

KIC 010744342

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})
010744342-01	OBS	No	1.213444	132.449930	41.1	4.217	8.3	7.6	1.52	7231	1.12	8841.16
010744342-02	OBS	No	383.409734	410.932590	618.6	9.289	7.5	6.2	1.52	7231	5.58	4.11
010744342-03	OBS	No	6.762819	135.582819	179.6	13.503	7.1	9.2	1.52	7231	3.96	894.74
010744342-04	OBS	No	174.871720	138.376624	155.0	7.005	10.4	2.1	1.52	7231	2.23	11.70
010744342-05	OBS	No	385.473327	380.490288	687.4	11.712	9.8	6.9	1.52	7231	4.85	4.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010744342-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010744342-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010744342-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010744342-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
010744342-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

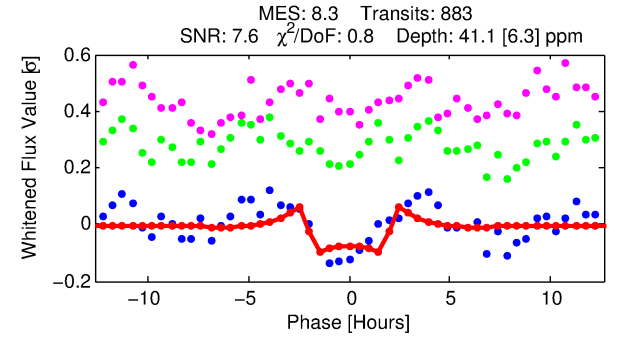
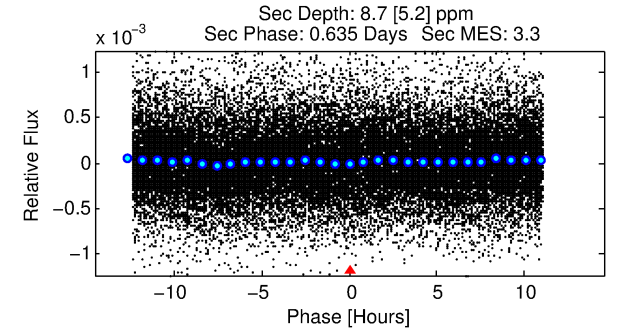
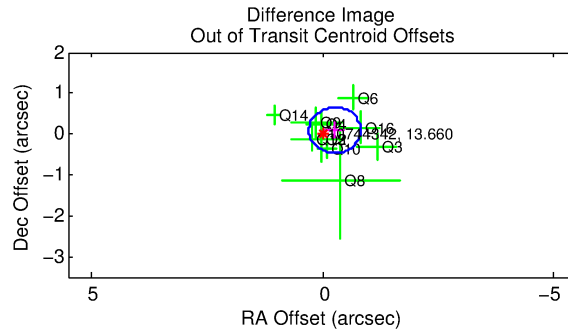
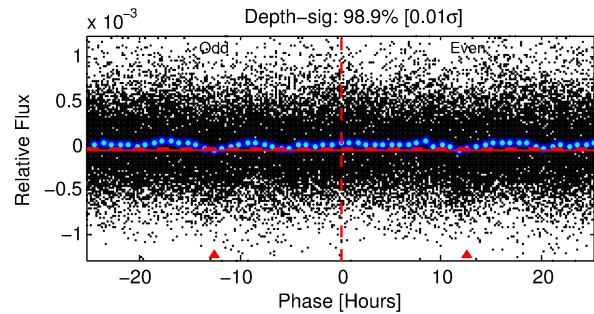
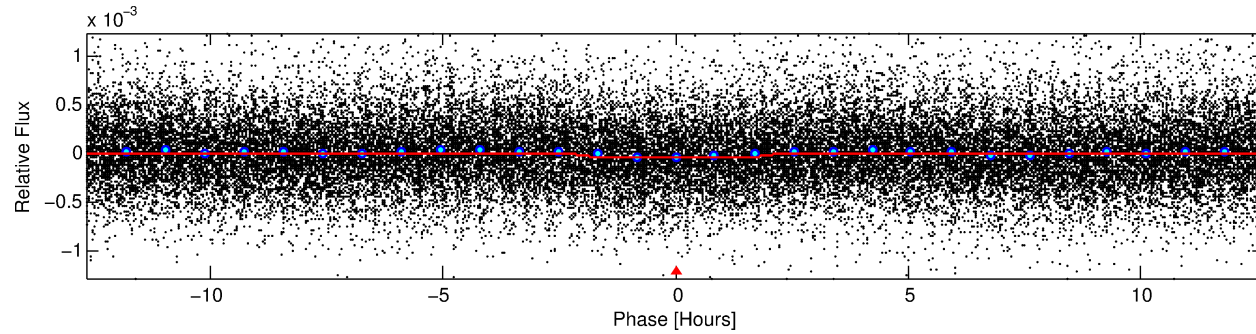
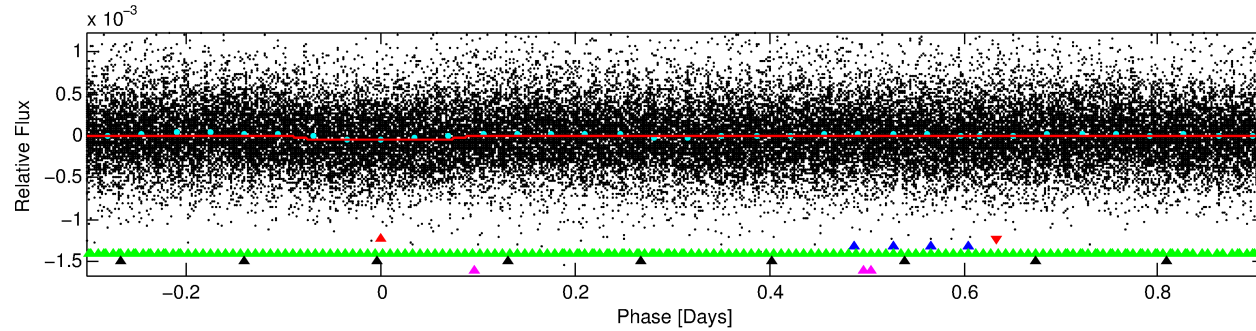
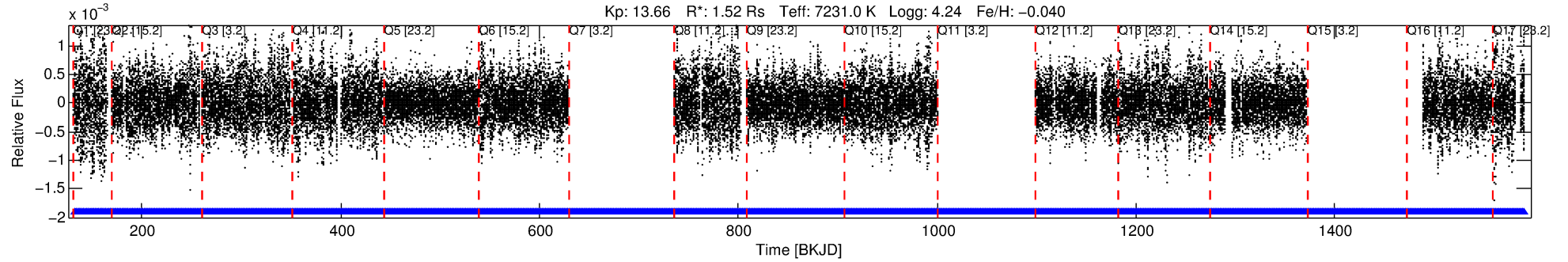
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010744342-01

No Significant Match Found

DV One-Page Summary

KIC: 10744342 Candidate: 1 of 5 Period: 1.213 d



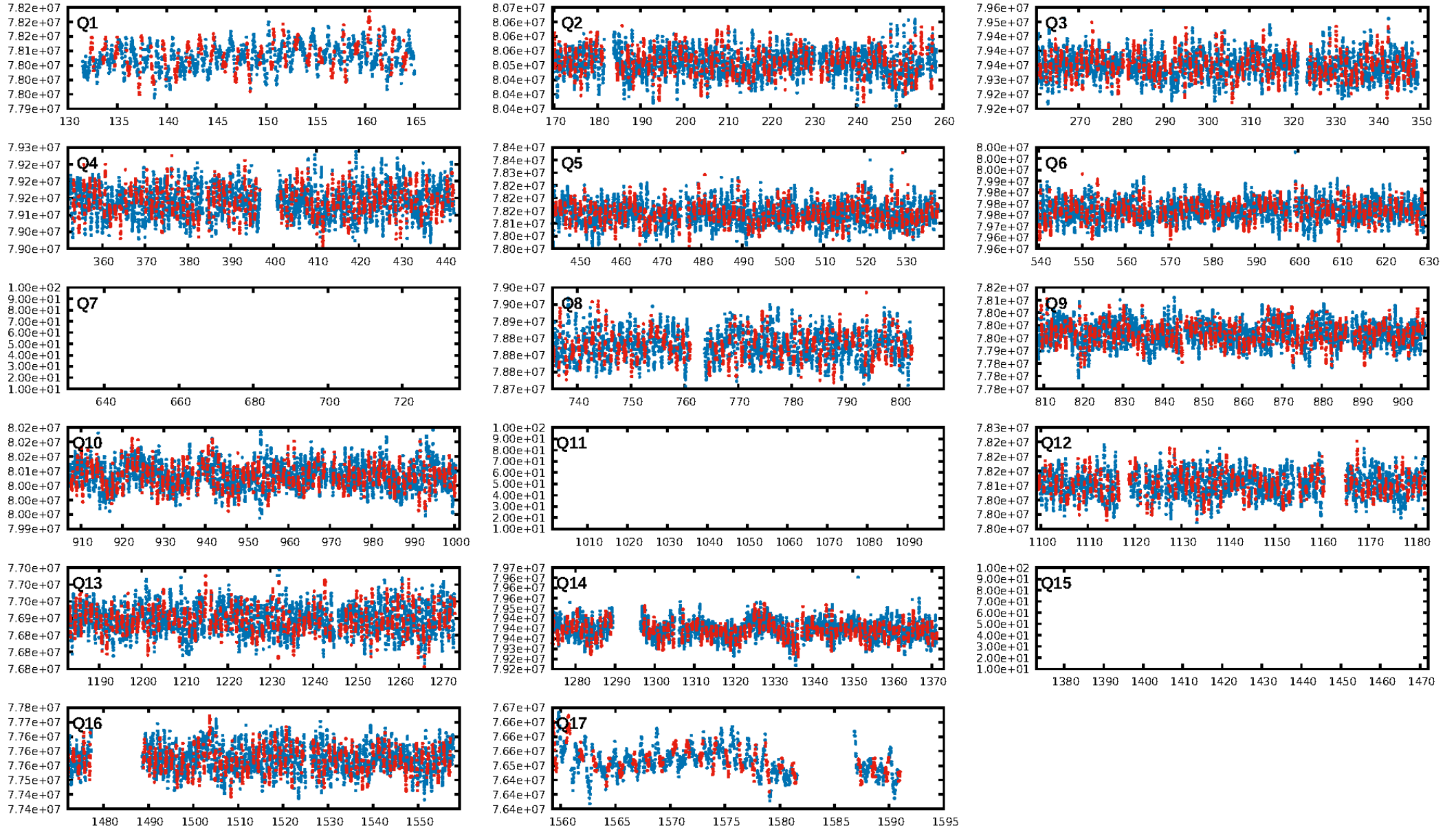
DV Fit Results:

Period = 1.21344 [0.00001] d
Epoch = 132.4499 [0.0031] BKJD
Rp/R* = 0.0068 [0.0020]
a/R* = 1.39 [1.21]
b = 0.89 [0.42]
Seff = 8841.16 [4008.09]
Teff = 2473 [280] K
Rp = 1.12 [0.53] Re
a = 0.0253 [0.0074] AU
Ag = 2.43 [2.28] [0.63 σ]
Teffp = 4773 [1032] K [2.15 σ]

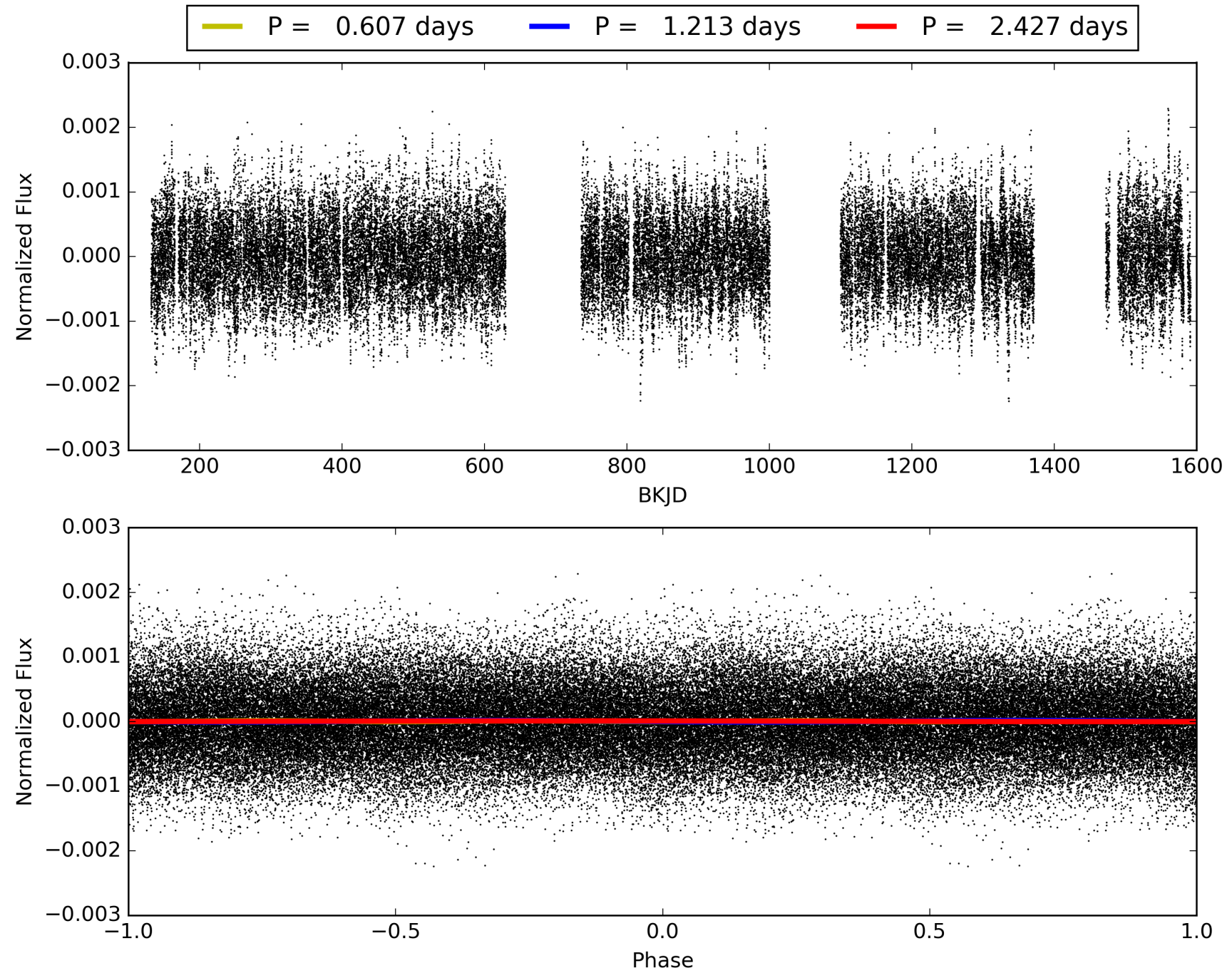
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [9.42 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.38e-12
RollingBand-fgt: 1.00 [833/833]
GhostDiagnostic-chr: 2.043
Centroid-sig: 16.0%
Centroid-so: 0.506 arcsec [0.72 σ]
OotOffset-rm: 0.281 arcsec [1.51 σ]
KicOffset-rm: 0.465 arcsec [2.28 σ]
OotOffset-st: 4/1/3/2 [10]
KicOffset-st: 4/1/3/2 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010744342-01, PDC Light Curves

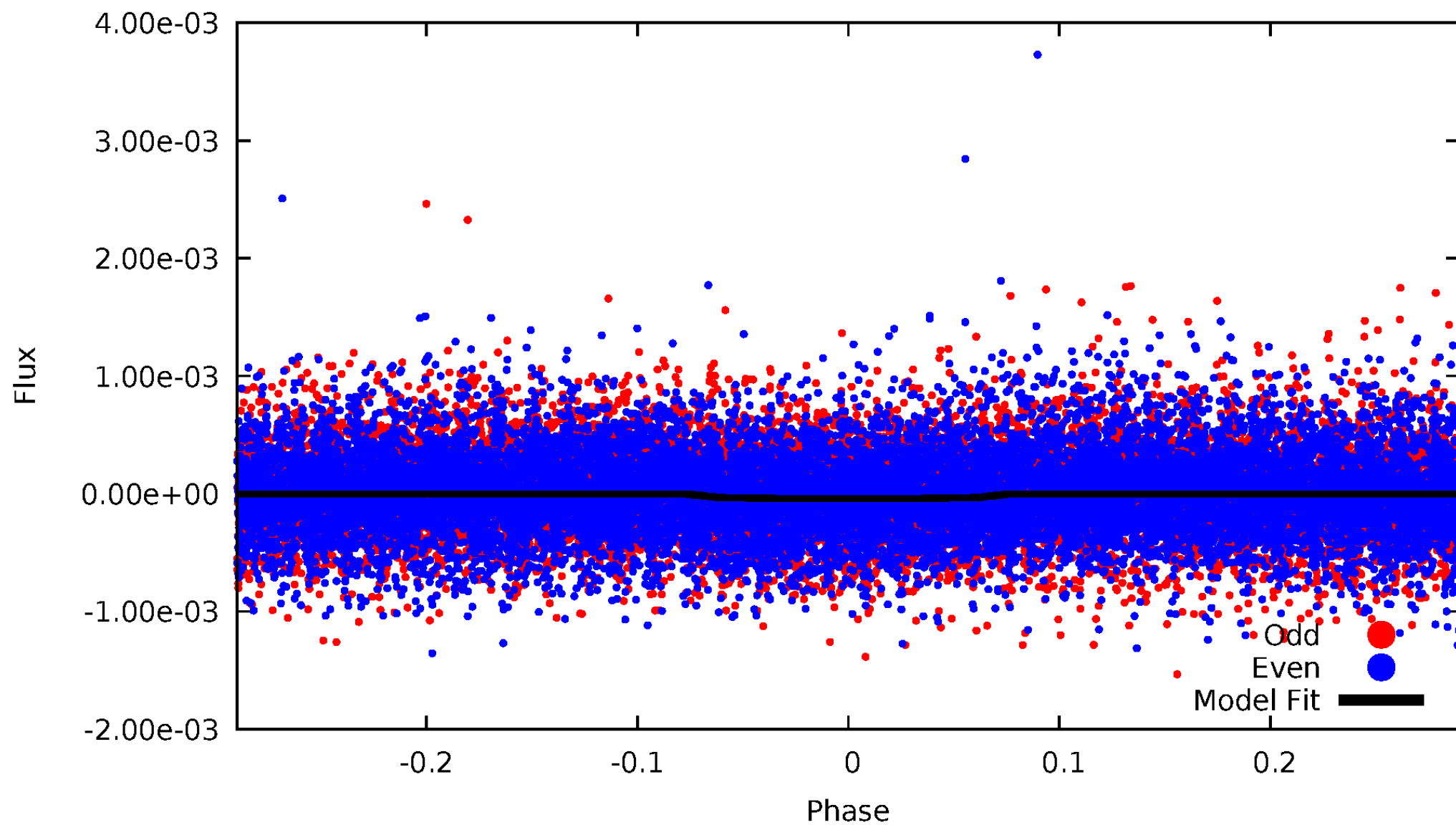


TCE 010744342-01



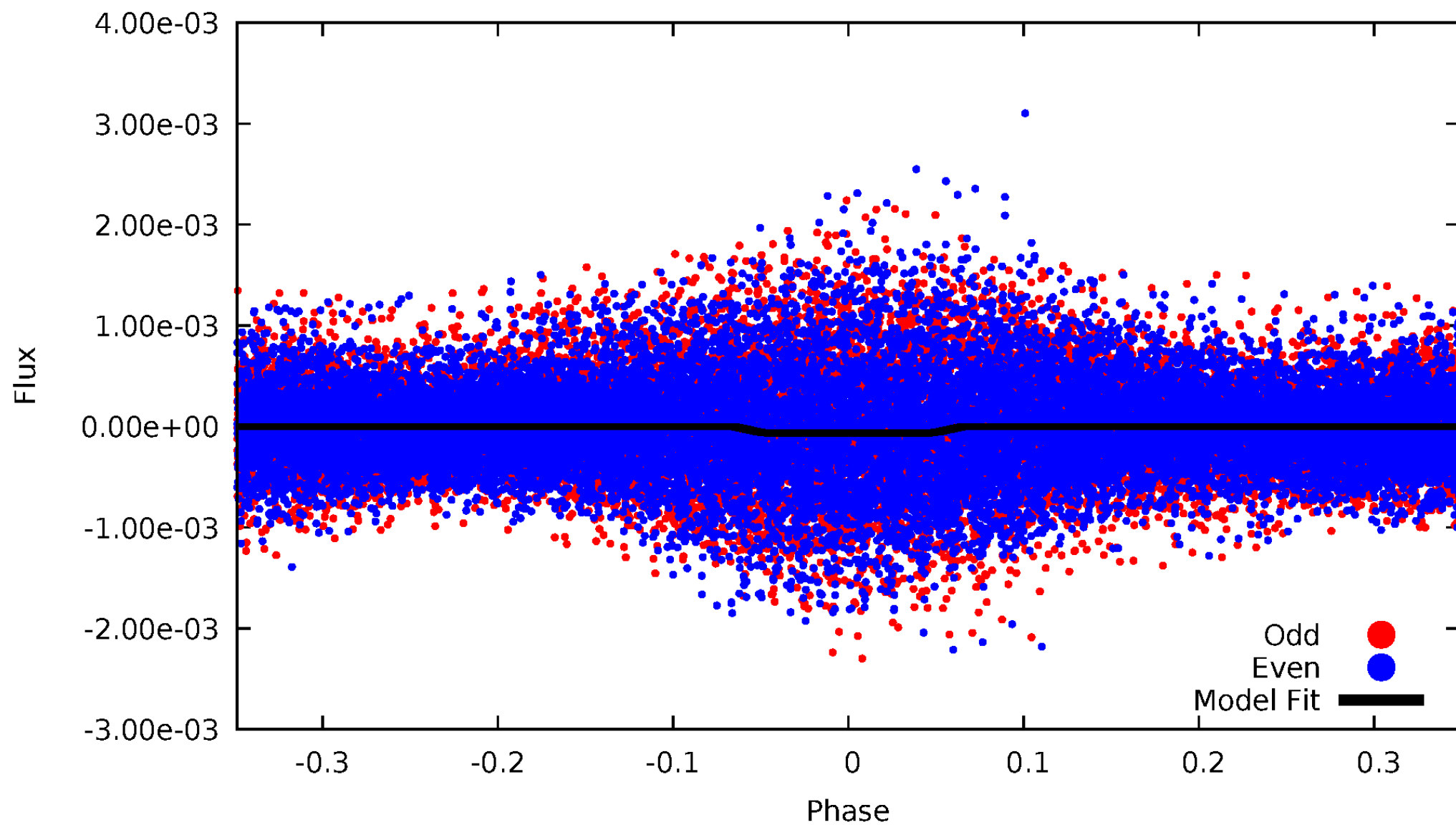
DV Odd/Even

TCE 010744342-01



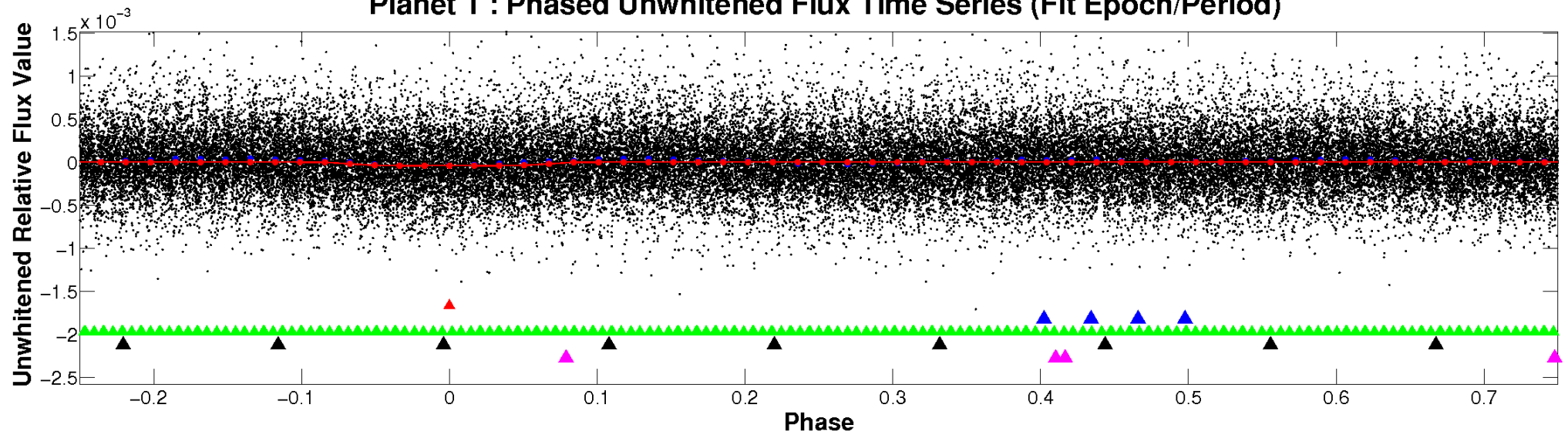
ALT Odd/Even

TCE 010744342-01

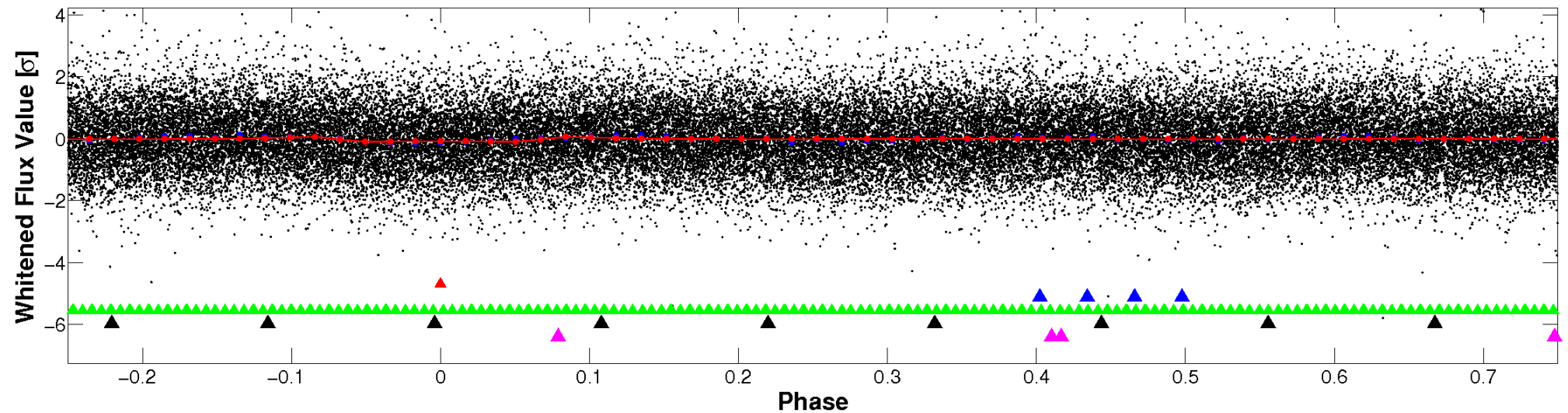


Non-Whitened Vs. Whitened Light Curve

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

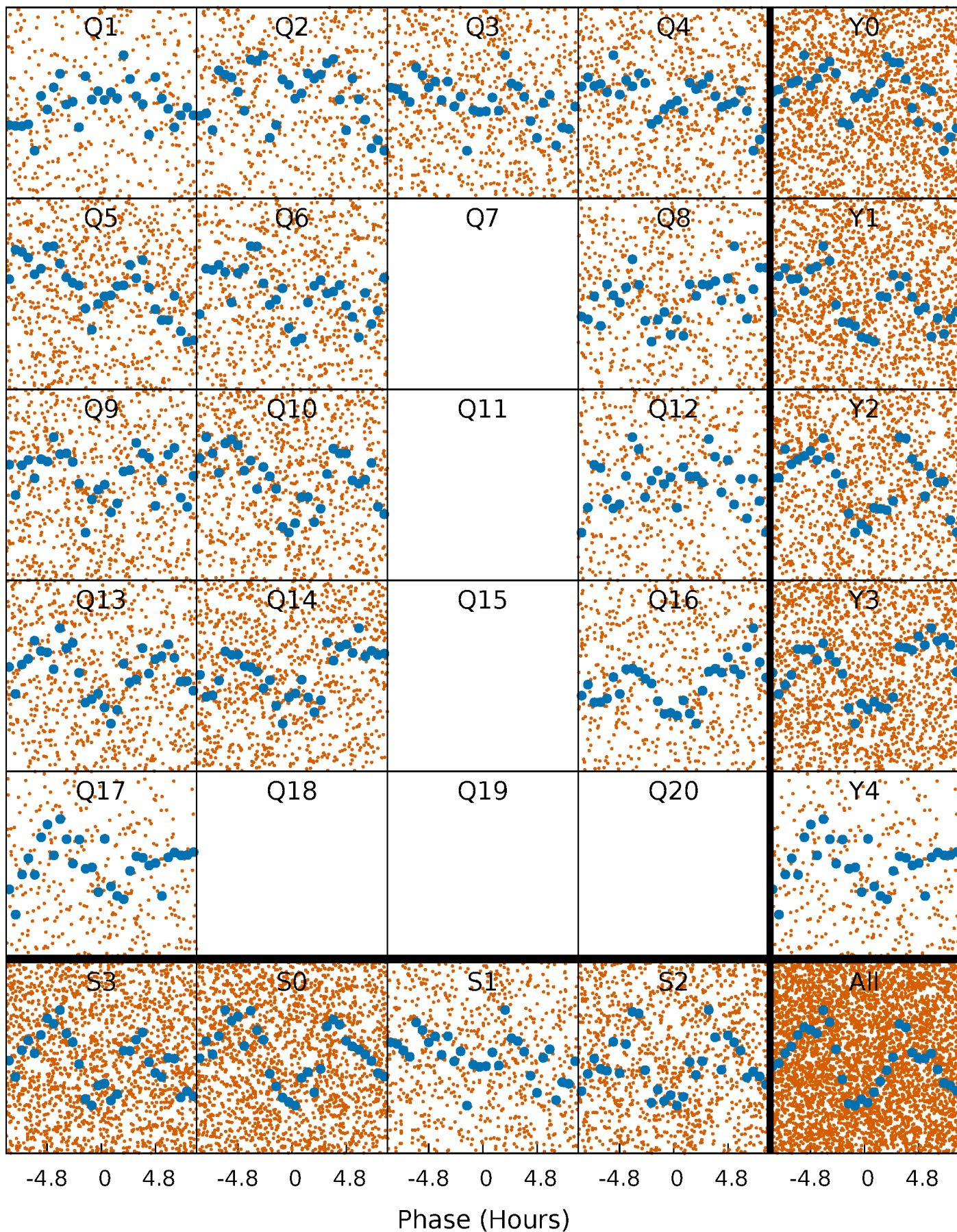


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



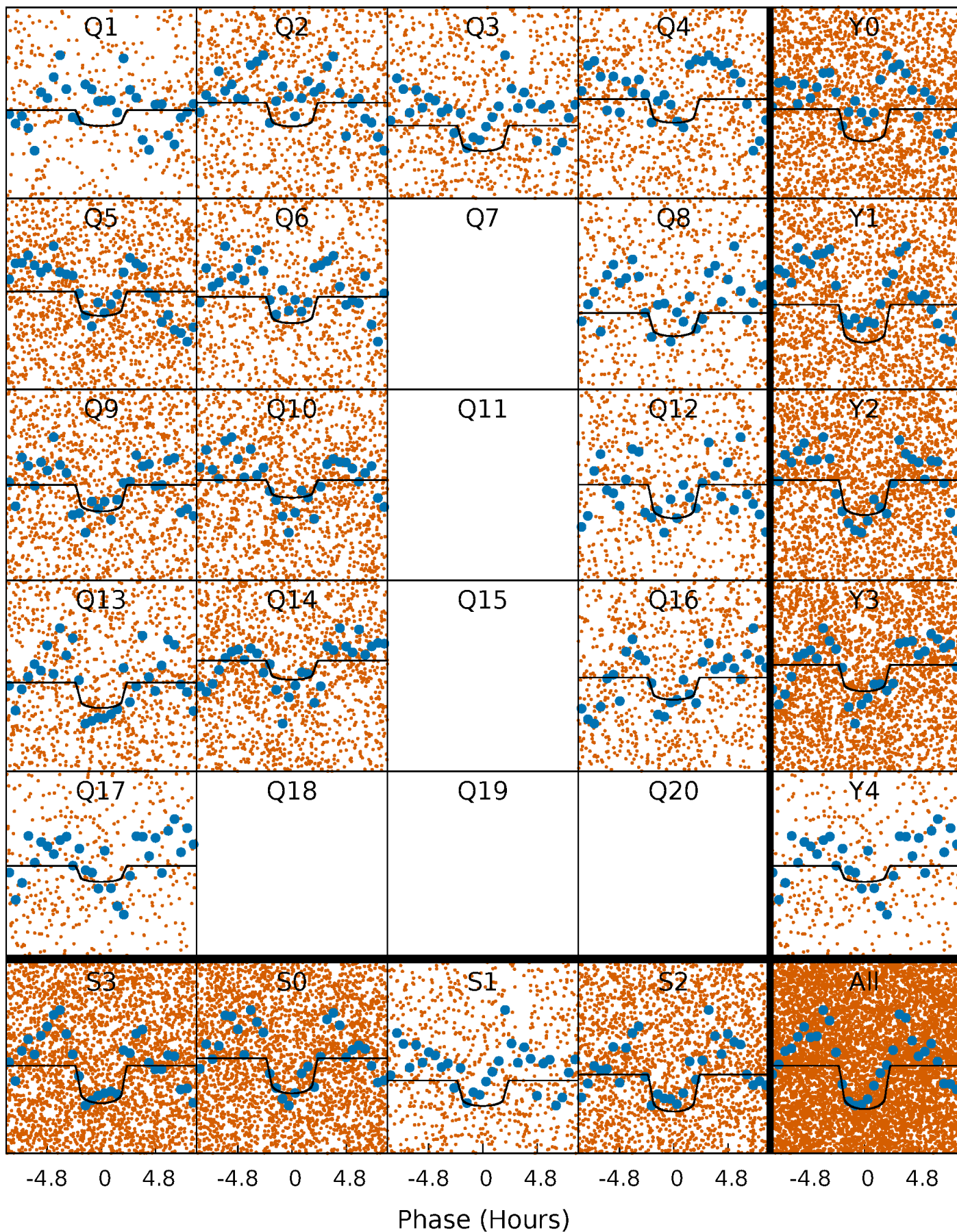
PDC Quarter-Phased Transit Curves

TCE 010744342-01 P= 1.213444 Days $T_0=132.449930$ (BKJD)



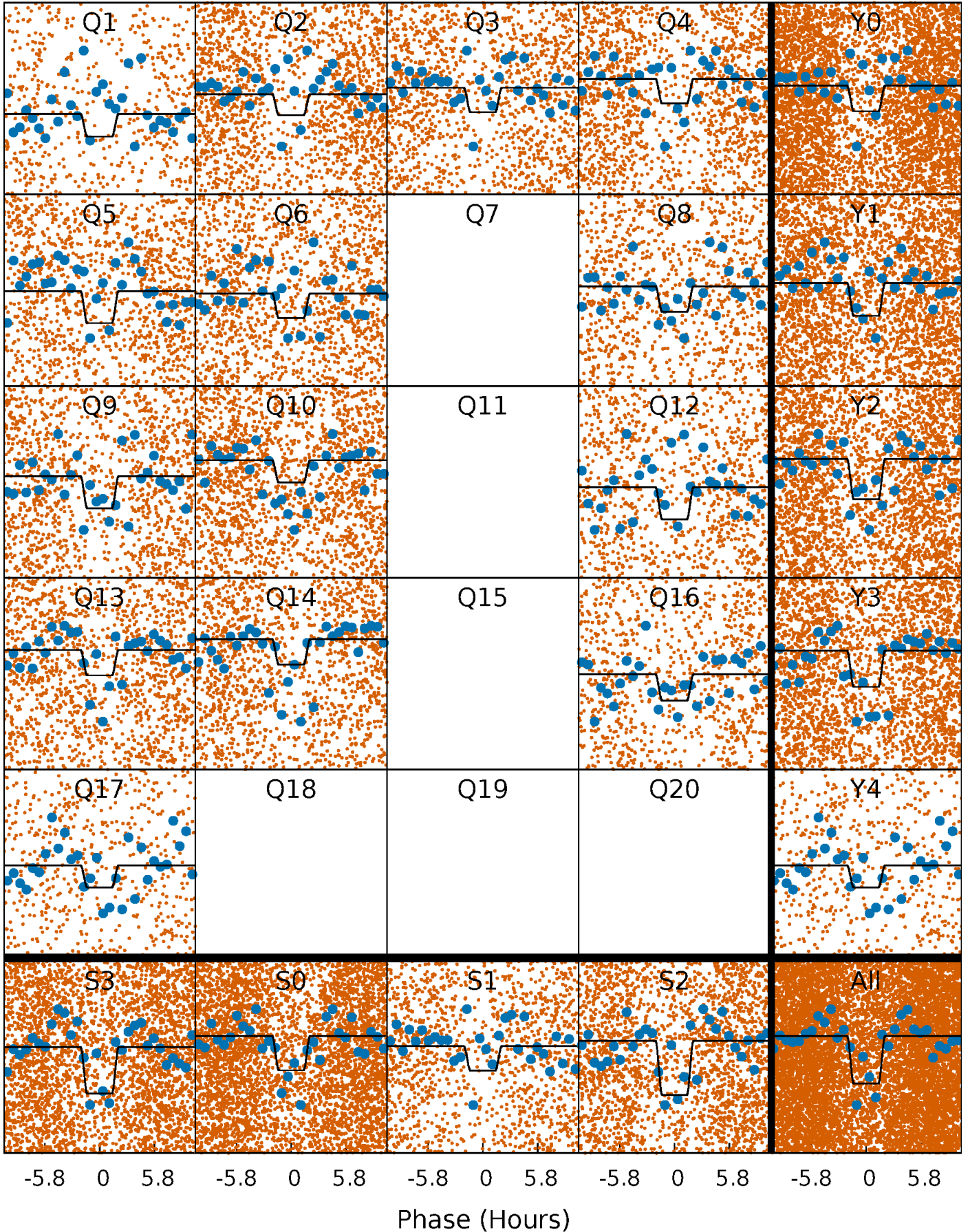
DV Quarter-Phased Transit Curves

TCE 010744342-01 P= 1.213444 Days $T_0=132.449930$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

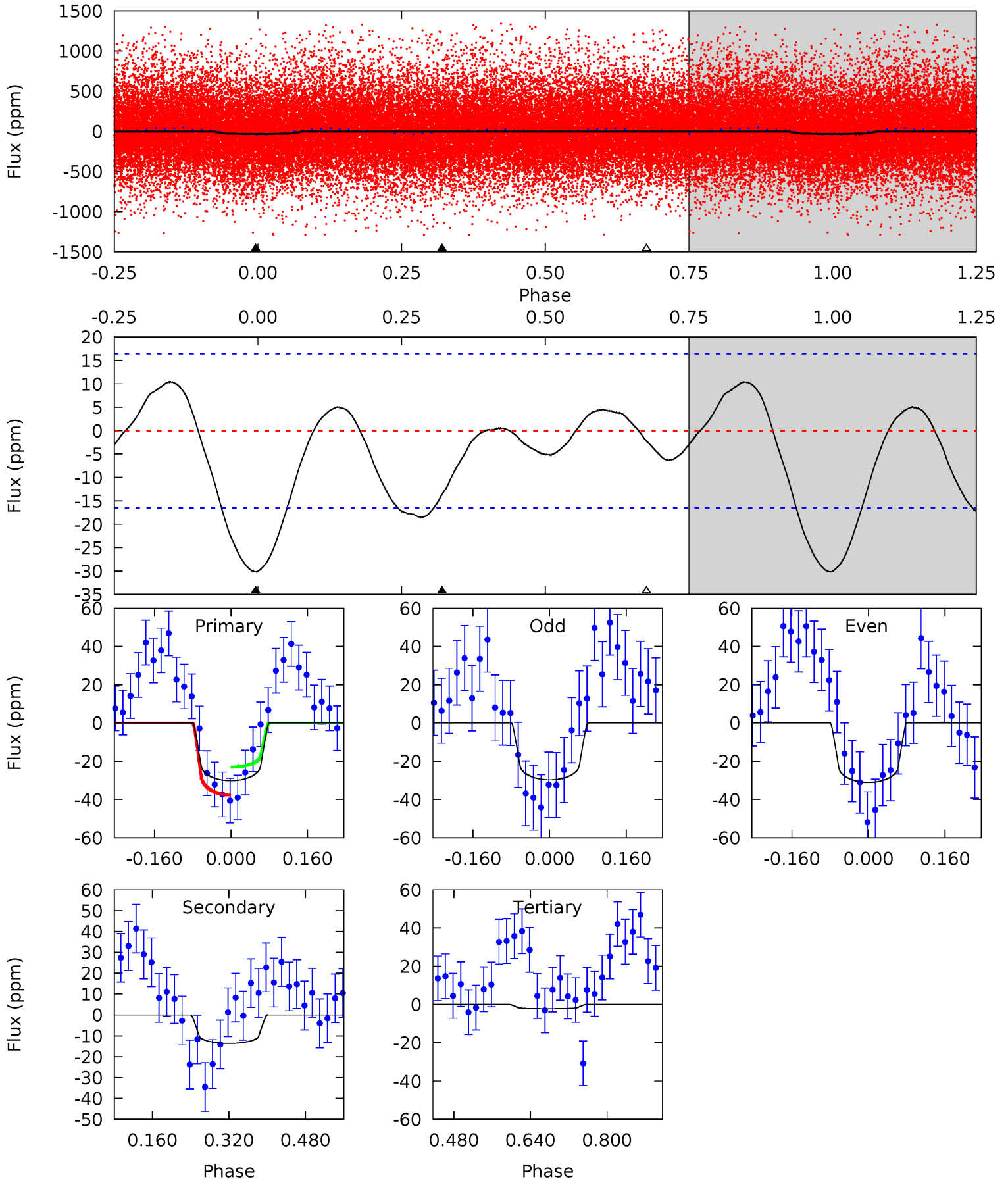
TCE 010744342-01 P= 1.213468 Days $T_0=132.428599$ (BKJD)



DV Model-Shift Uniqueness Test

010744342-01, P = 1.213444 Days, E = 131.236486 Days

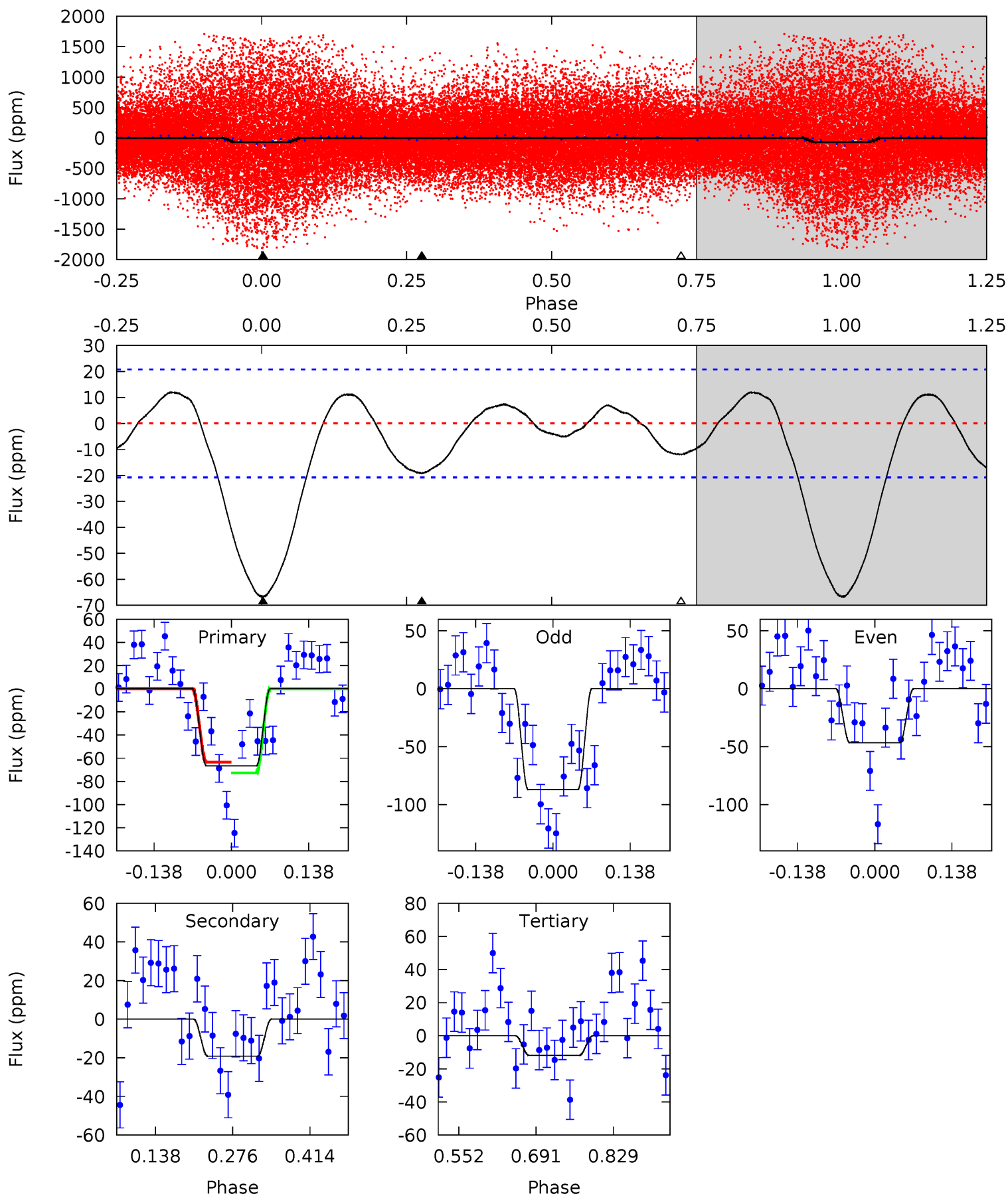
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.18	3.69	0.60	0	4.47	1.40	1.20	7.59	8.18	3.10	3.69	0.18	0.98	0.26	1.98



Alt Model-Shift Uniqueness Test

010744342-01, P = 1.213468 Days, E = 131.215131 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	4.14	2.57	0	4.50	1.48	1.45	11.8	14.4	1.57	4.14	4.36	0.70	0.15	1.10



Stellar Parameters For KIC 010744342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7231^{+200}_{-342}	$4.240^{+0.087}_{-0.217}$	$-0.040^{+0.200}_{-0.350}$	$1.518^{+0.552}_{-0.221}$	$1.458^{+0.209}_{-0.209}$	$0.588^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+500%/-875%	+36%/-15%	+14%/-14%	+41%/-56%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010744342-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 4	$1.19^{+0.37}_{-0.36}$	3505^{+278}_{-227}	5120^{+1100}_{-653}	$3.260^{+3.851}_{-1.544}$
Alt.	-19 ± 5	$1.39^{+0.42}_{-0.37}$	3512^{+287}_{-231}	5175^{+853}_{-621}	$3.388^{+3.090}_{-1.536}$

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

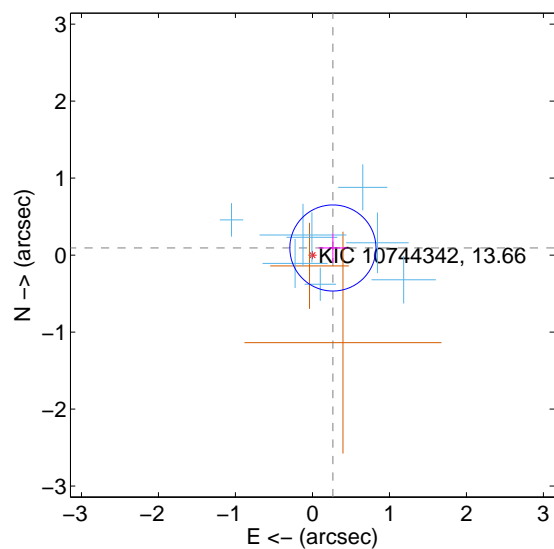
Supplemental centroid analysis for 010744342-01. Kepler magnitude: 13.66. Transit SNR 7.57

There are 8 quarters with good PRF difference image offsets

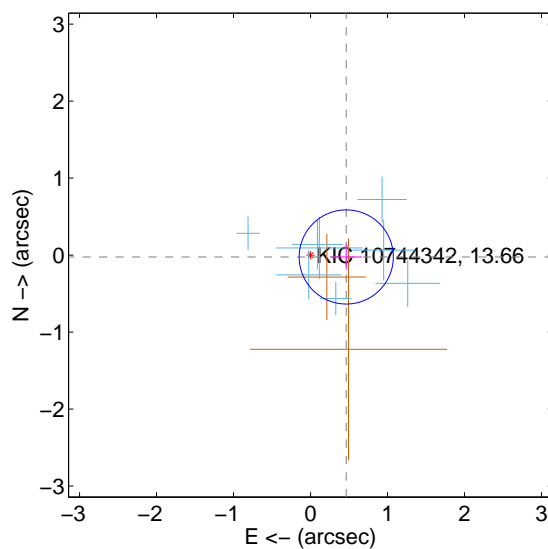
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.281 ± 0.186	1.51	-0.266 ± 0.186	0.092 ± 0.191
PRF-fit source offset from KIC position	0.465 ± 0.204	2.28	-0.464 ± 0.204	-0.024 ± 0.164
photometric centroid source offset	0.51 ± 0.70	0.72	0.21 ± 0.89	0.46 ± 0.66

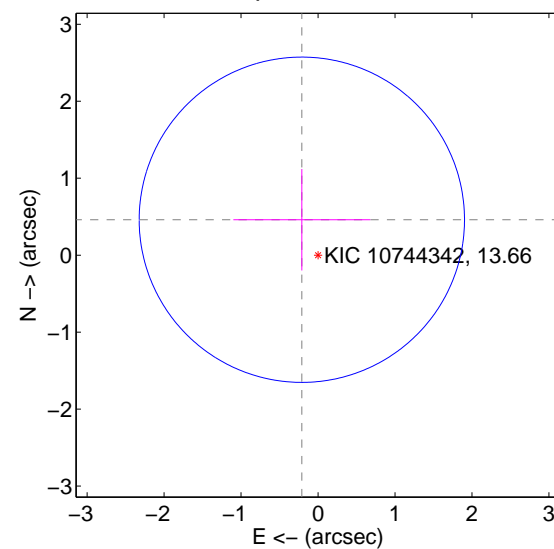
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

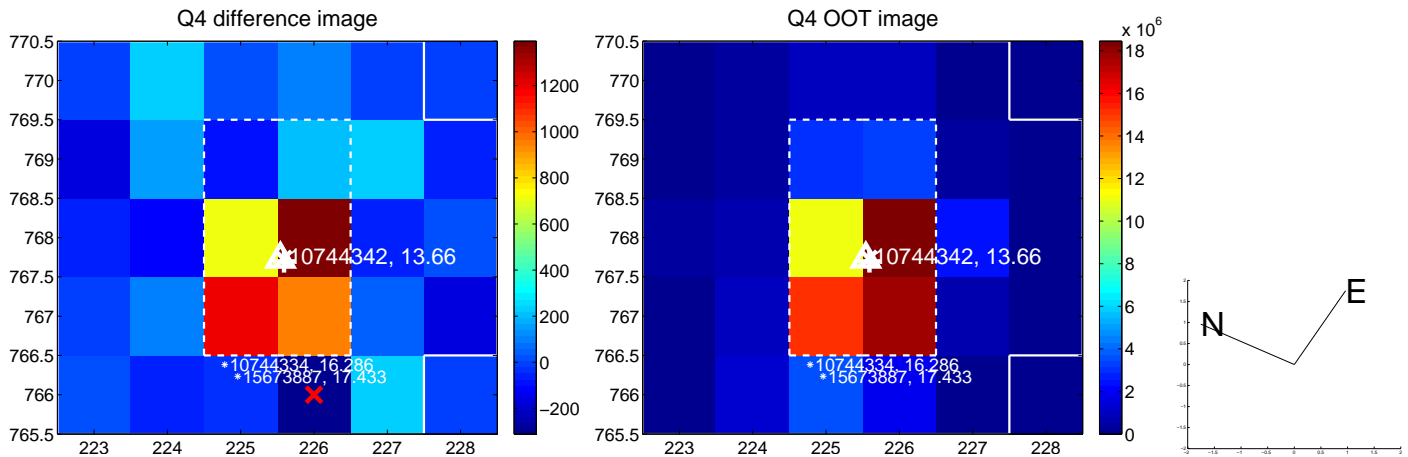
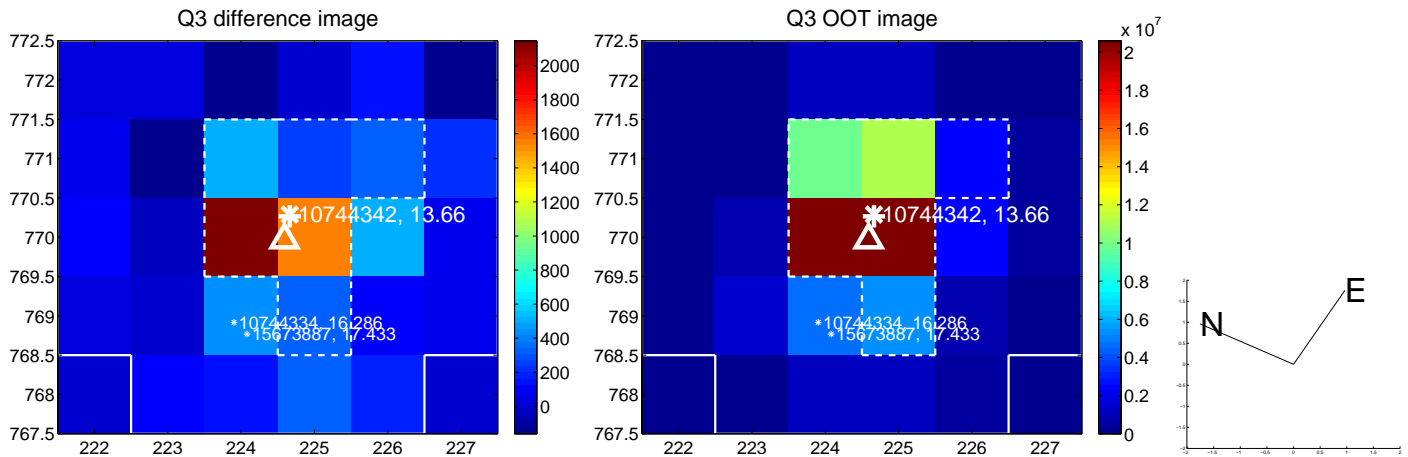
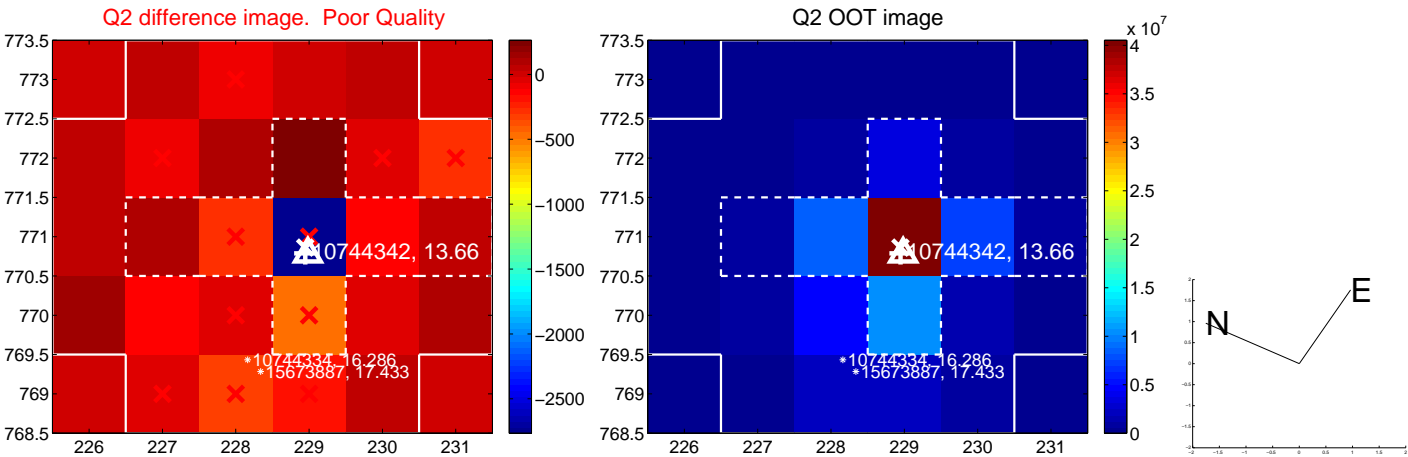
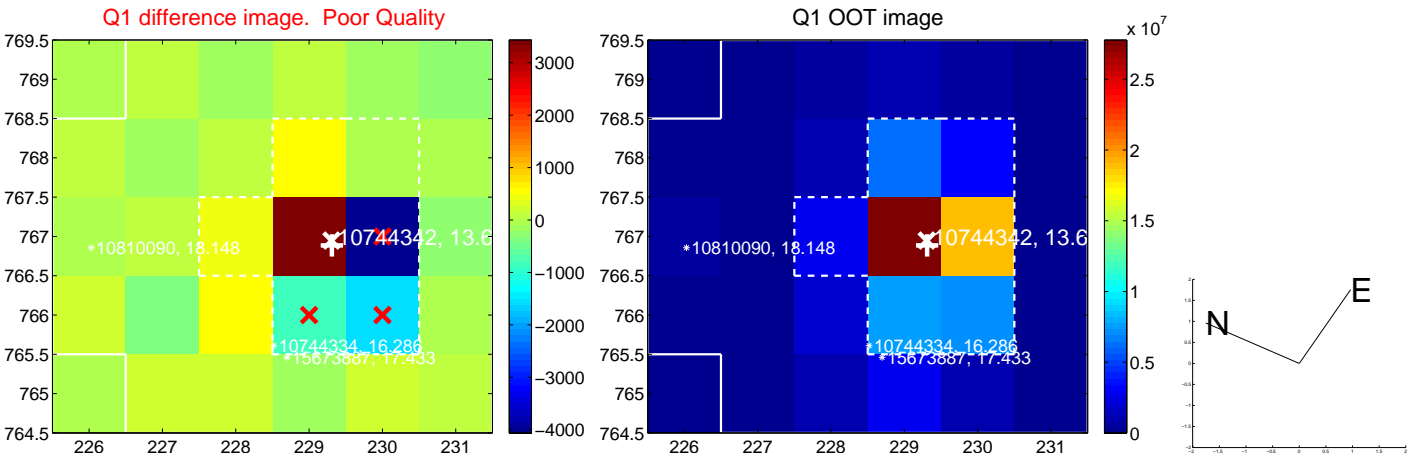


offset from photometric centroids

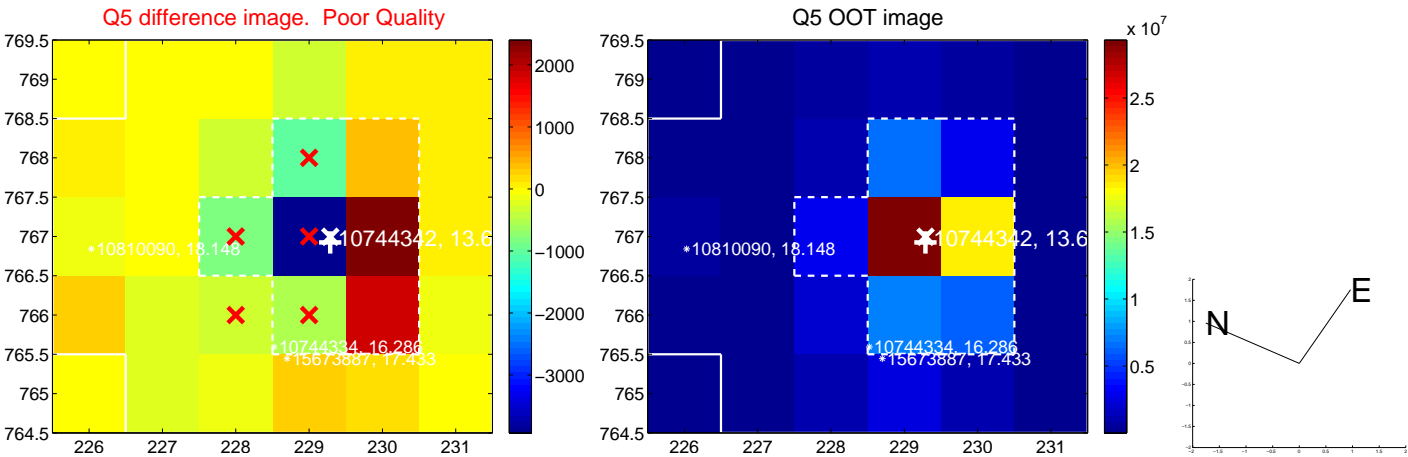


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

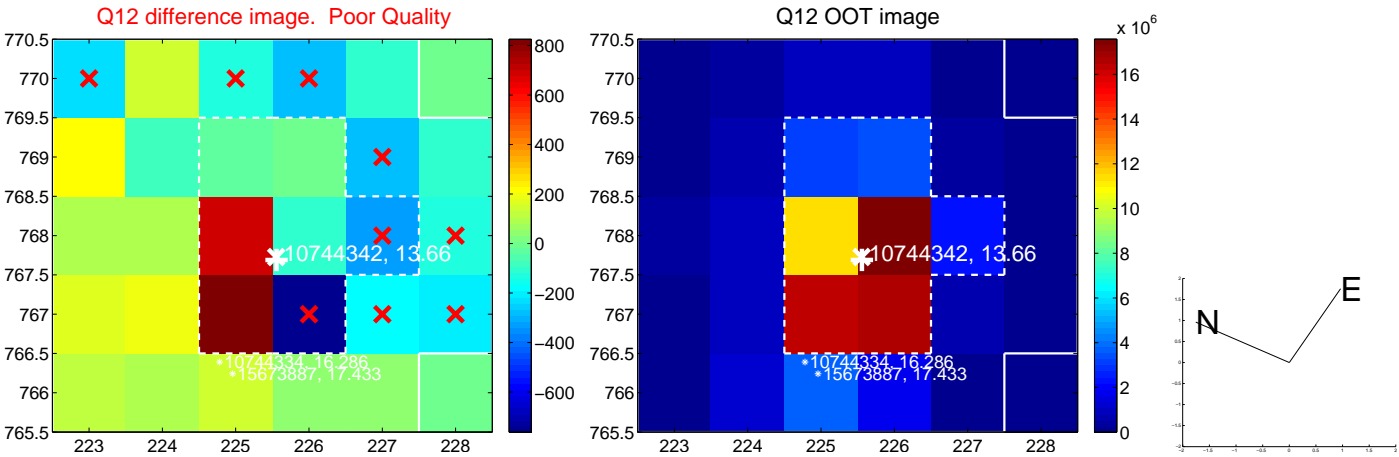
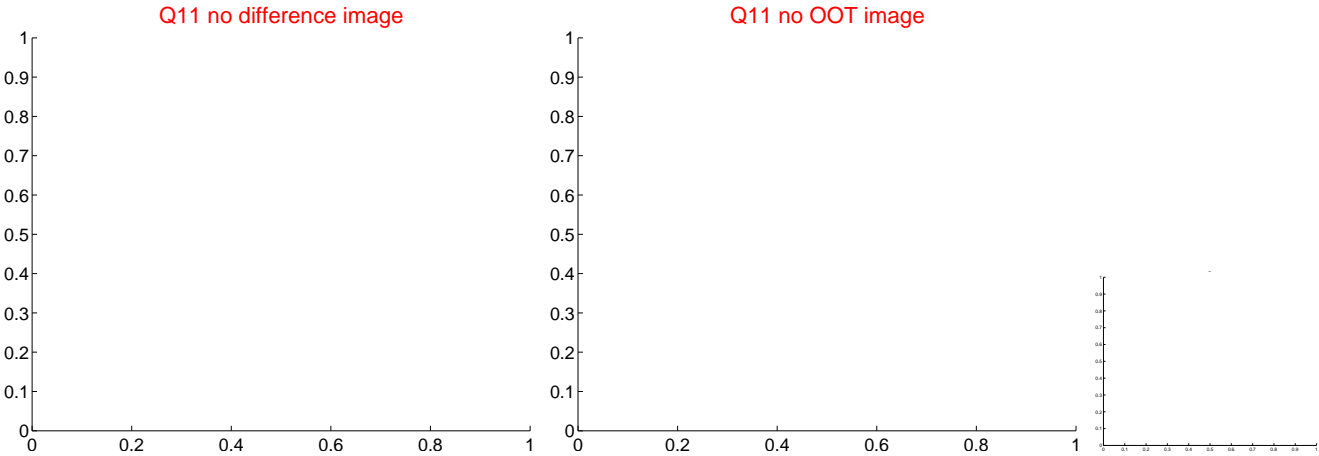
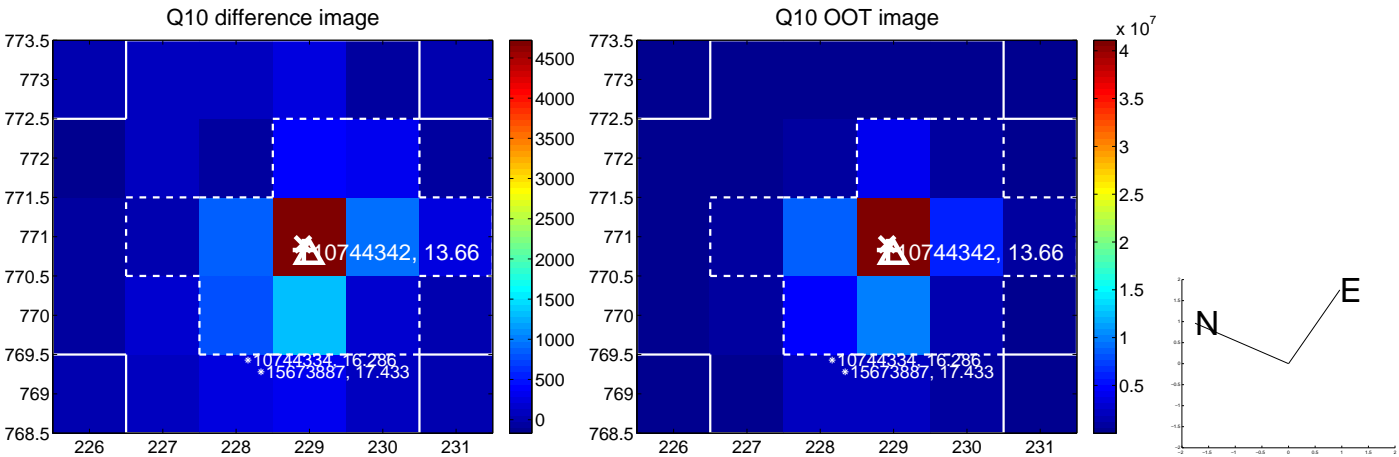
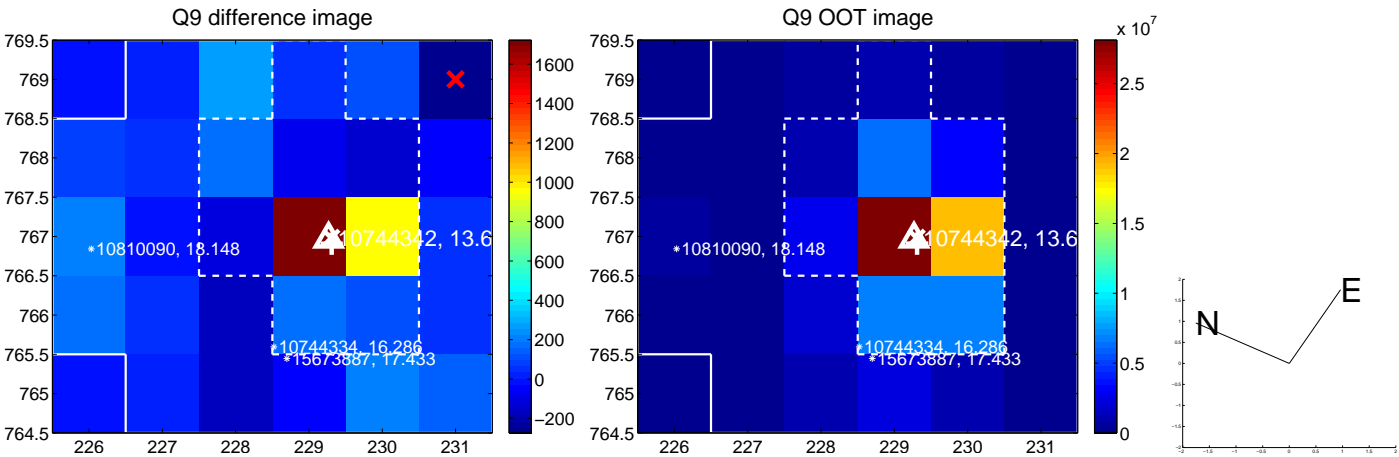
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



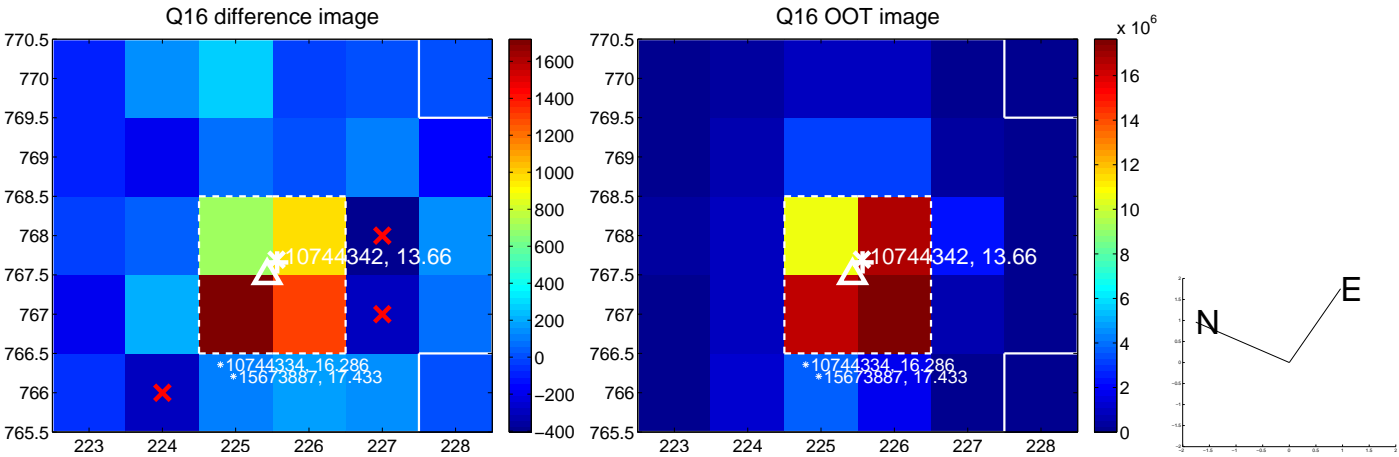
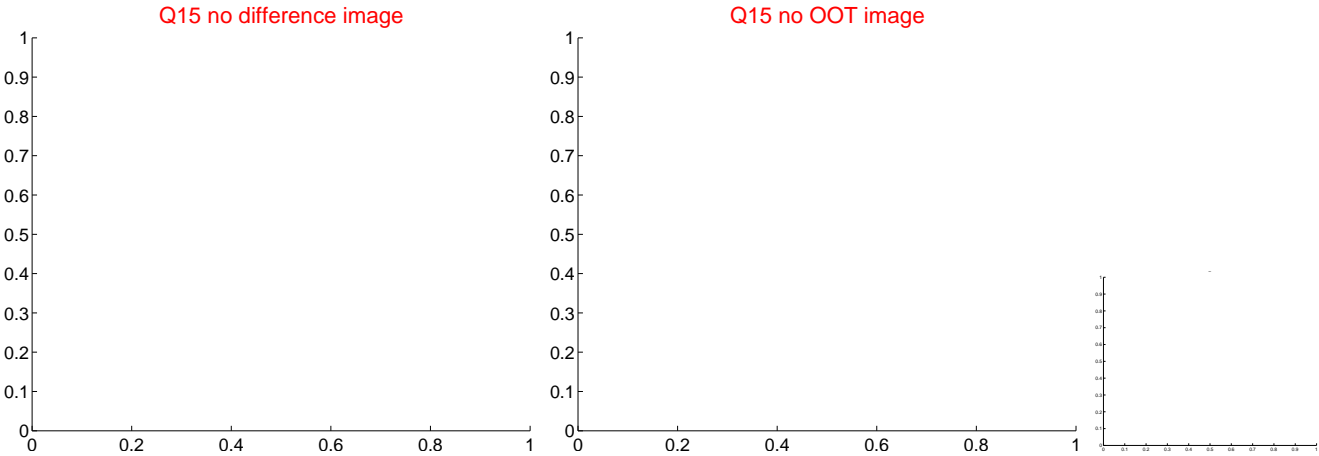
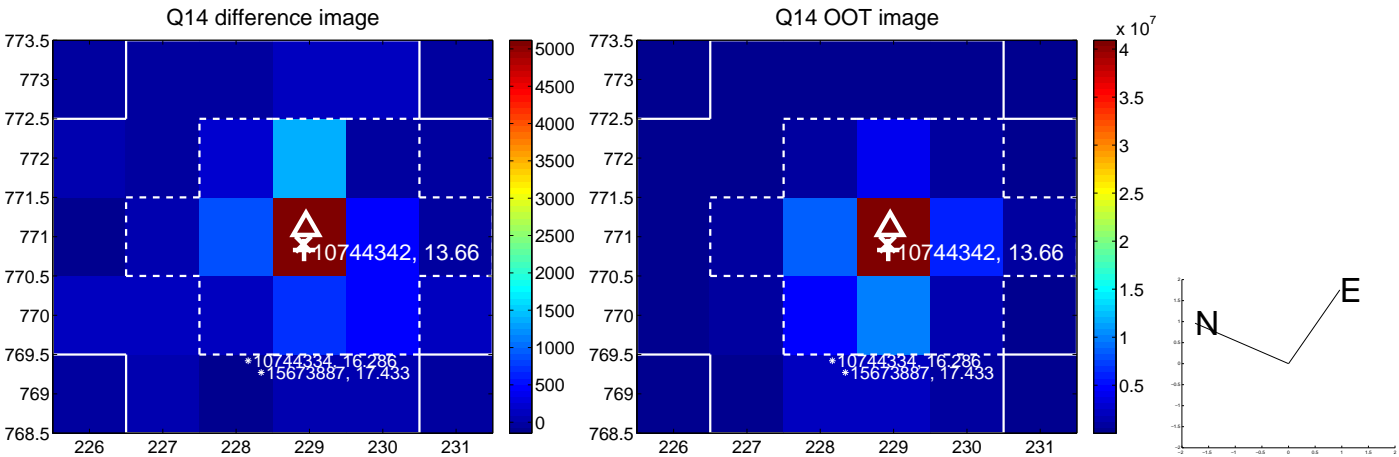
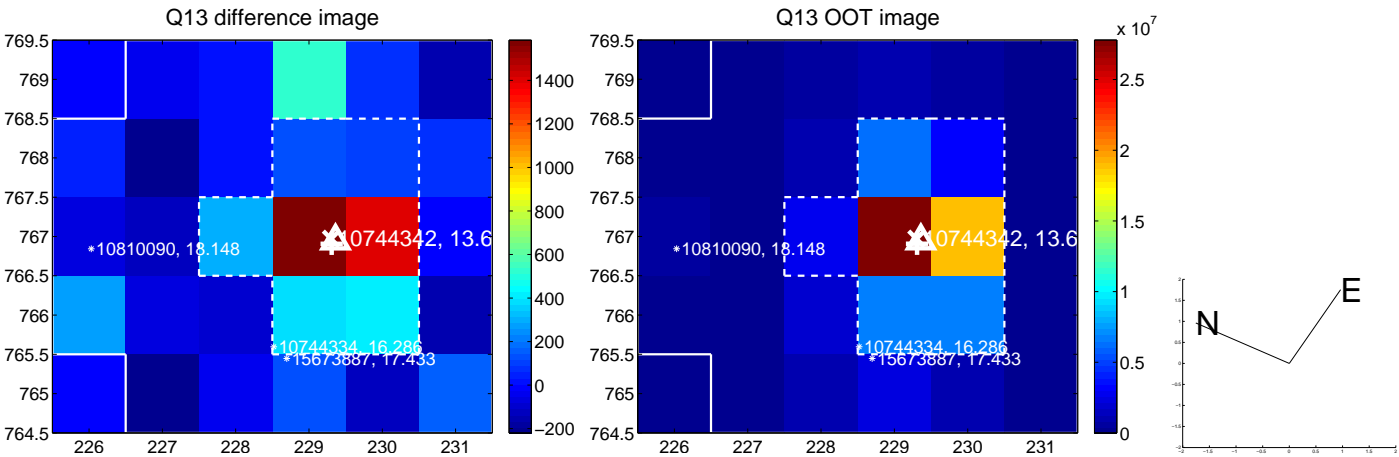
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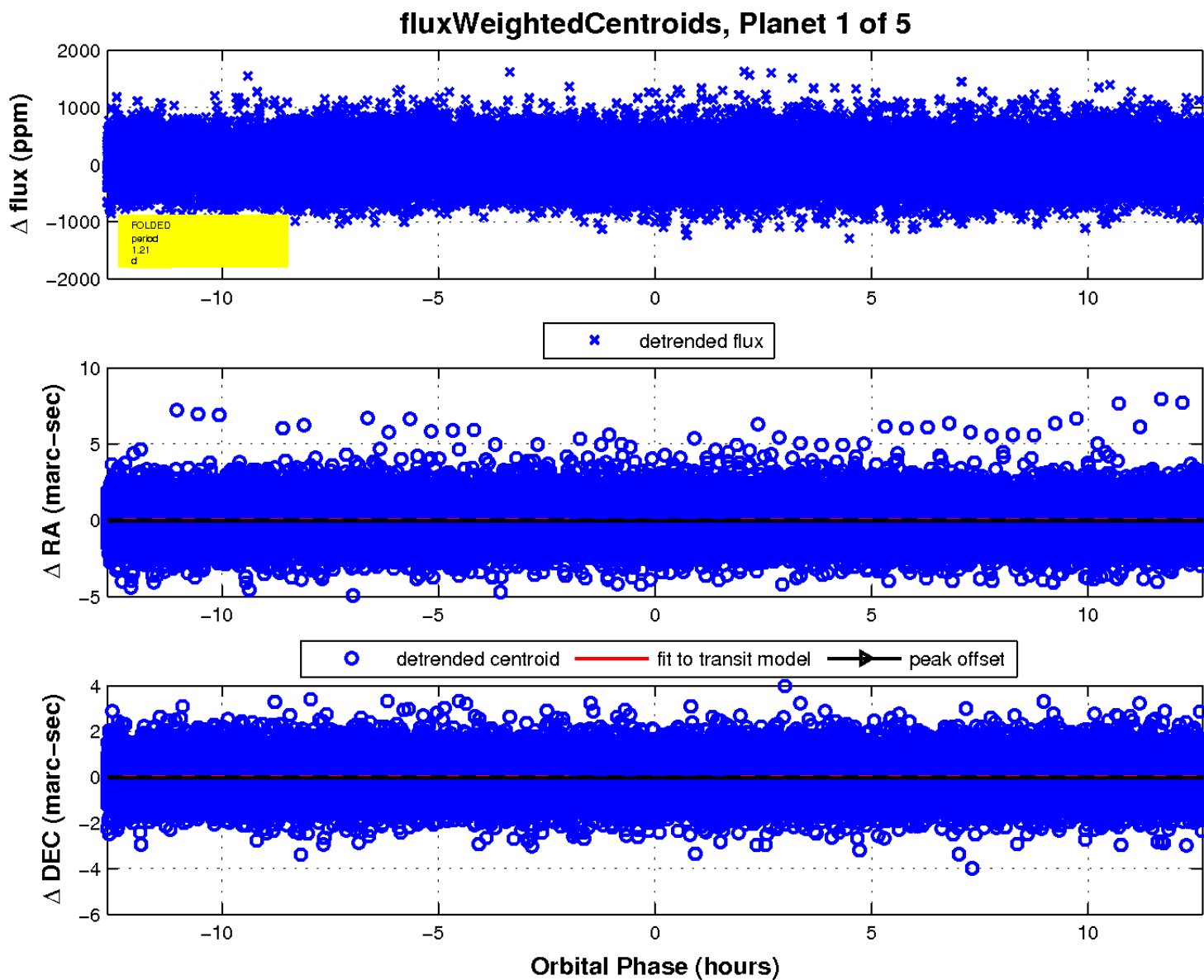
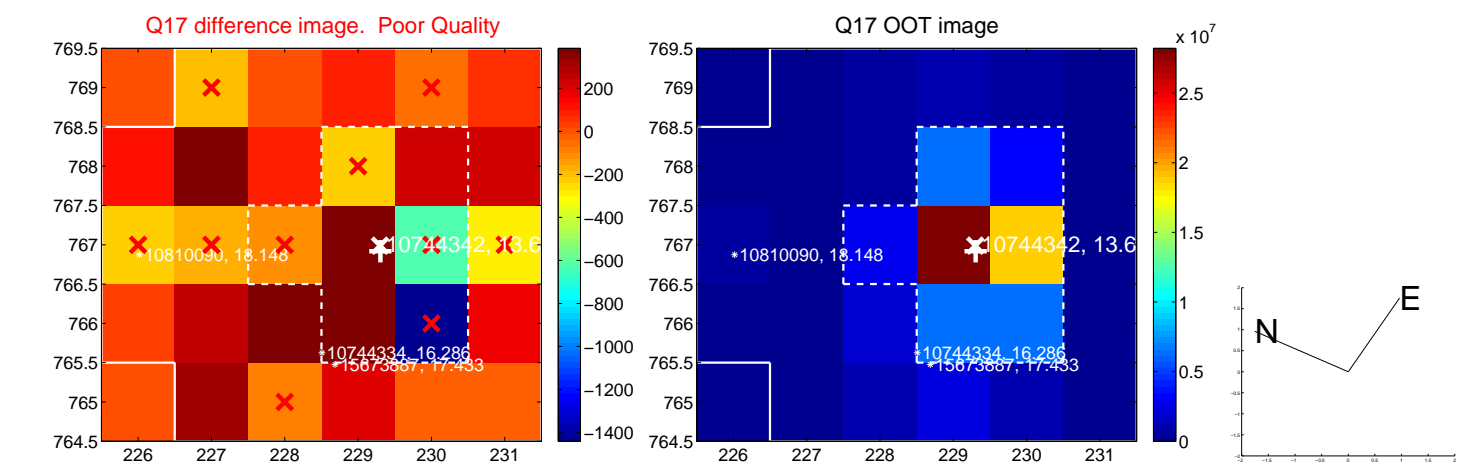
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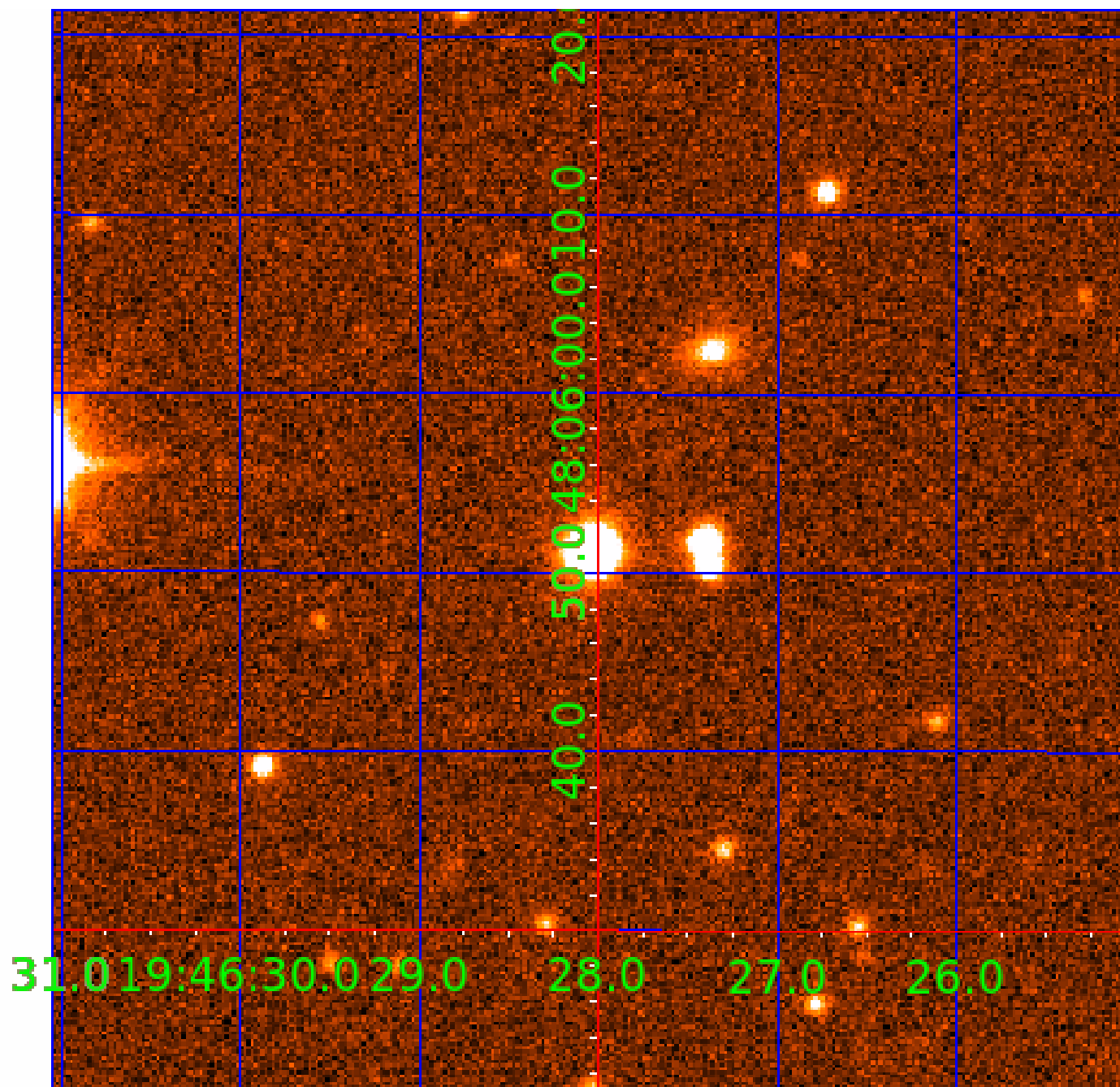


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010744342

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})
010744342-01	OBS	No	1.213444	132.449930	41.1	4.217	8.3	7.6	1.52	7231	1.12	8841.16
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010744342-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
010744342-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

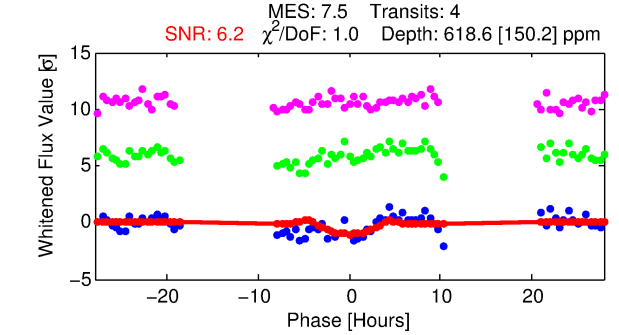
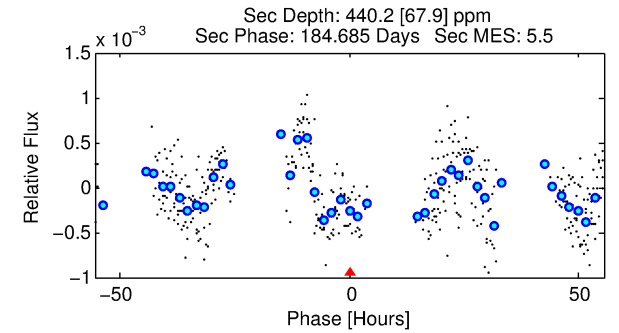
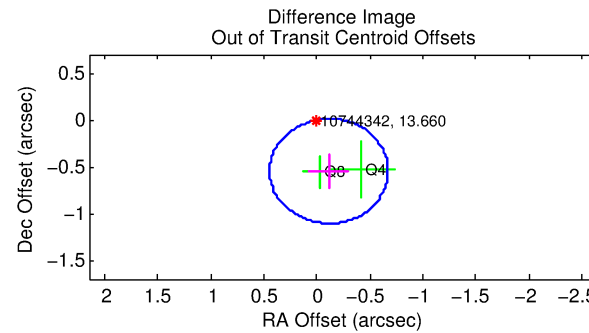
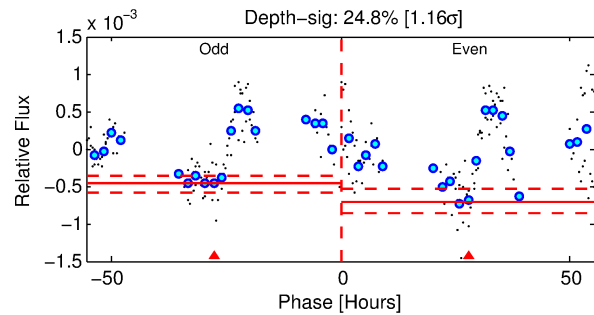
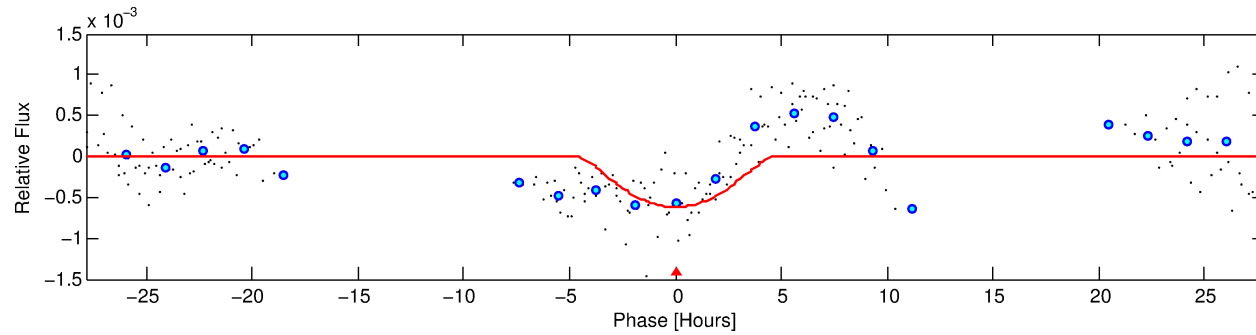
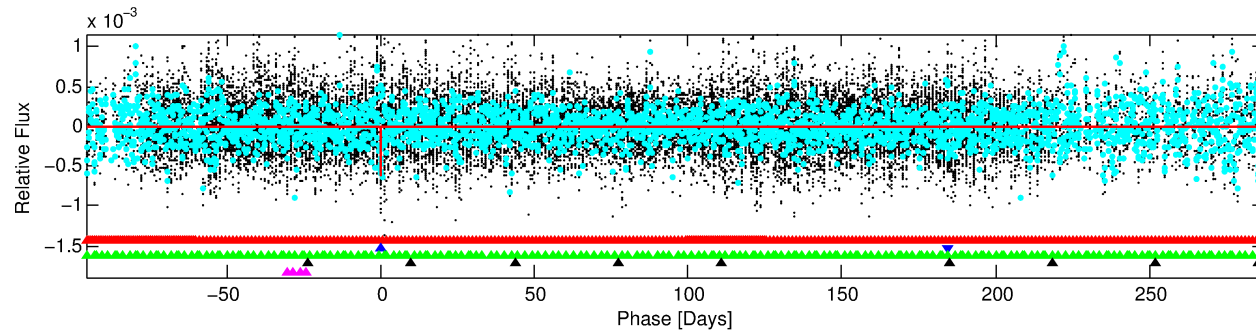
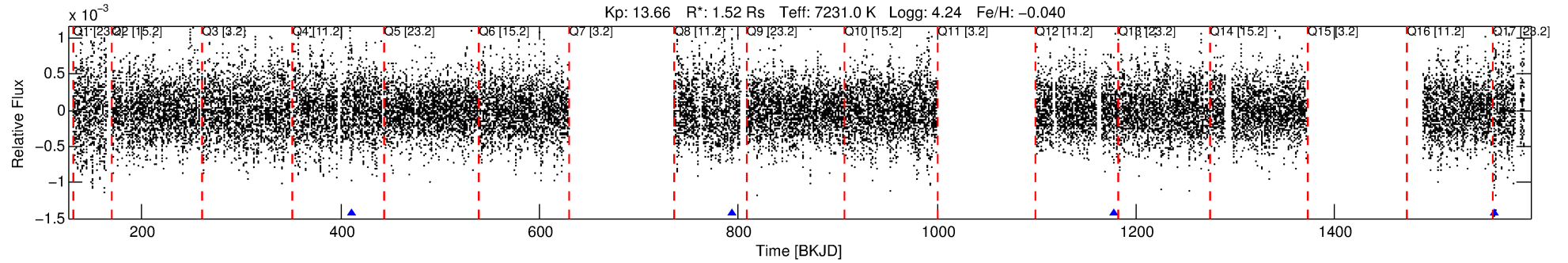
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010744342-02

No Significant Match Found

DV One-Page Summary

KIC: 10744342 Candidate: 2 of 5 Period: 383.410 d



DV Fit Results:

Period = 383.40973 [0.01444] d
Epoch = 410.9326 [0.0256] BKJD
Rp/R* = 0.0337 [0.0295]
a/R* = 99.50 [35.74]
b = 0.98 [0.06]
Seff = 4.11 [1.86]
Teq = 363 [41] K
Rp = 5.58 [5.29] Re
a = 1.1722 [0.3448] AU
Ag = 10681.83 [19272.58] [0.55 σ]
Teffp = 5706 [2520] K [2.12 σ]

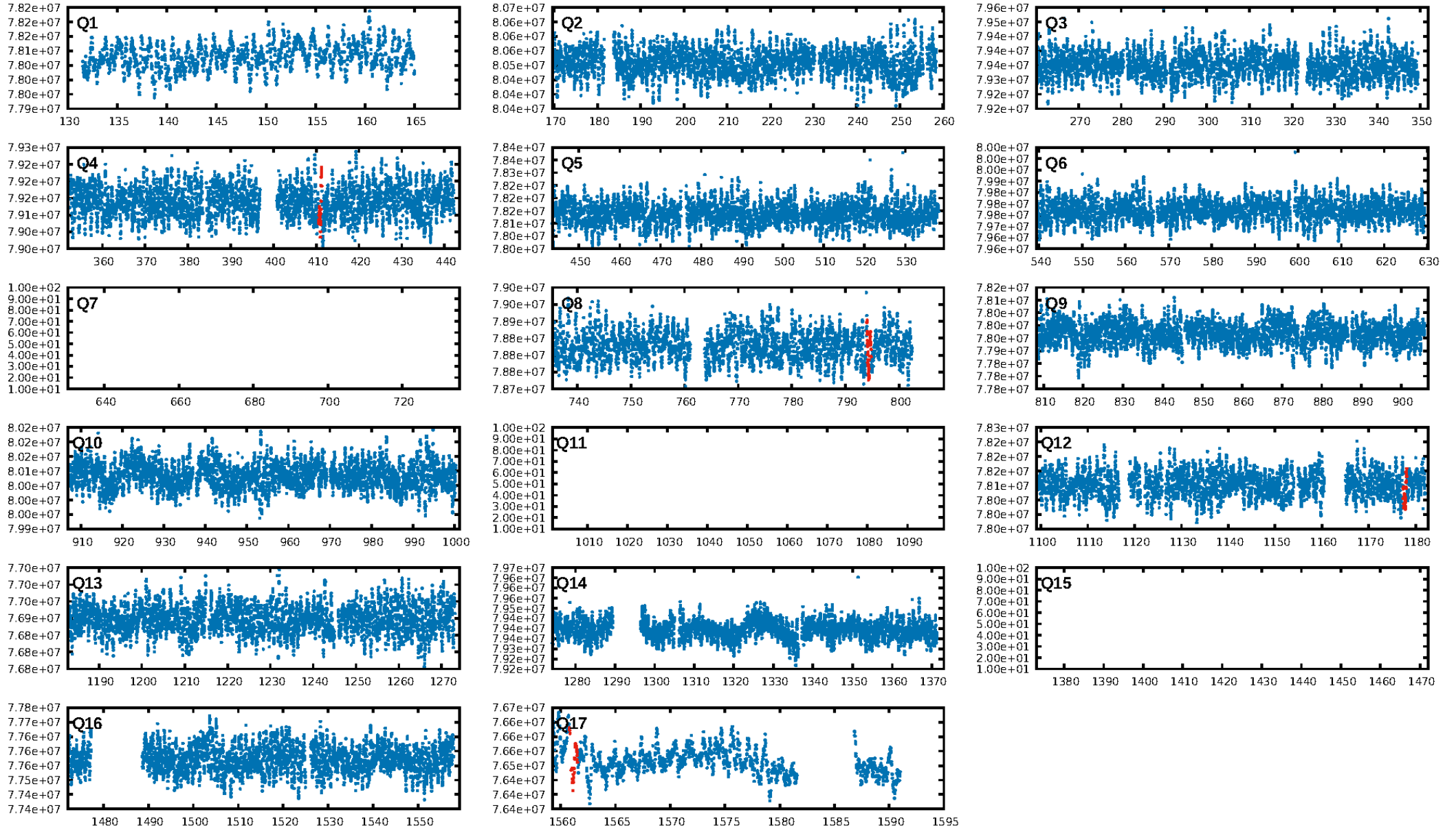
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [430.20 σ]
LongPeriod-sig: 99.9% [3.31 σ]
ModelChiSquare2-sig: 57.9%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 1.17e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.658
Centroid-sig: 10.1%
Centroid-so: 0.780 arcsec [1.16 σ]
OotOffset-rm: 0.560 arcsec [3.01 σ]
KicOffset-rm: 0.688 arcsec [3.70 σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

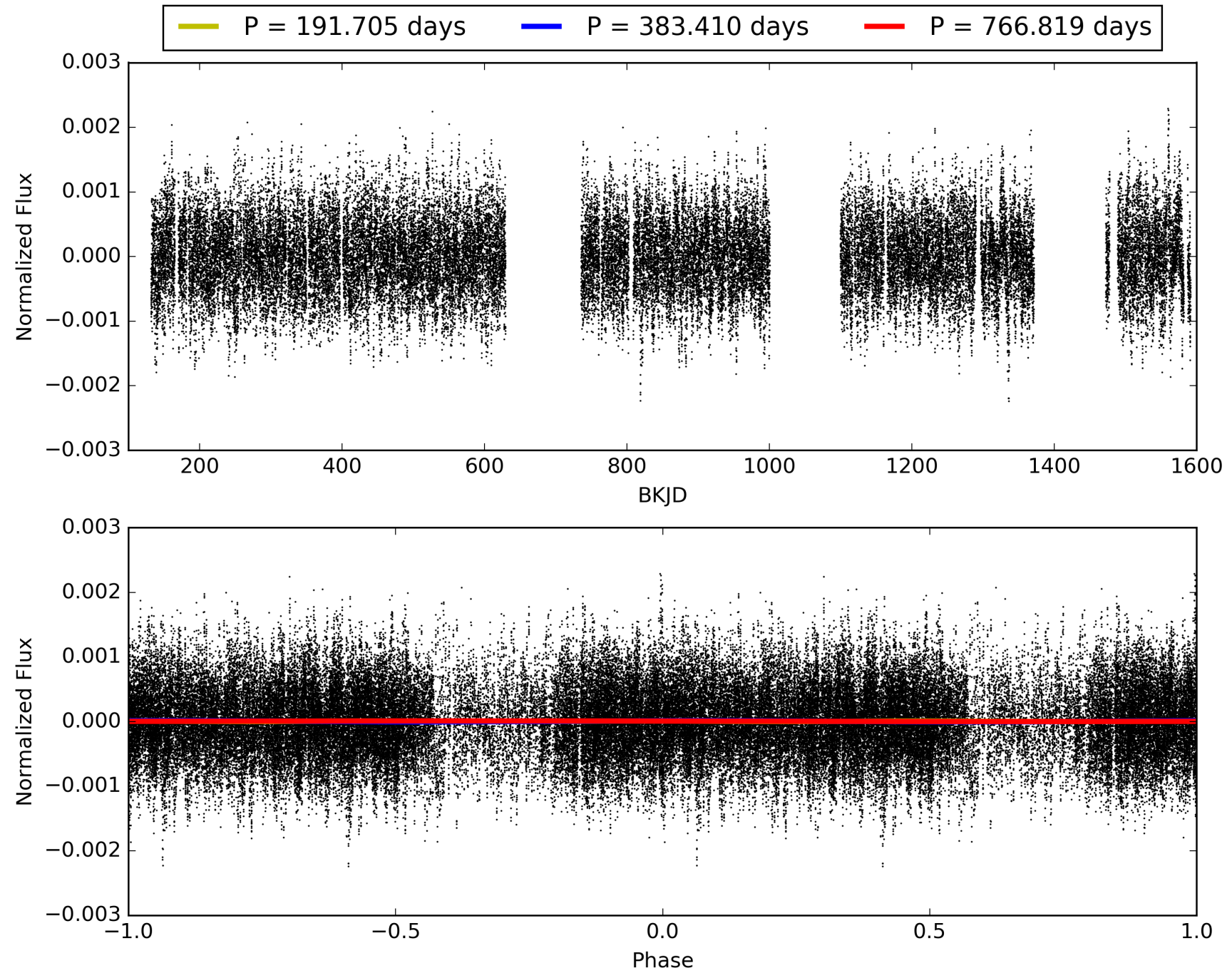
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010744342-02, PDC Light Curves

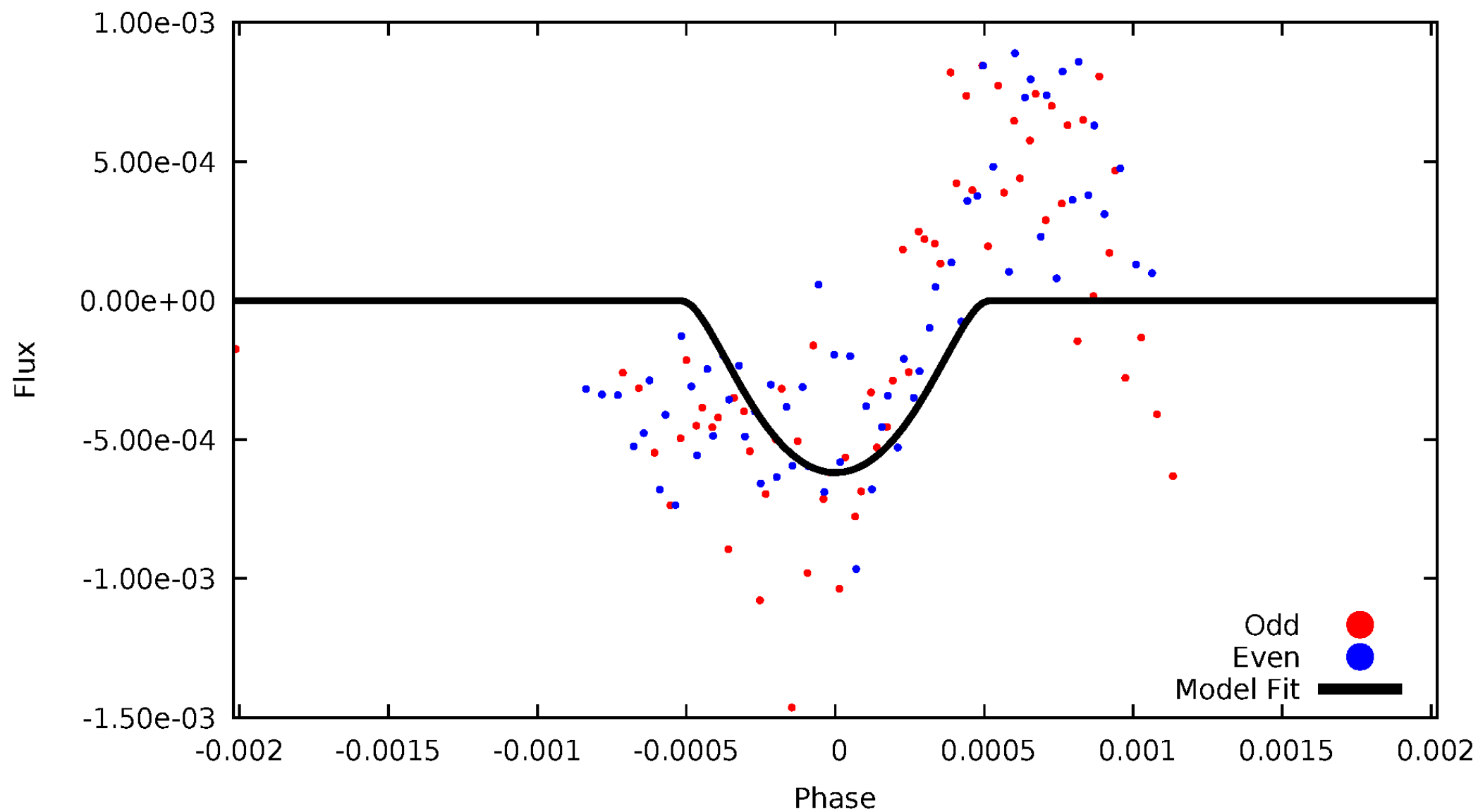


TCE 010744342-02



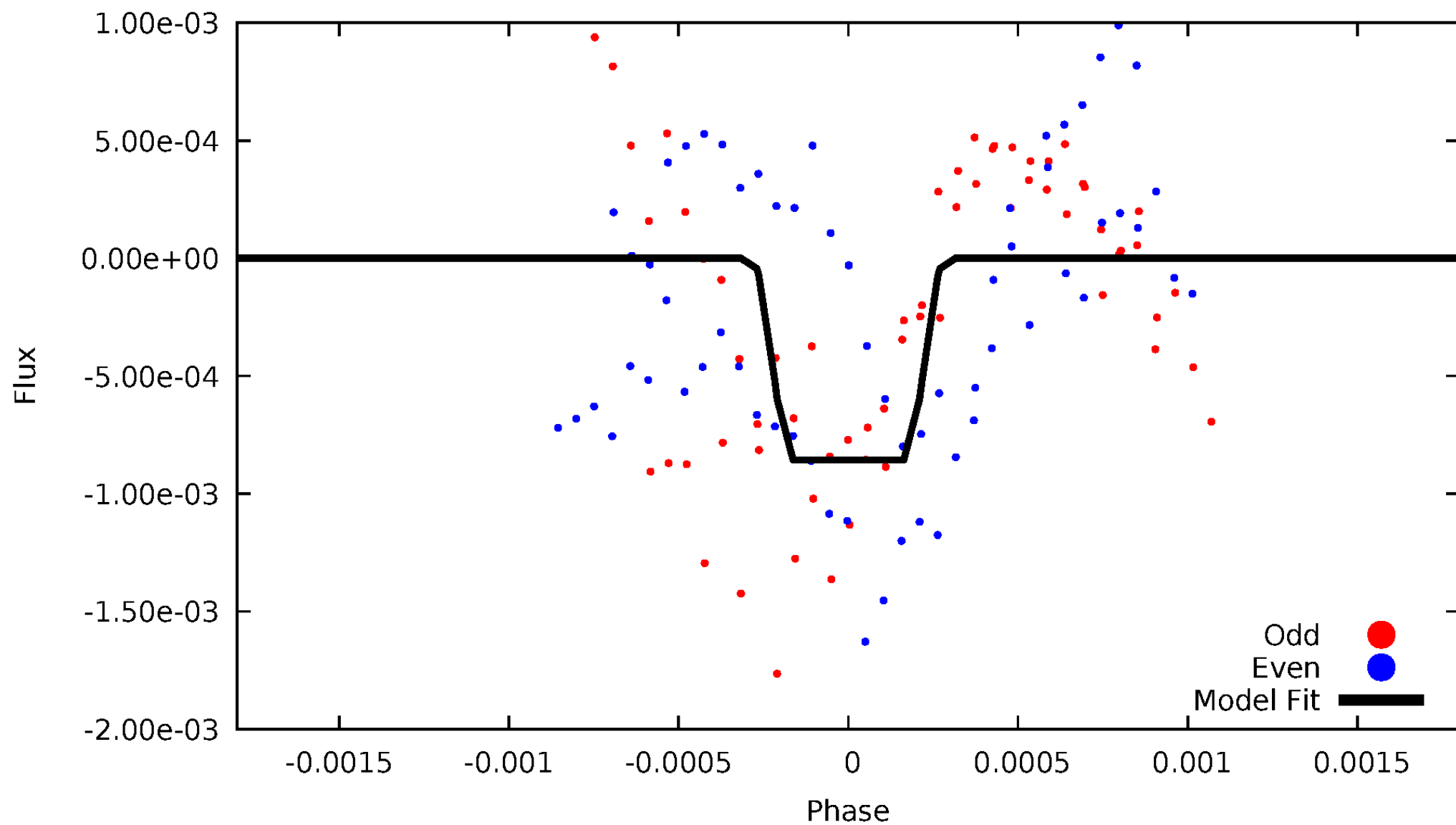
DV Odd/Even

TCE 010744342-02



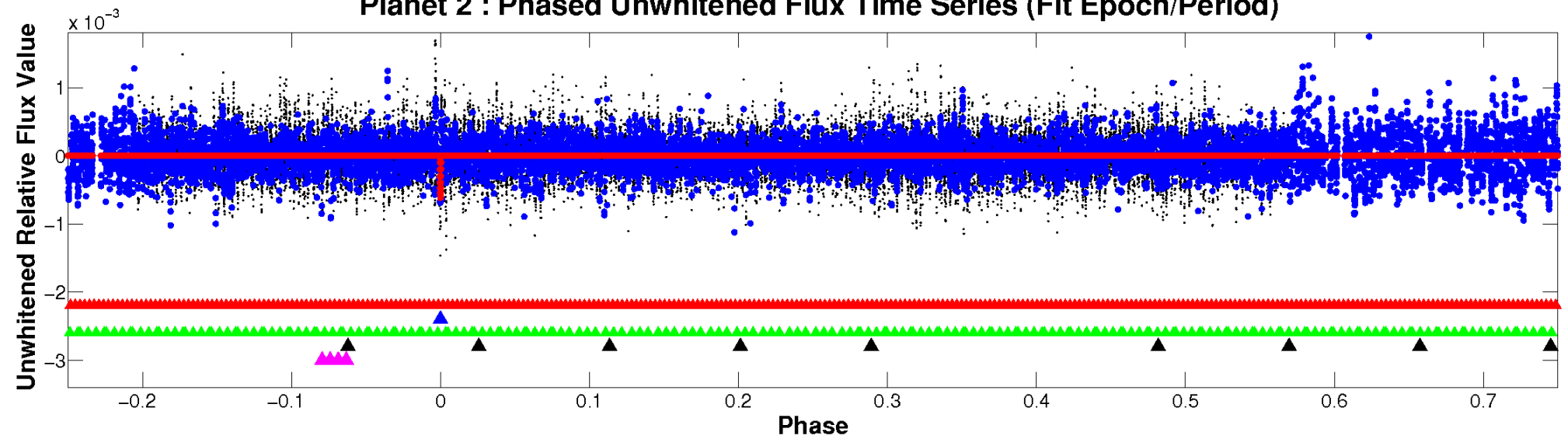
ALT Odd/Even

TCE 010744342-02

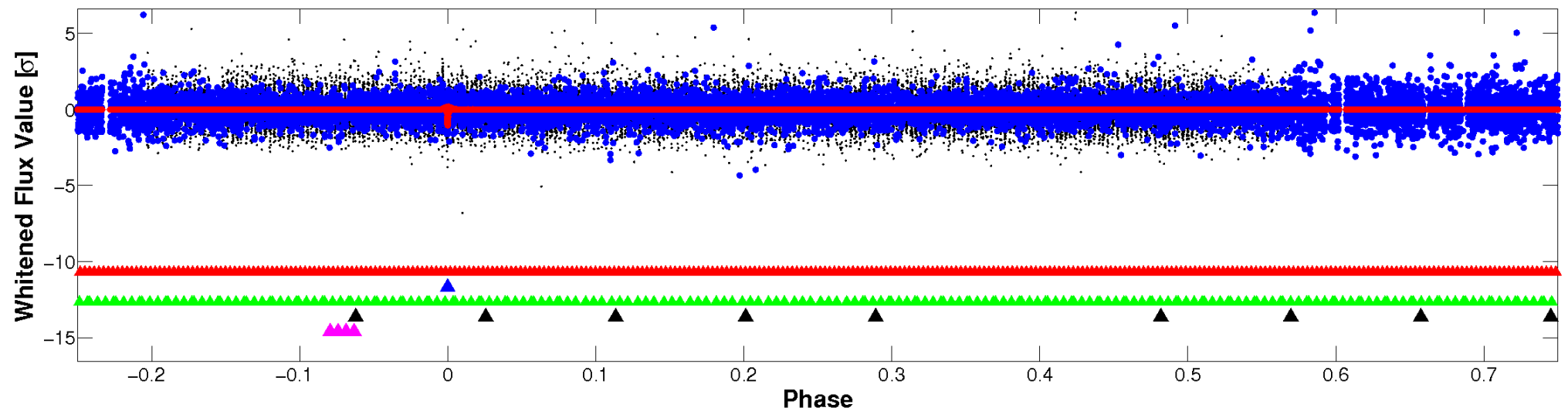


Non-Whitened Vs. Whitened Light Curve

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

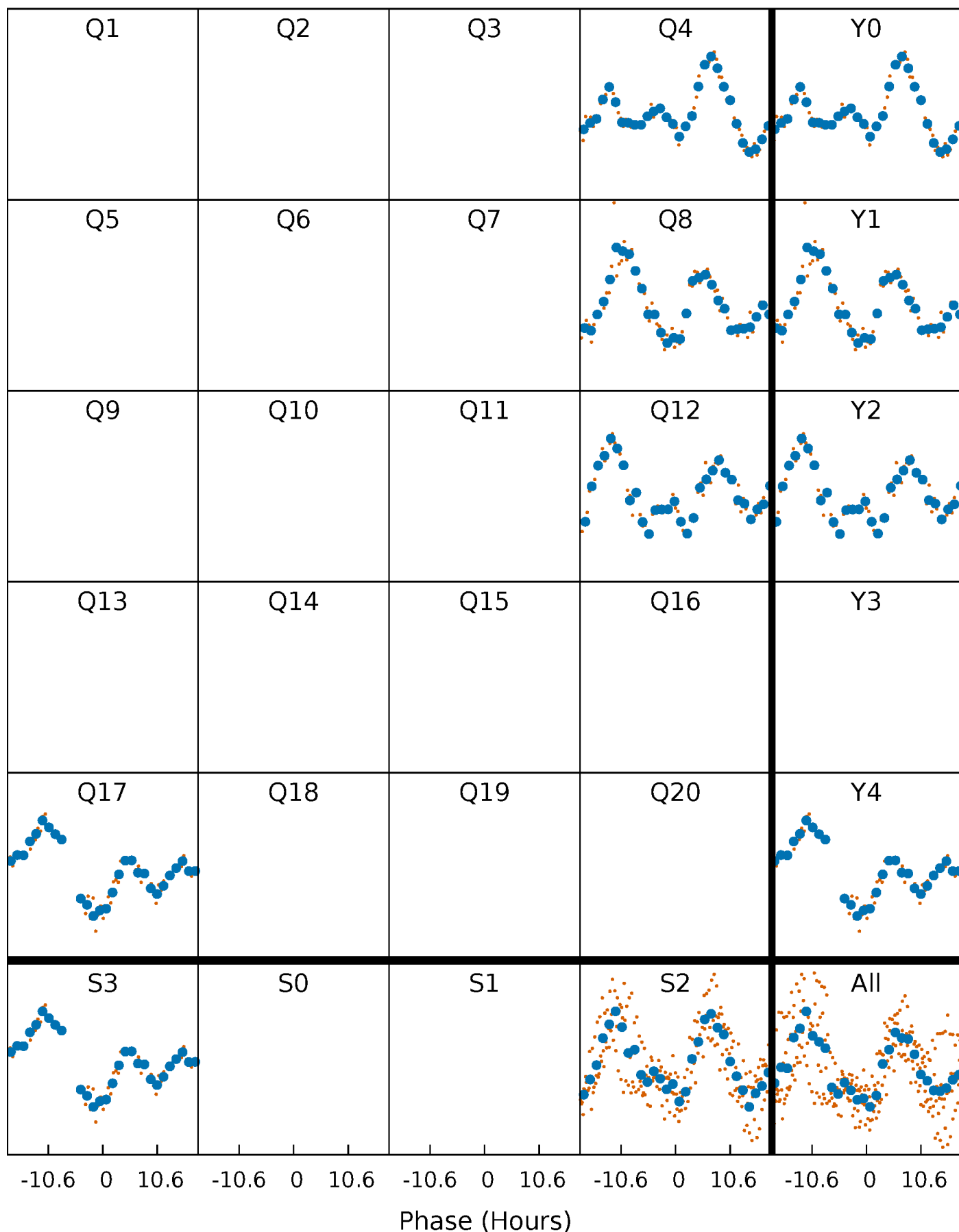


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



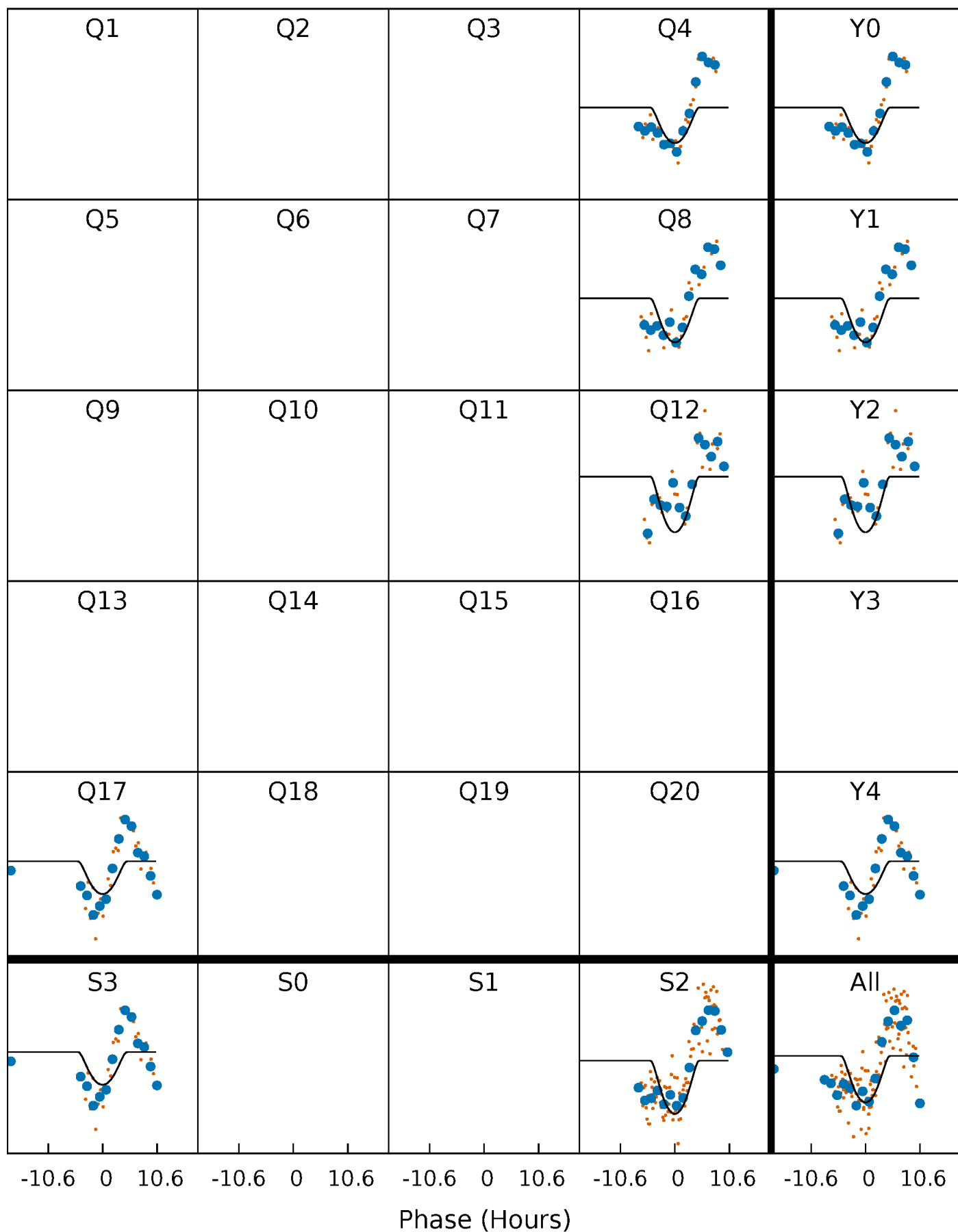
PDC Quarter-Phased Transit Curves

TCE 010744342-02 $P=383.409734$ Days $T_0=410.932590$ (BKJD)



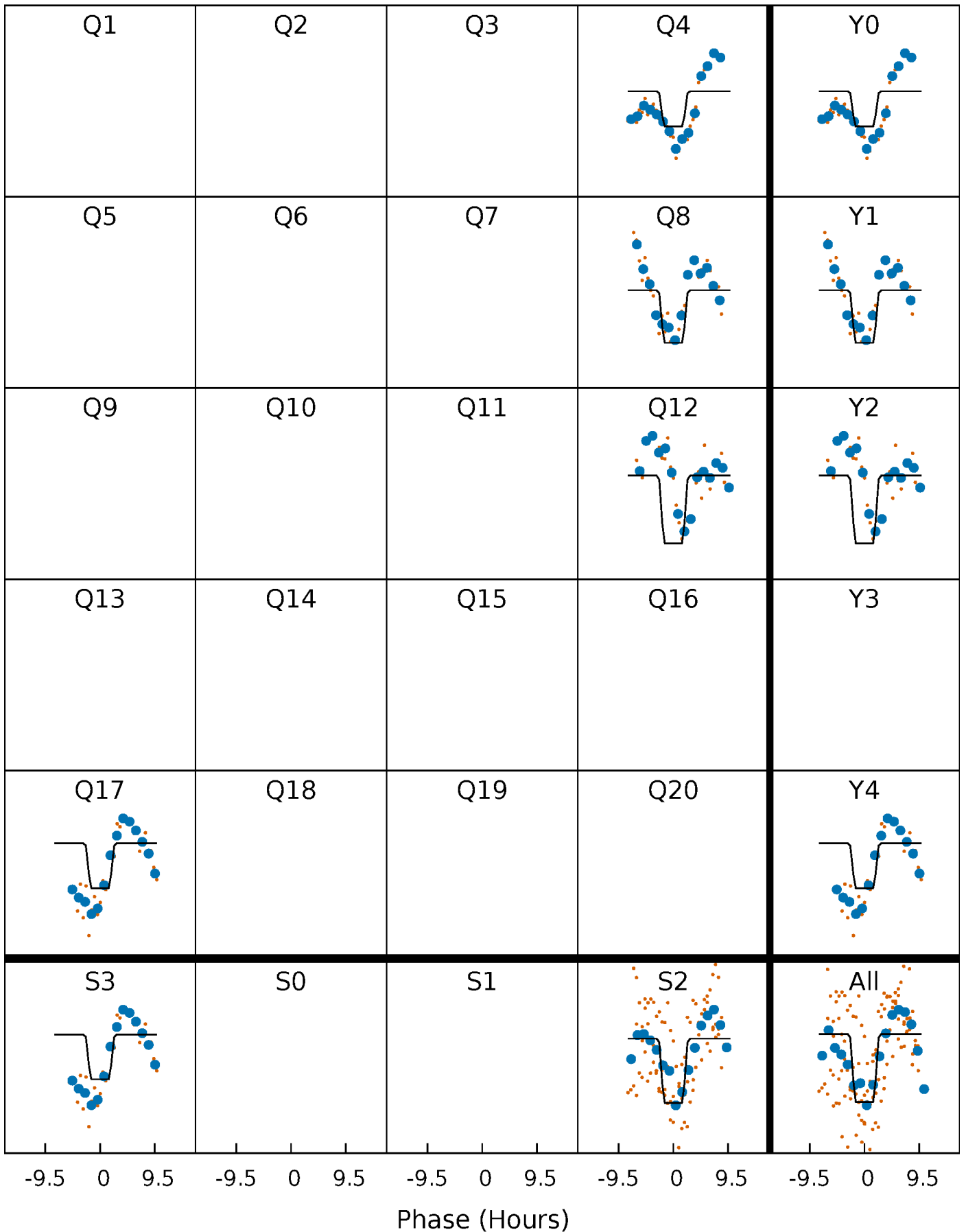
DV Quarter-Phased Transit Curves

TCE 010744342-02 P=383.409734 Days $T_0=410.932590$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

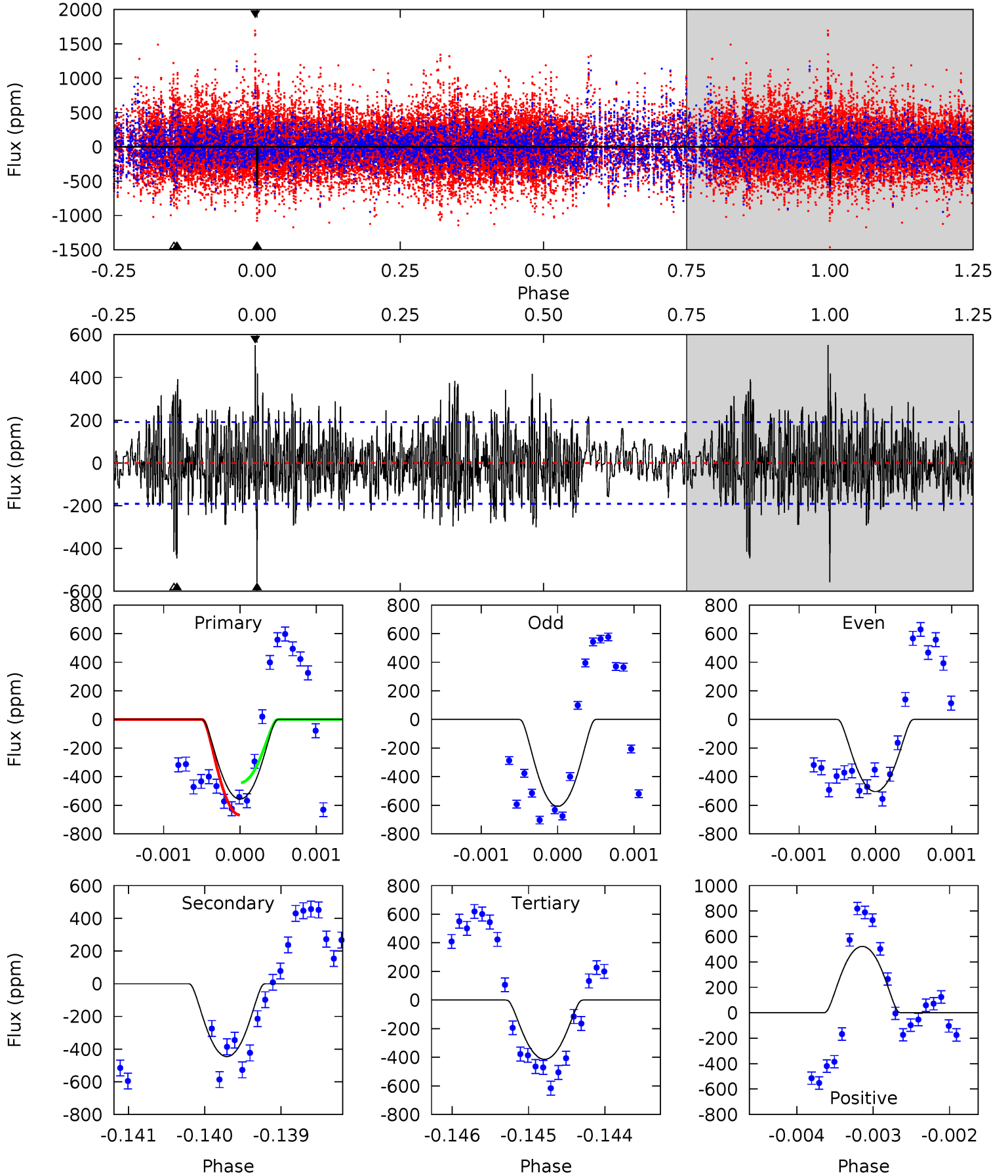
TCE 010744342-02 P=383.415320 Days $T_0=410.940225$ (BKJD)



DV Model-Shift Uniqueness Test

010744342-02, $P = 383.409734$ Days, $E = 27.522856$ Days

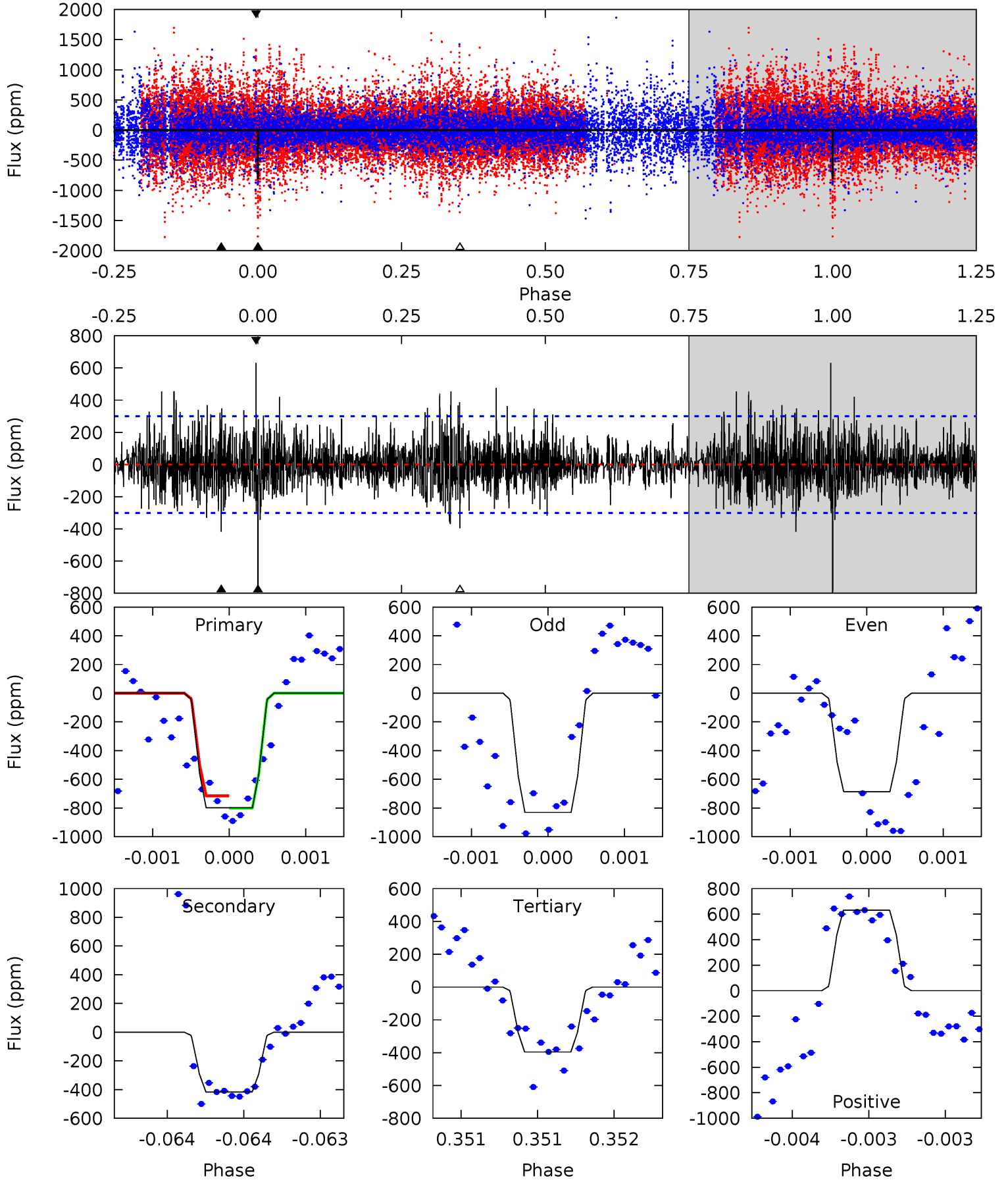
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	12.7	11.8	14.9	5.44	3.28	3.45	4.06	1.00	0.90	-2.15	1.47	0.97	0.50	3.20



Alt Model-Shift Uniqueness Test

010744342-02, P = 383.415320 Days, E = 27.524905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	7.71	7.32	11.7	5.56	3.46	2.12	7.45	3.11	0.40	-3.95	1.35	0.91	0.44	0.79



Stellar Parameters For KIC 010744342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7231^{+200}_{-342}	$4.240^{+0.087}_{-0.217}$	$-0.040^{+0.200}_{-0.350}$	$1.518^{+0.552}_{-0.221}$	$1.458^{+0.209}_{-0.209}$	$0.588^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+500%/-875%	+36%/-15%	+14%/-14%	+41%/-56%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010744342-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-446 ± 35	$6.82^{+4.95}_{-4.24}$	512^{+36}_{-32}	5224^{+3378}_{-983}	7213^{+40679}_{-4826}
Alt.	-417 ± 54	$5.98^{+5.13}_{-3.79}$	512^{+42}_{-28}	5438^{+4022}_{-1173}	8602^{+54827}_{-6152}

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 $A_{obs} \gg 1.0$

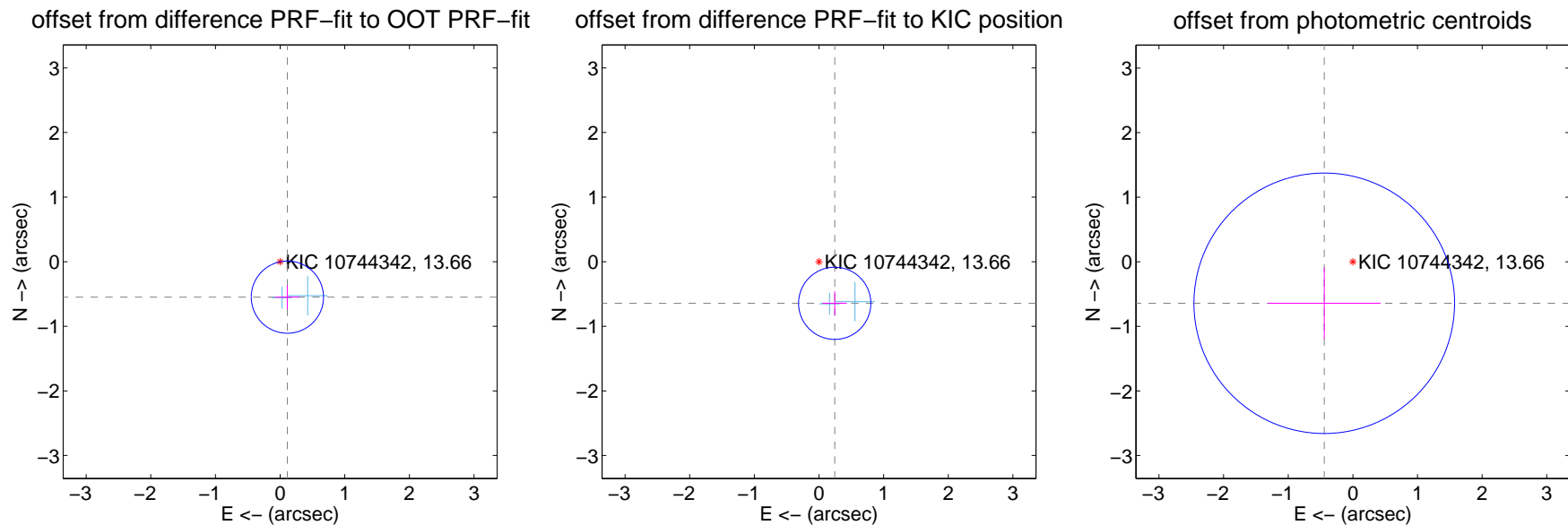
DV Centroid Data

Supplemental centroid analysis for 010744342-02. Kepler magnitude: 13.66. Transit SNR 6.19

There are 2 quarters with good PRF difference image offsets

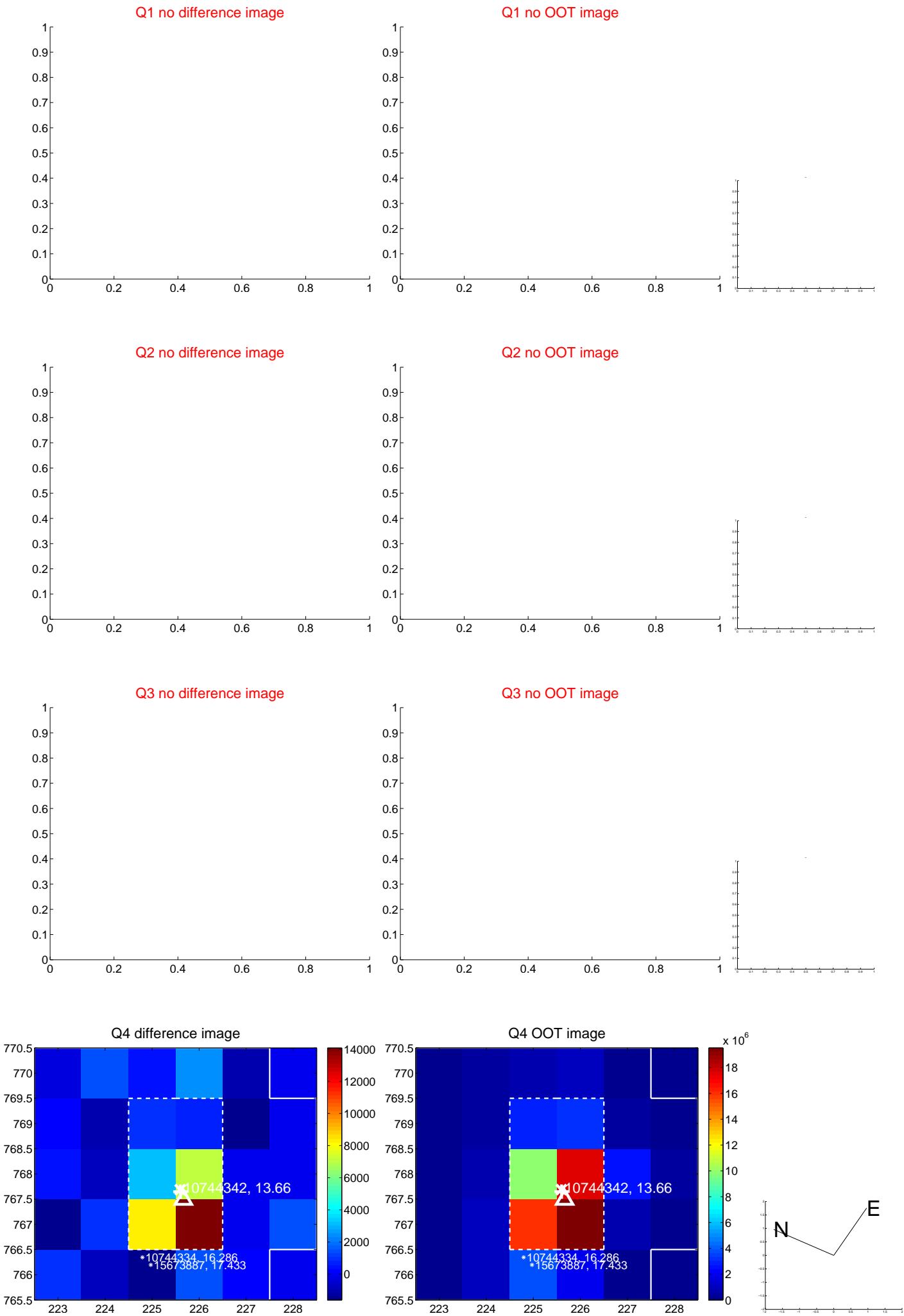
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.560 ± 0.186	3.01	-0.113 ± 0.186	-0.549 ± 0.186
PRF-fit source offset from KIC position	0.688 ± 0.186	3.70	-0.243 ± 0.186	-0.644 ± 0.186
photometric centroid source offset	0.78 ± 0.67	1.16	0.44 ± 0.87	-0.64 ± 0.55

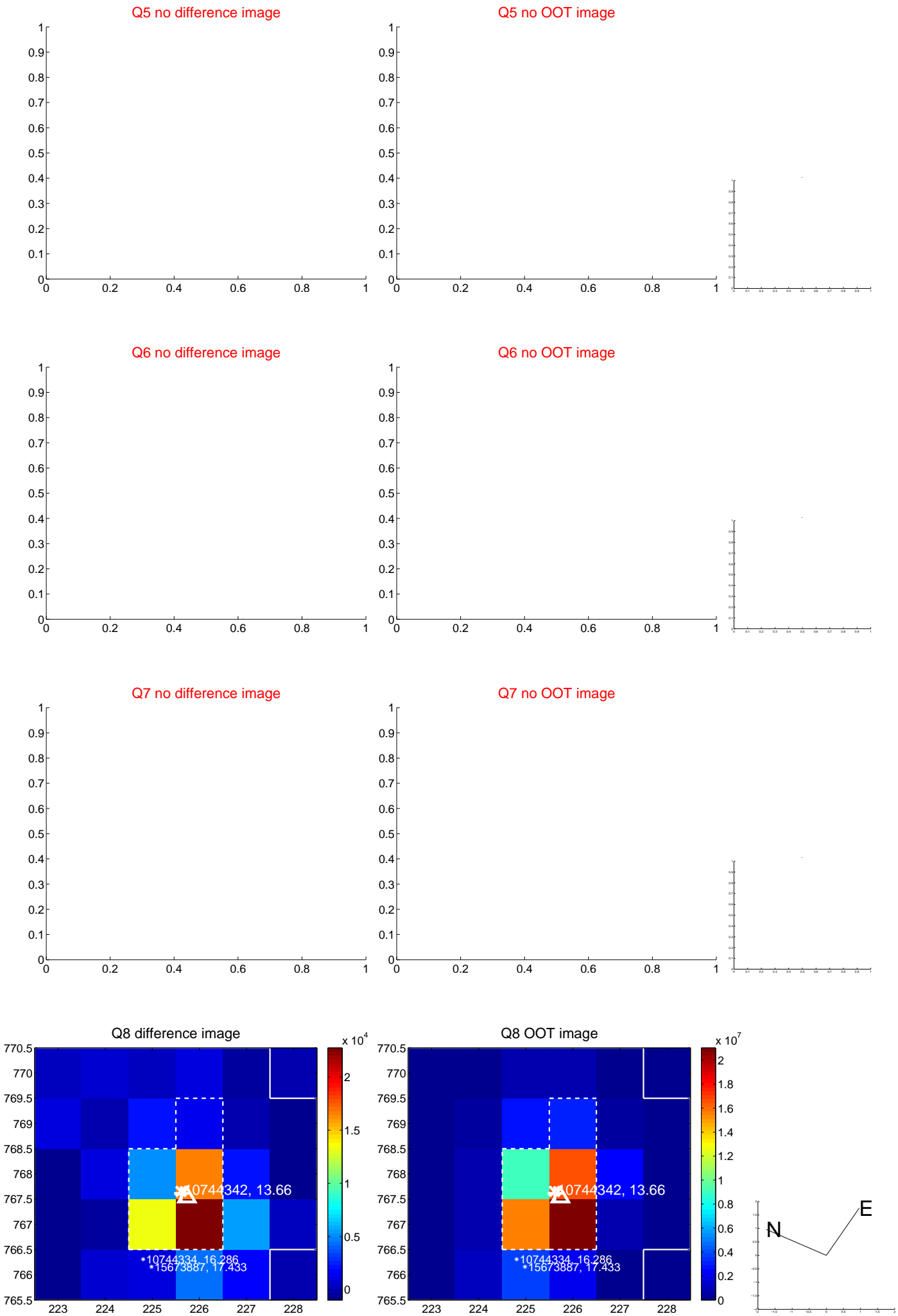


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

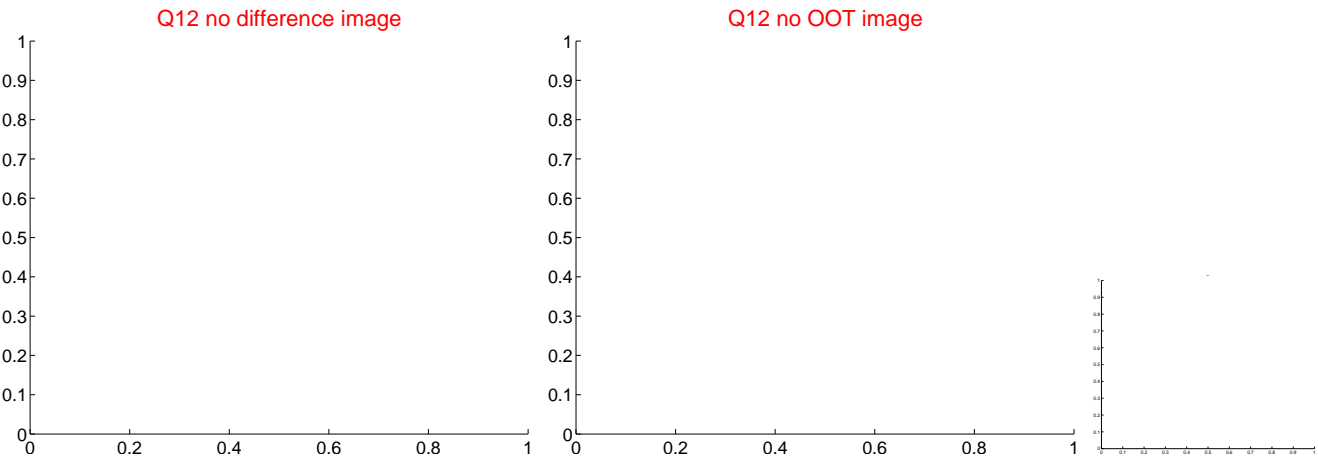
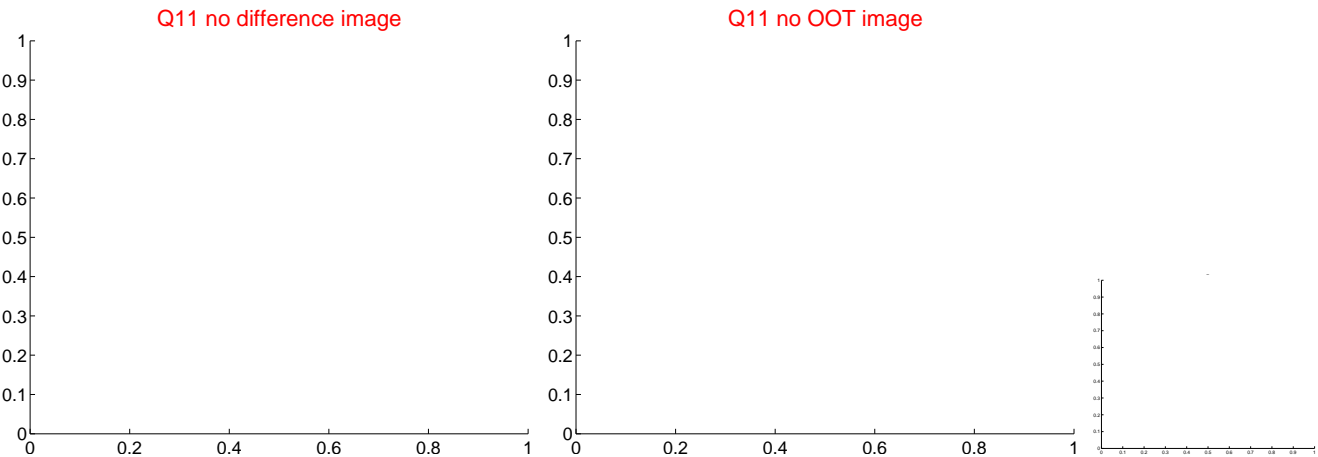
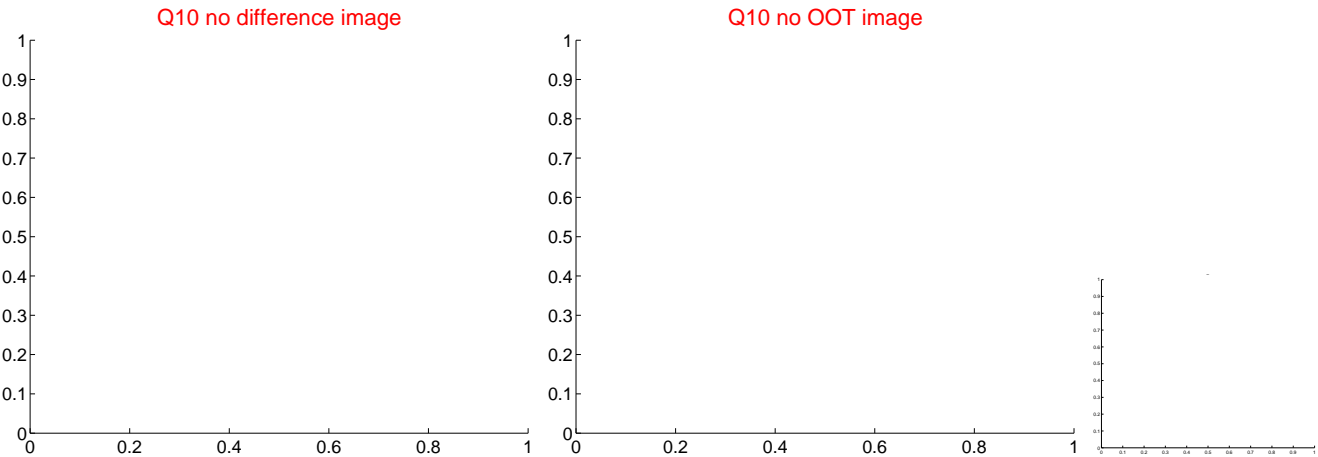
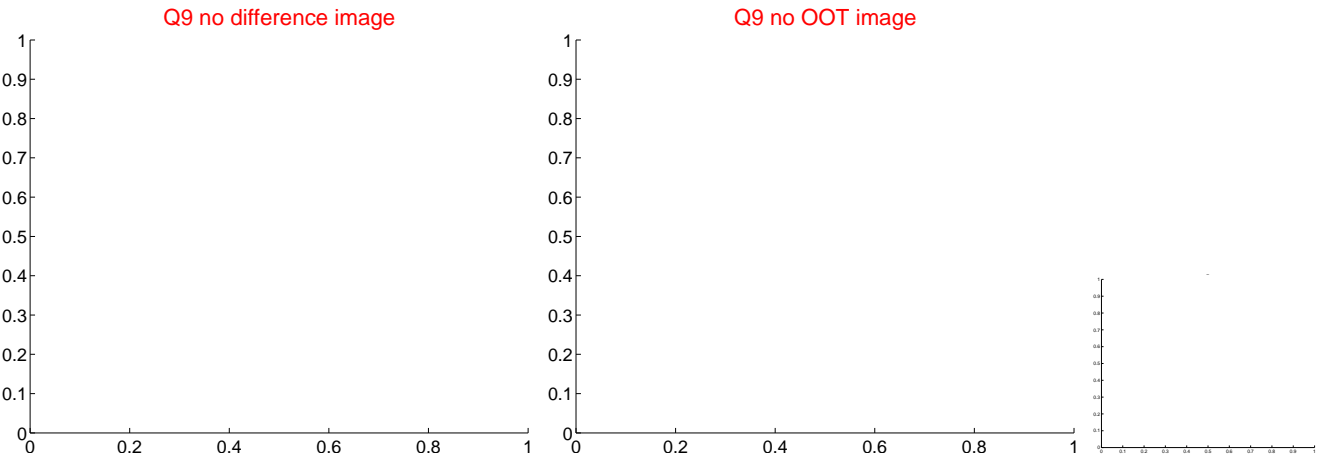
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



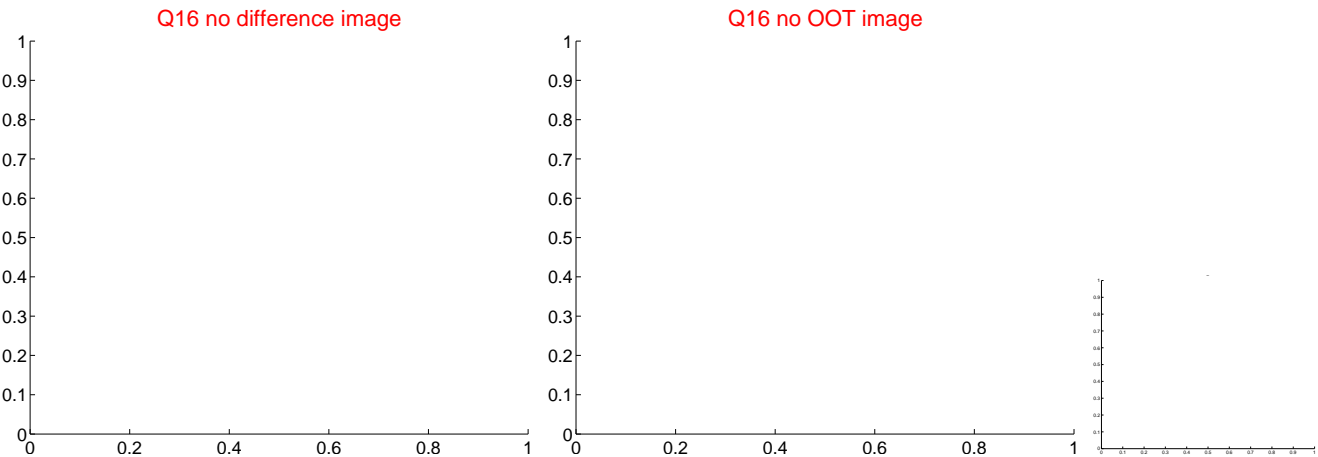
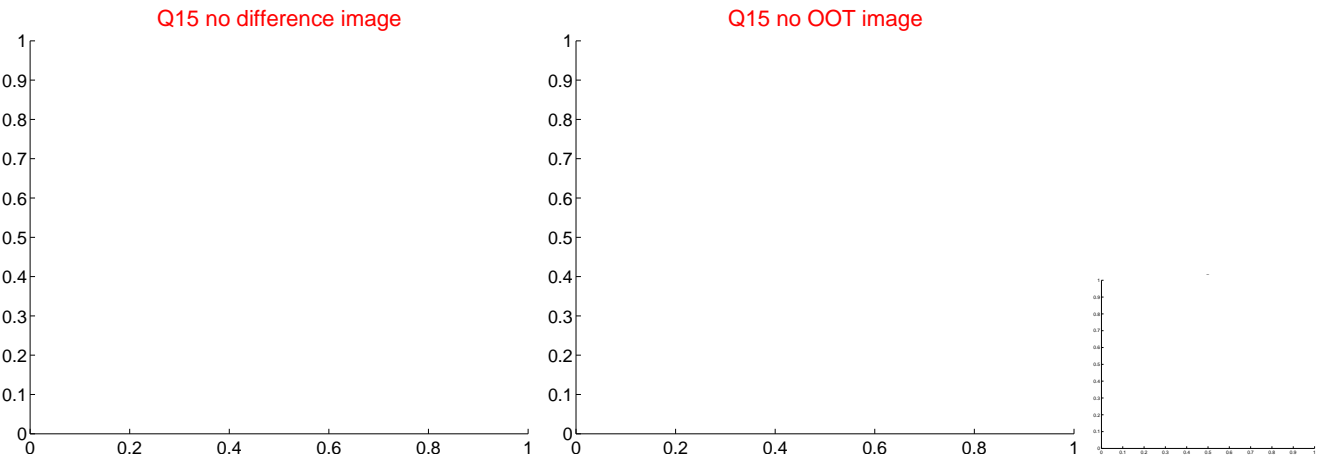
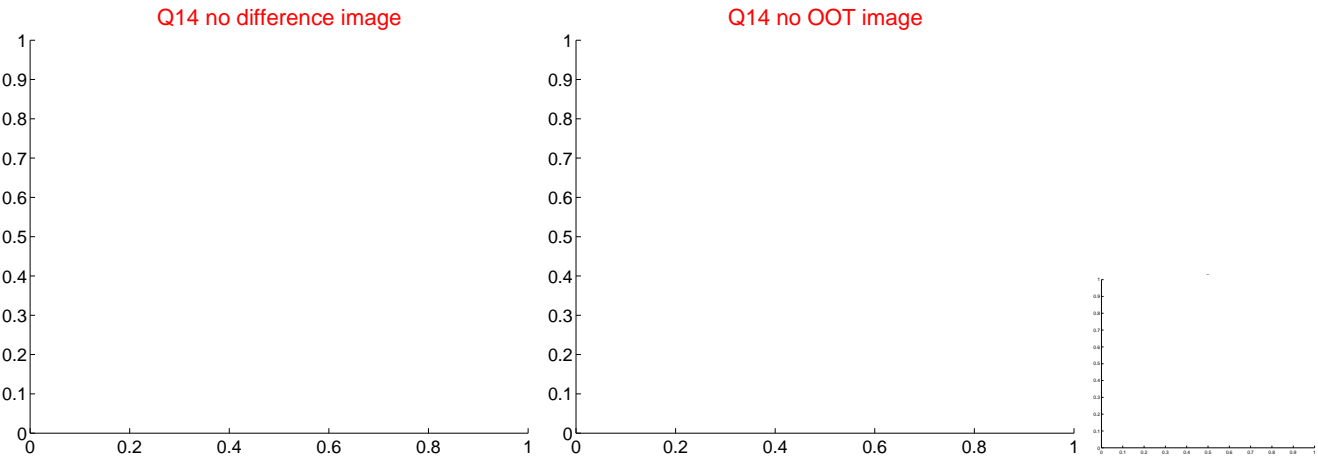
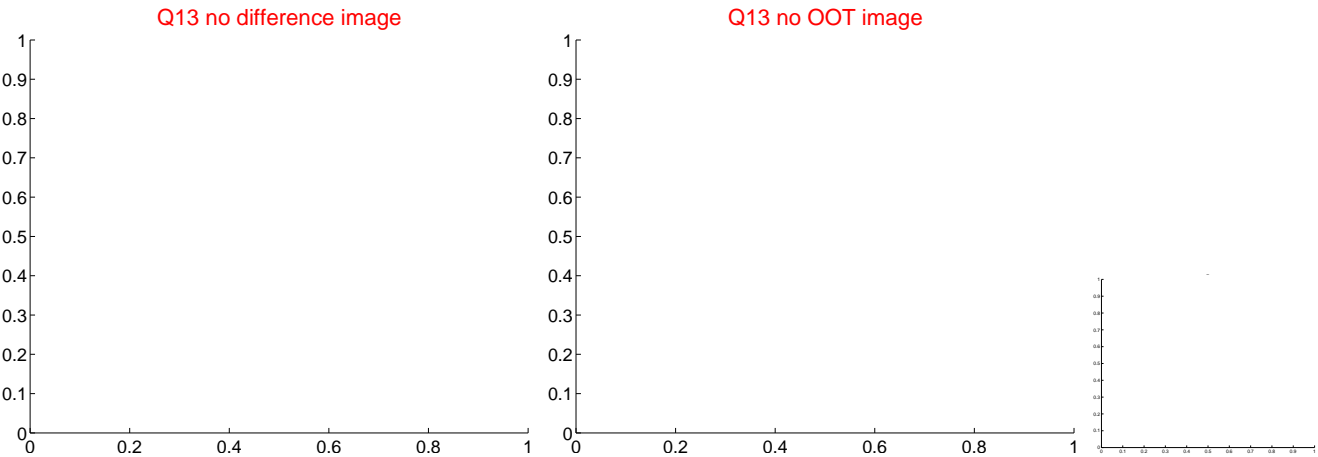
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



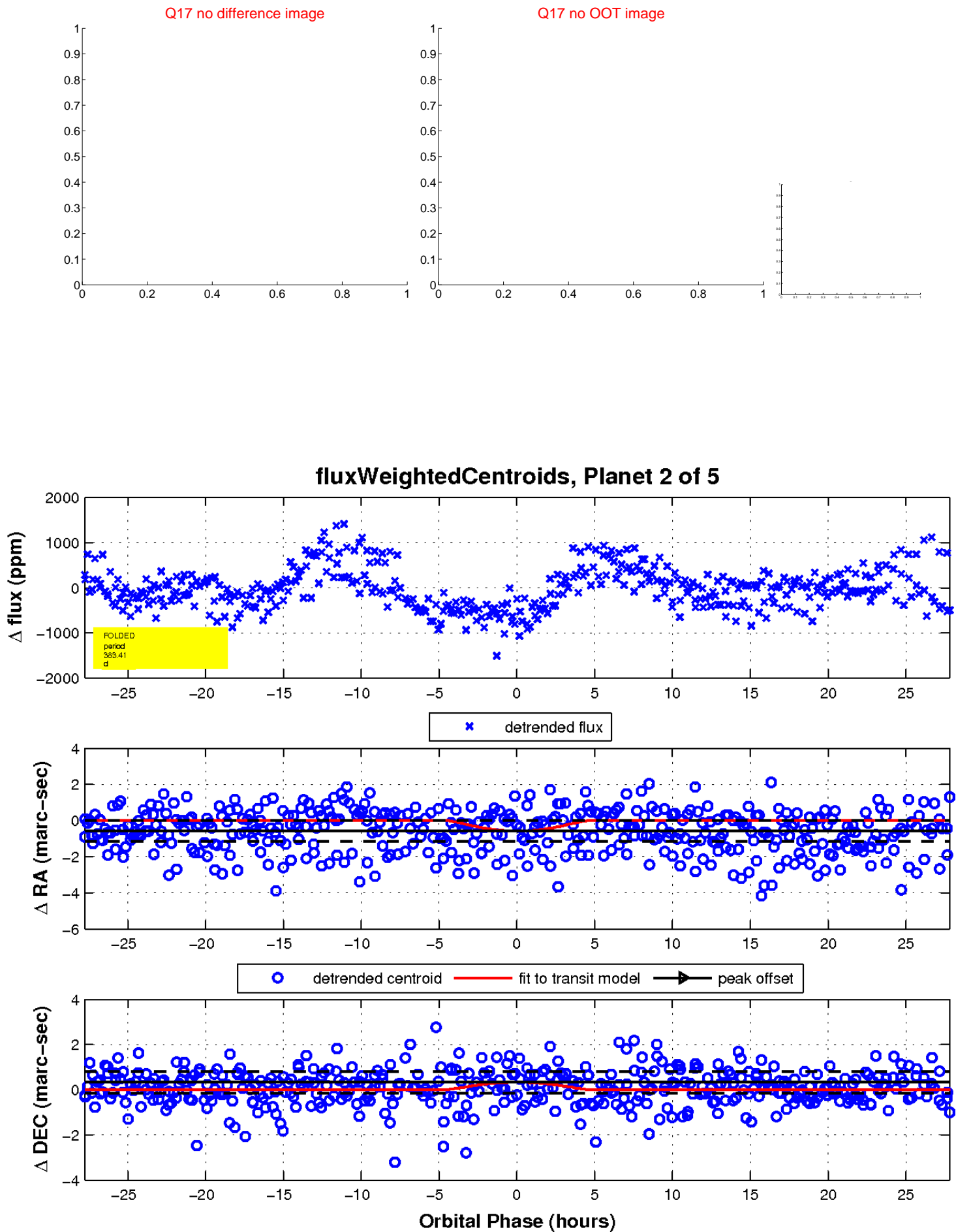
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

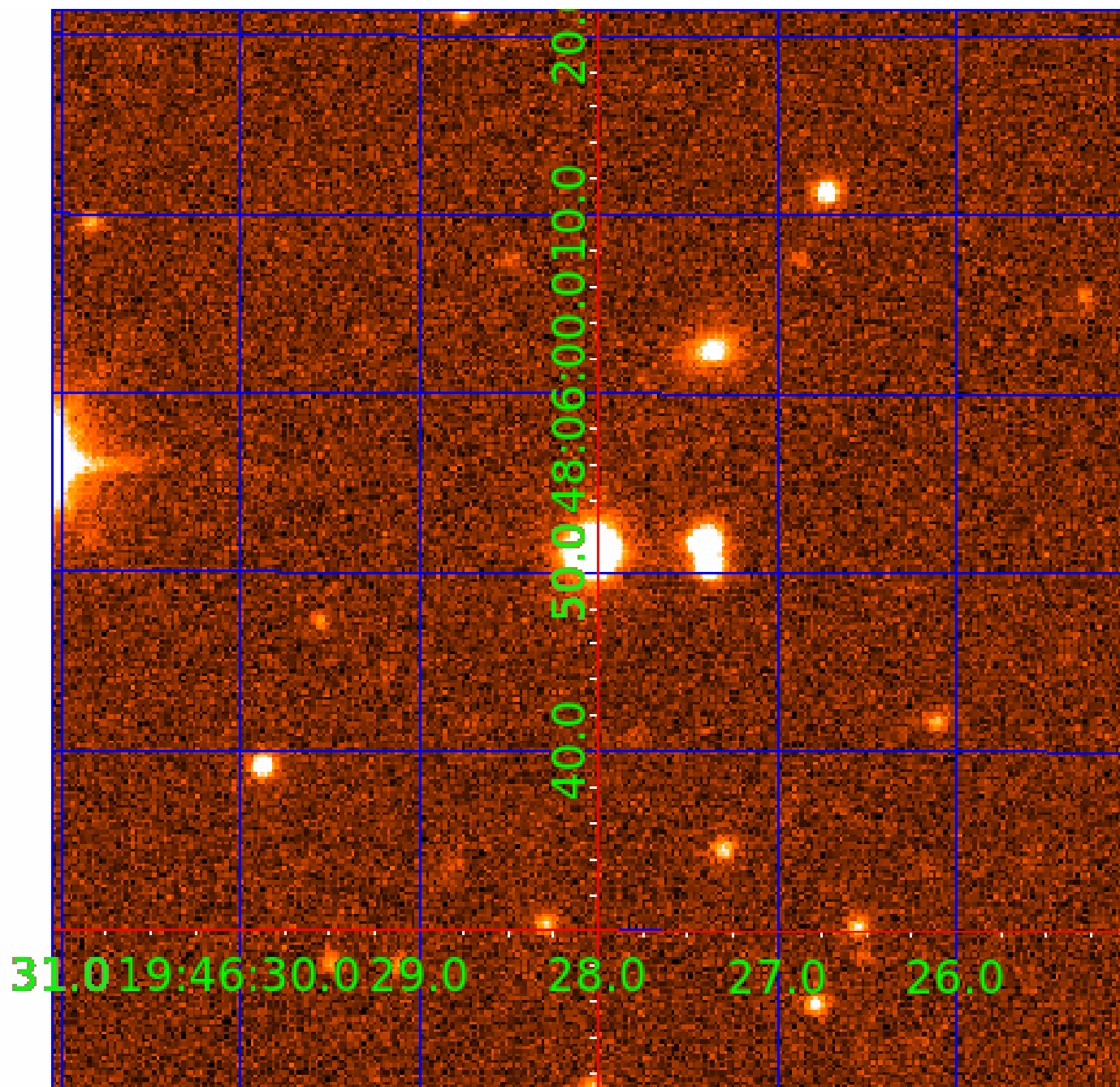


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010744342

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})
010744342-01	OBS	No	1.213444	132.449930	41.1	4.217	8.3	7.6	1.52	7231	1.12	8841.16
010744342-02	OBS	No	383.409734	410.932590	618.6	9.289	7.5	6.2	1.52	7231	5.58	4.11
010744342-03	OBS	No	6.762819	135.582819	179.6	13.503	7.1	9.2	1.52	7231	3.96	894.74
010744342-04	OBS	No	174.871720	138.376624	155.0	7.005	10.4	2.1	1.52	7231	2.23	11.70
010744342-05	OBS	No	385.473327	380.490288	687.4	11.712	9.8	6.9	1.52	7231	4.85	4.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010744342-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010744342-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010744342-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010744342-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
010744342-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

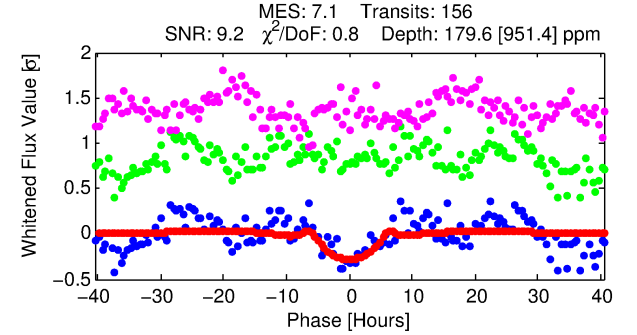
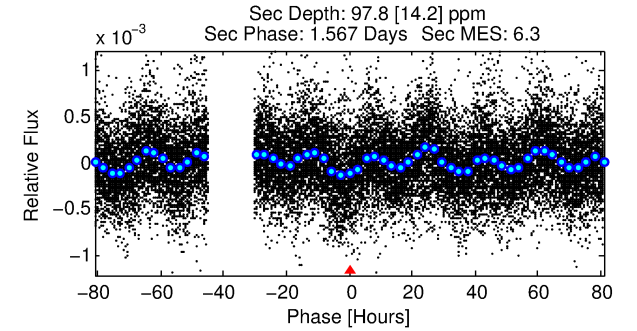
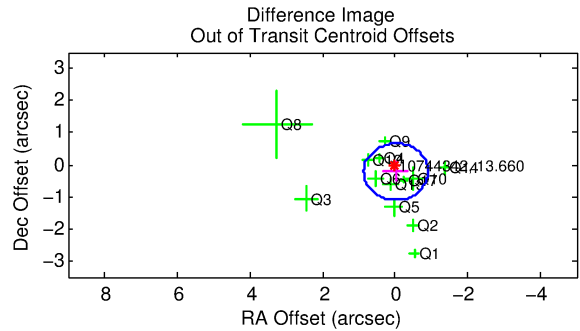
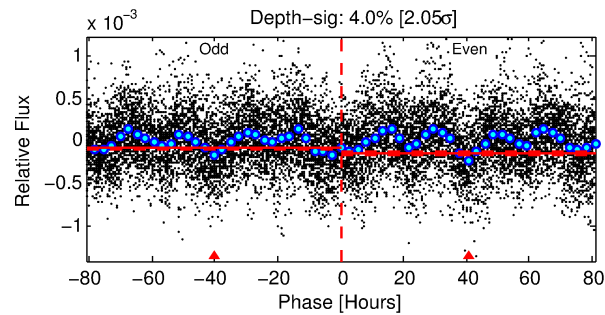
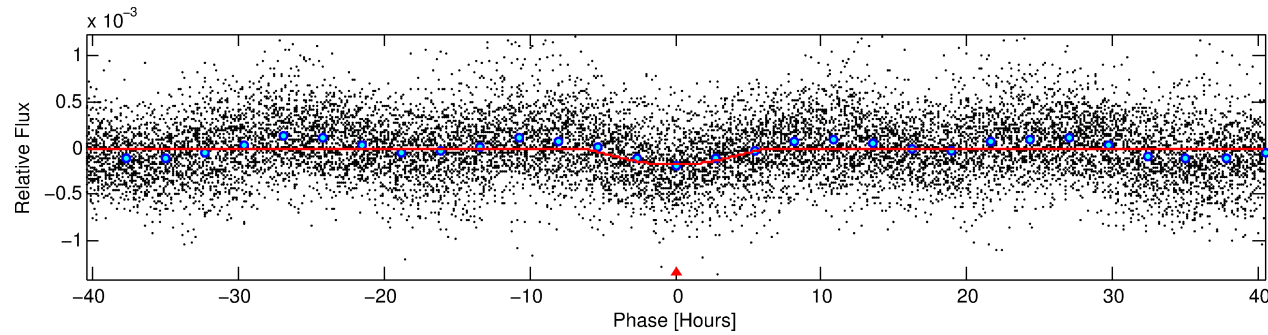
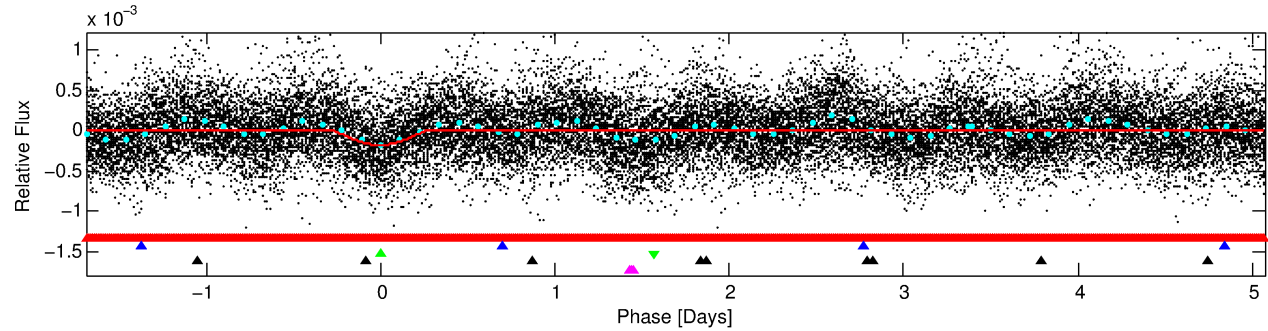
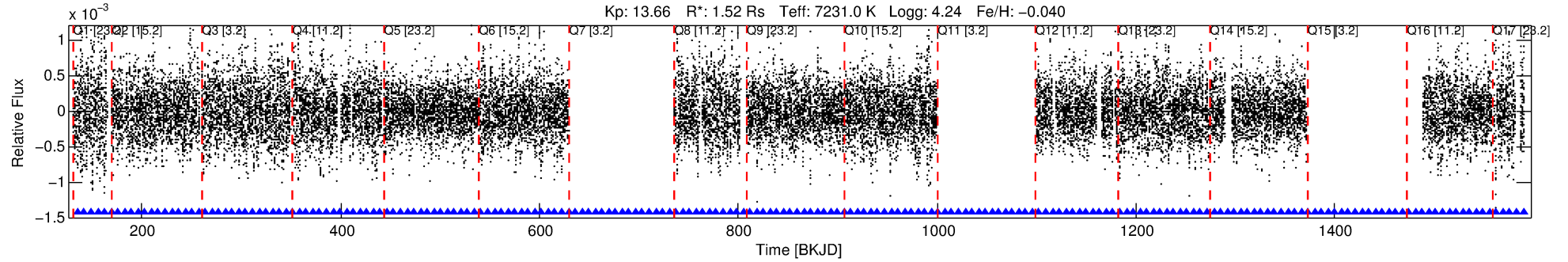
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010744342-03

No Significant Match Found

DV One-Page Summary

KIC: 10744342 Candidate: 3 of 5 Period: 6.763 d



DV Fit Results:

Period = 6.76282 [0.00024] d
Epoch = 135.5828 [0.0279] BKJD
Rp/R* = 0.0239 [0.0376]
a/R* = 1.31 [0.19]
b = 1.00 [0.14]
Seff = 894.74 [405.63]
Teff = 1395 [158] K
Rp = 3.96 [6.39] Re
a = 0.0794 [0.0234] AU
Ag = 21.70 [68.99] [0.30 σ]
Teffp = 4654 [3674] K [0.89 σ]

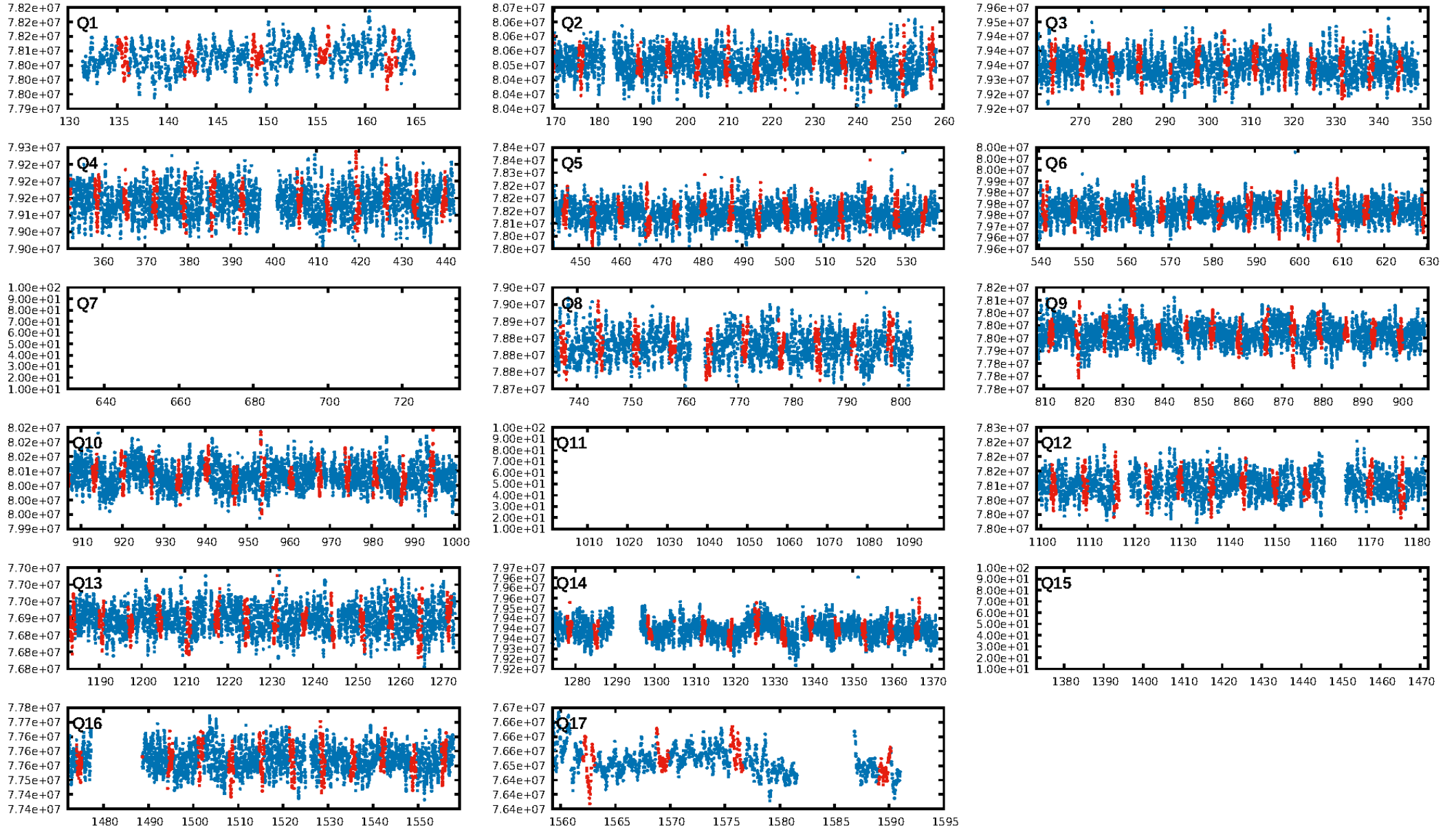
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.42 σ]
LongPeriod-sig: 100.0% [265.23 σ]
ModelChiSquare2-sig: 94.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.39e-09
RollingBand-fgt: 1.00 [147/147]
GhostDiagnostic-chr: 11.39
Centroid-sig: 7.6%
Centroid-so: 1.106 arcsec [2.30 σ]
OotOffset-rm: 0.223 arcsec [0.76 σ]
KicOffset-rm: 0.424 arcsec [1.28 σ]
OotOffset-st: 4/1/3/5 [13]
KicOffset-st: 4/1/3/5 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 0.00 [0/14]

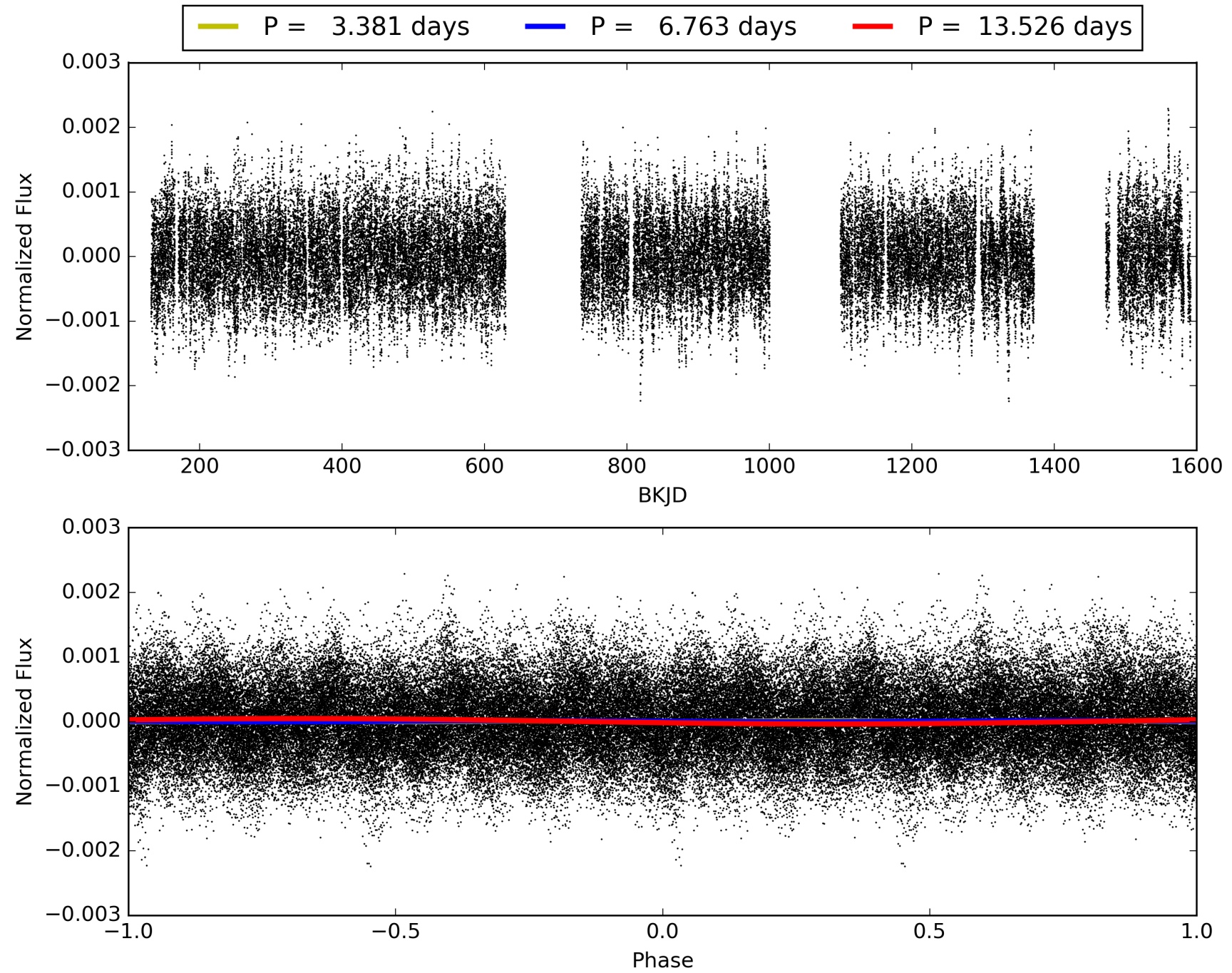
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:30:41 Z

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

TCE 010744342-03, PDC Light Curves

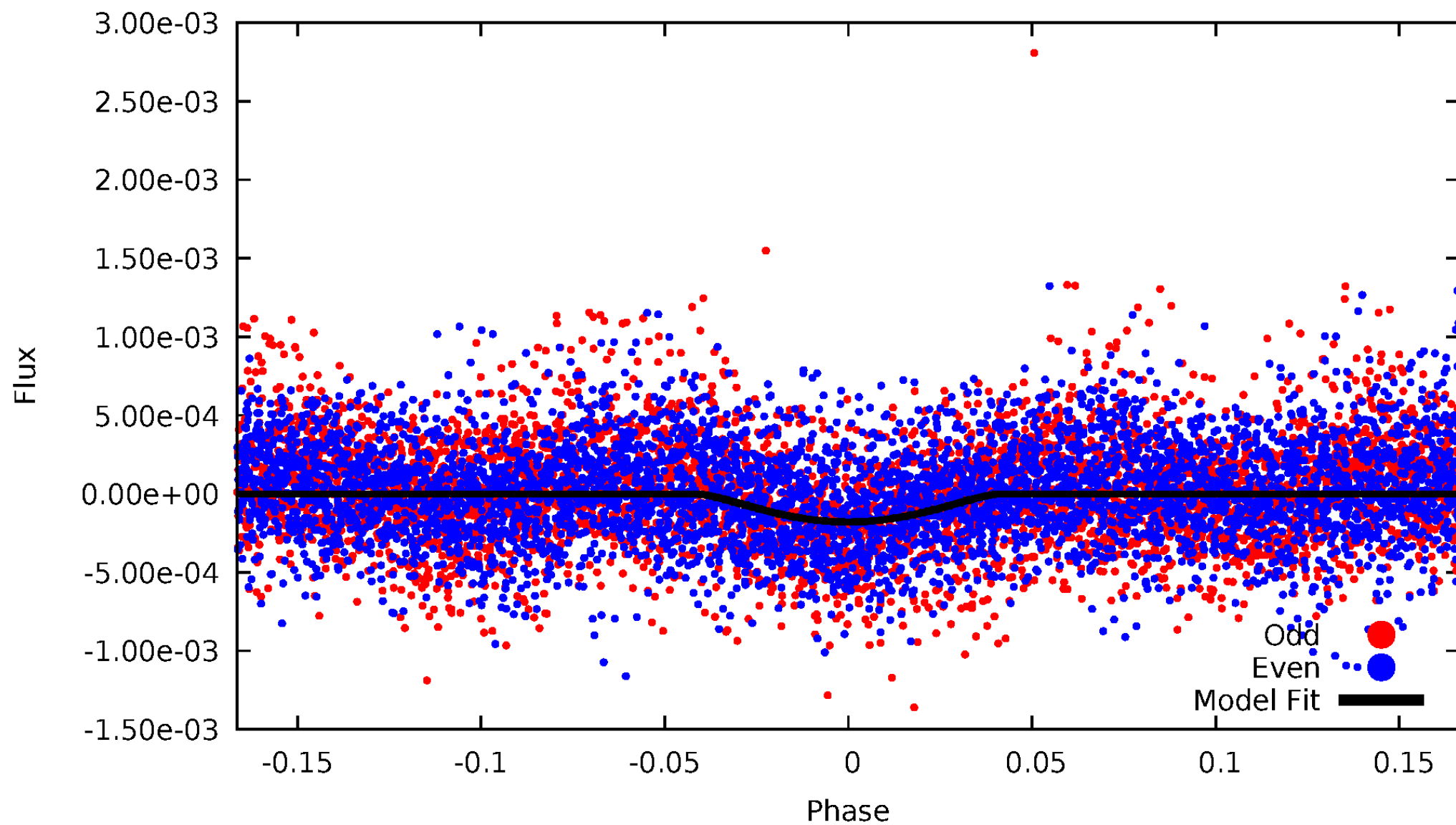


TCE 010744342-03



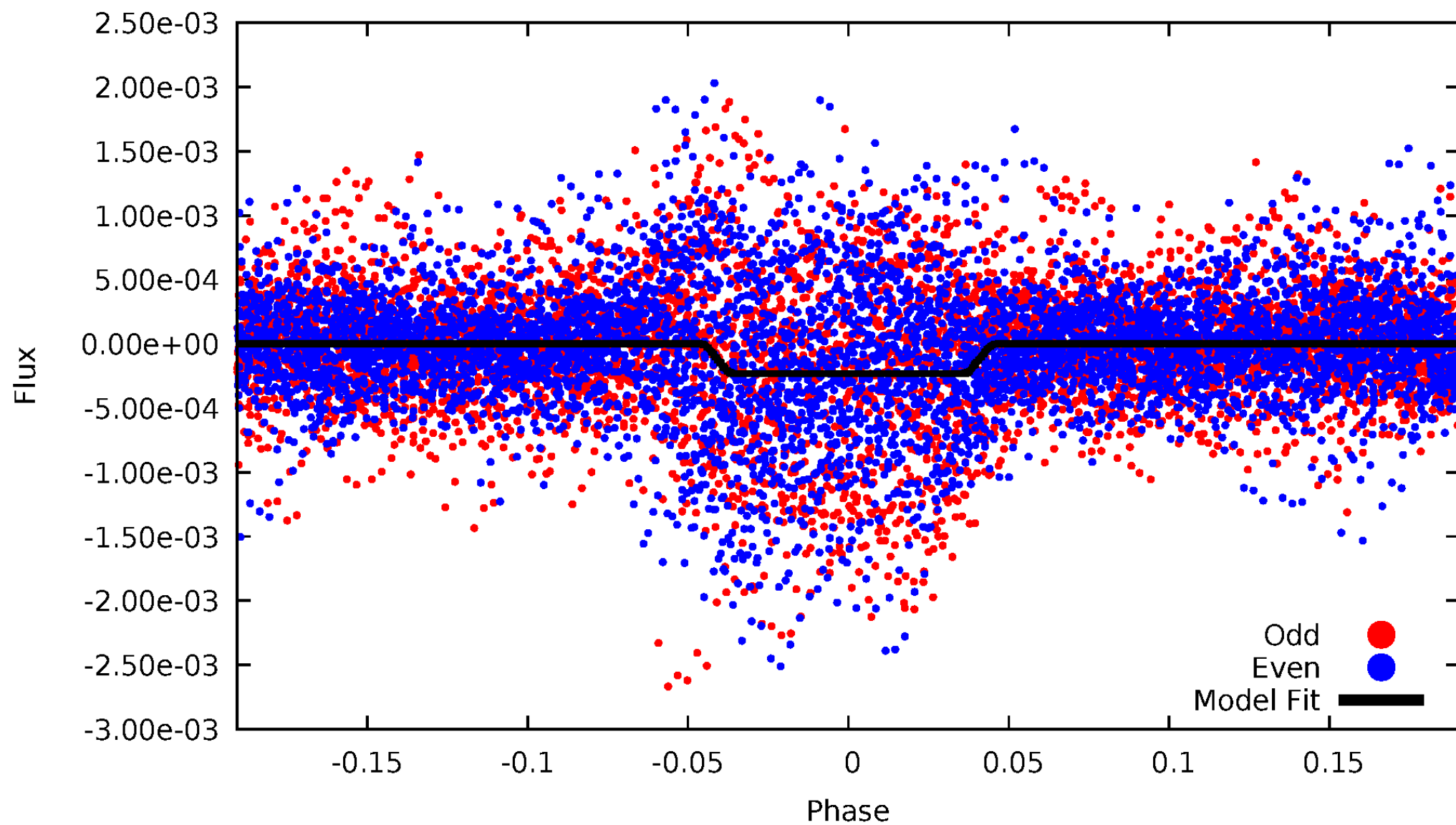
DV Odd/Even

TCE 010744342-03



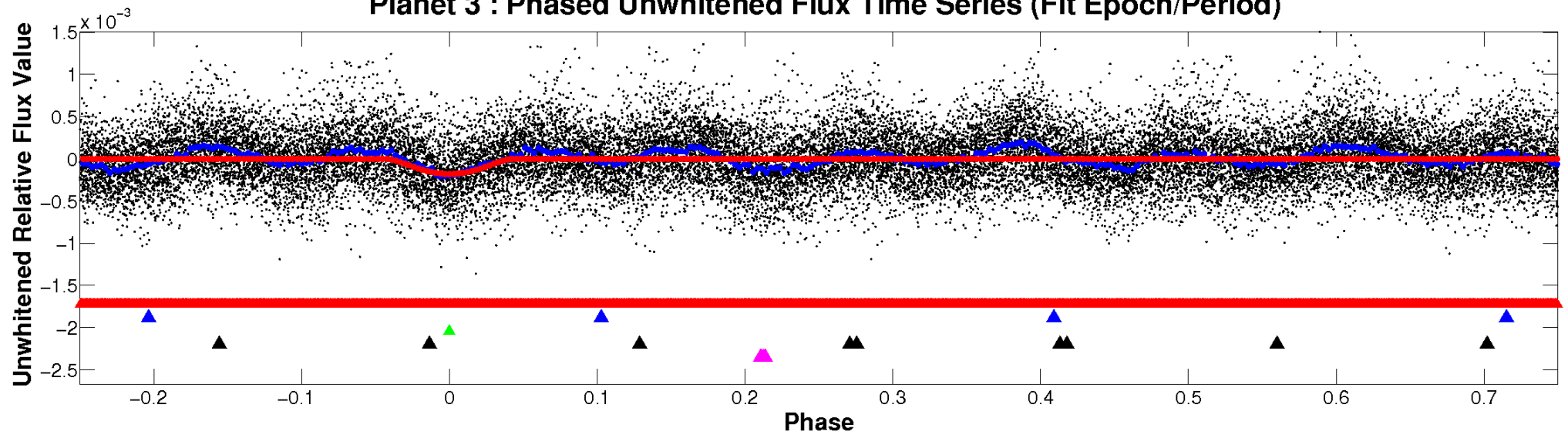
ALT Odd/Even

TCE 010744342-03

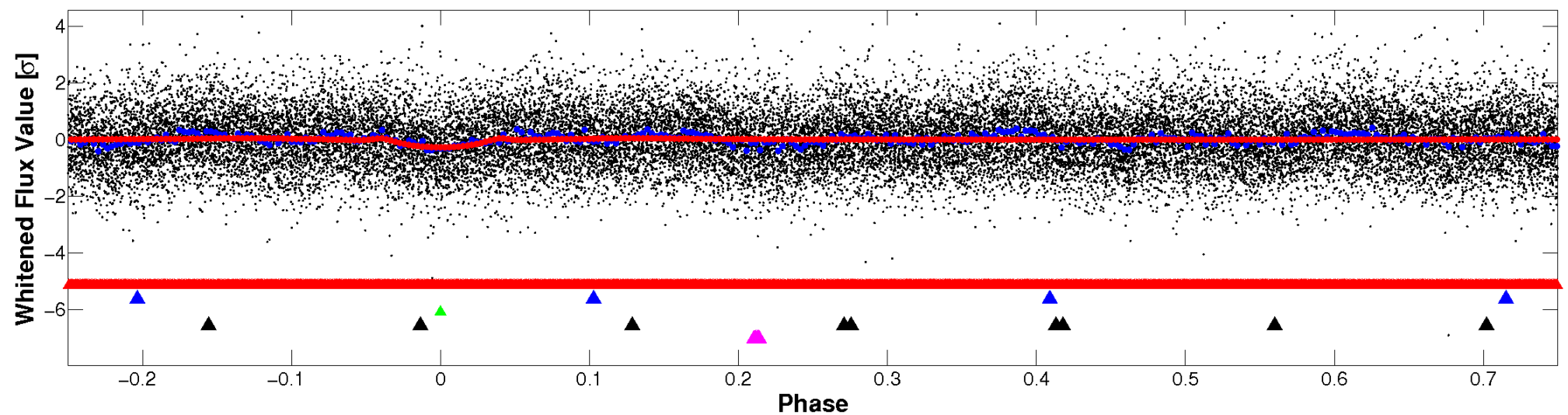


Non-Whitened Vs. Whitened Light Curve

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

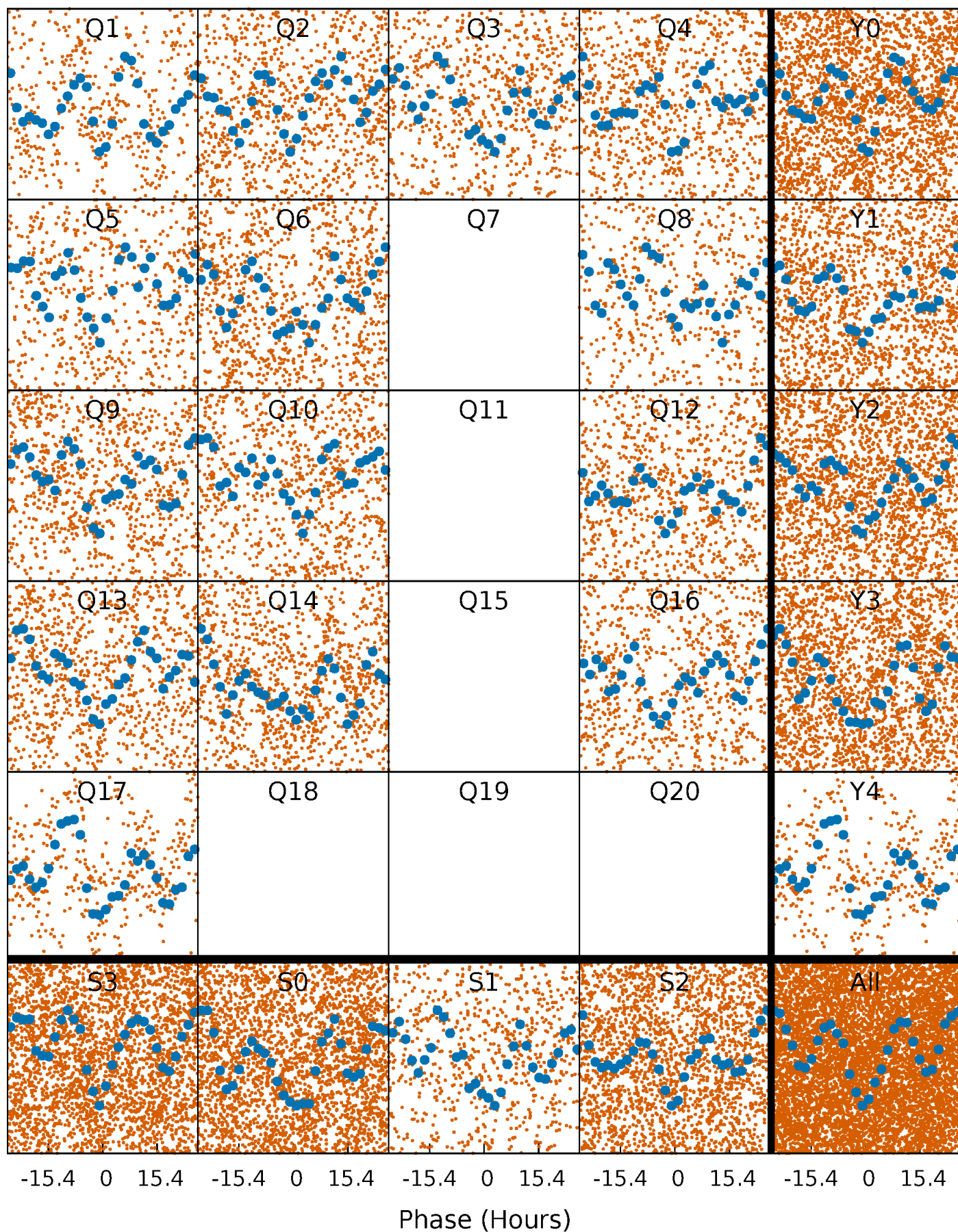


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



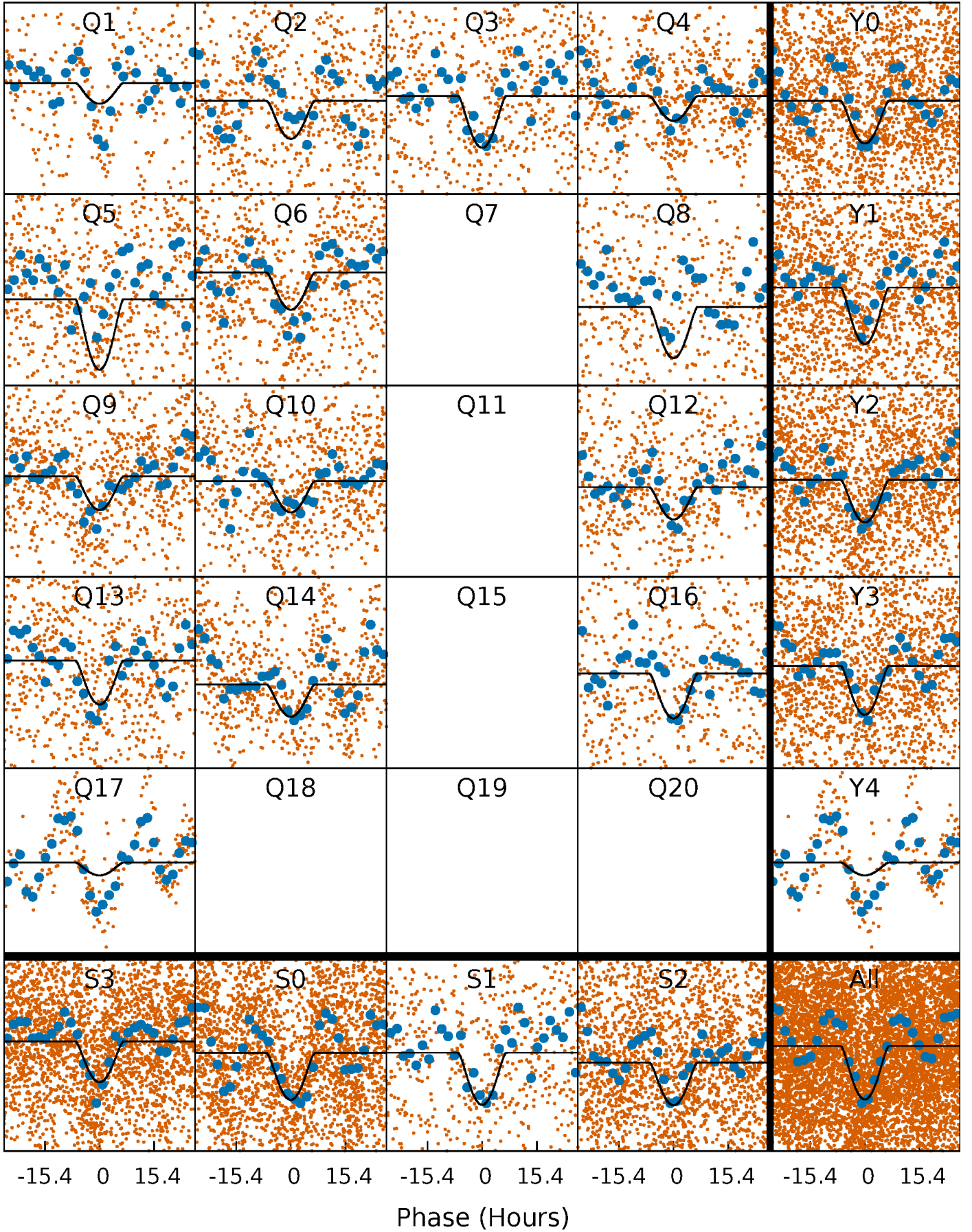
PDC Quarter-Phased Transit Curves

TCE 010744342-03 P= 6.762819 Days $T_0=135.582819$ (BKJD)



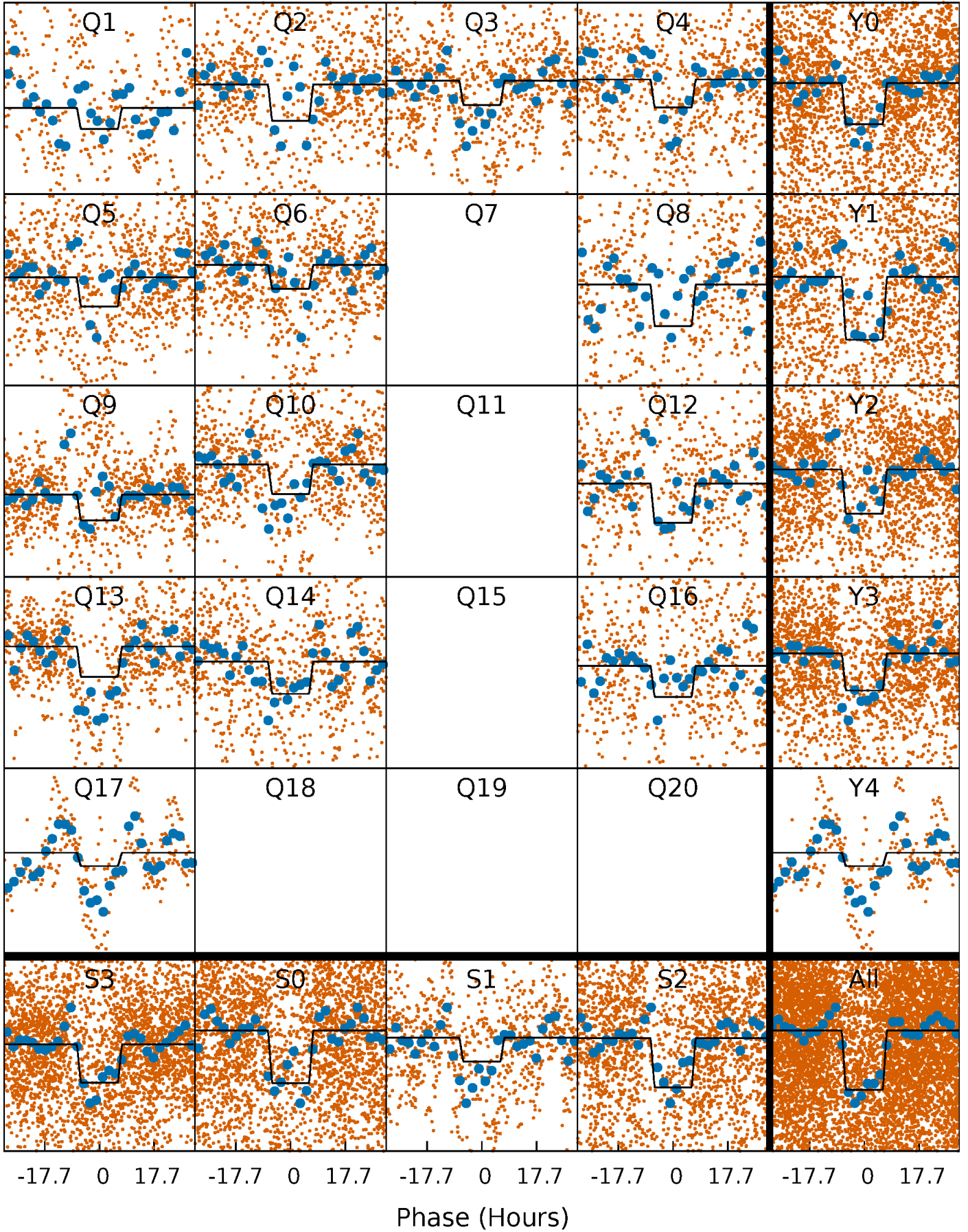
DV Quarter-Phased Transit Curves

TCE 010744342-03 P= 6.762819 Days $T_0=135.582819$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

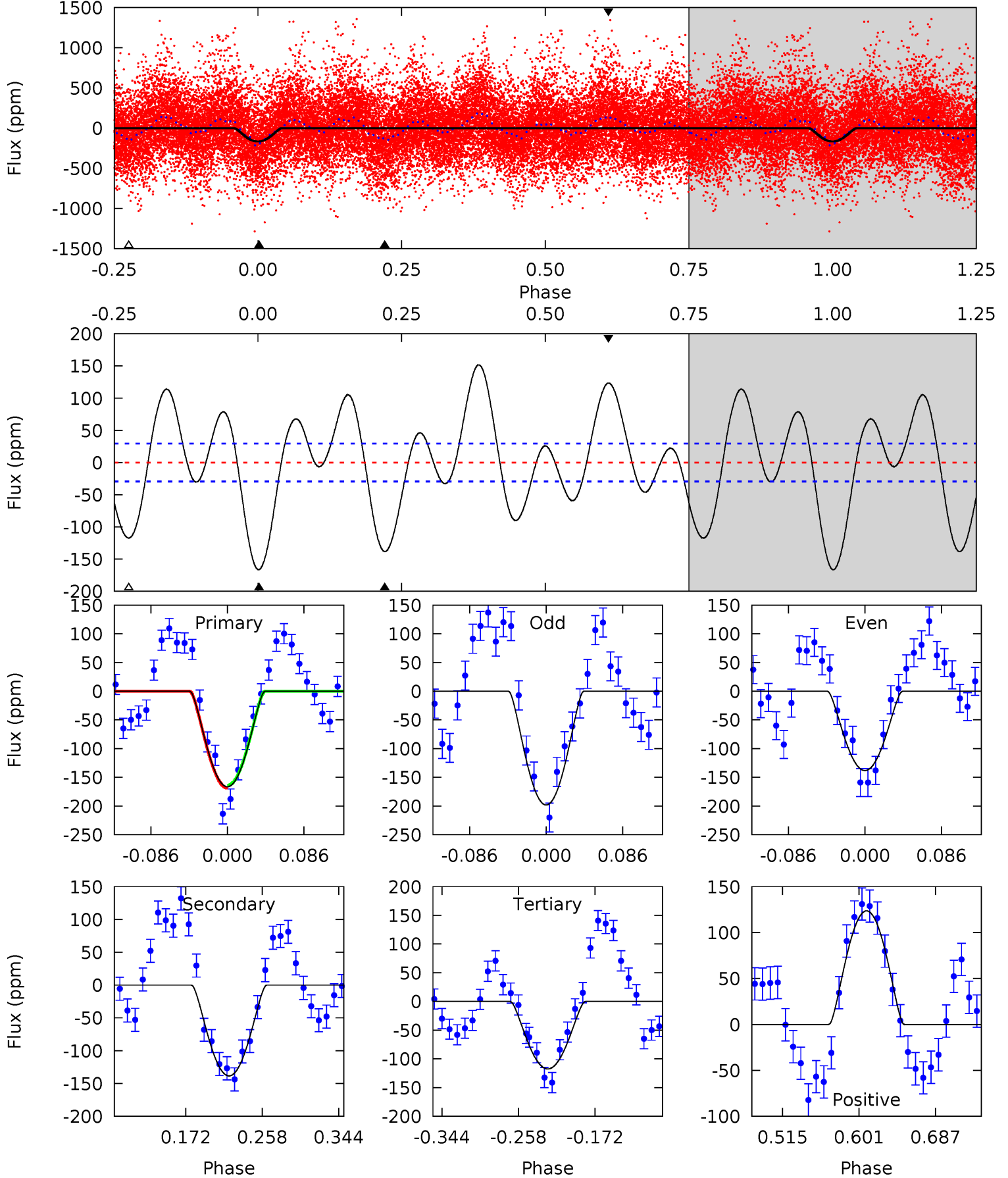
TCE 010744342-03 P= 6.763261 Days $T_0=135.562633$ (BKJD)



DV Model-Shift Uniqueness Test

010744342-03, P = 6.762819 Days, E = 128.820000 Days

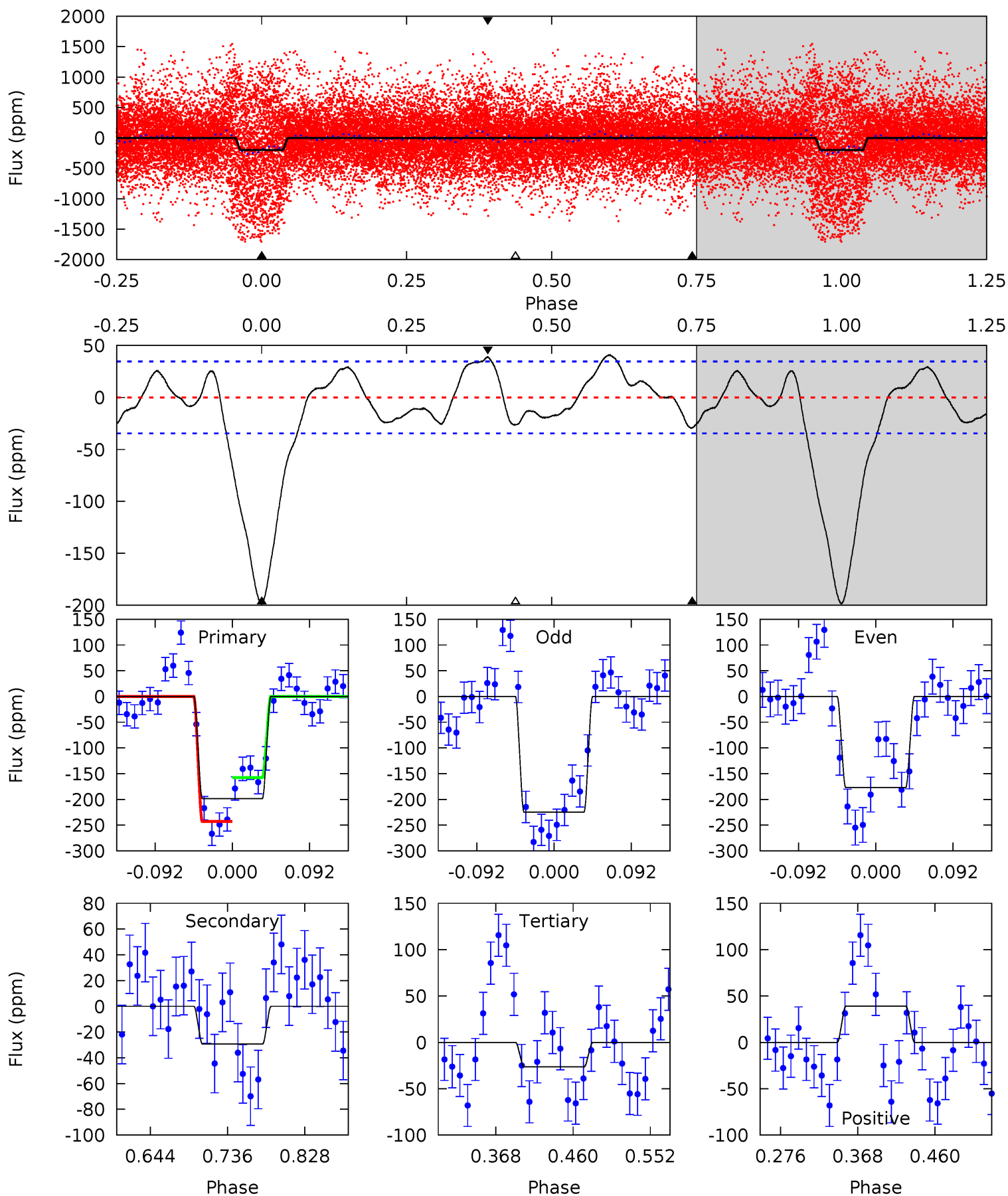
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	21.5	18.2	19.2	4.60	1.72	10.1	7.61	6.66	3.27	2.31	4.64	1.60	0.48	0.32



Alt Model-Shift Uniqueness Test

010744342-03, P = 6.763261 Days, E = 128.799372 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	3.88	3.49	5.16	4.58	1.68	2.66	22.8	21.1	0.39	-1.28	3.14	1.76	0.17	5.65



Stellar Parameters For KIC 010744342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7231^{+200}_{-342}	$4.240^{+0.087}_{-0.217}$	$-0.040^{+0.200}_{-0.350}$	$1.518^{+0.552}_{-0.221}$	$1.458^{+0.209}_{-0.209}$	$0.588^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+500%/-875%	+36%/-15%	+14%/-14%	+41%/-56%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010744342-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-138 ± 6	$6.17^{+6.16}_{-4.06}$	1969^{+164}_{-122}	4293^{+2630}_{-962}	13^{+92}_{-10}
Alt.	-29 ± 8	$5.85^{+5.40}_{-4.05}$	1963^{+166}_{-116}	3307^{+1866}_{-704}	$2.815^{+27.181}_{-2.049}$

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

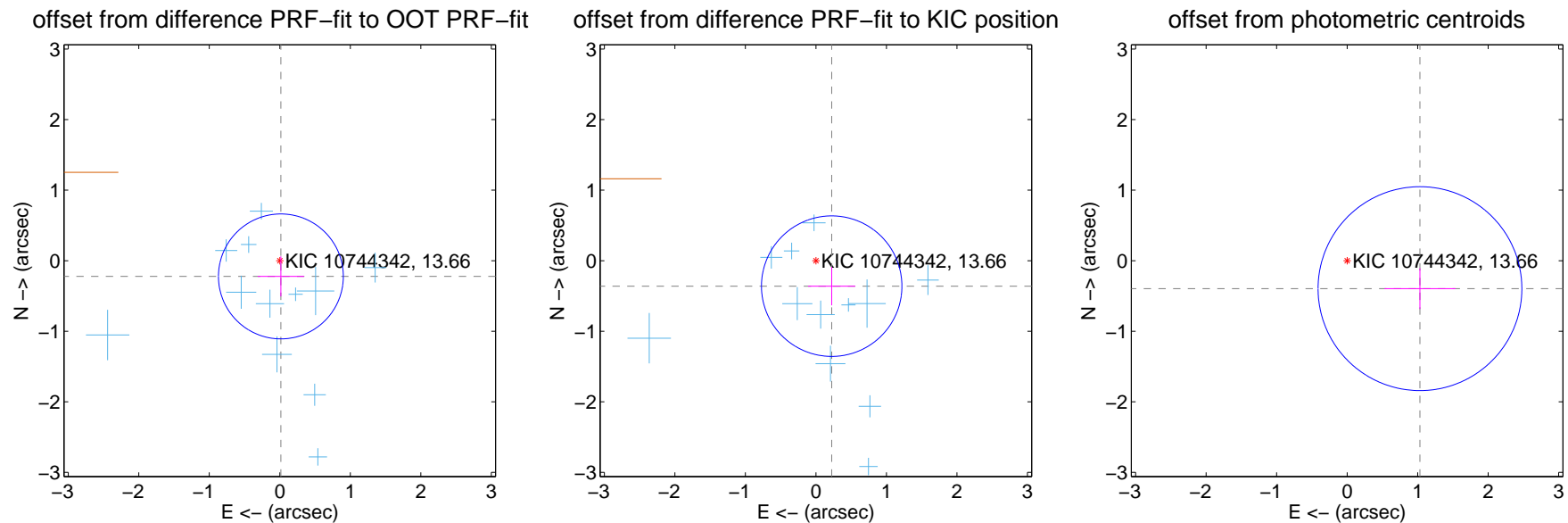
DV Centroid Data

Supplemental centroid analysis for 010744342-03. Kepler magnitude: 13.66. Transit SNR 9.23

There are 12 quarters with good PRF difference image offsets

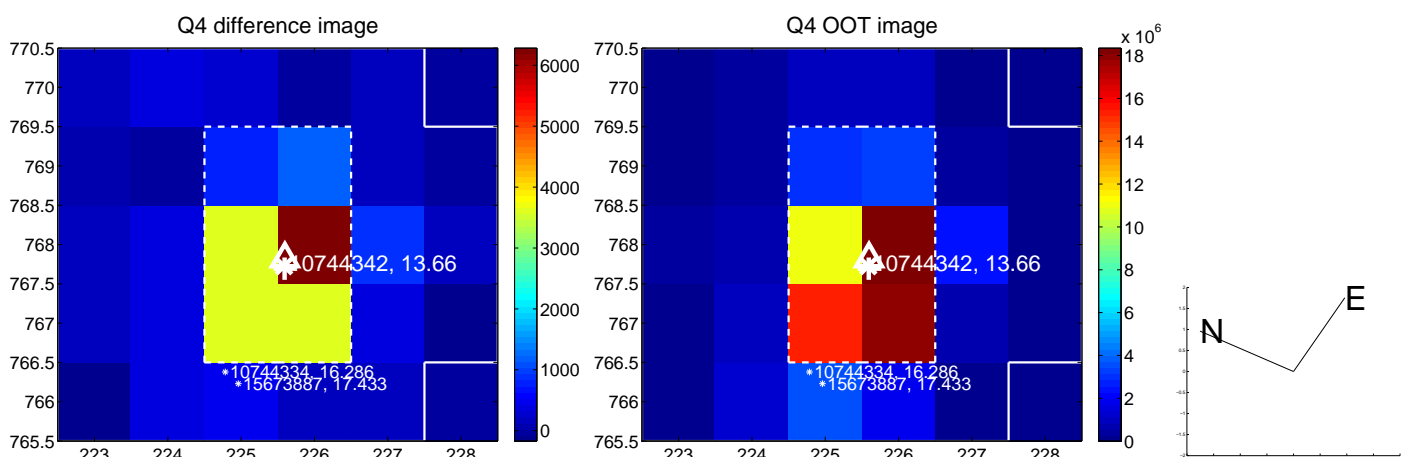
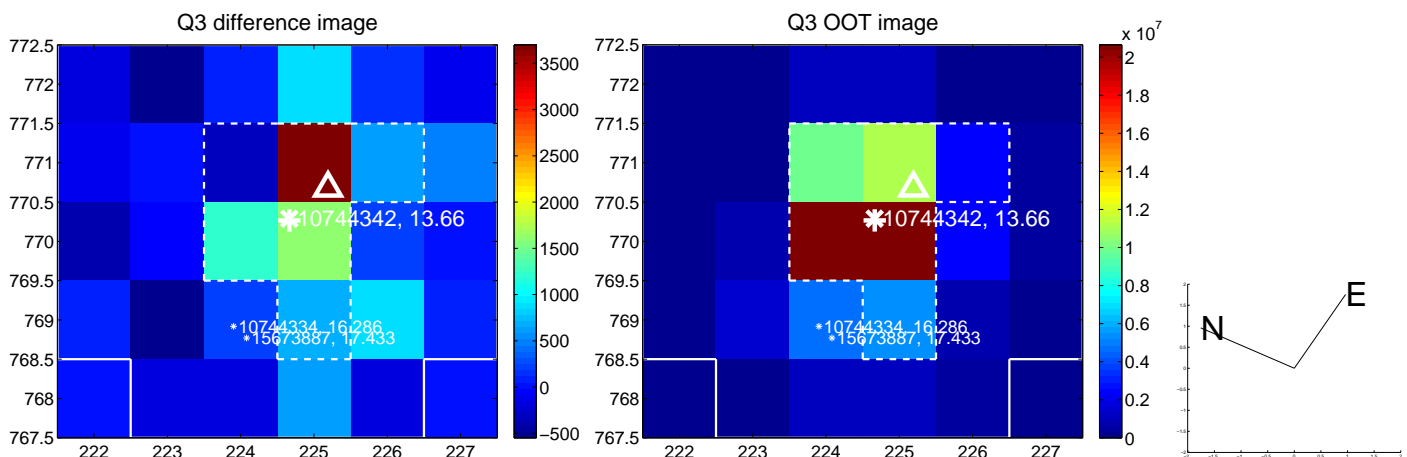
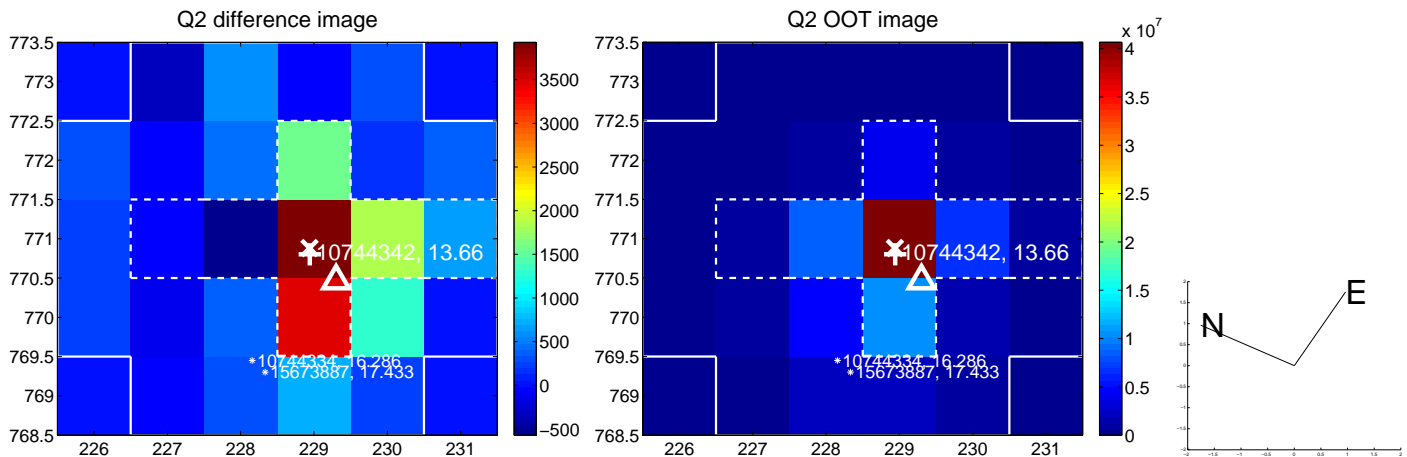
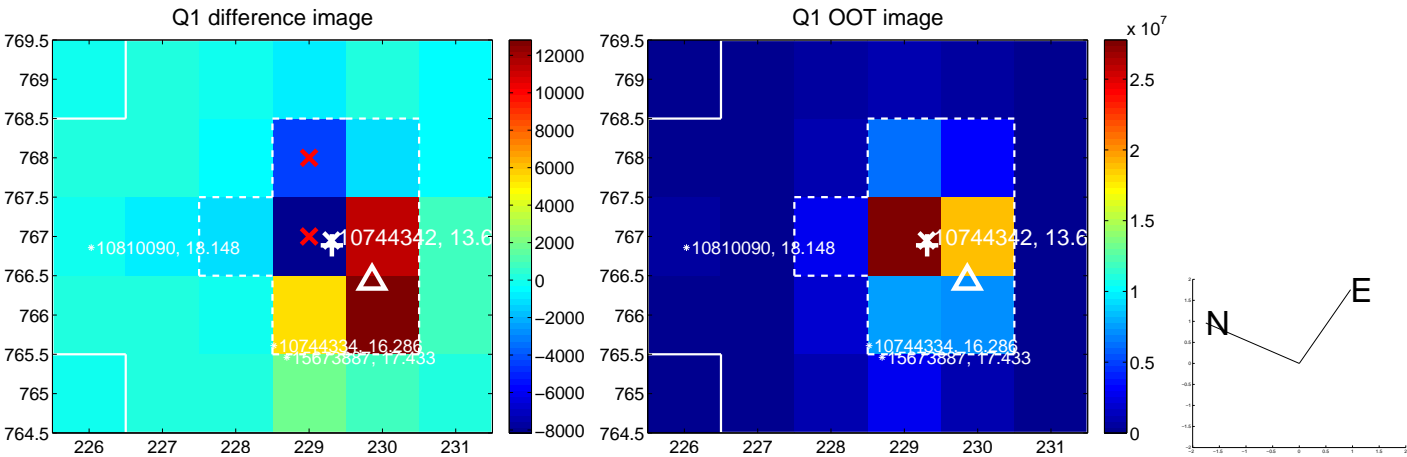
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.223 ± 0.295	0.76	-0.015 ± 0.329	-0.223 ± 0.284
PRF-fit source offset from KIC position	0.424 ± 0.332	1.28	-0.224 ± 0.335	-0.361 ± 0.272
photometric centroid source offset	1.11 ± 0.48	2.30	-1.03 ± 0.50	-0.40 ± 0.29

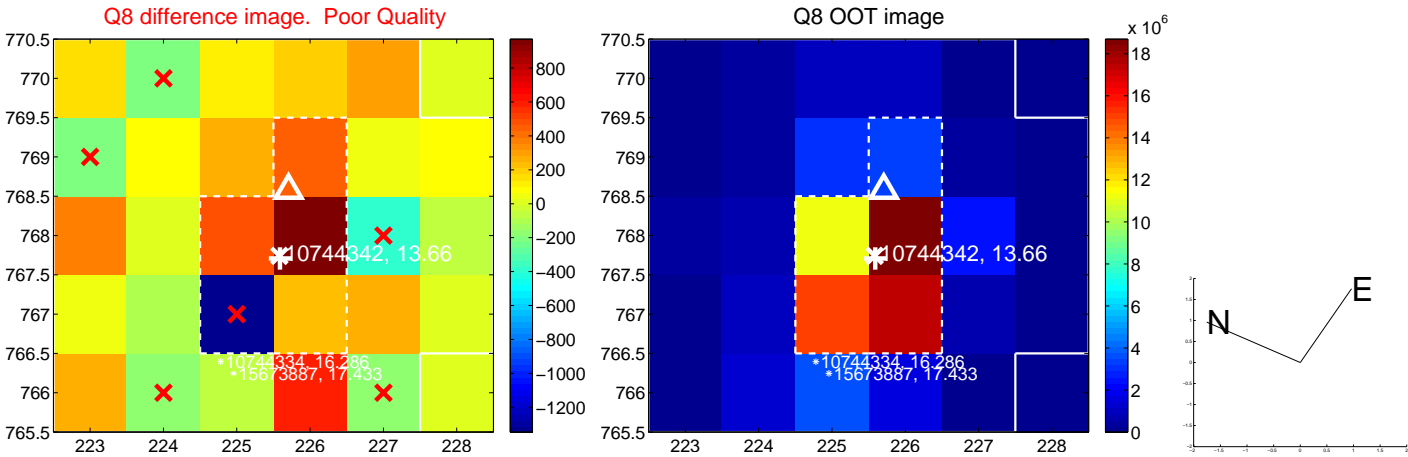
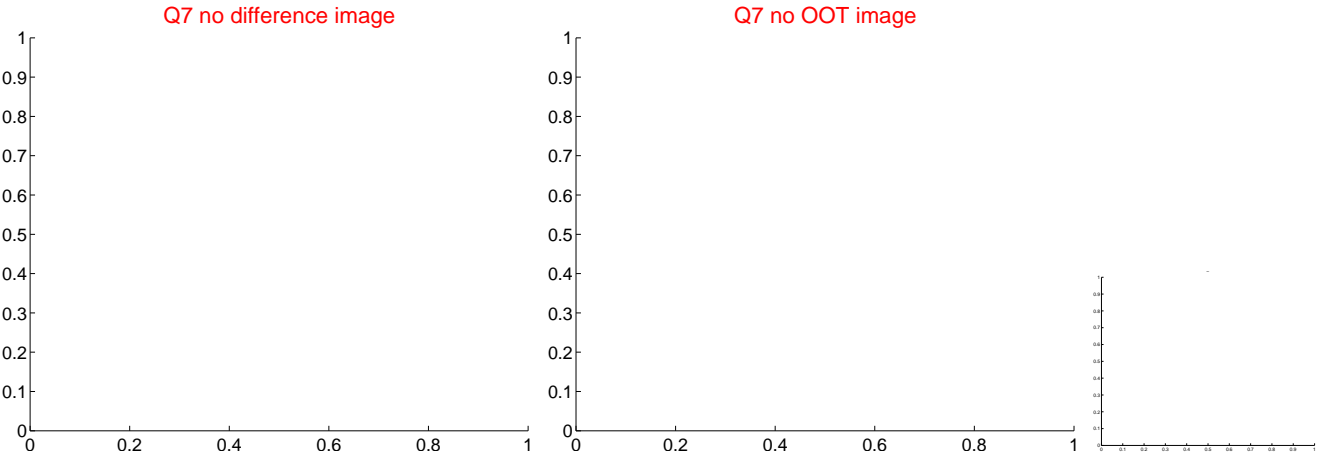
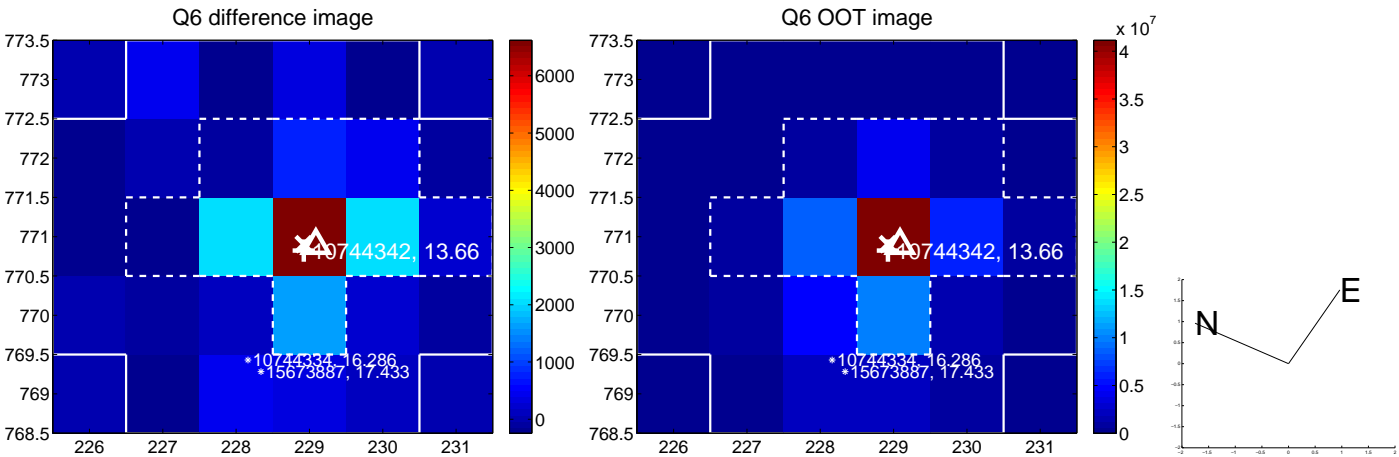
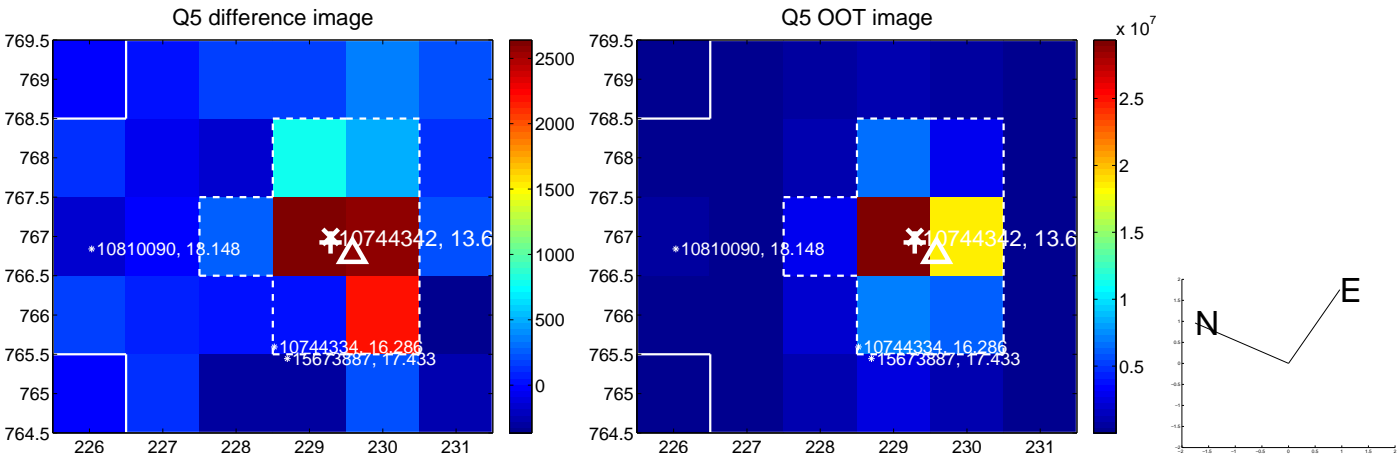


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

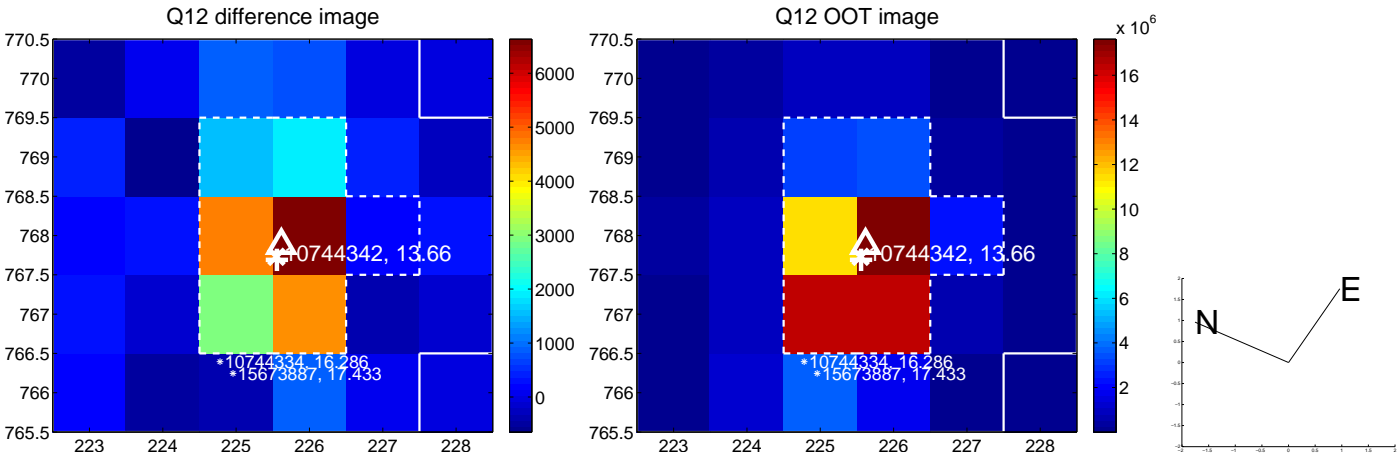
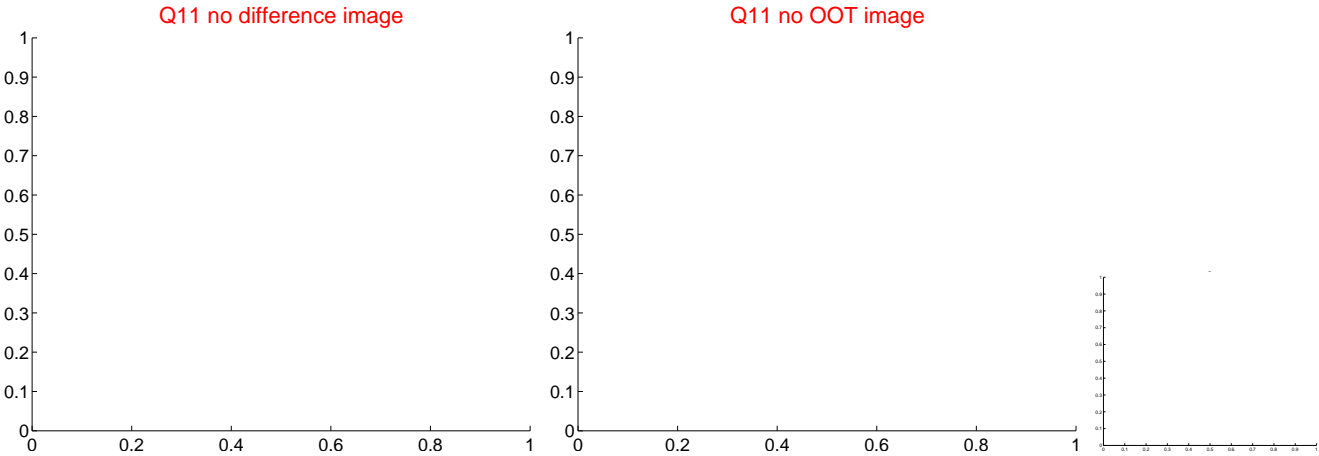
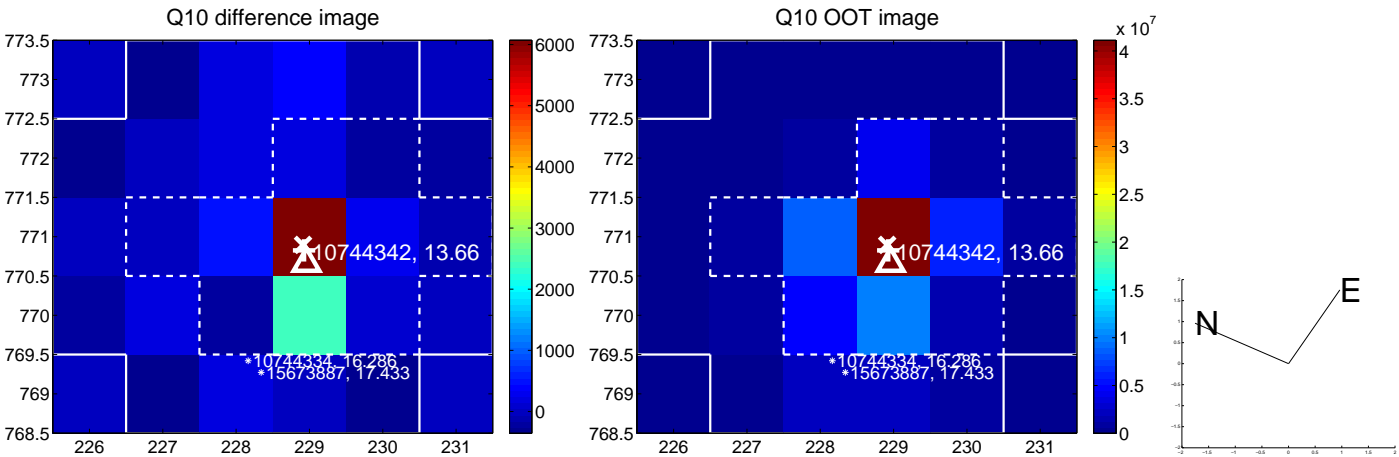
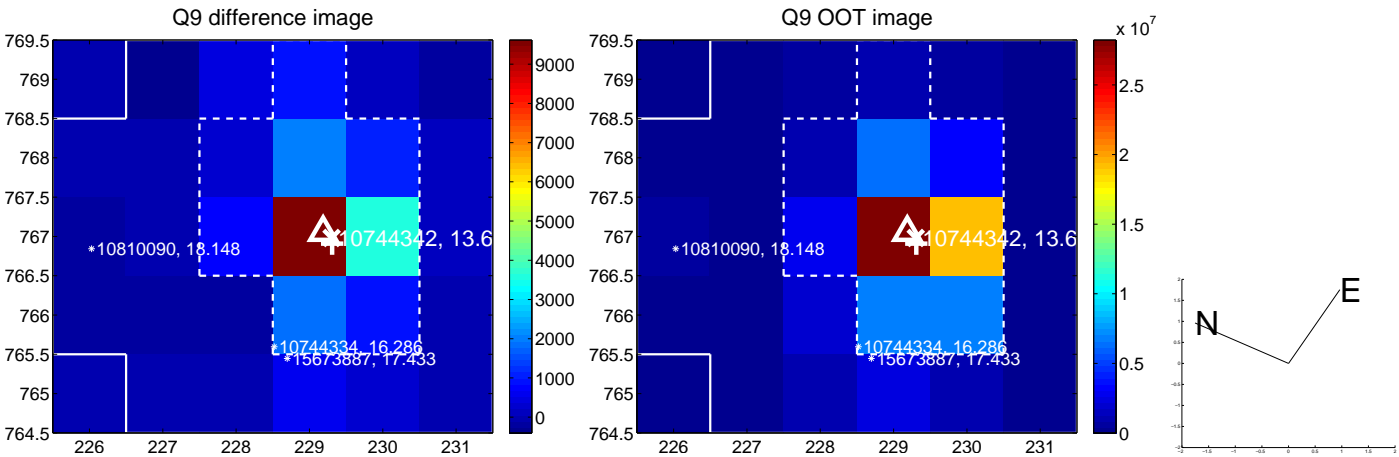
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



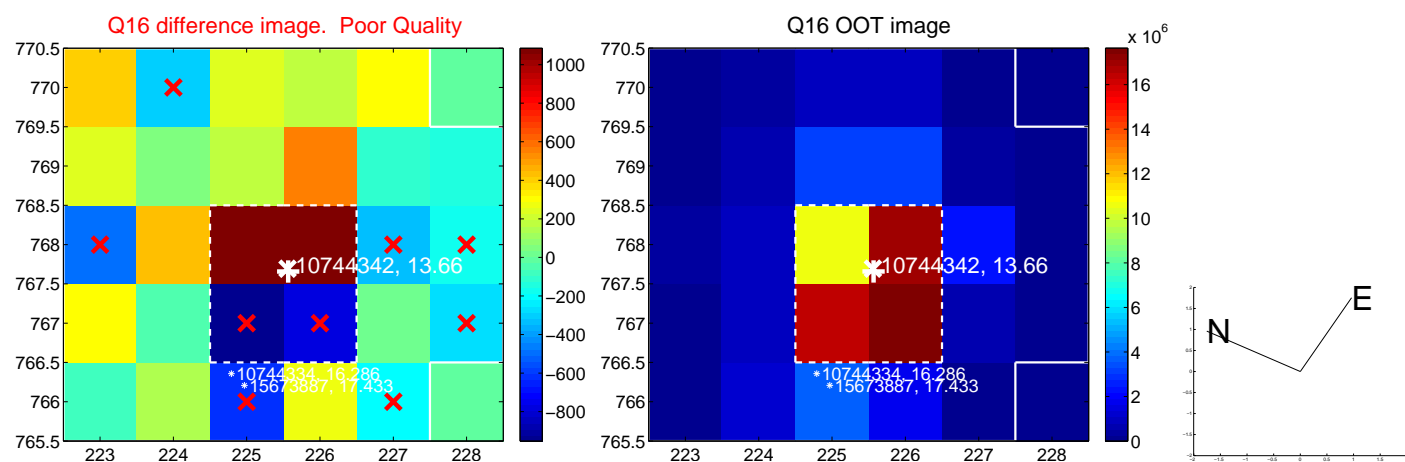
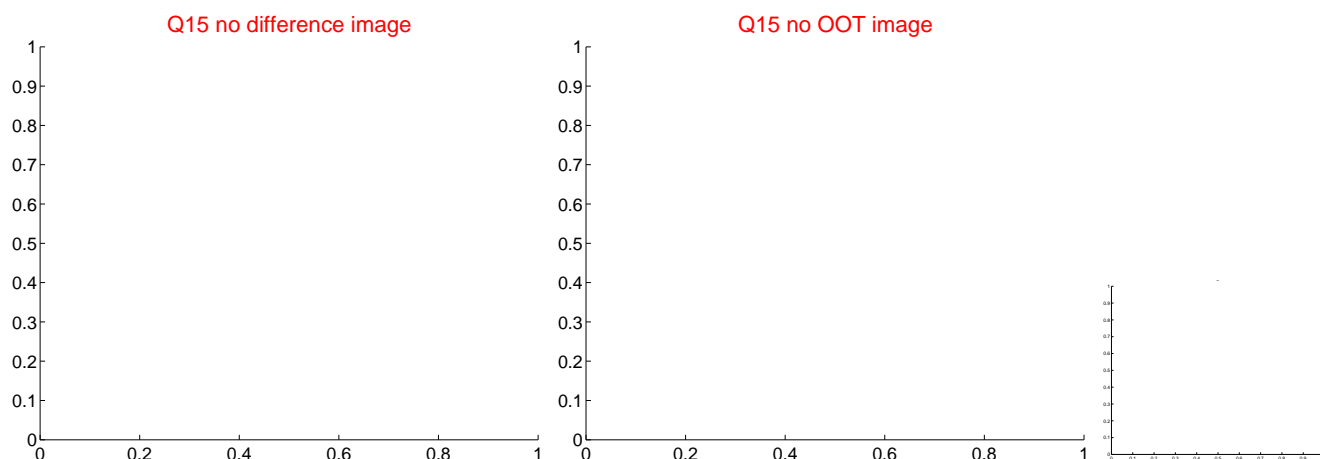
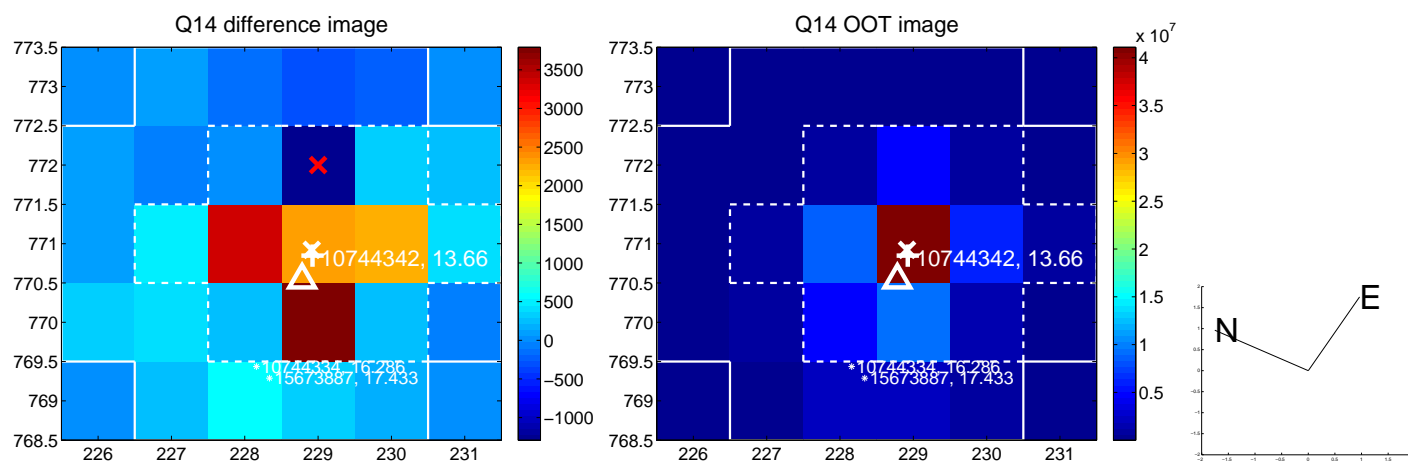
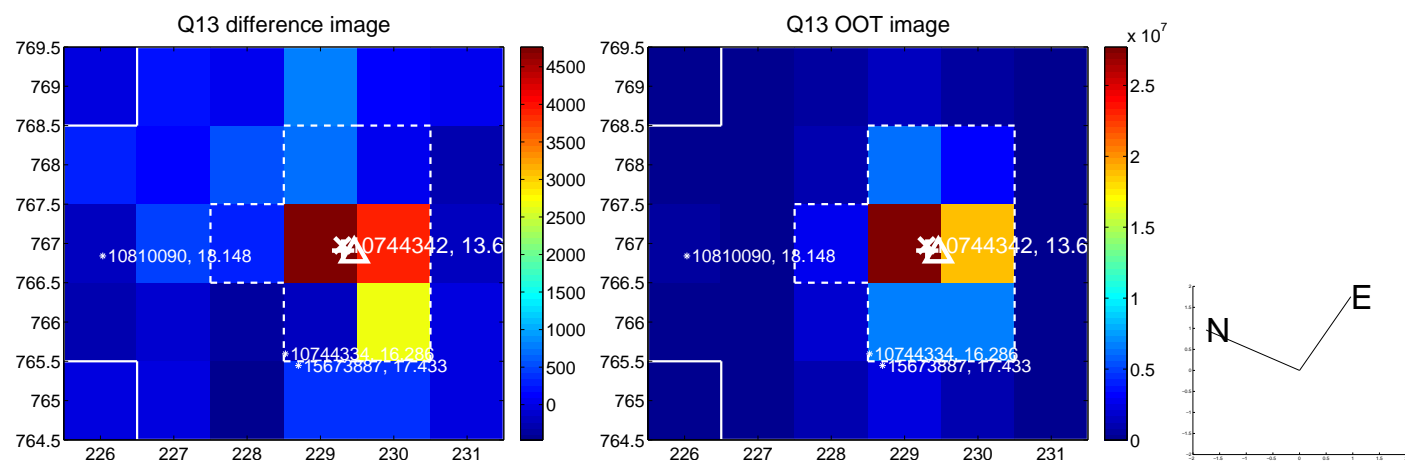
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



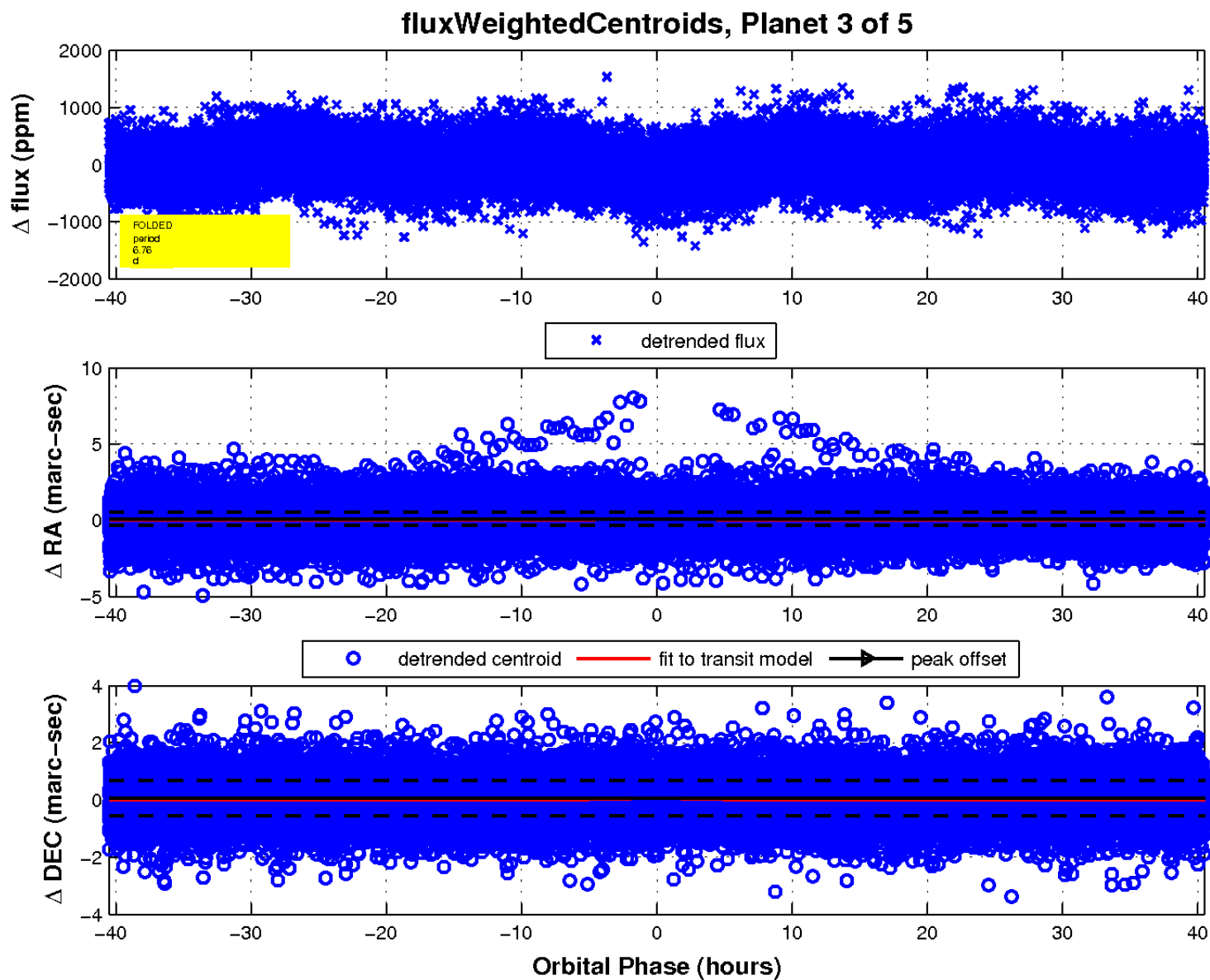
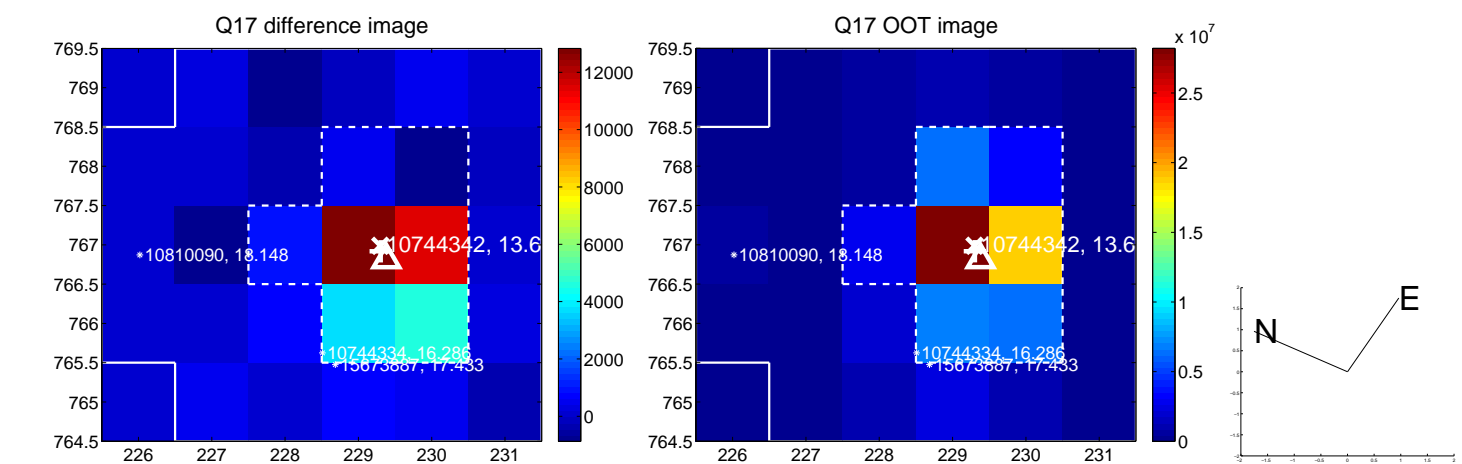
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

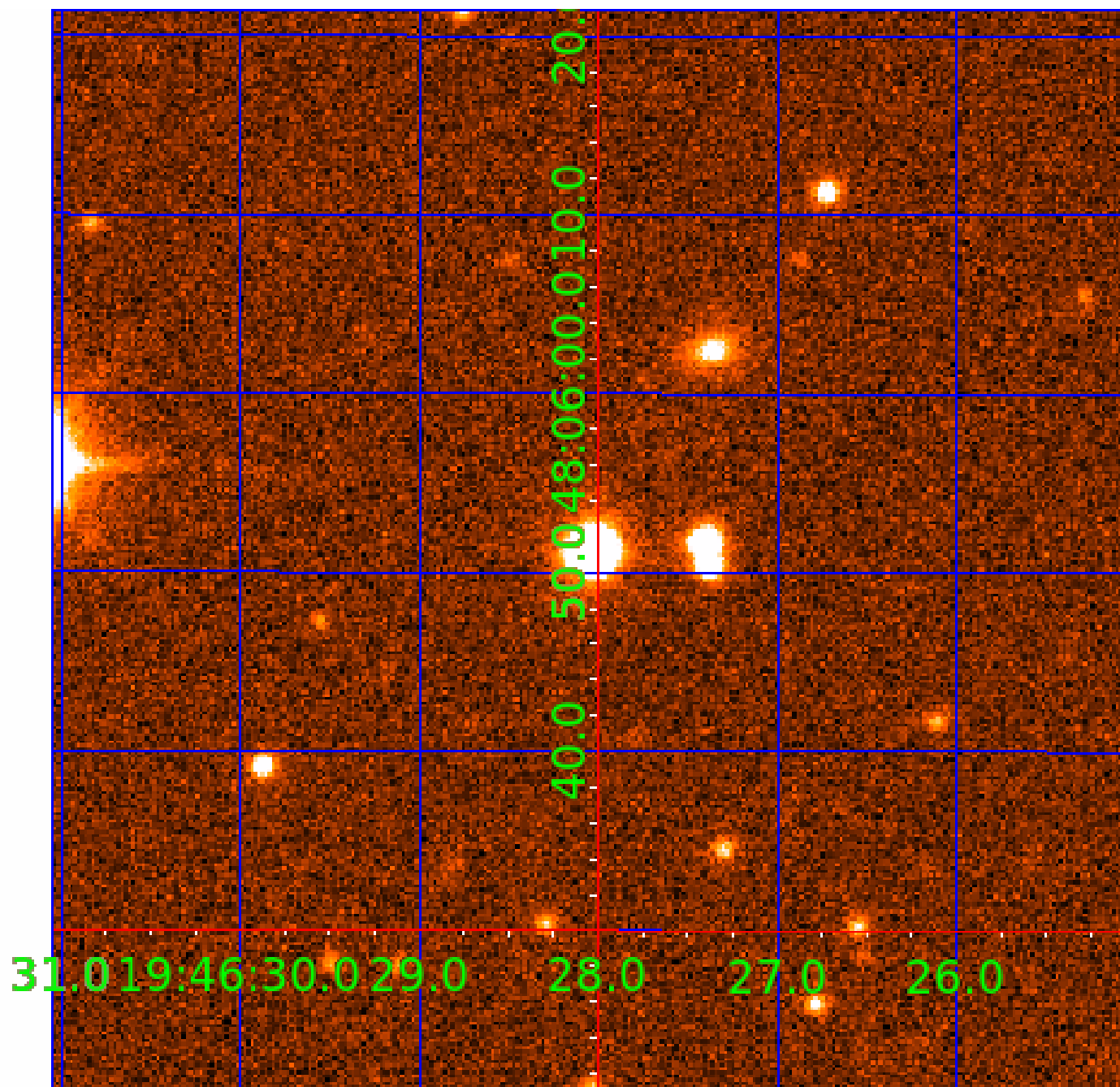


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010744342

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})
010744342-01	OBS	No	1.213444	132.449930	41.1	4.217	8.3	7.6	1.52	7231	1.12	8841.16
010744342-02	OBS	No	383.409734	410.932590	618.6	9.289	7.5	6.2	1.52	7231	5.58	4.11
010744342-03	OBS	No	6.762819	135.582819	179.6	13.503	7.1	9.2	1.52	7231	3.96	894.74
010744342-04	OBS	No	174.871720	138.376624	155.0	7.005	10.4	2.1	1.52	7231	2.23	11.70
010744342-05	OBS	No	385.473327	380.490288	687.4	11.712	9.8	6.9	1.52	7231	4.85	4.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010744342-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010744342-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010744342-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010744342-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
010744342-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

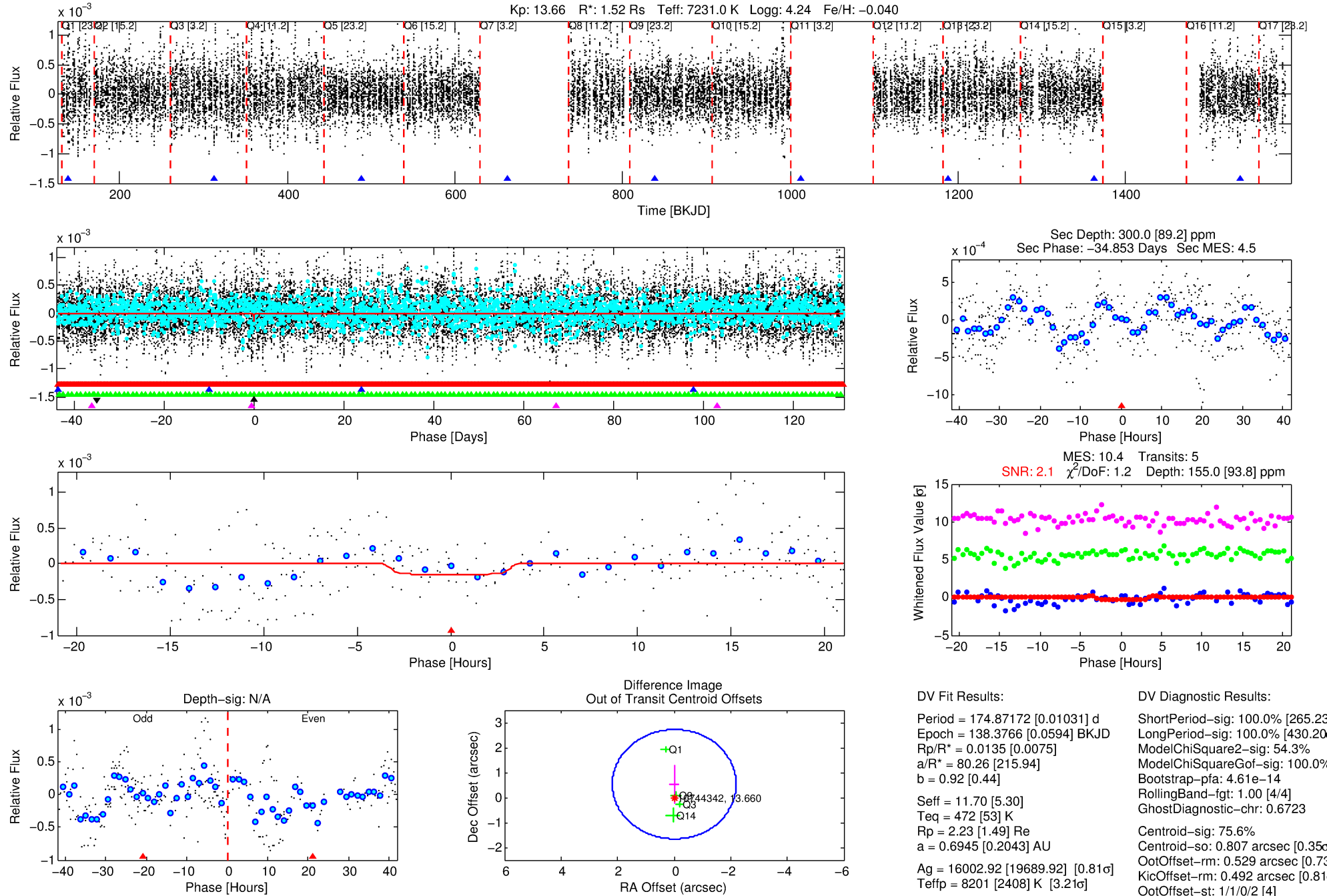
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010744342-04

No Significant Match Found

DV One-Page Summary

KIC: 10744342 Candidate: 4 of 5 Period: 174.872 d



DV Fit Results:

Period = 174.87172 [0.01031] d
Epoch = 138.3766 [0.0594] BKJD
Rp/R* = 0.0135 [0.0075]
a/R* = 80.26 [215.94]
b = 0.92 [0.44]
Seff = 11.70 [5.30]
Teff = 472 [53] K
Rp = 2.23 [1.49] Re
a = 0.6945 [0.2043] AU
Ag = 16002.92 [19689.92] [0.81] σ
Teffp = 8201 [2408] K [3.21] σ

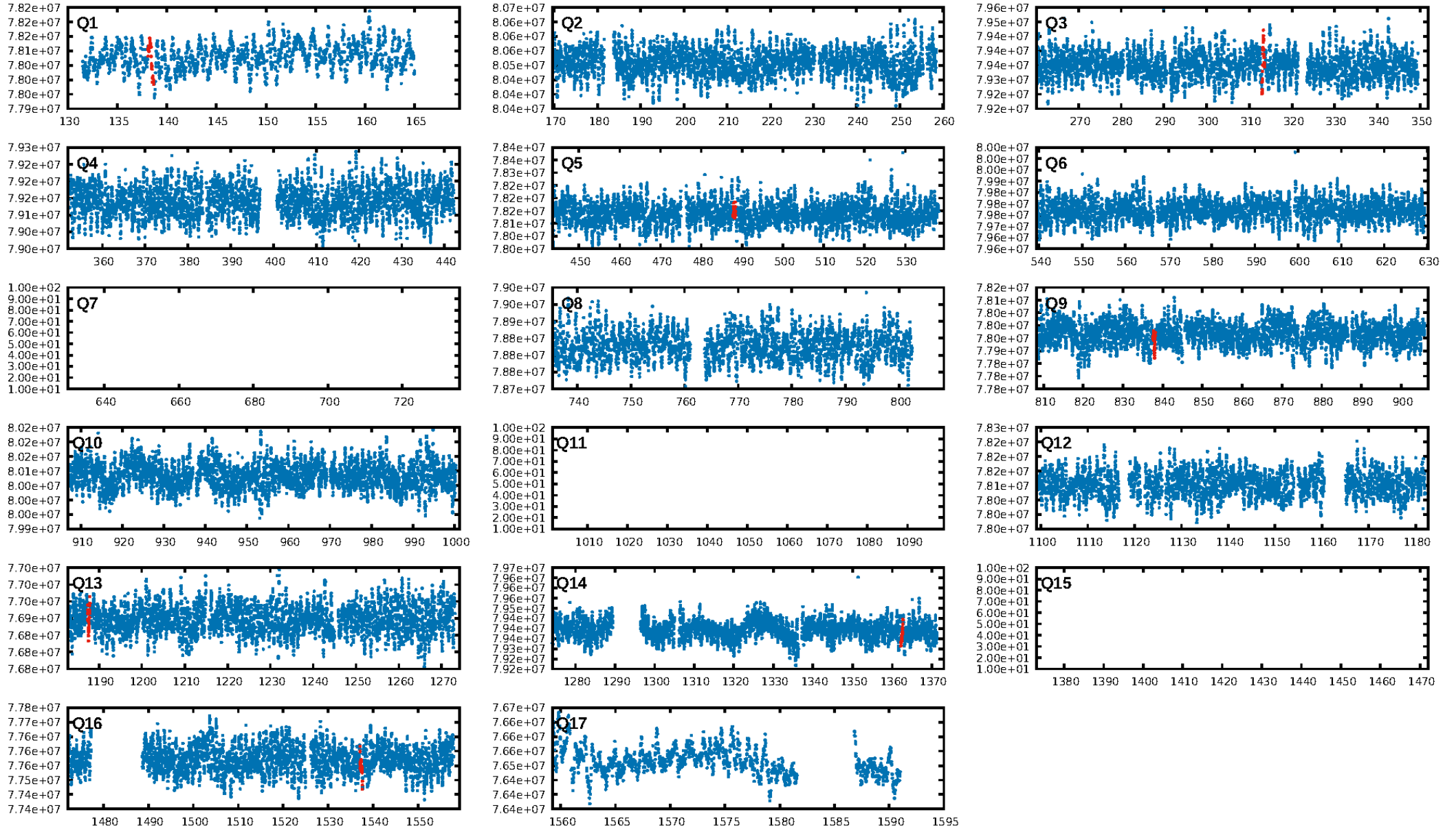
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [265.23 σ]
LongPeriod-sig: 100.0% [430.20 σ]
ModelChiSquare2-sig: 54.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.61e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6723
Centroid-sig: 75.6%
Centroid-so: 0.807 arcsec [0.35 σ]
OotOffset-rm: 0.529 arcsec [0.73 σ]
KicOffset-rm: 0.492 arcsec [0.81 σ]
OotOffset-st: 1/1/0/2 [4]
KicOffset-st: 1/1/0/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/6]

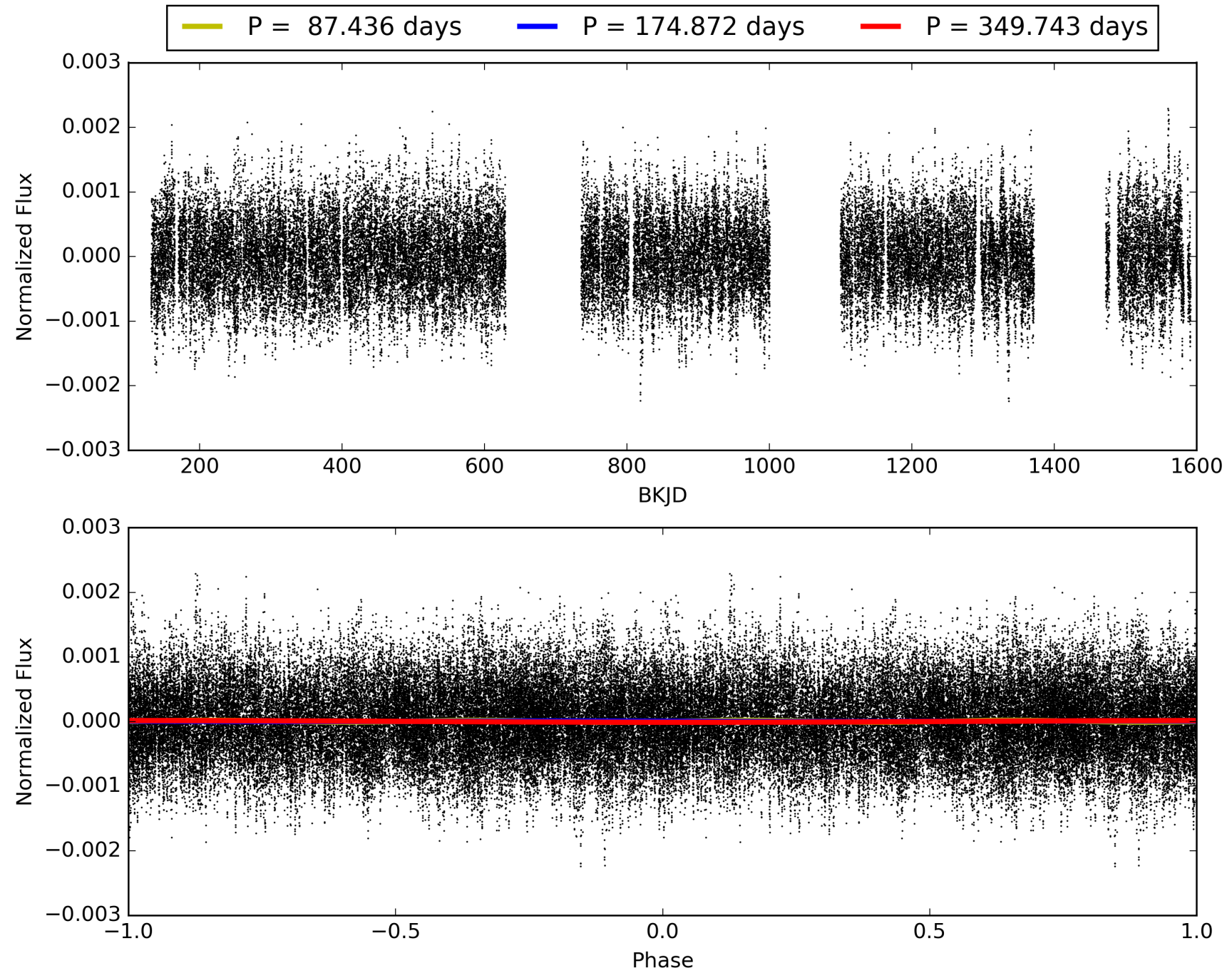
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:30:48 Z

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

TCE 010744342-04, PDC Light Curves

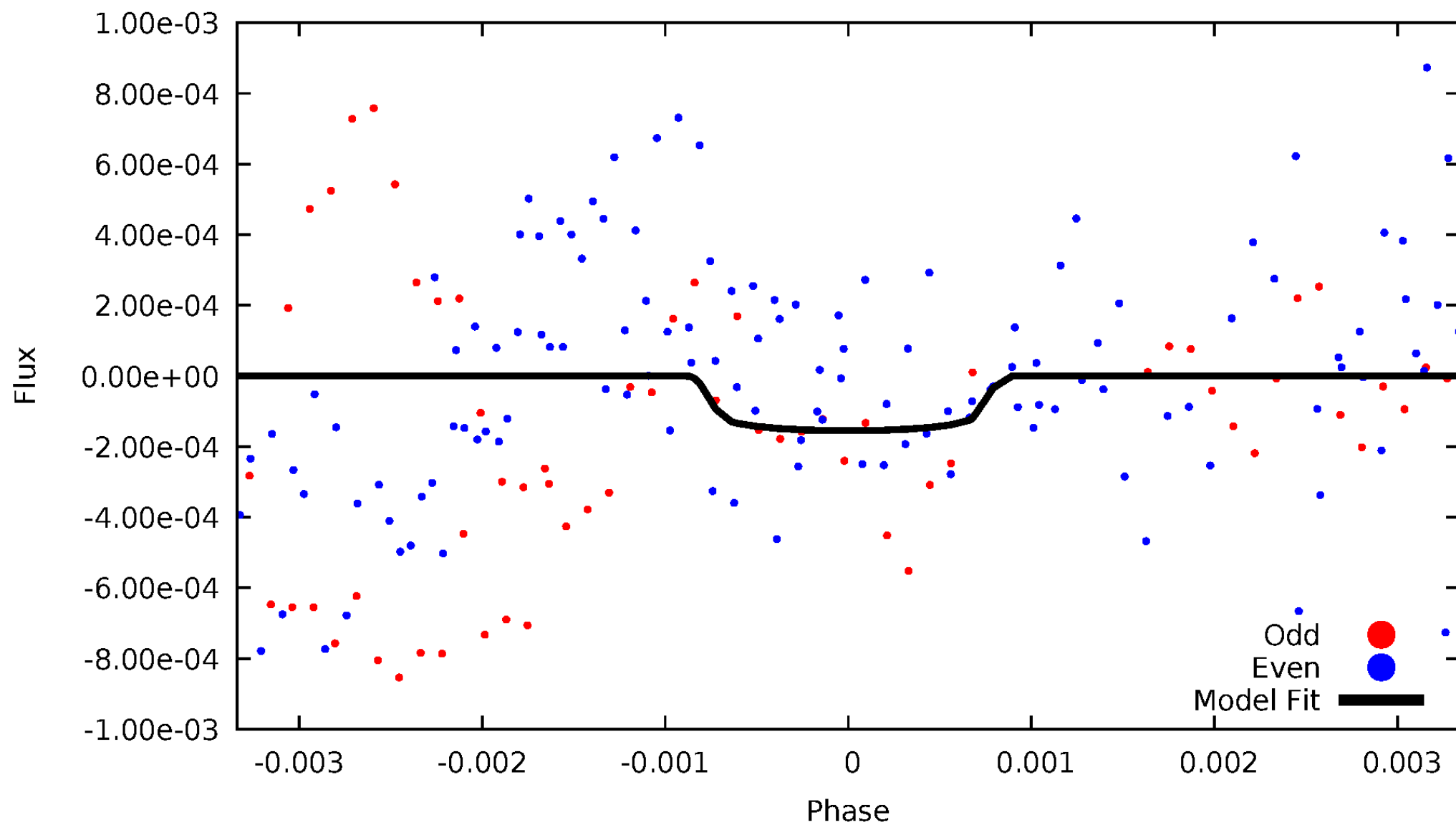


TCE 010744342-04



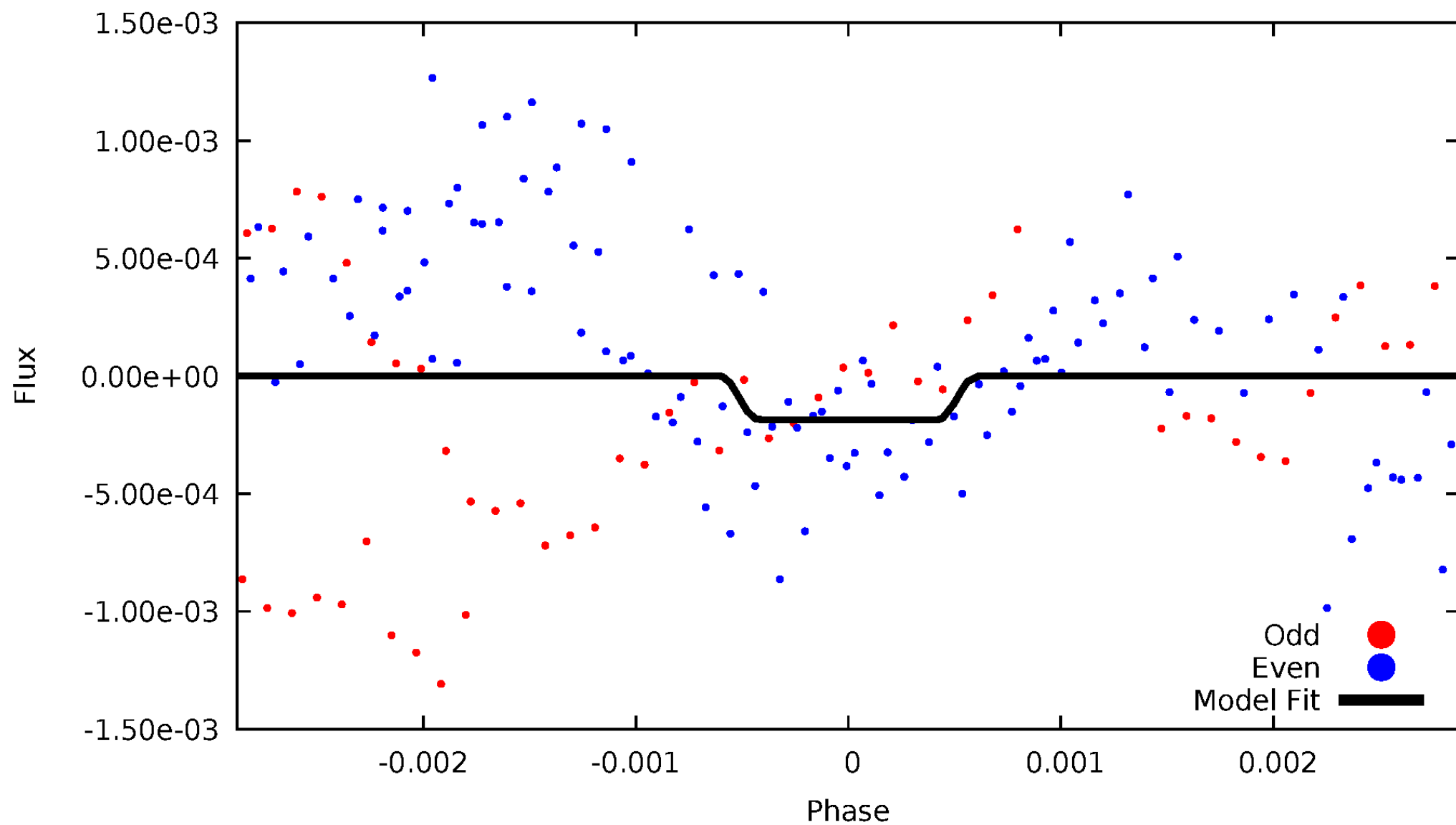
DV Odd/Even

TCE 010744342-04



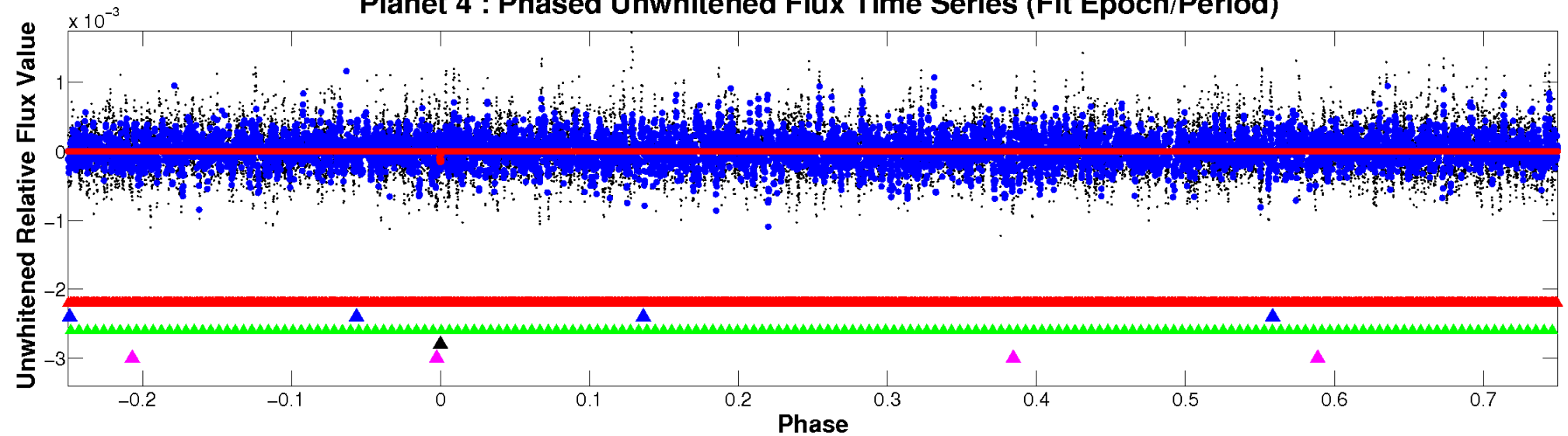
ALT Odd/Even

TCE 010744342-04

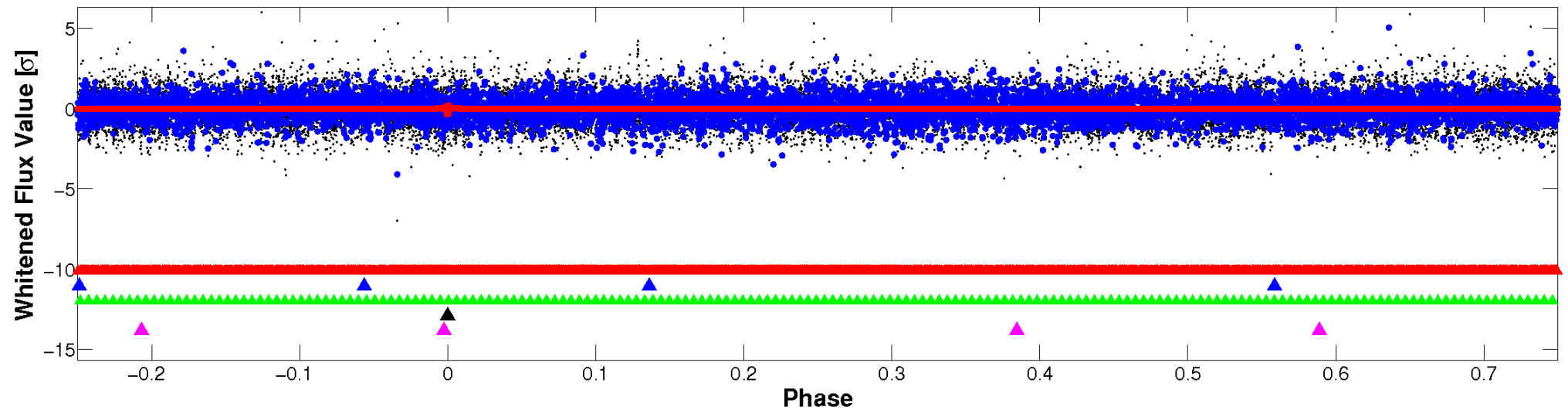


Non-Whitened Vs. Whitened Light Curve

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

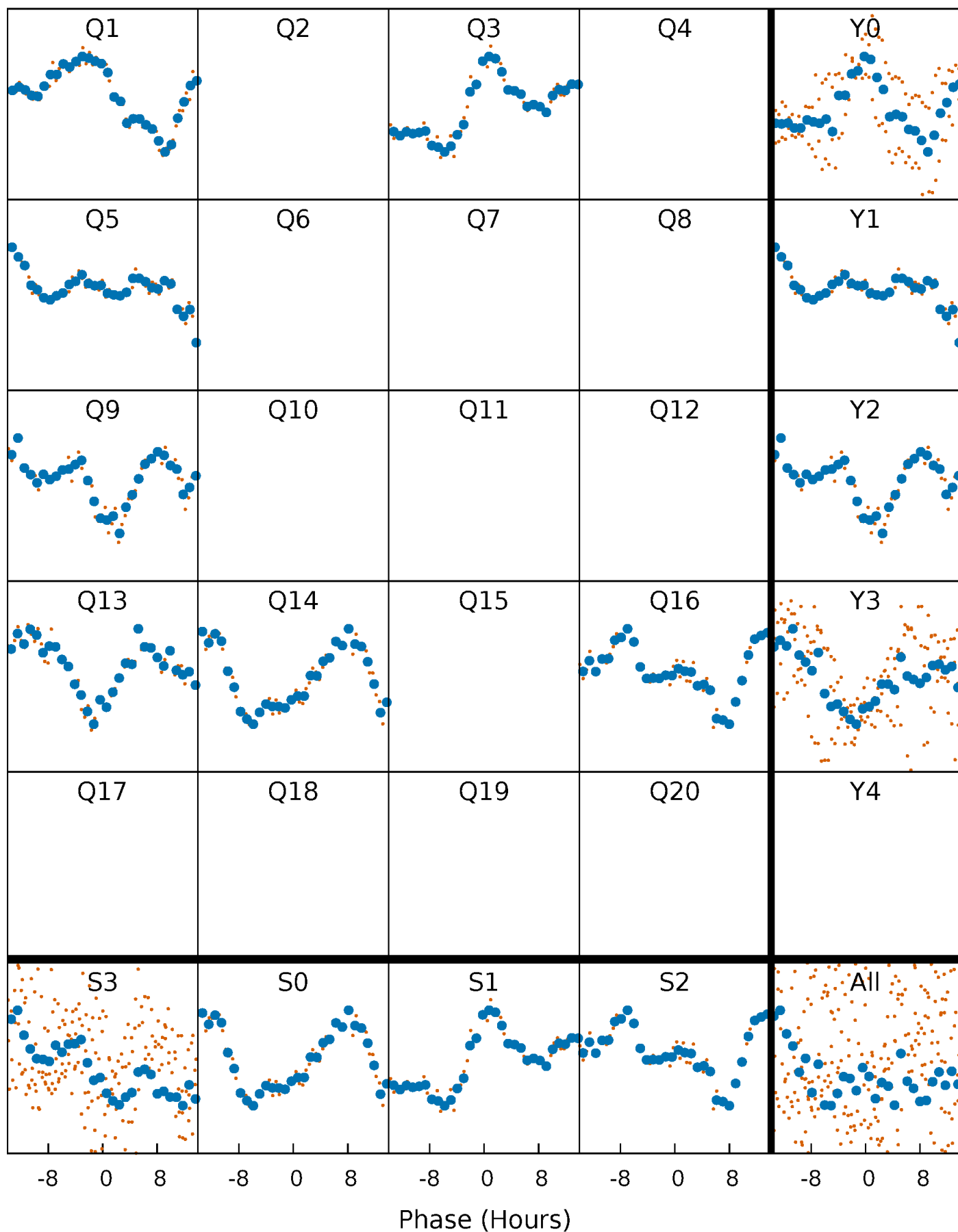


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



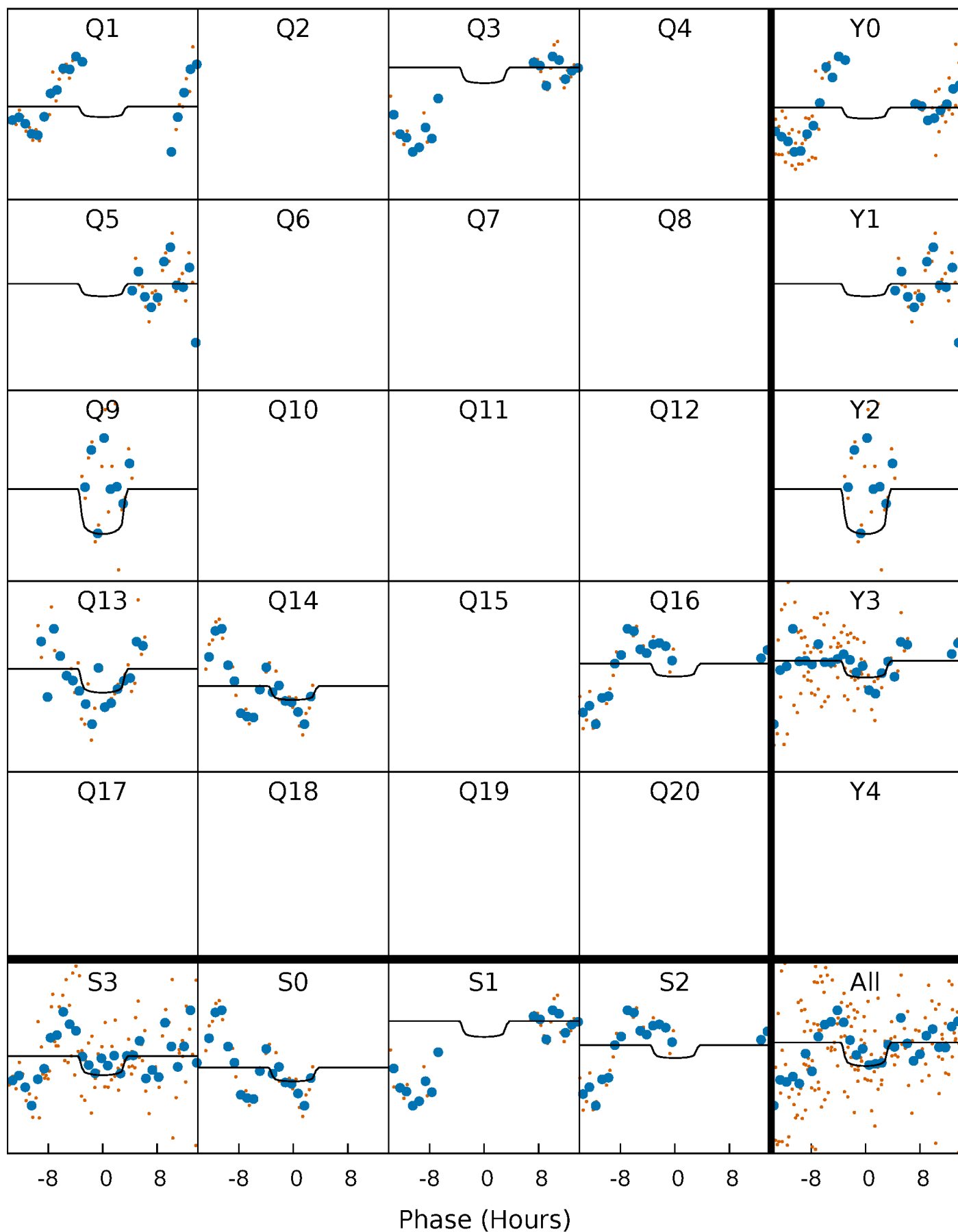
PDC Quarter-Phased Transit Curves

TCE 010744342-04 $P=174.871720$ Days $T_0=138.376624$ (BKJD)



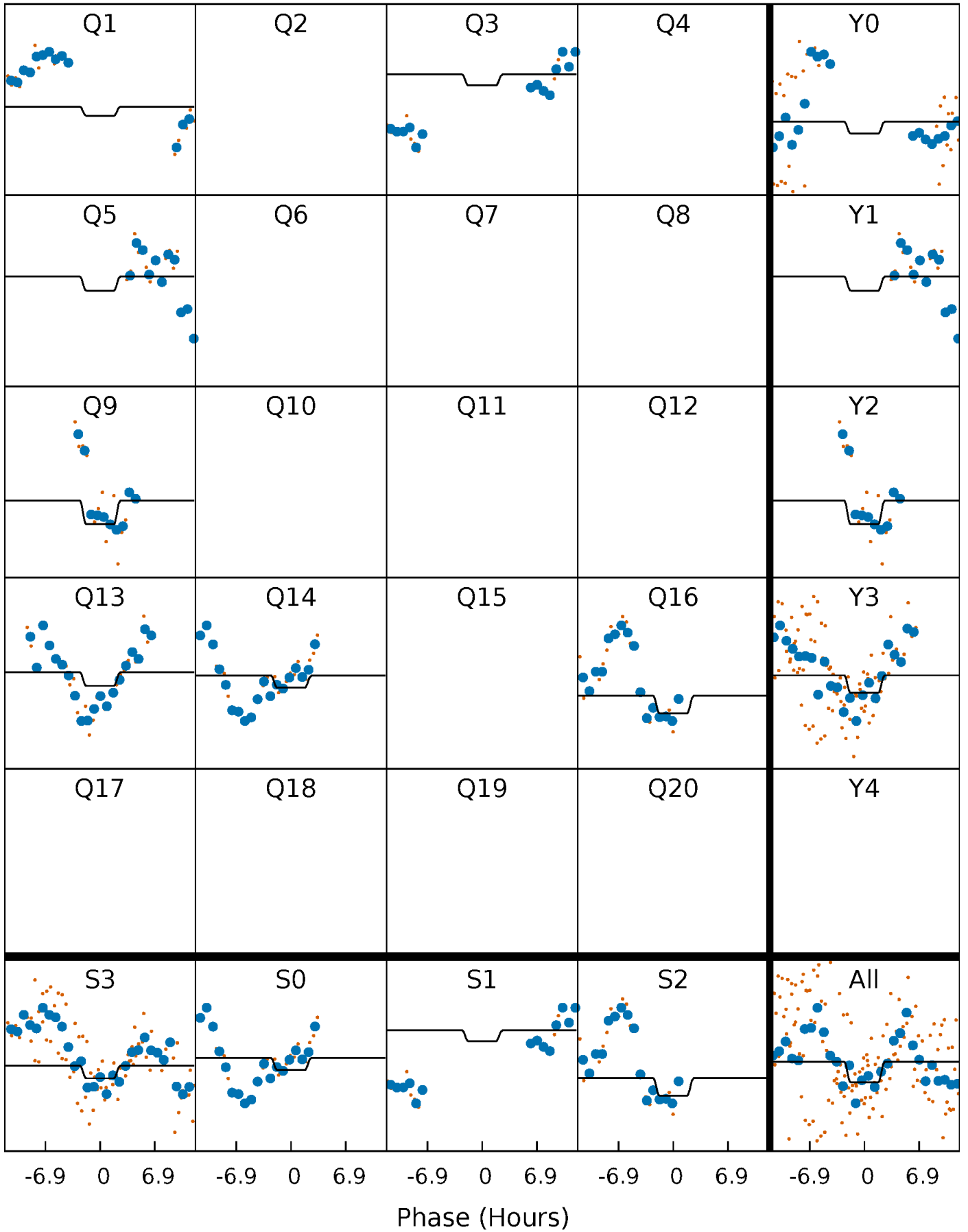
DV Quarter-Phased Transit Curves

TCE 010744342-04 $P=174.871720$ Days $T_0=138.376624$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

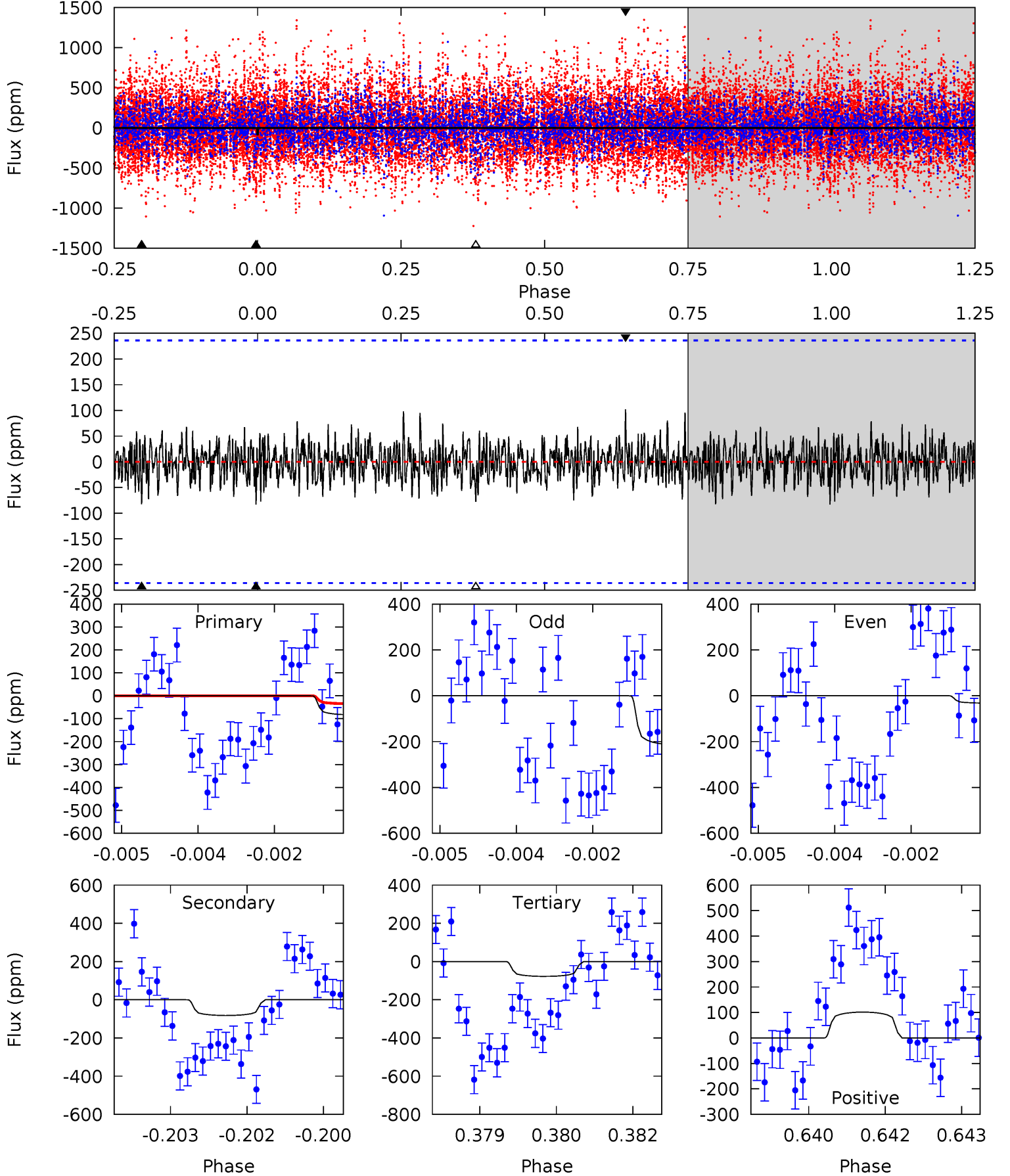
TCE 010744342-04 P=174.863595 Days $T_0=138.413253$ (BKJD)



DV Model-Shift Uniqueness Test

010744342-04, P = 174.871720 Days, E = 138.376624 Days

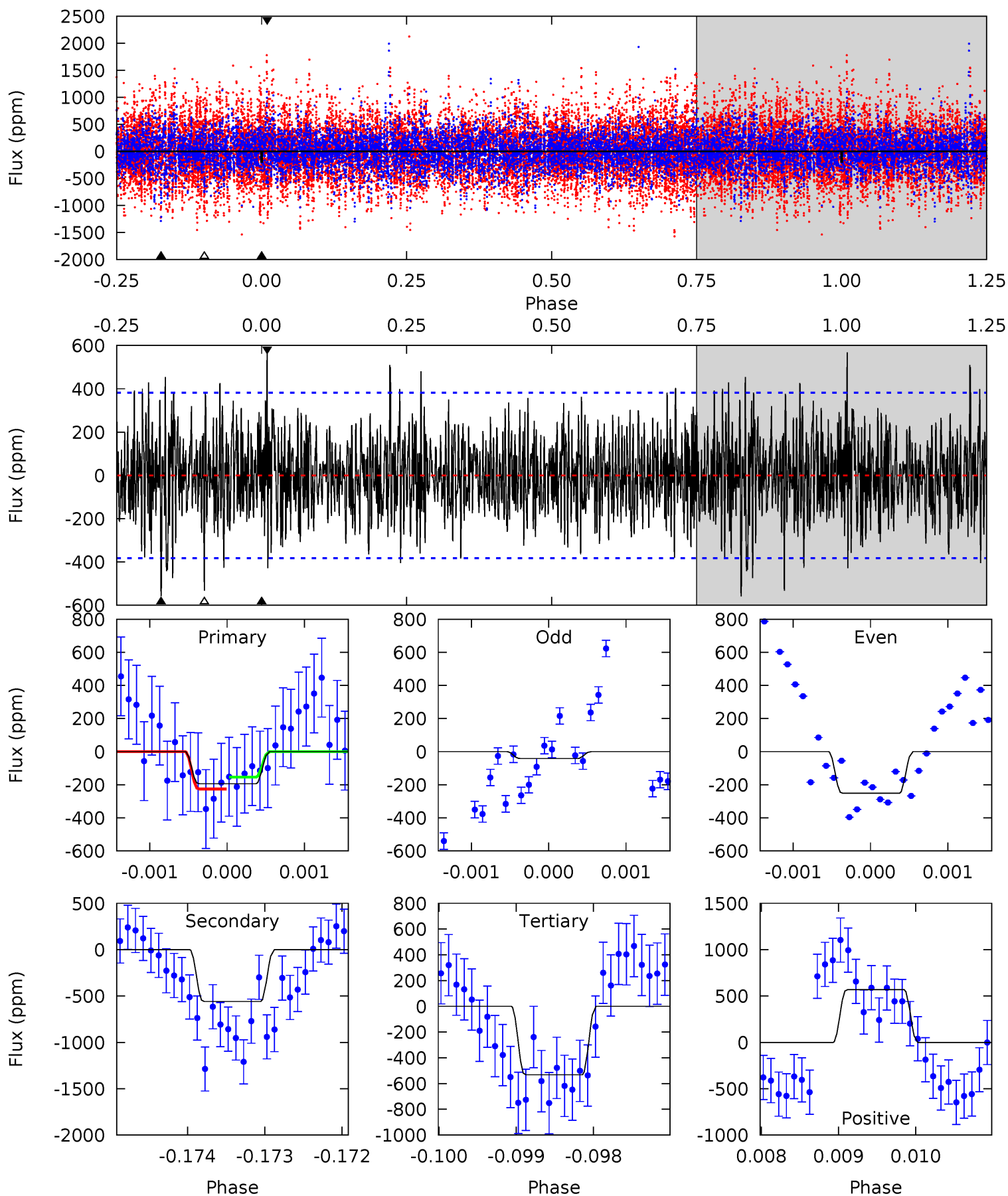
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.88	1.87	1.76	2.30	5.35	3.13	0.64	0.12	-0.42	0.11	-0.44	1.82	0.56	0.55	1.31



Alt Model-Shift Uniqueness Test

010744342-04, P = 174.863595 Days, E = 138.413253 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.76	7.94	7.56	8.08	5.43	3.26	2.09	-4.80	-5.31	0.39	-0.13	1.32	1.54	0.50	0.51



Stellar Parameters For KIC 010744342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7231^{+200}_{-342}	$4.240^{+0.087}_{-0.217}$	$-0.040^{+0.200}_{-0.350}$	$1.518^{+0.552}_{-0.221}$	$1.458^{+0.209}_{-0.209}$	$0.588^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+500%/-875%	+36%/-15%	+14%/-14%	+41%/-56%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010744342-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 44	$2.36^{+1.26}_{-1.19}$	670^{+51}_{-41}	5758^{+2977}_{-1309}	3686^{+12113}_{-2538}
Alt.	-559 ± 70	$2.39^{+1.34}_{-1.22}$	665^{+58}_{-39}	10073^{+8819}_{-2495}	26451^{+82492}_{-15637}

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

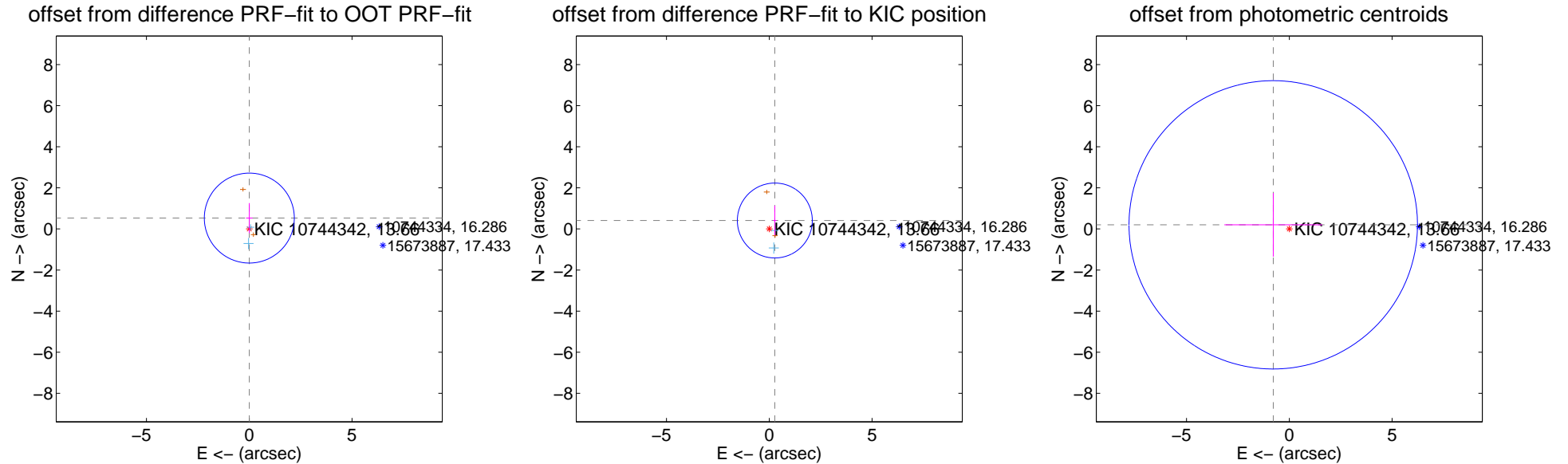
DV Centroid Data

Supplemental centroid analysis for 010744342-04. Kepler magnitude: 13.66. Transit SNR 2.08

There are 2 quarters with good PRF difference image offsets

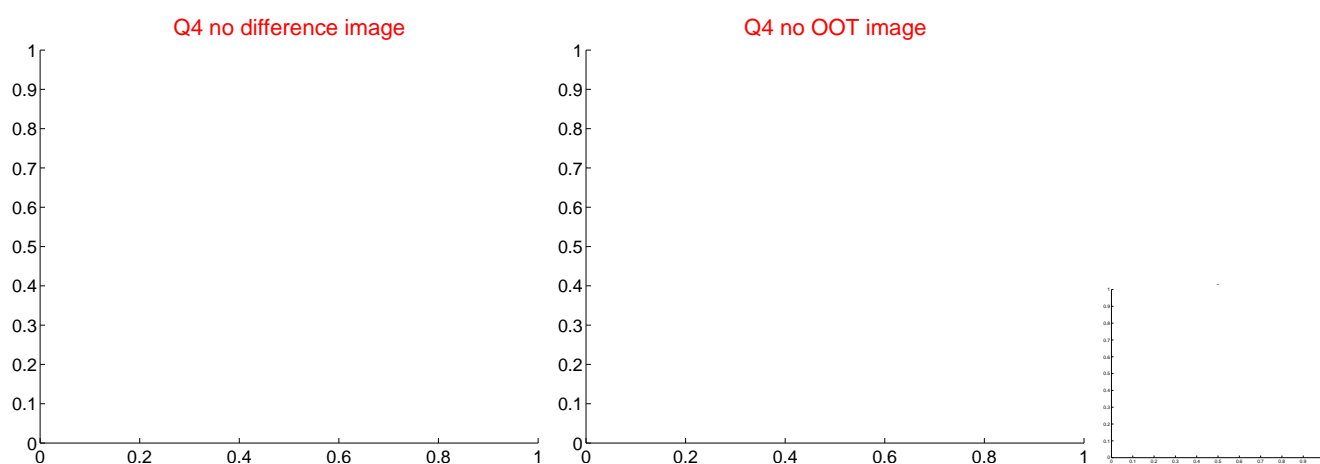
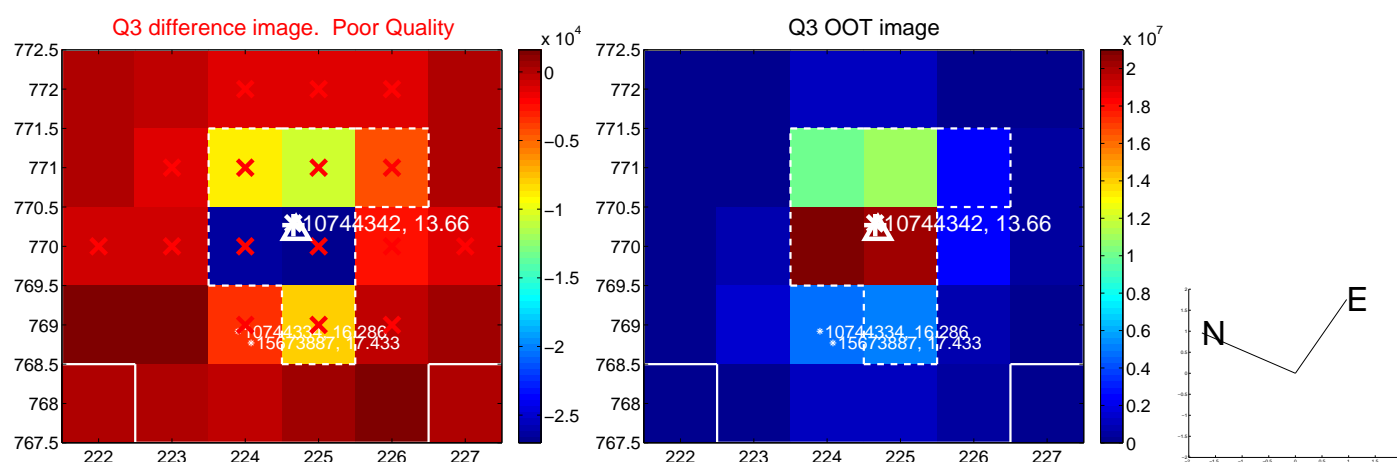
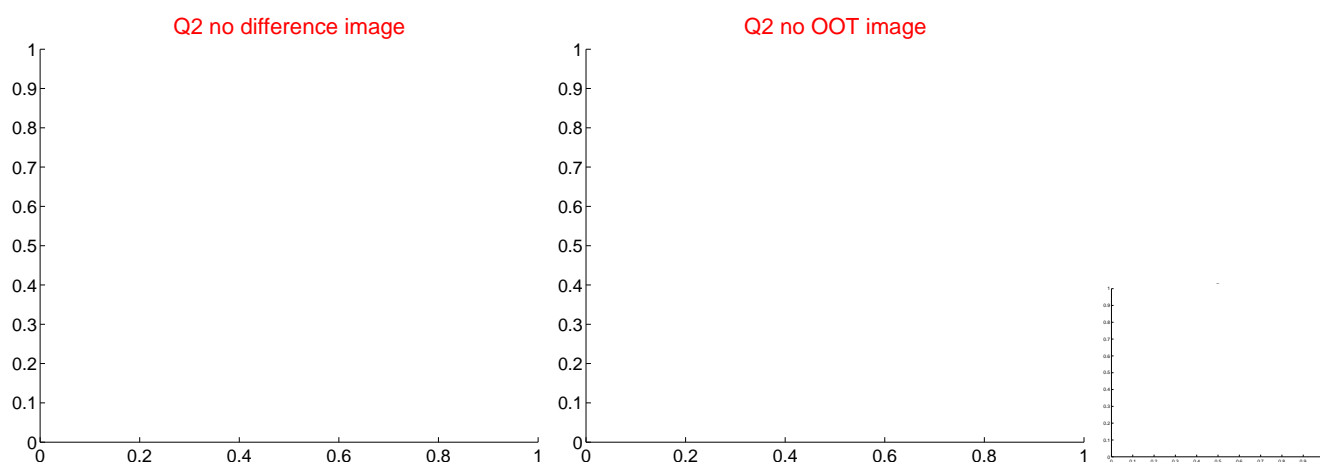
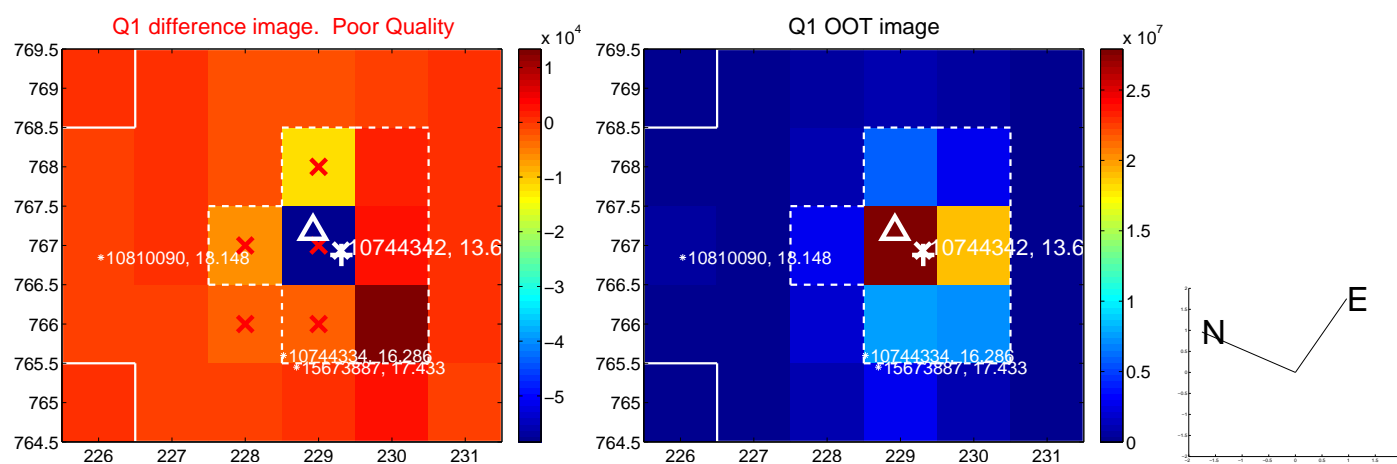
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.529 ± 0.730	0.73	-0.004 ± 0.159	0.529 ± 0.730
PRF-fit source offset from KIC position	0.492 ± 0.608	0.81	-0.270 ± 0.083	0.411 ± 0.725
photometric centroid source offset	0.81 ± 2.34	0.35	0.78 ± 2.38	0.20 ± 1.55

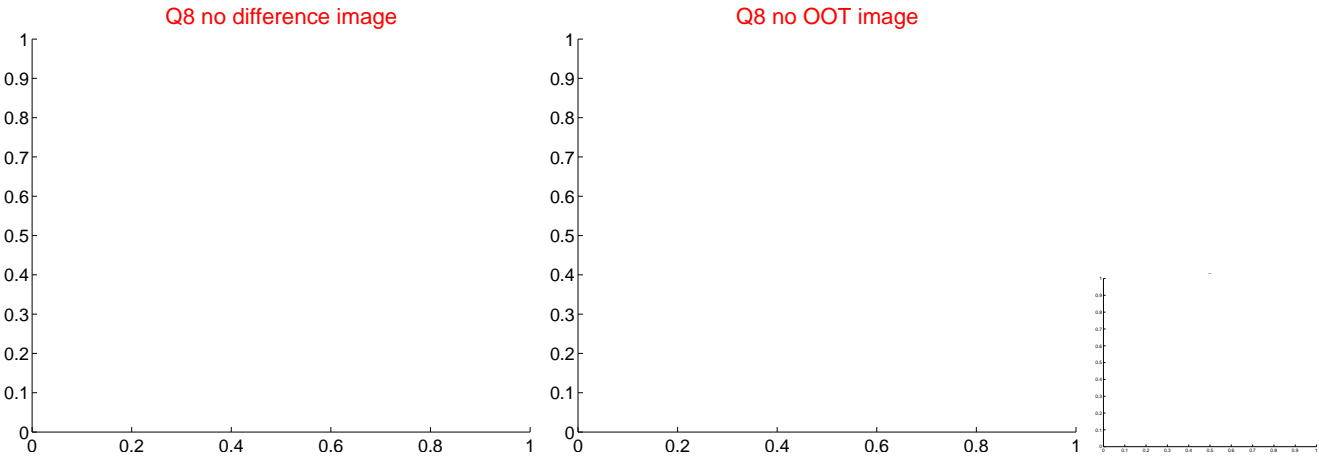
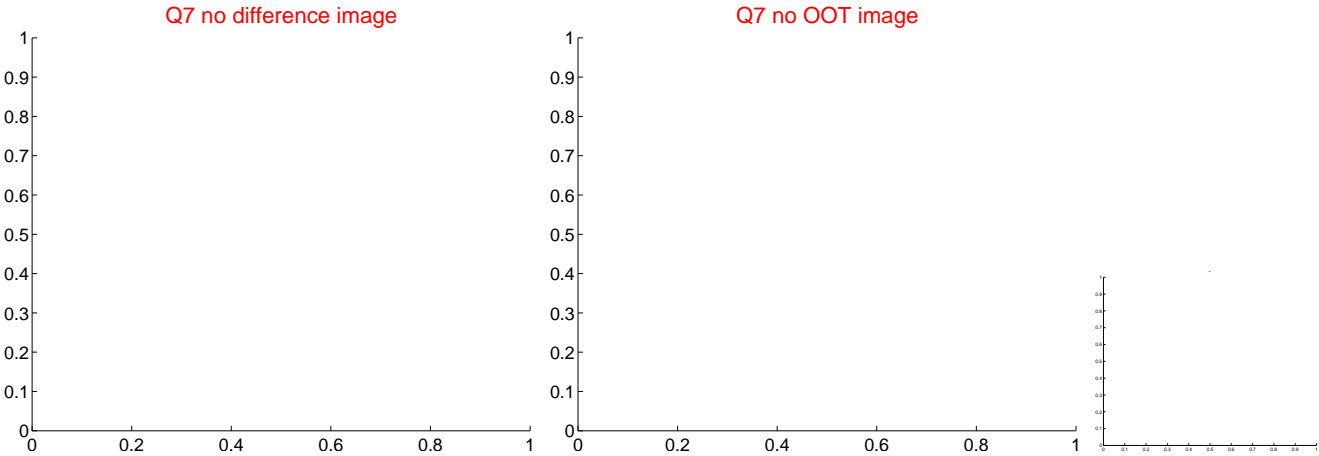
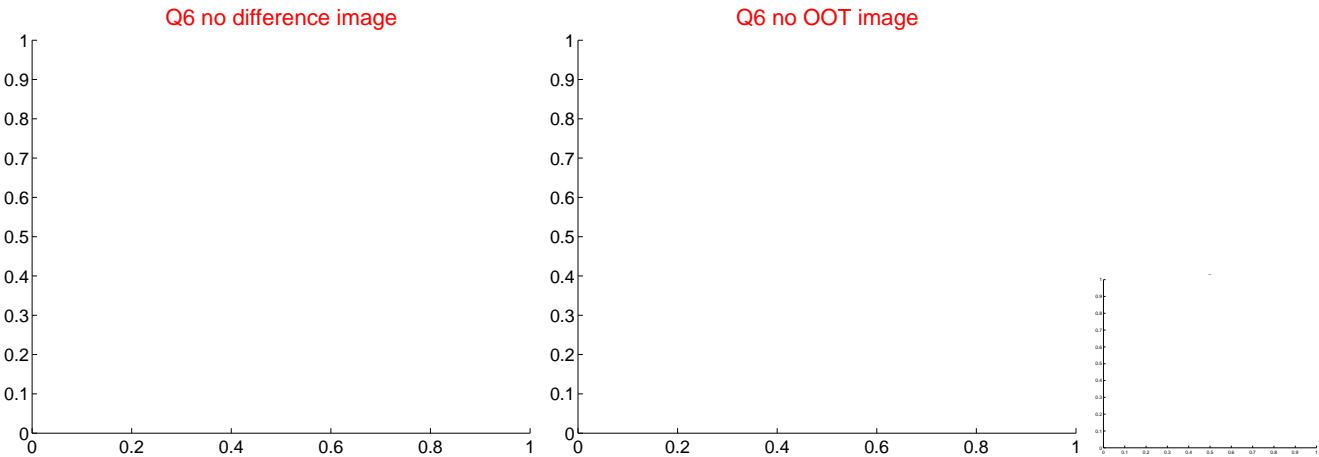
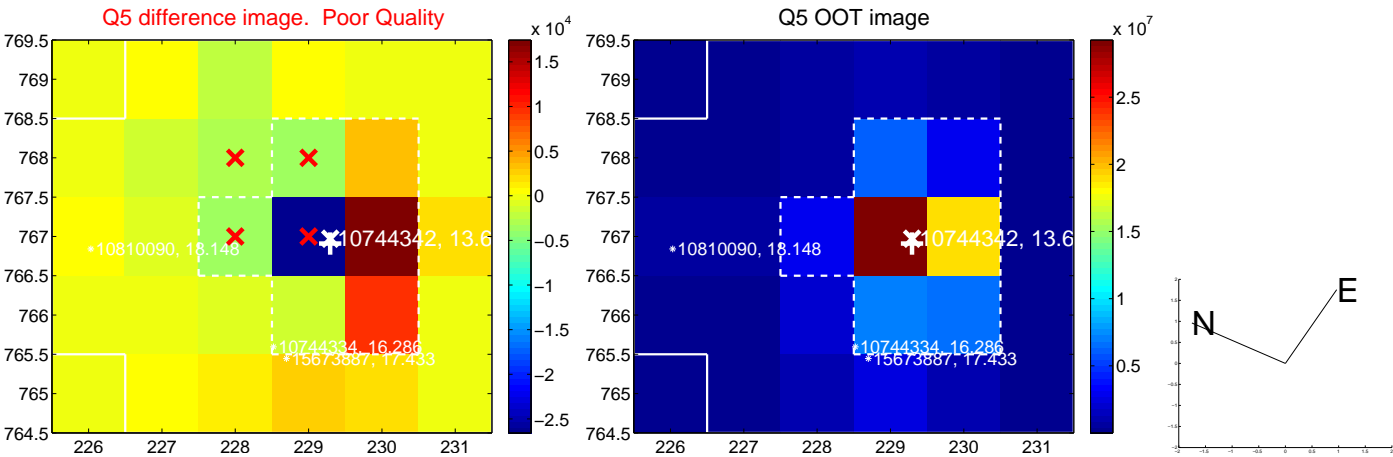


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

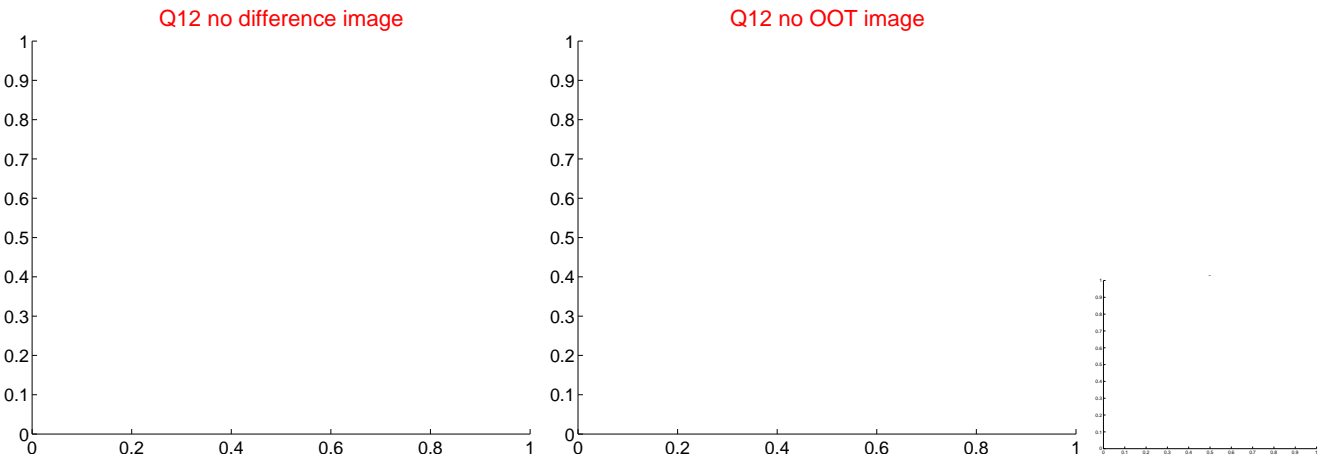
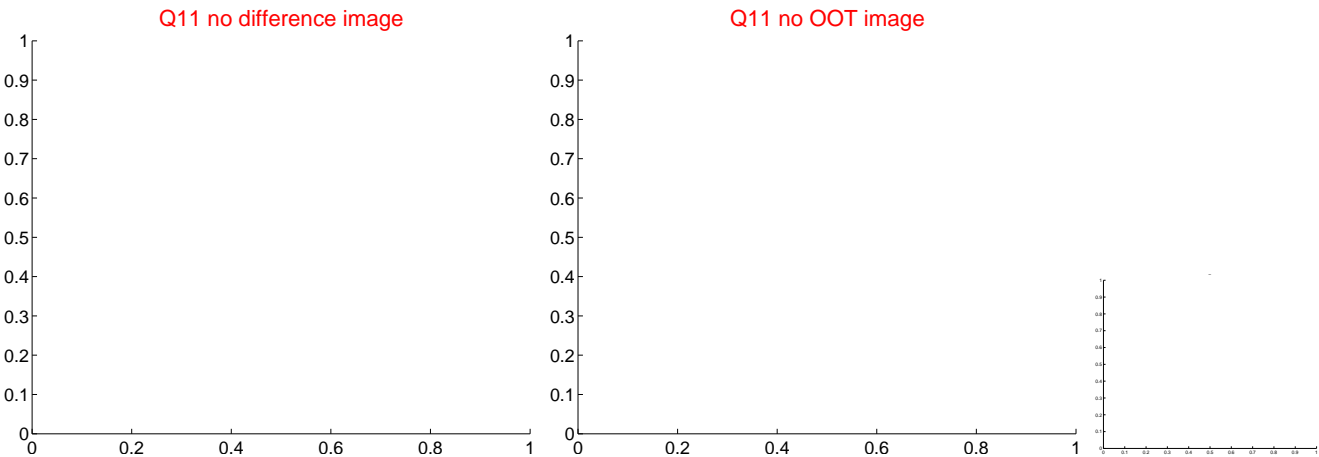
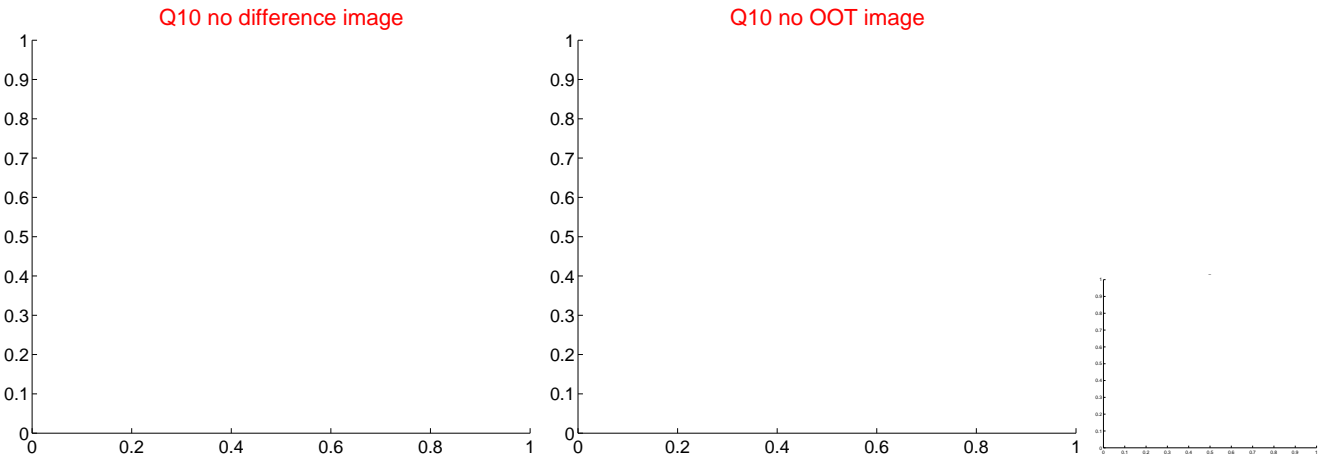
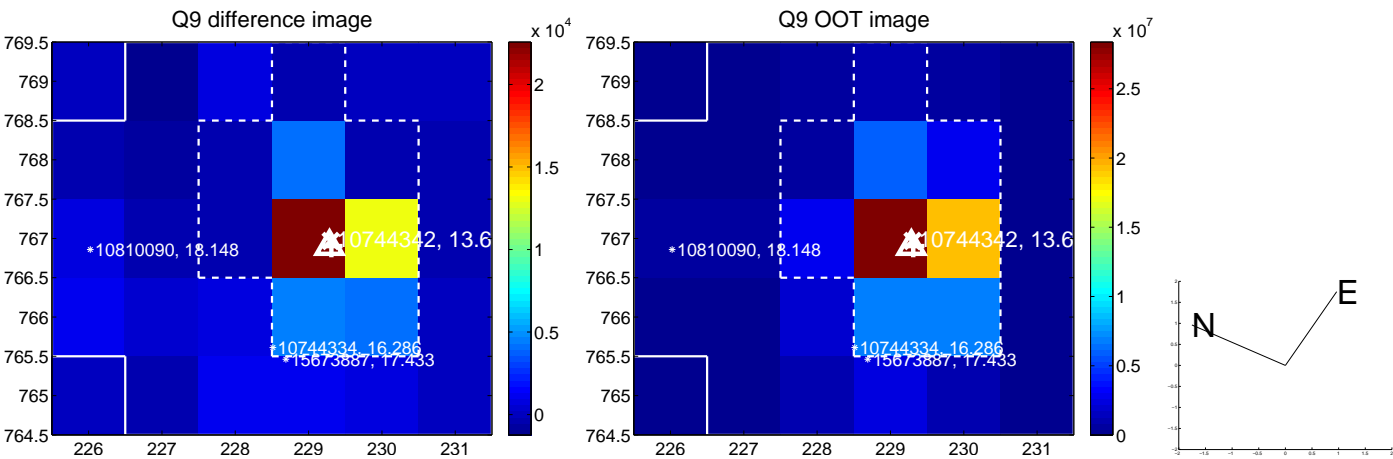
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

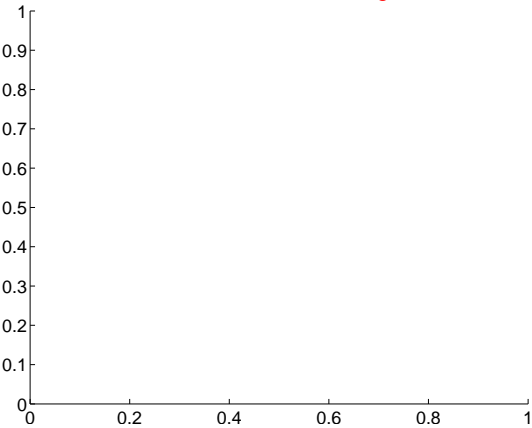


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

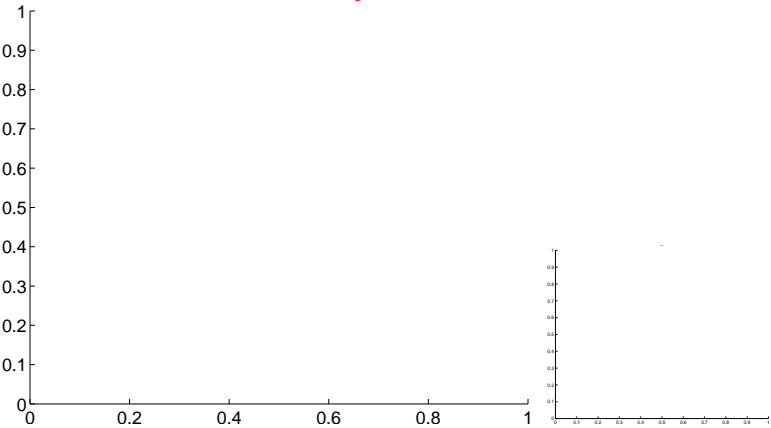


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

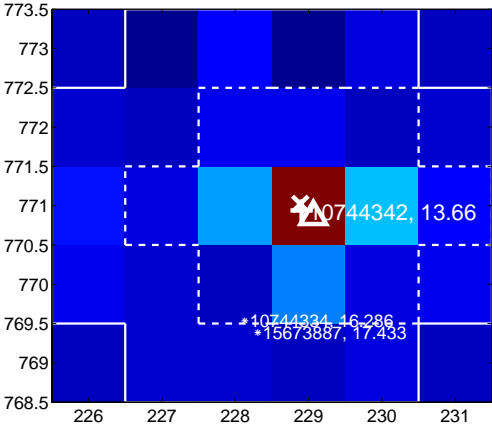
Q13 no difference image



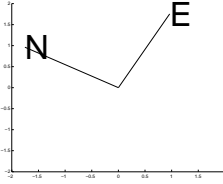
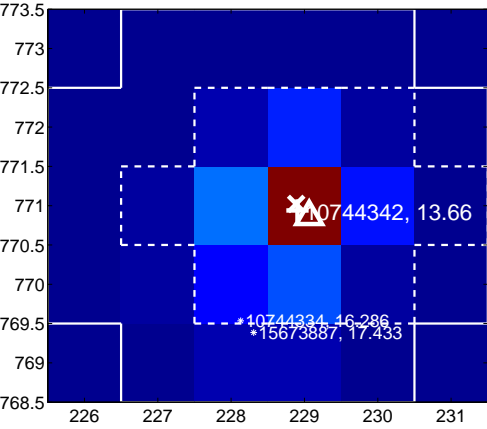
Q13 no OOT image



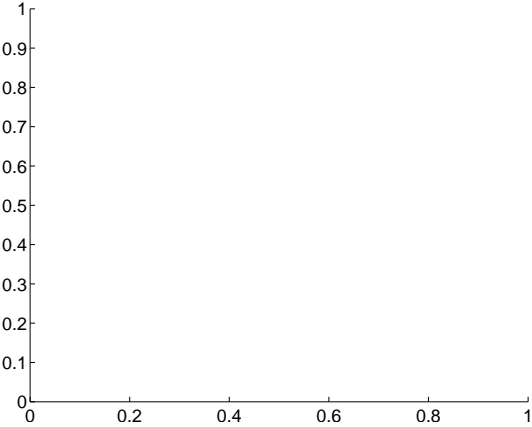
Q14 difference image



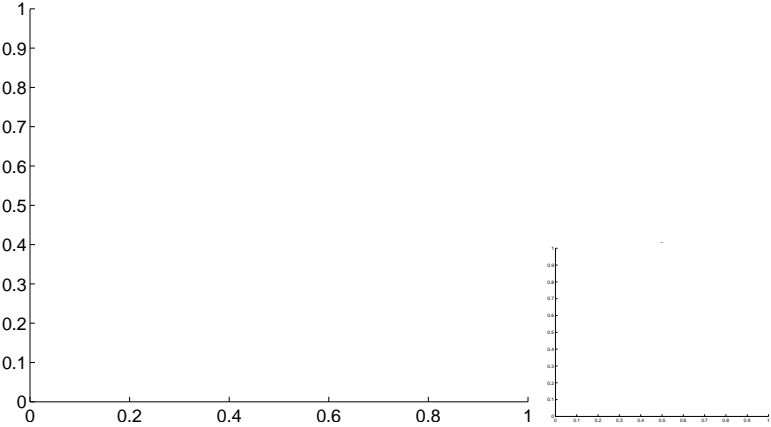
Q14 OOT image



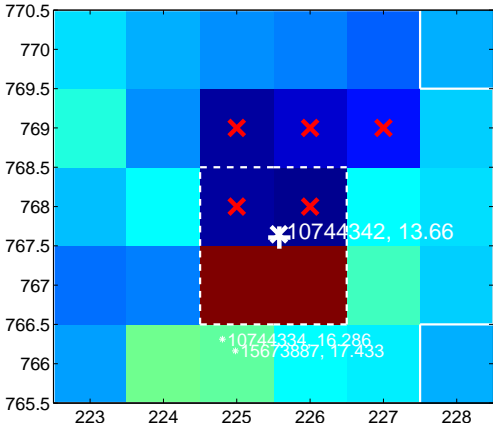
Q15 no difference image



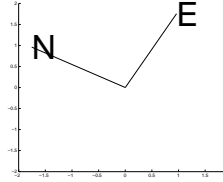
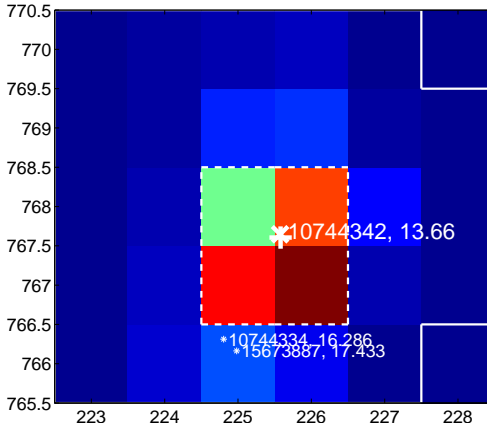
Q15 no OOT image



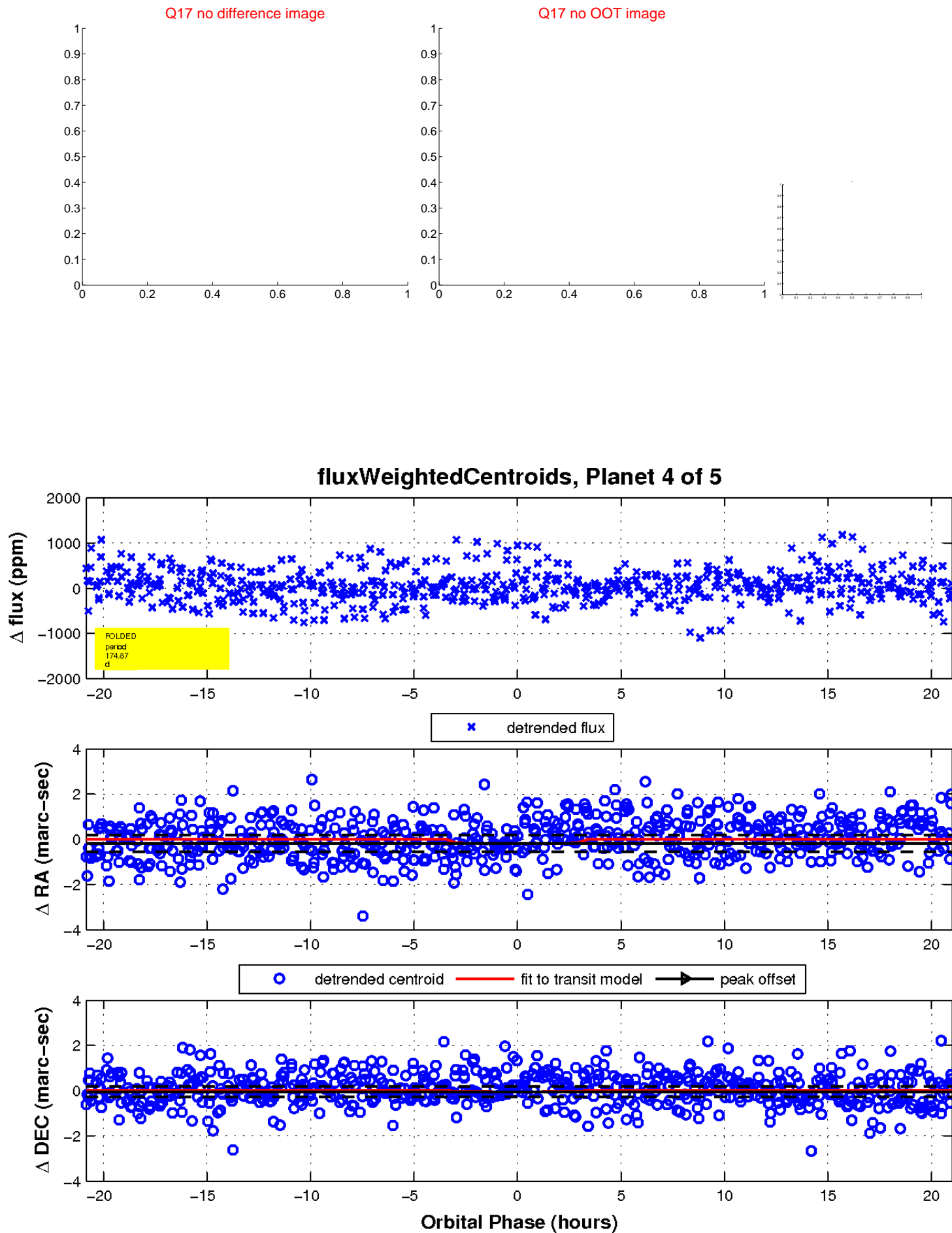
Q16 difference image. Poor Quality



Q16 OOT image

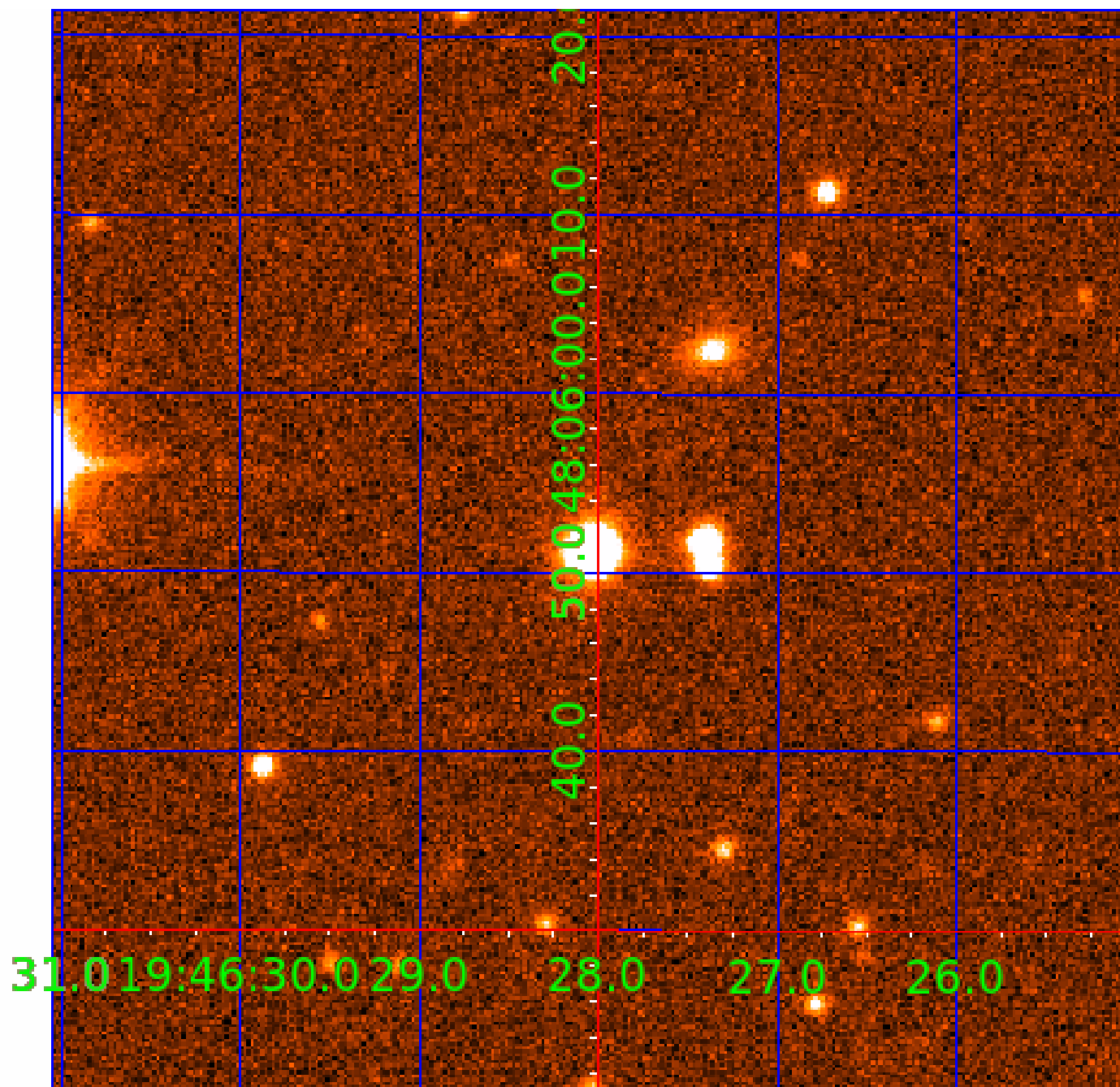


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010744342

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})
010744342-01	OBS	No	1.213444	132.449930	41.1	4.217	8.3	7.6	1.52	7231	1.12	8841.16
010744342-02	OBS	No	383.409734	410.932590	618.6	9.289	7.5	6.2	1.52	7231	5.58	4.11
010744342-03	OBS	No	6.762819	135.582819	179.6	13.503	7.1	9.2	1.52	7231	3.96	894.74
010744342-04	OBS	No	174.871720	138.376624	155.0	7.005	10.4	2.1	1.52	7231	2.23	11.70
010744342-05	OBS	No	385.473327	380.490288	687.4	11.712	9.8	6.9	1.52	7231	4.85	4.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010744342-01	OBS	FP	0.00	1	0	0	0	LPP_DV
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010744342-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010744342-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
010744342-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

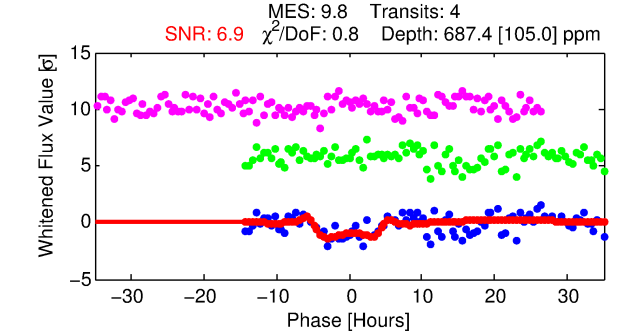
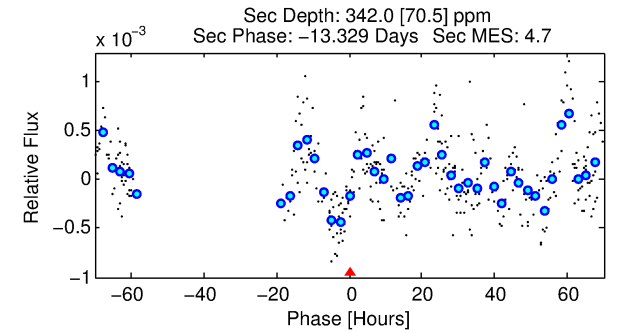
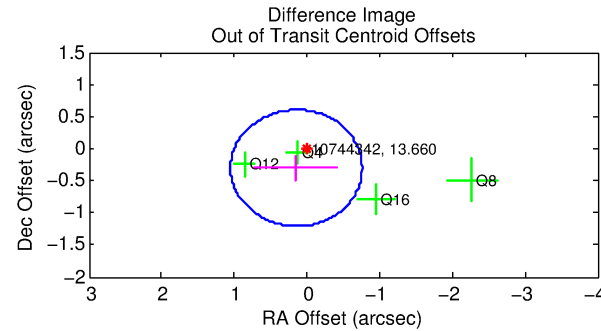
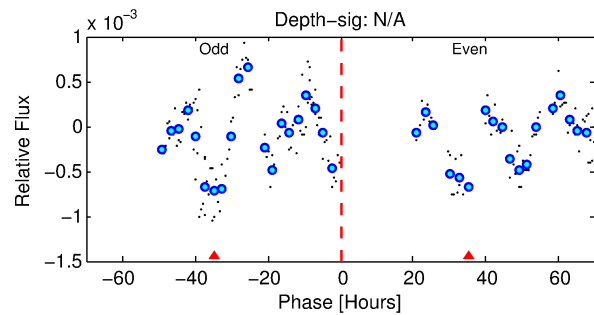
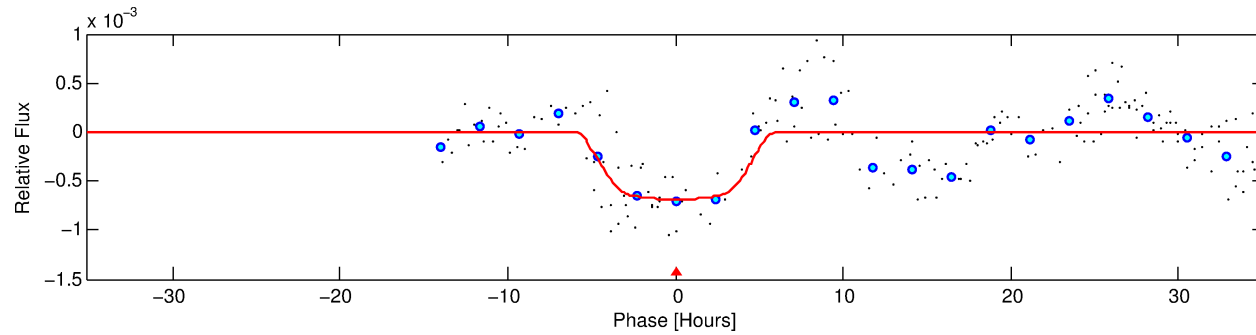
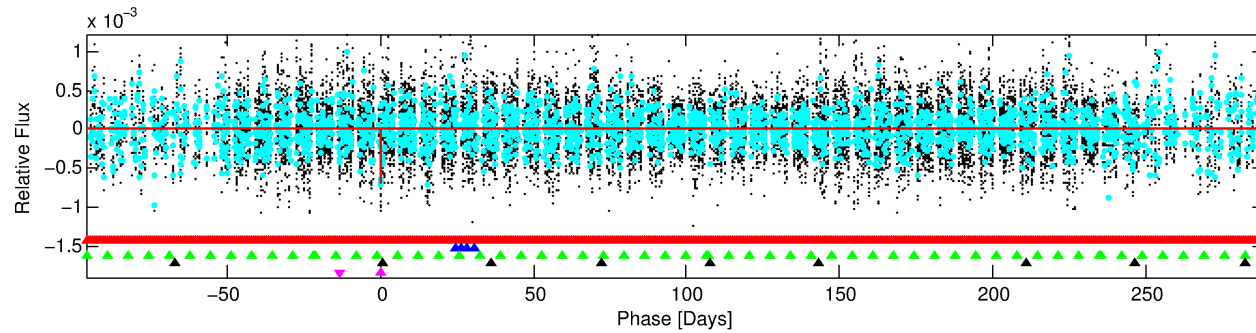
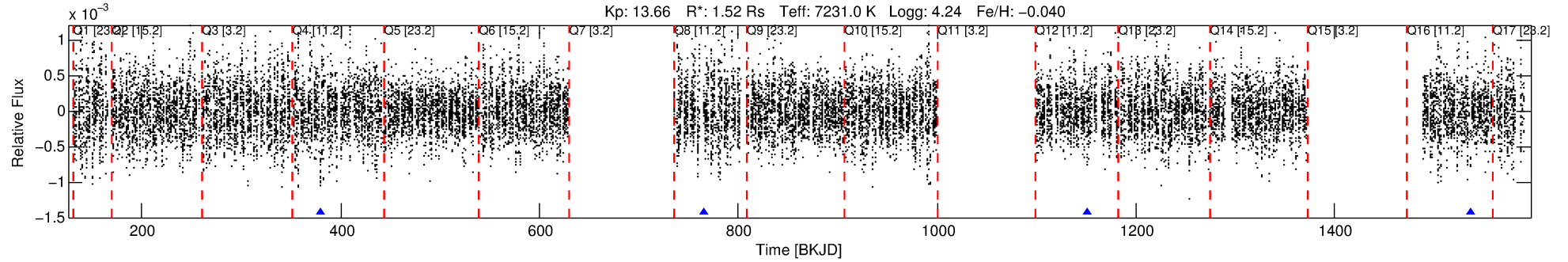
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010744342-05

No Significant Match Found

DV One-Page Summary

KIC: 10744342 Candidate: 5 of 5 Period: 385.473 d



DV Fit Results:

Period = 385.47333 [0.01147] d
Epoch = 380.4903 [0.0172] BKJD
Rp/R* = 0.0293 [0.0026]
a/R* = 100.34 [16.52]
b = 0.95 [0.02]
Seff = 4.08 [1.85]
Teff = 362 [41] K
Rp = 4.85 [1.82] Re
a = 1.1764 [0.3460] AU
Ag = 11055.35 [5453.69] [2.03] σ
Teffp = 5745 [475] K [11.29] σ

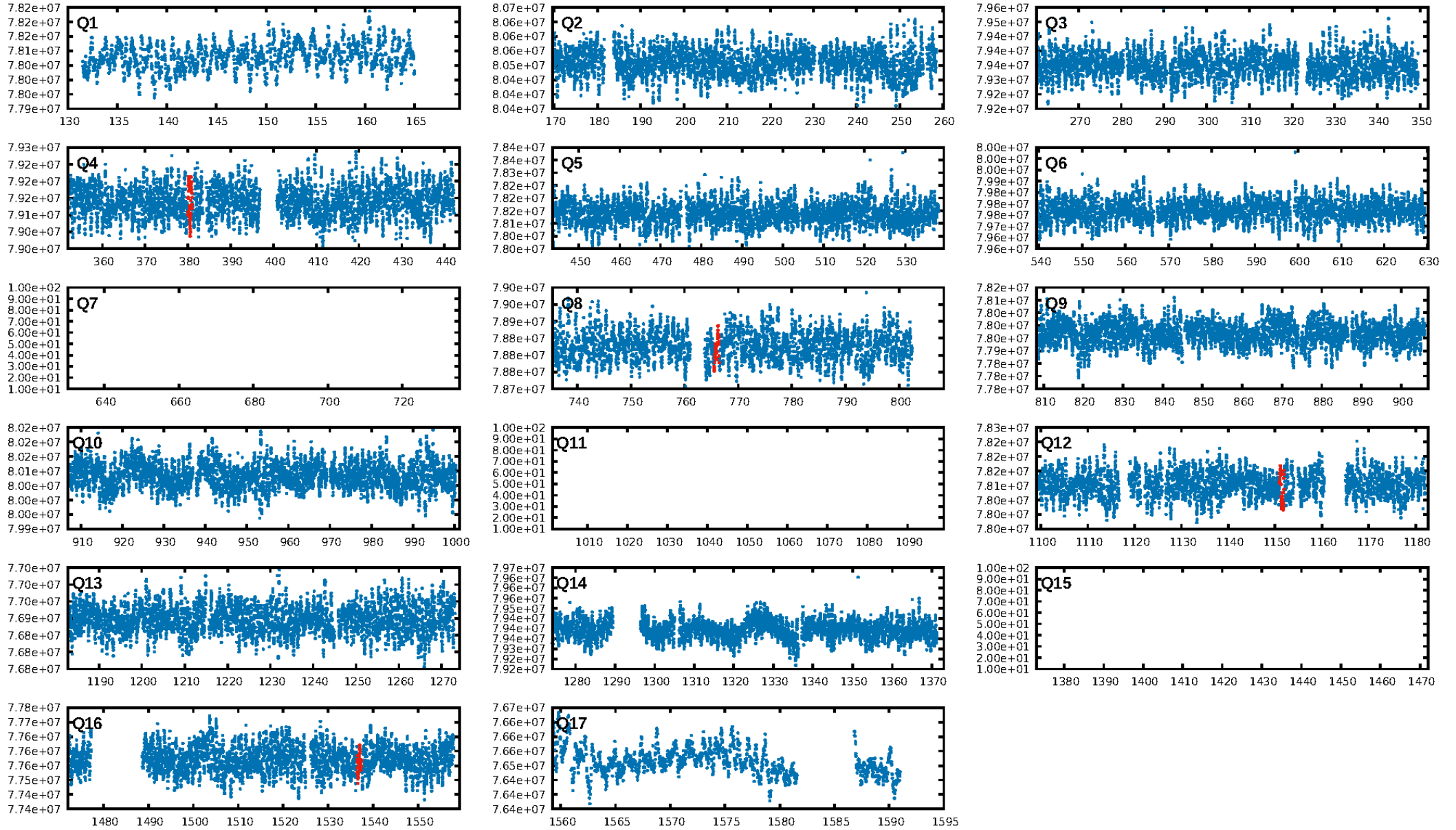
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.31] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.84e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.3698
Centroid-sig: 36.7%
Centroid-so: 0.334 arcsec [0.86] σ
OotOffset-rm: 0.337 arcsec [1.11] σ
OotOffset-st: 0/0/4/0 [4]
KicOffset-rm: 0.392 arcsec [1.98] σ
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/4]

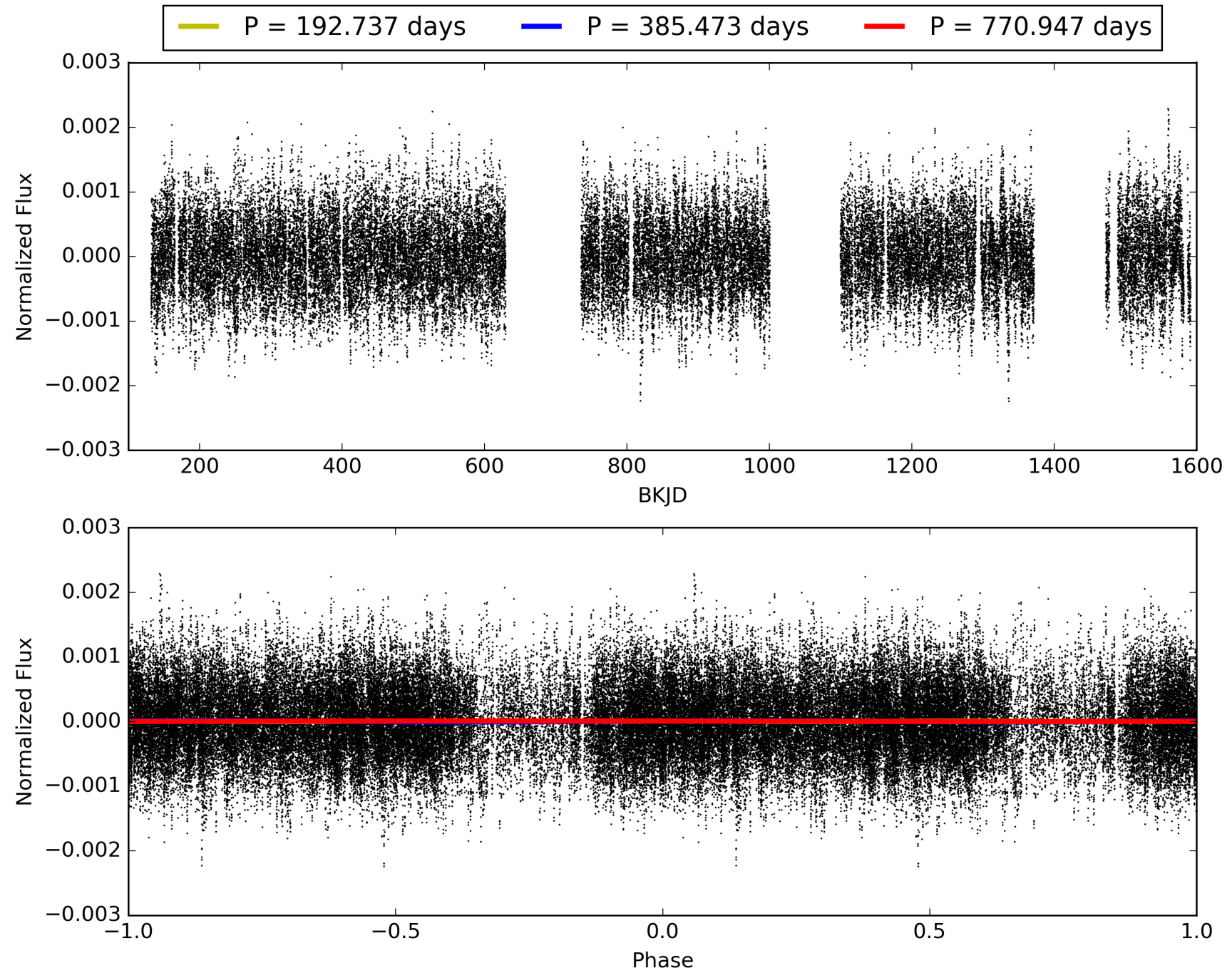
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:30:53 Z

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

TCE 010744342-05, PDC Light Curves

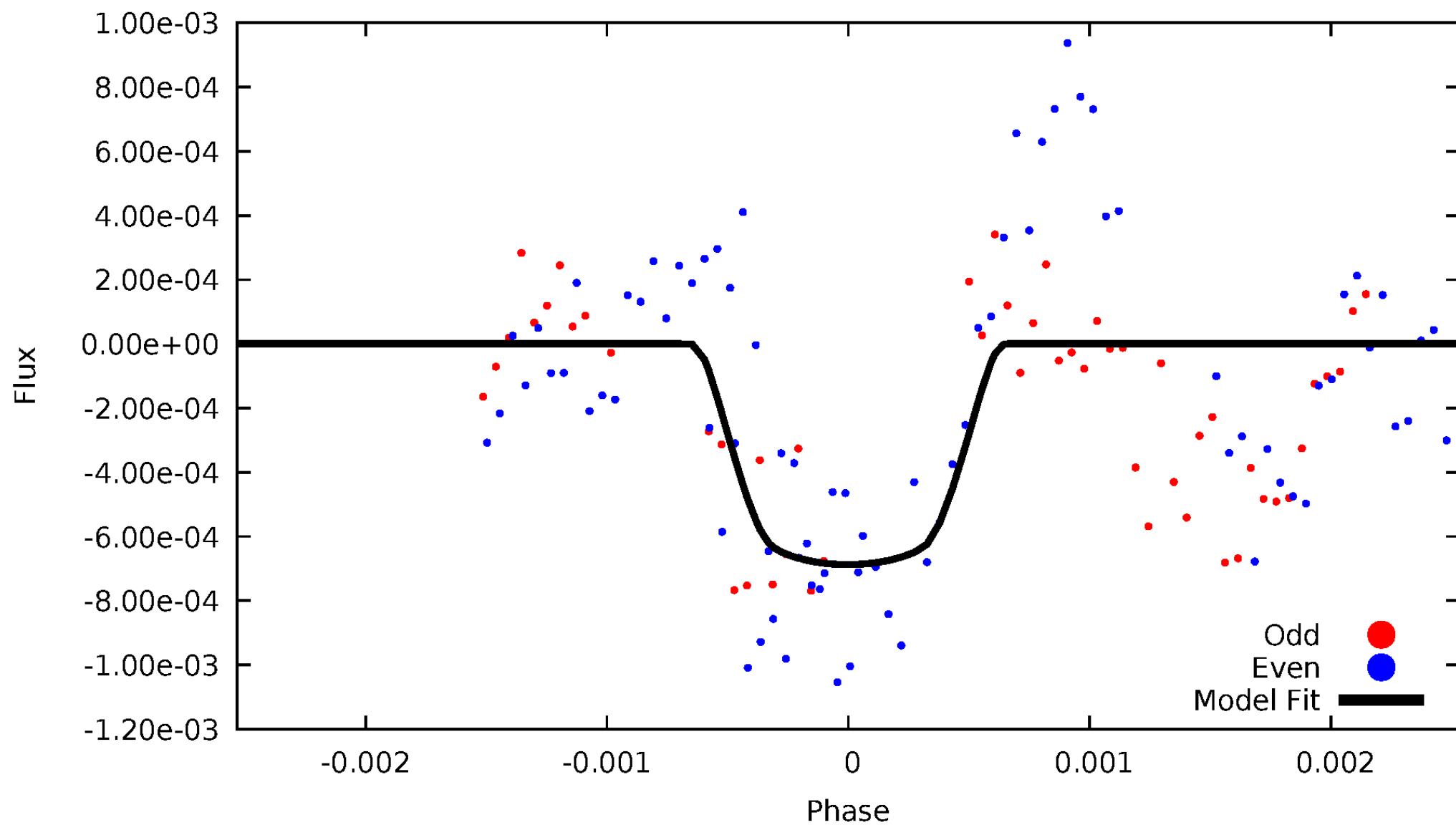


TCE 010744342-05



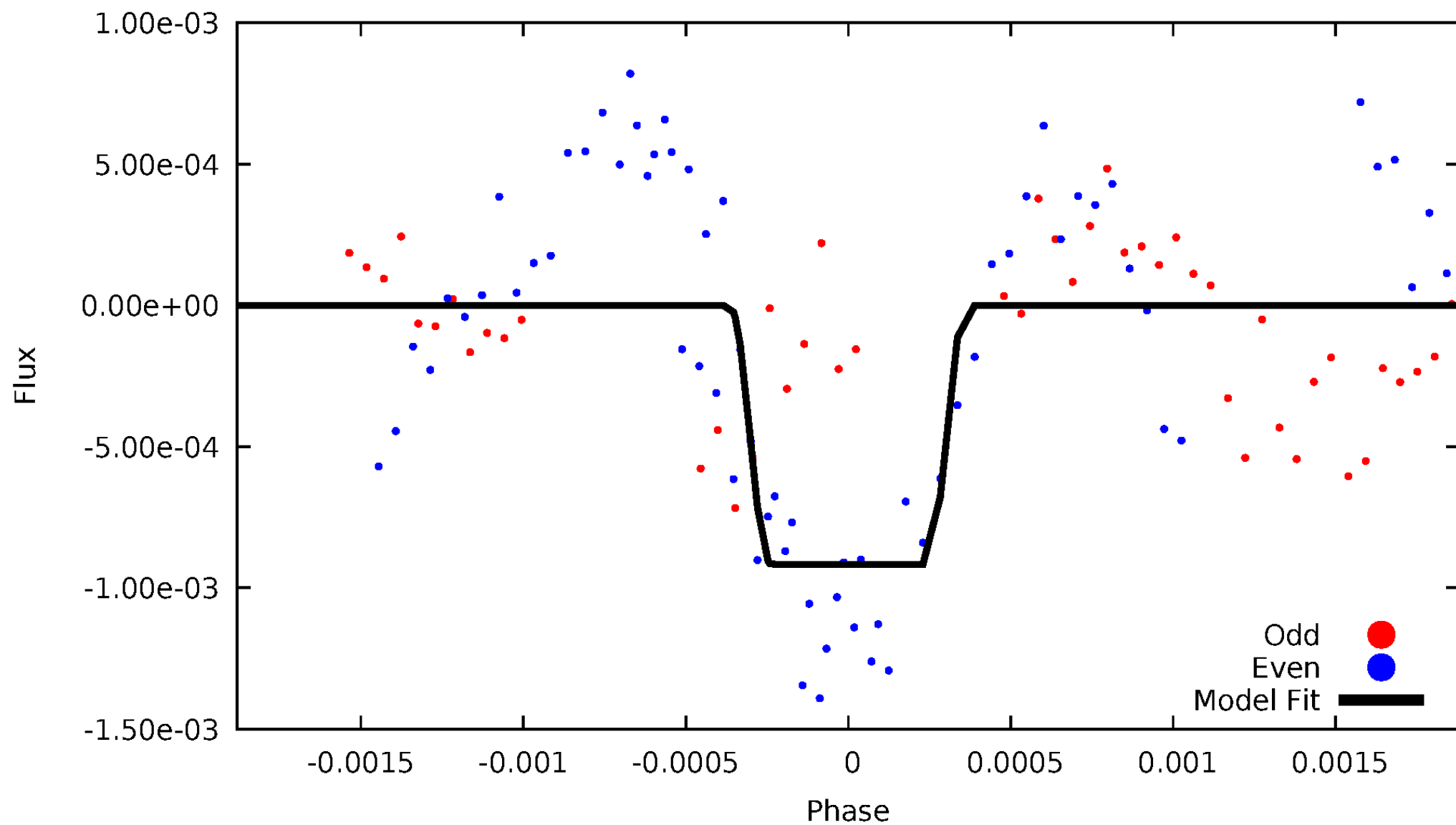
DV Odd/Even

TCE 010744342-05



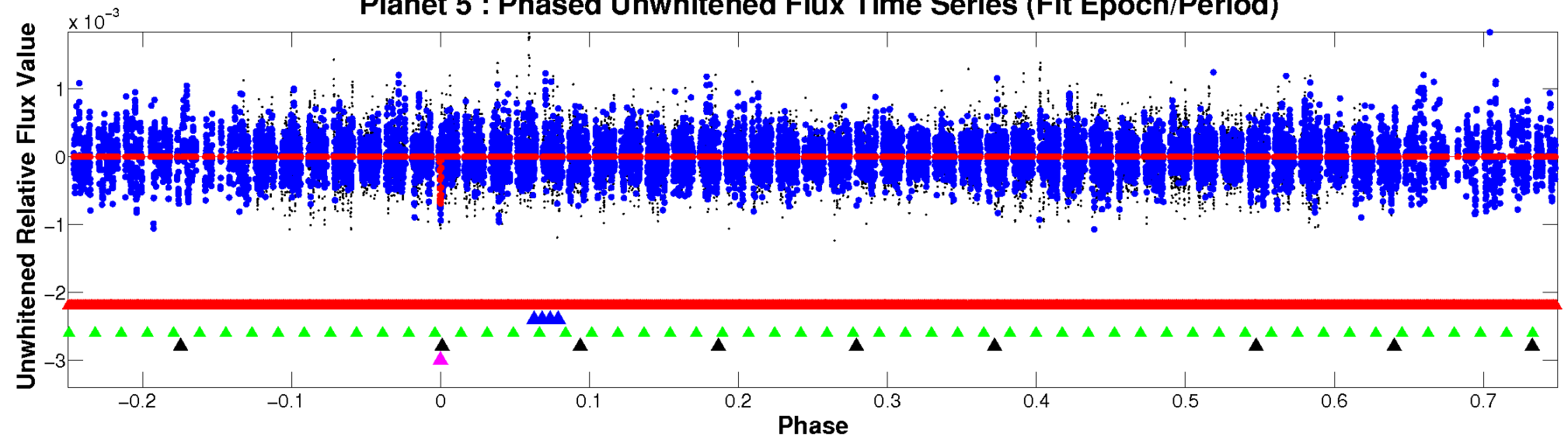
ALT Odd/Even

TCE 010744342-05

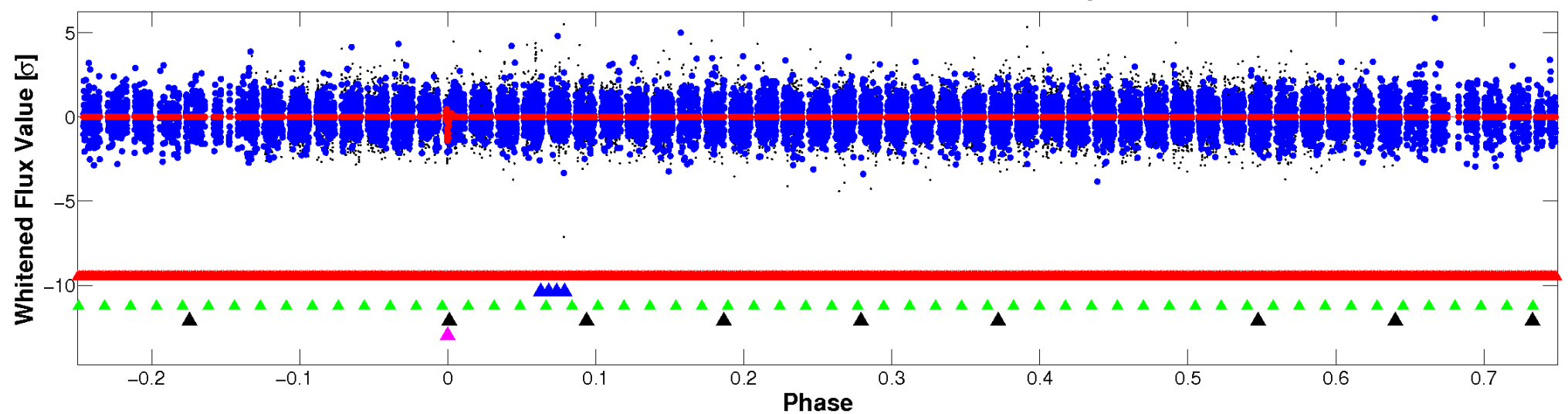


Non-Whitened Vs. Whitened Light Curve

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

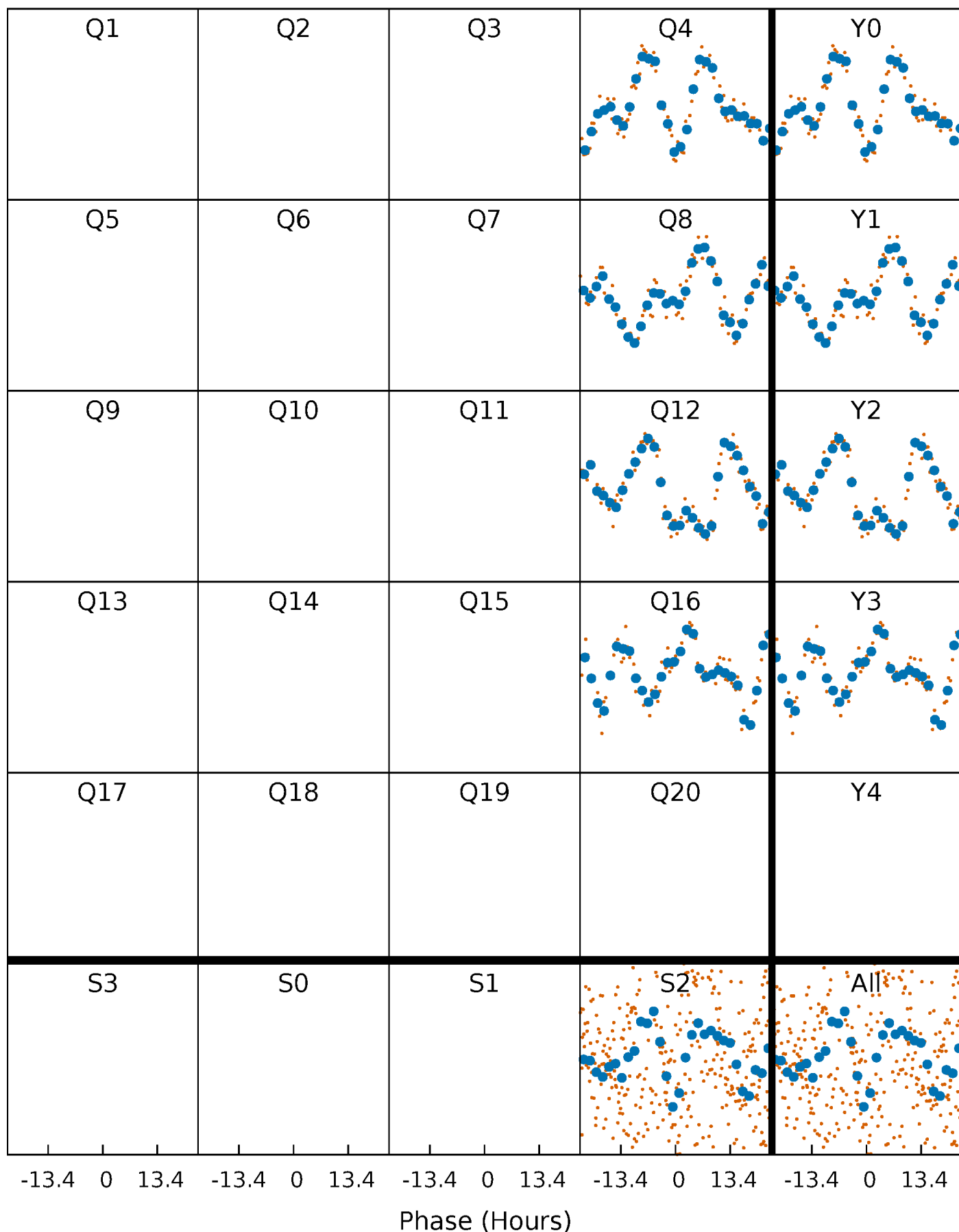


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



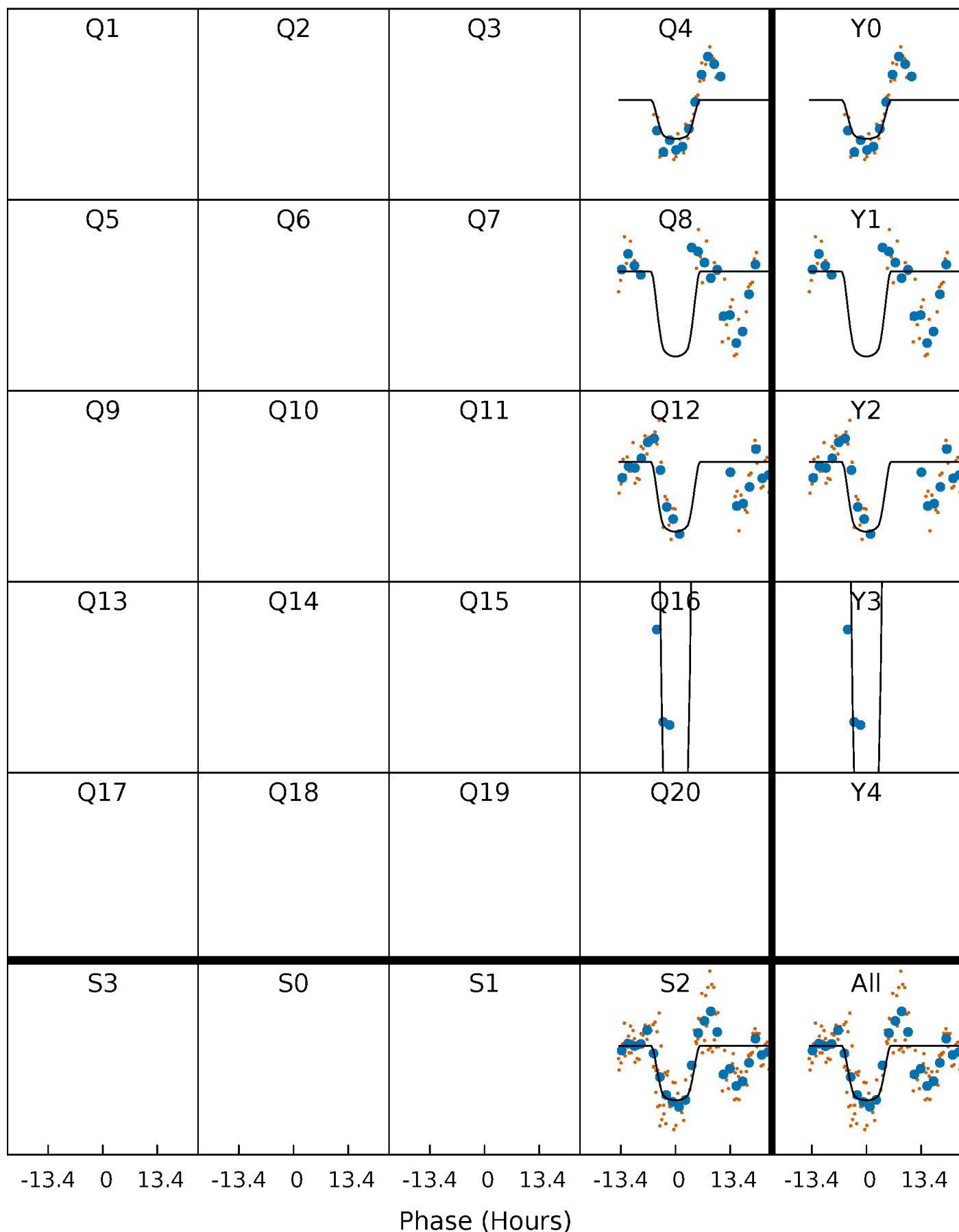
PDC Quarter-Phased Transit Curves

TCE 010744342-05 $P=385.473327$ Days $T_0=380.490288$ (BKJD)



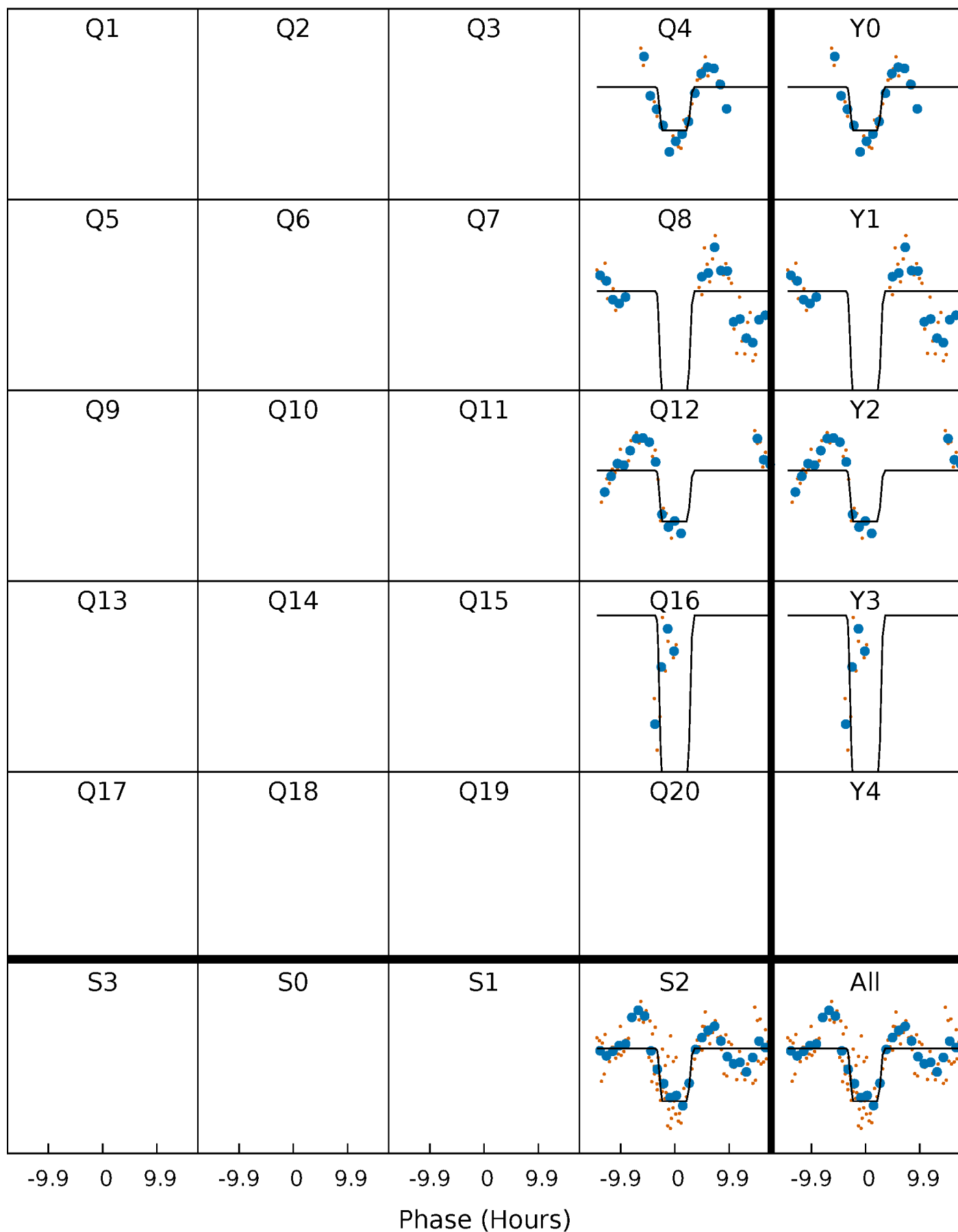
DV Quarter-Phased Transit Curves

TCE 010744342-05 $P=385.473327$ Days $T_0=380.490288$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

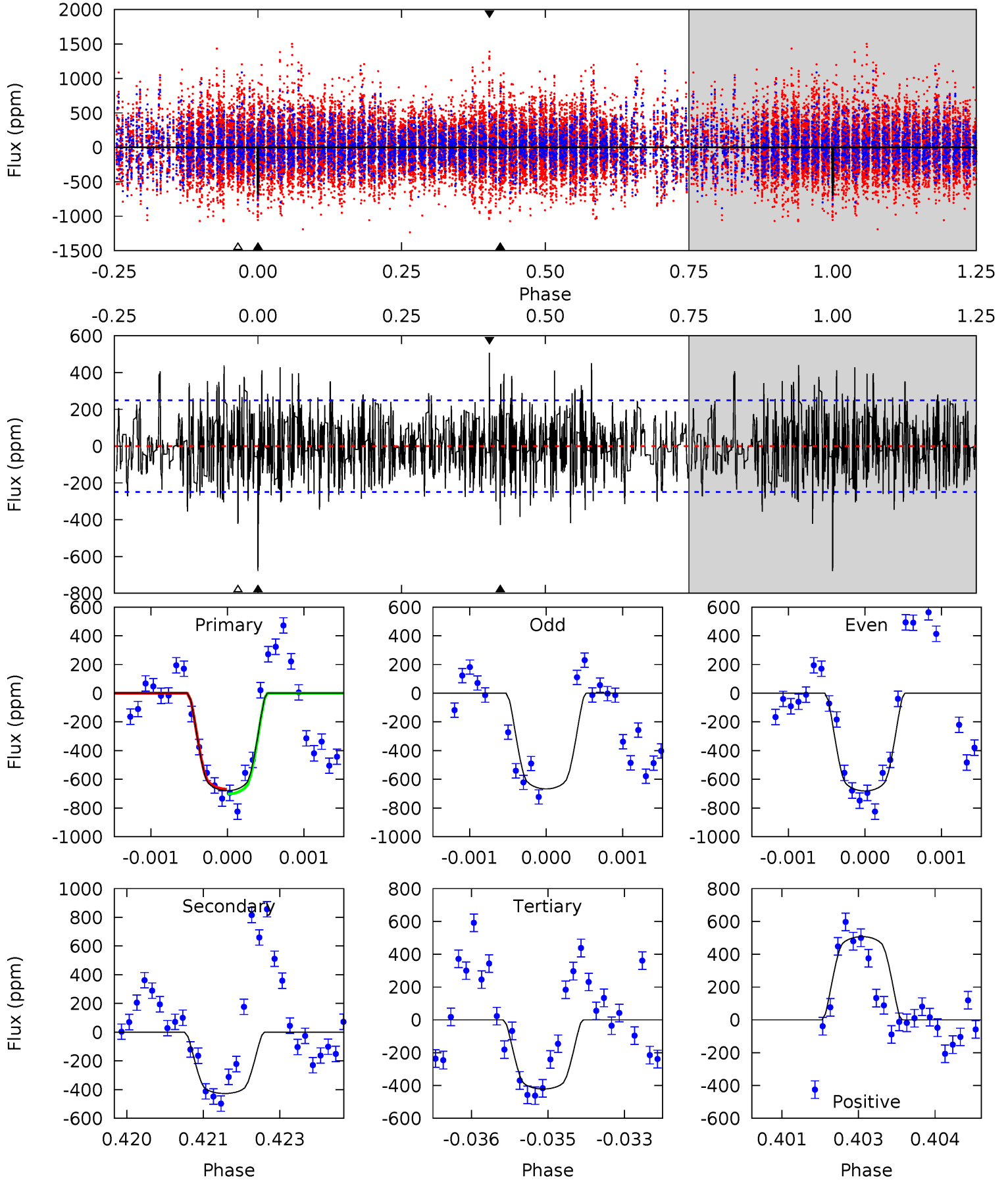
TCE 010744342-05 $P=385.445053$ Days $T_0=380.527089$ (BKJD)



DV Model-Shift Uniqueness Test

010744342-05, P = 385.473327 Days, E = 380.490288 Days

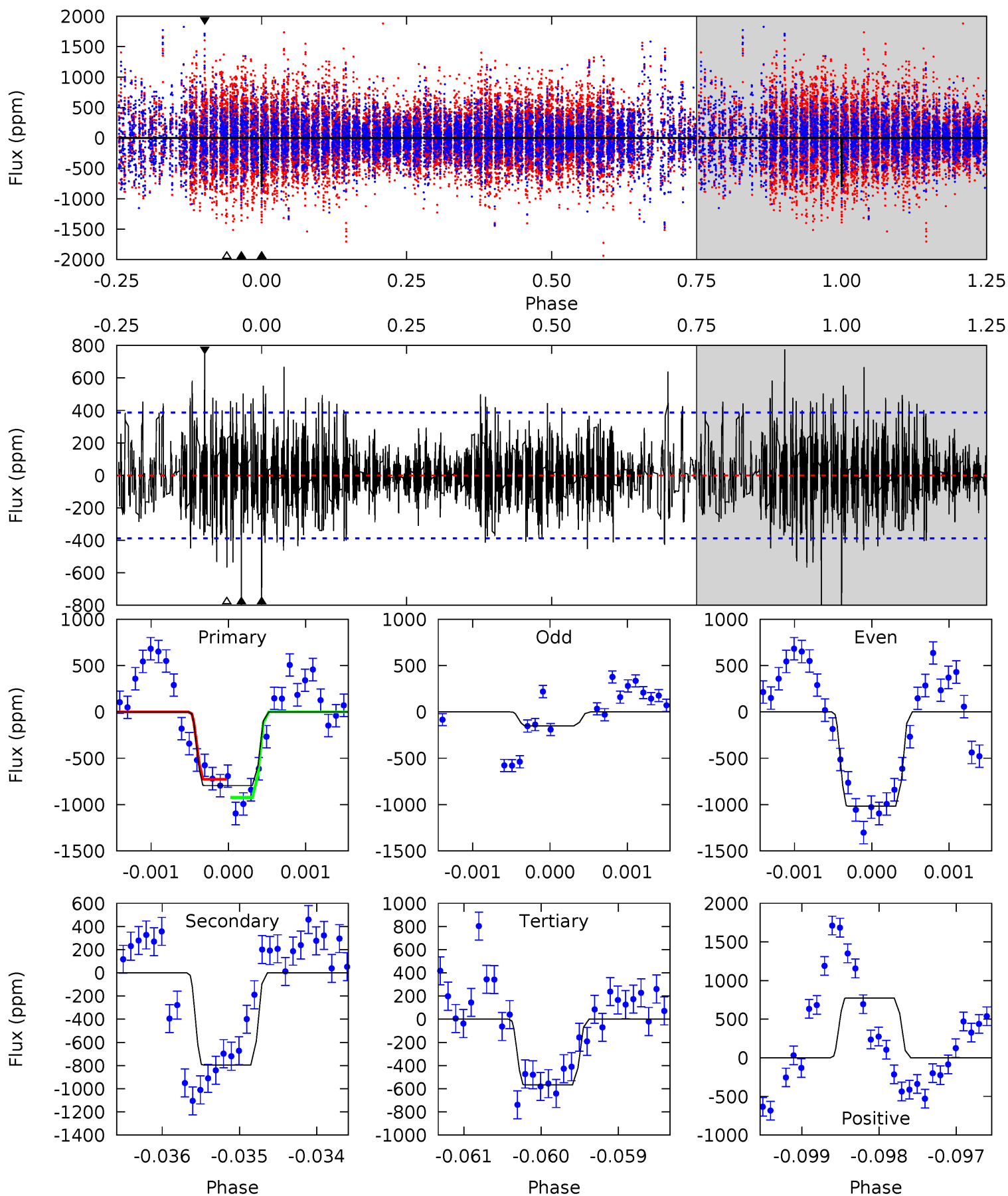
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	9.27	9.15	11.0	5.41	3.23	2.92	5.59	3.73	0.13	-1.73	0.13	0.65	0.43	0.35



Alt Model-Shift Uniqueness Test

010744342-05, P = 385.445053 Days, E = 380.527089 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	11.3	8.05	11.0	5.50	3.37	2.19	3.24	0.29	3.24	0.28	5.50	0.75	0.49	1.33



Stellar Parameters For KIC 010744342

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7231^{+200}_{-342}	$4.240^{+0.087}_{-0.217}$	$-0.040^{+0.200}_{-0.350}$	$1.518^{+0.552}_{-0.221}$	$1.458^{+0.209}_{-0.209}$	$0.588^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+500%/-875%	+36%/-15%	+14%/-14%	+41%/-56%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010744342-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-427 ± 46	$5.02^{+0.99}_{-0.70}$	511^{+42}_{-31}	5977^{+359}_{-345}	12855^{+4311}_{-3725}
Alt.	-795 ± 70	$5.15^{+1.05}_{-0.65}$	512^{+43}_{-30}	6900^{+429}_{-429}	21961^{+7306}_{-6078}

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

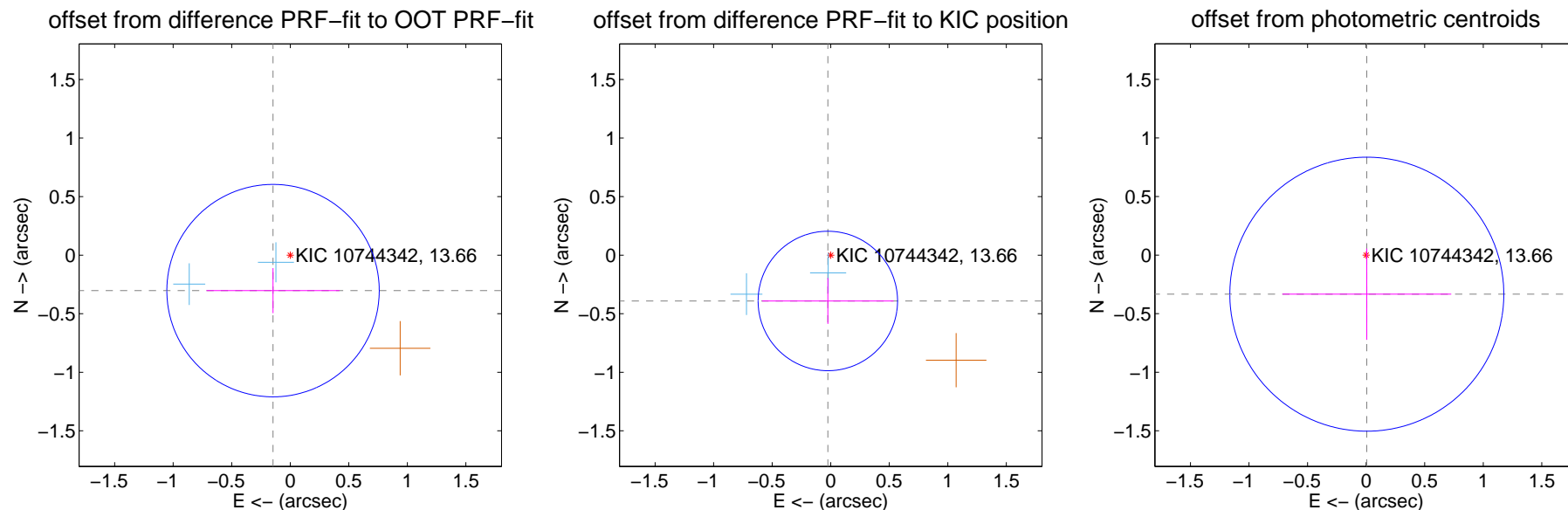
DV Centroid Data

Supplemental centroid analysis for 010744342-05. Kepler magnitude: 13.66. Transit SNR 6.94

There are 2 quarters with good PRF difference image offsets

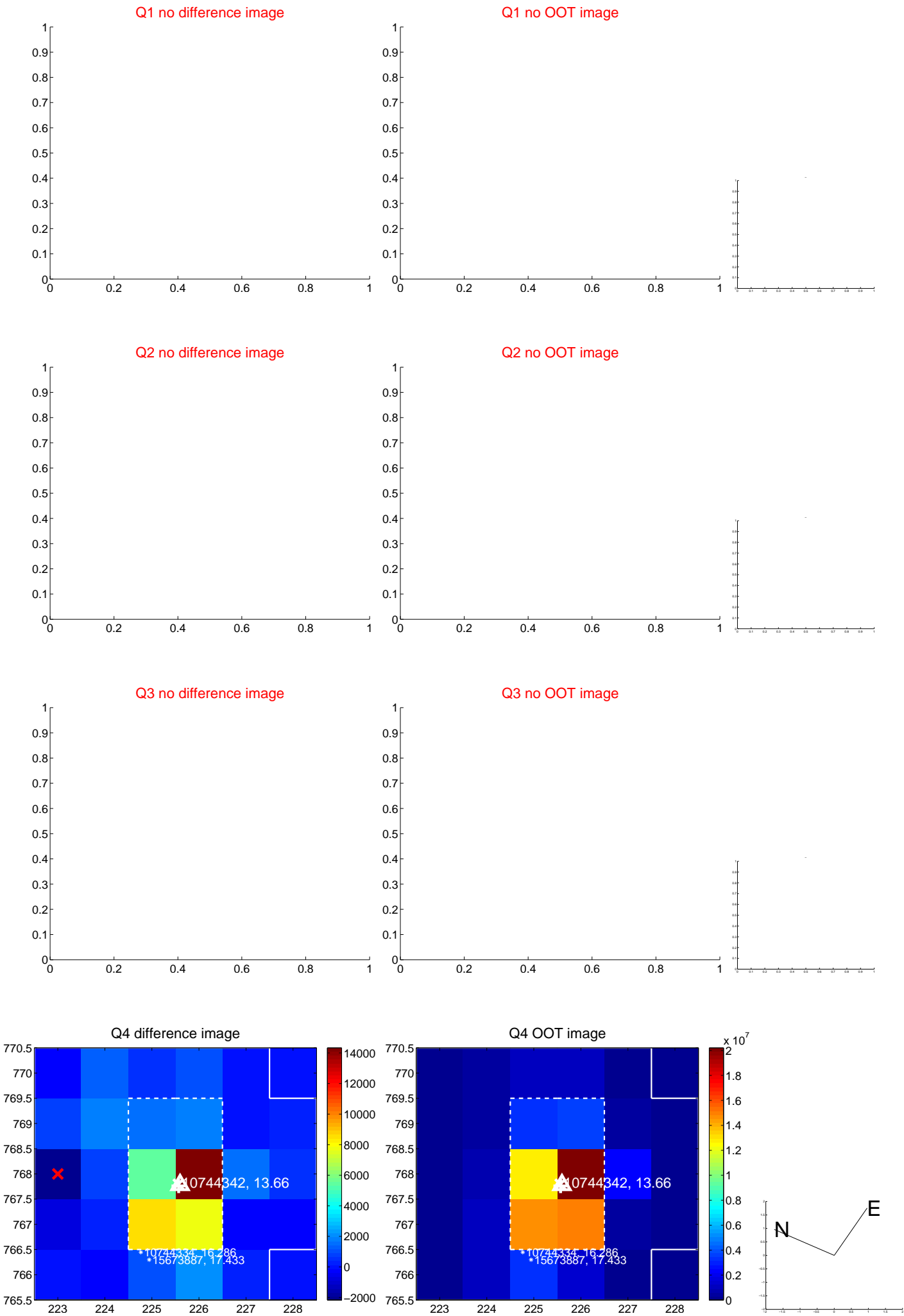
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.337 ± 0.302	1.11	0.147 ± 0.568	-0.303 ± 0.192
PRF-fit source offset from KIC position	0.392 ± 0.198	1.98	0.025 ± 0.562	-0.391 ± 0.196
photometric centroid source offset	0.33 ± 0.39	0.86	-0.01 ± 0.72	-0.33 ± 0.39

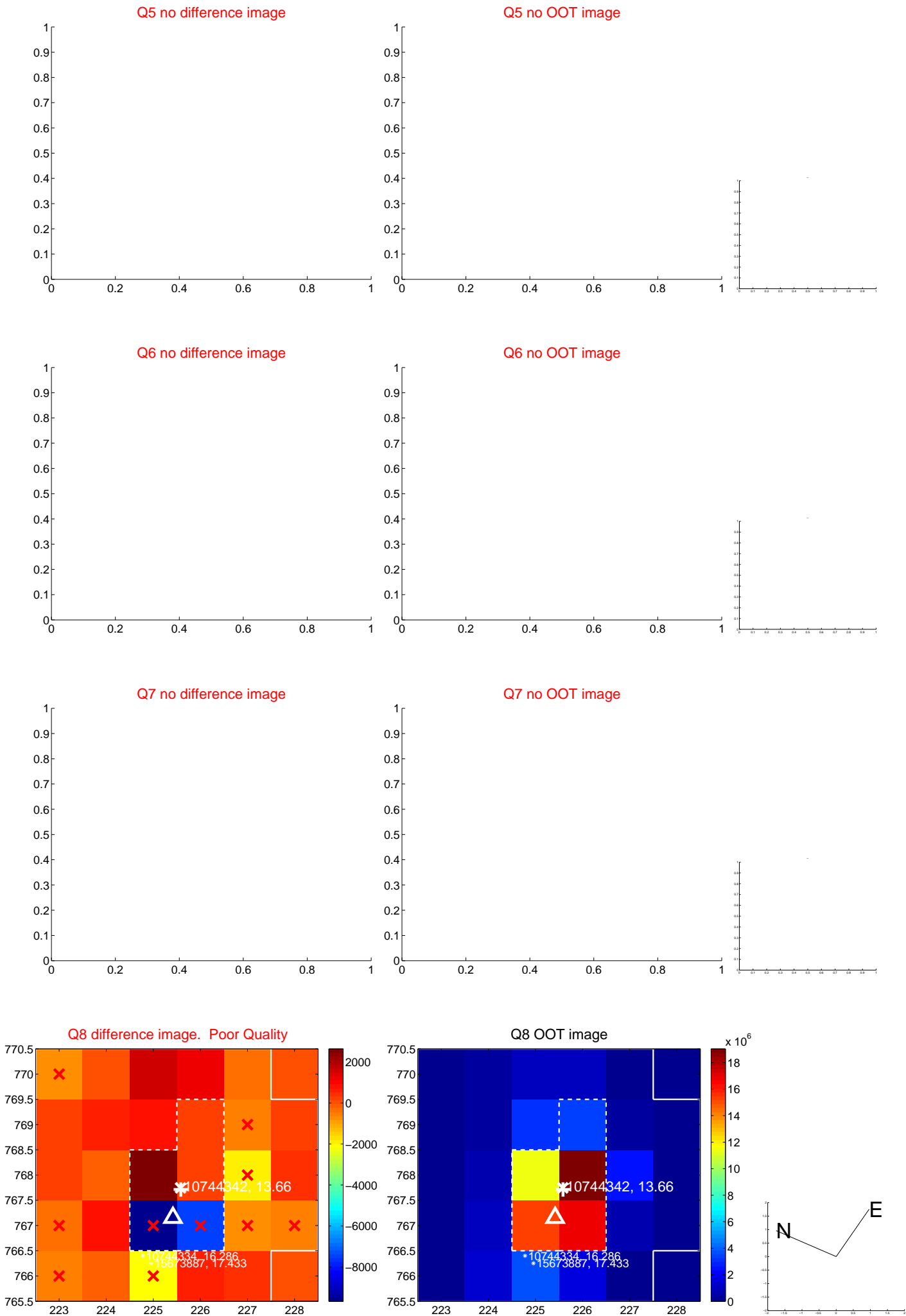


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

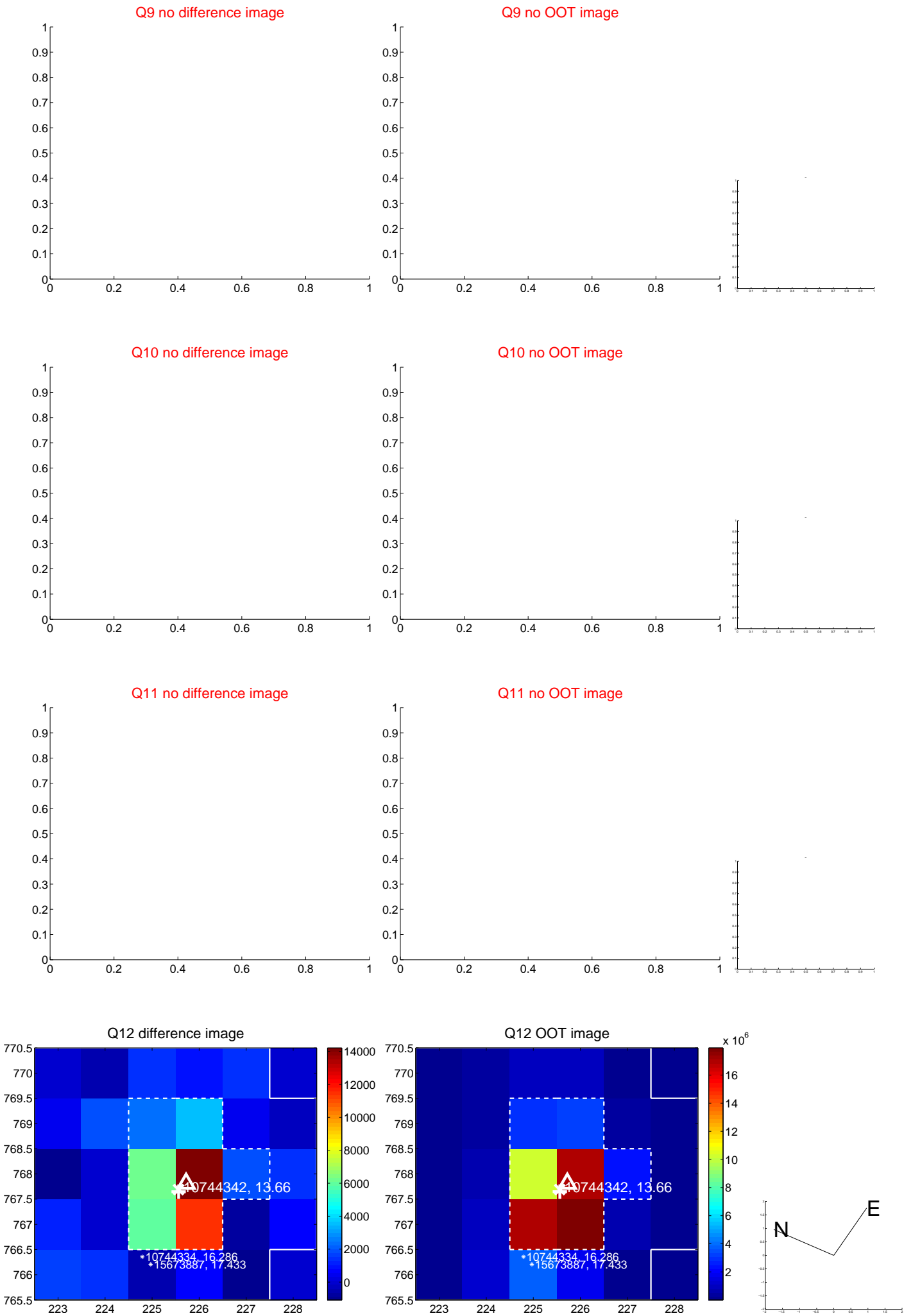
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



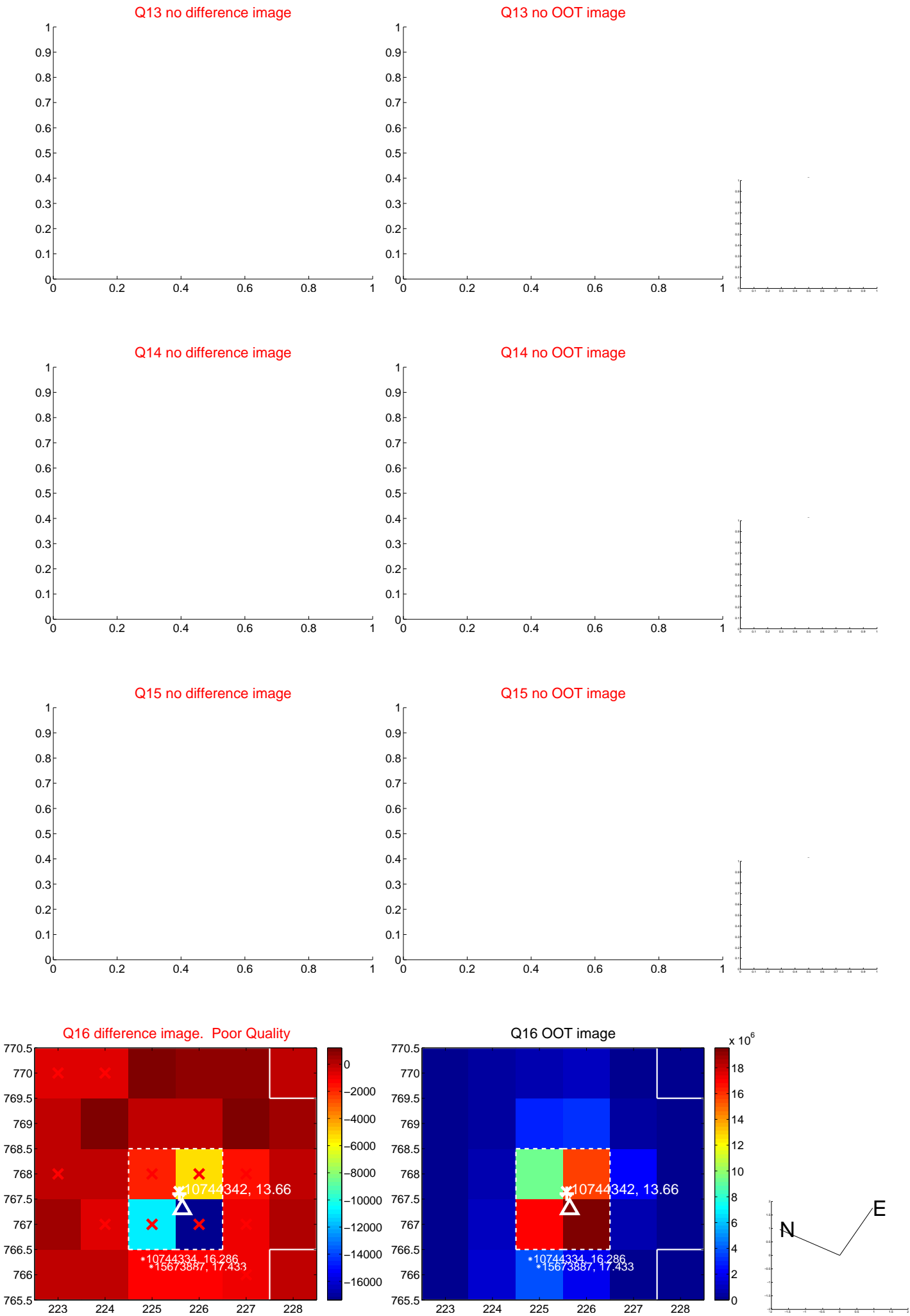
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



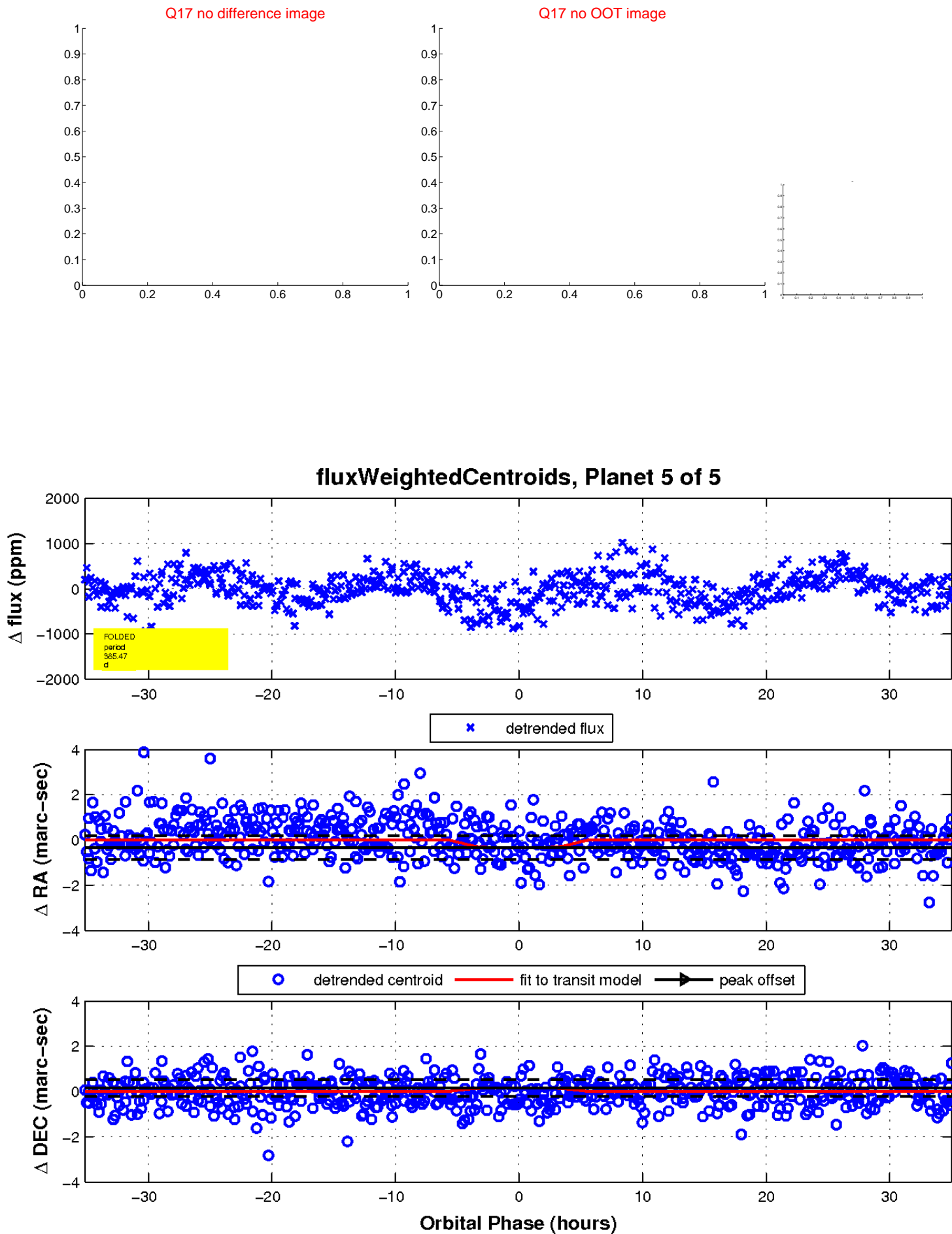
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

