

KIC 007764267

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})
007764267-01	OBS	No	369.959874	233.160046	274.9	16.249	8.7	8.2	1.01	6225	2.04	1.28
007764267-02	OBS	No	385.541558	146.275830	220.0	9.966	7.3	7.7	1.01	6225	1.60	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007764267-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
007764267-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

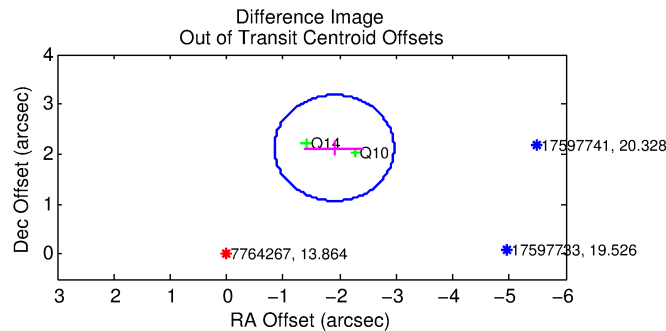
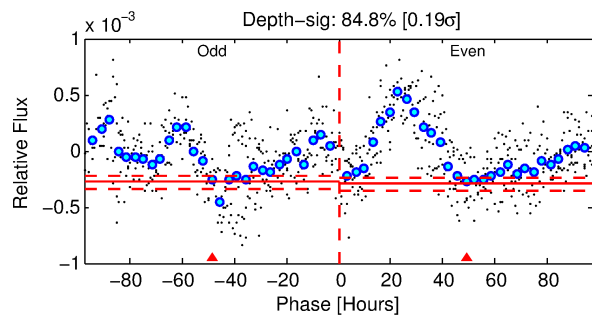
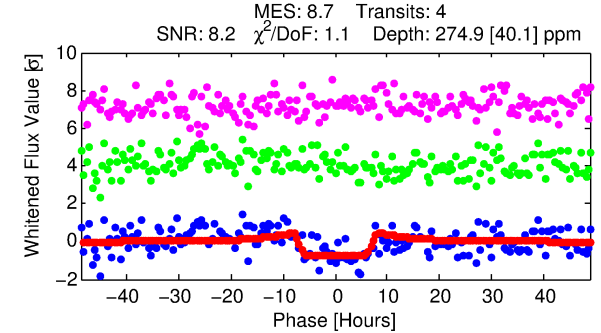
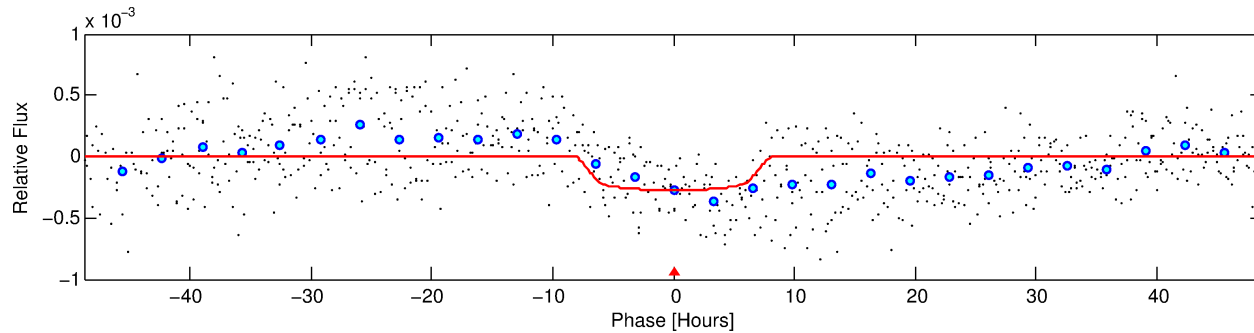
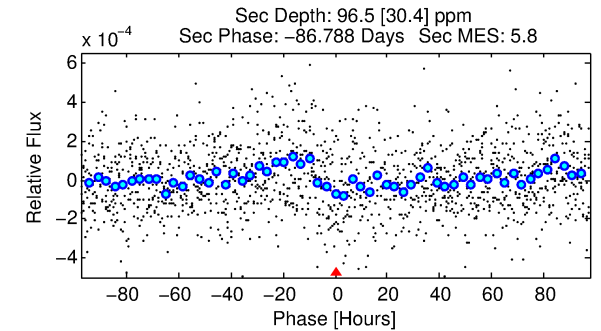
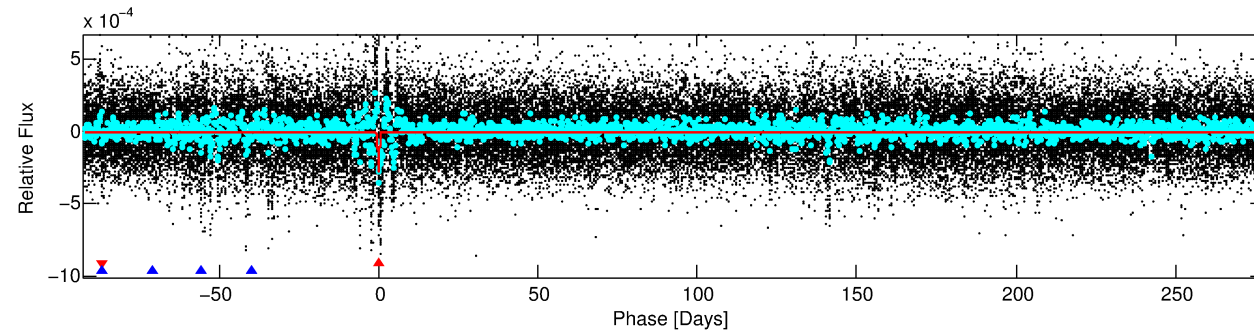
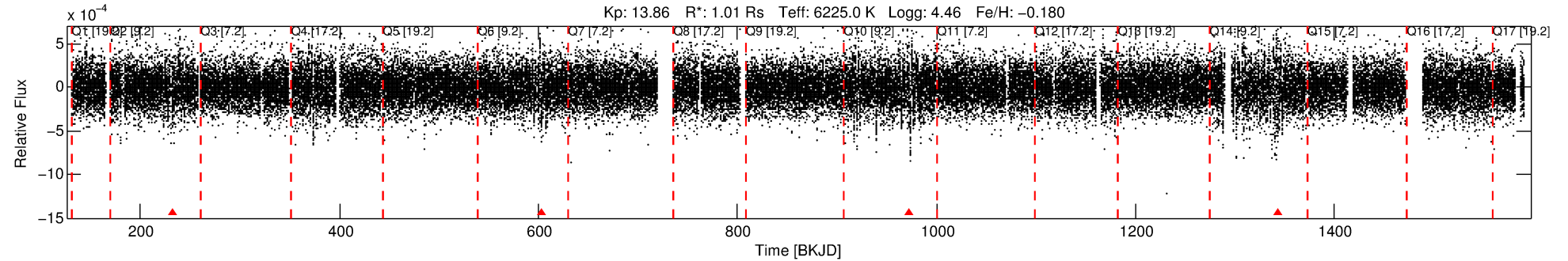
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007764267-01

No Significant Match Found

DV One-Page Summary

KIC: 7764267 Candidate: 1 of 2 Period: 369.960 d



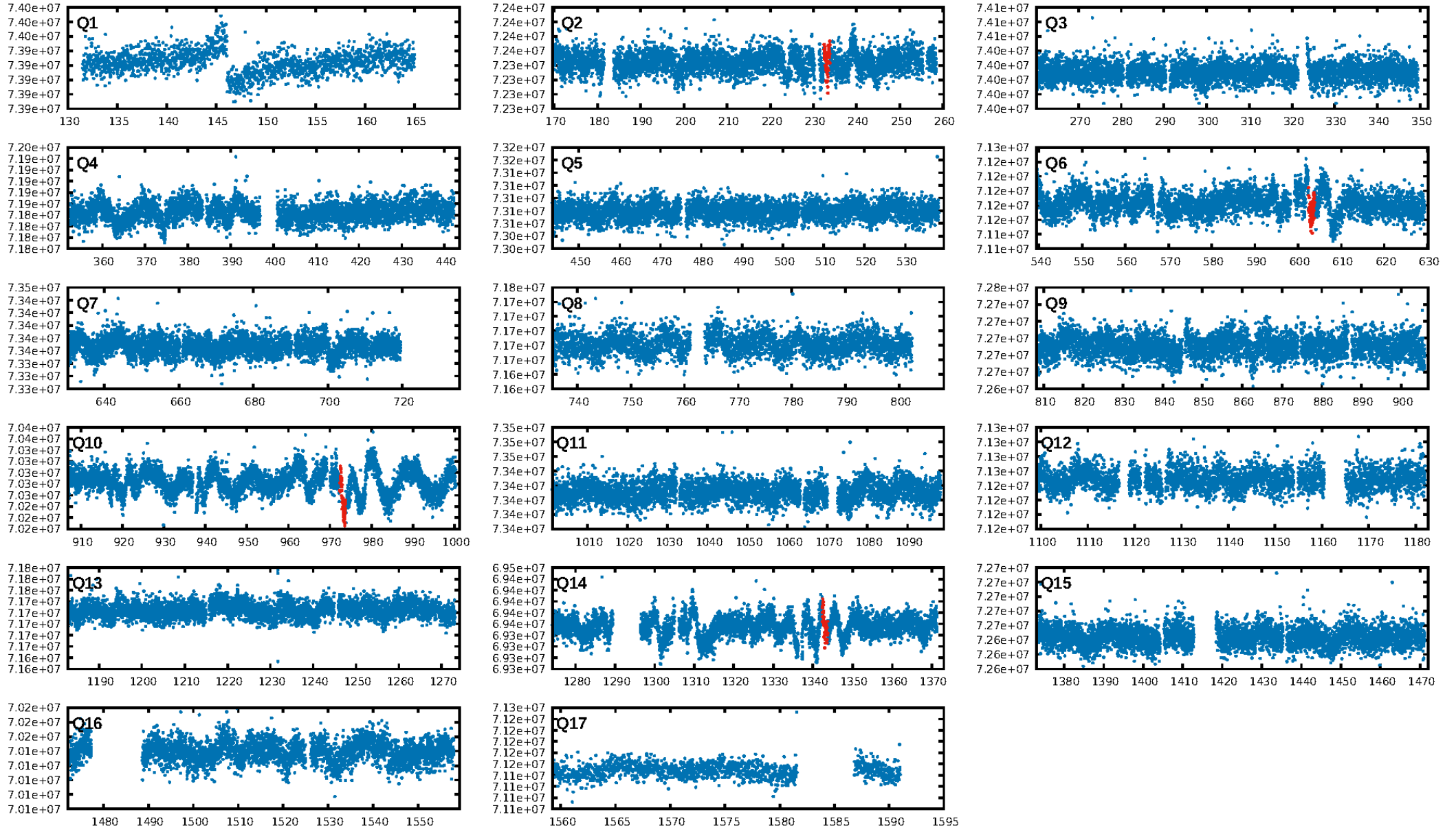
DV Fit Results:

Period = 369.95987 [0.01328] d
Epoch = 233.1600 [0.0243] BKJD
Rp/R* = 0.0185 [0.0019]
a/R* = 69.48 [24.92]
b = 0.94 [0.05]
Seff = 1.28 [0.50]
Teff = 271 [26] K
Rp = 2.04 [0.65] Re
a = 1.0329 [0.2617] AU
Ag = 13594.12 [7163.50] [1.90 σ]
Teffp = 4531 [454] K [9.38 σ]

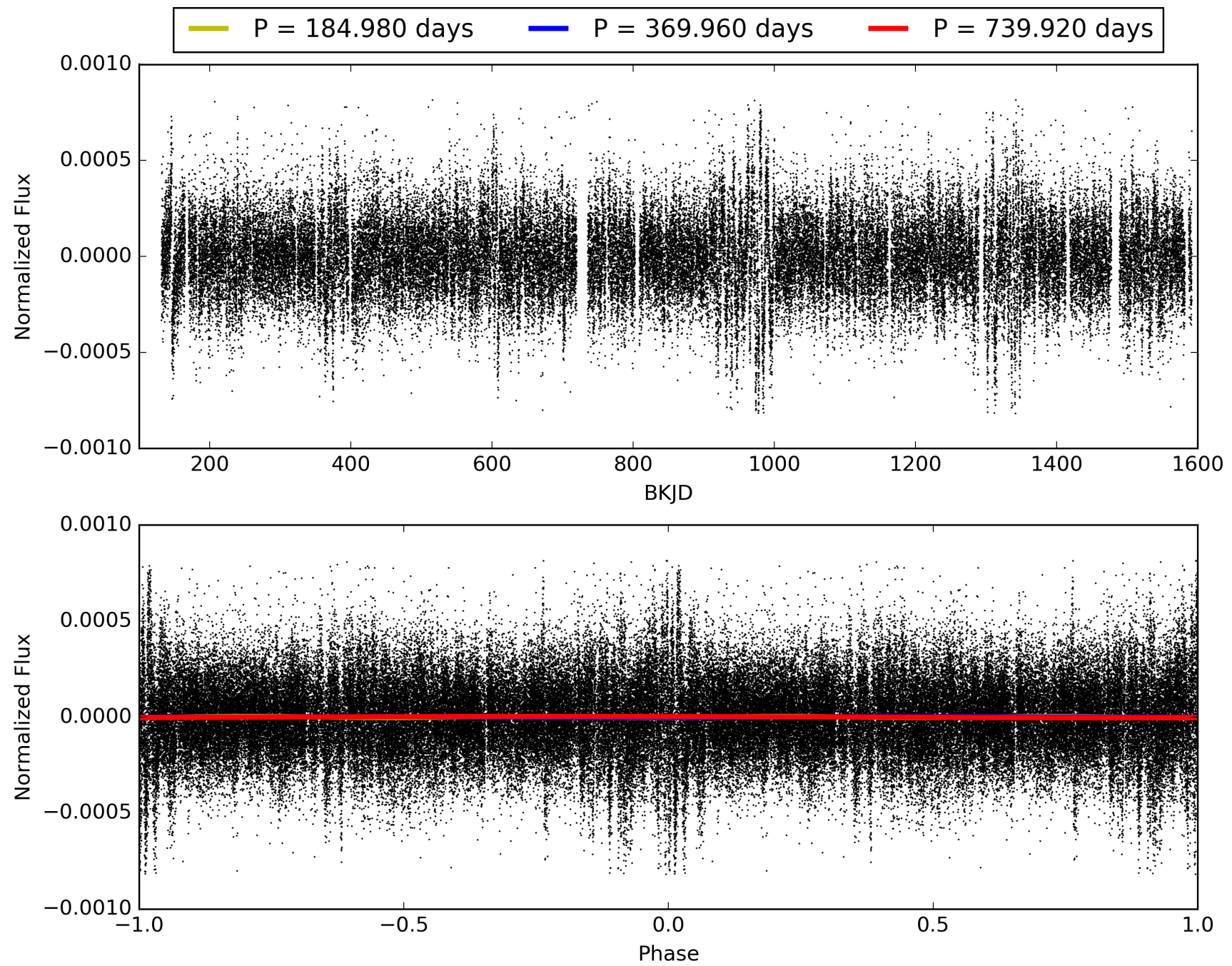
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [19.62 σ]
ModelChiSquare2-sig: 64.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.68e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: -6.328
Centroid-sig: 0.1%
Centroid-so: 5.808 arcsec [3.01 σ]
OotOffset-rm: 2.850 arcsec [8.06 σ]
KicOffset-rm: 2.955 arcsec [8.19 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007764267-01, PDC Light Curves

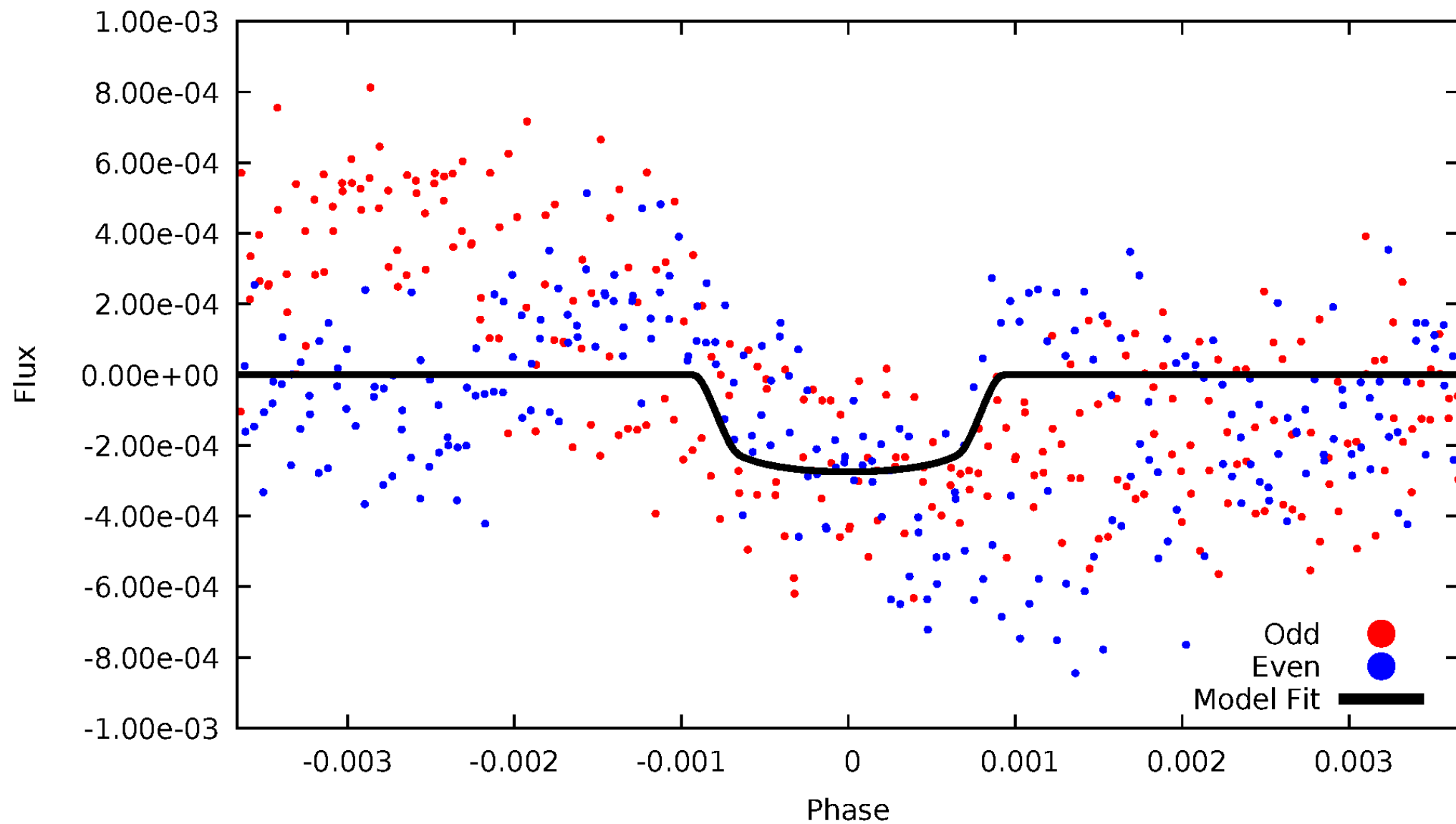


TCE 007764267-01



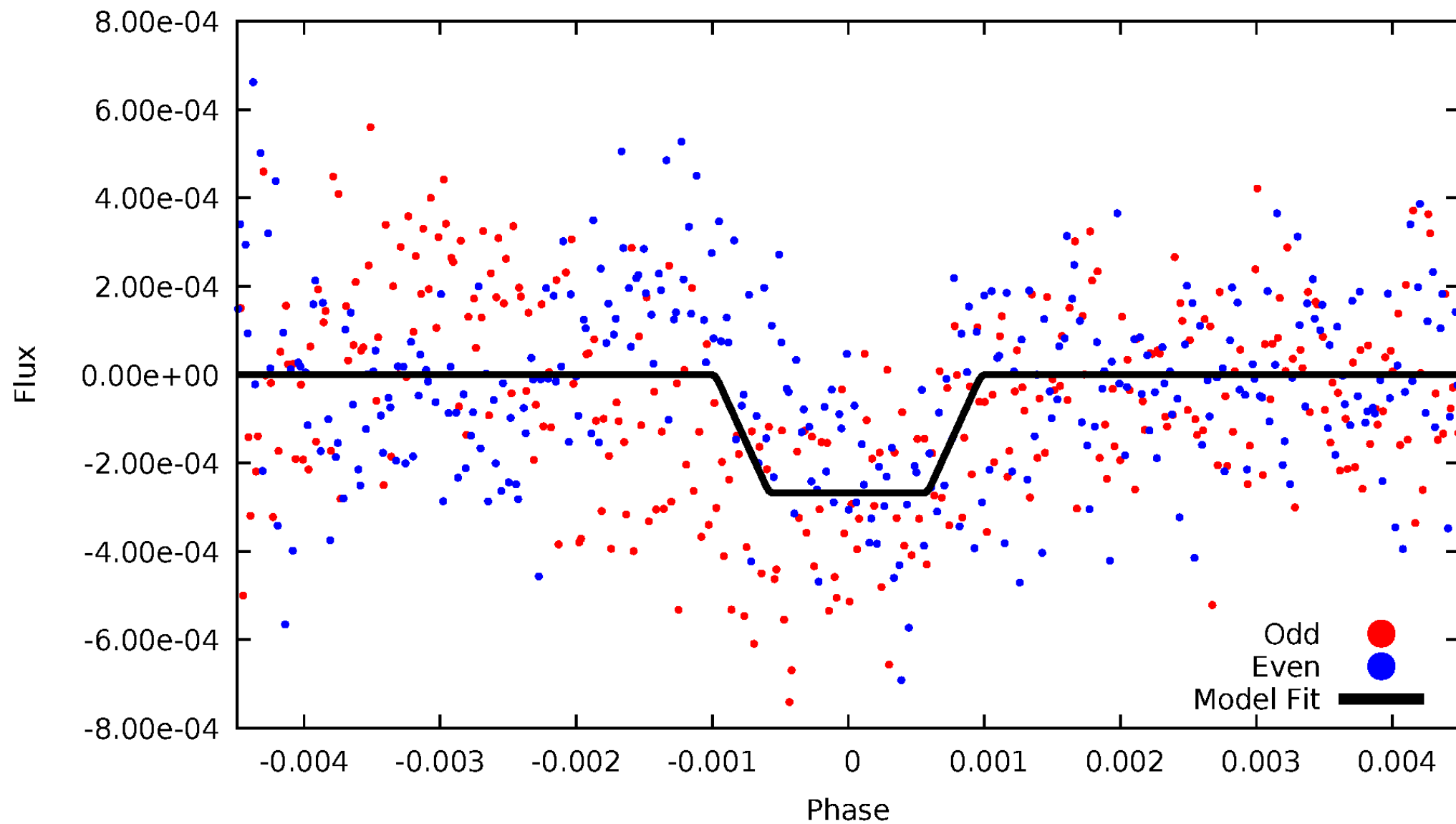
DV Odd/Even

TCE 007764267-01



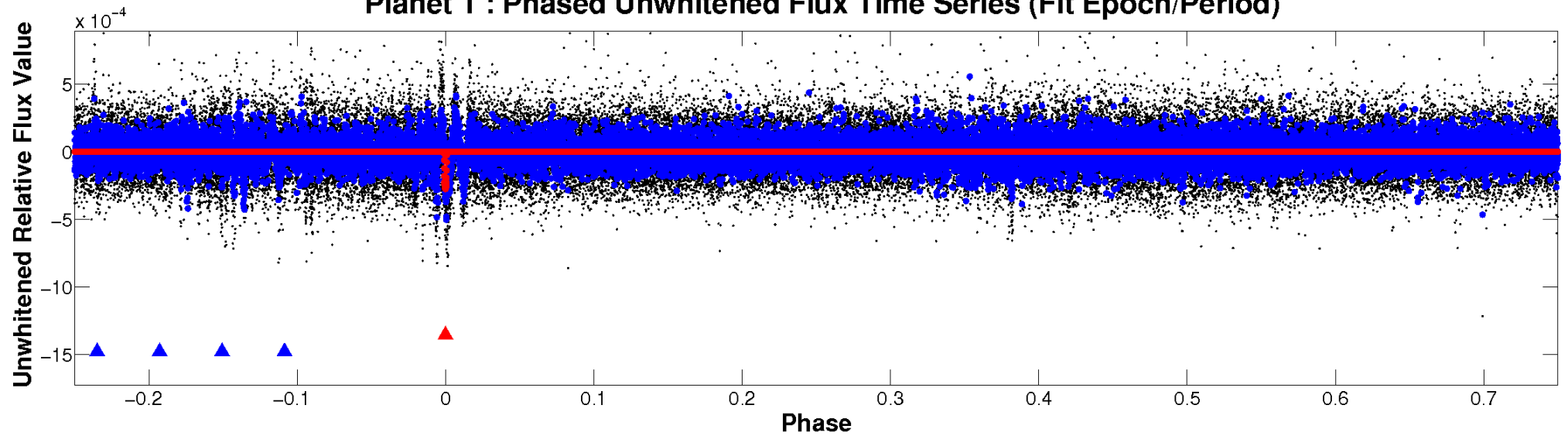
ALT Odd/Even

TCE 007764267-01

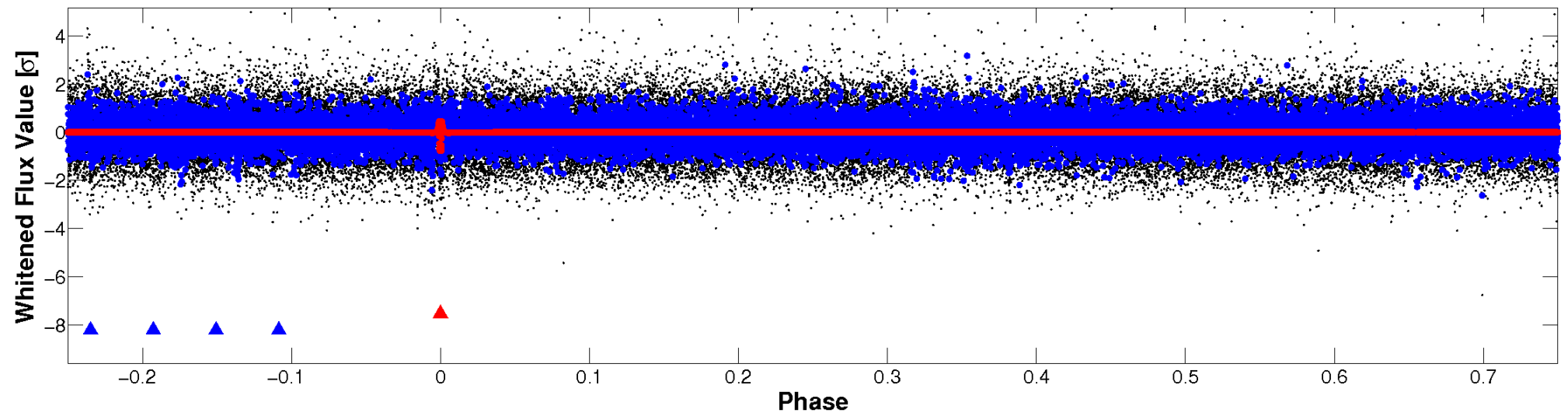


Non-Whitened Vs. Whitened Light Curve

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

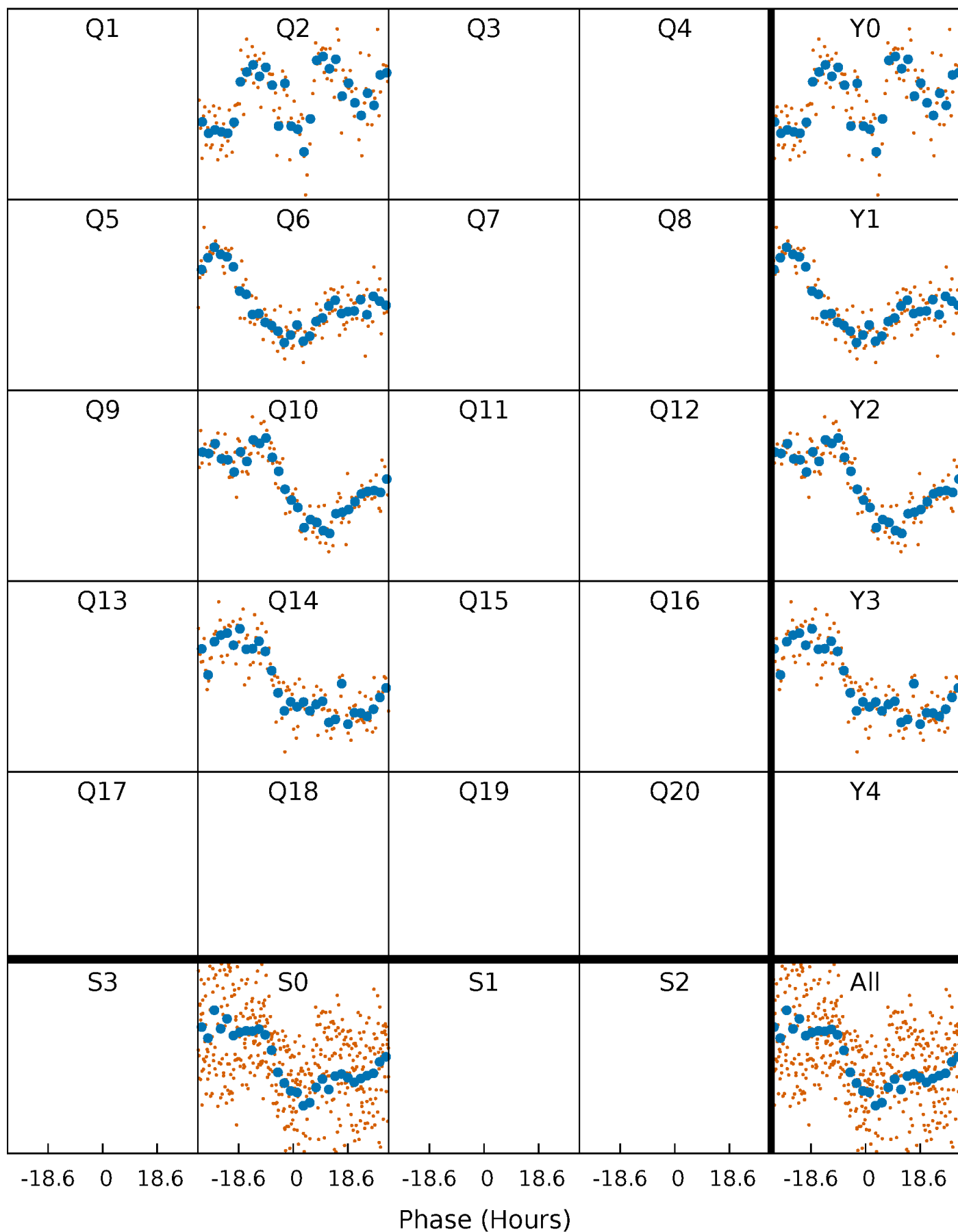


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



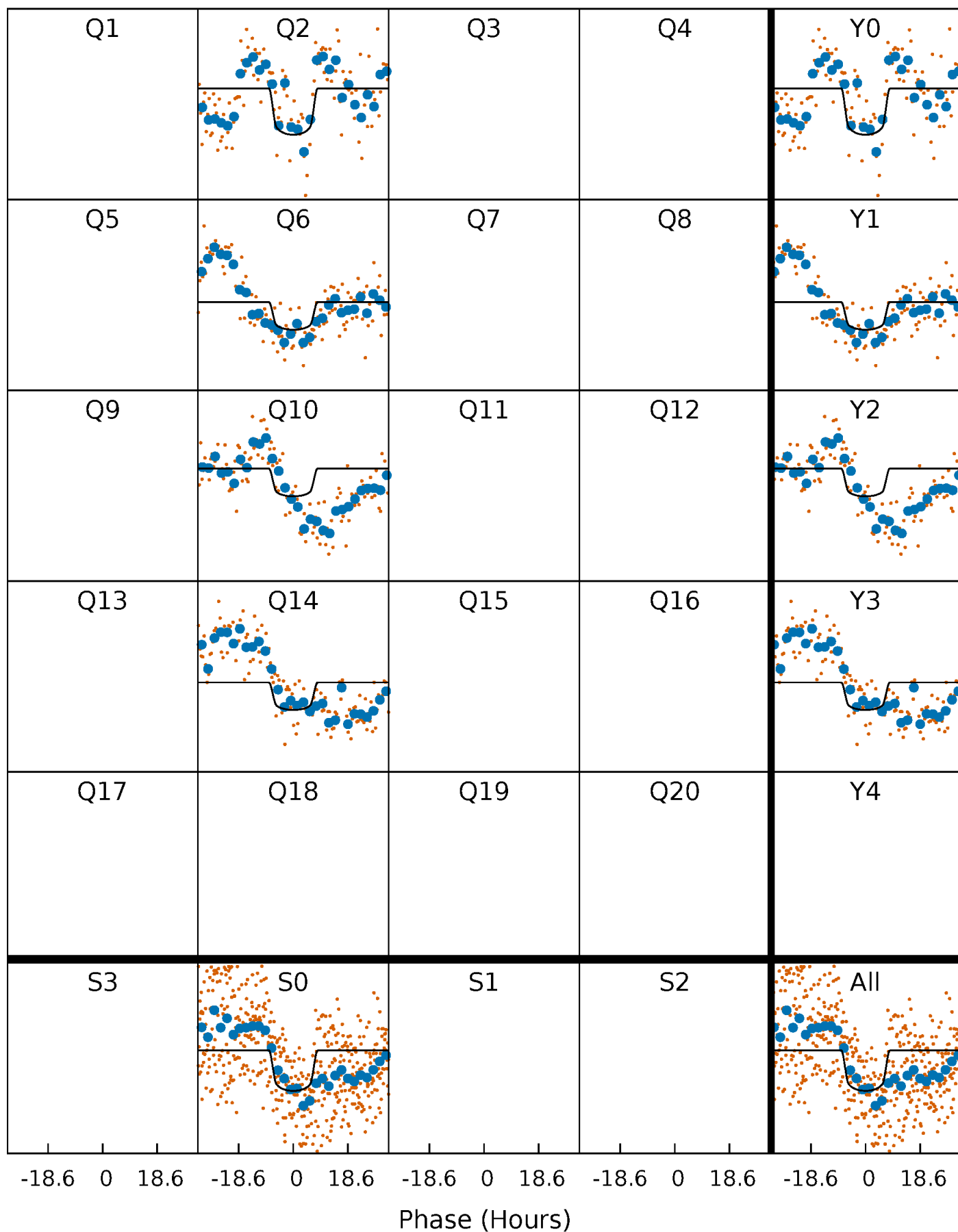
PDC Quarter-Phased Transit Curves

TCE 007764267-01 P=369.959874 Days $T_0=233.160046$ (BKJD)



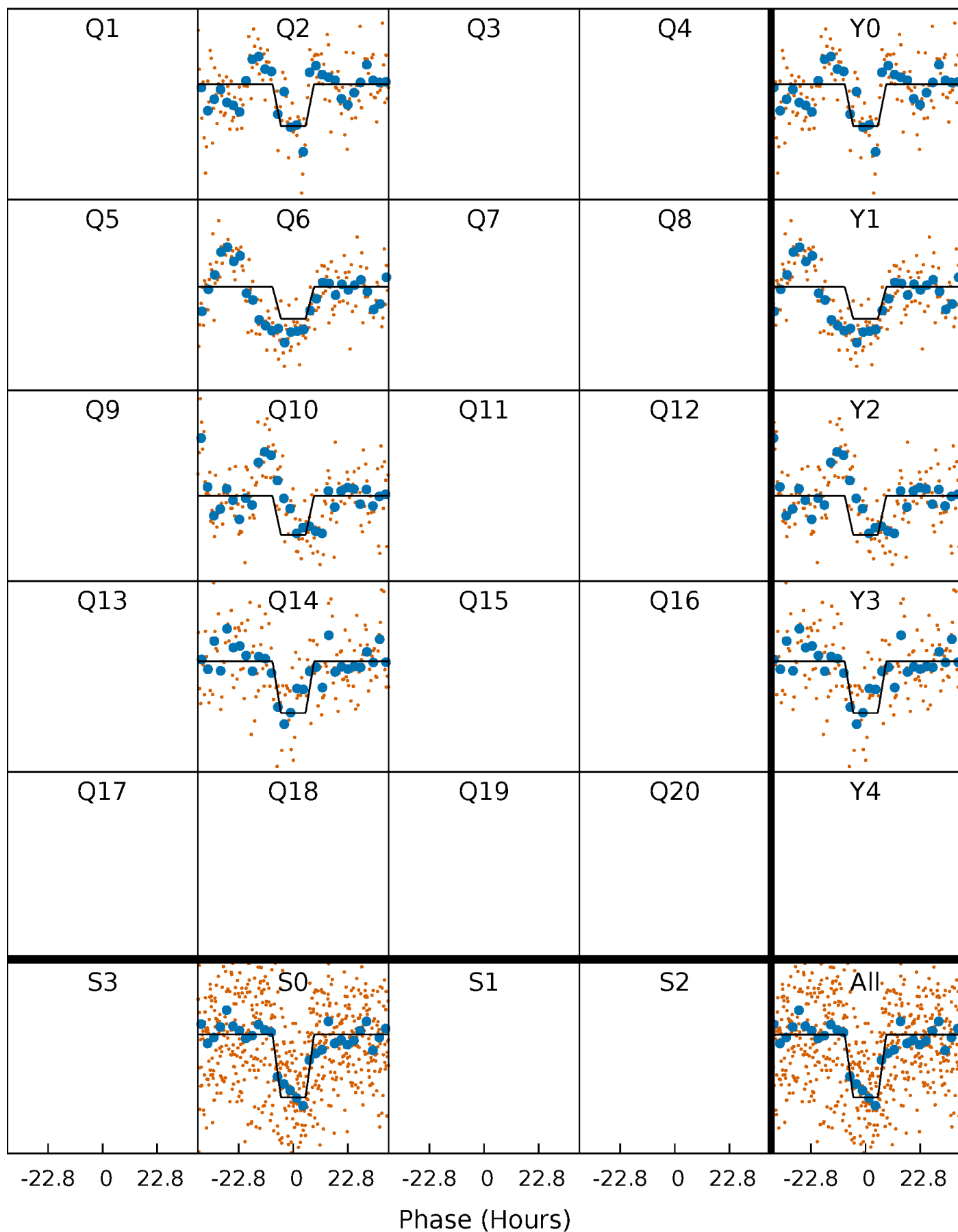
DV Quarter-Phased Transit Curves

TCE 007764267-01 P=369.959874 Days $T_0=233.160046$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

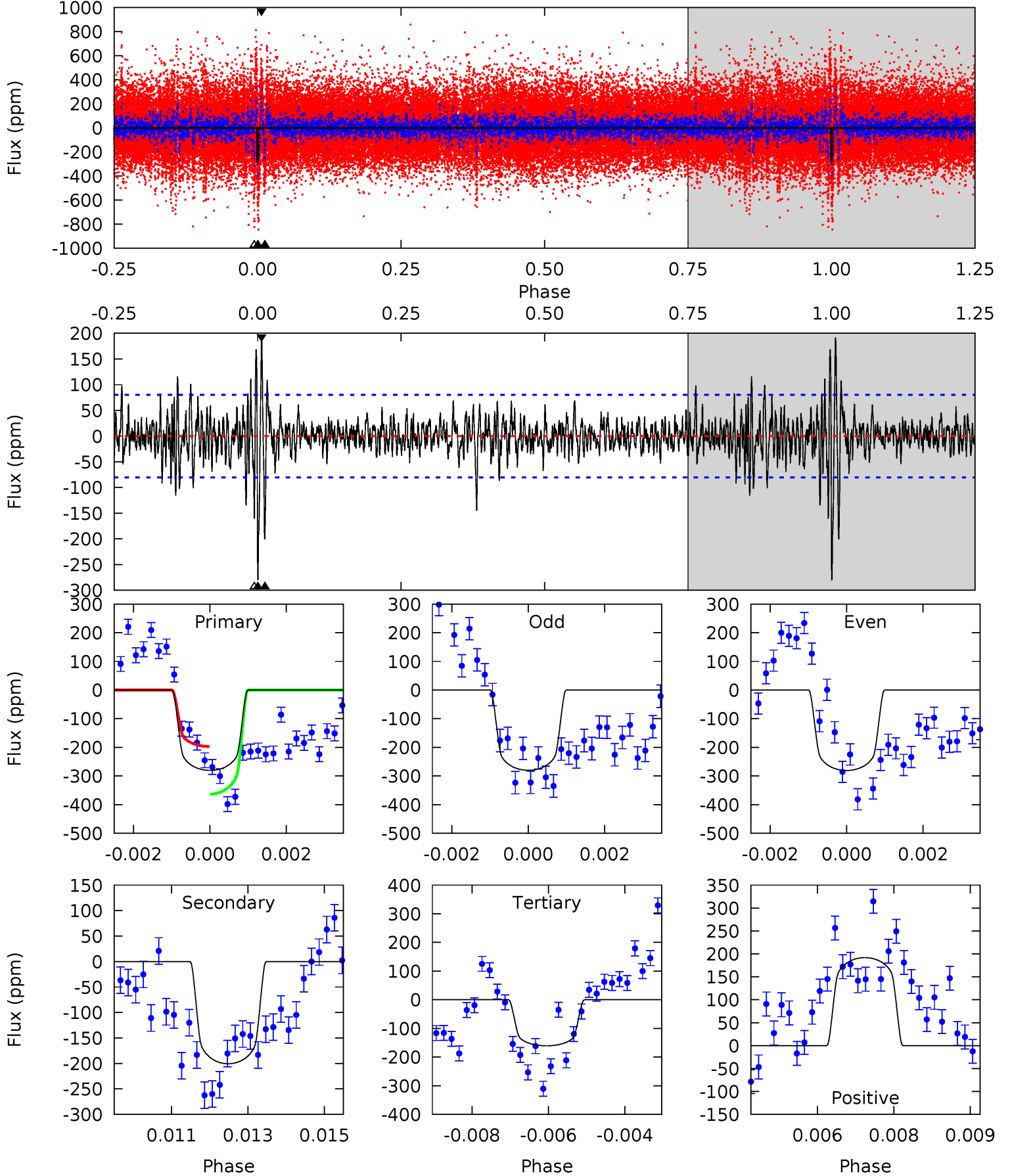
TCE 007764267-01 P=369.963226 Days $T_0=233.190666$ (BKJD)



DV Model-Shift Uniqueness Test

007764267-01, P = 369.959874 Days, E = 233.160046 Days

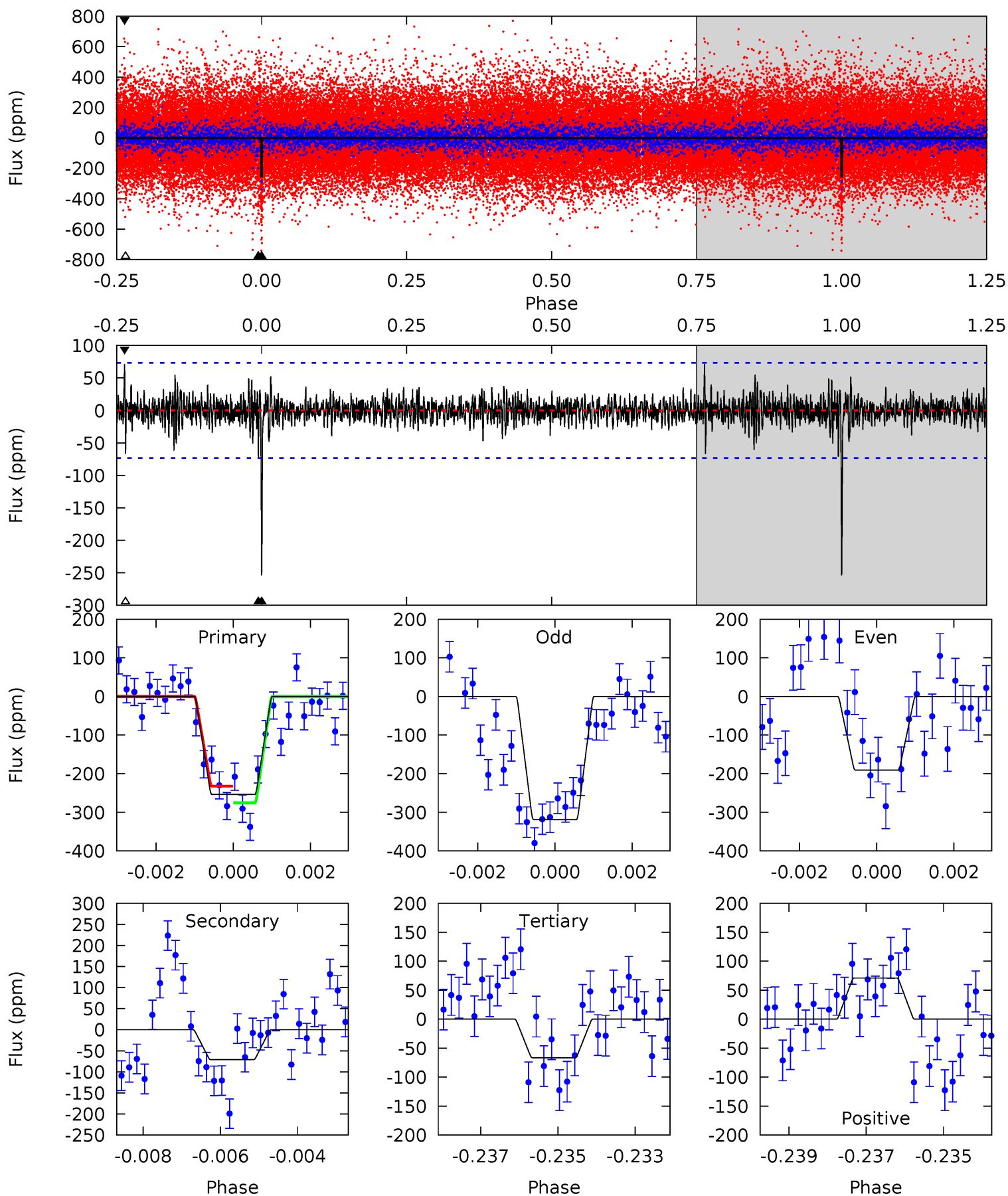
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	13.3	10.7	12.7	5.34	3.11	2.09	7.96	5.89	2.65	0.57	0.02	1.00	0.41	5.54



Alt Model-Shift Uniqueness Test

007764267-01, P = 369.963226 Days, E = 233.190666 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	5.16	4.83	5.16	5.33	3.09	1.02	13.6	13.3	0.33	-0.00	4.67	1.08	0.22	1.57



Stellar Parameters For KIC 007764267

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6225^{+150}_{-206}	$4.461^{+0.050}_{-0.200}$	$-0.180^{+0.250}_{-0.300}$	$1.009^{+0.305}_{-0.102}$	$1.070^{+0.144}_{-0.144}$	$1.467^{+0.381}_{-0.734}$
	+2%/-3%	+1%/-4%	+139%/-167%	+30%/-10%	+13%/-13%	+26%/-50%
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 007764267-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-201 ± 15	$2.14^{+0.35}_{-0.29}$	385^{+27}_{-16}	5450^{+313}_{-284}	25330^{+8109}_{-6252}
Alt.	-71 ± 14	$1.87^{+0.33}_{-0.28}$	386^{+25}_{-18}	4614^{+330}_{-298}	11293^{+5349}_{-3446}

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

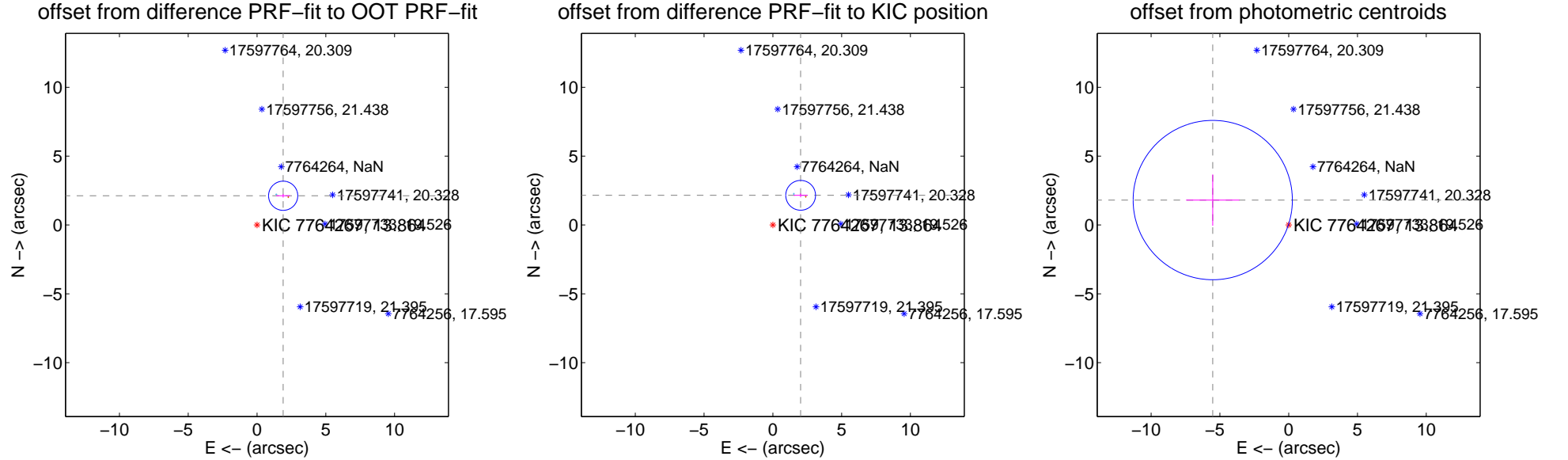
DV Centroid Data

Supplemental centroid analysis for 007764267-01. Kepler magnitude: 13.86. Transit SNR 8.21

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.850 ± 0.354	8.06	-1.901 ± 0.509	2.124 ± 0.134
PRF-fit source offset from KIC position	2.955 ± 0.361	8.19	-2.021 ± 0.505	2.155 ± 0.142
photometric centroid source offset	5.81 ± 1.93	3.01	5.52 ± 1.94	1.81 ± 1.86

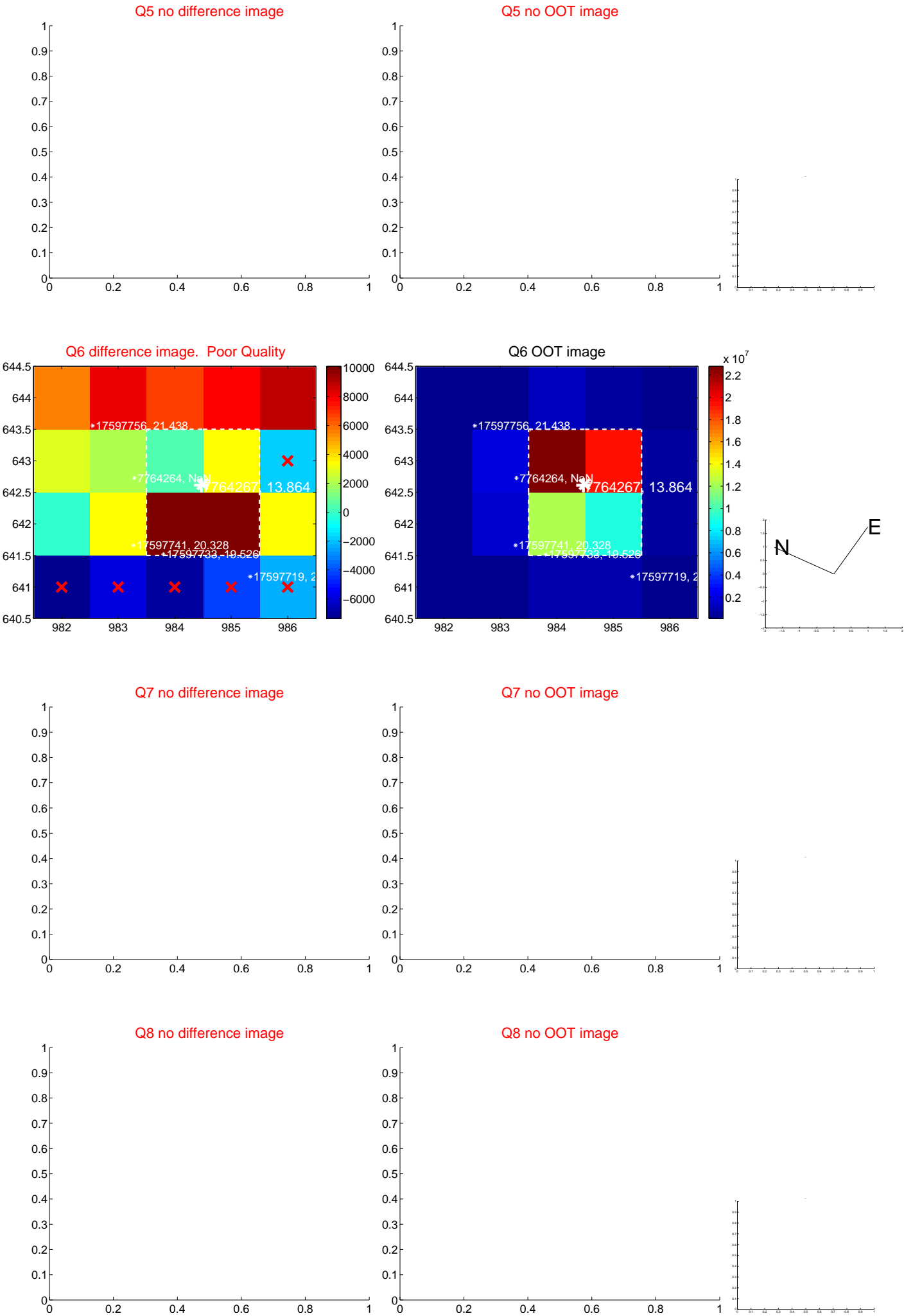


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

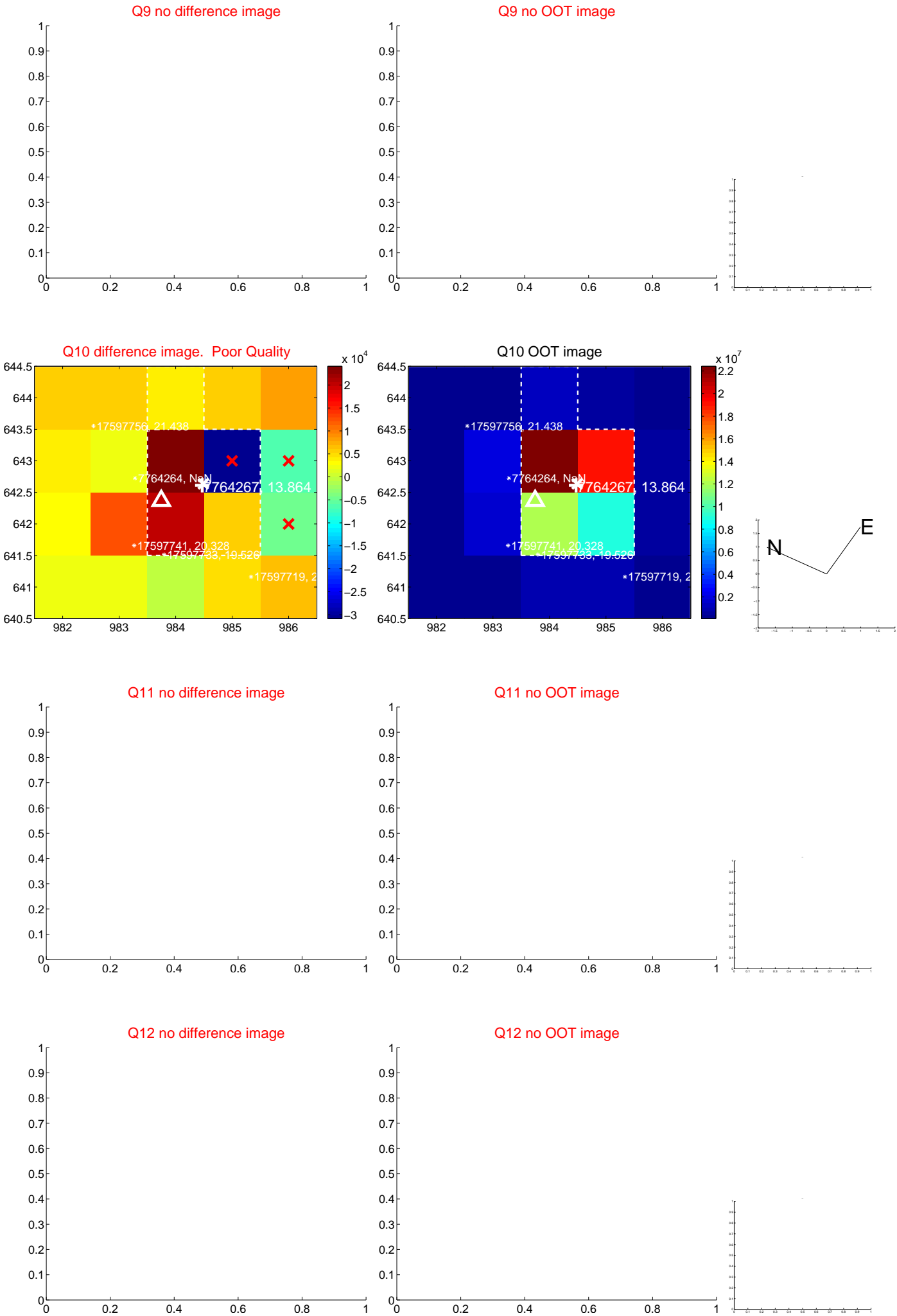
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



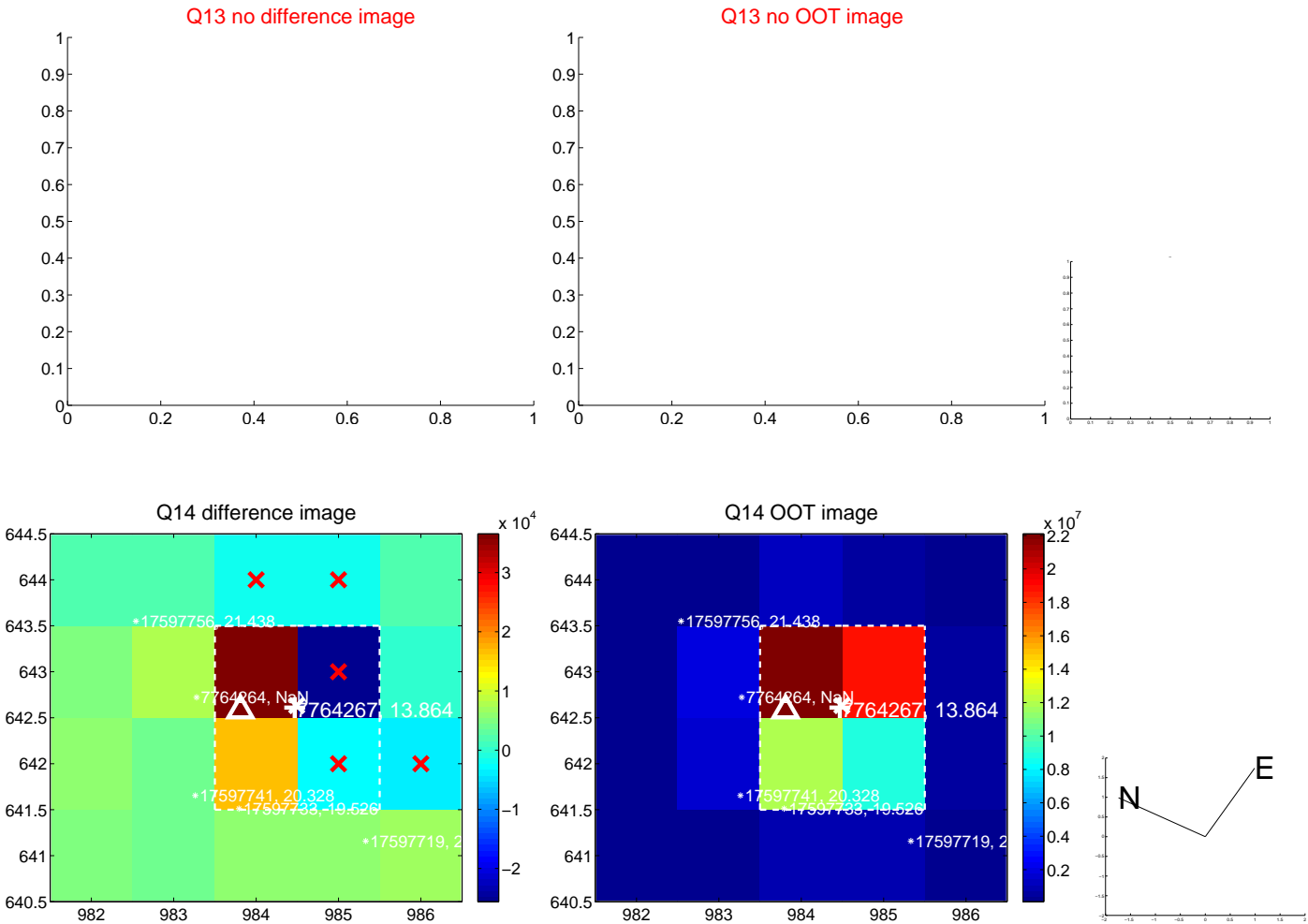
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



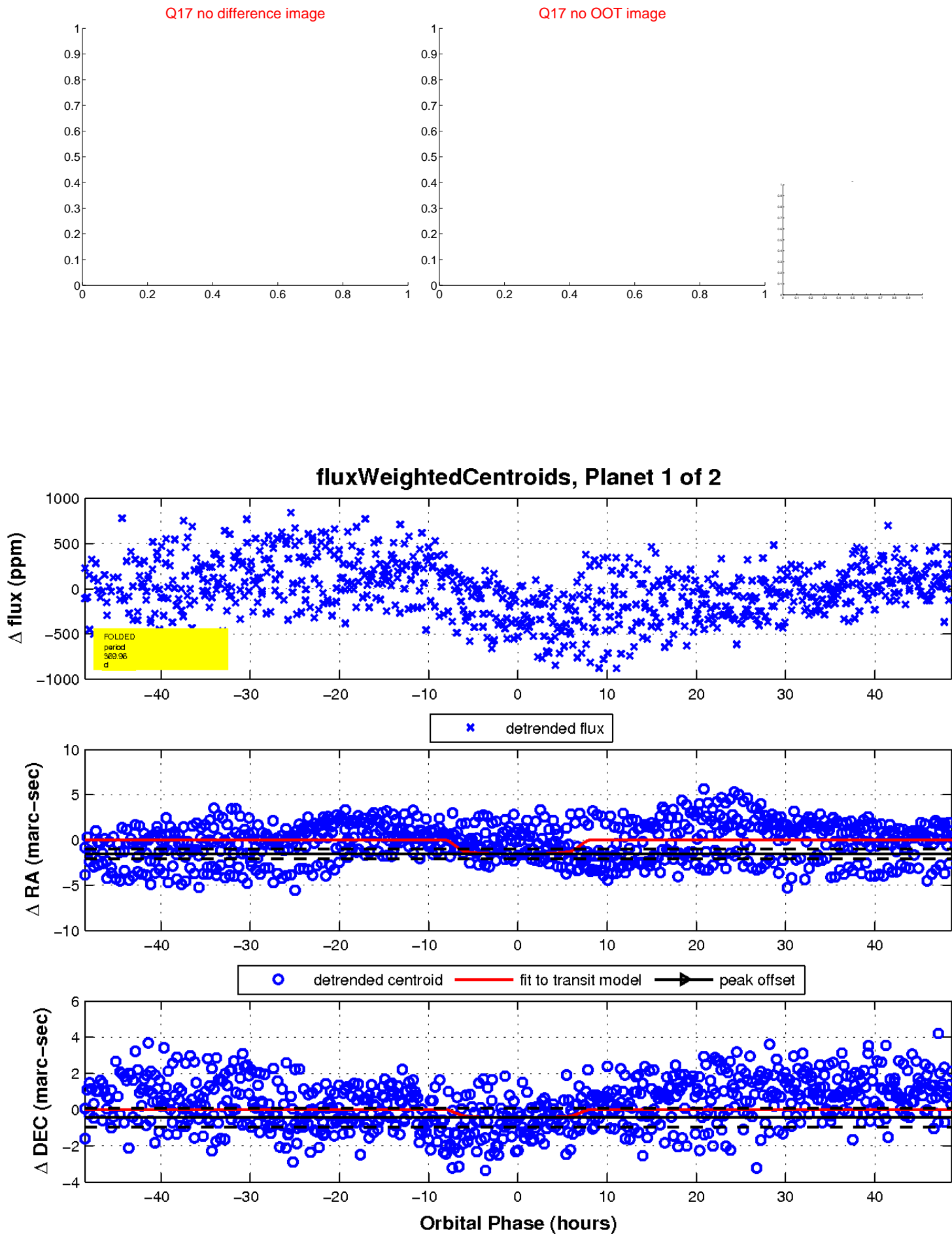
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

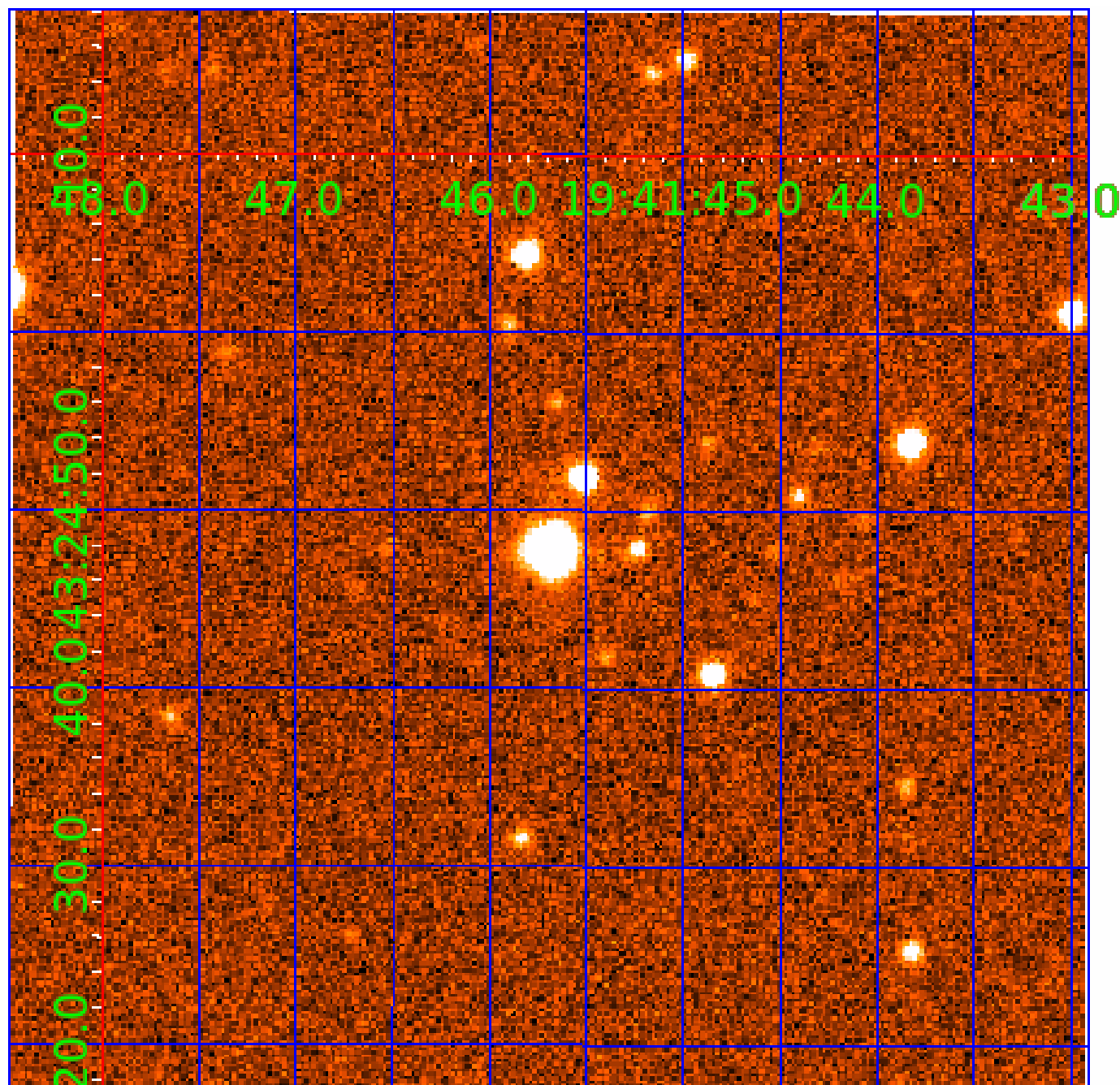


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007764267

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})
007764267-01	OBS	No	369.959874	233.160046	274.9	16.249	8.7	8.2	1.01	6225	2.04	1.28
007764267-02	OBS	No	385.541558	146.275830	220.0	9.966	7.3	7.7	1.01	6225	1.60	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007764267-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
007764267-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

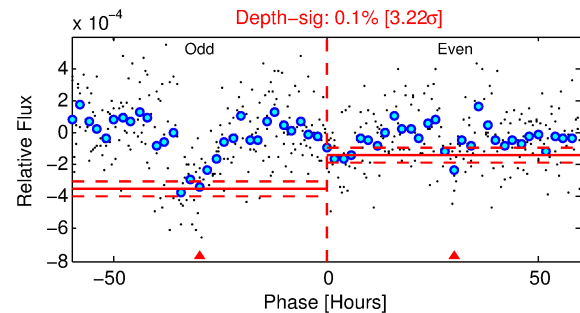
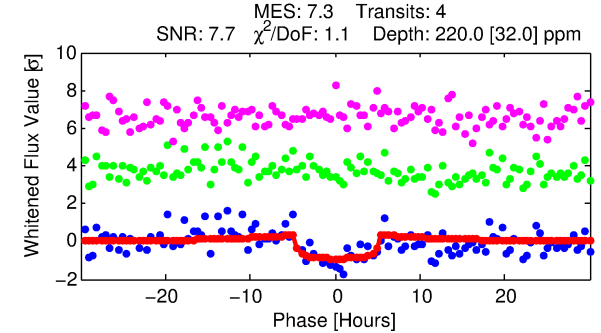
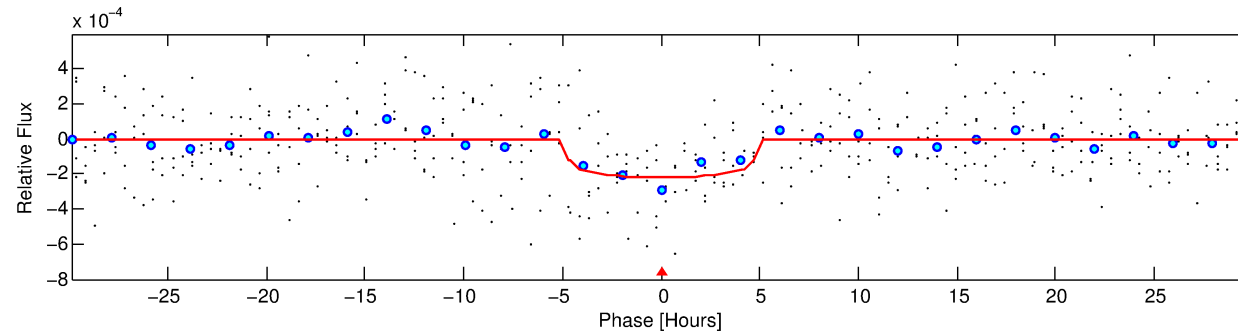
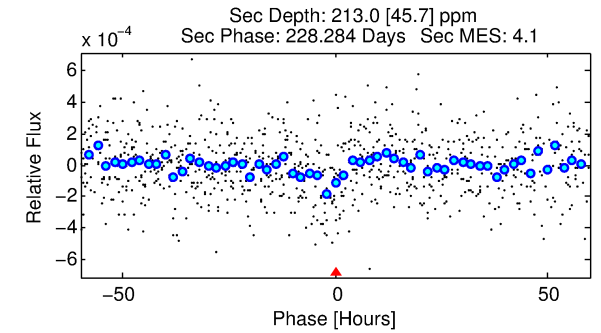
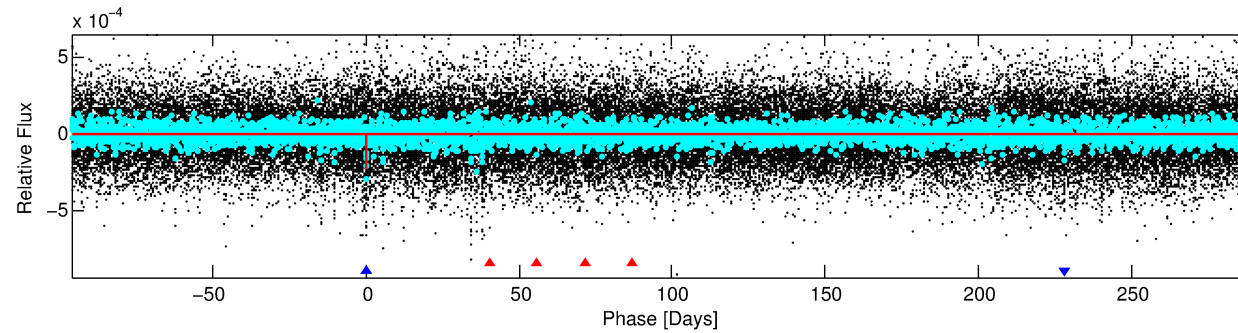
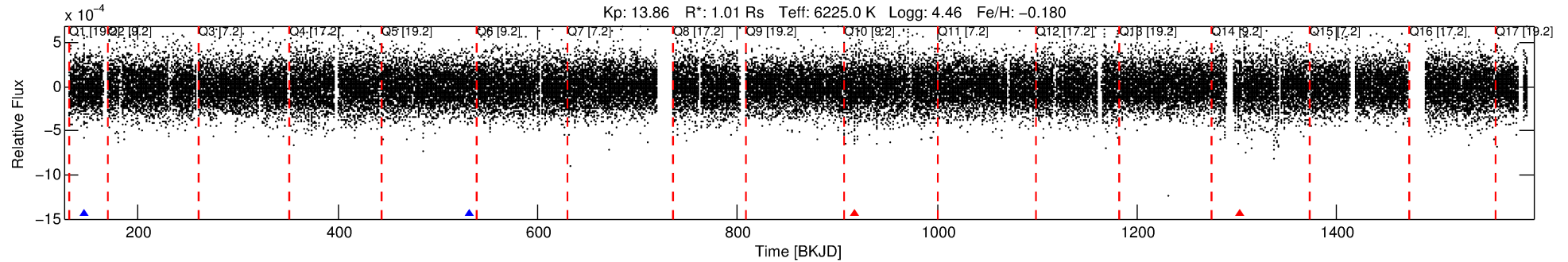
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007764267-02

No Significant Match Found

DV One-Page Summary

KIC: 7764267 Candidate: 2 of 2 Period: 385.542 d



DV Fit Results:

Period = 385.54156 [0.00969] d
Epoch = 146.2758 [0.0164] BKJD
Rp/R* = 0.0145 [0.0078]
a/R* = 217.01 [593.63]
b = 0.70 [1.99]
Seff = 1.22 [0.47]
Teq = 268 [26] K
Rp = 1.60 [0.98] Re
a = 1.0617 [0.2690] AU
Ag = 51560.59 [59351.41] [0.87σ]
Teffp = 6237 [1714] K [3.48σ]

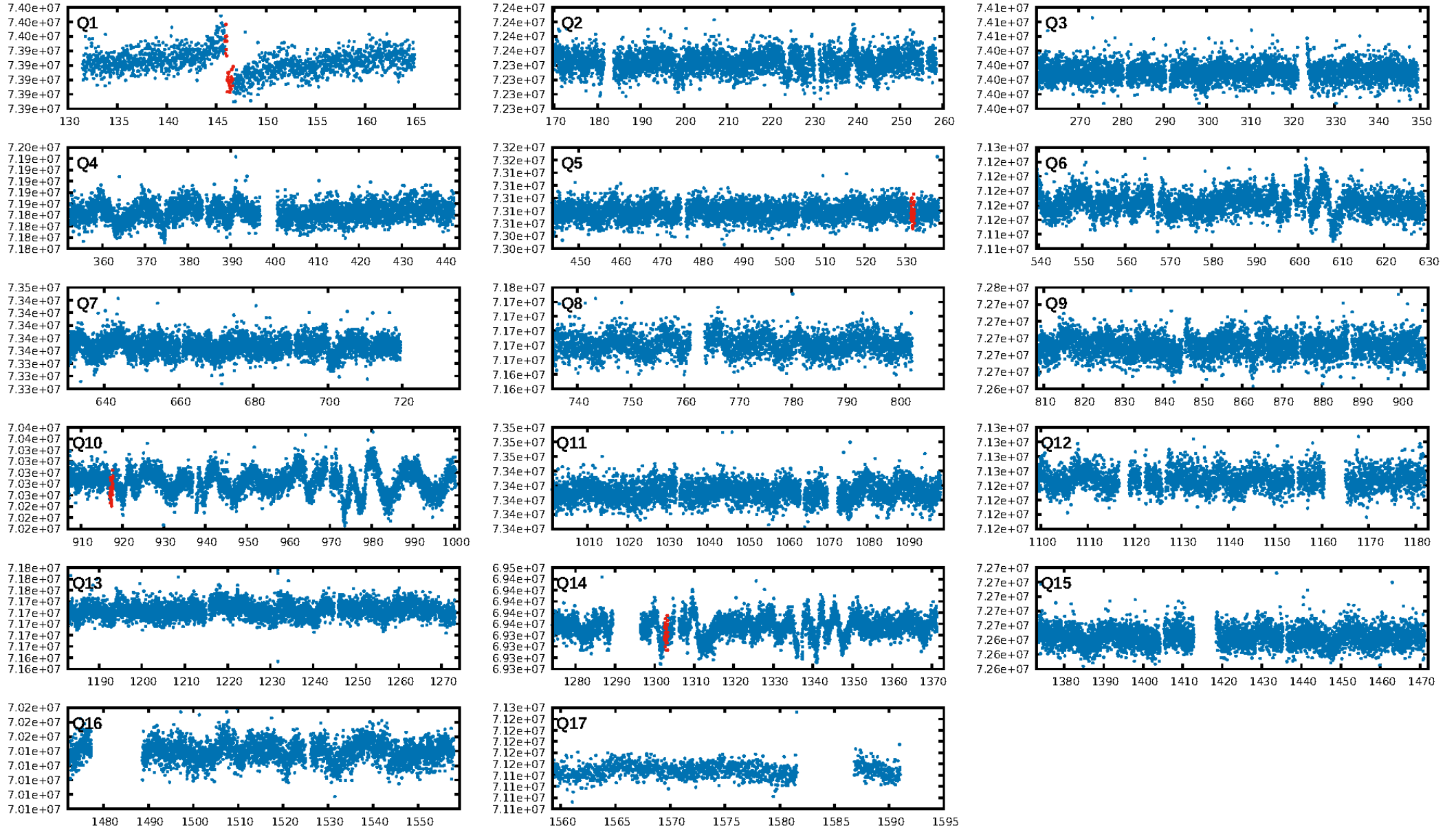
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.62σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: 2.60e-10
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 10.23
Centroid-sig: 18.8%
Centroid-so: 1.216 arcsec [0.87σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

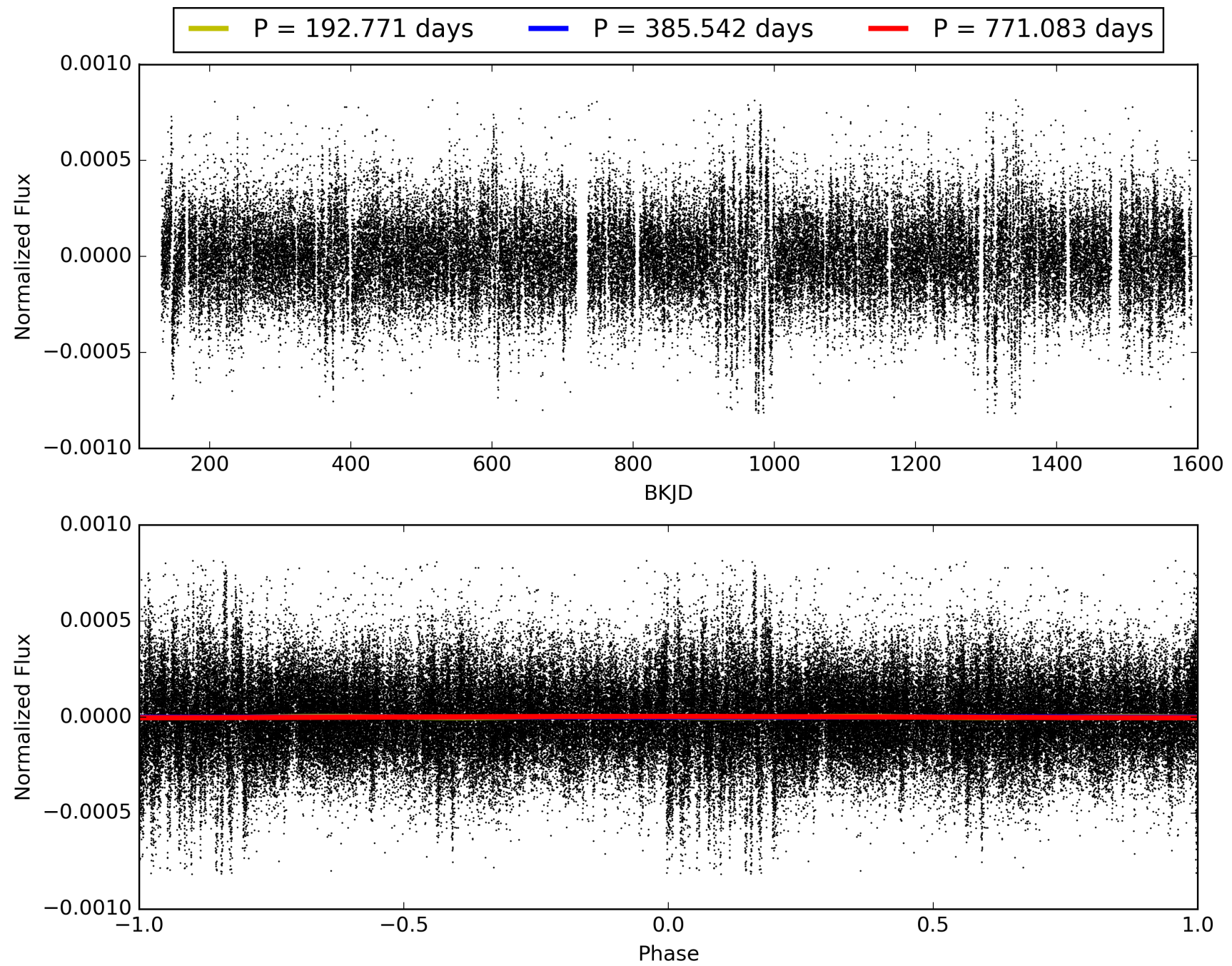
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:57:32 Z

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

TCE 007764267-02, PDC Light Curves

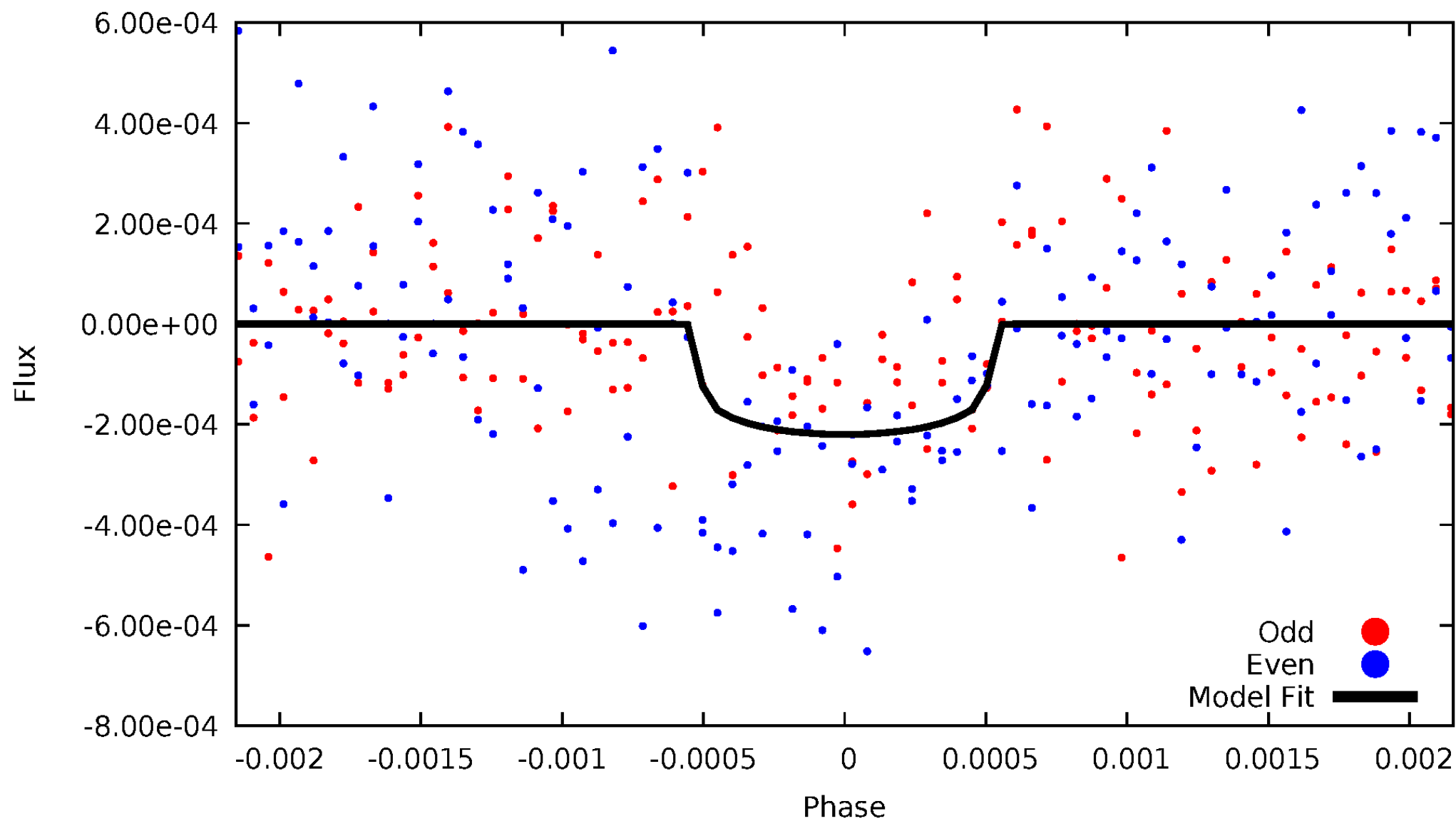


TCE 007764267-02



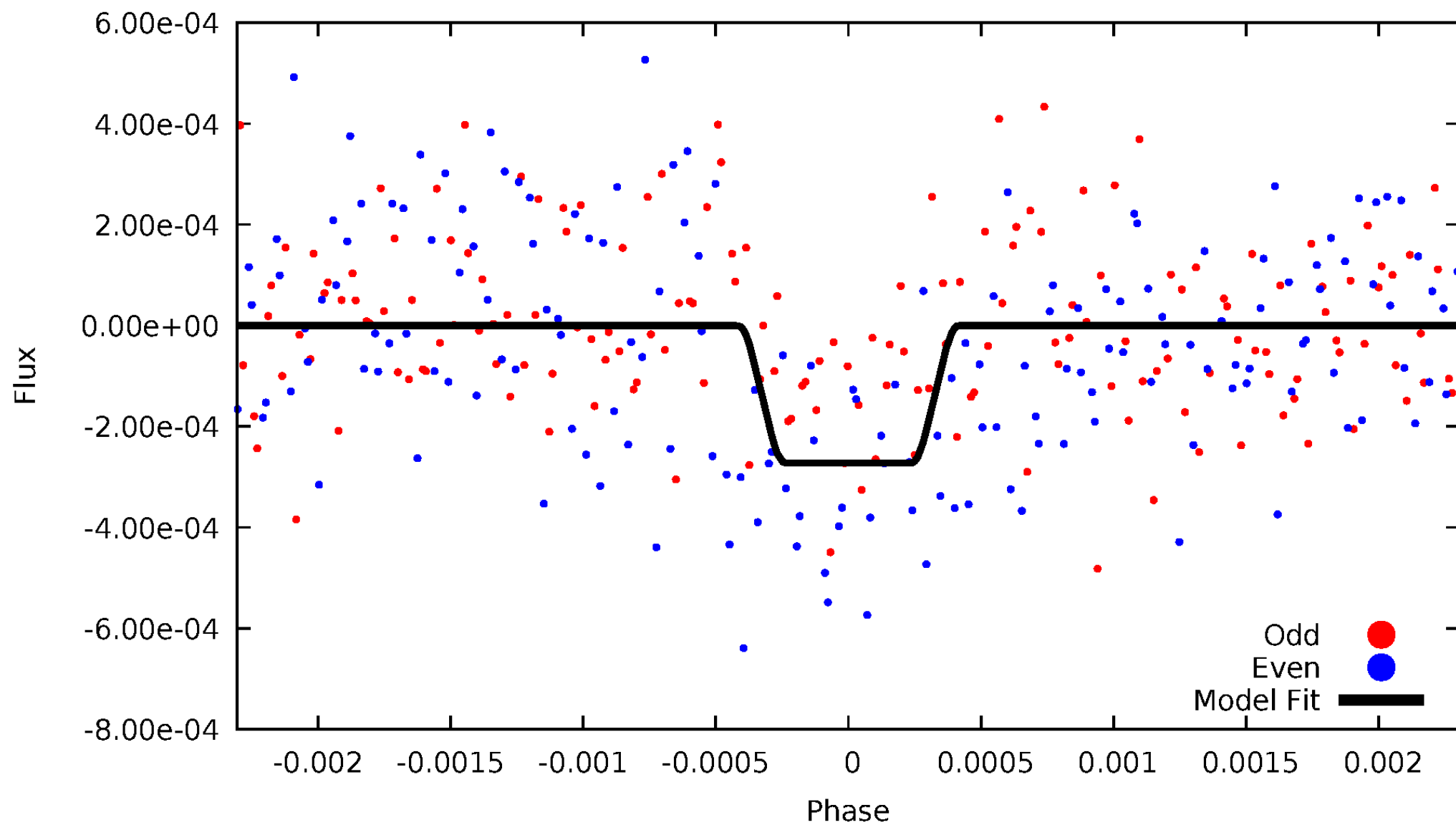
DV Odd/Even

TCE 007764267-02



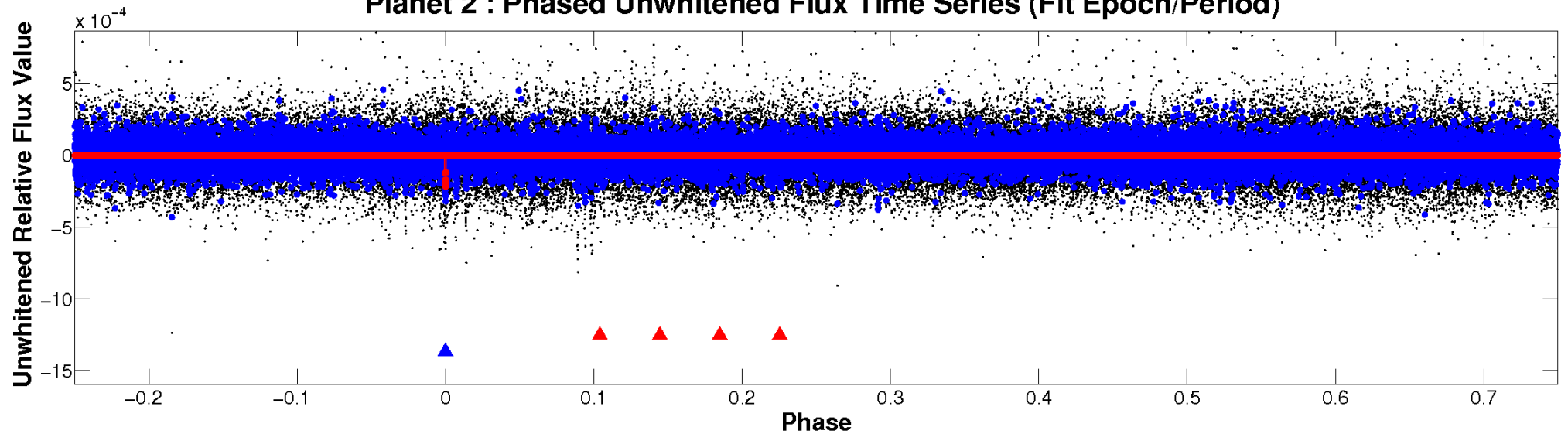
ALT Odd/Even

TCE 007764267-02

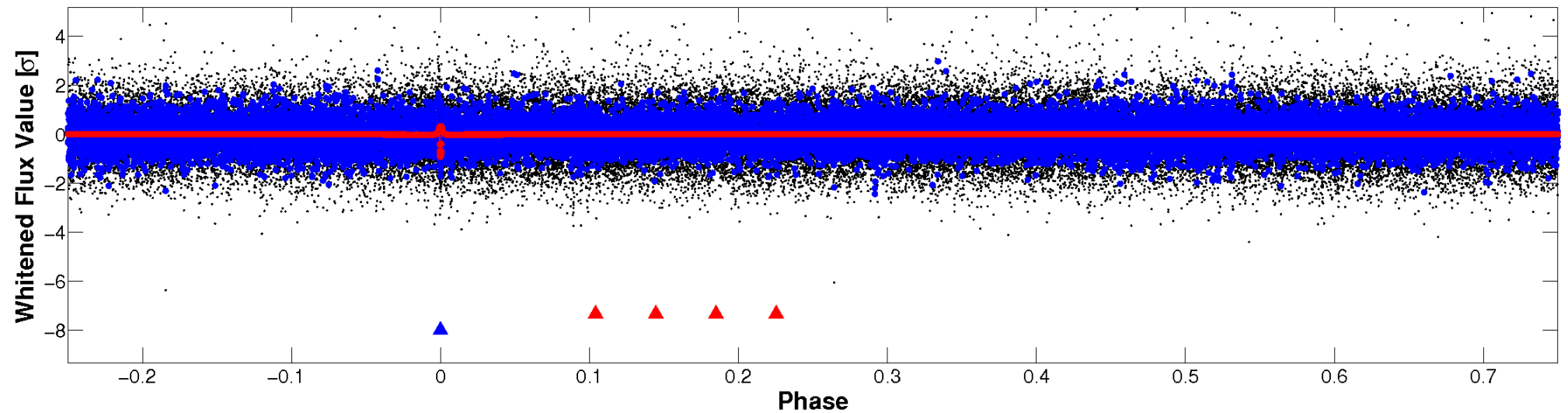


Non-Whitened Vs. Whitened Light Curve

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

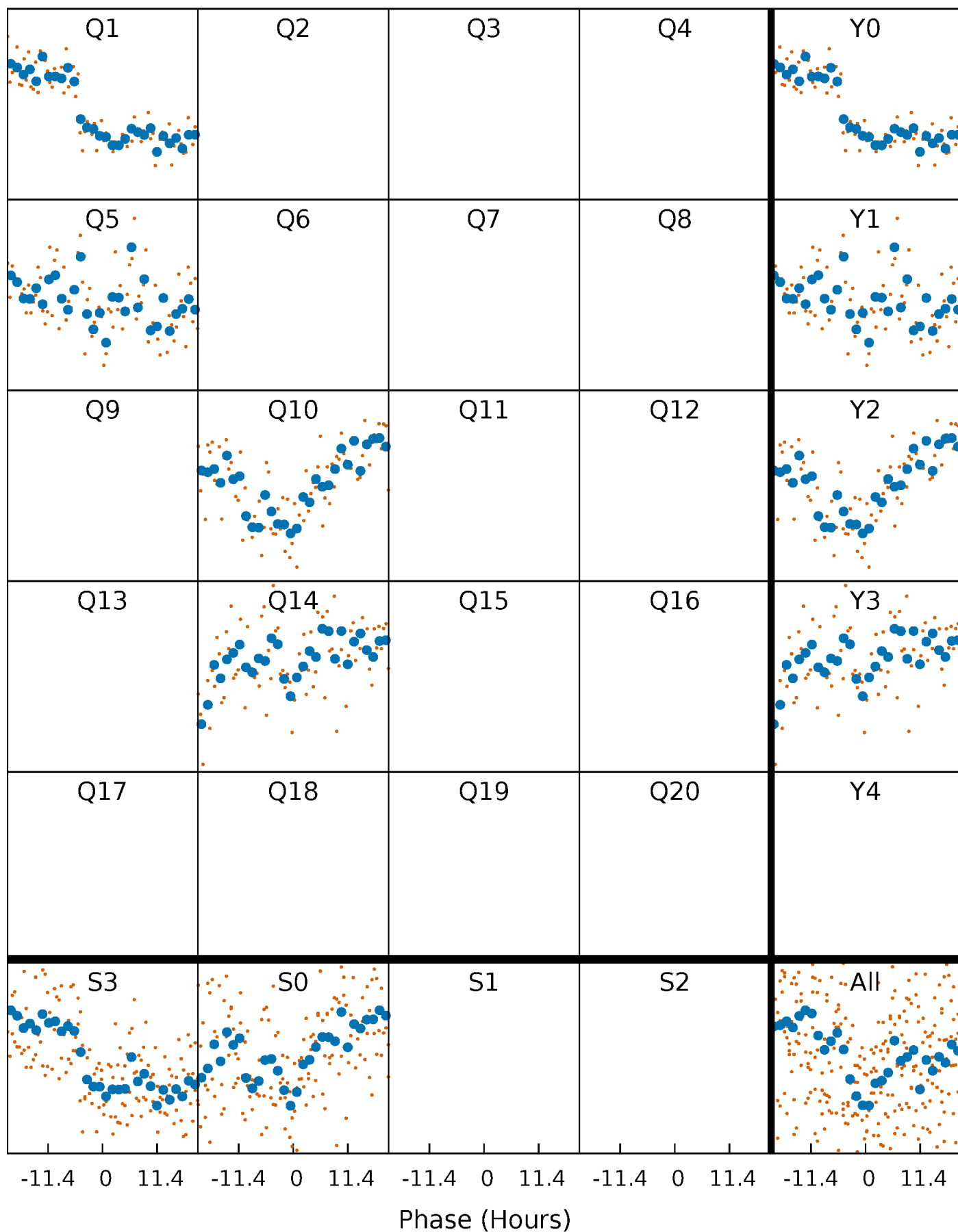


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



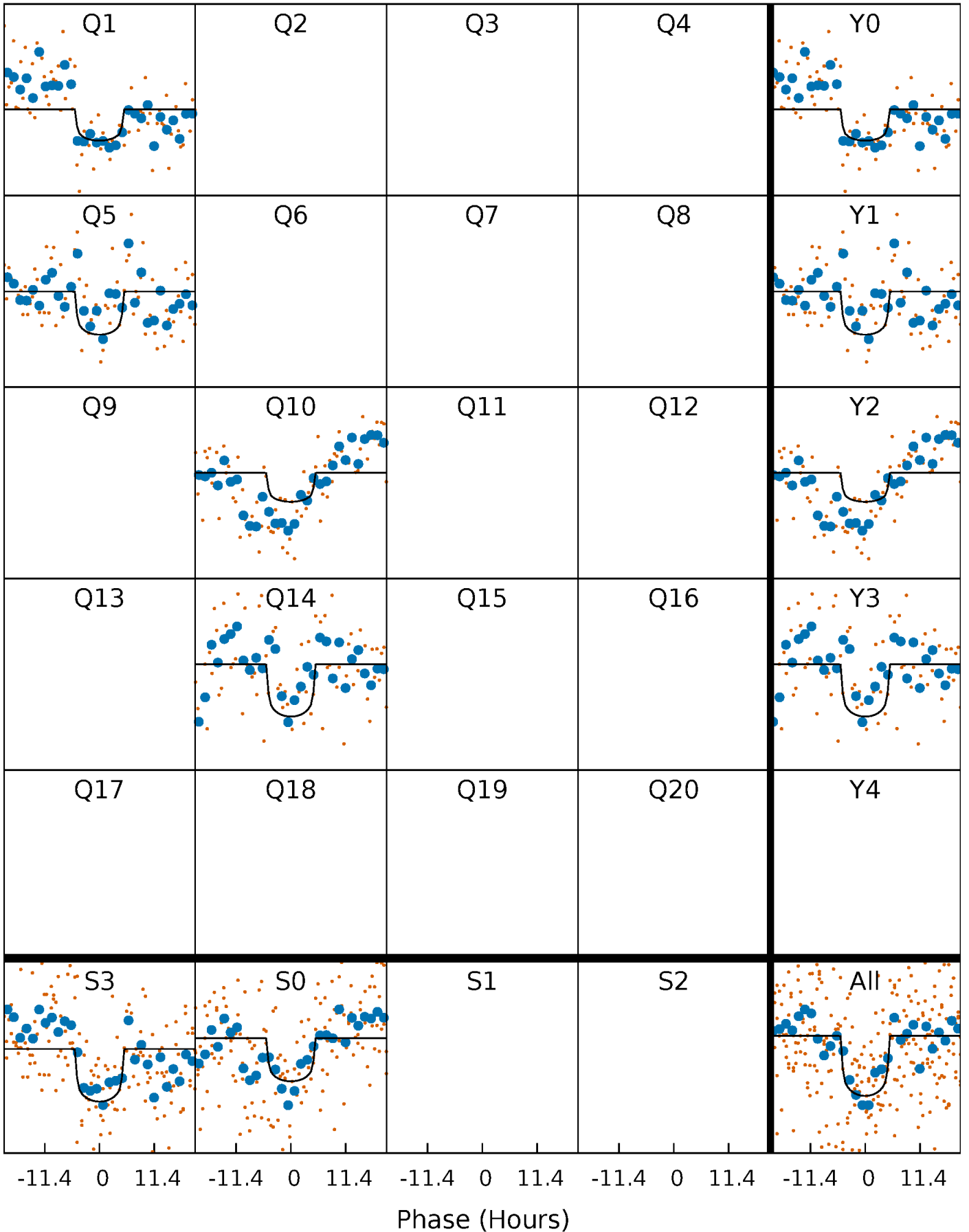
PDC Quarter-Phased Transit Curves

TCE 007764267-02 $P=385.541558$ Days $T_0=146.275829$ (BKJD)



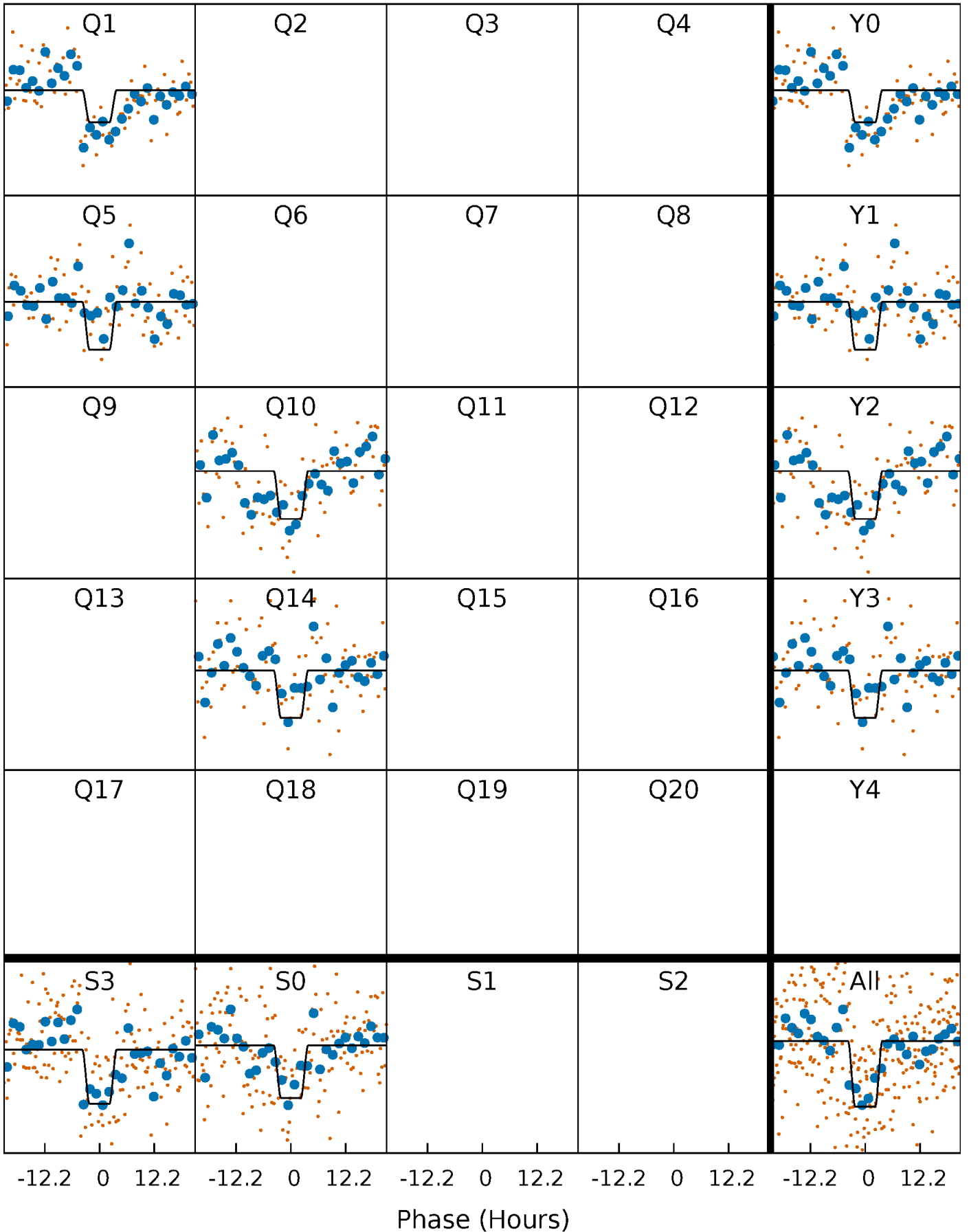
DV Quarter-Phased Transit Curves

TCE 007764267-02 $P=385.541558$ Days $T_0=146.275829$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

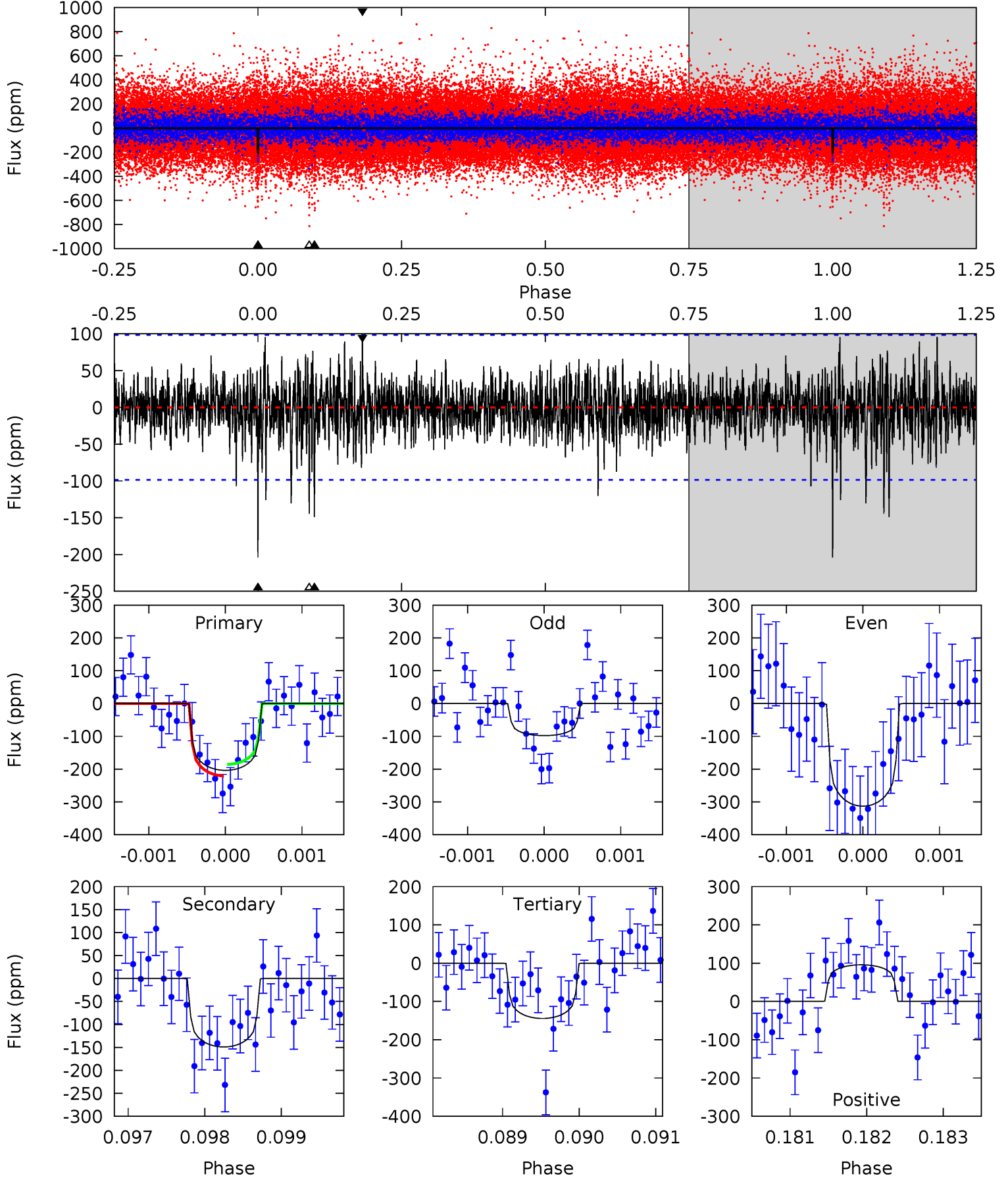
TCE 007764267-02 $P=385.554032$ Days $T_0=146.254495$ (BKJD)



DV Model-Shift Uniqueness Test

007764267-02, P = 385.541558 Days, E = 146.275829 Days

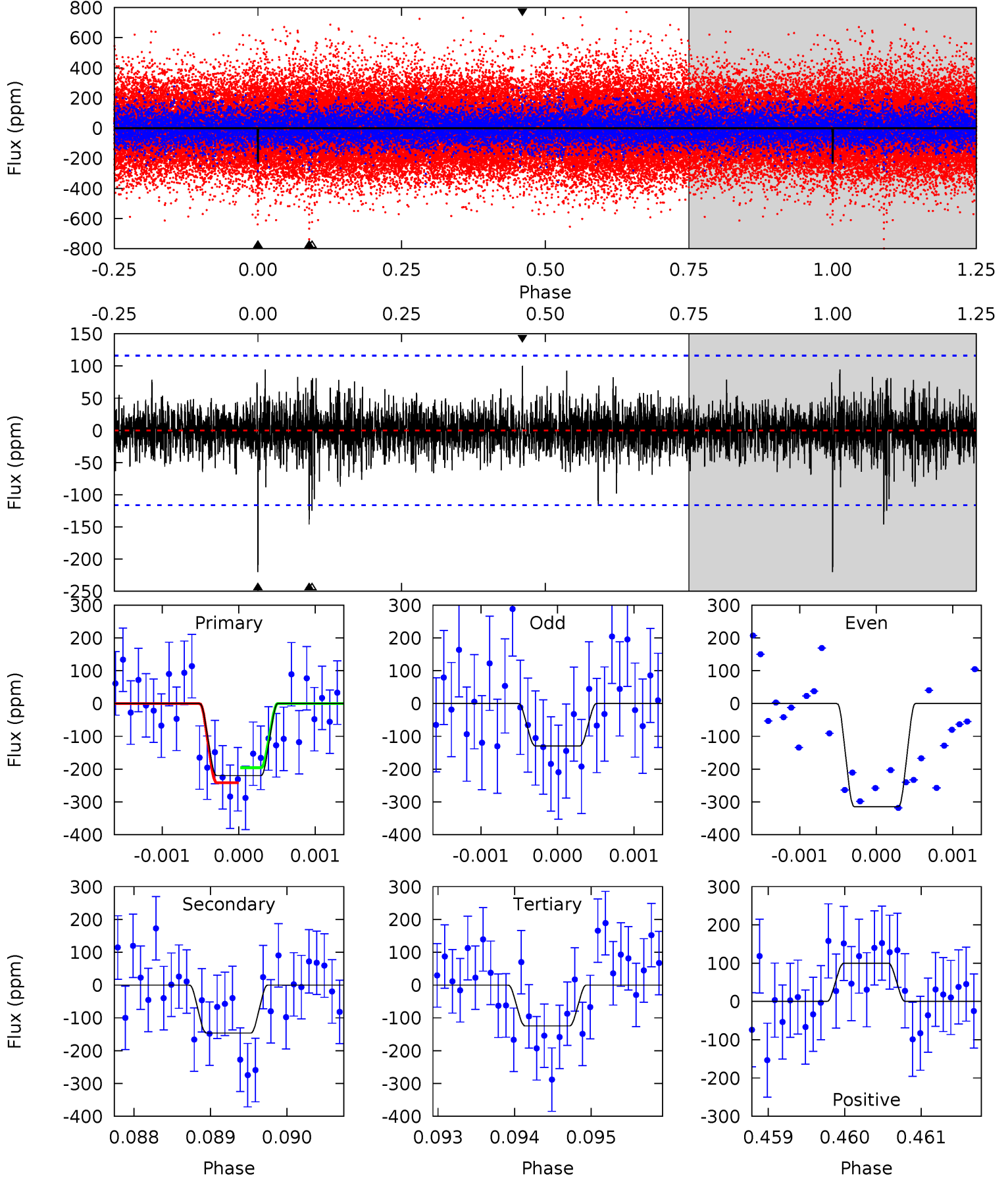
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	8.19	7.94	5.26	5.42	3.25	1.47	3.26	5.94	0.25	2.93	5.96	1.11	0.32	0.96



Alt Model-Shift Uniqueness Test

007764267-02, $P = 385.554032$ Days, $E = 146.254495$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	6.91	5.89	4.73	5.49	3.35	1.14	4.50	5.66	1.02	2.18	4.37	1.05	0.31	1.08



Stellar Parameters For KIC 007764267

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6225^{+150}_{-206}	$4.461^{+0.050}_{-0.200}$	$-0.180^{+0.250}_{-0.300}$	$1.009^{+0.305}_{-0.102}$	$1.070^{+0.144}_{-0.144}$	$1.467^{+0.381}_{-0.734}$
	+2%/-3%	+1%/-4%	+139%/-167%	+30%/-10%	+13%/-13%	+26%/-50%
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 007764267-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-149 ± 18	$1.69^{+0.83}_{-0.84}$	380^{+25}_{-17}	5705^{+2336}_{-983}	31710^{+91432}_{-17876}
Alt.	-146 ± 21	$1.92^{+0.92}_{-0.81}$	382^{+27}_{-18}	5311^{+1783}_{-730}	23896^{+49292}_{-12713}

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

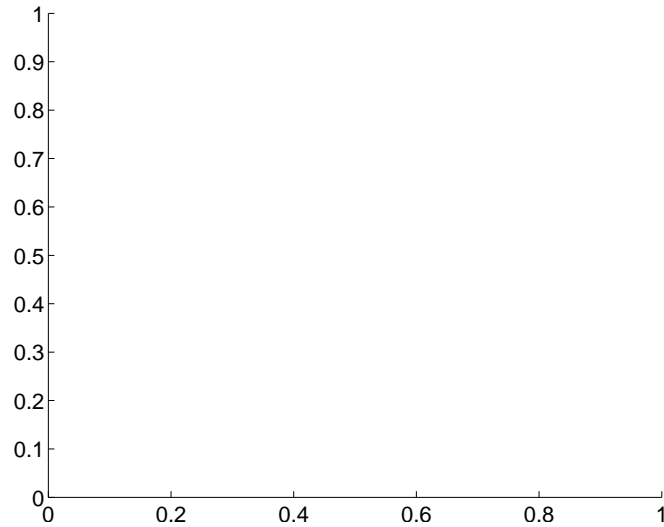
Supplemental centroid analysis for 007764267-02. Kepler magnitude: 13.86. Transit SNR 7.70

There are 0 quarters with good PRF difference image offsets

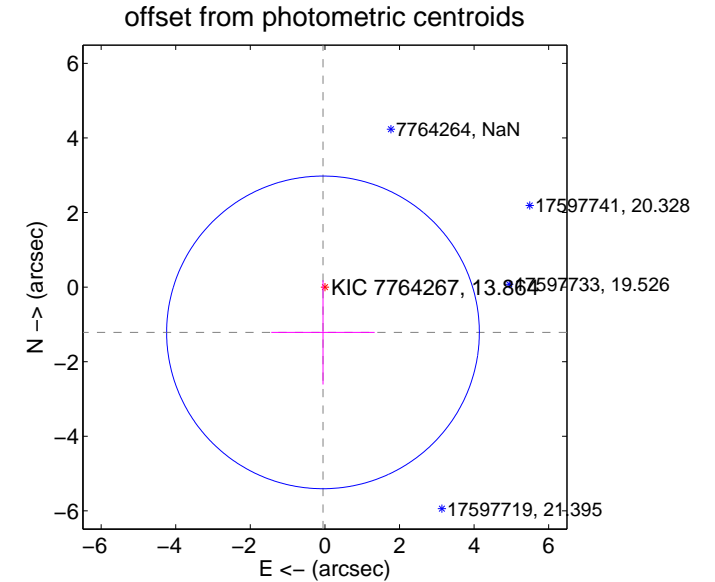
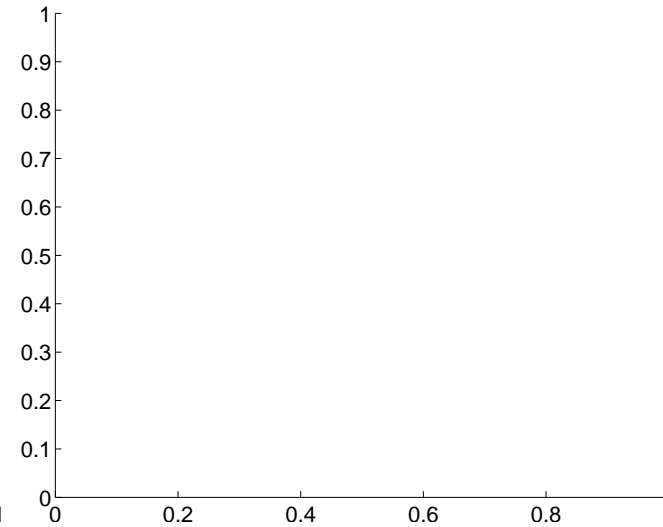
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.22 ± 1.40	0.87	0.05 ± 1.39	-1.21 ± 1.40

There is no PRF-fit offset from OOT-fit

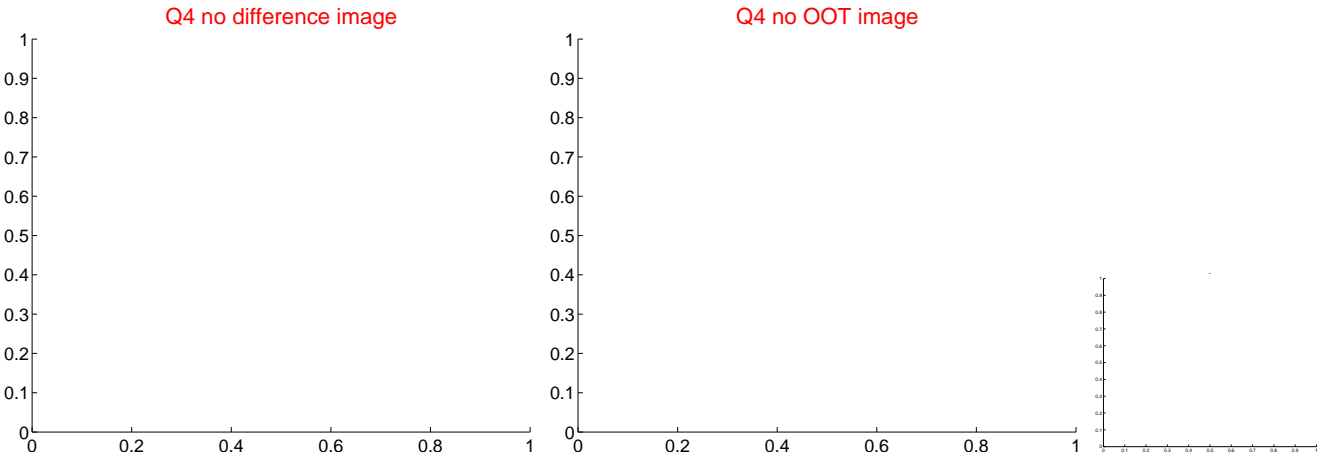
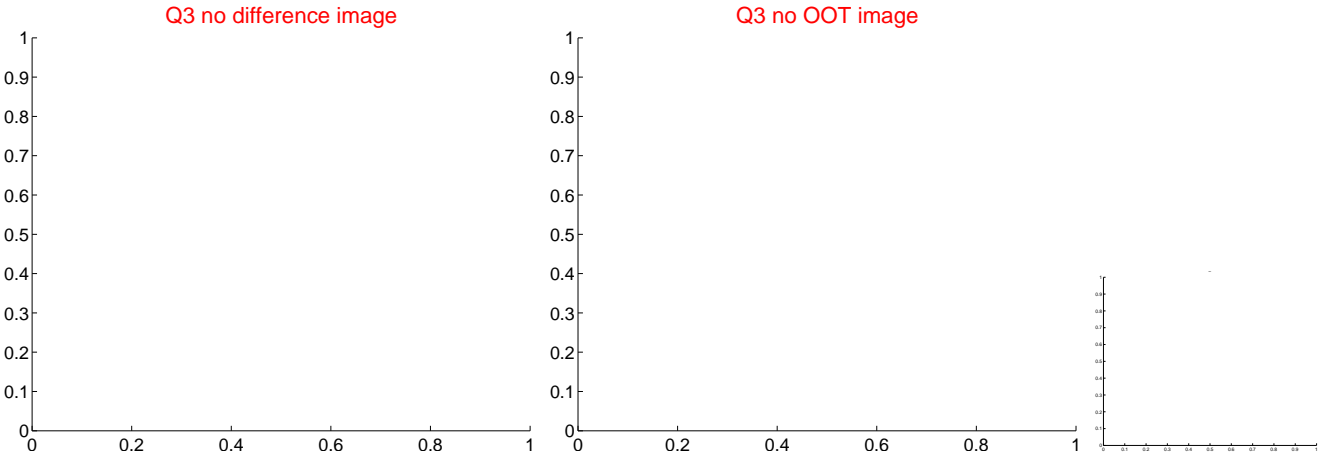
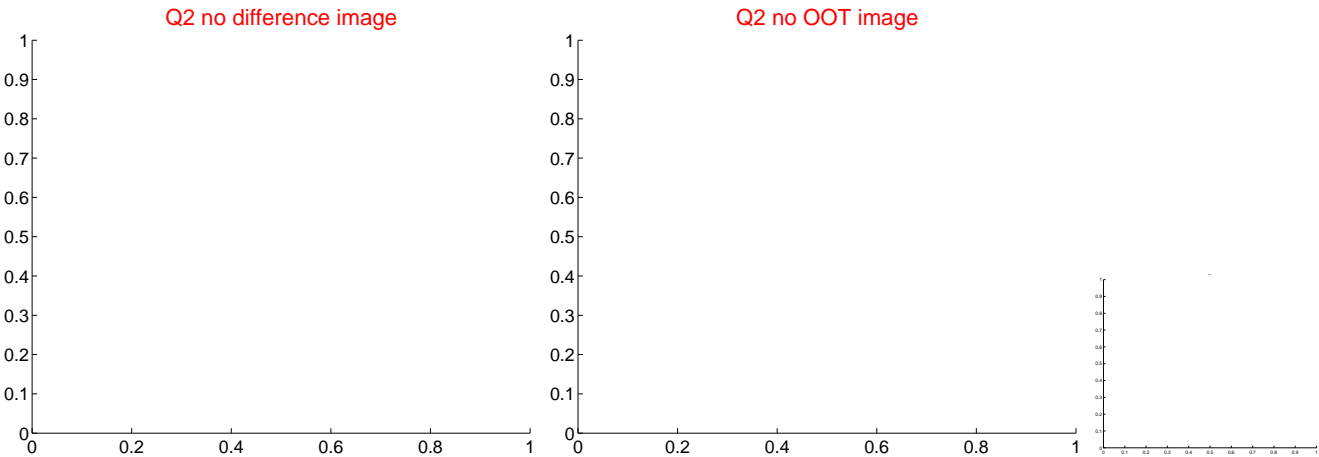
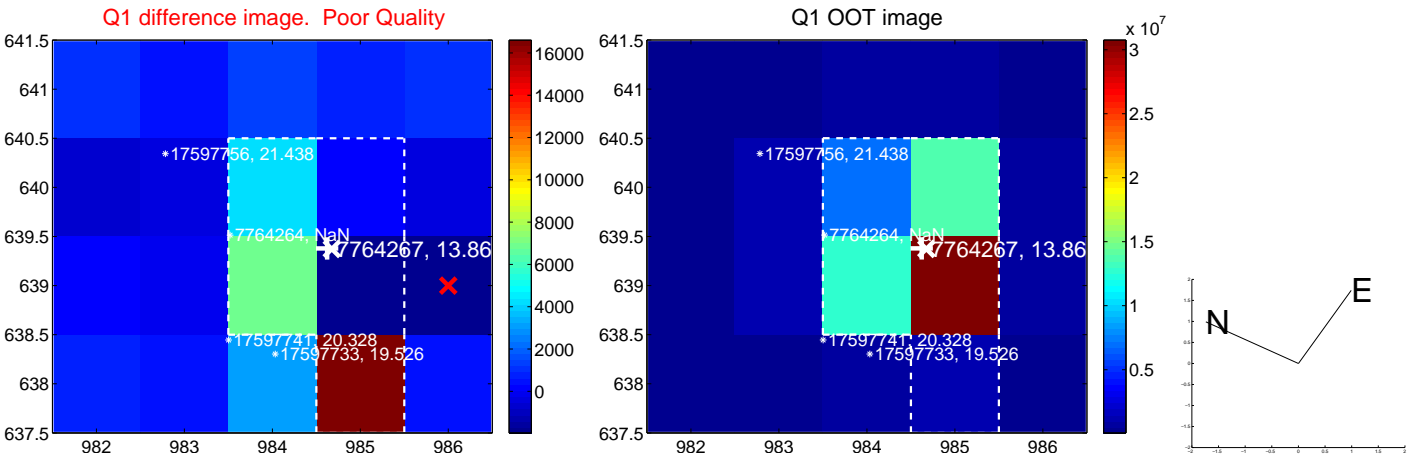


There is no PRF-fit offset from KIC

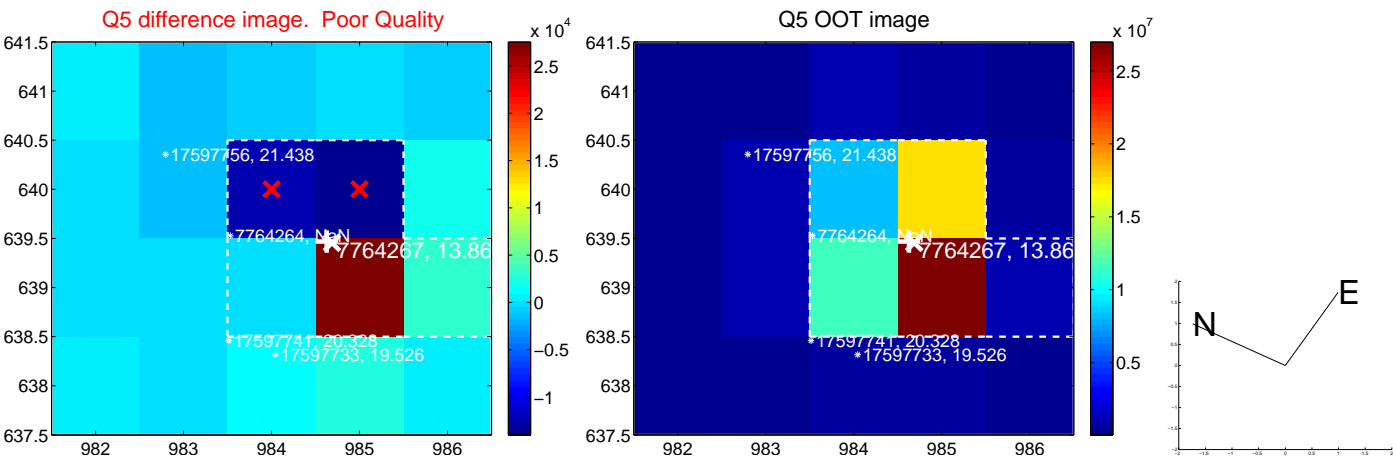


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

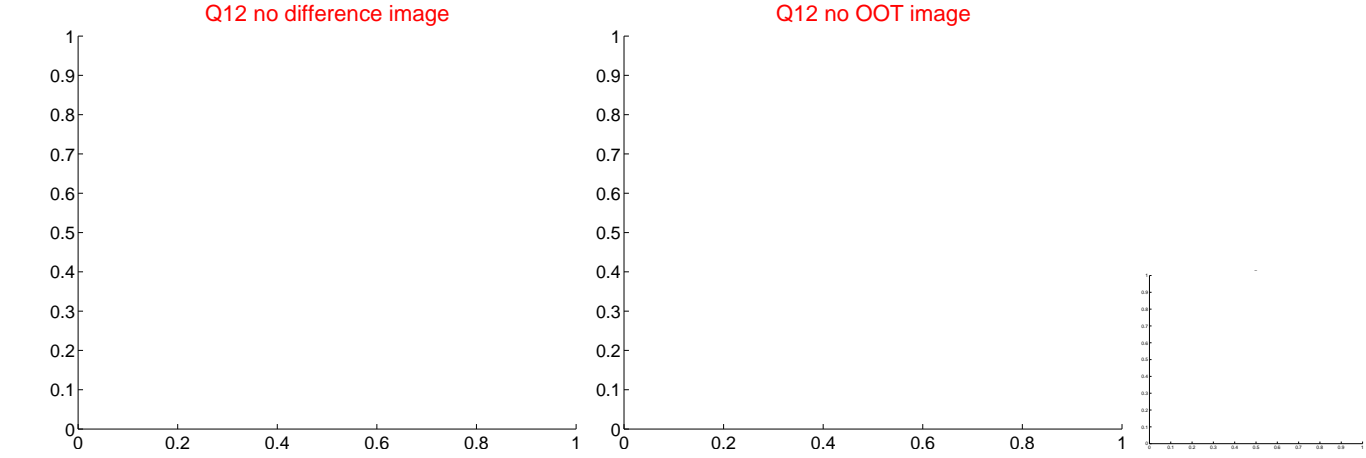
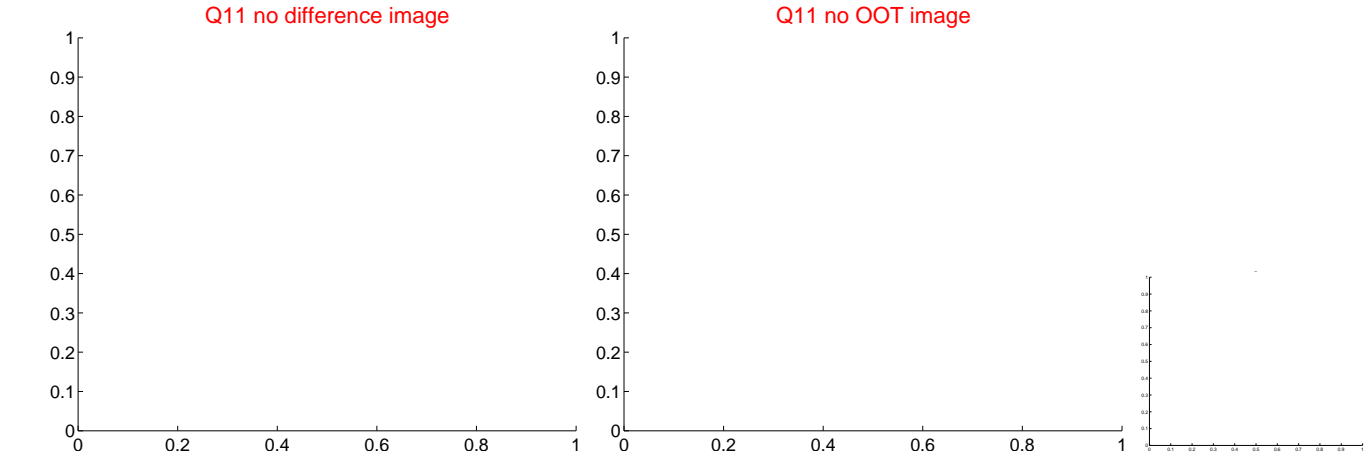
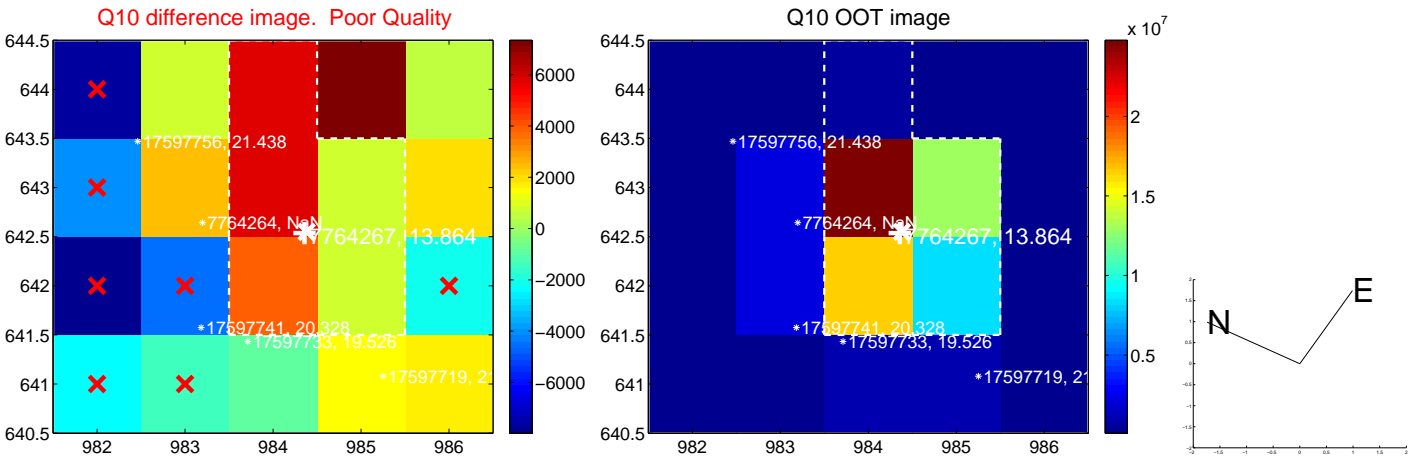
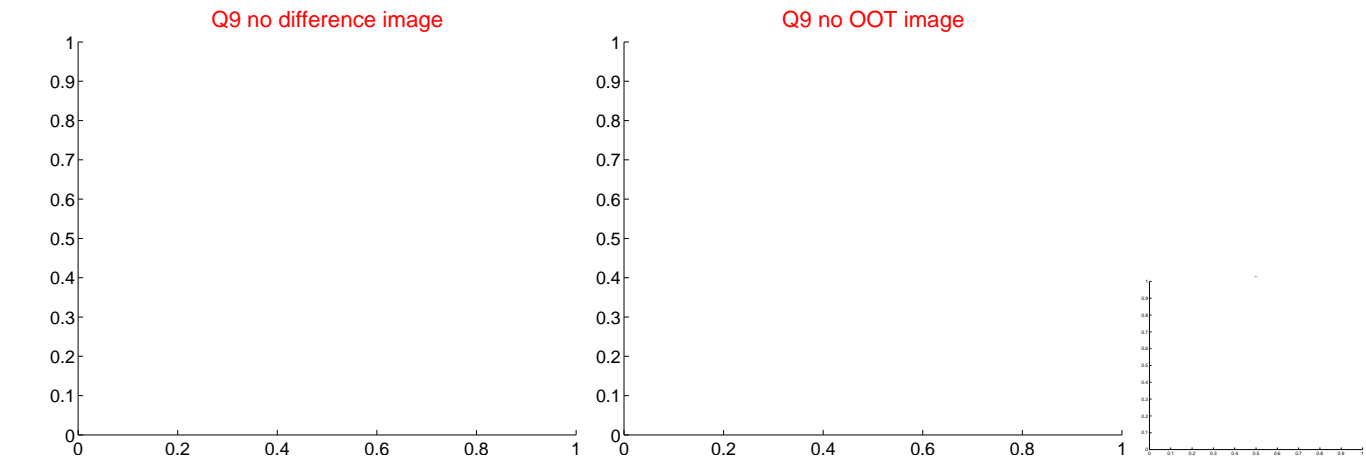
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



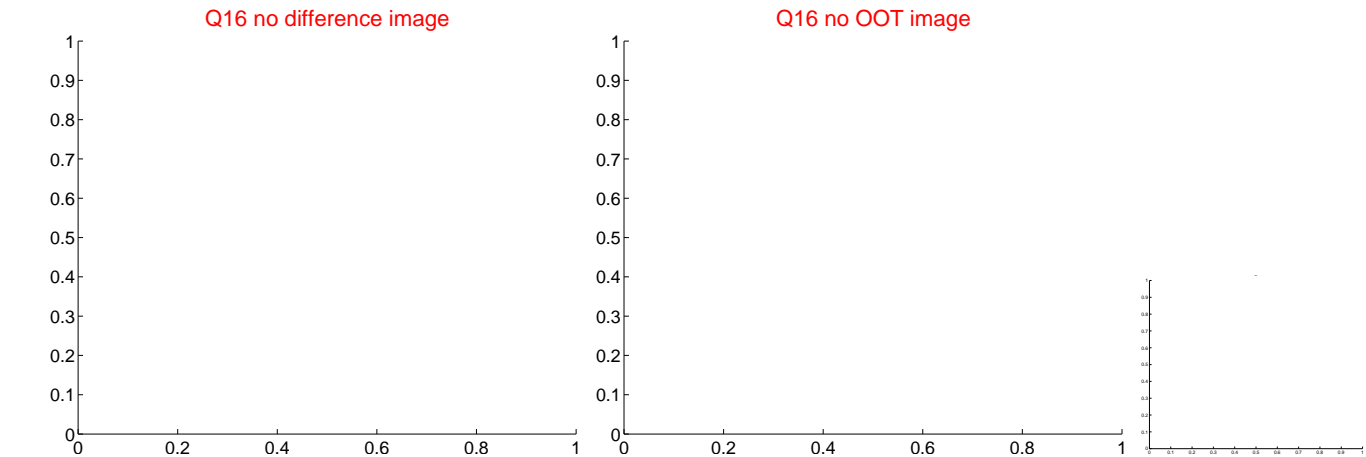
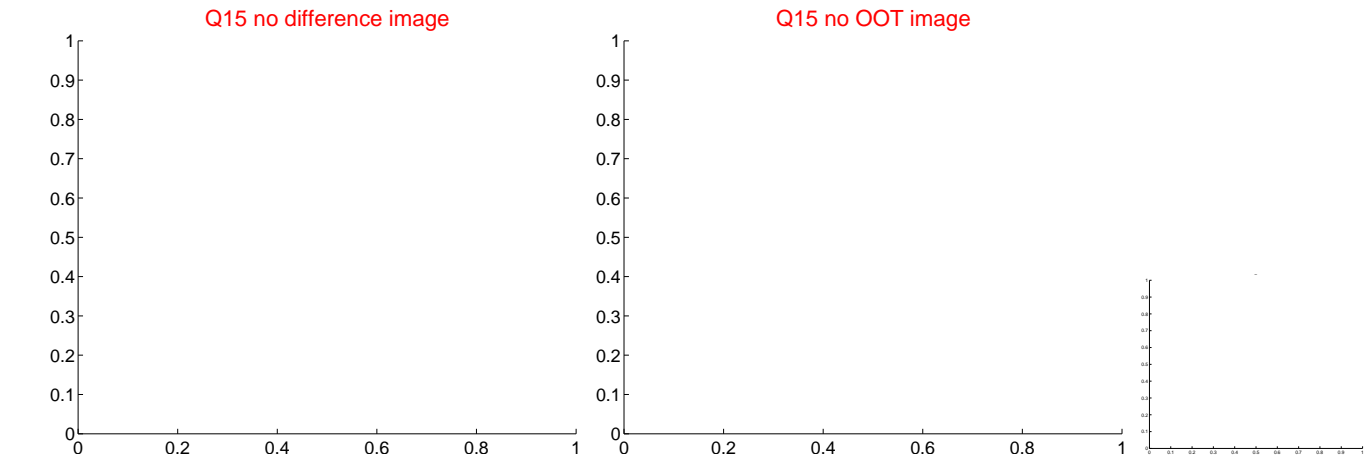
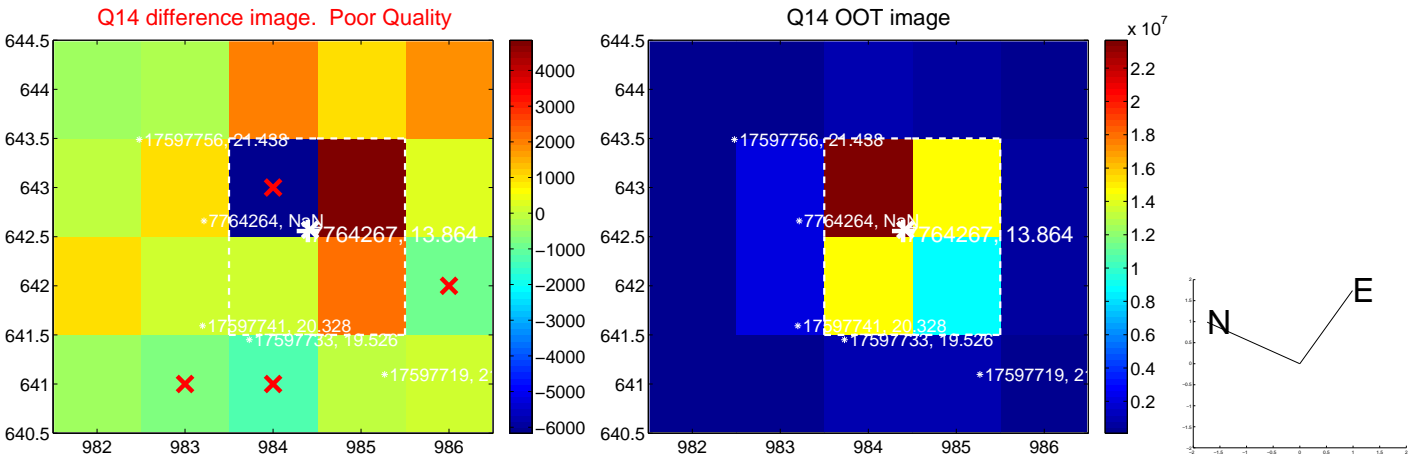
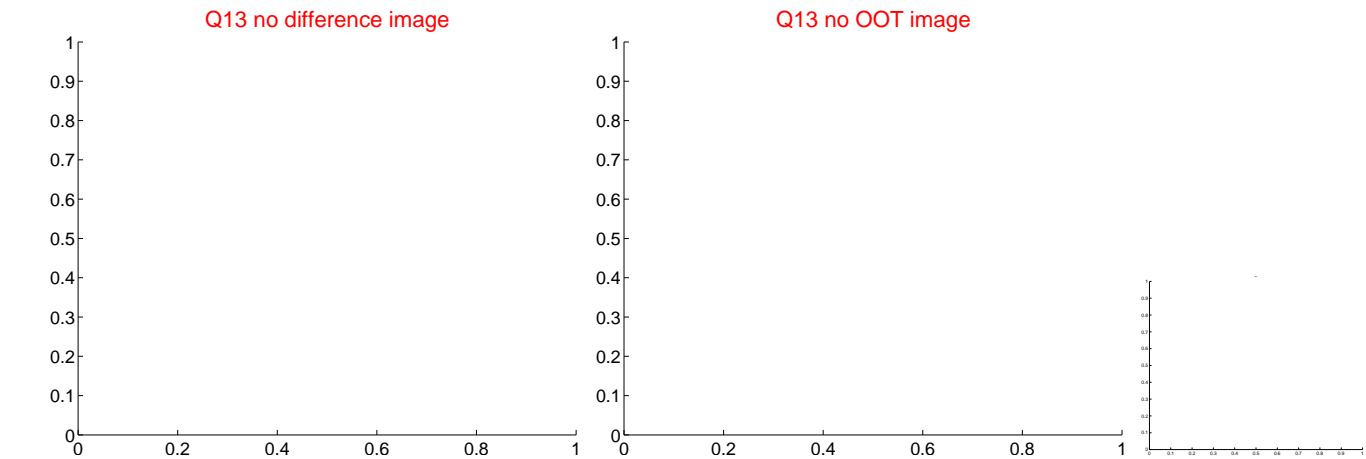
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



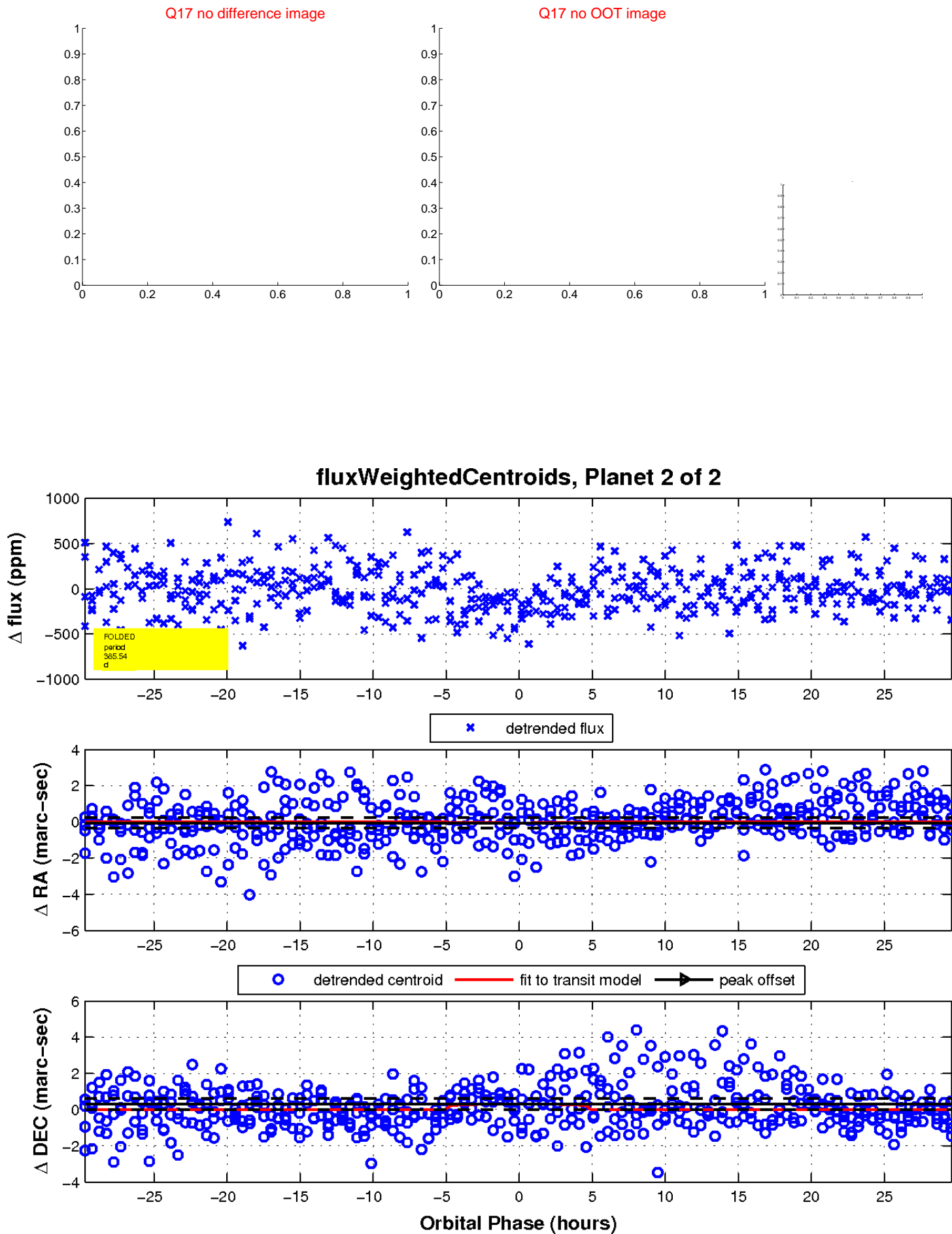
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

