

KIC 011498764

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})
011498764-01	OBS	No	2.515305	132.368611	15.4	9.808	8.1	5.2	2.82	6572	1.12	7391.88
011498764-02	OBS	No	311.992406	332.356826	176.6	15.153	8.4	7.5	2.82	6572	4.10	11.95
011498764-03	OBS	No	122.708796	248.464081	287.2	3.188	7.1	8.0	2.82	6572	5.31	41.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011498764-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011498764-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011498764-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

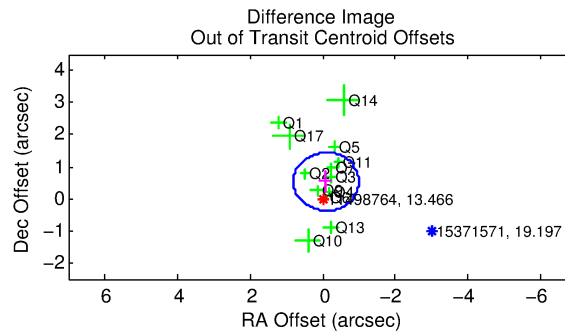
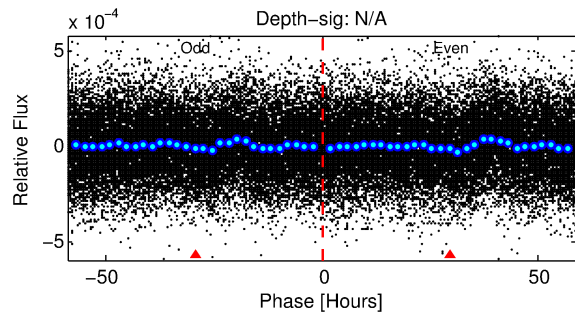
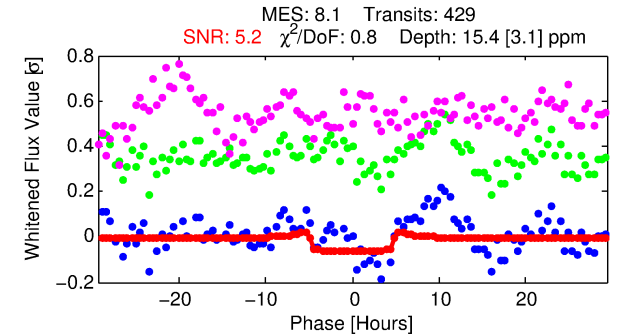
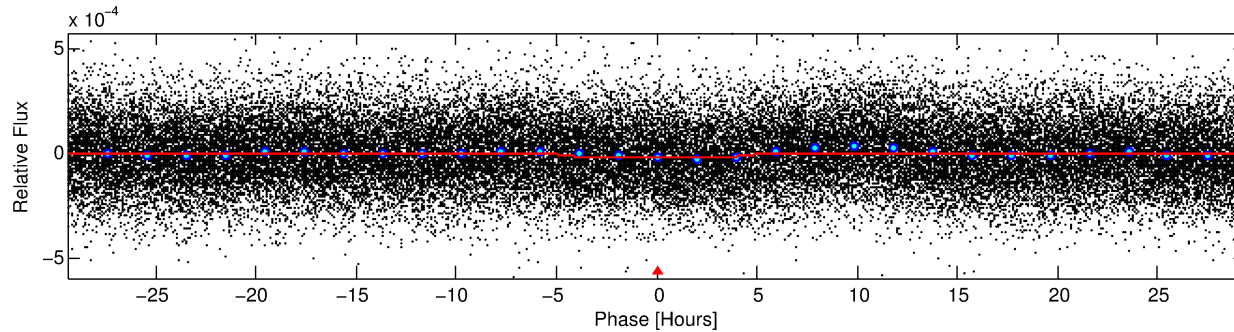
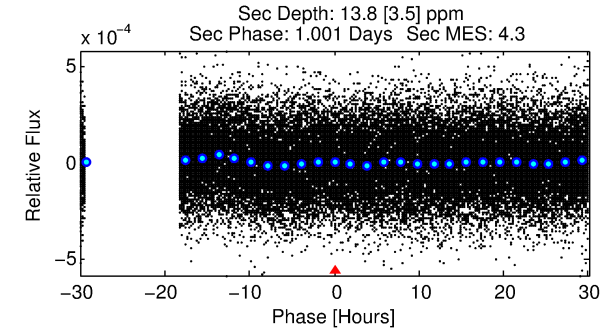
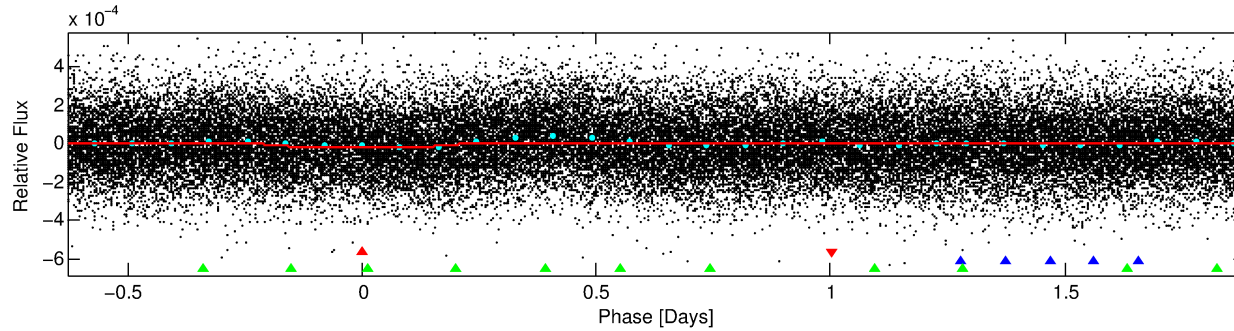
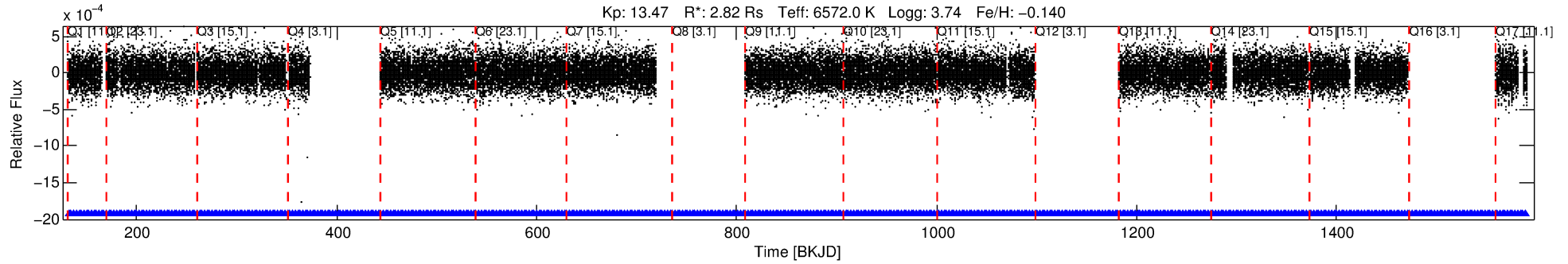
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011498764-01

No Significant Match Found

DV One-Page Summary

KIC: 11498764 Candidate: 1 of 3 Period: 2.515 d



DV Fit Results:

Period = 2.51531 [0.00006] d
Epoch = 132.3686 [0.0118] BKJD
Rp/R* = 0.0036 [0.0035]
a/R* = 2.02 [7.73]
b = 0.22 [22.60]
Seff = 7391.88 [6106.14]
Teq = 2364 [488] K
Rp = 1.12 [1.21] Re
a = 0.0424 [0.0214] AU
Ag = 10.93 [22.76] [0.44σ]
Teffp = 6646 [3194] K [1.33σ]

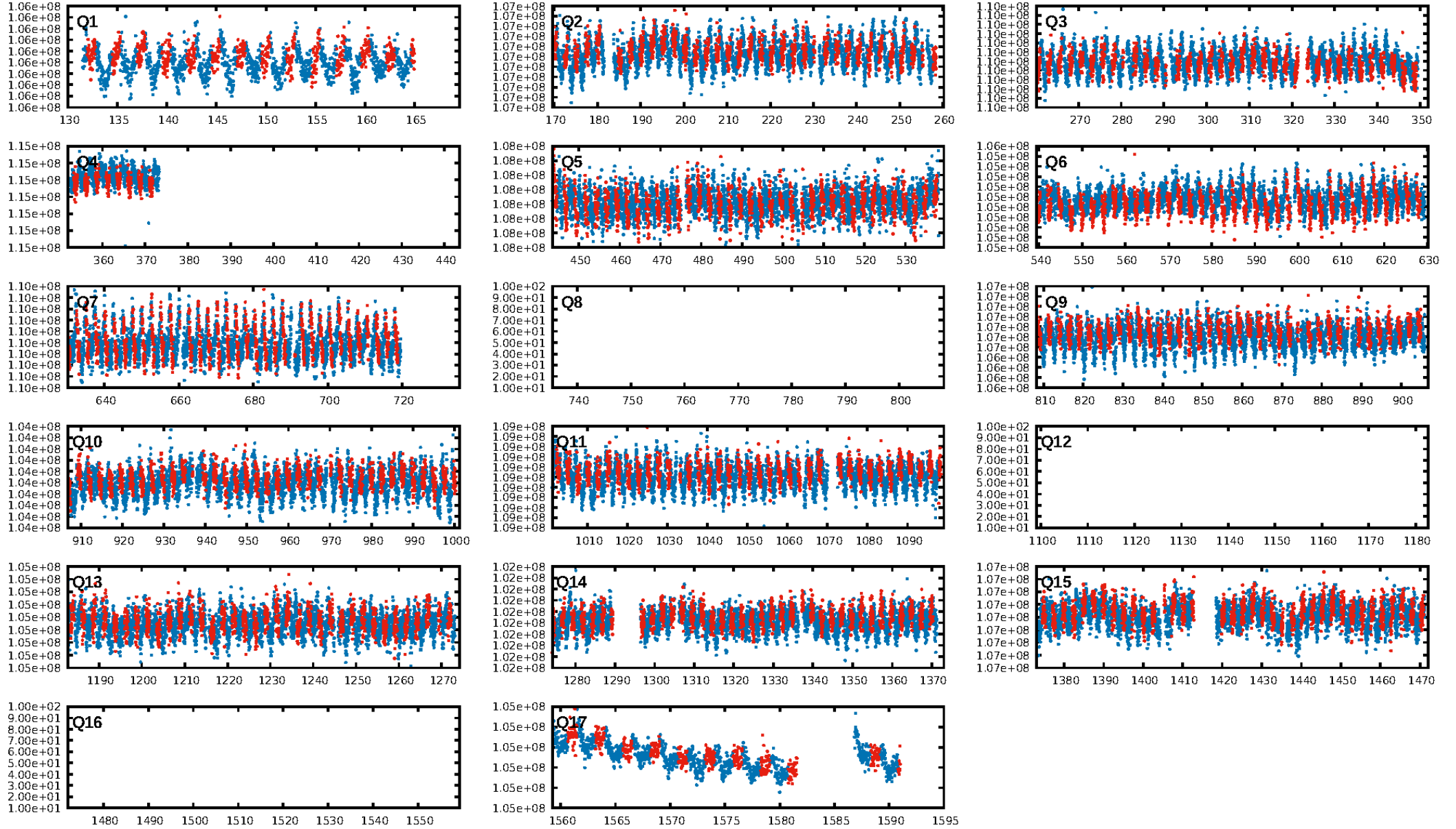
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [279.70σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.75e-11
RollingBand-fgt: 1.00 [397/397]
GhostDiagnostic-chr: 2.393
Centroid-sig: 47.9%
Centroid-so: 1.297 arcsec [0.79σ]
OotOffset-rm: 0.543 arcsec [1.80σ]
KicOffset-rm: 0.508 arcsec [1.60σ]
OotOffset-st: 4/3/1/5 [13]
KicOffset-st: 4/3/1/5 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [14/14]

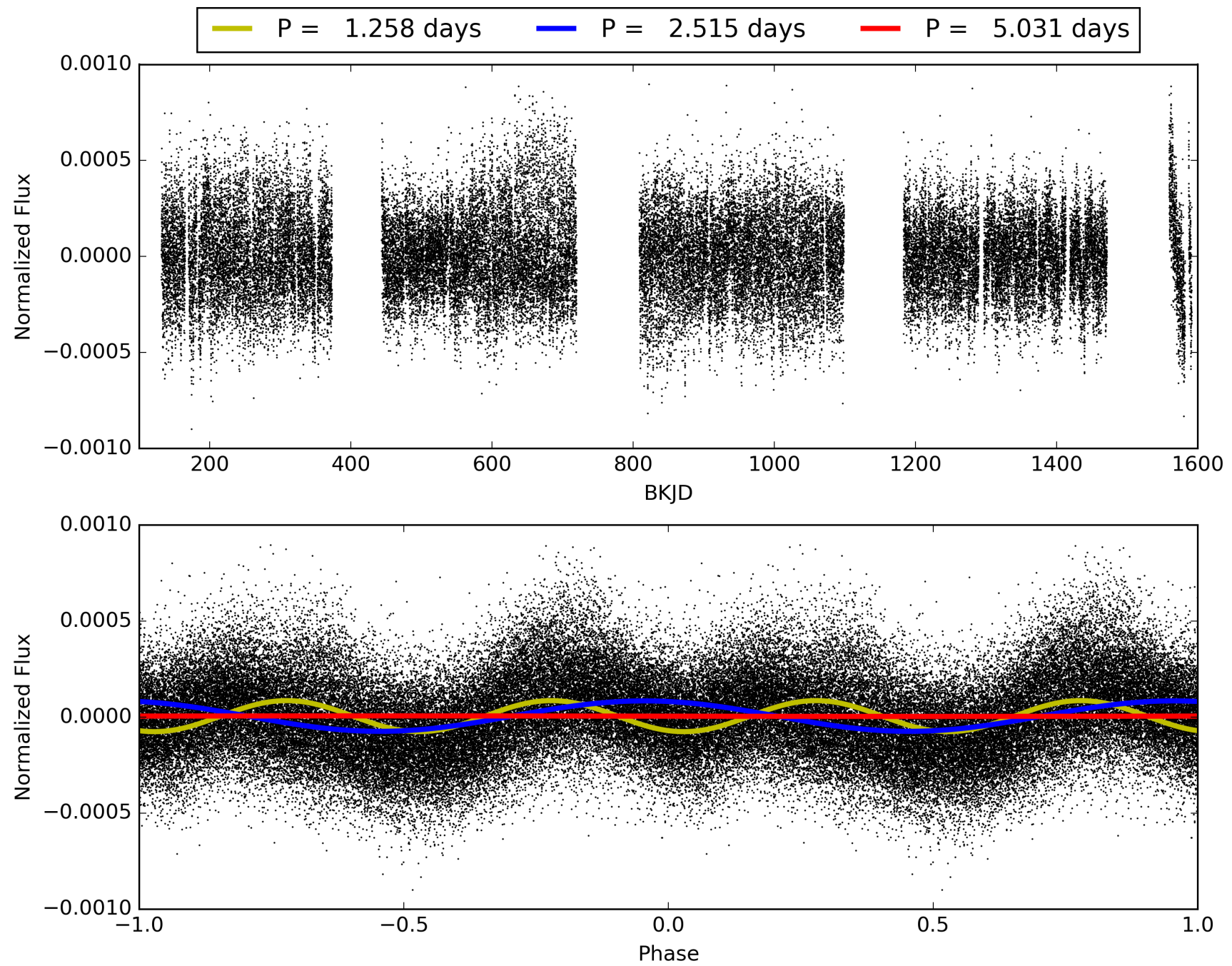
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:04:48 Z

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

TCE 011498764-01, PDC Light Curves

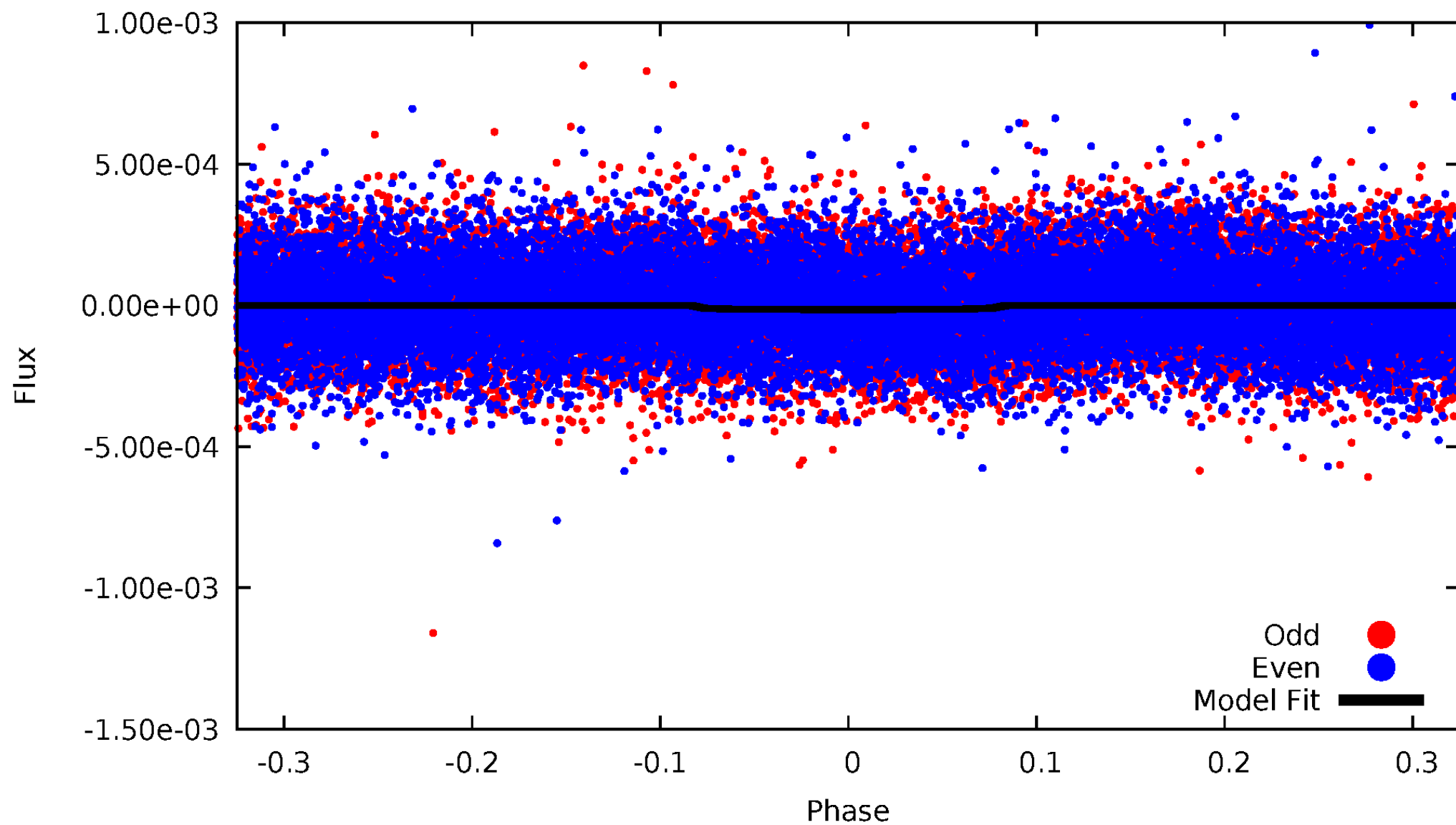


TCE 011498764-01



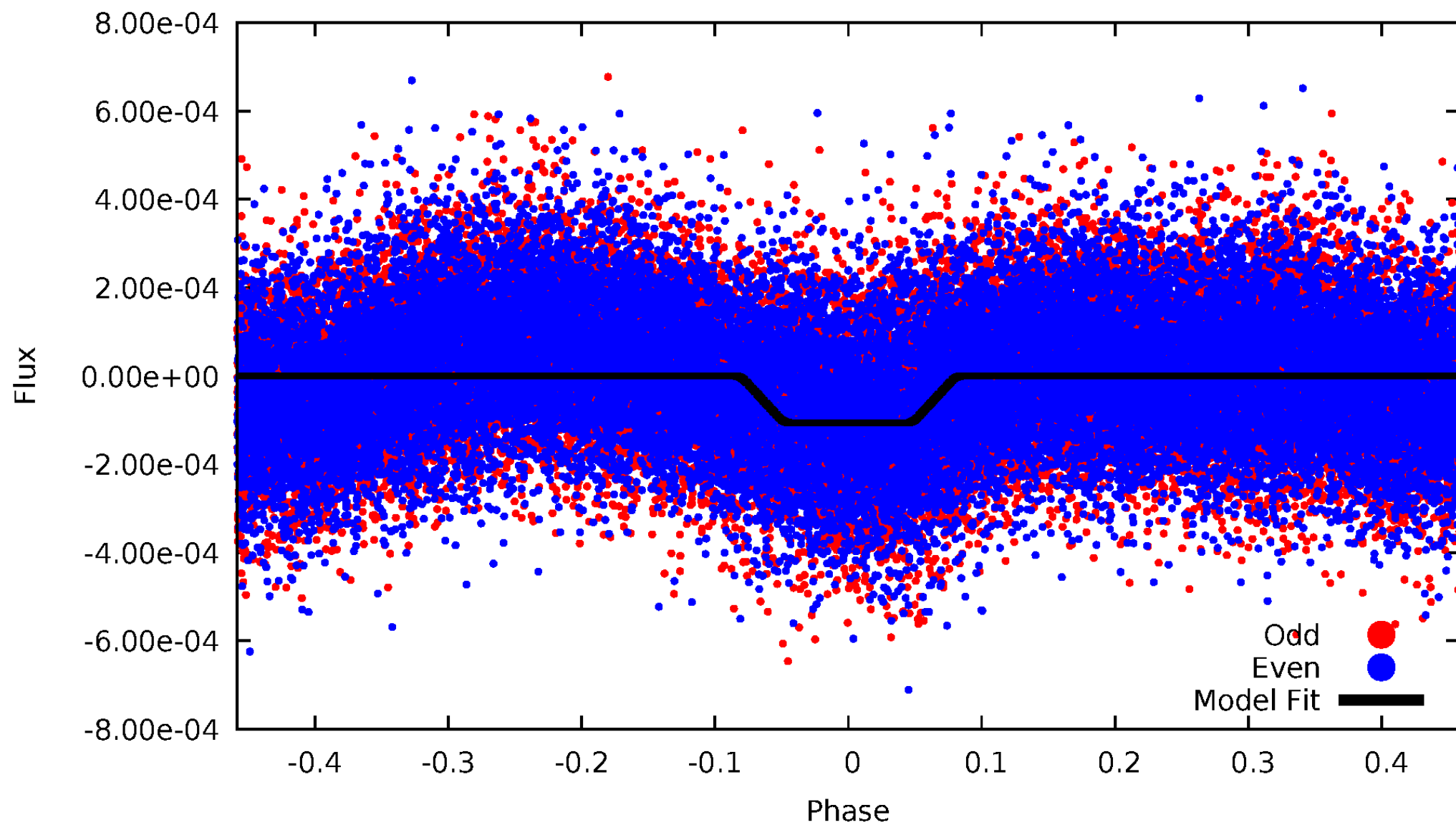
DV Odd/Even

TCE 011498764-01



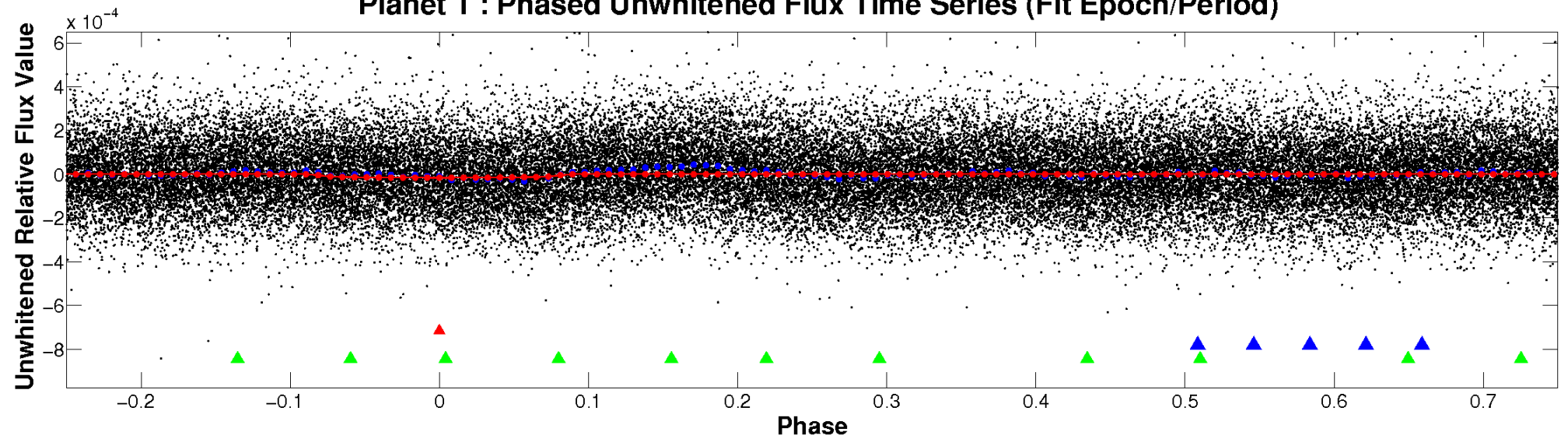
ALT Odd/Even

TCE 011498764-01

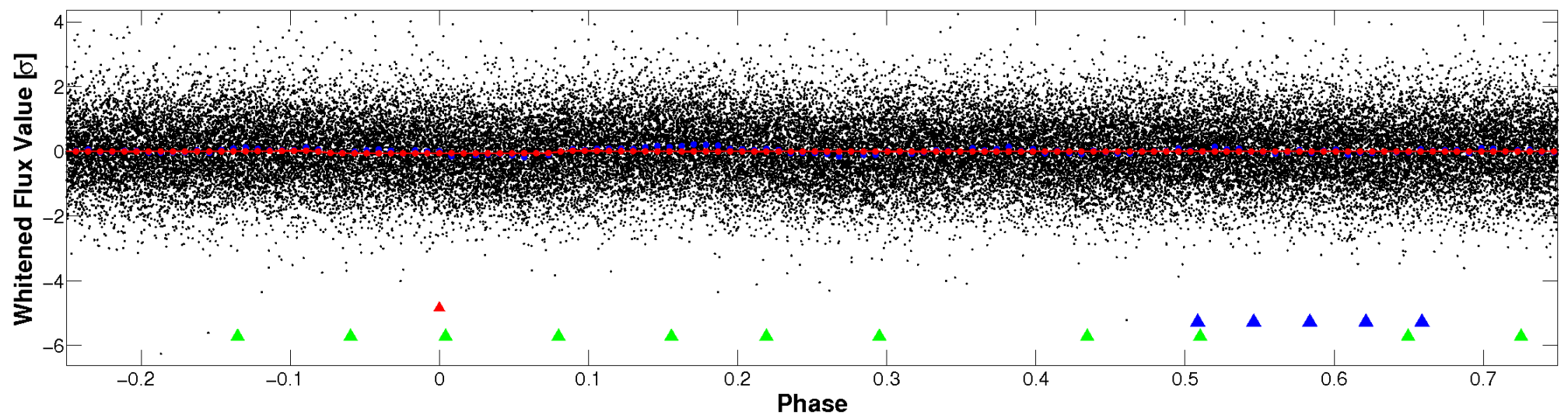


Non-Whitened Vs. Whitened Light Curve

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

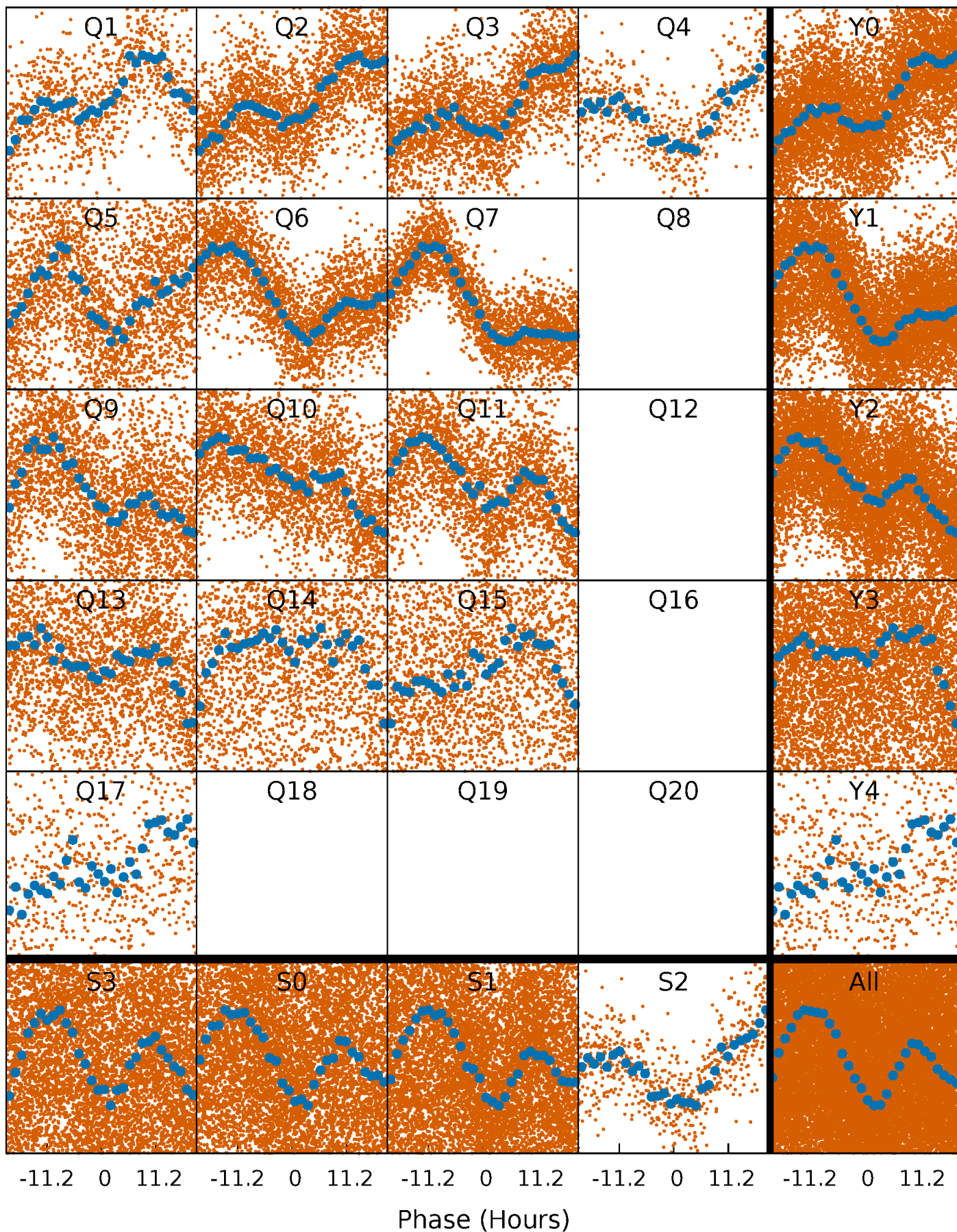


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



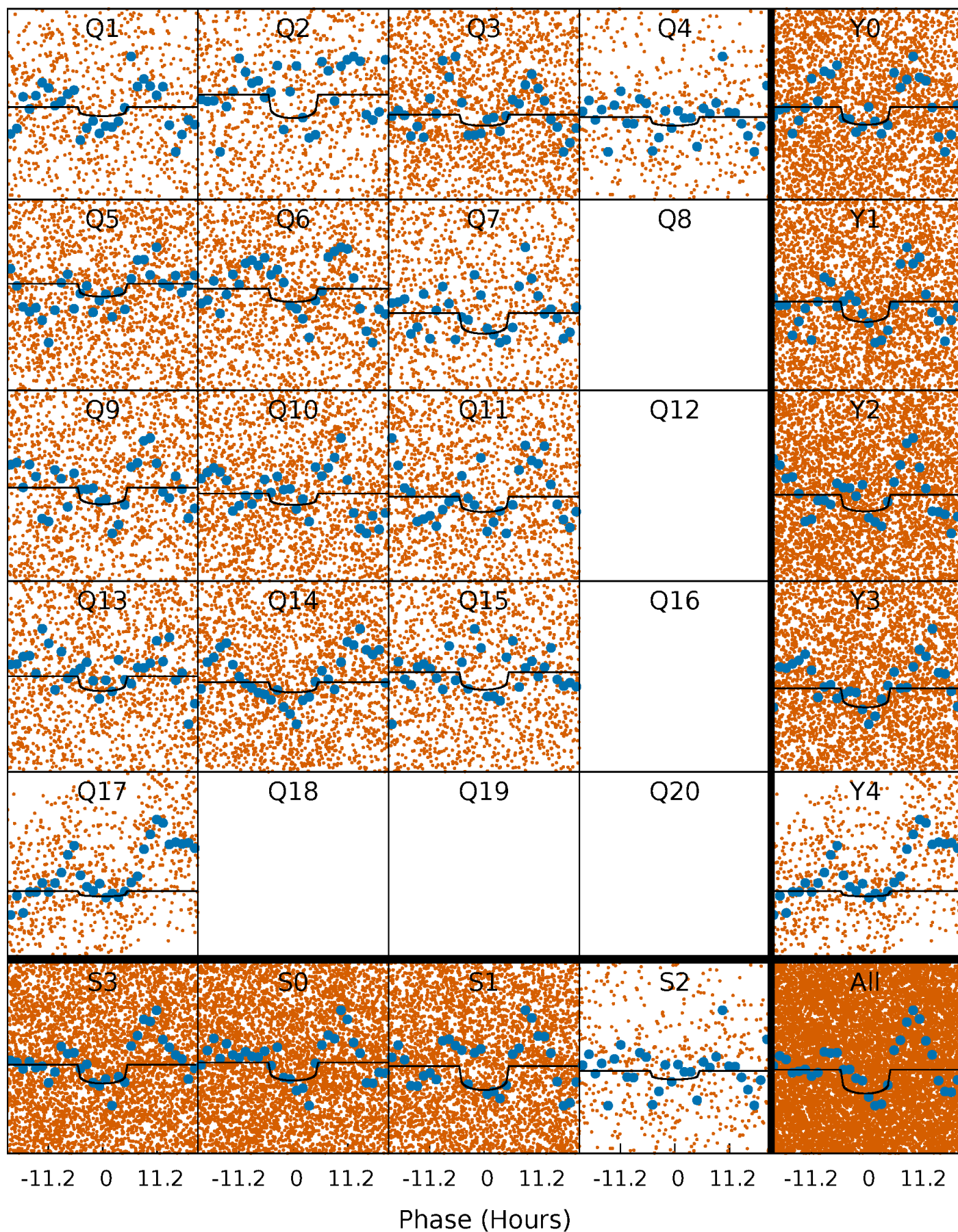
PDC Quarter-Phased Transit Curves

TCE 011498764-01 P= 2.515305 Days $T_0=132.368611$ (BKJD)



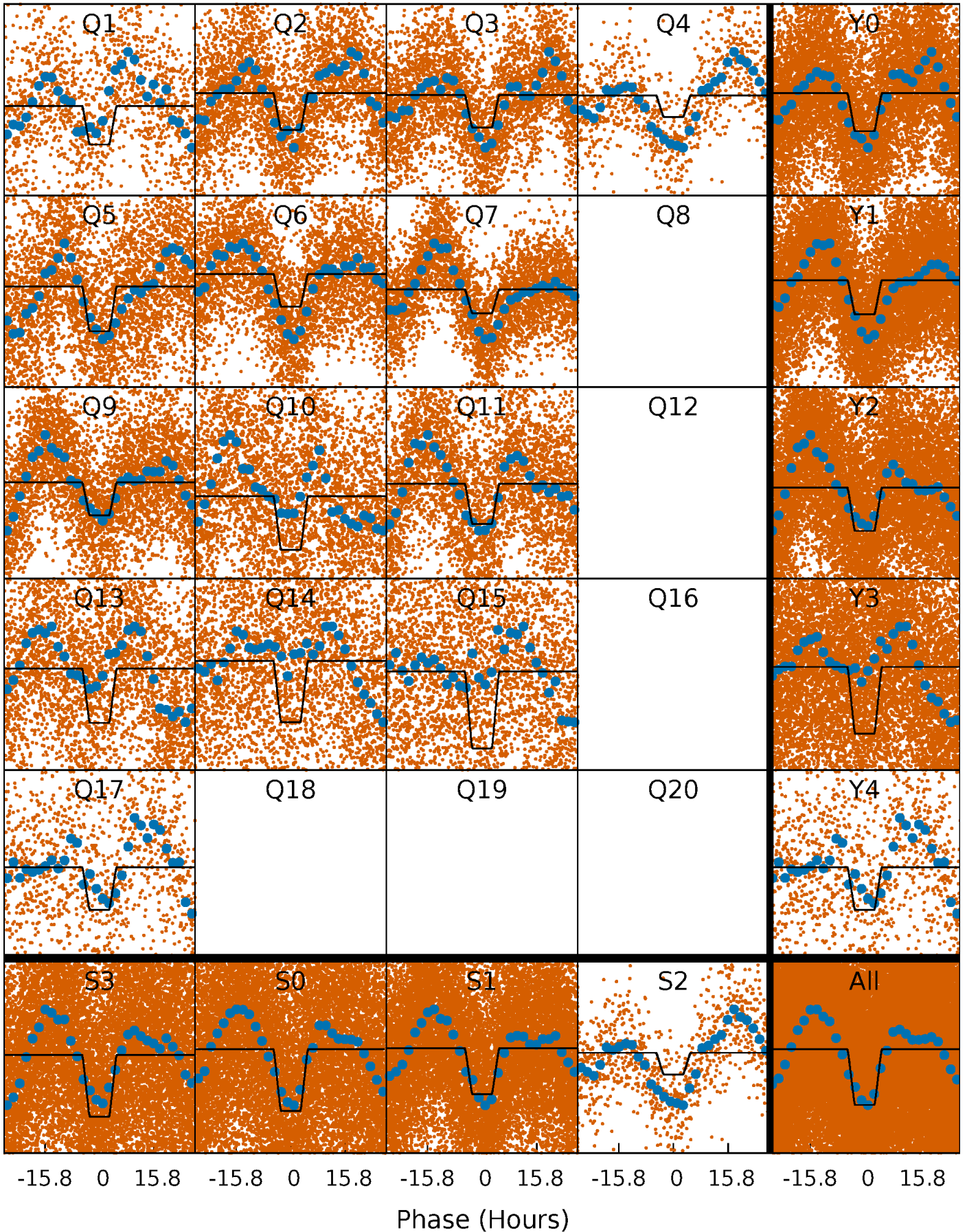
DV Quarter-Phased Transit Curves

TCE 011498764-01 P= 2.515305 Days $T_0=132.368611$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

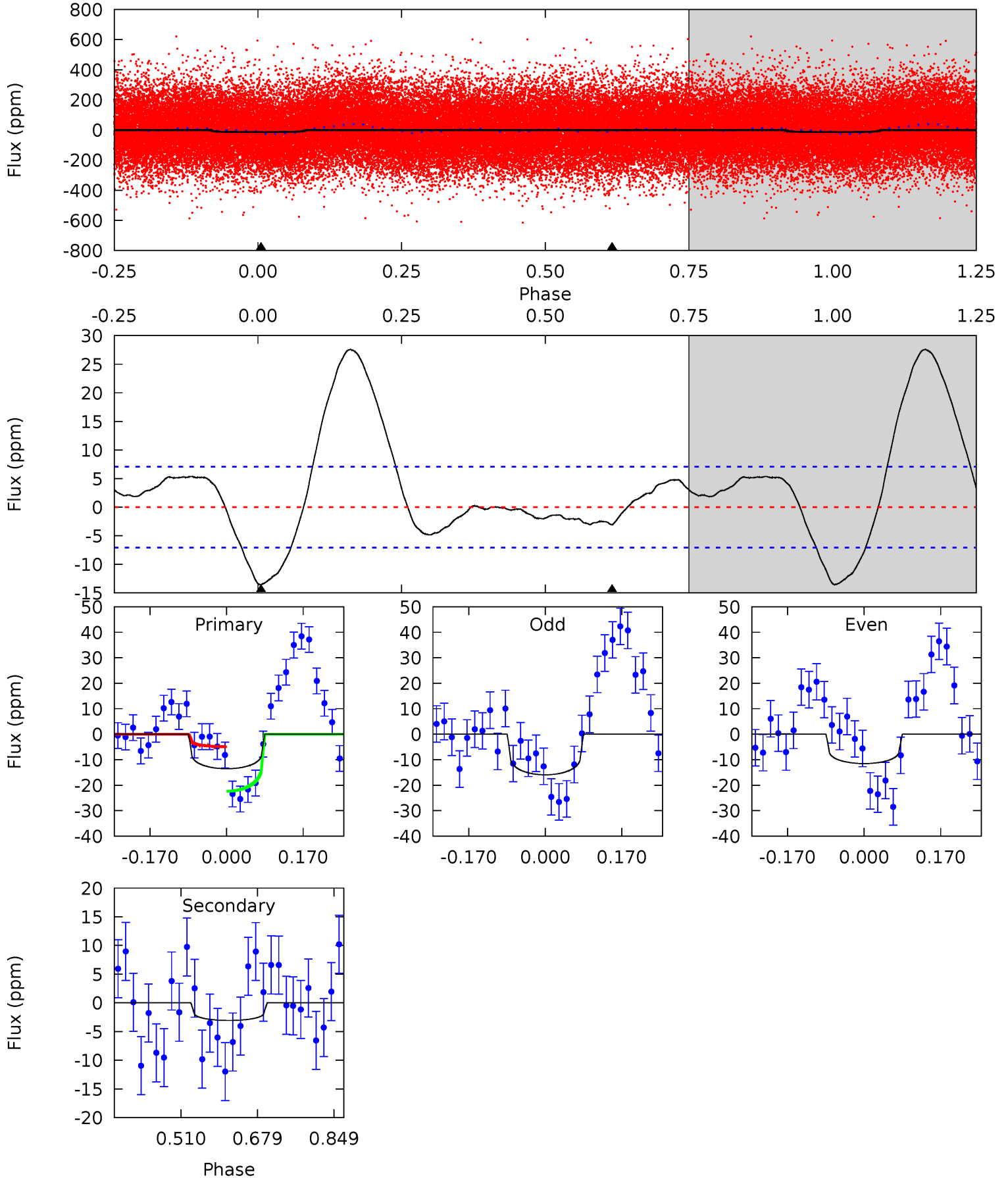
TCE 011498764-01 P= 2.515234 Days $T_0=132.447609$ (BKJD)



DV Model-Shift Uniqueness Test

011498764-01, P = 2.515305 Days, E = 129.853306 Days

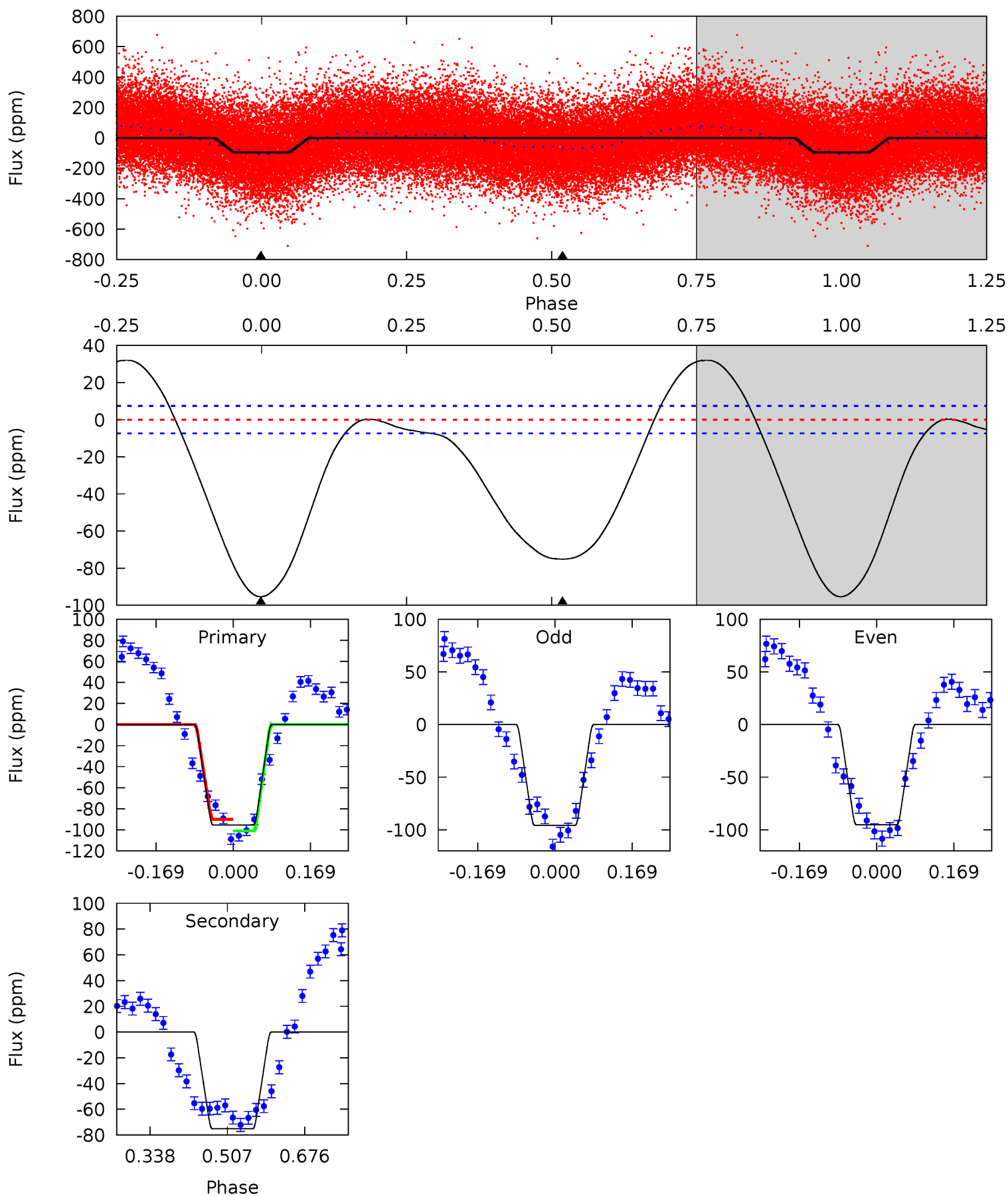
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.53	1.93	0	0	4.45	1.37	5.09	8.53	8.53	1.93	1.93	1.40	0.99	0.67	5.51



Alt Model-Shift Uniqueness Test

011498764-01, P = 2.515234 Days, E = 129.932375 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.5	45.3	0	0	4.45	1.38	9.84	57.5	57.5	45.3	45.3	0.17	1.05	0.25	3.33



Stellar Parameters For KIC 011498764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6572^{+182}_{-228}	$3.743^{+0.480}_{-0.090}$	$-0.140^{+0.250}_{-0.300}$	$2.817^{+0.488}_{-1.465}$	$1.601^{+0.198}_{-0.461}$	$0.101^{+0.548}_{-0.039}$
	+3%/-3%	+13%/-2%	+179%/-214%	+17%/-52%	+12%/-29%	+543%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011498764-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 2	$1.14^{+0.94}_{-0.73}$	3208^{+215}_{-423}	4221^{+2473}_{-1264}	$2.136^{+12.832}_{-1.661}$
Alt.	-75 ± 2	$2.83^{+1.23}_{-1.06}$	3193^{+240}_{-385}	5938^{+1397}_{-760}	$9.017^{+13.833}_{-4.492}$

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

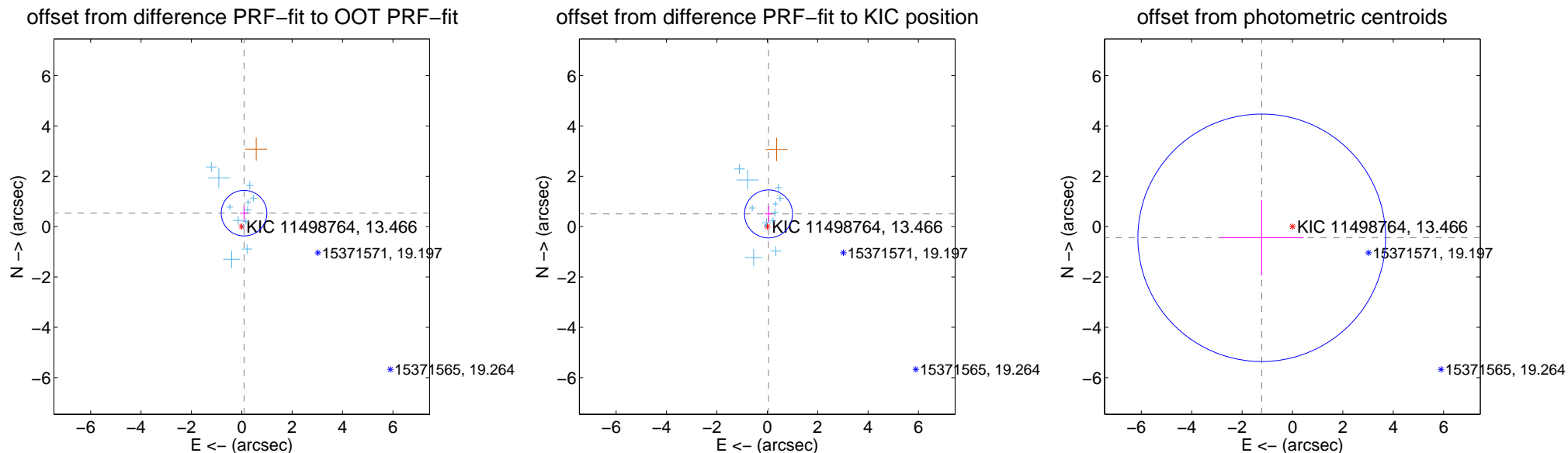
DV Centroid Data

Supplemental centroid analysis for 011498764-01. Kepler magnitude: 13.47. Transit SNR 5.23

There are 12 quarters with good PRF difference image offsets

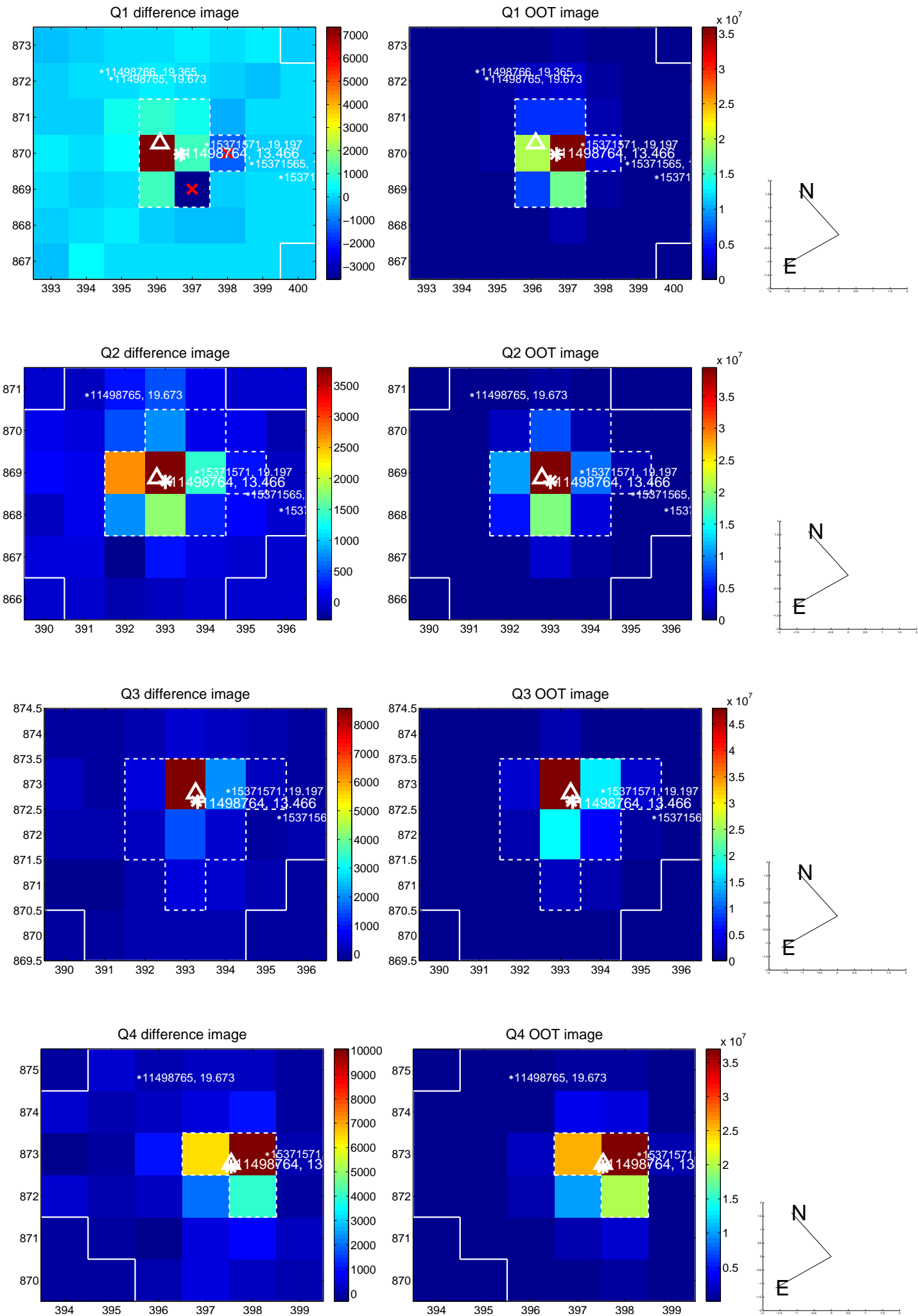
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.543 ± 0.302	1.80	-0.090 ± 0.155	0.535 ± 0.310
PRF-fit source offset from KIC position	0.508 ± 0.318	1.60	-0.050 ± 0.156	0.505 ± 0.319
photometric centroid source offset	1.30 ± 1.64	0.79	1.22 ± 1.66	-0.44 ± 1.49

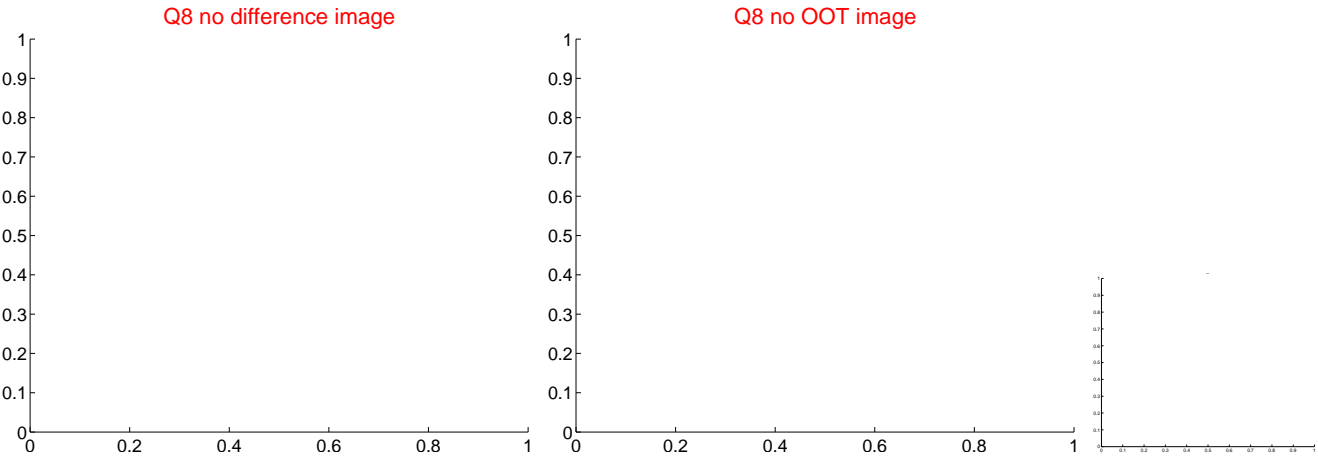
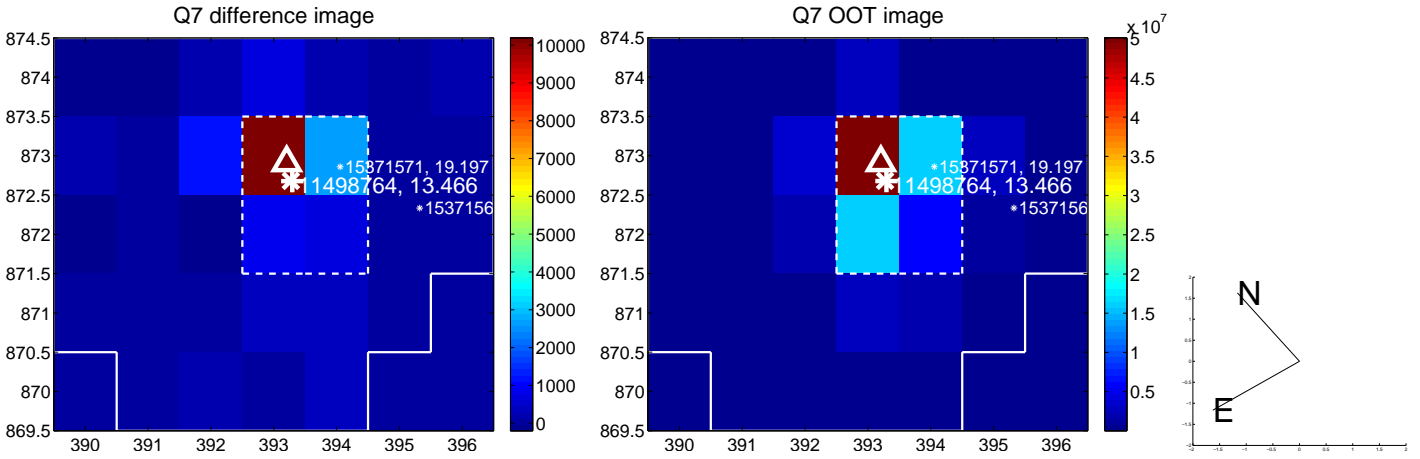
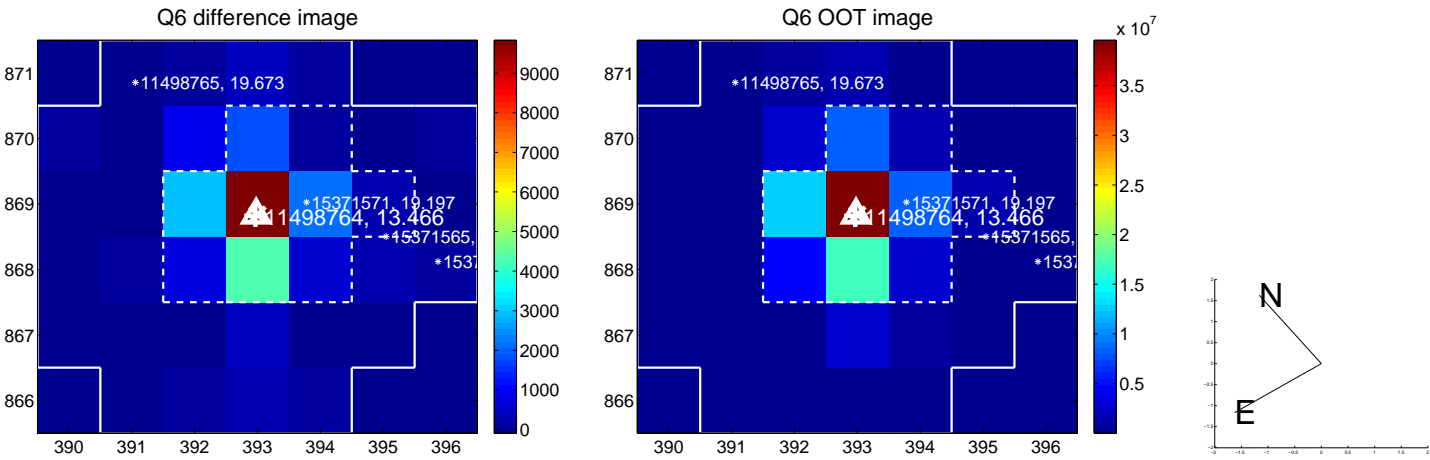
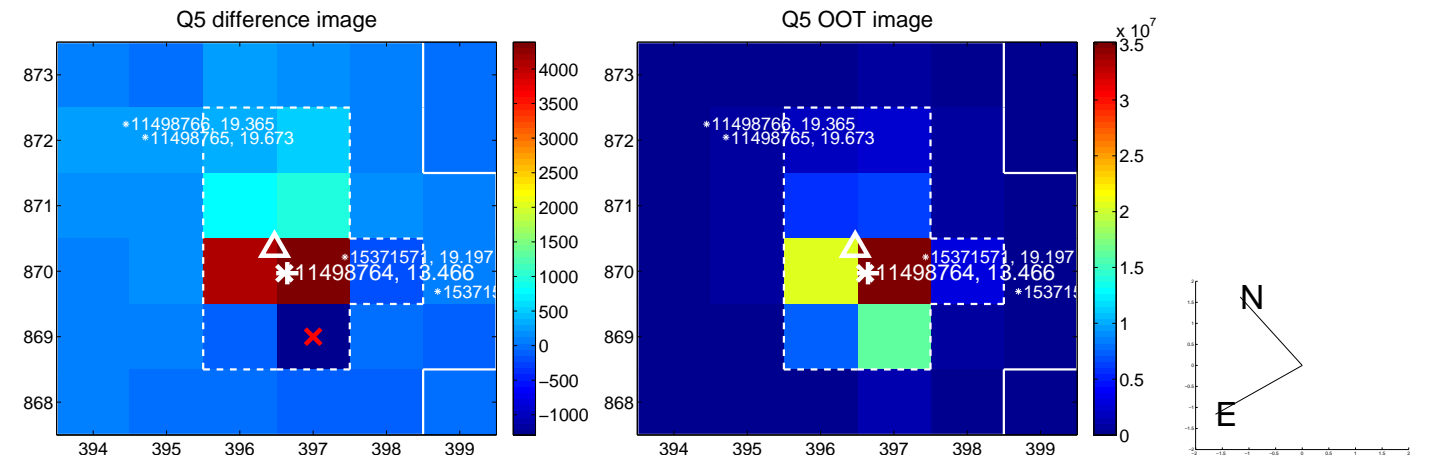


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

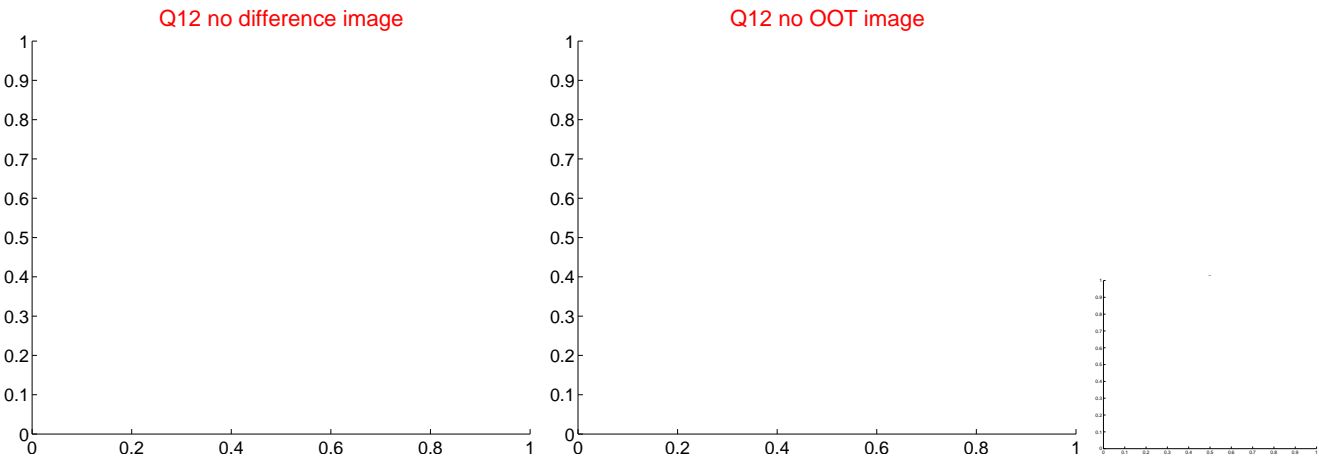
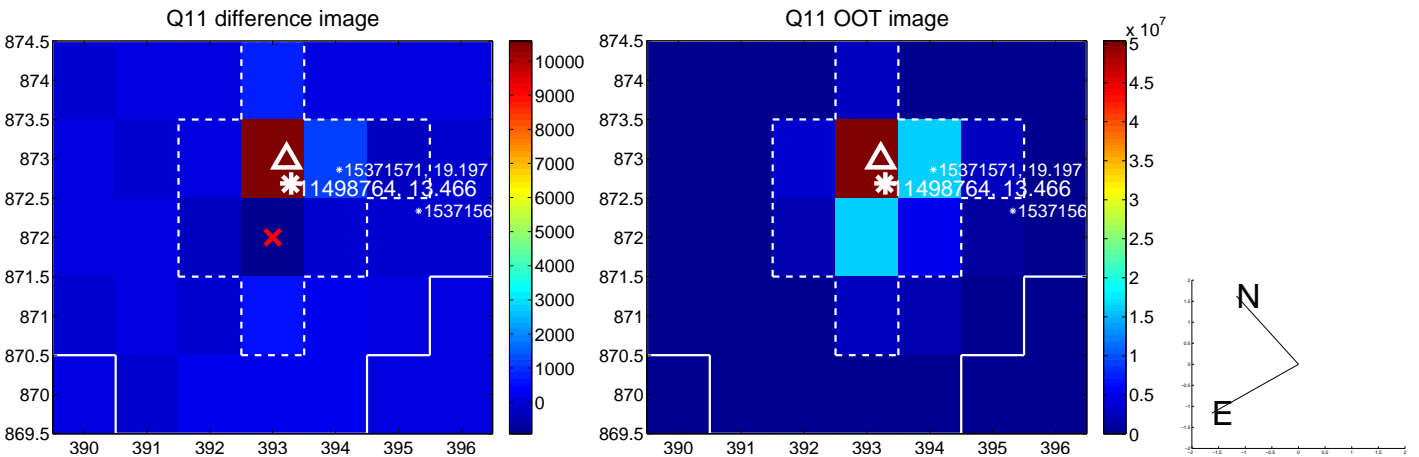
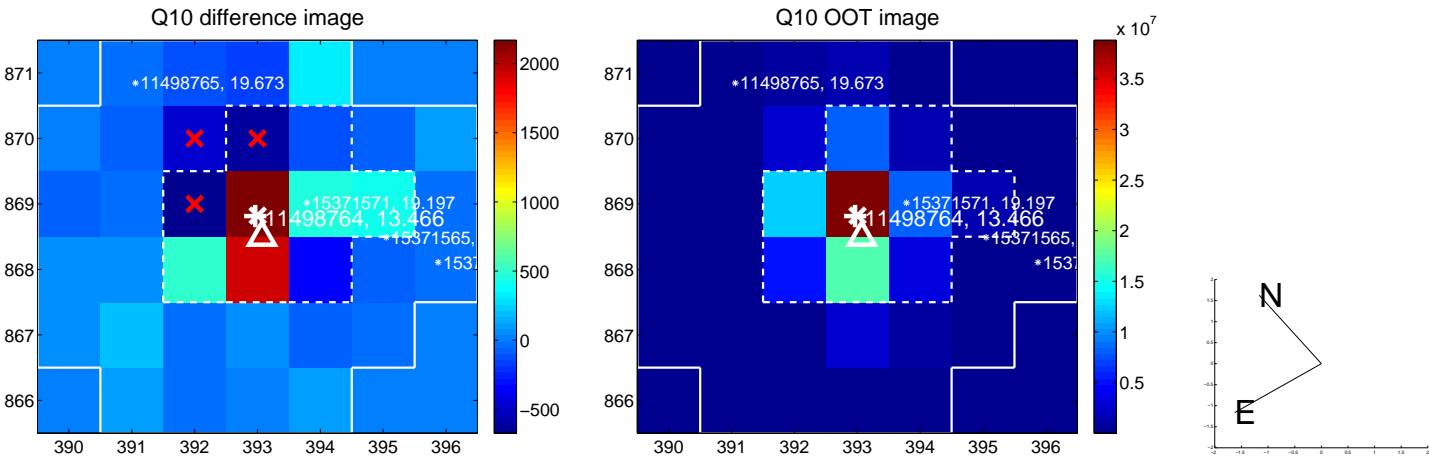
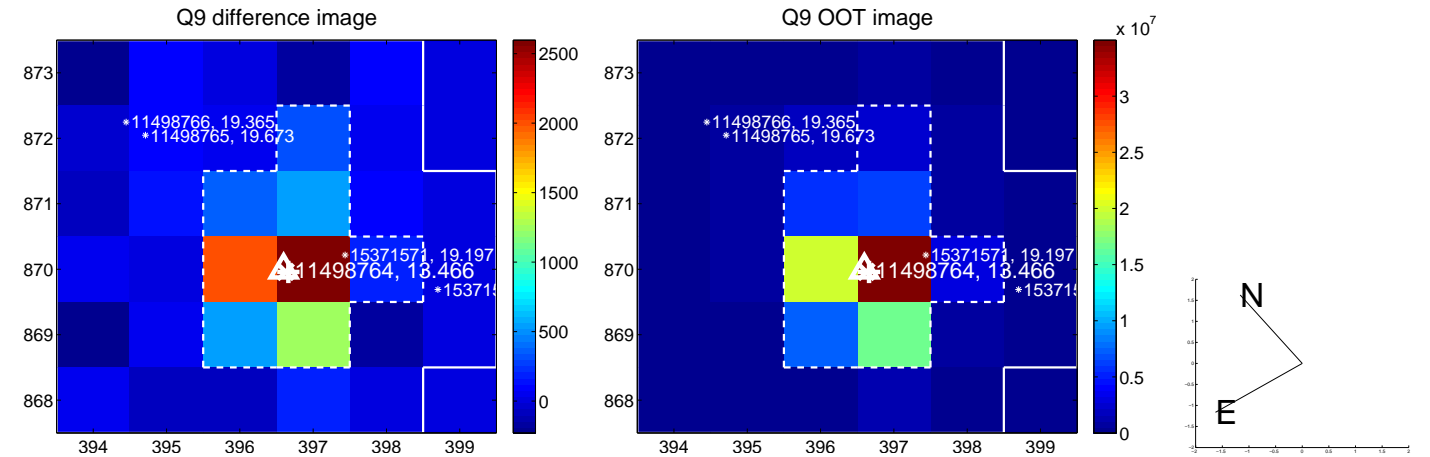
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



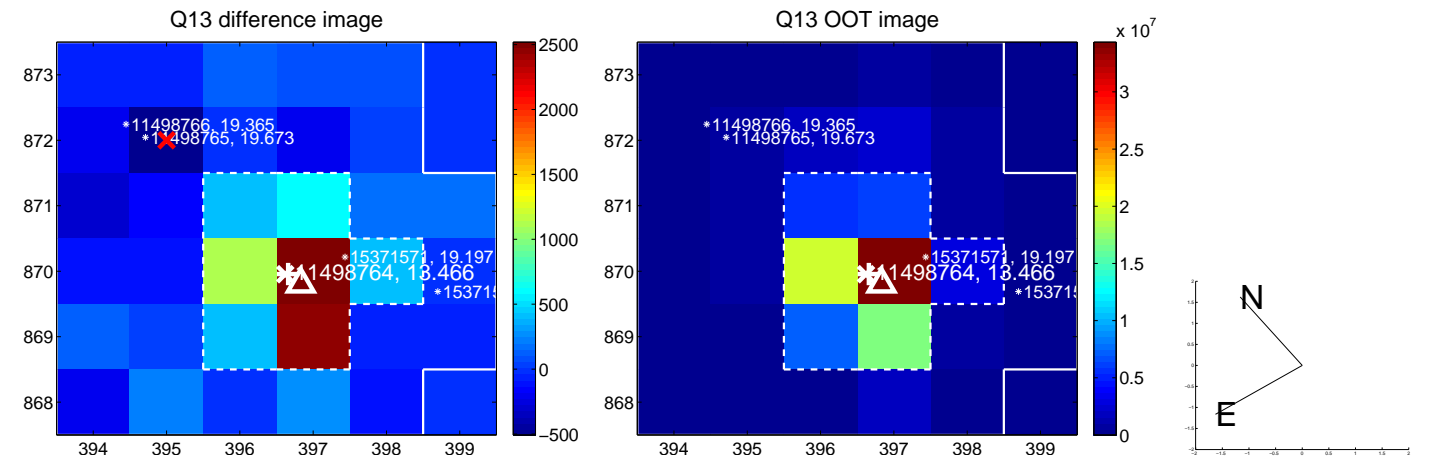
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



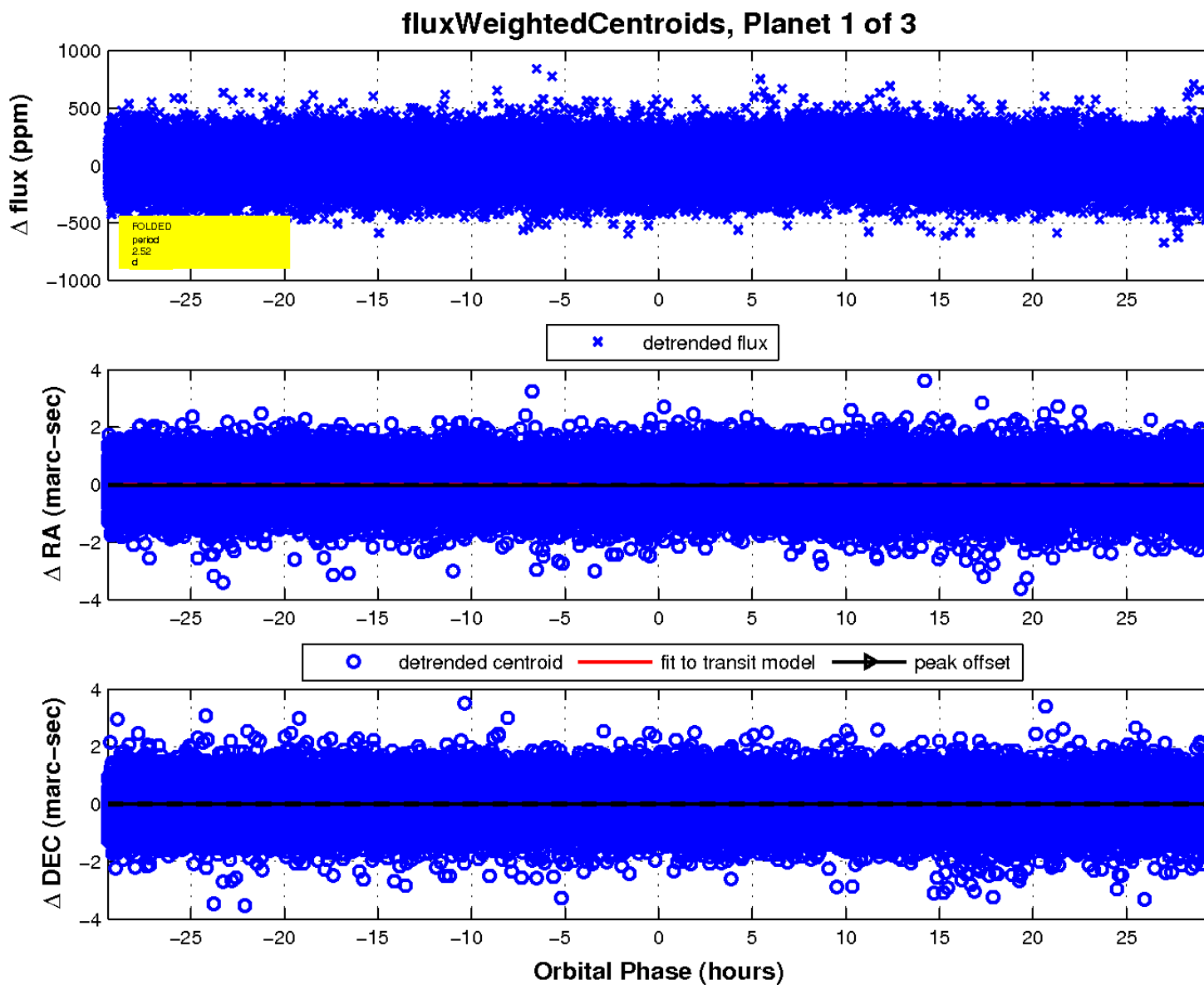
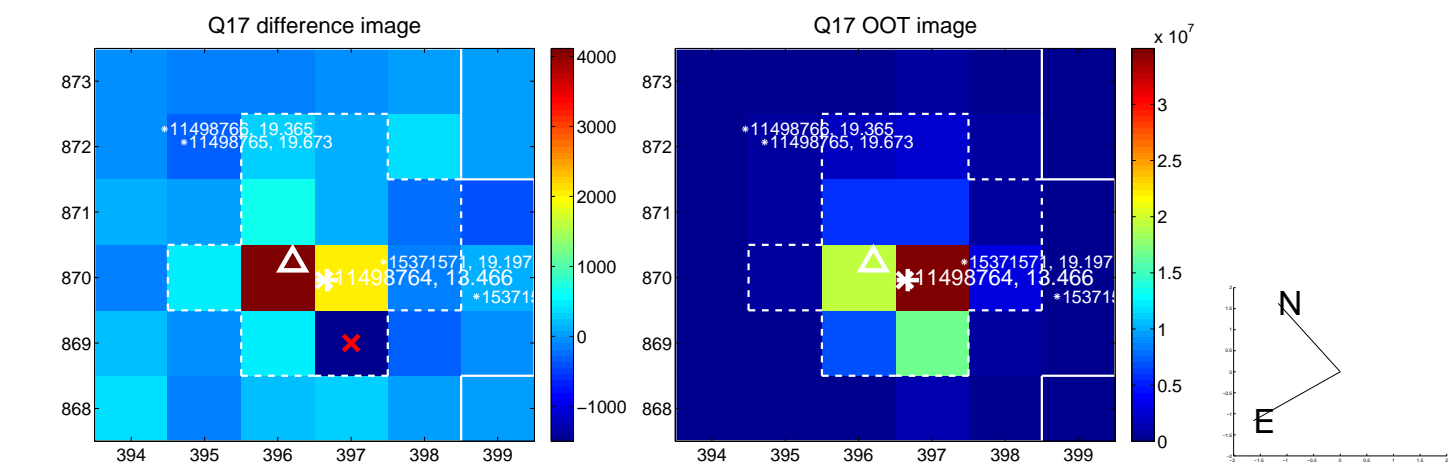
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

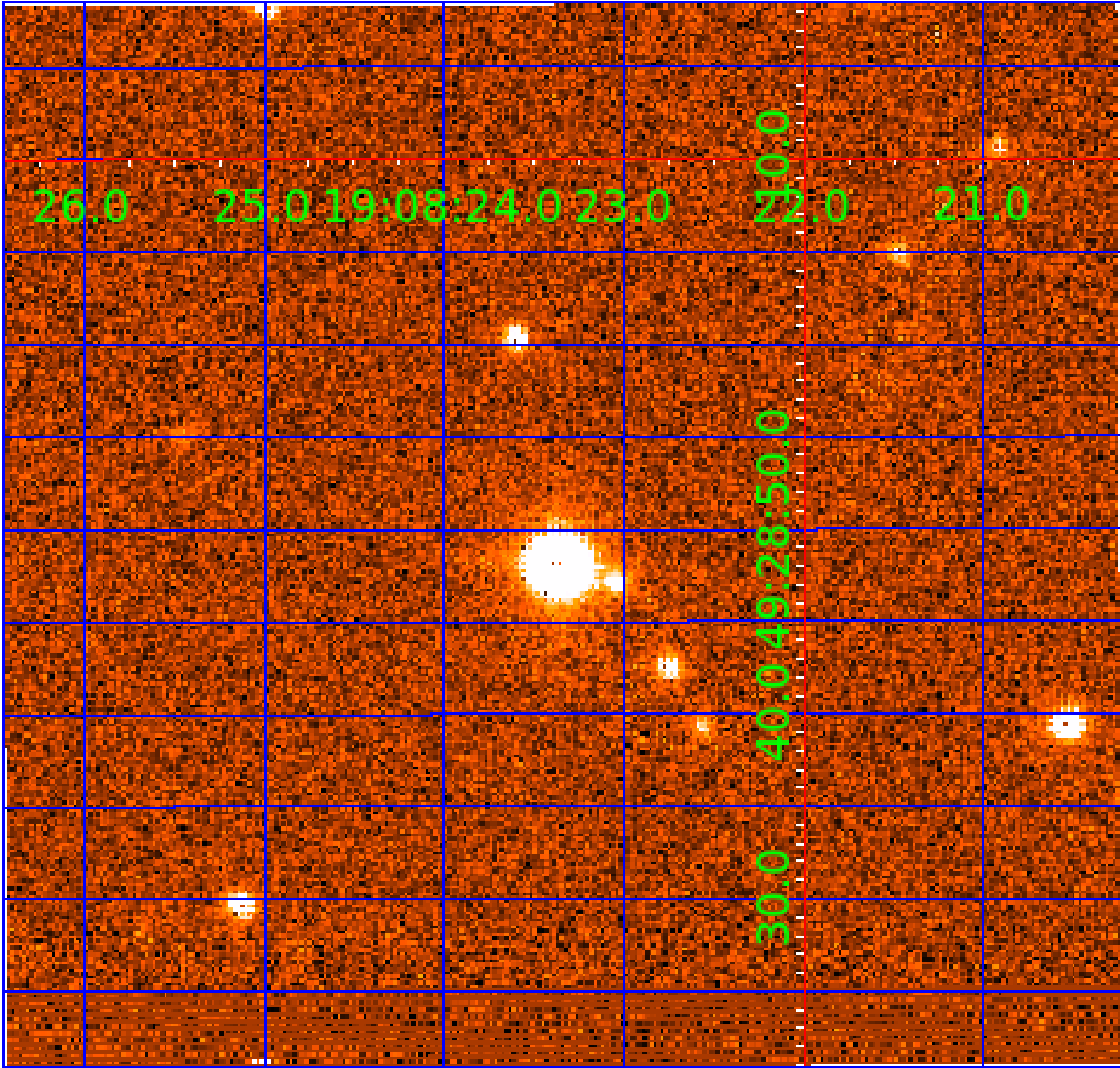


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011498764

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})
011498764-01	OBS	No	2.515305	132.368611	15.4	9.808	8.1	5.2	2.82	6572	1.12	7391.88
011498764-02	OBS	No	311.992406	332.356826	176.6	15.153	8.4	7.5	2.82	6572	4.10	11.95
011498764-03	OBS	No	122.708796	248.464081	287.2	3.188	7.1	8.0	2.82	6572	5.31	41.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011498764-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011498764-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011498764-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

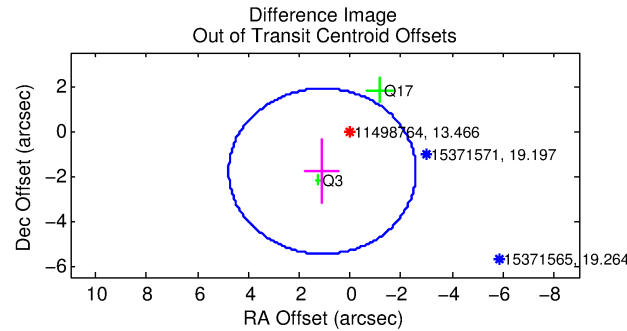
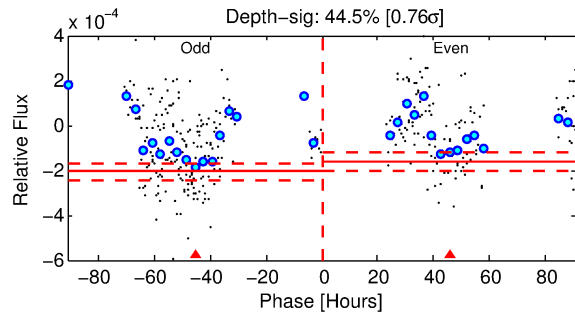
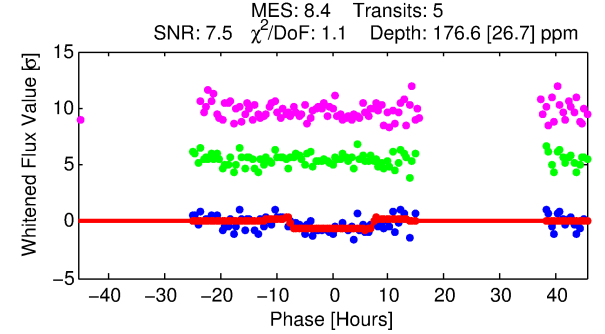
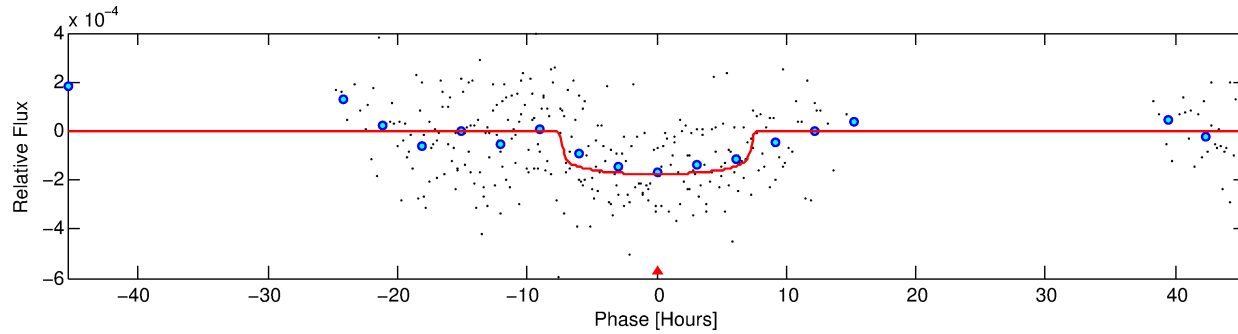
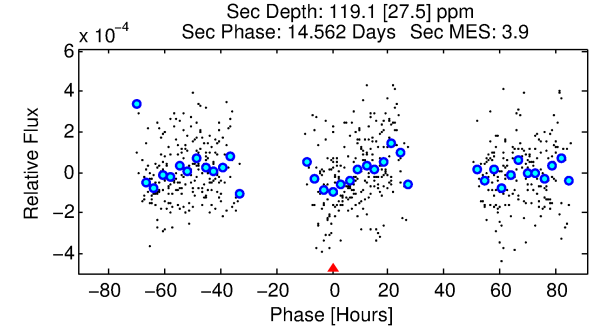
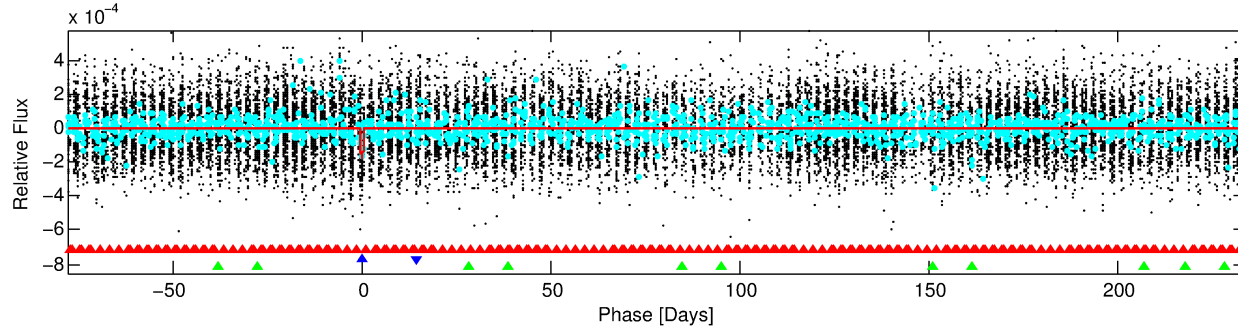
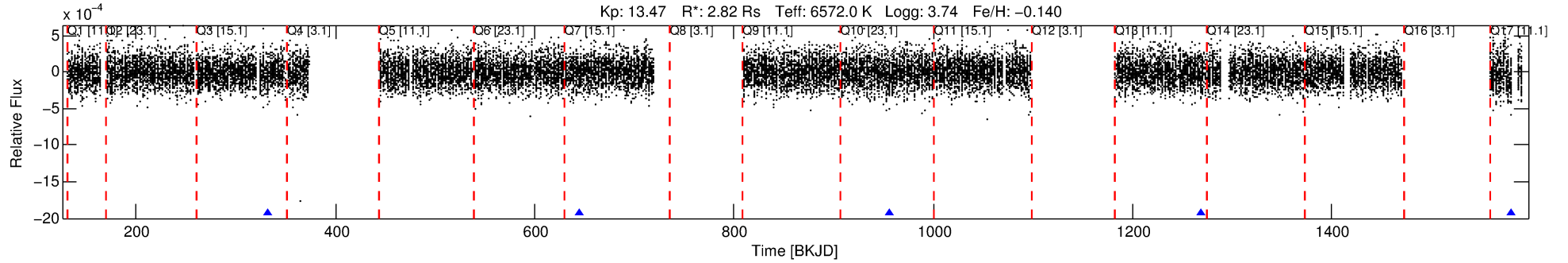
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011498764-02

No Significant Match Found

DV One-Page Summary

KIC: 11498764 Candidate: 2 of 3 Period: 311.992 d



DV Fit Results:

Period = 311.99241 [0.00772] d
Epoch = 332.3568 [0.0167] BKJD
Rp/R* = 0.0134 [0.0030]
a/R* = 101.53 [120.03]
b = 0.78 [0.59]
Seff = 11.95 [9.87]
Teq = 474 [98] K
Rp = 4.10 [2.33] Re
a = 1.0535 [0.5330] AU
Ag = 4319.27 [4153.39] [1.04σ]
Teffp = 5942 [787] K [6.89σ]

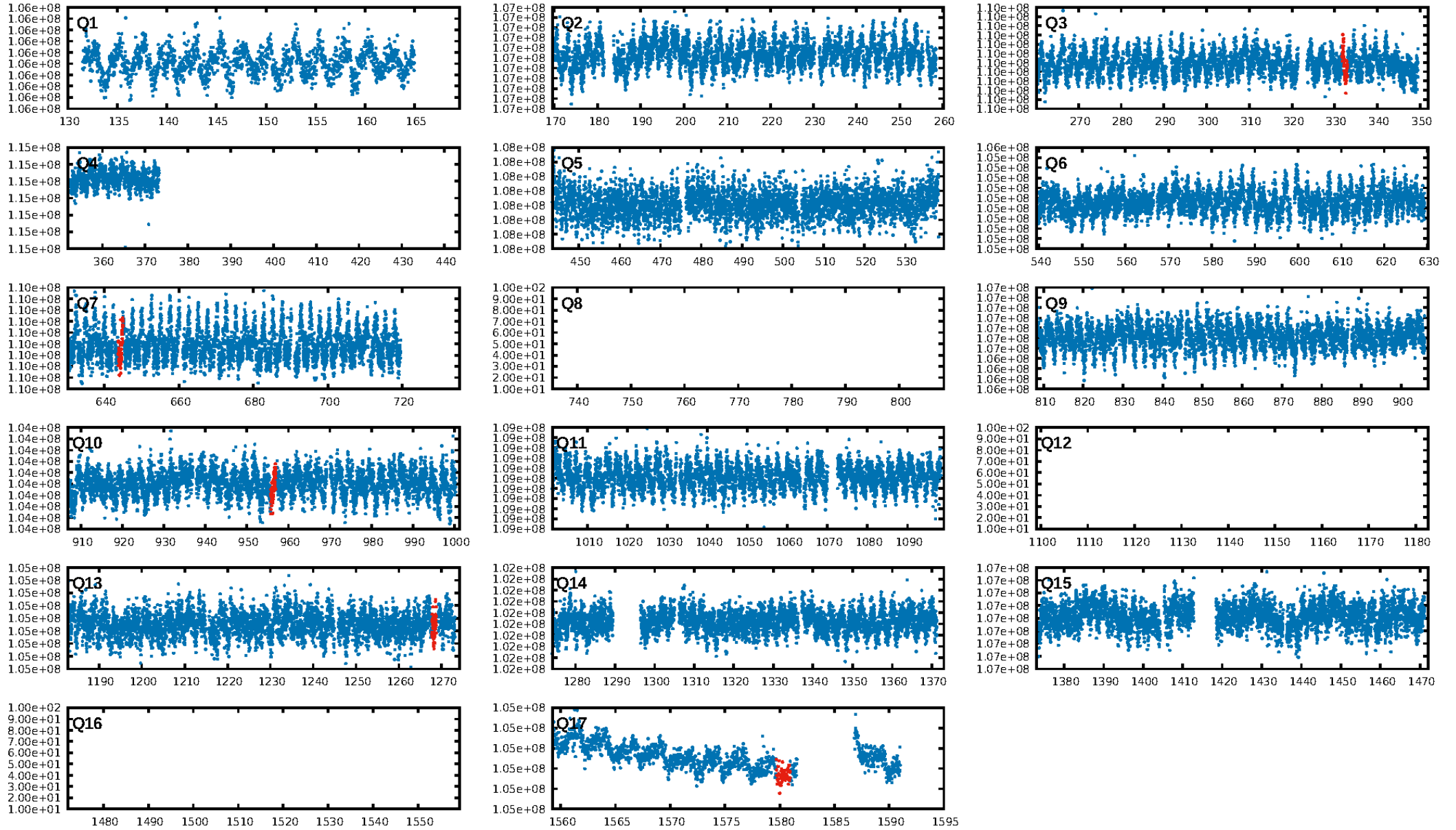
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [293.37σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 37.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.72e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -212.1
Centroid-sig: 99.6%
Centroid-so: 0.161 arcsec [0.14σ]
OotOffset-rm: 2.095 arcsec [1.71σ]
KicOffset-rm: 2.192 arcsec [0.96σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

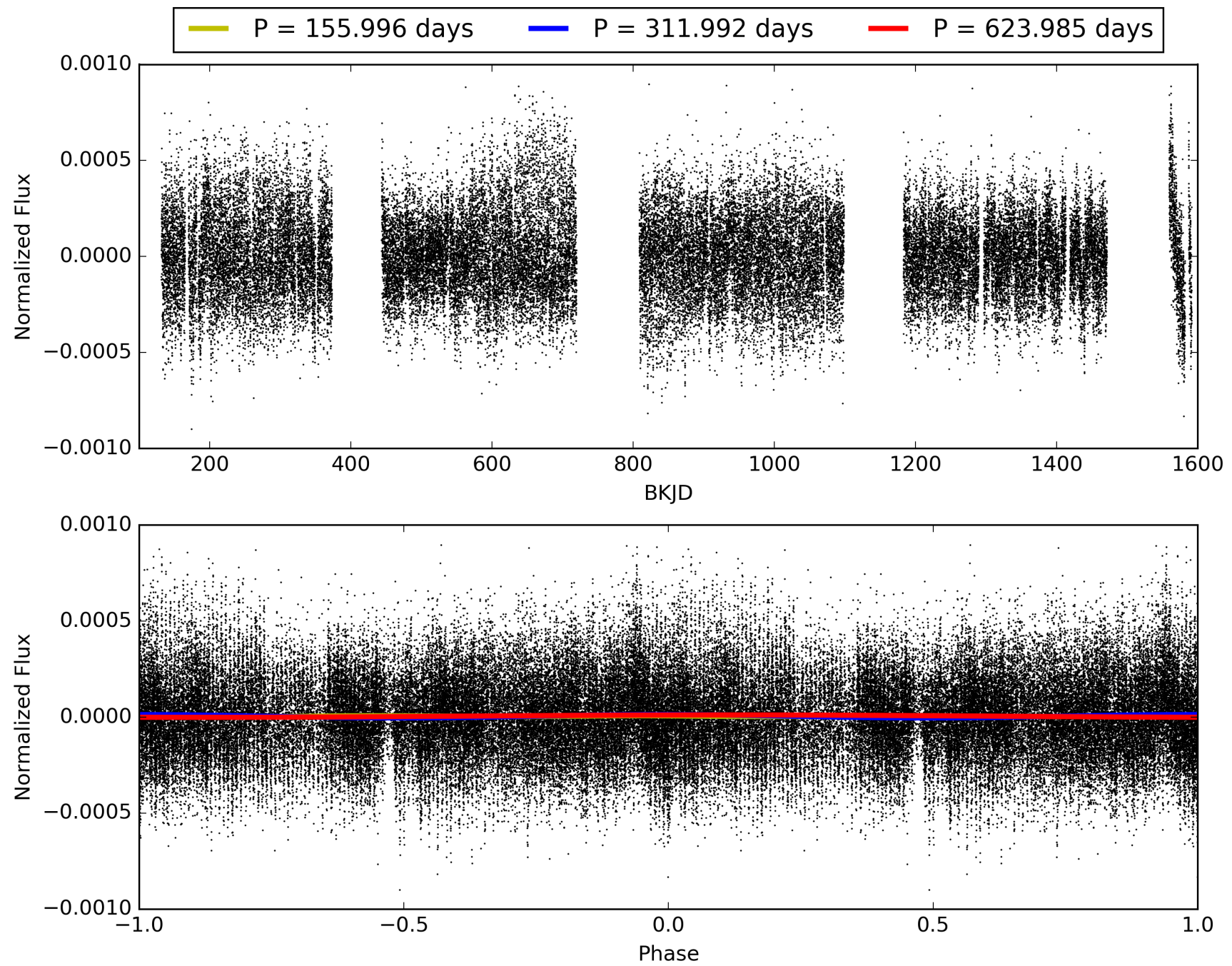
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:04:58 Z

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

TCE 011498764-02, PDC Light Curves

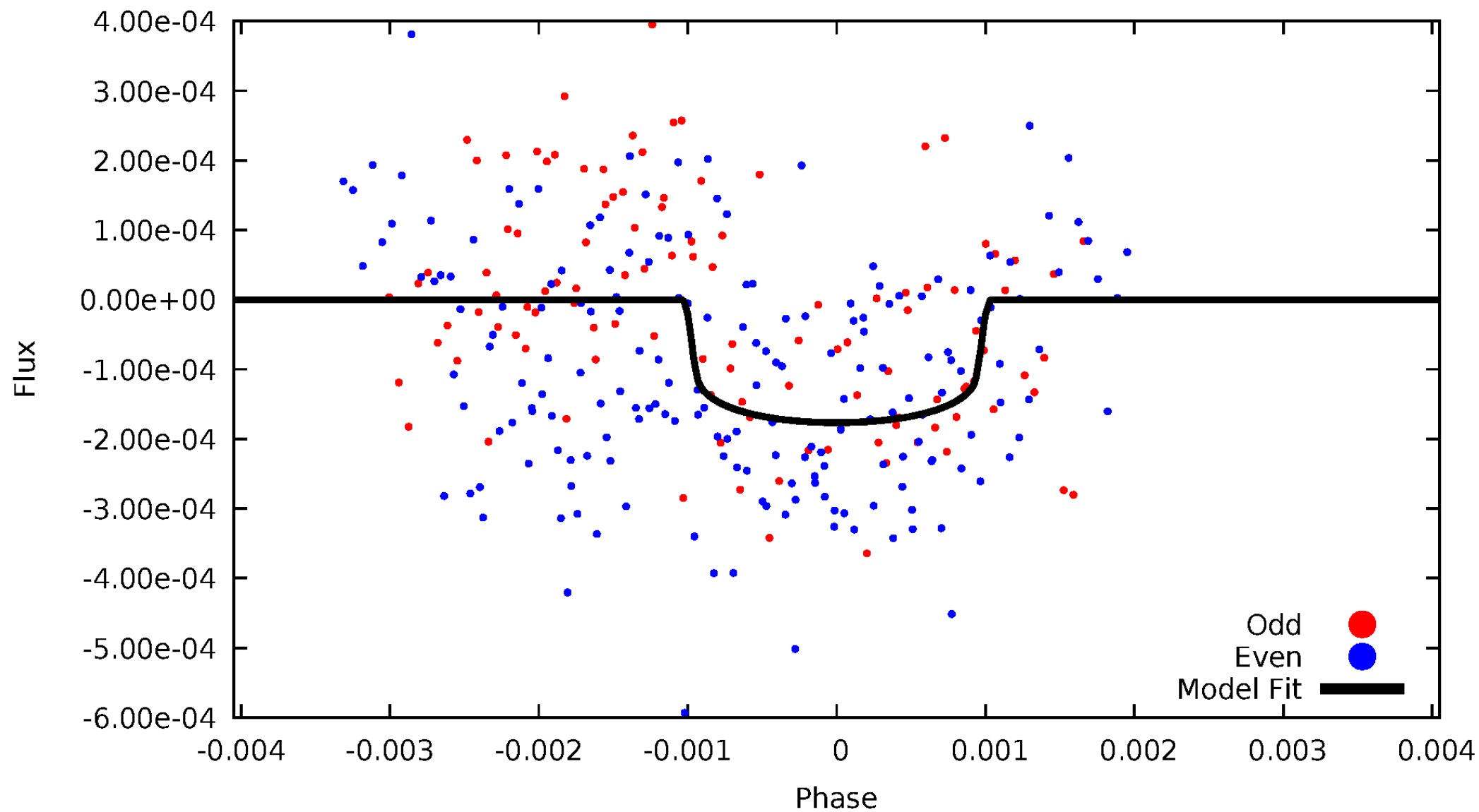


TCE 011498764-02



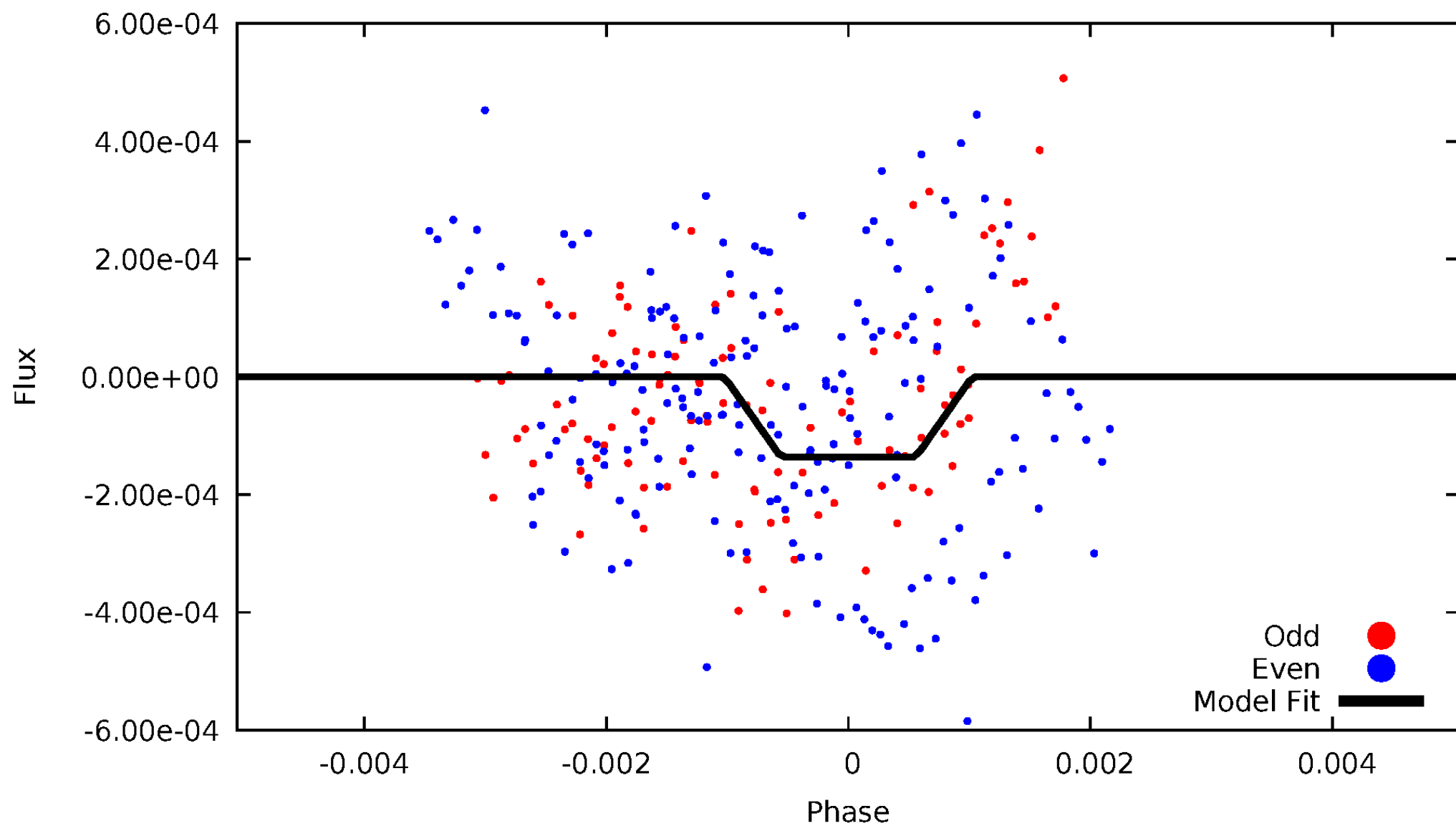
DV Odd/Even

TCE 011498764-02



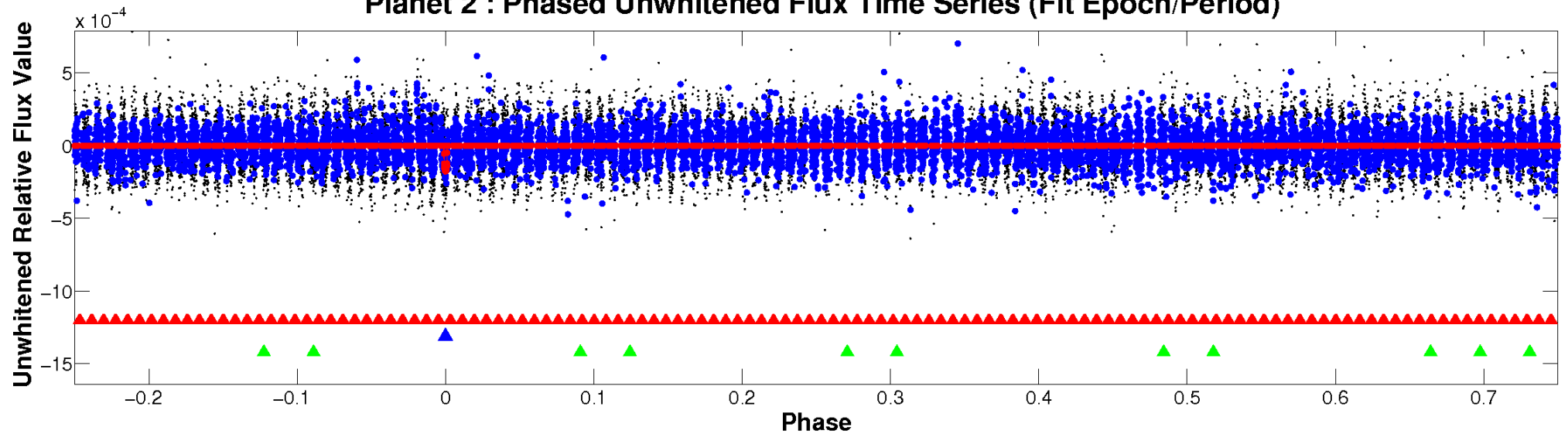
ALT Odd/Even

TCE 011498764-02

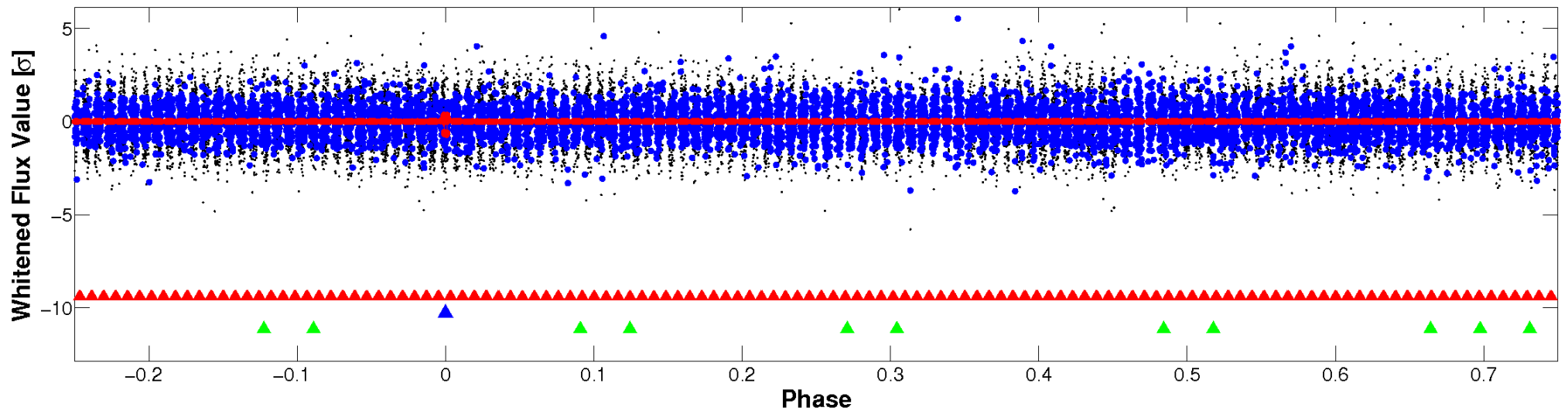


Non-Whitened Vs. Whitened Light Curve

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



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



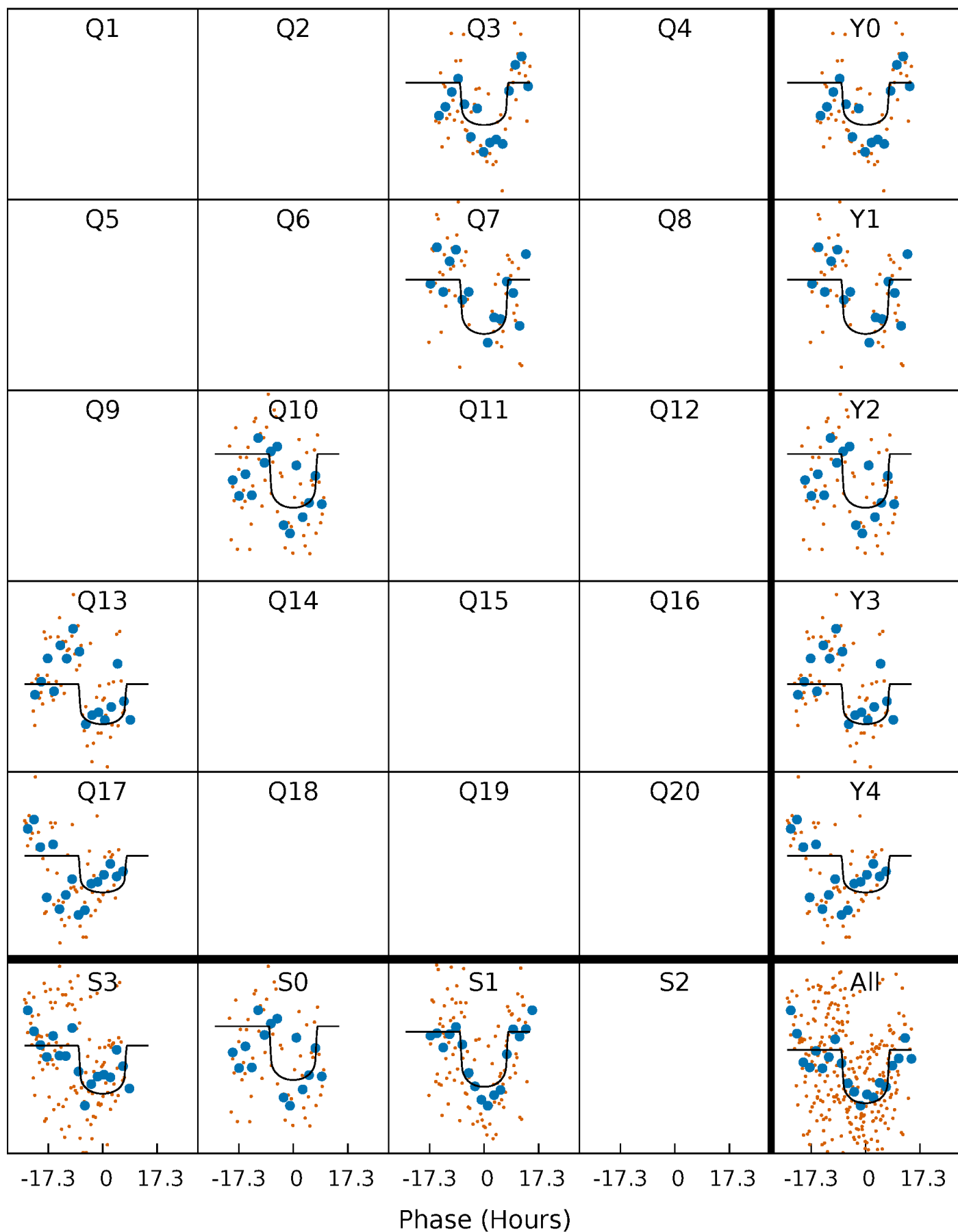
PDC Quarter-Phased Transit Curves

TCE 011498764-02 $P=311.992406$ Days $T_0=332.356826$ (BKJD)



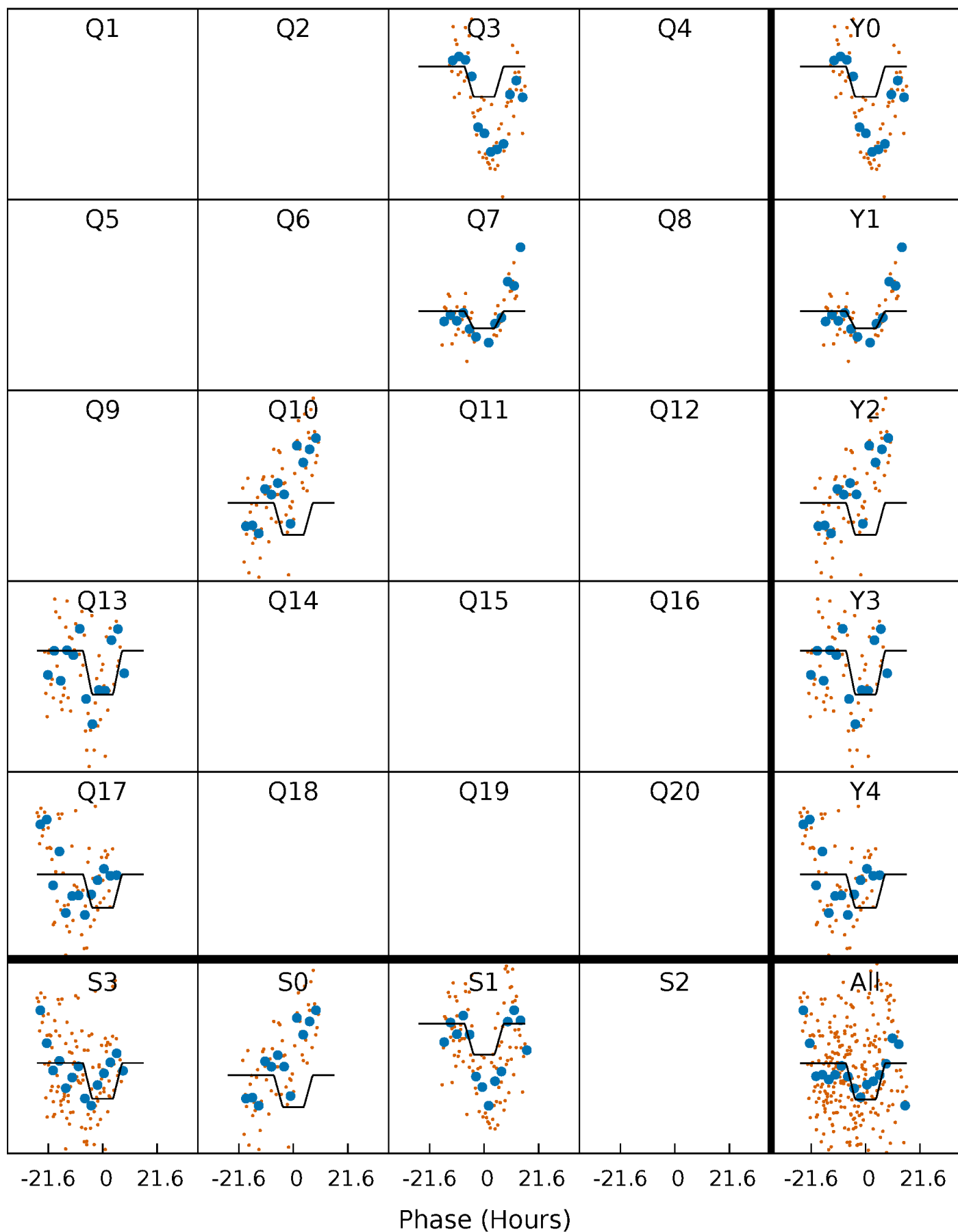
DV Quarter-Phased Transit Curves

TCE 011498764-02 P=311.992406 Days $T_0=332.356826$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

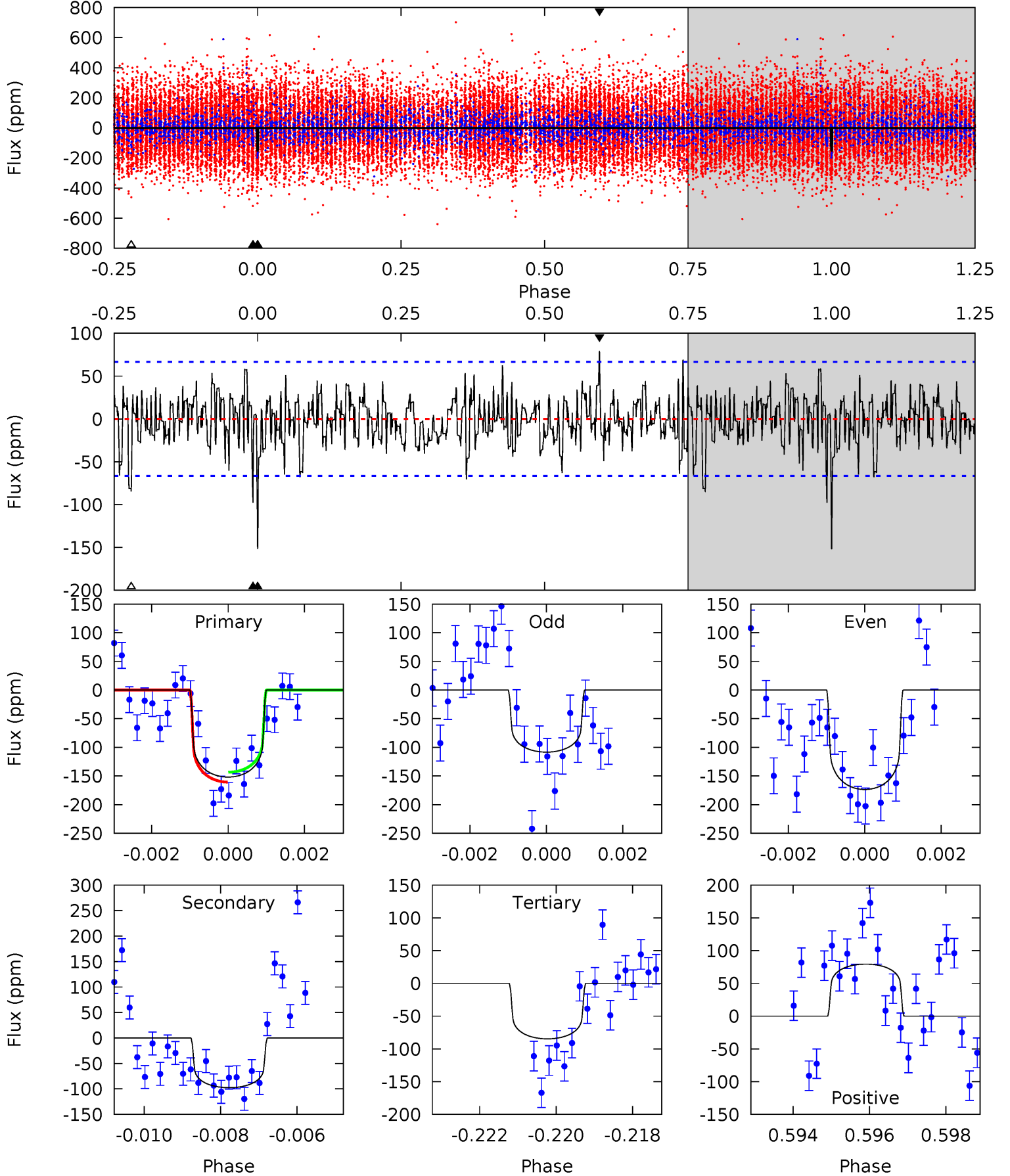
TCE 011498764-02 P=312.020461 Days $T_0=332.290909$ (BKJD)



DV Model-Shift Uniqueness Test

011498764-02, P = 311.992406 Days, E = 20.364420 Days

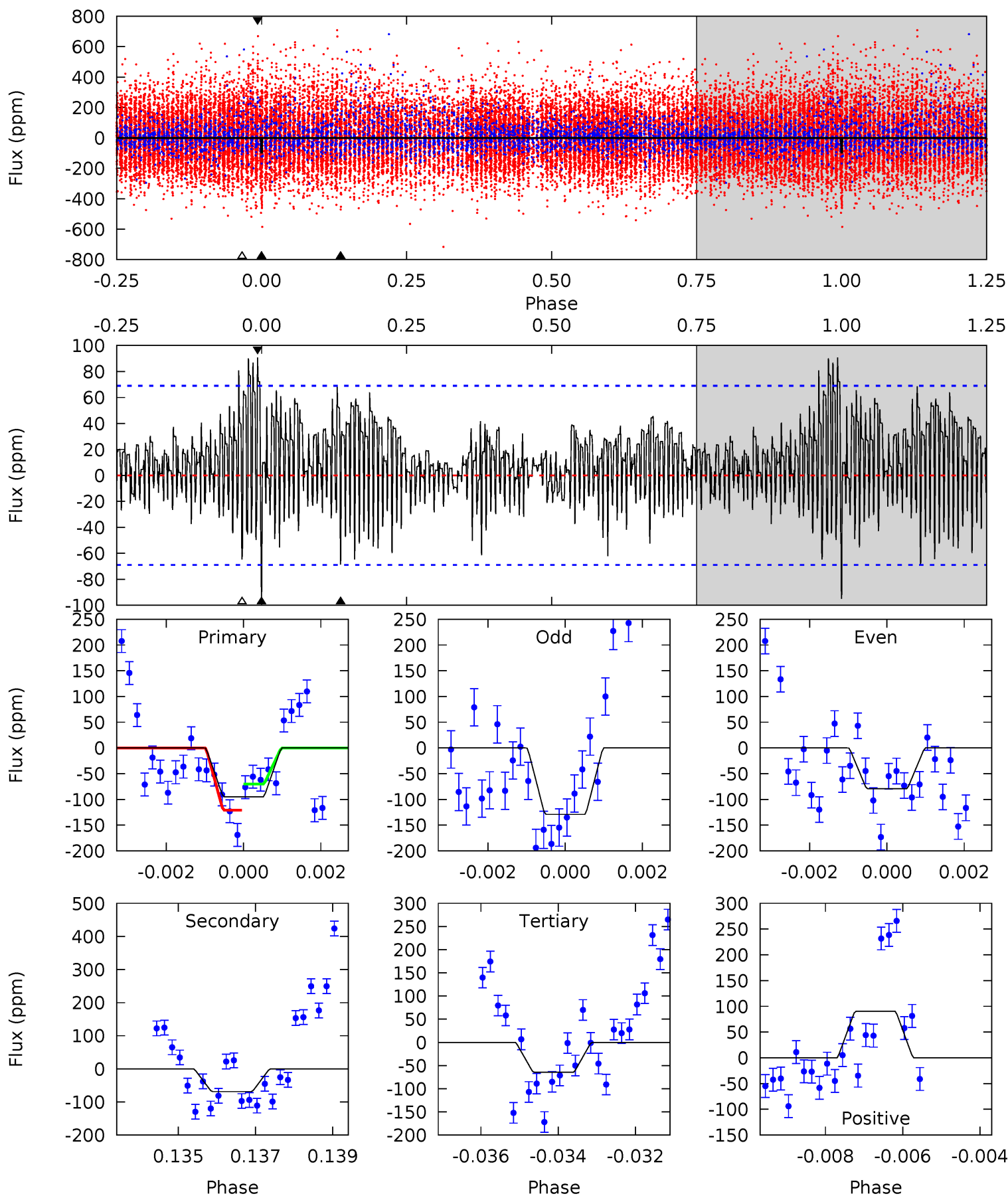
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	7.80	6.77	6.35	5.32	3.08	1.80	5.38	5.79	1.03	1.45	2.50	1.08	0.34	0.69



Alt Model-Shift Uniqueness Test

011498764-02, P = 312.020461 Days, E = 20.270448 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.33	5.29	5.00	6.99	5.32	3.08	1.84	2.33	0.34	0.30	-1.70	1.85	0.92	0.49	1.96



Stellar Parameters For KIC 011498764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6572^{+182}_{-228}	$3.743^{+0.480}_{-0.090}$	$-0.140^{+0.250}_{-0.300}$	$2.817^{+0.488}_{-1.465}$	$1.601^{+0.198}_{-0.461}$	$0.101^{+0.548}_{-0.039}$
	+3%/-3%	+13%/-2%	+179%/-214%	+17%/-52%	+12%/-29%	+543%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011498764-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-98 ± 13	$3.66^{+1.30}_{-1.14}$	641^{+47}_{-82}	5686^{+769}_{-558}	4320^{+4745}_{-1841}
Alt.	-69 ± 13	$3.17^{+1.15}_{-1.09}$	643^{+44}_{-81}	5581^{+900}_{-640}	4100^{+5212}_{-1900}

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 $A_{obs} \gg 1.0$

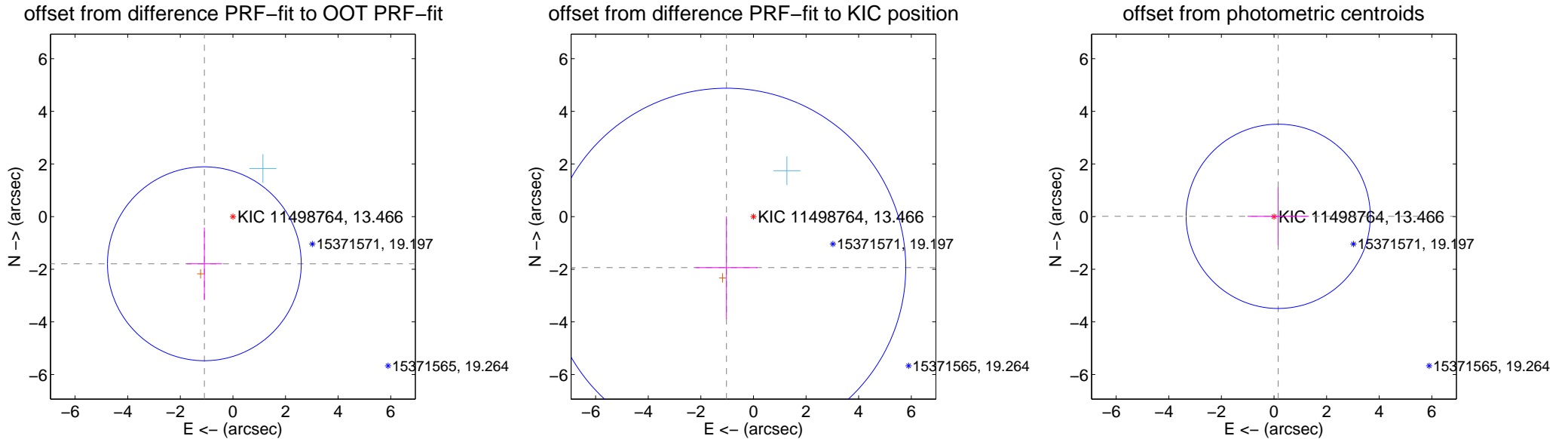
DV Centroid Data

Supplemental centroid analysis for 011498764-02. Kepler magnitude: 13.47. Transit SNR 7.47

There are 1 quarters with good PRF difference image offsets

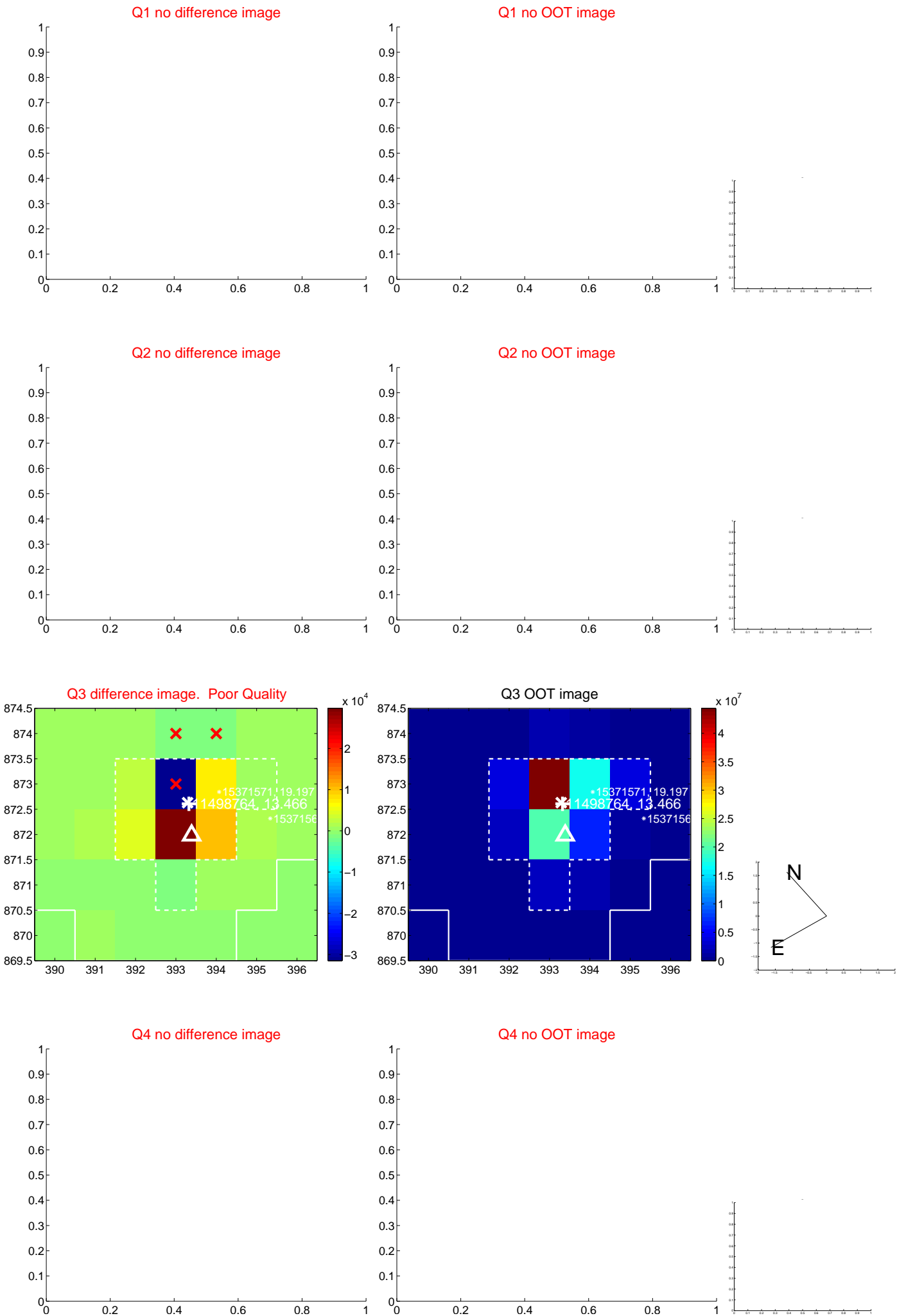
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.095 ± 1.228	1.71	1.086 ± 0.667	-1.792 ± 1.378
PRF-fit source offset from KIC position	2.192 ± 2.272	0.96	1.026 ± 1.174	-1.937 ± 1.950
photometric centroid source offset	0.16 ± 1.17	0.14	-0.16 ± 1.17	0.01 ± 1.10

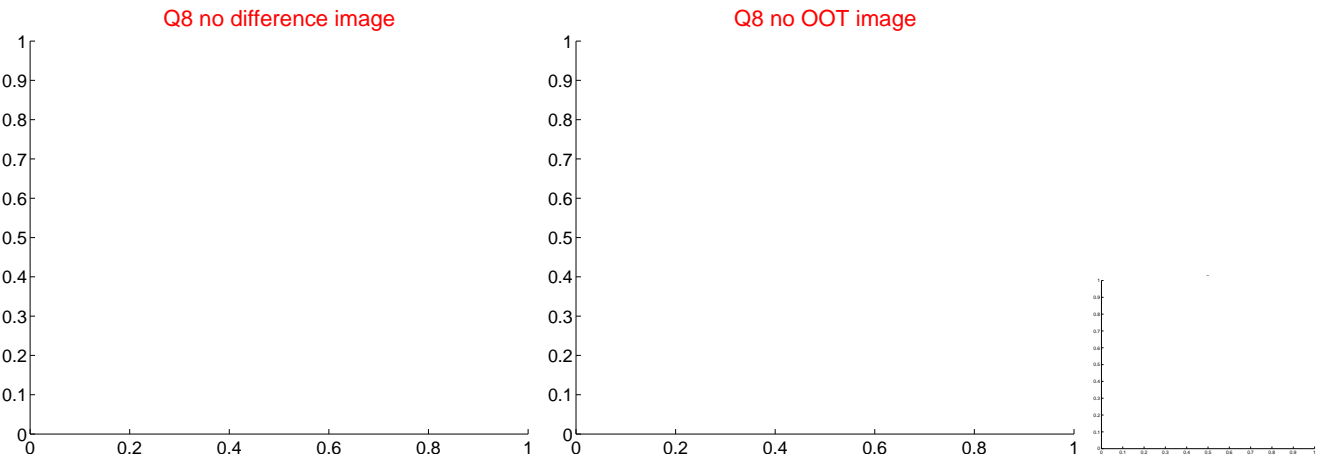
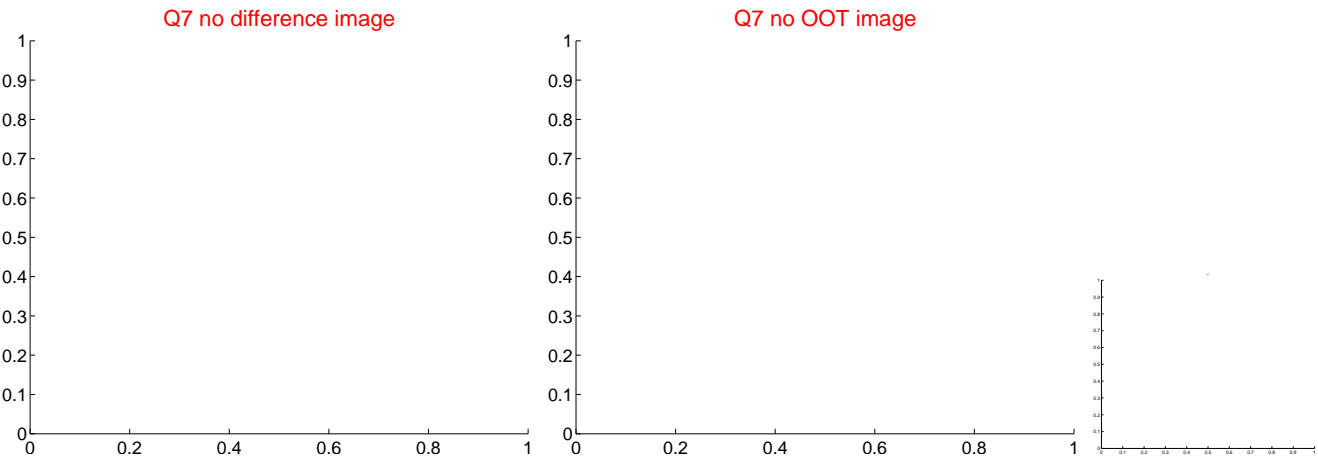
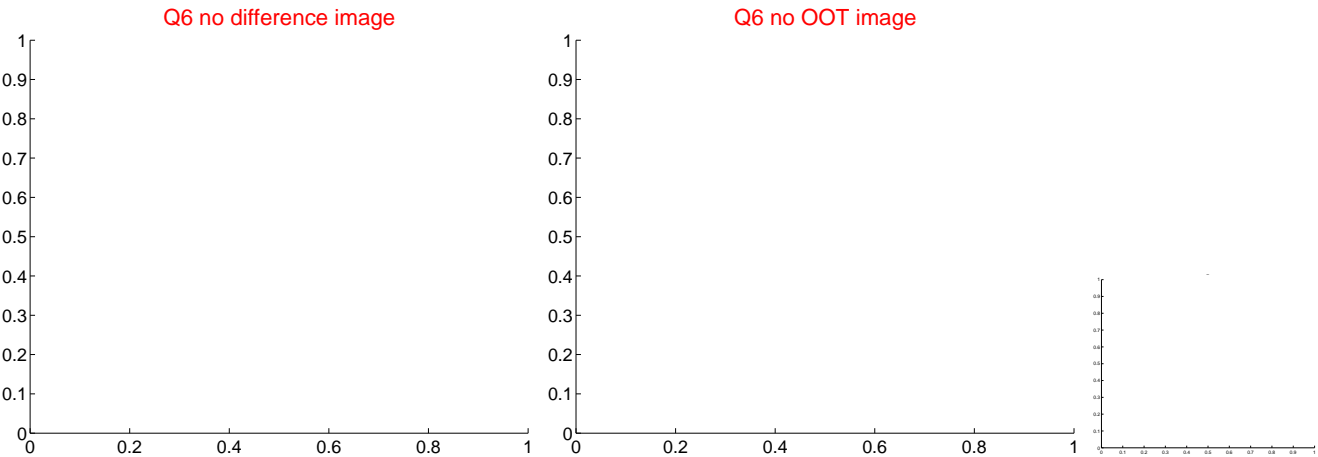
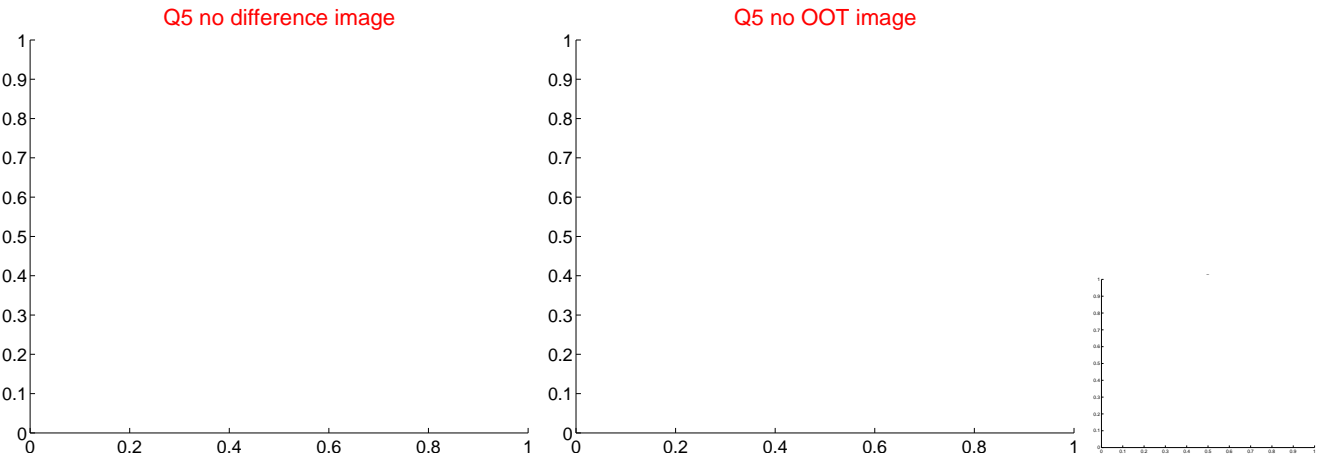


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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

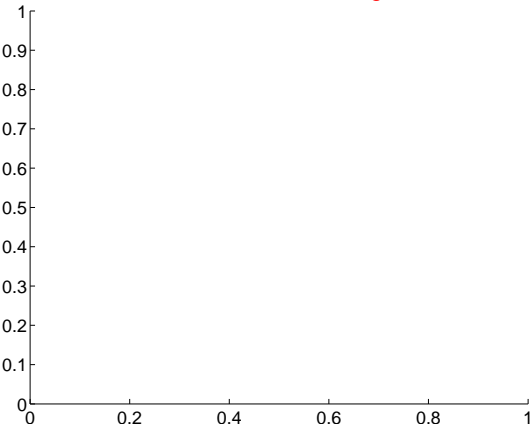


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

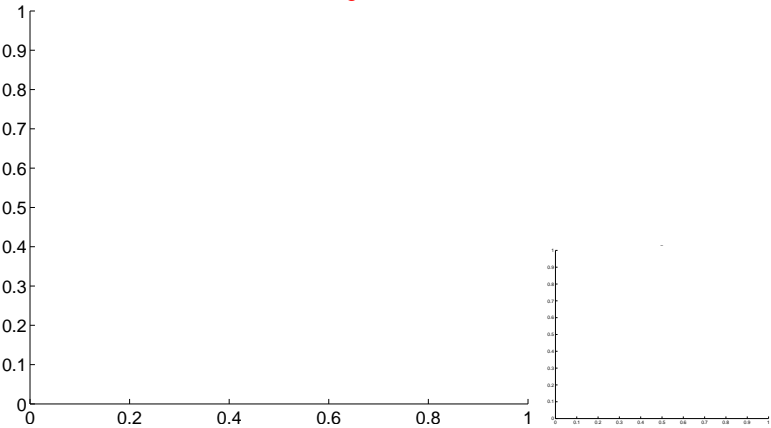


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

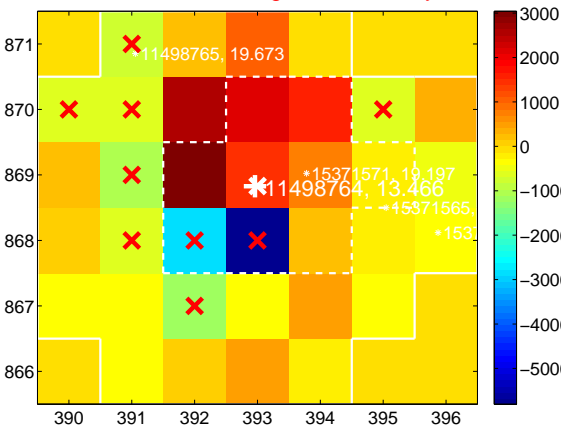
Q9 no difference image



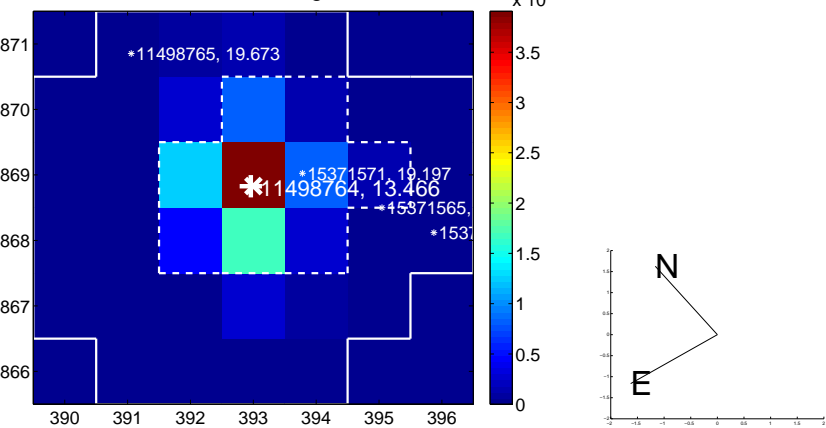
Q9 no OOT image



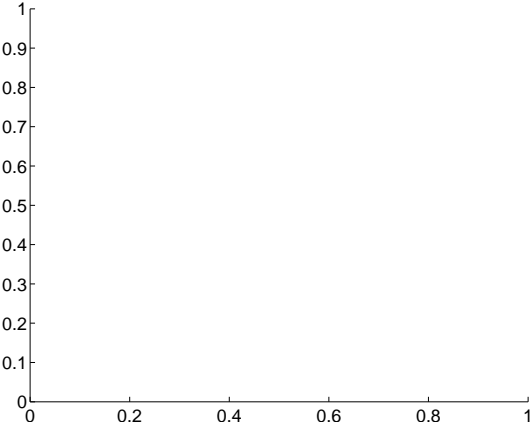
Q10 difference image. Poor Quality



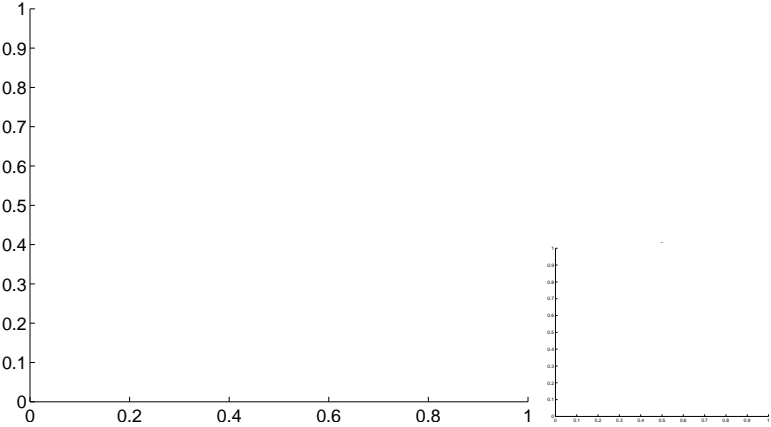
Q10 OOT image



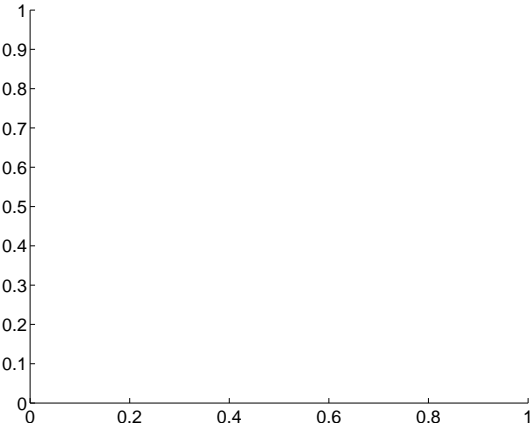
Q11 no difference image



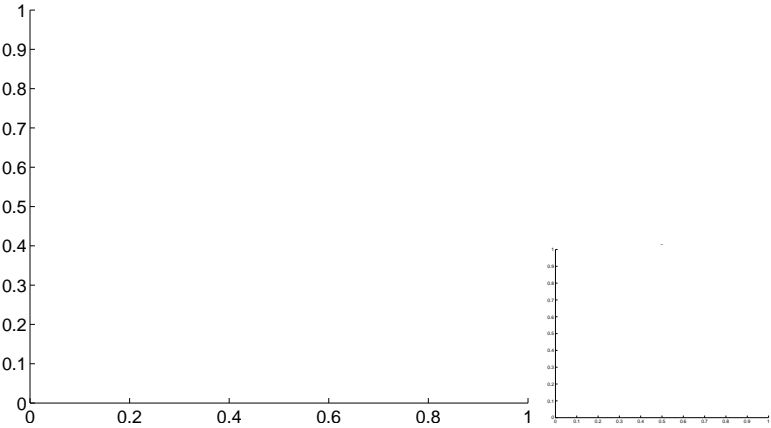
Q11 no OOT image



Q12 no difference image



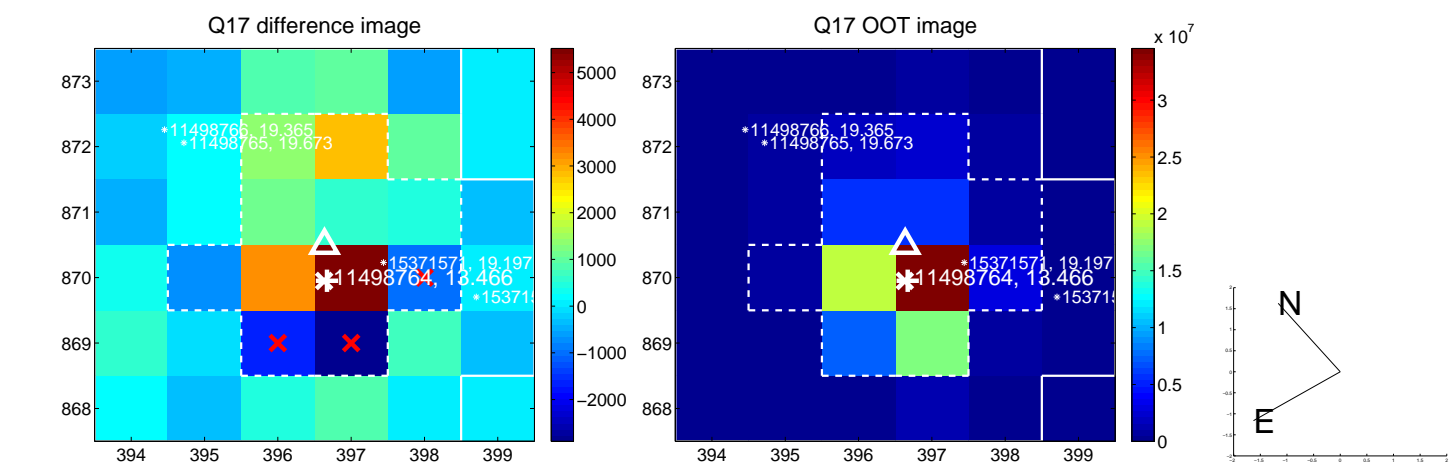
Q12 no OOT image



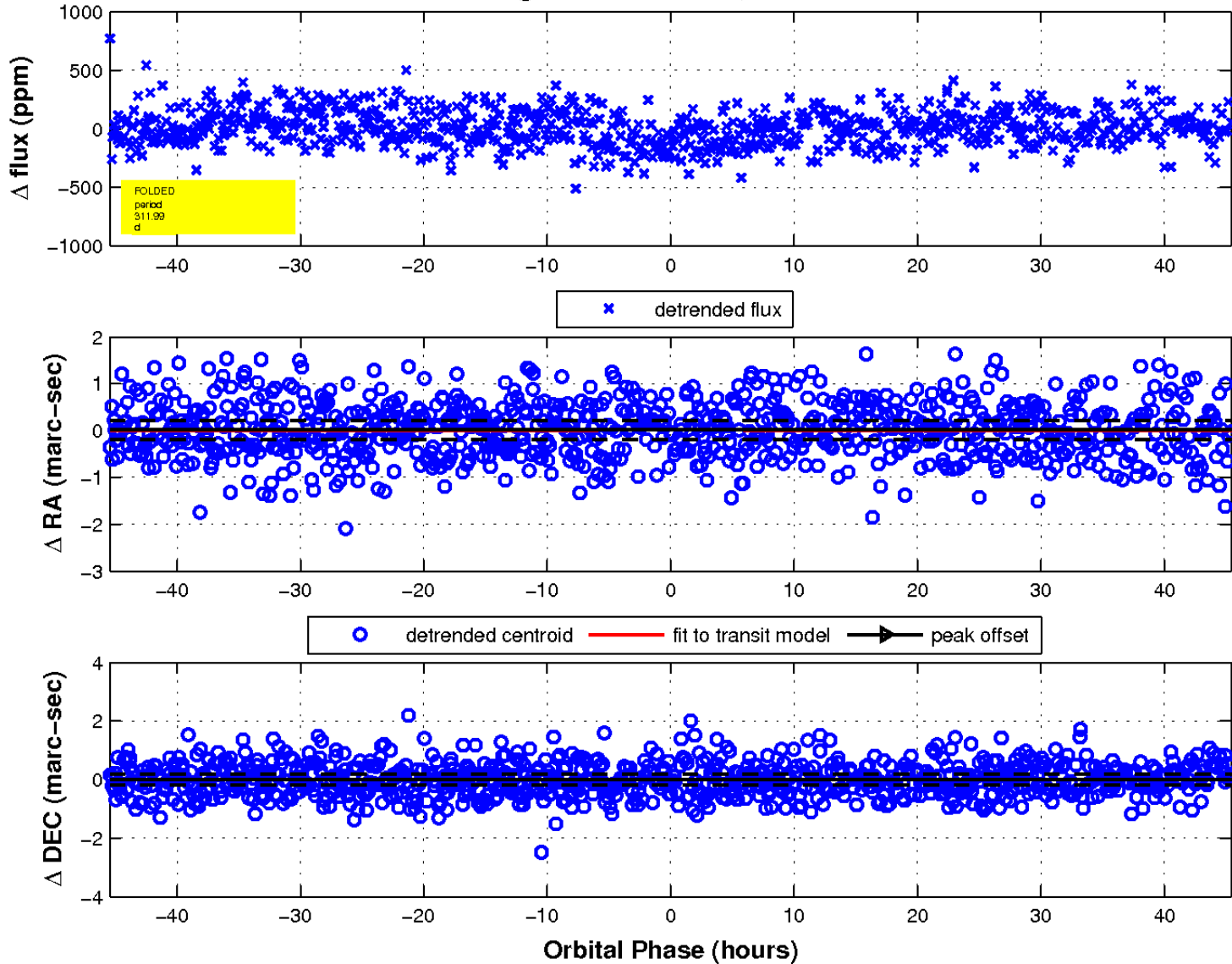
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

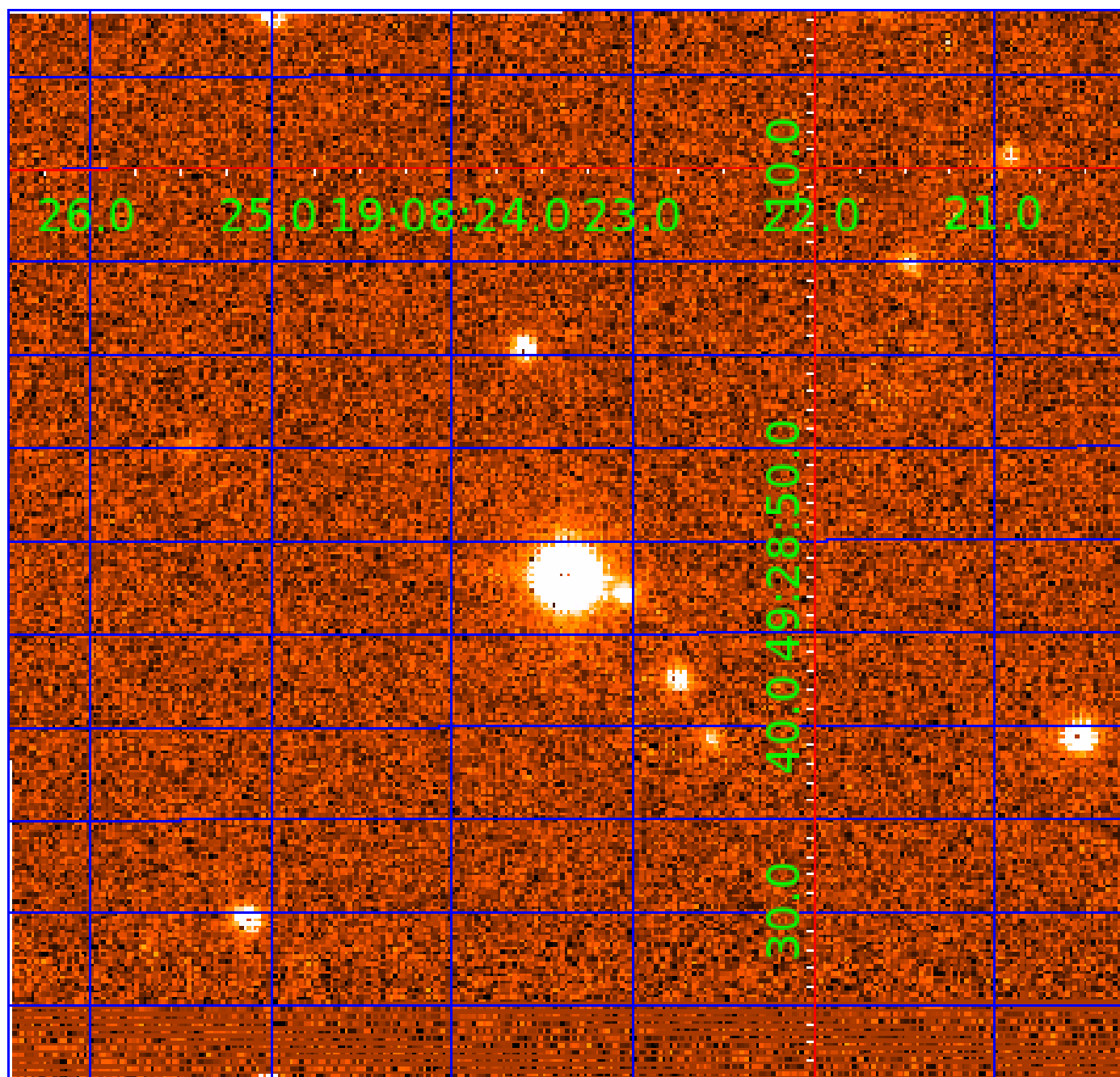


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011498764

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})
011498764-01	OBS	No	2.515305	132.368611	15.4	9.808	8.1	5.2	2.82	6572	1.12	7391.88
011498764-02	OBS	No	311.992406	332.356826	176.6	15.153	8.4	7.5	2.82	6572	4.10	11.95
011498764-03	OBS	No	122.708796	248.464081	287.2	3.188	7.1	8.0	2.82	6572	5.31	41.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011498764-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011498764-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011498764-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

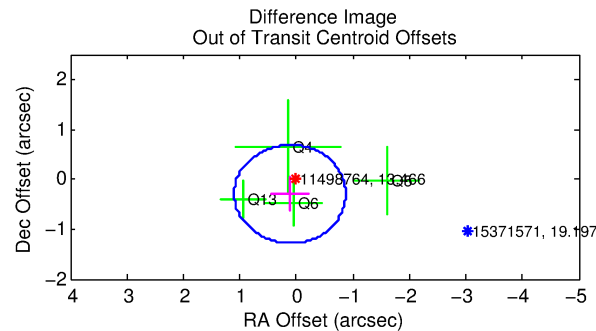
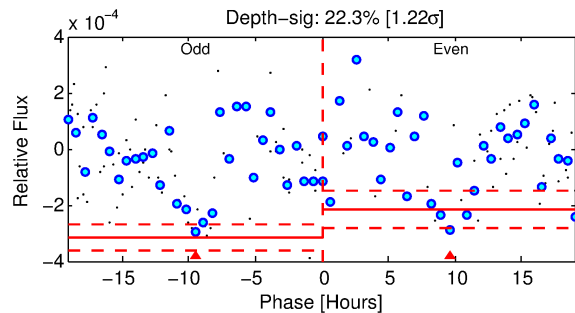
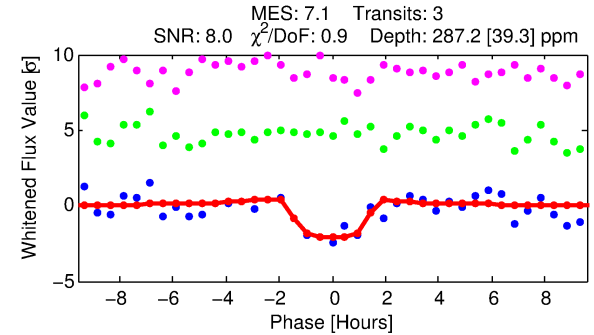
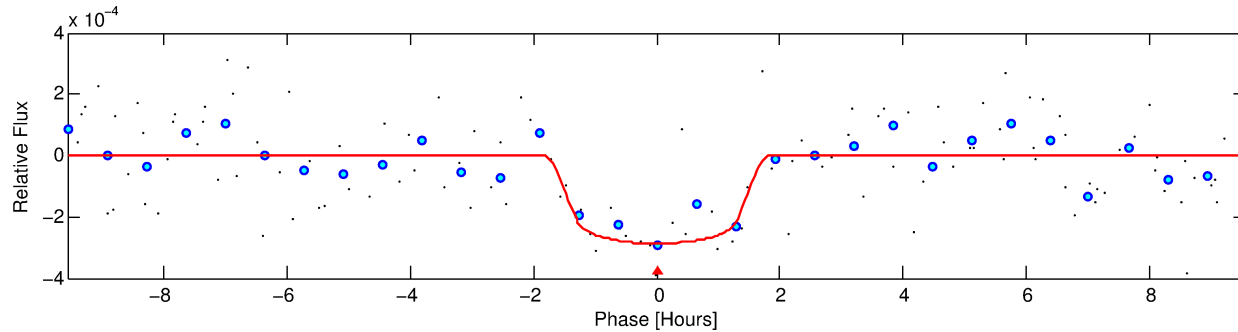
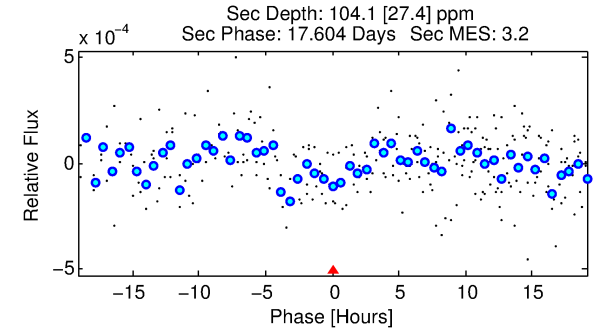
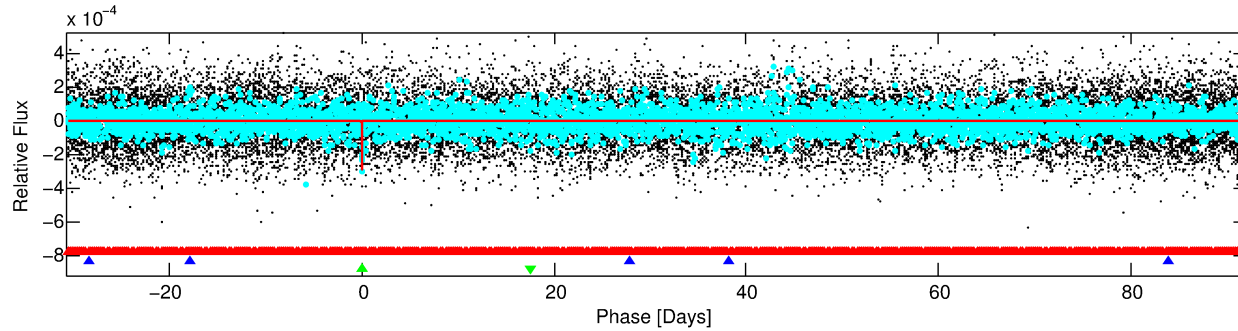
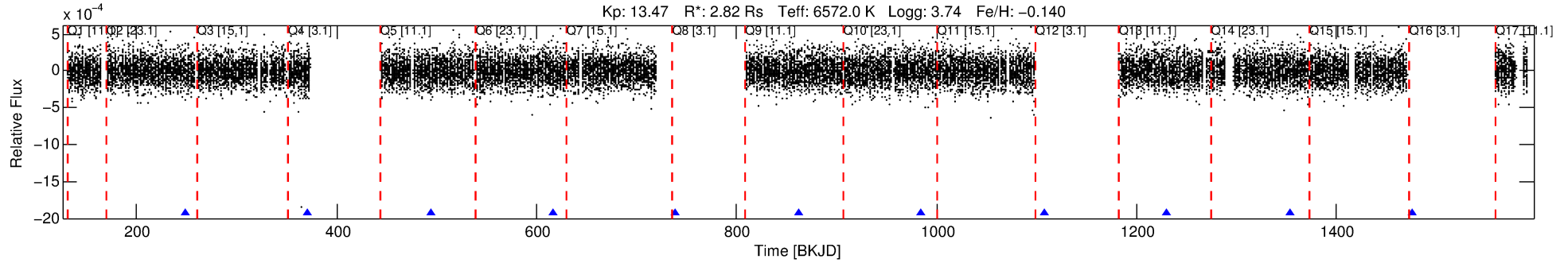
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011498764-03

No Significant Match Found

DV One-Page Summary

KIC: 11498764 Candidate: 3 of 3 Period: 122.709 d



DV Fit Results:

Period = 122.70880 [0.00188] d
Epoch = 248.4641 [0.0083] BKJD
Rp/R* = 0.0173 [0.0165]
a/R* = 177.80 [948.68]
b = 0.82 [2.19]
Seff = 41.47 [34.25]
Teq = 647 [134] K
Rp = 5.31 [5.79] Re
a = 0.5656 [0.2861] AU
Ag = 648.44 [1359.96] [0.48 σ]
Teffp = 5048 [2446] K [1.80 σ]

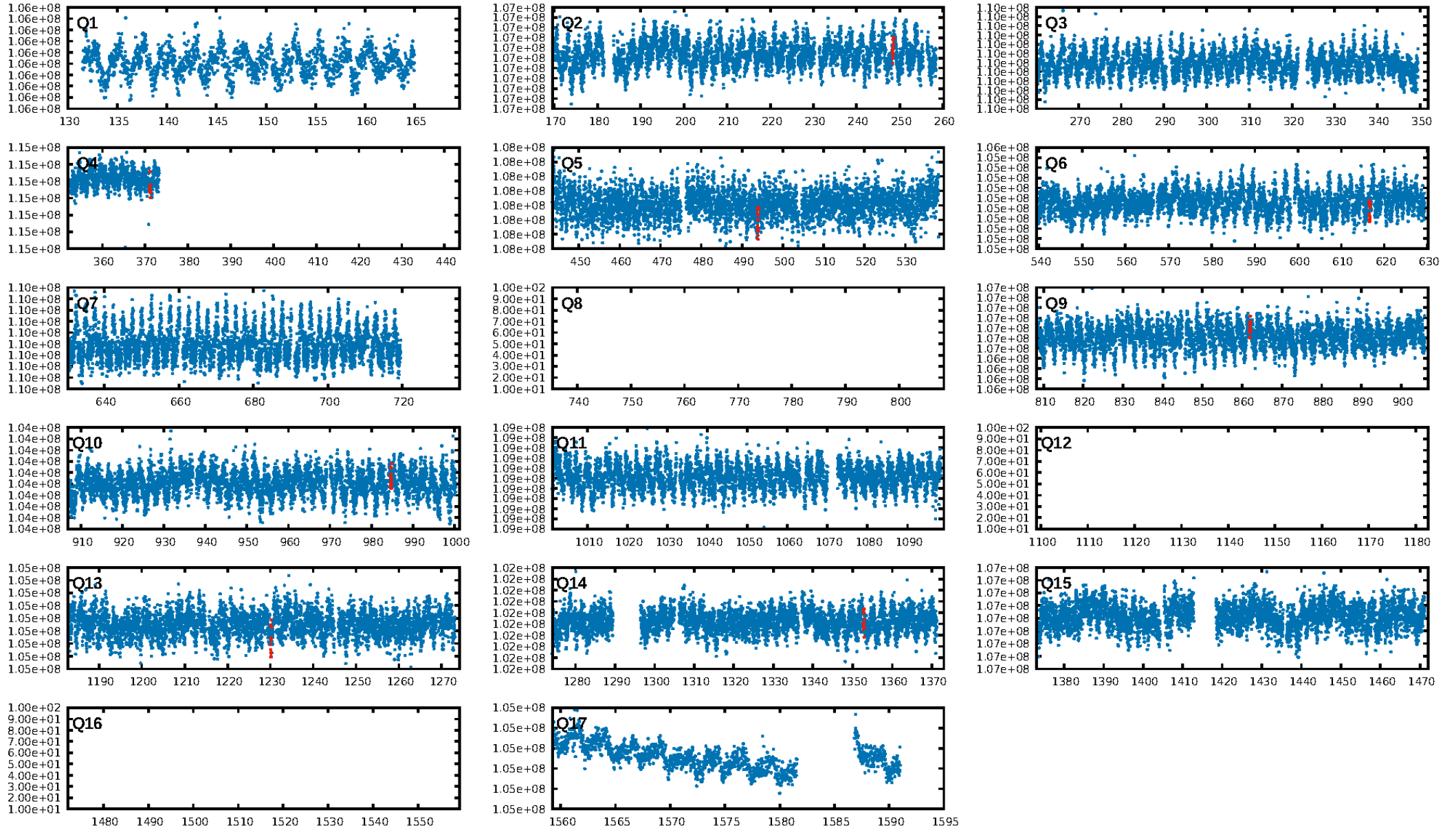
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [279.70 σ]
LongPeriod-sig: 100.0% [293.37 σ]
ModelChiSquare2-sig: 64.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.96e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.766
Centroid-sig: 21.7%
Centroid-so: 0.904 arcsec [0.93 σ]
OotOffset-rm: 0.321 arcsec [0.98 σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-rm: 0.411 arcsec [1.01 σ]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.50 [4/8]

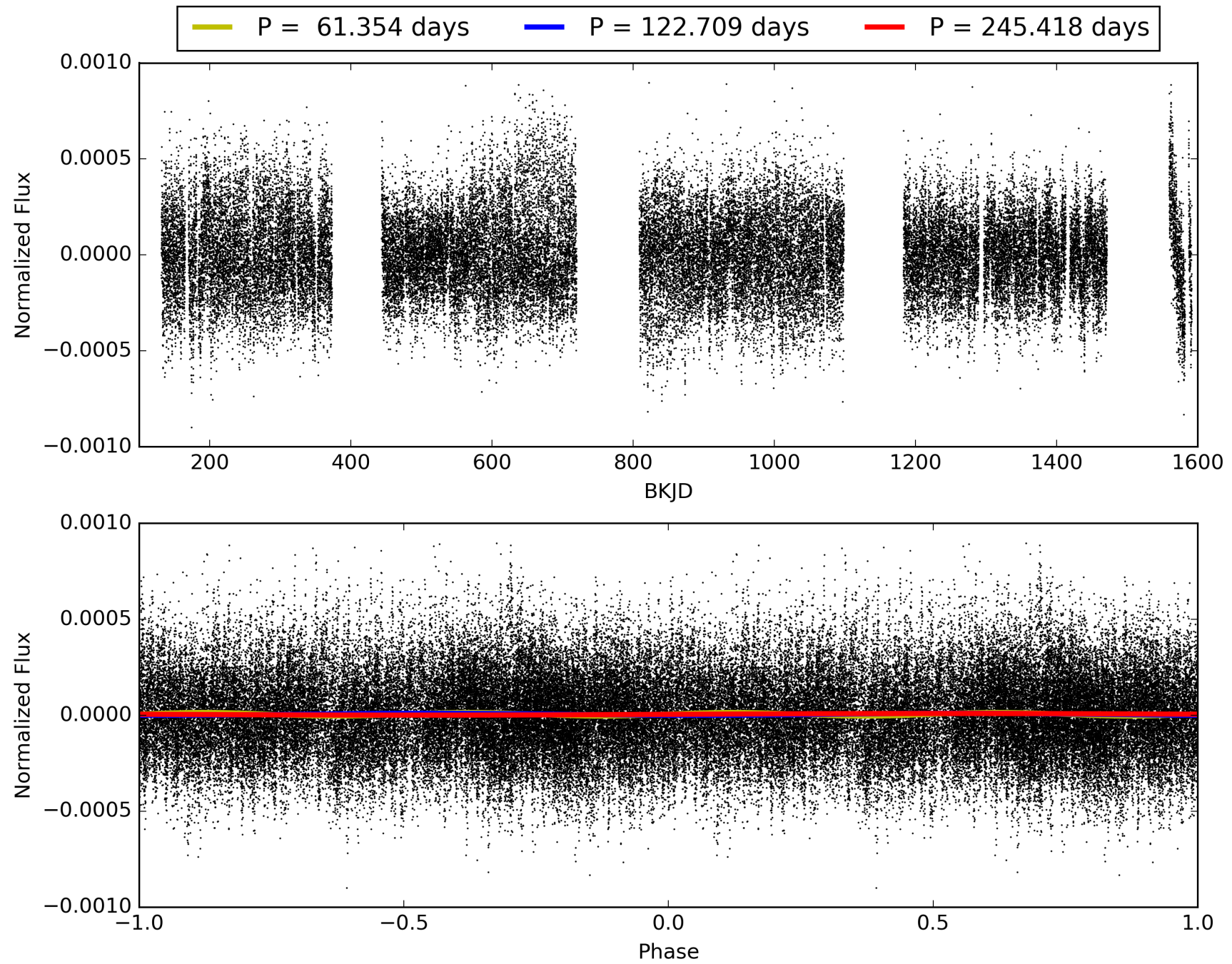
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:05:03 Z

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

TCE 011498764-03, PDC Light Curves

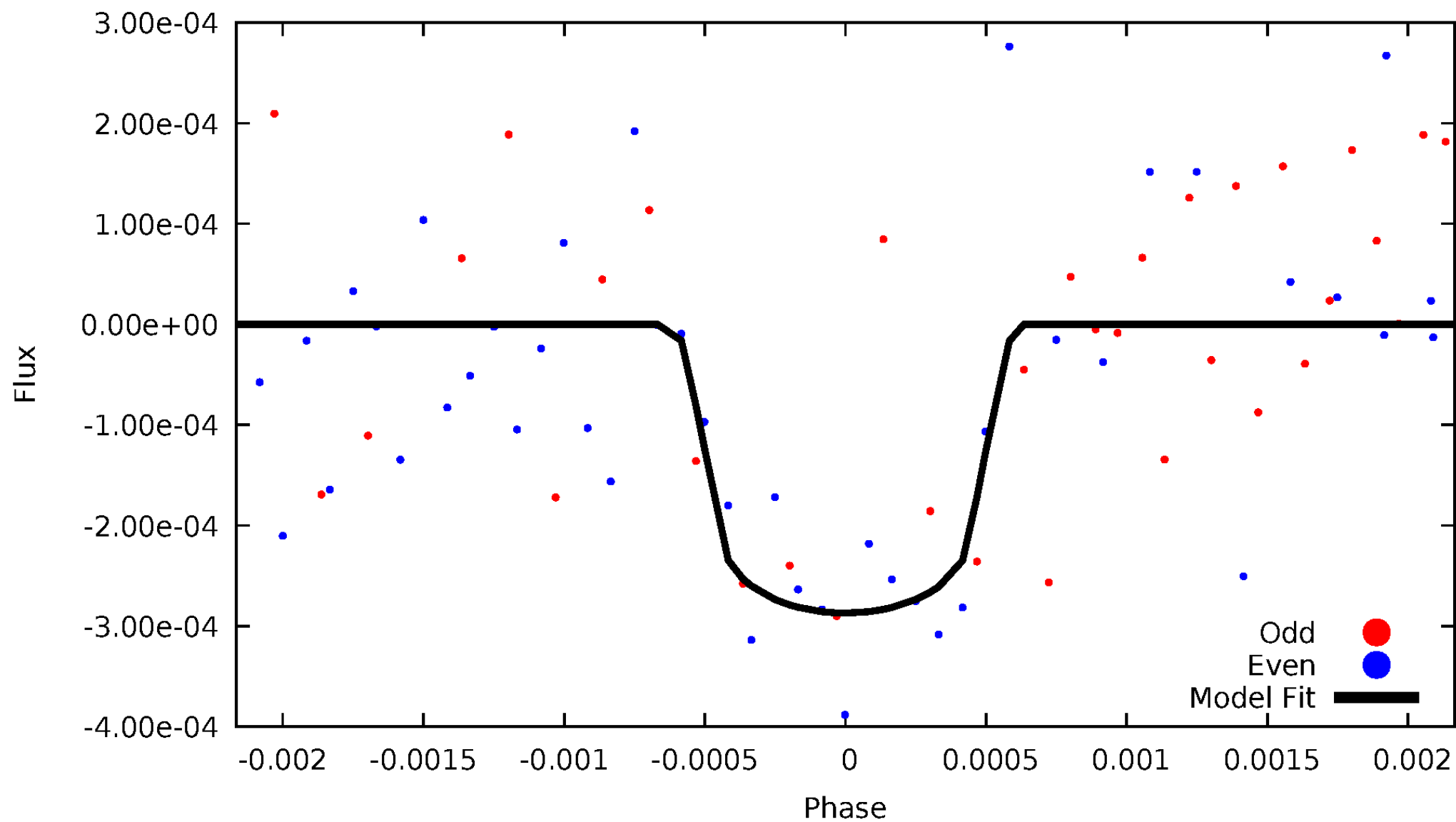


TCE 011498764-03



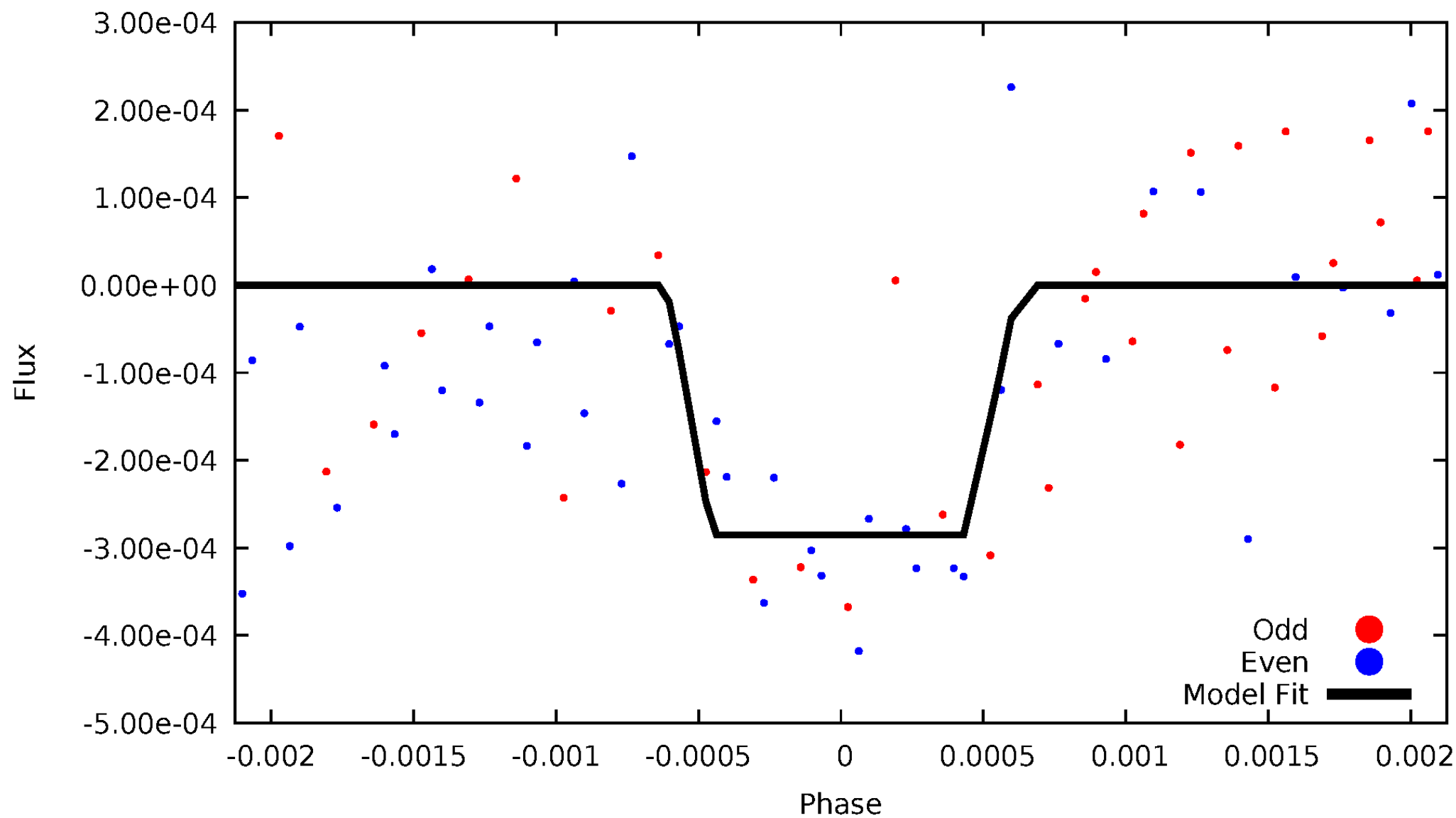
DV Odd/Even

TCE 011498764-03

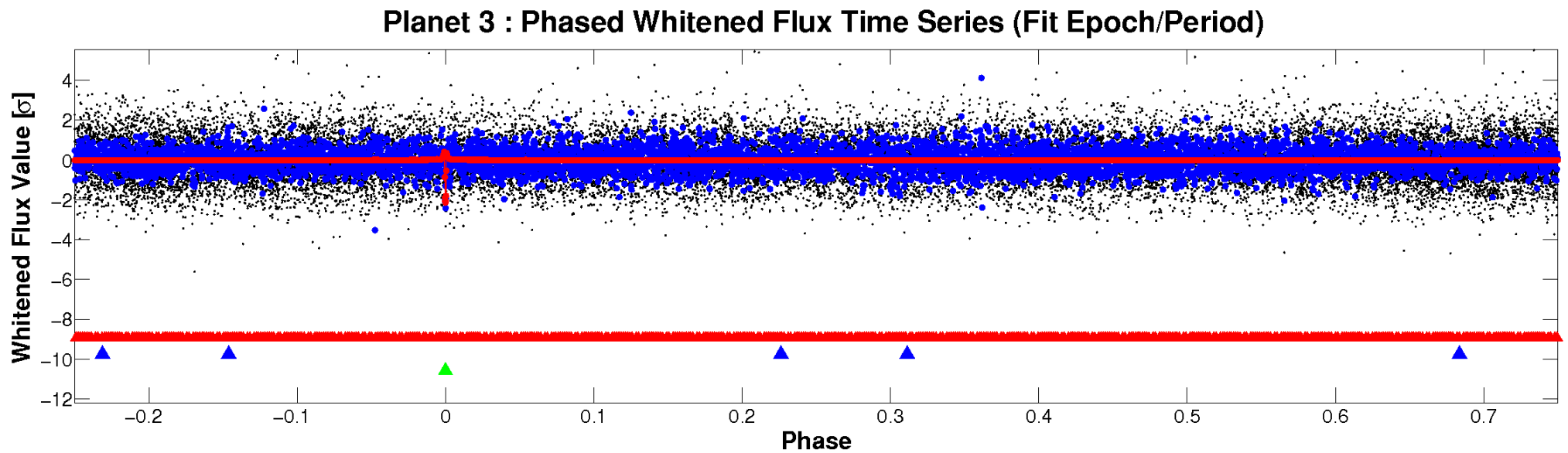
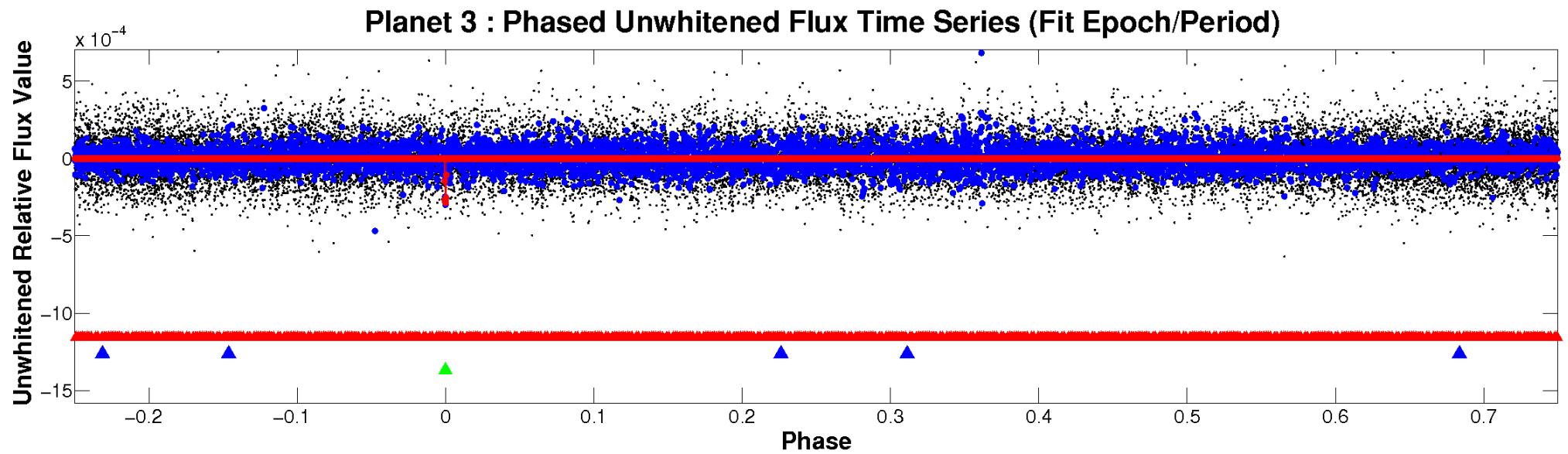


ALT Odd/Even

TCE 011498764-03

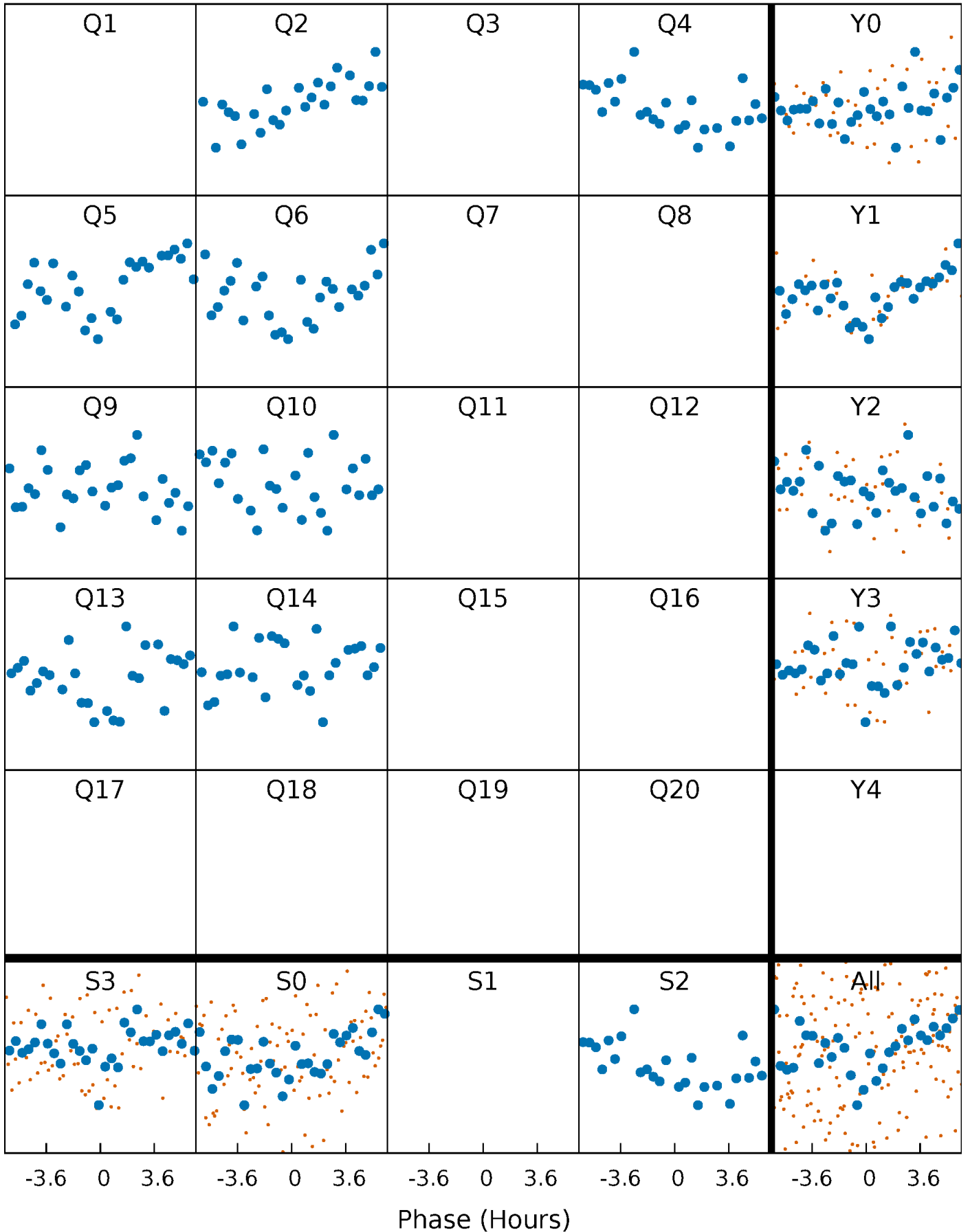


Non-Whitened Vs. Whitened Light Curve



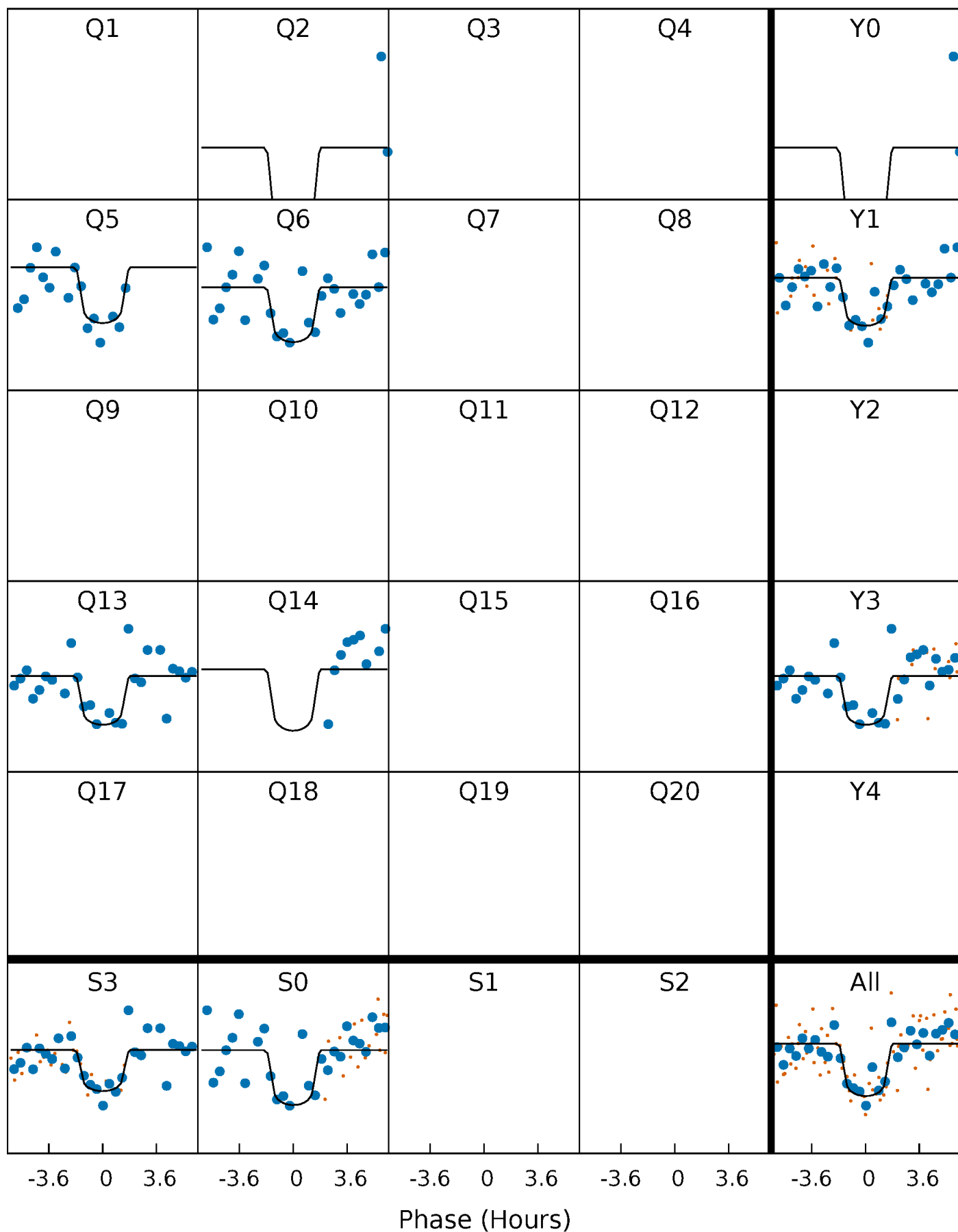
PDC Quarter-Phased Transit Curves

TCE 011498764-03 $P=122.708796$ Days $T_0=248.464081$ (BKJD)



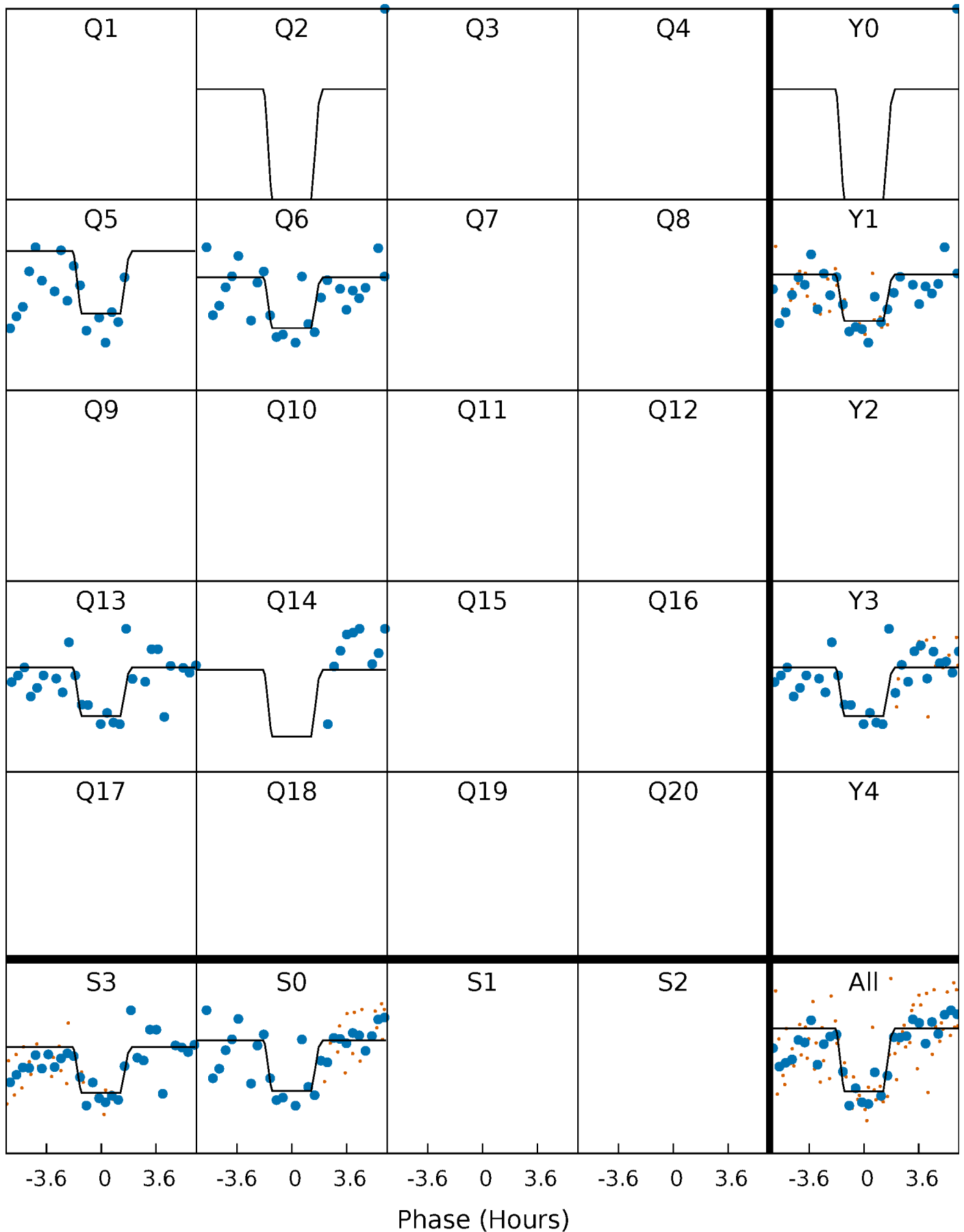
DV Quarter-Phased Transit Curves

TCE 011498764-03 $P=122.708796$ Days $T_0=248.464081$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

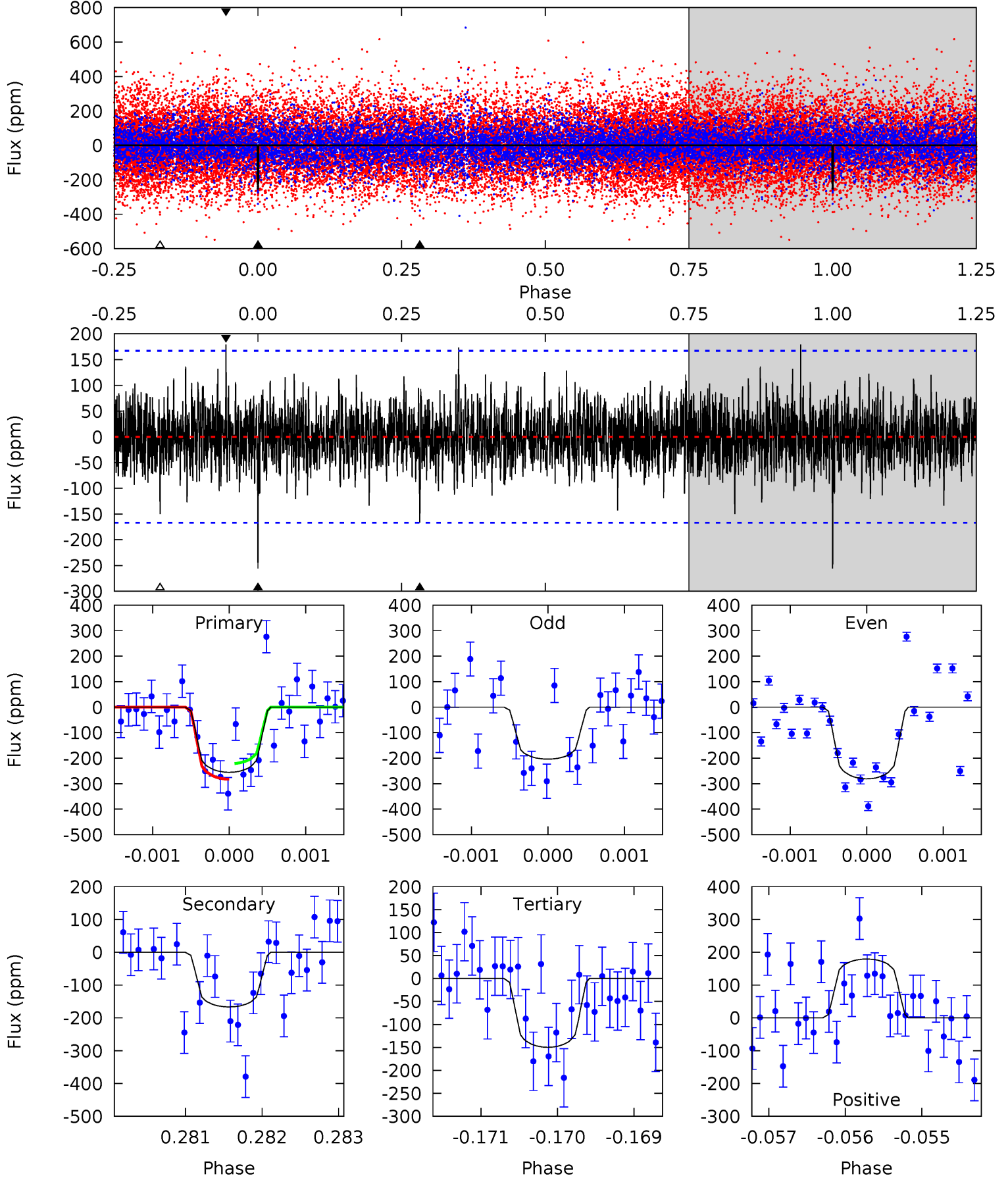
TCE 011498764-03 P=122.709808 Days $T_0=248.454119$ (BKJD)



DV Model-Shift Uniqueness Test

011498764-03, P = 122.708796 Days, E = 125.755285 Days

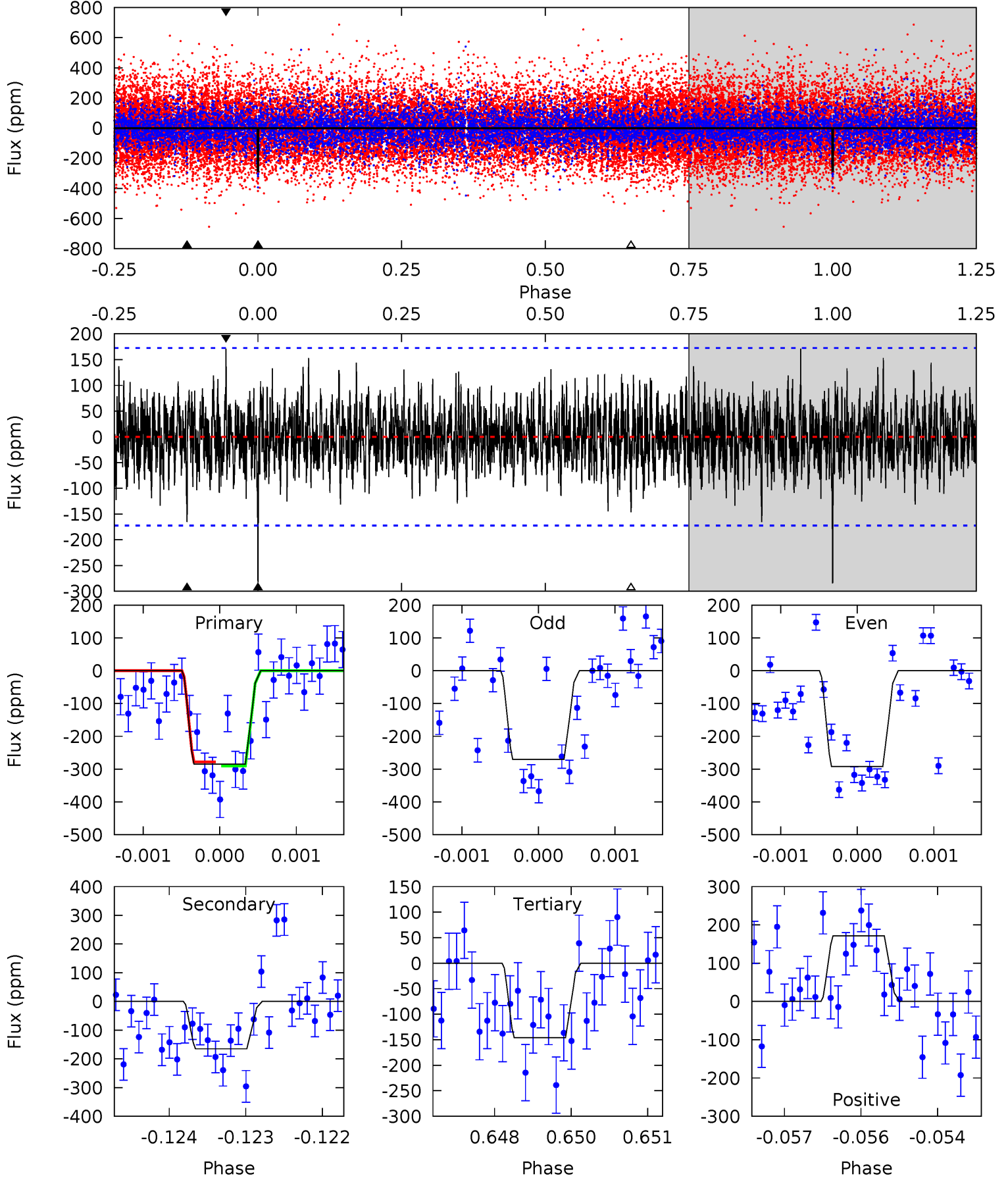
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	5.42	4.87	5.83	5.42	3.25	1.29	3.44	2.48	0.55	-0.41	1.20	1.02	0.41	1.00



Alt Model-Shift Uniqueness Test

011498764-03, P = 122.709808 Days, E = 125.744311 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.93	5.18	4.59	5.37	5.41	3.22	1.37	4.34	3.56	0.59	-0.19	0.31	1.03	0.38	0.21



Stellar Parameters For KIC 011498764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6572^{+182}_{-228}	$3.743^{+0.480}_{-0.090}$	$-0.140^{+0.250}_{-0.300}$	$2.817^{+0.488}_{-1.465}$	$1.601^{+0.198}_{-0.461}$	$0.101^{+0.548}_{-0.039}$
	+3%/-3%	+13%/-2%	+179%/-214%	+17%/-52%	+12%/-29%	+543%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011498764-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-167 ± 31	$5.64^{+4.72}_{-3.56}$	875^{+65}_{-107}	5120^{+3451}_{-967}	879^{+5397}_{-619}
Alt.	-165 ± 32	$5.49^{+4.35}_{-3.36}$	876^{+58}_{-109}	5280^{+3416}_{-1075}	943^{+5483}_{-655}

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

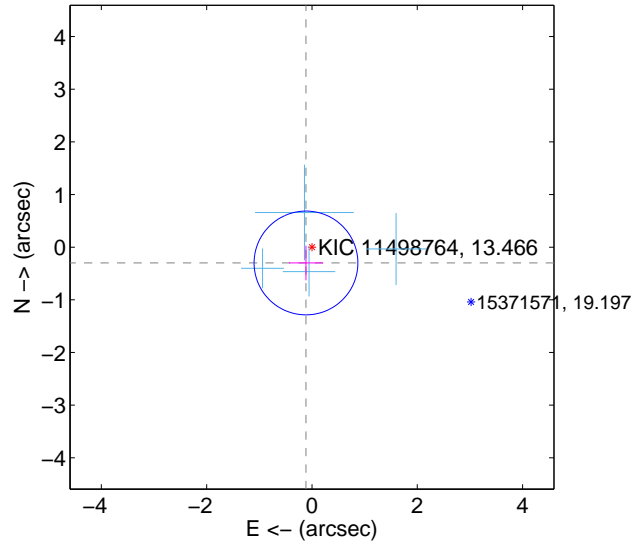
Supplemental centroid analysis for 011498764-03. Kepler magnitude: 13.47. Transit SNR 8.04

There are 4 quarters with good PRF difference image offsets

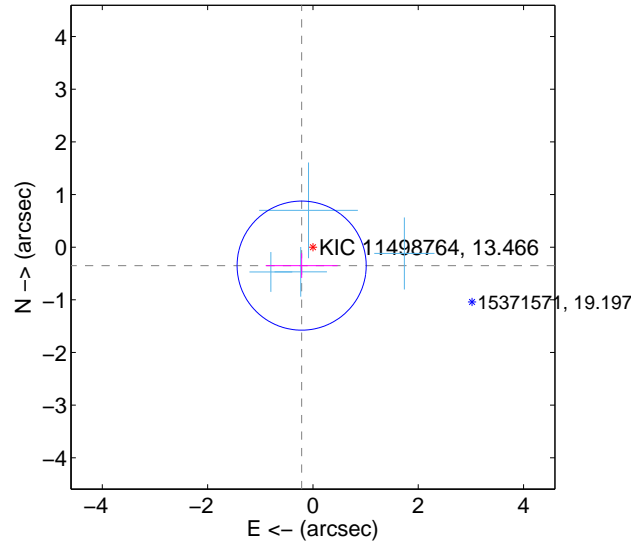
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.328	0.98	0.114 ± 0.325	-0.300 ± 0.329
PRF-fit source offset from KIC position	0.411 ± 0.409	1.01	0.214 ± 0.683	-0.350 ± 0.234
photometric centroid source offset	0.90 ± 0.97	0.93	0.25 ± 1.03	0.87 ± 0.97

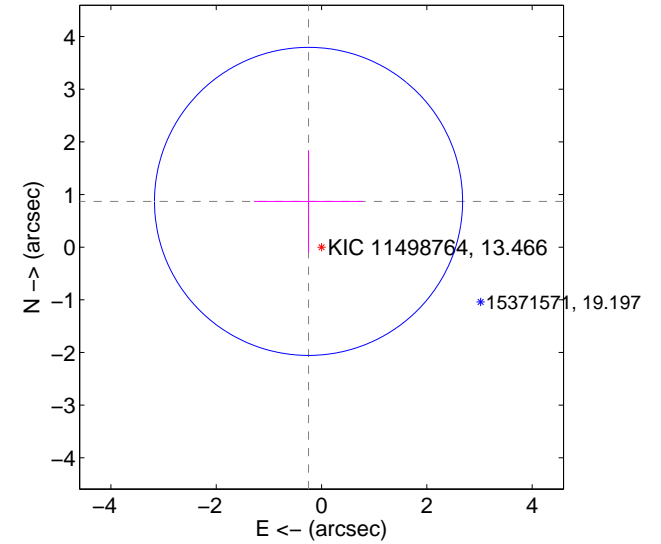
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



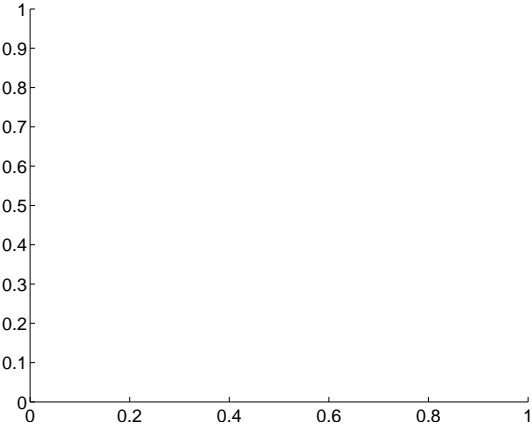
offset from photometric centroids



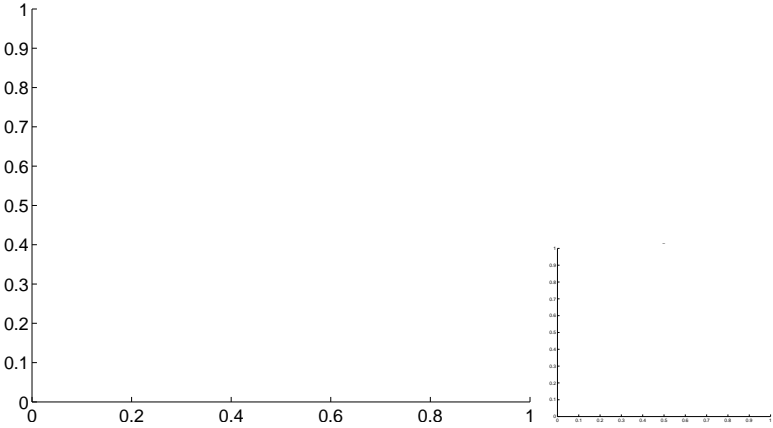
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

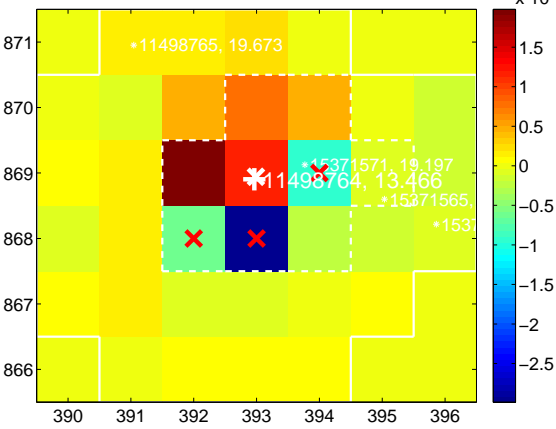
Q1 no difference image



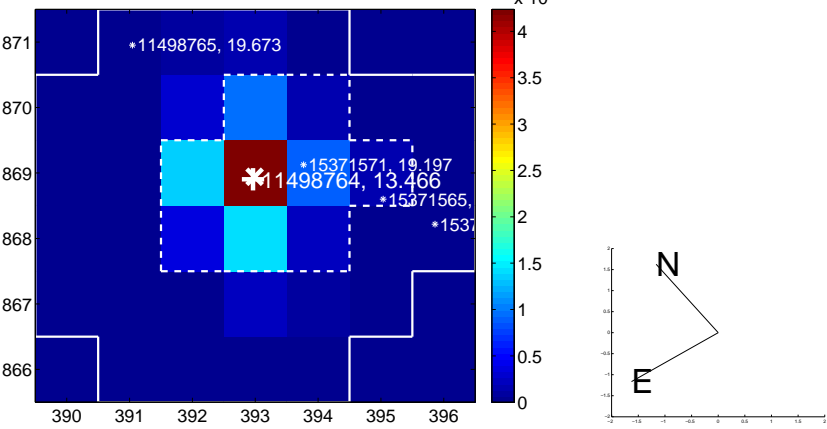
Q1 no OOT image



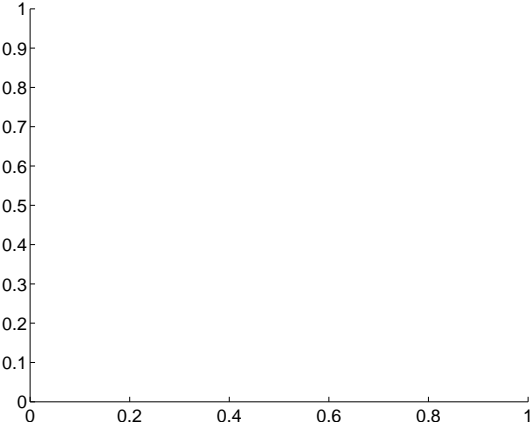
Q2 difference image. Poor Quality



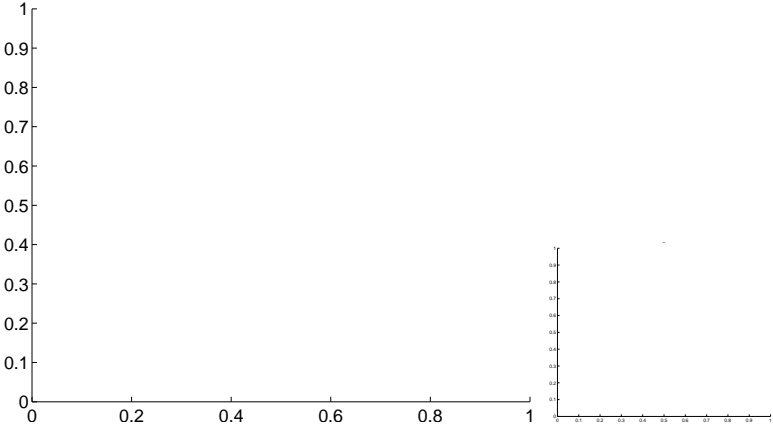
Q2 OOT image



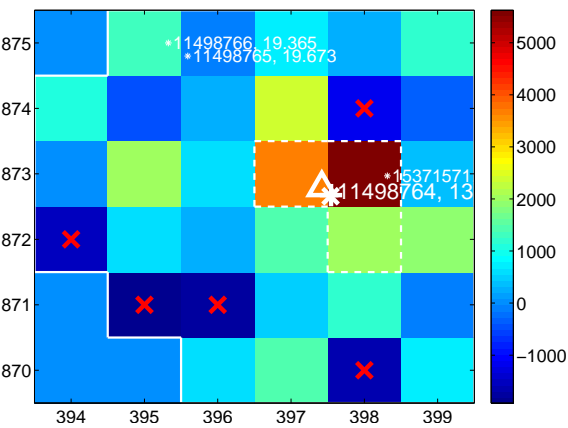
Q3 no difference image



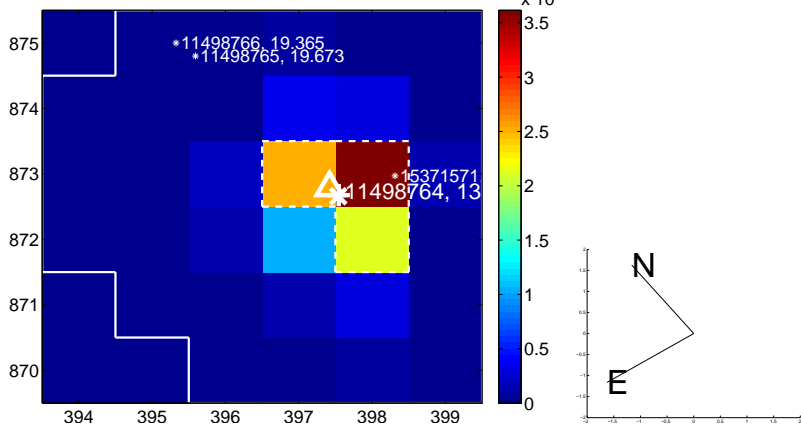
Q3 no OOT image



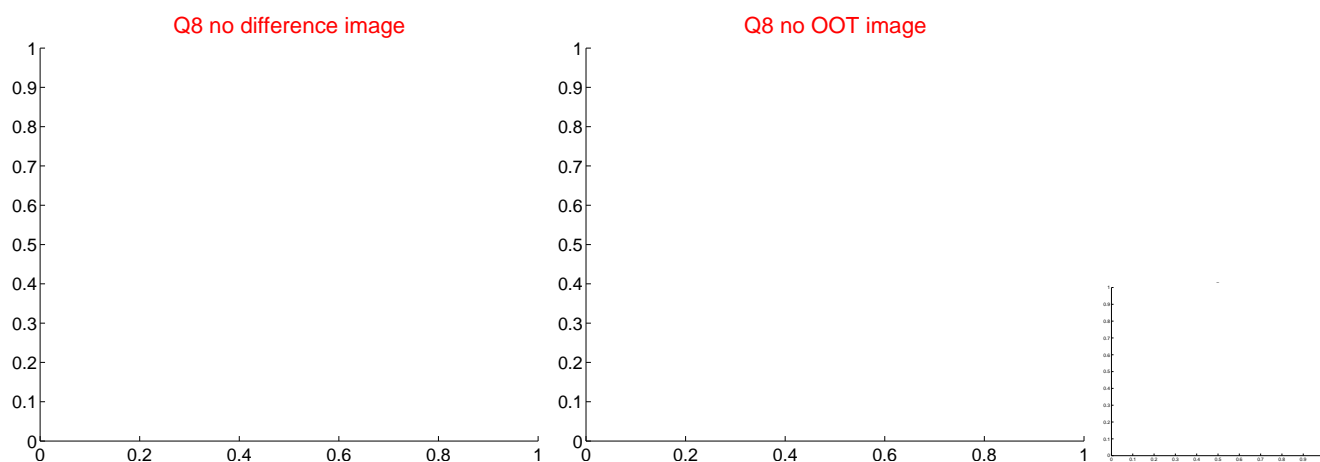
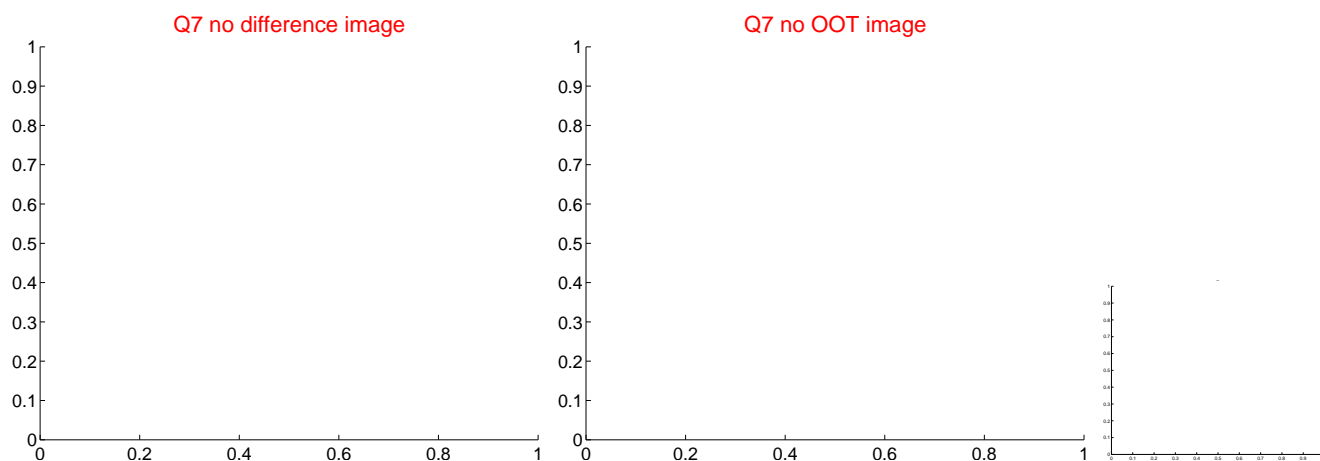
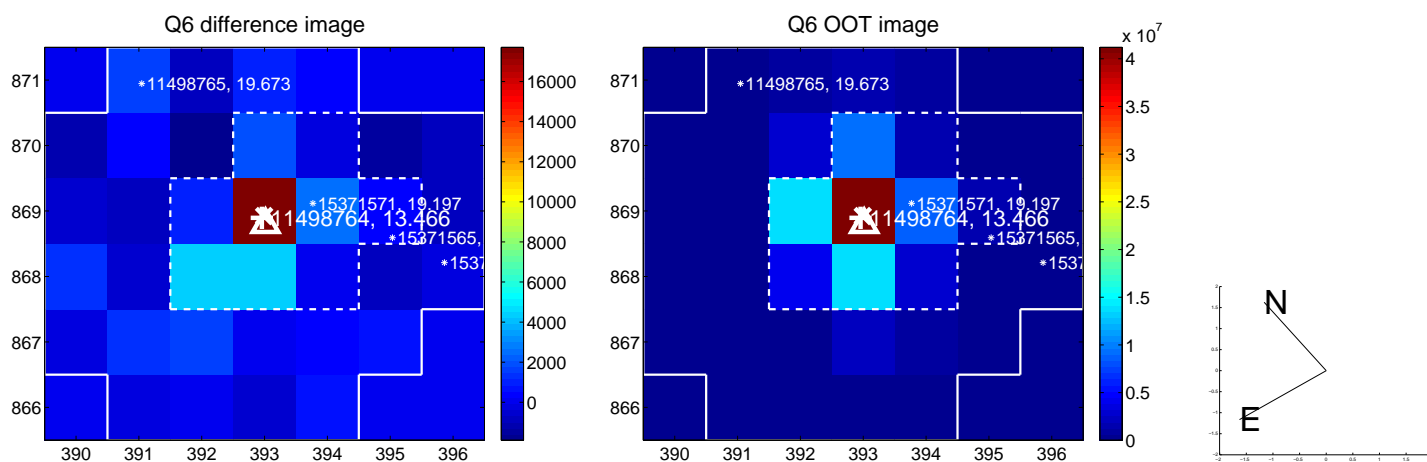
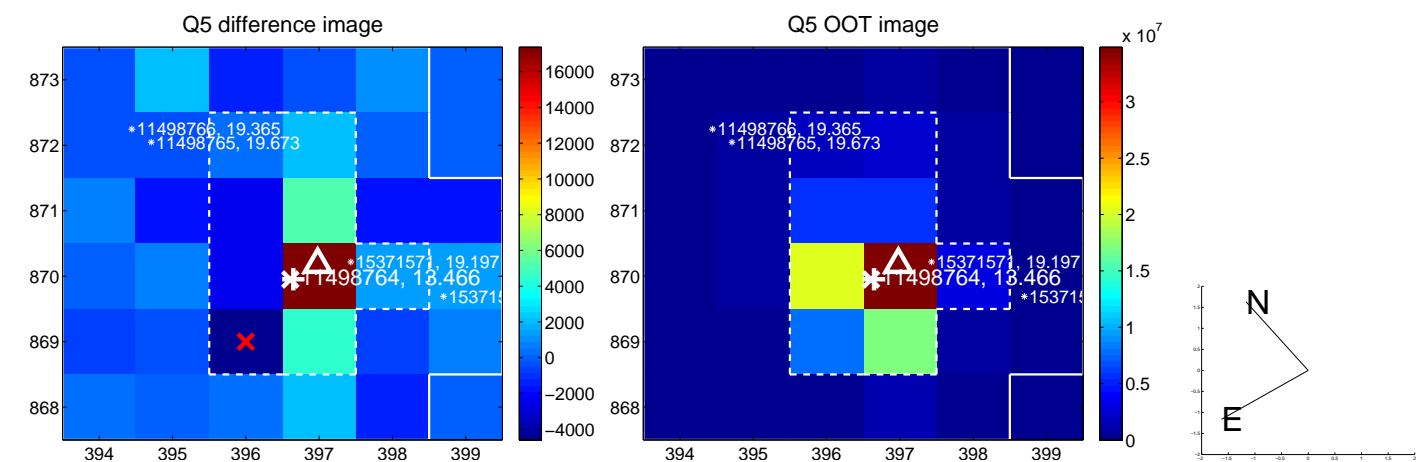
Q4 difference image



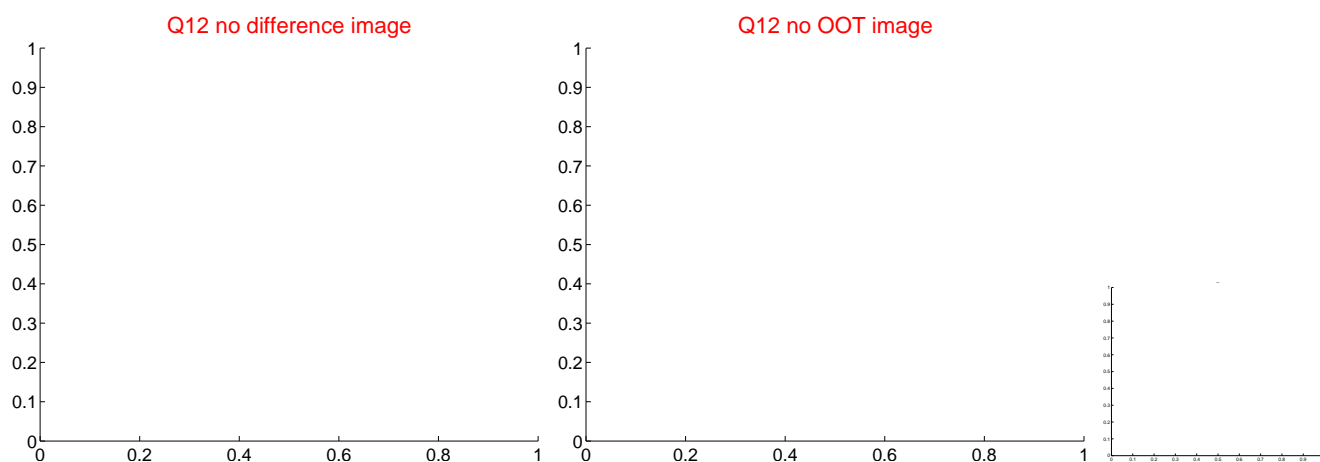
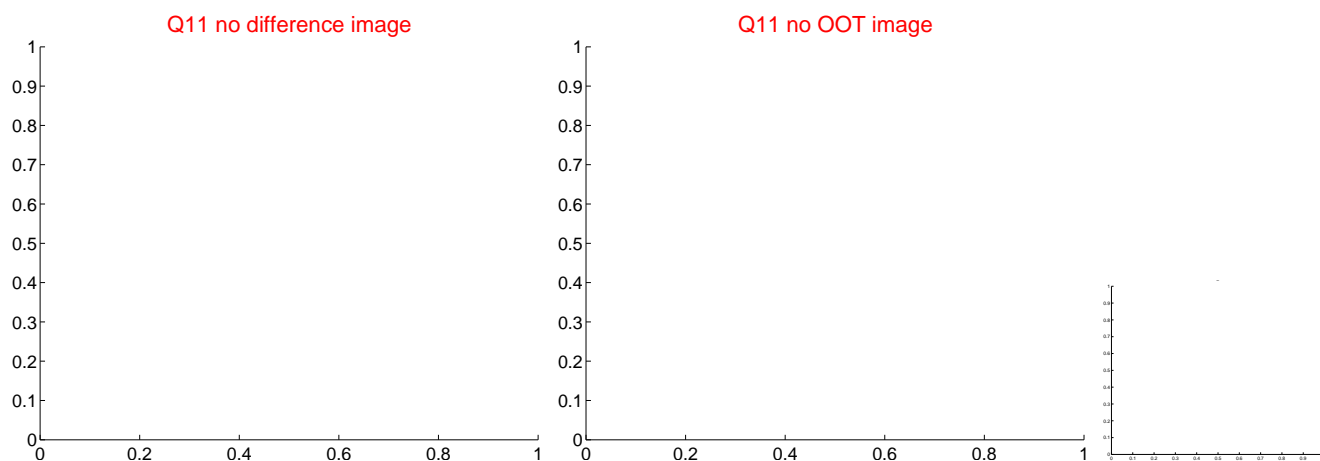
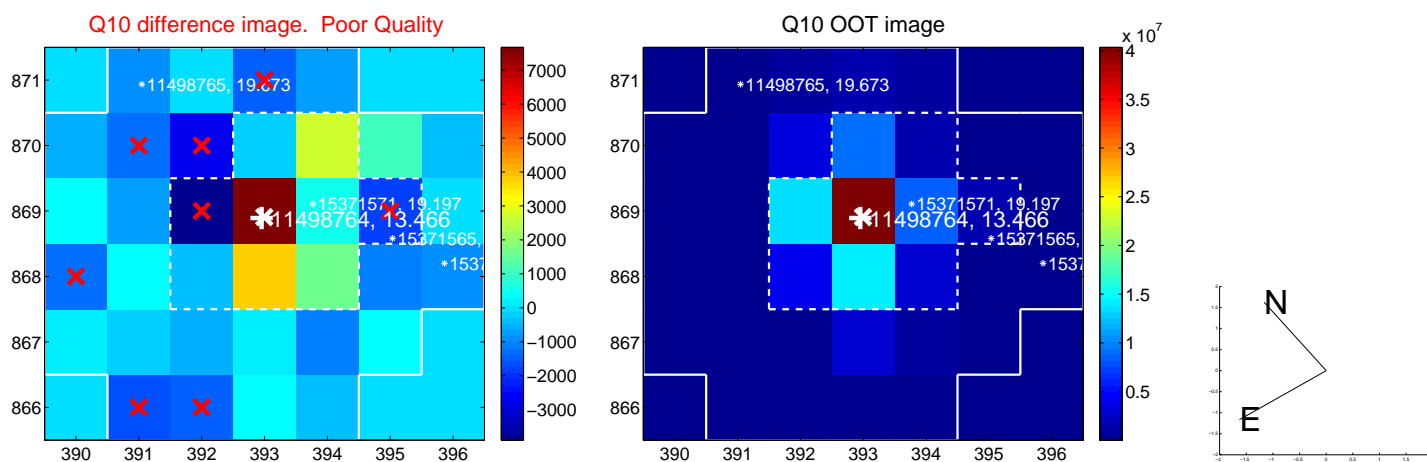
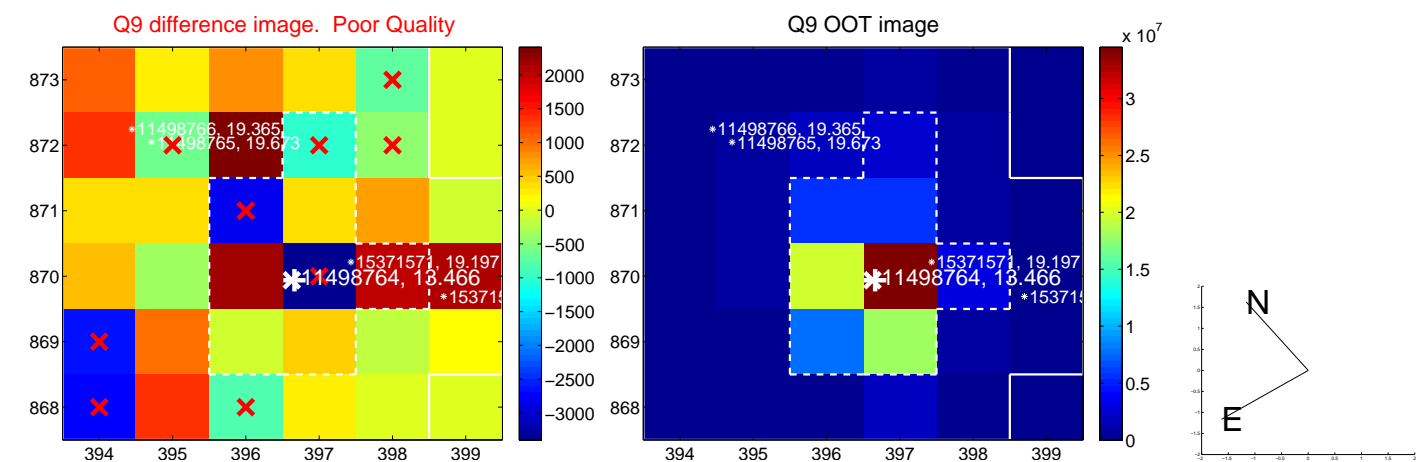
Q4 OOT image



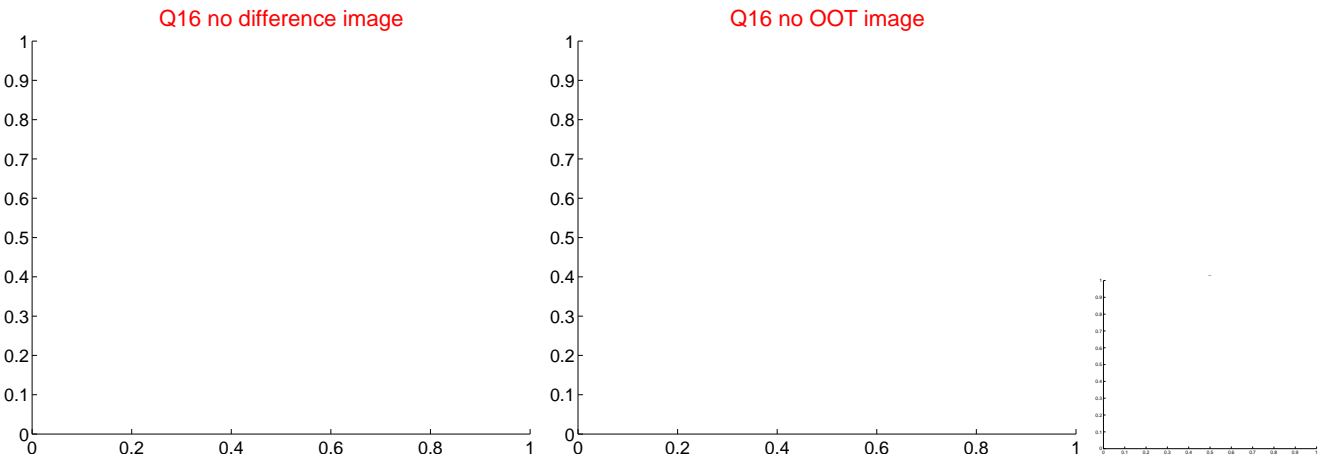
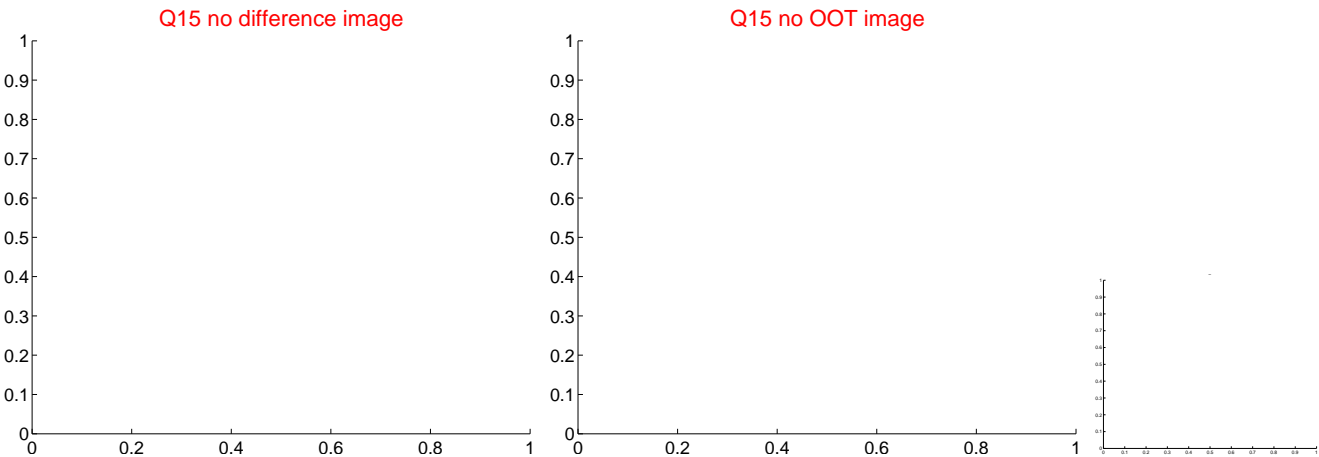
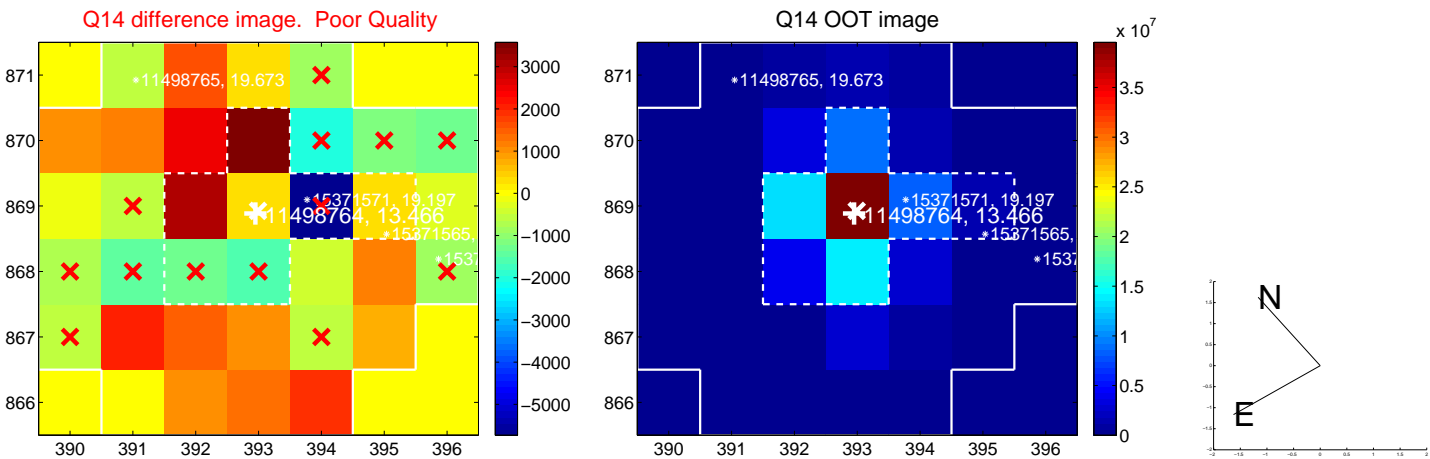
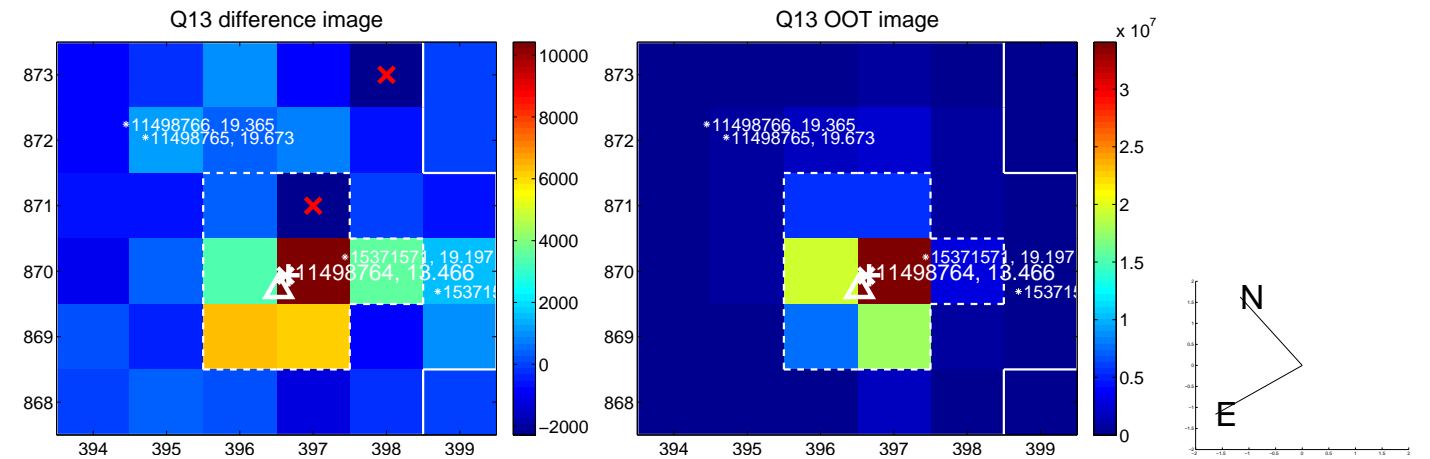
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



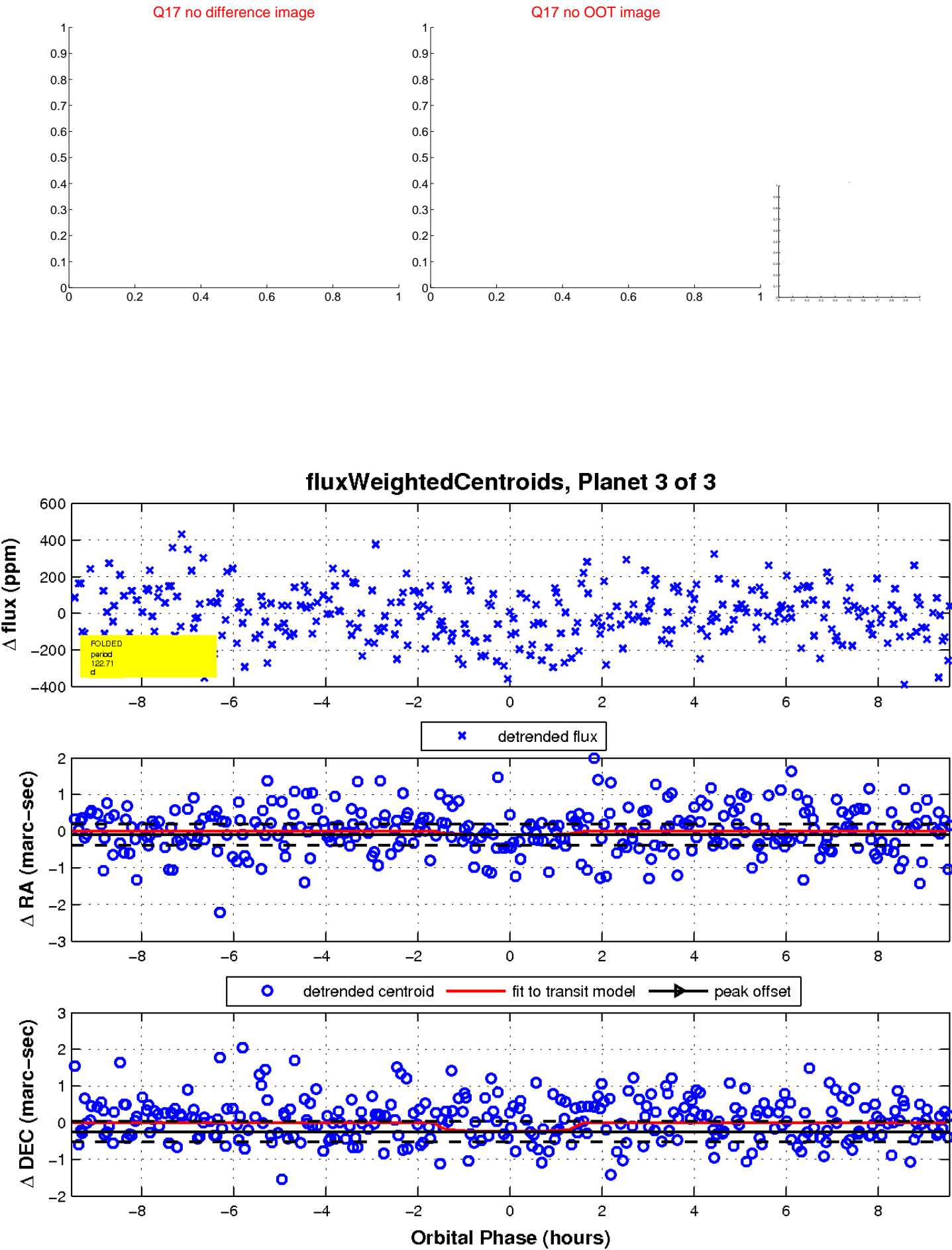
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

