

KIC 009655145

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})
009655145-01	OBS	No	494.315934	550.159774	952.0	8.330	7.8	7.5	1.27	6787	5.00	1.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009655145-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

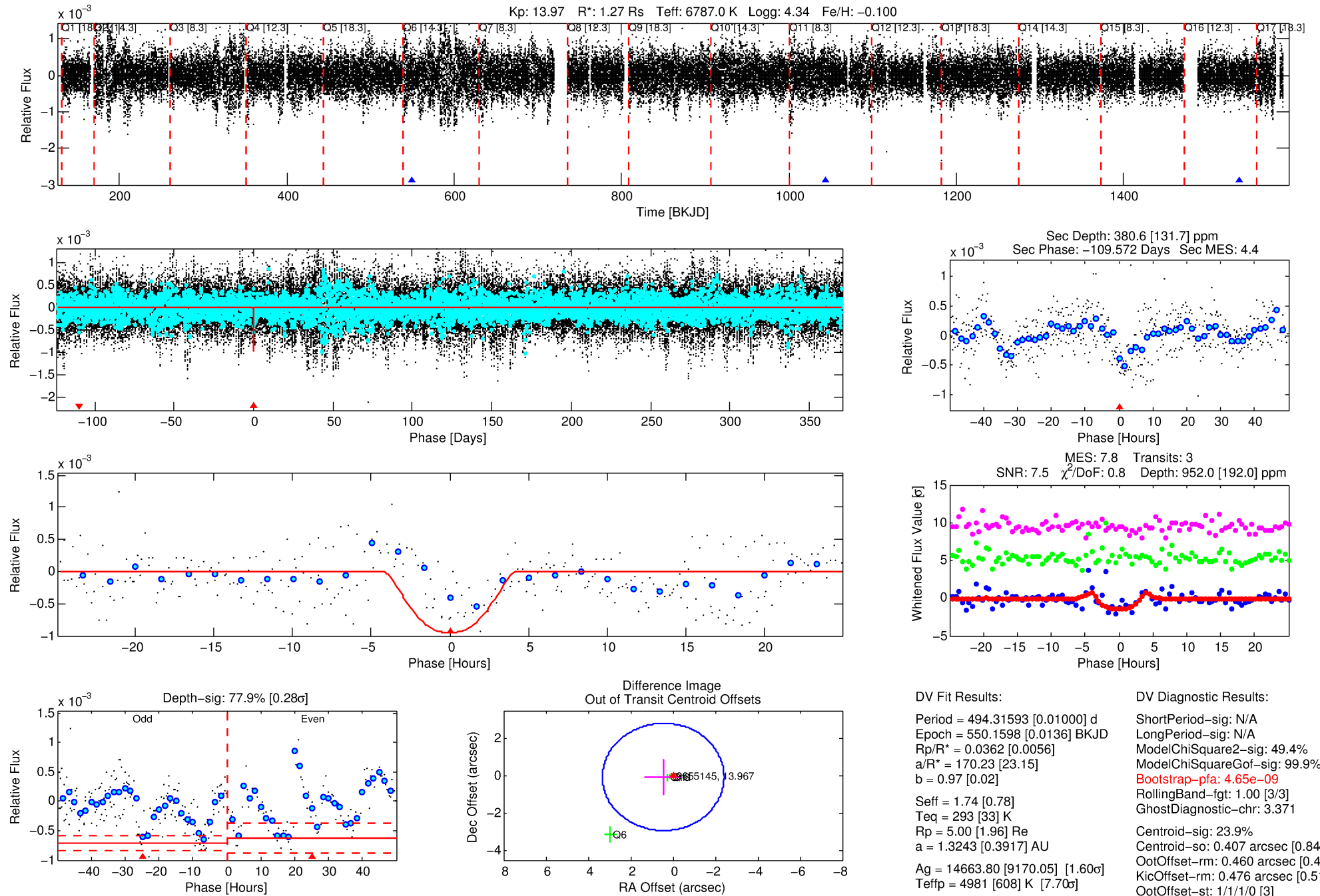
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009655145-01

No Significant Match Found

DV One-Page Summary

KIC: 9655145 Candidate: 1 of 1 Period: 494.316 d



DV Fit Results:

Period = 494.31593 [0.01000] d
 Epoch = 550.1598 [0.0136] BKJD
 Rp/R* = 0.0362 [0.0056]
 a/R* = 170.23 [23.15]
 b = 0.97 [0.02]
 Seff = 1.74 [0.78]
 Teq = 293 [33] K
 Rp = 5.00 [1.96] Re
 a = 1.3243 [0.3917] AU
 Ag = 14663.80 [9170.05] [1.60 σ]
 Tefp = 4981 [608] K [7.70 σ]

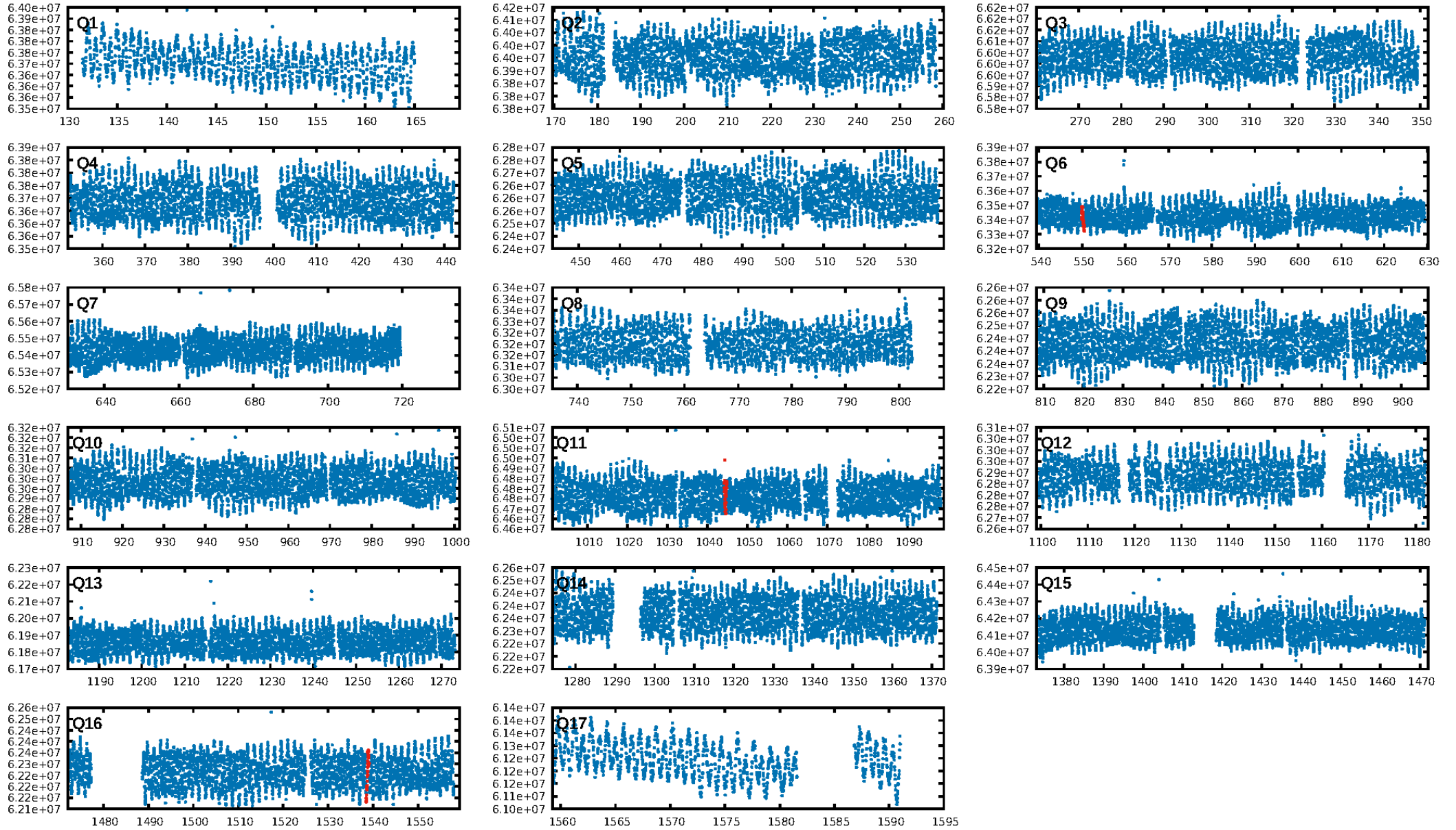
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 49.4%
 ModelChiSquareGof-sig: 99.9%
 Bootstrap-pfa: 4.65e-09
 RollingBand-fgt: 1.00 [3/3]
 GhostDiagnostic-chr: 3.371
 Centroid-sig: 23.9%
 Centroid-so: 0.407 arcsec [0.84 σ]
 OotOffset-rm: 0.460 arcsec [0.48 σ]
 KicOffset-rm: 0.476 arcsec [0.51 σ]
 OotOffset-st: 1/1/1/0 [3]
 KicOffset-st: 1/1/1/0 [3]
 DiffImageQuality-fgm: 0.33 [1/3]
 DiffImageOverlap-fno: 1.00 [3/3]

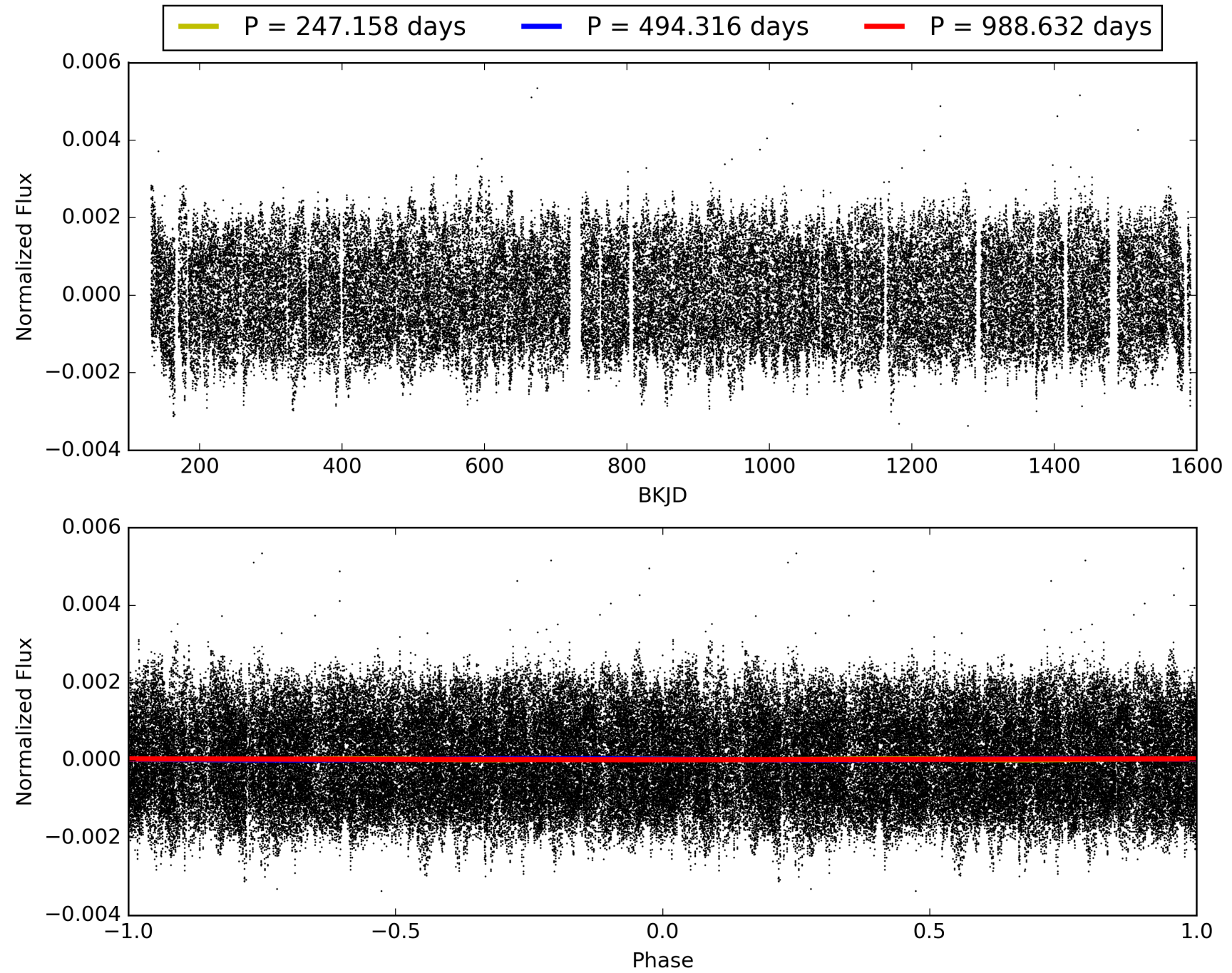
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:02:20 Z

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

TCE 009655145-01, PDC Light Curves

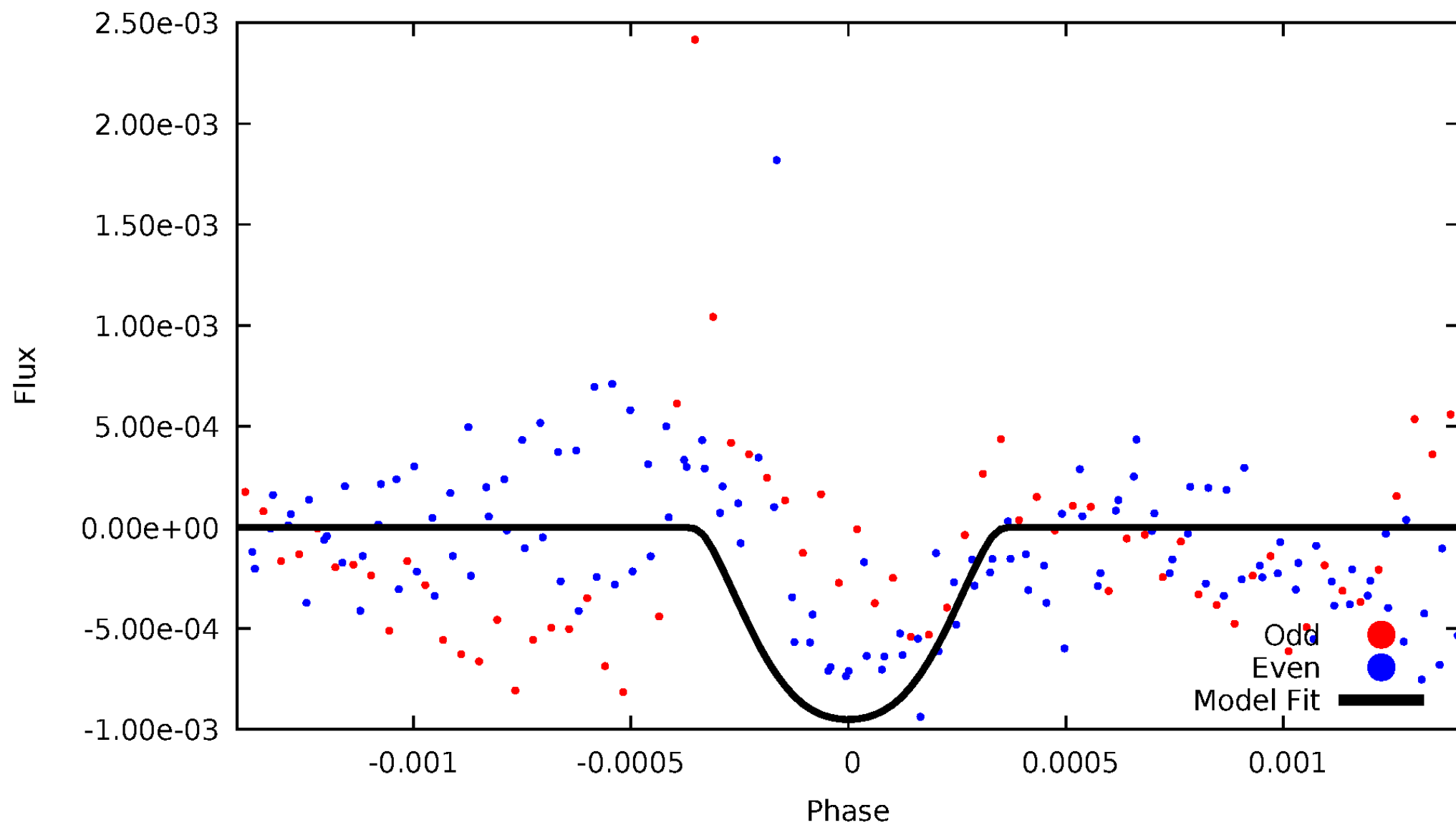


TCE 009655145-01



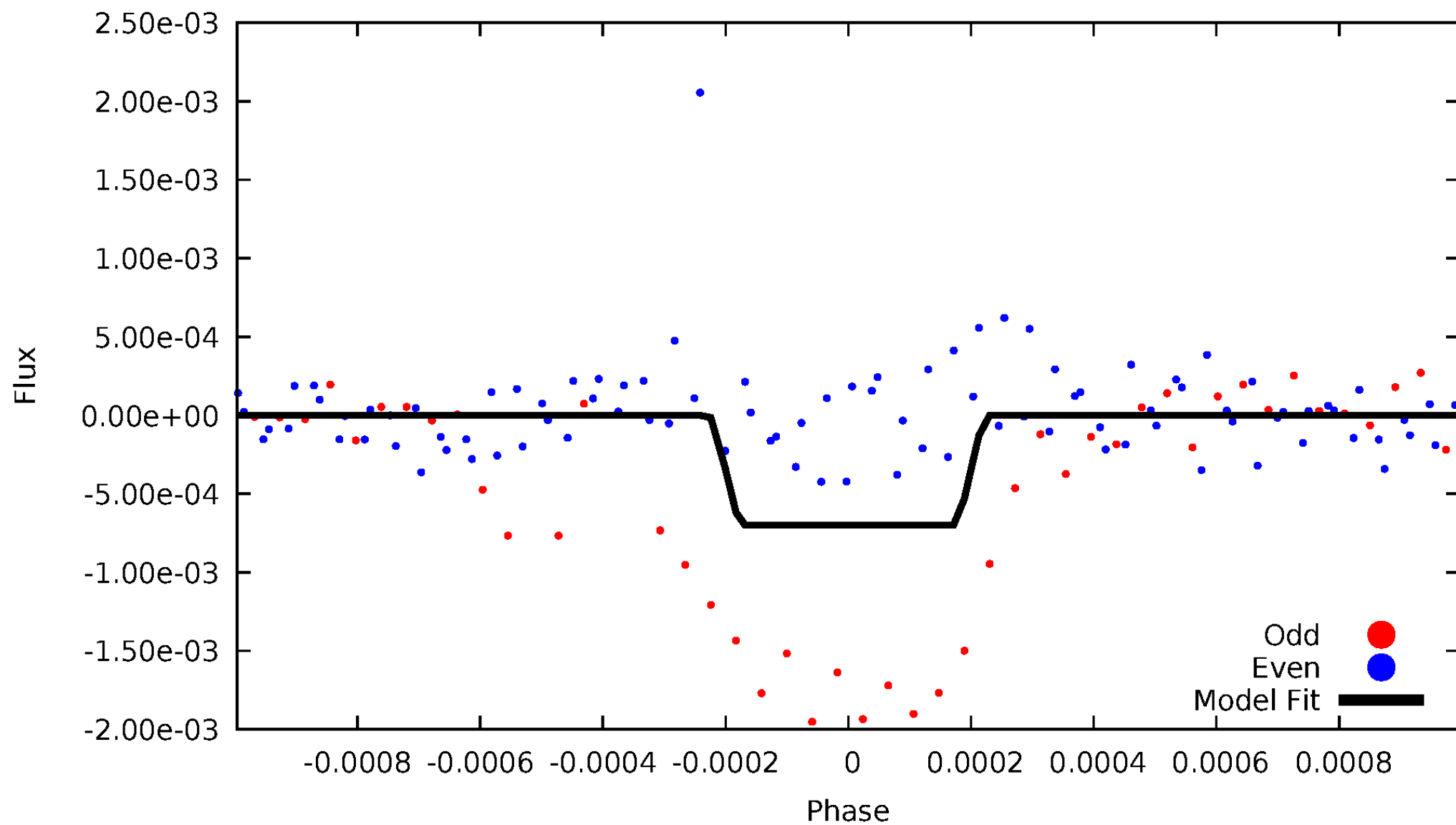
DV Odd/Even

TCE 009655145-01



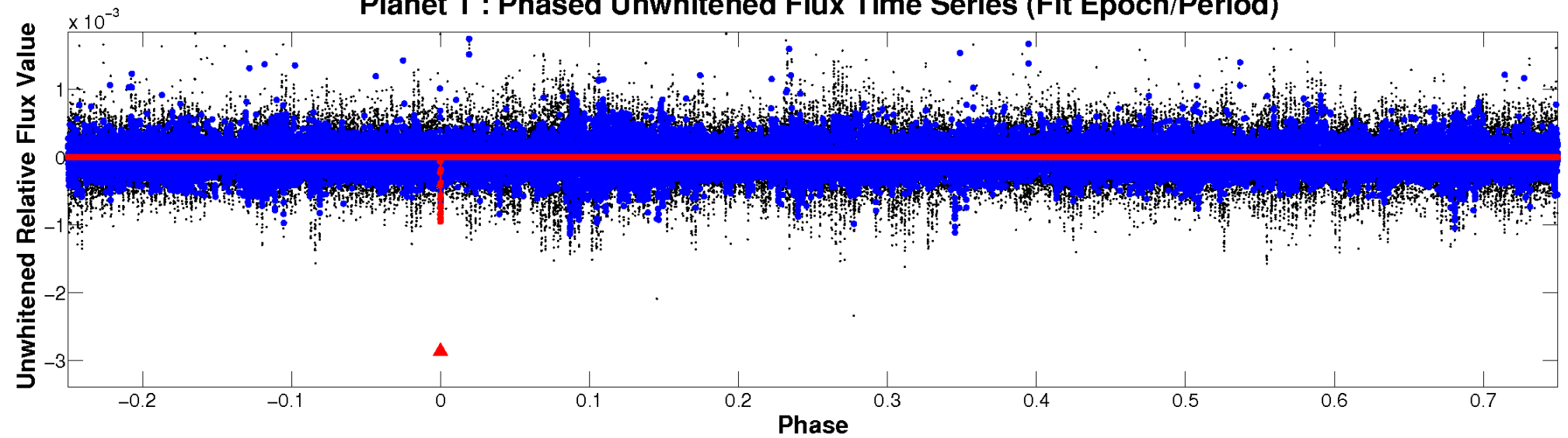
ALT Odd/Even

TCE 009655145-01

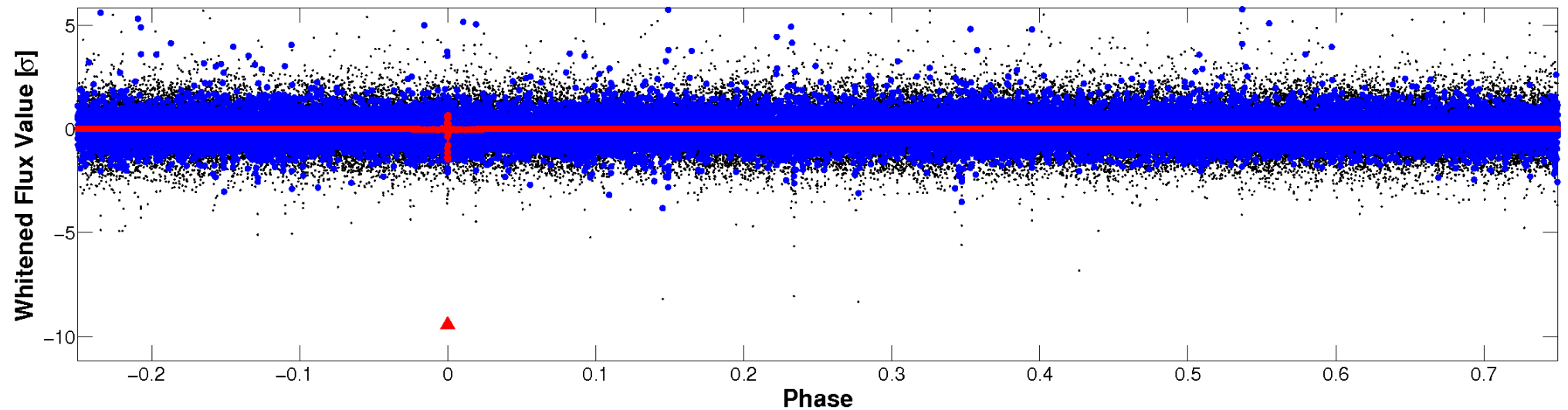


Non-Whitened Vs. Whitened Light Curve

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

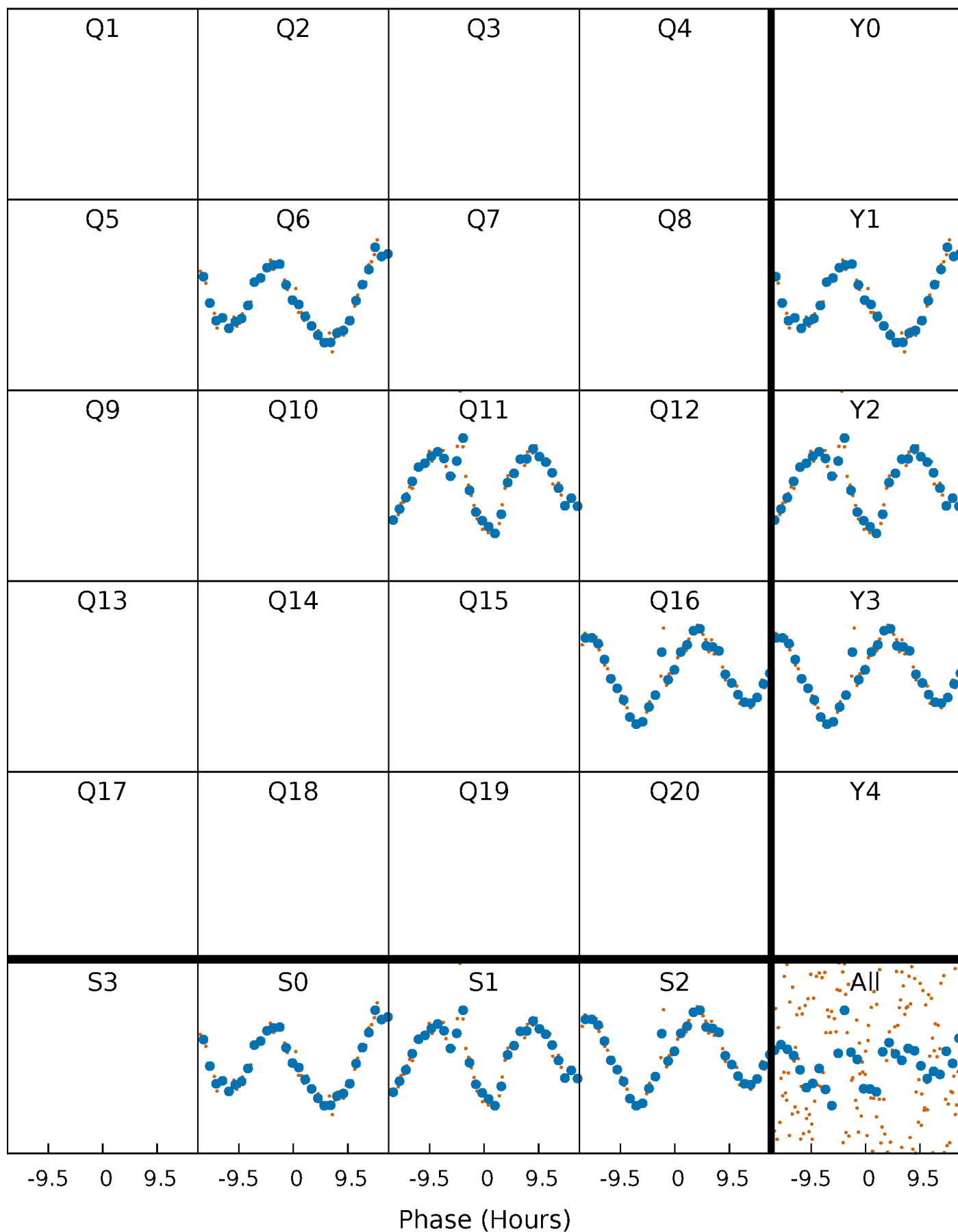


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



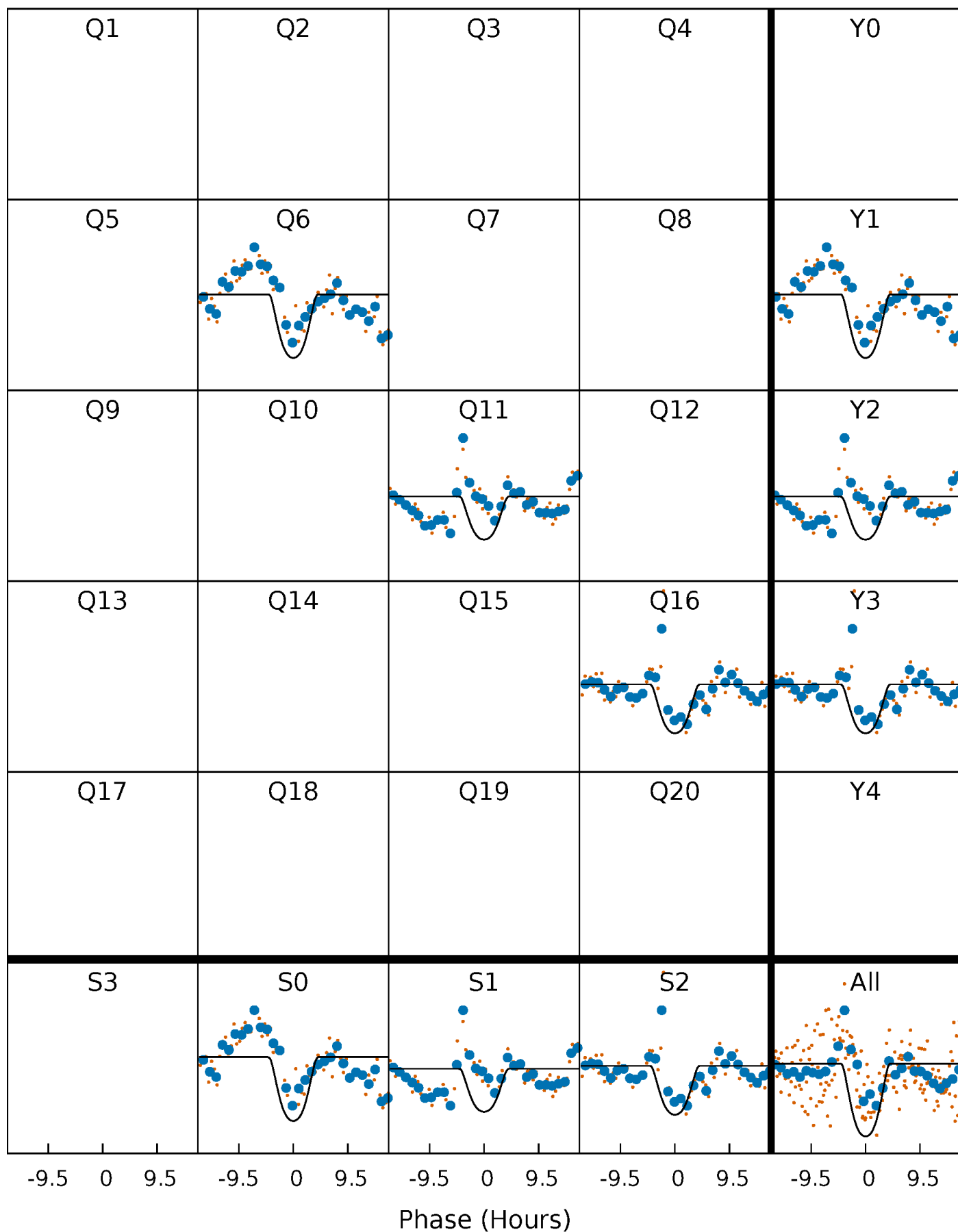
PDC Quarter-Phased Transit Curves

TCE 009655145-01 P=494.315934 Days $T_0=550.159774$ (BKJD)



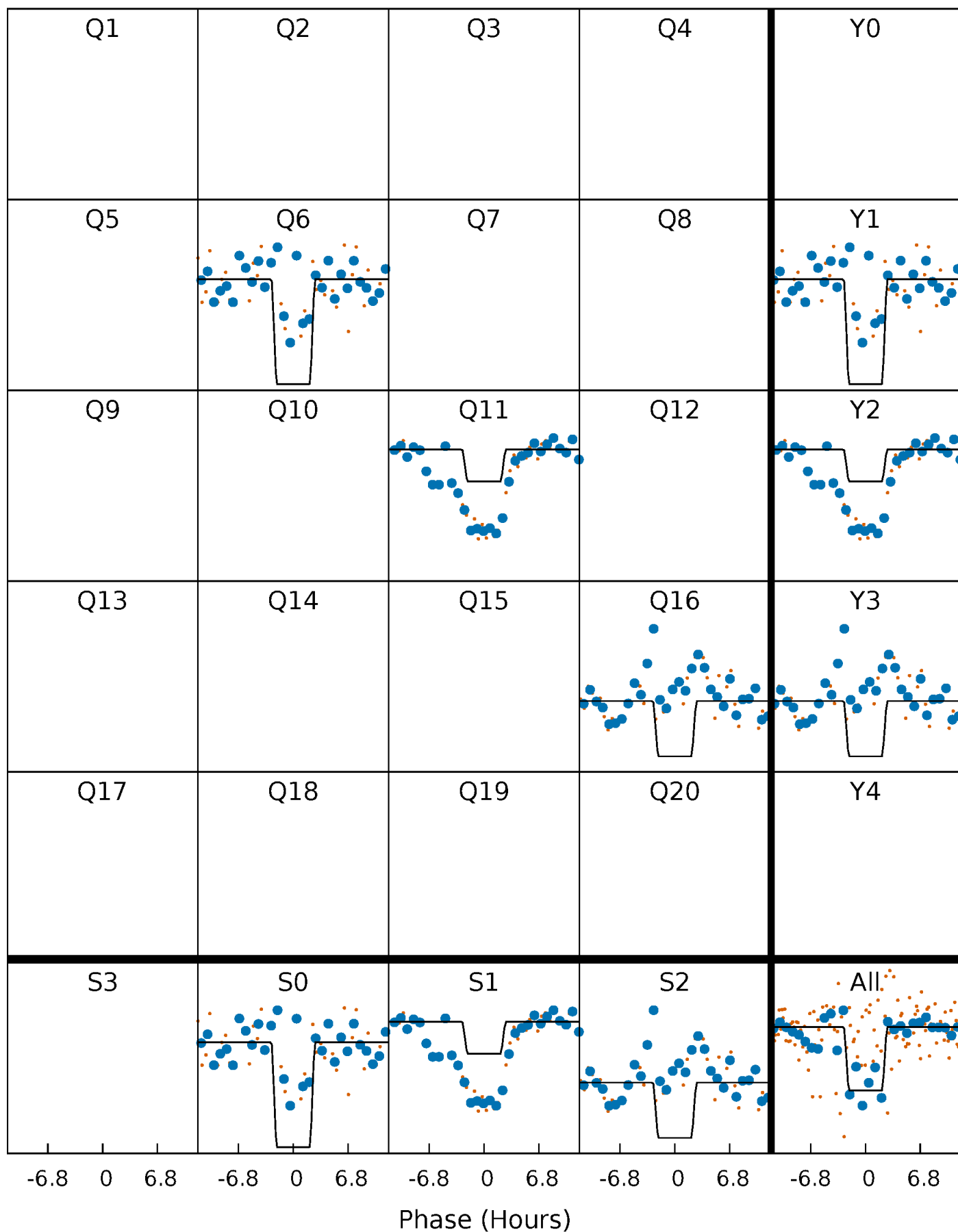
DV Quarter-Phased Transit Curves

TCE 009655145-01 P=494.315934 Days $T_0=550.159774$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

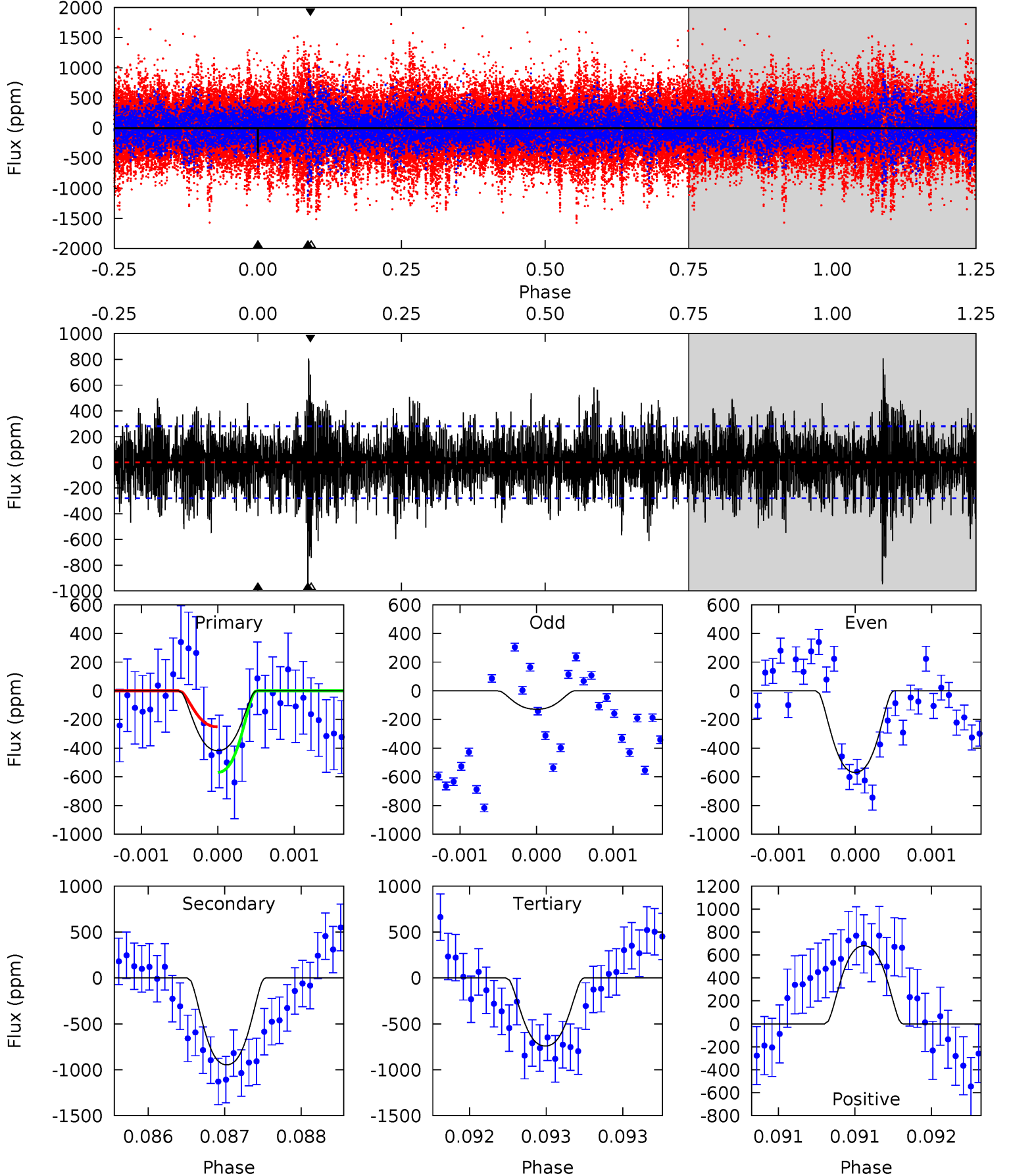
TCE 009655145-01 P=494.335495 Days $T_0=550.158662$ (BKJD)



DV Model-Shift Uniqueness Test

009655145-01, $P = 494.315934$ Days, $E = 55.843840$ Days

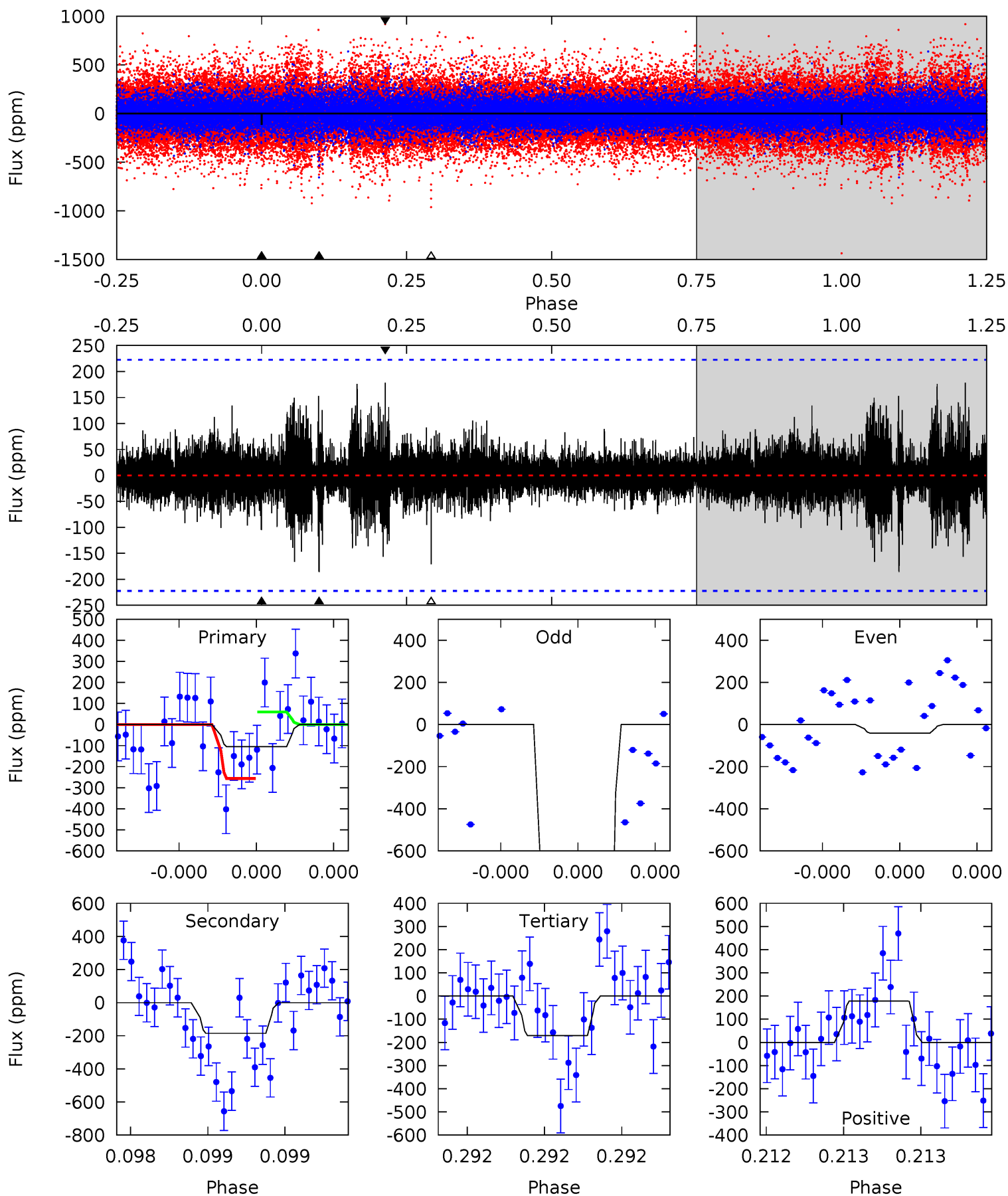
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	18.6	14.6	13.3	5.51	3.38	3.46	-6.37	-5.16	4.02	5.22	4.17	0.80	0.46	3.12



Alt Model-Shift Uniqueness Test

009655145-01, P = 494.335495 Days, E = 55.823167 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.65	4.68	4.30	4.48	5.60	3.52	0.78	-1.65	-1.83	0.38	0.19	24.5	3.20	0.49	2.47



Stellar Parameters For KIC 009655145

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6787^{+165}_{-259}	$4.336^{+0.056}_{-0.224}$	$-0.100^{+0.250}_{-0.350}$	$1.266^{+0.457}_{-0.152}$	$1.278^{+0.190}_{-0.190}$	$0.888^{+0.270}_{-0.484}$
	+2%/-4%	+1%/-5%	+250%/-350%	+36%/-12%	+15%/-15%	+30%/-54%
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 009655145-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-947 ± 51	$5.31^{+1.19}_{-1.00}$	418^{+34}_{-22}	6204^{+612}_{-471}	31920^{+16014}_{-10044}
Alt.	-186 ± 40	$3.90^{+1.01}_{-0.93}$	418^{+34}_{-22}	4918^{+595}_{-427}	11674^{+8745}_{-4787}

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 $A_{obs} \gg 1.0$

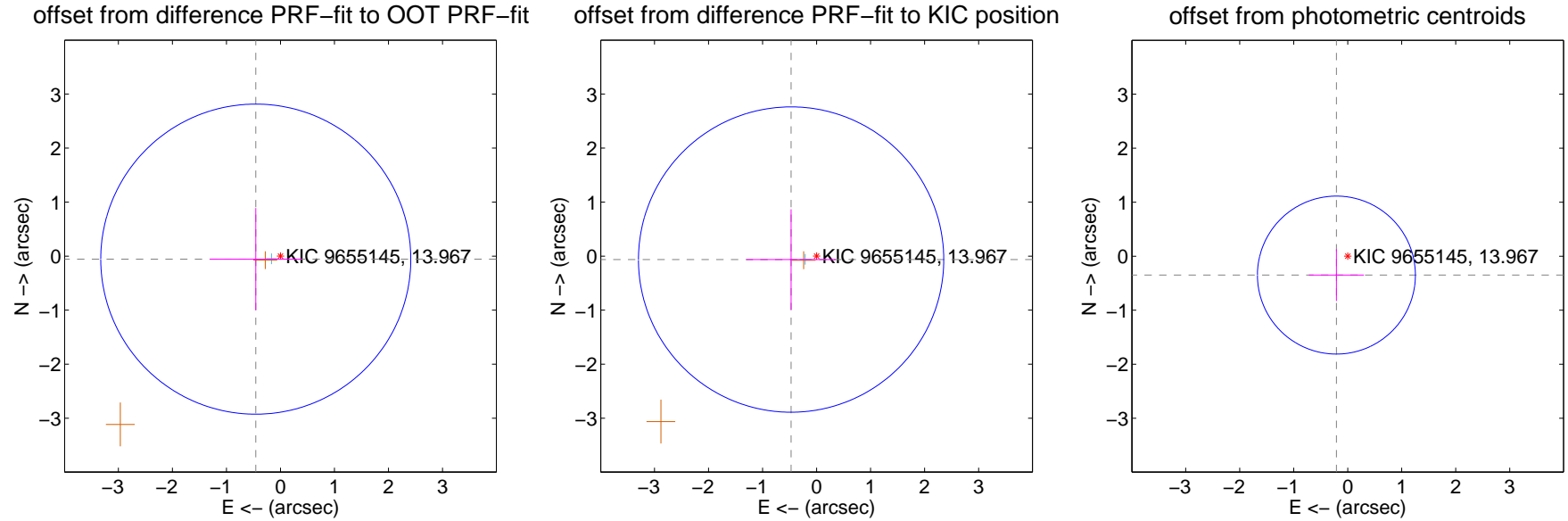
DV Centroid Data

Supplemental centroid analysis for 009655145-01. Kepler magnitude: 13.97. Transit SNR 7.46

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.460 ± 0.957	0.48	0.457 ± 0.849	-0.056 ± 0.946
PRF-fit source offset from KIC position	0.476 ± 0.942	0.51	0.471 ± 0.826	-0.063 ± 0.930
photometric centroid source offset	0.41 ± 0.49	0.84	0.21 ± 0.51	-0.35 ± 0.48

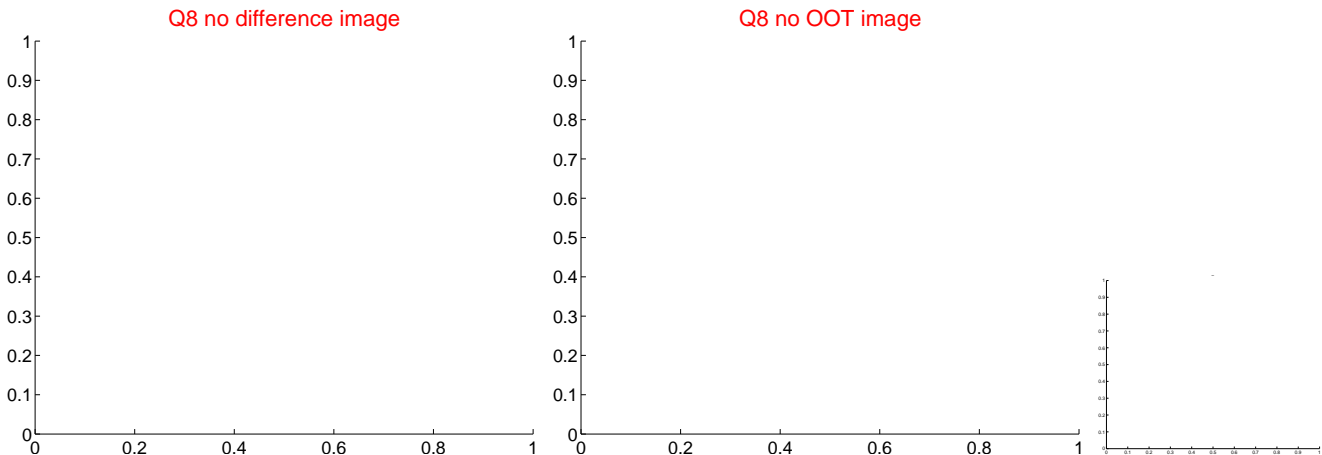
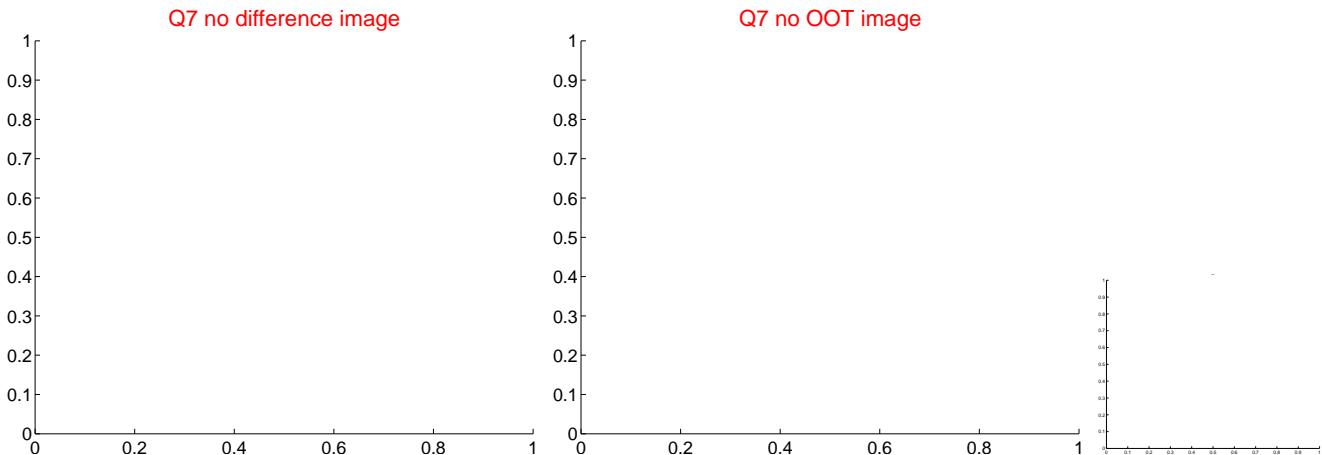
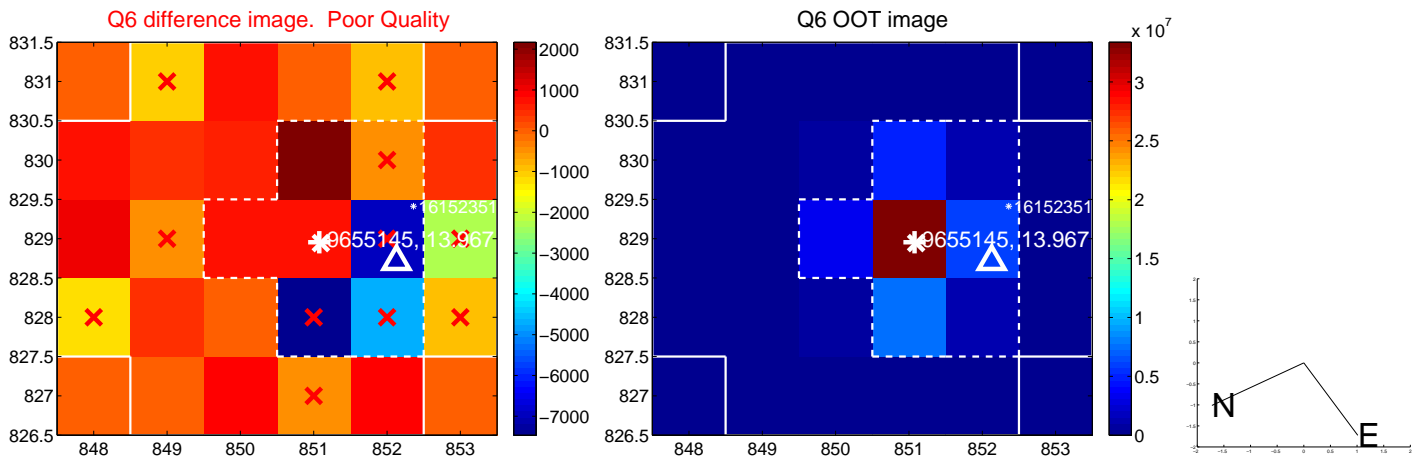
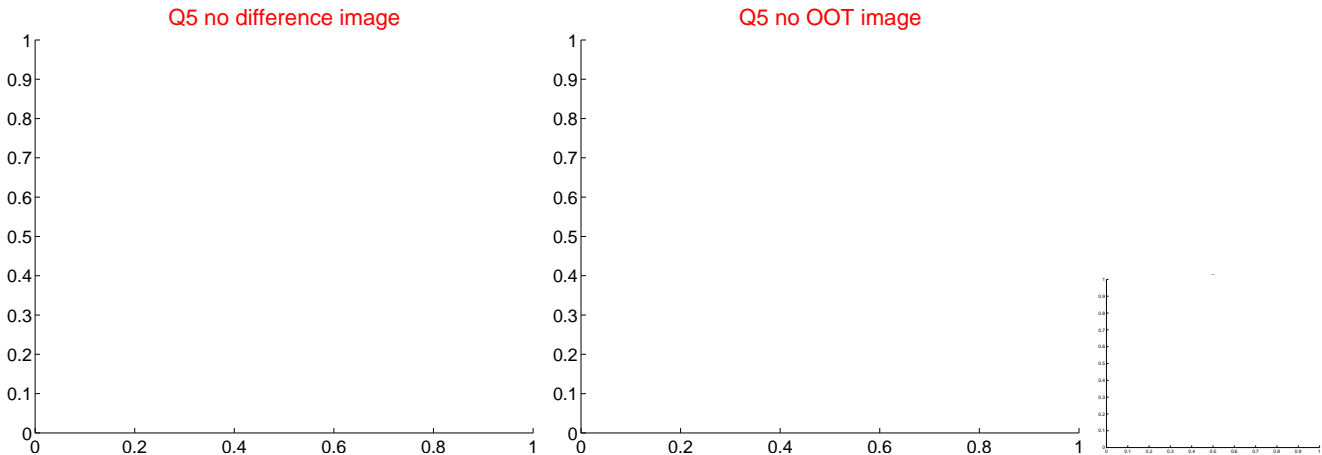


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

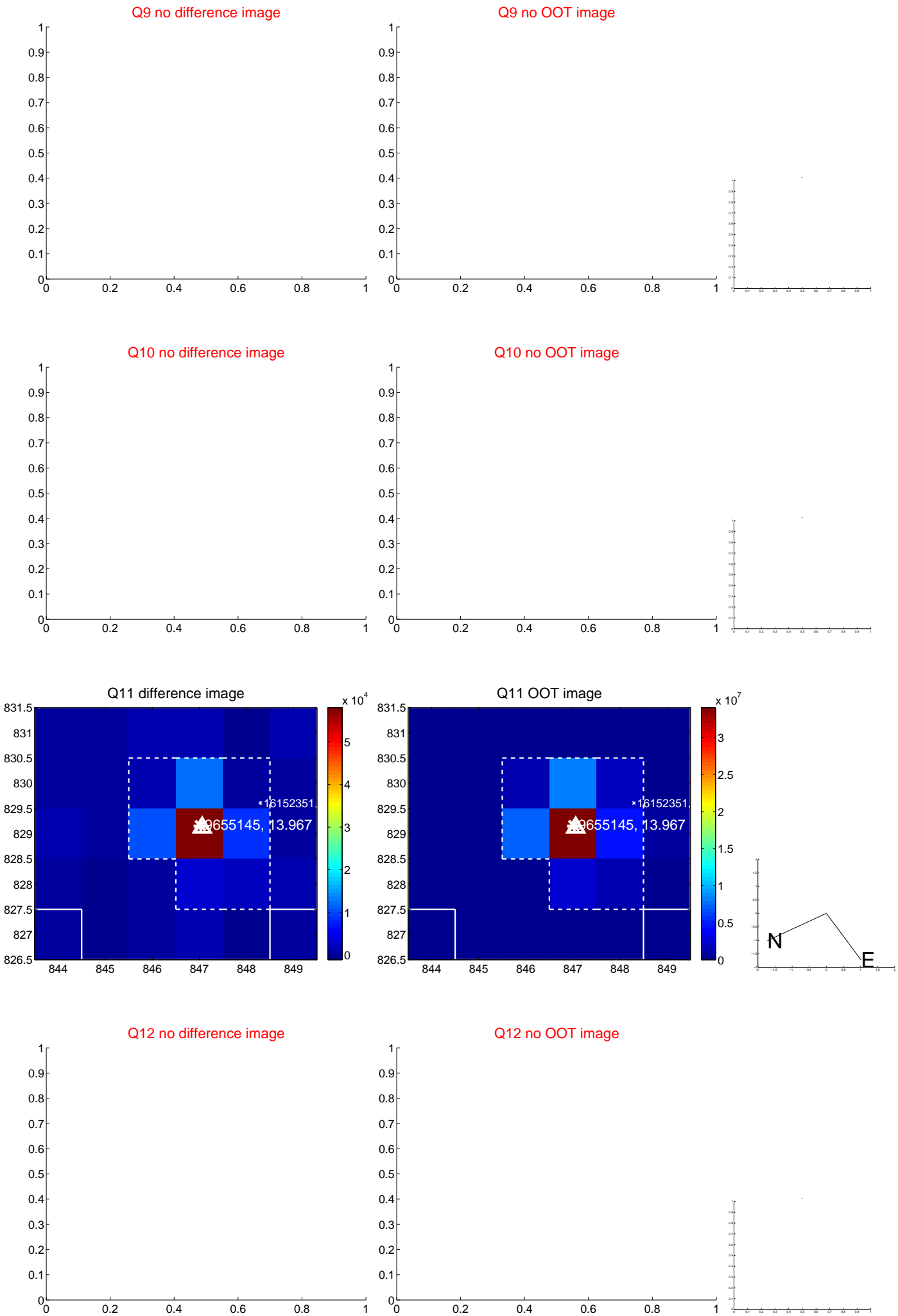
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



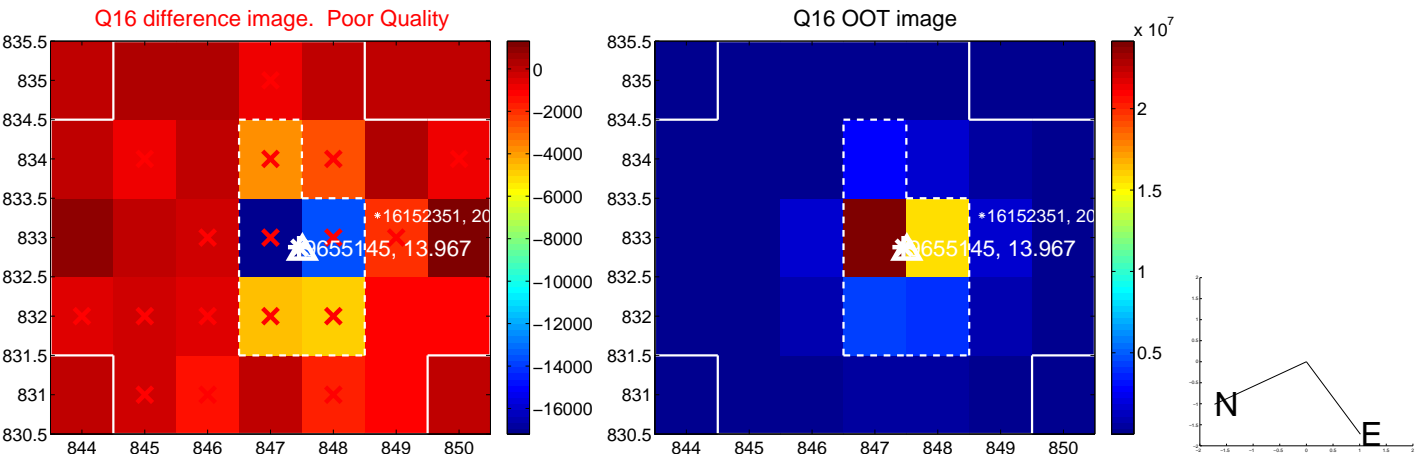
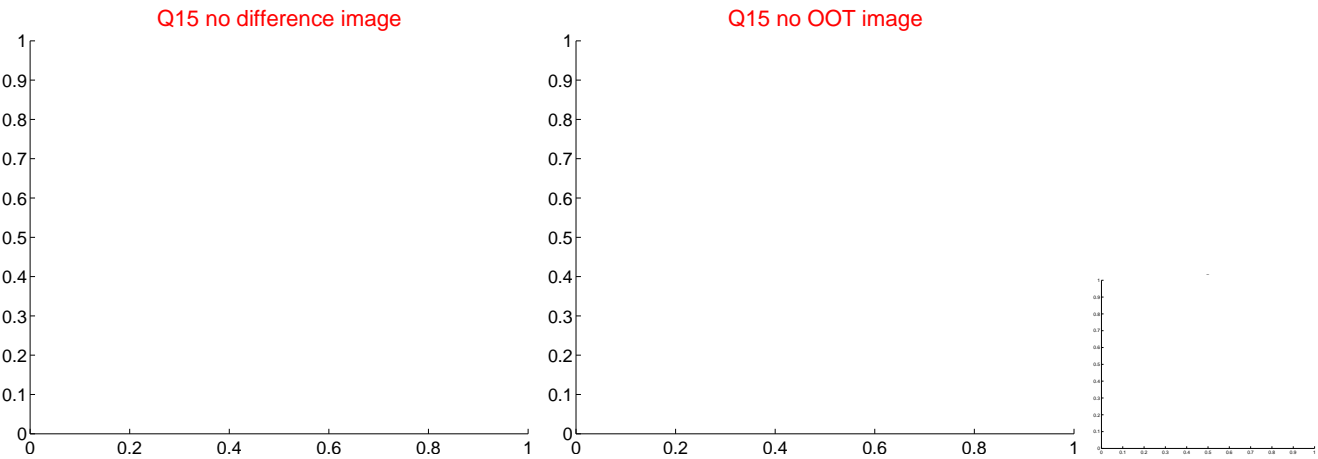
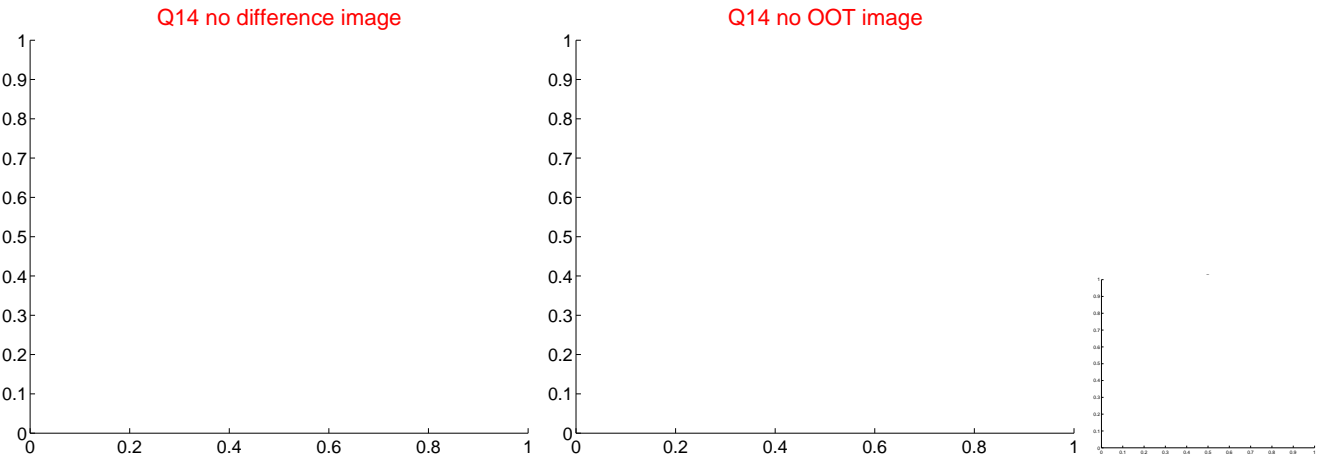
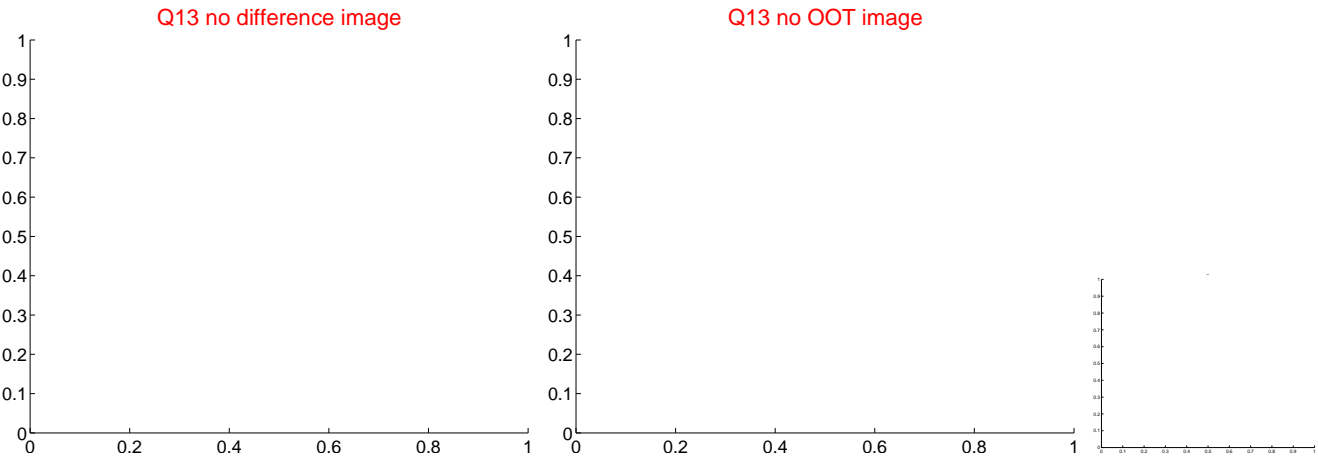
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



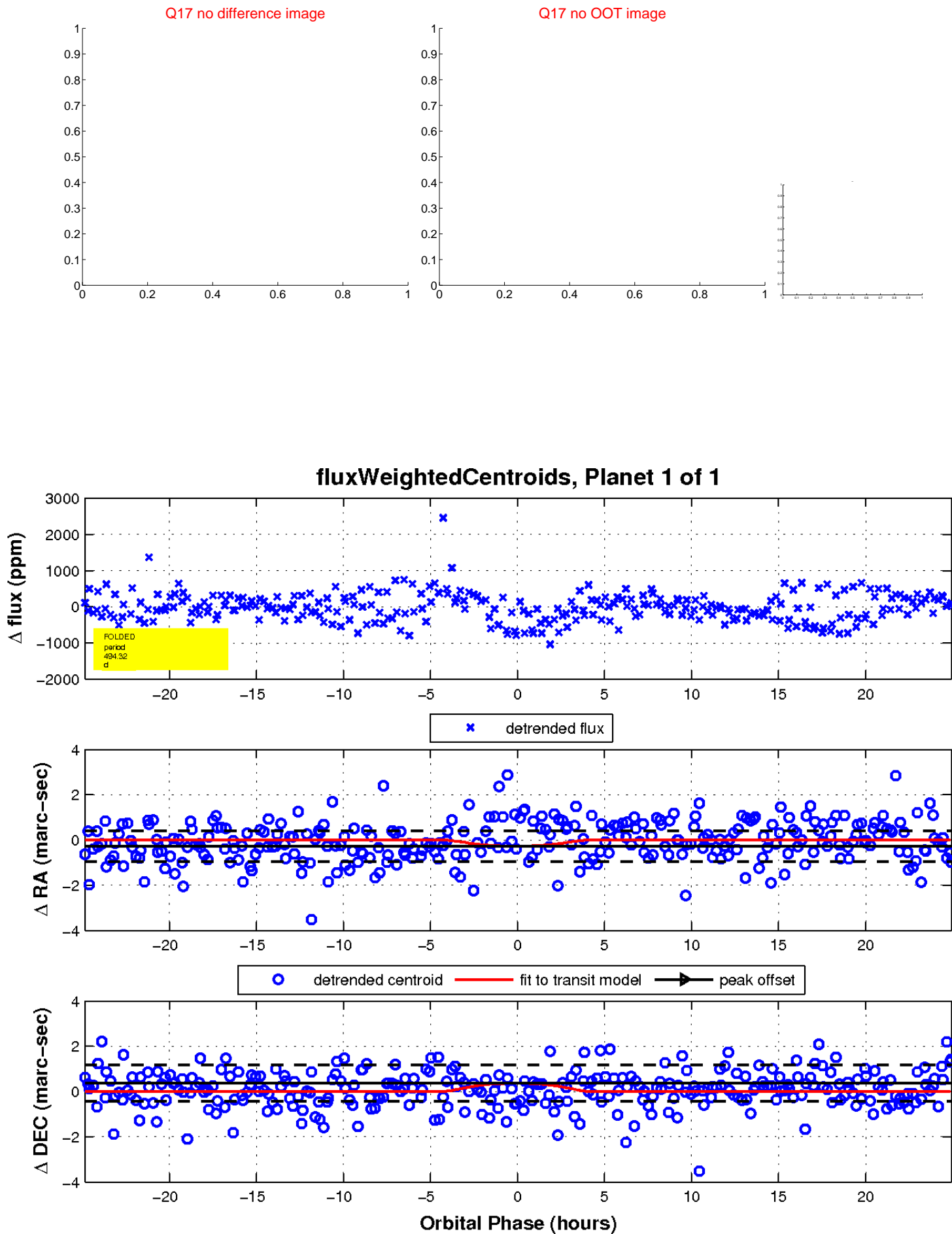
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

