

KIC 006387887

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})
006387887-01	OBS	No	0.650708	132.045369	56364.6	1.500	351.2	-1.0	3.70	10921	91.00	369523.63
006387887-02	OBS	5280.01	0.650708	131.829744	65336.0	1.500	384.1	-1.0	3.70	10921	98.02	369523.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006387887-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
006387887-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

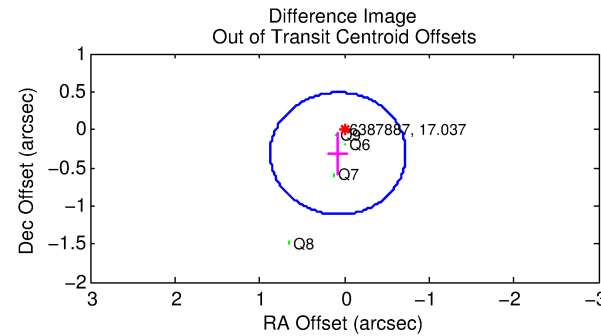
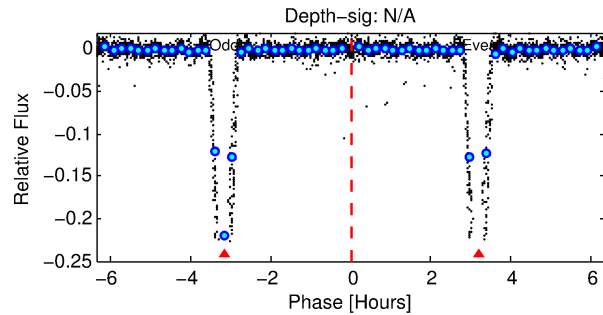
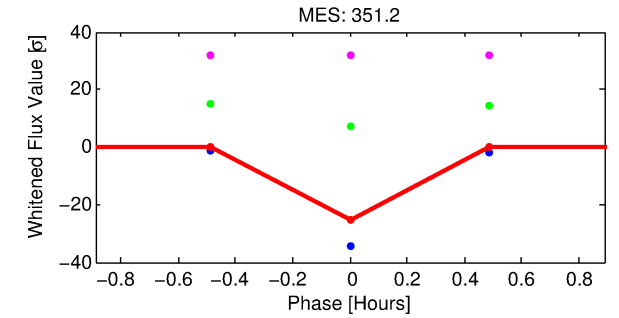
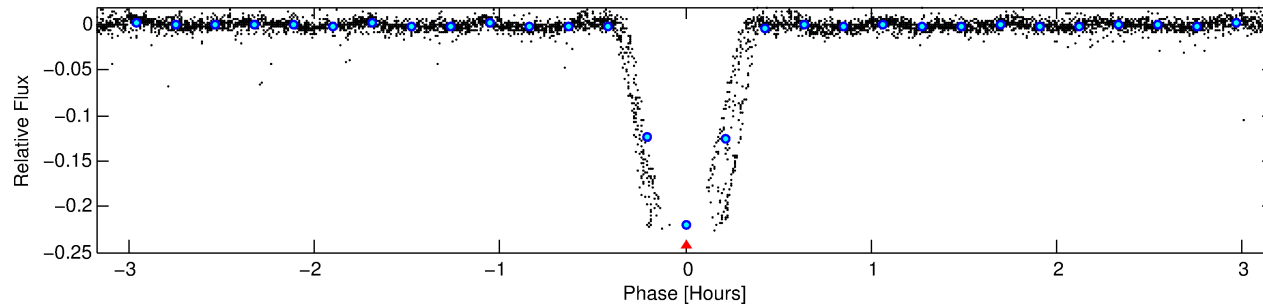
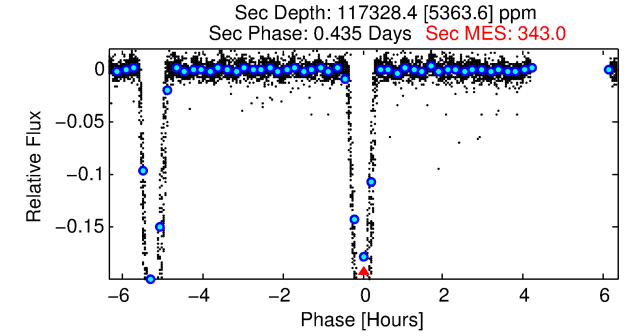
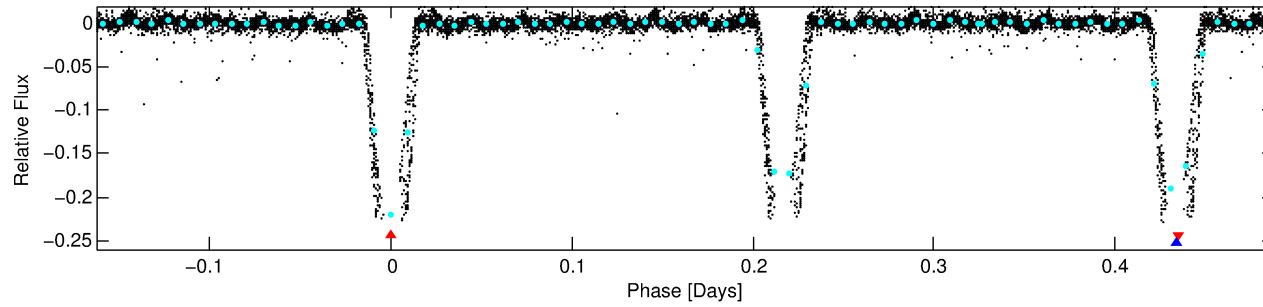
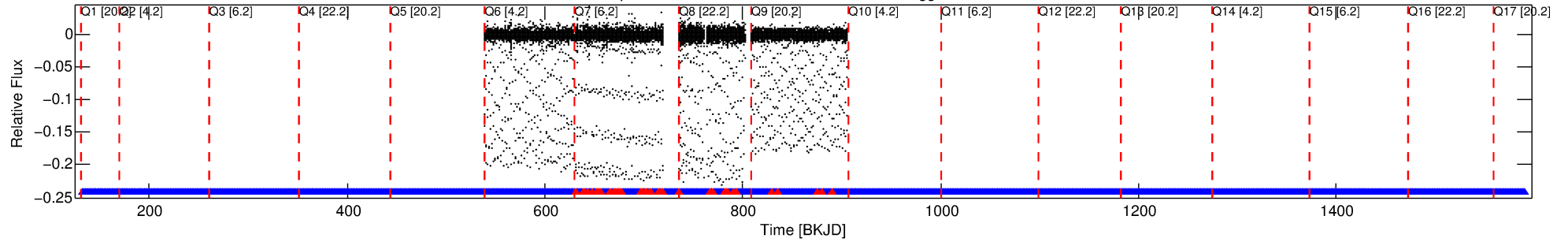
Ephemeris Match Information For 006387887-01

No Significant Match Found

DV One-Page Summary

KIC: 6387887 Candidate: 1 of 2 Period: 0.651 d
KOI: K05280 Corr: No Ephemeris Match

Kp: 17.04 R*: 3.70 Rs Teff: 10921.0 K Logg: 3.81 Fe/H: 0.070



TPS TCE Results:

Period = 0.65071 d
Epoch = 132.0454 BKJD

DV fit results are unavailable

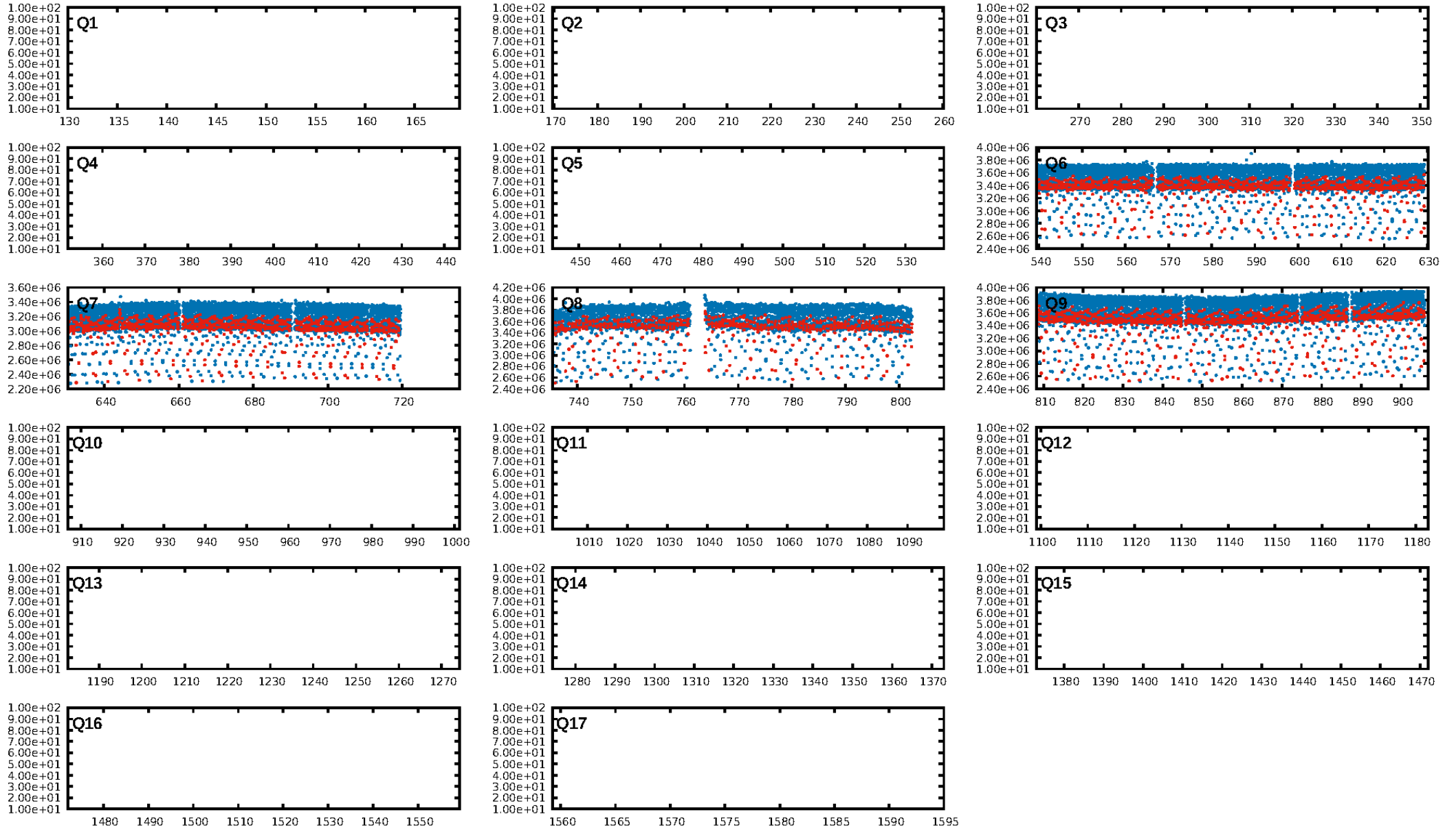
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [459/513]
GhostDiagnostic-chr: 1.32
Centroid-sig: N/A
Centroid-so: 0.466 arcsec [133.64σ]
OotOffset-rm: 0.321 arcsec [1.20σ]
KicOffset-rm: 0.077 arcsec [0.96σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]

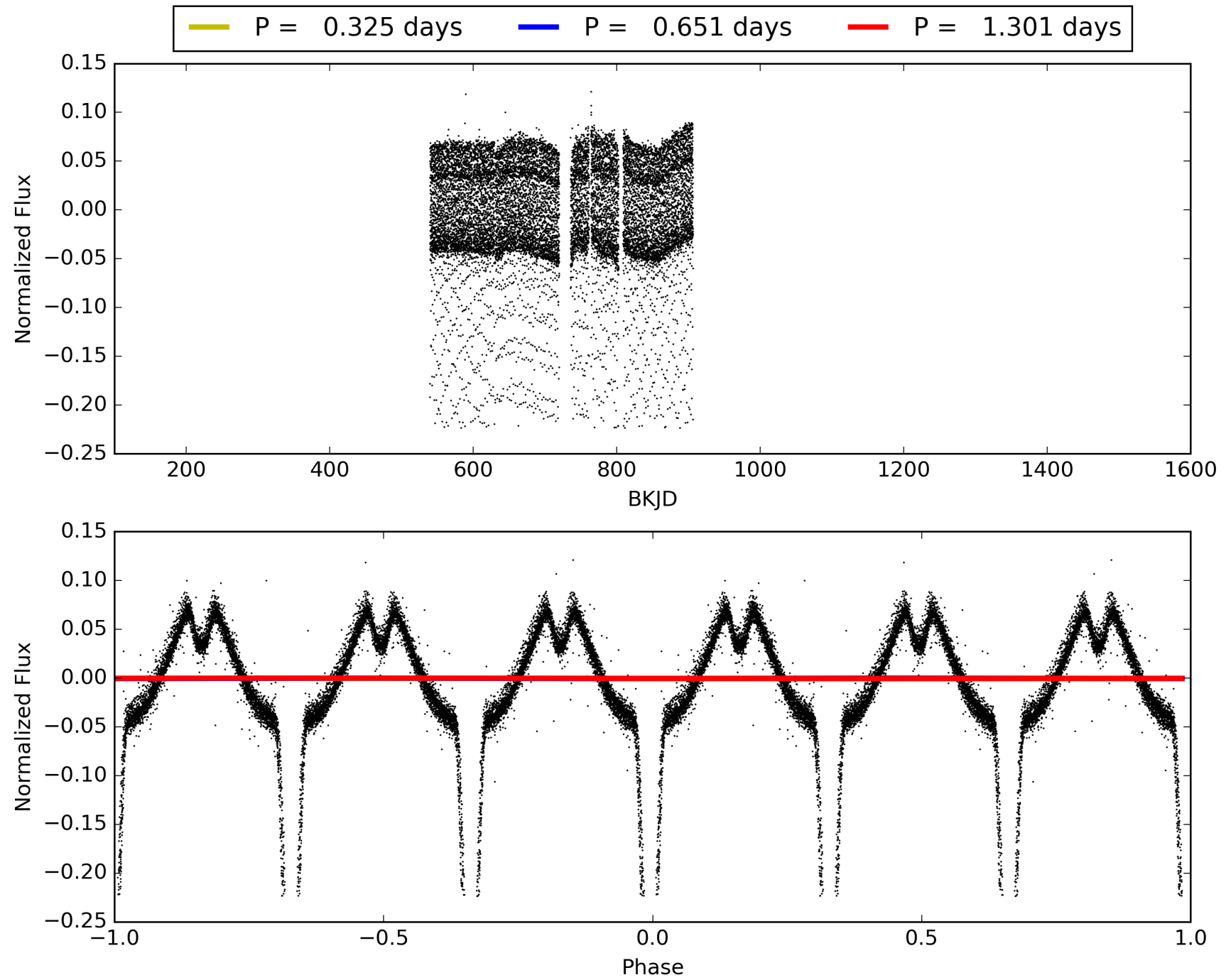
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:39:41 Z

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

TCE 006387887-01, PDC Light Curves

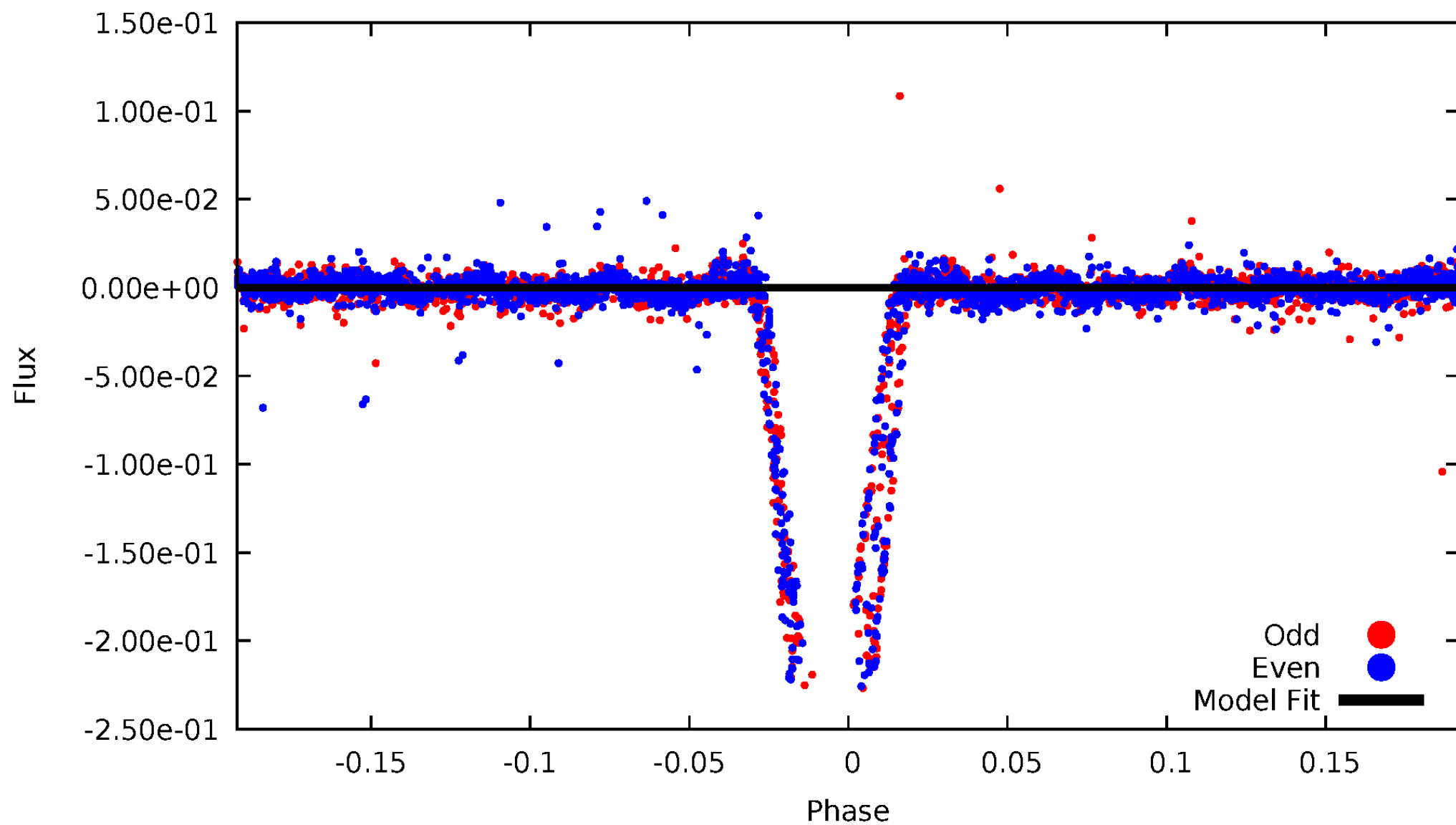


TCE 006387887-01



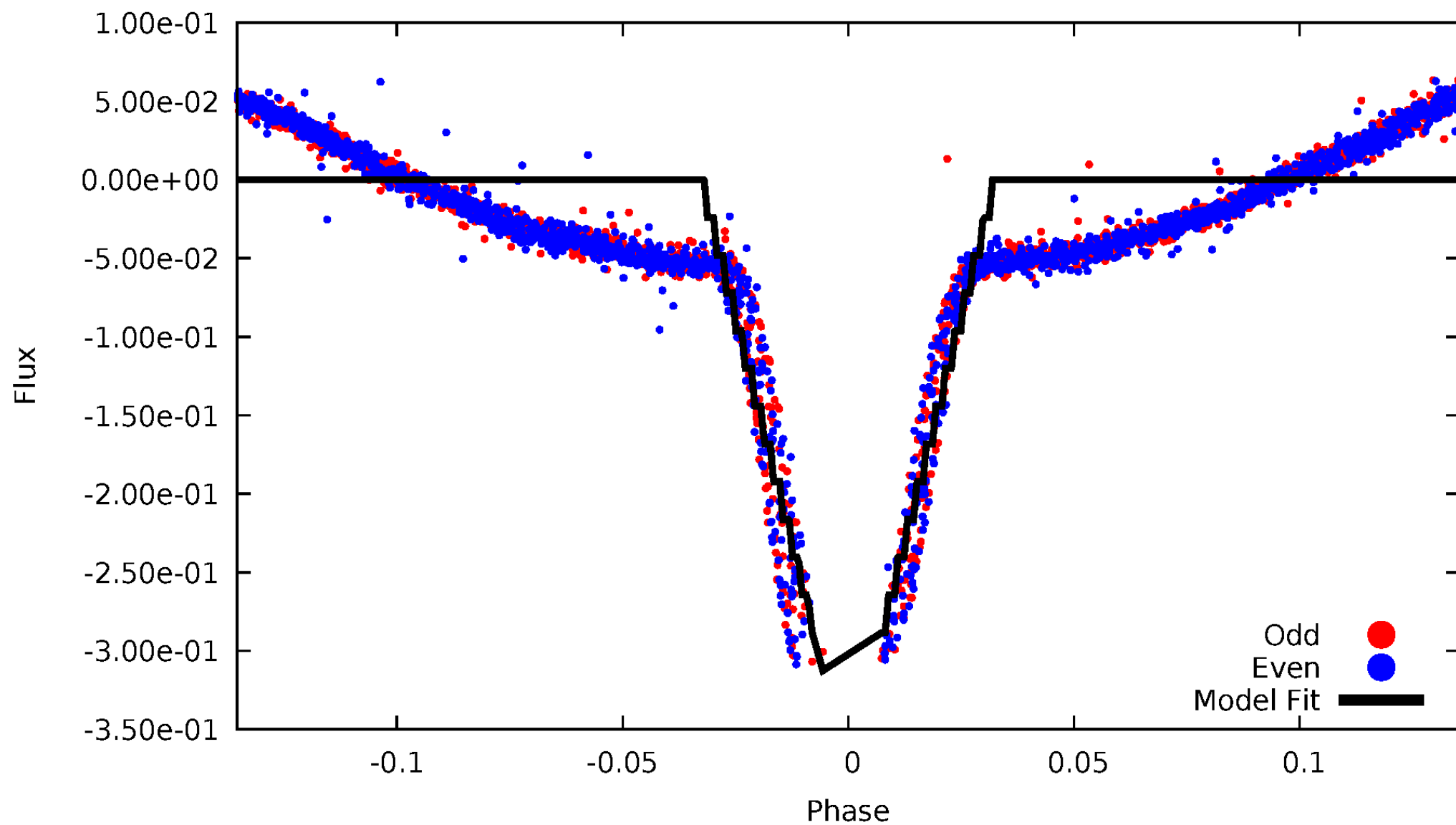
DV Odd/Even

TCE 006387887-01



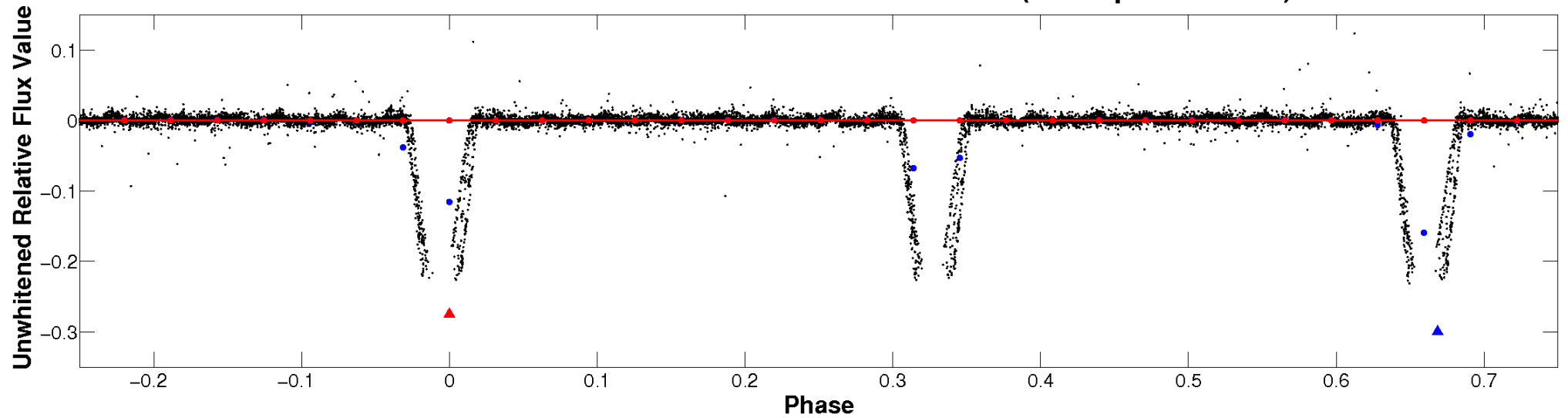
ALT Odd/Even

TCE 006387887-01



Non-Whitened Vs. Whitened Light Curve

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

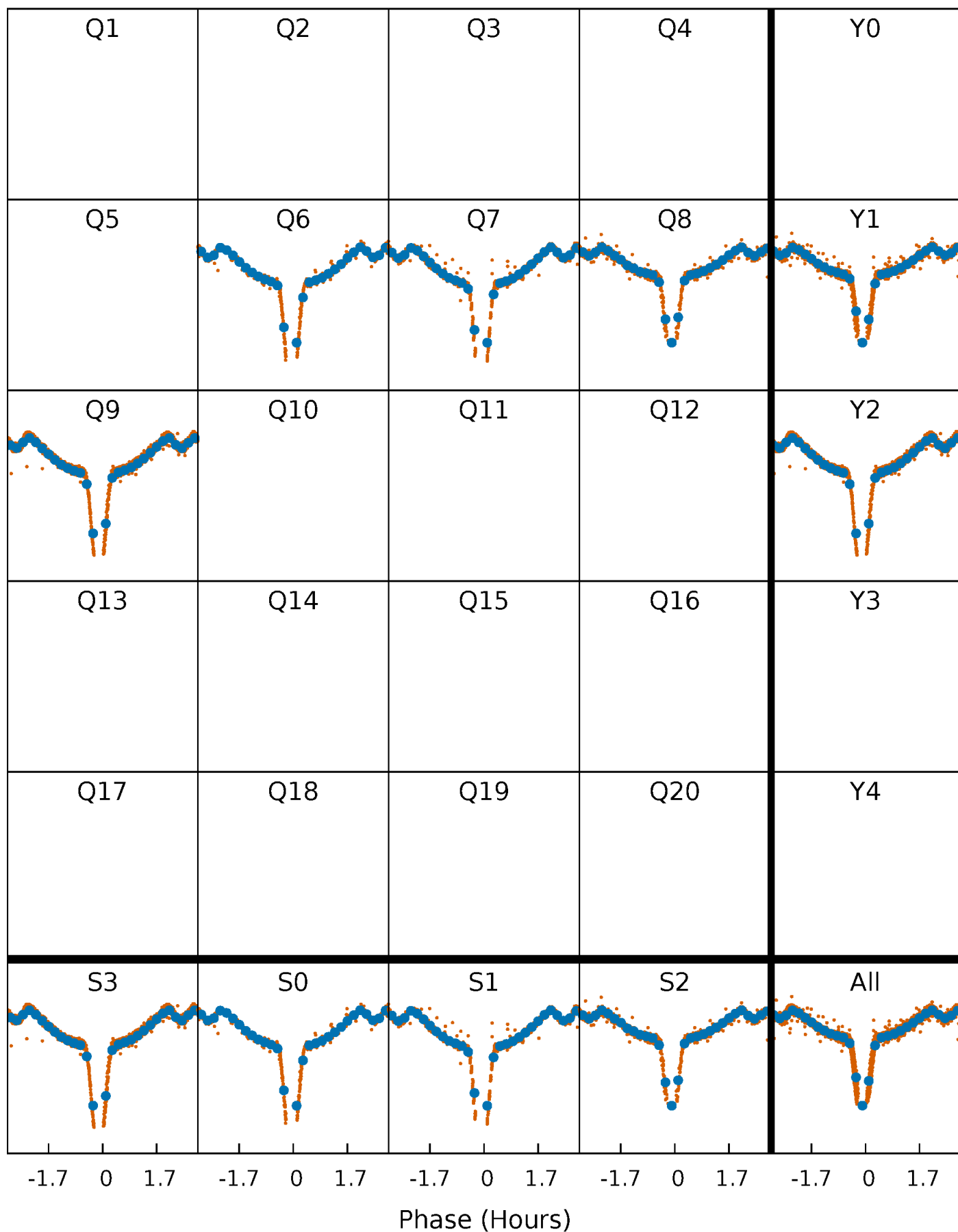


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



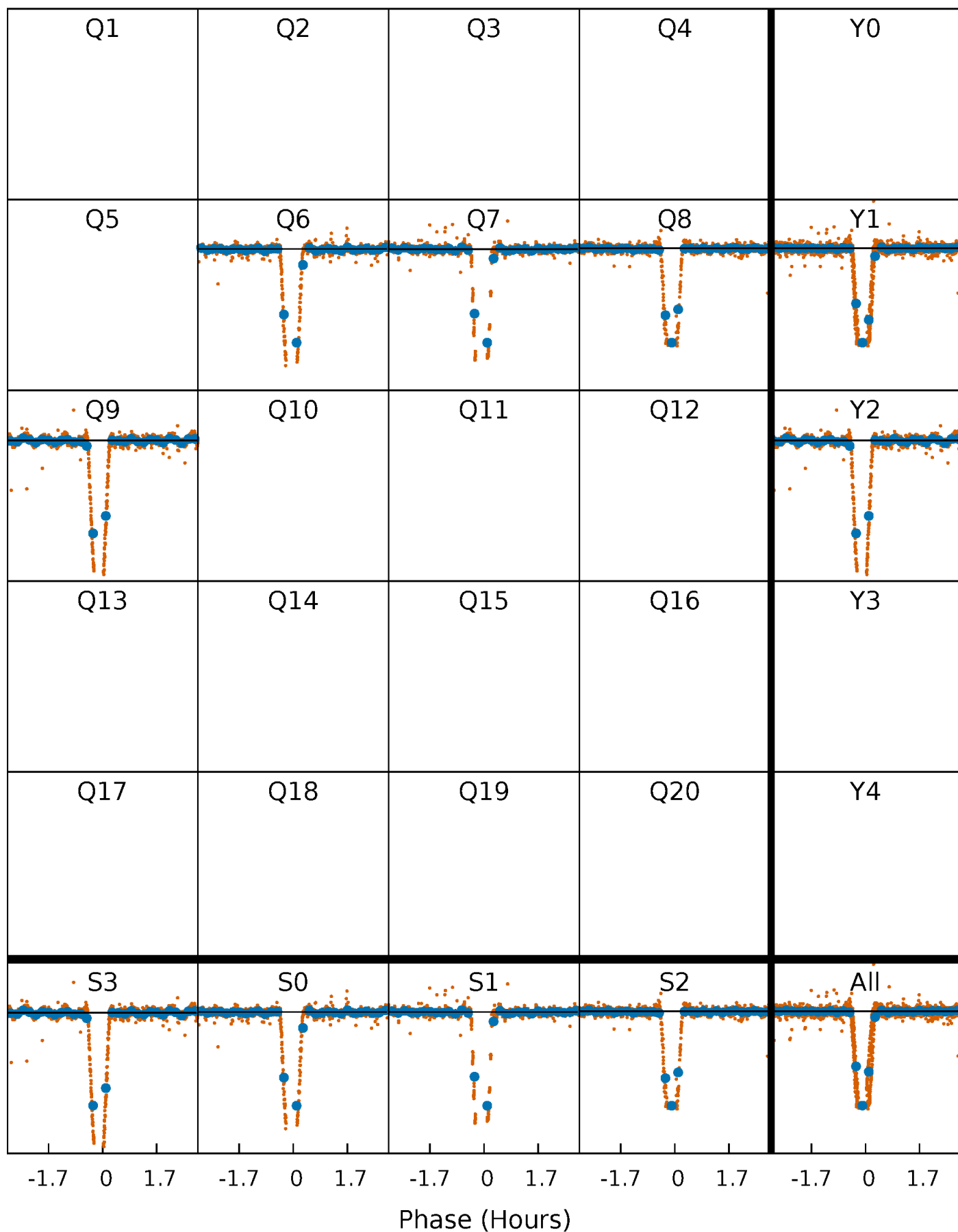
PDC Quarter-Phased Transit Curves

TCE 006387887-01 P= 0.650708 Days $T_0=132.045369$ (BKJD)



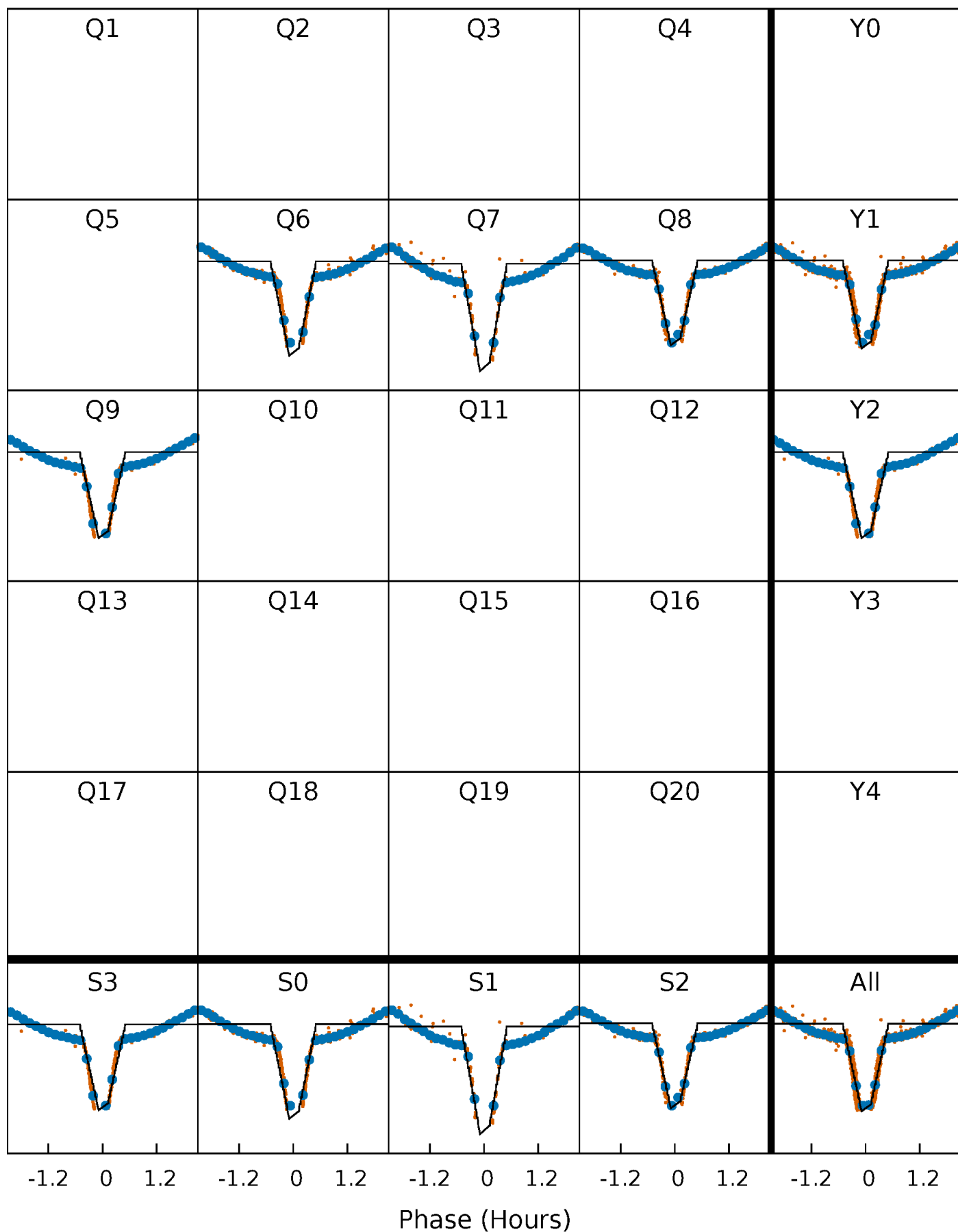
DV Quarter-Phased Transit Curves

TCE 006387887-01 P= 0.650708 Days $T_0=132.045369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

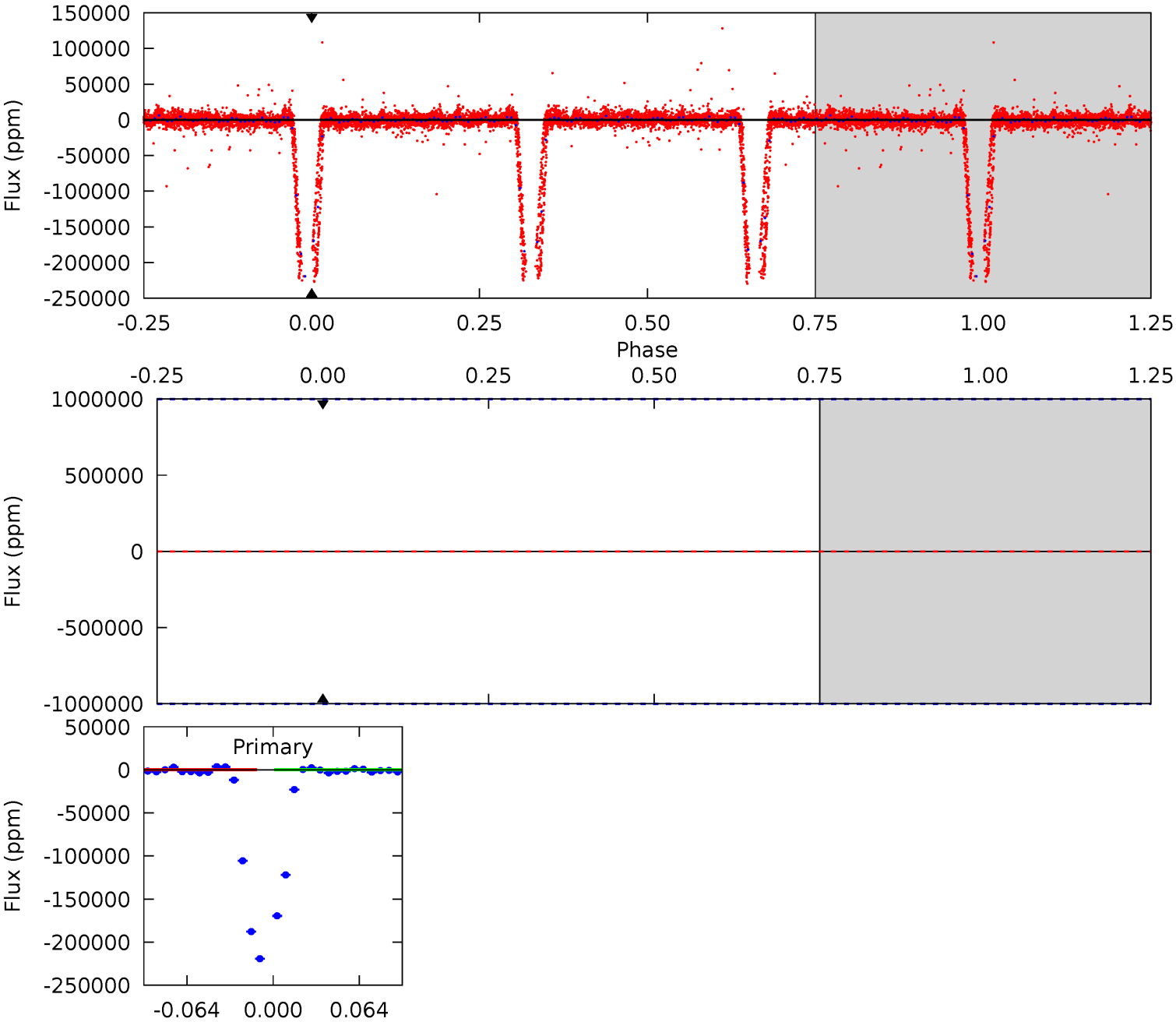
TCE 006387887-01 P= 0.650708 Days $T_0=132.041625$ (BKJD)



DV Model-Shift Uniqueness Test

006387887-01, P = 0.650708 Days, E = 132.045369 Days

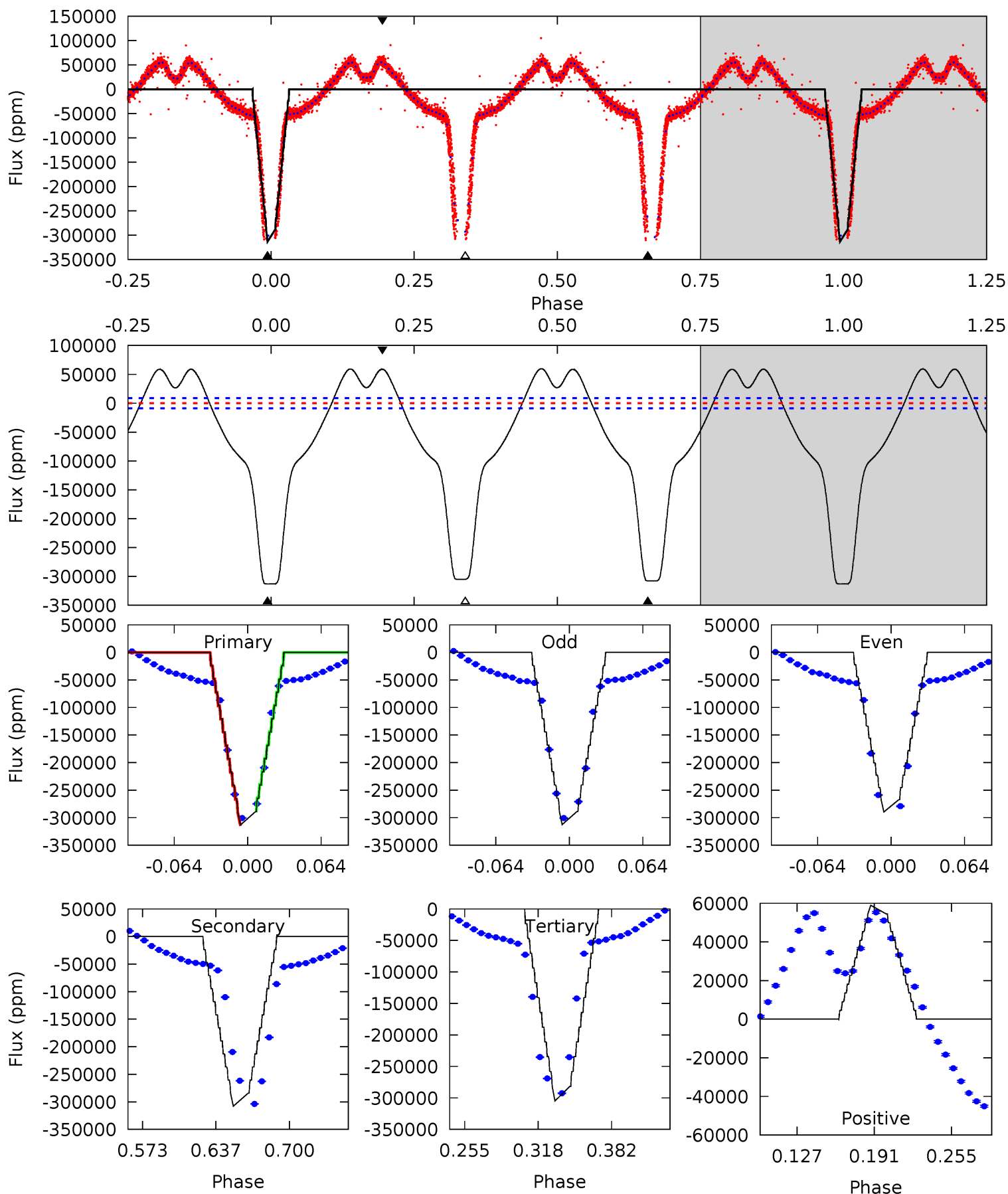
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006387887-01, P = 0.650708 Days, E = 132.041625 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
164.5	161.7	160.2	31.0	4.66	1.85	40.0	4.33	133.5	1.53	130.7	6.13	1.16	0.16	10.5



Stellar Parameters For KIC 006387887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	10921^{+266}_{-495}	$3.811^{+0.399}_{-0.070}$	$0.070^{+0.150}_{-0.600}$	$3.701^{+0.419}_{-1.779}$	$3.235^{+0.113}_{-1.018}$	$0.090^{+0.332}_{-0.022}$
	+2%/-5%	+10%/-2%	+214%/-857%	+11%/-48%	+3%/-31%	+370%/-24%
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 006387887-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$82.33^{+43.80}_{-36.20}$	8480^{+563}_{-924}	-7063^{+23034}_{-8652}	$-0.160^{+5.399}_{-4.231}$
Alt.	-307853 ± 1904	$217.25^{+59.52}_{-60.17}$	8451^{+579}_{-1008}	11157^{+2114}_{-1526}	$2.391^{+1.973}_{-0.888}$

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

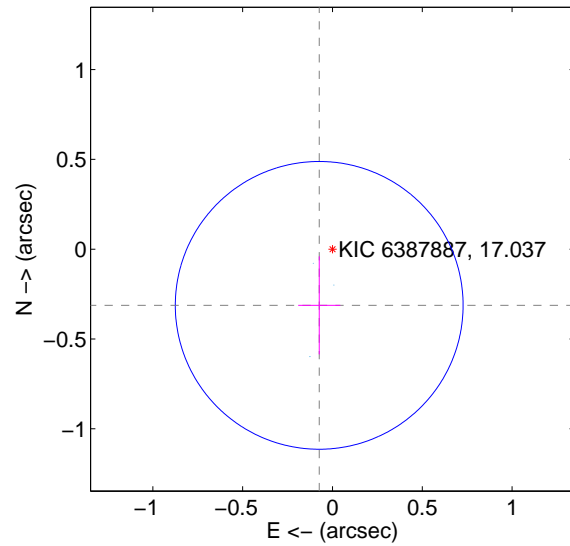
Supplemental centroid analysis for 006387887-01. Kepler magnitude: 17.04. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

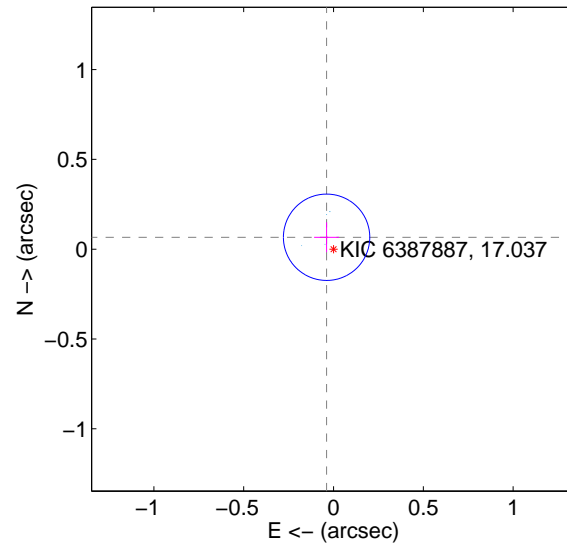
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.267	1.20	0.074 ± 0.117	-0.313 ± 0.273
PRF-fit source offset from KIC position	0.077 ± 0.080	0.96	0.039 ± 0.069	0.066 ± 0.083
photometric centroid source offset	0.47 ± 0.00	133.64	-0.15 ± 0.00	0.44 ± 0.00

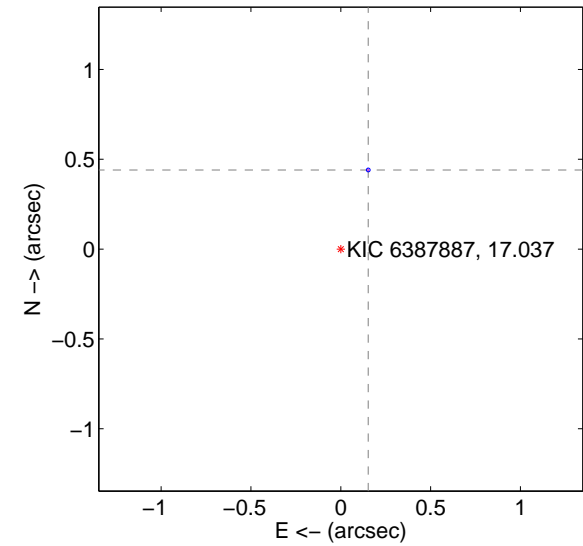
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

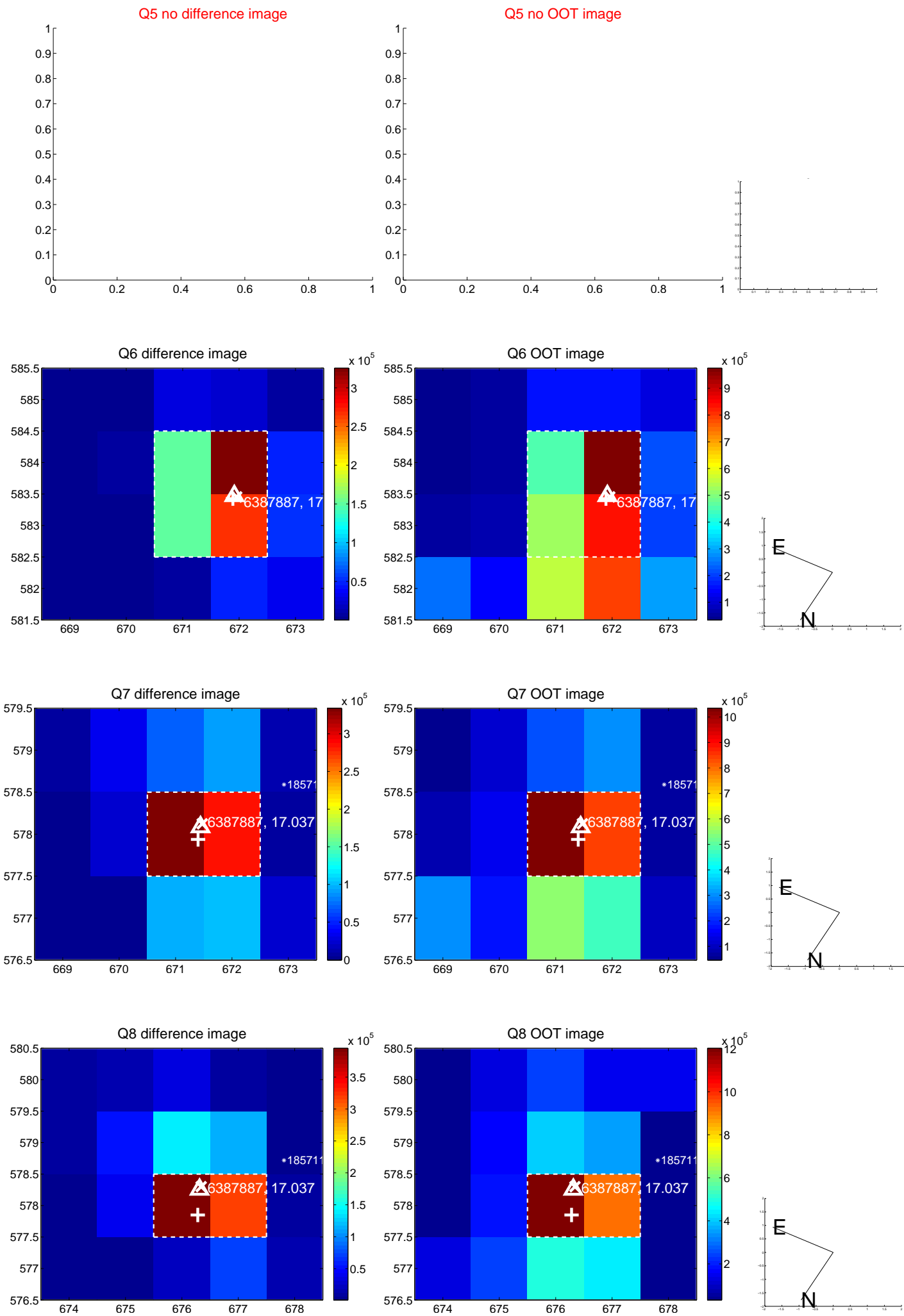


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

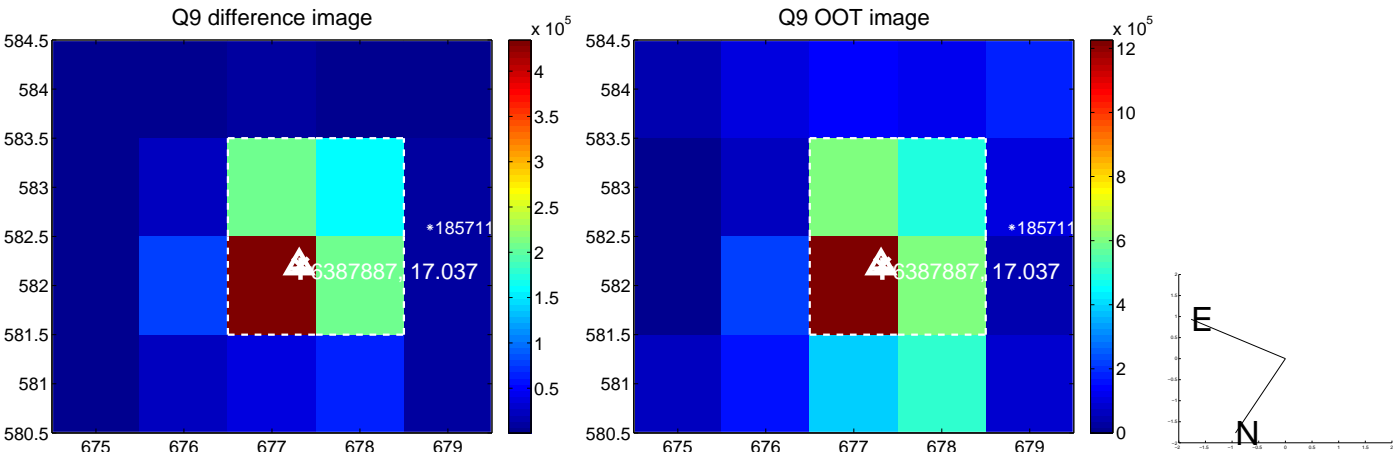
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



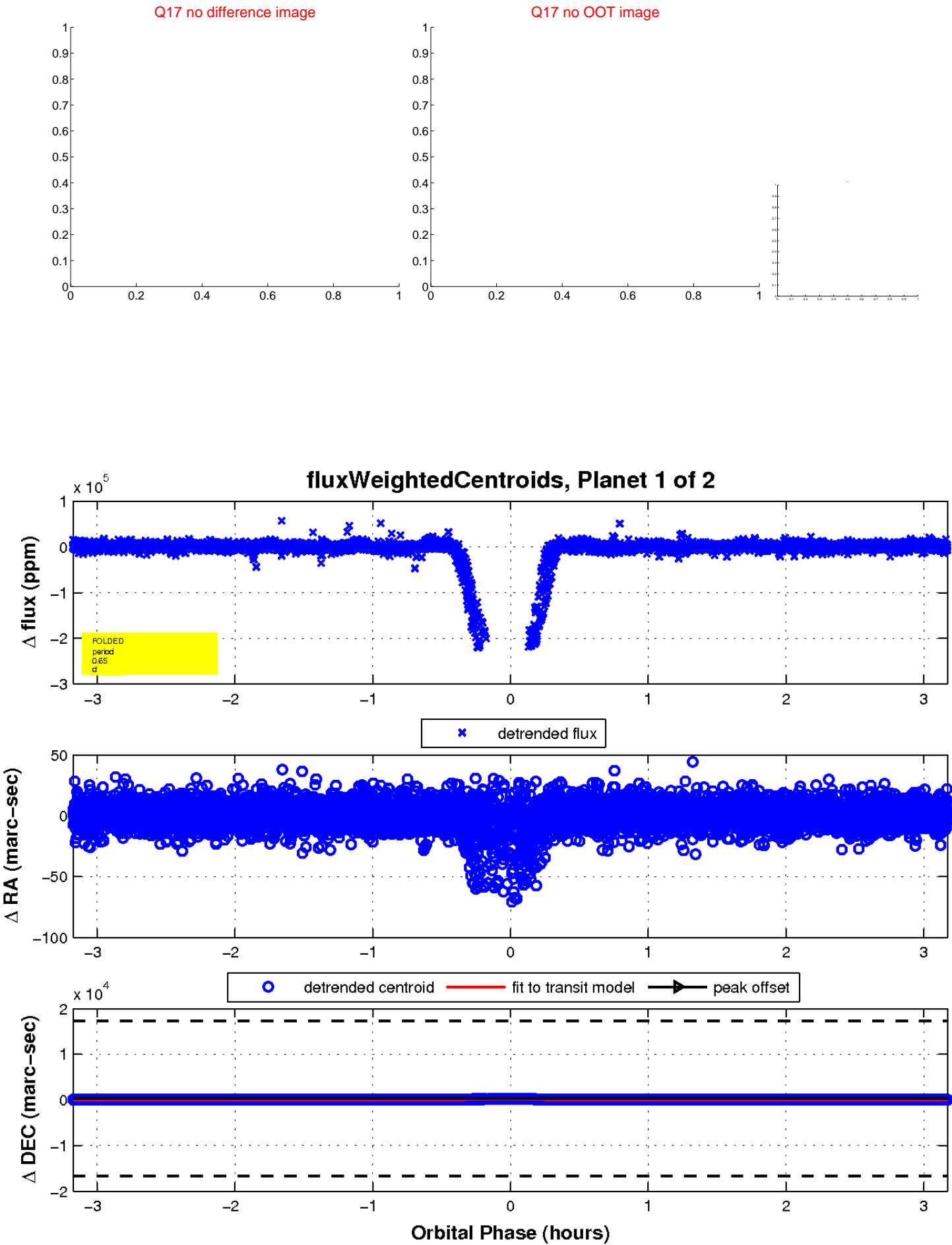
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



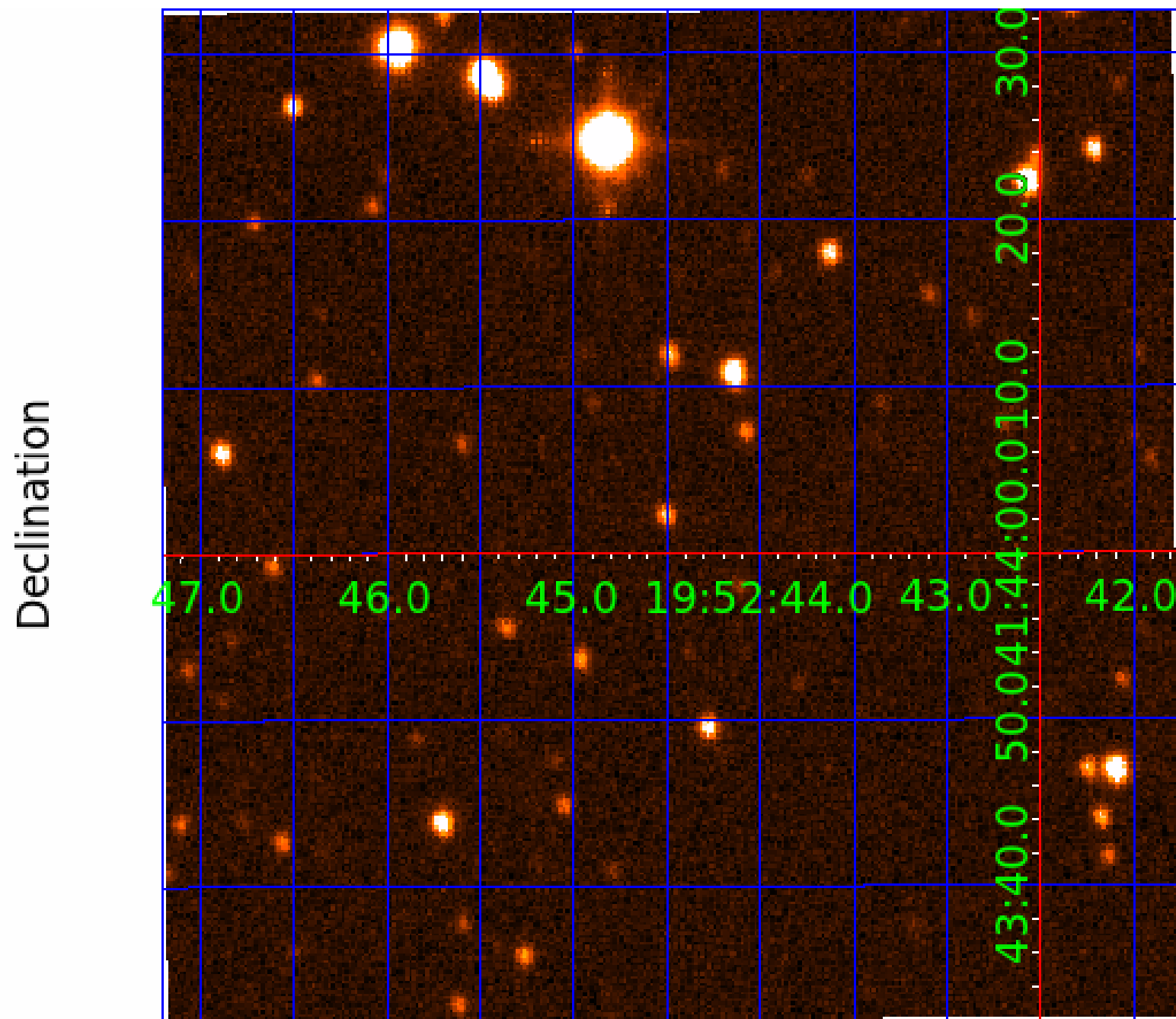
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006387887

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})
006387887-01	OBS	No	0.650708	132.045369	56364.6	1.500	351.2	-1.0	3.70	10921	91.00	369523.63
006387887-02	OBS	5280.01	0.650708	131.829744	65336.0	1.500	384.1	-1.0	3.70	10921	98.02	369523.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006387887-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
006387887-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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 006387887-02

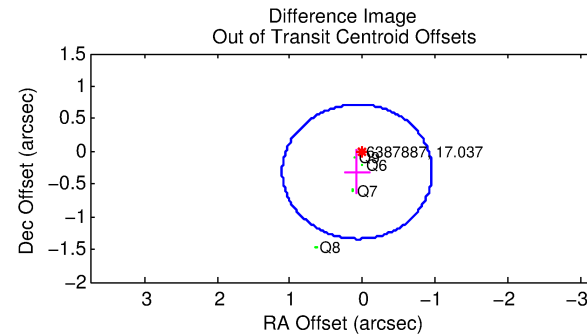
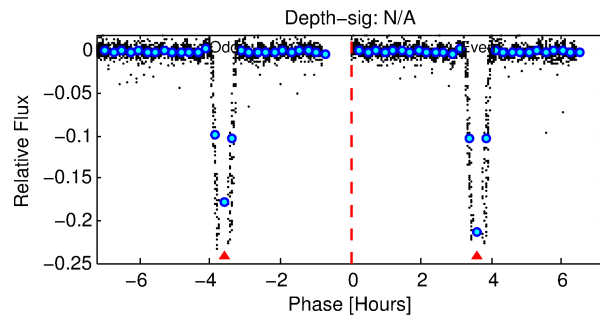
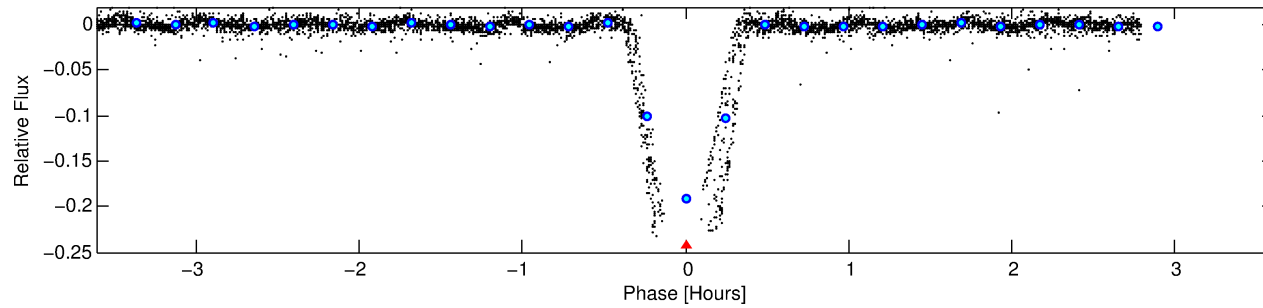
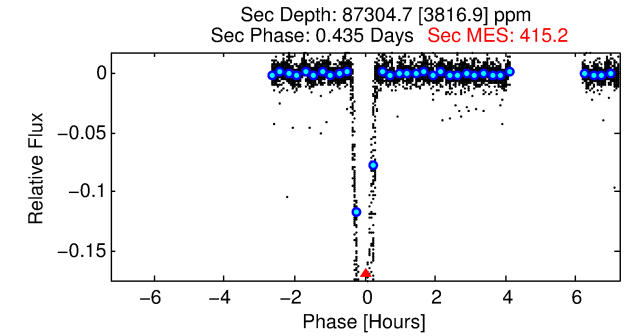
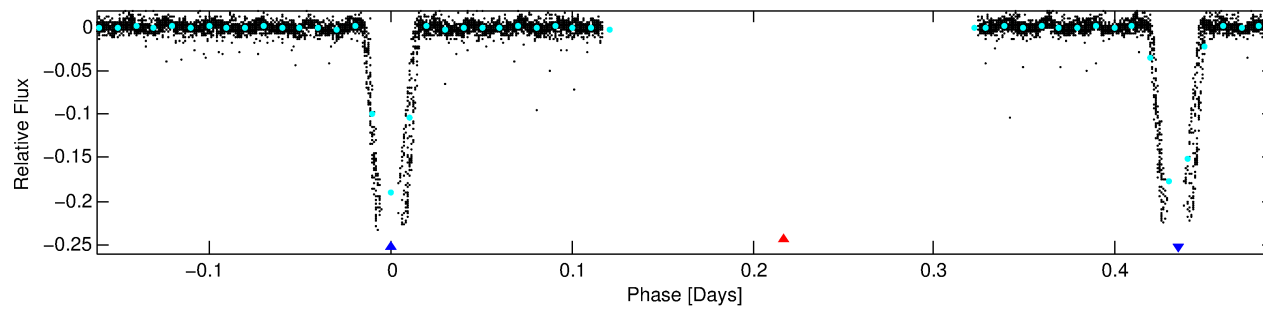
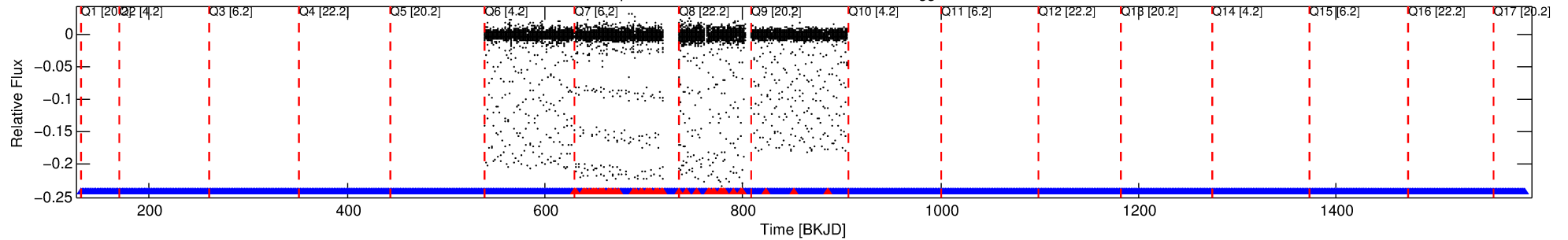
No Significant Match Found

DV One-Page Summary

KIC: 6387887 Candidate: 2 of 2 Period: 0.651 d

KOI: K05280.01 Corr: 0.782

Kp: 17.04 R*: 3.70 Rs Teff: 10921.0 K Logg: 3.81 Fe/H: 0.070



TPS TCE Results:

Period = 0.65071 d
Epoch = 131.8297 BKJD

DV fit results are unavailable

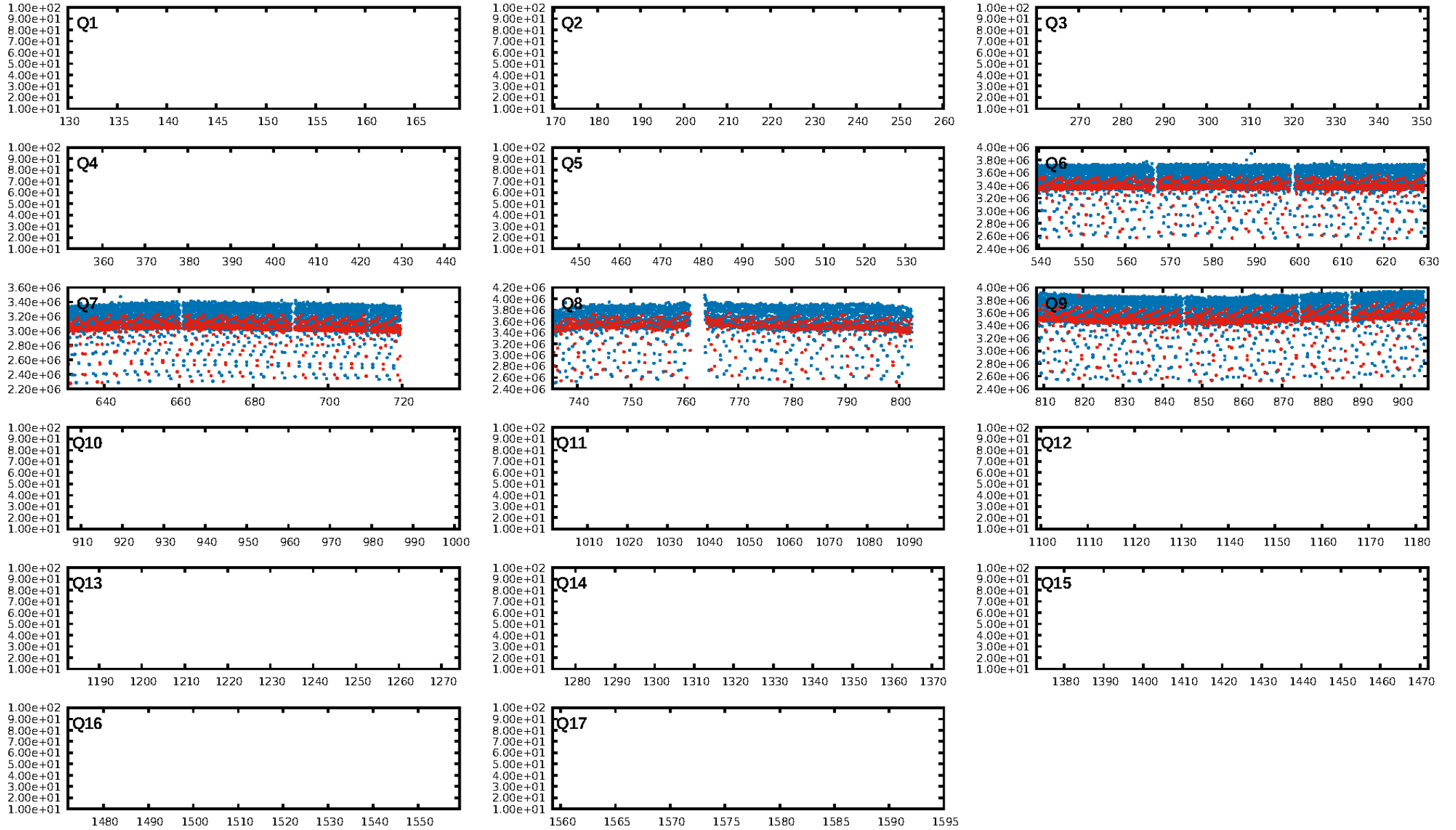
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [459/516]
GhostDiagnostic-chr: 1.324
Centroid-sig: N/A
Centroid-so: 0.422 arcsec [115.85σ]
OotOffset-rm: 0.319 arcsec [0.93σ]
KicOffset-rm: 0.077 arcsec [0.96σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]

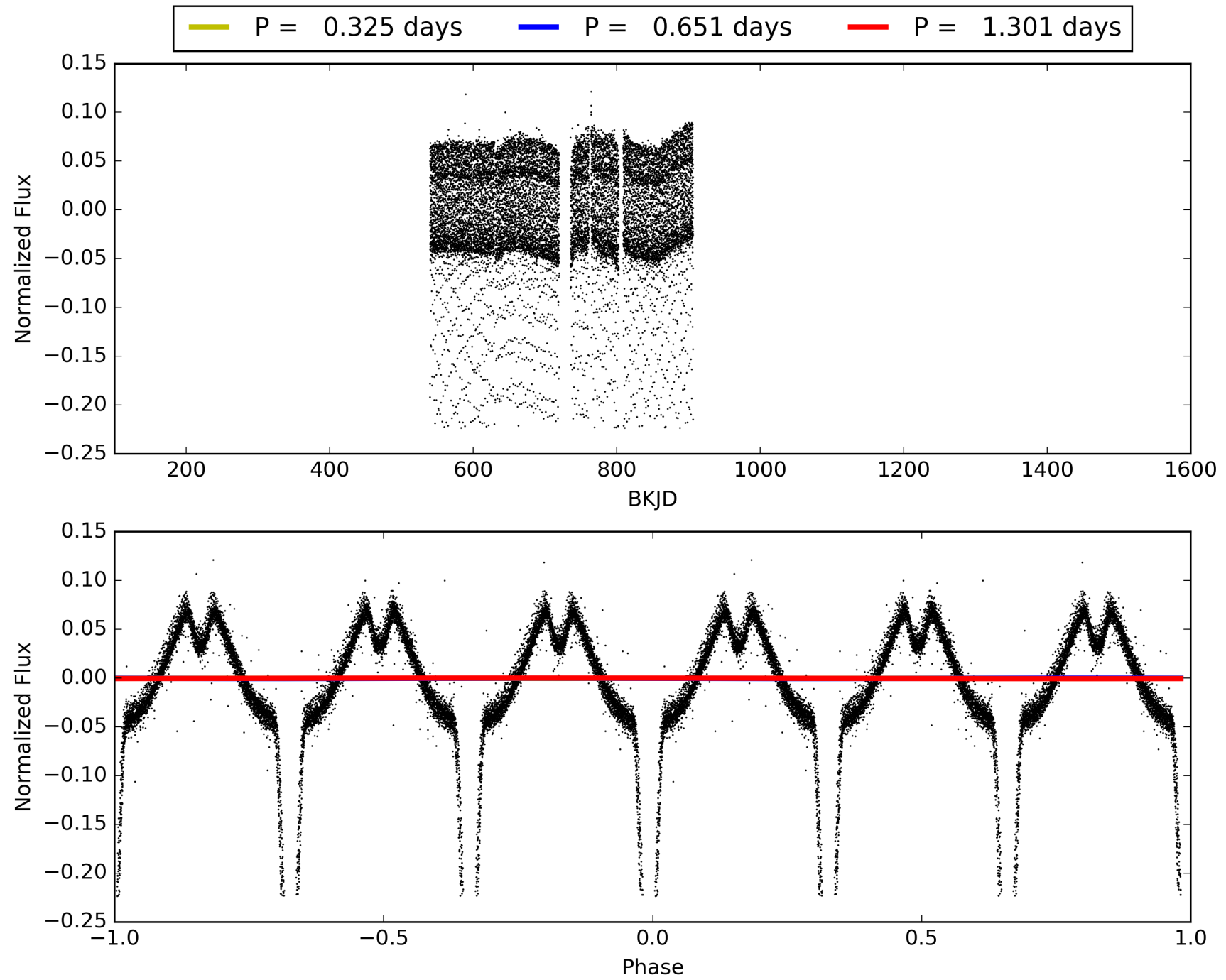
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:39:45 Z

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

TCE 006387887-02, PDC Light Curves

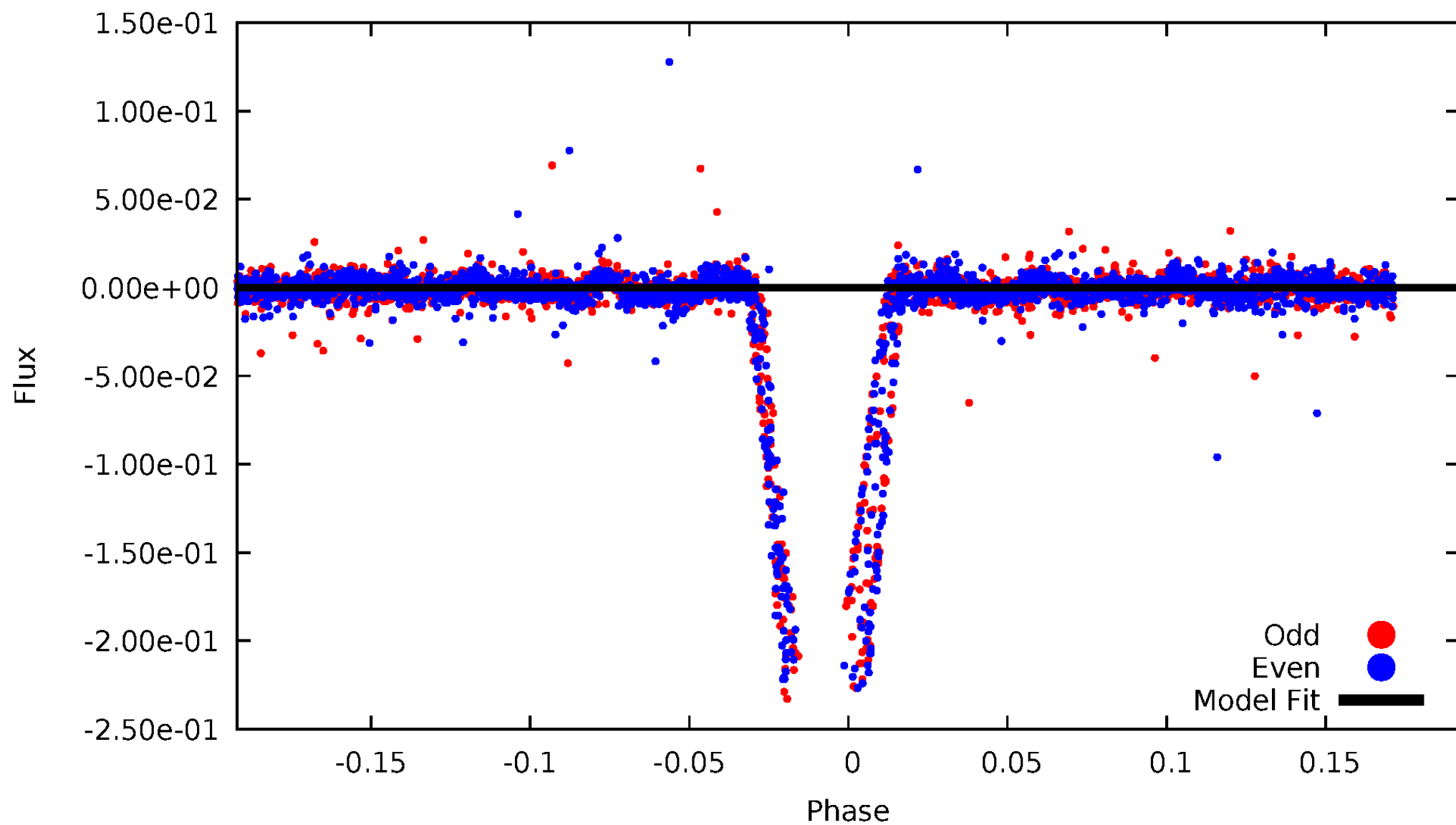


TCE 006387887-02



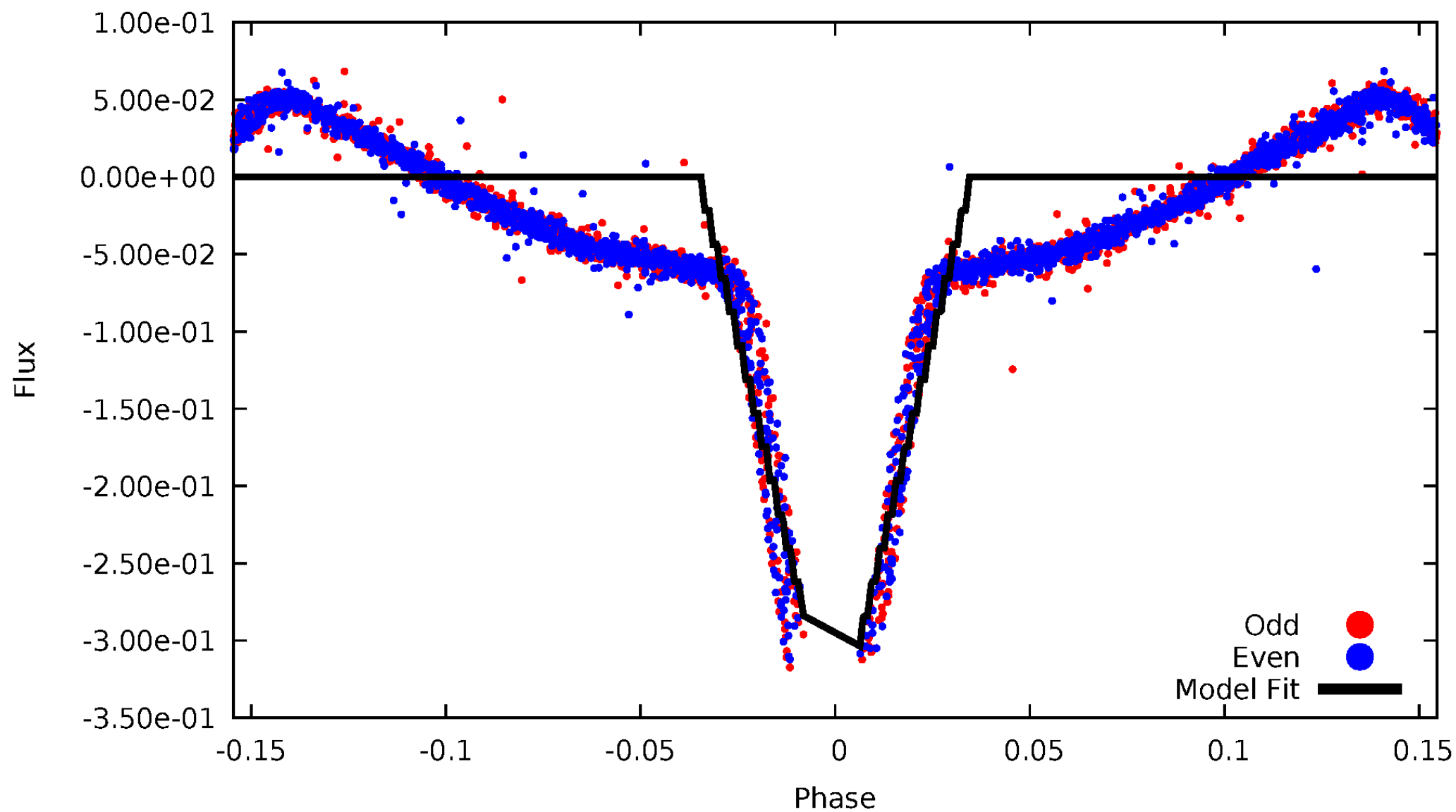
DV Odd/Even

TCE 006387887-02



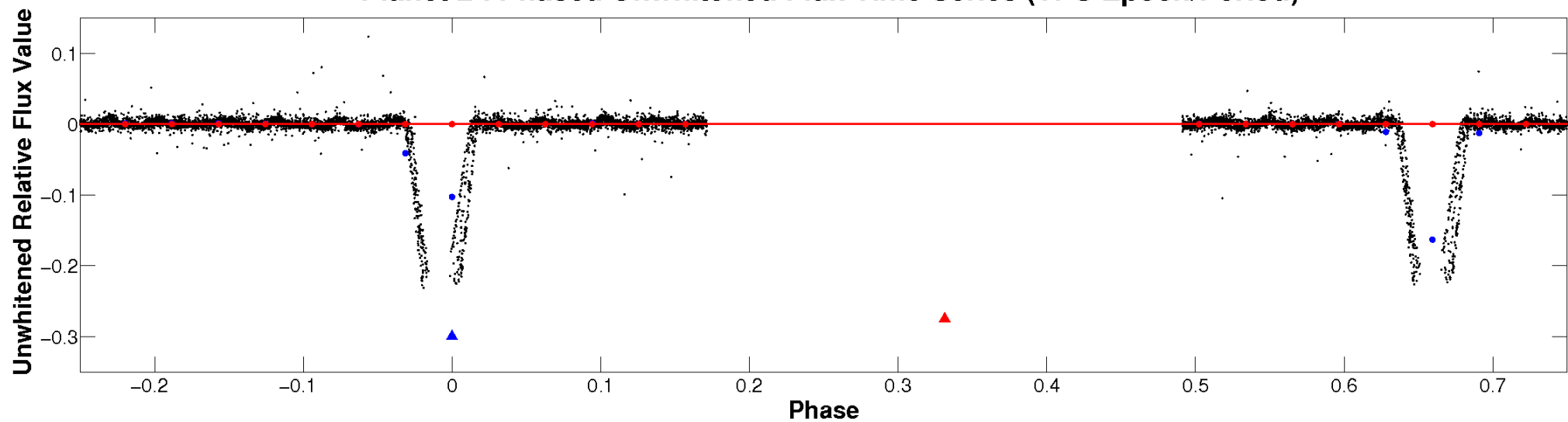
ALT Odd/Even

TCE 006387887-02

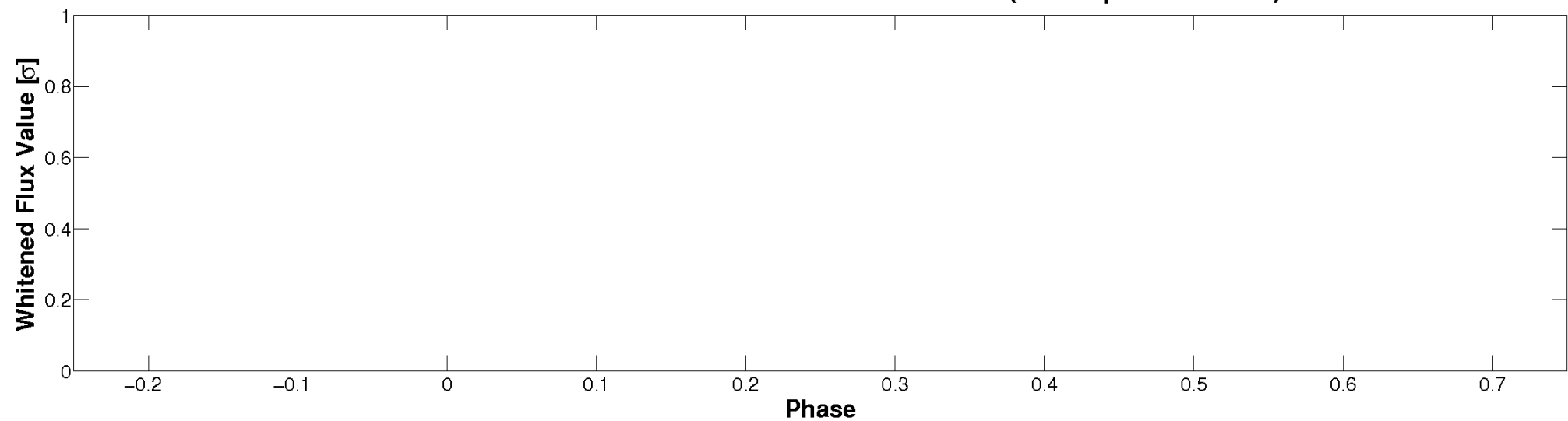


Non-Whitened Vs. Whitened Light Curve

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

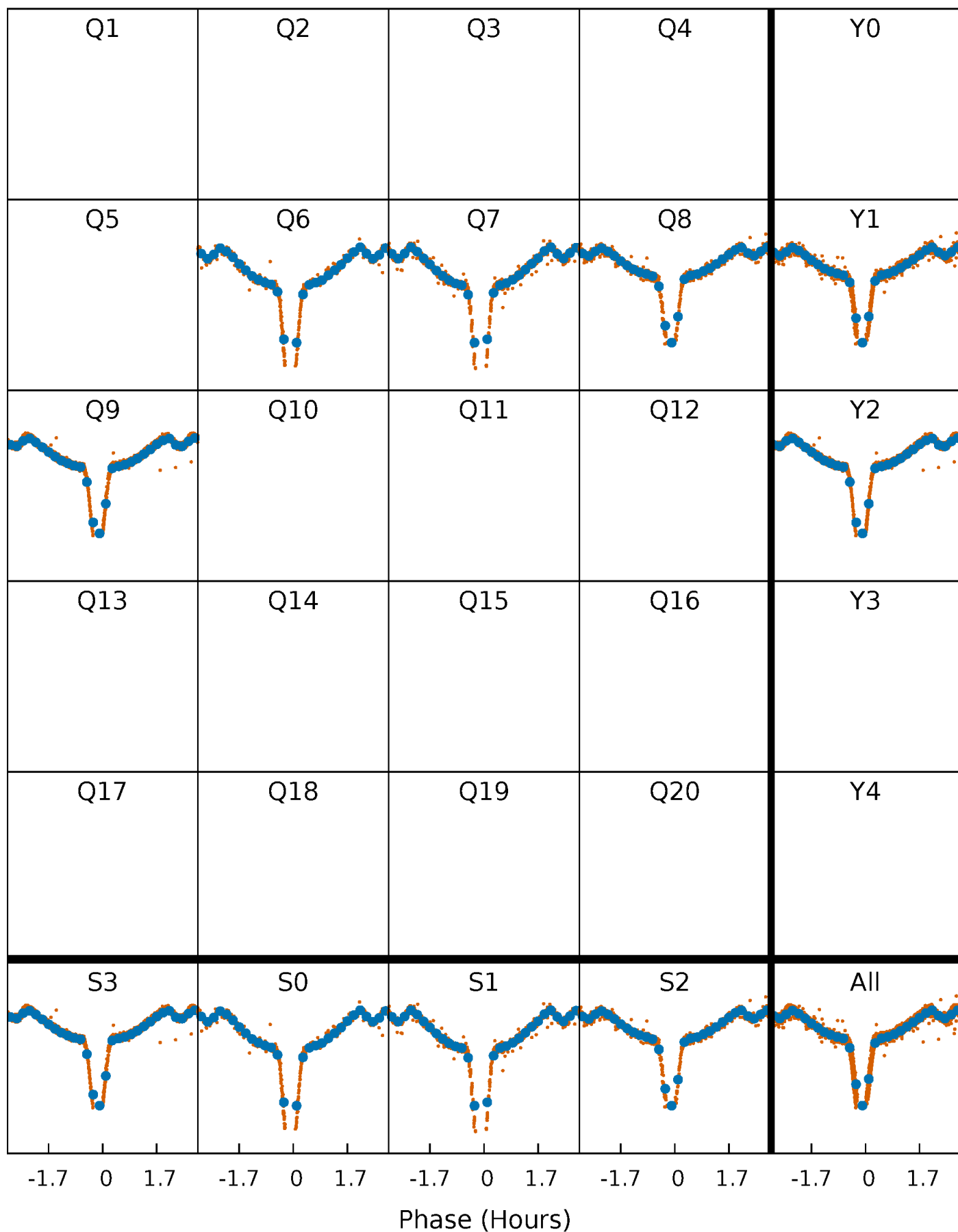


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



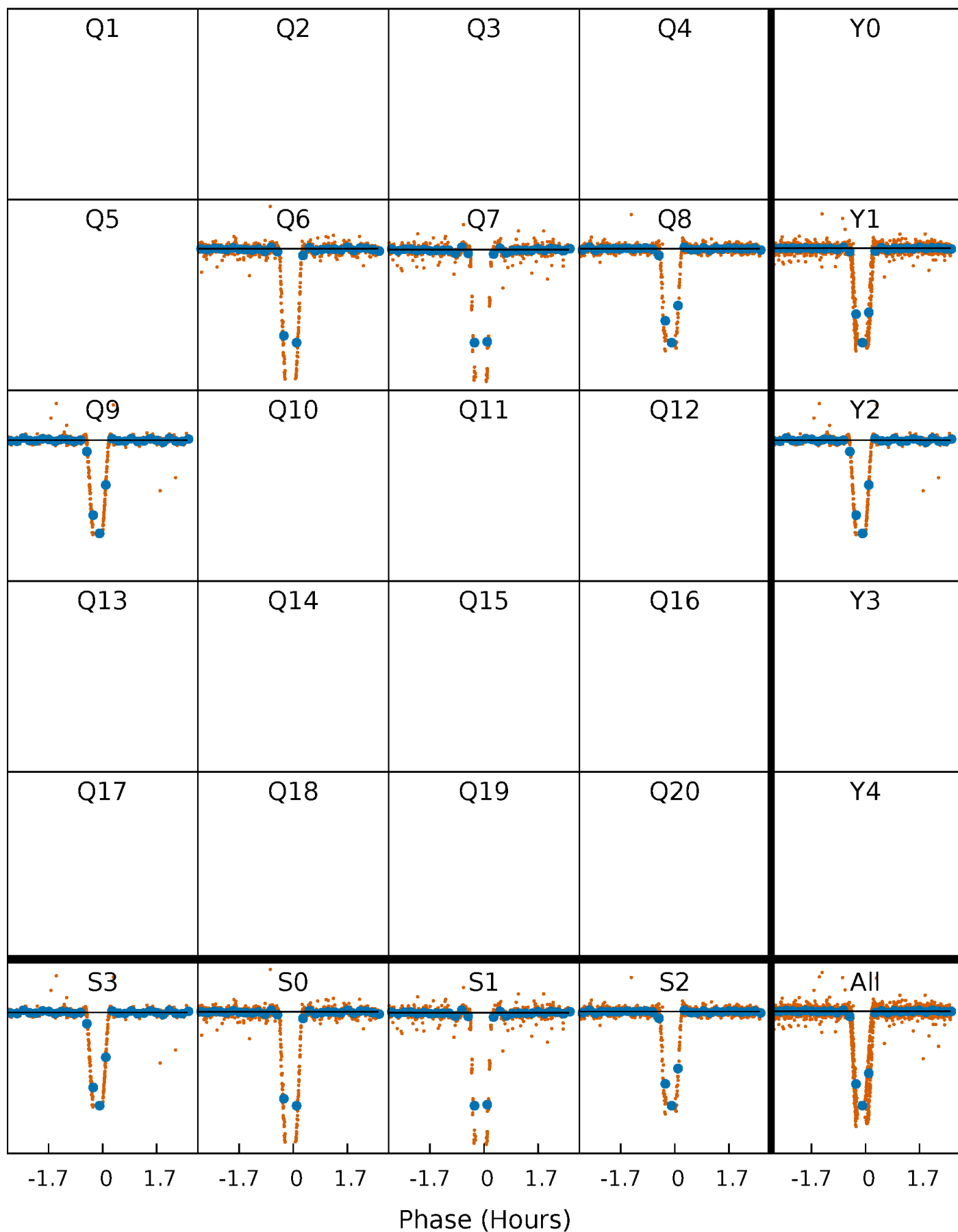
PDC Quarter-Phased Transit Curves

TCE 006387887-02 P= 0.650708 Days $T_0=131.829744$ (BKJD)



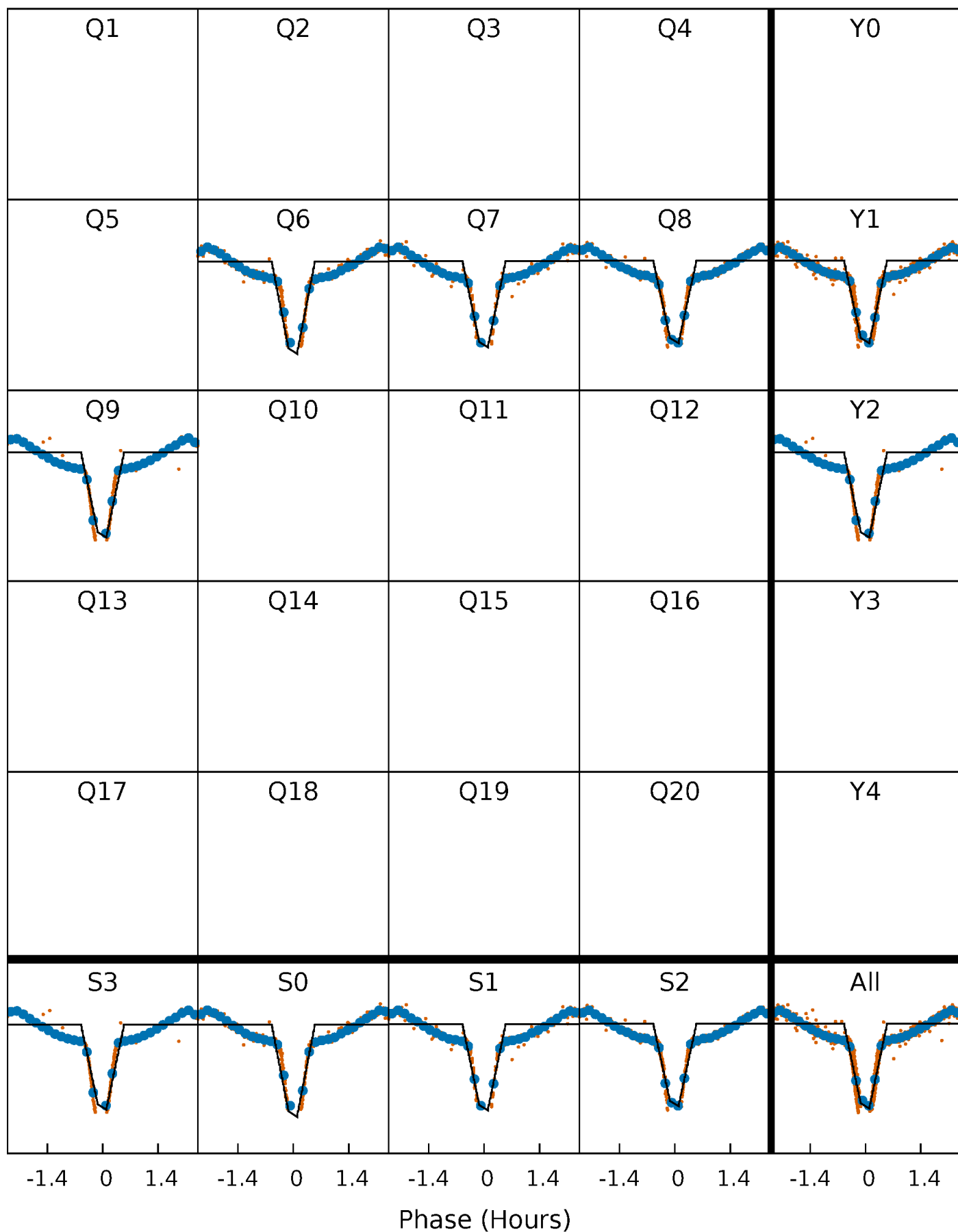
DV Quarter-Phased Transit Curves

TCE 006387887-02 $P = 0.650708$ Days $T_0 = 131.829744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

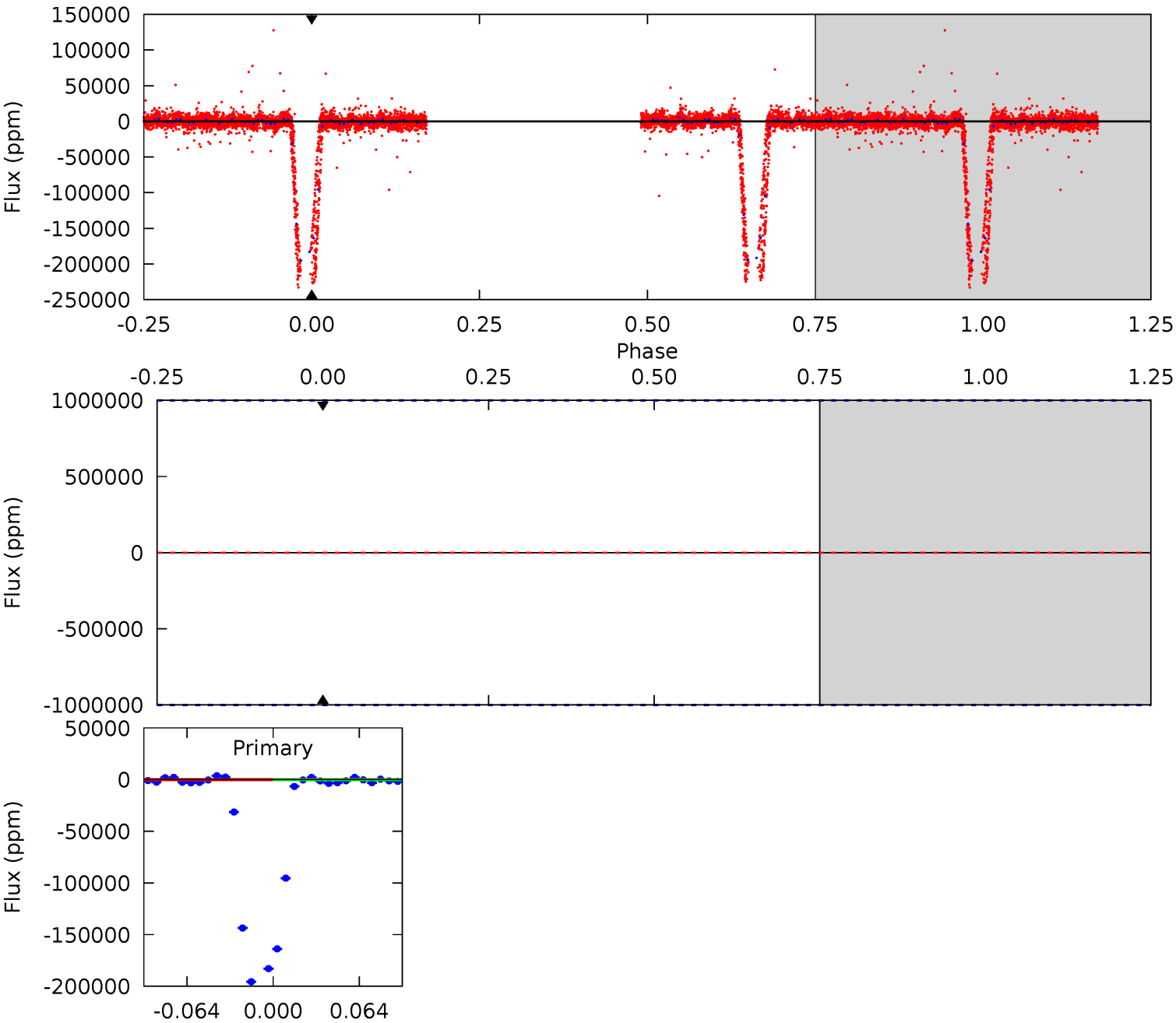
TCE 006387887-02 $P = 0.650708$ Days $T_0 = 131.824782$ (BKJD)



DV Model-Shift Uniqueness Test

006387887-02, P = 0.650708 Days, E = 131.829744 Days

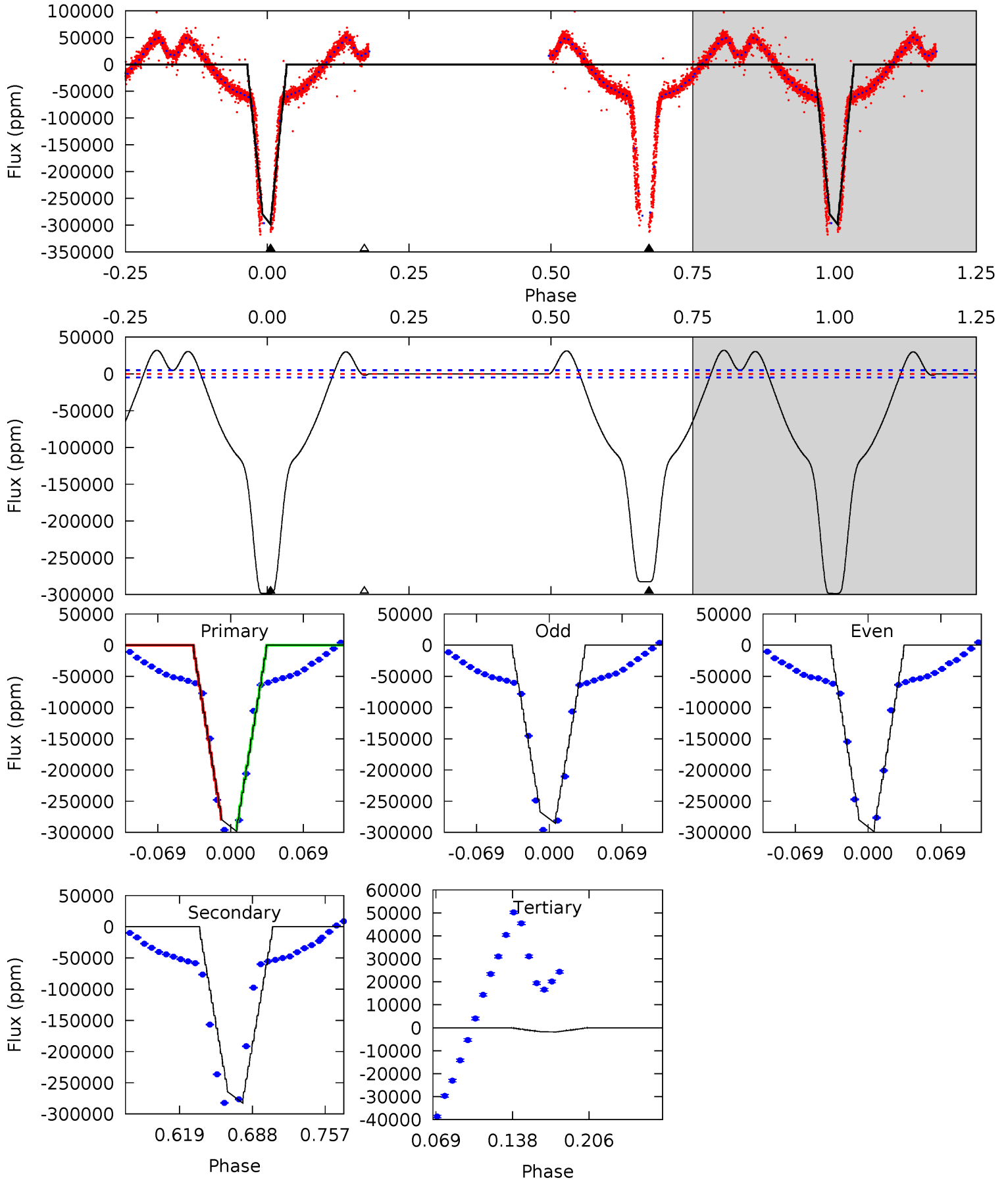
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006387887-02, P = 0.650708 Days, E = 131.824782 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
278.5	263.6	1.72	0	4.64	1.82	36.1	276.8	278.5	261.9	263.6	6.32	1.07	0.10	7.62



Stellar Parameters For KIC 006387887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	10921^{+266}_{-495}	$3.811^{+0.399}_{-0.070}$	$0.070^{+0.150}_{-0.600}$	$3.701^{+0.419}_{-1.779}$	$3.235^{+0.113}_{-1.018}$	$0.090^{+0.332}_{-0.022}$
	+2%/-5%	+10%/-2%	+214%/-857%	+11%/-48%	+3%/-31%	+370%/-24%
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 006387887-02 / KOI 5280.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$86.21^{+42.88}_{-35.42}$	8463^{+574}_{-944}	-6943^{+21729}_{-7462}	$-0.195^{+4.417}_{-3.490}$
Alt.	-282553 ± 1072	$209.32^{+57.24}_{-54.73}$	8484^{+582}_{-949}	10999^{+2374}_{-1582}	$2.264^{+1.795}_{-0.821}$

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

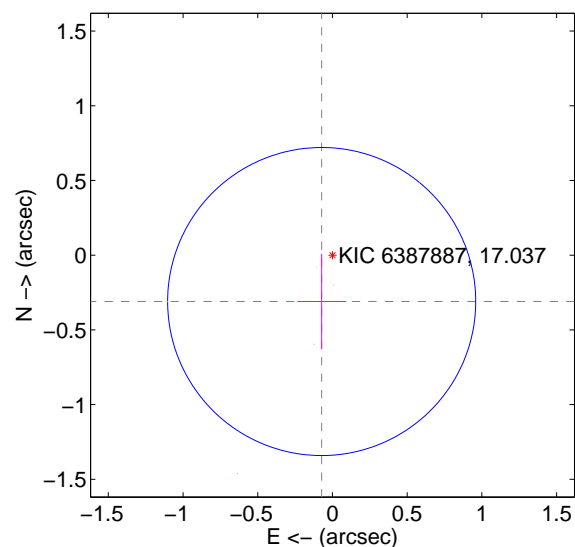
Supplemental centroid analysis for 006387887-02. Kepler magnitude: 17.04. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

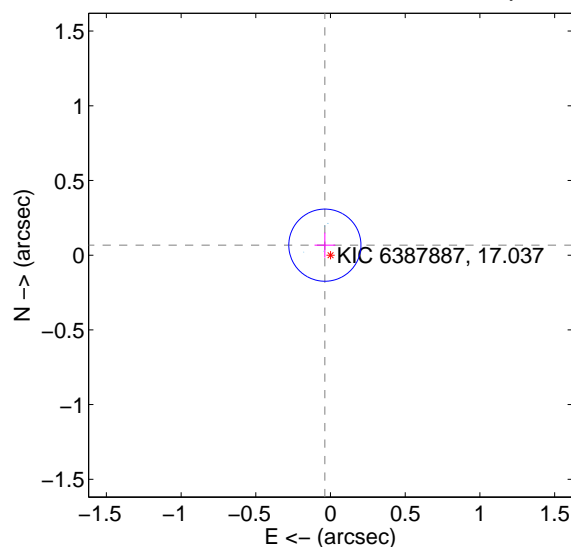
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.319 ± 0.344	0.93	0.072 ± 0.163	-0.310 ± 0.320
PRF-fit source offset from KIC position	0.077 ± 0.080	0.96	0.038 ± 0.069	0.067 ± 0.084
photometric centroid source offset	0.42 ± 0.00	115.85	-0.14 ± 0.00	0.40 ± 0.00

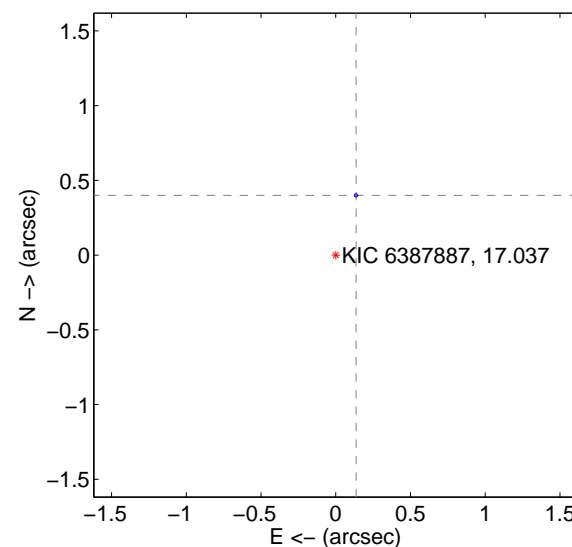
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

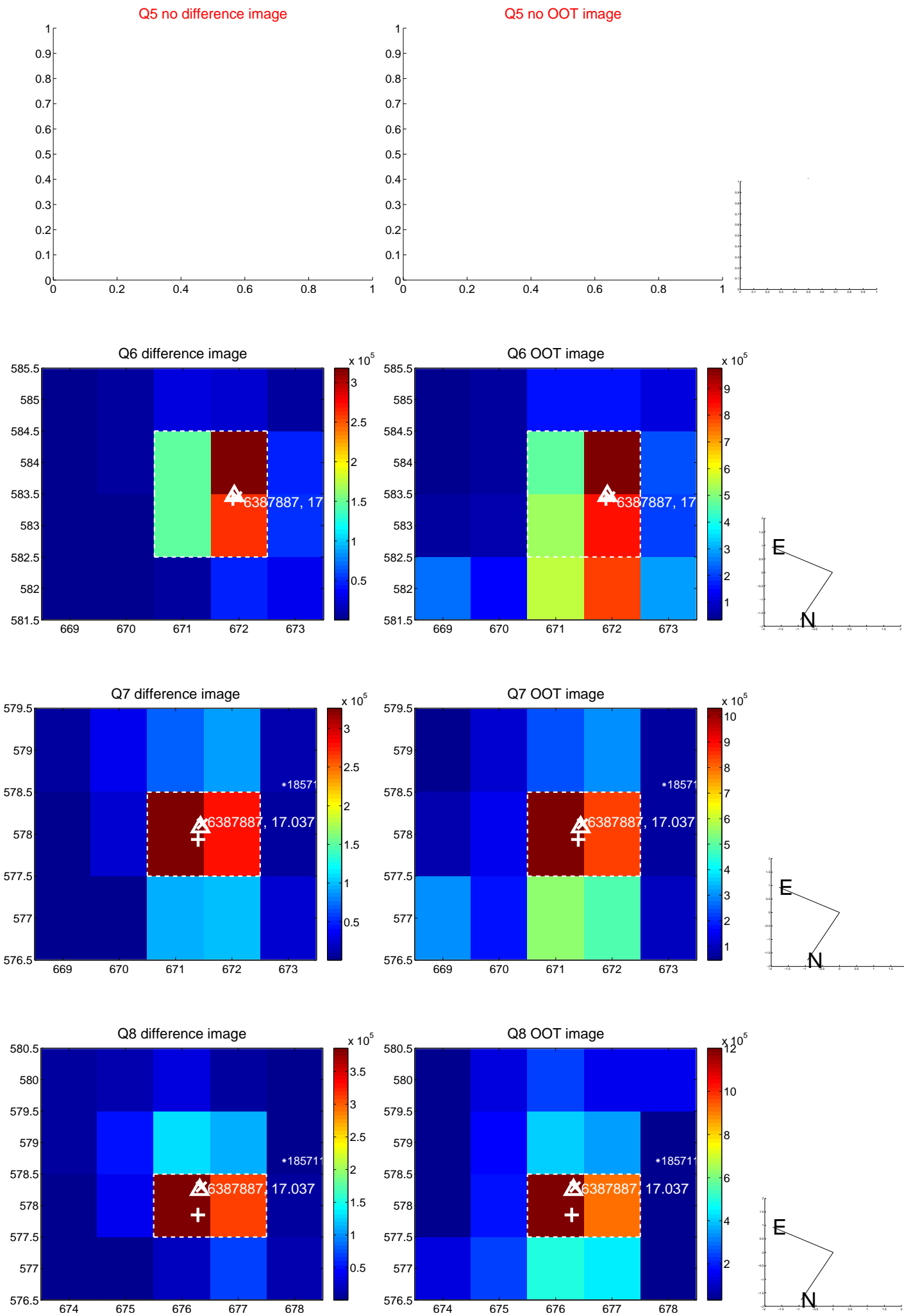


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

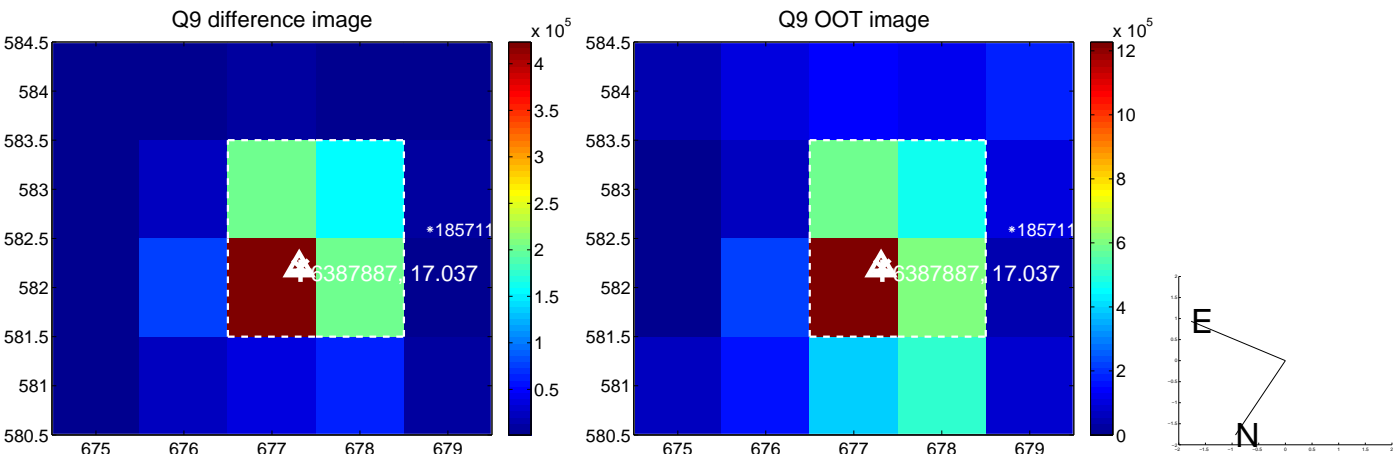
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



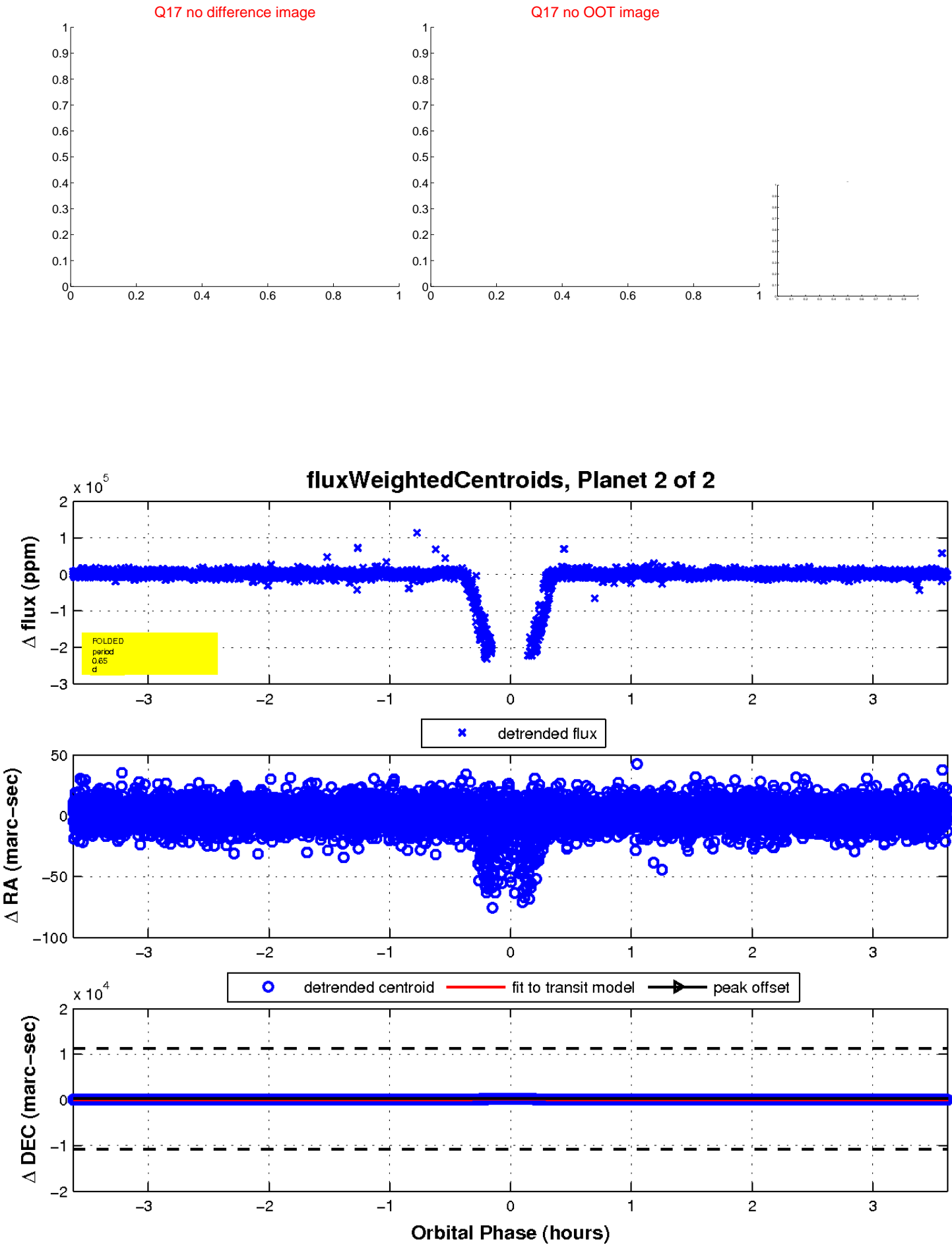
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

