

KIC 008490808

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})
008490808-01	OBS	No	0.925572	132.048494	14663.4	1.500	43.7	-1.0	1.99	7884	24.33	28226.25
008490808-02	OBS	No	0.925637	131.513277	25869.7	2.000	126.9	-1.0	1.99	7884	32.27	28223.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008490808-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
008490808-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_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.

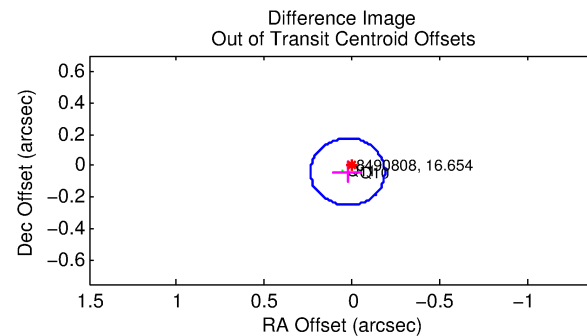
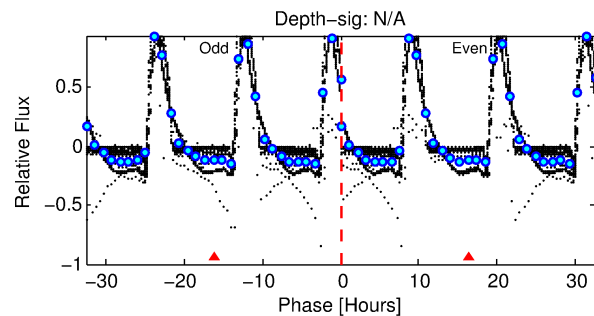
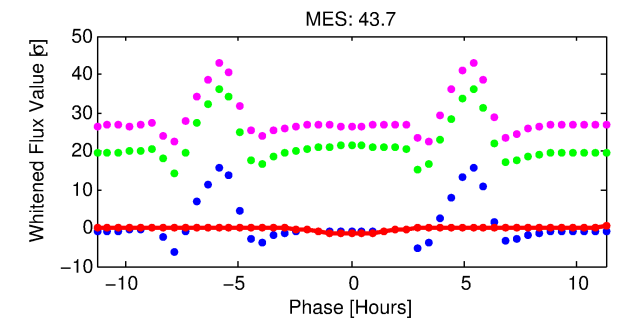
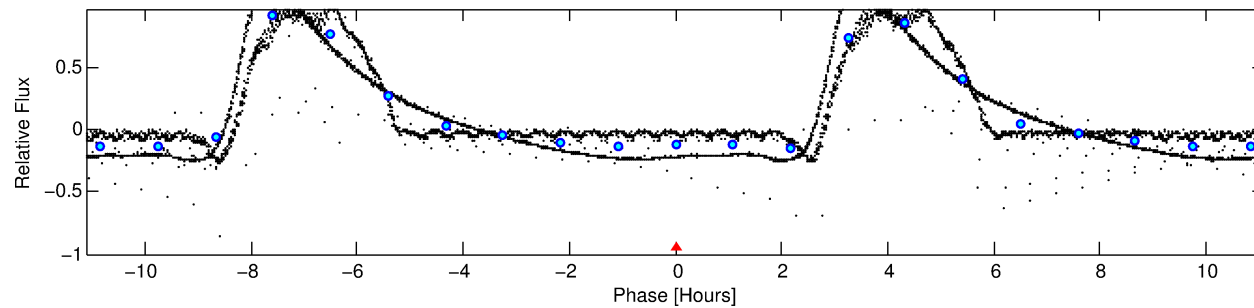
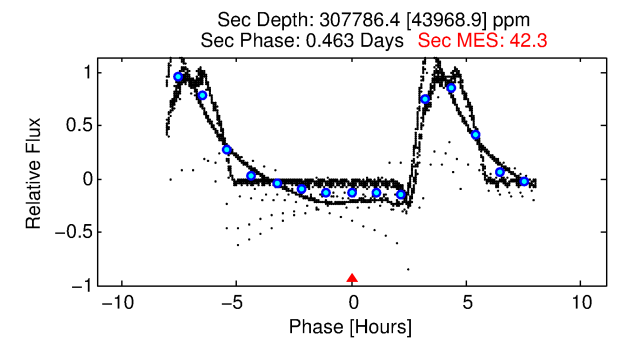
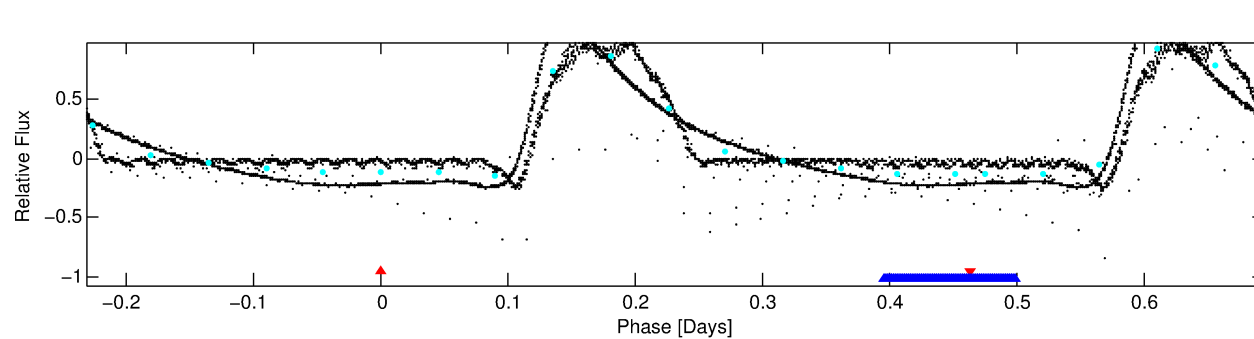
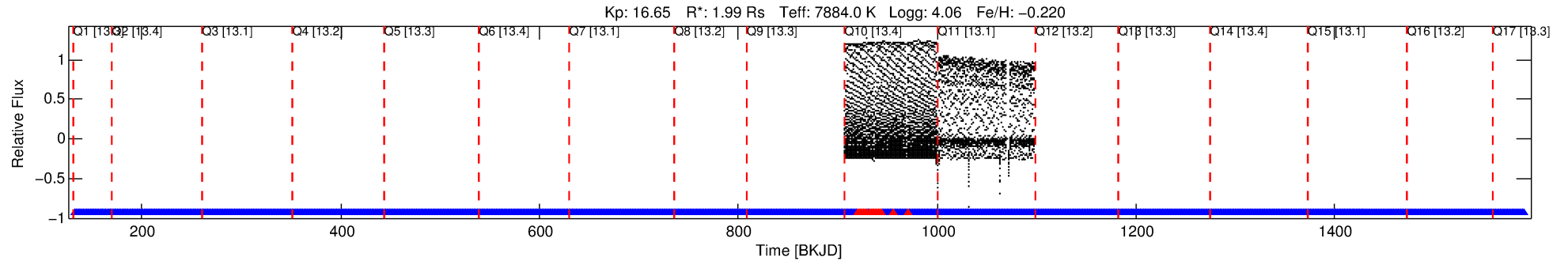
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008490808-01

No Significant Match Found

DV One-Page Summary

KIC: 8490808 Candidate: 1 of 2 Period: 0.926 d



TPS TCE Results:

Period = 0.92557 d
Epoch = 132.0485 BKJD

DV fit results are unavailable

DV Diagnostic Results:

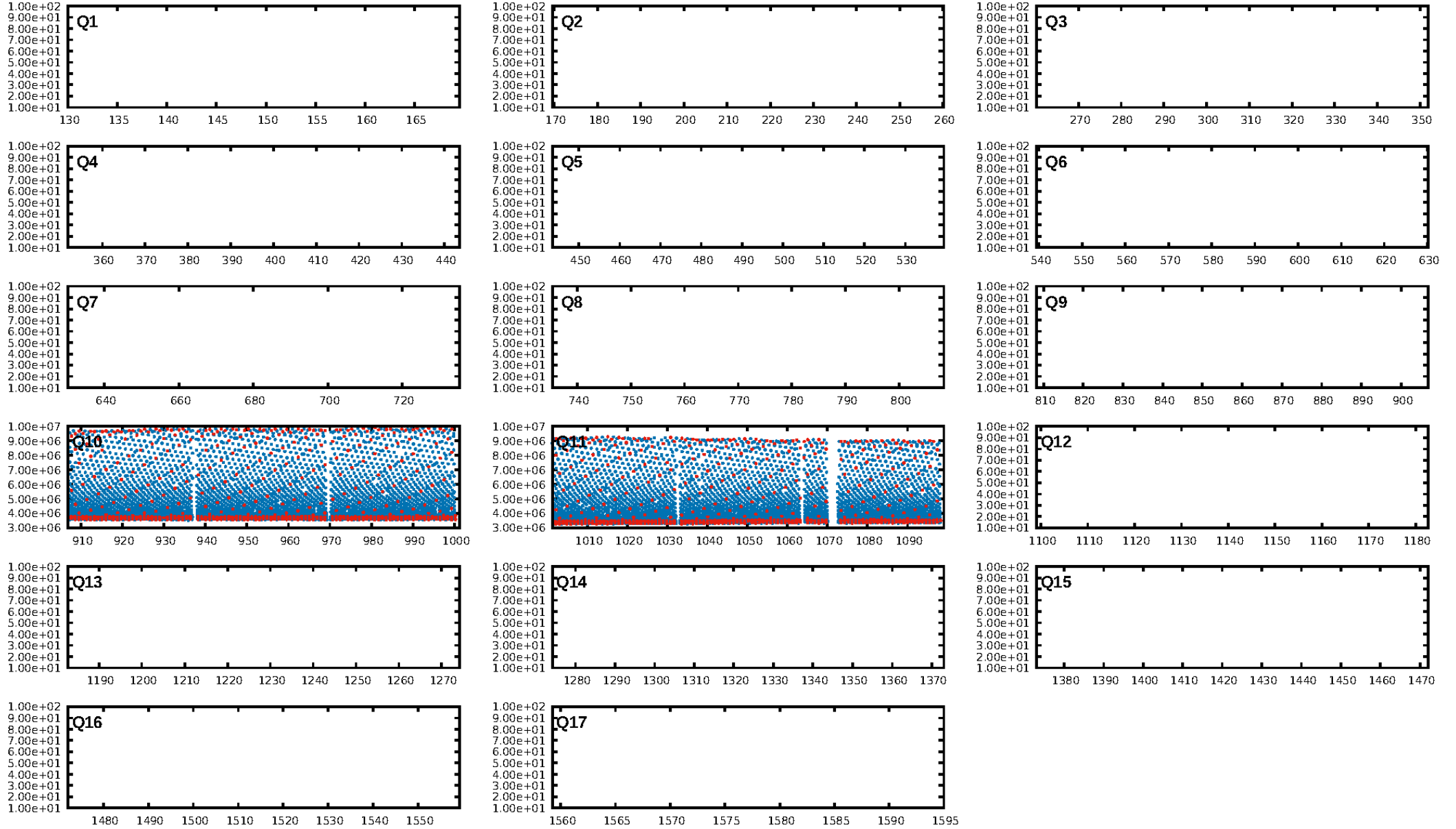
ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.88 [176/199]
GhostDiagnostic-chr: 0.9895

Centroid-sig: N/A
Centroid-so: 0.291 arcsec [38.37σ]
OotOffset-rm: 0.046 arcsec [0.65σ]
KicOffset-rm: 0.134 arcsec [1.46σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

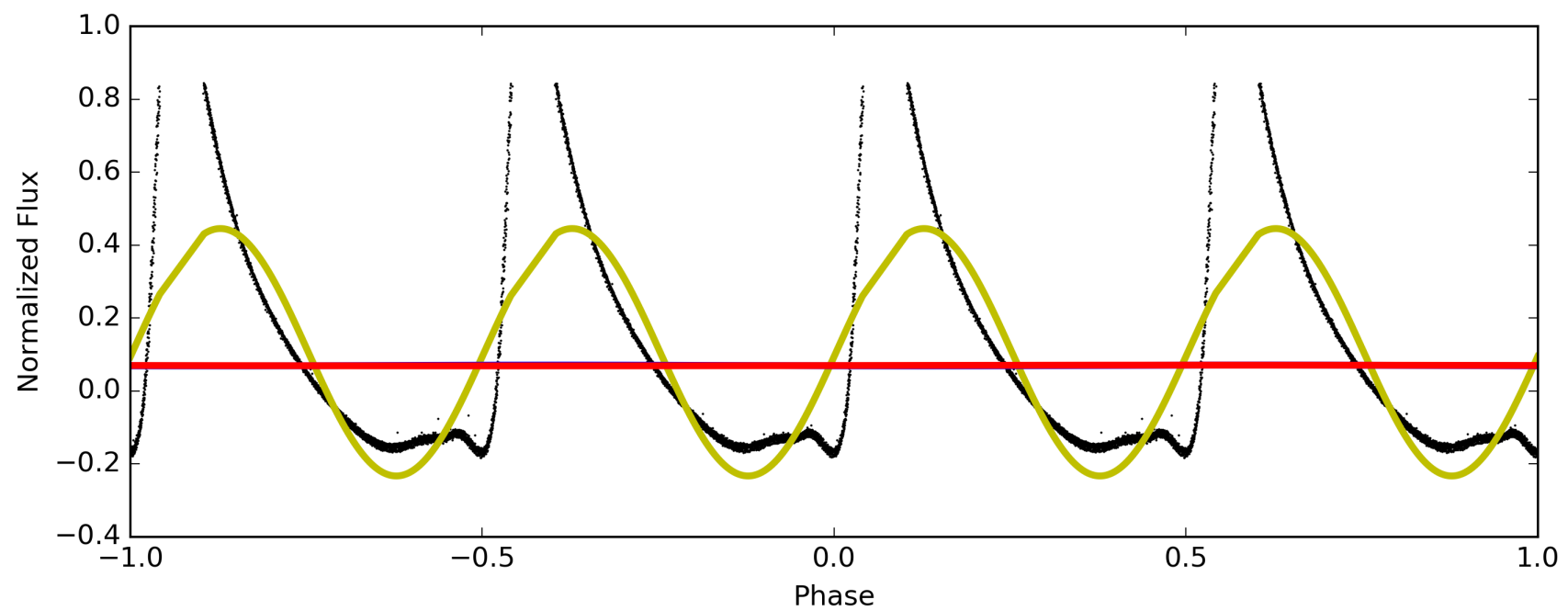
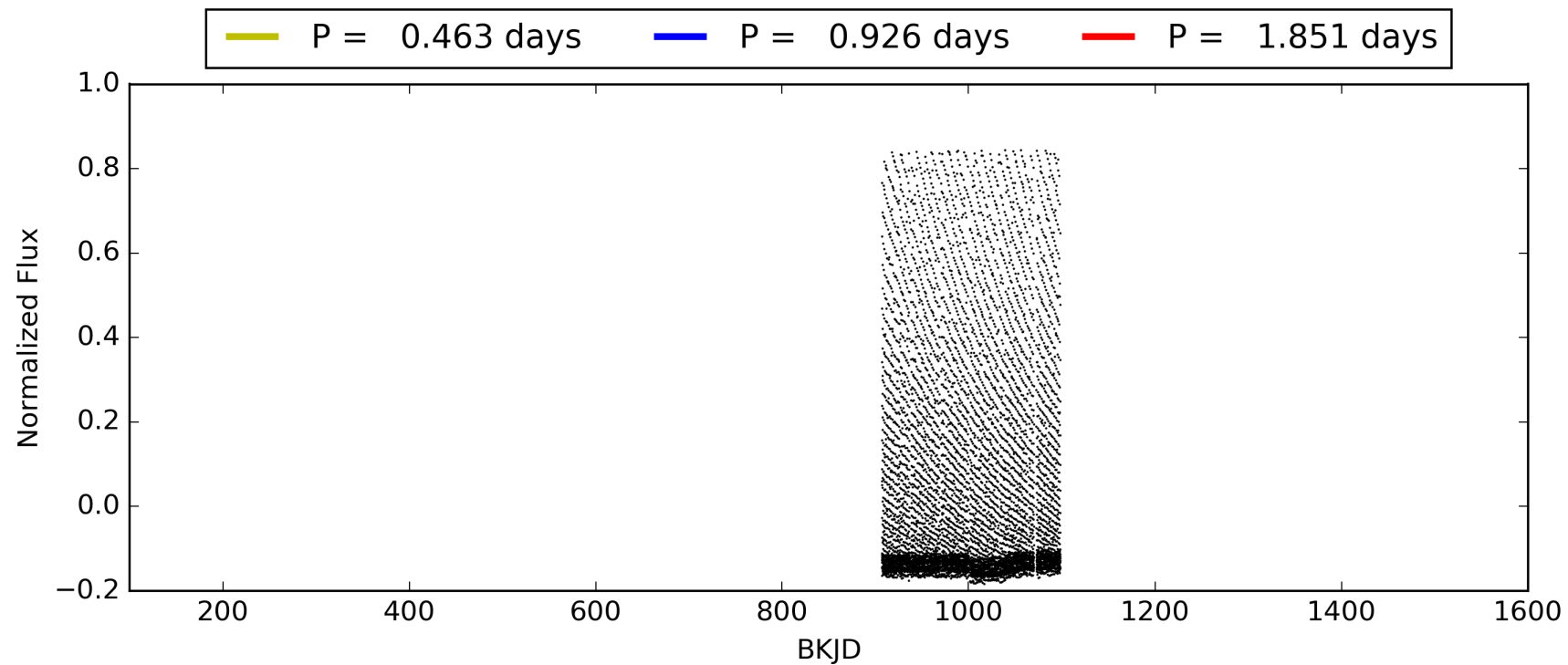
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:07:46 Z

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

TCE 008490808-01, PDC Light Curves

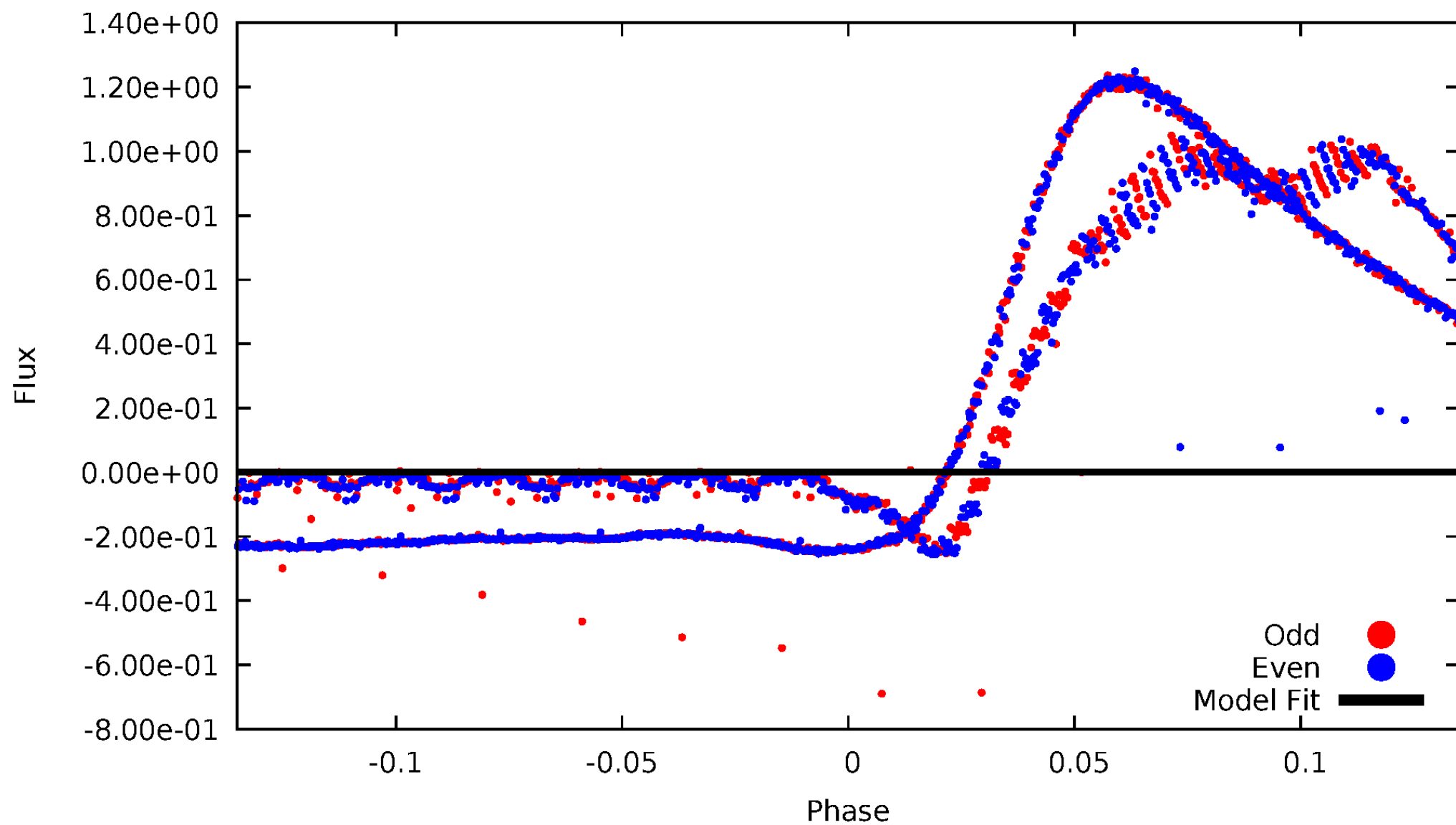


TCE 008490808-01



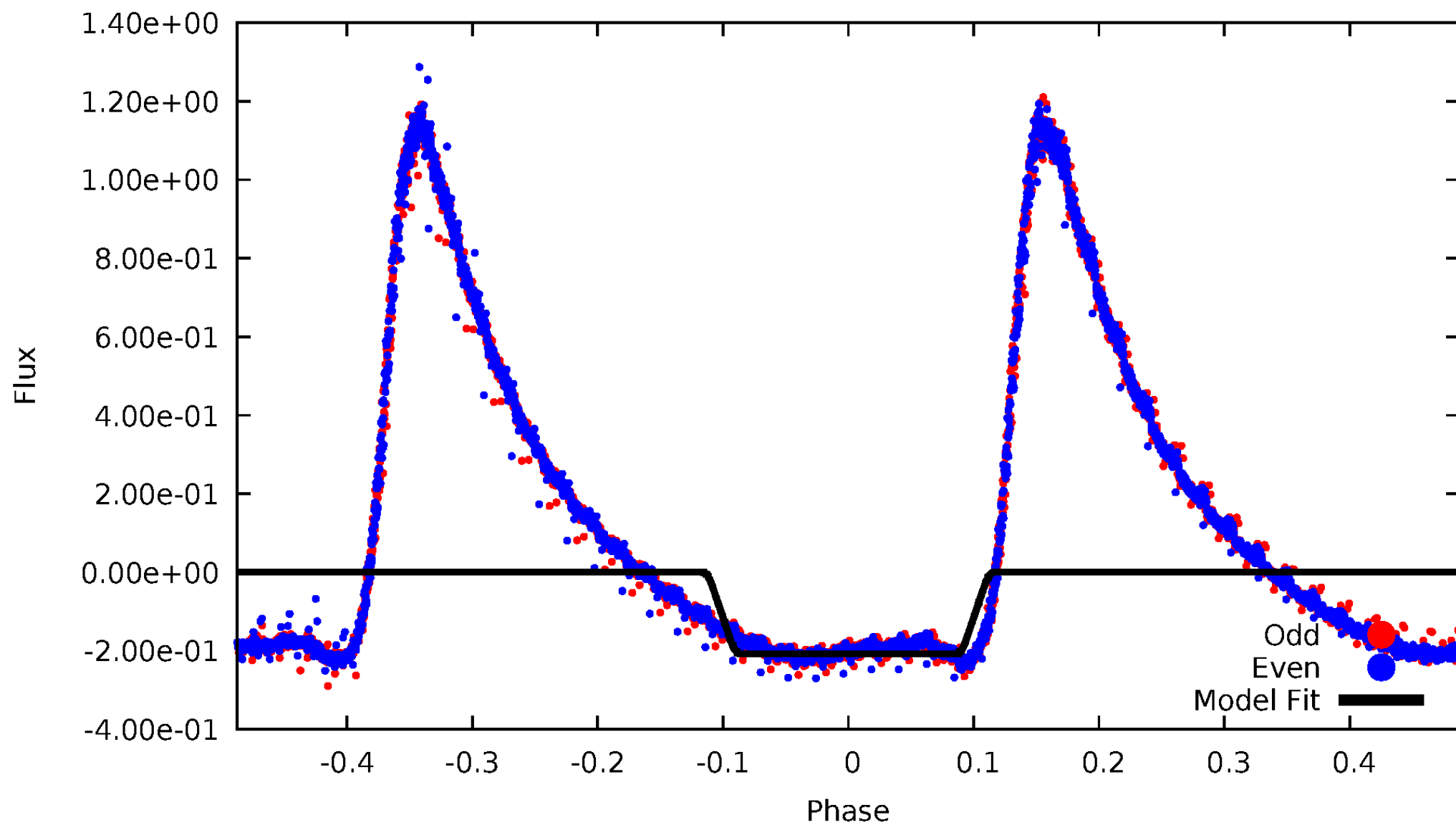
DV Odd/Even

TCE 008490808-01



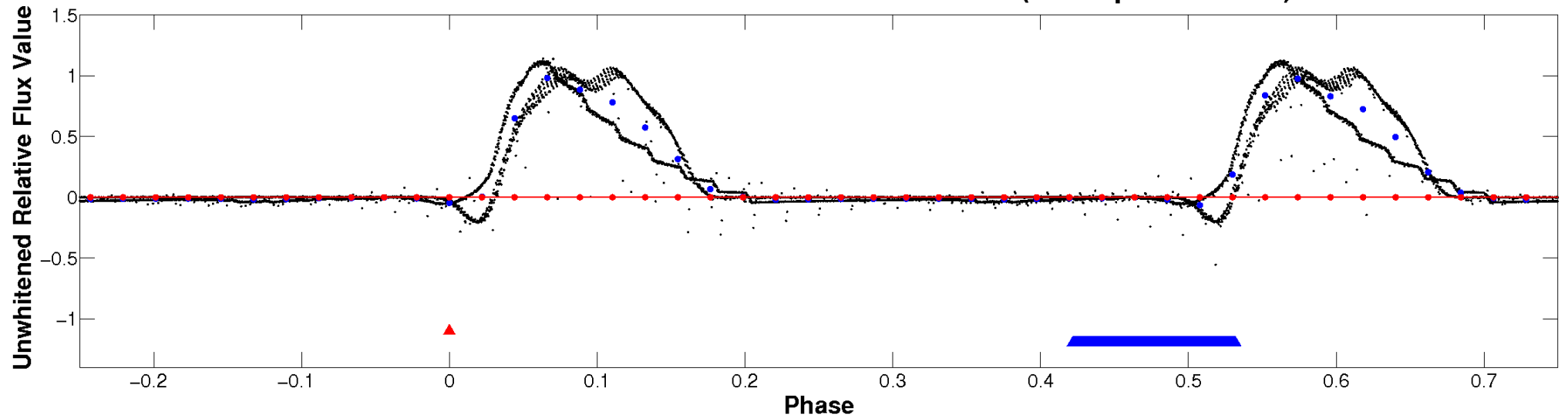
ALT Odd/Even

TCE 008490808-01



Non-Whitened Vs. Whitened Light Curve

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

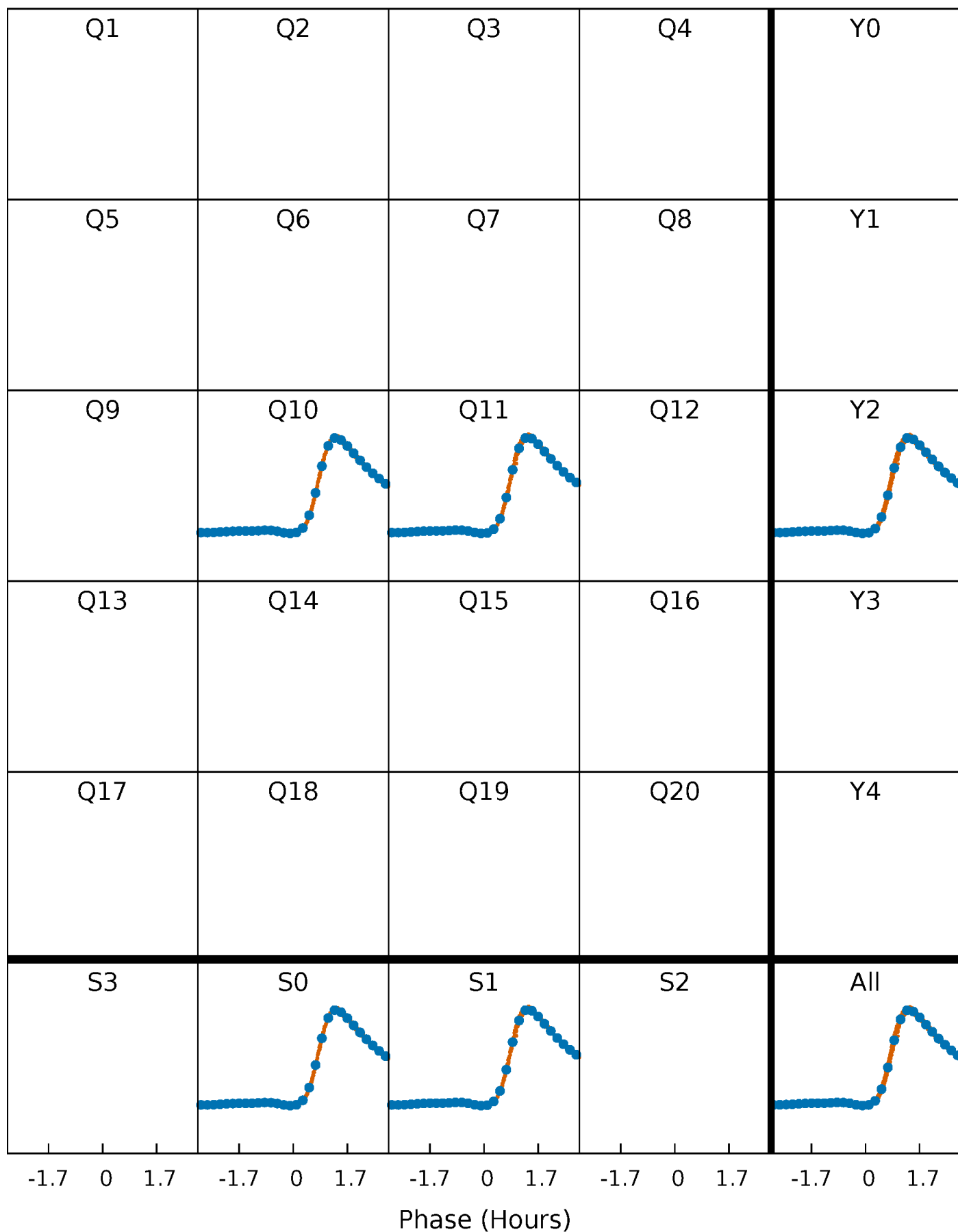


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



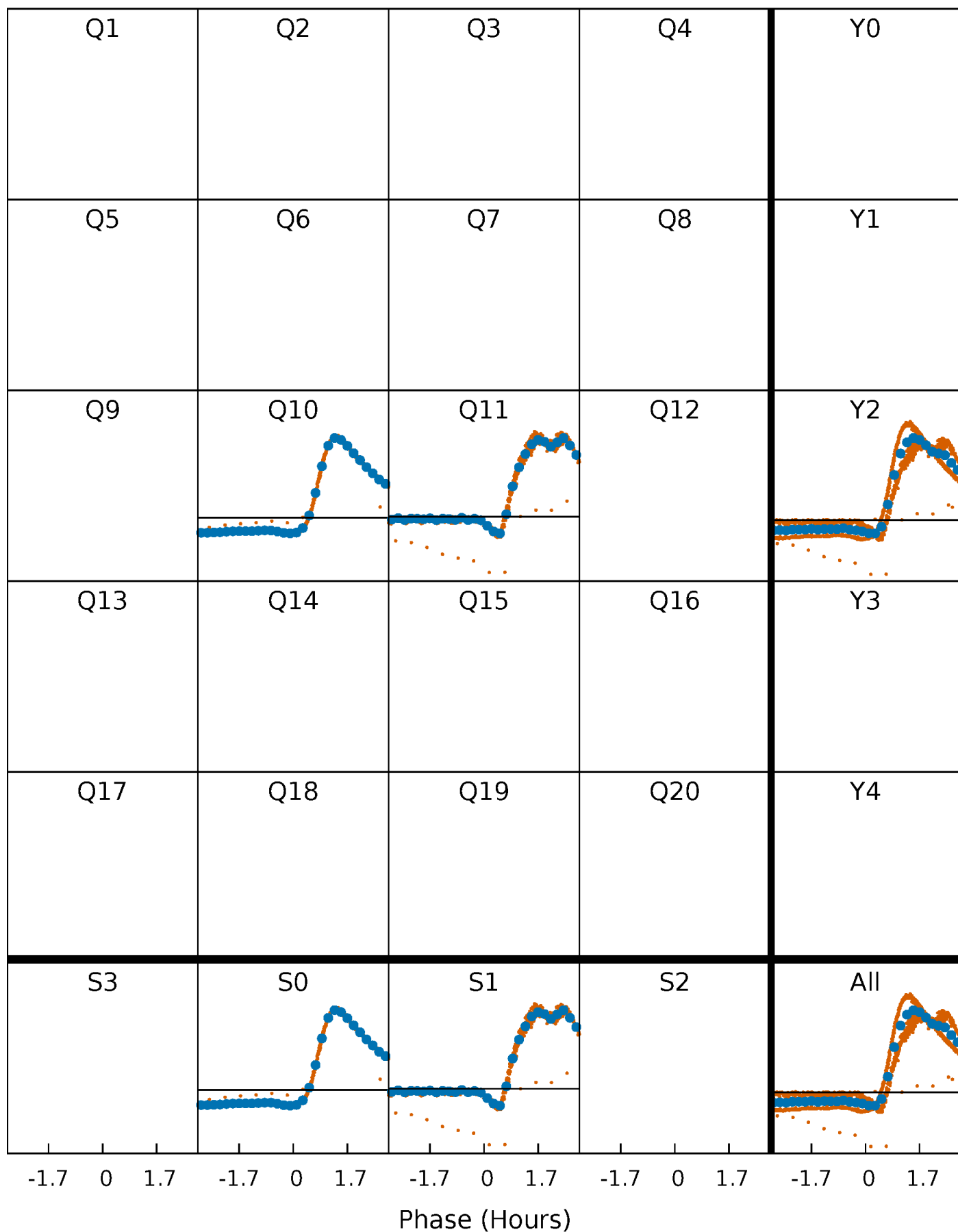
PDC Quarter-Phased Transit Curves

TCE 008490808-01 P= 0.925572 Days $T_0=132.048494$ (BKJD)



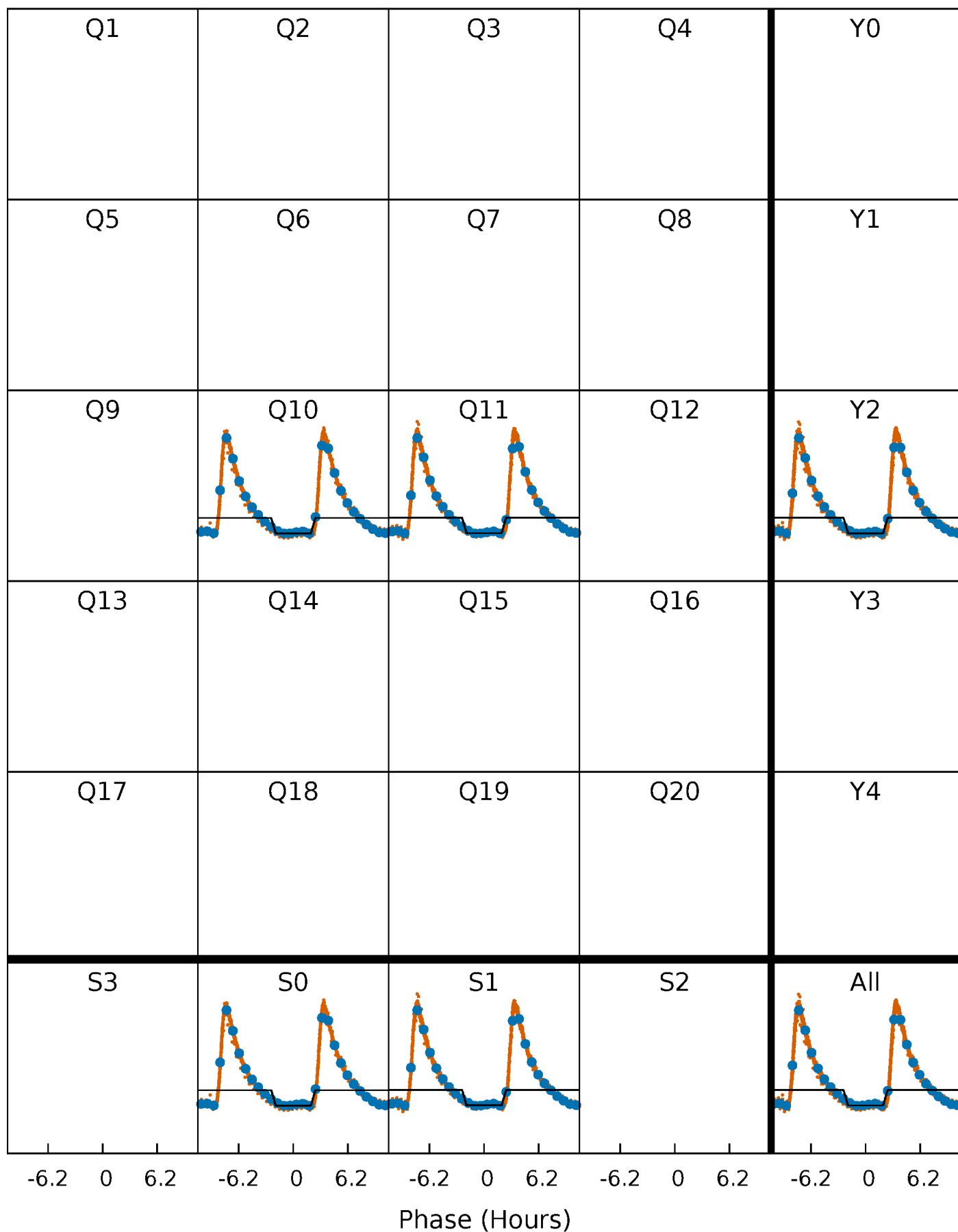
DV Quarter-Phased Transit Curves

TCE 008490808-01 P= 0.925572 Days $T_0=132.048494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

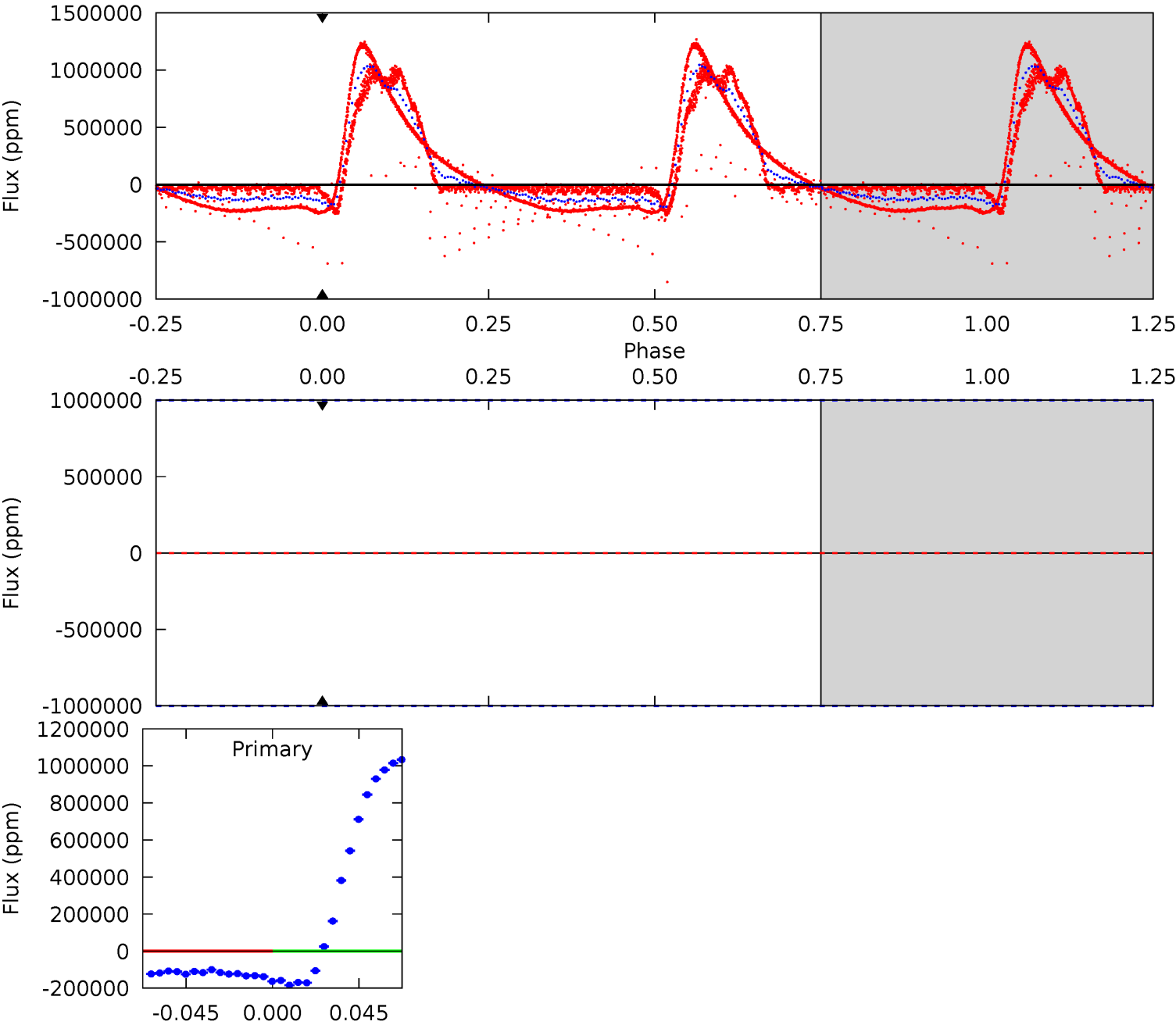
TCE 008490808-01 P= 0.925572 Days $T_0=131.960436$ (BKJD)



DV Model-Shift Uniqueness Test

008490808-01, P = 0.925572 Days, E = 132.048494 Days

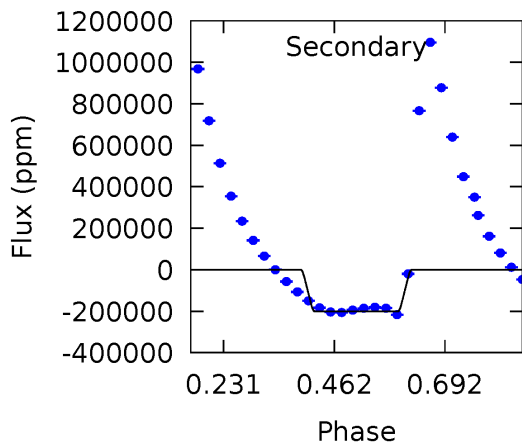
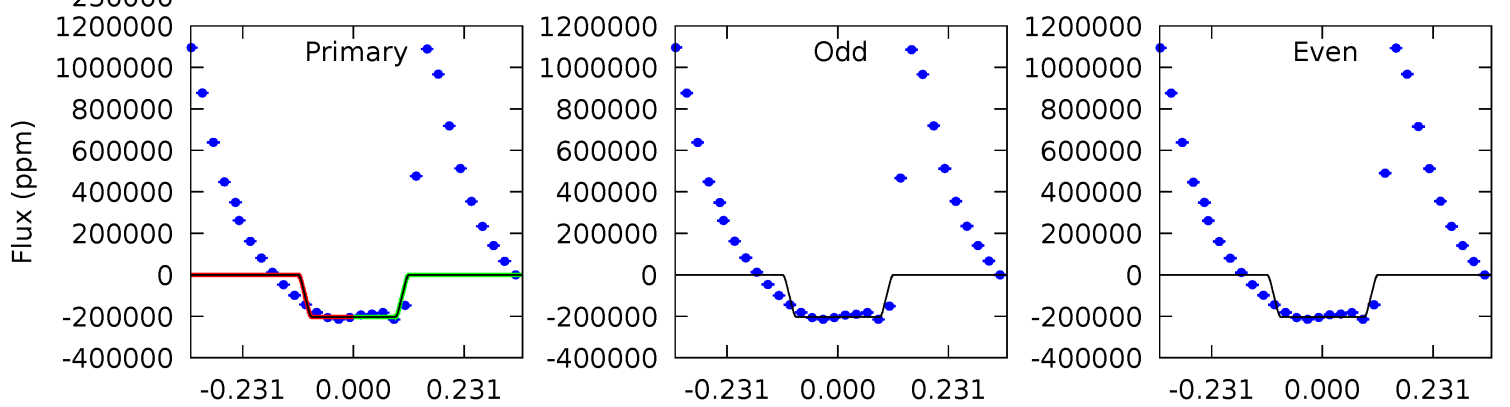
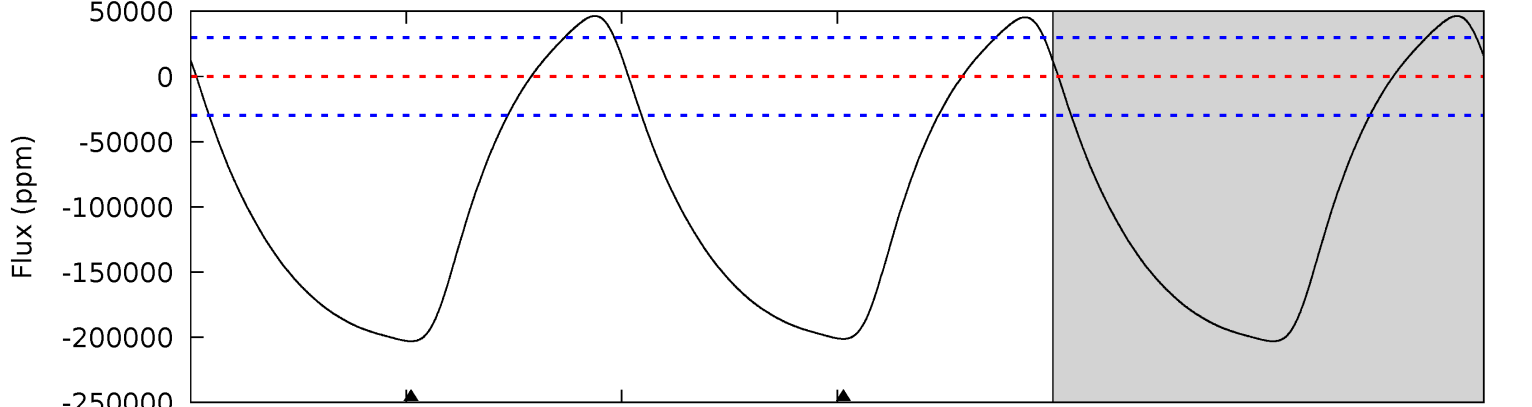
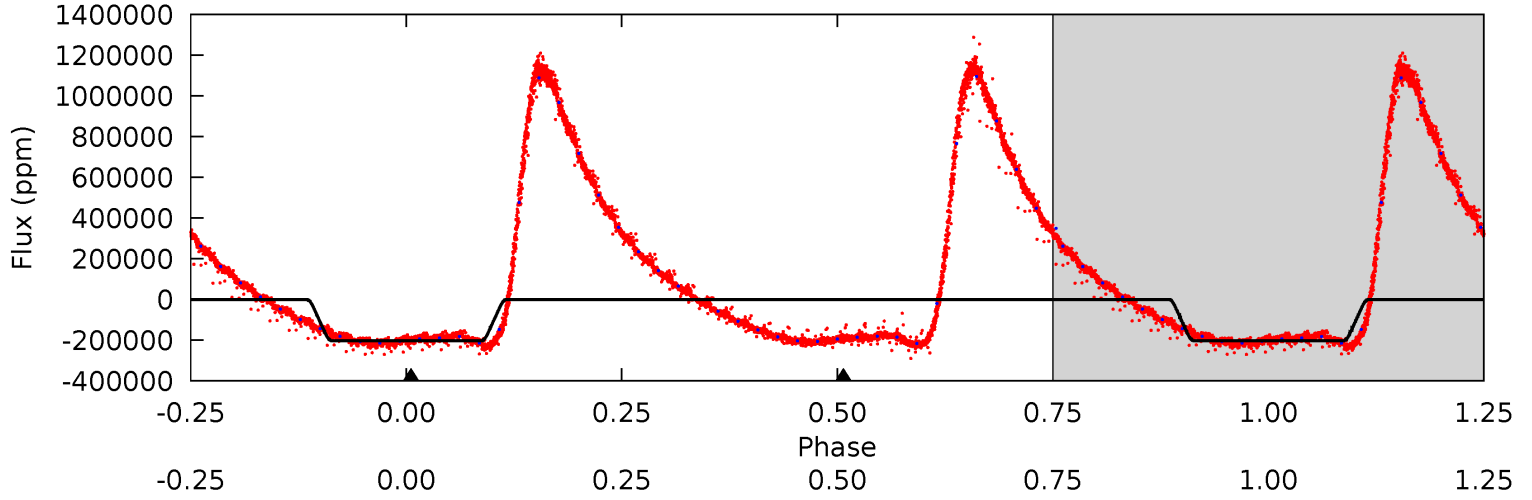
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008490808-01, P = 0.925572 Days, E = 131.960436 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	29.7	0	0	4.39	1.20	3.97	30.0	30.0	29.7	29.7	0.02	1.00	0.19	0.02



Stellar Parameters For KIC 008490808

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7884^{+216}_{-325}	$4.061^{+0.165}_{-0.149}$	$-0.220^{+0.200}_{-0.300}$	$1.986^{+0.479}_{-0.479}$	$1.656^{+0.208}_{-0.254}$	$0.298^{+0.277}_{-0.122}$
	+3%/-4%	+4%/-4%	+91%/-136%	+24%/-24%	+13%/-15%	+93%/-41%
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 008490808-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$27.70^{+20.50}_{-16.04}$	4591^{+309}_{-306}	4512^{+17253}_{-21550}	$0.798^{+62.222}_{-41.578}$
Alt.	-201242 ± 6778	$97.53^{+24.88}_{-23.38}$	4564^{+340}_{-289}	8122^{+1530}_{-927}	$7.073^{+4.821}_{-2.613}$

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 $A_{obs} \gg 1.0$

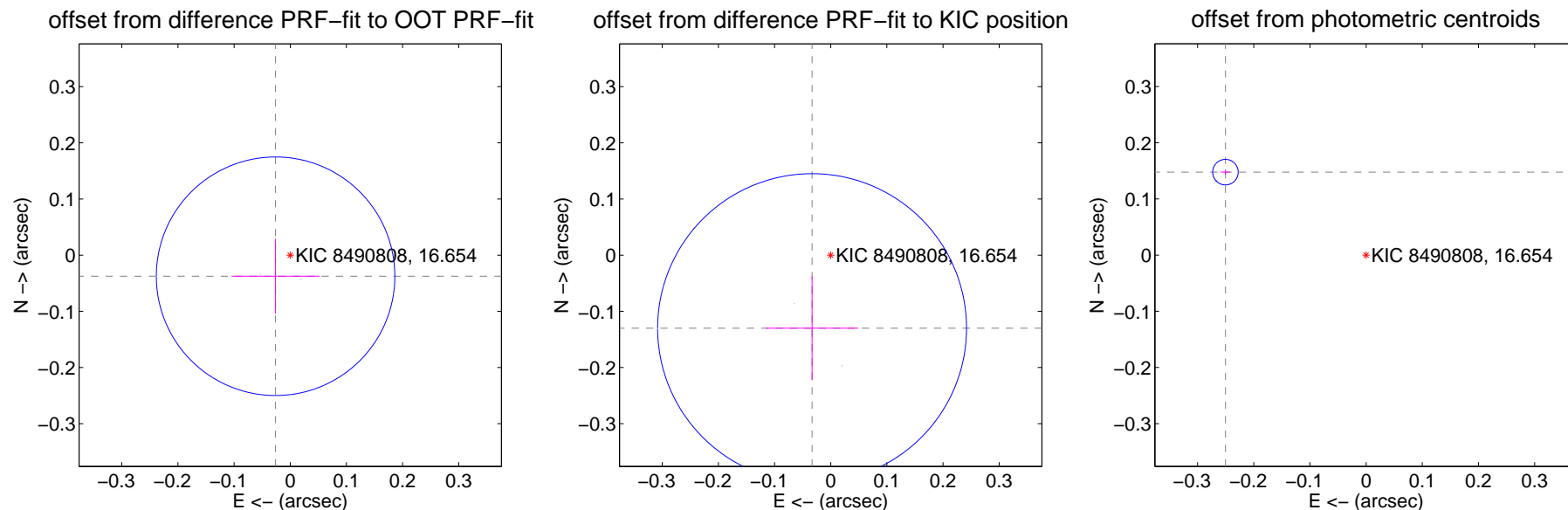
DV Centroid Data

Supplemental centroid analysis for 008490808-01. Kepler magnitude: 16.65. 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 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.071	0.65	0.026 ± 0.078	-0.038 ± 0.067
PRF-fit source offset from KIC position	0.134 ± 0.092	1.46	0.033 ± 0.082	-0.130 ± 0.092
photometric centroid source offset	0.29 ± 0.01	38.37	0.25 ± 0.01	0.15 ± 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.

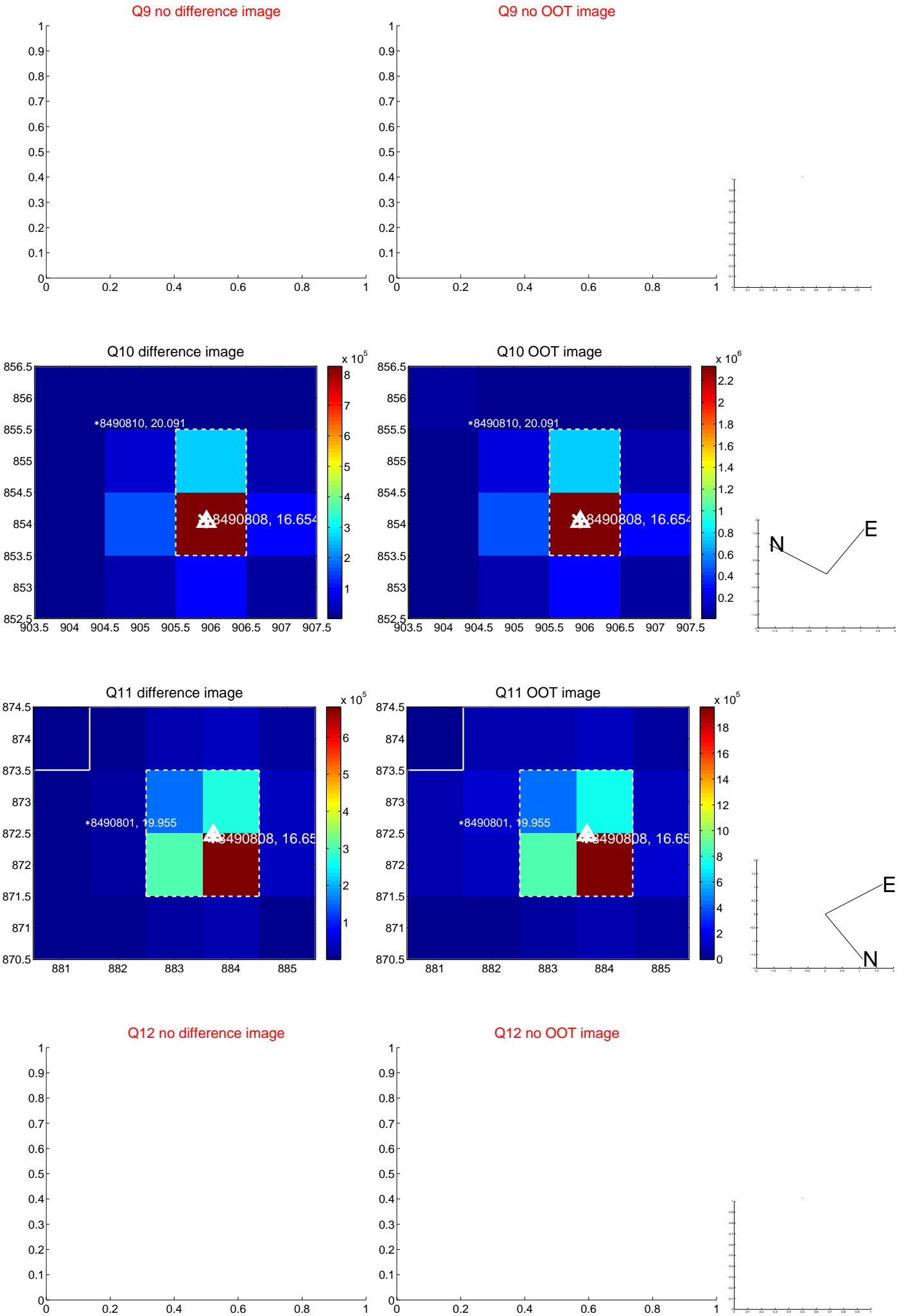
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



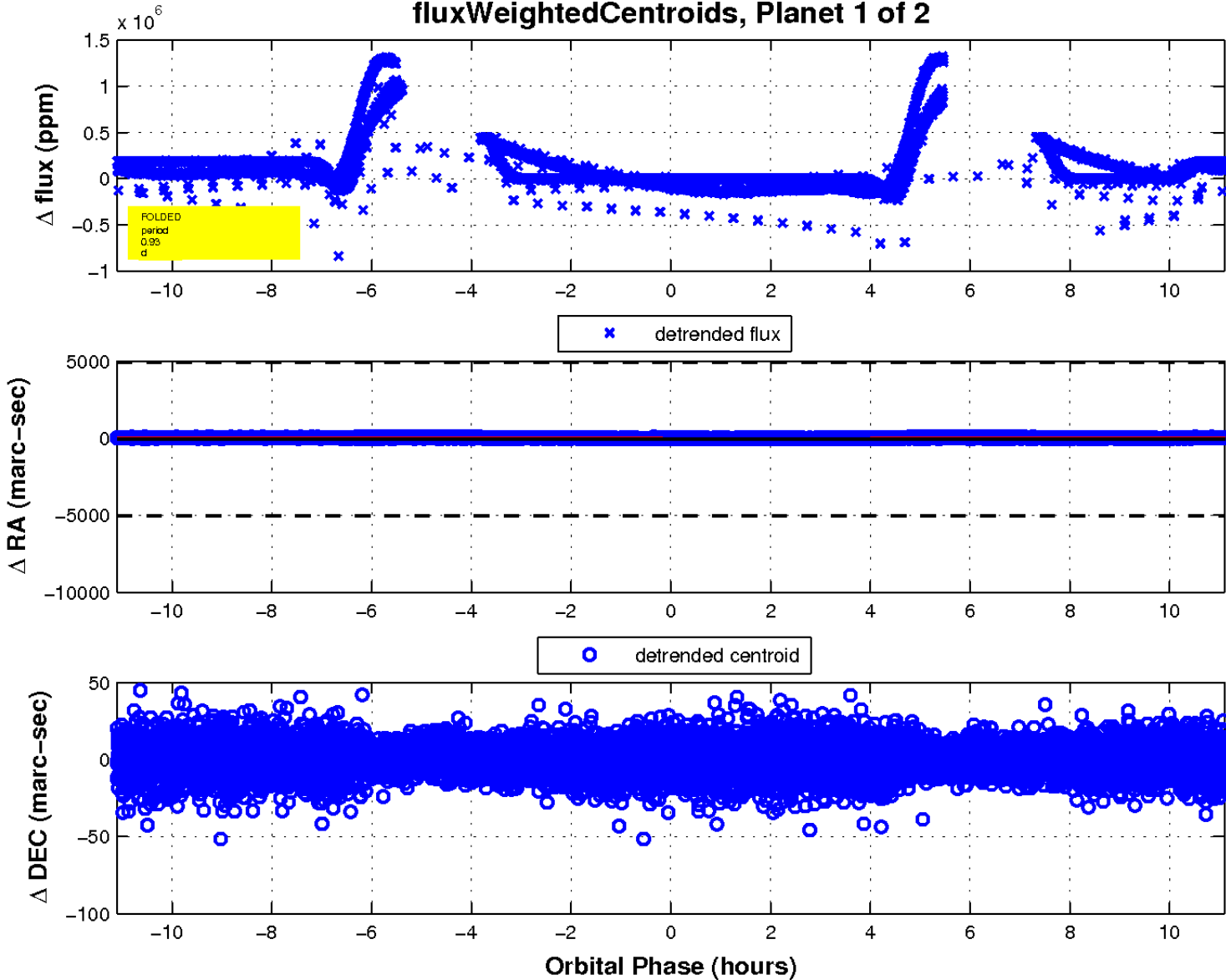
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image

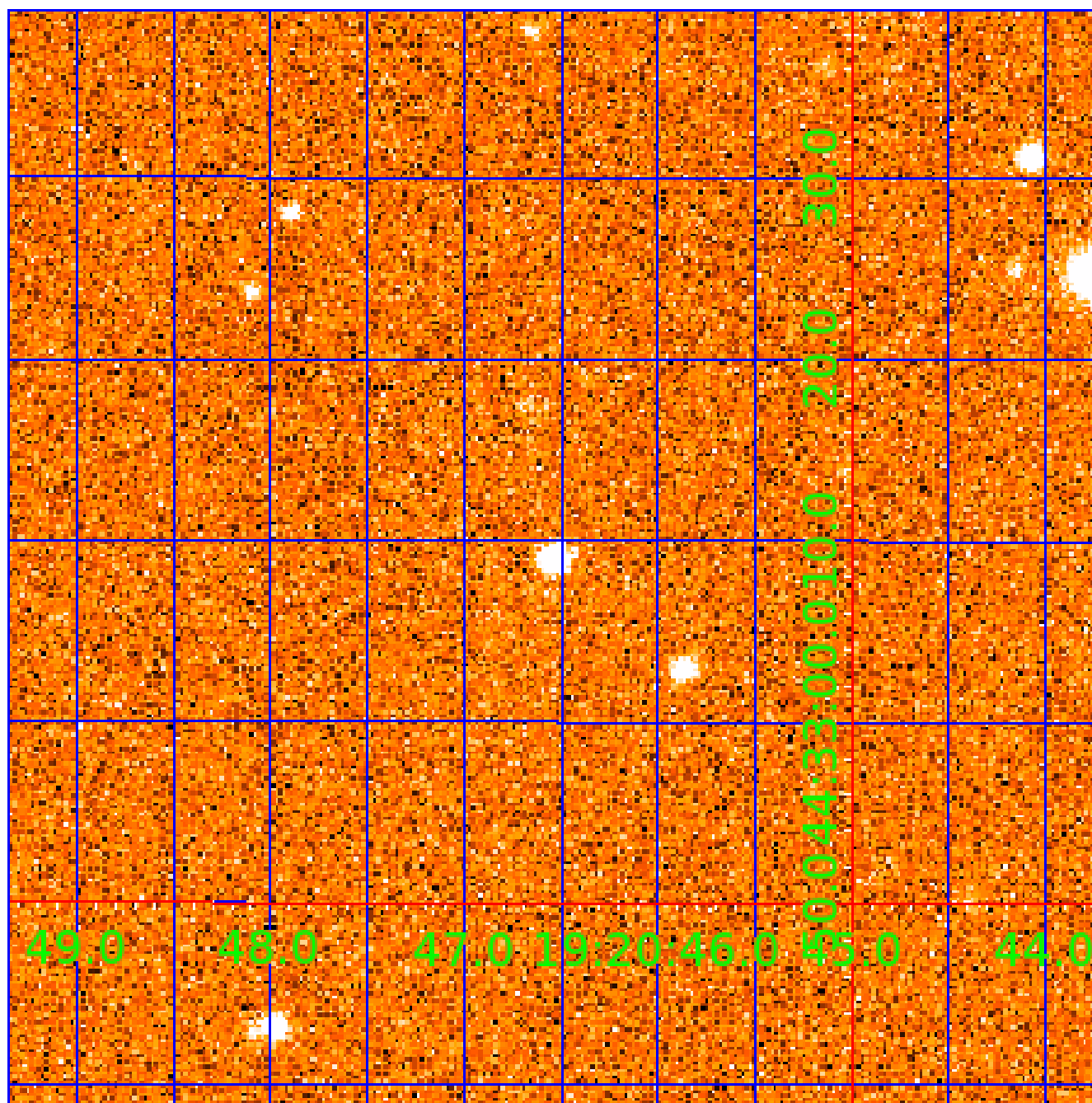


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008490808

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})
008490808-01	OBS	No	0.925572	132.048494	14663.4	1.500	43.7	-1.0	1.99	7884	24.33	28226.25
008490808-02	OBS	No	0.925637	131.513277	25869.7	2.000	126.9	-1.0	1.99	7884	32.27	28223.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008490808-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
008490808-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_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.

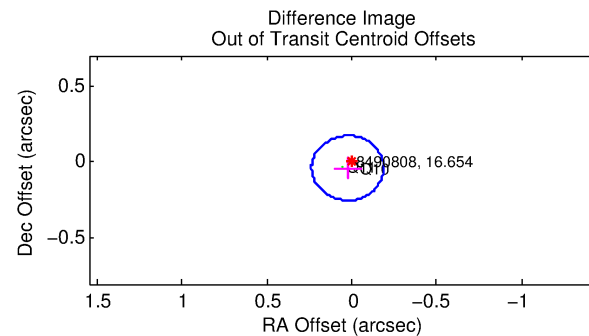
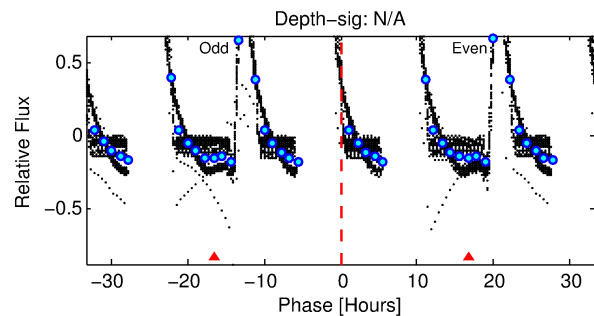
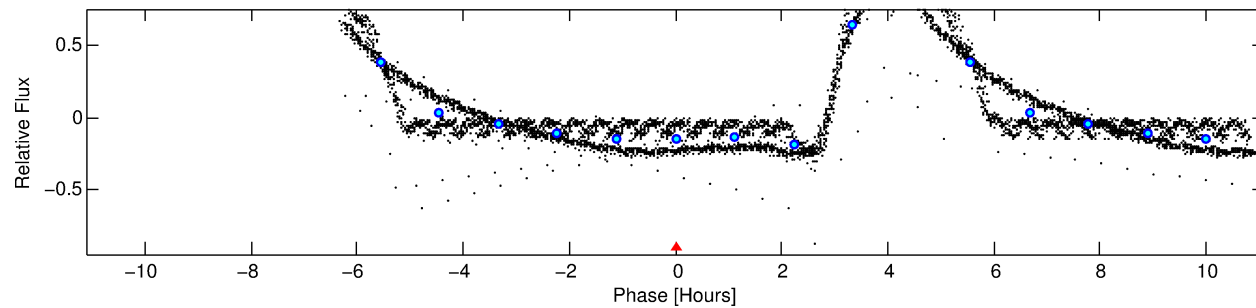
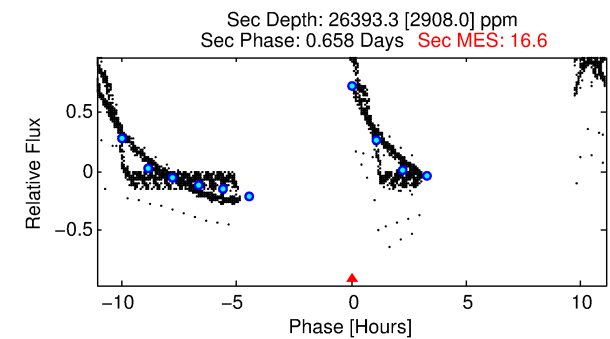
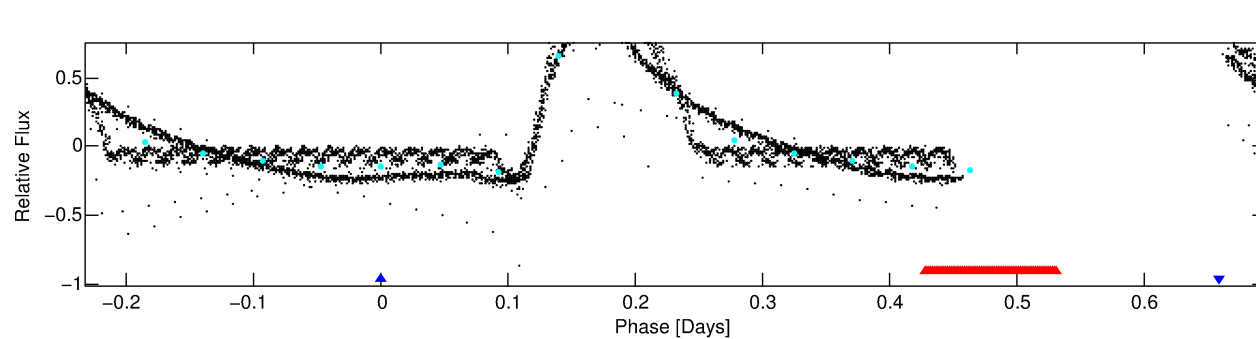
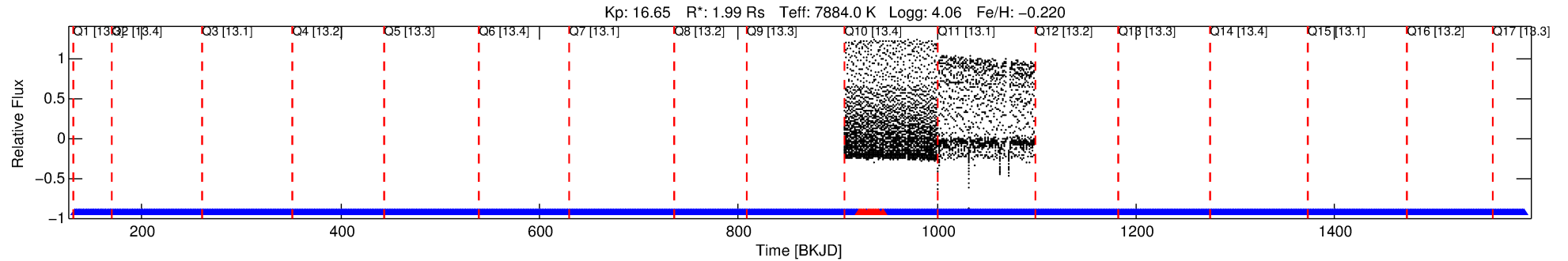
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008490808-02

No Significant Match Found

DV One-Page Summary

KIC: 8490808 Candidate: 2 of 2 Period: 0.926 d



TPS TCE Results:

Period = 0.92564 d
Epoch = 131.5133 BKJD

DV fit results are unavailable

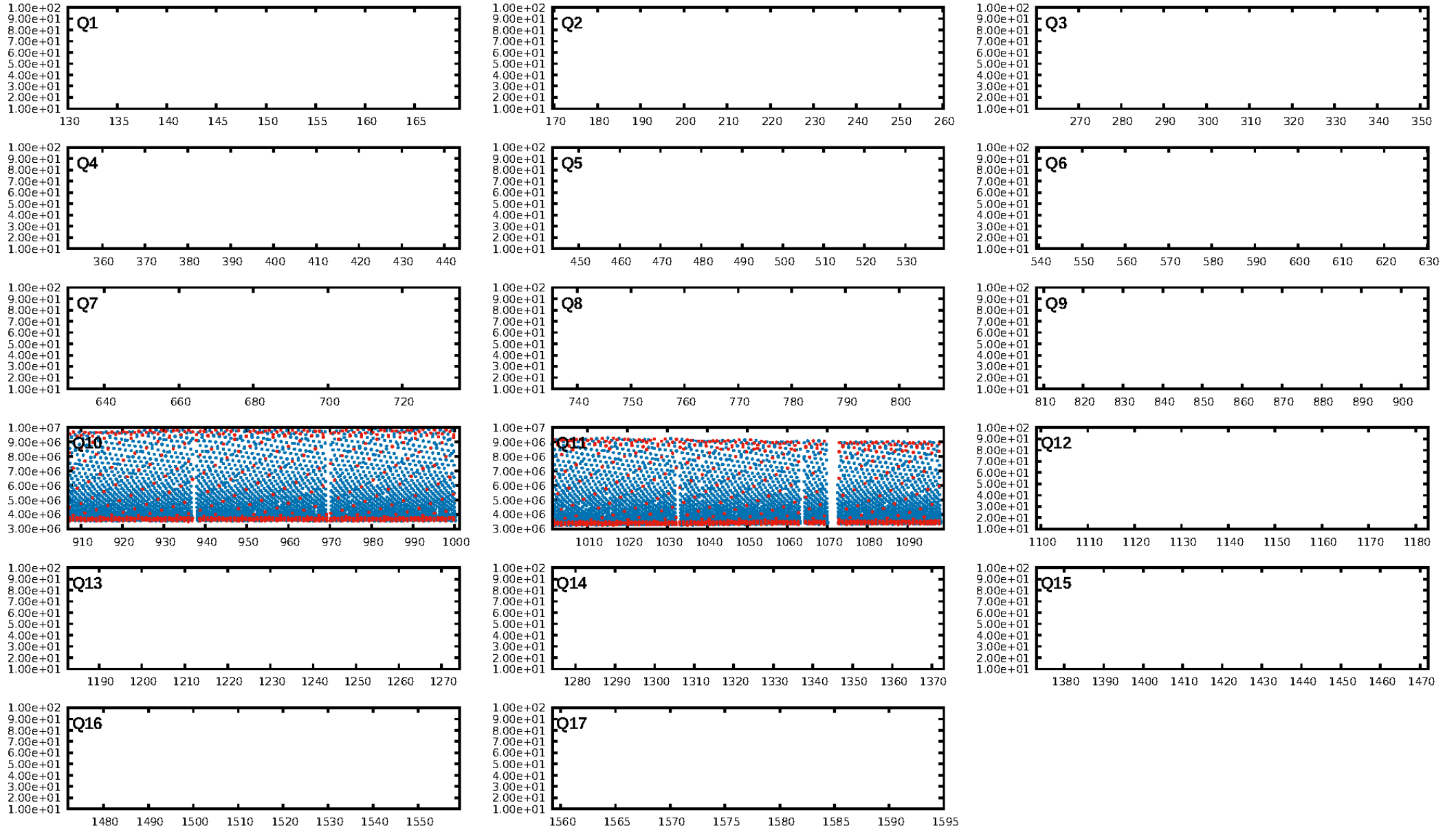
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.90 [182/202]
GhostDiagnostic-chr: 0.9905
Centroid-sig: N/A
Centroid-so: 0.299 arcsec [39.10 σ]
OotOffset-rm: 0.046 arcsec [0.66 σ]
KicOffset-rm: 0.136 arcsec [1.49 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

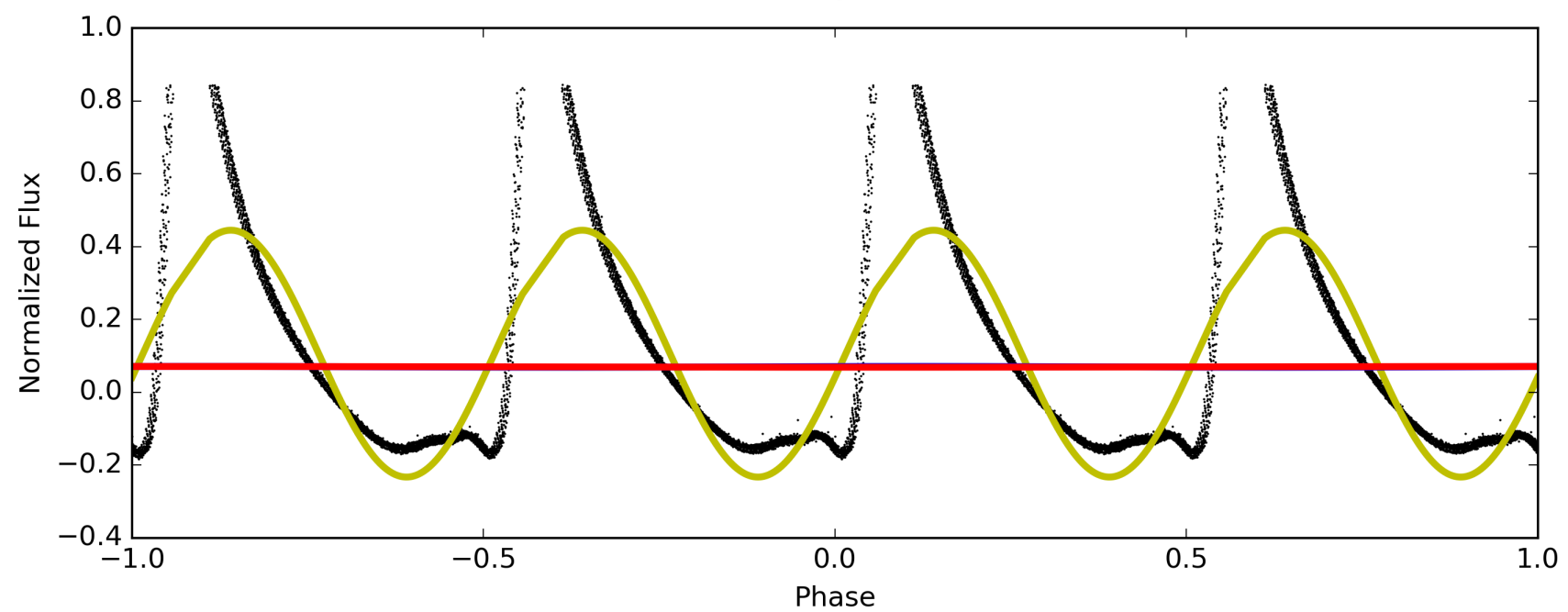
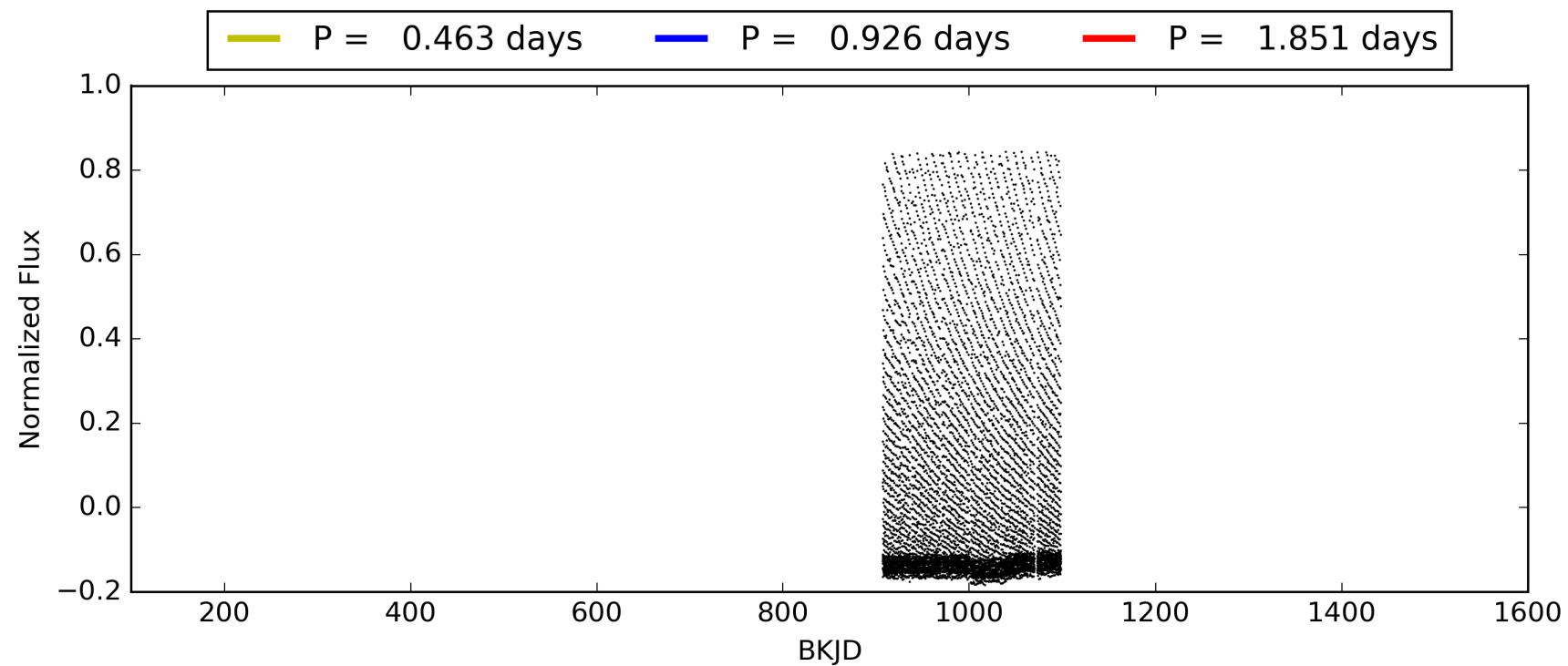
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:07:53 Z

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

TCE 008490808-02, PDC Light Curves

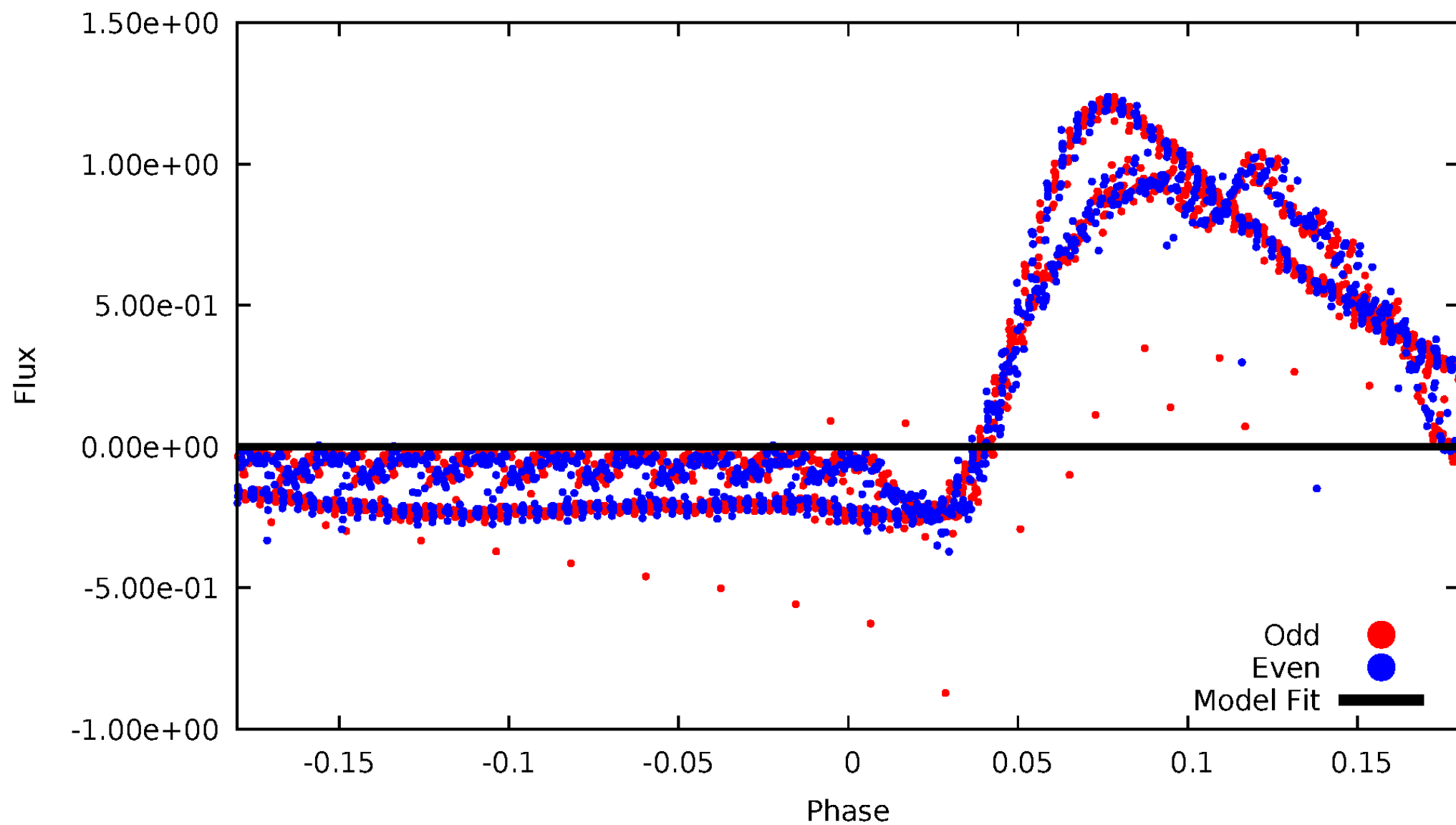


TCE 008490808-02



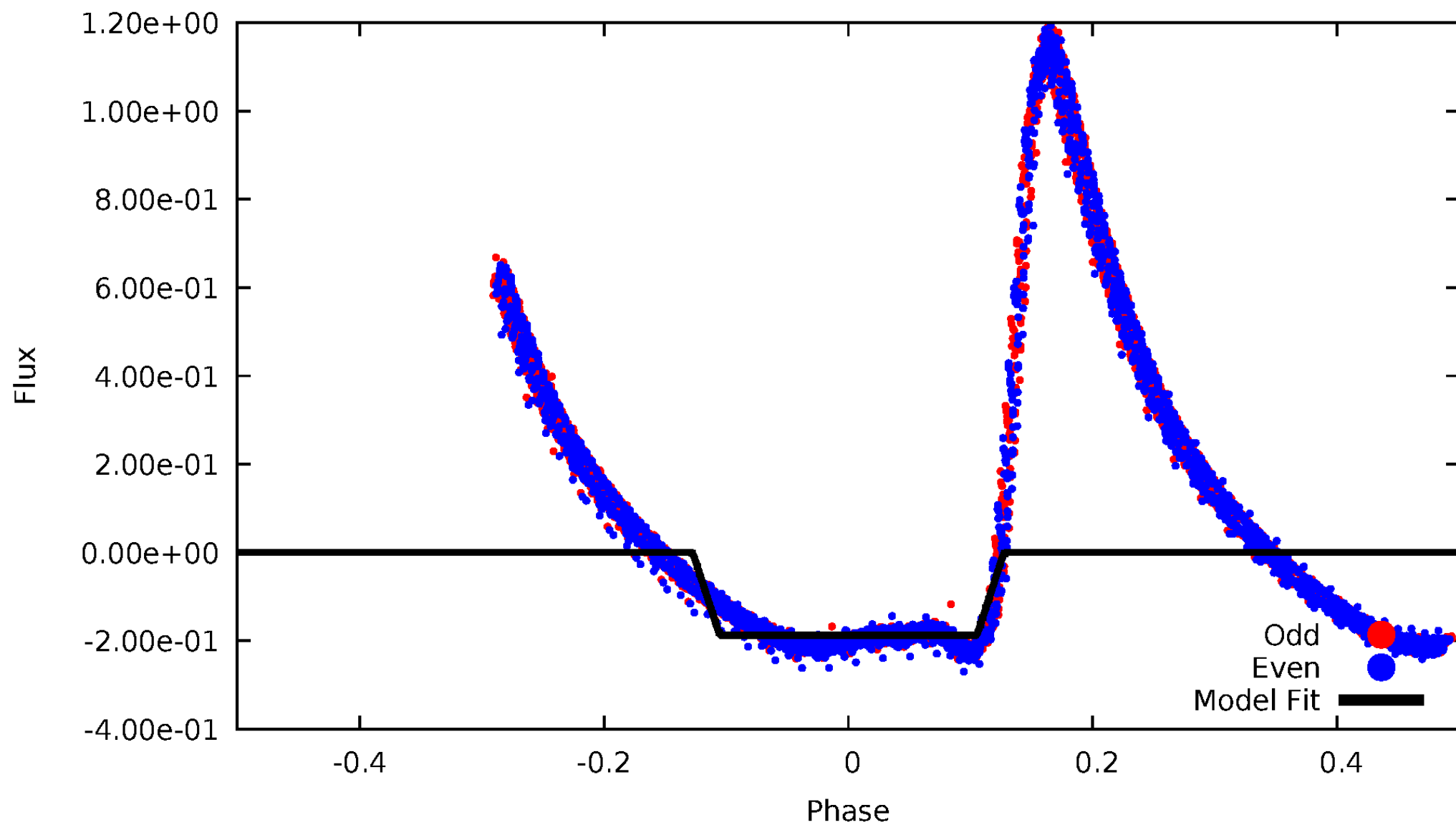
DV Odd/Even

TCE 008490808-02



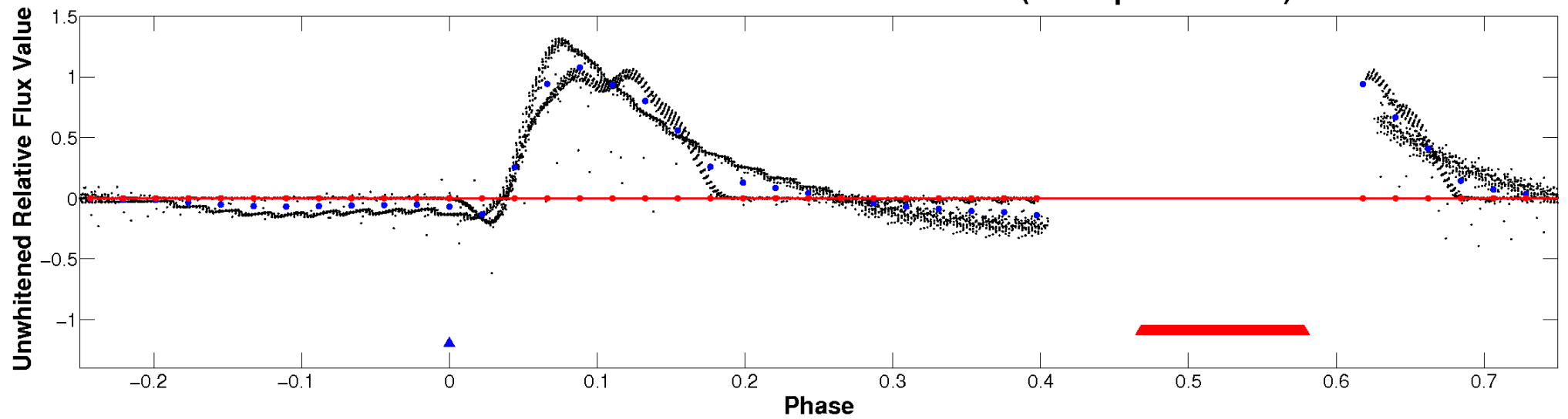
ALT Odd/Even

TCE 008490808-02



Non-Whitened Vs. Whitened Light Curve

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

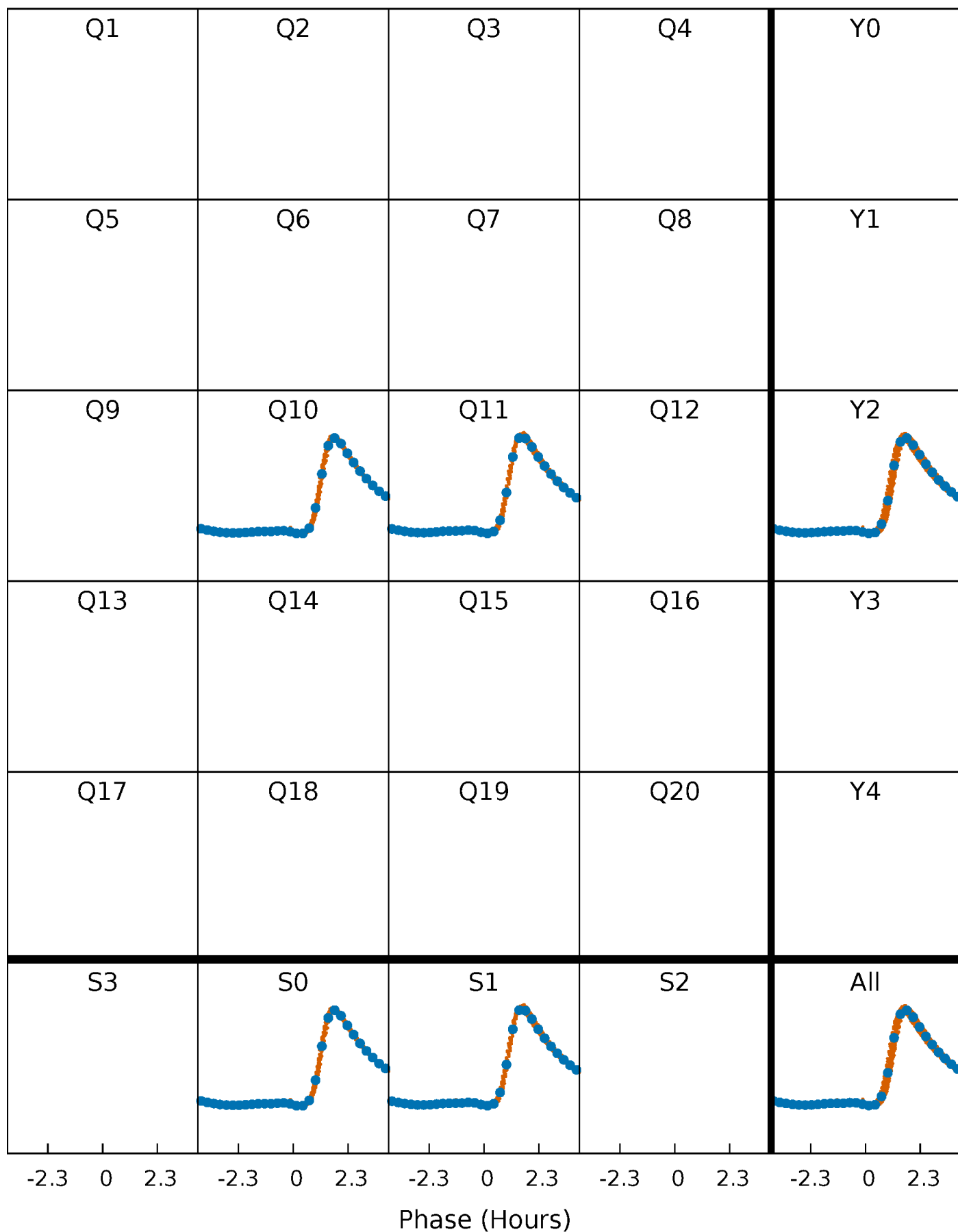


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



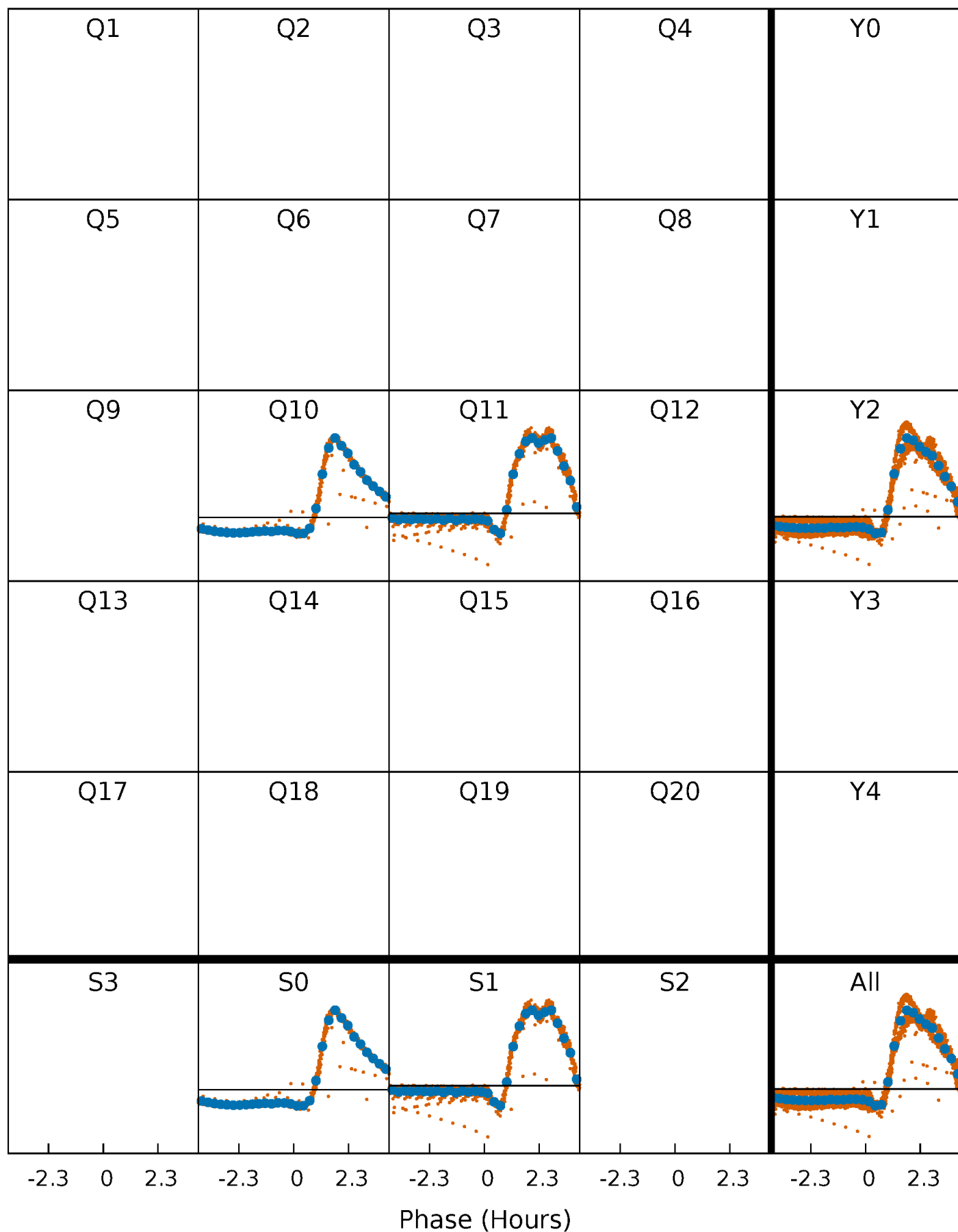
PDC Quarter-Phased Transit Curves

TCE 008490808-02 P= 0.925637 Days $T_0=131.513277$ (BKJD)



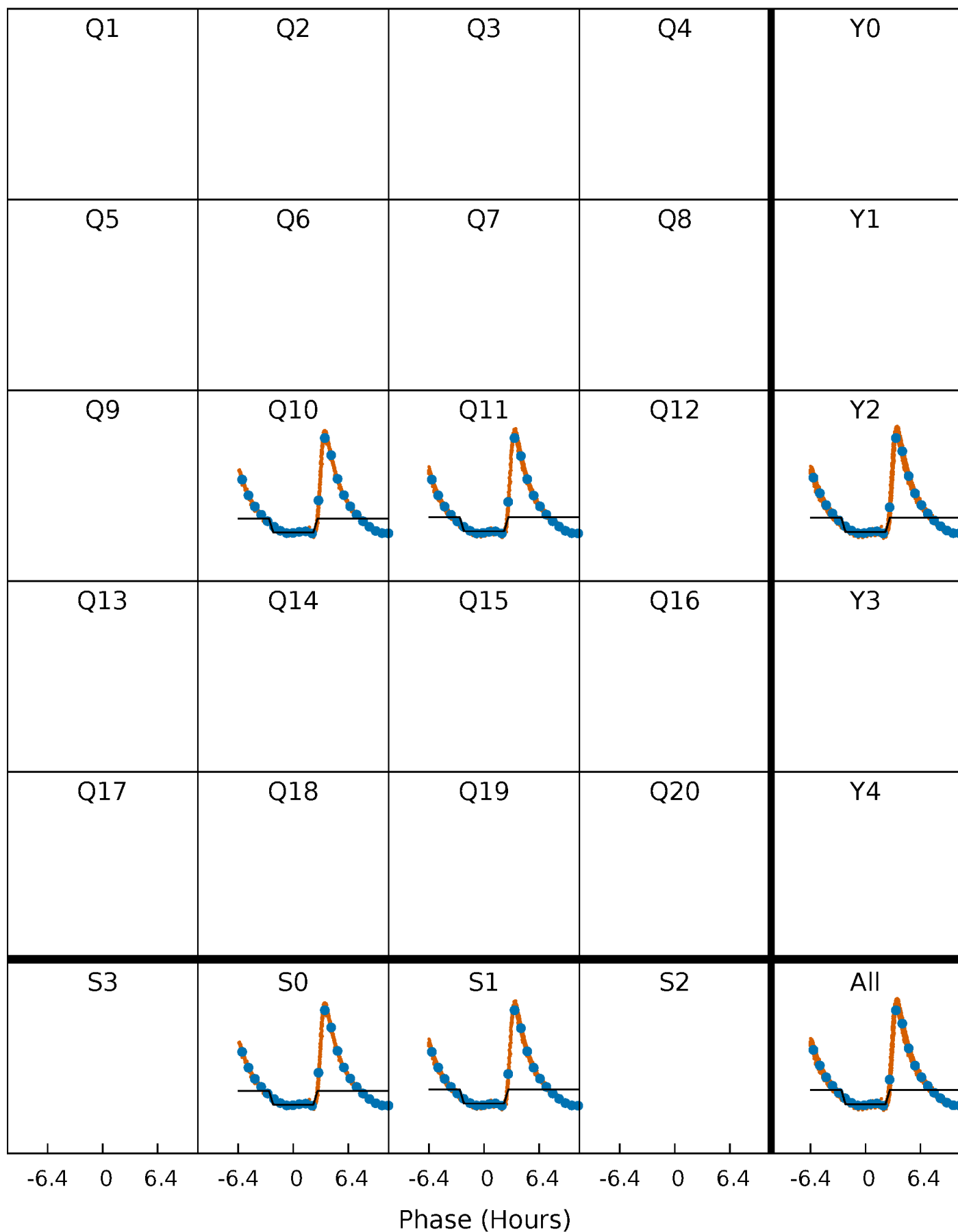
DV Quarter-Phased Transit Curves

TCE 008490808-02 P= 0.925637 Days $T_0=131.513277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

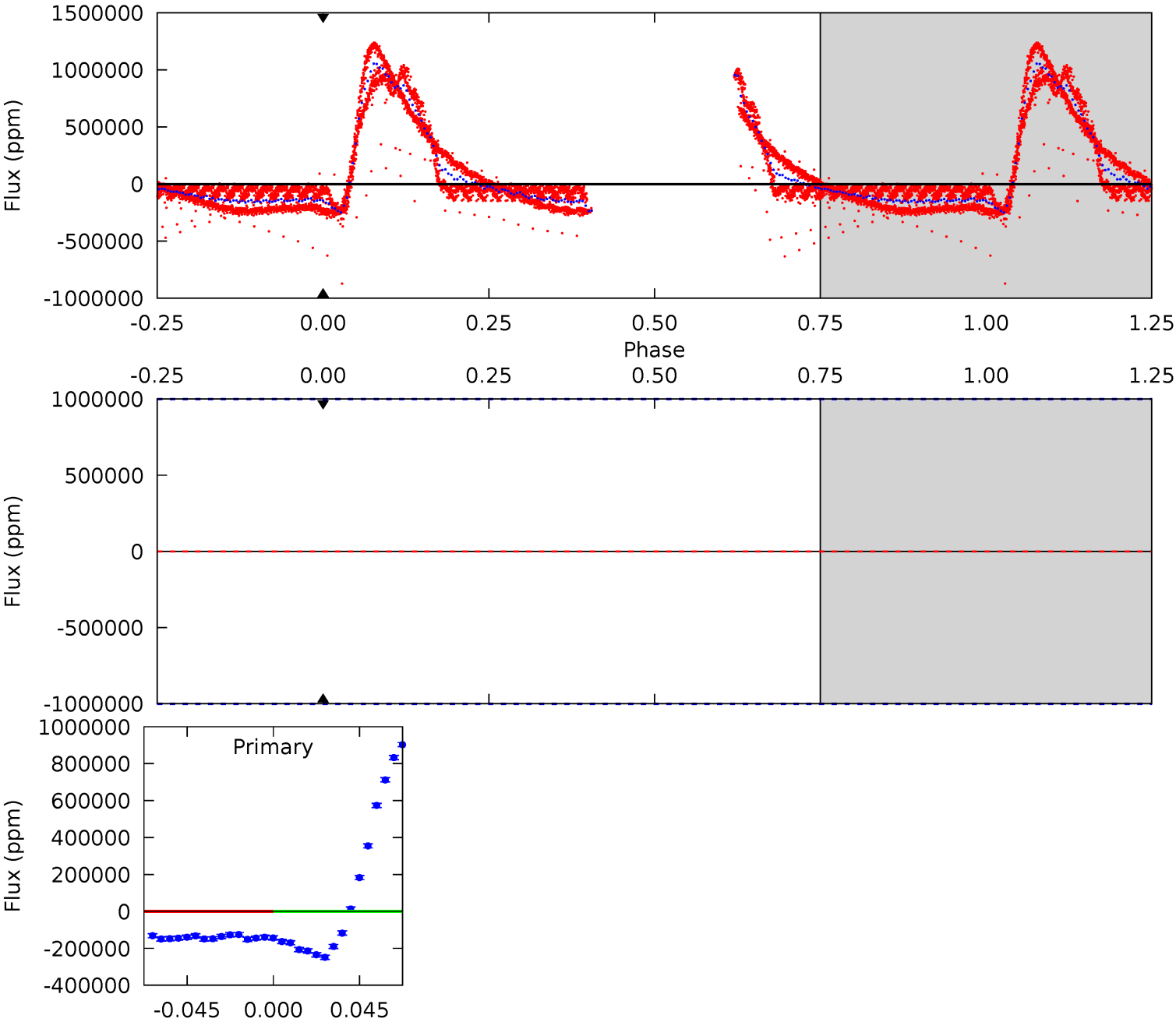
TCE 008490808-02 $P = 0.925637$ Days $T_0 = 132.356304$ (BKJD)



DV Model-Shift Uniqueness Test

008490808-02, P = 0.925637 Days, E = 131.513277 Days

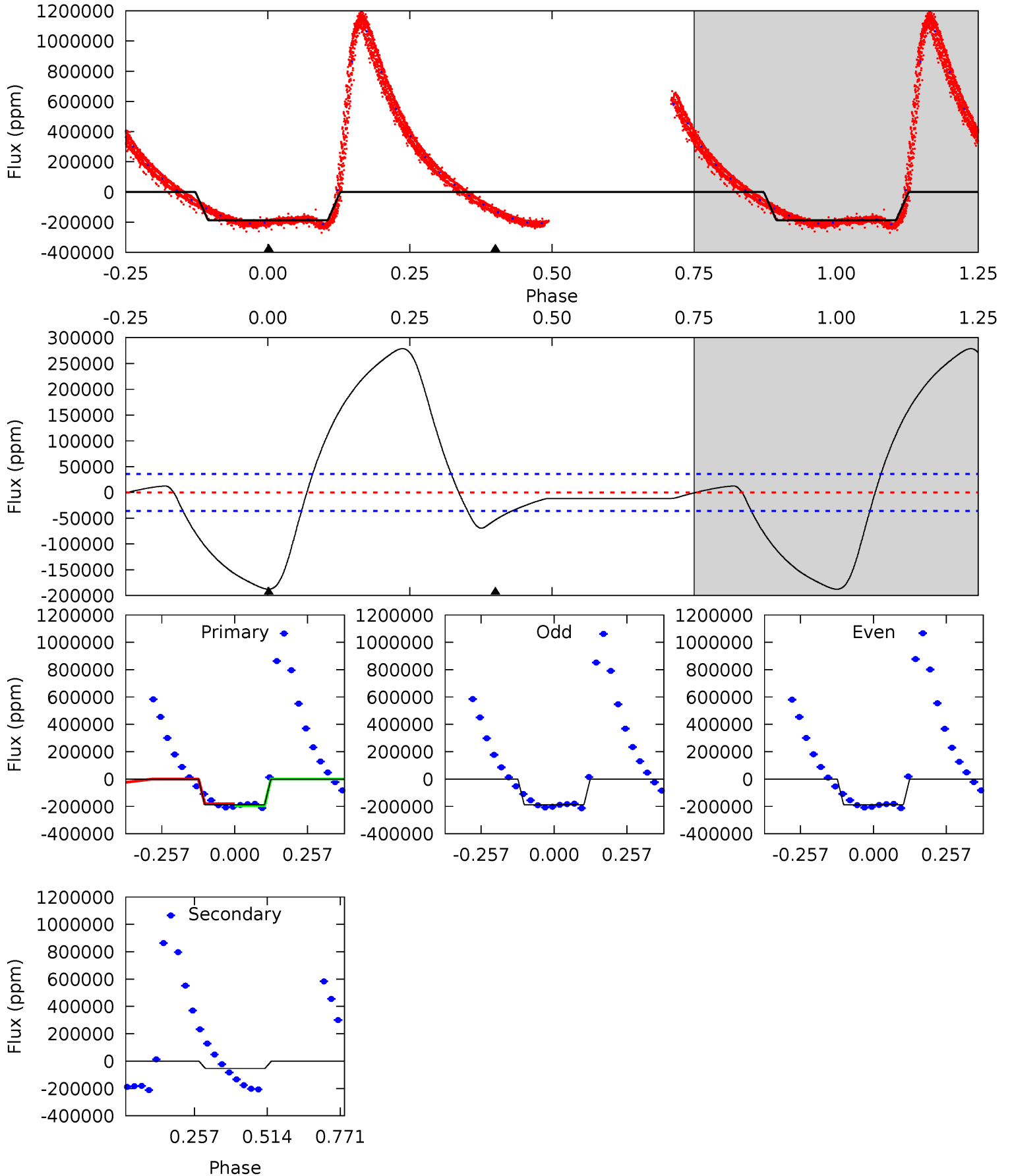
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008490808-02, P = 0.925637 Days, E = 132.356304 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	6.48	0	0	4.36	1.13	0.73	22.8	22.8	6.48	6.48	0.05	1.02	0.60	0.66



Stellar Parameters For KIC 008490808

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7884^{+216}_{-325}	$4.061^{+0.165}_{-0.149}$	$-0.220^{+0.200}_{-0.300}$	$1.986^{+0.479}_{-0.479}$	$1.656^{+0.208}_{-0.254}$	$0.298^{+0.277}_{-0.122}$
	+3%/-4%	+4%/-4%	+91%/-136%	+24%/-24%	+13%/-15%	+93%/-41%
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 008490808-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$33.84^{+22.26}_{-19.13}$	4575^{+307}_{-303}	-4498^{+18623}_{-10007}	$-0.297^{+27.977}_{-27.839}$
Alt.	-53315 ± 8229	$93.89^{+24.74}_{-22.82}$	4606^{+323}_{-309}	5404^{+907}_{-637}	$1.713^{+1.289}_{-0.681}$

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 $A_{obs} \gg 1.0$

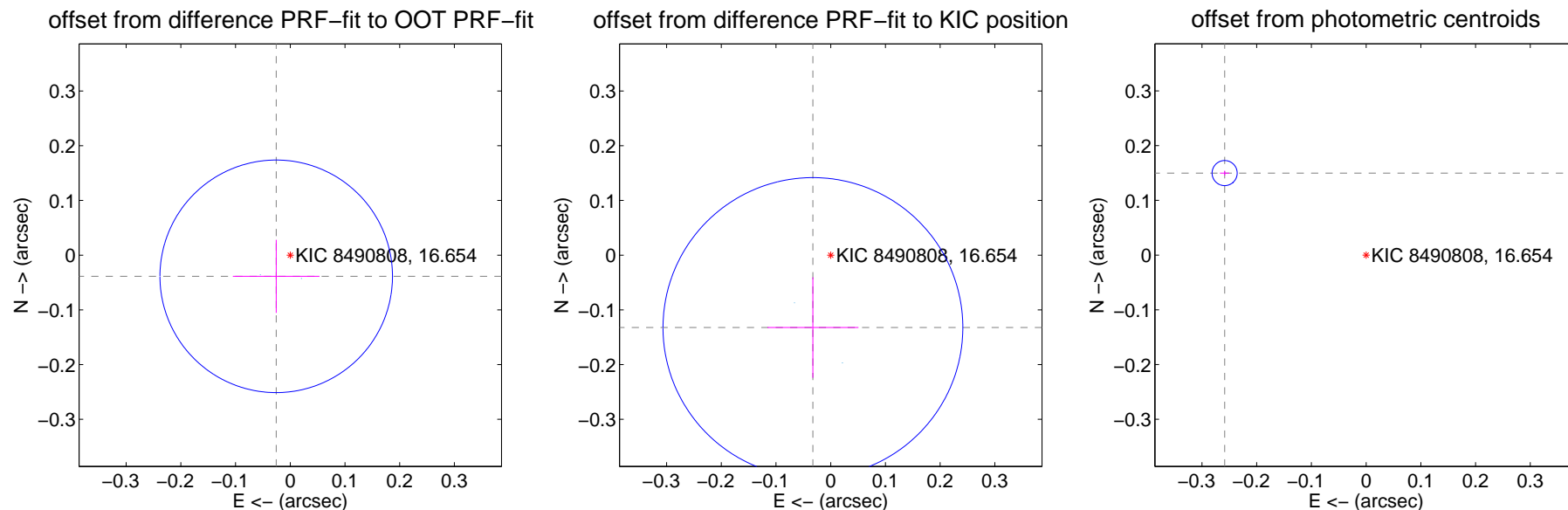
DV Centroid Data

Supplemental centroid analysis for 008490808-02. Kepler magnitude: 16.65. 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 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.071	0.66	0.026 ± 0.079	-0.039 ± 0.067
PRF-fit source offset from KIC position	0.136 ± 0.091	1.49	0.033 ± 0.083	-0.132 ± 0.092
photometric centroid source offset	0.30 ± 0.01	39.10	0.26 ± 0.01	0.15 ± 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.

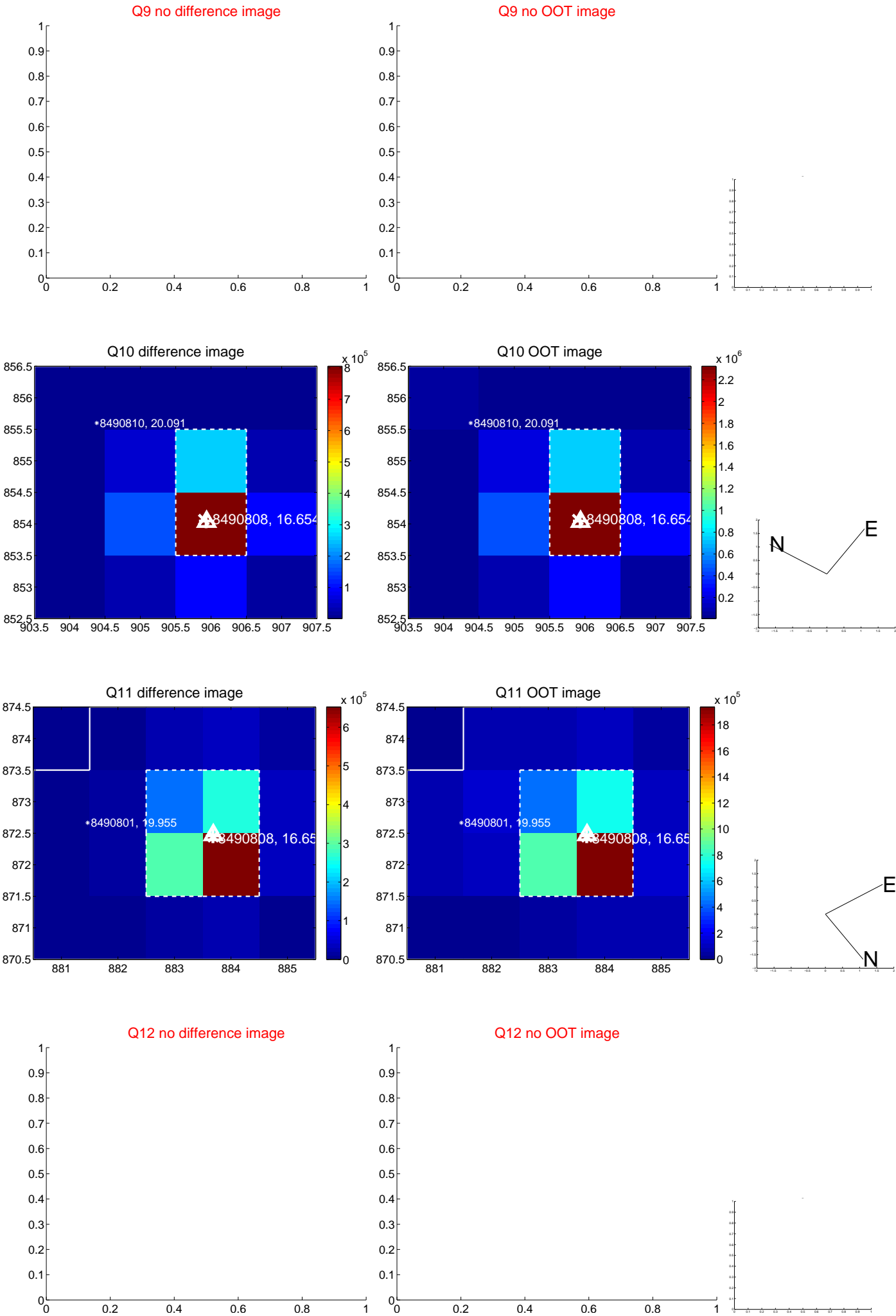
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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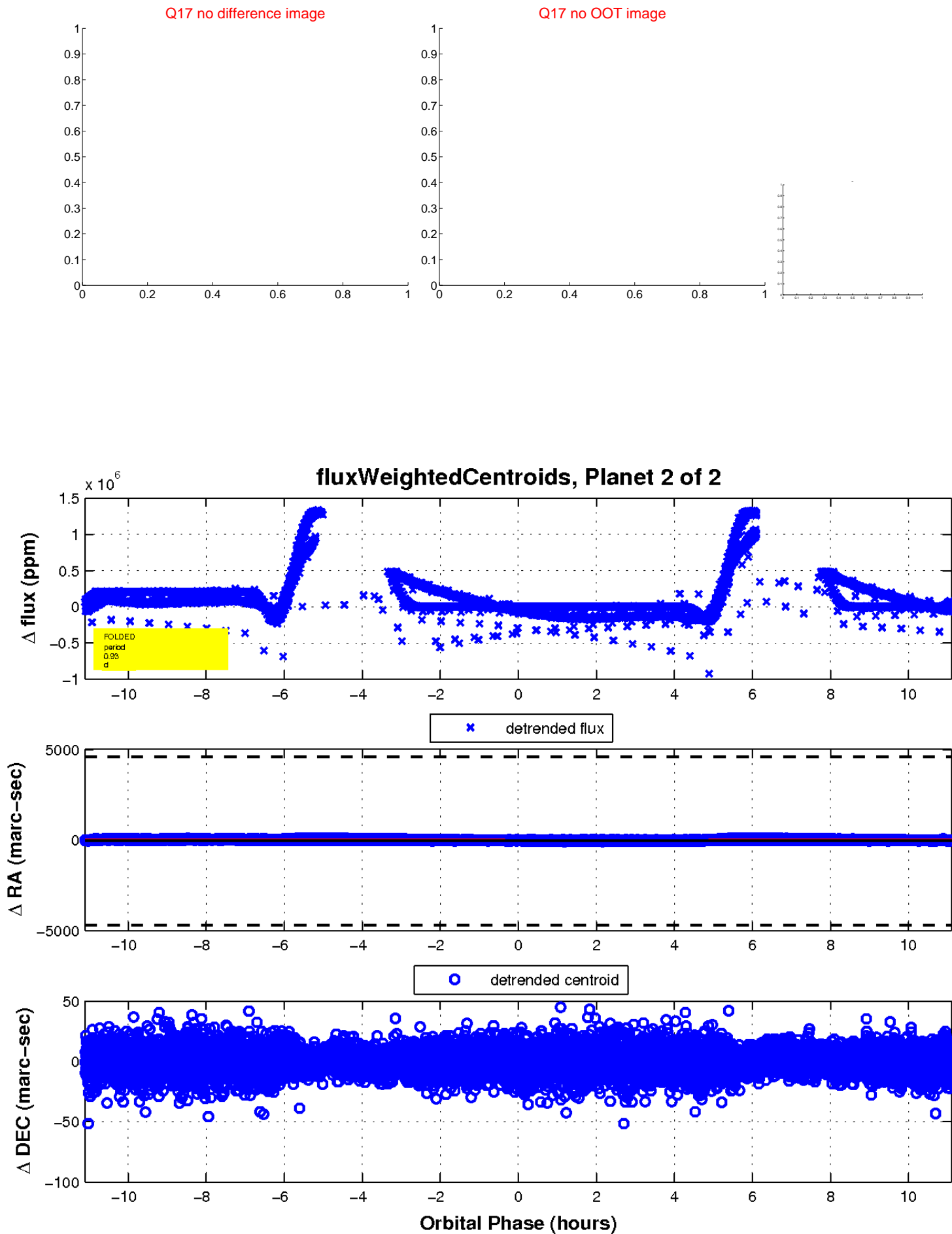
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

