

KIC 011826400

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})
011826400-01	OBS	6091.01	5.889373	134.779646	56391.0	4.951	10491.0	7848.8	2.07	7249	50.87	1953.00
011826400-02	OBS	No	5.889375	131.835466	1329.7	4.850	255.5	261.8	2.07	7249	8.78	1952.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011826400-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011826400-02	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.

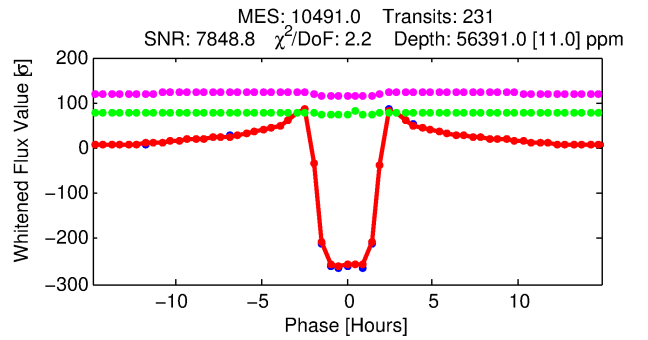
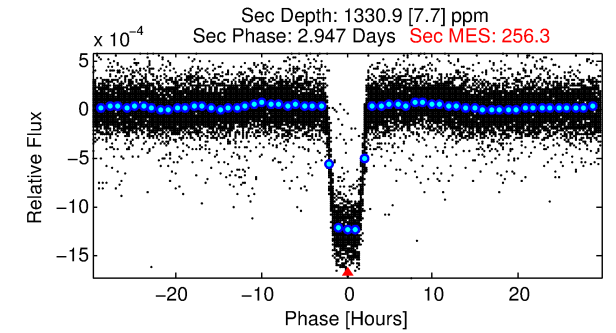
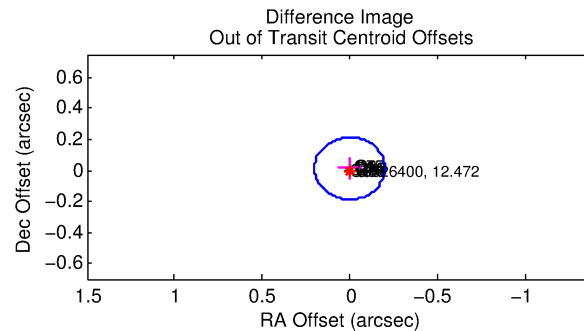
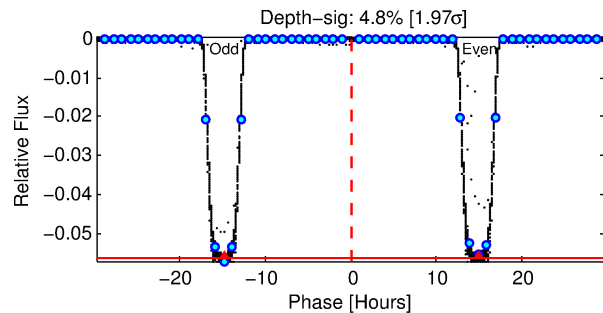
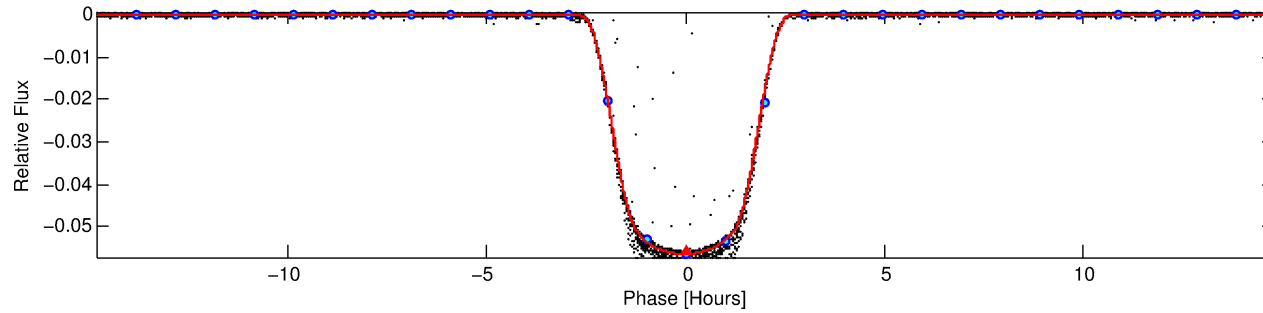
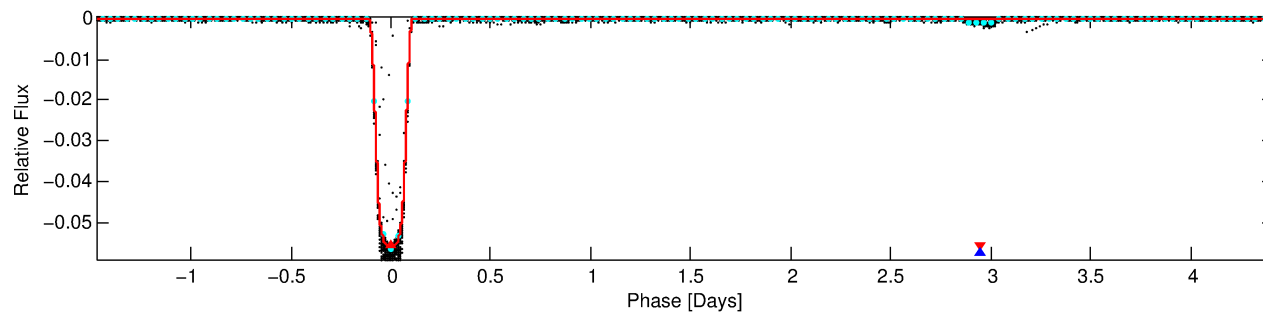
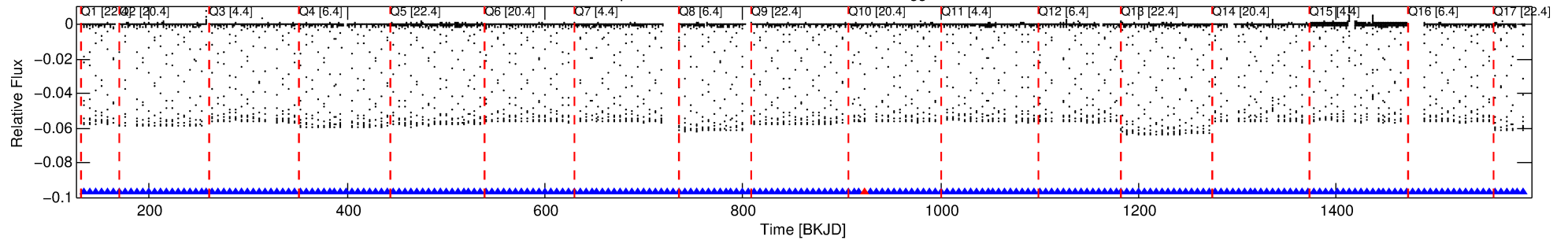
Ephemeris Match Information For 011826400-01

No Significant Match Found

DV One-Page Summary

KIC: 11826400 Candidate: 1 of 2 Period: 5.889 d
KOI: K06091.01 Corr: 0.998

Kp: 12.47 R*: 2.07 Rs Teff: 7249.0 K Logg: 3.99 Fe/H: -0.220



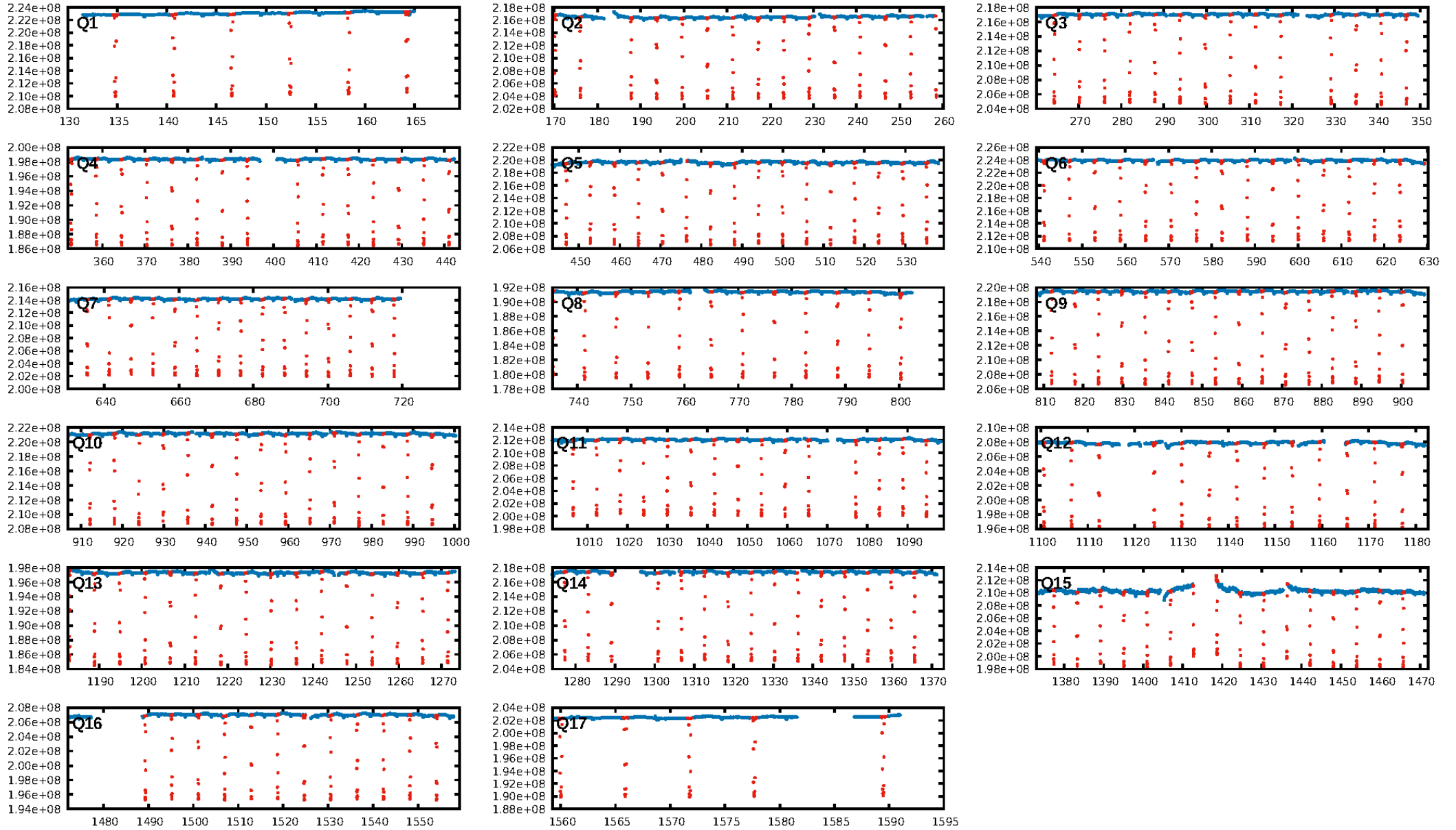
DV Fit Results:

Period = 5.88937 [0.00000] d
Epoch = 134.7796 [0.0000] BKJD
Rp/R* = 0.2251 [0.0000]
a/R* = 10.44 [0.00]
b = 0.43 [0.00]
Seff = 1953.00 [969.52]
Teq = 1695 [210] K
Rp = 50.87 [17.39] Re
a = 0.0737 [0.0226] AU
Ag = 1.54 [0.72] [0.75σ]
Teffp = 2918 [122] K [5.03σ]

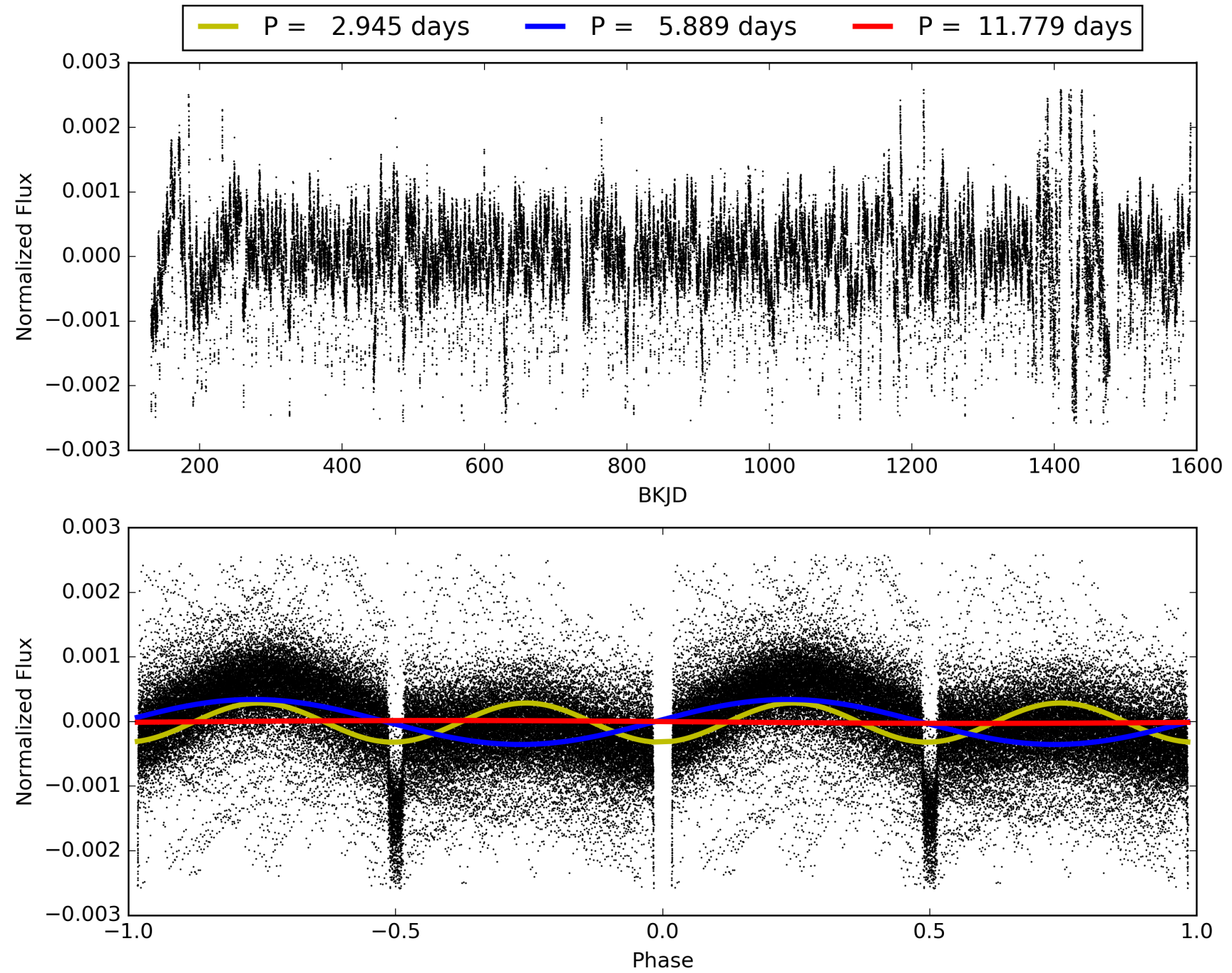
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [219/220]
GhostDiagnostic-chr: 6.647
Centroid-sig: N/A
Centroid-so: 0.295 arcsec [339.28σ]
OotOffset-rm: 0.014 arcsec [0.22σ]
KicOffset-rm: 0.143 arcsec [2.12σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011826400-01, PDC Light Curves

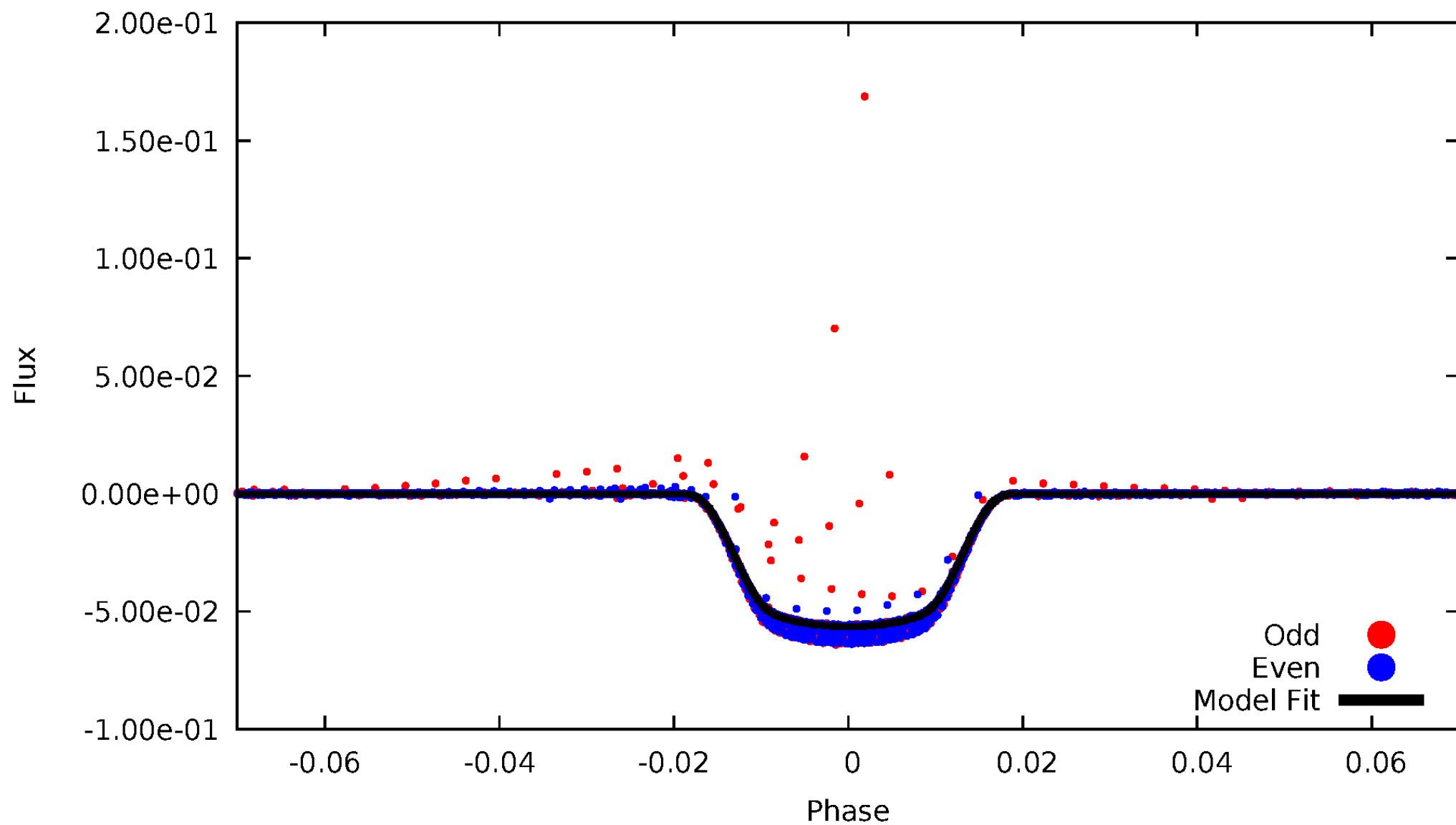


TCE 011826400-01



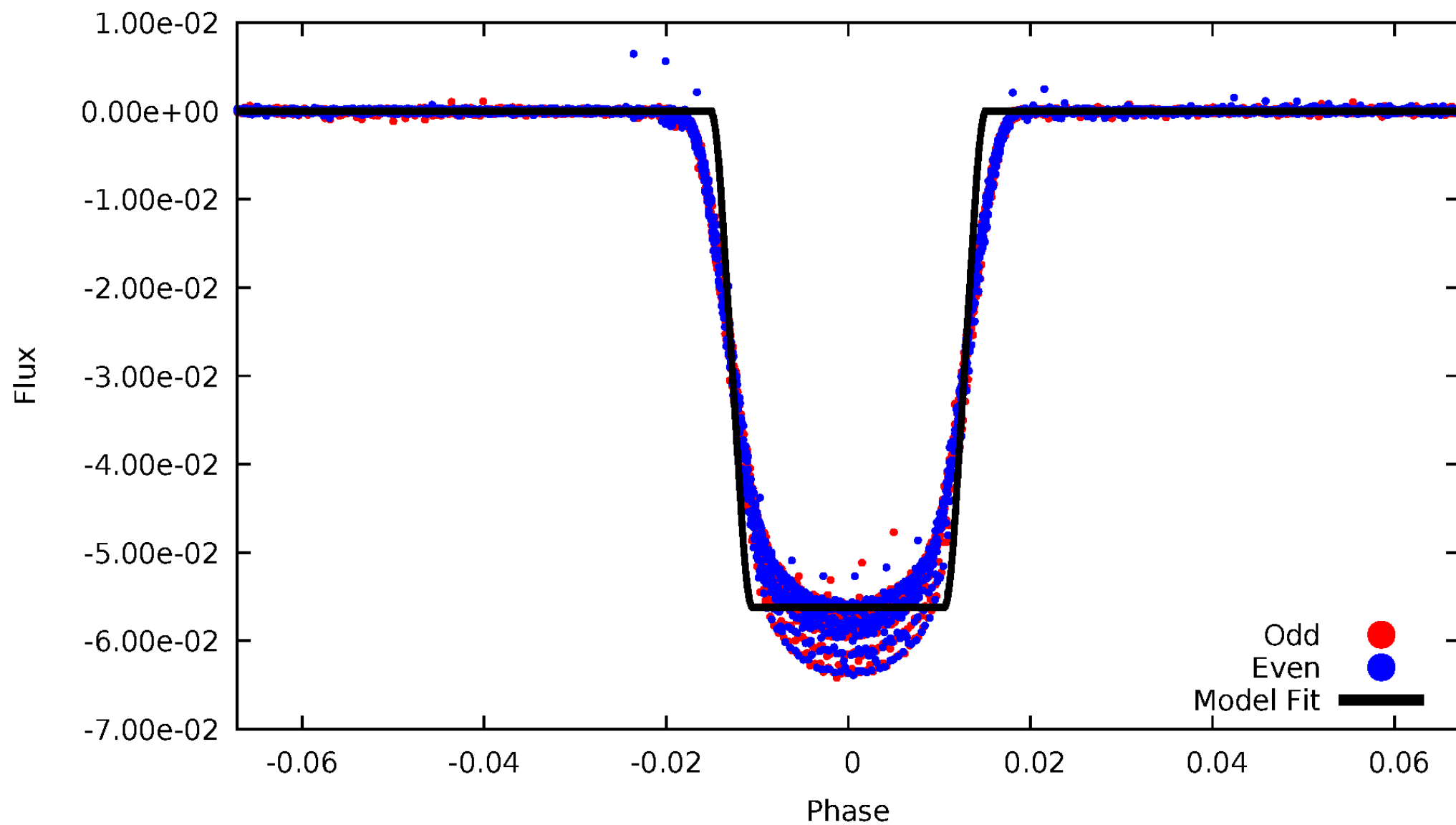
DV Odd/Even

TCE 011826400-01



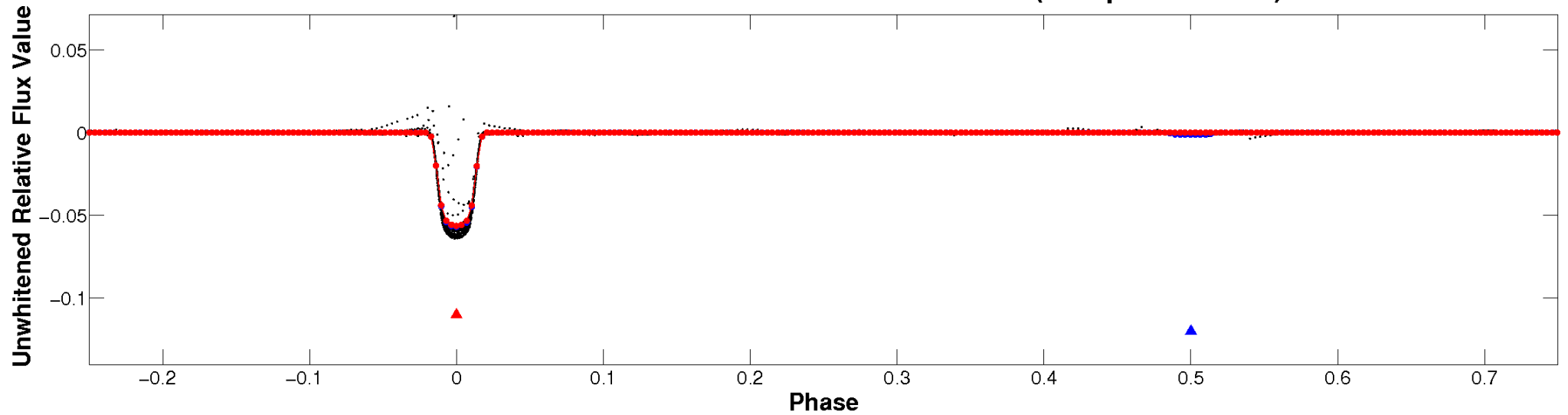
ALT Odd/Even

TCE 011826400-01

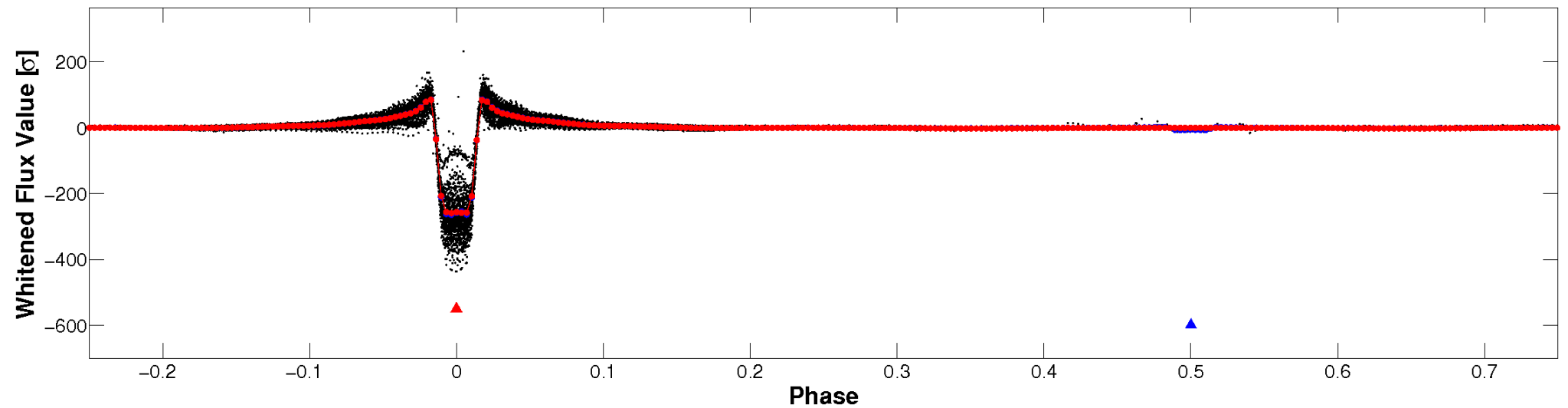


Non-Whitened Vs. Whitened Light Curve

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

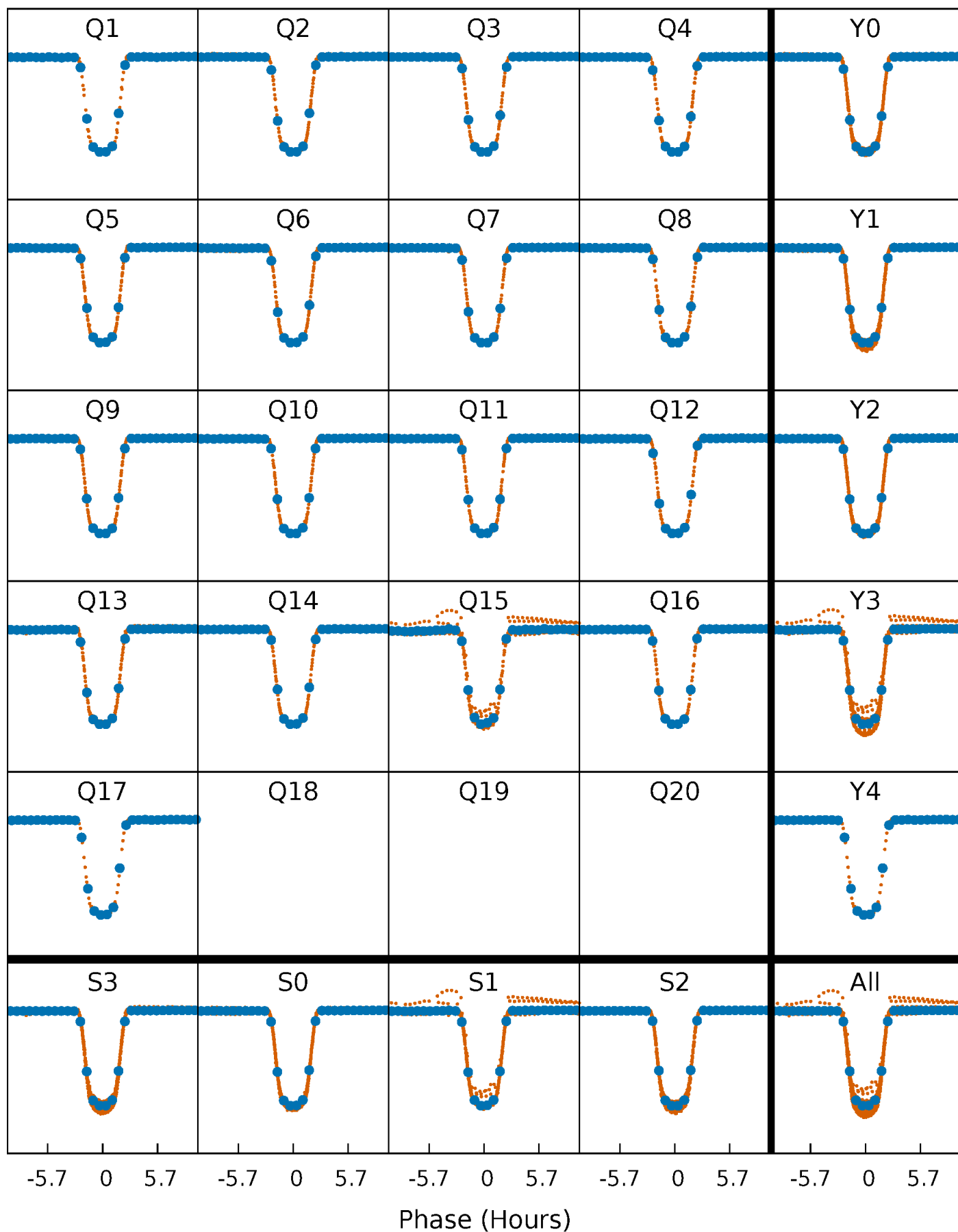


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



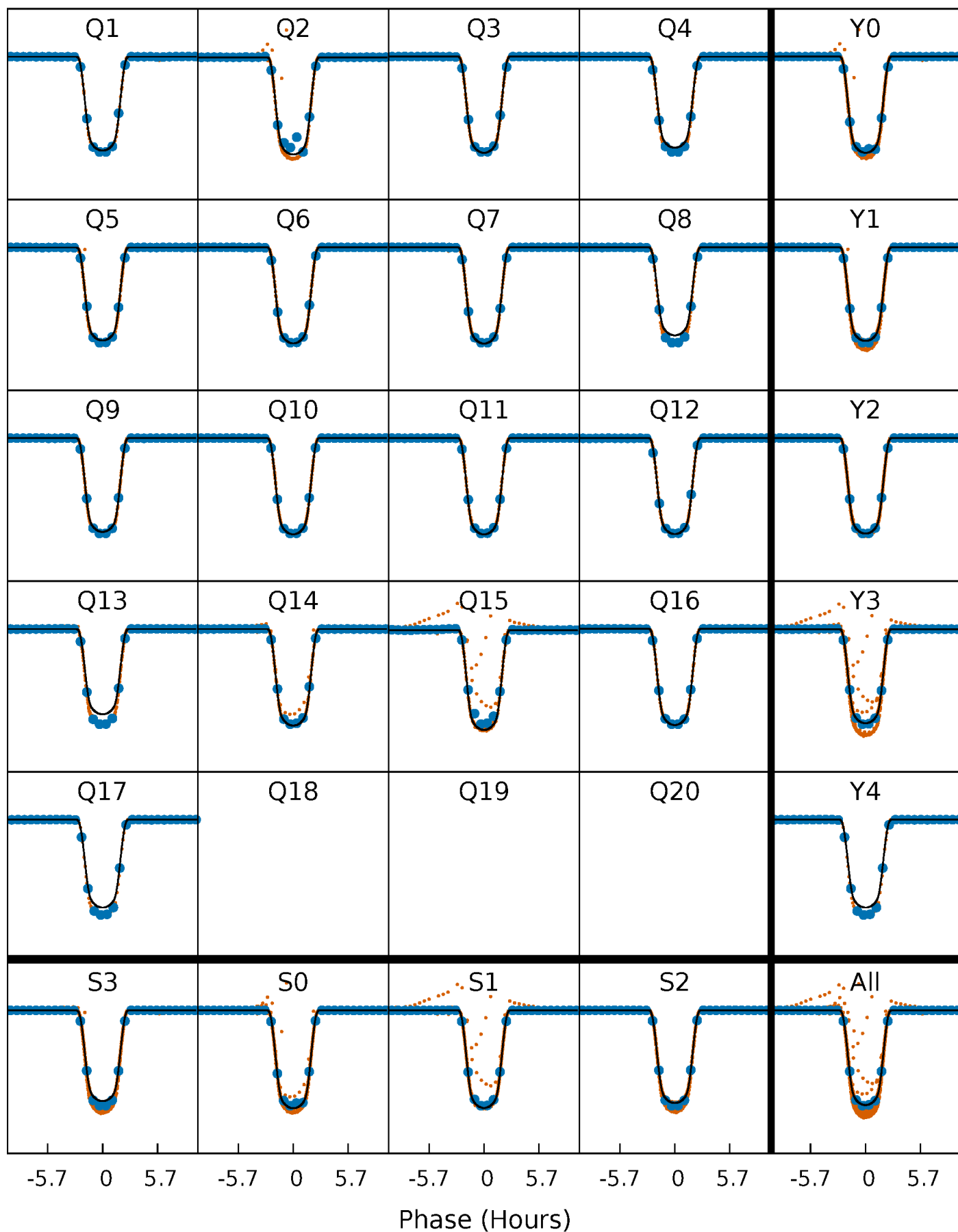
PDC Quarter-Phased Transit Curves

TCE 011826400-01 P= 5.889373 Days $T_0=134.779646$ (BKJD)



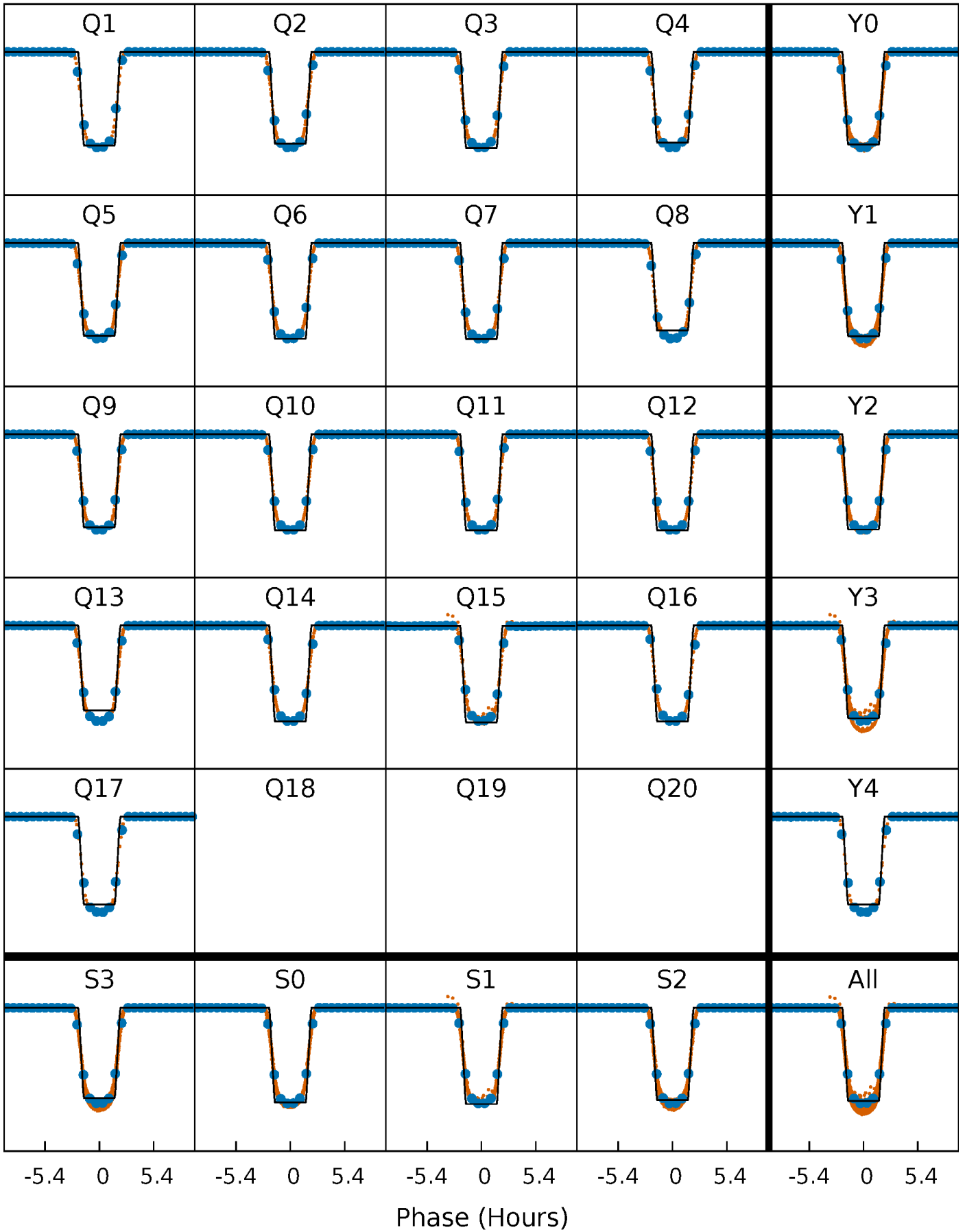
DV Quarter-Phased Transit Curves

TCE 011826400-01 P= 5.889373 Days $T_0=134.779646$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

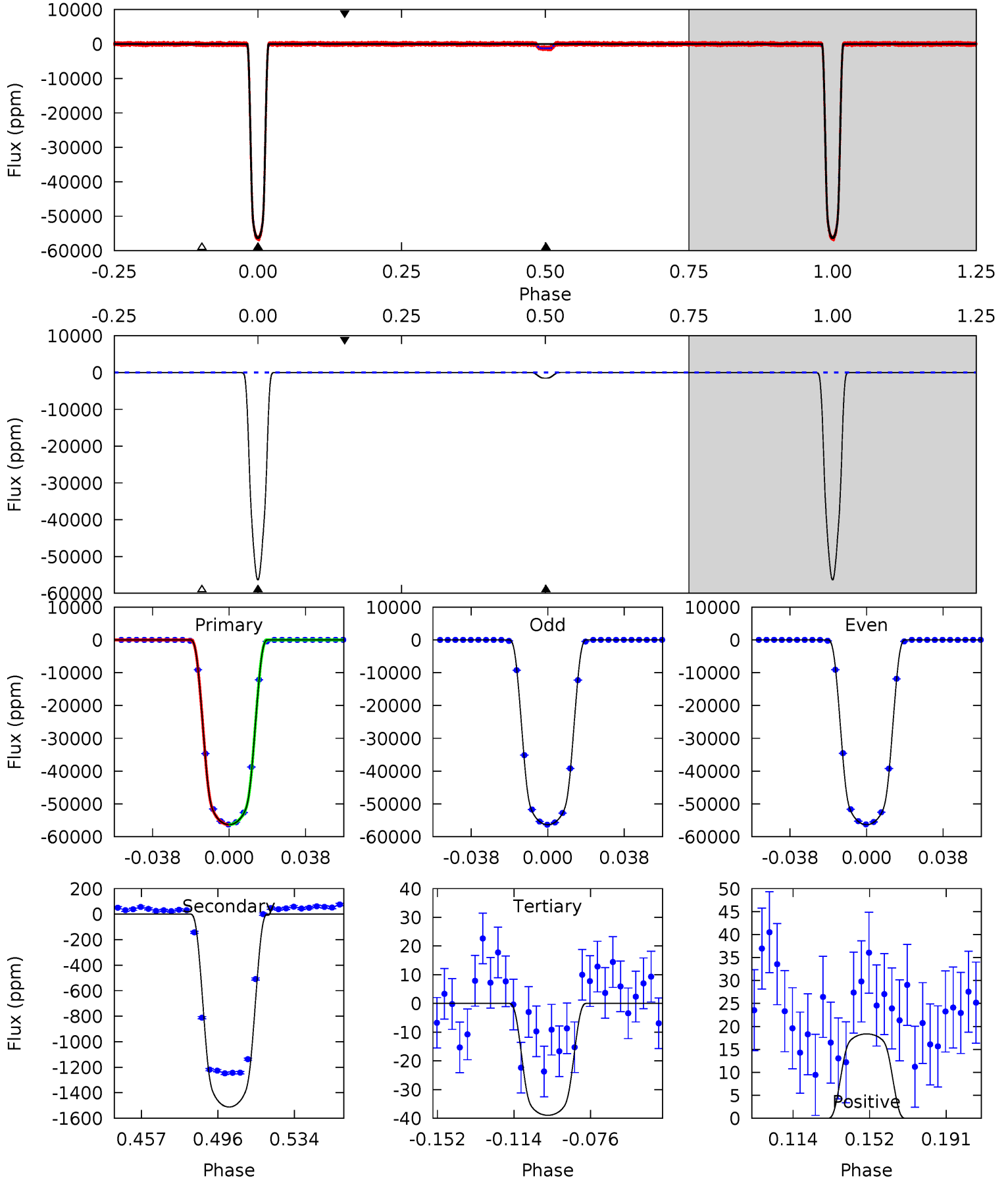
TCE 011826400-01 P= 5.889359 Days $T_0=134.781230$ (BKJD)



DV Model-Shift Uniqueness Test

011826400-01, P = 5.889373 Days, E = 128.890273 Days

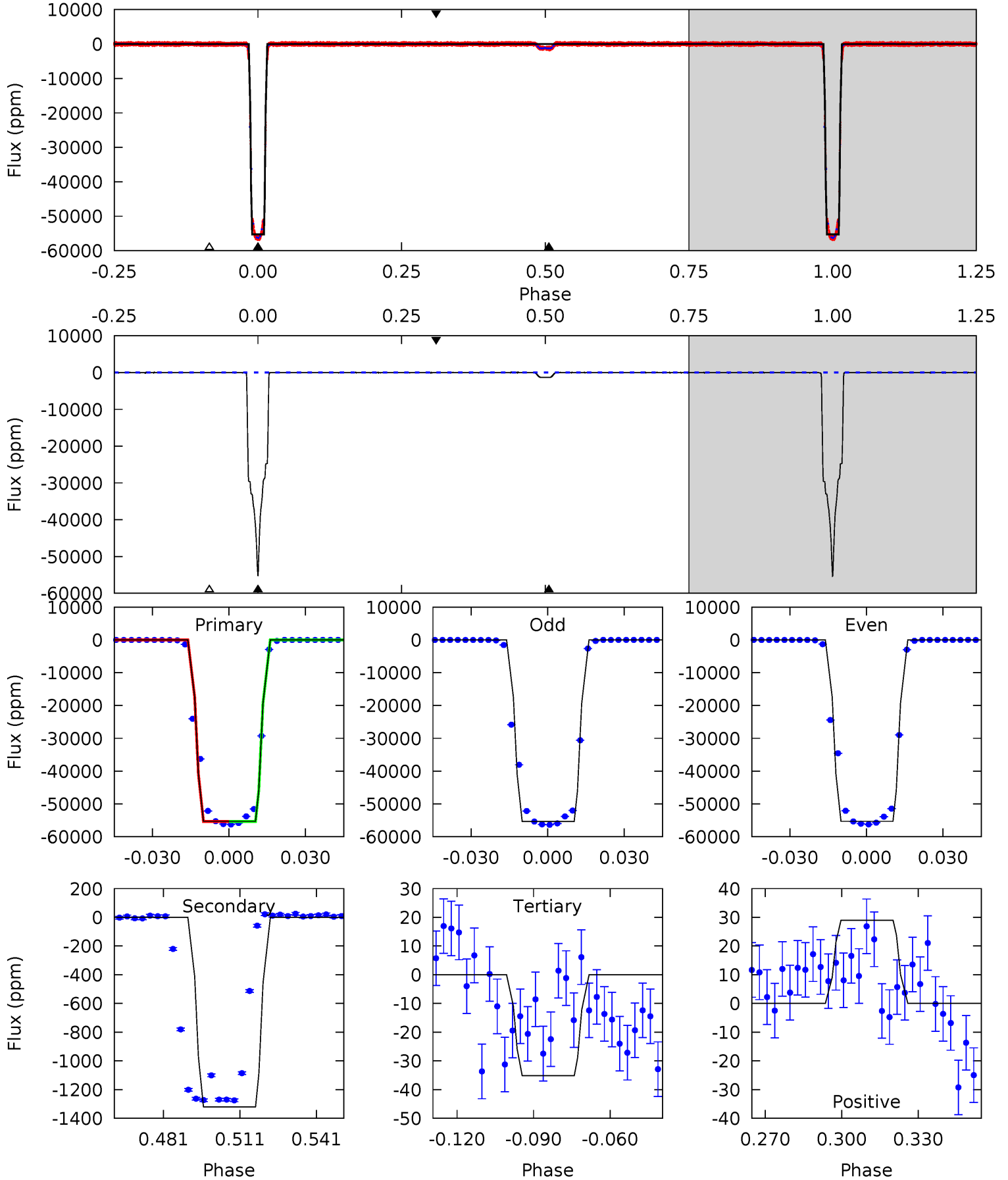
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14868	399.0	10.3	4.85	4.76	2.07	5.17	14858	14863	388.7	394.2	2.11	1.01	0.00	0



Alt Model-Shift Uniqueness Test

011826400-01, P = 5.889359 Days, E = 128.891871 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7651	182.7	4.86	4.01	4.81	2.17	1.67	7646	7647	177.9	178.7	6.17	1.02	0.00	0.44



Stellar Parameters For KIC 011826400

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7249^{+201}_{-302}	$3.993^{+0.266}_{-0.143}$	$-0.220^{+0.250}_{-0.350}$	$2.071^{+0.531}_{-0.708}$	$1.537^{+0.206}_{-0.308}$	$0.244^{+0.429}_{-0.101}$
	+3%/-4%	+7%/-4%	+114%/-159%	+26%/-34%	+13%/-20%	+176%/-41%
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 011826400-01 / KOI 6091.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1512 ± 4	$49.90^{+7.04}_{-8.71}$	2320^{+186}_{-204}	3372^{+66}_{-78}	$1.827^{+0.777}_{-0.424}$
Alt.	-1321 ± 7	$53.03^{+7.38}_{-8.45}$	2339^{+169}_{-190}	3224^{+63}_{-77}	$1.406^{+0.552}_{-0.307}$

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

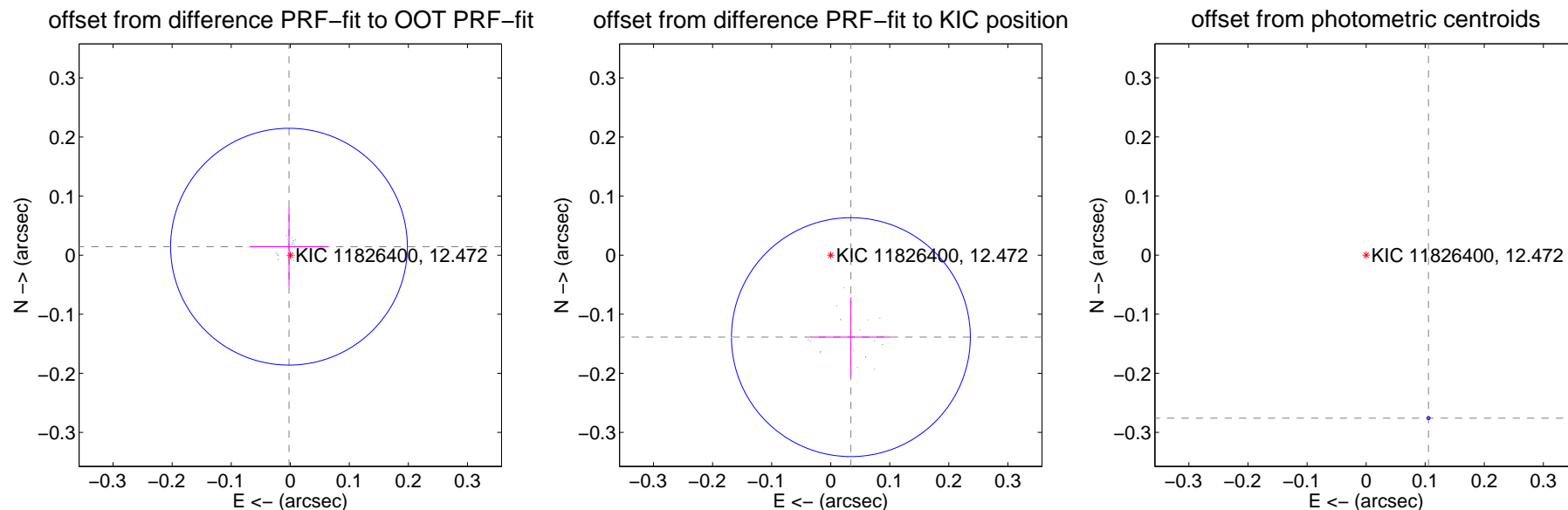
DV Centroid Data

Supplemental centroid analysis for 011826400-01. Kepler magnitude: 12.47. Transit SNR 7848.82

There are 17 quarters with good PRF difference image offsets

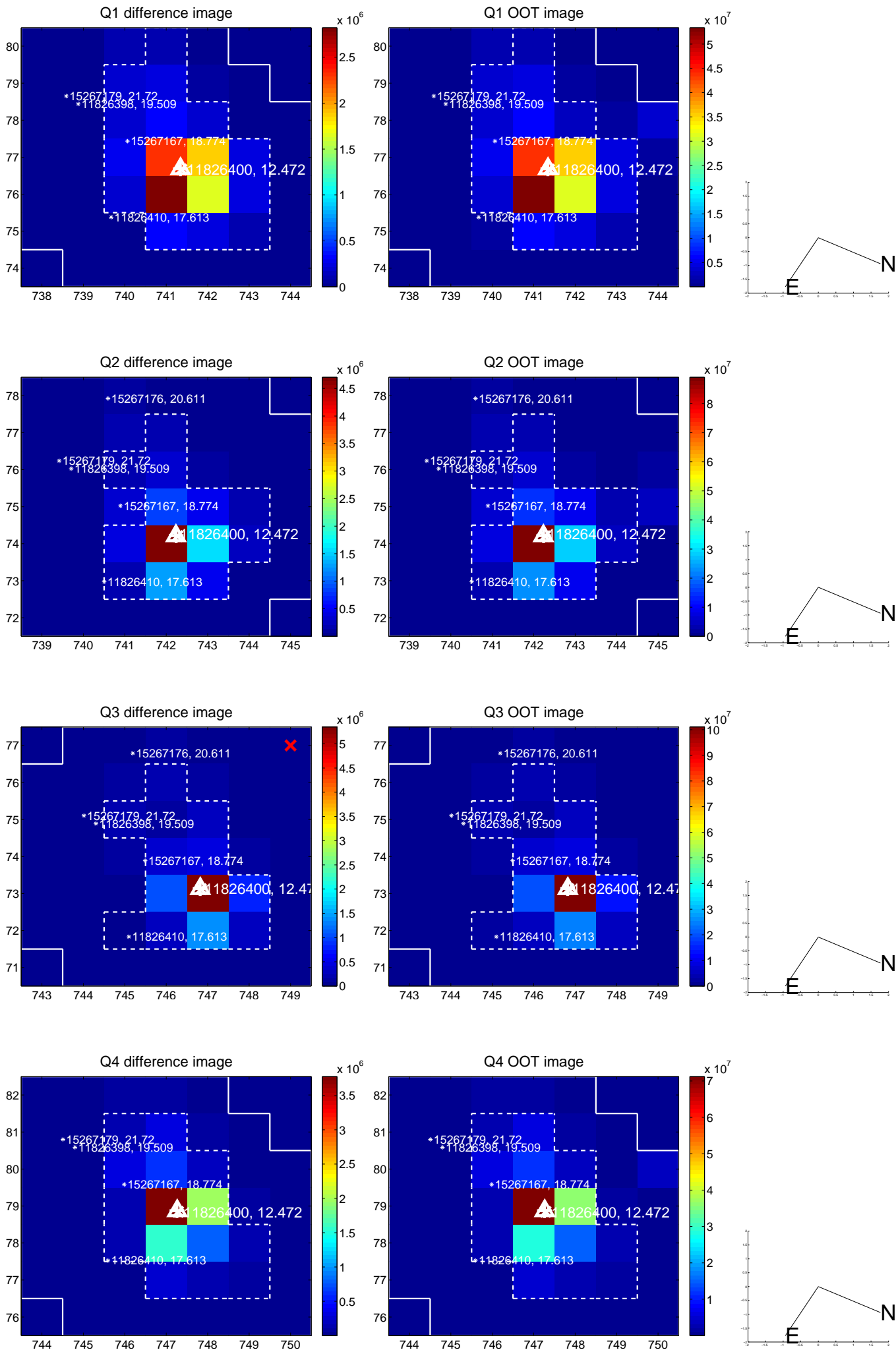
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.067	0.22	0.002 ± 0.067	0.014 ± 0.067
PRF-fit source offset from KIC position	0.143 ± 0.067	2.12	-0.034 ± 0.068	-0.139 ± 0.067
photometric centroid source offset	0.30 ± 0.00	339.28	-0.11 ± 0.00	-0.28 ± 0.00

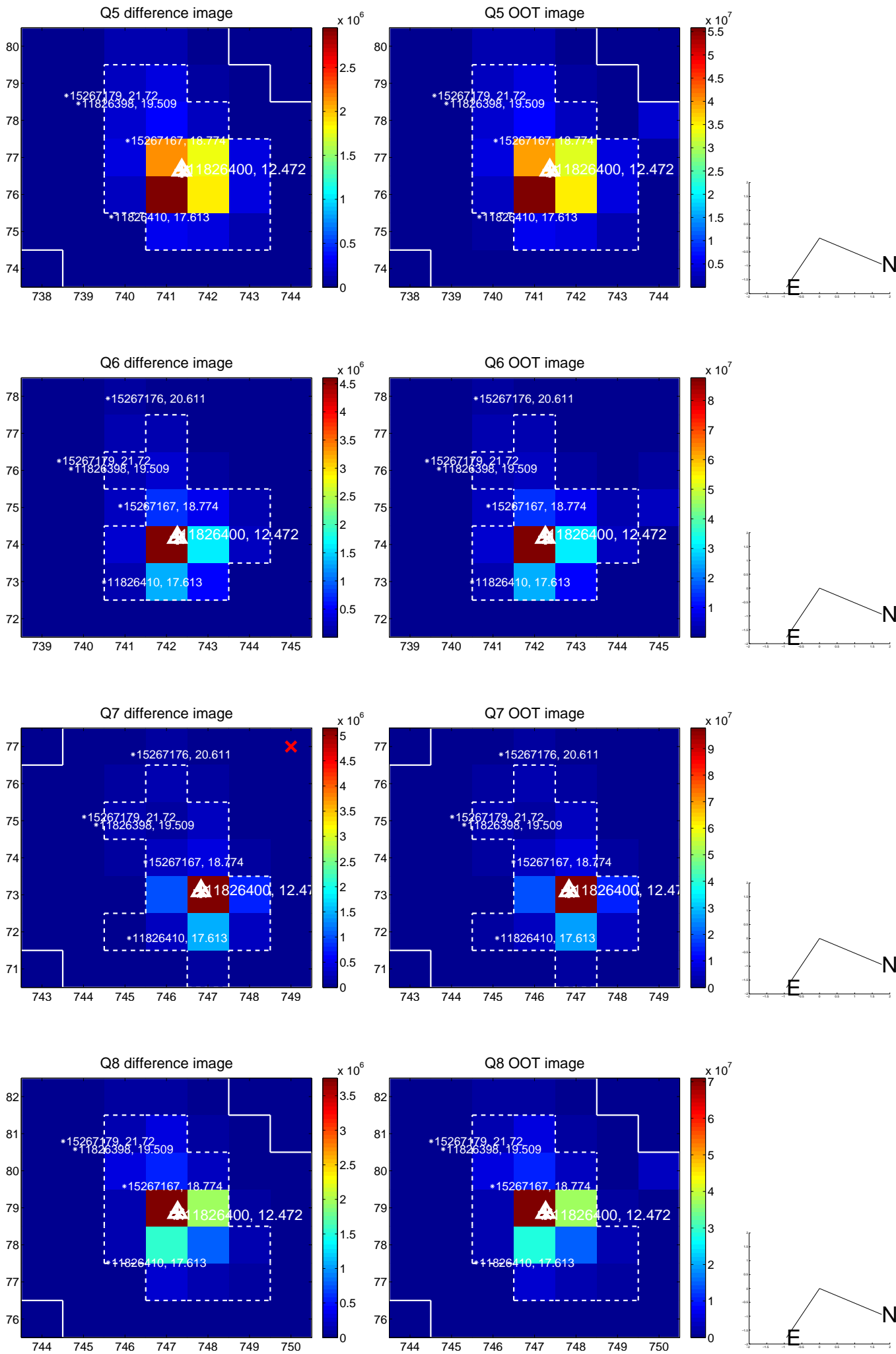


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

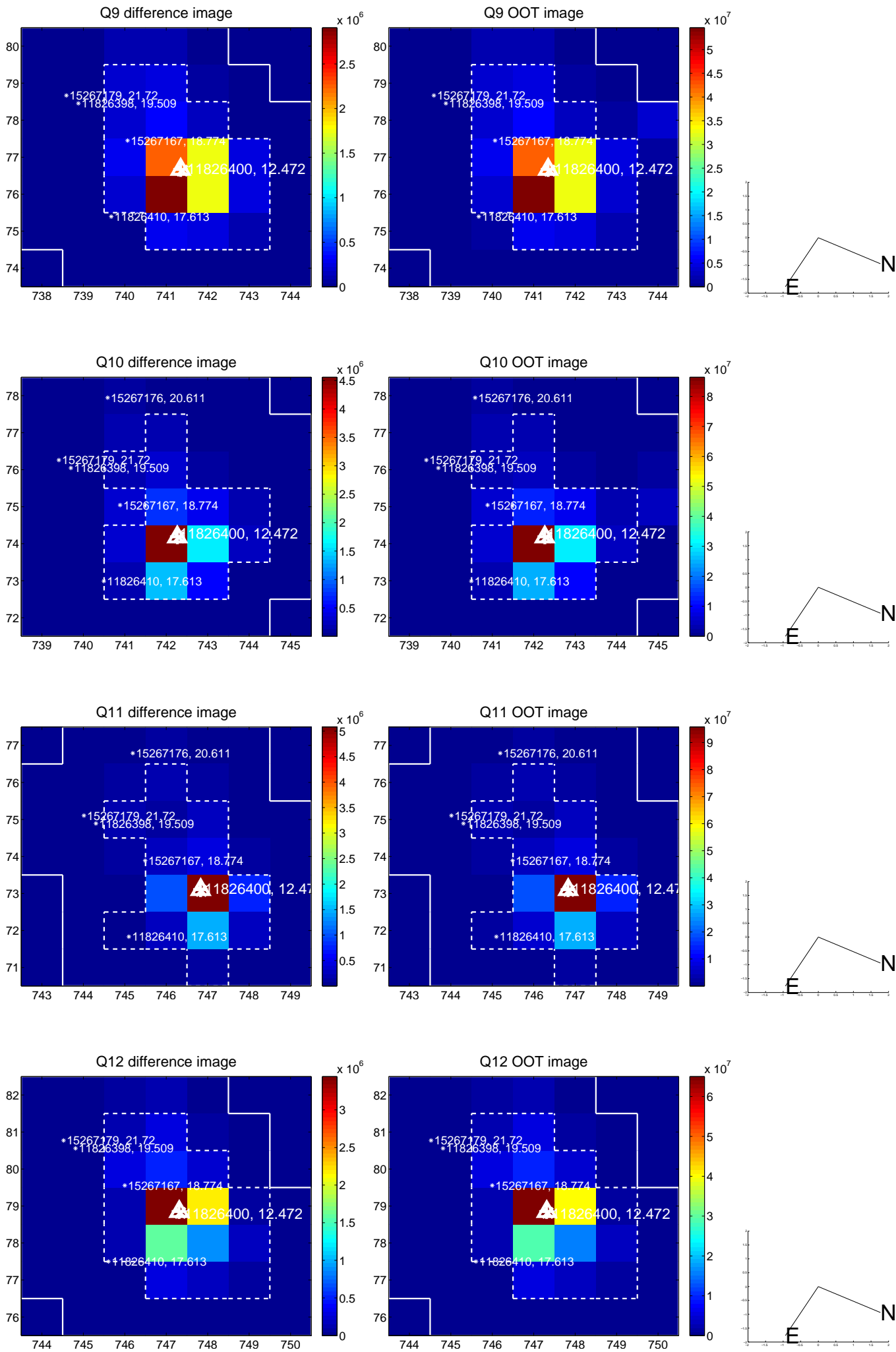
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



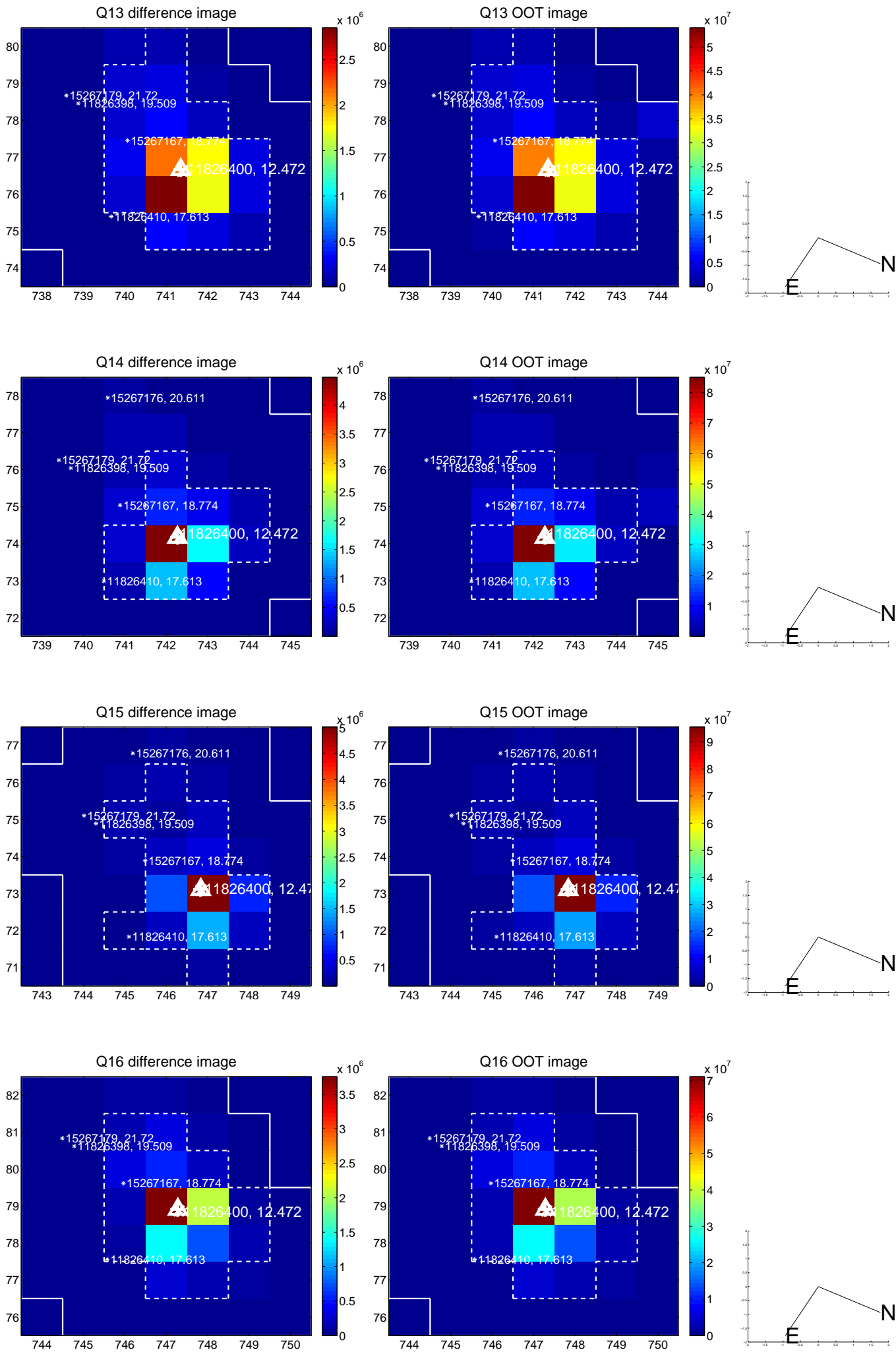
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



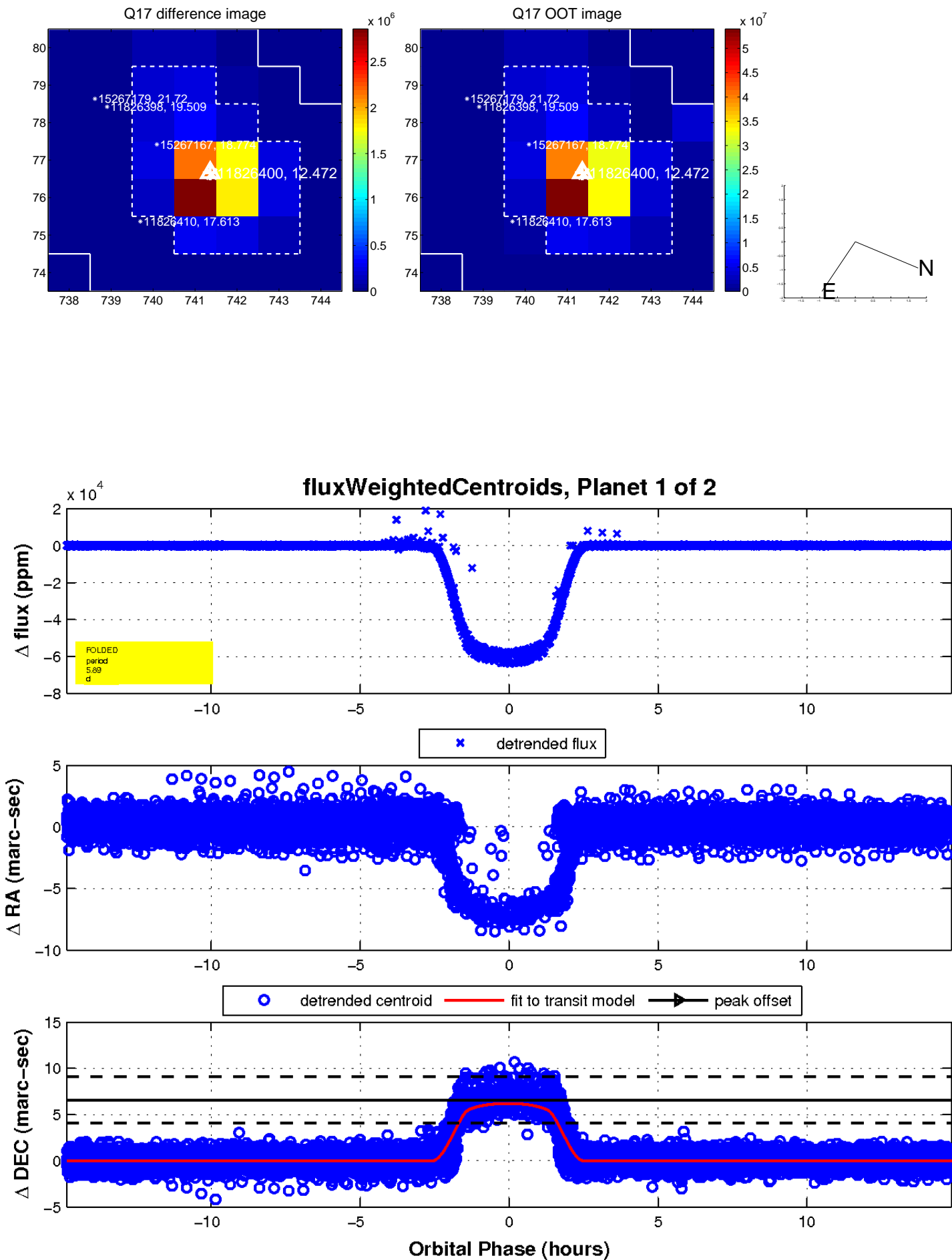
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

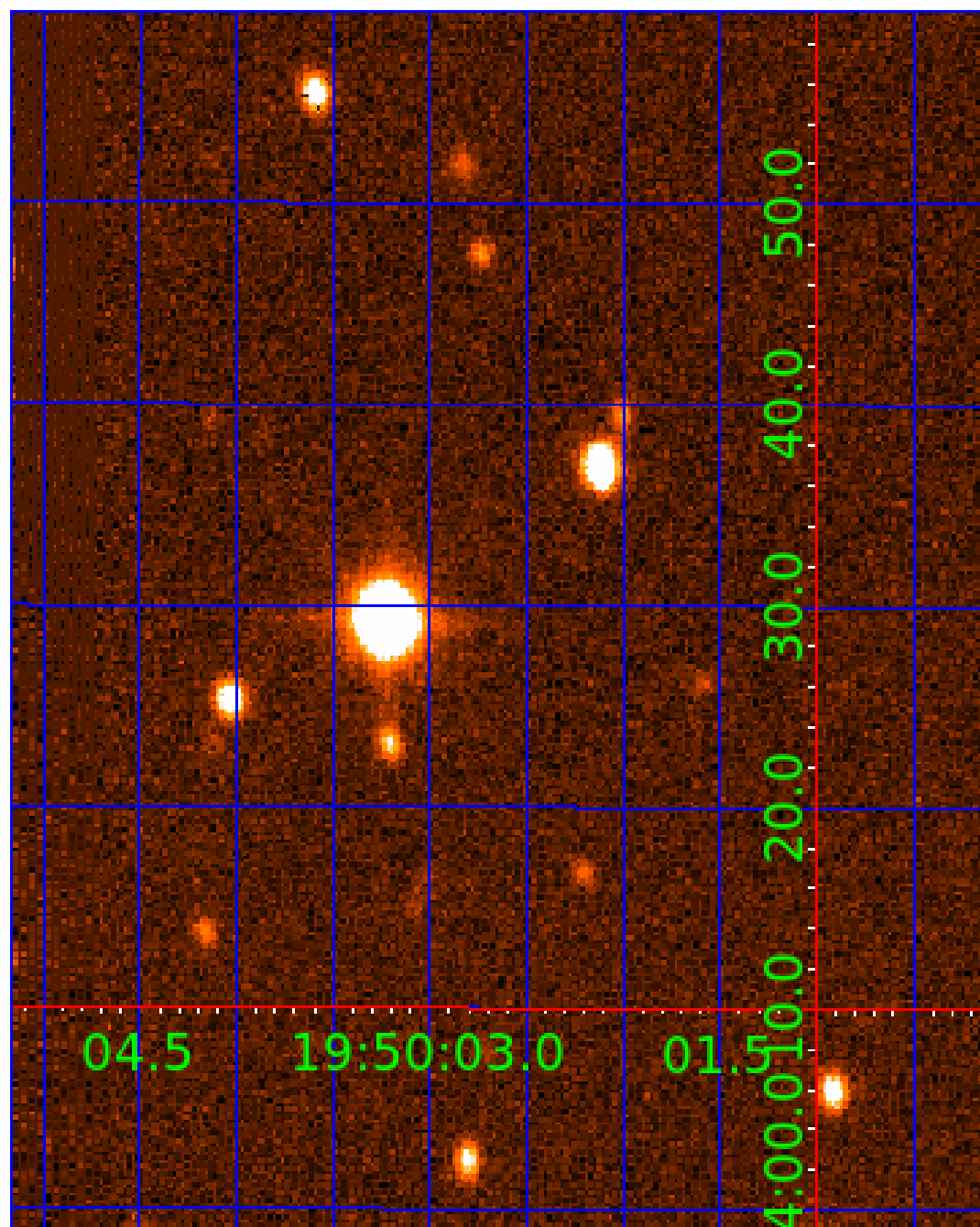


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011826400

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})
011826400-01	OBS	6091.01	5.889373	134.779646	56391.0	4.951	10491.0	7848.8	2.07	7249	50.87	1953.00
011826400-02	OBS	No	5.889375	131.835466	1329.7	4.850	255.5	261.8	2.07	7249	8.78	1952.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011826400-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011826400-02	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 011826400-02

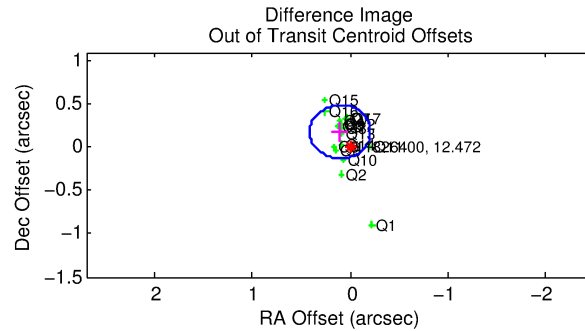
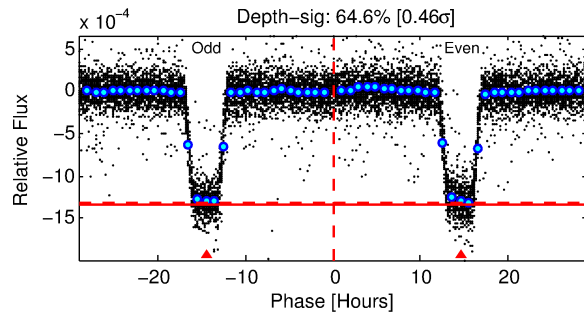
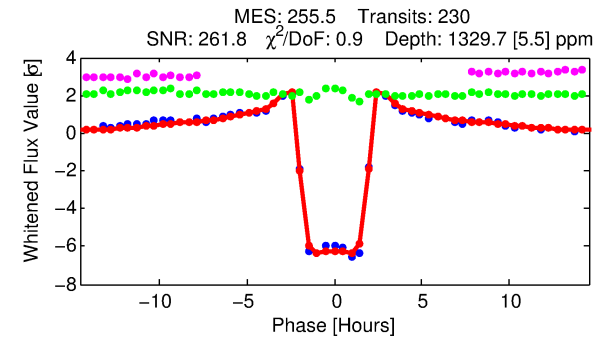
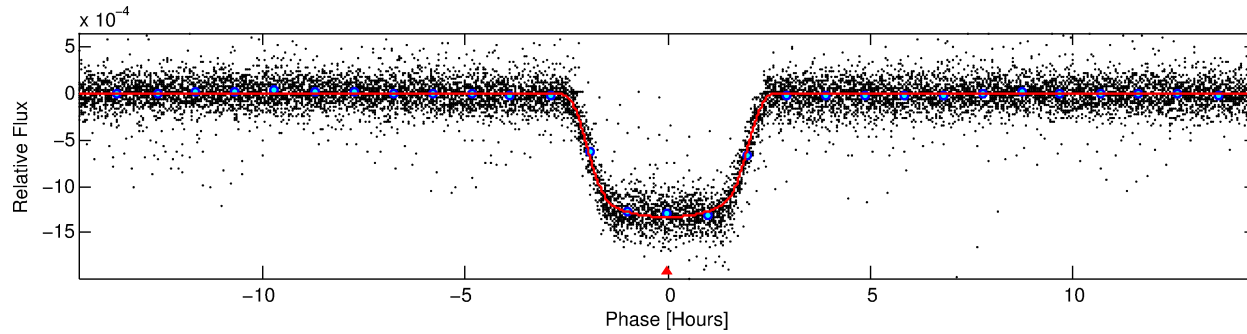
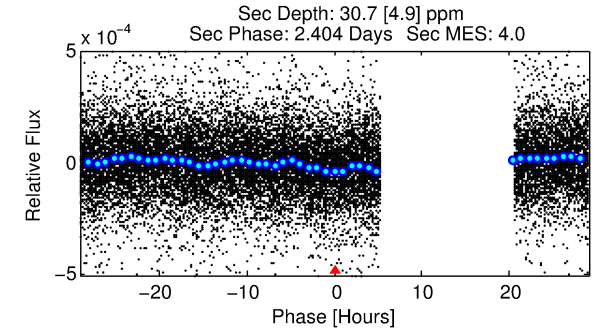
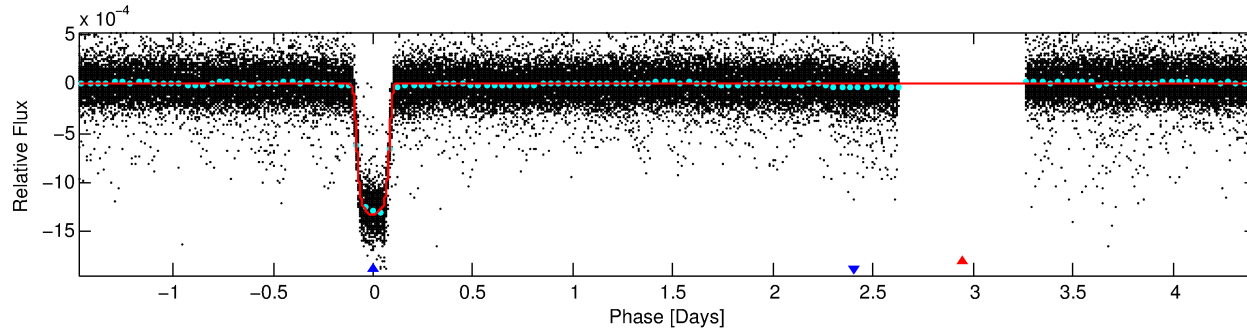
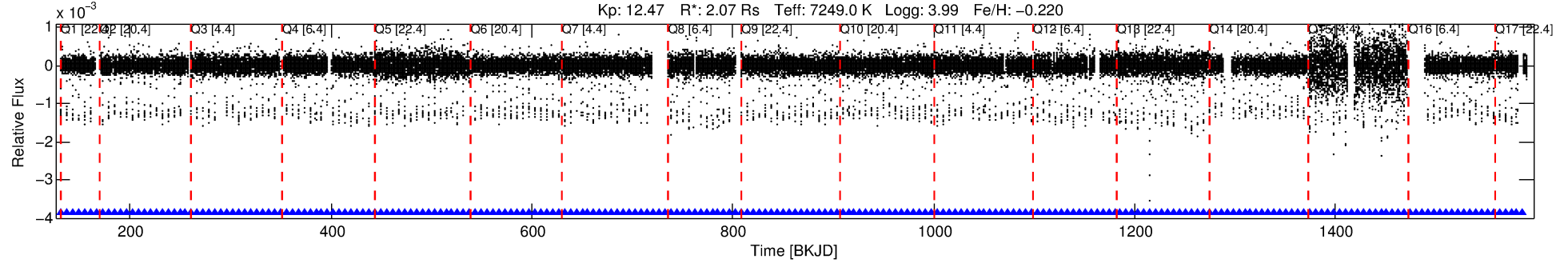
No Significant Match Found

DV One-Page Summary

KIC: 11826400 Candidate: 2 of 2 Period: 5.889 d

KOI: K06091 Corr: No Ephemeris Match

Kp: 12.47 R*: 2.07 Rs Teff: 7249.0 K Logg: 3.99 Fe/H: -0.220



DV Fit Results:

Period = 5.88938 [0.00000] d
Epoch = 131.8355 [0.0003] BKJD
Rp/R* = 0.0389 [0.0001]
a/R* = 4.86 [0.06]
b = 0.90 [0.00]
Seff = 1953.00 [969.52]
Teq = 1695 [210] K
Rp = 8.78 [3.00] Re
a = 0.0737 [0.0226] AU
Ag = 1.19 [0.59] [0.32σ]
Teffp = 2736 [157] K [3.96σ]

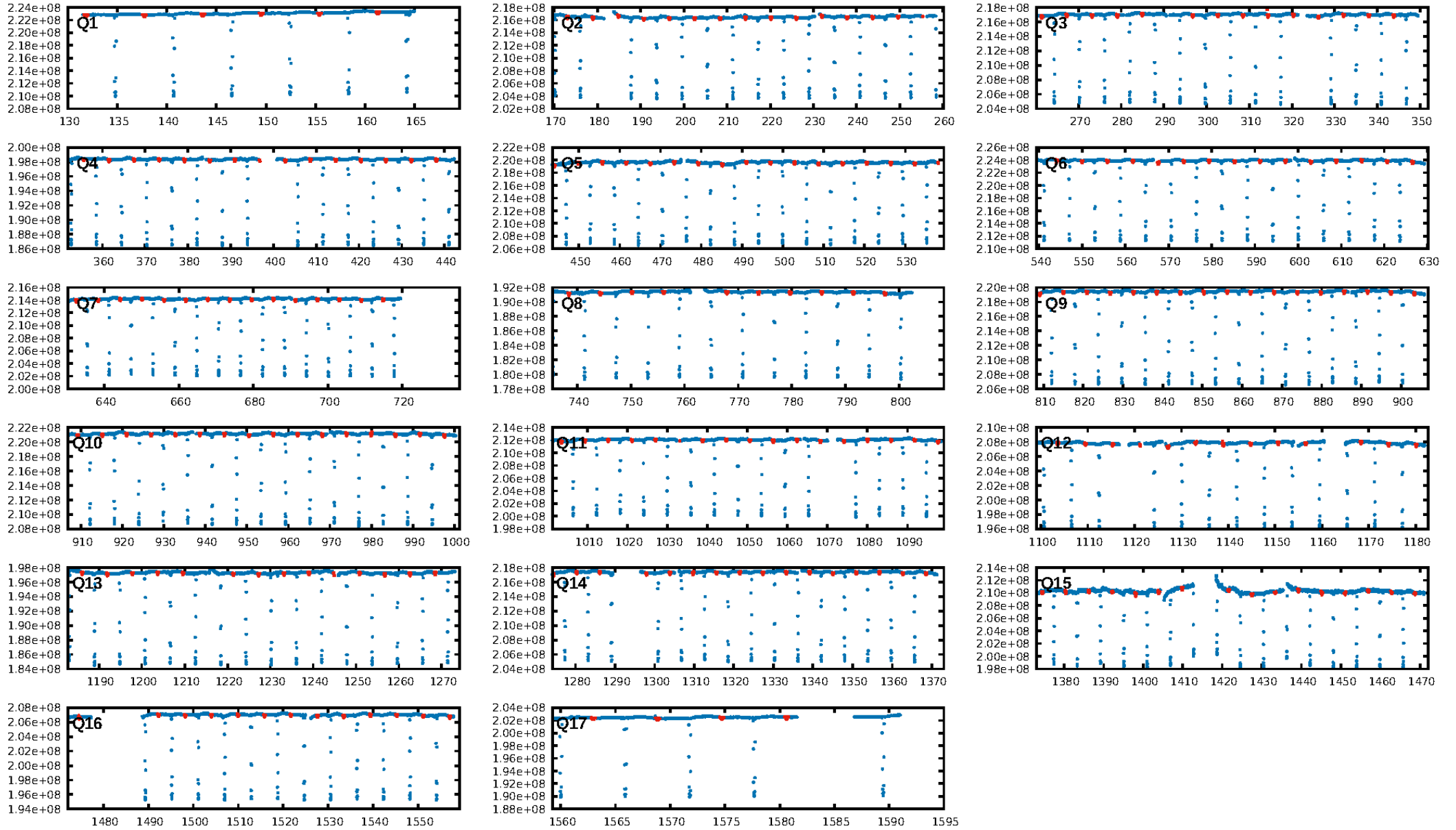
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [220/220]
GhostDiagnostic-chr: 5.344
Centroid-sig: N/A
Centroid-so: 0.056 arcsec [1.59σ]
OotOffset-rm: 0.209 arcsec [2.03σ]
KicOffset-rm: 0.083 arcsec [0.99σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

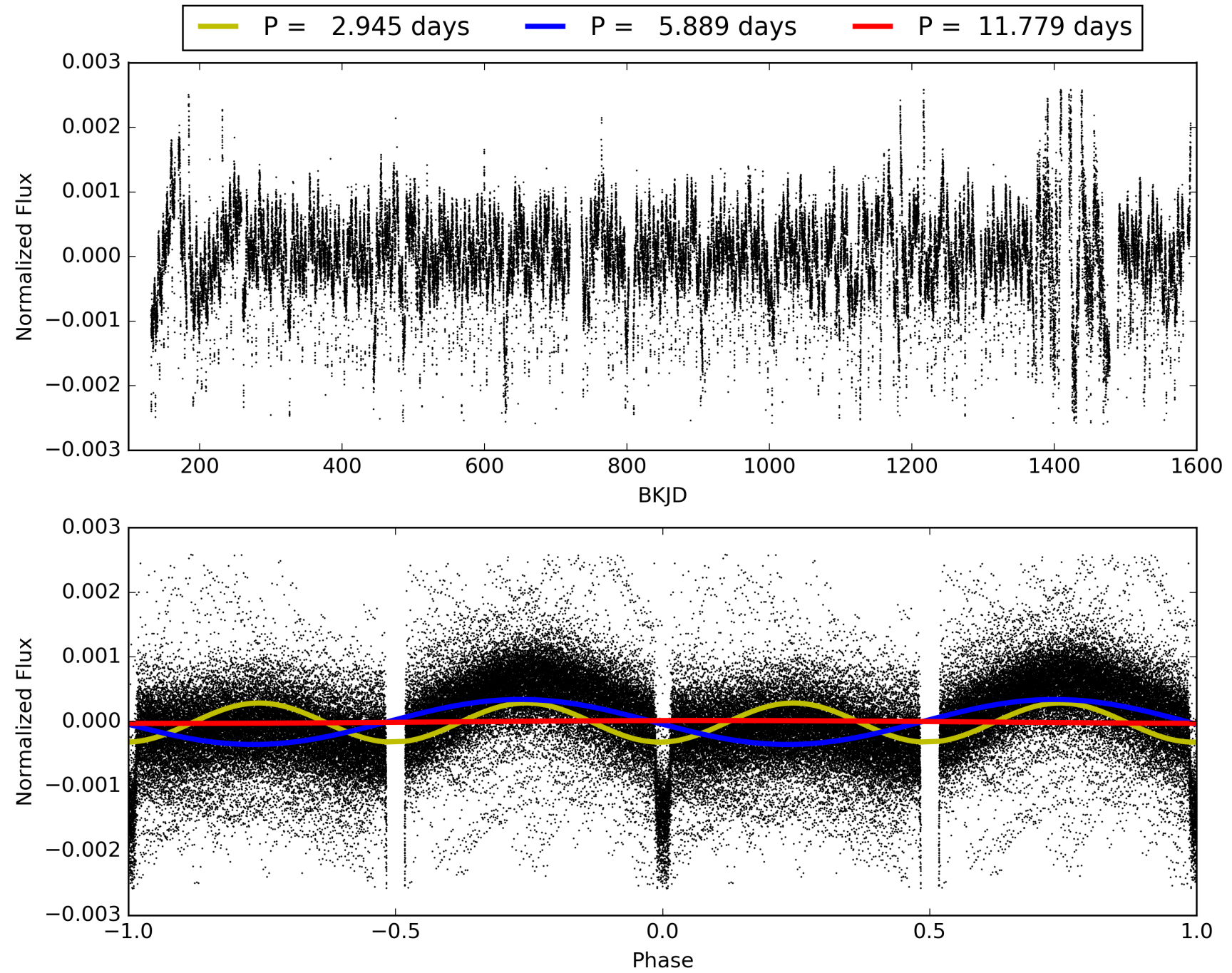
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:40:14 Z

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

TCE 011826400-02, PDC Light Curves

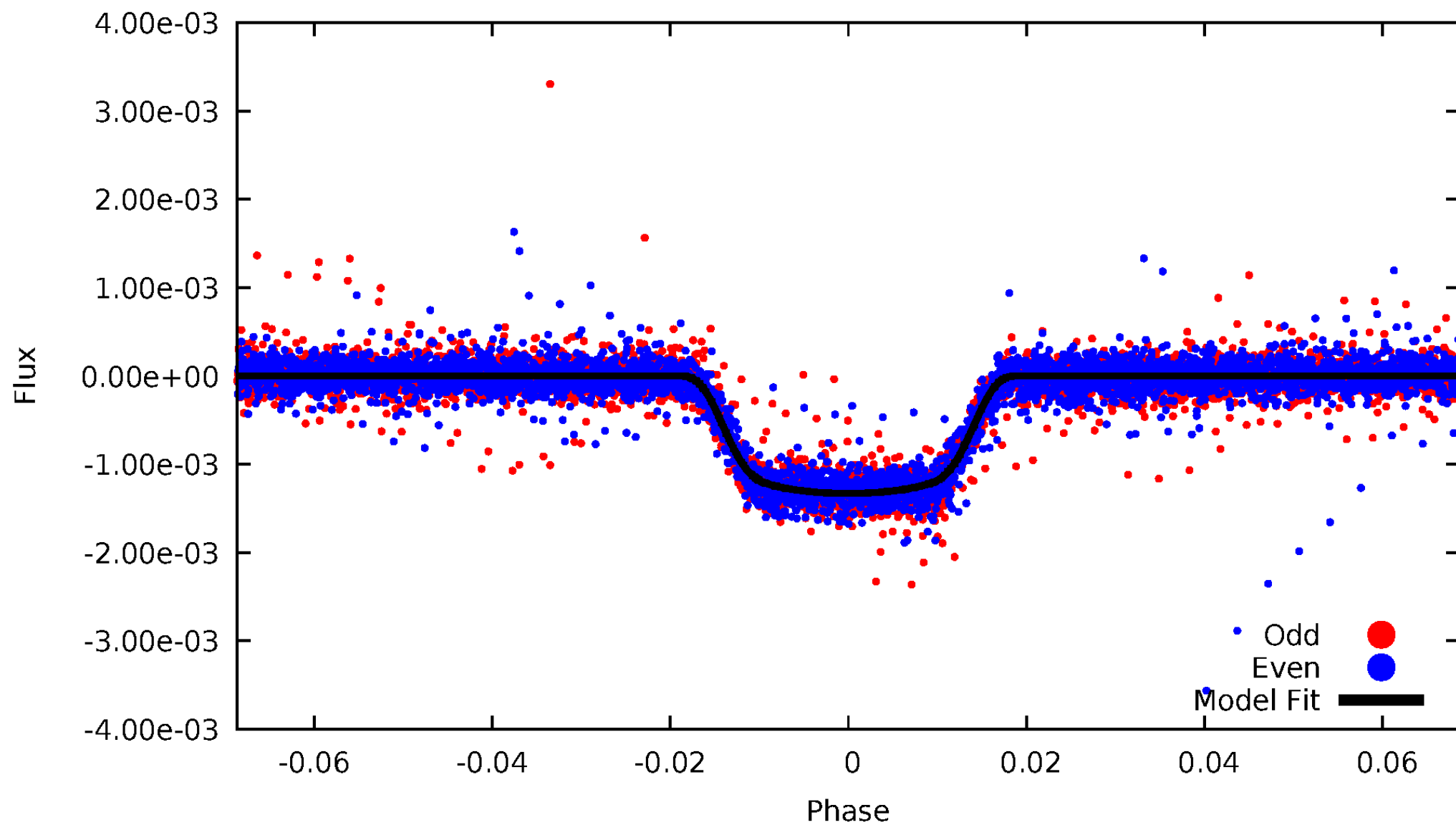


TCE 011826400-02



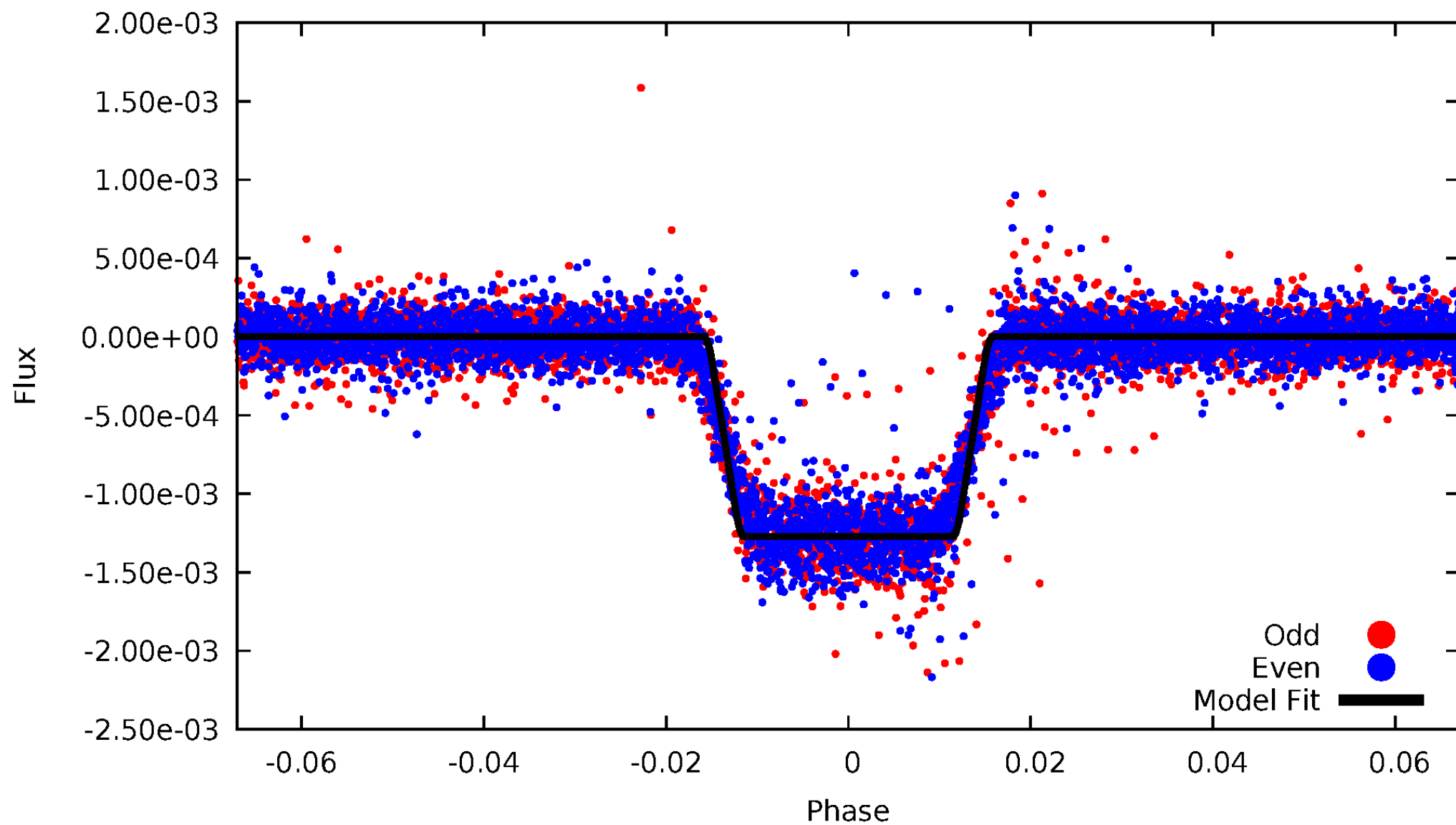
DV Odd/Even

TCE 011826400-02



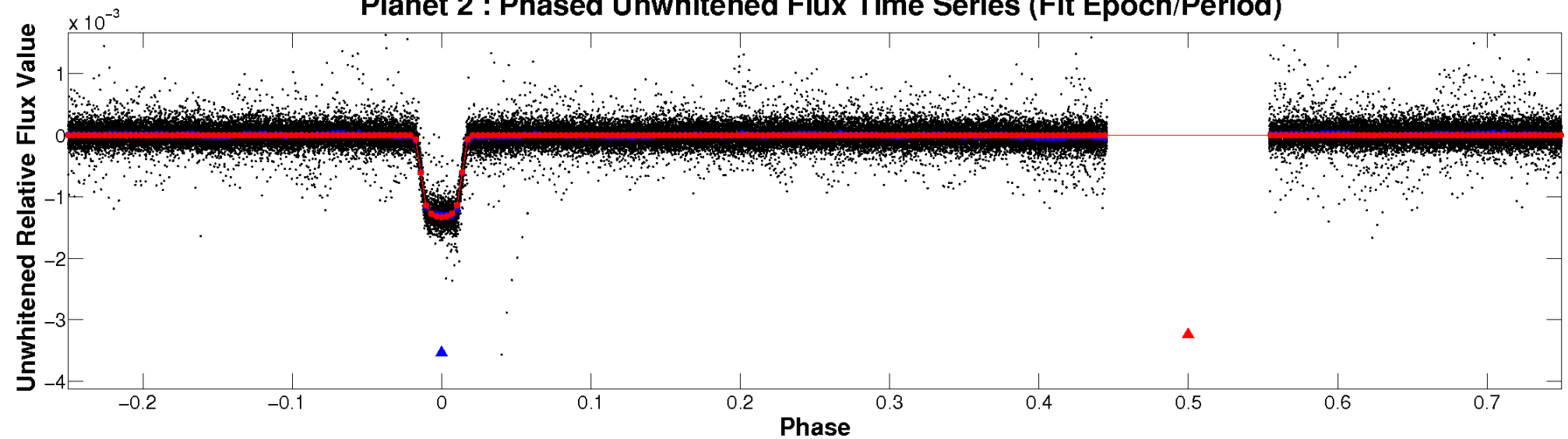
ALT Odd/Even

TCE 011826400-02

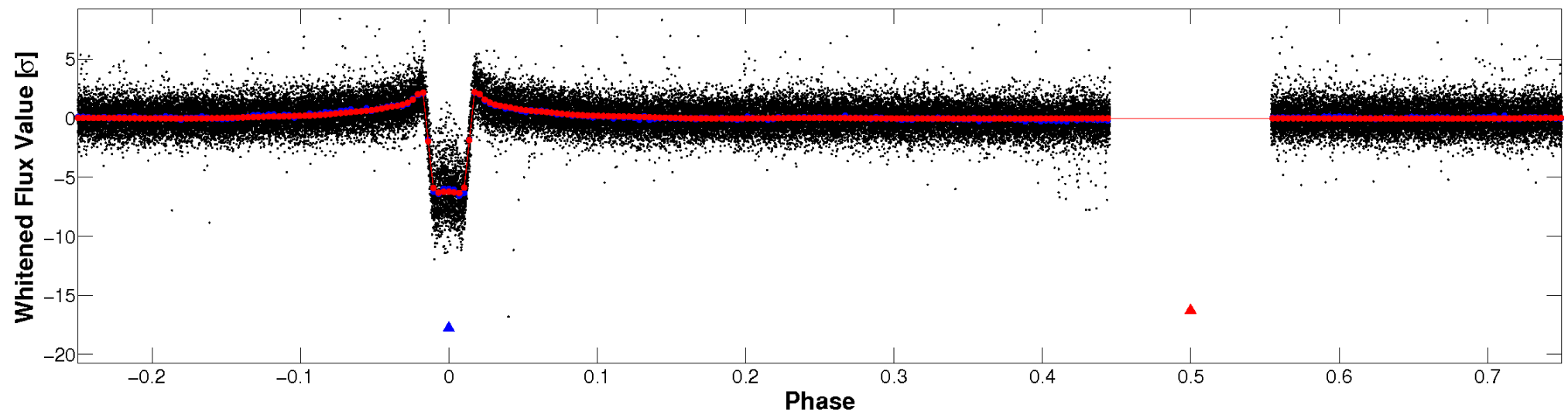


Non-Whitened Vs. Whitened Light Curve

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

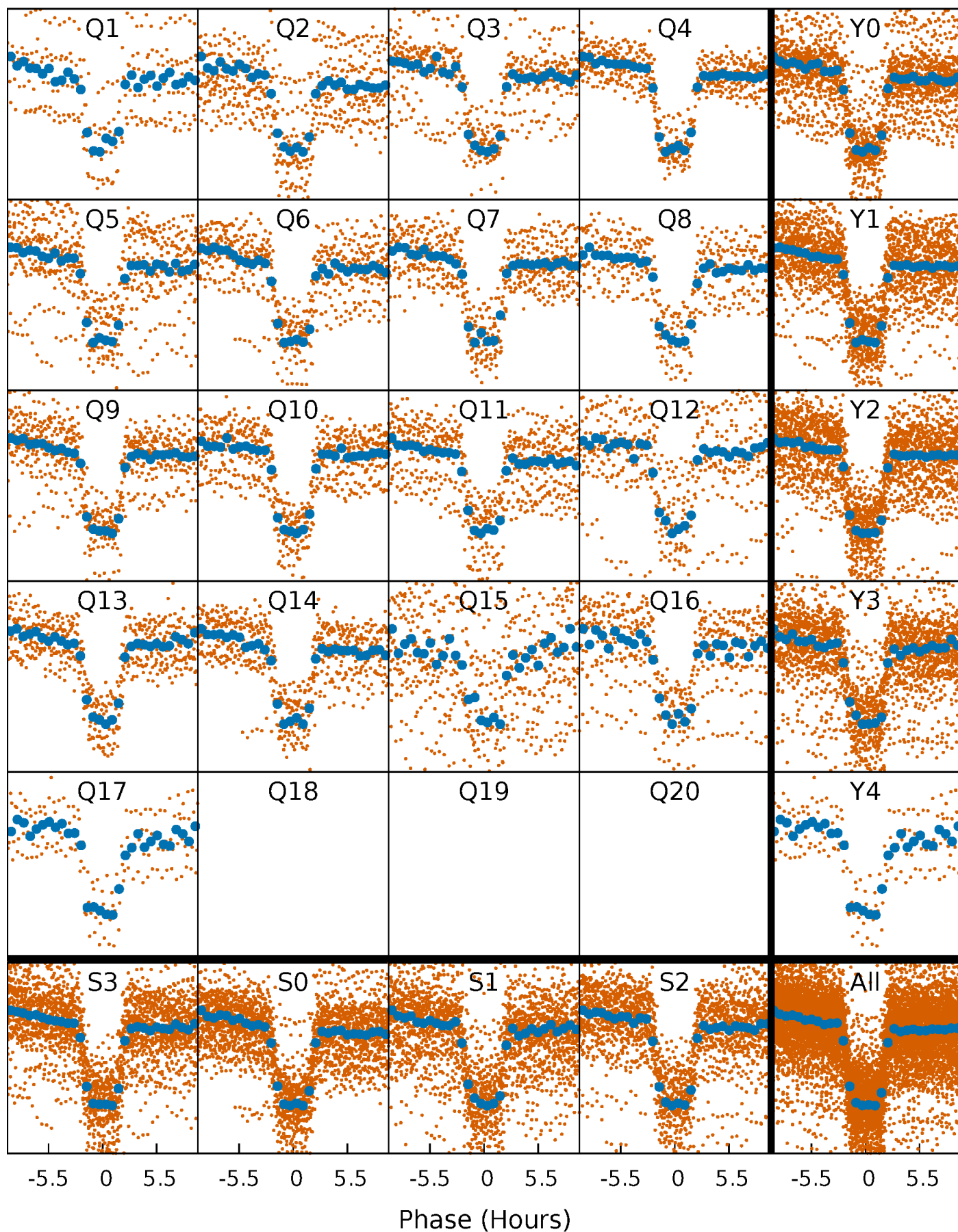


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



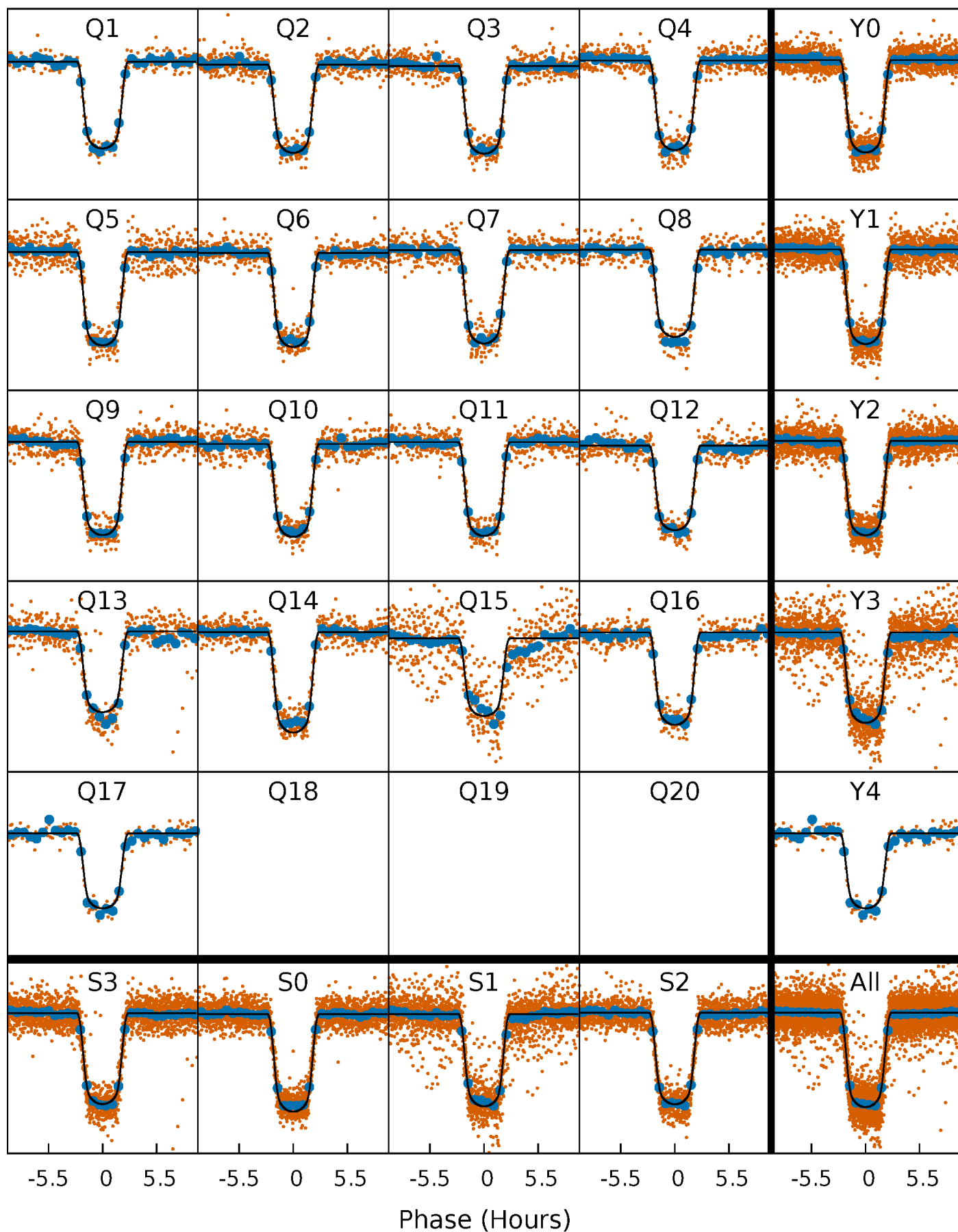
PDC Quarter-Phased Transit Curves

TCE 011826400-02 P= 5.889375 Days $T_0=131.835466$ (BKJD)



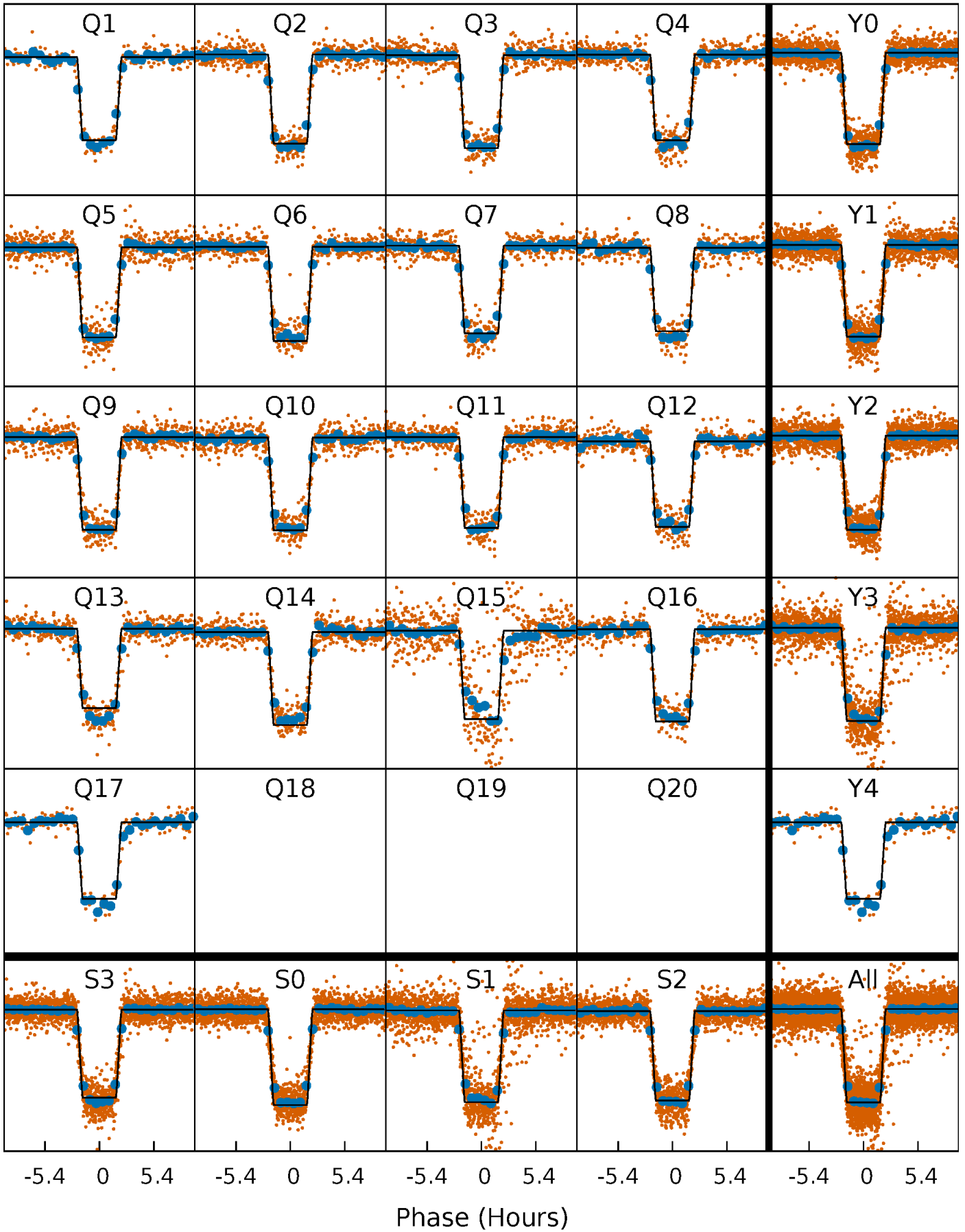
DV Quarter-Phased Transit Curves

TCE 011826400-02 P= 5.889375 Days $T_0=131.835466$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

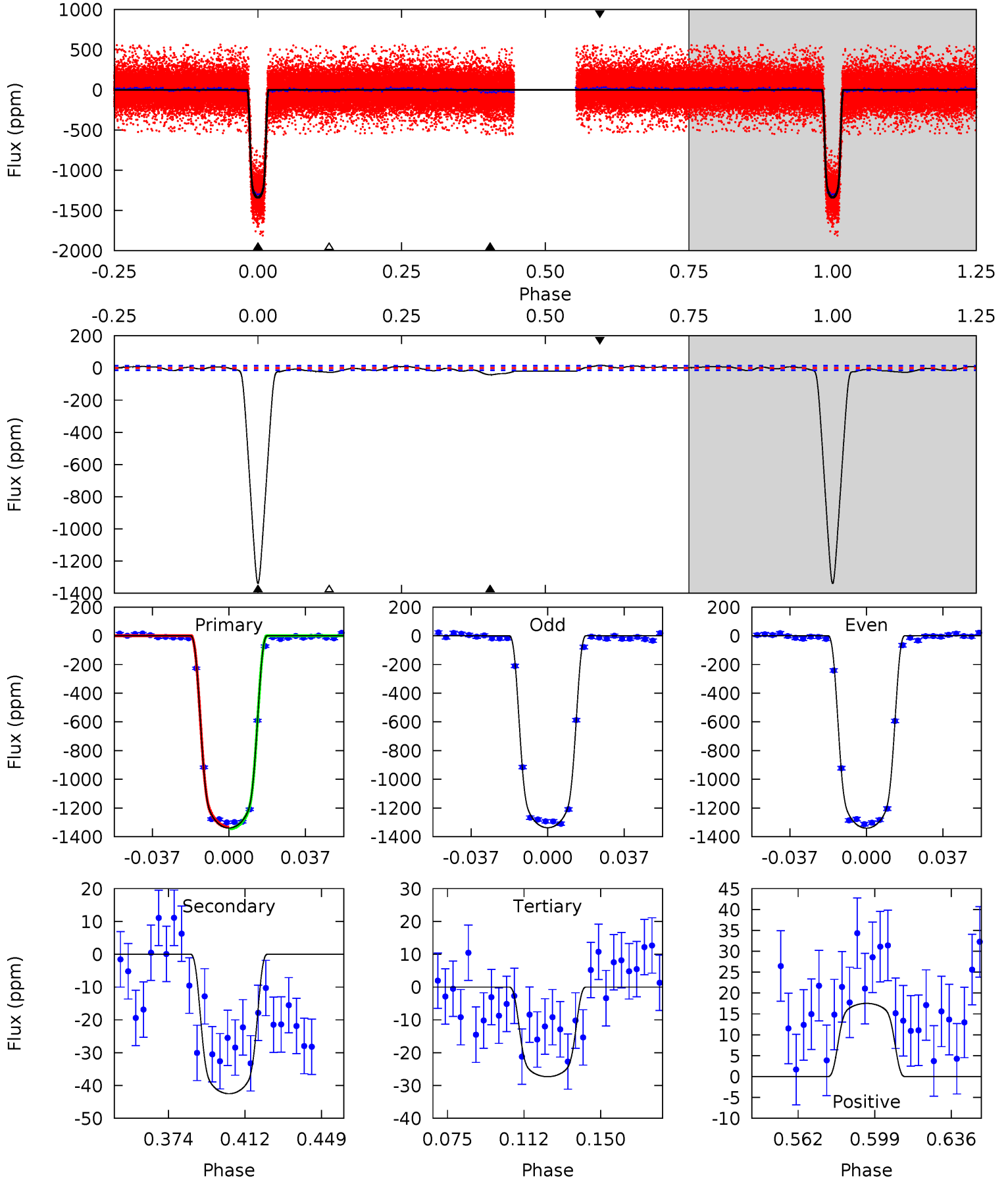
TCE 011826400-02 P= 5.889359 Days $T_0=131.837433$ (BKJD)



DV Model-Shift Uniqueness Test

011826400-02, P = 5.889375 Days, E = 125.946091 Days

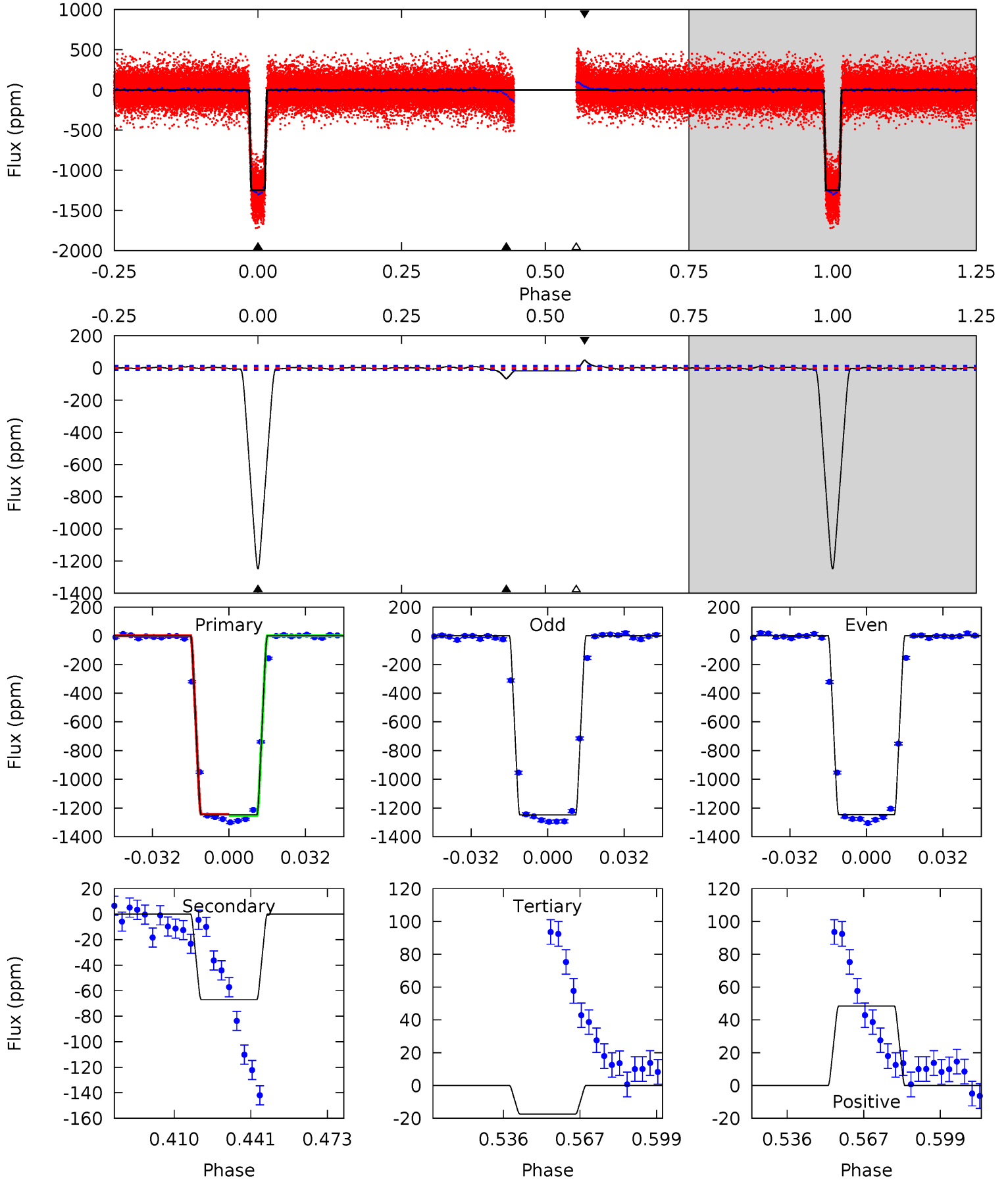
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
464.2	14.7	9.47	6.07	4.77	2.08	3.62	454.7	458.1	5.26	8.66	0.56	1.00	0.01	1.95



Alt Model-Shift Uniqueness Test

011826400-02, P = 5.889359 Days, E = 125.948074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
465.0	25.0	6.48	18.1	4.80	2.15	2.44	458.6	447.0	18.5	6.92	0.53	0.99	0.04	1.68



Stellar Parameters For KIC 011826400

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7249^{+201}_{-302}	$3.993^{+0.266}_{-0.143}$	$-0.220^{+0.250}_{-0.350}$	$2.071^{+0.531}_{-0.708}$	$1.537^{+0.206}_{-0.308}$	$0.244^{+0.429}_{-0.101}$
	+3%/-4%	+7%/-4%	+114%/-159%	+26%/-34%	+13%/-20%	+176%/-41%
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 011826400-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 3	$8.70^{+1.26}_{-1.37}$	2339^{+171}_{-190}	3329^{+79}_{-81}	$1.682^{+0.671}_{-0.383}$
Alt.	-67 ± 3	$7.92^{+1.14}_{-1.35}$	2334^{+175}_{-201}	3752^{+73}_{-94}	$3.204^{+1.315}_{-0.718}$

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

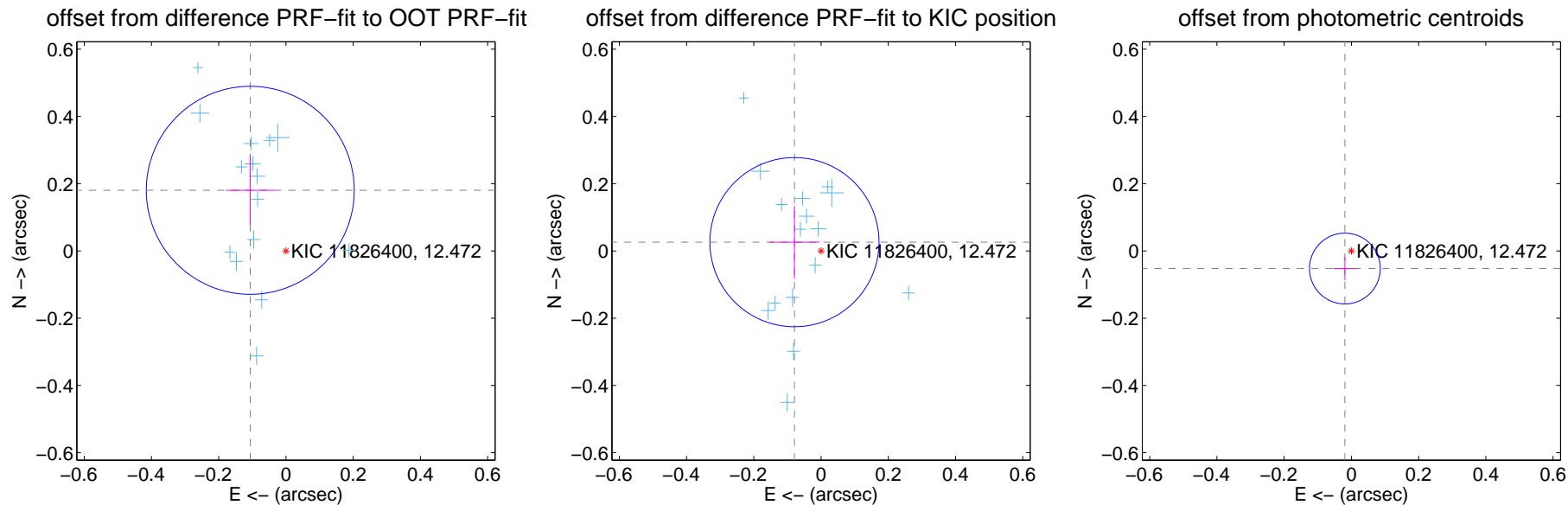
DV Centroid Data

Supplemental centroid analysis for 011826400-02. Kepler magnitude: 12.47. Transit SNR 261.81

There are 17 quarters with good PRF difference image offsets

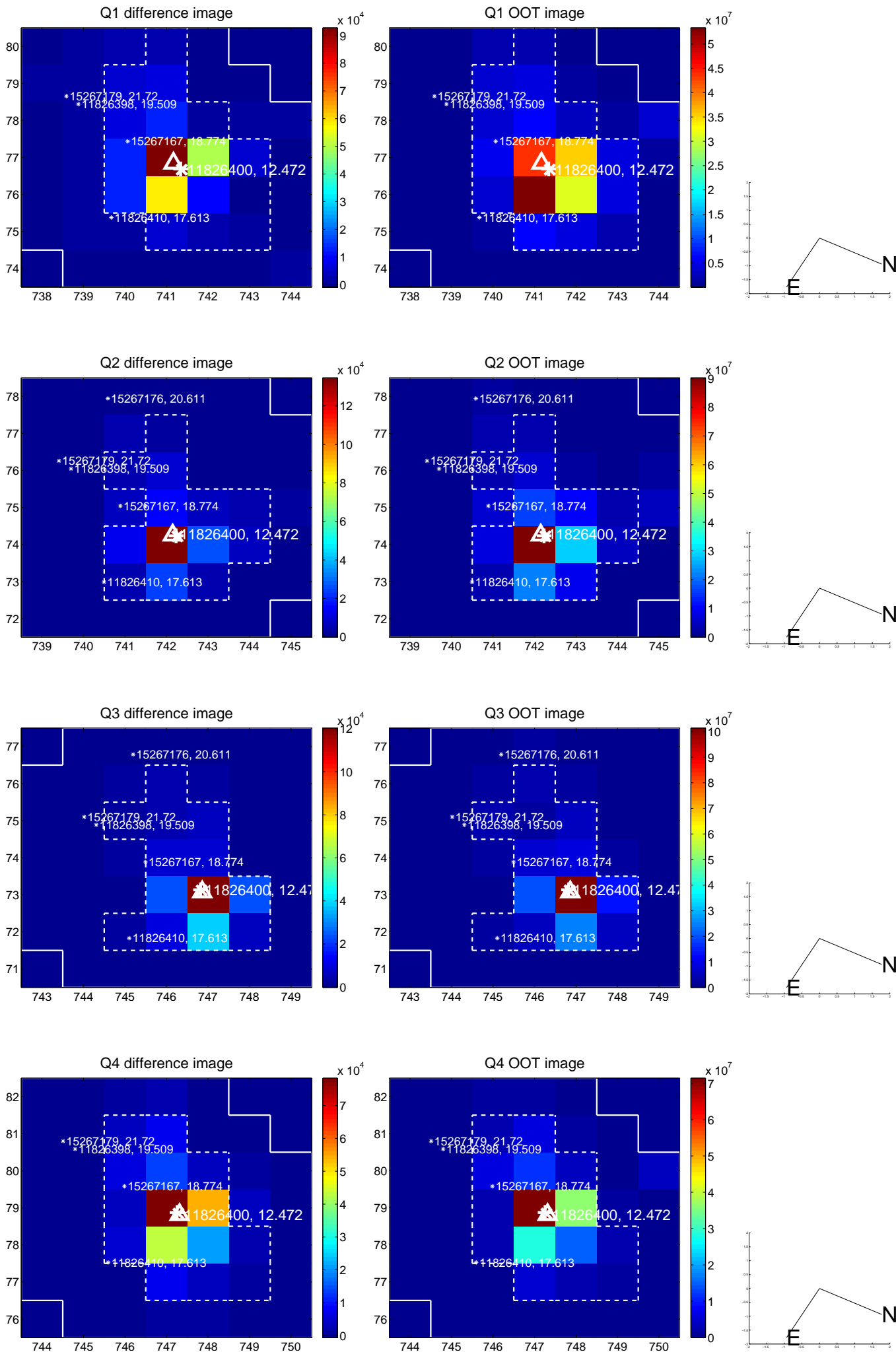
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.209 ± 0.103	2.03	0.106 ± 0.073	0.180 ± 0.104
PRF-fit source offset from KIC position	0.083 ± 0.084	0.99	0.079 ± 0.074	0.026 ± 0.108
photometric centroid source offset	0.06 ± 0.04	1.59	0.02 ± 0.03	-0.05 ± 0.04

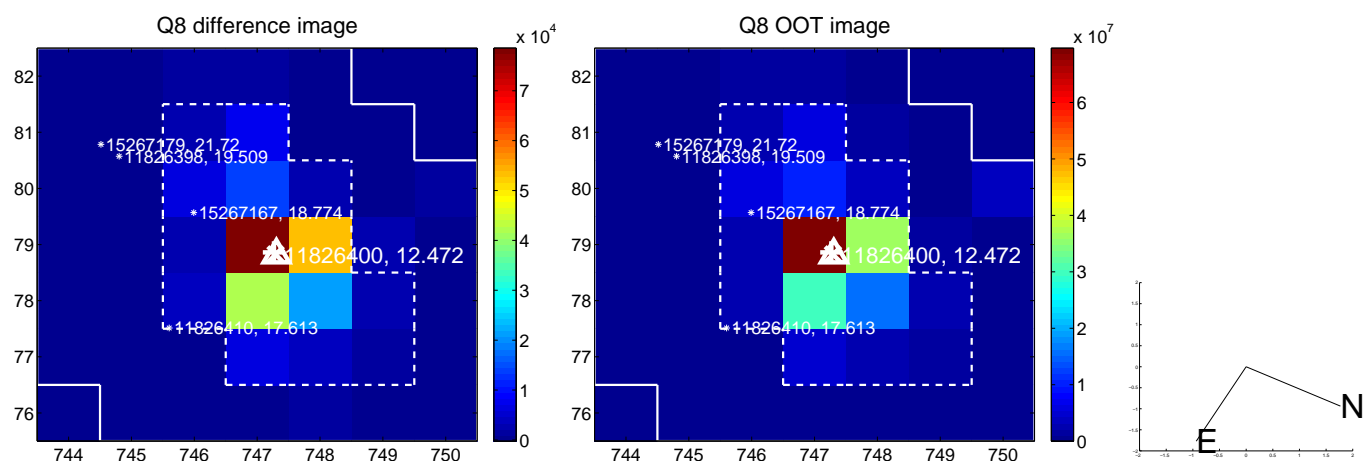
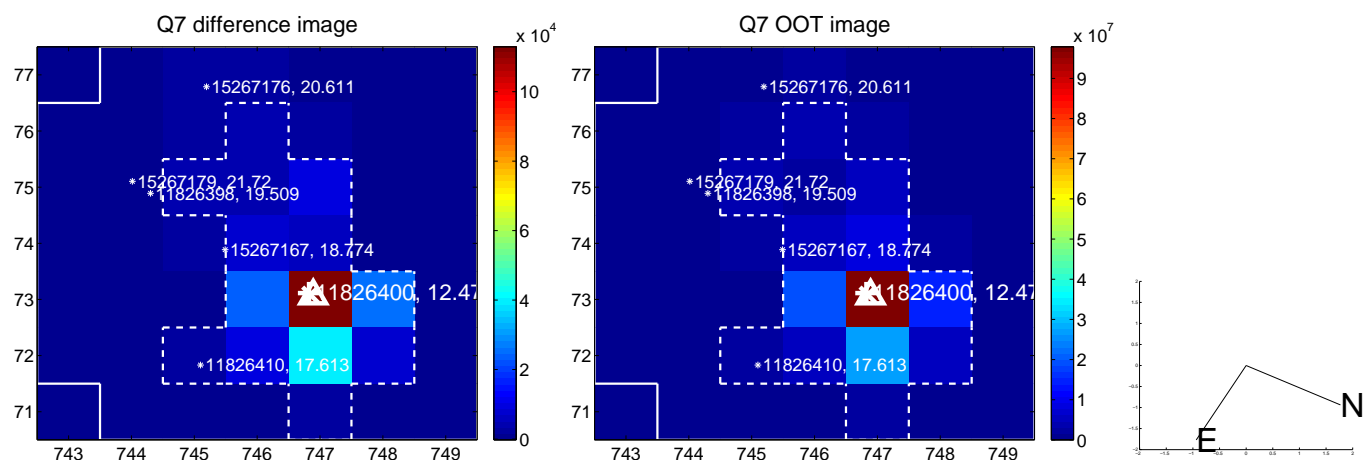
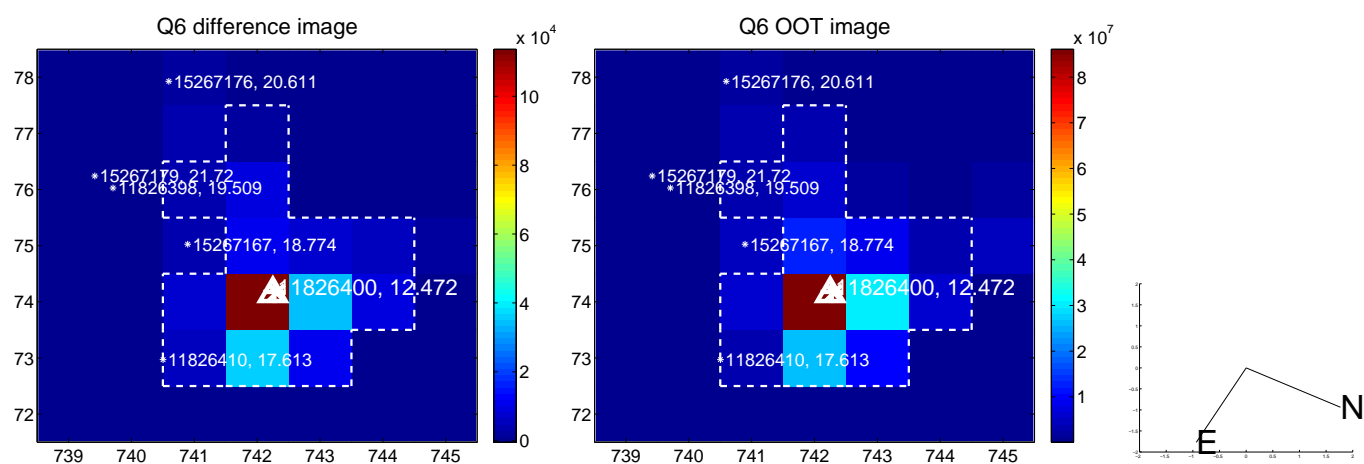
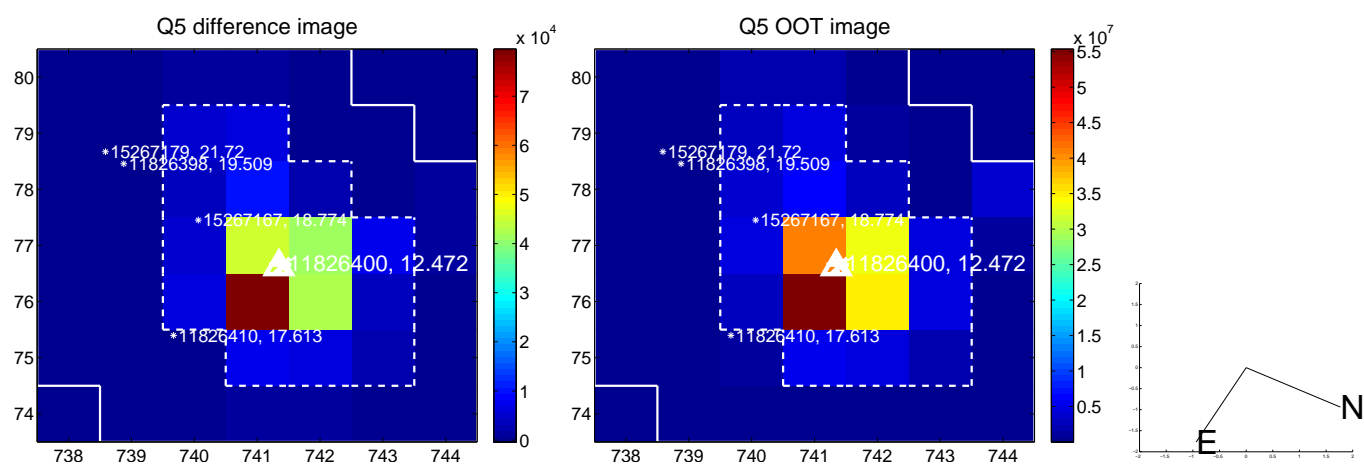


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

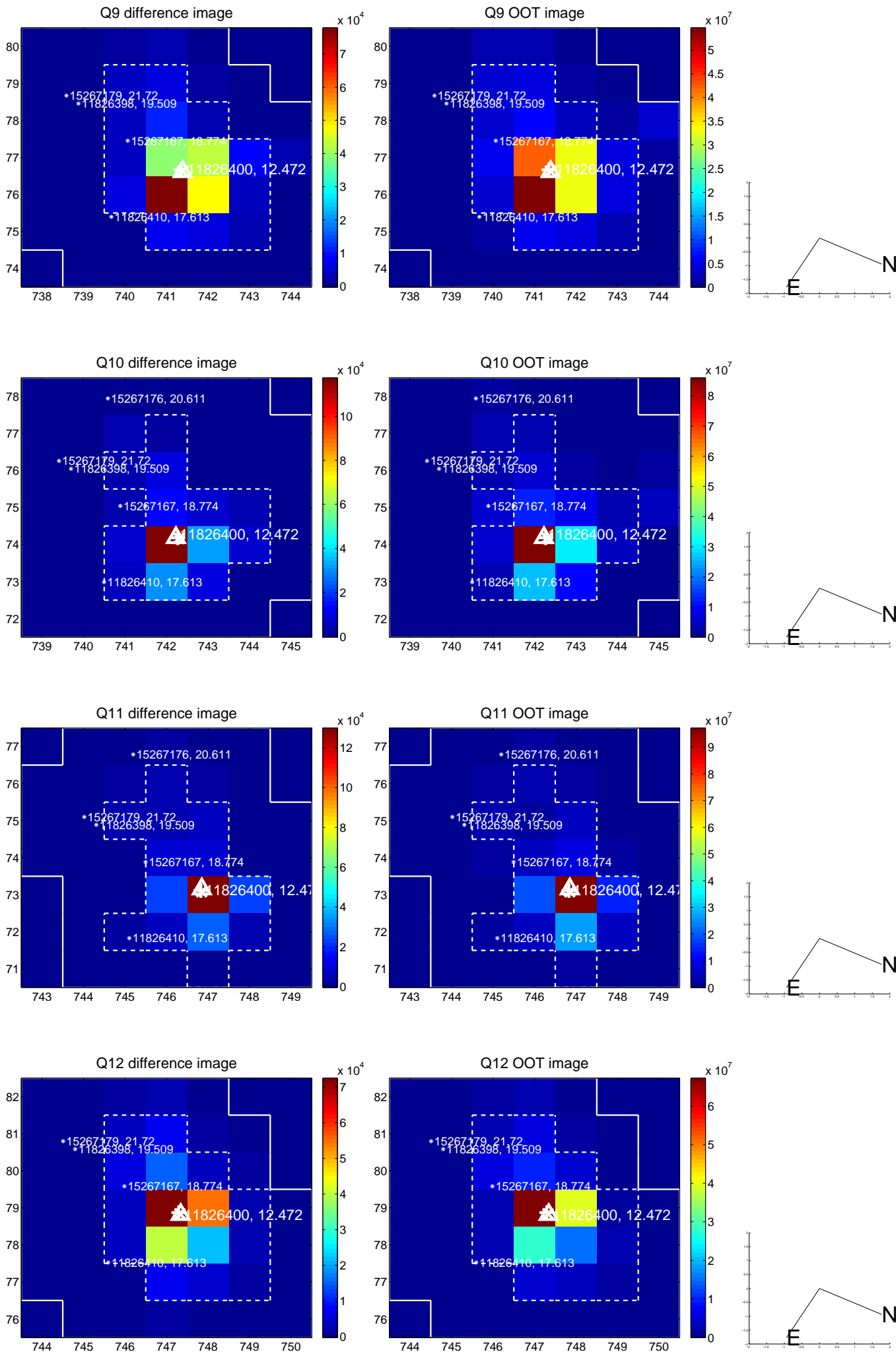
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



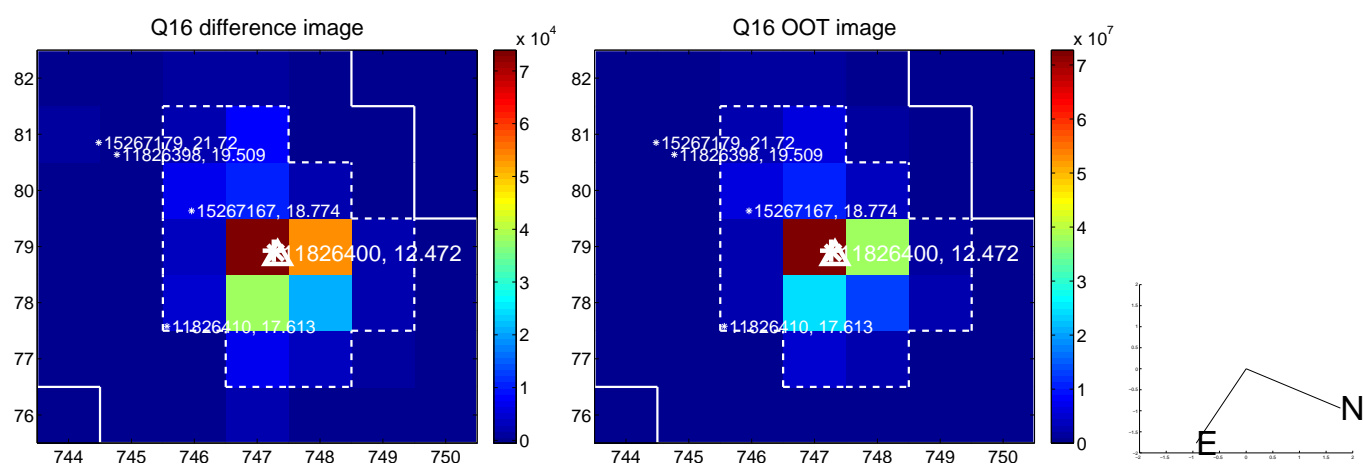
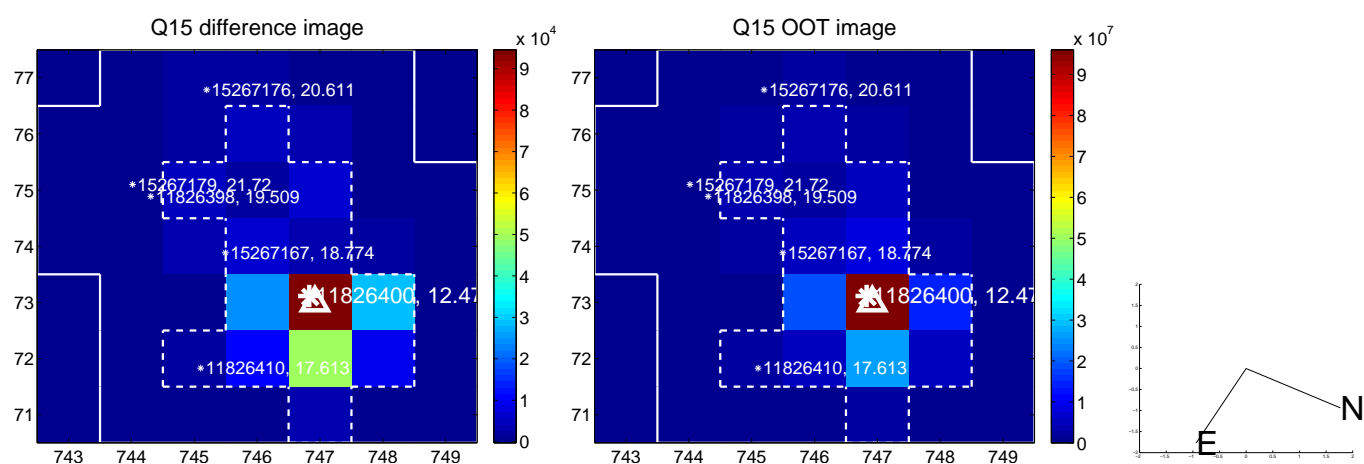
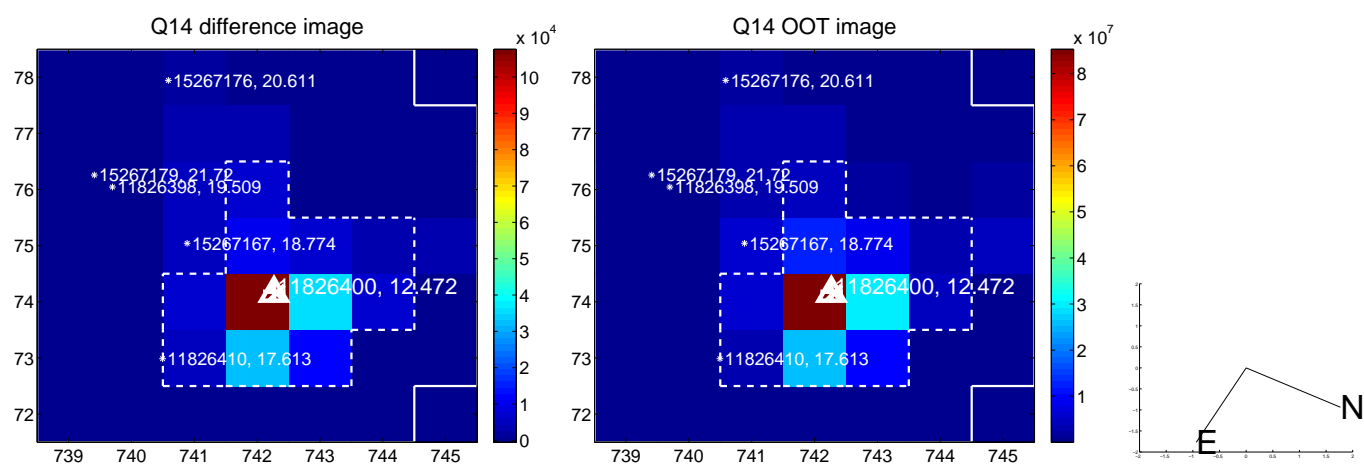
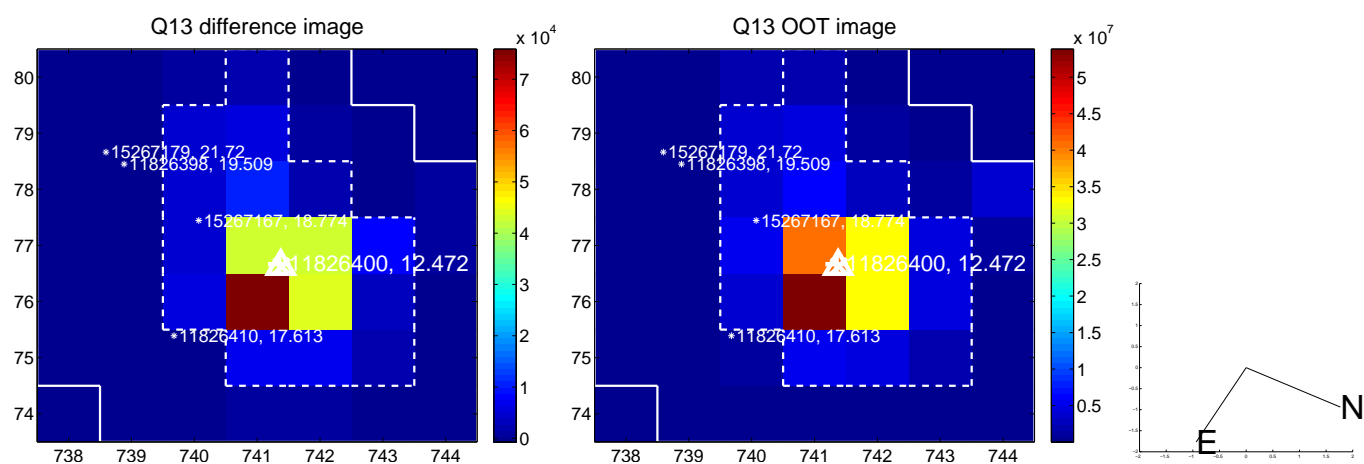
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



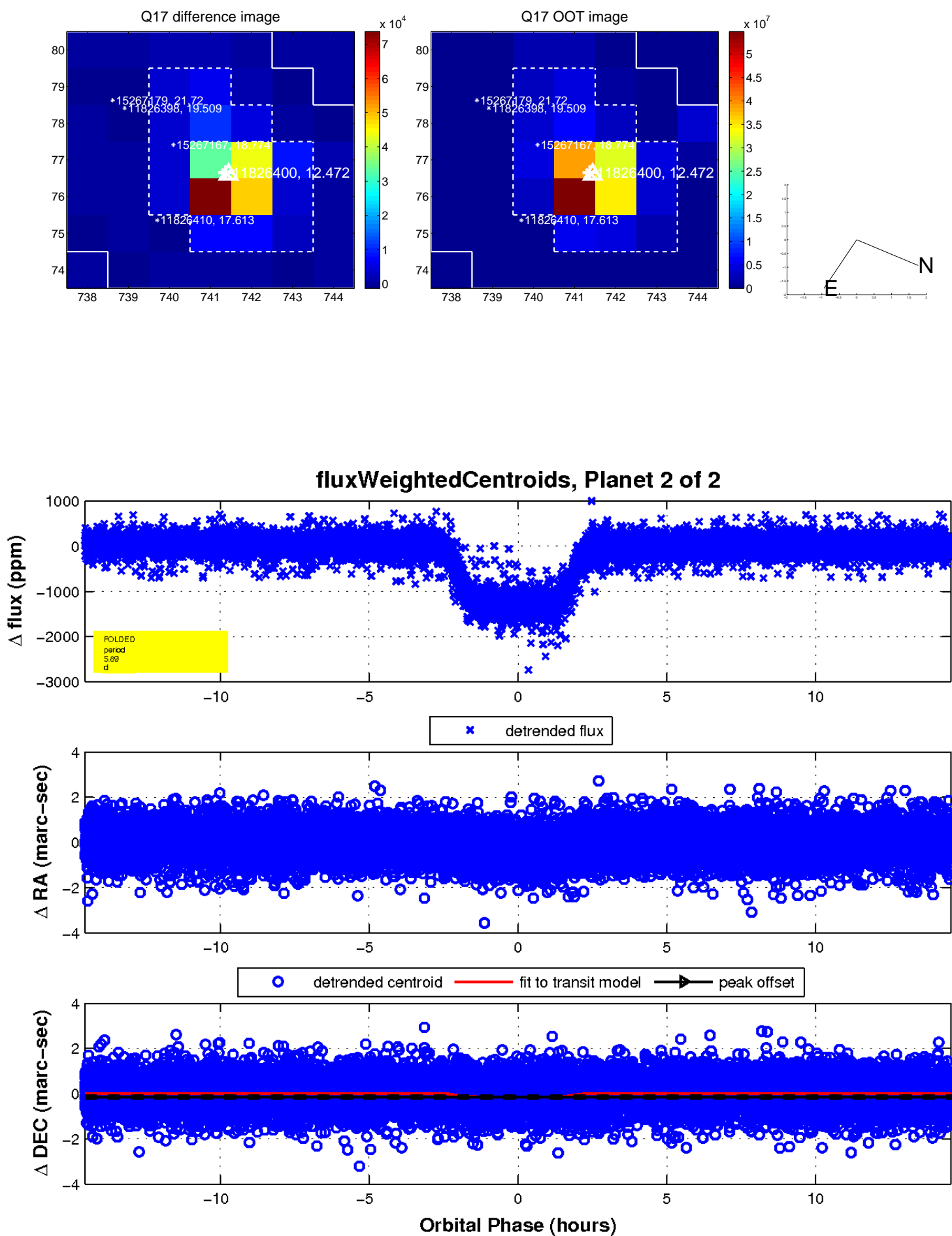
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

