

KIC 008197275

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})
008197275-01	OBS	No	386.614025	406.675874	5903.1	6.710	90.5	6.4	0.73	5602	7.33	0.51
008197275-02	OBS	No	370.255764	432.422154	22.7	10.469	154.5	0.0	0.73	5602	0.36	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197275-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008197275-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

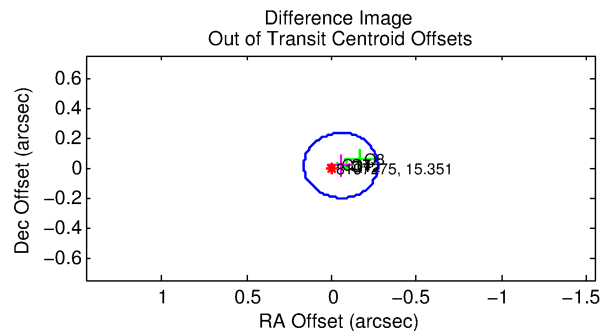
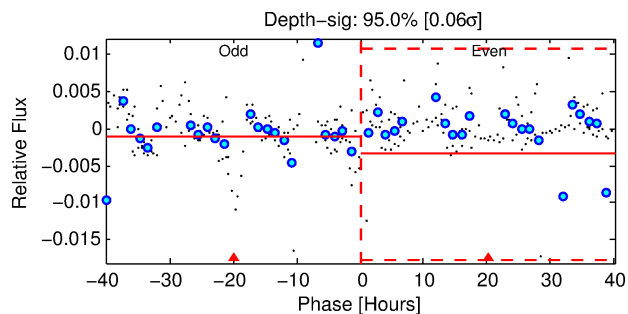
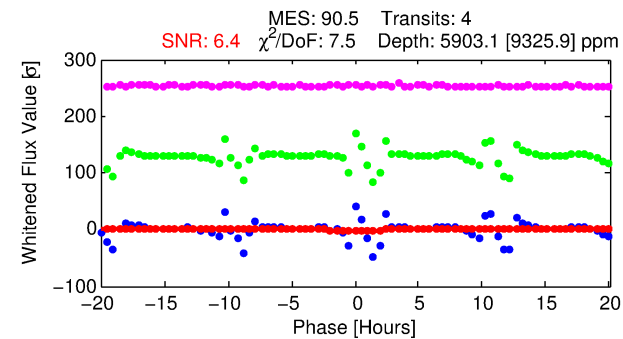
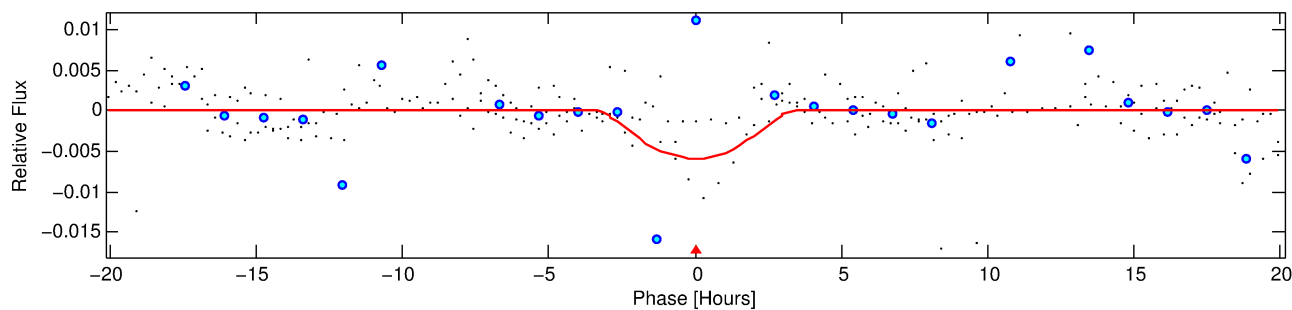
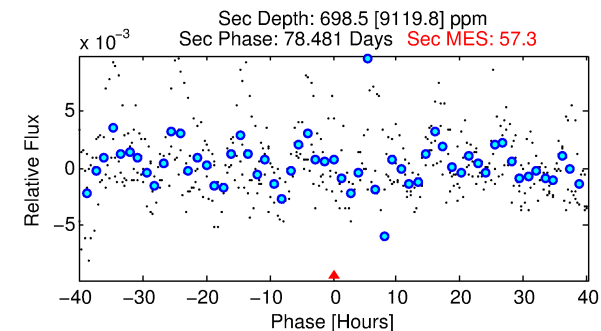
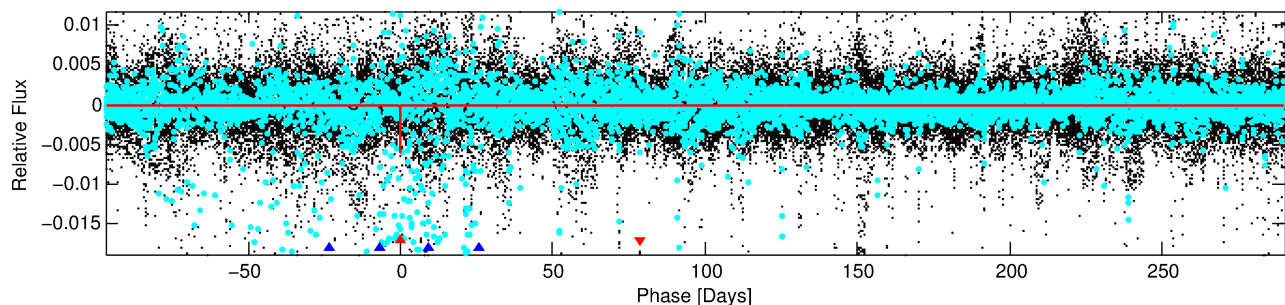
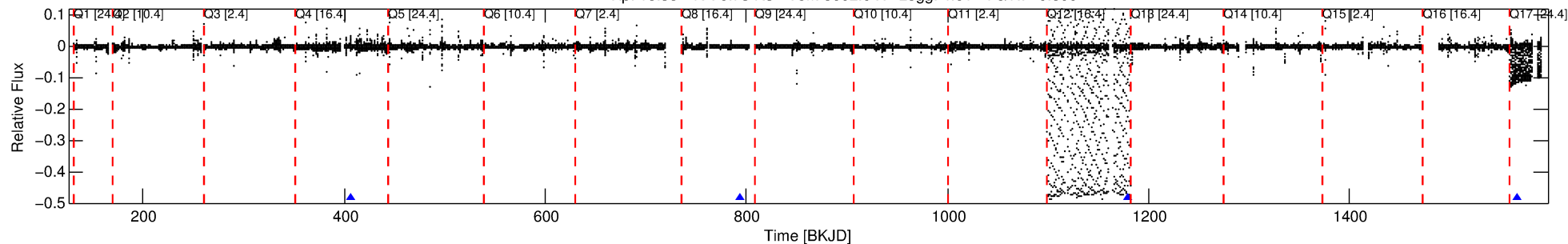
Ephemeris Match Information For 008197275-01

No Significant Match Found

DV One-Page Summary

KIC: 8197275 Candidate: 1 of 2 Period: 386.614 d

Kp: 15.35 R*: 0.73 Rs Teff: 5602.0 K Logg: 4.61 Fe/H: -0.500



DV Fit Results:

Period = 386.61403 [0.08425] d
Epoch = 406.6759 [0.1618] BKJD
Rp/R* = 0.0917 [0.4627]
a/R* = 248.65 [602.44]
b = 0.93 [1.08]
Seff = 0.51 [0.14]
Teq = 215 [15] K
Rp = 7.33 [36.99] Re
a = 0.9658 [0.1724] AU
Ag = 6677.76 [110192.87] [0.06σ]
Teff = 3007 [12404] K [0.23σ]

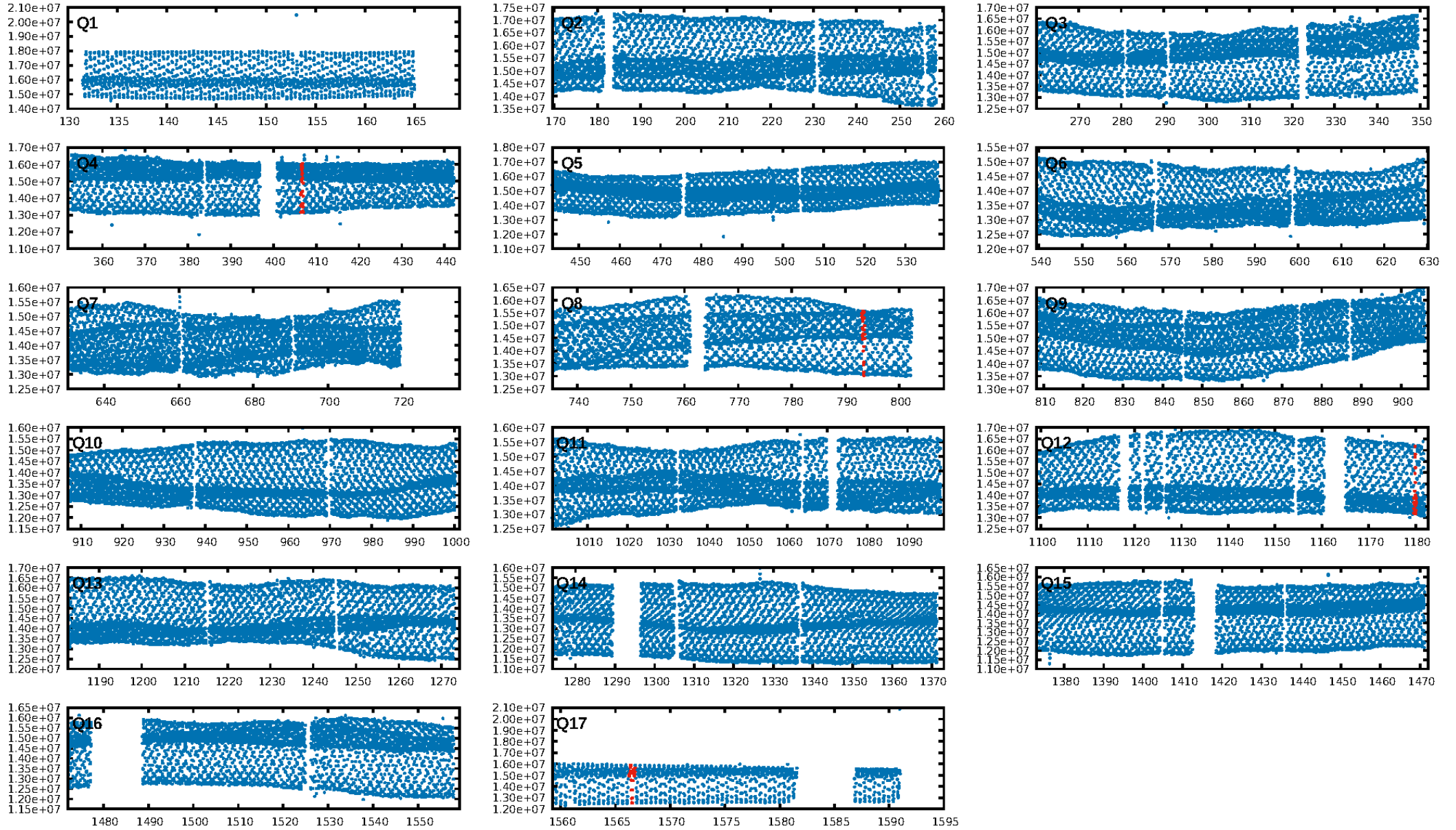
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [31.57σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 1.32e-04
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.715
Centroid-sig: 36.6%
Centroid-so: 1.543 arcsec [3.46σ]
OotOffset-rm: 0.056 arcsec [0.77σ]
KicOffset-rm: 0.161 arcsec [2.33σ]
OotOffset-st: 0/0/3/1 [4]
KicOffset-st: 0/0/3/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

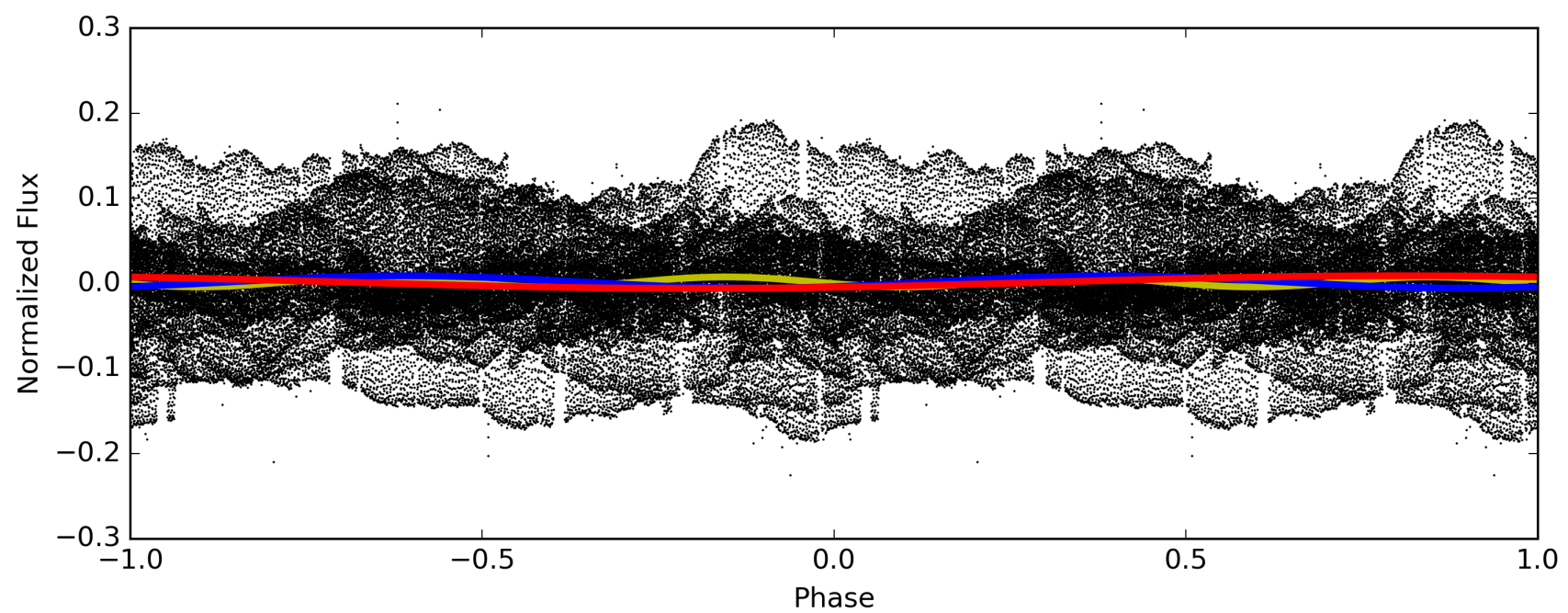
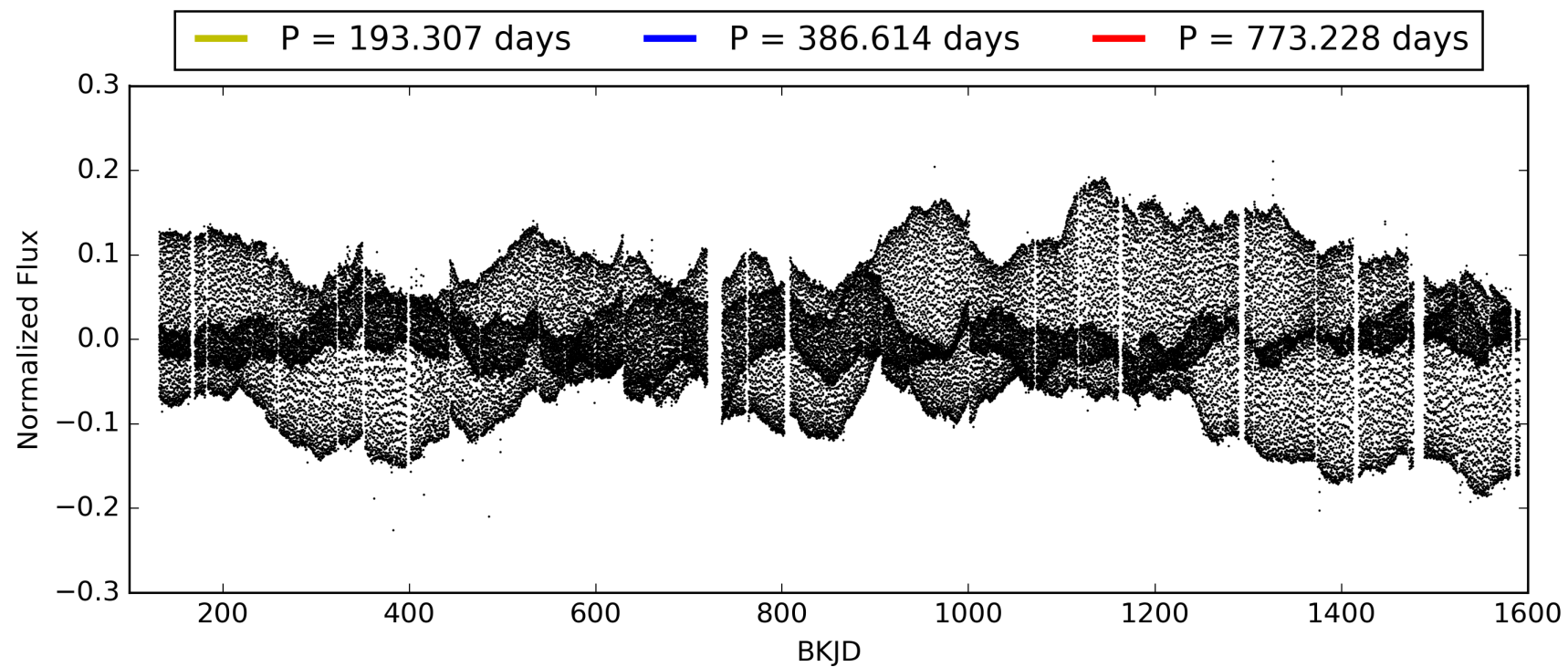
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:48:00 Z

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

TCE 008197275-01, PDC Light Curves

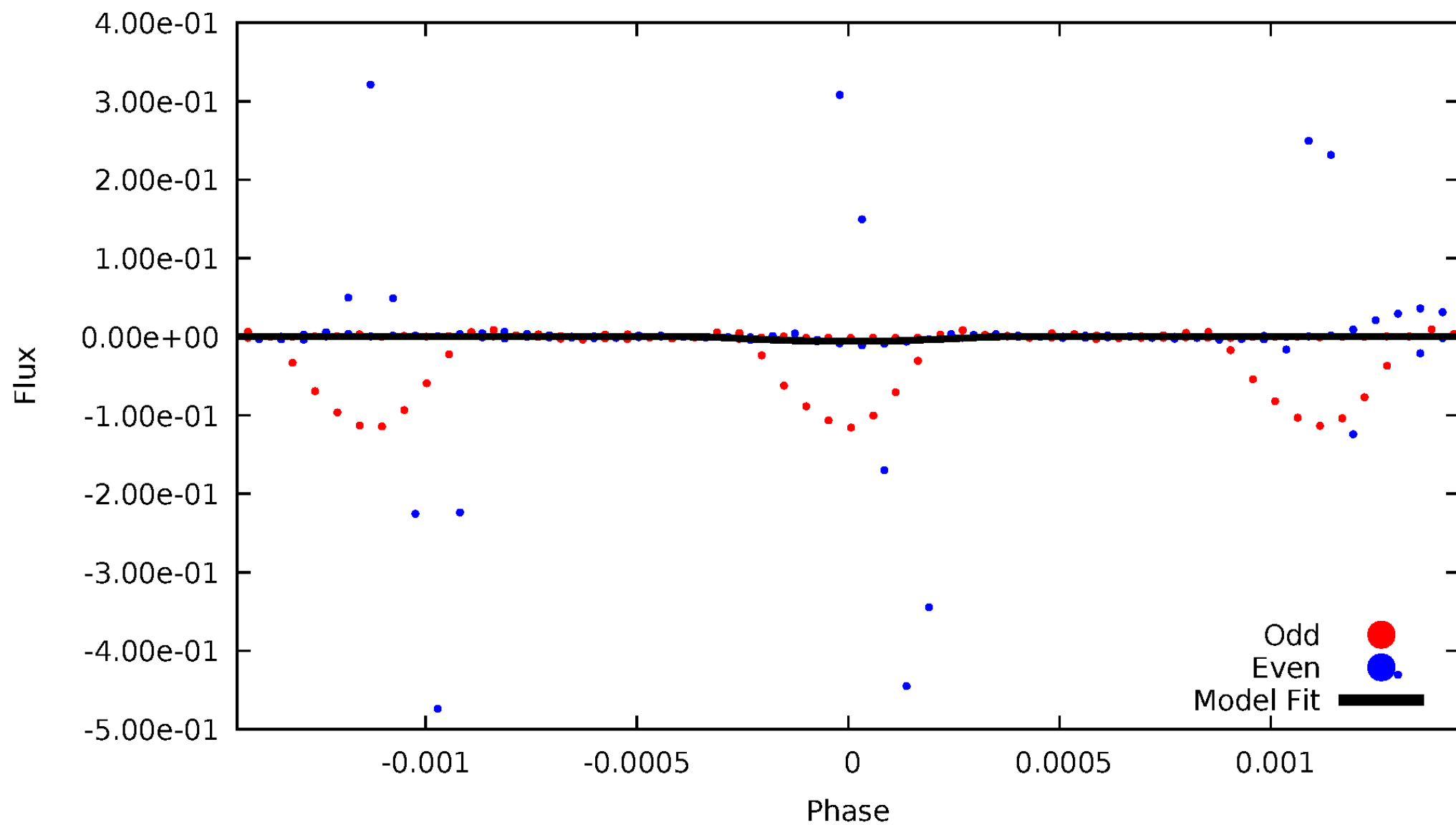


TCE 008197275-01



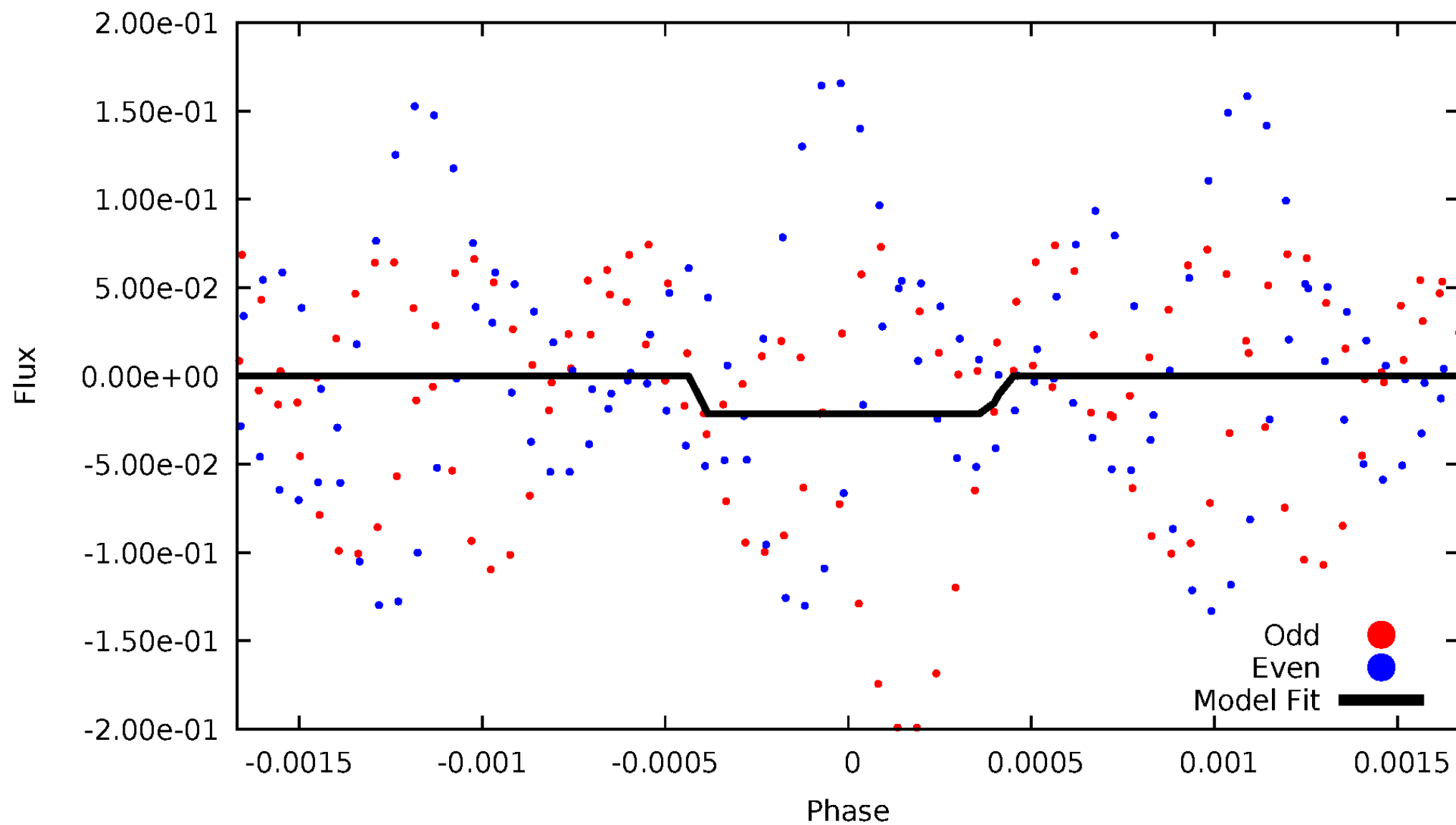
DV Odd/Even

TCE 008197275-01



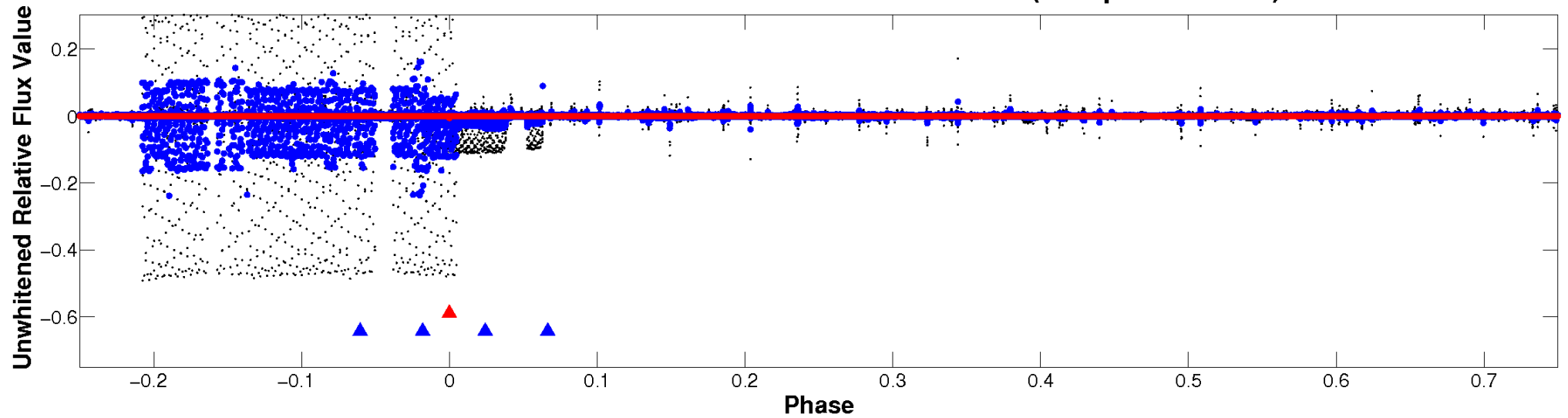
ALT Odd/Even

TCE 008197275-01

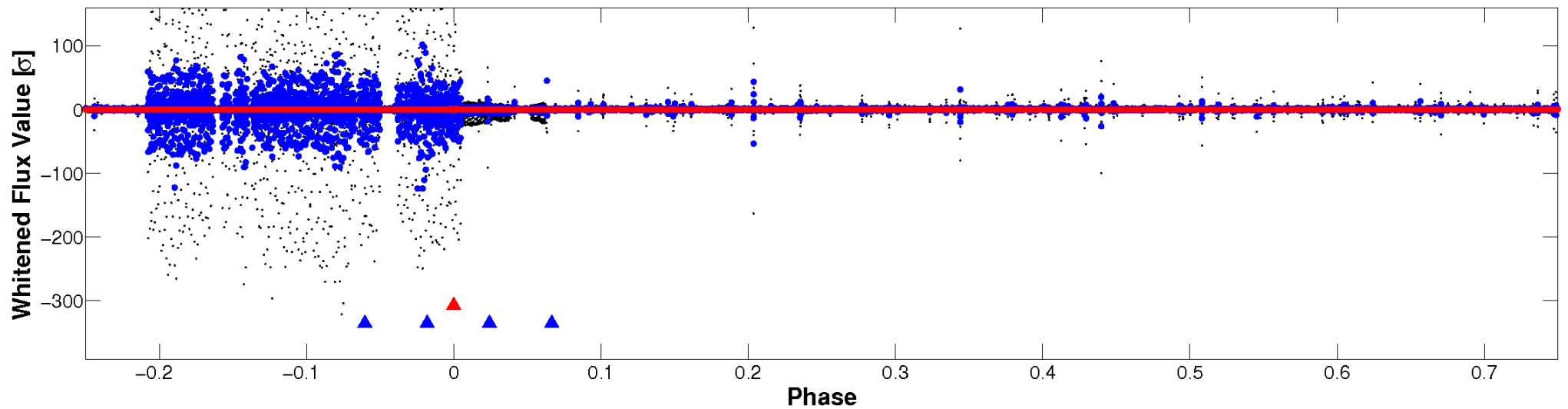


Non-Whitened Vs. Whitened Light Curve

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

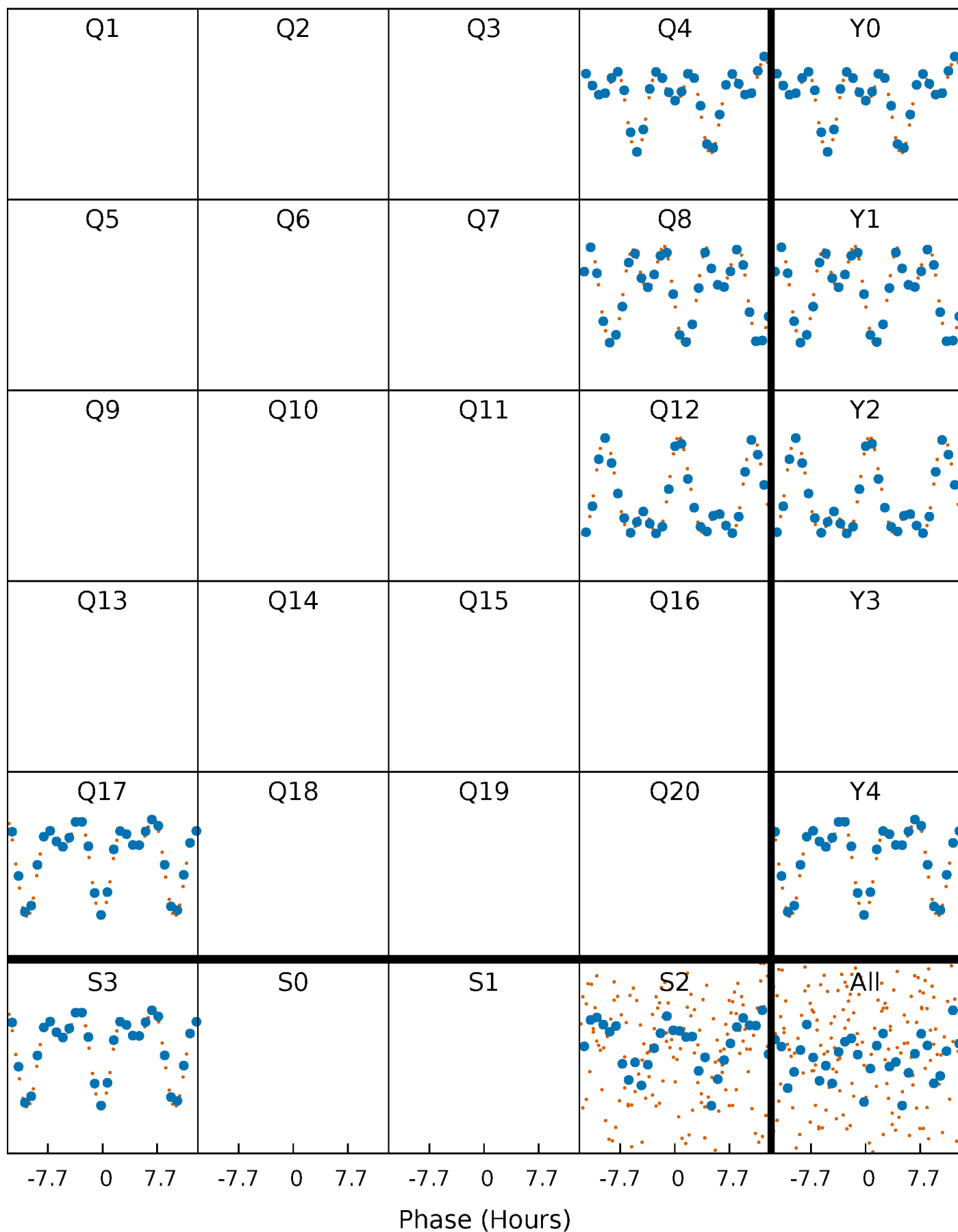


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



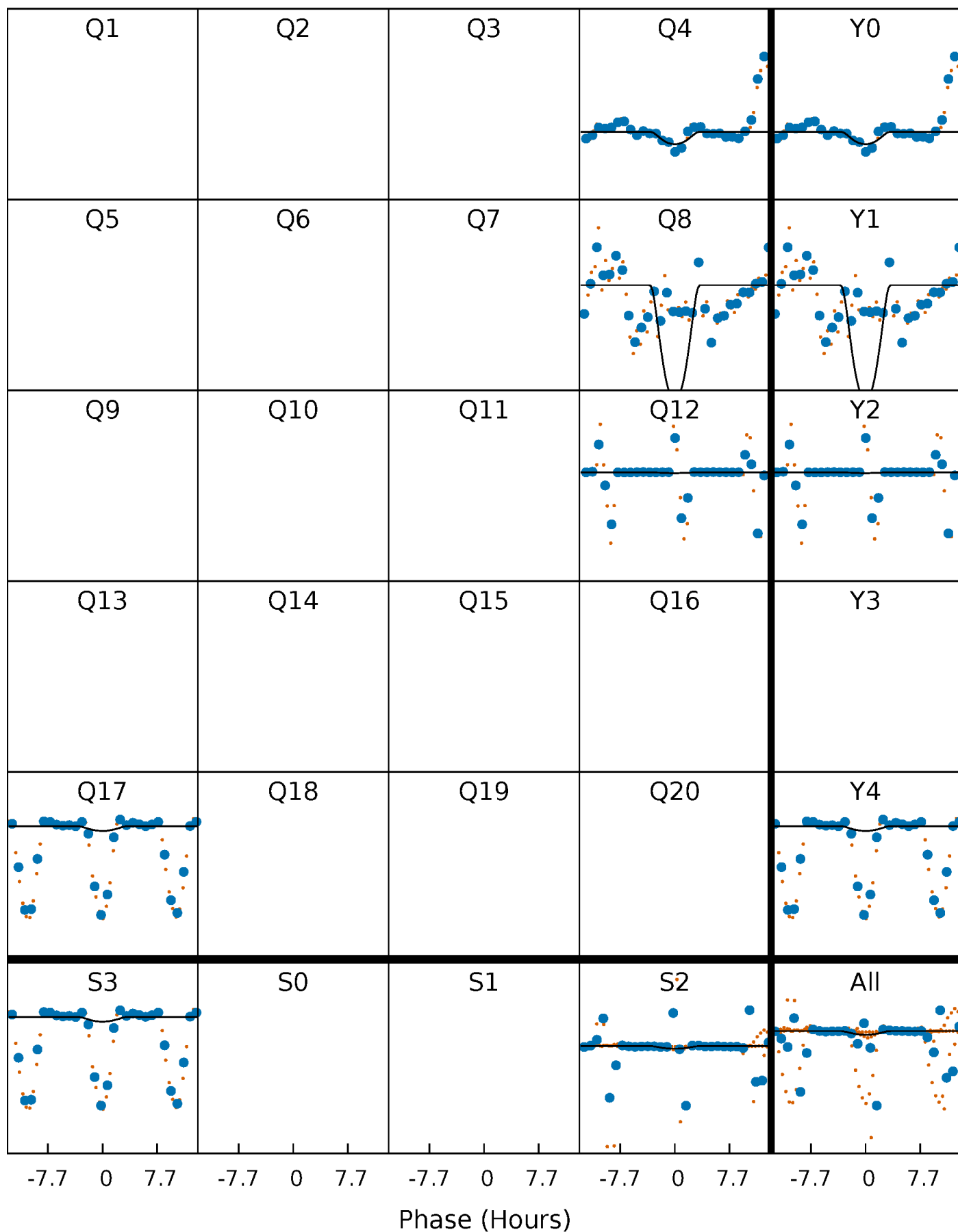
PDC Quarter-Phased Transit Curves

TCE 008197275-01 P=386.614025 Days $T_0=406.675874$ (BKJD)



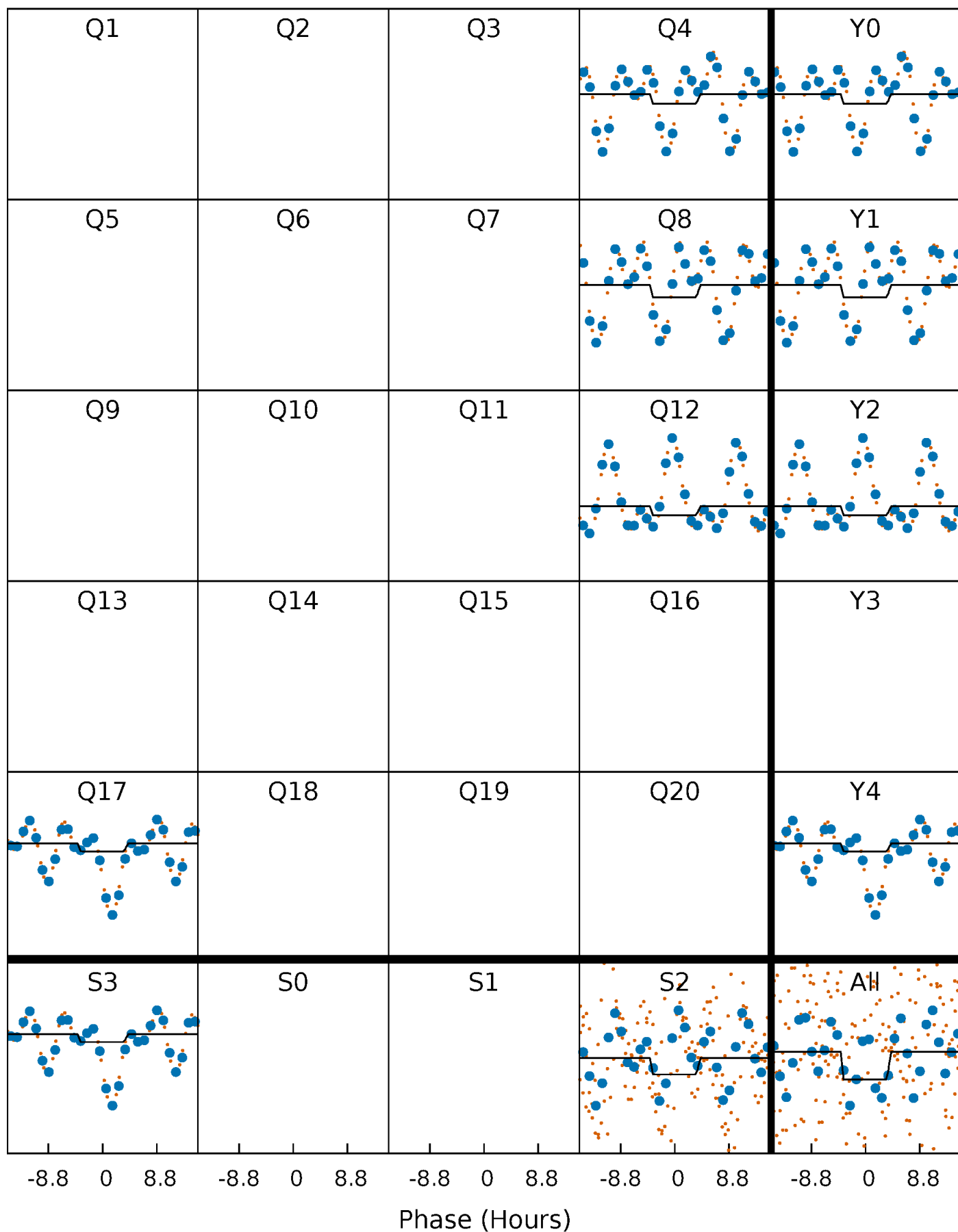
DV Quarter-Phased Transit Curves

TCE 008197275-01 $P=386.614025$ Days $T_0=406.675874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

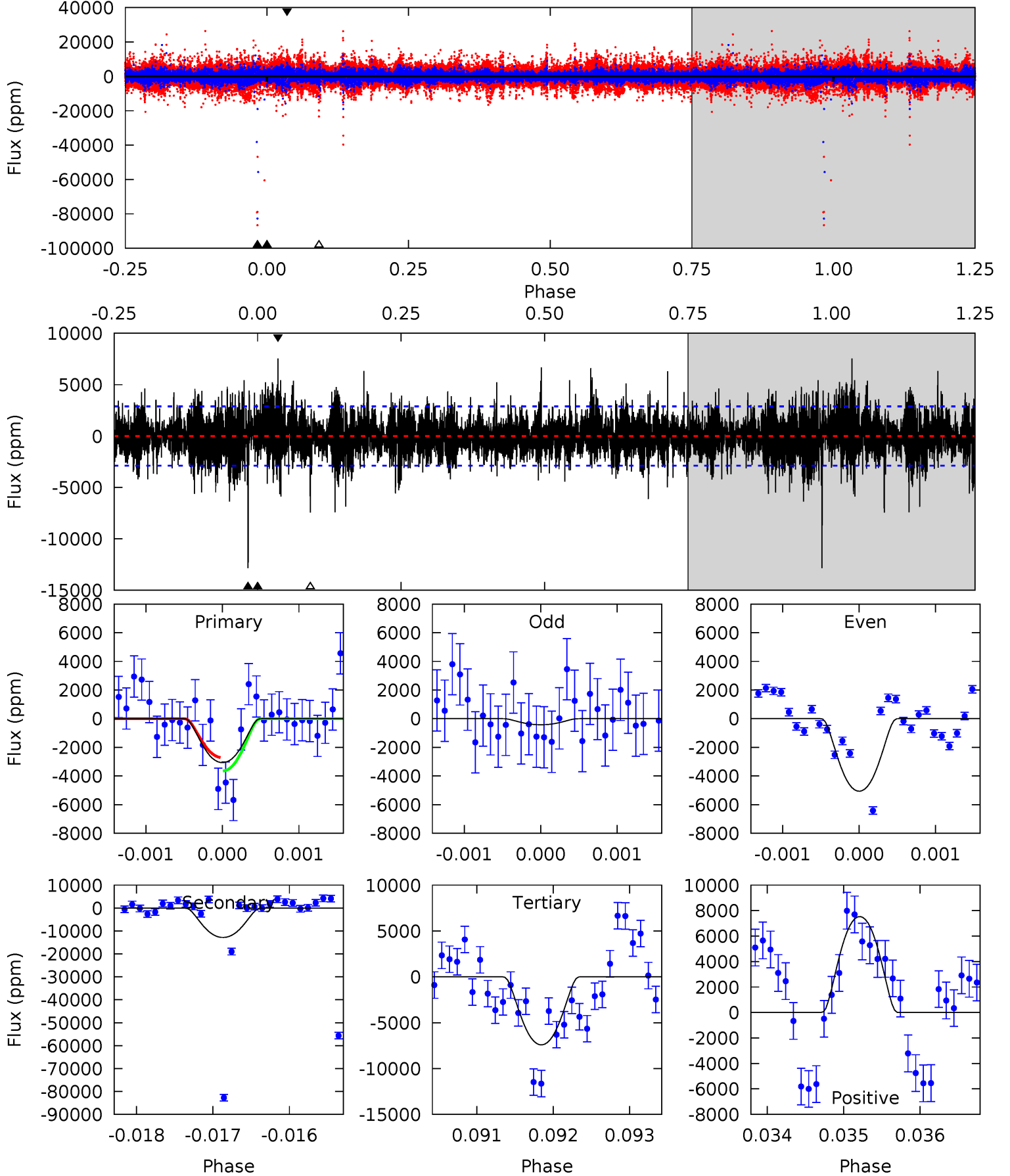
TCE 008197275-01 P=386.503192 Days $T_0=406.938467$ (BKJD)



DV Model-Shift Uniqueness Test

008197275-01, $P = 386.614025$ Days, $E = 20.061849$ Days

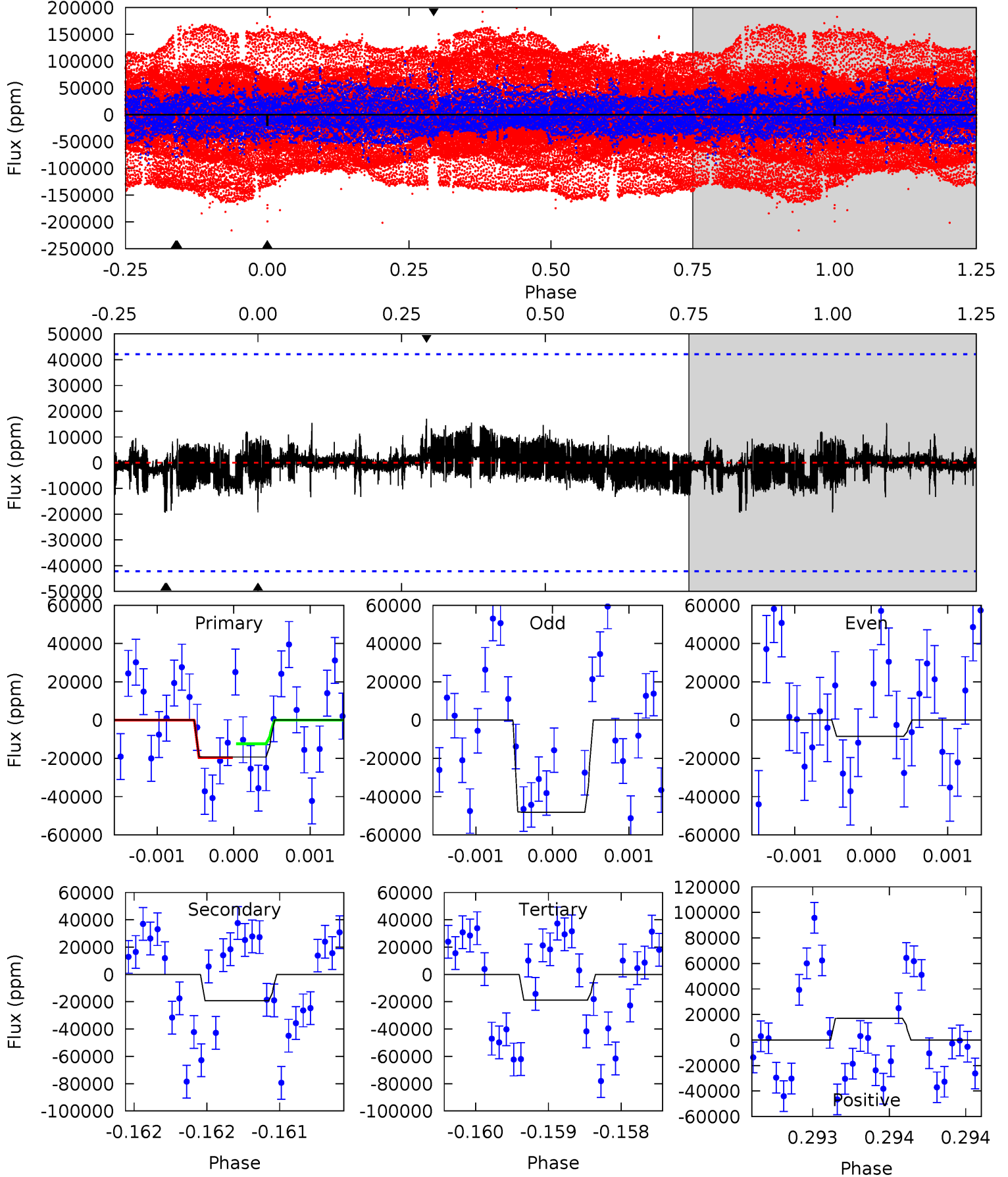
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.85	24.5	14.1	14.4	5.50	3.36	3.07	-8.30	-8.51	10.3	10.1	1.98	1.33	0.37	0



Alt Model-Shift Uniqueness Test

008197275-01, P = 386.503192 Days, E = 20.435275 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.51	2.52	2.45	2.21	5.48	3.34	0.55	0.06	0.30	0.07	0.31	2.61	0.97	0.47	0.47



Stellar Parameters For KIC 008197275

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5602^{+167}_{-167}	$4.614^{+0.034}_{-0.136}$	$-0.500^{+0.300}_{-0.300}$	$0.732^{+0.159}_{-0.053}$	$0.832^{+0.078}_{-0.095}$	$2.994^{+0.432}_{-1.252}$
	+3%/-3%	+1%/-3%	+60%/-60%	+22%/-7%	+9%/-11%	+14%/-42%
Source	PHO1	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 008197275-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12831 ± 525	$28.38^{+31.03}_{-21.06}$	306^{+15}_{-12}	3684^{+2627}_{-734}	$8341^{+114827}_{-6454}$
Alt.	-19351 ± 7687	$31.08^{+30.77}_{-20.71}$	307^{+15}_{-13}	3781^{+2269}_{-819}	10035^{+85715}_{-7989}

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 $A_{obs} \gg 1.0$

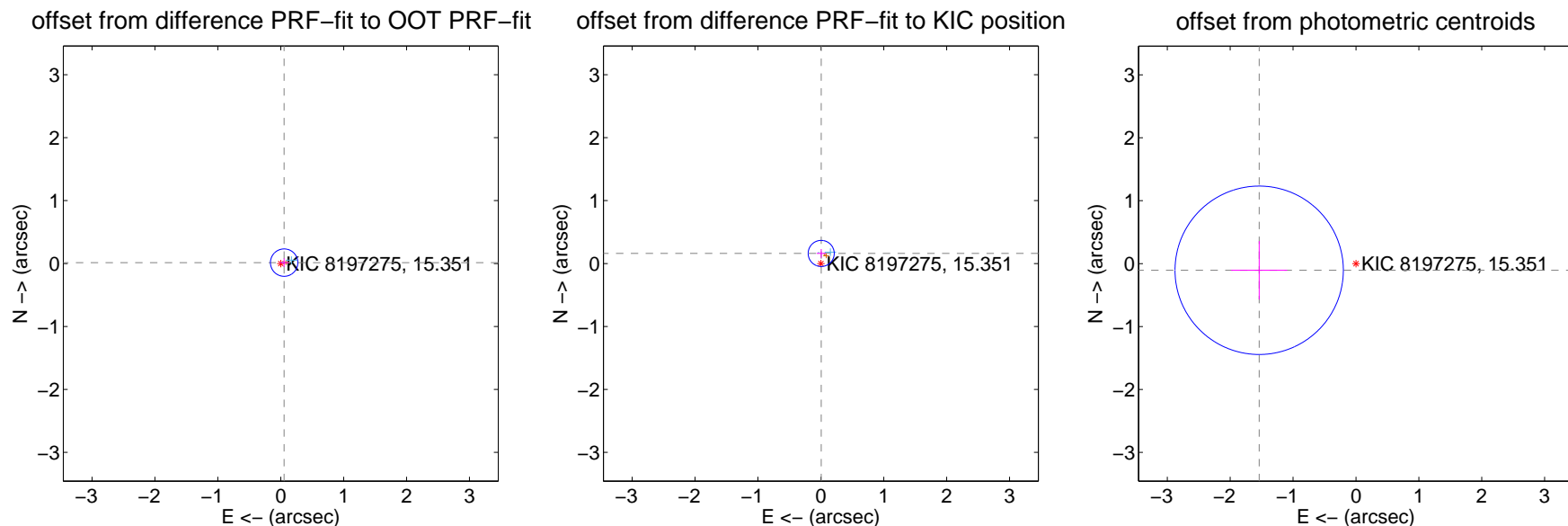
DV Centroid Data

Supplemental centroid analysis for 008197275-01. Kepler magnitude: 15.35. Transit SNR 6.42

There are 2 quarters with good PRF difference image offsets

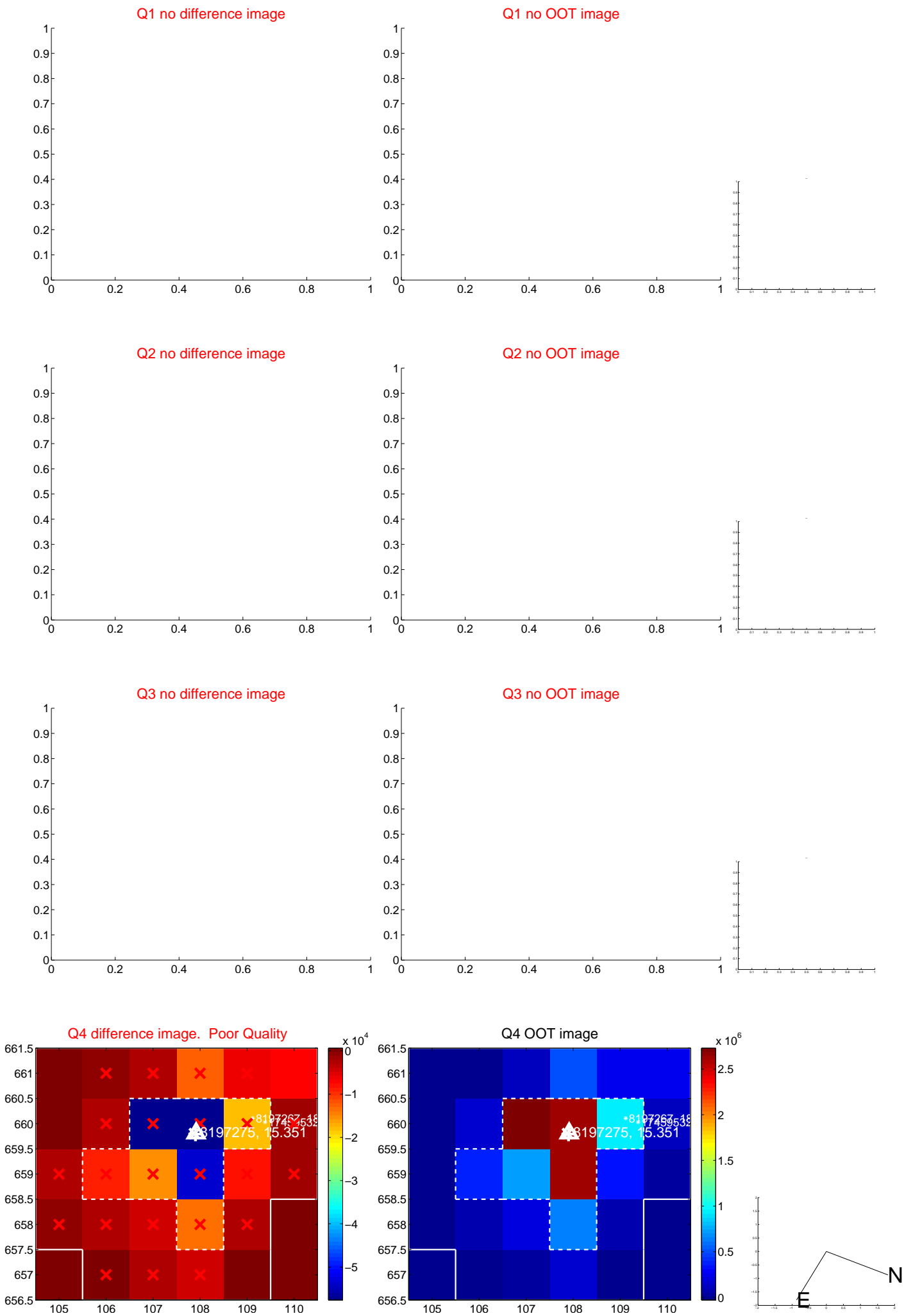
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.073	0.77	-0.054 ± 0.072	0.015 ± 0.067
PRF-fit source offset from KIC position	0.161 ± 0.069	2.33	-0.005 ± 0.072	0.161 ± 0.069
photometric centroid source offset	1.54 ± 0.45	3.46	1.54 ± 0.45	-0.11 ± 0.46

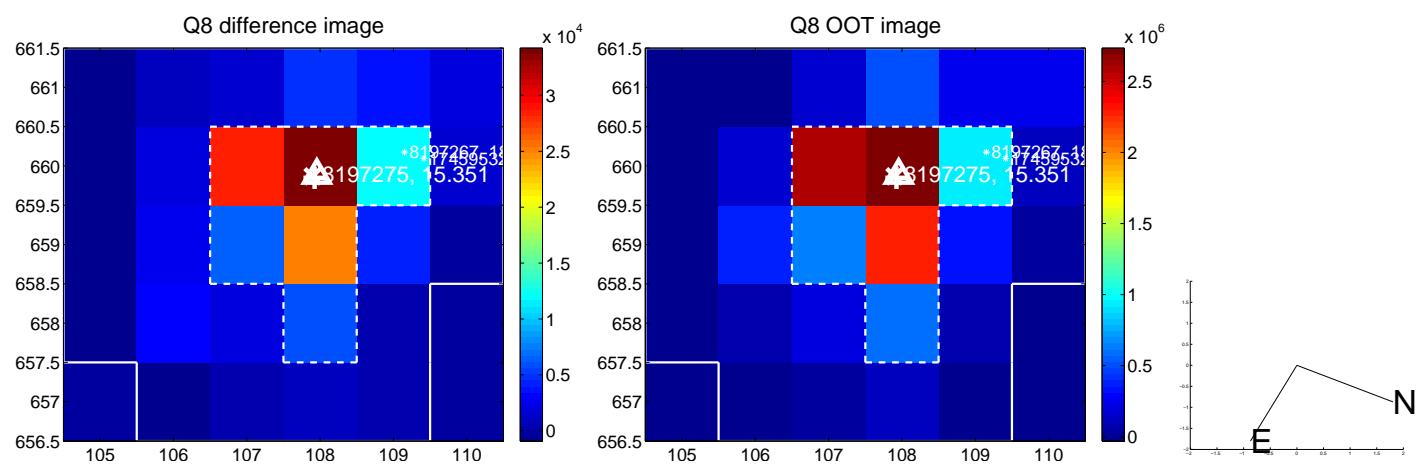
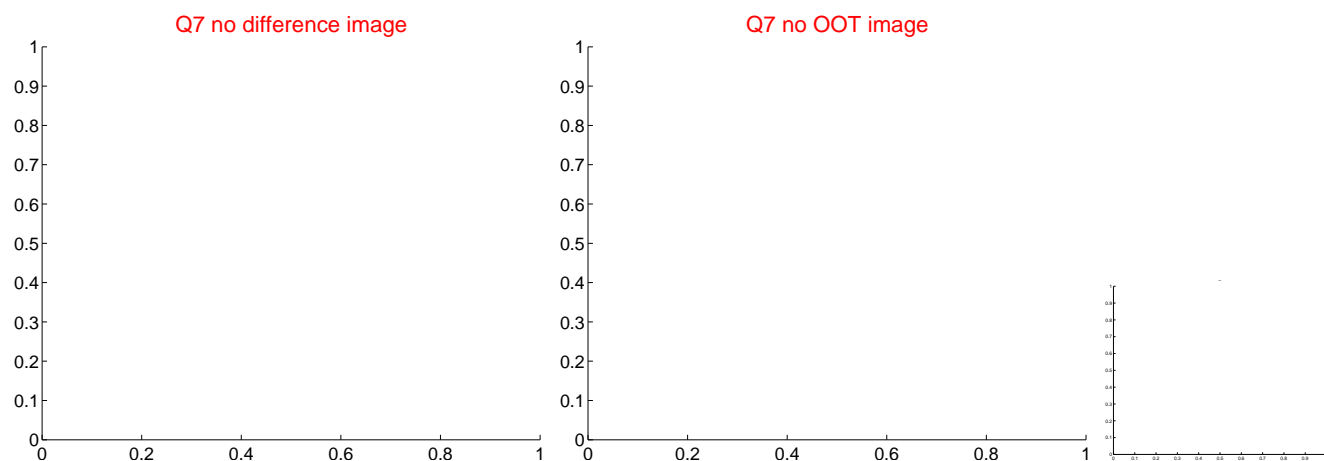
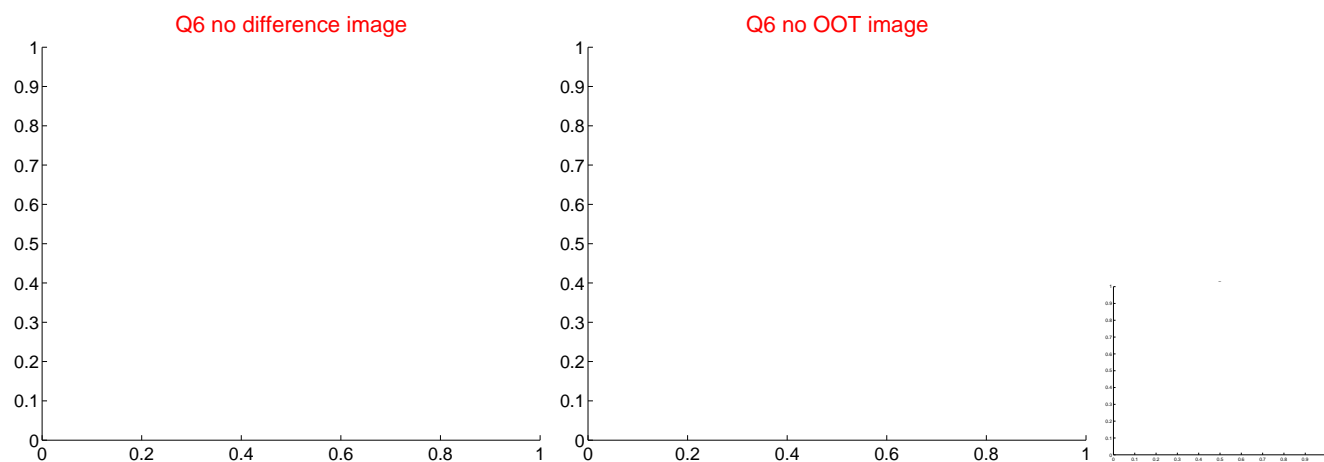
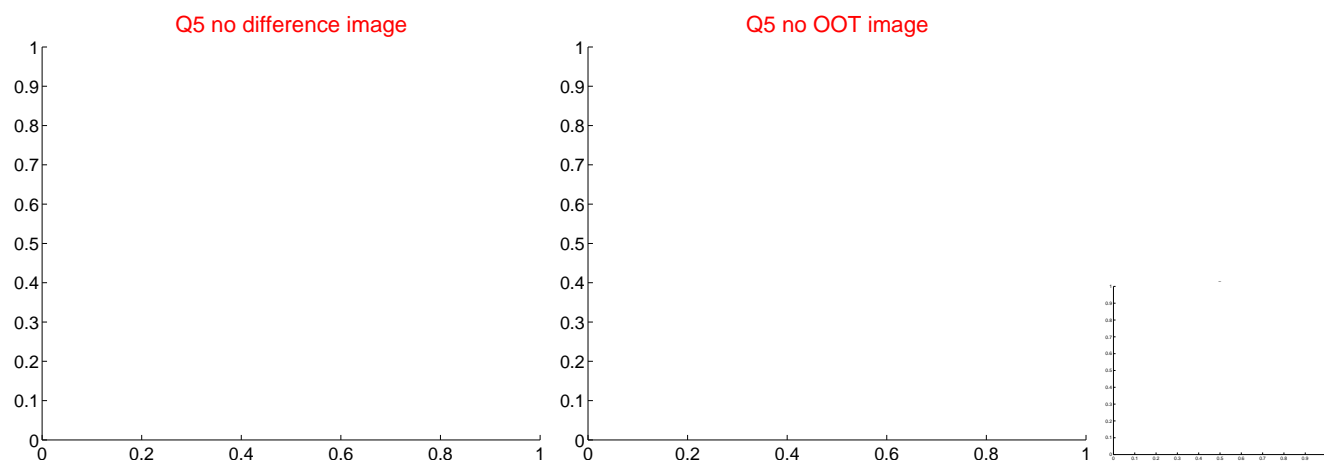


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

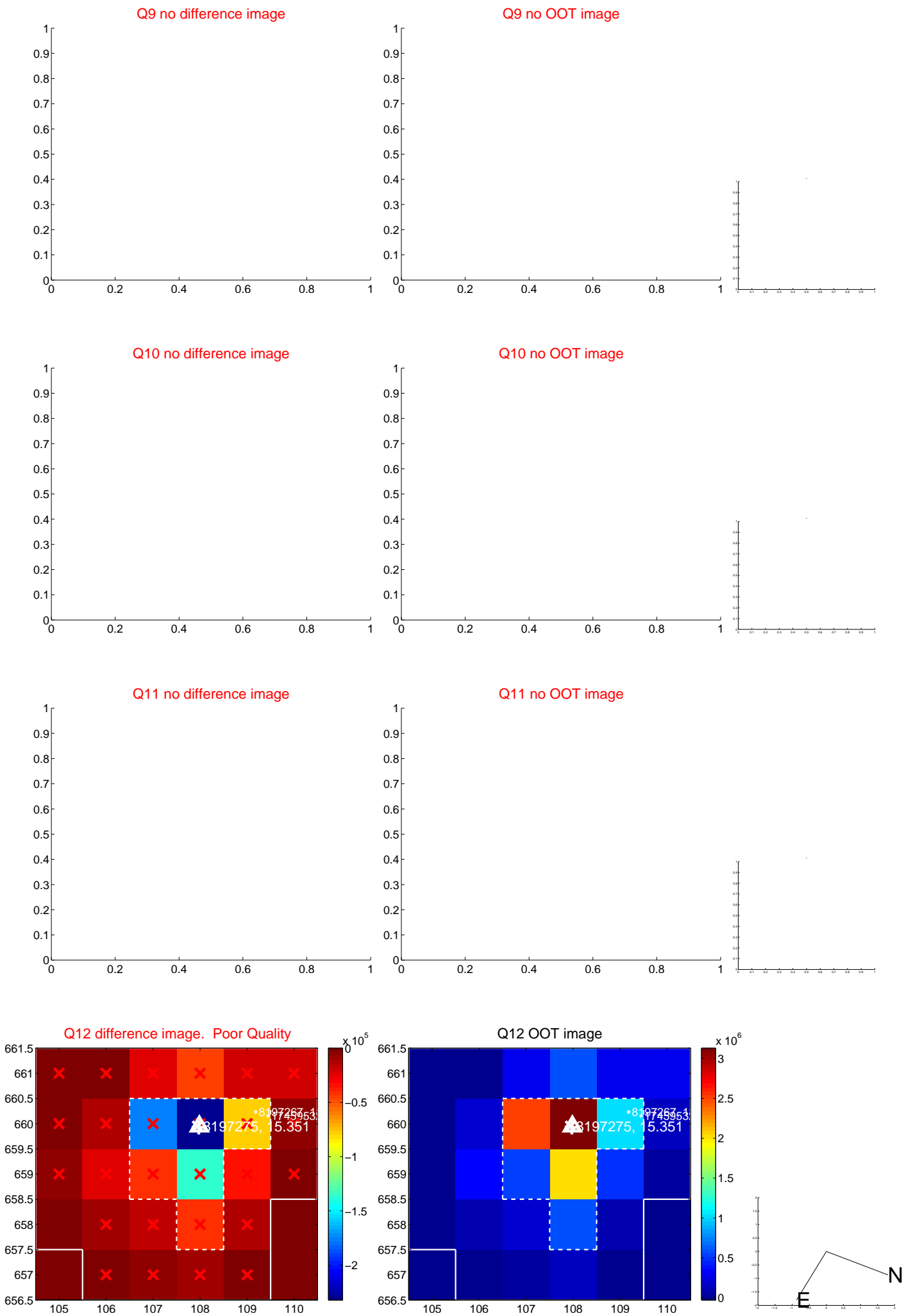
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



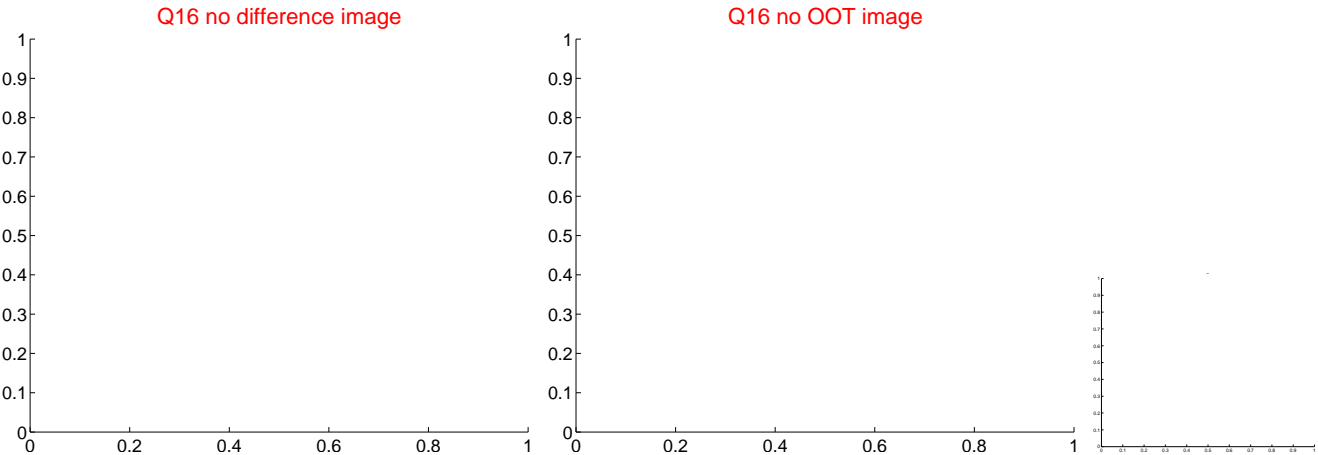
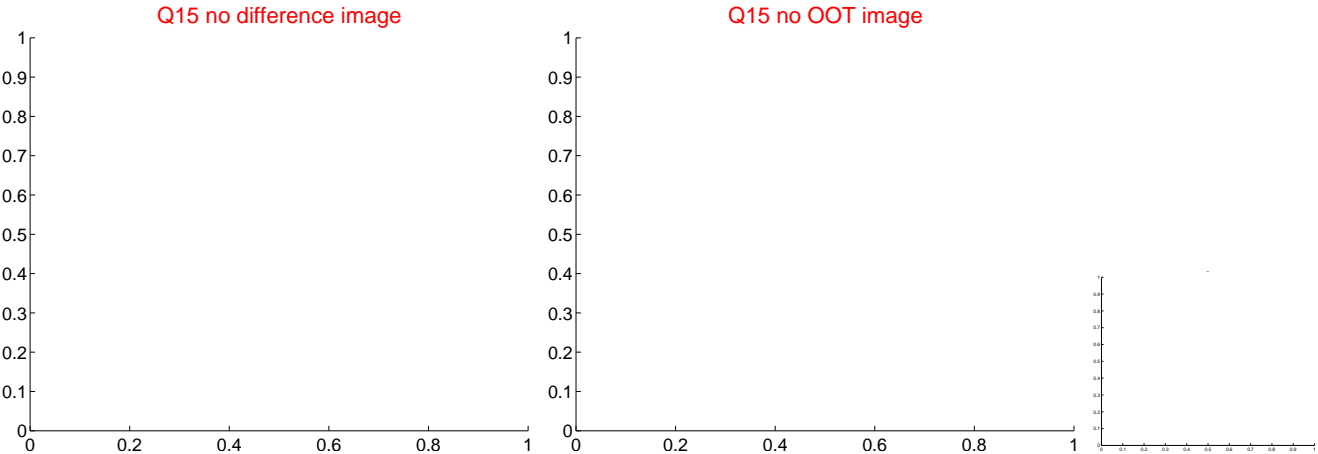
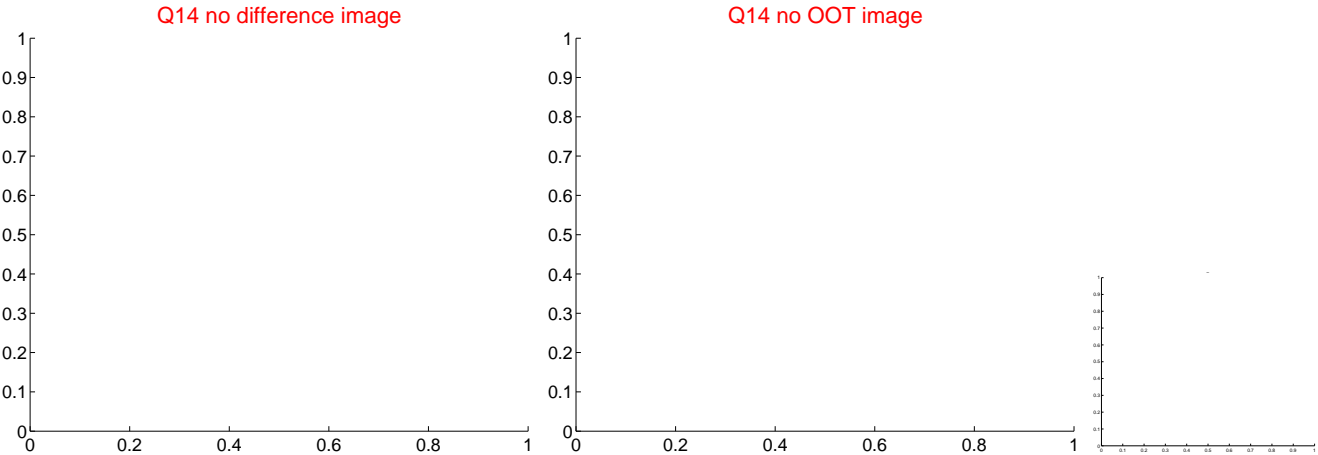
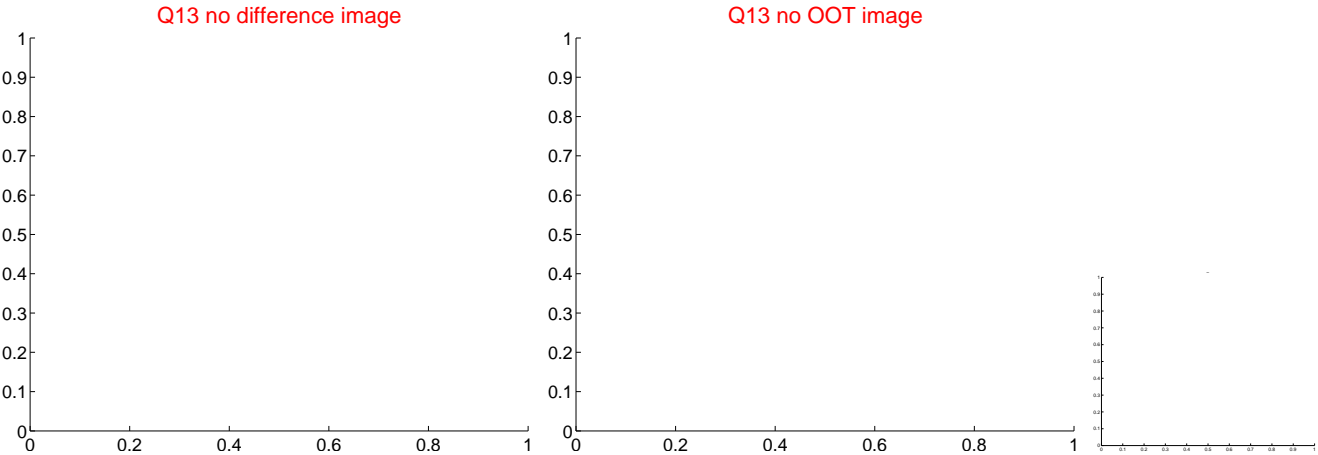
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



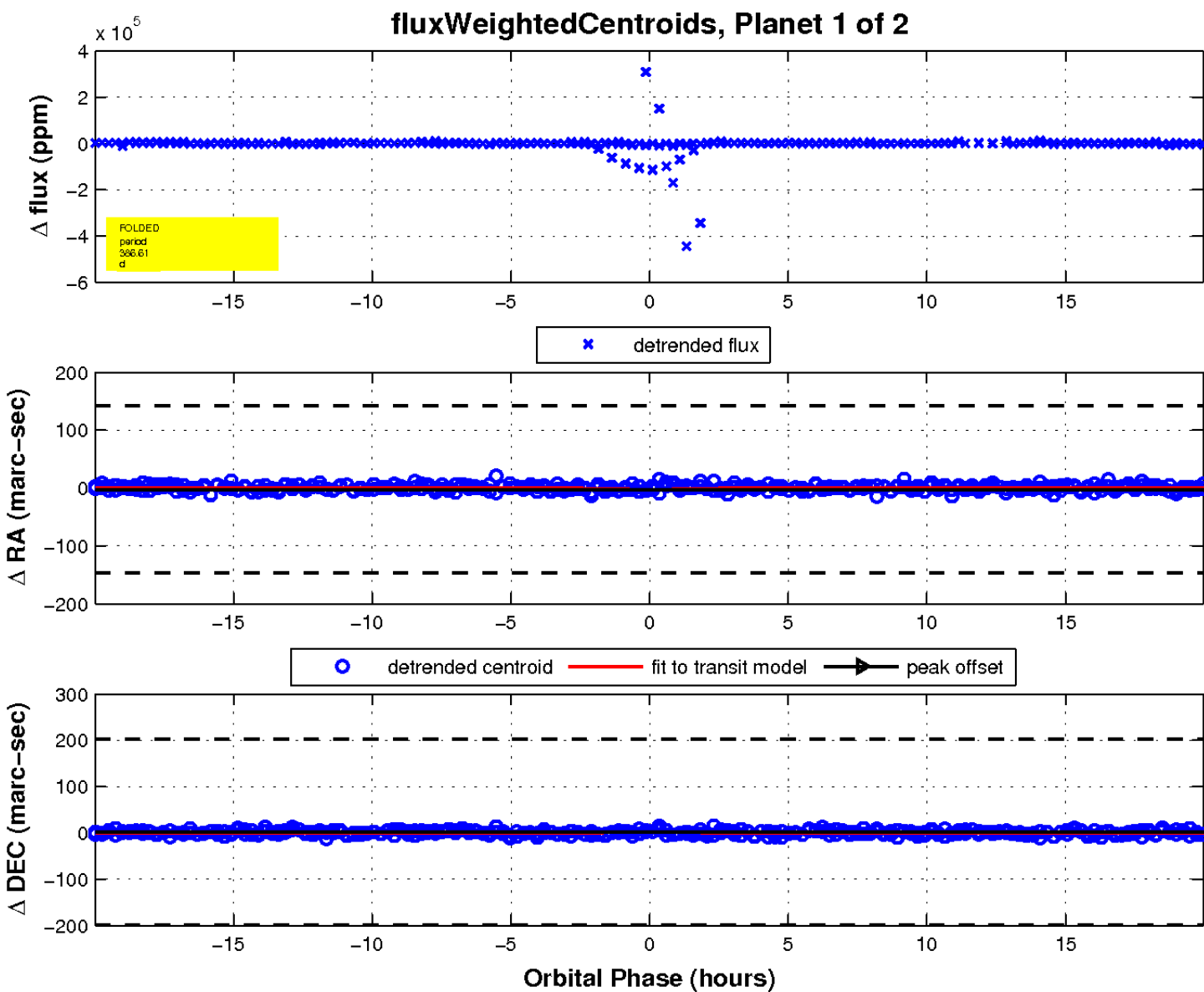
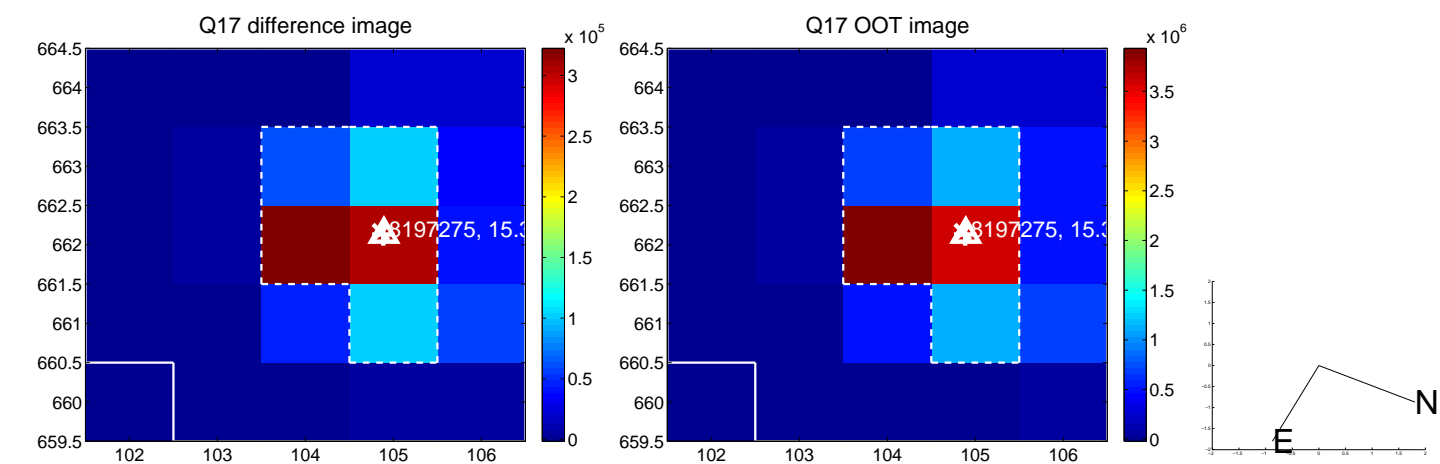
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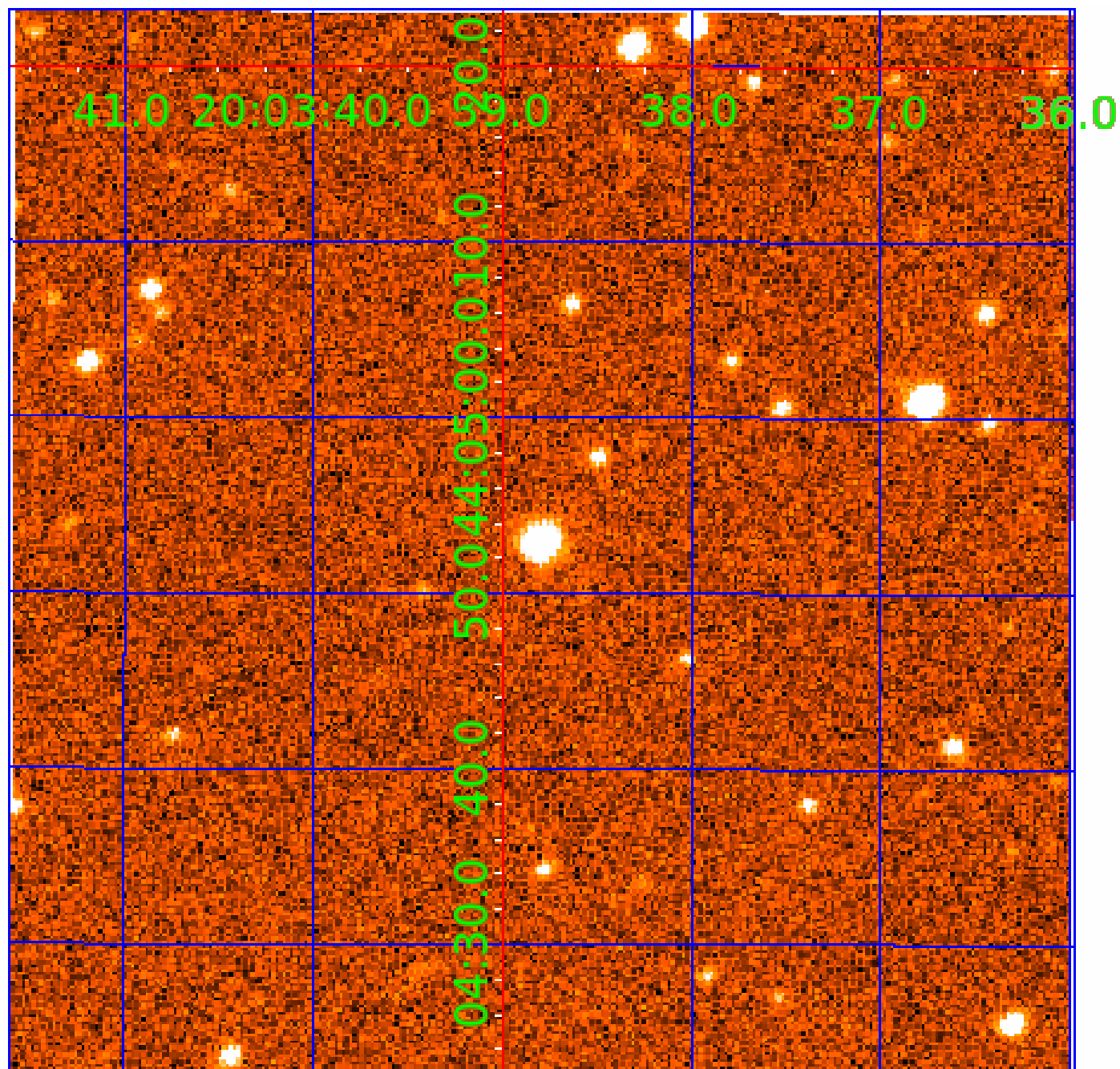


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008197275

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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008197275-02	OBS	No	370.255764	432.422154	22.7	10.469	154.5	0.0	0.73	5602	0.36	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008197275-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

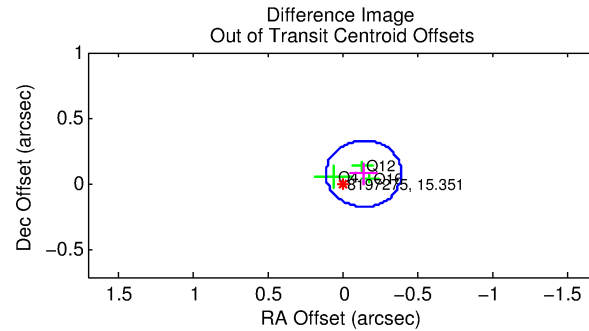
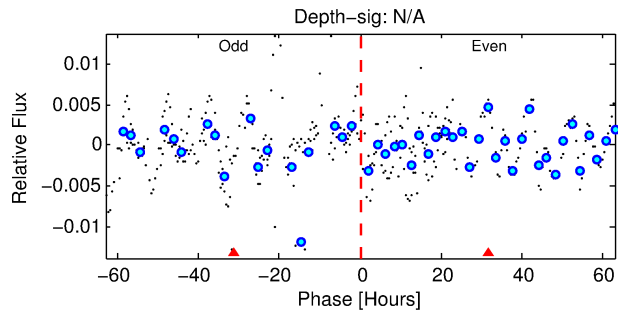
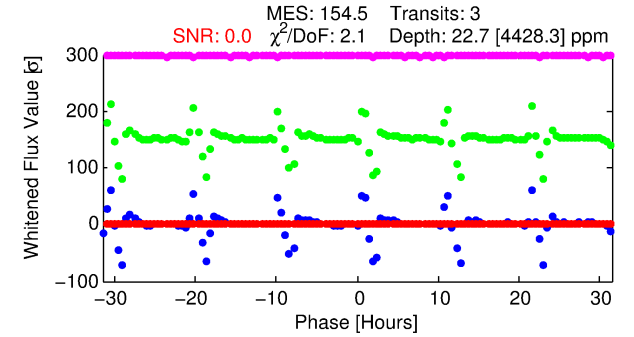
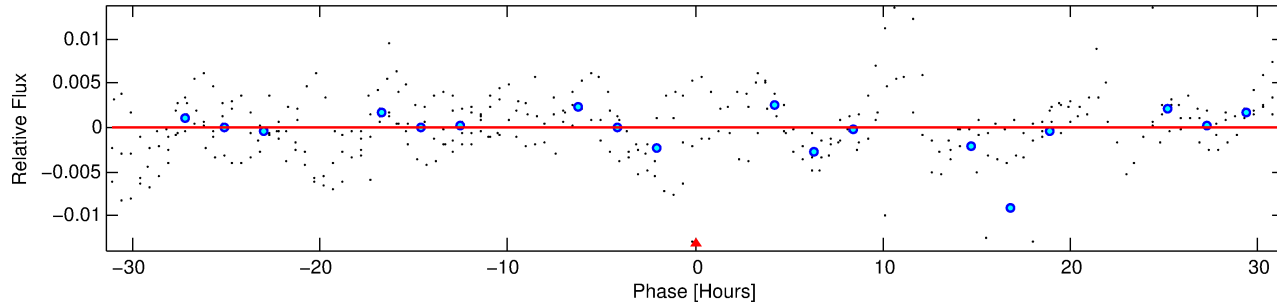
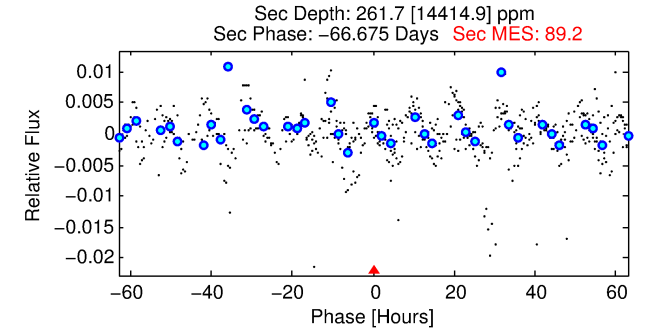
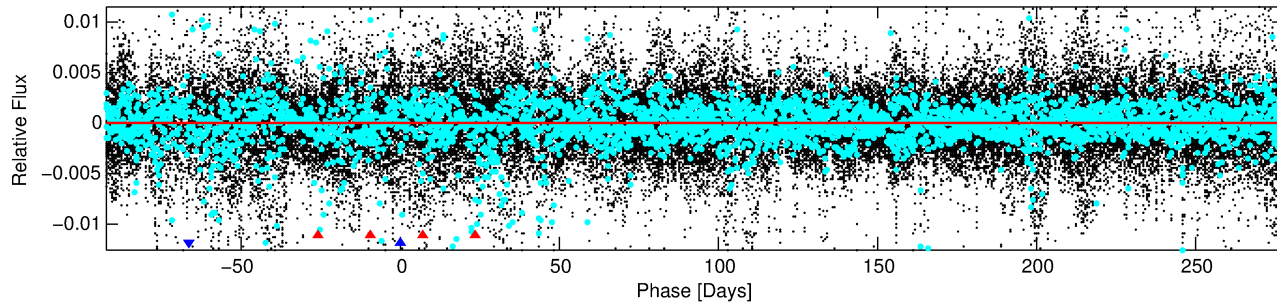
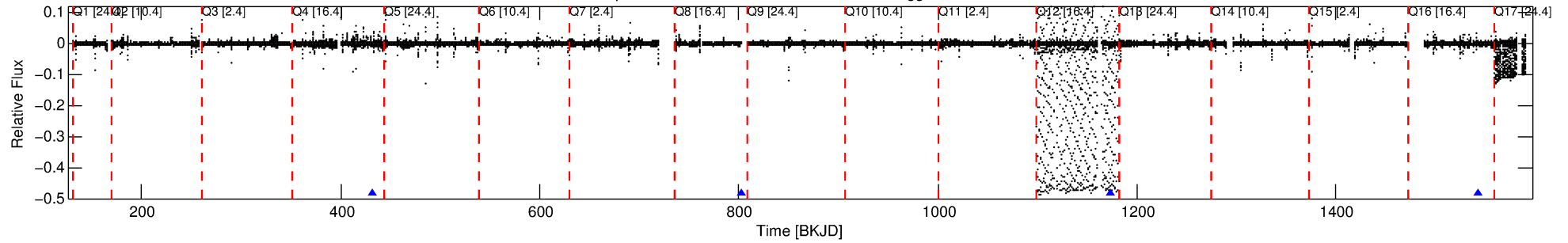
Ephemeris Match Information For 008197275-02

No Significant Match Found

DV One-Page Summary

KIC: 8197275 Candidate: 2 of 2 Period: 370.256 d

Kp: 15.35 R*: 0.73 Rs Teff: 5602.0 K Logg: 4.61 Fe/H: -0.500



DV Fit Results:

Period = 370.25576 [4.10852] d
Epoch = 432.4222 [9.6028] BKJD
Rp/R* = 0.0045 [0.5983]
a/R* = 231.63 [101358.20]
b = 0.52 [600.84]
Seff = 0.54 [0.15]
Teq = 218 [15] K
Rp = 0.36 [47.79] Re
a = 0.9384 [0.1677] AU
Ag = 988095.75 [269235605.70] [0.00σ]
Teff = 10640 [724813] K [0.01σ]

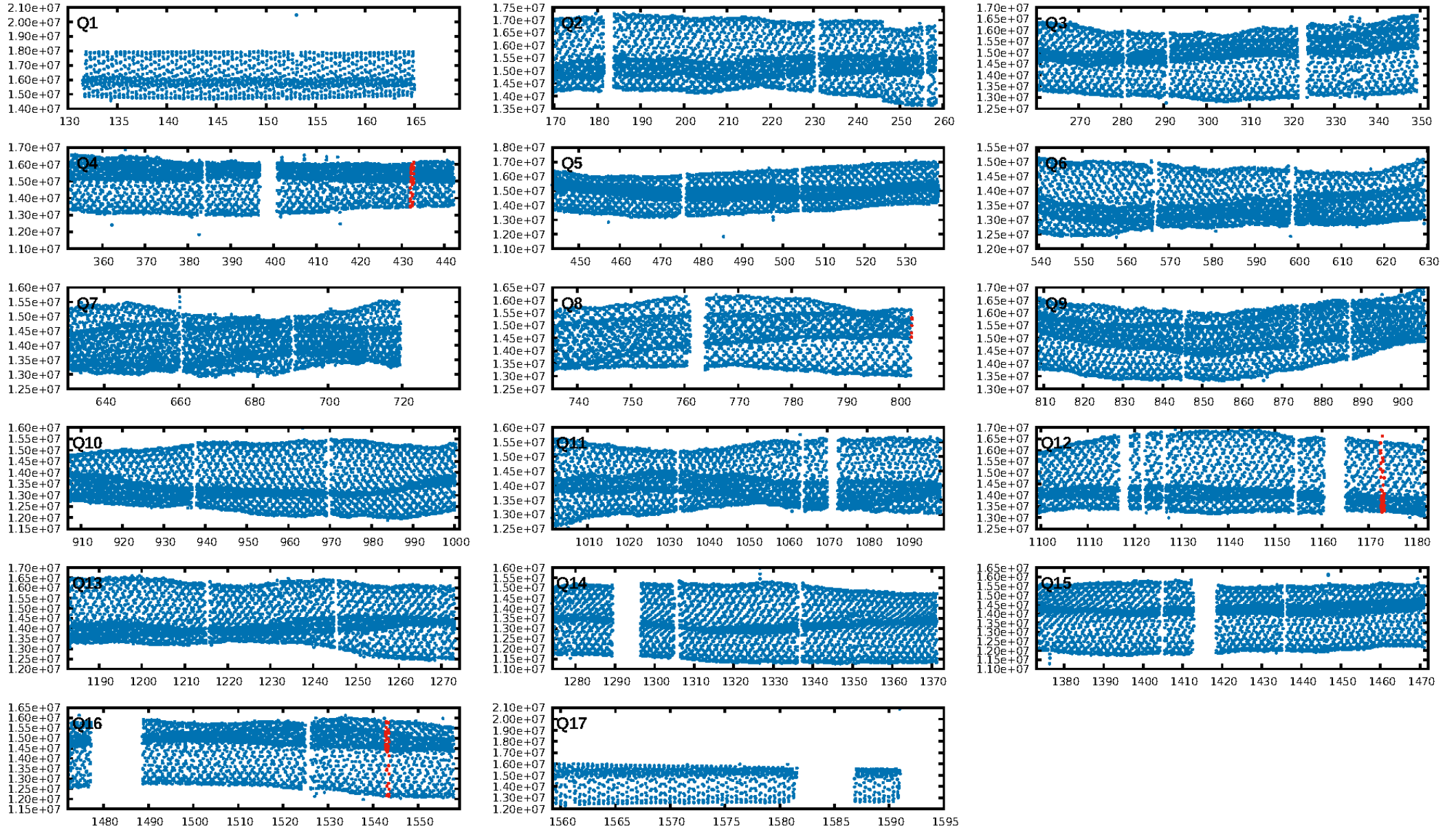
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [31.57σ]
ModelChiSquare2-sig: 69.3%
ModelChiSquareGof-sig: 90.1%
Bootstrap-pfa: 5.86e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.418
Centroid-sig: 35.7%
Centroid-so: 99.379 arcsec [1.19σ]
OptOffset-rm: 0.165 arcsec [1.96σ]
OptOffset-st: 0/0/3/0 [3]
KicOffset-rm: 0.246 arcsec [3.23σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

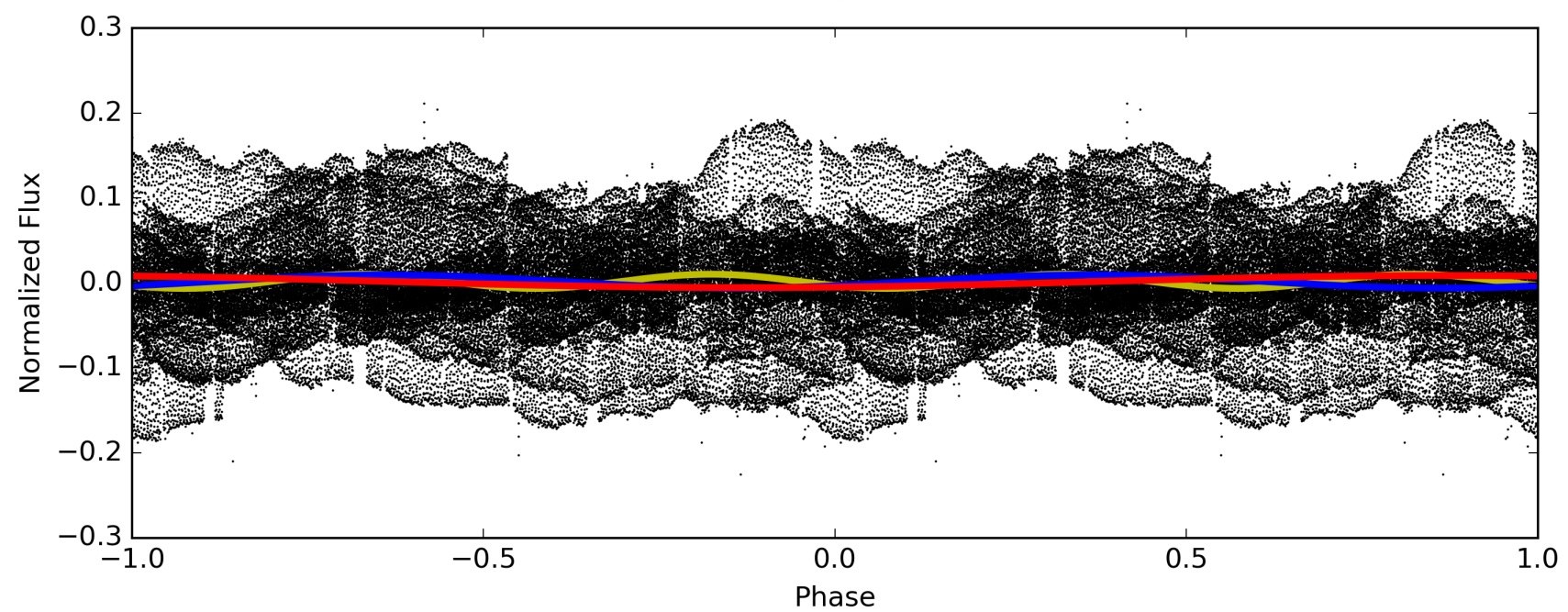
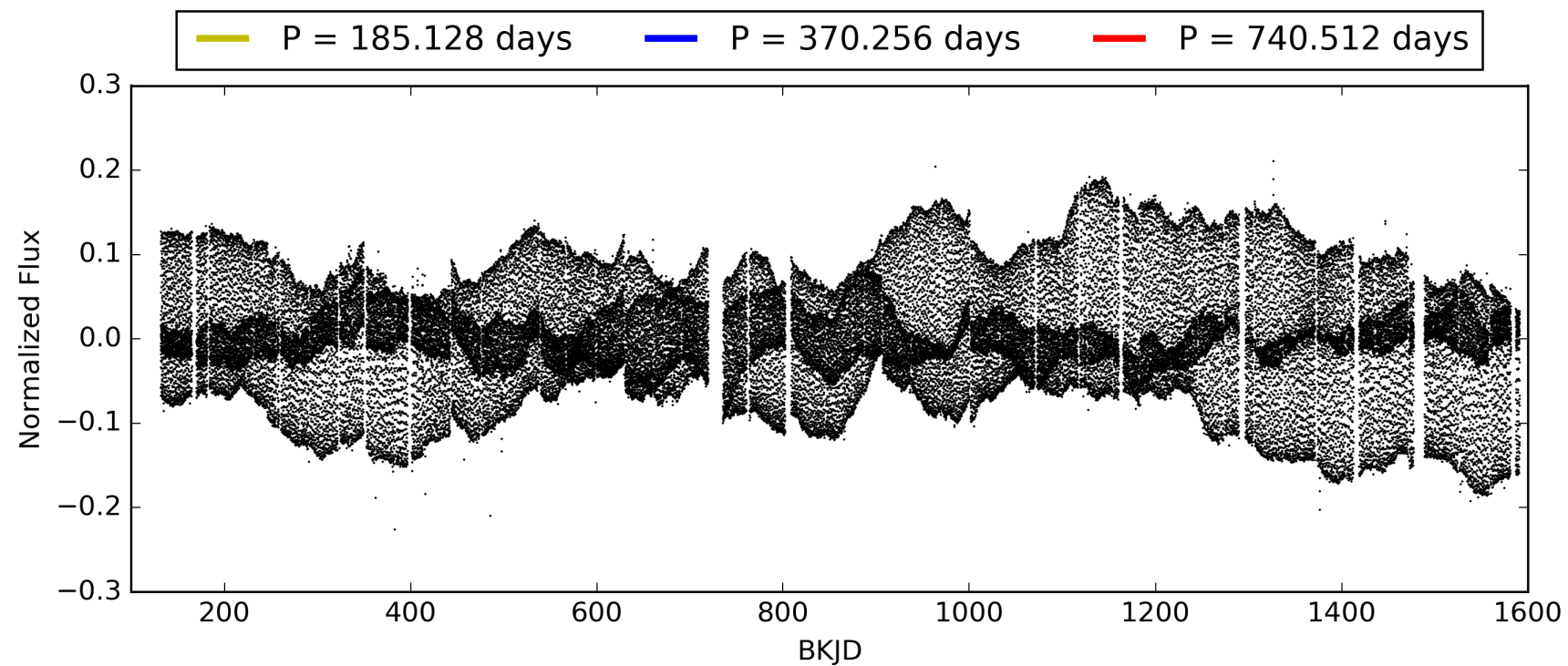
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:48:09 Z

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

TCE 008197275-02, PDC Light Curves

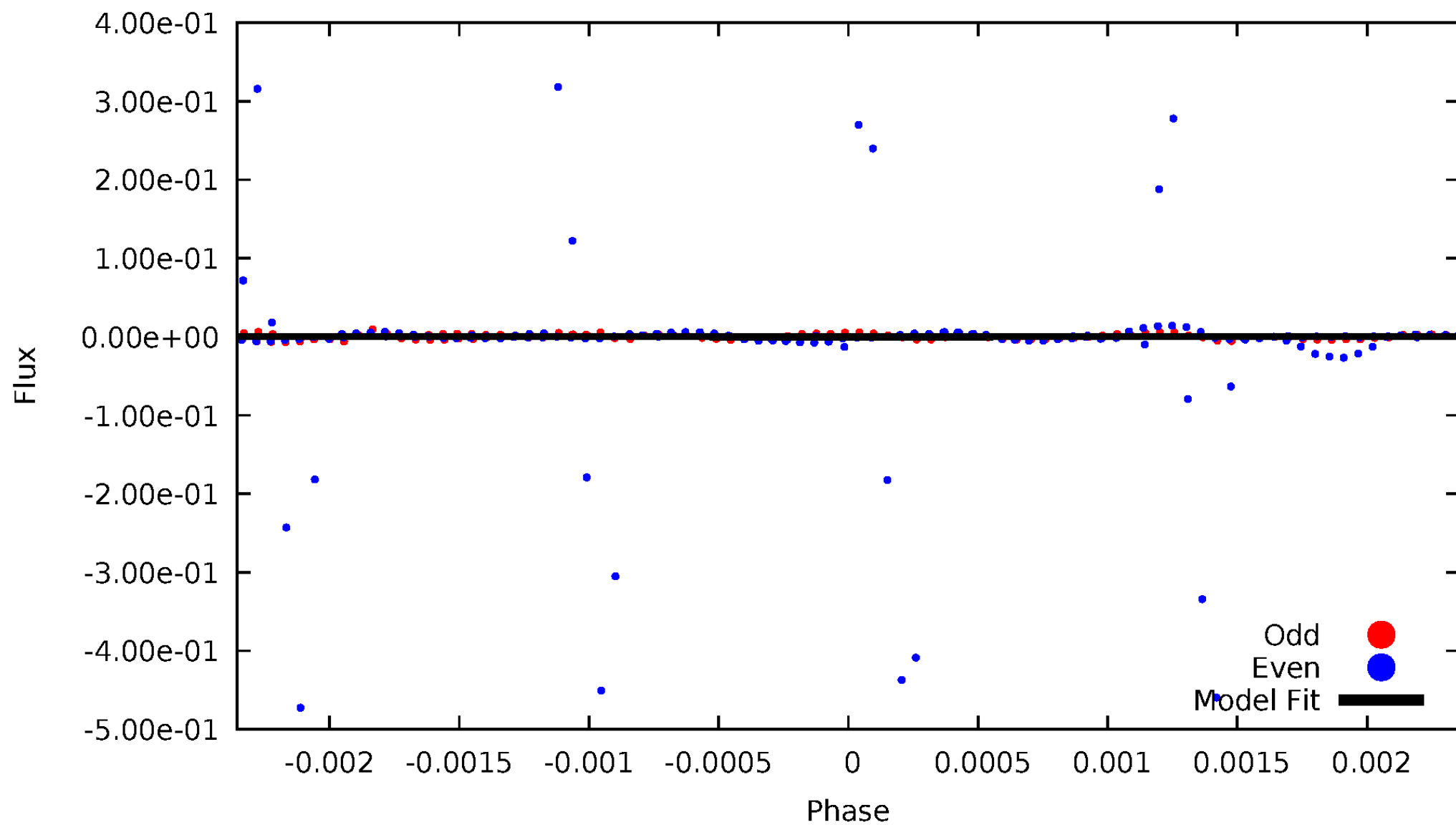


TCE 008197275-02



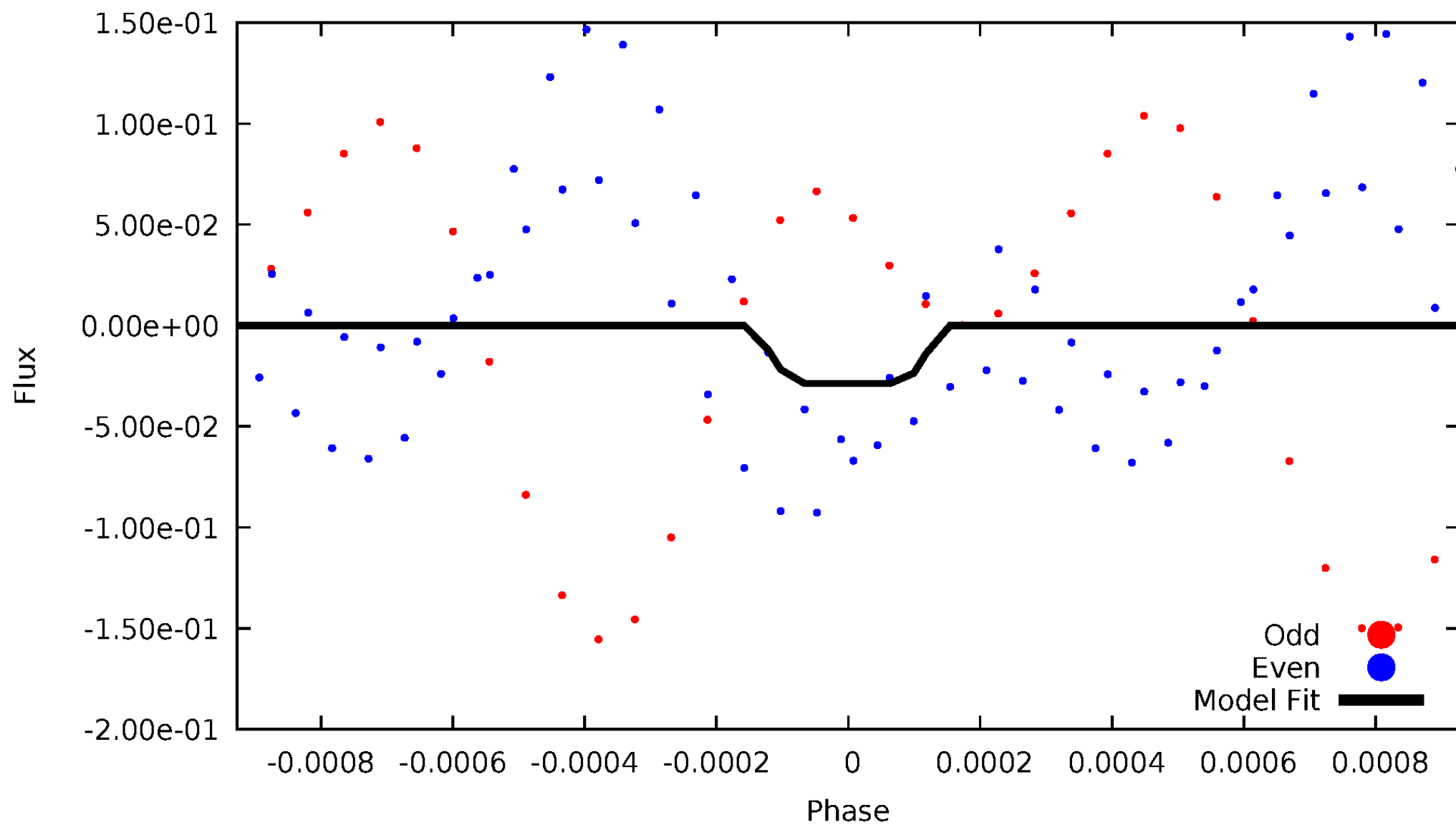
DV Odd/Even

TCE 008197275-02



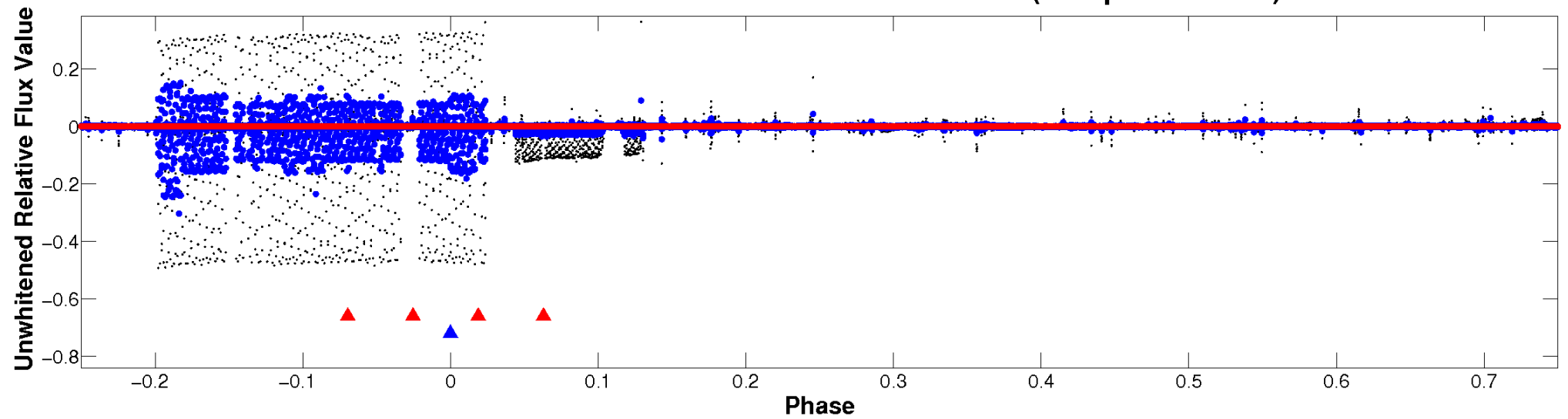
ALT Odd/Even

TCE 008197275-02

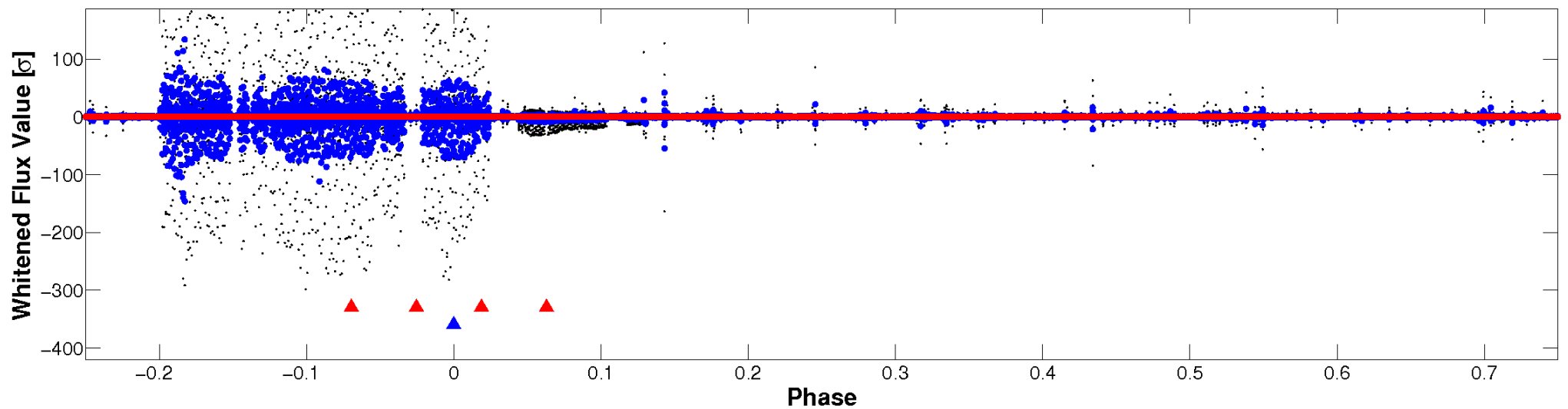


Non-Whitened Vs. Whitened Light Curve

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

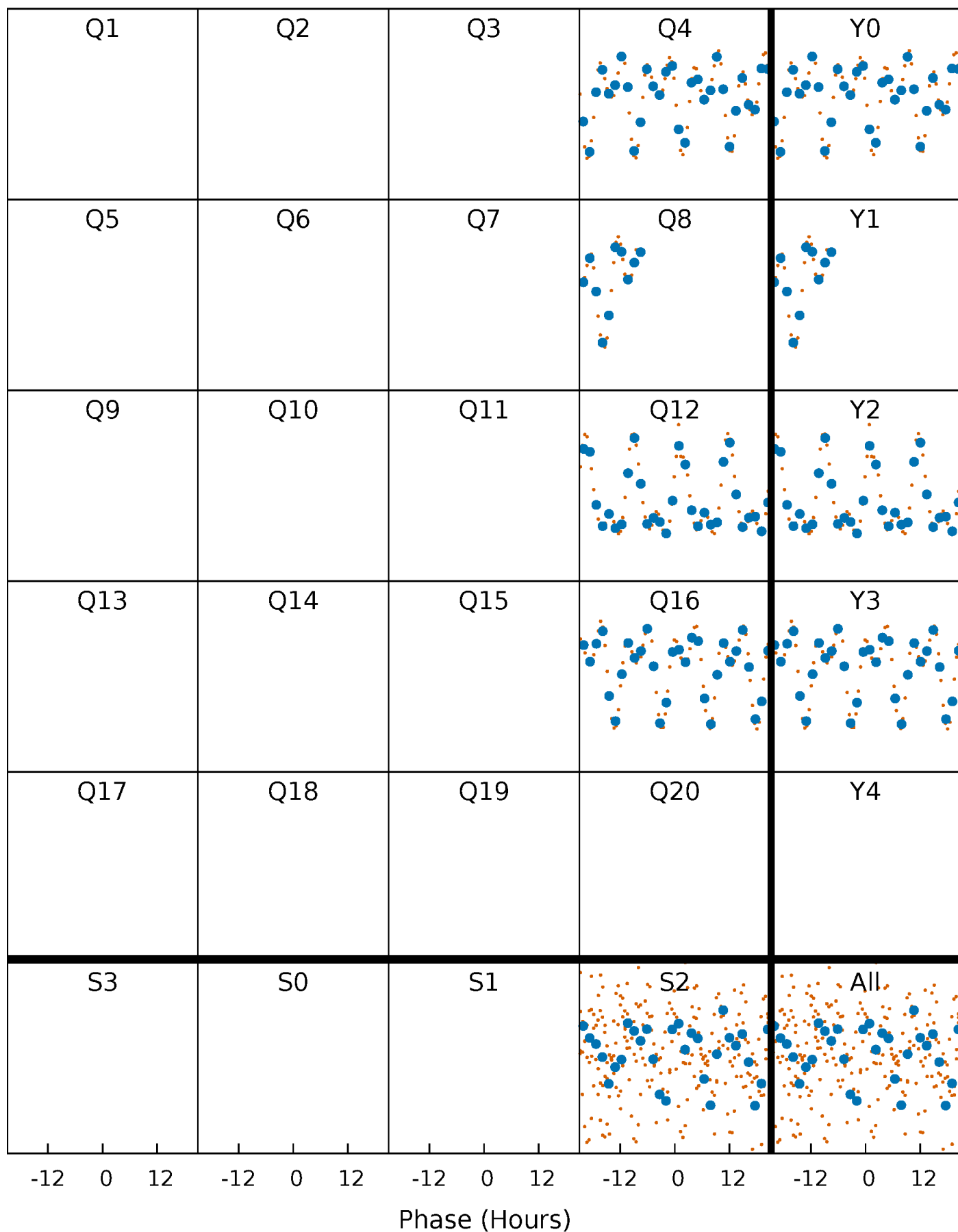


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



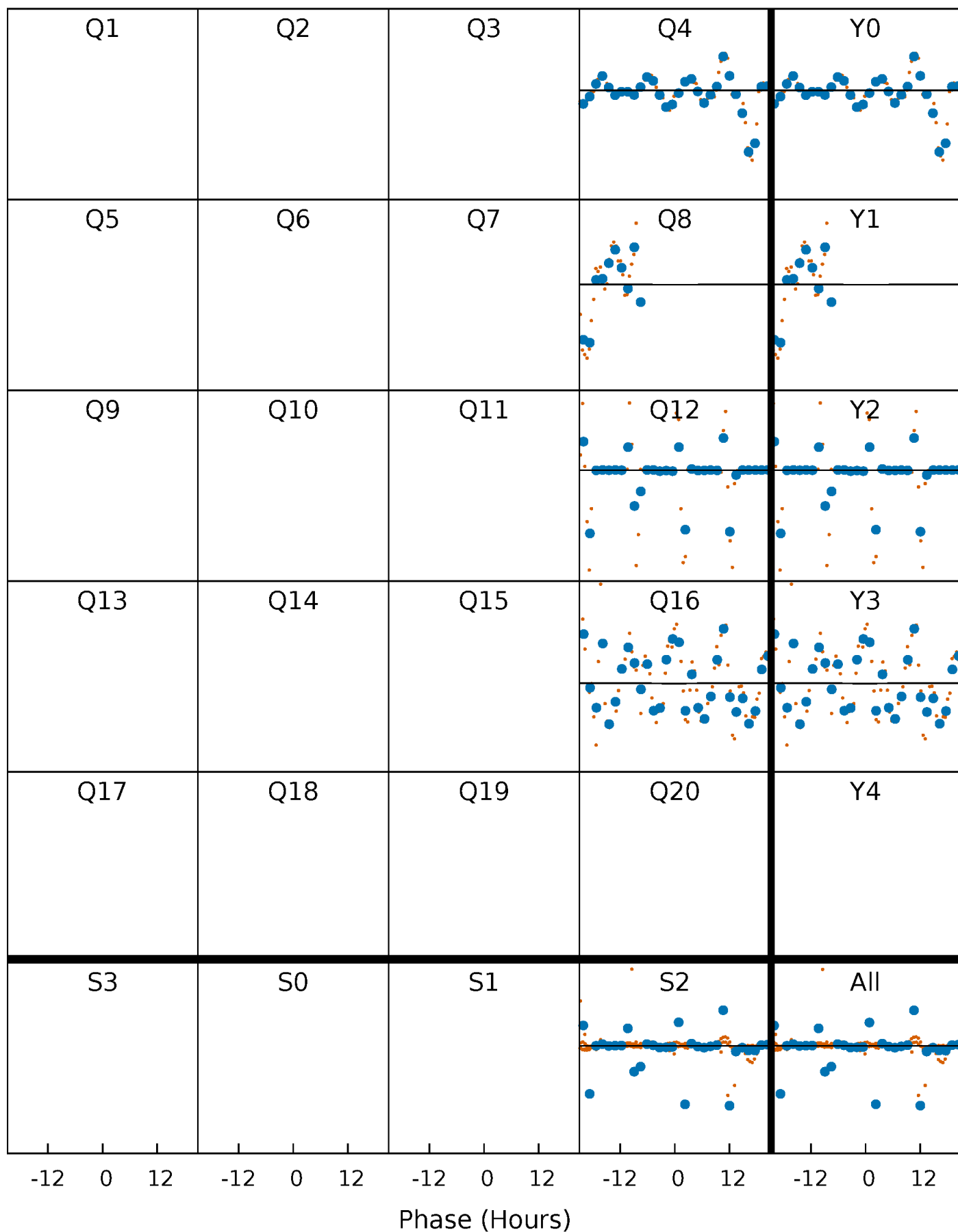
PDC Quarter-Phased Transit Curves

TCE 008197275-02 P=370.255764 Days $T_0=432.422154$ (BKJD)



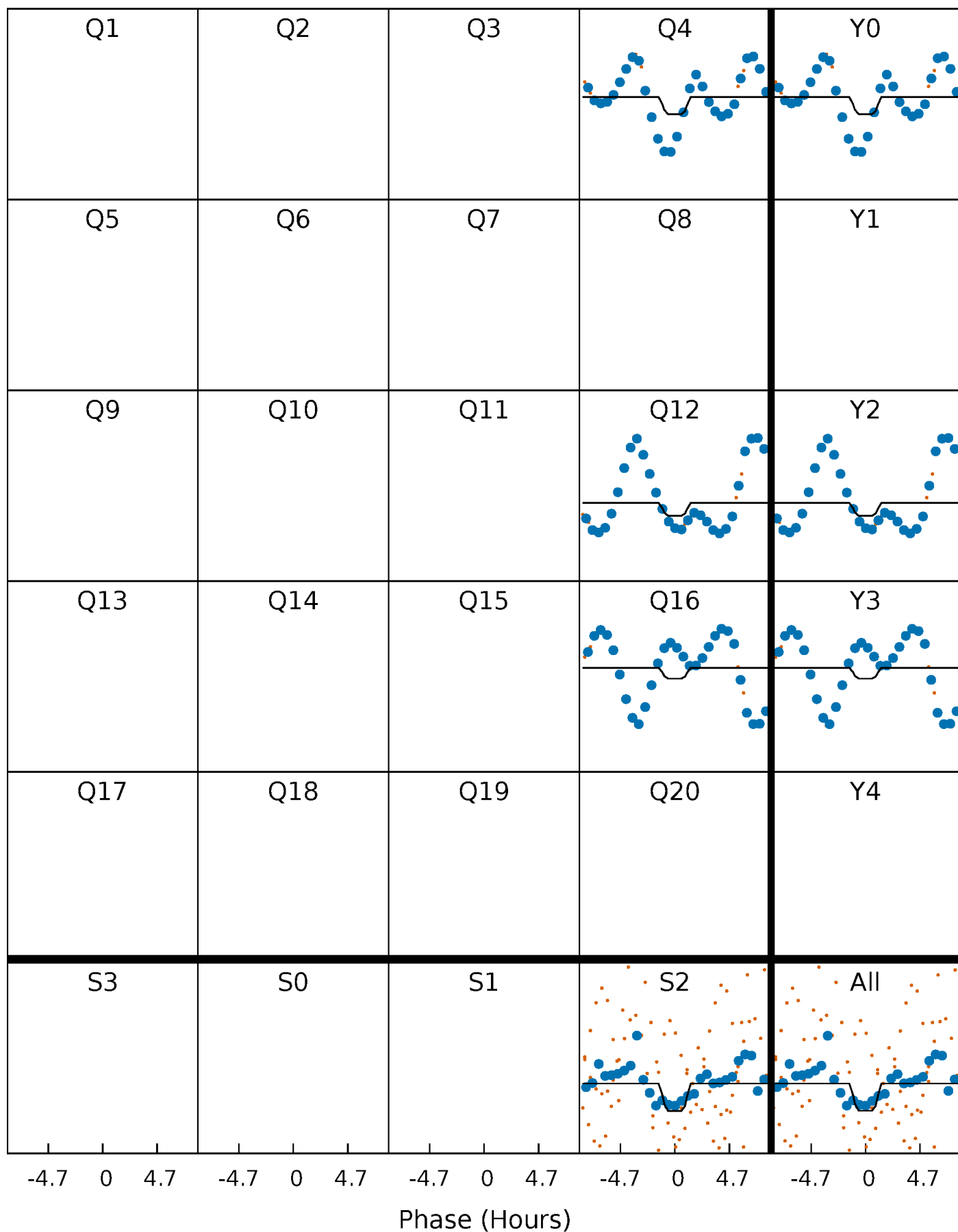
DV Quarter-Phased Transit Curves

TCE 008197275-02 $P=370.255764$ Days $T_0=432.422154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

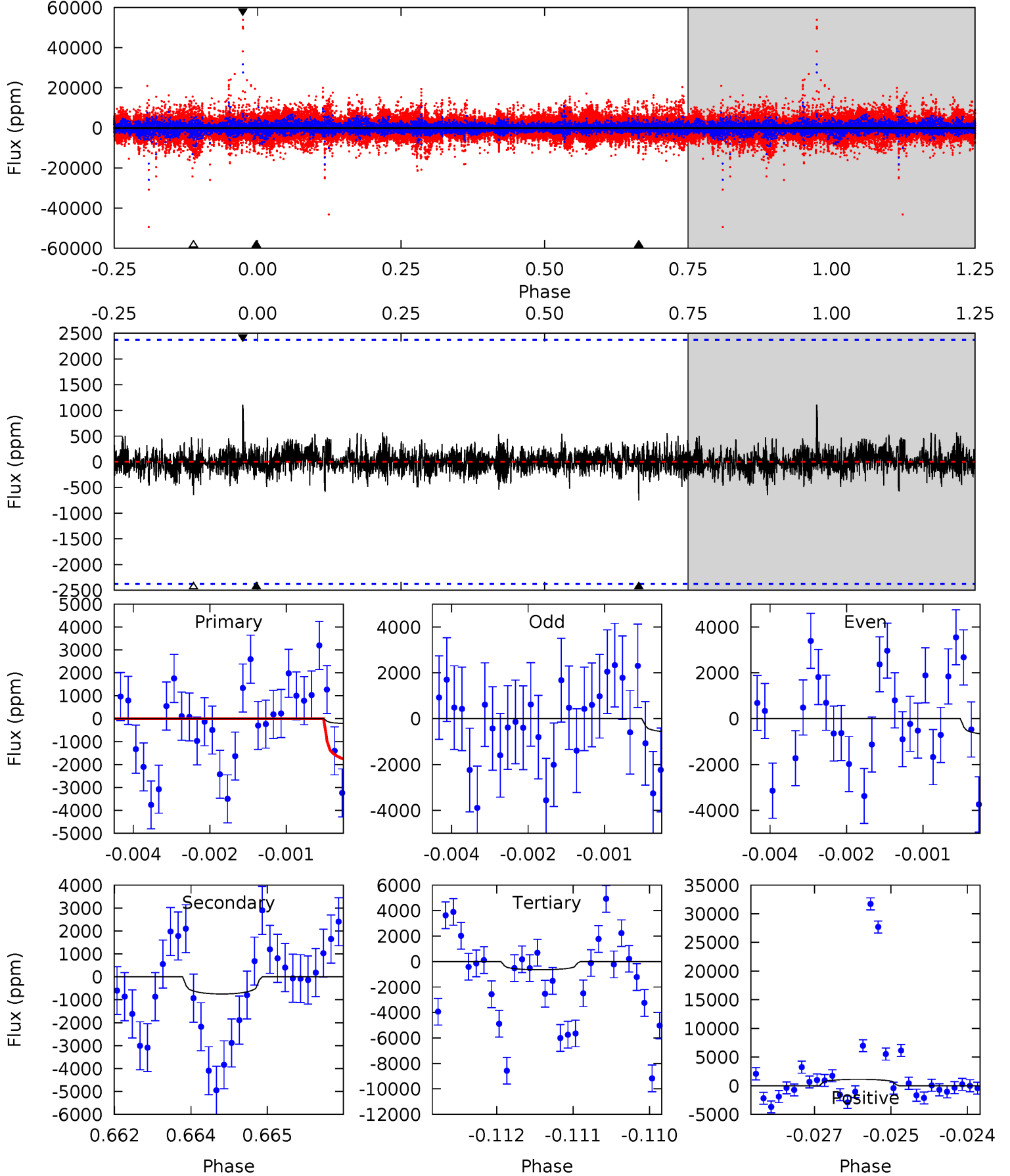
TCE 008197275-02 P=370.515688 Days $T_0=432.963295$ (BKJD)



DV Model-Shift Uniqueness Test

008197275-02, P = 370.255764 Days, E = 62.166390 Days

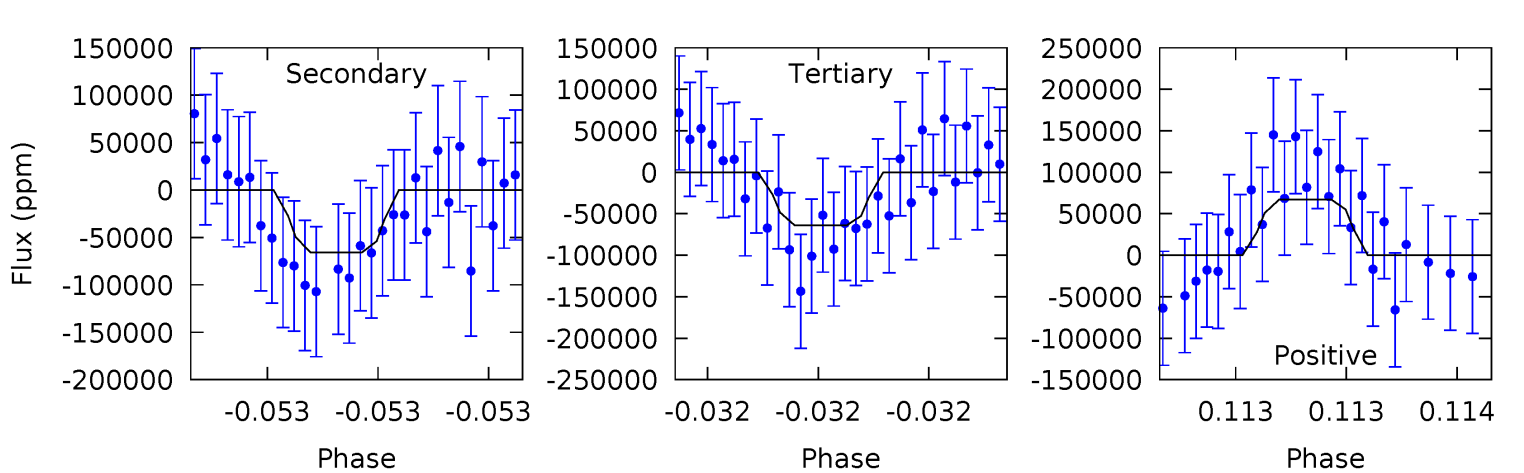
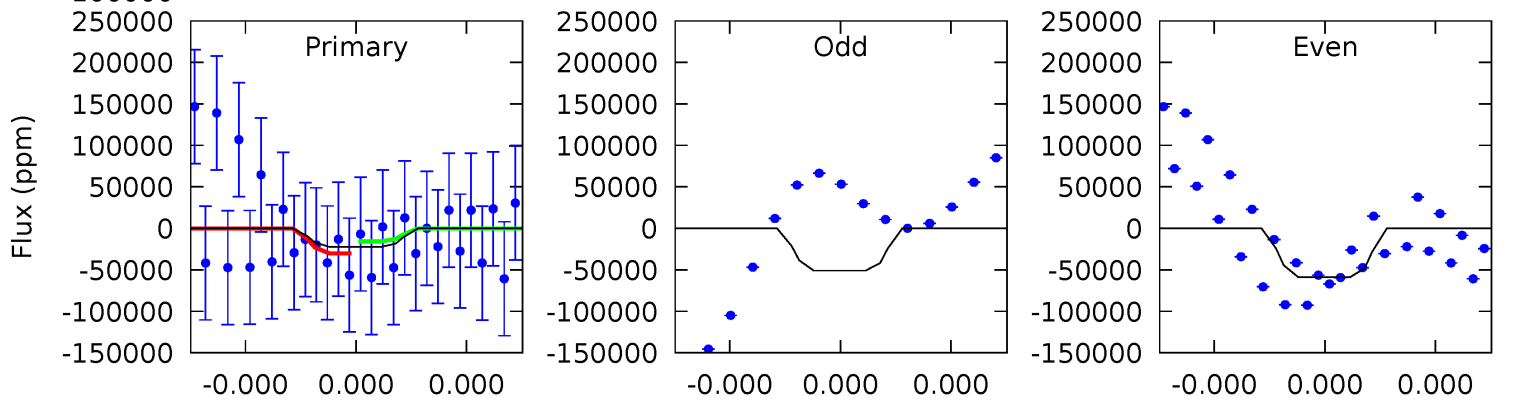
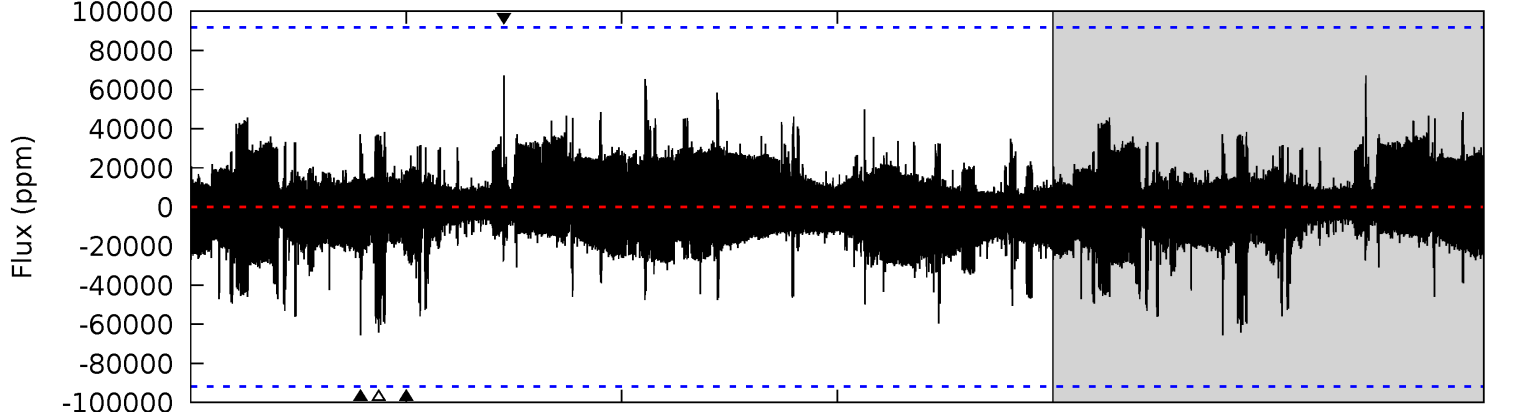
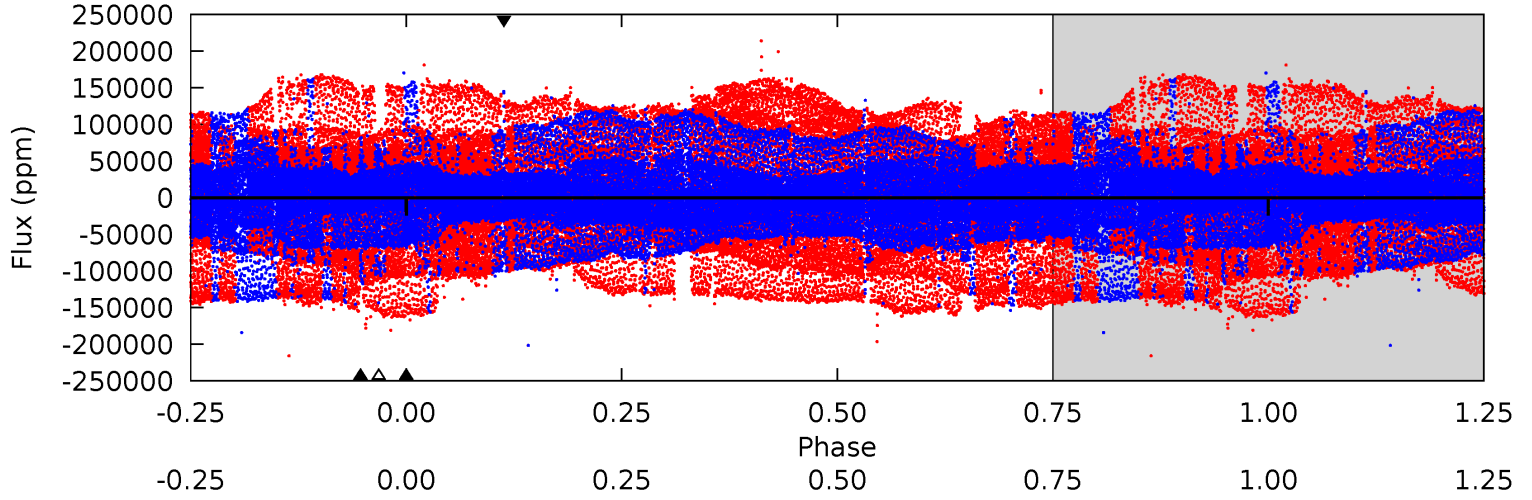
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.51	1.71	1.47	2.53	5.42	3.24	0.37	-0.96	-2.02	0.24	-0.82	0.06	21.7	0.60	0.06



Alt Model-Shift Uniqueness Test

008197275-02, P = 370.515688 Days, E = 62.447607 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.38	4.06	3.96	4.15	5.68	3.64	0.86	-2.58	-2.77	0.10	-0.09	0.24	0.42	0.51	0.45



Stellar Parameters For KIC 008197275

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5602^{+167}_{-167}	$4.614^{+0.034}_{-0.136}$	$-0.500^{+0.300}_{-0.300}$	$0.732^{+0.159}_{-0.053}$	$0.832^{+0.078}_{-0.095}$	$2.994^{+0.432}_{-1.252}$
	+3%/-3%	+1%/-3%	+60%/-60%	+22%/-7%	+9%/-11%	+14%/-42%
Source	PHO1	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 008197275-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-749 ± 438	$34.31^{+37.60}_{-24.17}$	311^{+15}_{-14}	2295^{+877}_{-385}	247^{+2931}_{-203}
Alt.	-65716 ± 16173	$40.05^{+39.68}_{-27.26}$	312^{+16}_{-13}	4343^{+3270}_{-918}	$20185^{+192987}_{-15170}$

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 $A_{obs} \gg 1.0$

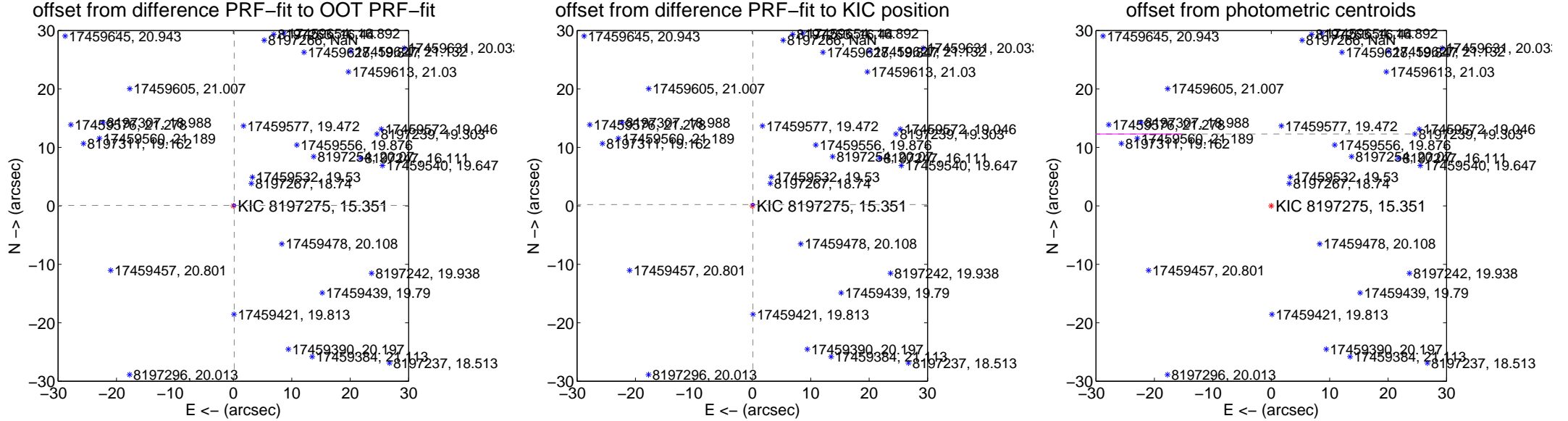
DV Centroid Data

Supplemental centroid analysis for 008197275-02. Kepler magnitude: 15.35. Transit SNR 0.03

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

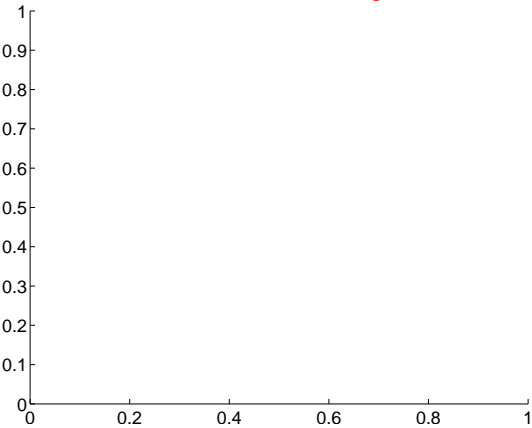
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.165 ± 0.084	1.96	-0.143 ± 0.087	0.081 ± 0.074
PRF-fit source offset from KIC position	0.246 ± 0.076	3.23	-0.102 ± 0.084	0.224 ± 0.075
photometric centroid source offset	99.37 ± 83.27	1.19	98.61 ± 83.25	12.29 ± 84.55



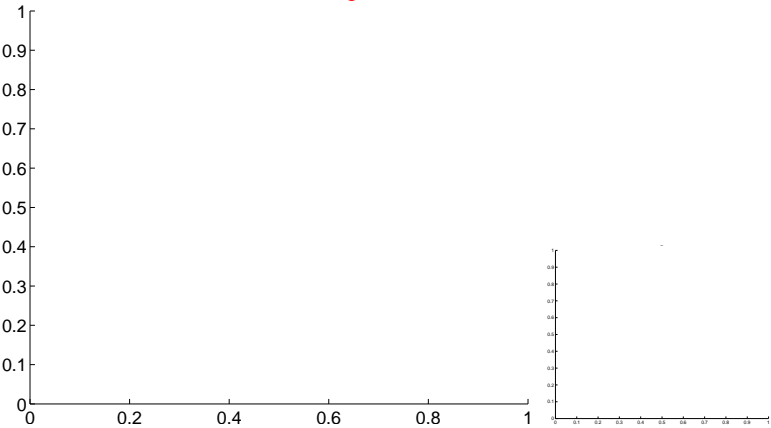
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

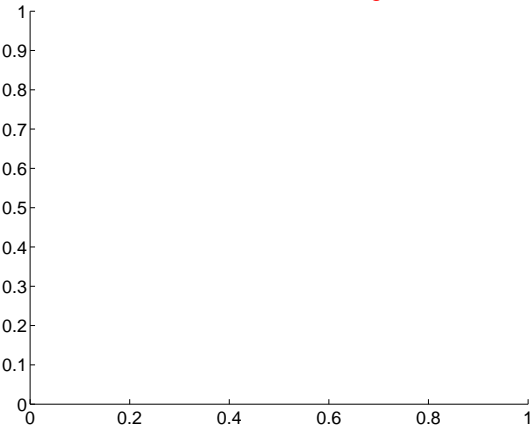
Q1 no difference image



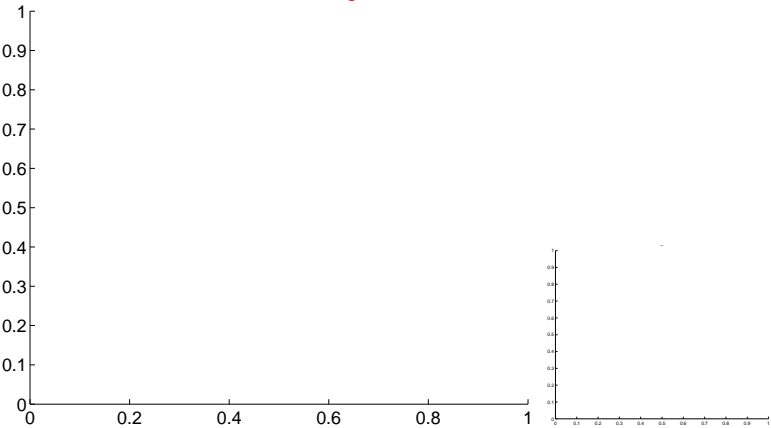
Q1 no OOT image



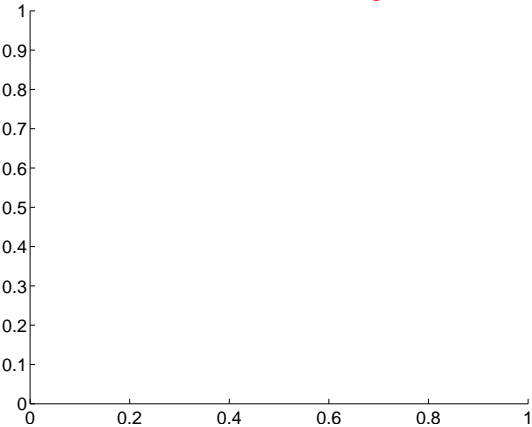
Q2 no difference image



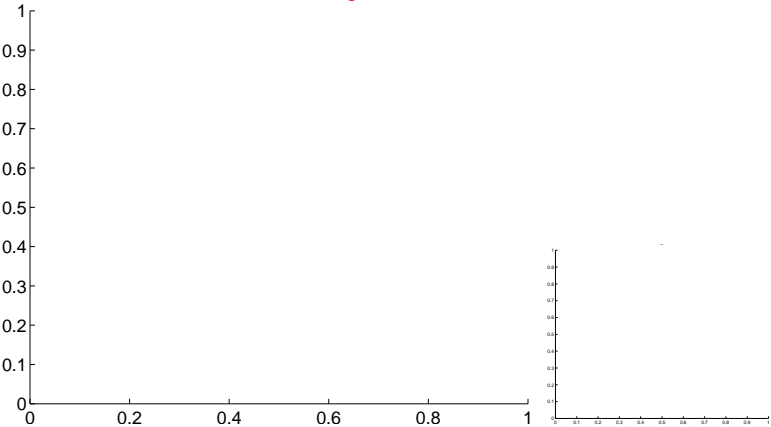
Q2 no OOT image



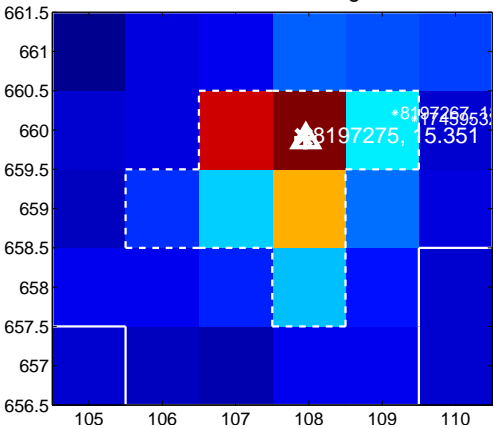
Q3 no difference image



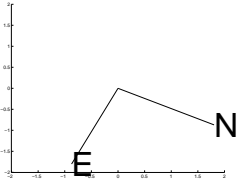
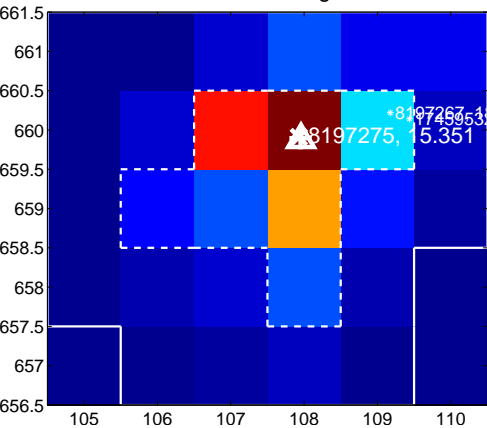
Q3 no OOT image



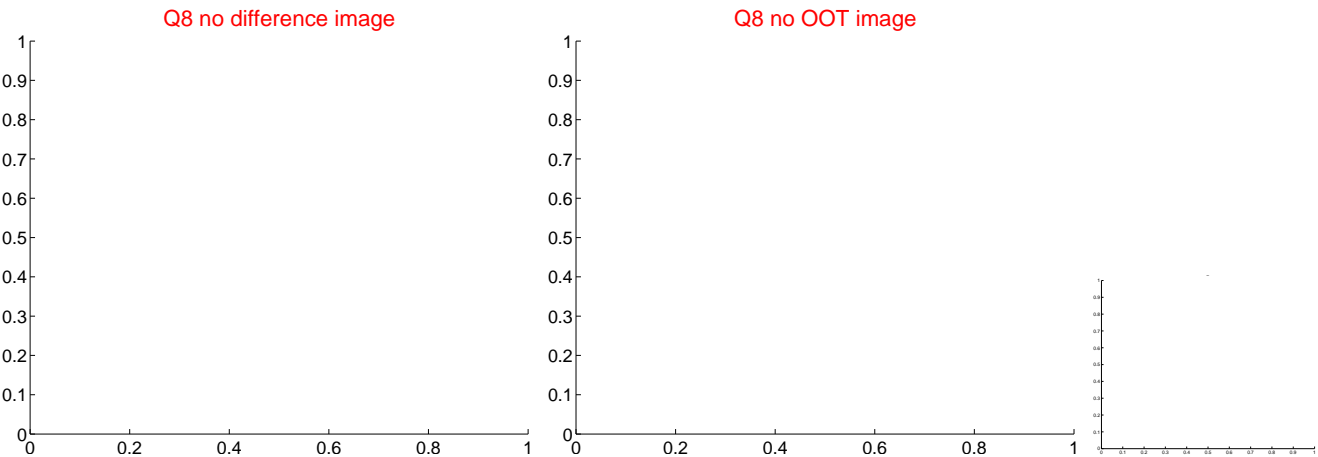
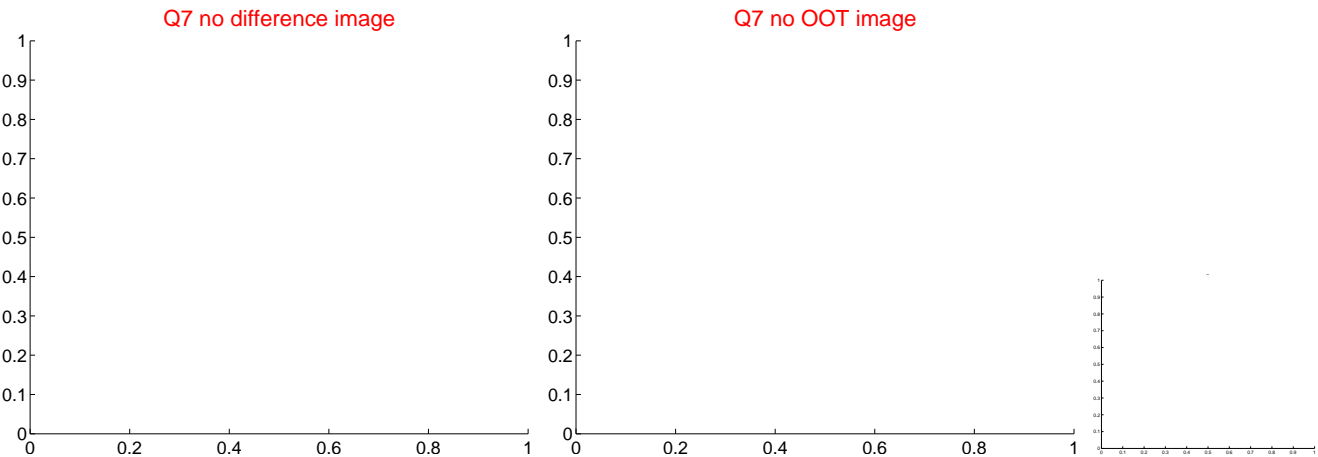
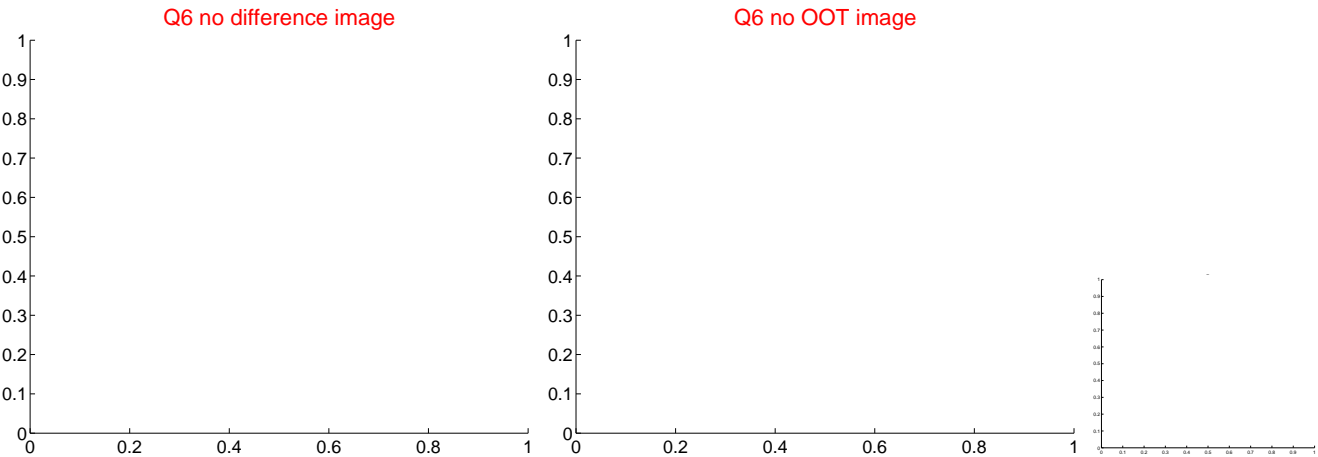
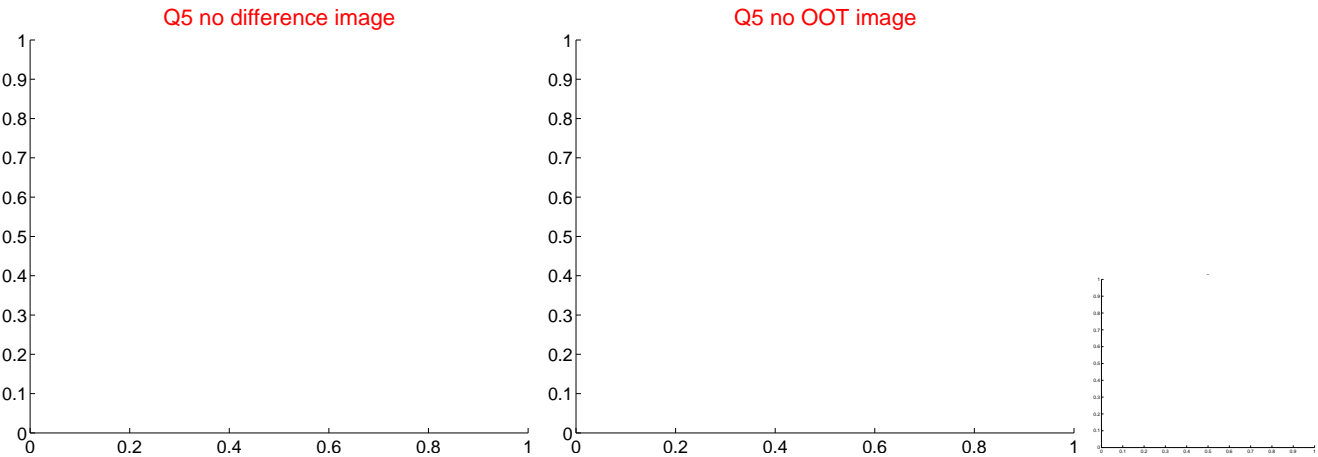
Q4 difference image



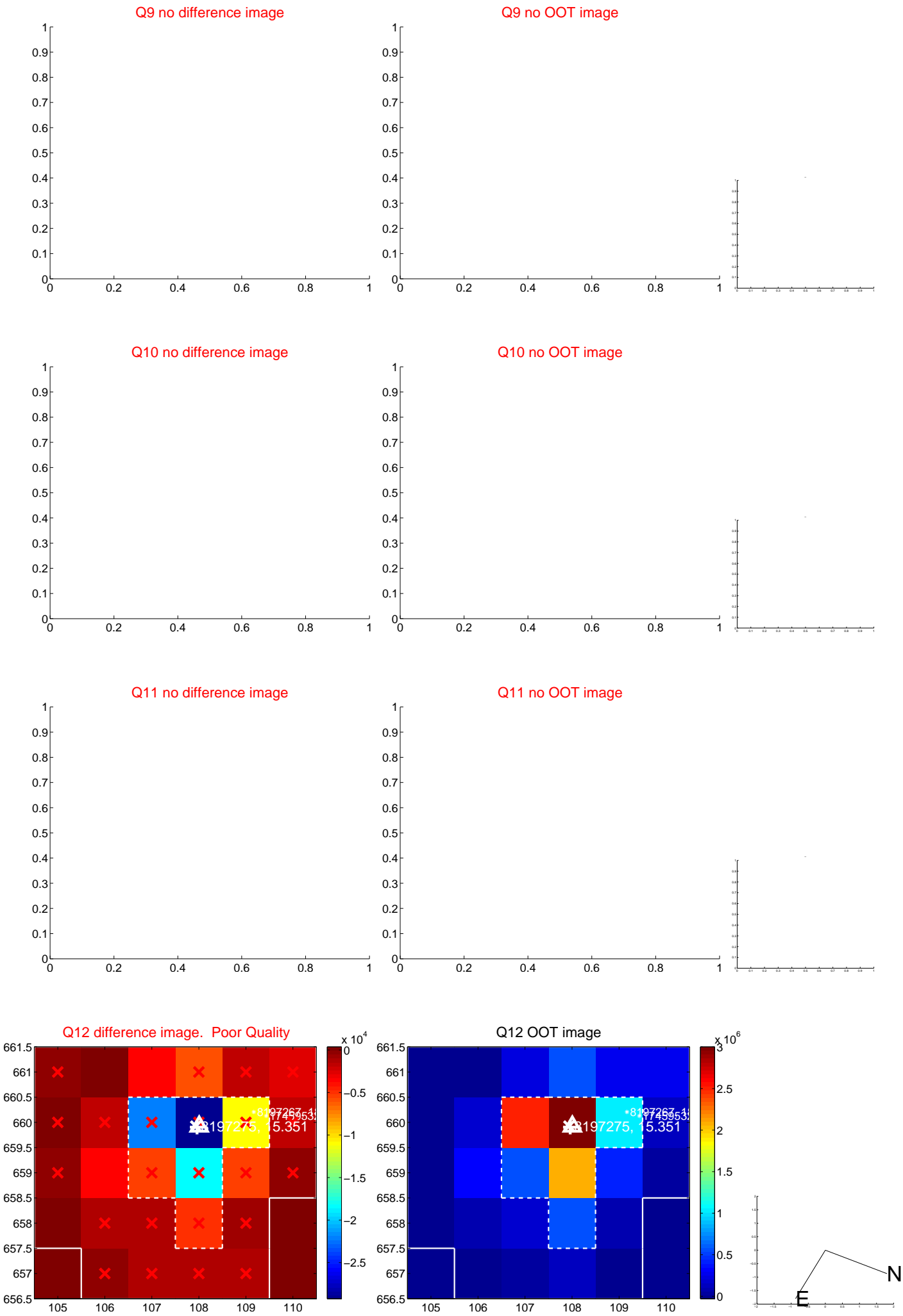
Q4 OOT image



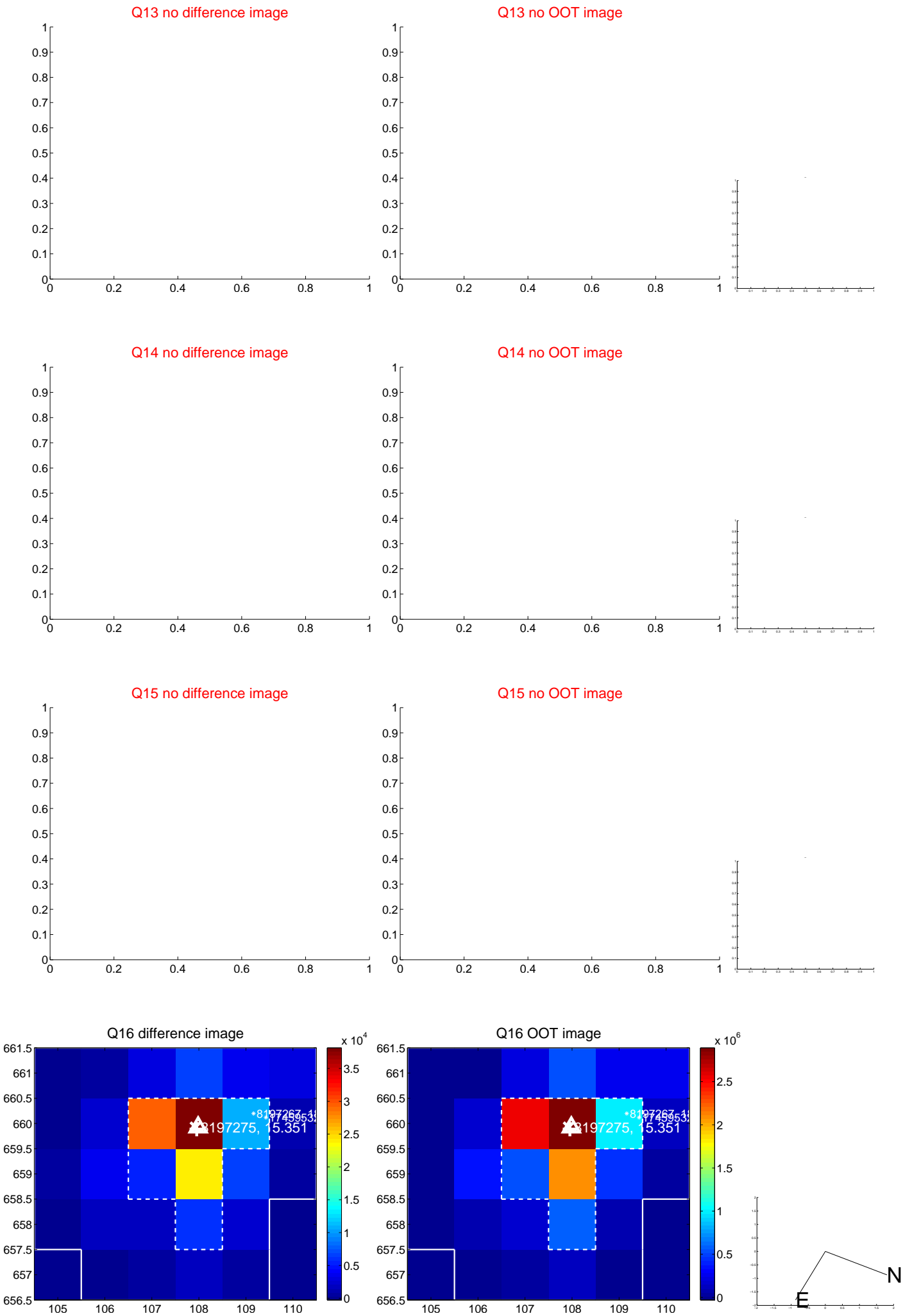
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



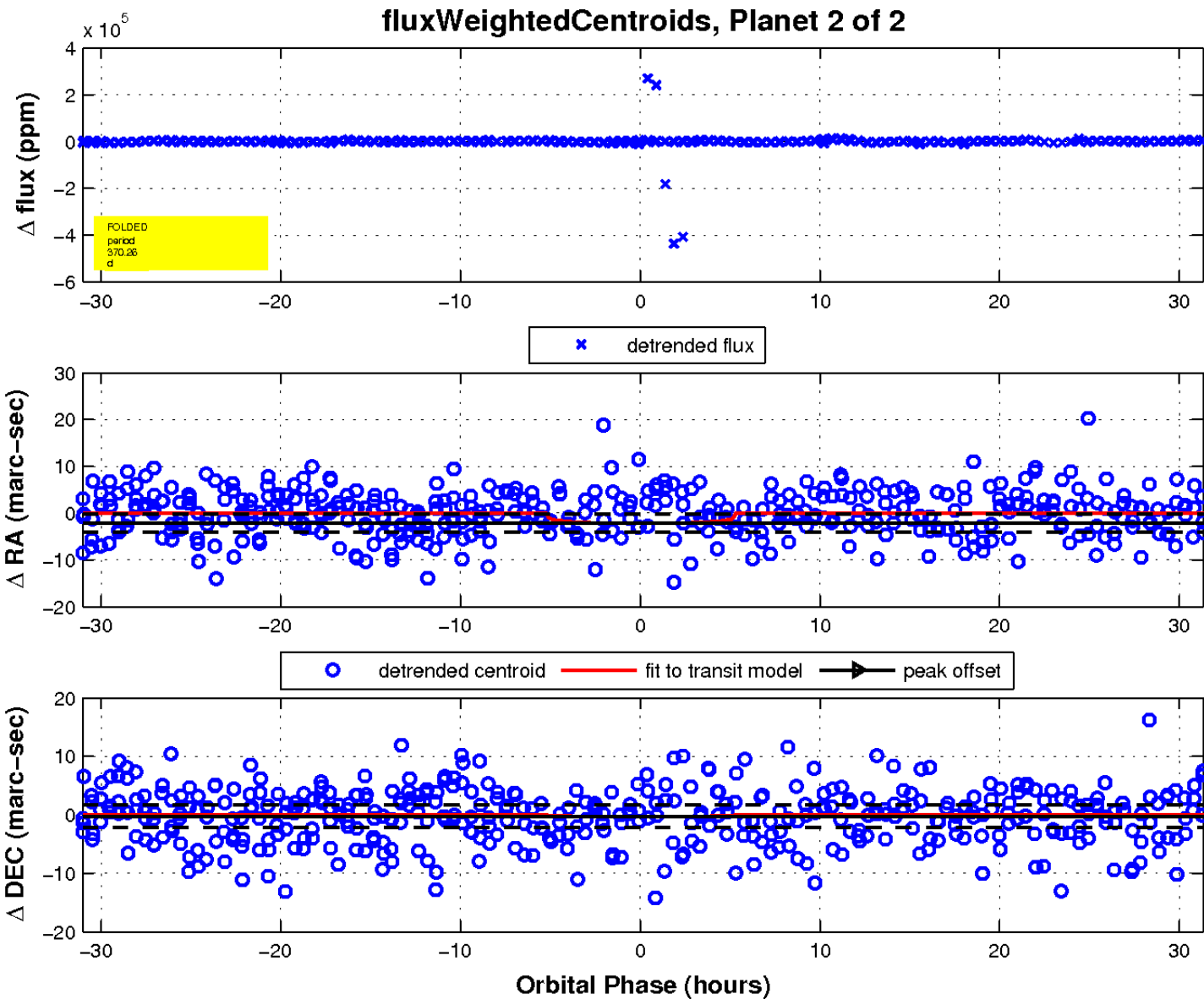
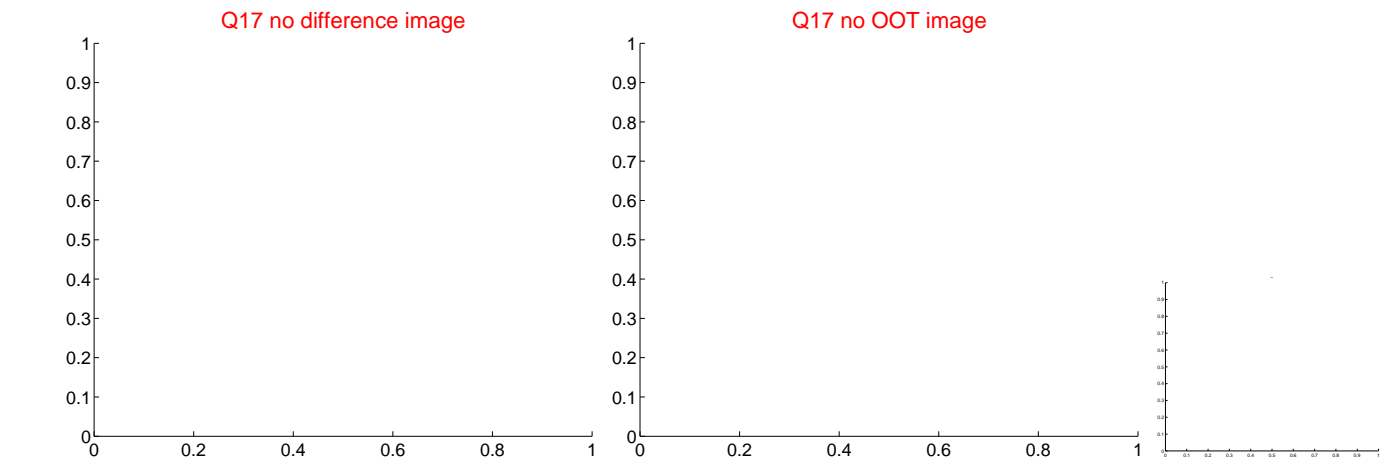
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

