

KIC 008242592

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})
008242592-01	OBS	No	415.889553	186.472674	356.9	5.108	7.5	6.3	0.87	5311	1.74	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008242592-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—MOD_NONUNIQ_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.

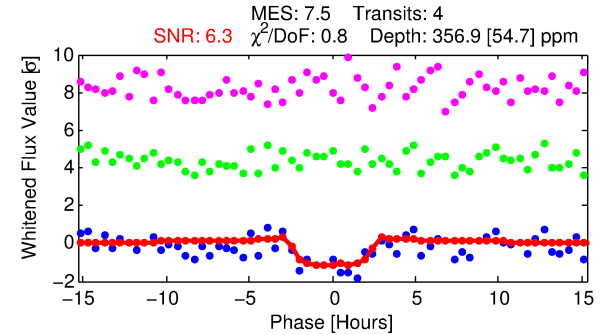
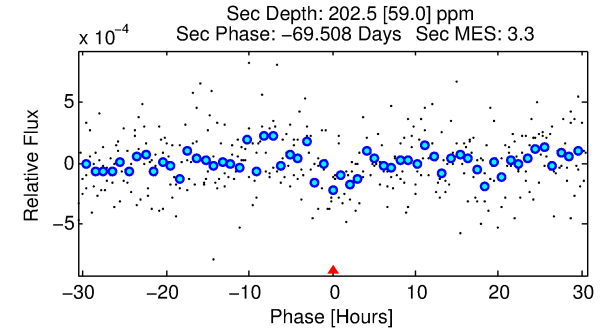
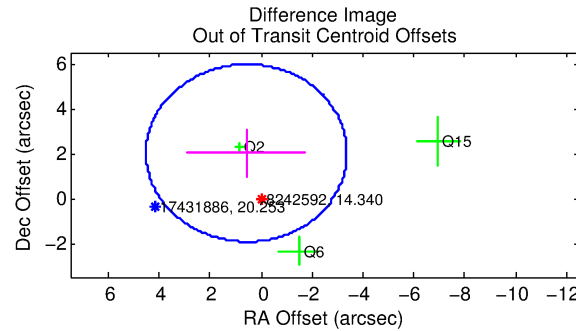
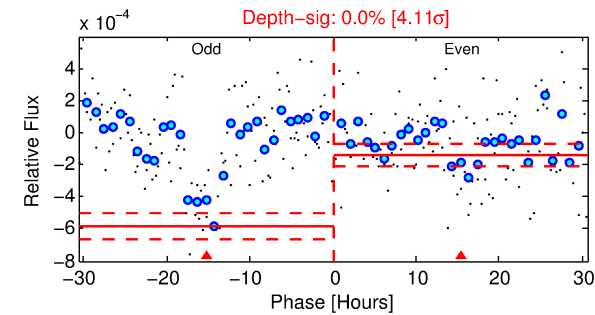
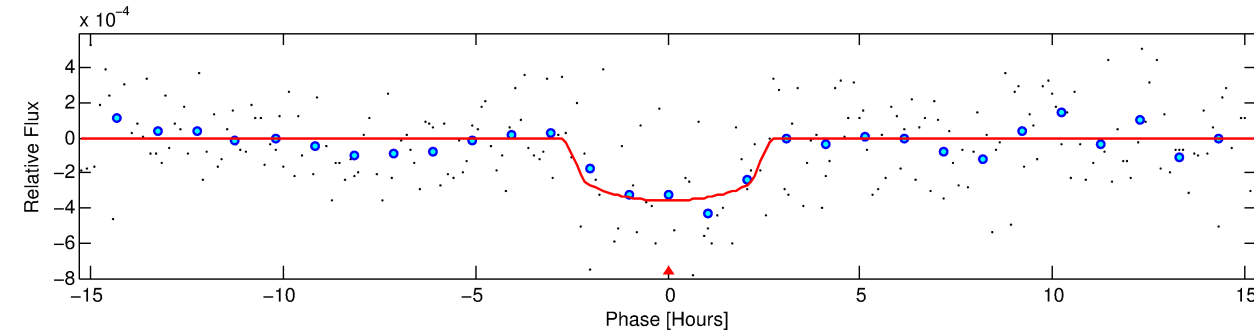
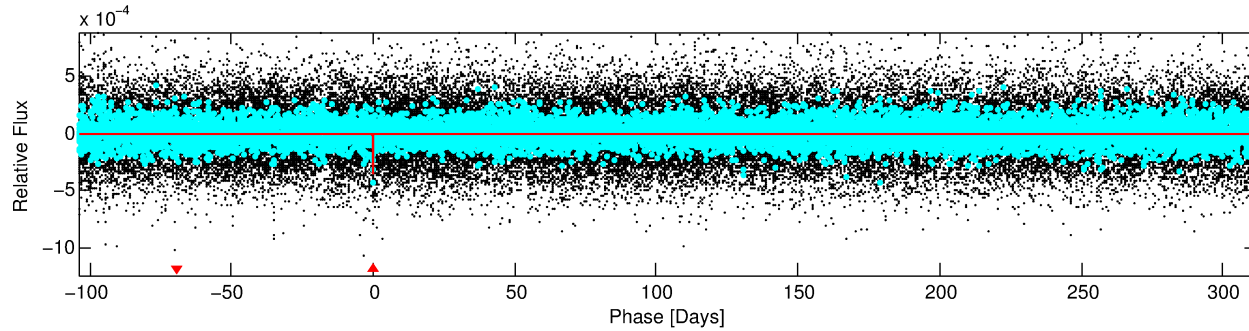
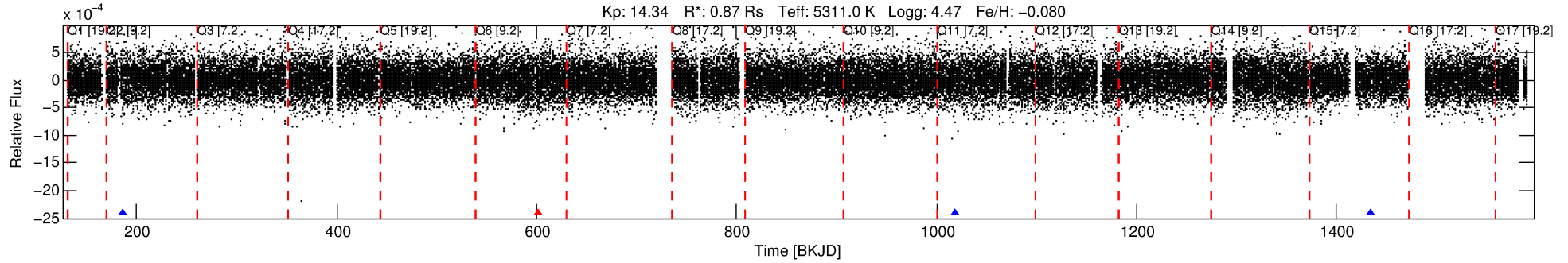
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008242592-01

No Significant Match Found

DV One-Page Summary

KIC: 8242592 Candidate: 1 of 1 Period: 415.890 d



DV Fit Results:

Period = 415.88955 [0.00607] d
Epoch = 186.4727 [0.0114] BKJD
Rp/R* = 0.0184 [0.0306]
a/R* = 468.15 [3006.75]
b = 0.69 [5.04]
Seff = 0.52 [0.13]
Teff = 216 [14] K
Rp = 1.74 [2.90] Re
a = 1.0148 [0.1490] AU
Ag = 38033.28 [127302.55] [0.30 σ]
Teffp = 4673 [3904] K [1.14 σ]

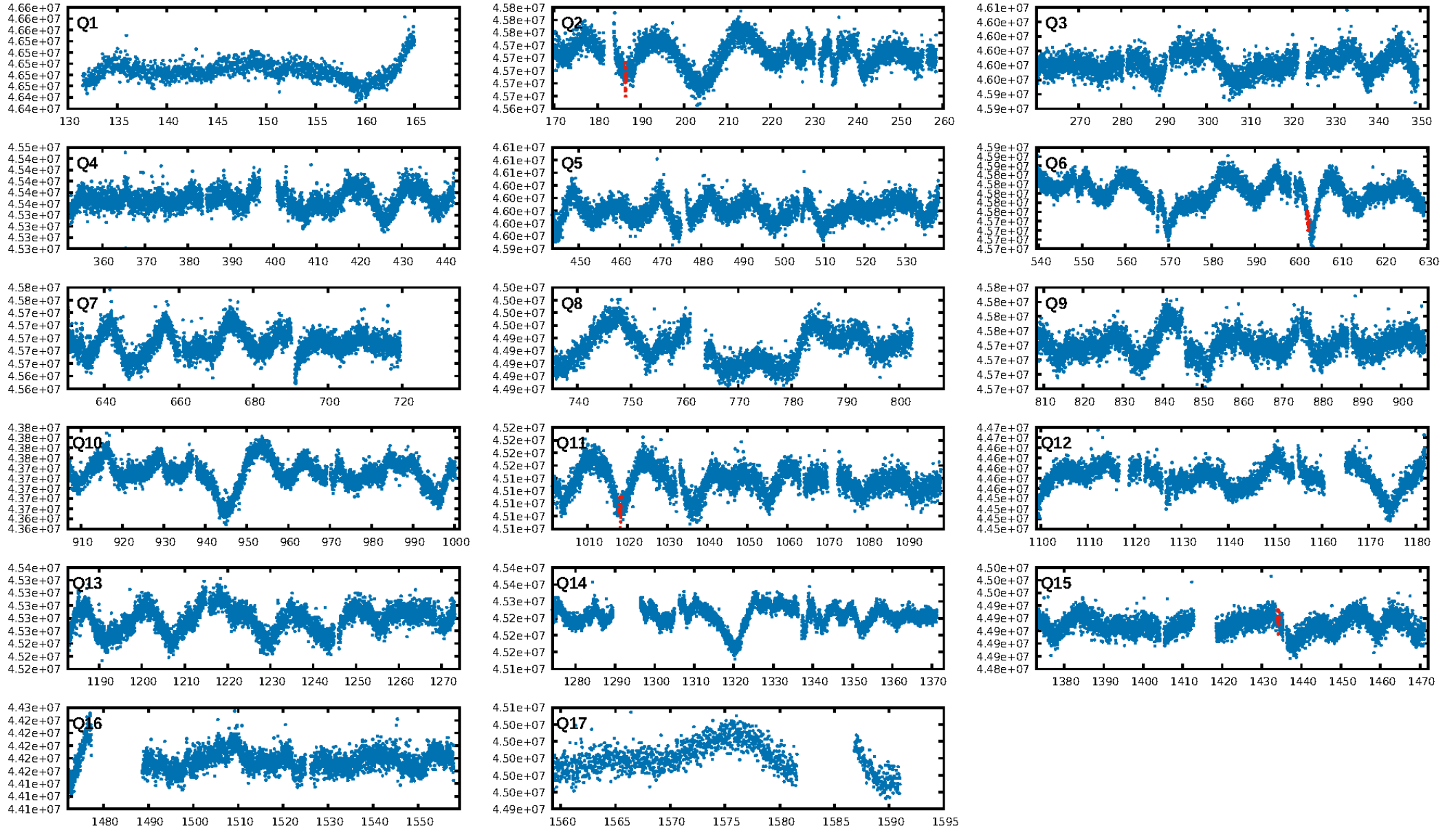
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 97.0%
Bootstrap-pfa: 2.34e-10
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: -0.2862
Centroid-sig: 1.2%
Centroid-so: 2.639 arcsec [1.69 σ]
OotOffset-rm: 2.094 arcsec [1.59 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-rm: 1.715 arcsec [1.76 σ]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

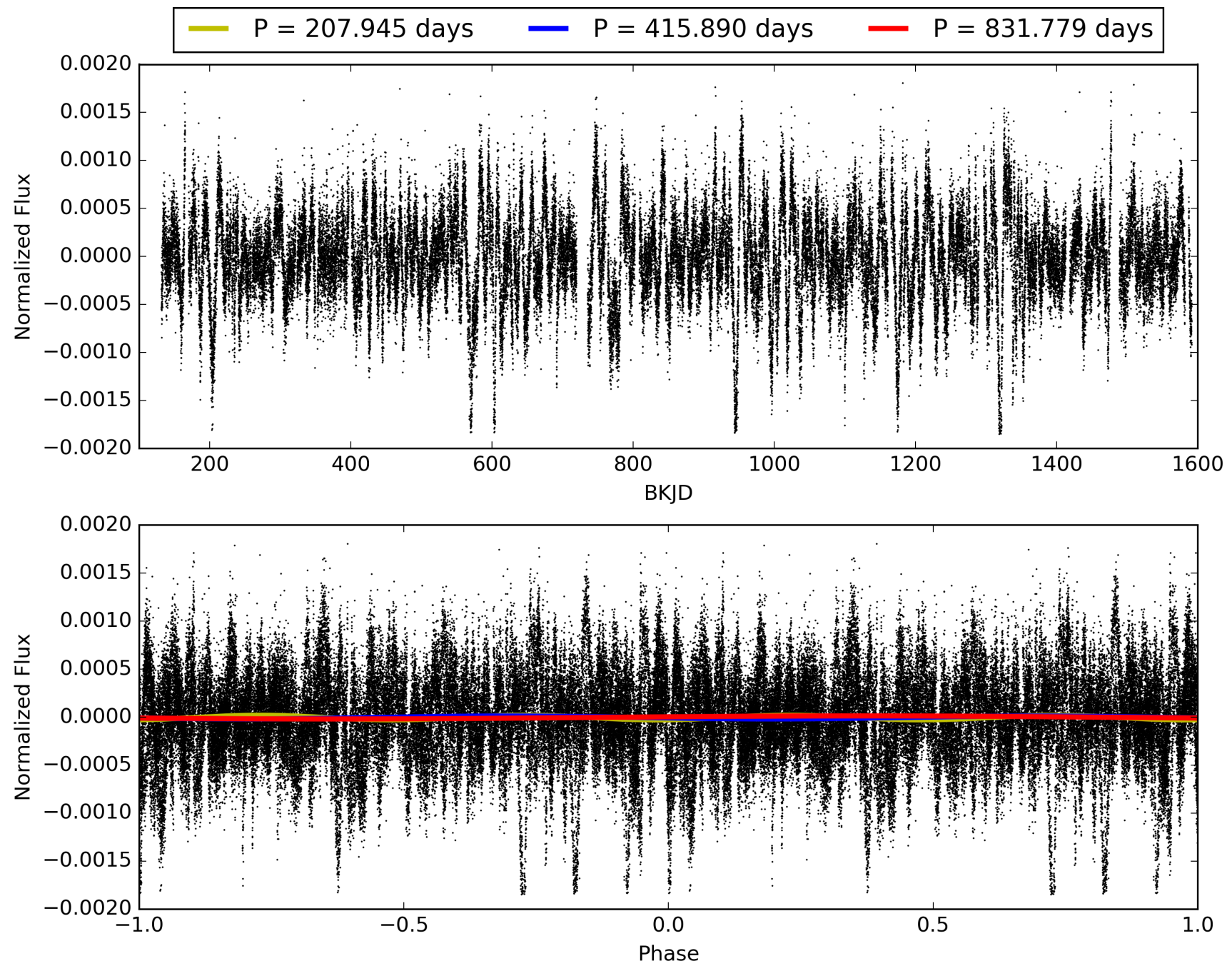
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:20:44 Z

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

TCE 008242592-01, PDC Light Curves

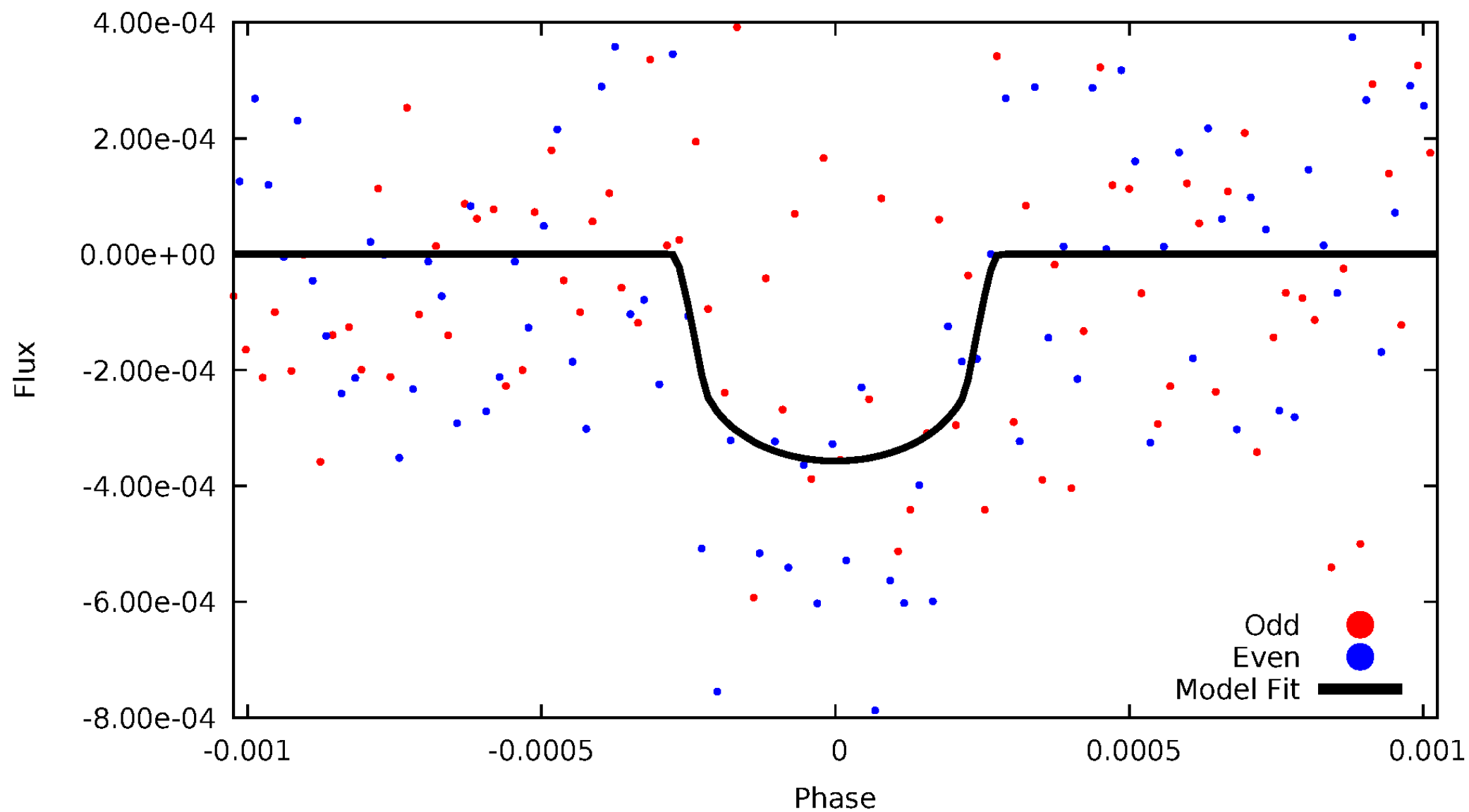


TCE 008242592-01



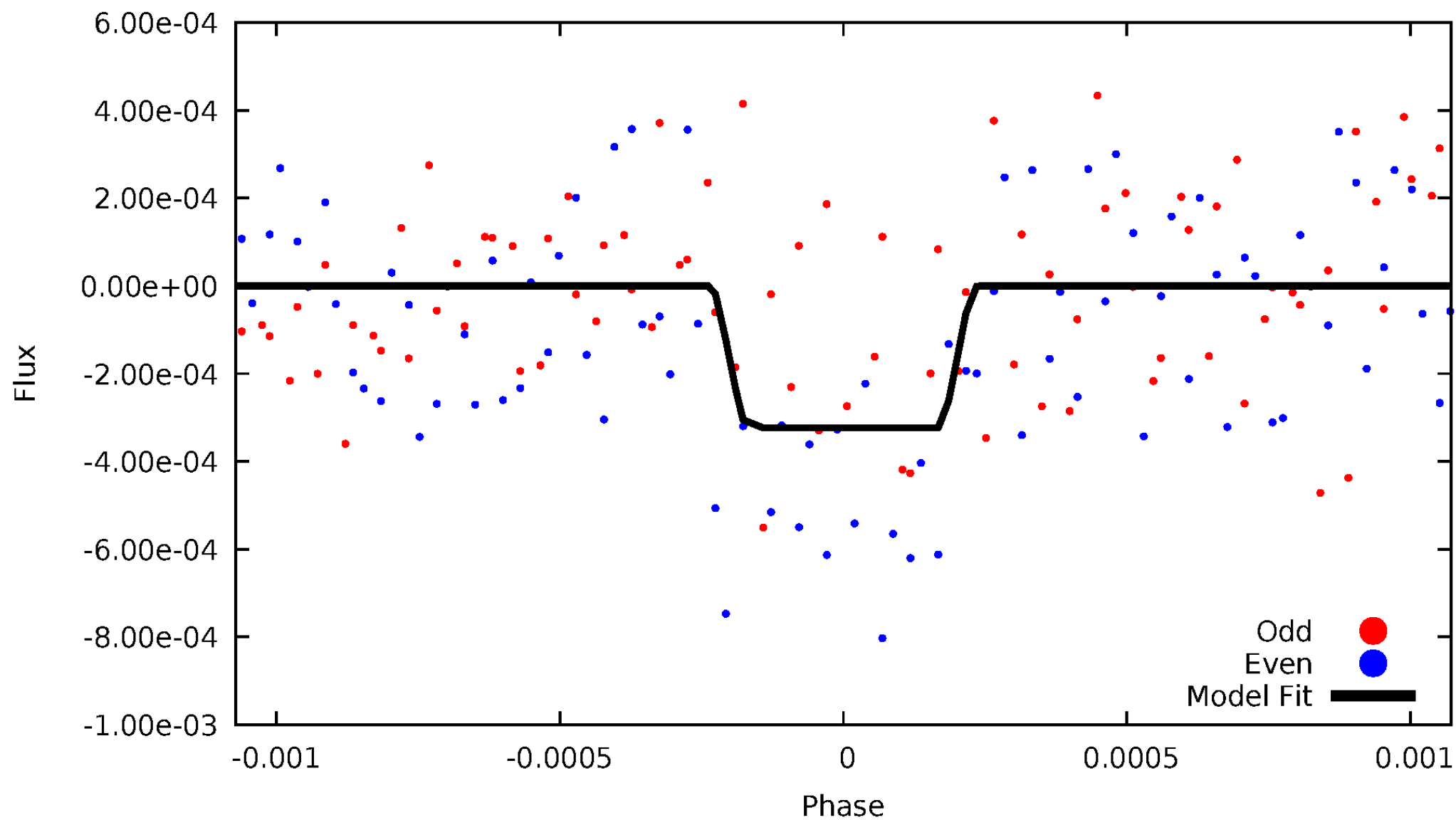
DV Odd/Even

TCE 008242592-01



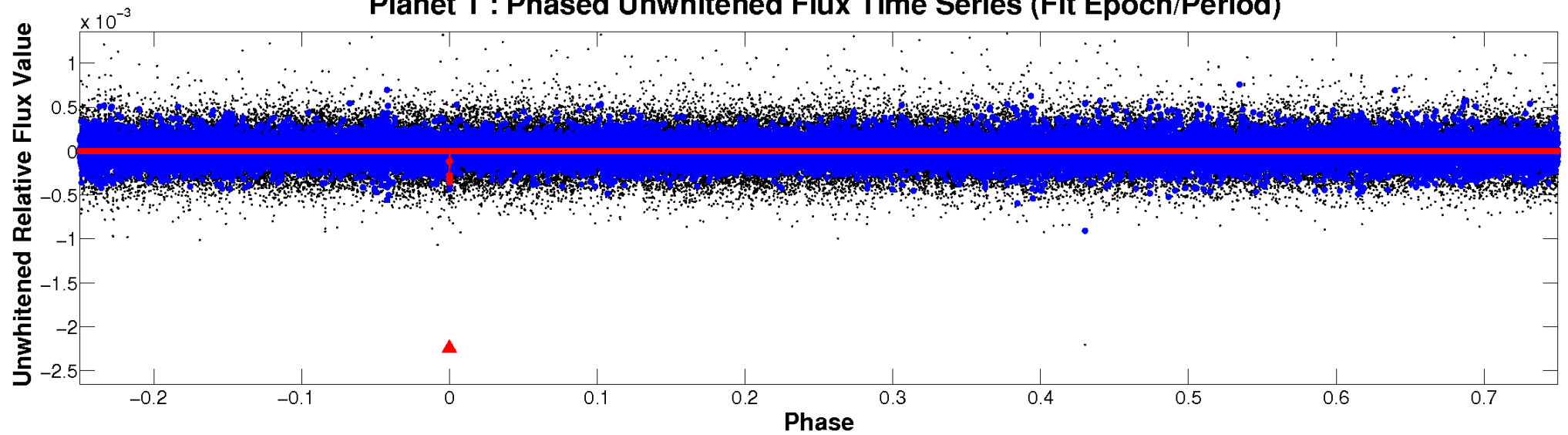
ALT Odd/Even

TCE 008242592-01

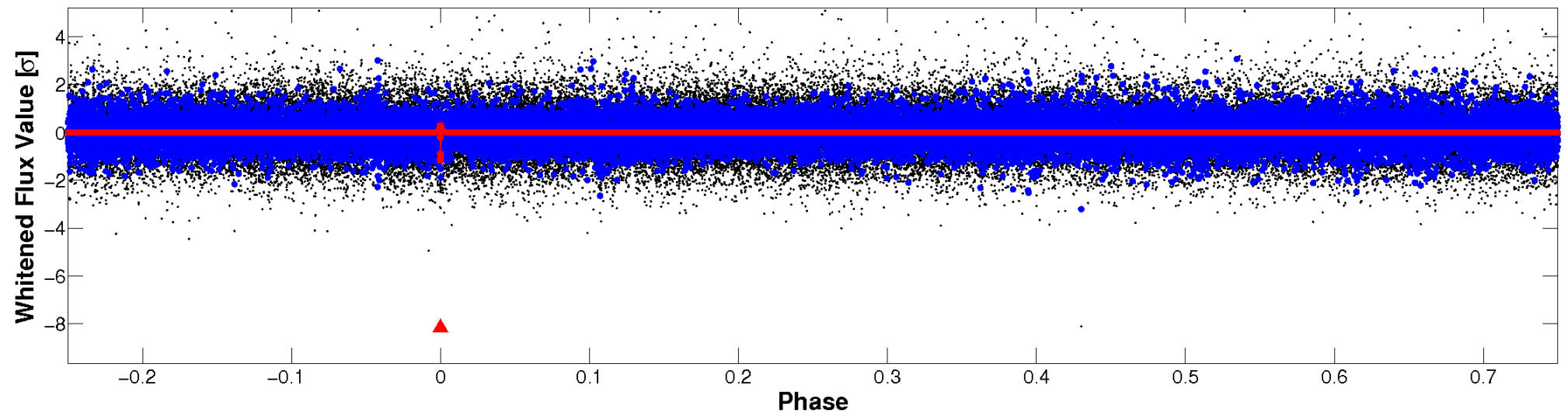


Non-Whitened Vs. Whitened Light Curve

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

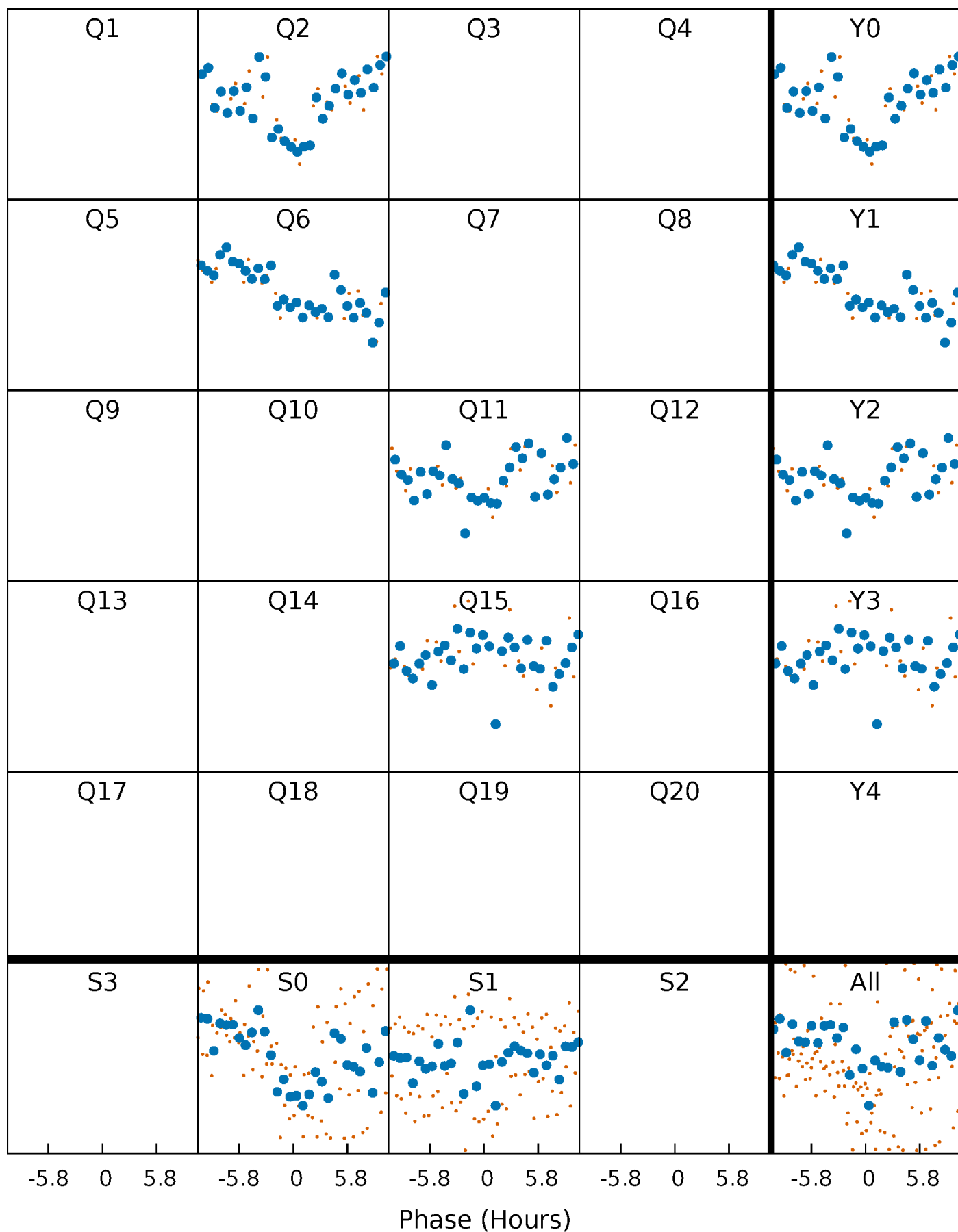


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



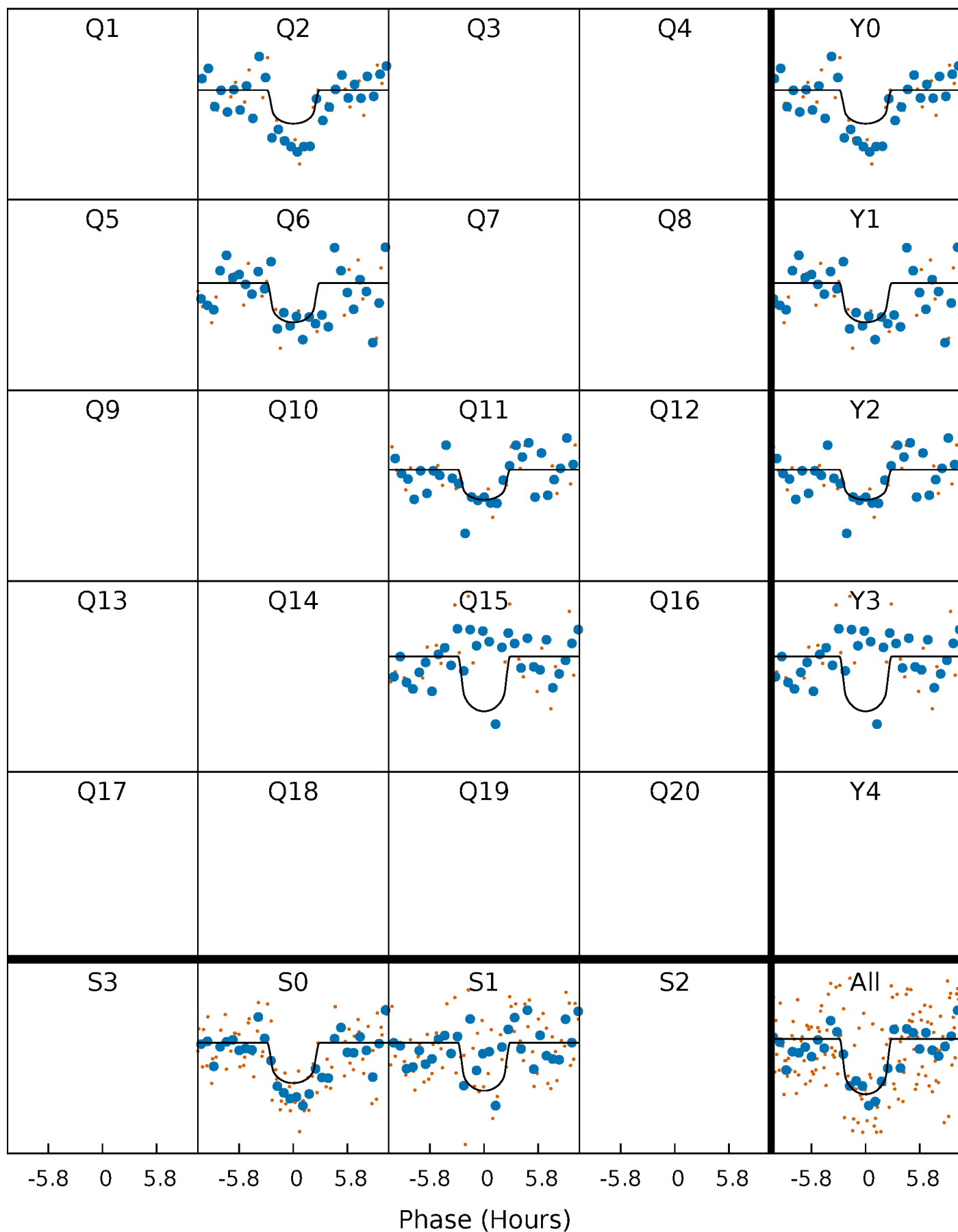
PDC Quarter-Phased Transit Curves

TCE 008242592-01 P=415.889553 Days $T_0=186.472674$ (BKJD)



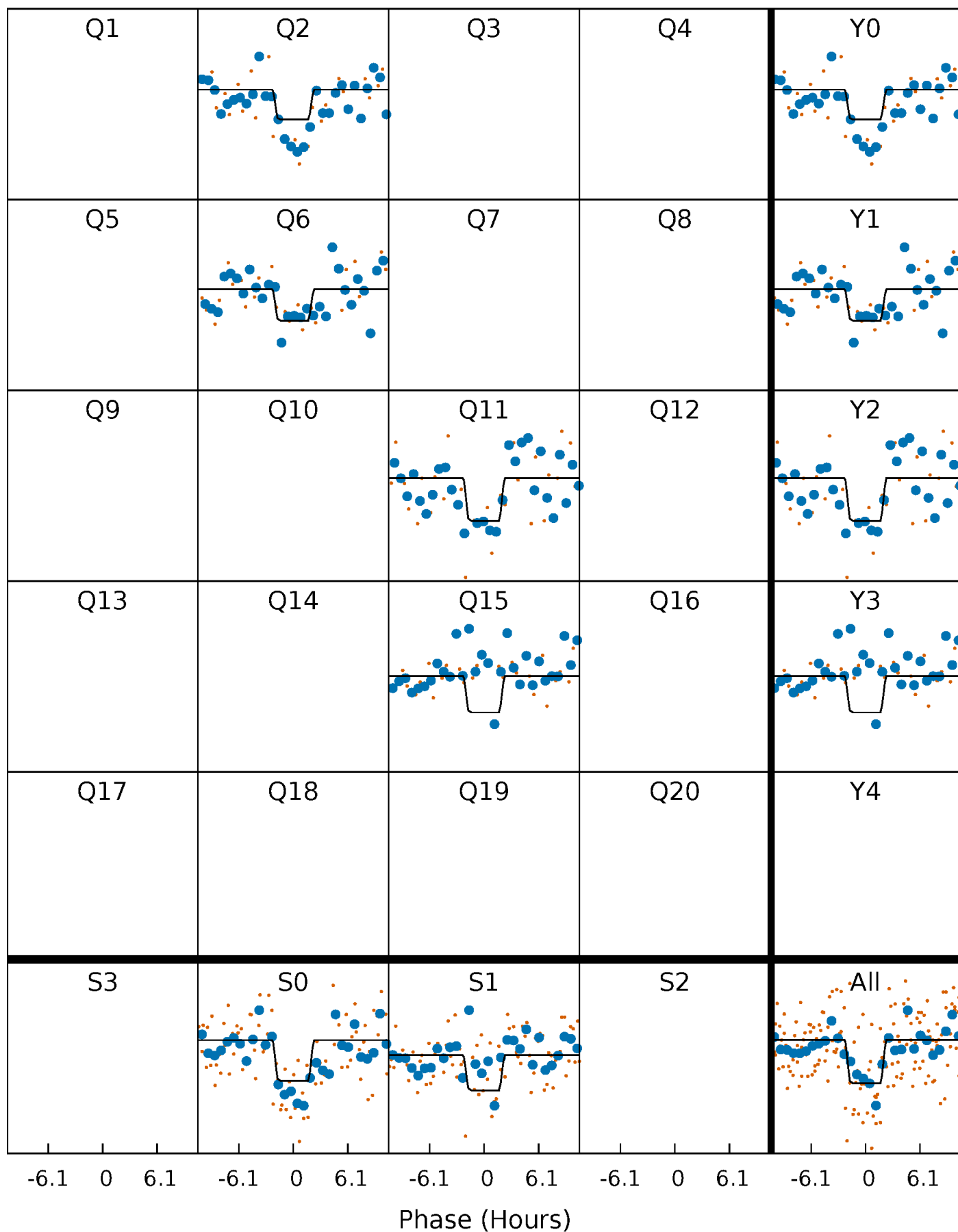
DV Quarter-Phased Transit Curves

TCE 008242592-01 P=415.889553 Days $T_0=186.472674$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

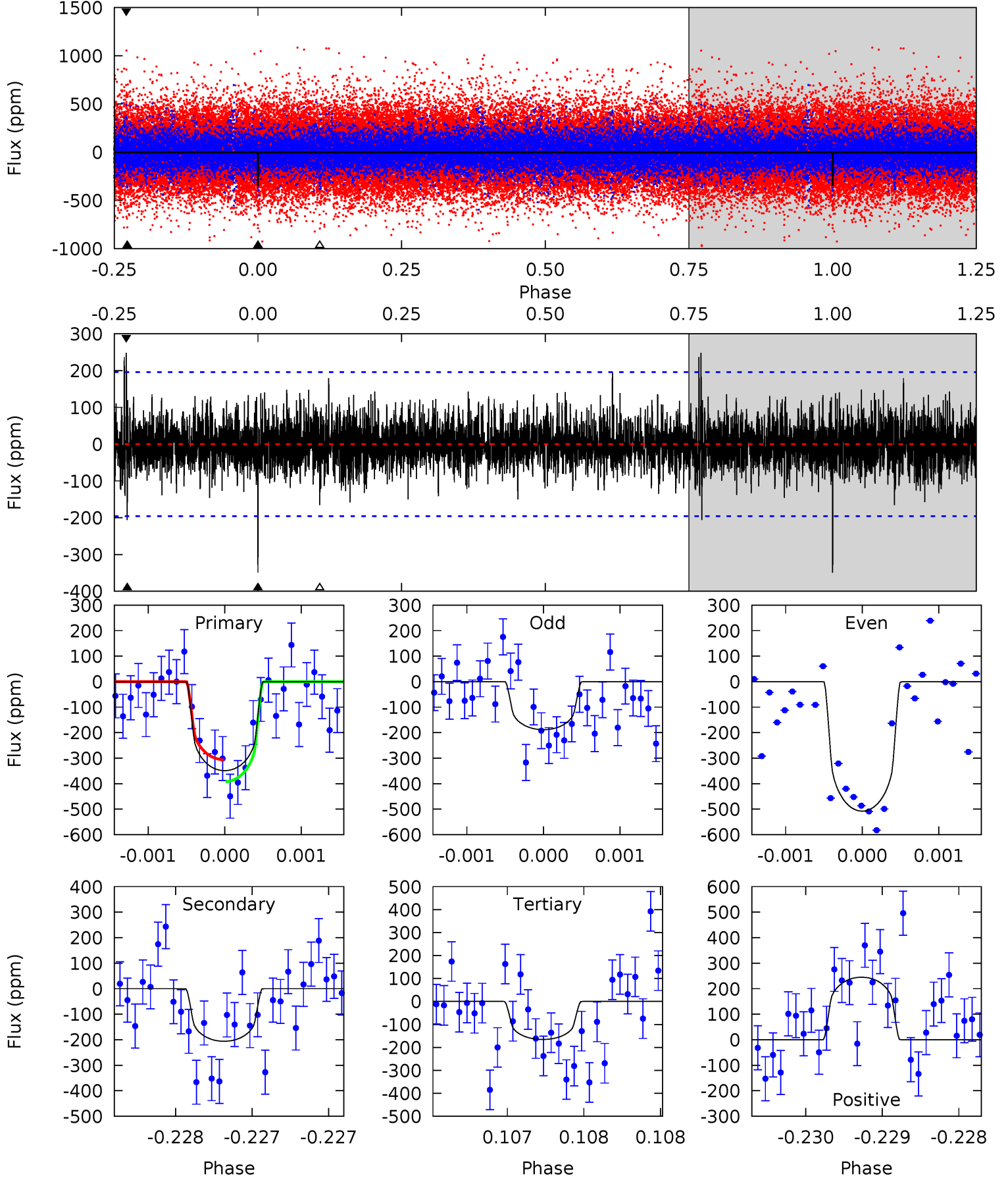
TCE 008242592-01 P=415.891058 Days $T_0=186.472071$ (BKJD)



DV Model-Shift Uniqueness Test

008242592-01, P = 415.889553 Days, E = 186.472674 Days

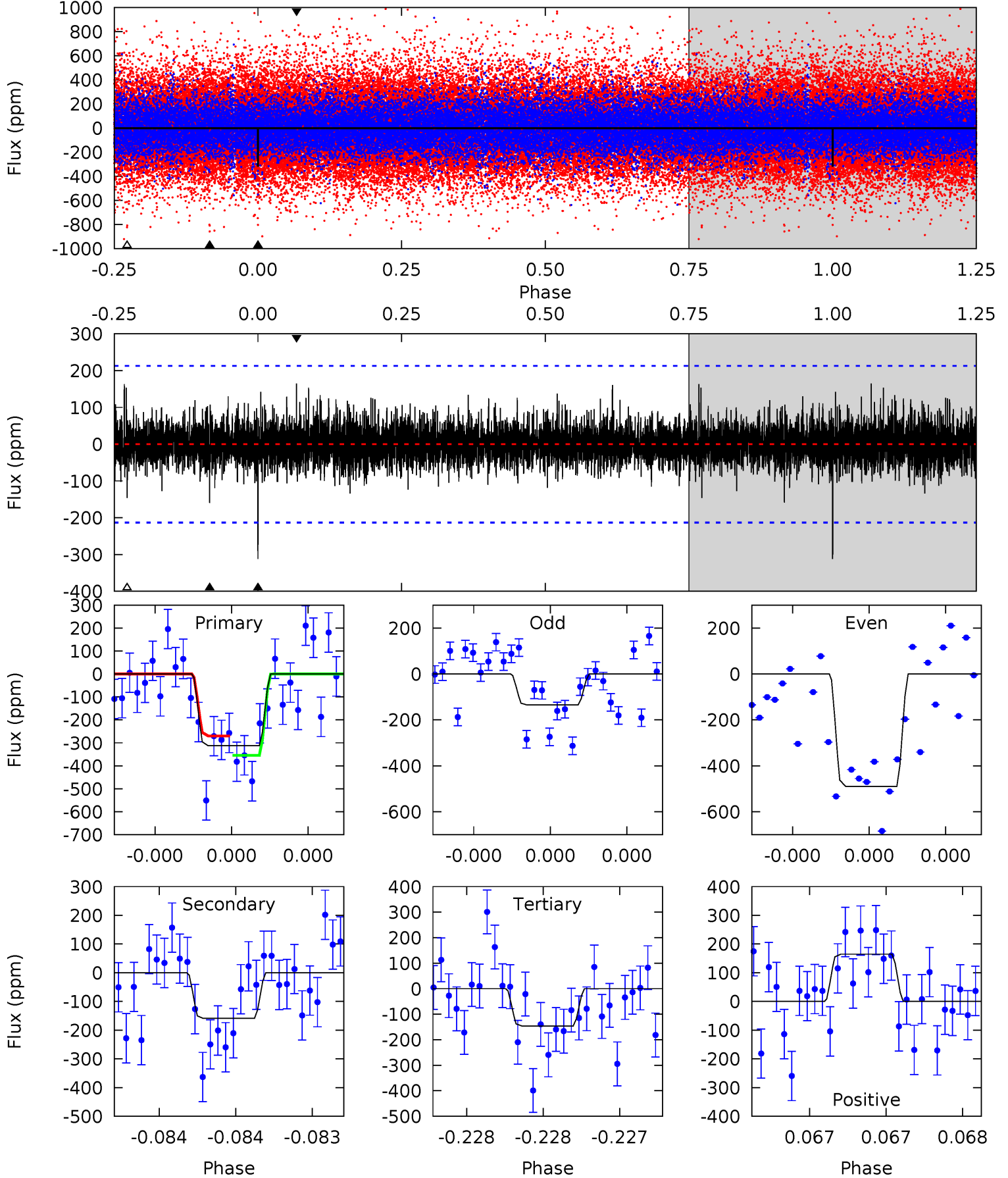
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.90	5.84	4.70	6.95	5.55	3.45	1.32	5.20	2.95	1.15	-1.10	4.53	0.86	0.42	1.22



Alt Model-Shift Uniqueness Test

008242592-01, P = 415.891058 Days, E = 186.472071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	4.17	3.83	4.32	5.59	3.50	0.99	4.36	3.87	0.34	-0.15	4.72	0.88	0.35	1.10



Stellar Parameters For KIC 008242592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5311^{+159}_{-143}	$4.469^{+0.110}_{-0.132}$	$-0.080^{+0.300}_{-0.300}$	$0.866^{+0.138}_{-0.113}$	$0.804^{+0.113}_{-0.061}$	$1.745^{+0.760}_{-0.623}$
	+3%/-3%	+2%/-3%	+375%/-375%	+16%/-13%	+14%/-8%	+44%/-36%
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 008242592-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-206 ± 35	$2.82^{+2.55}_{-1.95}$	304^{+15}_{-15}	3991^{+2600}_{-756}	$14801^{+134428}_{-10769}$
Alt.	-159 ± 38	$2.81^{+2.41}_{-1.86}$	303^{+16}_{-15}	3800^{+2107}_{-679}	11005^{+90847}_{-7848}

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 $A_{obs} \gg 1.0$

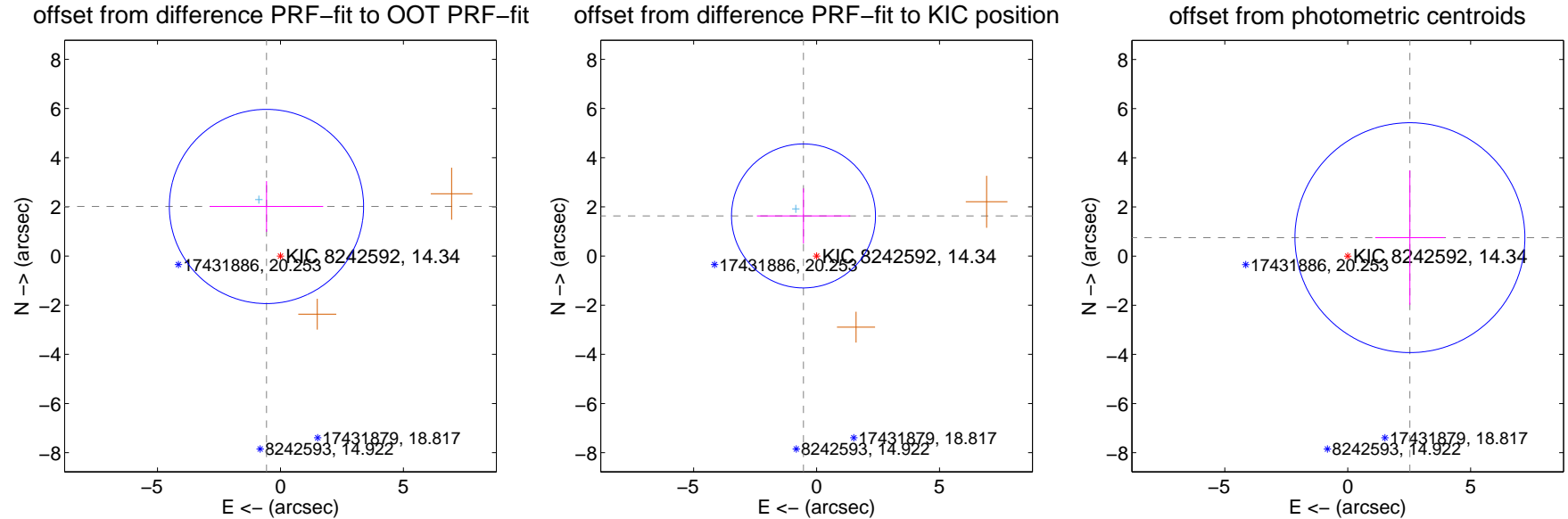
DV Centroid Data

Supplemental centroid analysis for 008242592-01. Kepler magnitude: 14.34. Transit SNR 6.29

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

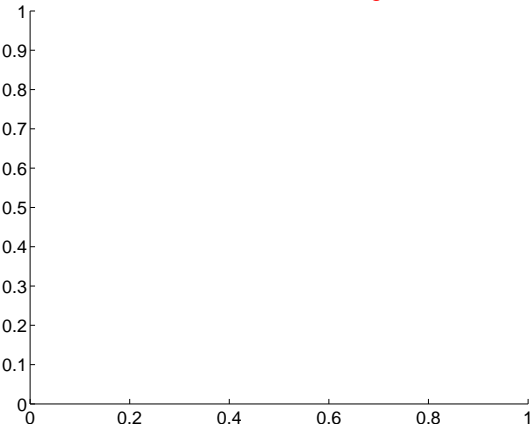
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.094 ± 1.317	1.59	0.569 ± 2.305	2.016 ± 1.032
PRF-fit source offset from KIC position	1.715 ± 0.976	1.76	0.532 ± 1.897	1.631 ± 1.119
photometric centroid source offset	2.64 ± 1.56	1.69	-2.53 ± 1.41	0.75 ± 2.73



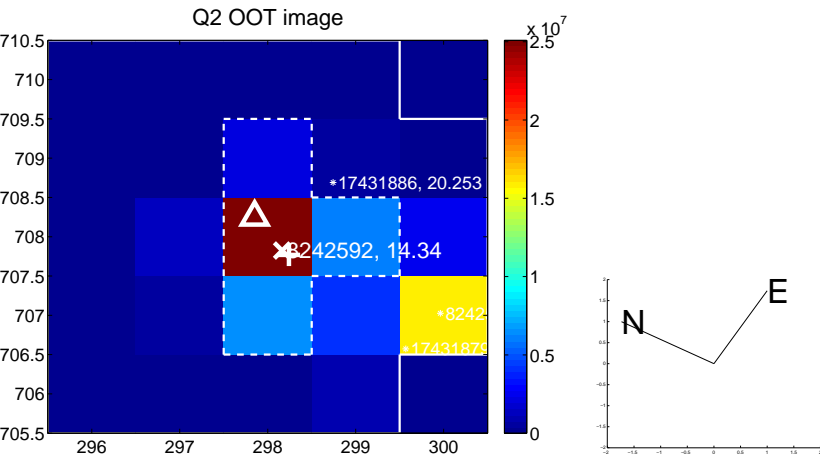
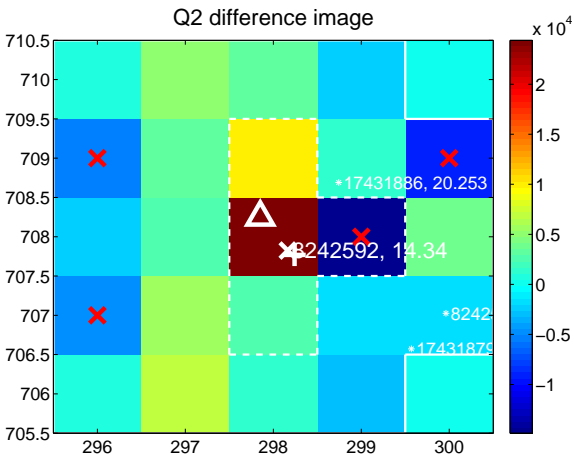
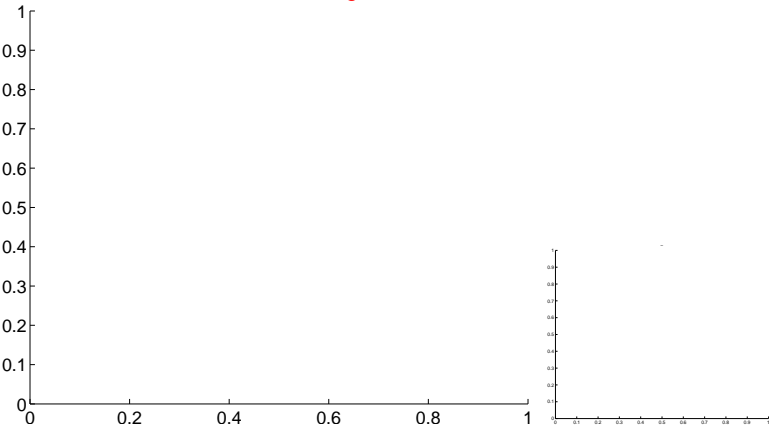
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

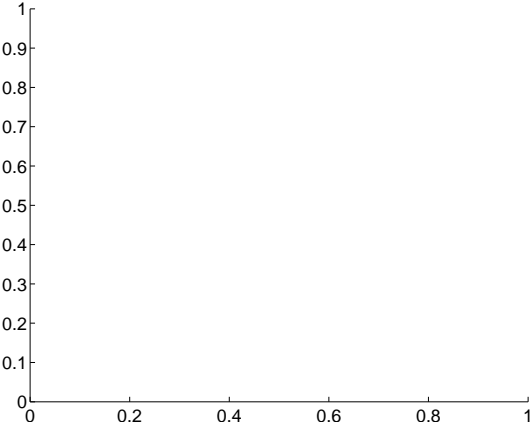
Q1 no difference image



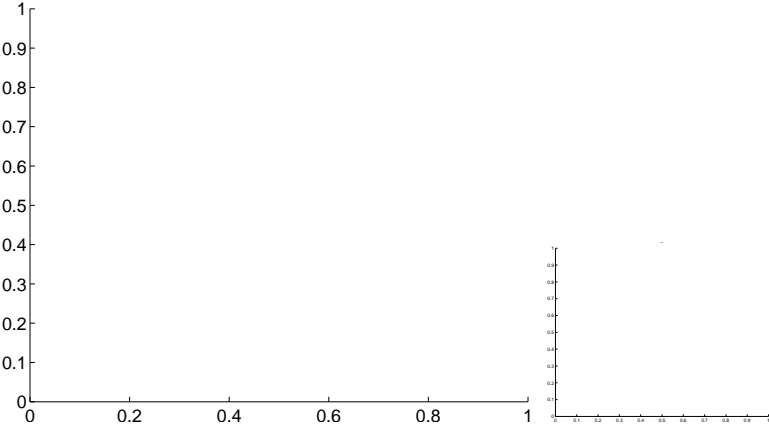
Q1 no OOT image



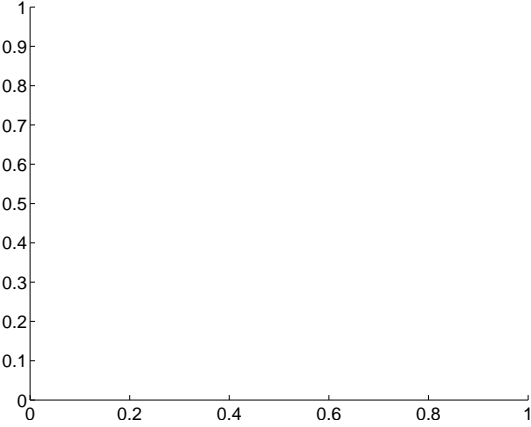
Q3 no difference image



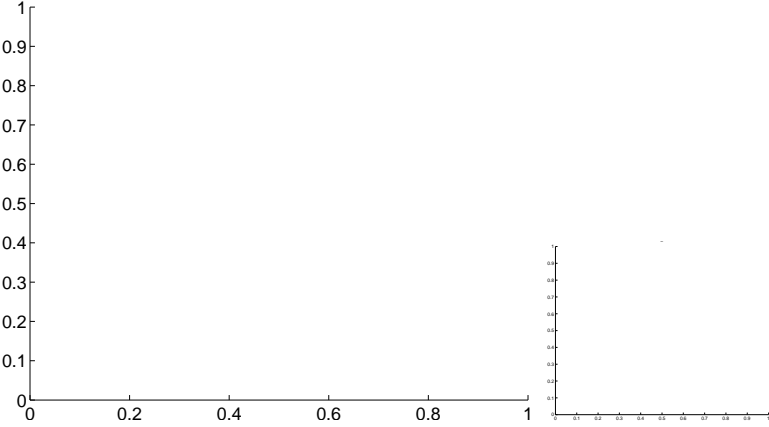
Q3 no OOT image



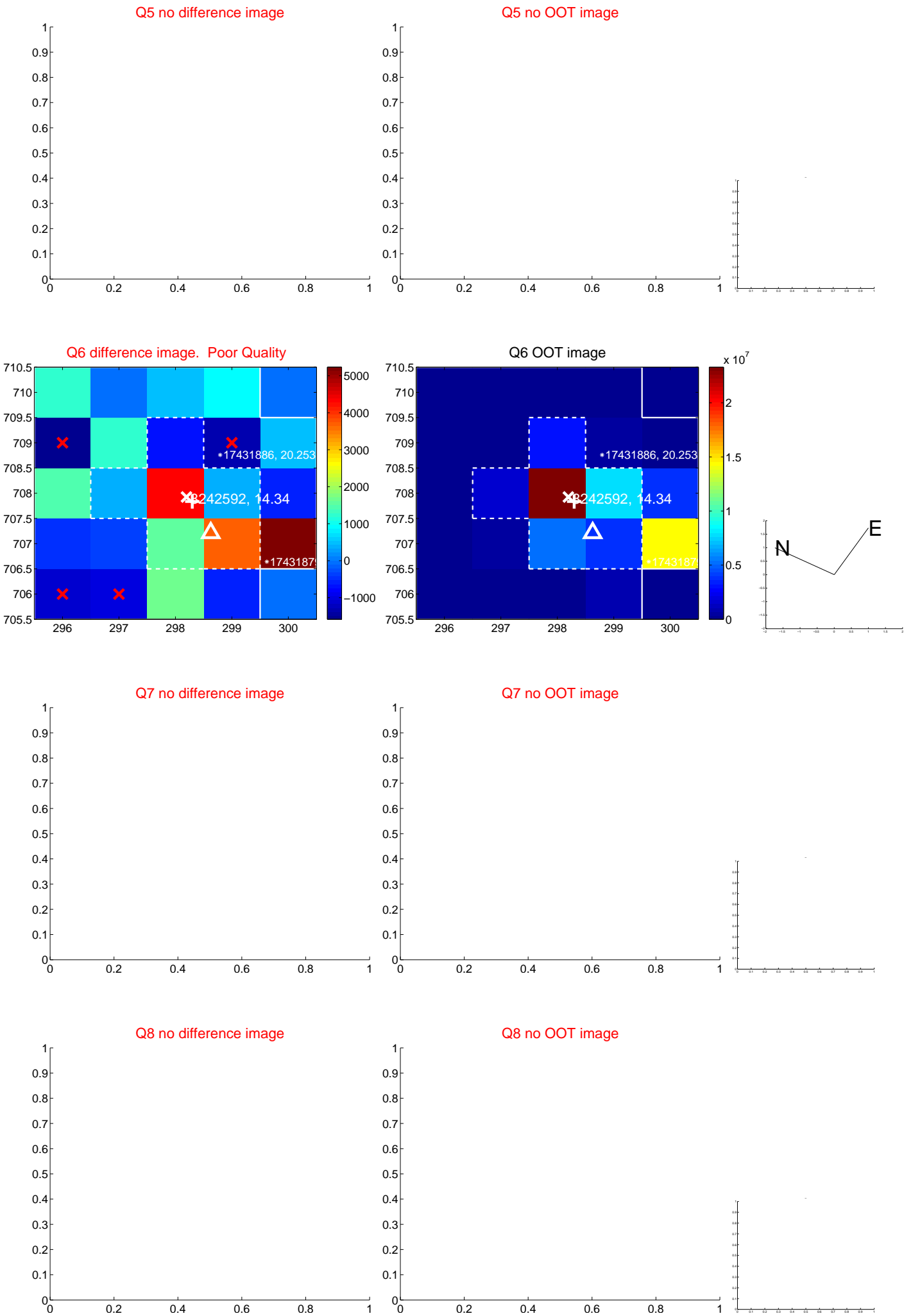
Q4 no difference image



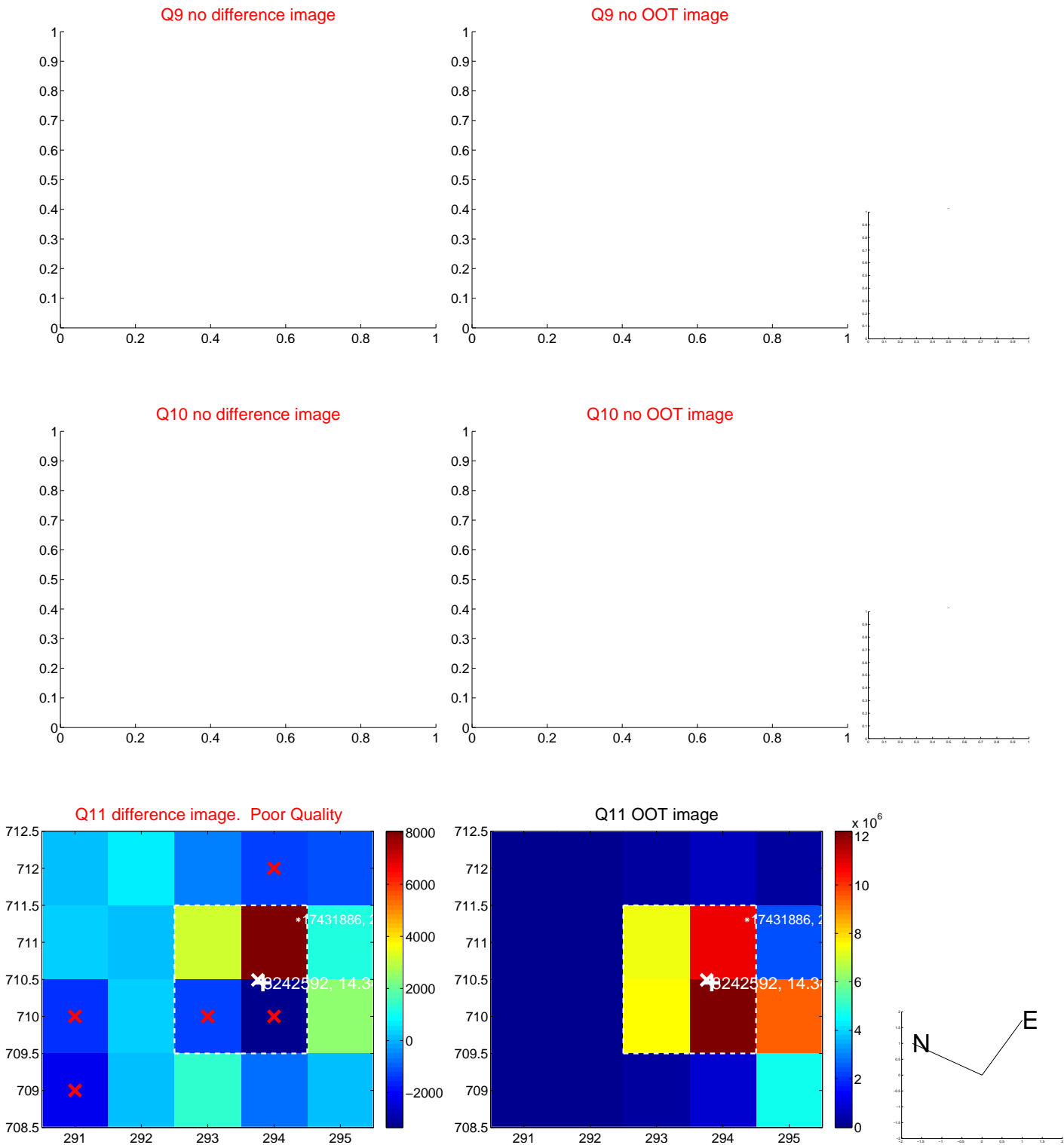
Q4 no OOT image



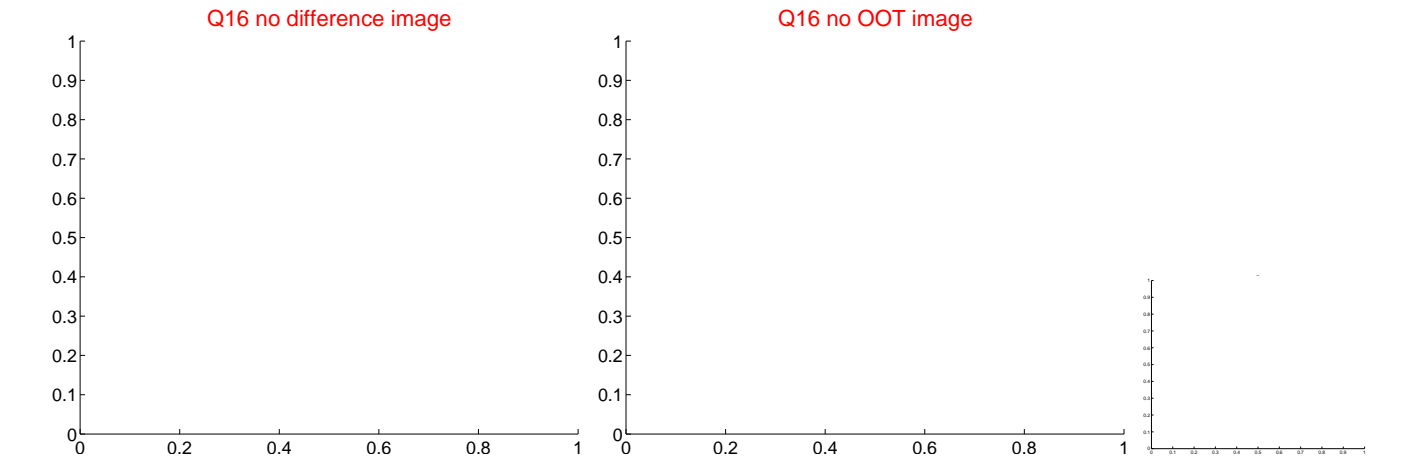
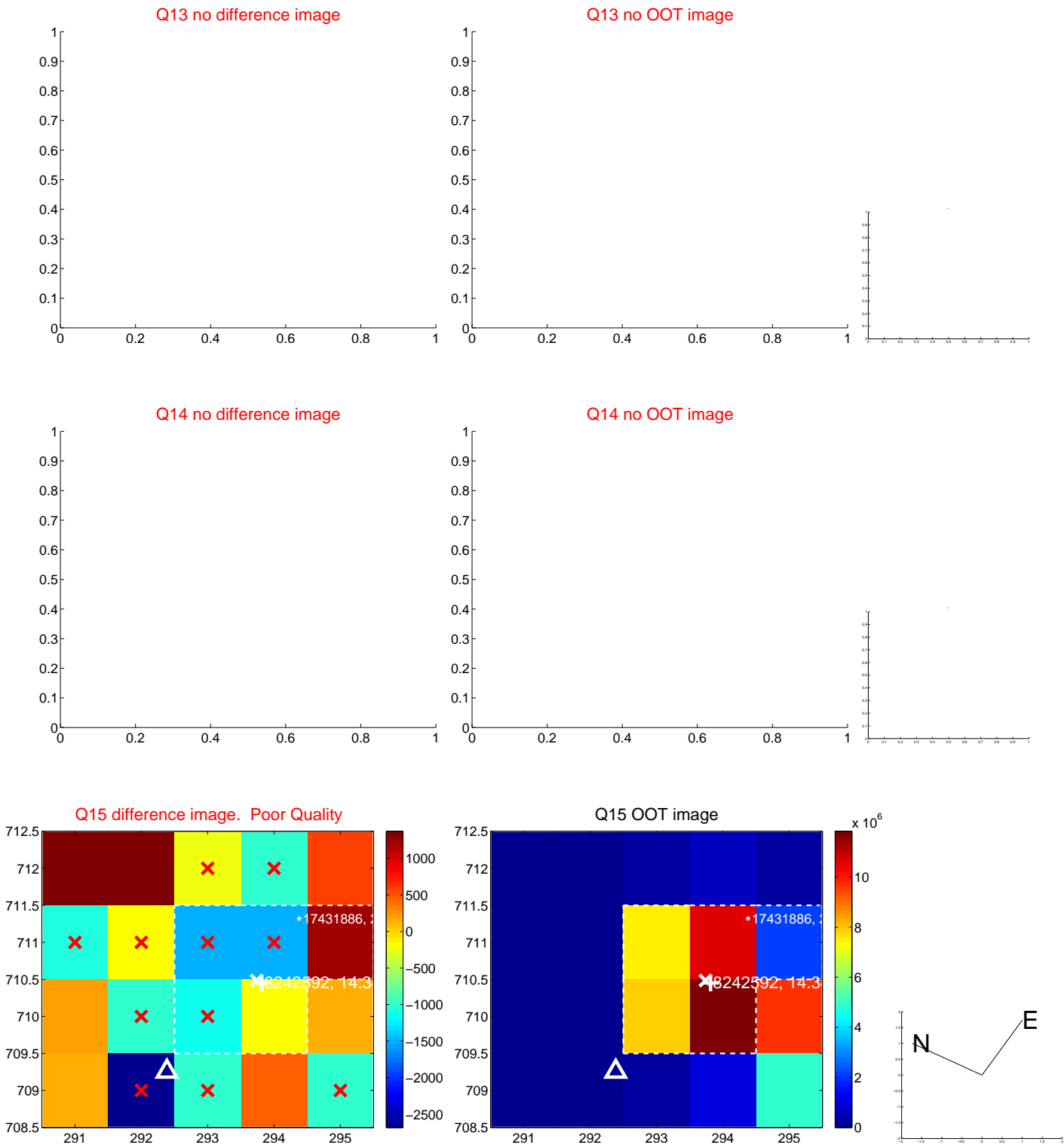
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



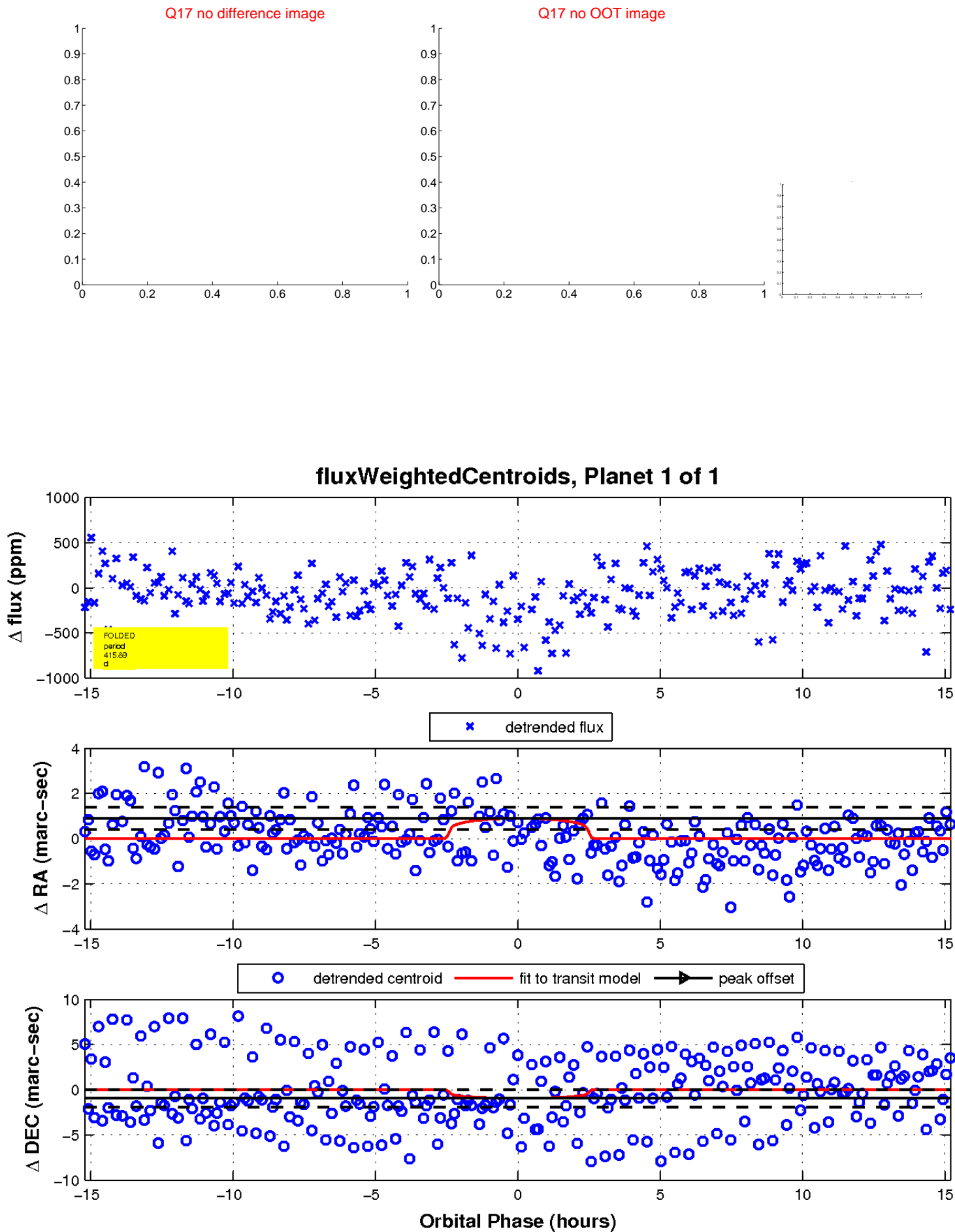
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

