

KIC 009474101

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})
009474101-01	OBS	No	0.814776	132.176538	162.8	1.462	9.0	9.0	0.80	5932	1.68	2632.19
009474101-02	OBS	No	0.814761	131.786487	89.0	2.987	8.9	8.3	0.80	5932	0.89	2632.25
009474101-03	OBS	No	90.232544	208.035745	2339.2	1.949	8.2	9.4	0.80	5932	4.00	4.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009474101-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
009474101-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
009474101-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

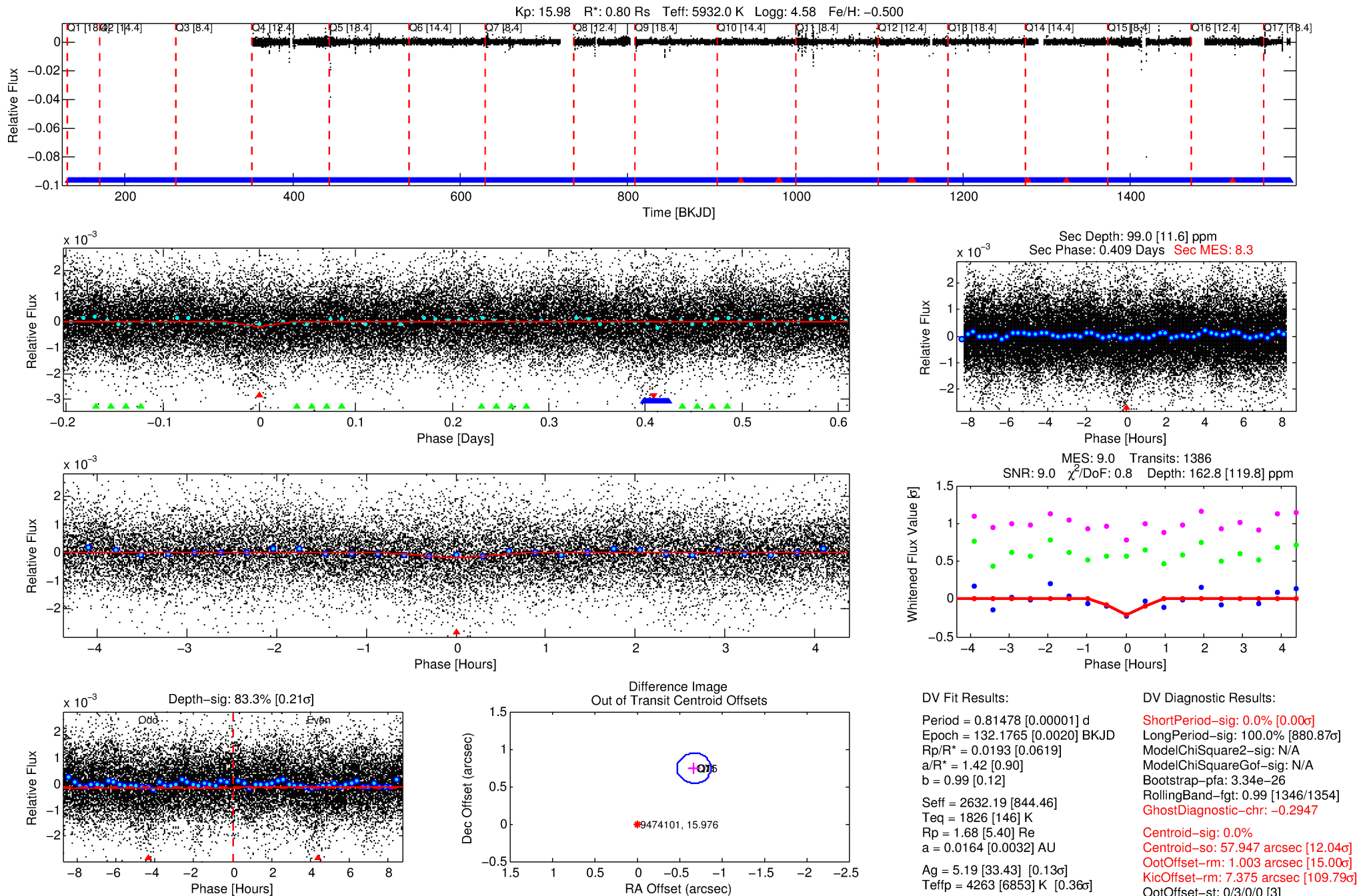
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009474101-01

No Significant Match Found

DV One-Page Summary

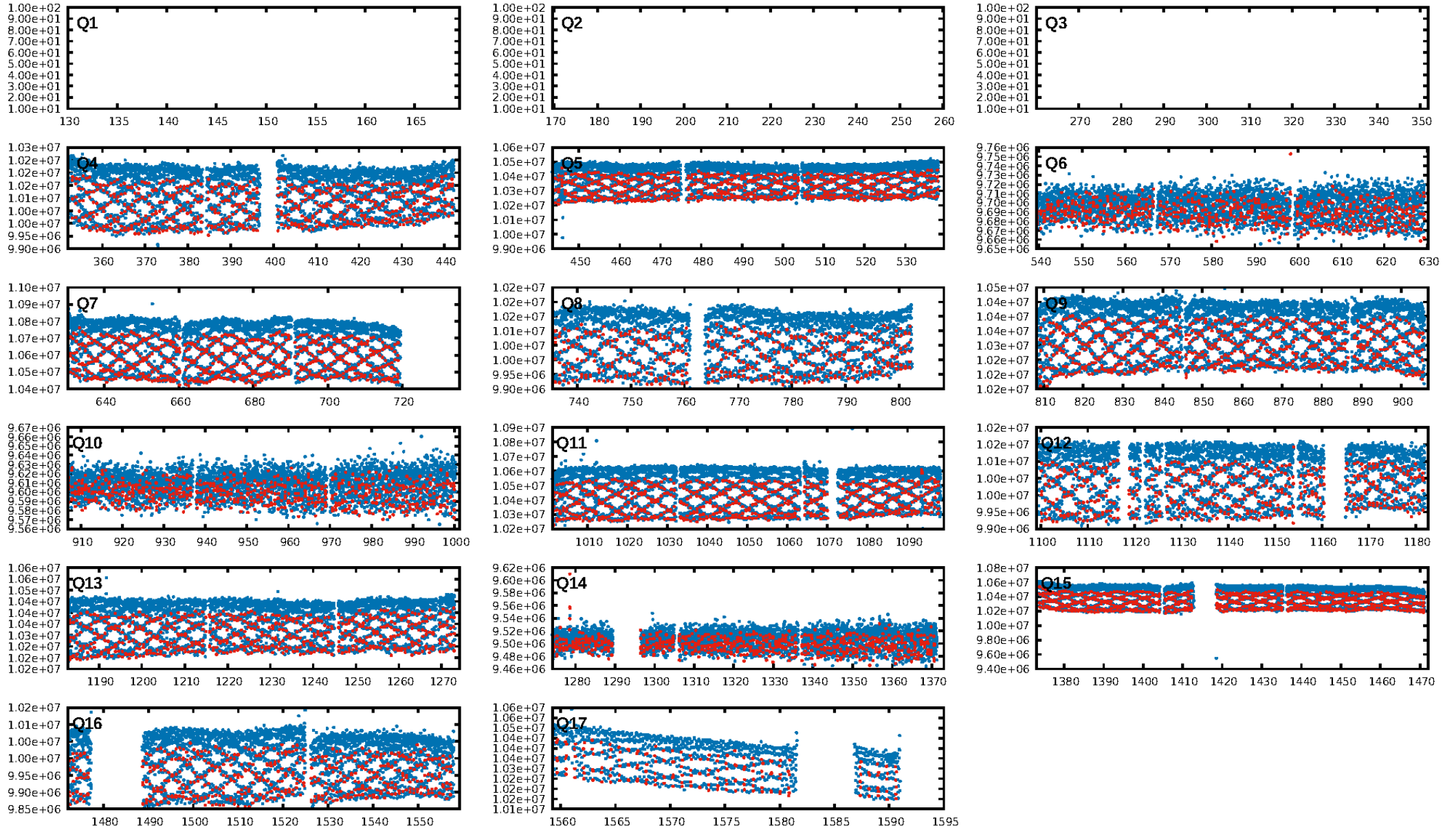
KIC: 9474101 Candidate: 1 of 3 Period: 0.815 d



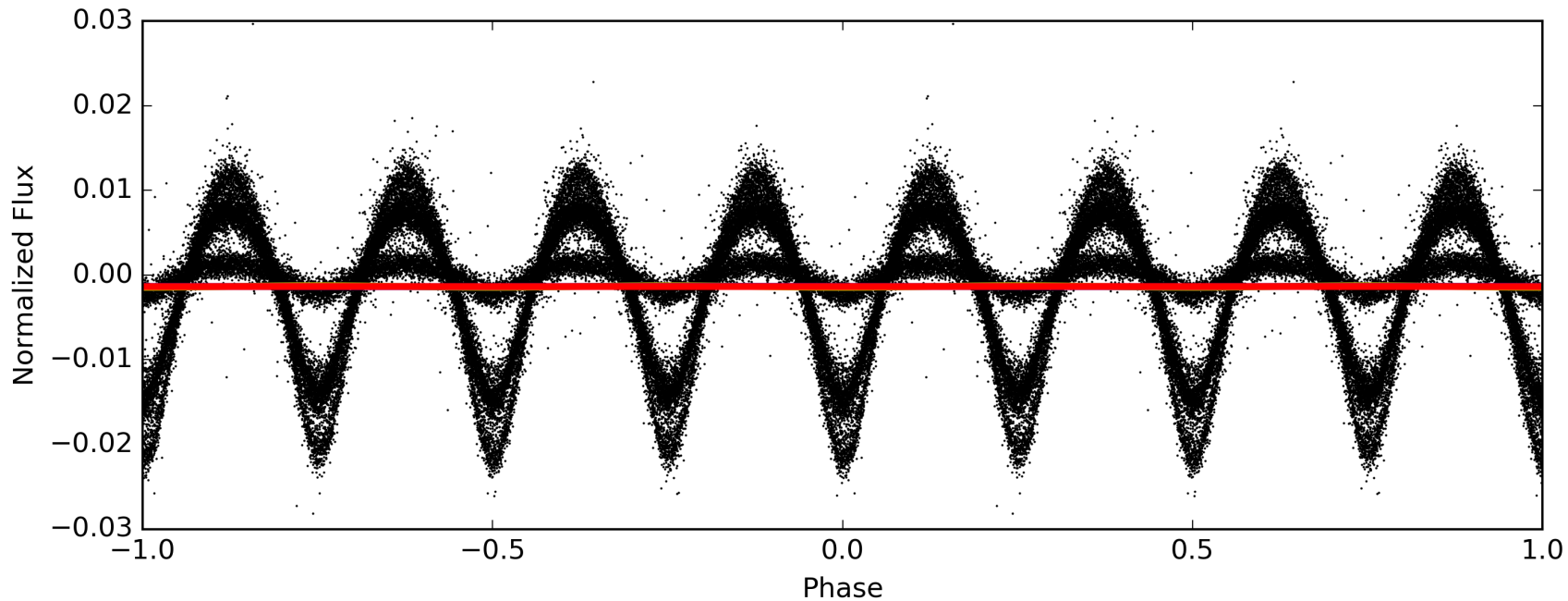
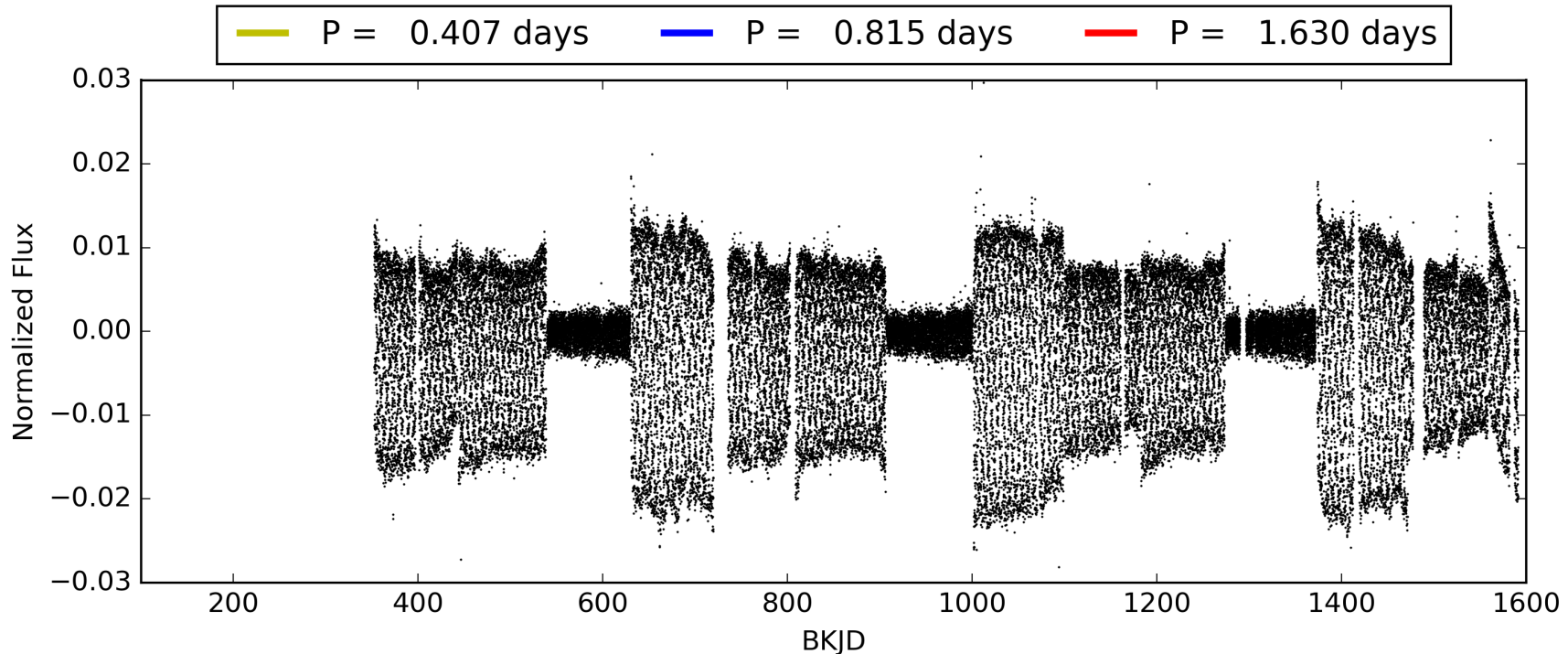
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:44:46 Z

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

TCE 009474101-01, PDC Light Curves

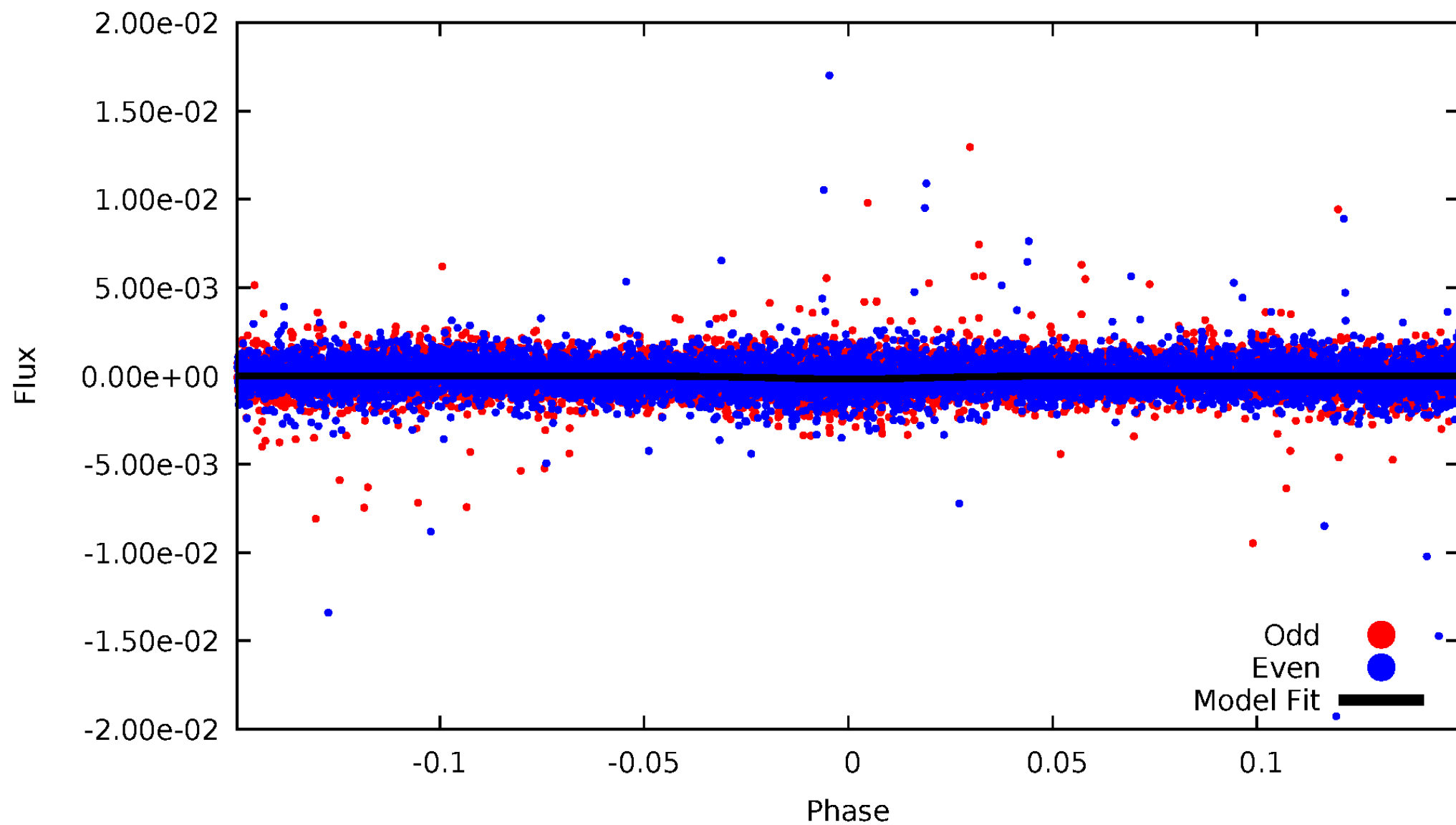


TCE 009474101-01



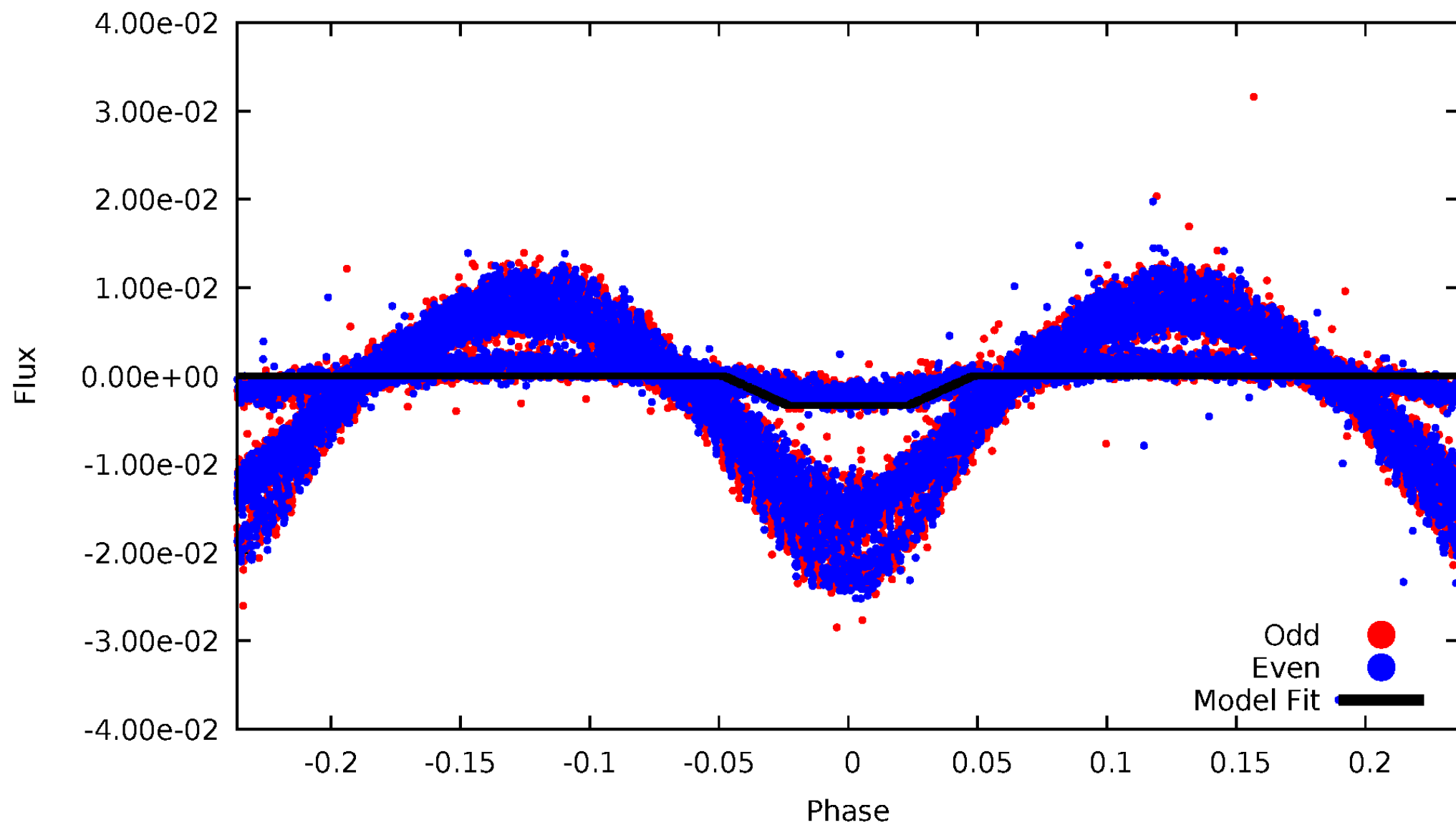
DV Odd/Even

TCE 009474101-01



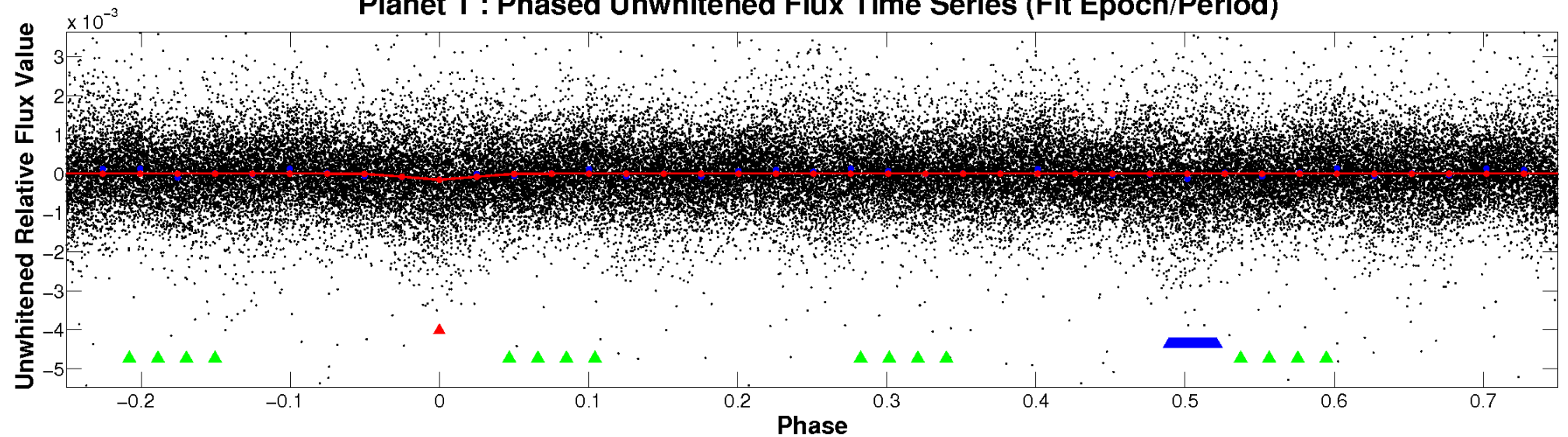
ALT Odd/Even

TCE 009474101-01

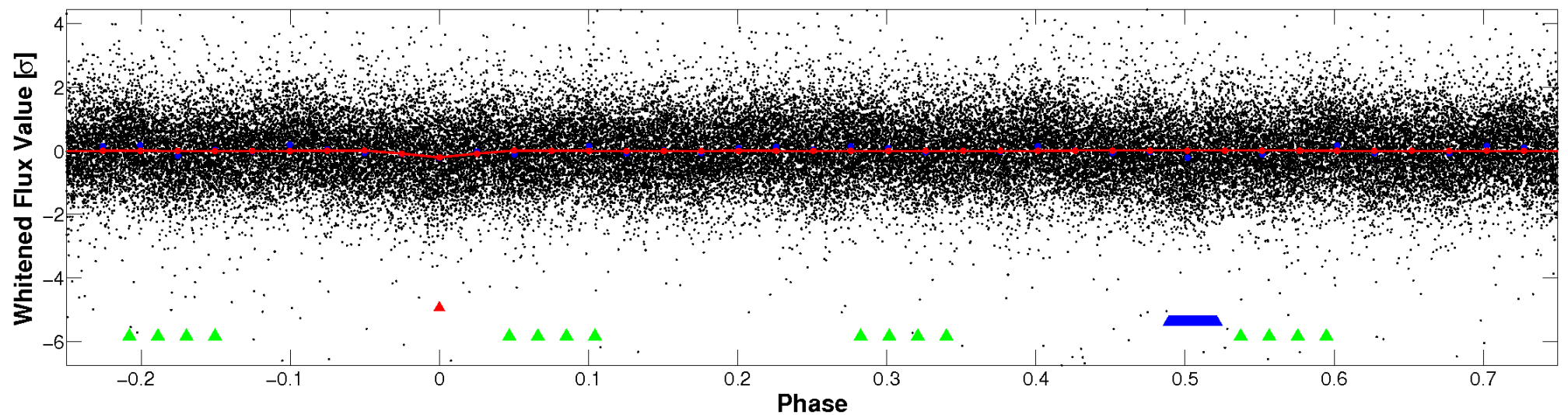


Non-Whitened Vs. Whitened Light Curve

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

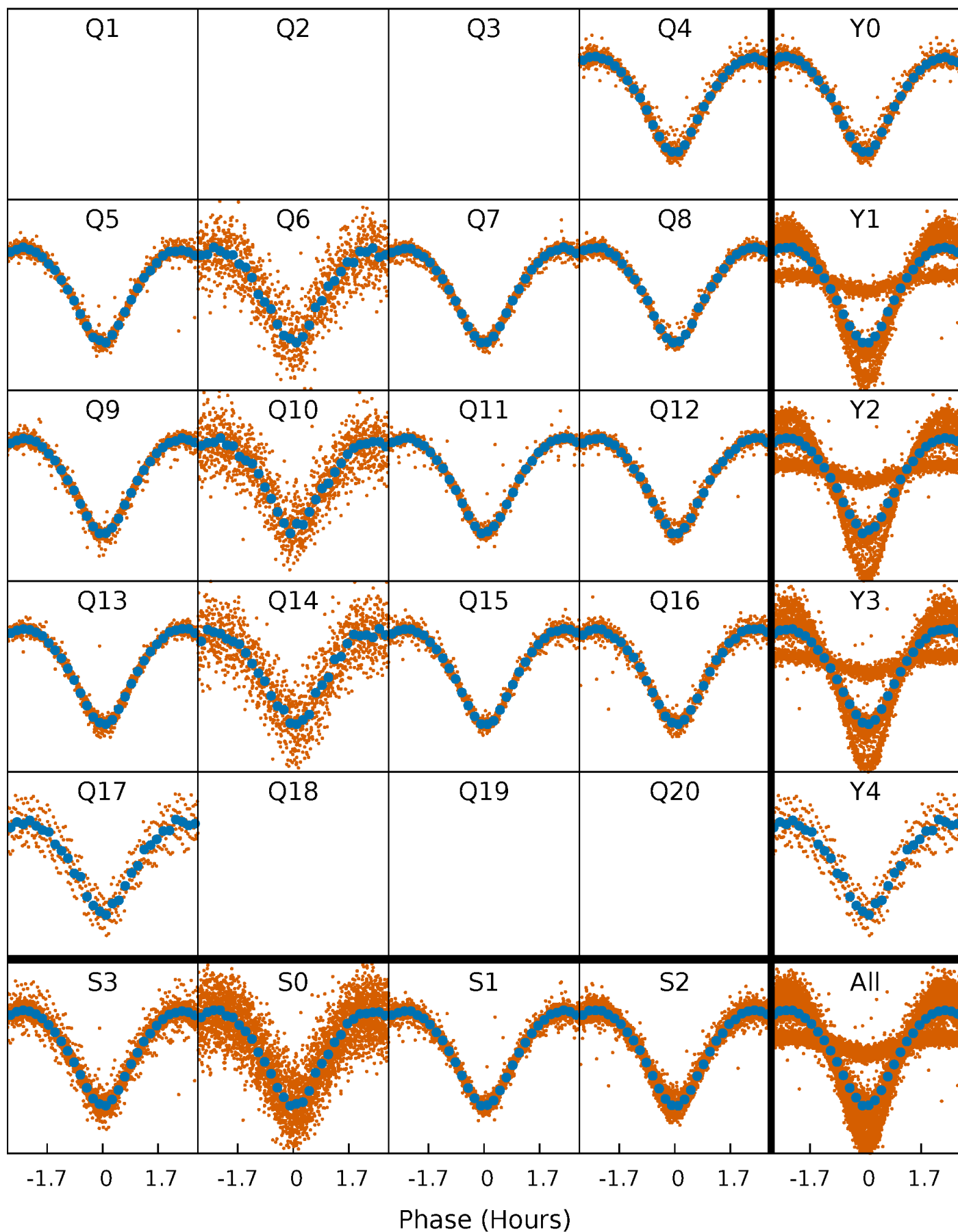


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



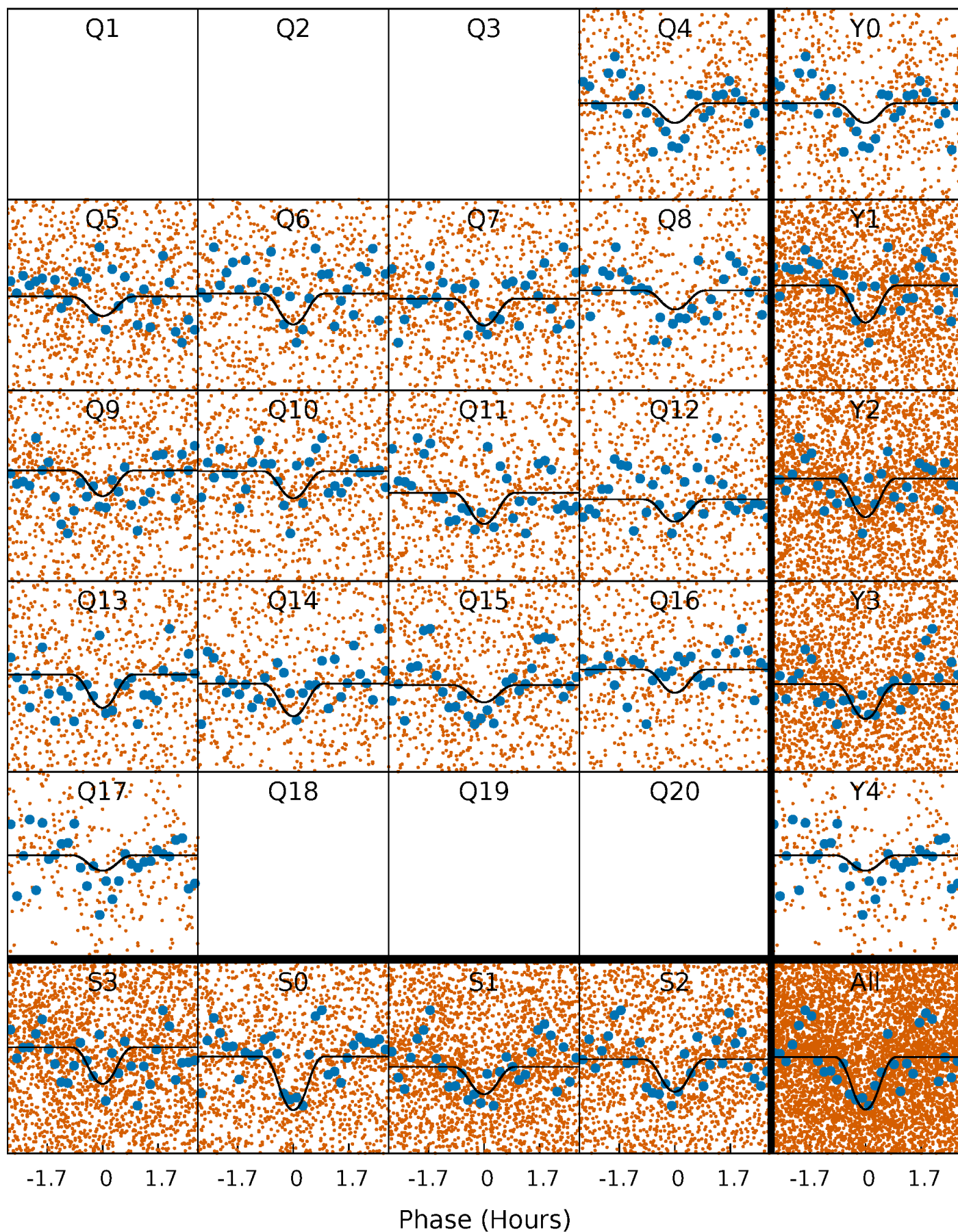
PDC Quarter-Phased Transit Curves

TCE 009474101-01 P= 0.814776 Days $T_0=132.176538$ (BKJD)



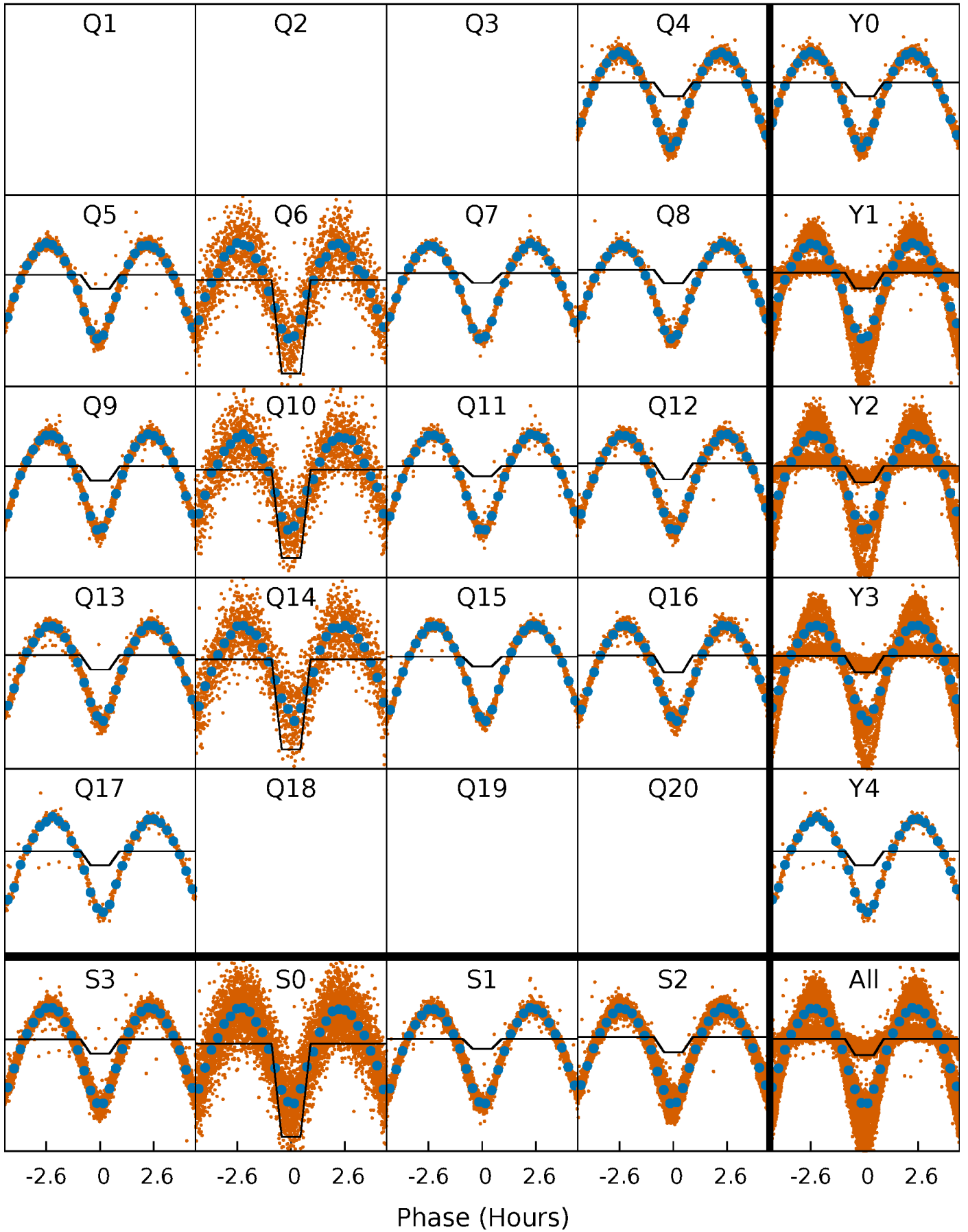
DV Quarter-Phased Transit Curves

TCE 009474101-01 P= 0.814776 Days $T_0=132.176538$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

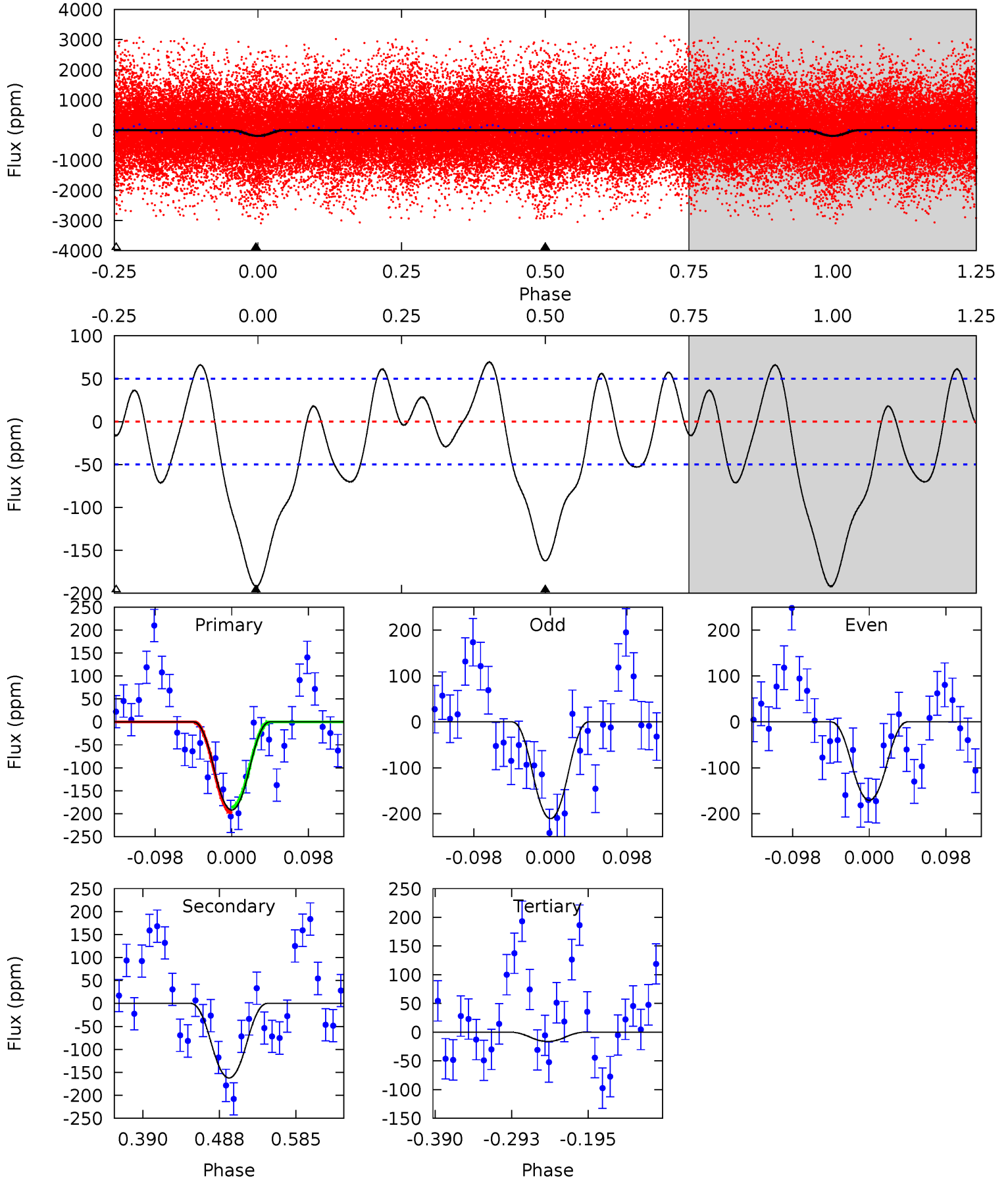
TCE 009474101-01 P= 0.814771 Days $T_0=132.182619$ (BKJD)



DV Model-Shift Uniqueness Test

009474101-01, P = 0.814776 Days, E = 132.176538 Days

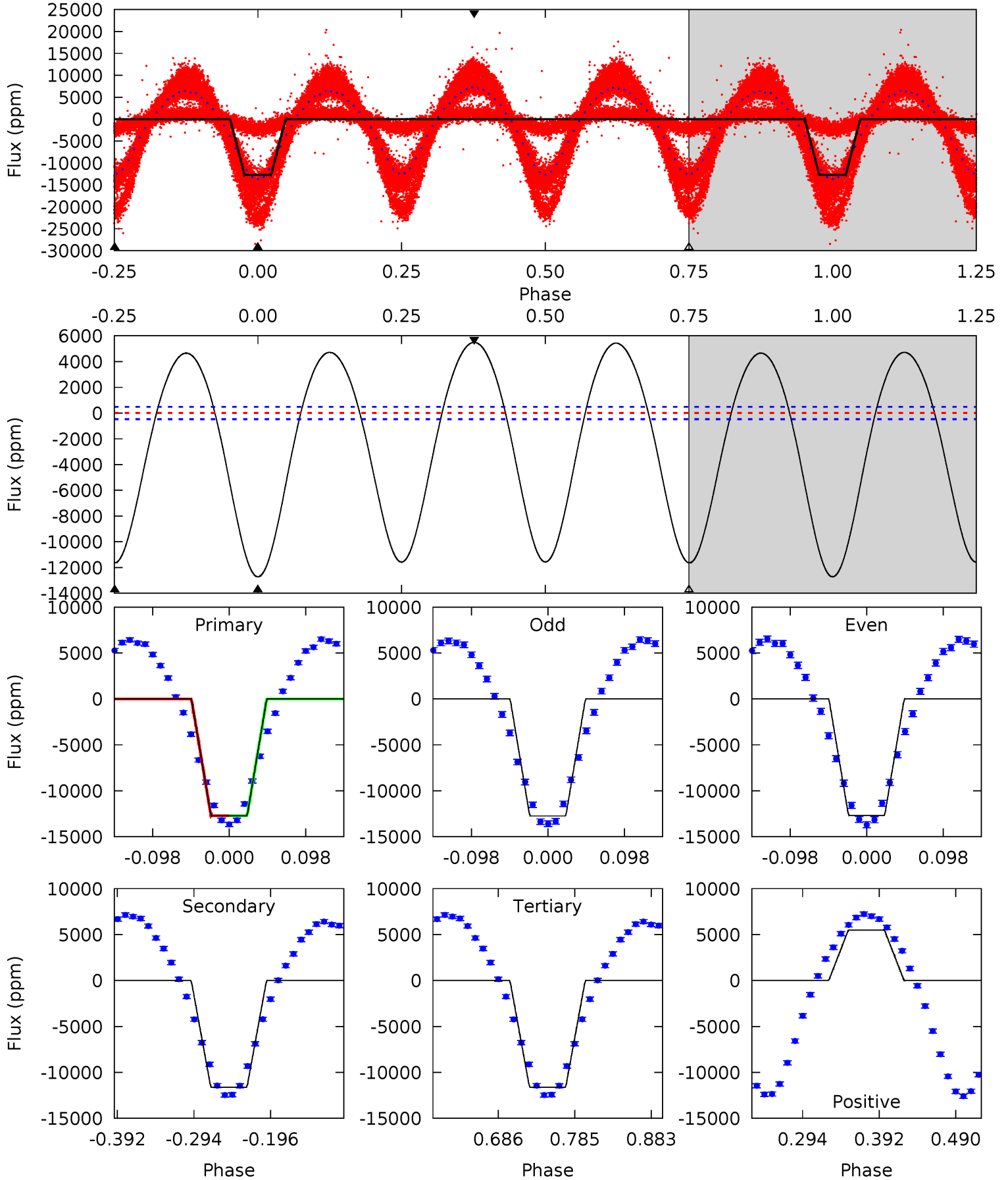
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	14.9	1.48	0	4.57	1.66	3.53	16.1	17.6	13.4	14.9	1.83	0.80	0.27	0.54



Alt Model-Shift Uniqueness Test

009474101-01, P = 0.814771 Days, E = 132.182619 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
121.2	110.9	110.9	52.3	4.57	1.65	56.9	10.4	68.9	0.02	58.6	0.17	0.91	0.30	0.01



Stellar Parameters For KIC 009474101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5932^{+186}_{-207}	$4.580^{+0.040}_{-0.160}$	$-0.500^{+0.300}_{-0.300}$	$0.798^{+0.182}_{-0.073}$	$0.899^{+0.084}_{-0.116}$	$2.487^{+0.500}_{-1.101}$
	+3%/-3%	+1%/-3%	+60%/-60%	+23%/-9%	+9%/-13%	+20%/-44%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009474101-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-162 ± 11	$4.62^{+5.11}_{-3.12}$	2593^{+152}_{-109}	3299^{+1886}_{-5561}	$1.078^{+9.389}_{-0.825}$
Alt.	-11638 ± 105	$6.22^{+5.28}_{-3.94}$	2597^{+135}_{-122}	7488^{+8830}_{-2039}	44^{+287}_{-31}

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 $A_{obs} \gg 1.0$

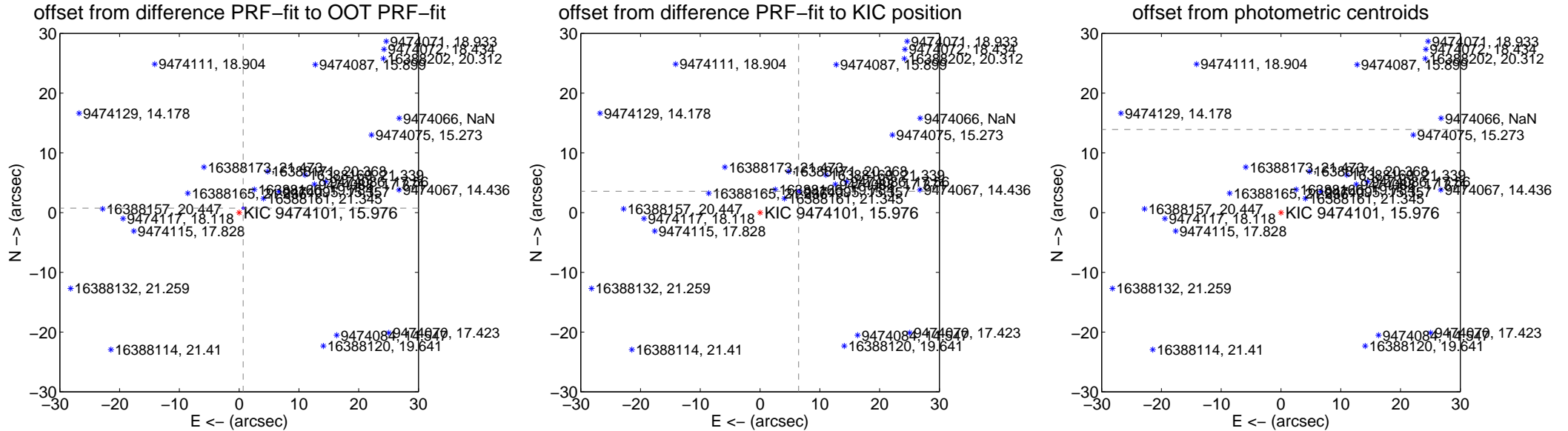
DV Centroid Data

Supplemental centroid analysis for 009474101-01. Kepler magnitude: 15.98. Transit SNR 9.03

There are 3 quarters with good PRF difference image offsets

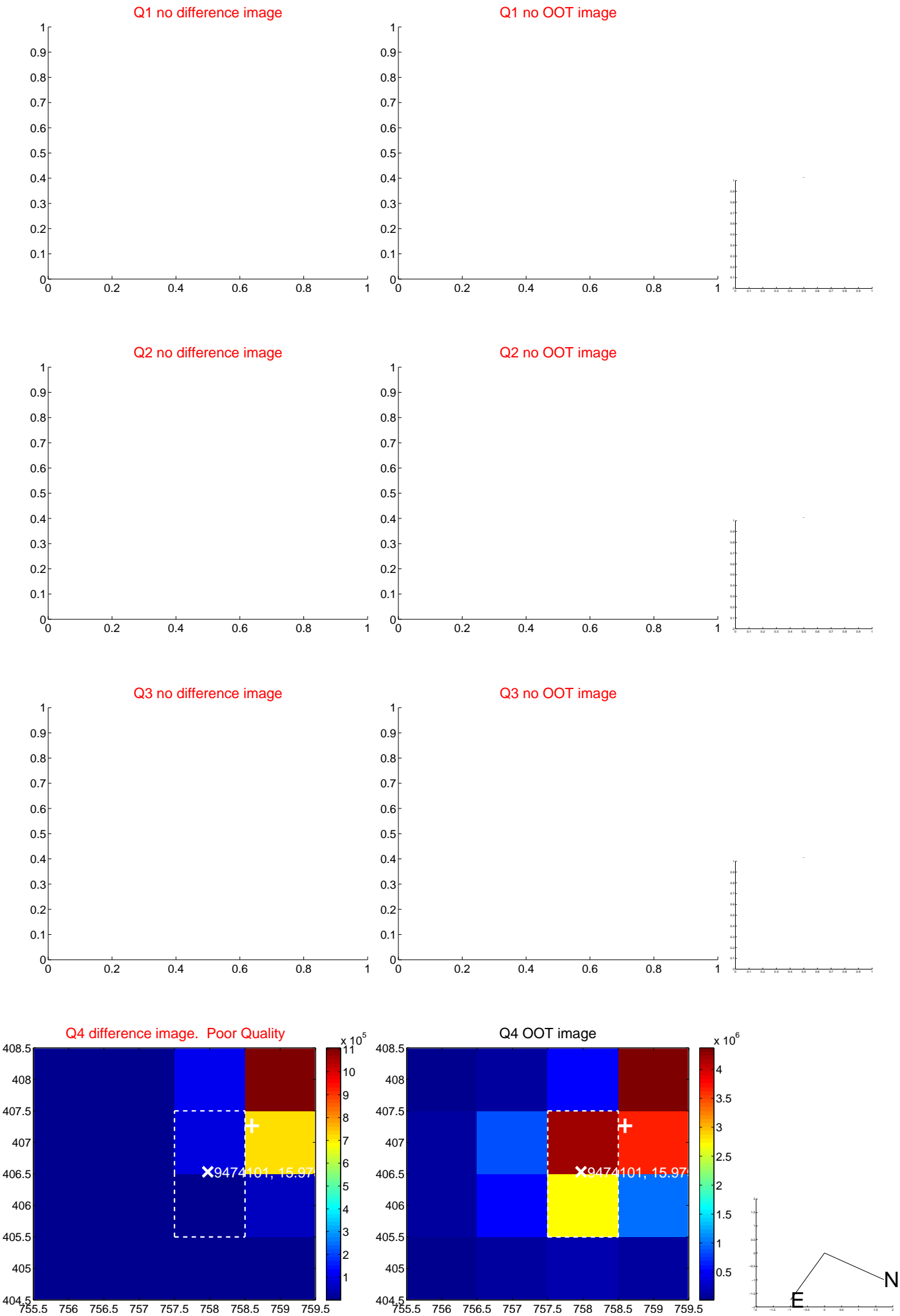
The OOT PRF centroid is offset from the target star catalog position by about 6.43 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.003 ± 0.067	15.00	-0.674 ± 0.067	0.743 ± 0.067
PRF-fit source offset from KIC position	7.375 ± 0.067	109.79	-6.452 ± 0.067	3.573 ± 0.067
photometric centroid source offset	57.94 ± 4.81	12.04	-56.25 ± 4.93	13.92 ± 2.08

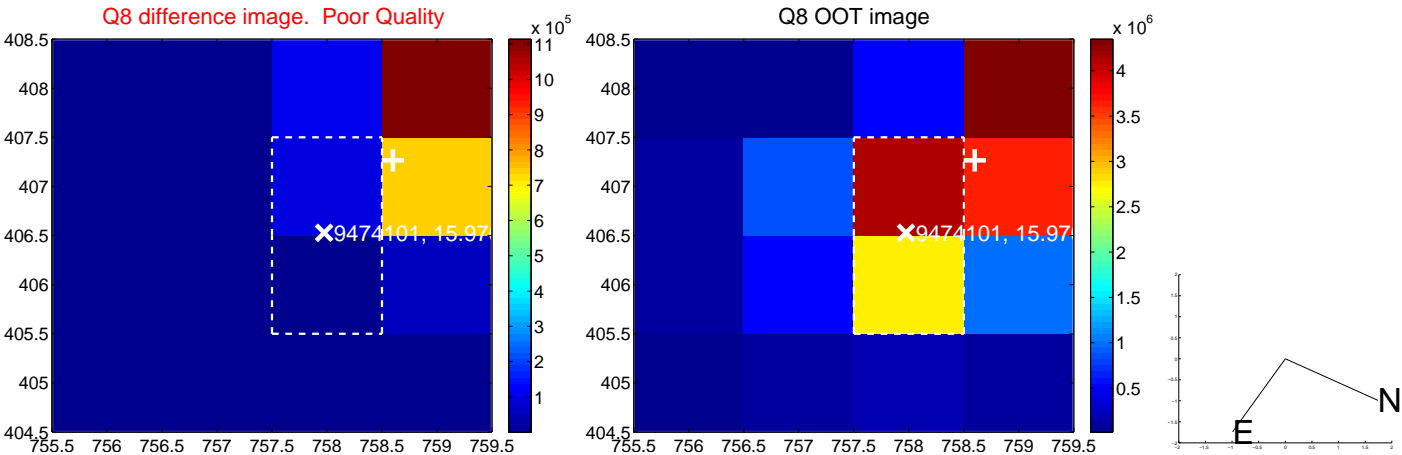
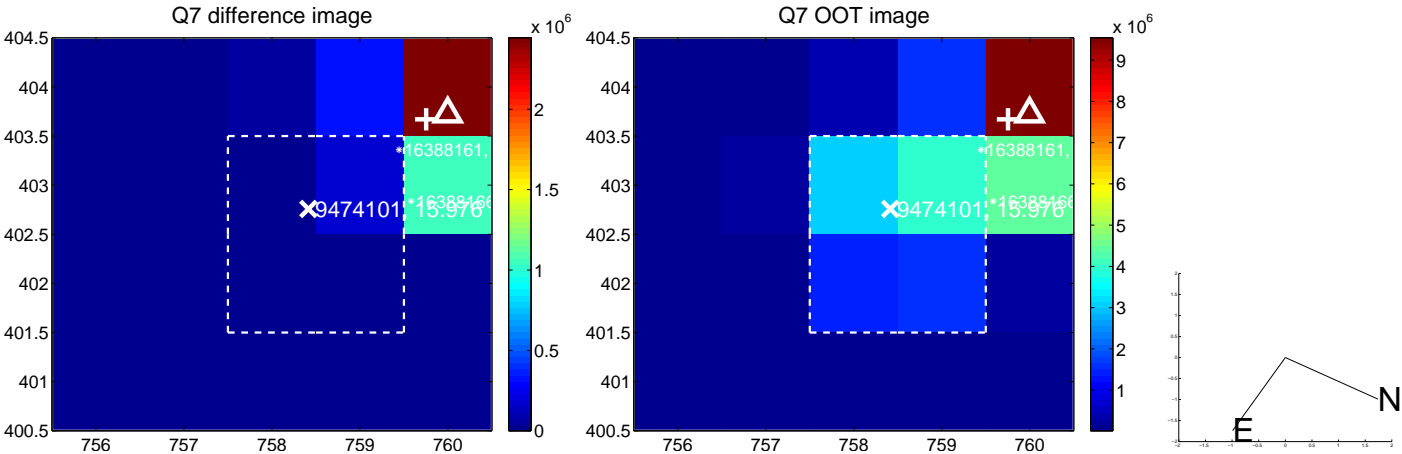
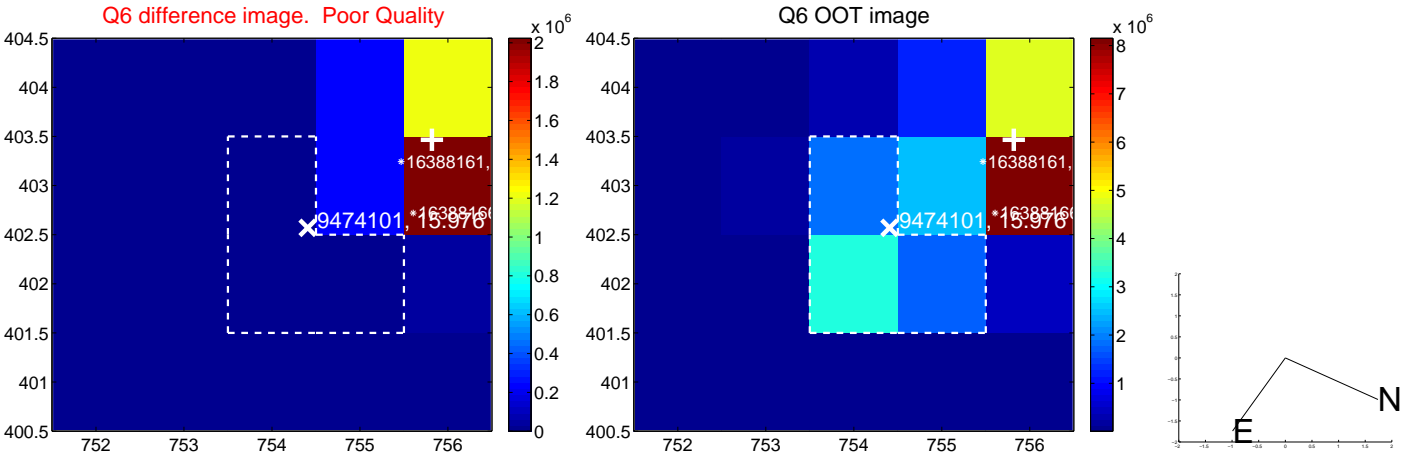
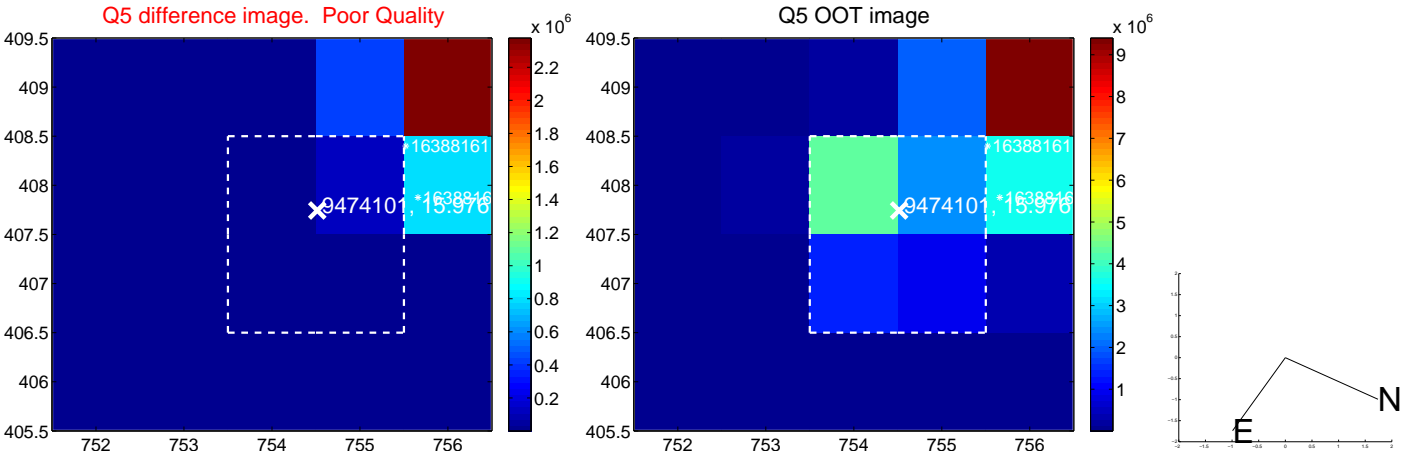


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

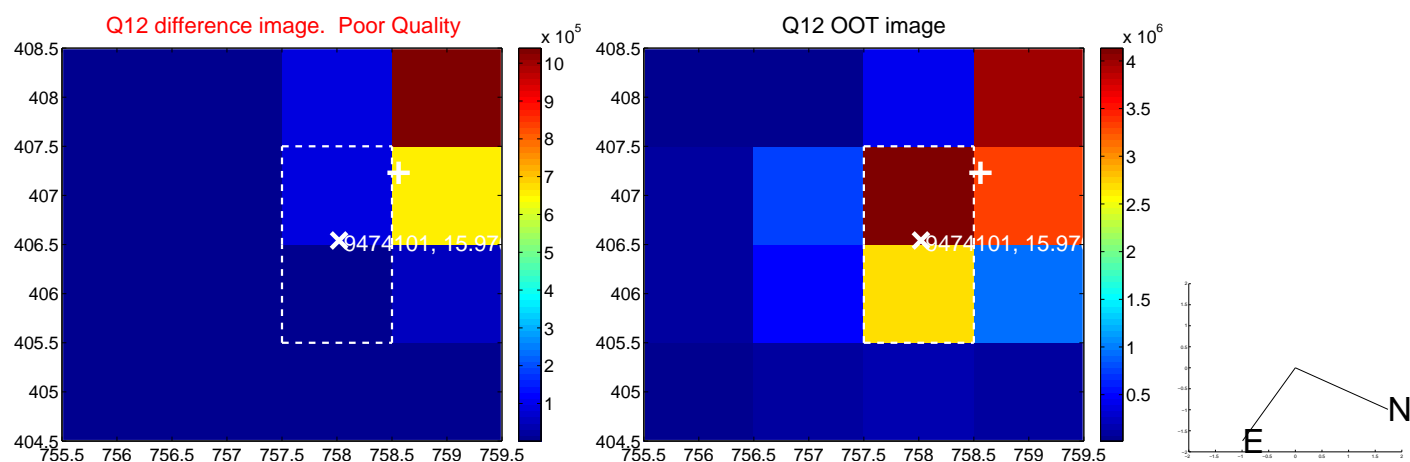
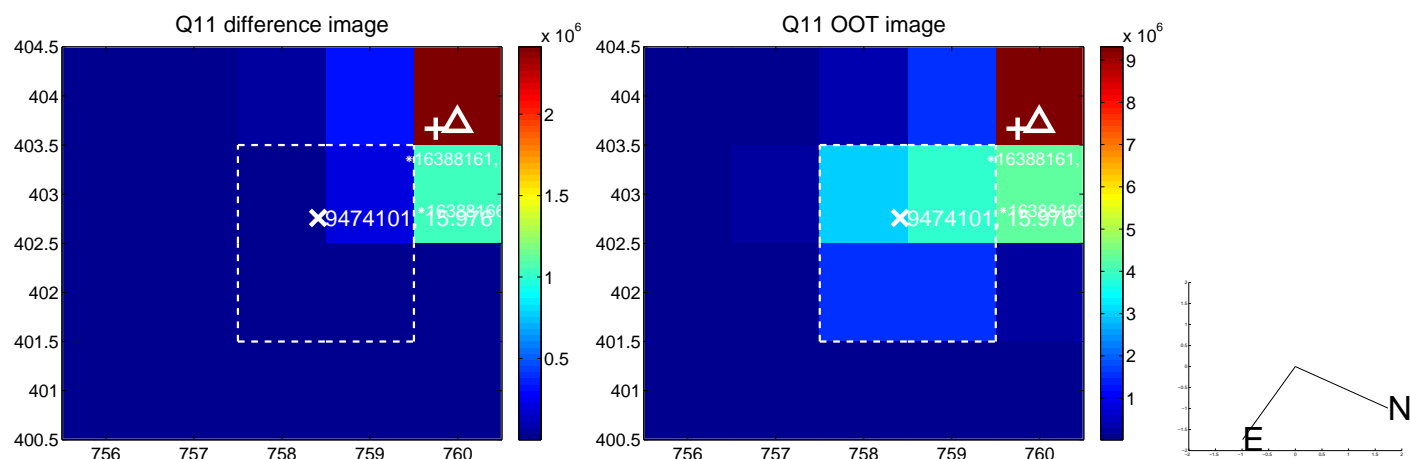
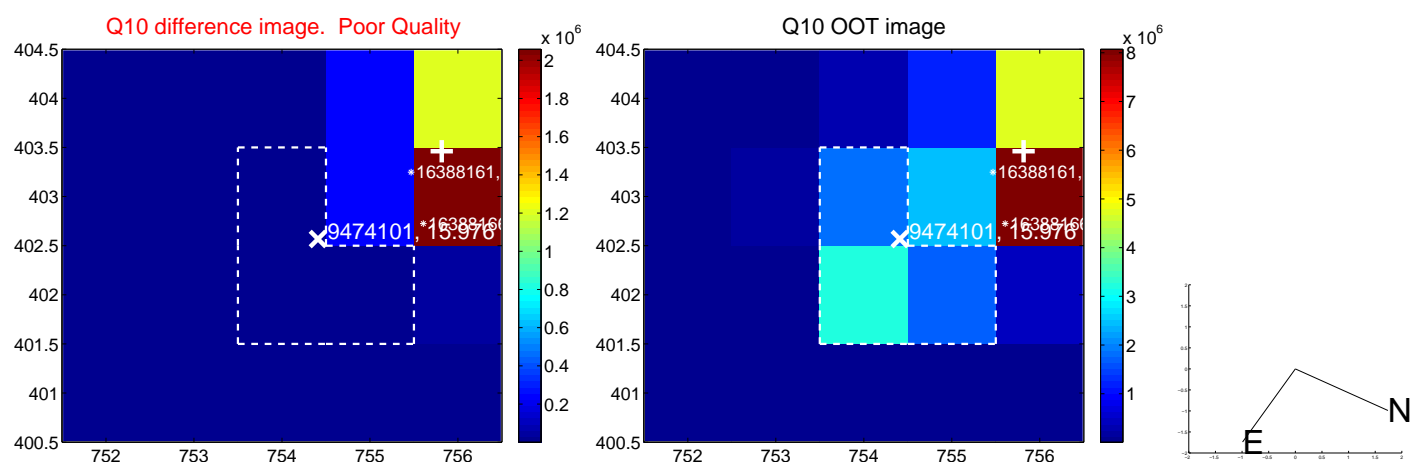
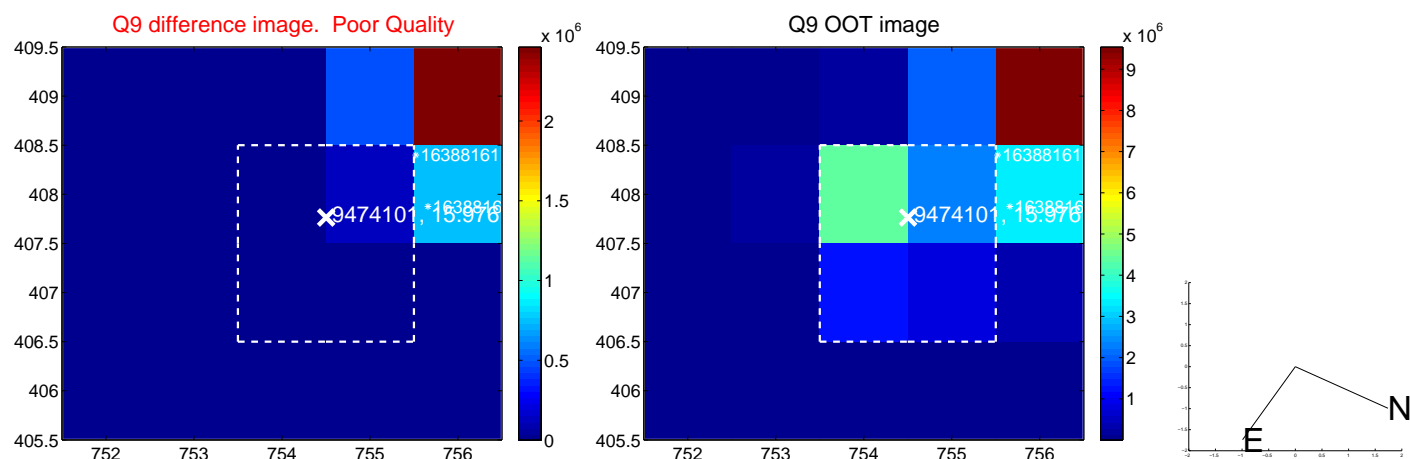
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



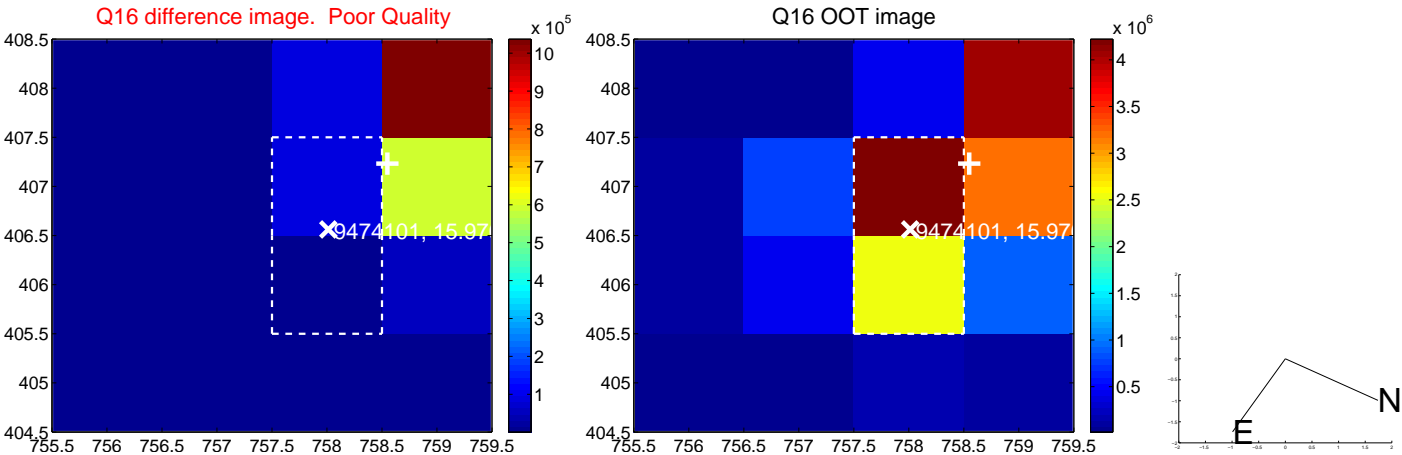
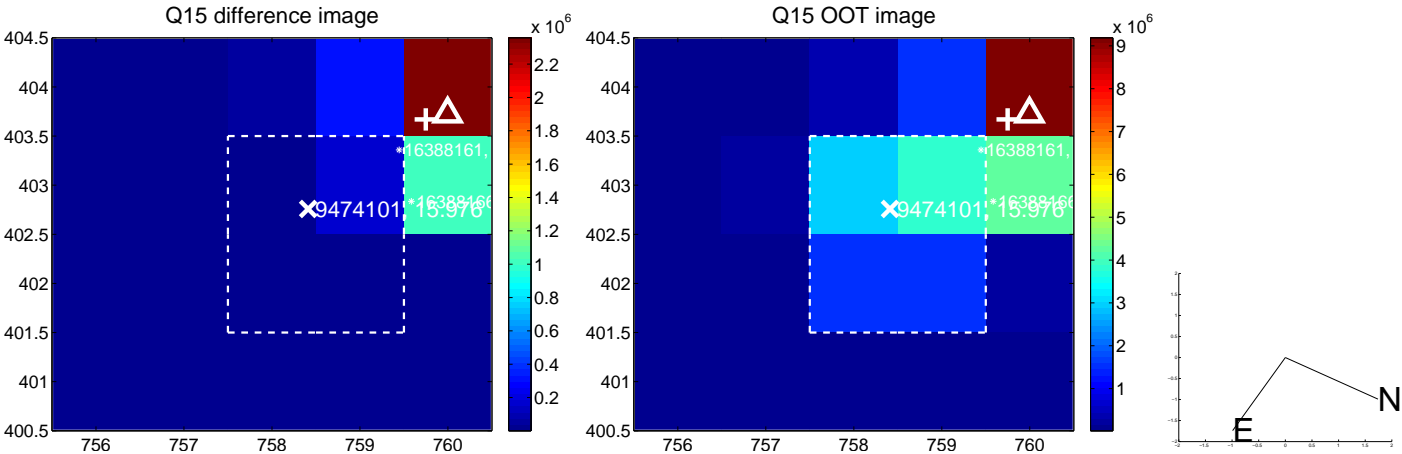
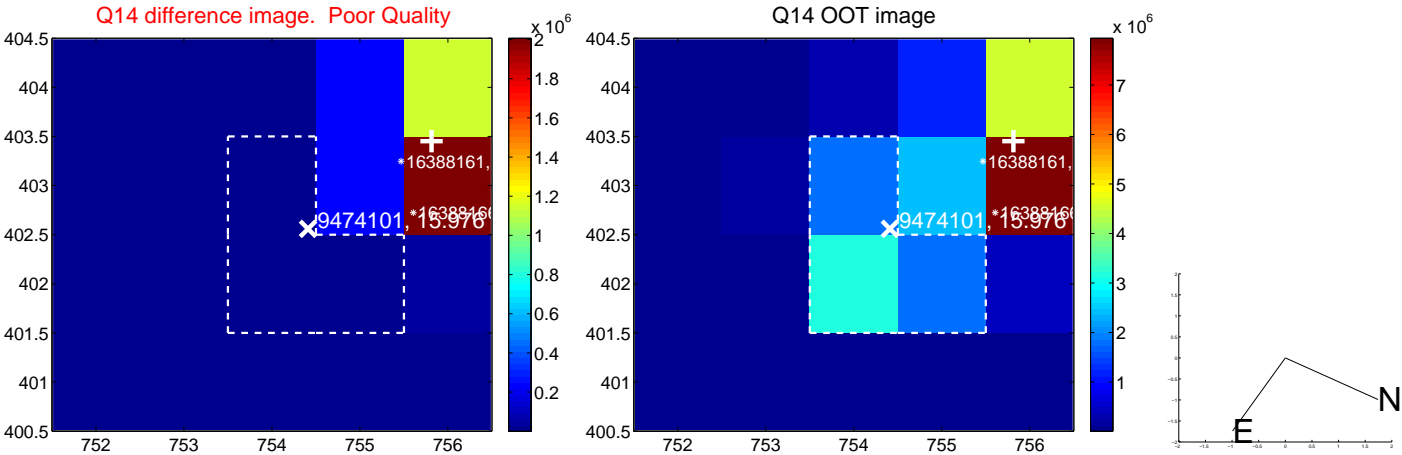
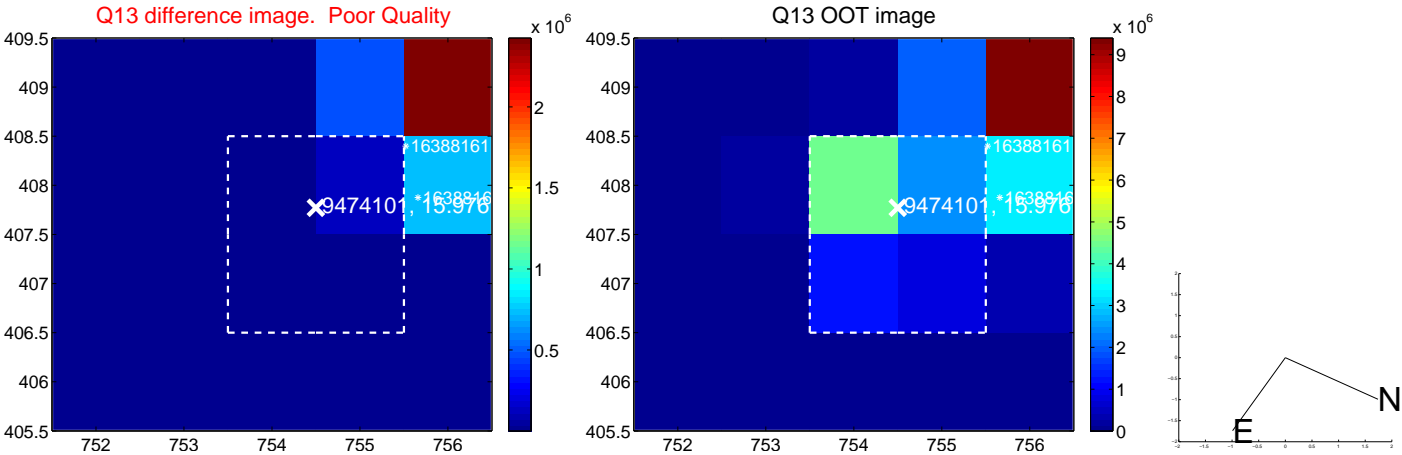
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



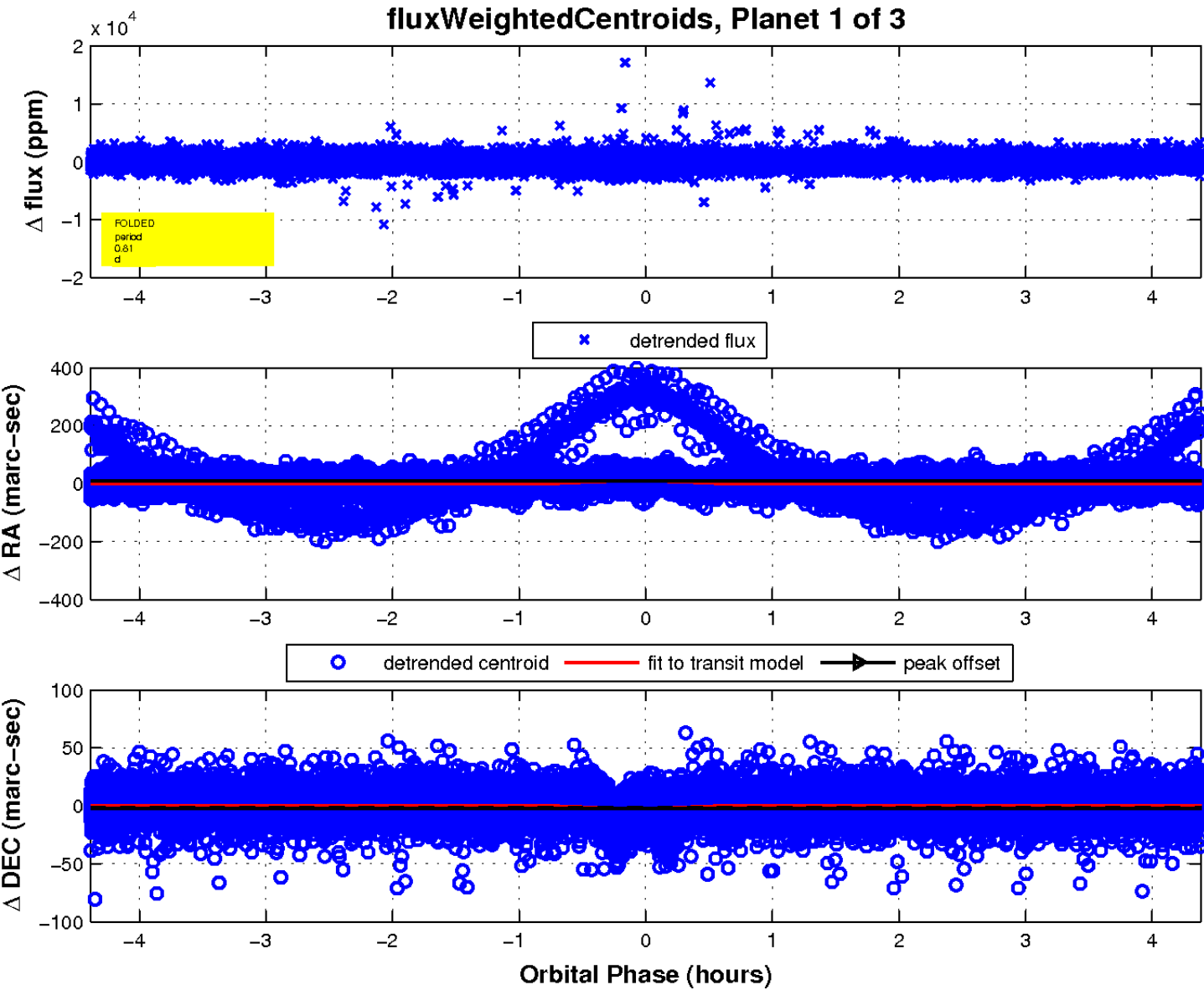
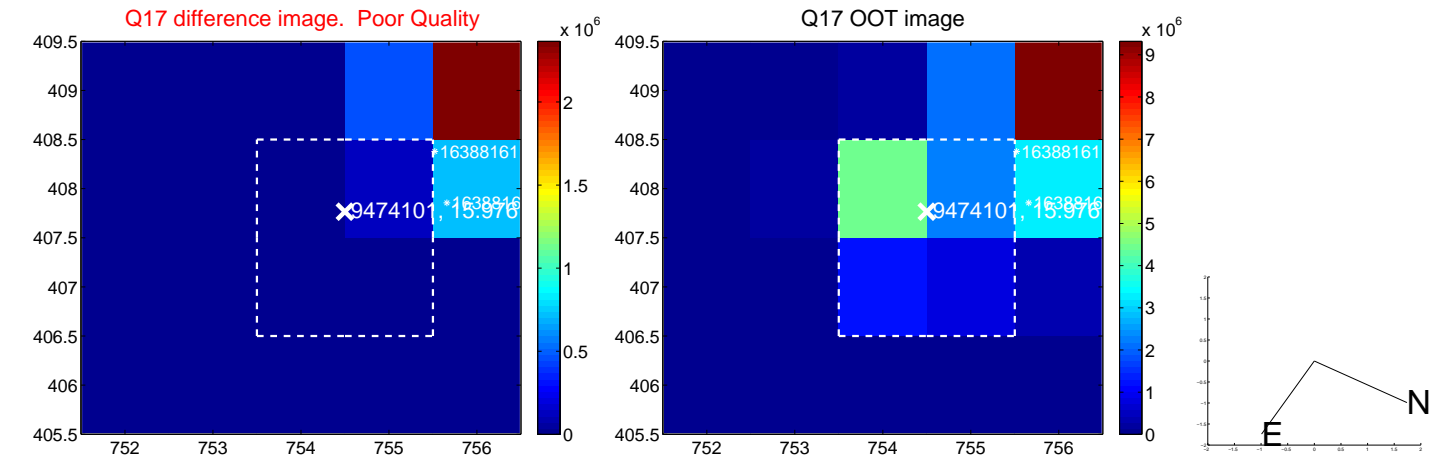
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

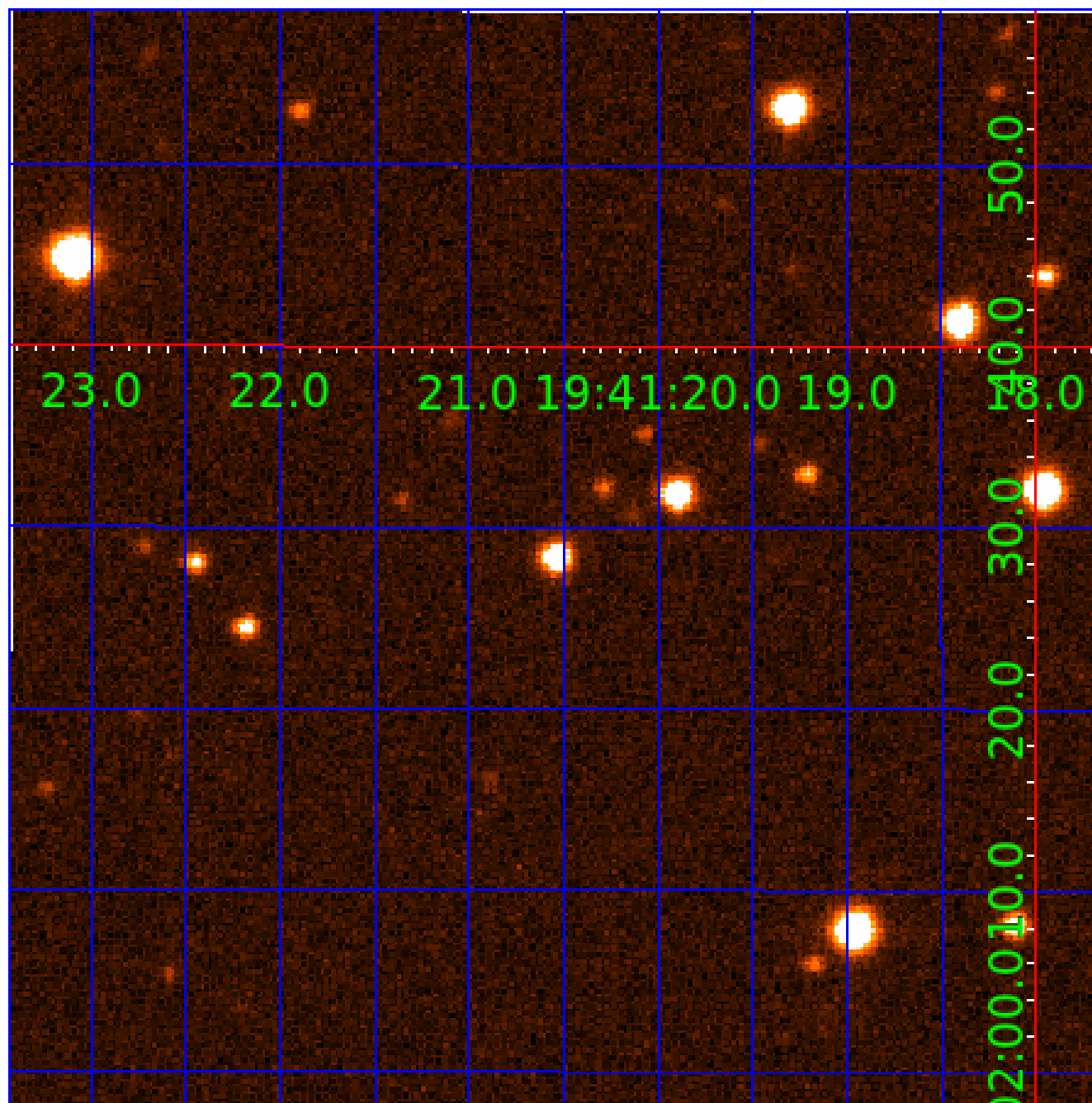


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009474101

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})
009474101-01	OBS	No	0.814776	132.176538	162.8	1.462	9.0	9.0	0.80	5932	1.68	2632.19
009474101-02	OBS	No	0.814761	131.786487	89.0	2.987	8.9	8.3	0.80	5932	0.89	2632.25
009474101-03	OBS	No	90.232544	208.035745	2339.2	1.949	8.2	9.4	0.80	5932	4.00	4.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009474101-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
009474101-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
009474101-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

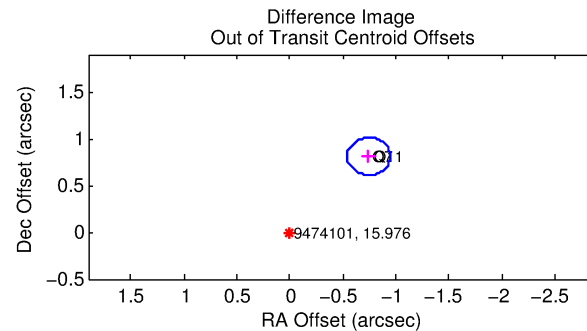
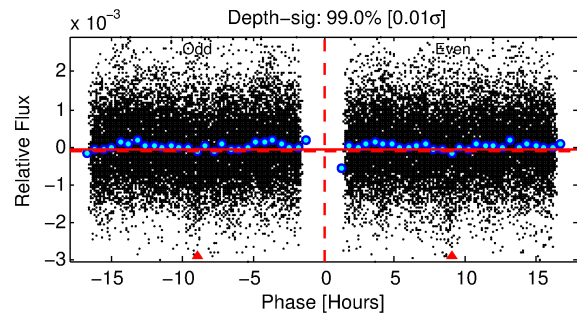
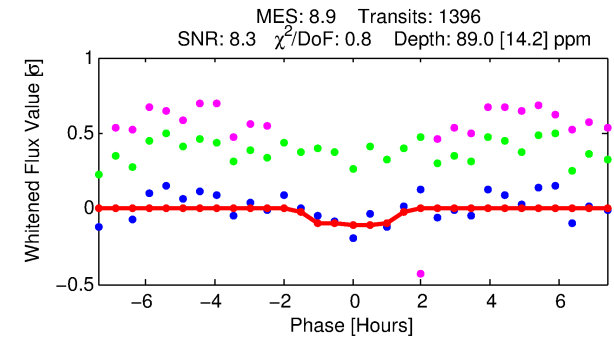
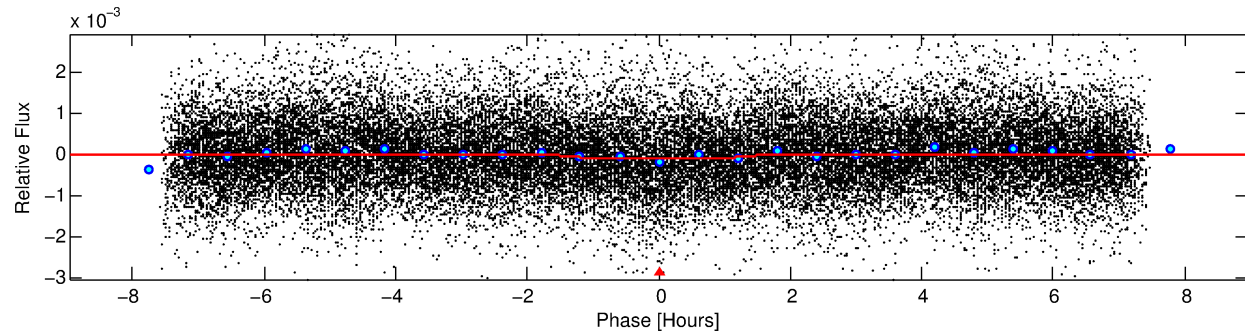
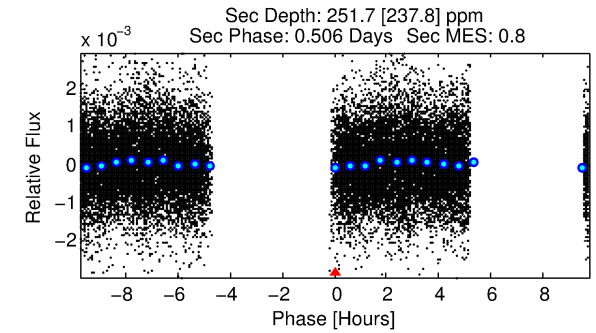
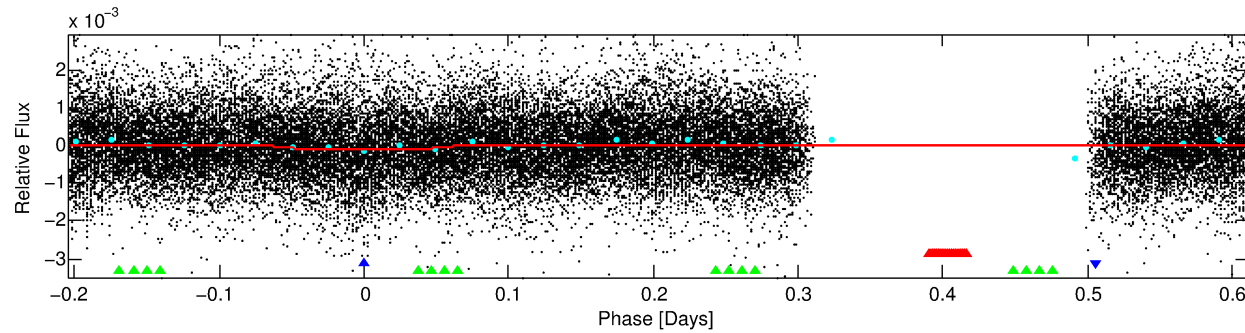
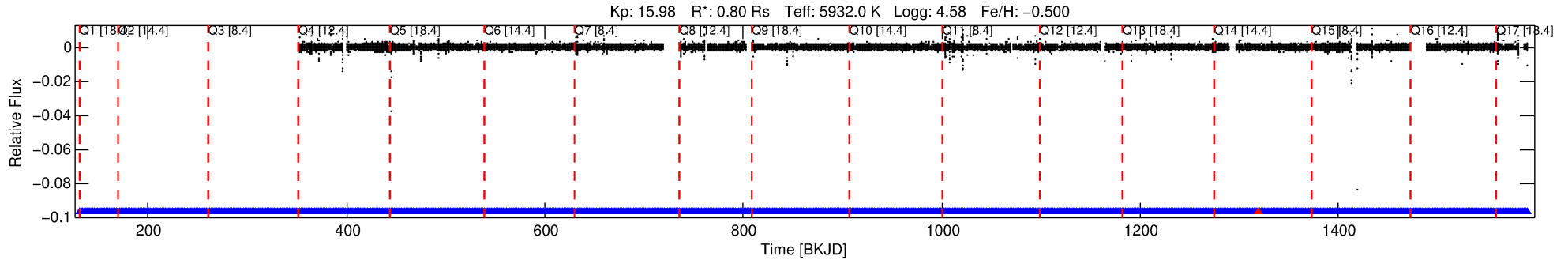
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009474101-02

No Significant Match Found

DV One-Page Summary

KIC: 9474101 Candidate: 2 of 3 Period: 0.815 d



DV Fit Results:

Period = 0.81476 [0.00001] d
Epoch = 131.7865 [0.0042] BKJD
Rp/R* = 0.0102 [0.0074]
a/R* = 1.34 [2.31]
b = 0.90 [0.84]
Seff = 2632.25 [844.48]
Teq = 1826 [146] K
Rp = 0.89 [0.68] Re
a = 0.0164 [0.0032] AU
Ag = 47.39 [83.49] [0.56σ]
Teffp = 7409 [3229] K [1.73σ]

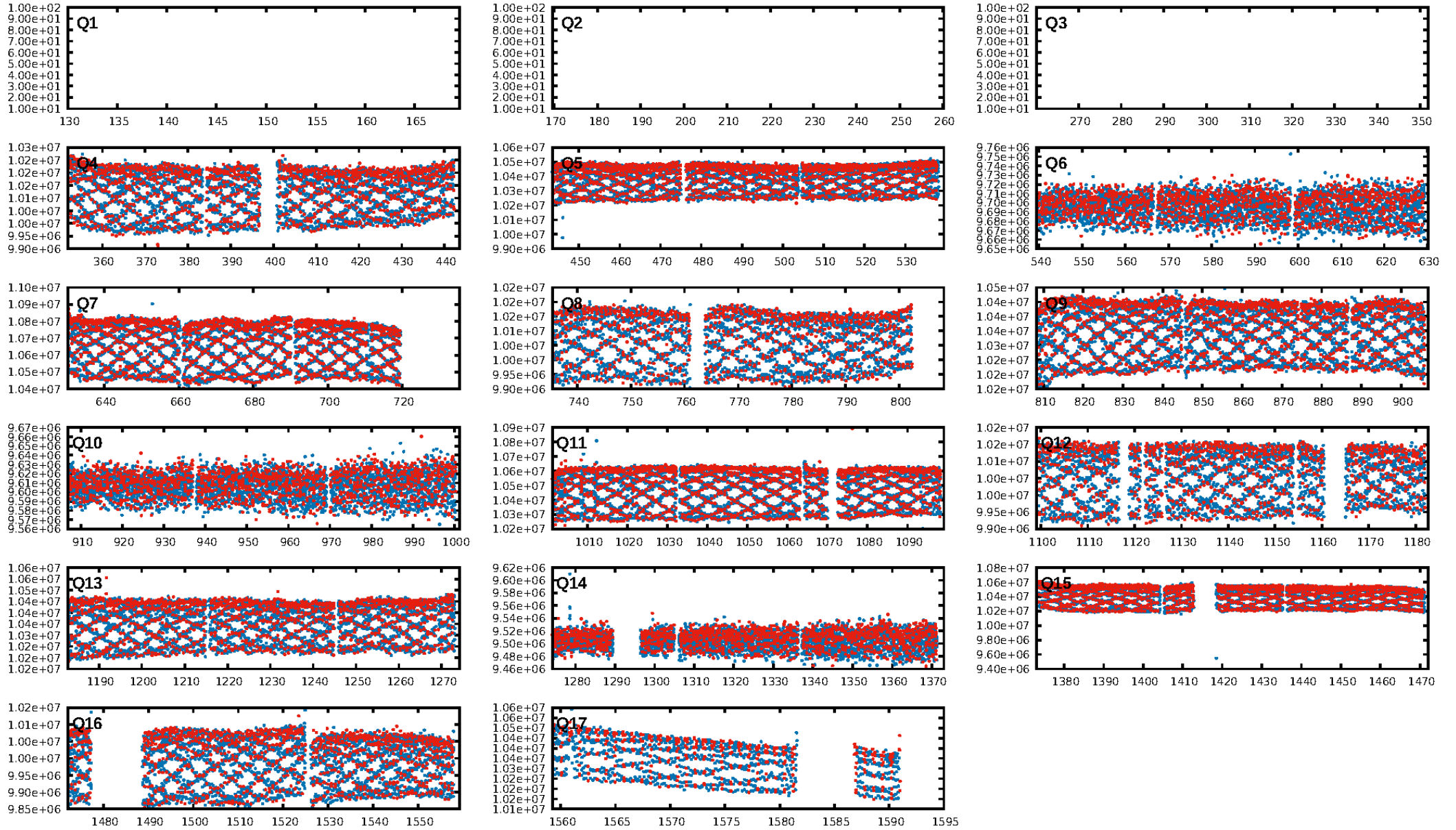
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.17e-25
RollingBand-fgt: 1.00 [1361/1362]
GhostDiagnostic-chr: -1.212
Centroid-sig: 0.0%
Centroid-so: 30.818 arcsec [5.72σ]
OotOffset-rm: 1.101 arcsec [16.47σ]
KicOffset-rm: 7.374 arcsec [109.49σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [14/14]

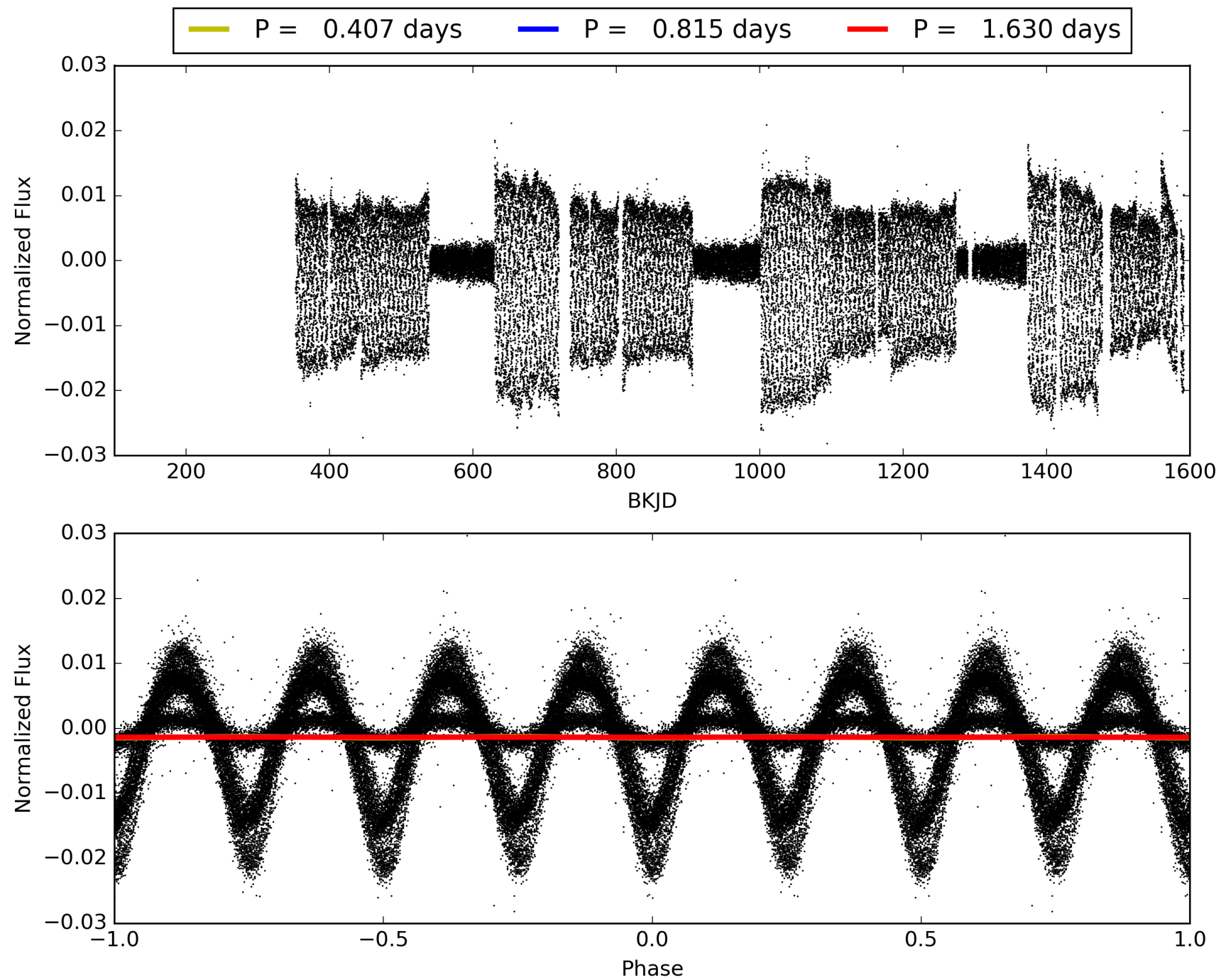
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:44:56 Z

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

TCE 009474101-02, PDC Light Curves

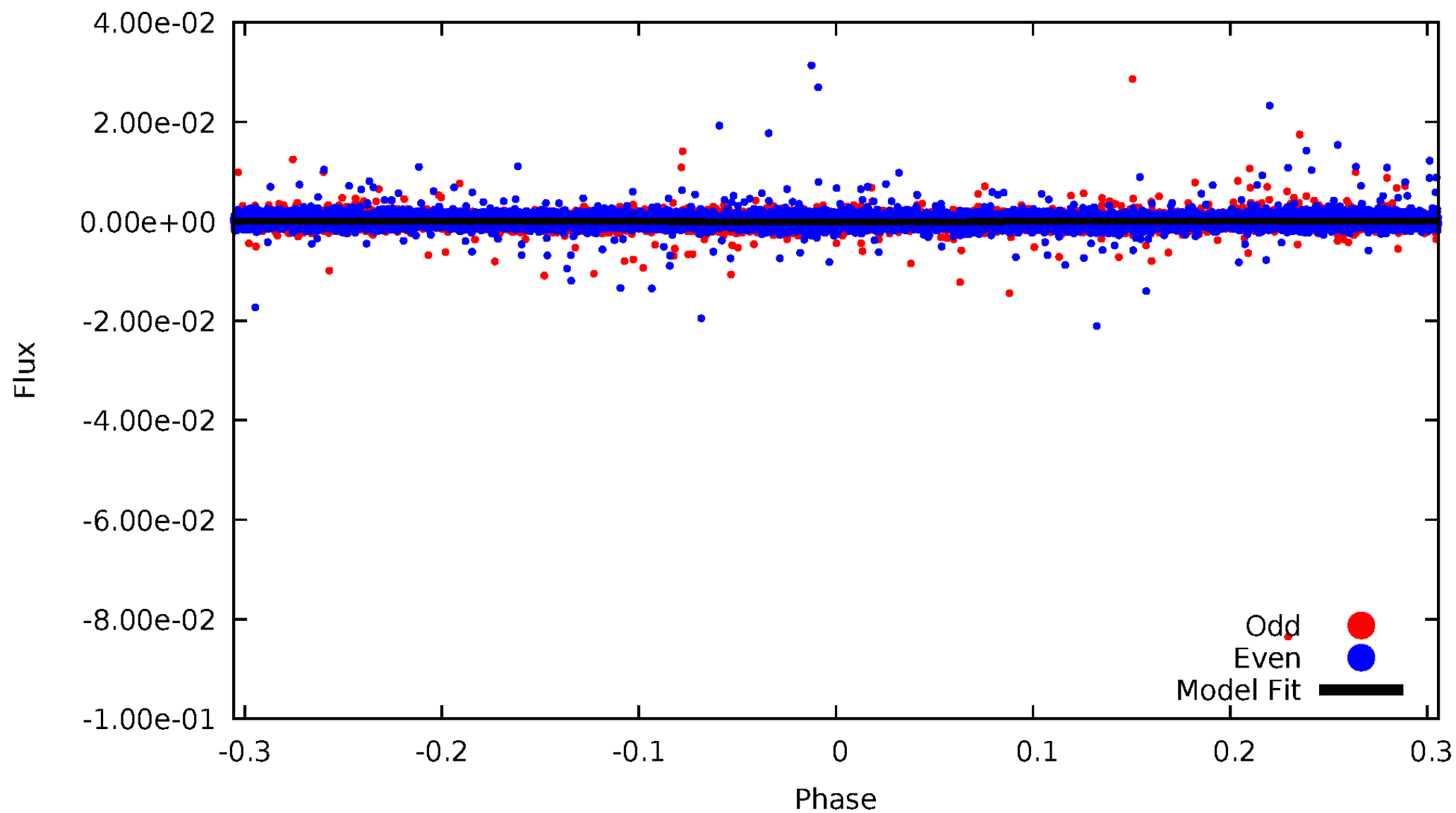


TCE 009474101-02



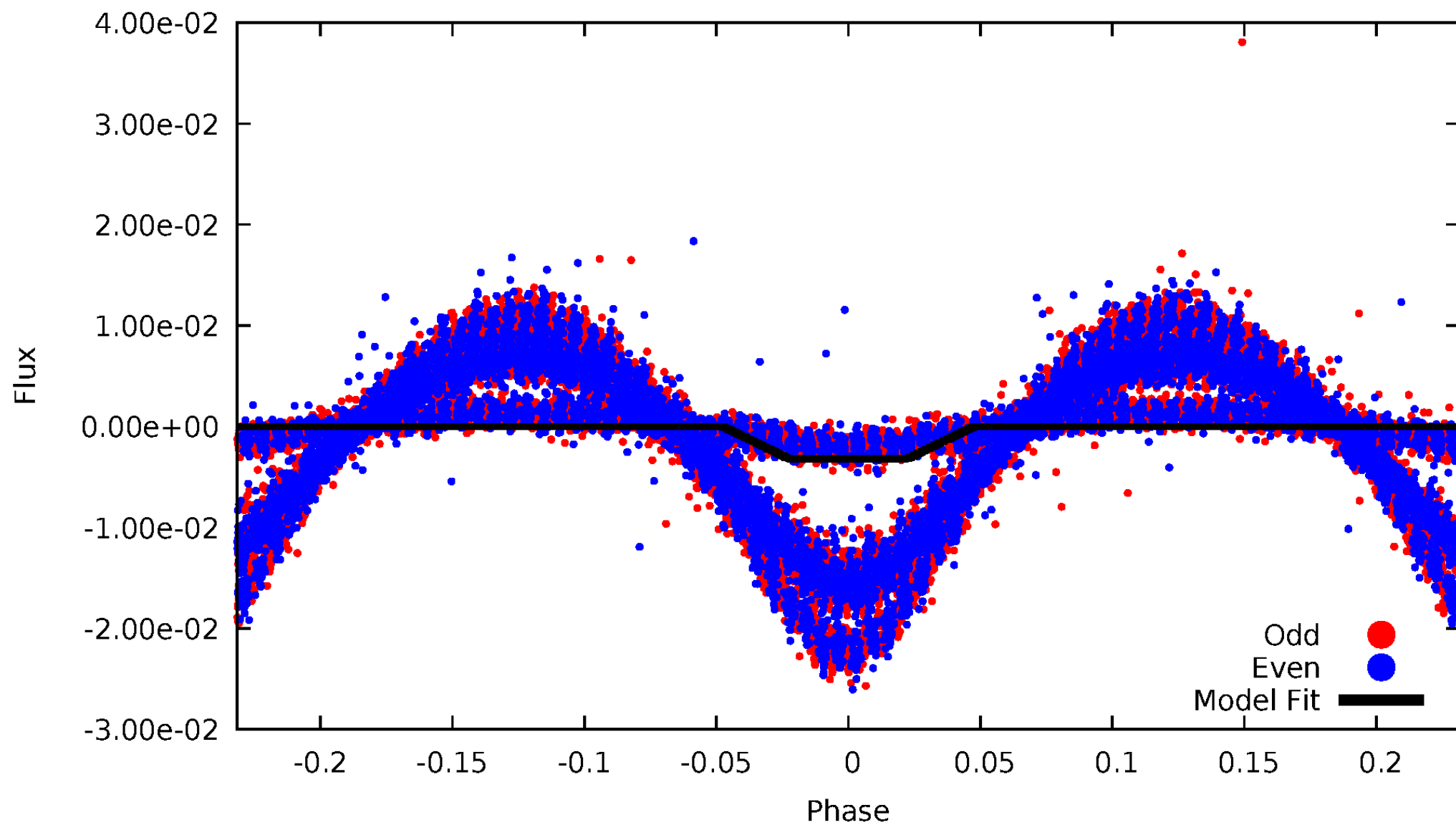
DV Odd/Even

TCE 009474101-02



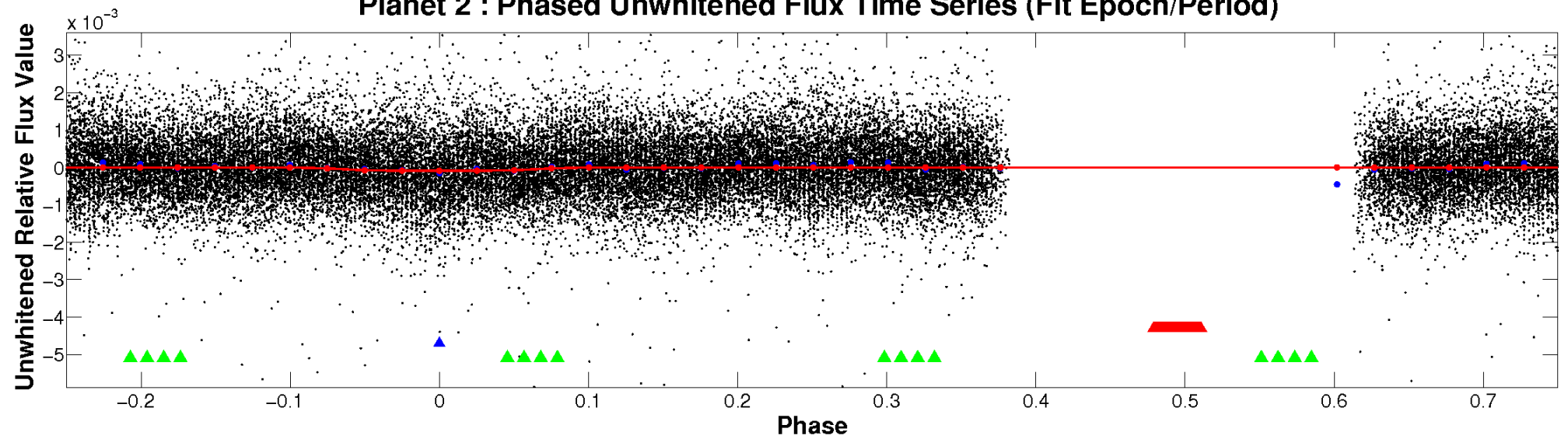
ALT Odd/Even

TCE 009474101-02

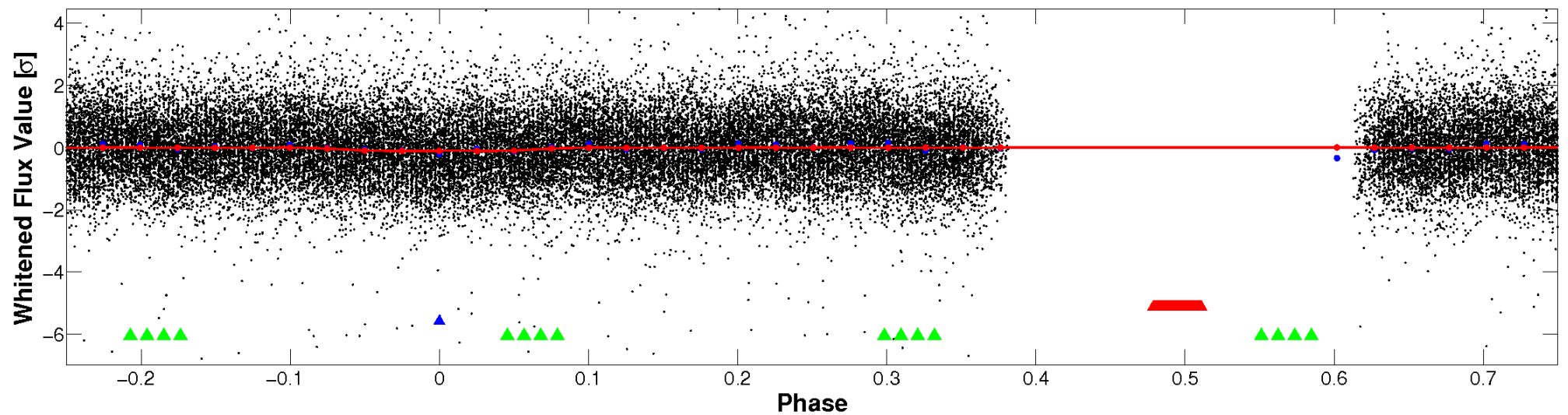


Non-Whitened Vs. Whitened Light Curve

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

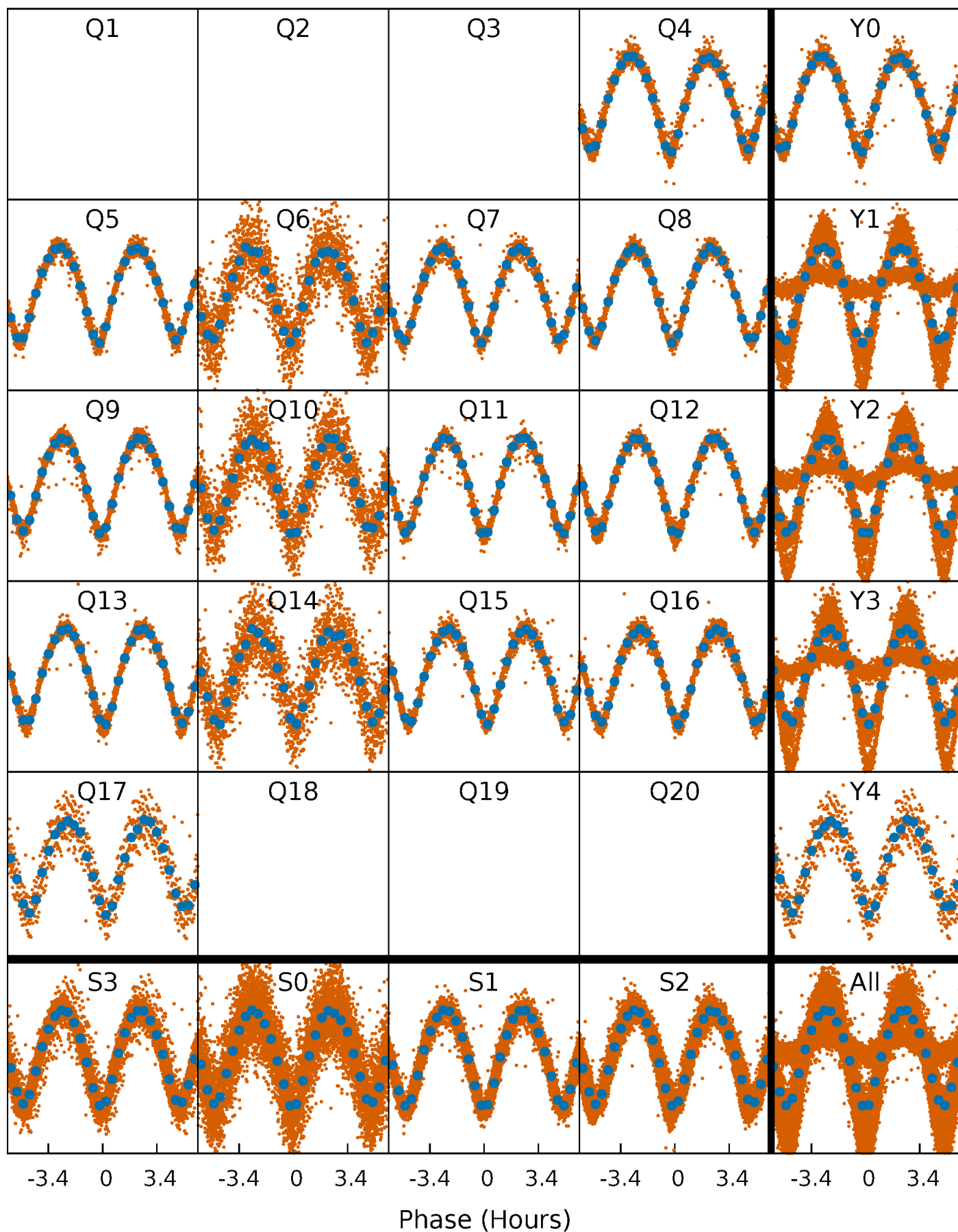


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



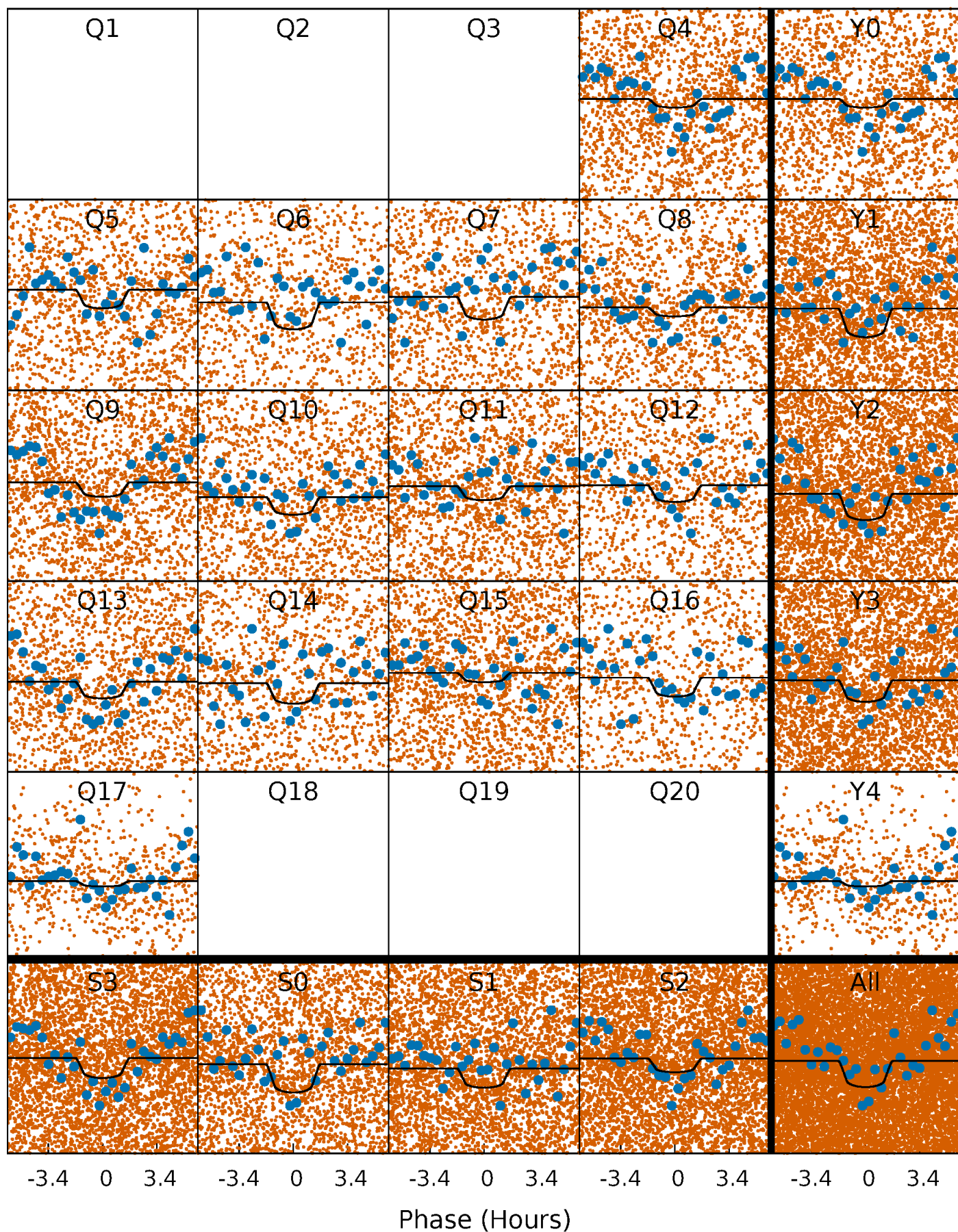
PDC Quarter-Phased Transit Curves

TCE 009474101-02 P= 0.814761 Days $T_0=131.786487$ (BKJD)



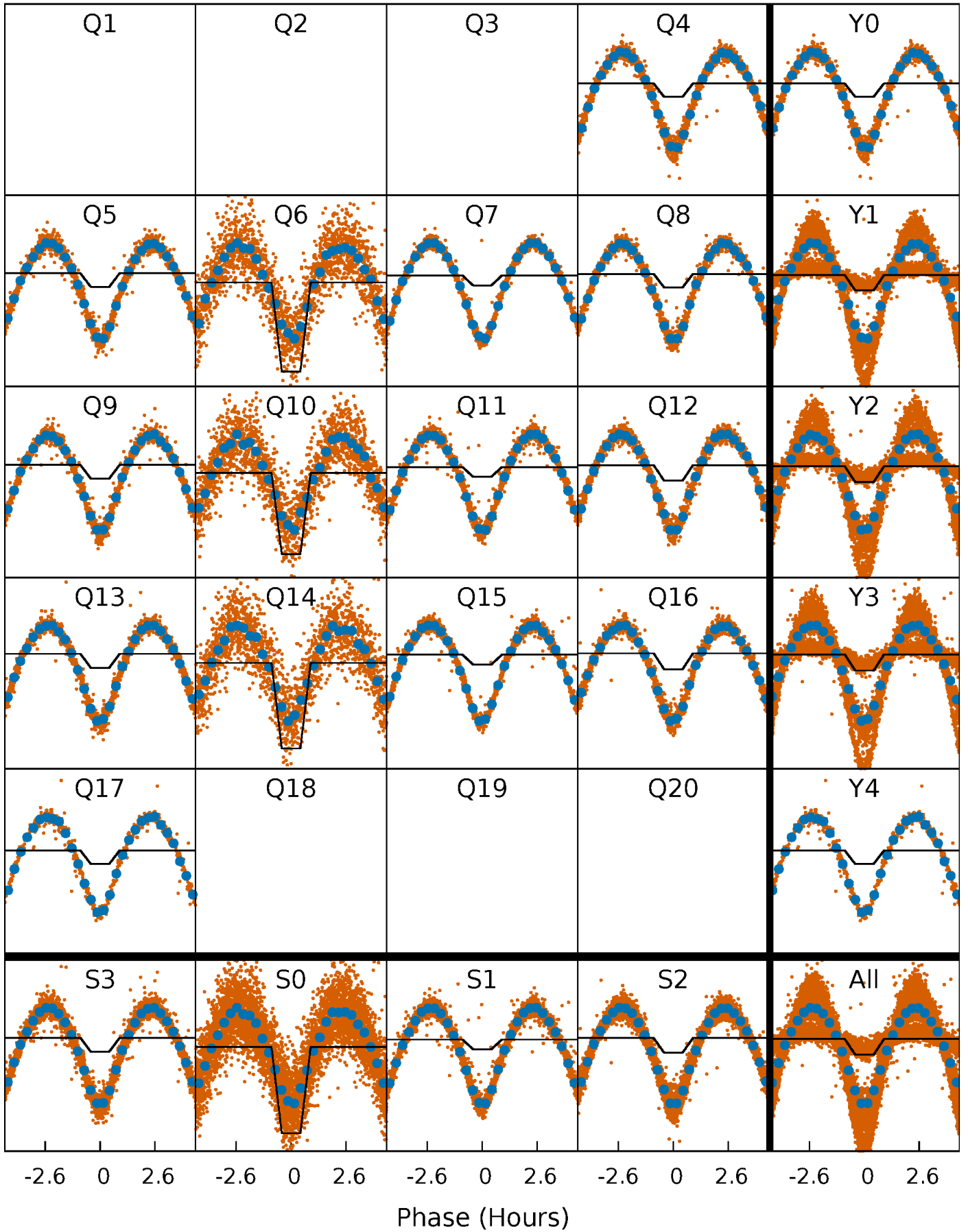
DV Quarter-Phased Transit Curves

TCE 009474101-02 $P = 0.814761$ Days $T_0 = 131.786487$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

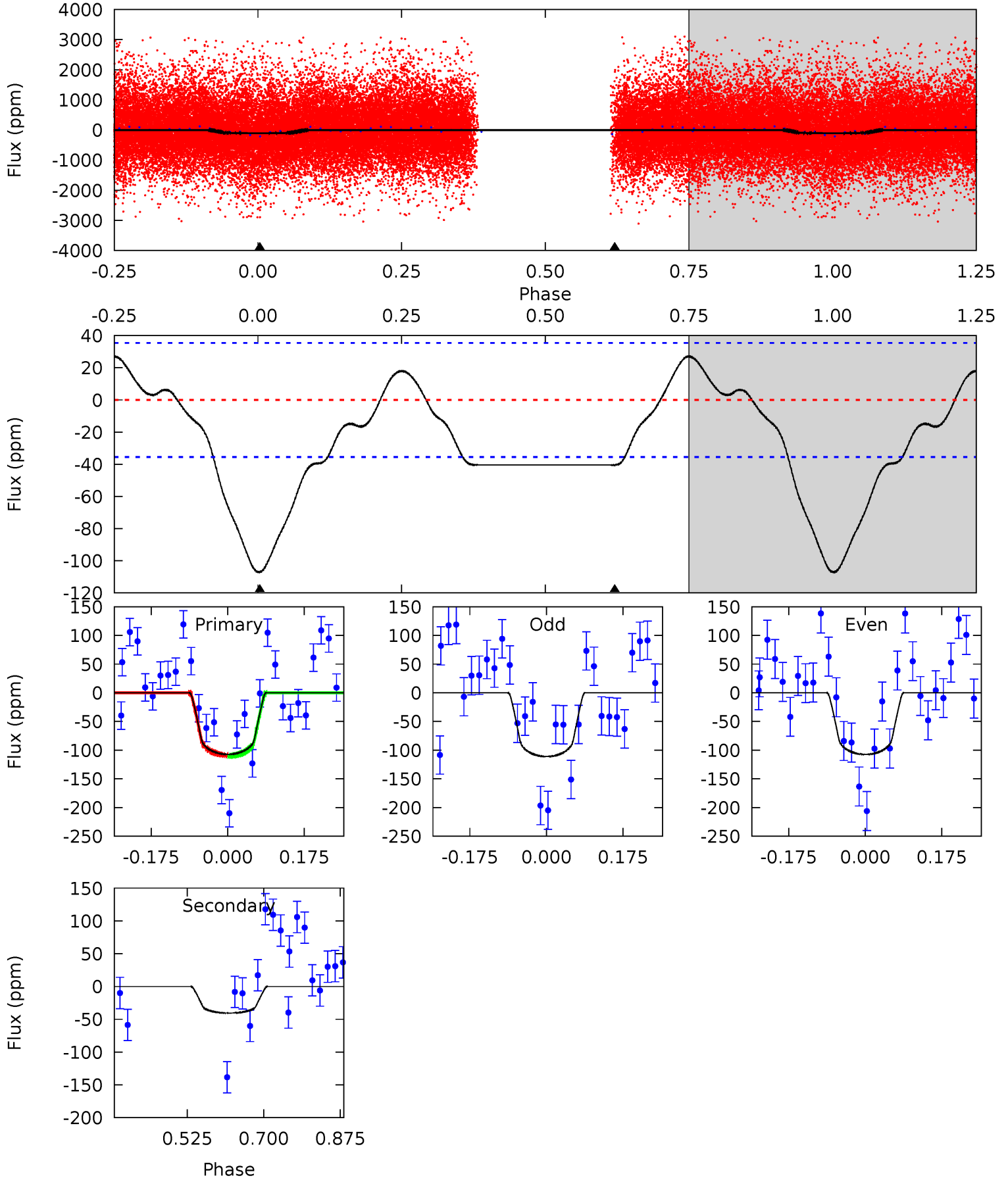
TCE 009474101-02 $P = 0.814780$ Days $T_0 = 131.765992$ (BKJD)



DV Model-Shift Uniqueness Test

009474101-02, P = 0.814761 Days, E = 131.786487 Days

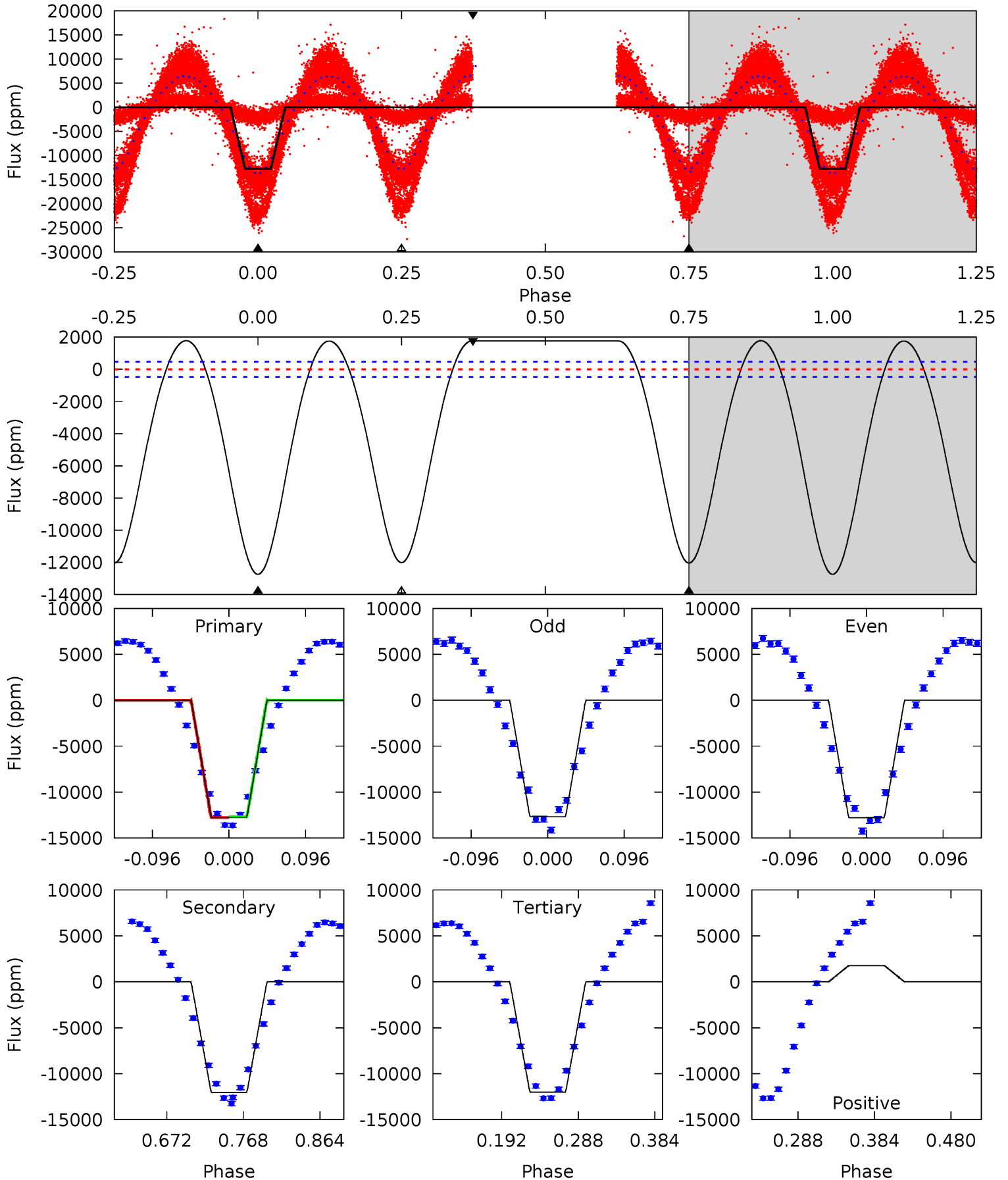
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	5.09	0	0	4.45	1.36	2.02	13.4	13.4	5.09	5.09	0.23	0.70	0.20	0.09



Alt Model-Shift Uniqueness Test

009474101-02, P = 0.814780 Days, E = 131.765992 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
123.8	117.0	116.7	17.1	4.57	1.66	47.0	7.05	106.6	0.27	99.8	0.59	0.89	0.12	0.49



Stellar Parameters For KIC 009474101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5932^{+186}_{-207}	$4.580^{+0.040}_{-0.160}$	$-0.500^{+0.300}_{-0.300}$	$0.798^{+0.182}_{-0.073}$	$0.899^{+0.084}_{-0.116}$	$2.487^{+0.500}_{-1.101}$
	+3%/-3%	+1%/-3%	+60%/-60%	+23%/-9%	+9%/-13%	+20%/-44%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009474101-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-41 ± 8	$1.04^{+0.61}_{-0.57}$	2603^{+147}_{-119}	4588^{+1969}_{-817}	$5.724^{+23.035}_{-3.597}$
Alt.	-12041 ± 103	$5.16^{+0.93}_{-0.78}$	2610^{+141}_{-125}	8570^{+945}_{-692}	67^{+25}_{-18}

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 $A_{obs} \gg 1.0$

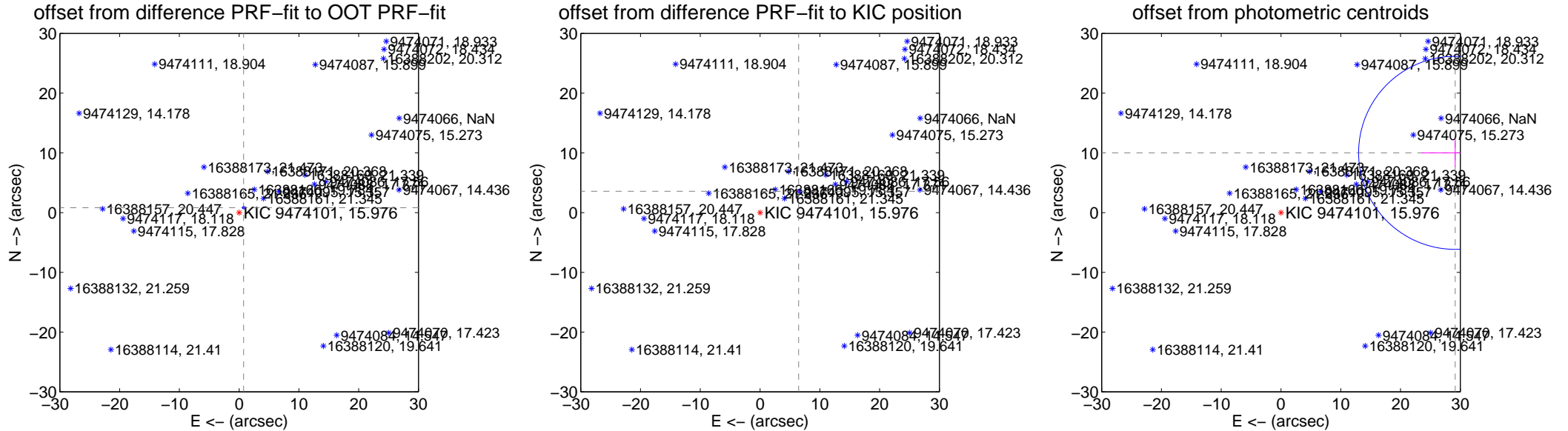
DV Centroid Data

Supplemental centroid analysis for 009474101-02. Kepler magnitude: 15.98. Transit SNR 8.34

There are 2 quarters with good PRF difference image offsets

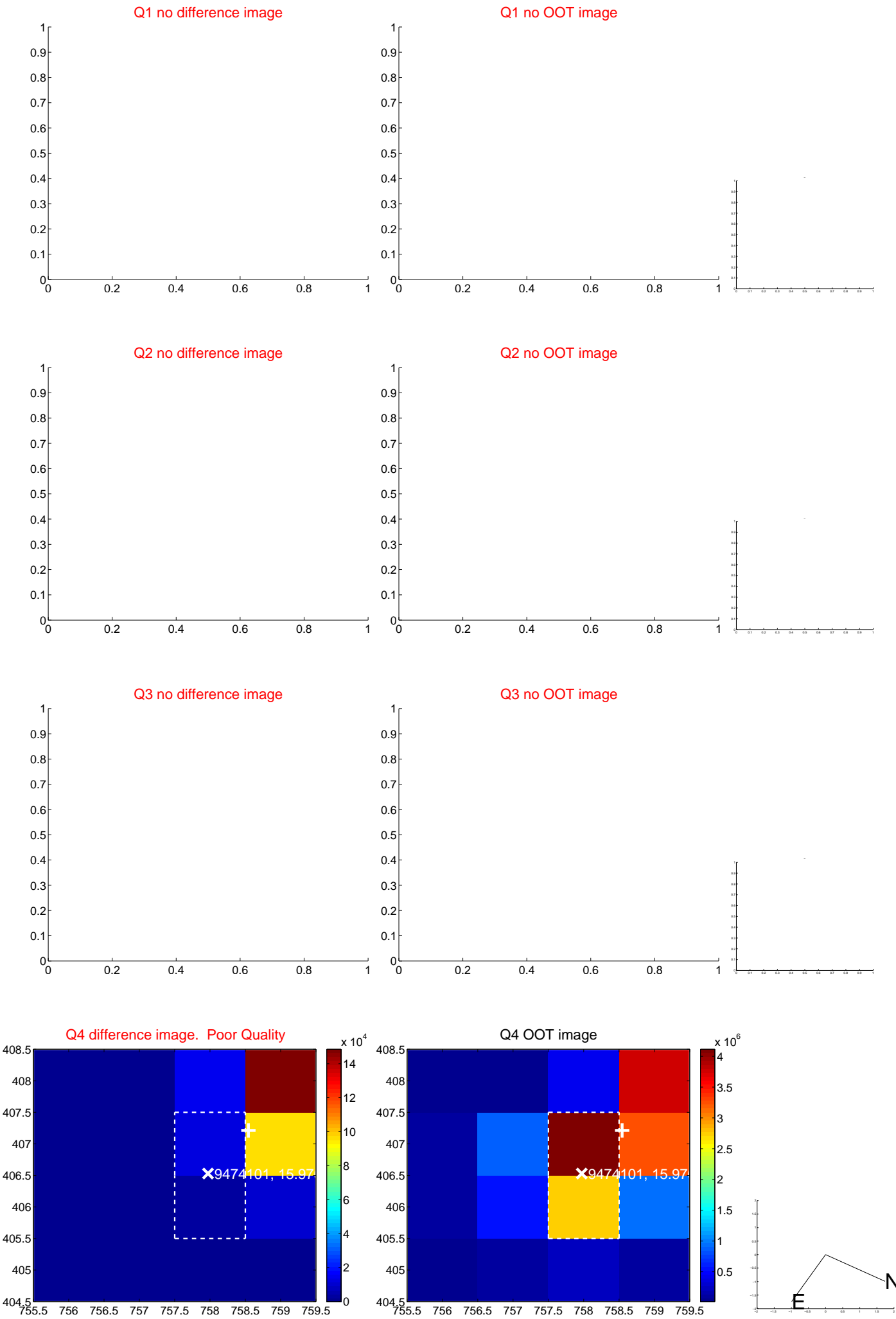
The OOT PRF centroid is offset from the target star catalog position by about 6.33 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.101 ± 0.067	16.47	-0.746 ± 0.067	0.810 ± 0.067
PRF-fit source offset from KIC position	7.374 ± 0.067	109.49	-6.449 ± 0.067	3.575 ± 0.067
photometric centroid source offset	30.82 ± 5.39	5.72	-29.15 ± 5.64	10.01 ± 2.33

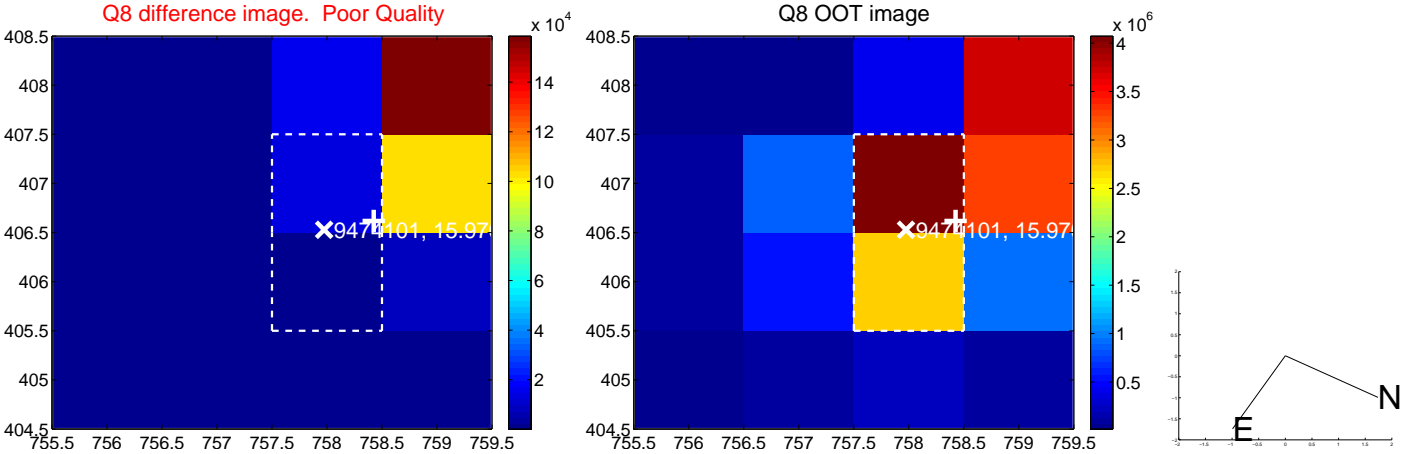
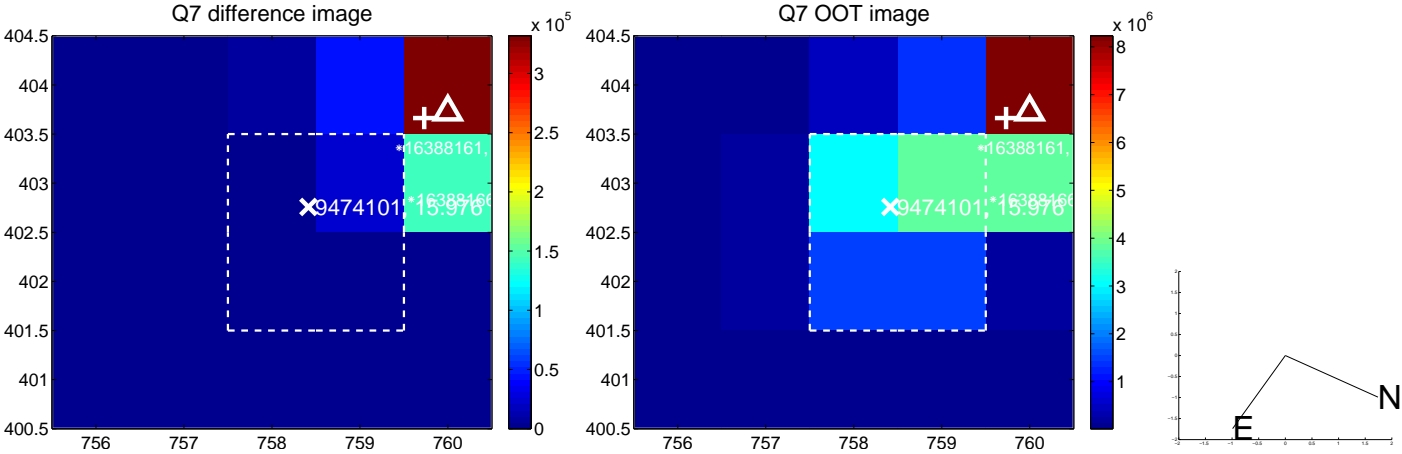
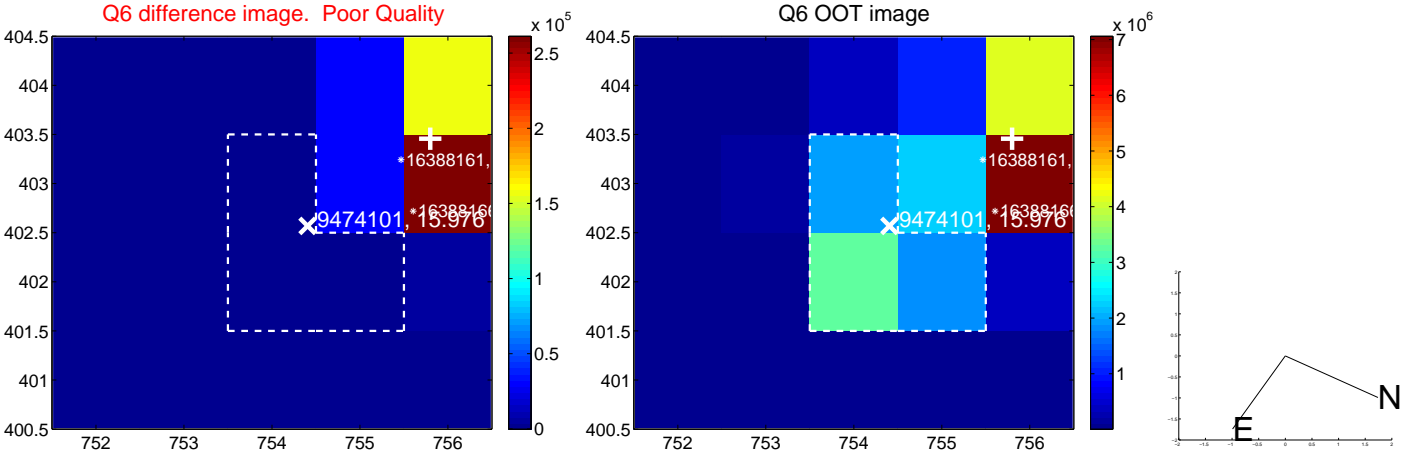
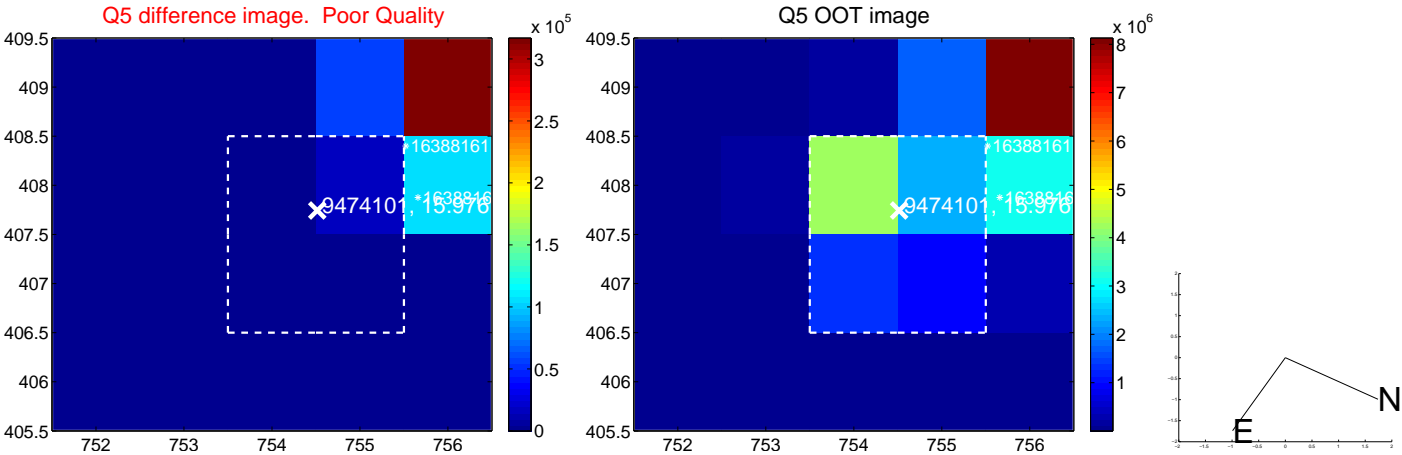


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

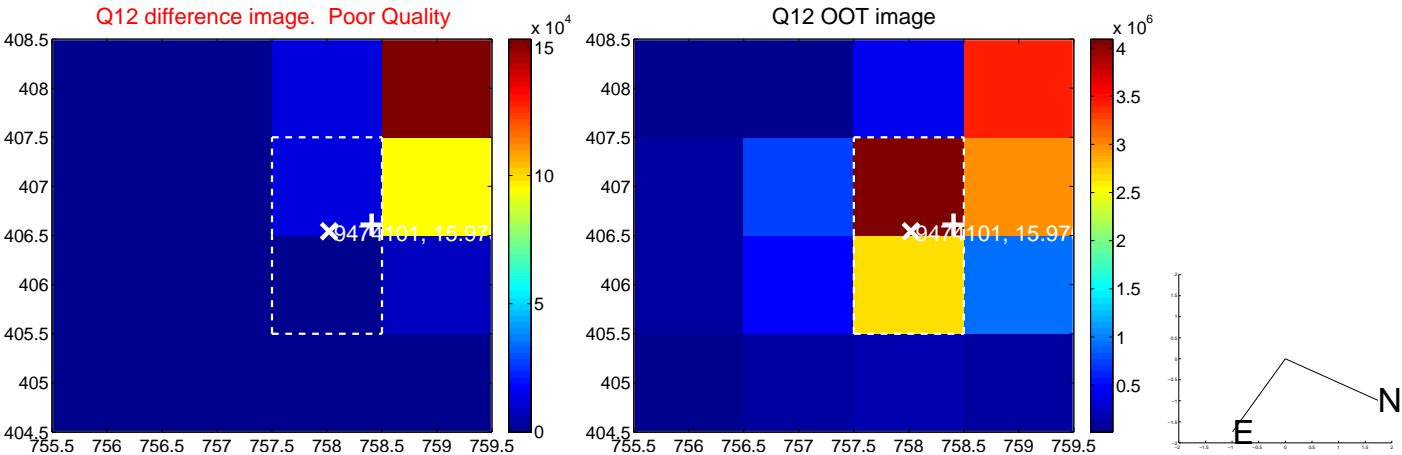
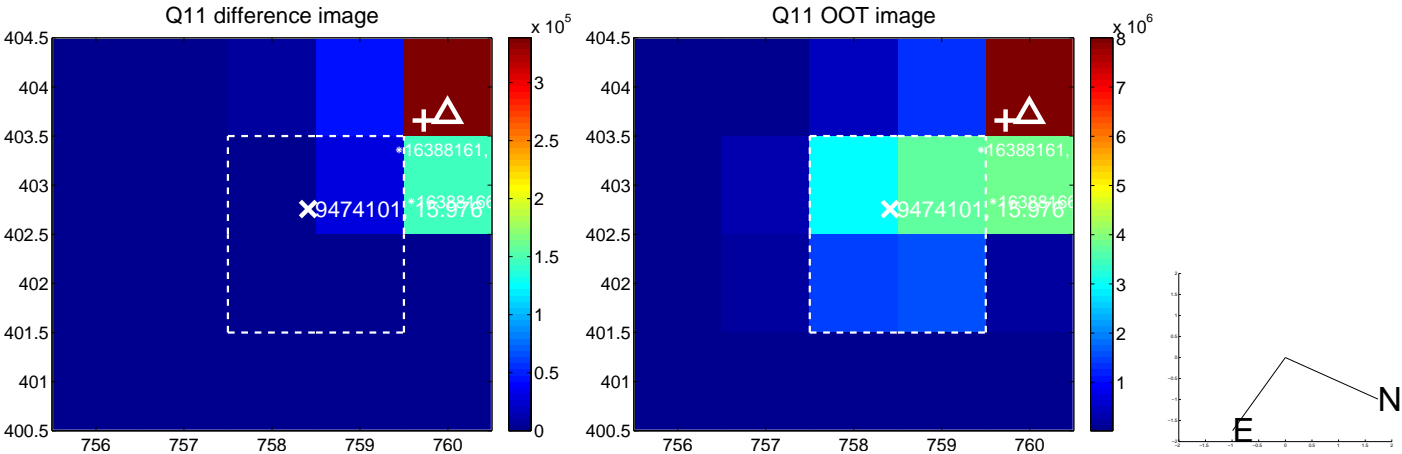
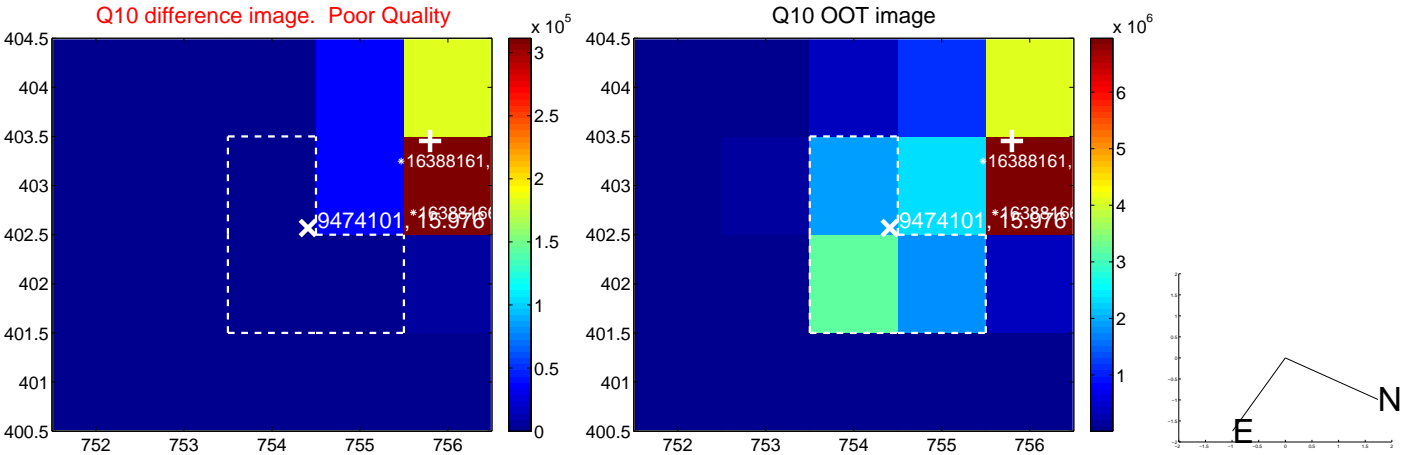
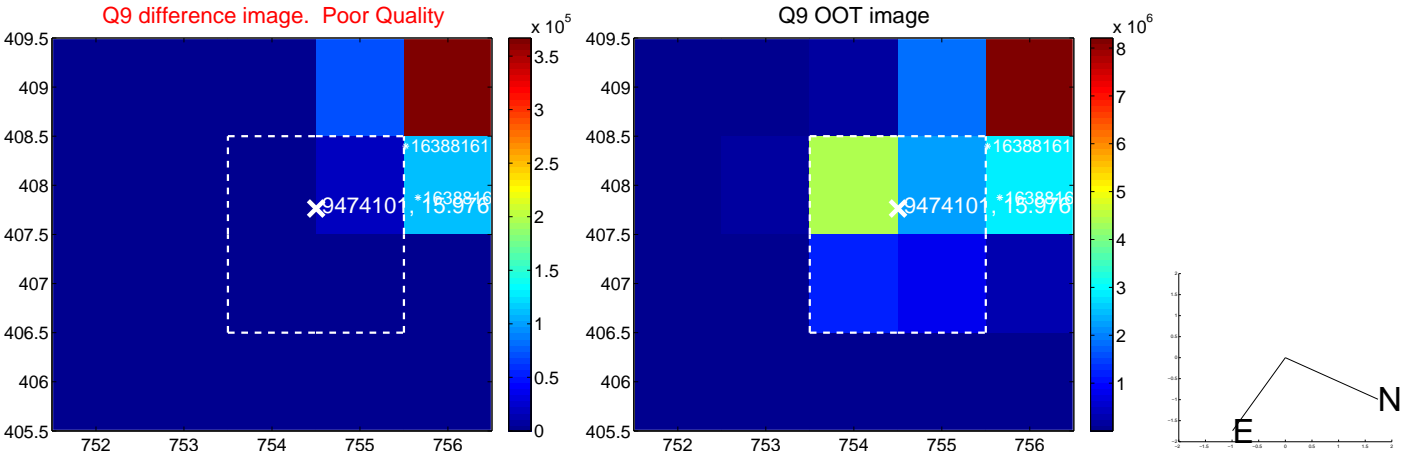
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



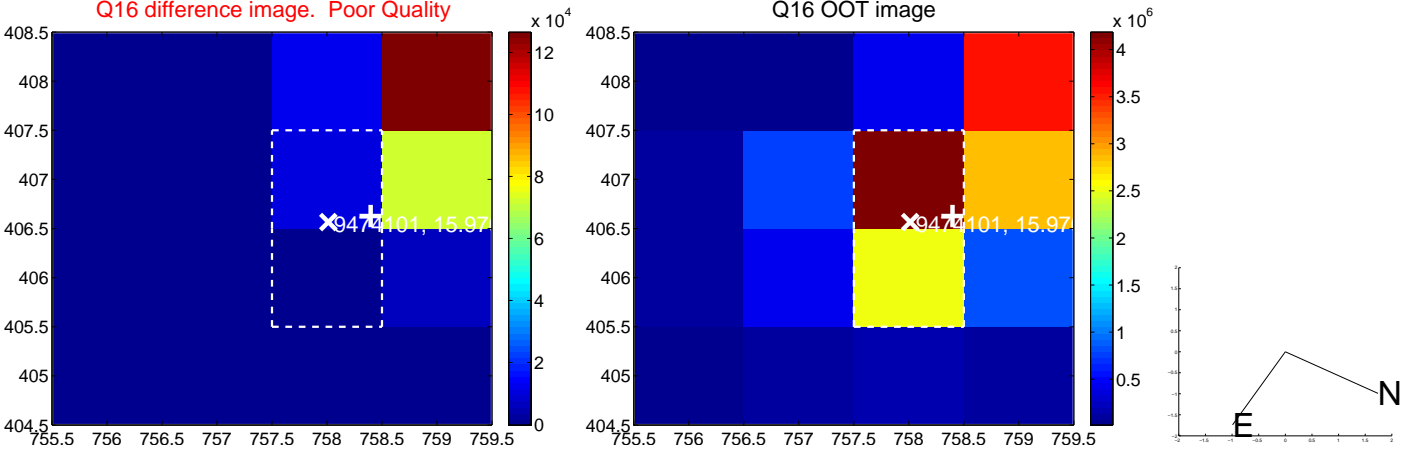
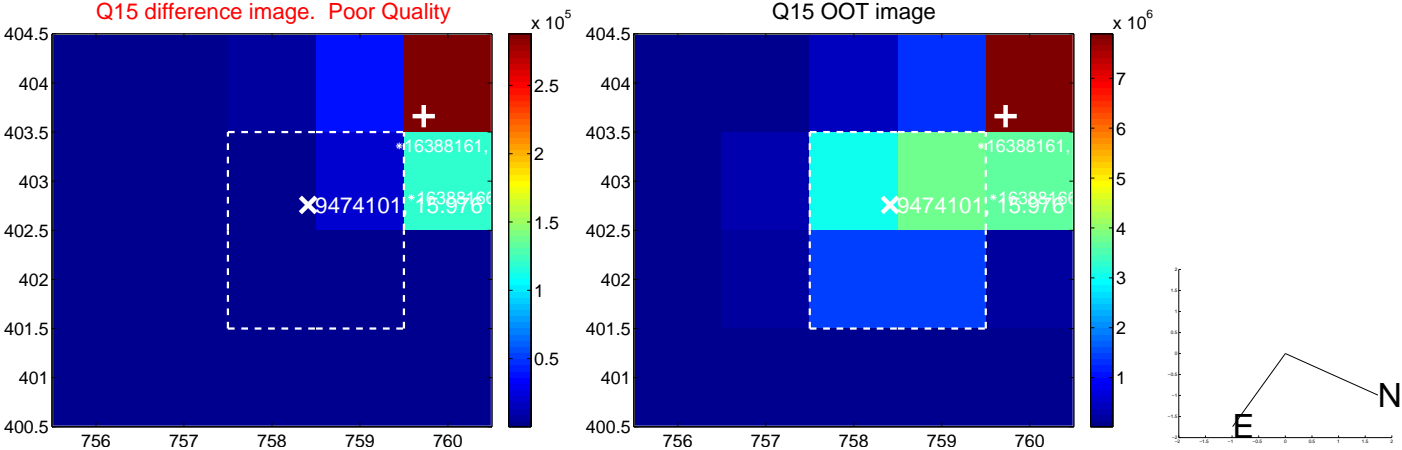
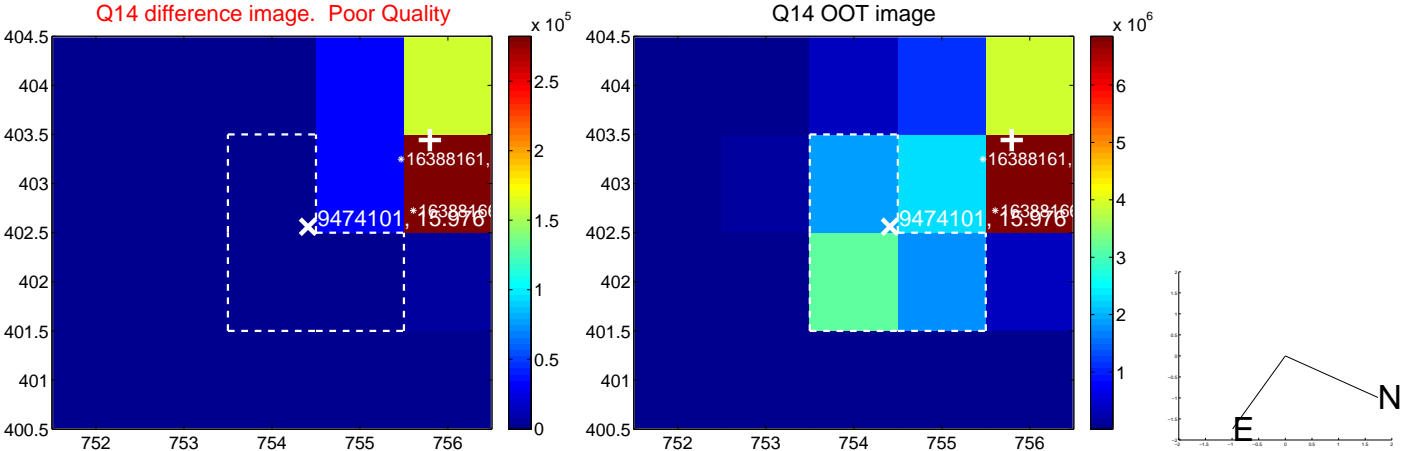
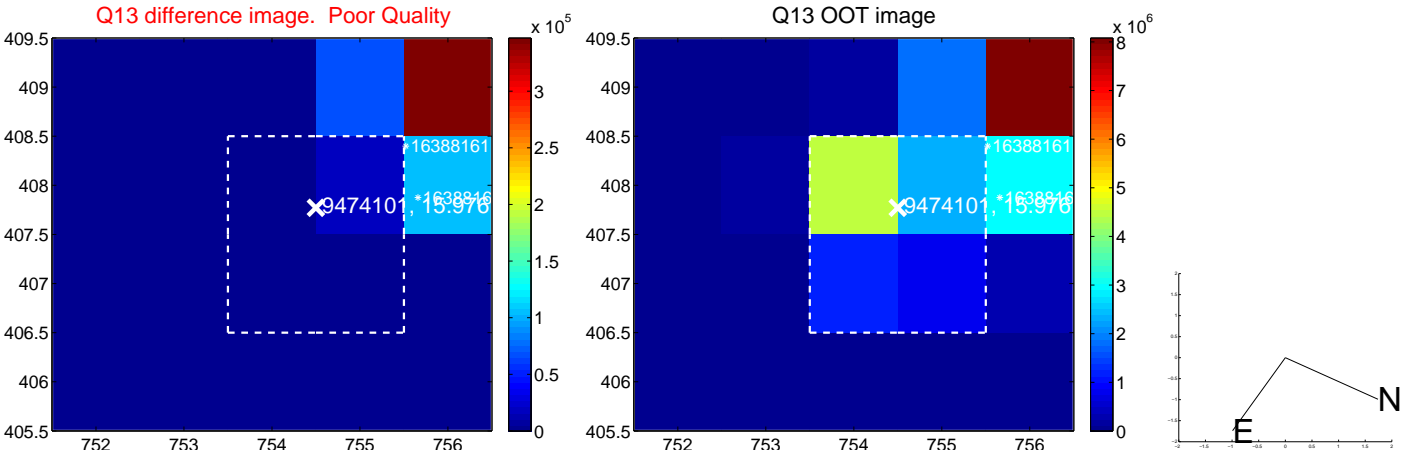
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



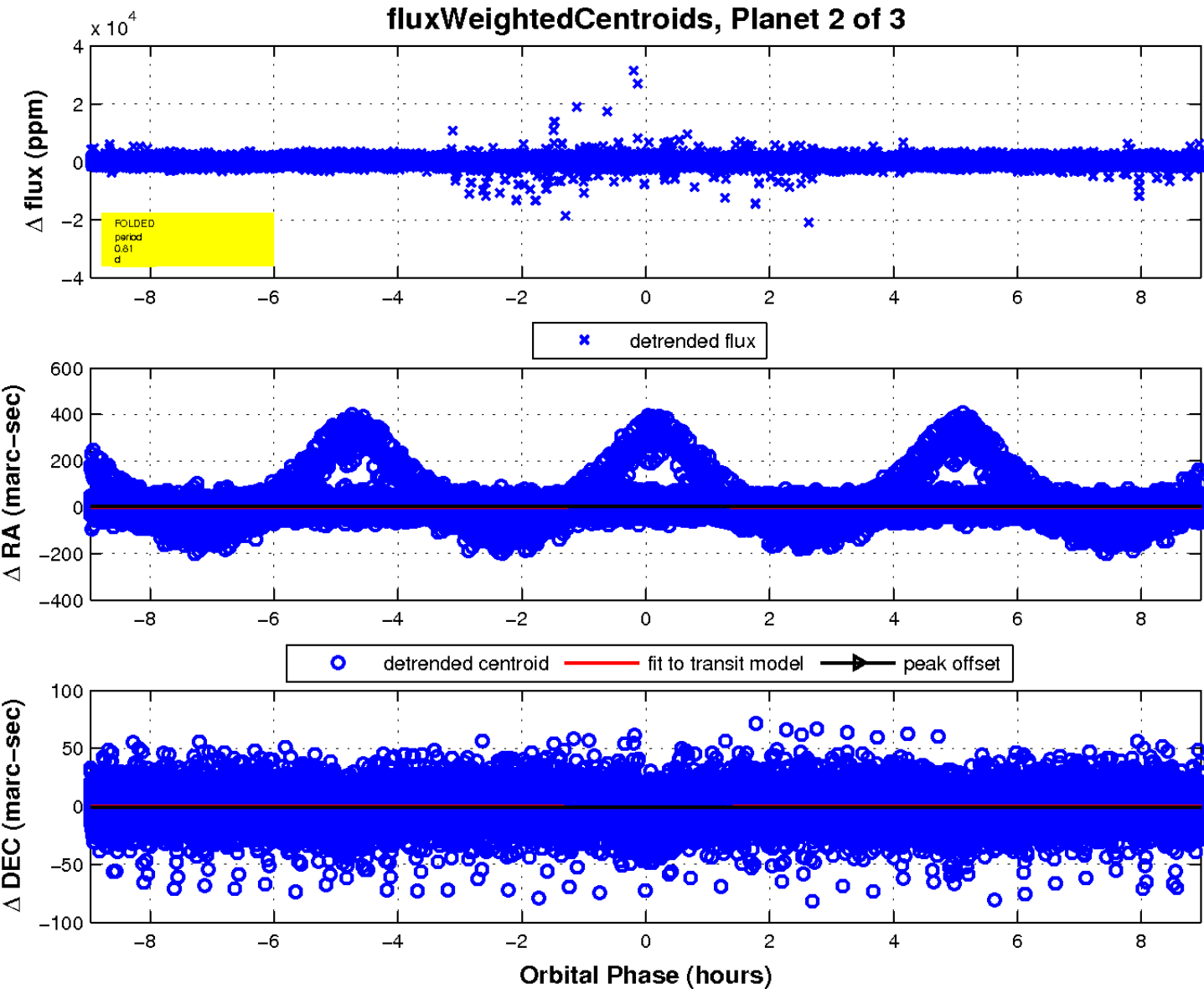
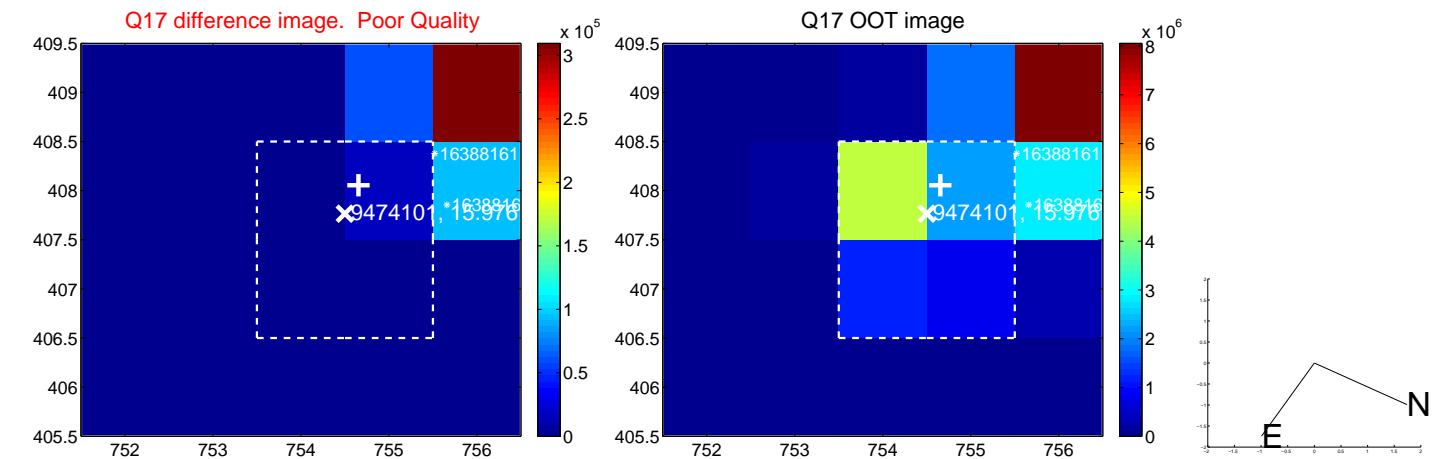
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

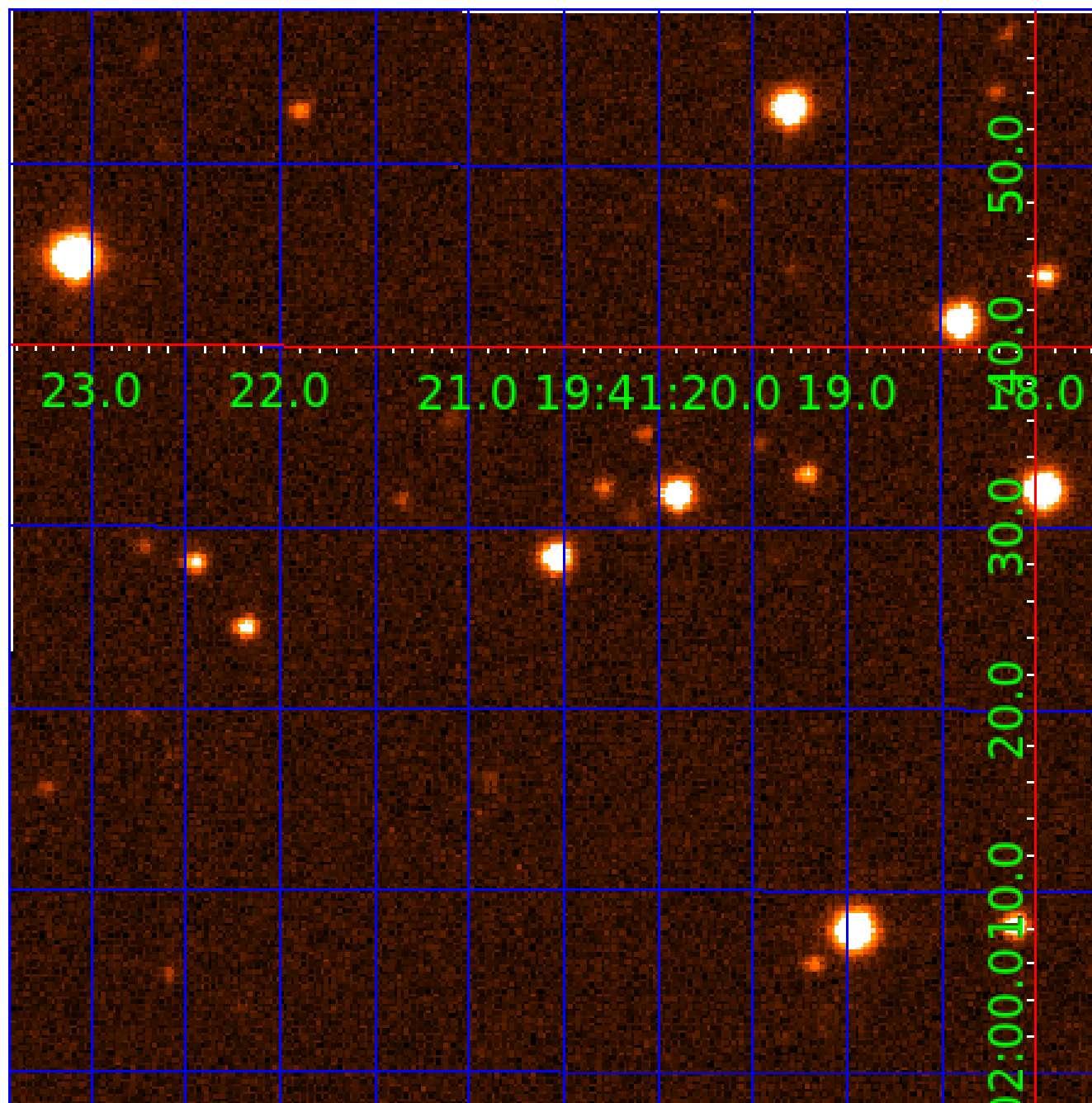


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009474101

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})
009474101-01	OBS	No	0.814776	132.176538	162.8	1.462	9.0	9.0	0.80	5932	1.68	2632.19
009474101-02	OBS	No	0.814761	131.786487	89.0	2.987	8.9	8.3	0.80	5932	0.89	2632.25
009474101-03	OBS	No	90.232544	208.035745	2339.2	1.949	8.2	9.4	0.80	5932	4.00	4.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009474101-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
009474101-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
009474101-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

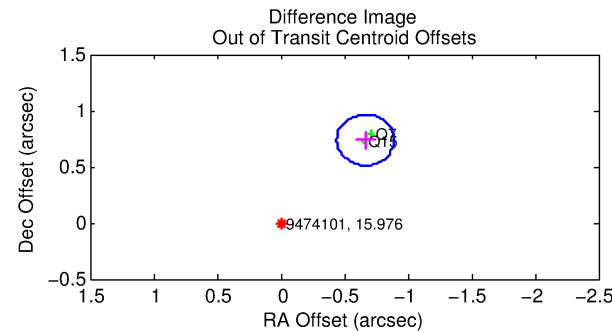
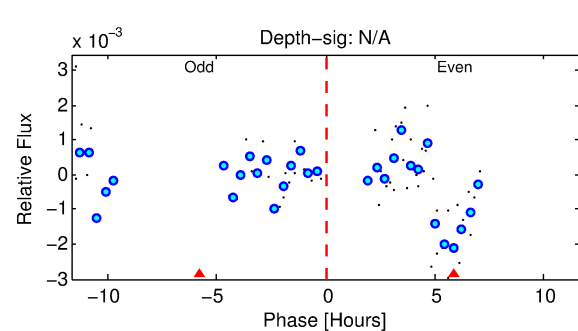
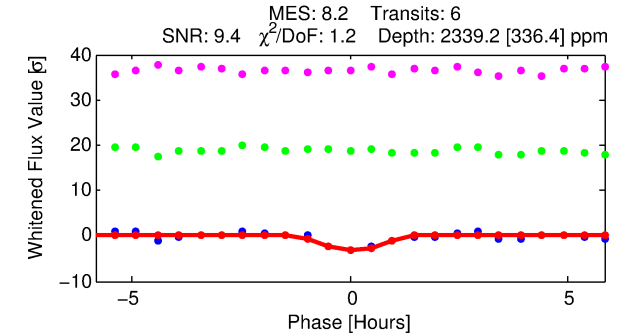
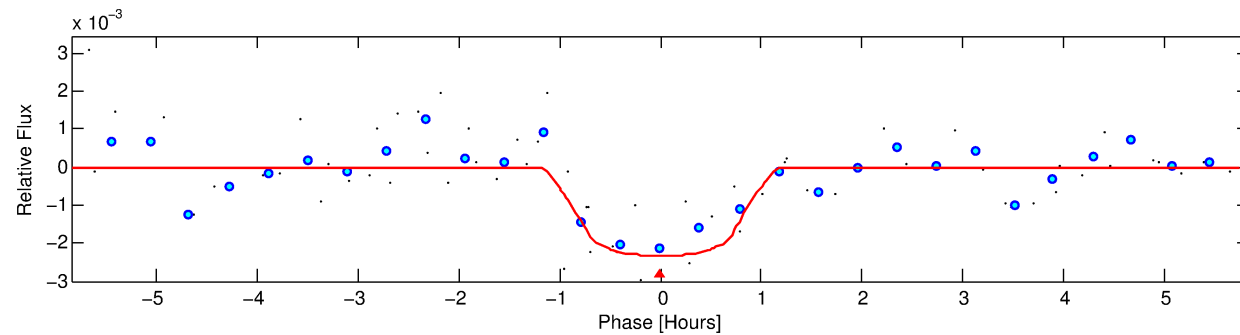
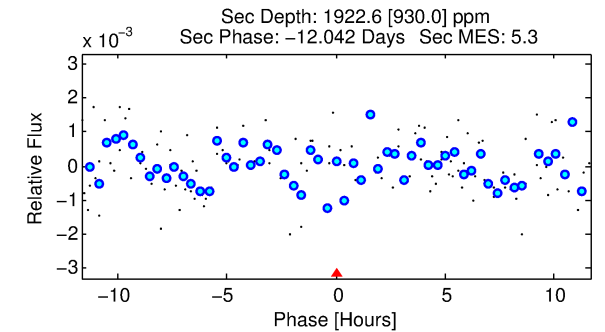
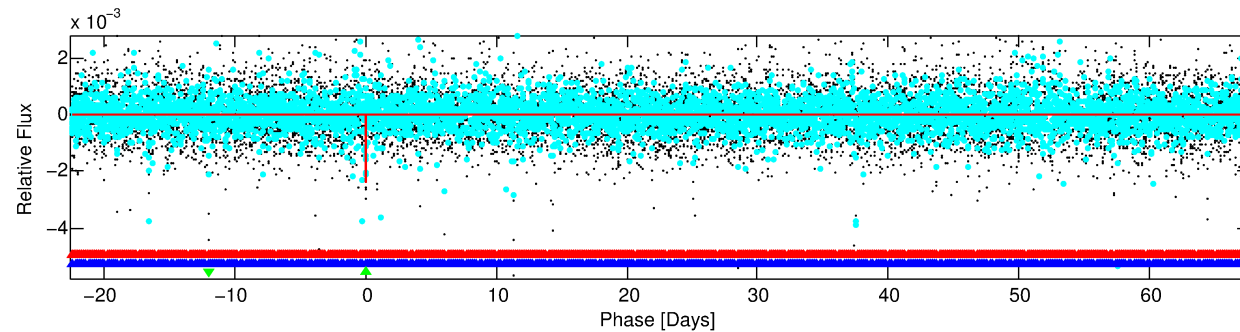
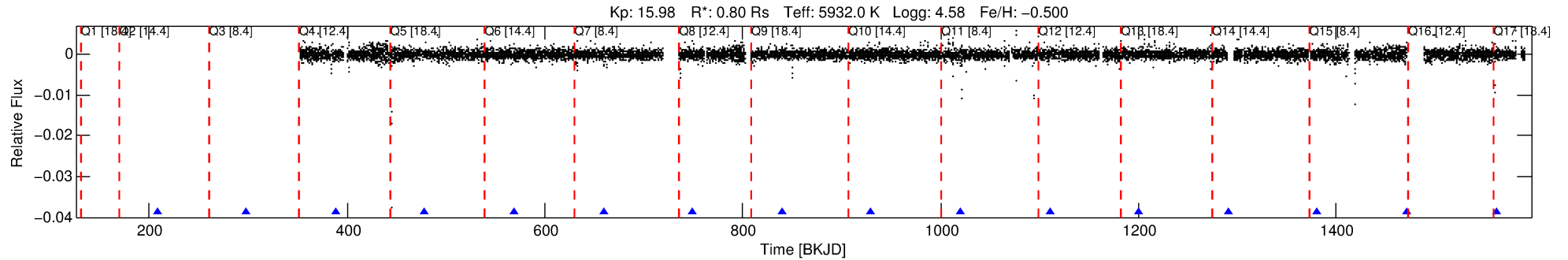
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009474101-03

No Significant Match Found

DV One-Page Summary

KIC: 9474101 Candidate: 3 of 3 Period: 90.233 d



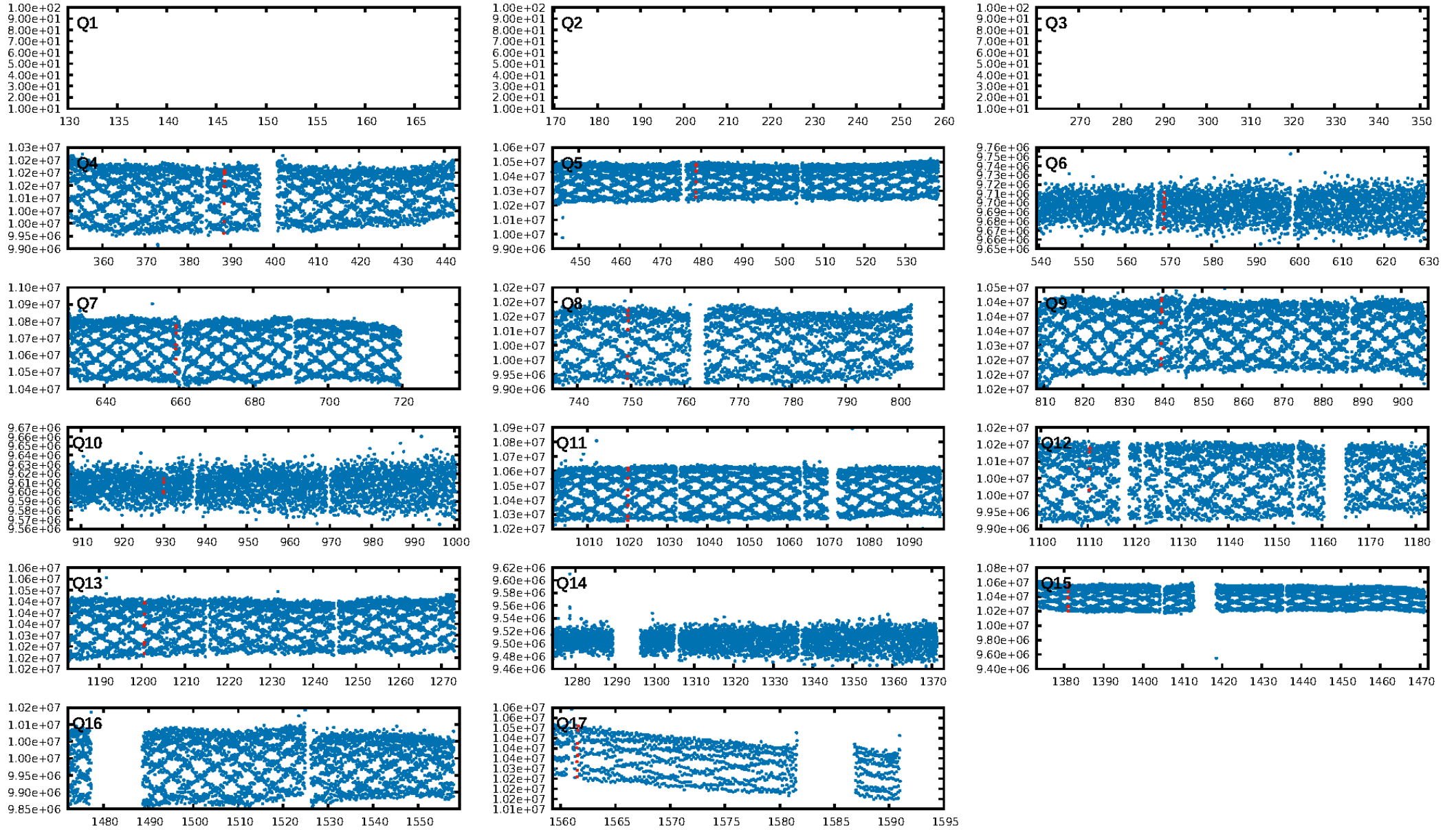
DV Fit Results:

Period = 90.23254 [0.00083] d
Epoch = 208.0357 [0.0083] BKJD
Rp/R* = 0.0459 [0.0724]
a/R* = 317.40 [2423.64]
b = 0.54 [10.22]
Seff = 4.95 [1.59]
Teq = 380 [31] K
Rp = 4.00 [6.37] Re
a = 0.3778 [0.0738] AU
Ag = 9436.53 [30207.86] [0.31σ]
Teffp = 5796 [4624] K [1.17σ]

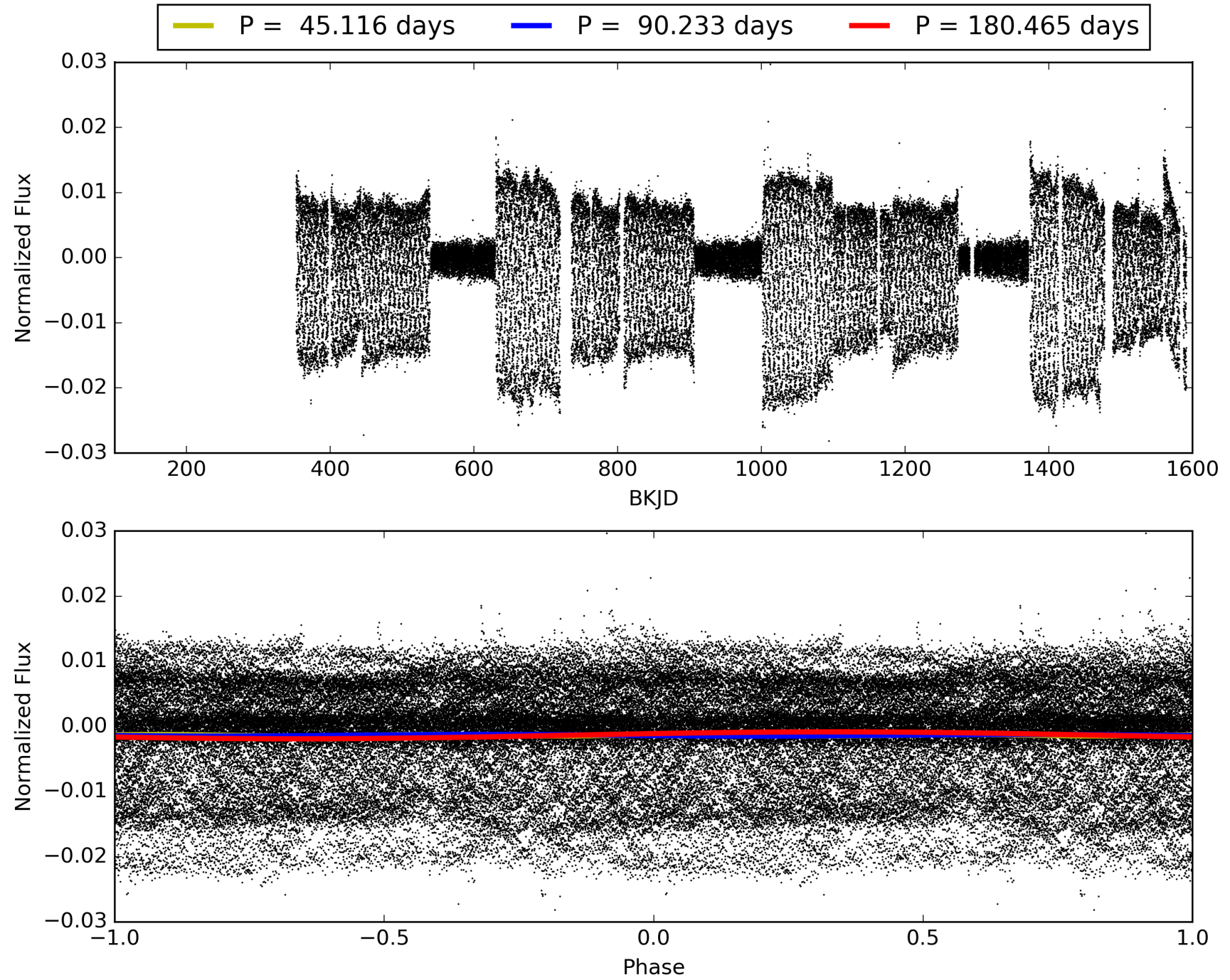
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [880.87σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 97.0%
Bootstrap-pfa: 1.86e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.04687
Centroid-sig: 93.1%
Centroid-so: 3.644 arcsec [1.29σ]
OotOffset-rm: 0.993 arcsec [13.21σ]
KicOffset-rm: 7.274 arcsec [86.89σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/10]

TCE 009474101-03, PDC Light Curves

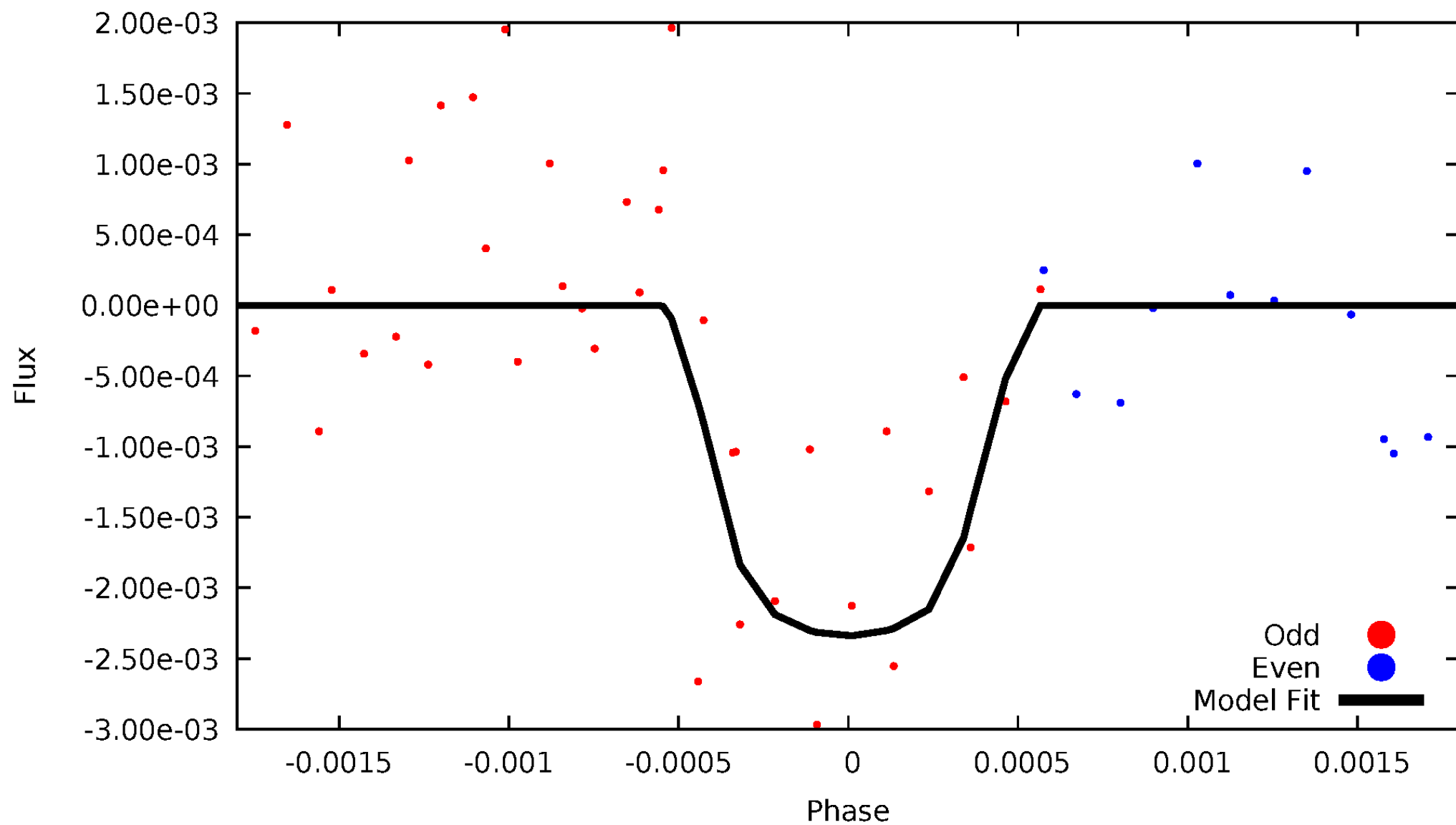


TCE 009474101-03



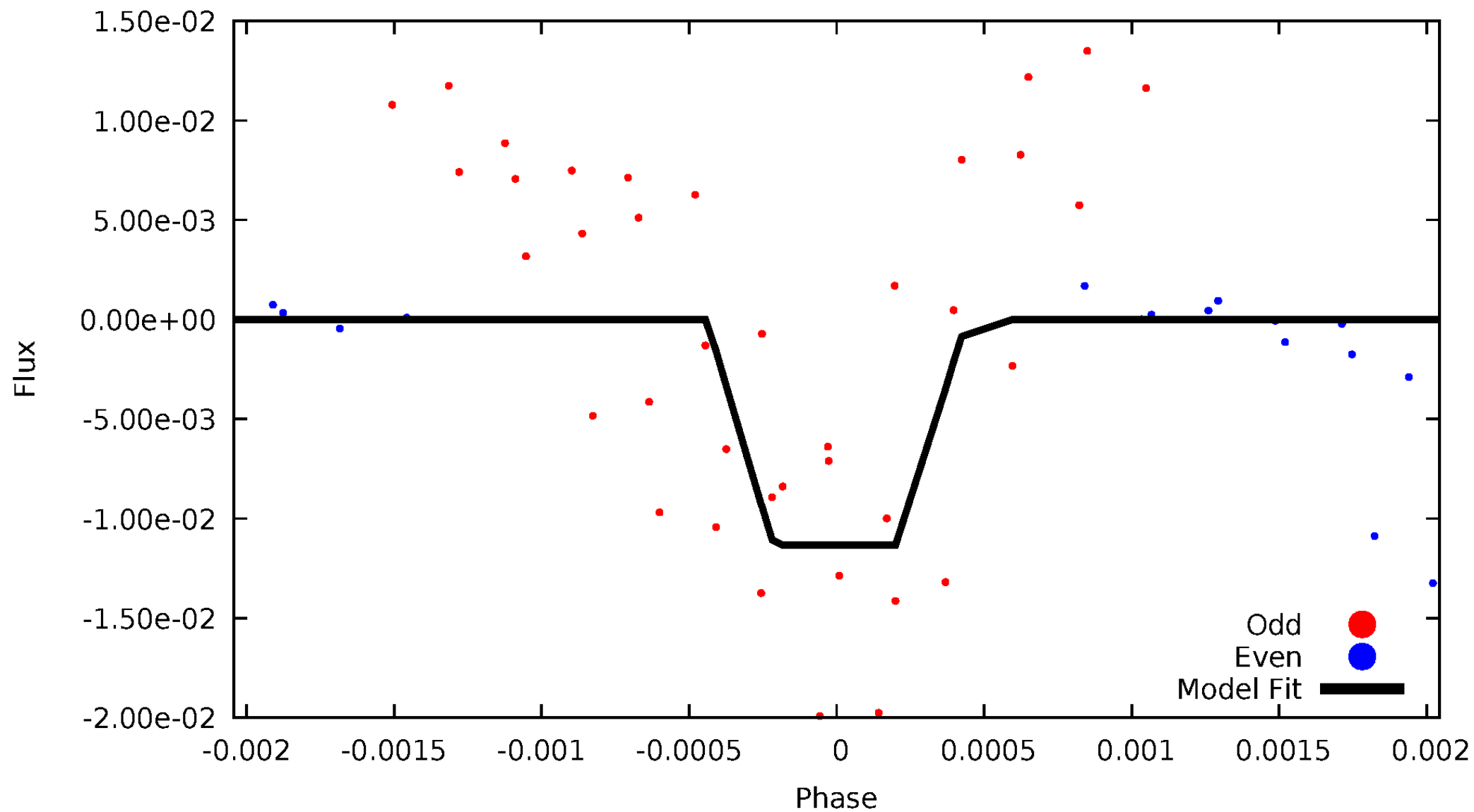
DV Odd/Even

TCE 009474101-03



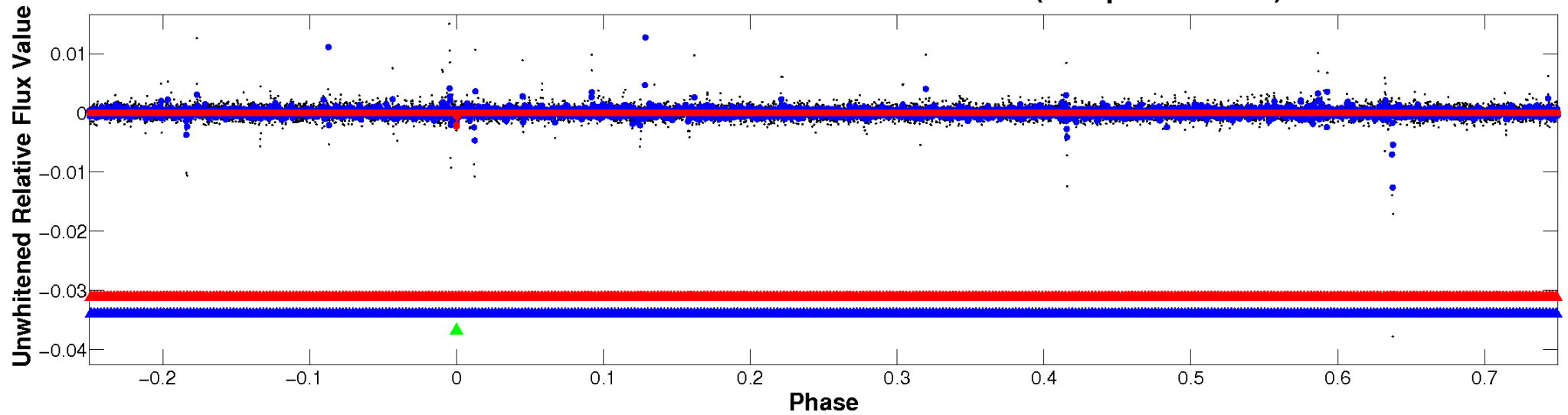
ALT Odd/Even

TCE 009474101-03

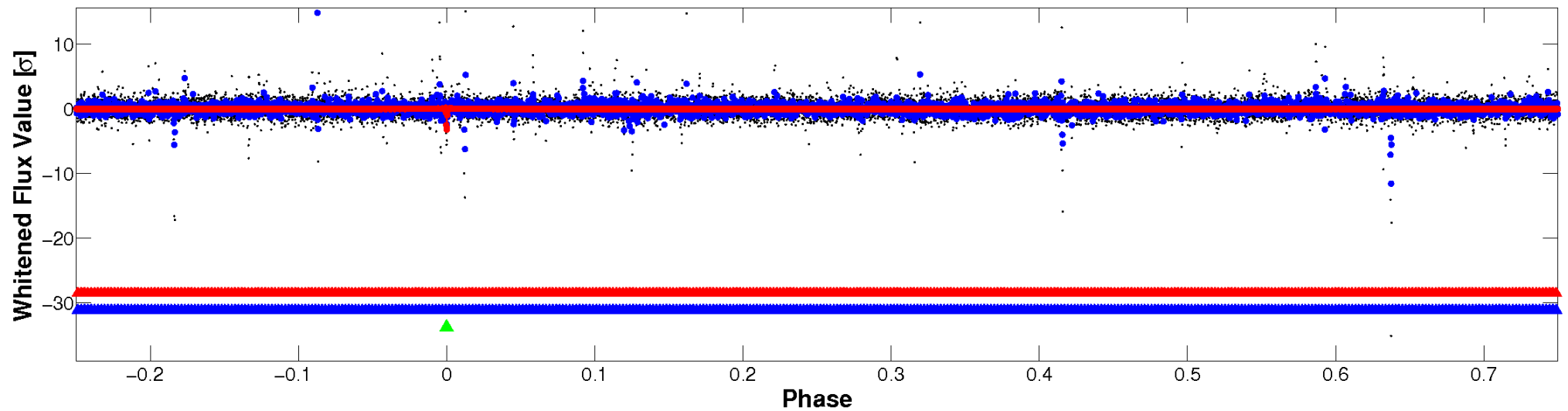


Non-Whitened Vs. Whitened Light Curve

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

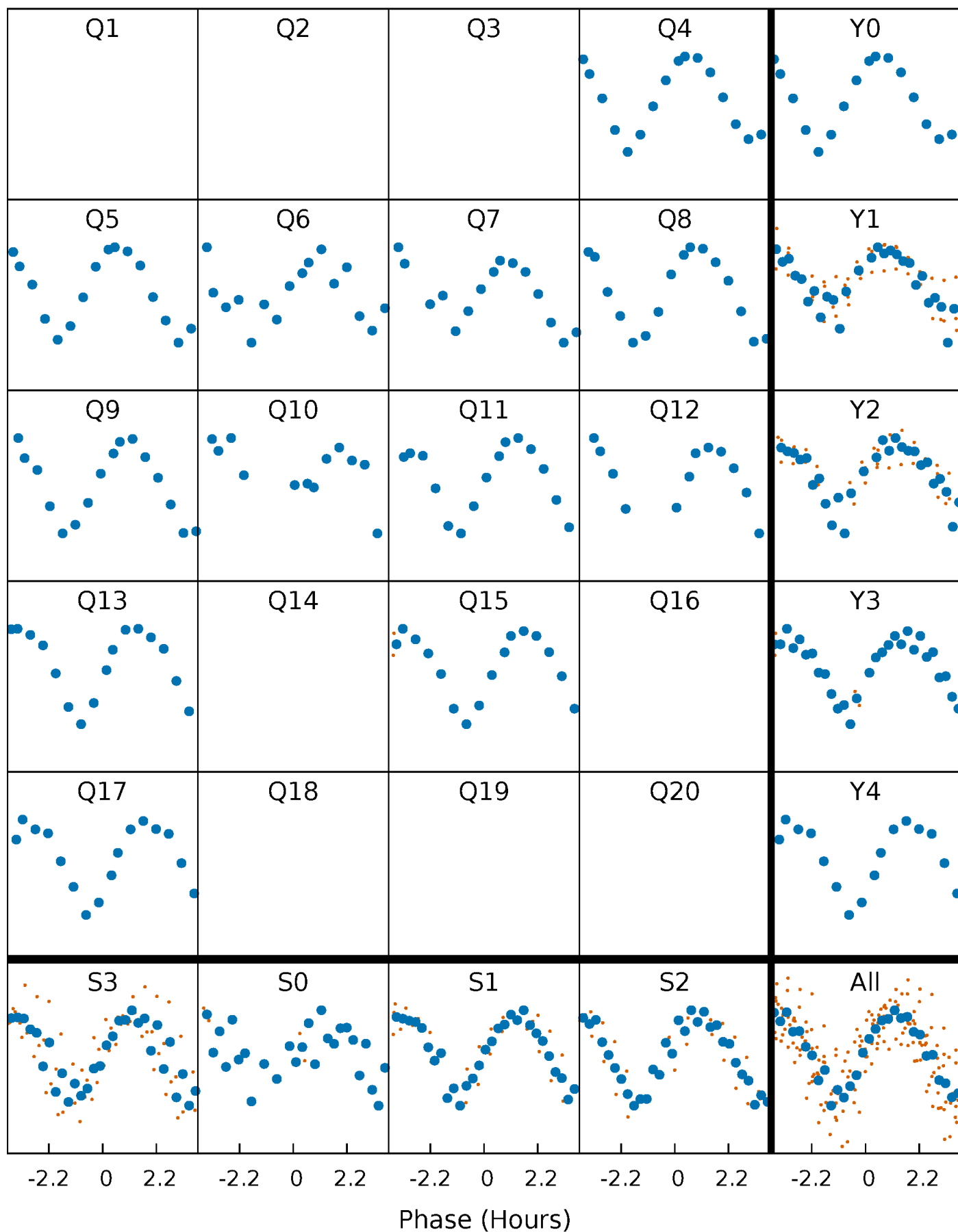


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



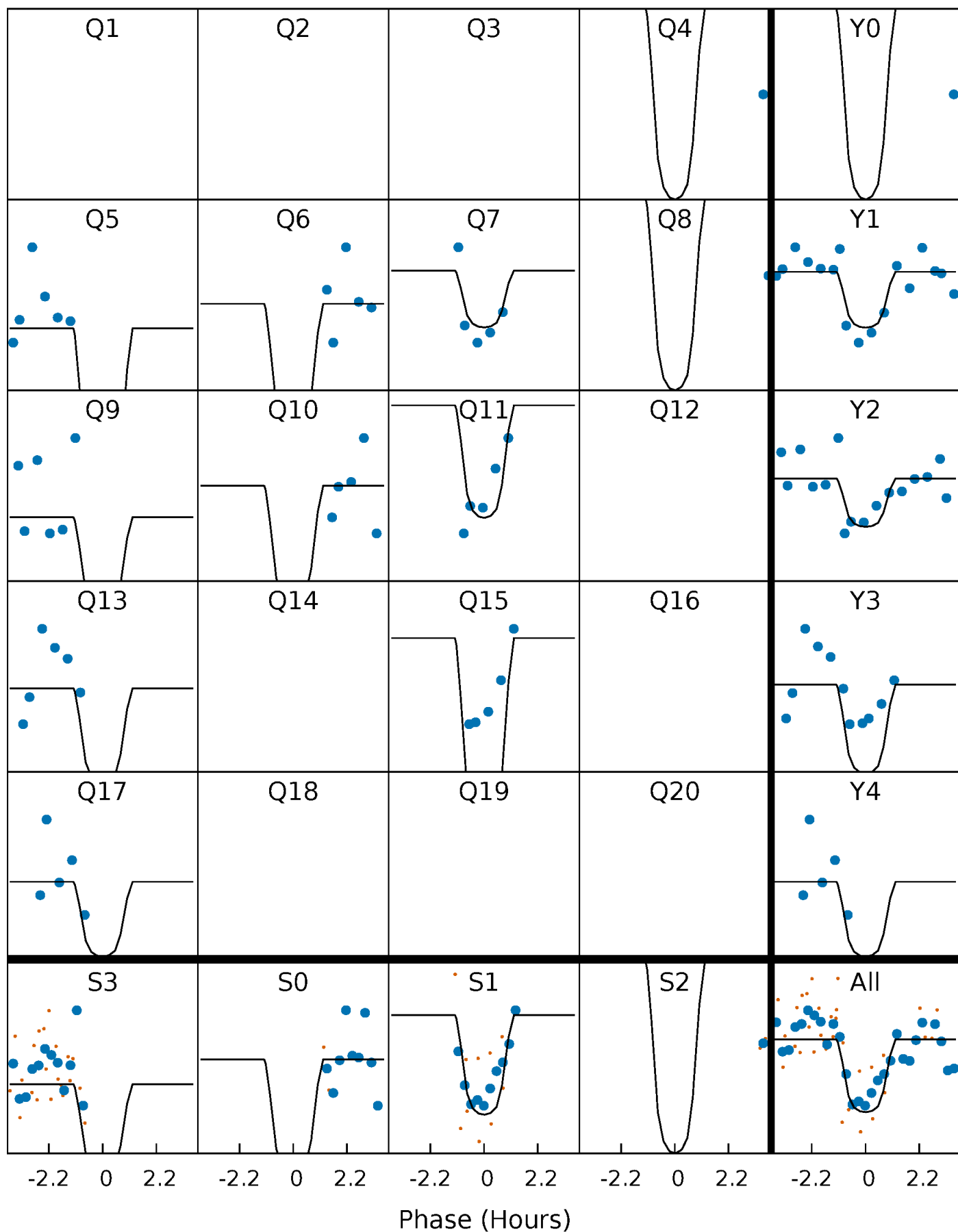
PDC Quarter-Phased Transit Curves

TCE 009474101-03 $P = 90.232544$ Days $T_0 = 208.035745$ (BKJD)



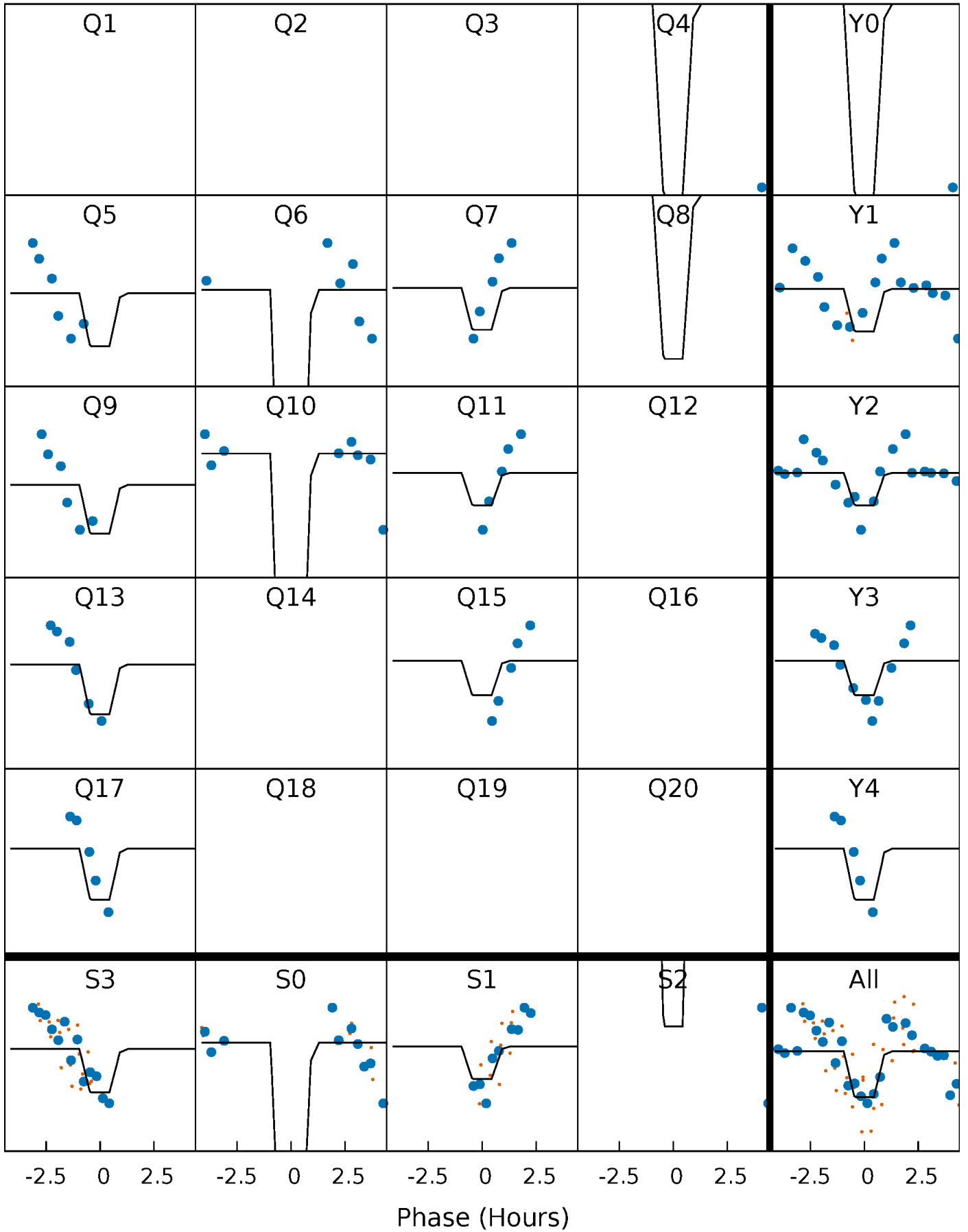
DV Quarter-Phased Transit Curves

TCE 009474101-03 P= 90.232544 Days $T_0=208.035745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

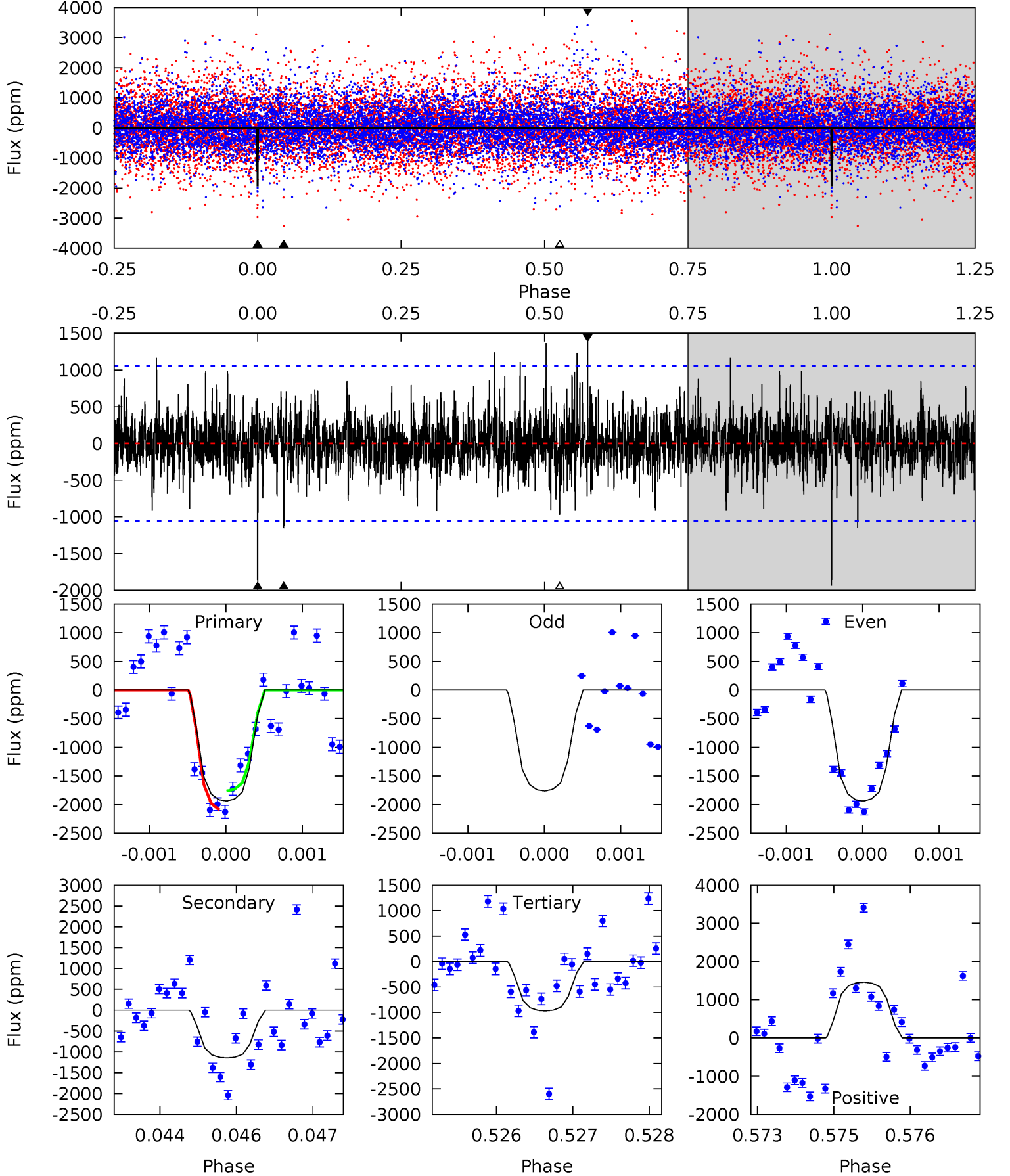
TCE 009474101-03 $P = 90.230366$ Days $T_0 = 208.020490$ (BKJD)



DV Model-Shift Uniqueness Test

009474101-03, P = 90.232544 Days, E = 208.035745 Days

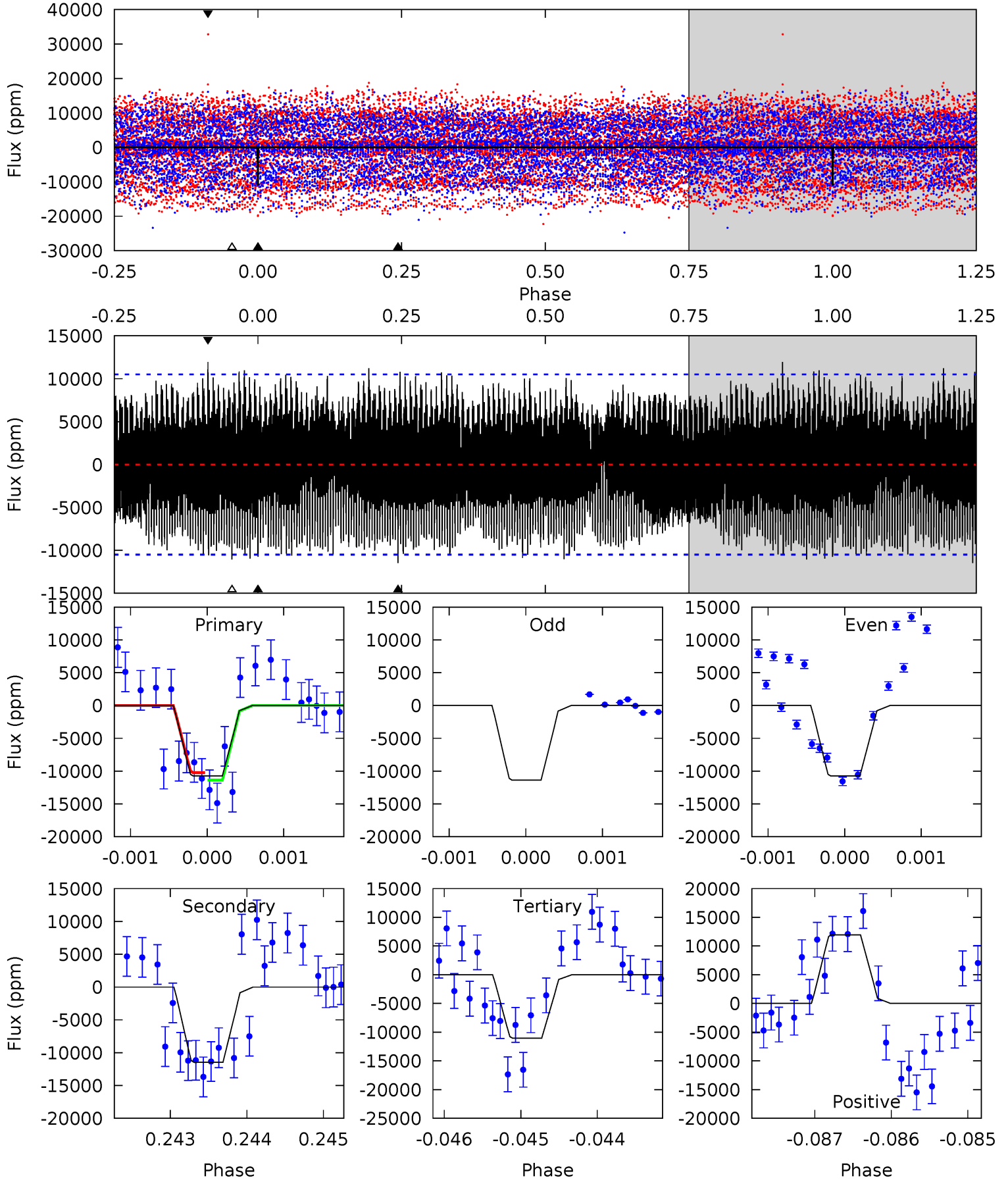
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.97	5.90	4.99	7.51	5.43	3.26	1.45	4.98	2.46	0.91	-1.61	0.51	0.92	0.43	0.84



Alt Model-Shift Uniqueness Test

009474101-03, P = 90.230366 Days, E = 208.020490 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.58	5.95	5.73	6.20	5.45	3.29	2.51	-0.15	-0.62	0.21	-0.26	0.18	1.14	0.51	0.29



Stellar Parameters For KIC 009474101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5932^{+186}_{-207}	$4.580^{+0.040}_{-0.160}$	$-0.500^{+0.300}_{-0.300}$	$0.798^{+0.182}_{-0.073}$	$0.899^{+0.084}_{-0.116}$	$2.487^{+0.500}_{-1.101}$
	+3%/-3%	+1%/-3%	+60%/-60%	+23%/-9%	+9%/-13%	+20%/-44%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009474101-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1146 ± 194	$6.65^{+5.96}_{-4.37}$	544^{+30}_{-26}	4249^{+2701}_{-815}	1976^{+14203}_{-1427}
Alt.	-11460 ± 1927	$10.80^{+6.17}_{-6.03}$	542^{+31}_{-23}	5670^{+3304}_{-1061}	7650^{+31272}_{-4591}

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 $A_{obs} \gg 1.0$

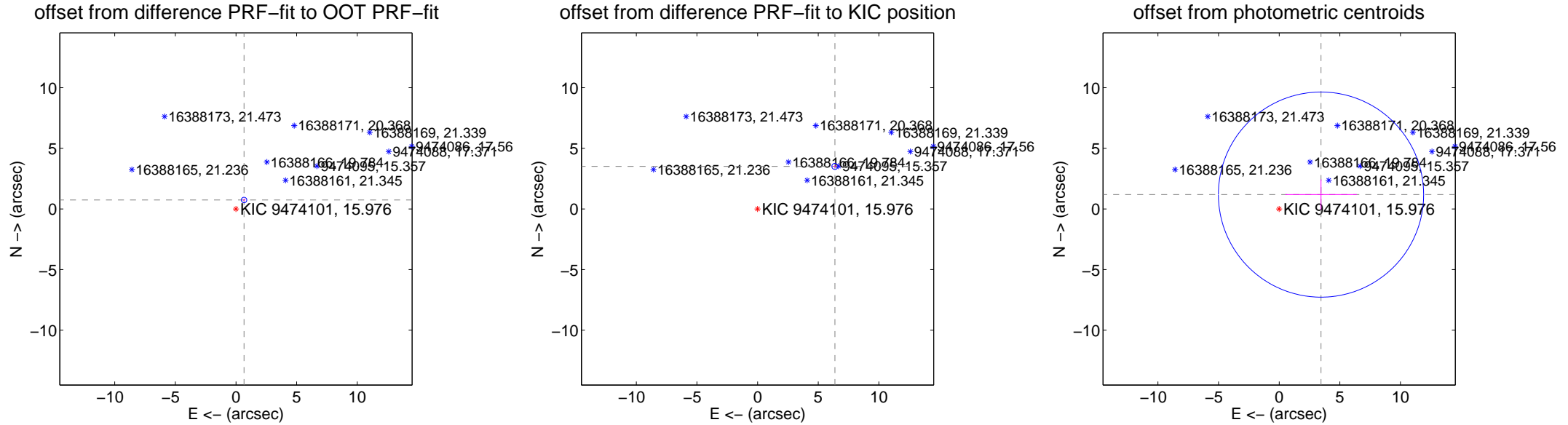
DV Centroid Data

Supplemental centroid analysis for 009474101-03. Kepler magnitude: 15.98. Transit SNR 9.43

There are 1 quarters with good PRF difference image offsets

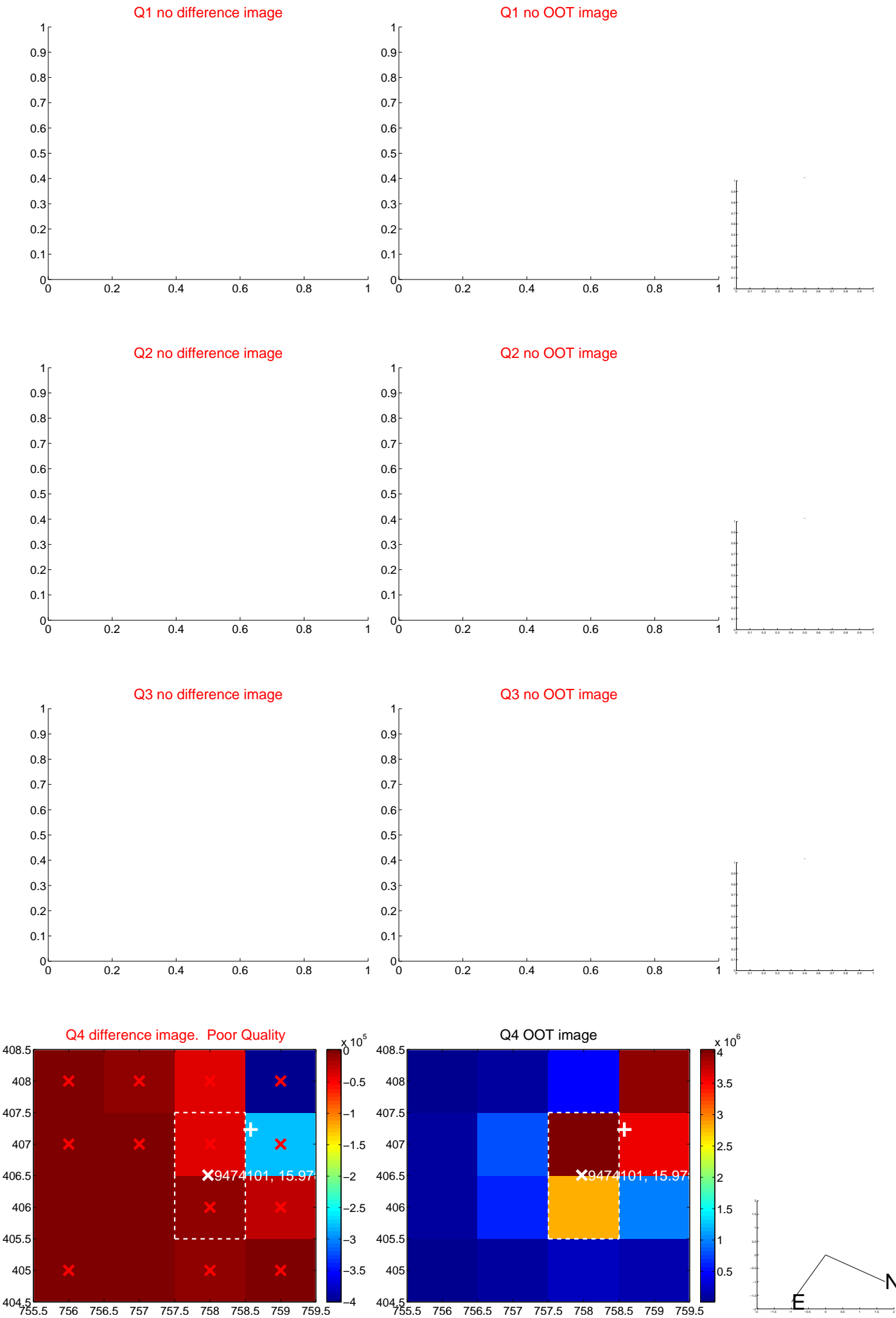
The OOT PRF centroid is offset from the target star catalog position by about 6.33 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.993 ± 0.075	13.21	-0.665 ± 0.071	0.737 ± 0.071
PRF-fit source offset from KIC position	7.274 ± 0.084	86.89	-6.372 ± 0.078	3.507 ± 0.073
photometric centroid source offset	3.64 ± 2.82	1.29	-3.45 ± 2.95	1.18 ± 1.25

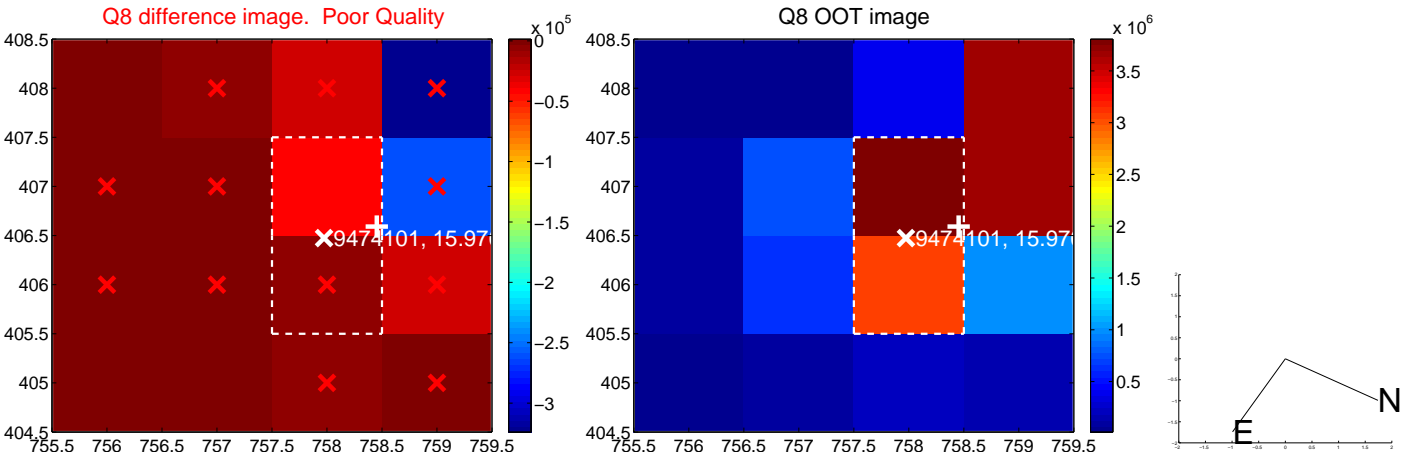
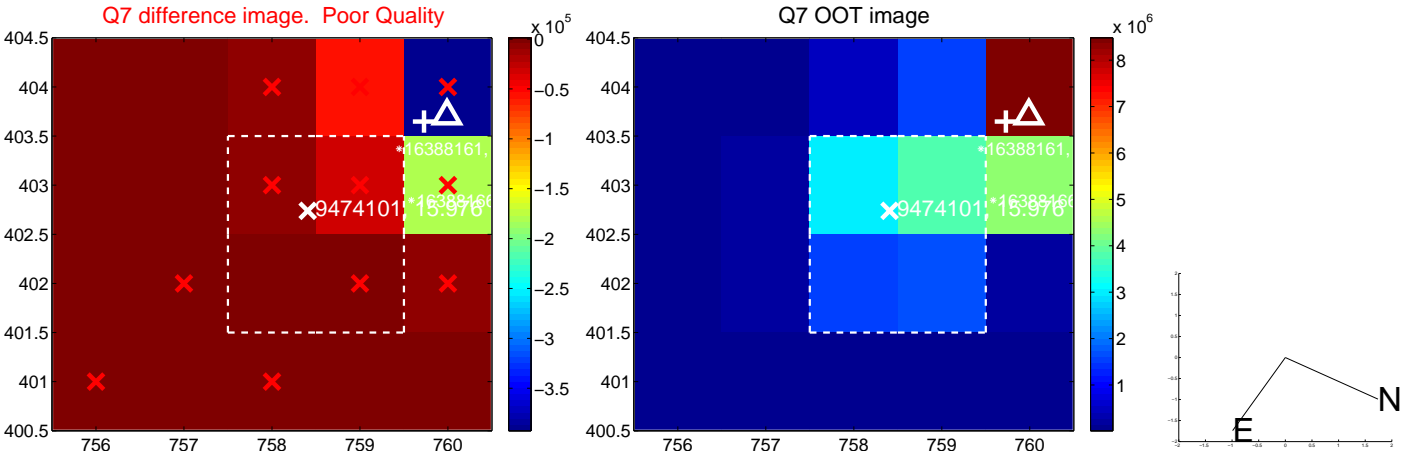
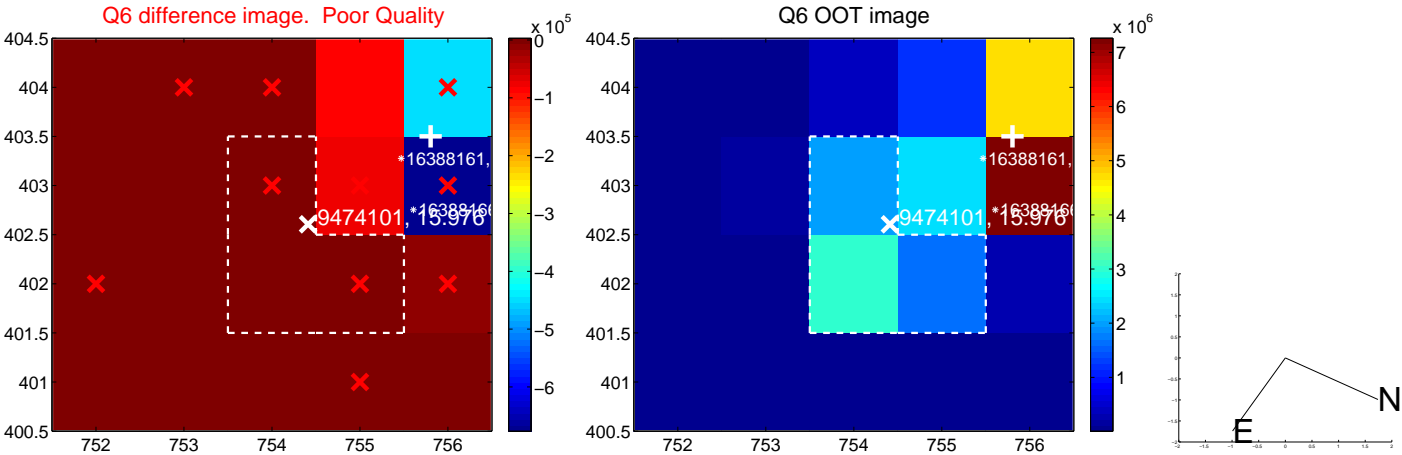
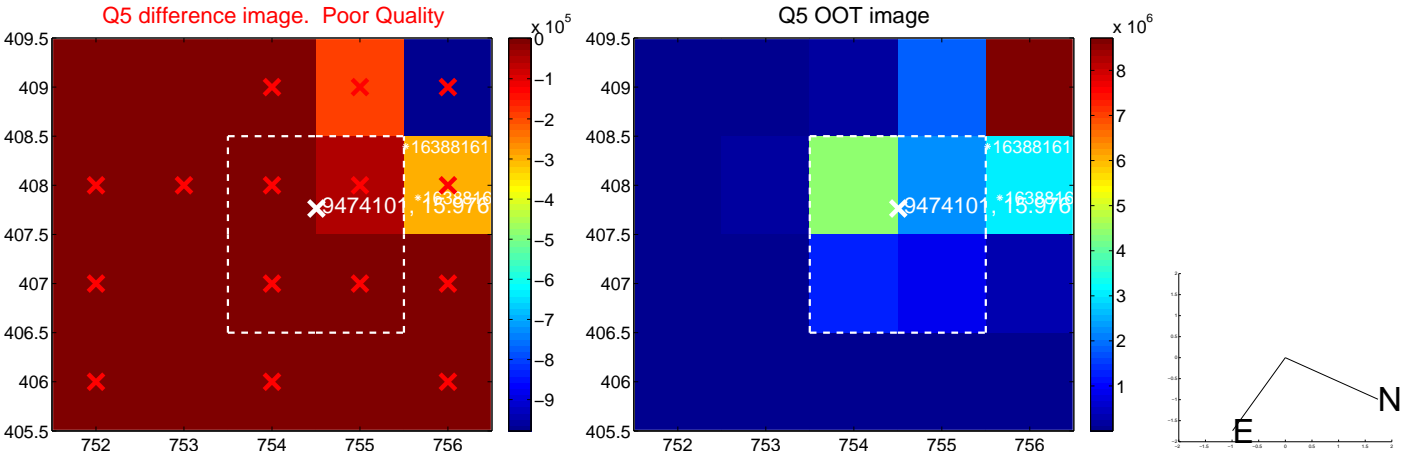


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

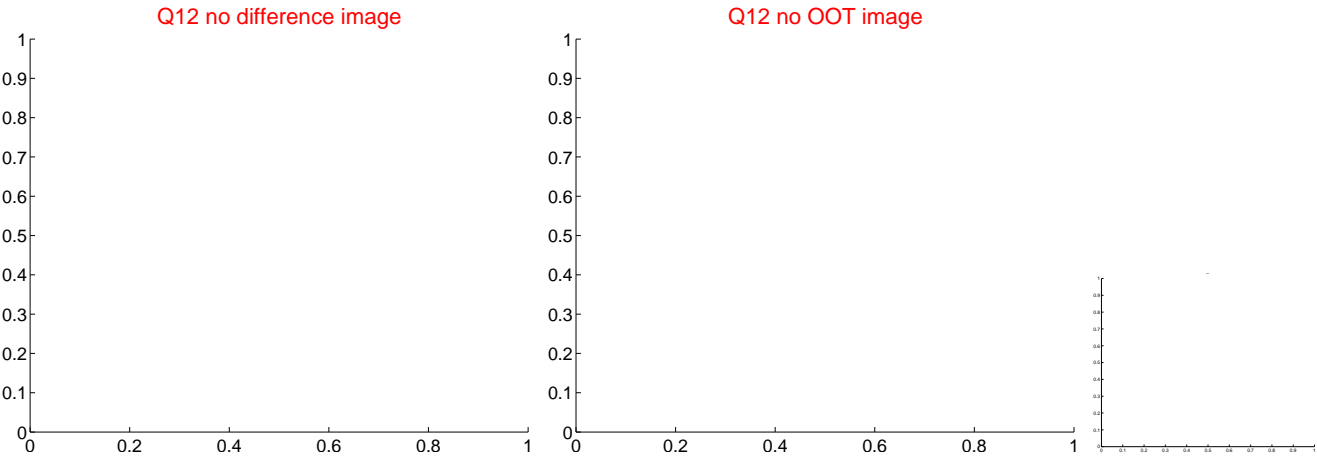
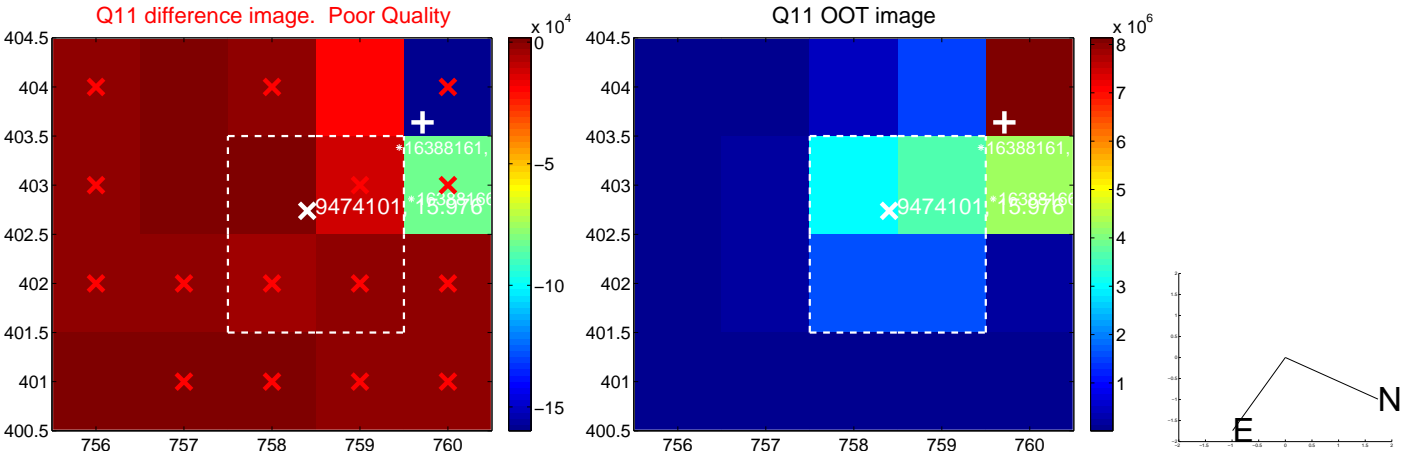
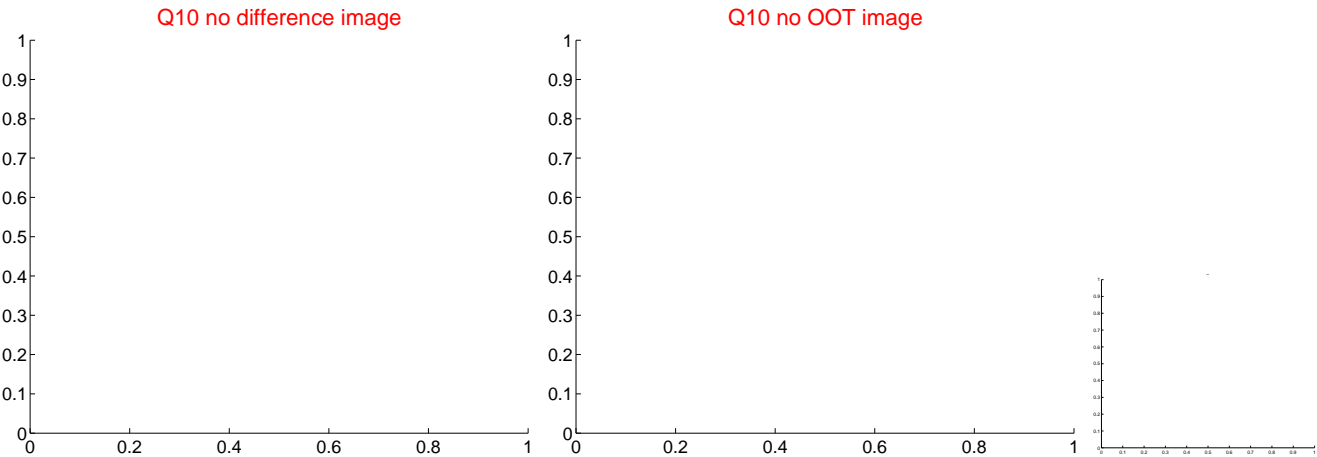
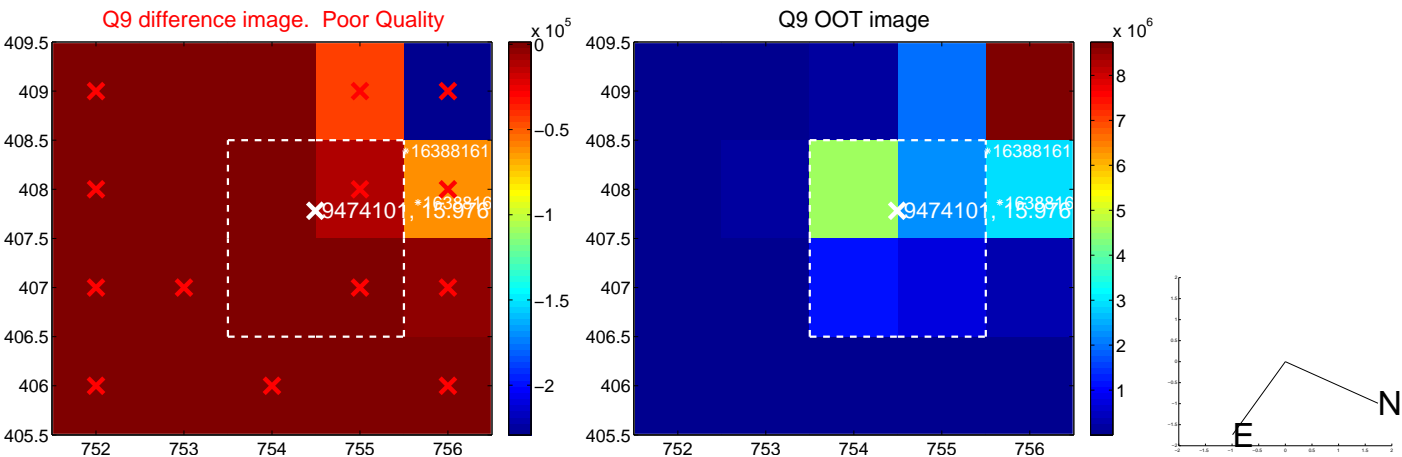
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



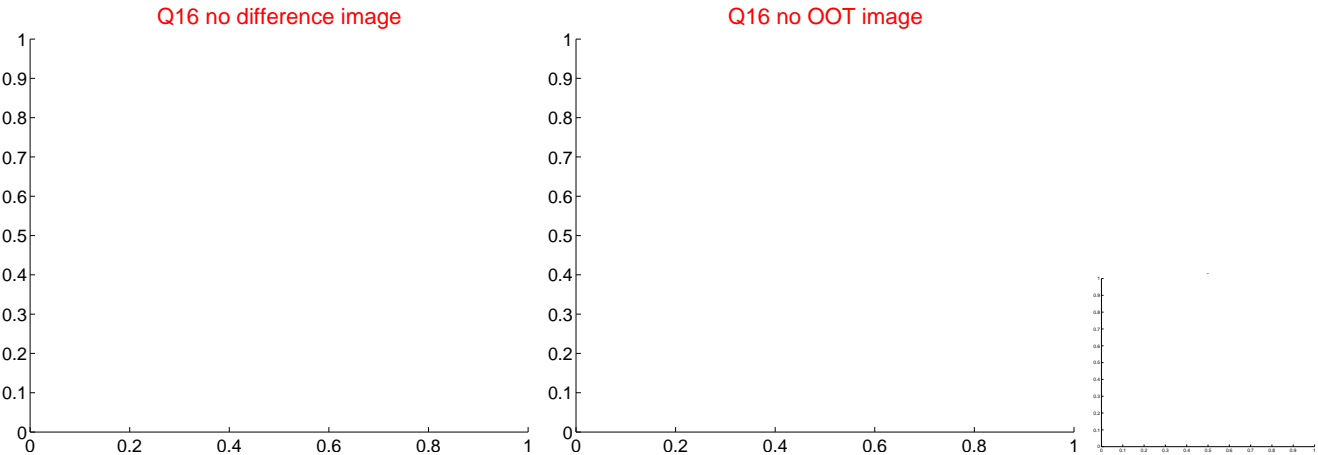
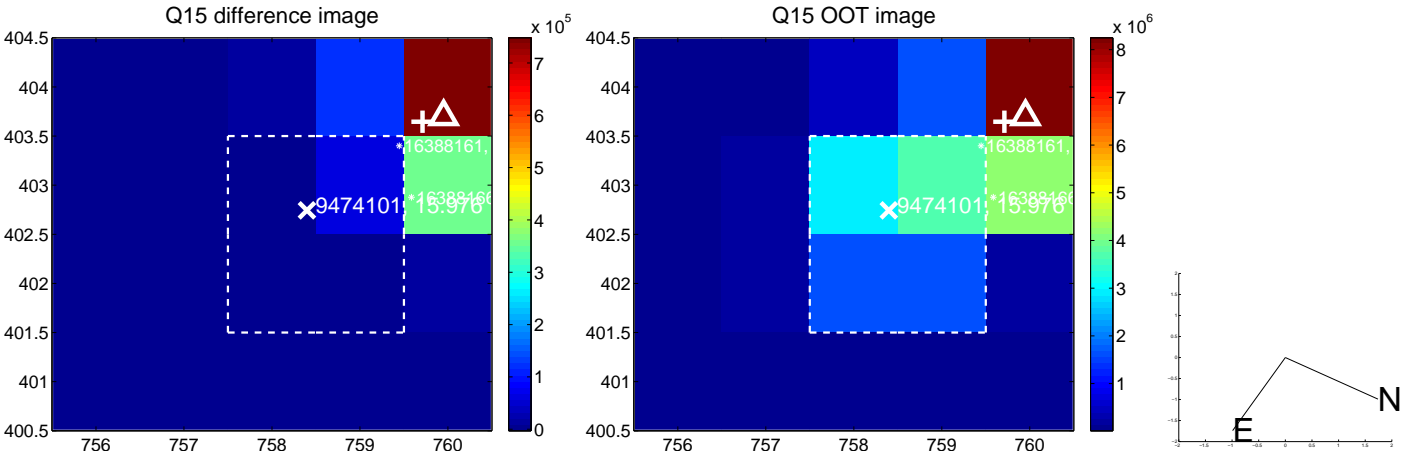
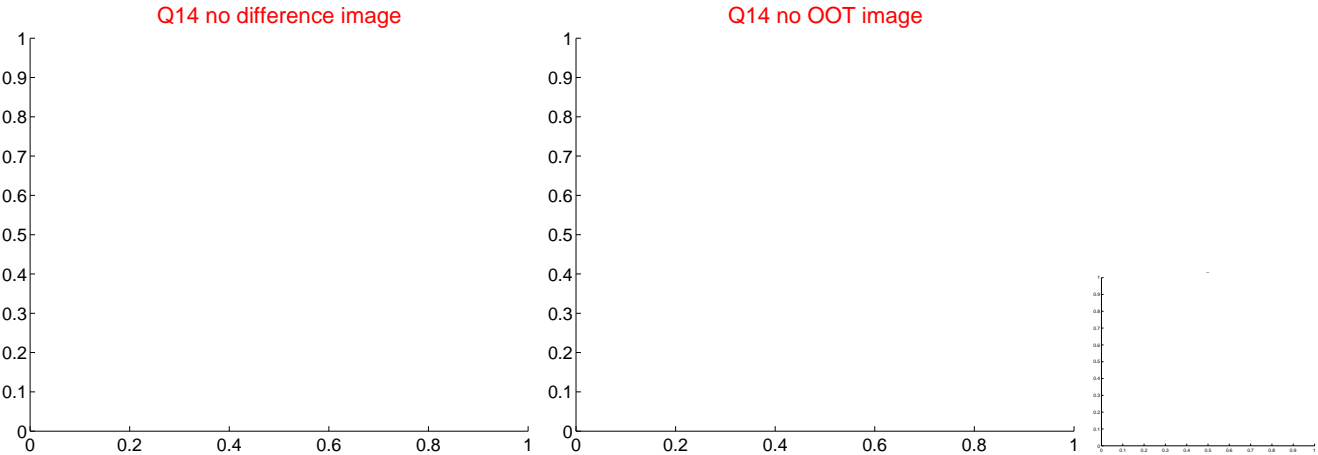
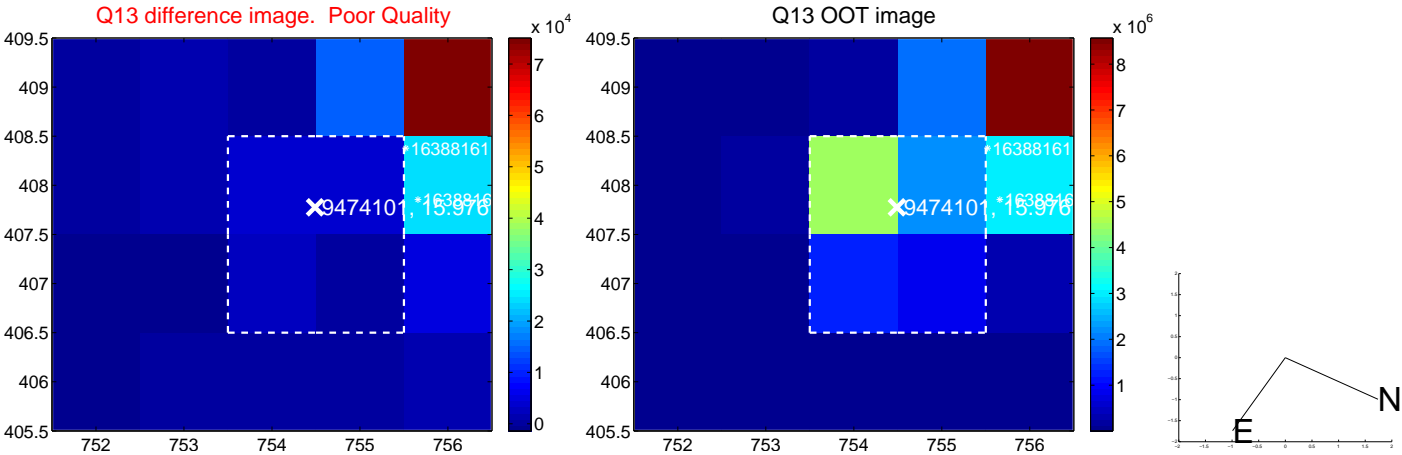
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



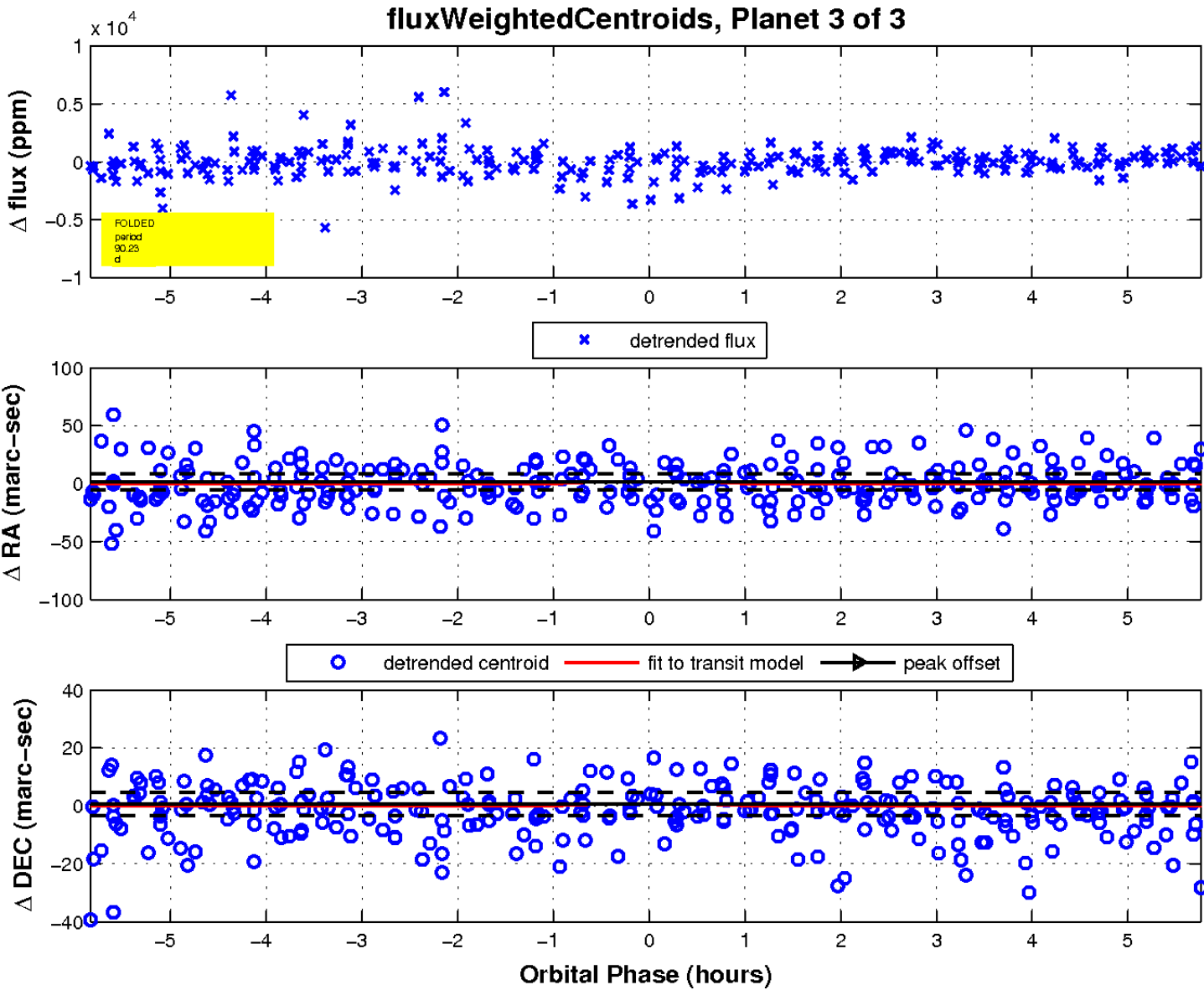
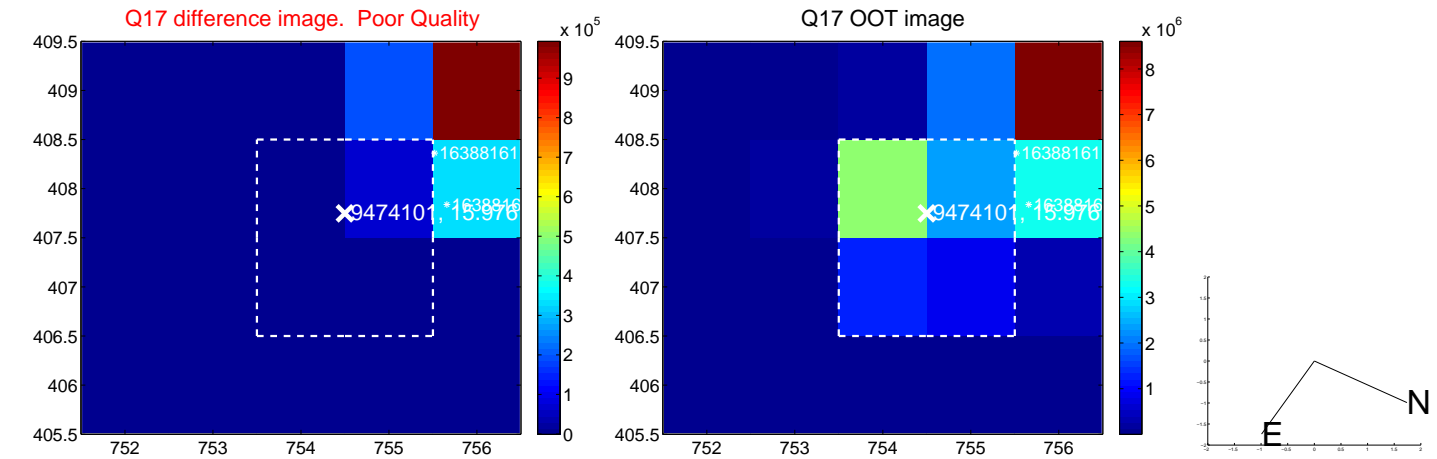
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UKIRT Image

Declination

