

KIC 006471244

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})
006471244-01	OBS	No	1.912071	131.876531	3.5	0.777	7.6	1.4	1.60	7345	0.32	6079.10
006471244-02	OBS	No	1.912151	132.189728	12.3	6.349	7.7	8.7	1.60	7345	0.57	6078.77
006471244-03	OBS	No	626.964695	140.138109	165.3	35.318	13.1	5.0	1.60	7345	2.10	2.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471244-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006471244-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_SATURATED
006471244-03	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—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

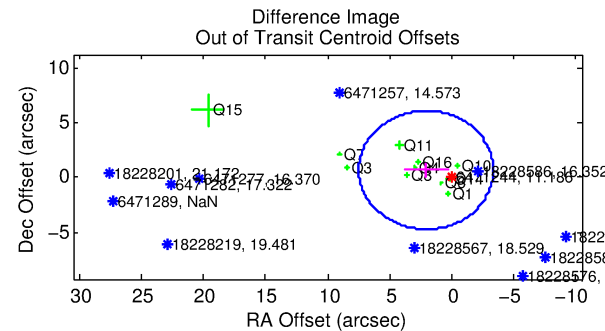
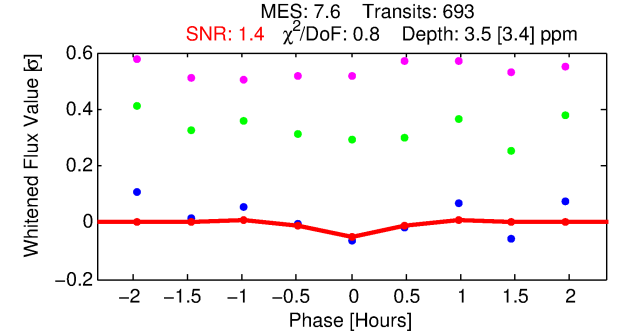
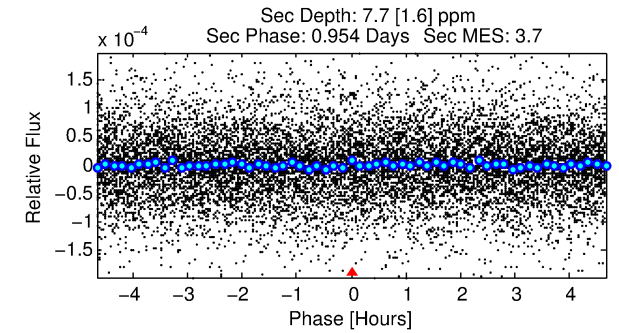
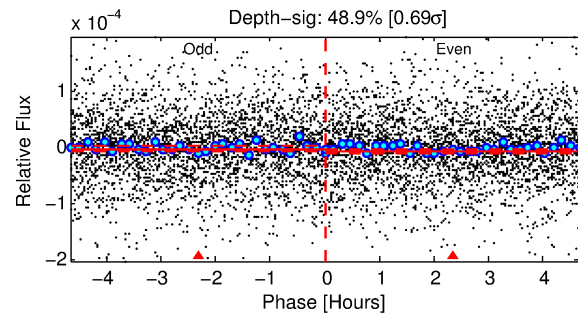
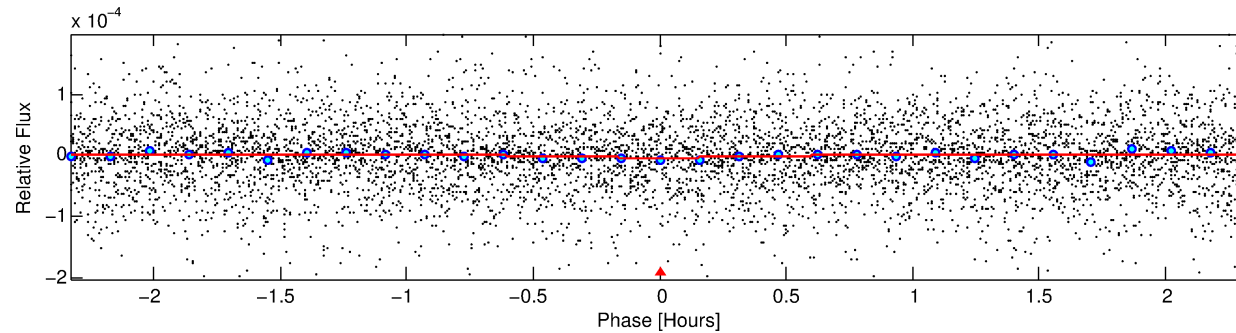
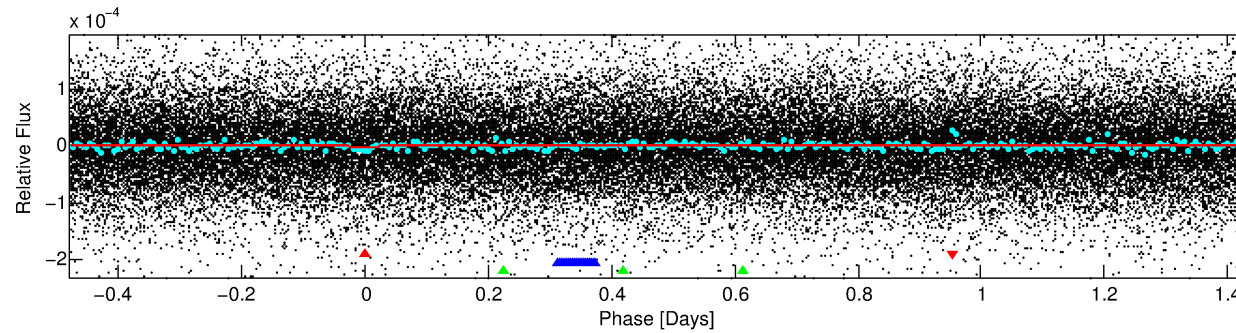
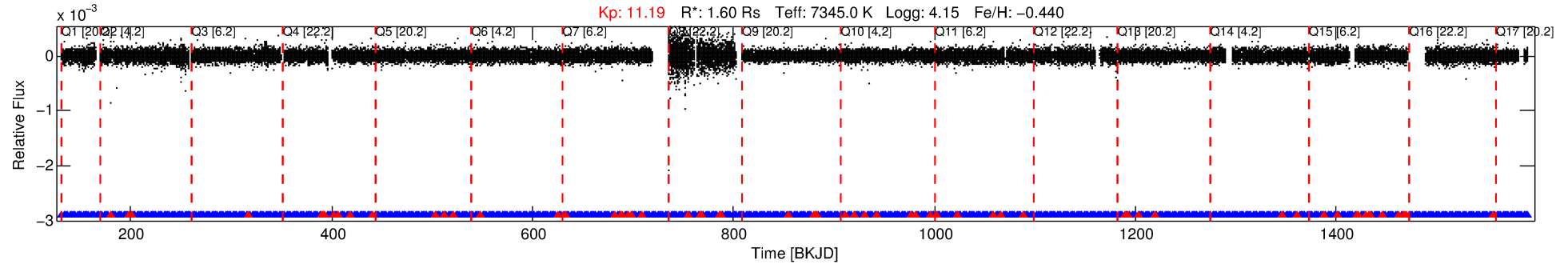
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006471244-01

No Significant Match Found

DV One-Page Summary

KIC: 6471244 Candidate: 1 of 3 Period: 1.912 d



DV Fit Results:

Period = 1.91207 [0.00007] d
Epoch = 131.8765 [0.0103] BKJD
Rp/R* = 0.0018 [0.0011]
a/R* = 13.75 [25.51]
b = 0.69 [1.45]
Seff = 6079.10 [2190.30]
Teq = 2252 [203] K
Rp = 0.32 [0.21] Re
a = 0.0332 [0.0078] AU
Ag = 44.76 [55.27] [0.79 σ]
Teffp = 9005 [2704] K [2.49 σ]

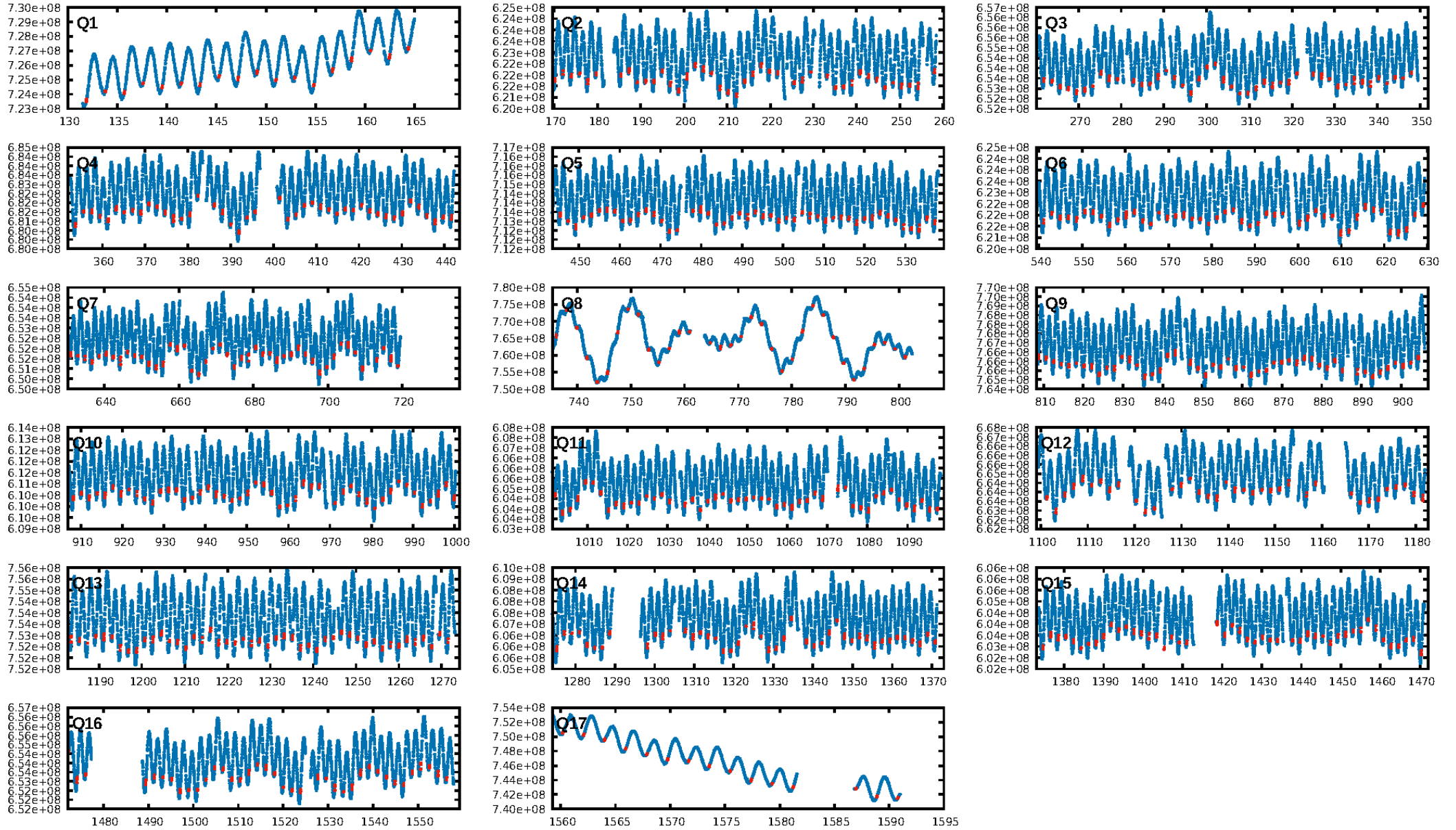
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.34e-11
RollingBand-fgt: 0.90 [597/660]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.185 arcsec [1.21 σ]
KicOffset-rm: 0.069 arcsec [0.08 σ]
OotOffset-st: 3/4/3/1 [11]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.41 [7/17]

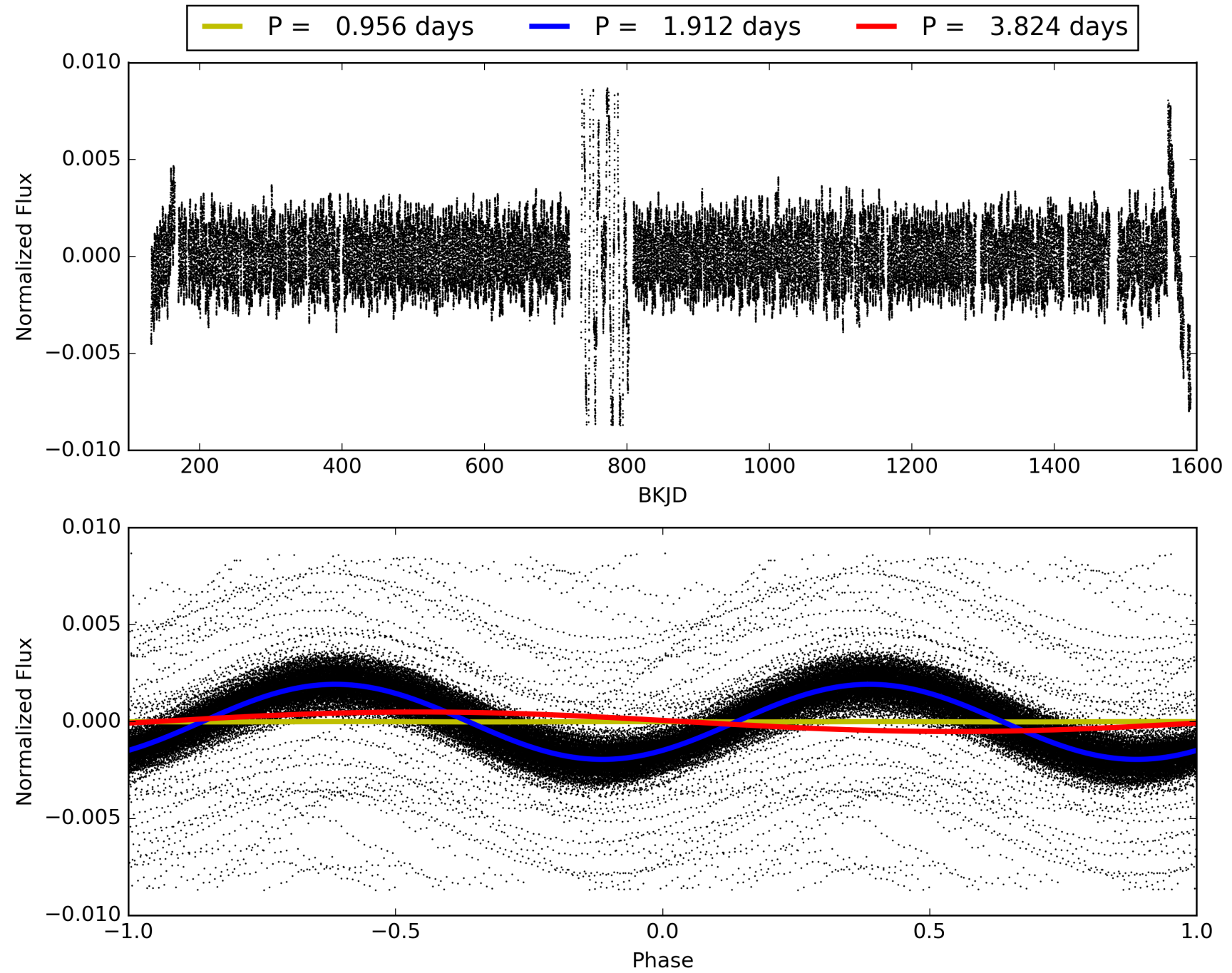
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006471244-01, PDC Light Curves

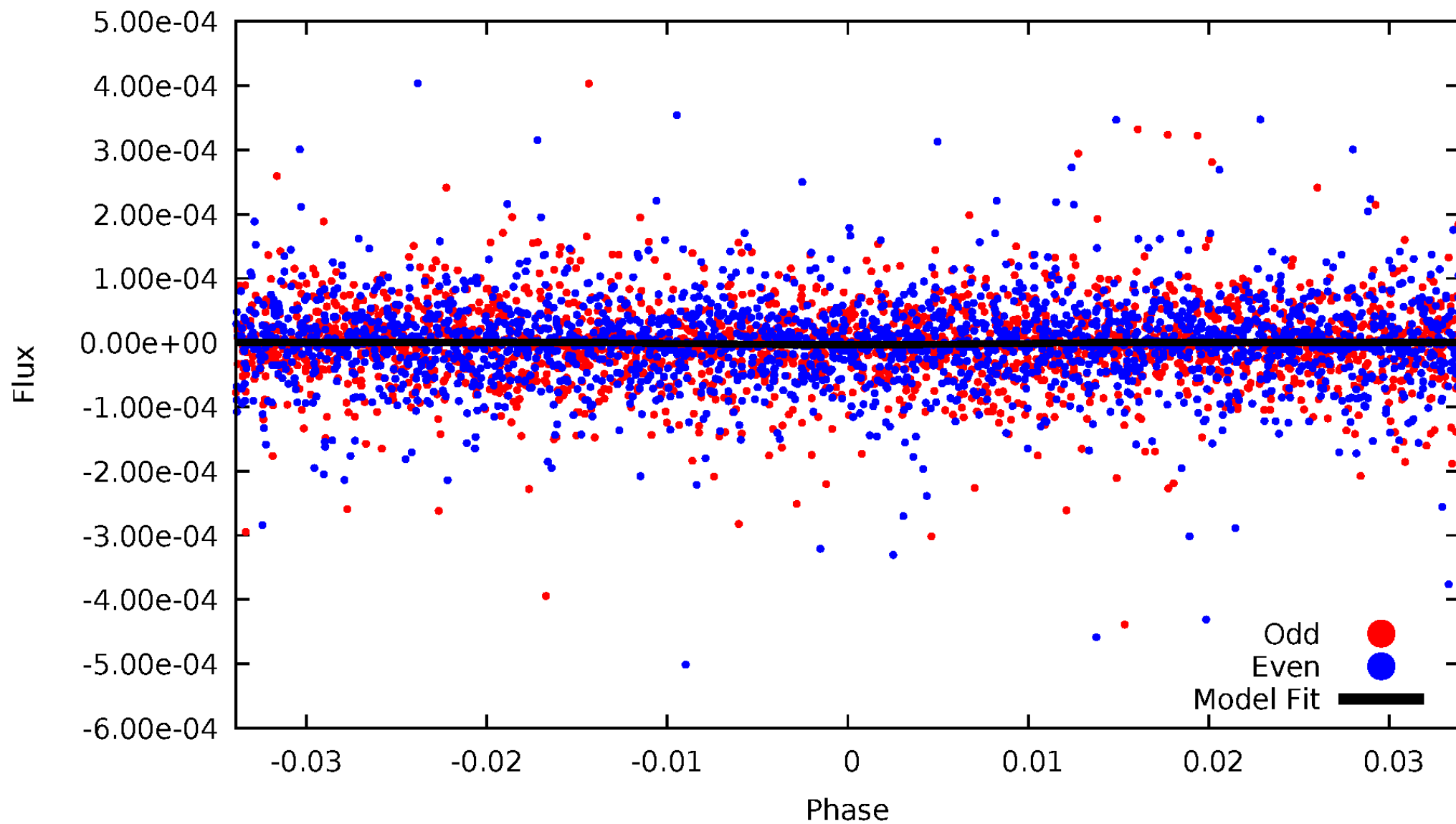


TCE 006471244-01



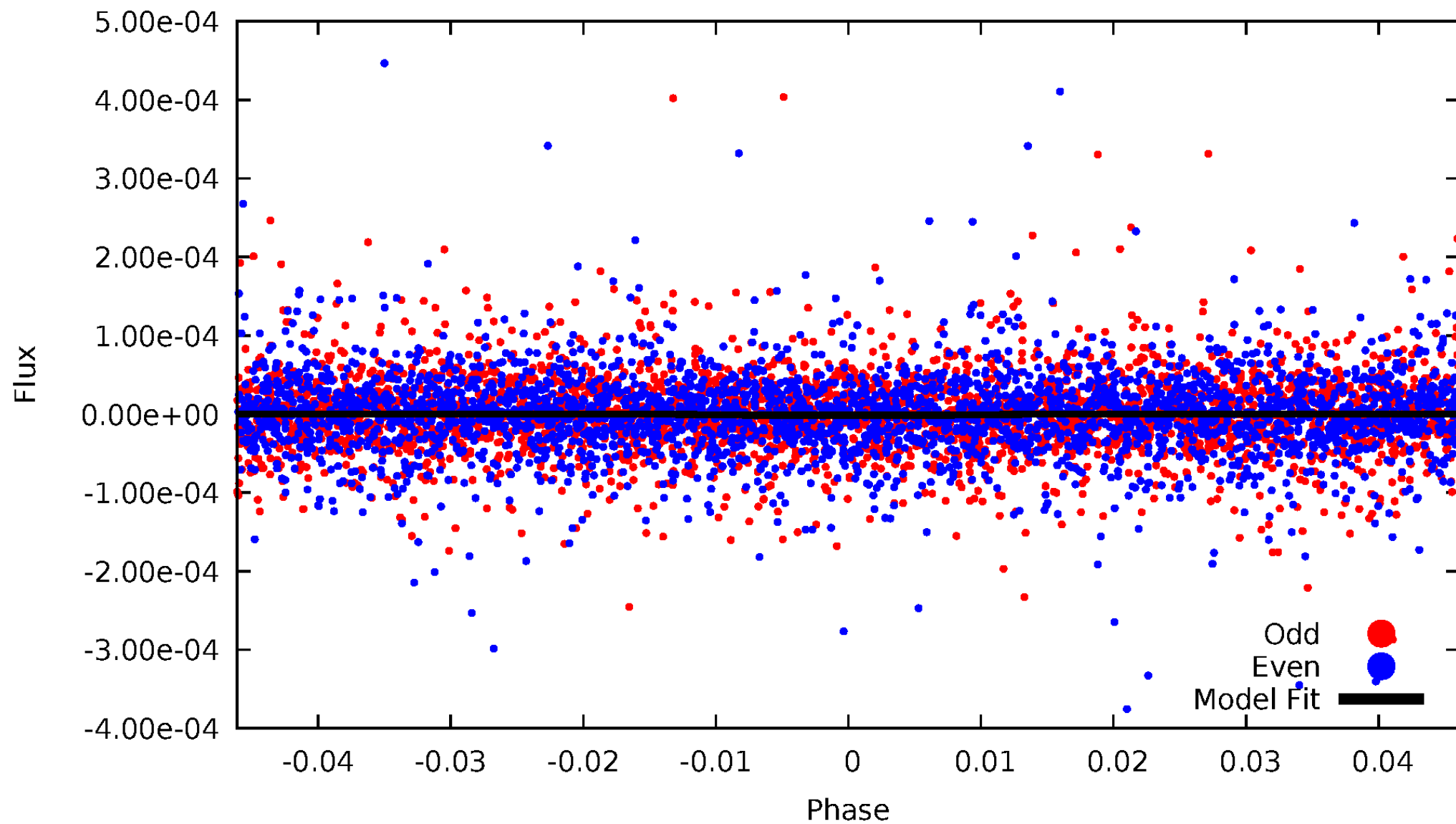
DV Odd/Even

TCE 006471244-01



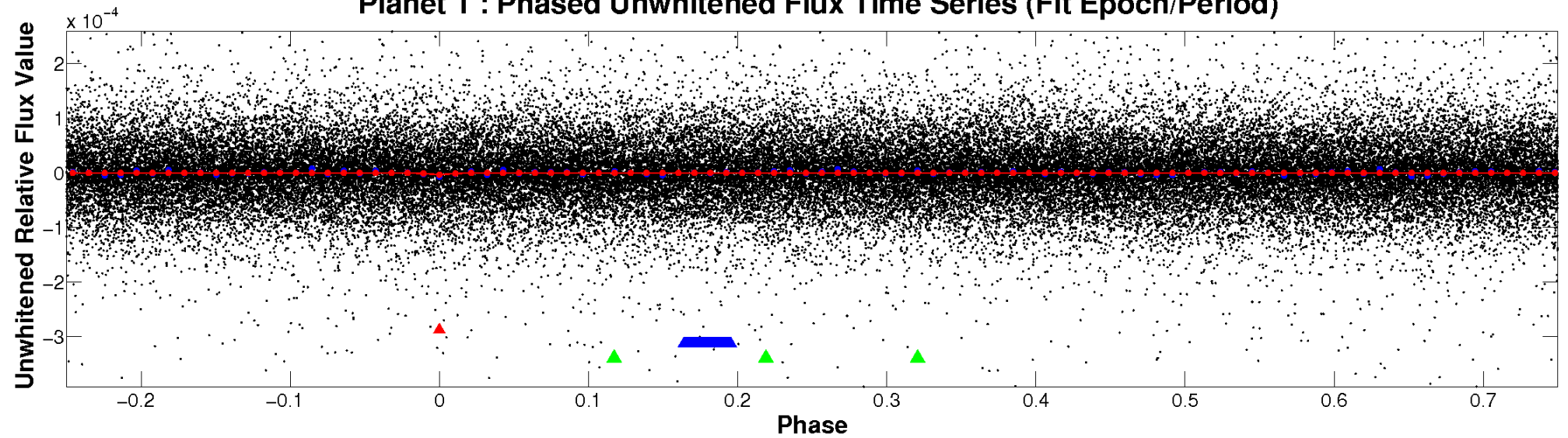
ALT Odd/Even

TCE 006471244-01

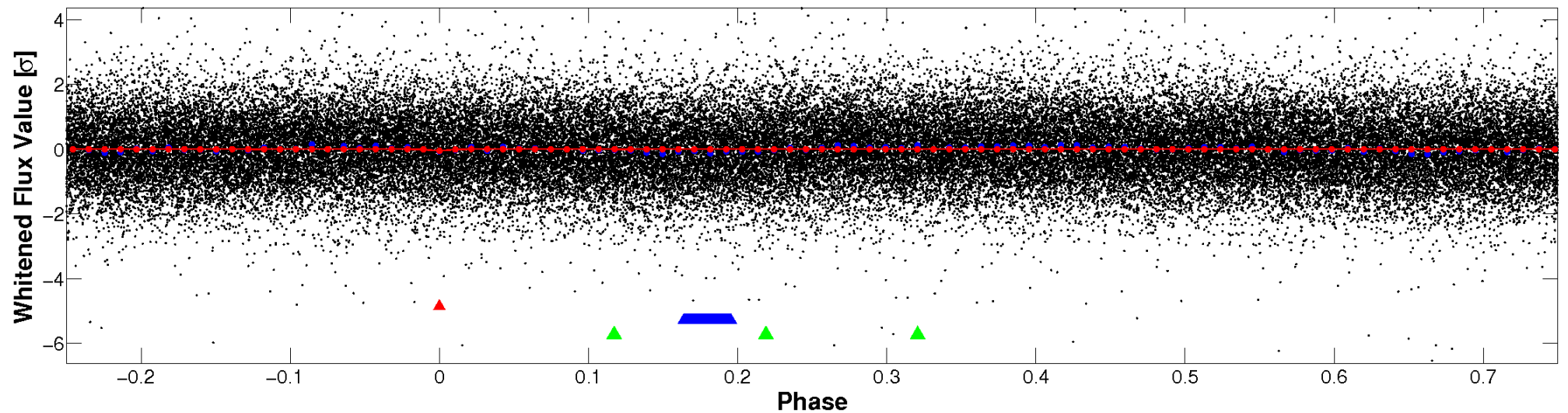


Non-Whitened Vs. Whitened Light Curve

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

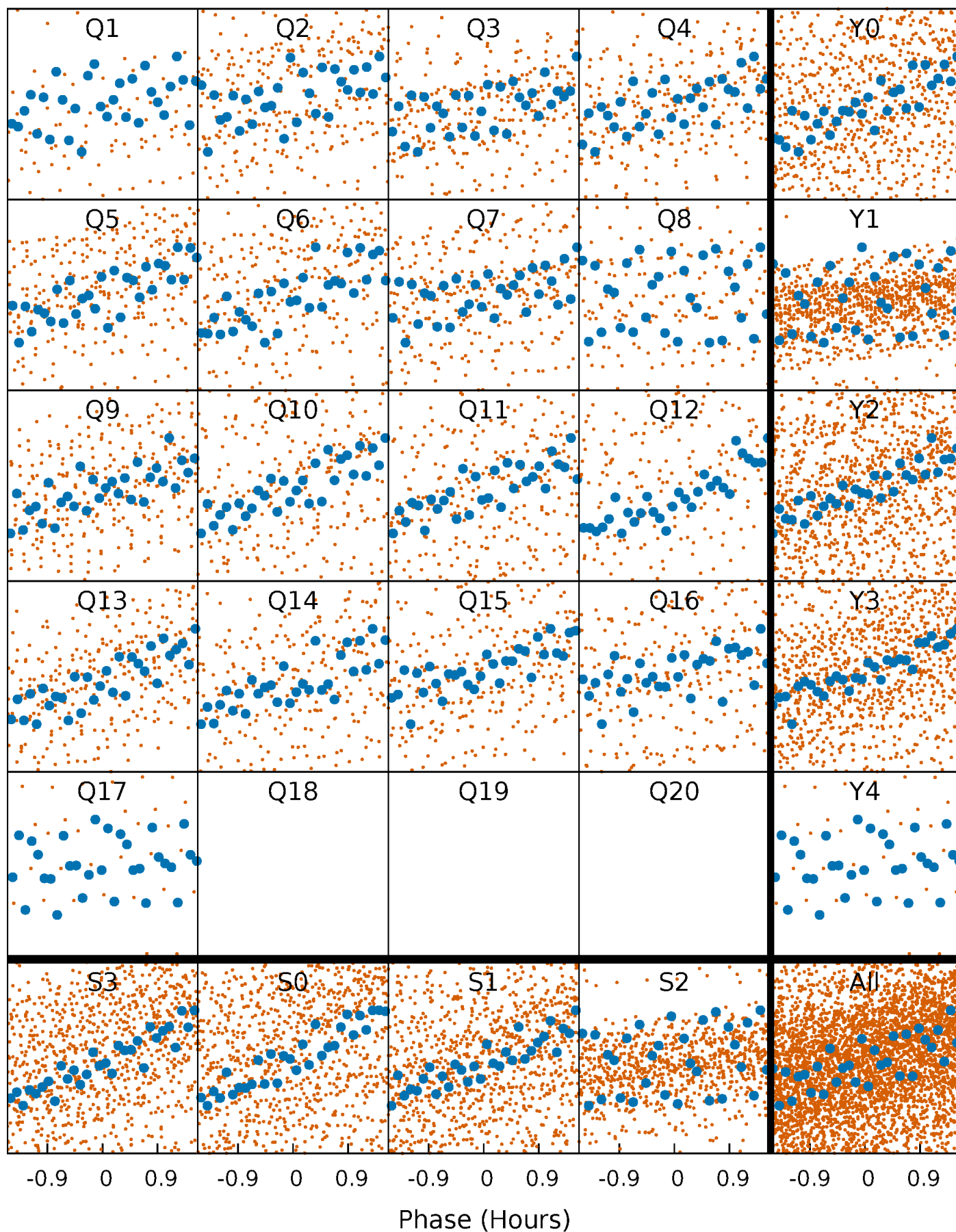


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



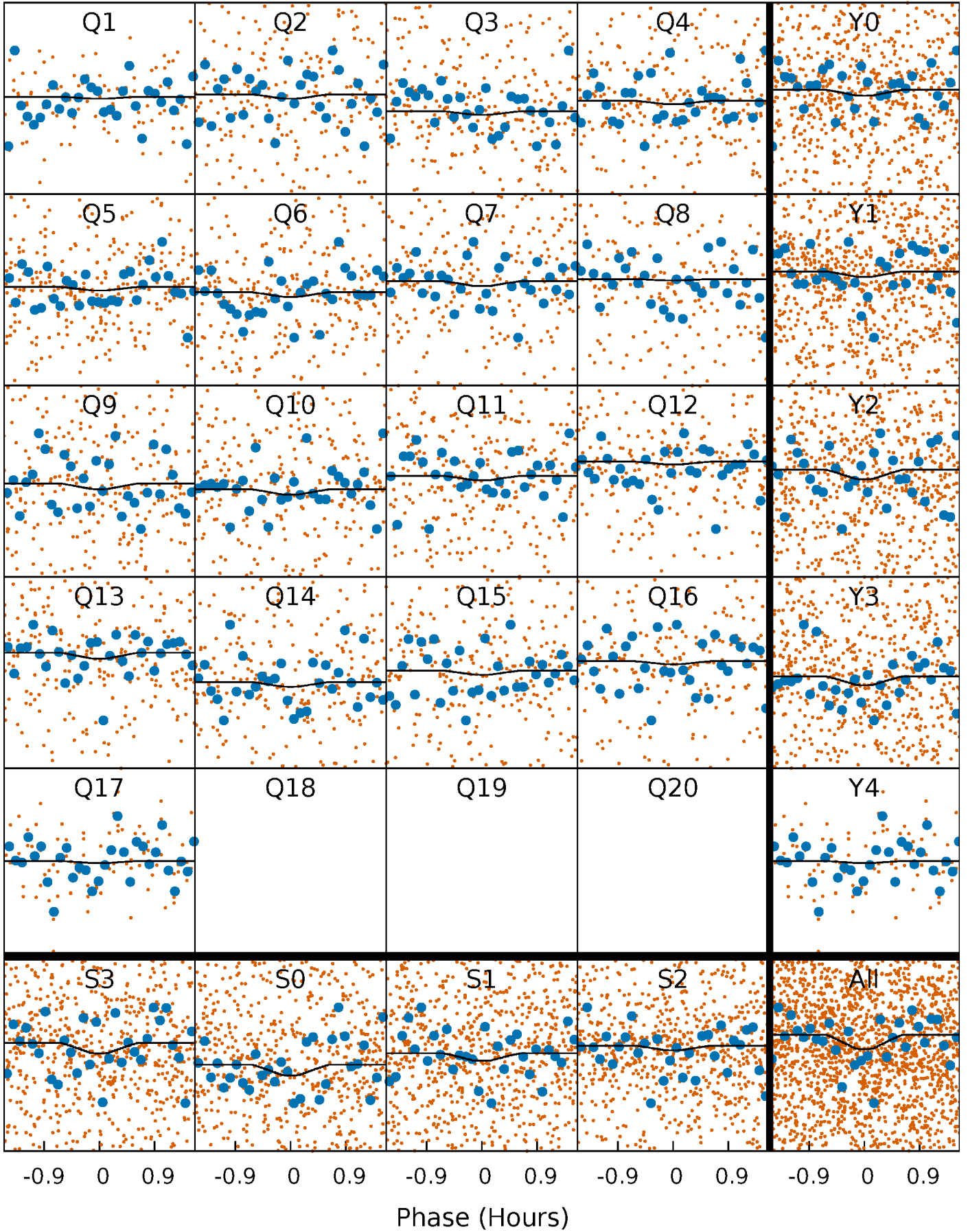
PDC Quarter-Phased Transit Curves

TCE 006471244-01 P= 1.912071 Days $T_0=131.876531$ (BKJD)



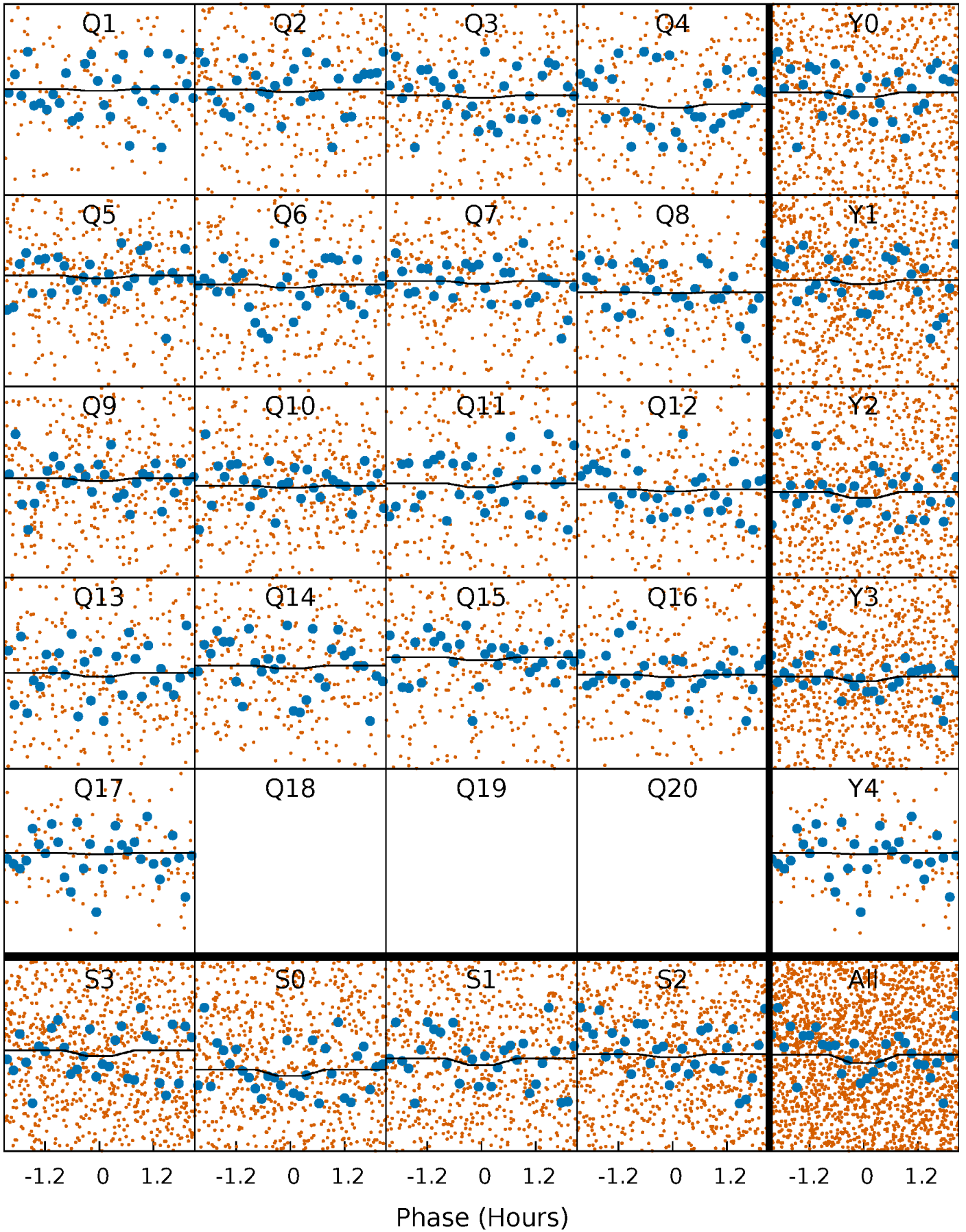
DV Quarter-Phased Transit Curves

TCE 006471244-01 P= 1.912071 Days $T_0=131.876531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

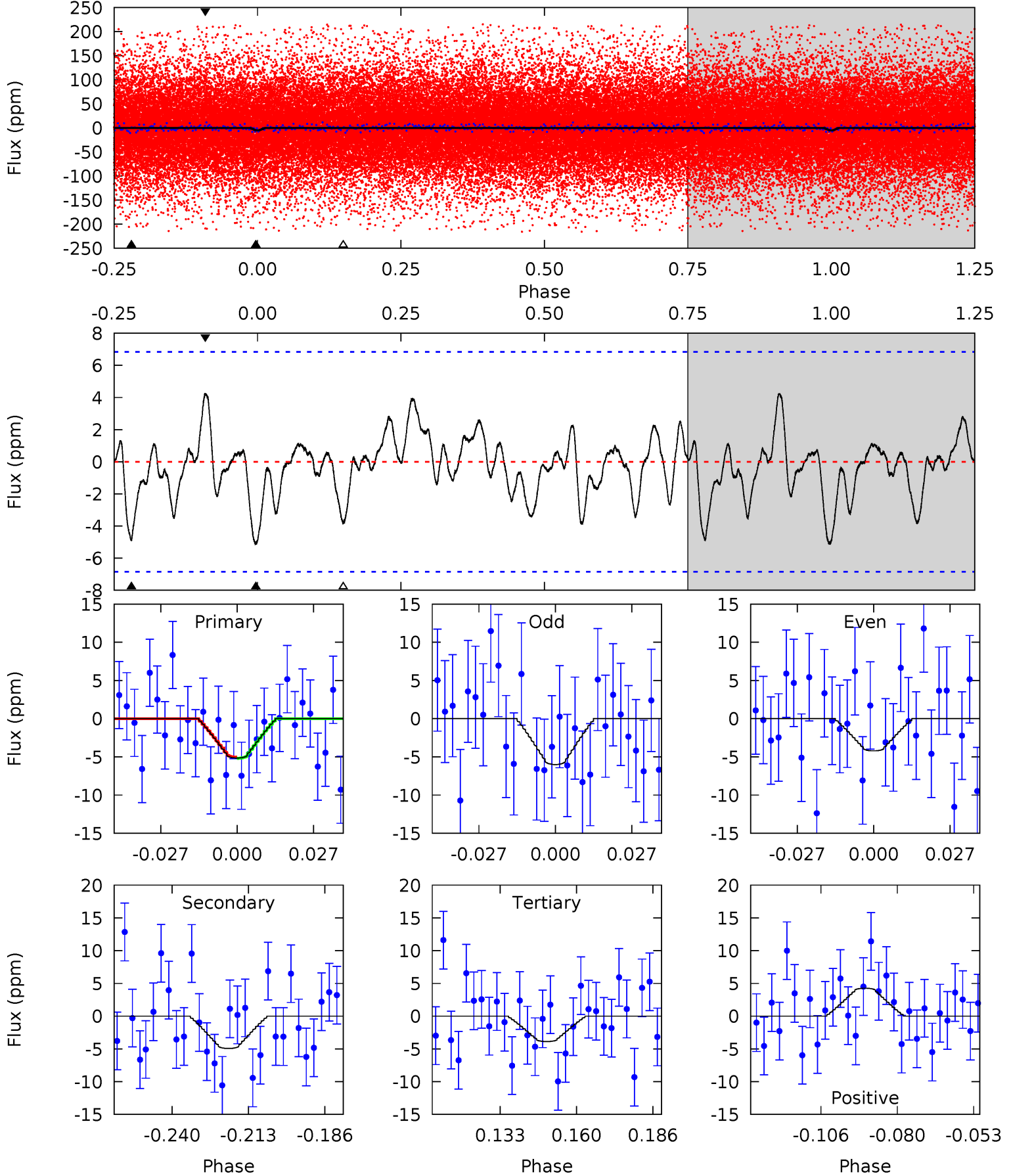
TCE 006471244-01 P= 1.912066 Days $T_0=131.876066$ (BKJD)



DV Model-Shift Uniqueness Test

006471244-01, P = 1.912071 Days, E = 129.964460 Days

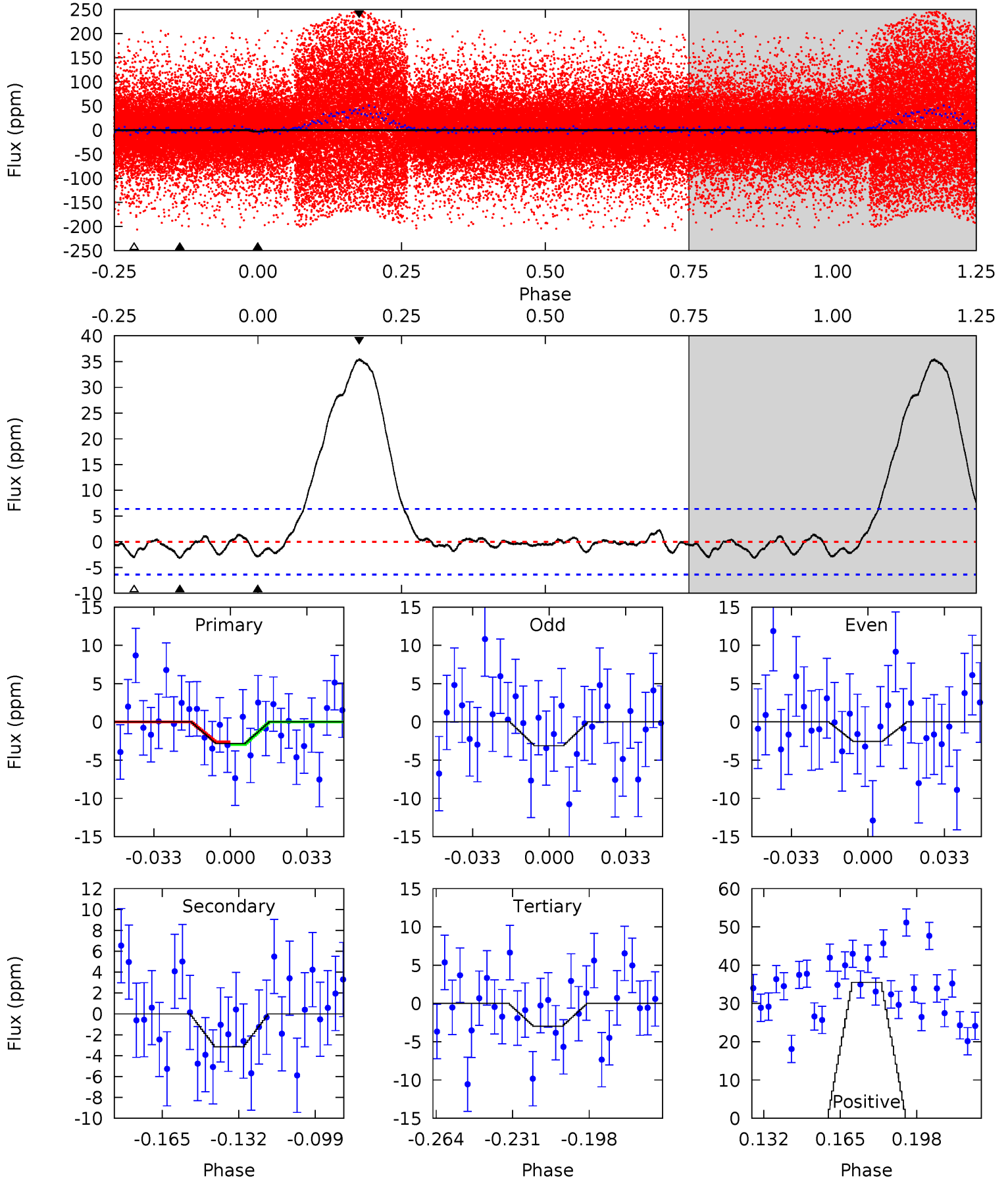
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.64	3.49	2.74	3.01	4.84	2.22	1.13	0.90	0.63	0.75	0.48	0.64	1.43	0.45	0.05



Alt Model-Shift Uniqueness Test

006471244-01, P = 1.912066 Days, E = 129.964000 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.13	2.36	2.24	26.7	4.79	2.13	7.59	-0.11	-24.5	0.12	-24.3	0.22	0.92	0.92	0.13



Stellar Parameters For KIC 006471244

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+233}_{-285}	$4.154^{+0.170}_{-0.170}$	$-0.440^{+0.250}_{-0.350}$	$1.605^{+0.467}_{-0.340}$	$1.341^{+0.206}_{-0.206}$	$0.457^{+0.404}_{-0.212}$
	+3%/-4%	+4%/-4%	+57%/-80%	+29%/-21%	+15%/-15%	+88%/-46%
Source	KIC0	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 006471244-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$0.34^{+0.20}_{-0.18}$	3143^{+245}_{-236}	7821^{+6019}_{-1713}	25^{+94}_{-16}
Alt.	-3 ± 1	$0.26^{+0.17}_{-0.15}$	3153^{+256}_{-231}	8119^{+8501}_{-2247}	27^{+141}_{-19}

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

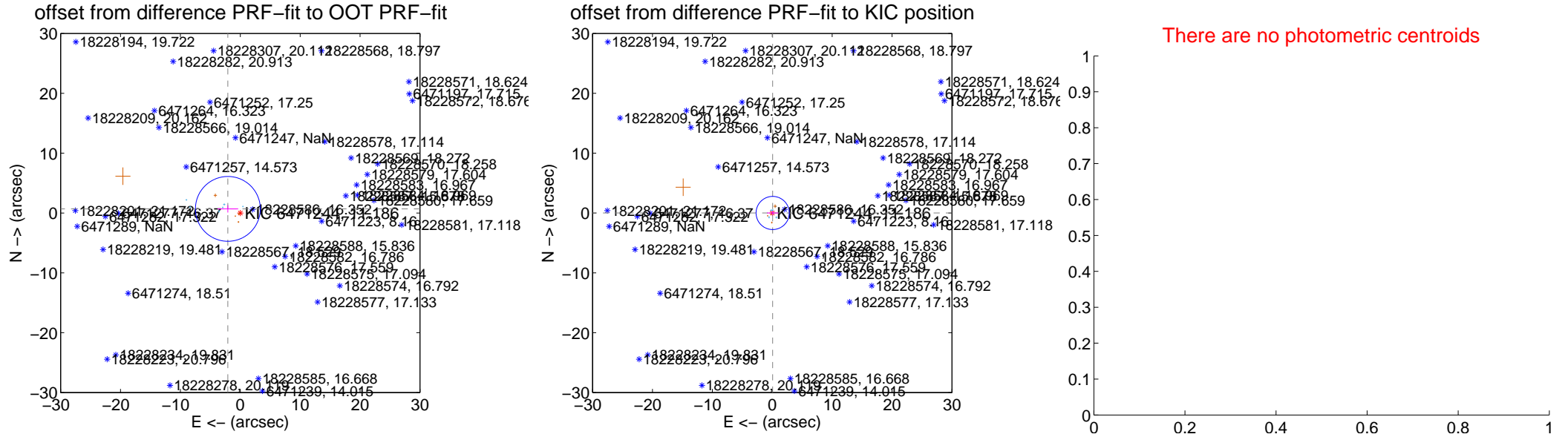
DV Centroid Data

Supplemental centroid analysis for 006471244-01. **Kepler magnitude: 11.19.** Transit SNR 1.42

There are 7 quarters with good PRF difference image offsets

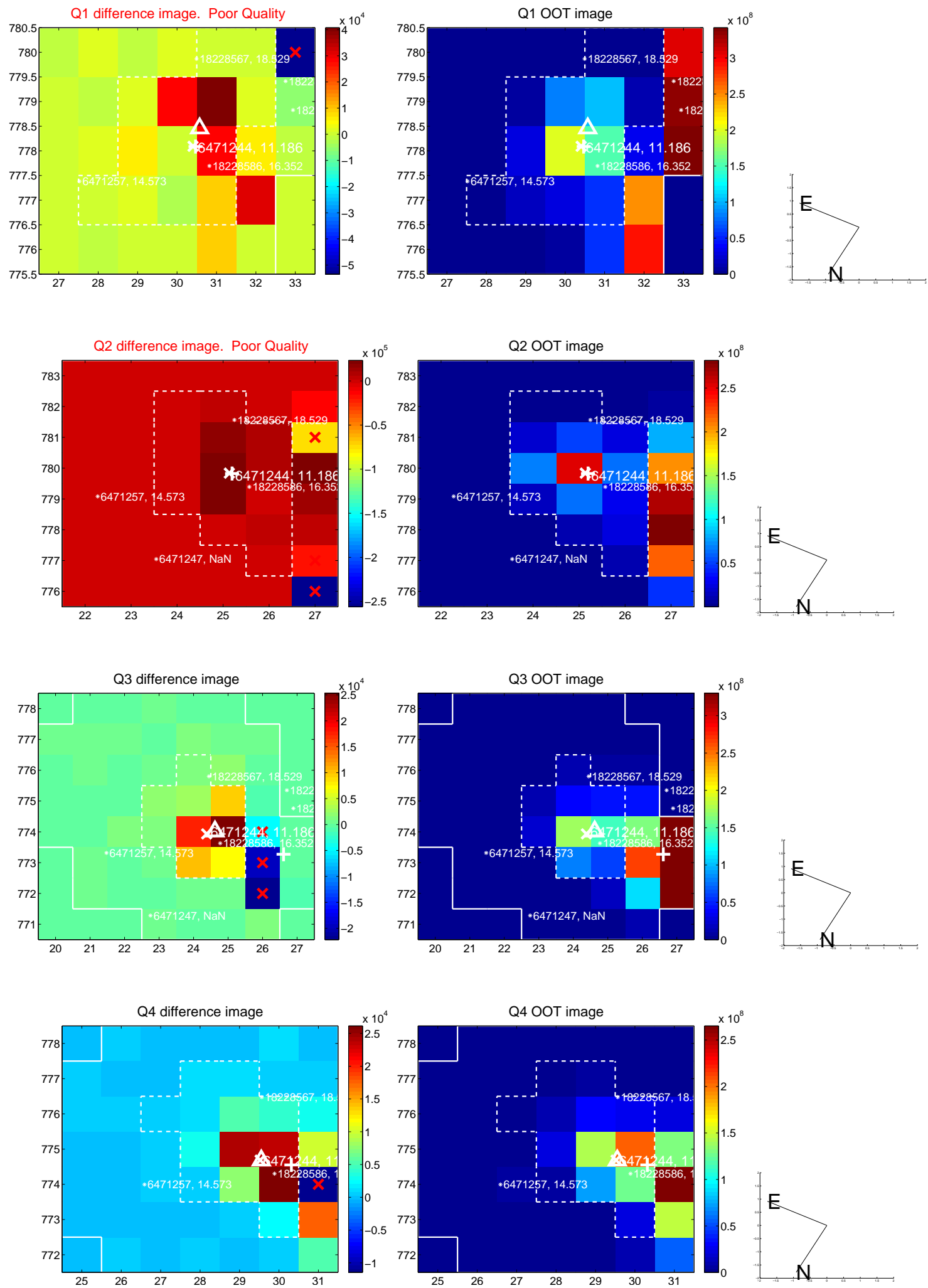
The OOT PRF centroid is offset from the target star catalog position by about 2.70 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.185 ± 1.805	1.21	2.074 ± 1.725	0.690 ± 0.611
PRF-fit source offset from KIC position	0.069 ± 0.923	0.08	-0.069 ± 0.947	0.006 ± 0.328
photometric centroid source offset	—	—	—	—

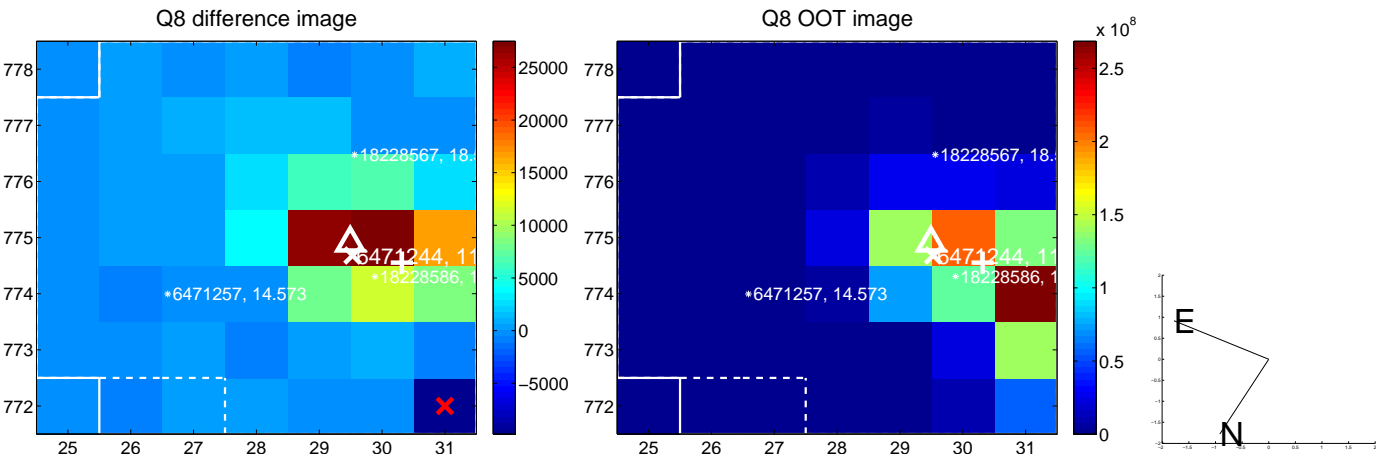
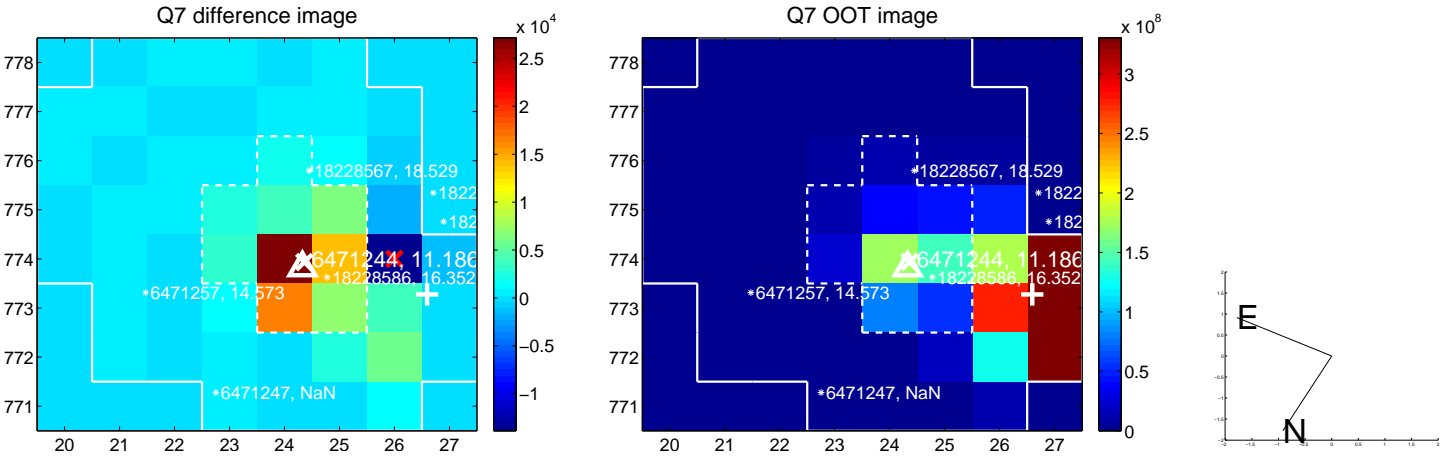
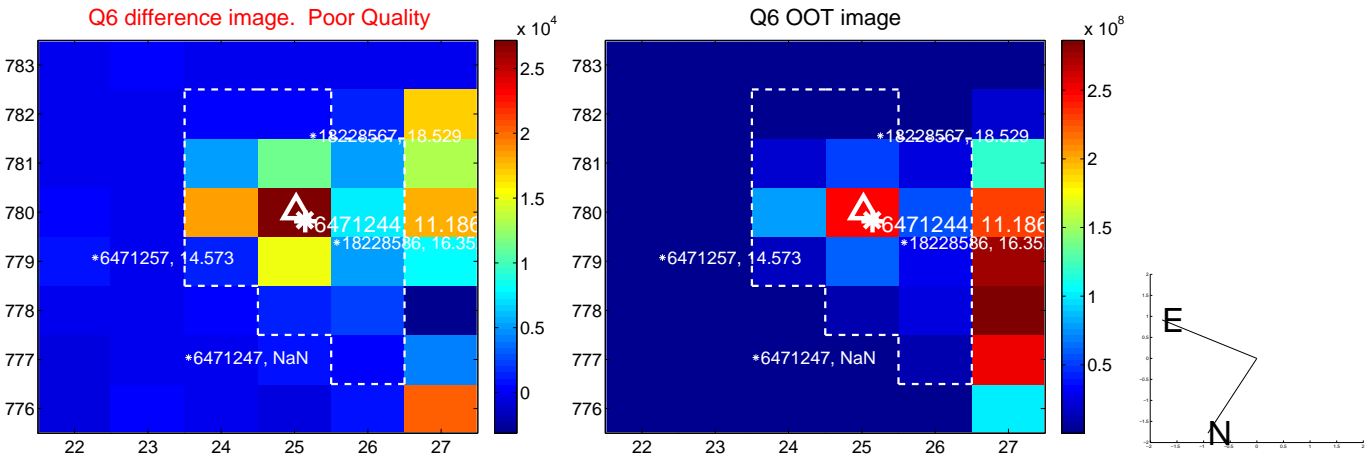
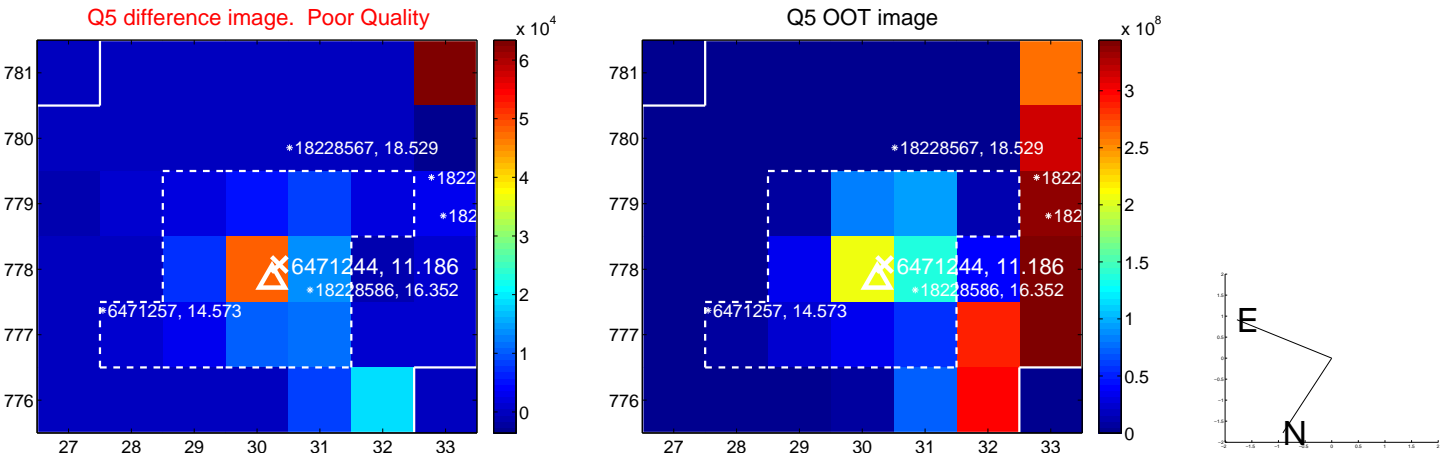


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

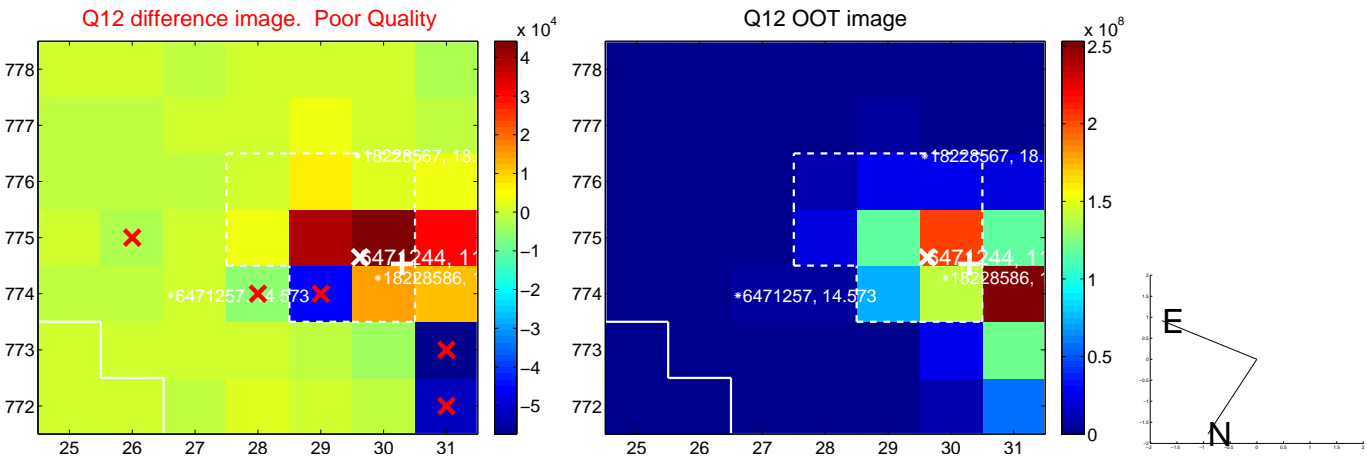
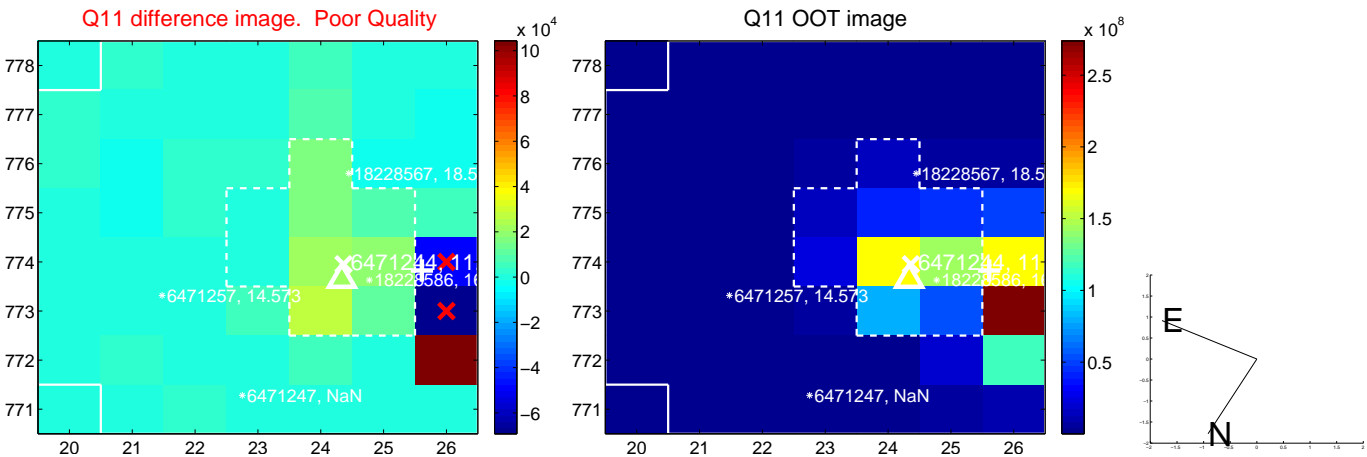
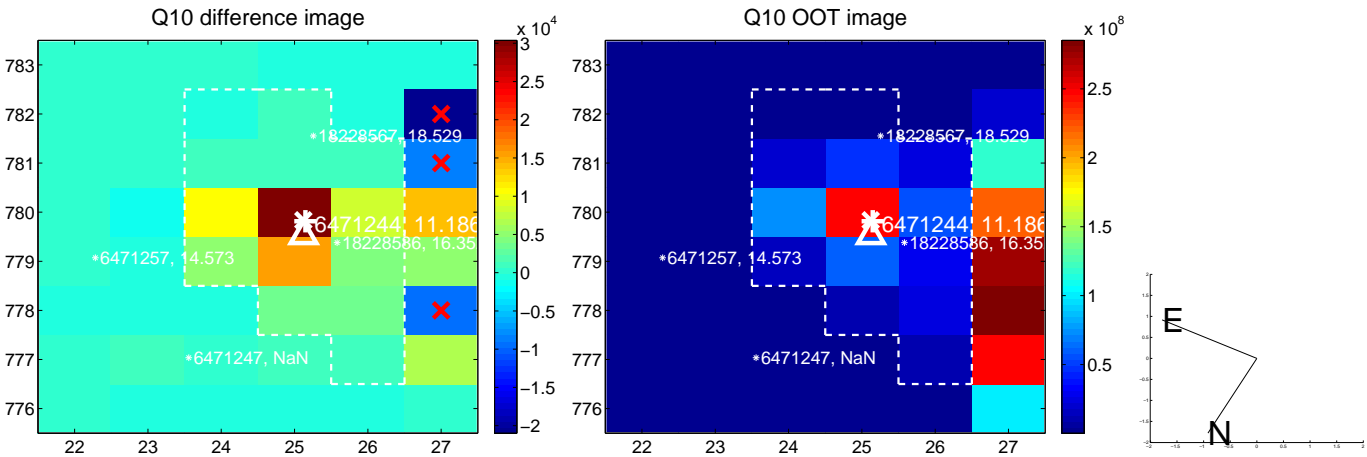
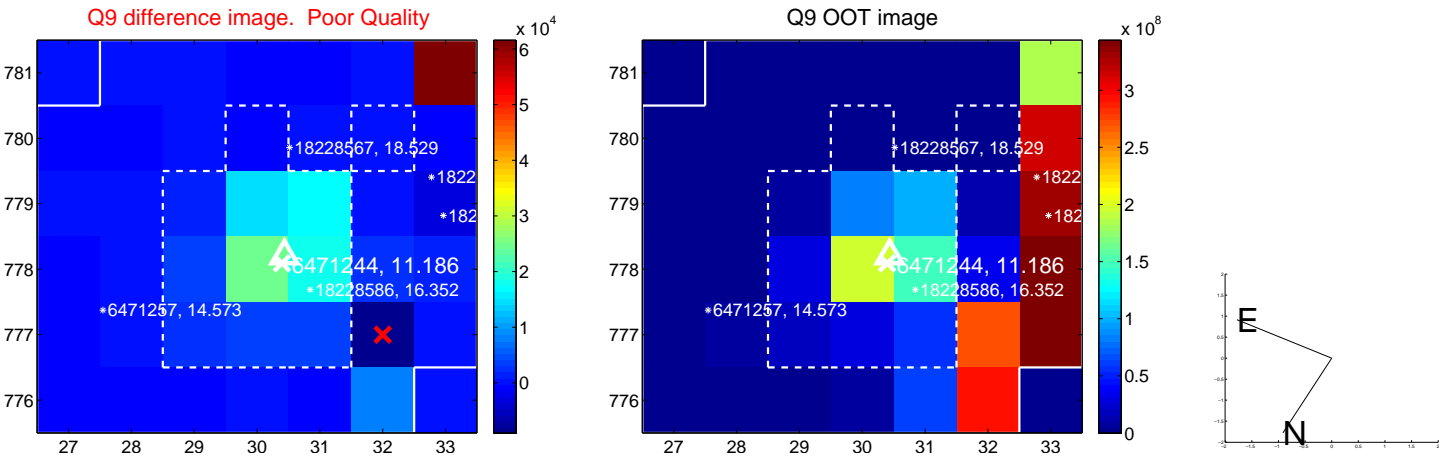
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



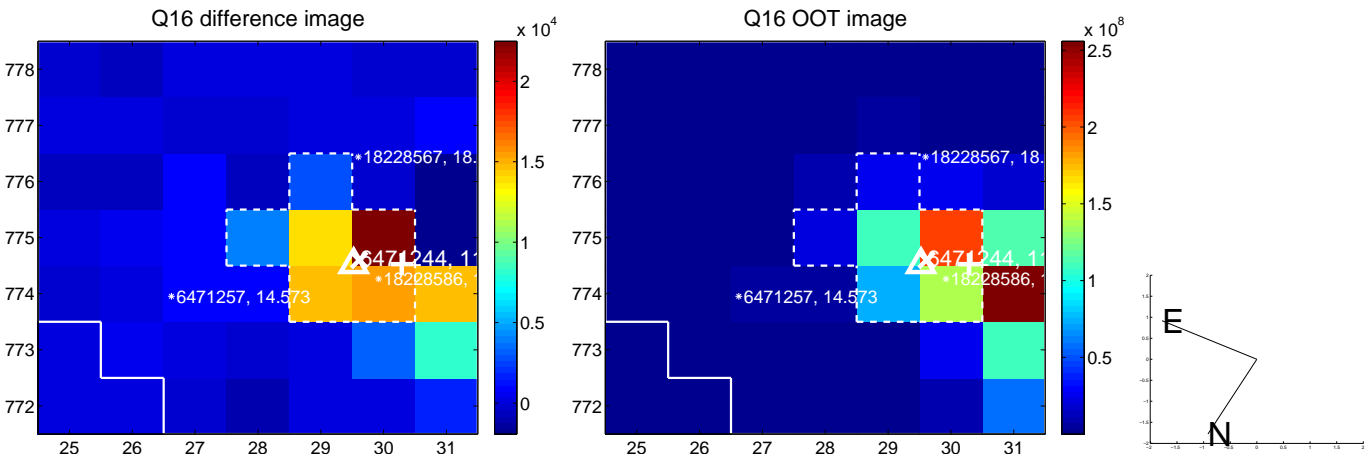
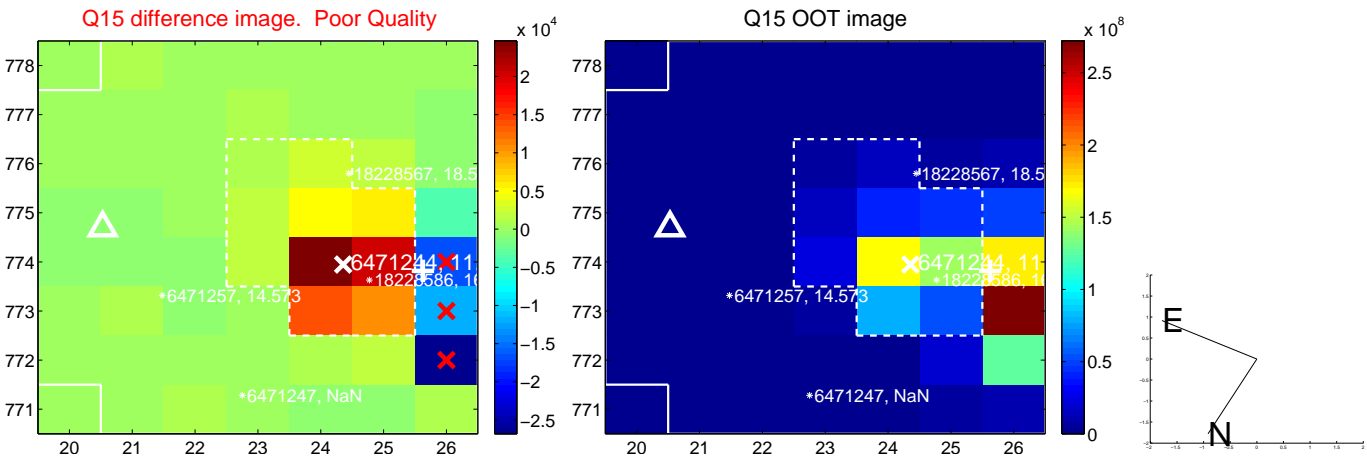
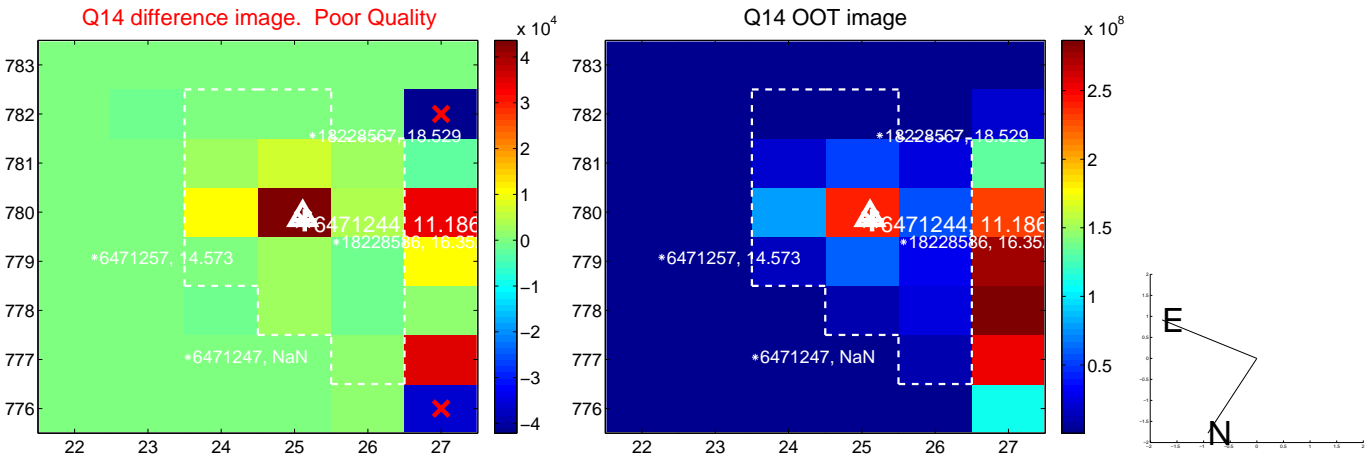
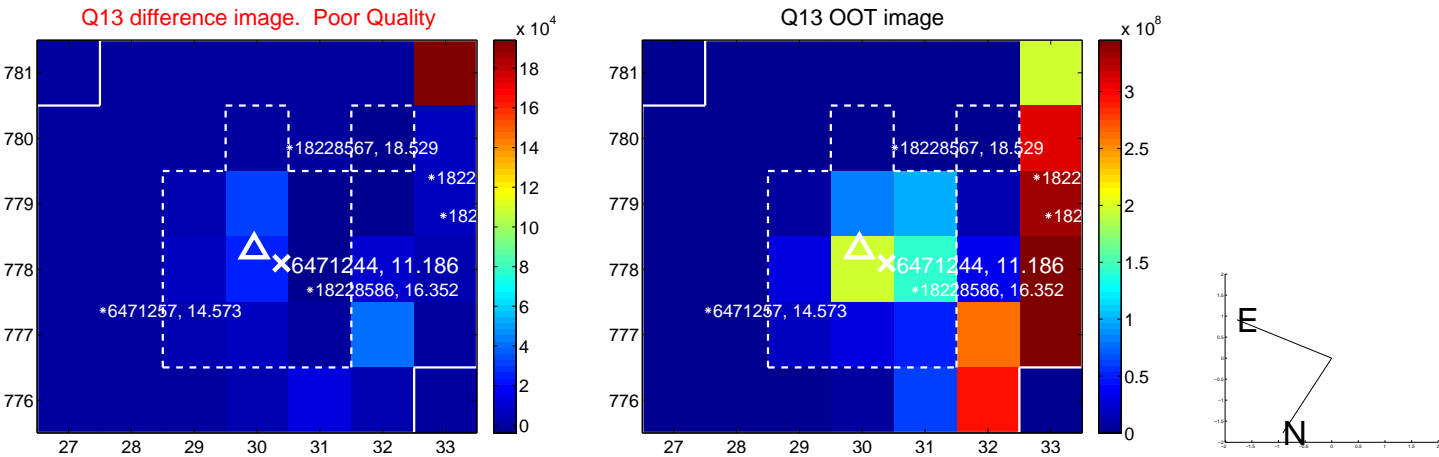
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



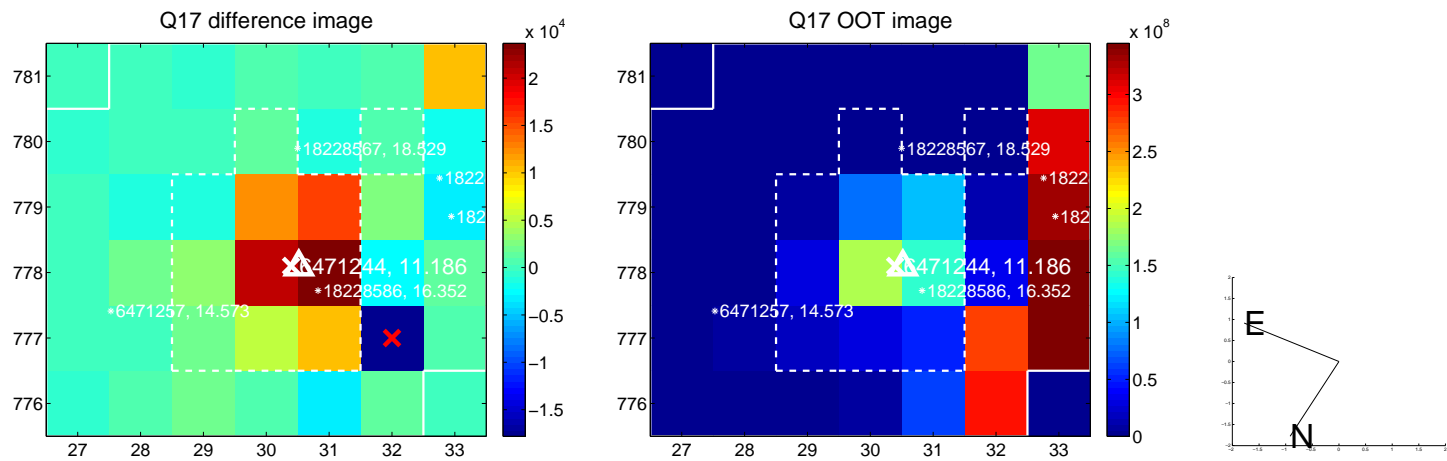
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



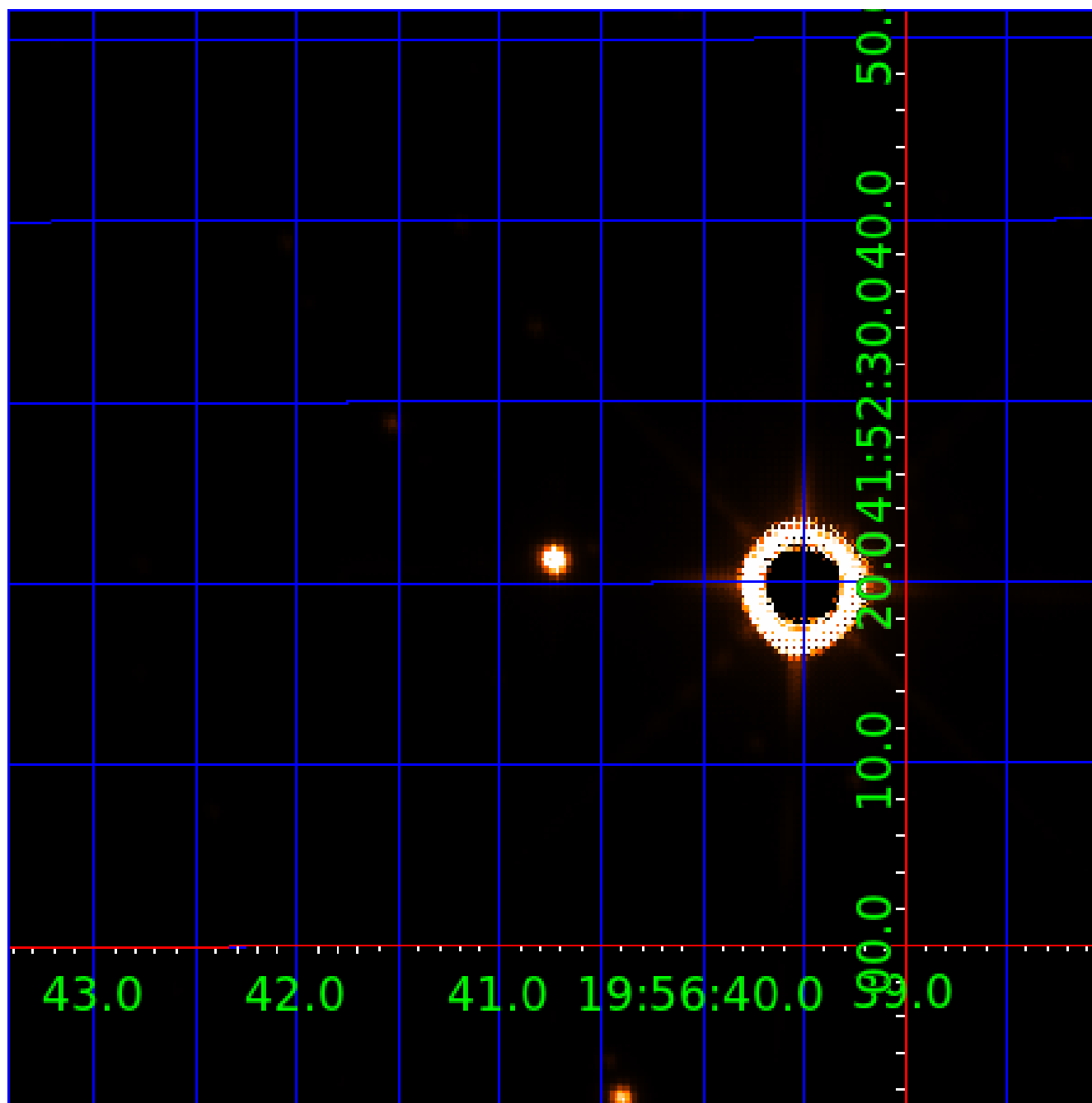
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006471244

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})
006471244-01	OBS	No	1.912071	131.876531	3.5	0.777	7.6	1.4	1.60	7345	0.32	6079.10
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006471244-03	OBS	No	626.964695	140.138109	165.3	35.318	13.1	5.0	1.60	7345	2.10	2.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471244-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006471244-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_SATURATED
006471244-03	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—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

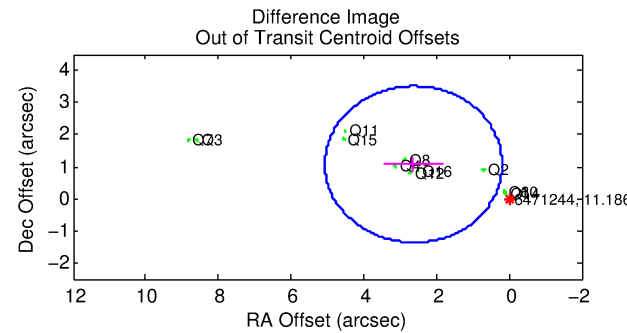
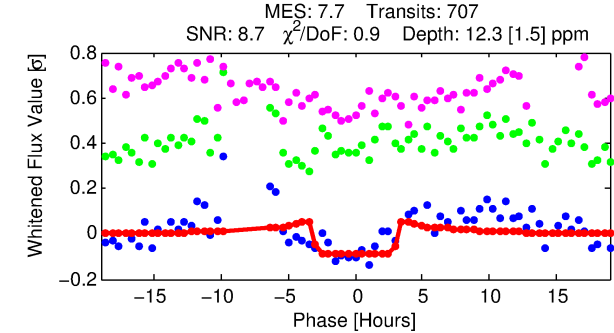
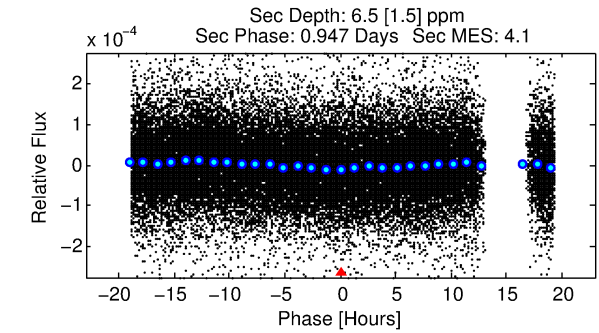
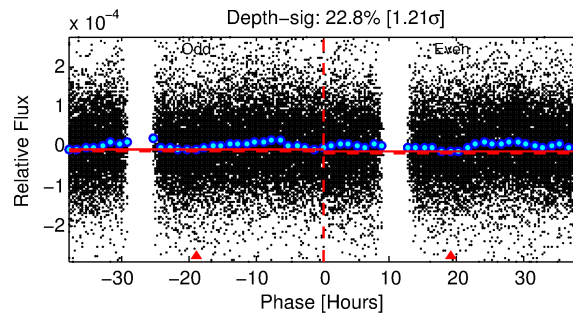
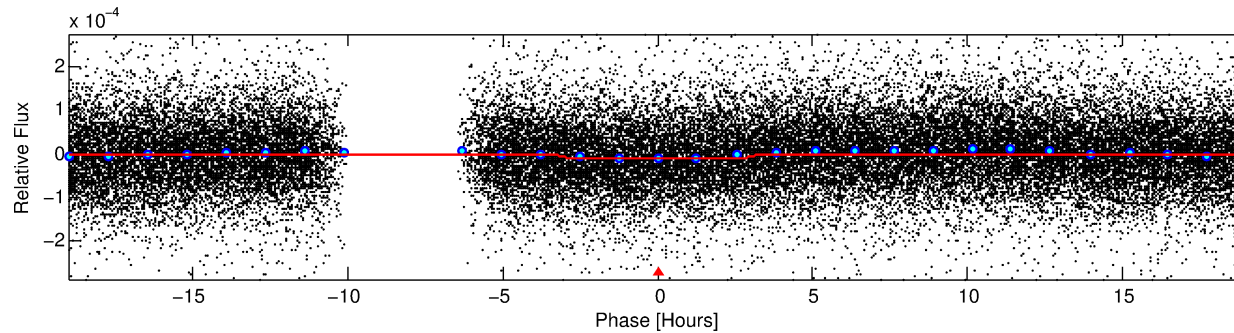
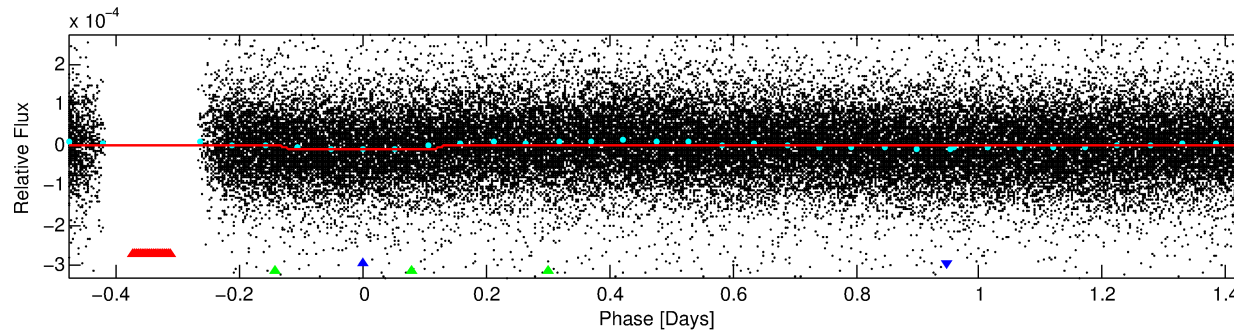
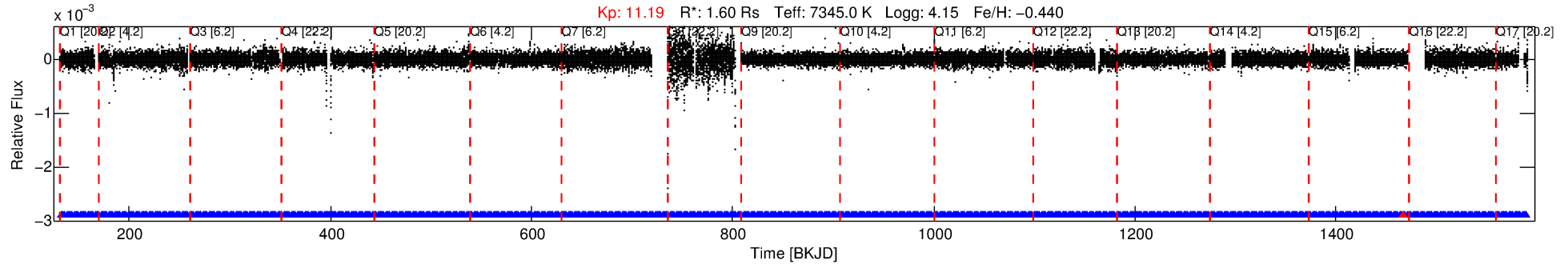
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006471244-02

No Significant Match Found

DV One-Page Summary

KIC: 6471244 Candidate: 2 of 3 Period: 1.912 d



DV Fit Results:

Period = 1.91215 [0.00002] d
Epoch = 132.1897 [0.0045] BKJD
Rp/R* = 0.0033 [0.0009]
a/R* = 2.29 [3.15]
b = 0.30 [5.16]
Seff = 6078.77 [2190.18]
Teq = 2252 [203] K
Rp = 0.57 [0.23] Re
a = 0.0332 [0.0078] AU
Ag = 11.92 [8.34] [1.31 σ]
Teffp = 6468 [1033] K [4.00 σ]

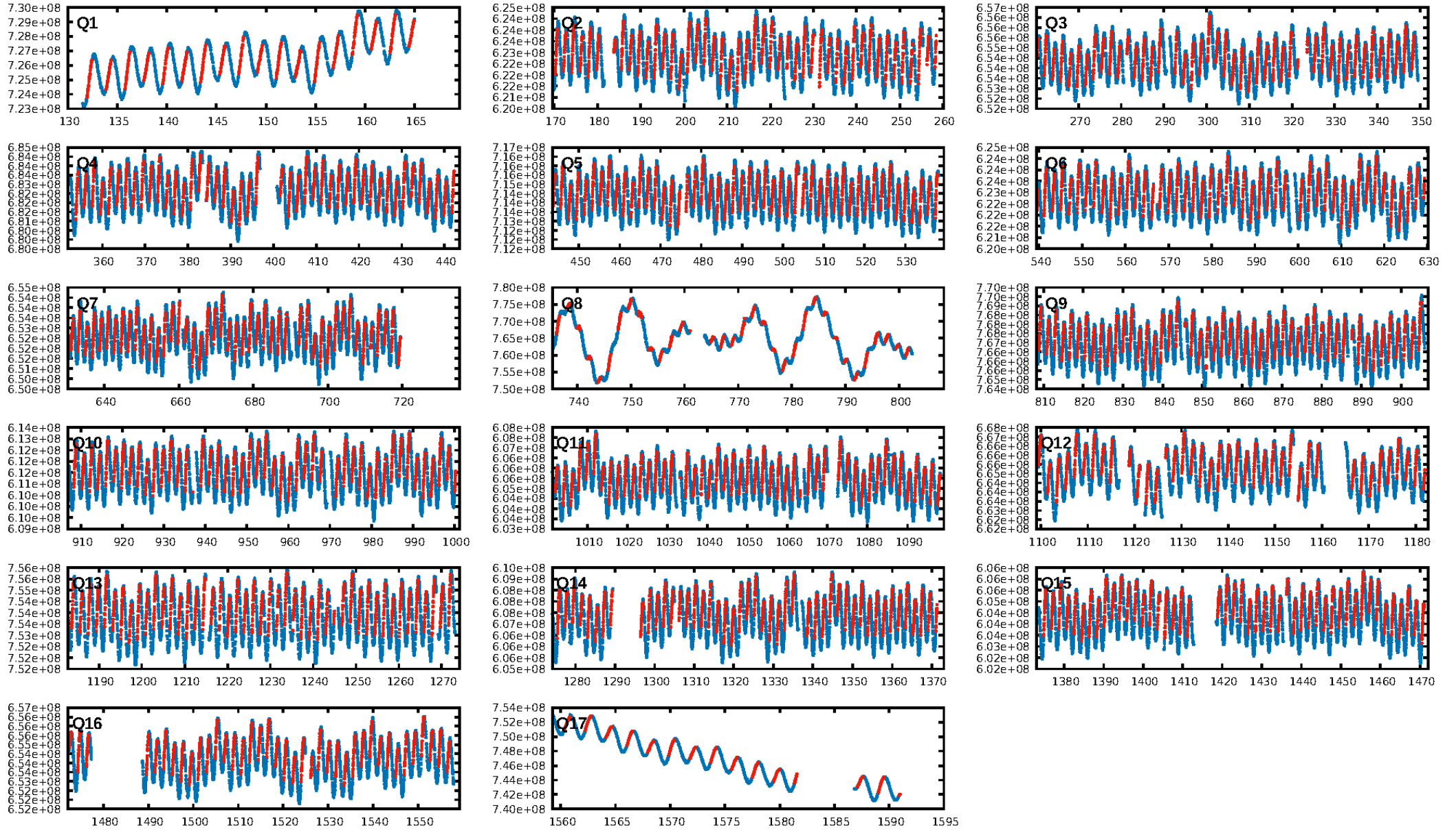
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [418.05 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.90e-12
RollingBand-fgt: 1.00 [674/675]
GhostDiagnostic-chr: -107.6
Centroid-sig: 39.7%
Centroid-so: 0.952 arcsec [0.26 σ]
OotOffset-rm: 2.843 arcsec [3.50 σ]
KicOffset-rm: 0.133 arcsec [0.53 σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 0.00 [0/17]

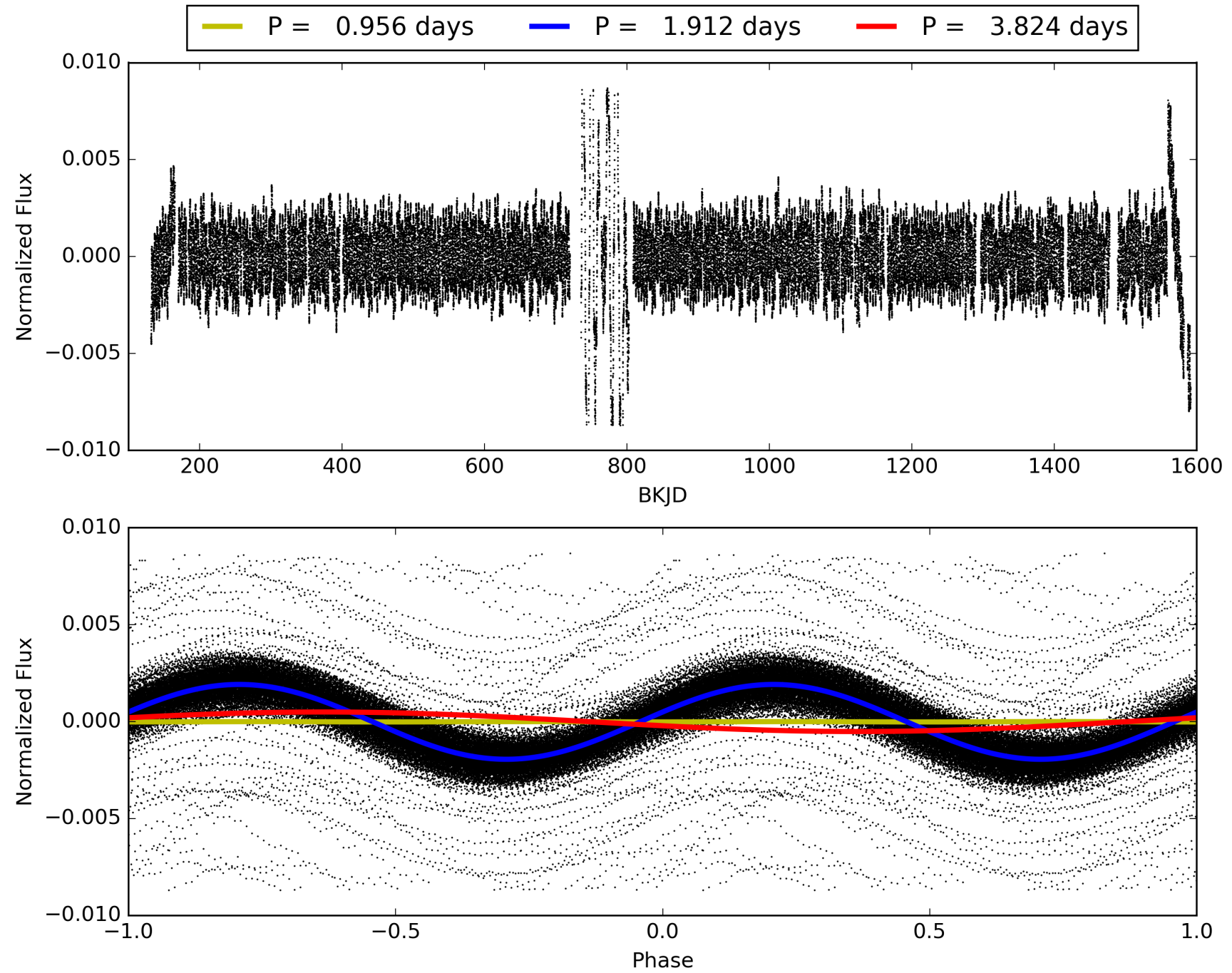
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:07:54 Z

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

TCE 006471244-02, PDC Light Curves

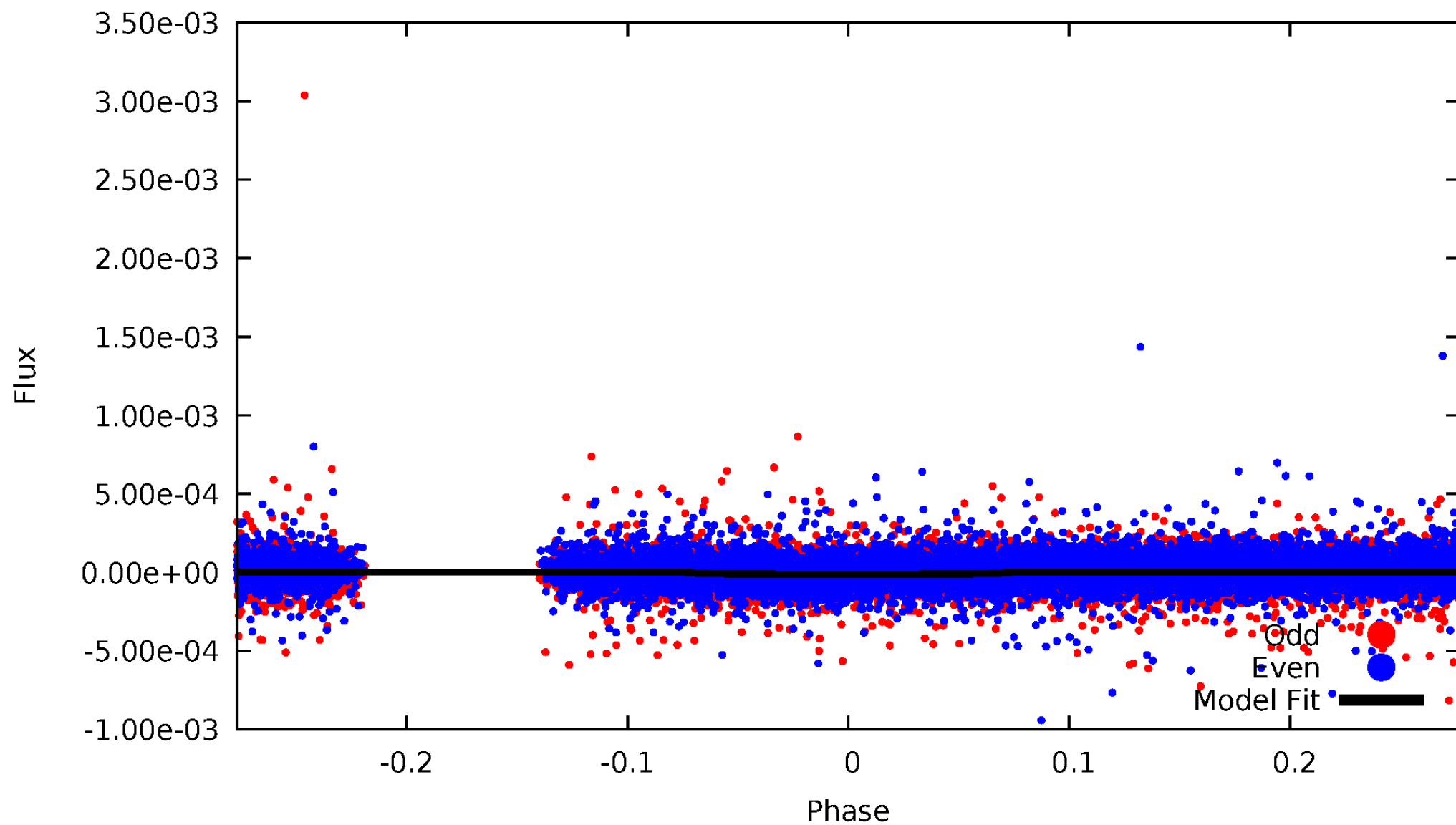


TCE 006471244-02



DV Odd/Even

TCE 006471244-02

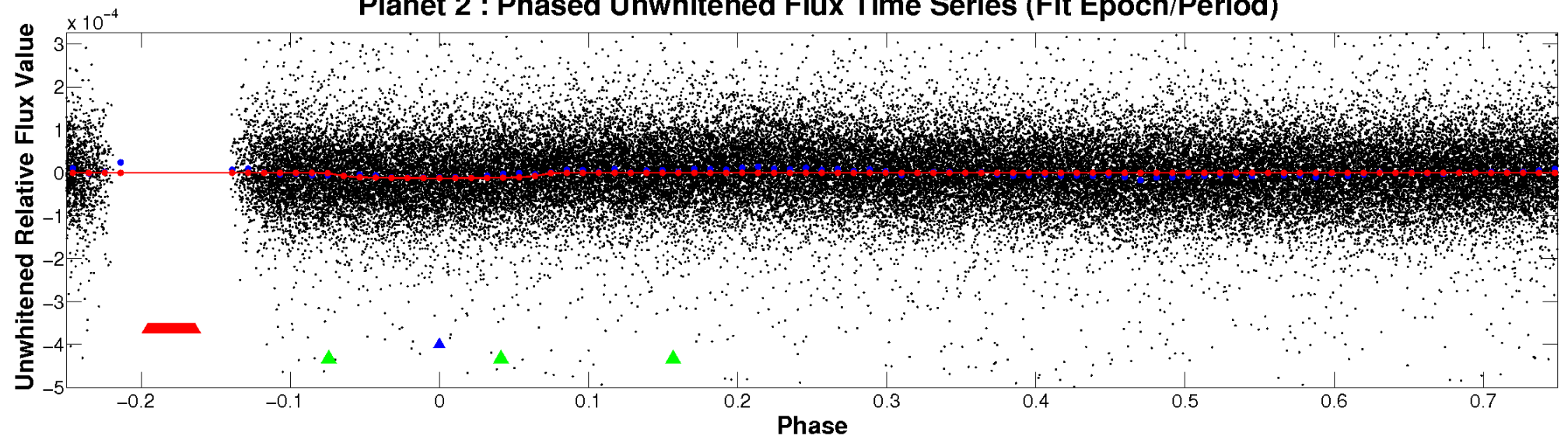


ALT Odd/Even

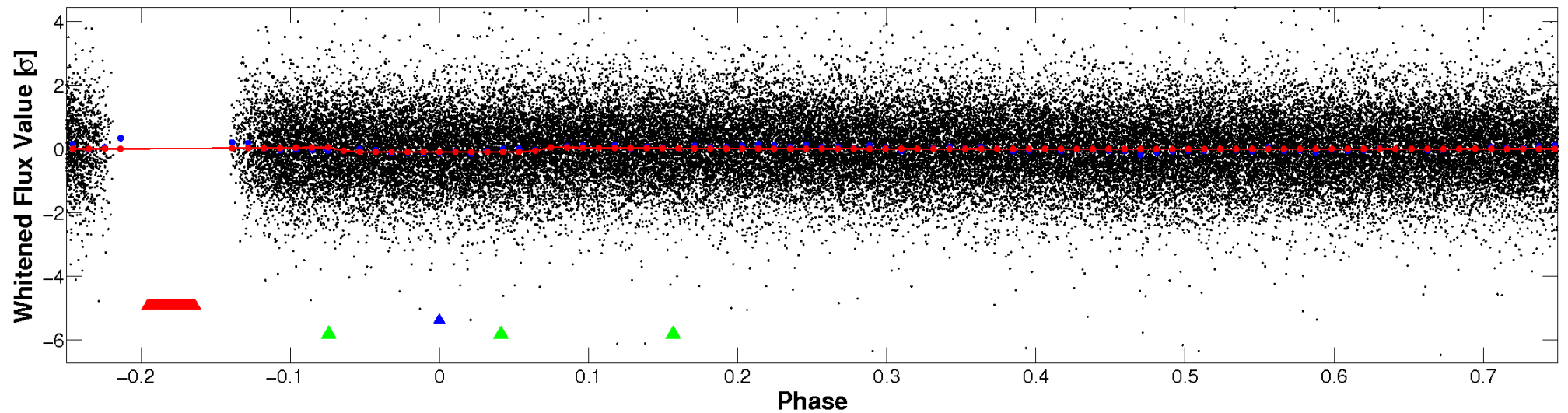
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

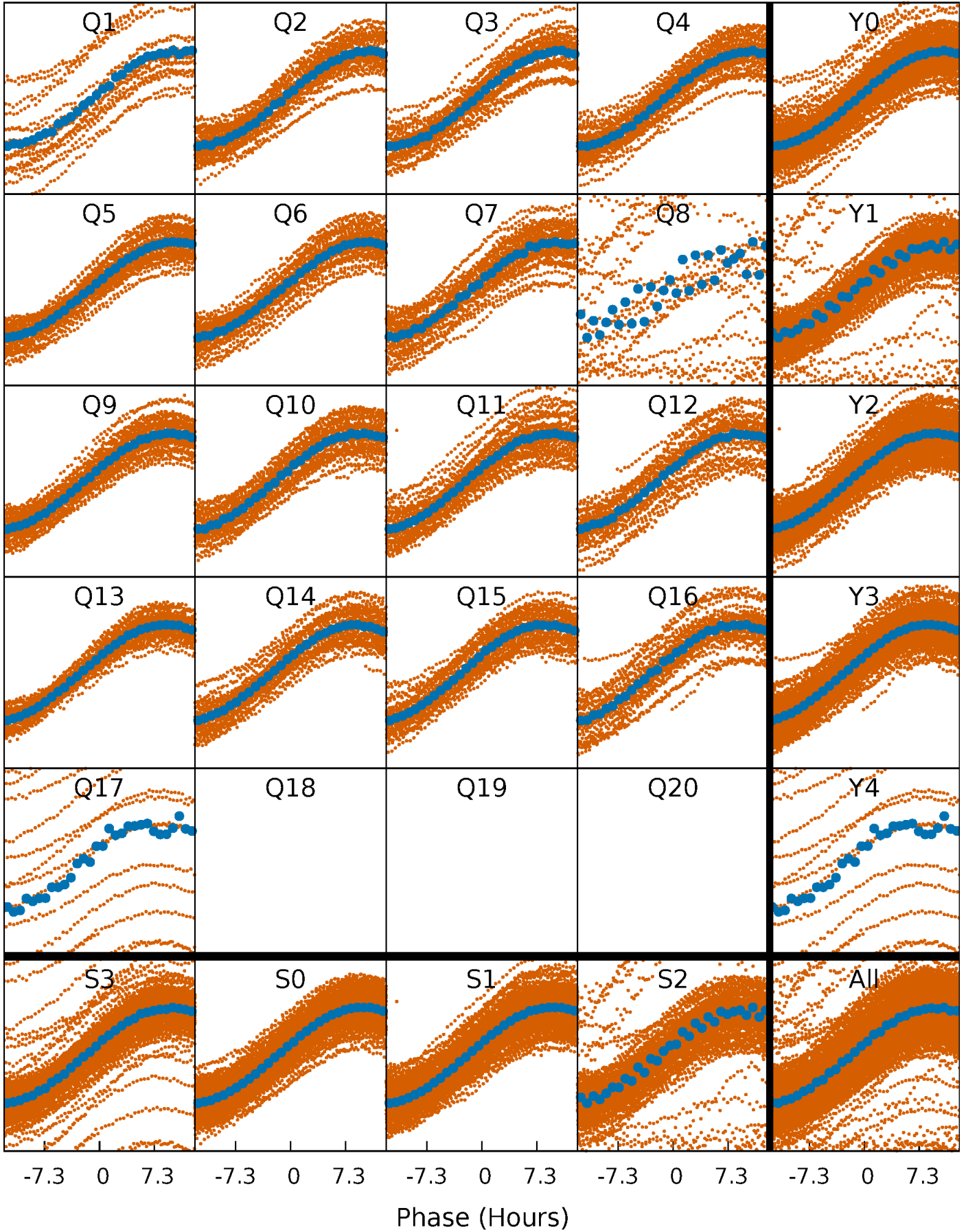


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



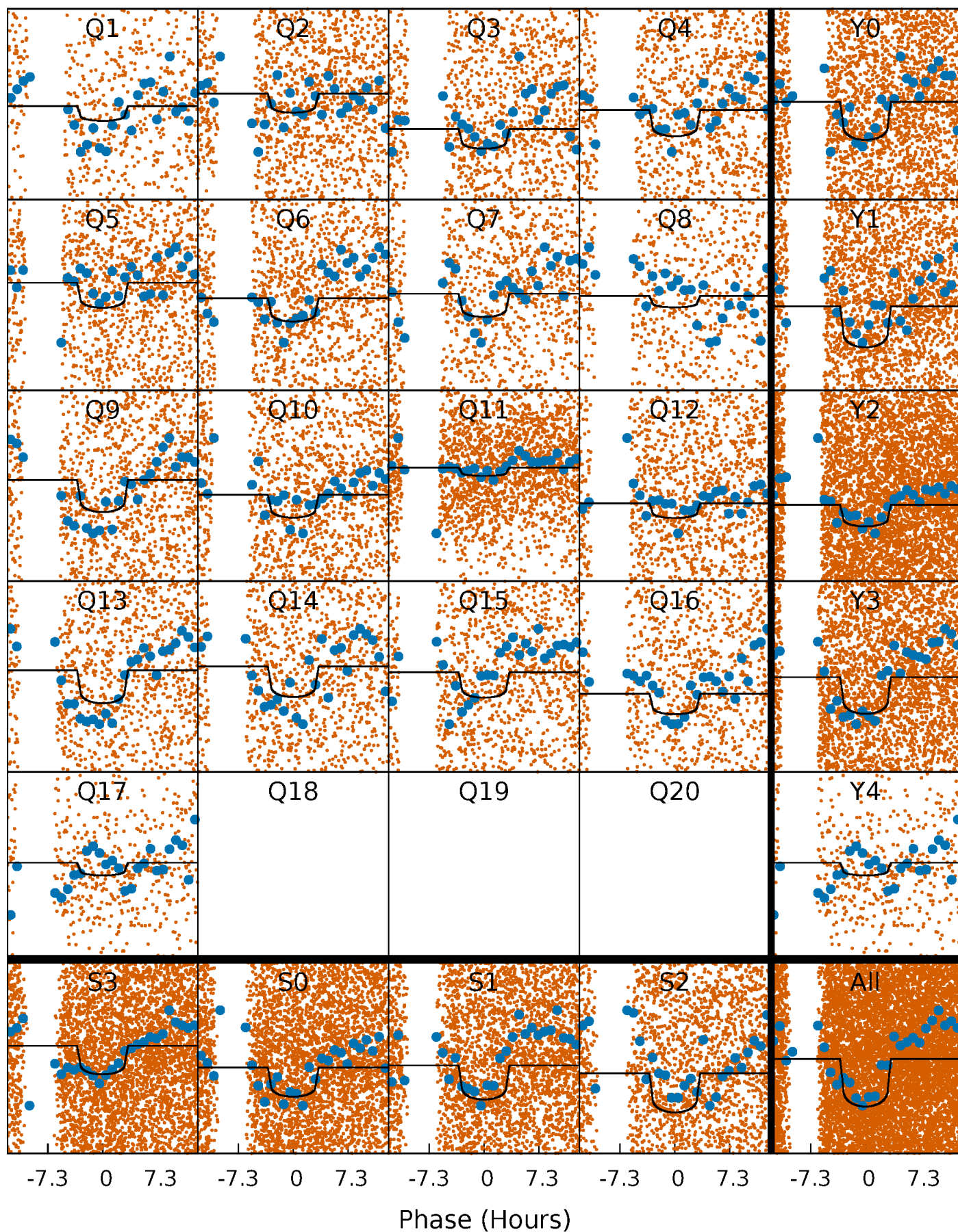
PDC Quarter-Phased Transit Curves

TCE 006471244-02 P= 1.912151 Days $T_0=132.189728$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006471244-02 P= 1.912151 Days $T_0=132.189728$ (BKJD)

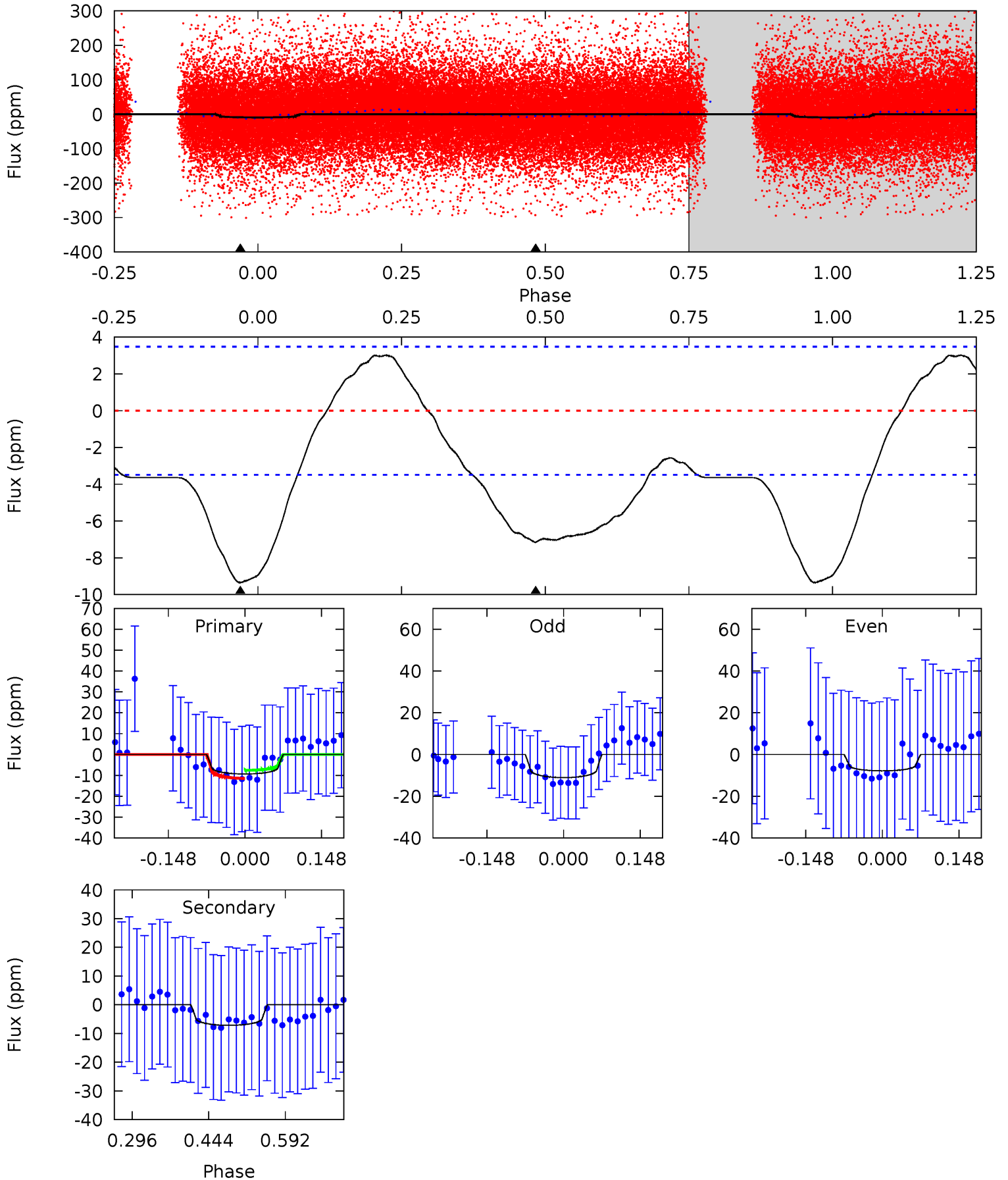


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006471244-02, P = 1.912151 Days, E = 130.277577 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	9.19	0	0	4.48	1.45	3.48	12.0	12.0	9.19	9.19	2.10	0.87	0.24	2.50



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006471244

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+233}_{-285}	$4.154^{+0.170}_{-0.170}$	$-0.440^{+0.250}_{-0.350}$	$1.605^{+0.467}_{-0.340}$	$1.341^{+0.206}_{-0.206}$	$0.457^{+0.404}_{-0.212}$
	+3%/-4%	+4%/-4%	+57%/-80%	+29%/-21%	+15%/-15%	+88%/-46%
Source	KIC0	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 006471244-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 1	$0.57^{+0.21}_{-0.17}$	3141^{+255}_{-210}	6567^{+1421}_{-884}	13^{+14}_{-6}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

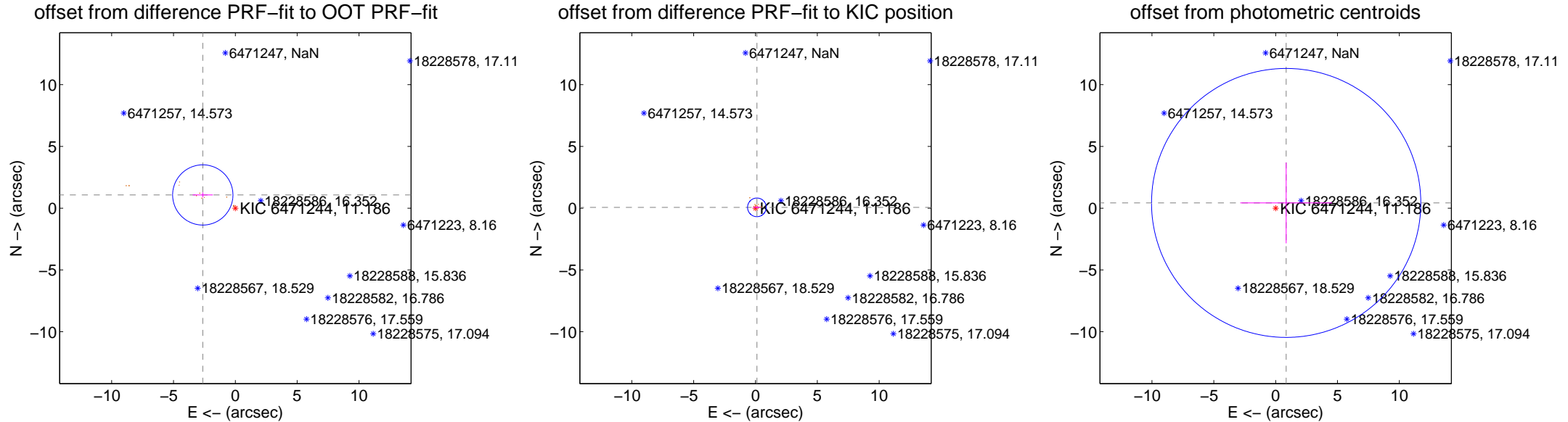
DV Centroid Data

Supplemental centroid analysis for 006471244-02. **Kepler magnitude: 11.19.** Transit SNR 8.74

There are 0 quarters with good PRF difference image offsets

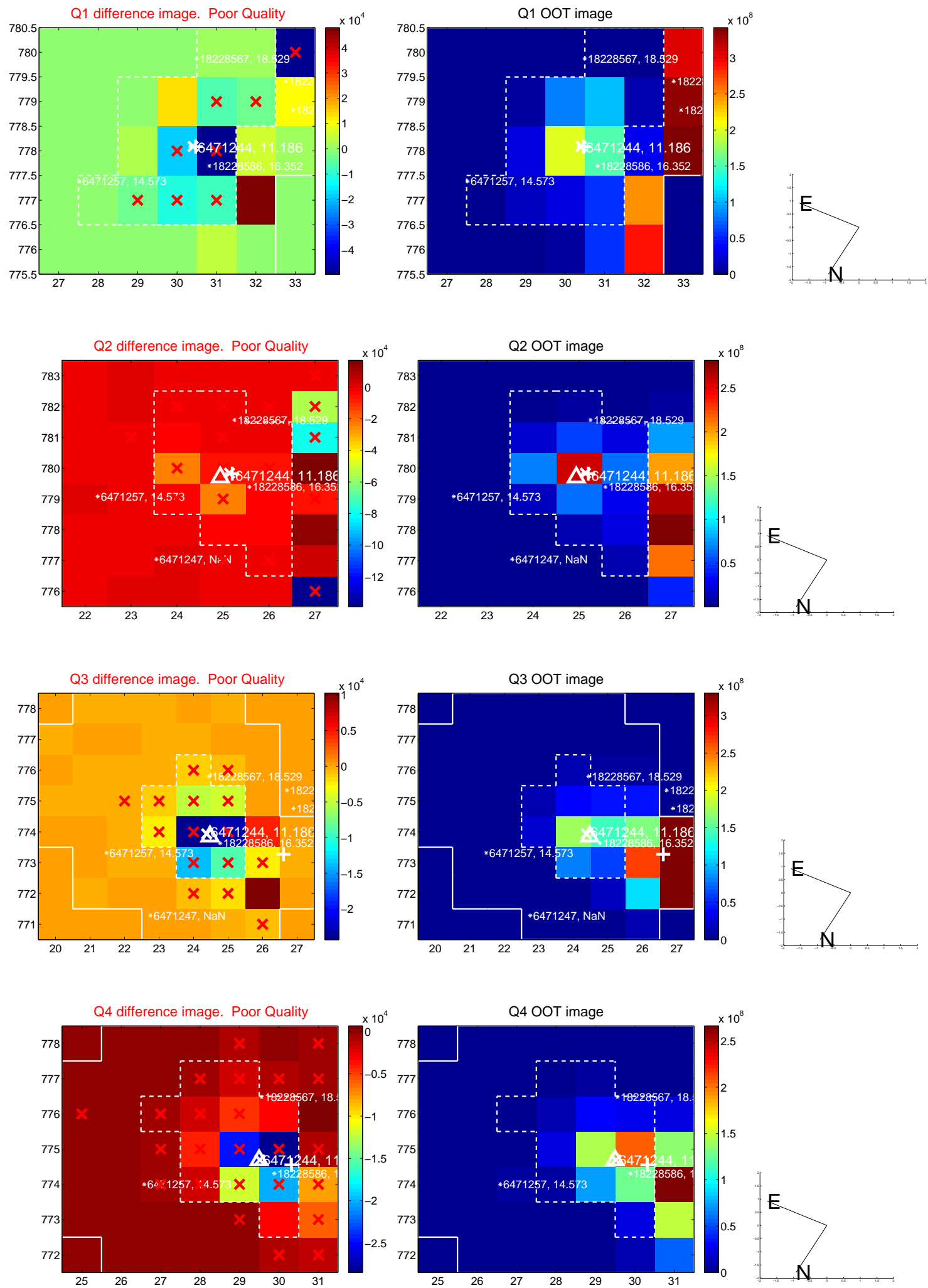
The OOT PRF centroid is offset from the target star catalog position by about 2.71 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.843 ± 0.813	3.50	2.633 ± 0.812	1.072 ± 0.201
PRF-fit source offset from KIC position	0.133 ± 0.252	0.53	-0.115 ± 0.304	0.066 ± 0.088
photometric centroid source offset	0.95 ± 3.63	0.26	-0.85 ± 3.71	0.42 ± 3.27

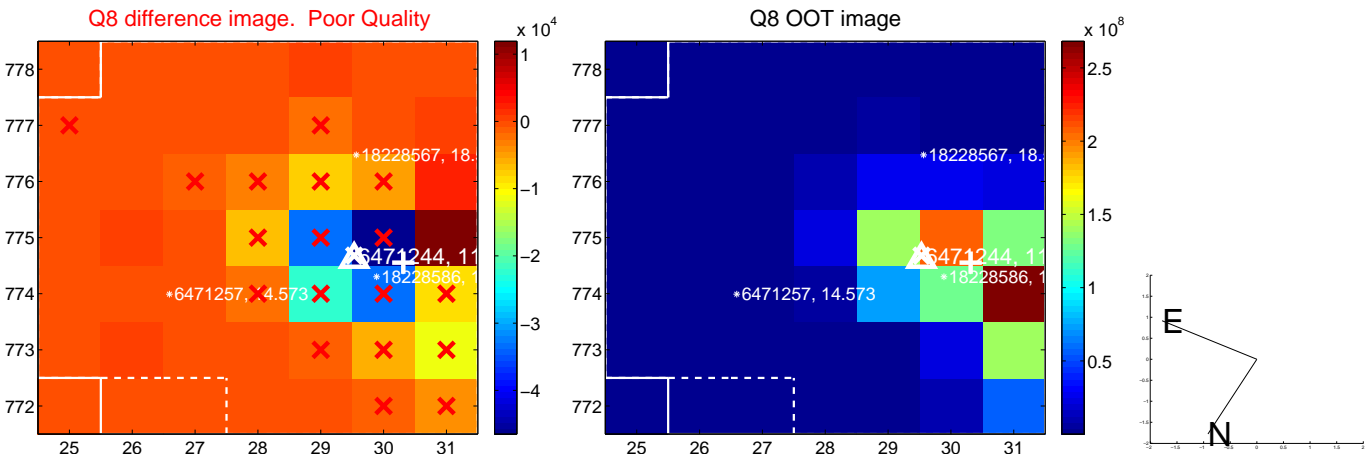
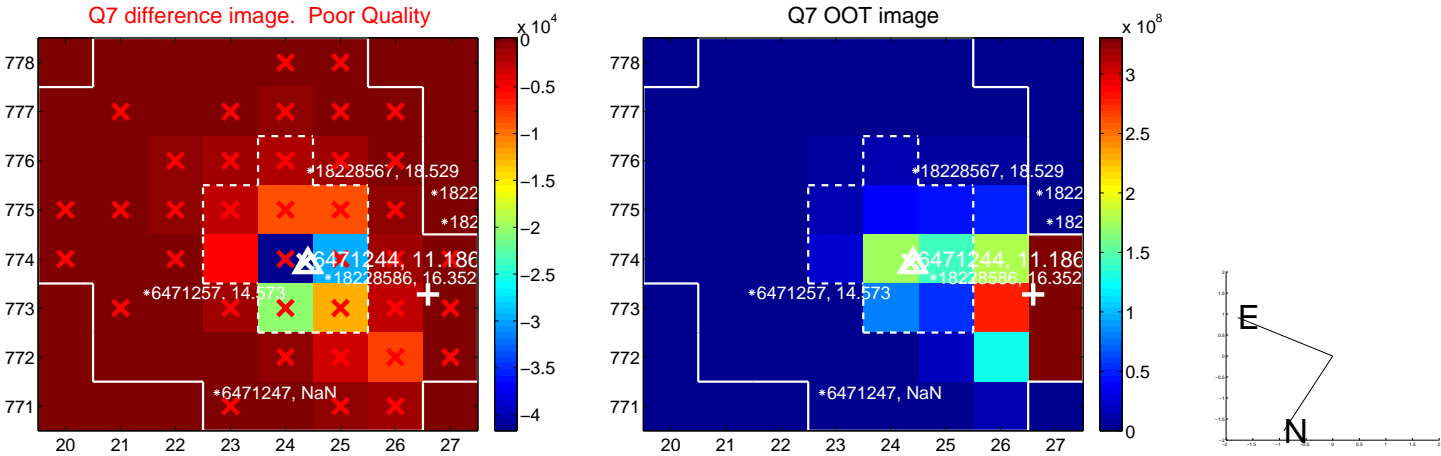
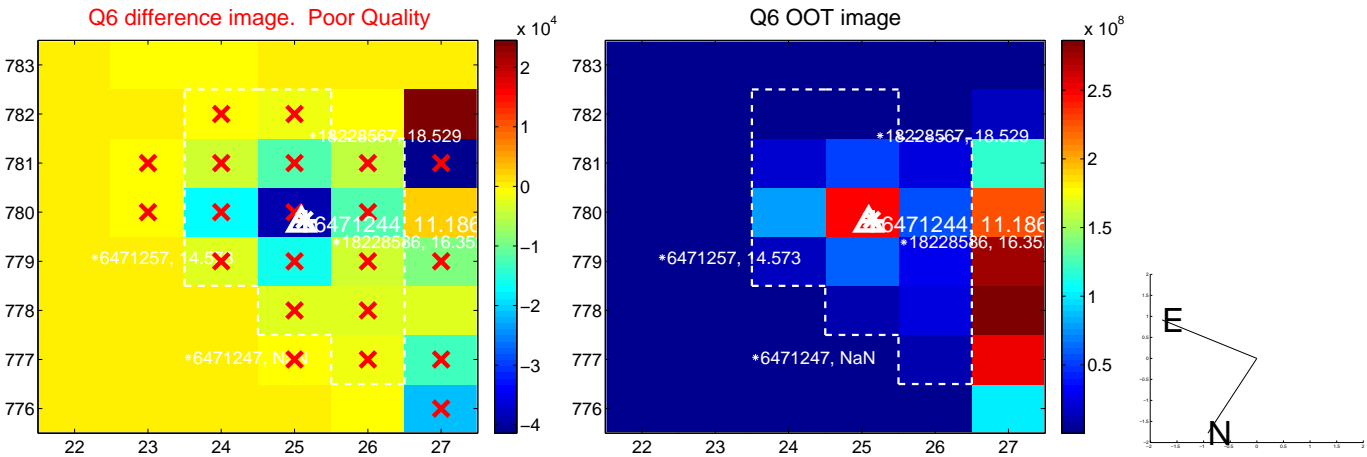
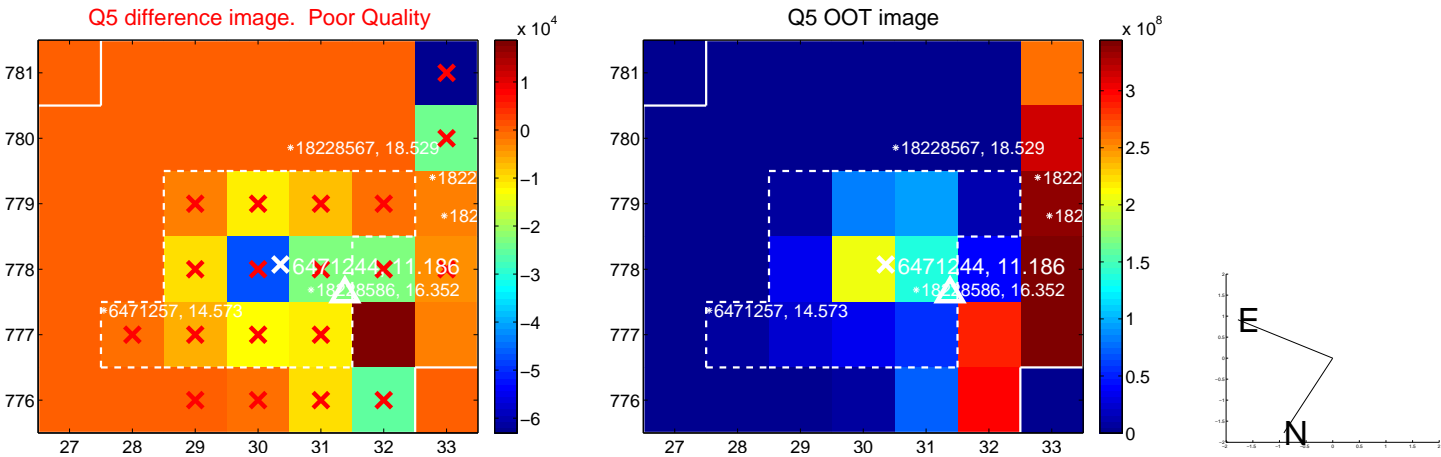


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

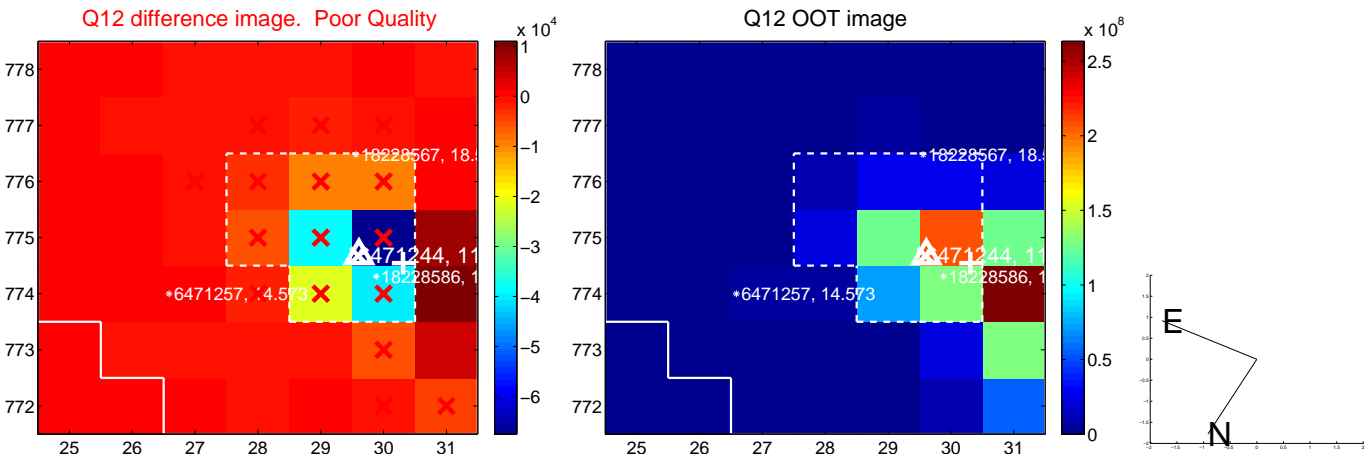
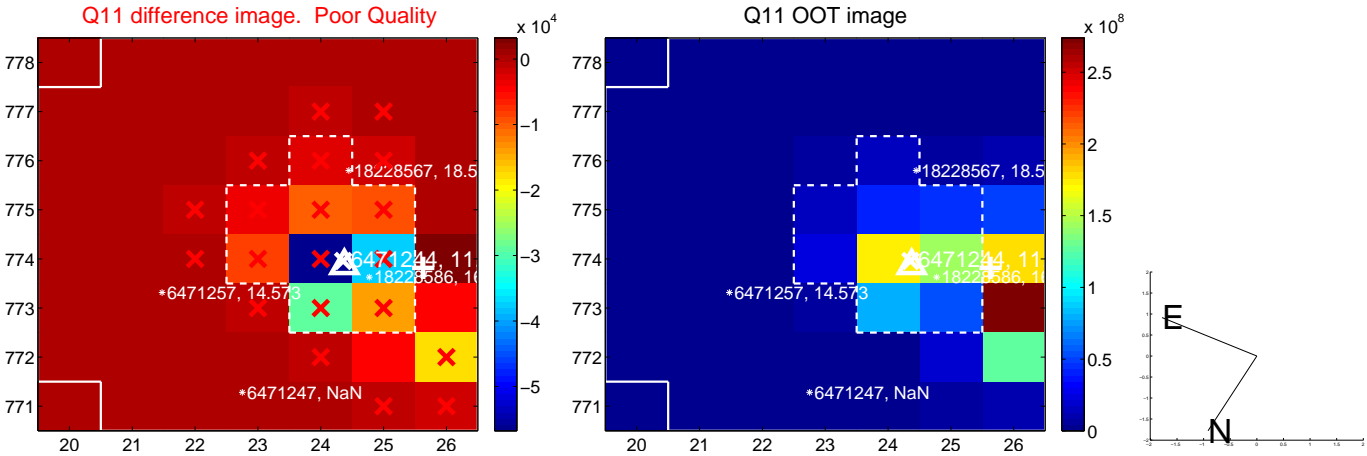
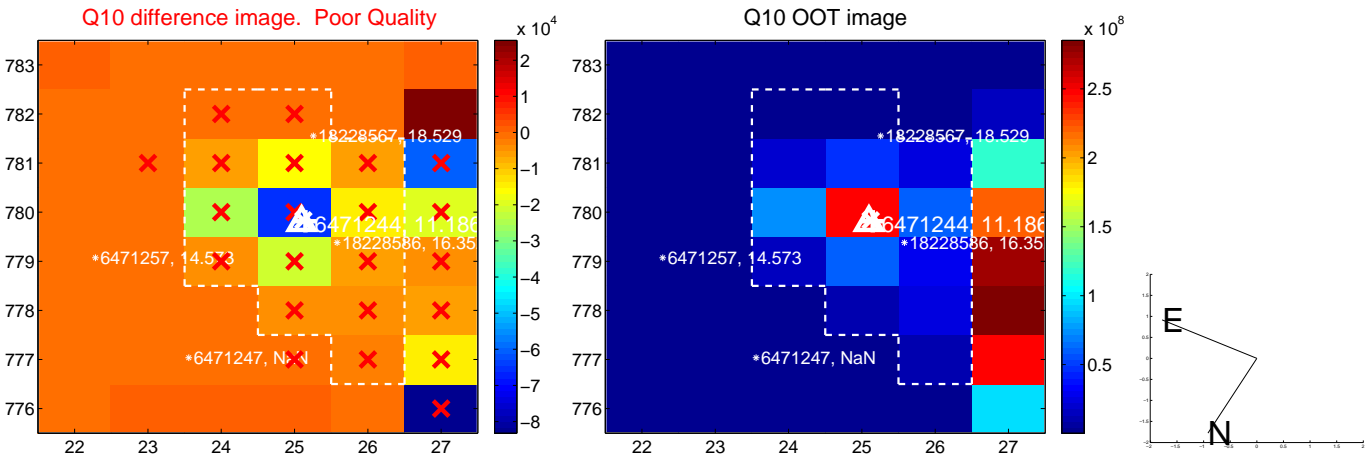
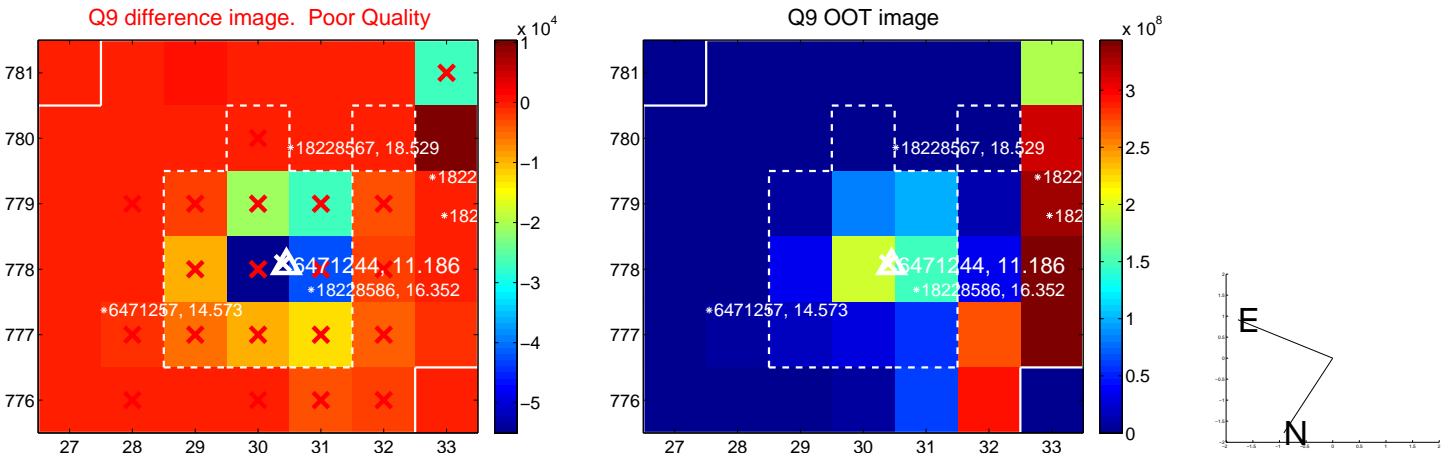
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



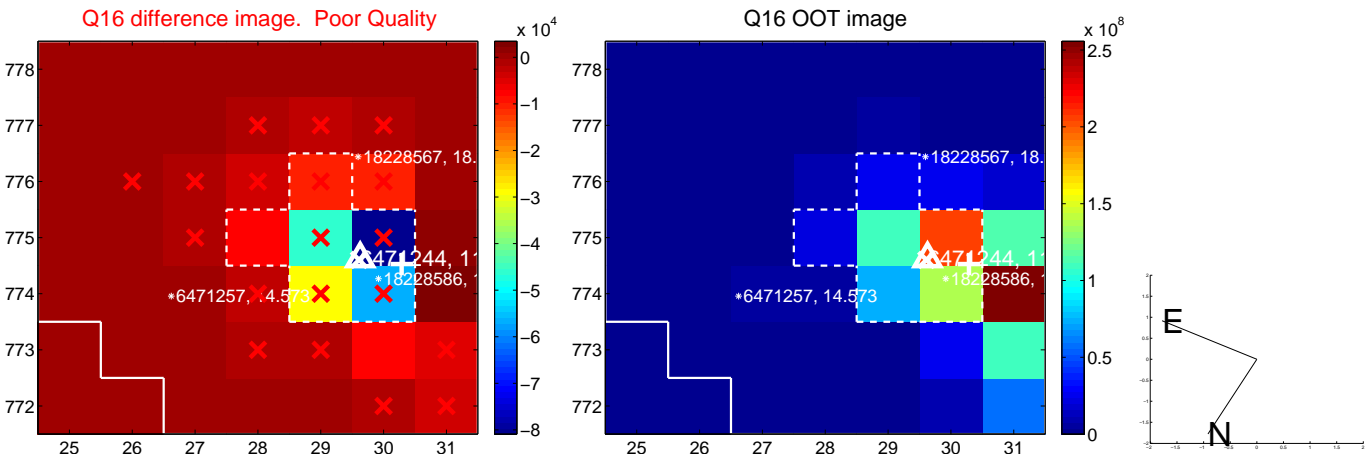
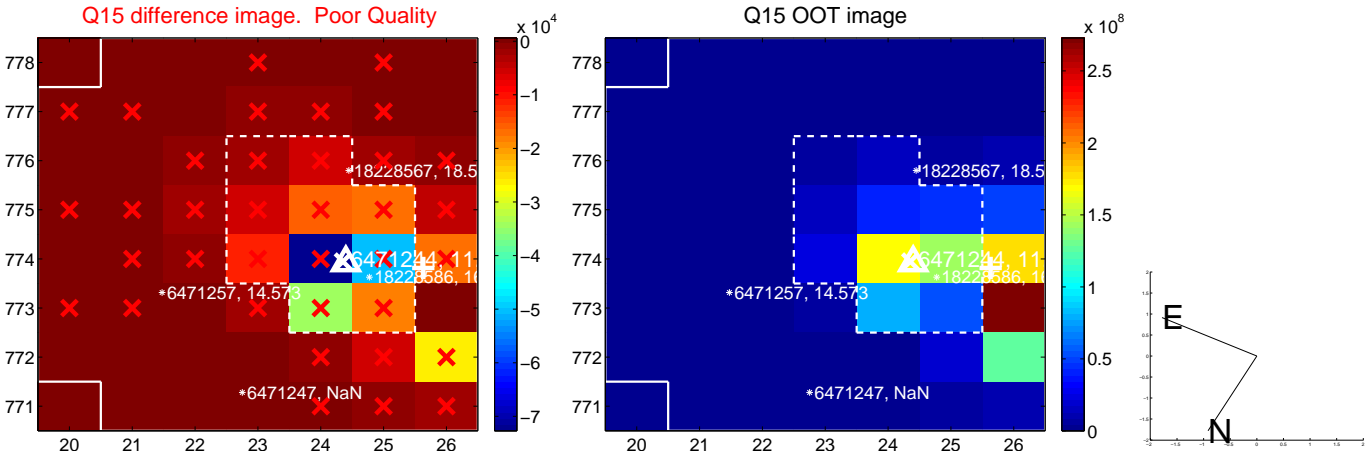
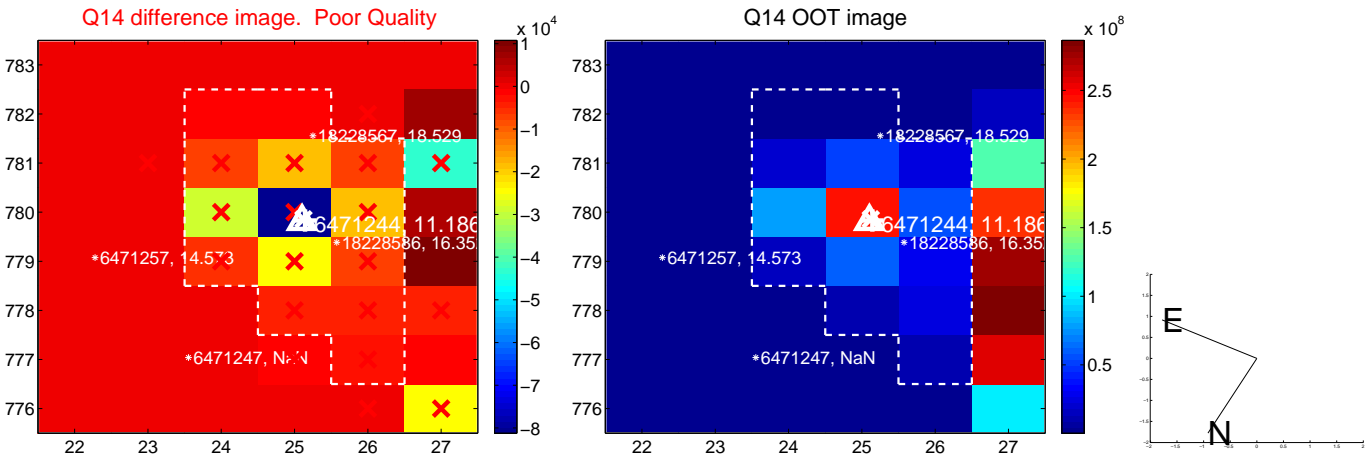
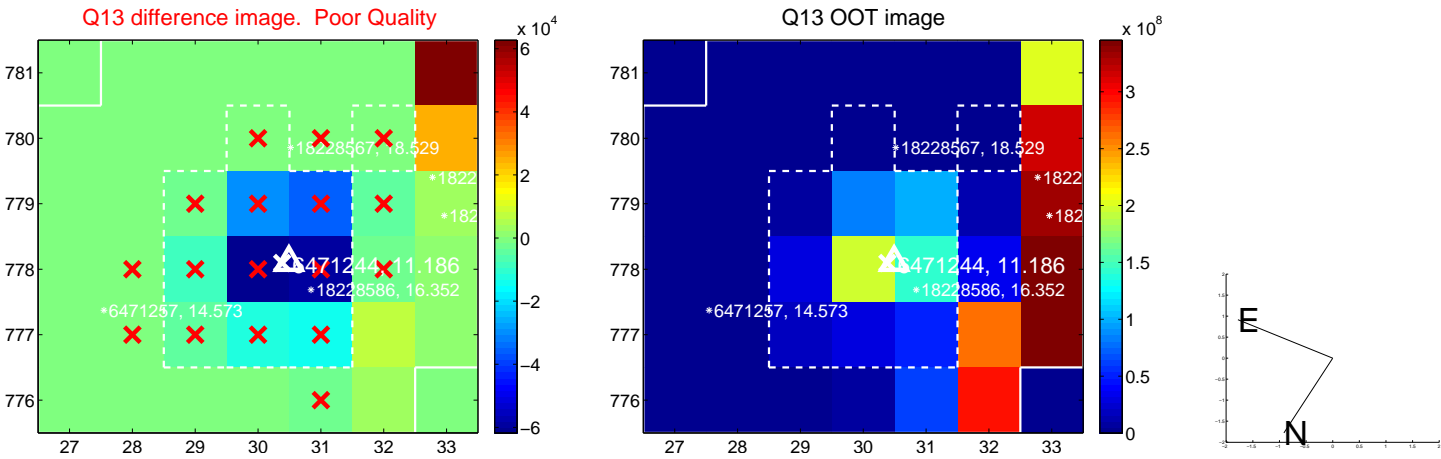
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



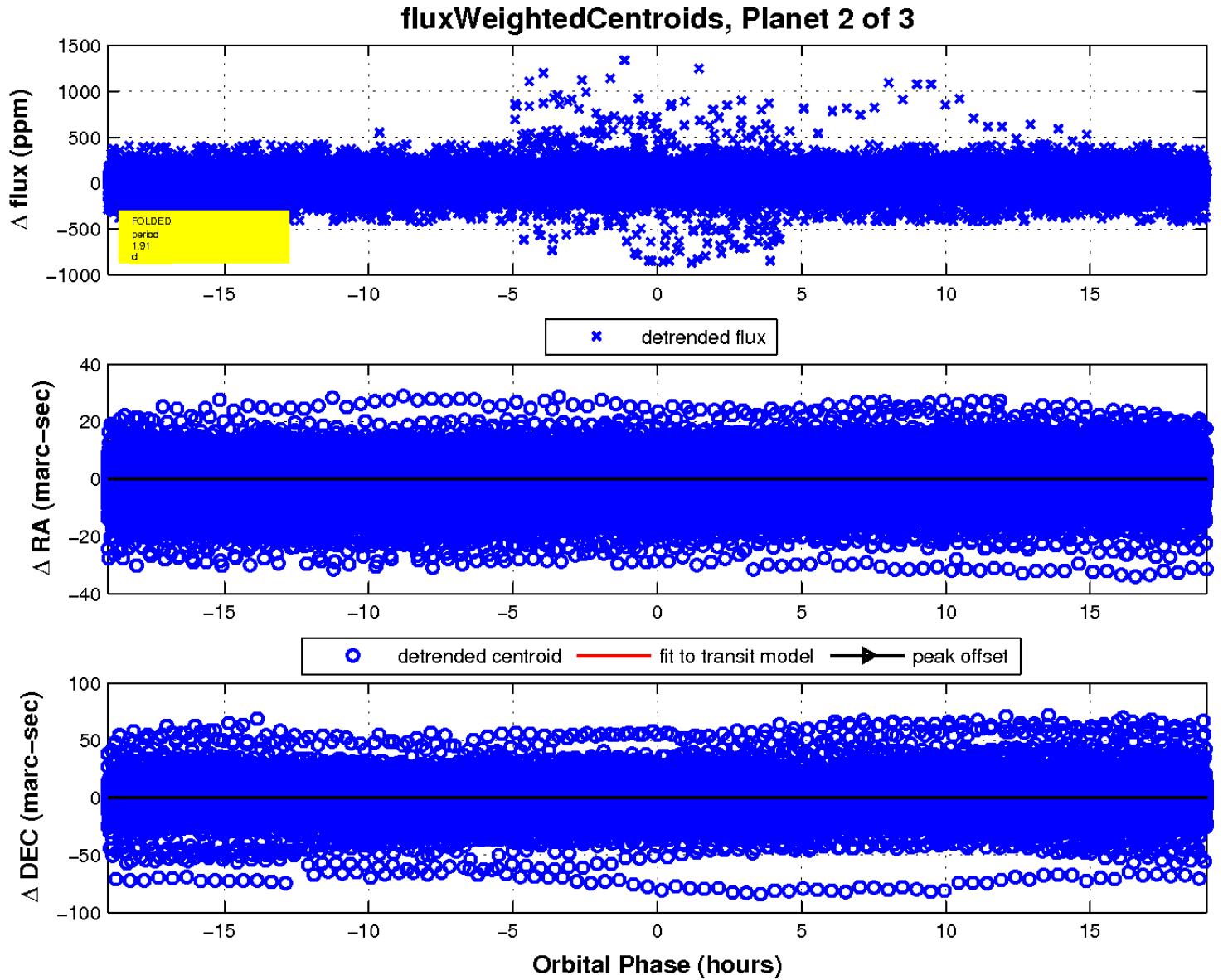
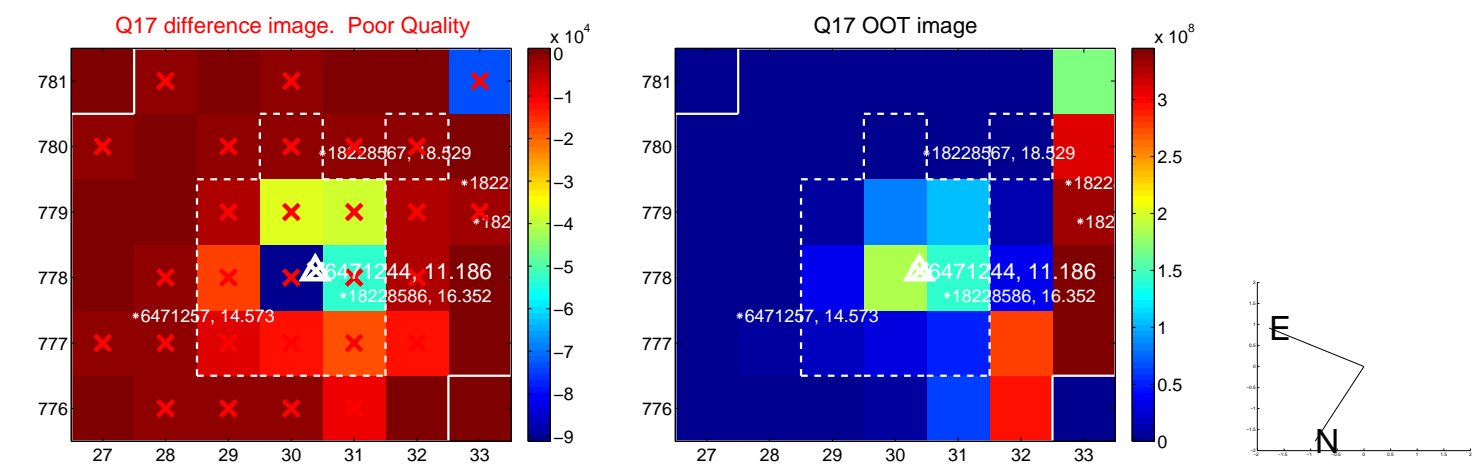
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

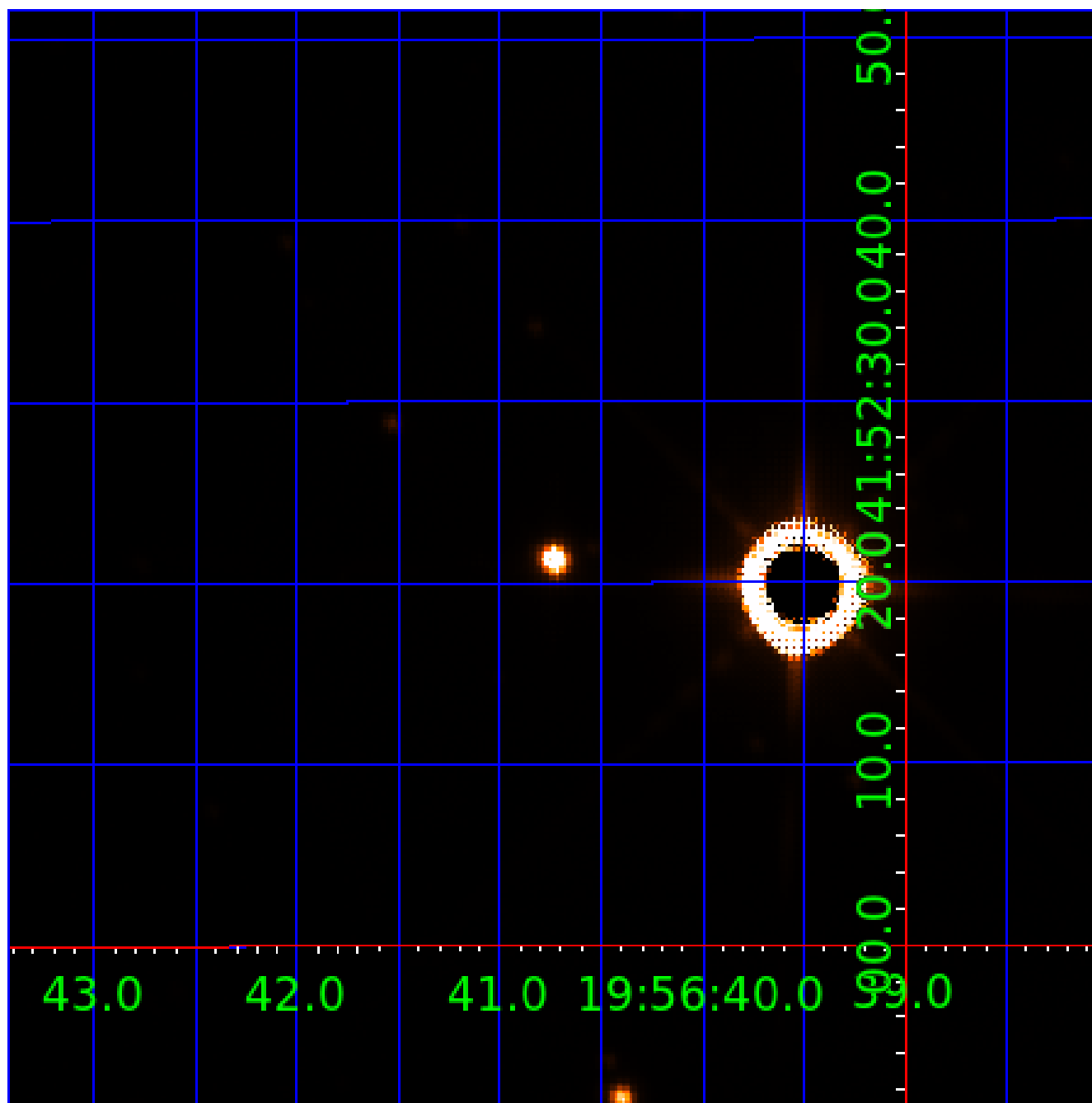


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006471244

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})
006471244-01	OBS	No	1.912071	131.876531	3.5	0.777	7.6	1.4	1.60	7345	0.32	6079.10
006471244-02	OBS	No	1.912151	132.189728	12.3	6.349	7.7	8.7	1.60	7345	0.57	6078.77
006471244-03	OBS	No	626.964695	140.138109	165.3	35.318	13.1	5.0	1.60	7345	2.10	2.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471244-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006471244-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_SATURATED
006471244-03	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—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

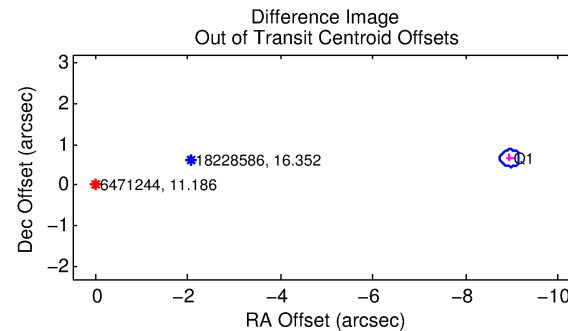
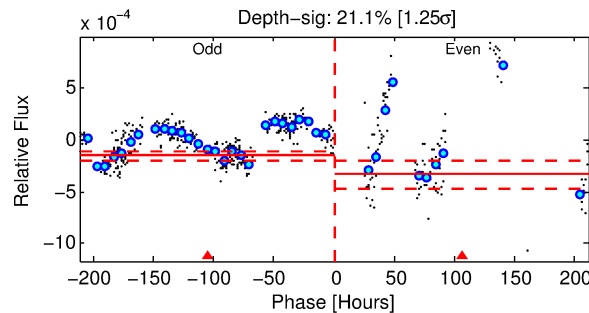
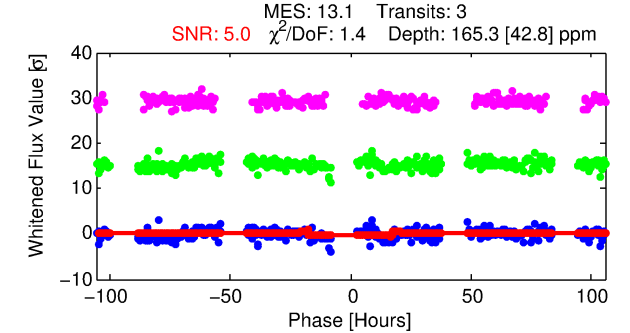
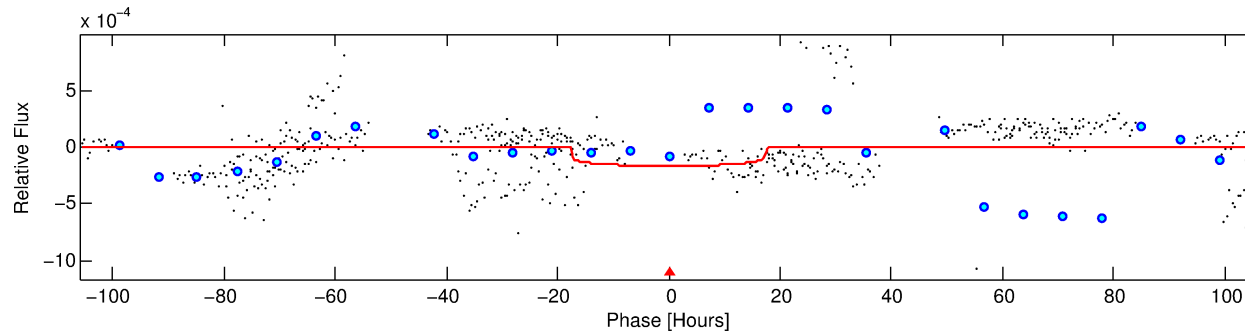
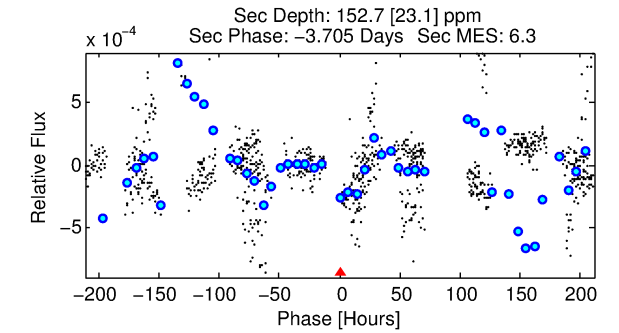
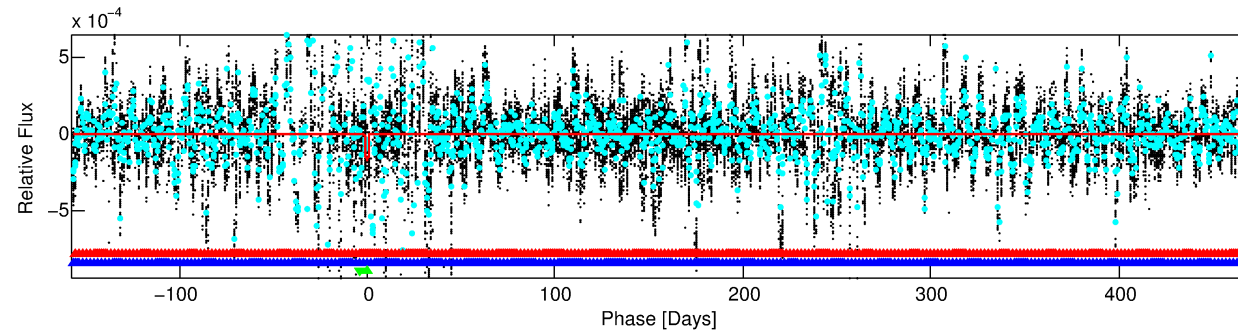
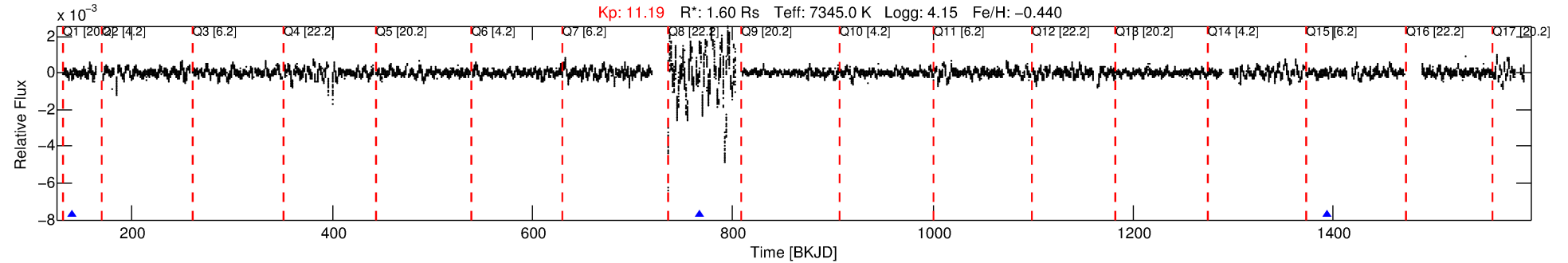
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006471244-03

No Significant Match Found

DV One-Page Summary

KIC: 6471244 Candidate: 3 of 3 Period: 626.965 d



DV Fit Results:

Period = 626.96470 [0.01180] d
Epoch = 140.1381 [0.0161] BKJD
Rp/R* = 0.0120 [0.0050]
a/R* = 135.65 [322.94]
b = 0.15 [15.18]
Seff = 2.69 [0.97]
Teq = 327 [29] K
Rp = 2.10 [1.07] Re
a = 1.5807 [0.3695] AU
Ag = 47792.04 [43789.69] [1.09σ]
Teff = 7464 [1625] K [4.39σ]

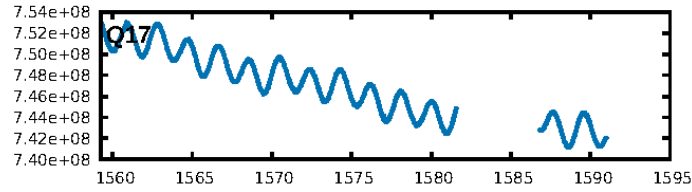
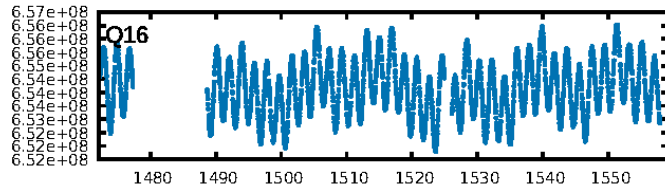
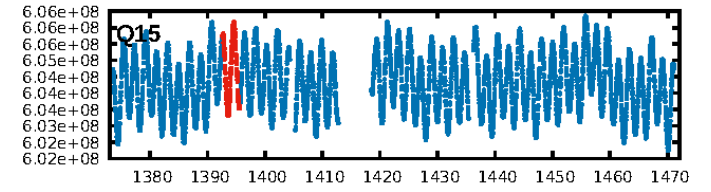
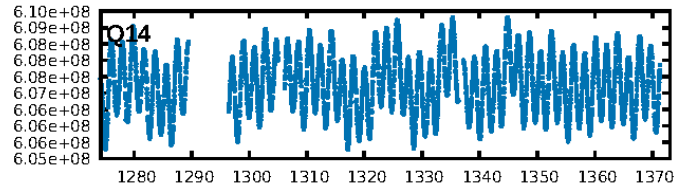
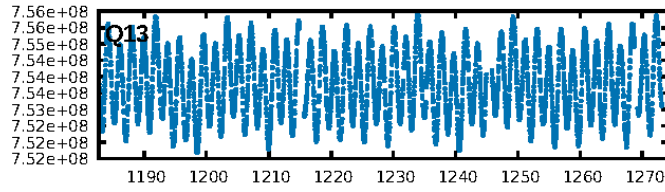
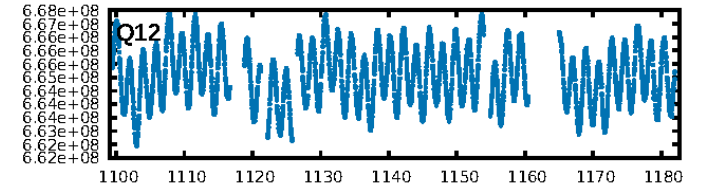
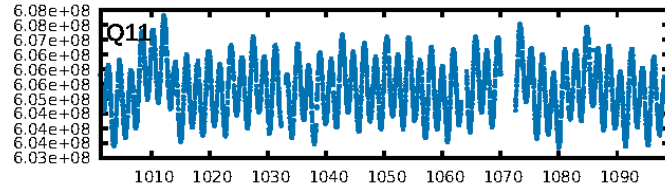
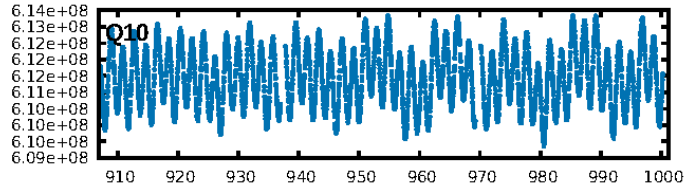
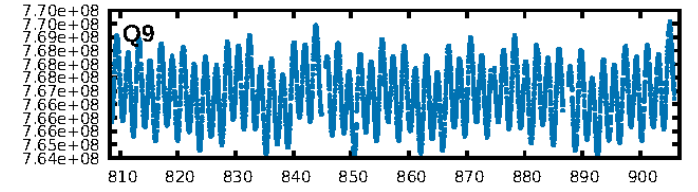
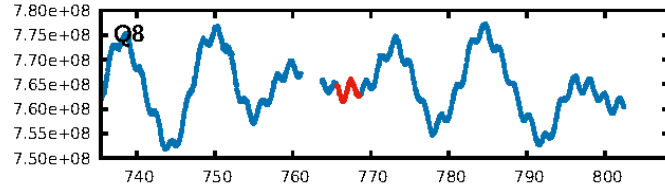
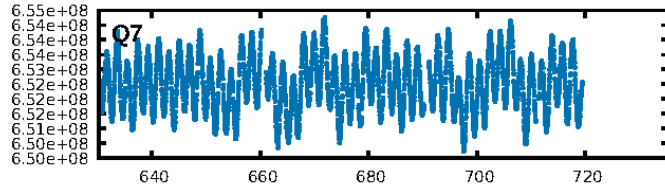
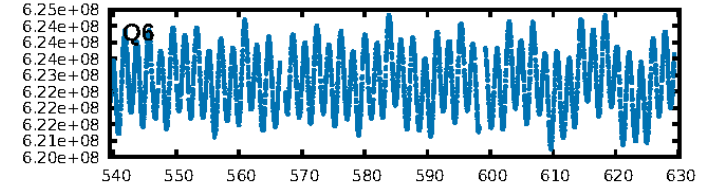
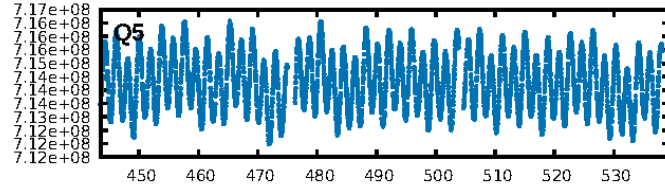
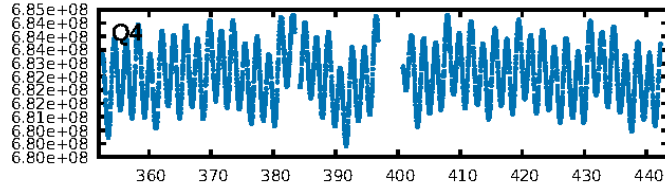
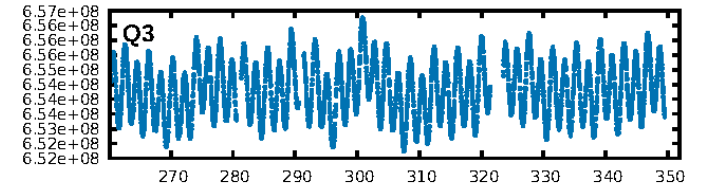
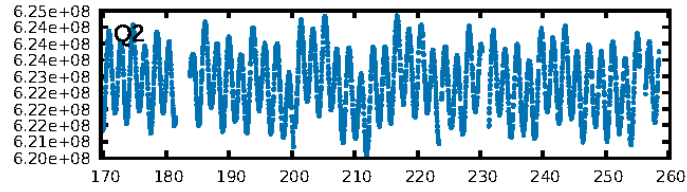
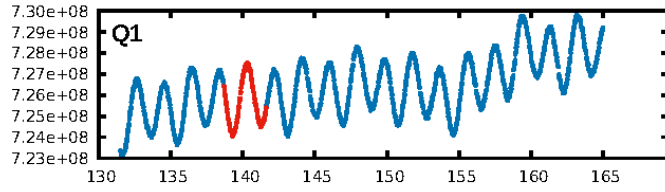
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [418.05σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.17e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.6602
Centroid-sig: 5.2%
Centroid-so: 7.008 arcsec [1.84σ]
OotOffset-rm: 8.978 arcsec [128.58σ]
KicOffset-rm: 9.190 arcsec [131.62σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/2]

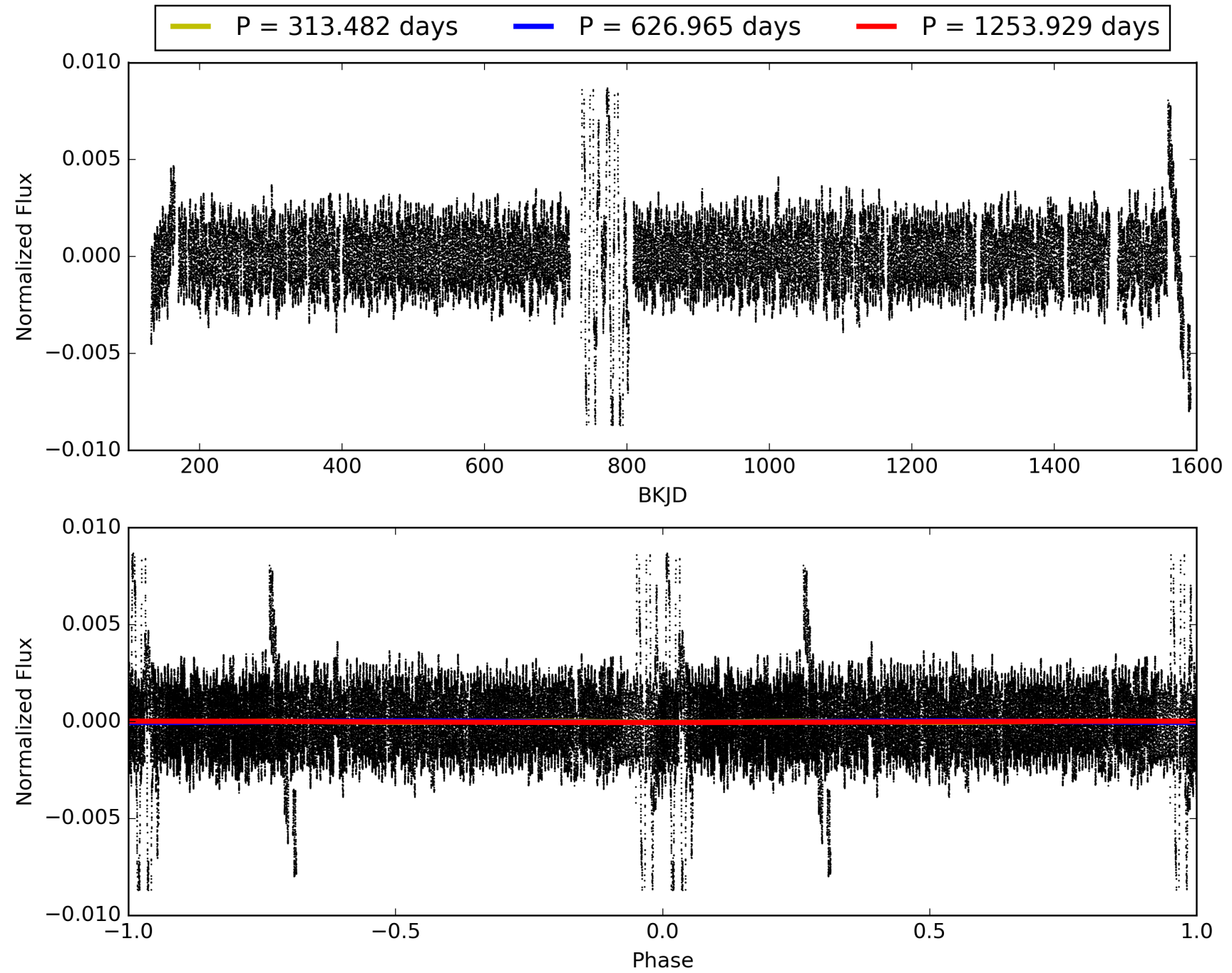
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:08:05 Z

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

TCE 006471244-03, PDC Light Curves

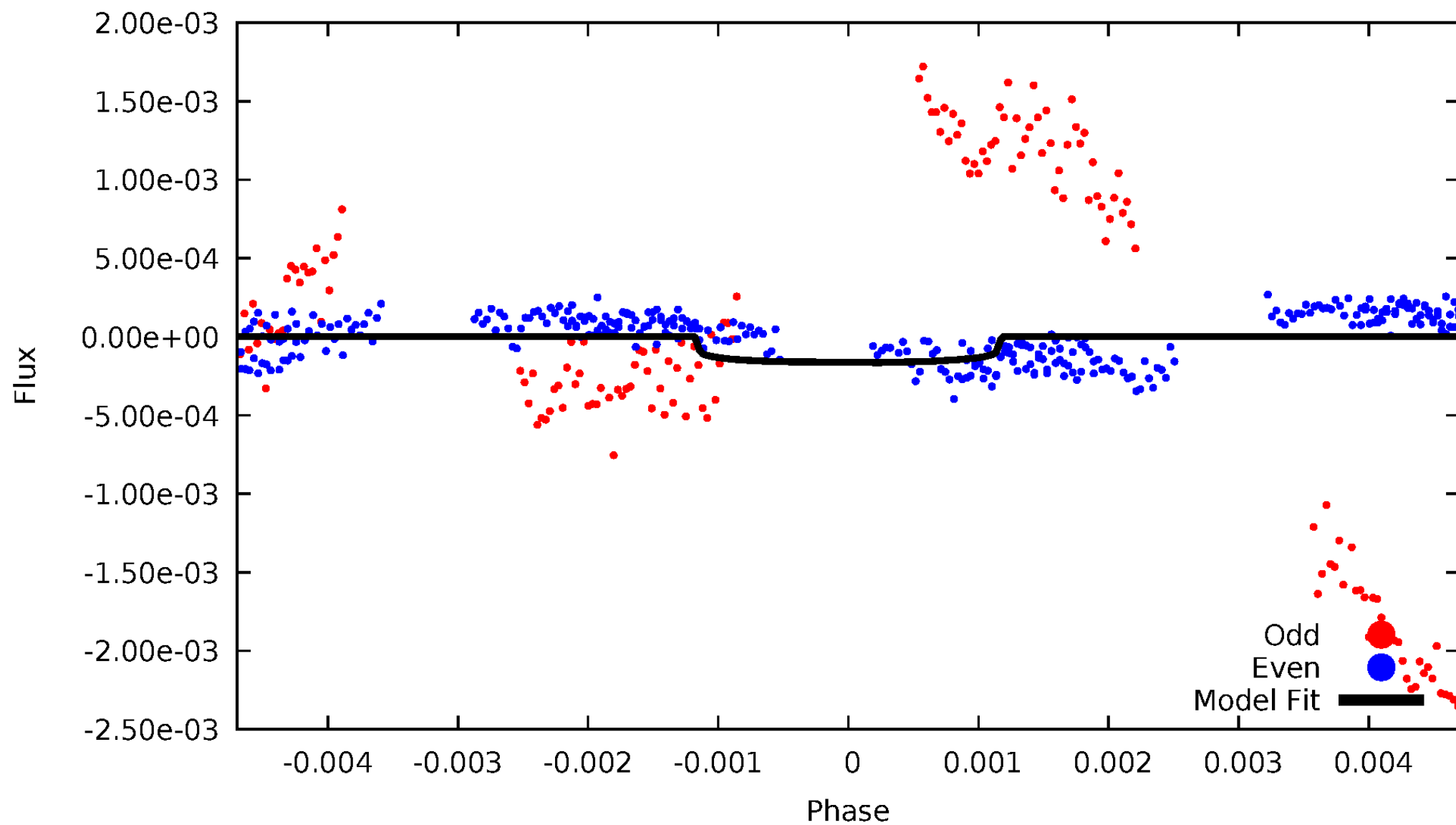


TCE 006471244-03



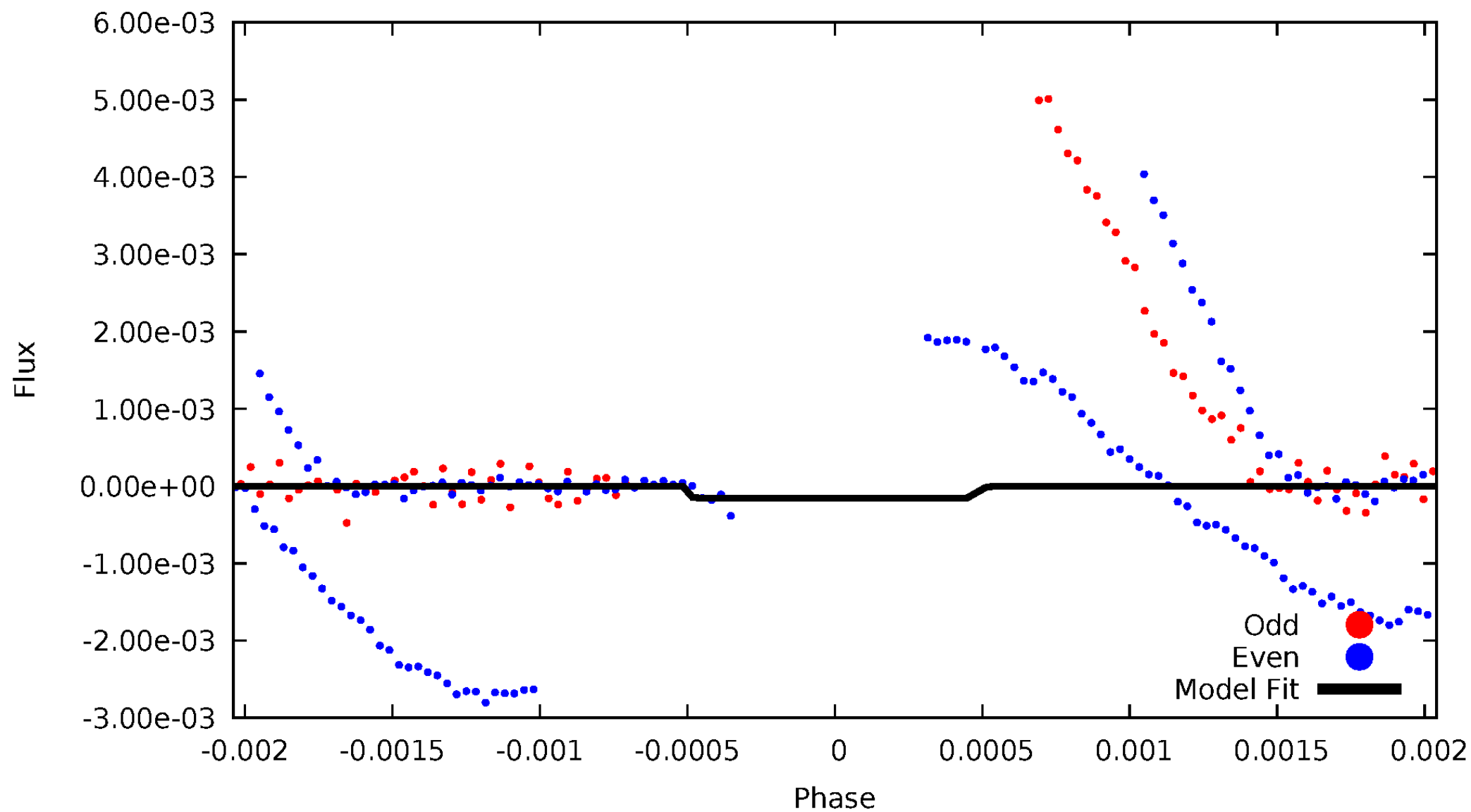
DV Odd/Even

TCE 006471244-03

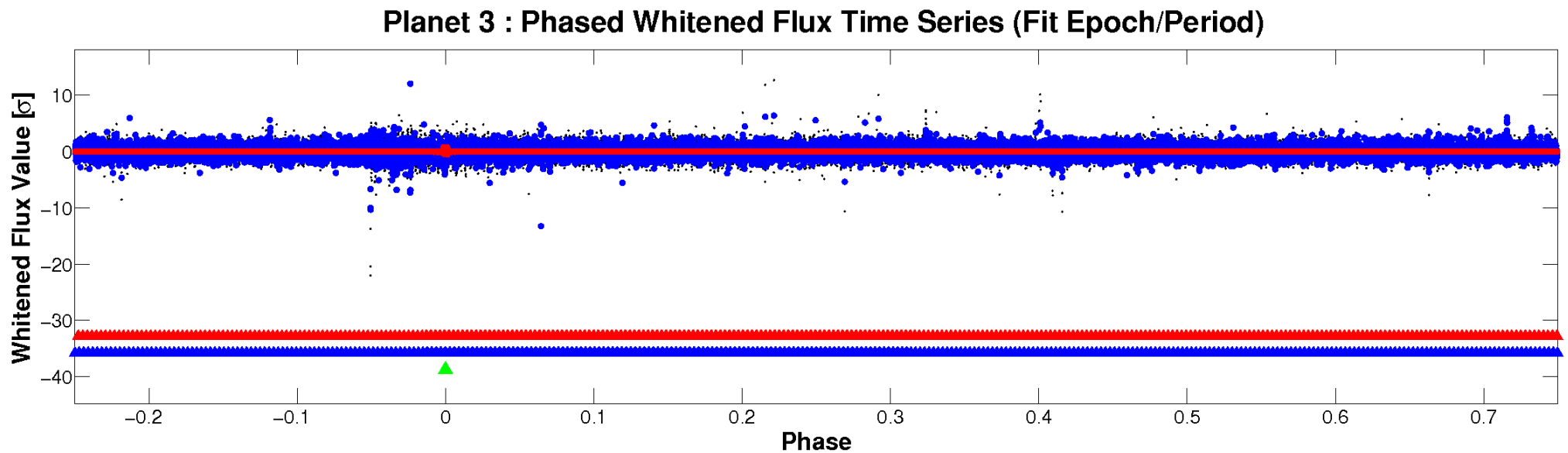
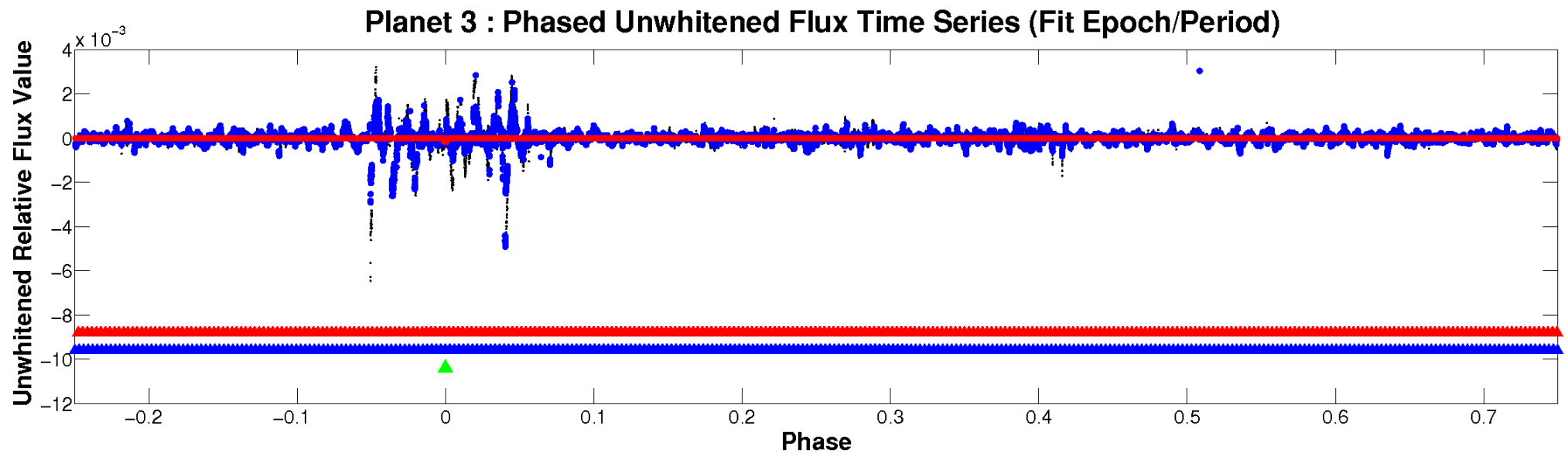


ALT Odd/Even

TCE 006471244-03

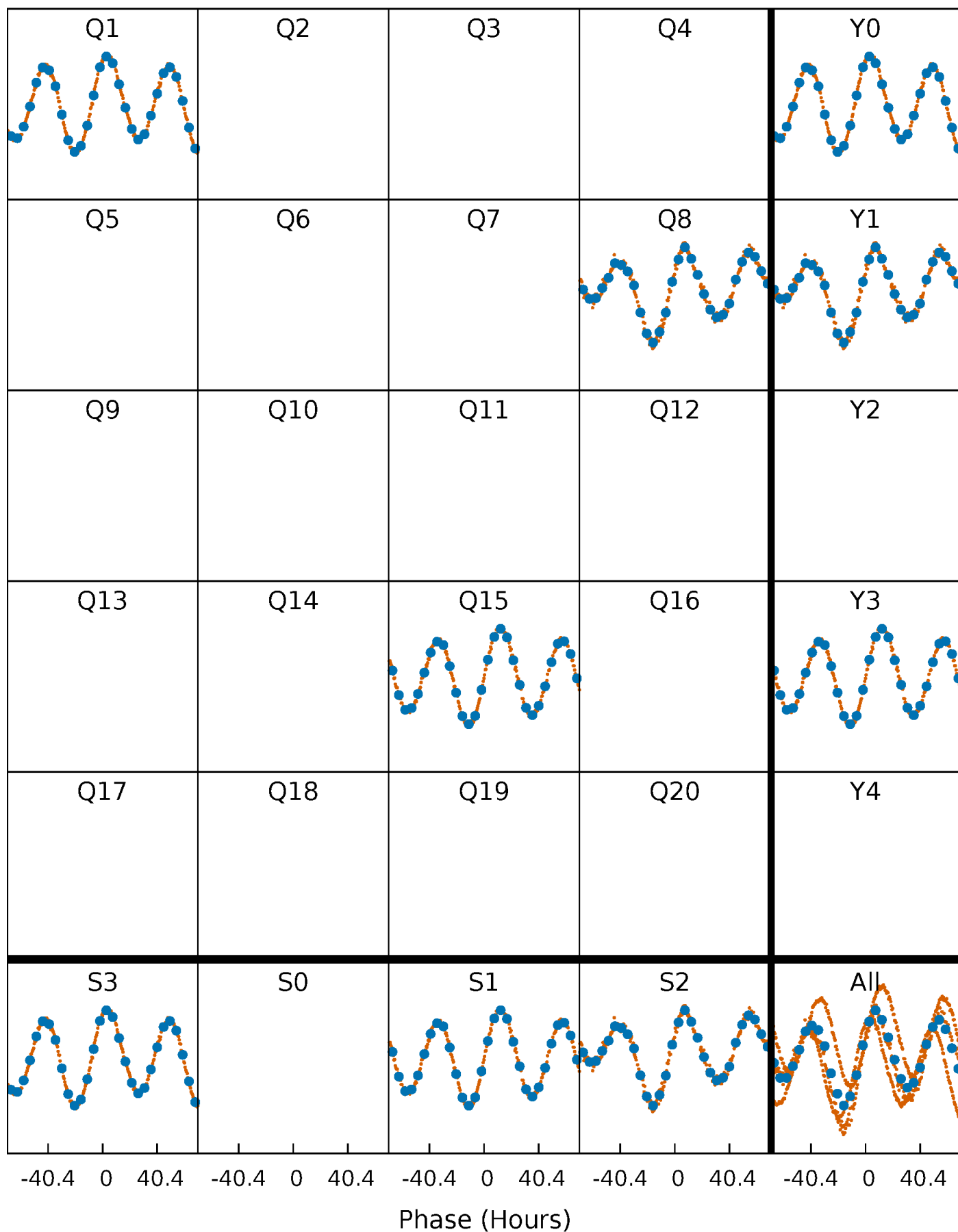


Non-Whitened Vs. Whitened Light Curve



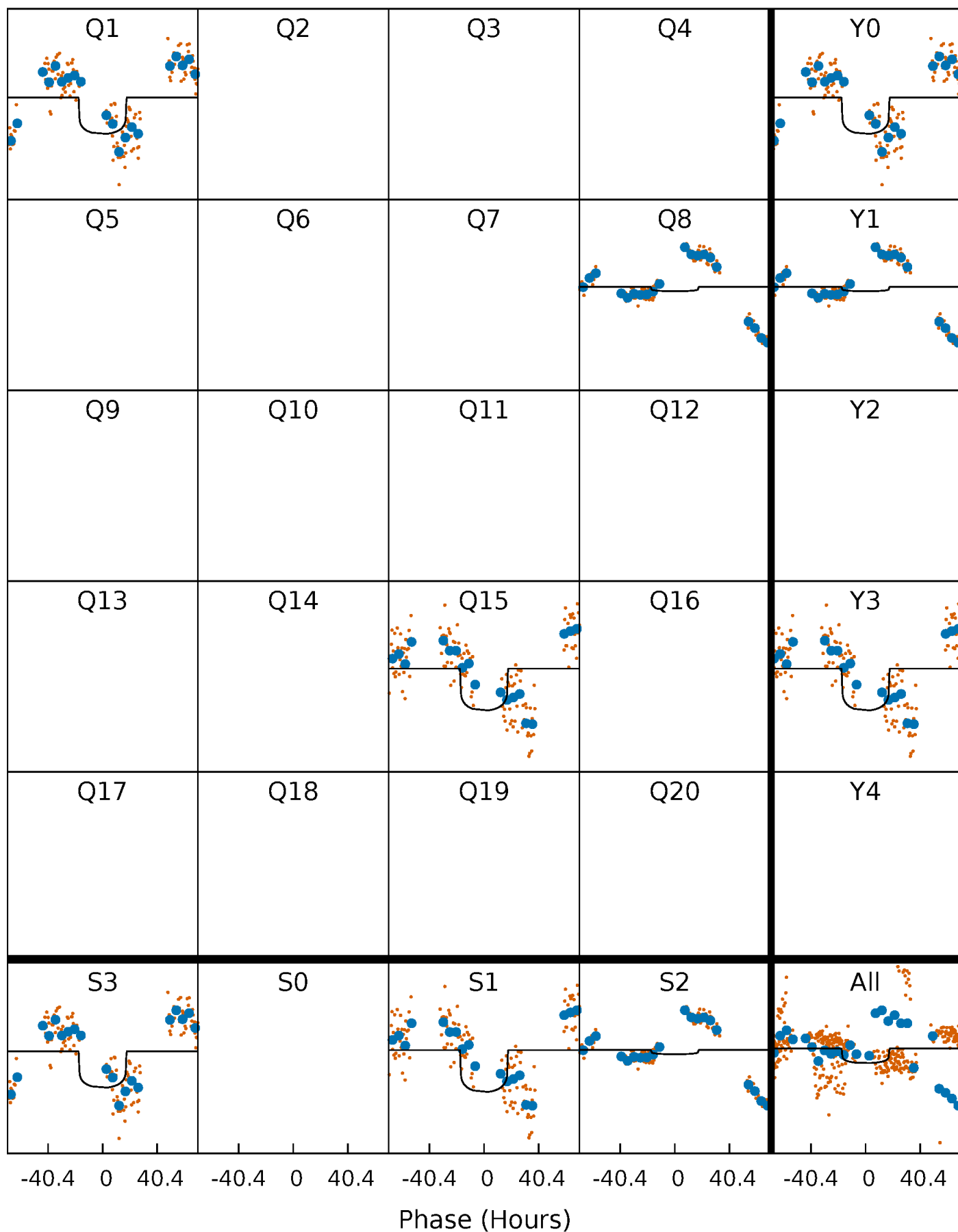
PDC Quarter-Phased Transit Curves

TCE 006471244-03 P=626.964695 Days $T_0=140.138109$ (BKJD)



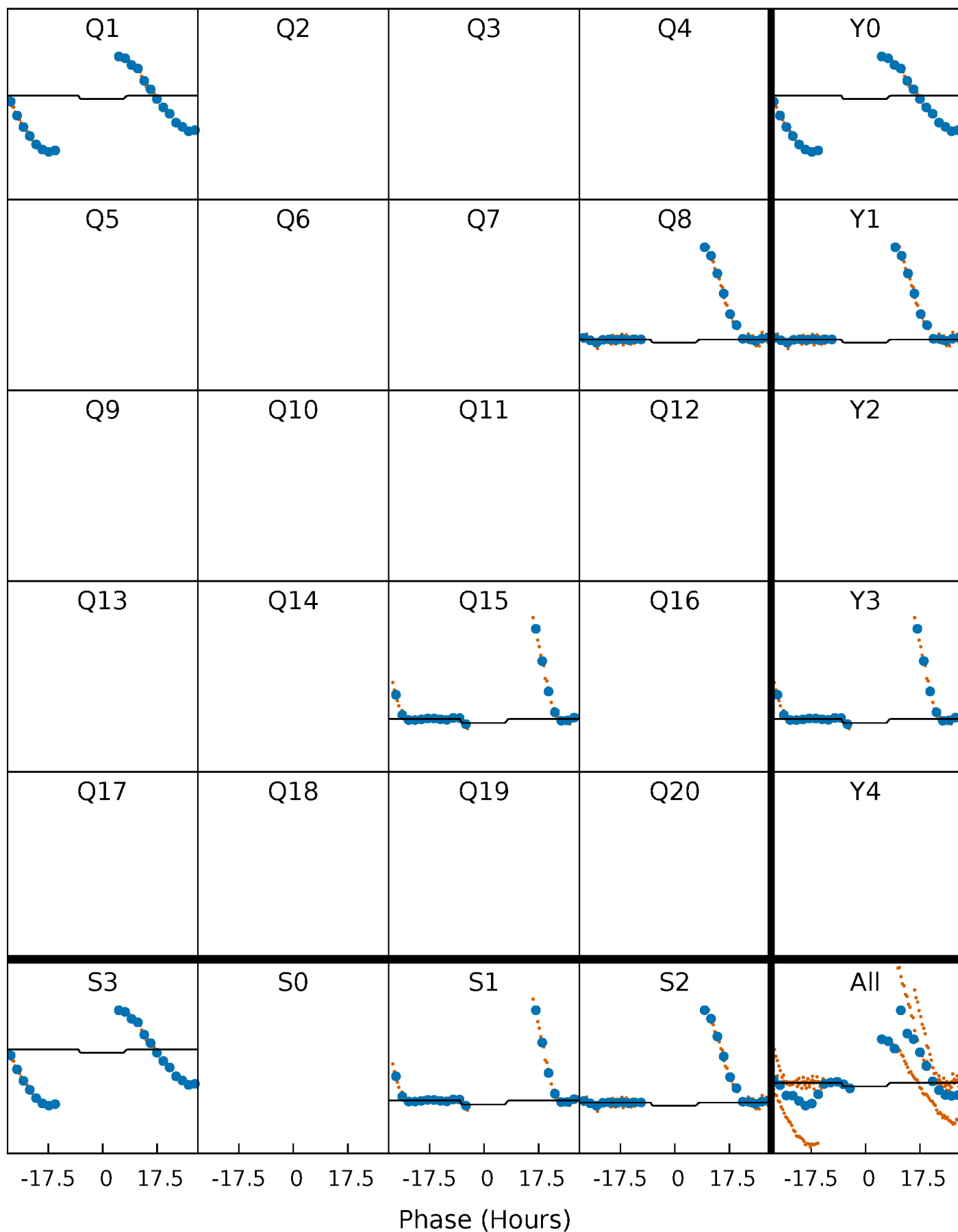
DV Quarter-Phased Transit Curves

TCE 006471244-03 $P=626.964695$ Days $T_0=140.138109$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

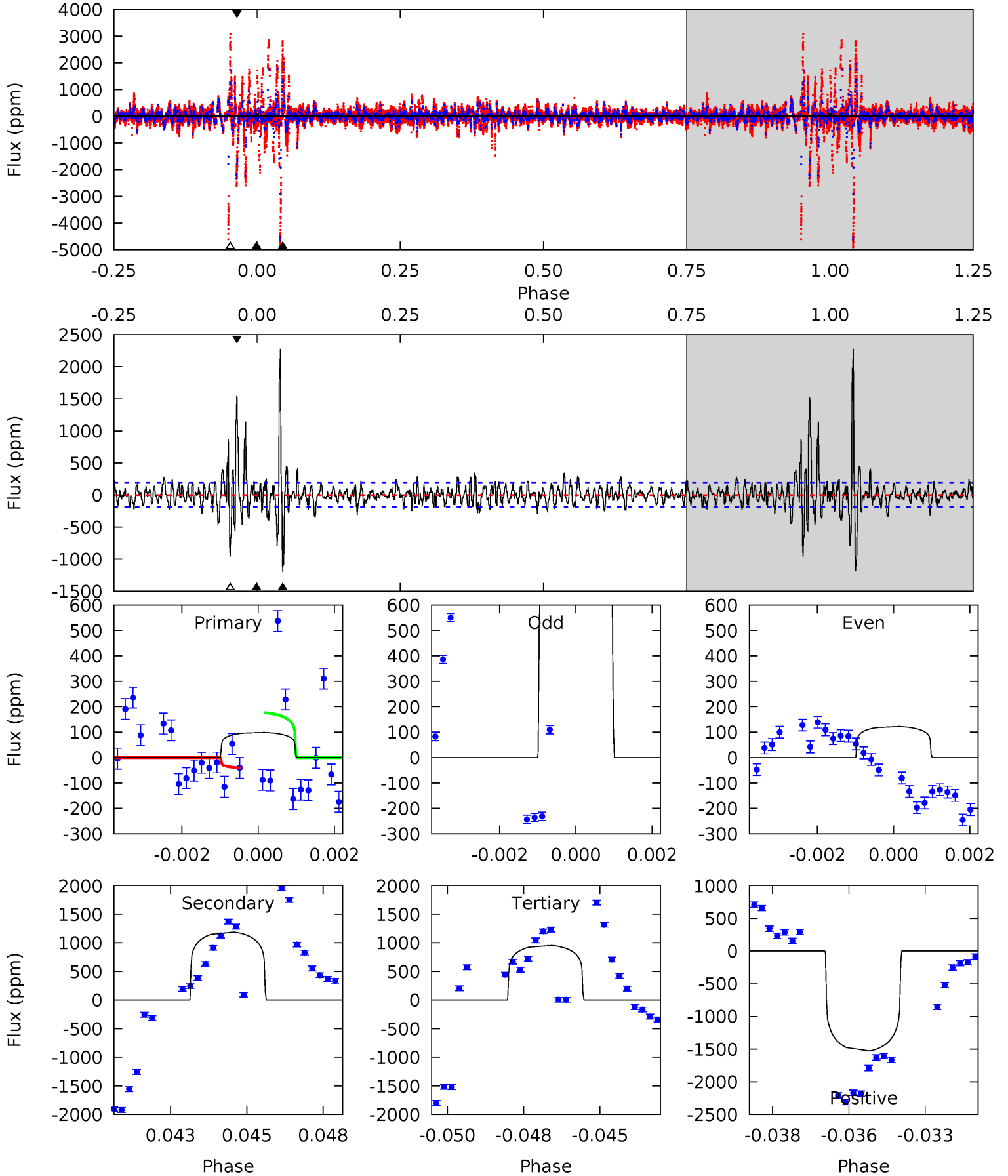
TCE 006471244-03 P=626.949299 Days $T_0=140.060499$ (BKJD)



DV Model-Shift Uniqueness Test

006471244-03, P = 626.964695 Days, E = 140.138109 Days

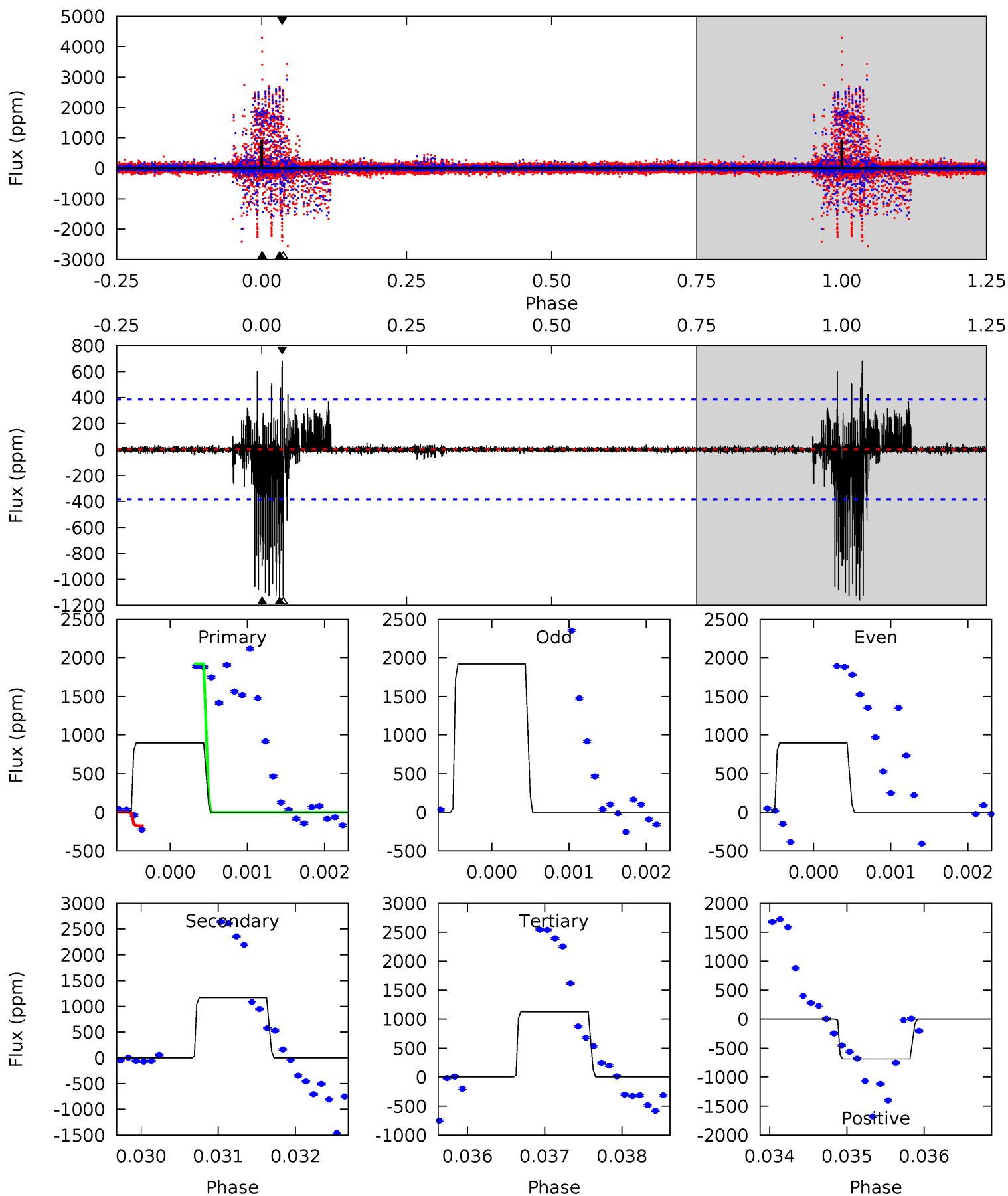
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.76	33.1	26.6	42.6	5.30	3.04	5.16	-23.8	-39.8	6.50	-9.50	9.65	-5.54	0.66	1.93



Alt Model-Shift Uniqueness Test

006471244-03, P = 626.949299 Days, E = 140.060499 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	16.5	16.0	9.73	5.45	3.28	1.11	-3.30	3.00	0.48	6.78	6.58	1.00	0.37	13.0



Stellar Parameters For KIC 006471244

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+233}_{-285}	$4.154^{+0.170}_{-0.170}$	$-0.440^{+0.250}_{-0.350}$	$1.605^{+0.467}_{-0.340}$	$1.341^{+0.206}_{-0.206}$	$0.457^{+0.404}_{-0.212}$
	+3%/-4%	+4%/-4%	+57%/-80%	+29%/-21%	+15%/-15%	+88%/-46%
Source	KIC0	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 006471244-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1187 ± 36	$2.07^{+0.93}_{-0.92}$	454^{+36}_{-31}	16558^{+15761}_{-4588}	$375835^{+845196}_{-192391}$
Alt.	-1163 ± 70	$2.15^{+1.10}_{-0.83}$	456^{+36}_{-35}	15539^{+10733}_{-4195}	$343061^{+565766}_{-192849}$

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

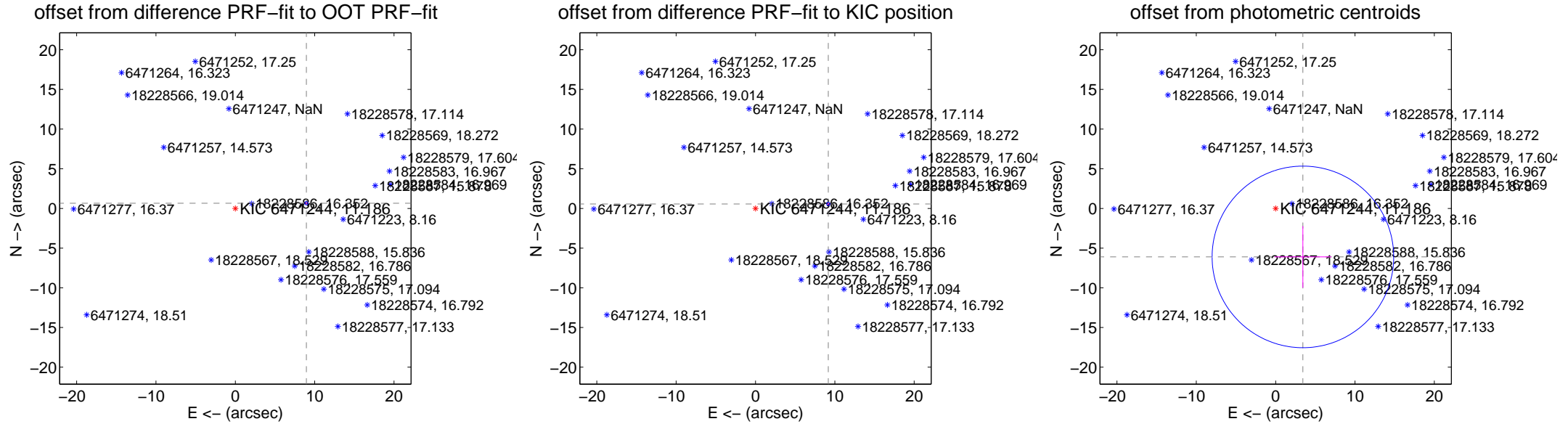
DV Centroid Data

Supplemental centroid analysis for 006471244-03. **Kepler magnitude: 11.19.** Transit SNR 4.95

There are 0 quarters with good PRF difference image offsets

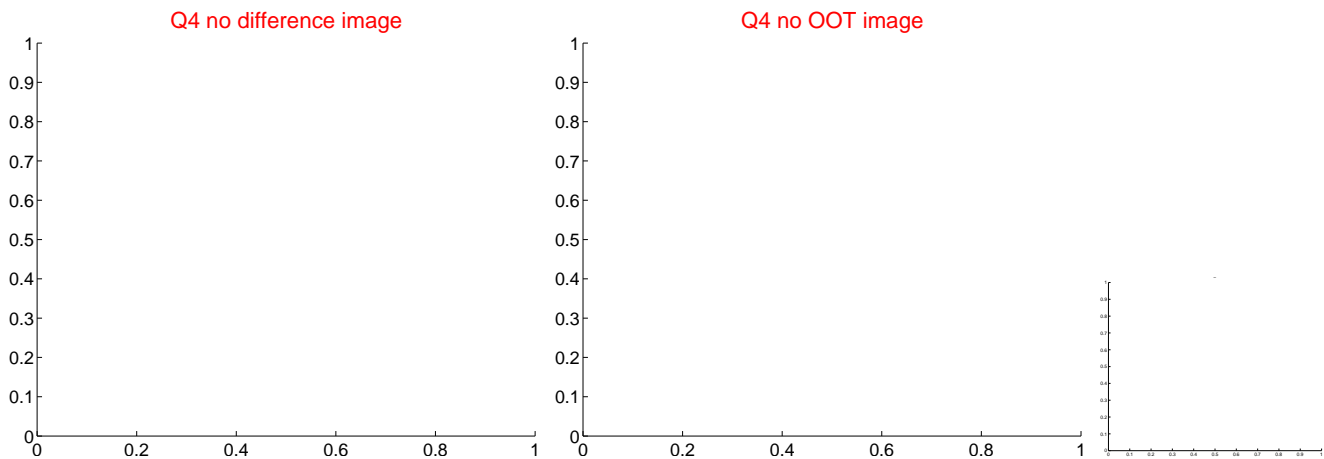
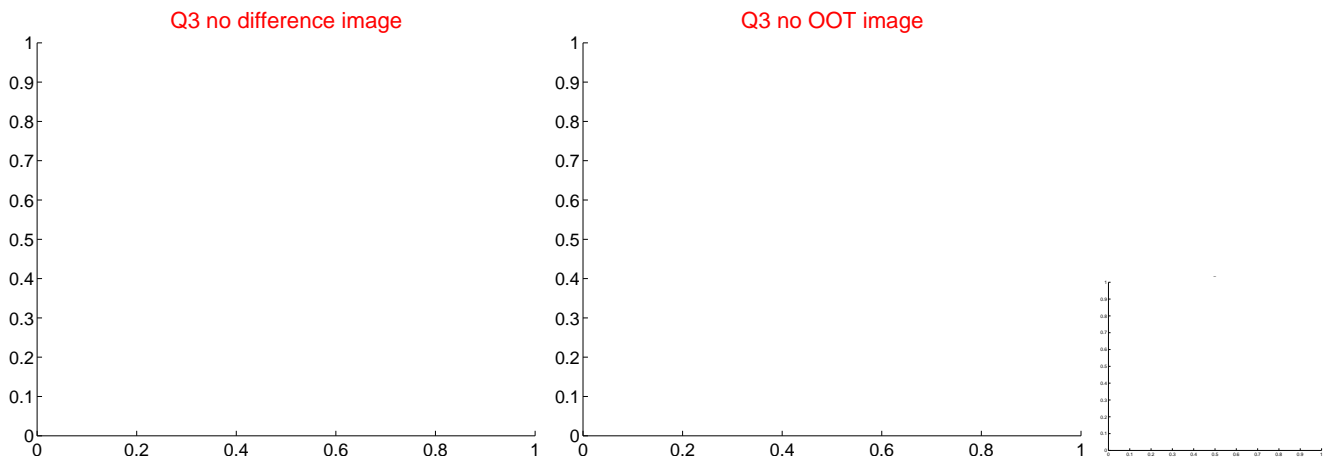
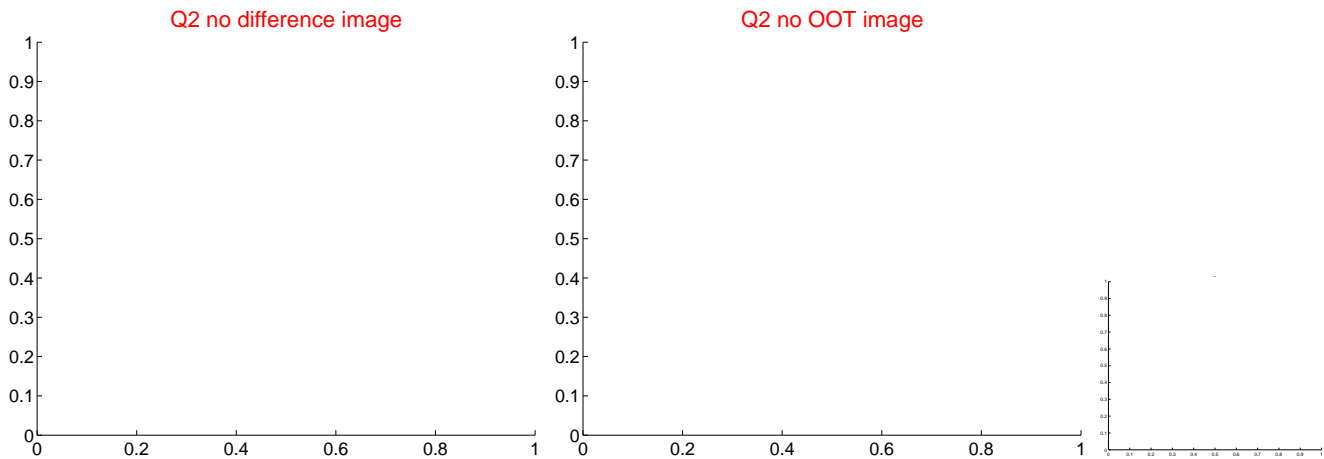
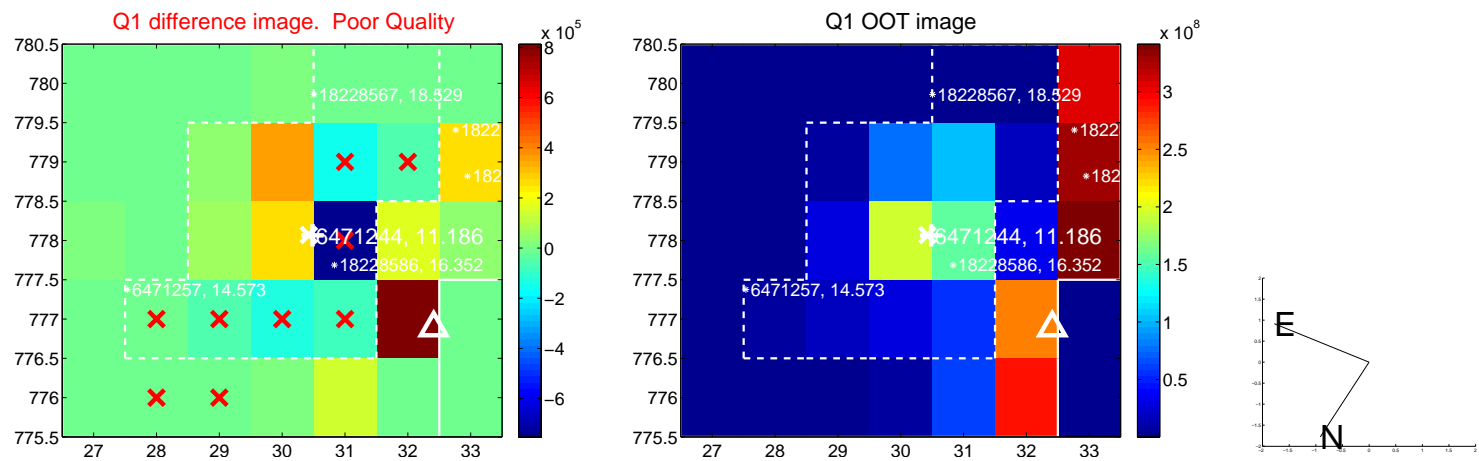
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.978 \pm 0.070	128.58	-8.953 \pm 0.070	0.658 \pm 0.068
PRF-fit source offset from KIC position	9.190 \pm 0.070	131.62	-9.172 \pm 0.070	0.566 \pm 0.068
photometric centroid source offset	7.01 \pm 3.81	1.84	-3.44 \pm 3.59	-6.11 \pm 3.88

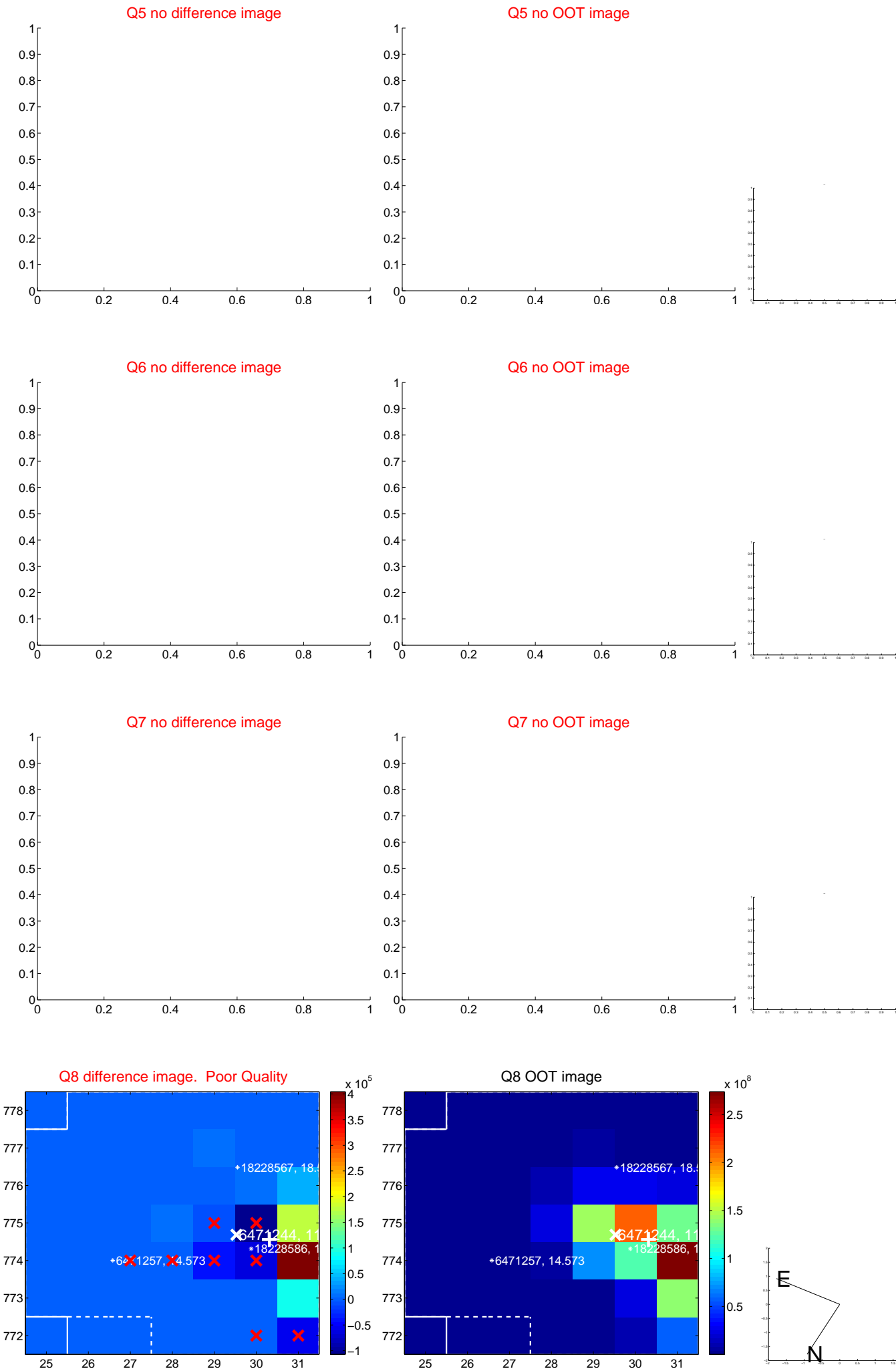


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



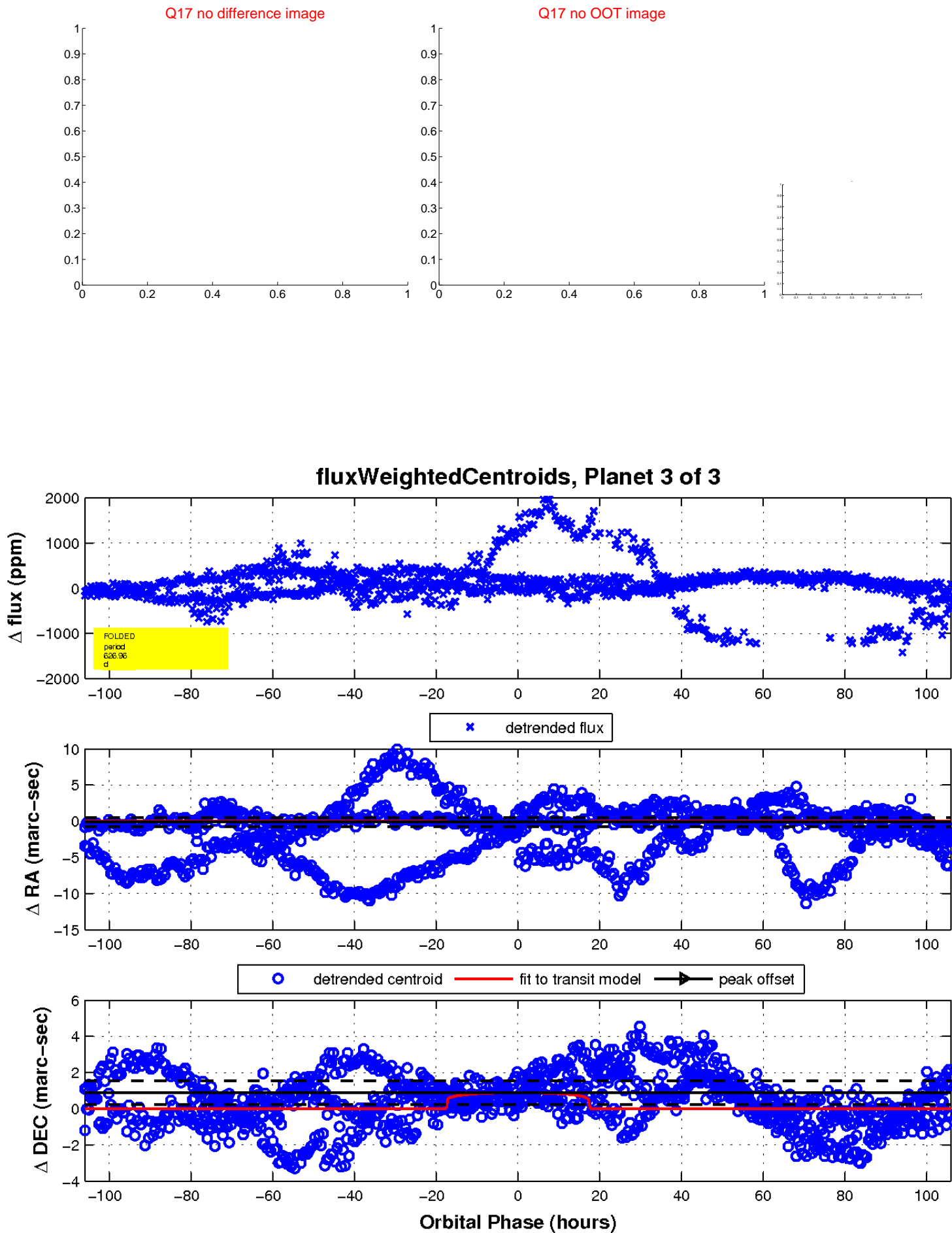
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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UKIRT Image

Declination

