

KIC 008248967

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})
008248967-01	OBS	No	0.592537	131.642135	250.6	2.313	17.7	1.1	1.28	6740	2.87	14184.48
008248967-02	OBS	No	0.592566	131.917244	790.3	1.500	16.8	-1.0	1.28	6740	3.63	14183.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008248967-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS
008248967-02	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

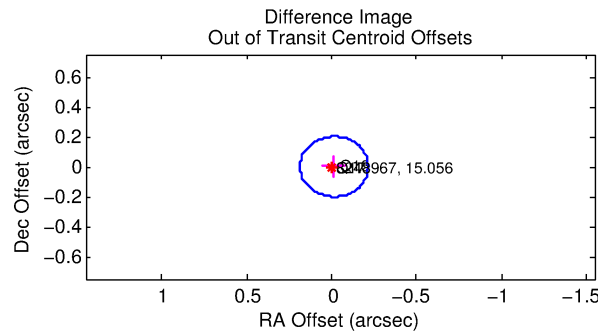
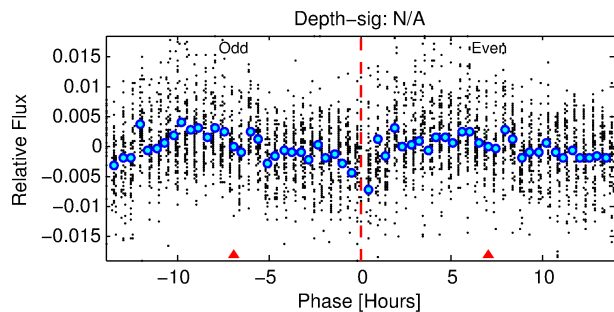
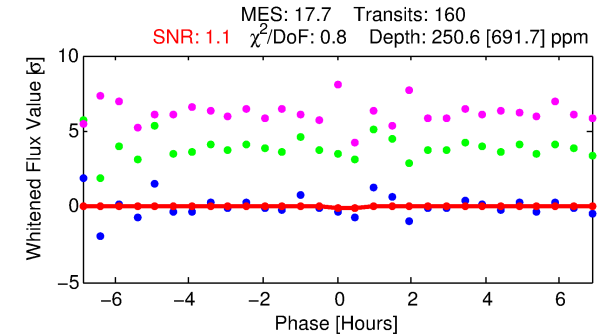
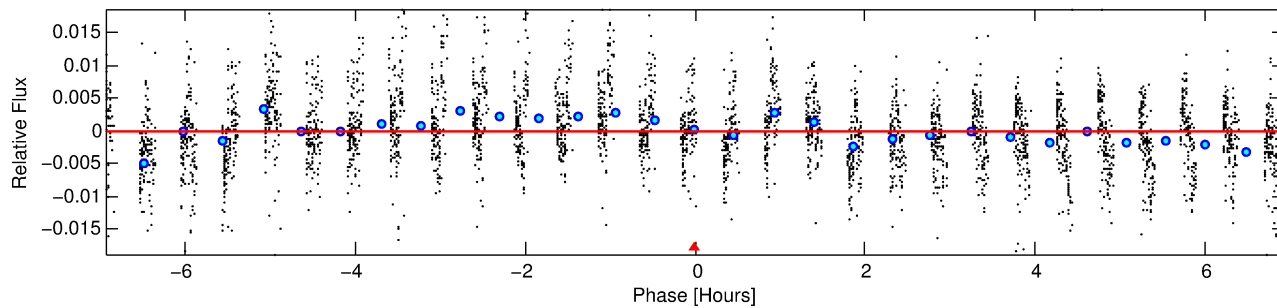
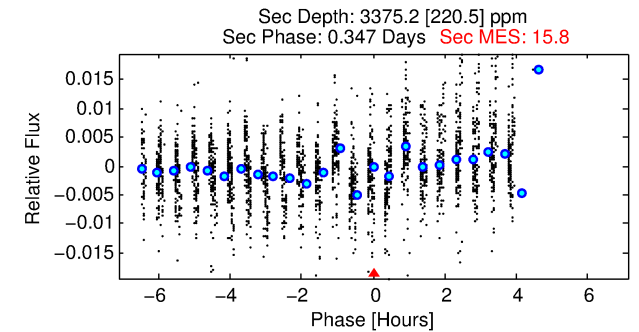
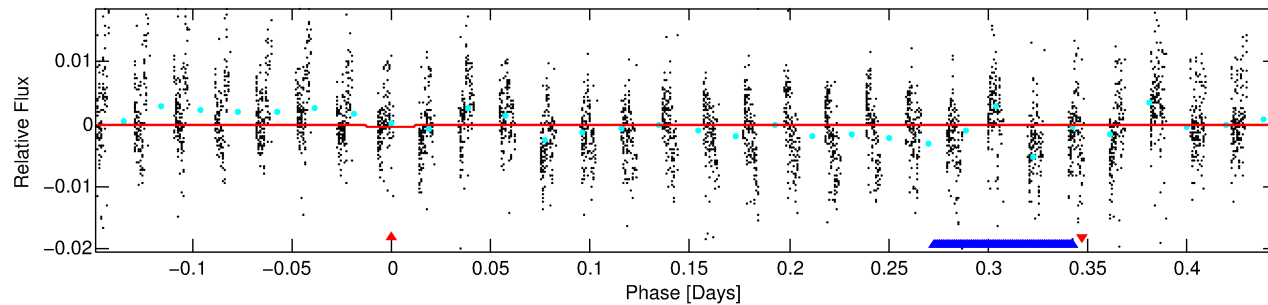
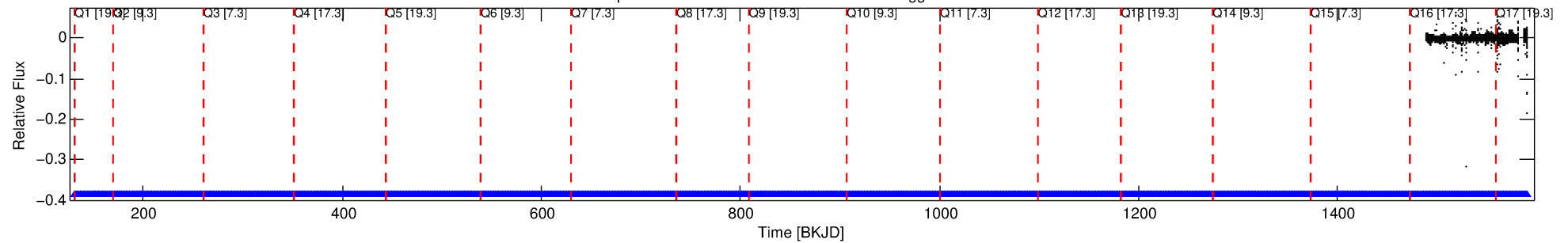
Ephemeris Match Information For 008248967-01

No Significant Match Found

DV One-Page Summary

KIC: 8248967 Candidate: 1 of 2 Period: 0.593 d

Kp: 15.06 R*: 1.28 Rs Teff: 6740.0 K Logg: 4.30 Fe/H: -0.360



DV Fit Results:

Period = 0.59254 [0.00009] d
Epoch = 131.6421 [0.0184] BKJD
Rp/R* = 0.0206 [0.0738]
a/R* = 1.13 [0.45]
b = 0.99 [0.18]
Seff = 14184.48 [5657.88]
Teq = 2783 [277] K
Rp = 2.87 [10.31] Re
a = 0.0146 [0.0037] AU
Ag = 47.86 [343.25] [0.14σ]
Teffp = 11316 [20271] K [0.42σ]

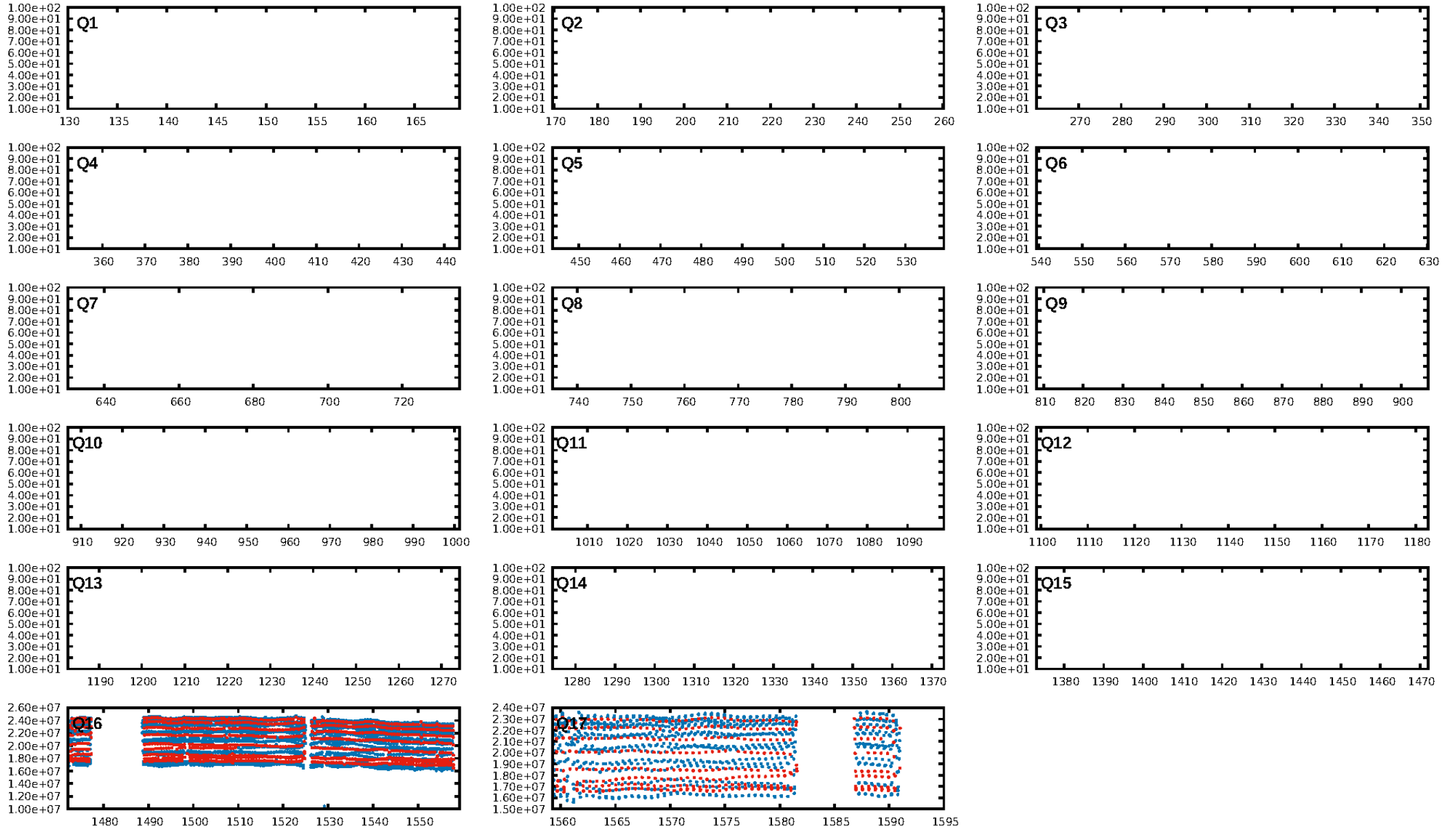
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.95e-35
RollingBand-fgt: 1.00 [115/115]
GhostDiagnostic-chr: 3.538
Centroid-sig: N/A
Centroid-so: 1.967 arcsec [2.13σ]
OotOffset-rm: 0.014 arcsec [0.21σ]
KicOffset-rm: 0.193 arcsec [1.73σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

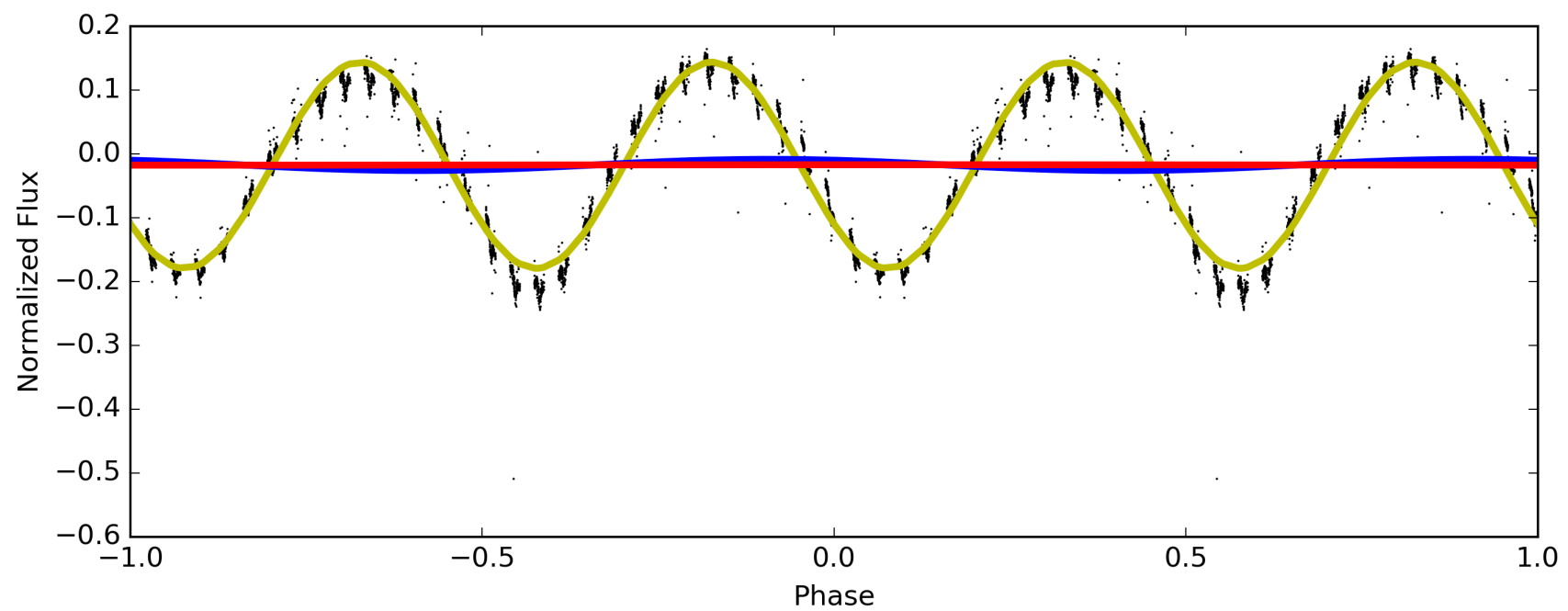
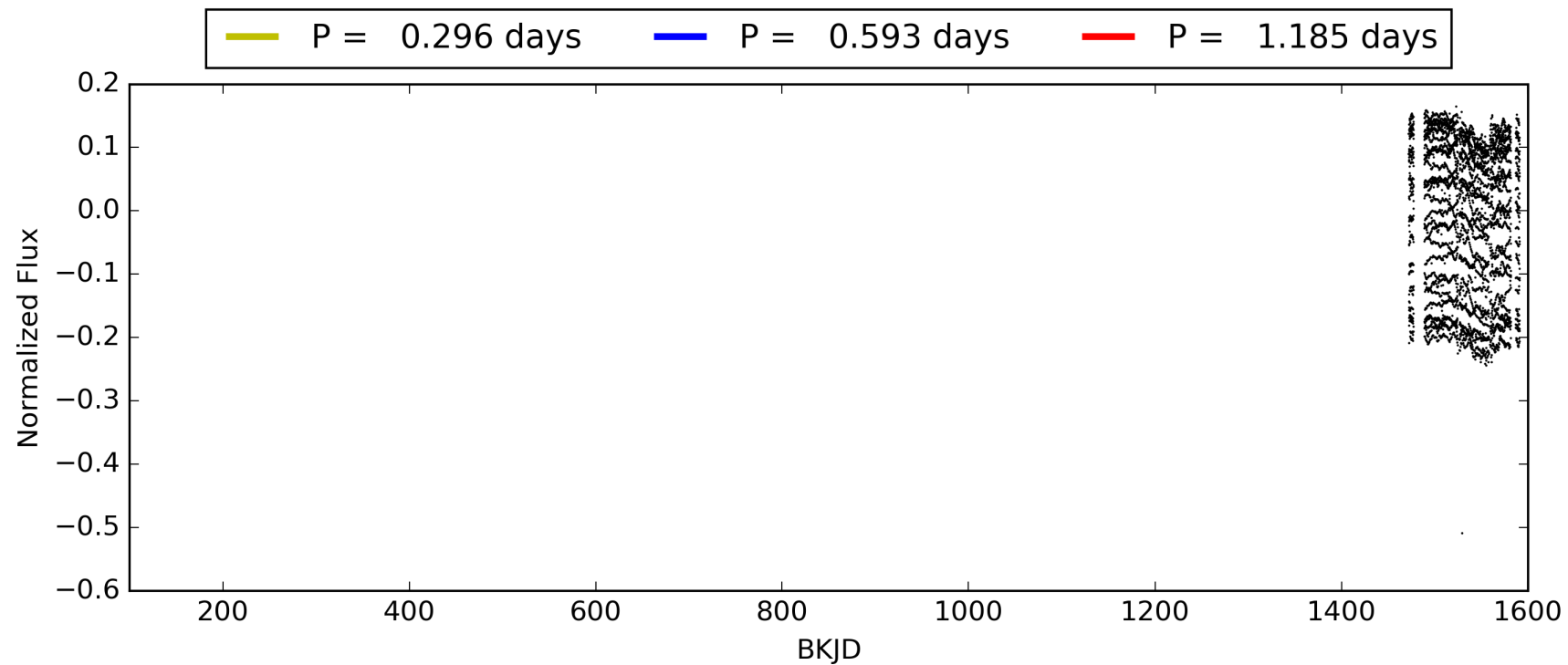
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:06:39 Z

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

TCE 008248967-01, PDC Light Curves

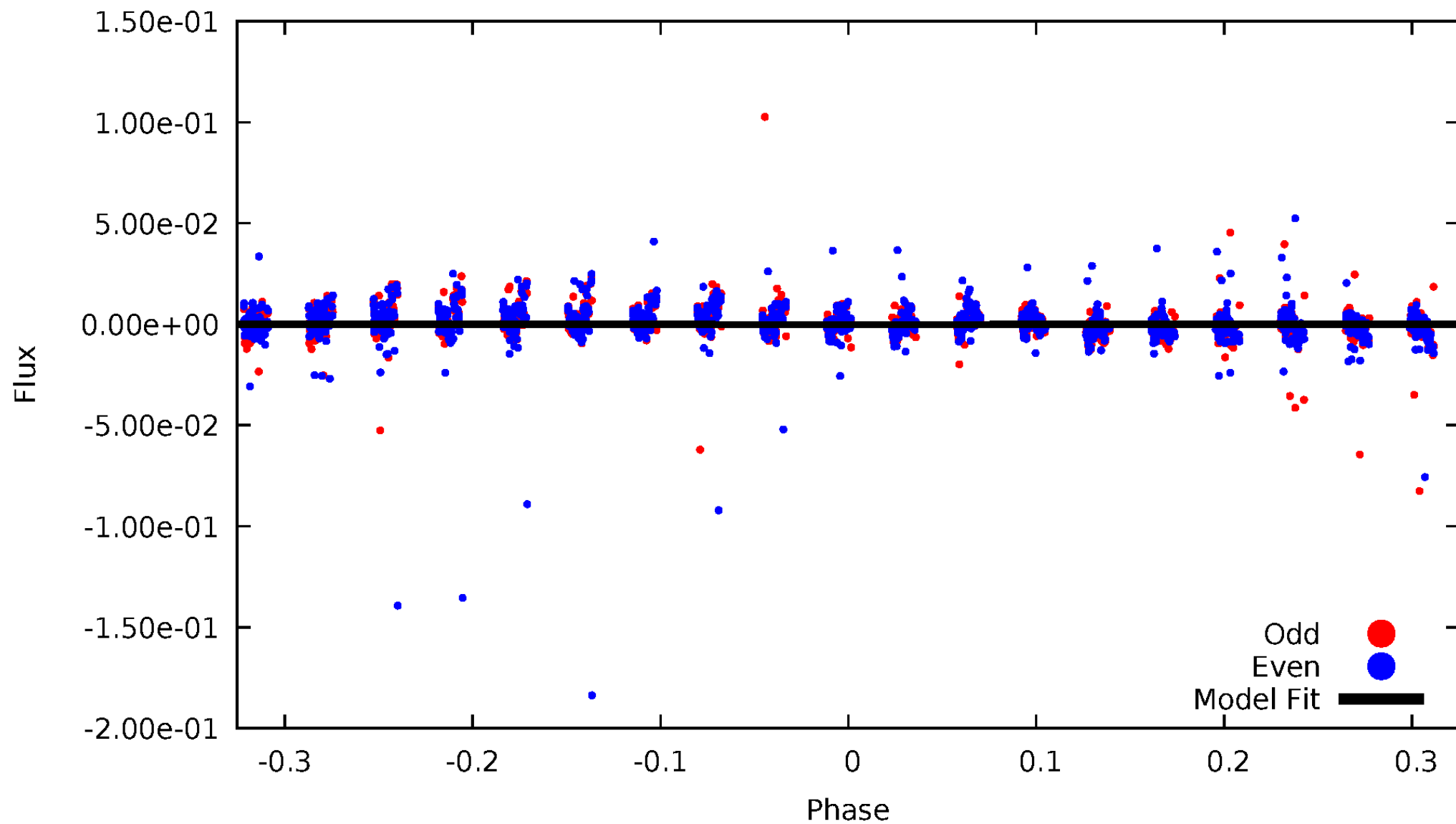


TCE 008248967-01



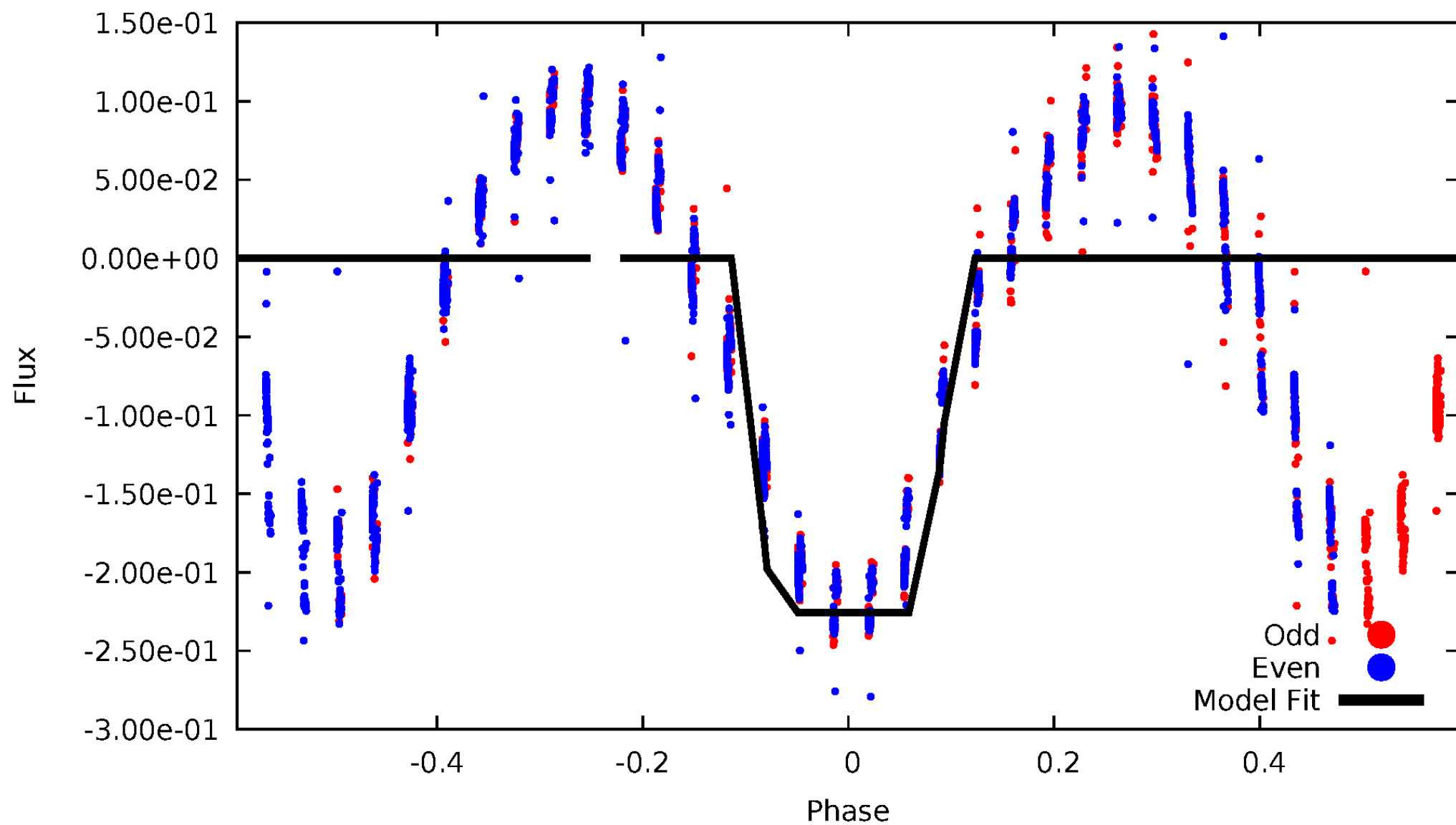
DV Odd/Even

TCE 008248967-01



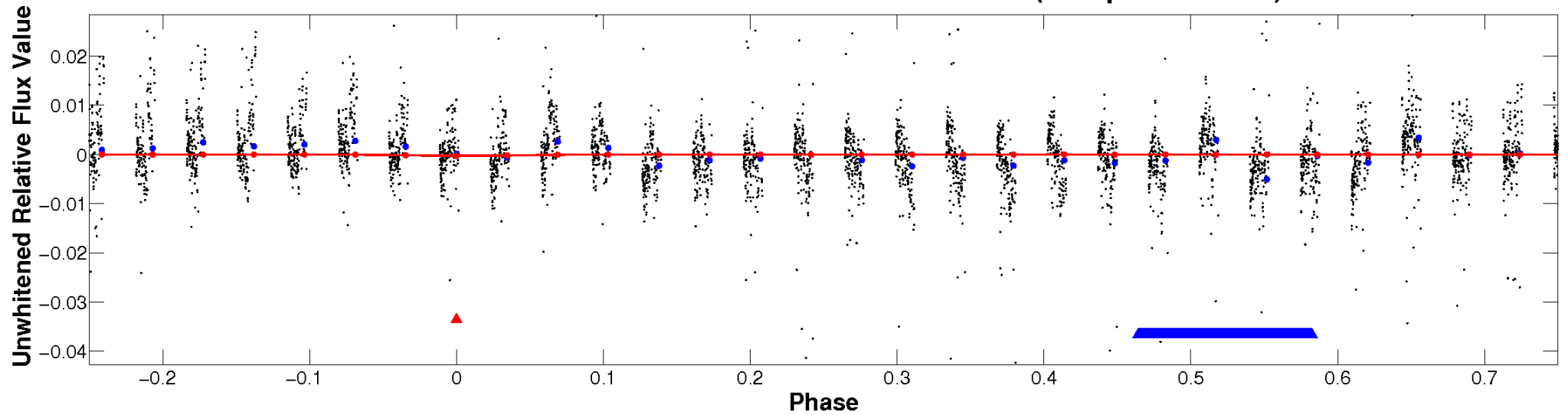
ALT Odd/Even

TCE 008248967-01

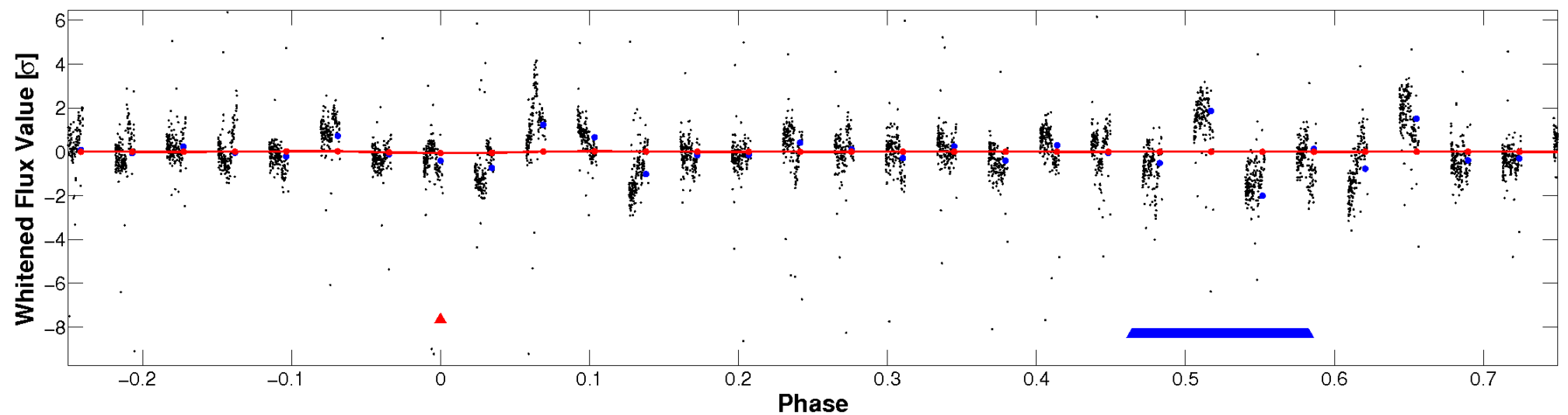


Non-Whitened Vs. Whitened Light Curve

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

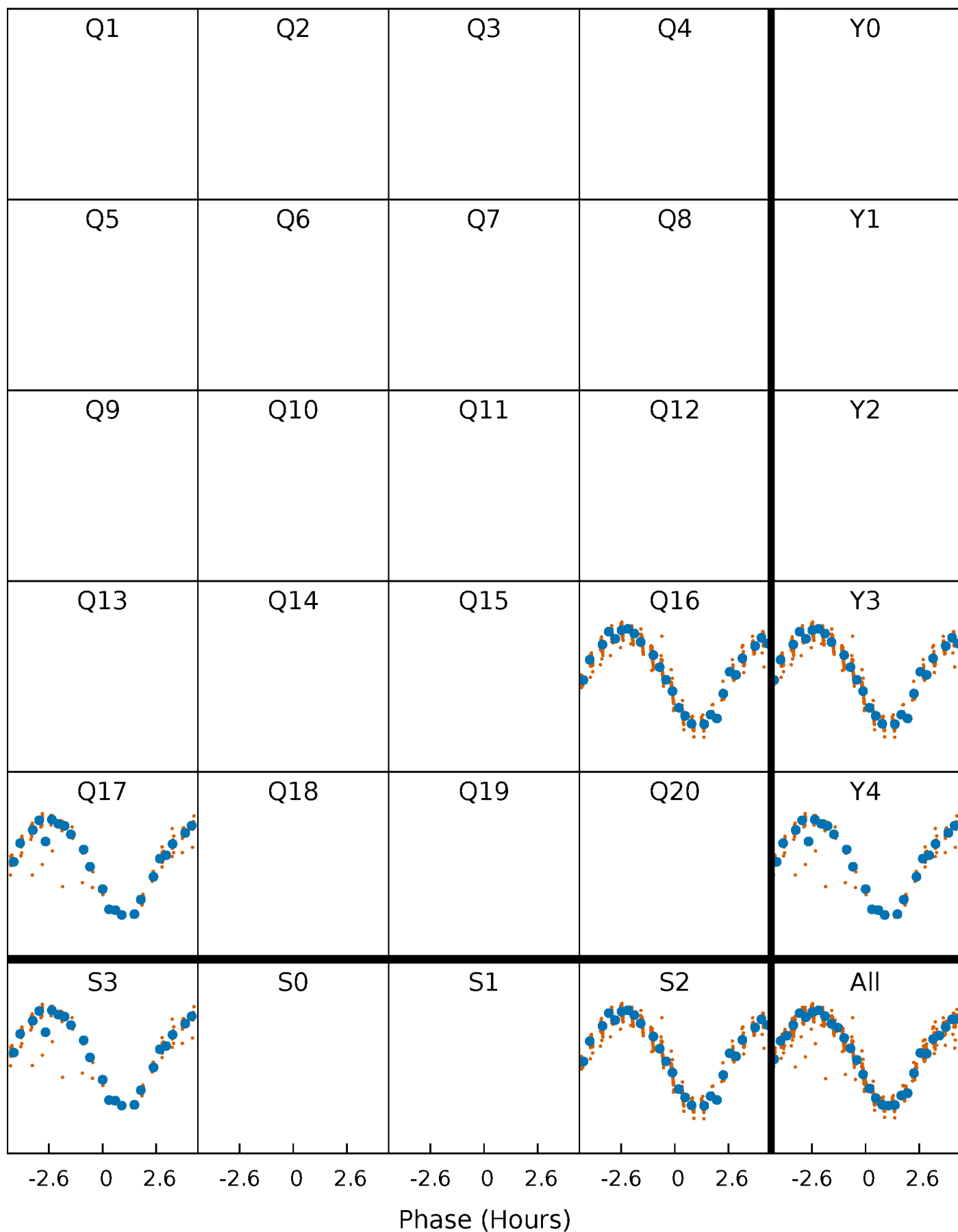


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



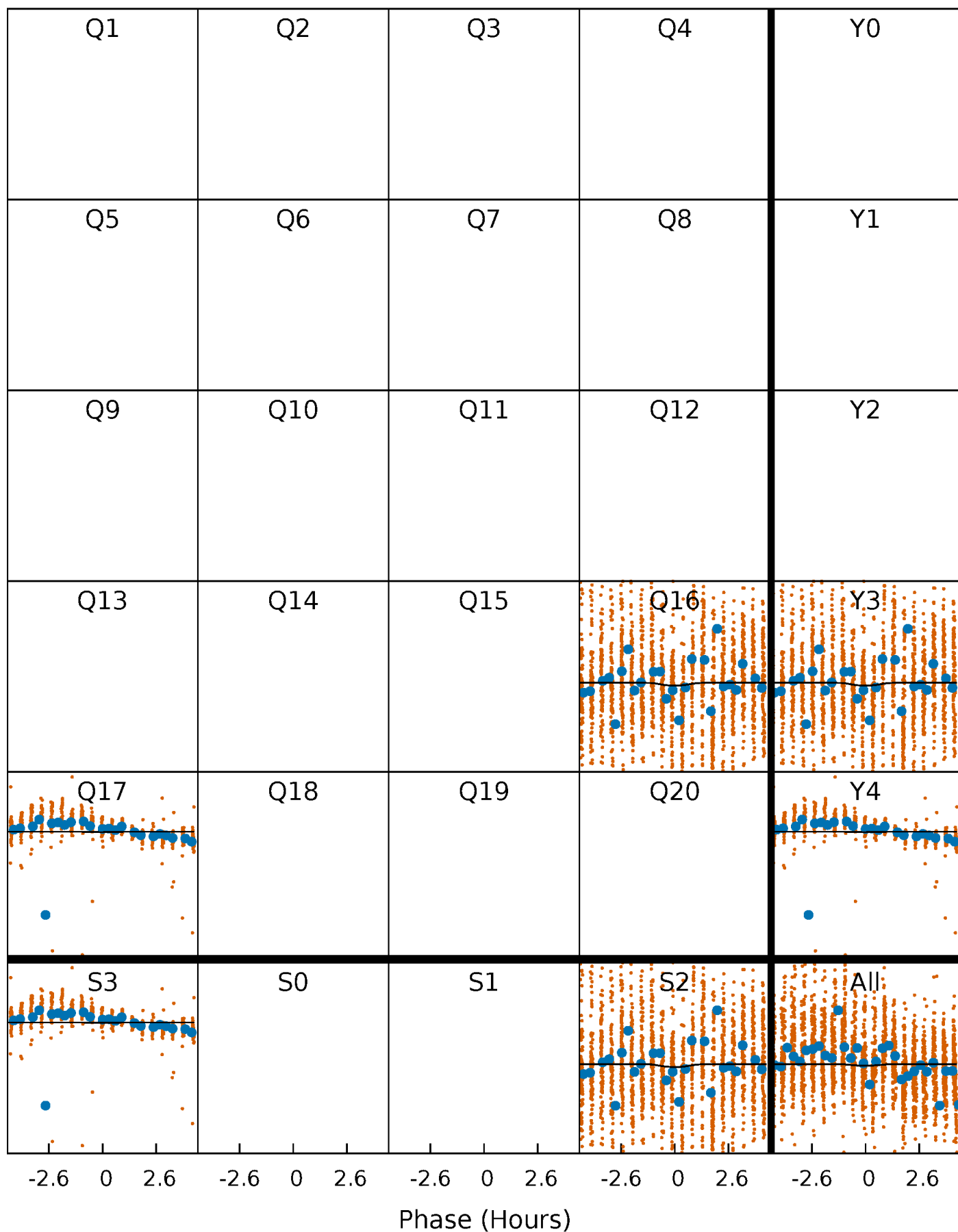
PDC Quarter-Phased Transit Curves

TCE 008248967-01 P= 0.592537 Days $T_0=131.642135$ (BKJD)



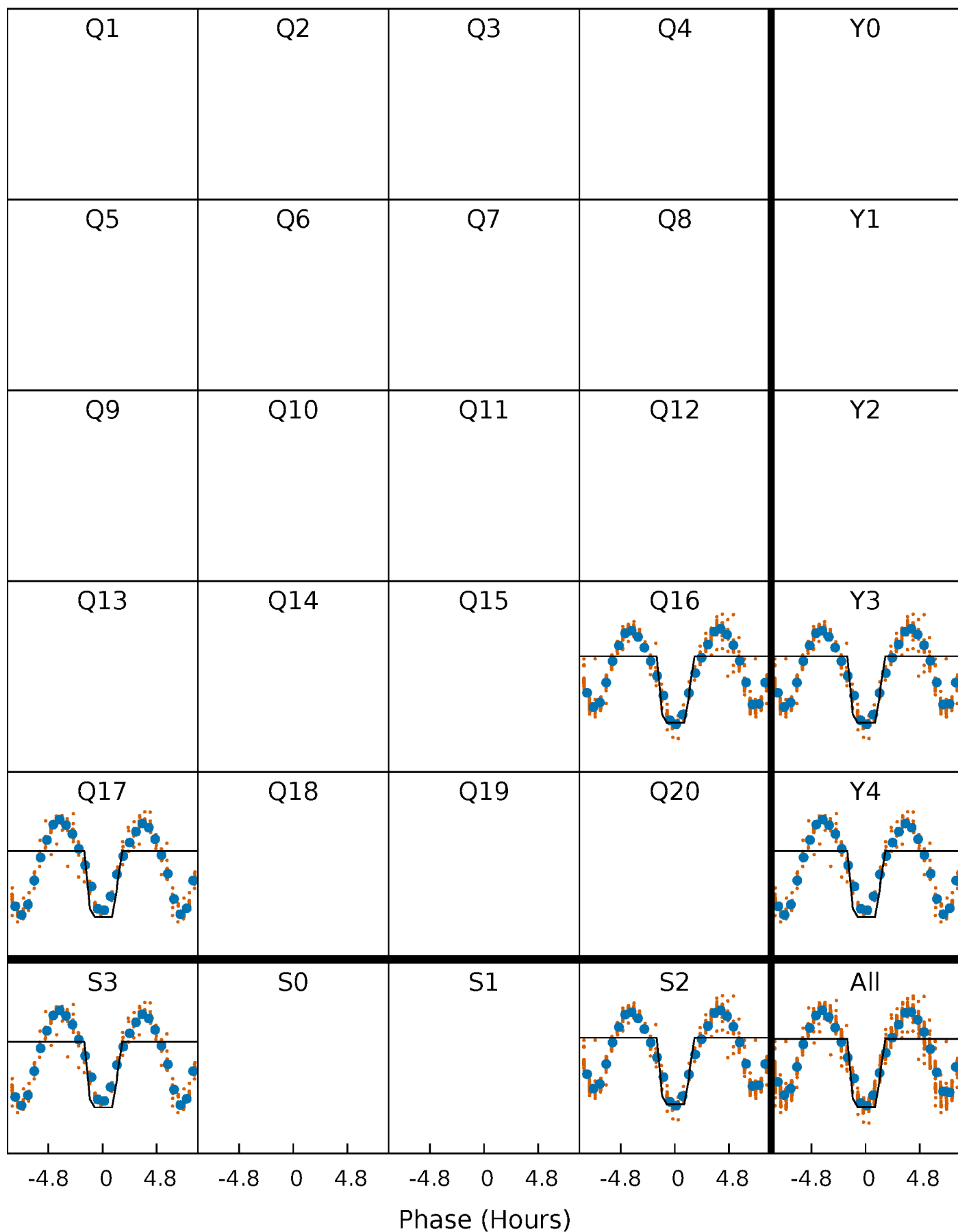
DV Quarter-Phased Transit Curves

TCE 008248967-01 P= 0.592537 Days $T_0=131.642135$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

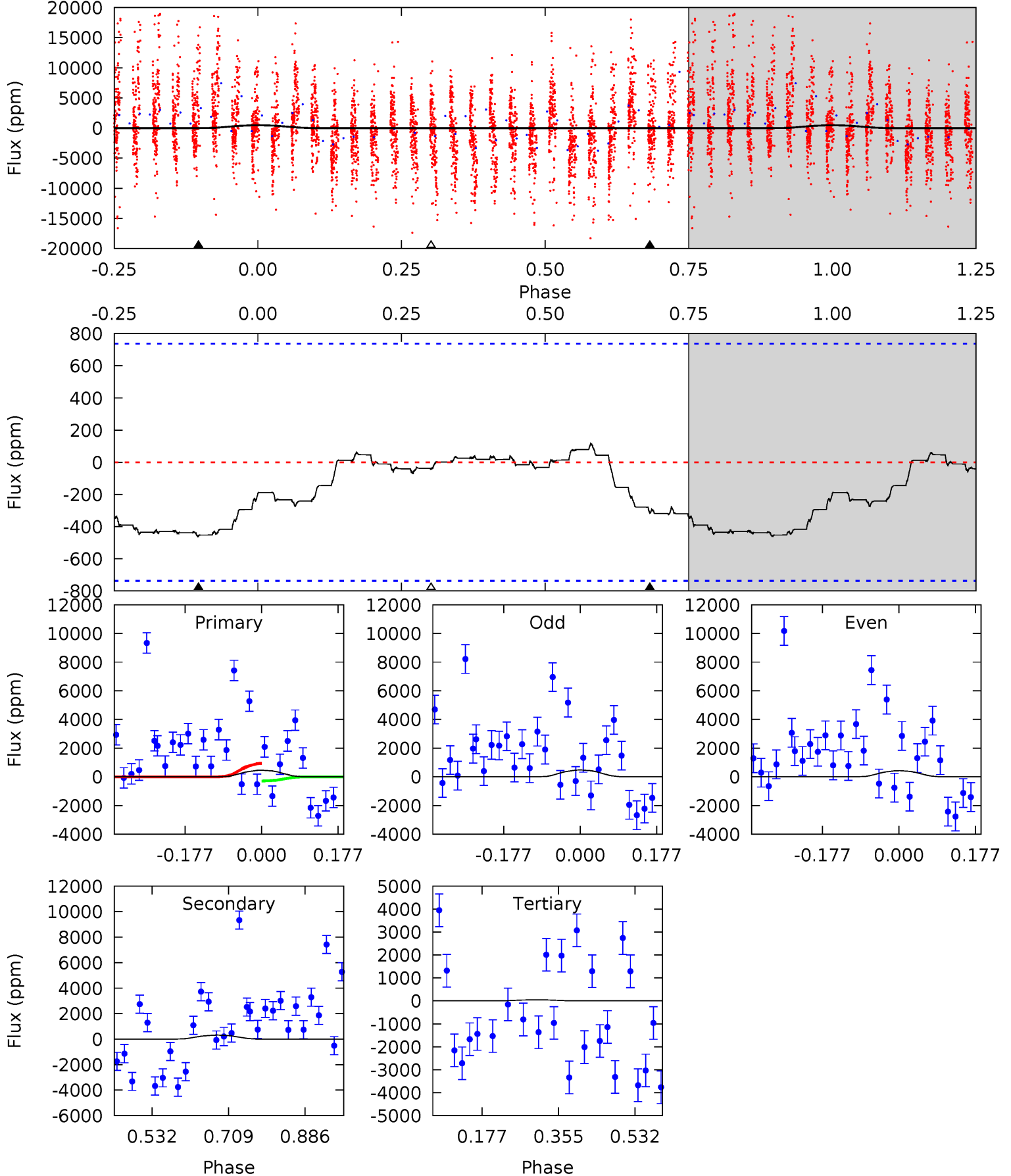
TCE 008248967-01 P= 0.592566 Days $T_0=131.619730$ (BKJD)



DV Model-Shift Uniqueness Test

008248967-01, P = 0.592537 Days, E = 131.642135 Days

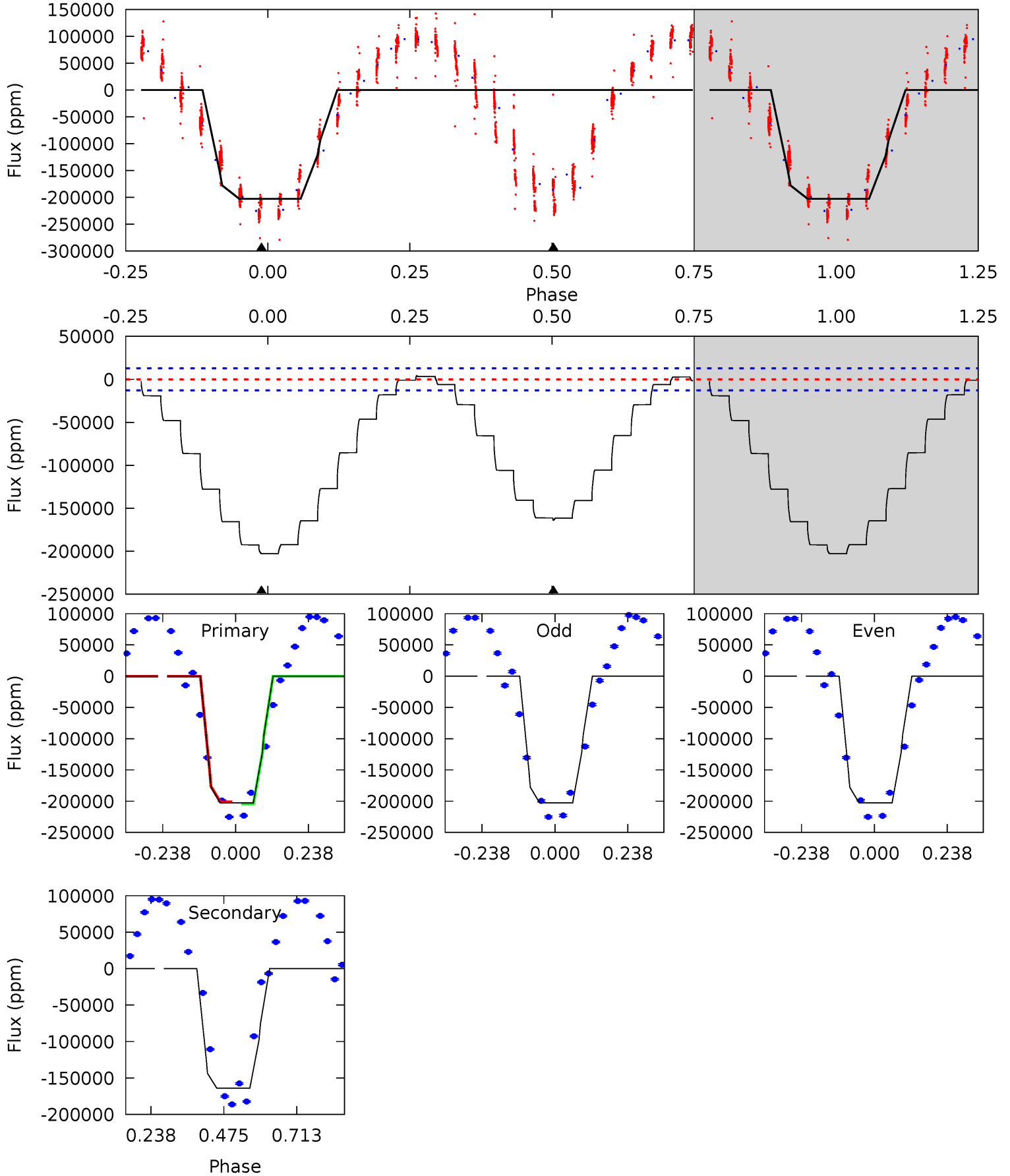
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.78	1.90	0.26	0	4.44	1.35	0.40	2.52	2.78	1.63	1.90	0.15	6.37	0.20	1.85



Alt Model-Shift Uniqueness Test

008248967-01, P = 0.592566 Days, E = 131.619730 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.1	55.8	0	0	4.38	1.18	1.95	69.1	69.1	55.8	55.8	0.00	0.97	0.02	1.35



Stellar Parameters For KIC 008248967

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6740^{+189}_{-284}	$4.296^{+0.105}_{-0.195}$	$-0.360^{+0.250}_{-0.300}$	$1.276^{+0.388}_{-0.209}$	$1.182^{+0.175}_{-0.175}$	$0.801^{+0.380}_{-0.412}$
	+3%/-4%	+2%/-5%	+69%/-83%	+30%/-16%	+15%/-15%	+47%/-51%
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 008248967-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-315 ± 166	$8.00^{+9.03}_{-5.27}$	3912^{+284}_{-234}	3303^{+2841}_{-6765}	$0.461^{+4.078}_{-0.371}$
Alt.	-163752 ± 2932	$68.48^{+16.53}_{-14.21}$	3922^{+316}_{-237}	6336^{+721}_{-543}	$4.811^{+2.678}_{-1.534}$

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

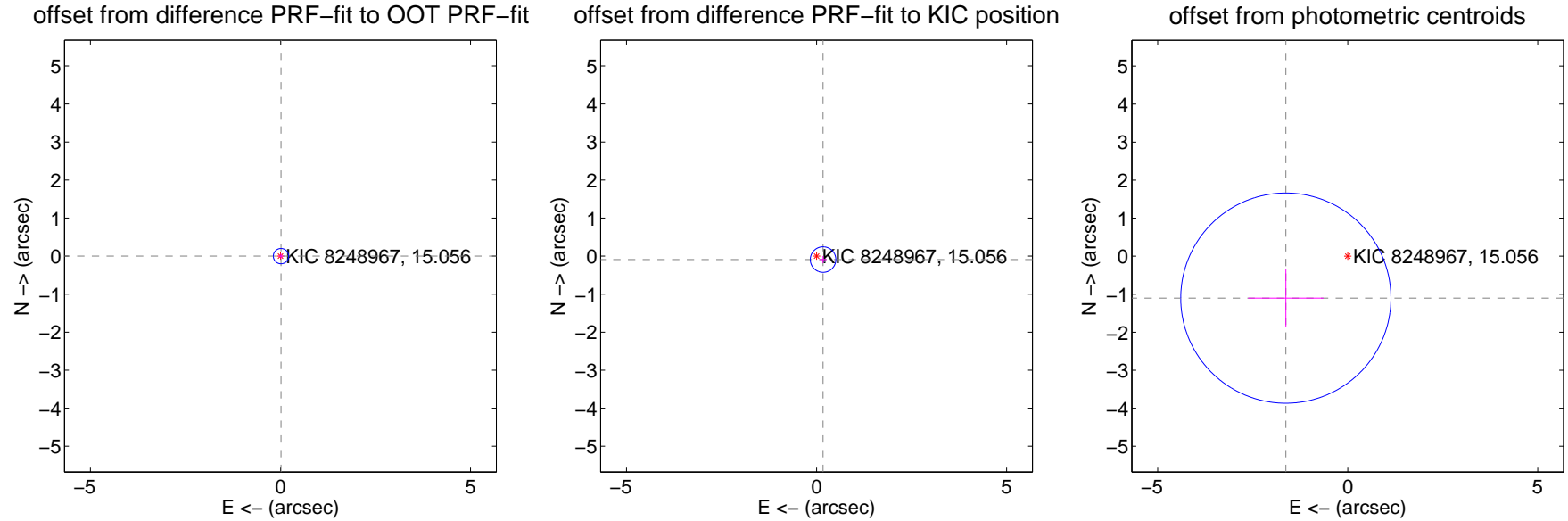
DV Centroid Data

Supplemental centroid analysis for 008248967-01. Kepler magnitude: 15.06. Transit SNR 1.13

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.067	0.21	-0.014 ± 0.067	0.000 ± 0.067
PRF-fit source offset from KIC position	0.193 ± 0.112	1.73	-0.171 ± 0.094	-0.090 ± 0.094
photometric centroid source offset	1.97 ± 0.92	2.13	1.63 ± 0.99	-1.10 ± 0.75



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.



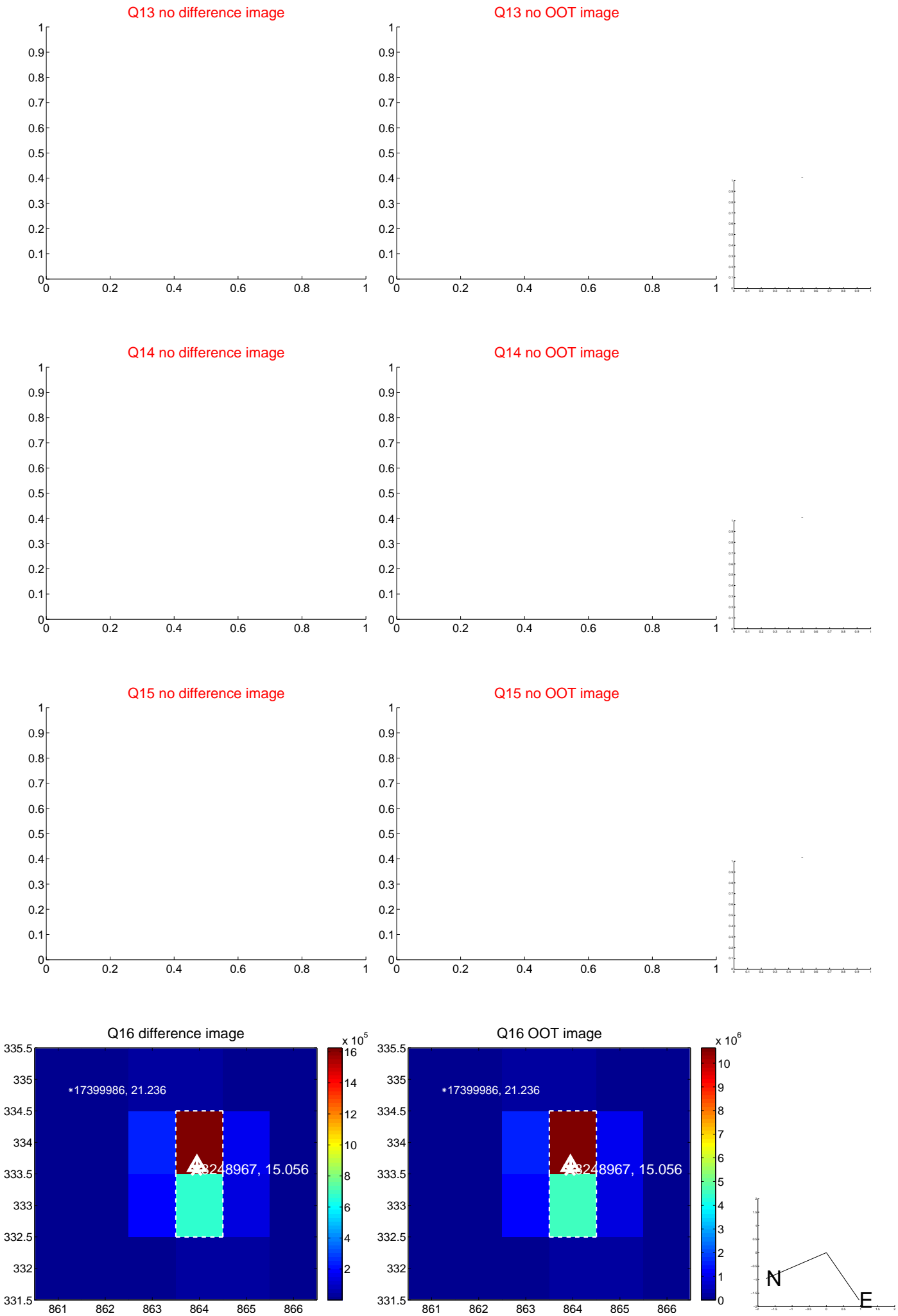
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



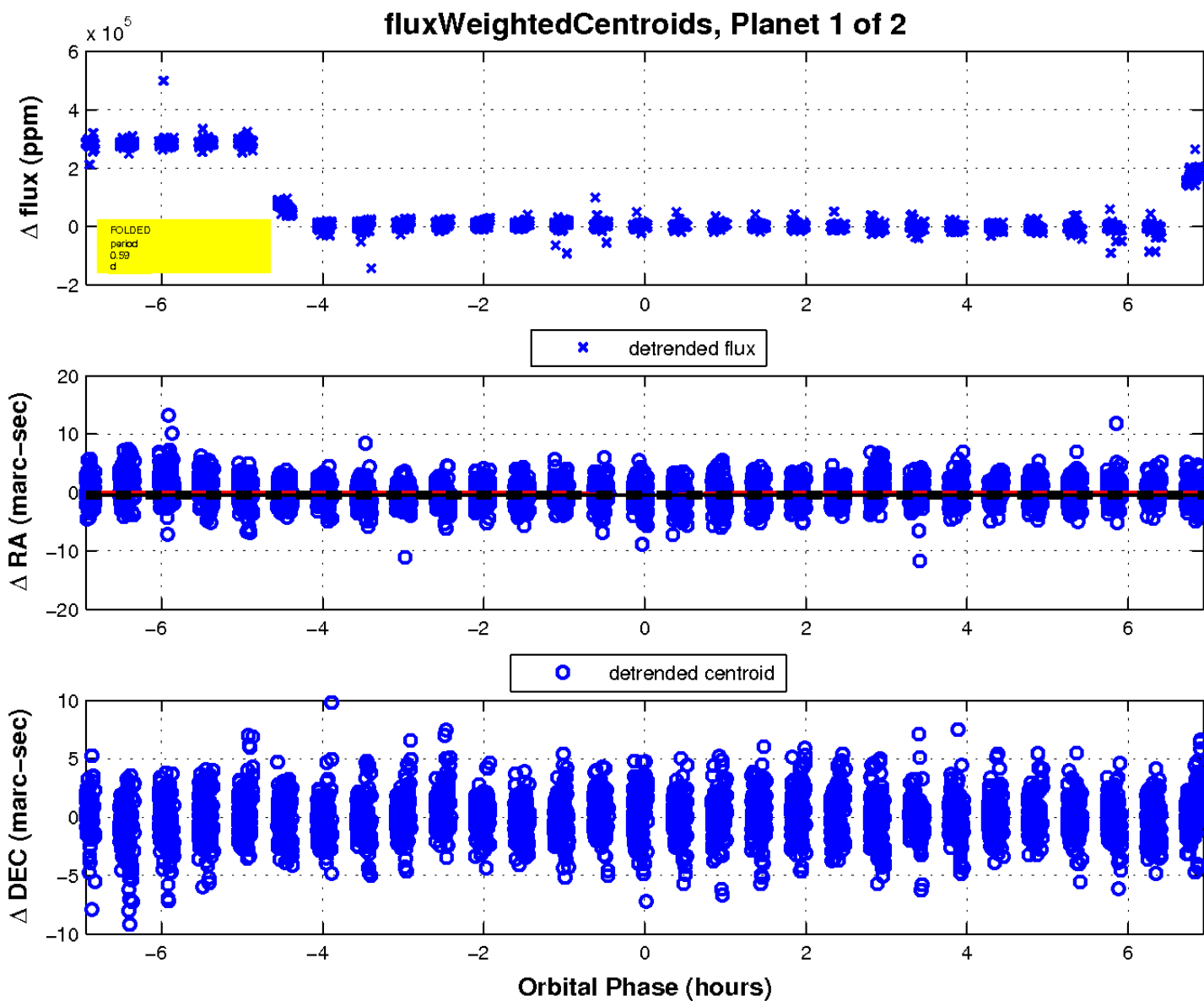
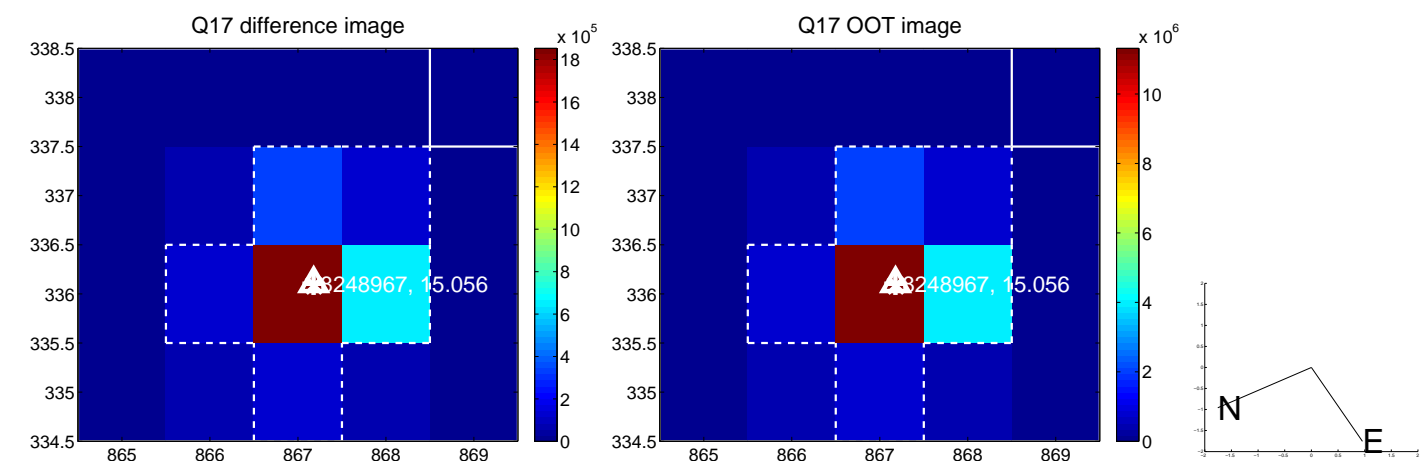
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

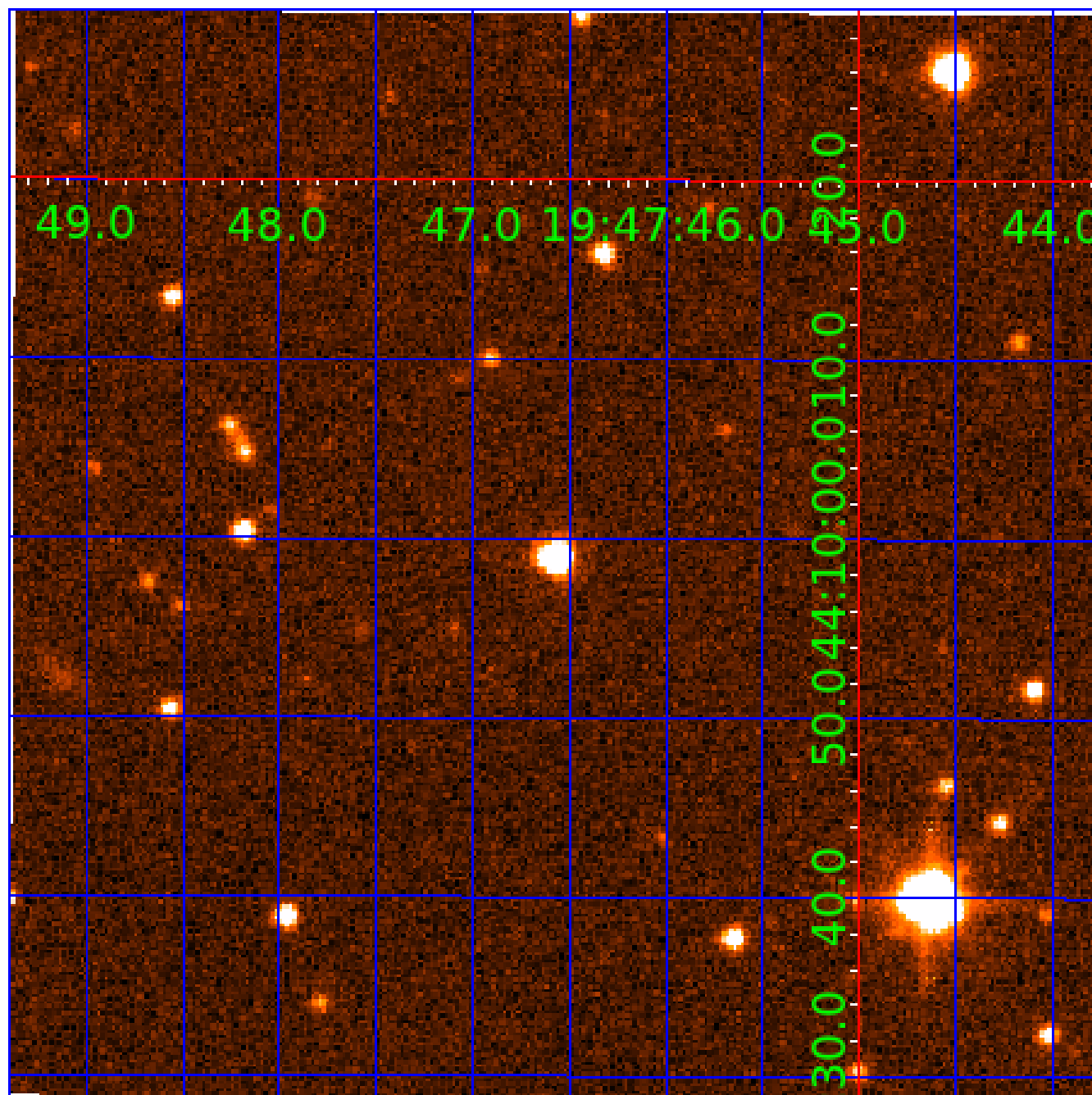


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008248967

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})
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008248967-02	OBS	No	0.592566	131.917244	790.3	1.500	16.8	-1.0	1.28	6740	3.63	14183.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008248967-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS
008248967-02	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

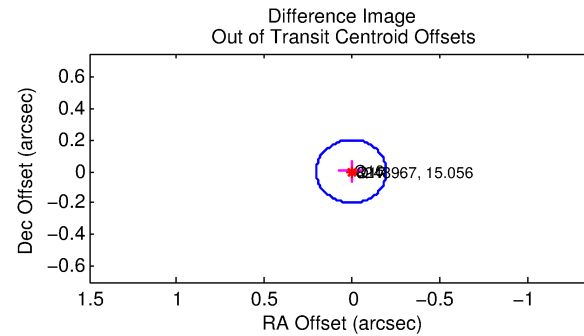
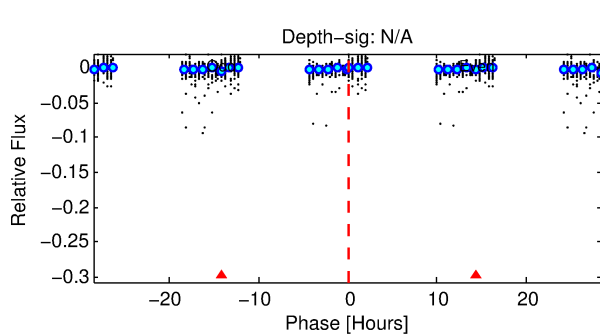
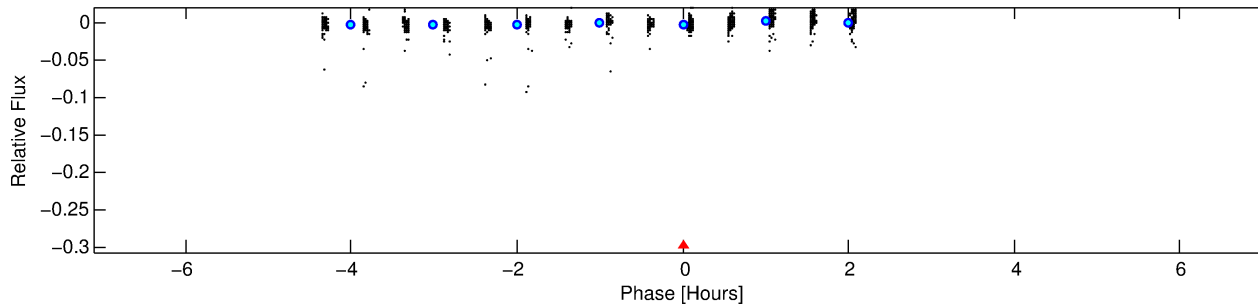
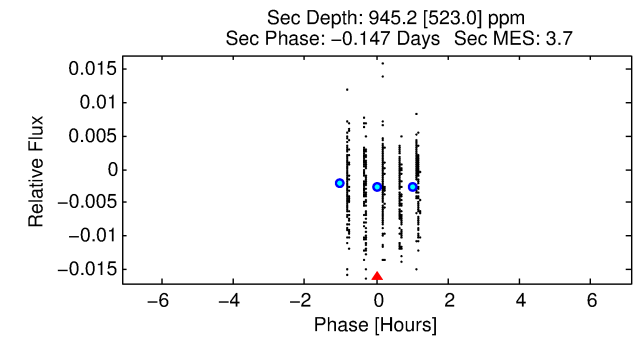
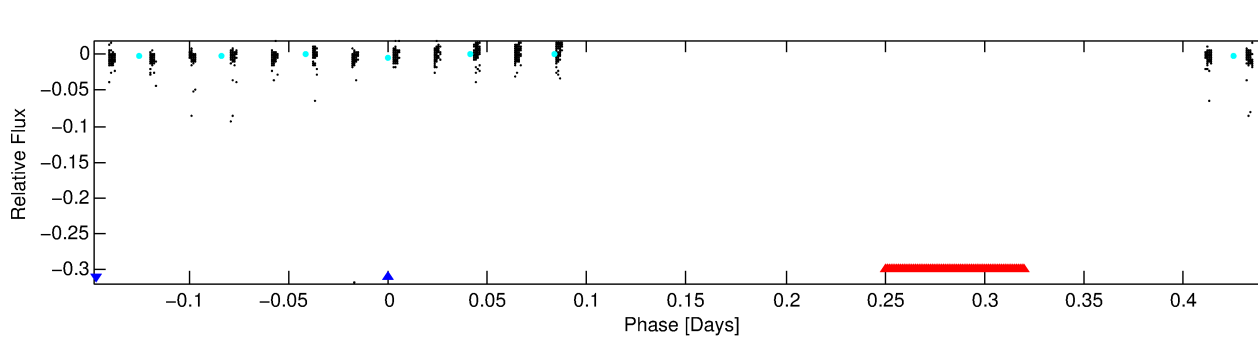
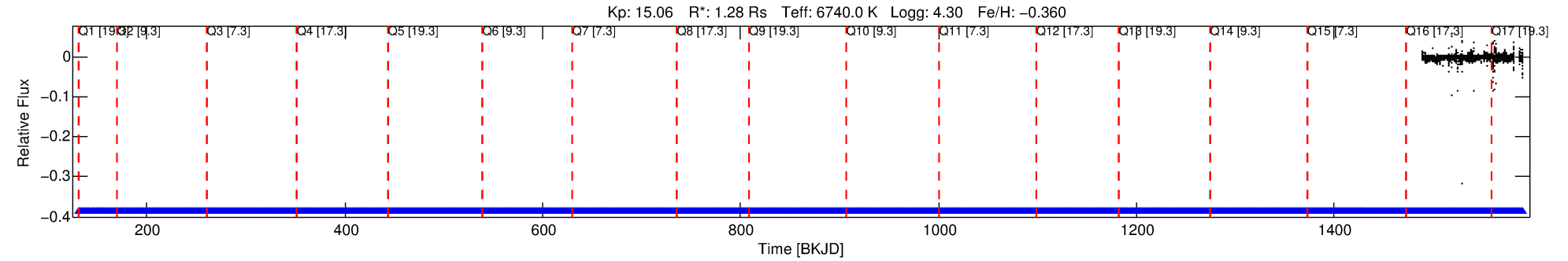
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008248967-02

No Significant Match Found

DV One-Page Summary

KIC: 8248967 Candidate: 2 of 2 Period: 0.593 d



TPS TCE Results:

Period = 0.59257 d
Epoch = 131.9172 BKJD

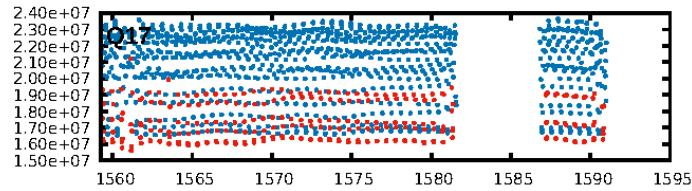
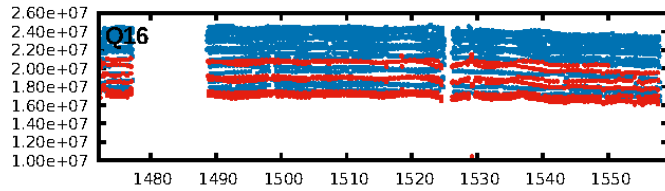
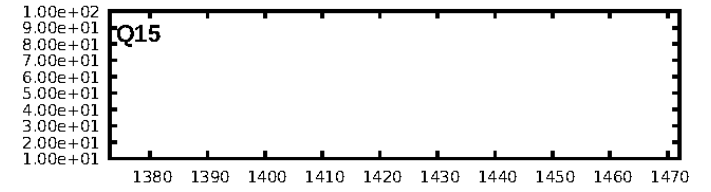
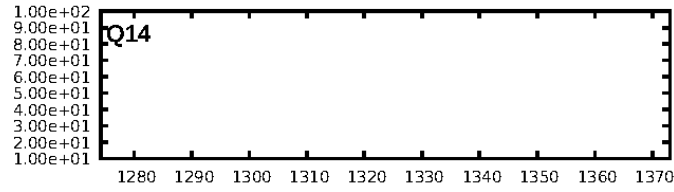
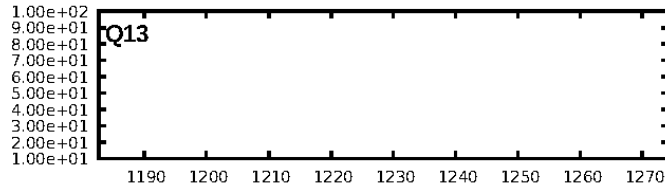
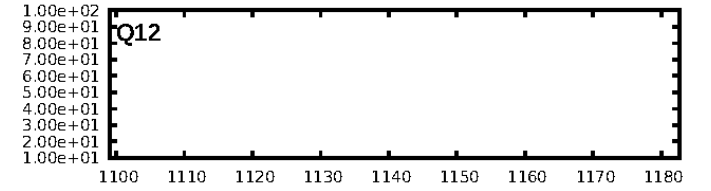
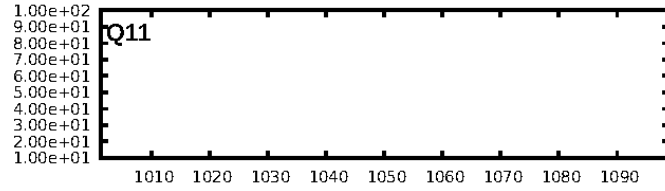
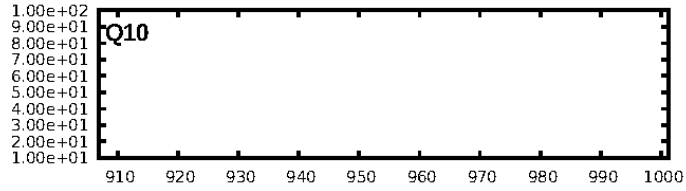
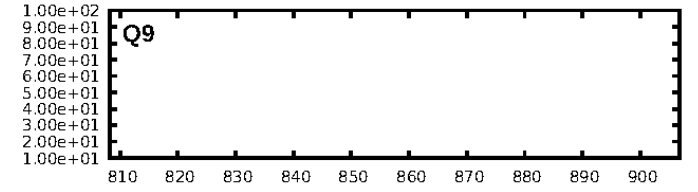
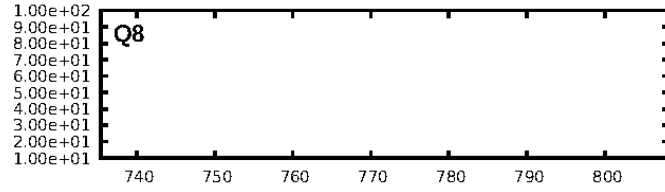
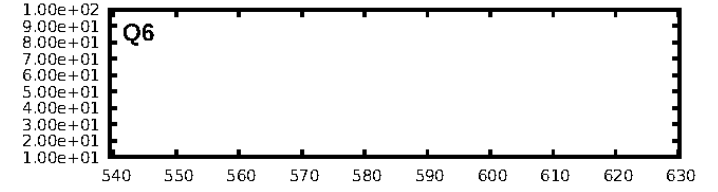
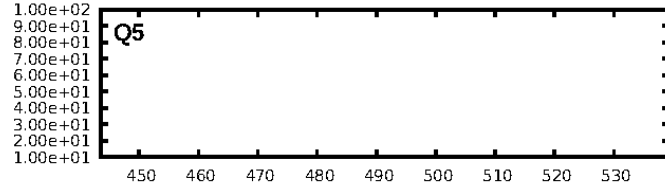
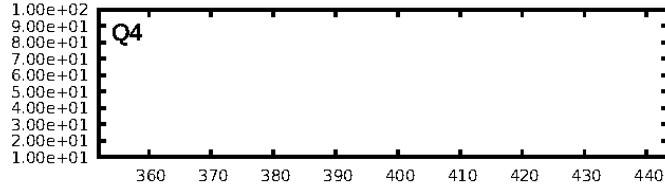
DV fit results are unavailable

DV Diagnostic Results:

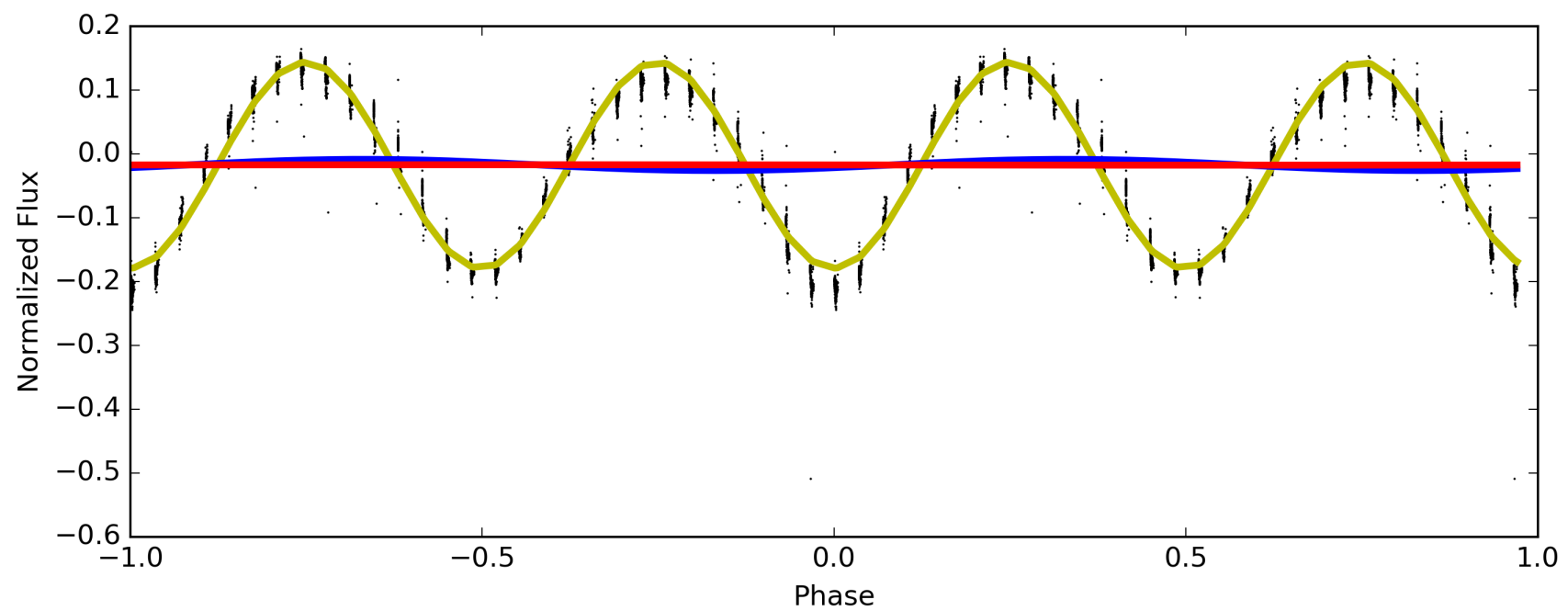
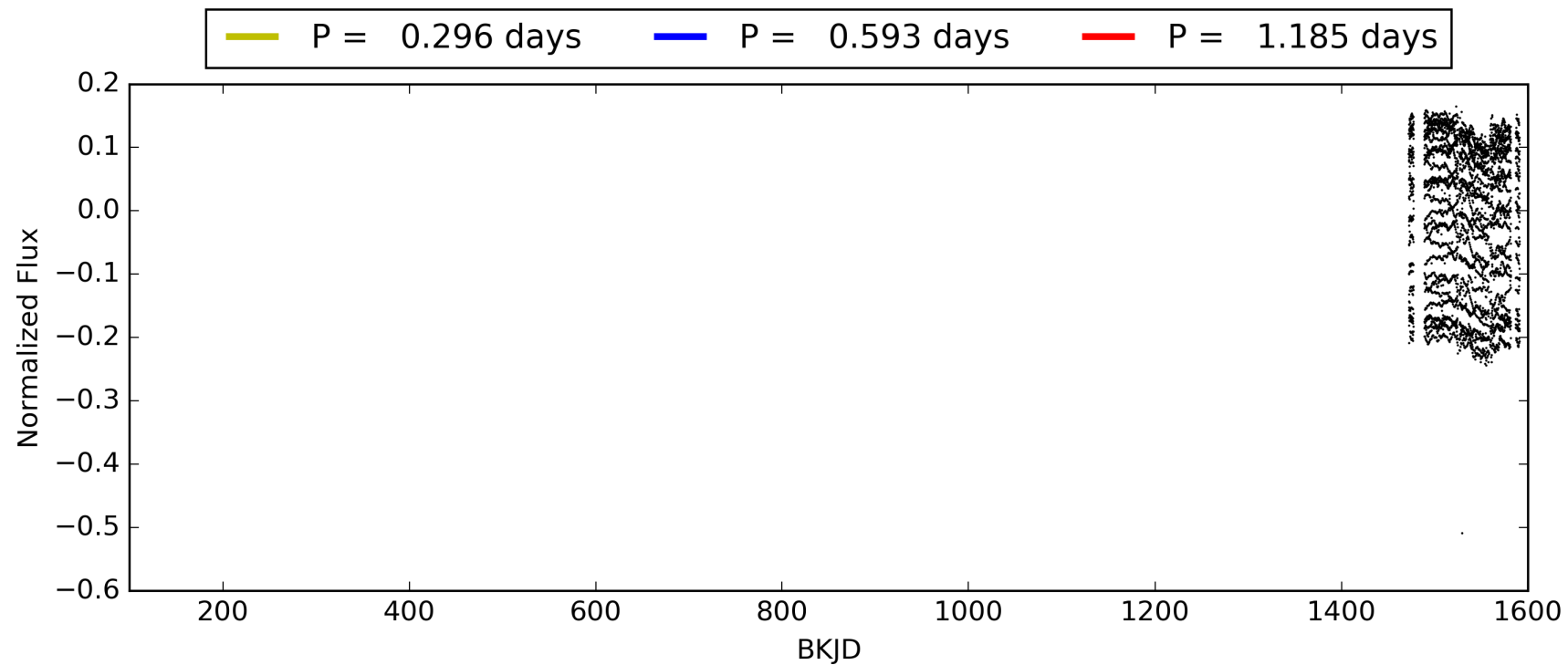
ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.09e-30
RollingBand-fgt: 1.00 [116/116]
GhostDiagnostic-chr: 0.419

Centroid-sig: N/A
Centroid-so: 0.200 arcsec [77.97 σ]
OotOffset-rm: 0.007 arcsec [0.11 σ]
KicOffset-rm: 0.188 arcsec [2.07 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

TCE 008248967-02, PDC Light Curves

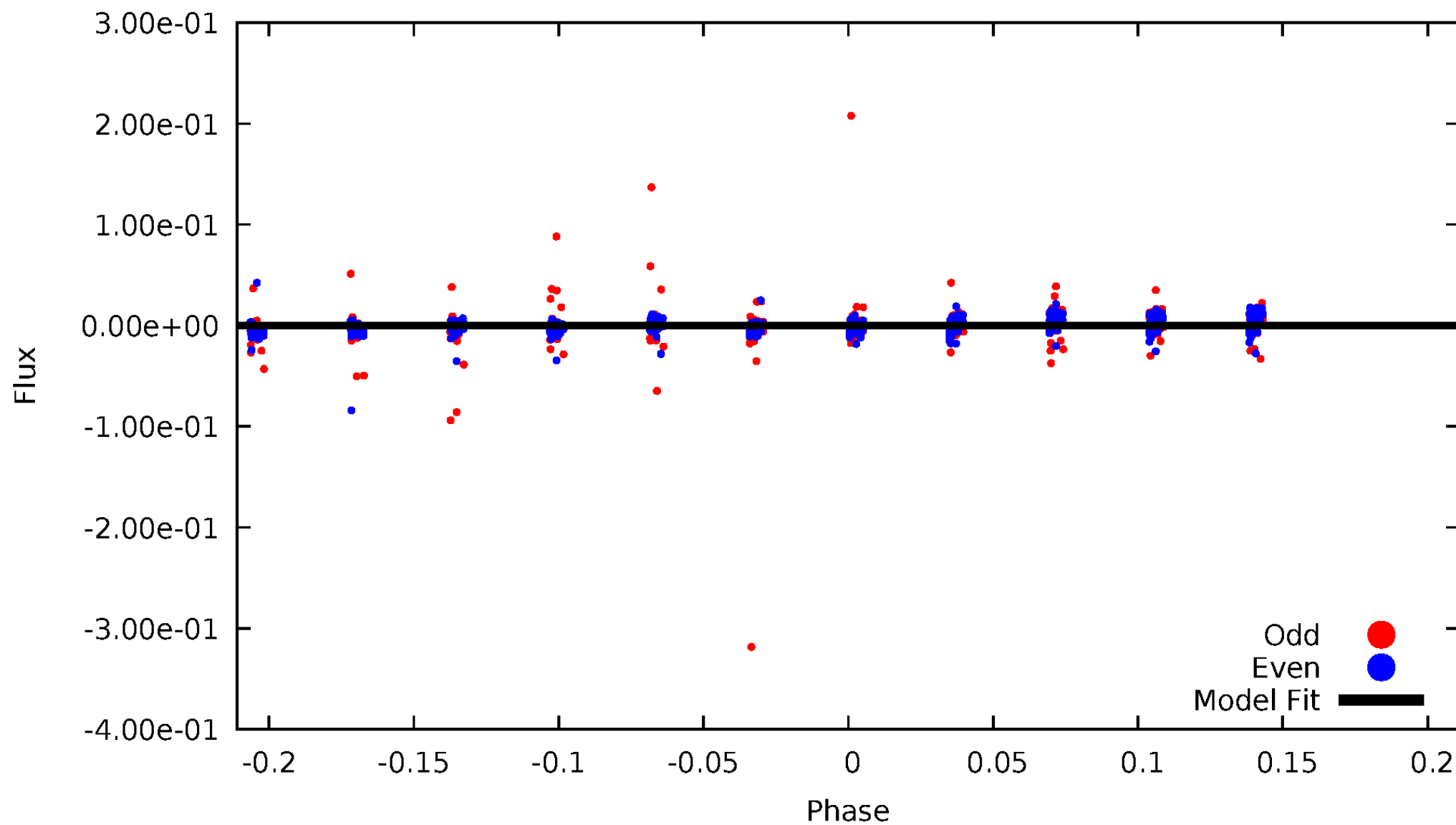


TCE 008248967-02



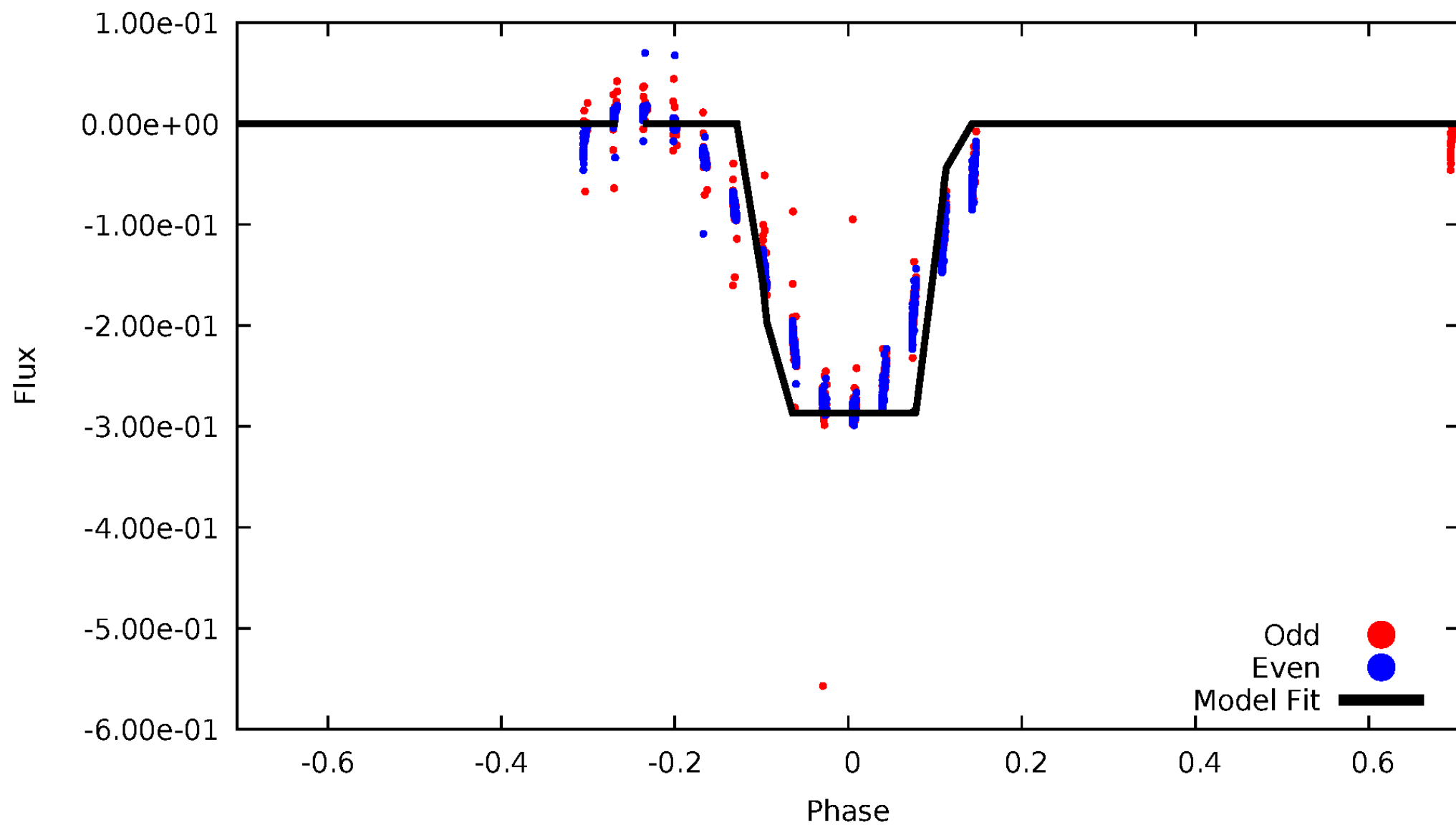
DV Odd/Even

TCE 008248967-02



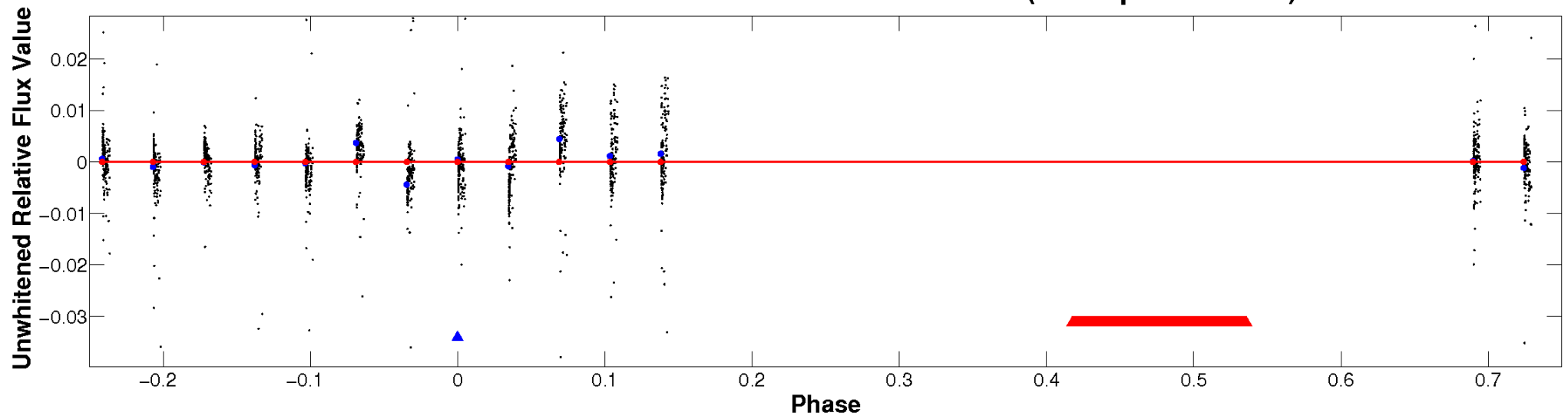
ALT Odd/Even

TCE 008248967-02

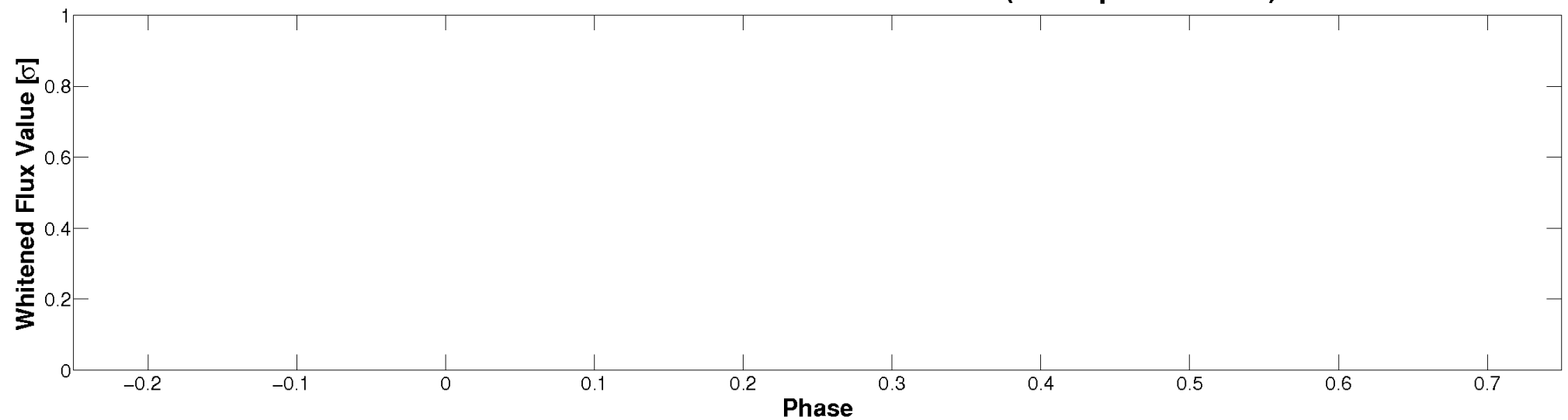


Non-Whitened Vs. Whitened Light Curve

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

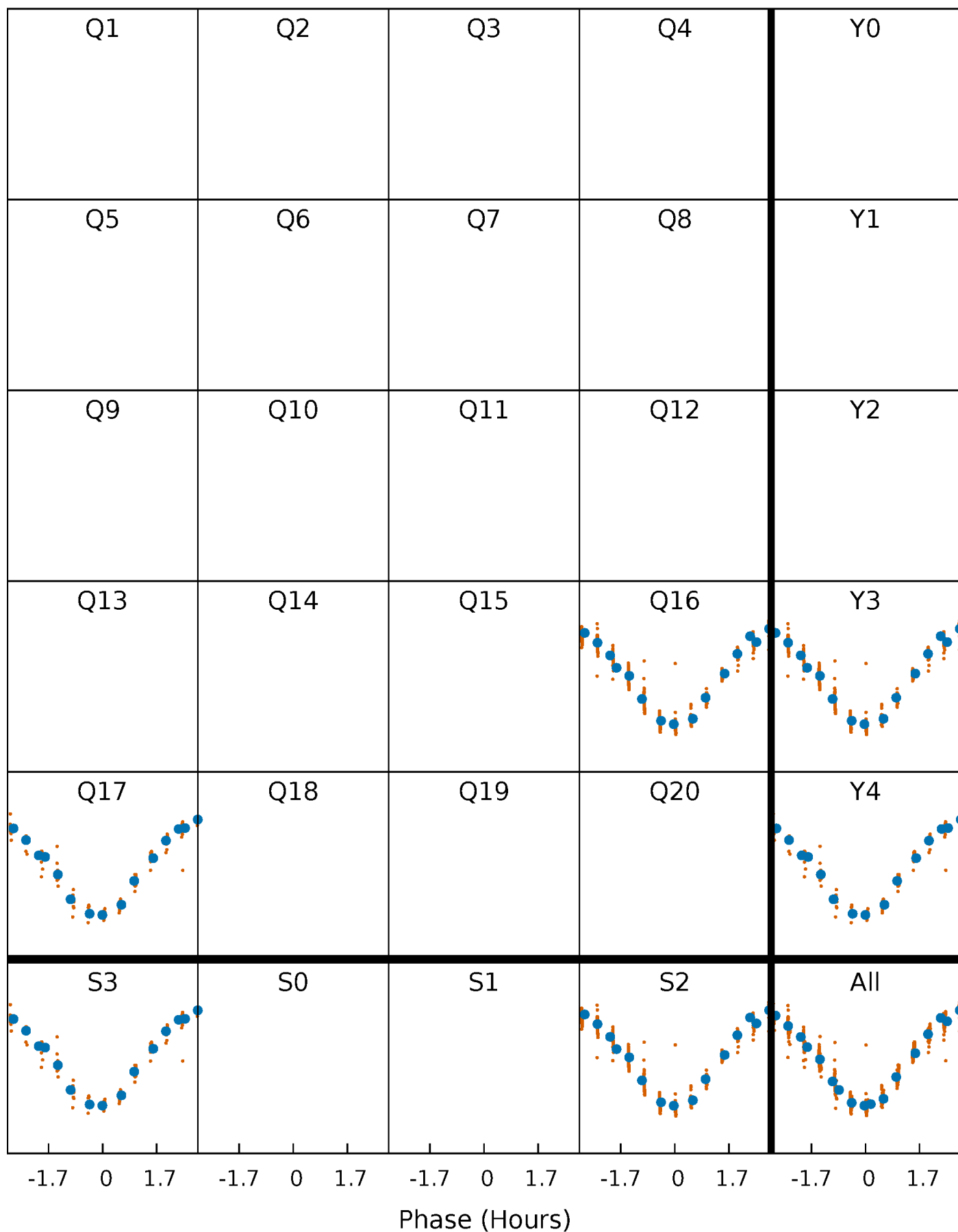


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



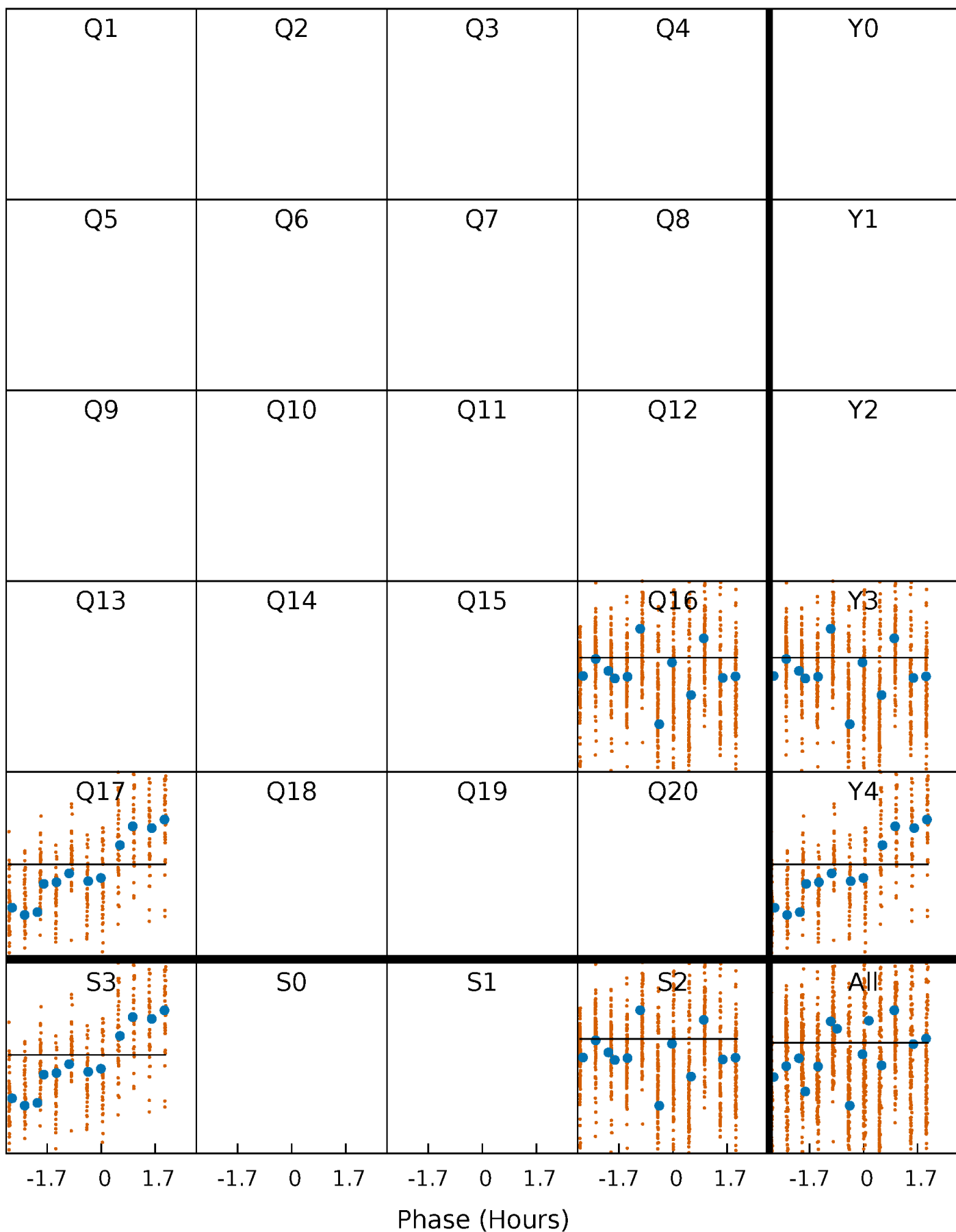
PDC Quarter-Phased Transit Curves

TCE 008248967-02 P= 0.592566 Days $T_0=131.917244$ (BKJD)



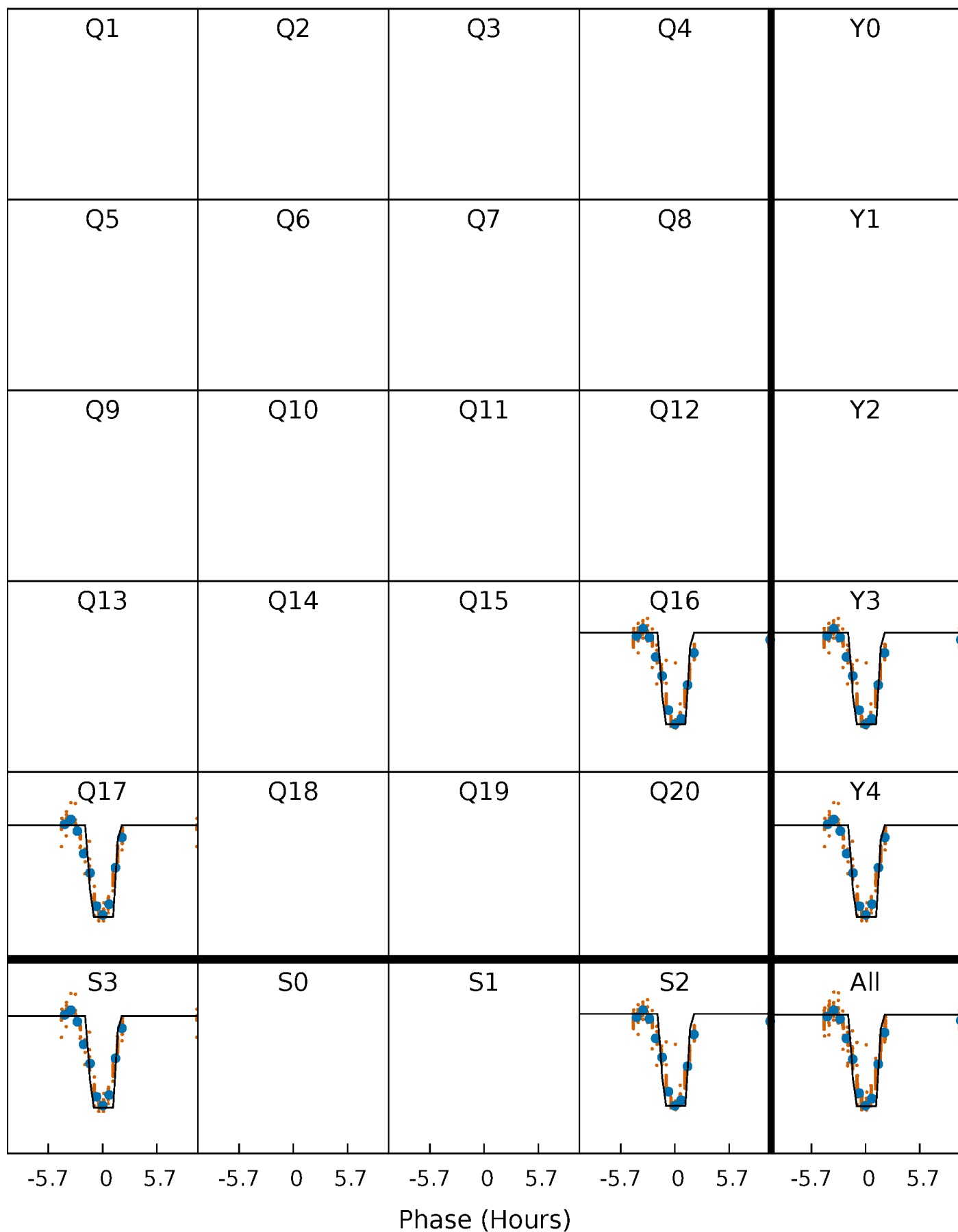
DV Quarter-Phased Transit Curves

TCE 008248967-02 P= 0.592566 Days $T_0=131.917244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

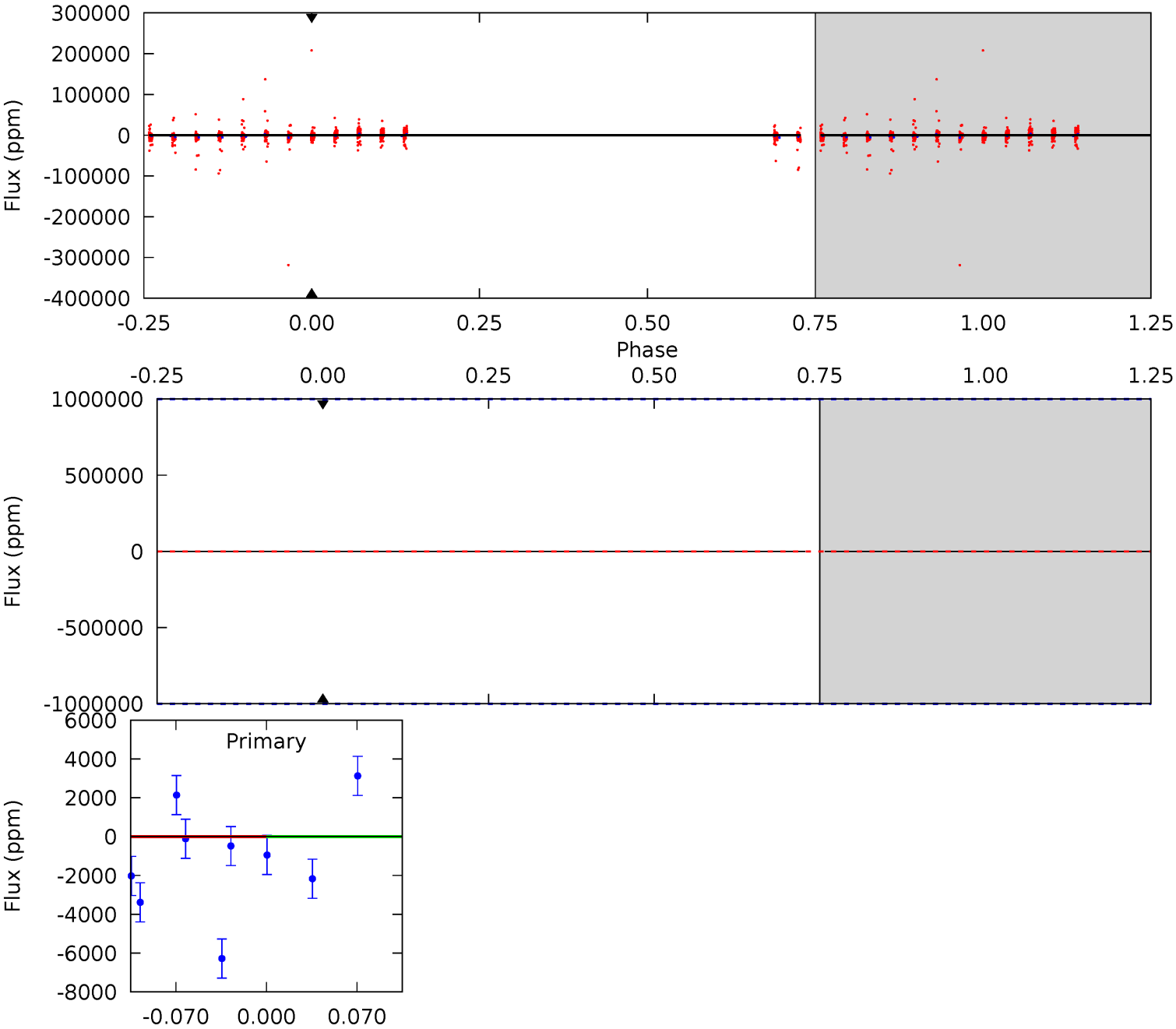
TCE 008248967-02 $P = 0.592566$ Days $T_0 = 131.914754$ (BKJD)



DV Model-Shift Uniqueness Test

008248967-02, P = 0.592566 Days, E = 131.917244 Days

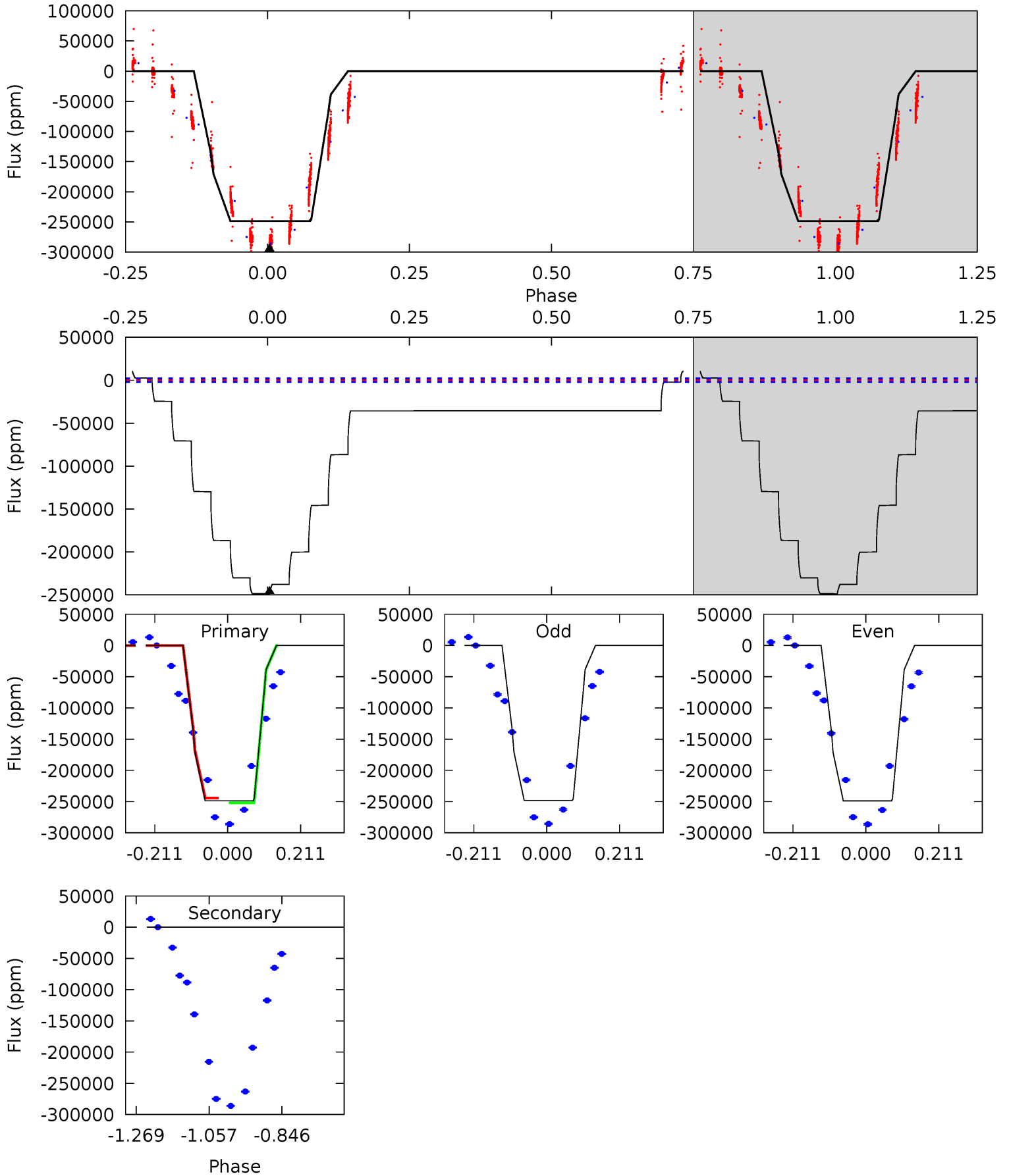
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008248967-02, P = 0.592566 Days, E = 131.914754 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
548.9	0	0	0	4.41	1.25	27.6	548.9	548.9	0	0	0.86	0.99	0.04	3.72



Stellar Parameters For KIC 008248967

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6740^{+189}_{-284}	$4.296^{+0.105}_{-0.195}$	$-0.360^{+0.250}_{-0.300}$	$1.276^{+0.388}_{-0.209}$	$1.182^{+0.175}_{-0.175}$	$0.801^{+0.380}_{-0.412}$
	+3%/-4%	+2%/-5%	+69%/-83%	+30%/-16%	+15%/-15%	+47%/-51%
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 008248967-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$11.94^{+11.27}_{-8.44}$	3909^{+292}_{-222}	-4571^{+30138}_{-21474}	$-0.877^{+179.819}_{-142.541}$
Alt.	0 ± 453	$76.30^{+18.53}_{-16.58}$	3929^{+283}_{-265}	-3646^{+160}_{-173}	$-0.001^{+0.009}_{-0.009}$

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

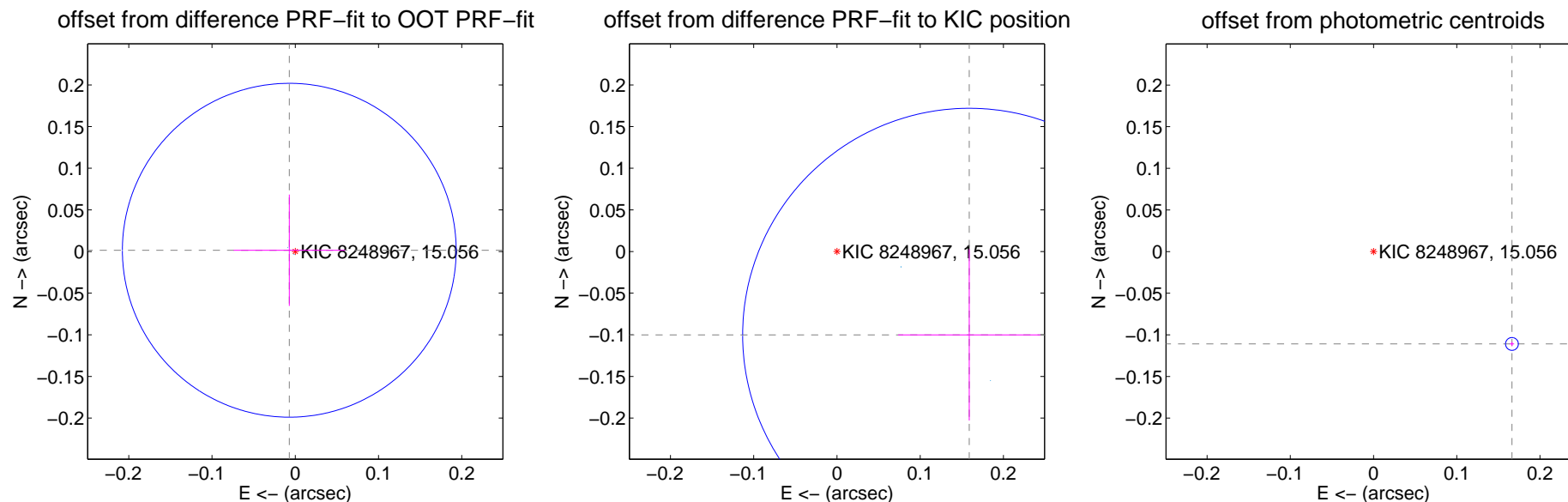
DV Centroid Data

Supplemental centroid analysis for 008248967-02. Kepler magnitude: 15.06. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.11	0.007 ± 0.067	0.002 ± 0.067
PRF-fit source offset from KIC position	0.188 ± 0.091	2.07	-0.159 ± 0.085	-0.100 ± 0.103
photometric centroid source offset	0.20 ± 0.00	77.97	-0.17 ± 0.00	-0.11 ± 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.



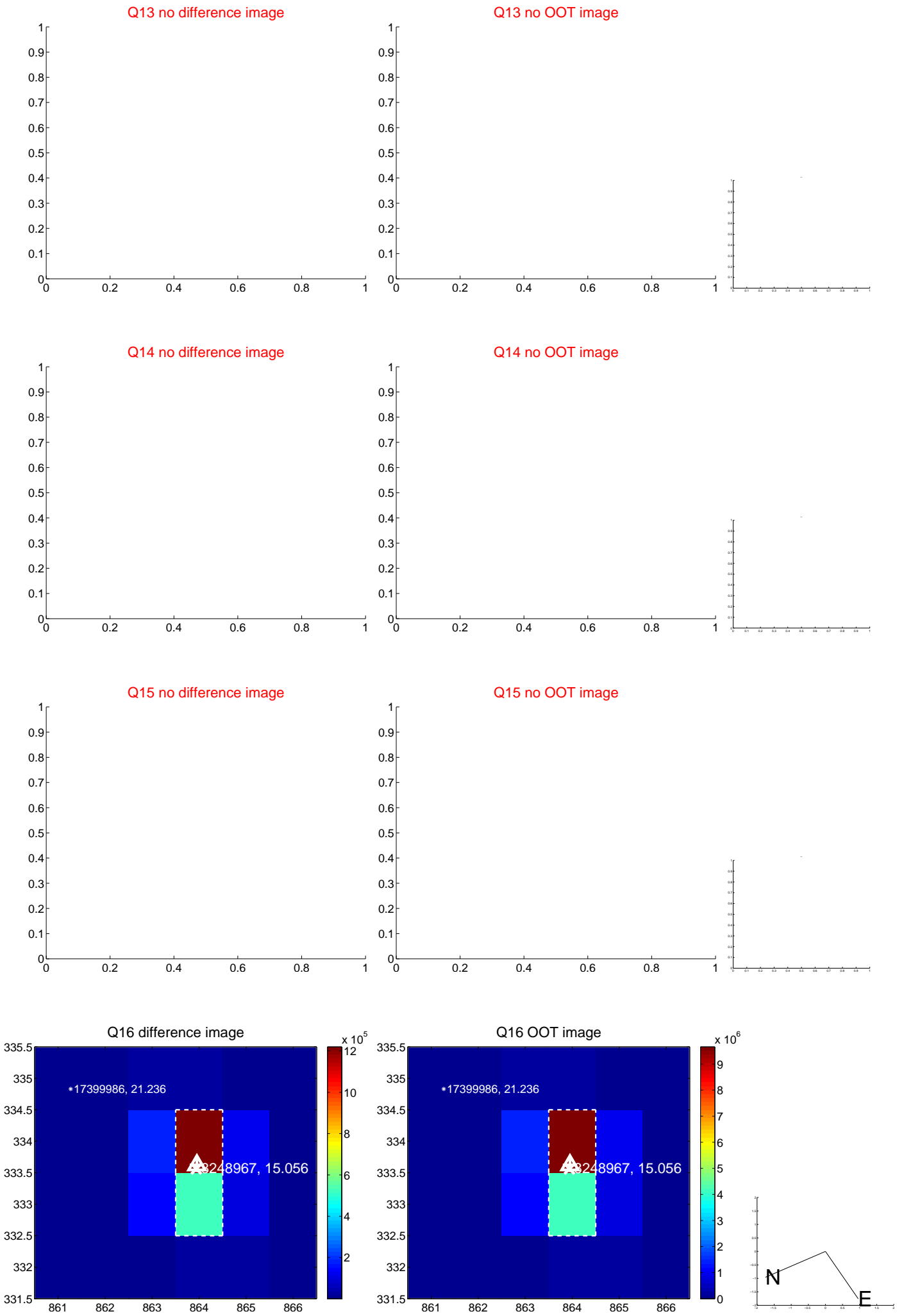
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



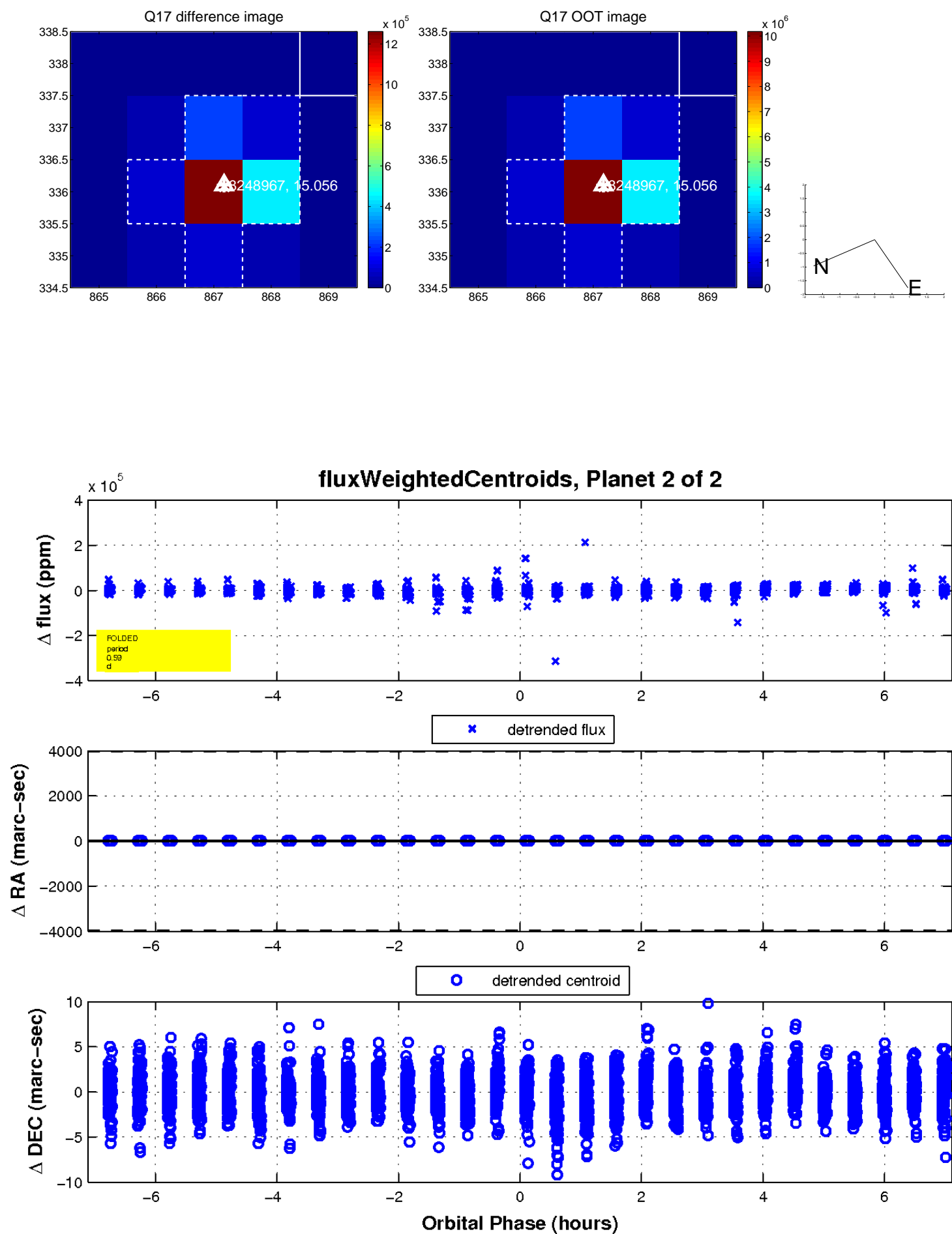
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

