

KIC 009658012

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})
009658012-01	OBS	No	0.533202	131.568036	2122.3	3.727	279.6	2.2	1.54	6603	7.17	23347.92
009658012-02	OBS	No	0.533201	131.857869	1252.4	1.500	16.0	-1.0	1.54	6603	5.52	23347.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009658012-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL LPP_DV LPP_ALT
009658012-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA SWEET_NTL LPP_DV NO_FITS 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.

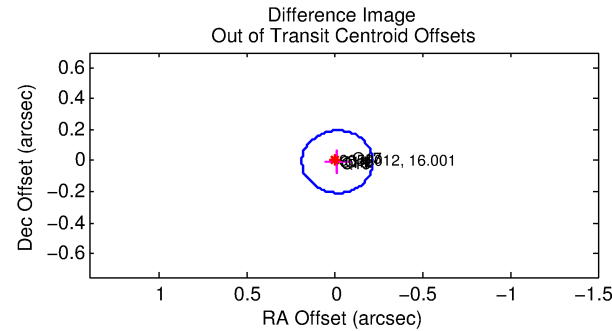
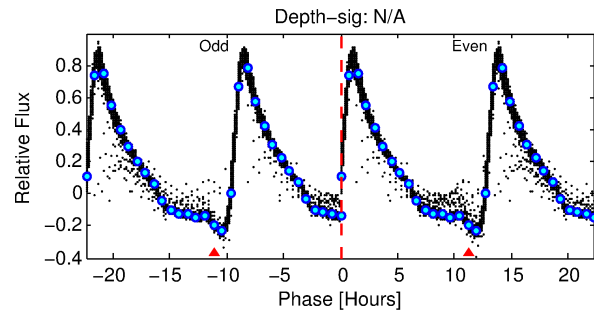
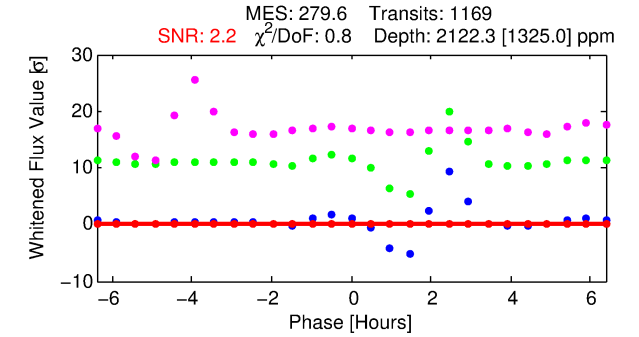
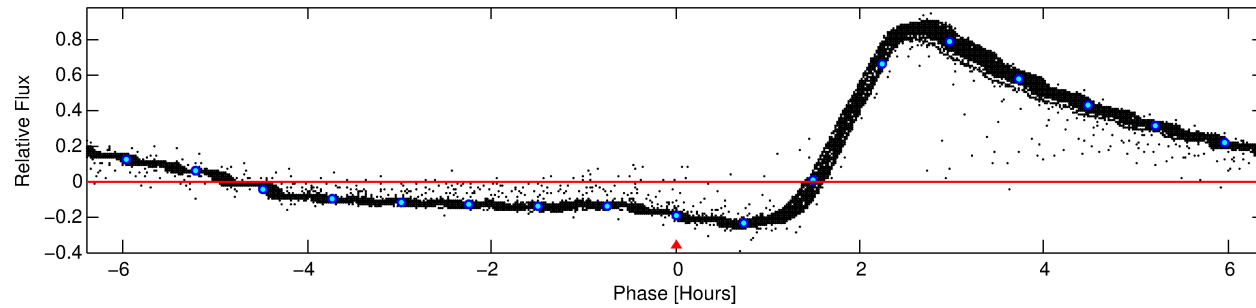
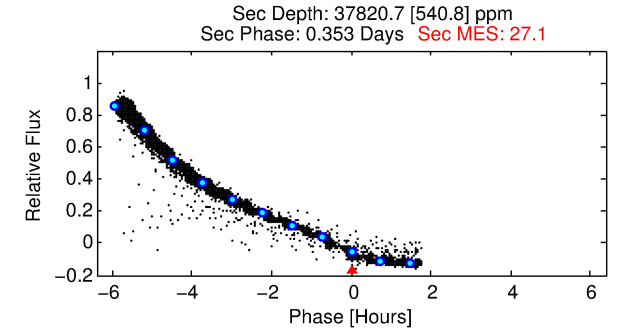
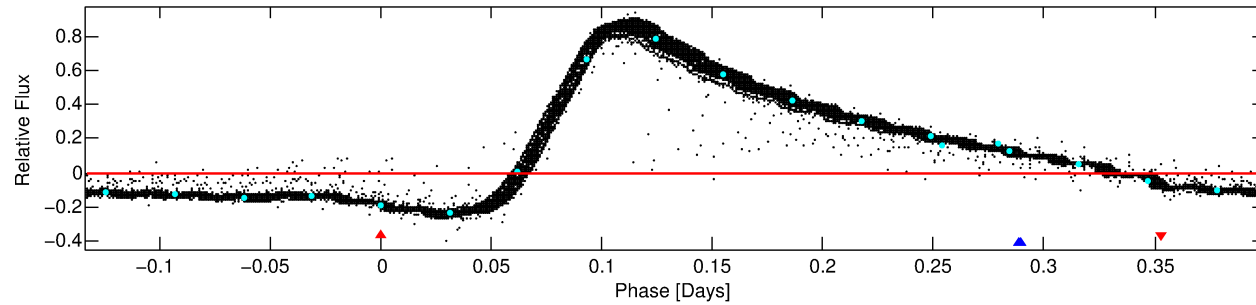
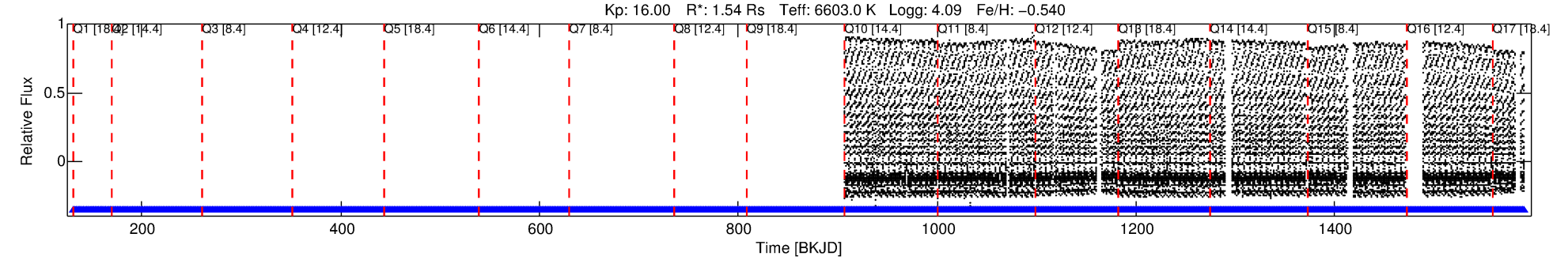
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009658012-01

No Significant Match Found

DV One-Page Summary

KIC: 9658012 Candidate: 1 of 2 Period: 0.533 d



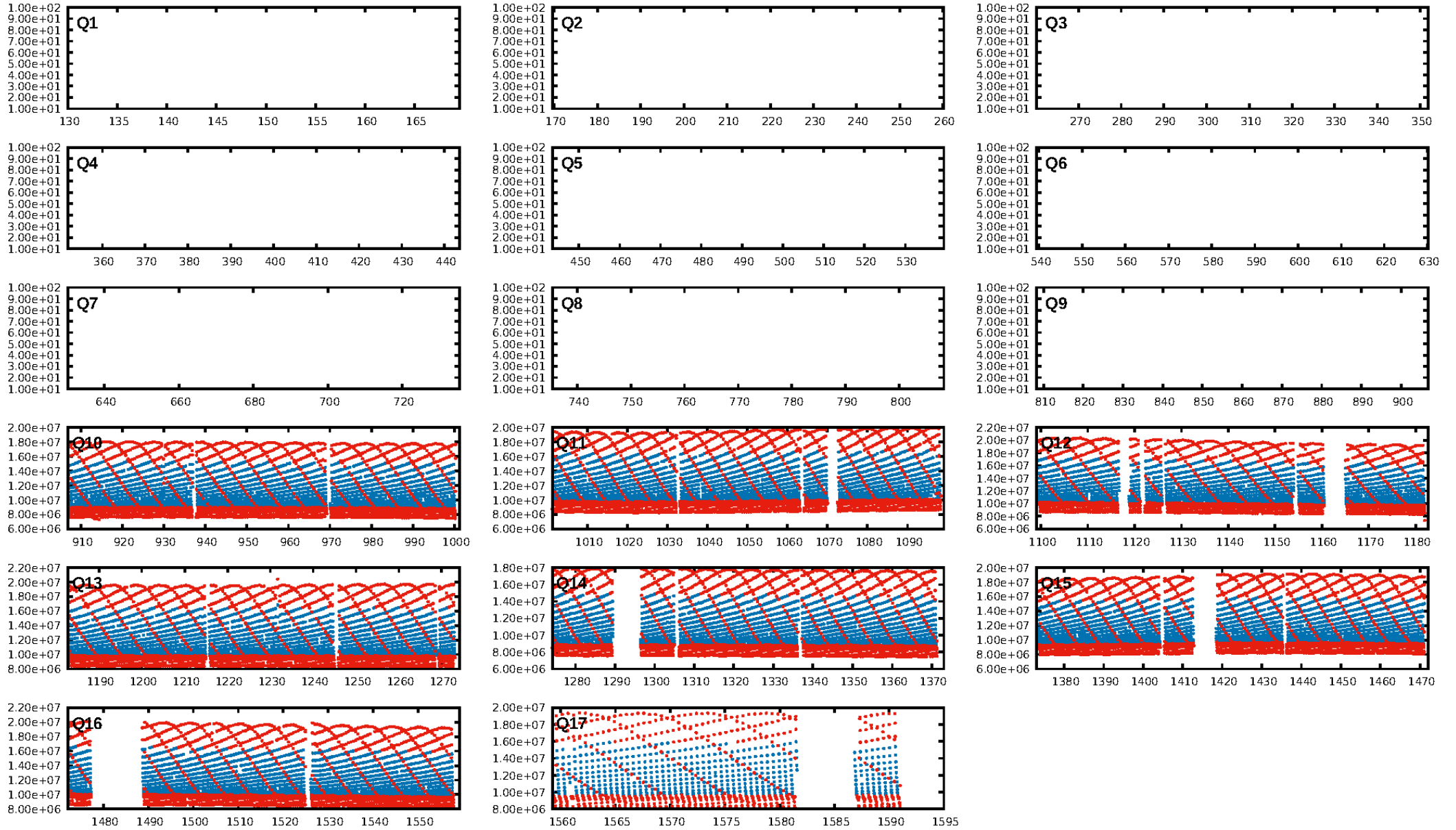
DV Fit Results:

Period = 0.53320 [0.00004] d
Epoch = 131.5680 [0.0061] BKJD
Rp/R* = 0.0426 [0.0343]
a/R* = 1.31 [1.89]
b = 0.11 [32.83]
Seff = 23347.92 [12015.64]
Teff = 3152 [406] K
Rp = 7.17 [6.18] Re
a = 0.0132 [0.0040] AU
Ag = 70.34 [118.51] [0.59σ]
Teffp = 14113 [5706] K [1.92σ]

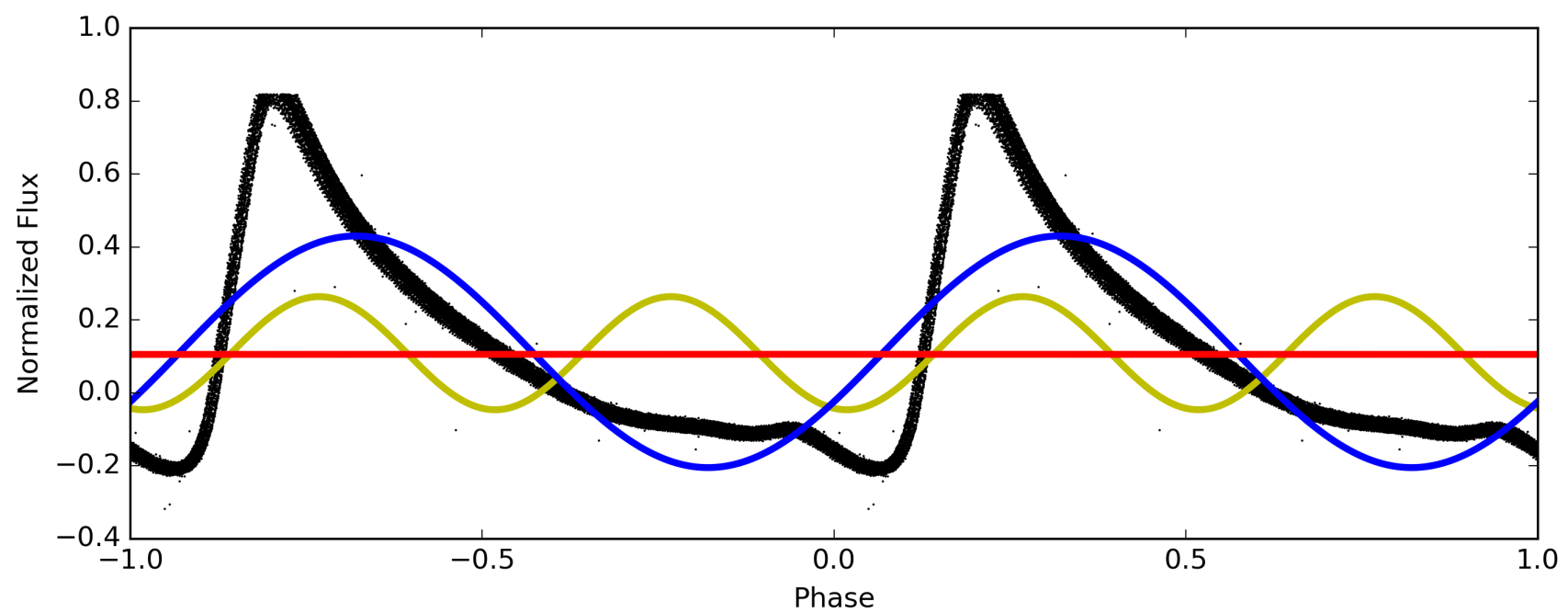
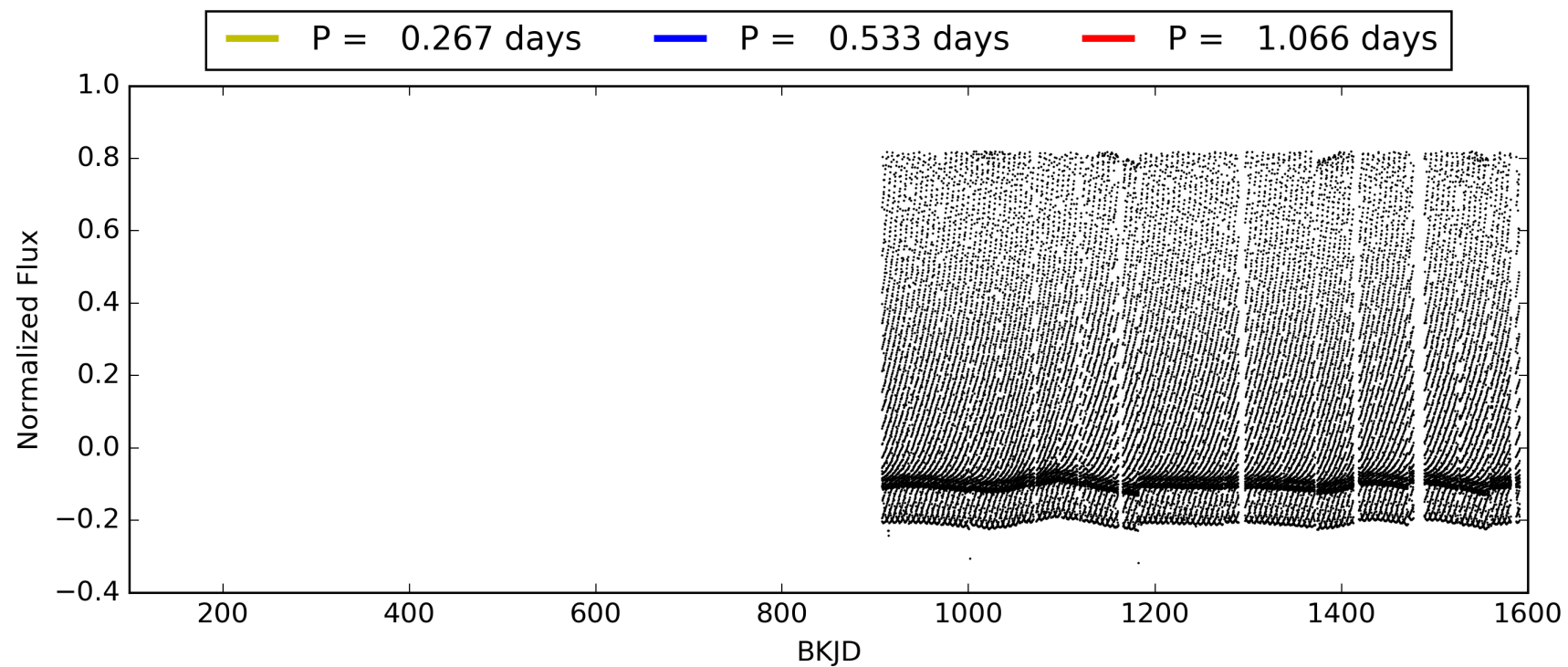
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1119/1119]
GhostDiagnostic-chr: 1.194
Centroid-sig: 0.0%
Centroid-so: 0.256 arcsec [4.51σ]
OotOffset-rm: 0.016 arcsec [0.24σ]
KicOffset-rm: 0.040 arcsec [0.57σ]
OotOffset-st: 2/2/2 [8]
KicOffset-st: 2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 009658012-01, PDC Light Curves

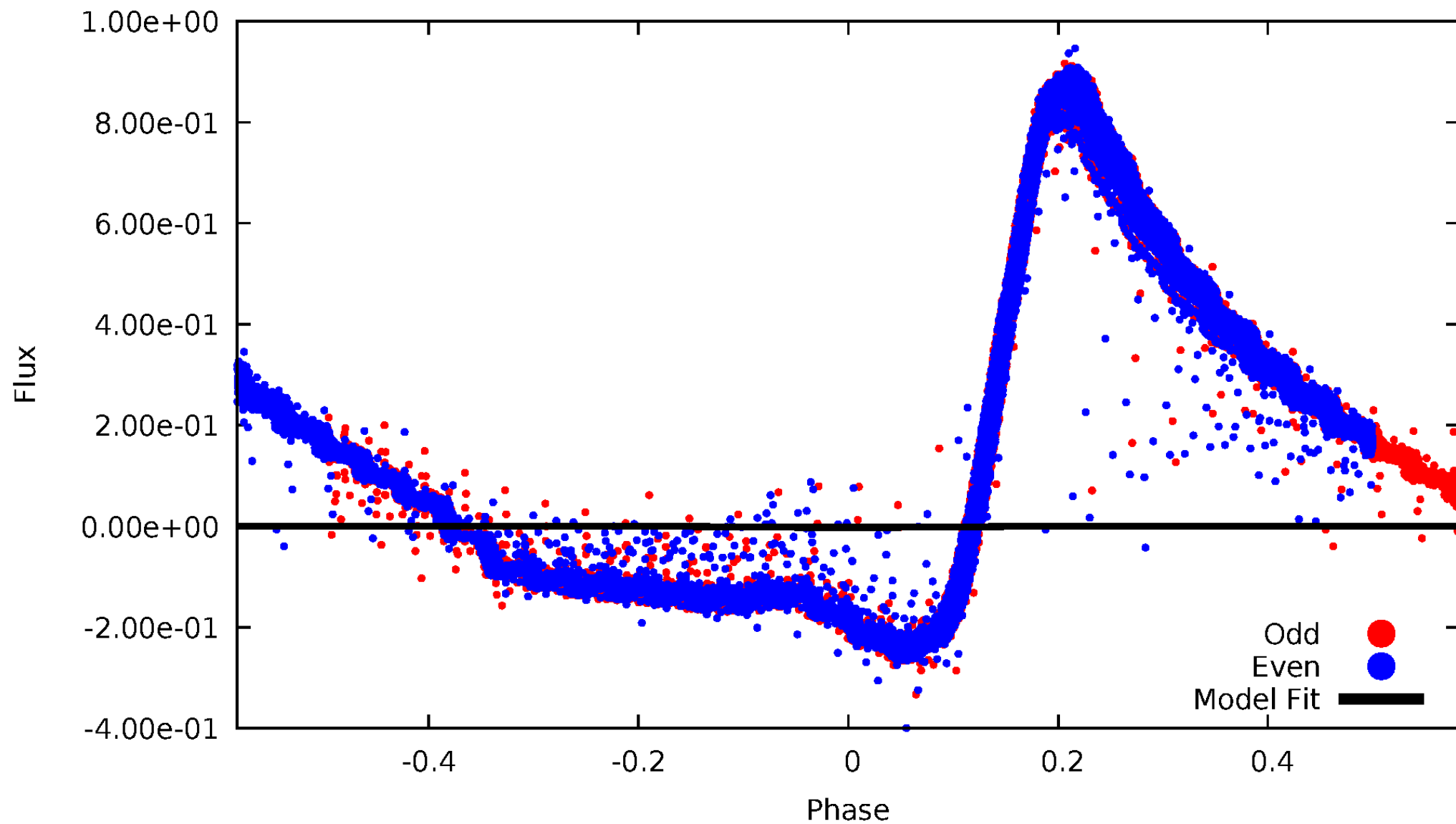


TCE 009658012-01



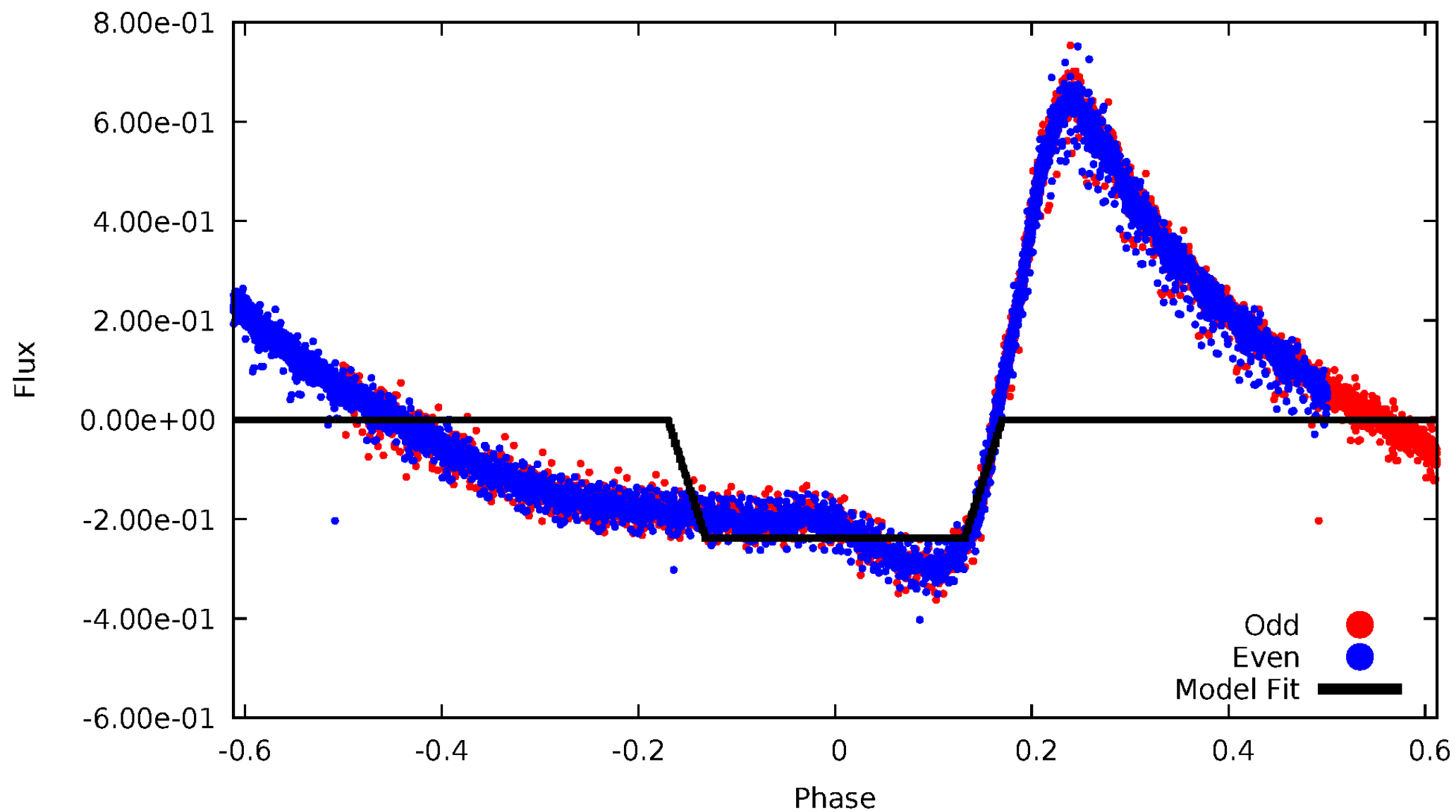
DV Odd/Even

TCE 009658012-01



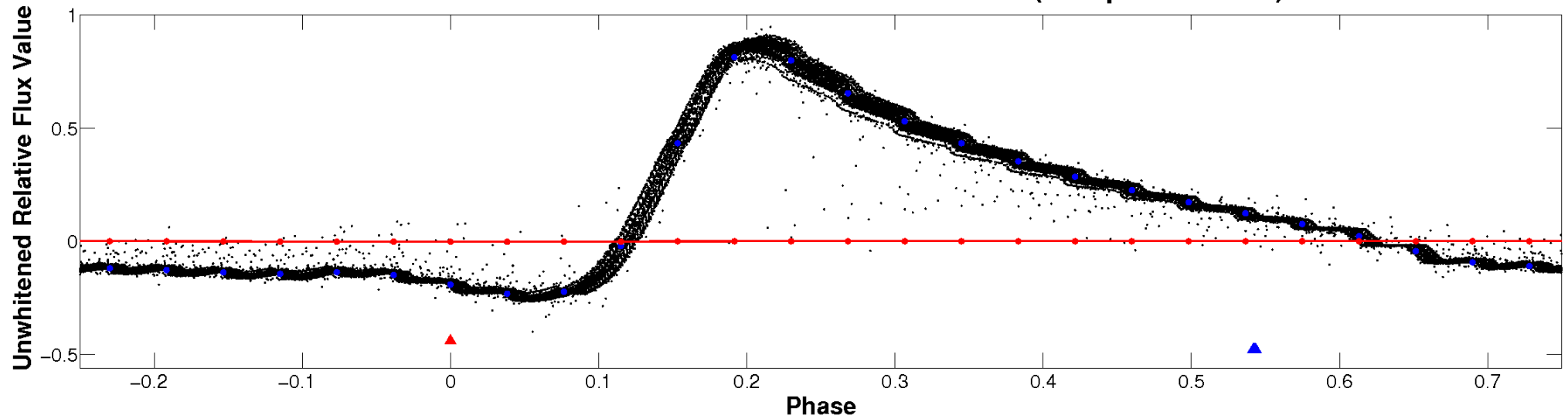
ALT Odd/Even

TCE 009658012-01

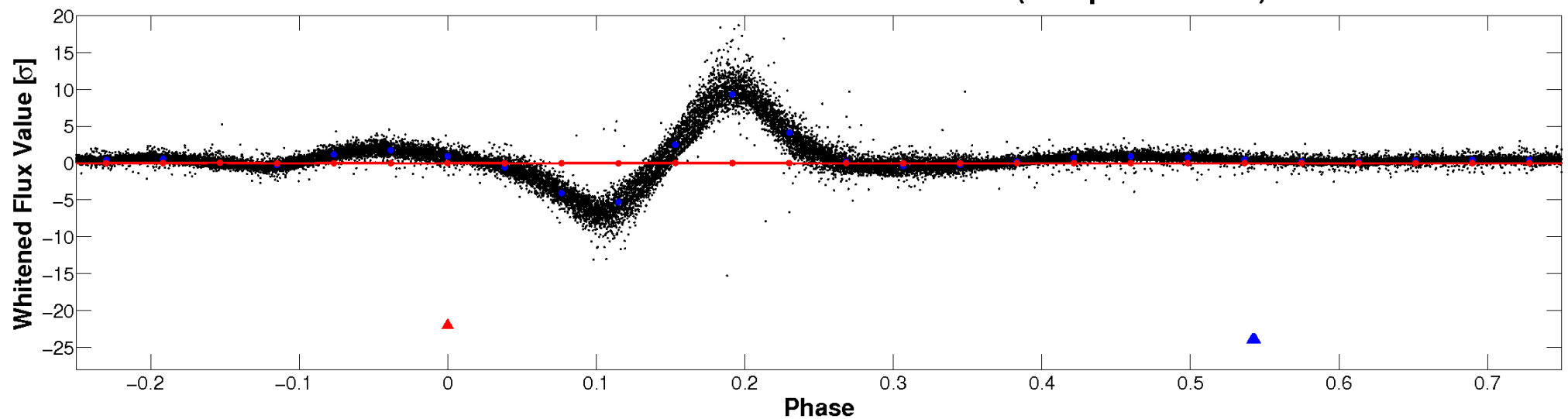


Non-Whitened Vs. Whitened Light Curve

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

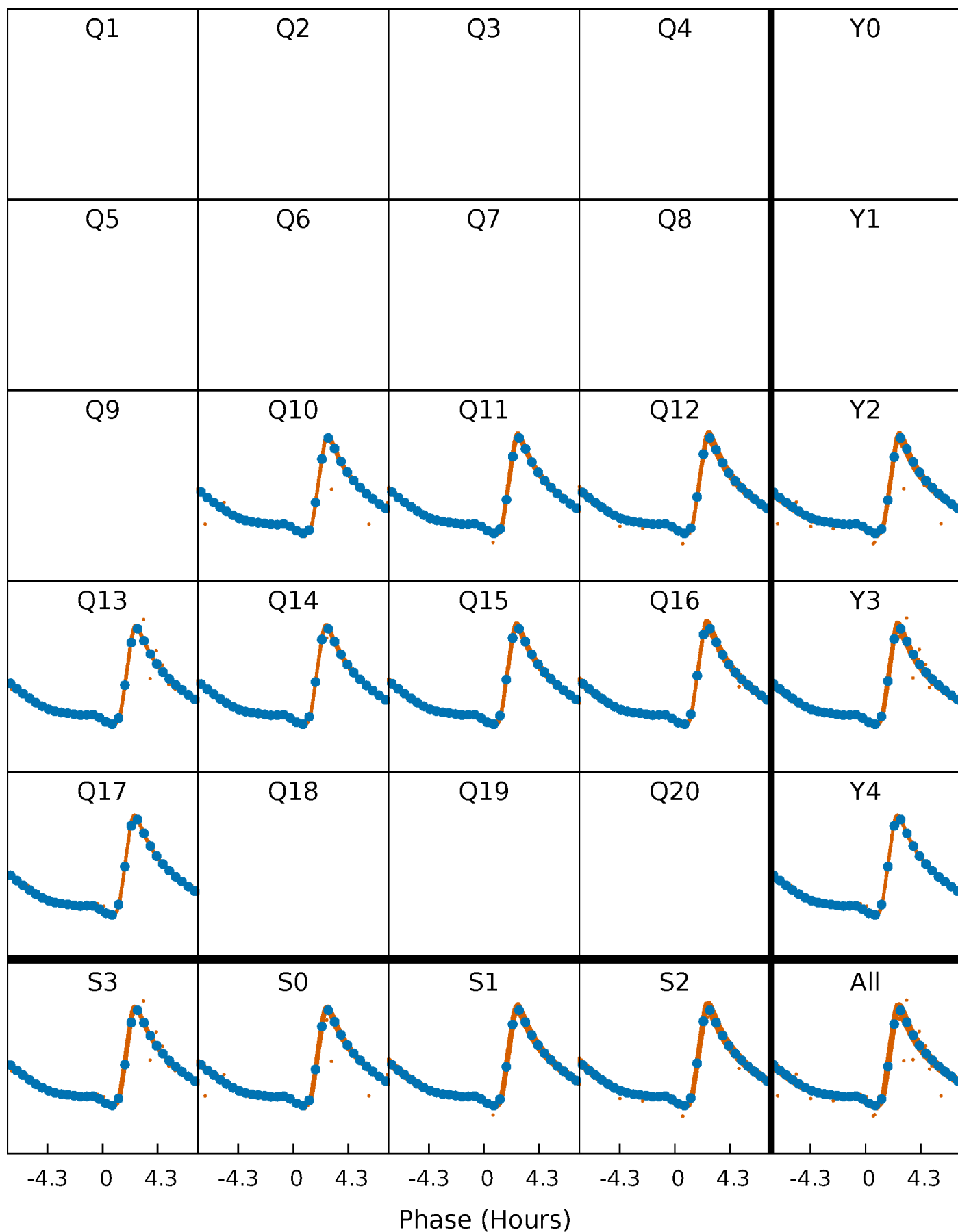


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



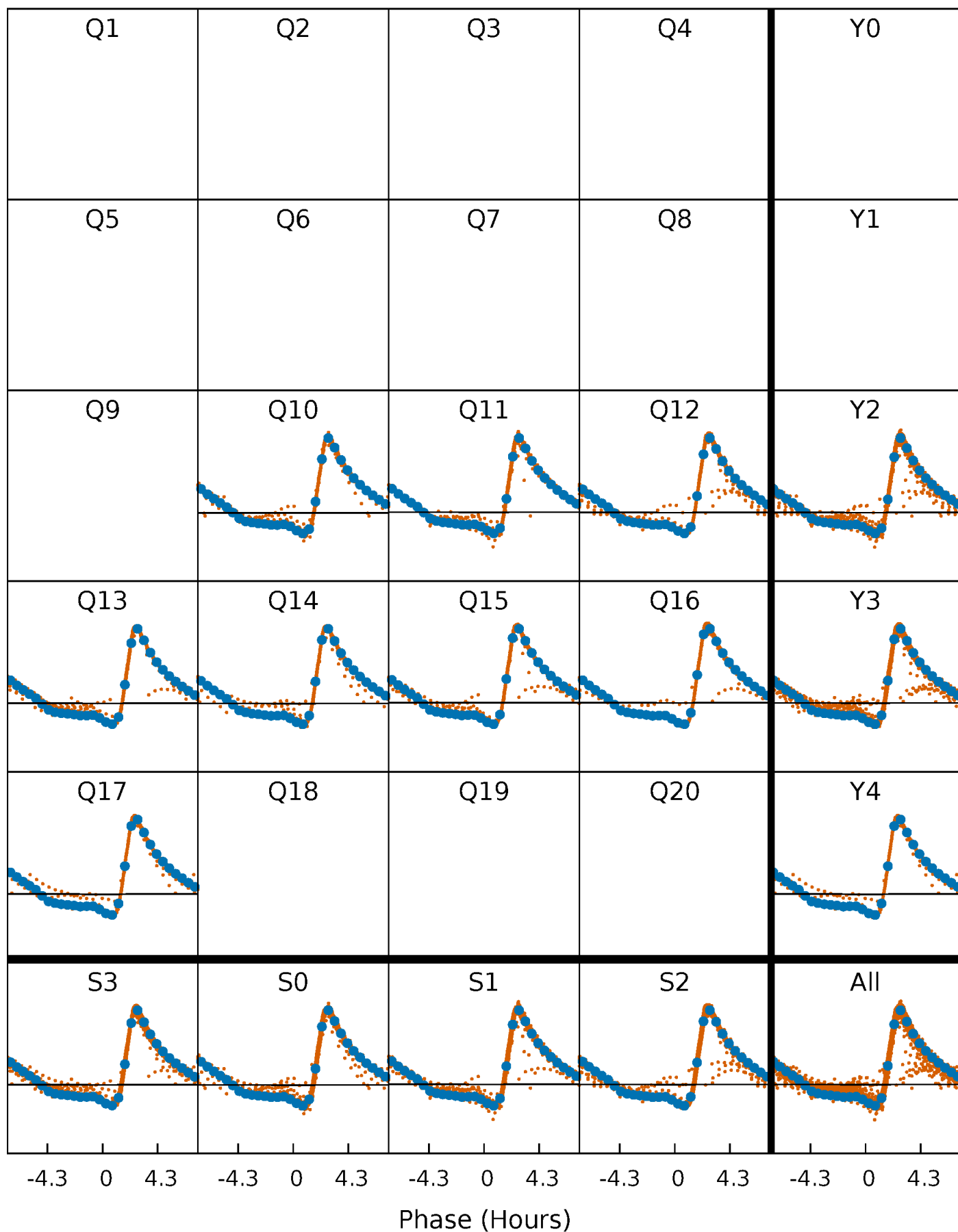
PDC Quarter-Phased Transit Curves

TCE 009658012-01 P= 0.533202 Days $T_0=131.568036$ (BKJD)



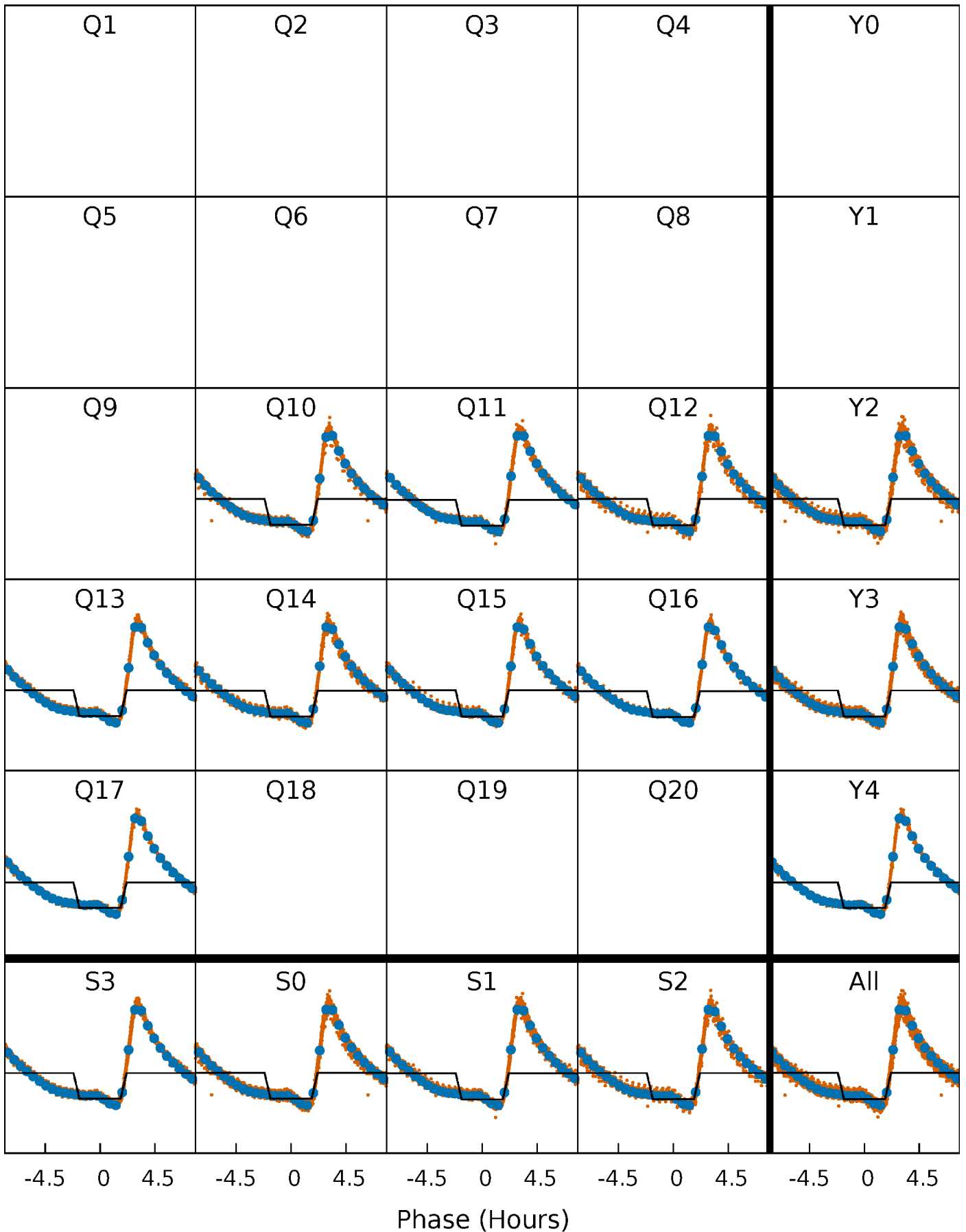
DV Quarter-Phased Transit Curves

TCE 009658012-01 P= 0.533202 Days $T_0=131.568036$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

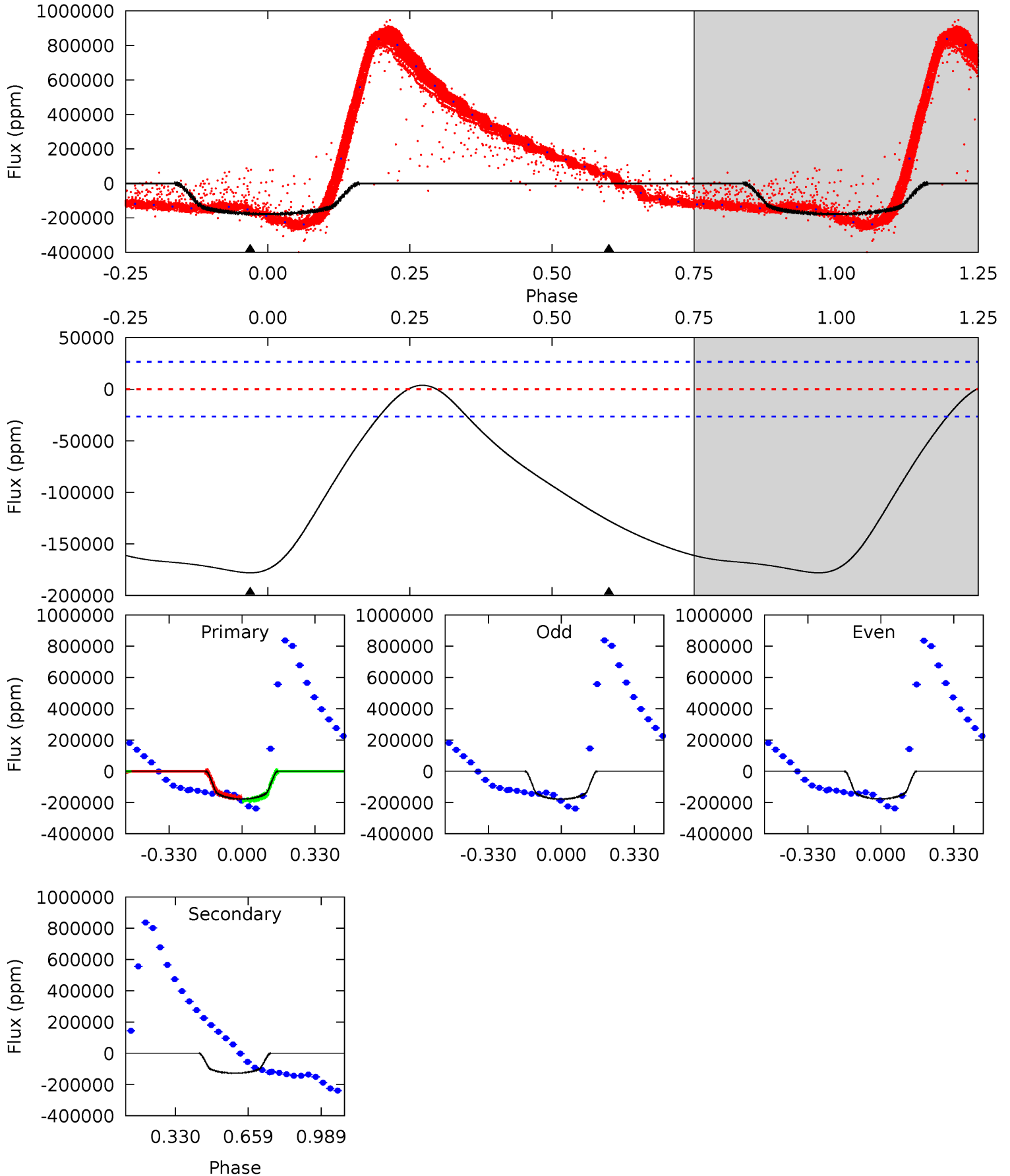
TCE 009658012-01 P= 0.533197 Days $T_0=131.559761$ (BKJD)



DV Model-Shift Uniqueness Test

009658012-01, P = 0.533202 Days, E = 131.568036 Days

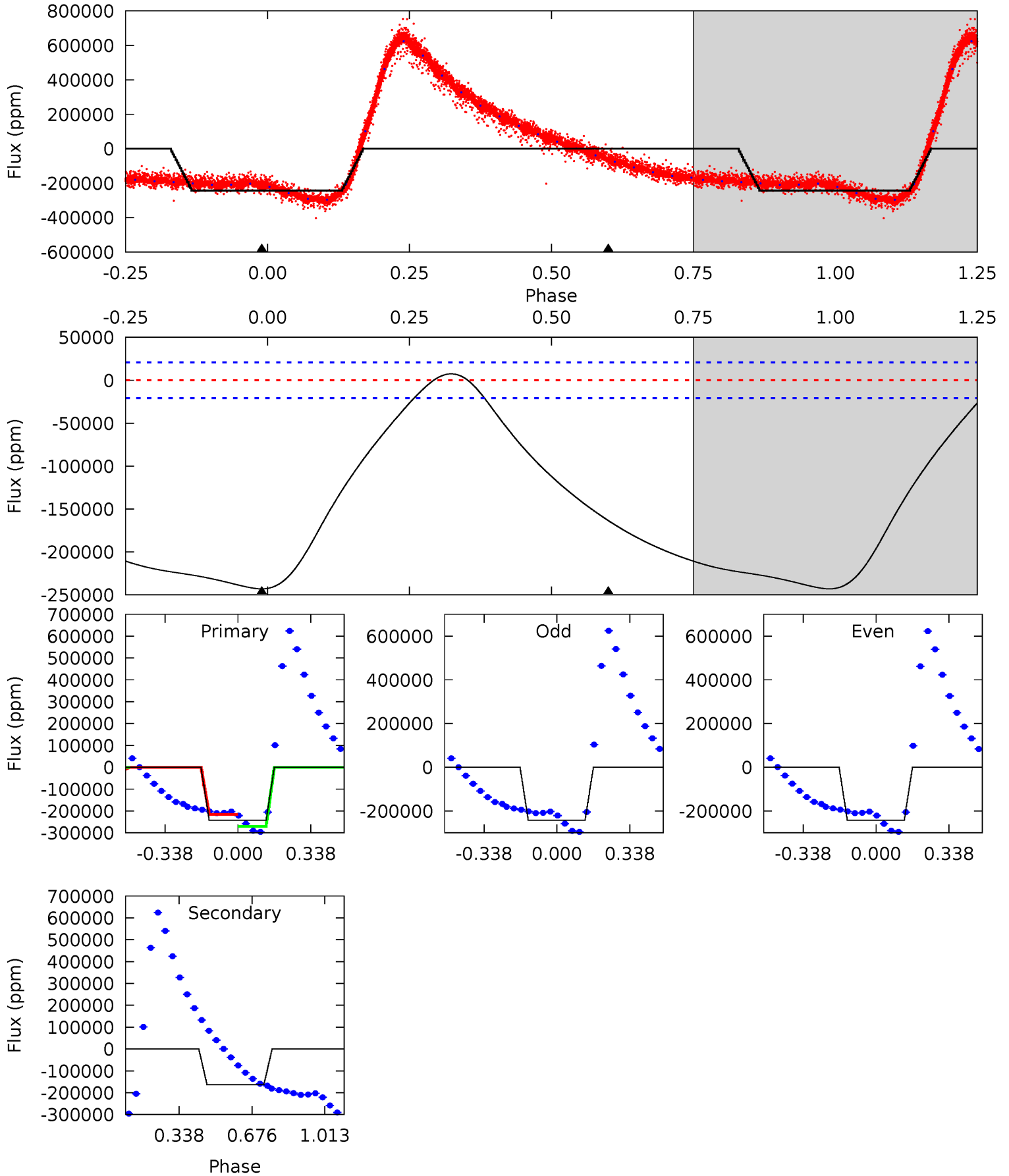
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	20.7	0	0	4.31	0.97	0.94	28.9	28.9	20.7	20.7	0.12	0.99	0.02	1.89



Alt Model-Shift Uniqueness Test

009658012-01, P = 0.533197 Days, E = 131.559761 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	33.8	0	0	4.30	0.96	2.58	50.3	50.3	33.8	33.8	0.00	1.00	0.03	6.18



Stellar Parameters For KIC 009658012

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6603^{+189}_{-237}	$4.092^{+0.293}_{-0.158}$	$-0.540^{+0.300}_{-0.300}$	$1.543^{+0.431}_{-0.474}$	$1.071^{+0.164}_{-0.135}$	$0.411^{+0.765}_{-0.176}$
	+3%/-4%	+7%/-4%	+56%/-56%	+28%/-31%	+15%/-13%	+186%/-43%
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 009658012-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-127312 ± 6162	$7.68^{+6.17}_{-4.23}$	4340^{+337}_{-387}	$45692^{+136090}_{-23273}$	235^{+972}_{-162}
Alt.	-163400 ± 4829	$79.50^{+16.04}_{-14.31}$	4331^{+366}_{-421}	6085^{+317}_{-297}	$2.954^{+1.423}_{-0.852}$

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 $A_{obs} \gg 1.0$

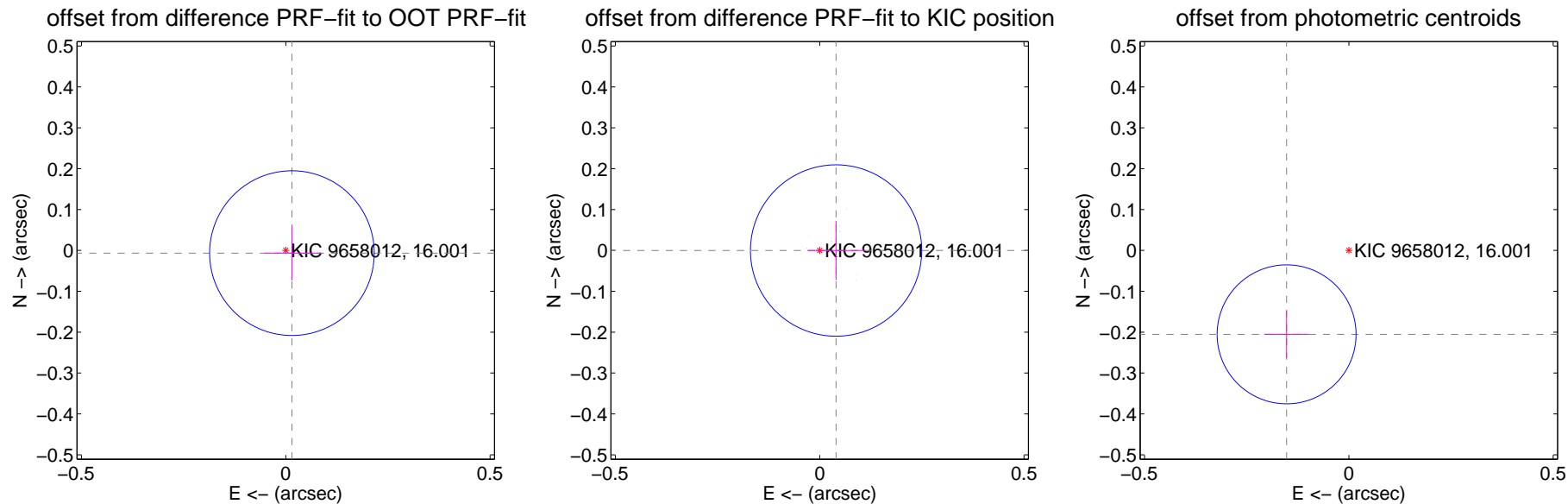
DV Centroid Data

Supplemental centroid analysis for 009658012-01. Kepler magnitude: 16.00. Transit SNR 2.17

There are 8 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	0.016 ± 0.067	0.24	-0.015 ± 0.067	-0.007 ± 0.067
PRF-fit source offset from KIC position	0.040 ± 0.070	0.57	-0.040 ± 0.070	-0.000 ± 0.072
photometric centroid source offset	0.26 ± 0.06	4.51	0.15 ± 0.05	-0.21 ± 0.06



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.

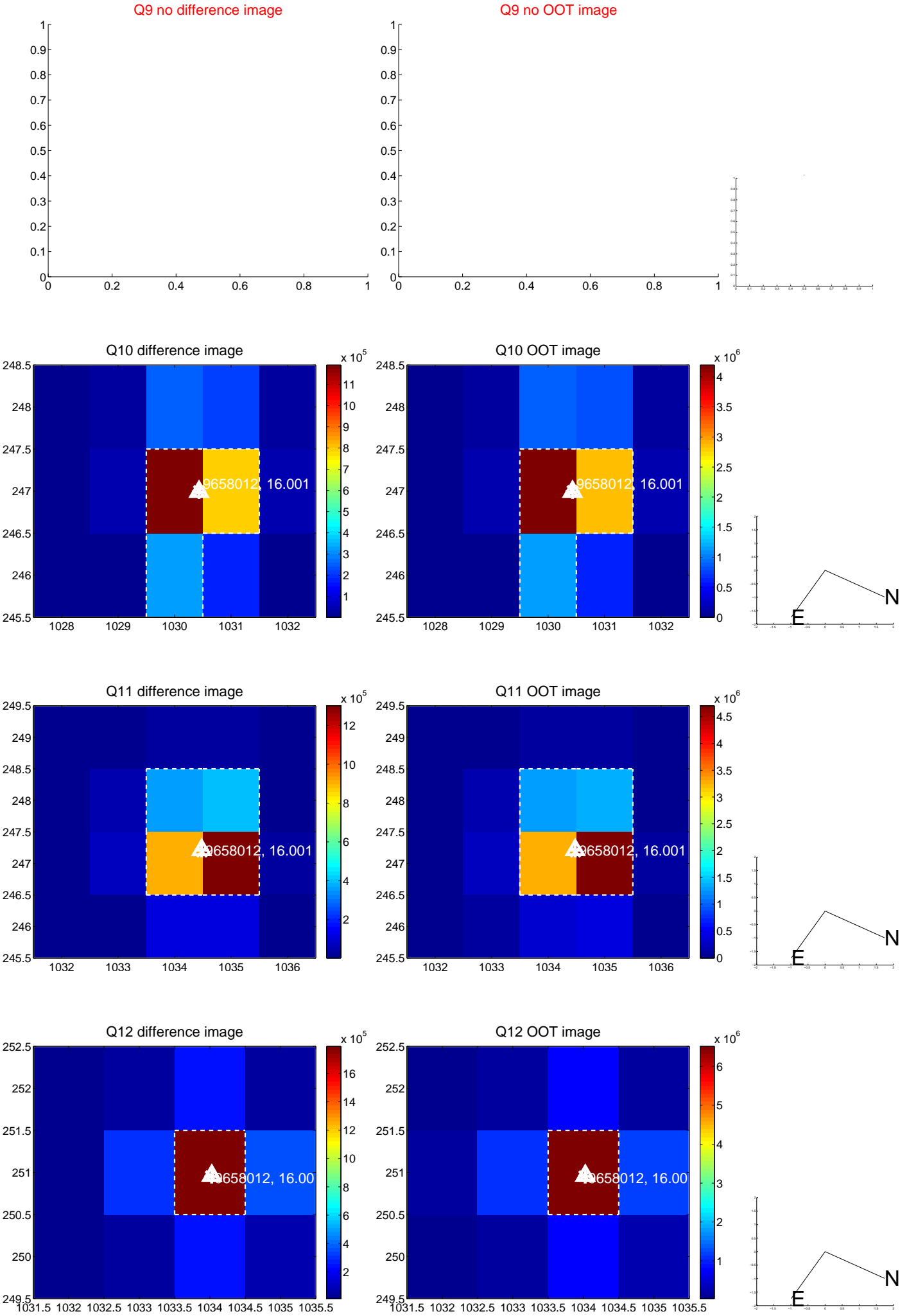
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



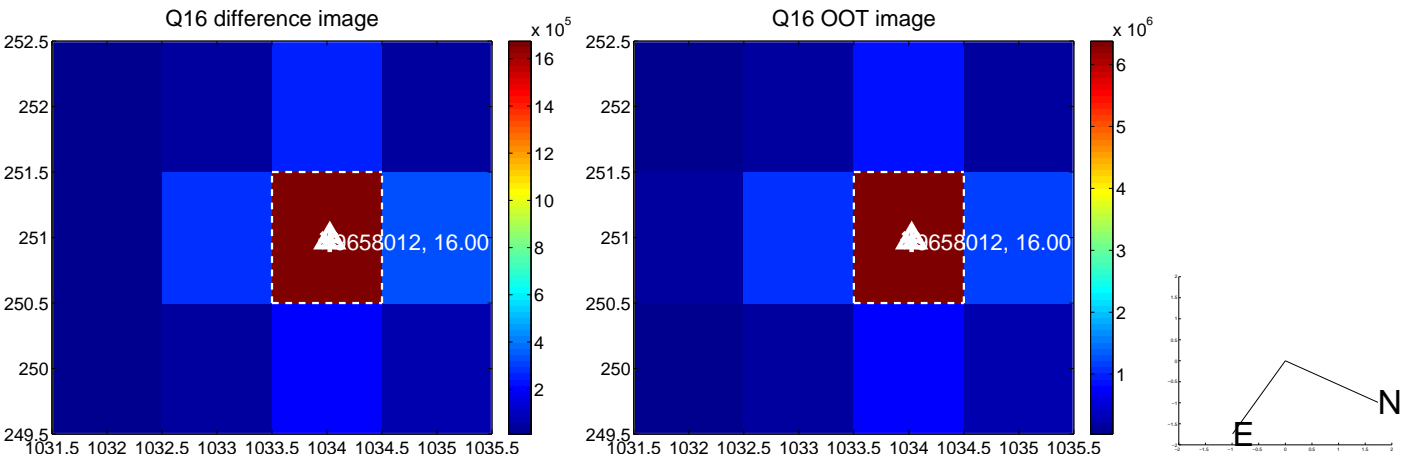
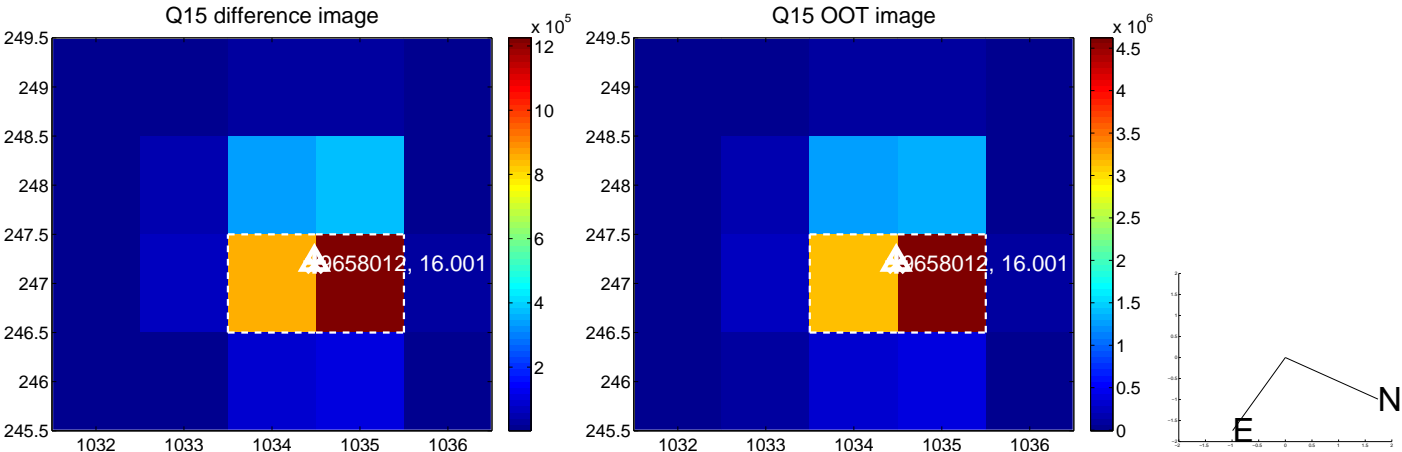
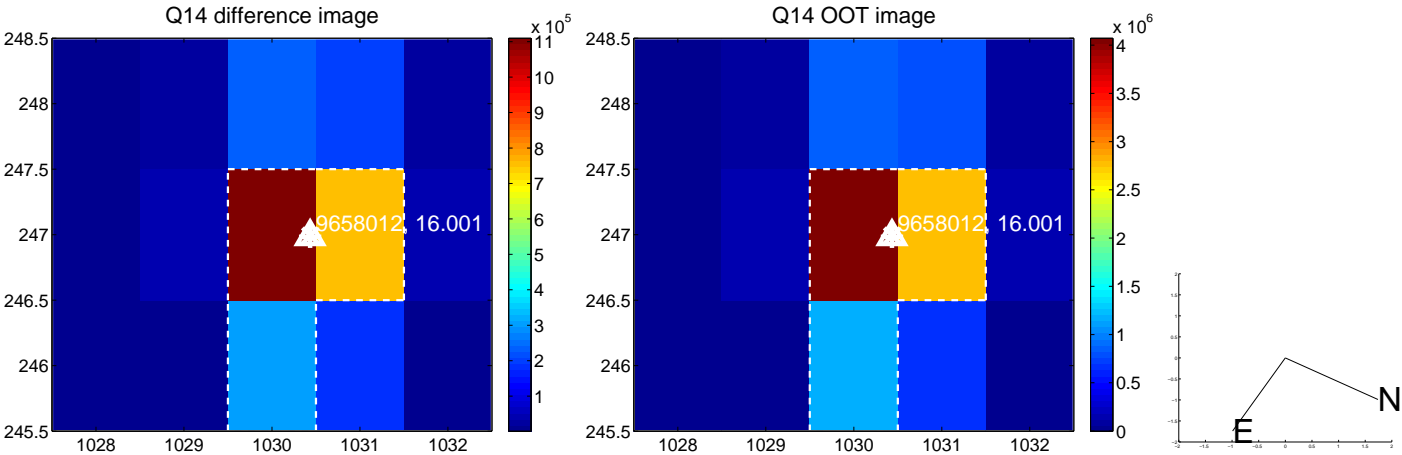
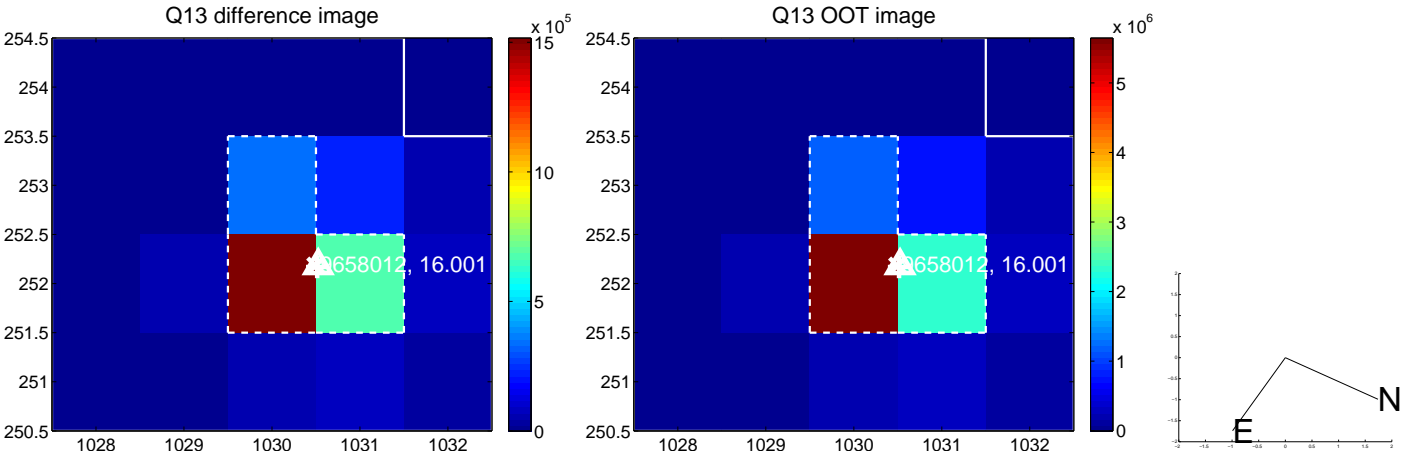
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



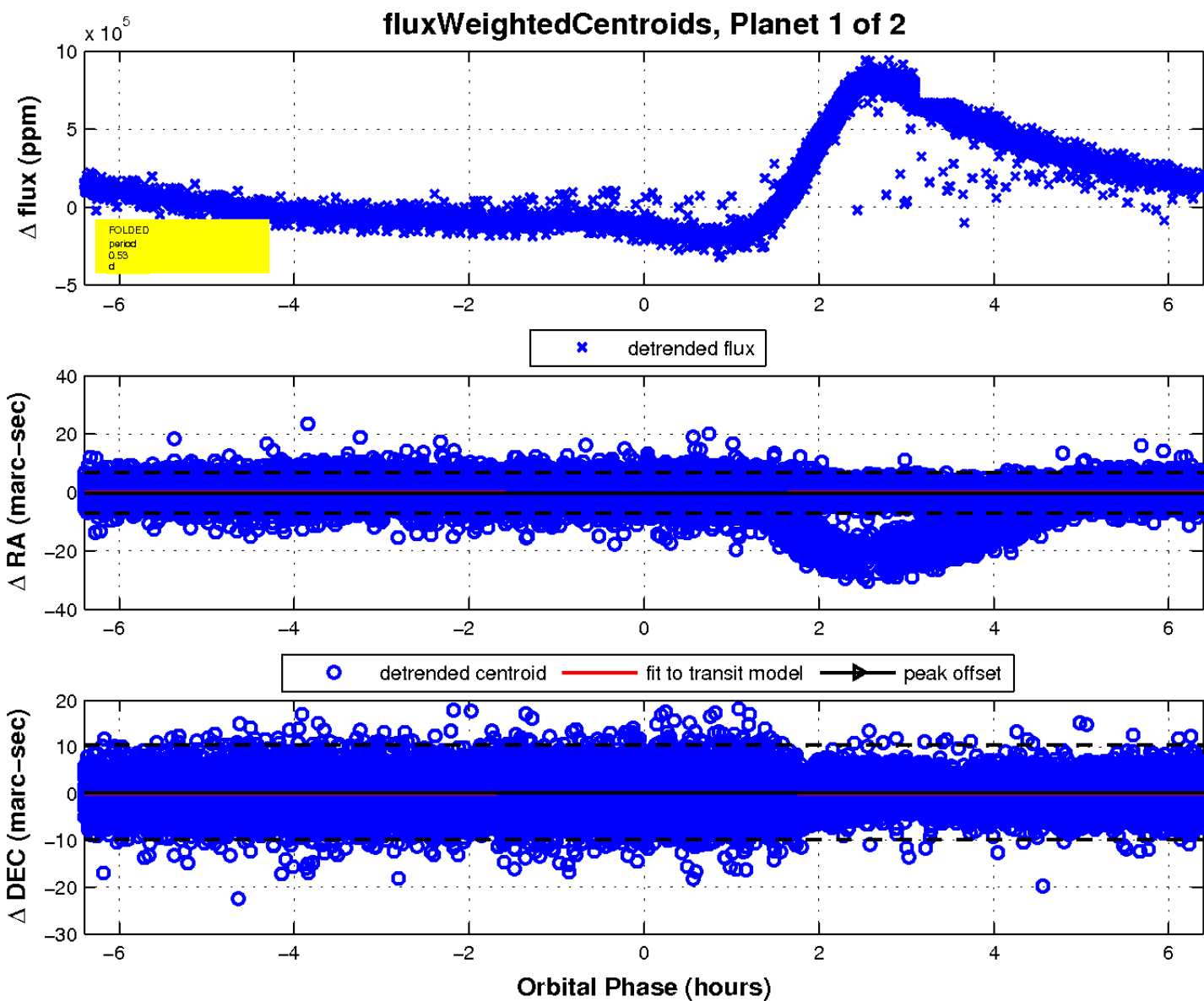
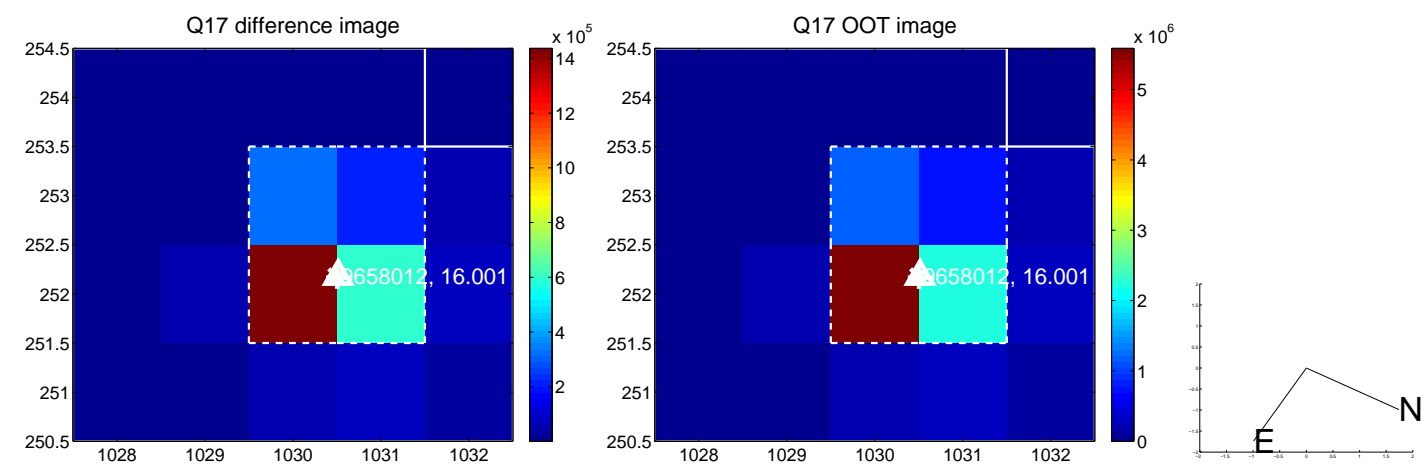
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



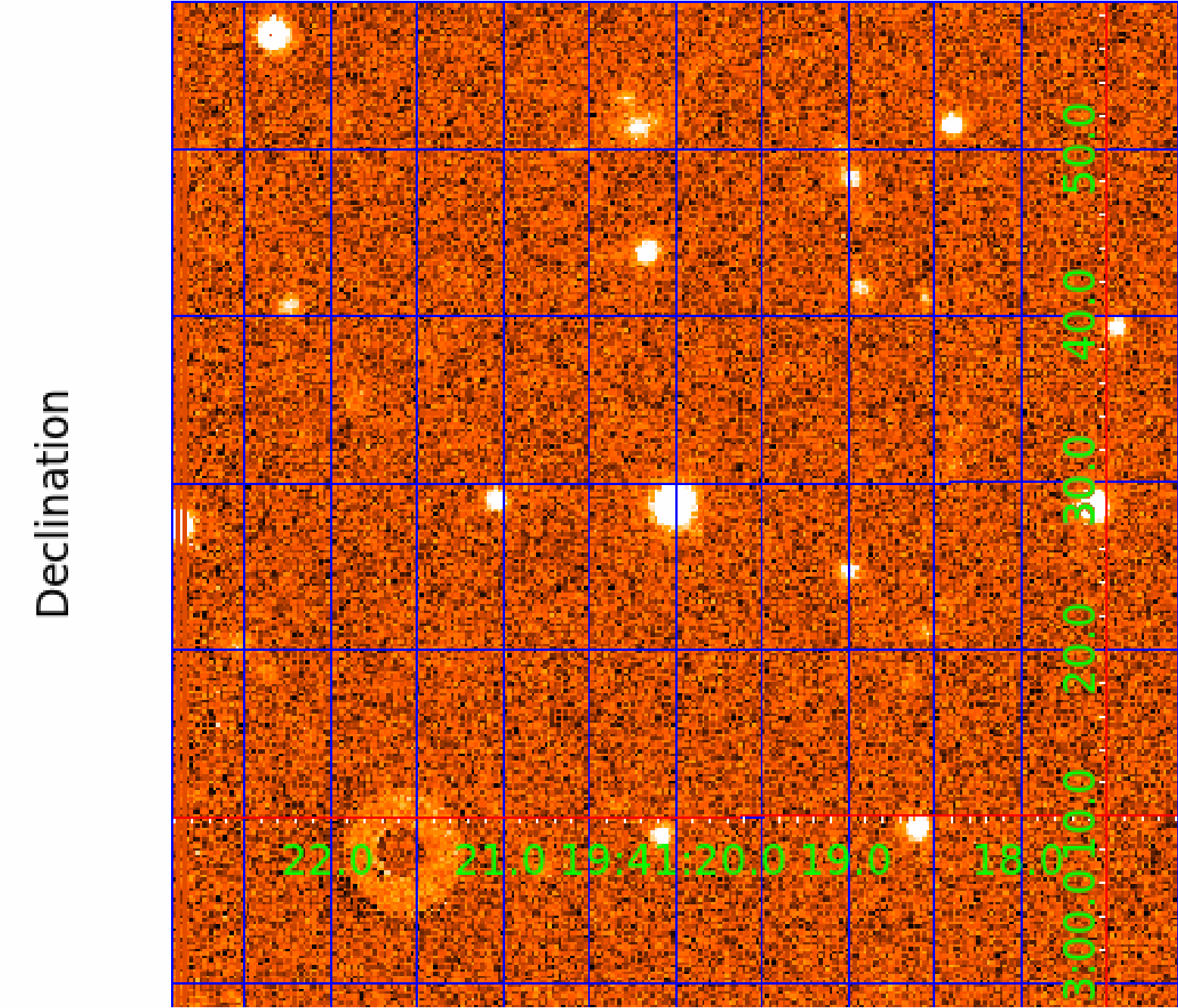
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009658012

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})
009658012-01	OBS	No	0.533202	131.568036	2122.3	3.727	279.6	2.2	1.54	6603	7.17	23347.92
009658012-02	OBS	No	0.533201	131.857869	1252.4	1.500	16.0	-1.0	1.54	6603	5.52	23347.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009658012-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
009658012-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—NO_FITS—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.

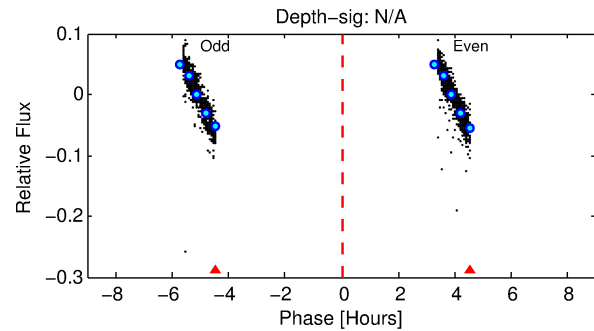
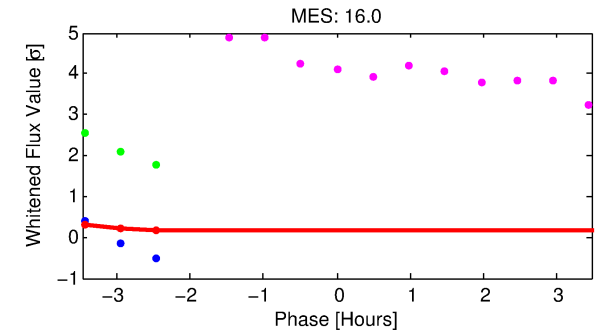
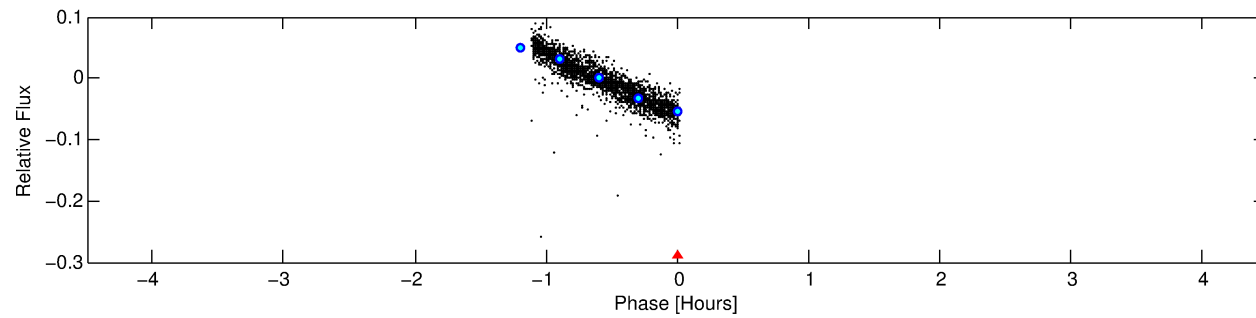
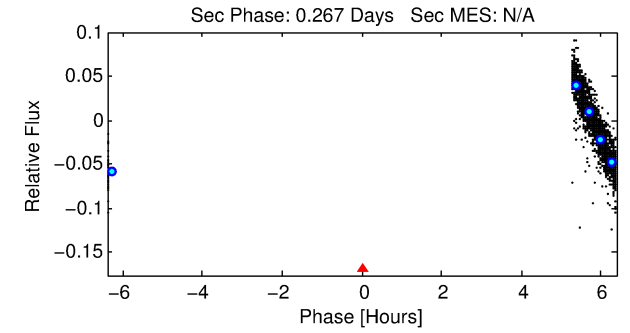
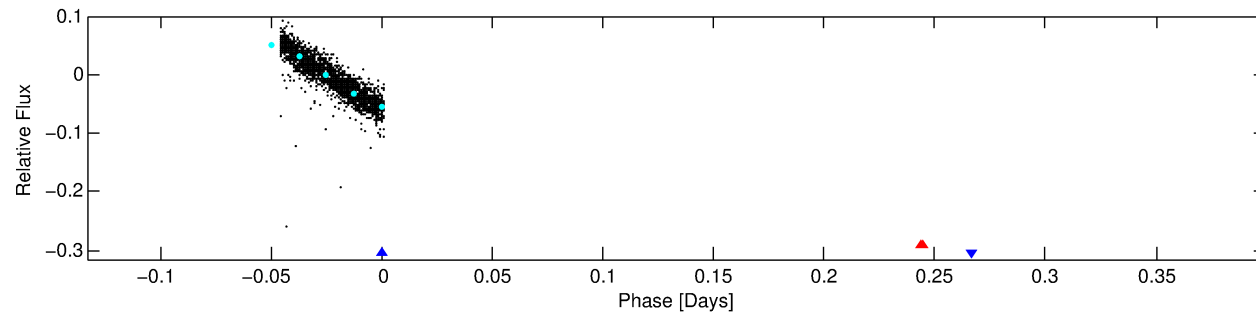
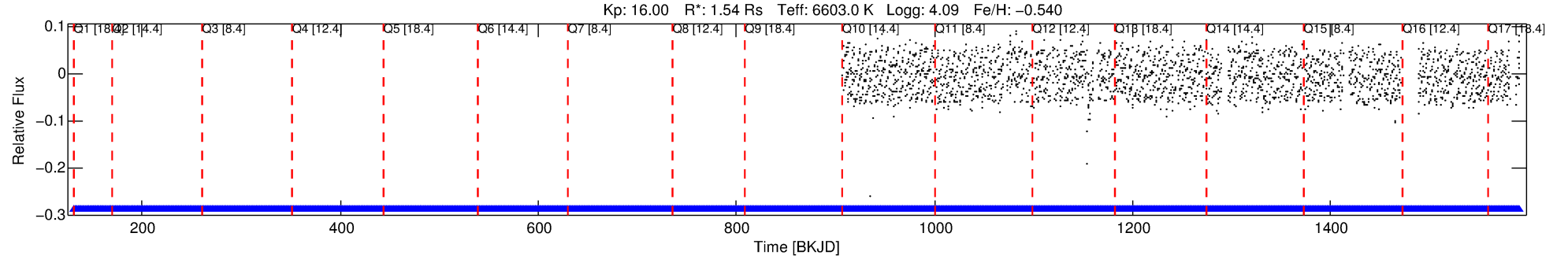
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009658012-02

No Significant Match Found

DV One-Page Summary

KIC: 9658012 Candidate: 2 of 2 Period: 0.533 d



TPS TCE Results:

Period = 0.53320 d
Epoch = 131.8579 BKJD

DV fit results are unavailable

DV Diagnostic Results:

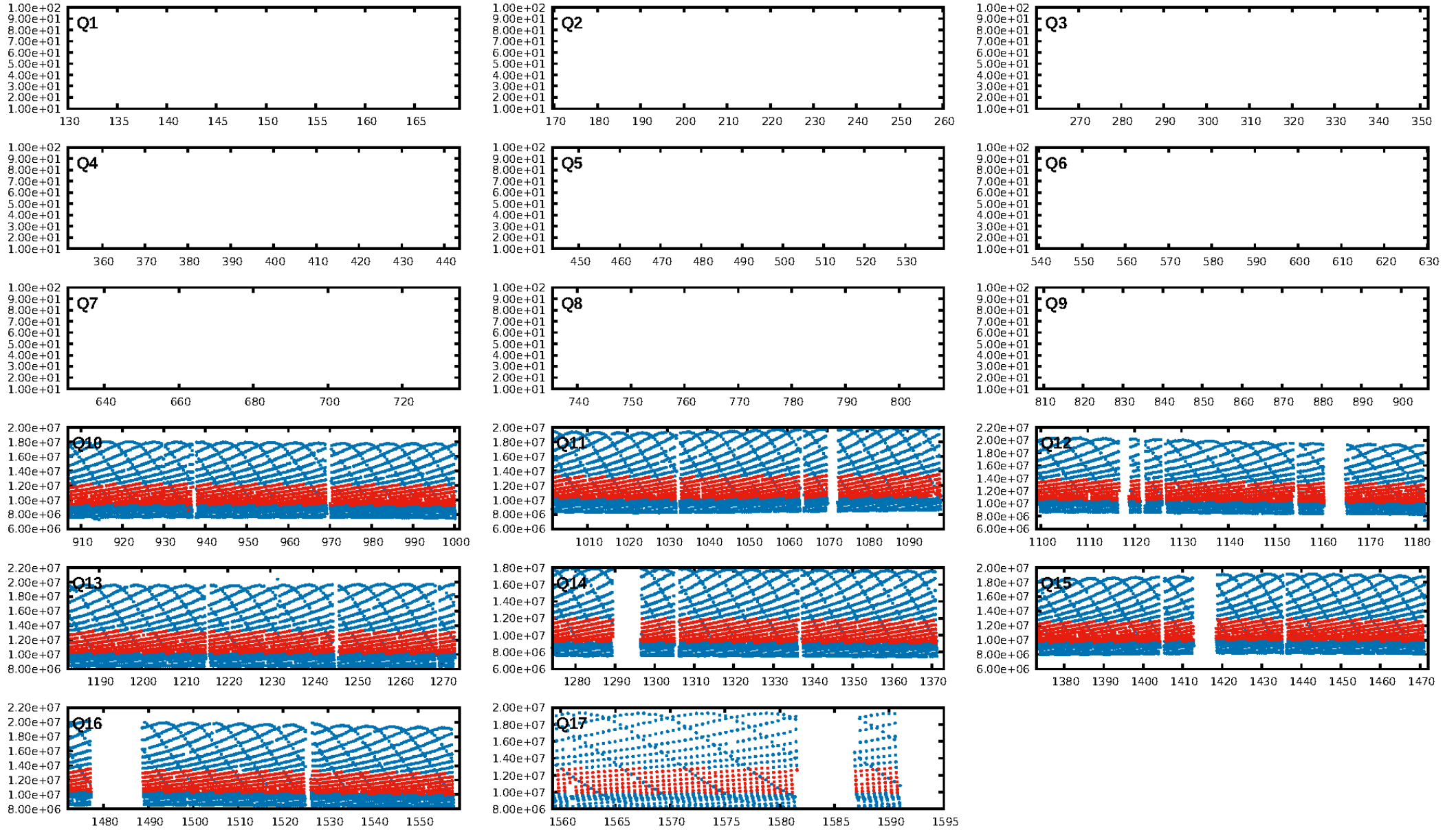
ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: N/A
GhostDiagnostic-chr: N/A

Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

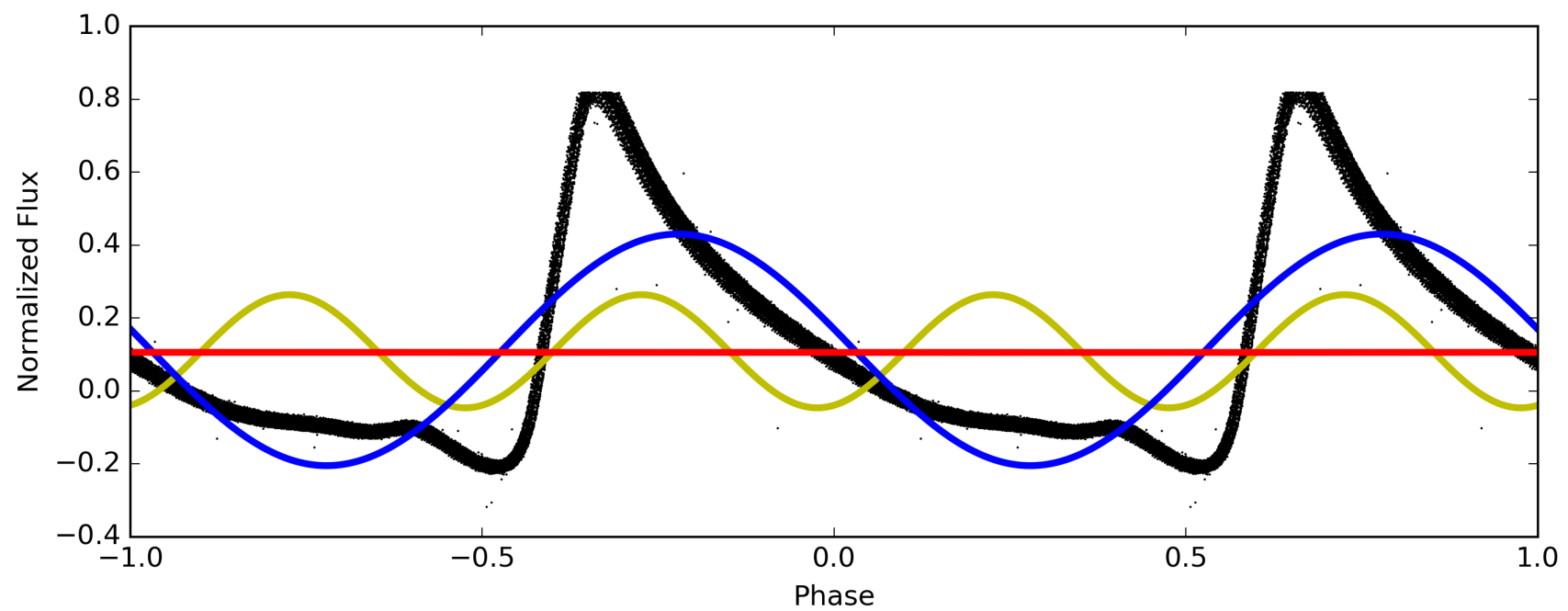
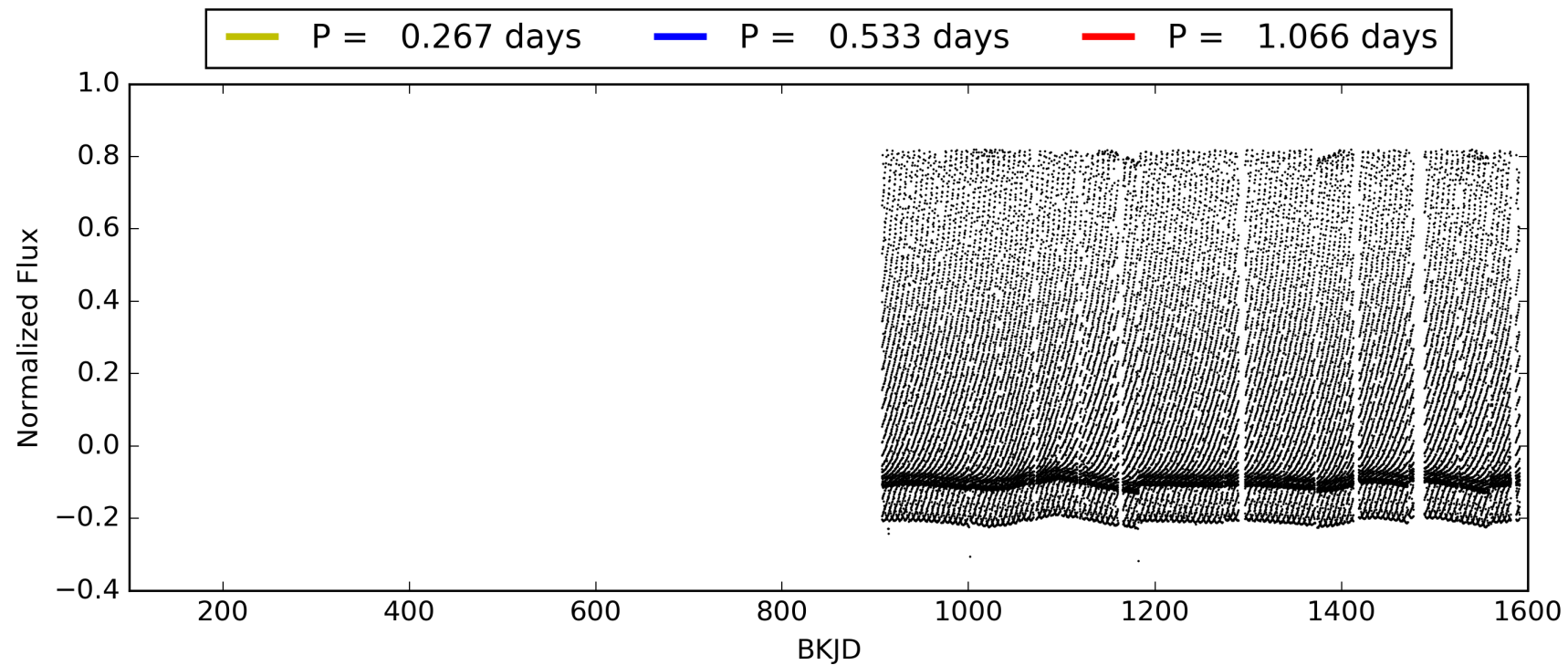
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:54:49 Z

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

TCE 009658012-02, PDC Light Curves

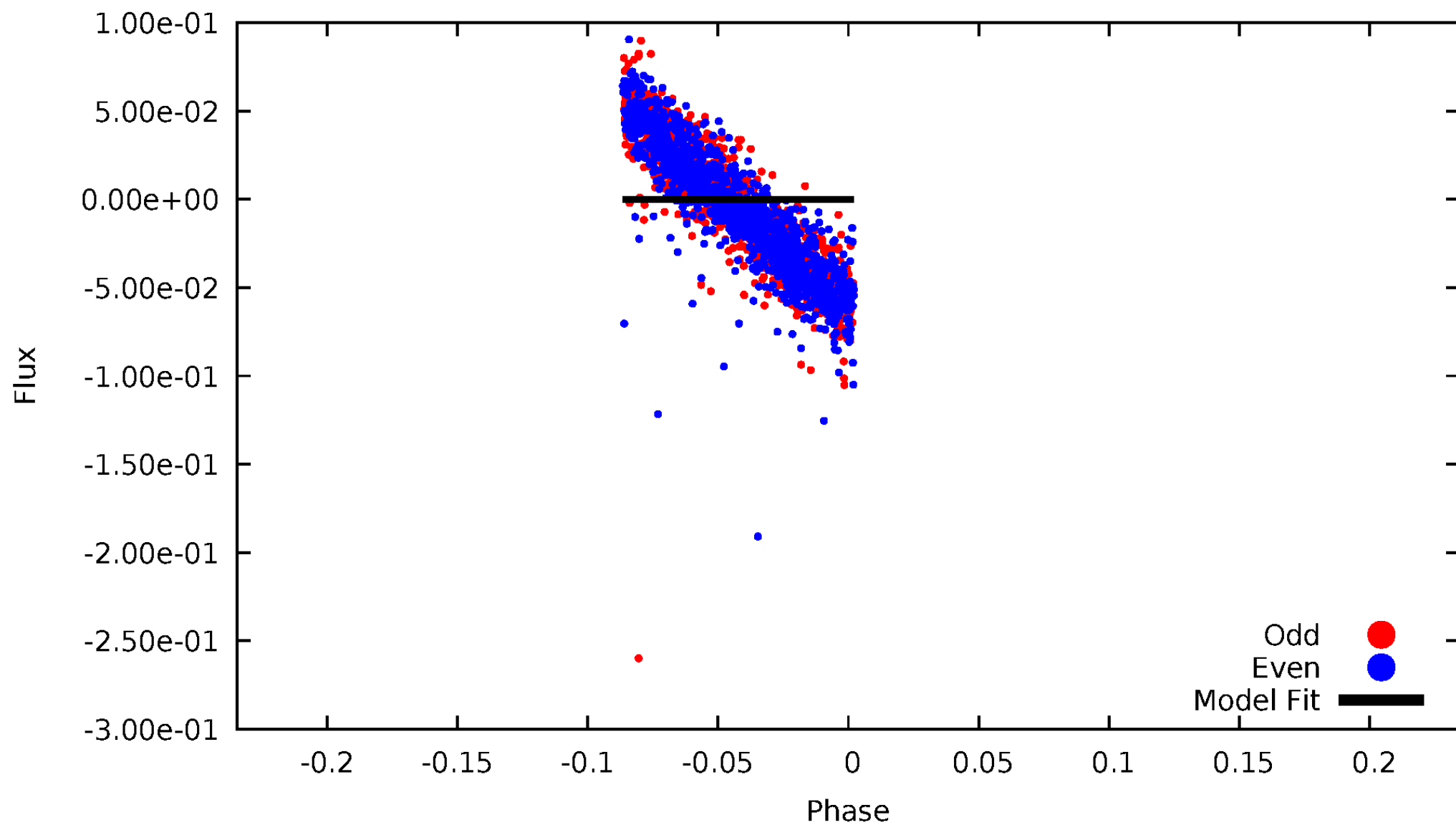


TCE 009658012-02



DV Odd/Even

TCE 009658012-02

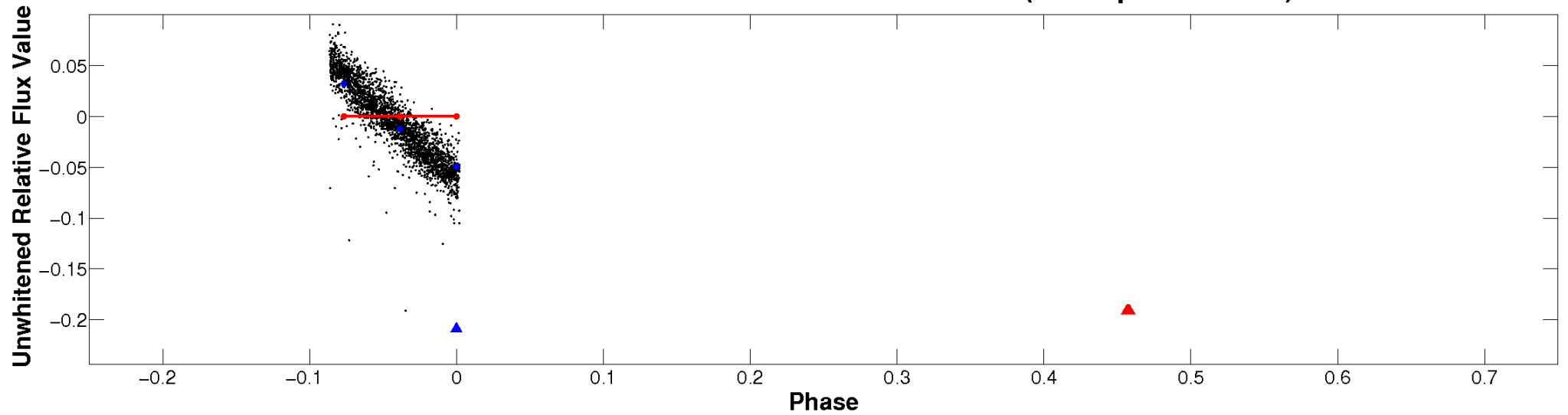


ALT Odd/Even

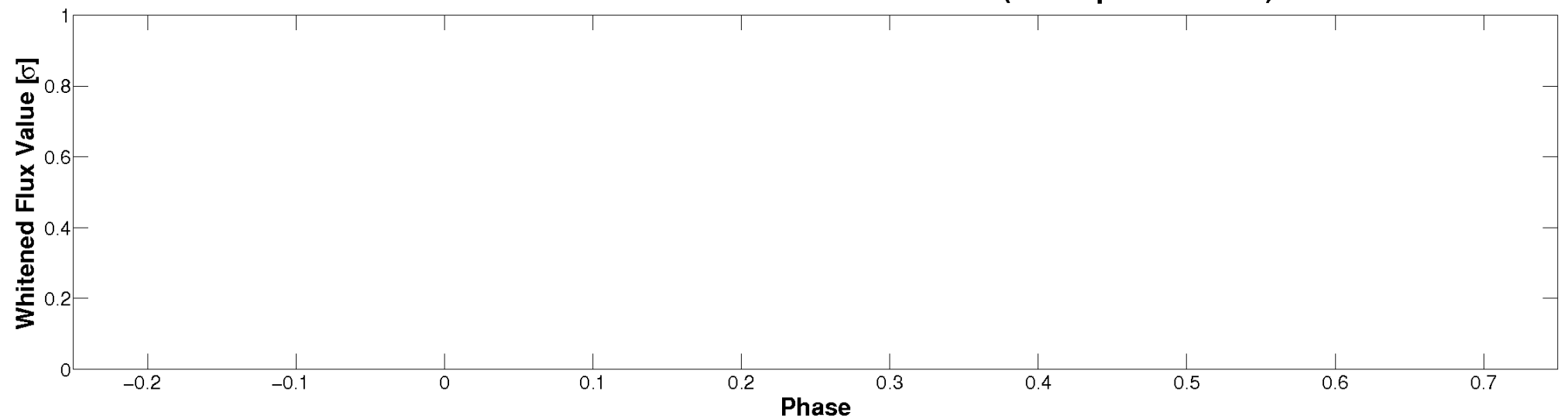
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

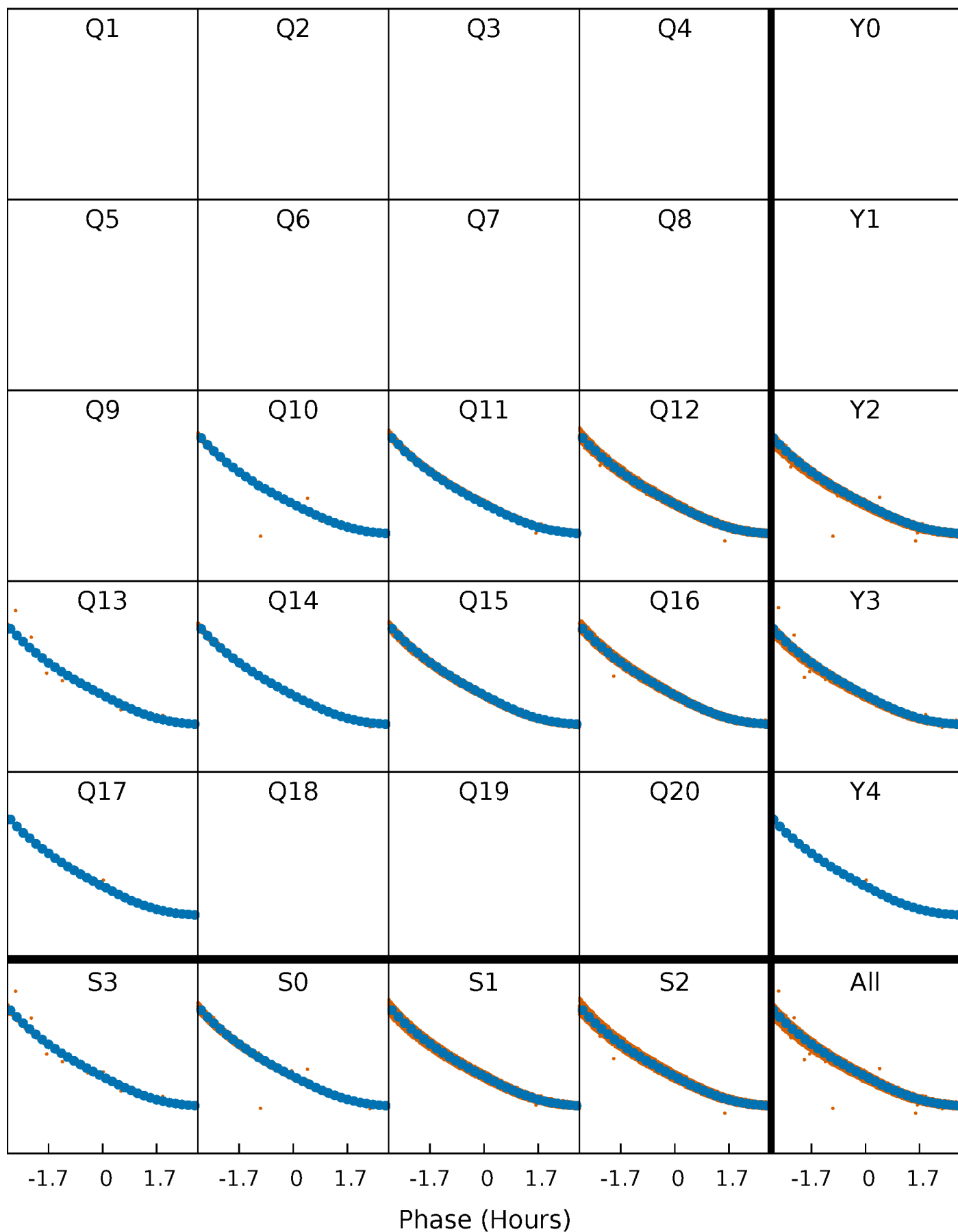


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



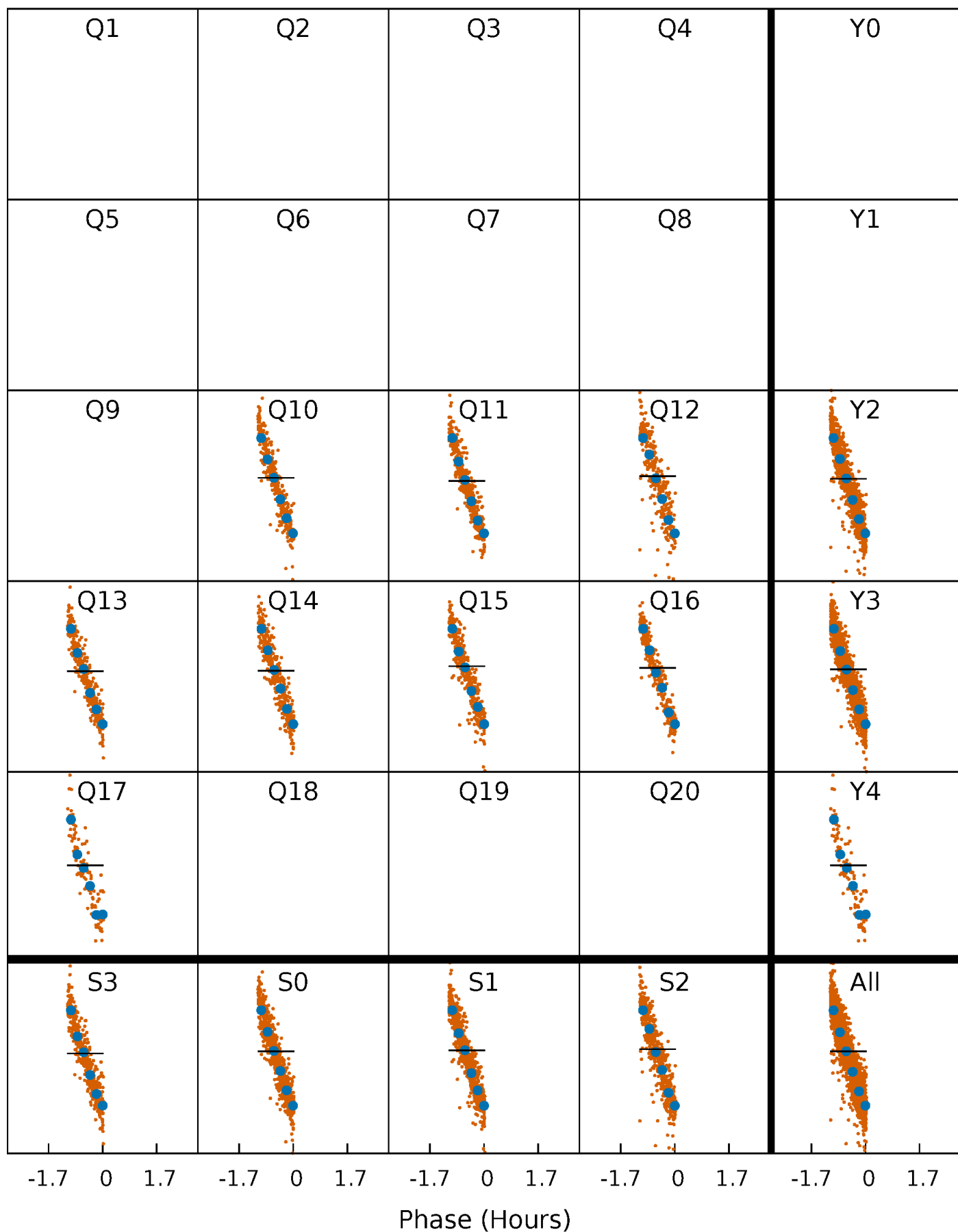
PDC Quarter-Phased Transit Curves

TCE 009658012-02 P= 0.533201 Days $T_0=131.857869$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009658012-02 $P = 0.533201$ Days $T_0 = 131.857869$ (BKJD)

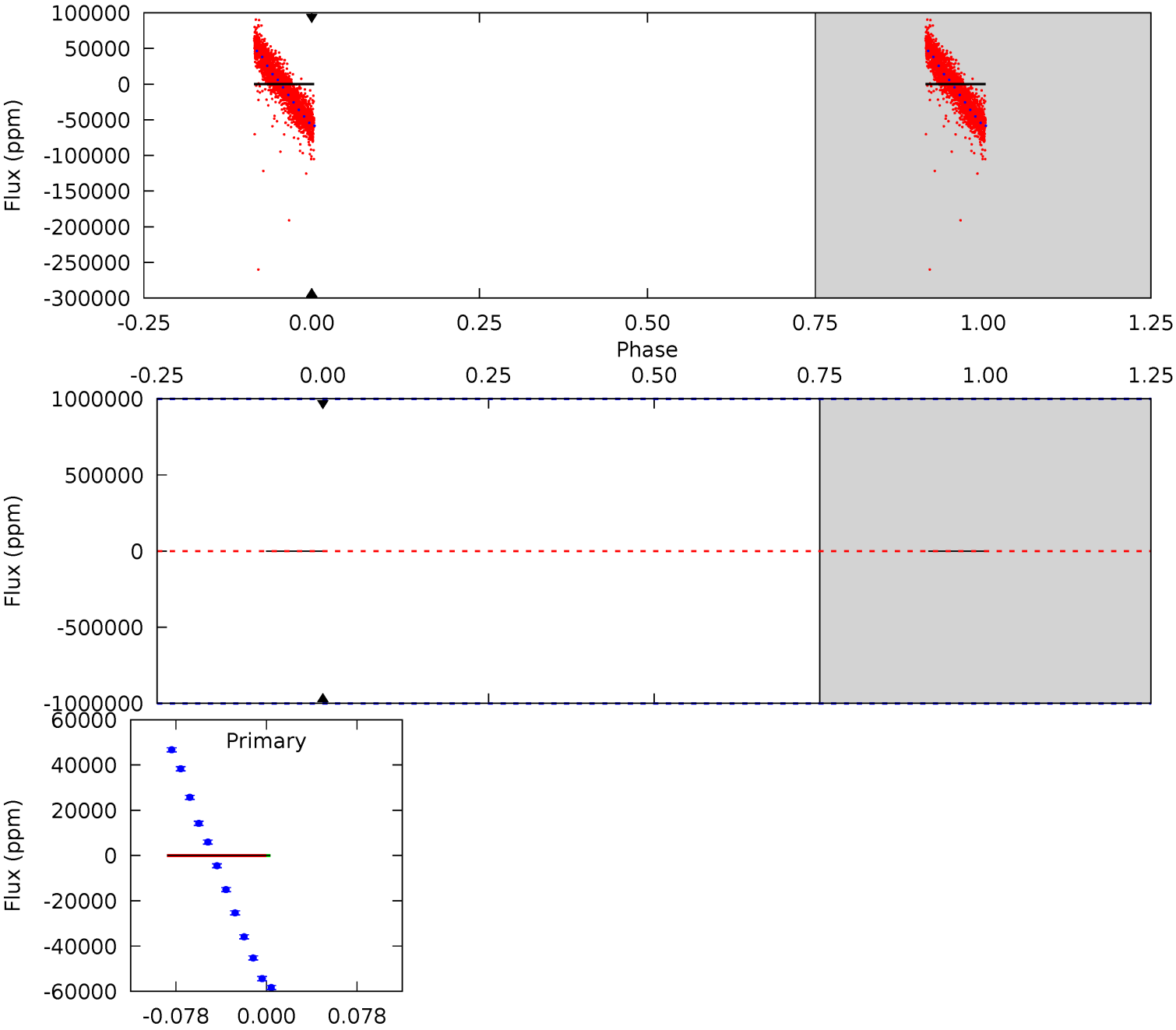


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009658012-02, P = 0.533201 Days, E = 131.857869 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

This plot does not exist for this TCE.

Stellar Parameters For KIC 009658012

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6603^{+189}_{-237}	$4.092^{+0.293}_{-0.158}$	$-0.540^{+0.300}_{-0.300}$	$1.543^{+0.431}_{-0.474}$	$1.071^{+0.164}_{-0.135}$	$0.411^{+0.765}_{-0.176}$
	+3%/-4%	+7%/-4%	+56%/-56%	+28%/-31%	+15%/-13%	+186%/-43%
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 009658012-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$12.88^{+13.86}_{-8.74}$	4340^{+337}_{-364}	-3651^{+30128}_{-21561}	$0.128^{+100.252}_{-98.246}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

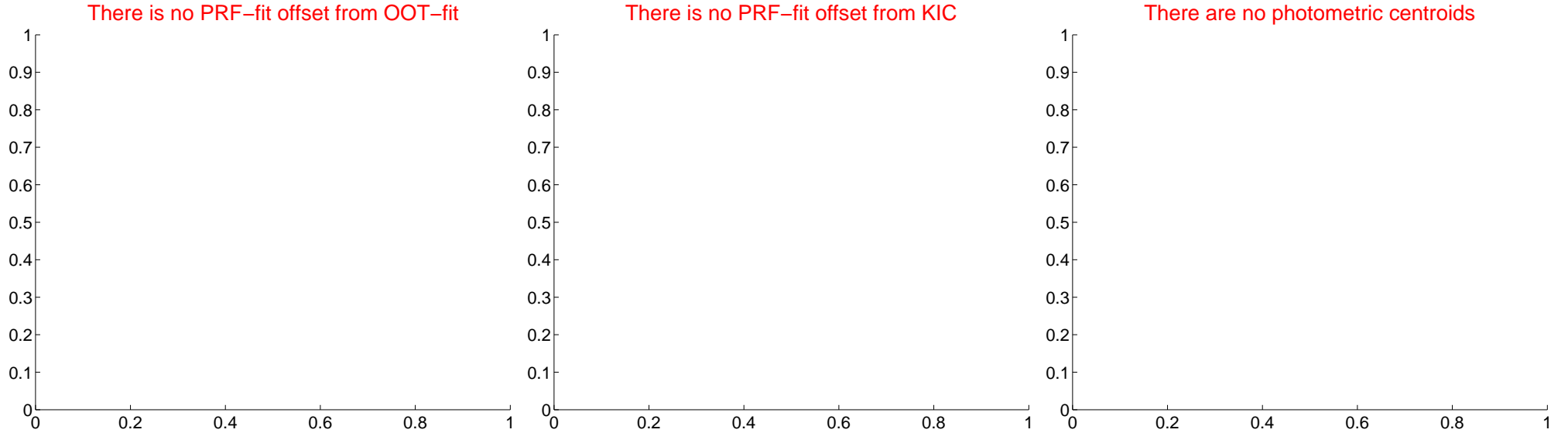
DV Centroid Data

Supplemental centroid analysis for 009658012-02. Kepler magnitude: 16.00. Transit SNR -1.00

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	—	—	—	—

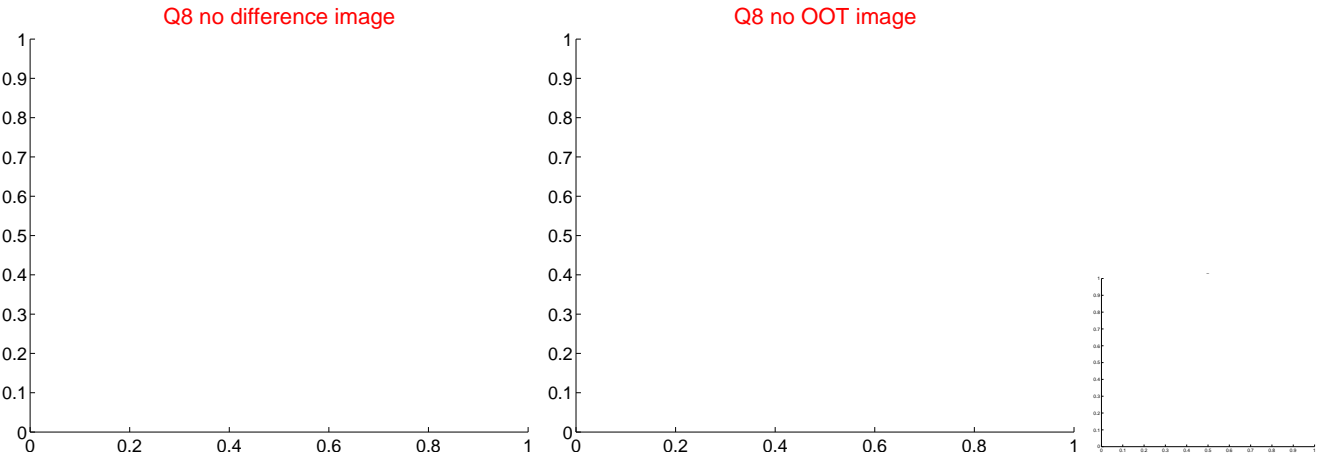
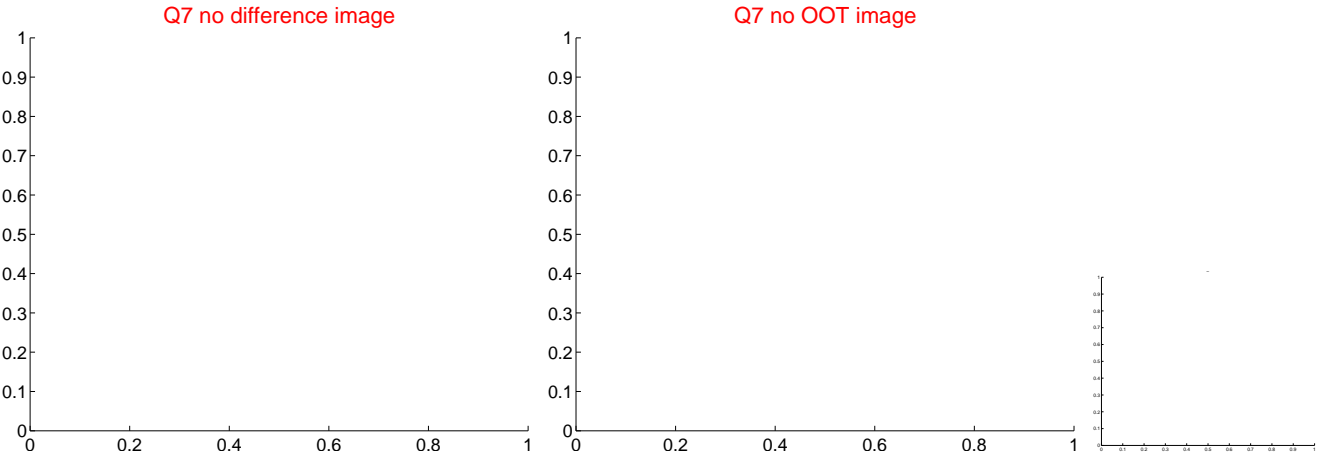
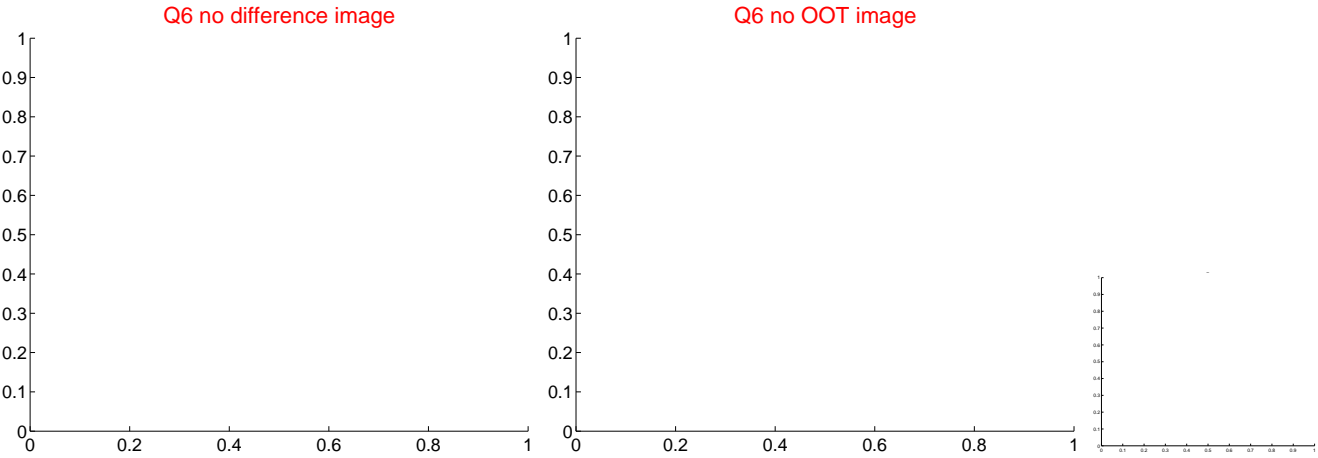
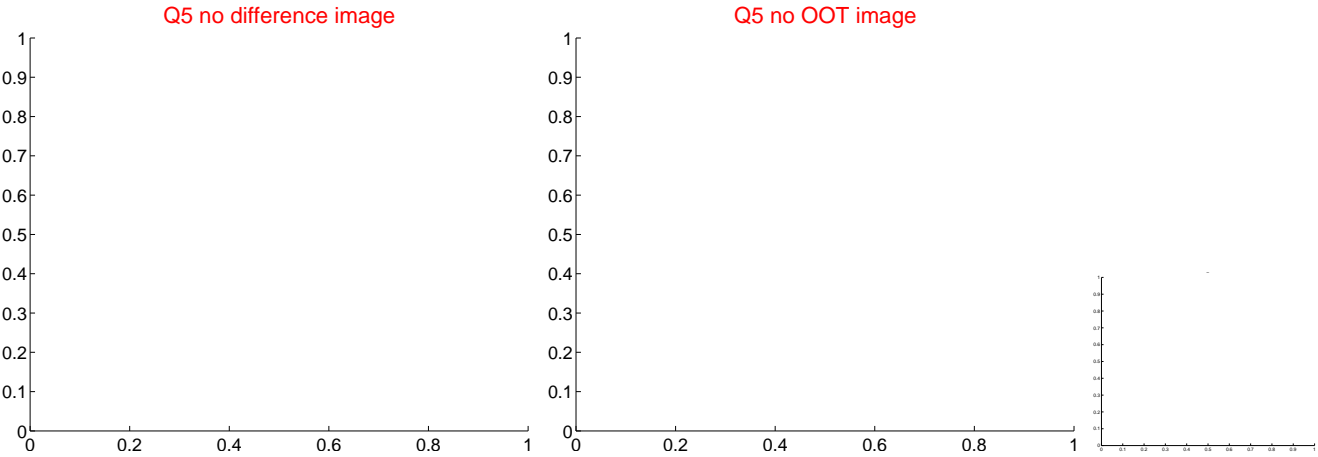


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

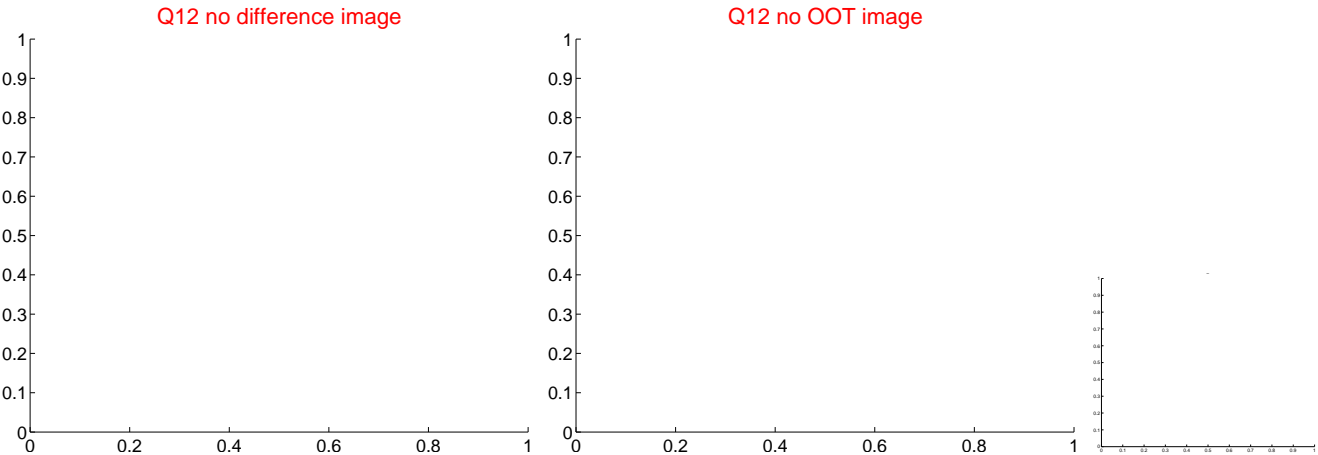
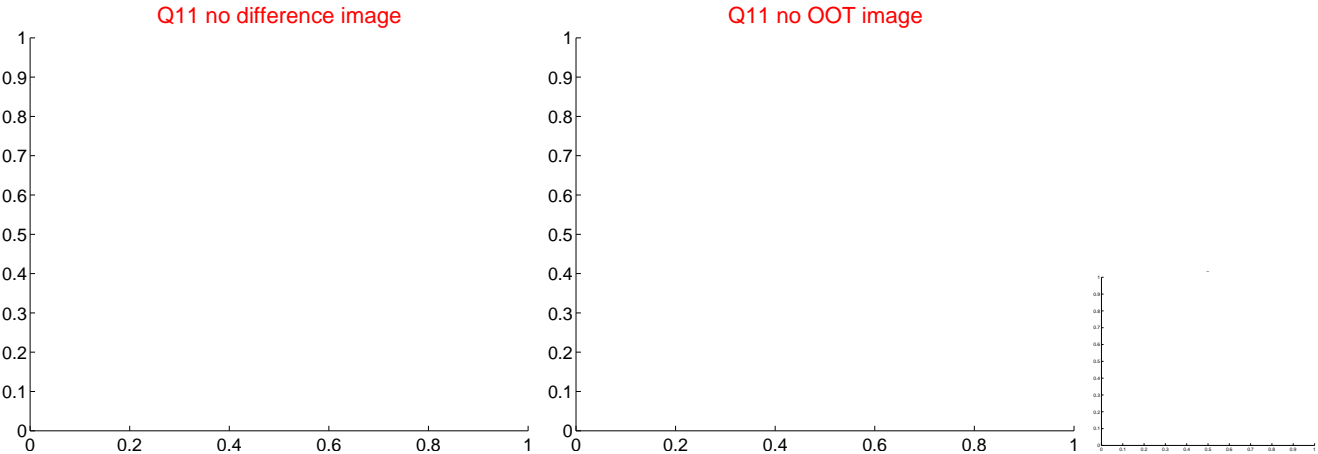
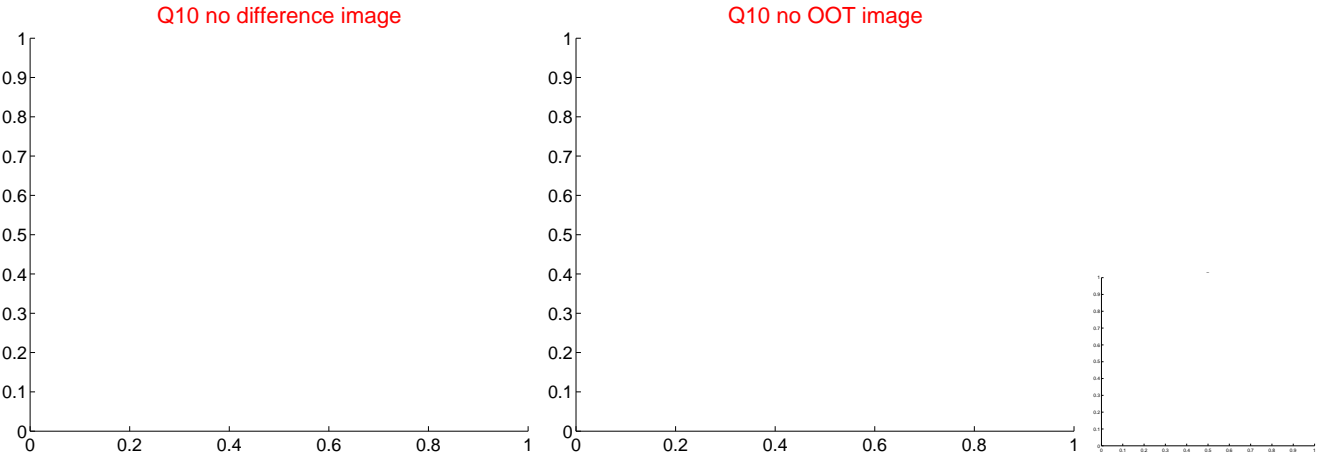
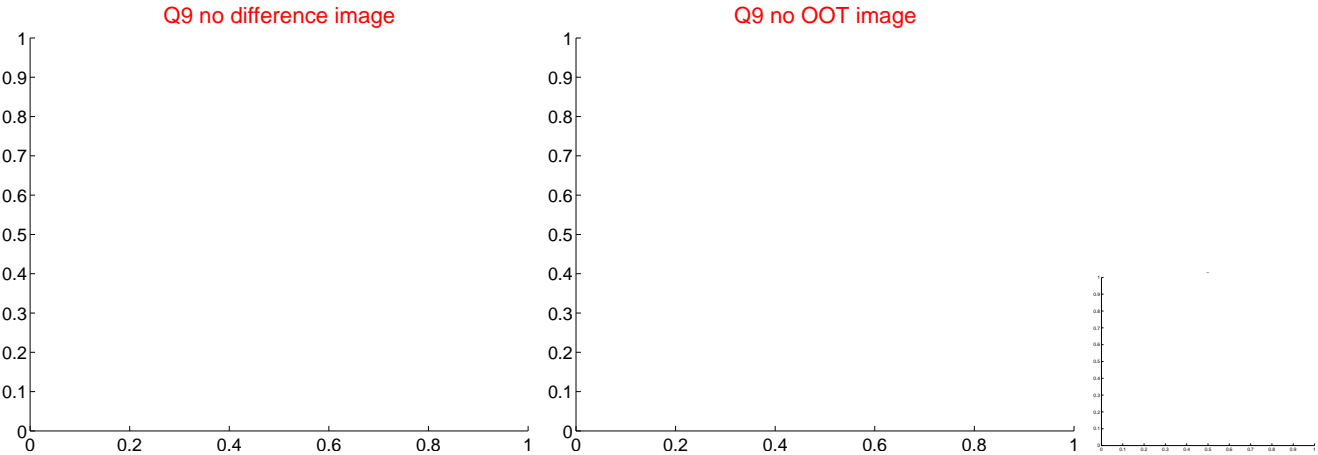
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



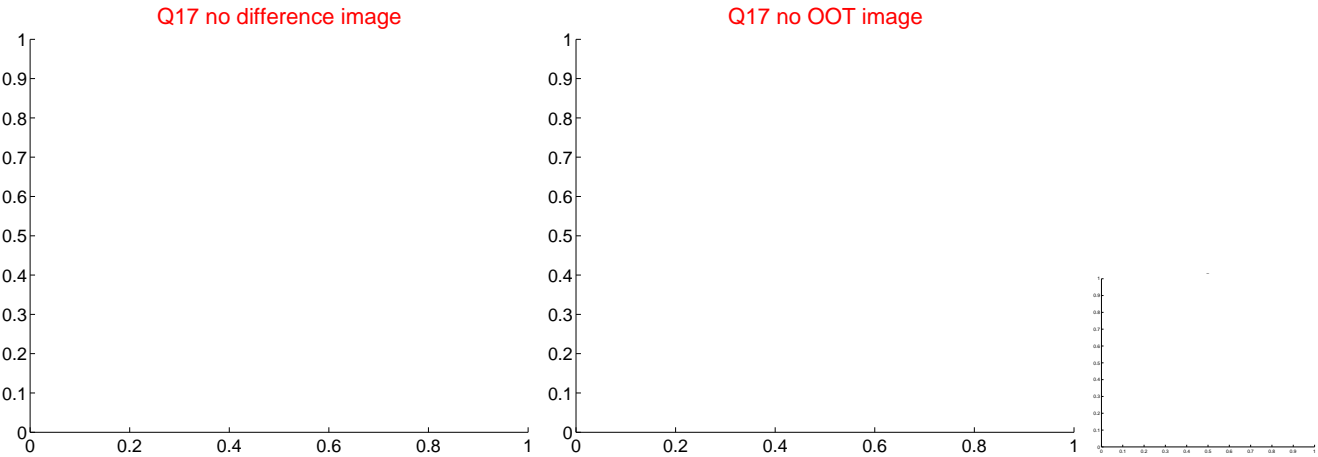
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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folded centroid time series figure for this object.

UKIRT Image

