

KIC 009161118

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})
009161118-01	OBS	3898.01	1.306675	132.567547	7759.6	5.230	620.3	257.4	0.66	4651	7.83	443.17
009161118-02	OBS	No	1.306634	131.933302	215.9	3.242	22.7	17.2	0.66	4651	1.03	443.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009161118-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
009161118-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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 009161118-01

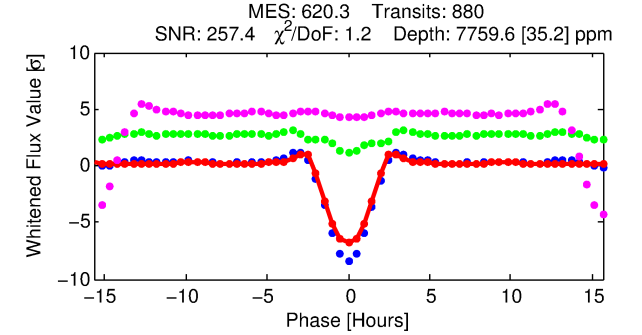
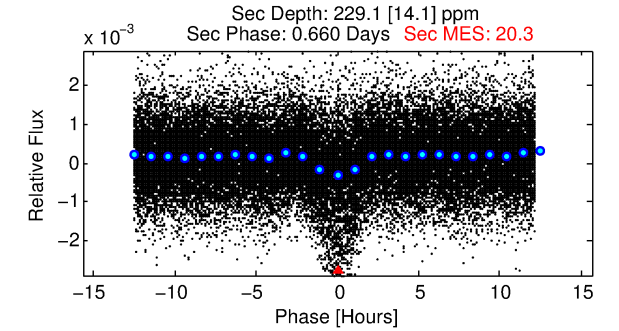
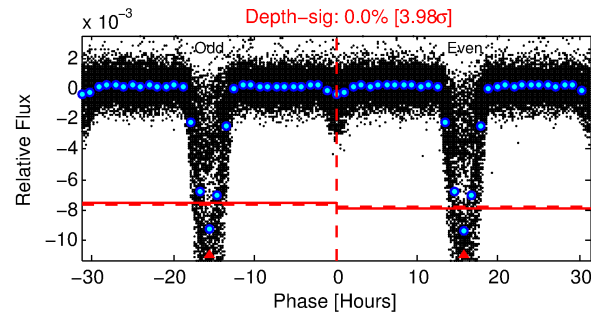
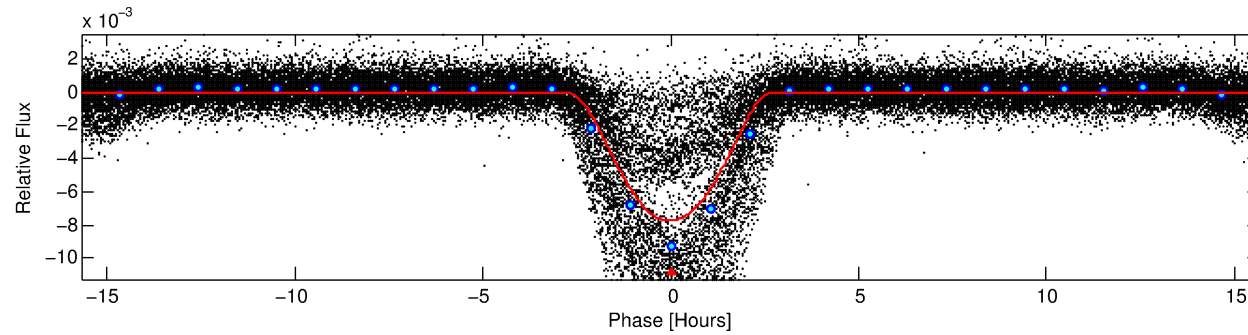
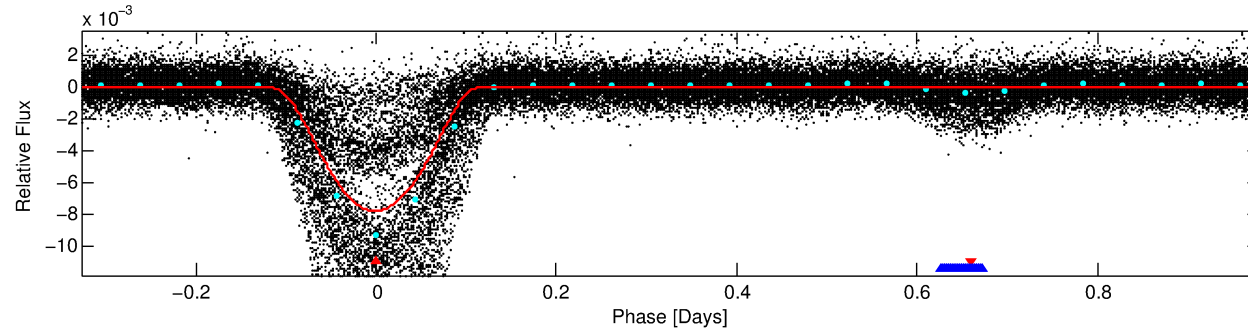
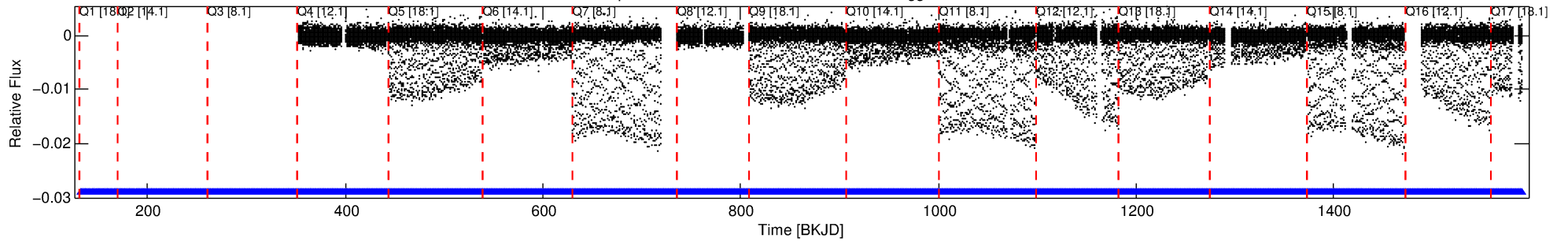
No Significant Match Found

DV One-Page Summary

KIC: 9161118 Candidate: 1 of 2 Period: 1.307 d

KOI: K03898.01 Corr: 0.904

Kp: 15.98 R*: 0.66 Rs Teff: 4651.0 K Logg: 4.61 Fe/H: -0.320



DV Fit Results:

Period = 1.30668 [0.00000] d
Epoch = 132.5675 [0.0002] BKJD
Rp/R* = 0.1092 [0.0021]
a/R* = 1.53 [0.01]
b = 0.93 [0.00]
Seff = 443.17 [76.26]
Teq = 1170 [50] K
Rp = 7.83 [0.72] Re
a = 0.0202 [0.0015] AU
Ag = 0.84 [0.10] [-1.55σ]
Teffp = 1731 [68] K [6.61σ]

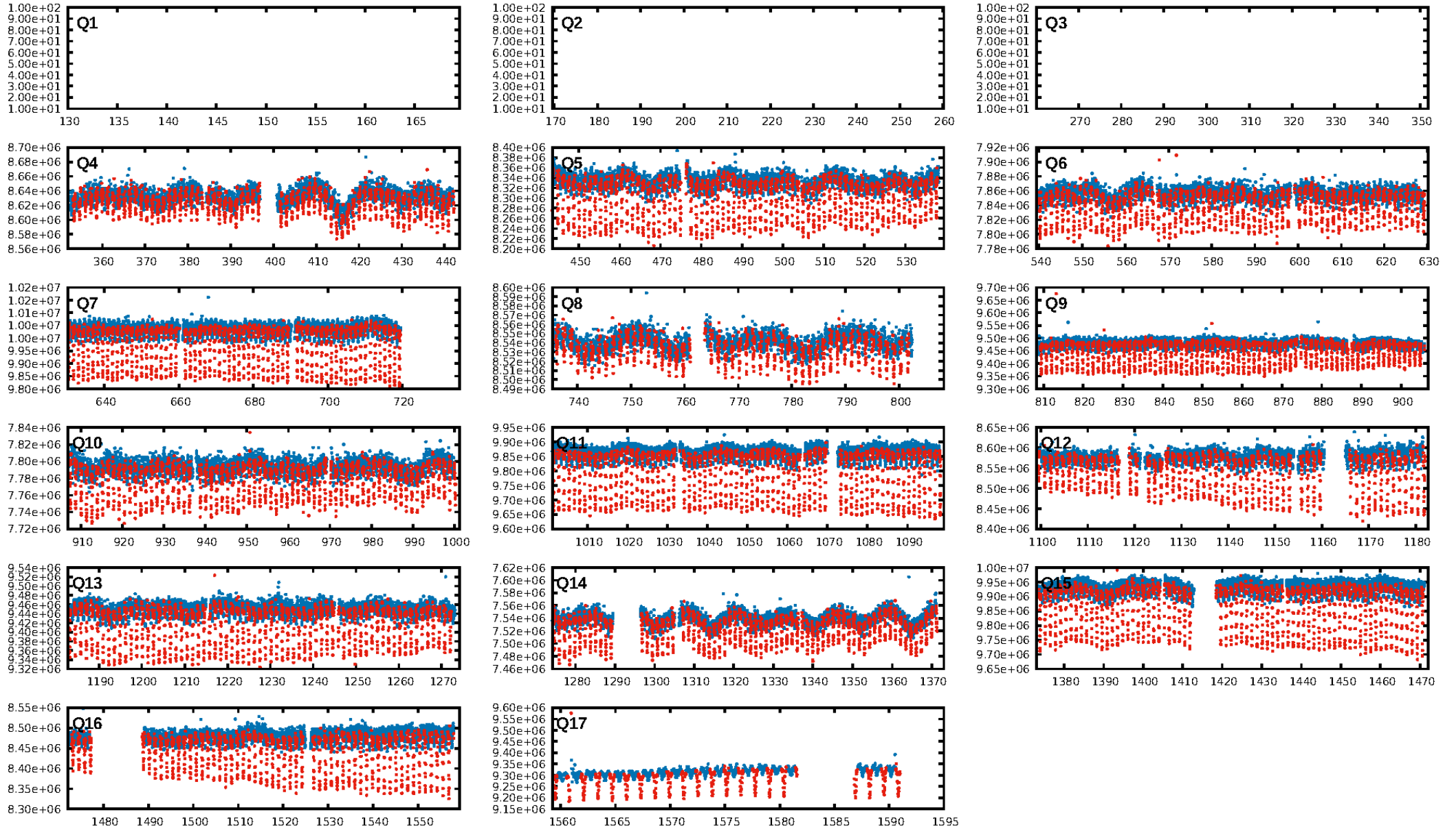
DV Diagnostic Results:

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 [858/858]
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: 1.00 [14/14]

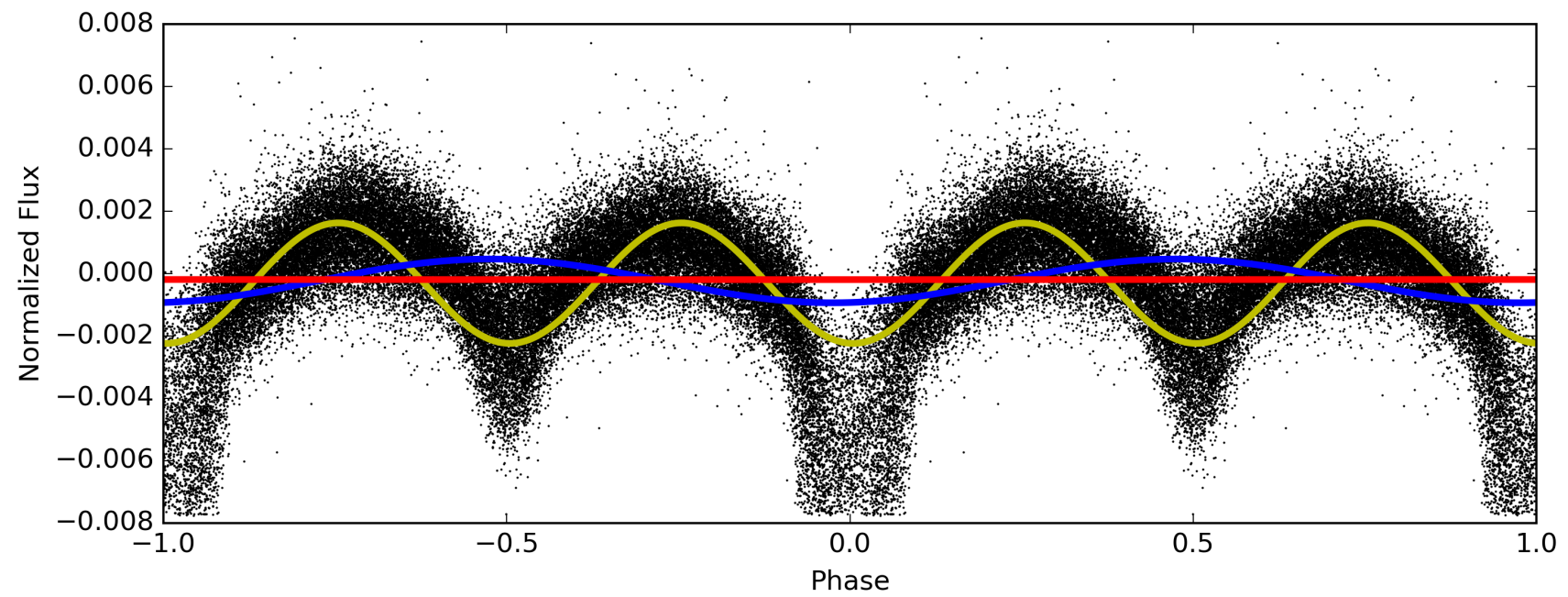
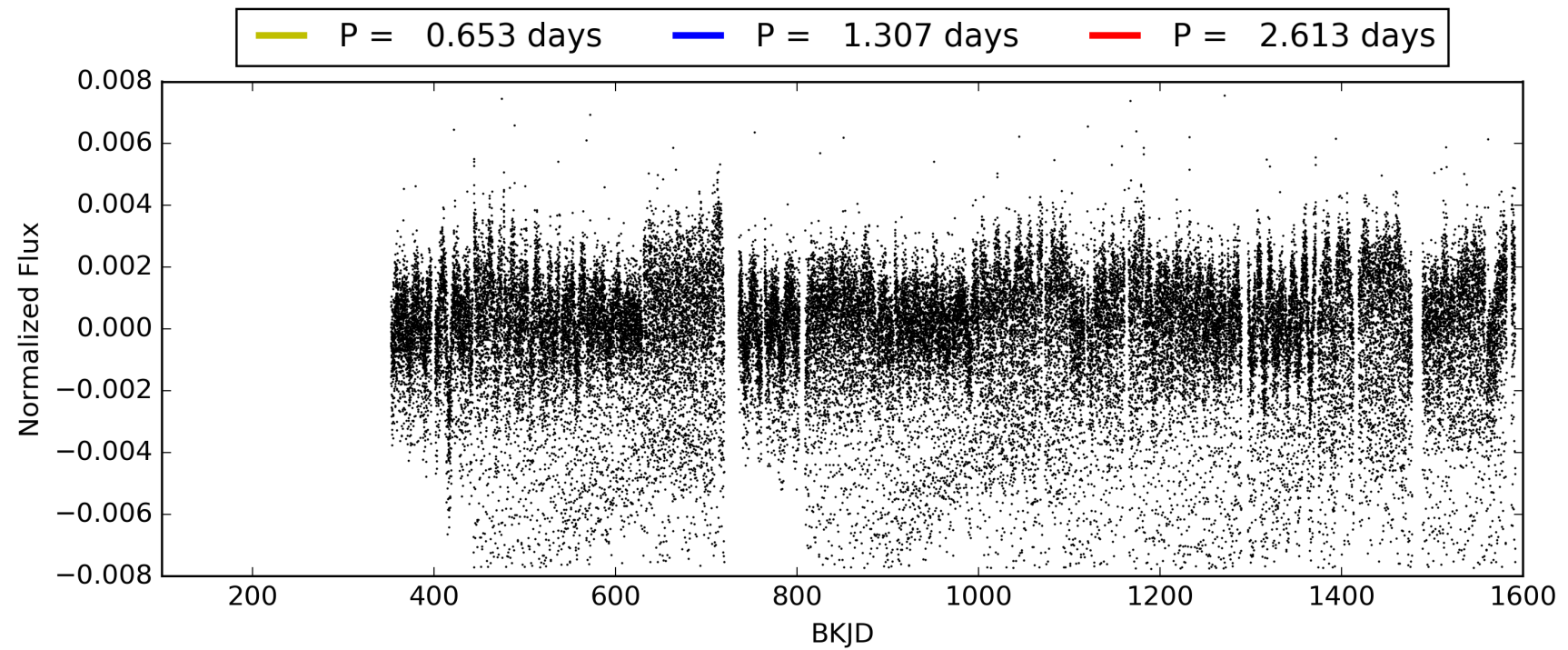
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:42:02 Z

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

TCE 009161118-01, PDC Light Curves

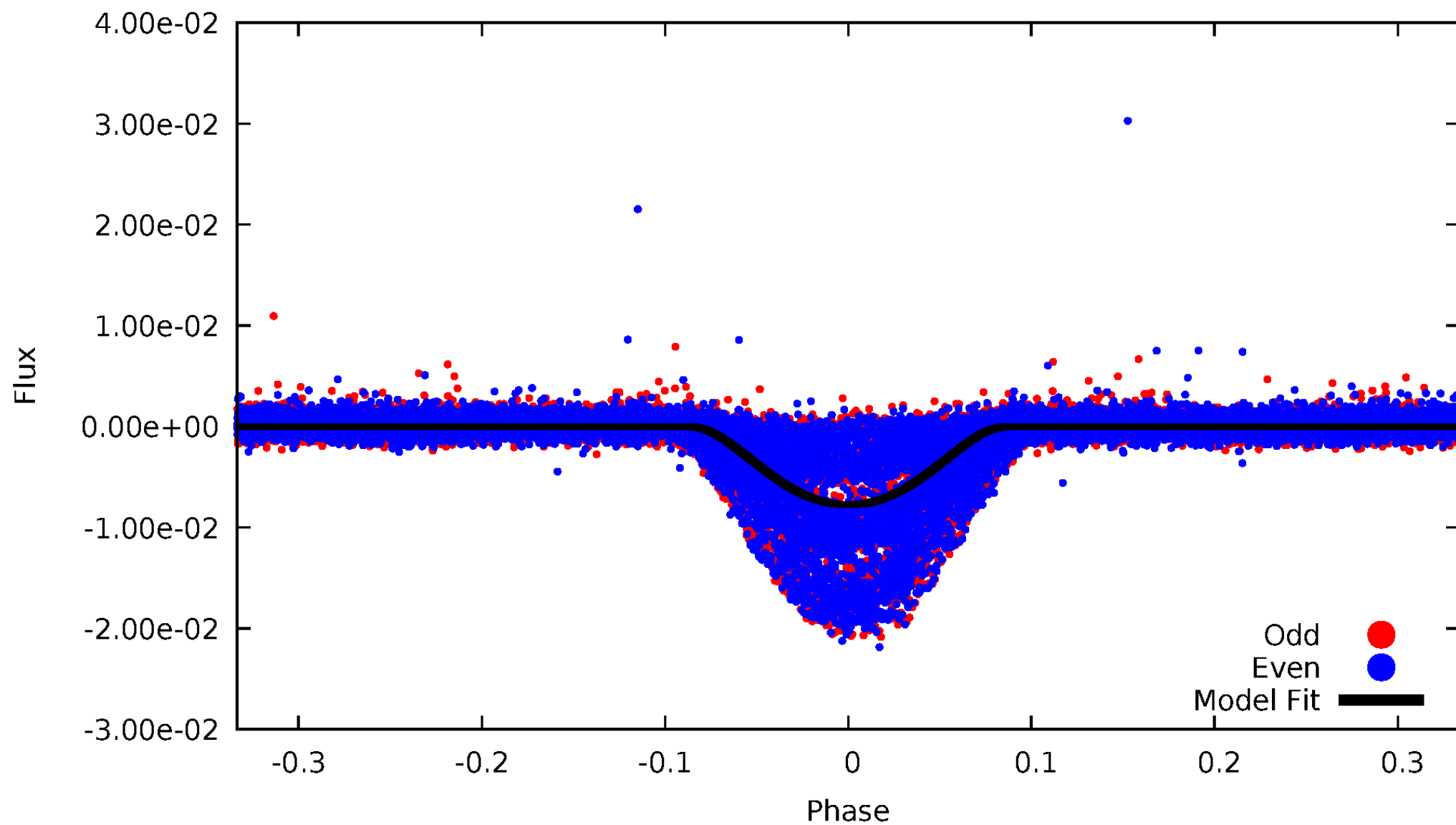


TCE 009161118-01



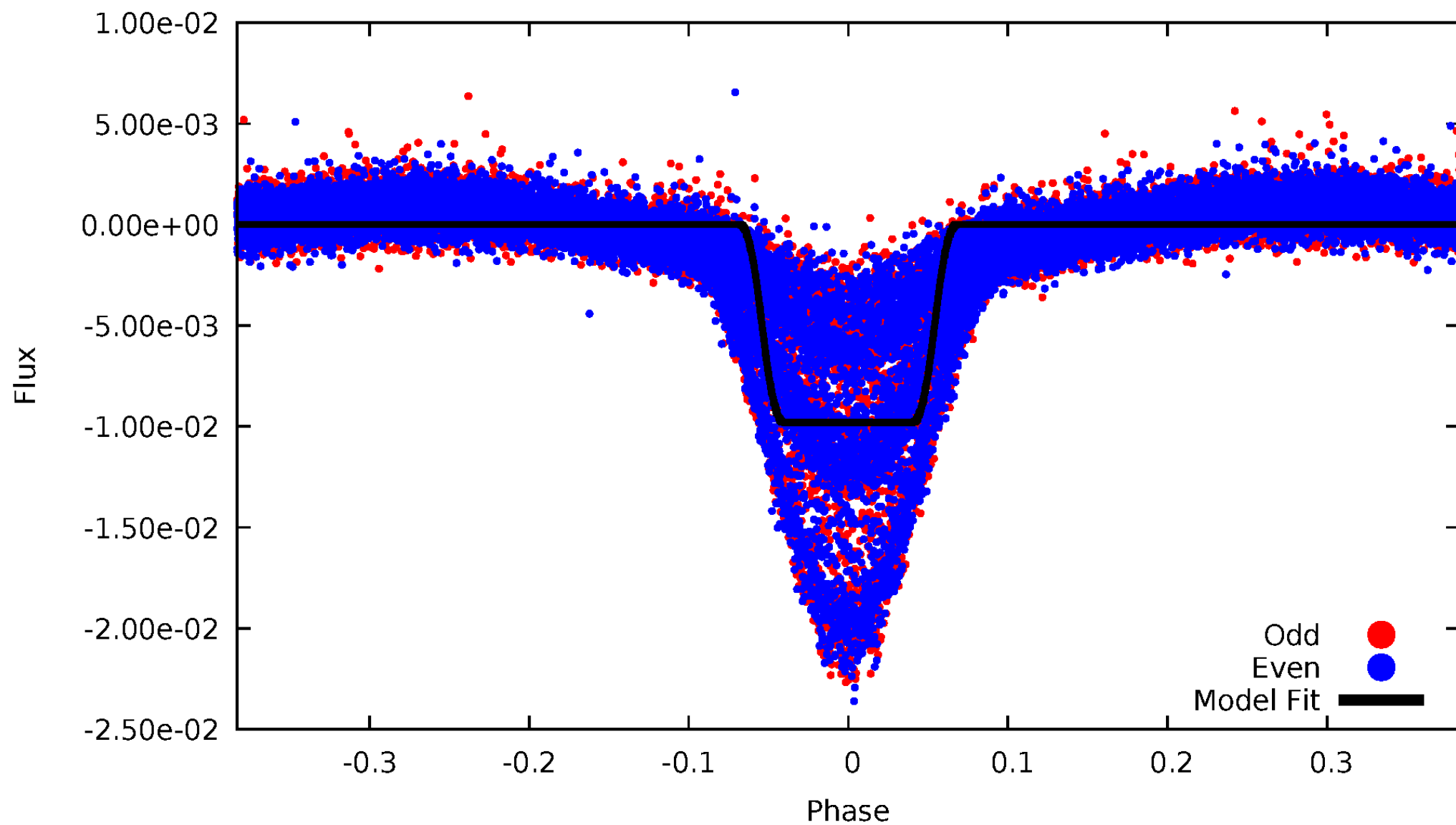
DV Odd/Even

TCE 009161118-01



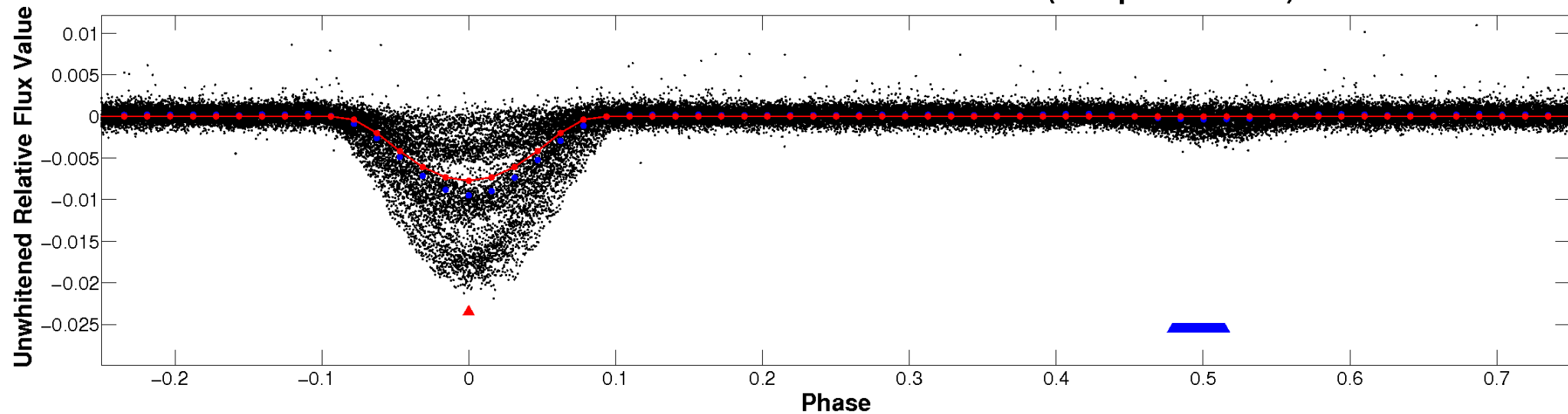
ALT Odd/Even

TCE 009161118-01

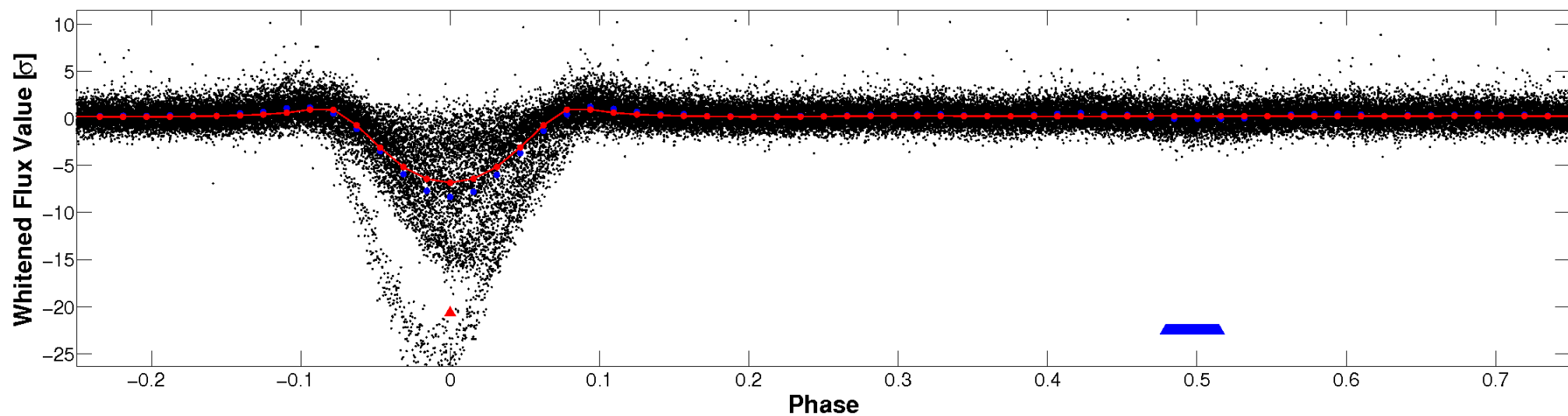


Non-Whitened Vs. Whitened Light Curve

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

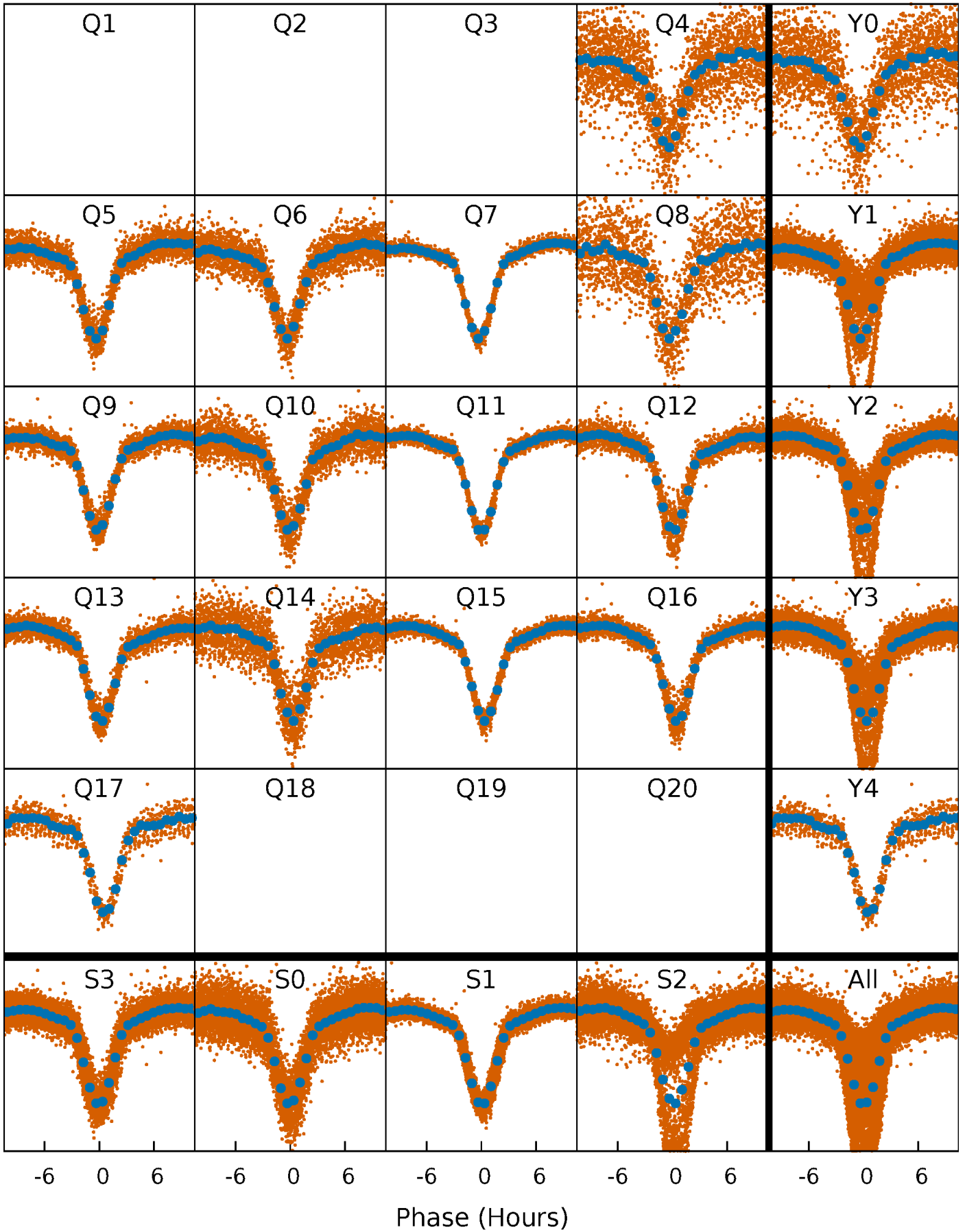


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



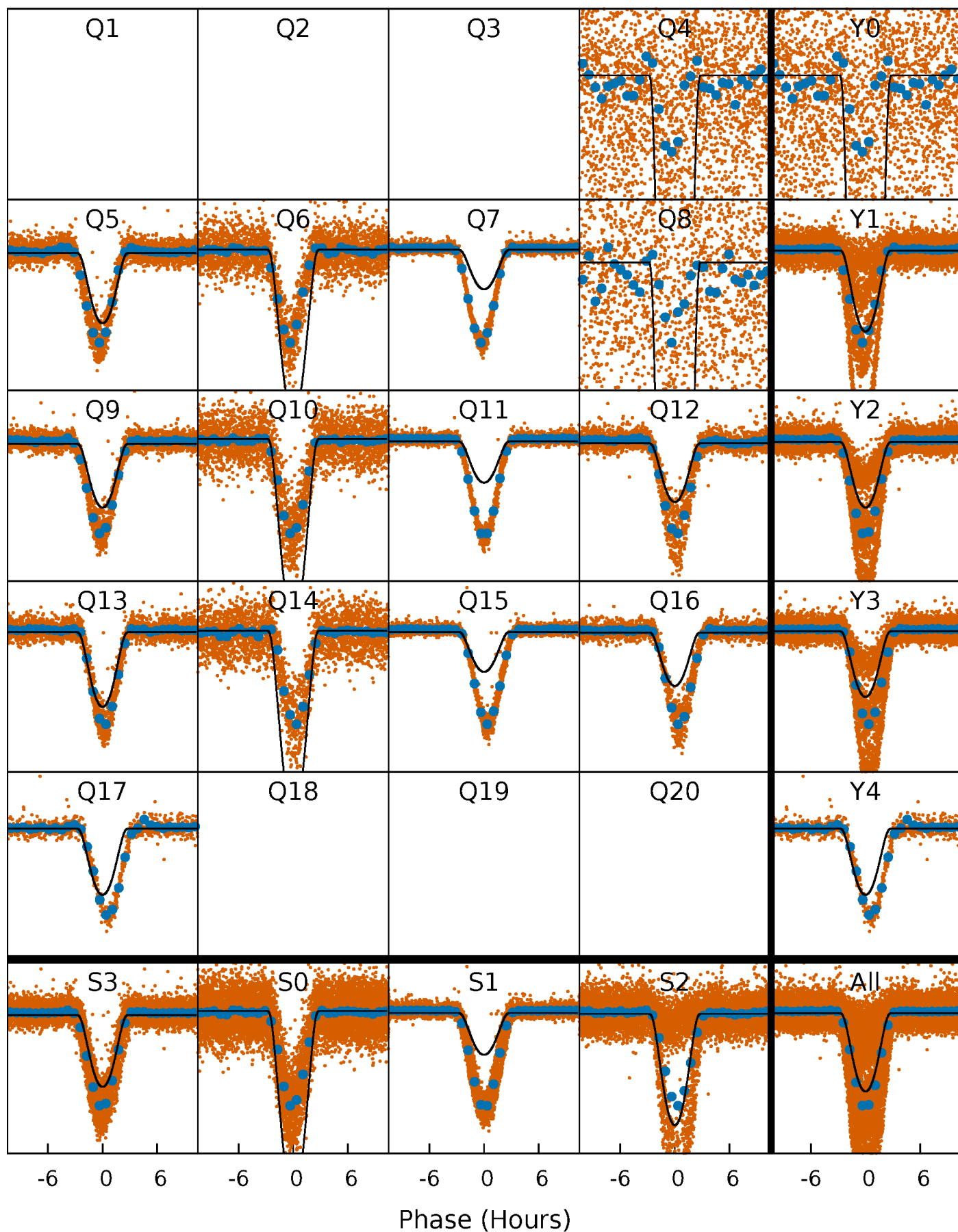
PDC Quarter-Phased Transit Curves

TCE 009161118-01 P= 1.306675 Days $T_0=132.567547$ (BKJD)



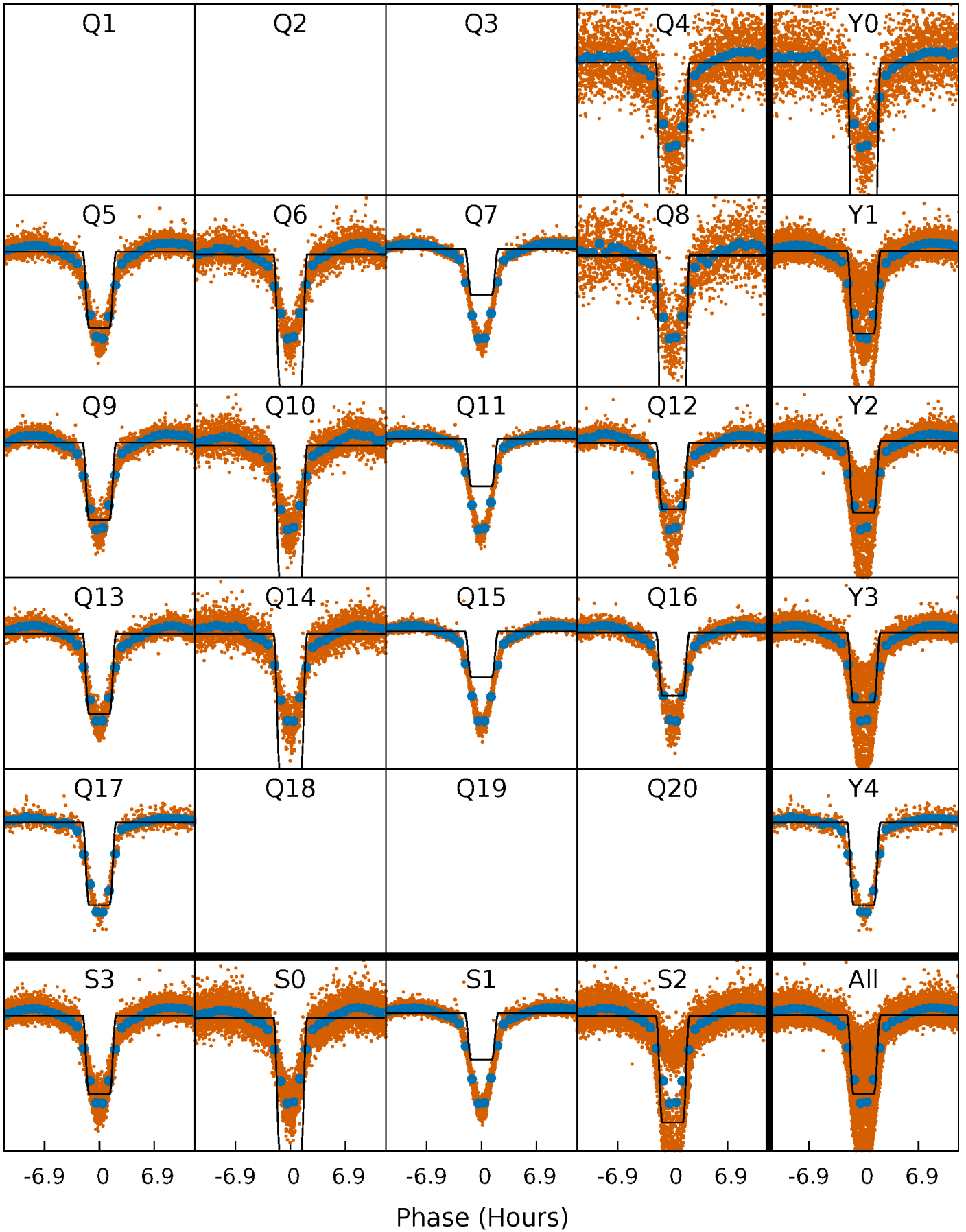
DV Quarter-Phased Transit Curves

TCE 009161118-01 P= 1.306675 Days $T_0=132.567547$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

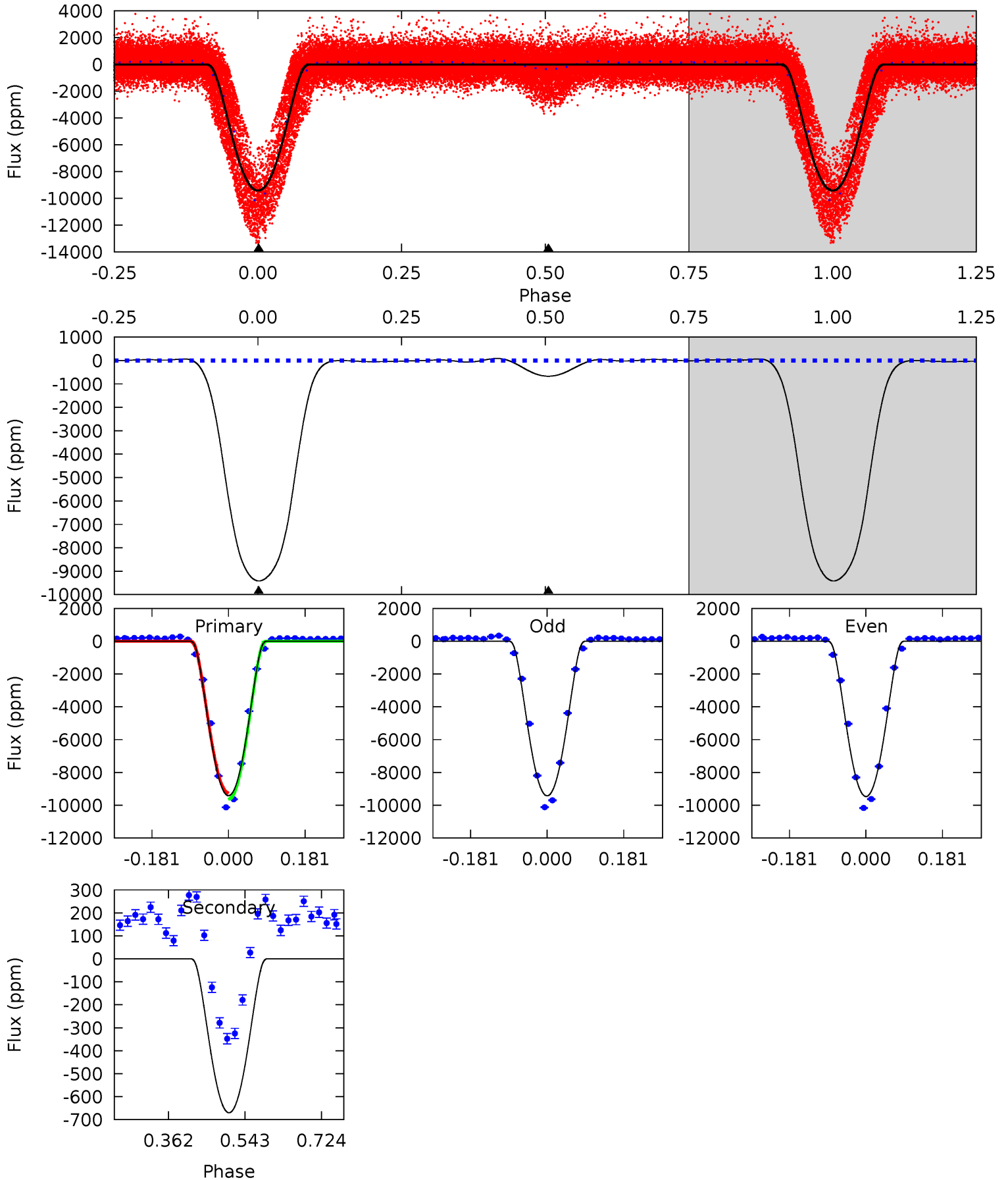
TCE 009161118-01 P= 1.306722 Days $T_0=132.537265$ (BKJD)



DV Model-Shift Uniqueness Test

009161118-01, P = 1.306675 Days, E = 132.567547 Days

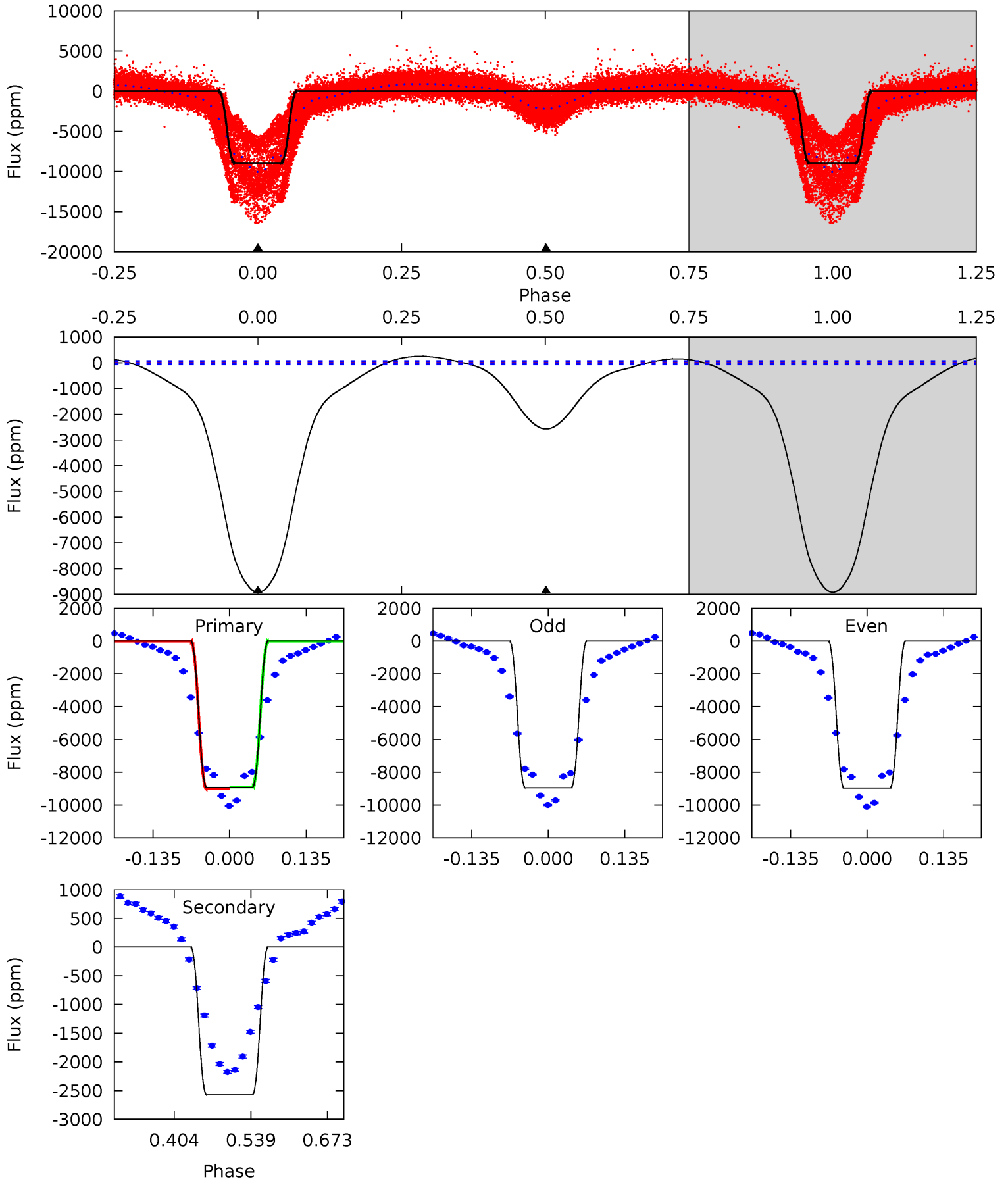
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
993.9	70.7	0	0	4.44	1.34	3.05	993.9	993.9	70.7	70.7	2.32	0.96	0.01	0



Alt Model-Shift Uniqueness Test

009161118-01, P = 1.306722 Days, E = 132.537265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
694.1	200.2	0	0	4.50	1.50	28.6	694.1	694.1	200.2	200.2	0.78	1.02	0.03	3.68



Stellar Parameters For KIC 009161118

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4651^{+163}_{-163}	$4.612^{+0.052}_{-0.032}$	$-0.320^{+0.300}_{-0.300}$	$0.657^{+0.053}_{-0.059}$	$0.644^{+0.080}_{-0.046}$	$3.199^{+0.798}_{-0.409}$
	+4%/-4%	+1%/-1%	+94%/-94%	+8%/-9%	+12%/-7%	+25%/-13%
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 009161118-01 / KOI 3898.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-670 ± 9	$7.82^{+0.44}_{-0.41}$	1632^{+65}_{-69}	2851^{+75}_{-69}	$2.482^{+0.234}_{-0.180}$
Alt.	-2573 ± 13	$7.09^{+0.38}_{-0.39}$	1629^{+63}_{-64}	3636^{+112}_{-102}	12^{+1}_{-1}

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

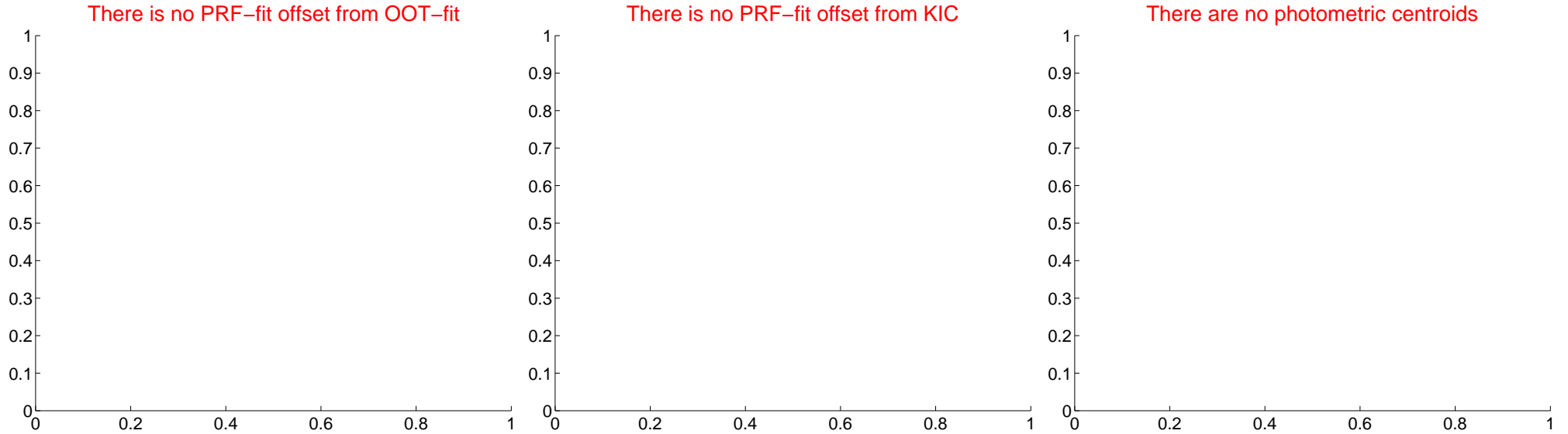
DV Centroid Data

Supplemental centroid analysis for 009161118-01. Kepler magnitude: 15.98. Transit SNR 257.44

There are 0 quarters with good PRF difference image offsets

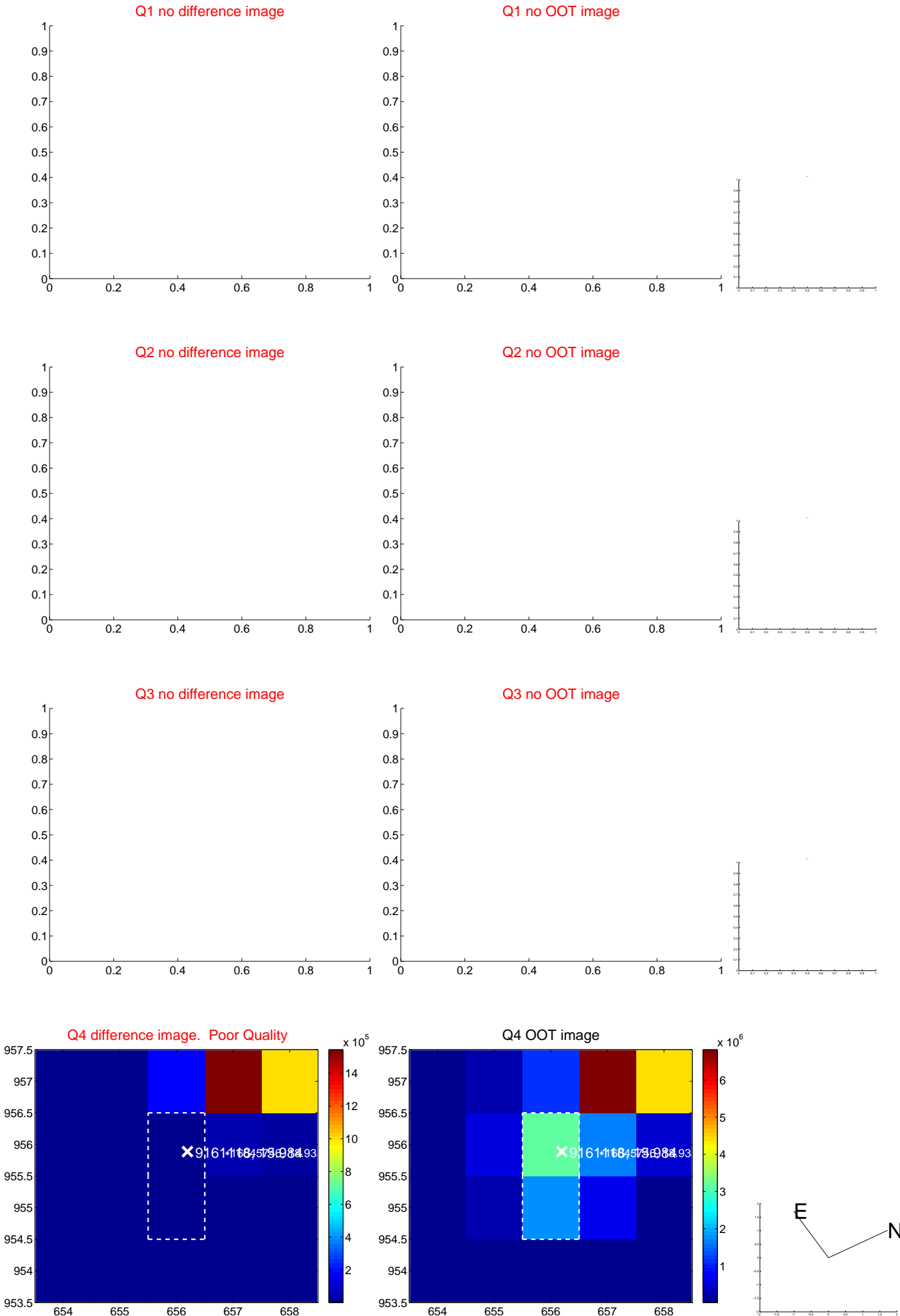
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	—	—	—	—

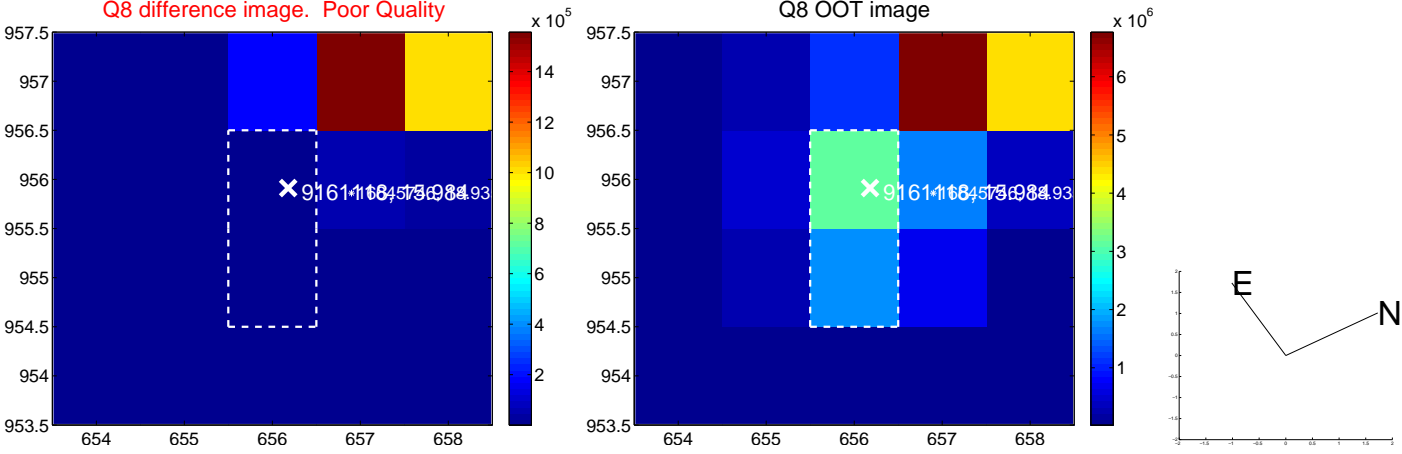
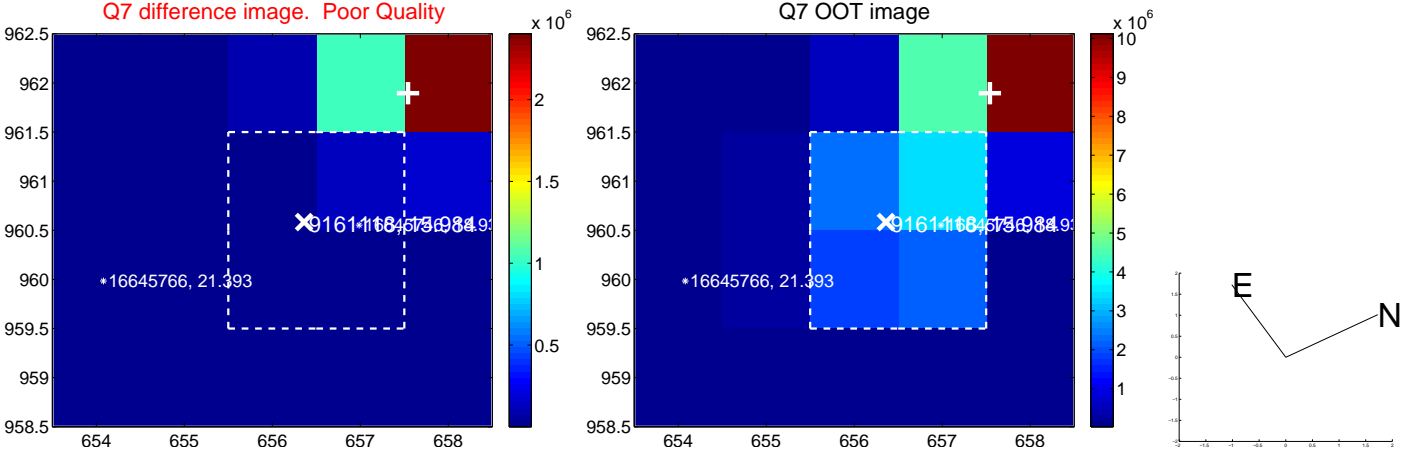
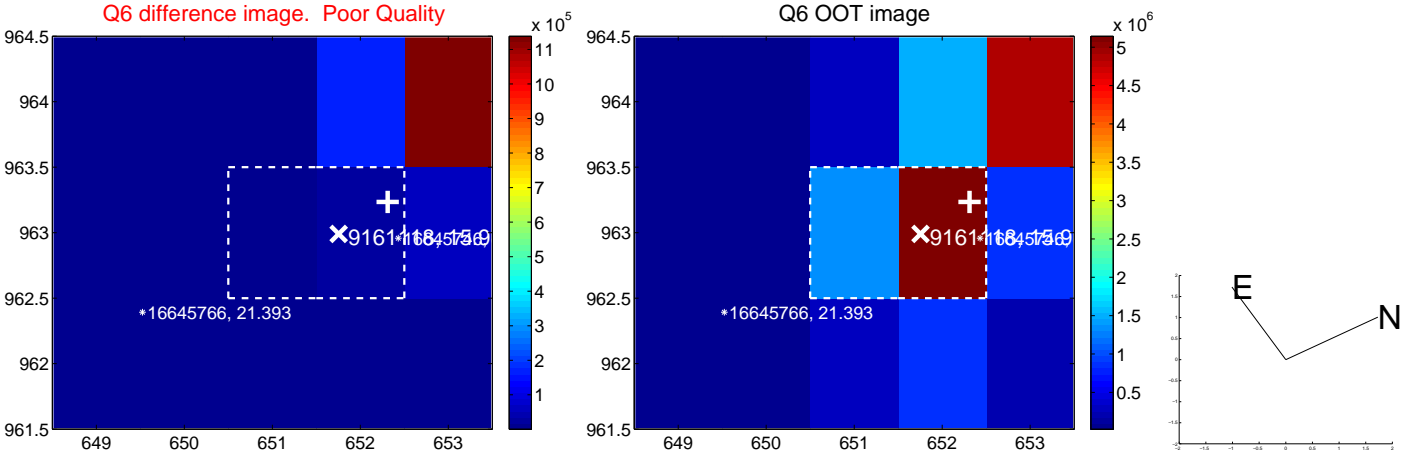
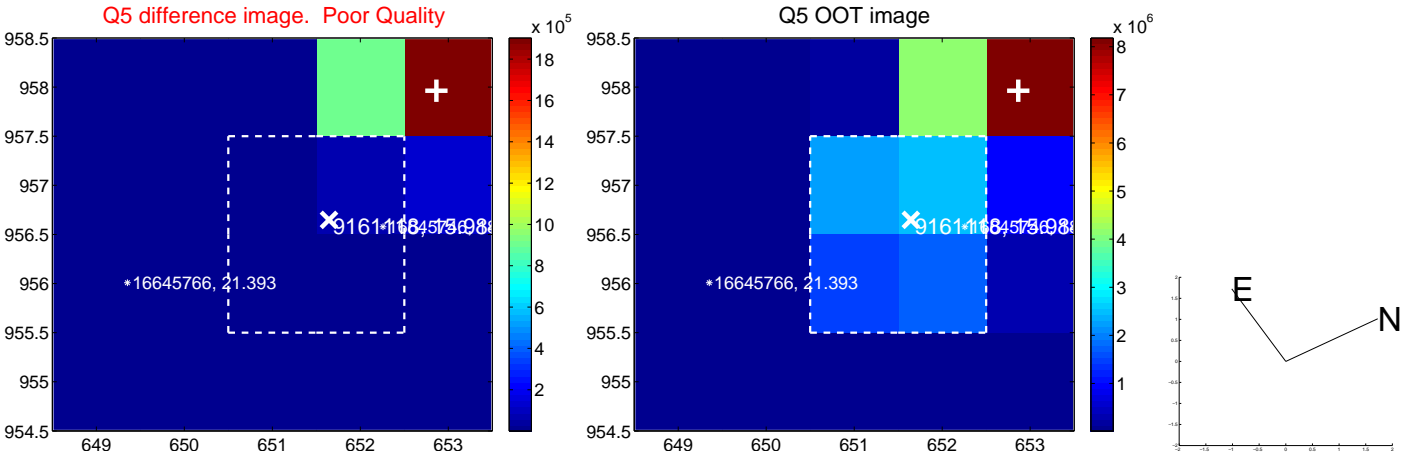


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

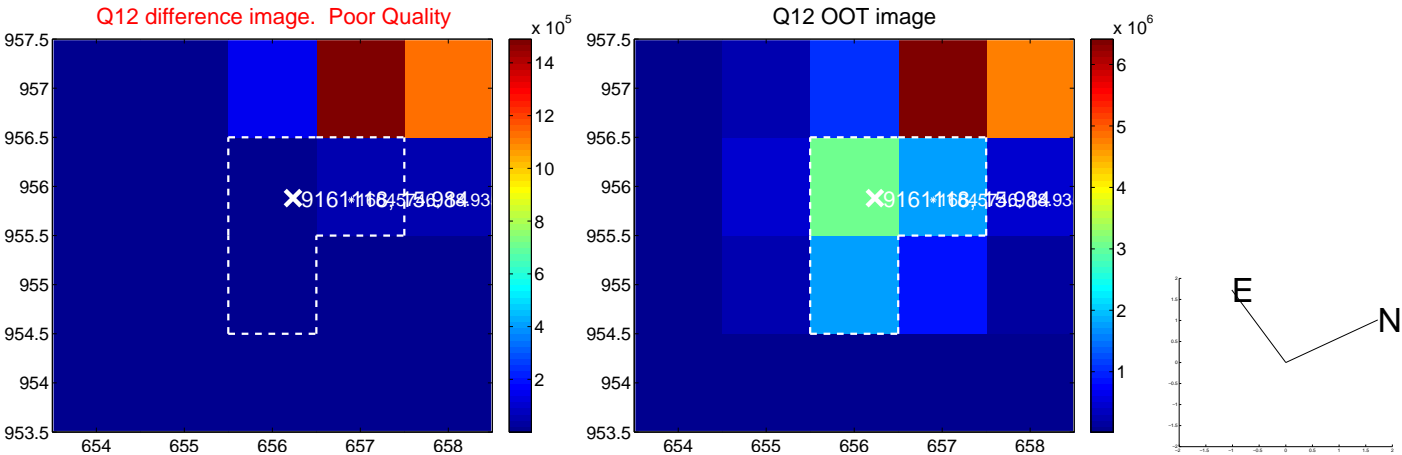
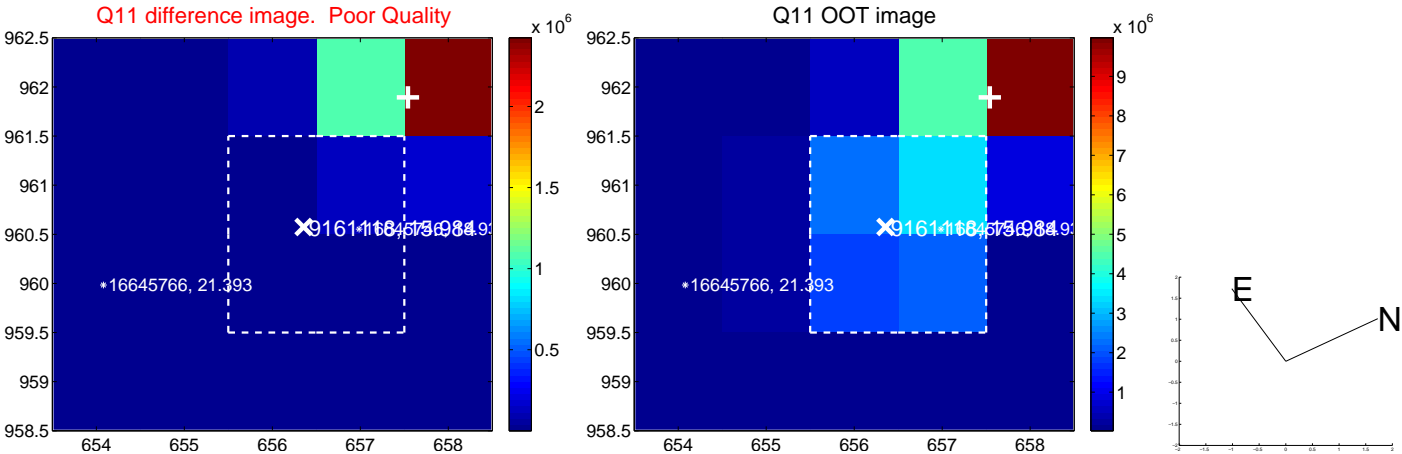
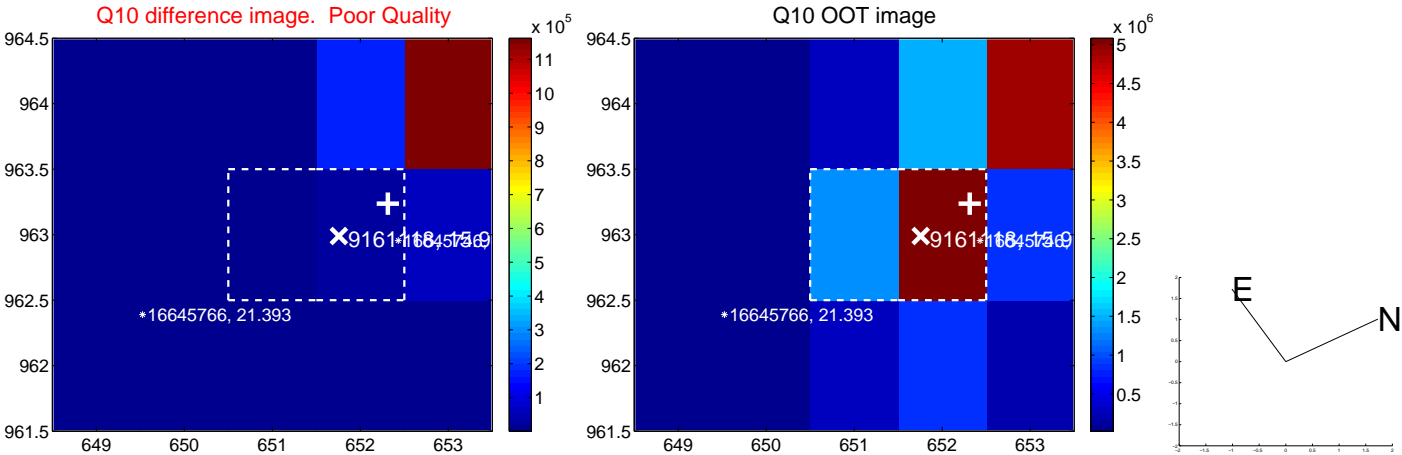
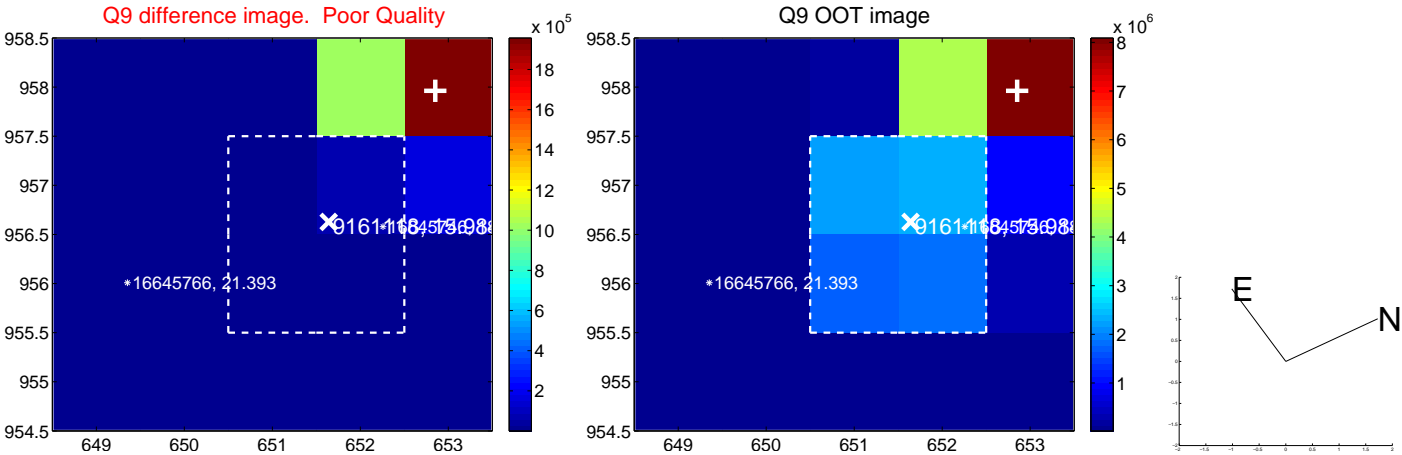
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



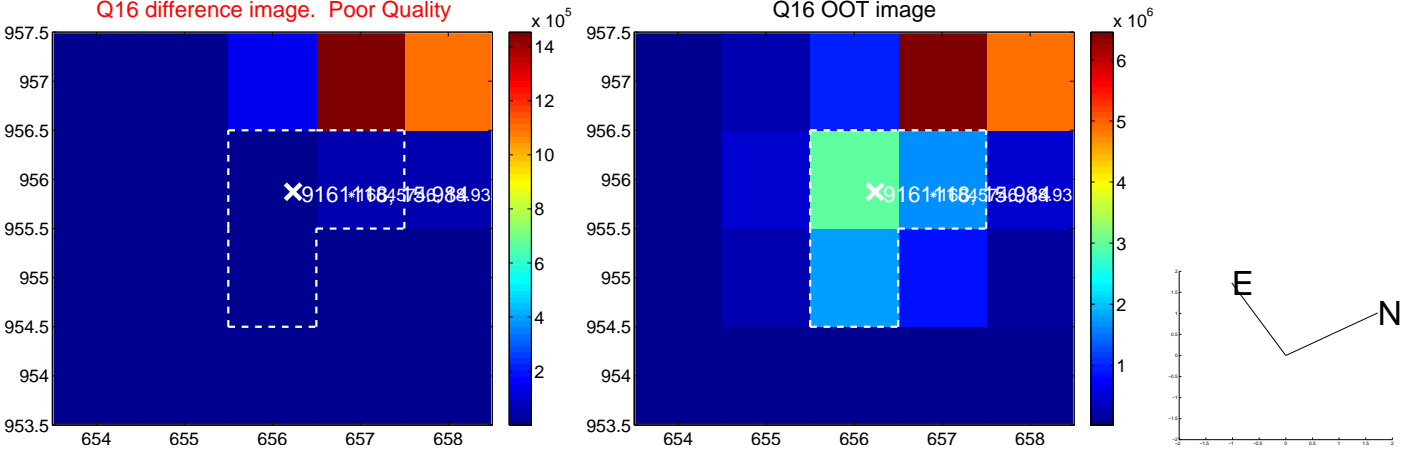
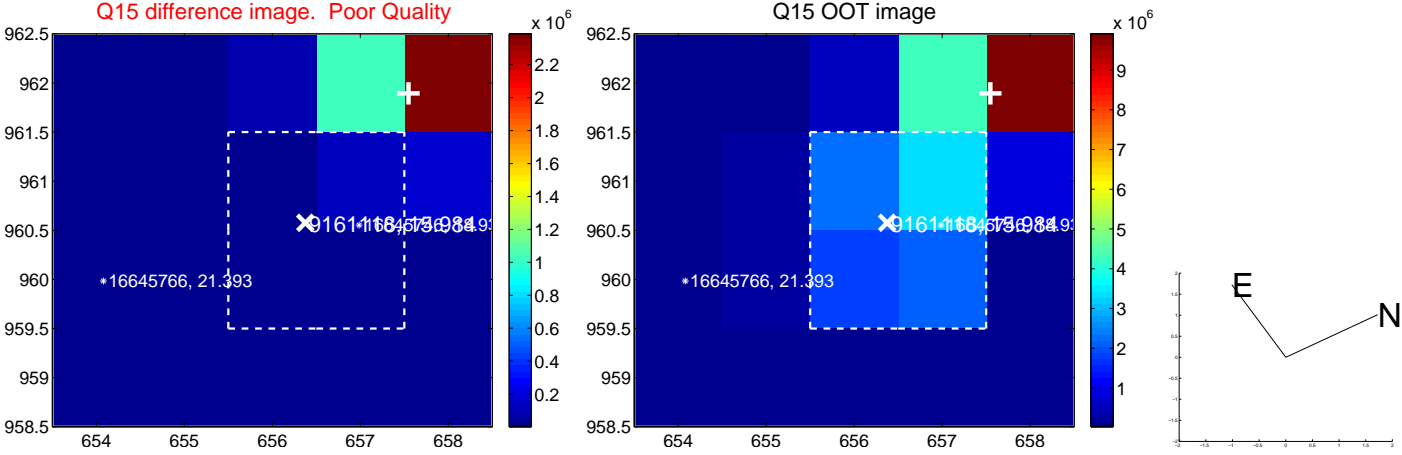
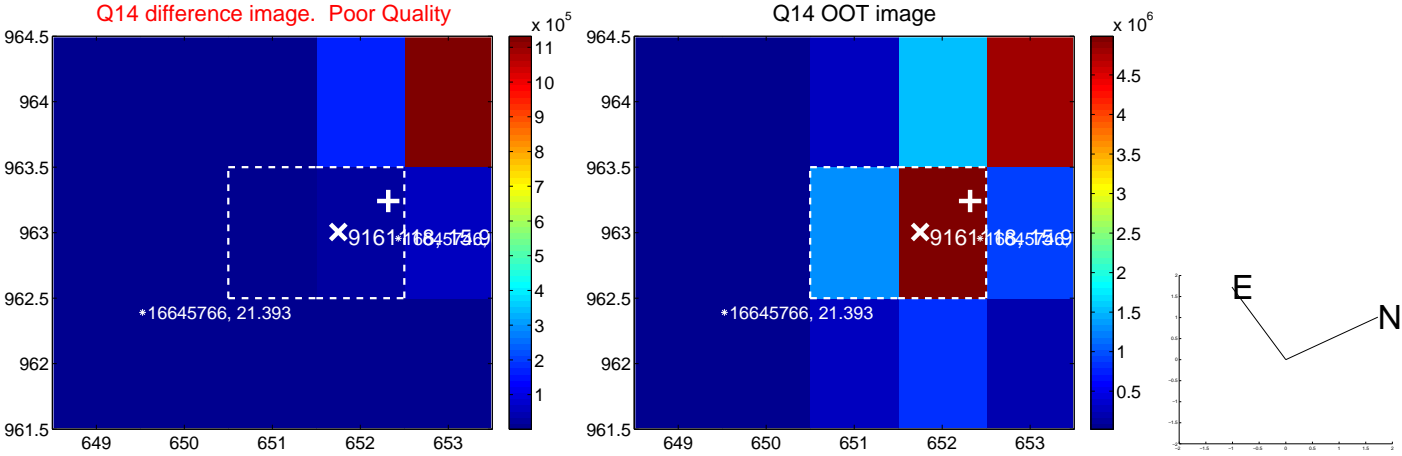
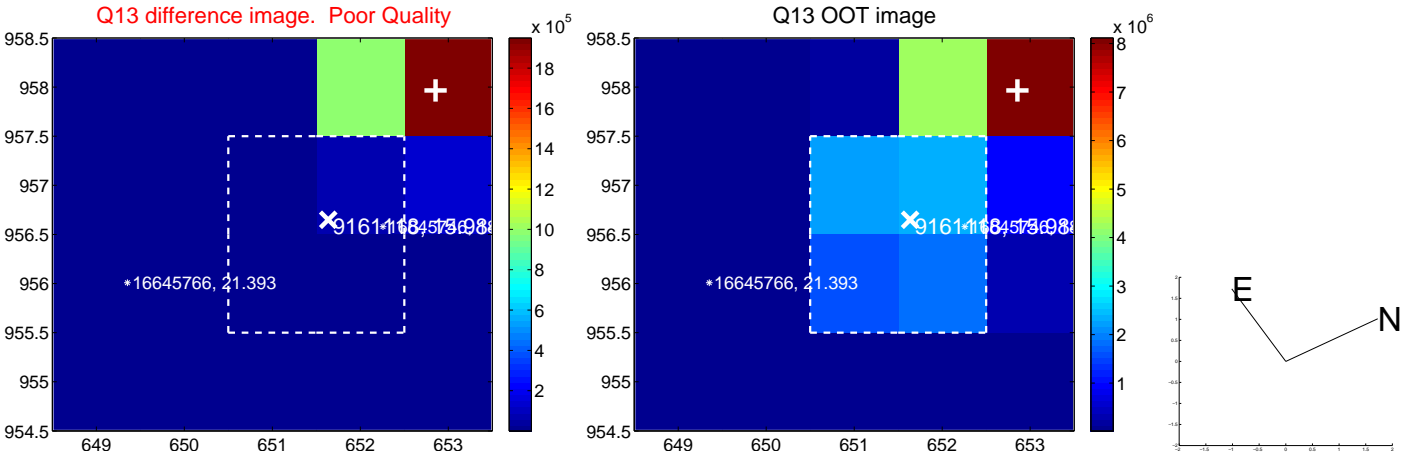
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



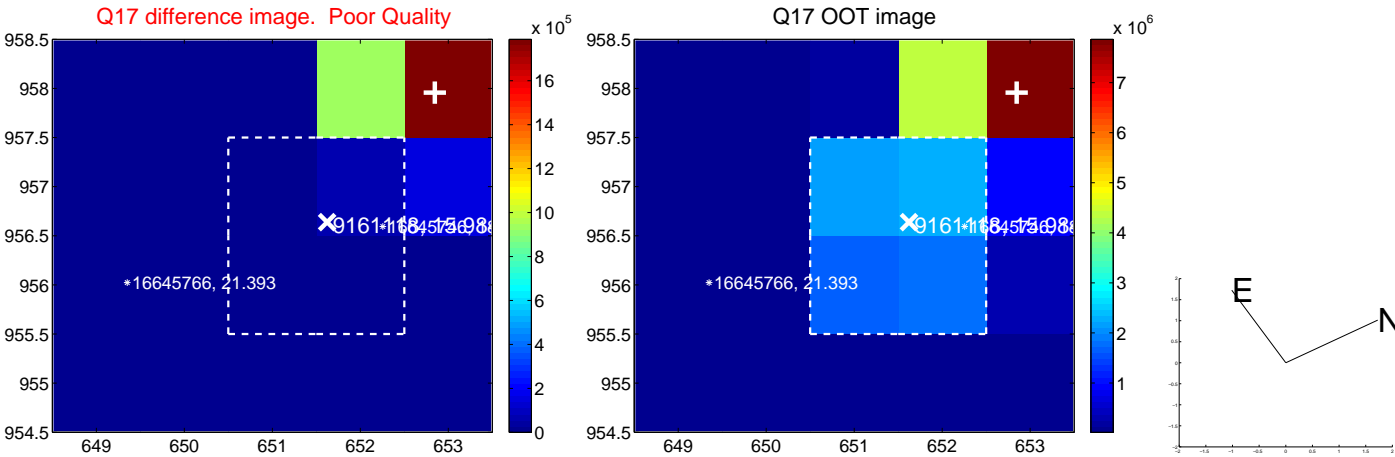
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



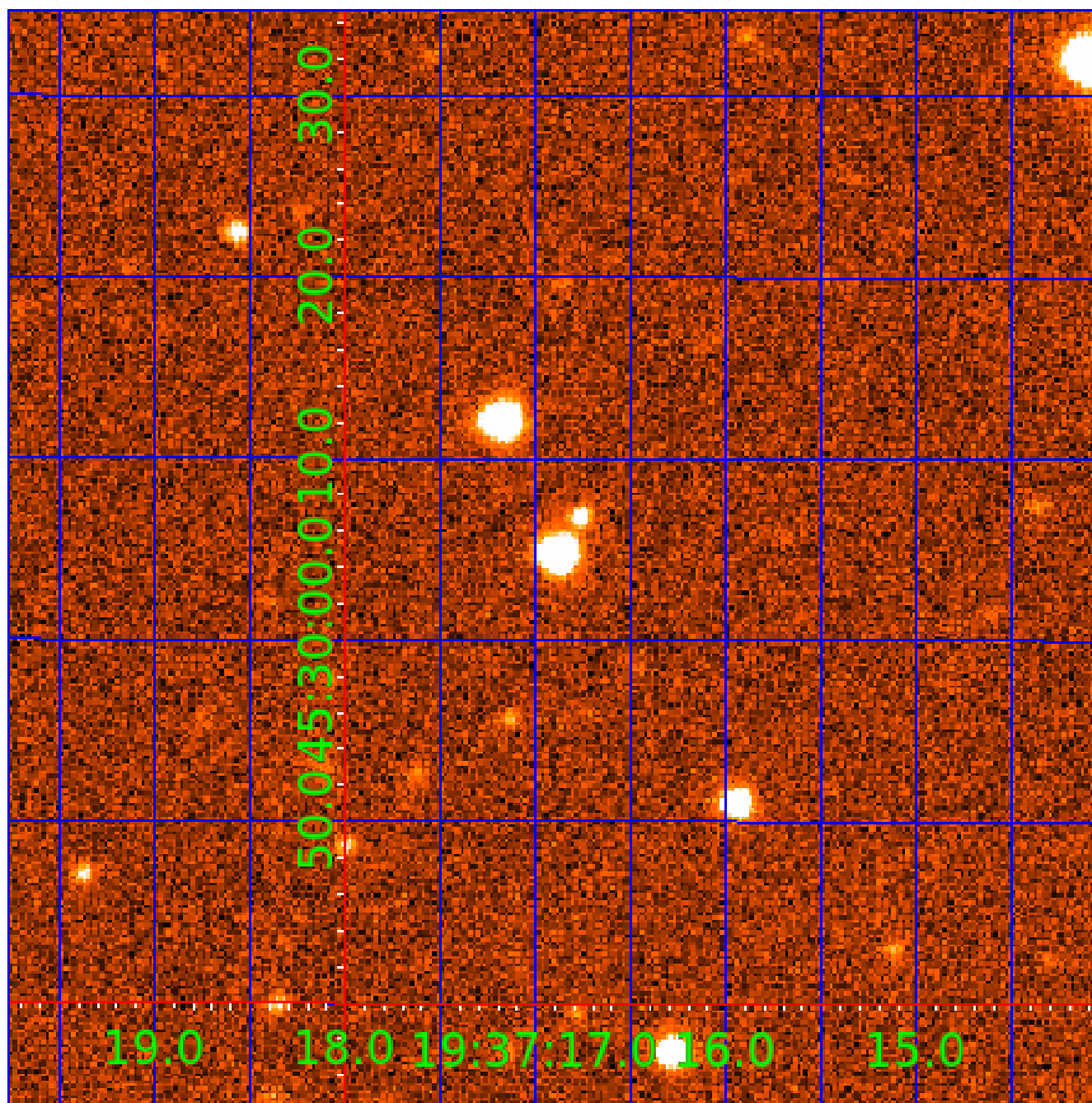
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 009161118

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})
009161118-01	OBS	3898.01	1.306675	132.567547	7759.6	5.230	620.3	257.4	0.66	4651	7.83	443.17
009161118-02	OBS	No	1.306634	131.933302	215.9	3.242	22.7	17.2	0.66	4651	1.03	443.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009161118-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
009161118-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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.

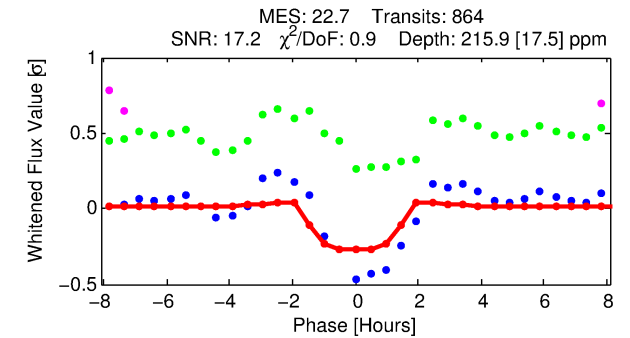
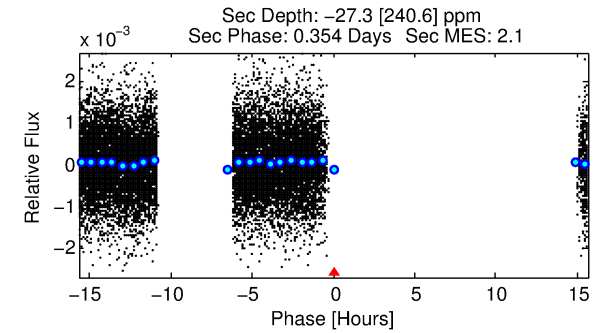
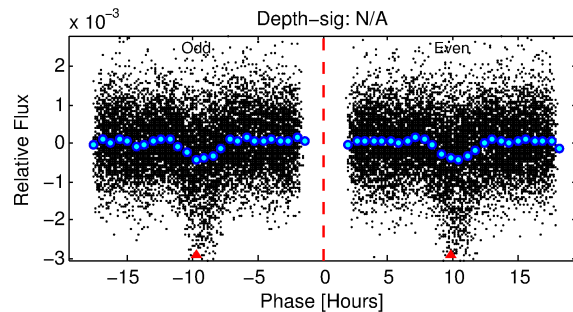
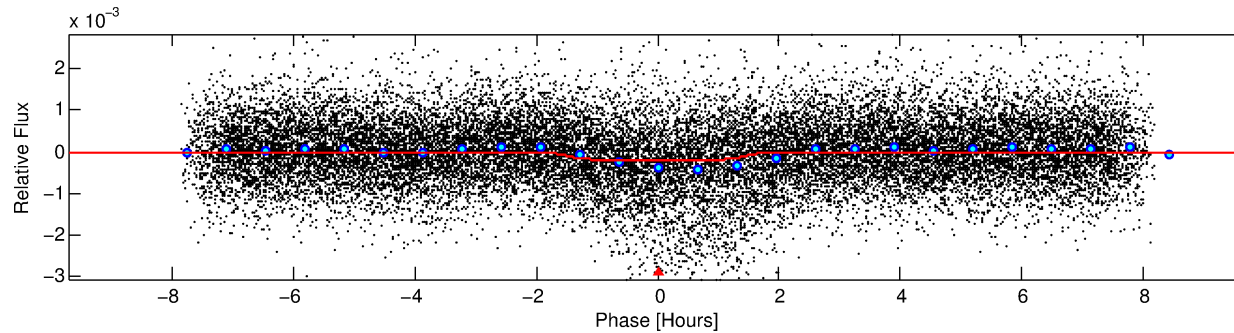
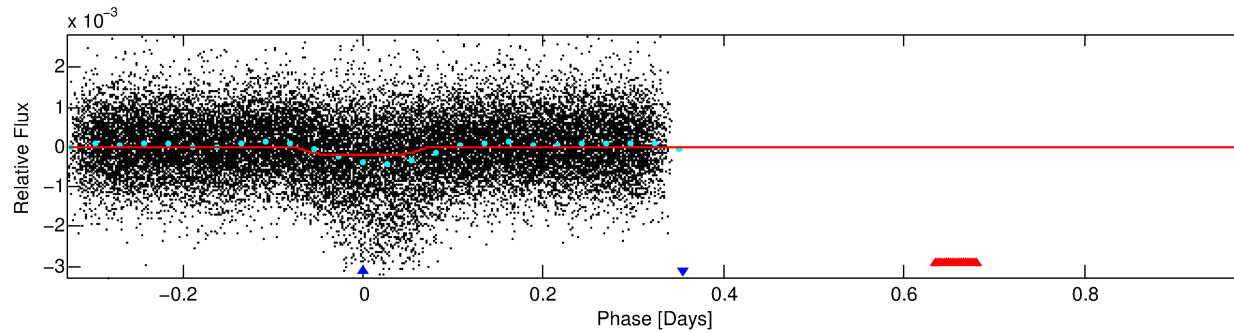
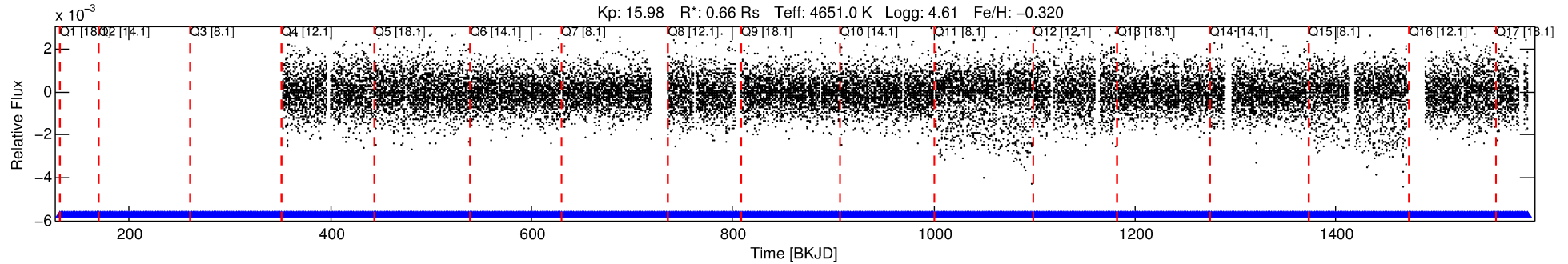
Ephemeris Match Information For 009161118-02

No Significant Match Found

DV One-Page Summary

KIC: 9161118 Candidate: 2 of 2 Period: 1.307 d
KOI: K03898 Corr: No Ephemeris Match

Kp: 15.98 R*: 0.66 Rs Teff: 4651.0 K Logg: 4.61 Fe/H: -0.320



DV Fit Results:

Period = 1.30663 [0.00001] d
Epoch = 131.9333 [0.0025] BKJD
Rp/R* = 0.0144 [0.0089]
a/R* = 2.40 [4.11]
b = 0.70 [1.55]
Seff = 443.18 [76.26]
Teq = 1170 [50] K
Rp = 1.03 [0.65] Re
a = 0.0202 [0.0015] AU
Ag = N/A
Teffp = N/A

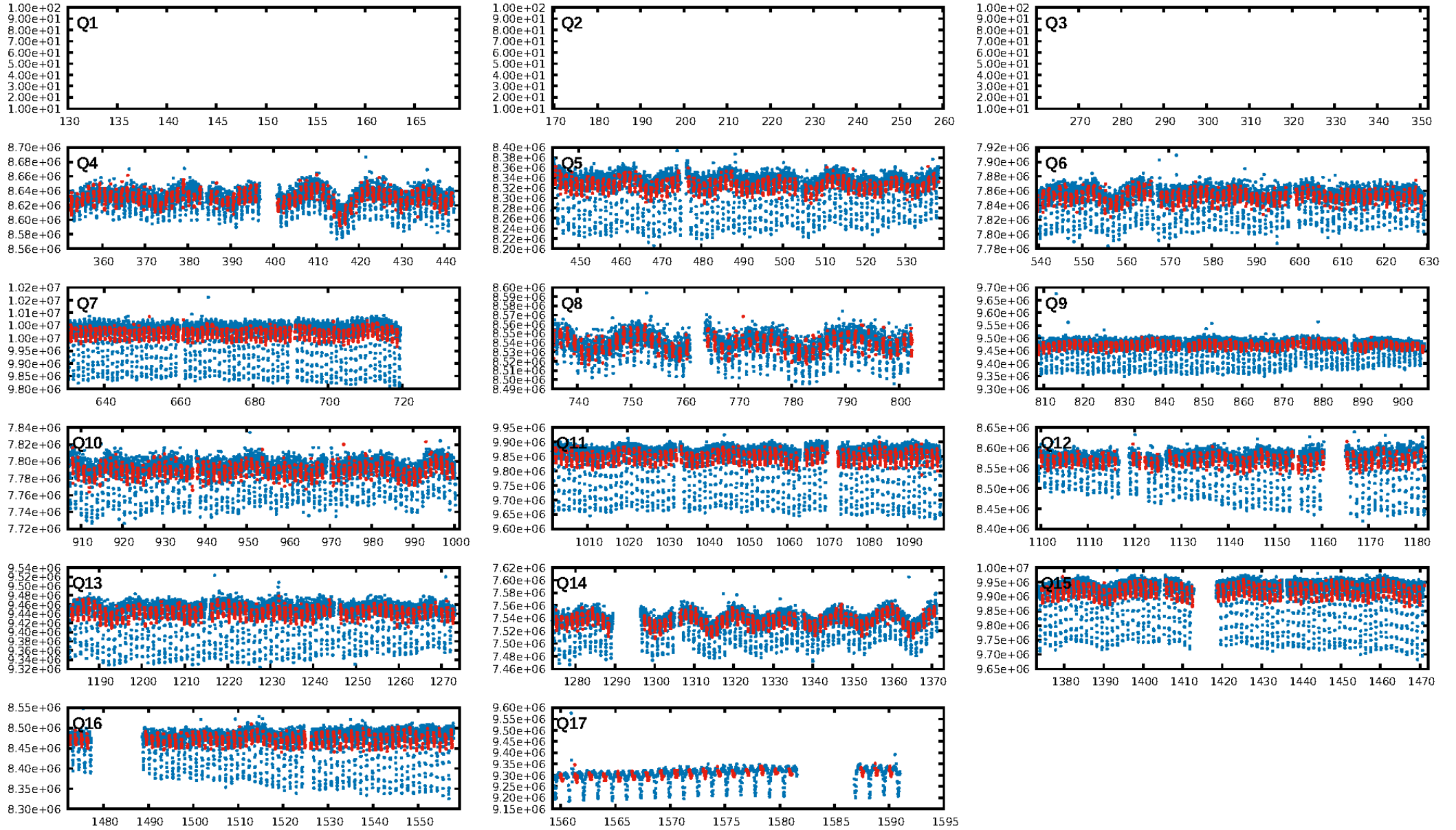
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [844/844]
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]
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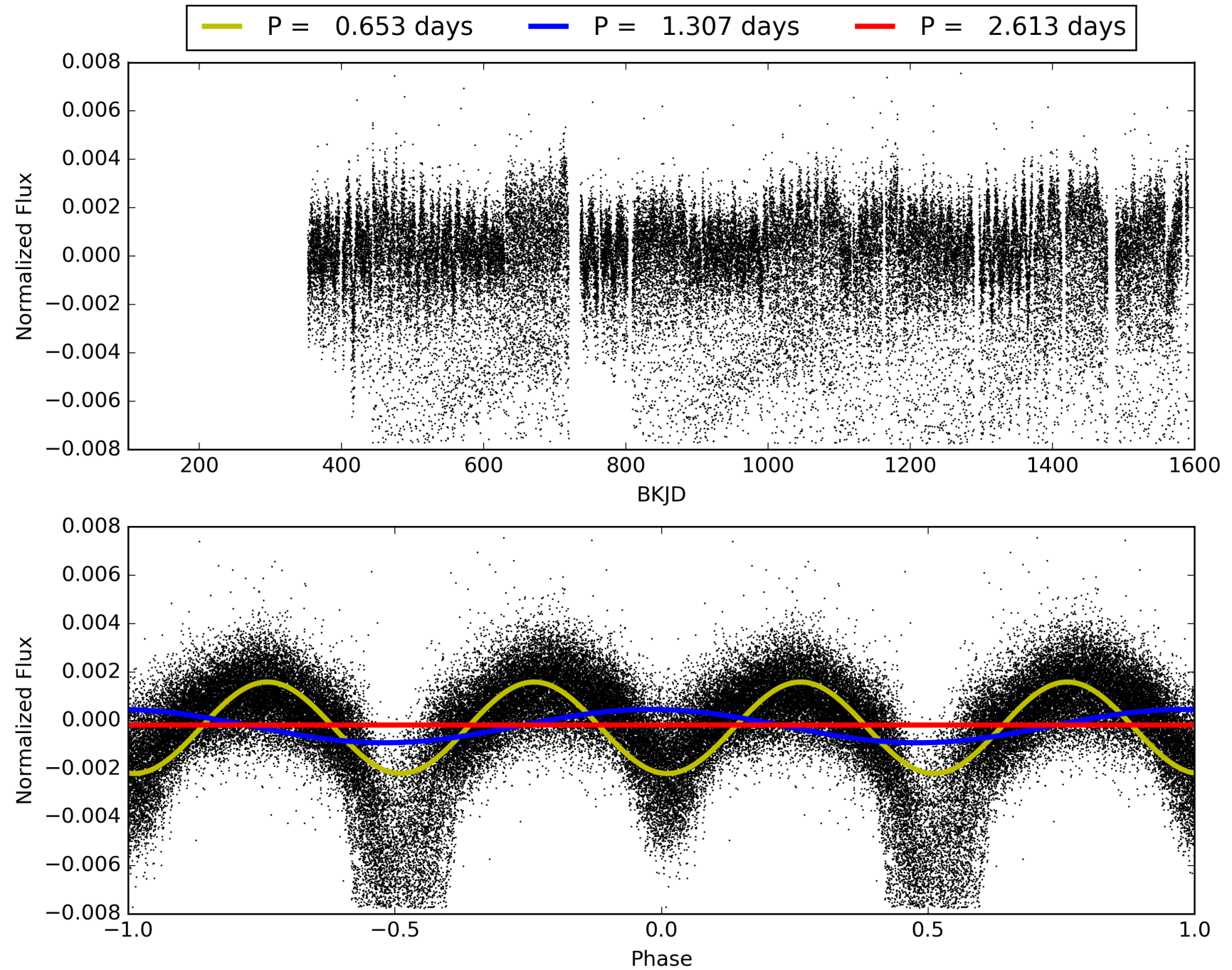
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:42:13 Z

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

TCE 009161118-02, PDC Light Curves

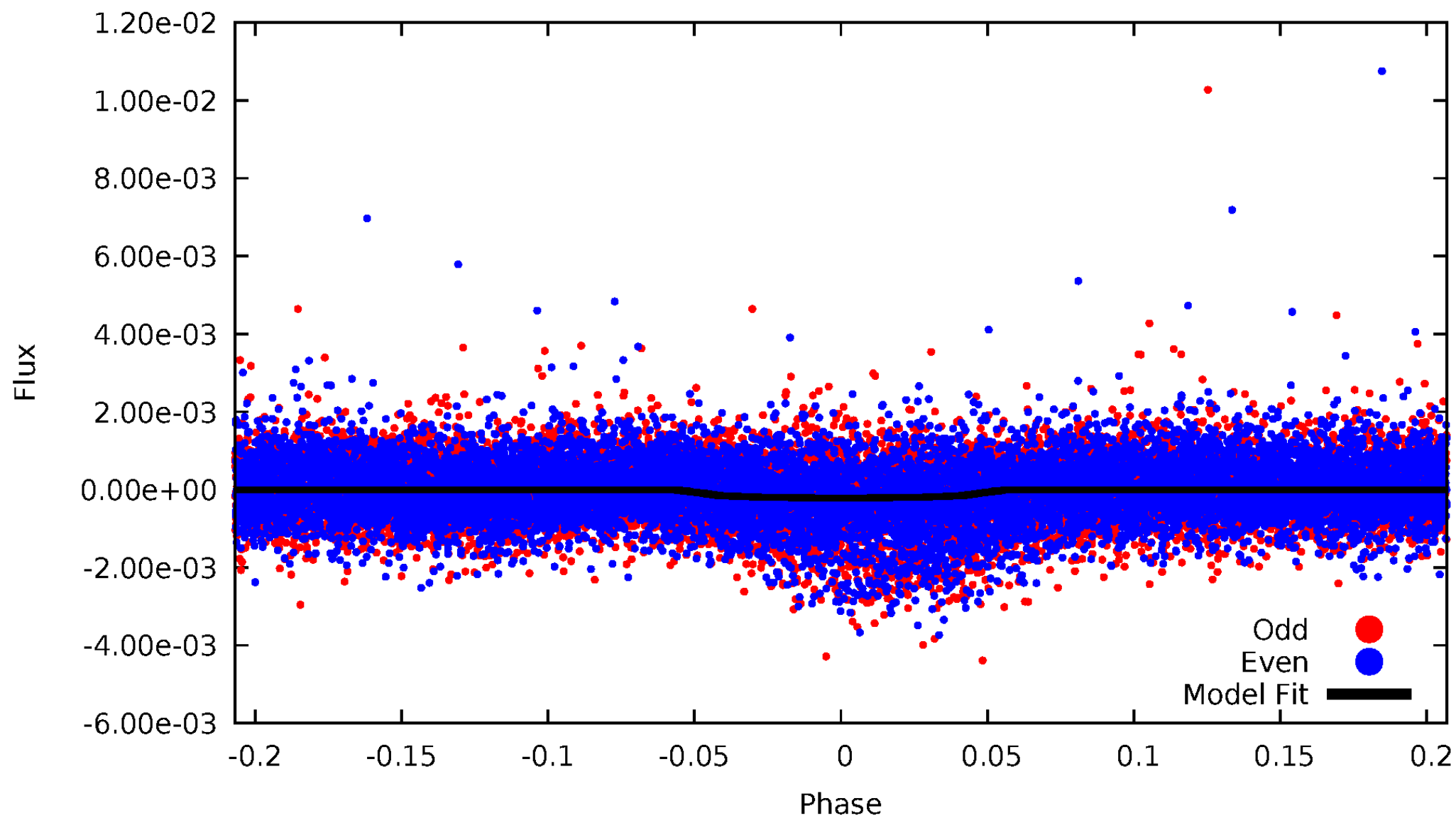


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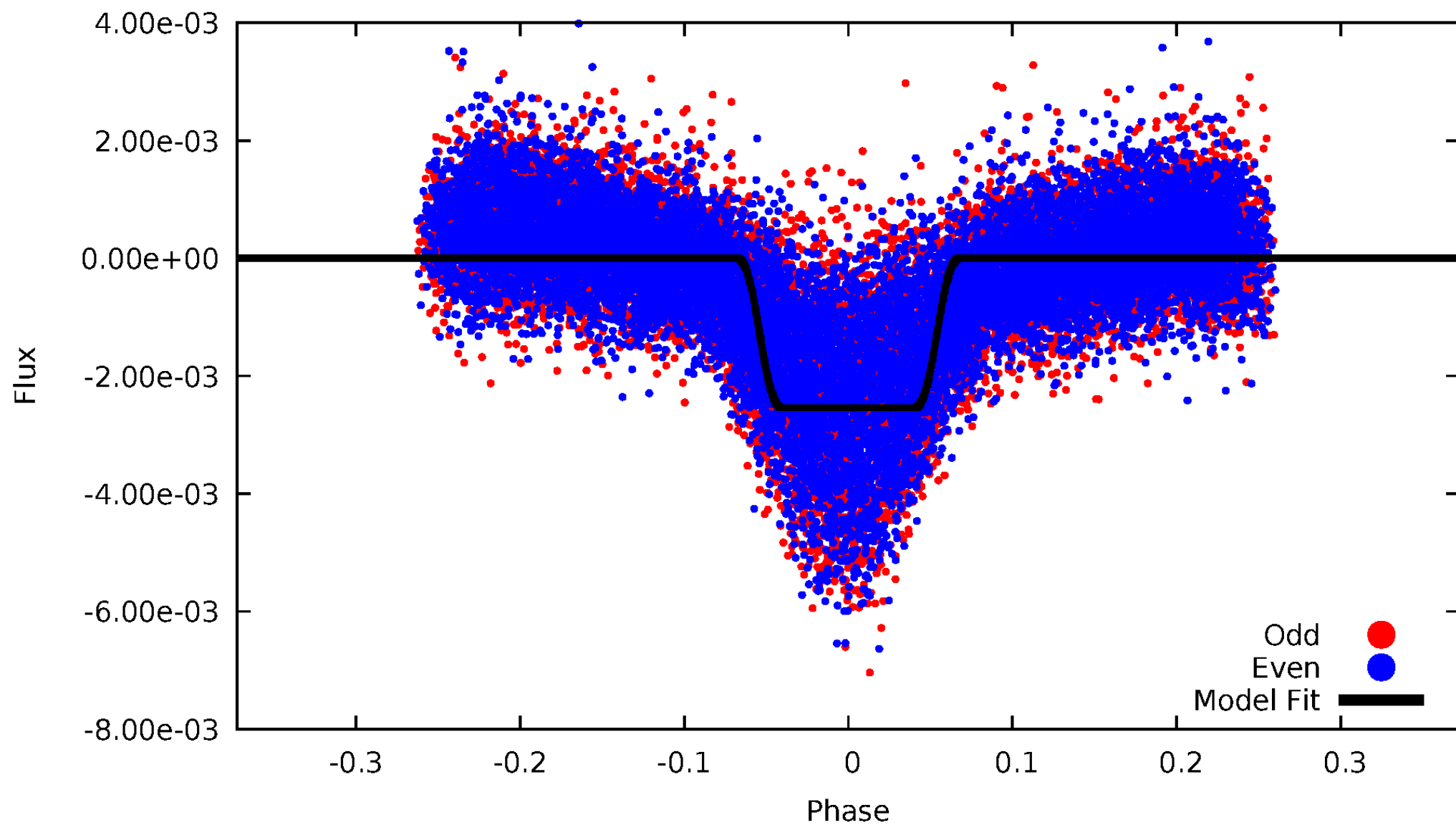
DV Odd/Even

TCE 009161118-02



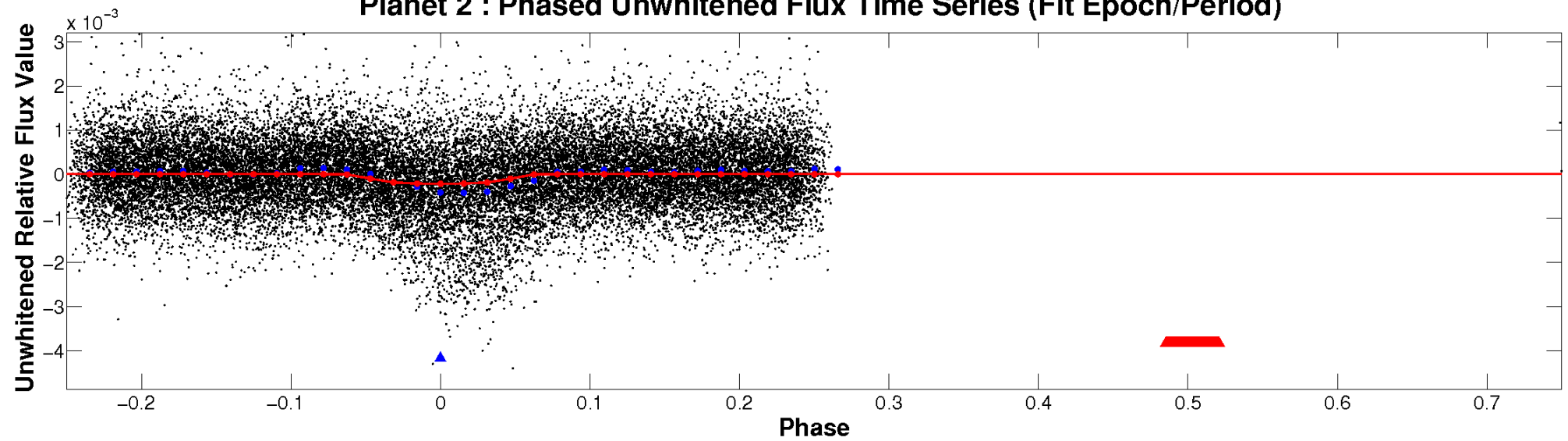
ALT Odd/Even

TCE 009161118-02

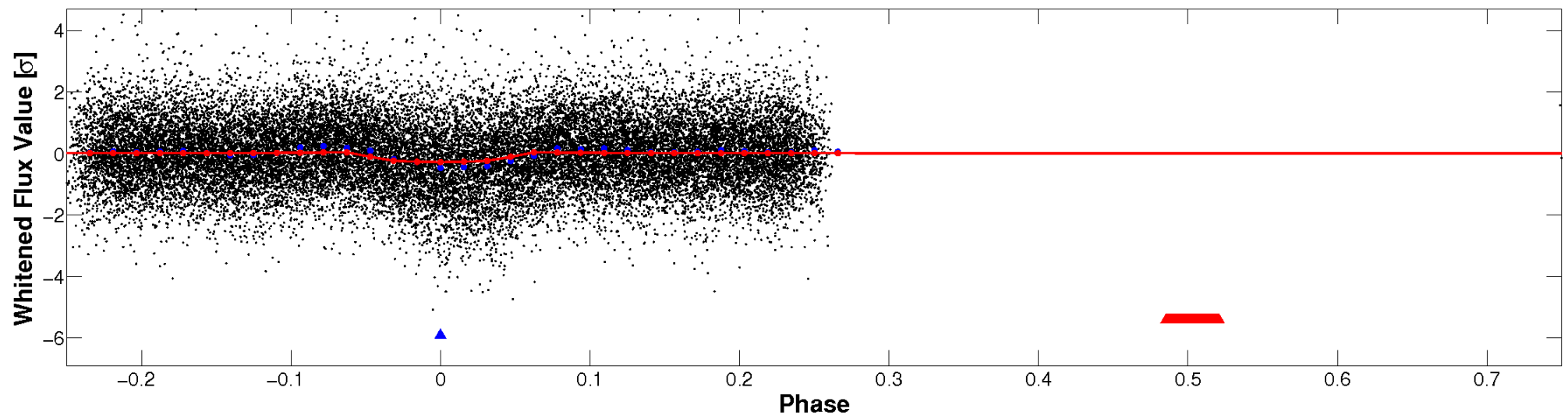


Non-Whitened Vs. Whitened Light Curve

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

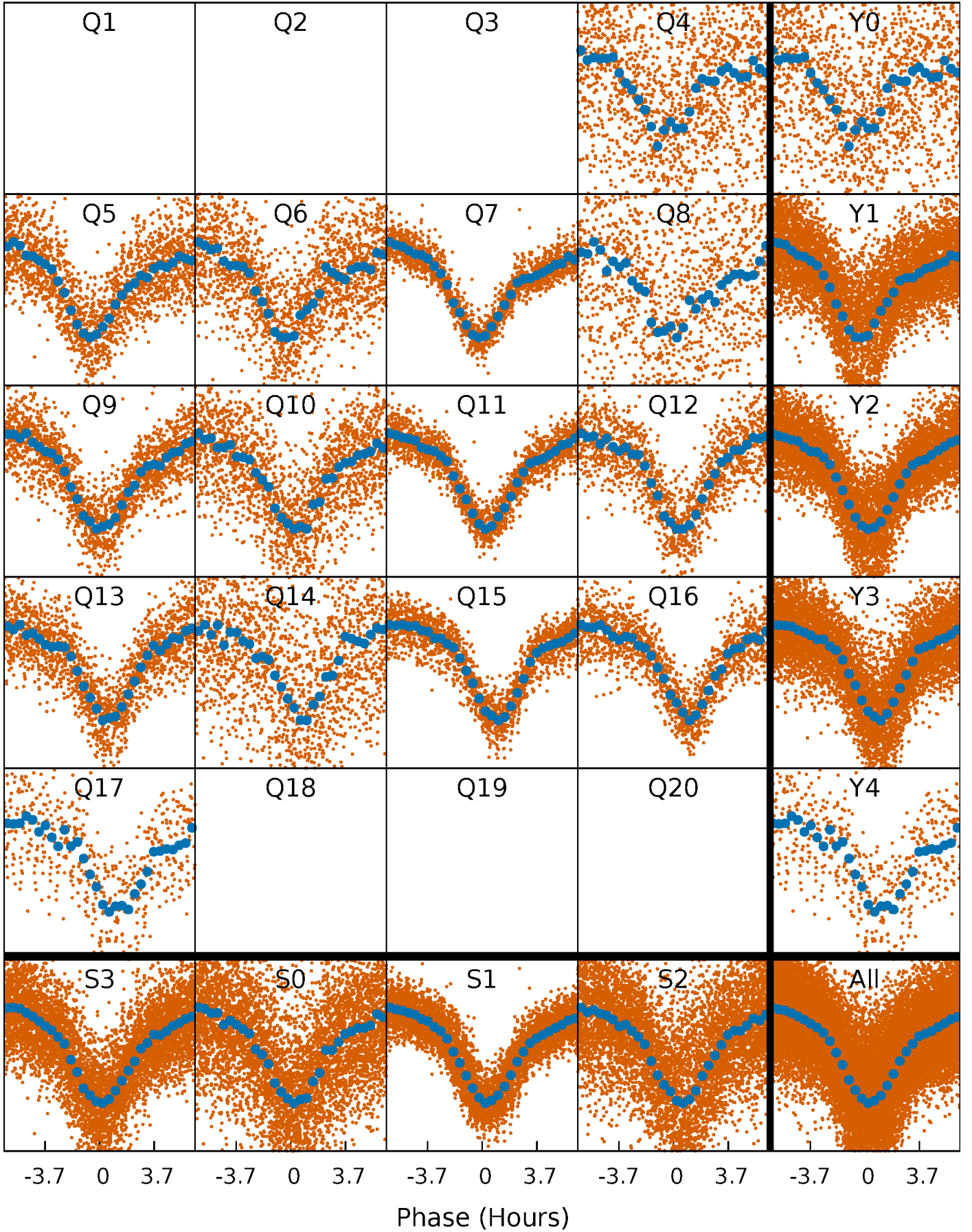


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



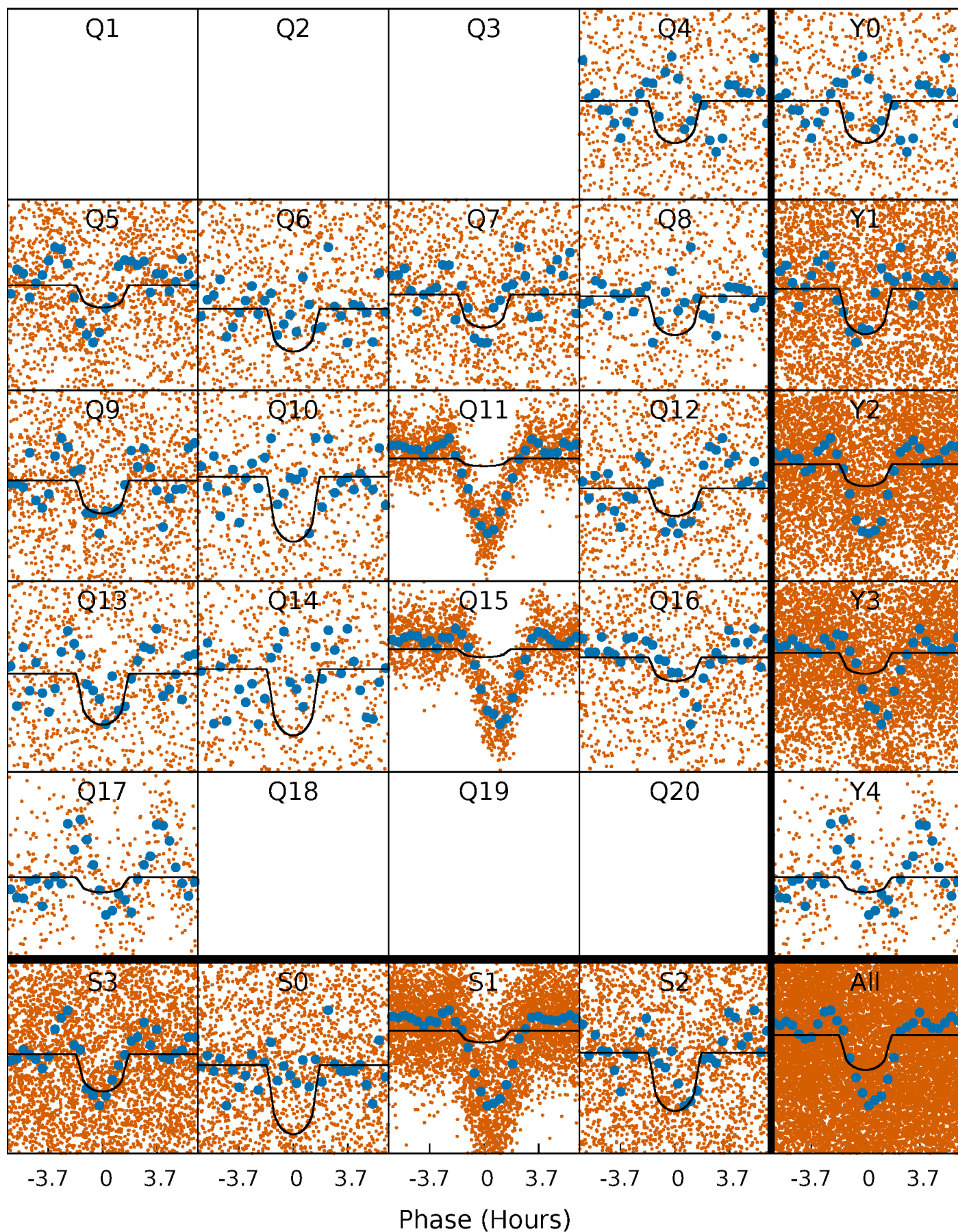
PDC Quarter-Phased Transit Curves

TCE 009161118-02 P= 1.306634 Days $T_0=131.933302$ (BKJD)



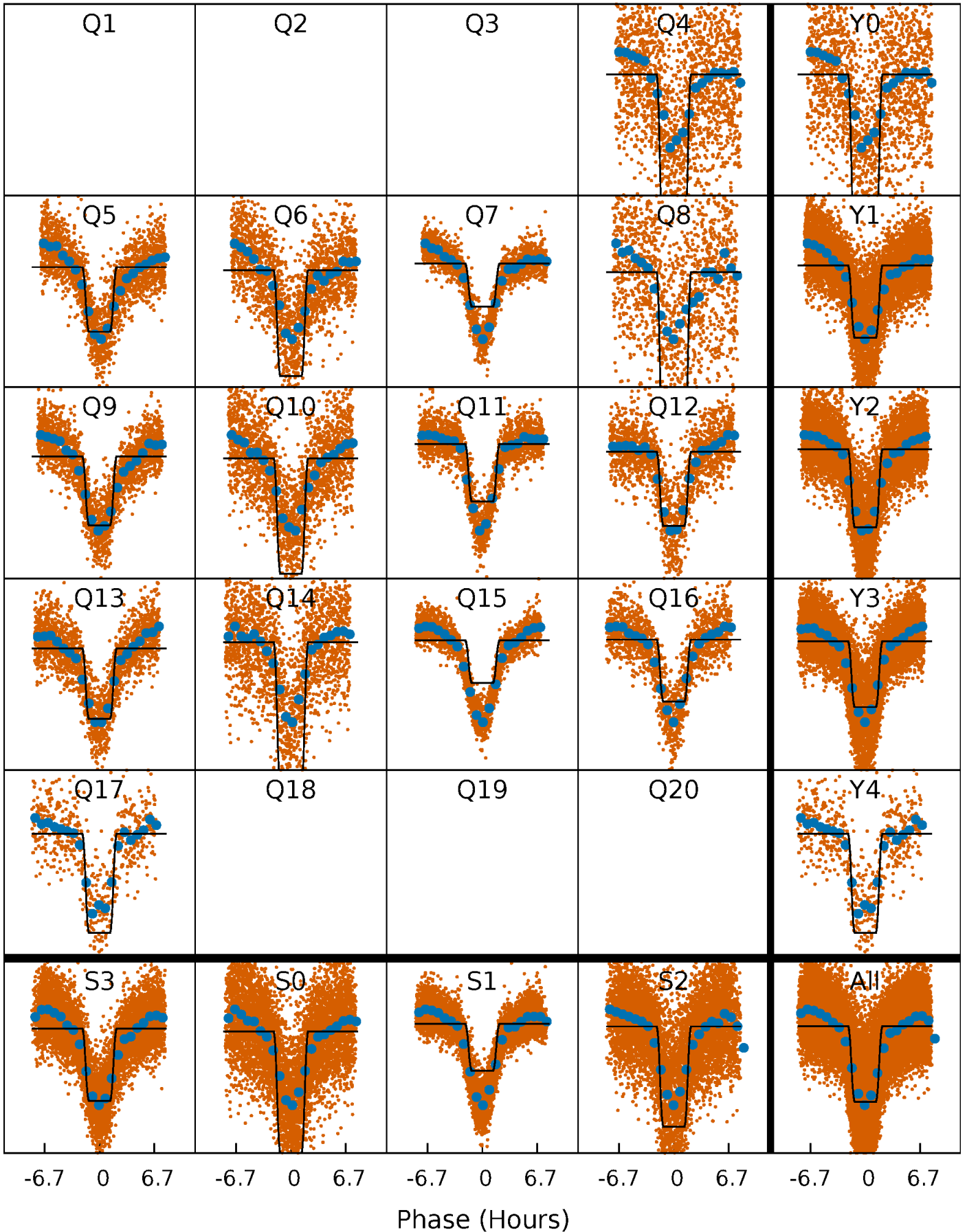
DV Quarter-Phased Transit Curves

TCE 009161118-02 P= 1.306634 Days $T_0=131.933302$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

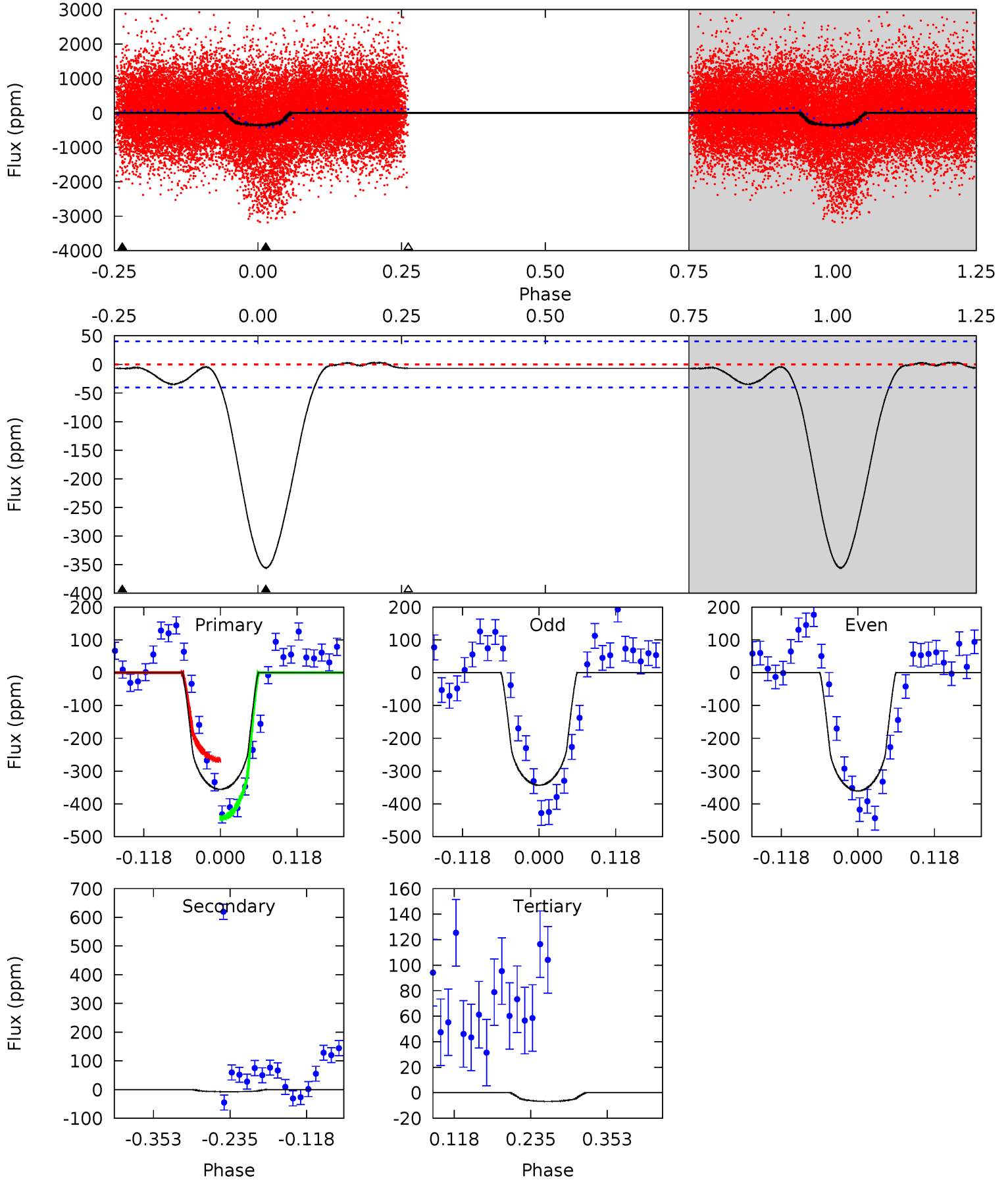
TCE 009161118-02 P= 1.306730 Days $T_0=131.880803$ (BKJD)



DV Model-Shift Uniqueness Test

009161118-02, P = 1.306634 Days, E = 131.933302 Days

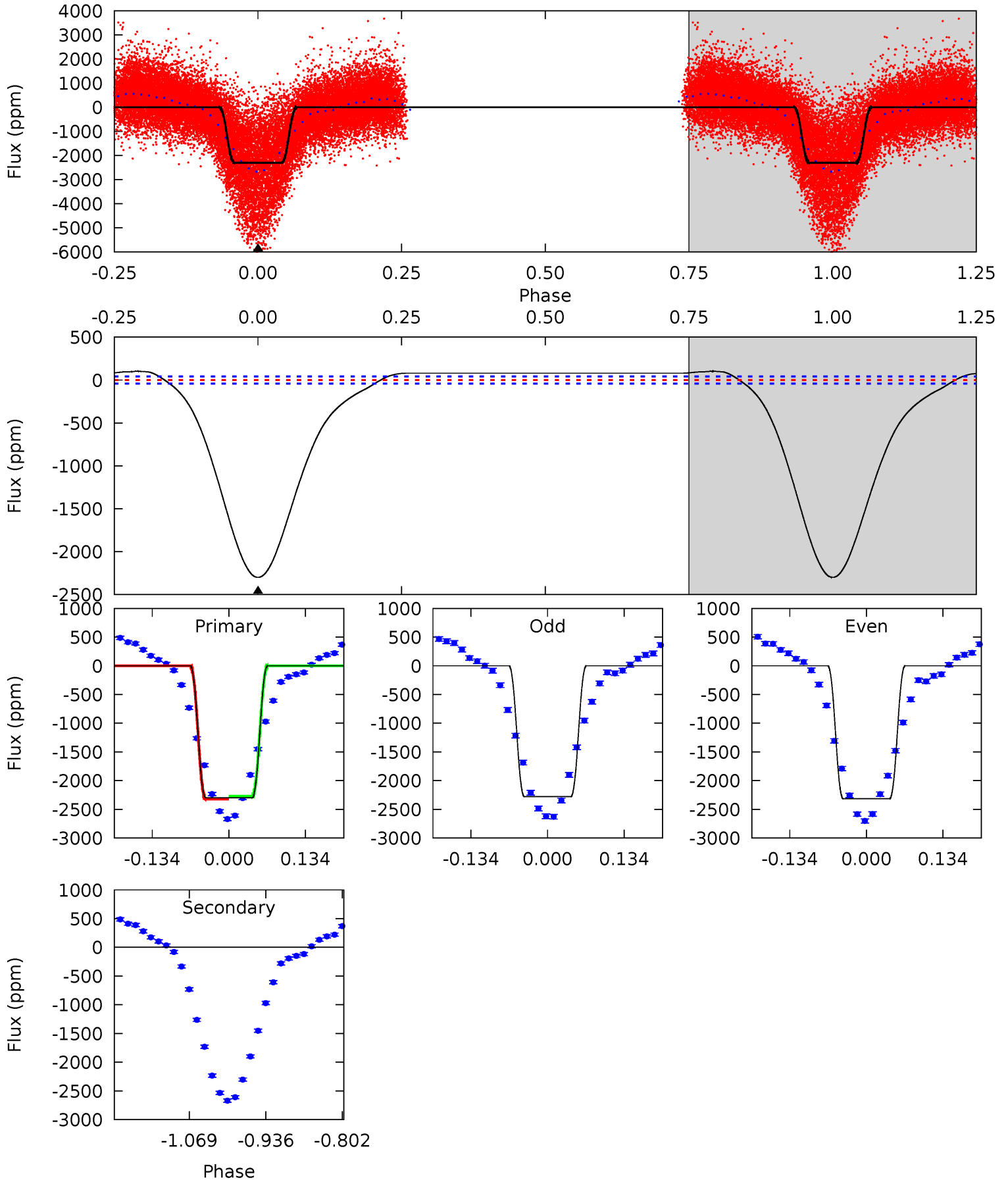
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.9	0.82	0.76	0	4.53	1.57	0.65	39.1	39.9	0.06	0.82	0.98	1.65	0.01	9.92



Alt Model-Shift Uniqueness Test

009161118-02, P = 1.306730 Days, E = 131.880803 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
248.0	0	0	0	4.50	1.50	13.6	248.0	248.0	0	0	1.88	1.03	0.04	2.65



Stellar Parameters For KIC 009161118

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4651^{+163}_{-163}	$4.612^{+0.052}_{-0.032}$	$-0.320^{+0.300}_{-0.300}$	$0.657^{+0.053}_{-0.059}$	$0.644^{+0.080}_{-0.046}$	$3.199^{+0.798}_{-0.409}$
	+4%/-4%	+1%/-1%	+94%/-94%	+8%/-9%	+12%/-7%	+25%/-13%
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 009161118-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 9	$1.06^{+0.68}_{-0.56}$	1628^{+65}_{-65}	2559^{+813}_{-4926}	$1.250^{+6.185}_{-1.426}$
Alt.	0 ± 9	$3.62^{+0.65}_{-0.71}$	1630^{+66}_{-63}	-2235^{+171}_{-123}	$-0.002^{+0.155}_{-0.174}$

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

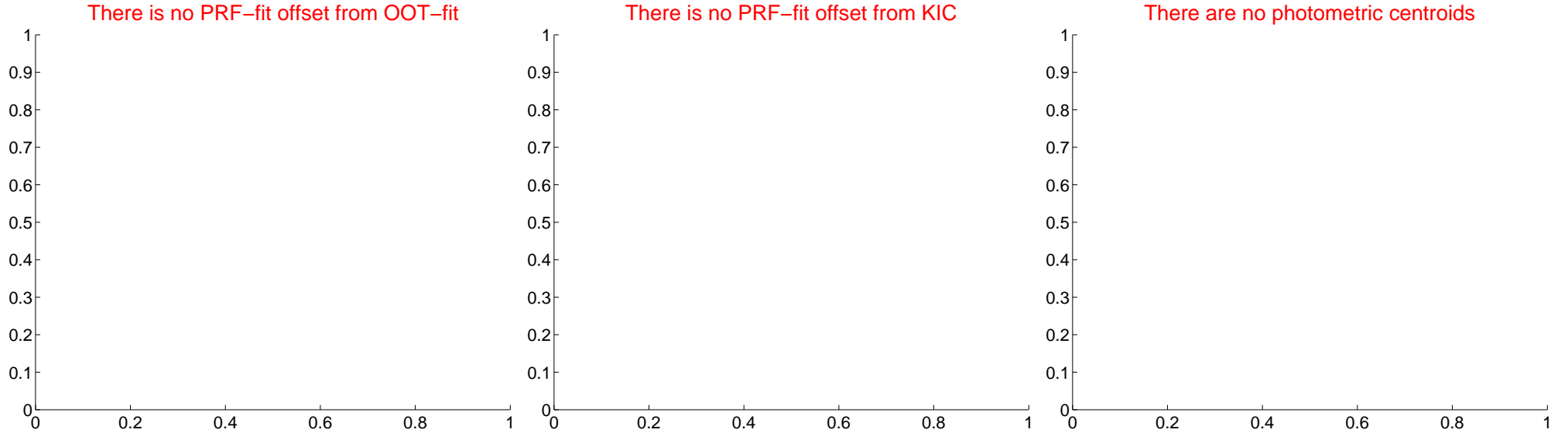
DV Centroid Data

Supplemental centroid analysis for 009161118-02. Kepler magnitude: 15.98. Transit SNR 17.19

There are 0 quarters with good PRF difference image offsets

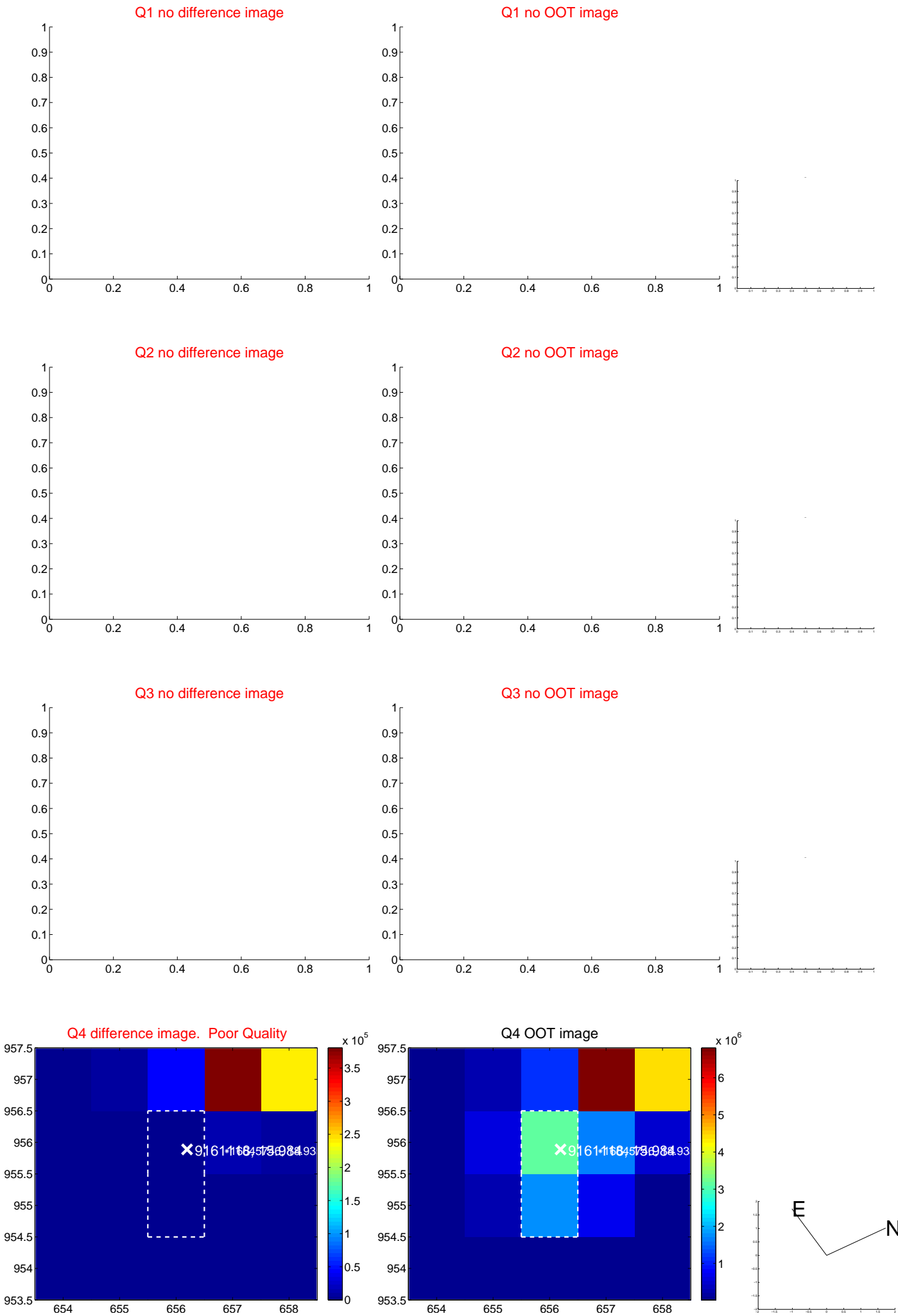
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	—	—	—	—

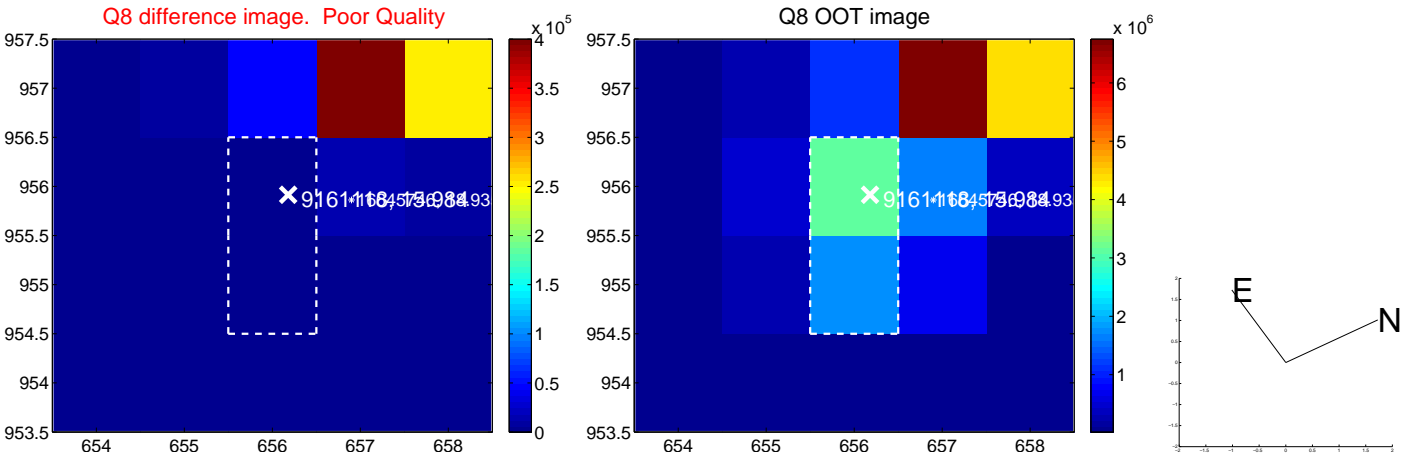
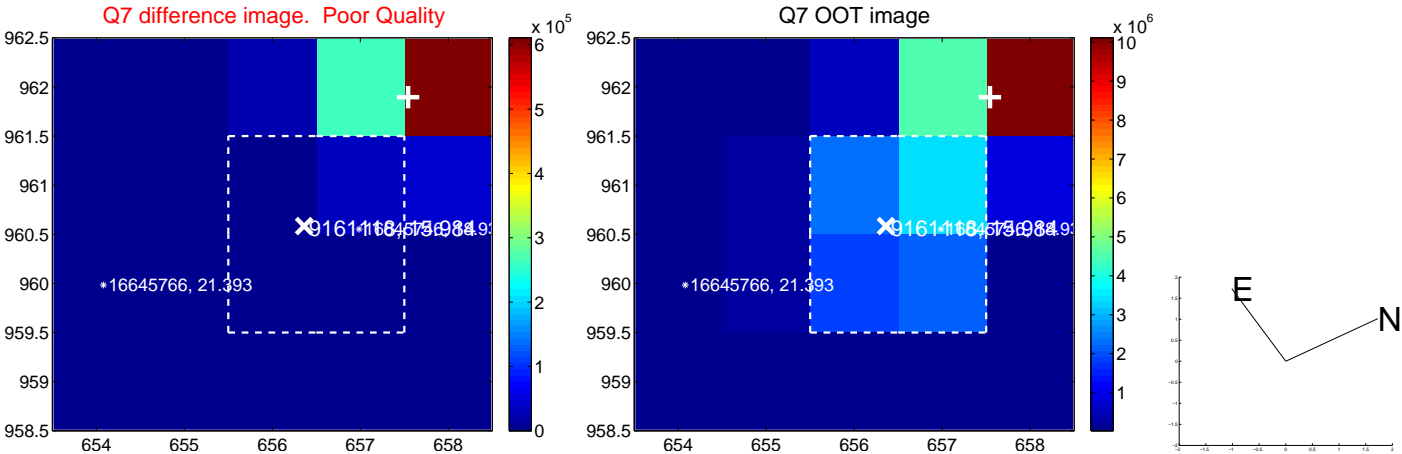
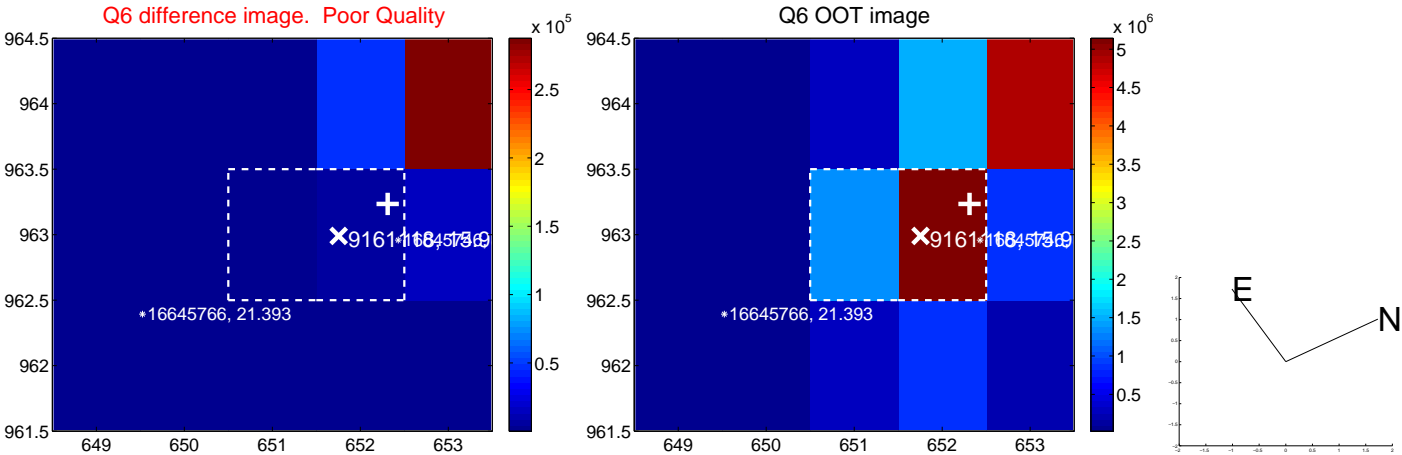
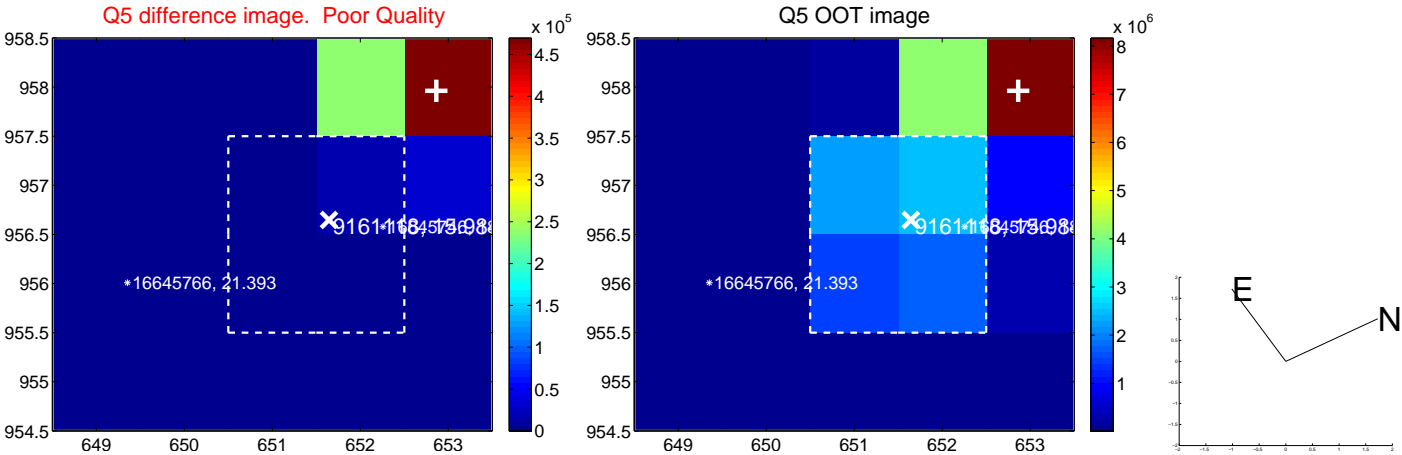


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

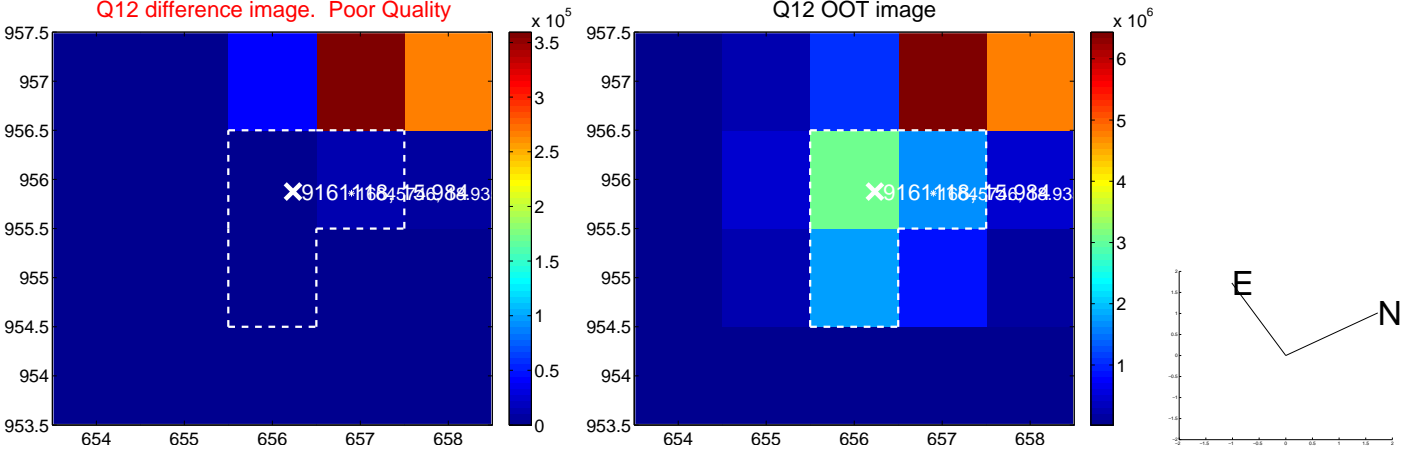
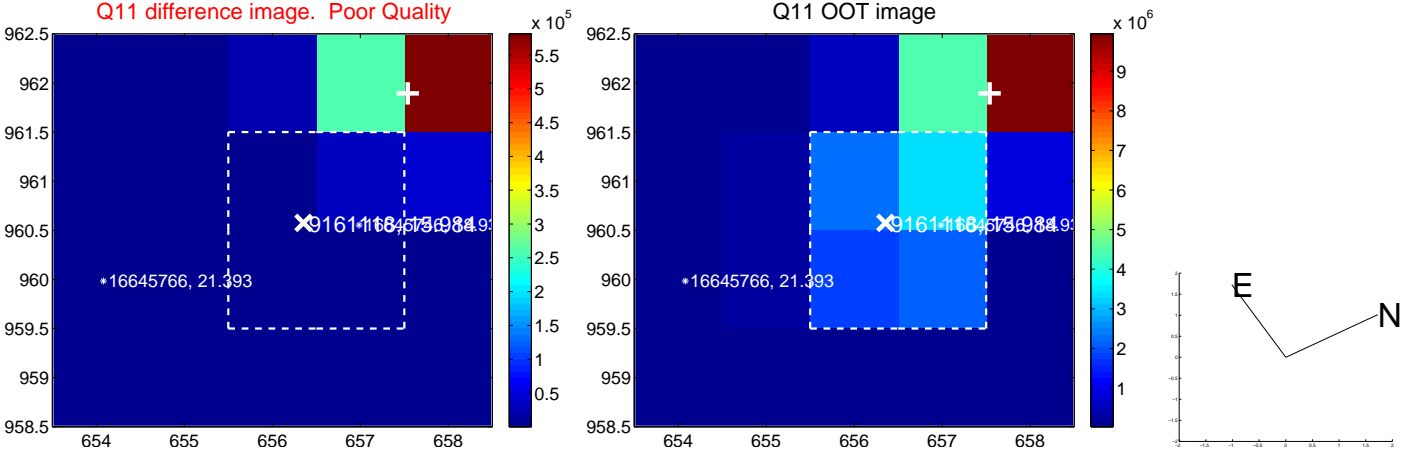
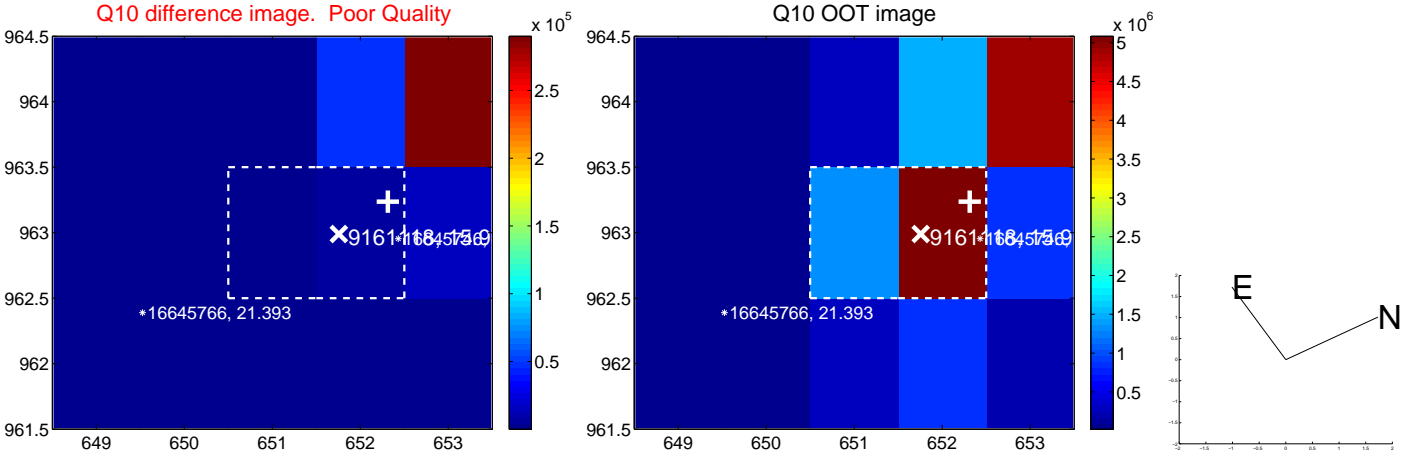
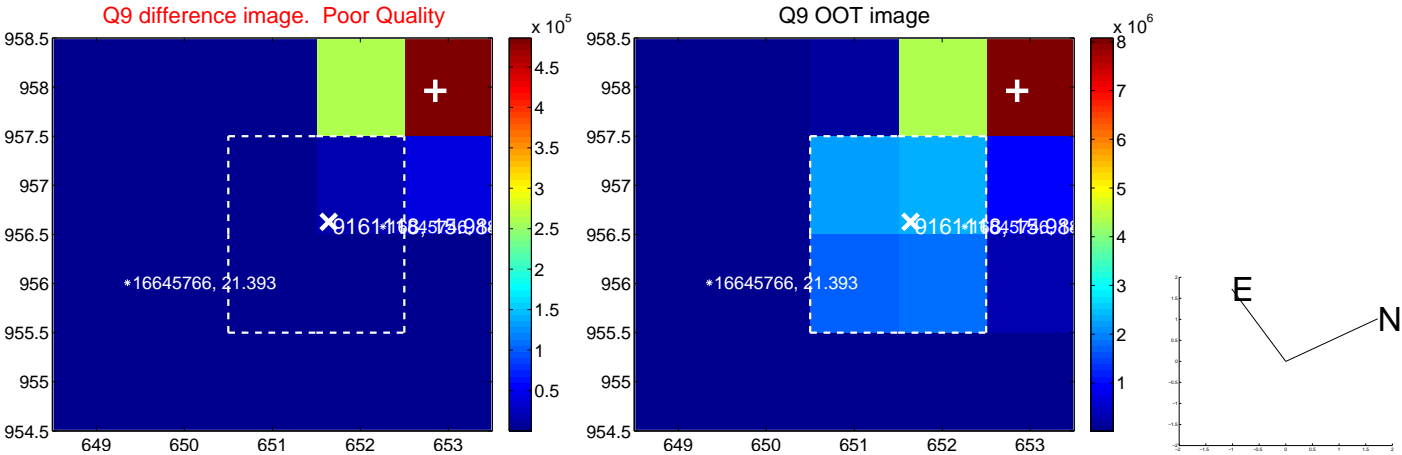
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



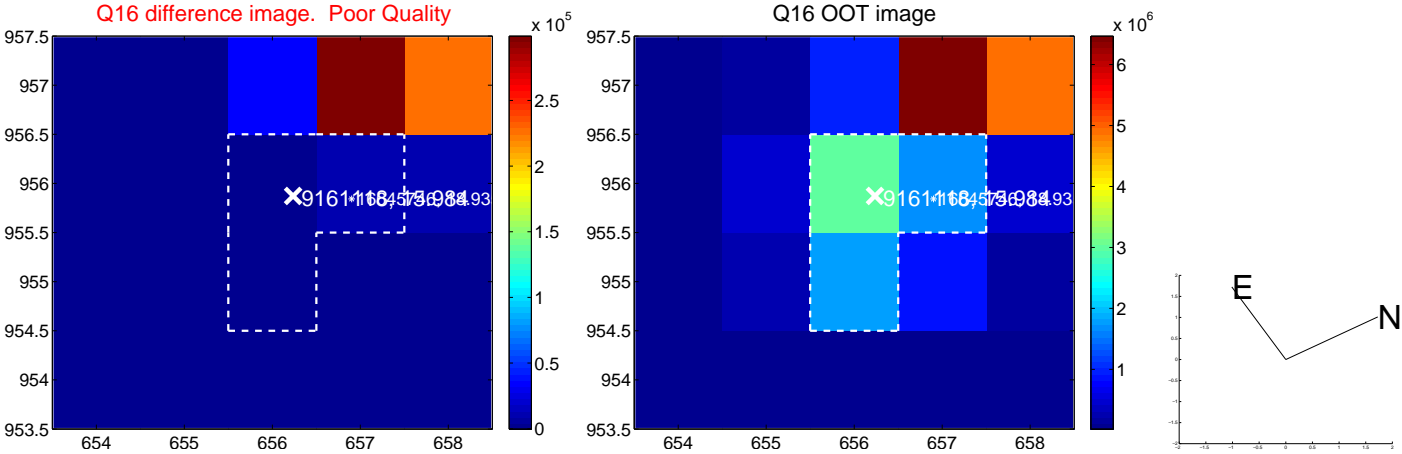
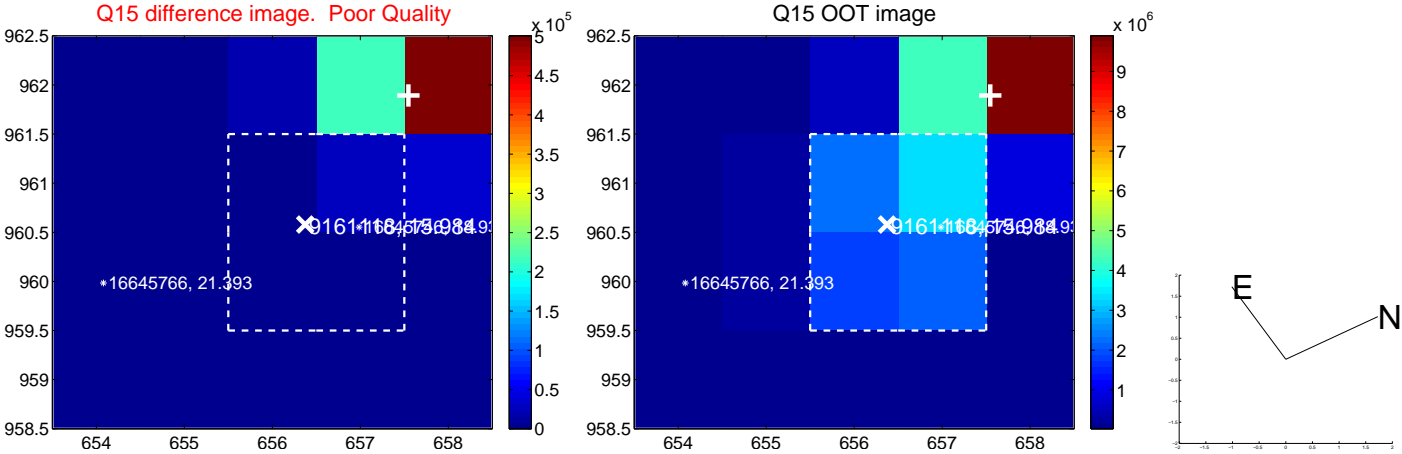
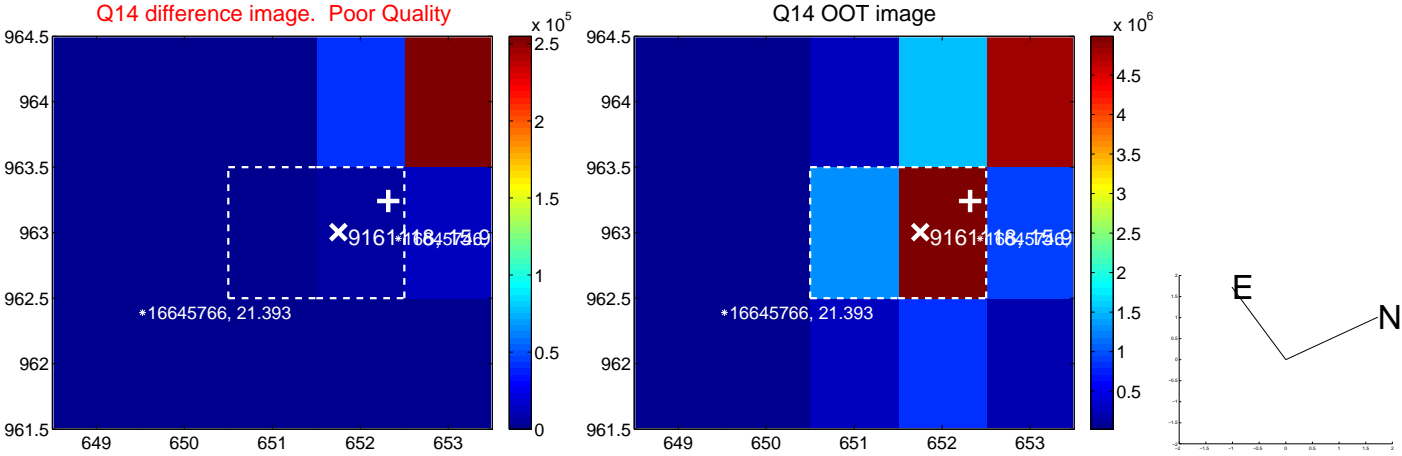
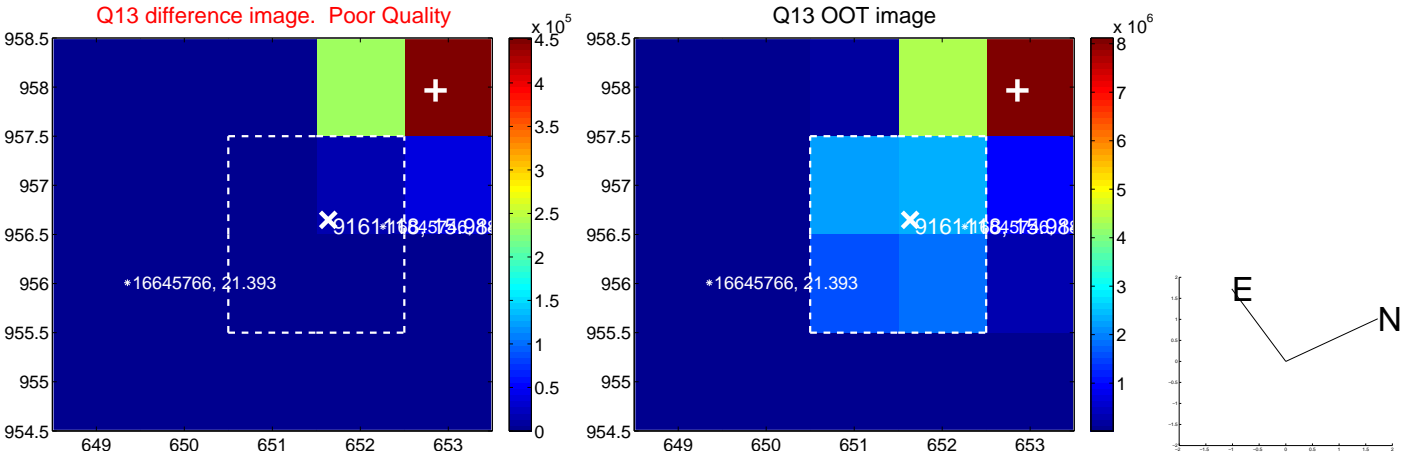
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



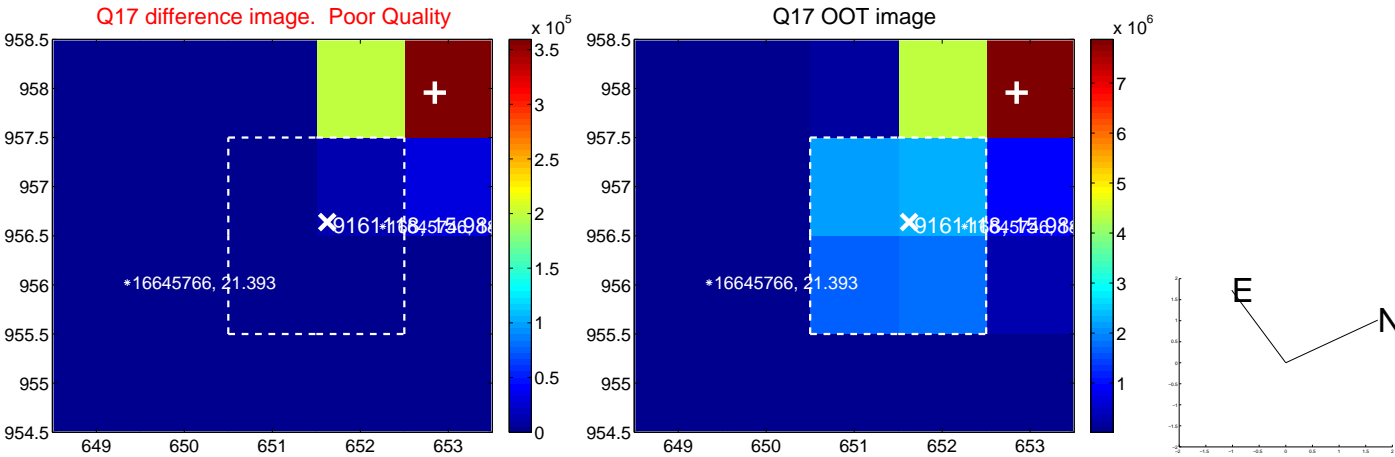
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

