

KIC 009717032

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})
009717032-01	OBS	No	0.556740	132.006650	0.0	1.179	241.9	0.0	1.00	5780	0.02	5698.17
009717032-02	OBS	No	0.556869	131.579744	7452.9	1.500	70.2	-1.0	1.00	5780	8.59	5696.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009717032-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS
009717032-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

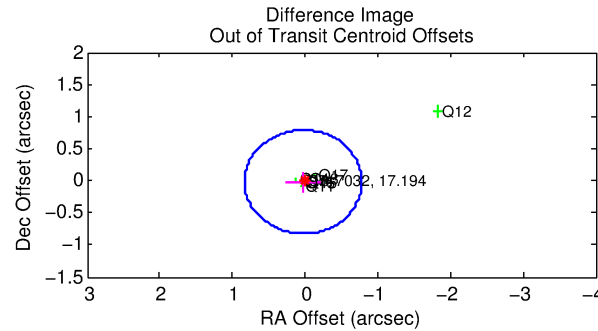
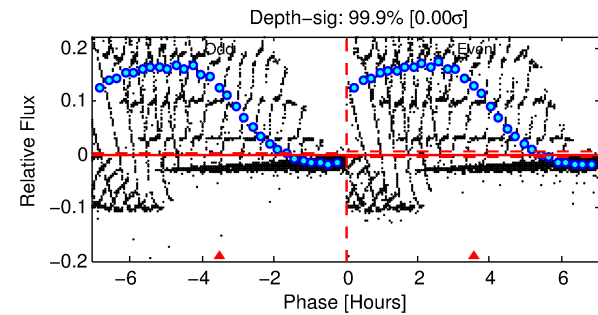
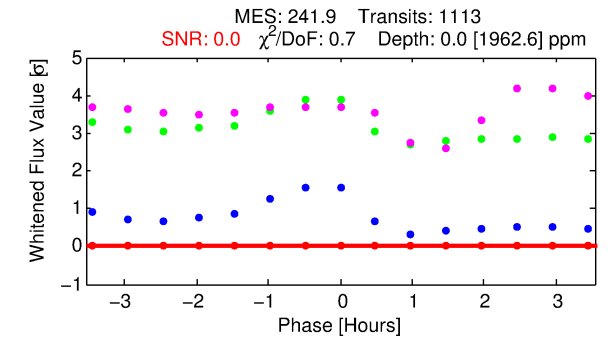
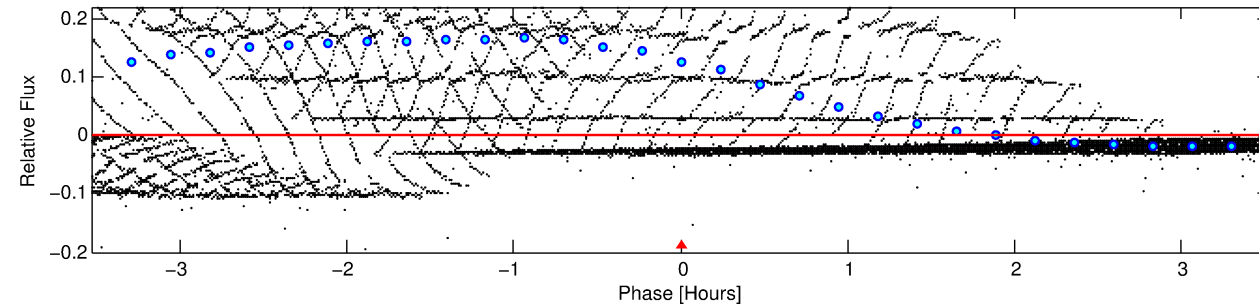
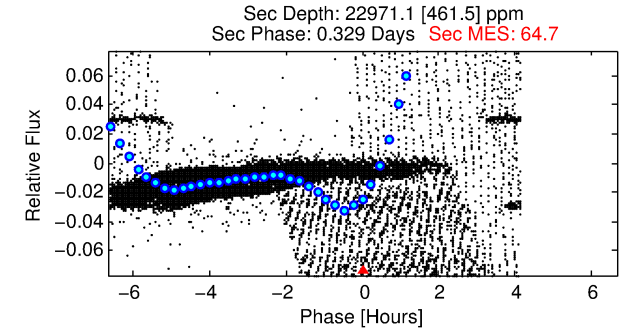
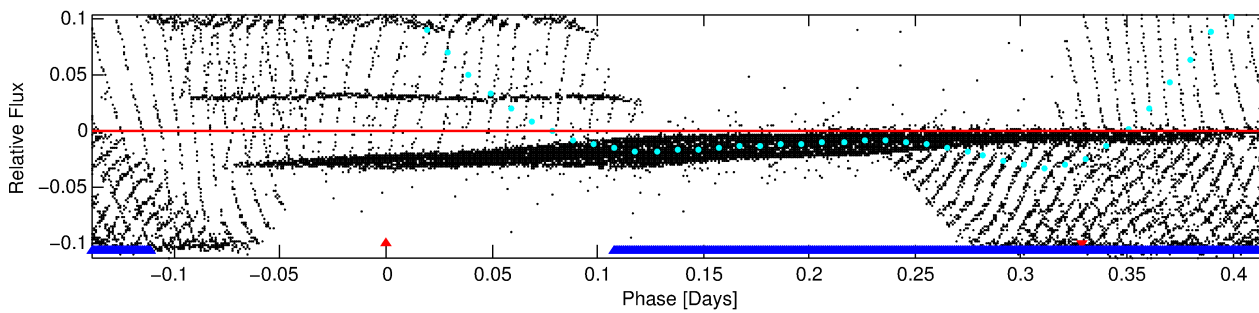
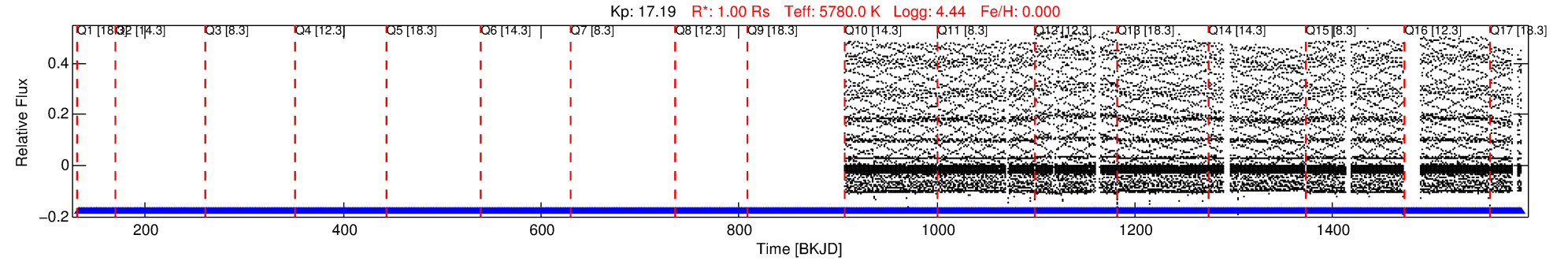
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009717032-01

No Significant Match Found

DV One-Page Summary

KIC: 9717032 Candidate: 1 of 2 Period: 0.557 d



DV Fit Results:

Period = 0.55674 [1.38201] d
Epoch = 132.0066 [379.4973] BKJD
Rp/R* = 0.0002 [4.5751]
a/R* = 2.35 [6708.91]
b = 0.80 [2643.00]
Seff = 5698.17 [18859.69]
Teq = 2215 [1833] K
Rp = 0.02 [499.25] Re
a = 0.0132 [0.0219] AU
Ag = 3717166.14 [151946670968.36] [0.00σ]
Teffp = 150402 [1537037851] K [0.00σ]

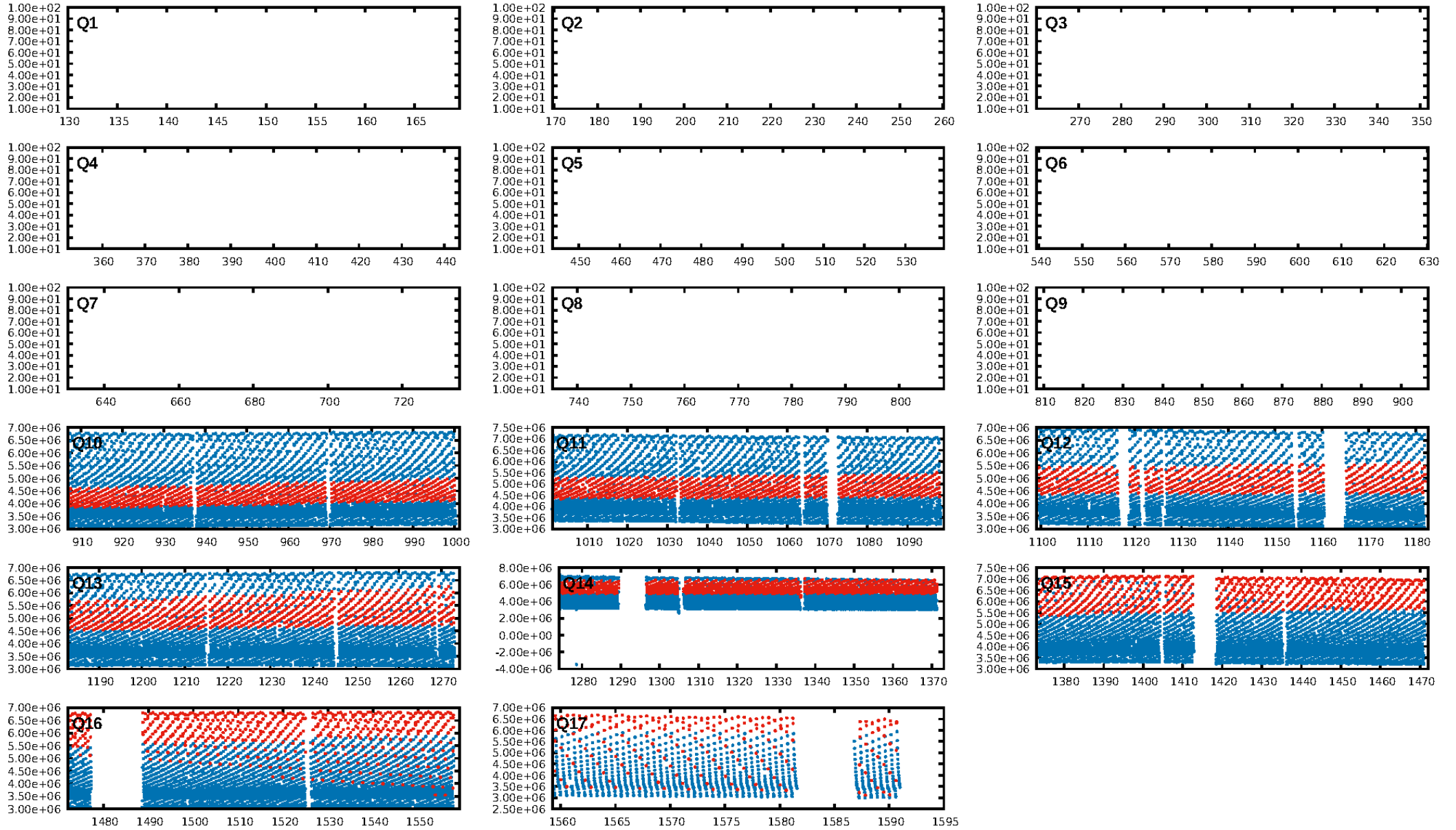
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1066/1066]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
QotOffset-rm: 0.035 arcsec [0.13σ]
KicOffset-rm: 0.172 arcsec [1.31σ]
QotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.12 [1/8]

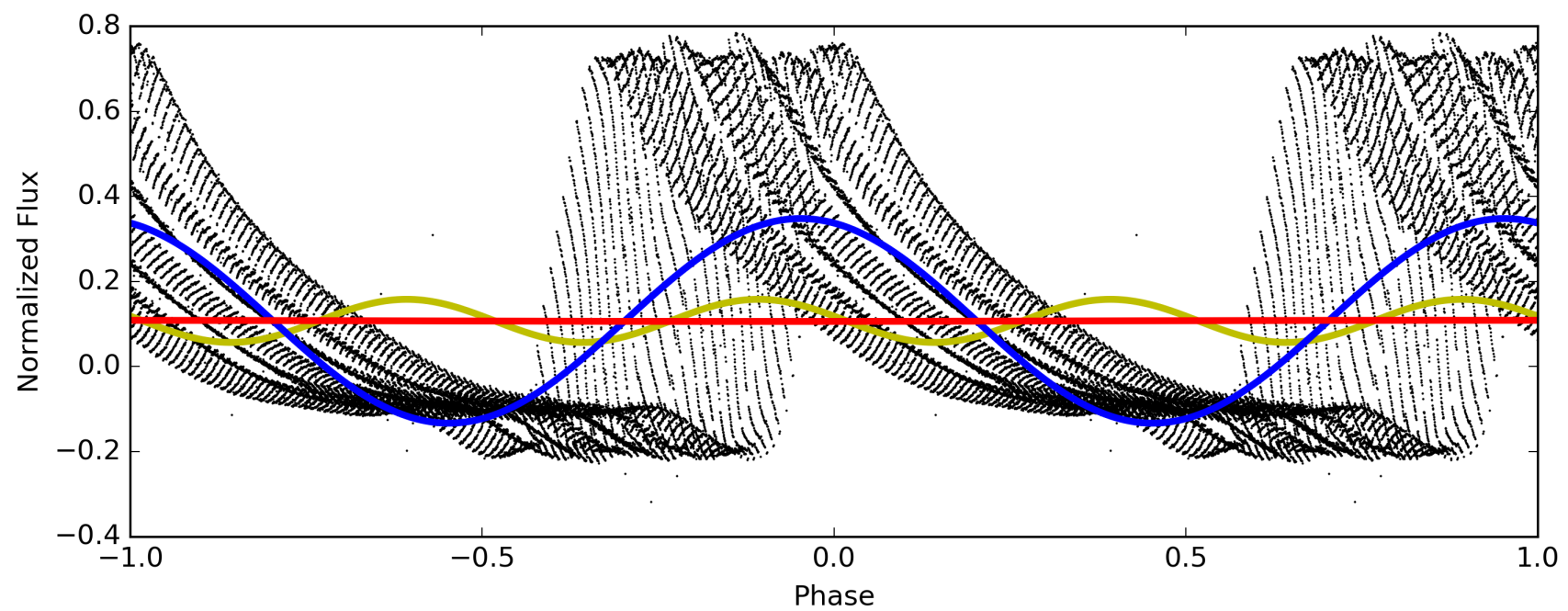
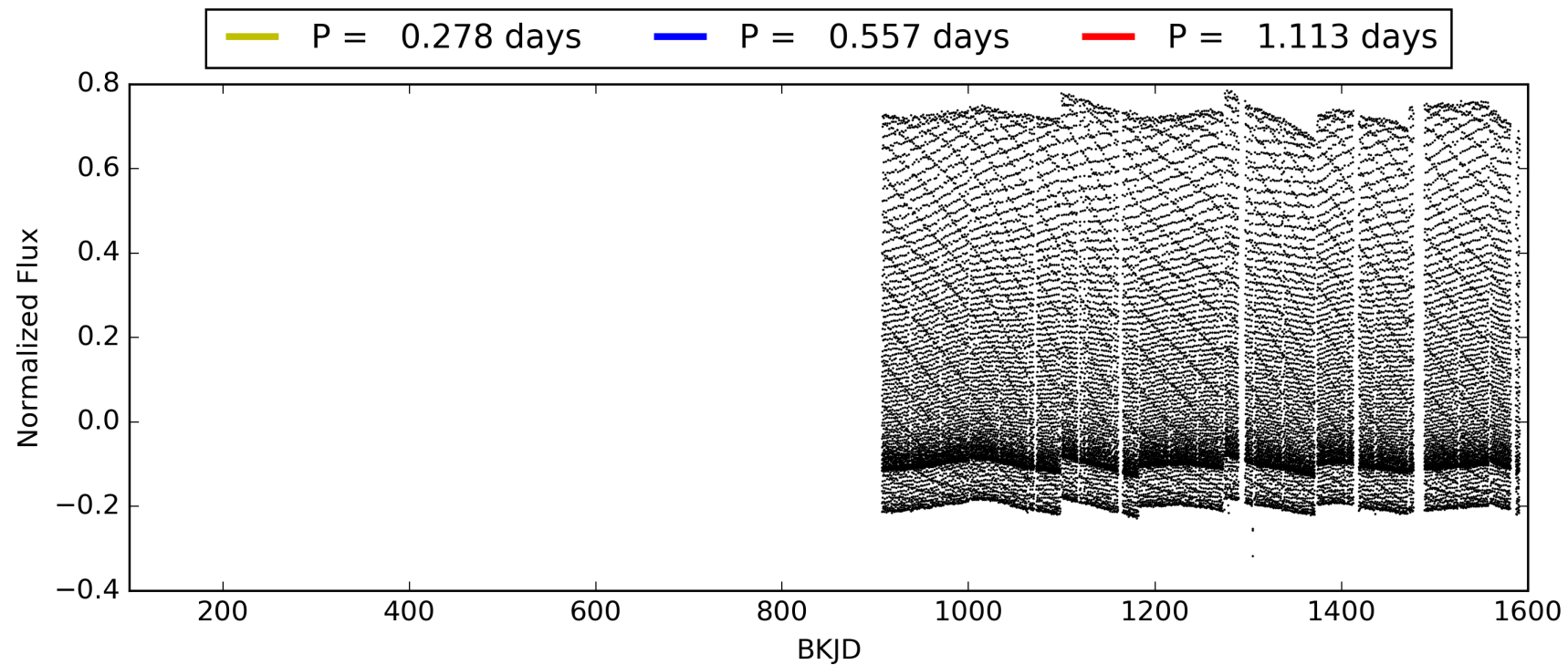
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:32:56 Z

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

TCE 009717032-01, PDC Light Curves

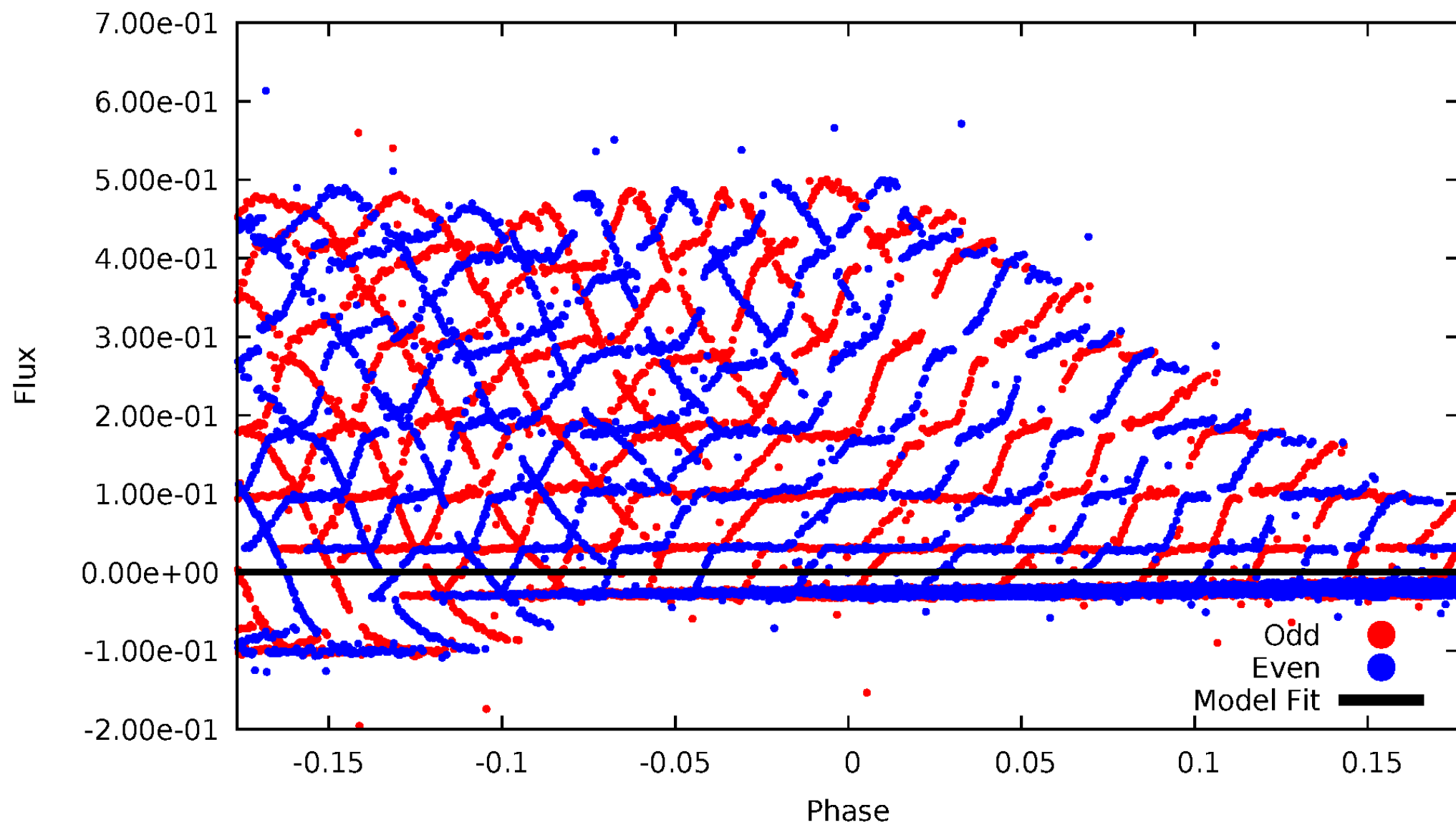


TCE 009717032-01



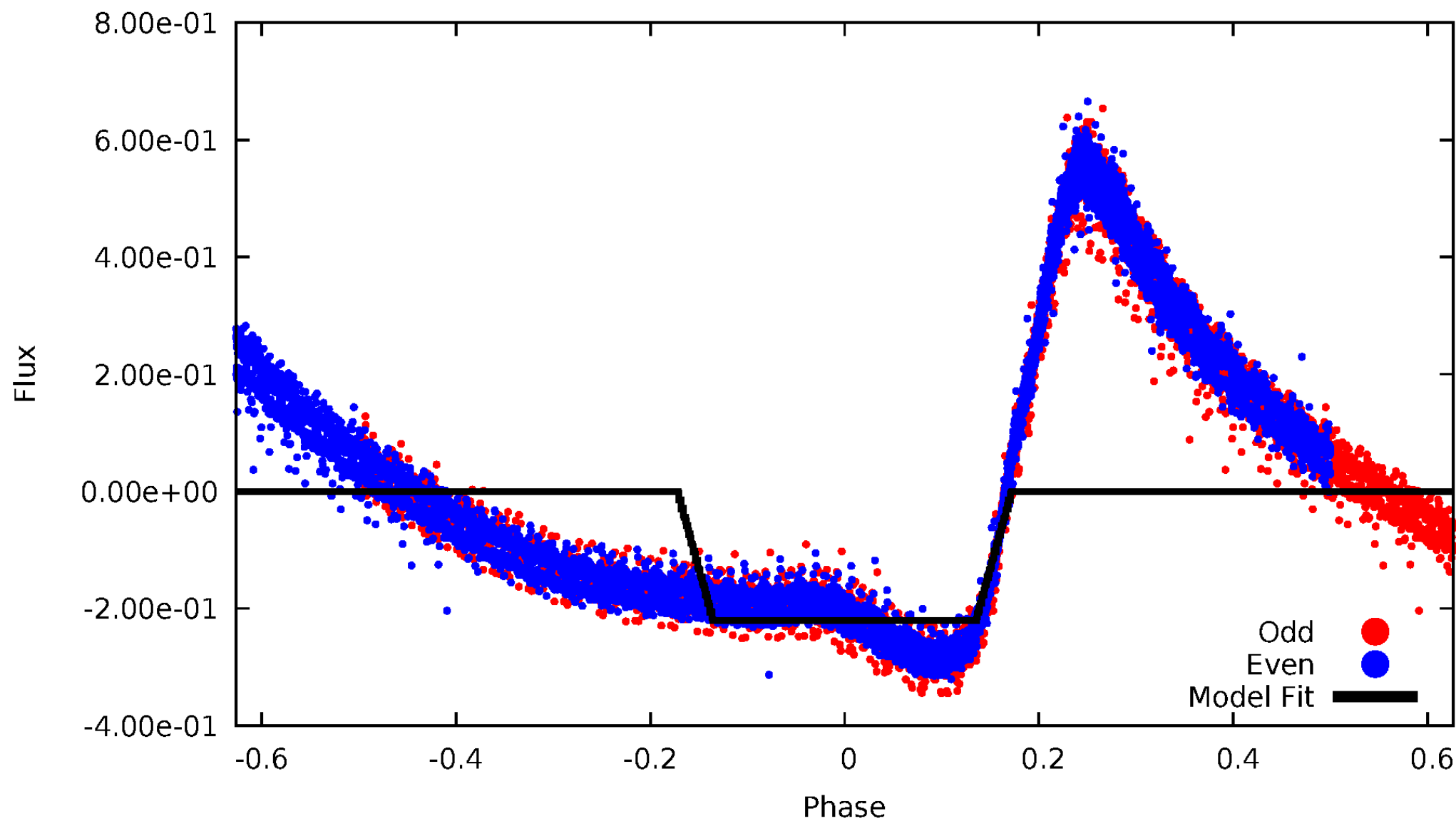
DV Odd/Even

TCE 009717032-01



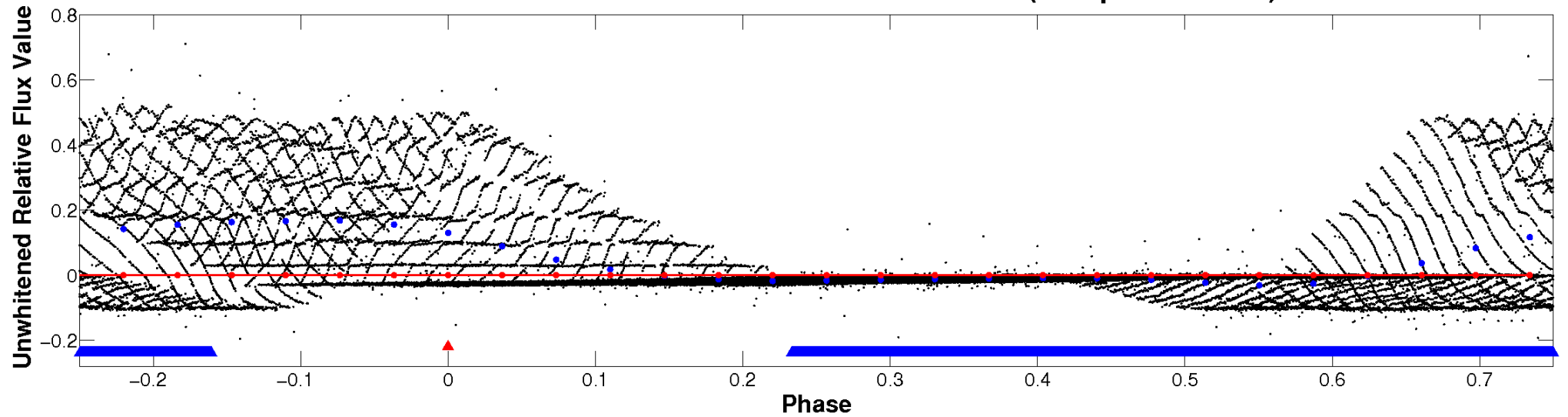
ALT Odd/Even

TCE 009717032-01

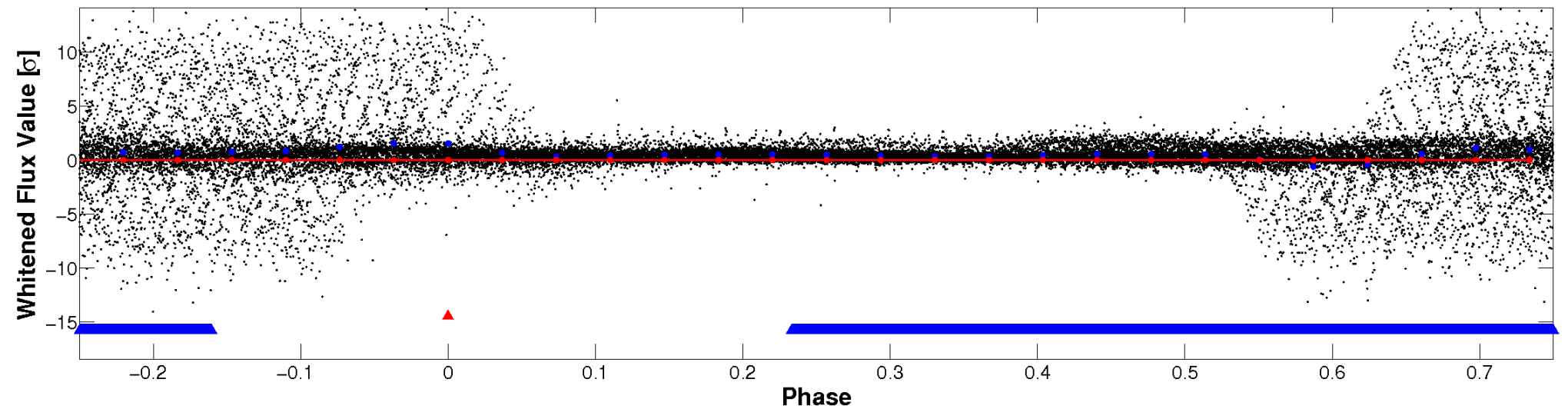


Non-Whitened Vs. Whitened Light Curve

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

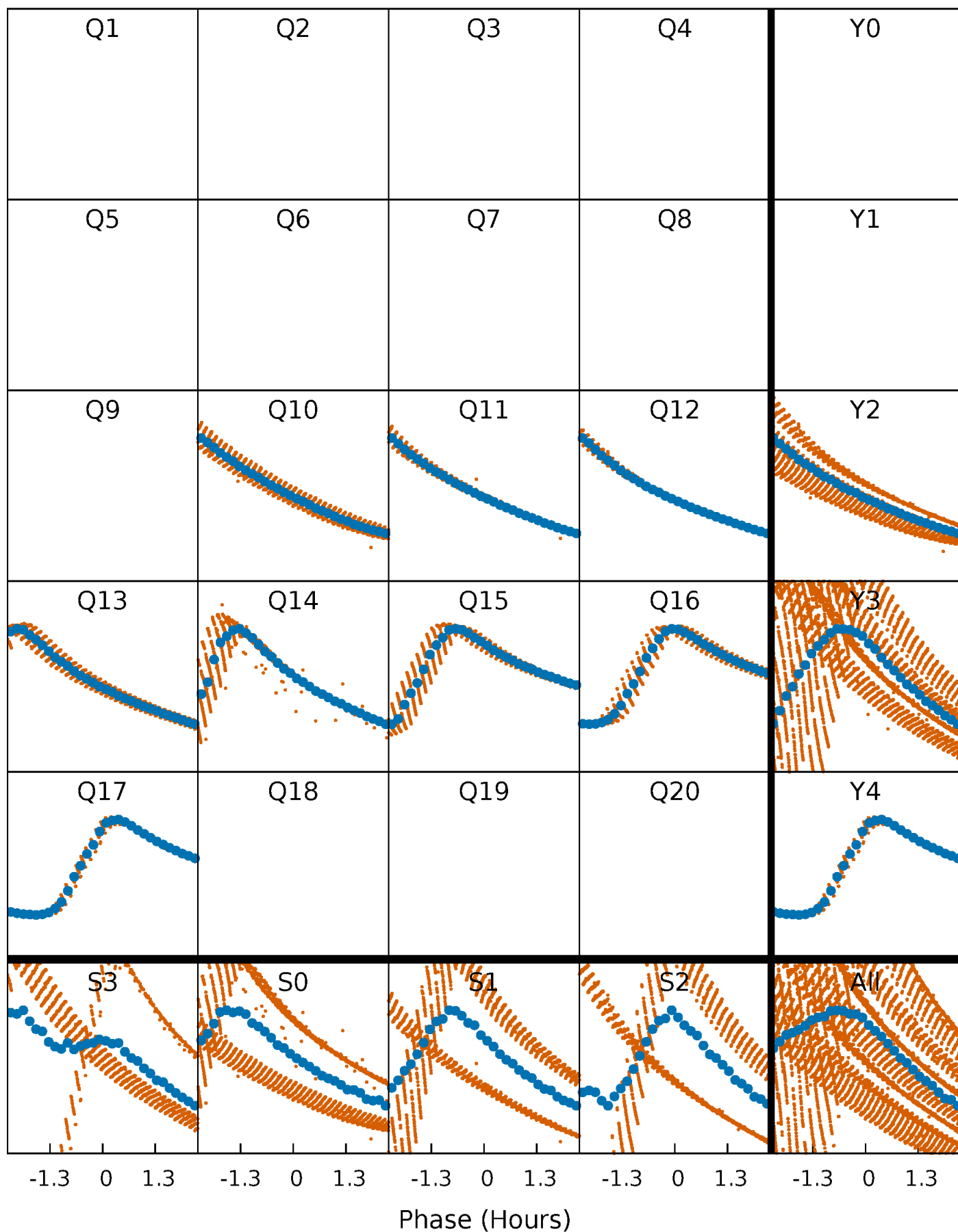


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



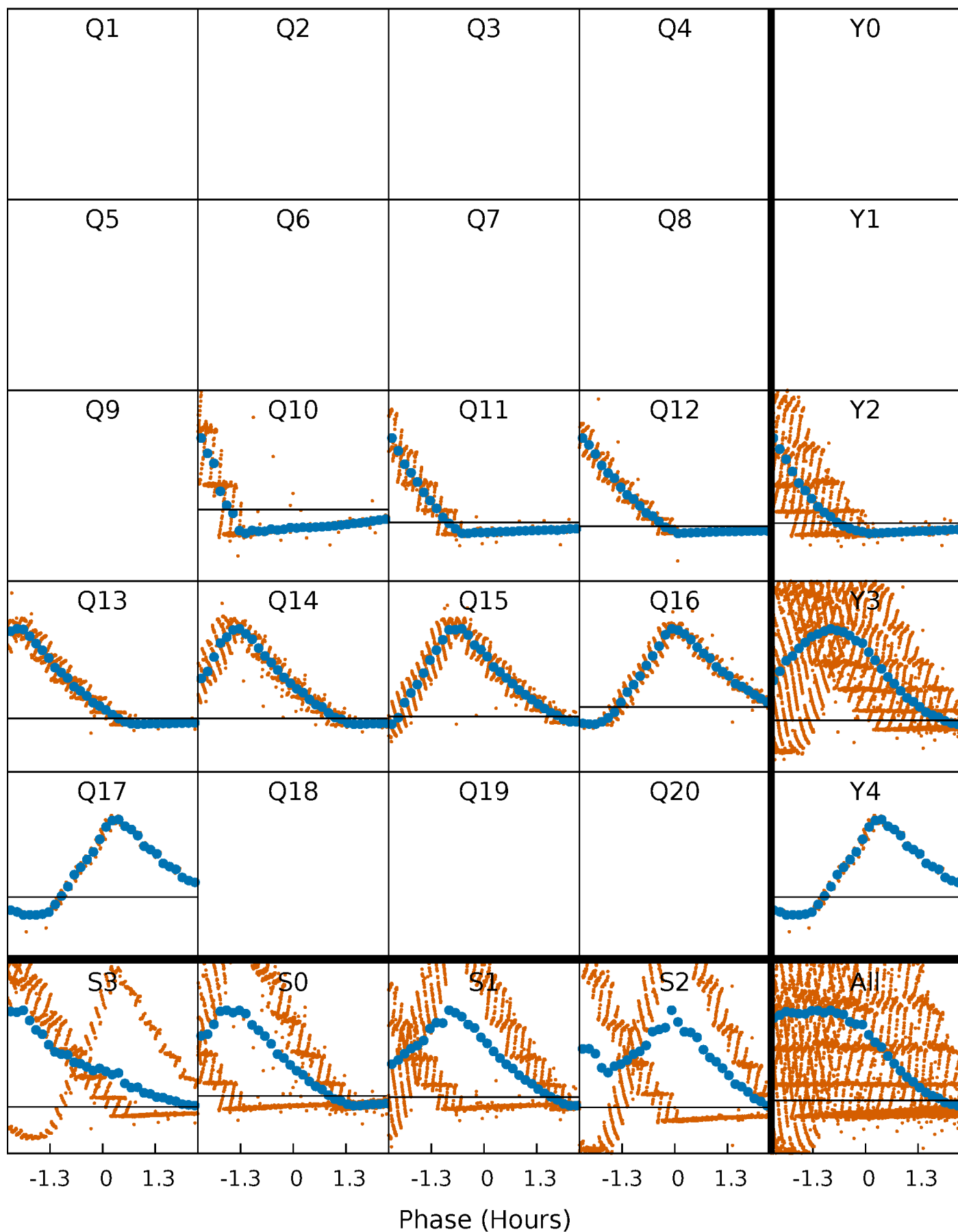
PDC Quarter-Phased Transit Curves

TCE 009717032-01 P= 0.556740 Days $T_0=132.006650$ (BKJD)



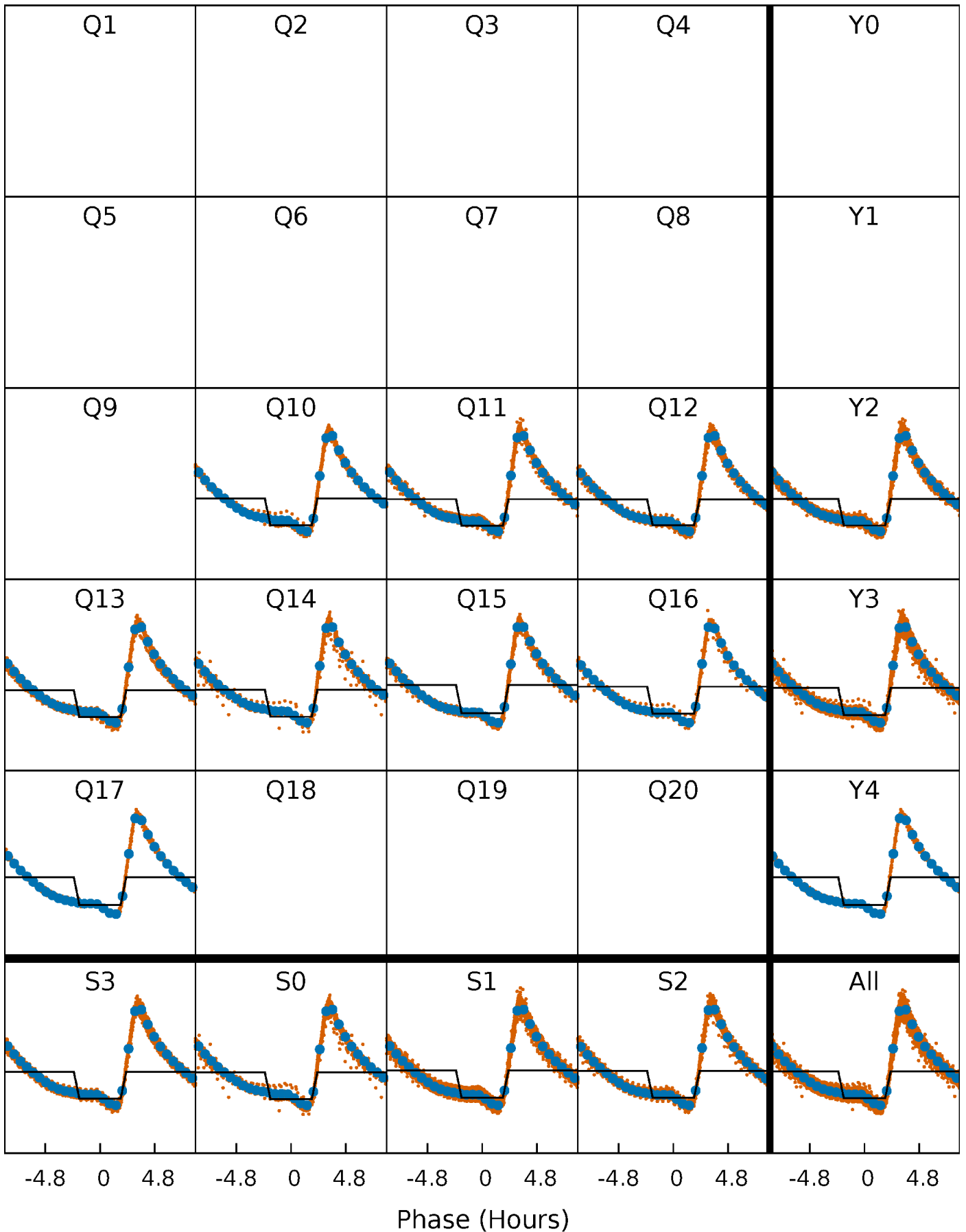
DV Quarter-Phased Transit Curves

TCE 009717032-01 P= 0.556740 Days $T_0=132.006650$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

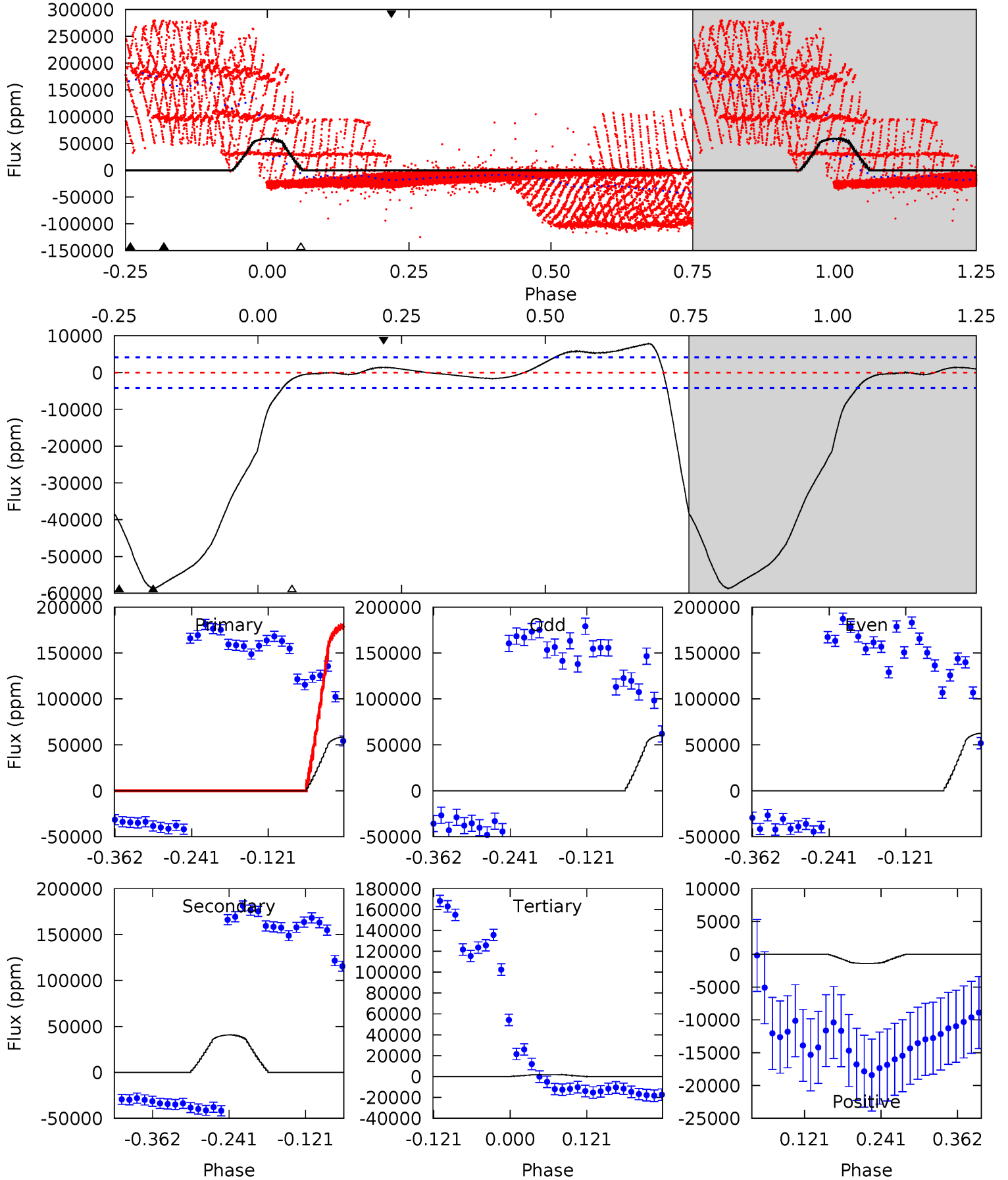
TCE 009717032-01 P= 0.556910 Days $T_0=132.001388$ (BKJD)



DV Model-Shift Uniqueness Test

009717032-01, P = 0.556740 Days, E = 132.006650 Days

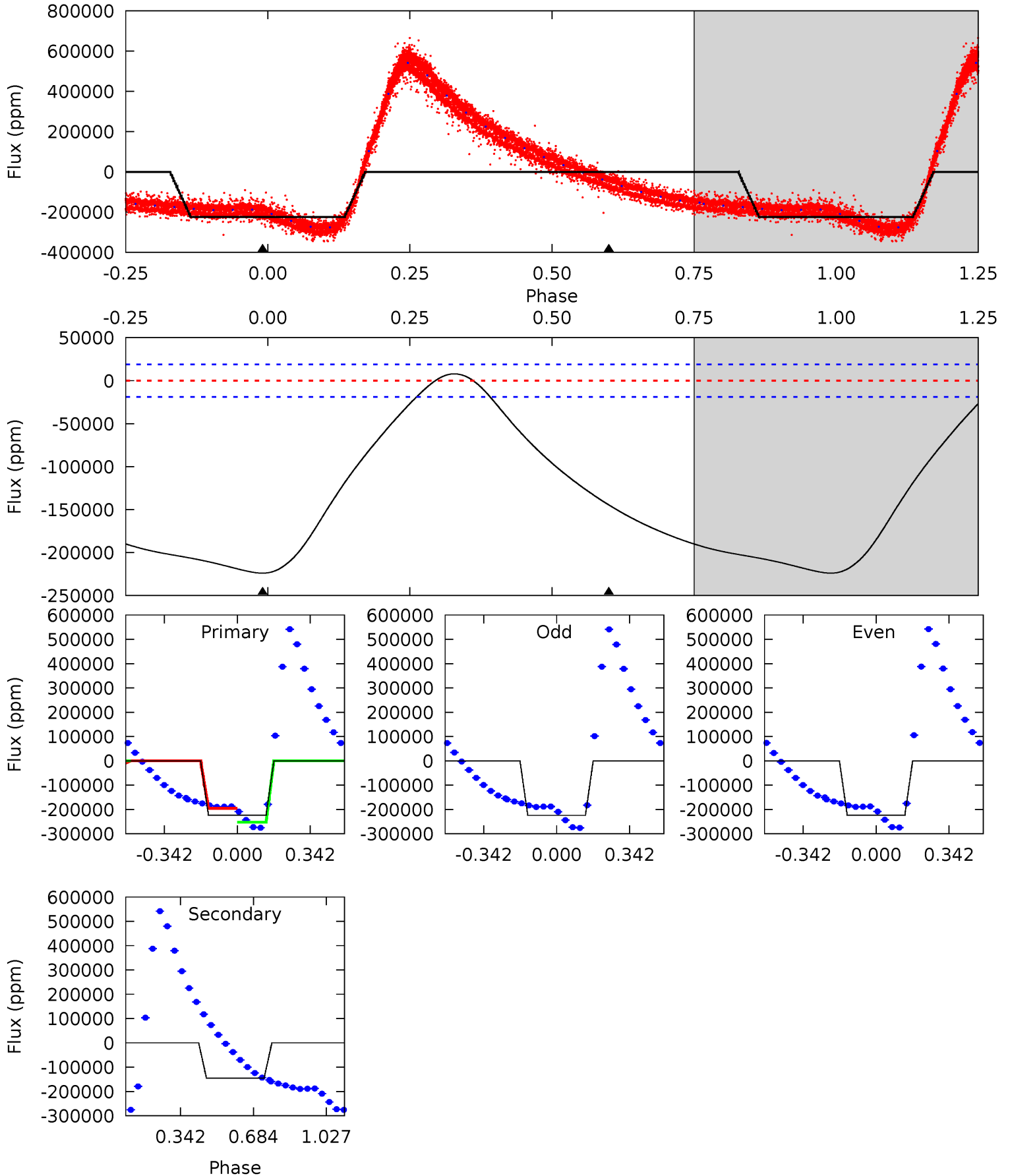
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.6	44.2	1.99	1.53	4.53	1.55	7.42	61.6	62.1	42.2	42.7	1.16	2.12	0.12	25.8



Alt Model-Shift Uniqueness Test

009717032-01, P = 0.556910 Days, E = 132.001388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.0	32.9	0	0	4.30	0.95	2.79	51.0	51.0	32.9	32.9	0.09	1.03	0.03	7.43



Stellar Parameters For KIC 009717032

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009717032-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-40717 ± 921	$331.86^{+369.69}_{-228.97}$	2433^{+1111}_{-501}	-2500^{+5547}_{-728}	$0.096^{+0.978}_{-0.083}$
Alt.	-144601 ± 4390	$341.15^{+406.59}_{-249.48}$	2412^{+1130}_{-472}	1969^{+2152}_{-5084}	$0.322^{+4.750}_{-0.278}$

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 $A_{obs} \gg 1.0$

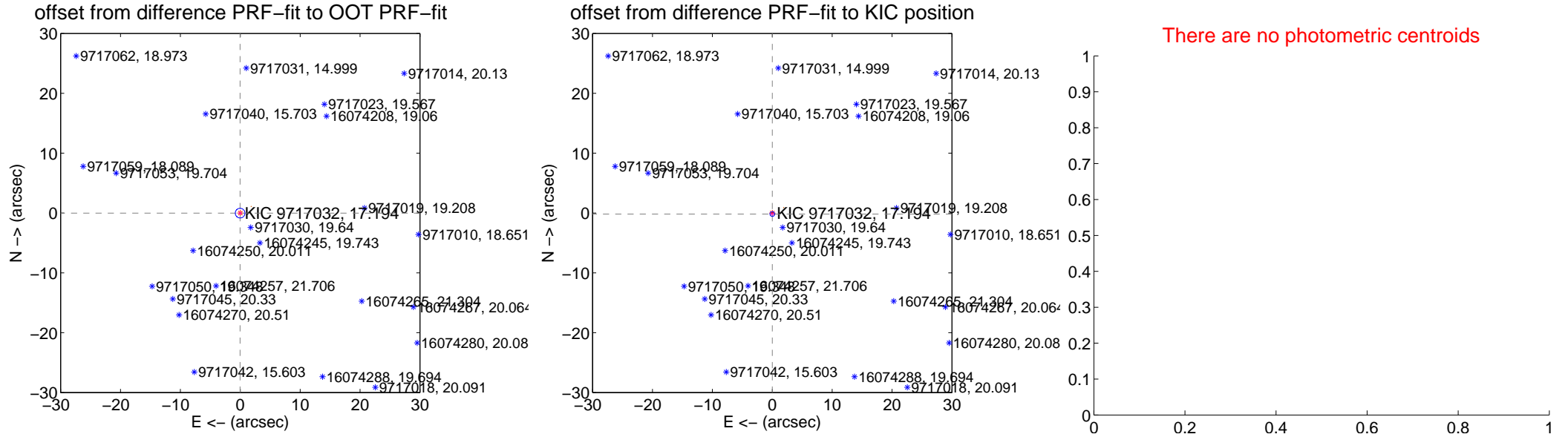
DV Centroid Data

Supplemental centroid analysis for 009717032-01. Kepler magnitude: 17.19. Transit SNR 0.00

There are 2 quarters with good PRF difference image offsets

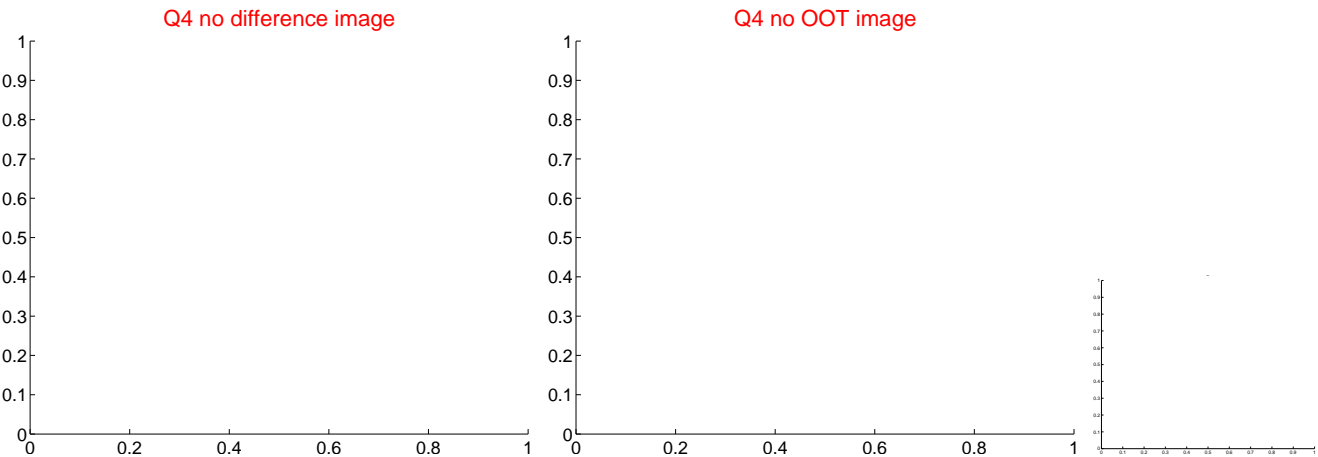
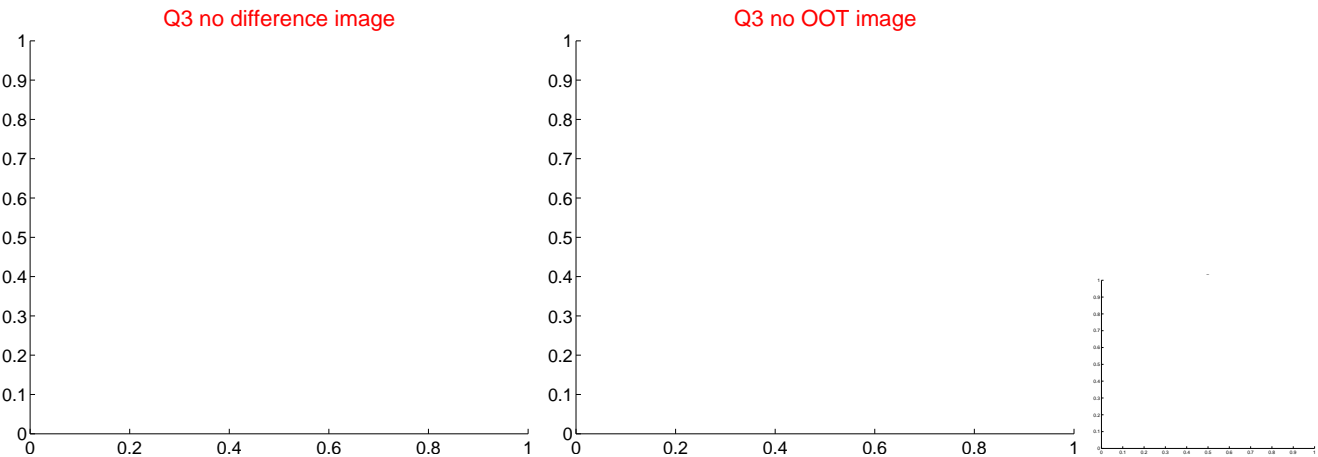
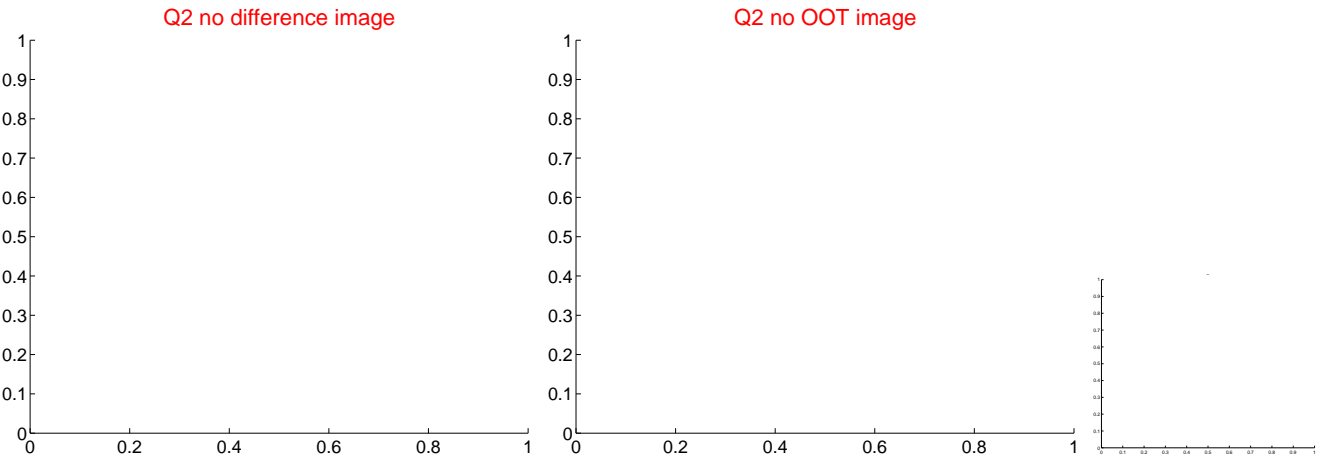
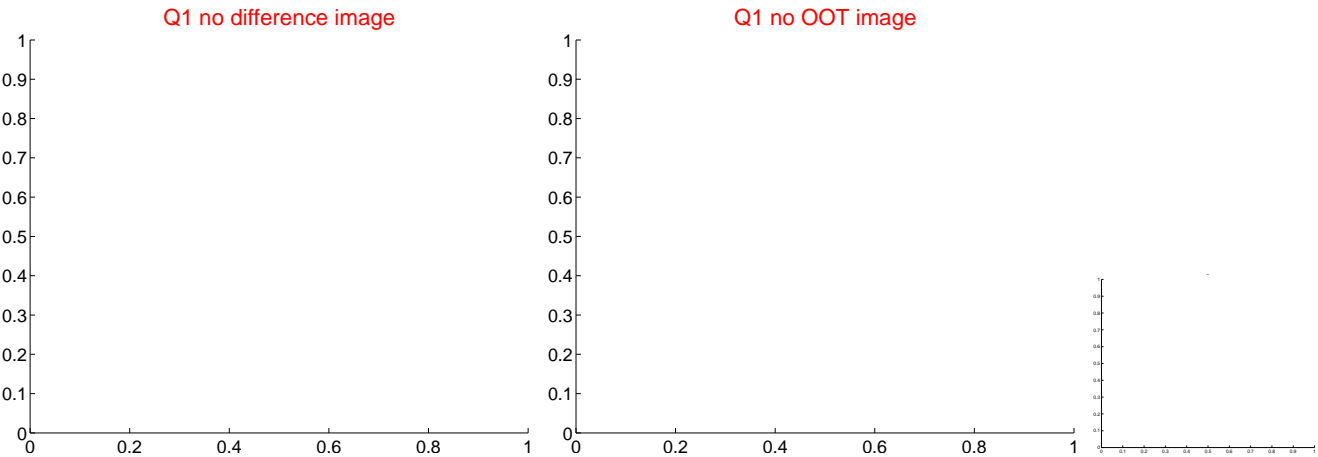
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.269	0.13	0.029 ± 0.235	-0.019 ± 0.148
PRF-fit source offset from KIC position	0.172 ± 0.131	1.31	-0.003 ± 0.215	-0.172 ± 0.134
photometric centroid source offset	—	—	—	—

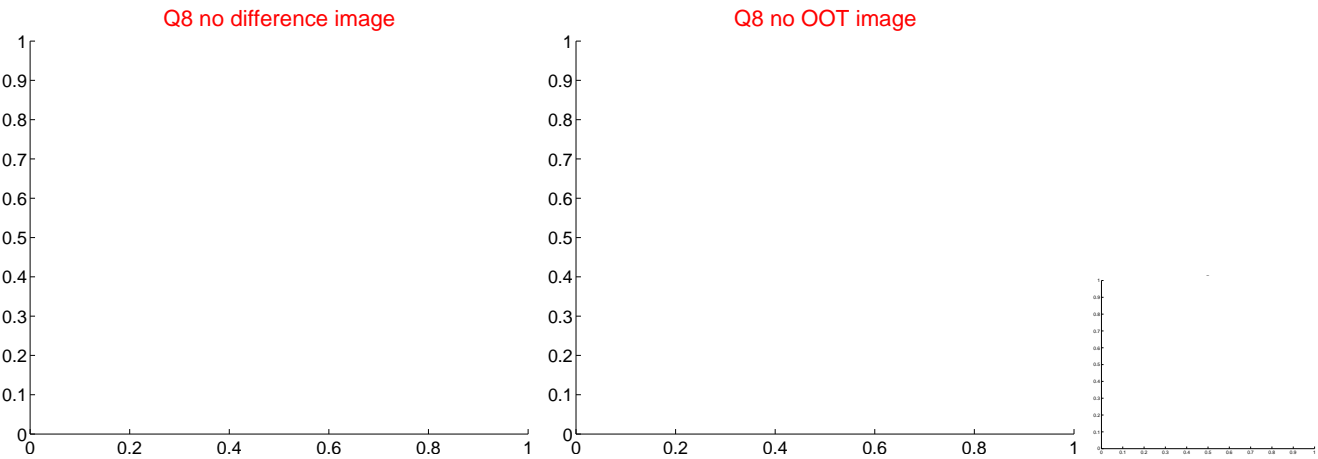
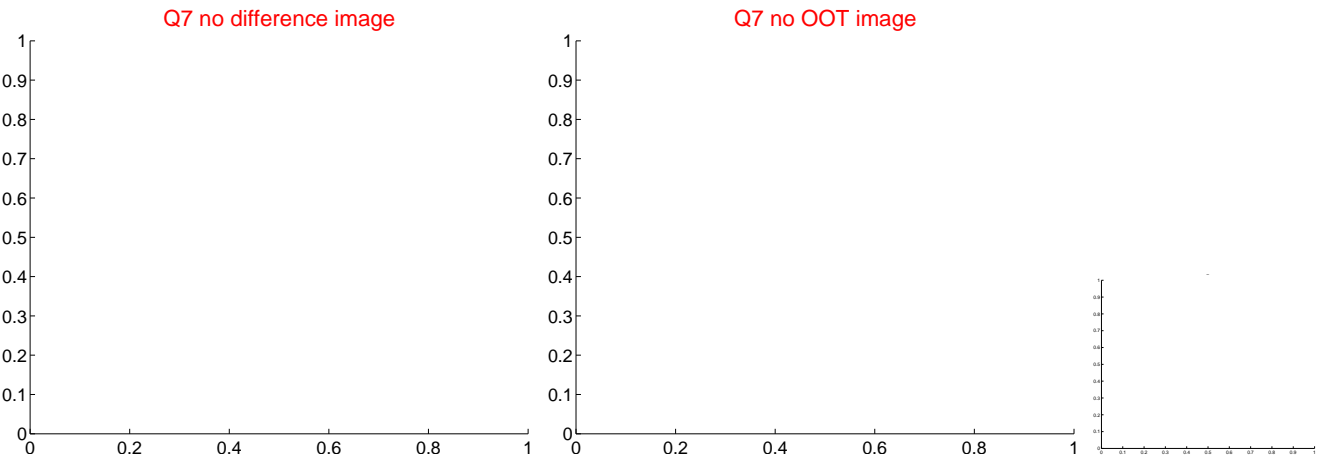
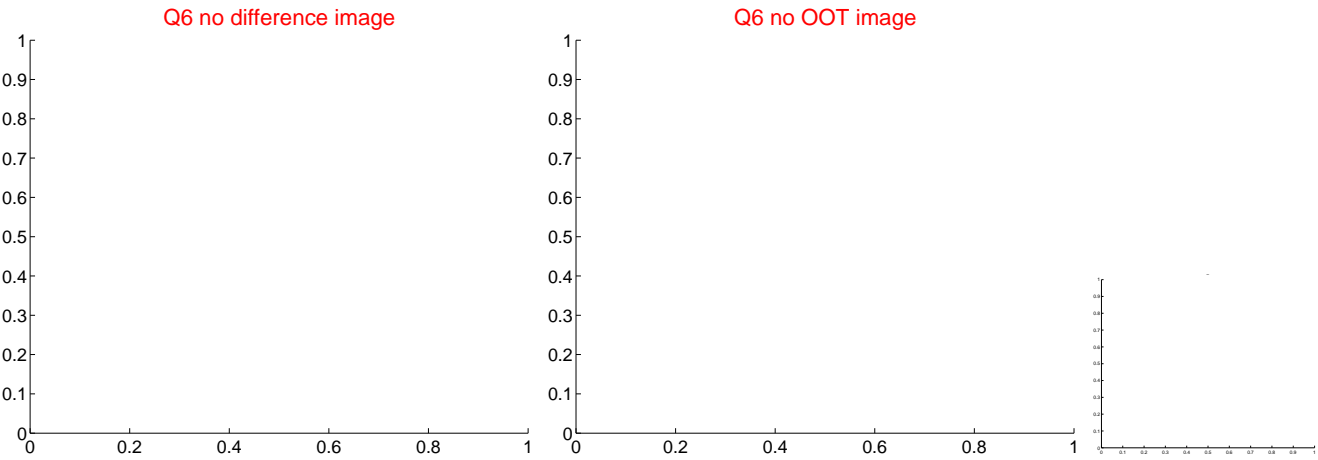
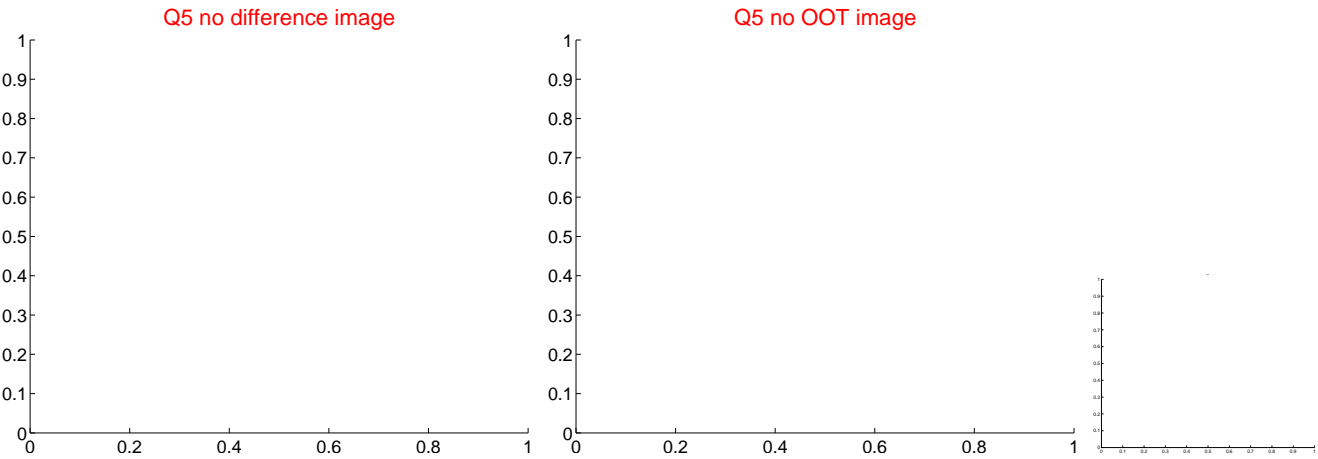


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

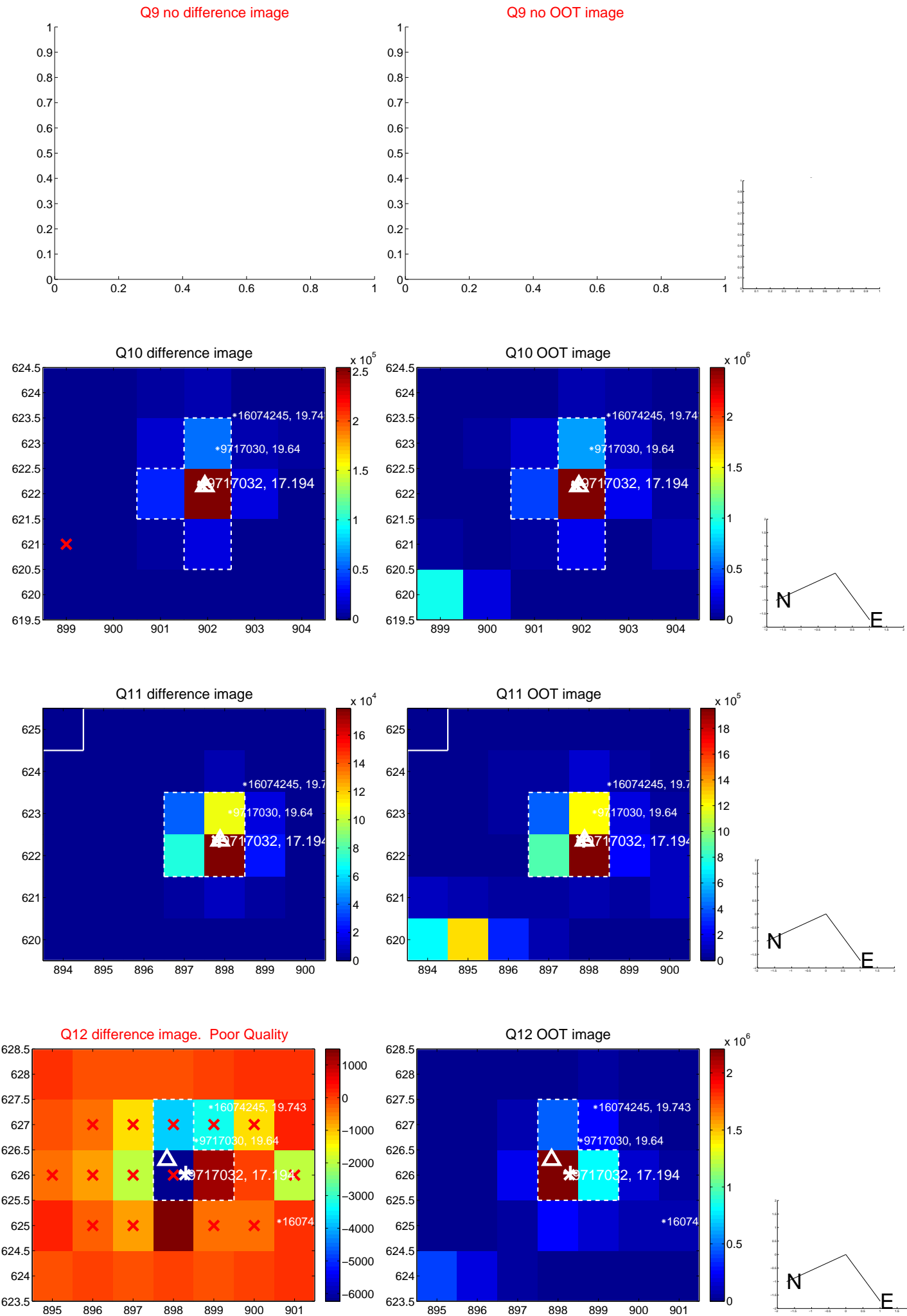
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



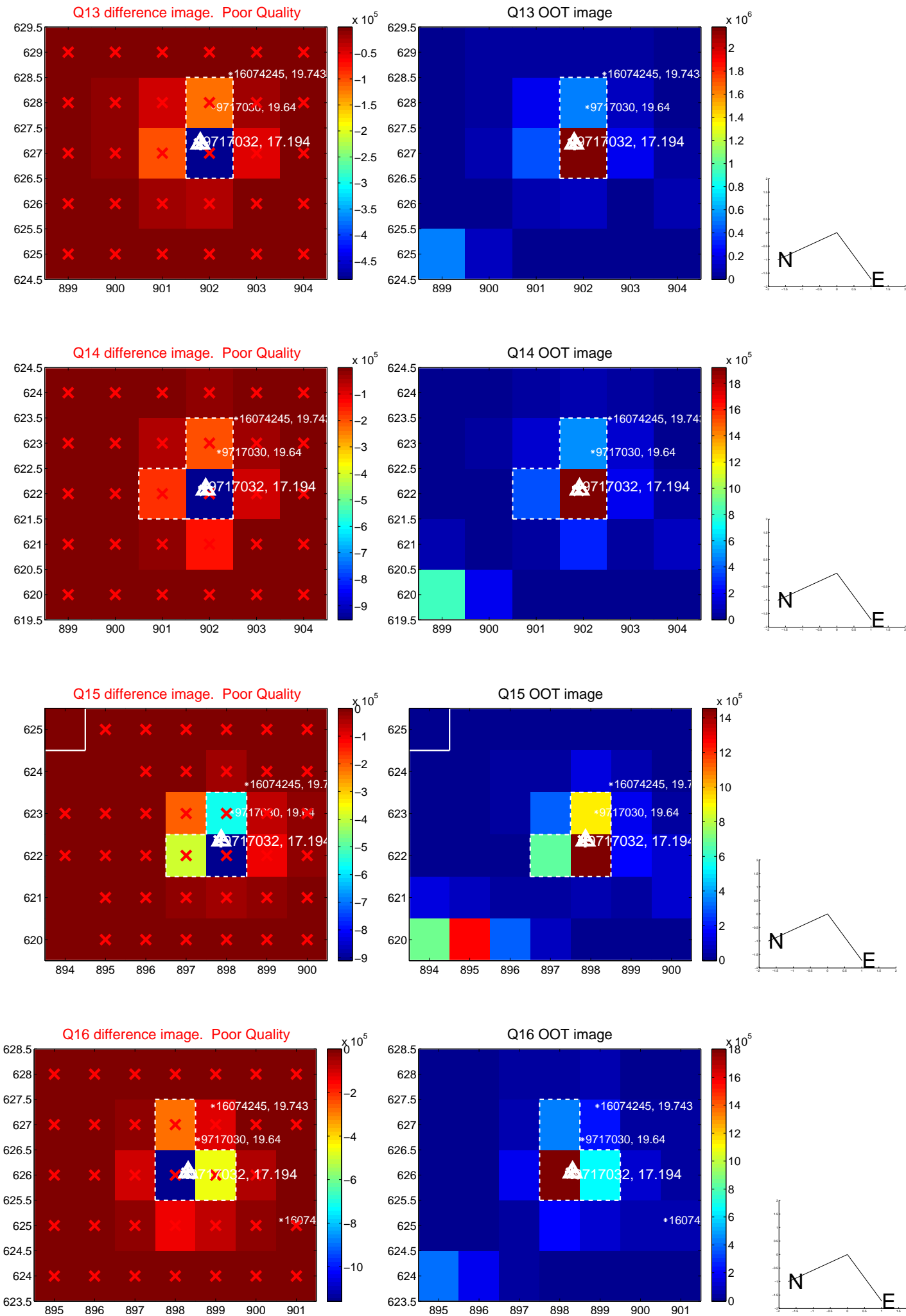
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



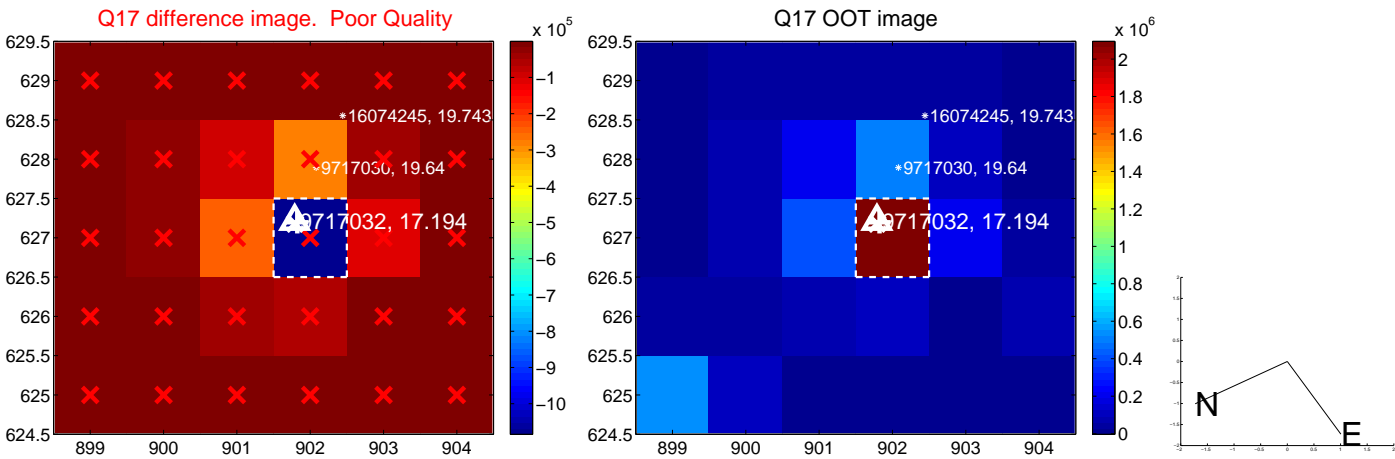
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



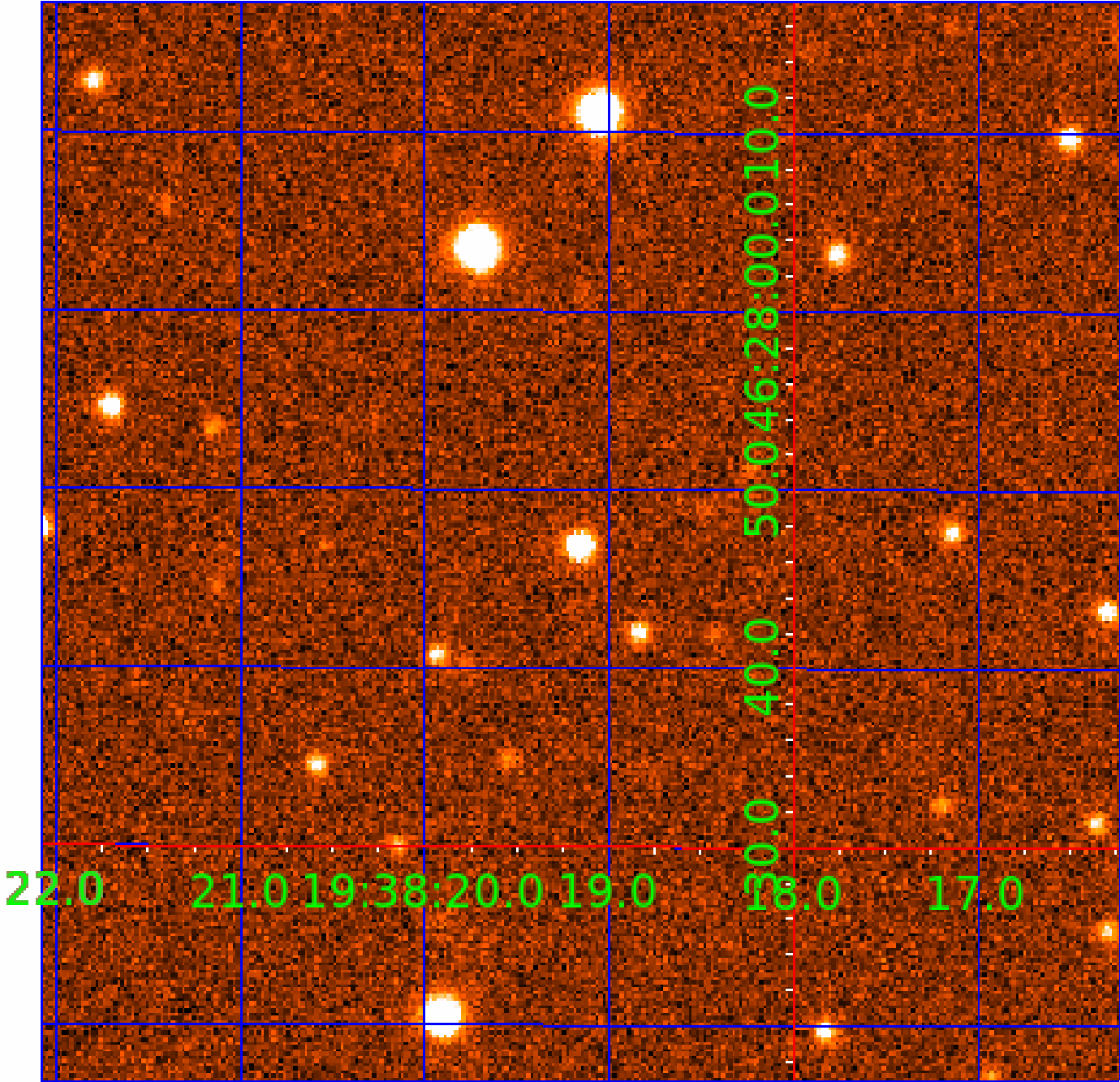
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 009717032

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})
009717032-01	OBS	No	0.556740	132.006650	0.0	1.179	241.9	0.0	1.00	5780	0.02	5698.17
009717032-02	OBS	No	0.556869	131.579744	7452.9	1.500	70.2	-1.0	1.00	5780	8.59	5696.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009717032-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS
009717032-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

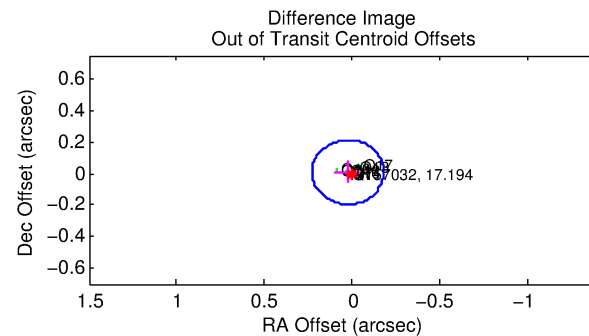
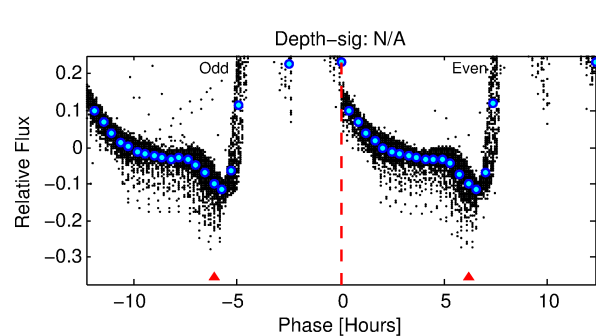
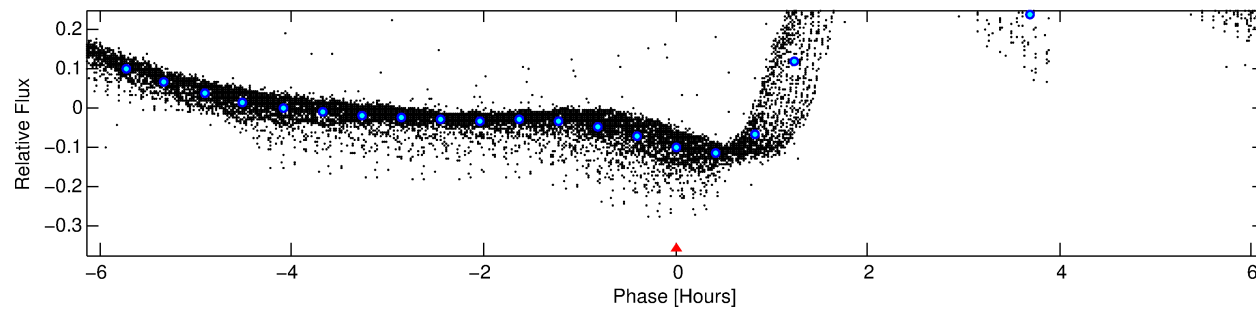
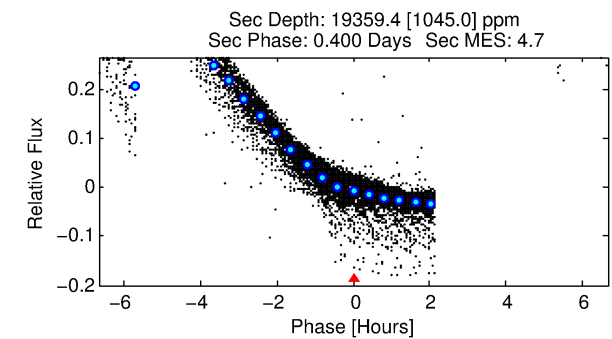
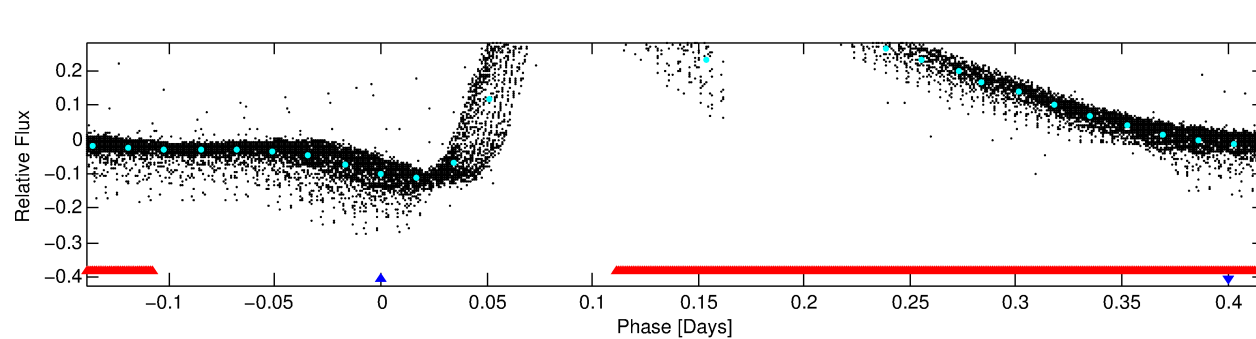
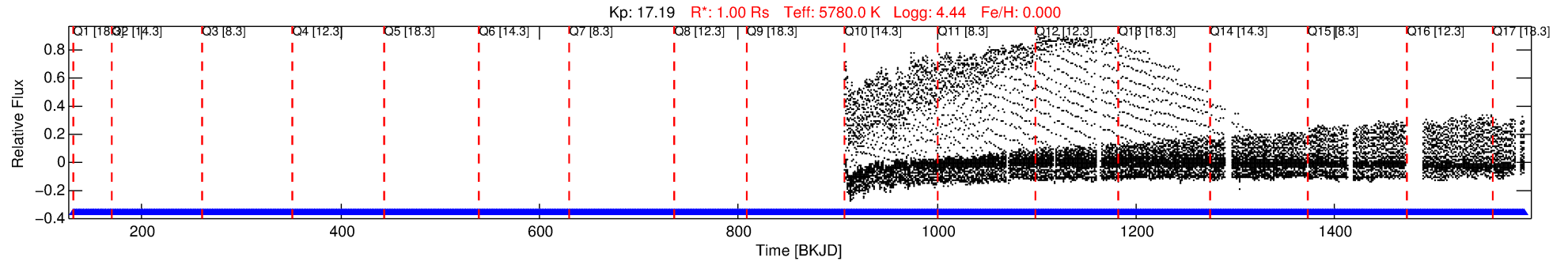
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009717032-02

No Significant Match Found

DV One-Page Summary

KIC: 9717032 Candidate: 2 of 2 Period: 0.557 d



TPS TCE Results:

Period = 0.55687 d
Epoch = 131.5797 BKJD

DV fit results are unavailable

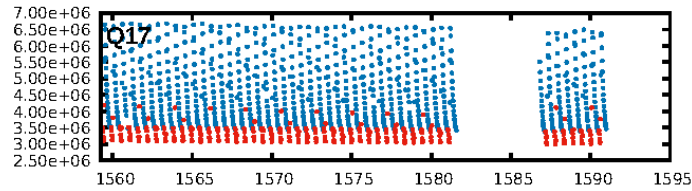
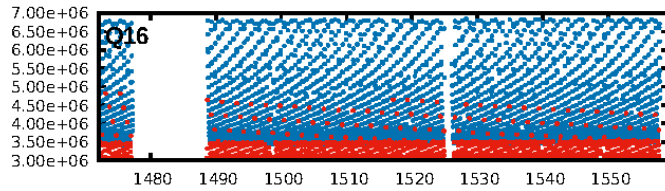
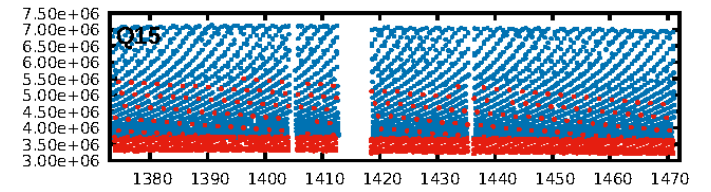
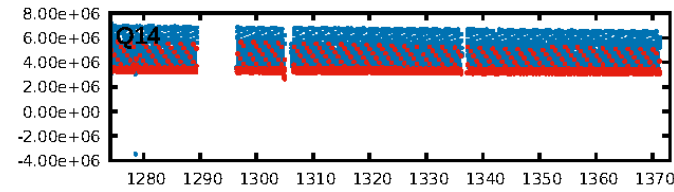
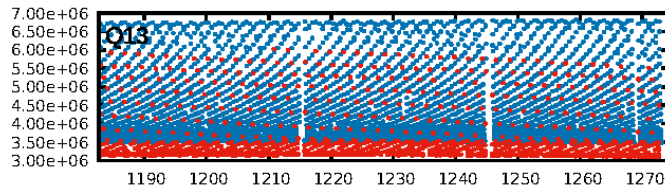
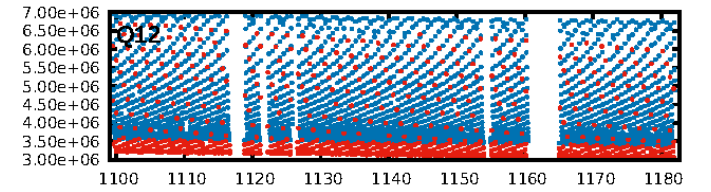
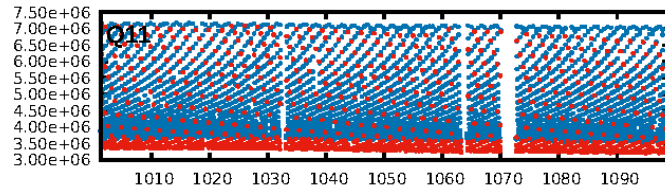
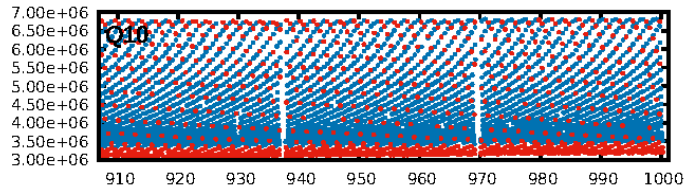
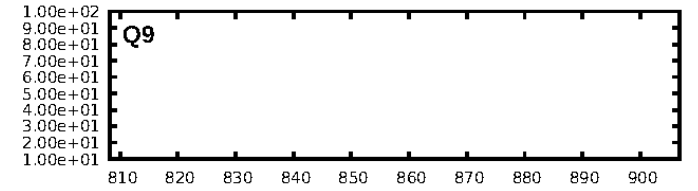
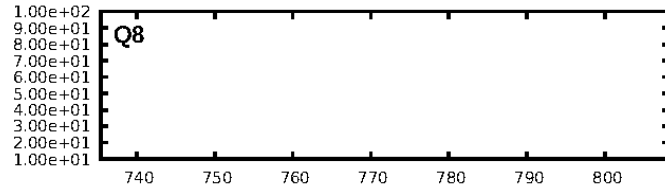
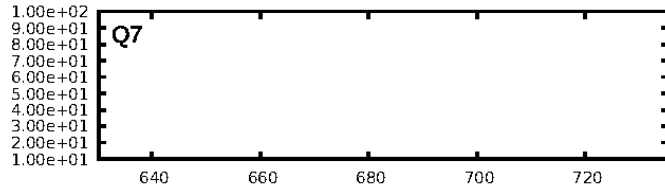
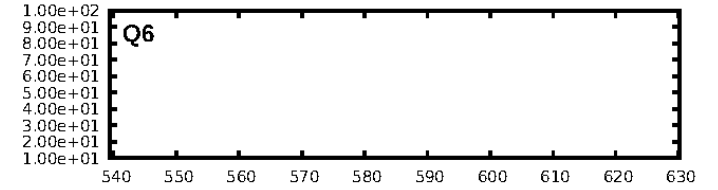
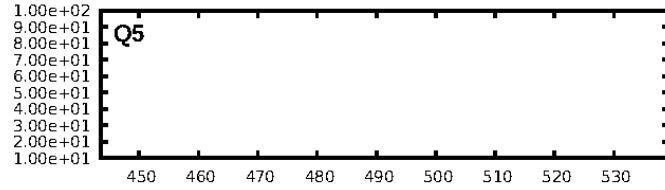
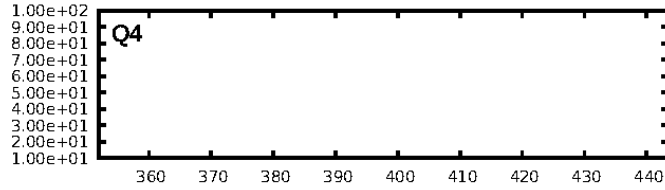
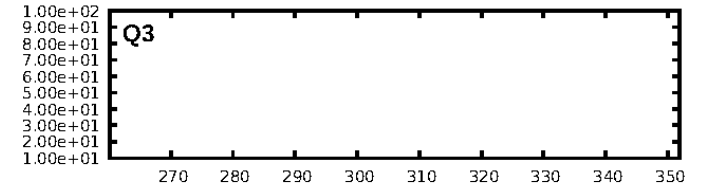
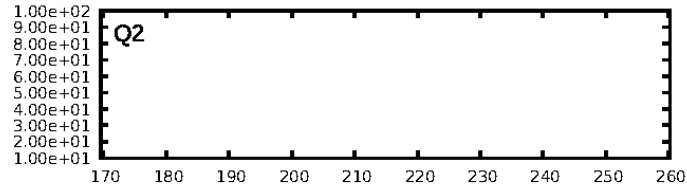
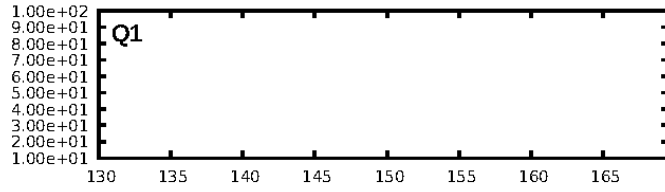
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1073/1073]
GhostDiagnostic-chr: -19.71
Centroid-sig: 0.0%
Centroid-so: 0.289 arcsec [89.29 σ]
OotOffset-rm: 0.028 arcsec [0.40 σ]
KicOffset-rm: 0.157 arcsec [2.27 σ]
OotOffset-st: 2/2/2/2 [8]
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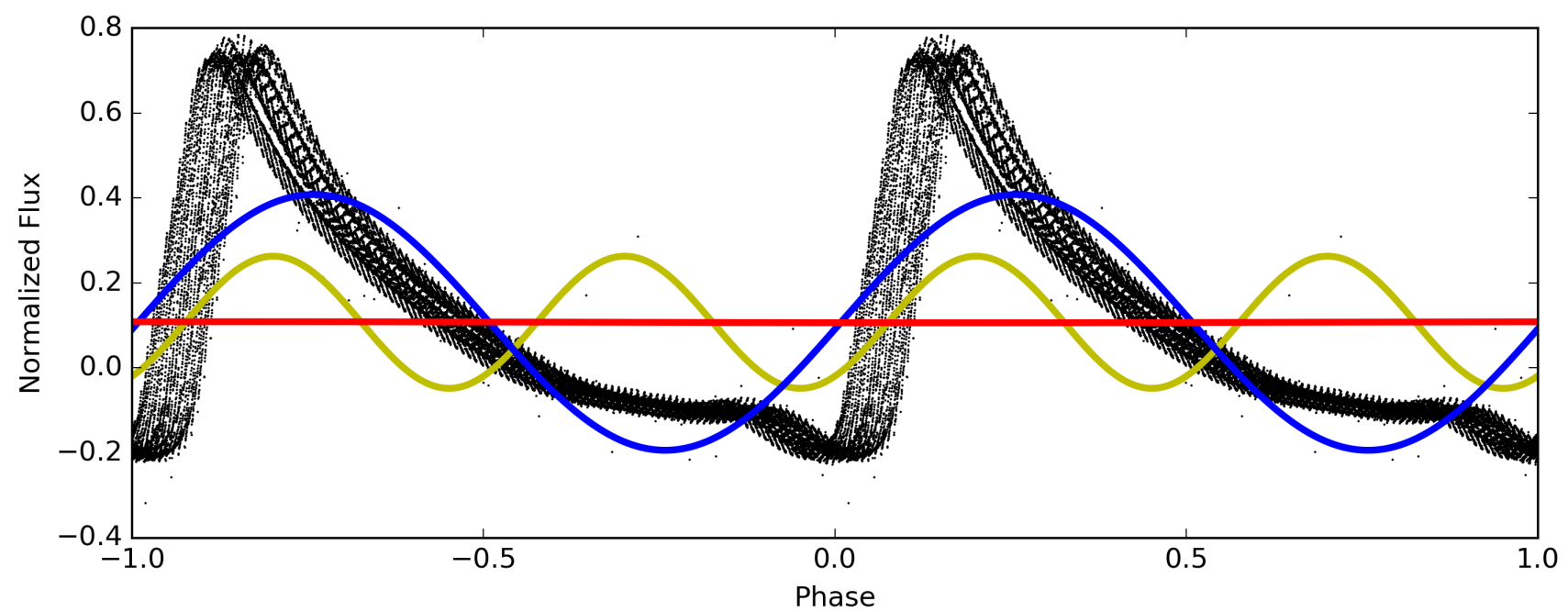
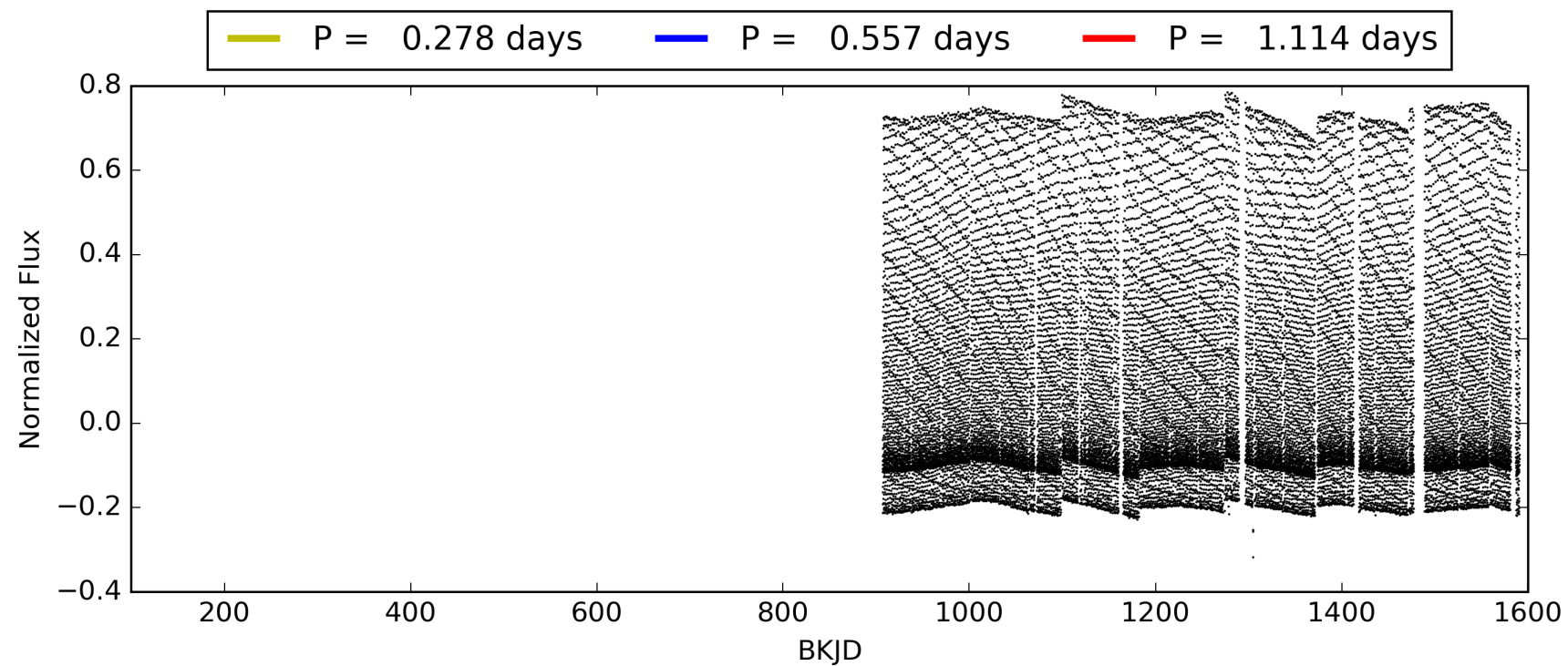
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:33:03 Z

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

TCE 009717032-02, PDC Light Curves

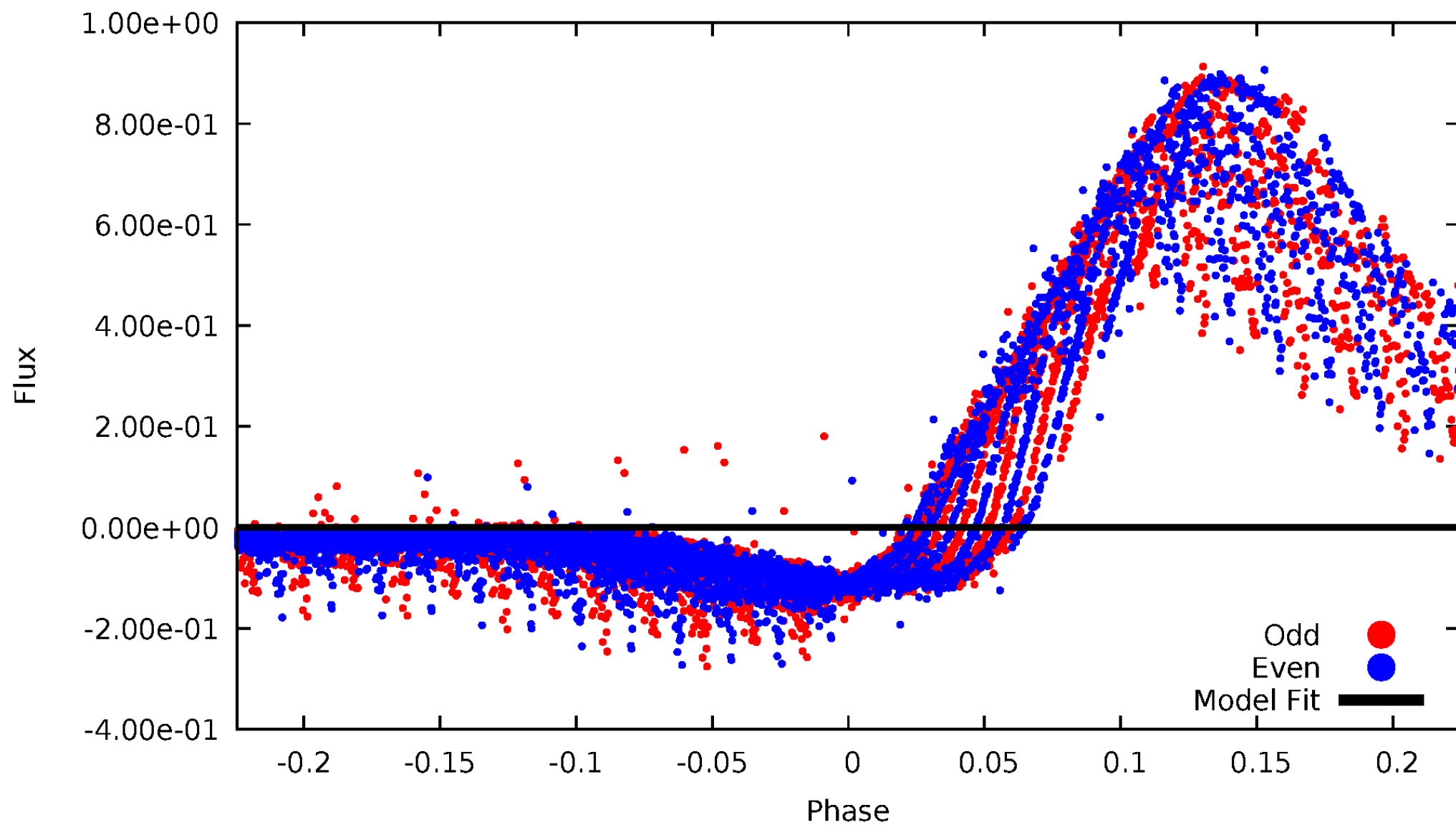


TCE 009717032-02



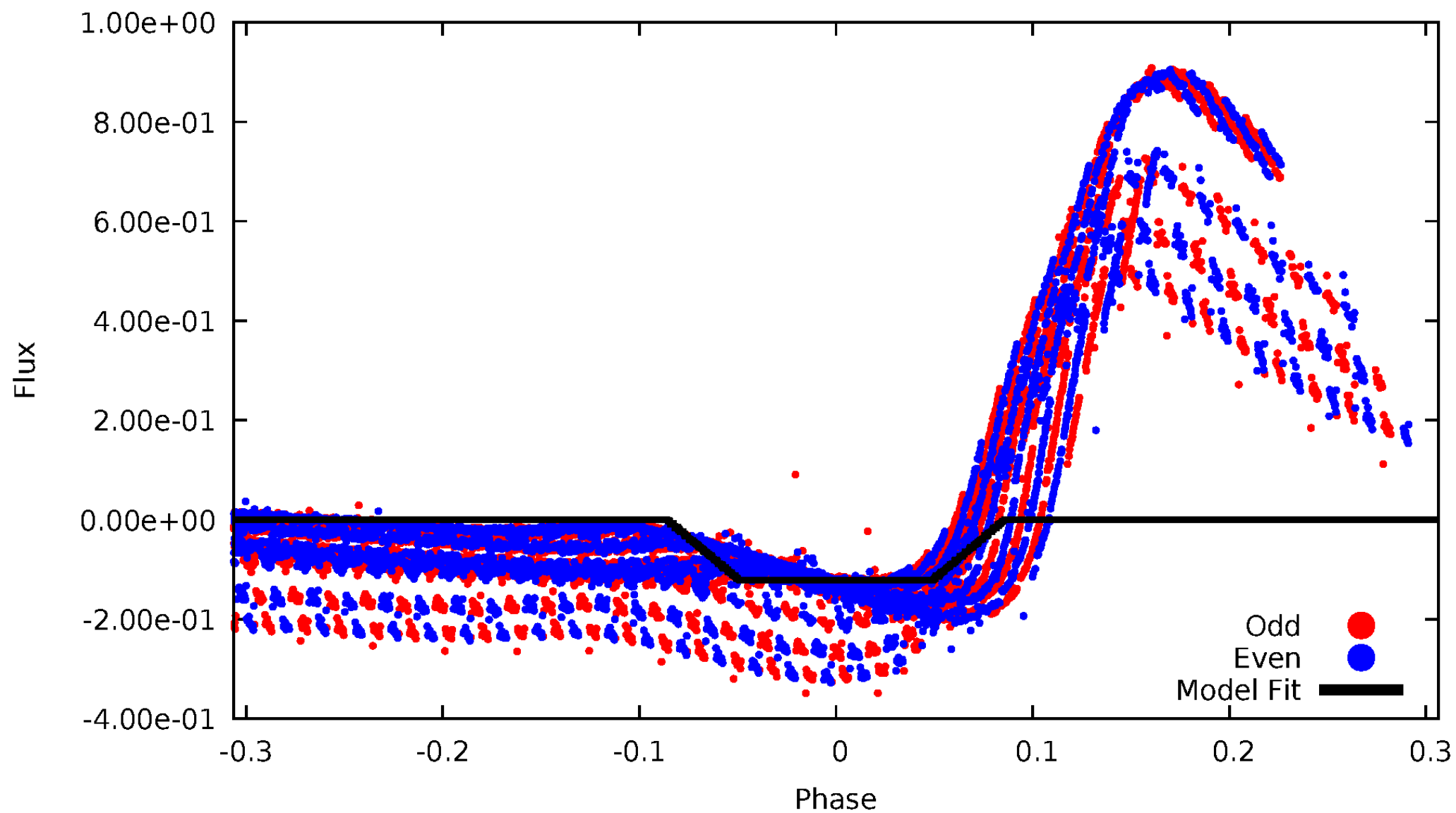
DV Odd/Even

TCE 009717032-02



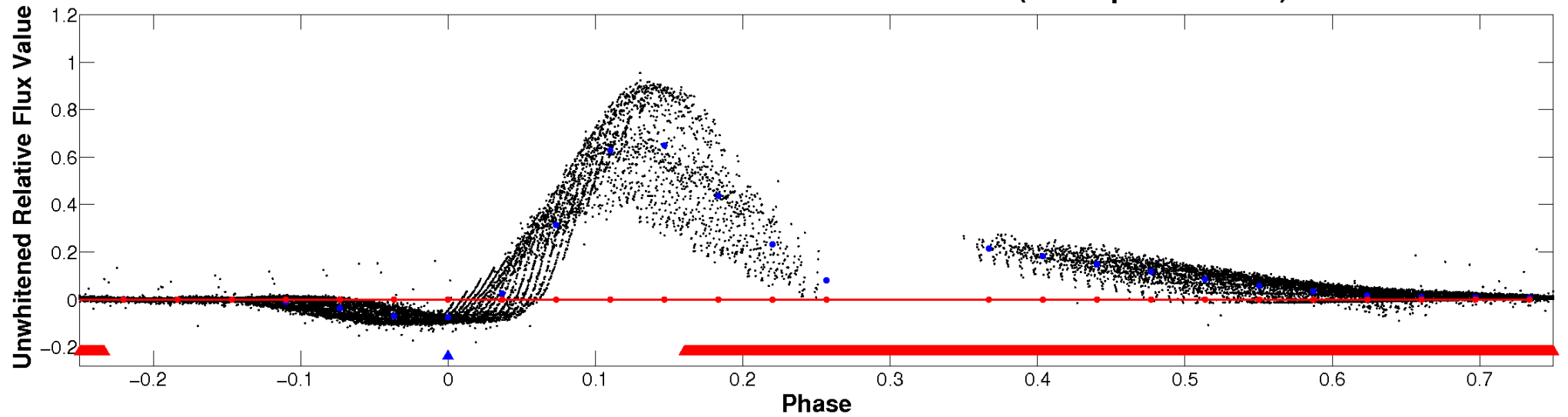
ALT Odd/Even

TCE 009717032-02

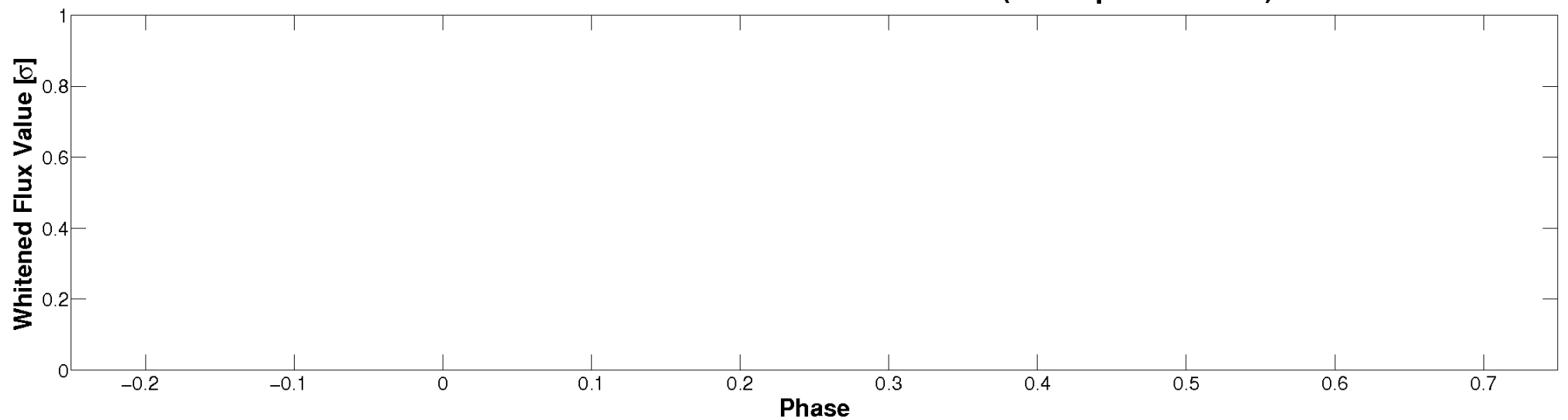


Non-Whitened Vs. Whitened Light Curve

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

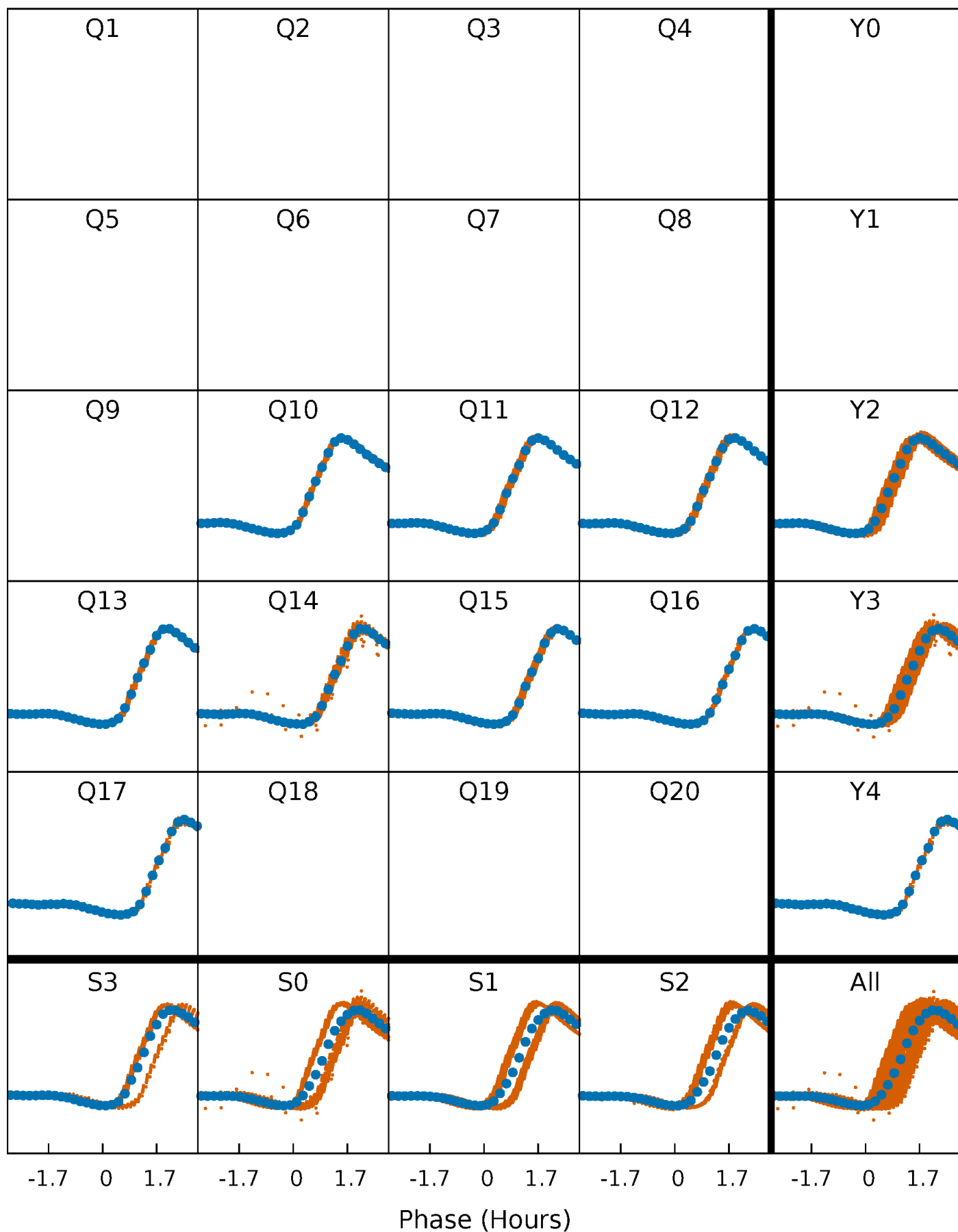


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



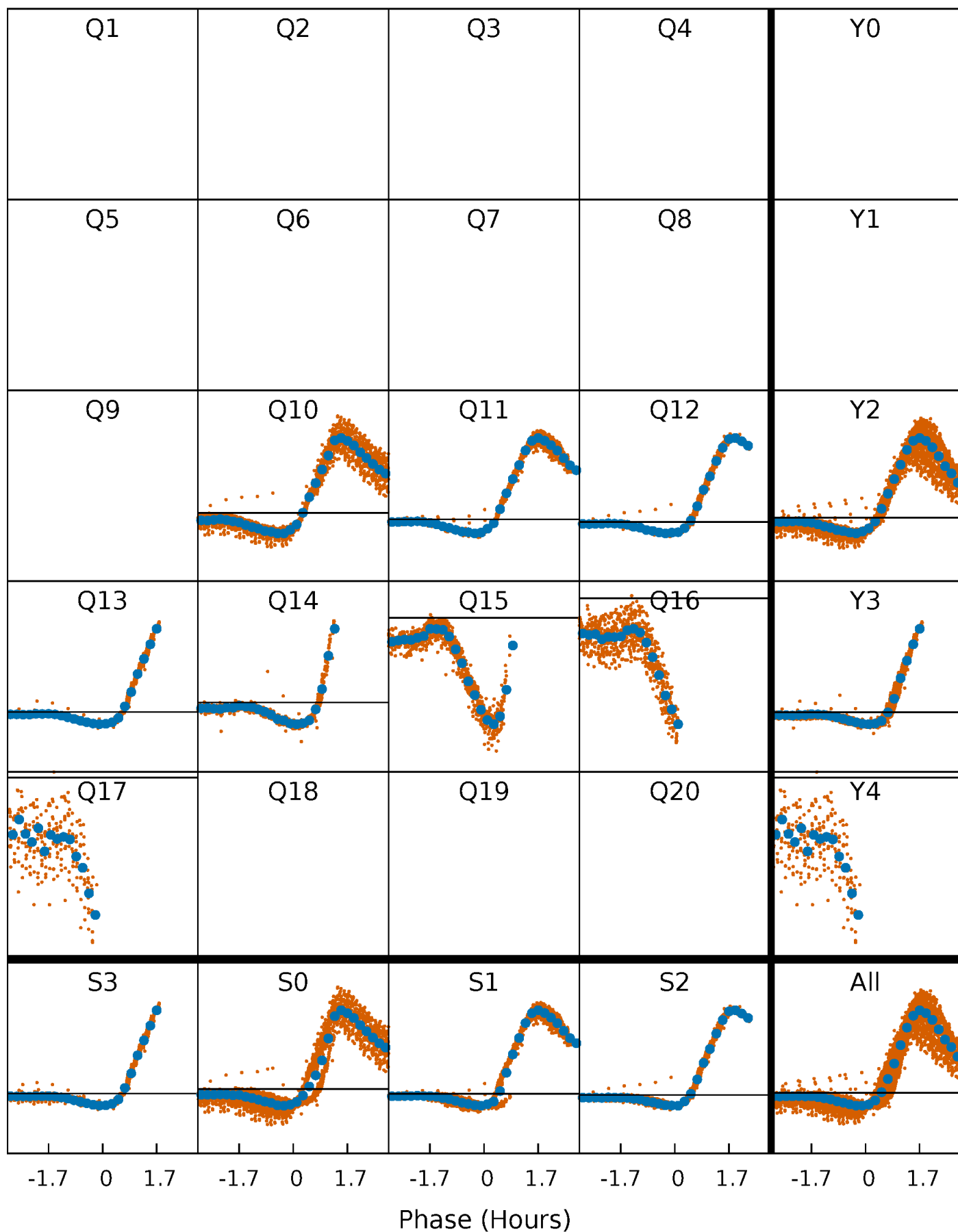
PDC Quarter-Phased Transit Curves

TCE 009717032-02 $P = 0.556869$ Days $T_0 = 131.579744$ (BKJD)



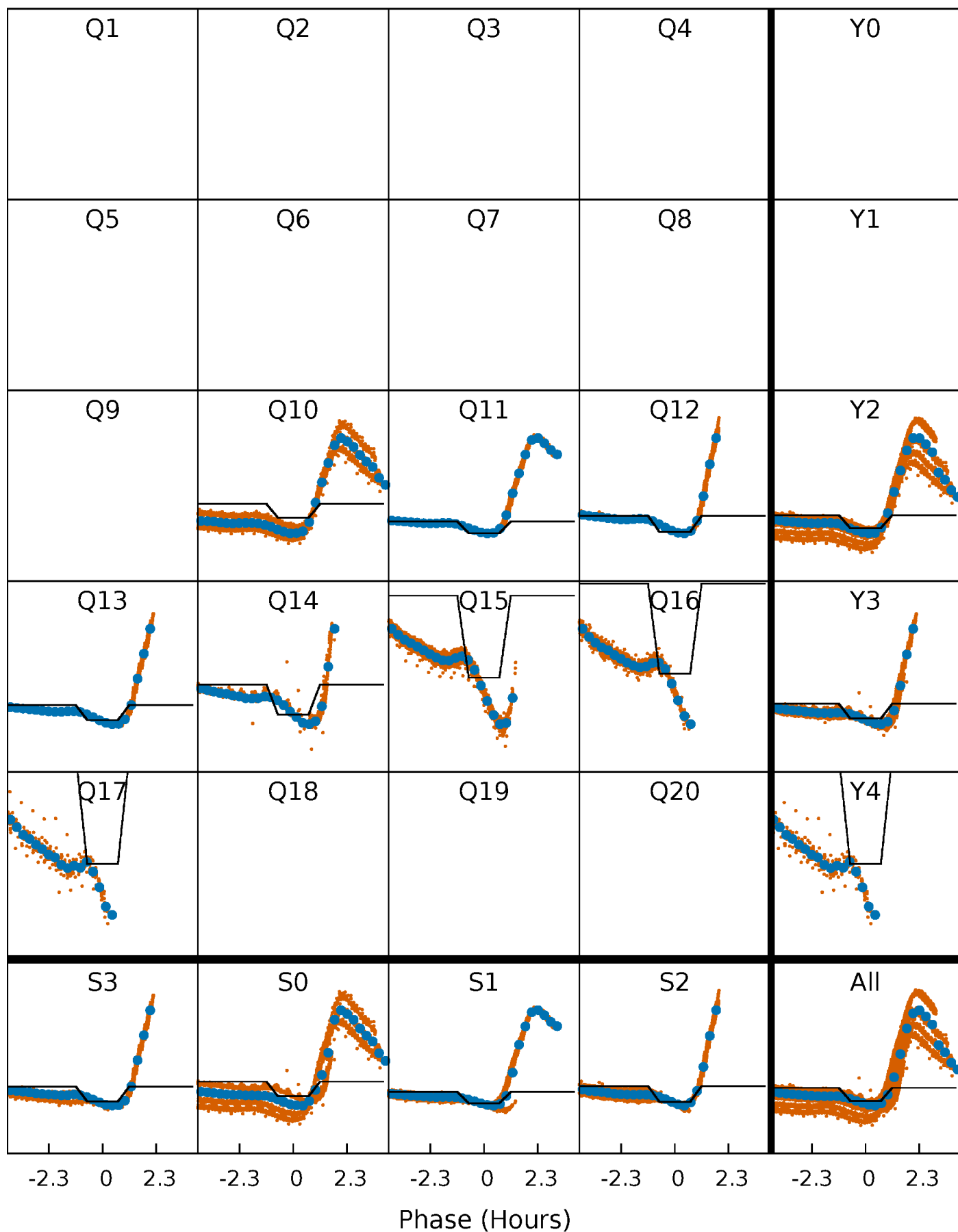
DV Quarter-Phased Transit Curves

TCE 009717032-02 P= 0.556869 Days $T_0=131.579744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

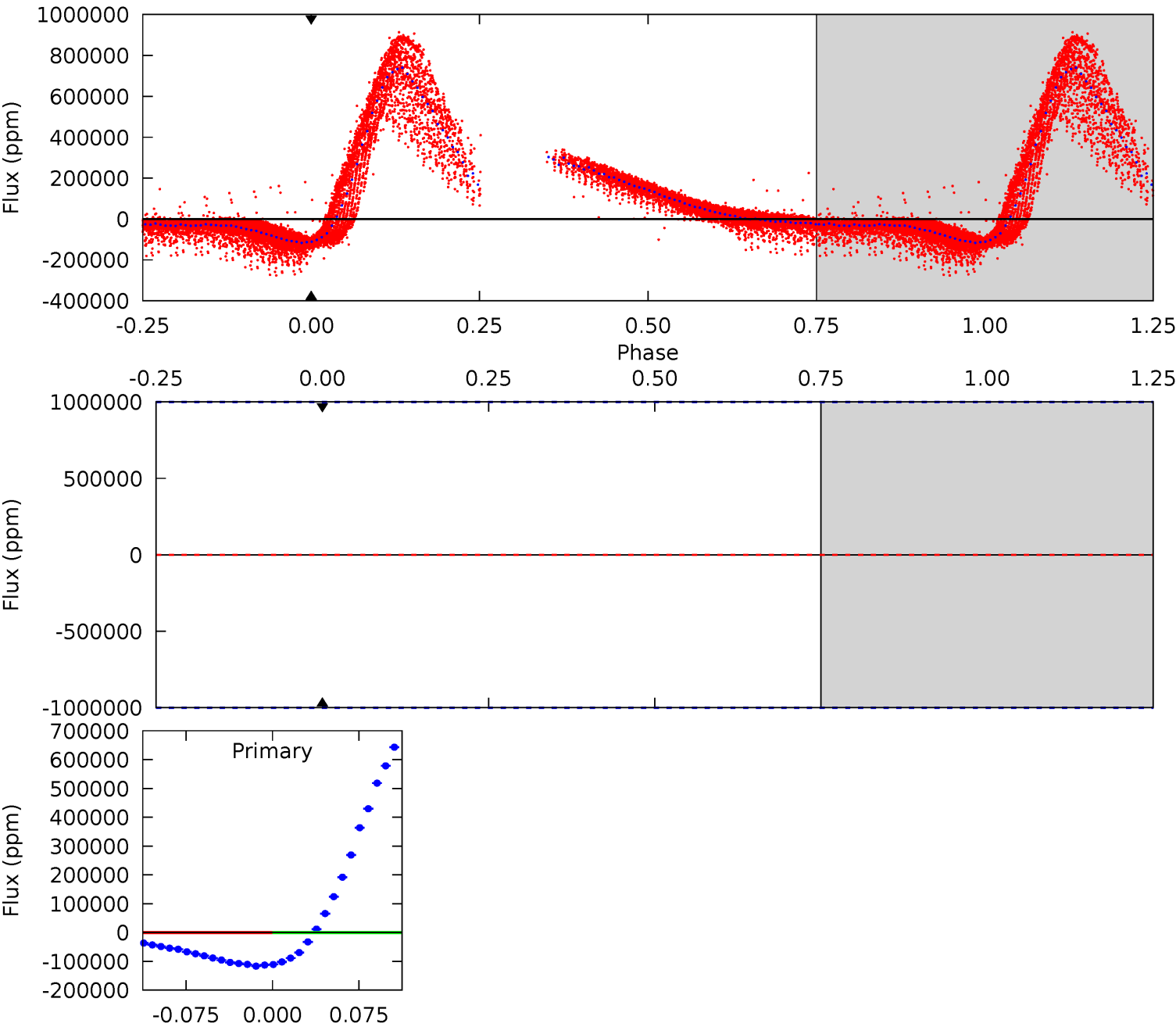
TCE 009717032-02 P= 0.556869 Days $T_0=131.557630$ (BKJD)



DV Model-Shift Uniqueness Test

009717032-02, P = 0.556869 Days, E = 131.579744 Days

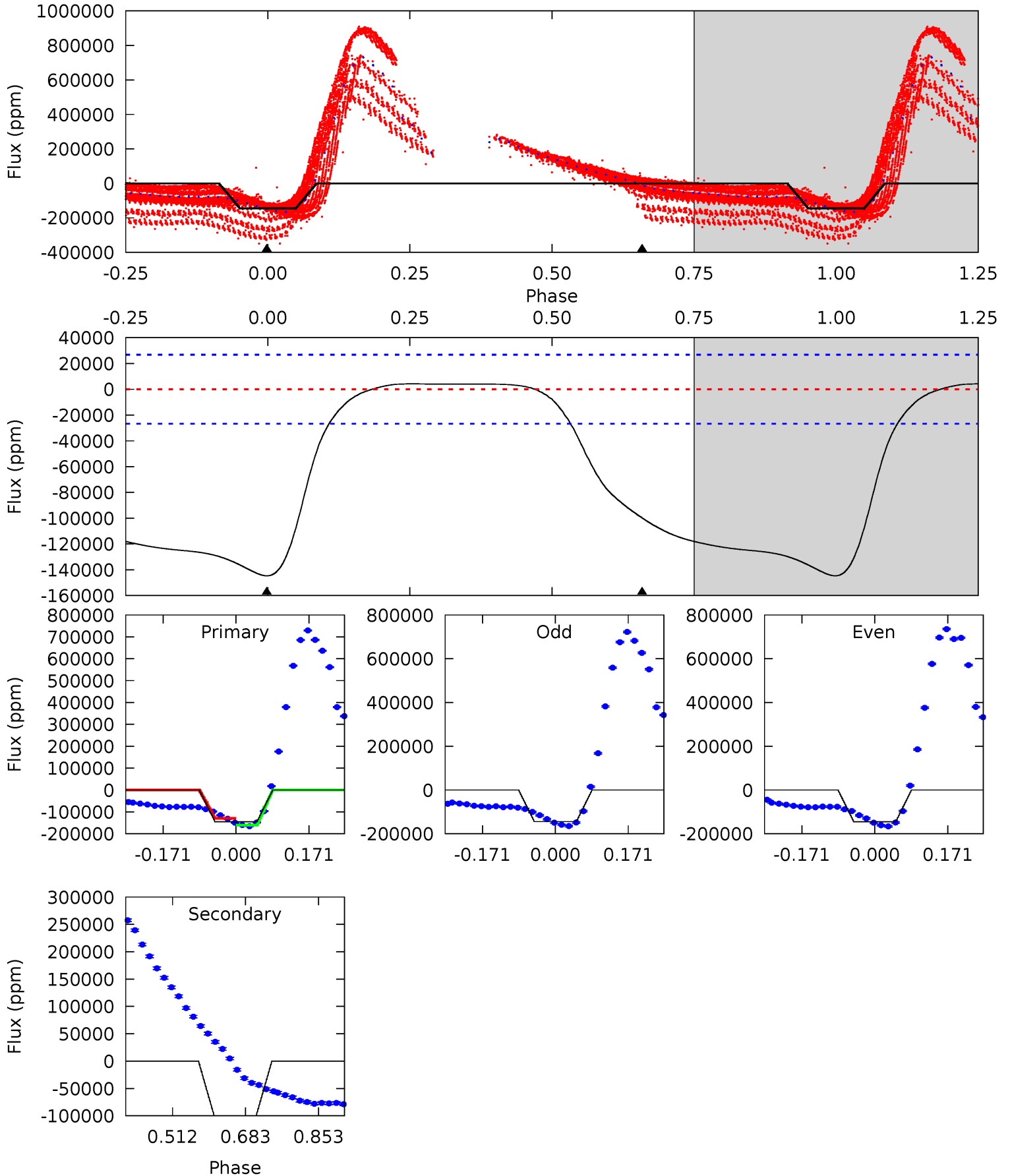
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009717032-02, P = 0.556869 Days, E = 131.557630 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	16.6	0	0	4.45	1.37	8.95	24.0	24.0	16.6	16.6	0.04	1.08	0.03	2.58



Stellar Parameters For KIC 009717032

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009717032-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$12.00^{+9.95}_{-7.21}$	3093^{+159}_{-151}	3851^{+10465}_{-15821}	$1.488^{+120.901}_{-88.676}$
Alt.	-99759 ± 6018	$38.00^{+11.62}_{-11.49}$	3093^{+145}_{-135}	5609^{+1079}_{-686}	$7.373^{+7.686}_{-3.108}$

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

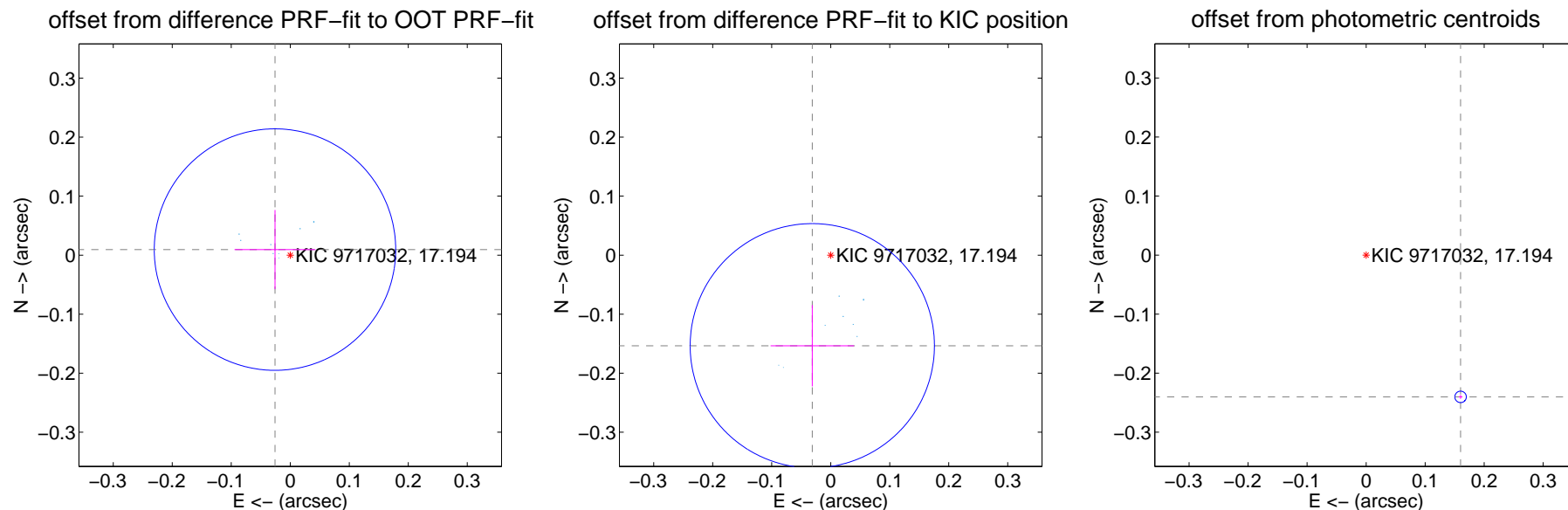
DV Centroid Data

Supplemental centroid analysis for 009717032-02. Kepler magnitude: 17.19. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

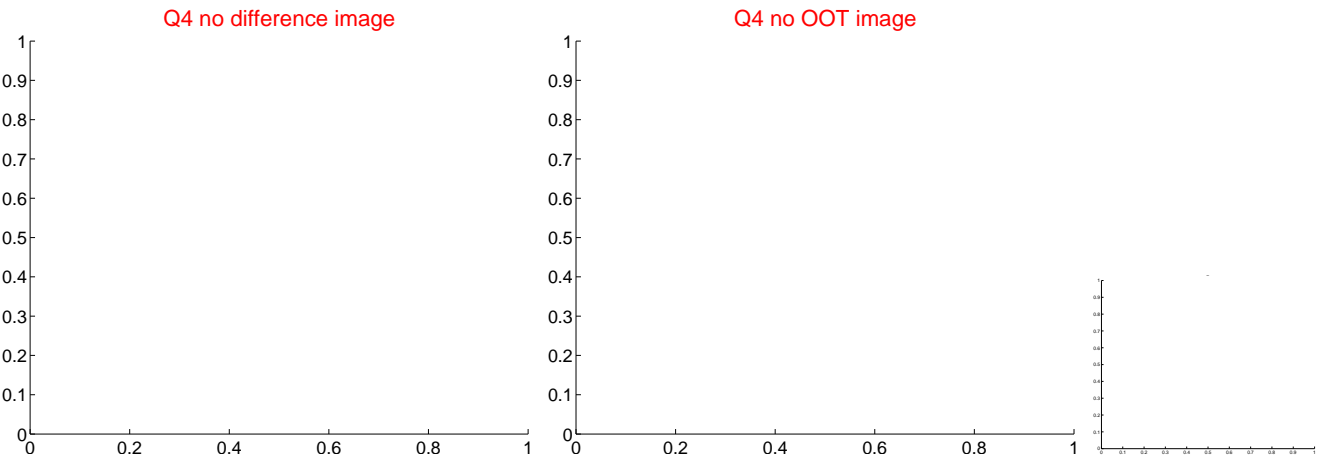
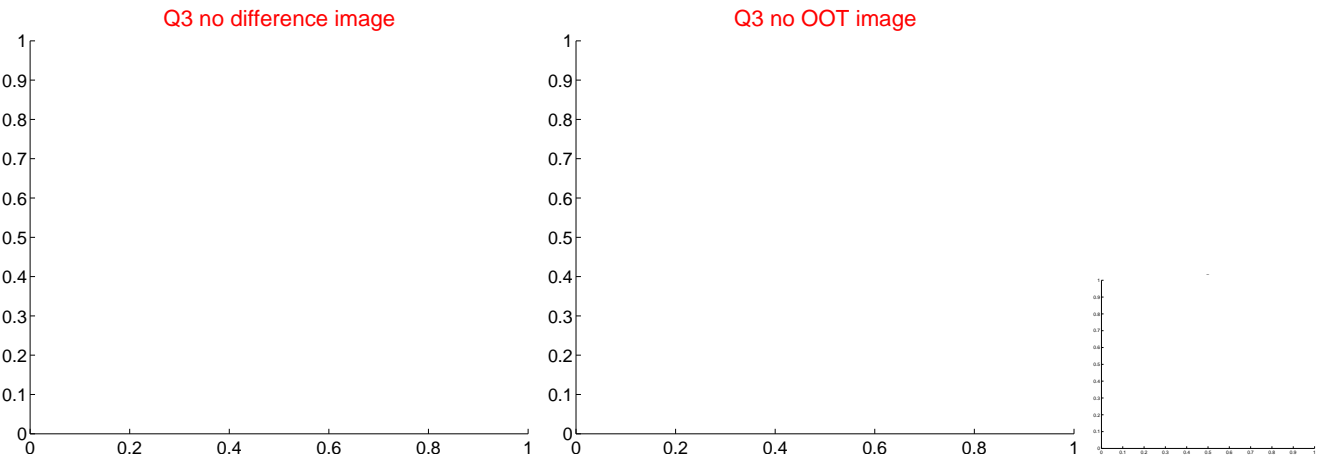
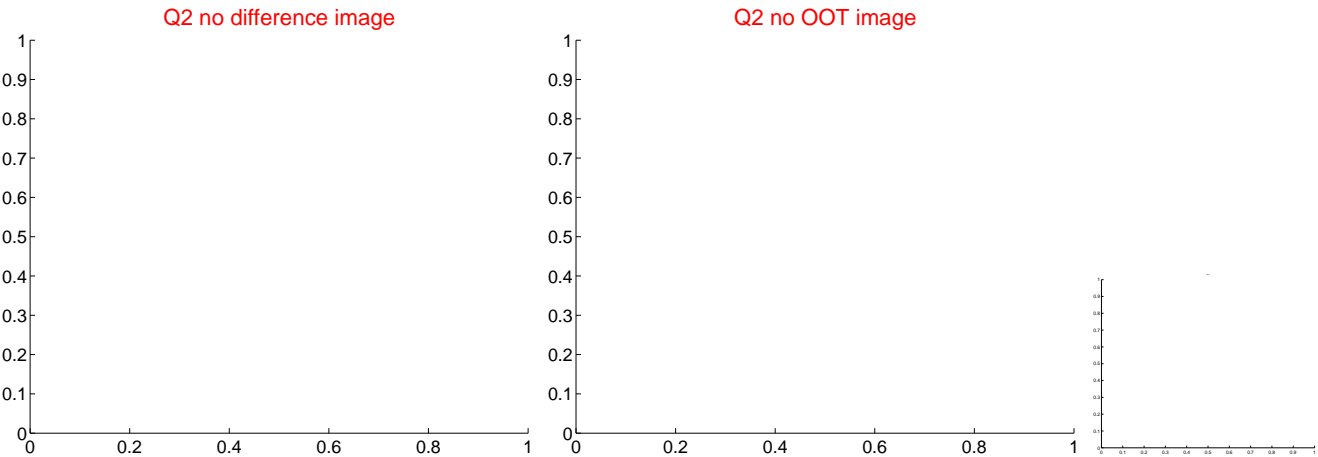
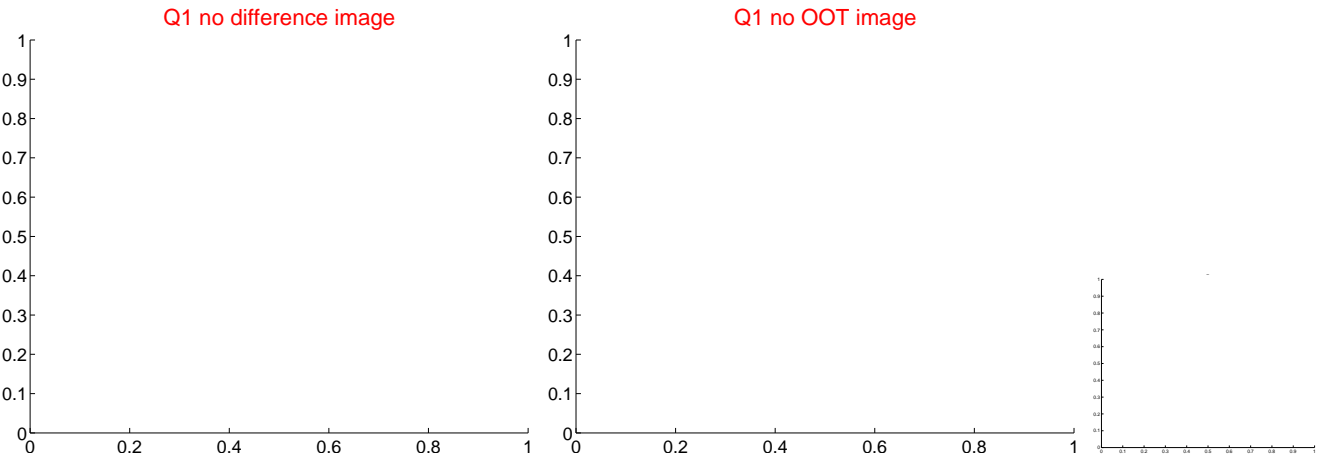
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.068	0.40	0.026 ± 0.069	0.009 ± 0.067
PRF-fit source offset from KIC position	0.157 ± 0.069	2.27	0.031 ± 0.071	-0.154 ± 0.069
photometric centroid source offset	0.29 ± 0.00	89.29	-0.16 ± 0.00	-0.24 ± 0.00

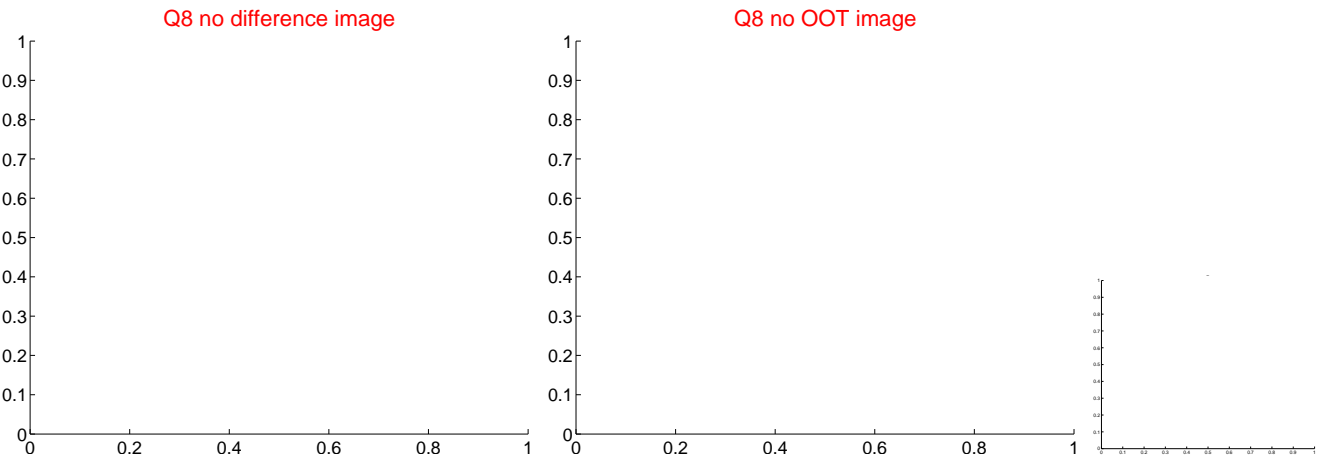
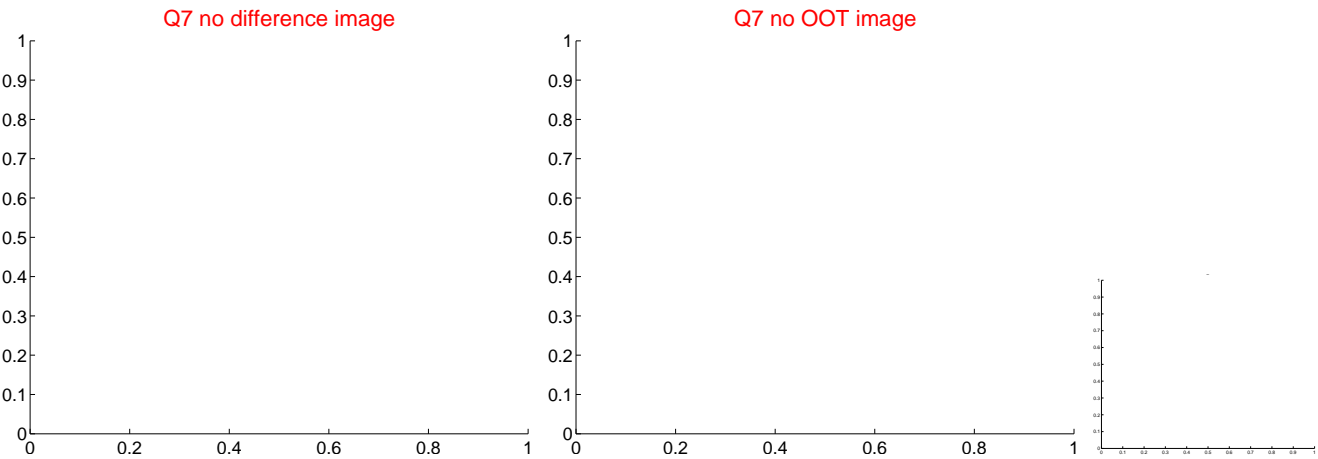
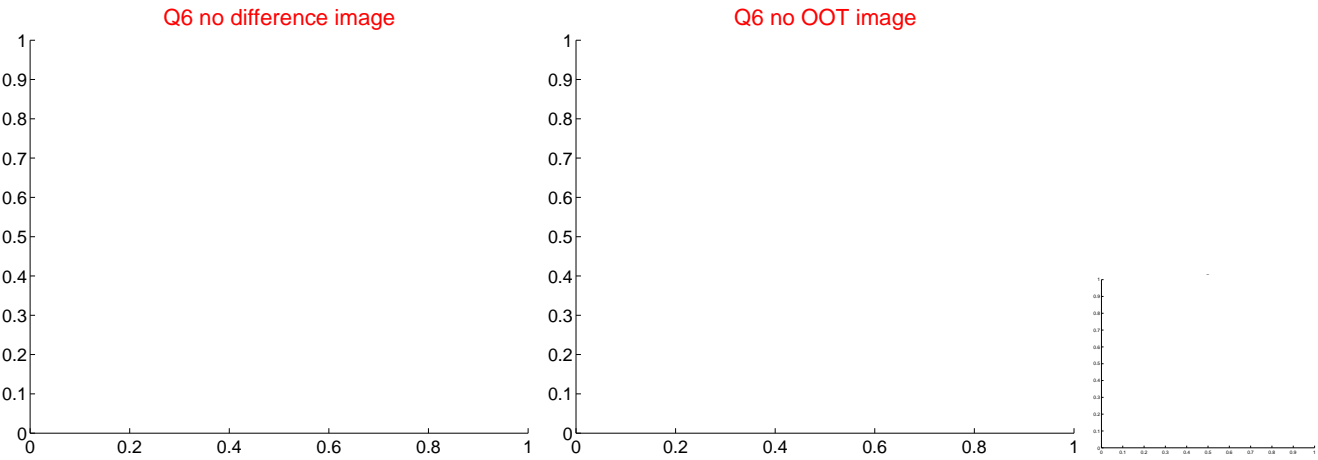
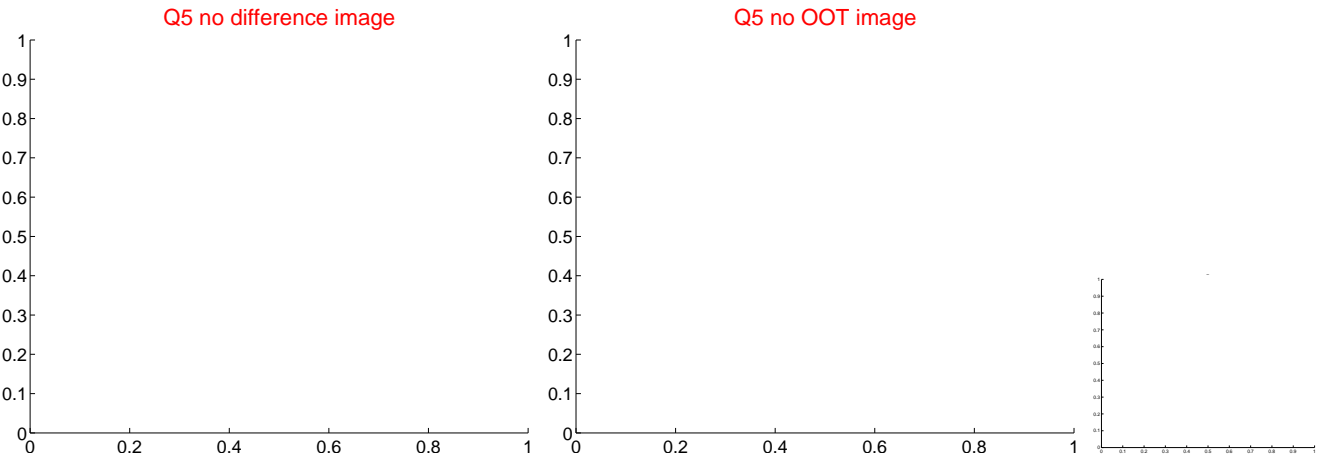


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

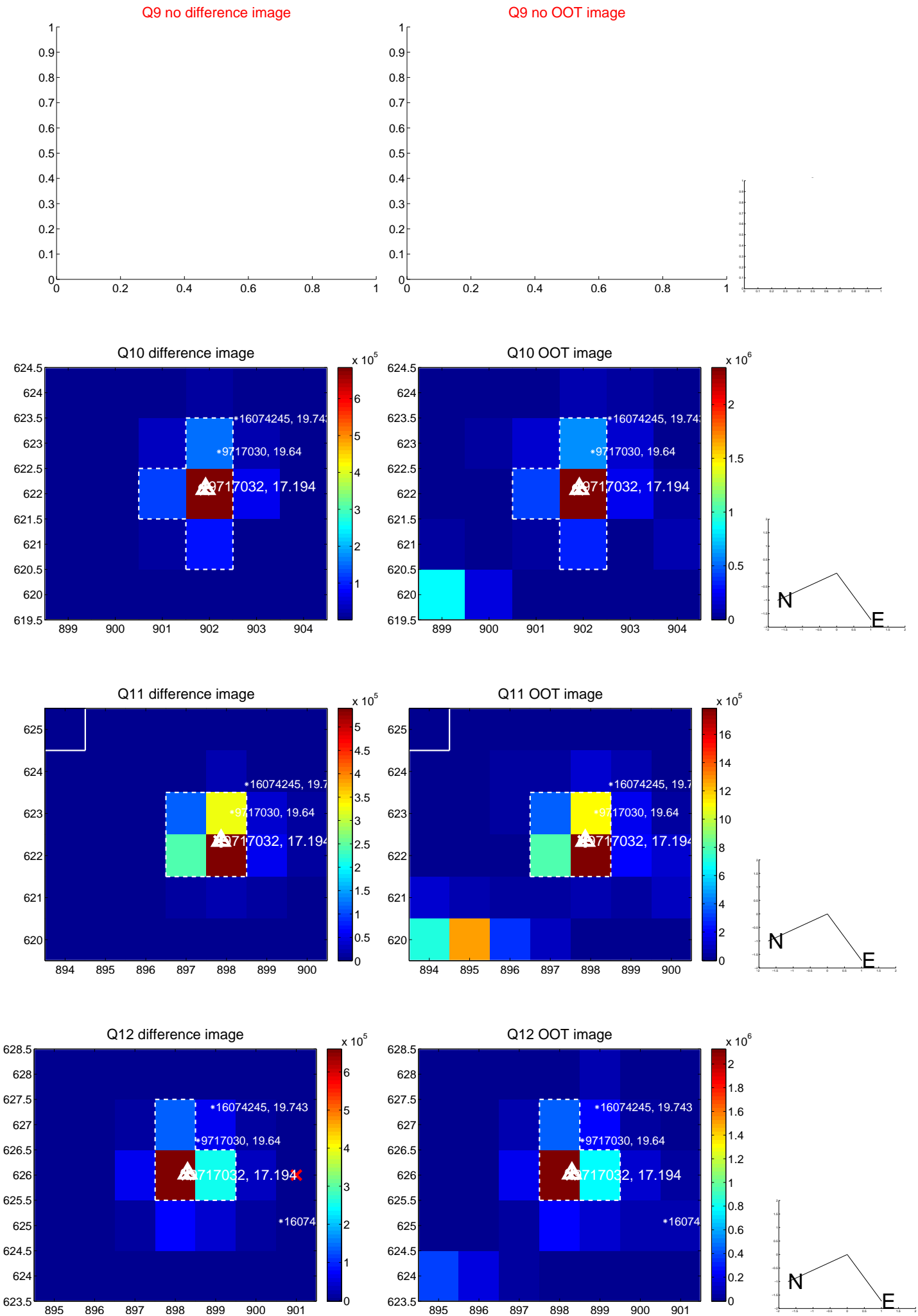
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



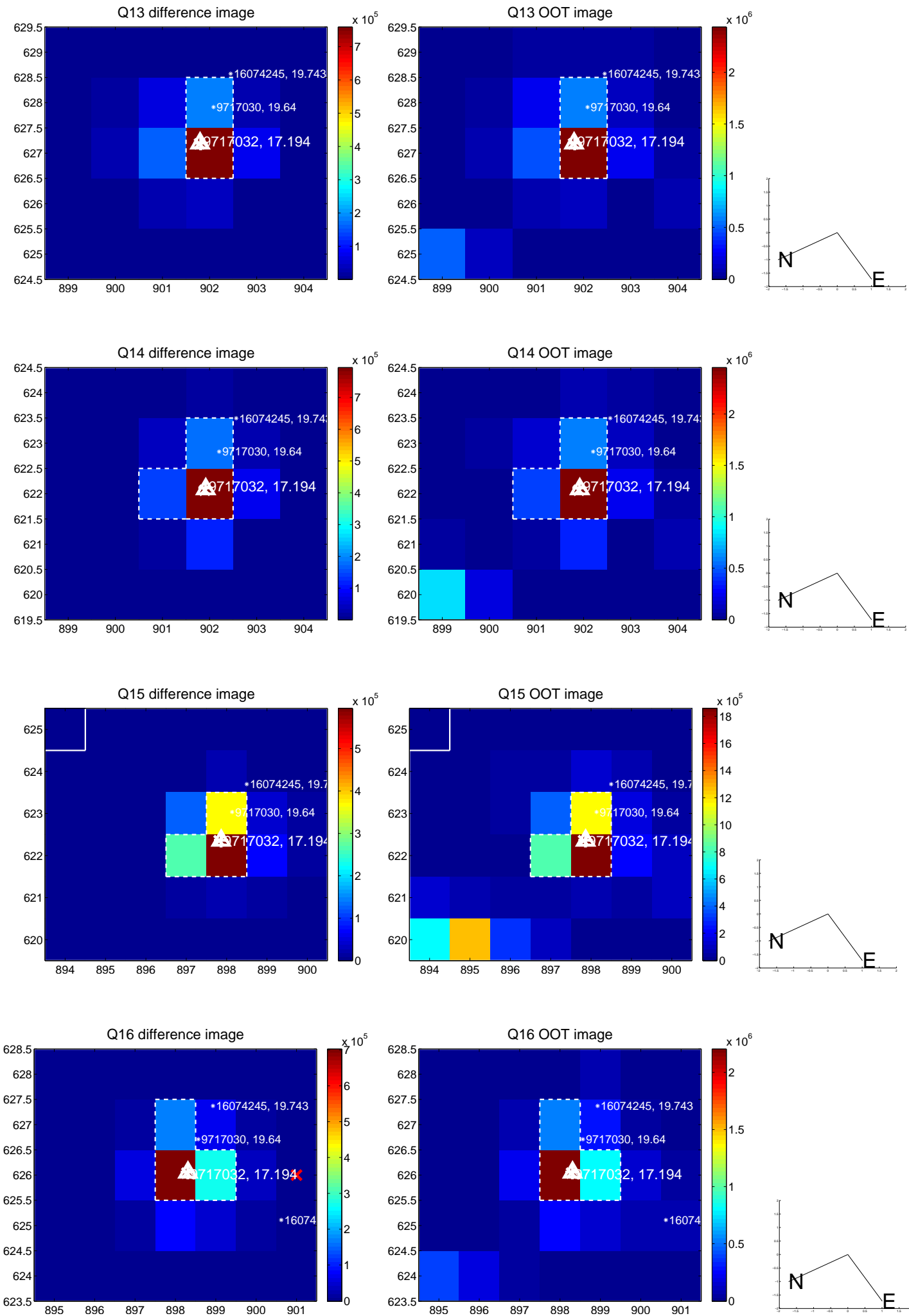
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



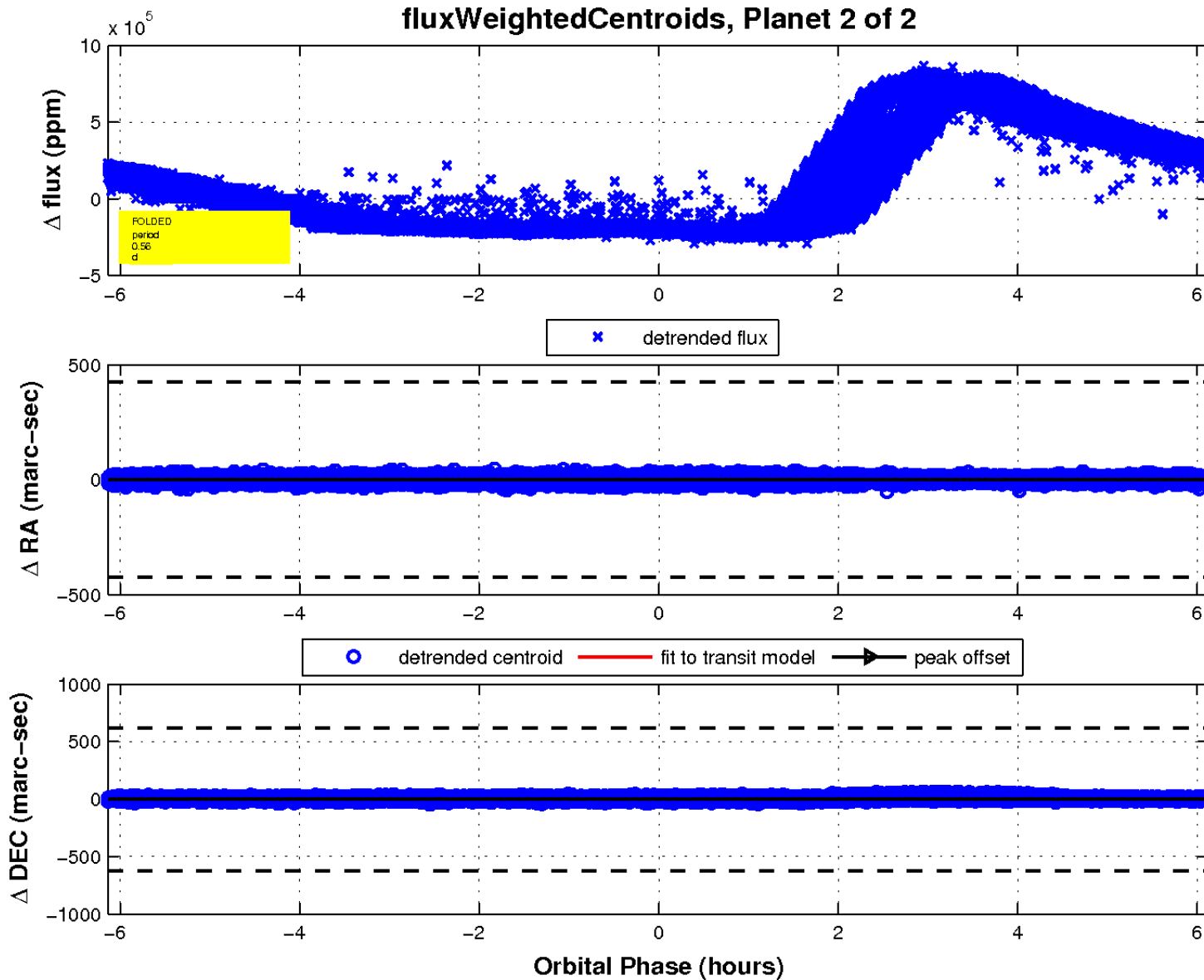
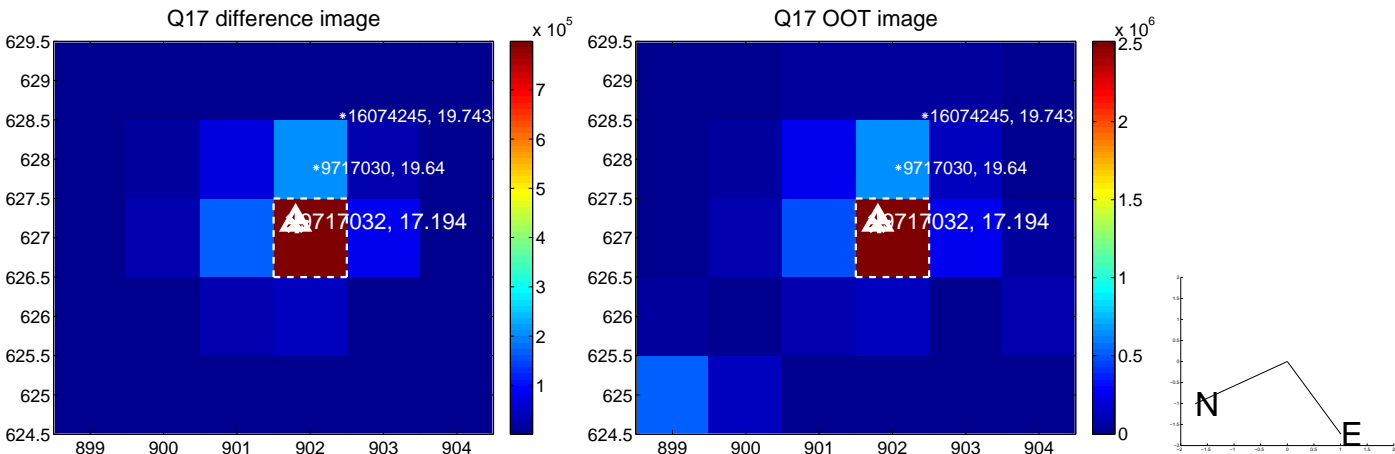
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

