

KIC 004144873

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})
004144873-01	OBS	7686.01	68.538856	186.209867	1178.5	3.762	8.0	8.3	8.12	4687	29.30	267.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004144873-01	OBS	FP	0.35	1	0	0	0	MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

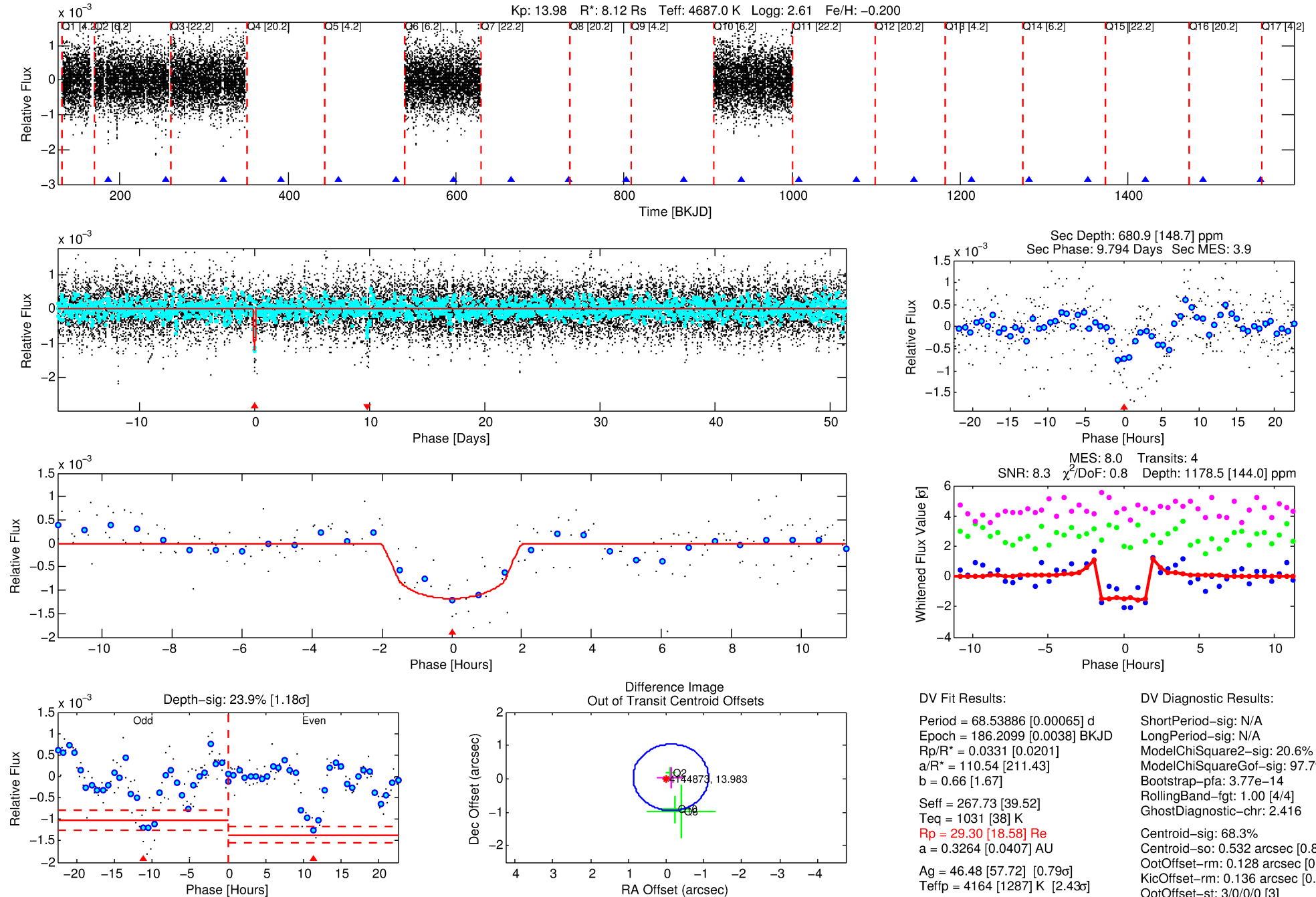
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004144873-01

No Significant Match Found

DV One-Page Summary

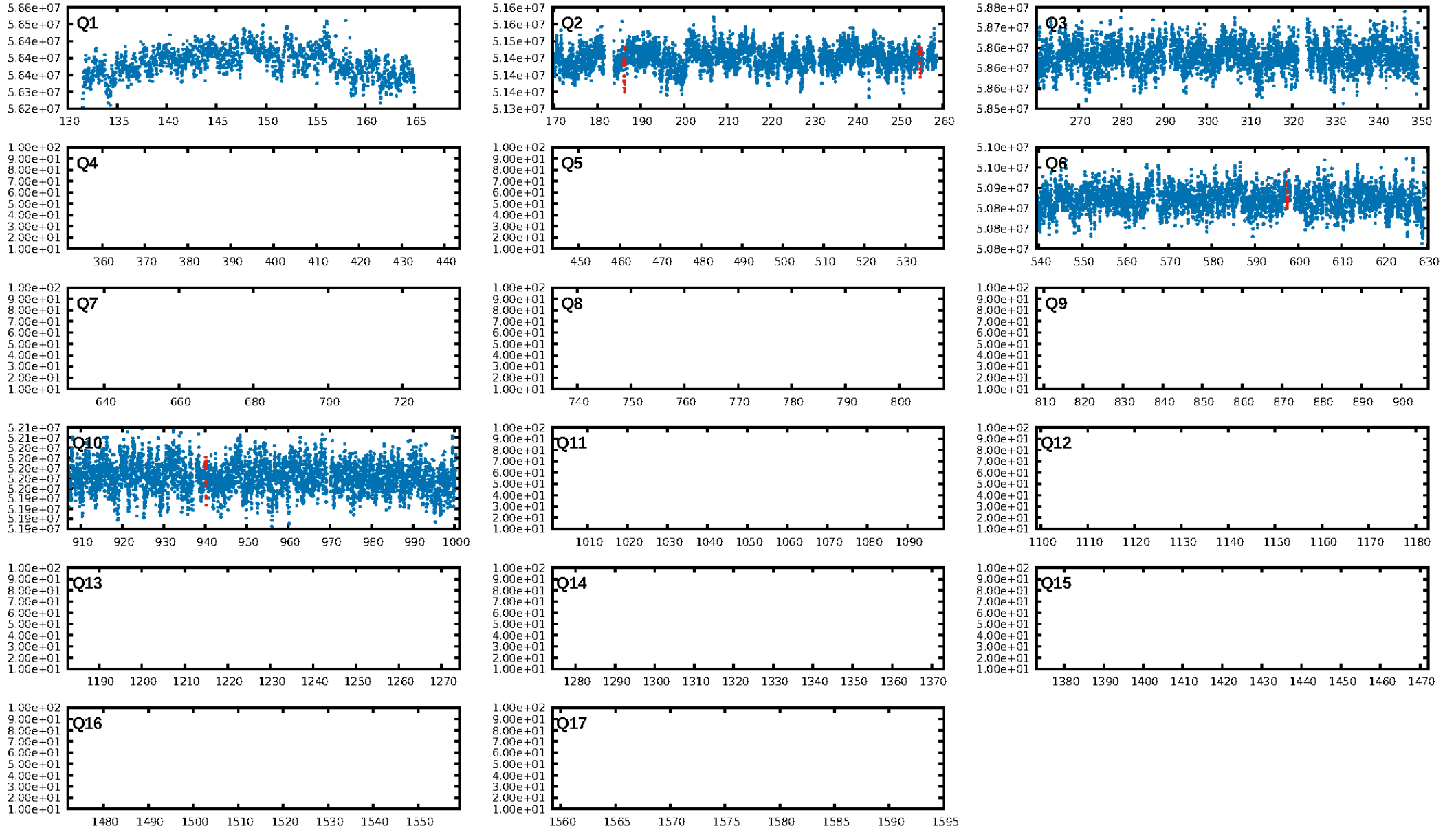
KIC: 4144873 Candidate: 1 of 1 Period: 68.539 d



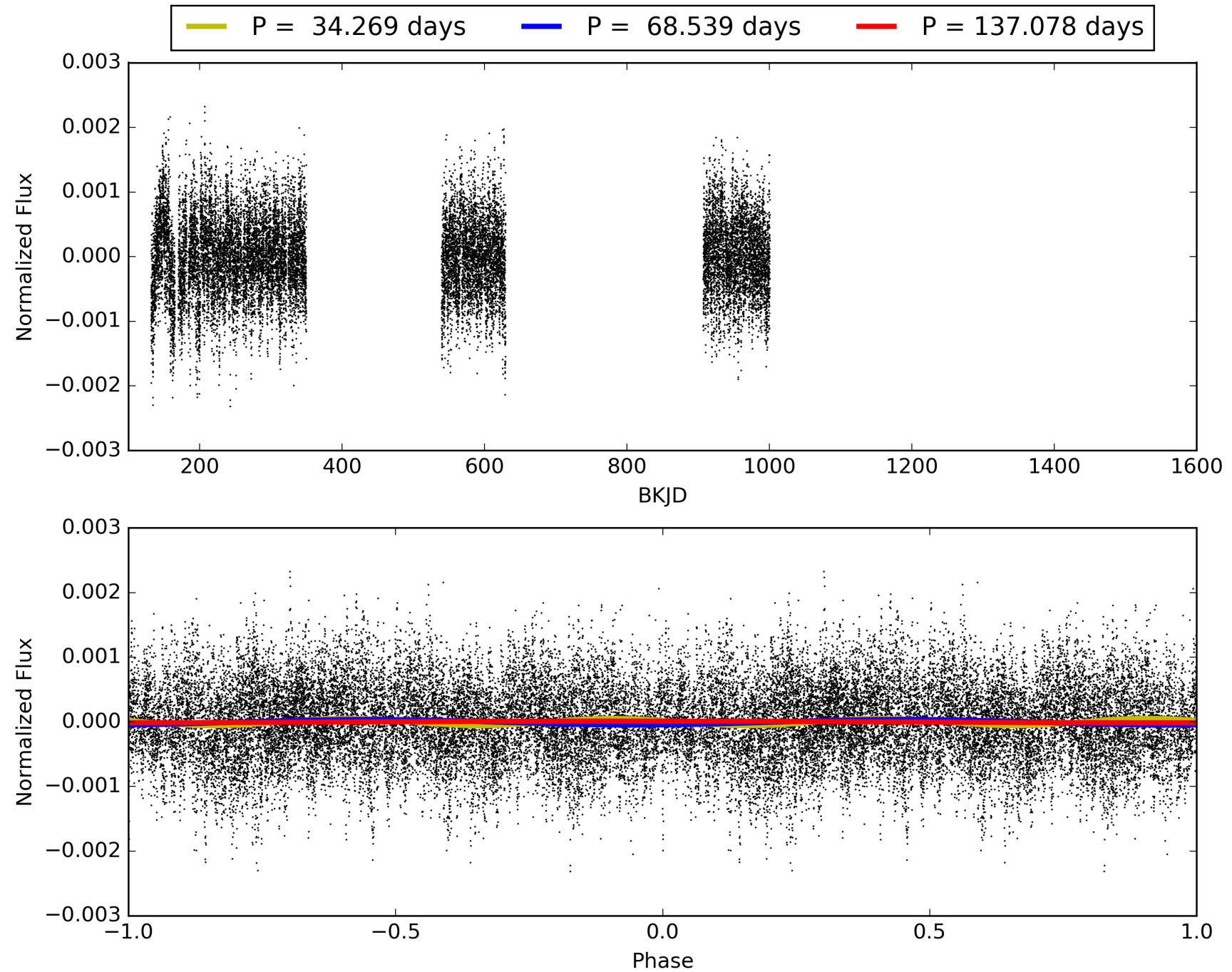
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:15:06 Z

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

TCE 004144873-01, PDC Light Curves

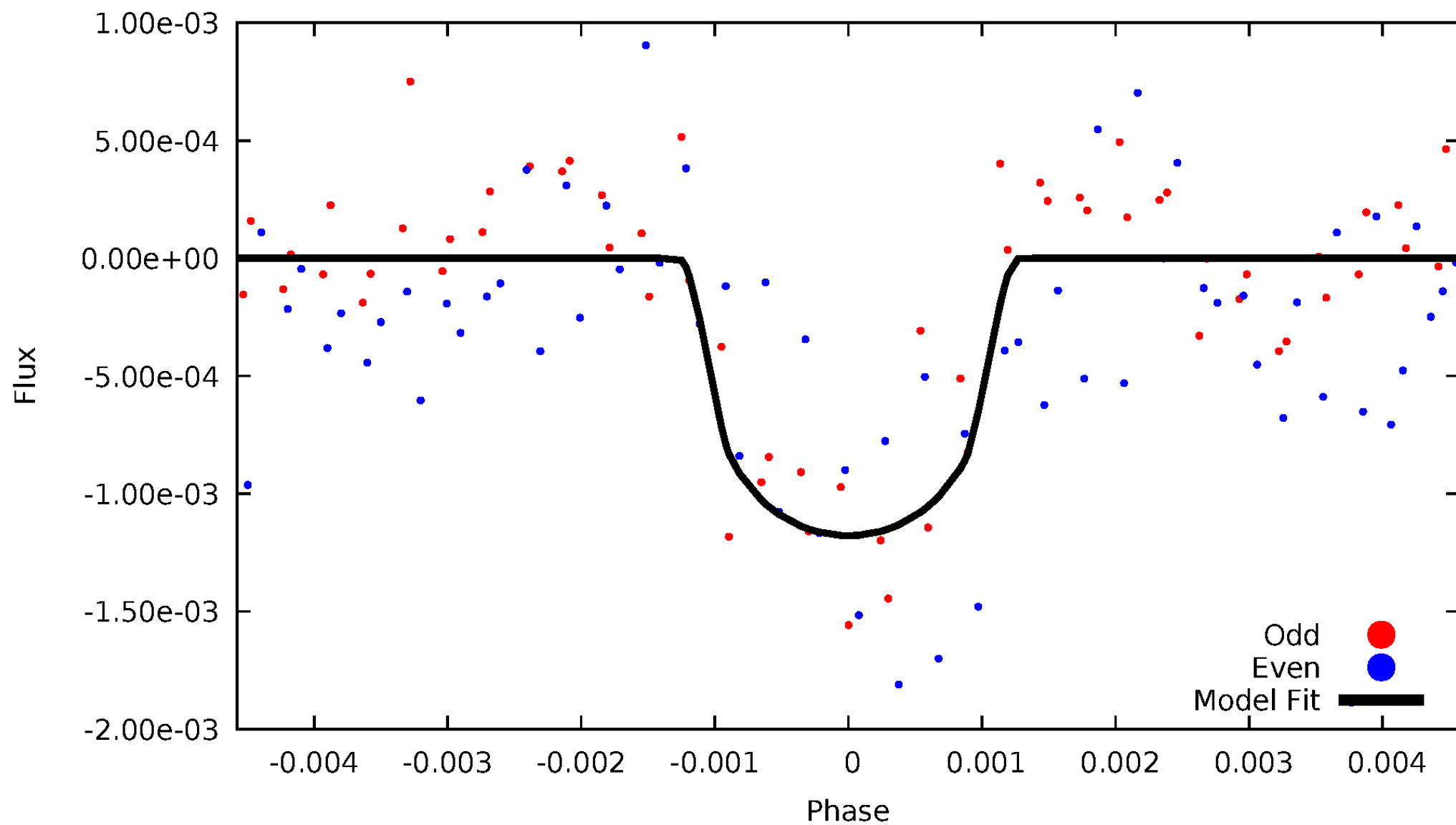


TCE 004144873-01



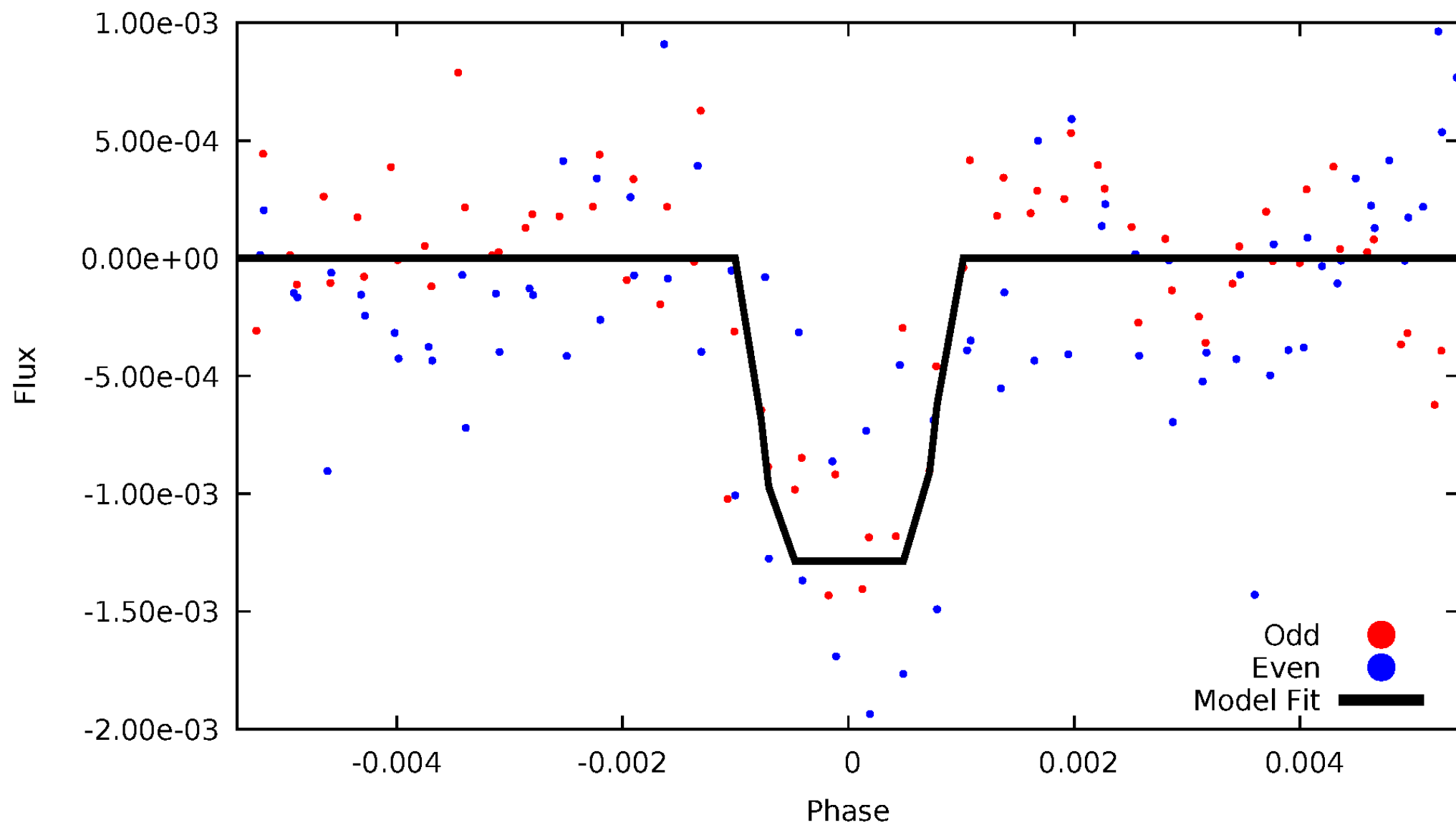
DV Odd/Even

TCE 004144873-01



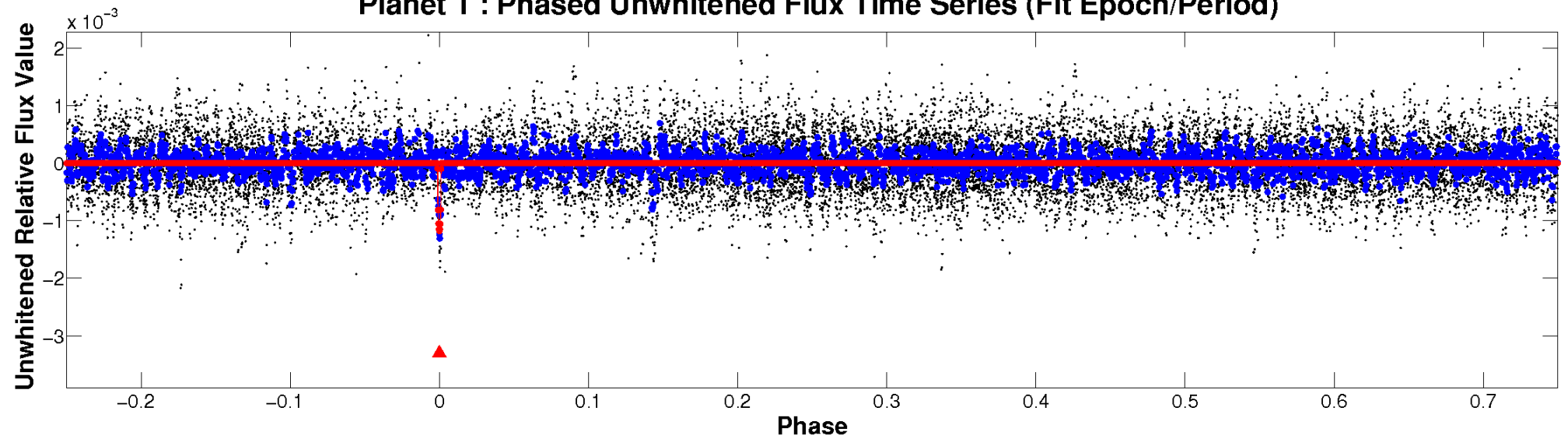
ALT Odd/Even

TCE 004144873-01

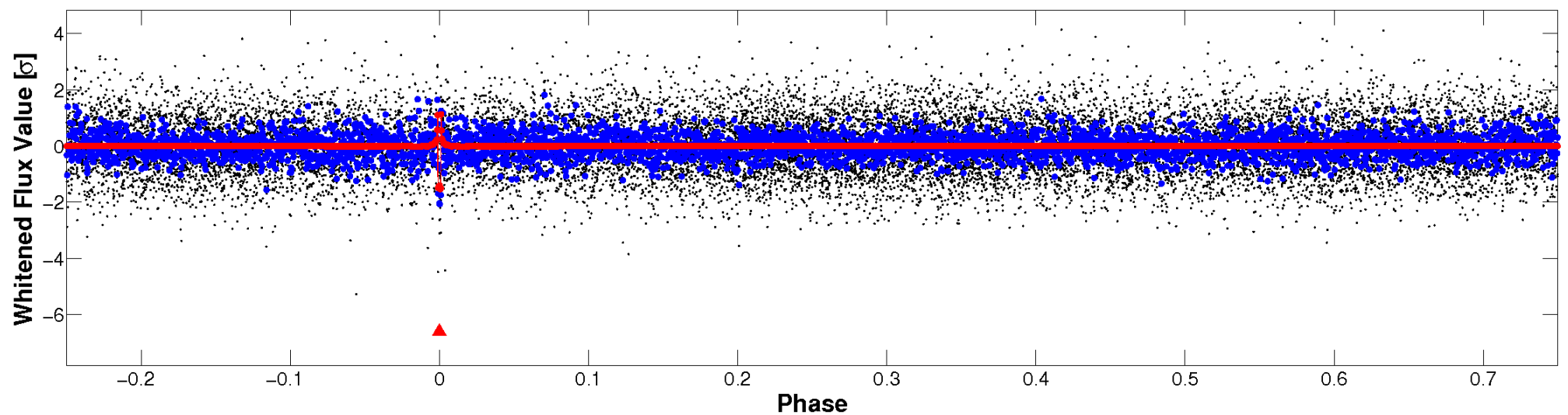


Non-Whitened Vs. Whitened Light Curve

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

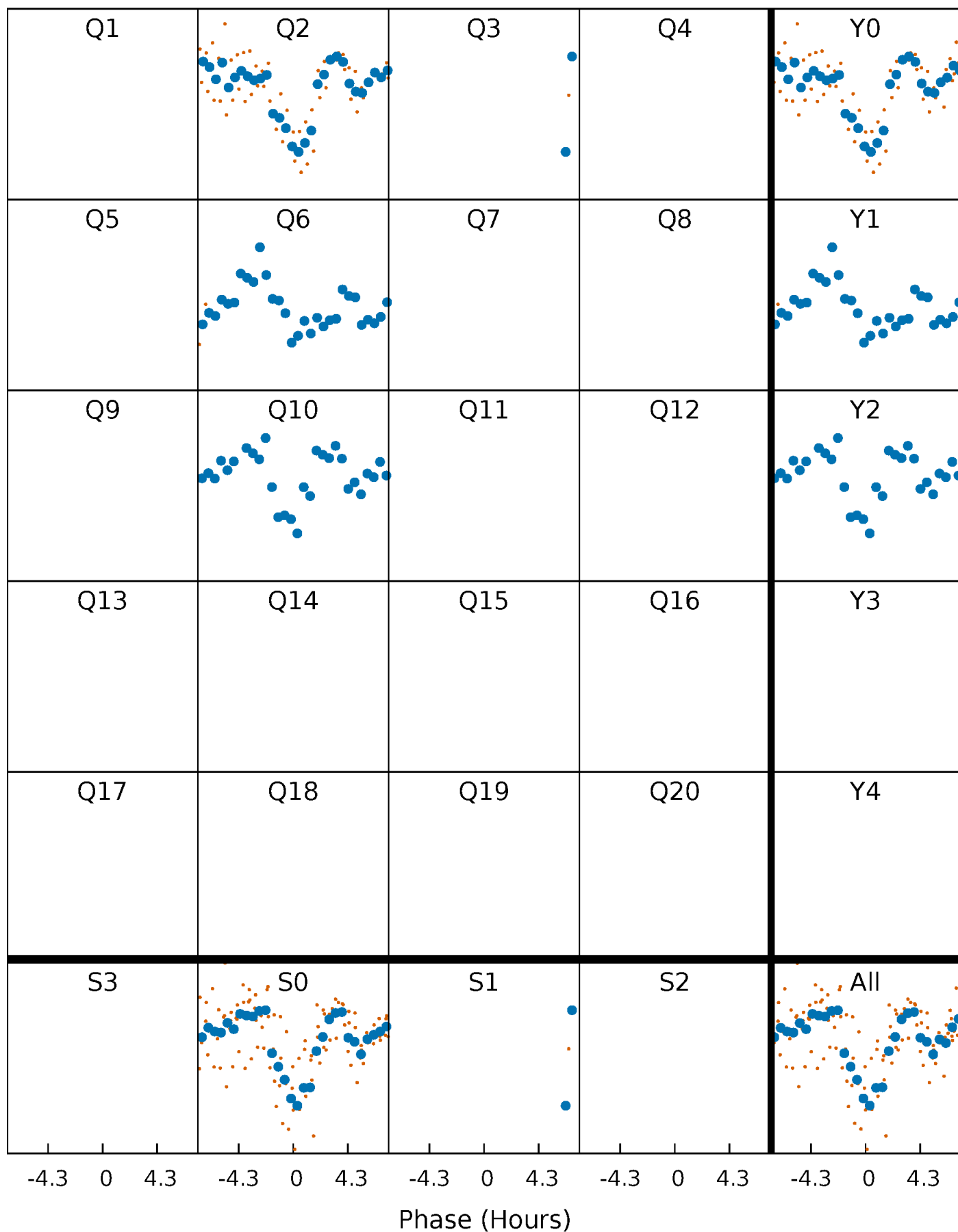


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



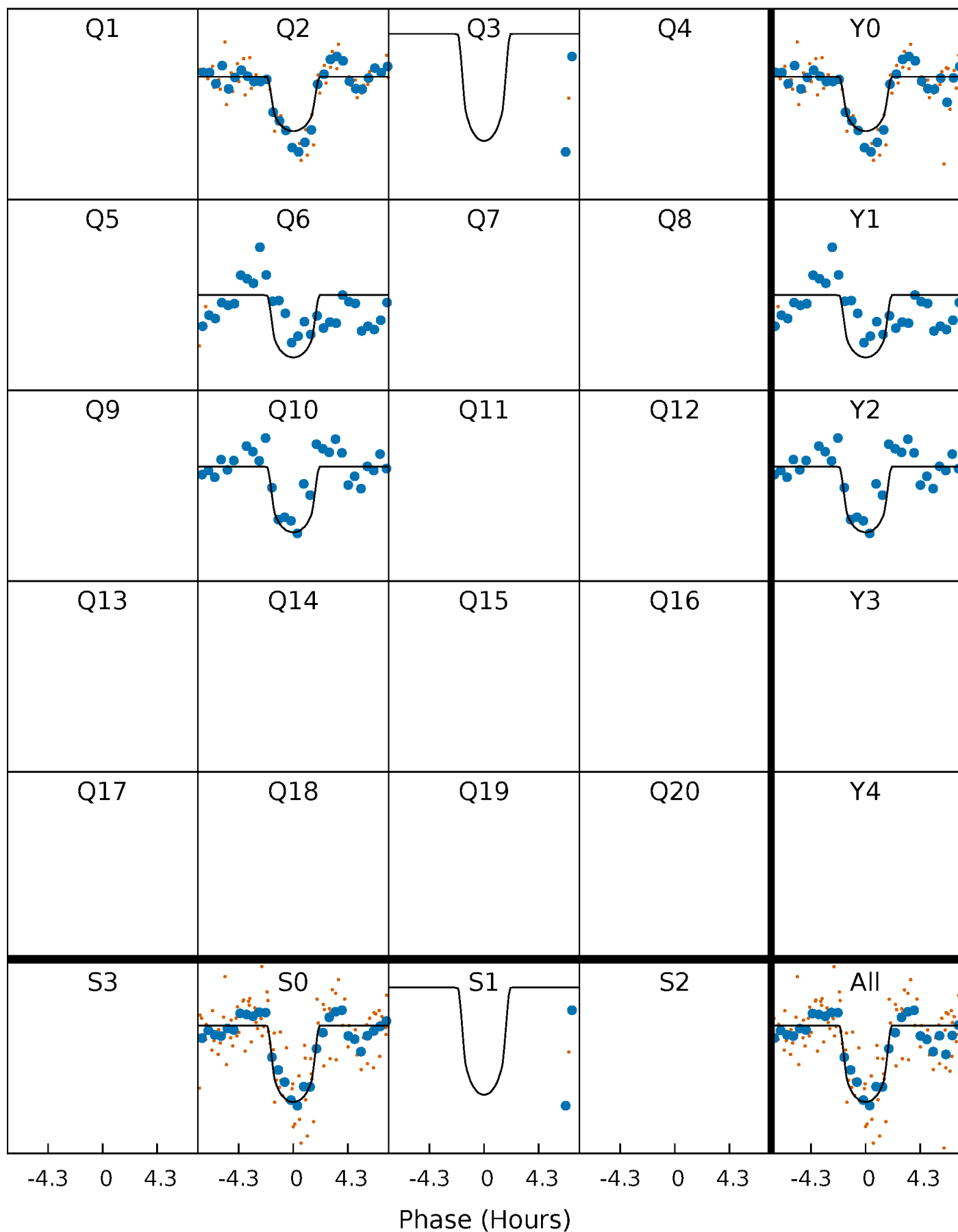
PDC Quarter-Phased Transit Curves

TCE 004144873-01 P= 68.538856 Days $T_0=186.209867$ (BKJD)



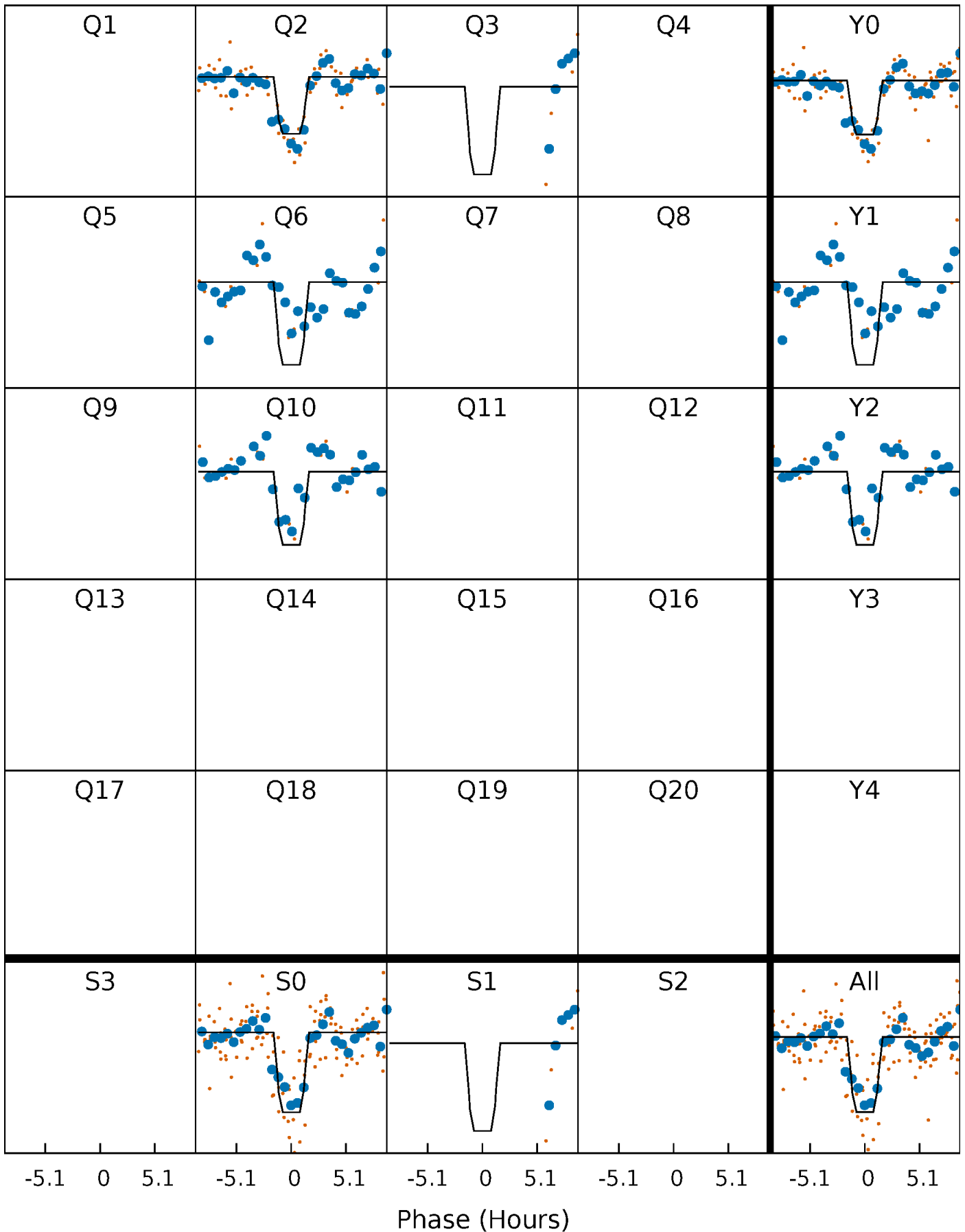
DV Quarter-Phased Transit Curves

TCE 004144873-01 P= 68.538856 Days $T_0=186.209867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

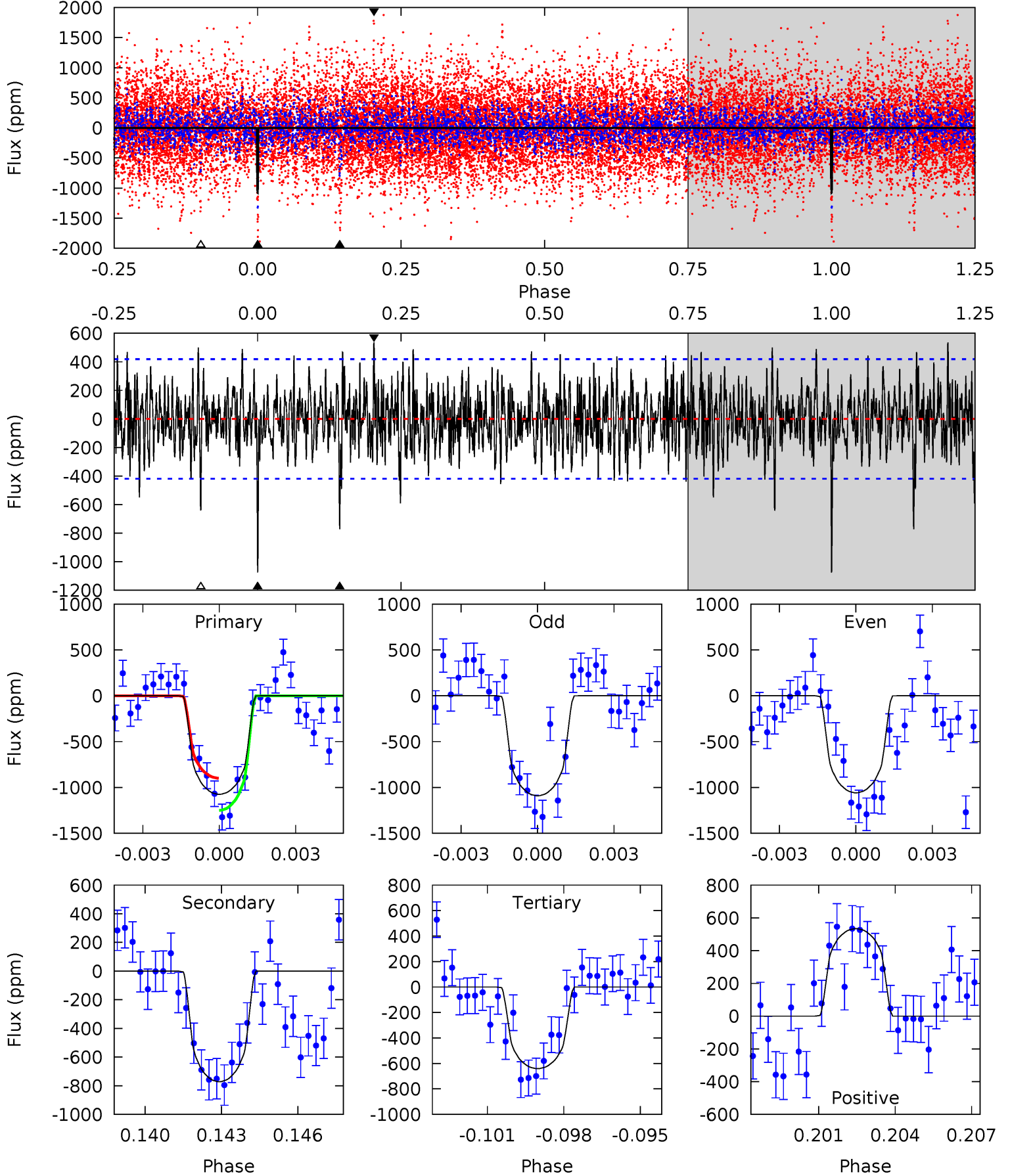
TCE 004144873-01 P= 68.538061 Days $T_0=186.222692$ (BKJD)



DV Model-Shift Uniqueness Test

004144873-01, P = 68.538856 Days, E = 117.671011 Days

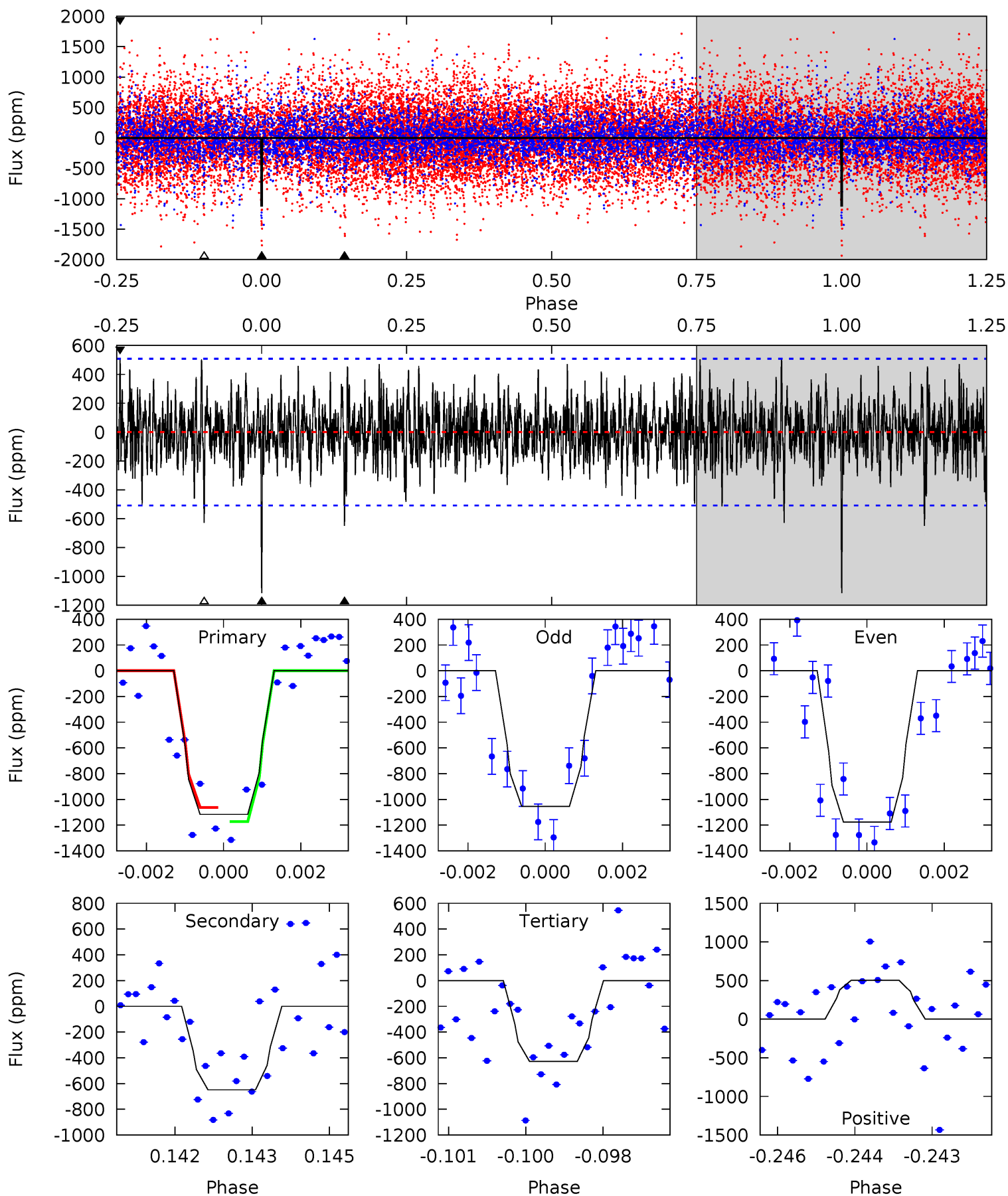
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	9.73	8.08	6.73	5.28	3.01	2.13	5.47	6.82	1.65	3.00	0.21	0.99	0.33	2.20



Alt Model-Shift Uniqueness Test

004144873-01, P = 68.538061 Days, E = 117.684631 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	6.85	6.63	5.33	5.37	3.16	1.65	5.15	6.45	0.21	1.52	0.64	1.06	0.31	0.58



Stellar Parameters For KIC 004144873

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4687^{+70}_{-56}	$2.613^{+0.028}_{-0.039}$	$-0.200^{+0.150}_{-0.100}$	$8.123^{+1.474}_{-0.295}$	$0.988^{+0.404}_{-0.067}$	$0.003^{+0.000}_{-0.000}$
	+1%/-1%	+1%/-1%	+75%/-50%	+18%/-4%	+41%/-7%	+9%/-19%
Source	SPE68	AST9	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004144873-01 / KOI 7686.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-772 ± 79	$30.07^{+17.08}_{-15.43}$	1446^{+35}_{-28}	4334^{+1632}_{-604}	50^{+166}_{-29}
Alt.	-648 ± 95	$32.50^{+18.88}_{-16.06}$	1443^{+35}_{-25}	4064^{+1348}_{-548}	36^{+107}_{-21}

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 $A_{obs} \gg 1.0$

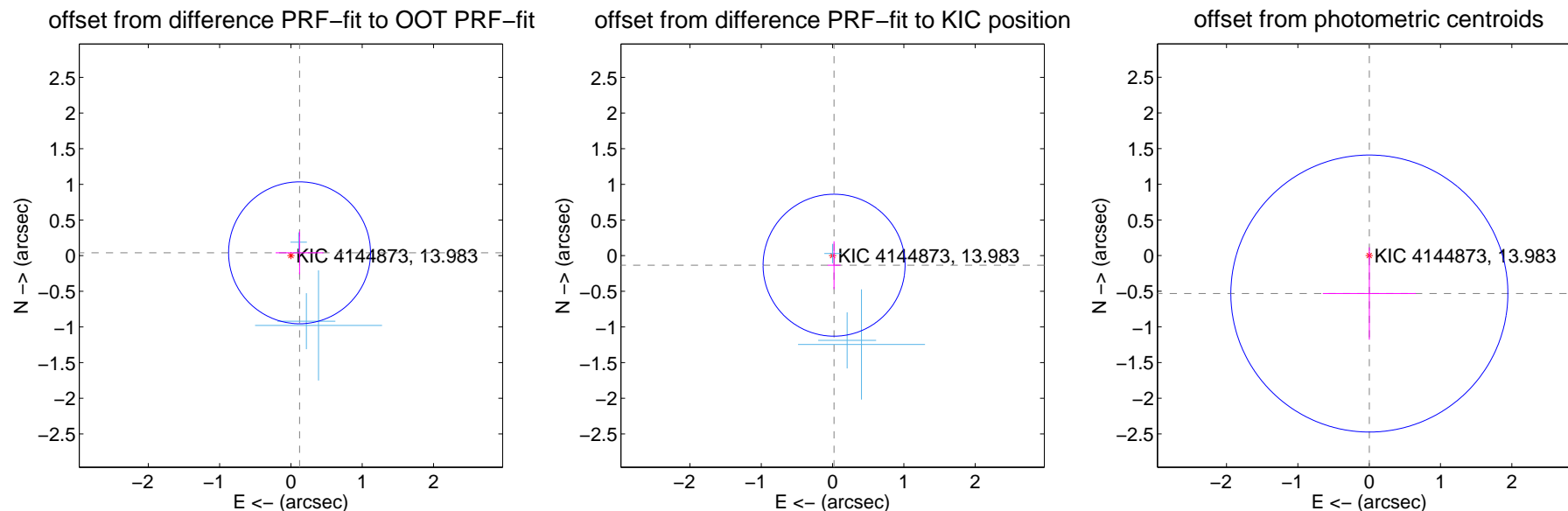
DV Centroid Data

Supplemental centroid analysis for 004144873-01. Kepler magnitude: 13.98. Transit SNR 8.29

There are 3 quarters with good PRF difference image offsets

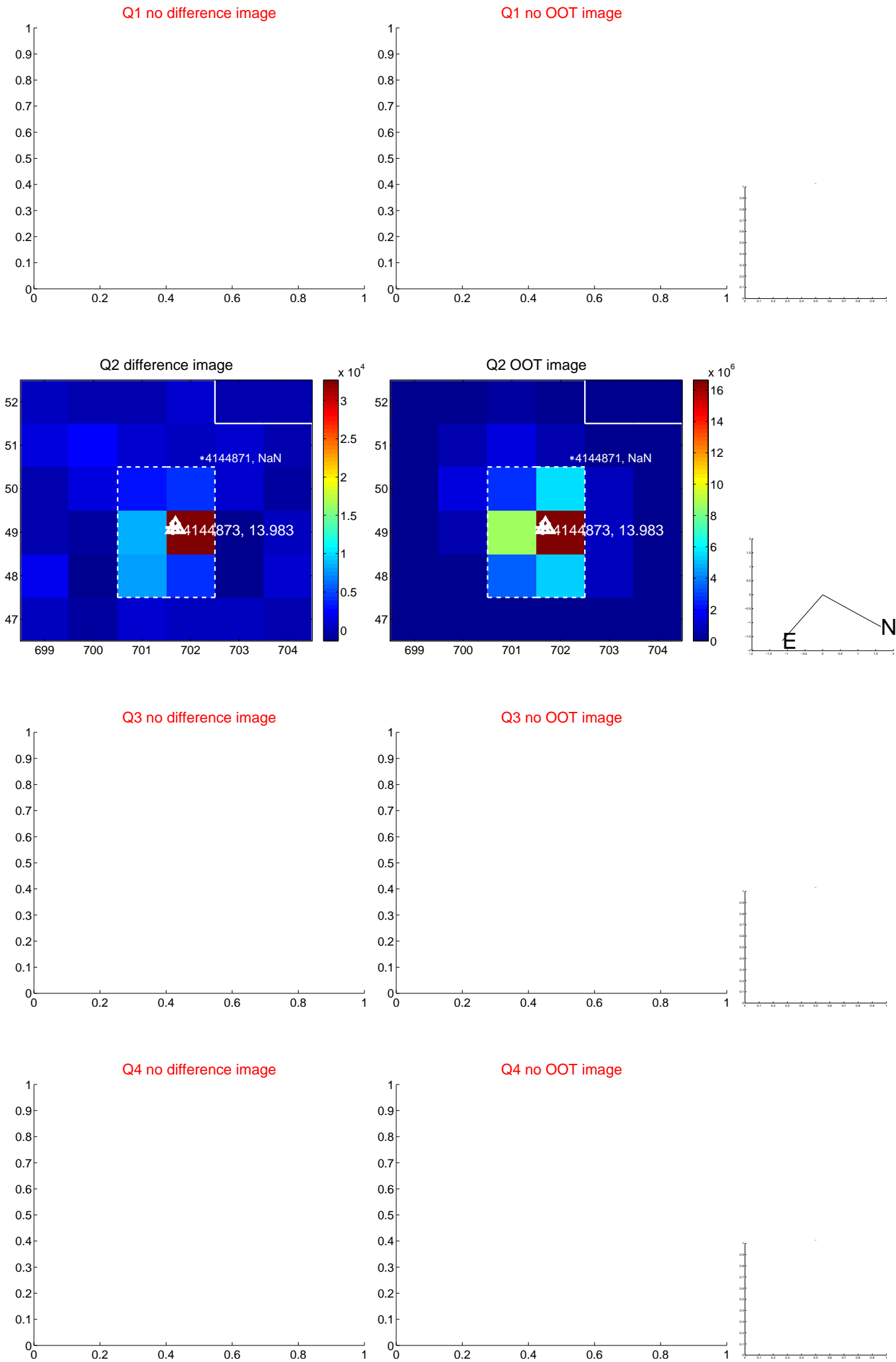
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.128 ± 0.332	0.38	-0.121 ± 0.335	0.040 ± 0.300
PRF-fit source offset from KIC position	0.136 ± 0.332	0.41	-0.021 ± 0.090	-0.134 ± 0.336
photometric centroid source offset	0.53 ± 0.65	0.82	-0.00 ± 0.65	-0.53 ± 0.65

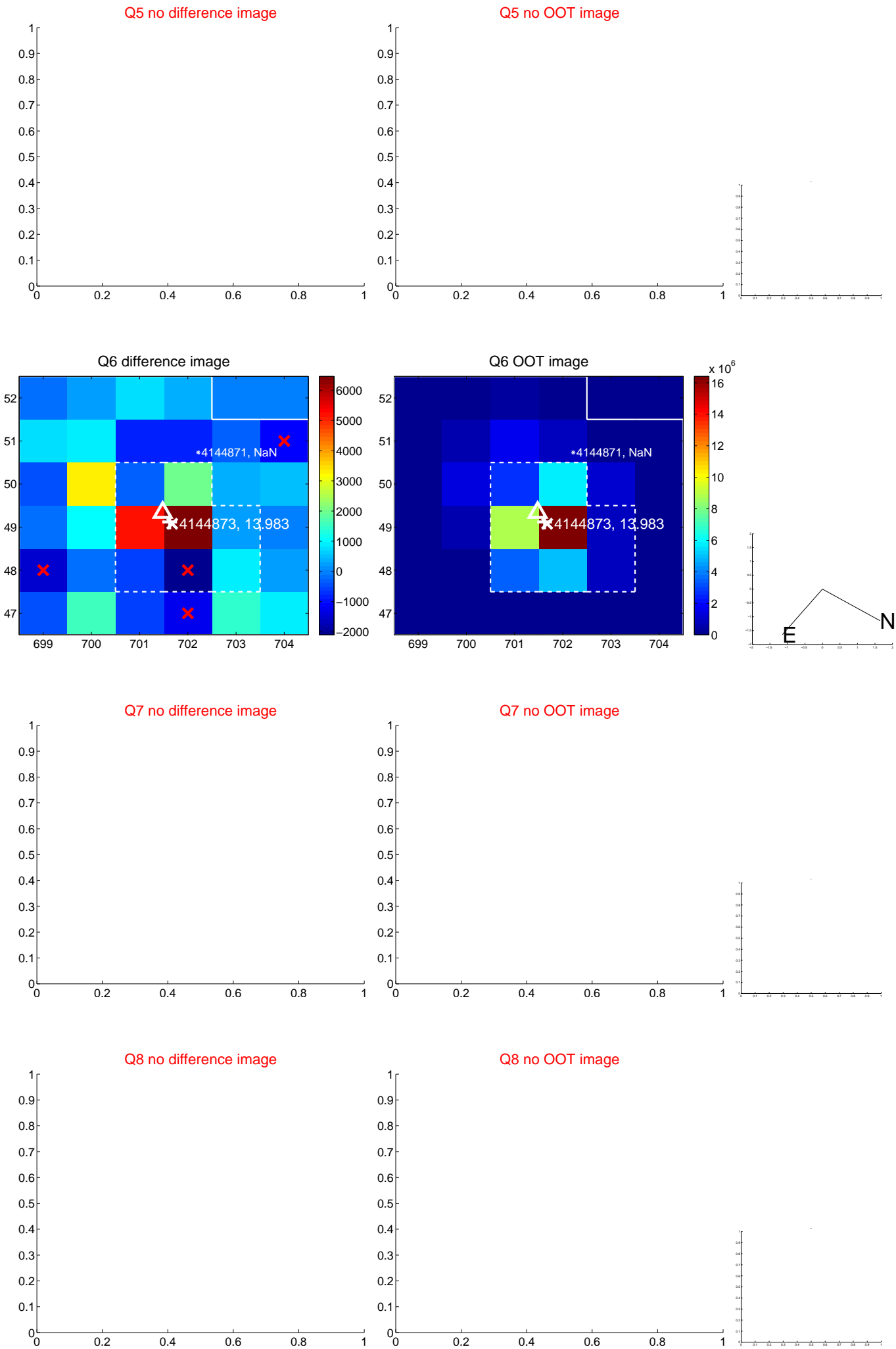


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

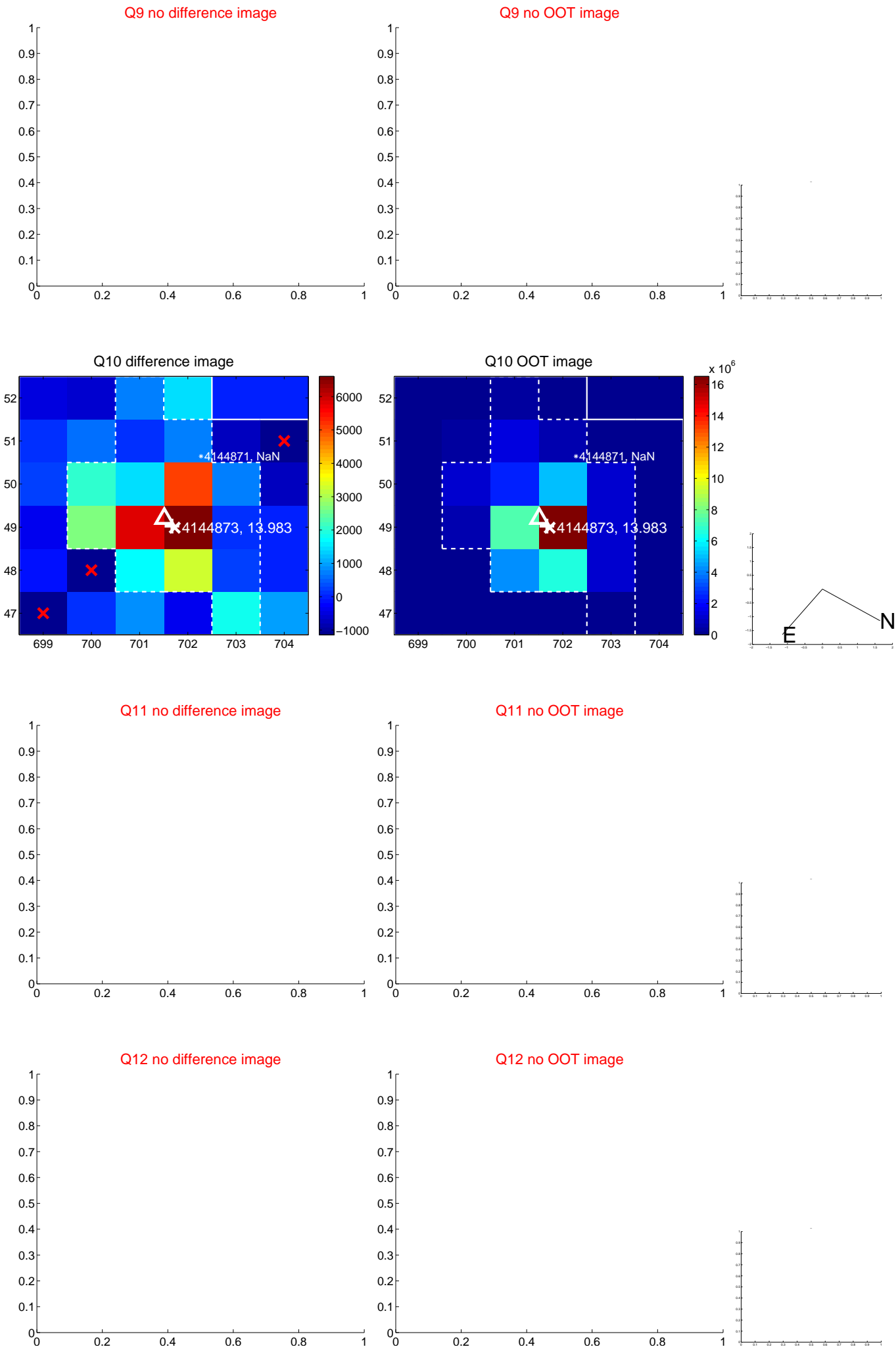
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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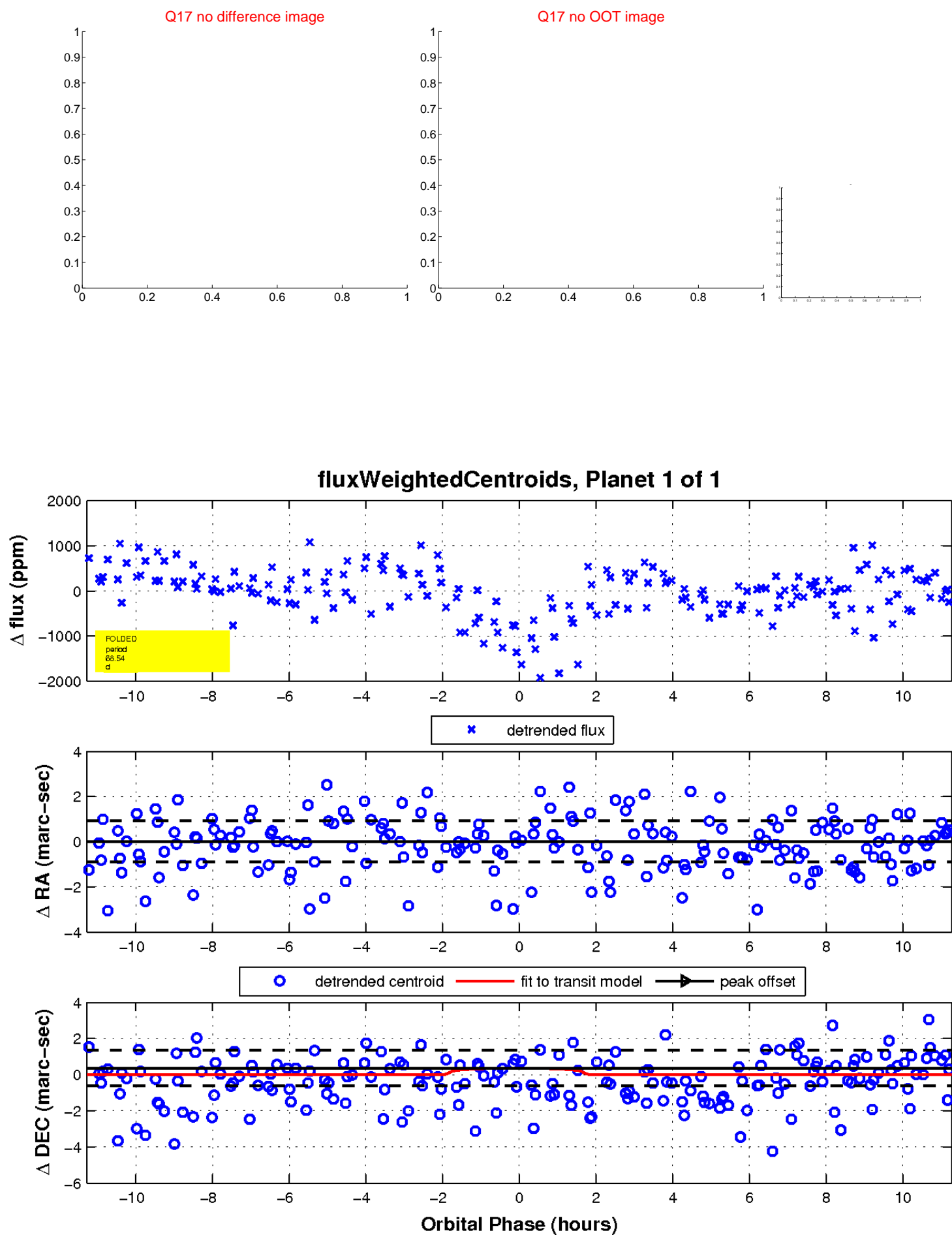
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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UKIRT Image

Declination

