

KIC 010874926

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})
010874926-01	OBS	1293.01	11.703116	133.721382	4143.9	2.039	135.1	129.7	0.96	6014	10.51	102.66
010874926-02	OBS	No	11.703141	141.113657	2024.8	3.436	77.2	77.8	0.96	6014	7.85	102.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010874926-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010874926-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

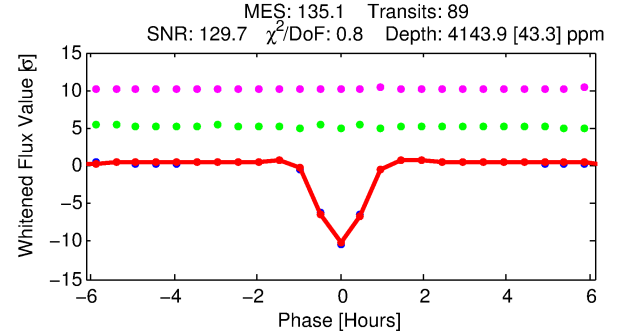
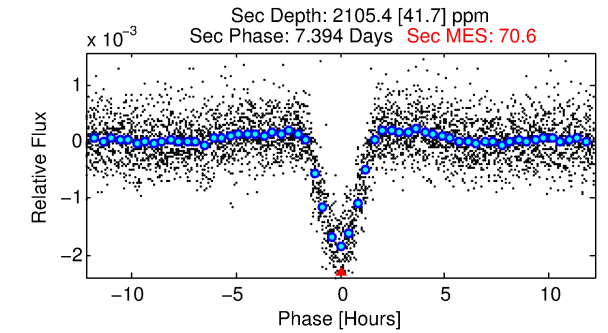
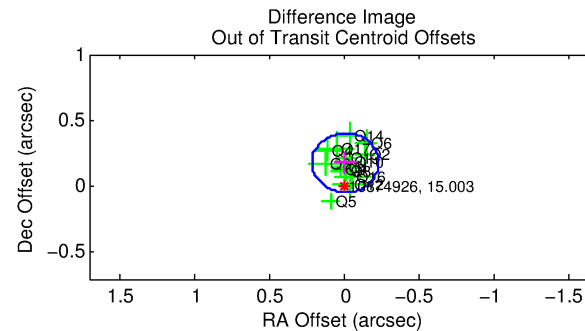
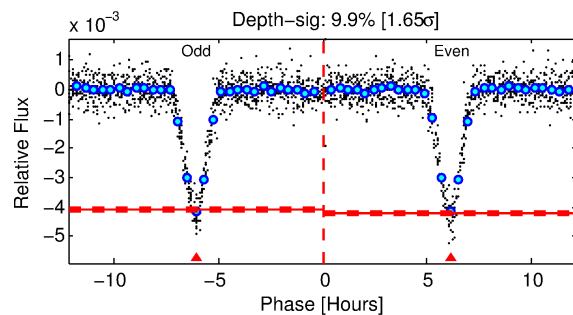
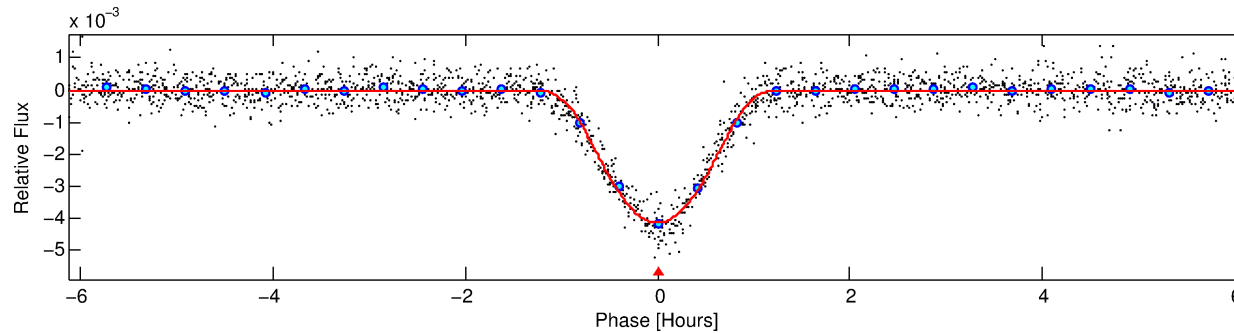
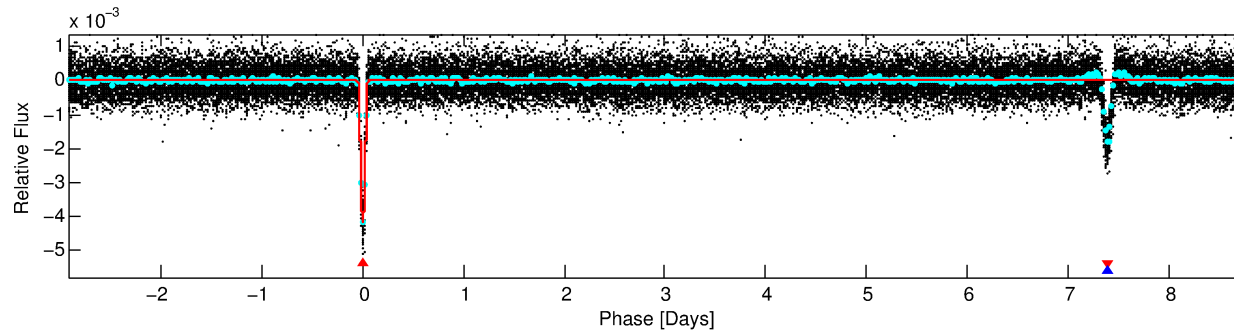
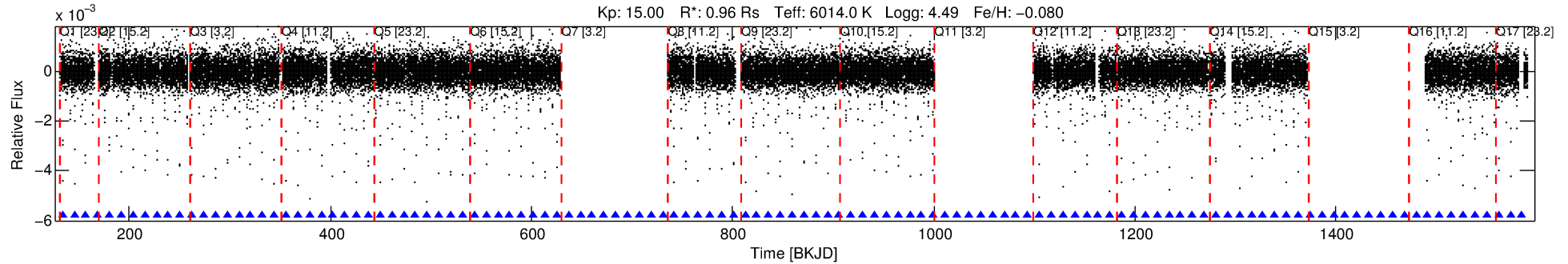
Ephemeris Match Information For 010874926-01

No Significant Match Found

DV One-Page Summary

KIC: 10874926 Candidate: 1 of 2 Period: 11.703 d

KOI: K01293.01 Corr: 0.996



DV Fit Results:

Period = 11.70312 [0.00001] d
Epoch = 133.7214 [0.0003] BKJD
Rp/R* = 0.1006 [0.0381]
a/R* = 21.47 [1.86]
b = 0.99 [0.06]
Seff = 102.66 [41.87]
Teq = 812 [83] K
Rp = 10.51 [5.17] Re
a = 0.1024 [0.0269] AU
Ag = 109.81 [93.26] [1.17 σ]
Teffp = 4062 [784] K [4.12 σ]

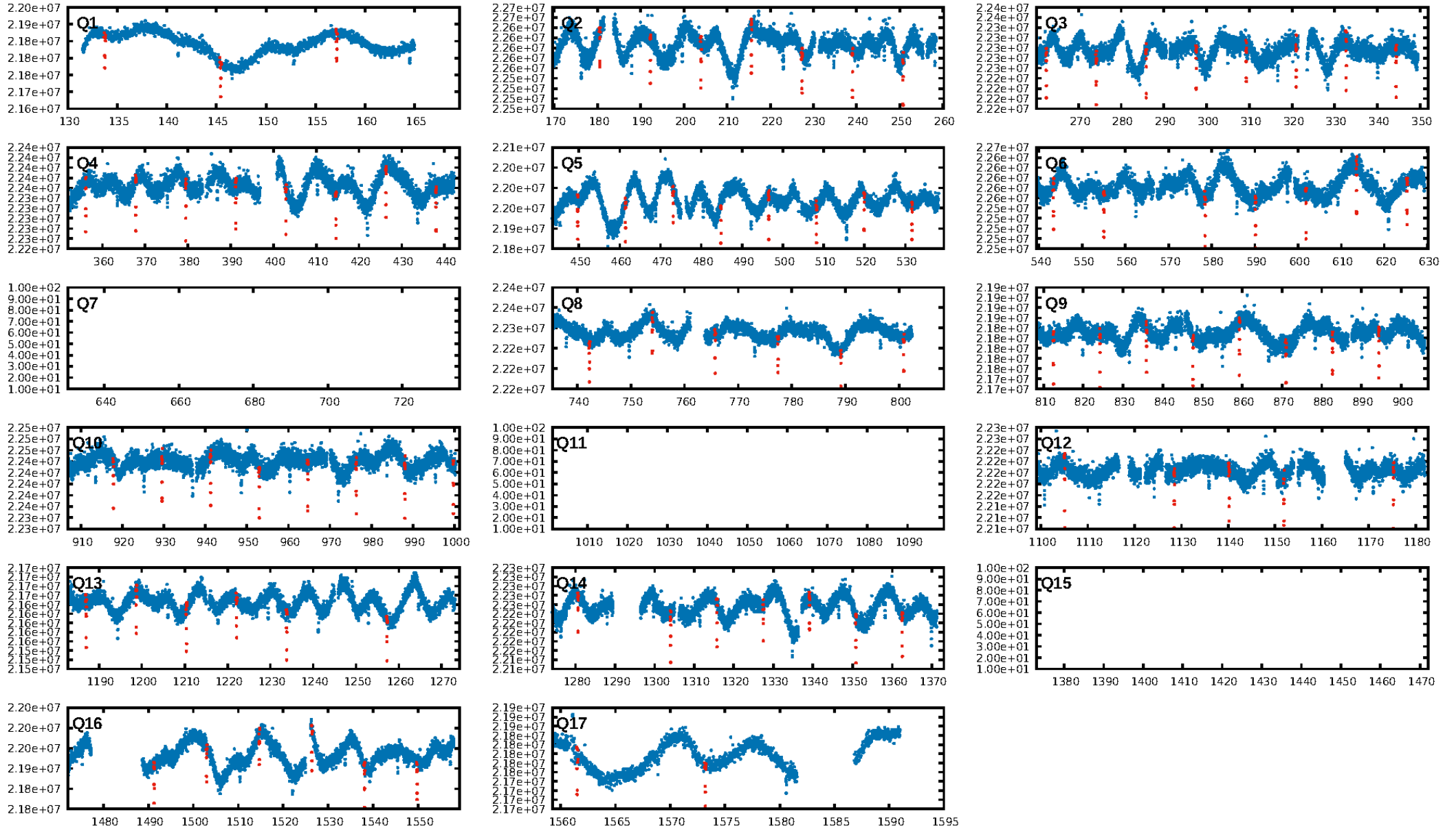
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [84/84]
GhostDiagnostic-chr: 4.617
Centroid-sig: 0.0%
Centroid-so: 0.352 arcsec [3.61 σ]
OotOffset-rm: 0.180 arcsec [2.41 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-rm: 0.268 arcsec [3.31 σ]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

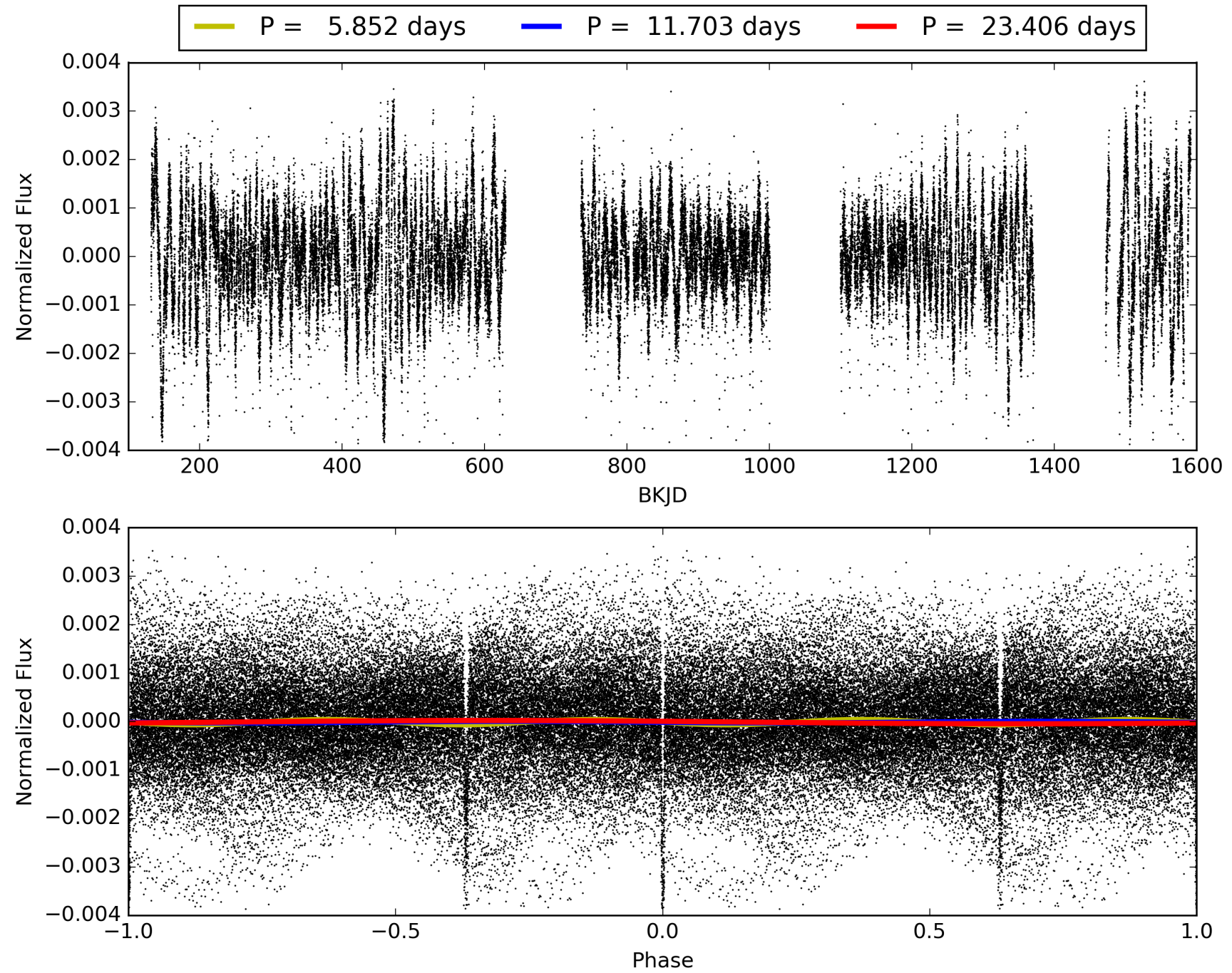
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:00:14 Z

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

TCE 010874926-01, PDC Light Curves

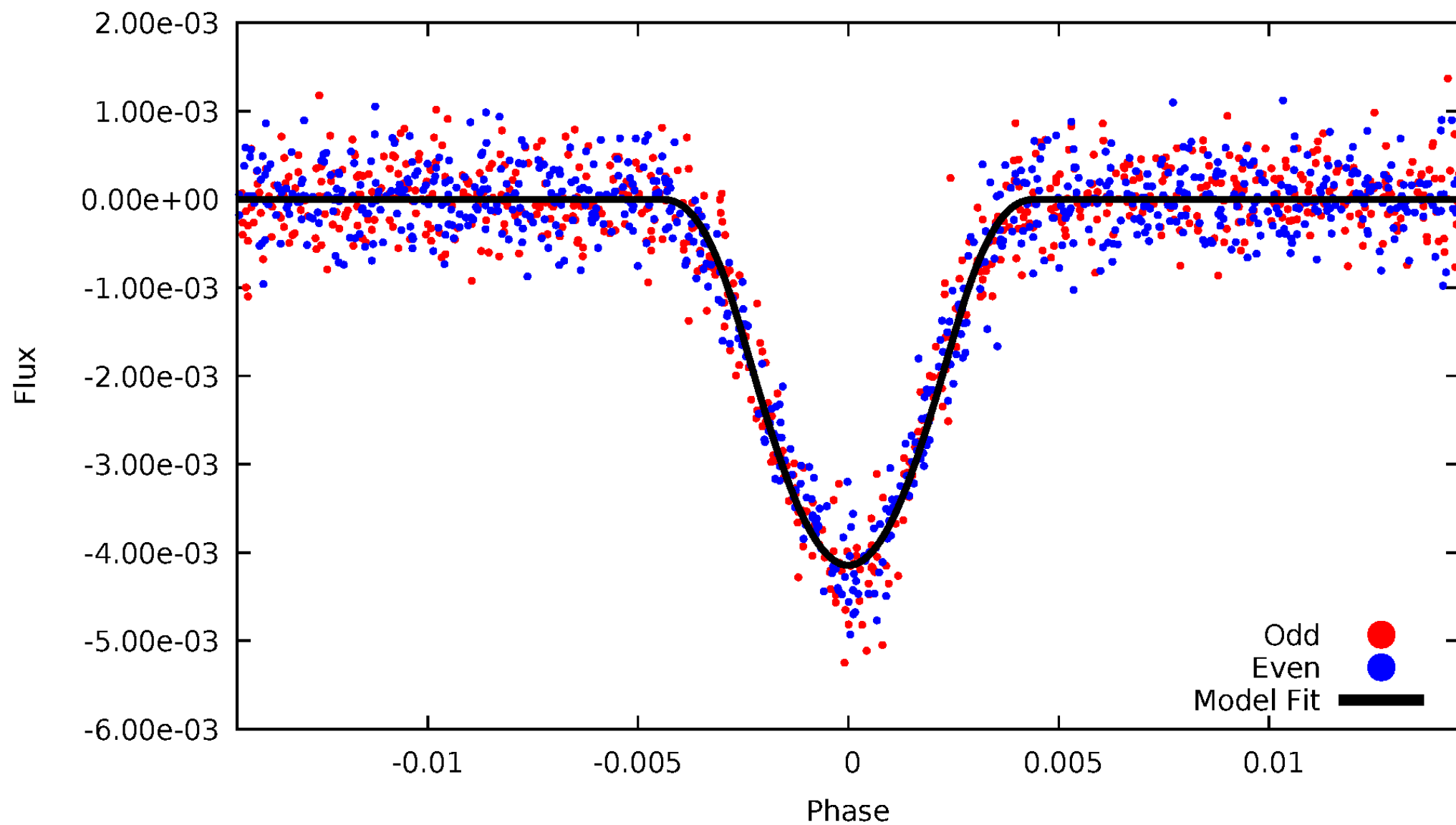


TCE 010874926-01



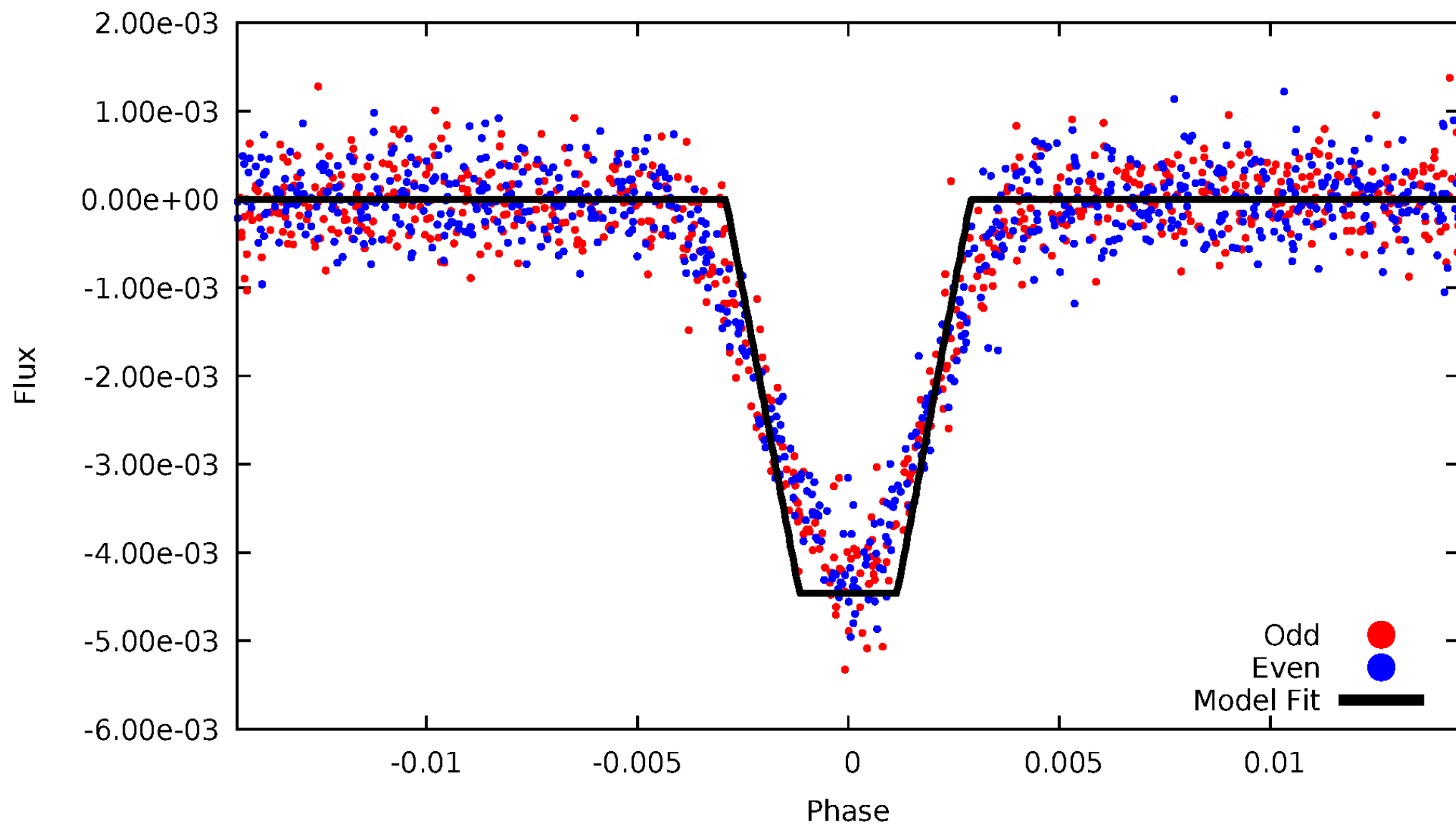
DV Odd/Even

TCE 010874926-01



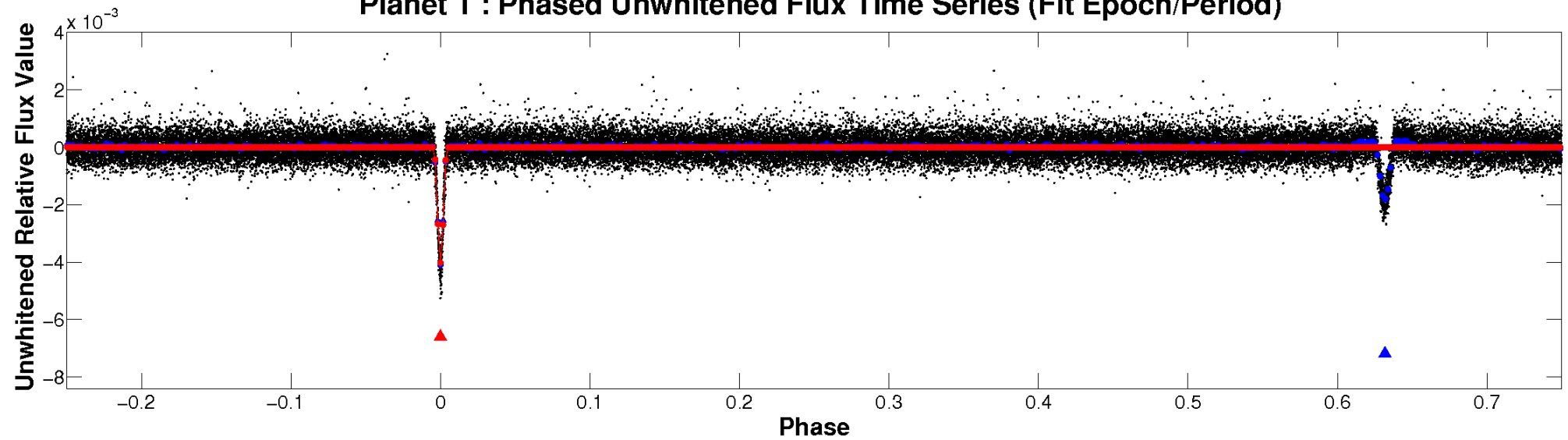
ALT Odd/Even

TCE 010874926-01

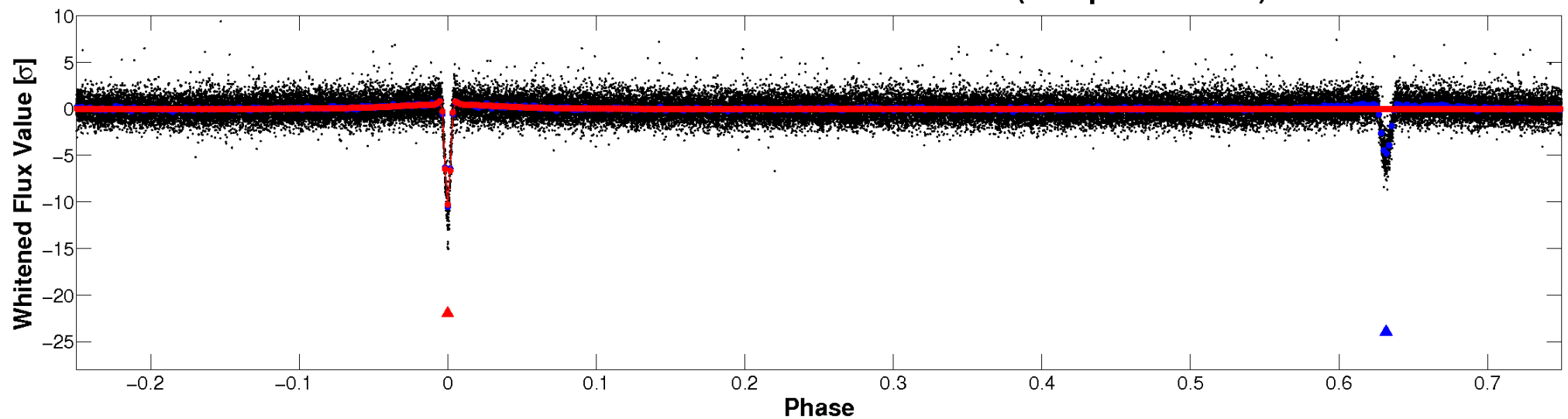


Non-Whitened Vs. Whitened Light Curve

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

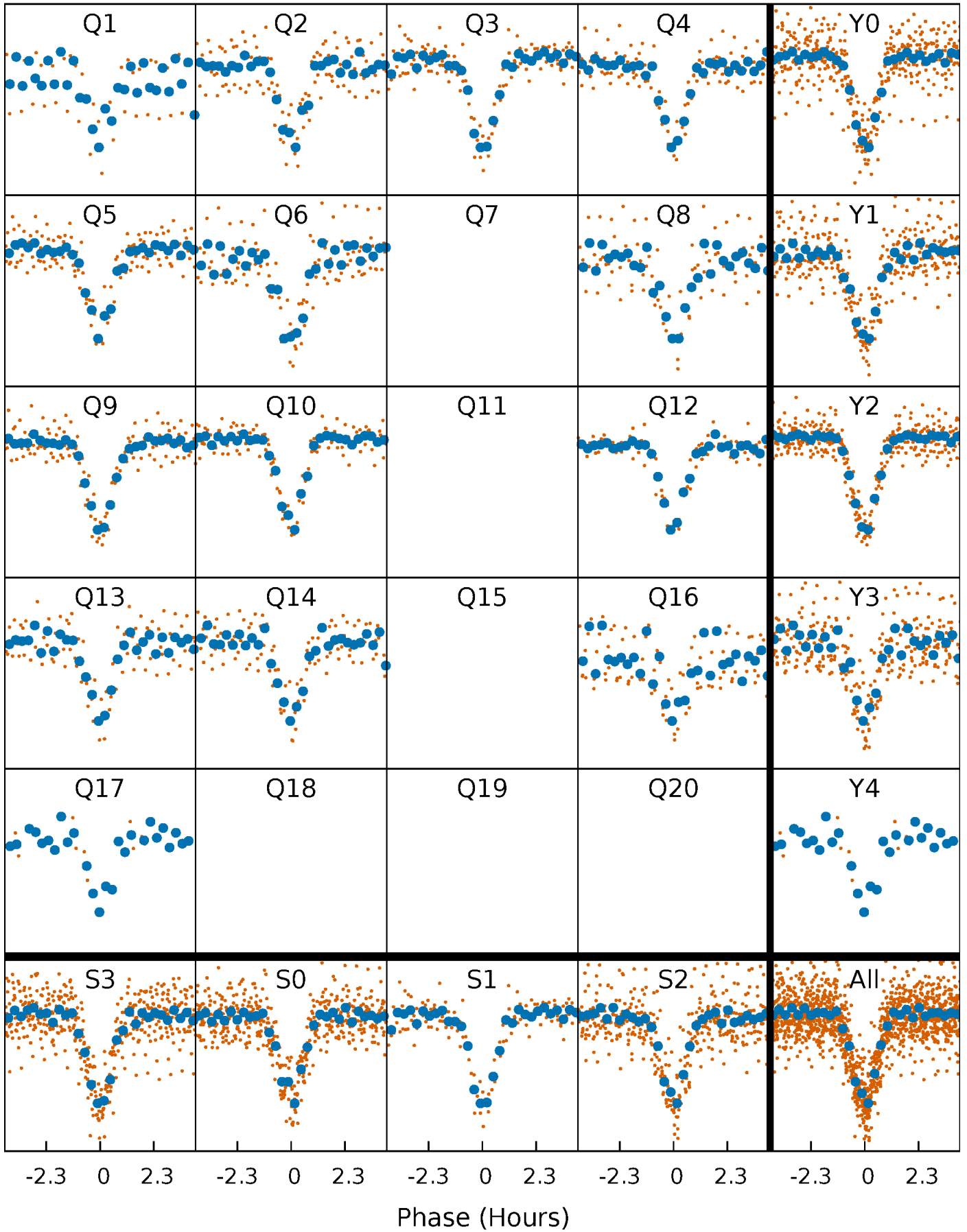


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



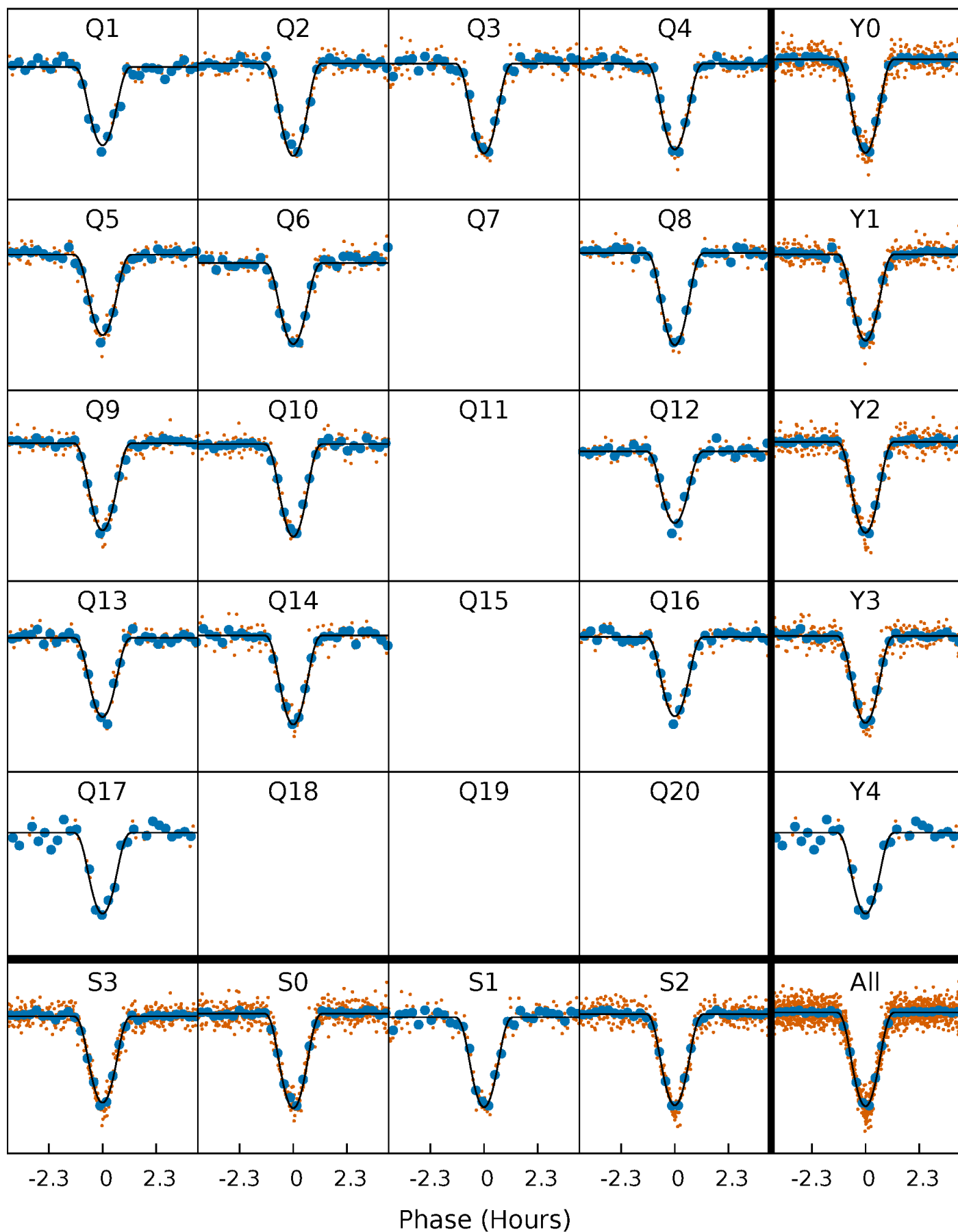
PDC Quarter-Phased Transit Curves

TCE 010874926-01 P= 11.703116 Days $T_0=133.721382$ (BKJD)



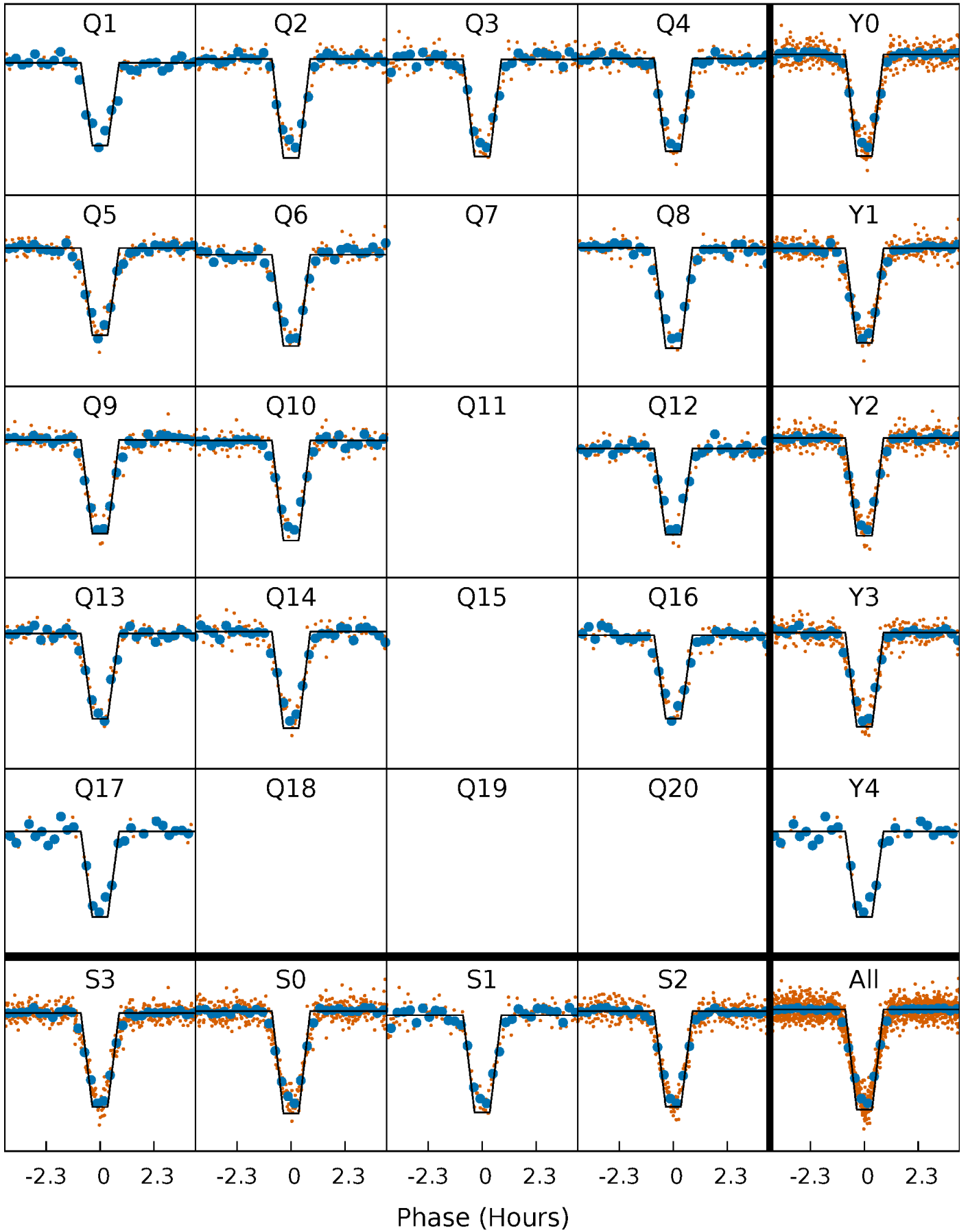
DV Quarter-Phased Transit Curves

TCE 010874926-01 P= 11.703116 Days $T_0=133.721382$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

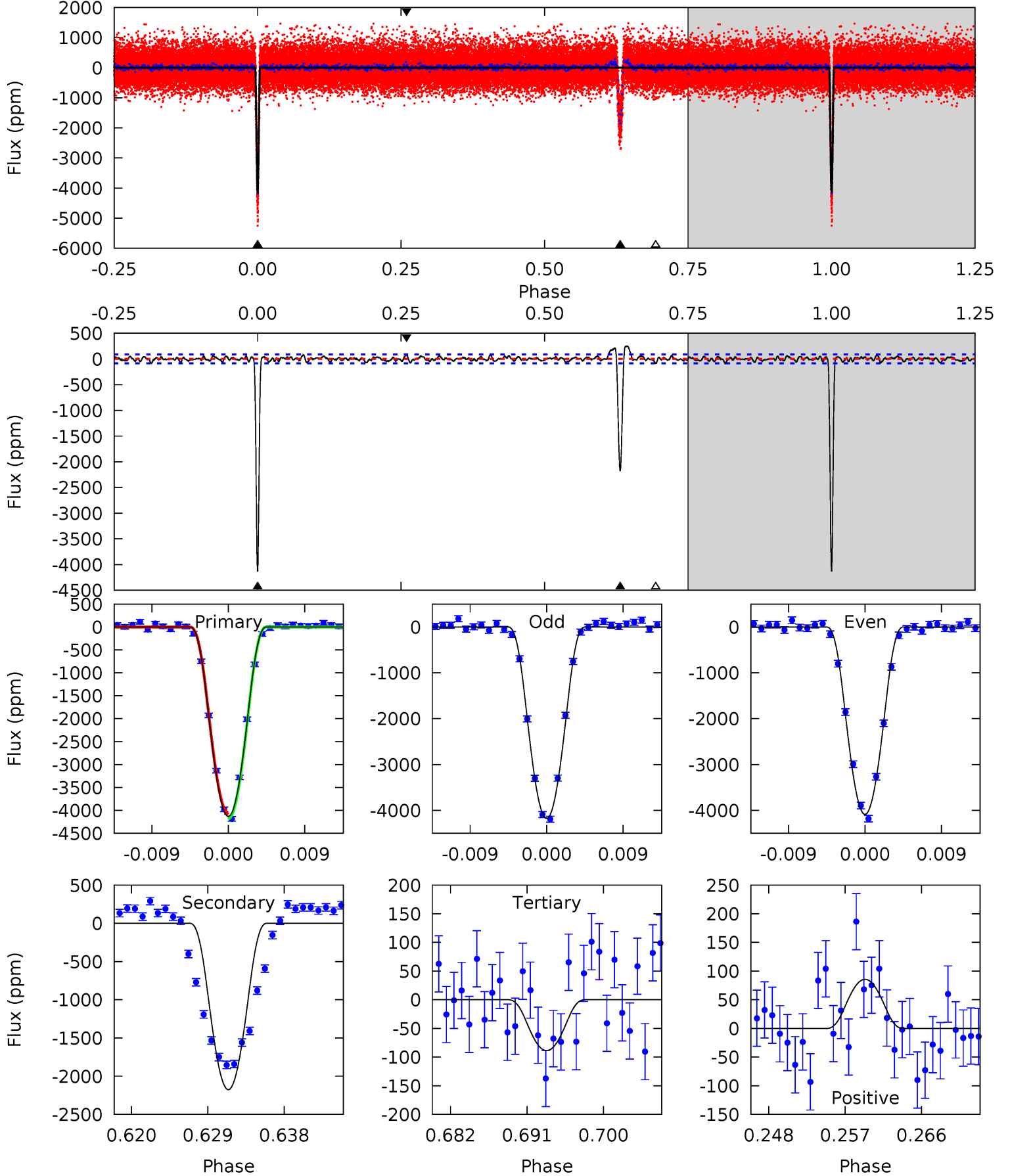
TCE 010874926-01 P= 11.703117 Days $T_0=133.721271$ (BKJD)



DV Model-Shift Uniqueness Test

010874926-01, P = 11.703116 Days, E = 122.018266 Days

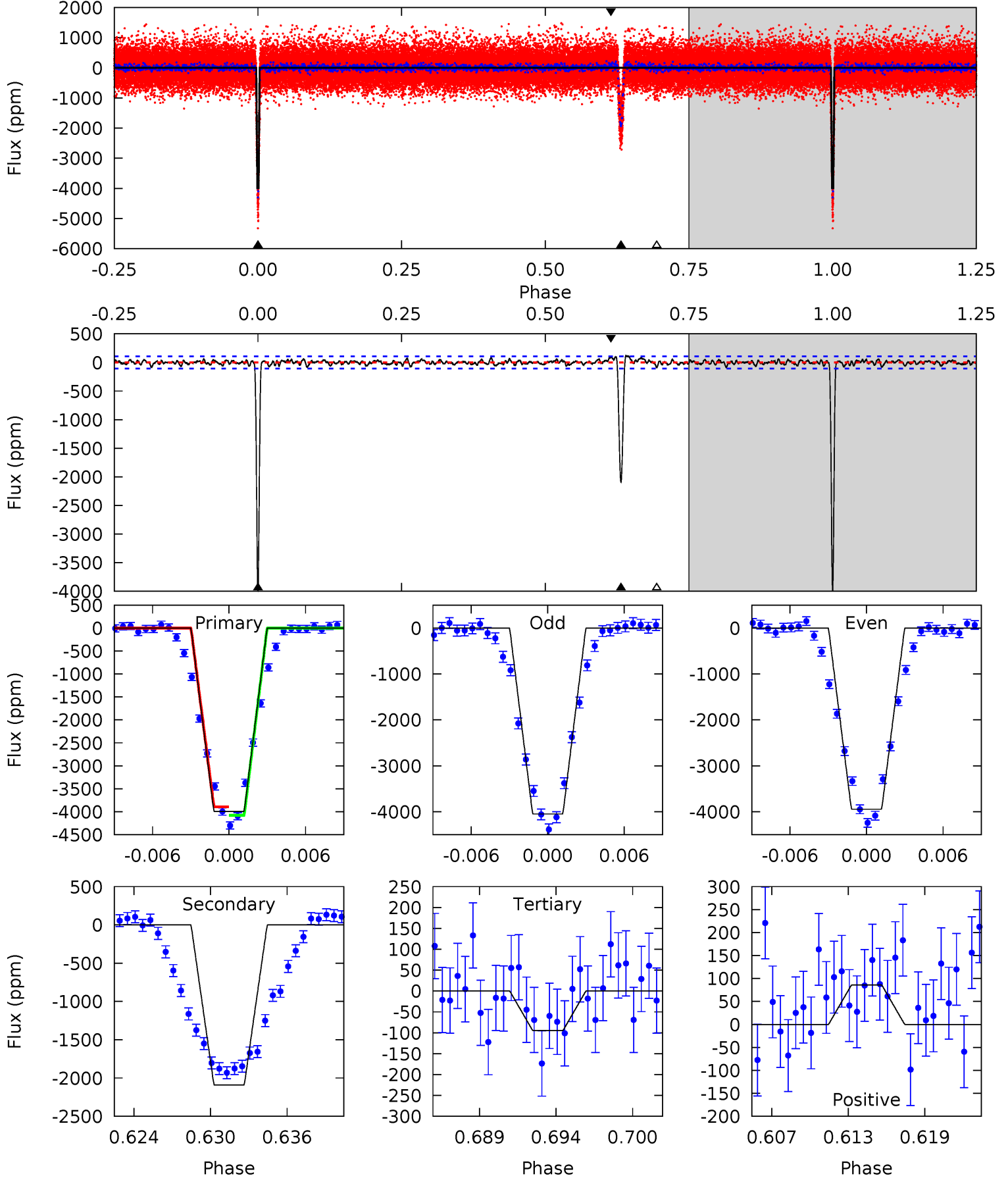
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
240.6	126.7	5.17	4.99	5.05	2.62	2.30	235.4	235.6	121.6	121.7	2.61	1.01	0.06	2.87



Alt Model-Shift Uniqueness Test

010874926-01, P = 11.703117 Days, E = 122.018154 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
192.0	100.5	4.55	4.13	5.13	2.76	1.49	187.4	187.8	96.0	96.4	2.46	1.00	0.03	4.15



Stellar Parameters For KIC 010874926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6014^{+162}_{-217}	$4.494^{+0.052}_{-0.208}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.300}_{-0.100}$	$1.043^{+0.129}_{-0.142}$	$1.673^{+0.361}_{-0.912}$
	+3%/-4%	+1%/-5%	+312%/-438%	+31%/-10%	+12%/-14%	+22%/-55%
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 010874926-01 / KOI 1293.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2176 ± 17	$11.08^{+4.34}_{-4.52}$	1158^{+88}_{-60}	4294^{+1025}_{-458}	102^{+184}_{-50}
Alt.	-2092 ± 21	$7.50^{+4.23}_{-3.58}$	1155^{+83}_{-57}	5002^{+1787}_{-775}	215^{+553}_{-129}

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 $A_{obs} \gg 1.0$

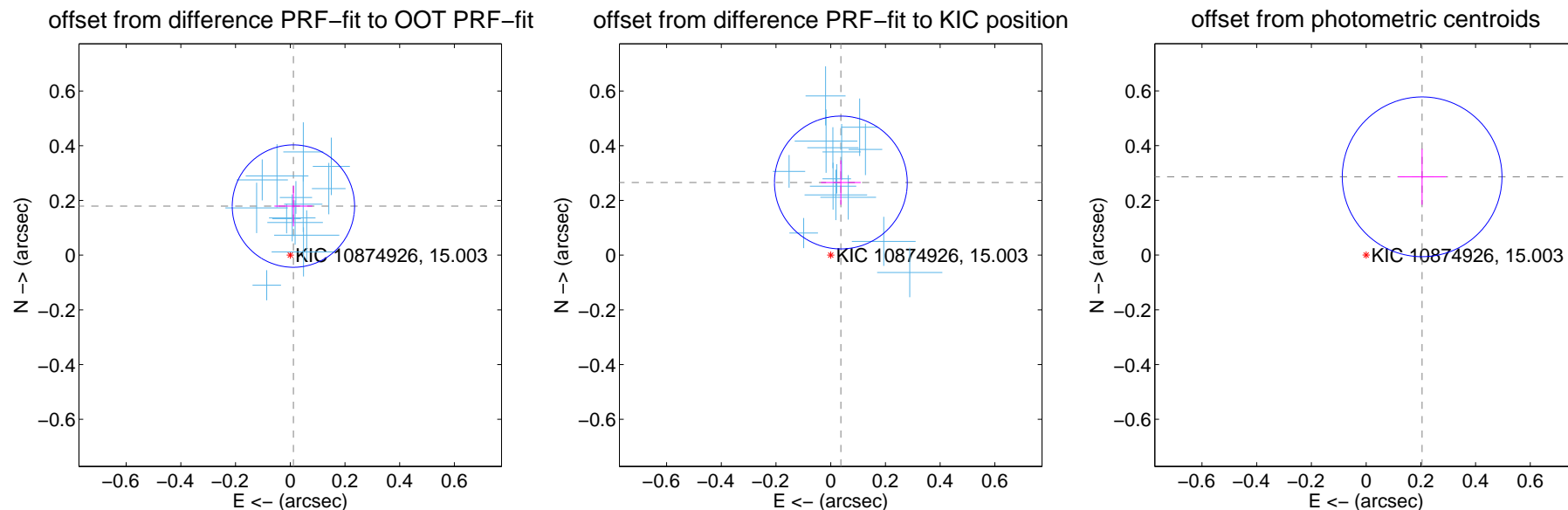
DV Centroid Data

Supplemental centroid analysis for 010874926-01. Kepler magnitude: 15.00. Transit SNR 129.71

There are 14 quarters with good PRF difference image offsets

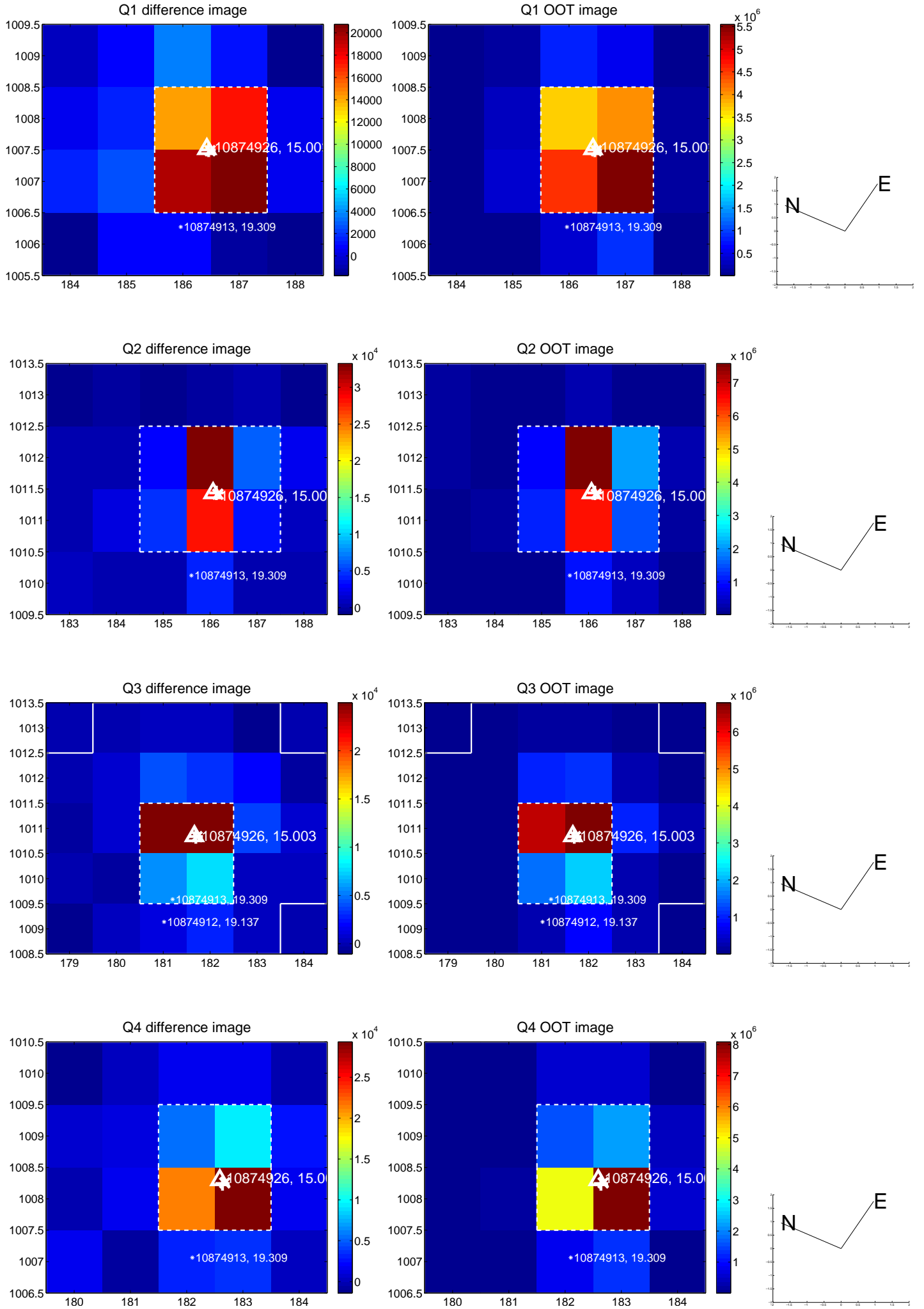
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.180 ± 0.075	2.41	-0.012 ± 0.070	0.179 ± 0.074
PRF-fit source offset from KIC position	0.268 ± 0.081	3.31	-0.037 ± 0.073	0.266 ± 0.081
photometric centroid source offset	0.35 ± 0.10	3.61	-0.20 ± 0.09	0.29 ± 0.10

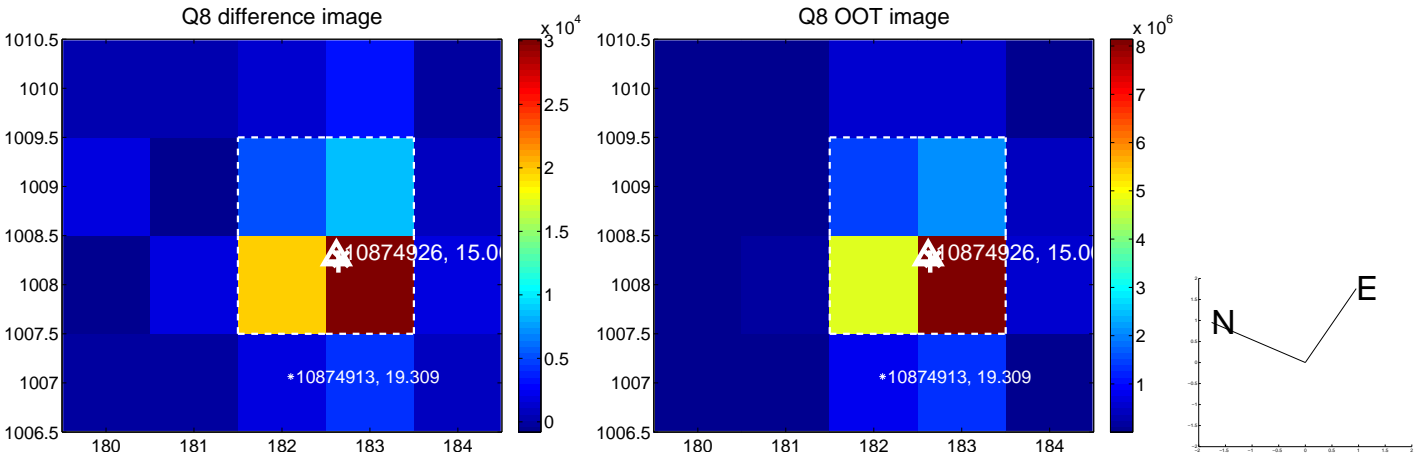
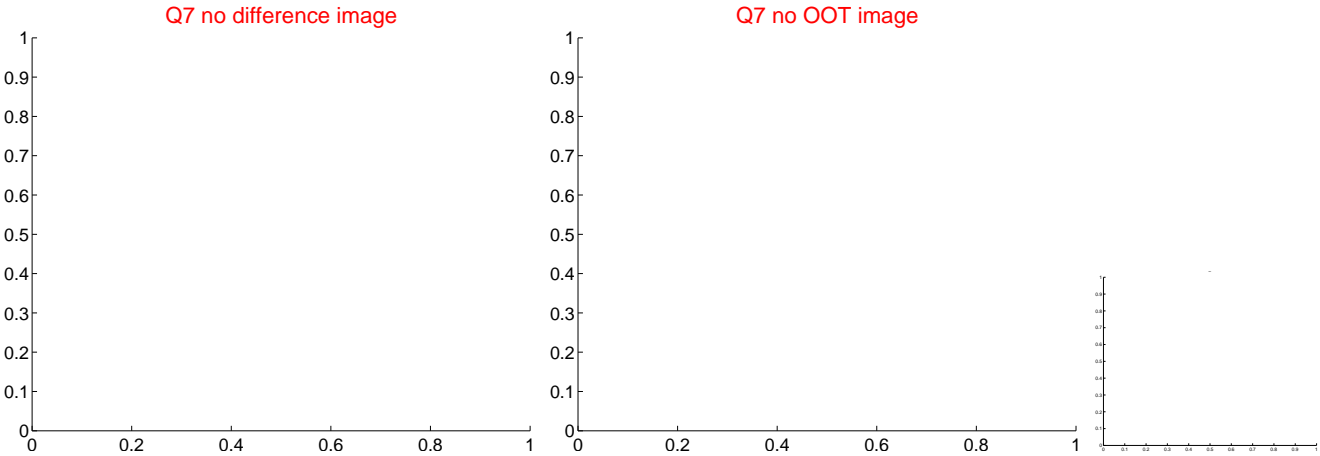
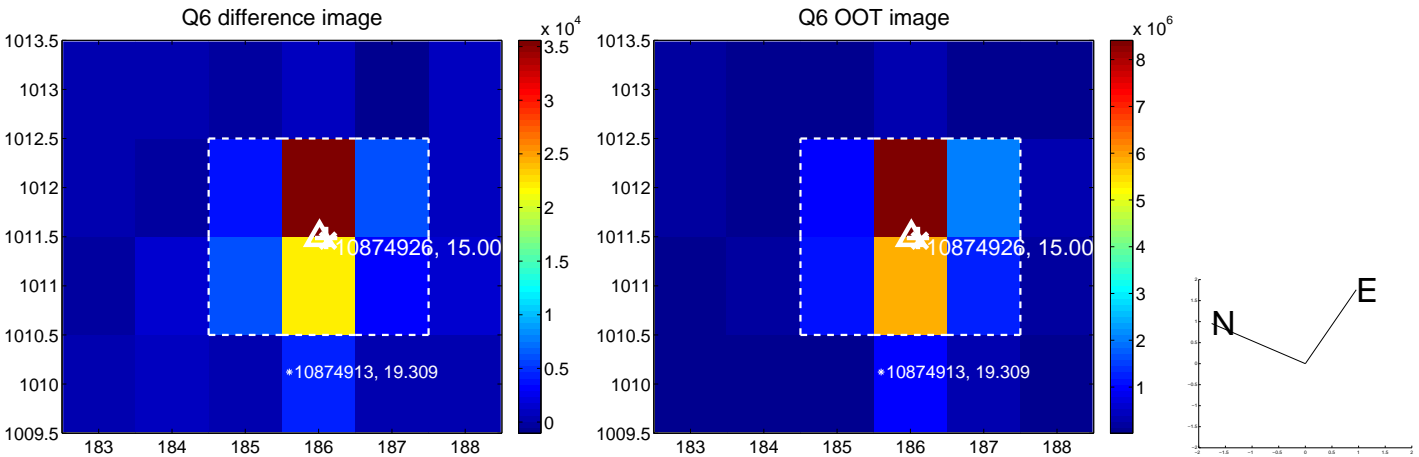
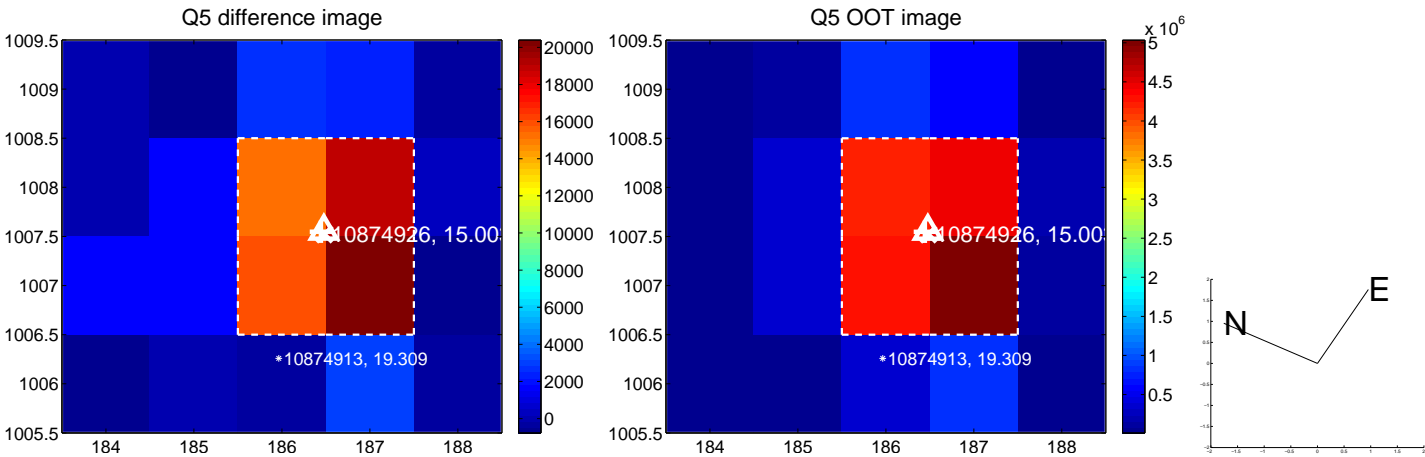


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

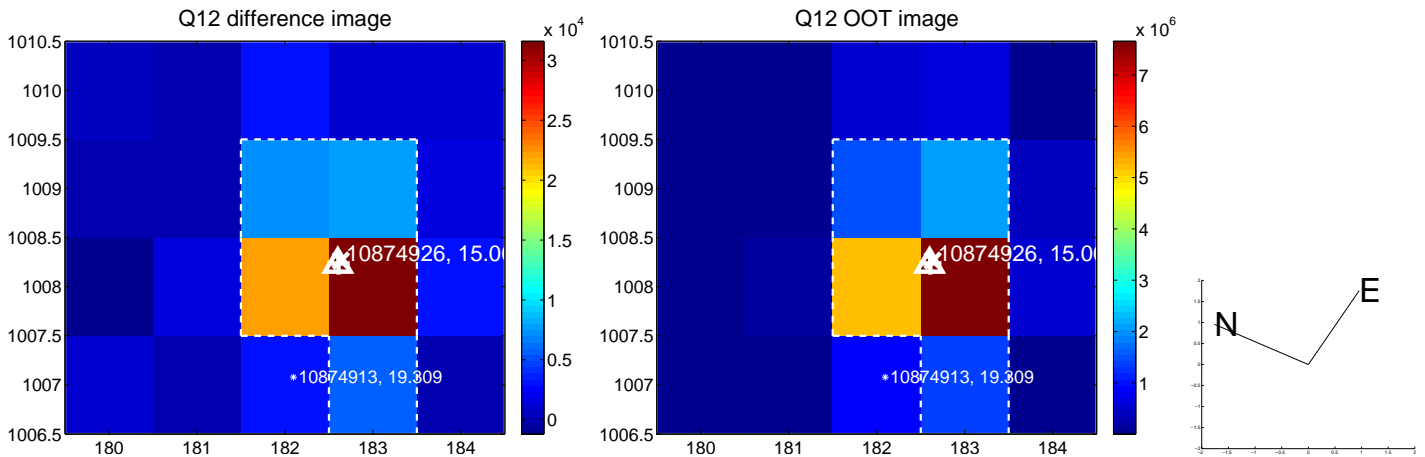
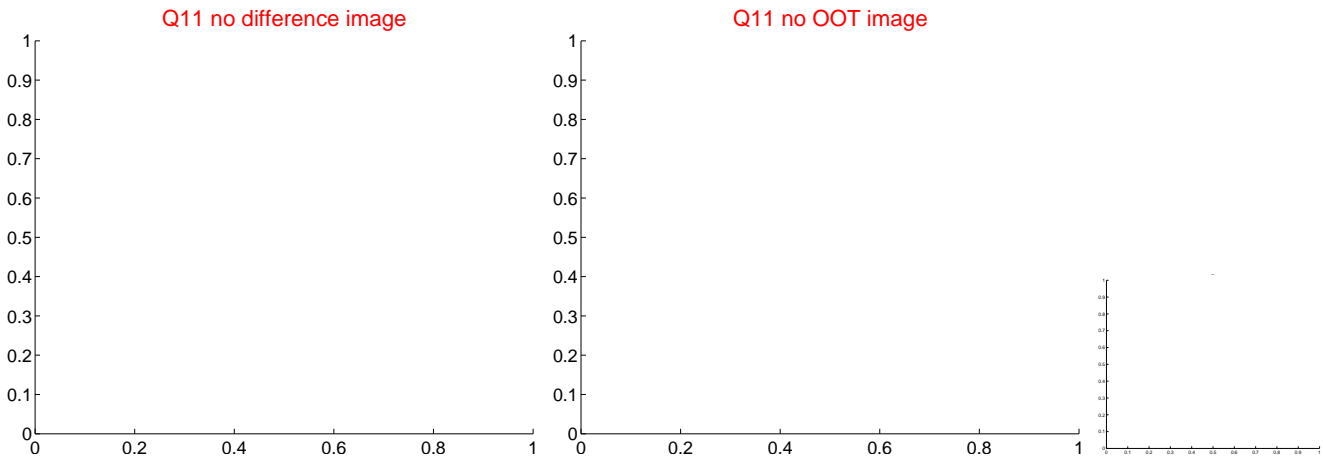
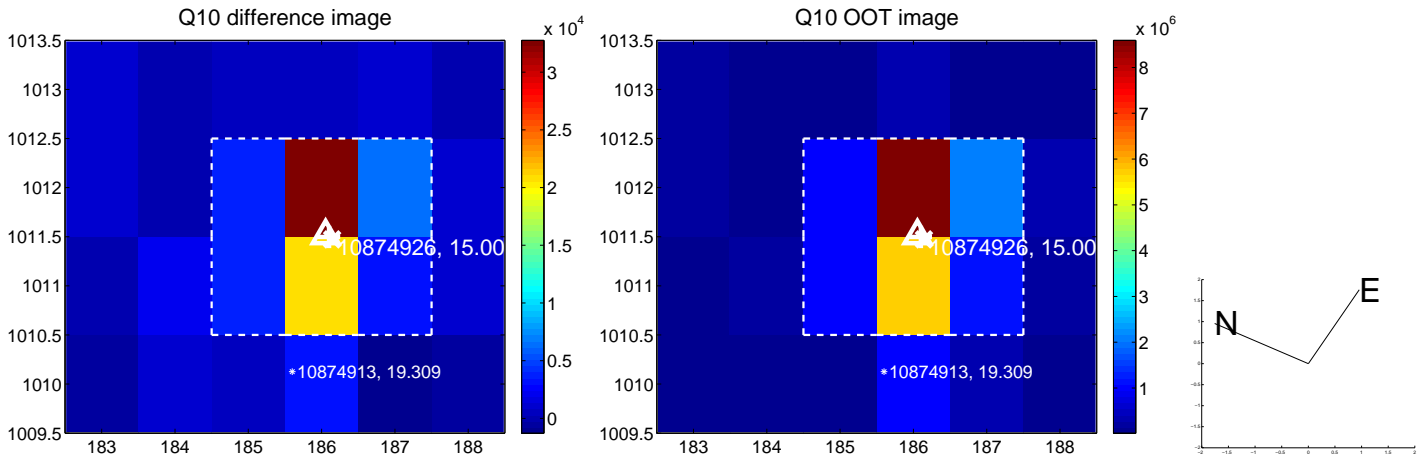
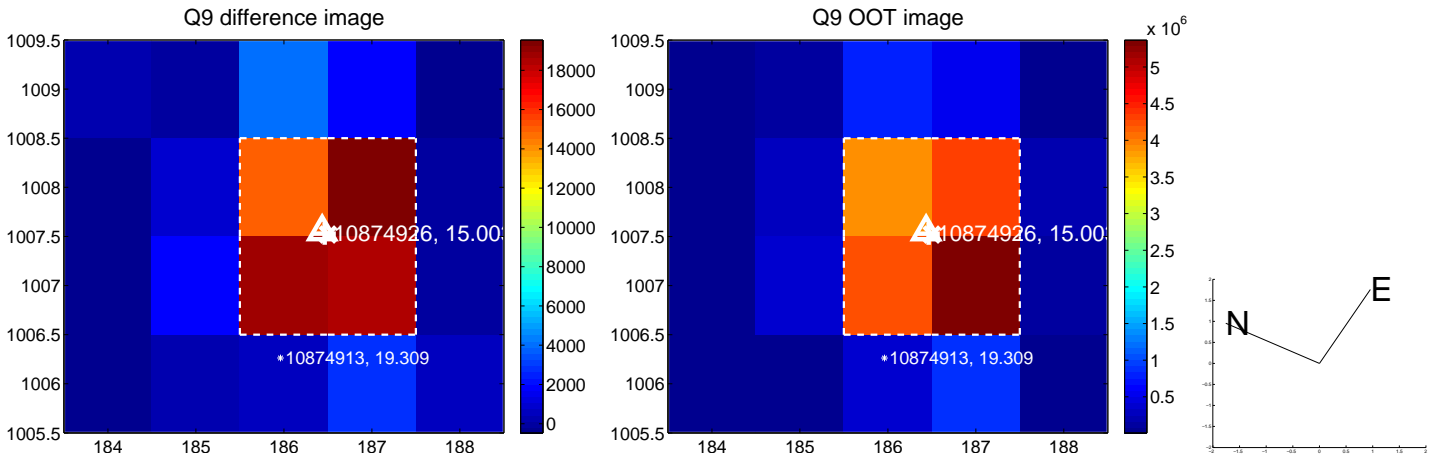
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



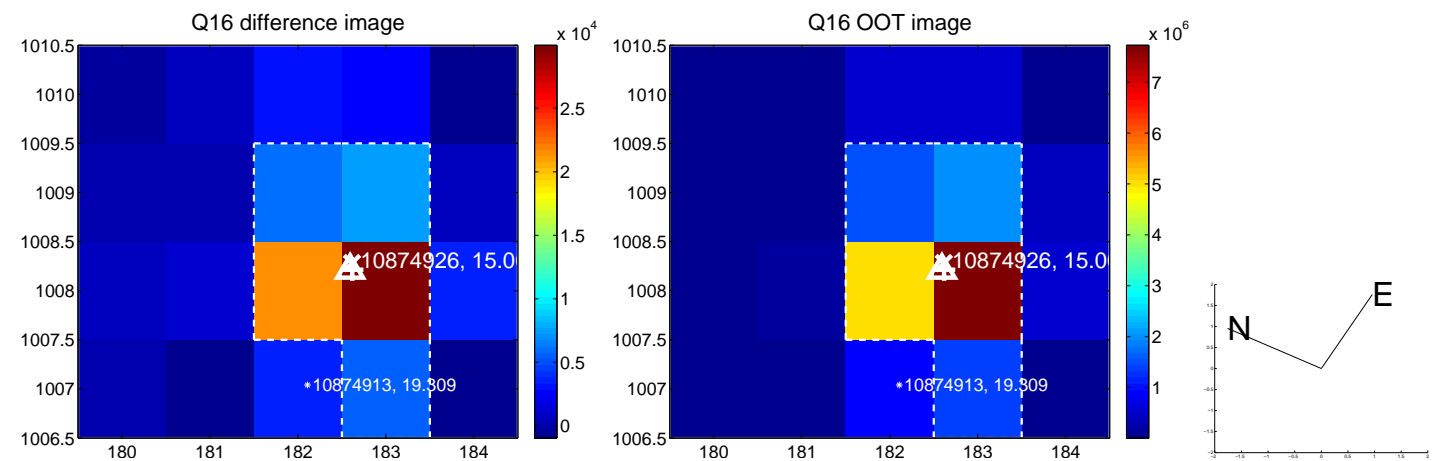
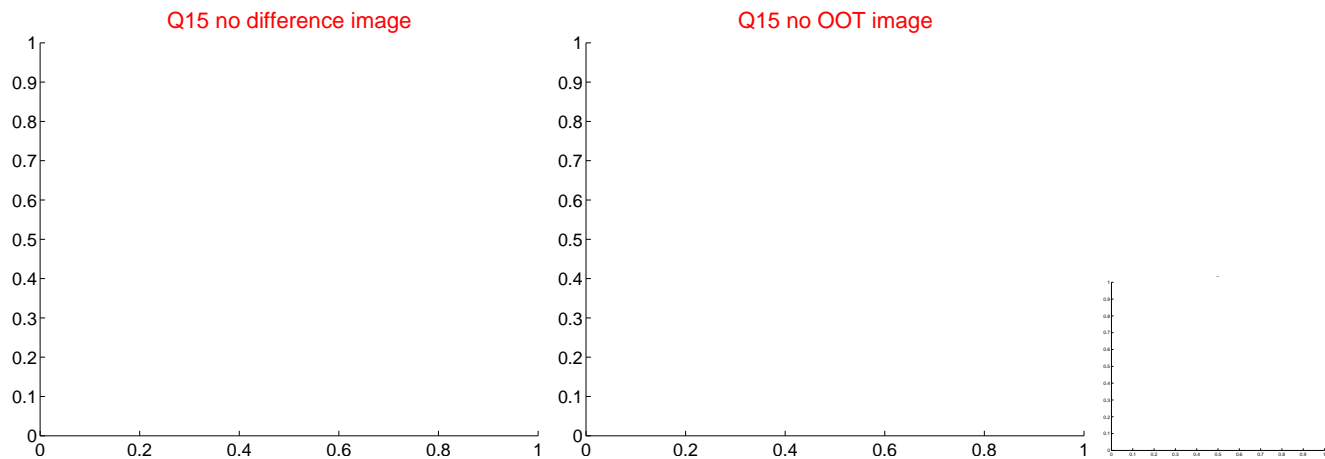
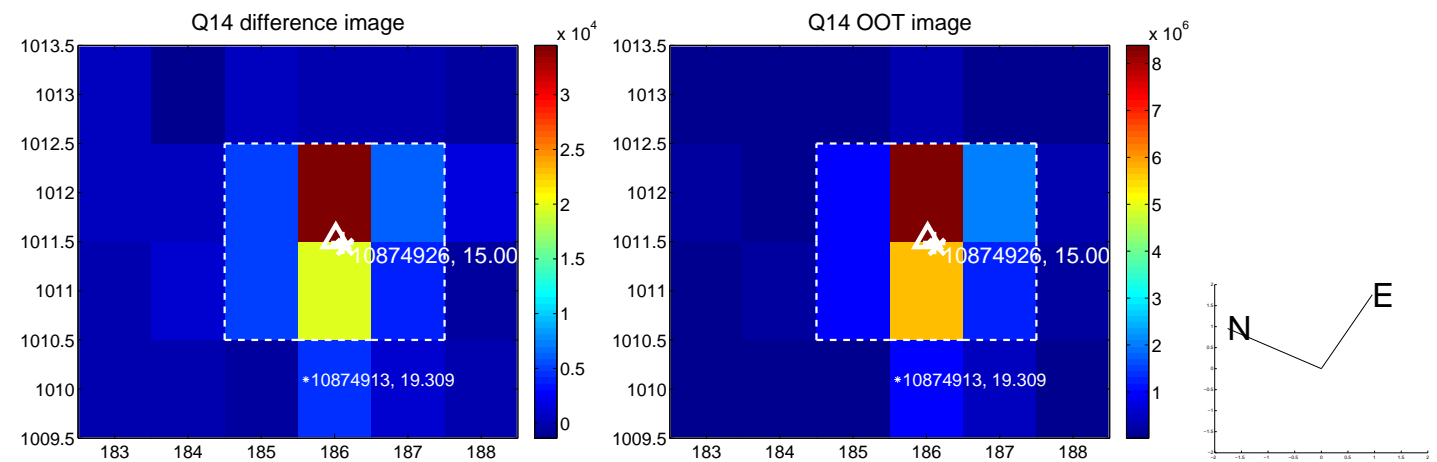
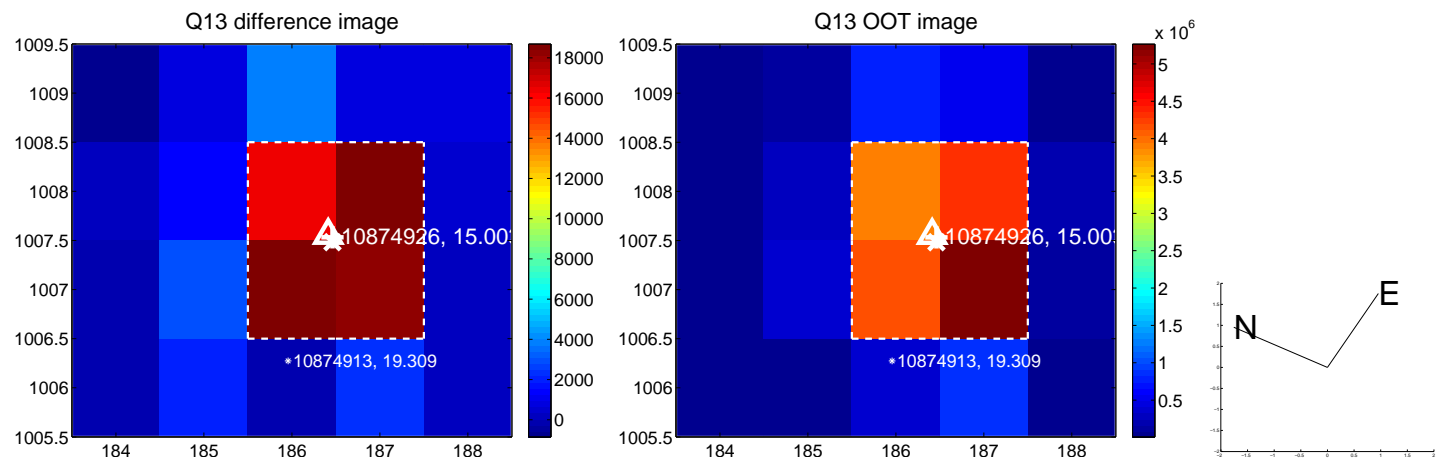
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



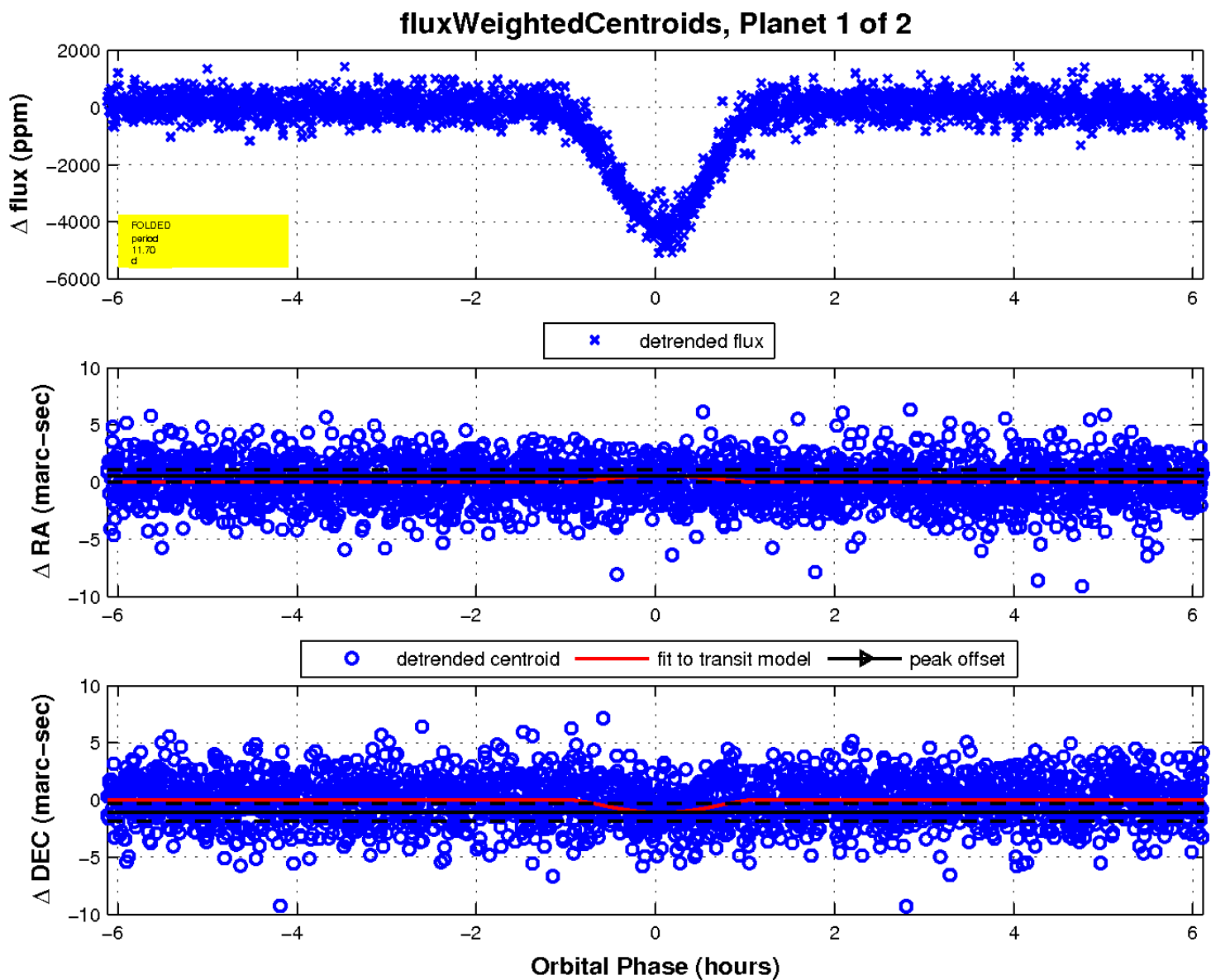
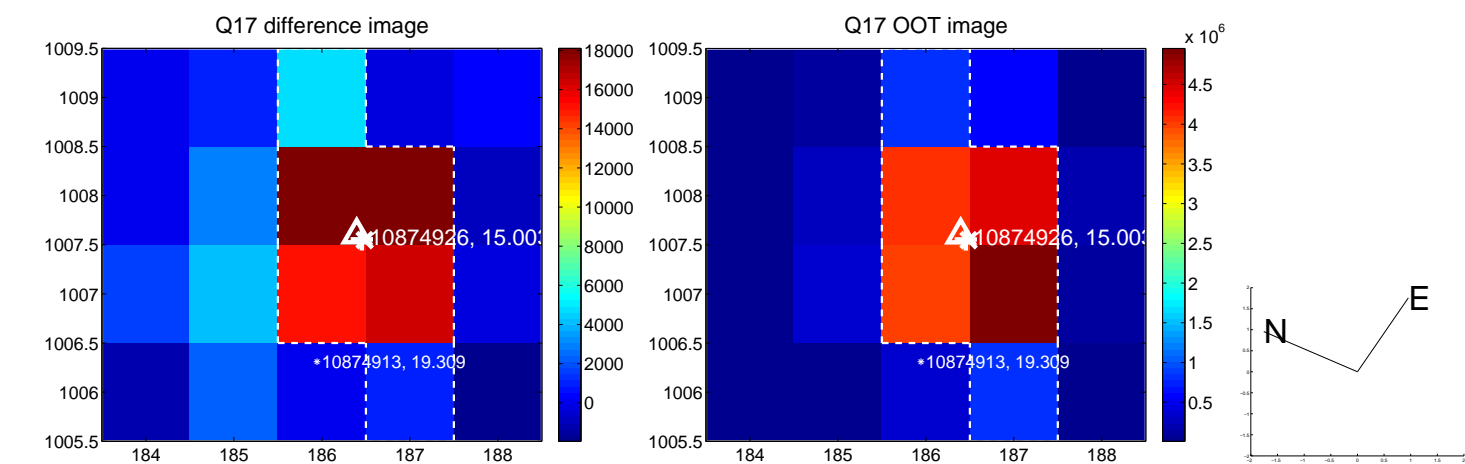
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

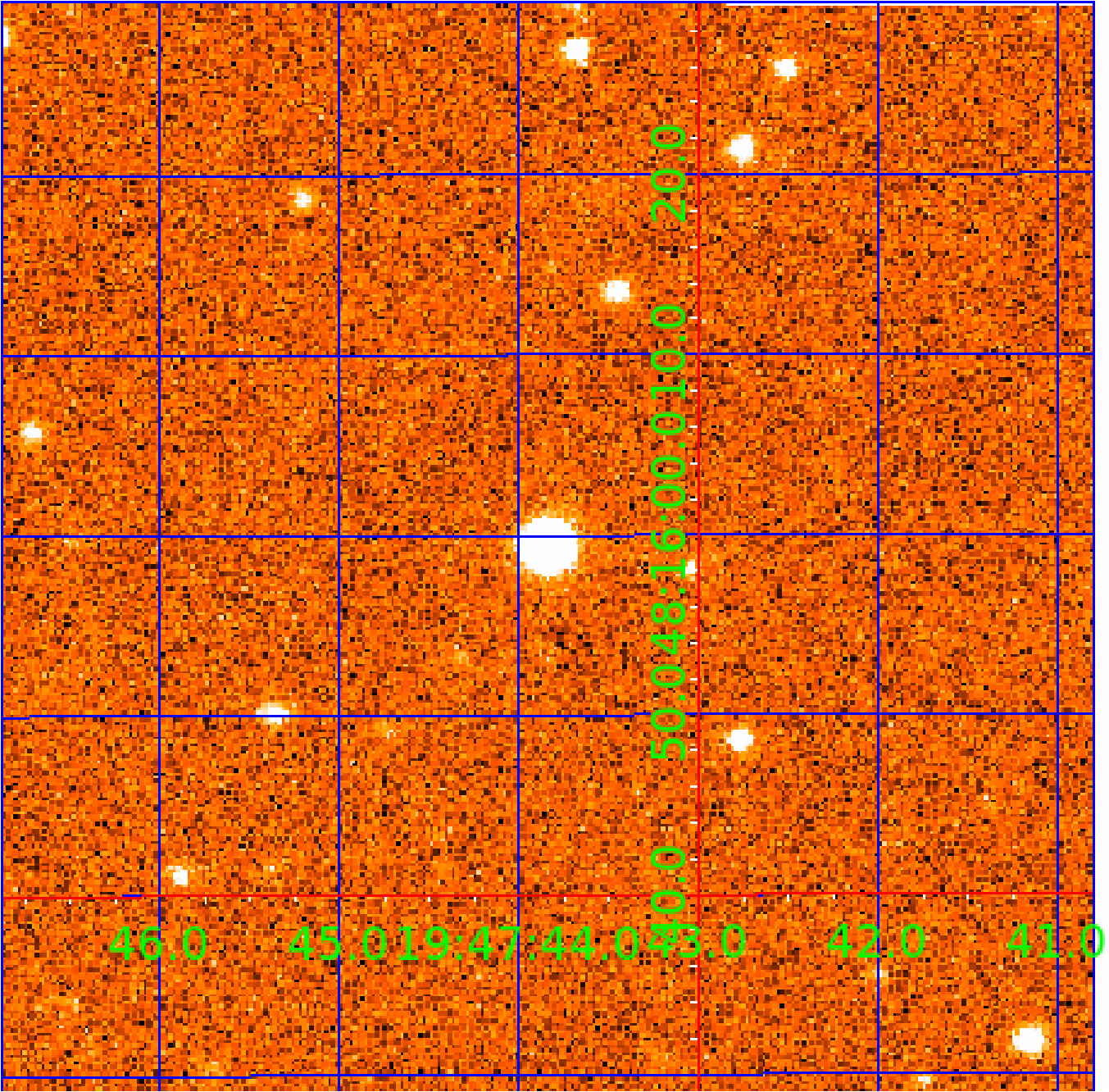


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010874926

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})
010874926-01	OBS	1293.01	11.703116	133.721382	4143.9	2.039	135.1	129.7	0.96	6014	10.51	102.66
010874926-02	OBS	No	11.703141	141.113657	2024.8	3.436	77.2	77.8	0.96	6014	7.85	102.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010874926-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010874926-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

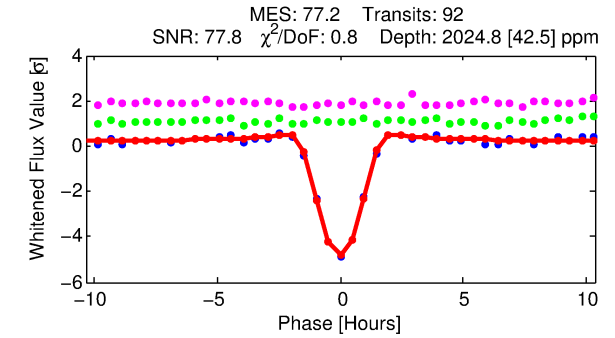
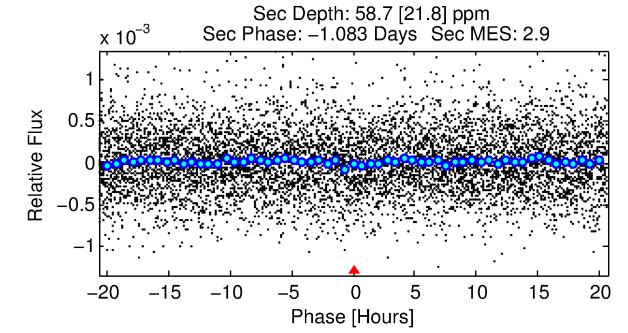
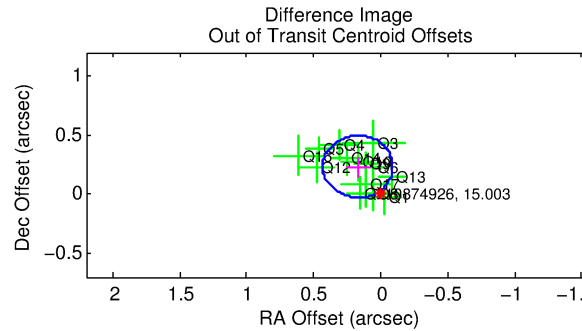
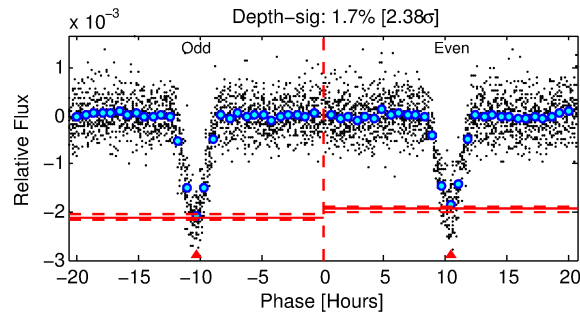
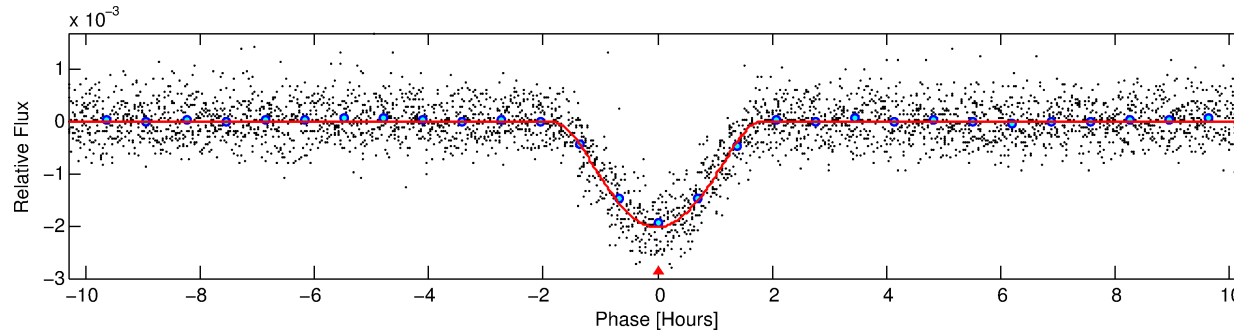
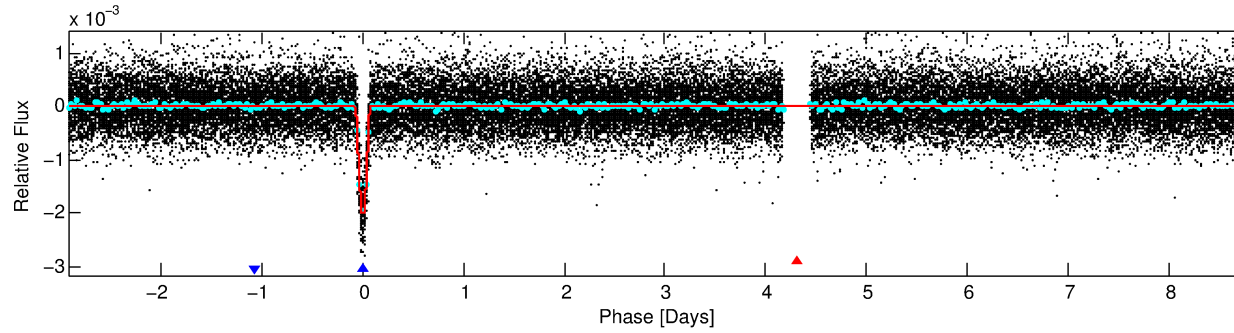
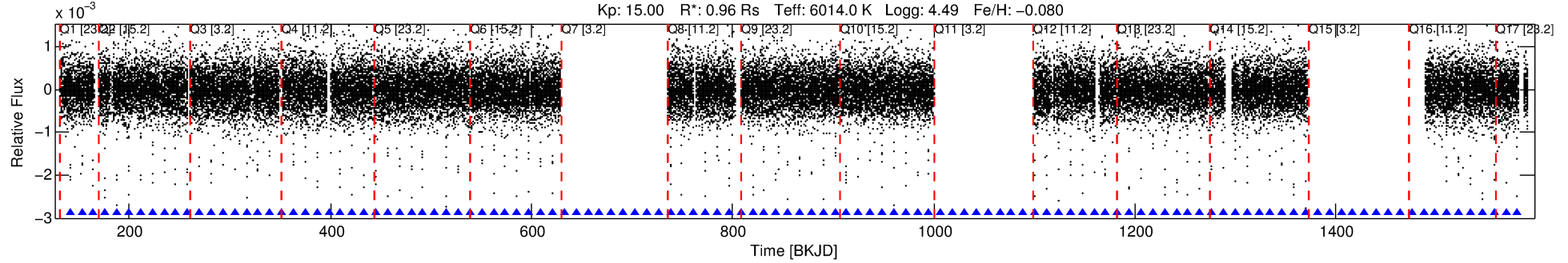
Ephemeris Match Information For 010874926-02

No Significant Match Found

DV One-Page Summary

KIC: 10874926 Candidate: 2 of 2 Period: 11.703 d
KOI: K01293 Corr: No Ephemeris Match

Kp: 15.00 R*: 0.96 Rs Teff: 6014.0 K Logg: 4.49 Fe/H: -0.080



DV Fit Results:

Period = 11.70314 [0.00001] d
Epoch = 141.1137 [0.0009] BKJD
Rp/R* = 0.0751 [0.0356]
a/R* = 10.59 [1.15]
b = 1.00 [0.05]
Seff = 102.66 [41.87]
Teq = 812 [83] K
Rp = 7.85 [4.46] Re
a = 0.1024 [0.0269] AU
Ag = 5.48 [5.95] [0.75σ]
Teffp = 1920 [493] K [2.22σ]

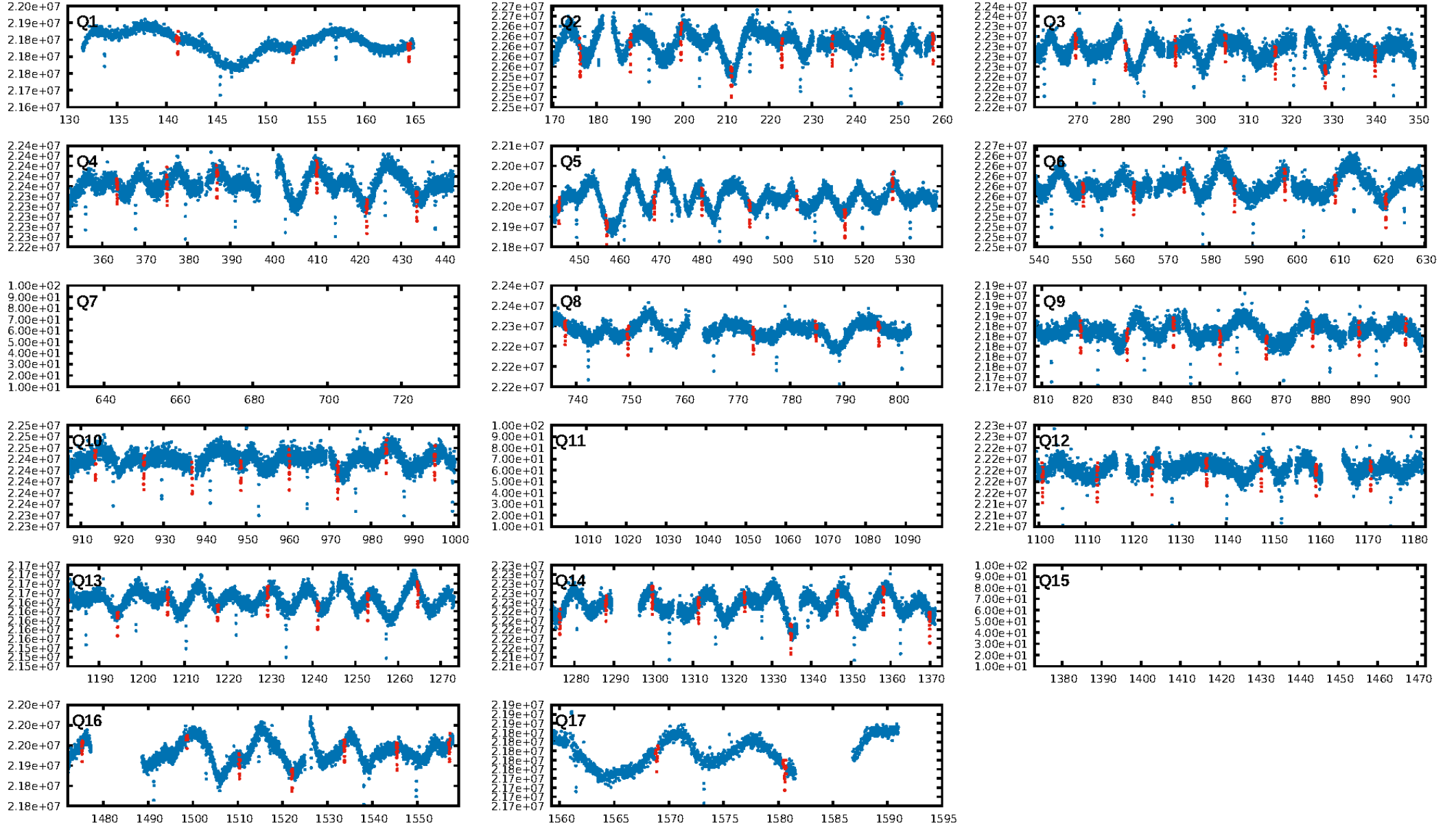
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [87/87]
GhostDiagnostic-chr: 5.021
Centroid-sig: 1.7%
Centroid-so: 0.294 arcsec [1.82σ]
OotOffset-rm: 0.290 arcsec [3.32σ]
KicOffset-rm: 0.387 arcsec [4.73σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

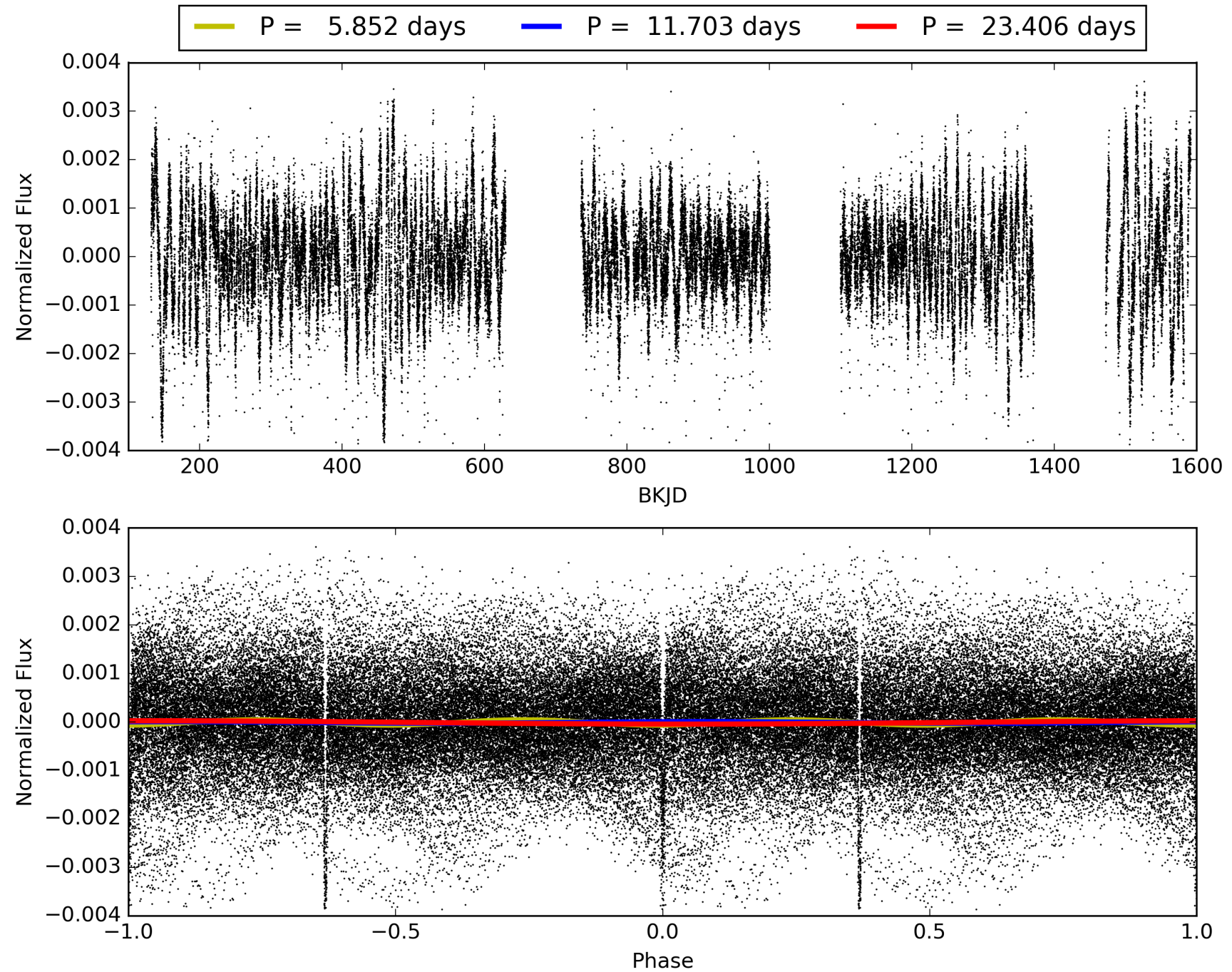
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:00:23 Z

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

TCE 010874926-02, PDC Light Curves

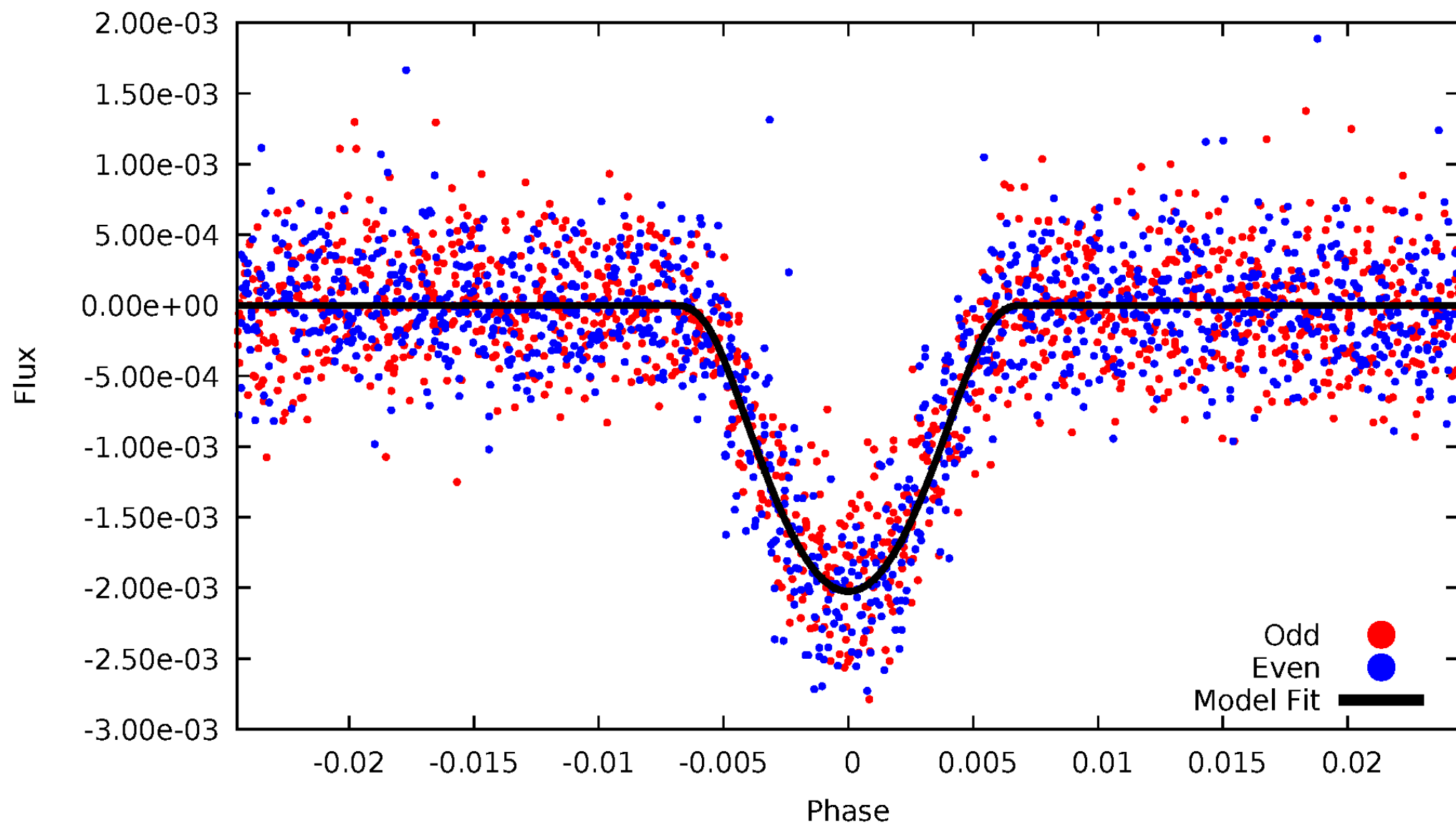


TCE 010874926-02



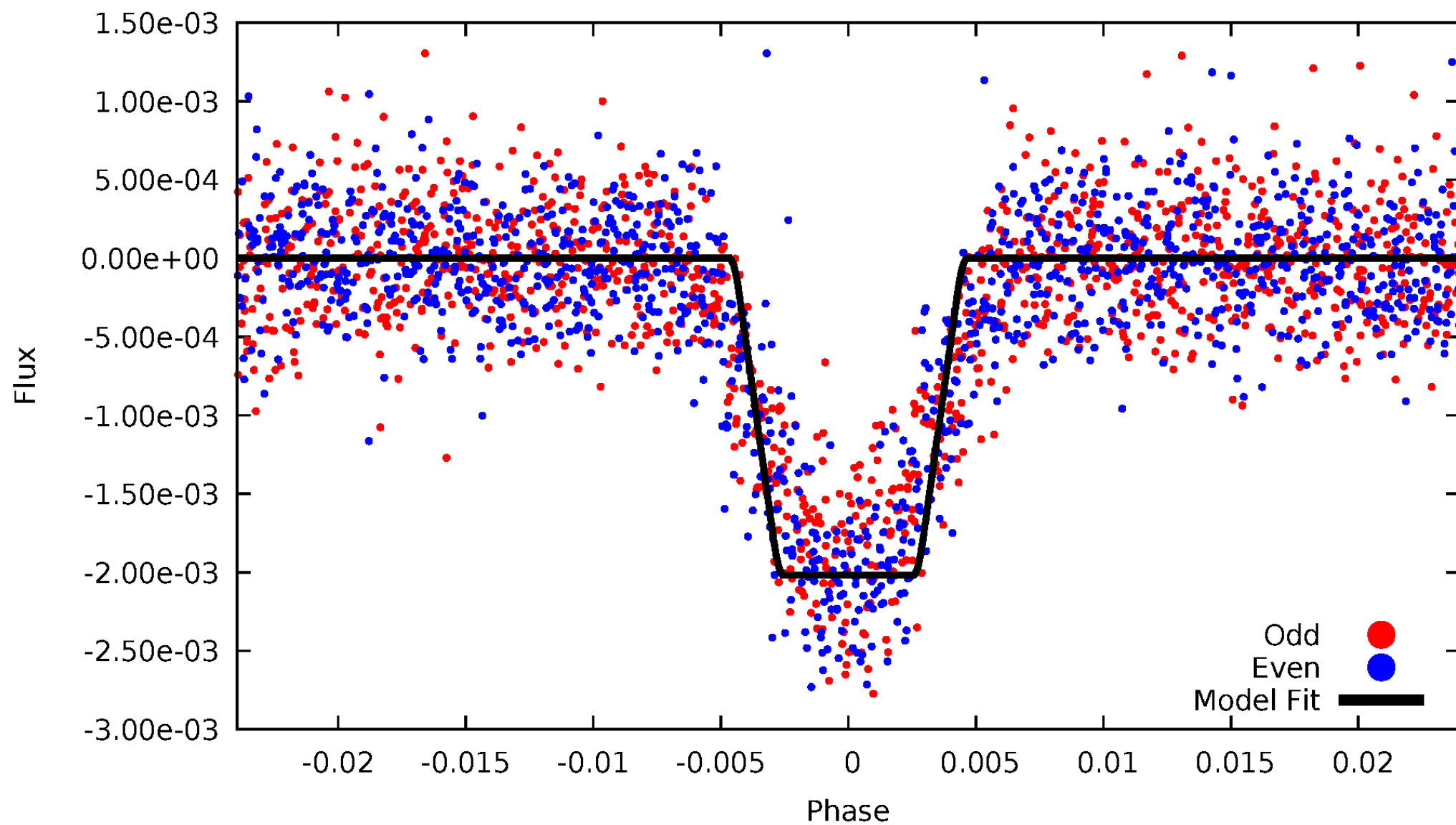
DV Odd/Even

TCE 010874926-02



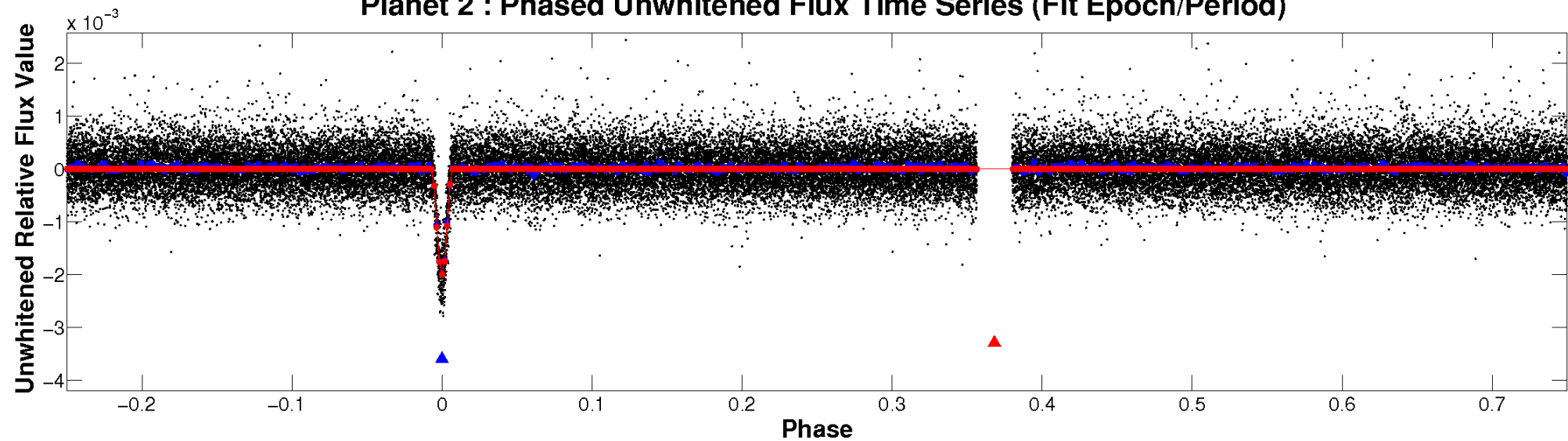
ALT Odd/Even

TCE 010874926-02

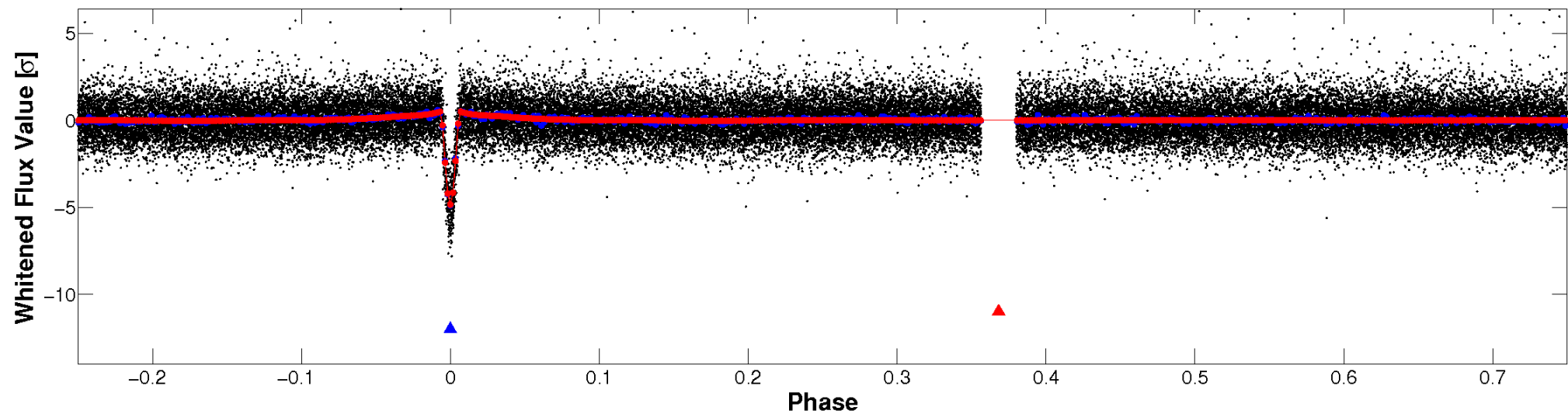


Non-Whitened Vs. Whitened Light Curve

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

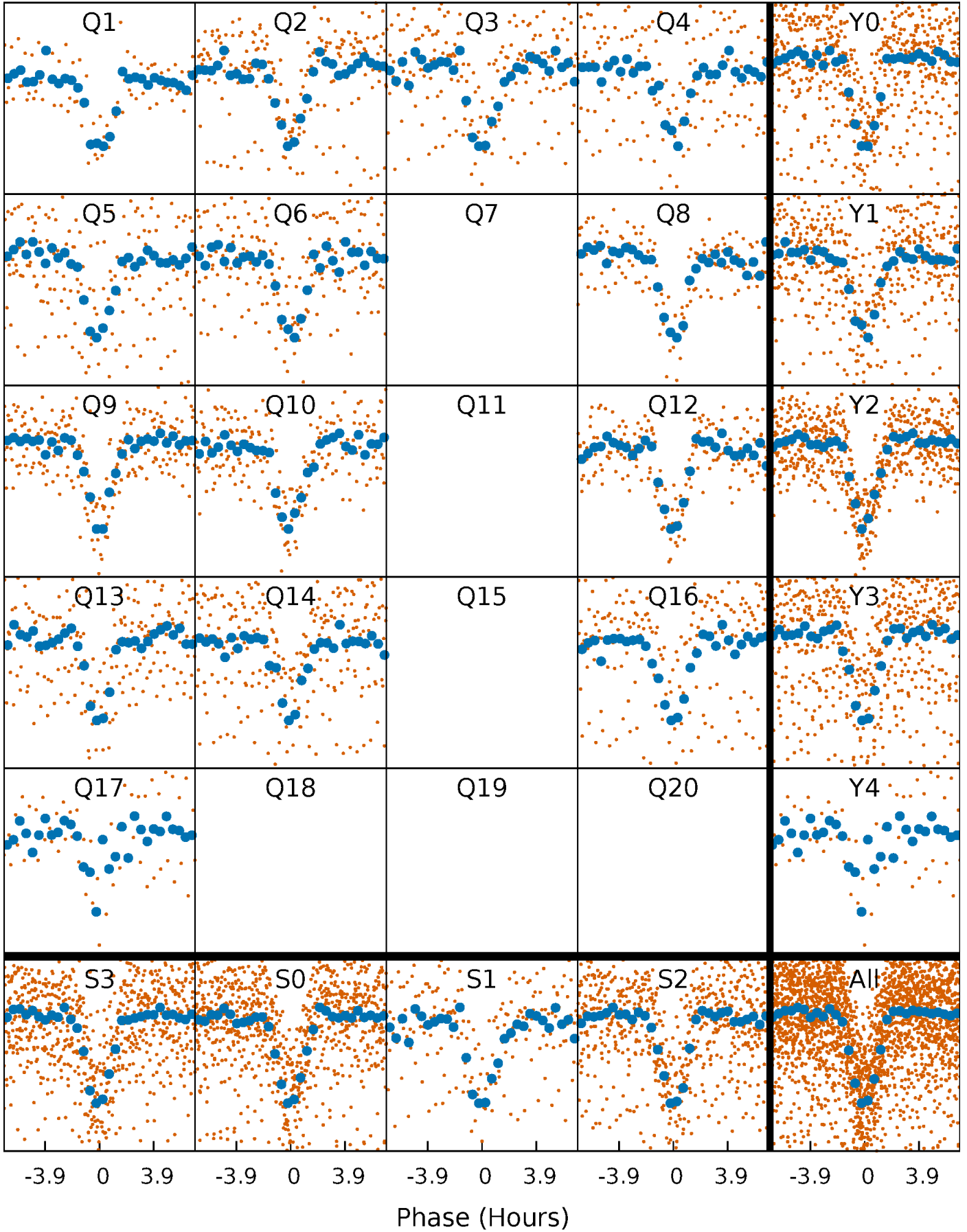


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



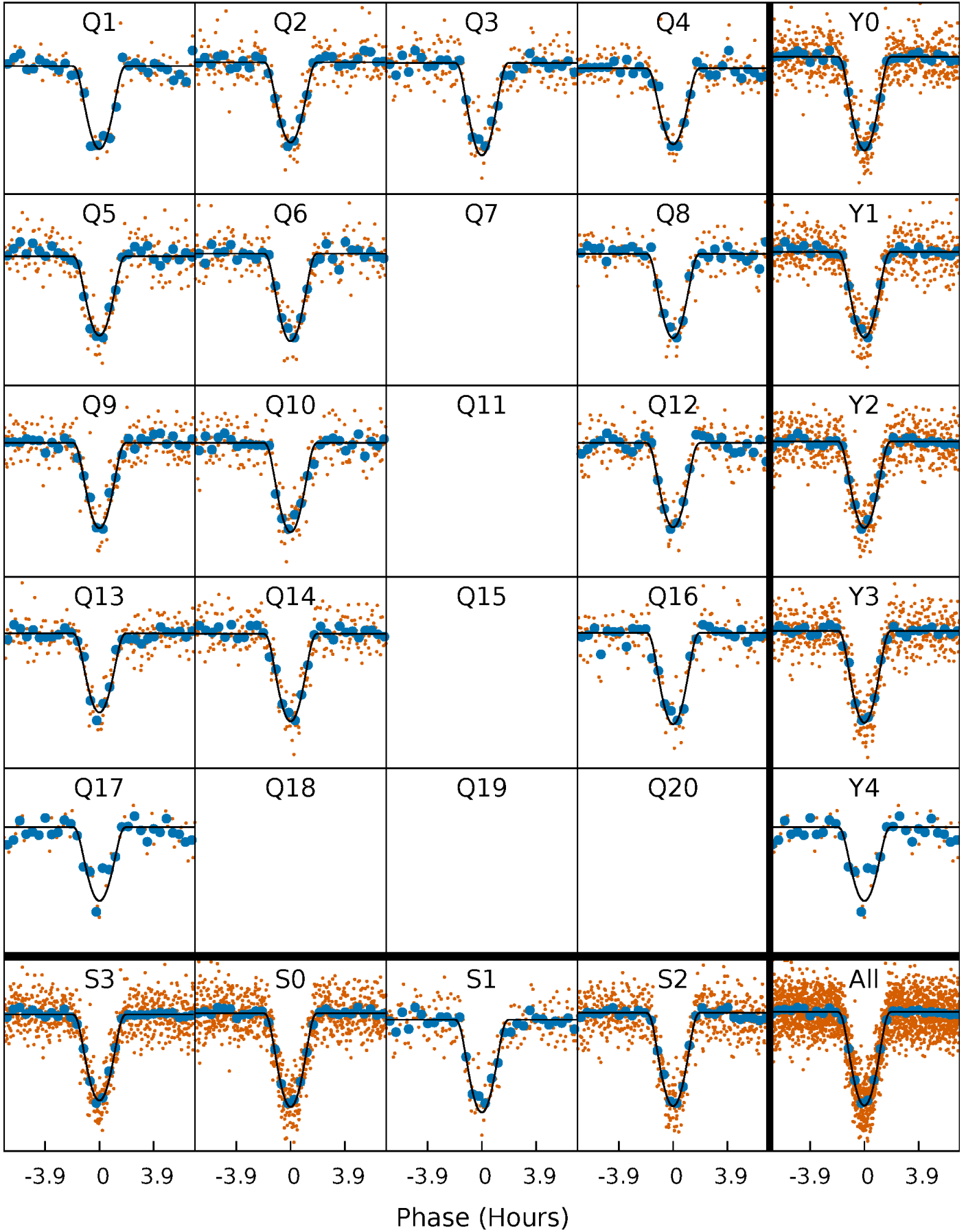
PDC Quarter-Phased Transit Curves

TCE 010874926-02 P= 11.703141 Days $T_0=141.113657$ (BKJD)



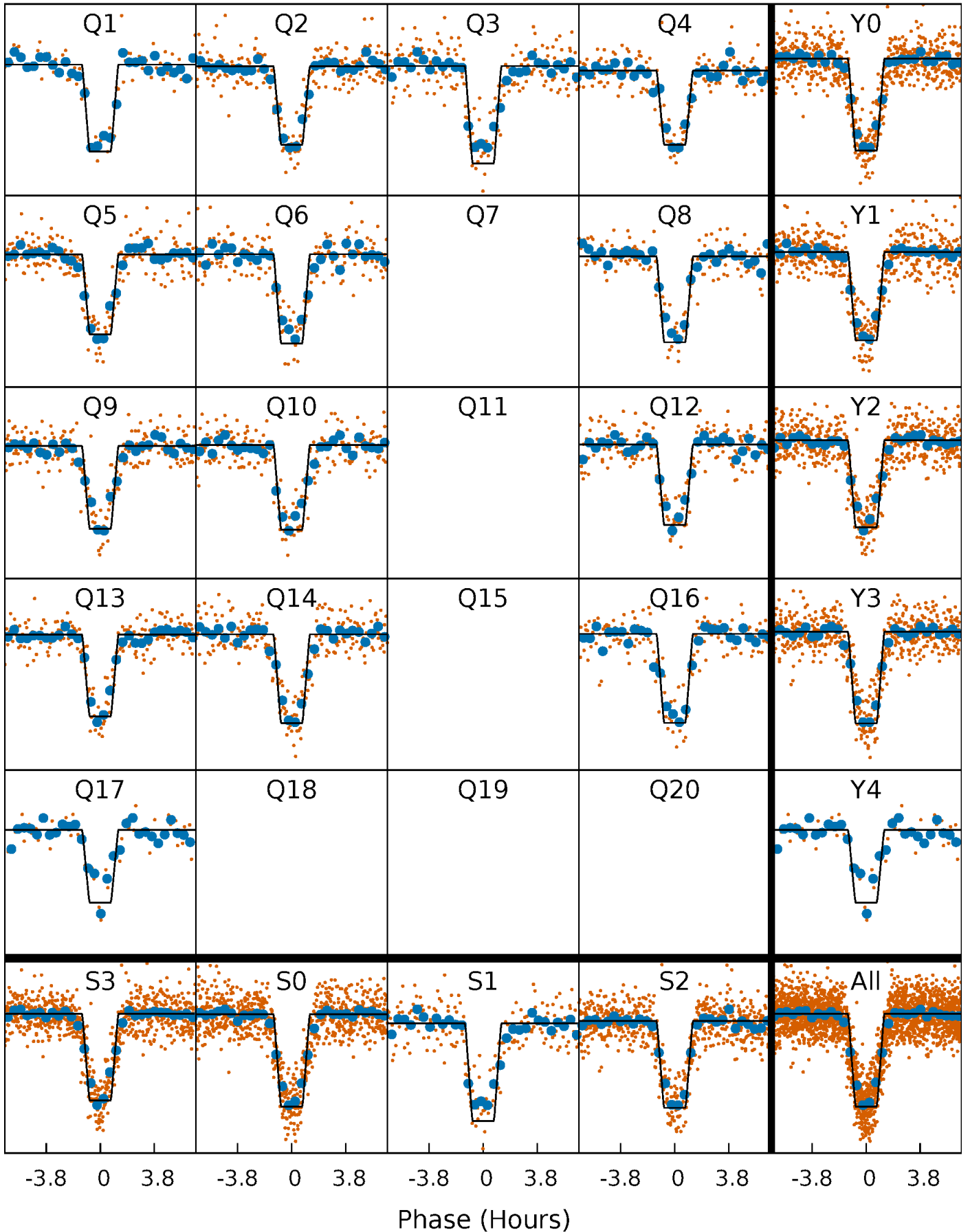
DV Quarter-Phased Transit Curves

TCE 010874926-02 P= 11.703141 Days $T_0=141.113657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

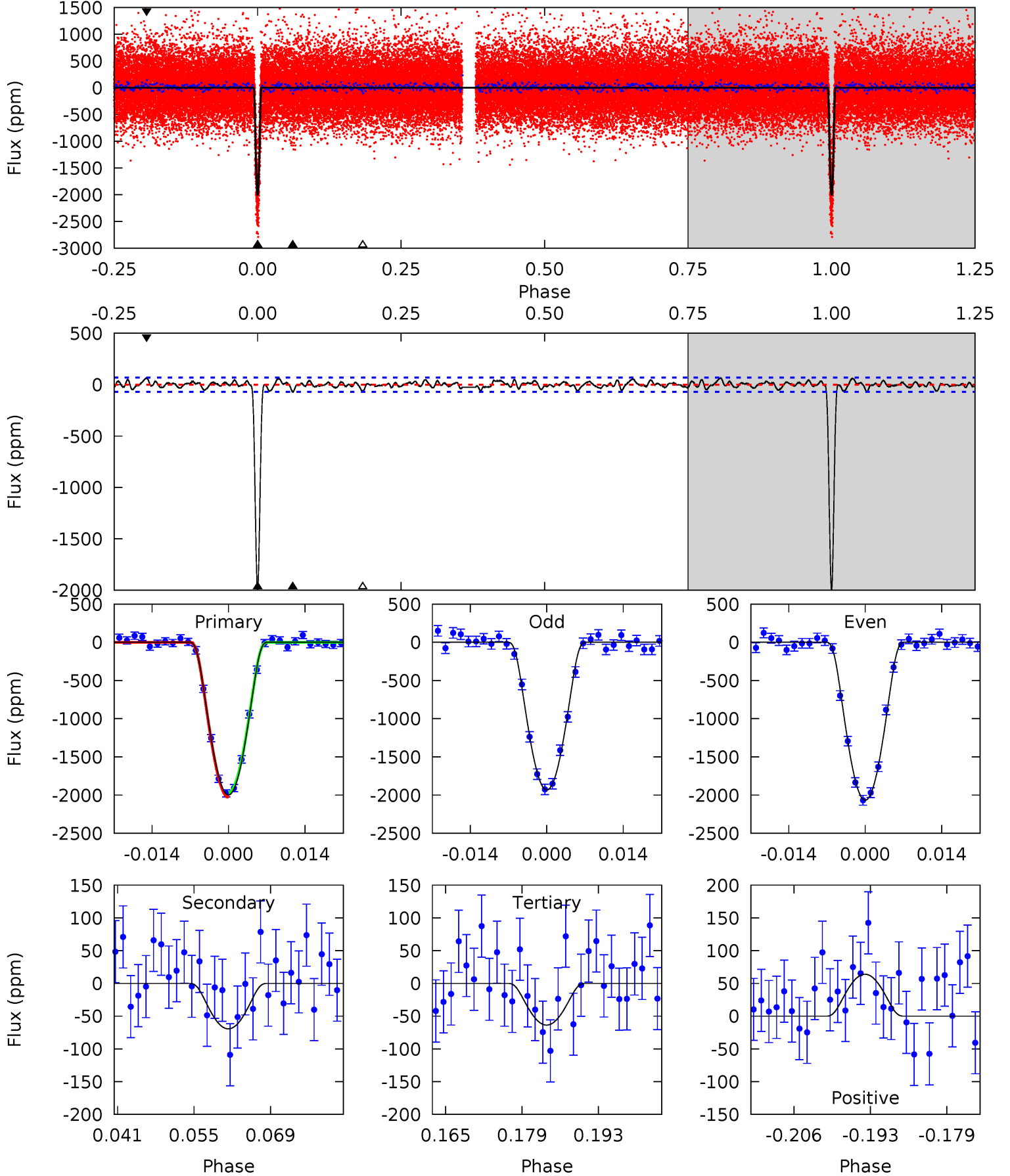
TCE 010874926-02 P= 11.703115 Days $T_0=141.114811$ (BKJD)



DV Model-Shift Uniqueness Test

010874926-02, $P = 11.703141$ Days, $E = 129.410516$ Days

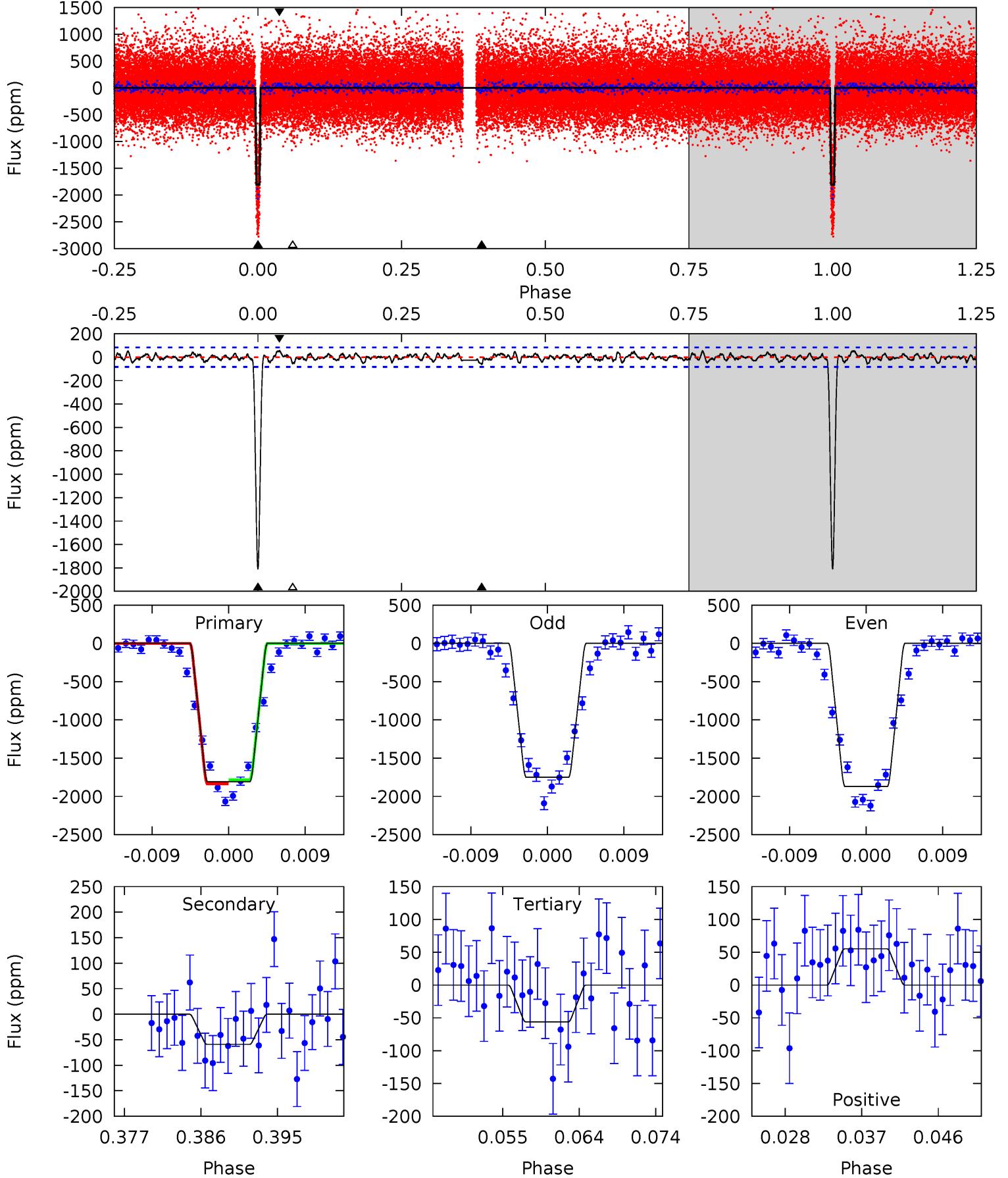
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
143.9	4.99	4.58	4.60	4.96	2.46	1.68	139.3	139.3	0.41	0.39	4.81	0.98	0.03	2.10



Alt Model-Shift Uniqueness Test

010874926-02, $P = 11.703115$ Days, $E = 129.411696$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
109.5	3.58	3.41	3.34	5.04	2.60	1.17	106.1	106.1	0.18	0.24	3.63	0.99	0.03	1.58



Stellar Parameters For KIC 010874926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6014^{+162}_{-217}	$4.494^{+0.052}_{-0.208}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.300}_{-0.100}$	$1.043^{+0.129}_{-0.142}$	$1.673^{+0.361}_{-0.912}$
	+3%/-4%	+1%/-5%	+312%/-438%	+31%/-10%	+12%/-14%	+22%/-55%
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 010874926-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-69 ± 14	$8.39^{+4.05}_{-3.92}$	1155^{+81}_{-58}	2733^{+522}_{-300}	$5.582^{+13.883}_{-3.193}$
Alt.	-59 ± 17	$5.45^{+3.65}_{-3.36}$	1157^{+83}_{-63}	3015^{+1052}_{-448}	12^{+62}_{-8}

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 $A_{obs} \gg 1.0$

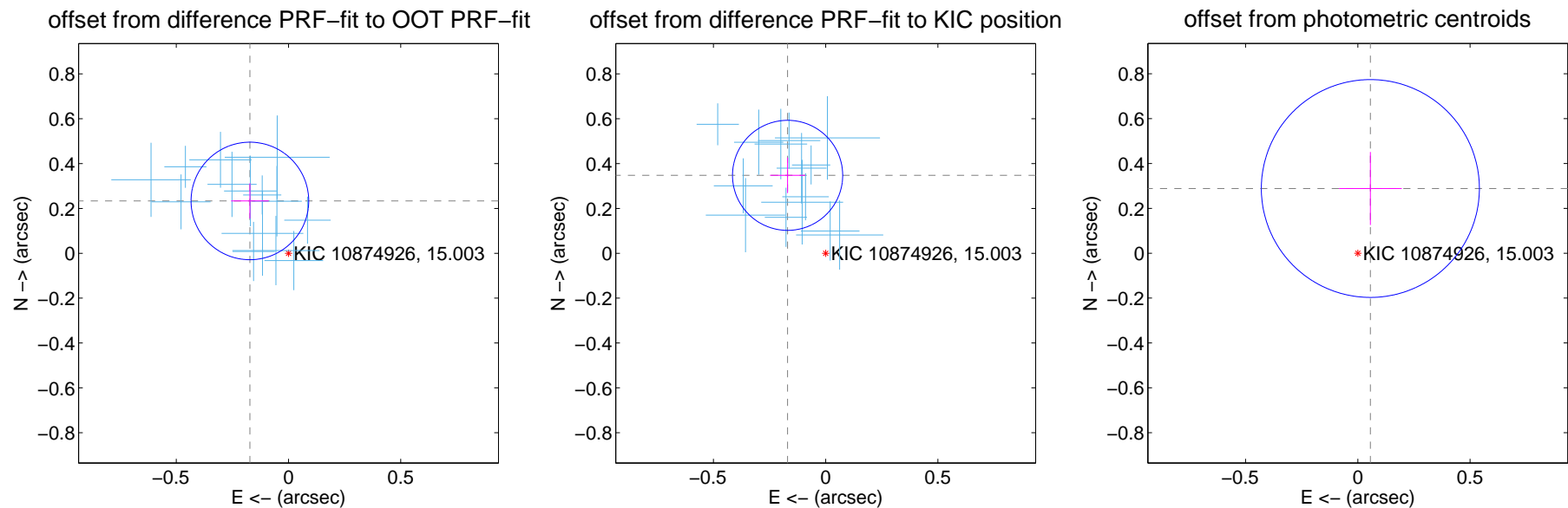
DV Centroid Data

Supplemental centroid analysis for 010874926-02. Kepler magnitude: 15.00. Transit SNR 77.79

There are 14 quarters with good PRF difference image offsets

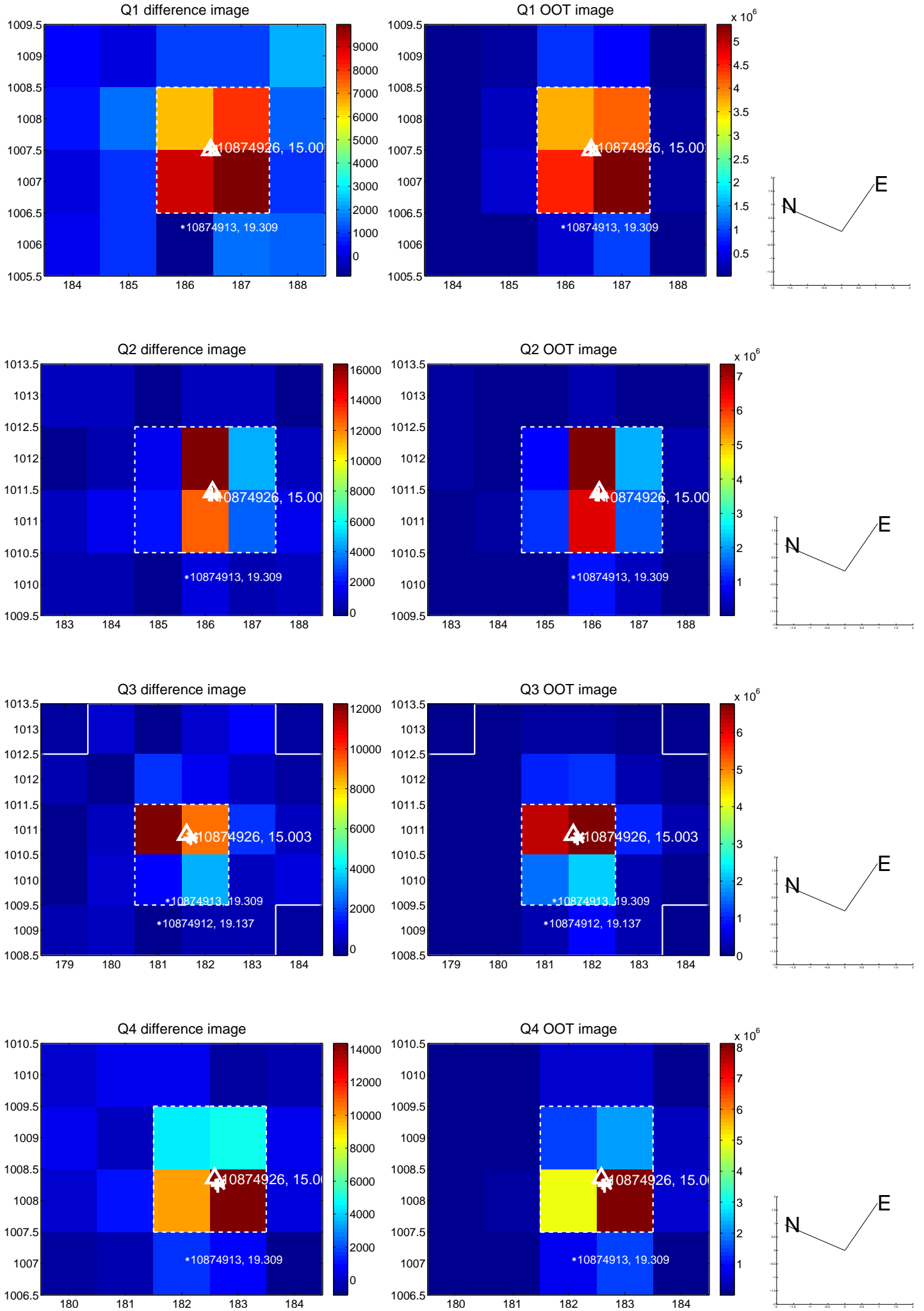
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.290 ± 0.087	3.32	0.172 ± 0.083	0.233 ± 0.079
PRF-fit source offset from KIC position	0.387 ± 0.082	4.73	0.170 ± 0.078	0.347 ± 0.079
photometric centroid source offset	0.29 ± 0.16	1.82	-0.06 ± 0.14	0.29 ± 0.16

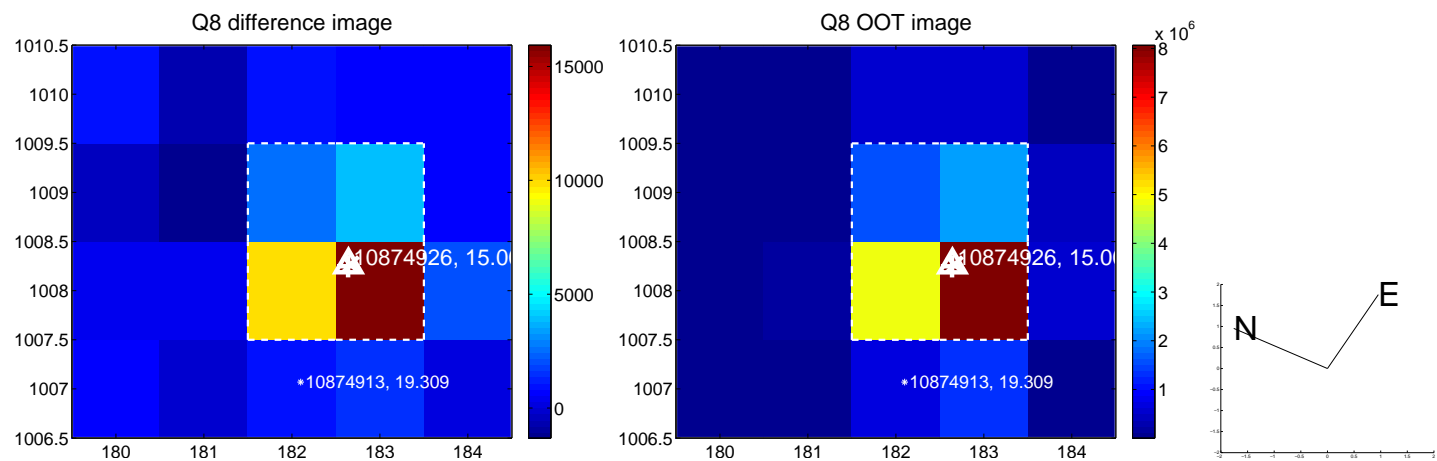
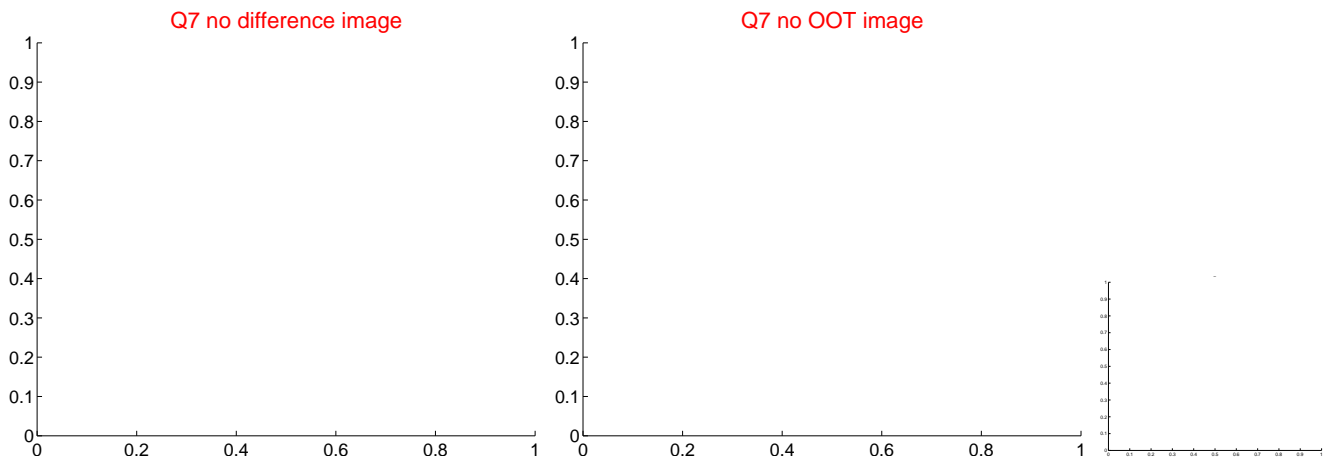
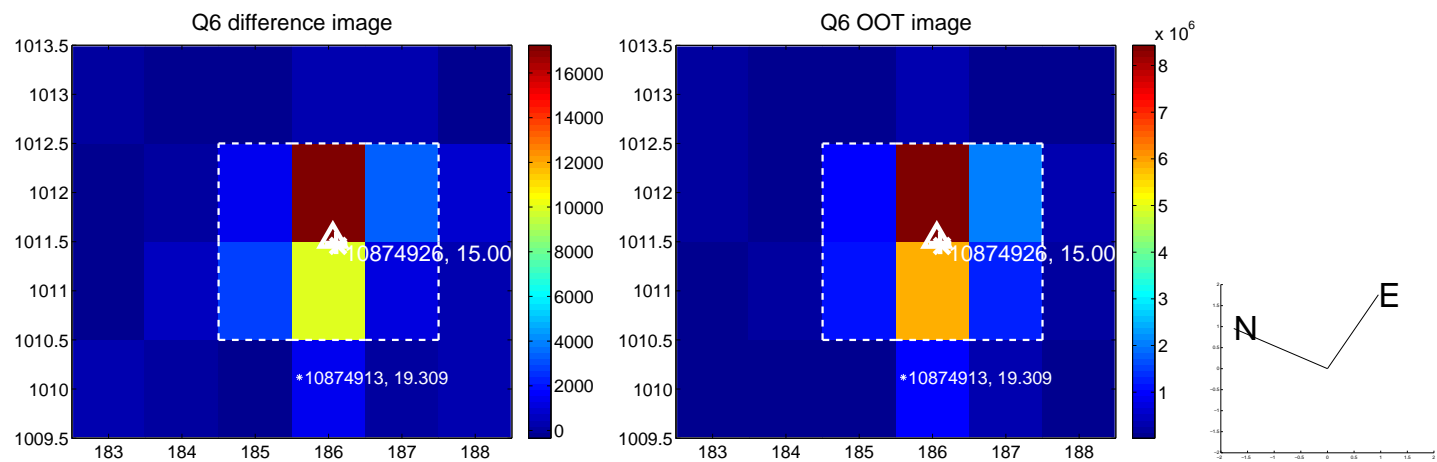
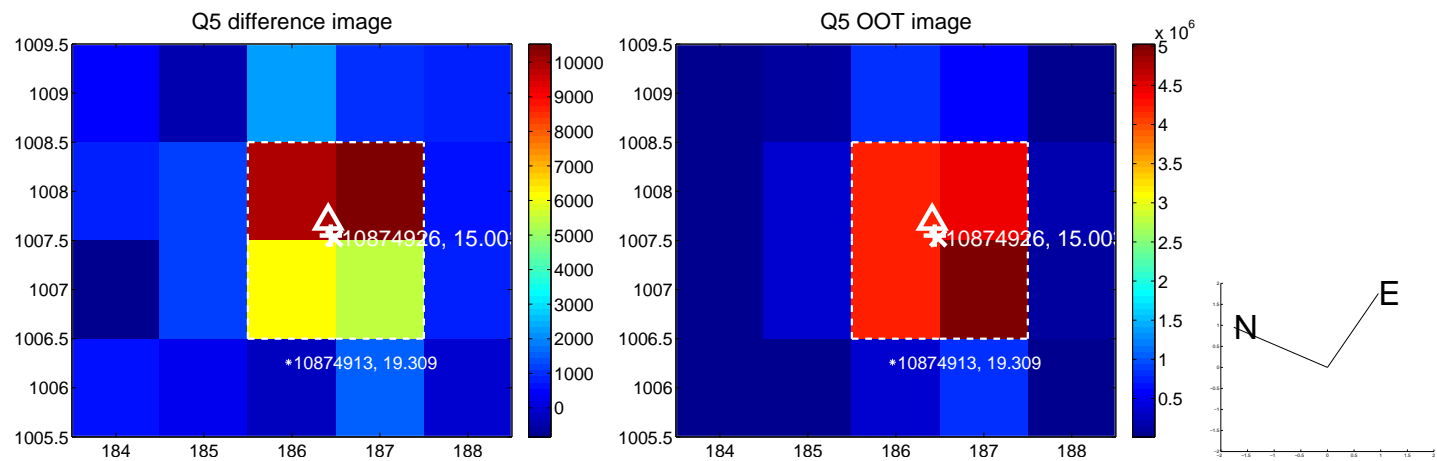


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

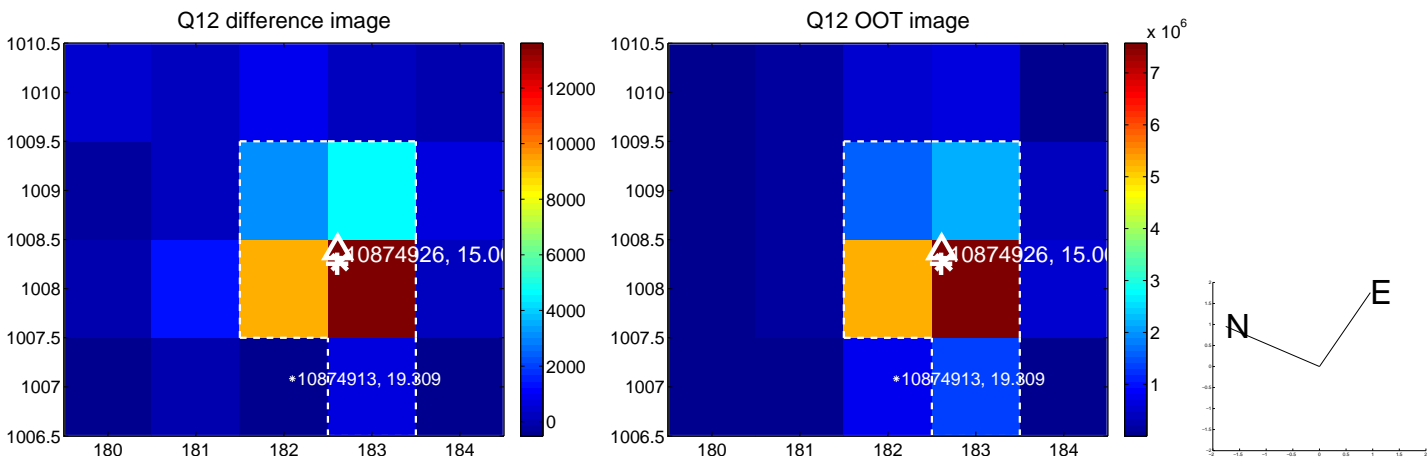
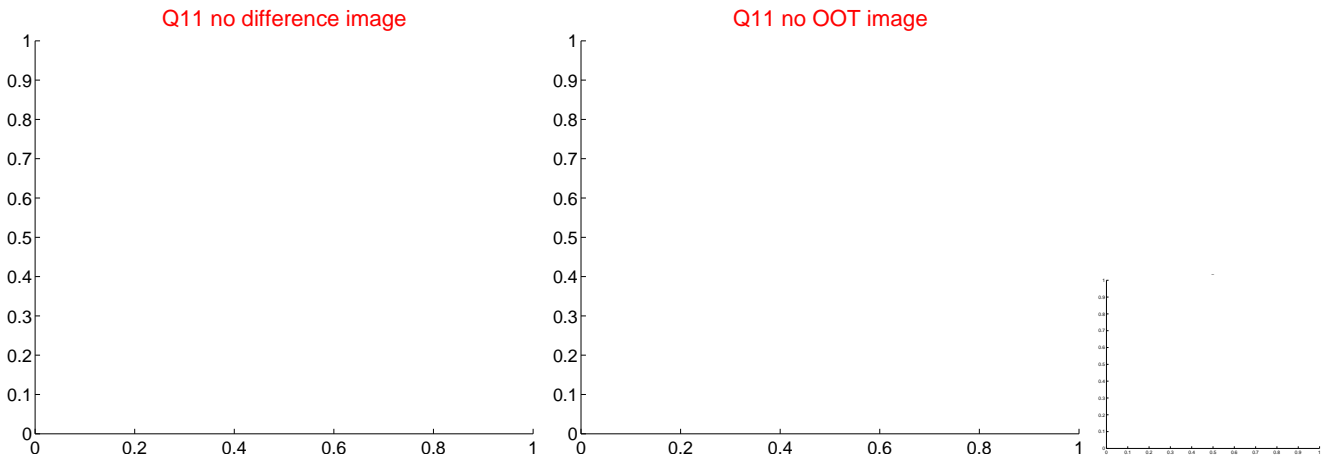
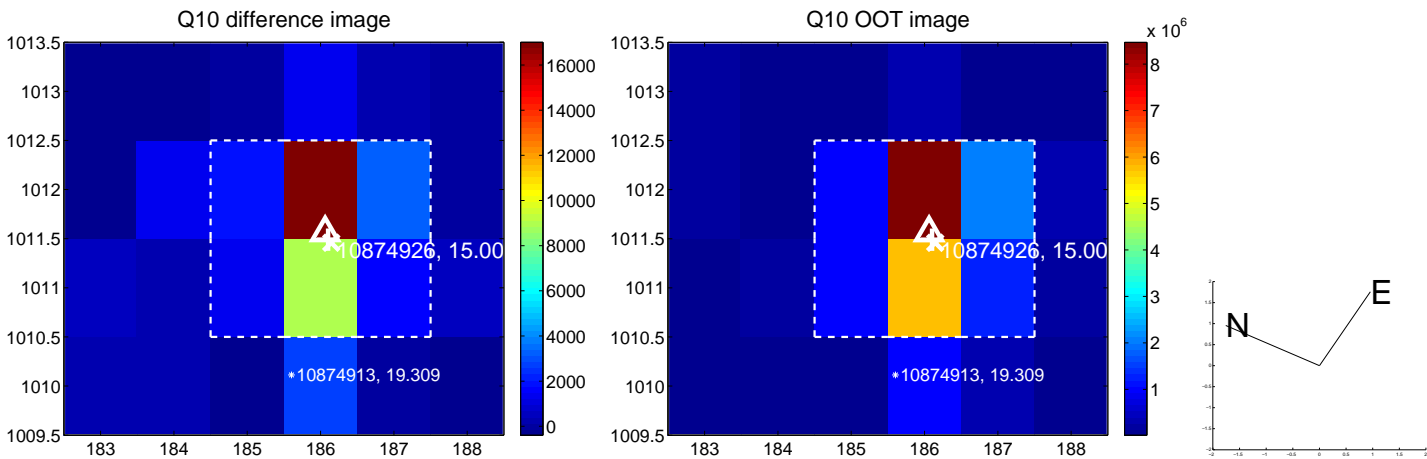
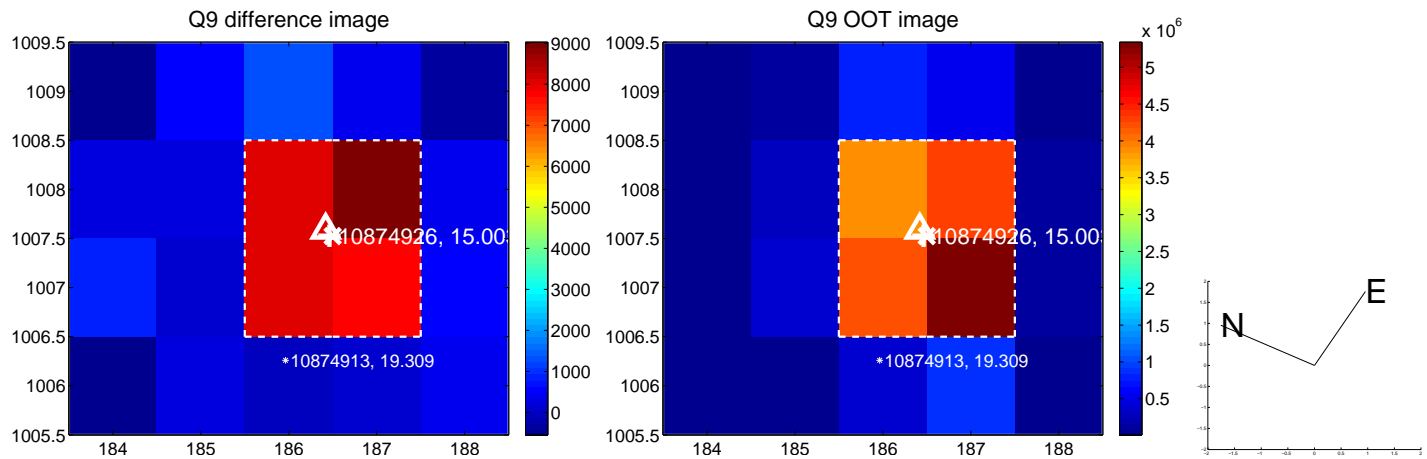
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



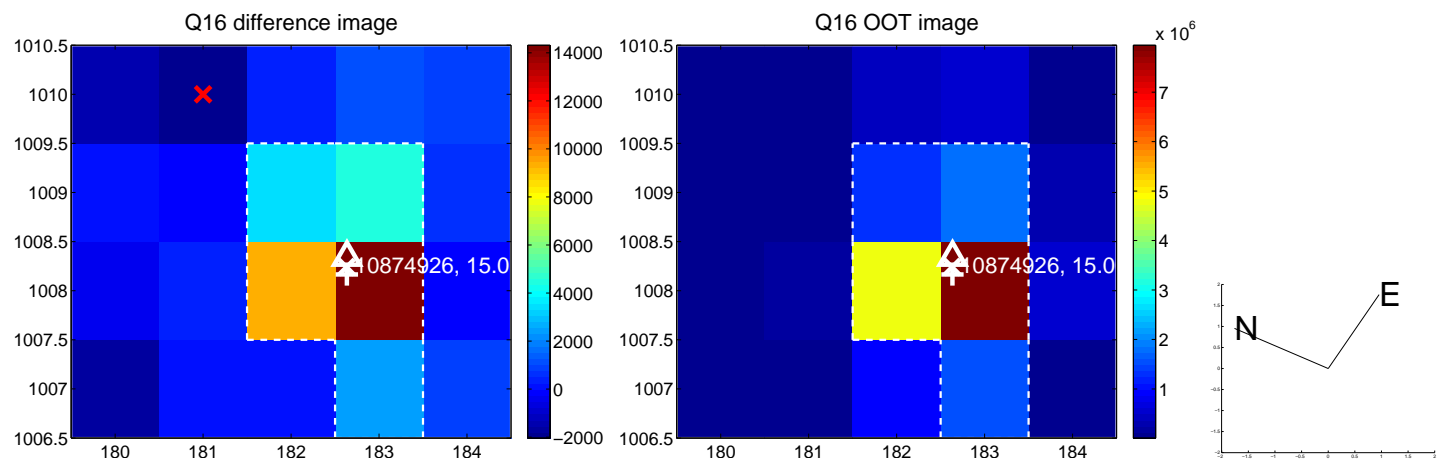
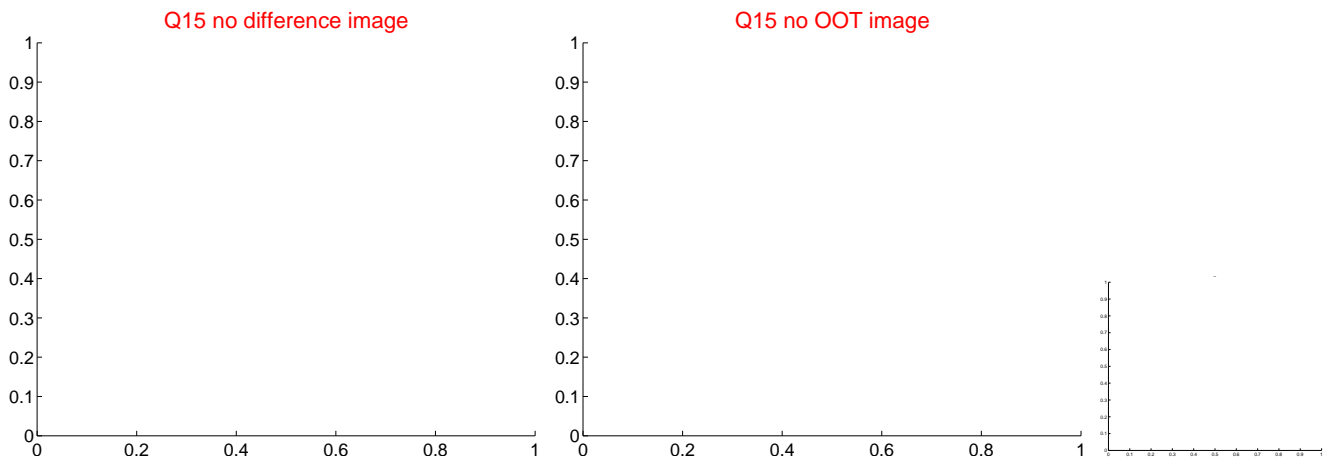
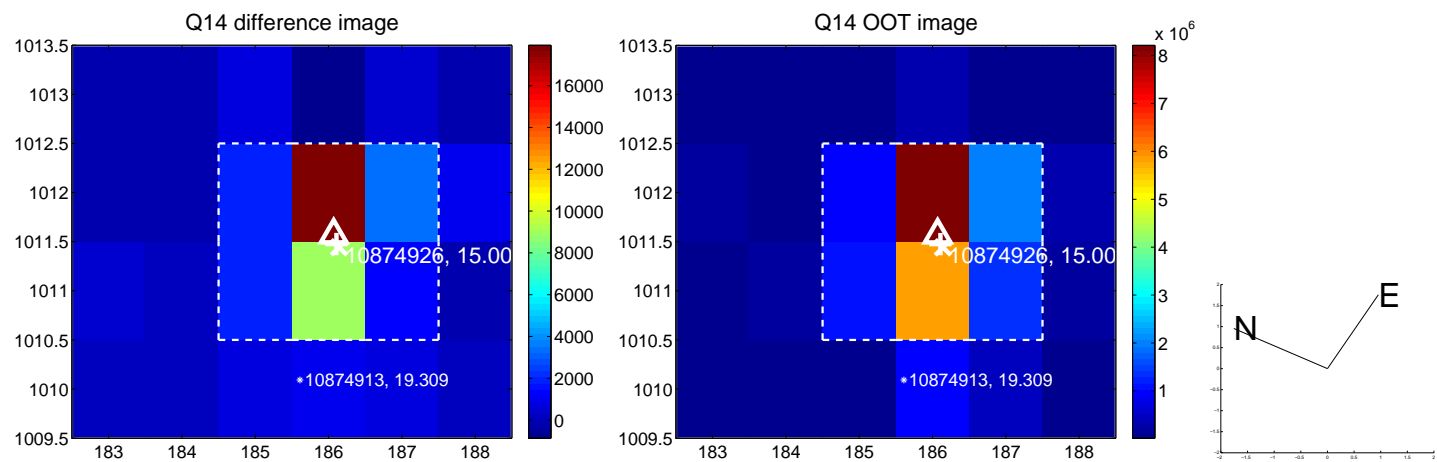
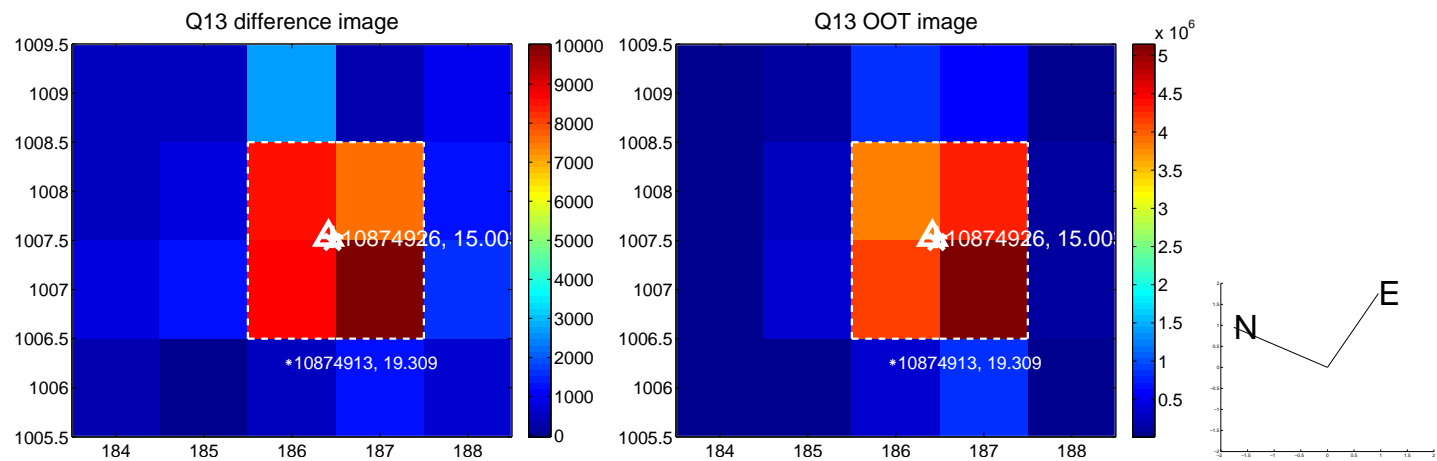
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



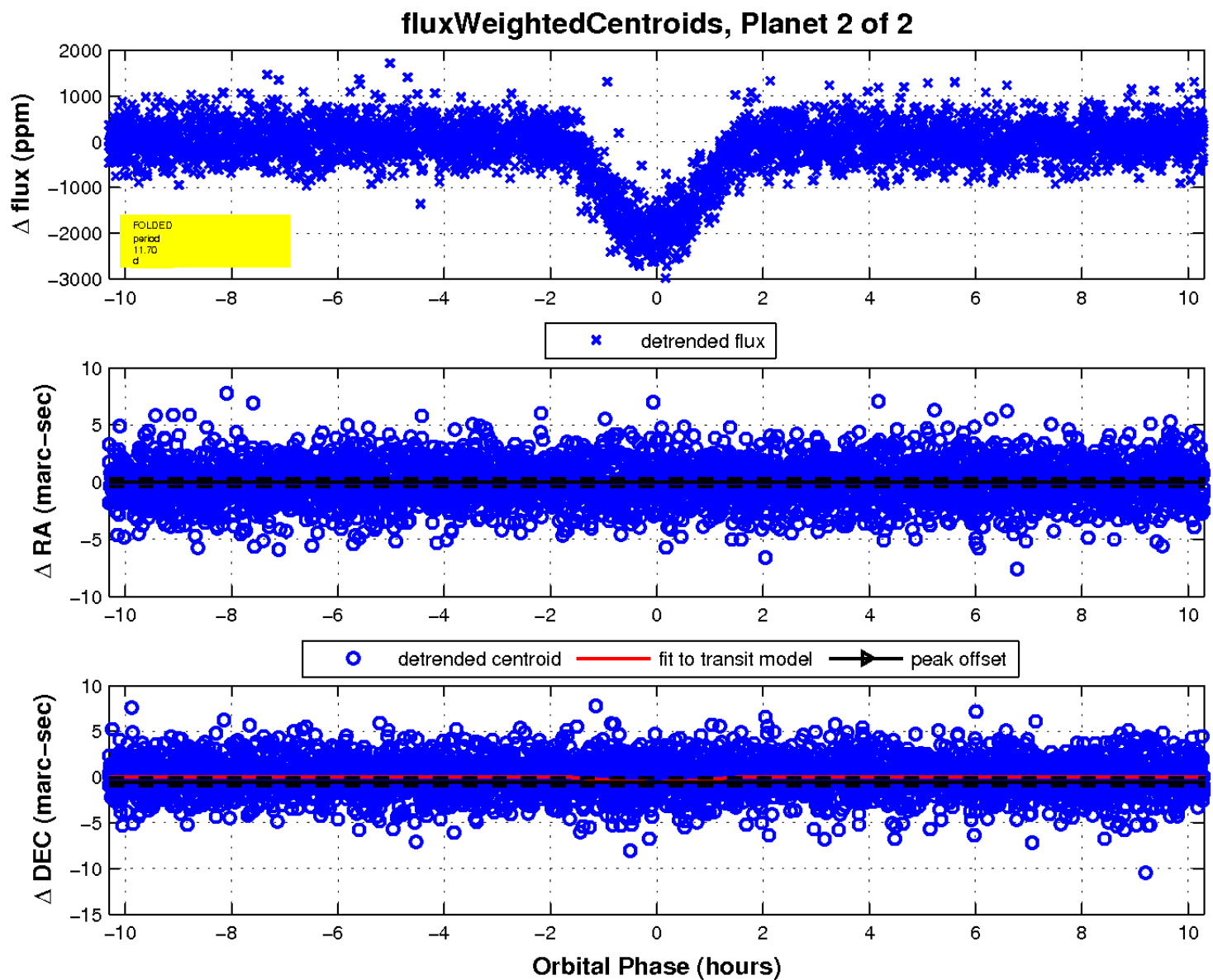
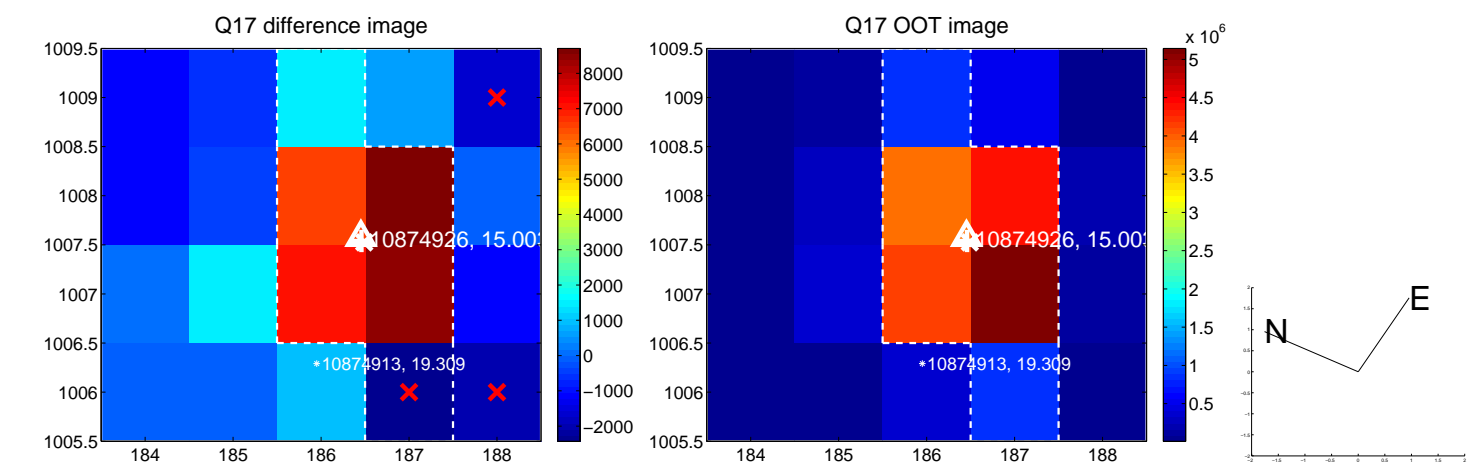
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

