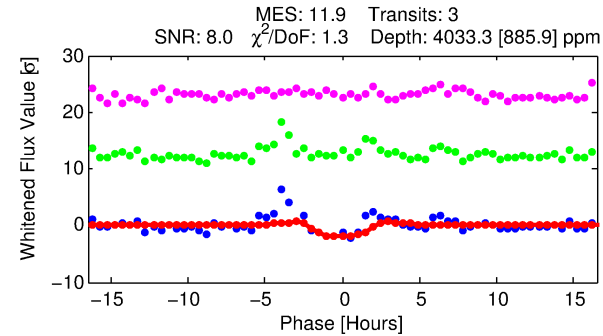
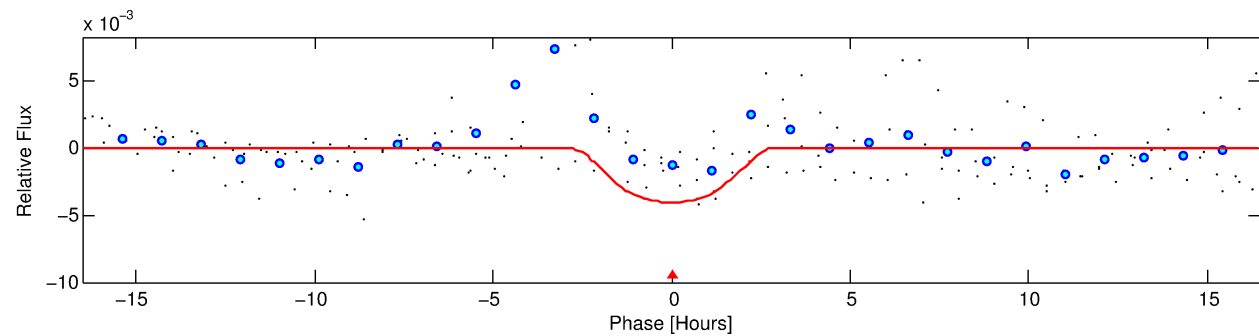
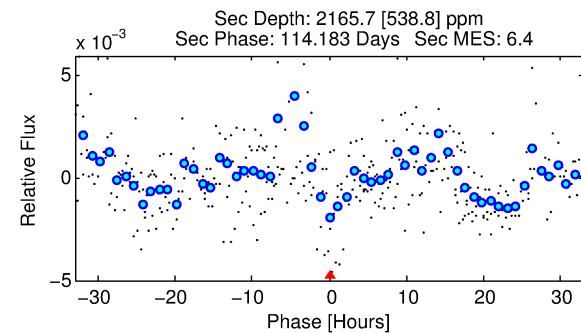
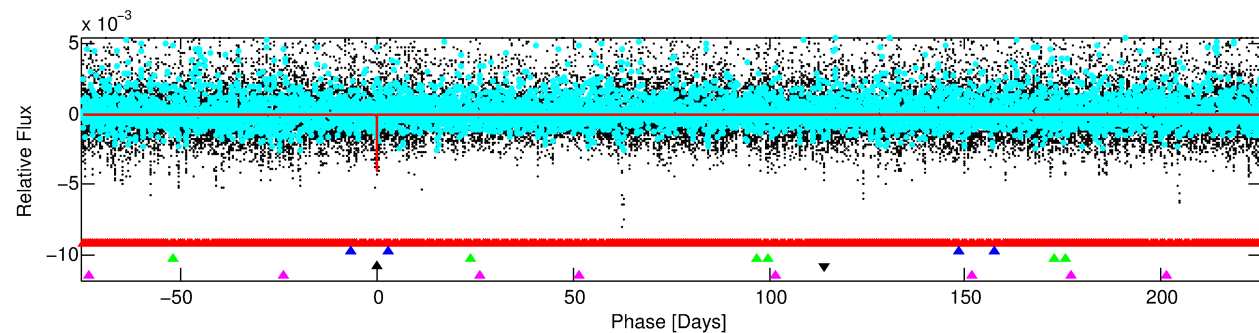
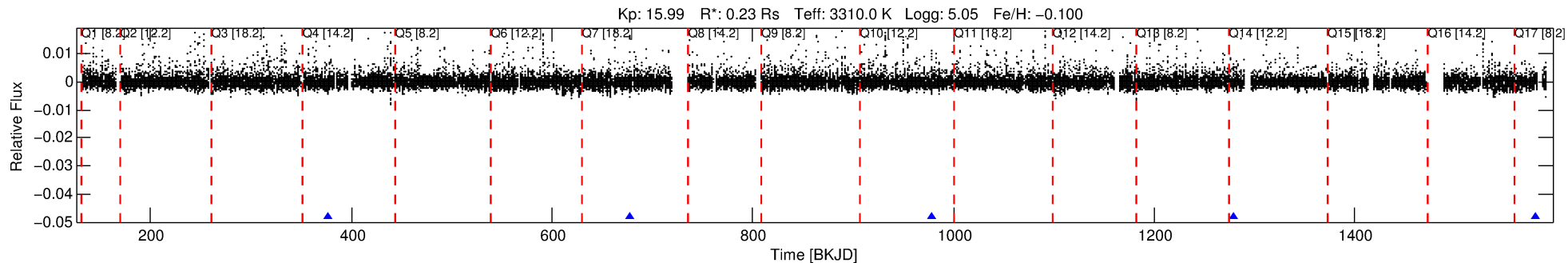
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007434110-04

No Significant Match Found

DV One-Page Summary

KIC: 7434110 Candidate: 4 of 5 Period: 300.623 d



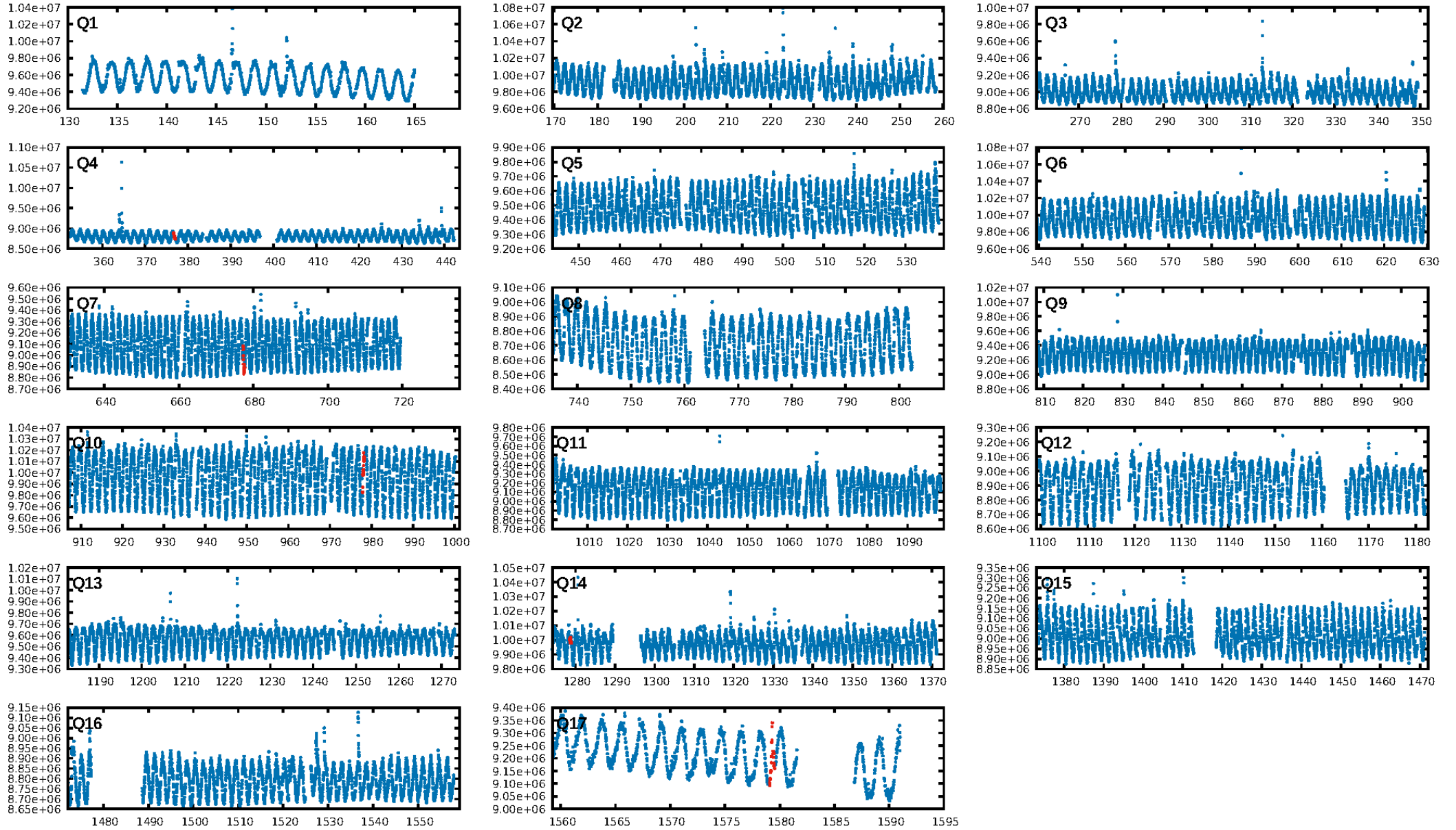
DV Fit Results:

Period = 300.62280 [0.01059] d
Epoch = 376.8243 [0.0131] BKJD
Rp/R* = 0.0716 [0.0117]
a/R* = 229.42 [55.11]
b = 0.92 [0.05]
Seff = 0.02 [0.00]
Teq = 96 [3] K
Rp = 1.76 [0.39] Re
a = 0.5202 [0.0538] AU
Ag = 104400.19 [44620.34] [2.34σ]
Teffp = 2669 [276] K [9.32σ]

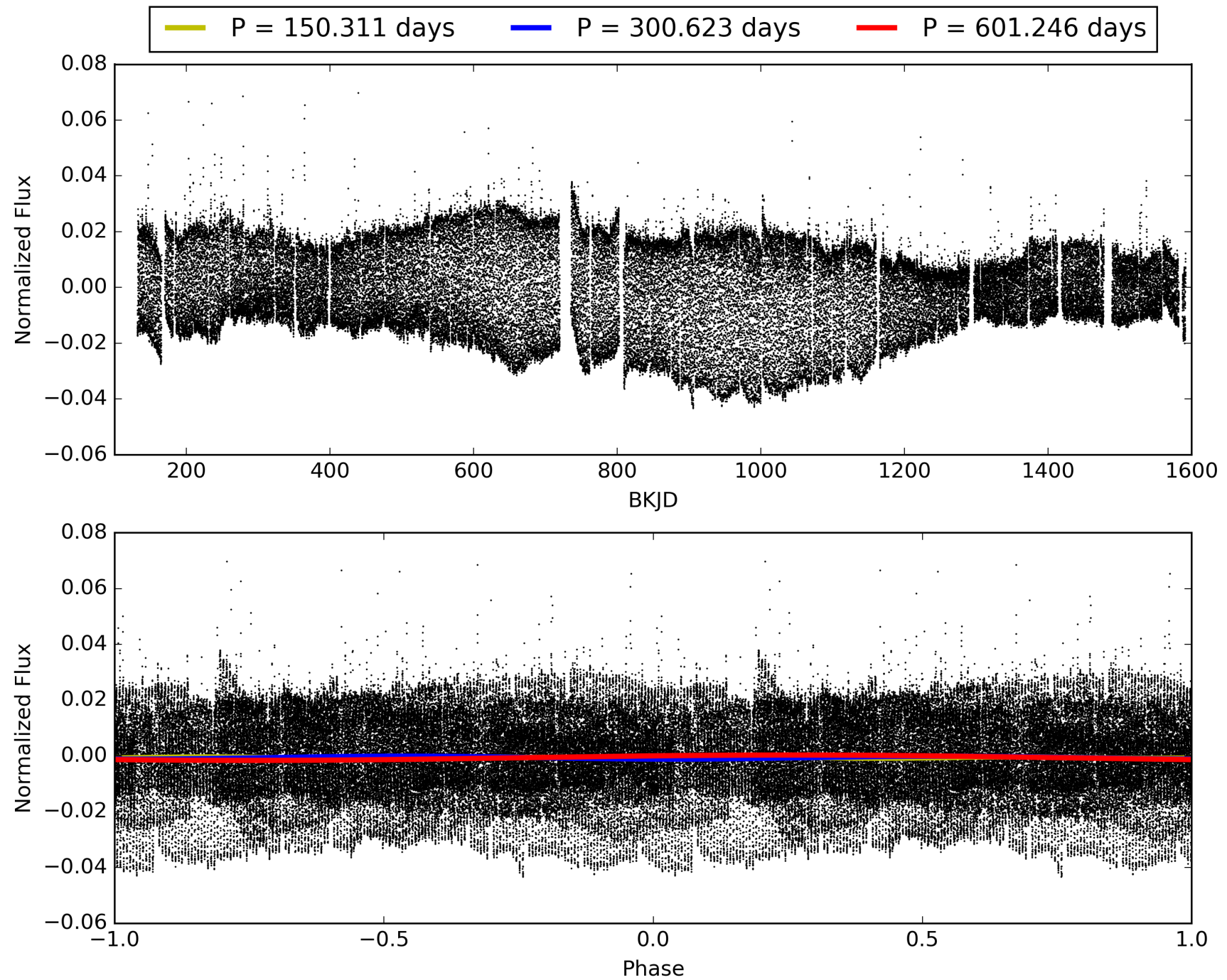
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [270.74σ]
LongPeriod-sig: 100.0% [481.77σ]
ModelChiSquare2-sig: 21.5%
ModelChiSquareGof-sig: 94.9%
Bootstrap-pfa: 8.59e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -33.66
Centroid-sig: 3.8%
Centroid-so: 0.999 arcsec [1.95σ]
OotOffset-rm: 0.068 arcsec [0.34σ]
KicOffset-rm: 0.102 arcsec [0.51σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.75 [3/4]

TCE 007434110-04, PDC Light Curves

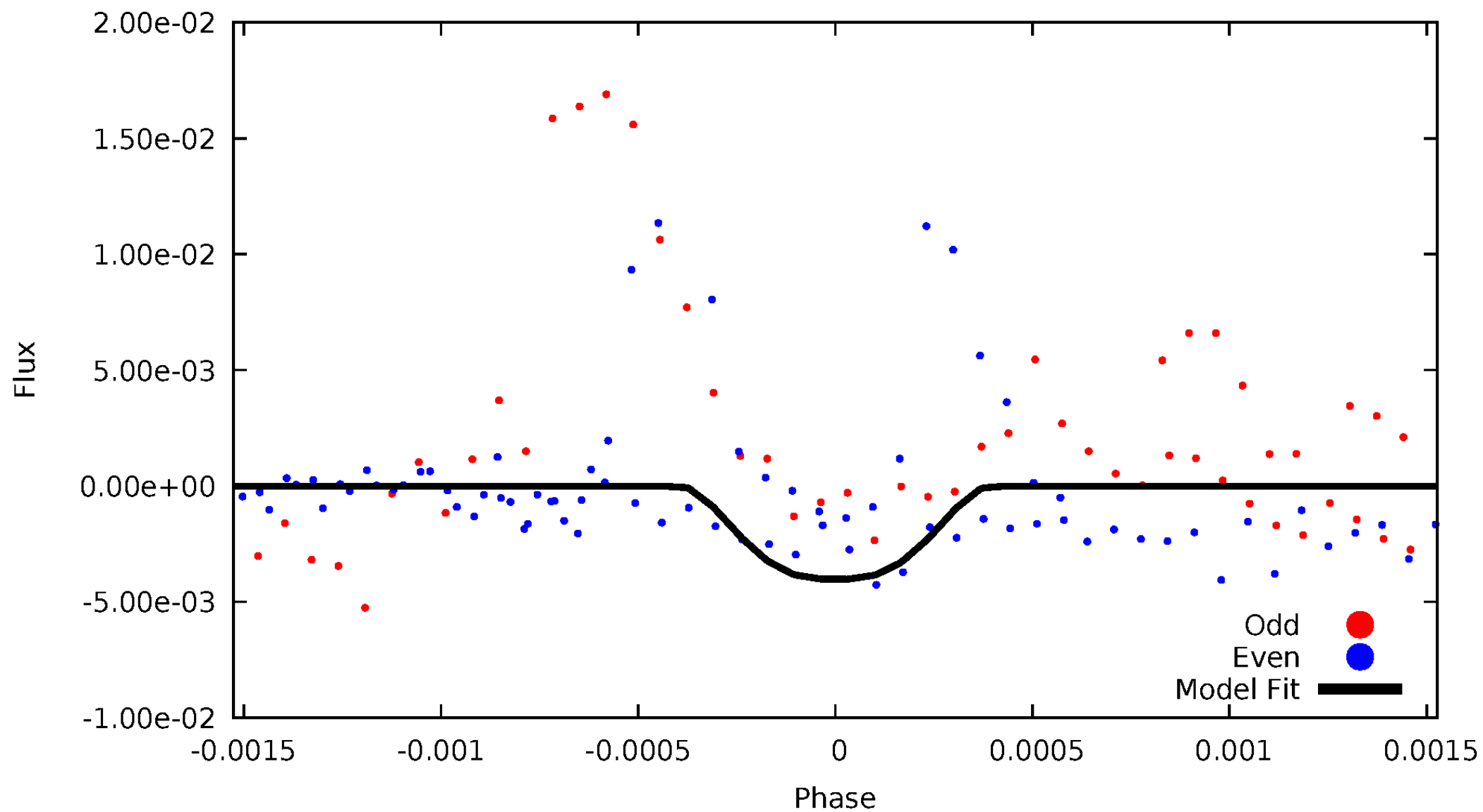


TCE 007434110-04



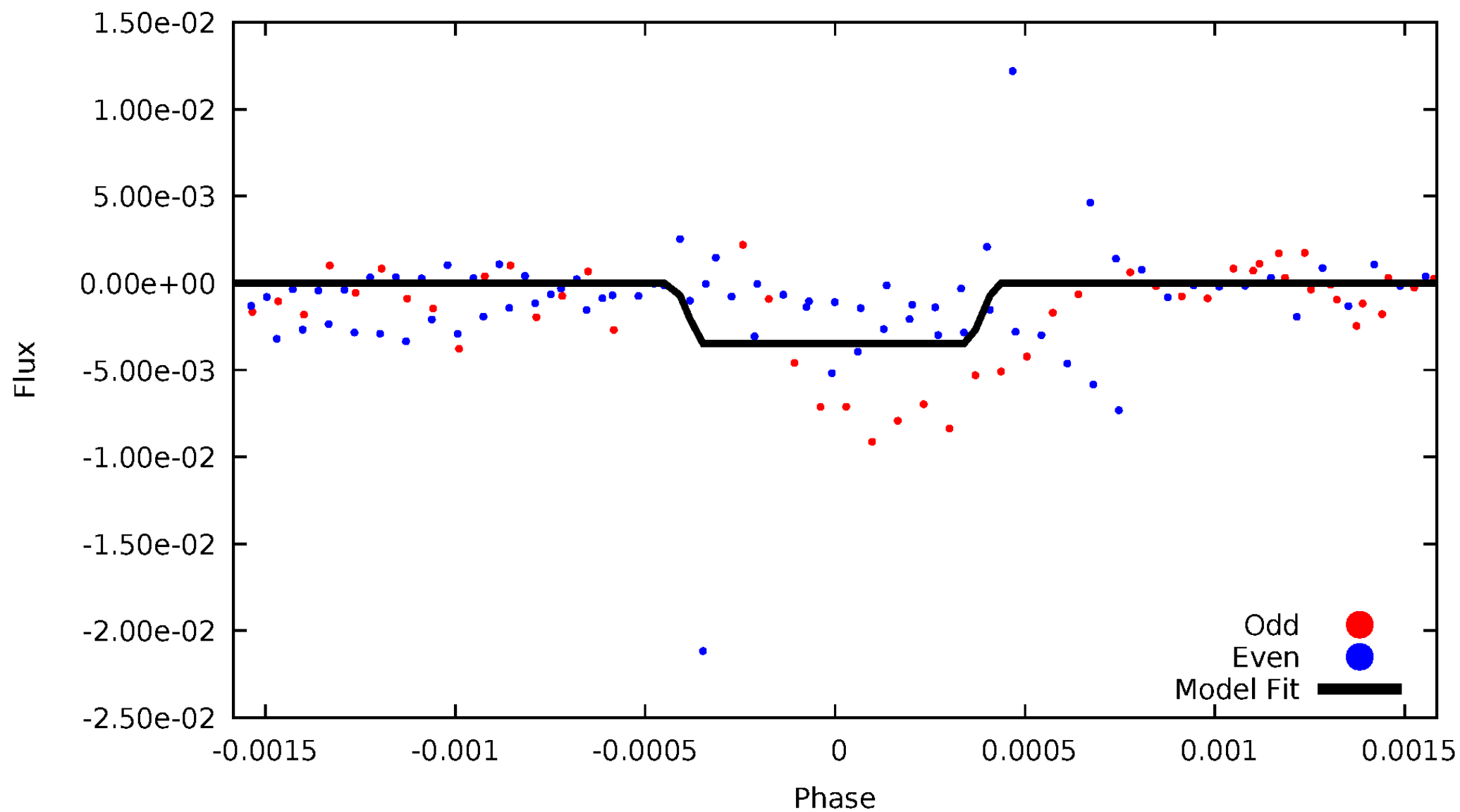
DV Odd/Even

TCE 007434110-04



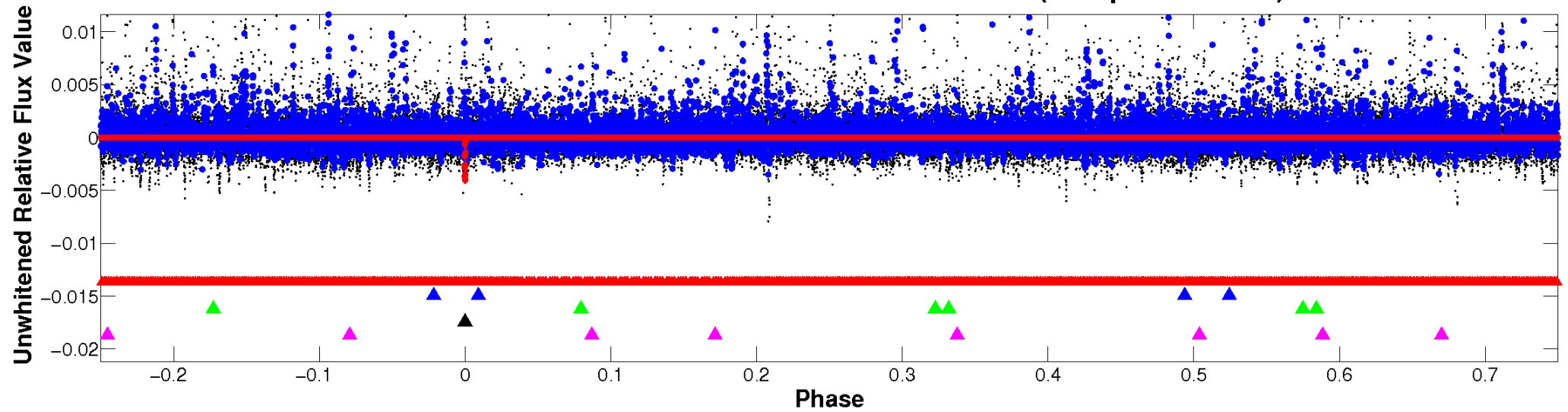
ALT Odd/Even

TCE 007434110-04

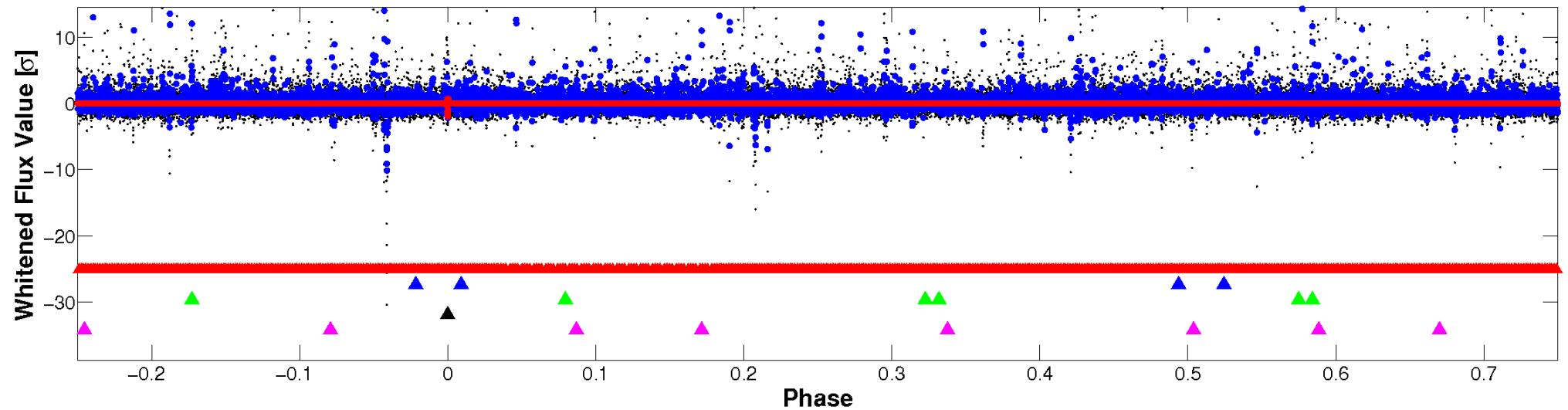


Non-Whitened Vs. Whitened Light Curve

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

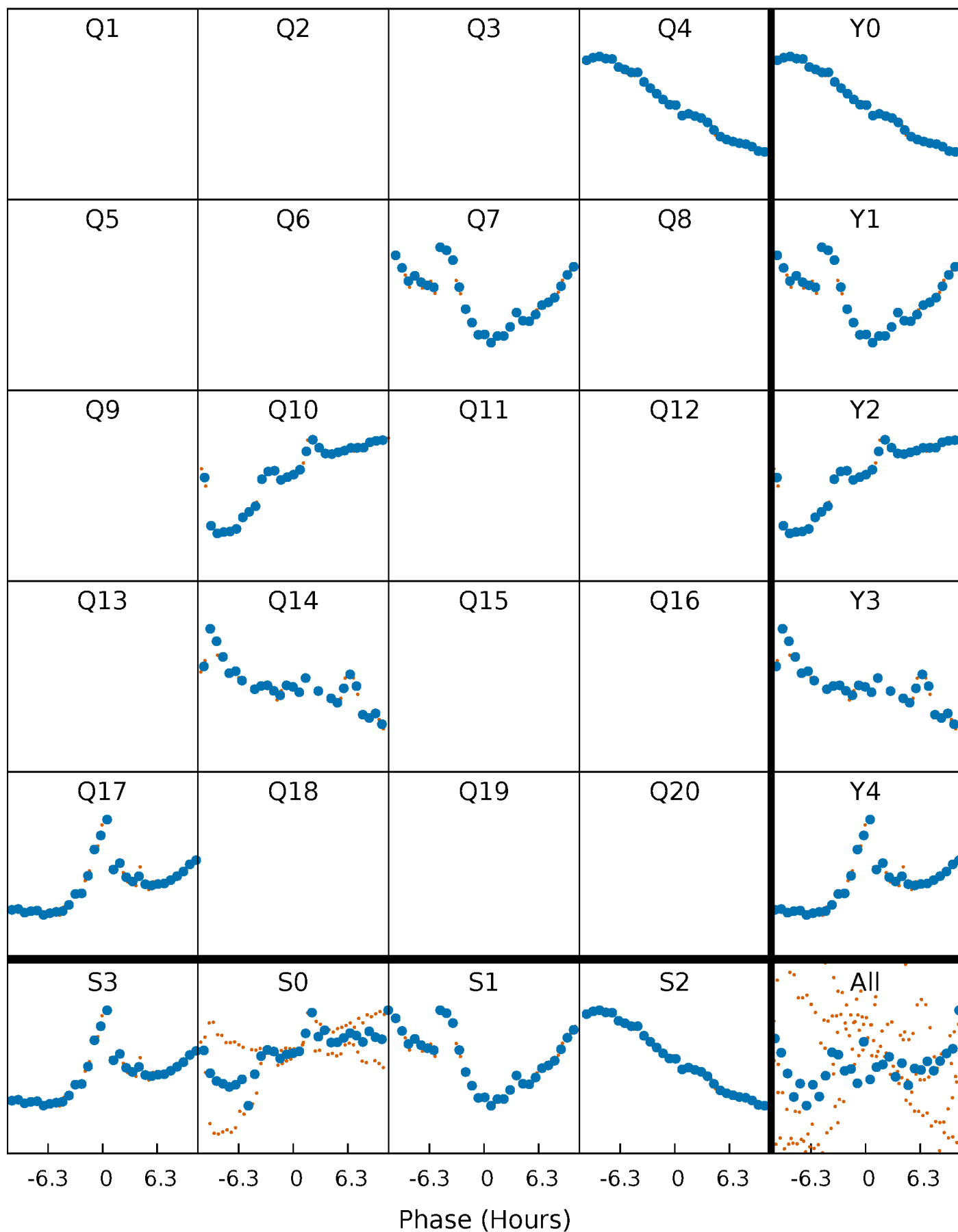


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



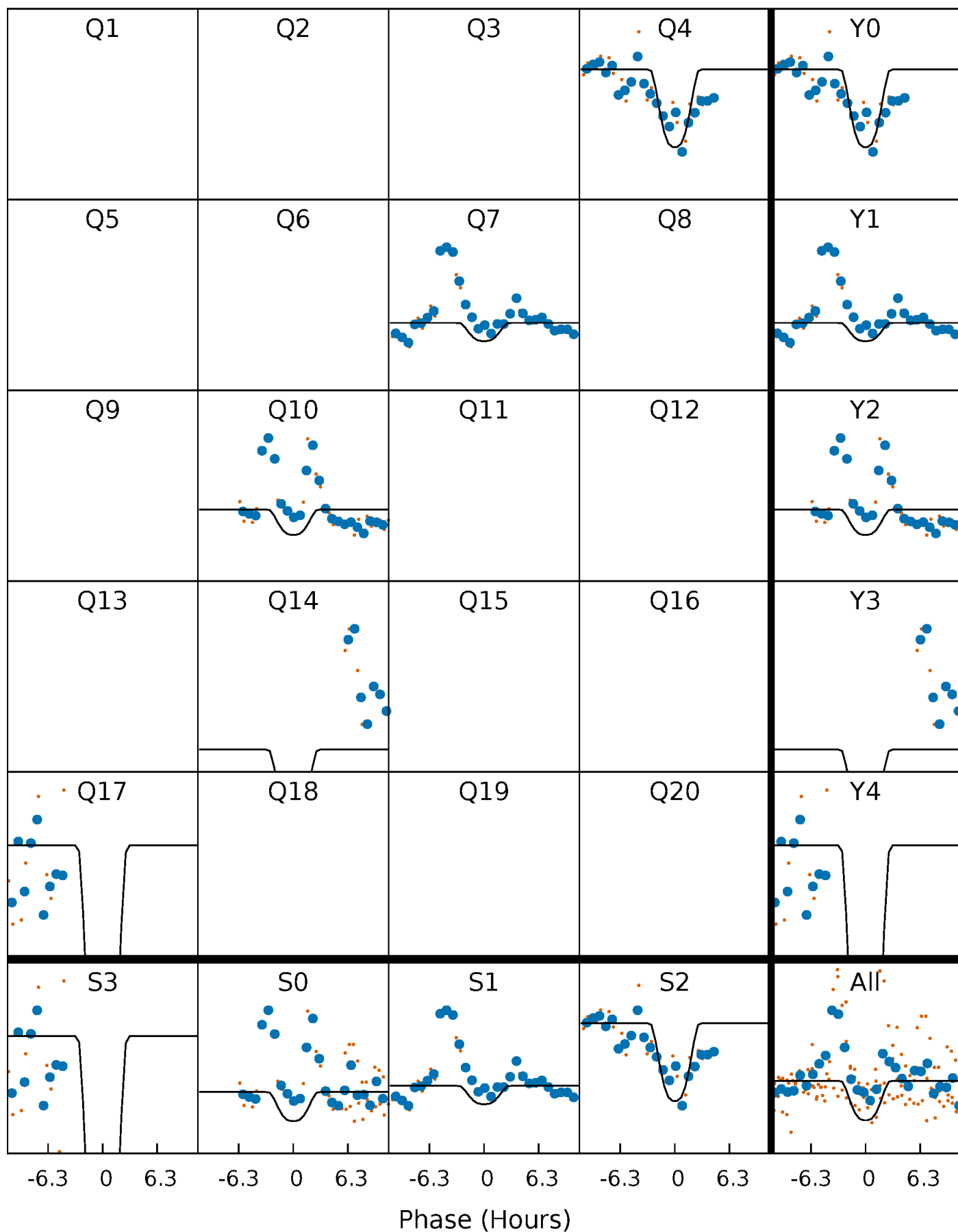
PDC Quarter-Phased Transit Curves

TCE 007434110-04 P=300.622796 Days $T_0=376.824342$ (BKJD)



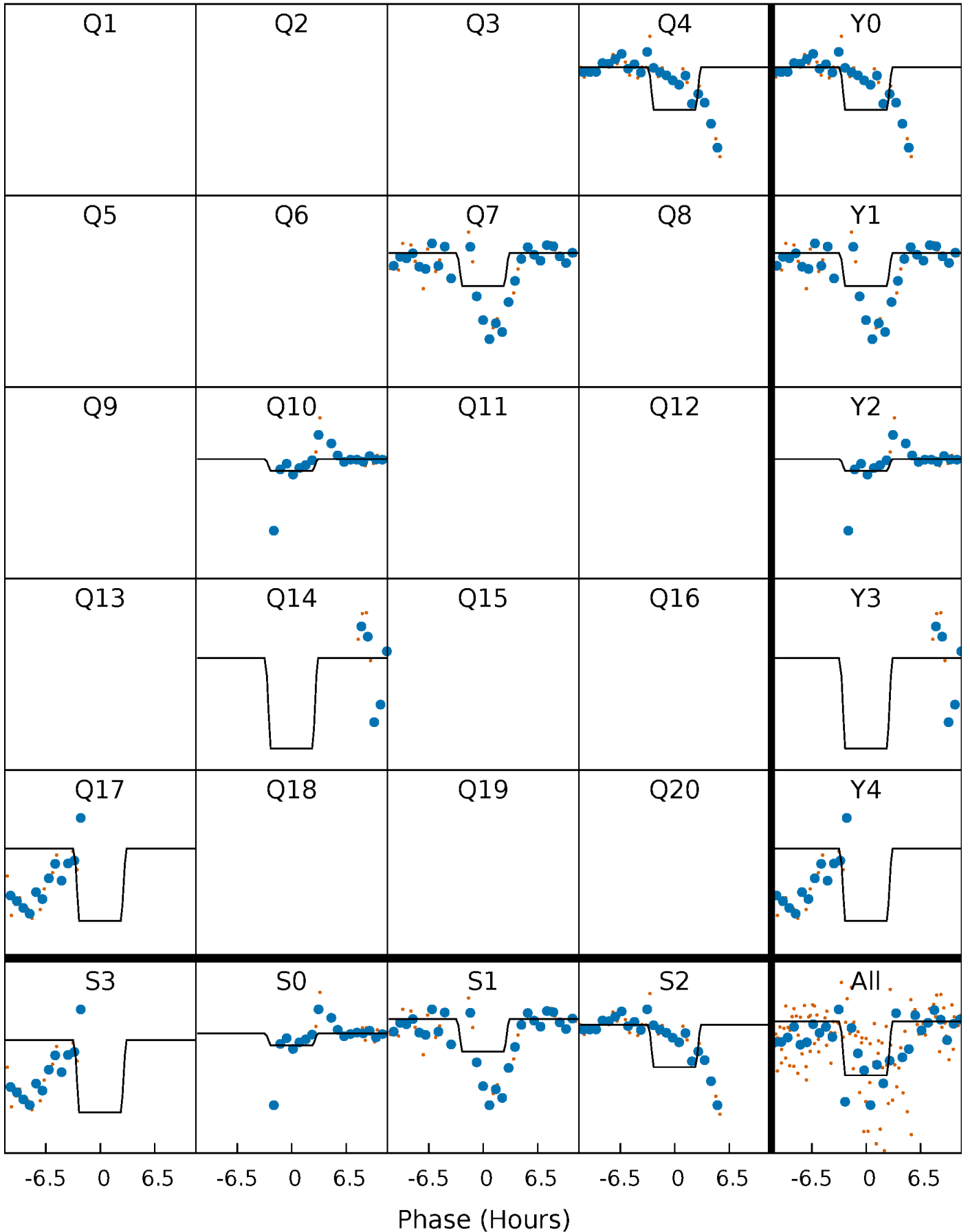
DV Quarter-Phased Transit Curves

TCE 007434110-04 P=300.622796 Days $T_0=376.824342$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

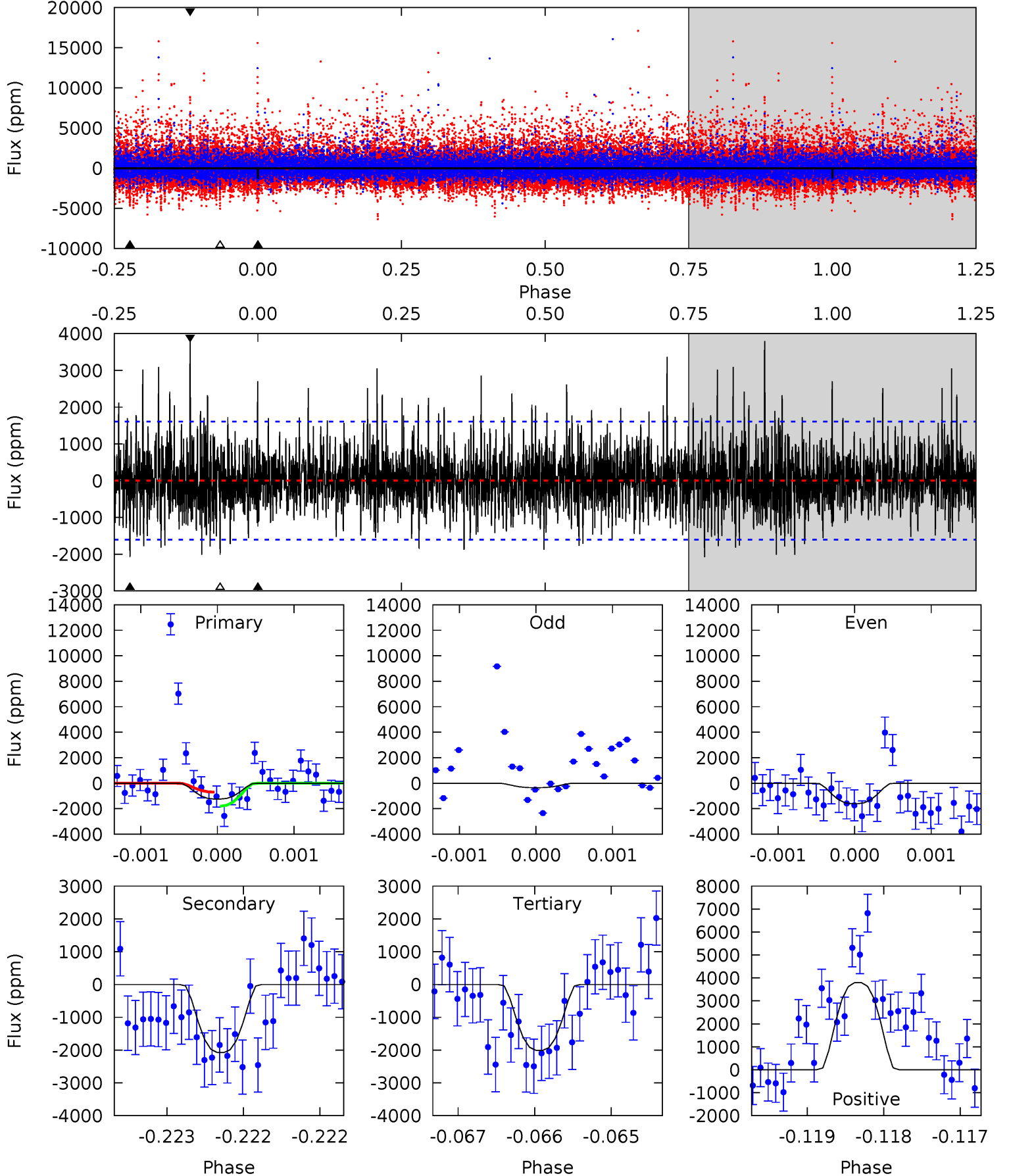
TCE 007434110-04 $P=300.612398$ Days $T_0=376.773959$ (BKJD)



DV Model-Shift Uniqueness Test

007434110-04, $P = 300.622796$ Days, $E = 76.201546$ Days

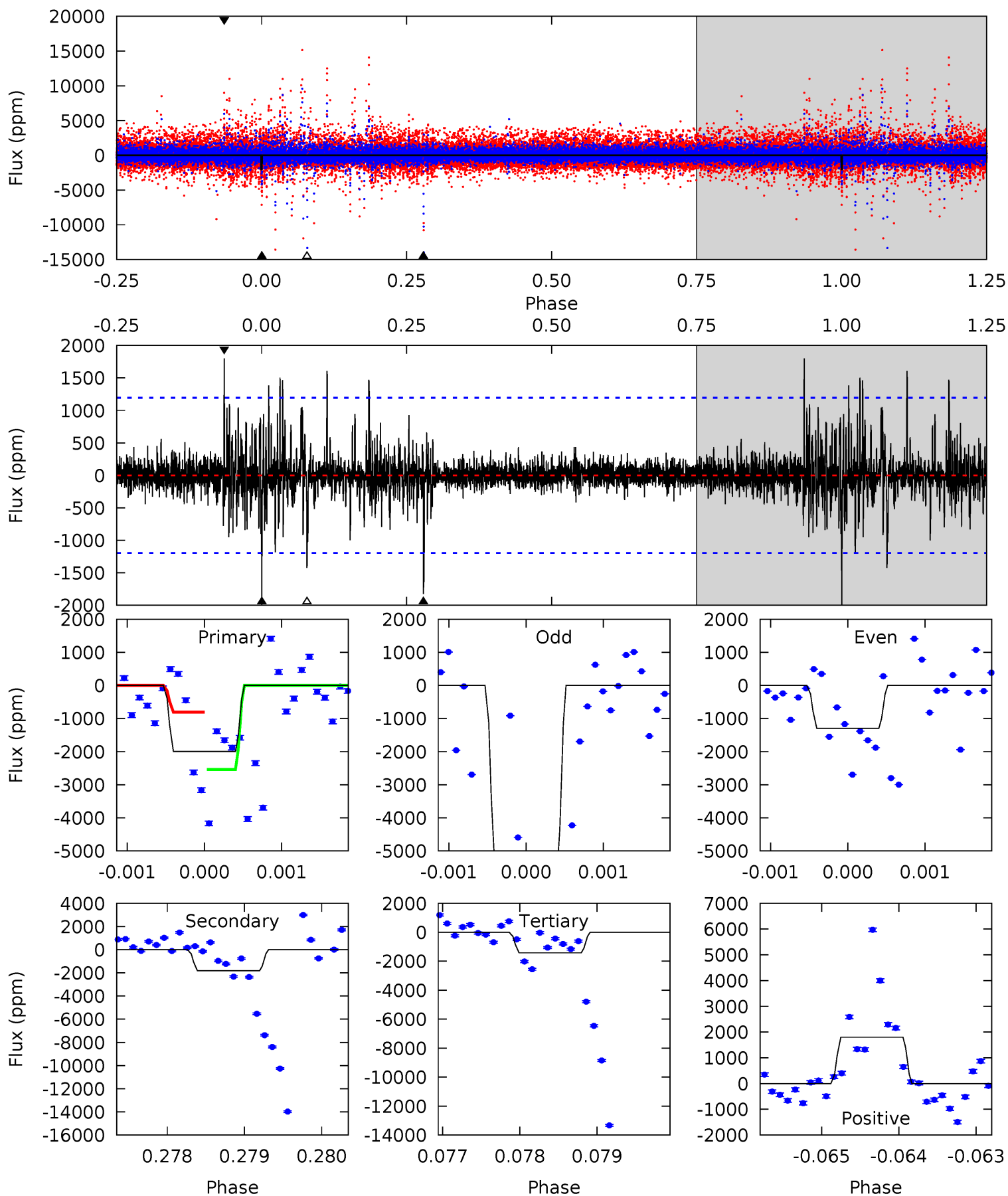
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.25	7.10	6.87	13.0	5.49	3.35	2.18	-2.62	-8.74	0.22	-5.89	1.60	1.93	0.65	1.90



Alt Model-Shift Uniqueness Test

007434110-04, P = 300.612398 Days, E = 76.161561 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.15	8.38	6.53	8.26	5.48	3.34	1.01	2.63	0.89	1.85	0.11	8.25	0.95	0.47	3.88



Stellar Parameters For KIC 007434110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3310^{+43}_{-36}	$5.051^{+0.040}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.225^{+0.033}_{-0.024}$	$0.207^{+0.037}_{-0.027}$	$25.630^{+6.331}_{-5.537}$
	+1%/-1%	+1%/-1%	+100%/-100%	+15%/-11%	+18%/-13%	+25%/-22%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007434110-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2077 ± 293	$1.76^{+0.32}_{-0.30}$	134^{+3}_{-3}	2901^{+167}_{-124}	99402^{+43484}_{-28092}
Alt.	-1826 ± 218	$1.44^{+0.33}_{-0.31}$	134^{+3}_{-3}	3022^{+214}_{-162}	130427^{+79935}_{-42680}

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

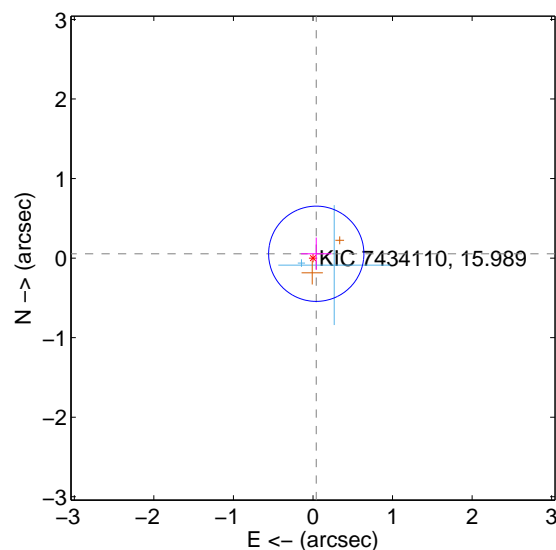
Supplemental centroid analysis for 007434110-04. Kepler magnitude: 15.99. Transit SNR 7.97

There are 2 quarters with good PRF difference image offsets

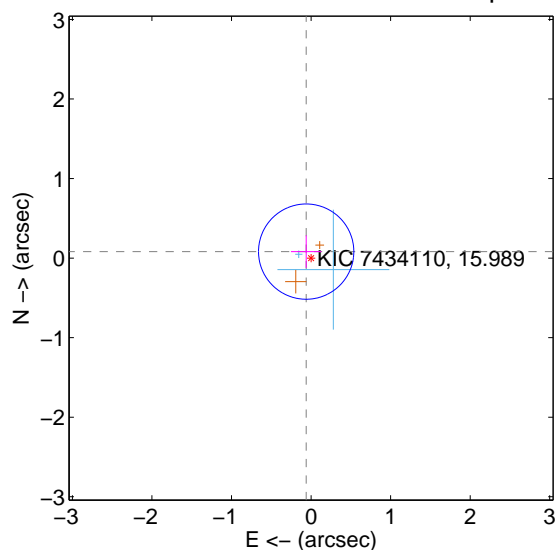
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.068 ± 0.200	0.34	-0.041 ± 0.192	0.054 ± 0.204
PRF-fit source offset from KIC position	0.102 ± 0.200	0.51	0.061 ± 0.192	0.082 ± 0.204
photometric centroid source offset	1.00 ± 0.51	1.95	0.80 ± 0.50	-0.60 ± 0.53

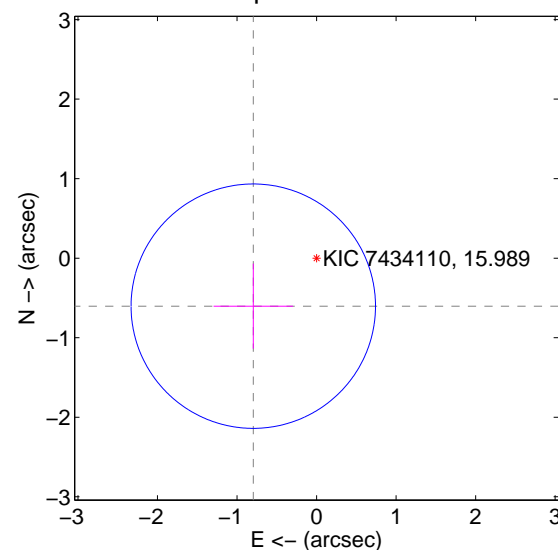
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

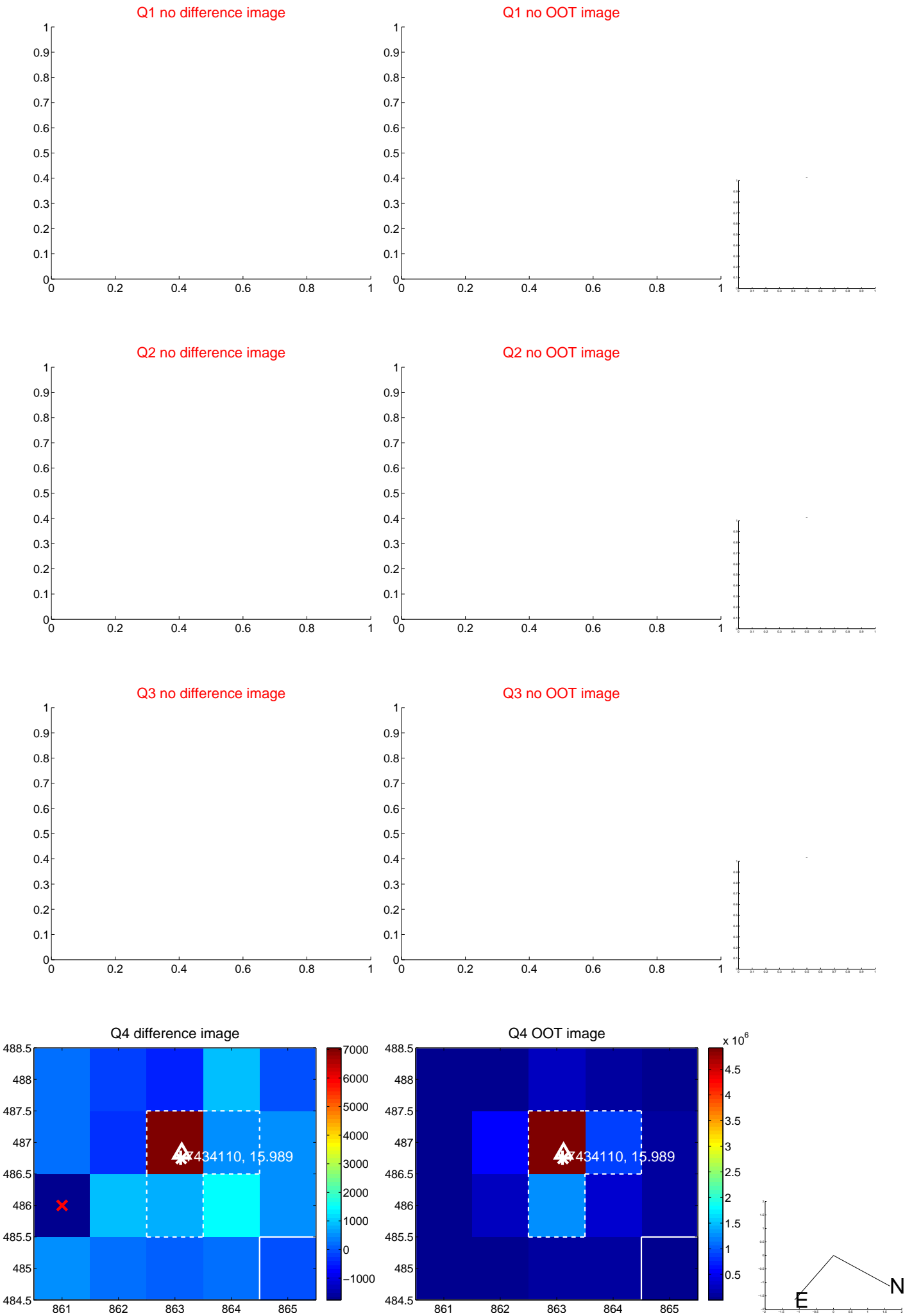


offset from photometric centroids

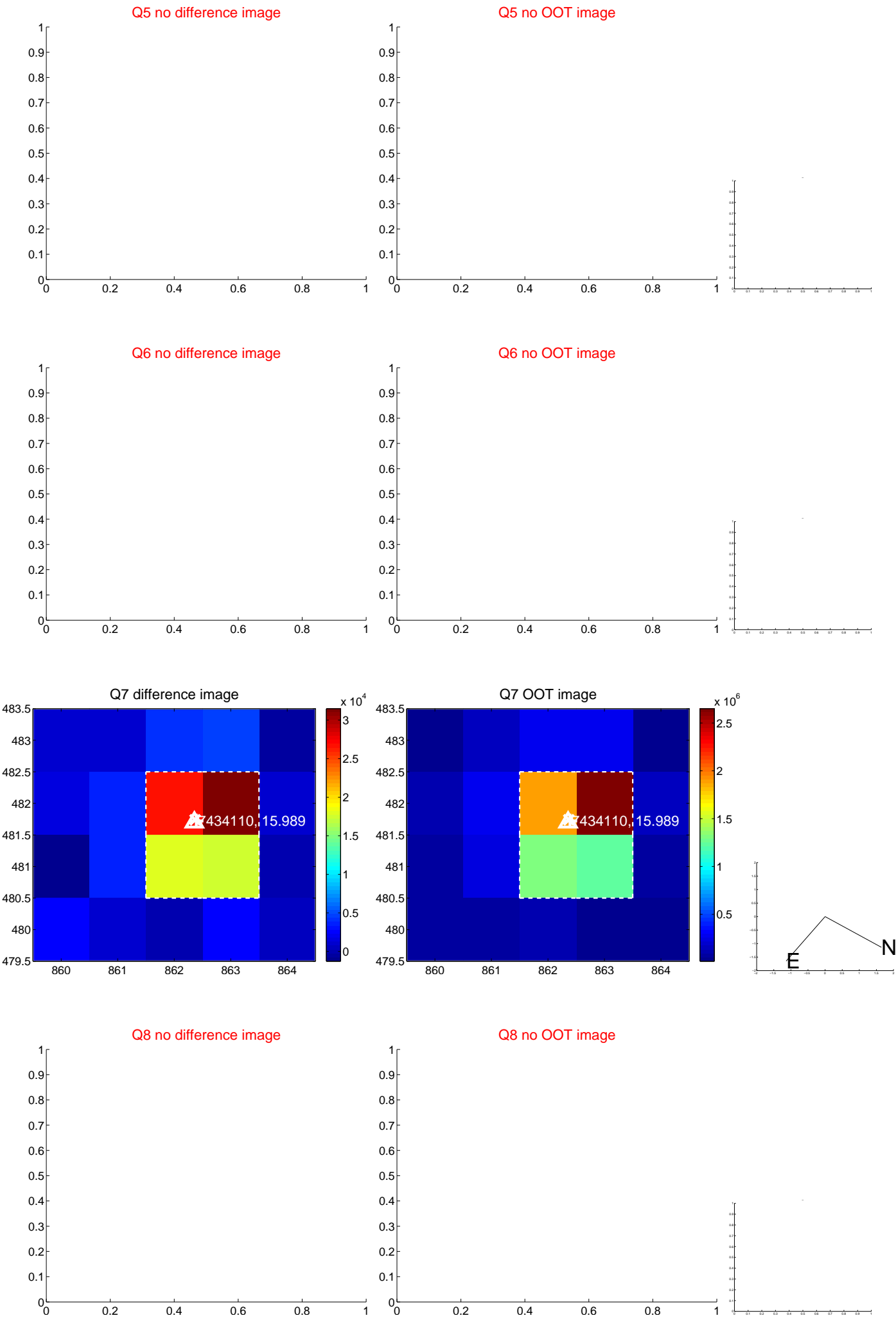


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

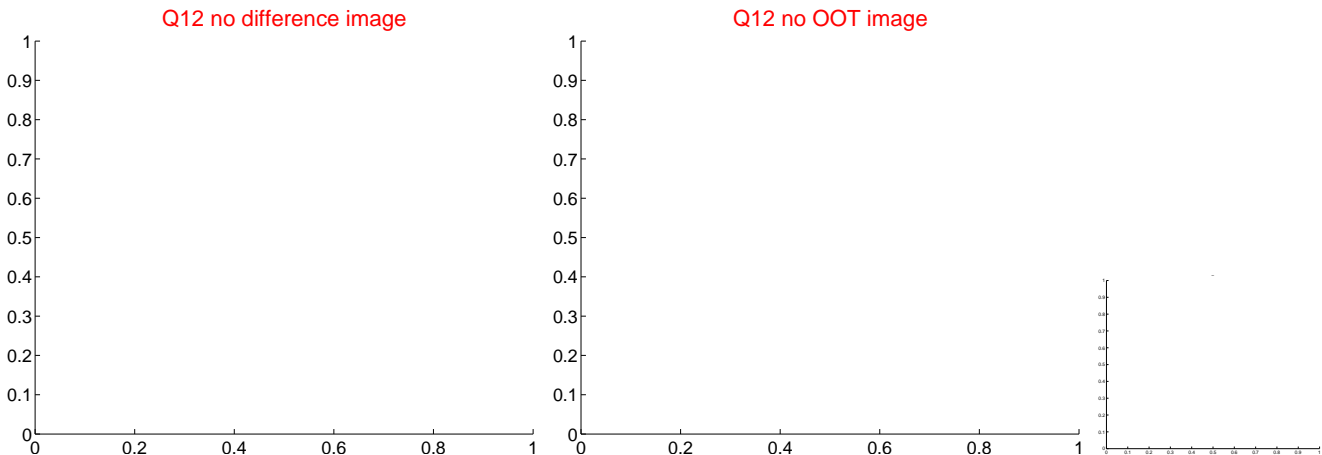
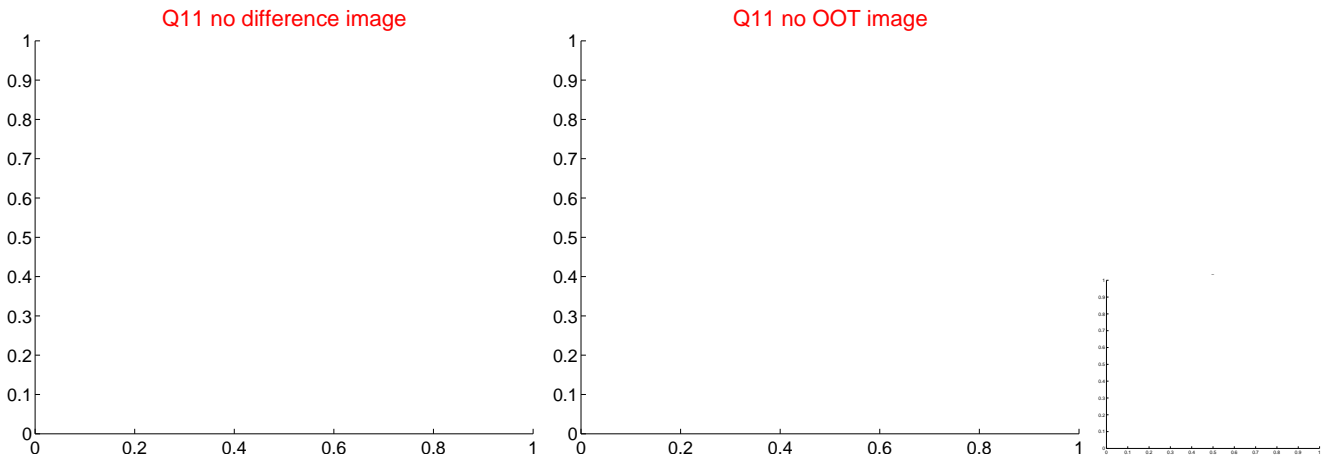
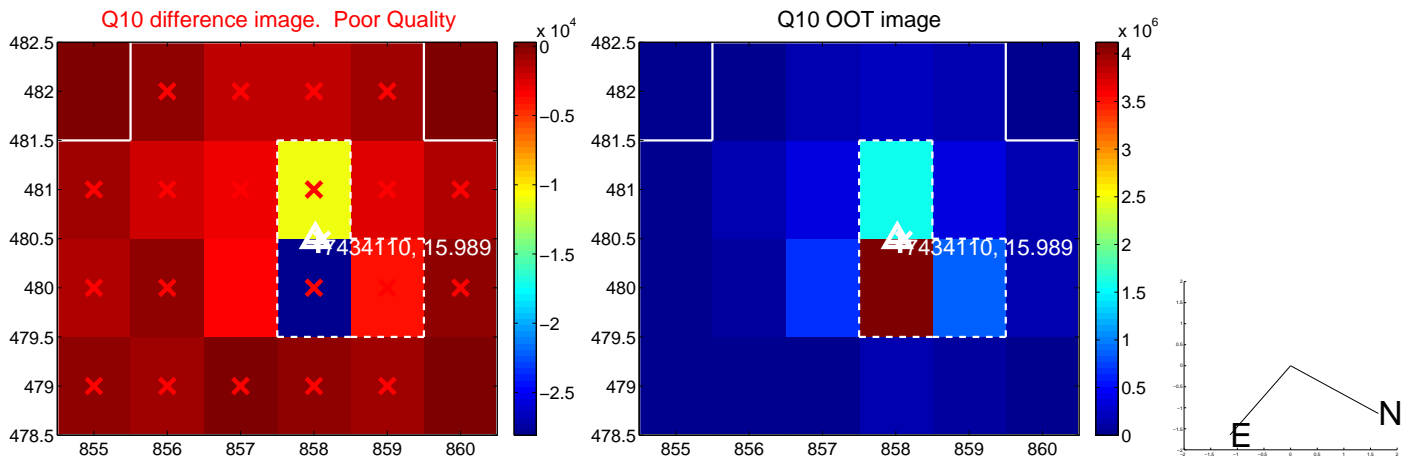
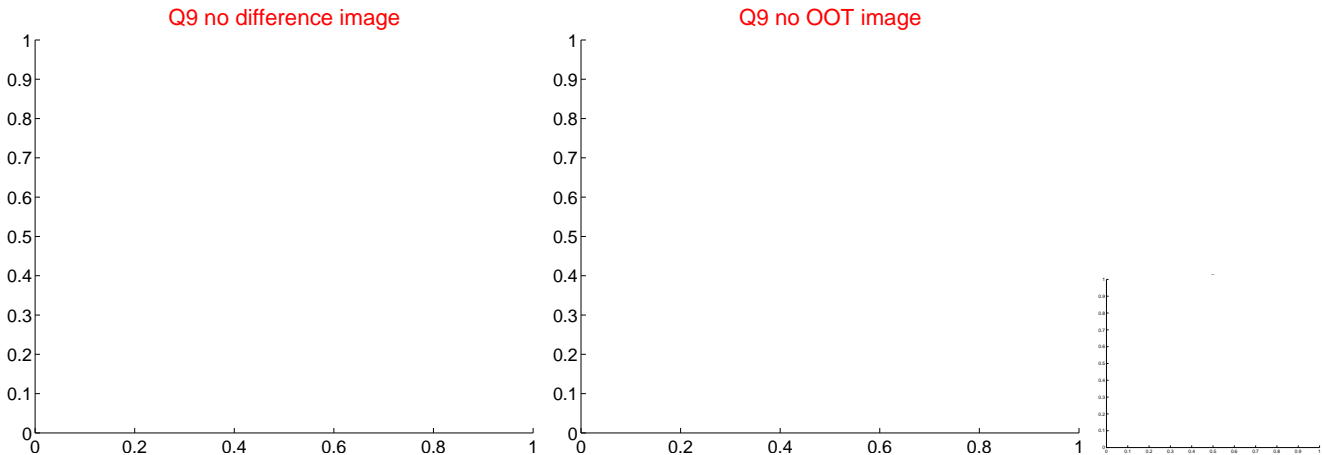
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



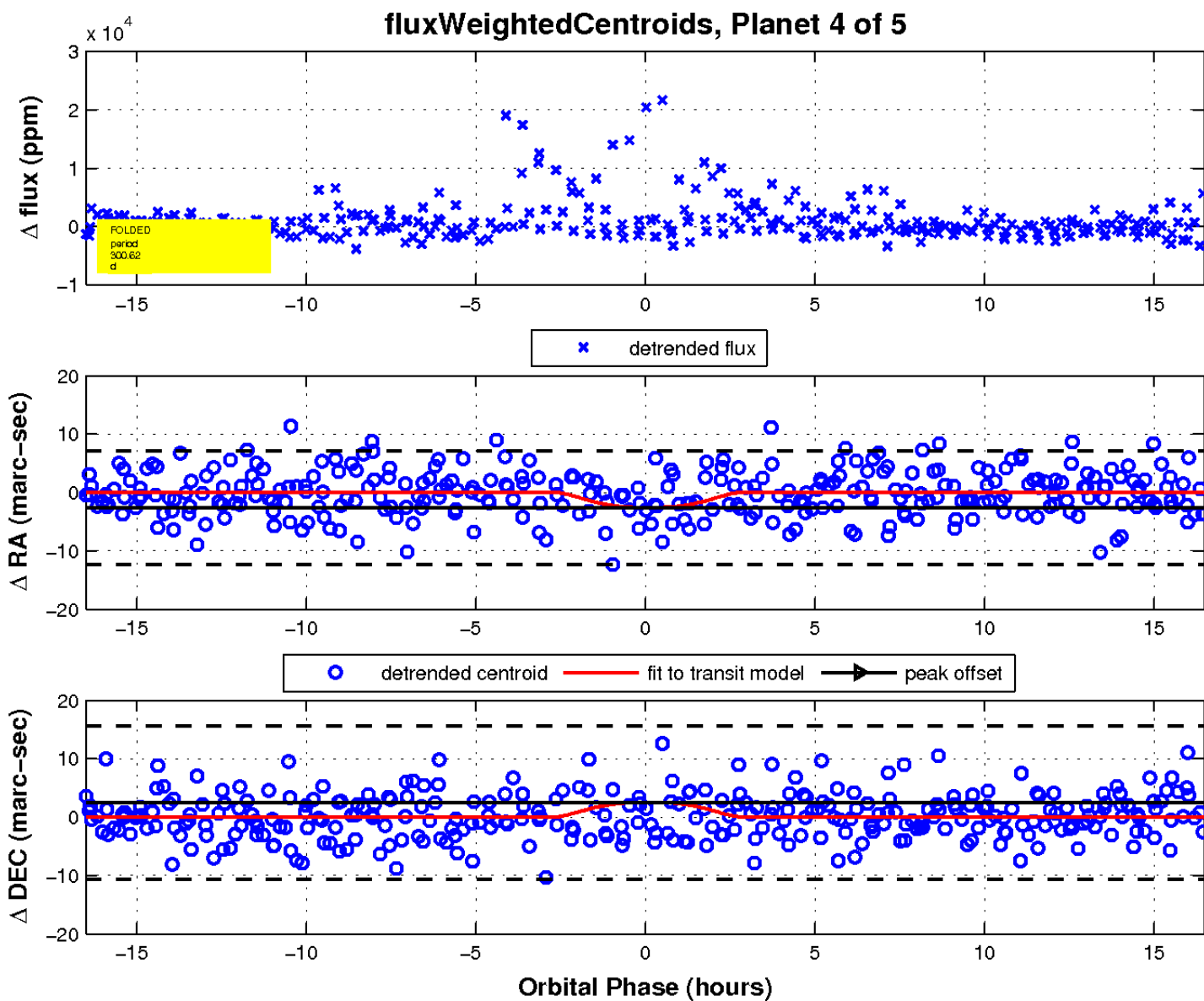
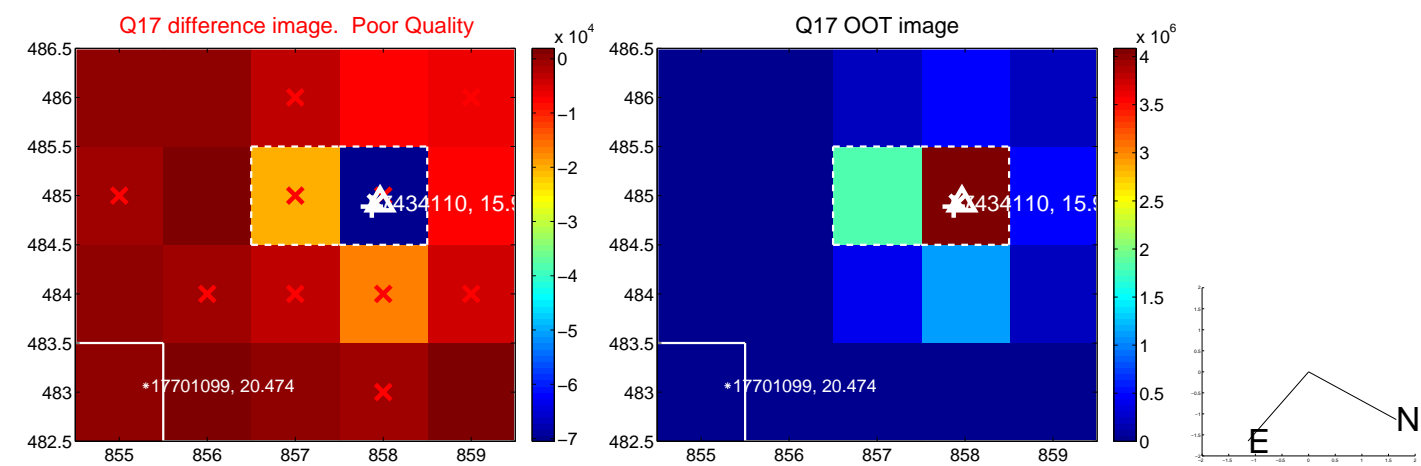
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

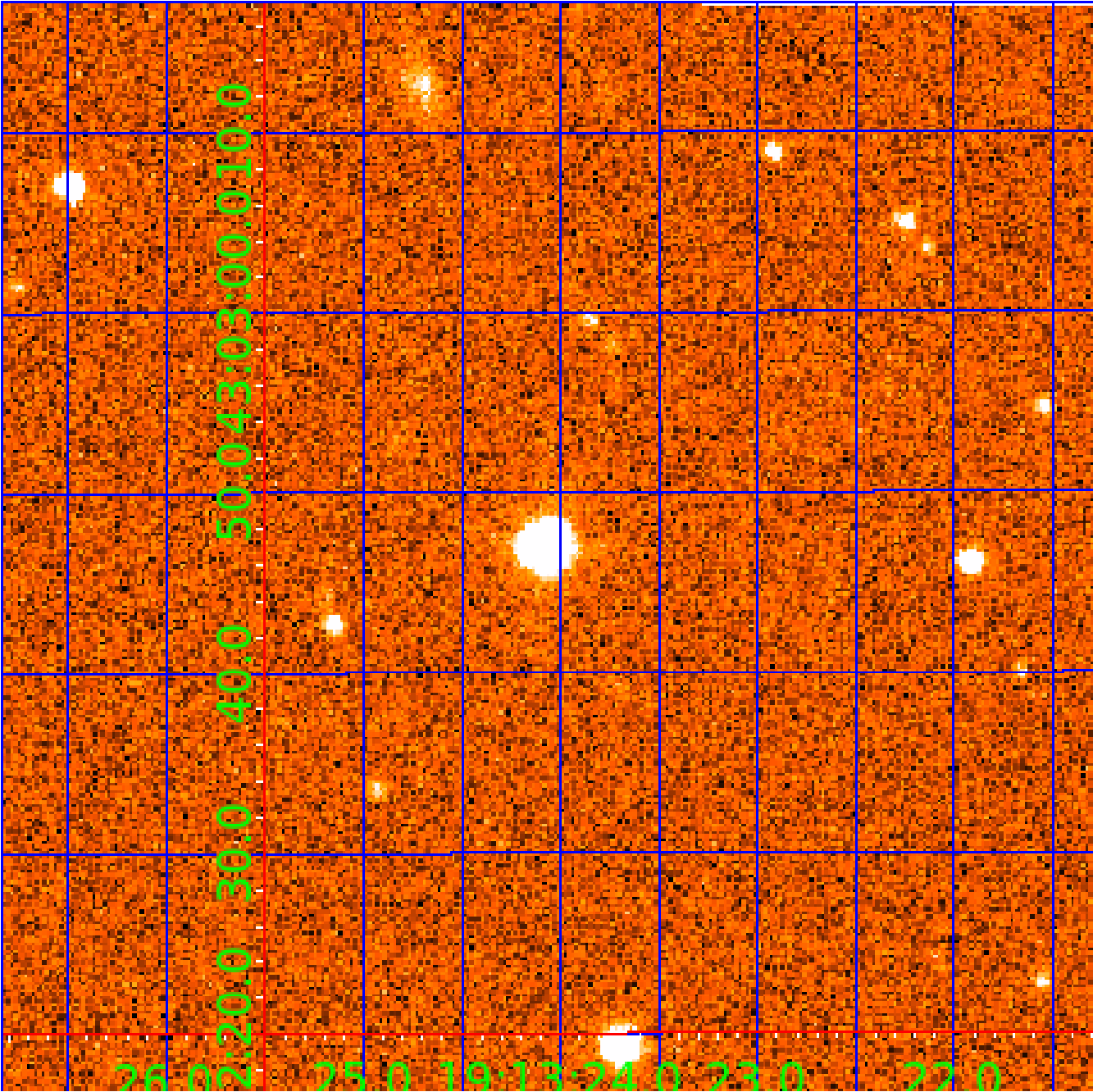


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007434110

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})
007434110-01	OBS	No	2.409089	131.747452	638.1	7.315	10.8	14.1	0.23	3310	0.83	12.55
007434110-02	OBS	No	446.330855	233.854265	5032.8	4.731	13.8	9.1	0.23	3310	1.60	0.01
007434110-03	OBS	No	224.775903	251.806588	3672.8	3.861	13.5	7.3	0.23	3310	1.35	0.03
007434110-04	OBS	No	300.622796	376.824342	4033.3	5.505	11.9	8.0	0.23	3310	1.76	0.02
007434110-05	OBS	No	175.287864	253.107056	2978.7	3.000	11.5	-1.0	0.23	3310	1.22	0.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007434110-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007434110-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007434110-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

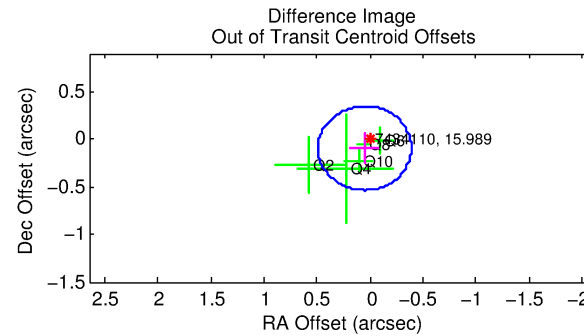
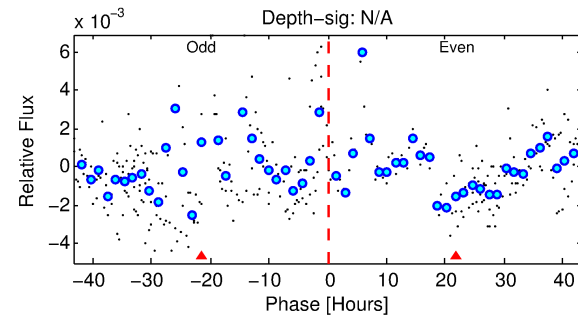
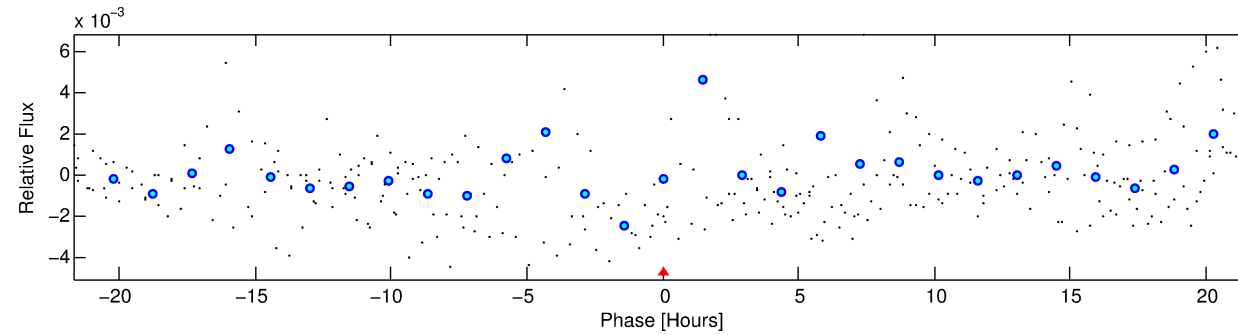
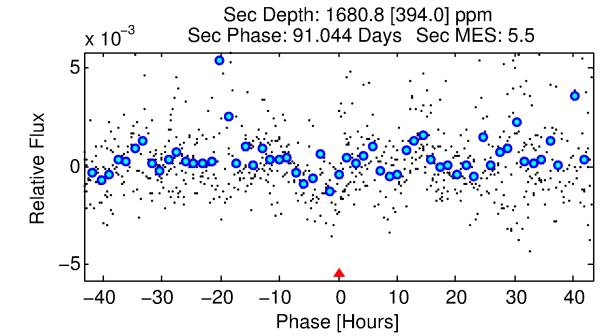
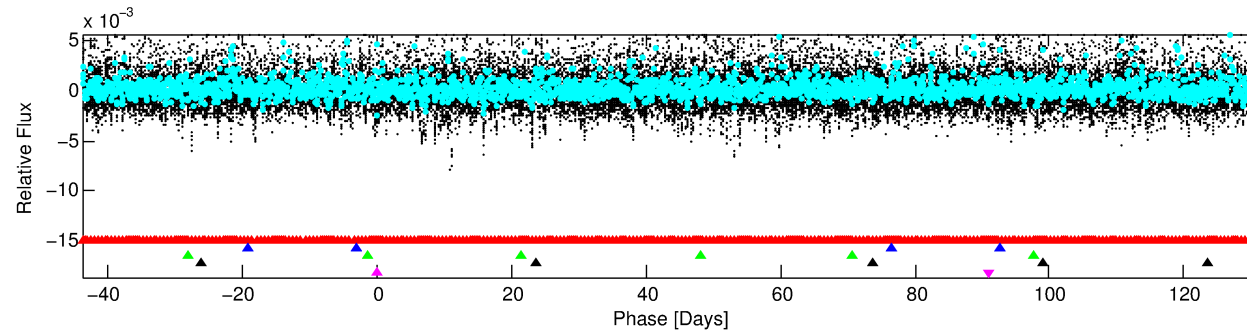
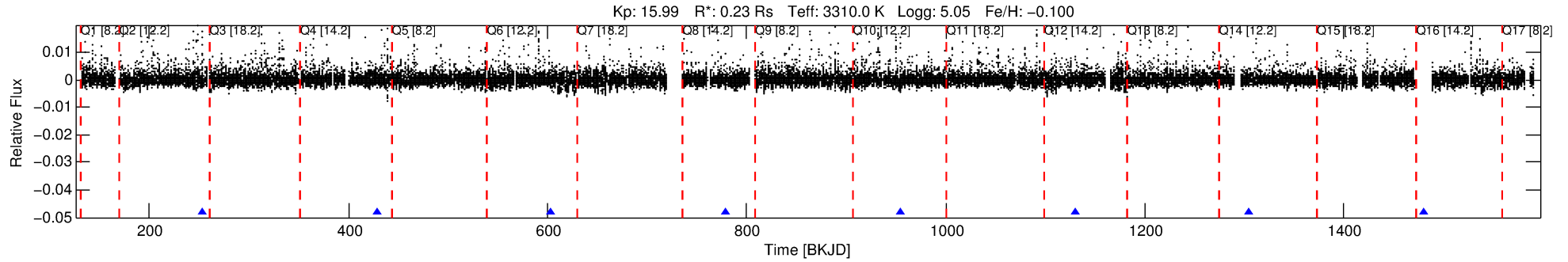
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007434110-05

No Significant Match Found

DV One-Page Summary

KIC: 7434110 Candidate: 5 of 5 Period: 175.288 d



TPS TCE Results:

Period = 175.28786 d
Epoch = 253.1071 BKJD

DV fit results are unavailable

DV Diagnostic Results:

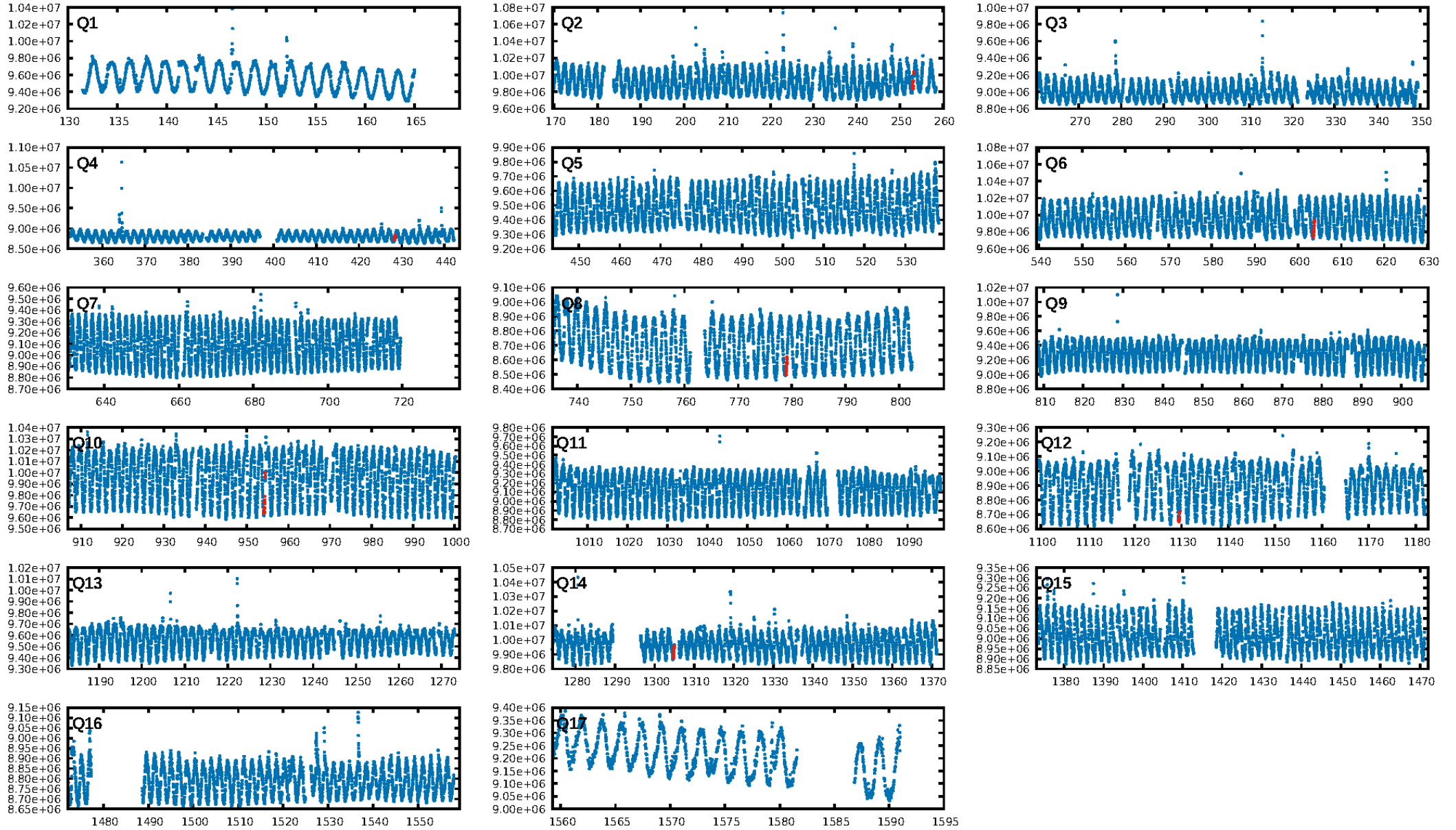
ShortPeriod-sig: 100.0% [524.77 σ]
LongPeriod-sig: 100.0% [242.92 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.08e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.6593

Centroid-sig: 22.4%
Centroid-so: 0.192 arcsec [1.33 σ]
OotOffset-rm: 0.108 arcsec [0.74 σ]
KicOffset-rm: 0.155 arcsec [1.06 σ]
OotOffset-st: 3/0/2/0 [5]
KicOffset-st: 3/0/2/0 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 0.60 [3/5]

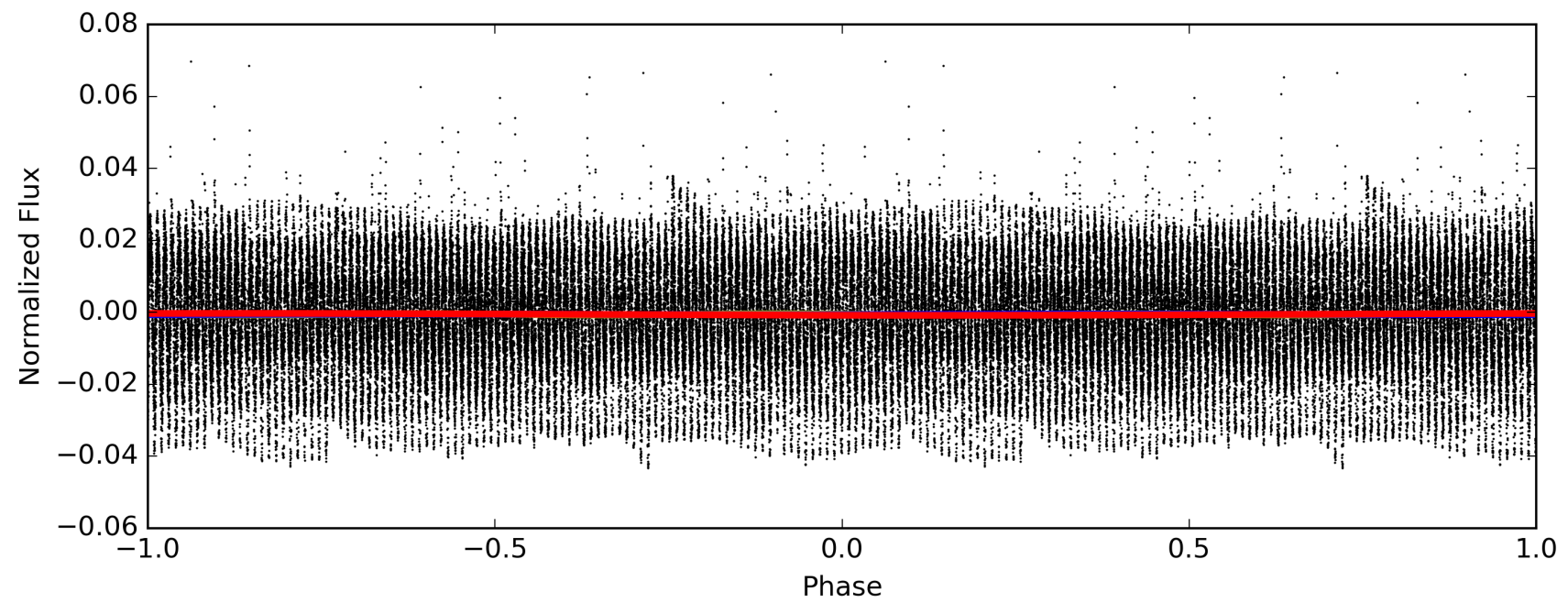
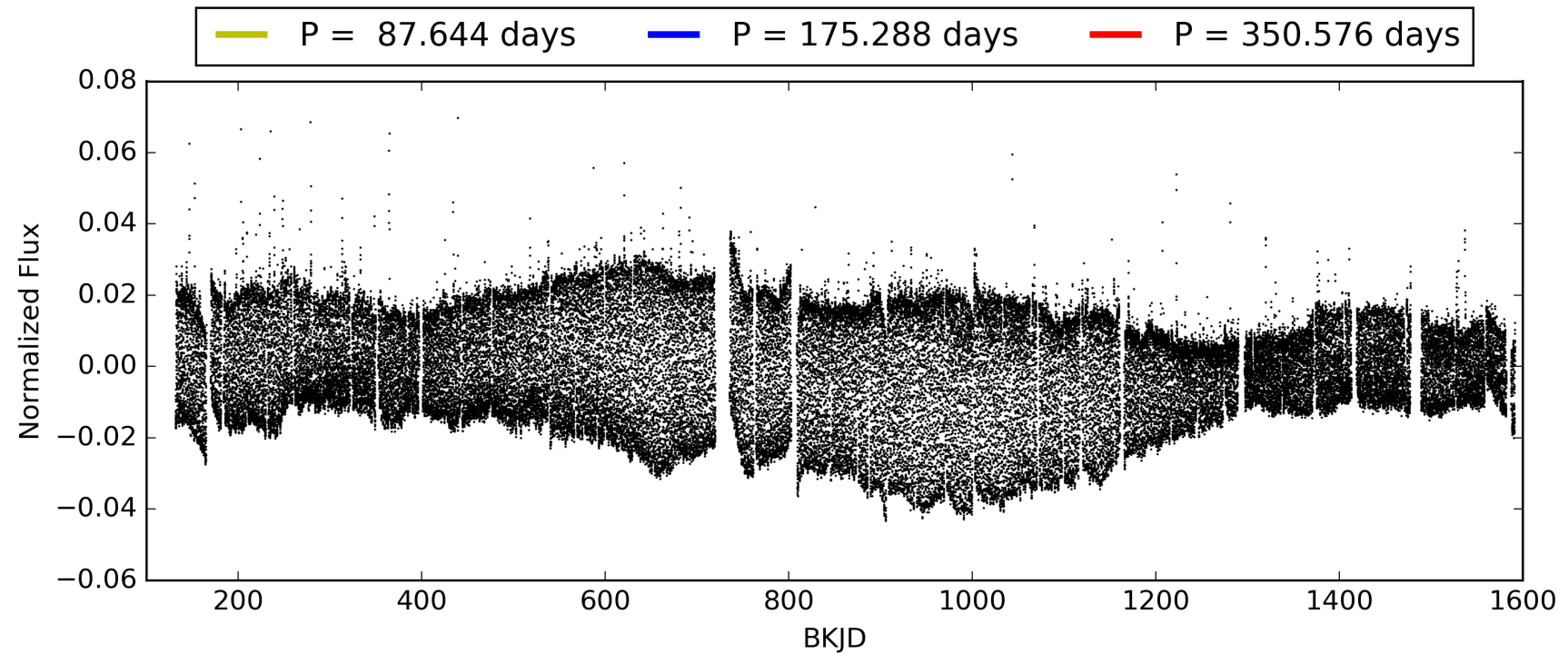
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:20 Z

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

TCE 007434110-05, PDC Light Curves

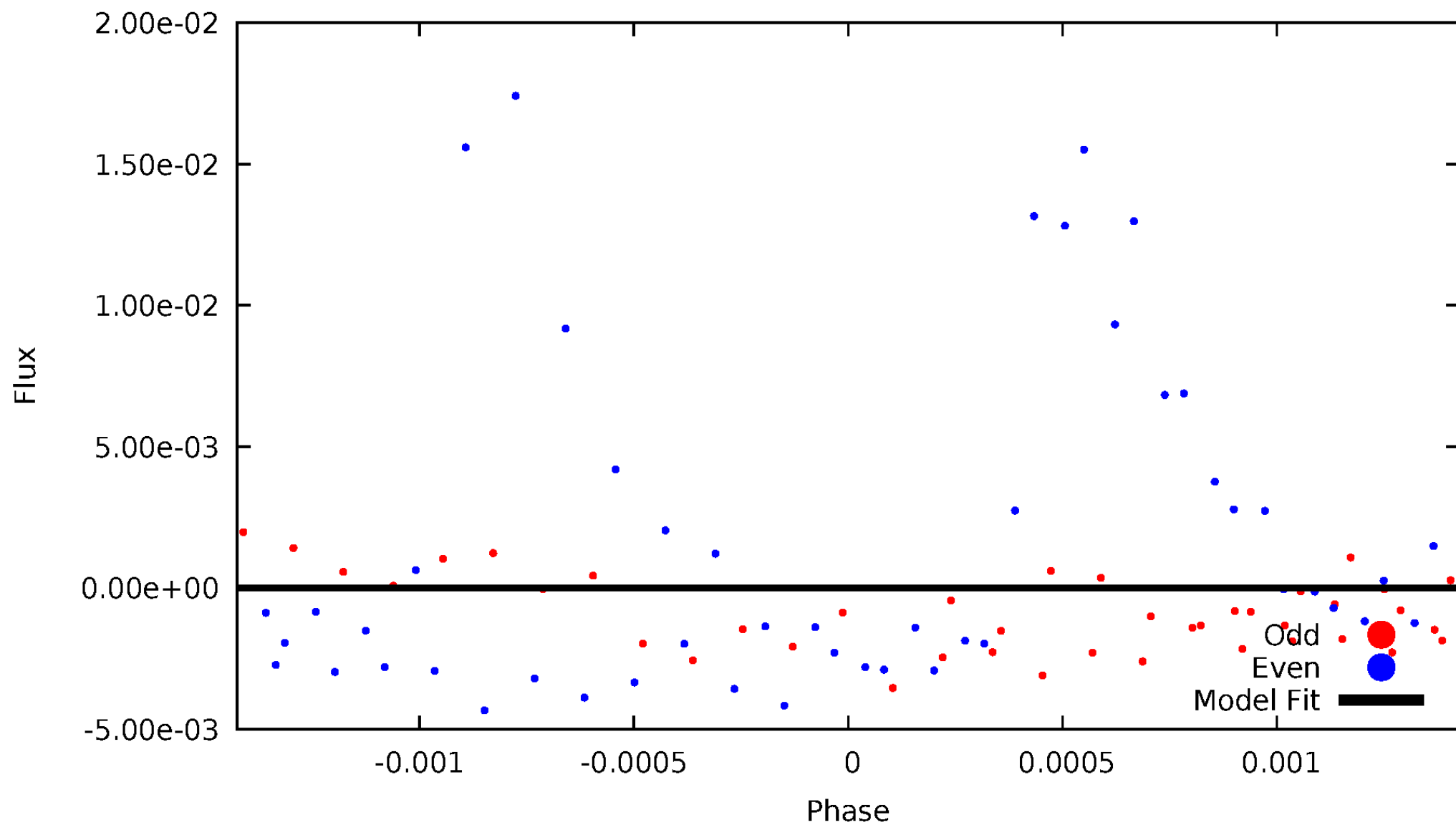


TCE 007434110-05



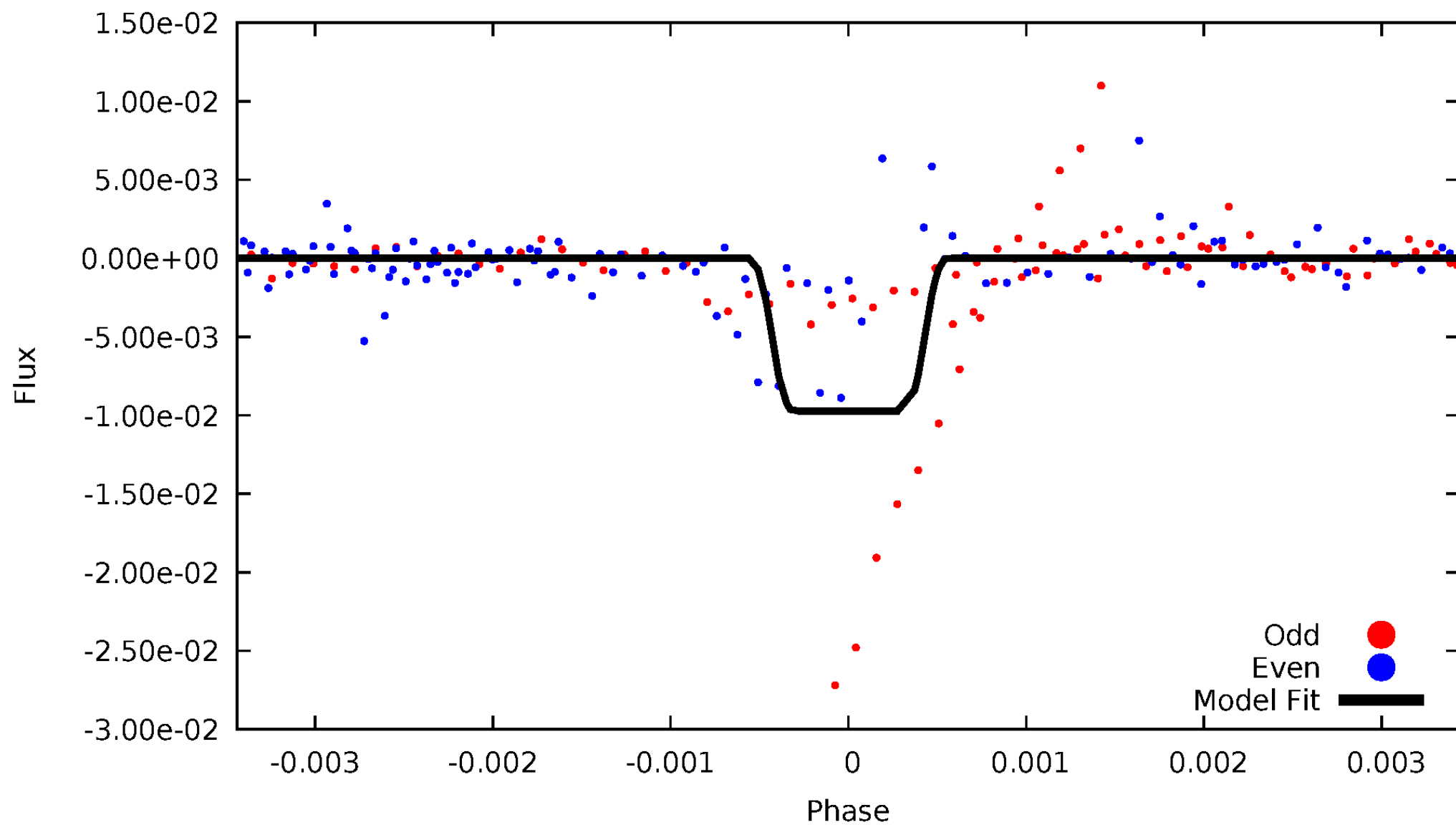
DV Odd/Even

TCE 007434110-05

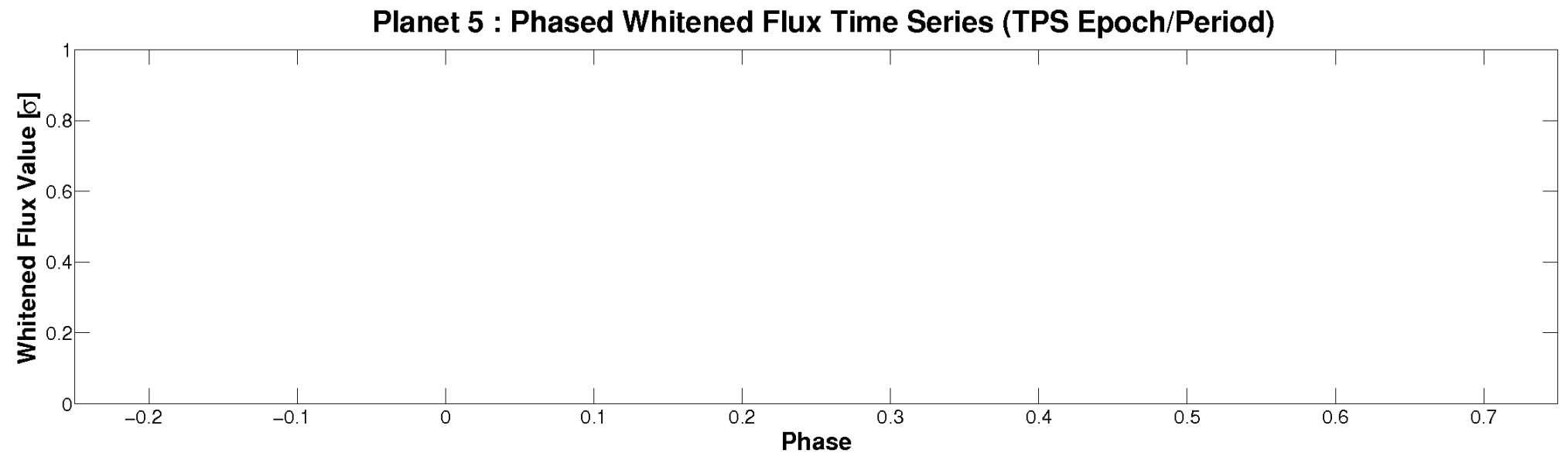
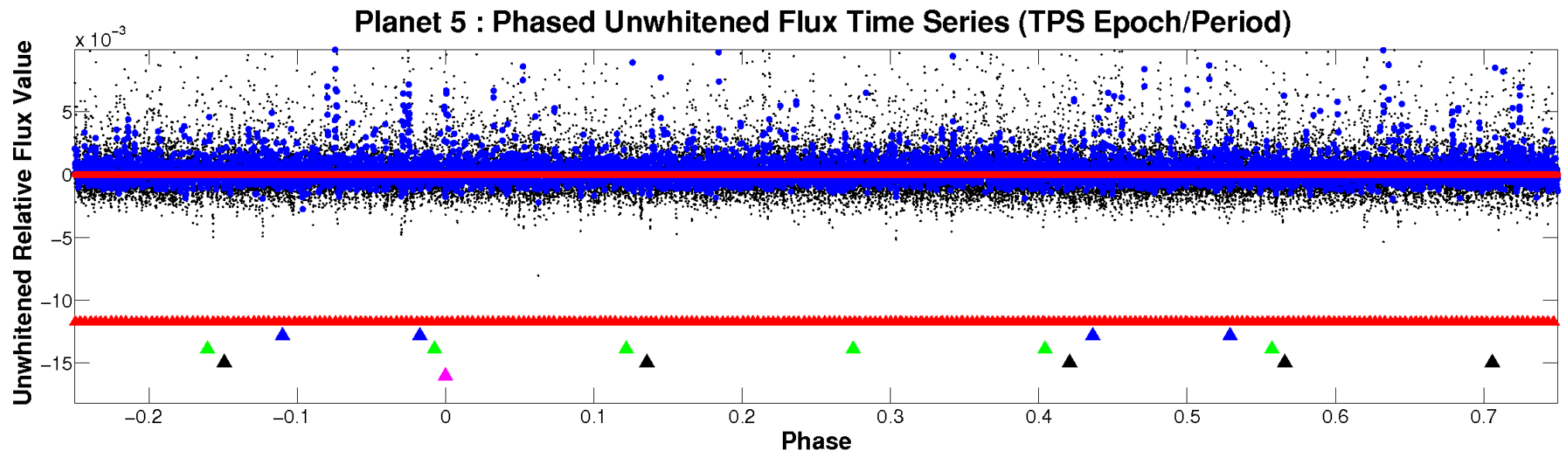


ALT Odd/Even

TCE 007434110-05

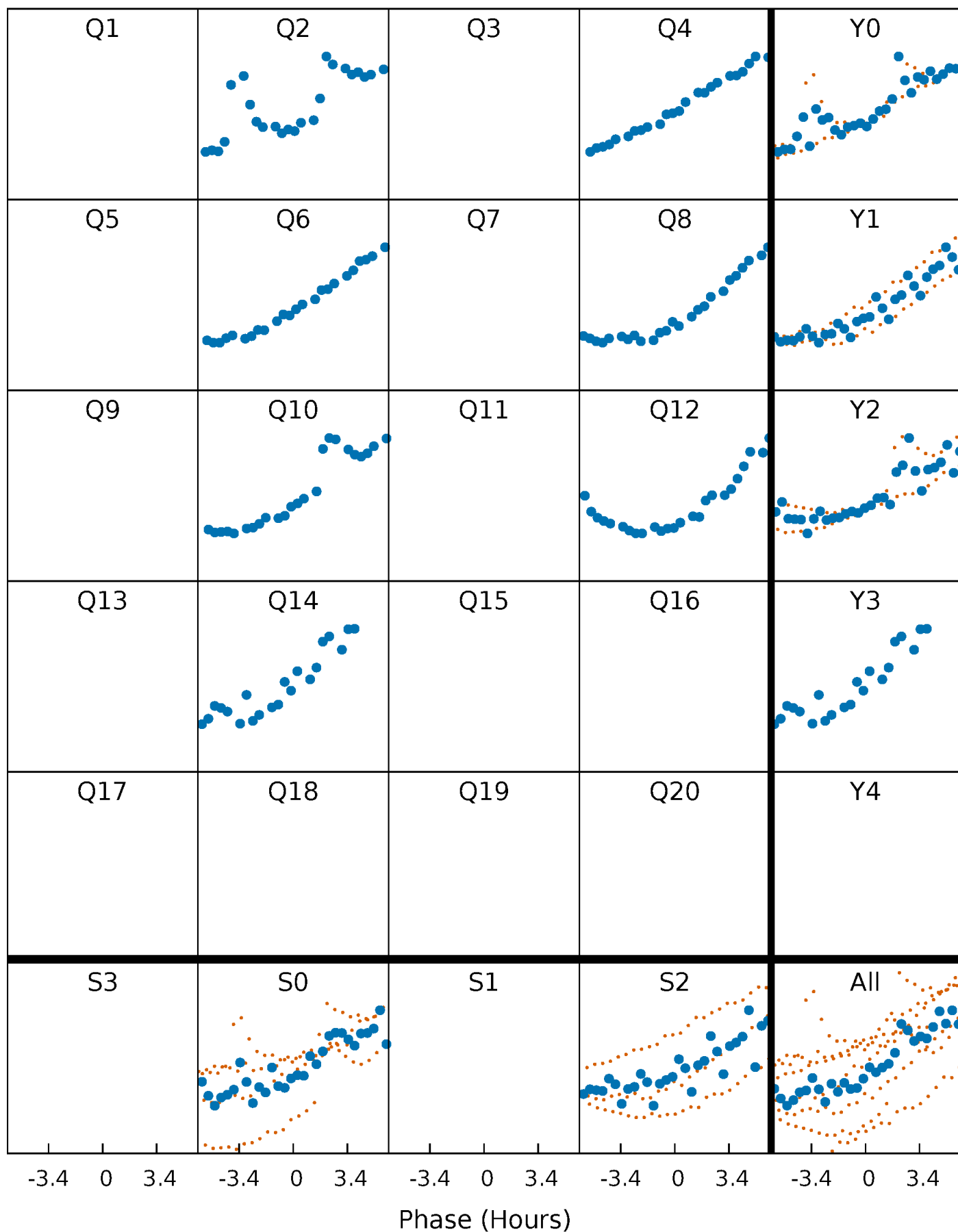


Non-Whitened Vs. Whitened Light Curve



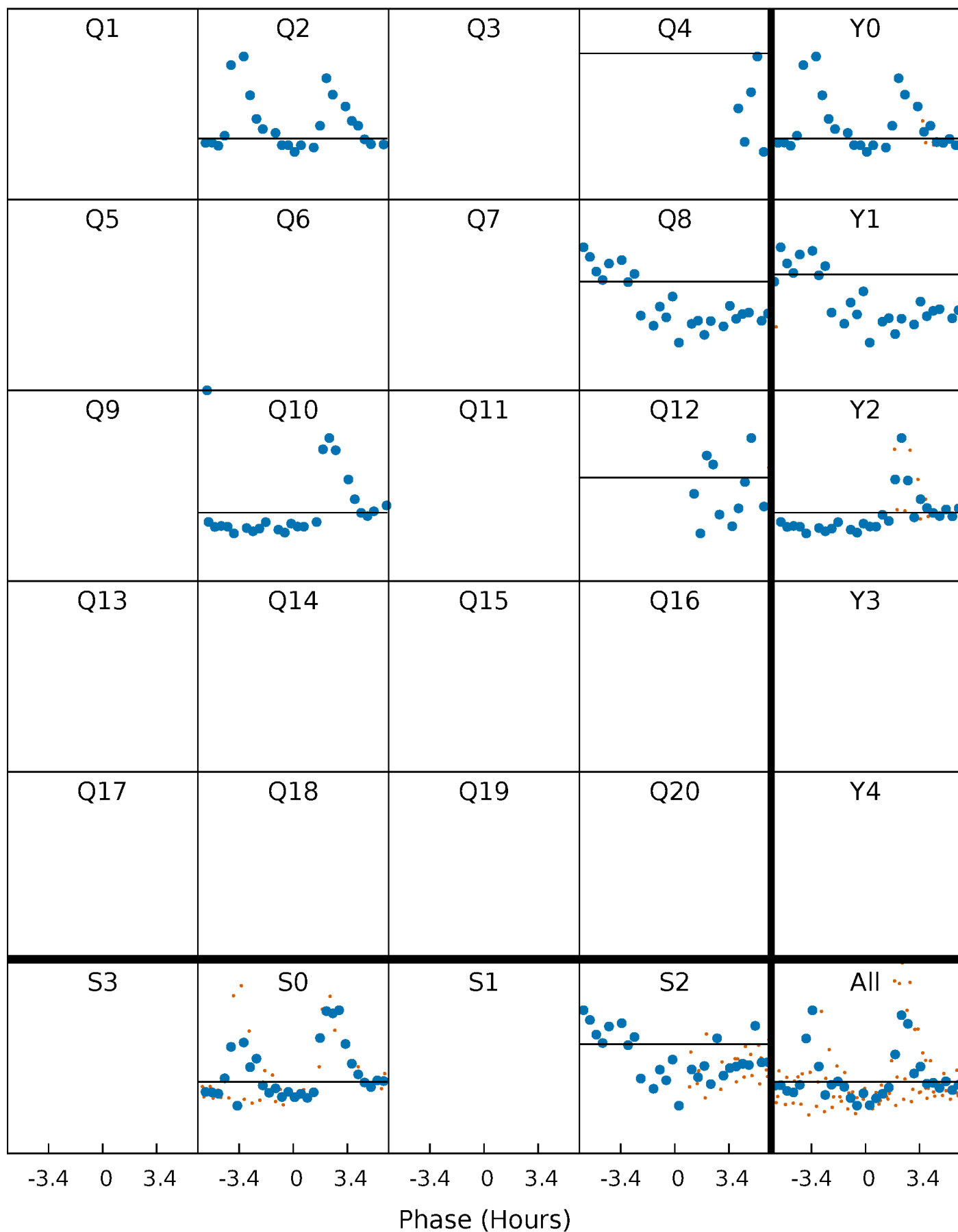
PDC Quarter-Phased Transit Curves

TCE 007434110-05 P=175.287864 Days $T_0=253.107056$ (BKJD)



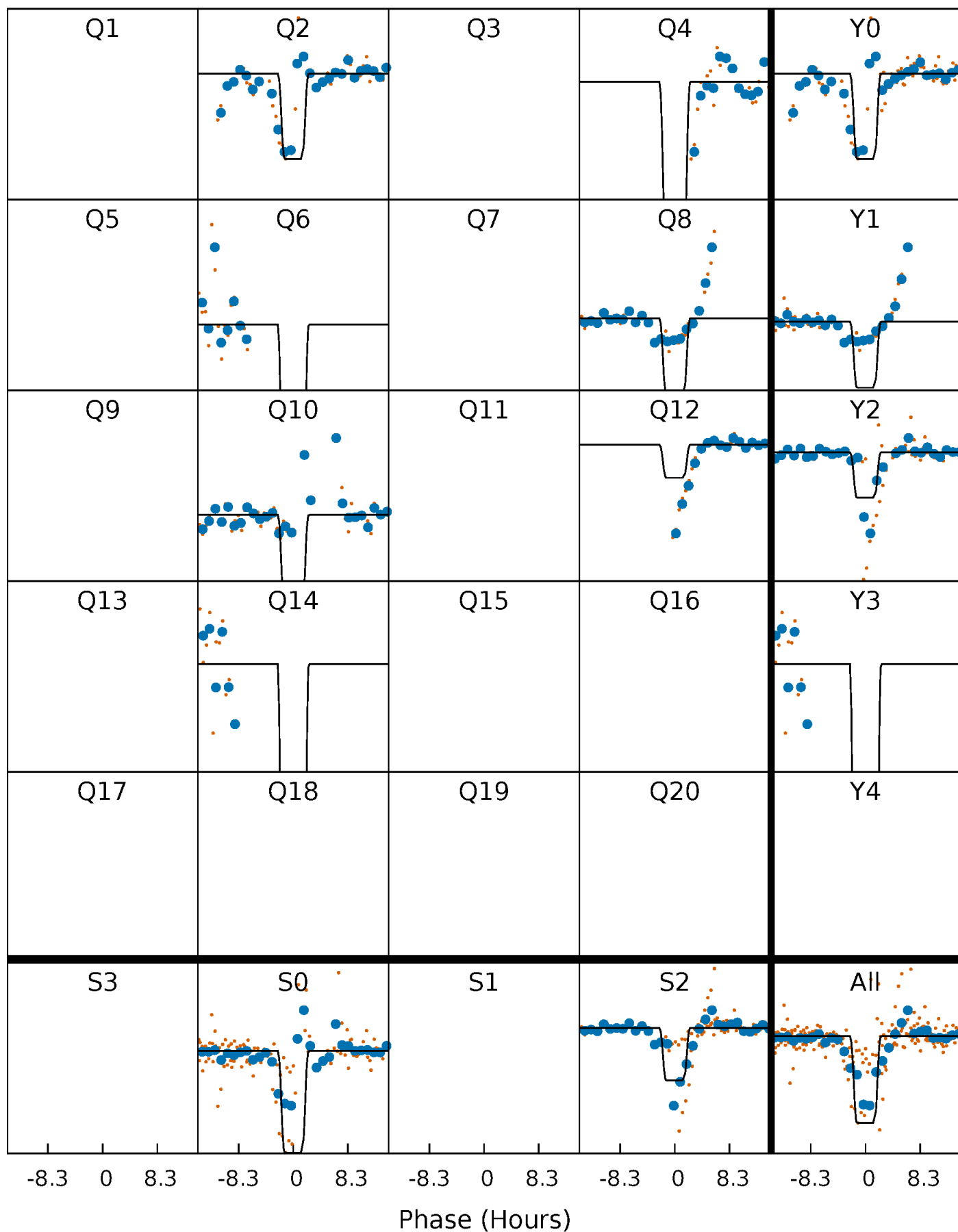
DV Quarter-Phased Transit Curves

TCE 007434110-05 $P=175.287864$ Days $T_0=253.107056$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

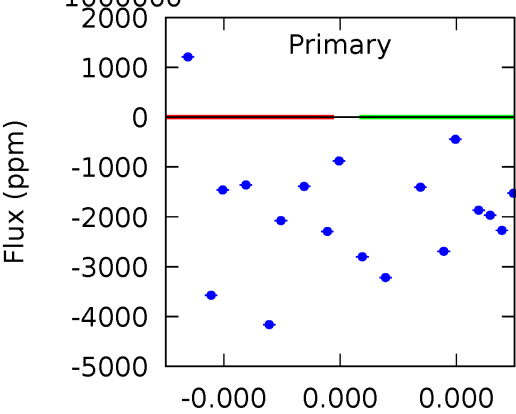
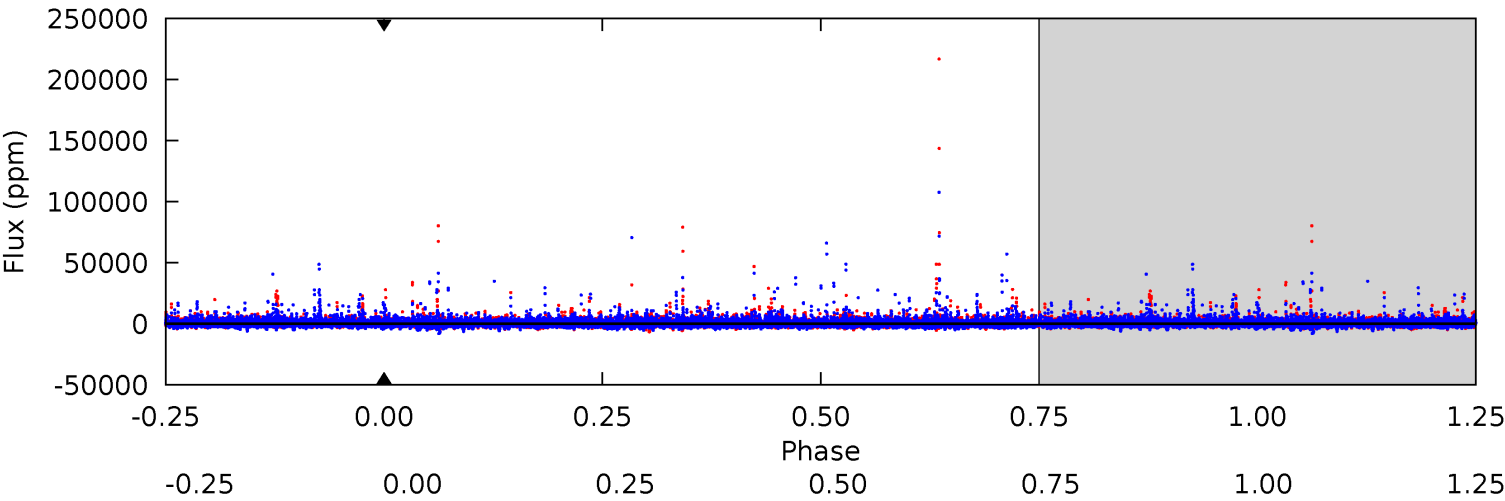
TCE 007434110-05 P=175.287864 Days $T_0=253.162083$ (BKJD)



DV Model-Shift Uniqueness Test

007434110-05, P = 175.287864 Days, E = 77.819192 Days

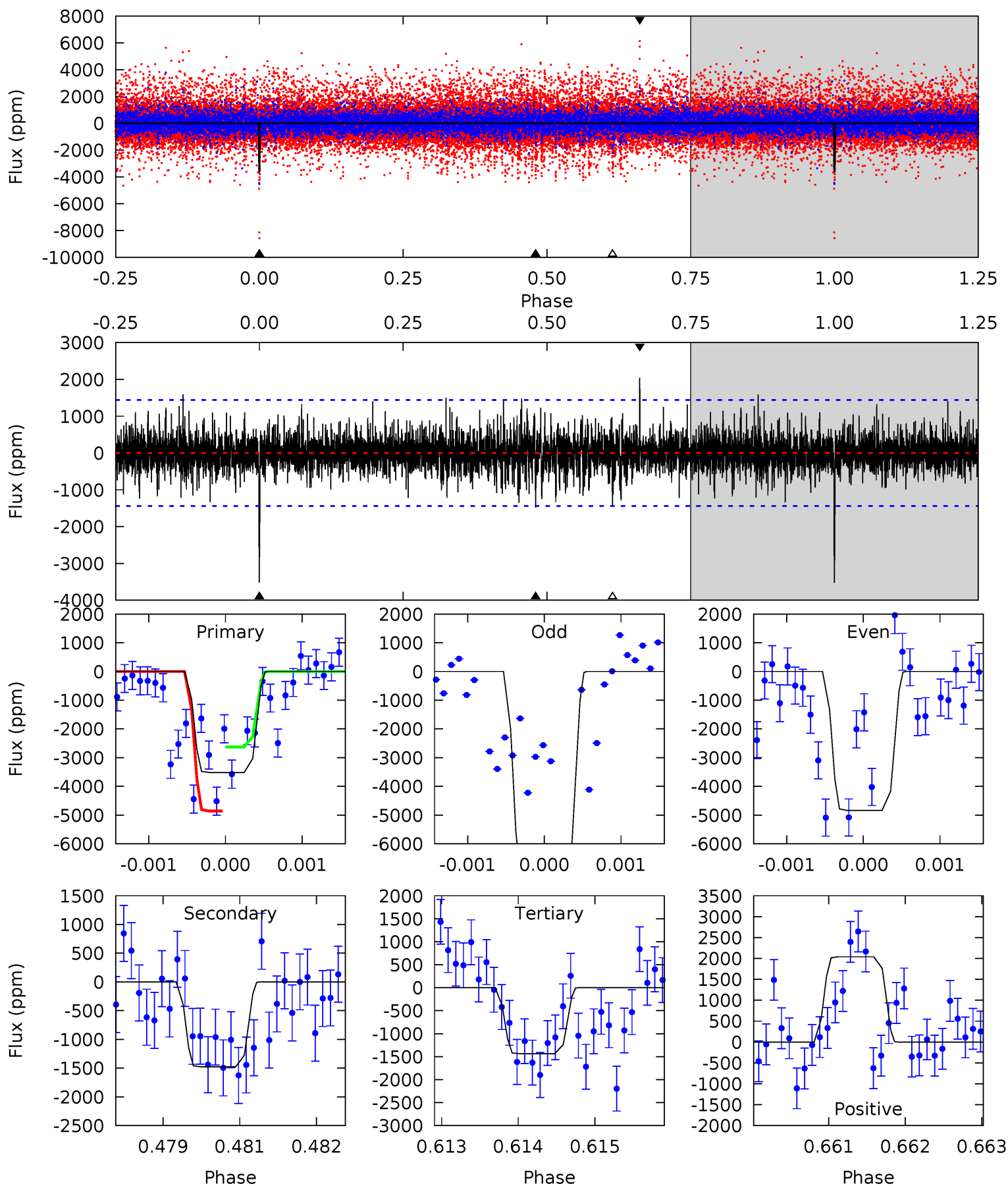
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007434110-05, P = 175.287864 Days, E = 77.874219 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.57	5.42	7.70	5.44	3.28	1.33	7.85	5.57	0.15	-2.13	4.72	1.90	0.37	4.38



Stellar Parameters For KIC 007434110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3310^{+43}_{-36}	$5.051^{+0.040}_{-0.044}$	$-0.100^{+0.100}_{-0.100}$	$0.225^{+0.033}_{-0.024}$	$0.207^{+0.037}_{-0.027}$	$25.630^{+6.331}_{-5.537}$
	+1%/-1%	+1%/-1%	+100%/-100%	+15%/-11%	+18%/-13%	+25%/-22%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007434110-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$2.17^{+2.01}_{-1.42}$	161^{+4}_{-4}	2745^{+3323}_{-8522}	$29288^{+2711378}_{-2339810}$
Alt.	-1476 ± 265	$2.96^{+2.24}_{-1.86}$	161^{+4}_{-4}	2431^{+704}_{-286}	11882^{+75420}_{-8032}

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 $A_{obs} \gg 1.0$

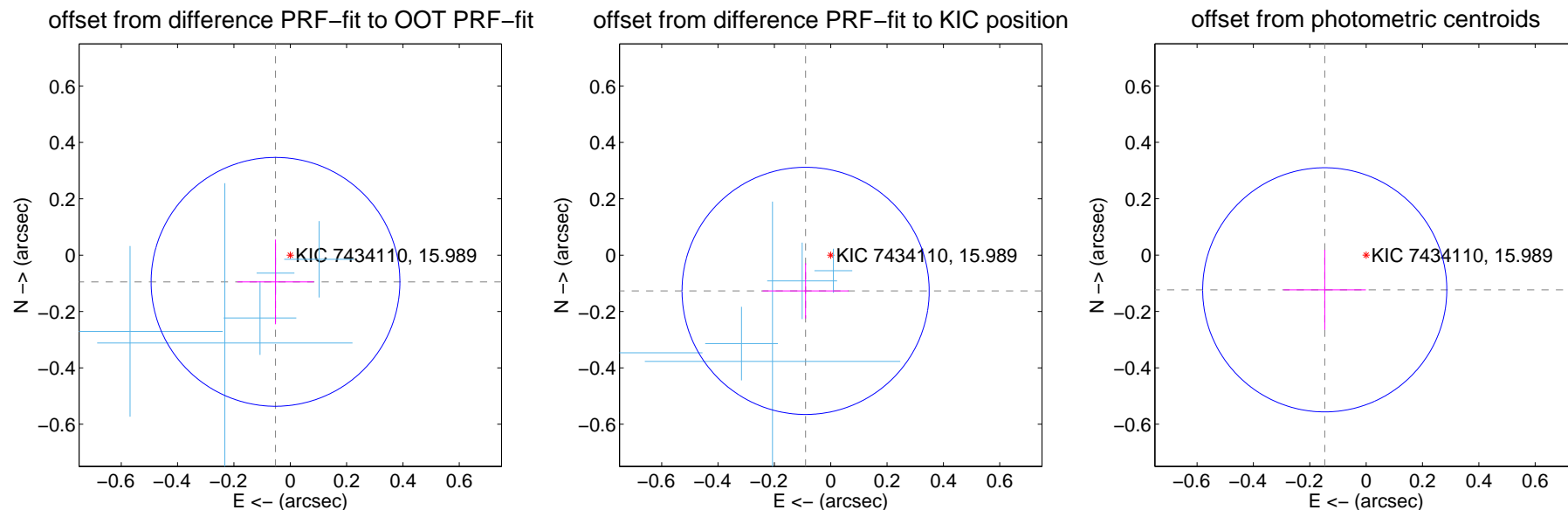
DV Centroid Data

Supplemental centroid analysis for 007434110-05. Kepler magnitude: 15.99. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

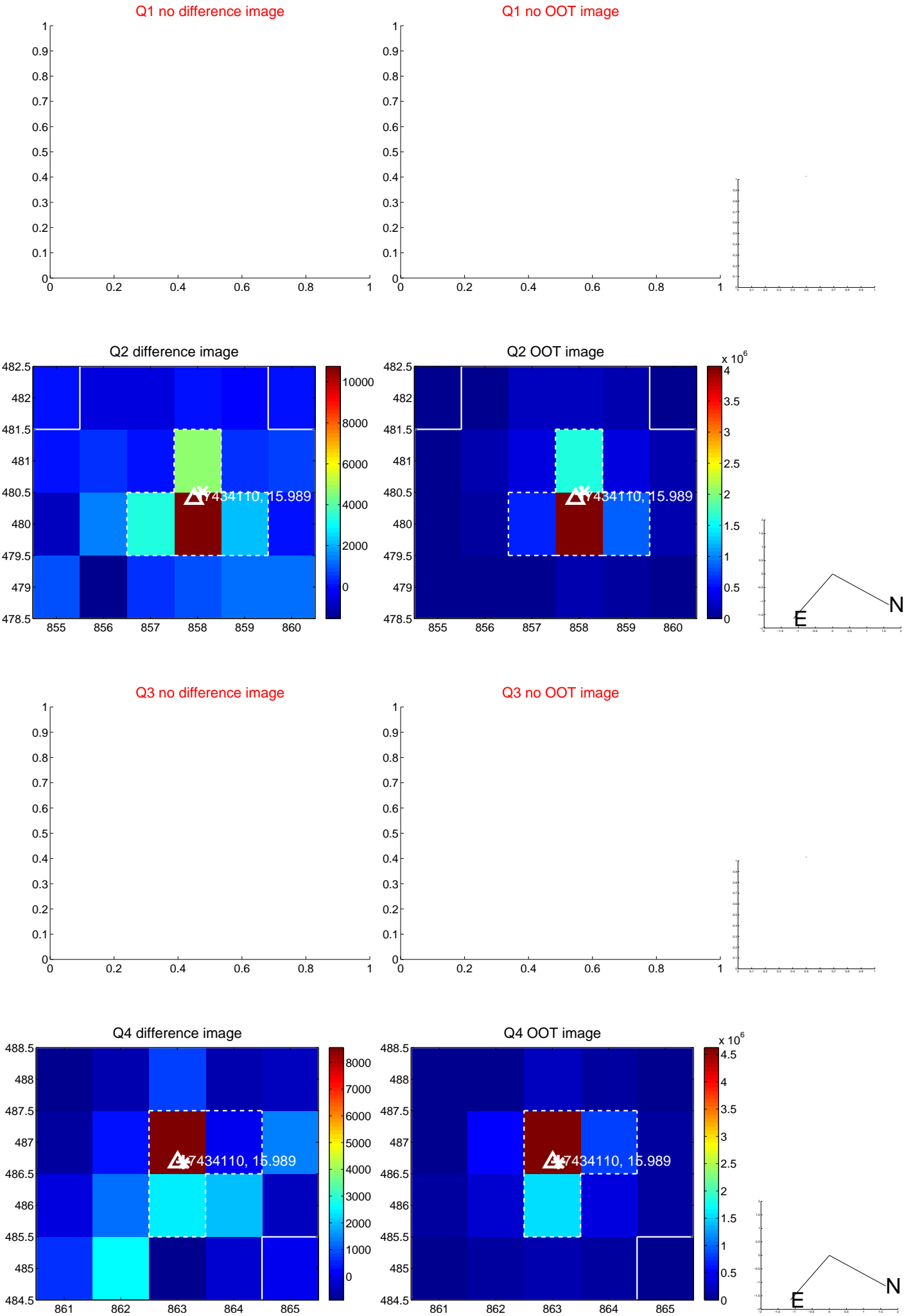
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.147	0.74	0.052 ± 0.136	-0.095 ± 0.150
PRF-fit source offset from KIC position	0.155 ± 0.146	1.06	0.089 ± 0.153	-0.127 ± 0.098
photometric centroid source offset	0.19 ± 0.14	1.33	0.15 ± 0.15	-0.12 ± 0.14

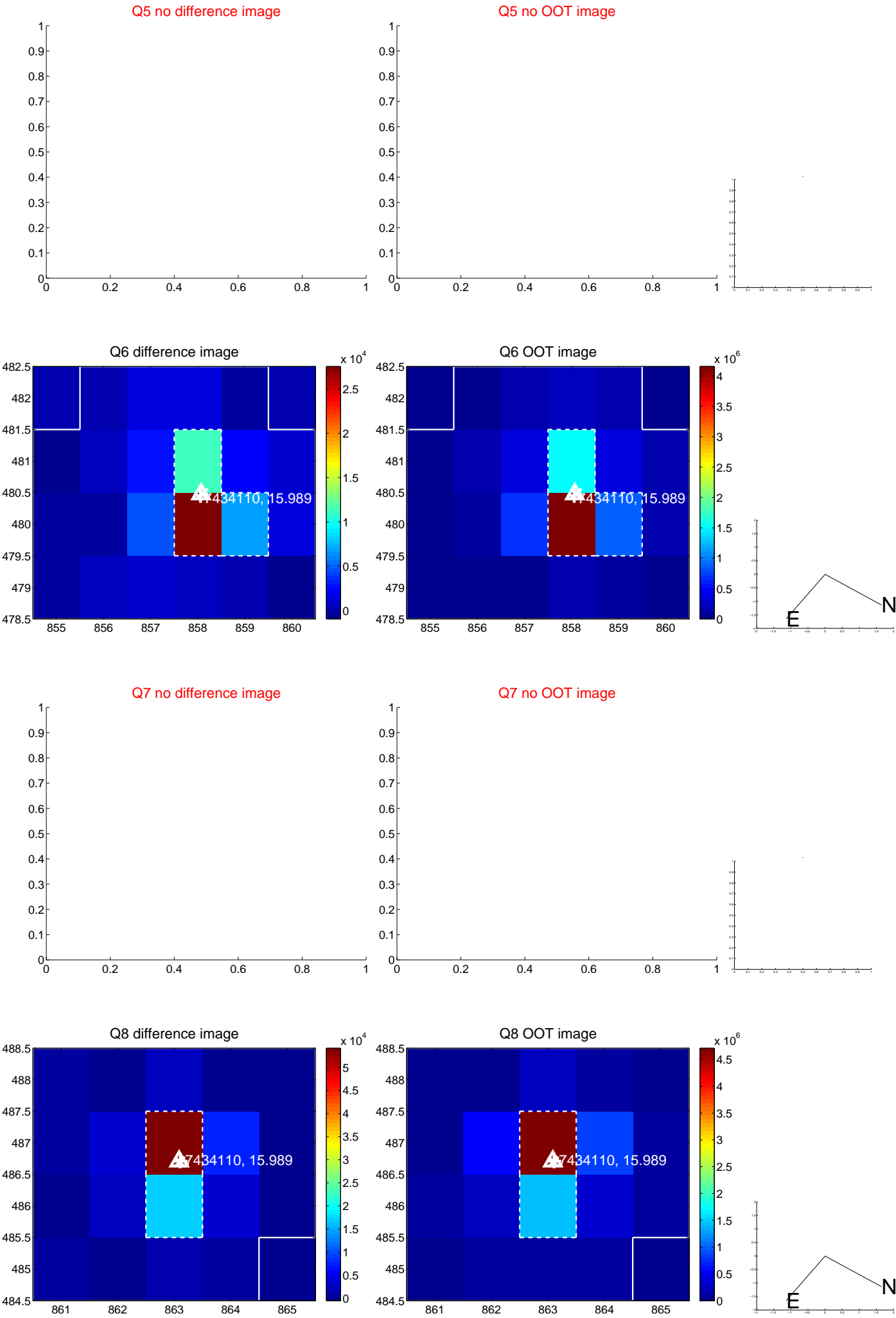


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

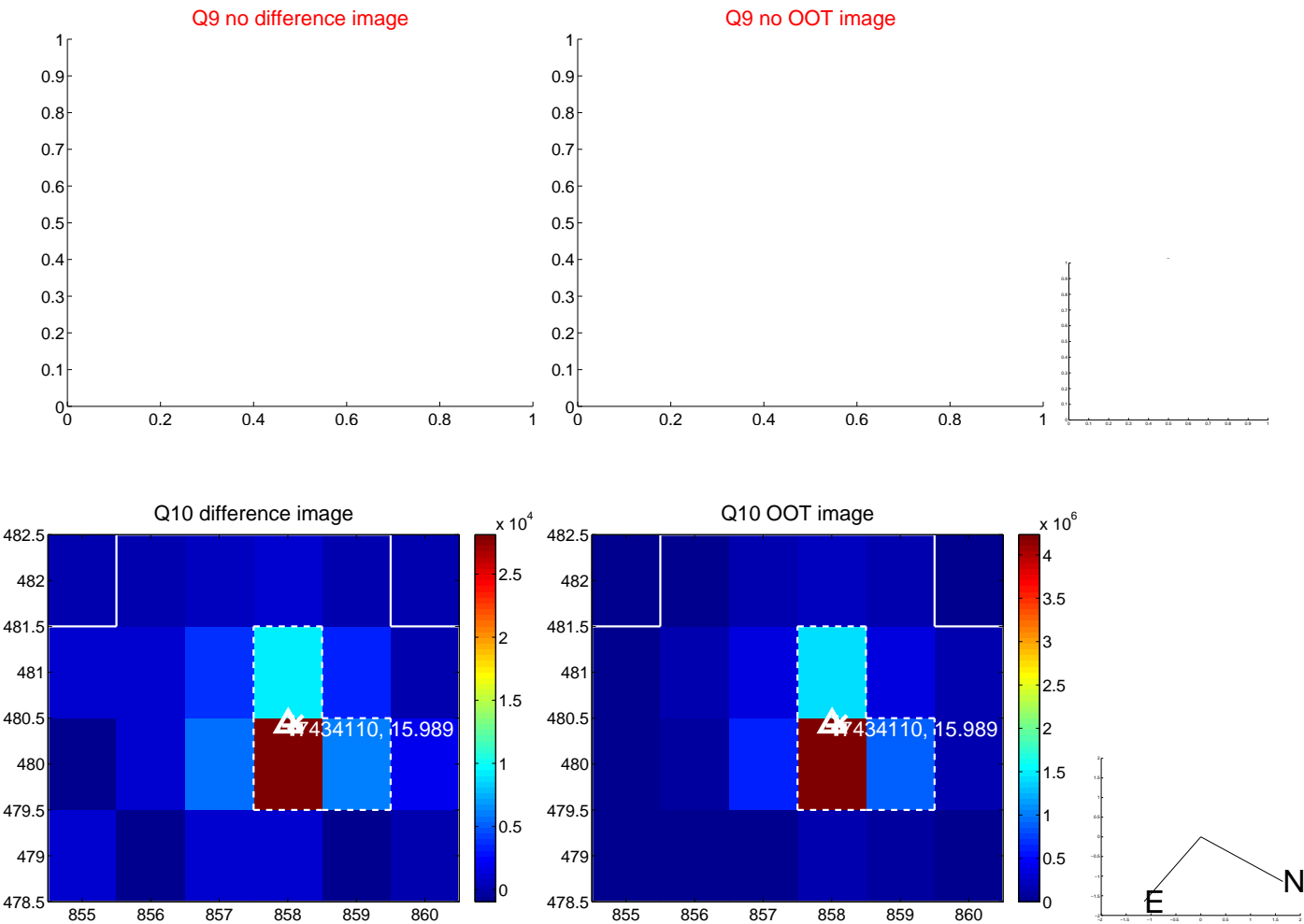
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



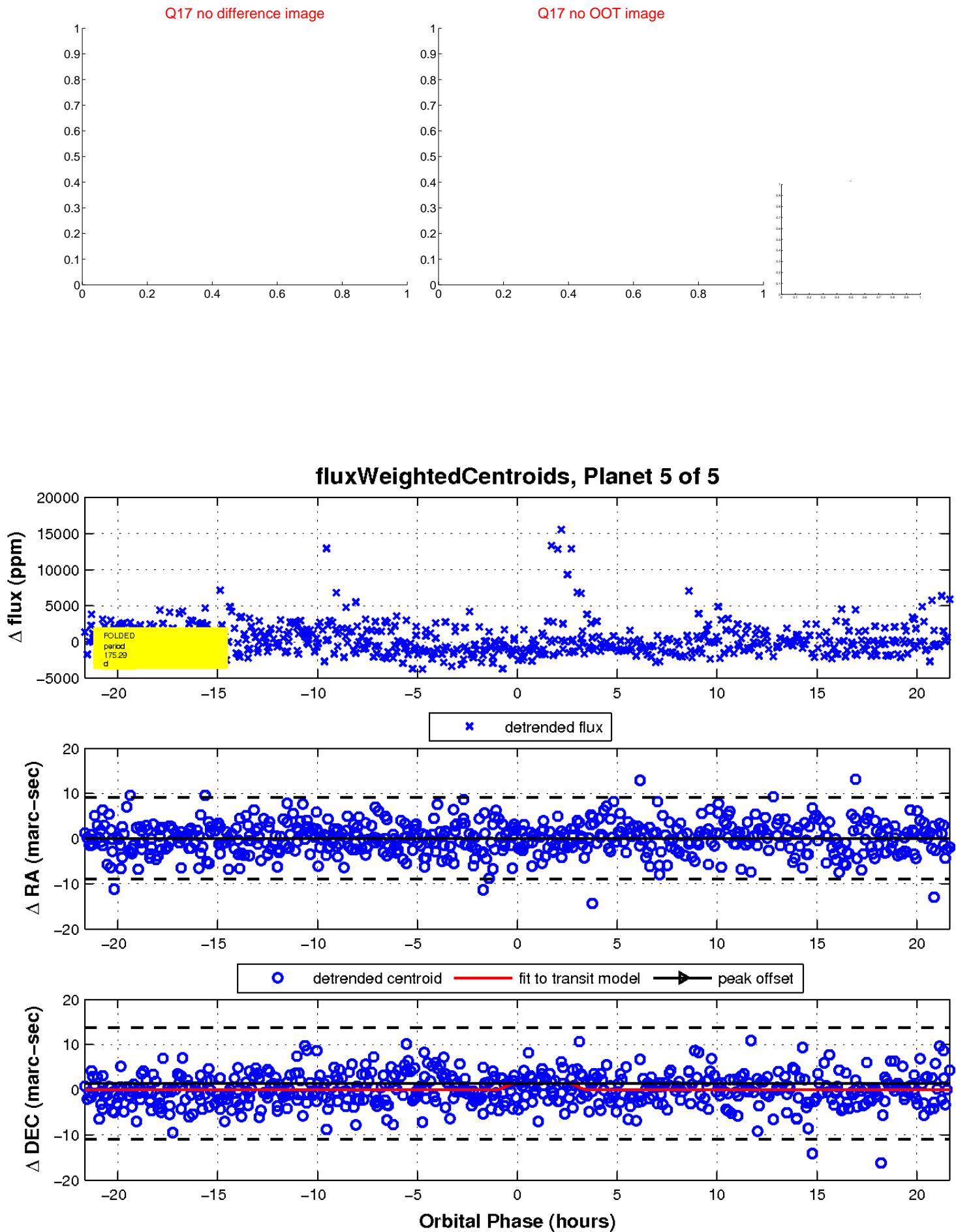
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

