

KIC 010849244

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})
010849244-01	OBS	7381.01	24.261683	132.556249	165909.0	7.592	9553.5	5855.2	0.98	6151	57.84	44.65
010849244-02	OBS	No	24.261688	147.241582	191307.7	7.189	9155.1	5332.1	0.98	6151	59.88	44.65
010849244-03	OBS	No	367.402167	317.853913	861.9	37.788	11.1	10.7	0.98	6151	3.61	1.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010849244-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010849244-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010849244-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

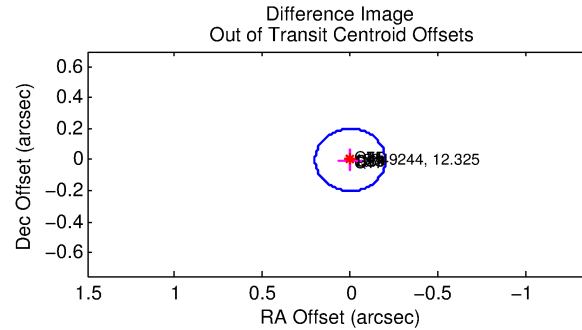
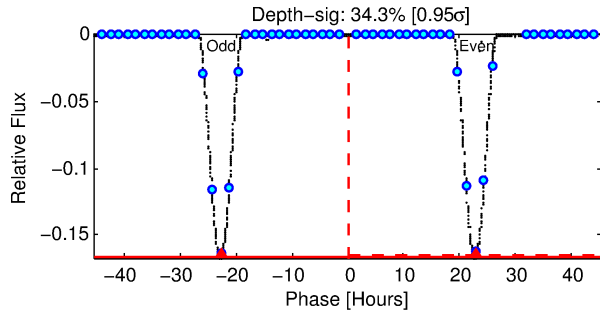
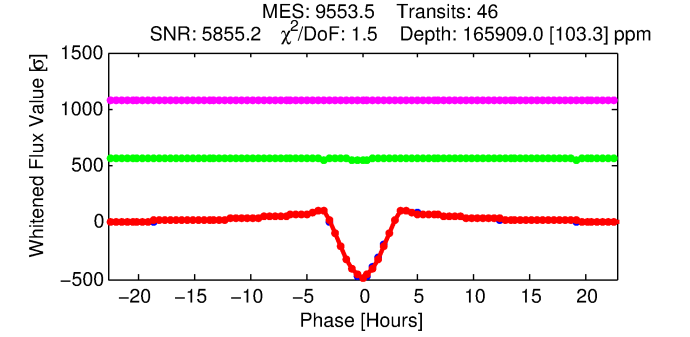
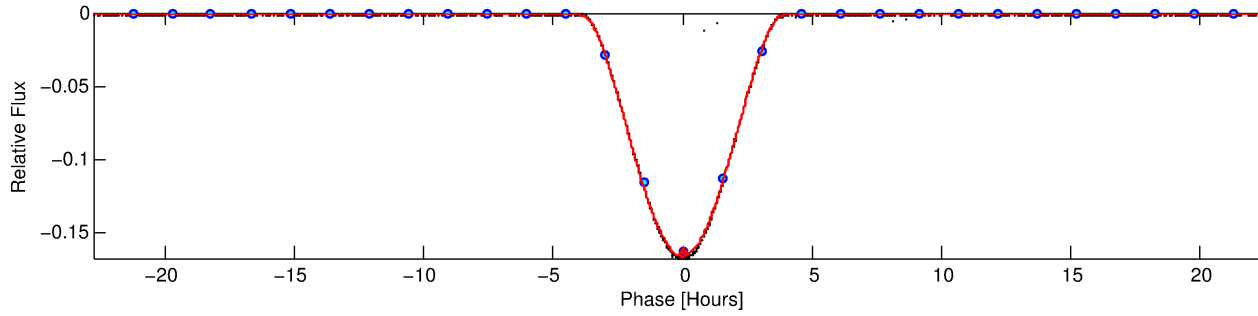
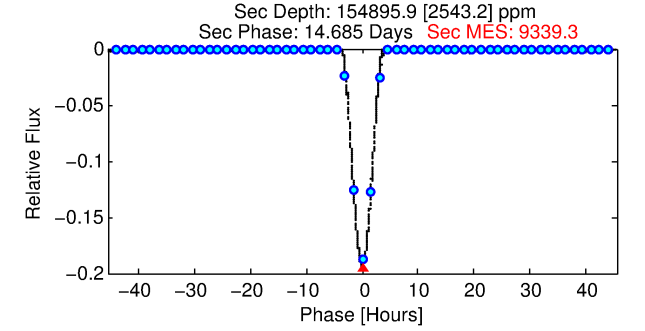
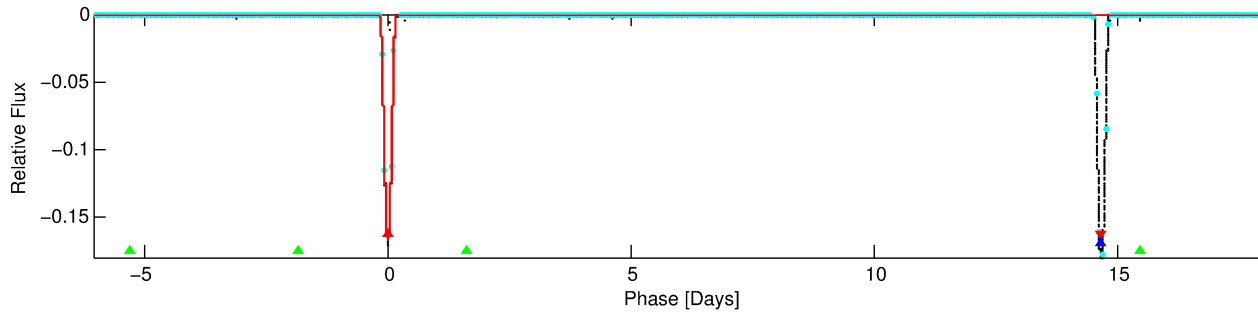
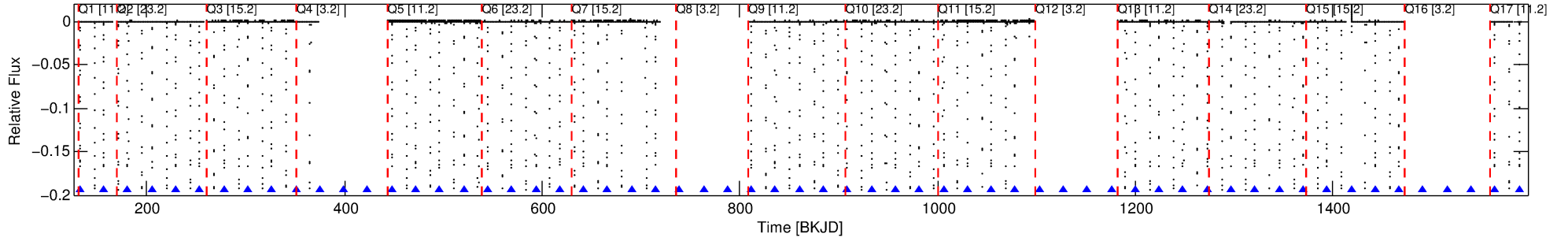
Ephemeris Match Information For 010849244-01

No Significant Match Found

DV One-Page Summary

KIC: 10849244 Candidate: 1 of 3 Period: 24.262 d
KOI: K07381 Corr: No Ephemeris Match

Kp: 12.32 R*: 0.98 Rs Teff: 6151.0 K Logg: 4.47 Fe/H: -0.180



DV Fit Results:

Period = 24.26168 [0.00000] d
Epoch = 132.5562 [0.0000] BKJD
Rp/R* = 0.5392 [0.0276]
a/R* = 30.94 [0.17]
b = 0.87 [0.04]
Seff = 44.65 [13.51]
Teq = 659 [50] K
Rp = 57.84 [13.11] Re
a = 0.1666 [0.0311] AU
Ag = 707.07 [206.65] [3.42σ]
Teffp = 5255 [218] K [20.51σ]

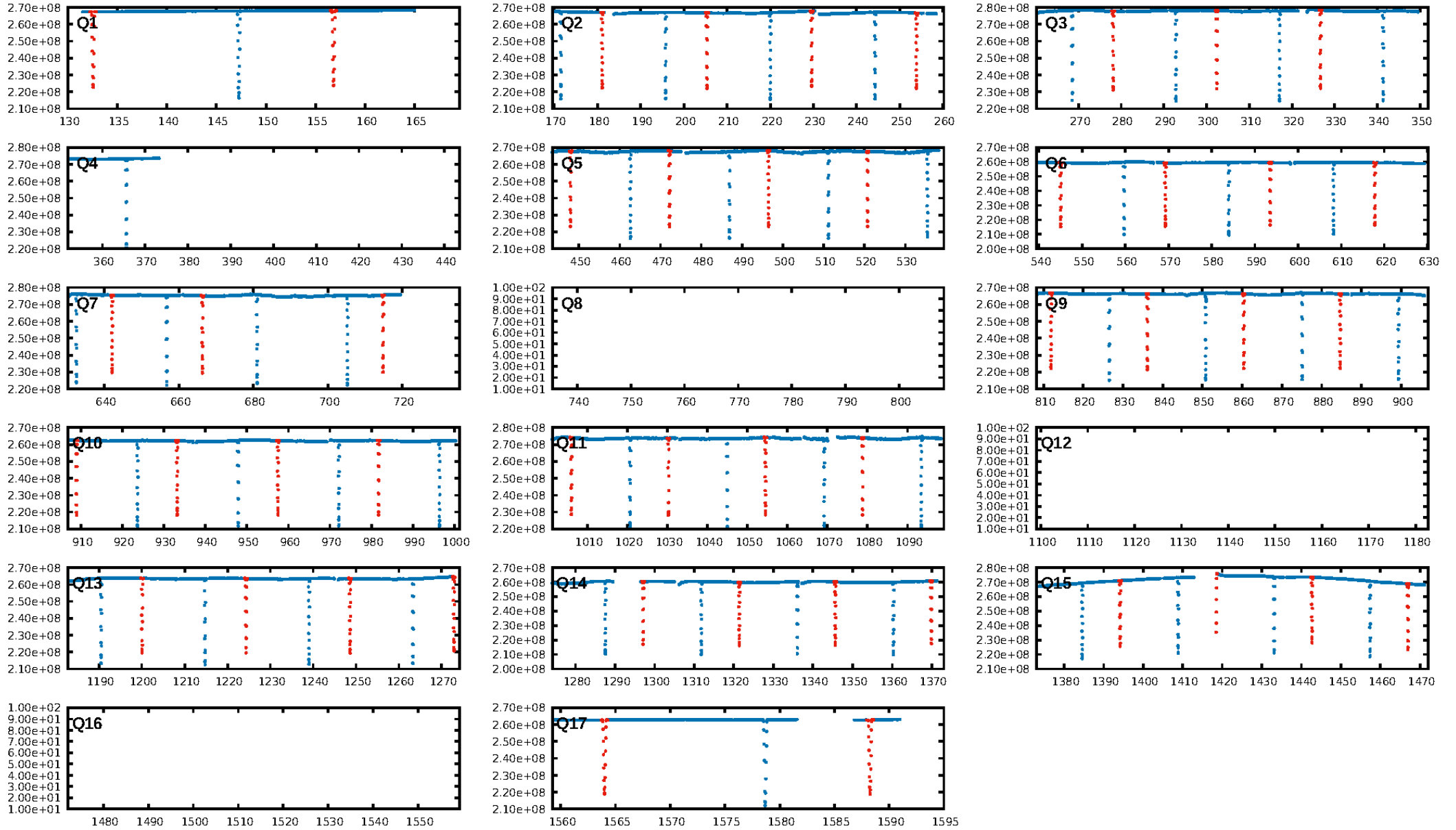
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [42/42]
GhostDiagnostic-chr: 6.88
Centroid-sig: 0.0%
Centroid-so: 0.026 arcsec [55.50σ]
OotOffset-rm: 0.002 arcsec [0.03σ]
KicOffset-rm: 0.021 arcsec [0.31σ]
OotOffset-st: 4/4/0/5 [13]
KicOffset-st: 4/4/0/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

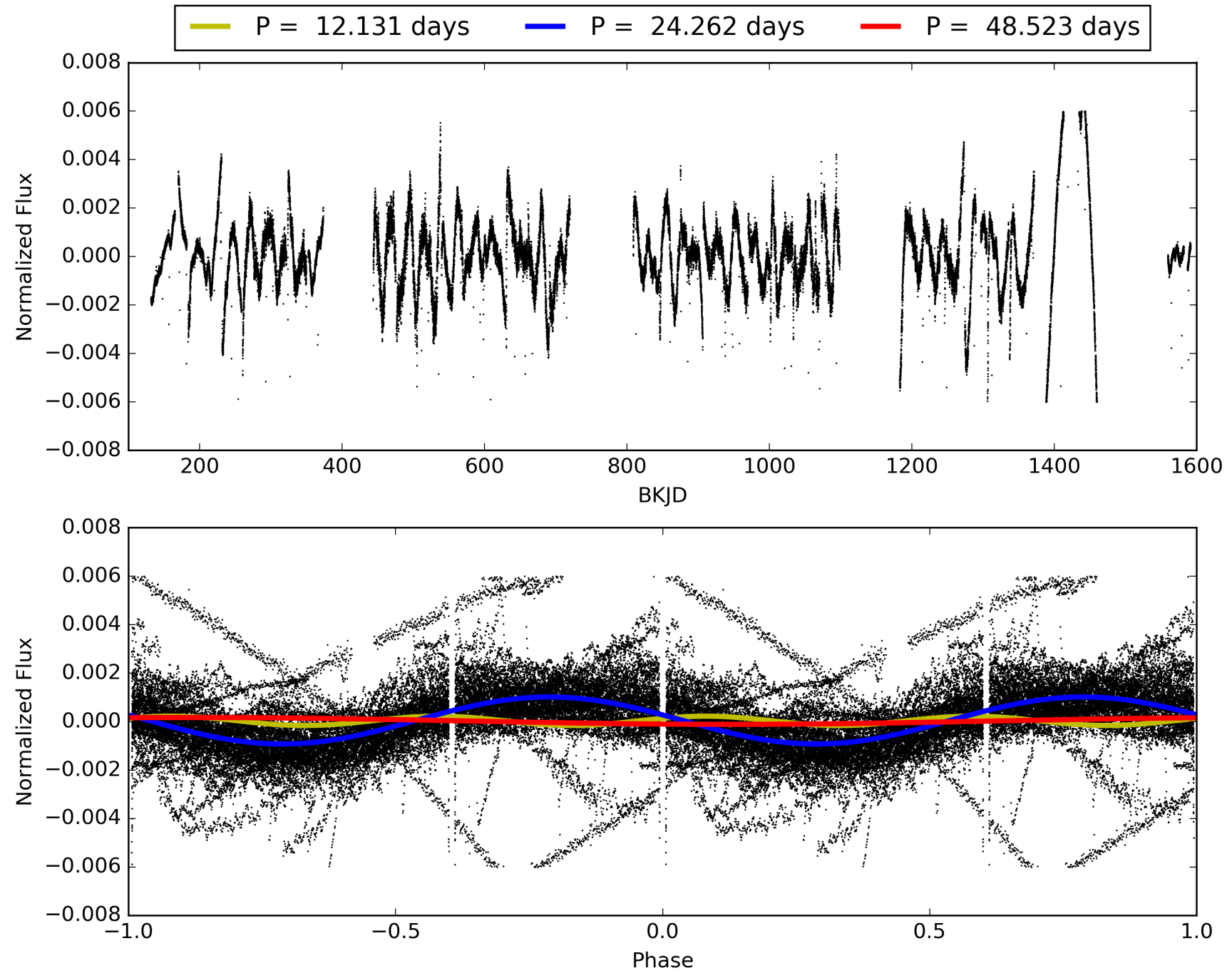
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:26:23 Z

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

TCE 010849244-01, PDC Light Curves

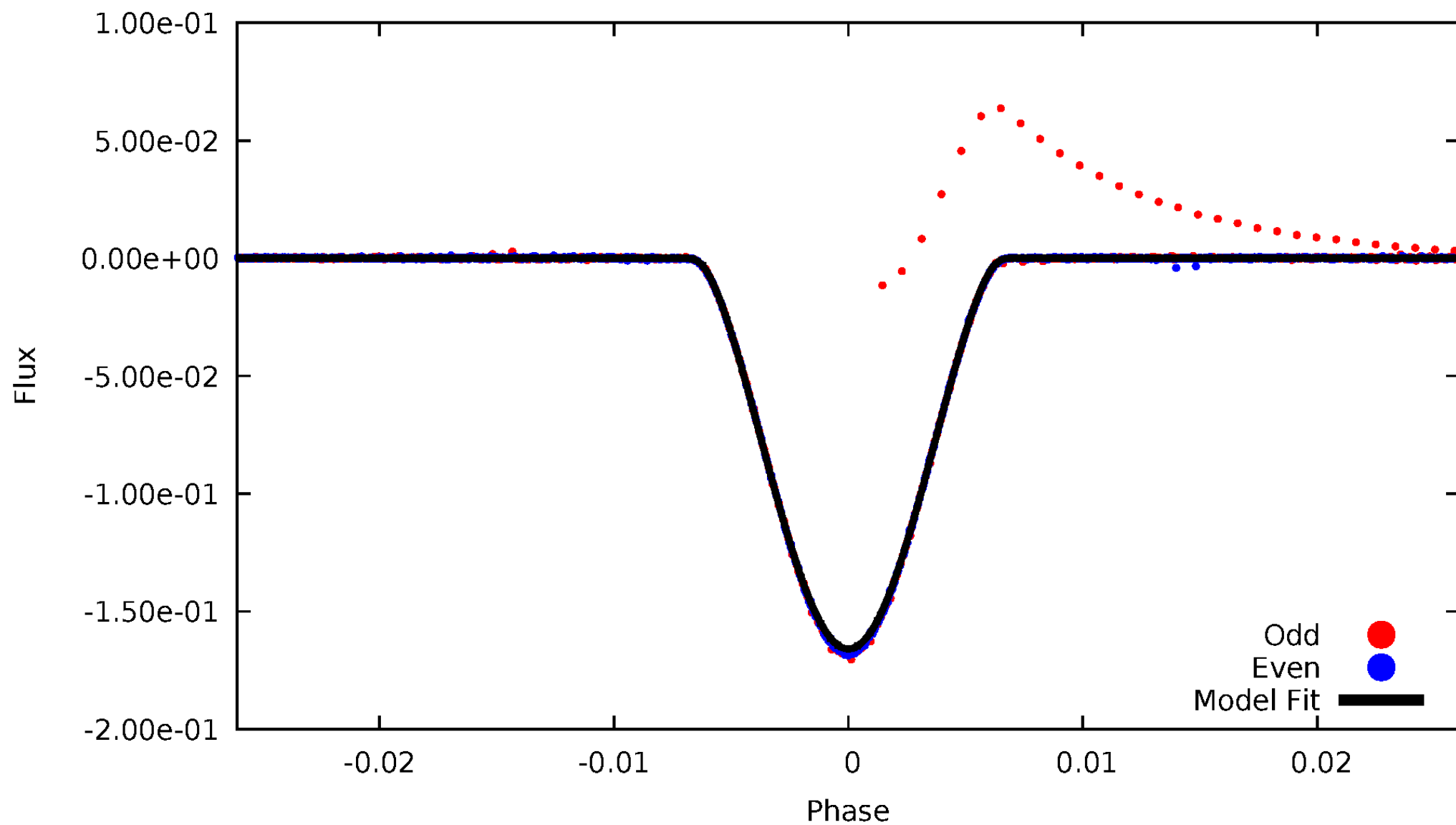


TCE 010849244-01



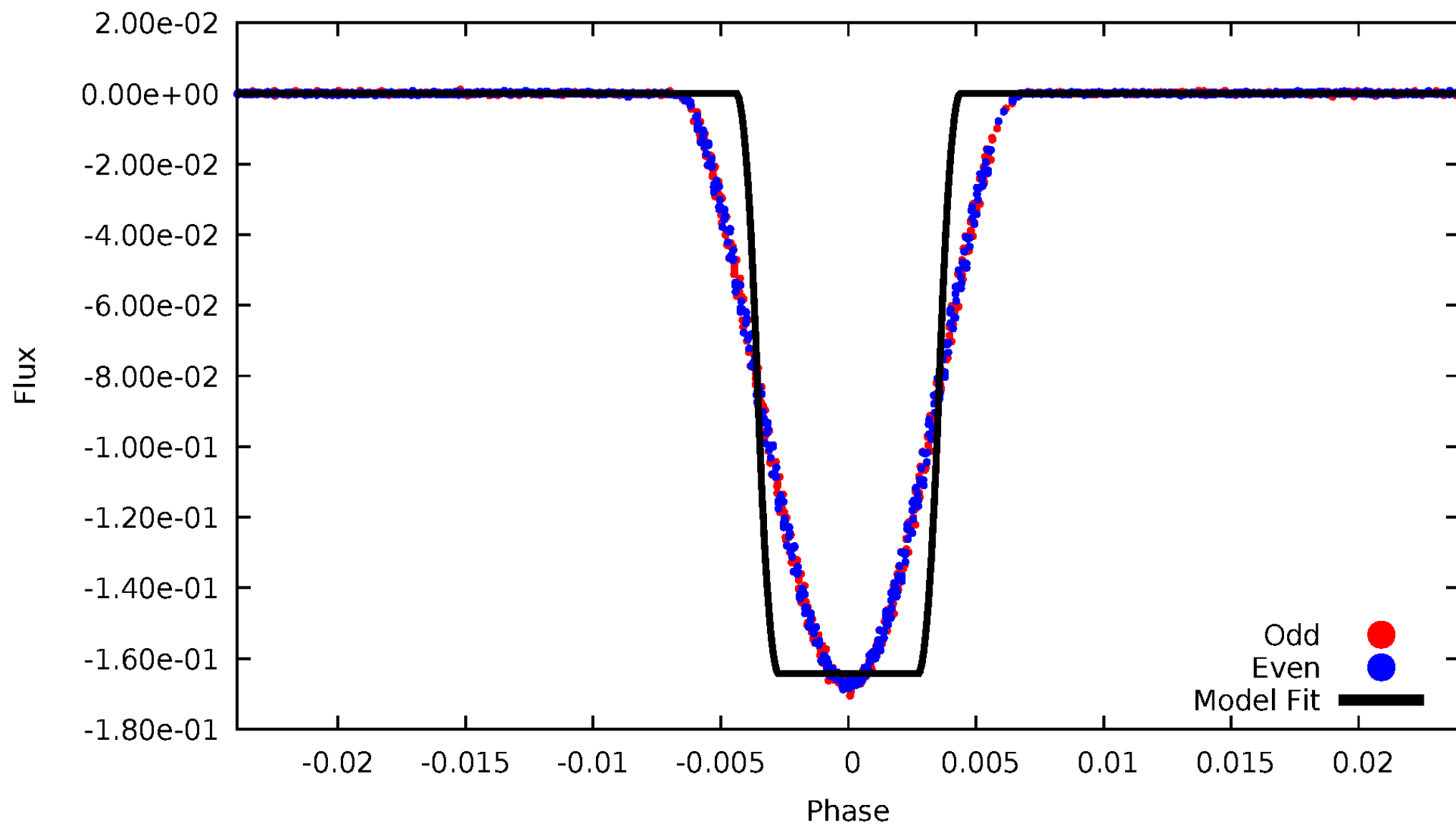
DV Odd/Even

TCE 010849244-01



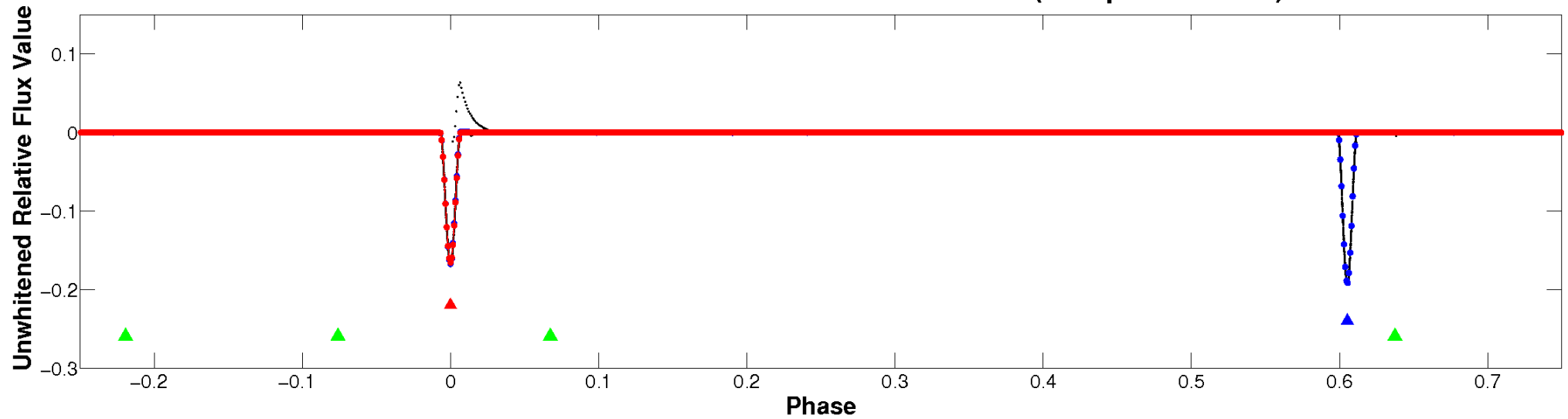
ALT Odd/Even

TCE 010849244-01

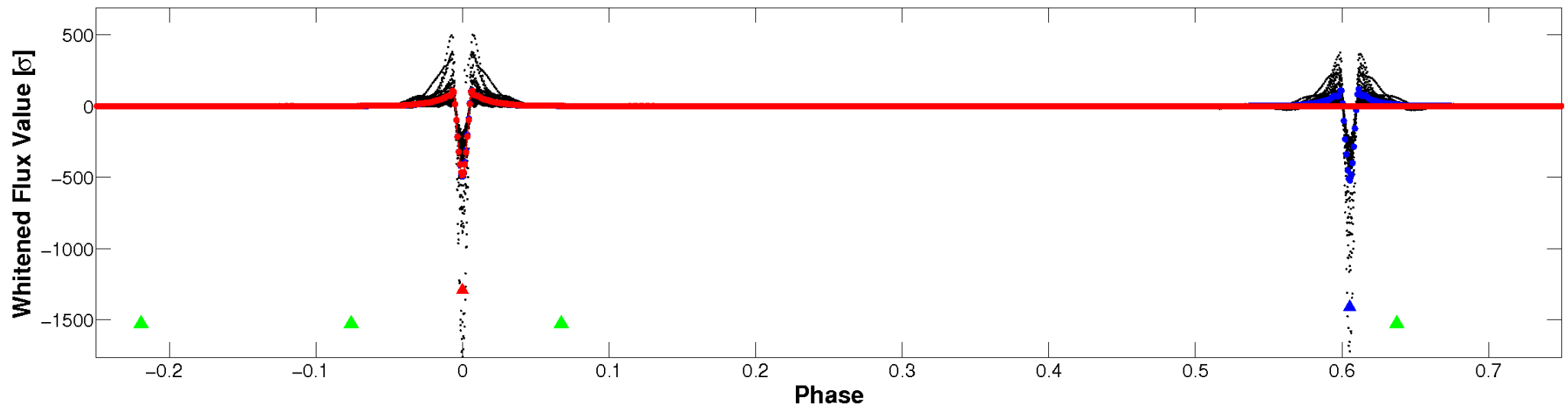


Non-Whitened Vs. Whitened Light Curve

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

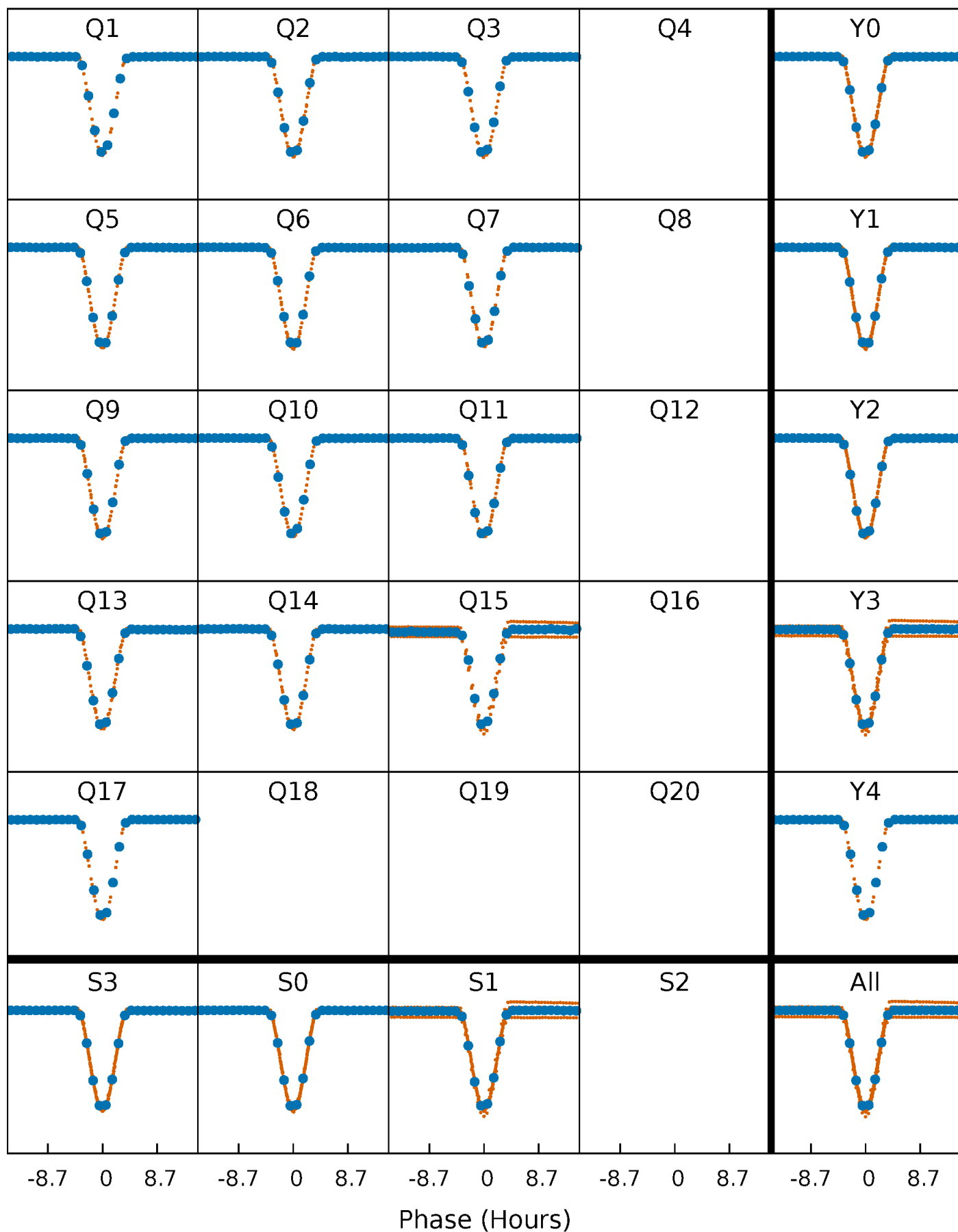


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



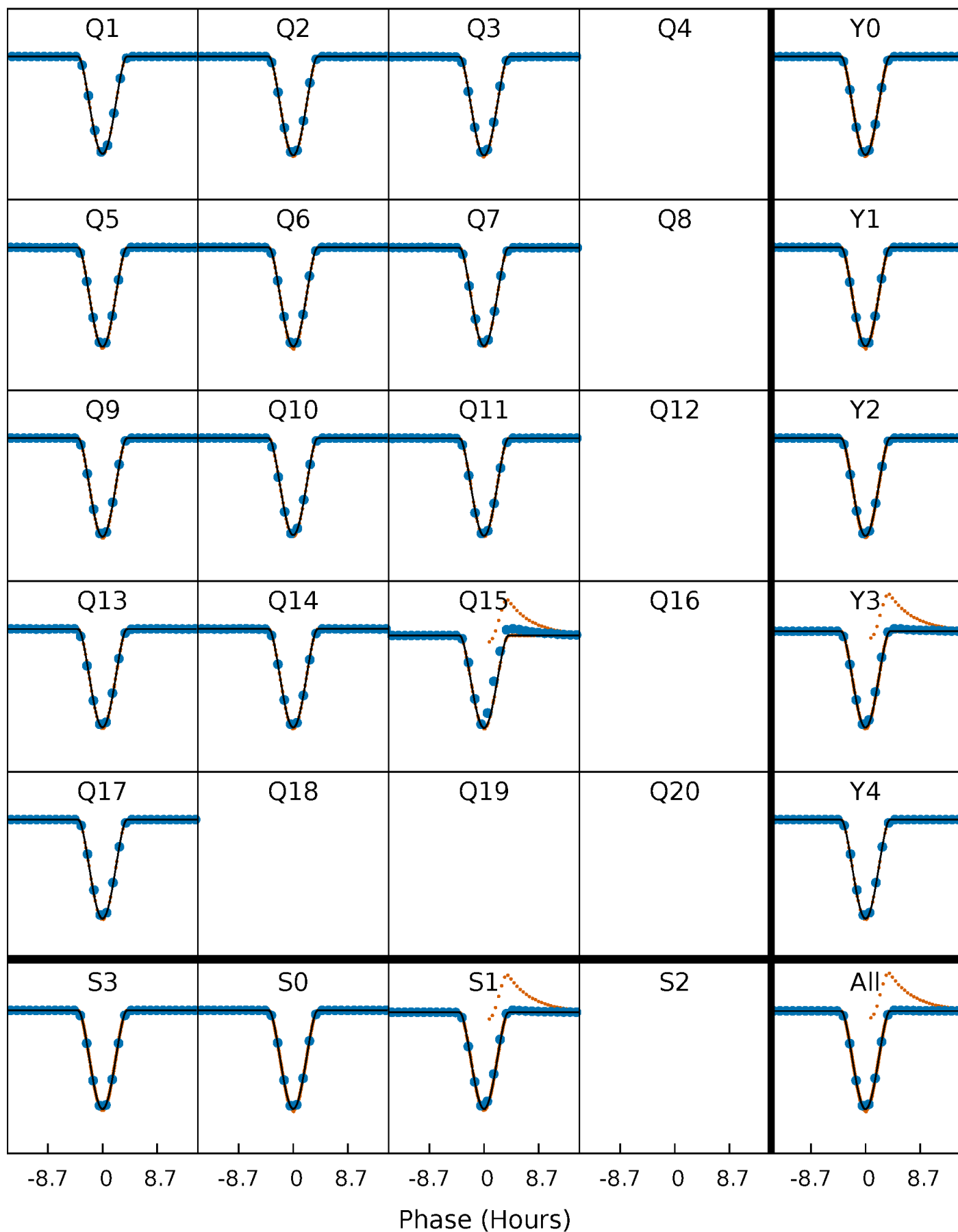
PDC Quarter-Phased Transit Curves

TCE 010849244-01 P= 24.261683 Days $T_0=132.556249$ (BKJD)



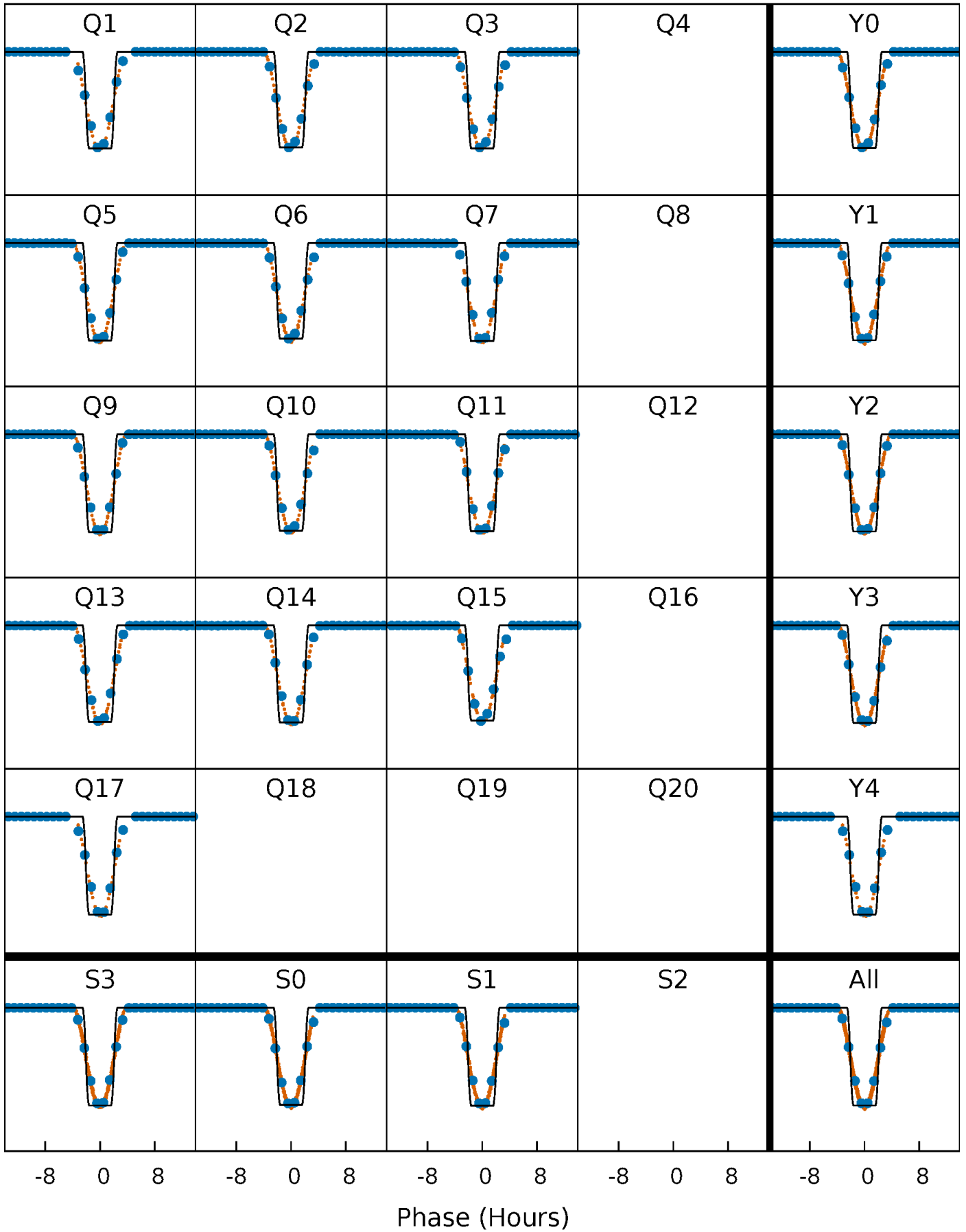
DV Quarter-Phased Transit Curves

TCE 010849244-01 P= 24.261683 Days $T_0=132.556249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

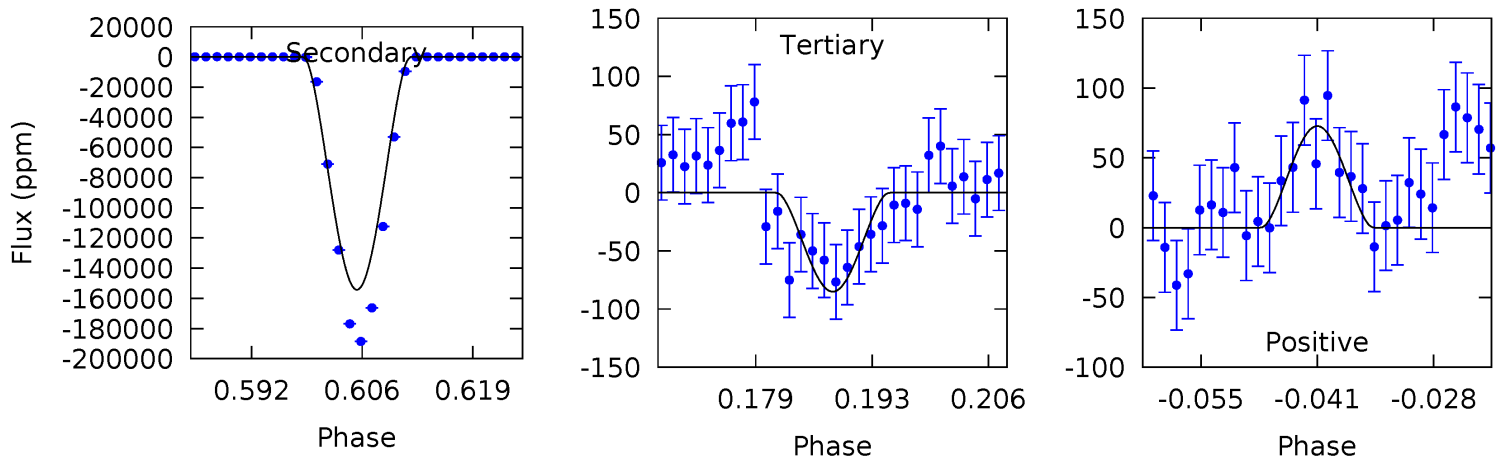
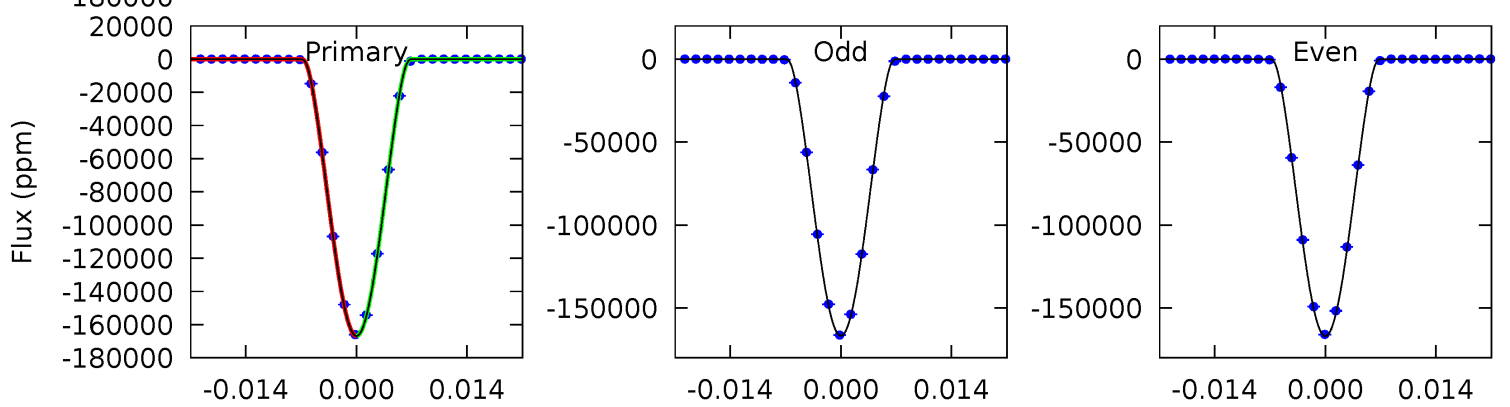
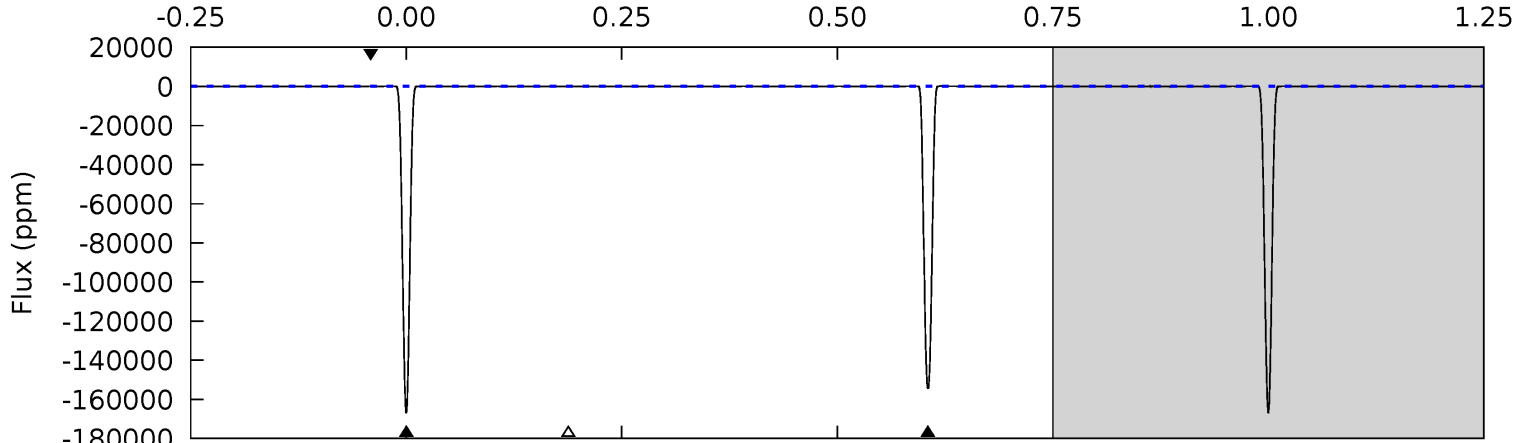
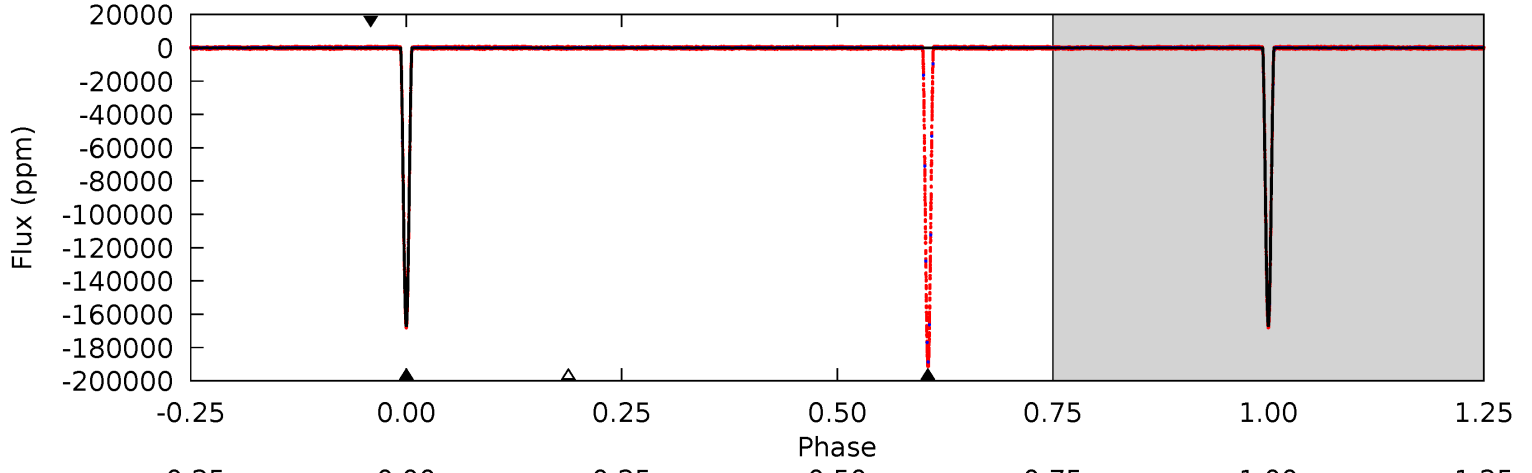
TCE 010849244-01 P= 24.261562 Days $T_0=132.559611$ (BKJD)



DV Model-Shift Uniqueness Test

010849244-01, P = 24.261683 Days, E = 108.294566 Days

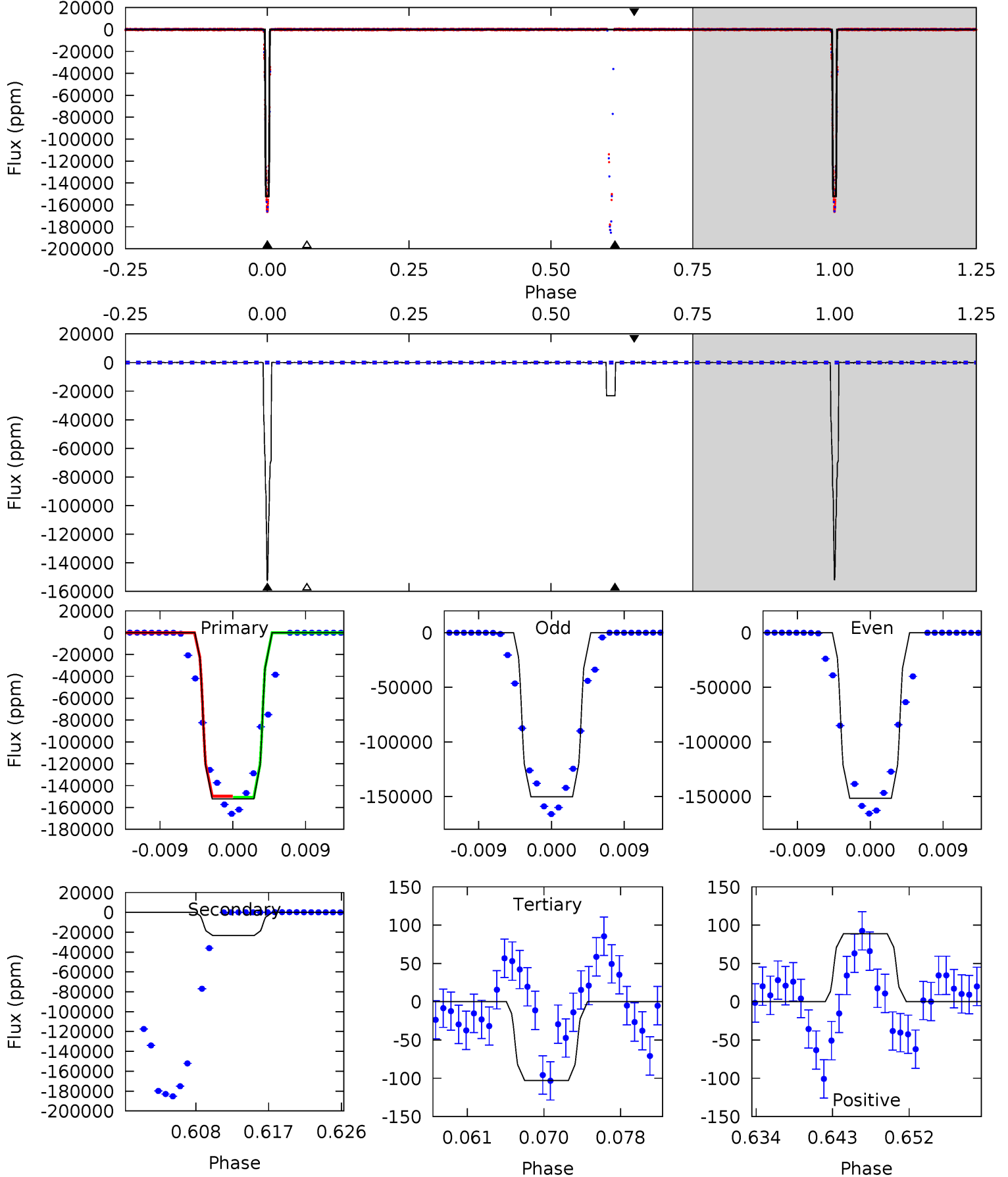
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17678	16351	9.01	7.71	4.96	2.46	3.83	17669	17670	16342	16344	5.32	0.98	0.00	0



Alt Model-Shift Uniqueness Test

010849244-01, P = 24.261562 Days, E = 108.298049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1037	158.6	0.70	0.61	5.05	2.62	4.33	1036	1036	157.9	158.0	5.06	1.00	0.00	0



Stellar Parameters For KIC 010849244

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6151^{+146}_{-200}	$4.473^{+0.050}_{-0.150}$	$-0.180^{+0.250}_{-0.350}$	$0.983^{+0.217}_{-0.109}$	$1.048^{+0.116}_{-0.141}$	$1.552^{+0.409}_{-0.651}$
	+2%/-3%	+1%/-3%	+139%/-194%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	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 010849244-01 / KOI 7381.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-154268 ± 9	$59.54^{+7.77}_{-5.58}$	938^{+48}_{-43}	5490^{+198}_{-198}	773^{+138}_{-153}
Alt.	-23277 ± 147	$44.63^{+5.49}_{-4.75}$	931^{+53}_{-38}	4083^{+132}_{-126}	180^{+39}_{-34}

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

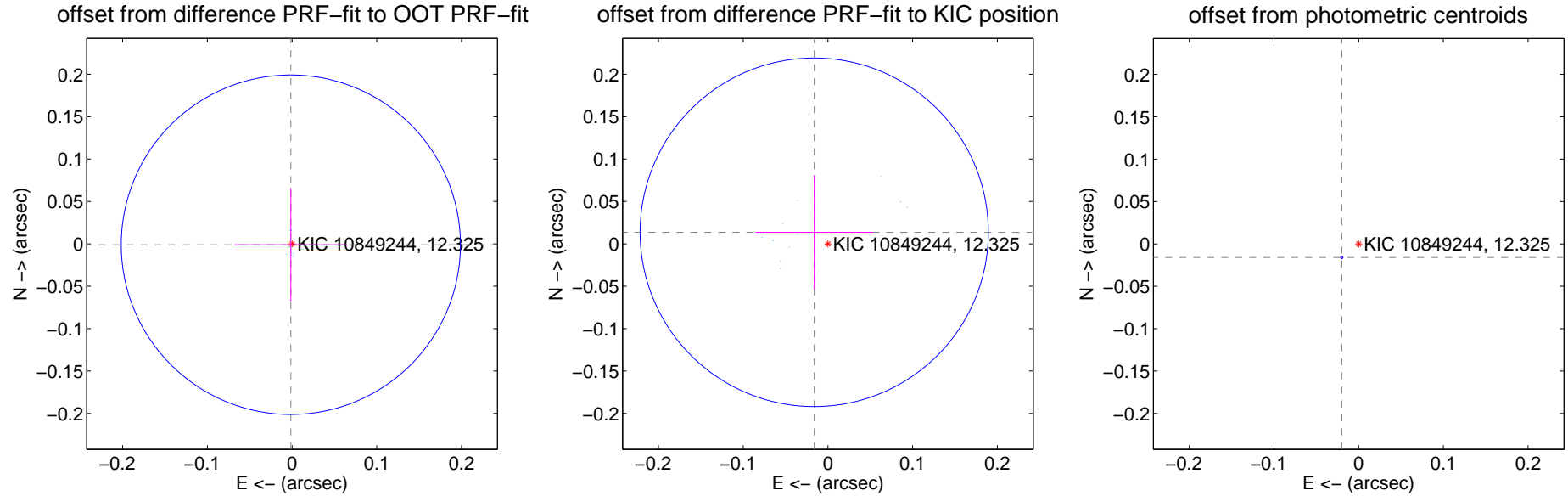
DV Centroid Data

Supplemental centroid analysis for 010849244-01. Kepler magnitude: 12.32. Transit SNR 5855.24

There are 13 quarters with good PRF difference image offsets

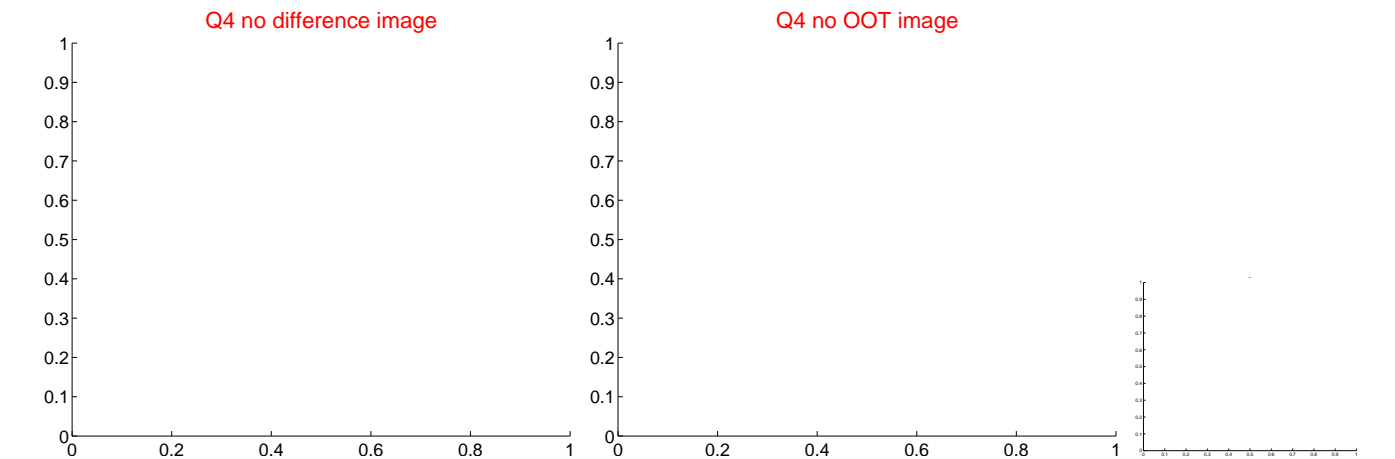
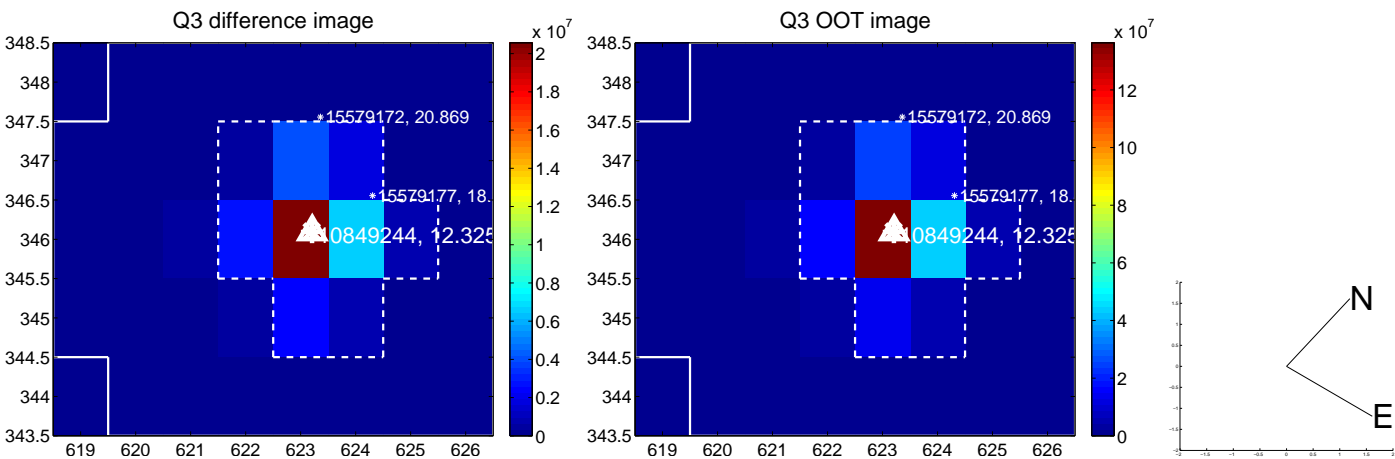
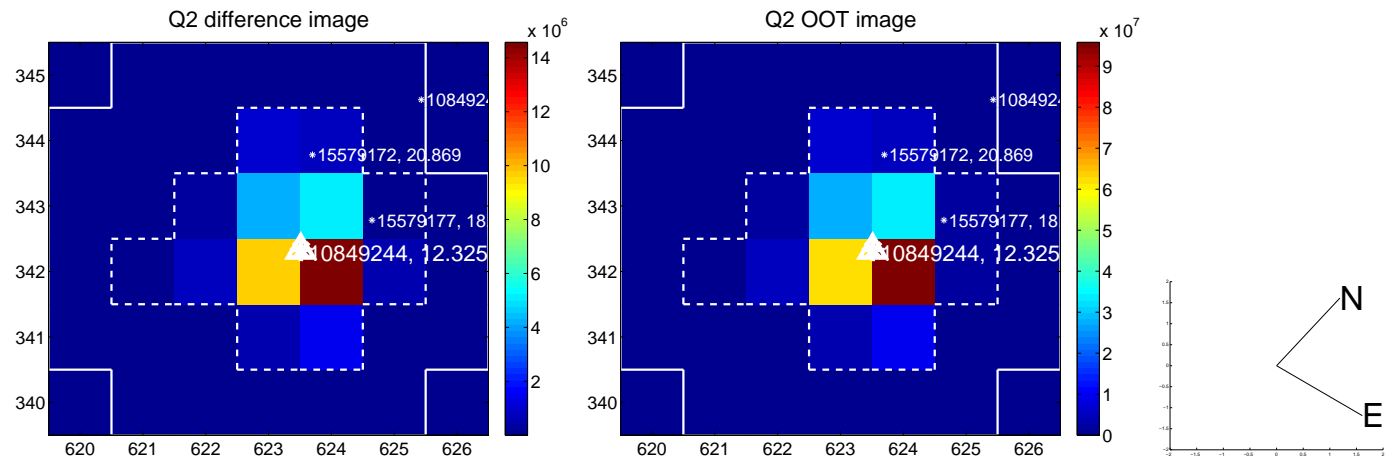
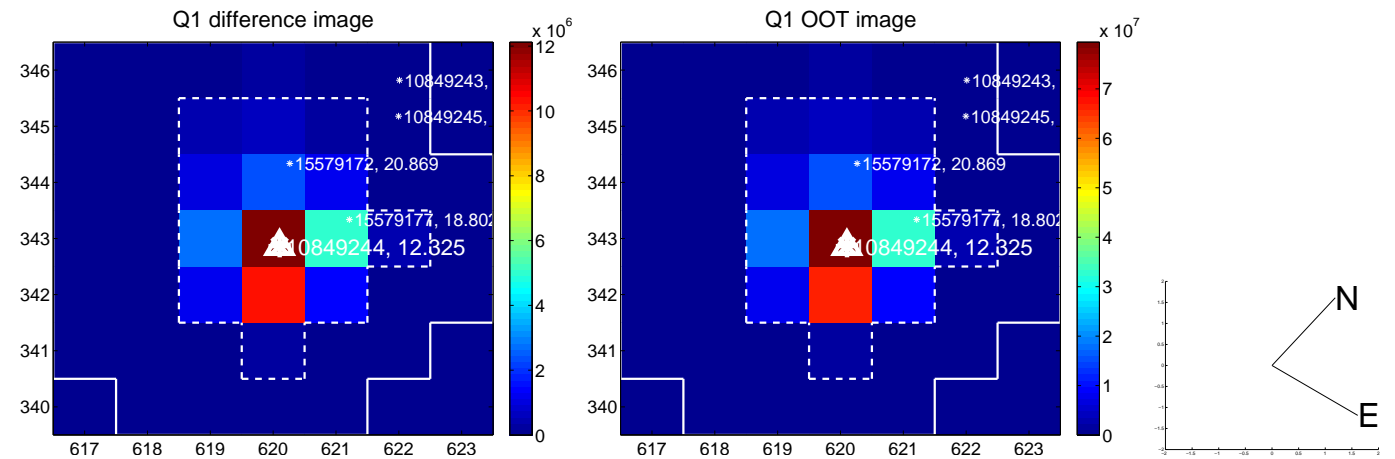
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.067	0.03	0.001 ± 0.067	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.021 ± 0.069	0.31	0.016 ± 0.069	0.014 ± 0.067
photometric centroid source offset	0.03 ± 0.00	55.50	0.02 ± 0.00	-0.02 ± 0.00

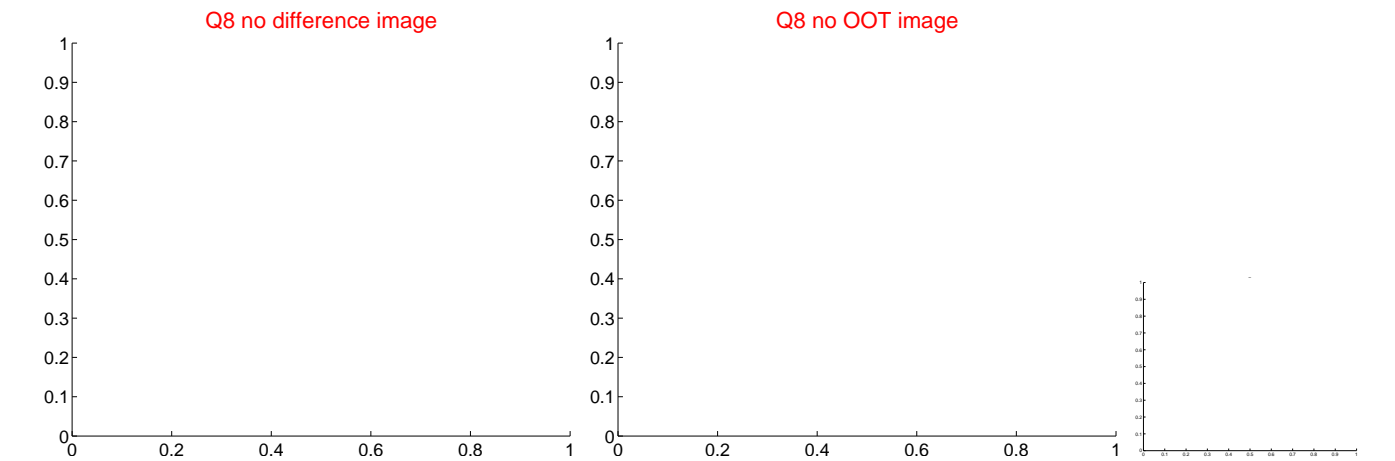
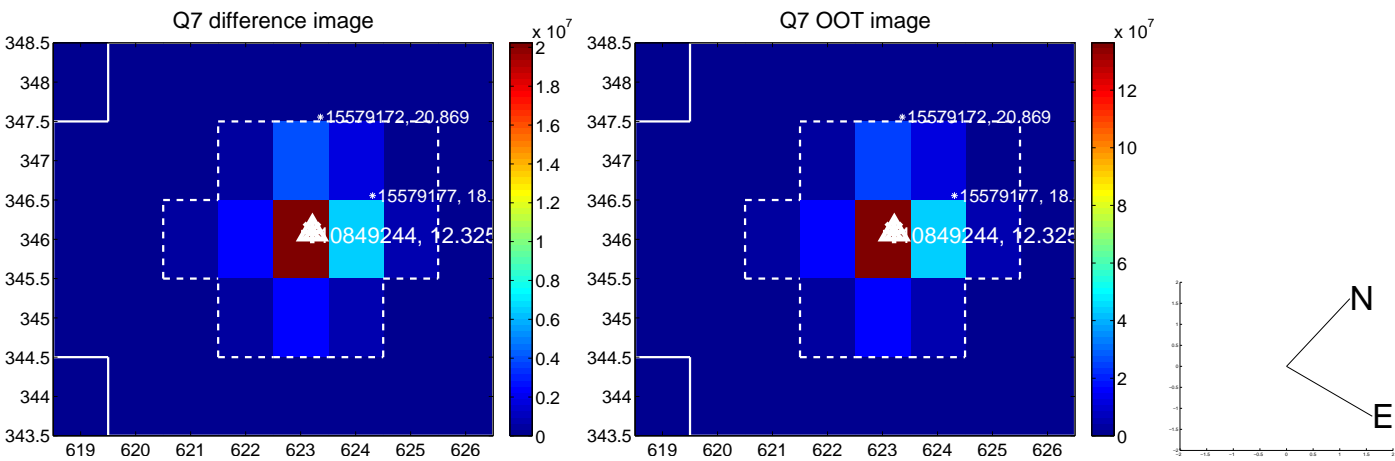
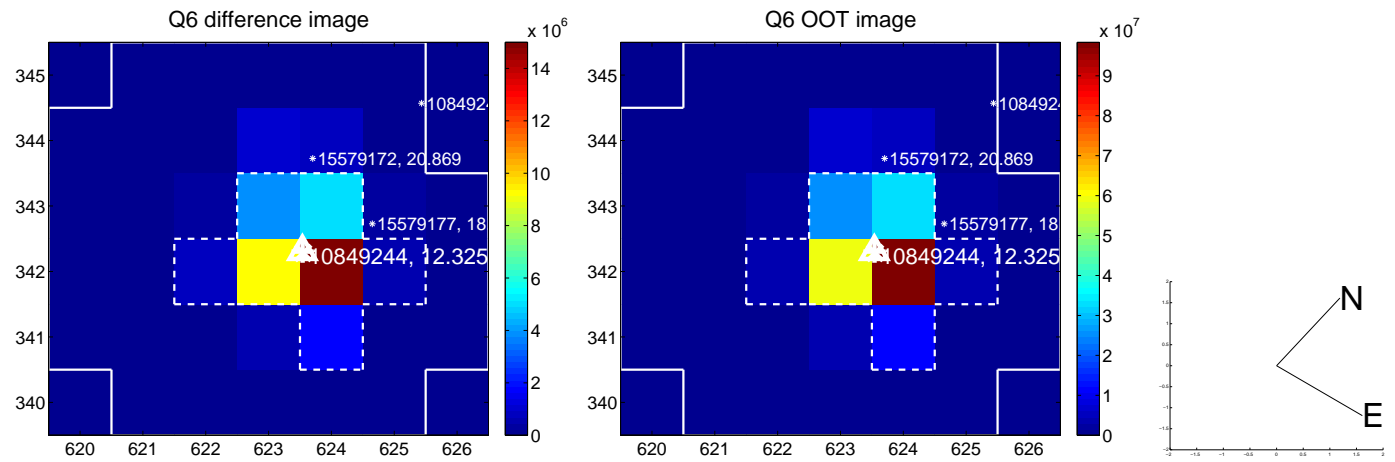
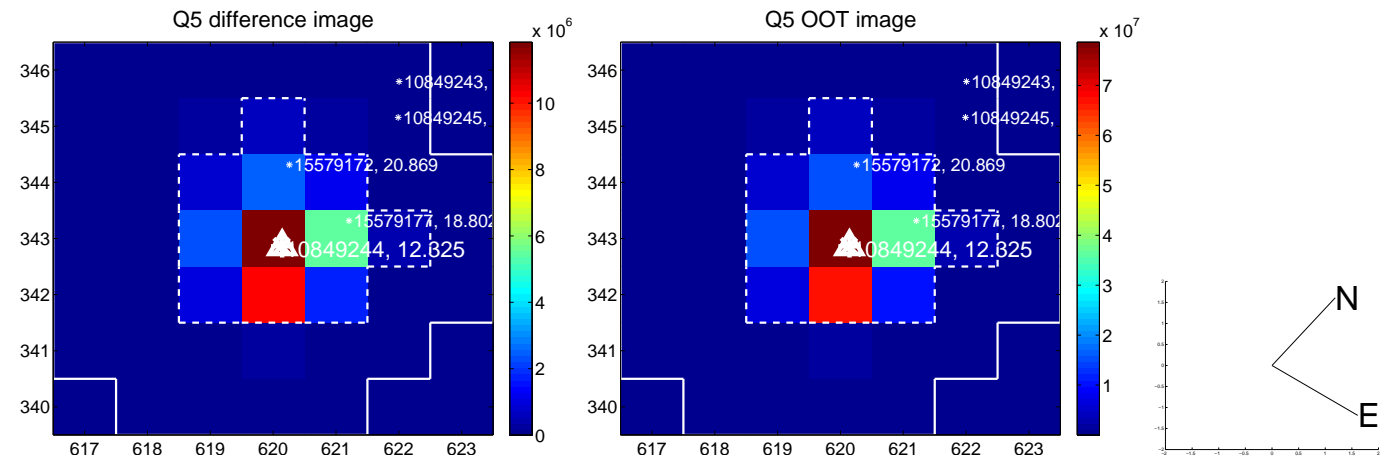


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

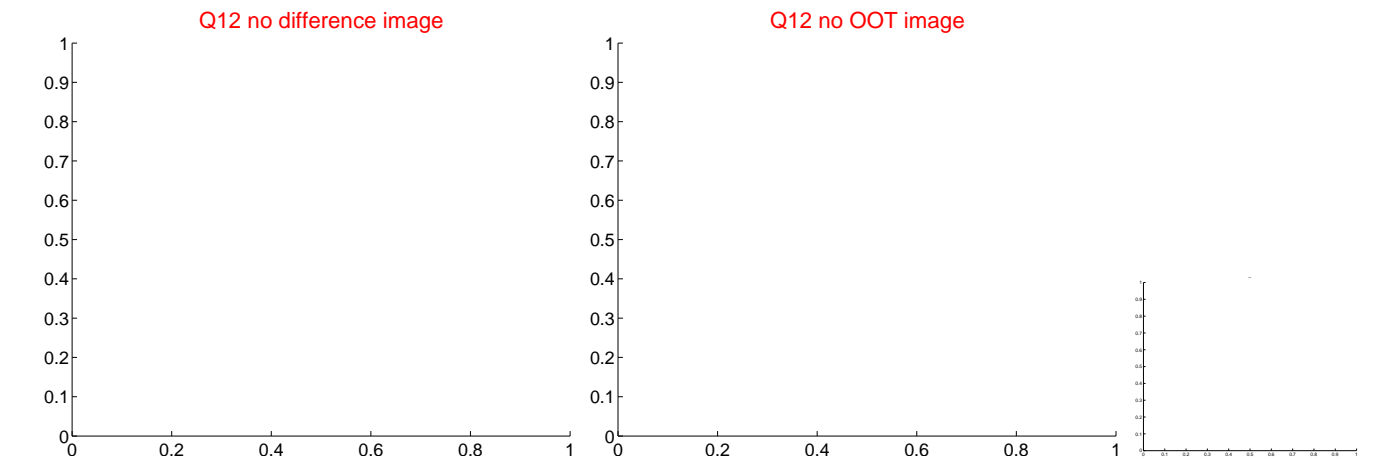
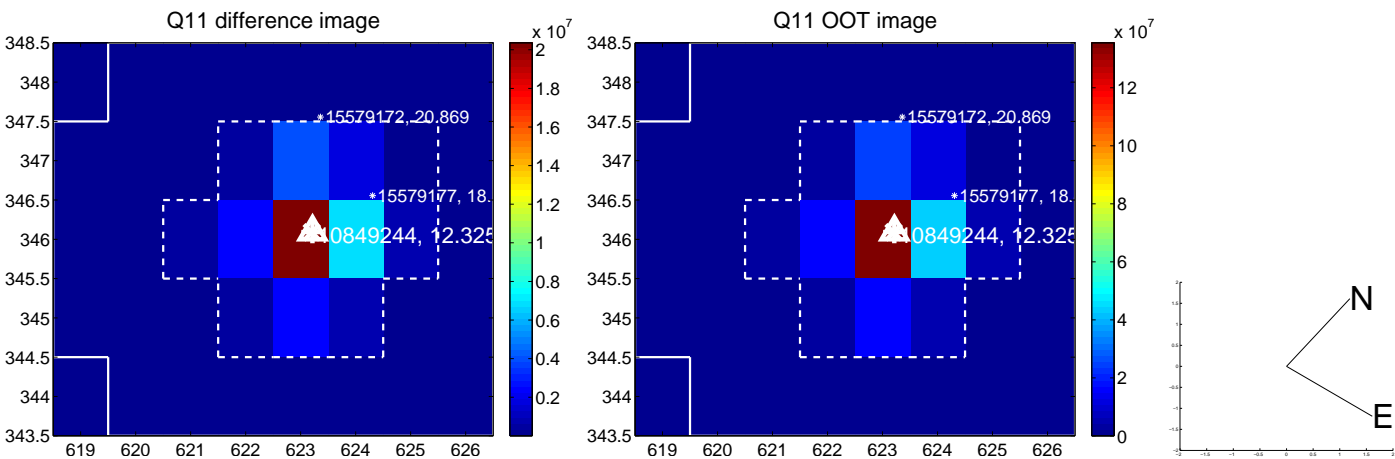
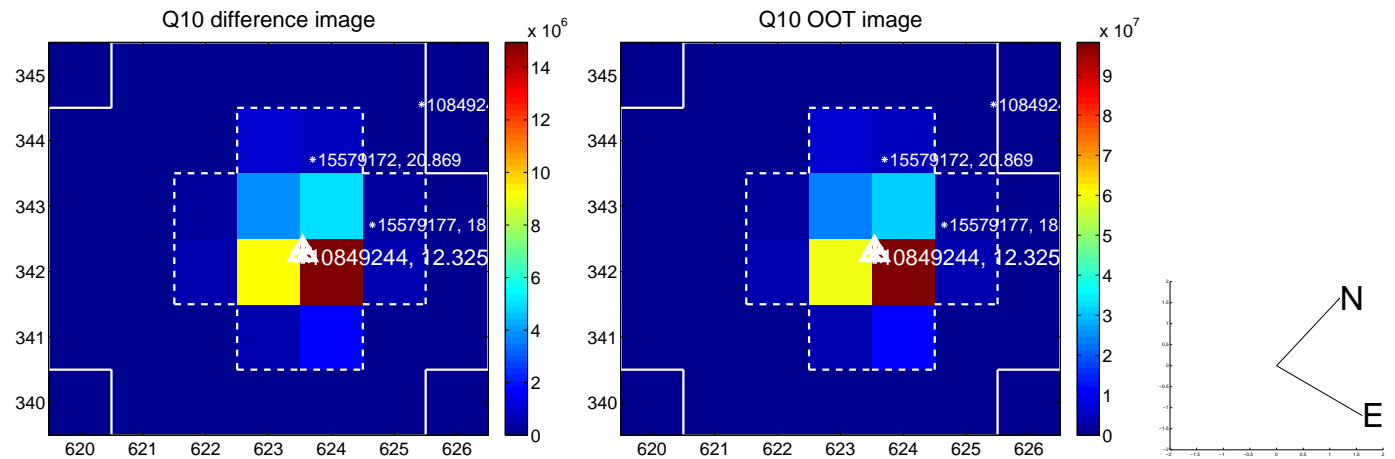
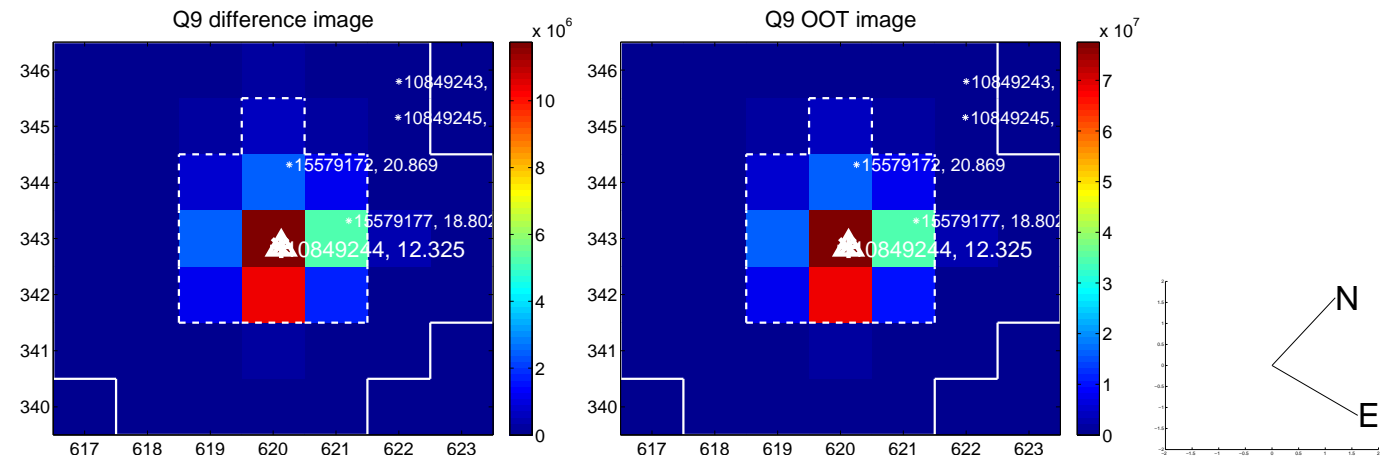
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



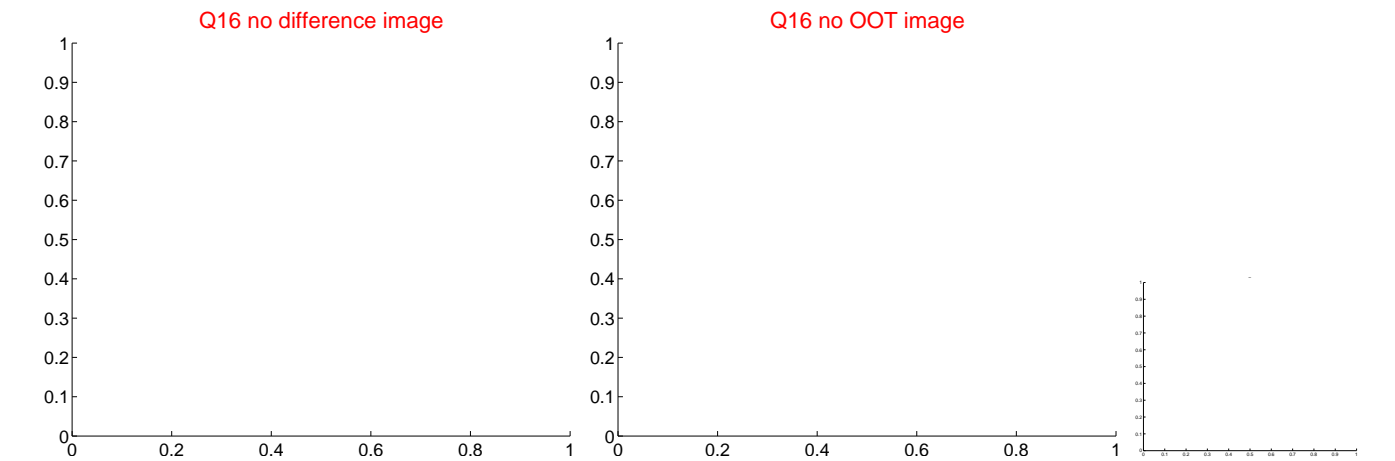
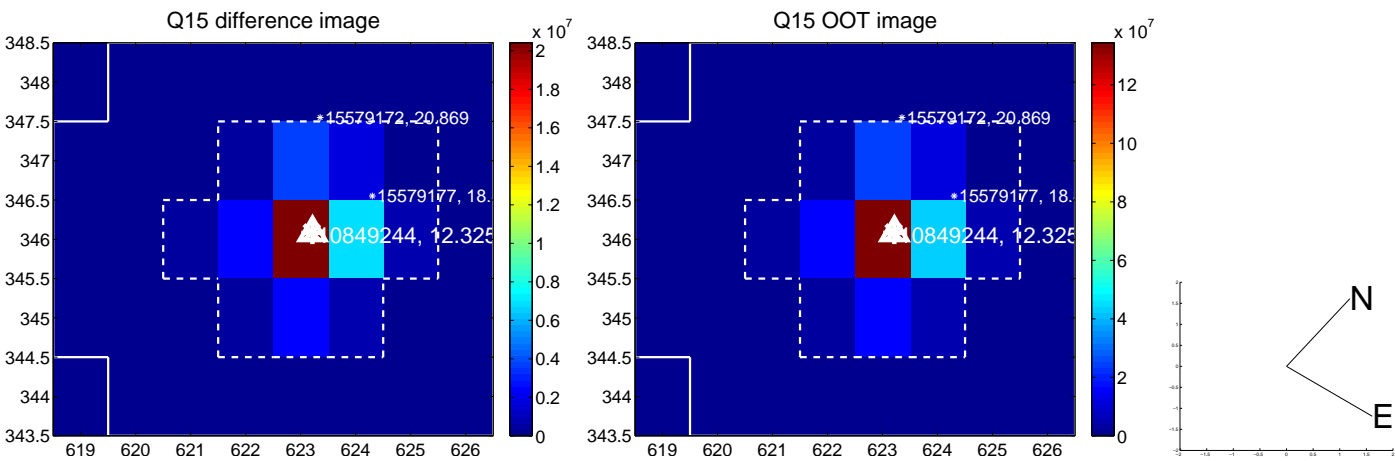
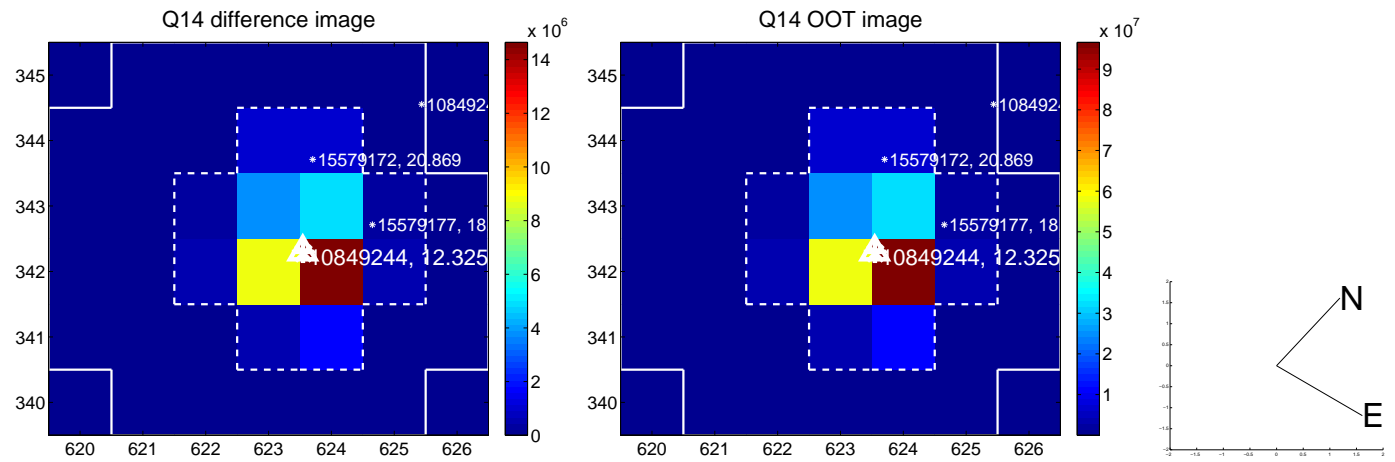
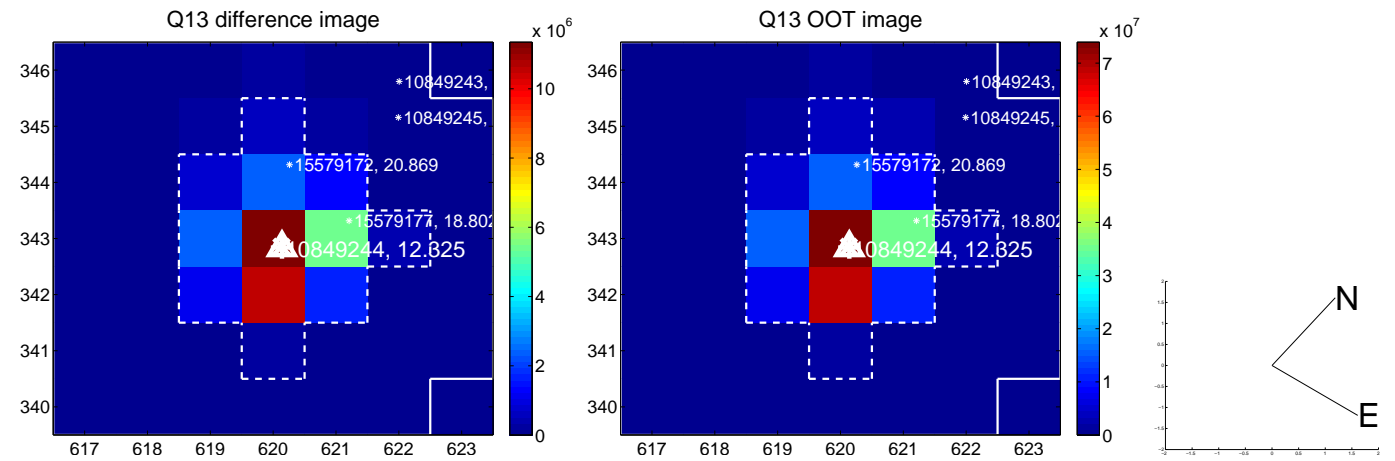
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



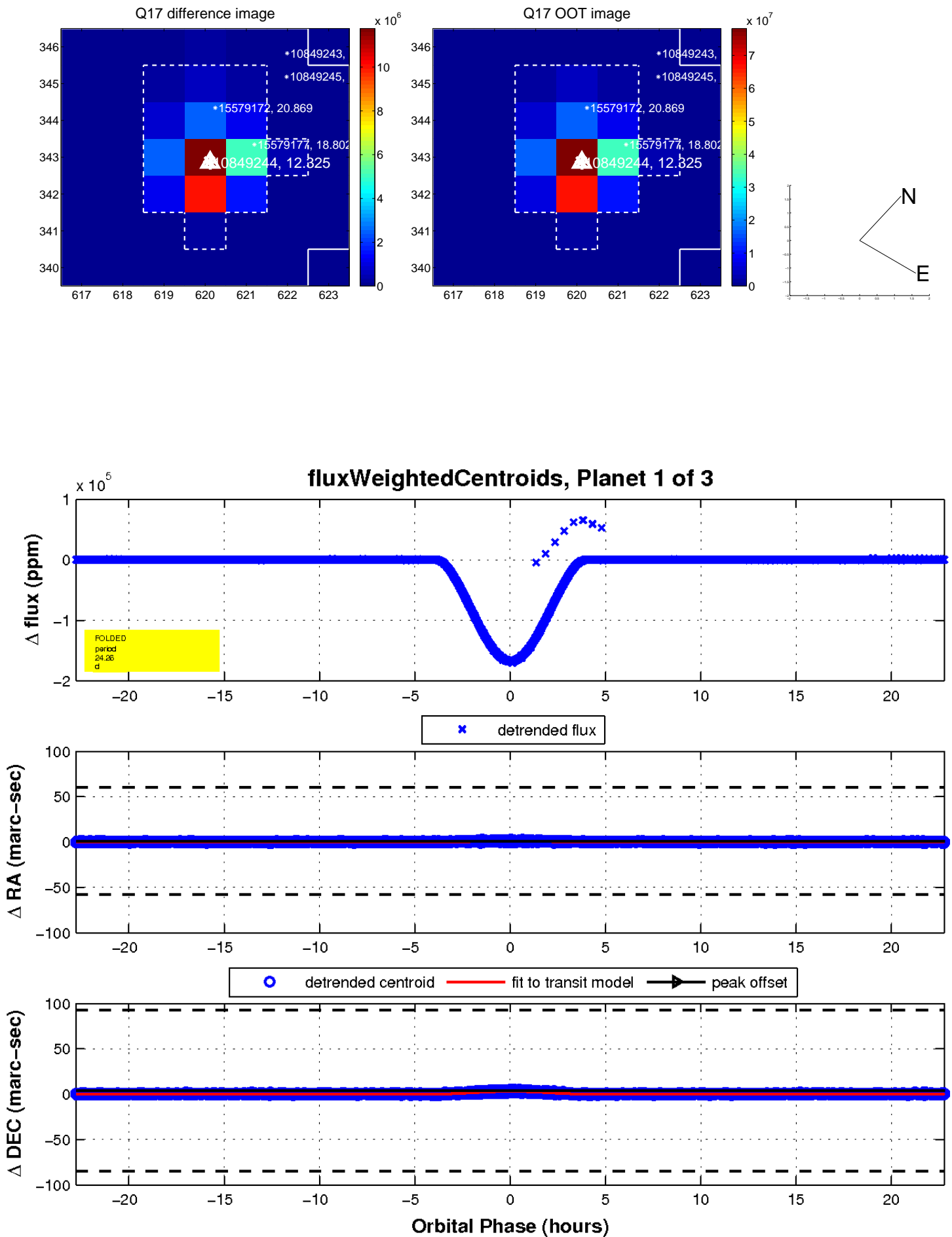
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

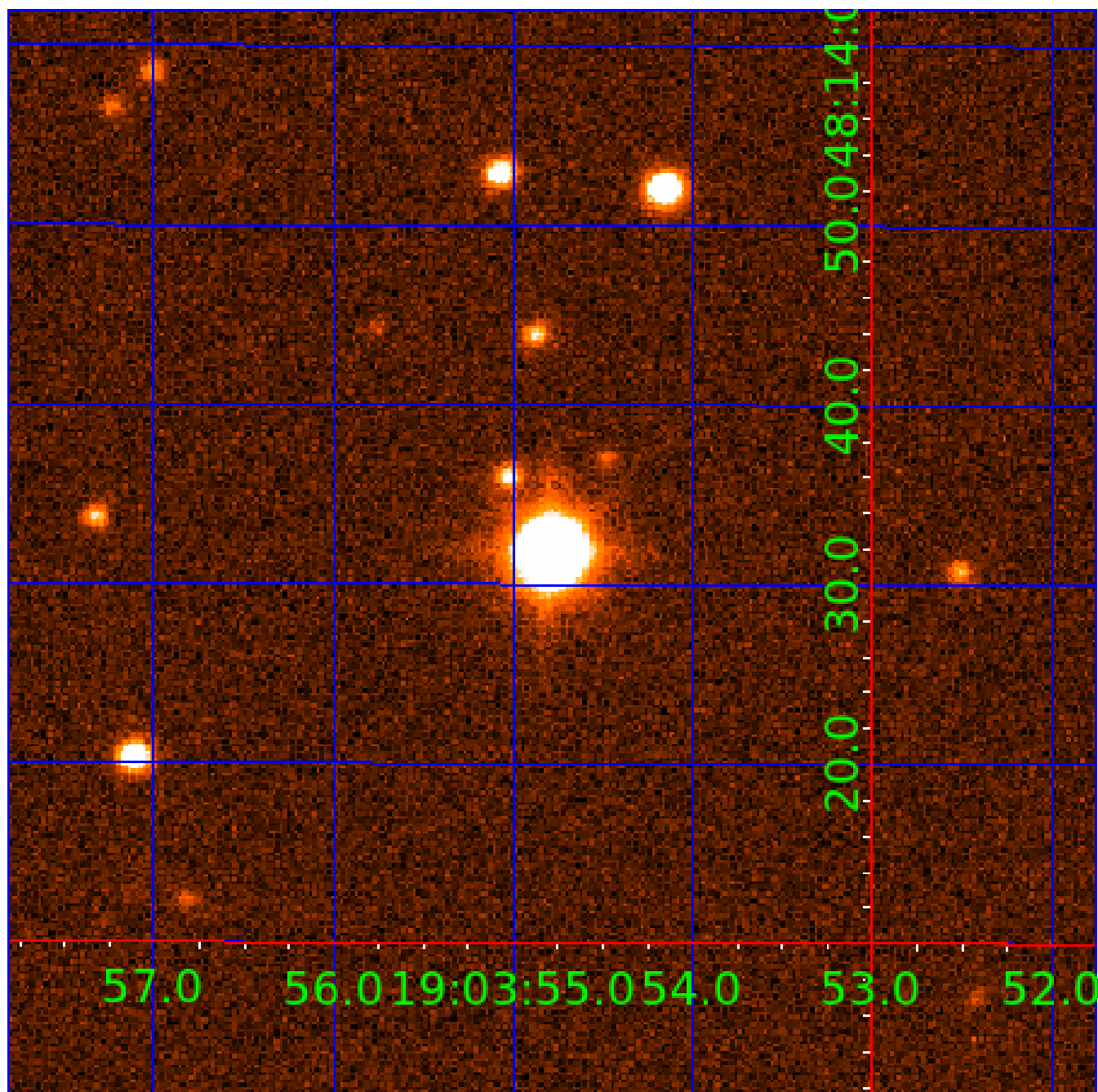


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010849244

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})
010849244-01	OBS	7381.01	24.261683	132.556249	165909.0	7.592	9553.5	5855.2	0.98	6151	57.84	44.65
010849244-02	OBS	No	24.261688	147.241582	191307.7	7.189	9155.1	5332.1	0.98	6151	59.88	44.65
010849244-03	OBS	No	367.402167	317.853913	861.9	37.788	11.1	10.7	0.98	6151	3.61	1.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010849244-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010849244-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010849244-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

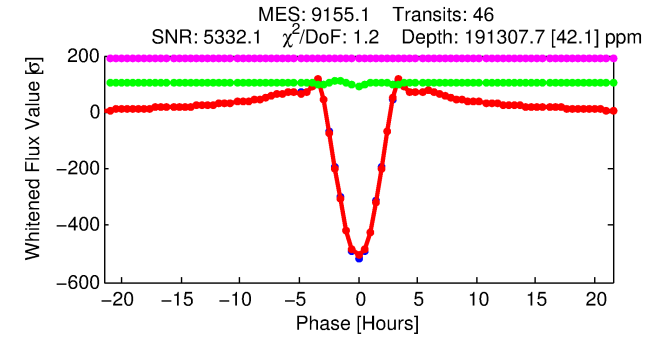
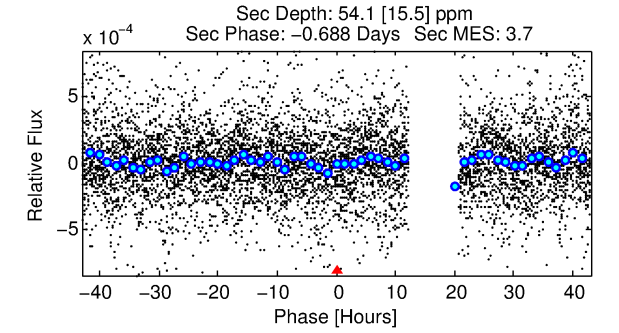
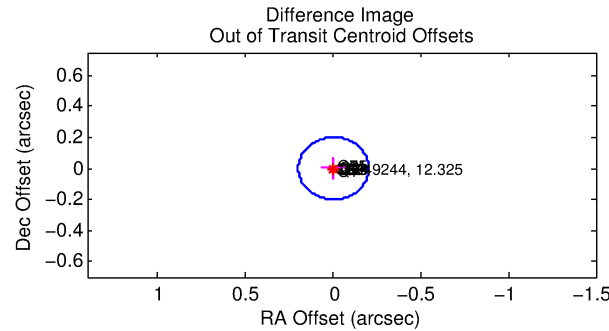
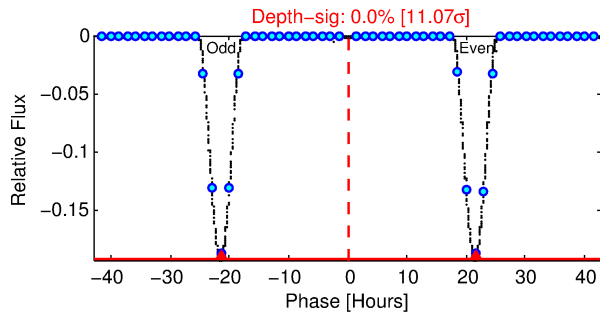
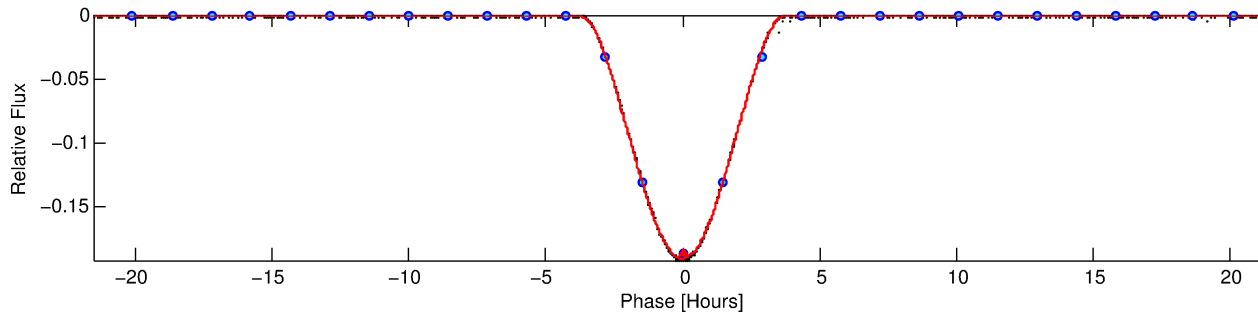
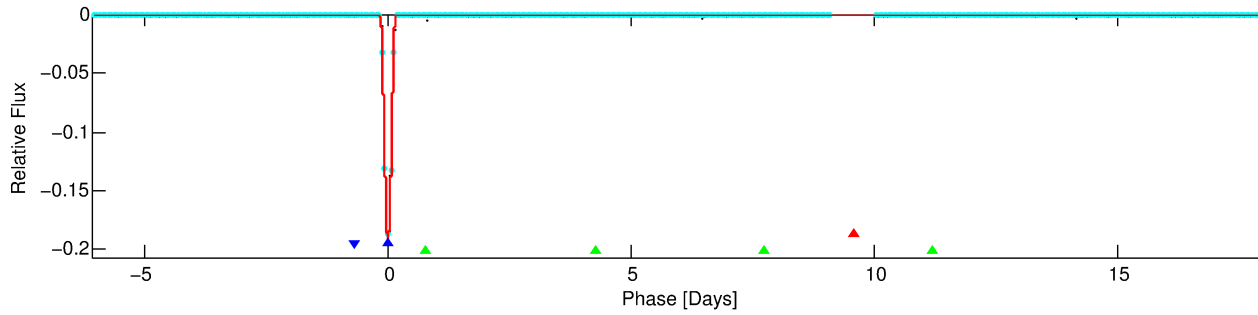
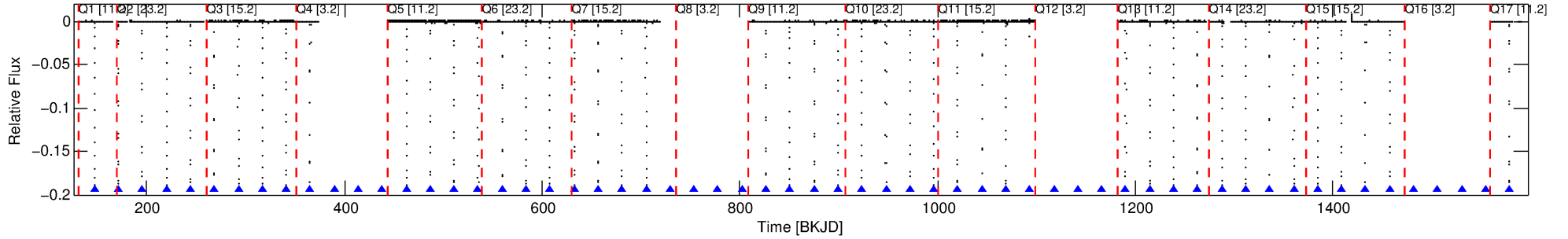
Ephemeris Match Information For 010849244-02

No Significant Match Found

DV One-Page Summary

KIC: 10849244 Candidate: 2 of 3 Period: 24.262 d
KOI: K07381.01 Corr: 0.998

Kp: 12.32 R*: 0.98 Rs Teff: 6151.0 K Logg: 4.47 Fe/H: -0.180



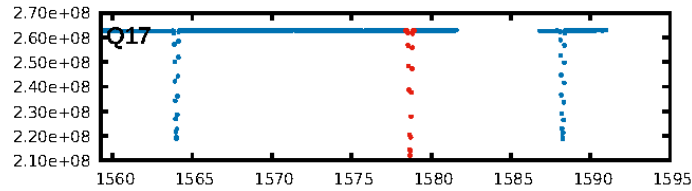
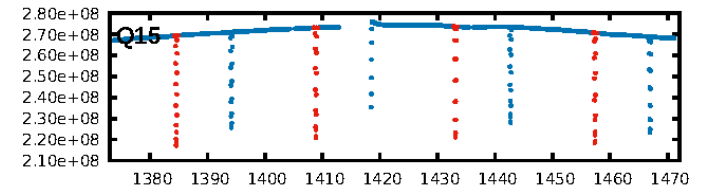
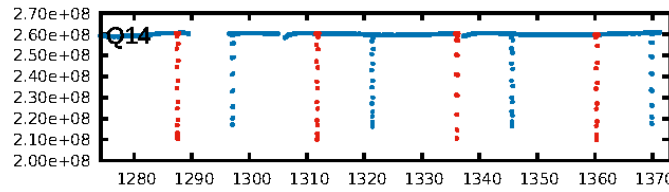
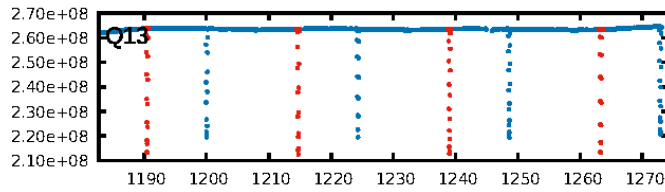
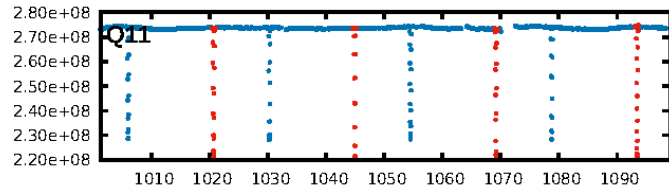
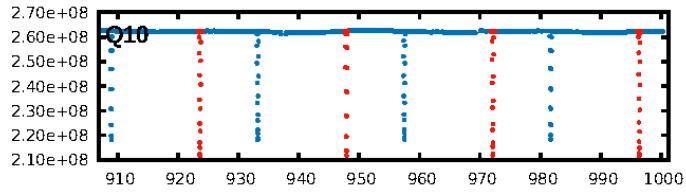
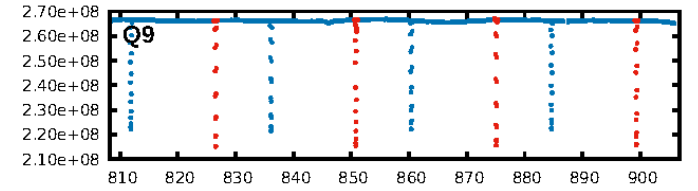
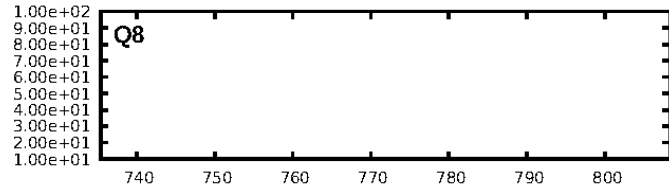
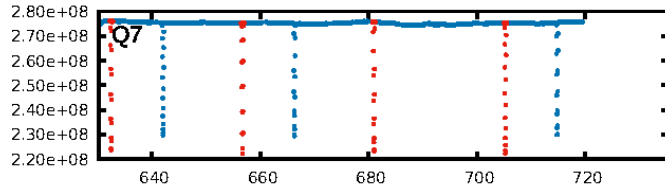
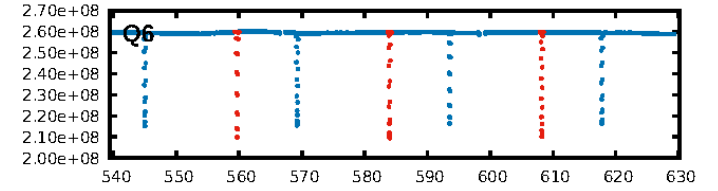
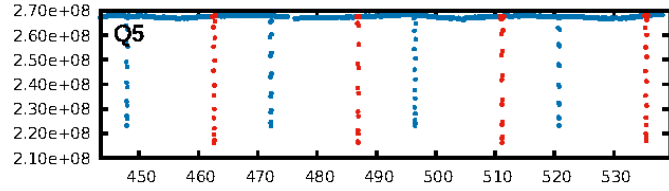
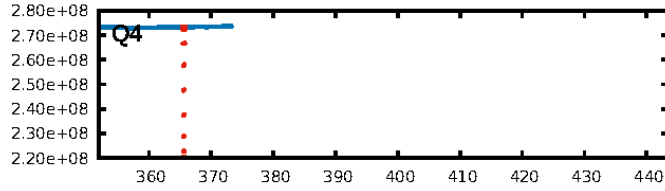
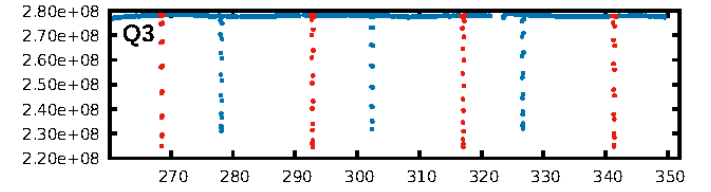
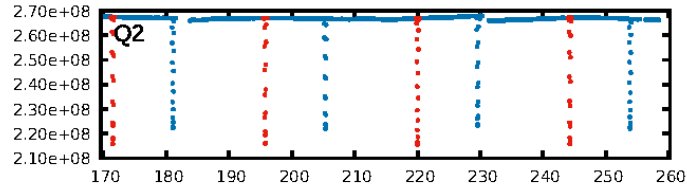
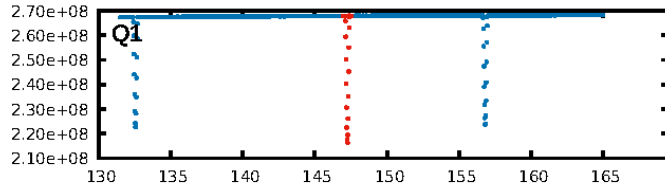
DV Fit Results:

Period = 24.26169 [0.00000] d
Epoch = 147.2416 [0.0000] BKJD
Rp/R* = 0.5583 [0.0096]
a/R* = 33.92 [0.07]
b = 0.84 [0.01]
Seff = 44.65 [13.51]
Teq = 659 [50] K
Rp = 59.89 [13.26] Re
a = 0.1666 [0.0311] AU
Ag = 0.23 [0.09] [-8.40σ]
Teffp = 706 [56] K [0.62σ]

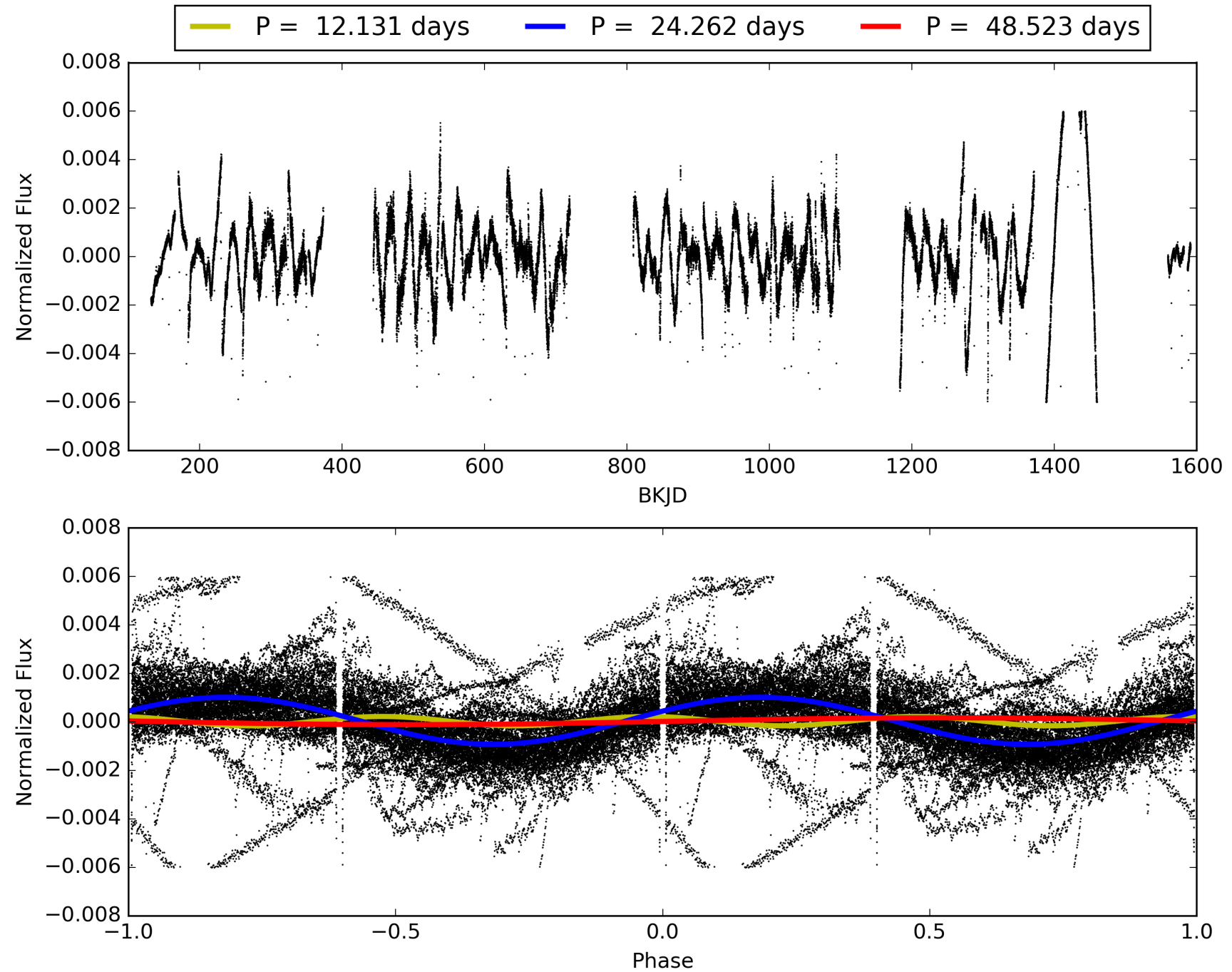
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [214.10σ]
ModelChiSquare2-sig: 20.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [43/43]
GhostDiagnostic-chr: 6.5
Centroid-sig: 0.0%
Centroid-so: 0.024 arcsec [58.47σ]
OotOffset-rm: 0.003 arcsec [0.05σ]
KicOffset-rm: 0.020 arcsec [0.29σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010849244-02, PDC Light Curves

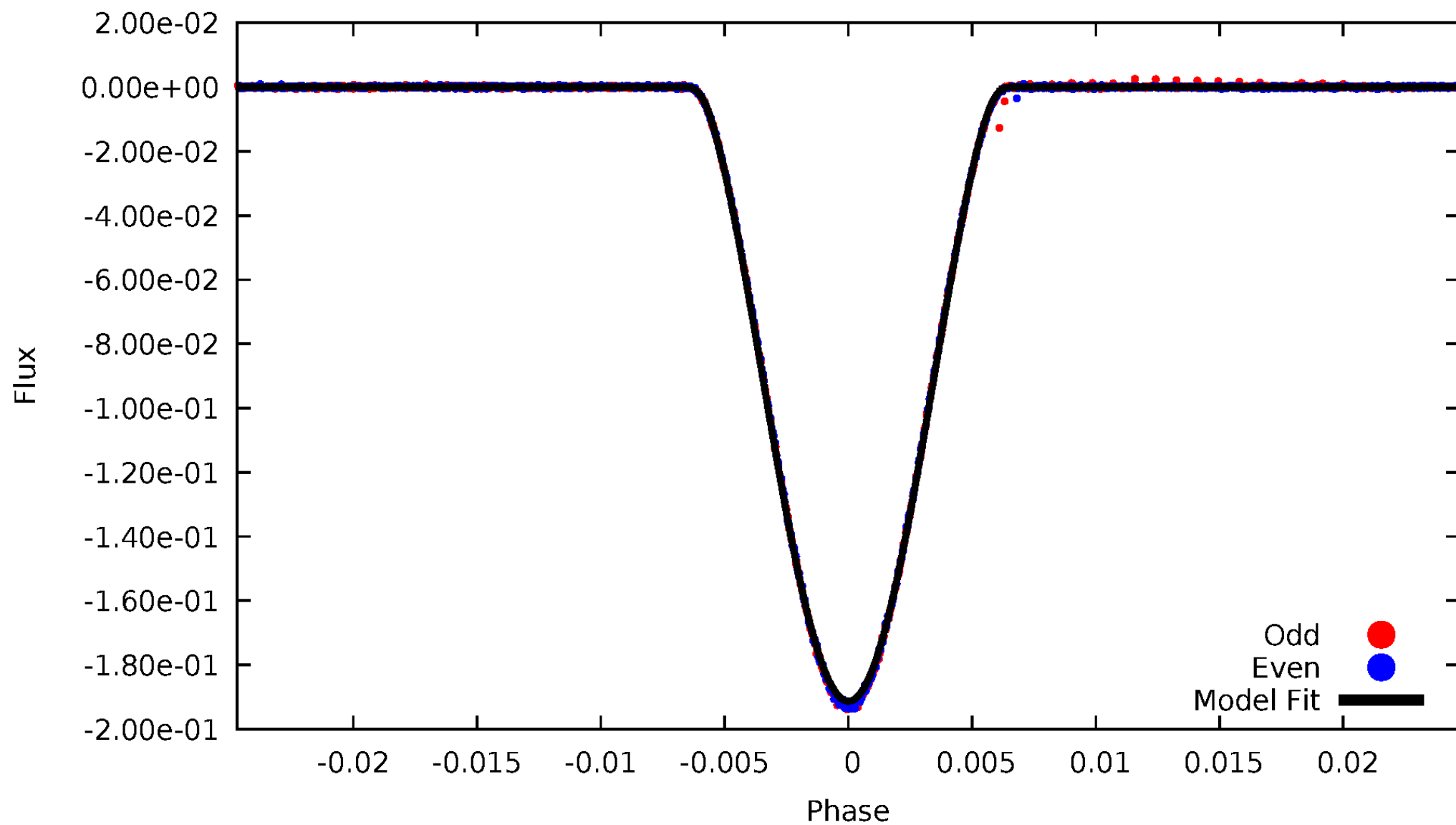


TCE 010849244-02



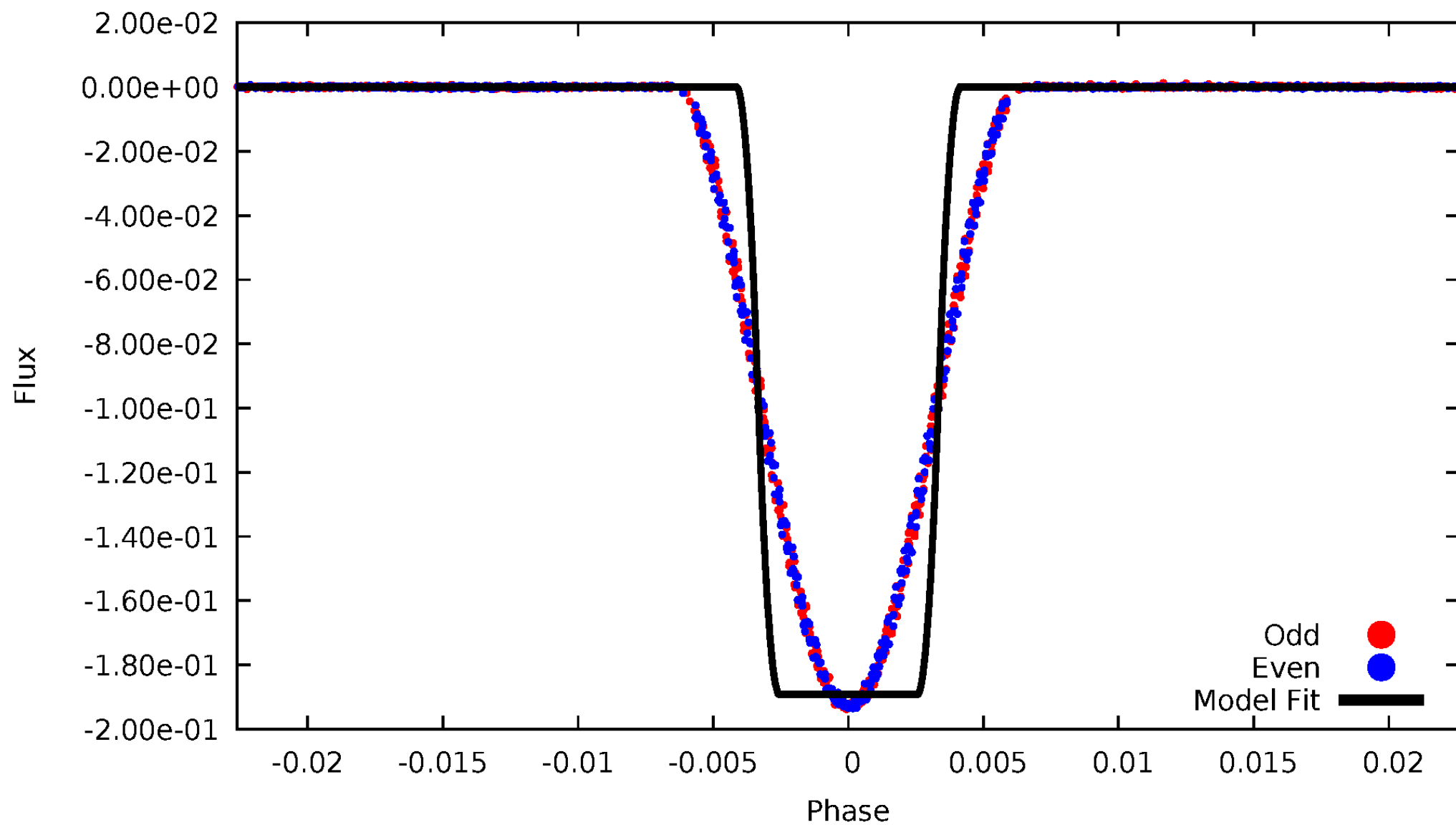
DV Odd/Even

TCE 010849244-02



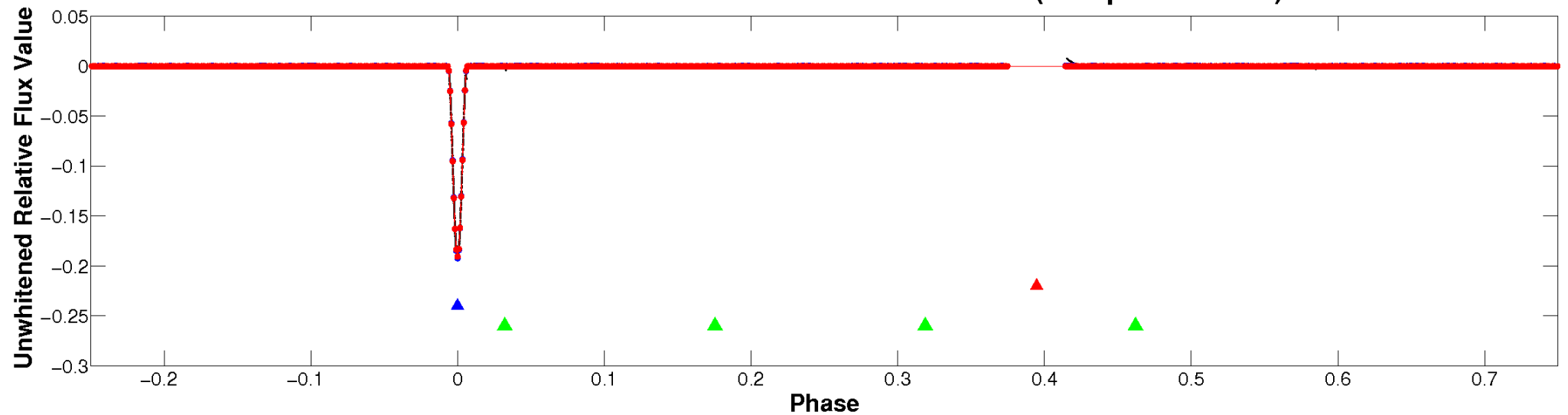
ALT Odd/Even

TCE 010849244-02

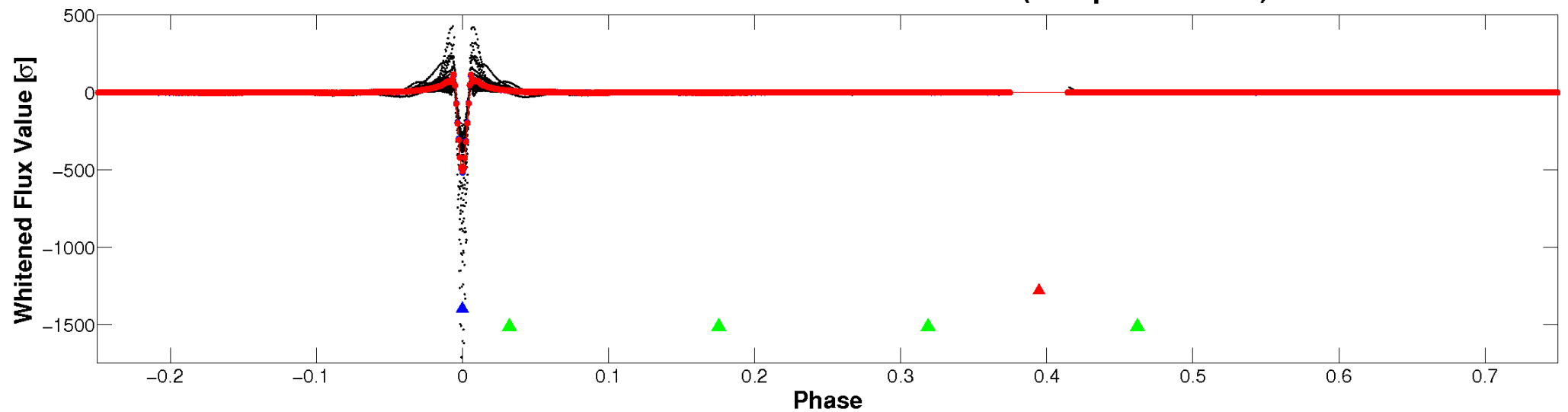


Non-Whitened Vs. Whitened Light Curve

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

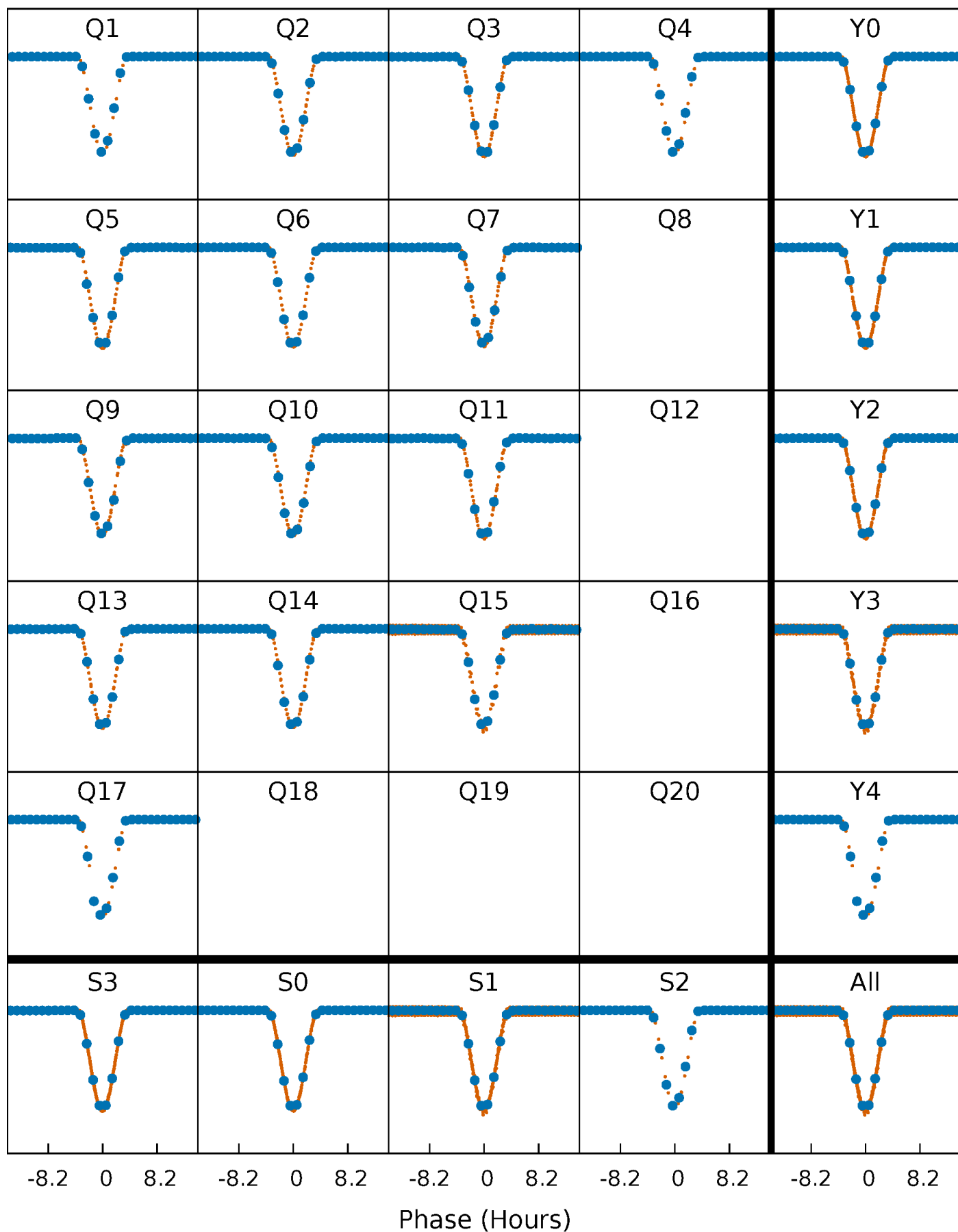


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



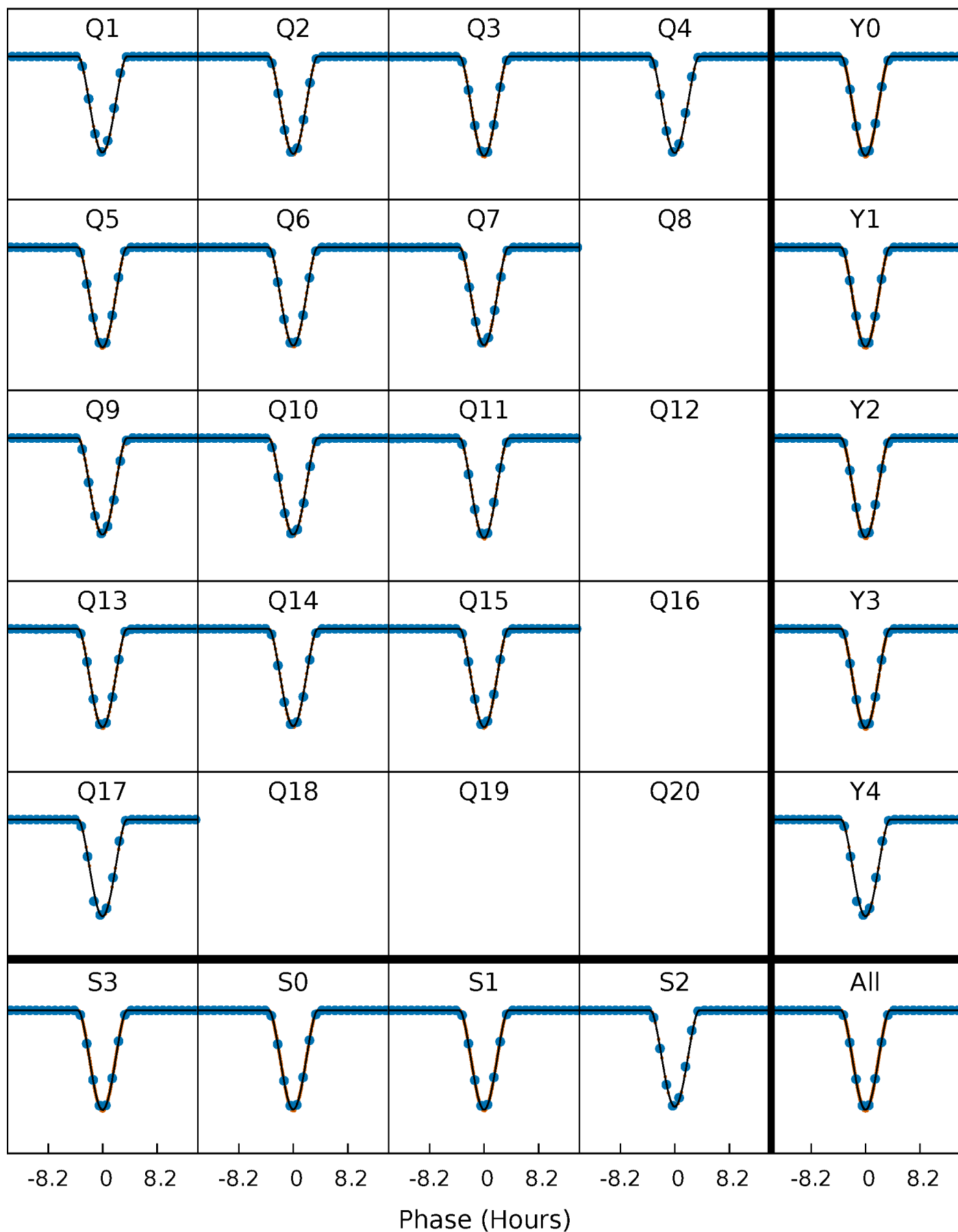
PDC Quarter-Phased Transit Curves

TCE 010849244-02 P= 24.261688 Days $T_0=147.241582$ (BKJD)



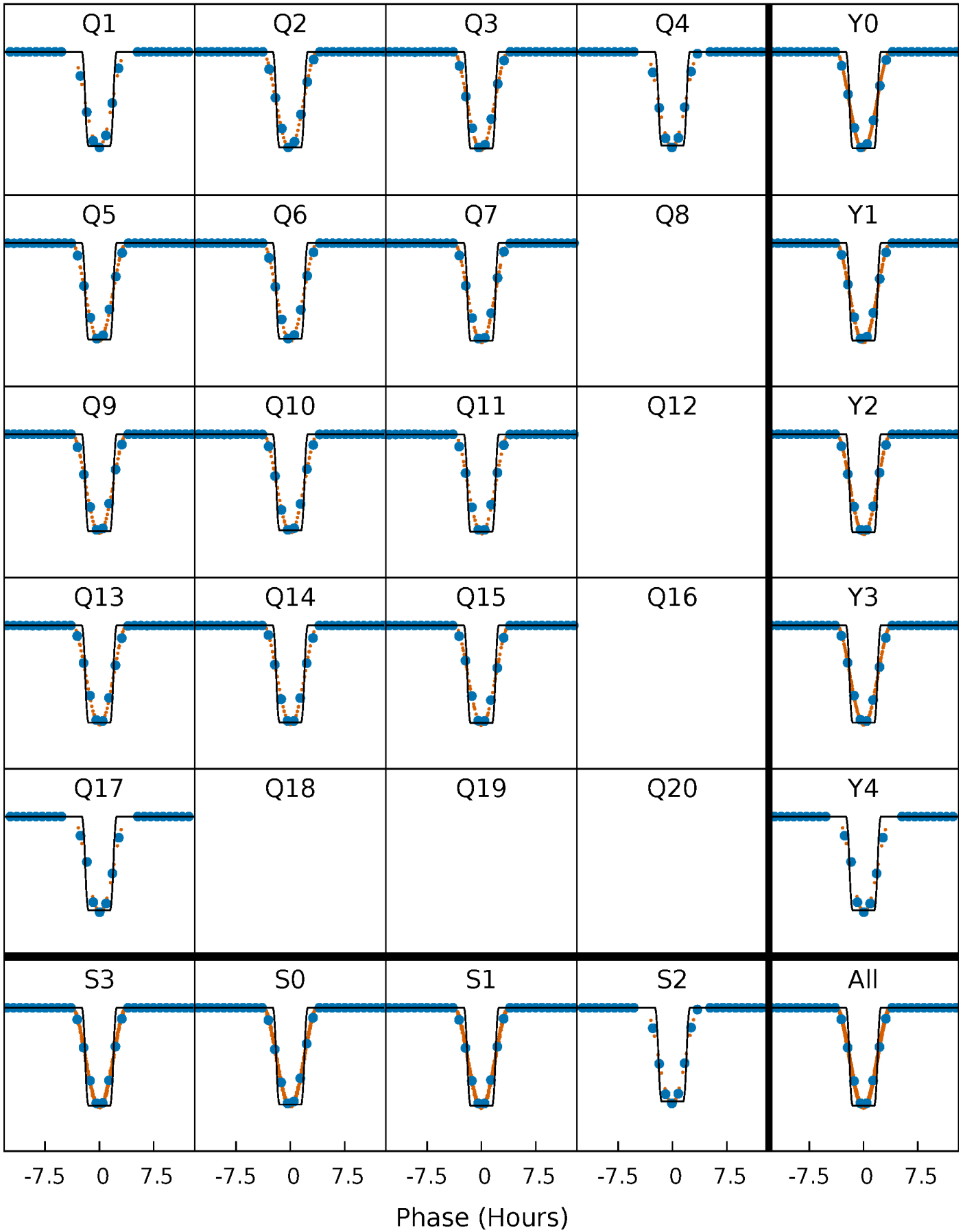
DV Quarter-Phased Transit Curves

TCE 010849244-02 P= 24.261688 Days $T_0=147.241582$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

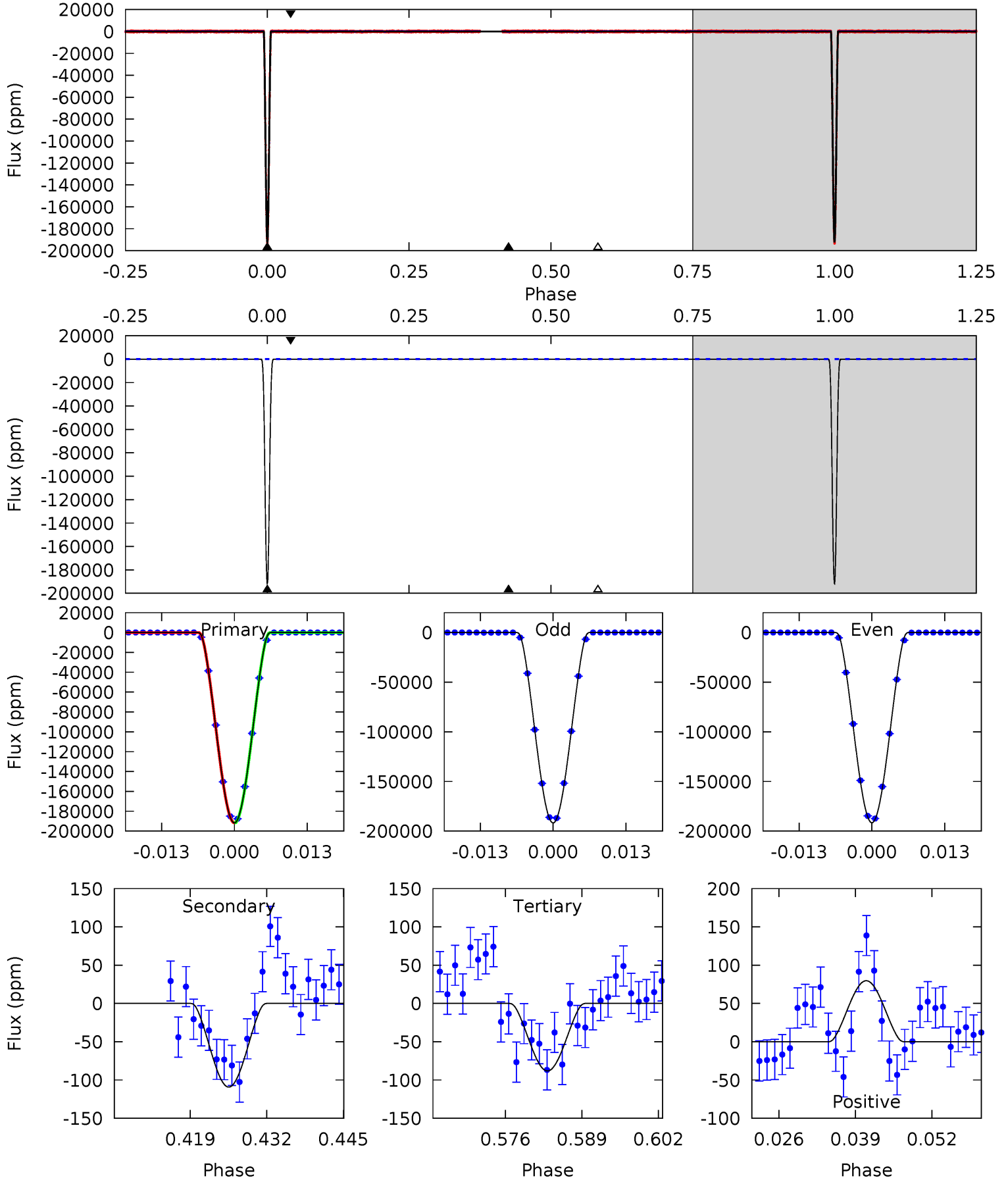
TCE 010849244-02 P= 24.261562 Days $T_0=147.244832$ (BKJD)



DV Model-Shift Uniqueness Test

010849244-02, P = 24.261688 Days, E = 122.979894 Days

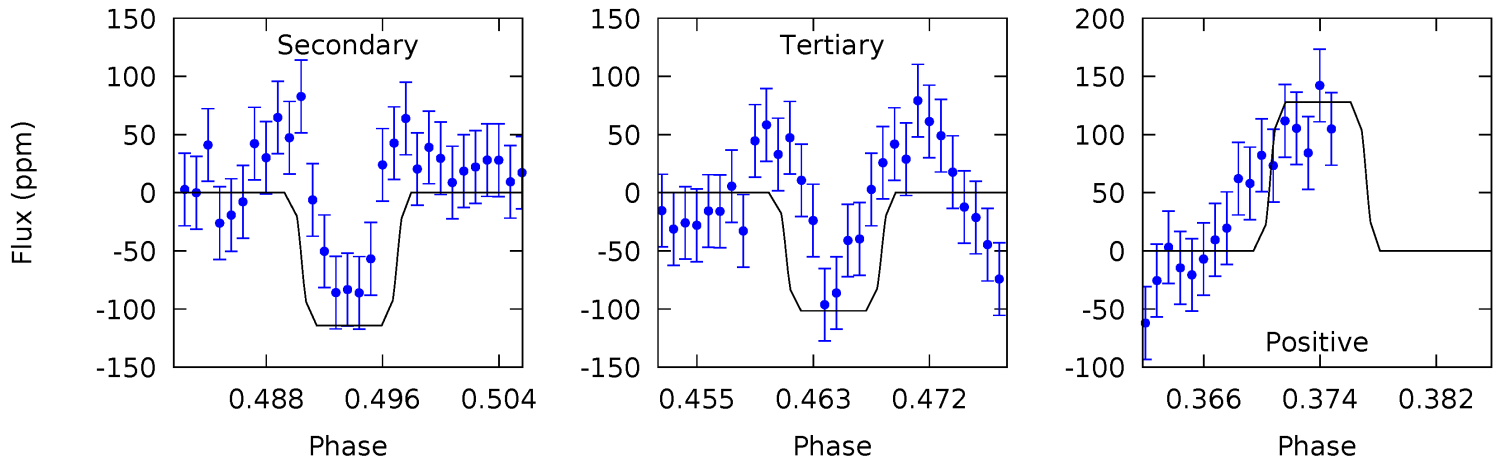
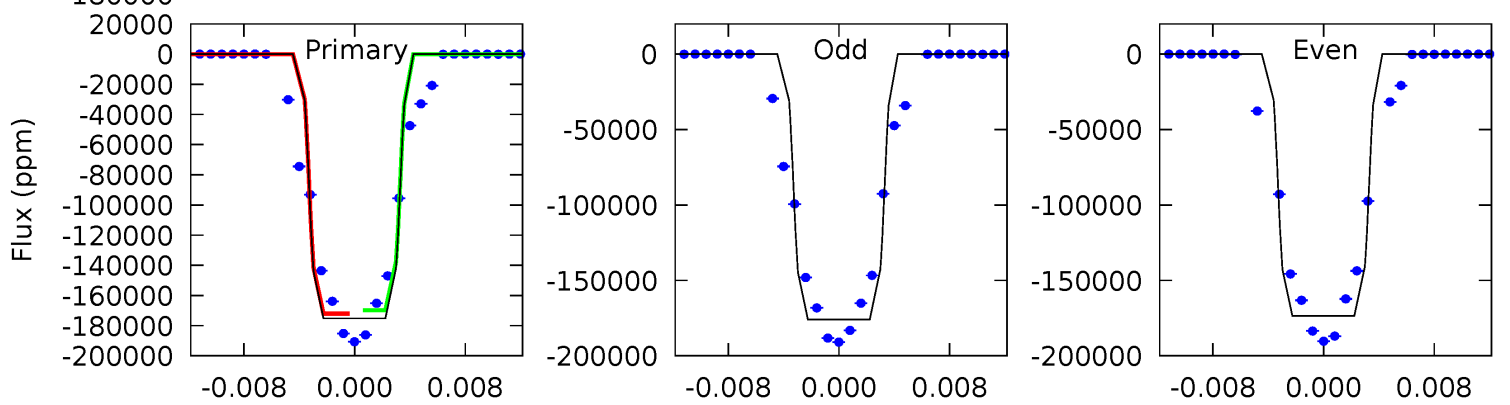
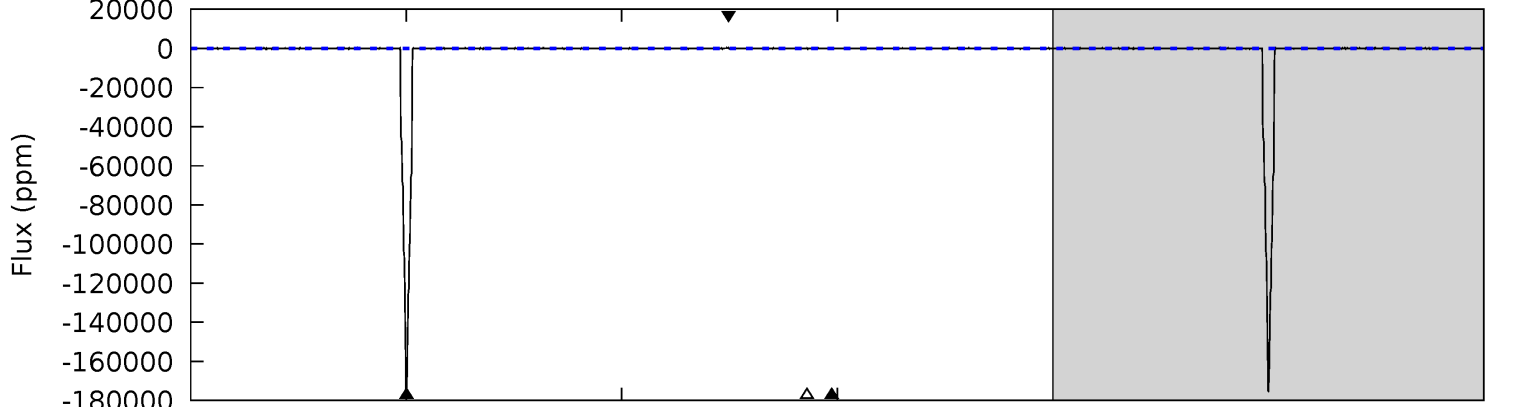
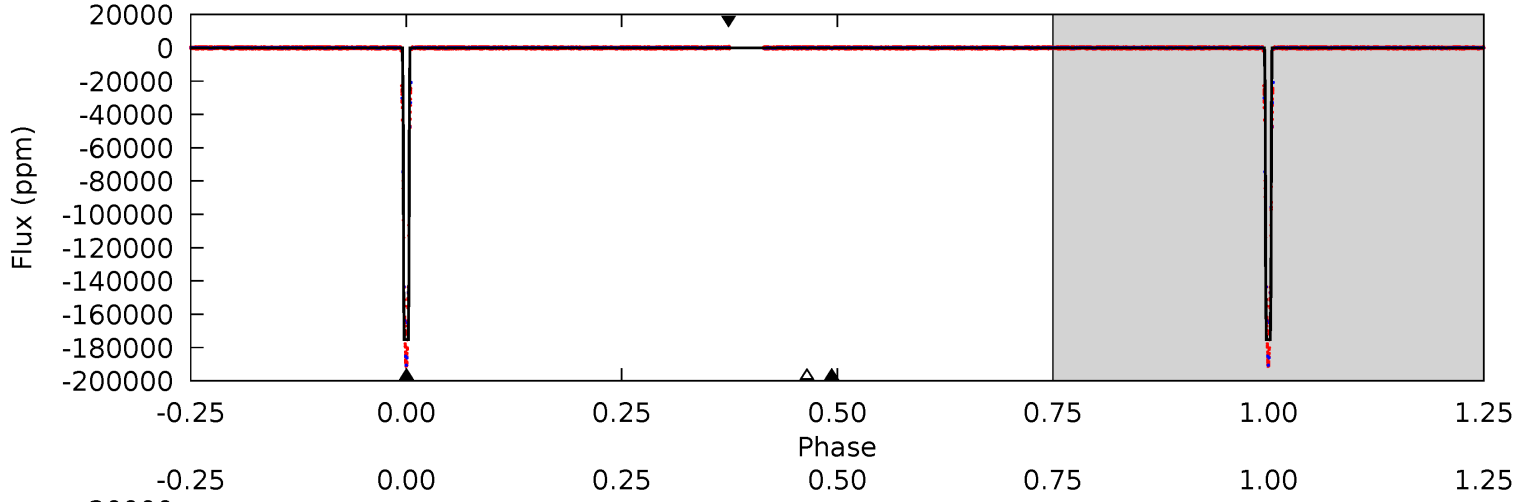
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19712	11.2	9.06	8.19	4.97	2.48	3.03	19703	19704	2.17	3.04	7.77	1.00	0.00	10.3



Alt Model-Shift Uniqueness Test

010849244-02, P = 24.261562 Days, E = 122.983270 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7984	5.20	4.63	5.83	5.07	2.65	1.43	7979	7978	0.57	-0.63	53.1	1.00	0.00	0



Stellar Parameters For KIC 010849244

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6151^{+146}_{-200}	$4.473^{+0.050}_{-0.150}$	$-0.180^{+0.250}_{-0.350}$	$0.983^{+0.217}_{-0.109}$	$1.048^{+0.116}_{-0.141}$	$1.552^{+0.409}_{-0.651}$
	+2%/-3%	+1%/-3%	+139%/-194%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	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 010849244-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109±10	$61.11^{+7.19}_{-4.47}$	935^{+49}_{-38}	1672^{+58}_{-102}	$0.432^{+0.075}_{-0.077}$
Alt.	-114±22	$47.84^{+5.67}_{-3.74}$	938^{+44}_{-42}	1866^{+64}_{-77}	$0.728^{+0.199}_{-0.173}$

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 $A_{obs} \gg 1.0$

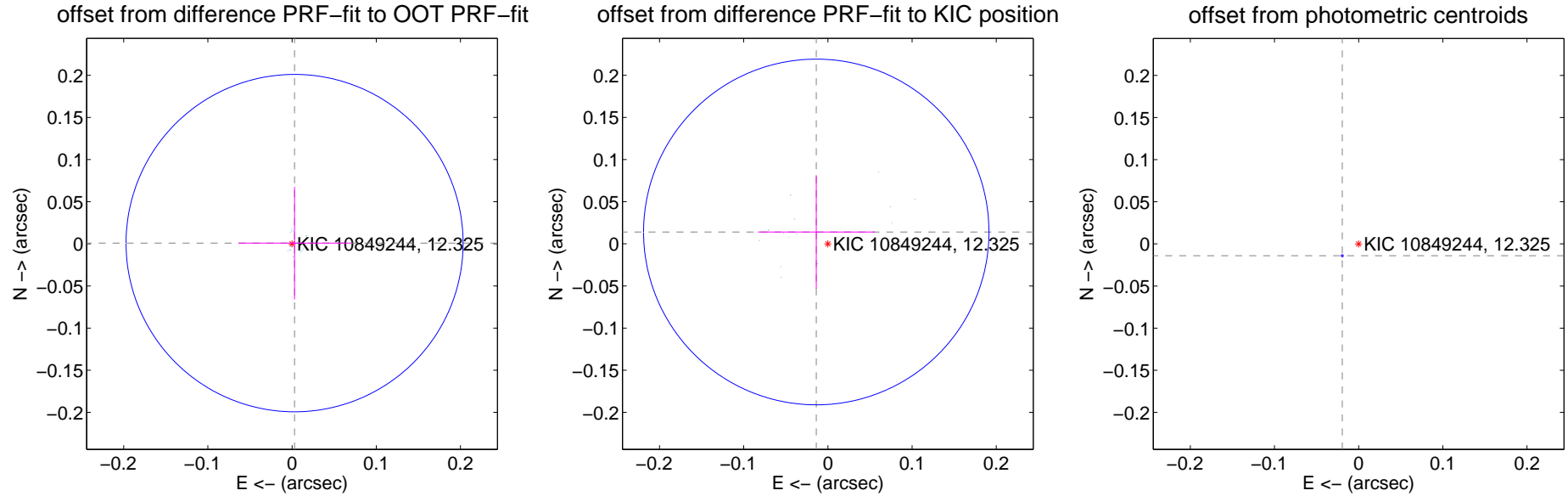
DV Centroid Data

Supplemental centroid analysis for 010849244-02. Kepler magnitude: 12.32. Transit SNR 5332.08

There are 14 quarters with good PRF difference image offsets

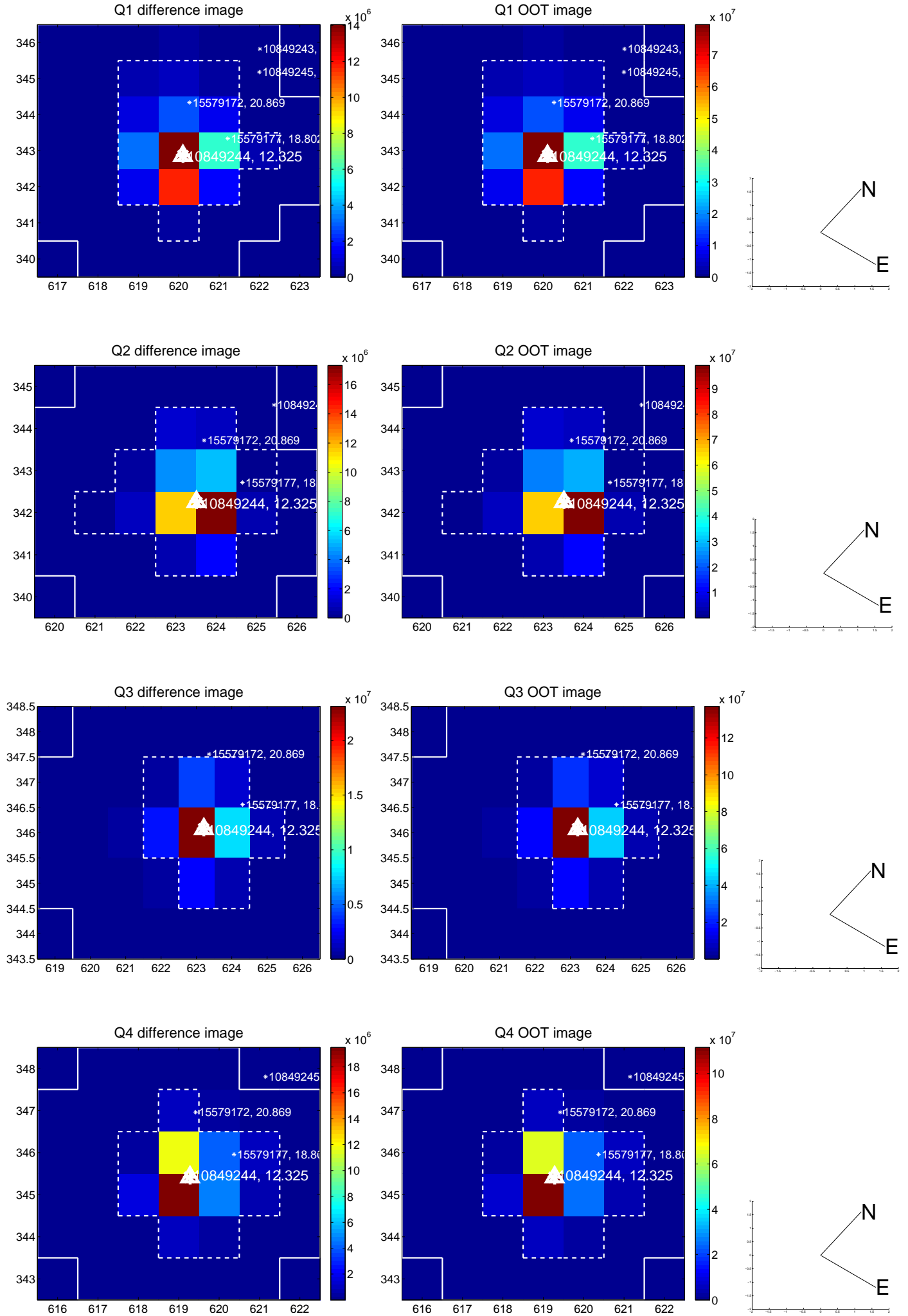
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.05	-0.003 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.020 ± 0.068	0.29	0.014 ± 0.069	0.014 ± 0.067
photometric centroid source offset	0.02 ± 0.00	58.47	0.02 ± 0.00	-0.01 ± 0.00

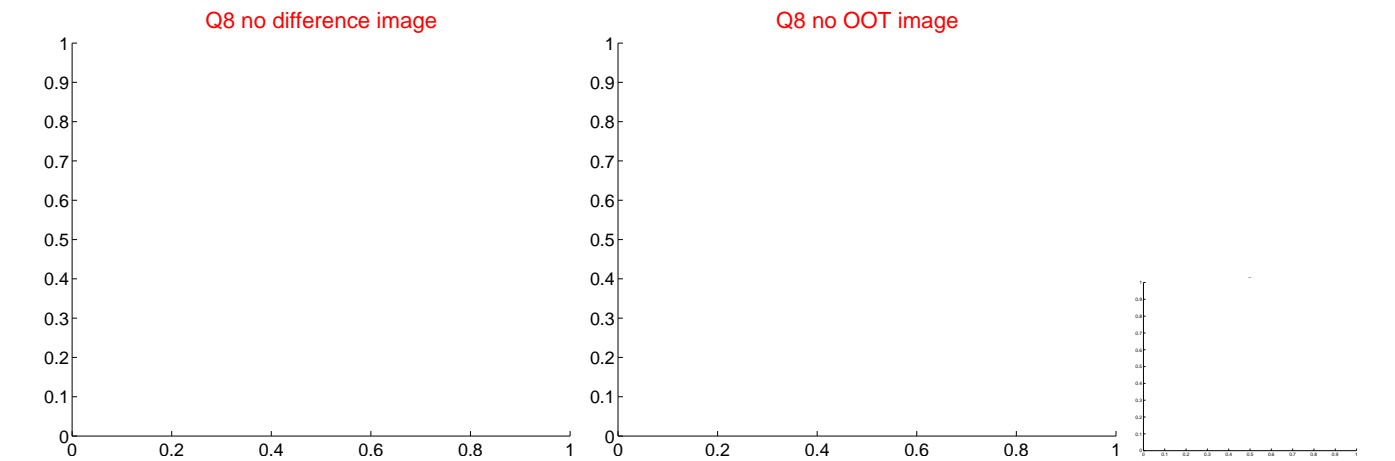
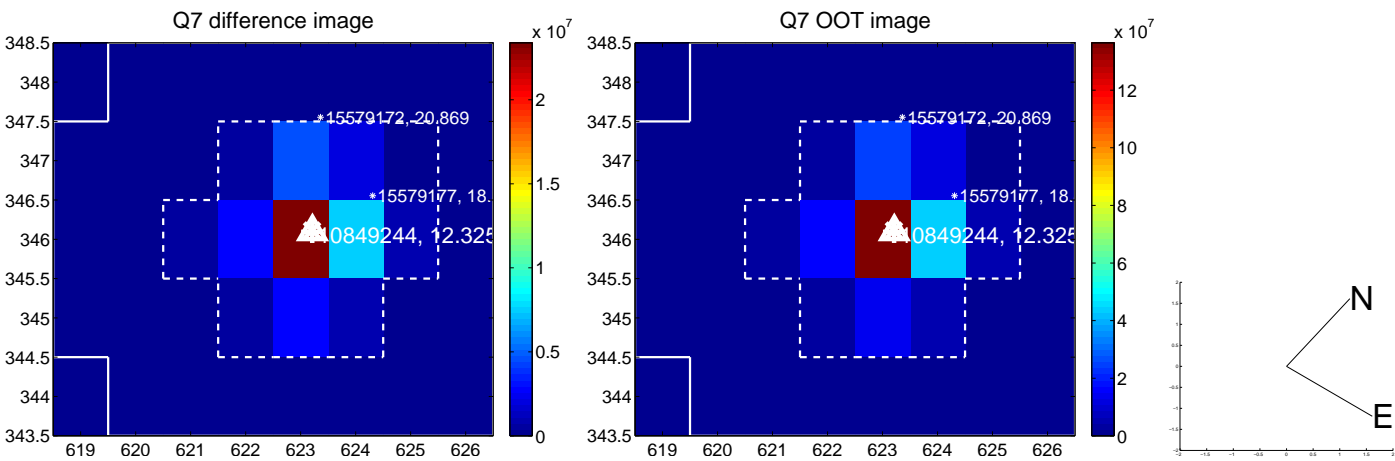
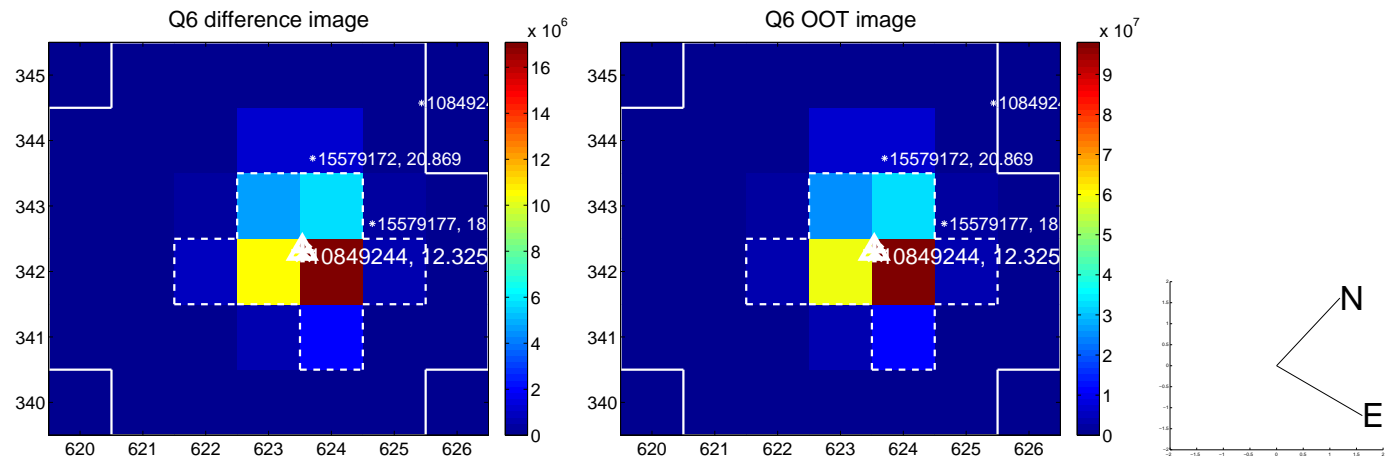
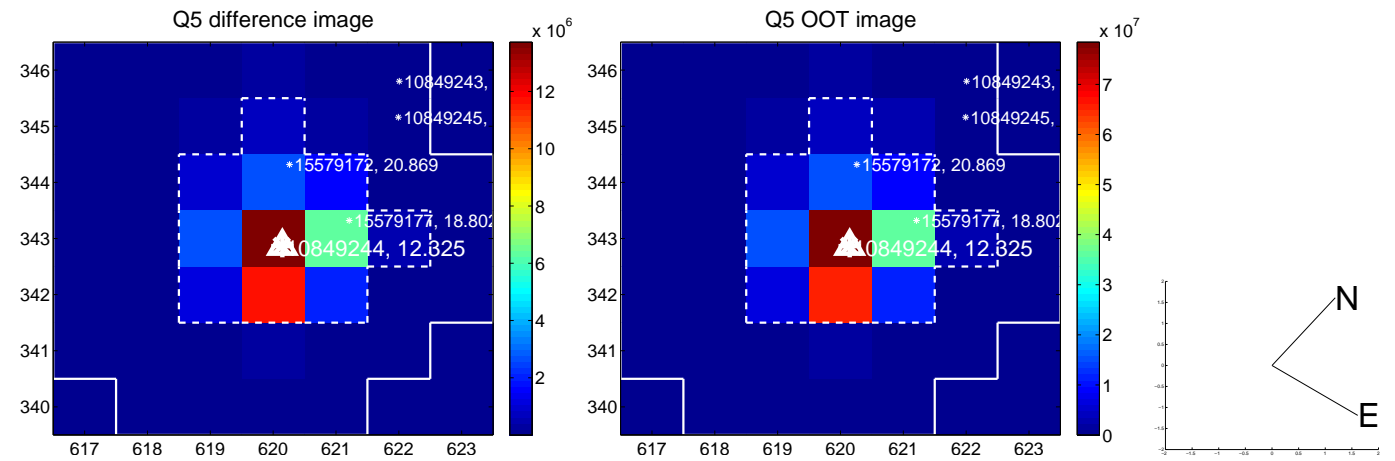


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

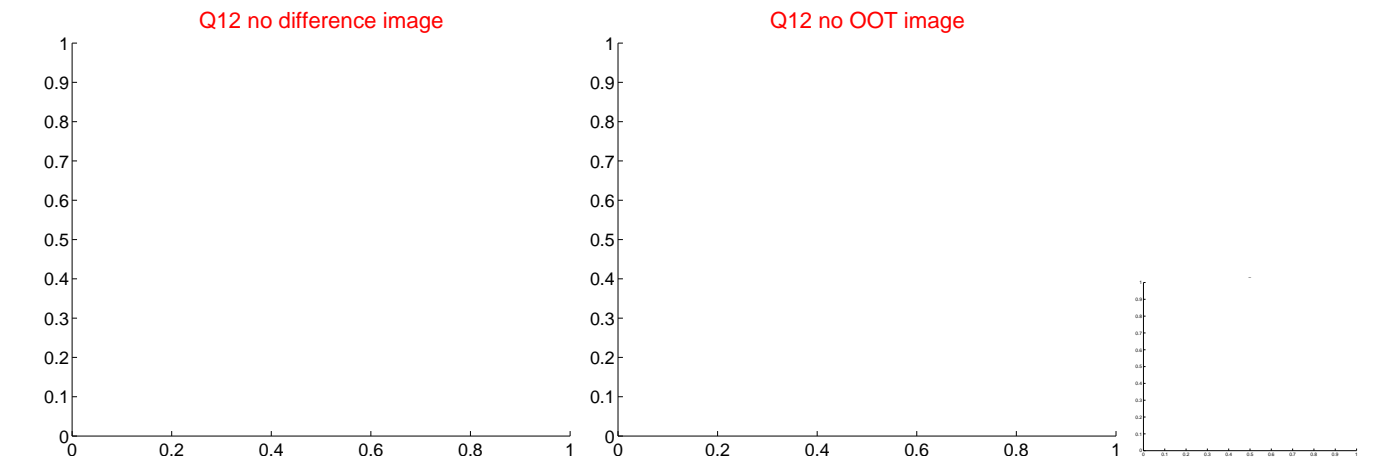
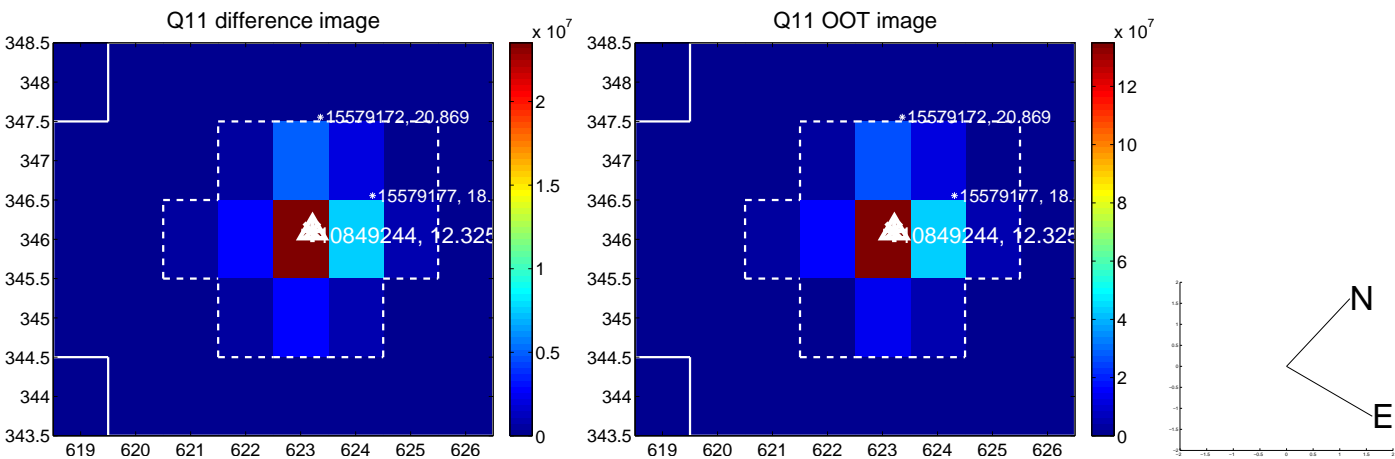
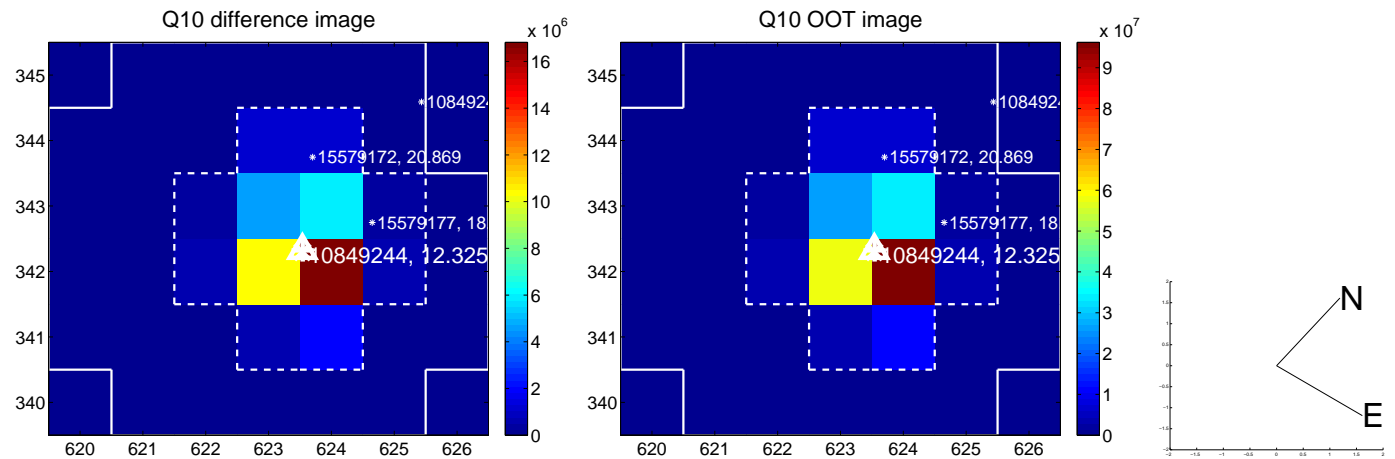
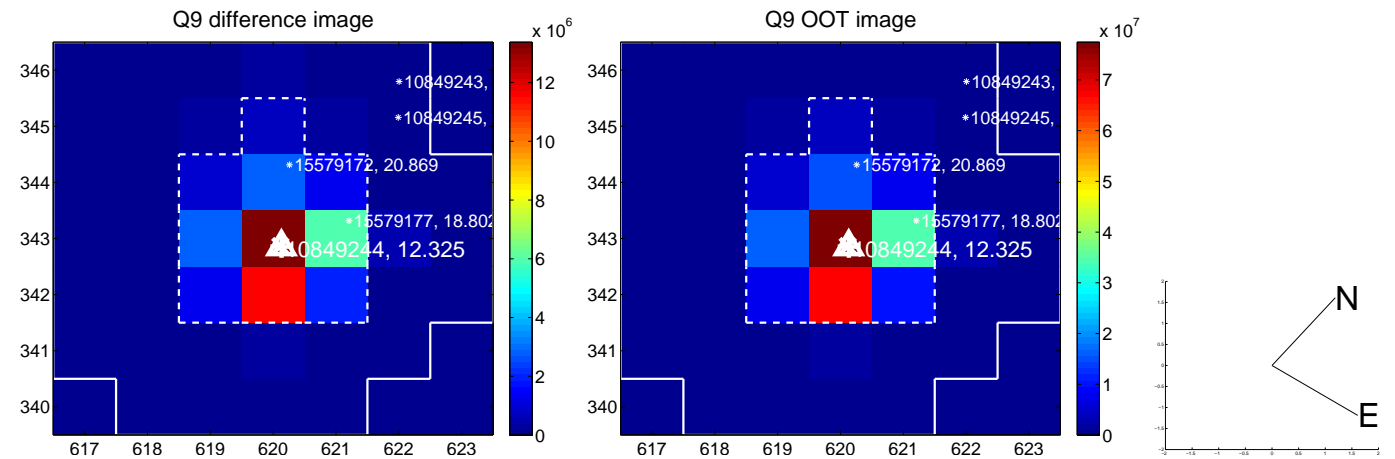
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



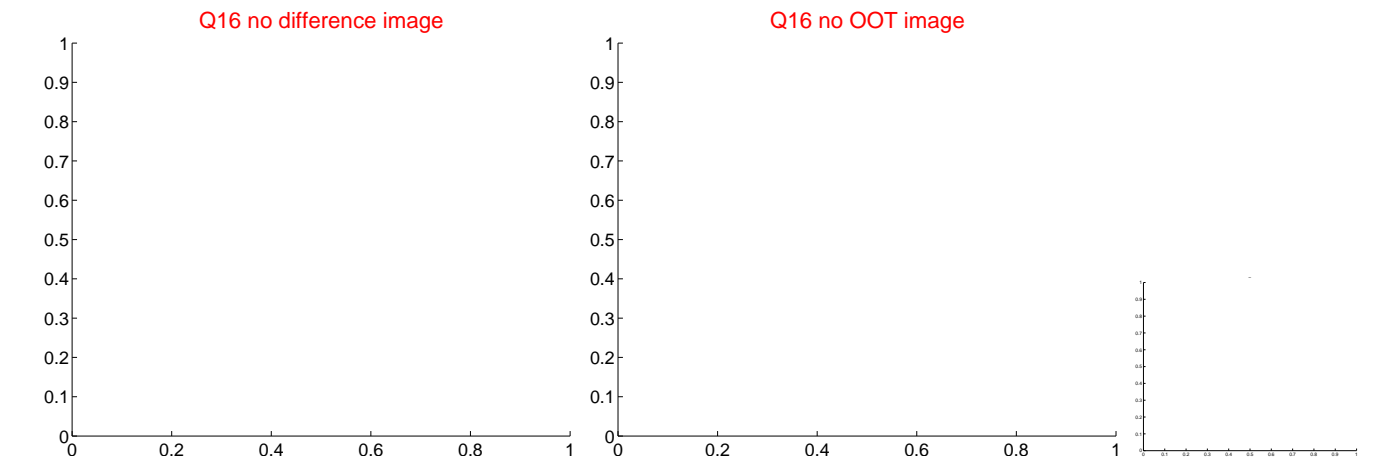
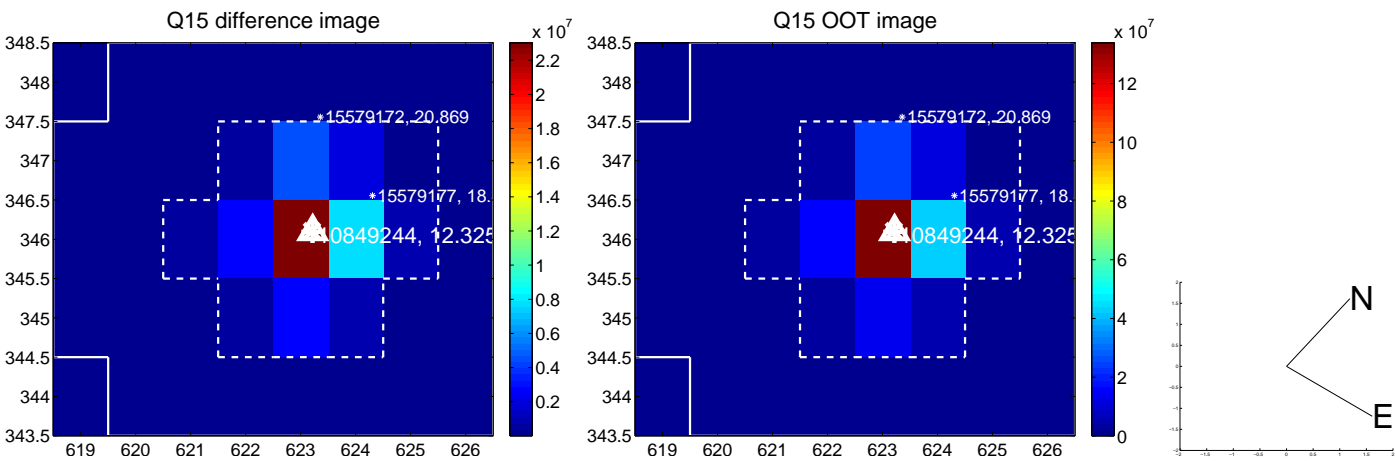
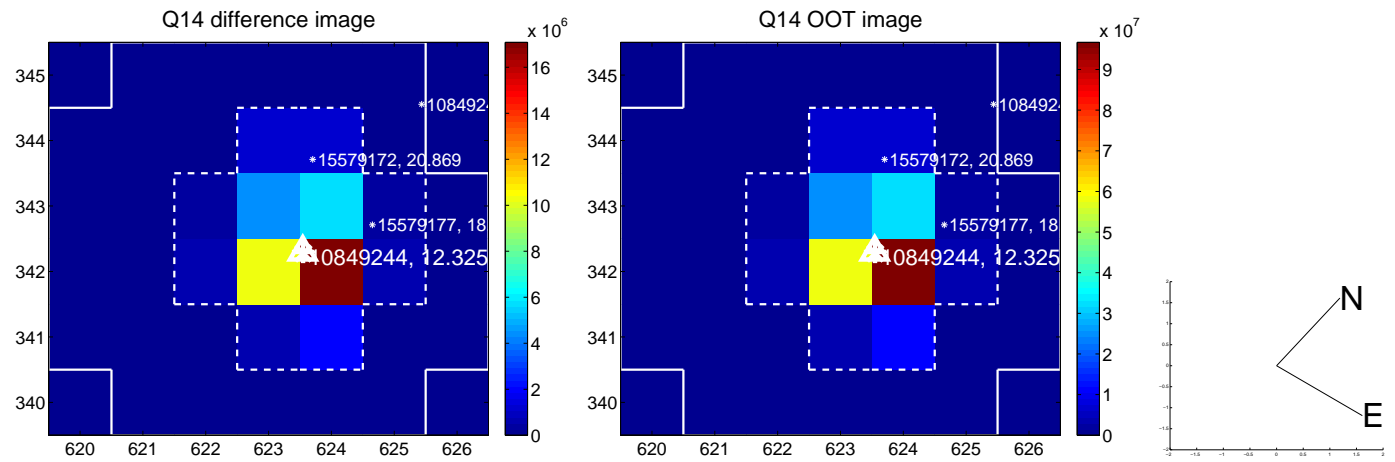
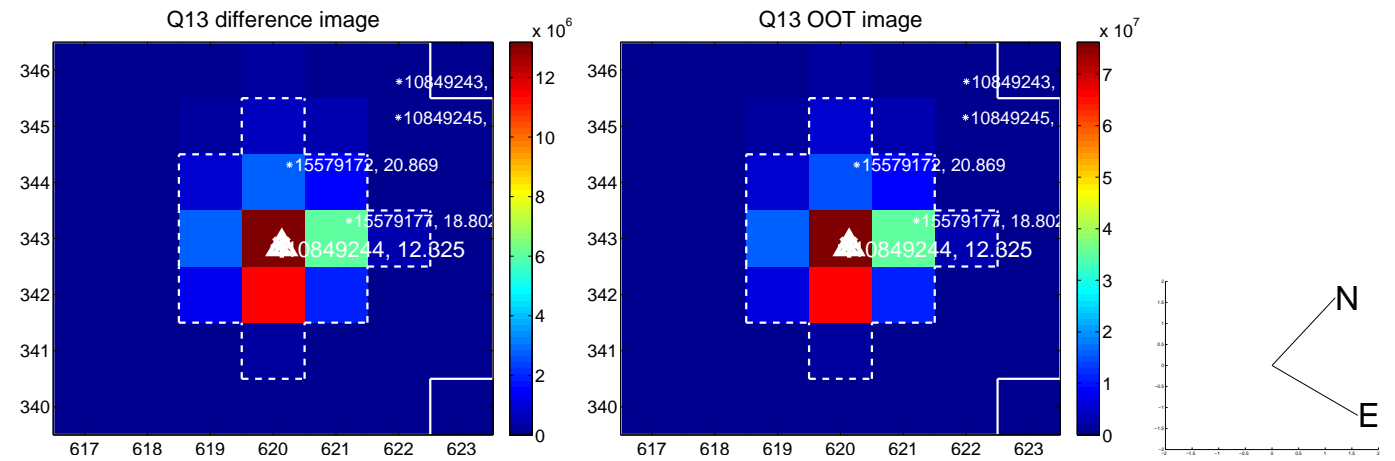
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



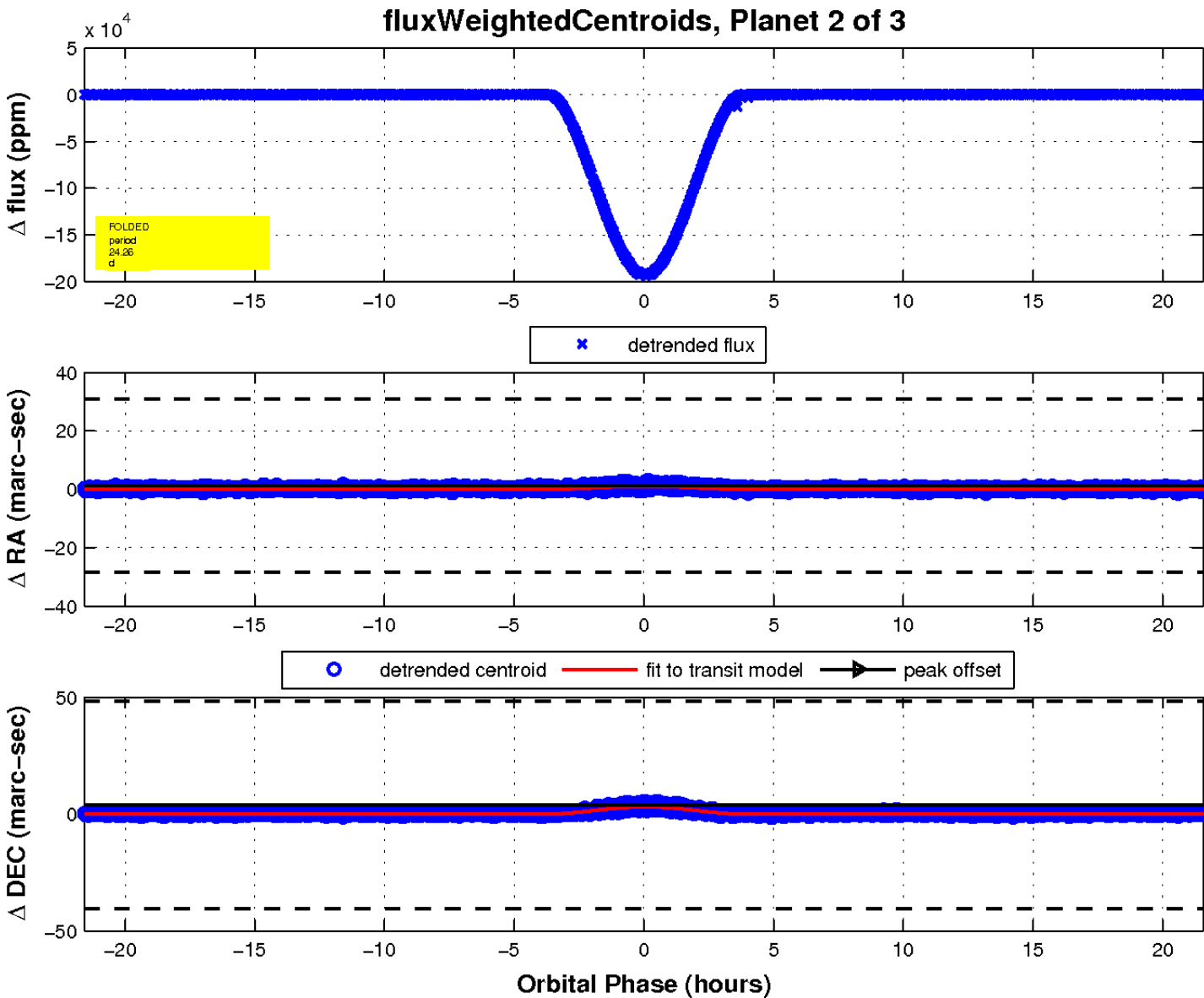
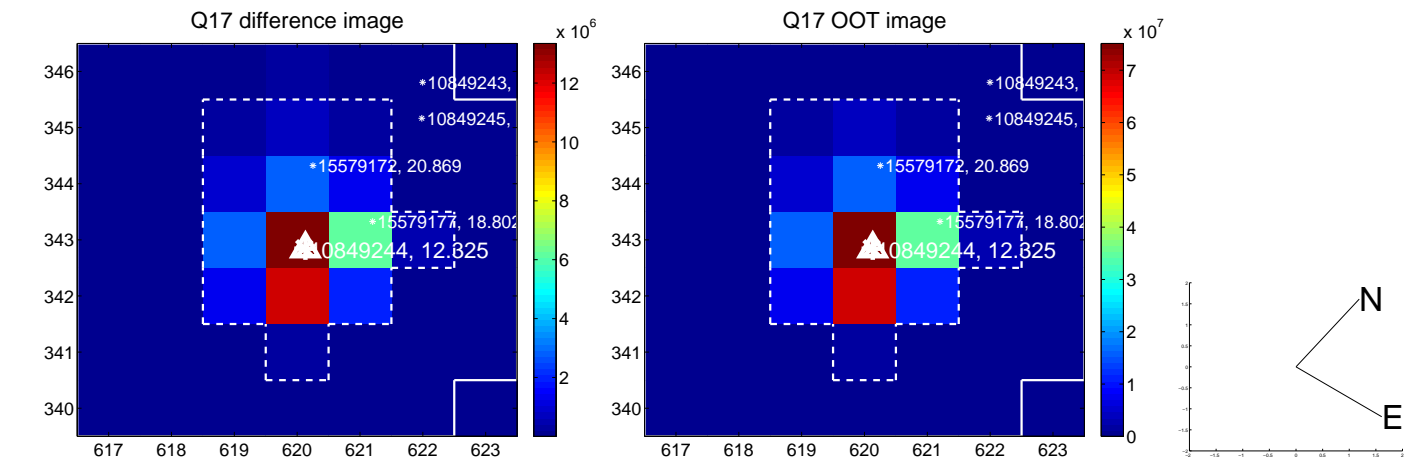
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

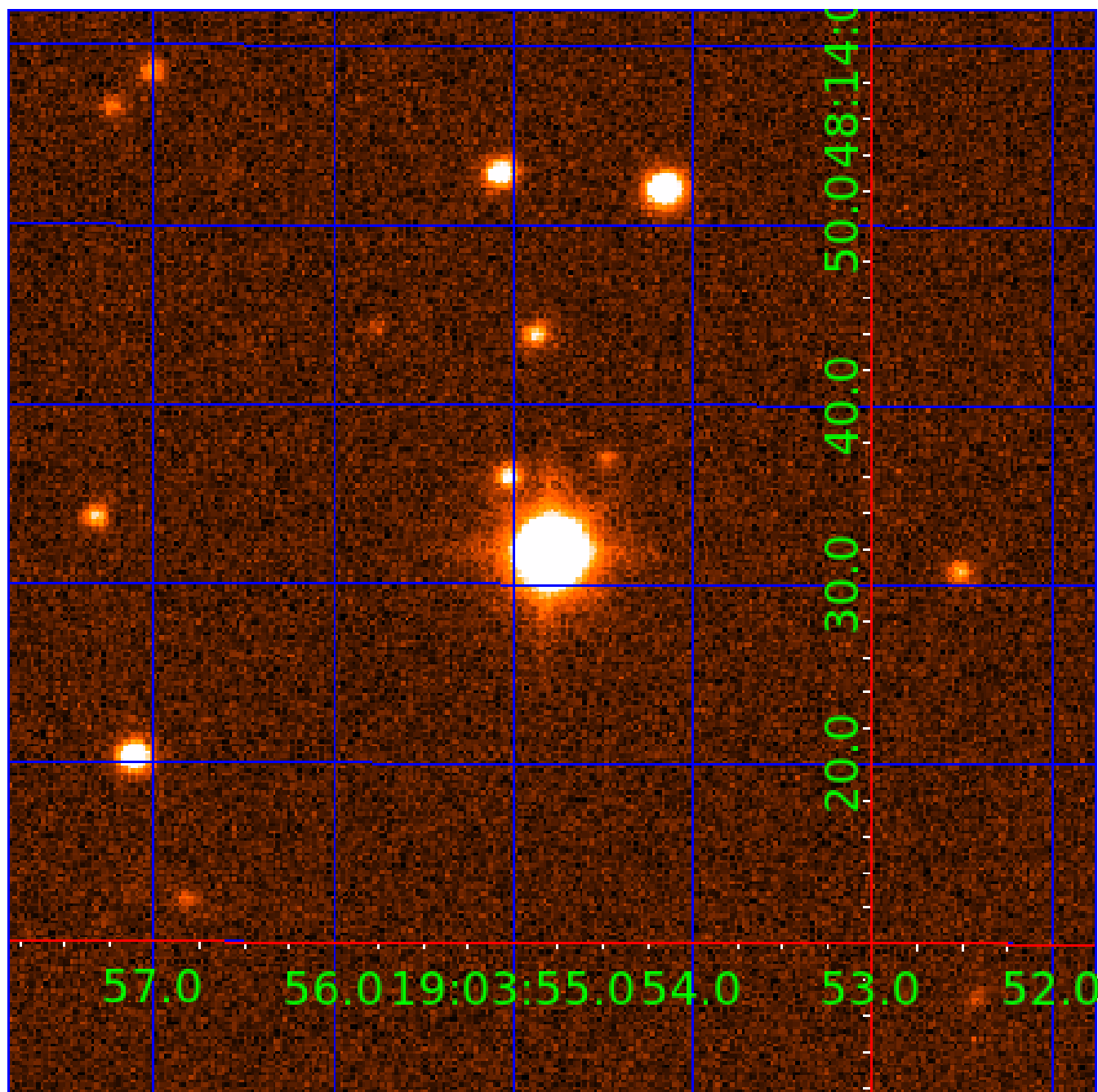


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010849244

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})
010849244-01	OBS	7381.01	24.261683	132.556249	165909.0	7.592	9553.5	5855.2	0.98	6151	57.84	44.65
010849244-02	OBS	No	24.261688	147.241582	191307.7	7.189	9155.1	5332.1	0.98	6151	59.88	44.65
010849244-03	OBS	No	367.402167	317.853913	861.9	37.788	11.1	10.7	0.98	6151	3.61	1.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010849244-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010849244-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010849244-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

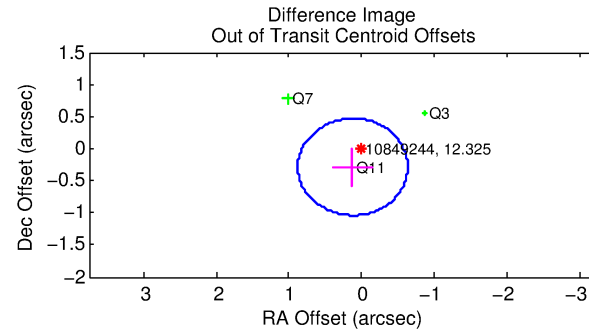
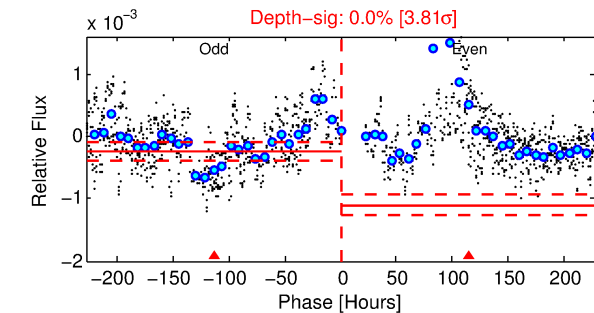
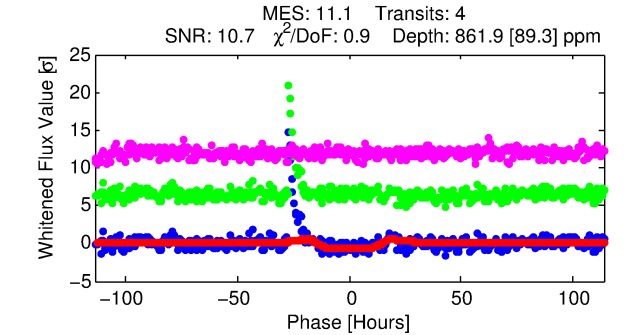
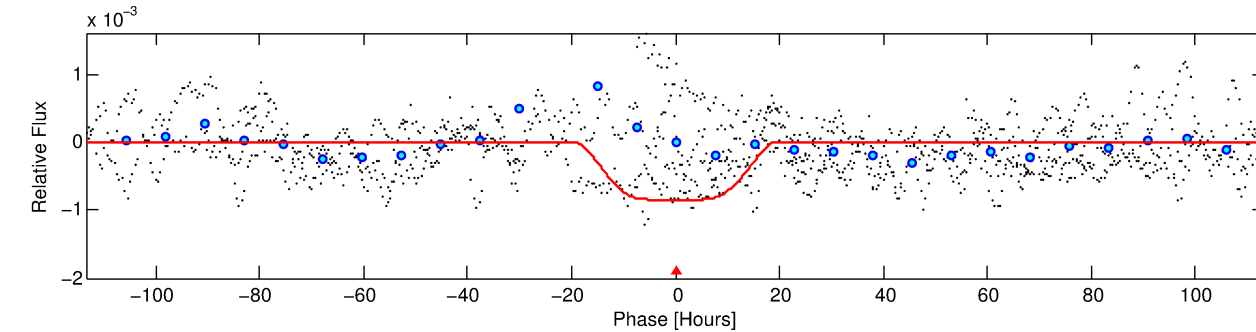
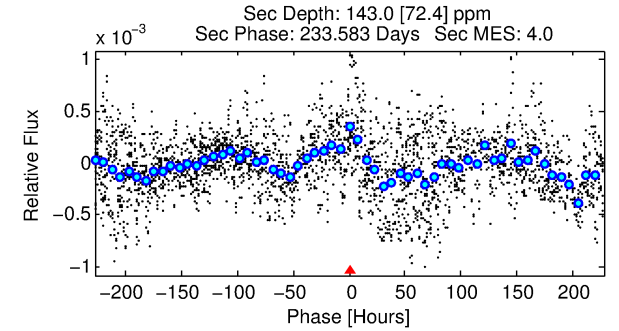
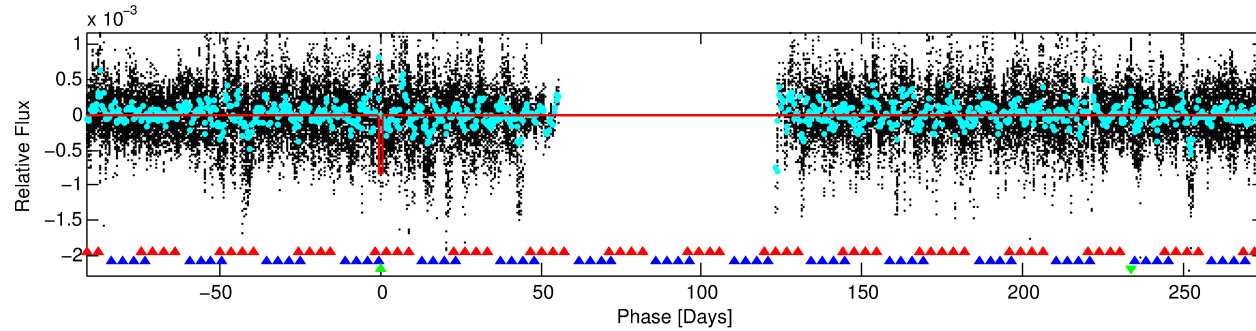
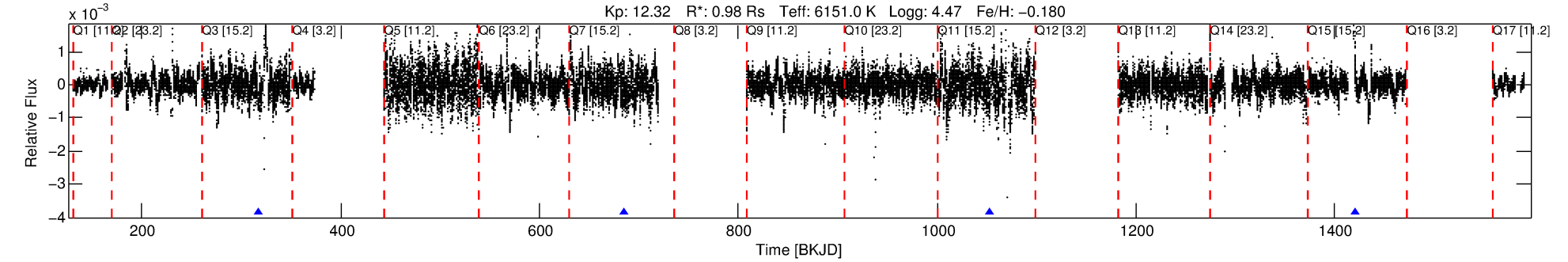
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010849244-03

No Significant Match Found

DV One-Page Summary

KIC: 10849244 Candidate: 3 of 3 Period: 367.402 d
KOI: K07381 Corr: No Ephemeris Match



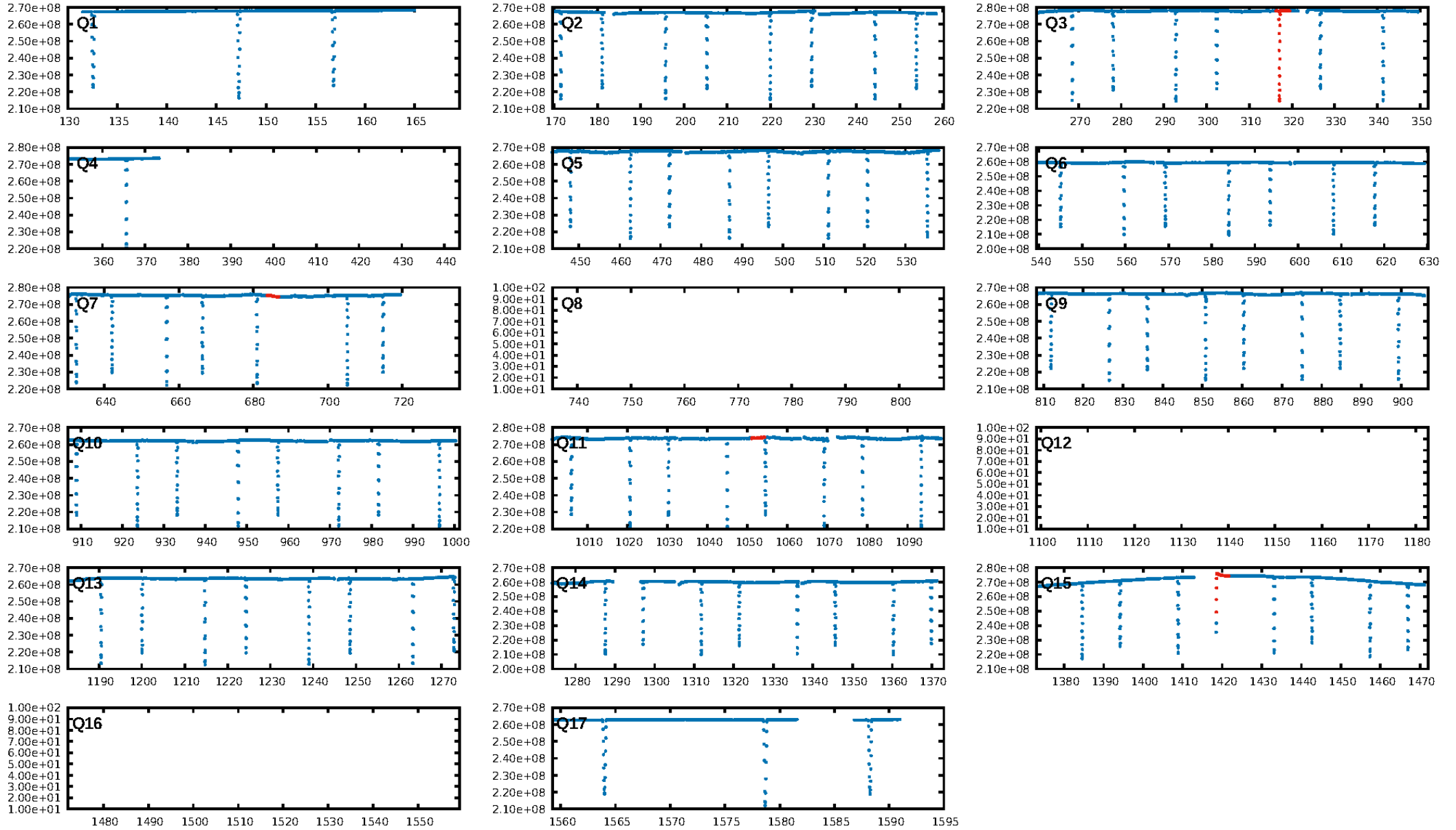
DV Fit Results:

Period = 367.40217 [0.02356] d
Epoch = 317.8539 [0.0613] BKJD
Rp/R* = 0.0336 [0.0019]
a/R* = 30.32 [2.65]
b = 0.95 [0.01]
Seff = 1.19 [0.36]
Teq = 266 [20] K
Rp = 3.61 [0.82] Re
a = 1.0198 [0.1905] AU
Ag = 6283.88 [3685.59] [1.70 σ]
Teffp = 3668 [491] K [6.93 σ]

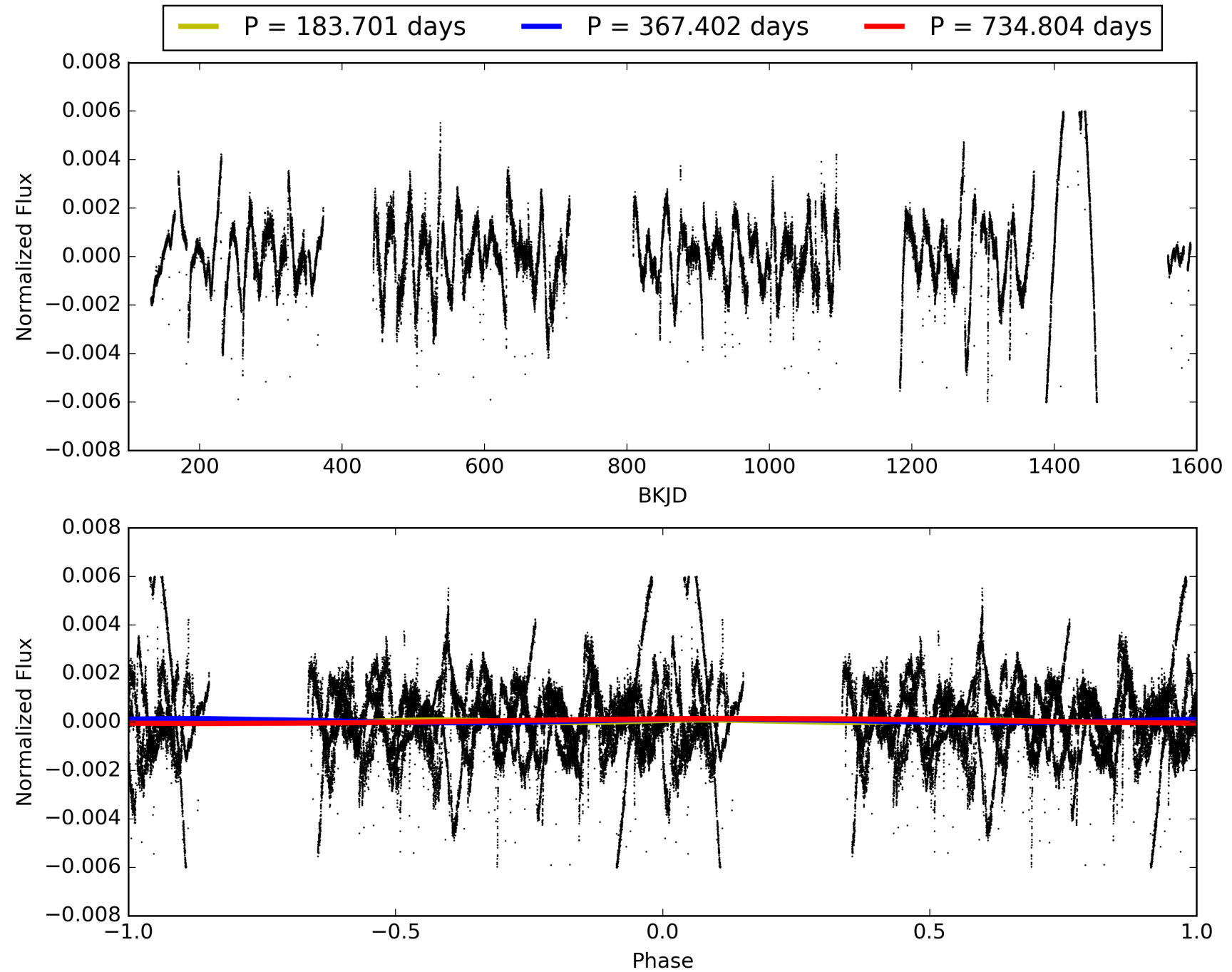
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [214.10 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.75e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.313
Centroid-sig: 4.6%
Centroid-so: 0.280 arcsec [1.98 σ]
OotOffset-rm: 0.311 arcsec [1.24 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 0.289 arcsec [0.79 σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.33 [1/3]

TCE 010849244-03, PDC Light Curves

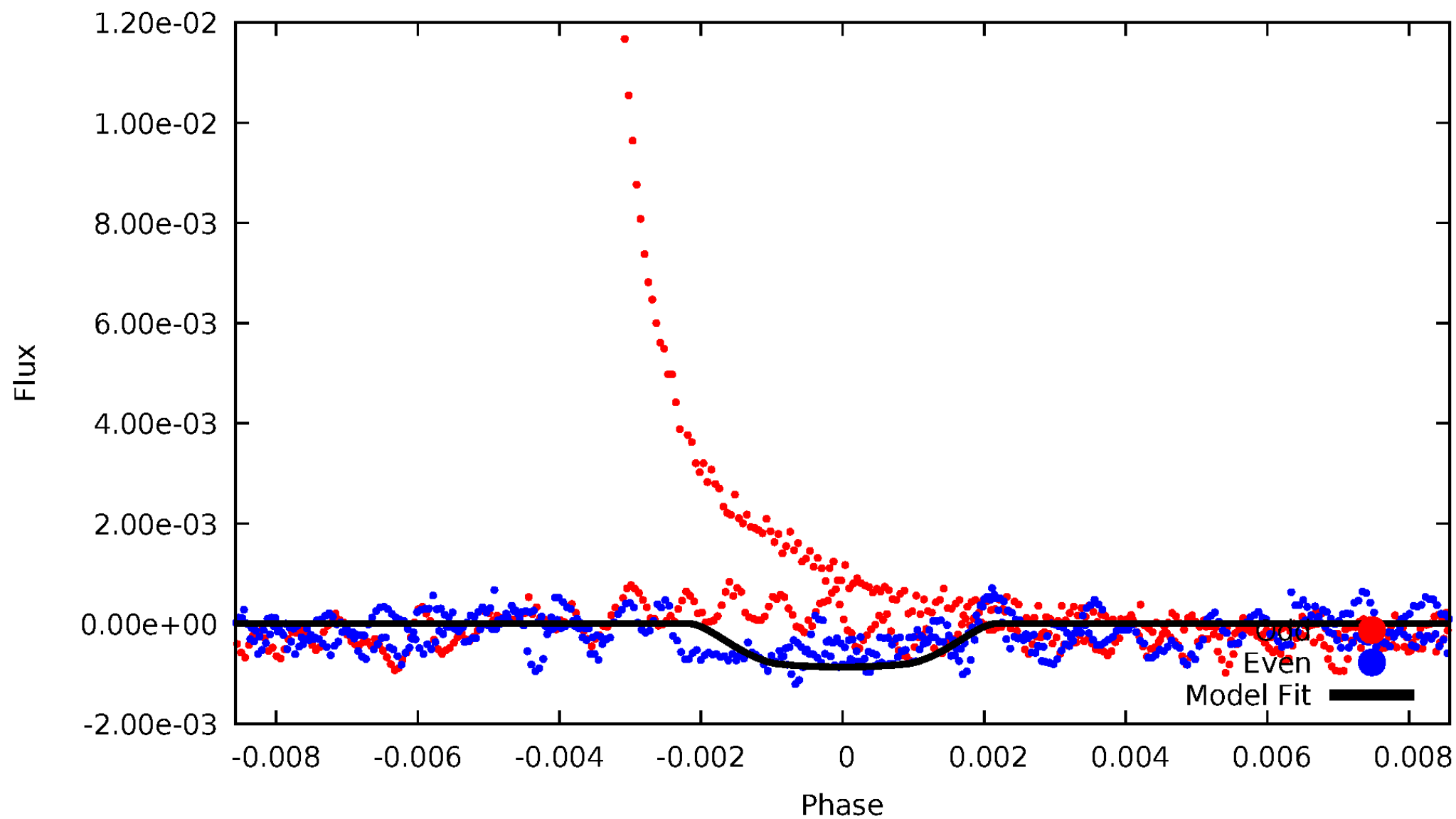


TCE 010849244-03



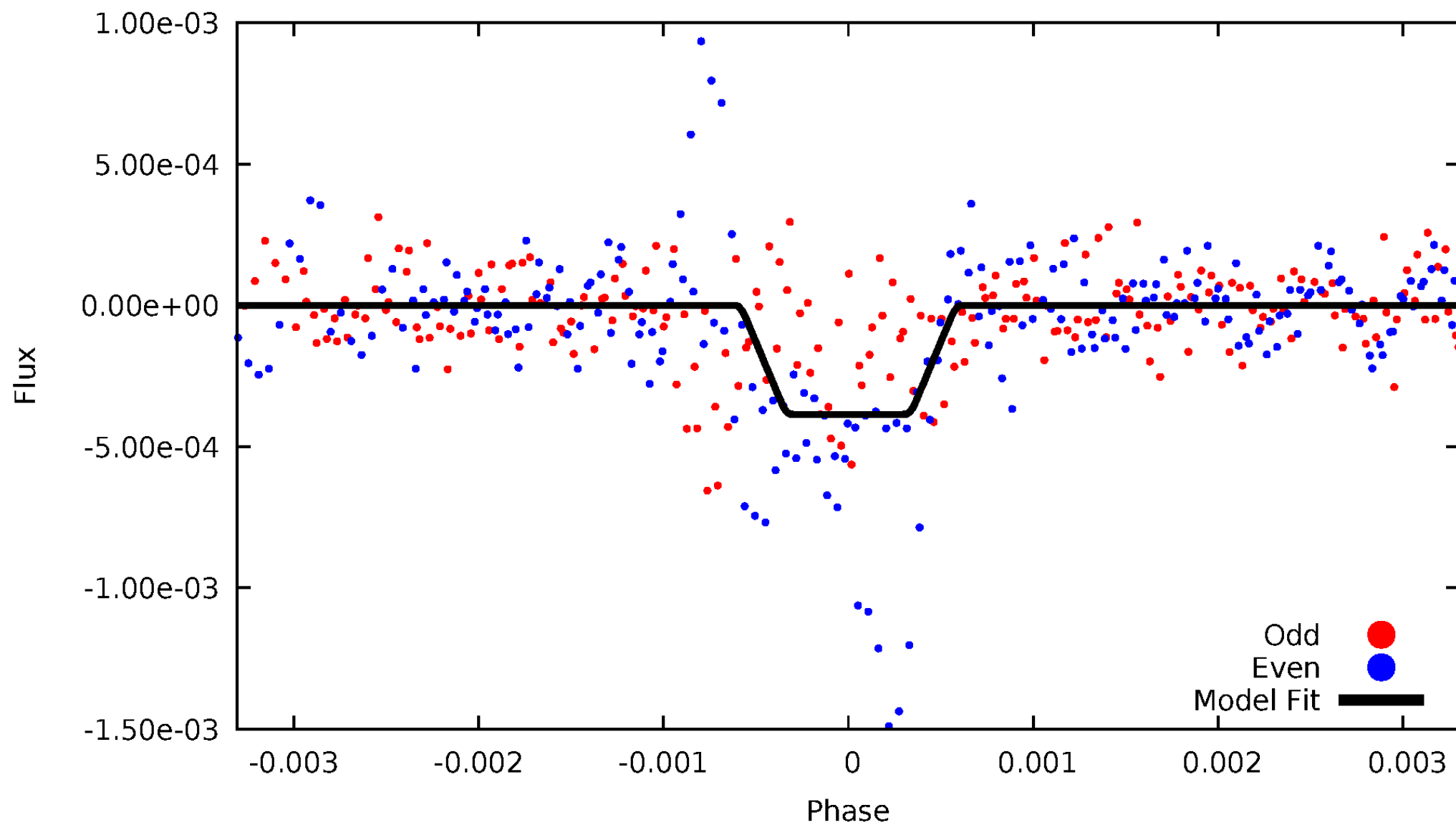
DV Odd/Even

TCE 010849244-03



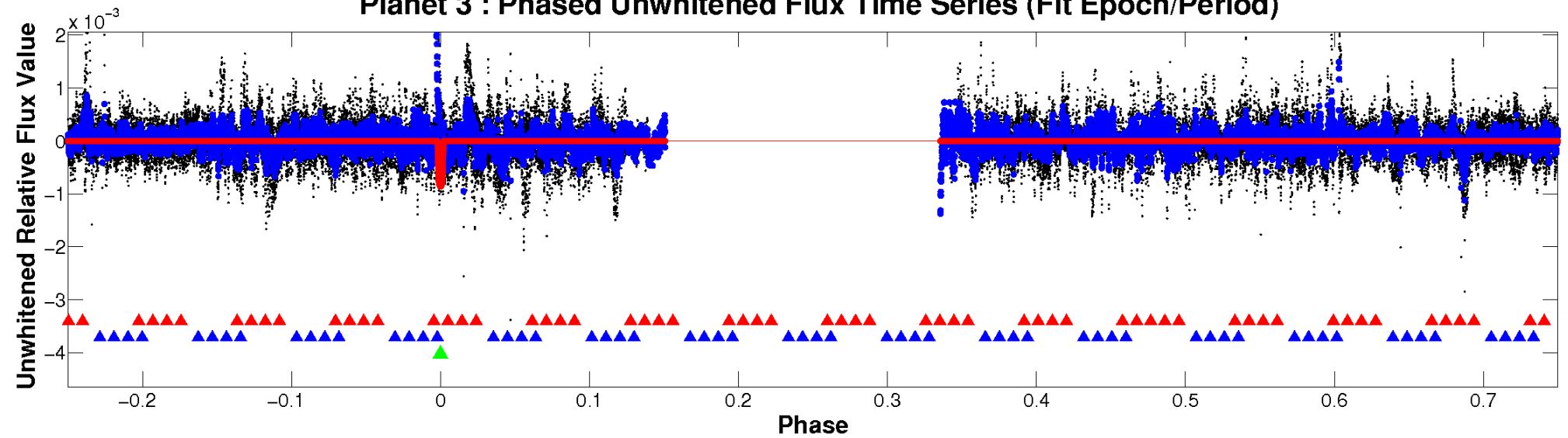
ALT Odd/Even

TCE 010849244-03

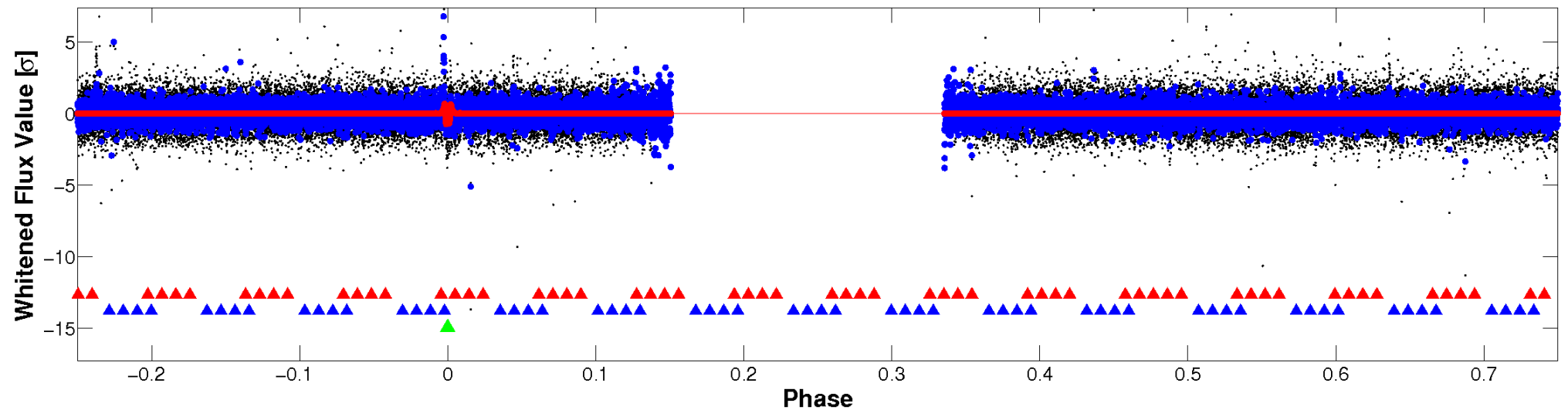


Non-Whitened Vs. Whitened Light Curve

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

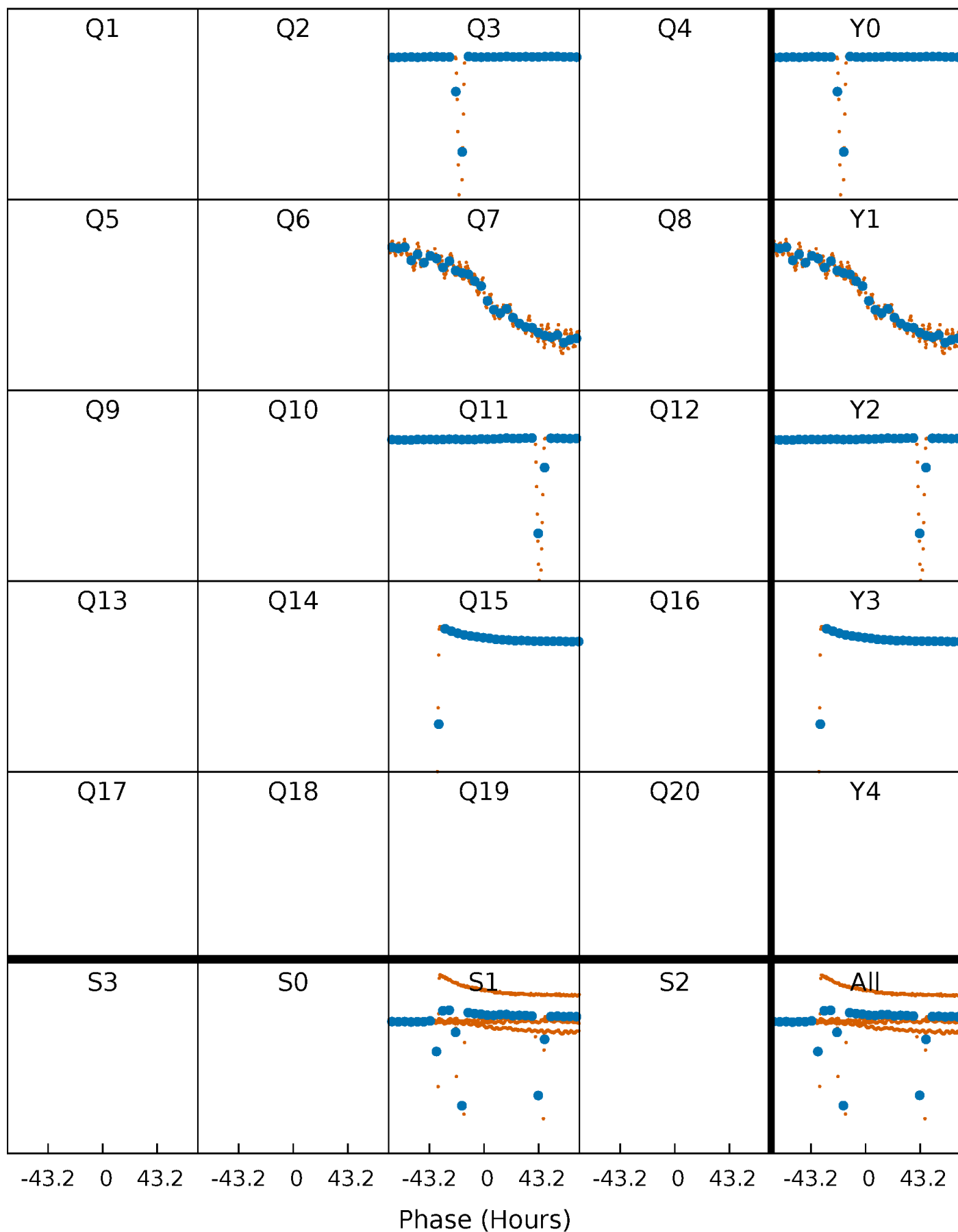


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



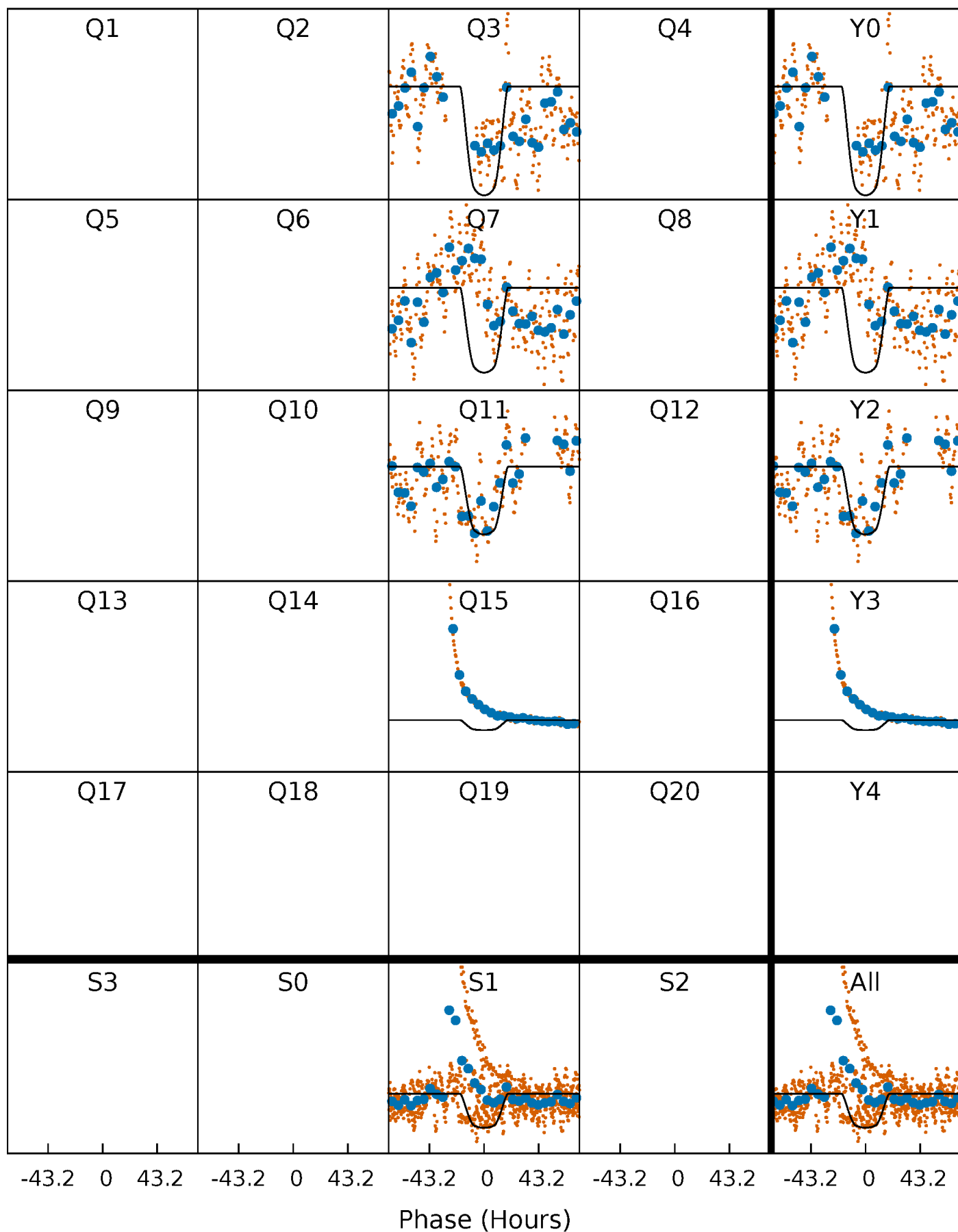
PDC Quarter-Phased Transit Curves

TCE 010849244-03 $P=367.402167$ Days $T_0=317.853913$ (BKJD)



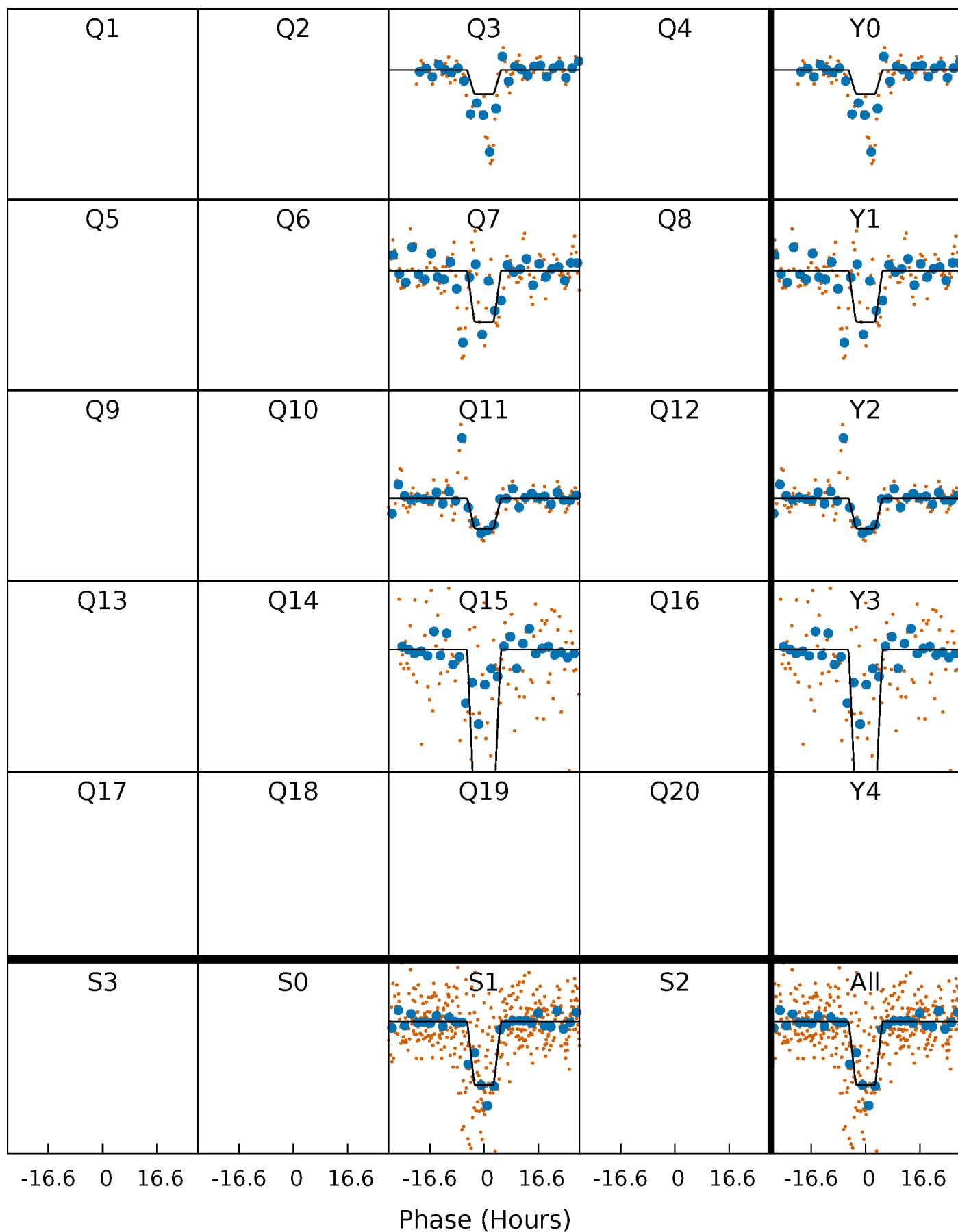
DV Quarter-Phased Transit Curves

TCE 010849244-03 P=367.402167 Days $T_0=317.853913$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

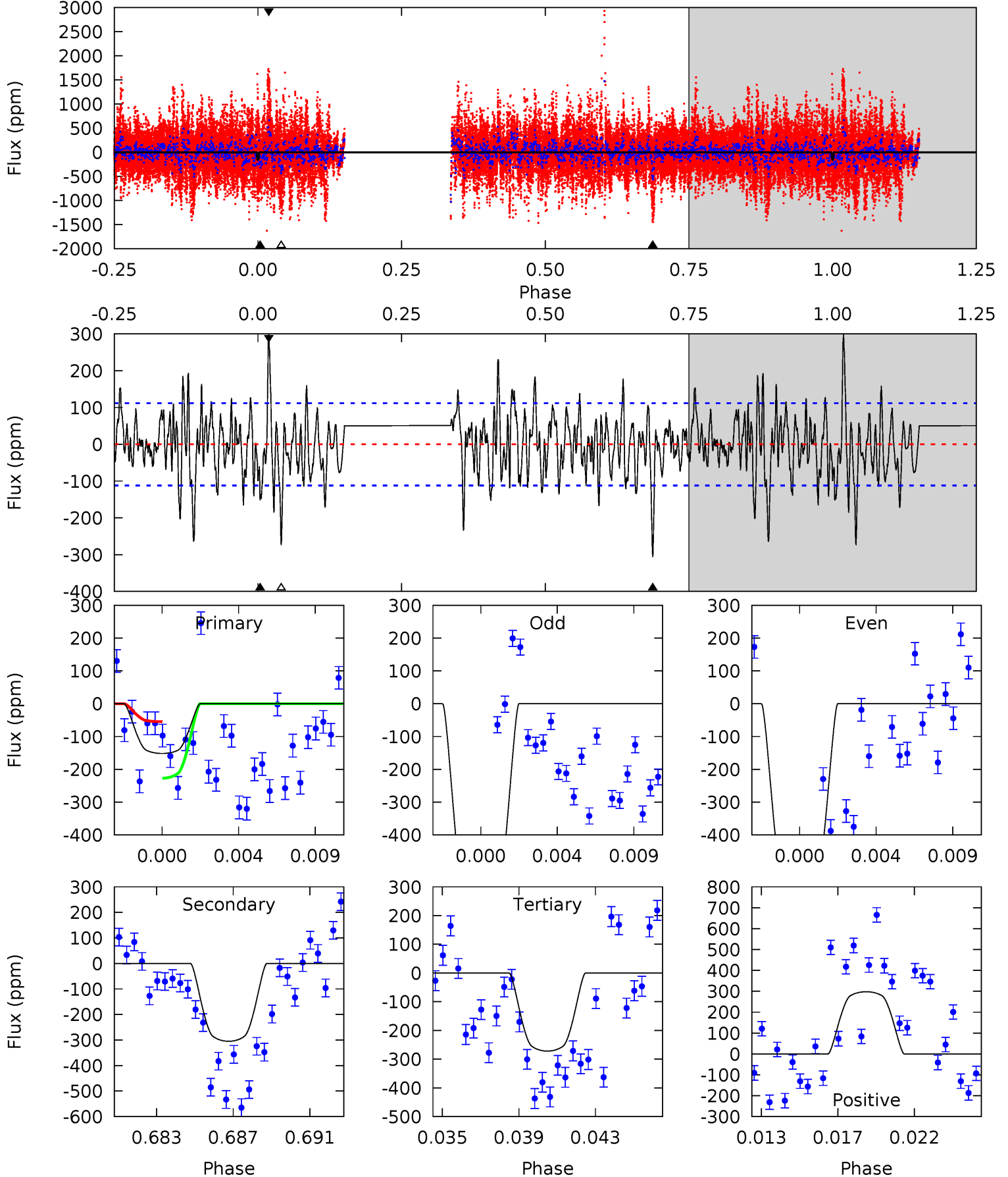
TCE 010849244-03 $P=367.204696$ Days $T_0=318.398222$ (BKJD)



DV Model-Shift Uniqueness Test

010849244-03, P = 367.402167 Days, E = 317.853913 Days

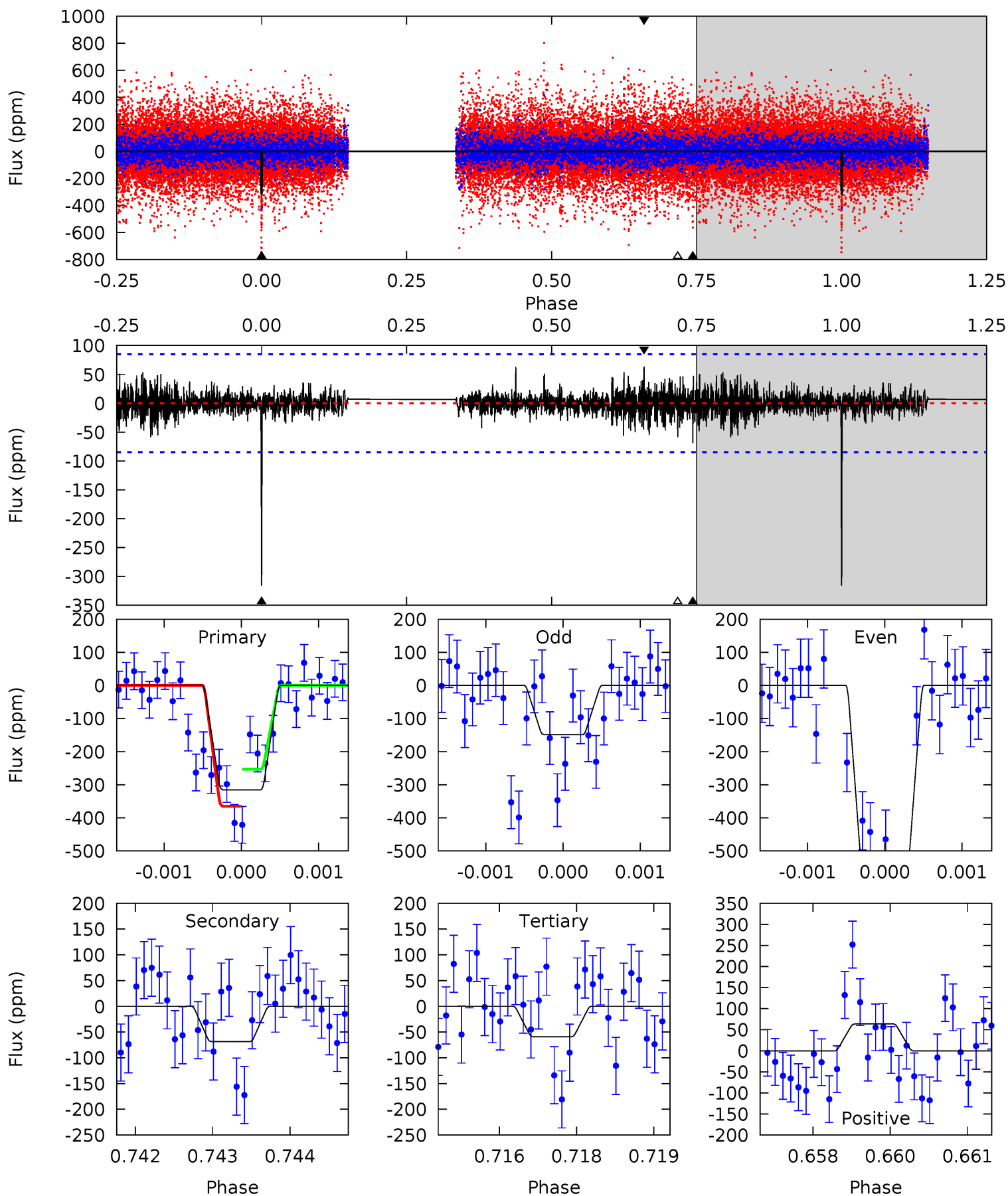
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	14.2	12.6	13.8	5.18	2.85	3.48	-5.58	-6.78	1.53	0.33	0.88	-0.09	0.49	3.92



Alt Model-Shift Uniqueness Test

010849244-03, P = 367.204696 Days, E = 318.398222 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	4.38	3.77	4.06	5.42	3.24	0.87	16.4	16.1	0.61	0.32	16.2	1.32	0.17	3.60



Stellar Parameters For KIC 010849244

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6151^{+146}_{-200}	$4.473^{+0.050}_{-0.150}$	$-0.180^{+0.250}_{-0.350}$	$0.983^{+0.217}_{-0.109}$	$1.048^{+0.116}_{-0.141}$	$1.552^{+0.409}_{-0.651}$
	+2%/-3%	+1%/-3%	+139%/-194%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	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 010849244-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-305 ± 22	$3.68^{+0.46}_{-0.33}$	377^{+20}_{-17}	4592^{+161}_{-161}	12574^{+2535}_{-2430}
Alt.	-69 ± 16	$2.16^{+0.32}_{-0.27}$	377^{+20}_{-16}	4231^{+267}_{-258}	8150^{+3144}_{-2557}

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

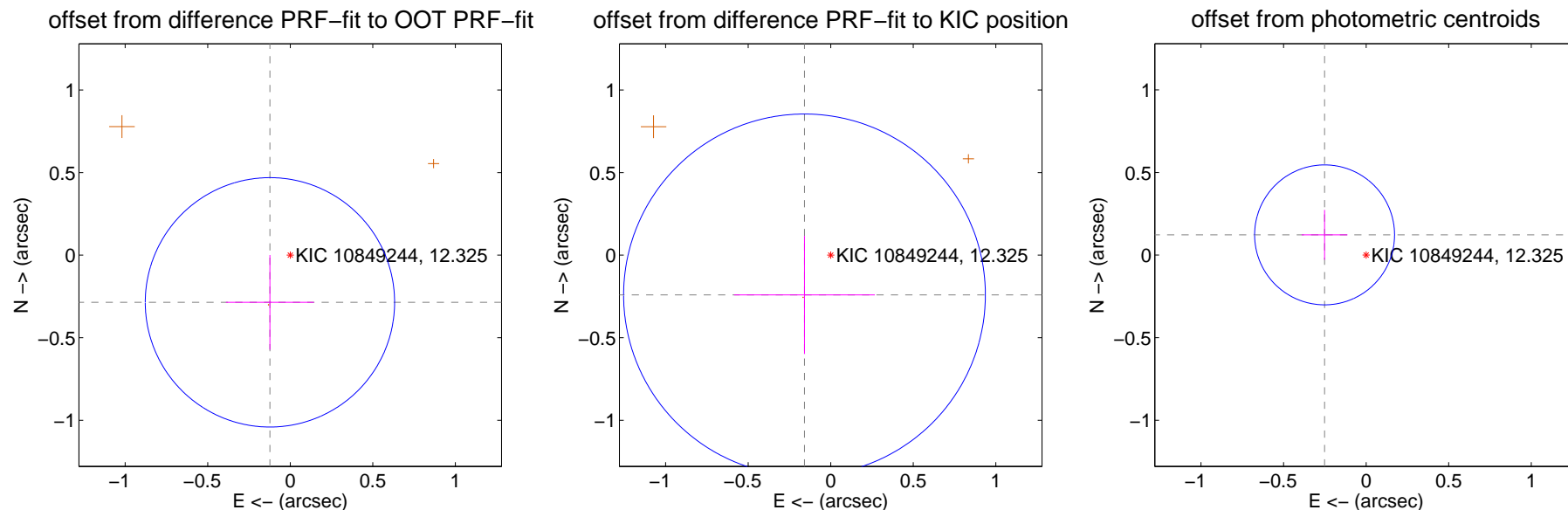
DV Centroid Data

Supplemental centroid analysis for 010849244-03. Kepler magnitude: 12.32. Transit SNR 10.73

There are 0 quarters with good PRF difference image offsets

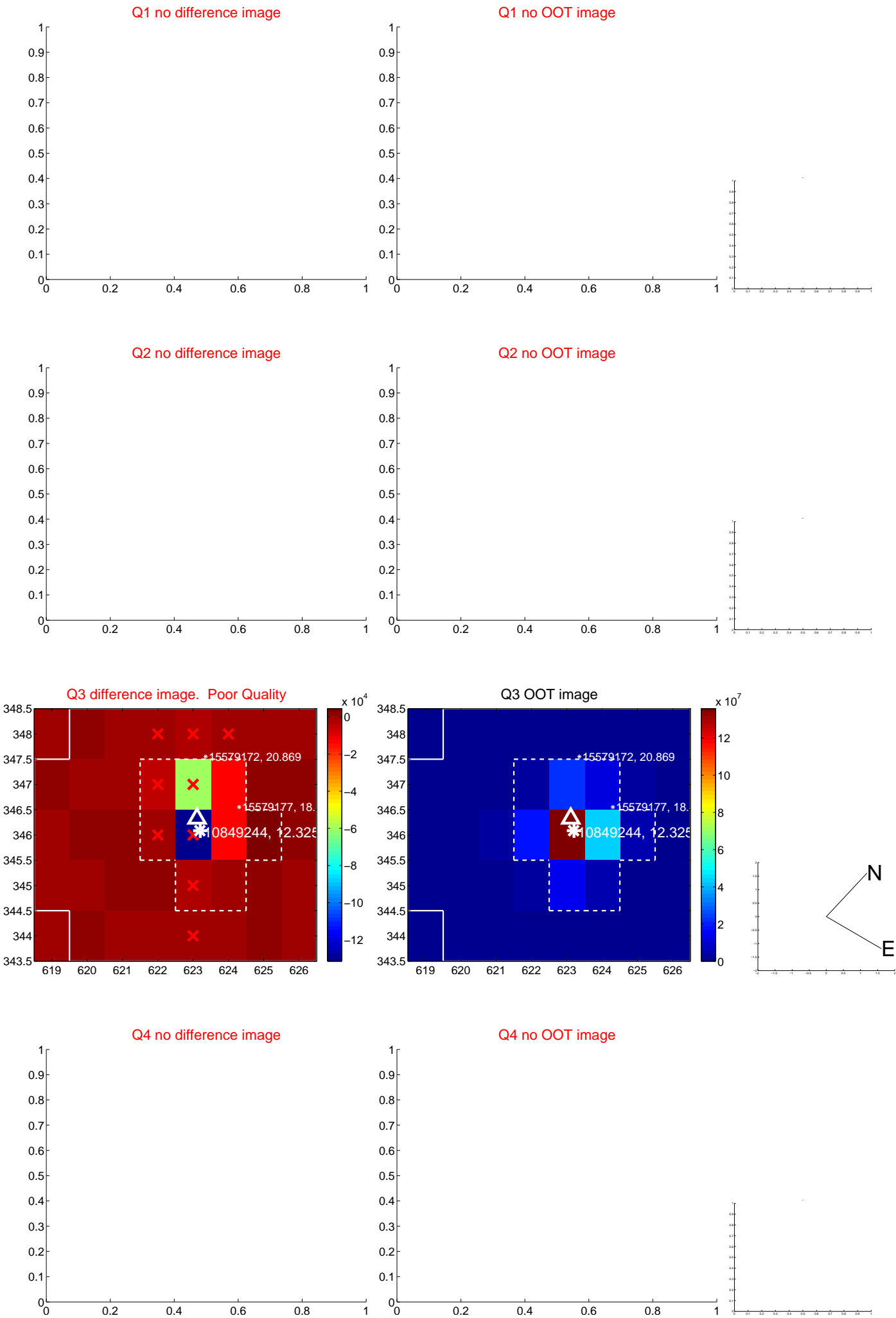
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.311 ± 0.252	1.24	0.123 ± 0.267	-0.286 ± 0.287
PRF-fit source offset from KIC position	0.289 ± 0.365	0.79	0.159 ± 0.426	-0.241 ± 0.358
photometric centroid source offset	0.28 ± 0.14	1.98	0.25 ± 0.14	0.12 ± 0.15



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.

Q5 no difference image



Q5 no OOT image



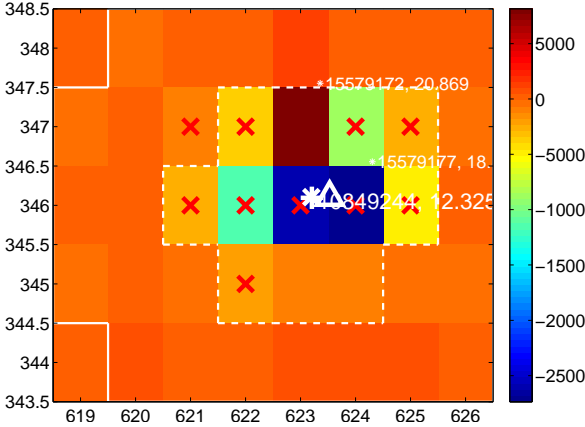
Q6 no difference image



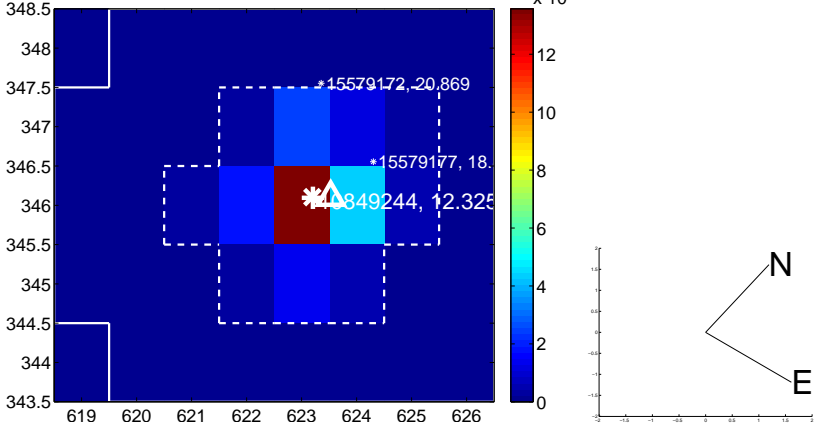
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



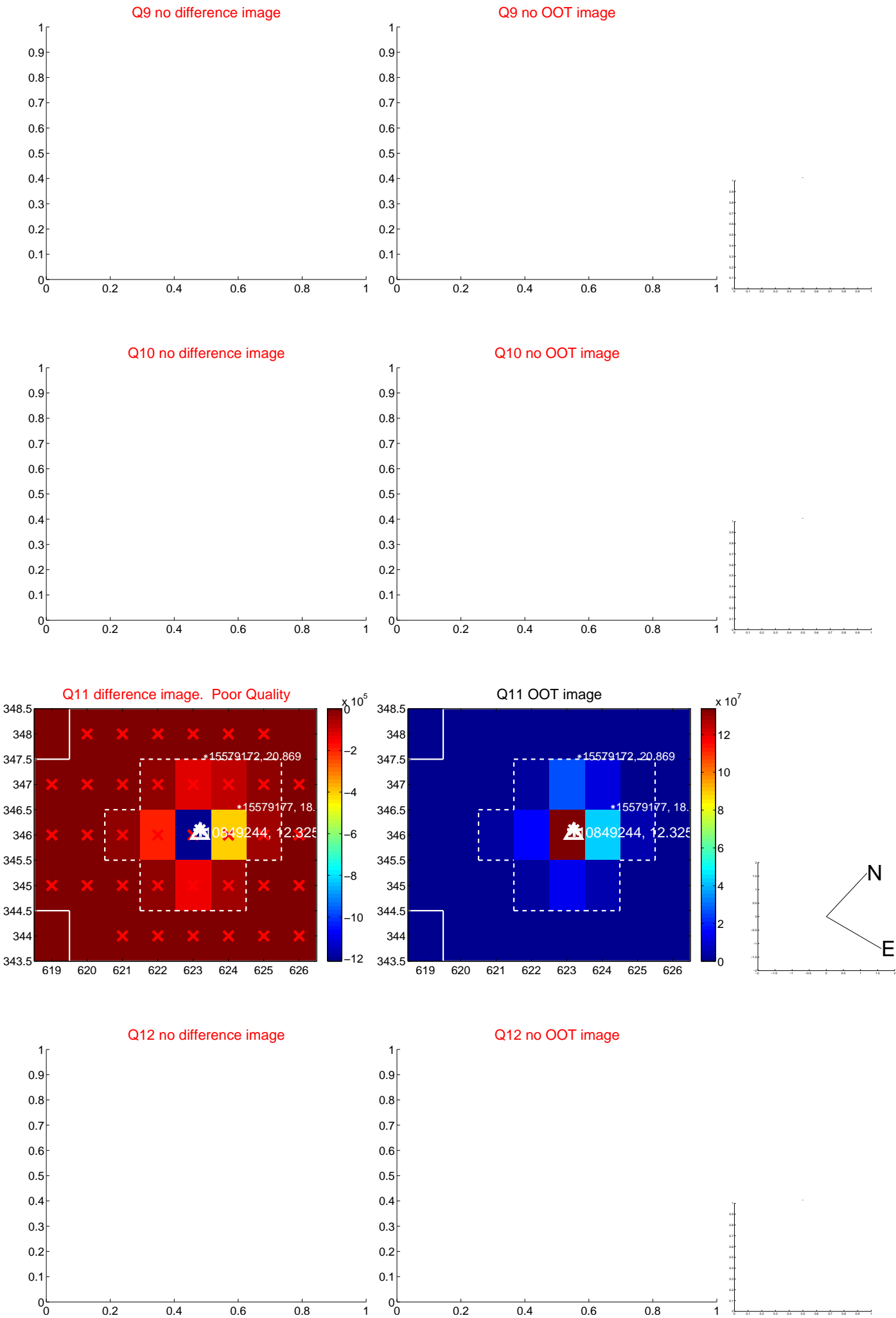
Q8 no difference image



Q8 no OOT image



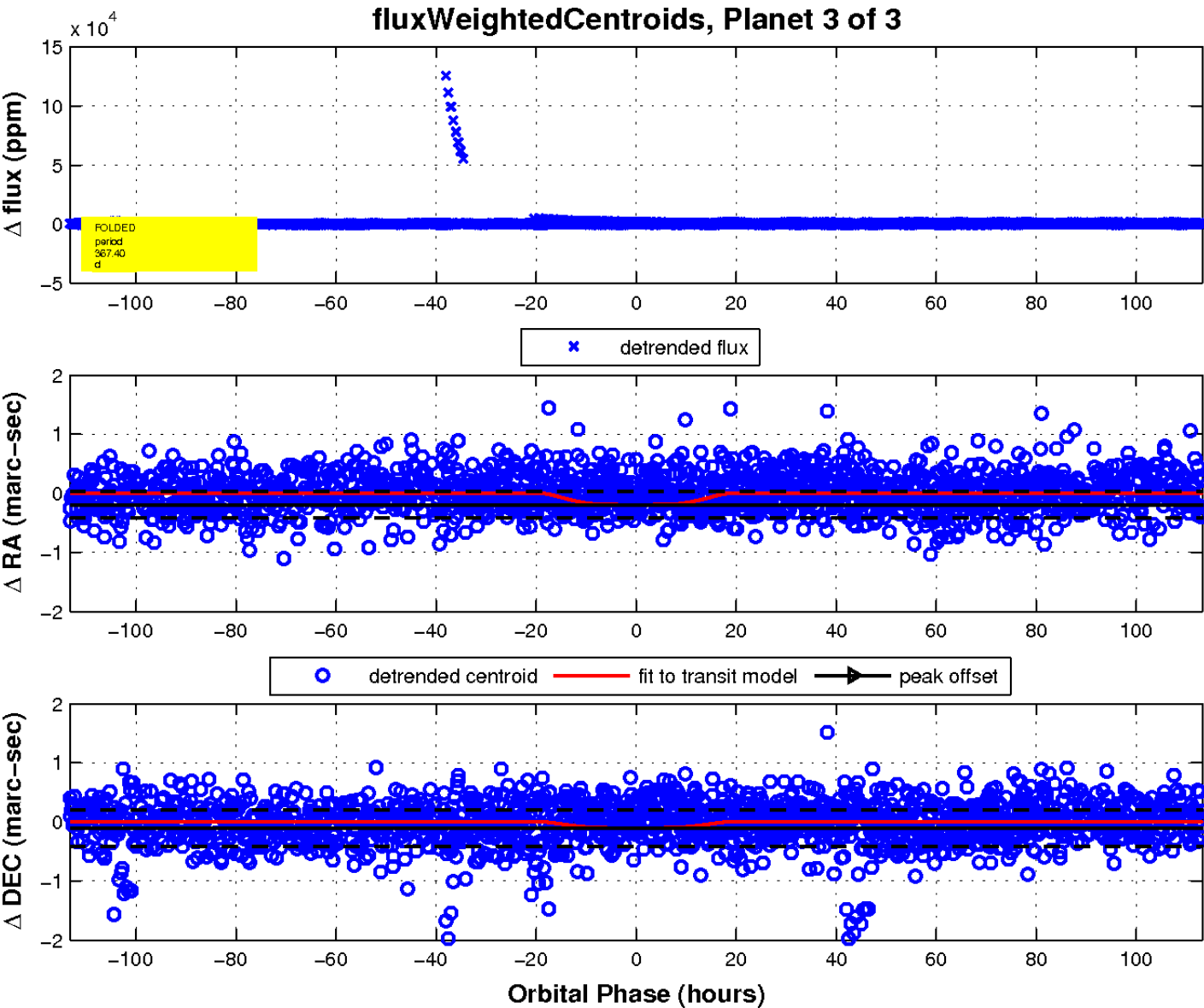
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

