

KIC 003248332

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})
003248332-01	OBS	No	7.363586	135.214652	93045.3	4.687	2456.8	1256.7	1.51	6793	77.86	650.56
003248332-02	OBS	6317.01	3.681806	135.019897	117140.2	6.166	2238.3	1337.8	1.51	6793	81.88	1639.31
003248332-03	OBS	No	232.642593	202.958763	493.2	2.127	54.1	3.1	1.51	6793	3.89	6.51
003248332-04	OBS	No	594.017212	268.320489	994.8	3.500	23.0	-1.0	1.51	6793	4.80	1.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003248332-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003248332-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
003248332-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003248332-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

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

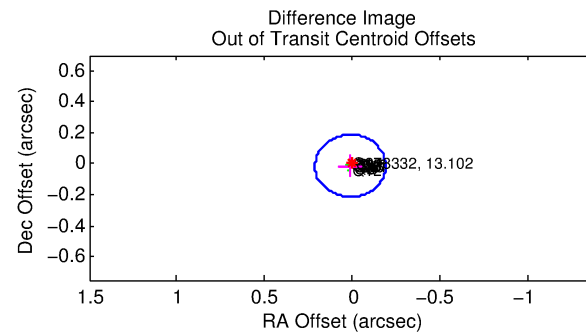
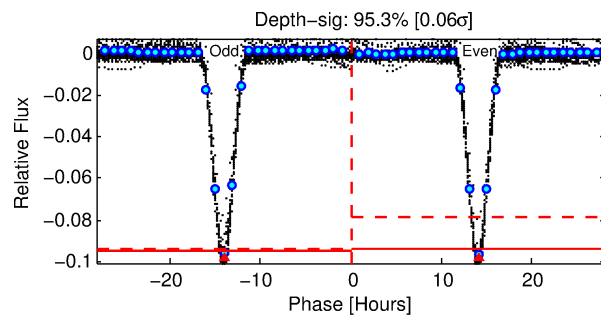
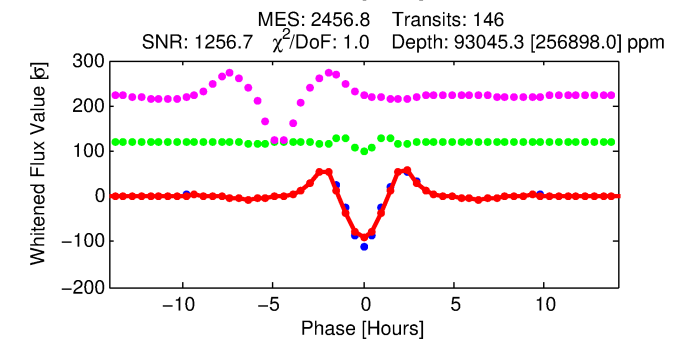
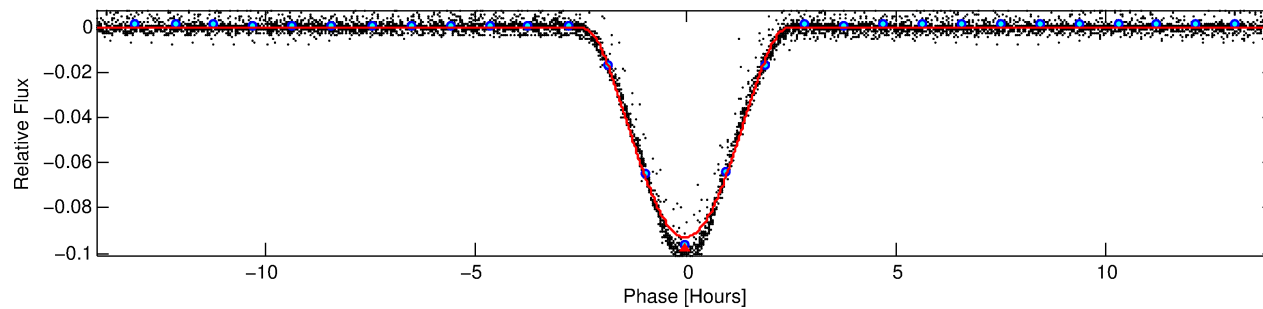
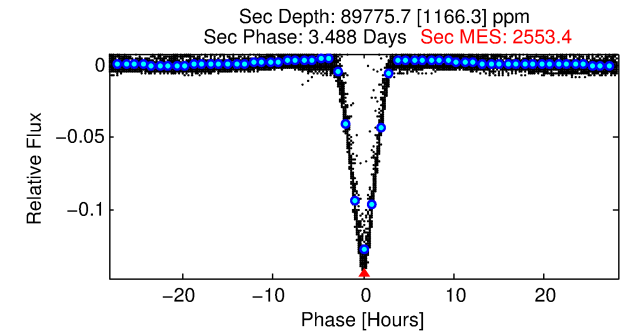
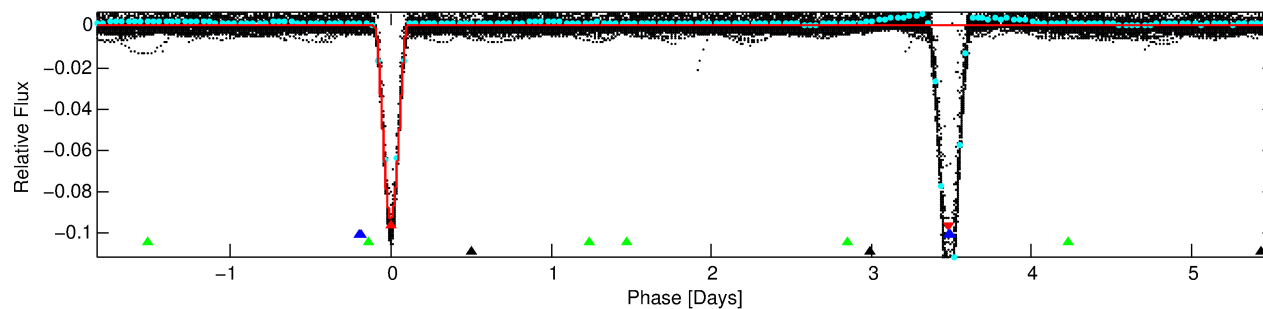
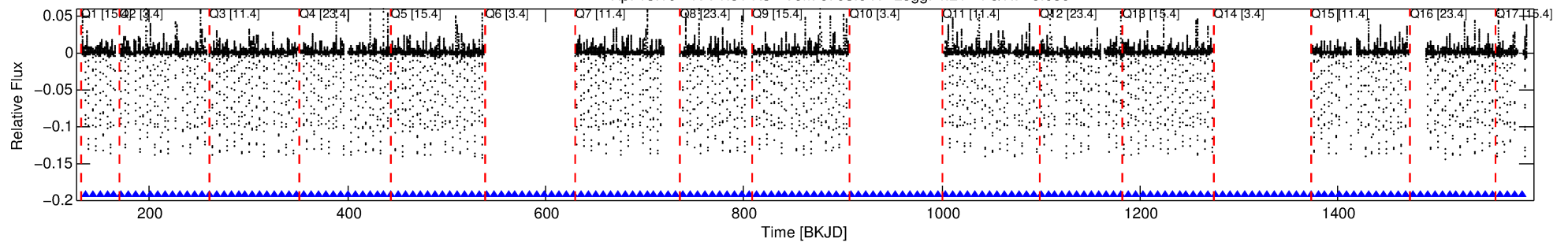
Ephemeris Match Information For 003248332-01

No Significant Match Found

DV One-Page Summary

KIC: 3248332 Candidate: 1 of 4 Period: 7.364 d
KOI: K06317 Corr: No Ephemeris Match

Kp: 13.10 R*: 1.51 Rs Teff: 6793.0 K Logg: 4.21 Fe/H: -0.080



DV Fit Results:

Period = 7.36359 [0.00000] d
Epoch = 135.2147 [0.0000] BKJD
Rp/R* = 0.4731 [0.0519]
a/R* = 13.04 [0.09]
b = 1.00 [0.78]
Seff = 650.56 [254.19]
Teq = 1288 [126] K
Rp = 77.86 [26.95] Re
a = 0.0817 [0.0213] AU
Ag = 54.33 [22.90] [2.33σ]
Teffp = 5406 [361] K [10.76σ]

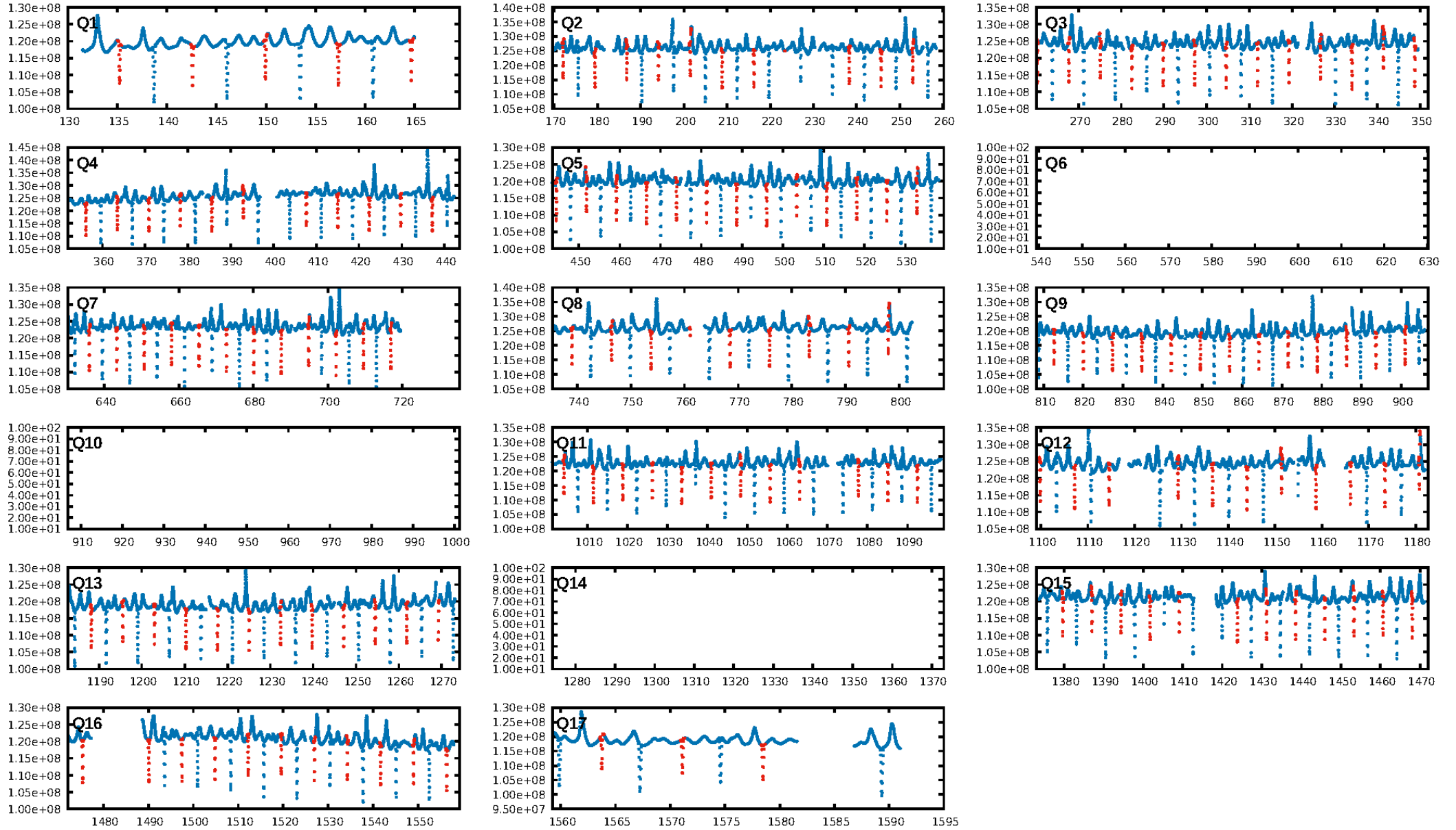
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.41σ]
LongPeriod-sig: 100.0% [1050.46σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [138/138]
GhostDiagnostic-chr: 1.116
Centroid-sig: 0.0%
Centroid-so: 0.099 arcsec [86.37σ]
OotOffset-rm: 0.019 arcsec [0.28σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-rm: 0.106 arcsec [1.56σ]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

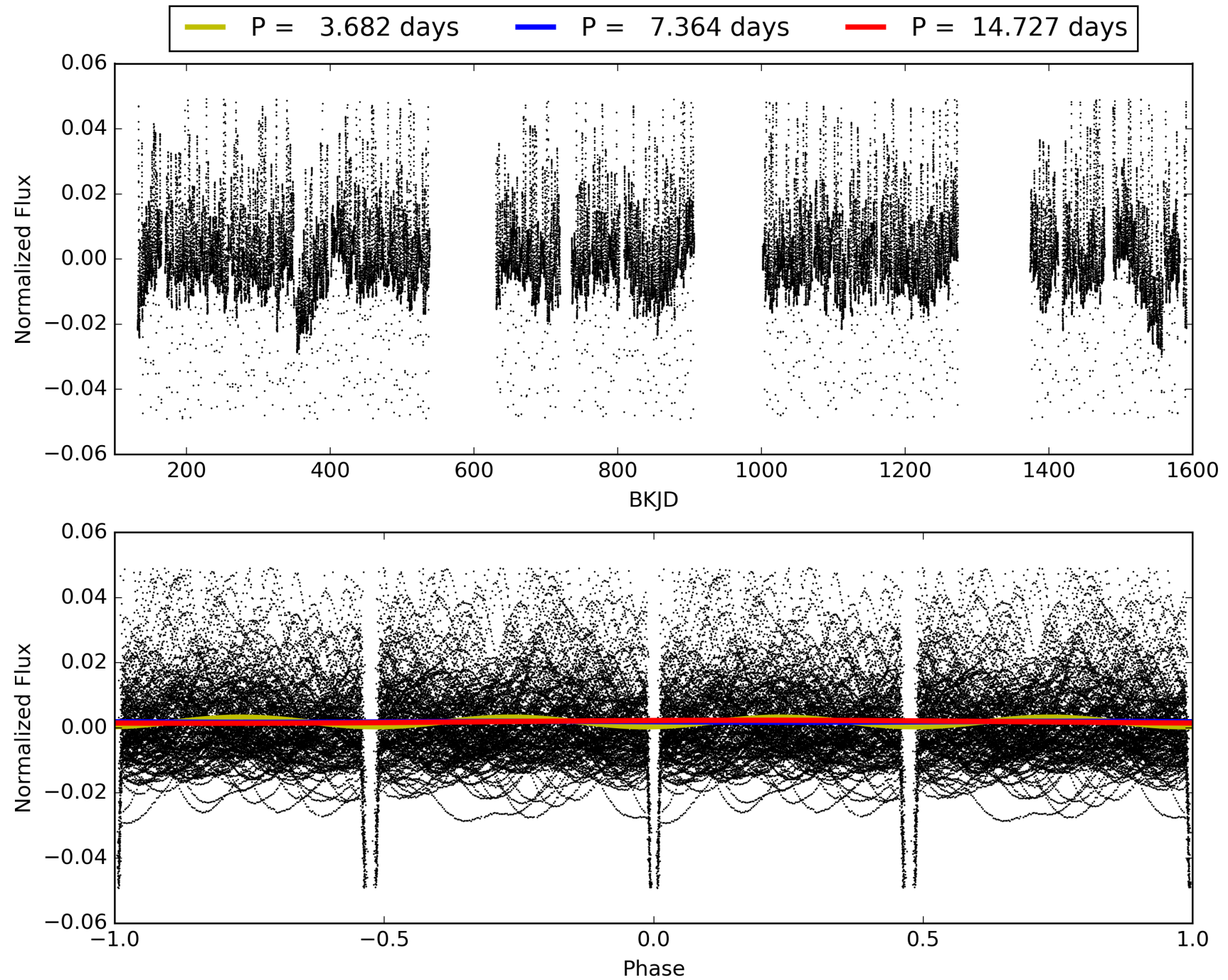
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:22 Z

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

TCE 003248332-01, PDC Light Curves

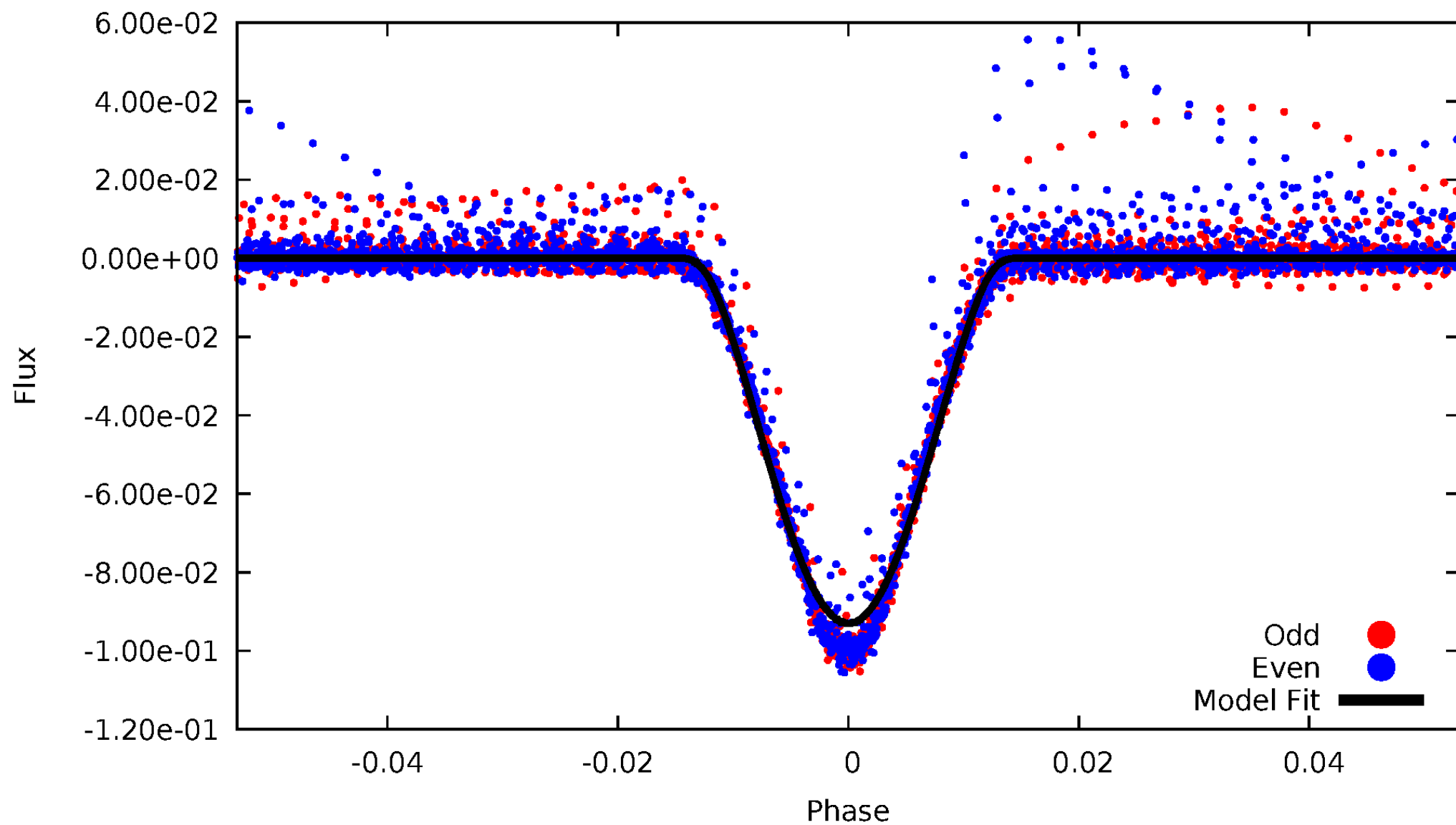


TCE 003248332-01



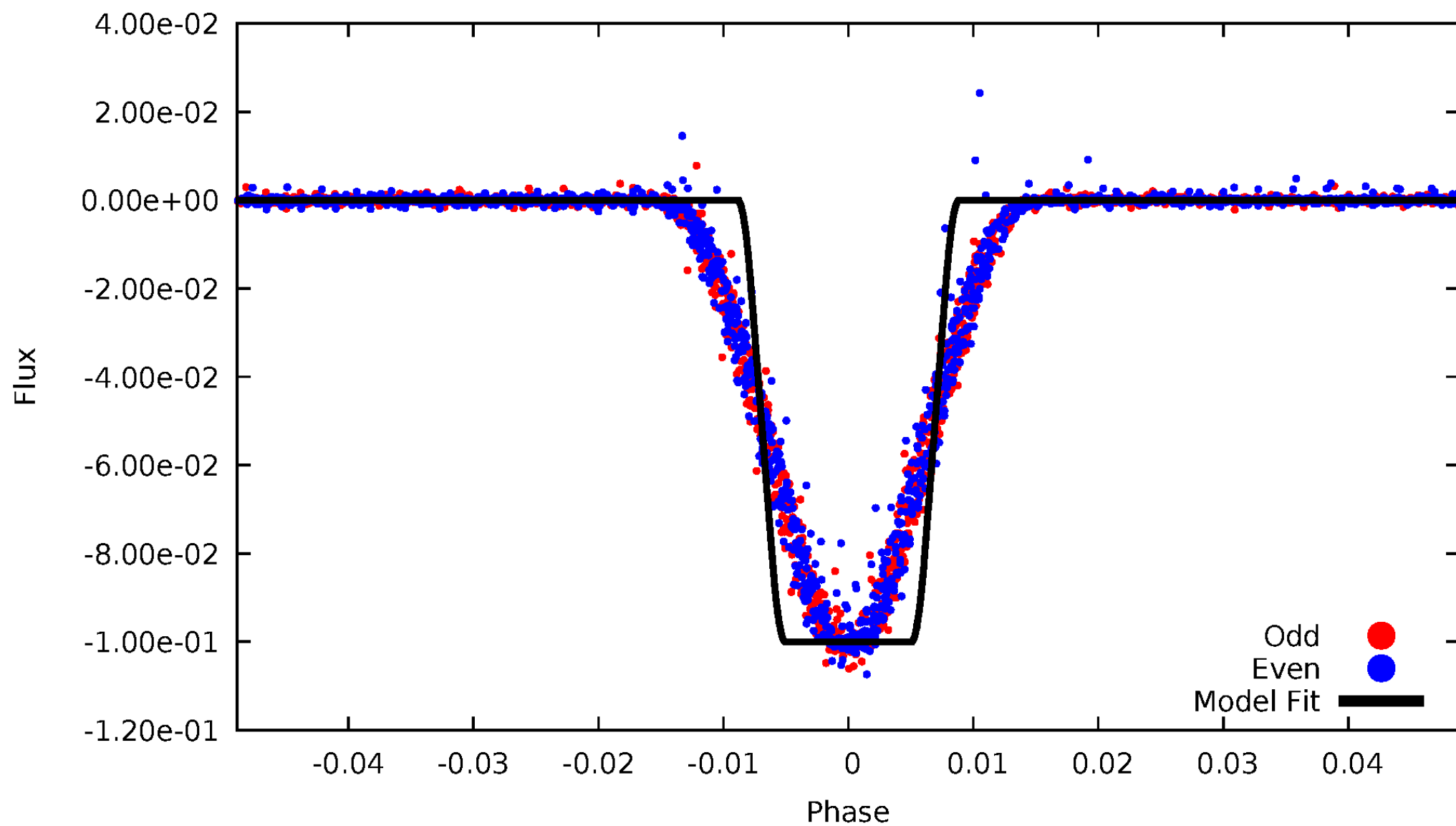
DV Odd/Even

TCE 003248332-01



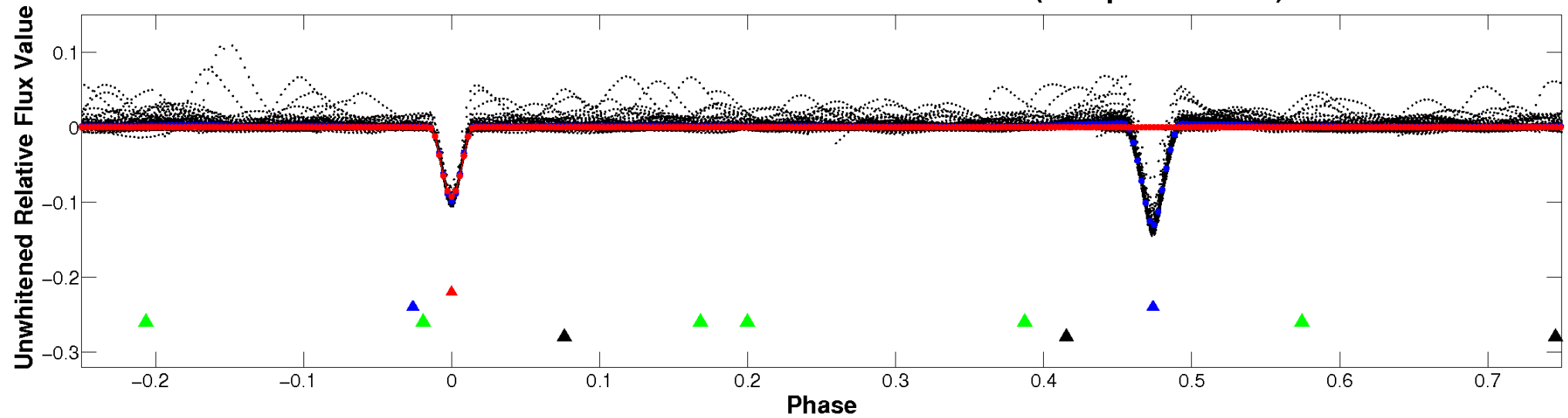
ALT Odd/Even

TCE 003248332-01

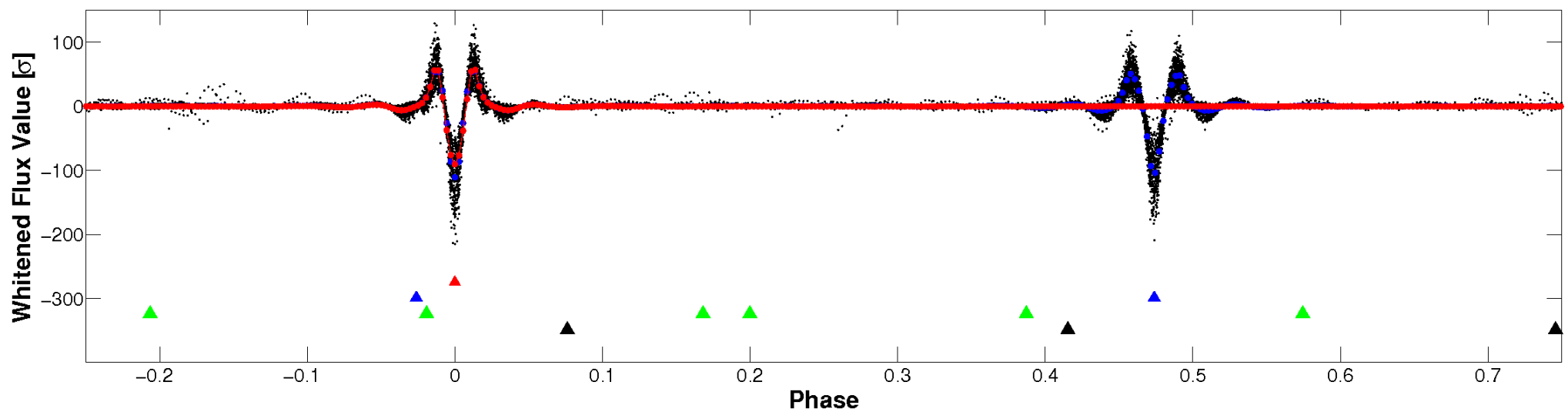


Non-Whitened Vs. Whitened Light Curve

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

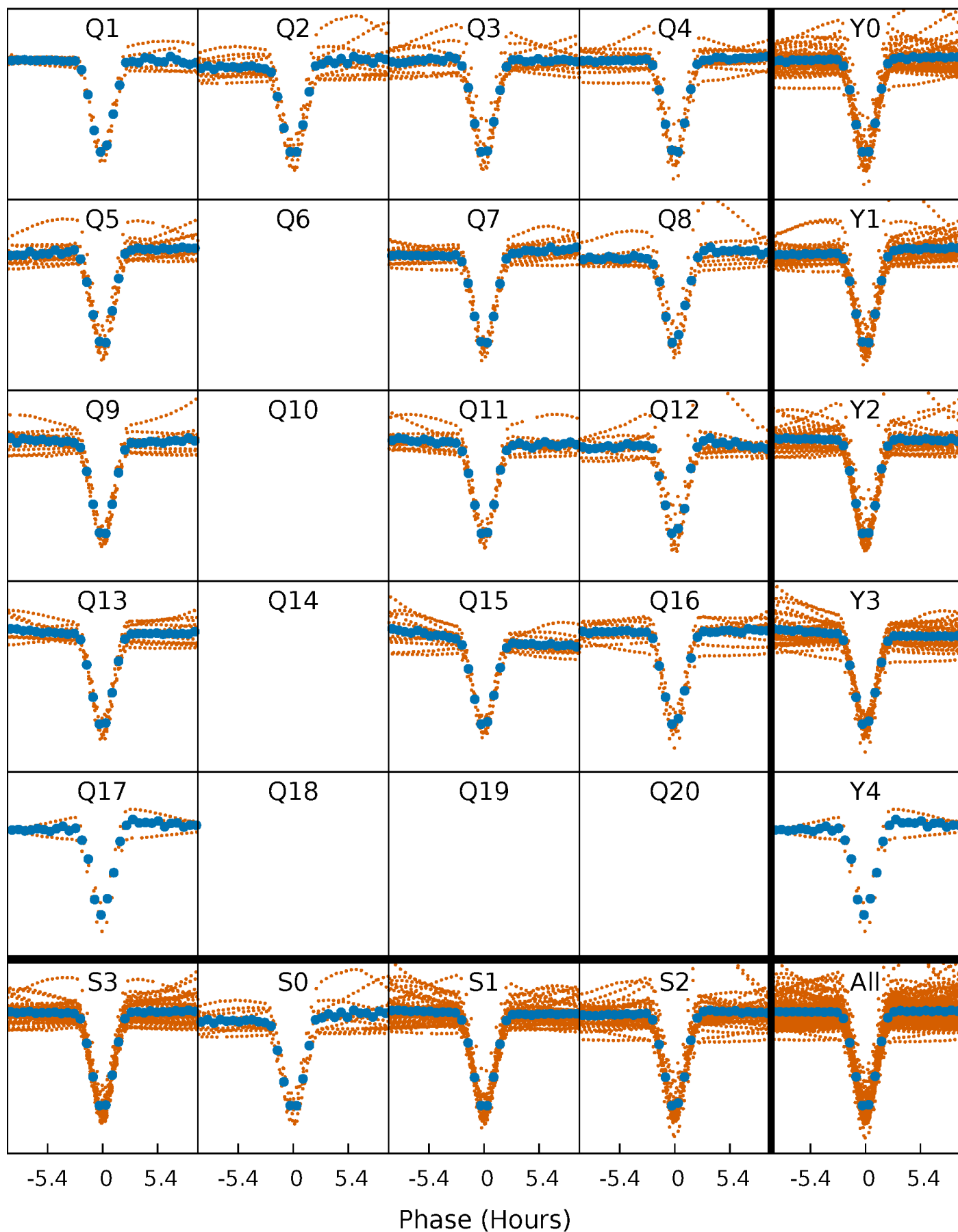


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



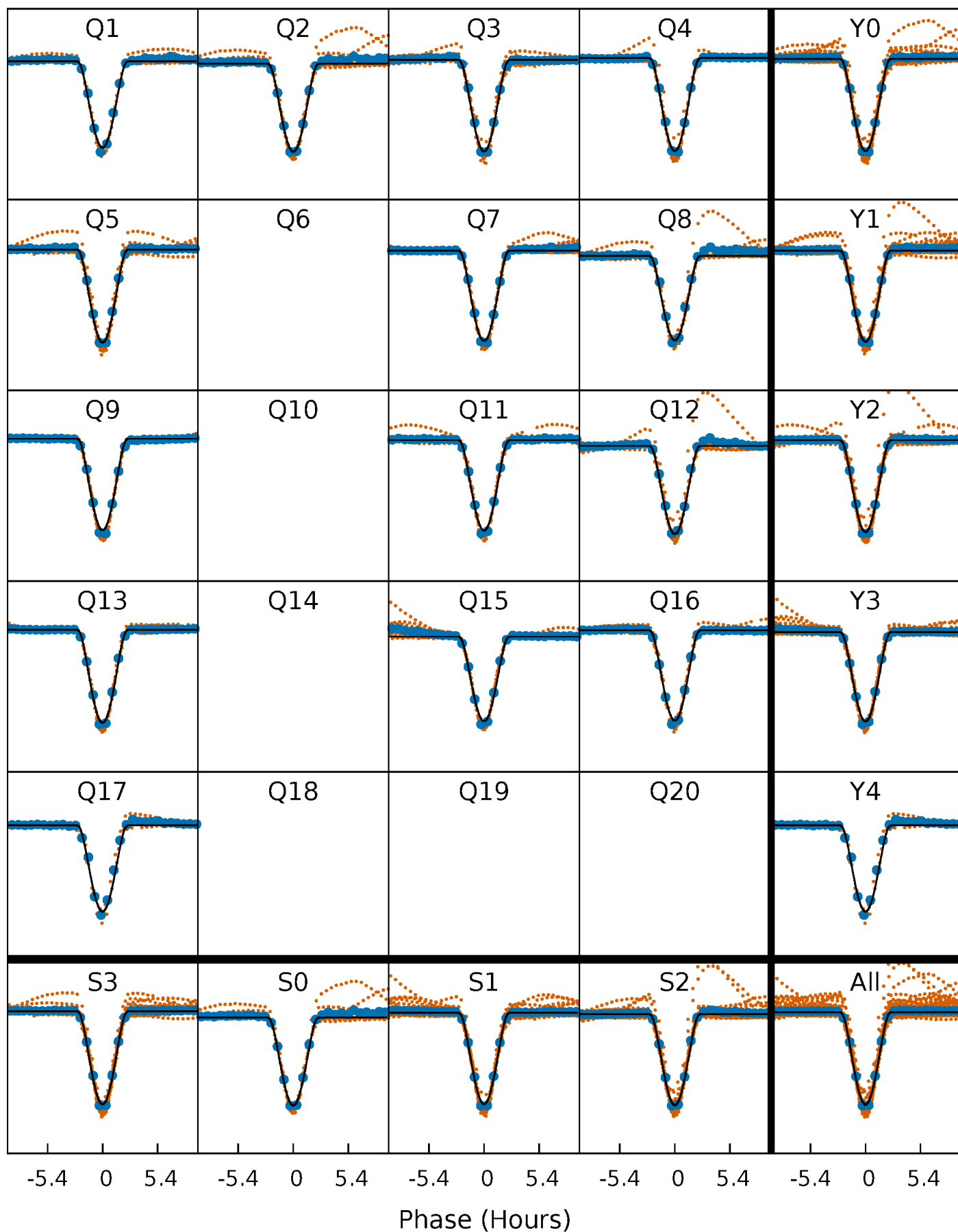
PDC Quarter-Phased Transit Curves

TCE 003248332-01 P= 7.363586 Days $T_0=135.214652$ (BKJD)



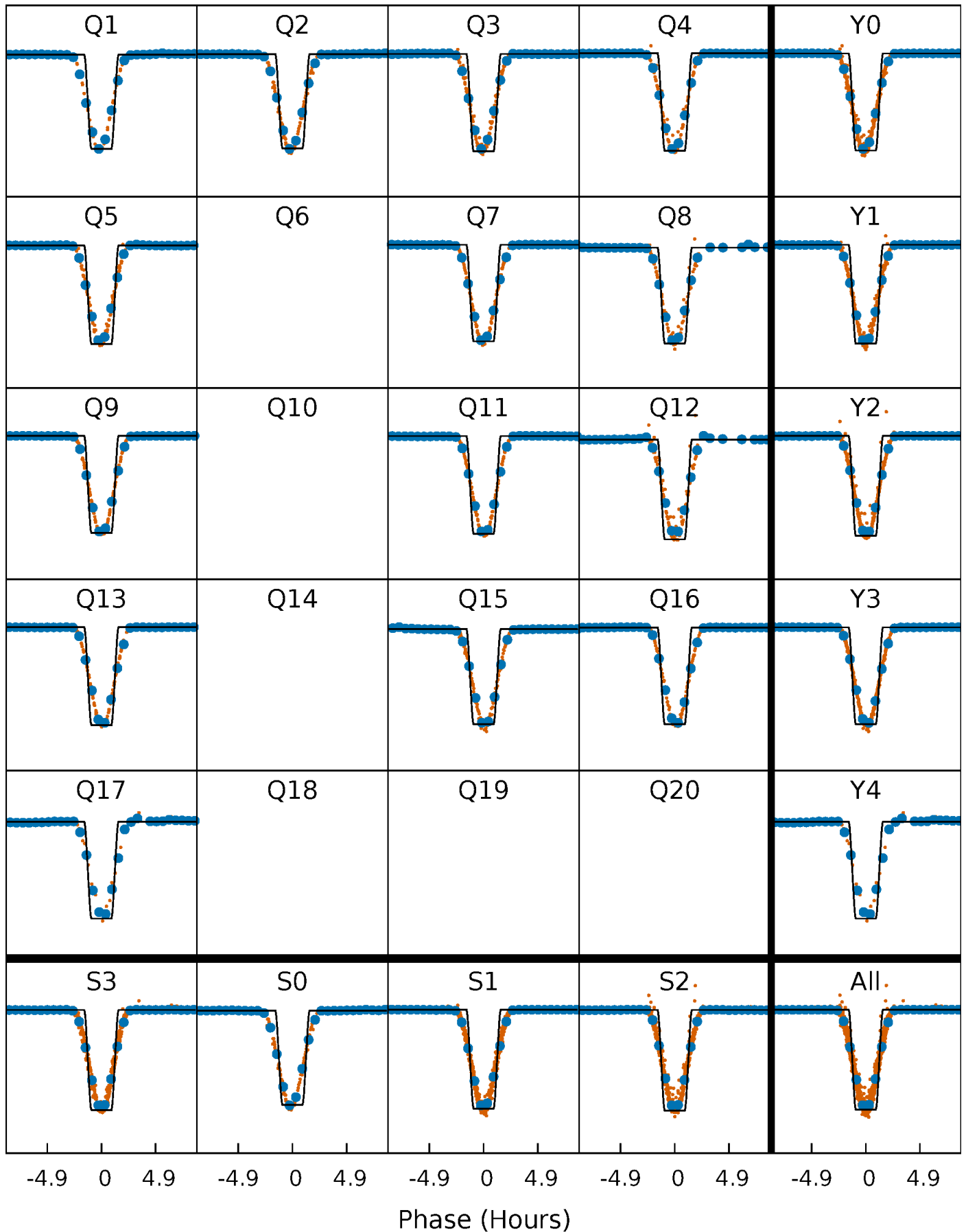
DV Quarter-Phased Transit Curves

TCE 003248332-01 P= 7.363586 Days $T_0=135.214652$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

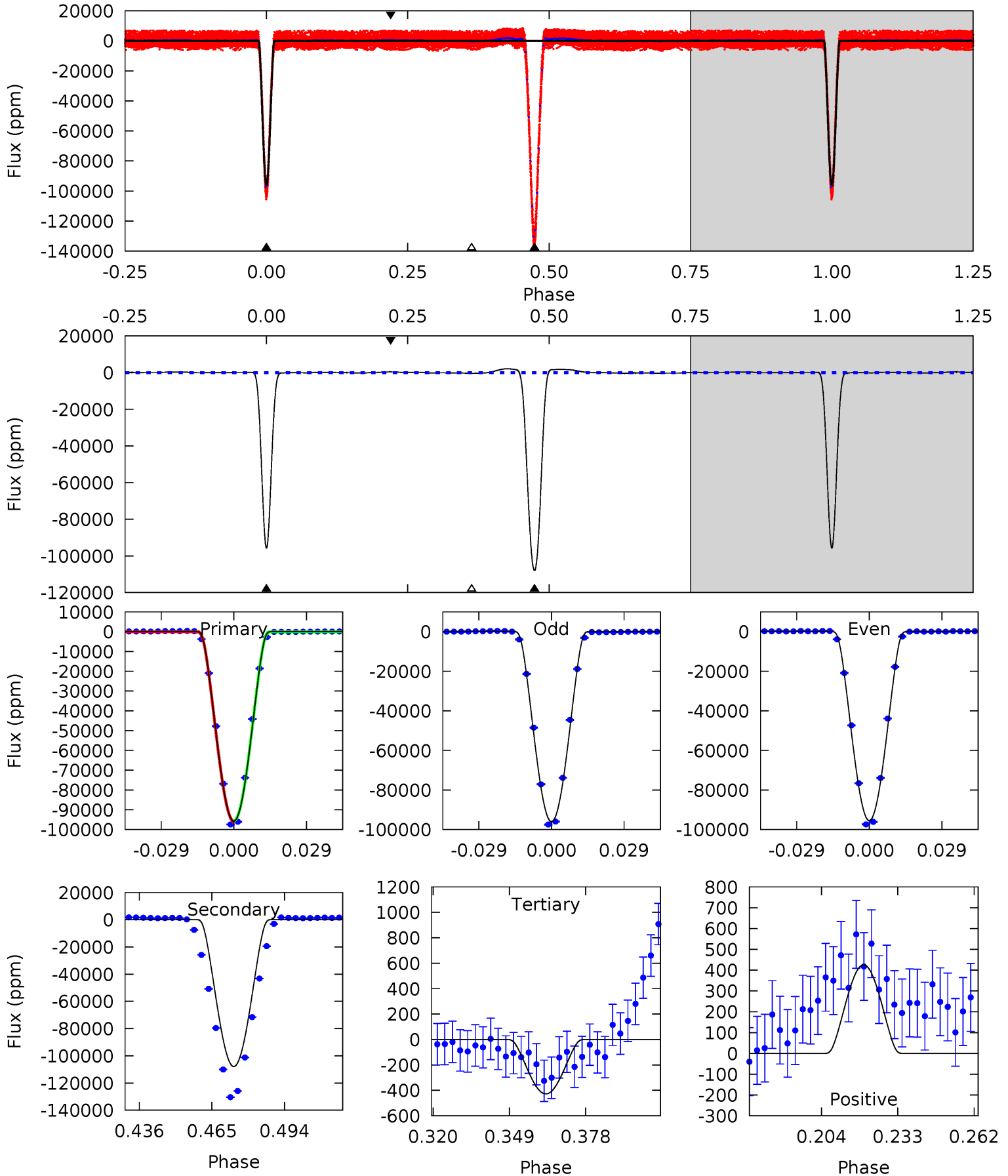
TCE 003248332-01 P= 7.363518 Days $T_0=135.220850$ (BKJD)



DV Model-Shift Uniqueness Test

003248332-01, P = 7.363586 Days, E = 127.851066 Days

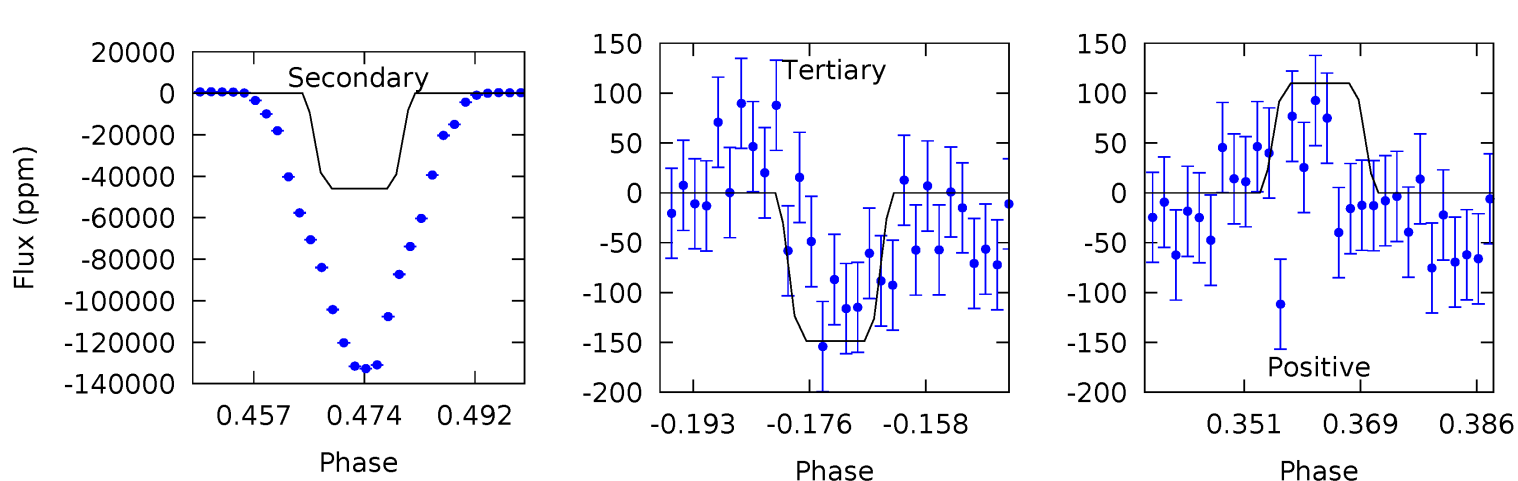
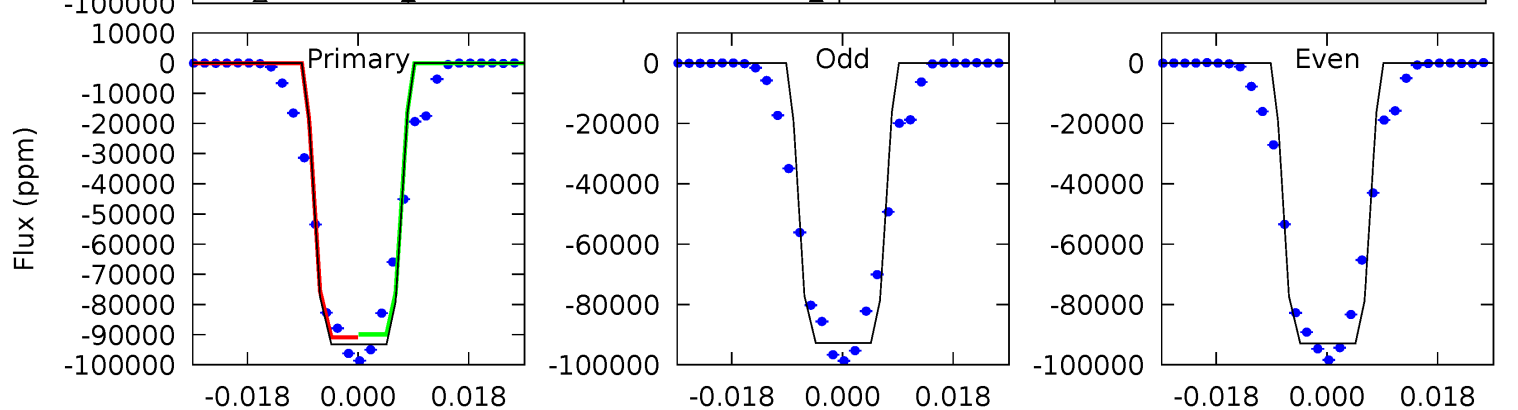
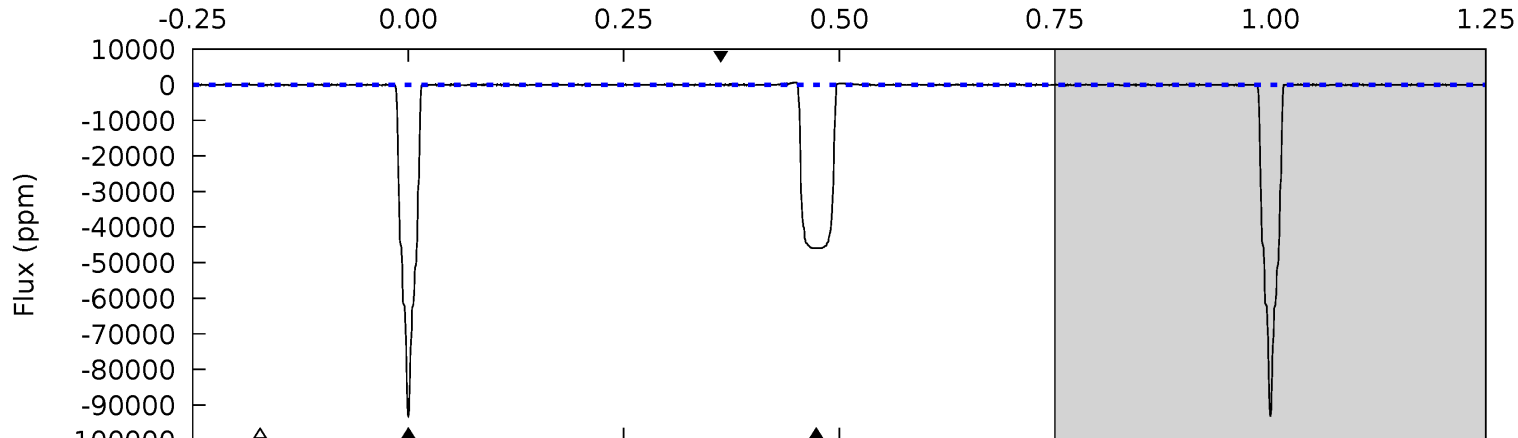
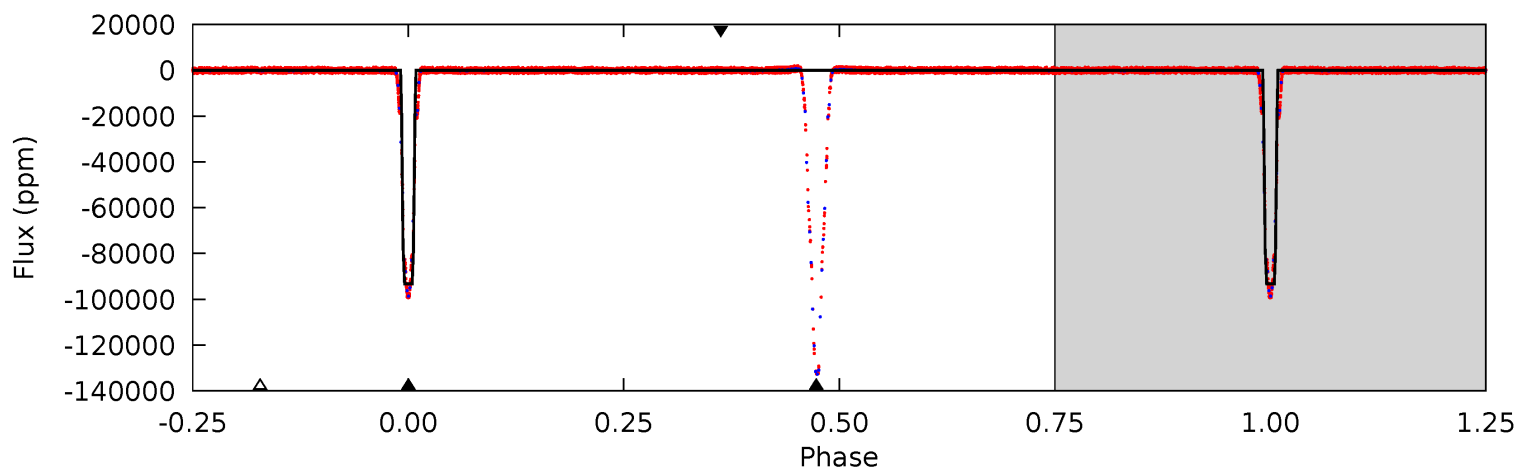
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1749	1971	7.81	7.77	4.82	2.18	9.77	1741	1741	1963	1963	5.46	0.99	0.02	2.59



Alt Model-Shift Uniqueness Test

003248332-01, P = 7.363518 Days, E = 127.857332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2713	1338	4.33	3.20	4.92	2.37	26.0	2709	2710	1334	1335	2.79	0.99	0.01	0



Stellar Parameters For KIC 003248332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6793^{+165}_{-259}	$4.208^{+0.124}_{-0.186}$	$-0.080^{+0.250}_{-0.350}$	$1.508^{+0.495}_{-0.304}$	$1.346^{+0.204}_{-0.224}$	$0.552^{+0.347}_{-0.289}$
	+2%/-4%	+3%/-4%	+312%/-438%	+33%/-20%	+15%/-17%	+63%/-52%
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 003248332-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-107906 ± 55	$78.55^{+16.10}_{-13.25}$	1804^{+139}_{-112}	5789^{+366}_{-331}	70^{+29}_{-20}
Alt.	-45968 ± 34	$53.04^{+11.55}_{-10.42}$	1799^{+145}_{-113}	5623^{+517}_{-410}	63^{+33}_{-20}

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

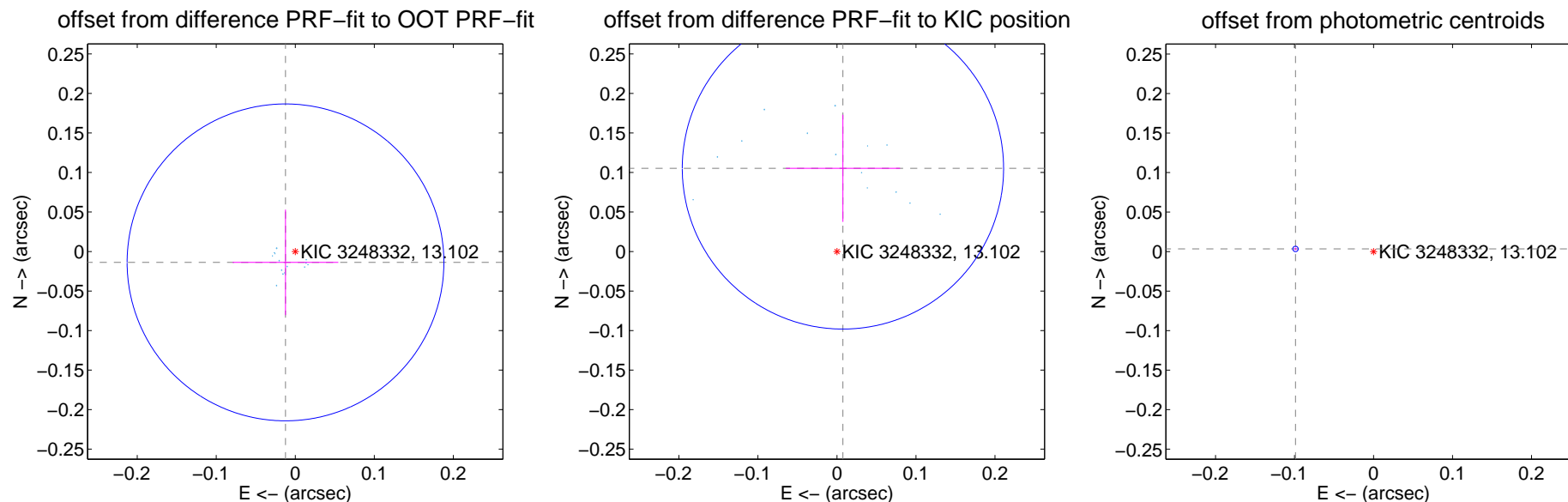
DV Centroid Data

Supplemental centroid analysis for 003248332-01. Kepler magnitude: 13.10. Transit SNR 1256.66

There are 14 quarters with good PRF difference image offsets

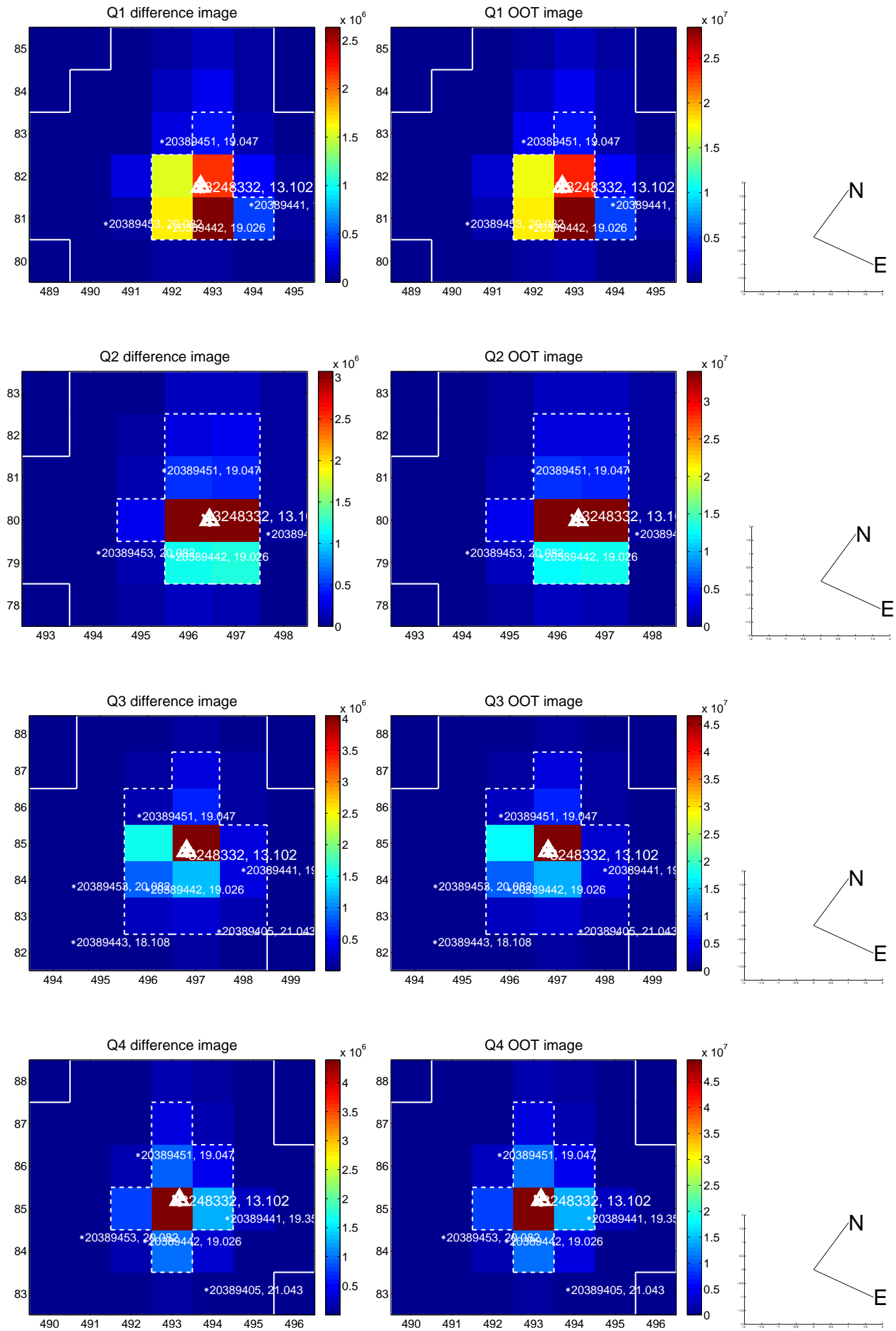
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.019 ± 0.067	0.28	0.012 ± 0.067	-0.014 ± 0.067
PRF-fit source offset from KIC position	0.106 ± 0.068	1.56	-0.008 ± 0.072	0.105 ± 0.068
photometric centroid source offset	0.10 ± 0.00	86.37	0.10 ± 0.00	0.00 ± 0.00

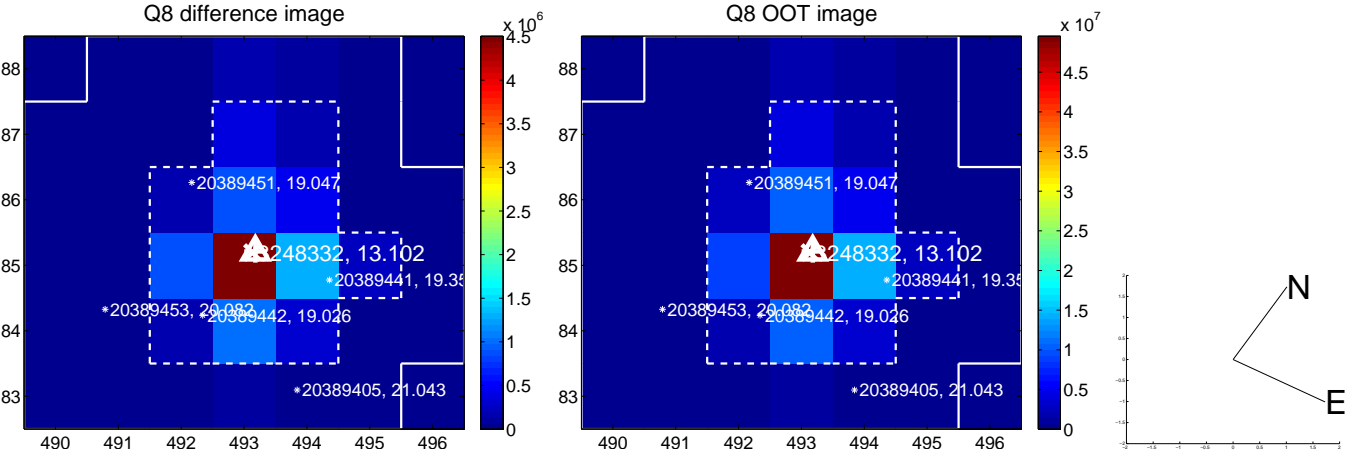
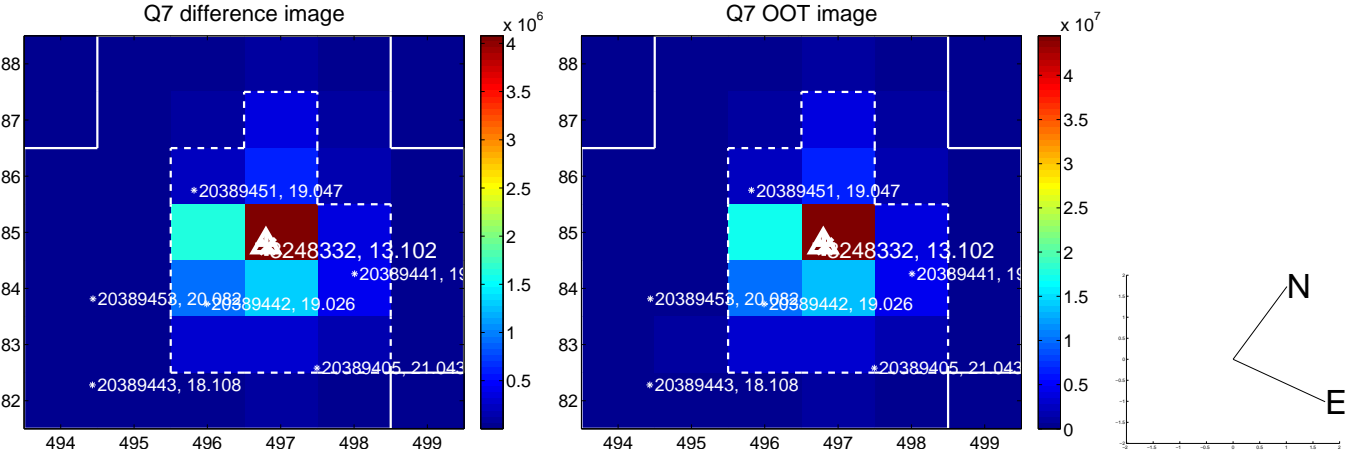
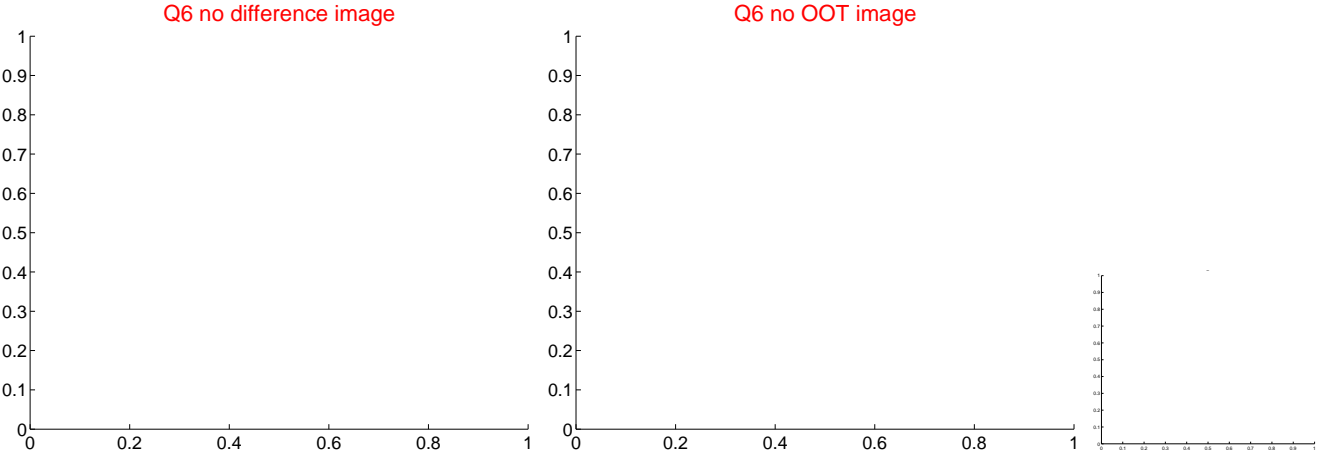
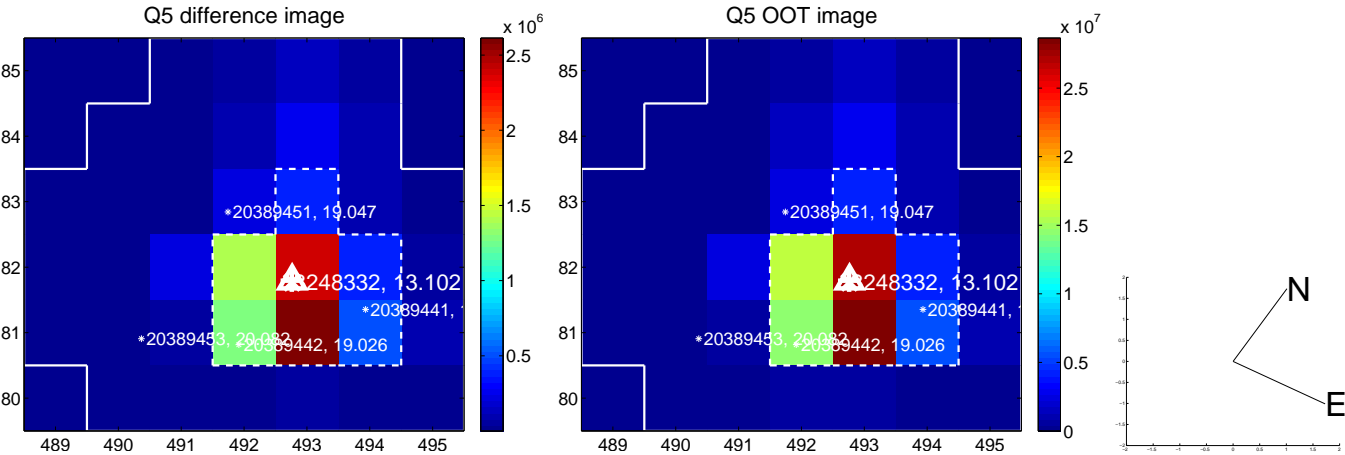


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

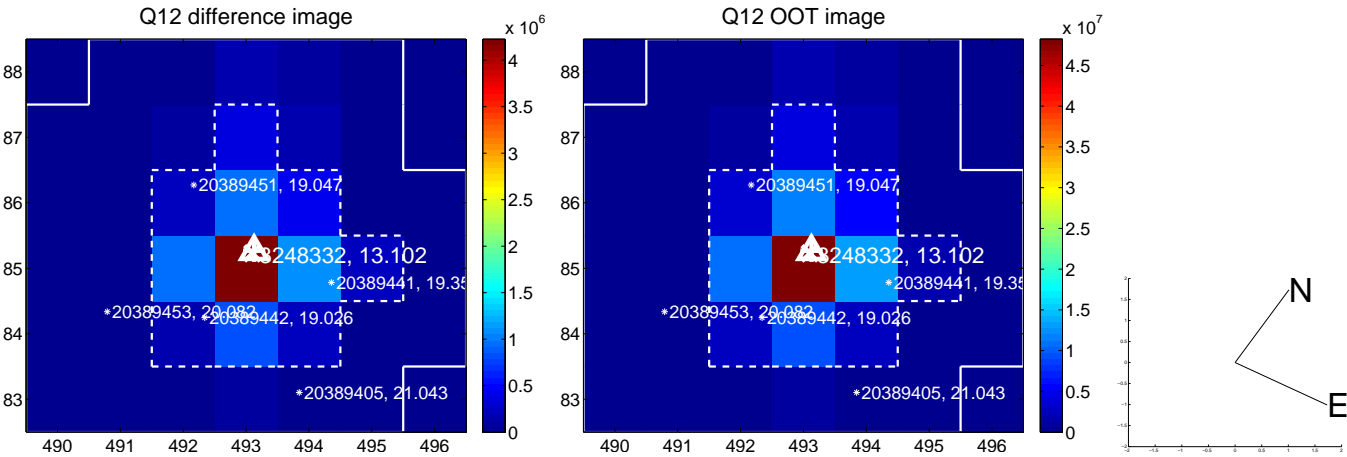
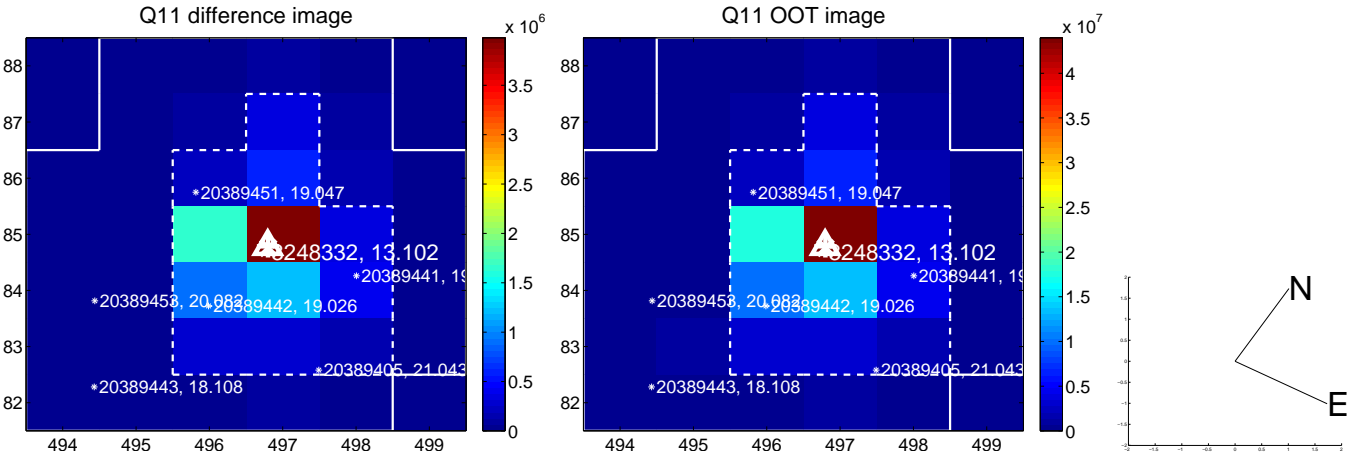
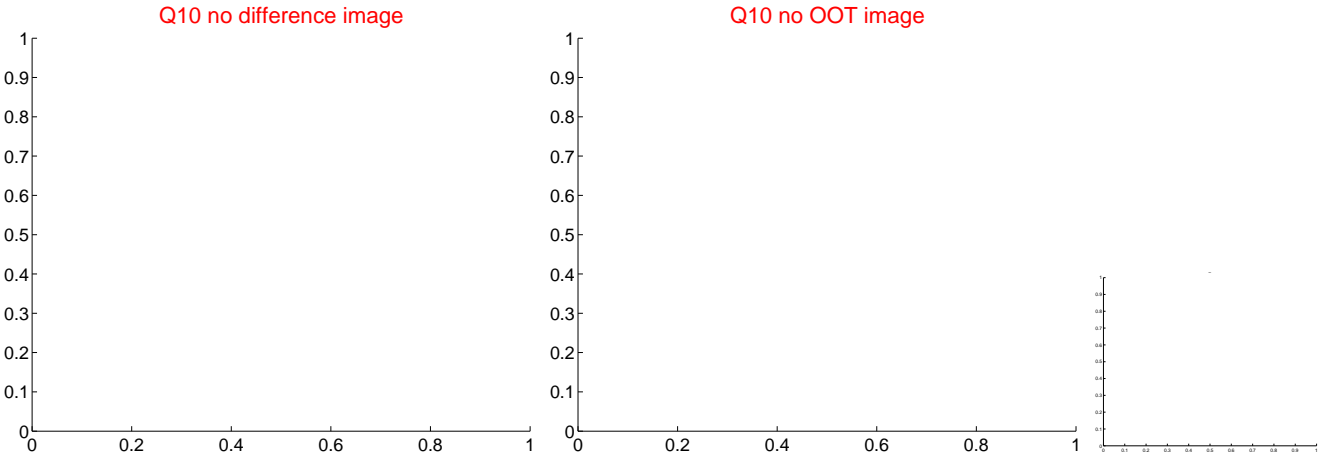
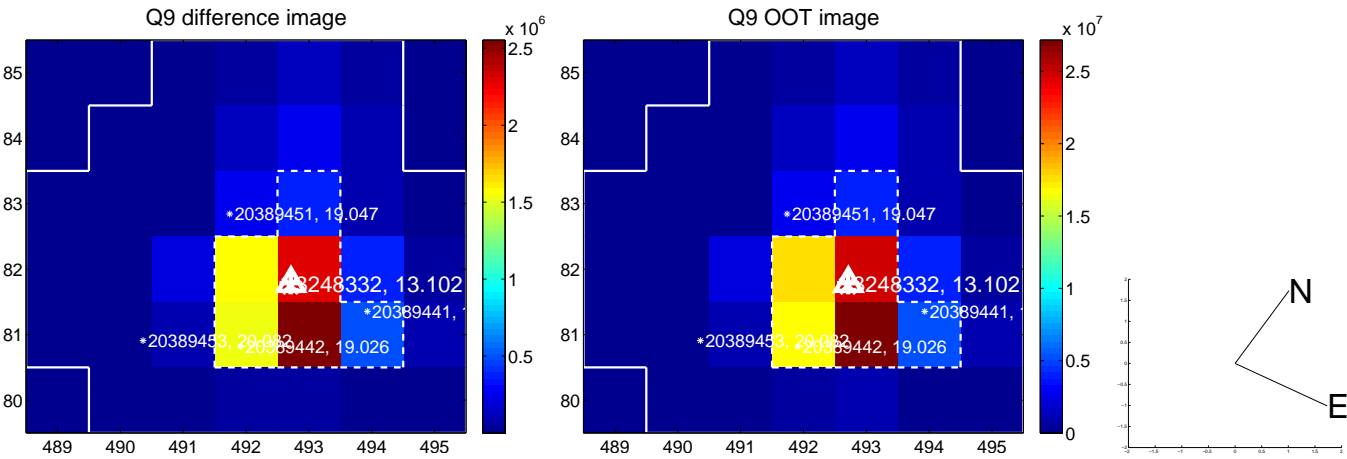
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



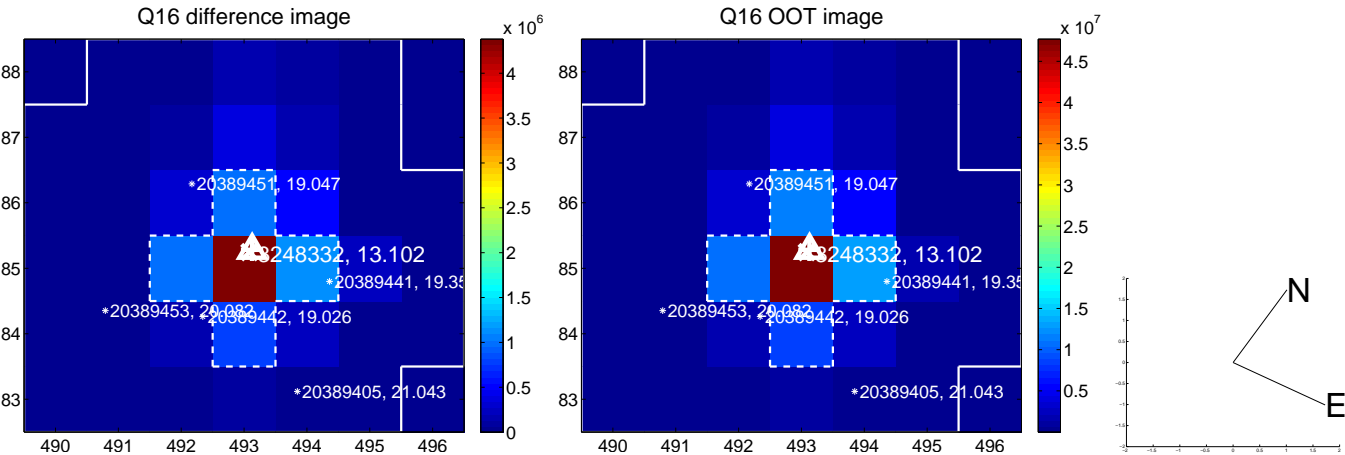
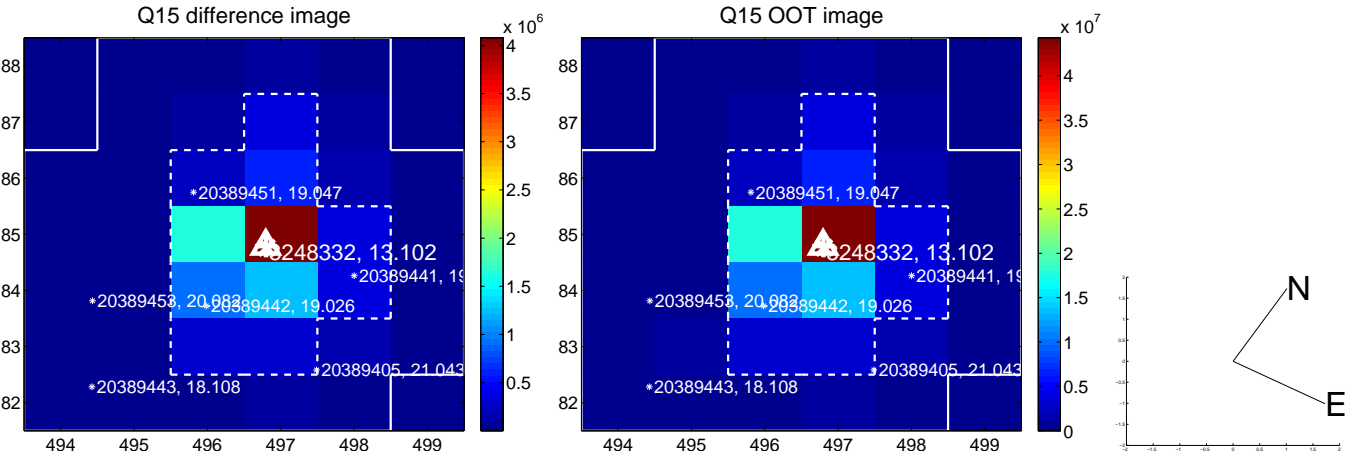
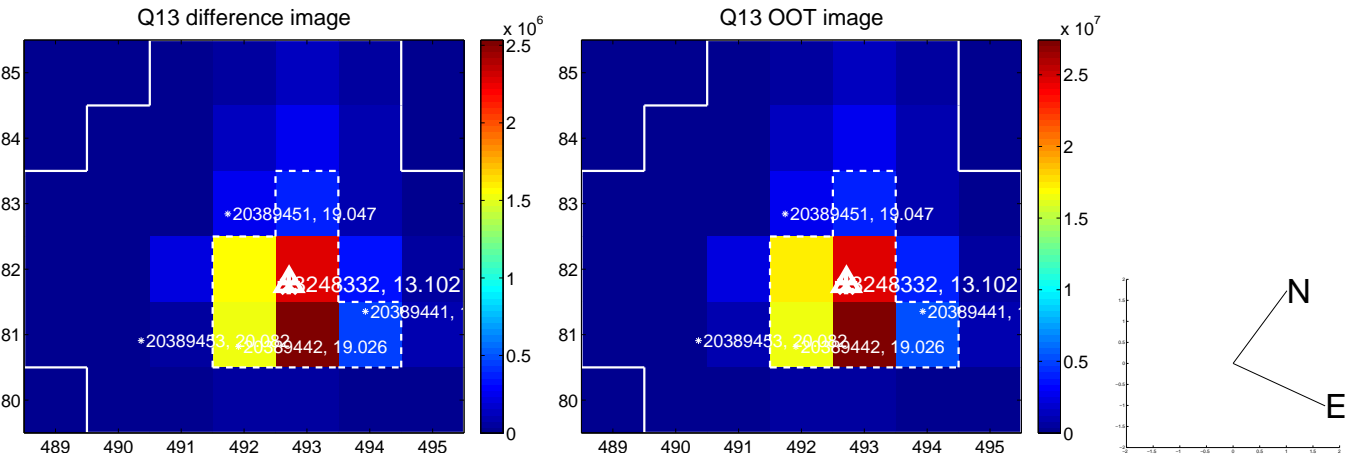
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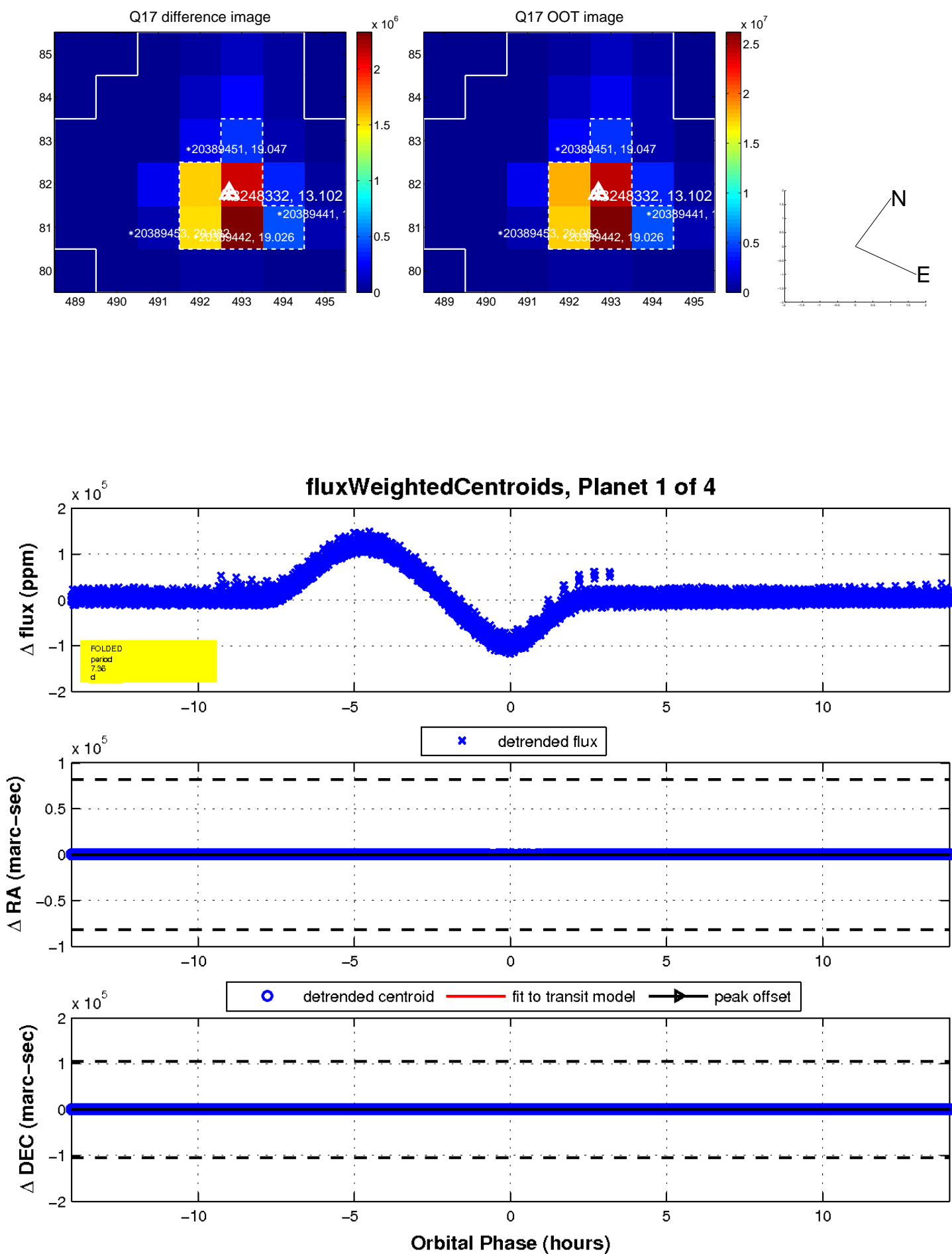
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



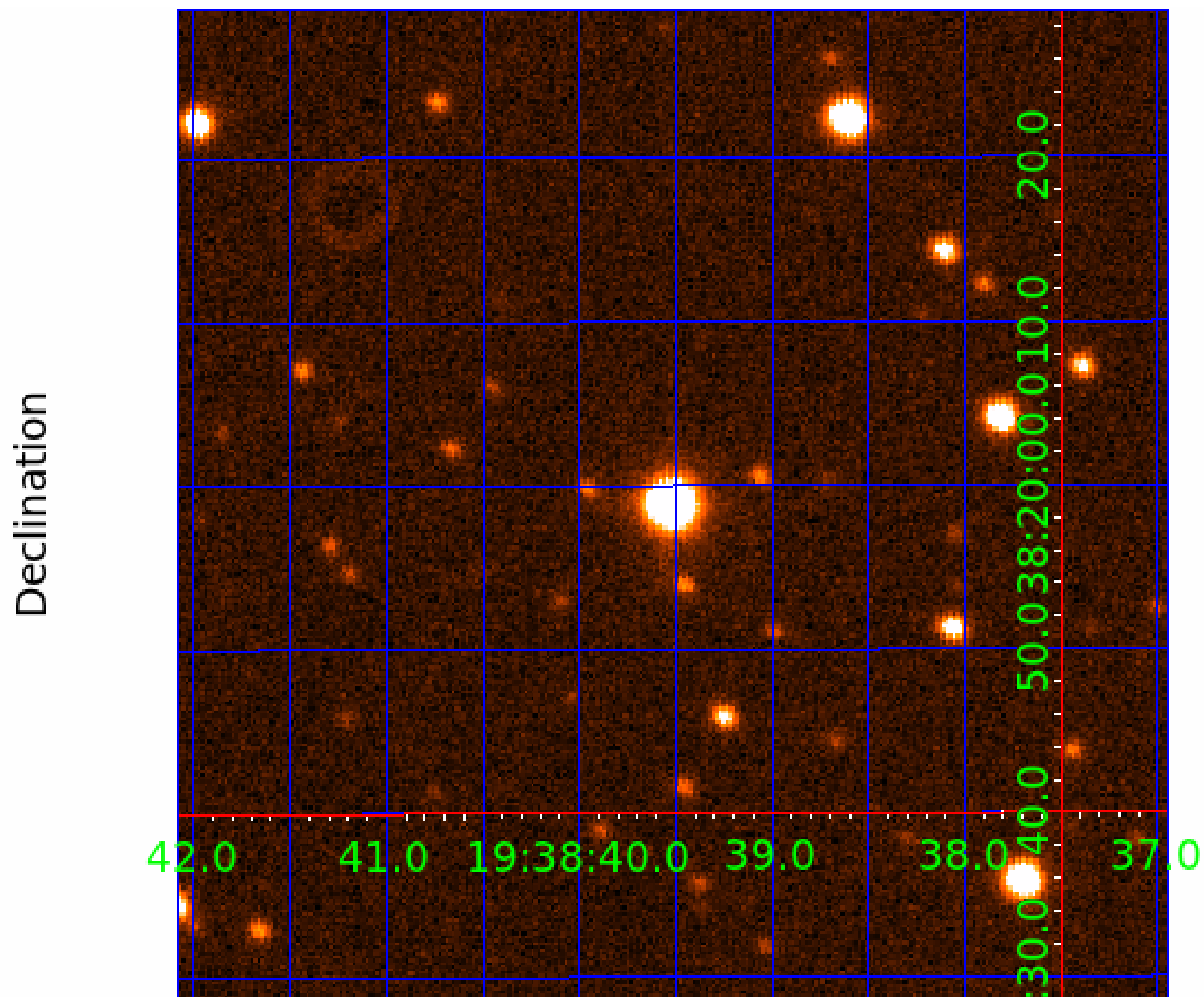
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003248332

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})
003248332-01	OBS	No	7.363586	135.214652	93045.3	4.687	2456.8	1256.7	1.51	6793	77.86	650.56
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Robovetter Results

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003248332-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
003248332-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003248332-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

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

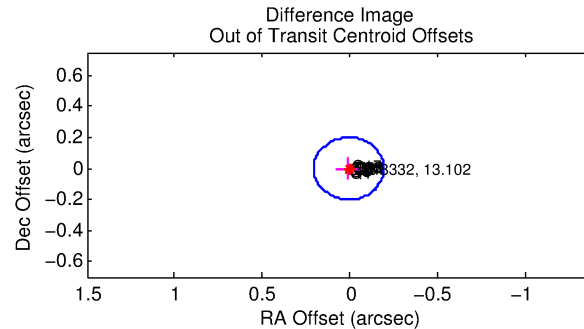
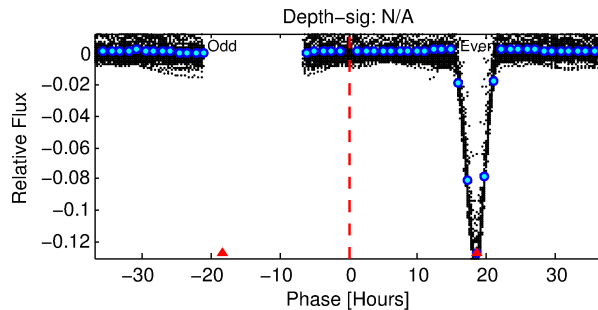
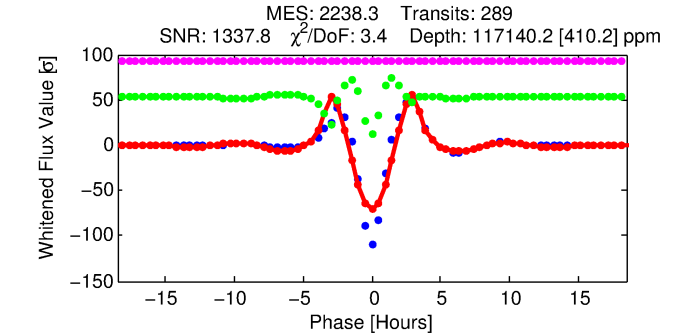
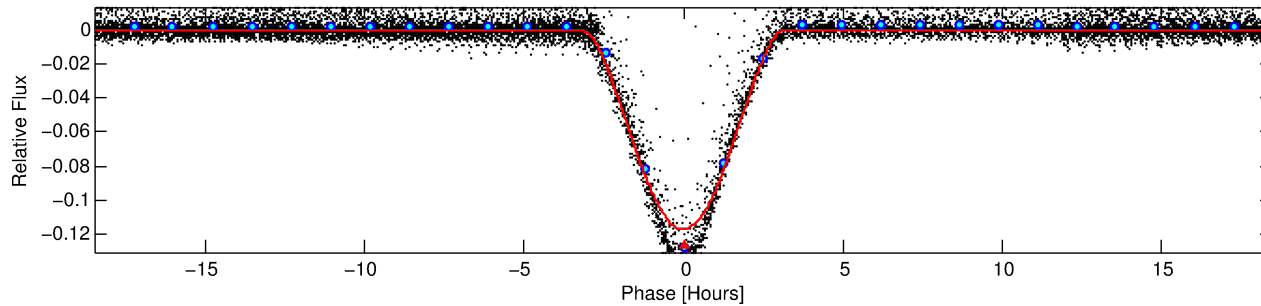
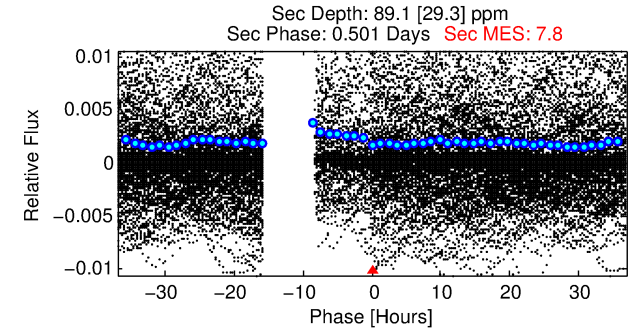
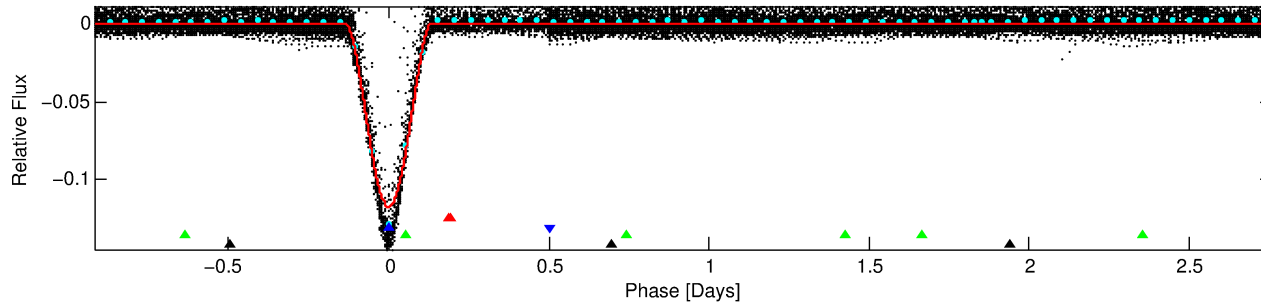
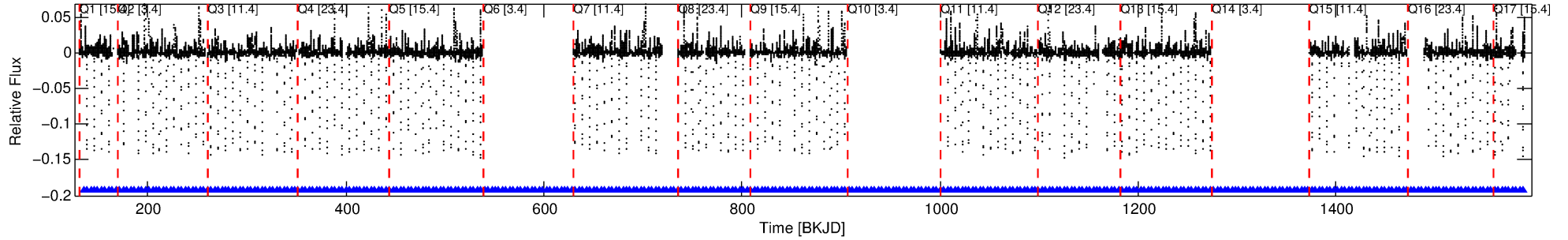
Ephemeris Match Information For 003248332-02

No Significant Match Found

DV One-Page Summary

KIC: 3248332 Candidate: 2 of 4 Period: 3.682 d
KOI: K06317 Corr: No Ephemeris Match

Kp: 13.10 R*: 1.51 Rs Teff: 6793.0 K Logg: 4.21 Fe/H: -0.080



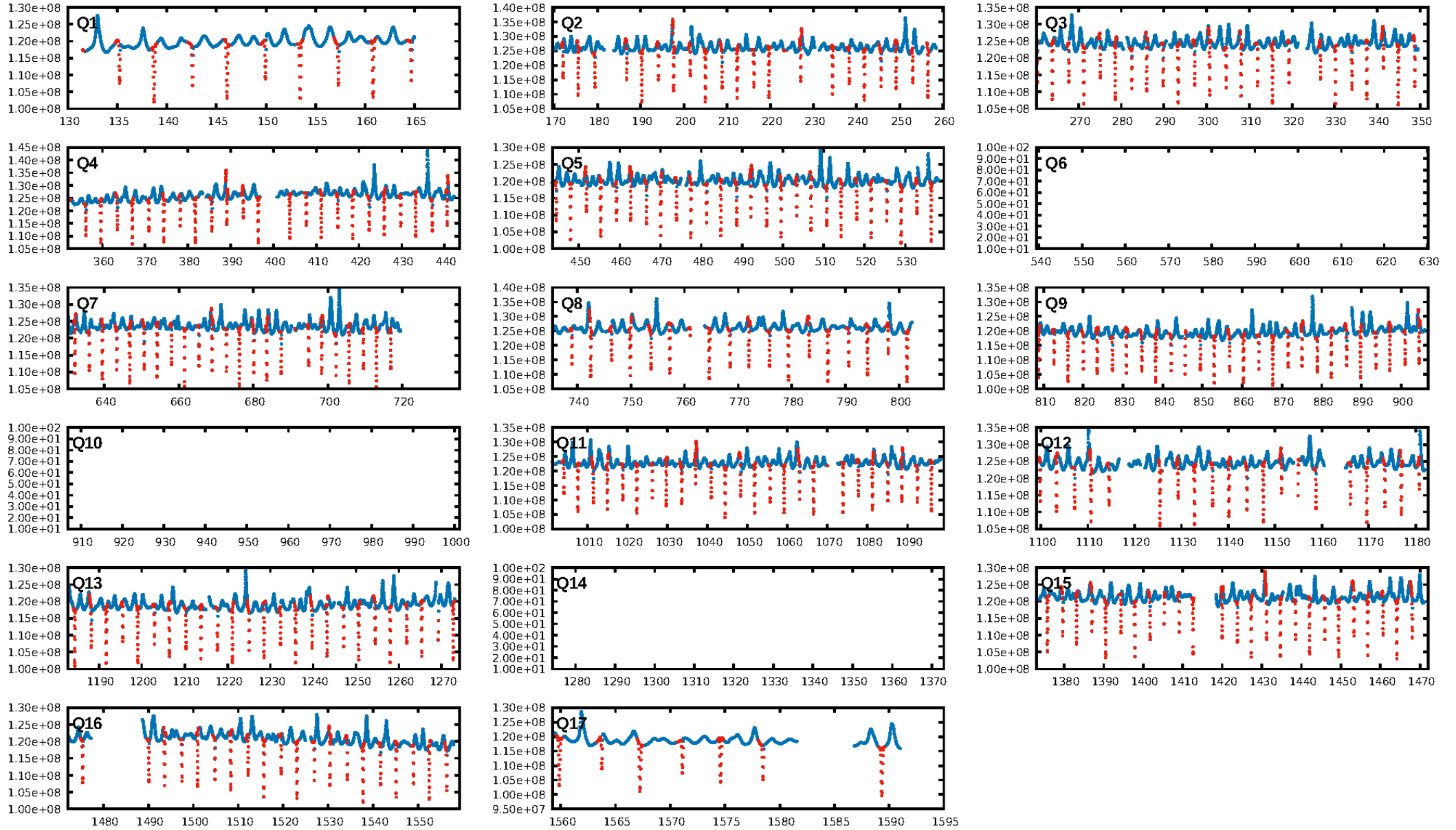
DV Fit Results:

Period = 3.68181 [0.00000] d
Epoch = 135.0199 [0.0001] BKJD
Rp/R* = 0.4976 [0.0993]
a/R* = 5.38 [0.10]
b = 0.96 [0.14]
Seff = 1639.31 [640.53]
Teq = 1623 [158] K
Rp = 81.88 [31.45] Re
a = 0.0514 [0.0134] AU
Ag = 0.02 [0.01] [-80.44σ]
Teffp = 936 [126] K [-3.39σ]

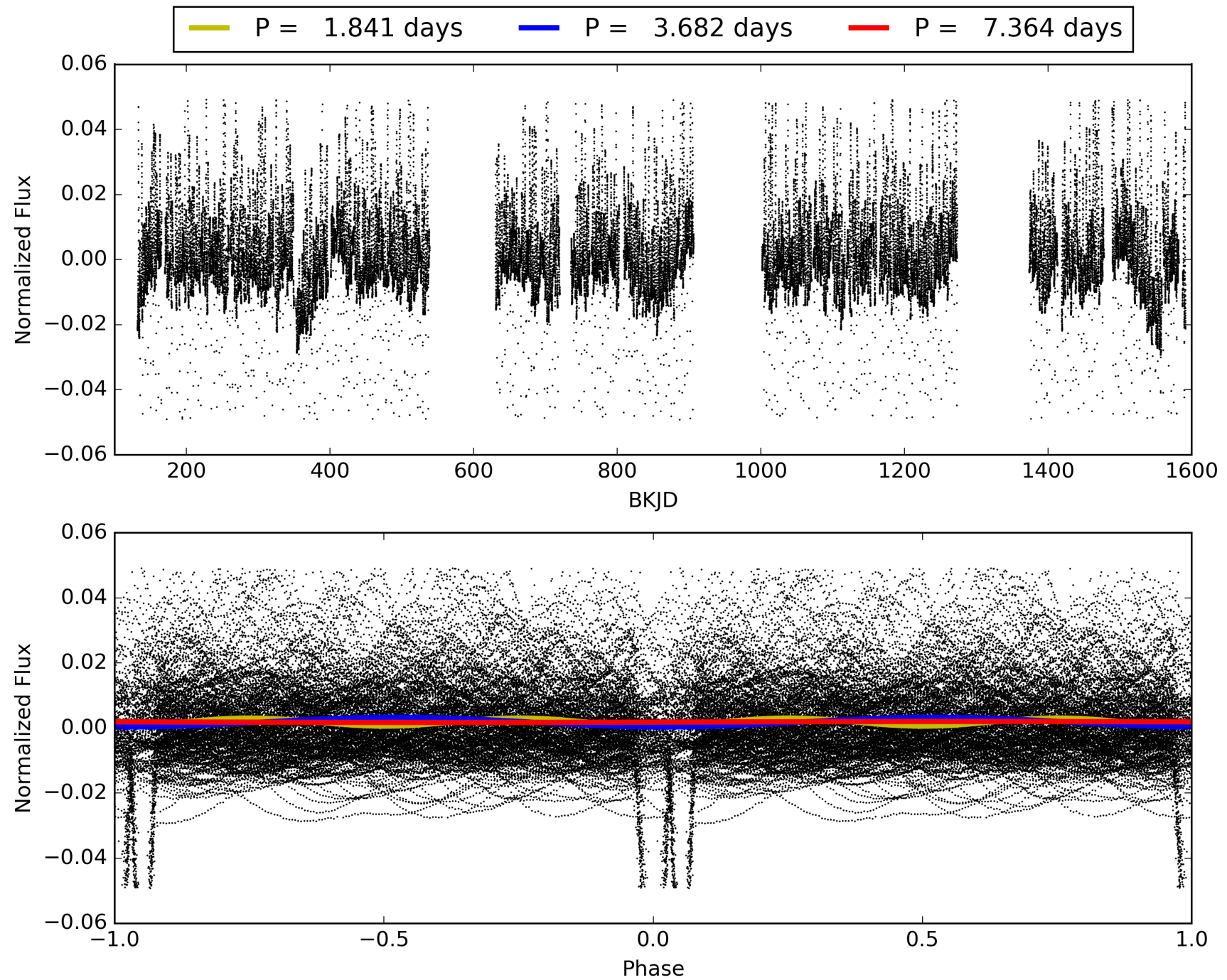
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.41σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [273/273]
GhostDiagnostic-chr: 1.783
Centroid-sig: 0.0%
Centroid-so: 0.076 arcsec [121.31σ]
OotOffset-rm: 0.008 arcsec [0.12σ]
KicOffset-rm: 0.120 arcsec [1.77σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003248332-02, PDC Light Curves

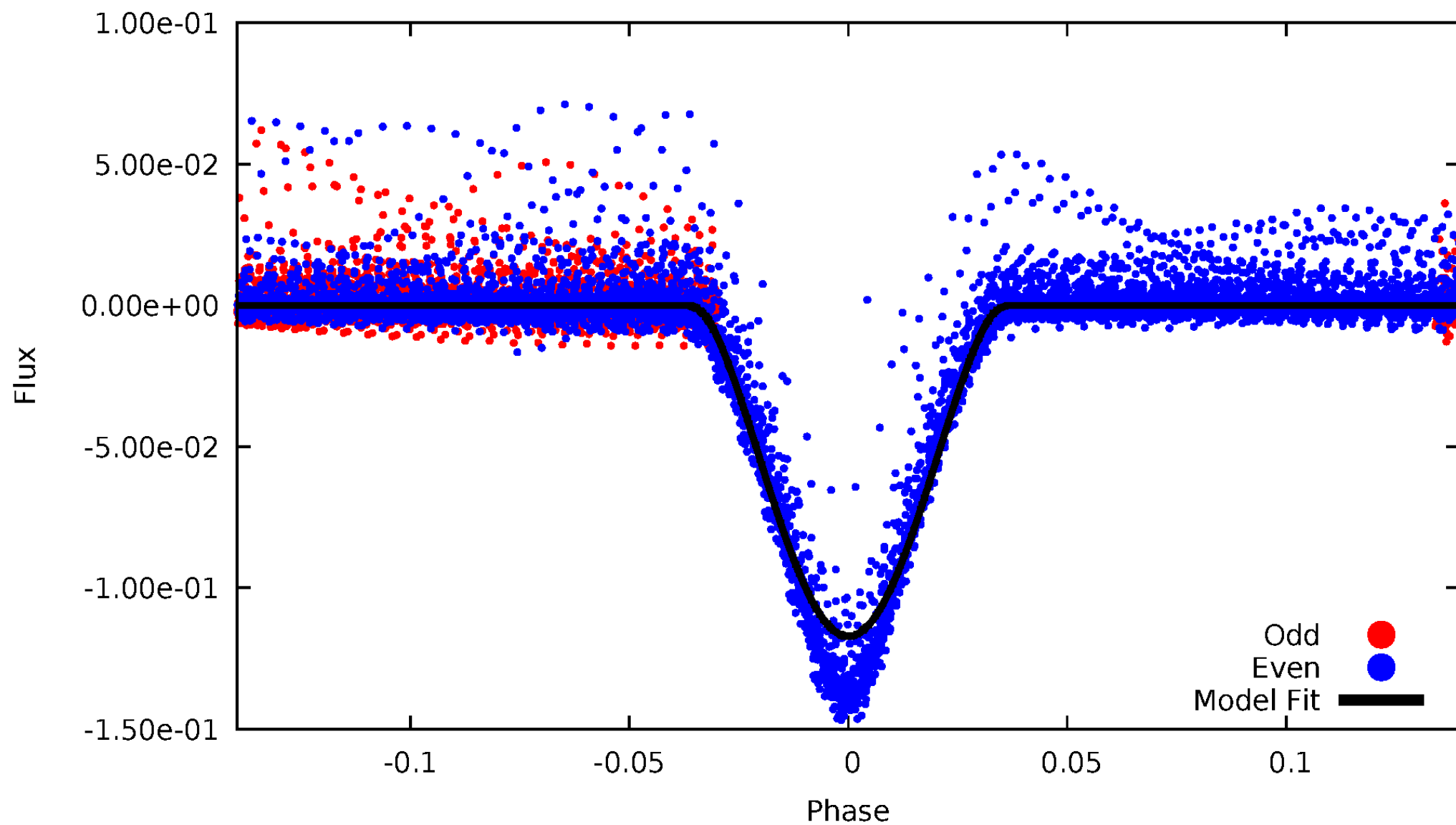


TCE 003248332-02



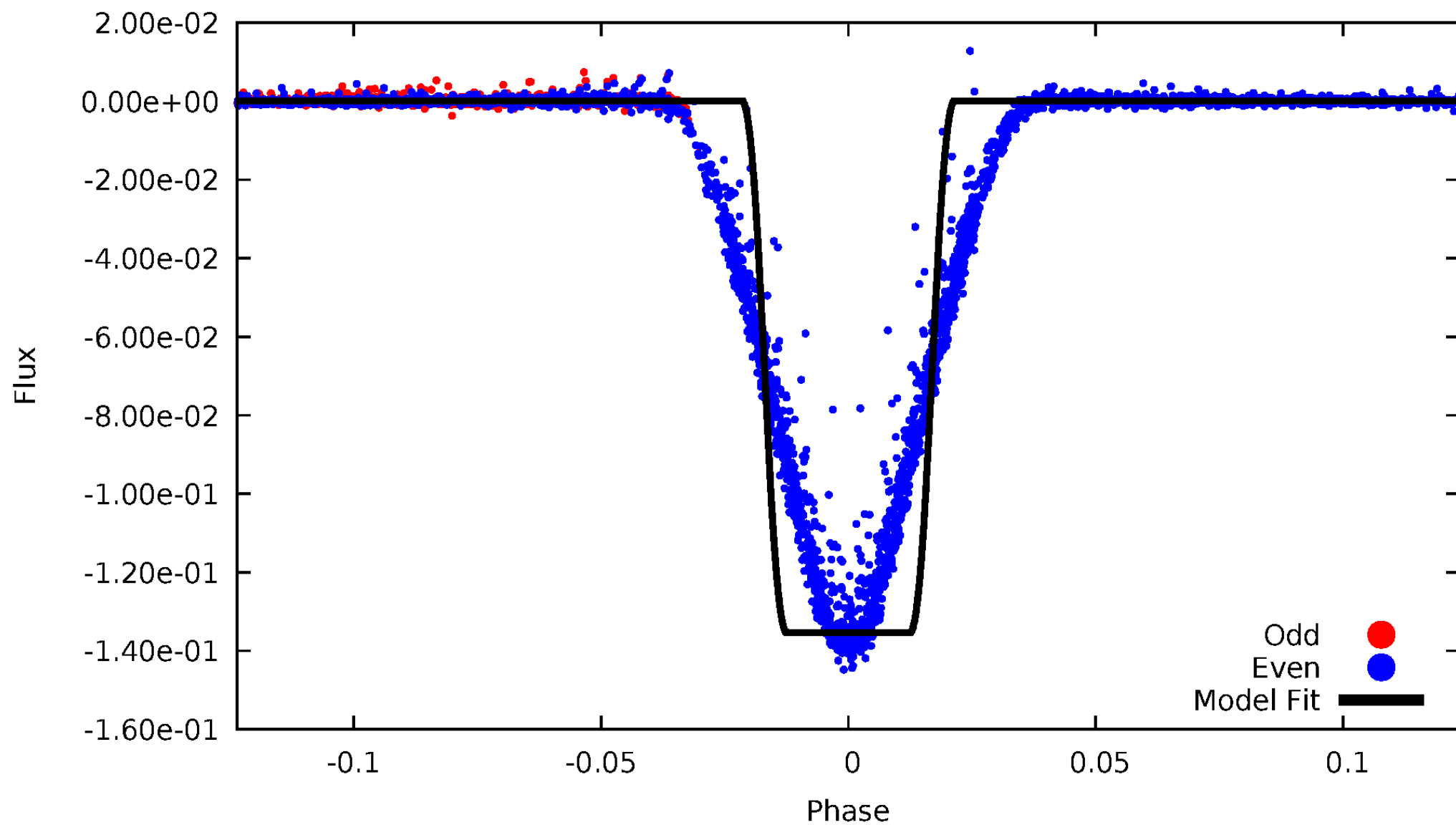
DV Odd/Even

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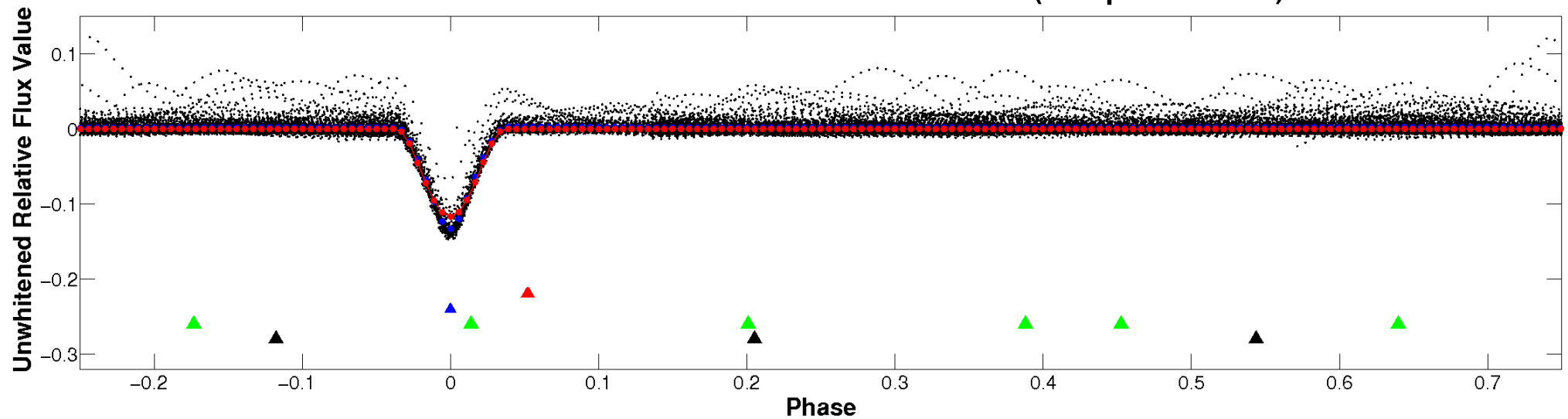
ALT Odd/Even

TCE 003248332-02

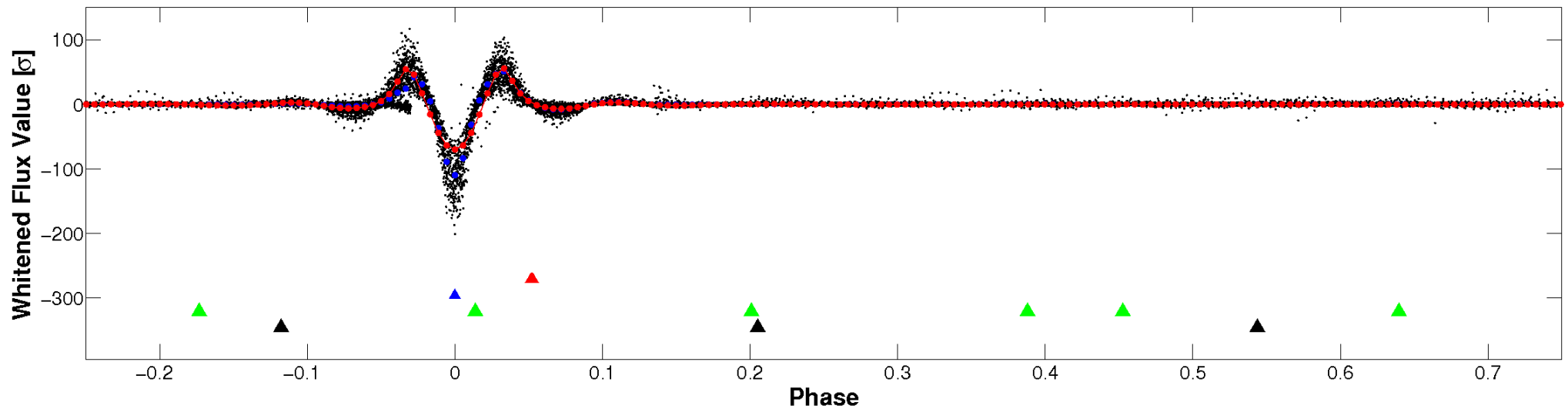


Non-Whitened Vs. Whitened Light Curve

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

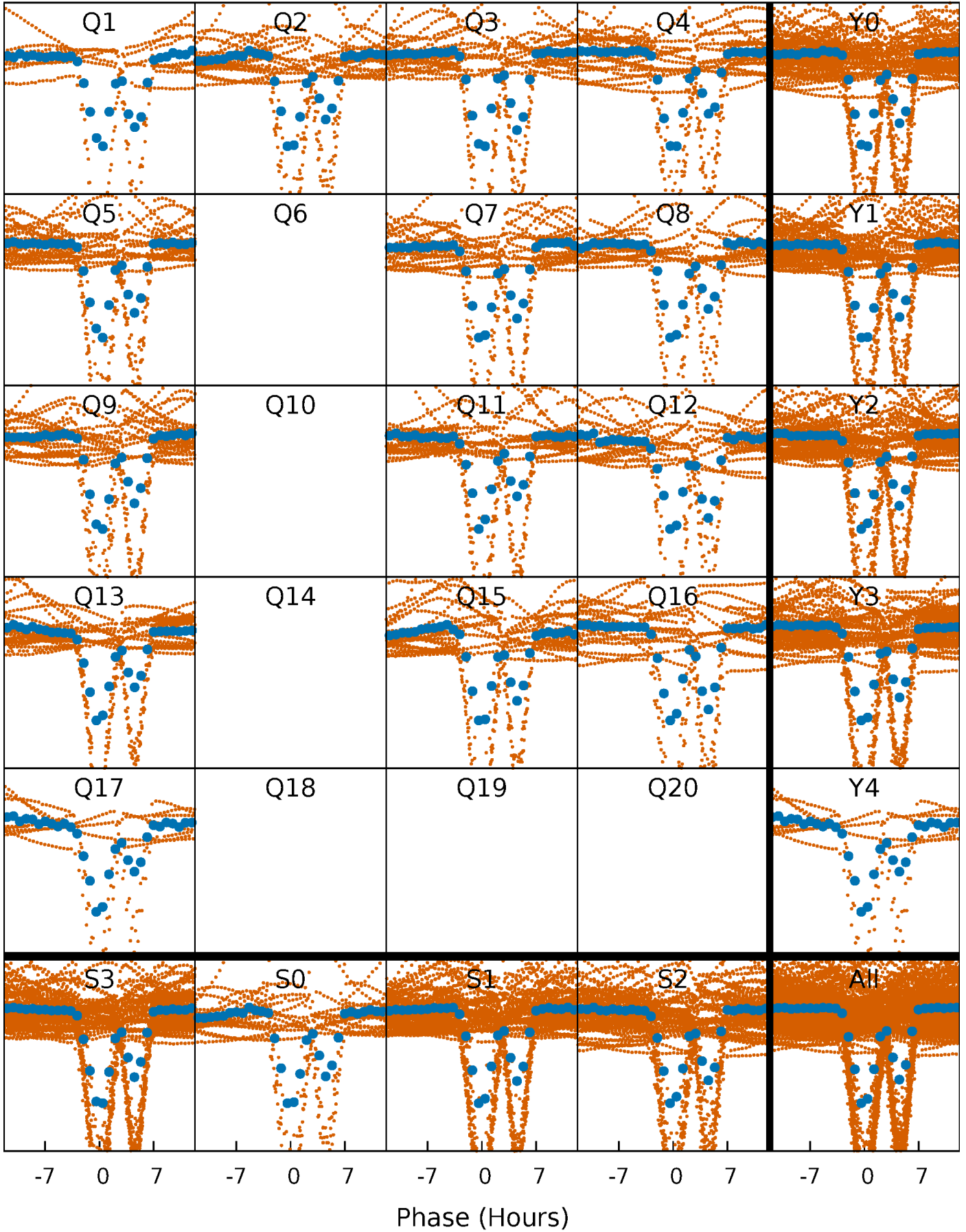


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



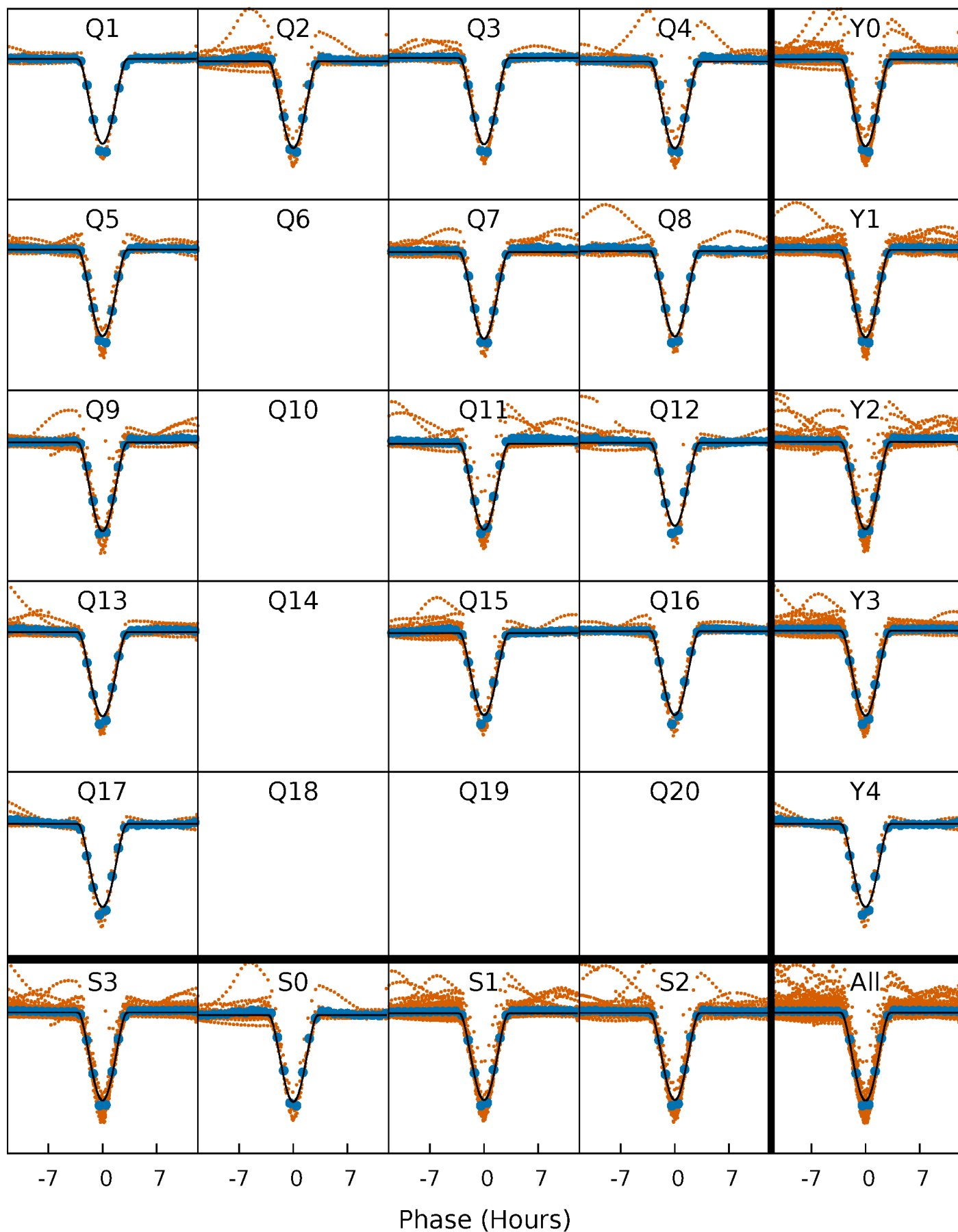
PDC Quarter-Phased Transit Curves

TCE 003248332-02 P= 3.681806 Days $T_0=135.019897$ (BKJD)



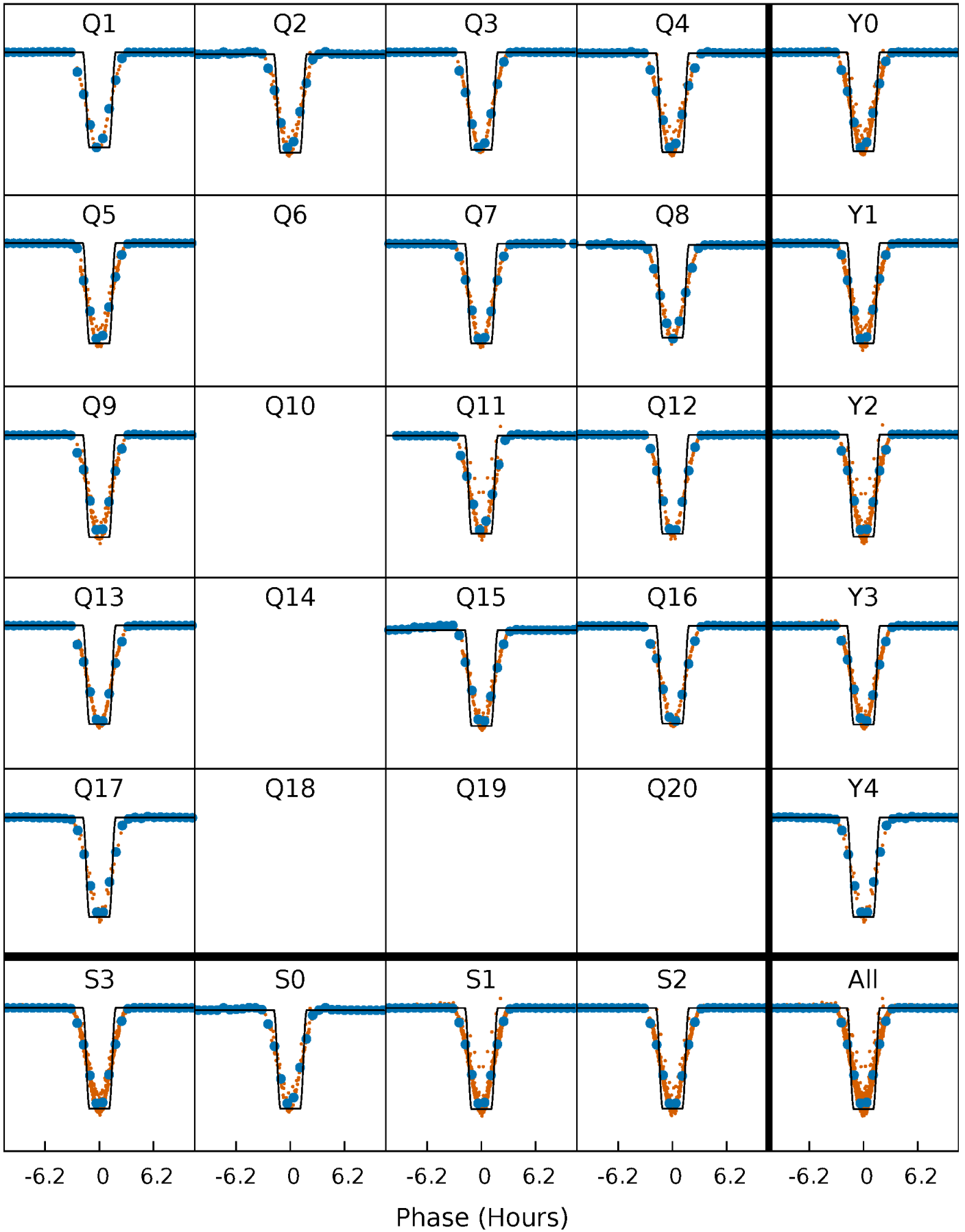
DV Quarter-Phased Transit Curves

TCE 003248332-02 P= 3.681806 Days $T_0=135.019897$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

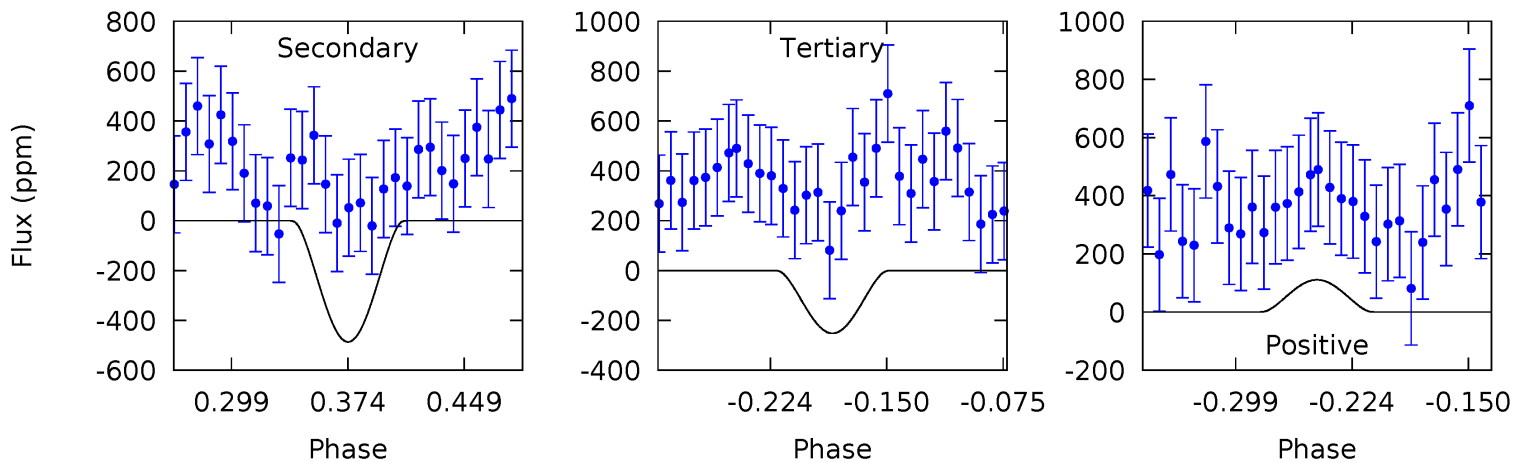
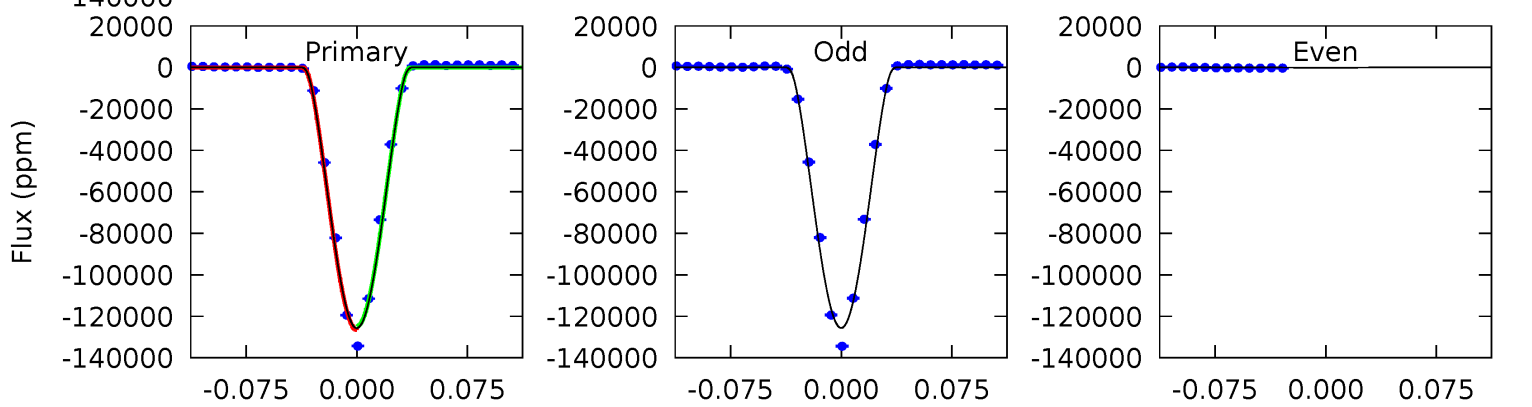
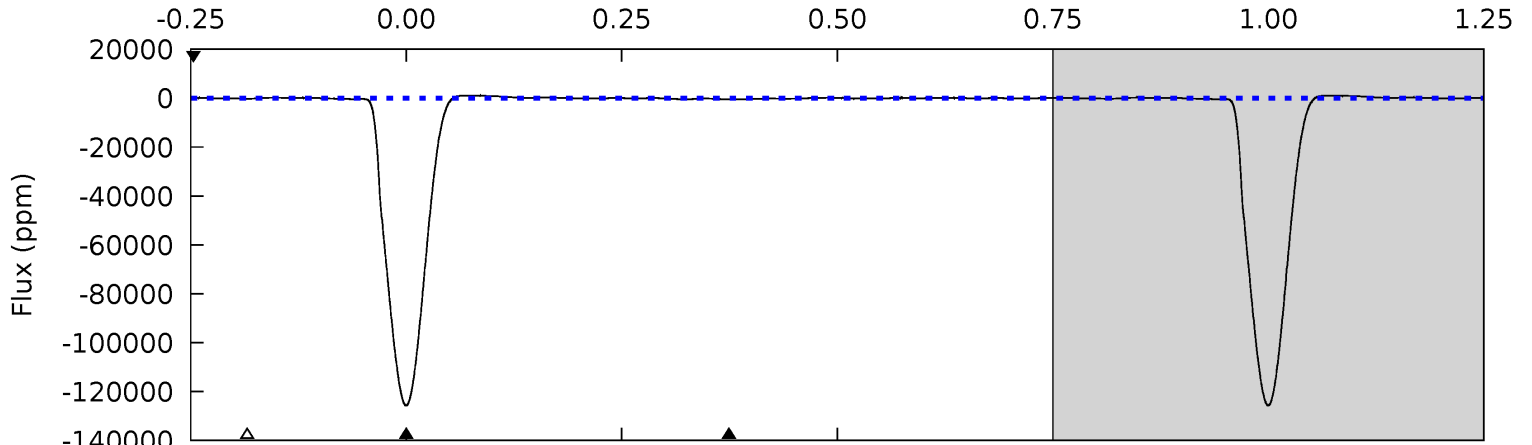
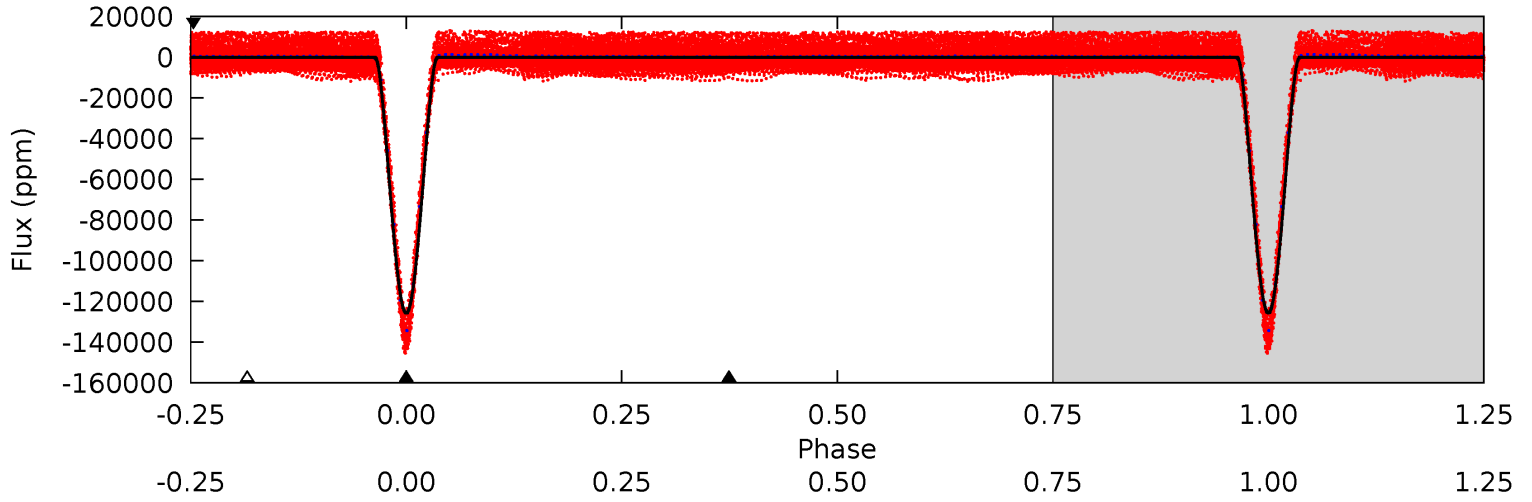
TCE 003248332-02 P= 3.681767 Days $T_0=135.026474$ (BKJD)



DV Model-Shift Uniqueness Test

003248332-02, P = 3.681806 Days, E = 131.338091 Days

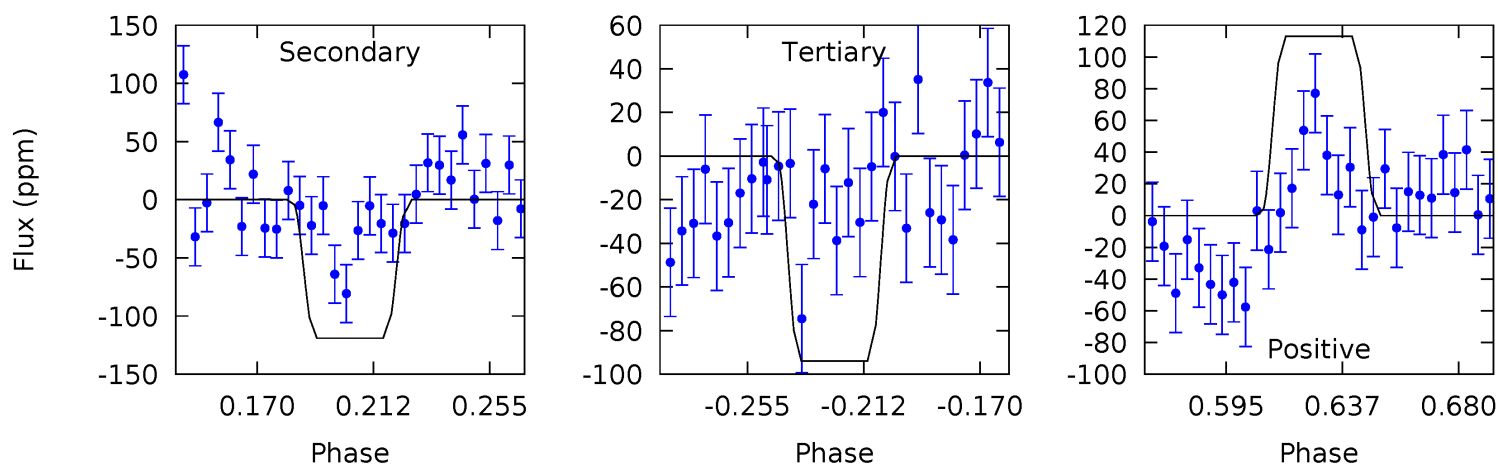
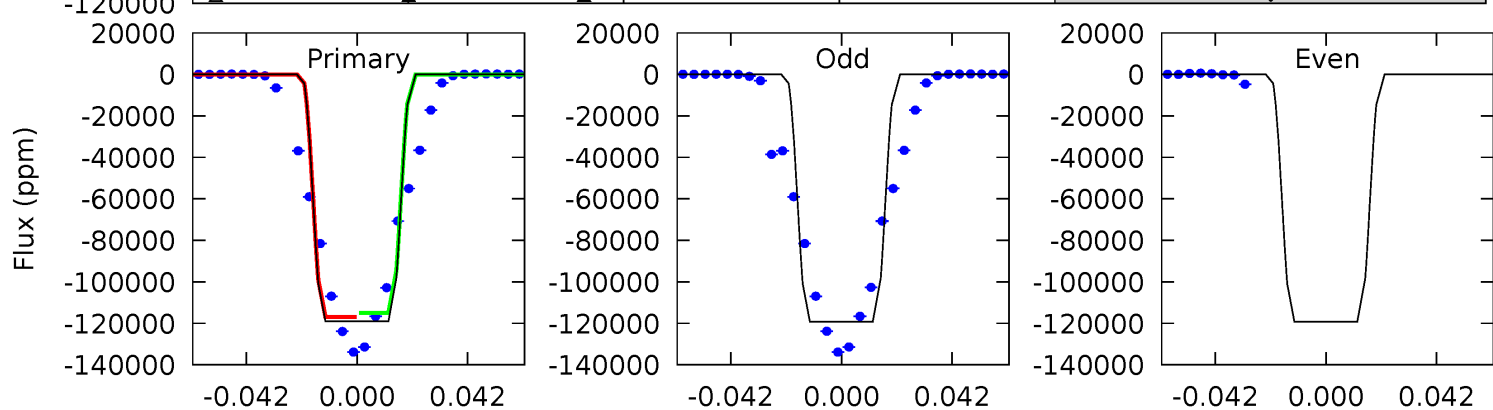
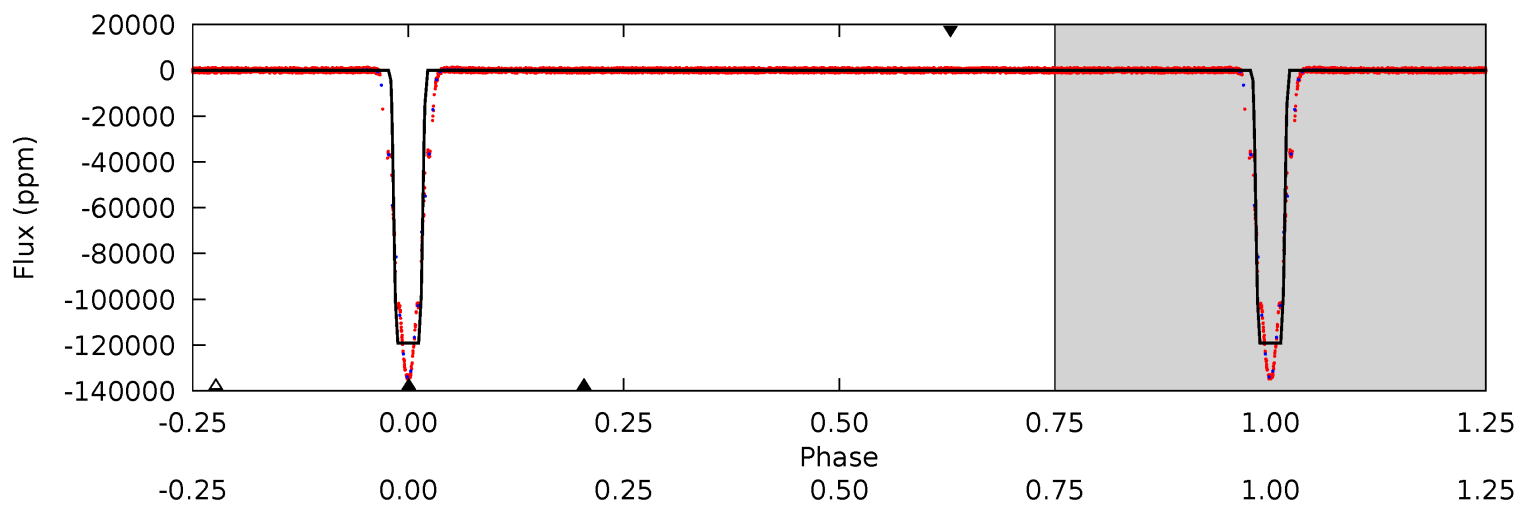
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1459	5.65	2.93	1.29	4.63	1.78	2.18	1456	1458	2.72	4.36	467.0	0.72	0.01	9.87



Alt Model-Shift Uniqueness Test

003248332-02, P = 3.681767 Days, E = 131.344707 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3965	3.96	3.13	3.76	4.74	2.03	1.40	3962	3961	0.83	0.20	0	0.98	0.00	0



Stellar Parameters For KIC 003248332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6793^{+165}_{-259}	$4.208^{+0.124}_{-0.186}$	$-0.080^{+0.250}_{-0.350}$	$1.508^{+0.495}_{-0.304}$	$1.346^{+0.204}_{-0.224}$	$0.552^{+0.347}_{-0.289}$
	+2%/-4%	+3%/-4%	+312%/-438%	+33%/-20%	+15%/-17%	+63%/-52%
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 003248332-02 / KOI 6317.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-486 ± 86	$84.77^{+20.71}_{-20.05}$	2278^{+164}_{-143}	-2523^{+156}_{-126}	$0.095^{+0.068}_{-0.034}$
Alt.	-119 ± 30	$61.36^{+20.11}_{-16.84}$	2273^{+188}_{-144}	-2586^{+110}_{-128}	$0.044^{+0.044}_{-0.021}$

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 $A_{obs} \gg 1.0$

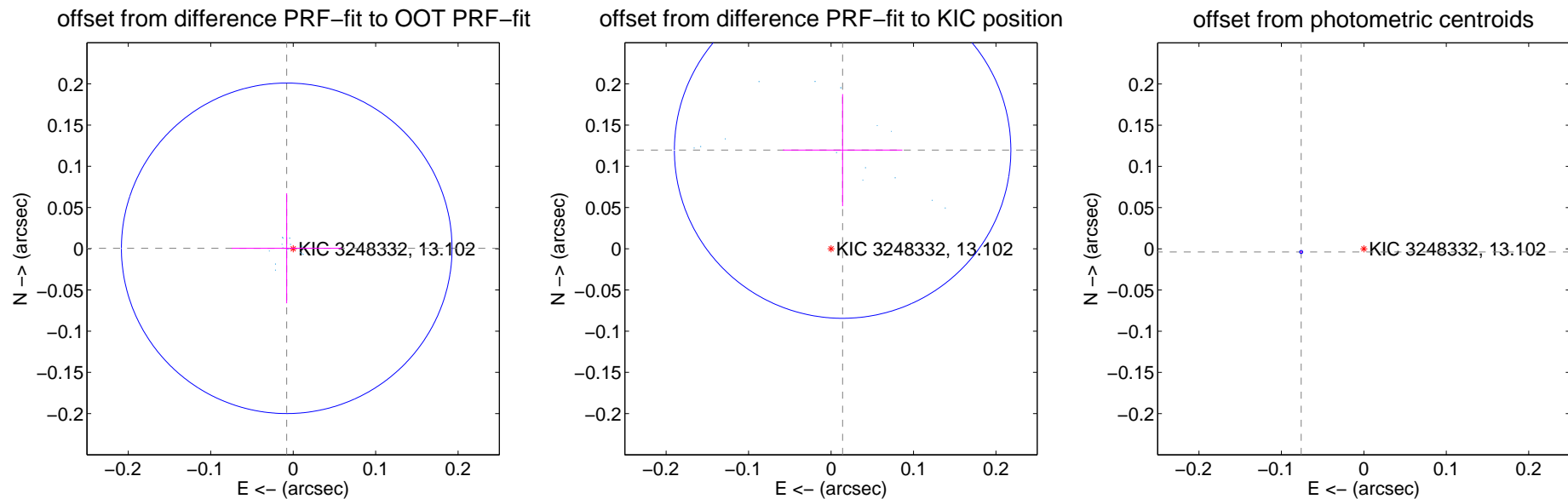
DV Centroid Data

Supplemental centroid analysis for 003248332-02. Kepler magnitude: 13.10. Transit SNR 1337.84

There are 14 quarters with good PRF difference image offsets

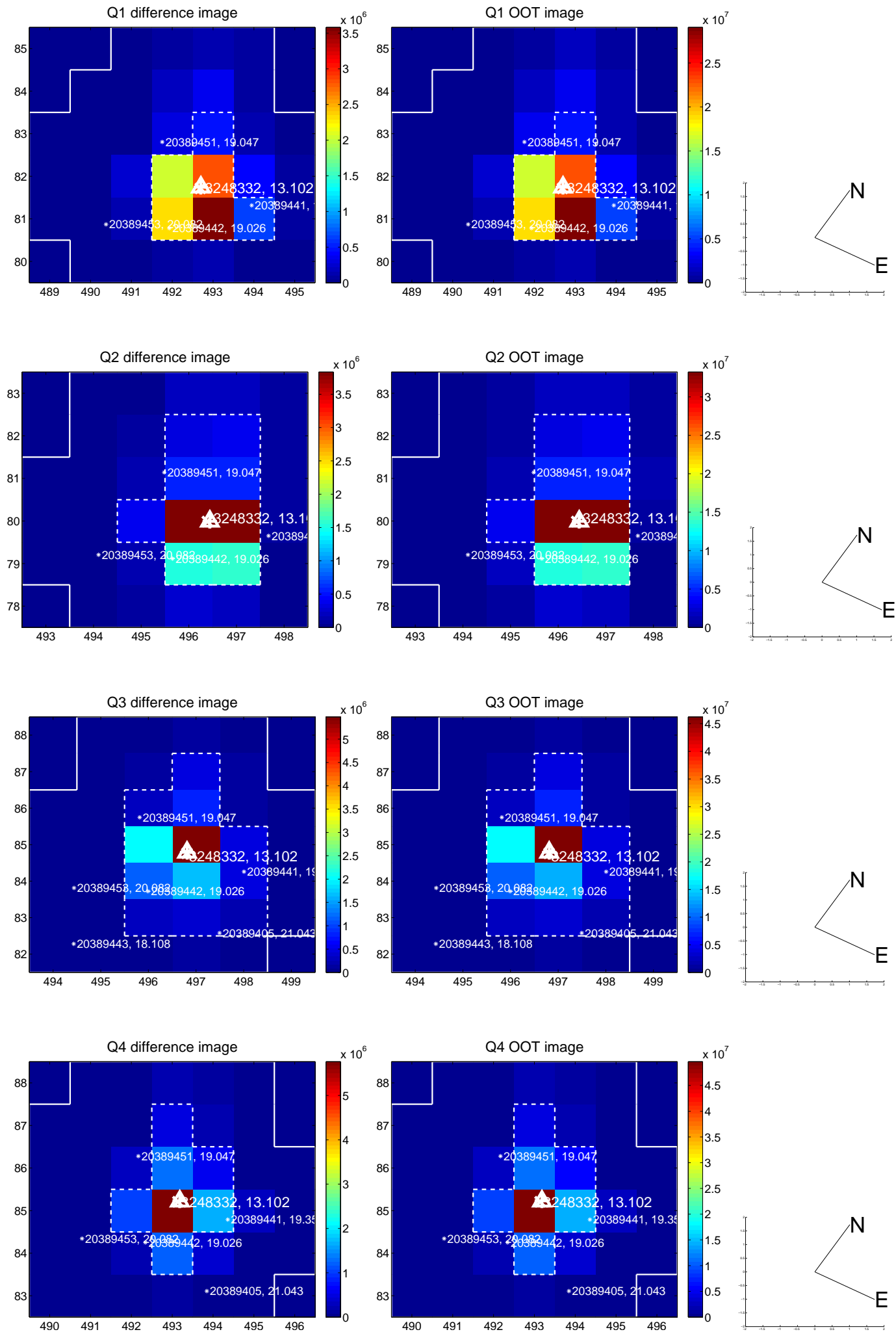
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	0.008 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.120 ± 0.068	1.77	-0.014 ± 0.072	0.120 ± 0.068
photometric centroid source offset	0.08 ± 0.00	121.31	0.08 ± 0.00	-0.00 ± 0.00

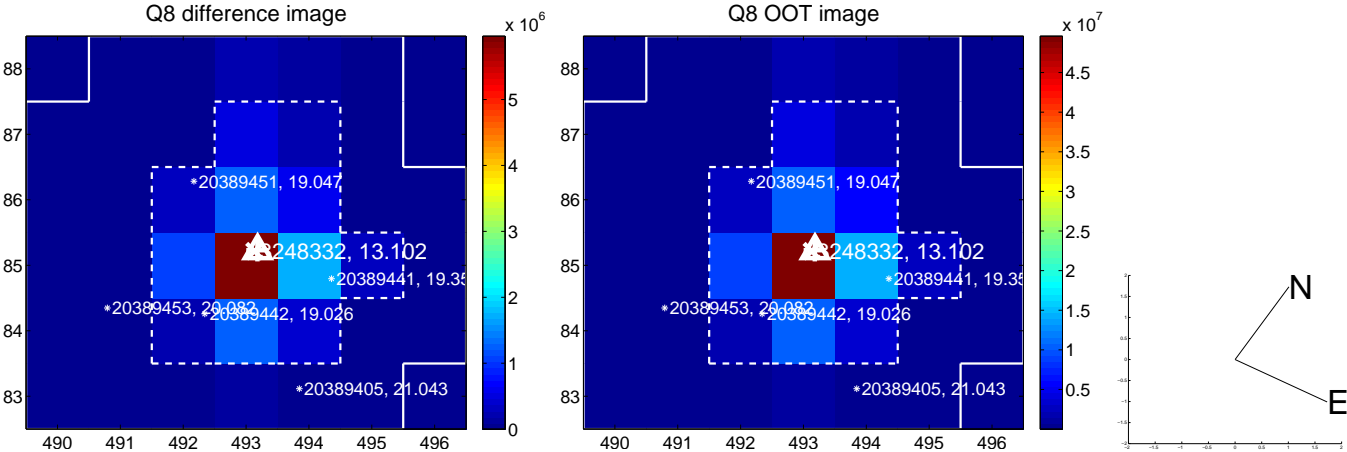
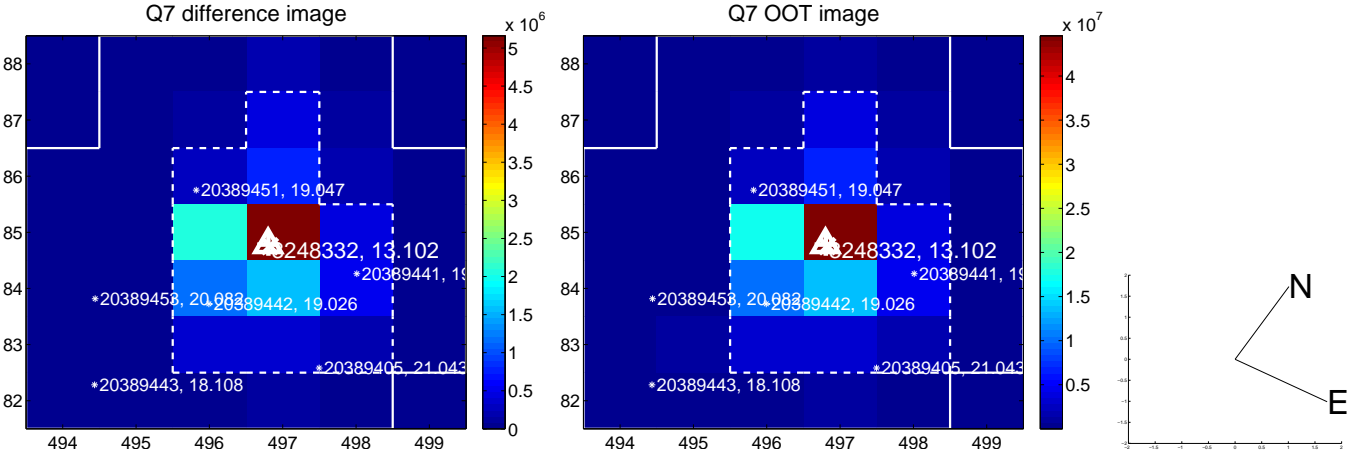
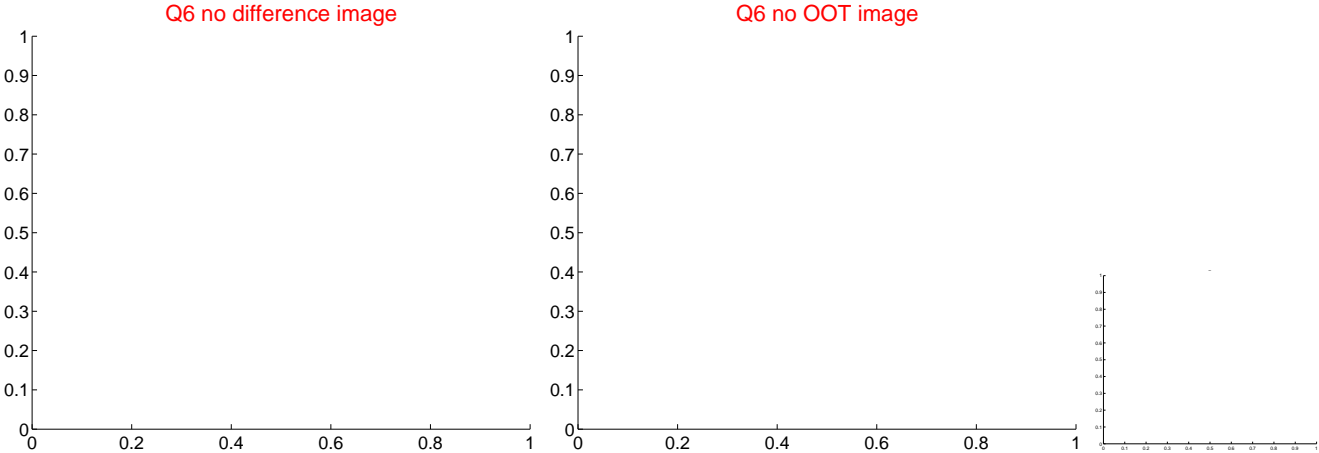
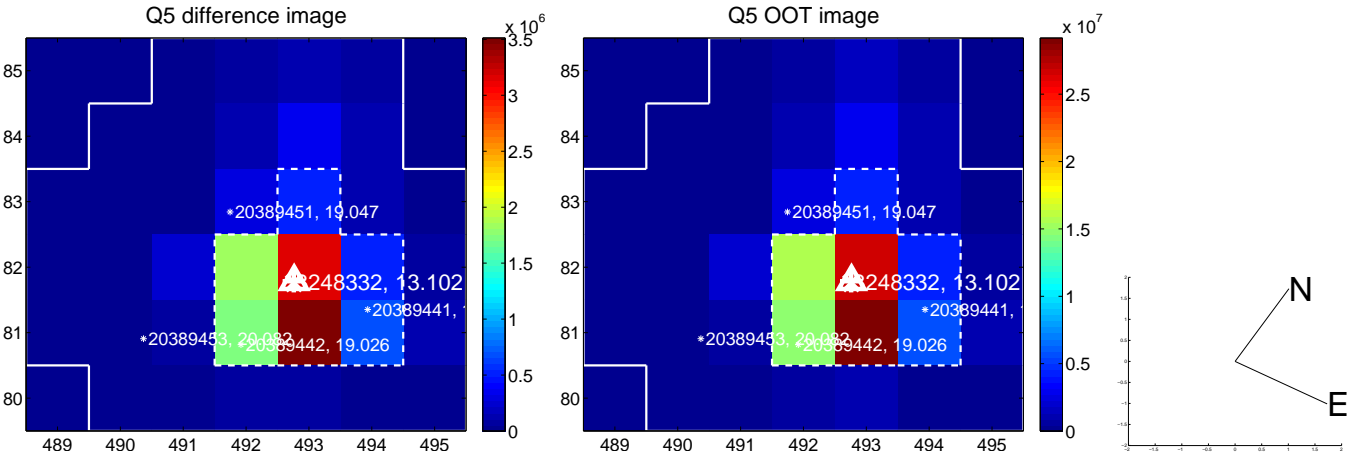


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

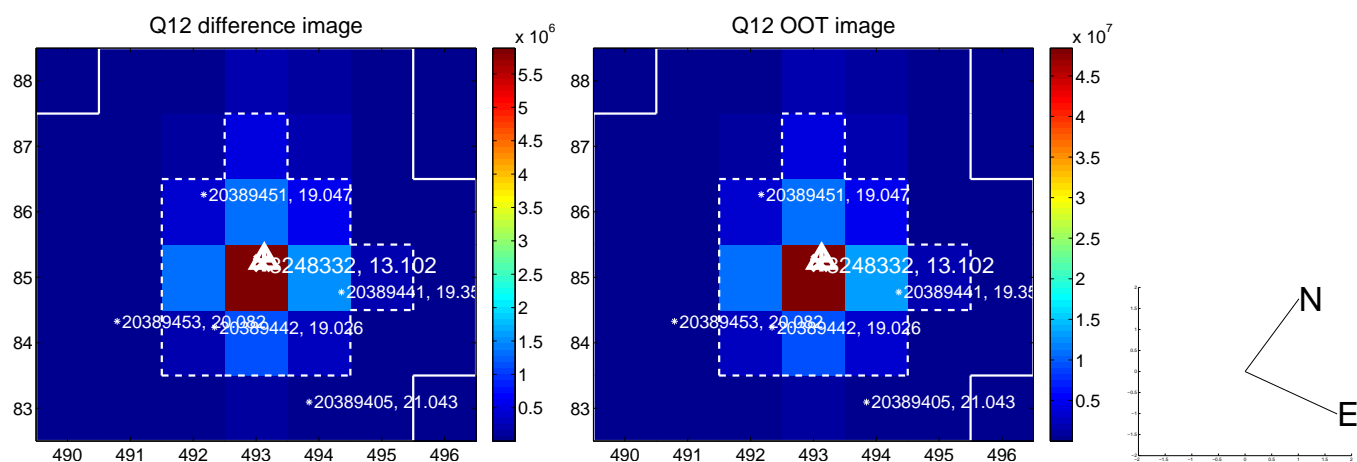
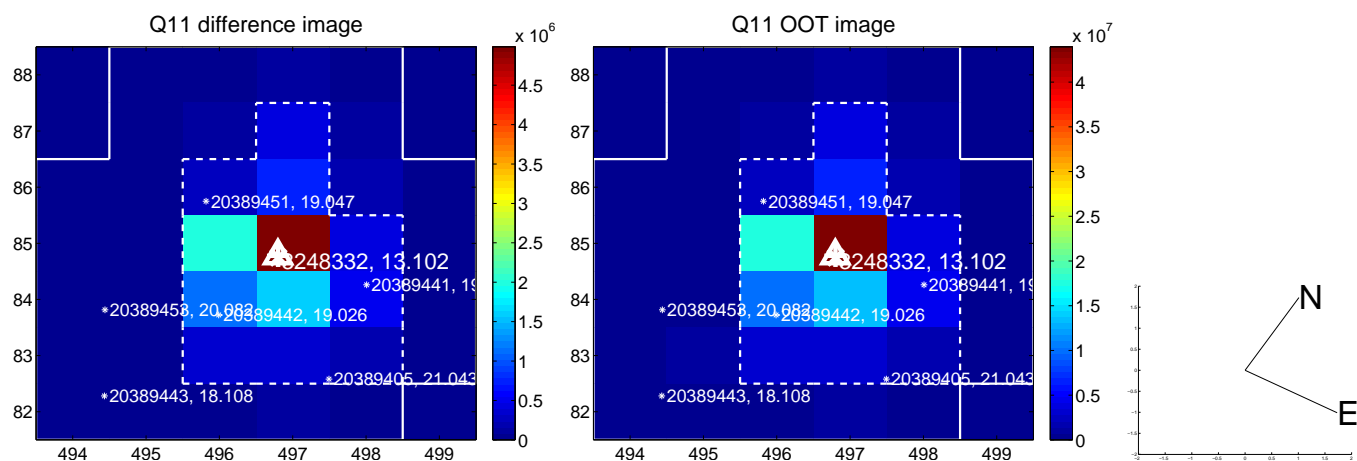
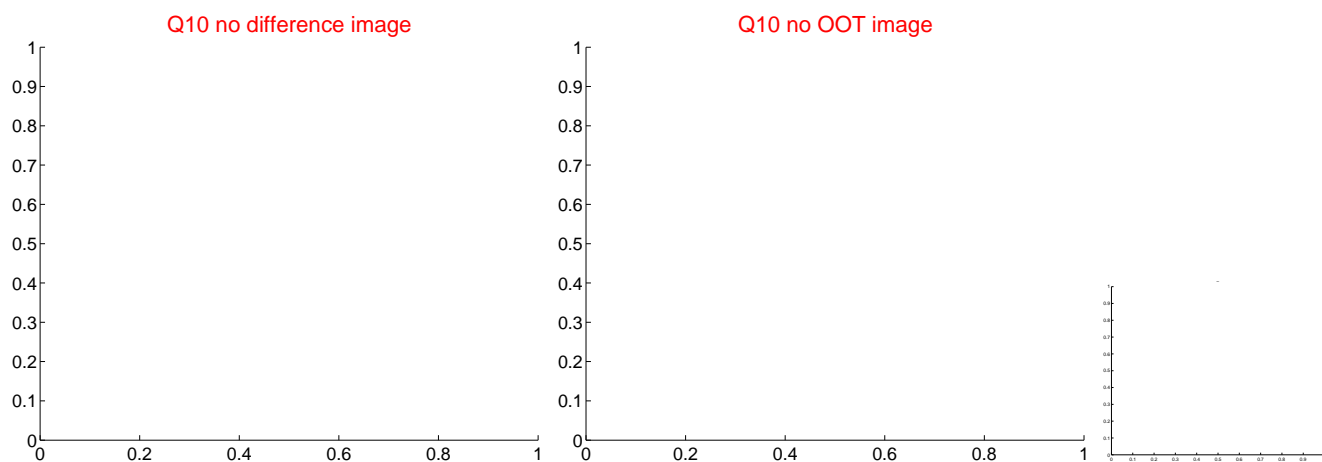
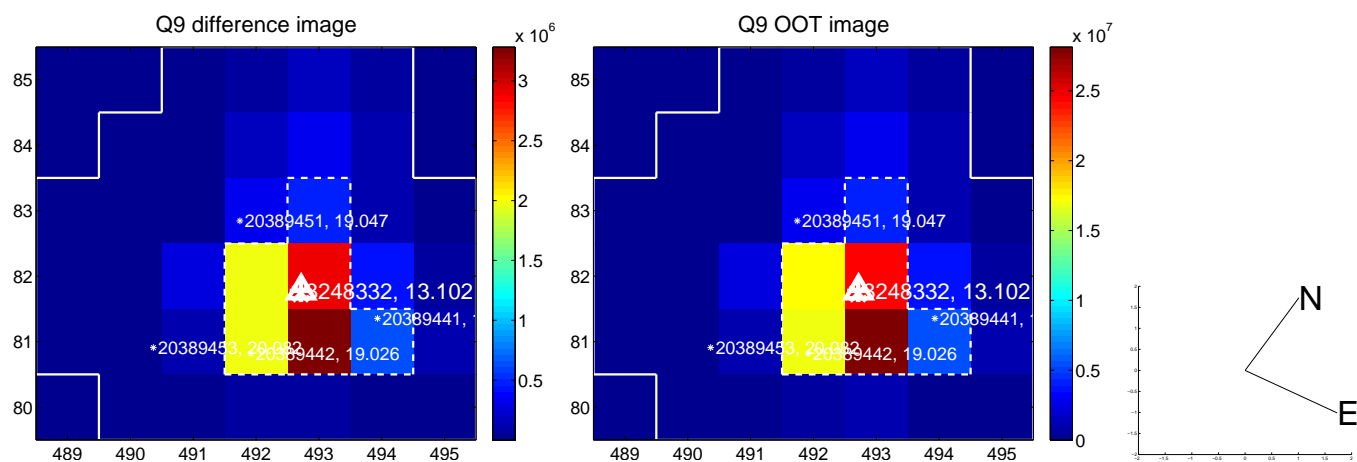
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



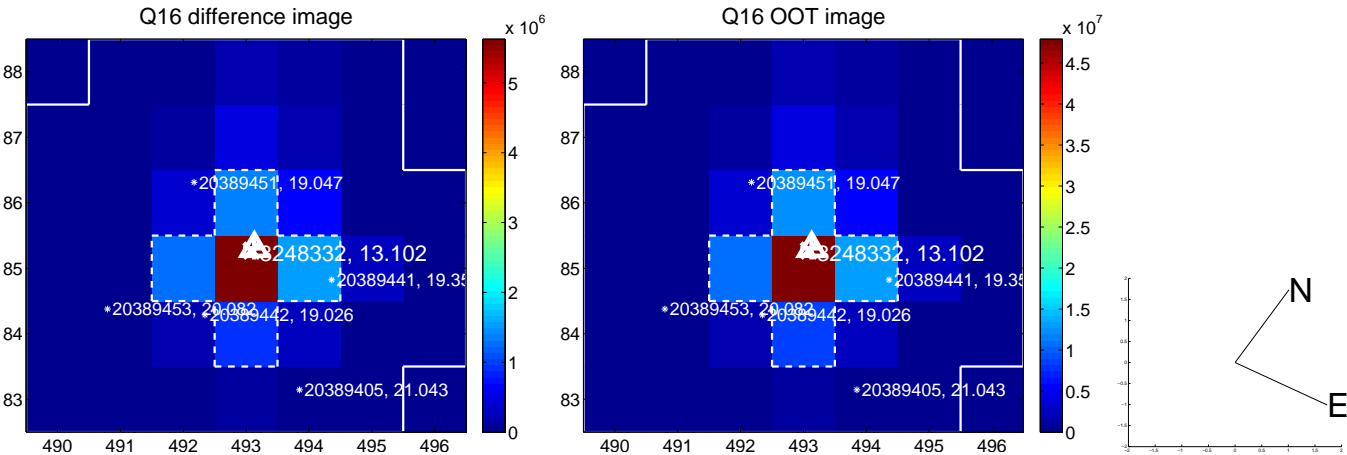
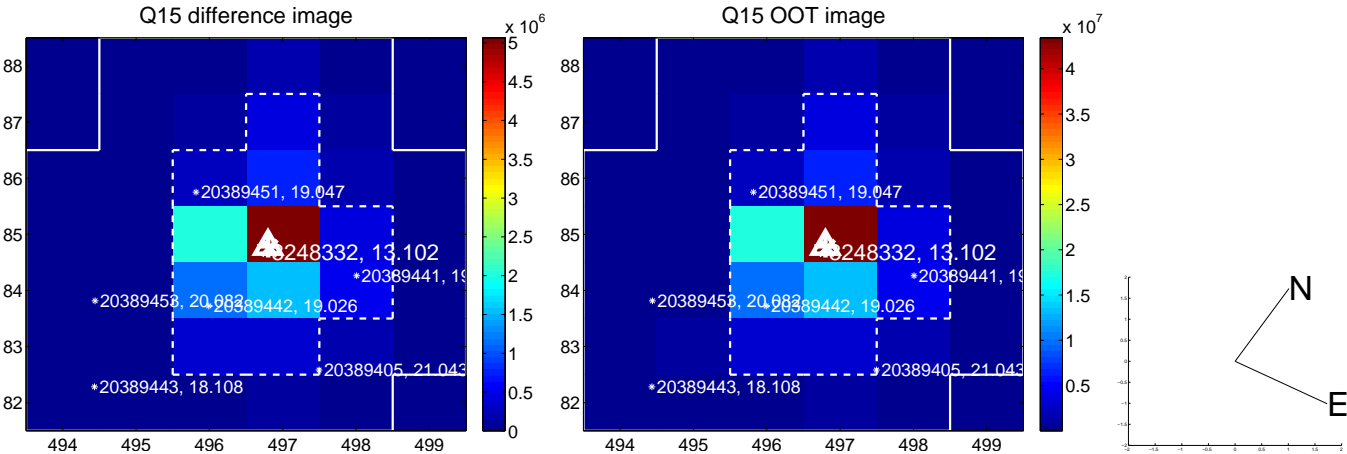
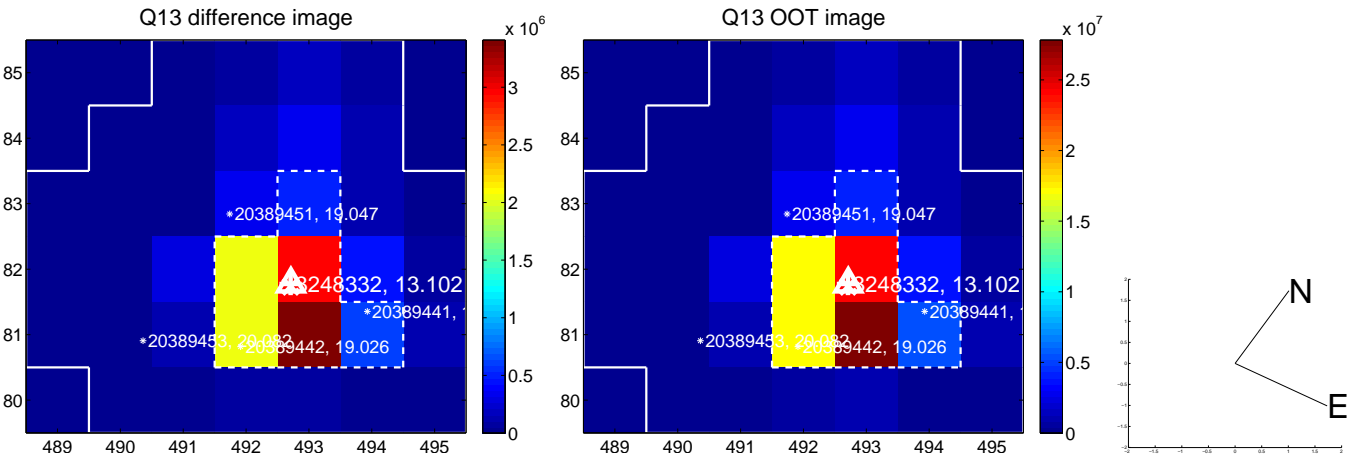
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



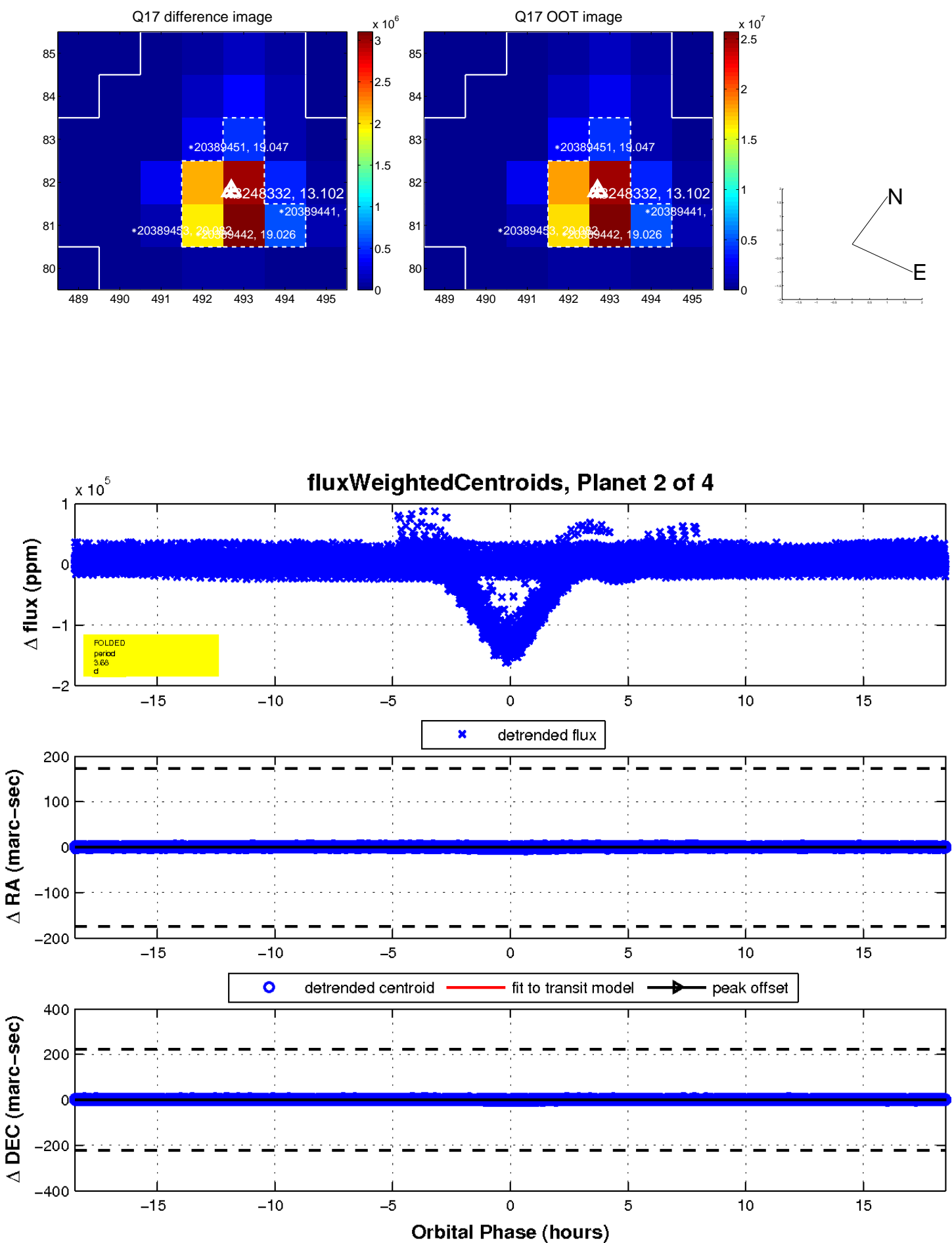
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

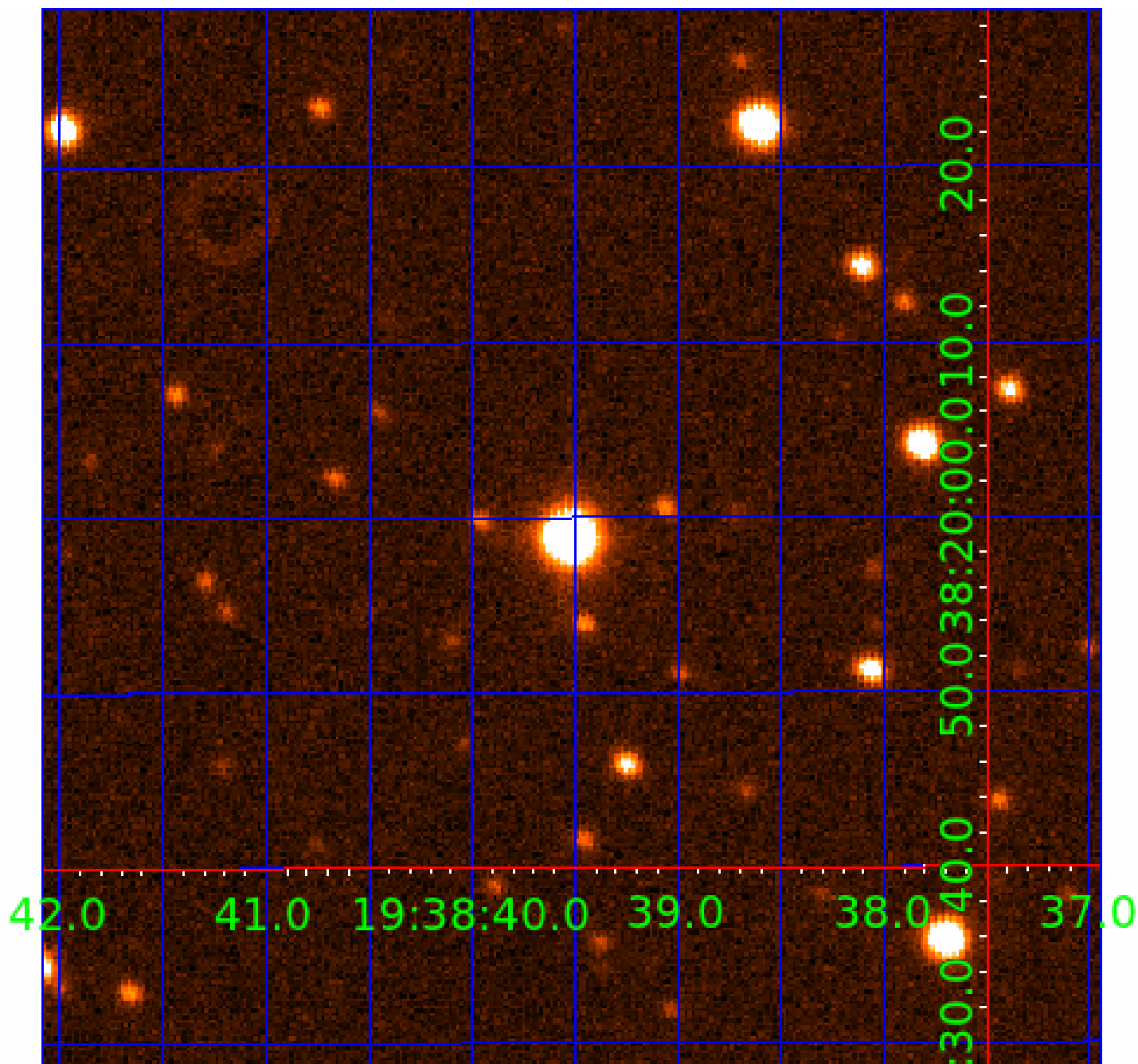


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003248332

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})
003248332-01	OBS	No	7.363586	135.214652	93045.3	4.687	2456.8	1256.7	1.51	6793	77.86	650.56
003248332-02	OBS	6317.01	3.681806	135.019897	117140.2	6.166	2238.3	1337.8	1.51	6793	81.88	1639.31
003248332-03	OBS	No	232.642593	202.958763	493.2	2.127	54.1	3.1	1.51	6793	3.89	6.51
003248332-04	OBS	No	594.017212	268.320489	994.8	3.500	23.0	-1.0	1.51	6793	4.80	1.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003248332-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003248332-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
003248332-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003248332-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

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

Ephemeris Match Information For 003248332-03

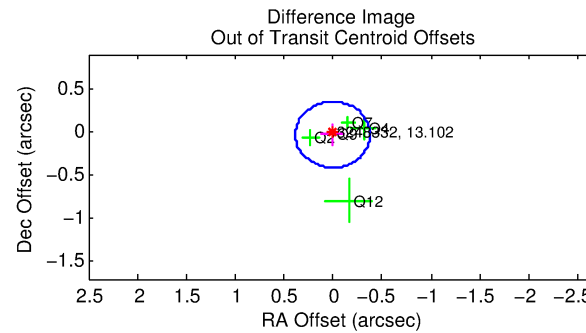
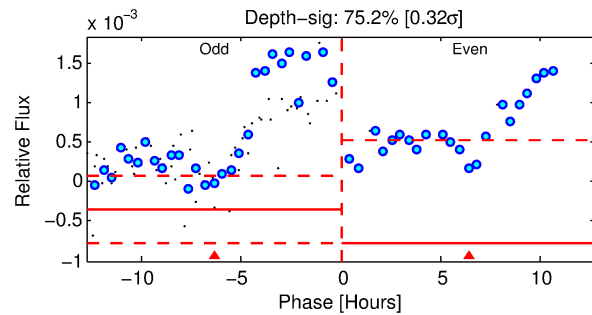
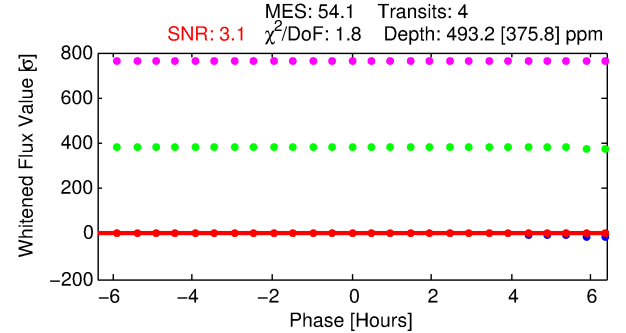
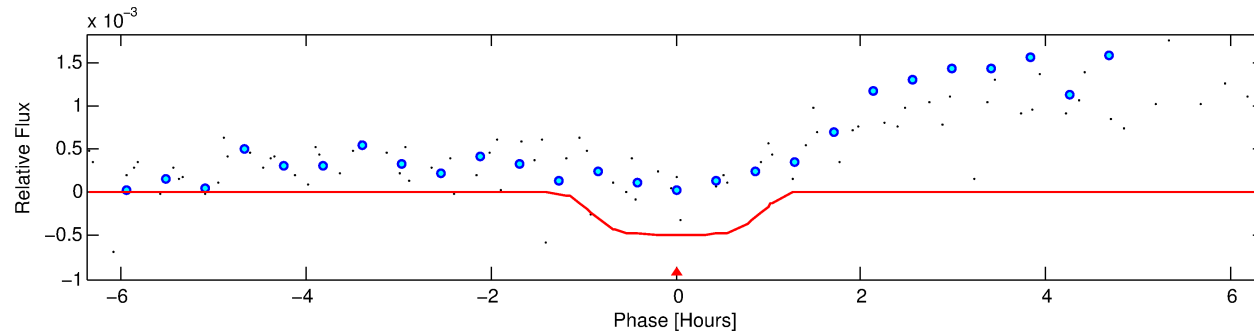
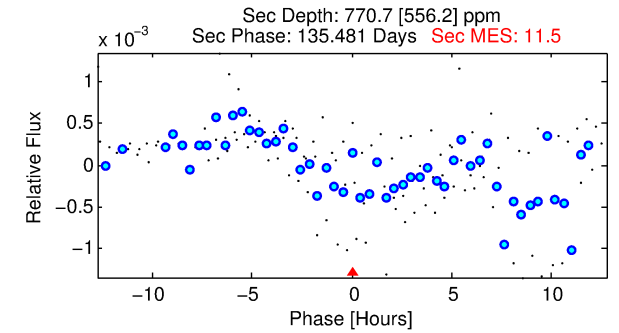
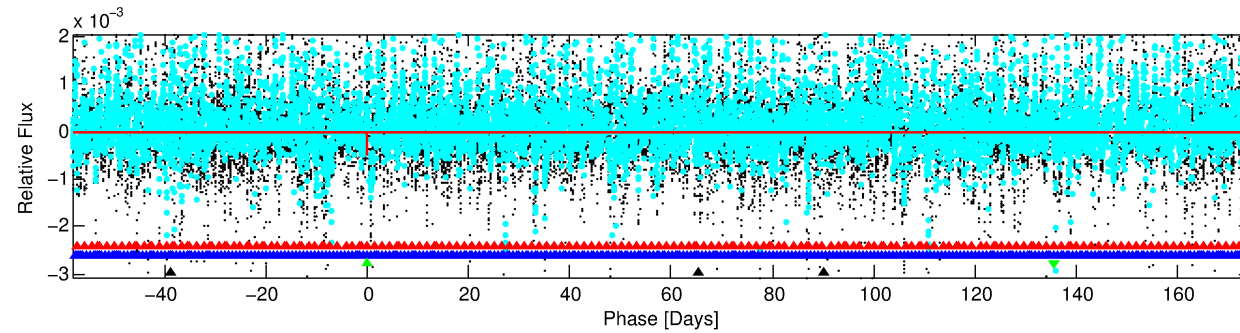
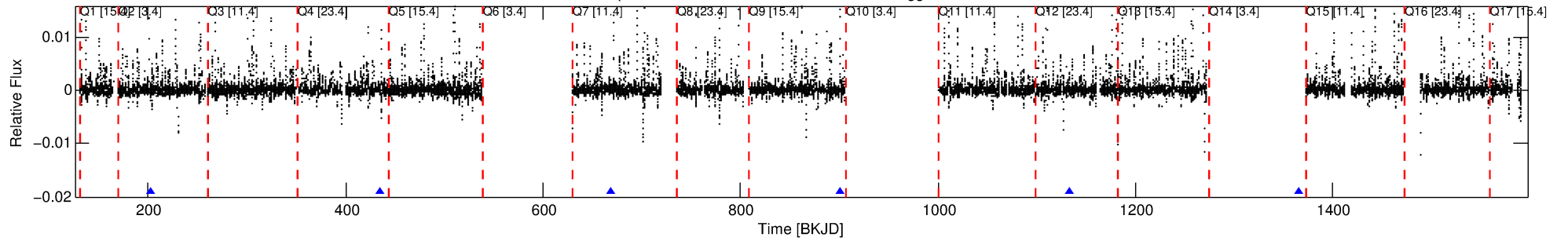
No Significant Match Found

DV One-Page Summary

KIC: 3248332 Candidate: 3 of 4 Period: 232.643 d

KOI: K06317 Corr: No Ephemeris Match

Kp: 13.10 R*: 1.51 Rs Teff: 6793.0 K Logg: 4.21 Fe/H: -0.080



DV Fit Results:

Period = 232.64259 [0.00911] d
Epoch = 202.9588 [0.0230] BKJD
Rp/R* = 0.0236 [0.0503]
a/R* = 416.63 [5029.98]
b = 0.89 [2.75]
Seff = 6.51 [2.55]
Teq = 407 [40] K
Rp = 3.89 [8.38] Re
a = 0.8161 [0.2132] AU
Ag = 18670.17 [80905.26] [0.23σ]
Teffp = 7362 [7953] K [0.87σ]

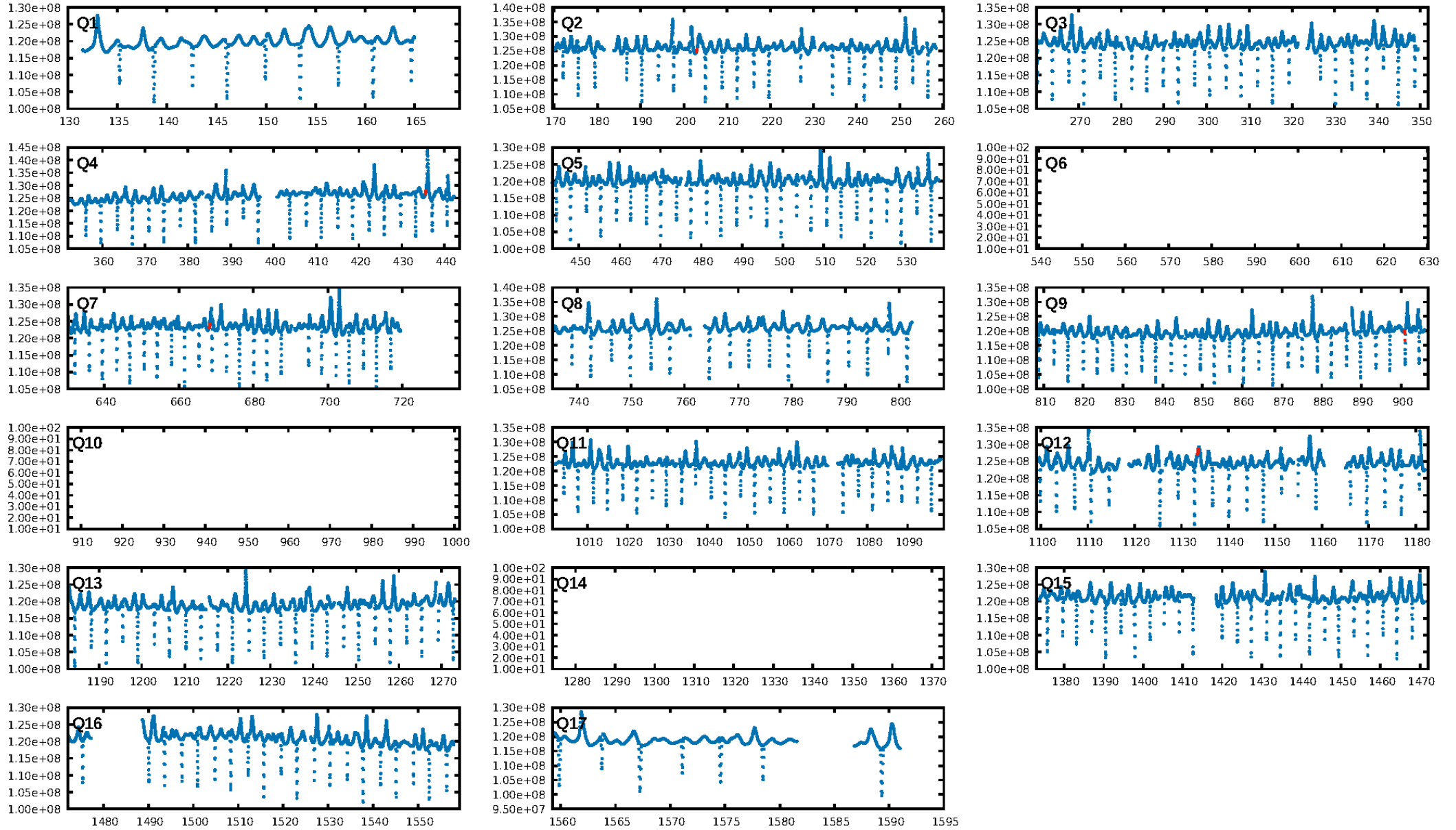
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1050.46σ]
LongPeriod-sig: 100.0% [2117.53σ]
ModelChiSquare2-sig: 90.9%
ModelChiSquareGoF-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.751
Centroid-sig: 16.7%
Centroid-so: 1.595 arcsec [1.02σ]
OotOffset-rm: 0.031 arcsec [0.24σ]
KicOffset-rm: 0.067 arcsec [0.47σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.80 [4/5]

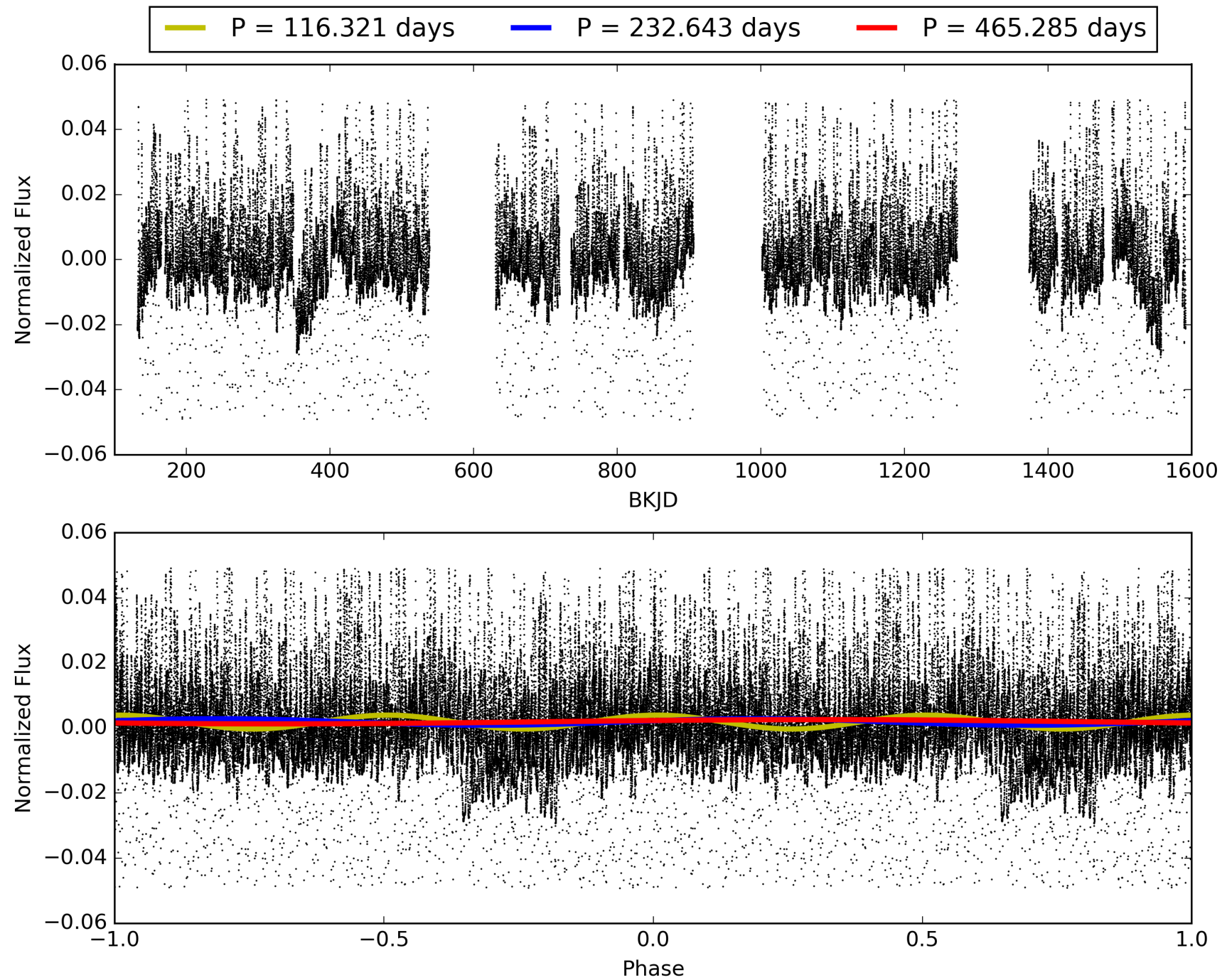
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:41 Z

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

TCE 003248332-03, PDC Light Curves

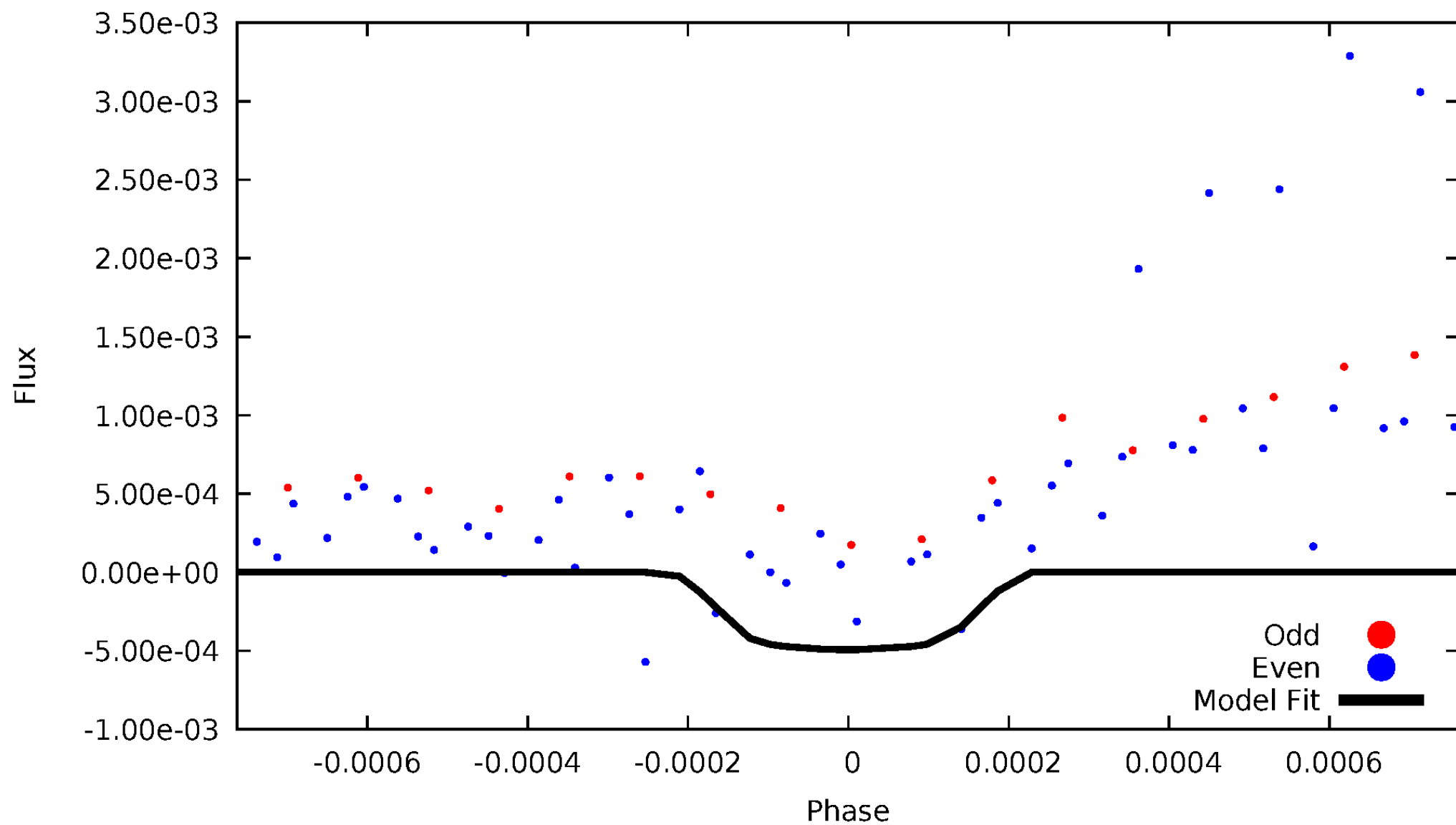


TCE 003248332-03



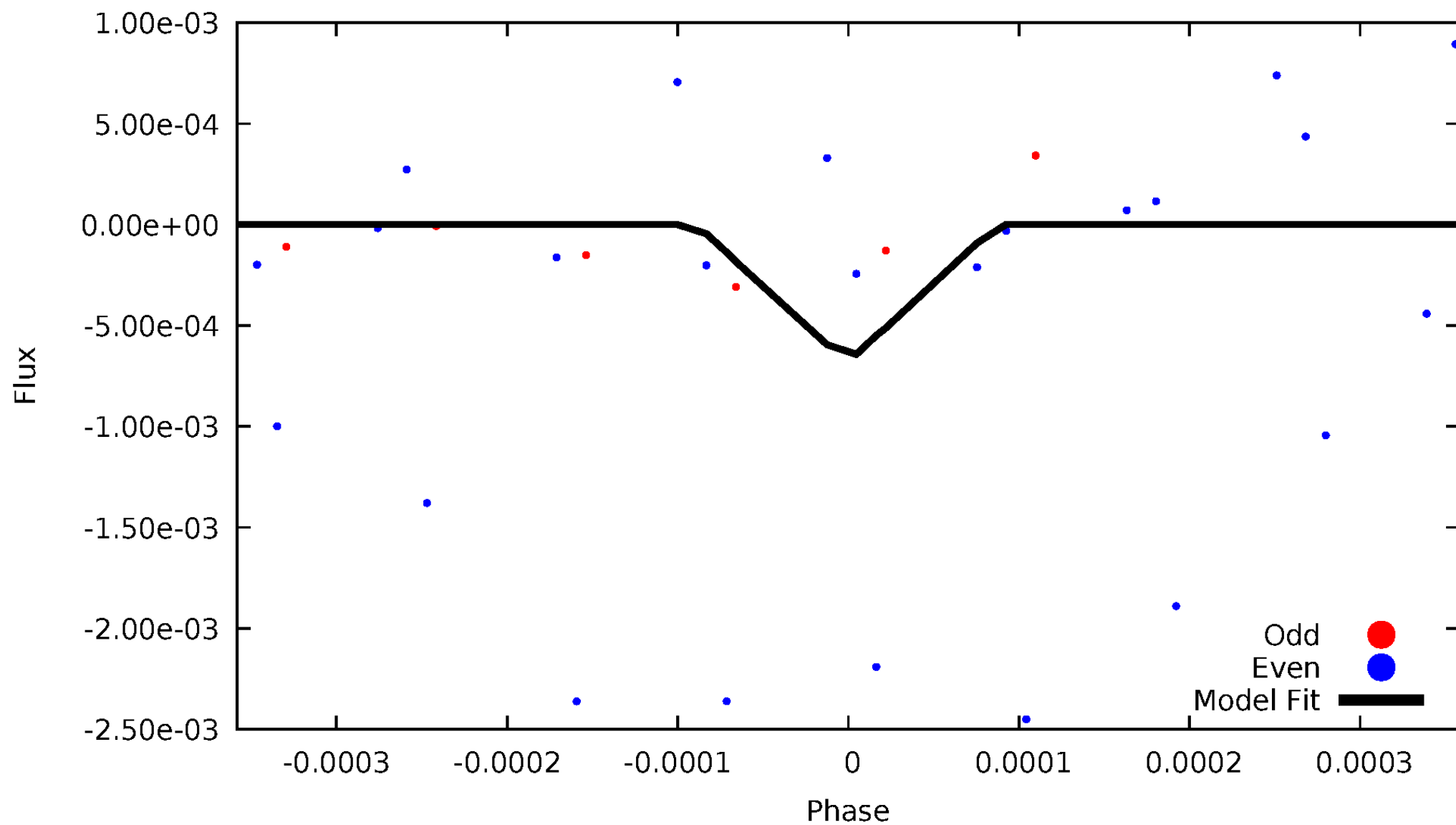
DV Odd/Even

TCE 003248332-03



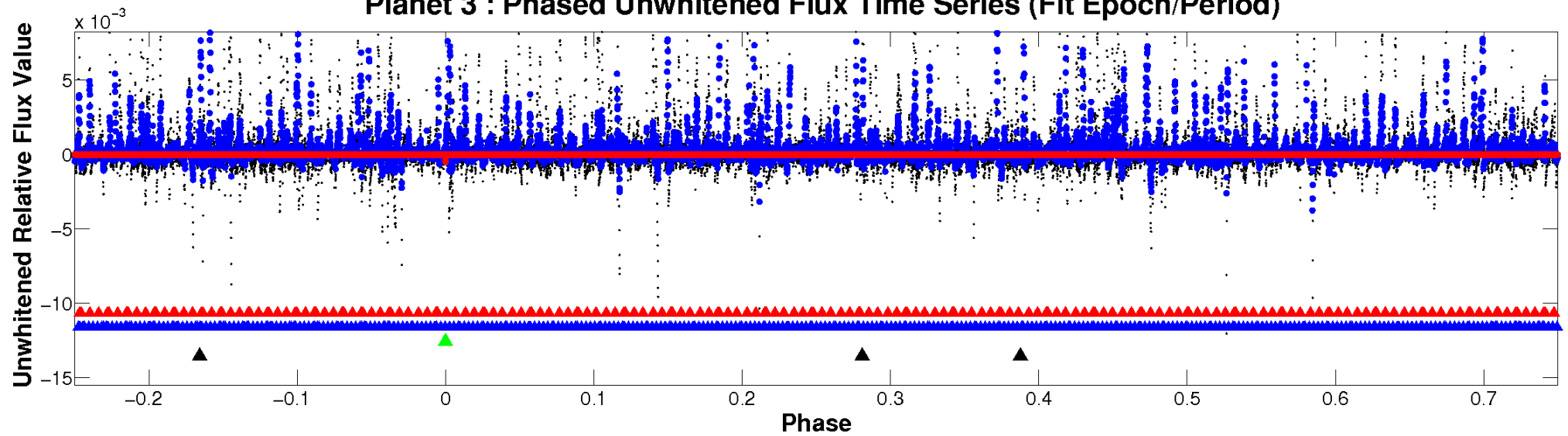
ALT Odd/Even

TCE 003248332-03

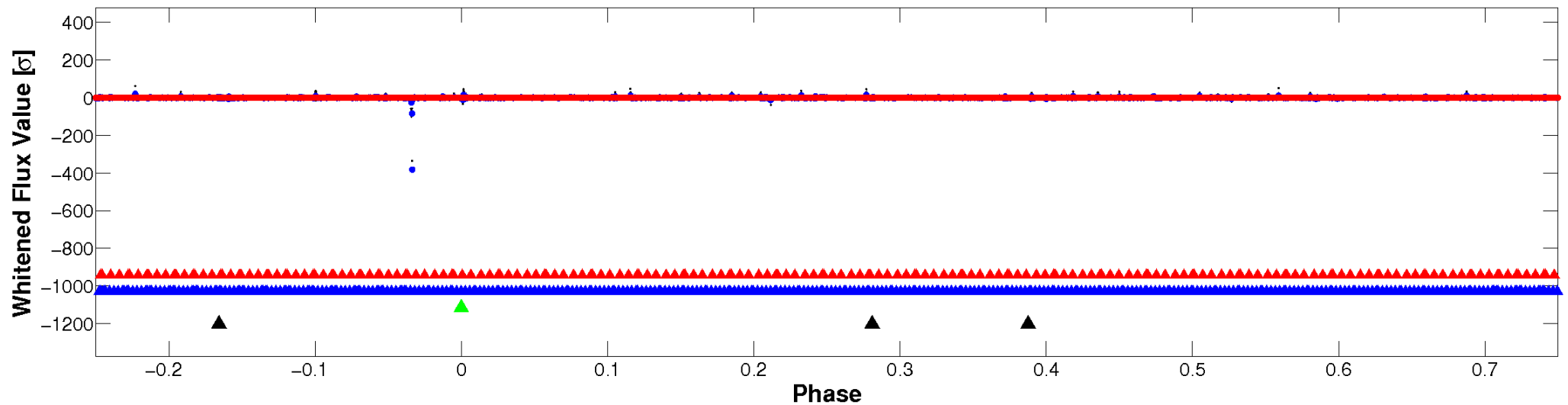


Non-Whitened Vs. Whitened Light Curve

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

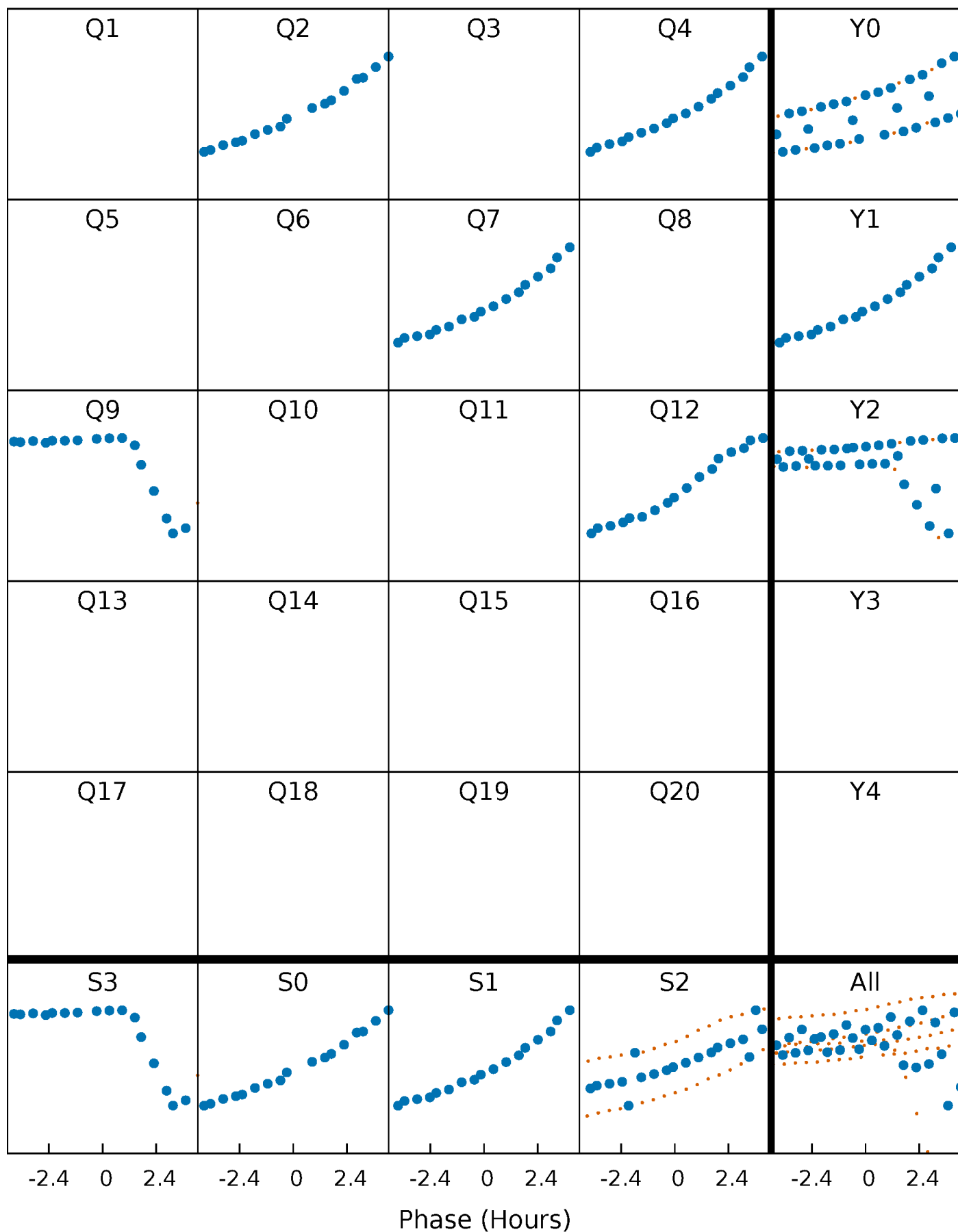


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



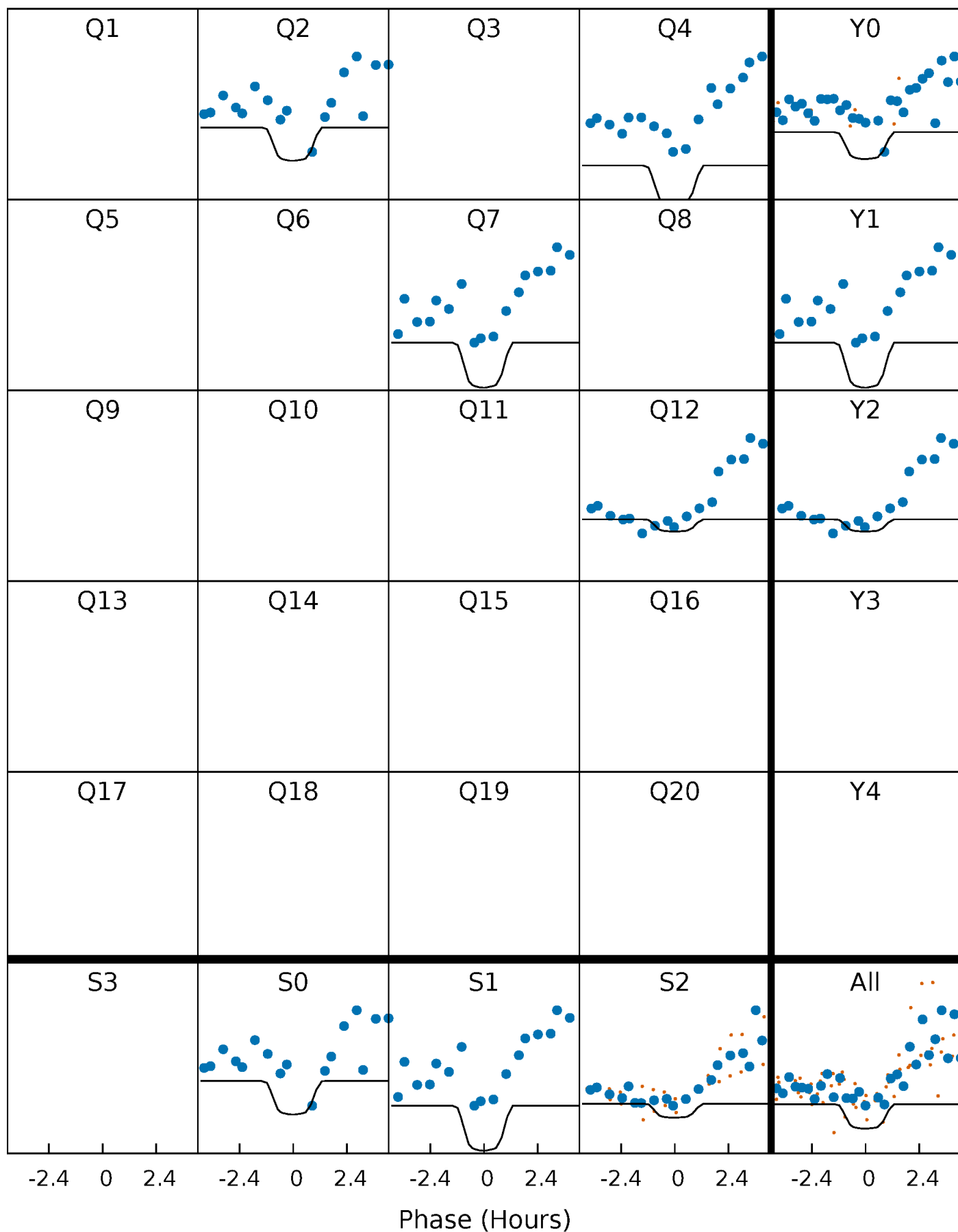
PDC Quarter-Phased Transit Curves

TCE 003248332-03 $P=232.642593$ Days $T_0=202.958763$ (BKJD)



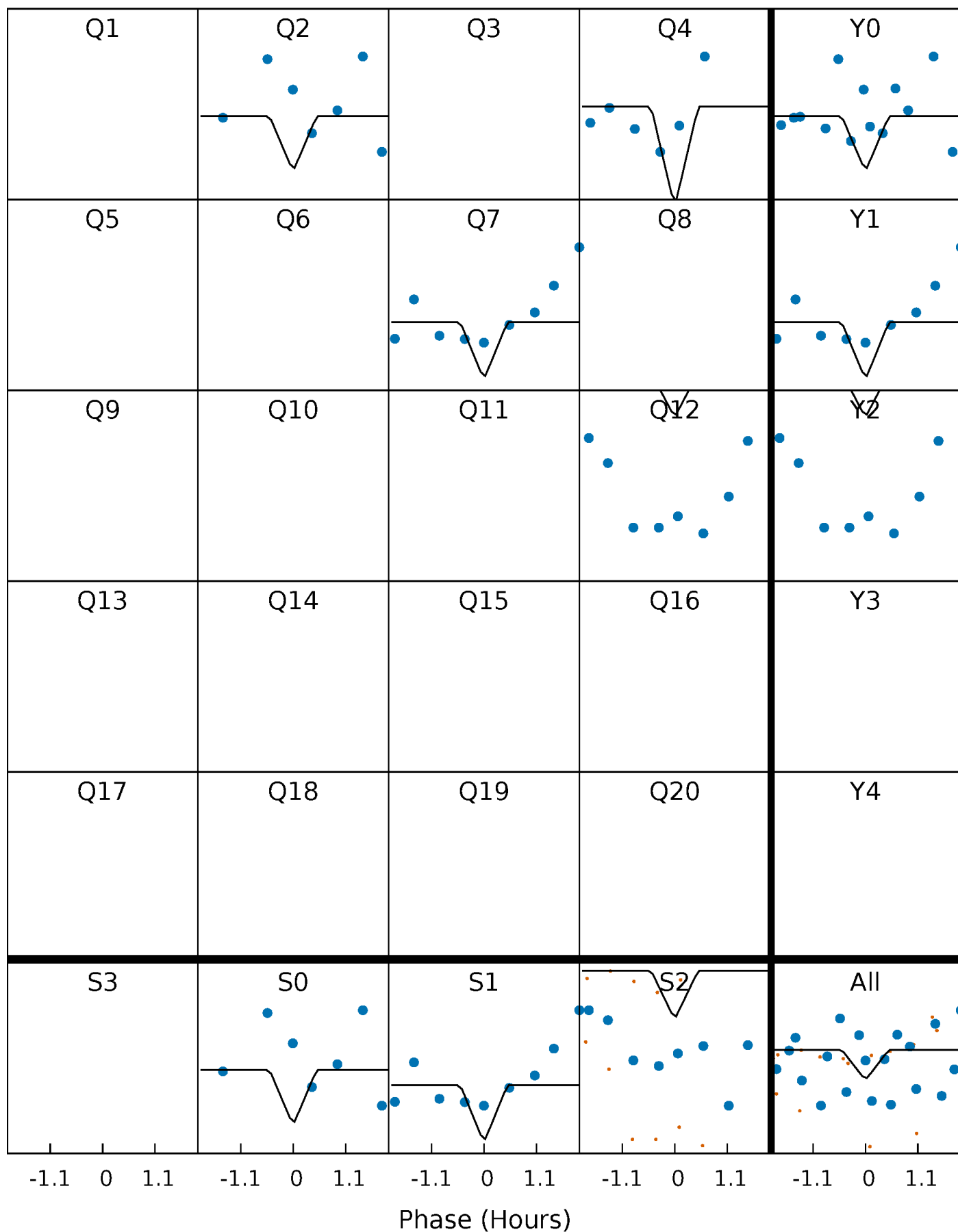
DV Quarter-Phased Transit Curves

TCE 003248332-03 $P=232.642593$ Days $T_0=202.958763$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

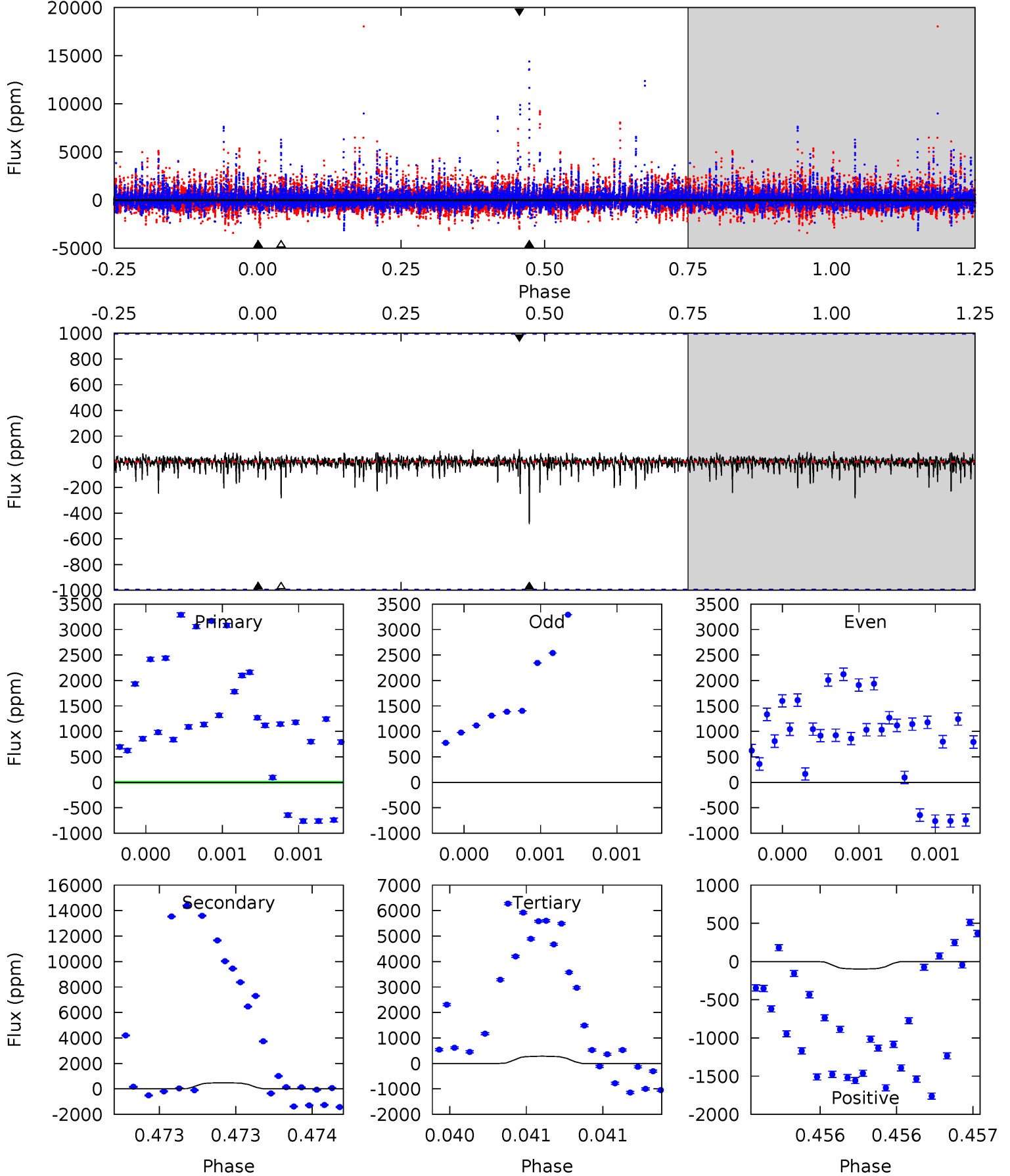
TCE 003248332-03 P=232.623125 Days $T_0=203.014825$ (BKJD)



DV Model-Shift Uniqueness Test

003248332-03, P = 232.642593 Days, E = 202.958763 Days

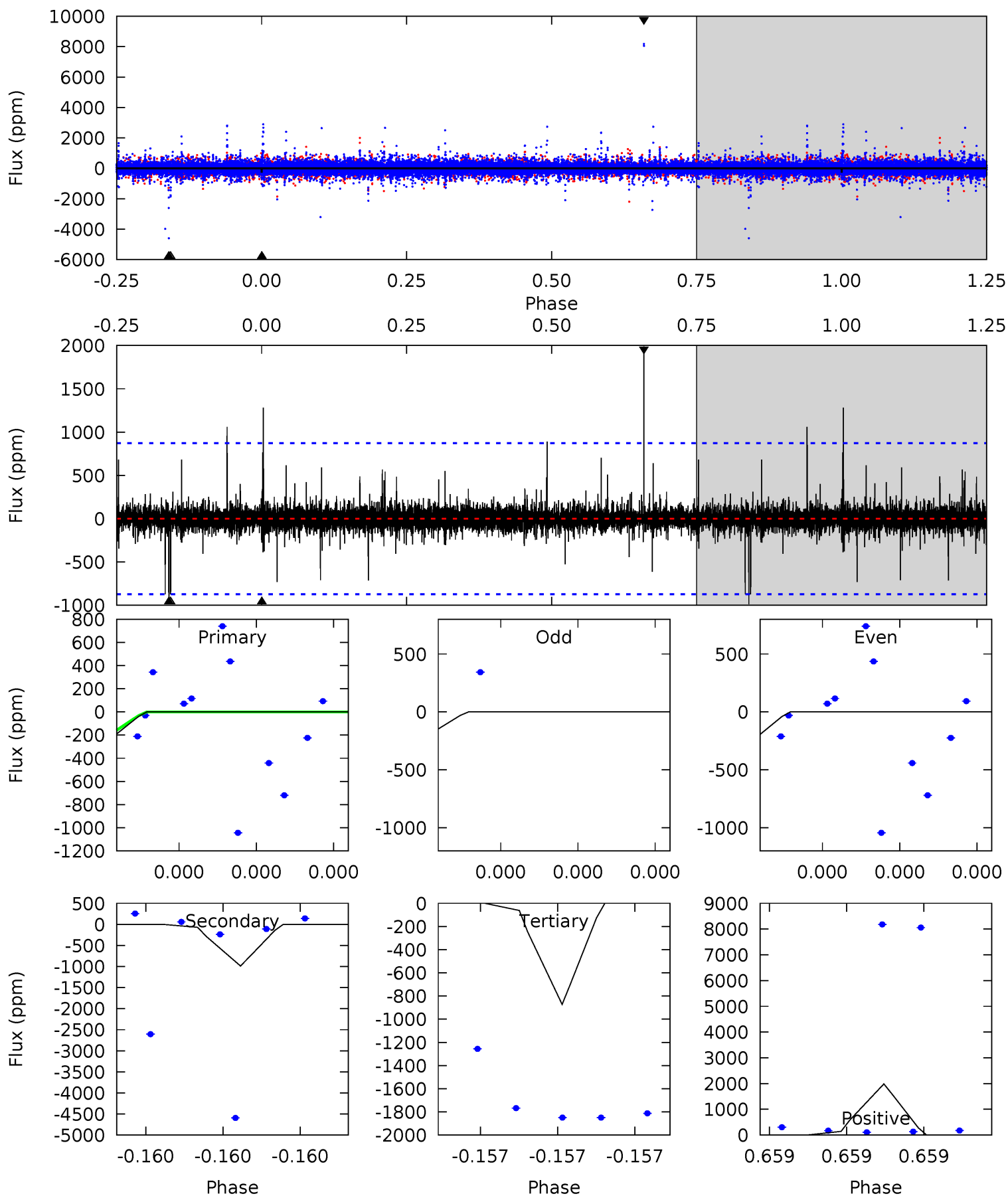
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.69	2.72	1.59	0.55	5.60	3.52	0.17	-0.90	0.14	1.13	2.17	0.51	1.25	0.17	0.26



Alt Model-Shift Uniqueness Test

003248332-03, P = 232.623125 Days, E = 203.014825 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.82	6.53	5.77	13.1	5.77	3.78	0.53	-3.95	-11.3	0.76	-6.61	0.08	3.13	0.67	0



Stellar Parameters For KIC 003248332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6793^{+165}_{-259}	$4.208^{+0.124}_{-0.186}$	$-0.080^{+0.250}_{-0.350}$	$1.508^{+0.495}_{-0.304}$	$1.346^{+0.204}_{-0.224}$	$0.552^{+0.347}_{-0.289}$
	+2%/-4%	+3%/-4%	+312%/-438%	+33%/-20%	+15%/-17%	+63%/-52%
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 003248332-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-484±178	$7.38^{+7.03}_{-5.06}$	575^{+42}_{-37}	4784^{+4136}_{-1099}	2855^{+30061}_{-2148}
Alt.	-987±151	$7.37^{+6.86}_{-4.83}$	570^{+46}_{-38}	5759^{+5567}_{-1443}	6883^{+52165}_{-5122}

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

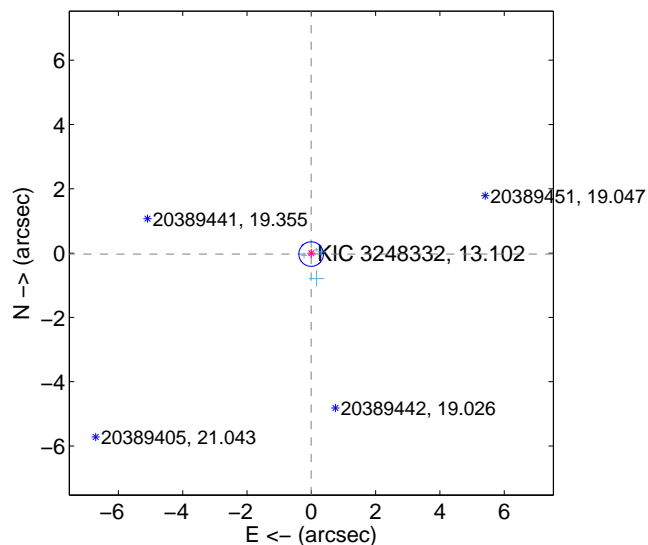
Supplemental centroid analysis for 003248332-03. Kepler magnitude: 13.10. Transit SNR 3.10

There are 4 quarters with good PRF difference image offsets

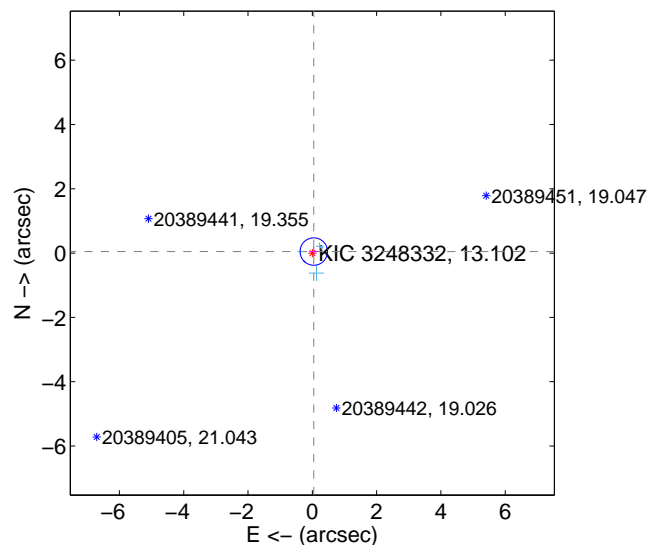
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.127	0.24	0.005 ± 0.108	-0.030 ± 0.125
PRF-fit source offset from KIC position	0.067 ± 0.142	0.47	-0.046 ± 0.134	0.048 ± 0.131
photometric centroid source offset	1.59 ± 1.56	1.02	-0.38 ± 1.29	1.55 ± 1.57

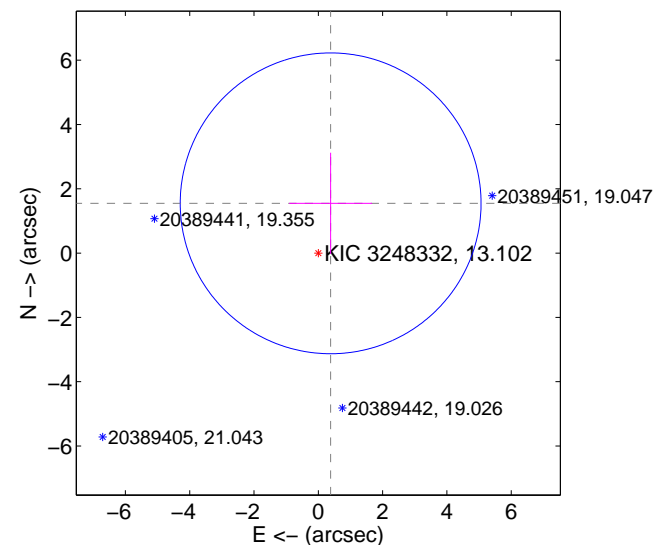
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

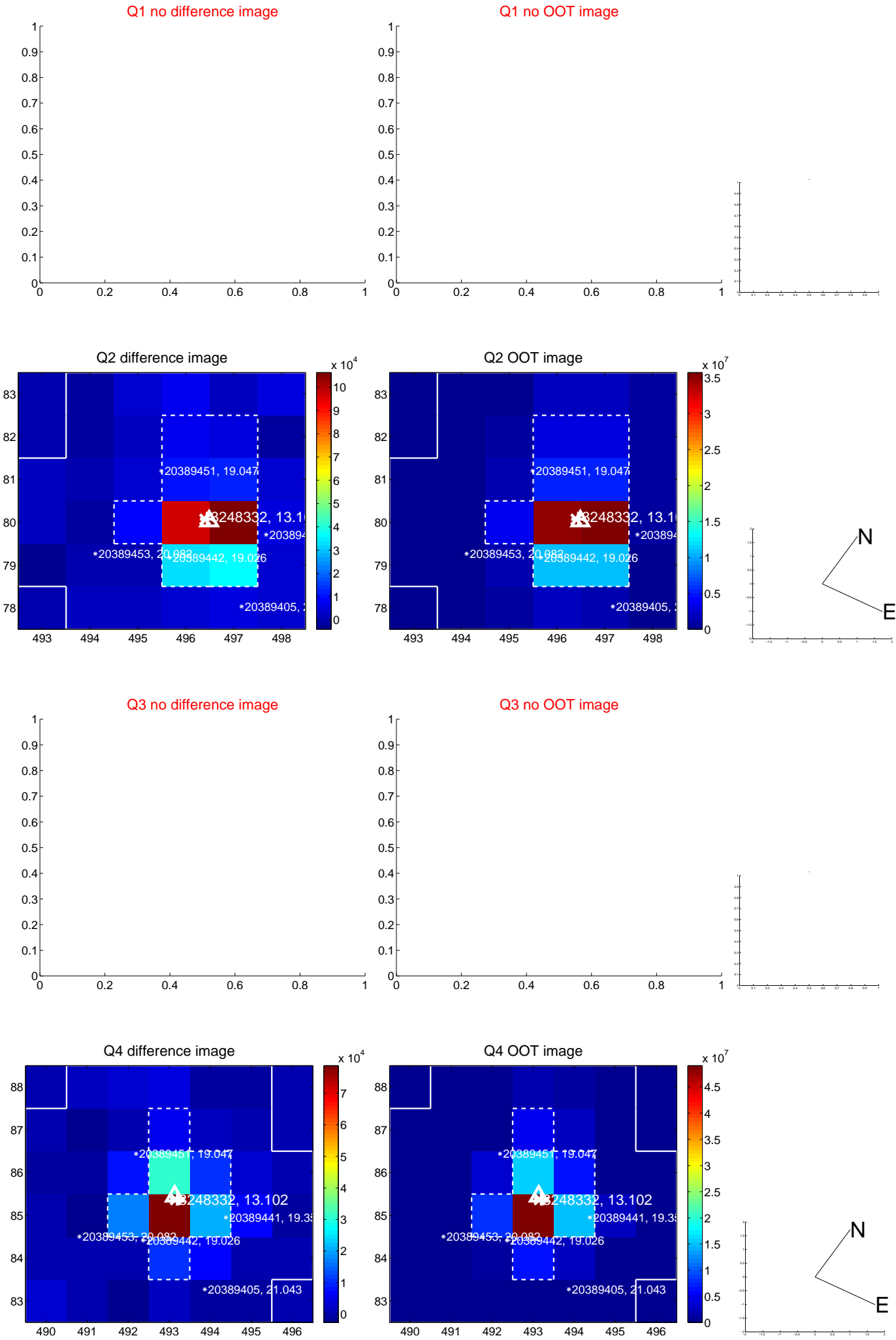


offset from photometric centroids

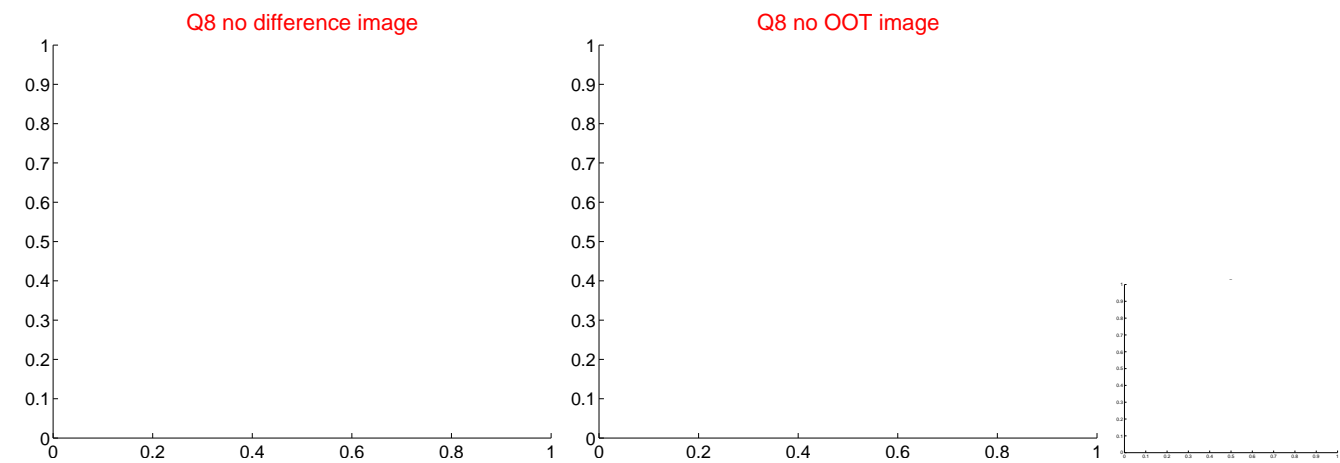
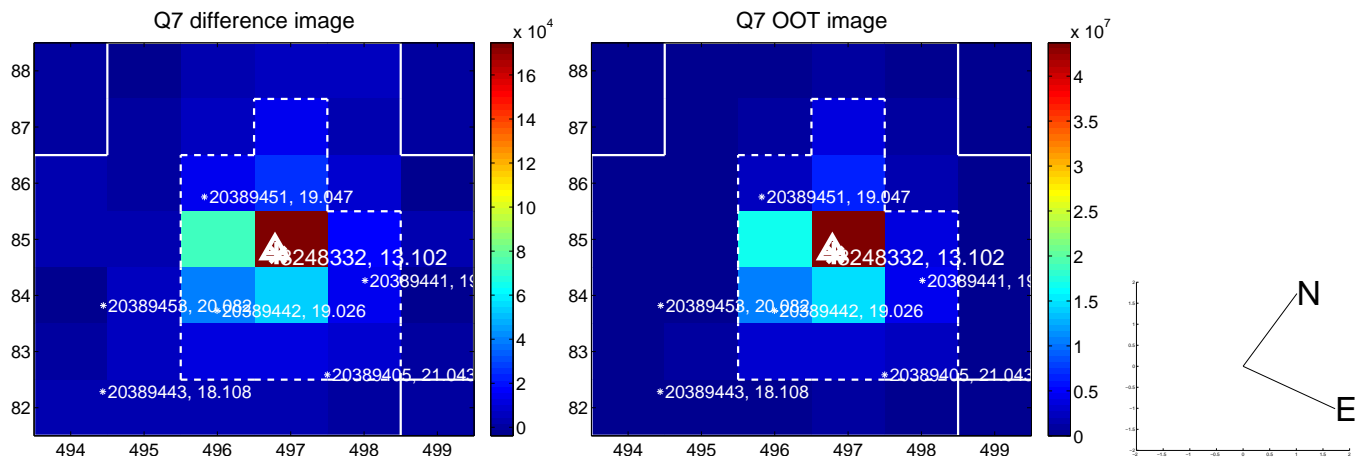
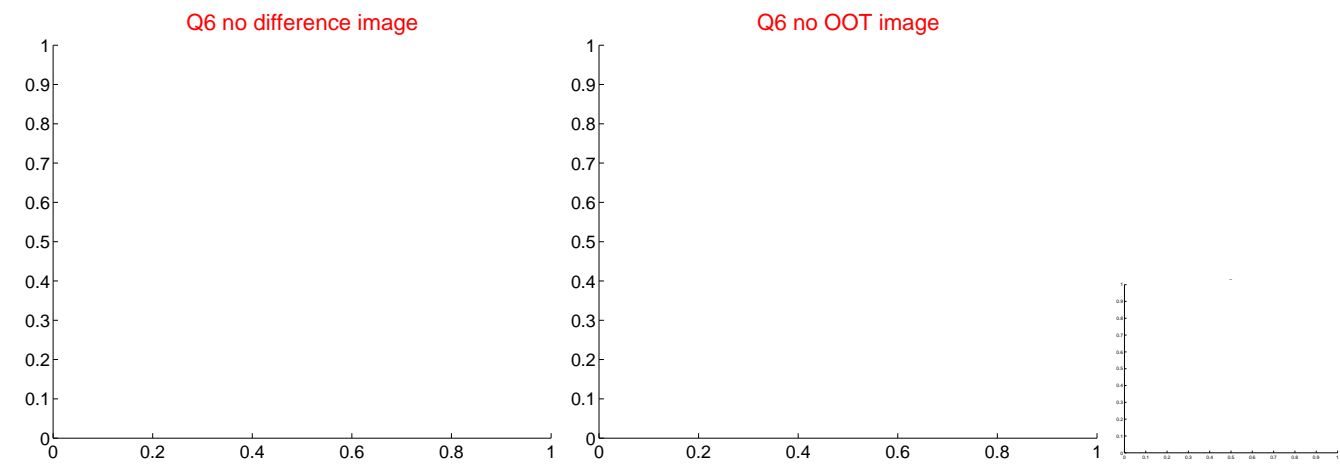
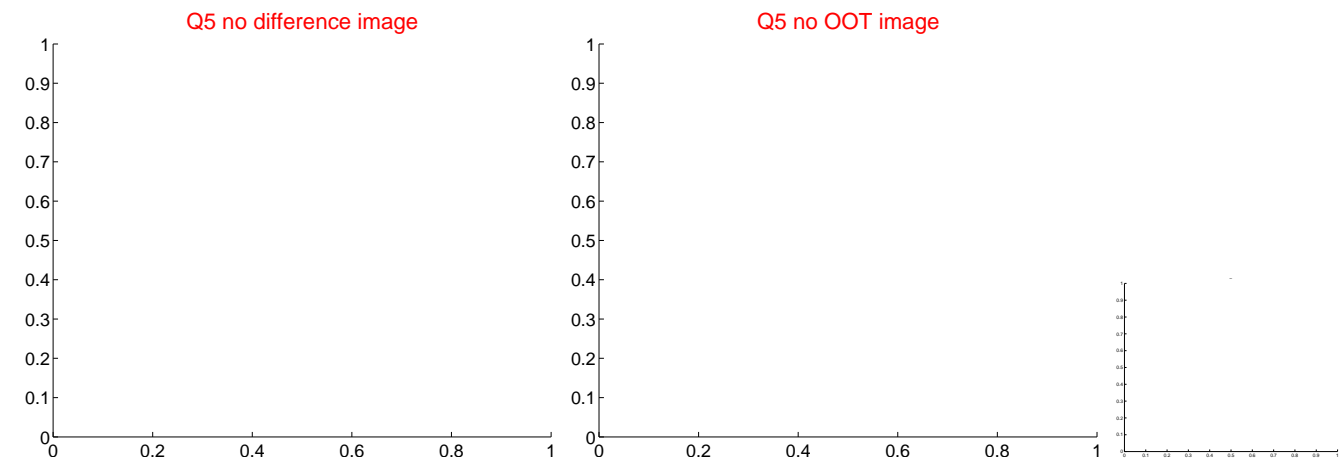


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

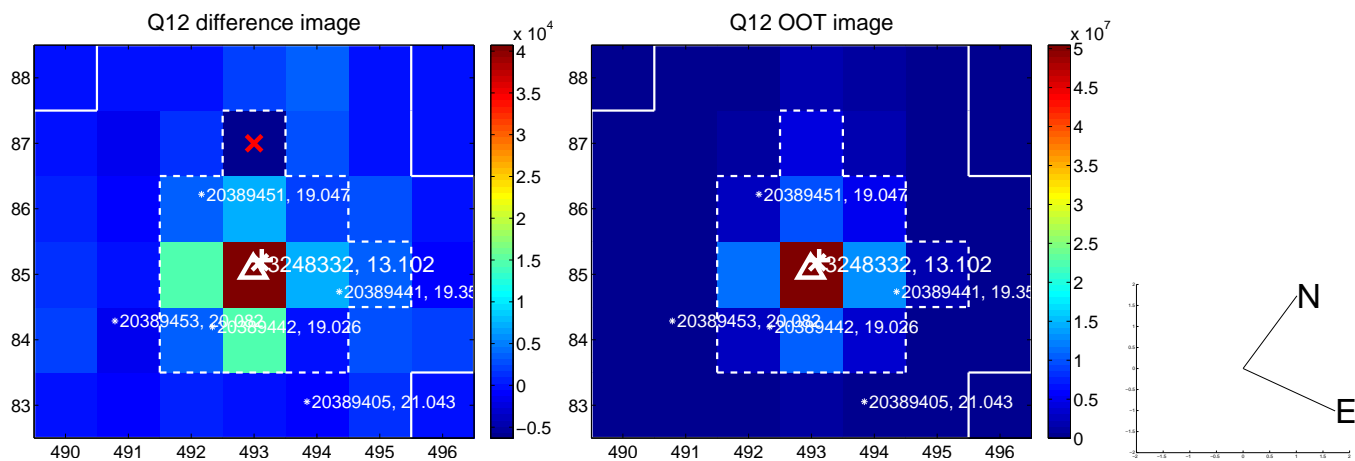
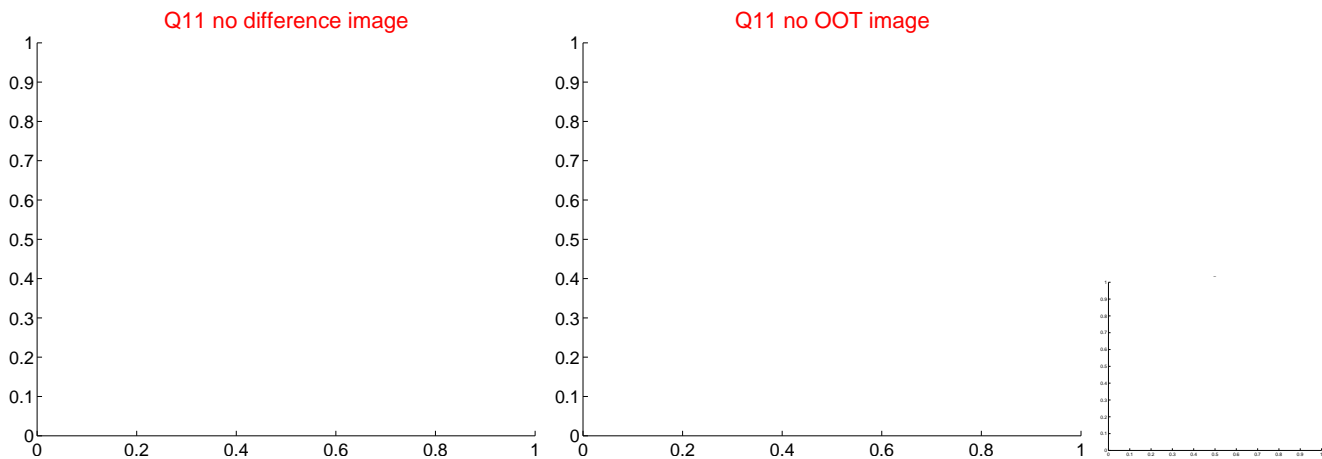
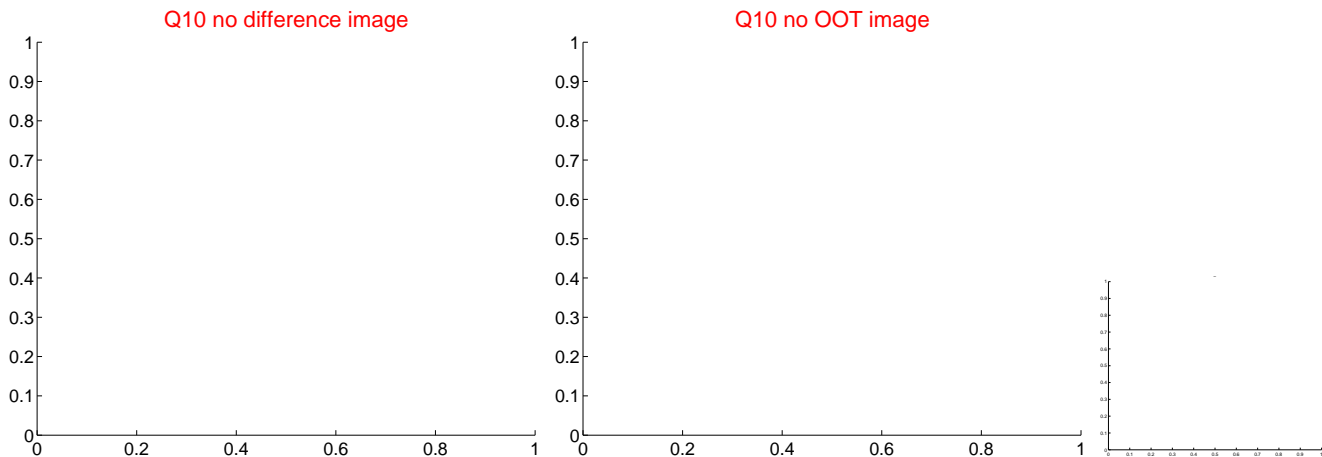
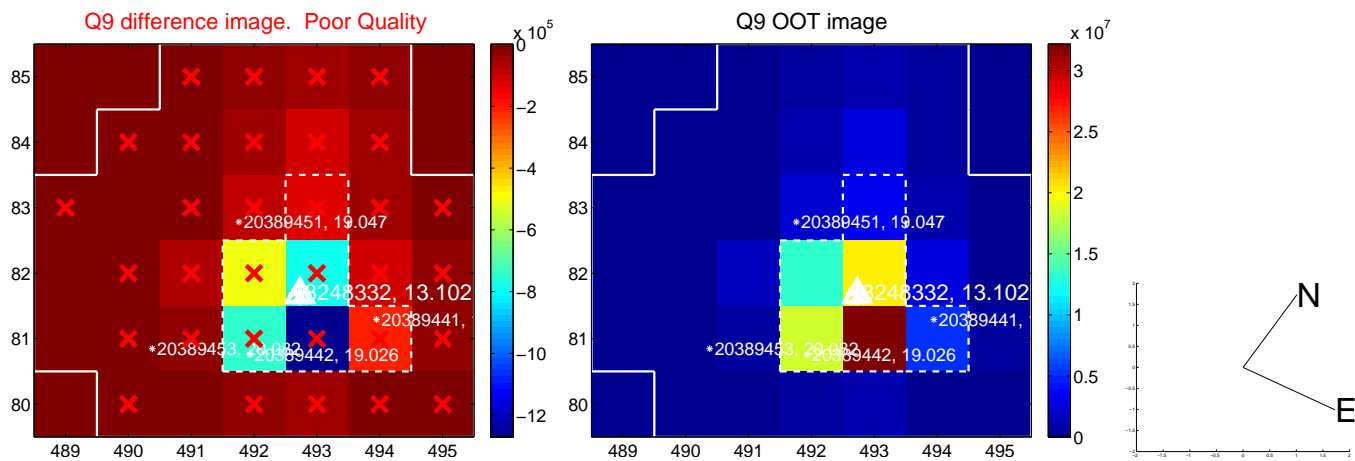
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



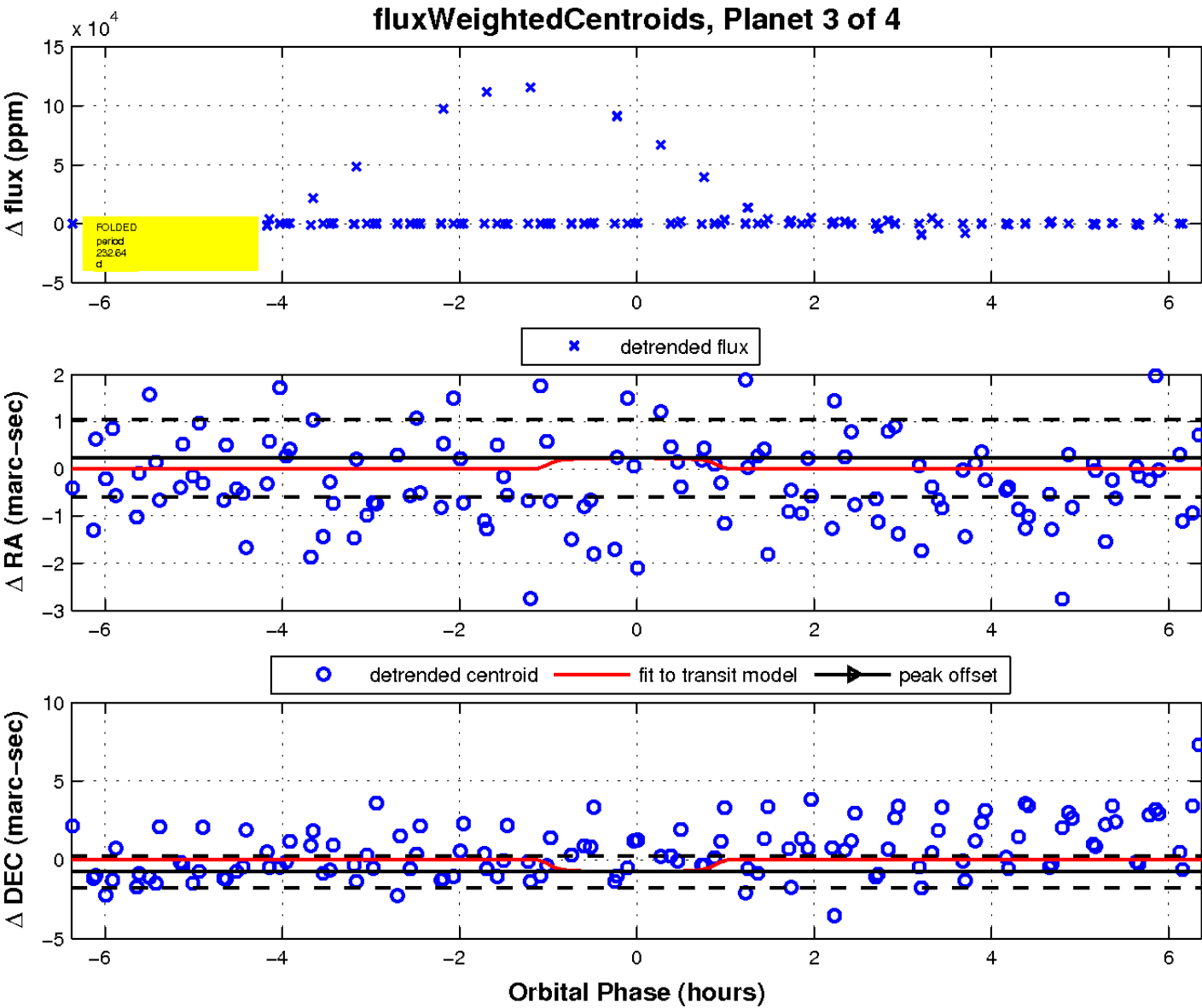
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

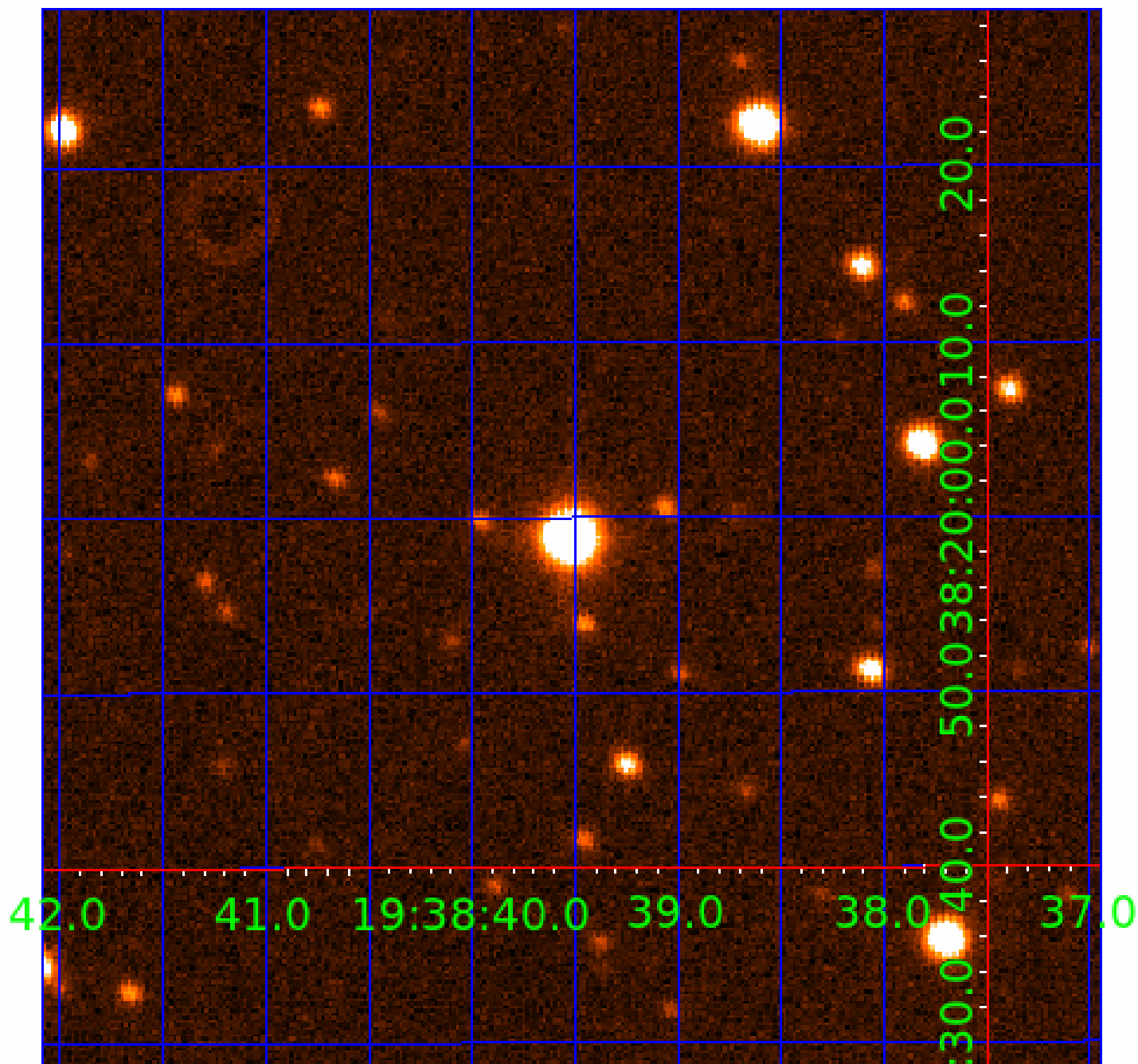


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003248332

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})
003248332-01	OBS	No	7.363586	135.214652	93045.3	4.687	2456.8	1256.7	1.51	6793	77.86	650.56
003248332-02	OBS	6317.01	3.681806	135.019897	117140.2	6.166	2238.3	1337.8	1.51	6793	81.88	1639.31
003248332-03	OBS	No	232.642593	202.958763	493.2	2.127	54.1	3.1	1.51	6793	3.89	6.51
003248332-04	OBS	No	594.017212	268.320489	994.8	3.500	23.0	-1.0	1.51	6793	4.80	1.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003248332-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003248332-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
003248332-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003248332-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

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

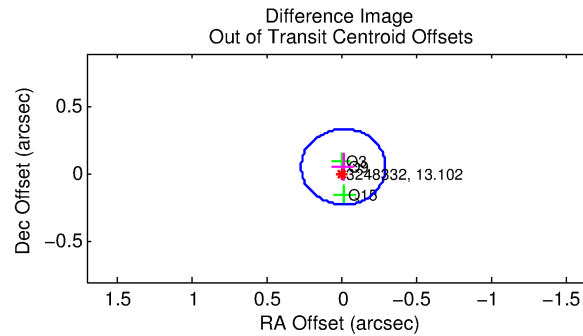
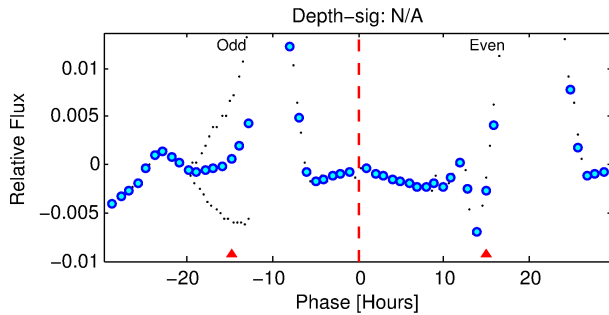
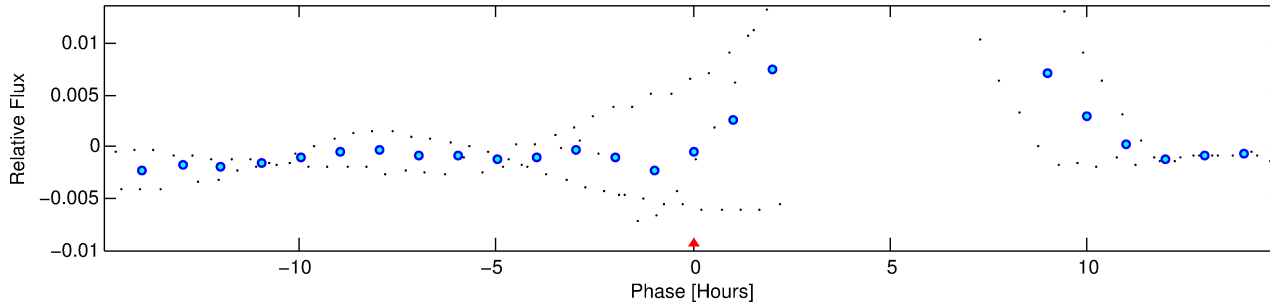
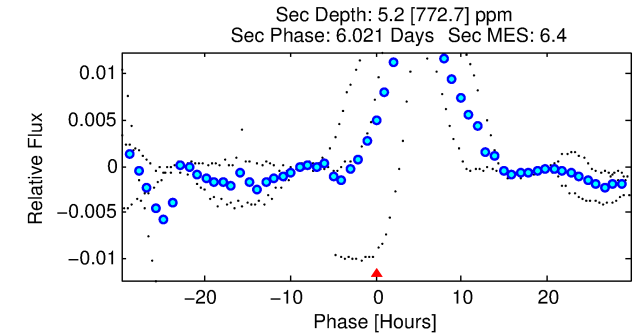
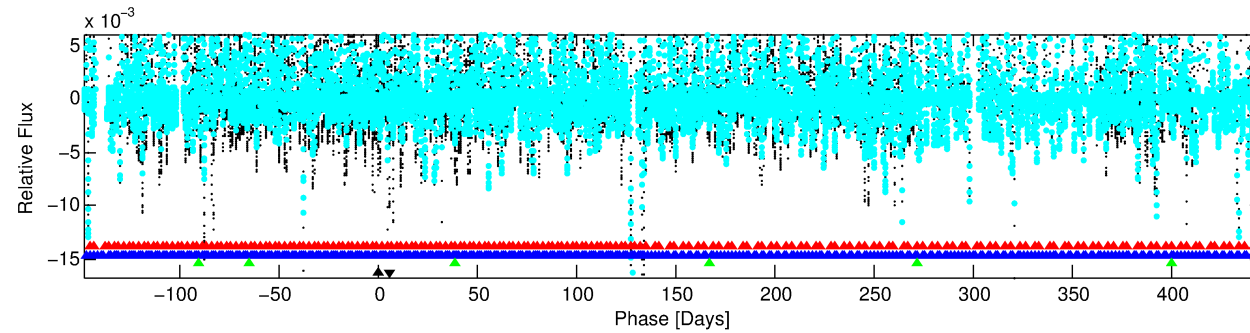
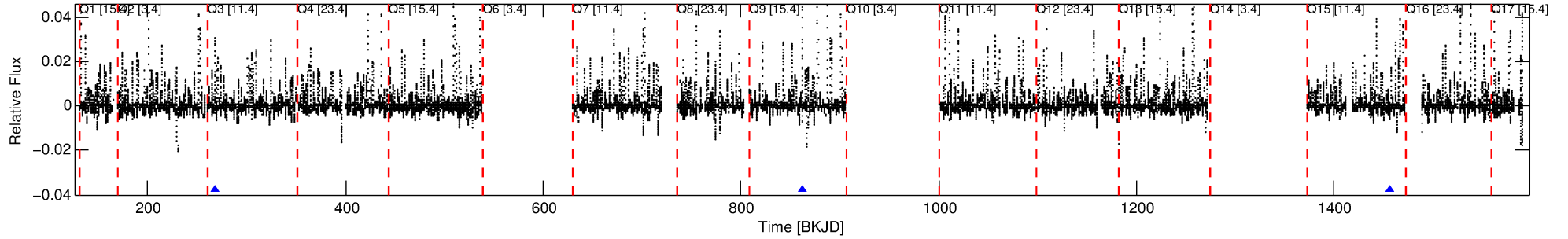
Ephemeris Match Information For 003248332-04

No Significant Match Found

DV One-Page Summary

KIC: 3248332 Candidate: 4 of 4 Period: 594.017 d
KOI: K06317 Corr: No Ephemeris Match

Kp: 13.10 R*: 1.51 Rs Teff: 6793.0 K Logg: 4.21 Fe/H: -0.080



TPS TCE Results:

Period = 594.01721 d
Epoch = 268.3205 BKJD

DV fit results are unavailable

DV Diagnostic Results:

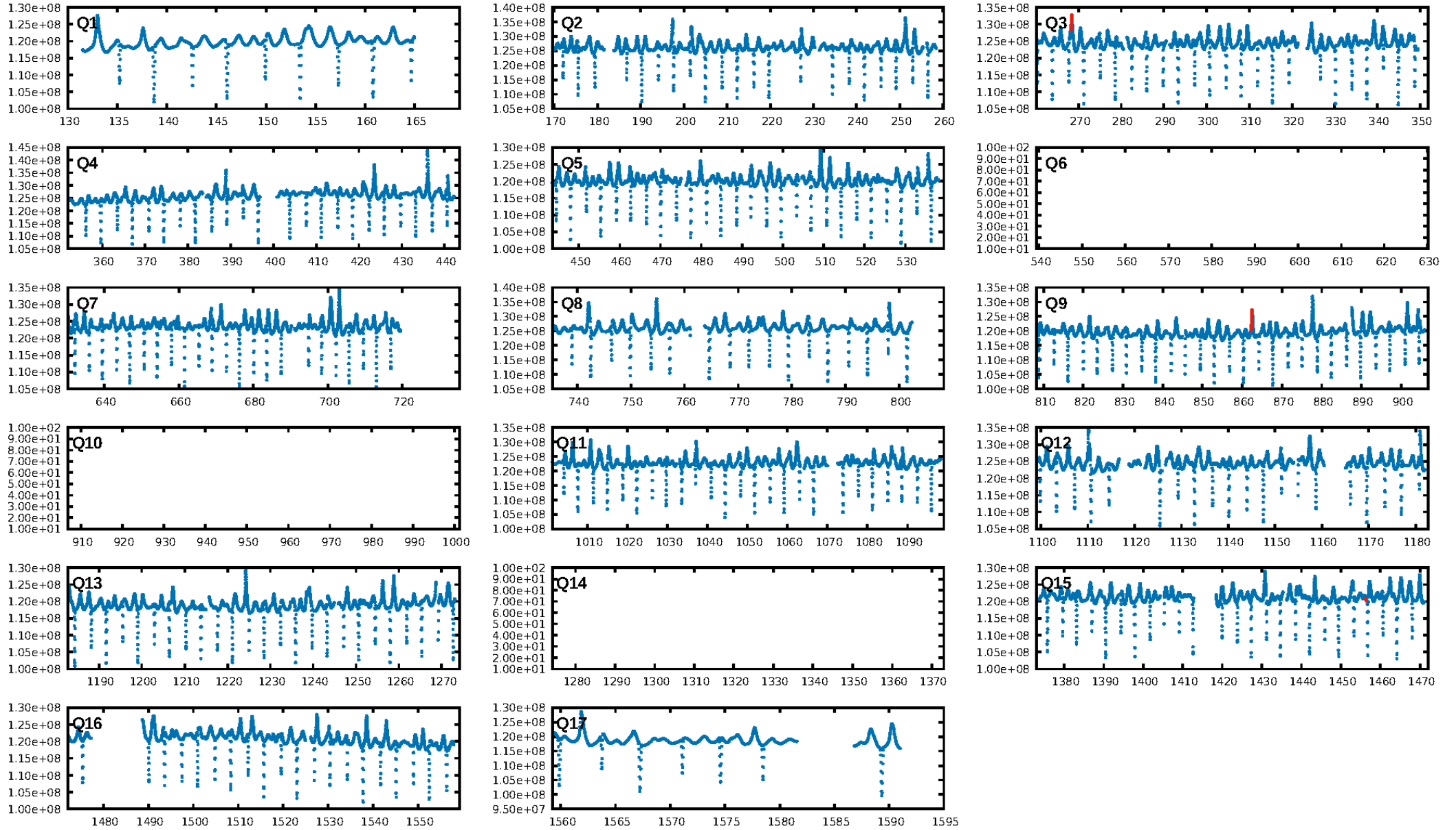
ShortPeriod-sig: 100.0% [2117.53σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.6589

Centroid-sig: 99.8%
Centroid-so: 0.072 arcsec [1.10σ]
OotOffset-rm: 0.058 arcsec [0.62σ]
KicOffset-rm: 0.192 arcsec [2.12σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.33 [1/3]

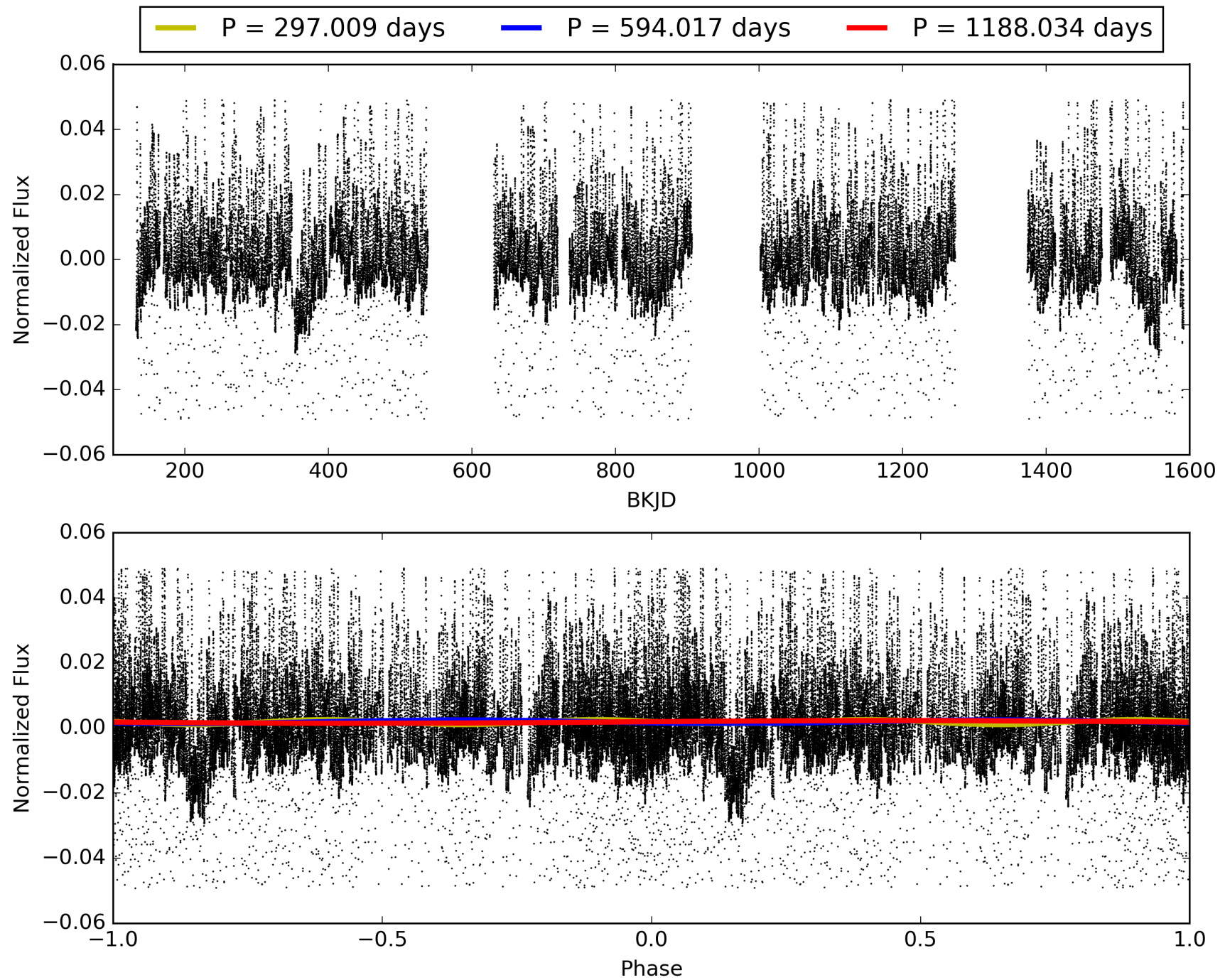
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:53 Z

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

TCE 003248332-04, PDC Light Curves

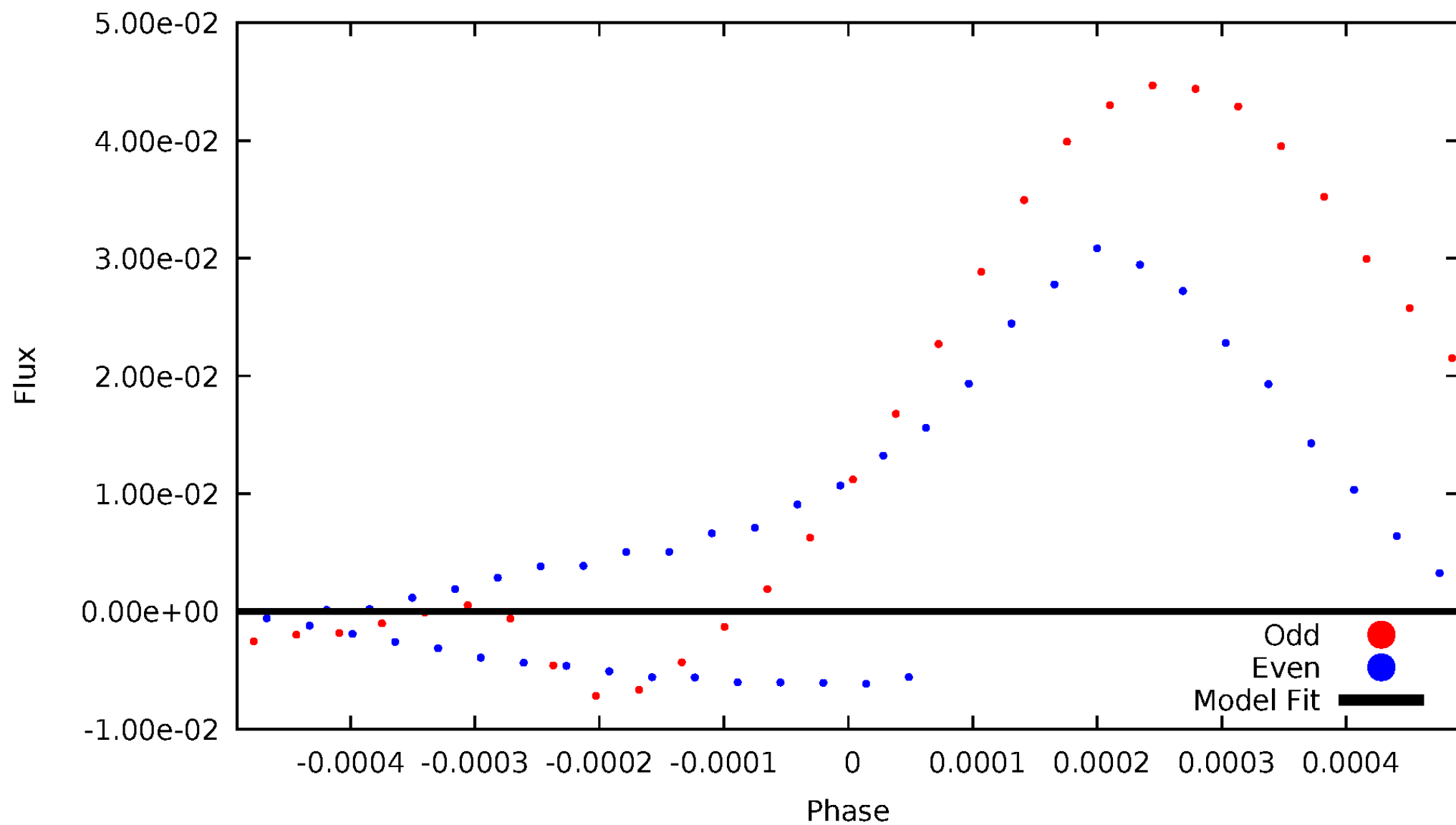


TCE 003248332-04



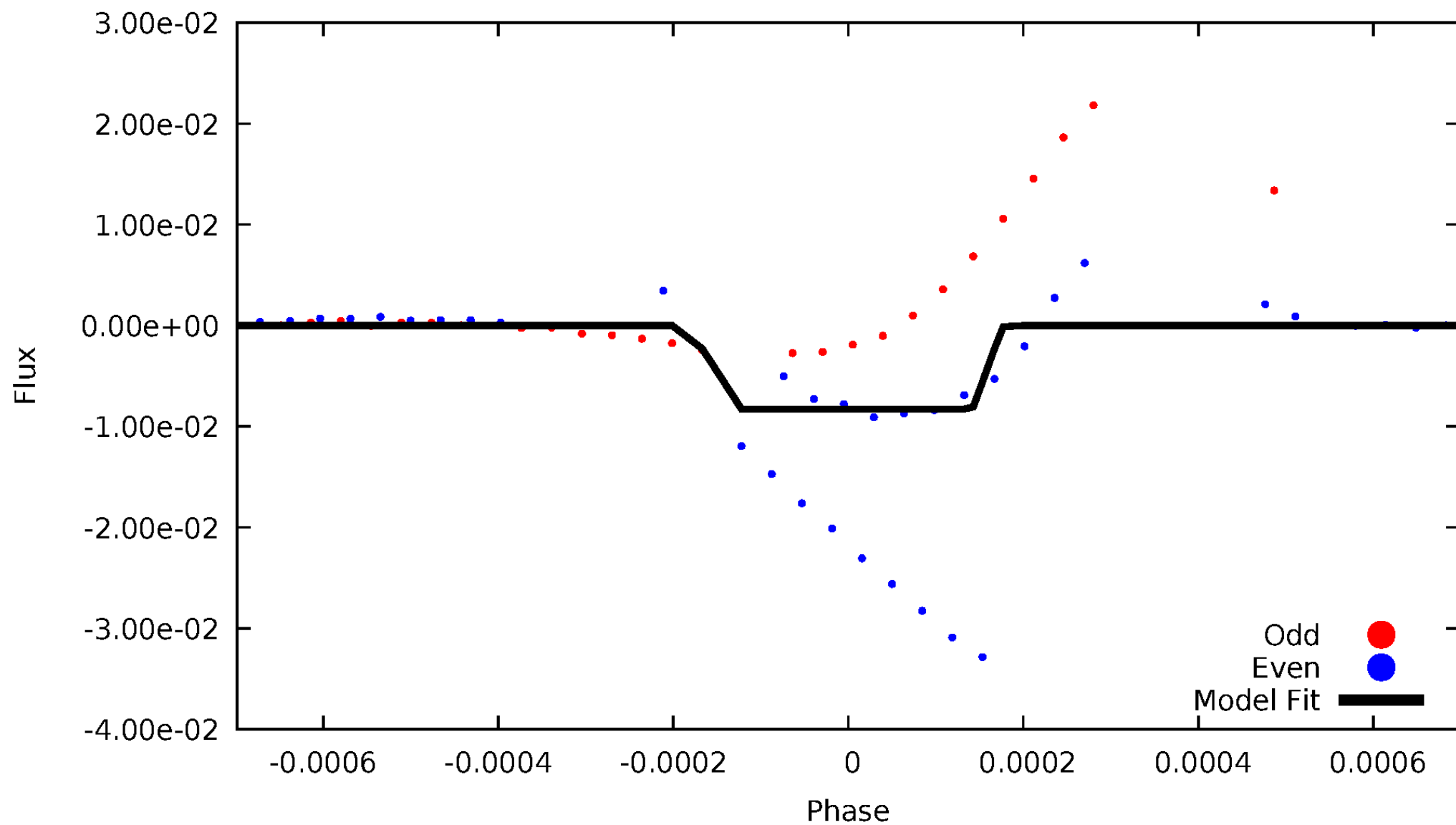
DV Odd/Even

TCE 003248332-04



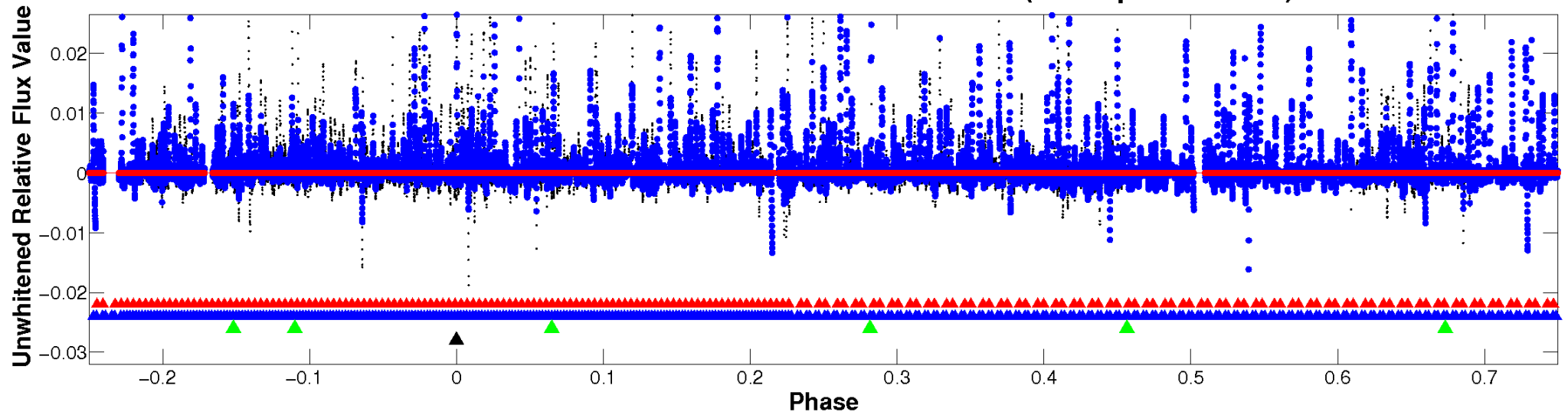
ALT Odd/Even

TCE 003248332-04

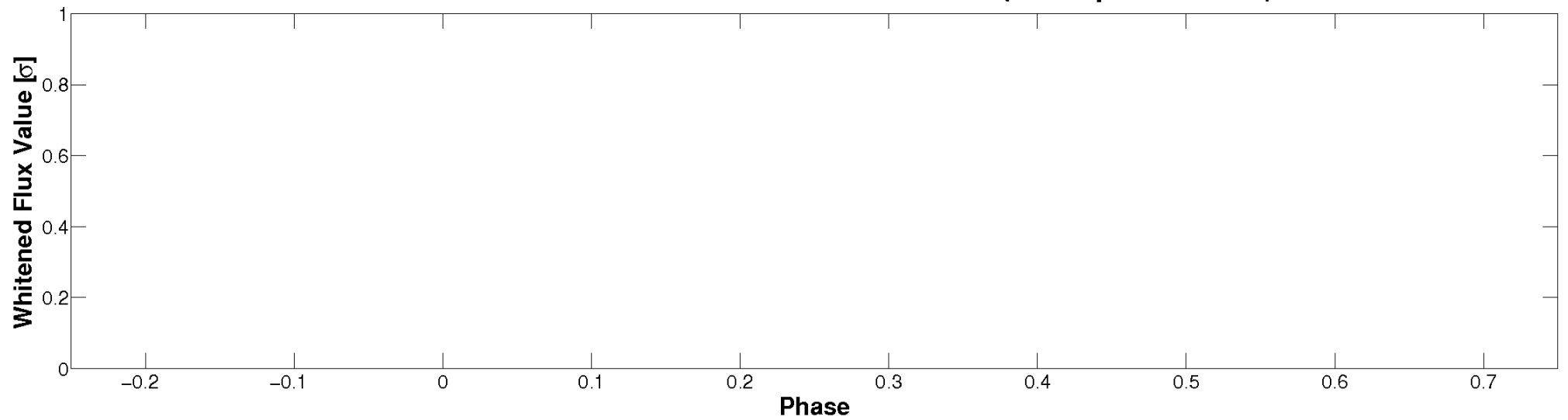


Non-Whitened Vs. Whitened Light Curve

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

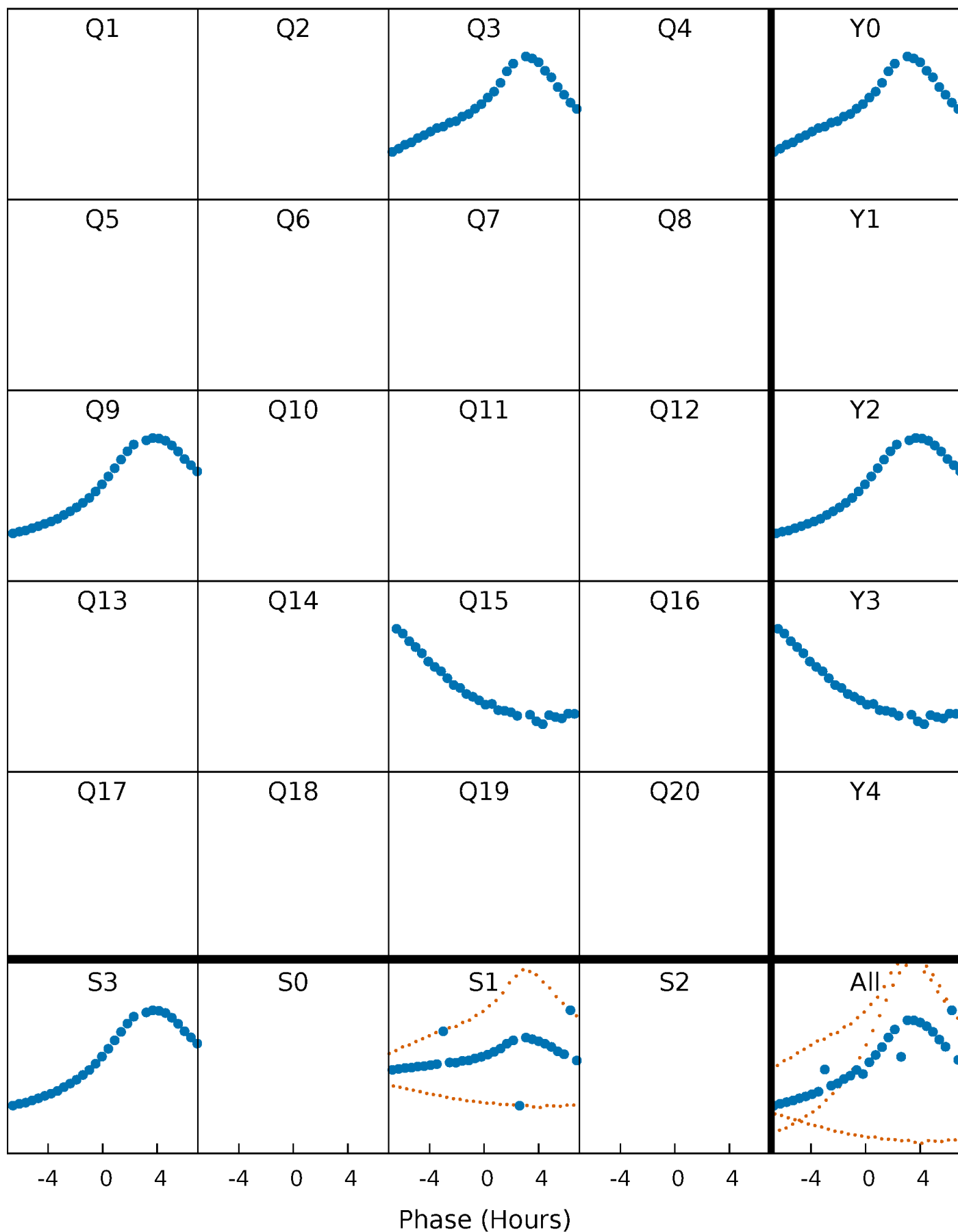


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



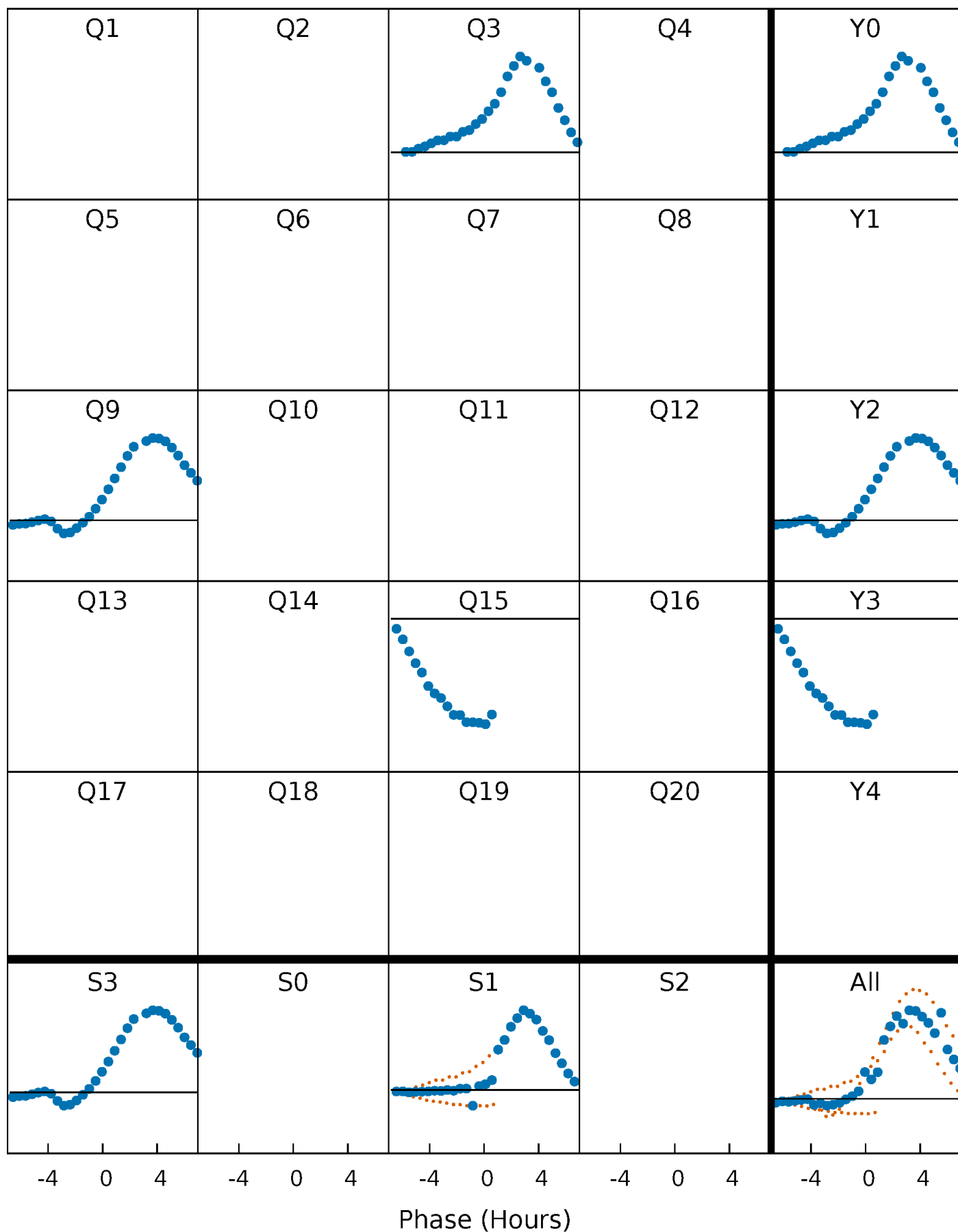
PDC Quarter-Phased Transit Curves

TCE 003248332-04 P=594.017212 Days $T_0=268.320489$ (BKJD)



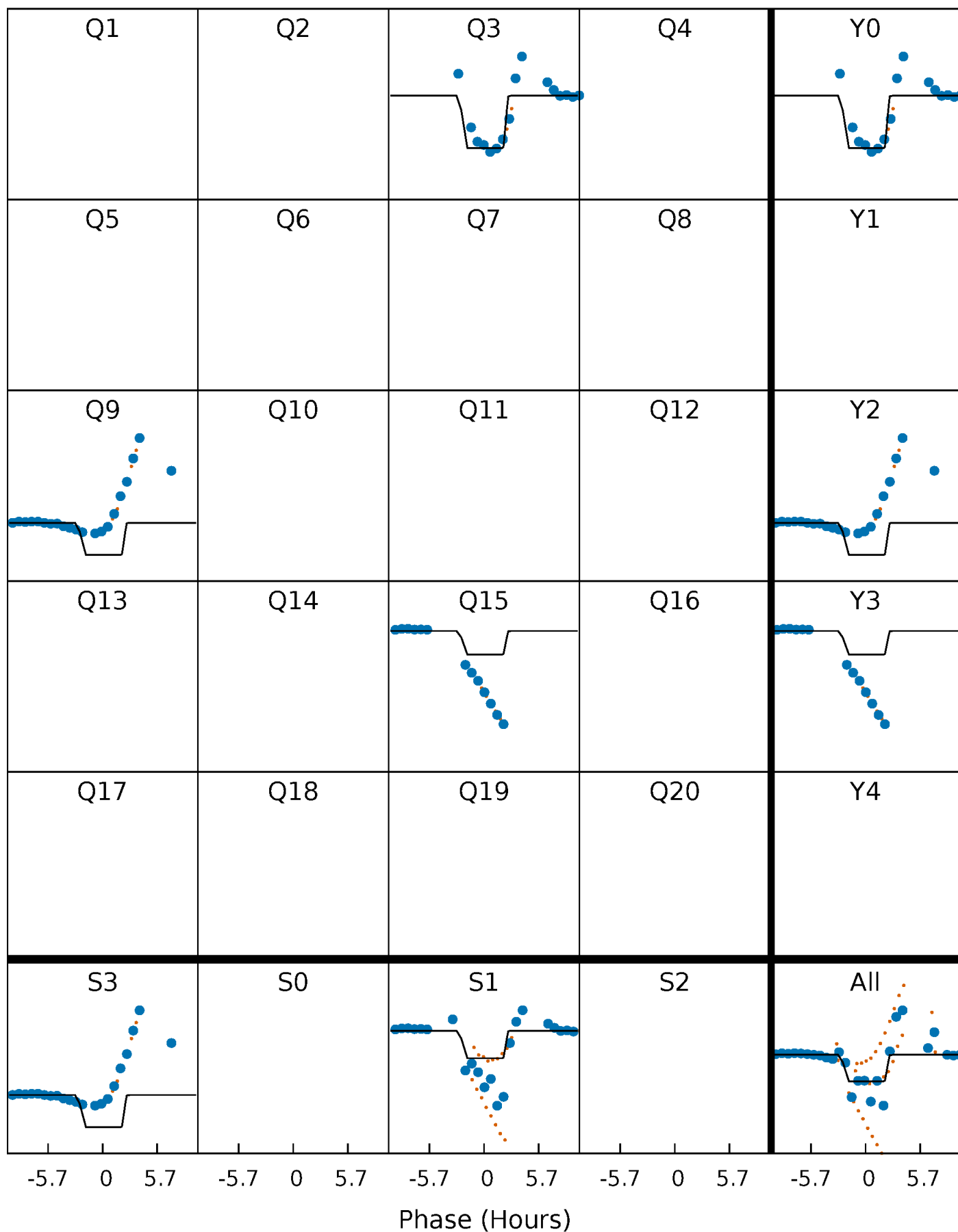
DV Quarter-Phased Transit Curves

TCE 003248332-04 $P=594.017212$ Days $T_0=268.320489$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

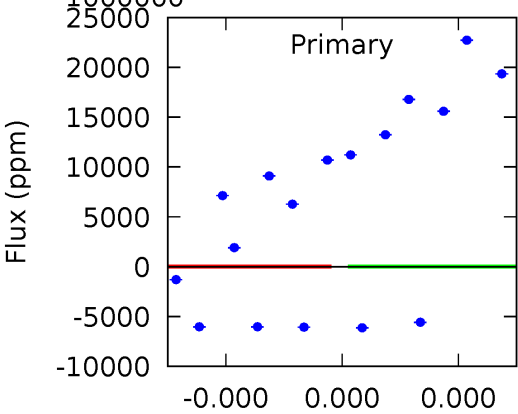
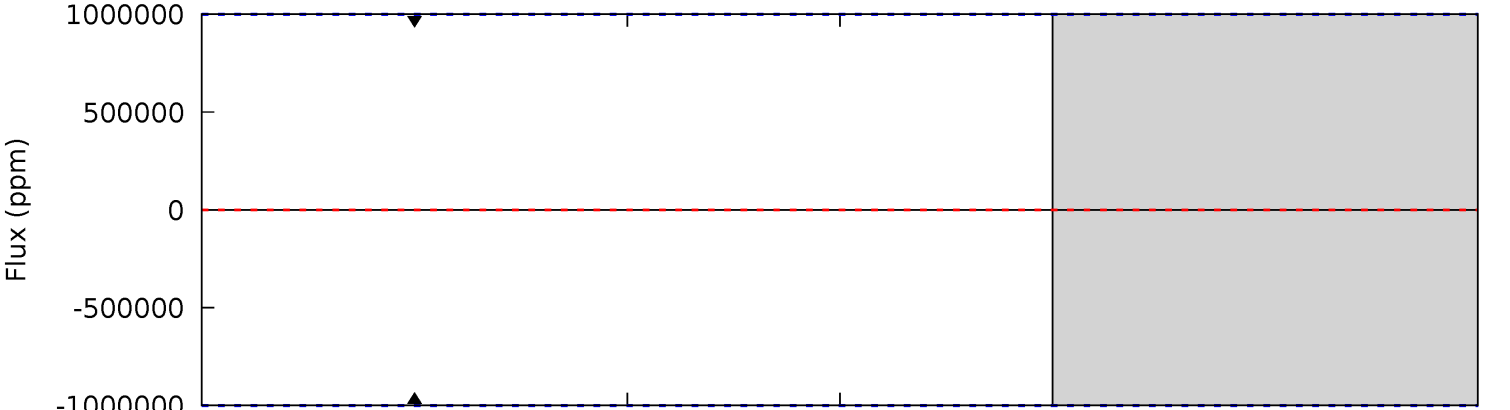
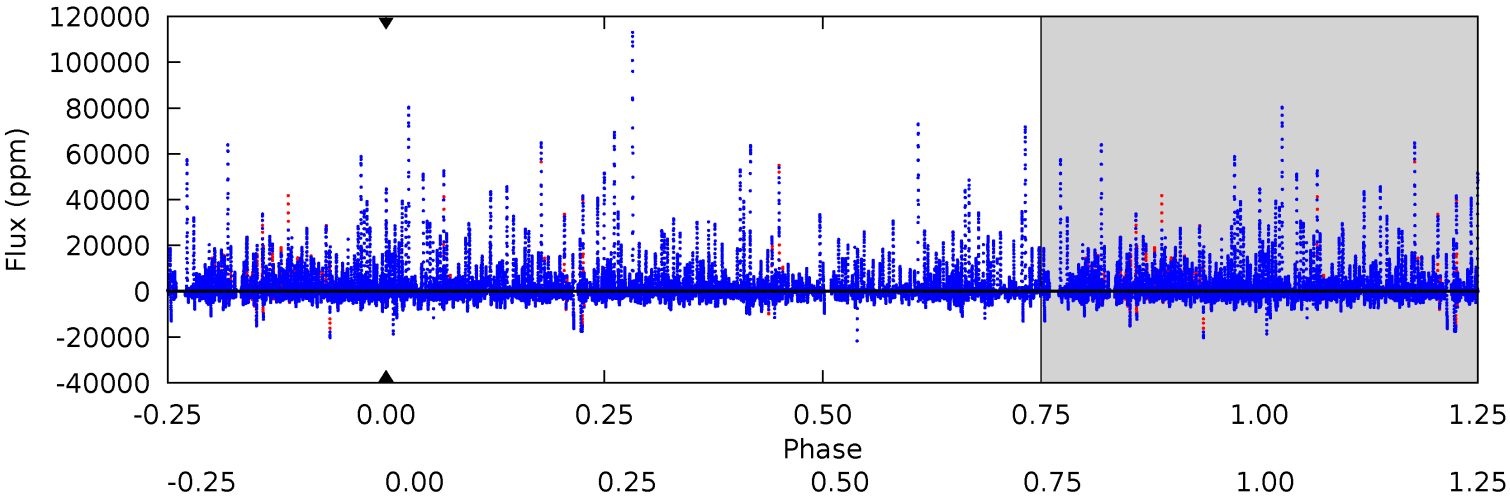
TCE 003248332-04 P=594.017212 Days $T_0=268.258394$ (BKJD)



DV Model-Shift Uniqueness Test

003248332-04, P = 594.017212 Days, E = 268.320489 Days

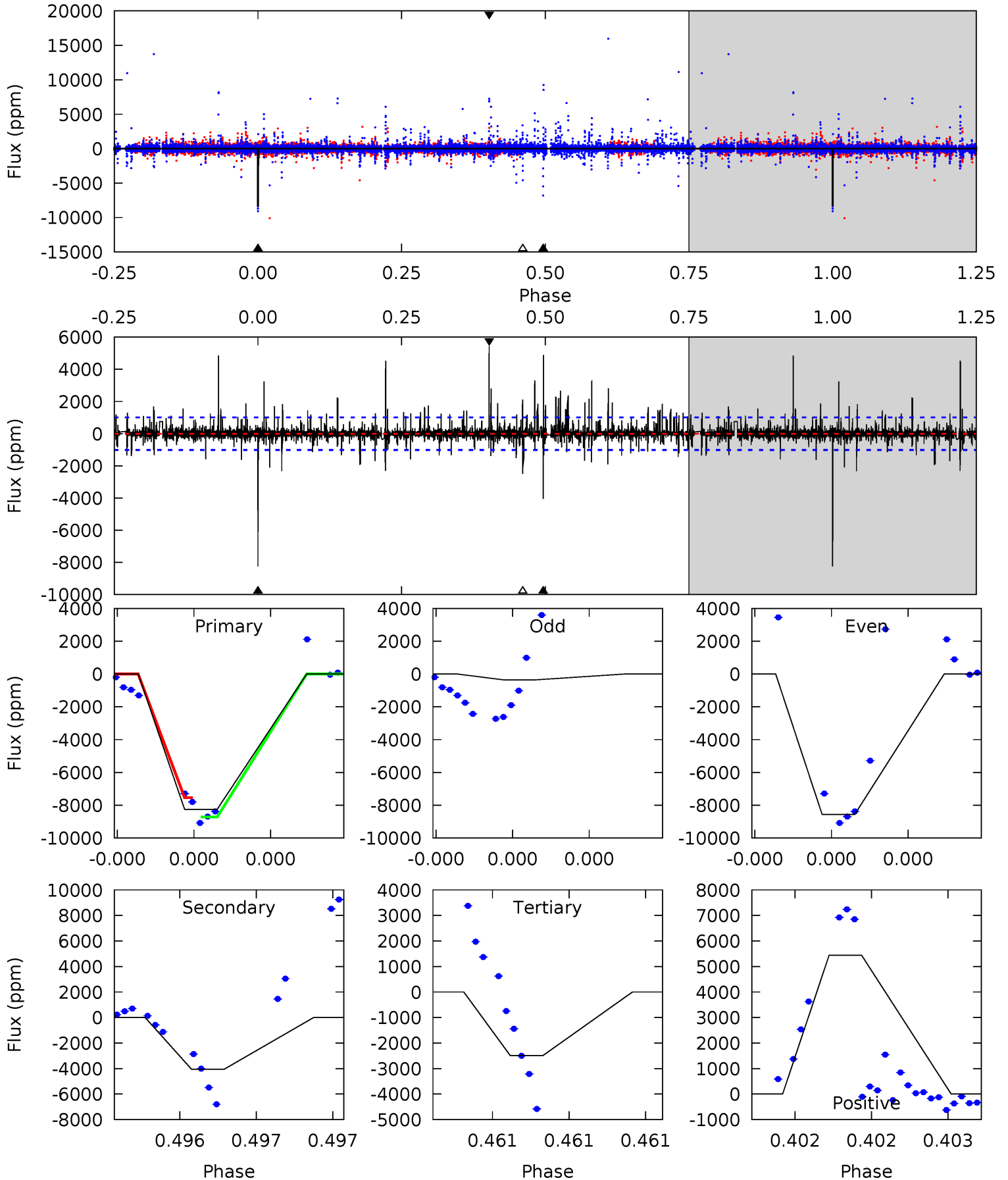
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003248332-04, P = 594.017212 Days, E = 268.258394 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.0	22.6	13.9	30.3	5.65	3.60	1.35	32.1	15.7	8.71	-7.71	25.8	1.31	0.40	3.20



Stellar Parameters For KIC 003248332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6793^{+165}_{-259}	$4.208^{+0.124}_{-0.186}$	$-0.080^{+0.250}_{-0.350}$	$1.508^{+0.495}_{-0.304}$	$1.346^{+0.204}_{-0.224}$	$0.552^{+0.347}_{-0.289}$
	+2%/-4%	+3%/-4%	+312%/-438%	+33%/-20%	+15%/-17%	+63%/-52%
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 003248332-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$13.21^{+15.42}_{-9.09}$	418^{+28}_{-26}	4328^{+22205}_{-32078}	$6734^{+1150906}_{-1270244}$
Alt.	-4055 ± 179	$19.40^{+15.80}_{-11.67}$	418^{+31}_{-26}	5062^{+3147}_{-1037}	13746^{+73113}_{-9567}

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 $A_{obs} \gg 1.0$

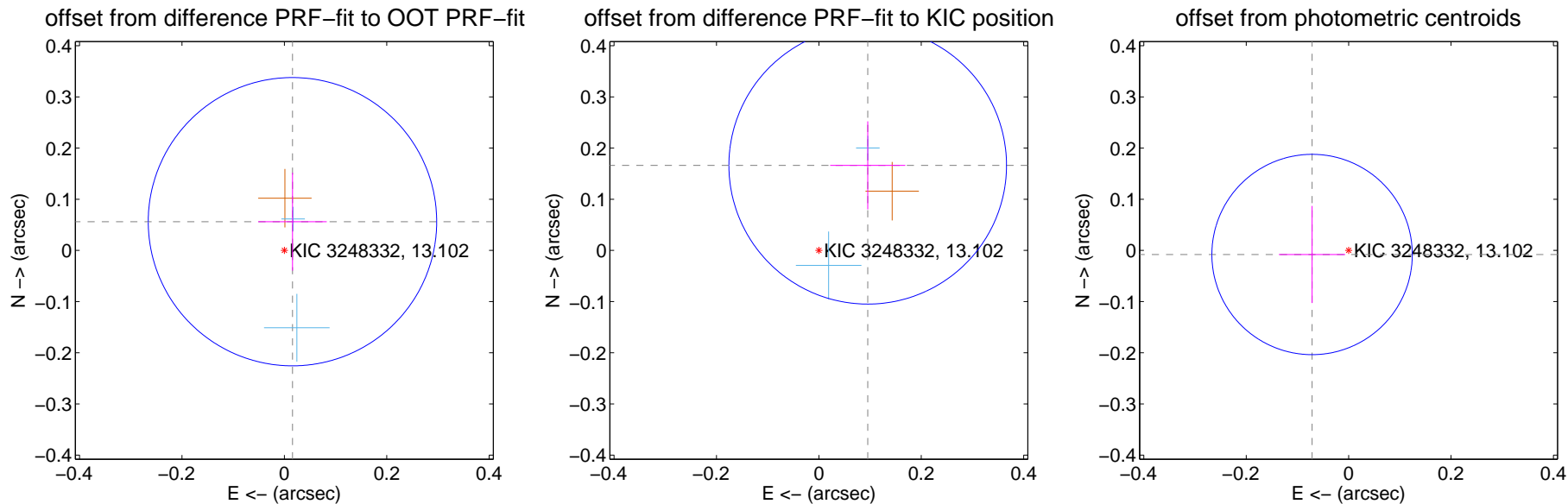
DV Centroid Data

Supplemental centroid analysis for 003248332-04. Kepler magnitude: 13.10. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

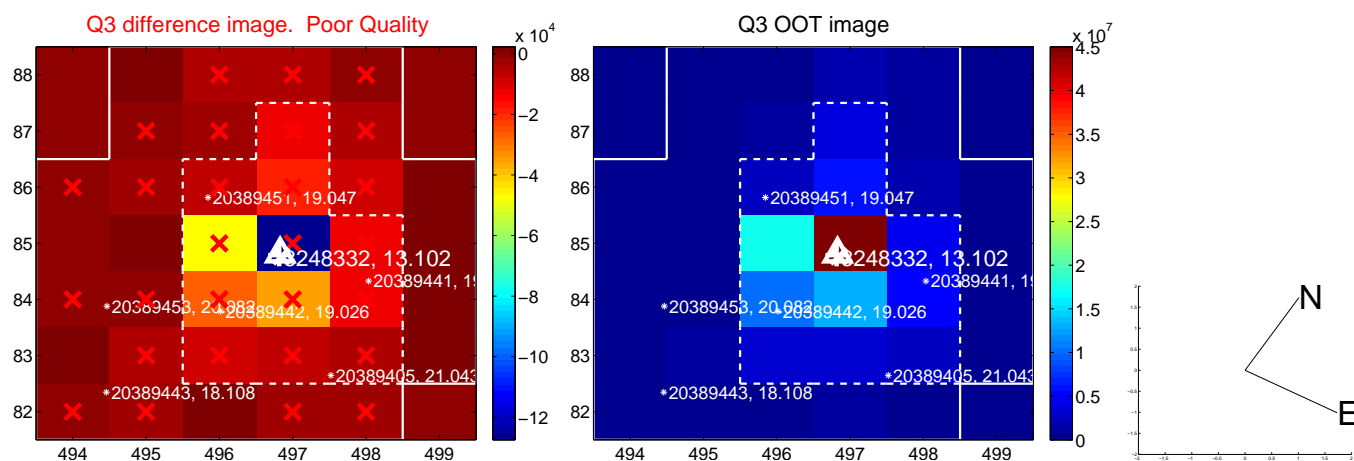
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.058 ± 0.094	0.62	-0.016 ± 0.067	0.056 ± 0.096
PRF-fit source offset from KIC position	0.192 ± 0.090	2.12	-0.095 ± 0.073	0.166 ± 0.086
photometric centroid source offset	0.07 ± 0.07	1.10	0.07 ± 0.06	-0.01 ± 0.09



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.

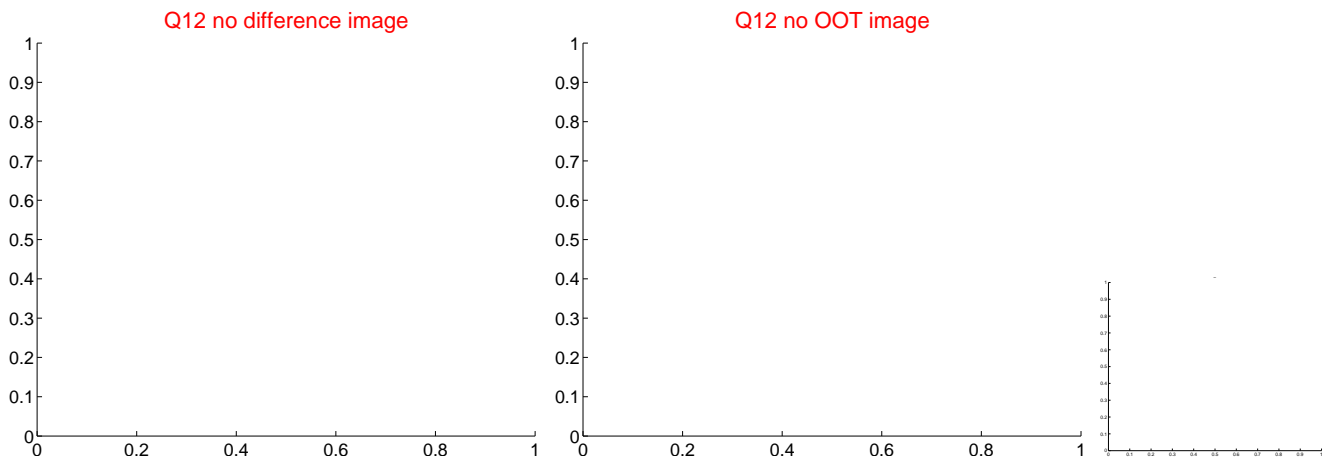
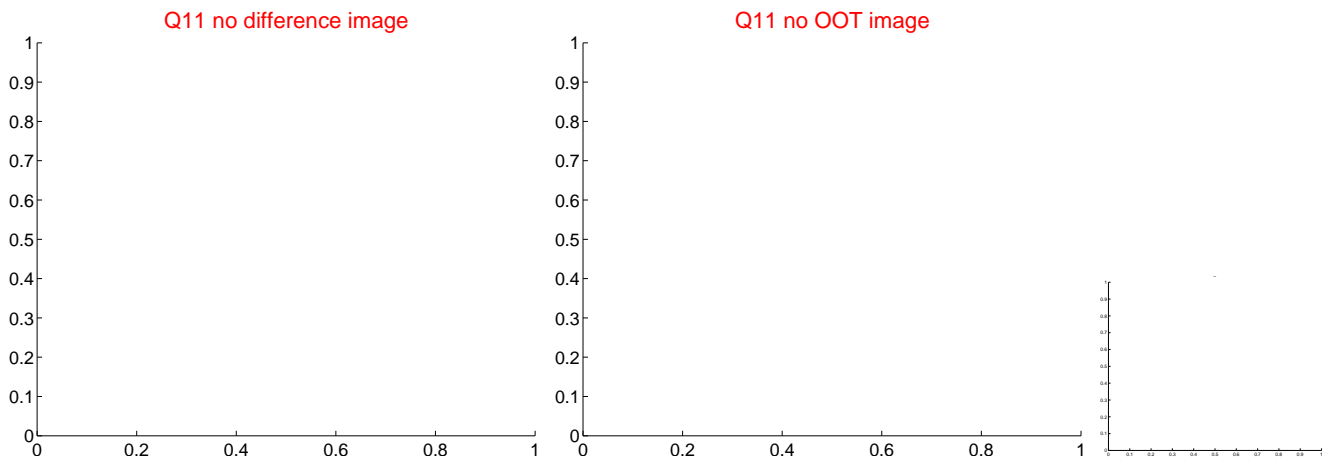
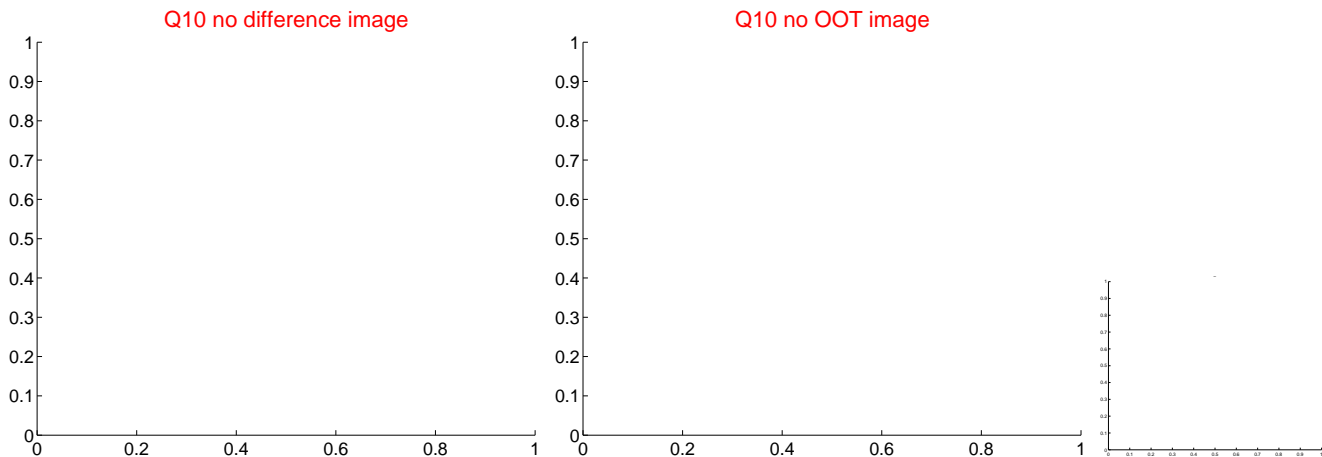
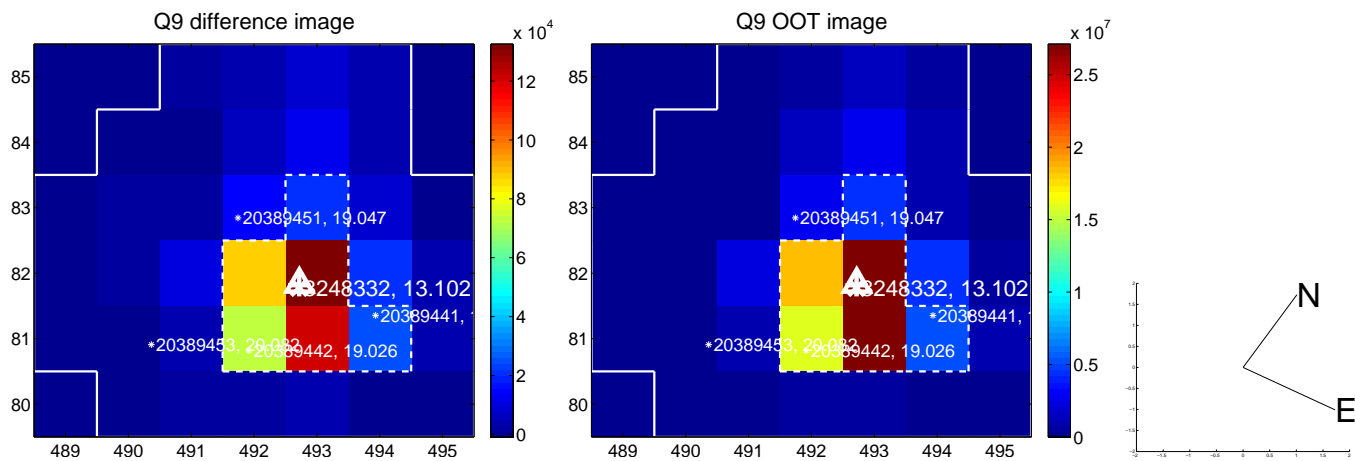
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



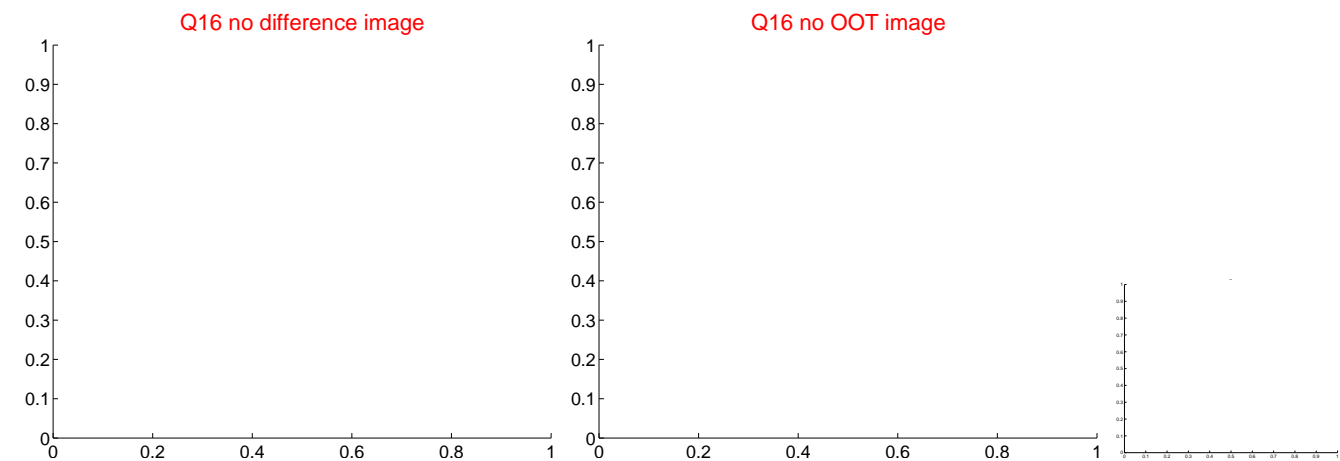
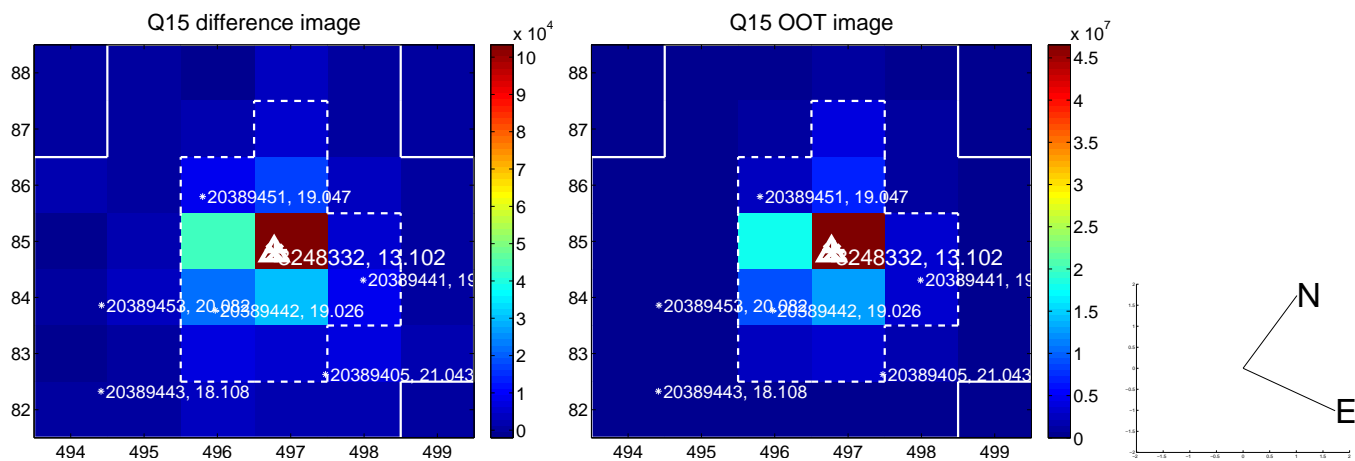
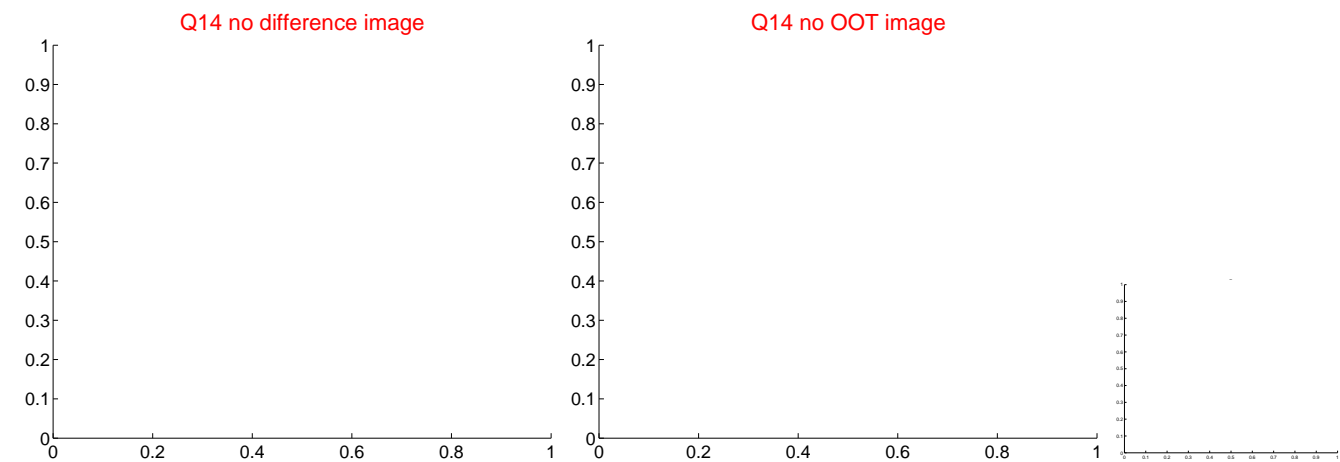
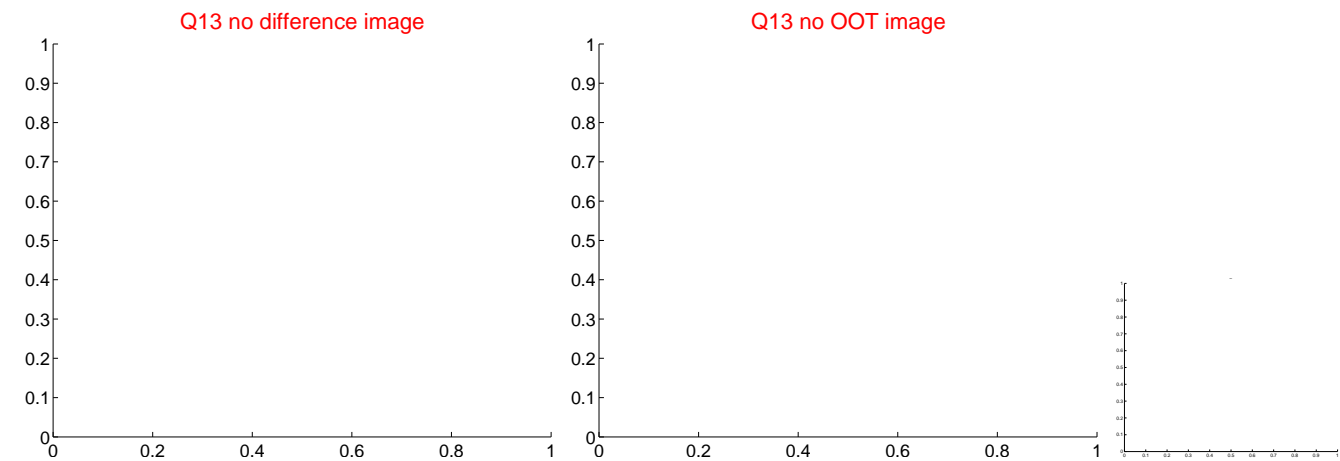
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



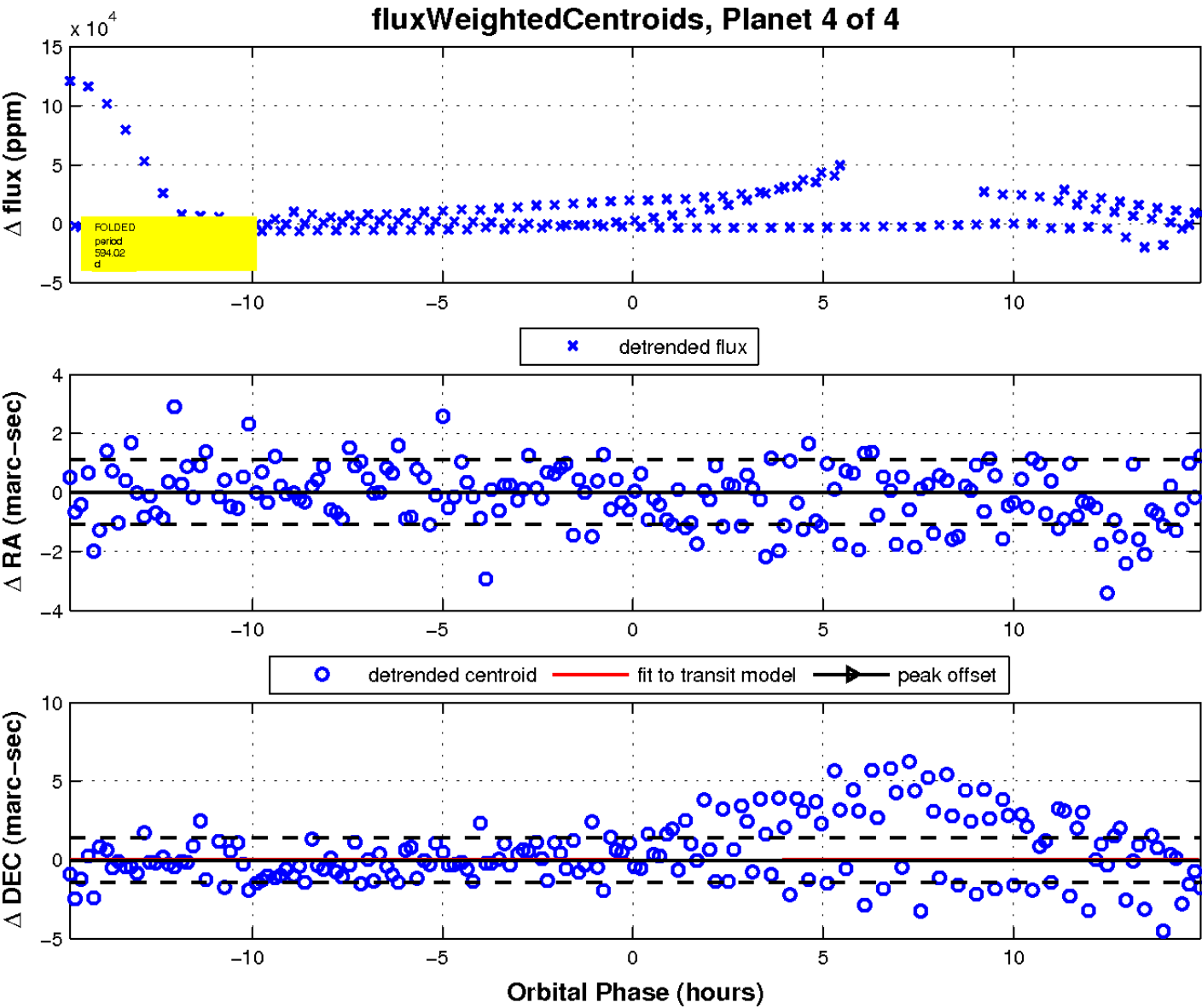
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

