

KIC 008039172

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})
008039172-01	OBS	No	335.786947	304.653807	319.9	16.467	7.9	6.4	0.84	5433	1.59	0.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008039172-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—MOD_NONUNIQ_DV—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.

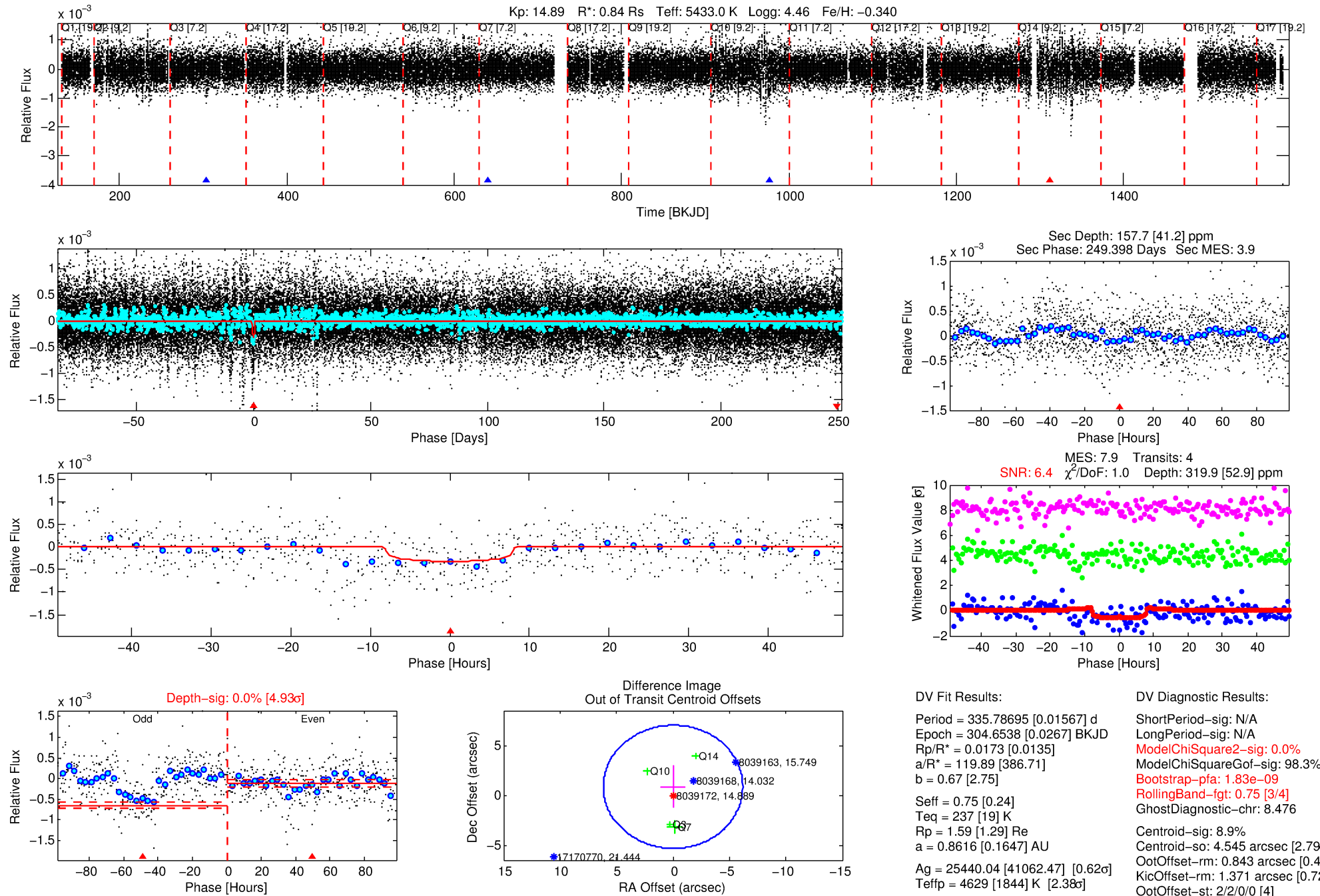
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008039172-01

No Significant Match Found

DV One-Page Summary

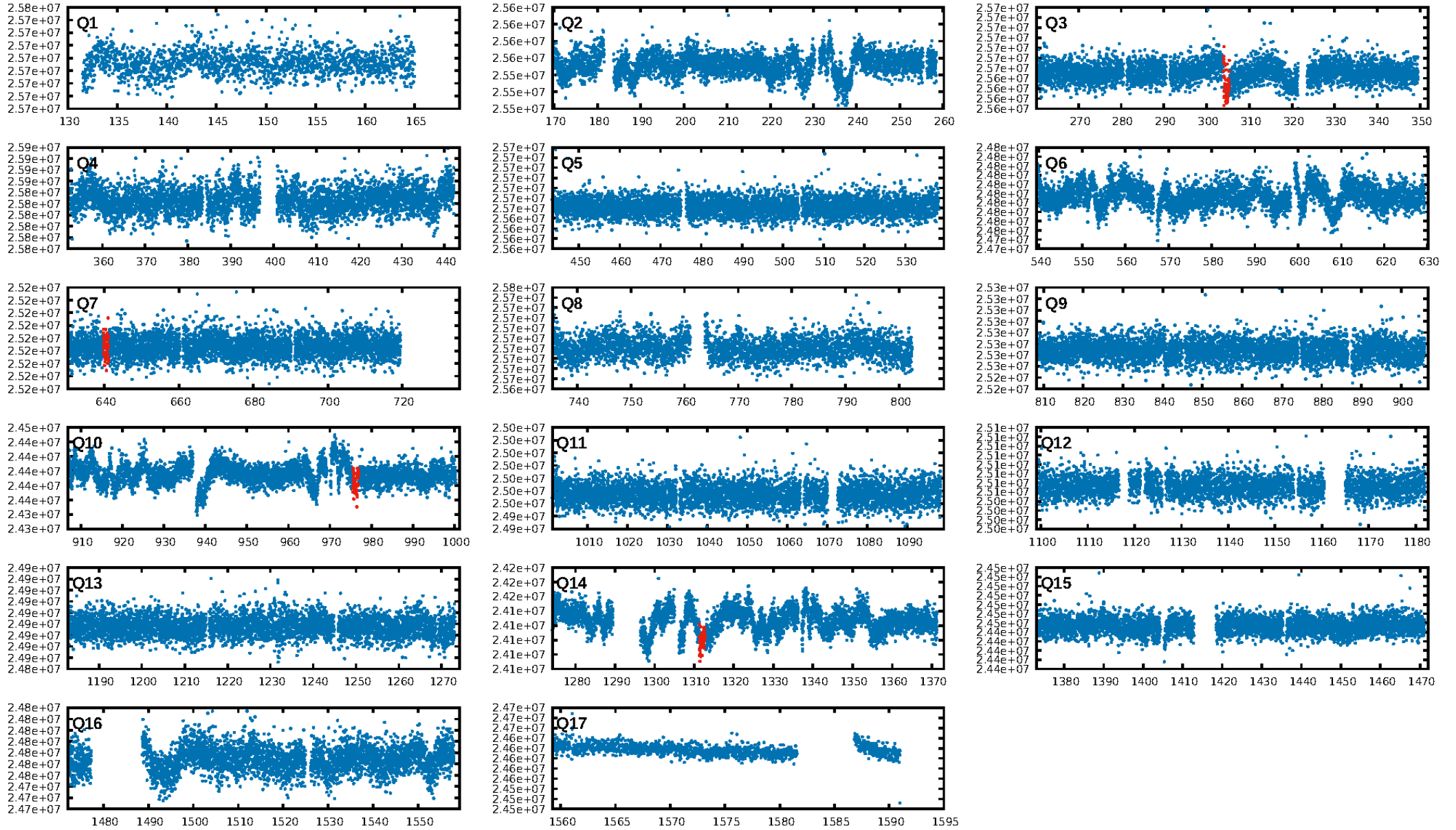
KIC: 8039172 Candidate: 1 of 1 Period: 335.787 d



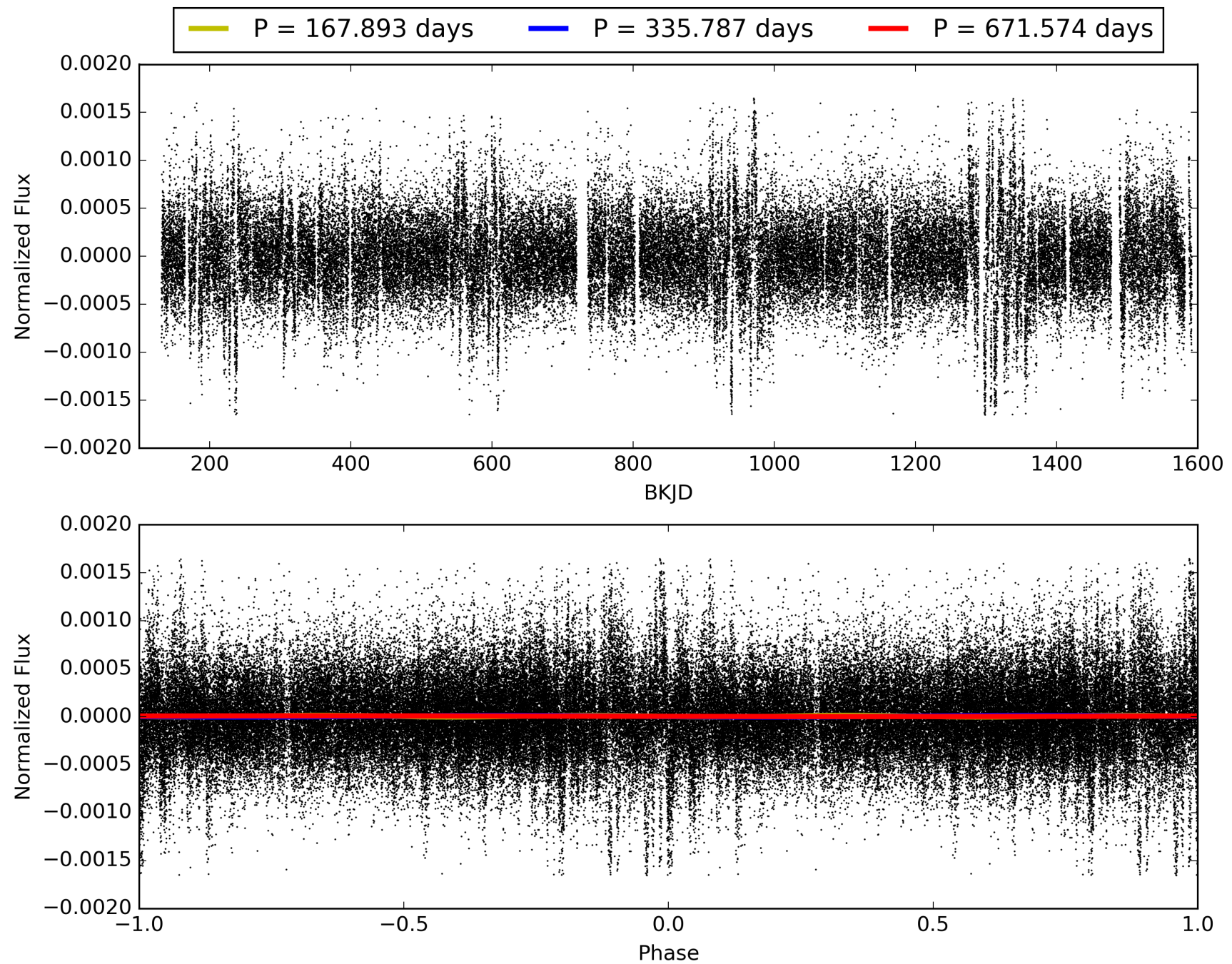
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:13:40 Z

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

TCE 008039172-01, PDC Light Curves

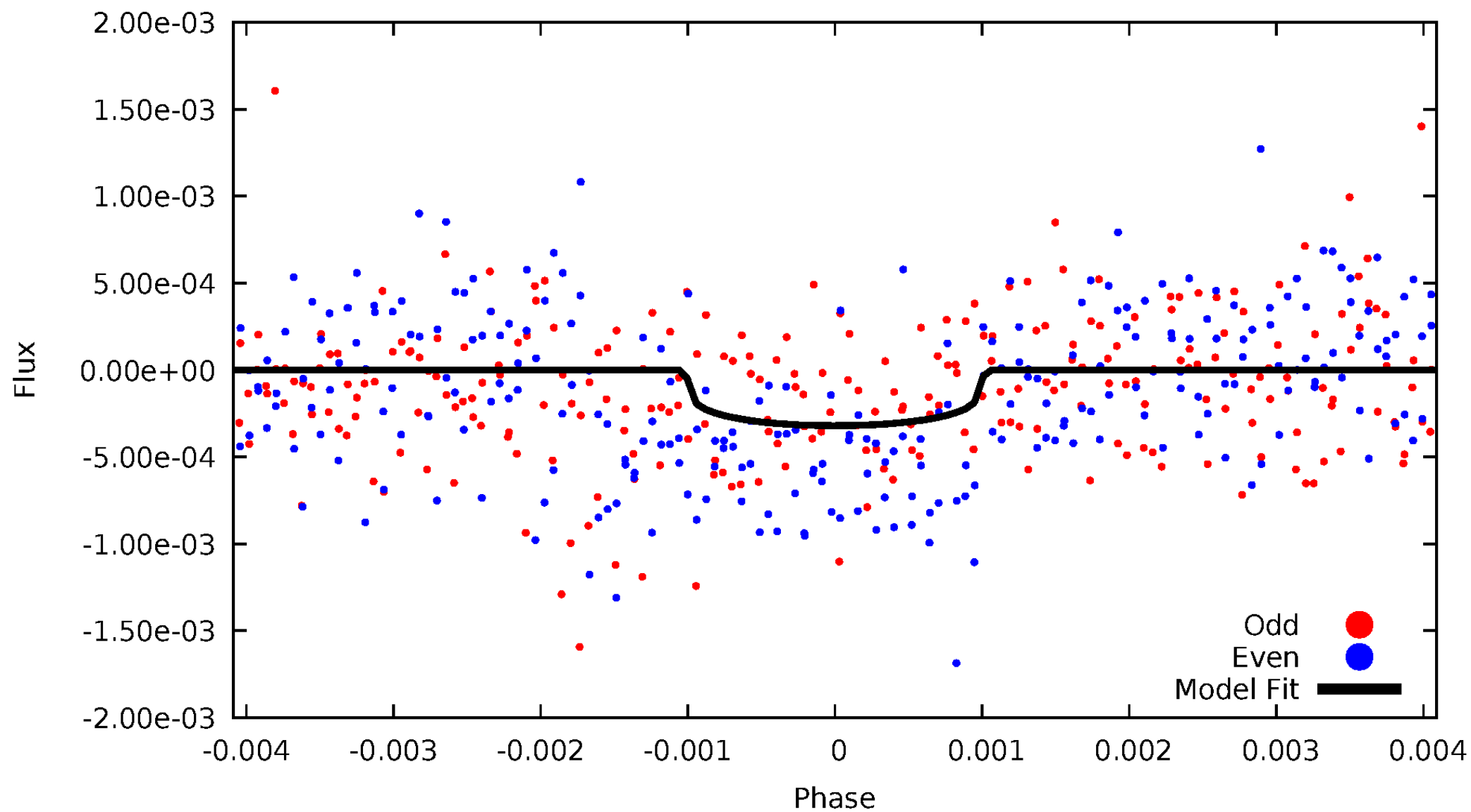


TCE 008039172-01



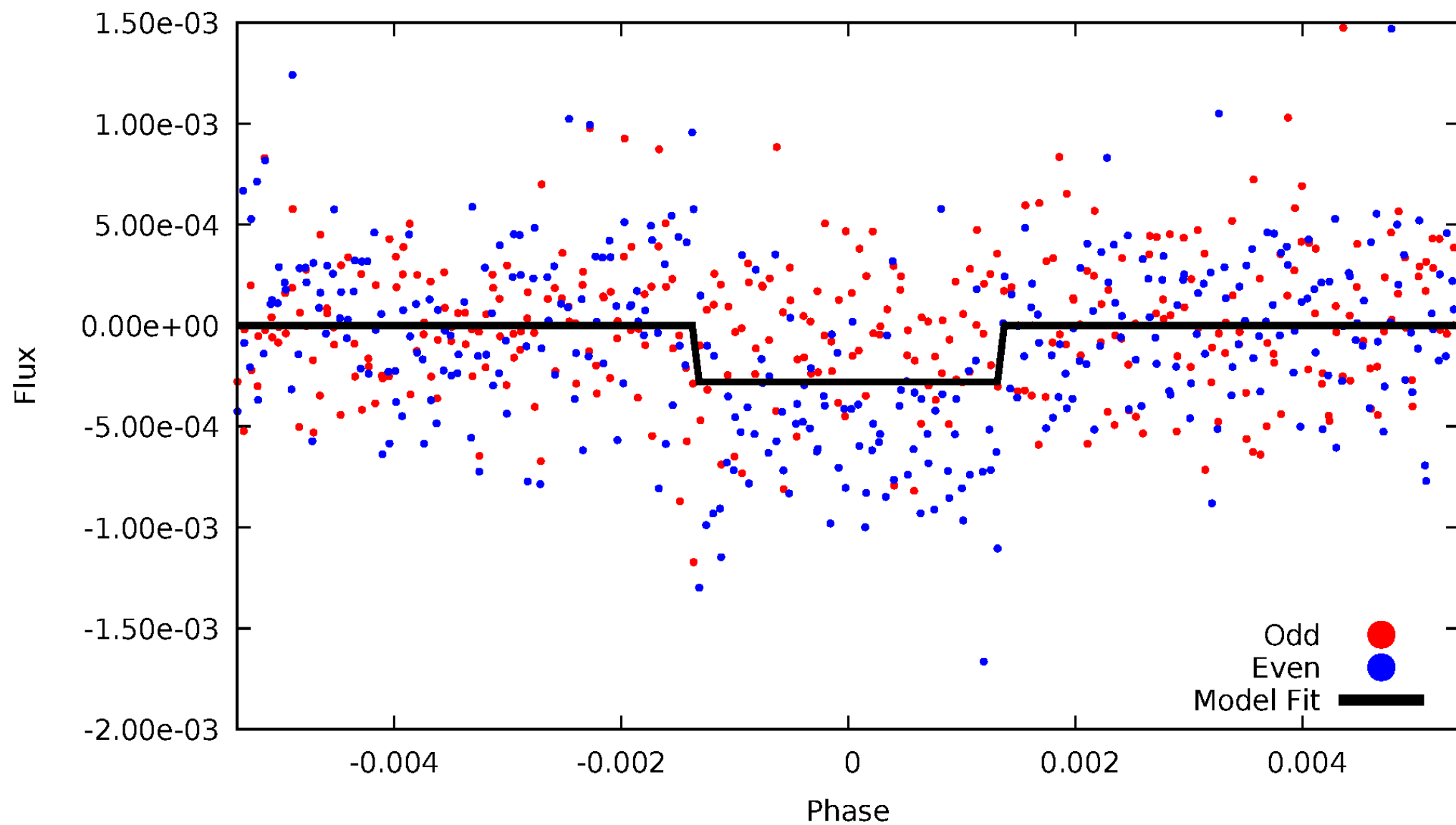
DV Odd/Even

TCE 008039172-01



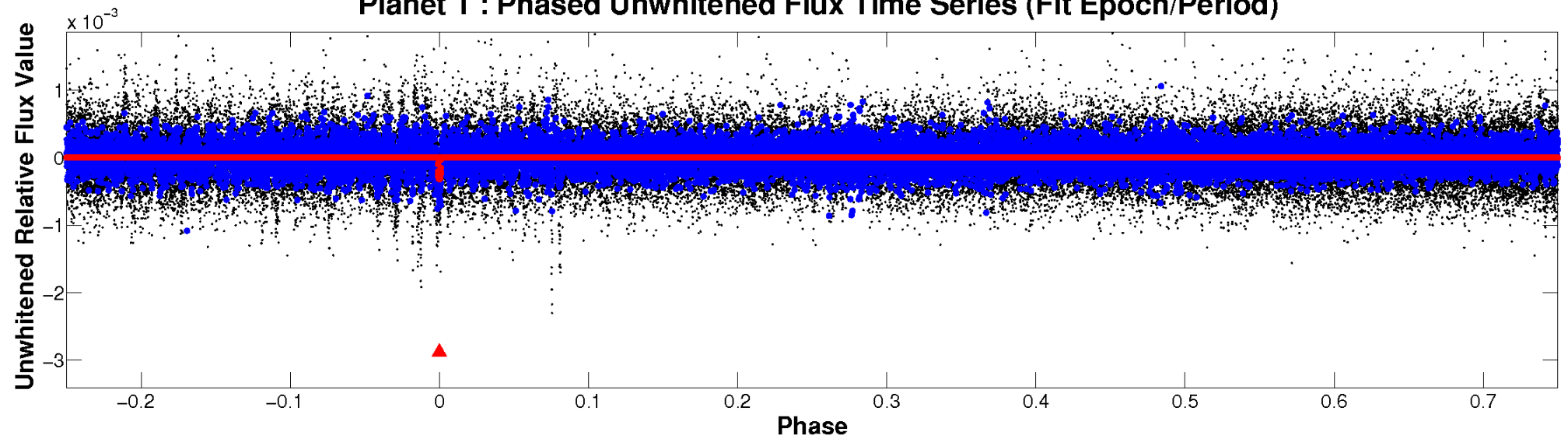
ALT Odd/Even

TCE 008039172-01

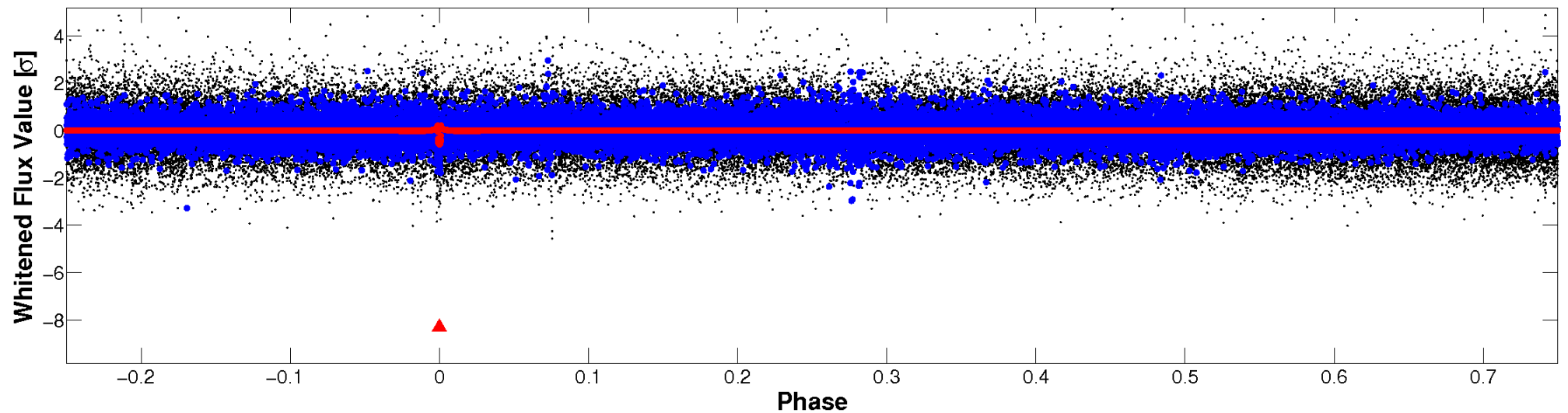


Non-Whitened Vs. Whitened Light Curve

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

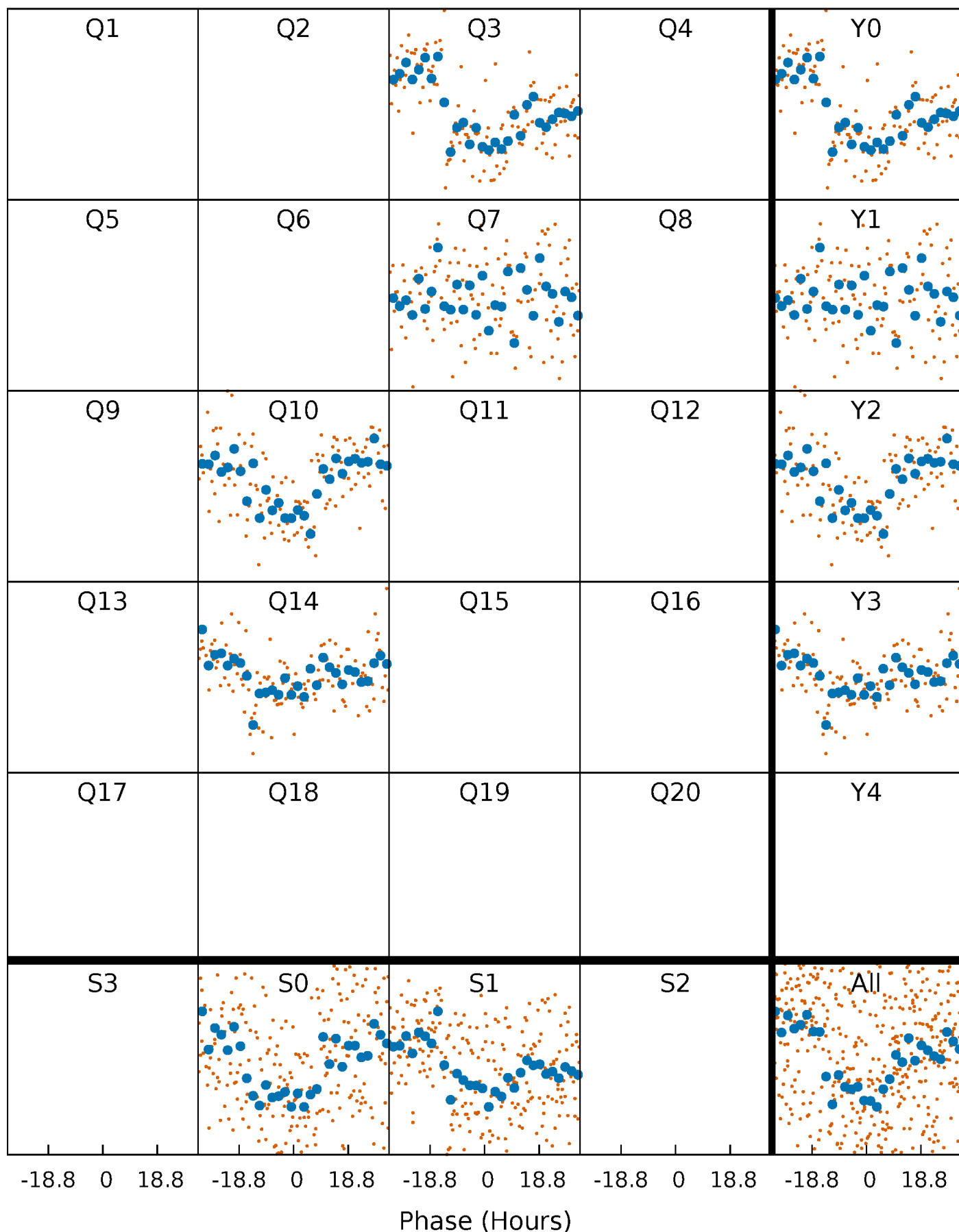


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



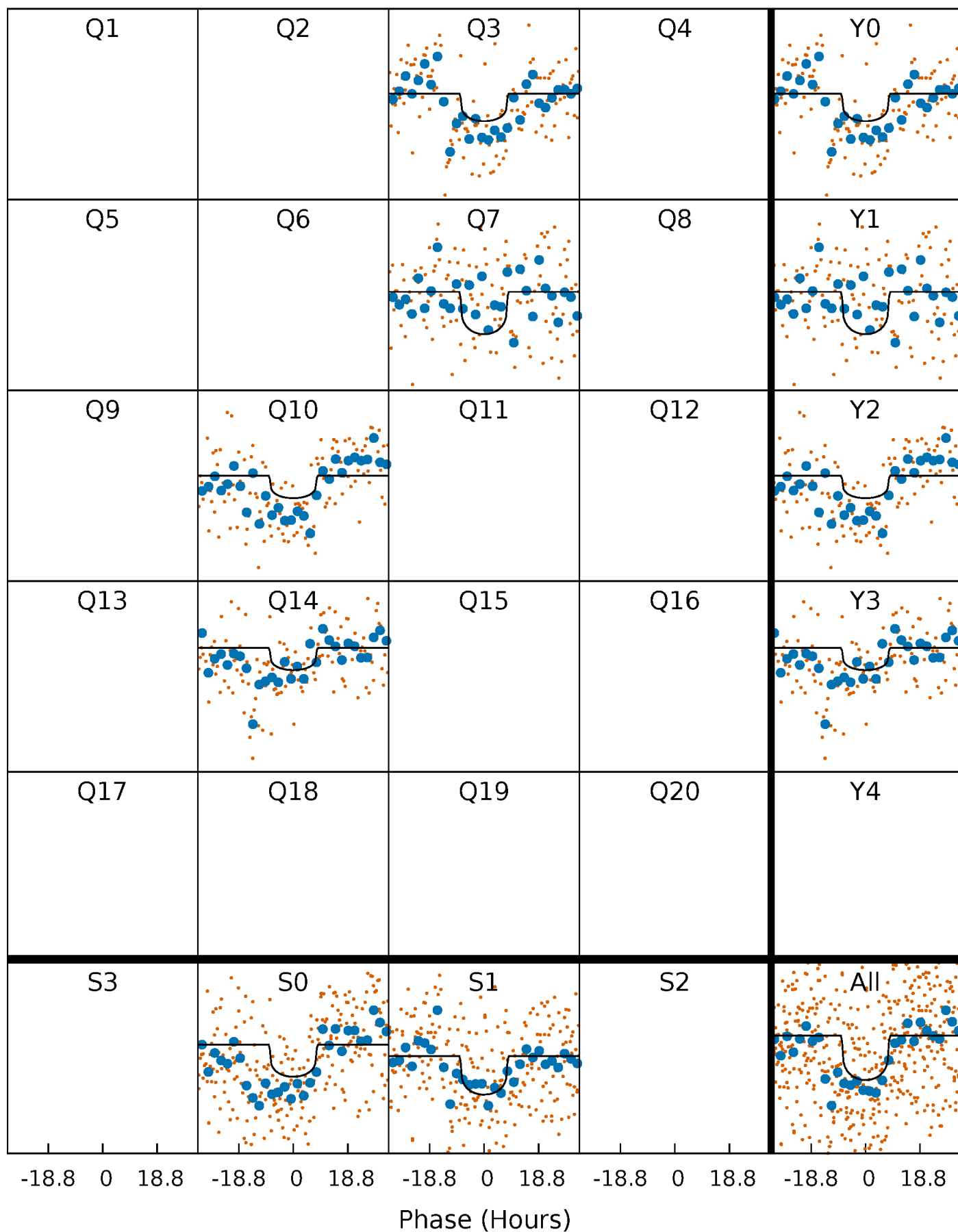
PDC Quarter-Phased Transit Curves

TCE 008039172-01 P=335.786947 Days $T_0=304.653807$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008039172-01 P=335.786947 Days $T_0=304.653807$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

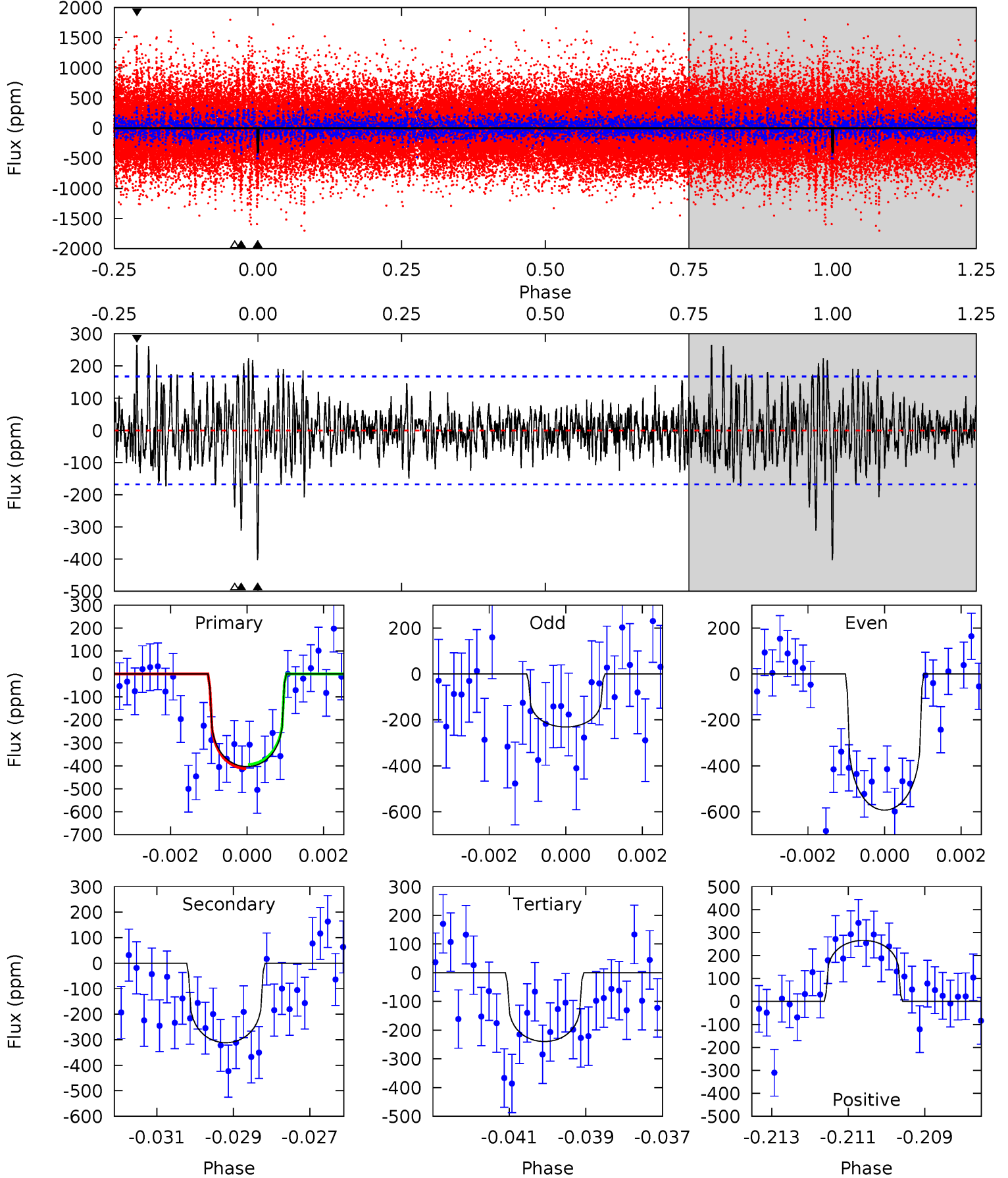
TCE 008039172-01 P=335.784692 Days $T_0=304.535118$ (BKJD)



DV Model-Shift Uniqueness Test

008039172-01, P = 335.786947 Days, E = 304.653807 Days

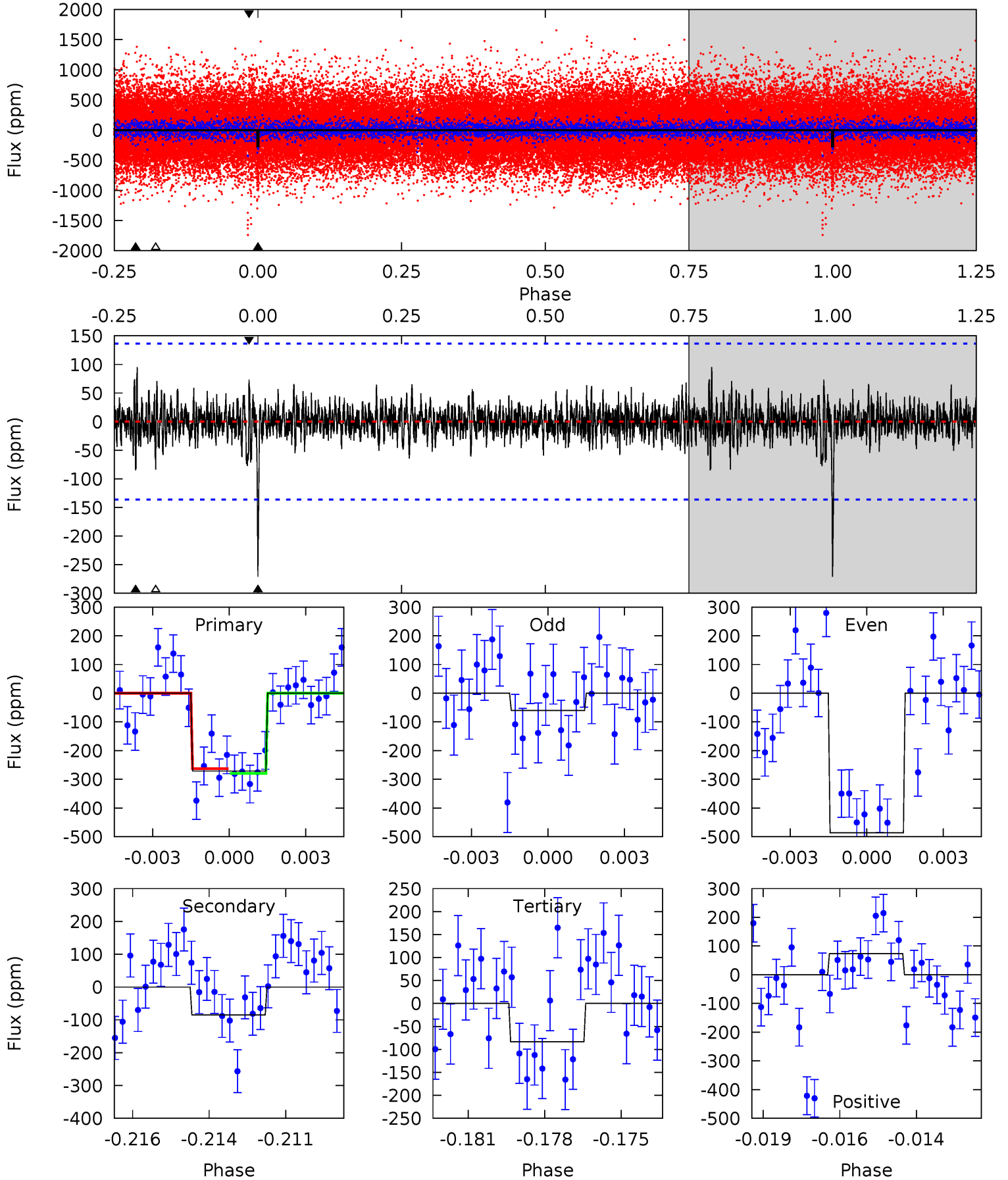
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	9.89	7.60	8.44	5.32	3.08	1.95	5.21	4.37	2.29	1.45	5.77	0.91	0.40	0.29



Alt Model-Shift Uniqueness Test

008039172-01, P = 335.784692 Days, E = 304.535118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.30	3.23	2.84	5.27	3.00	0.78	7.25	7.65	0.07	0.46	8.27	1.05	0.26	0.32



Stellar Parameters For KIC 008039172

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5433^{+178}_{-162}	$4.465^{+0.120}_{-0.165}$	$-0.340^{+0.350}_{-0.300}$	$0.843^{+0.181}_{-0.121}$	$0.756^{+0.122}_{-0.052}$	$1.776^{+0.896}_{-0.766}$
	+3%/-3%	+3%/-4%	+103%/-88%	+21%/-14%	+16%/-7%	+50%/-43%
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 008039172-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-311 ± 31	$1.83^{+1.31}_{-1.09}$	335^{+22}_{-19}	5259^{+3064}_{-1017}	$39199^{+199917}_{-26389}$
Alt.	-85 ± 26	$1.67^{+1.34}_{-1.05}$	334^{+22}_{-20}	4144^{+2198}_{-760}	12159^{+72553}_{-8604}

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

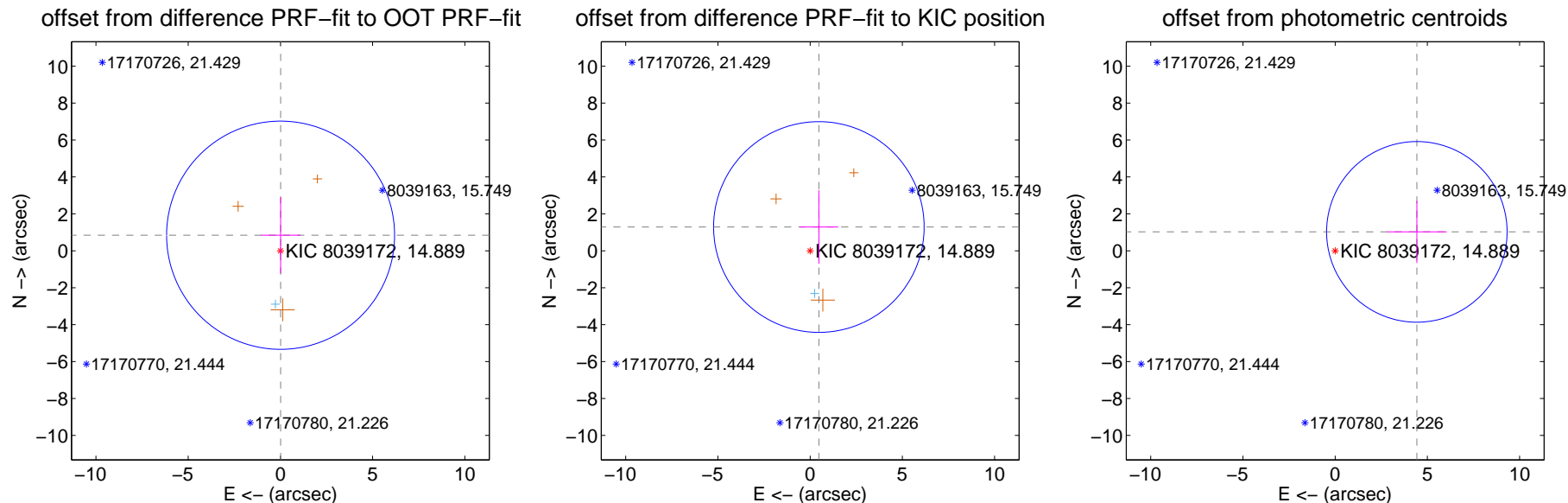
DV Centroid Data

Supplemental centroid analysis for 008039172-01. Kepler magnitude: 14.89. Transit SNR 6.42

There are 1 quarters with good PRF difference image offsets

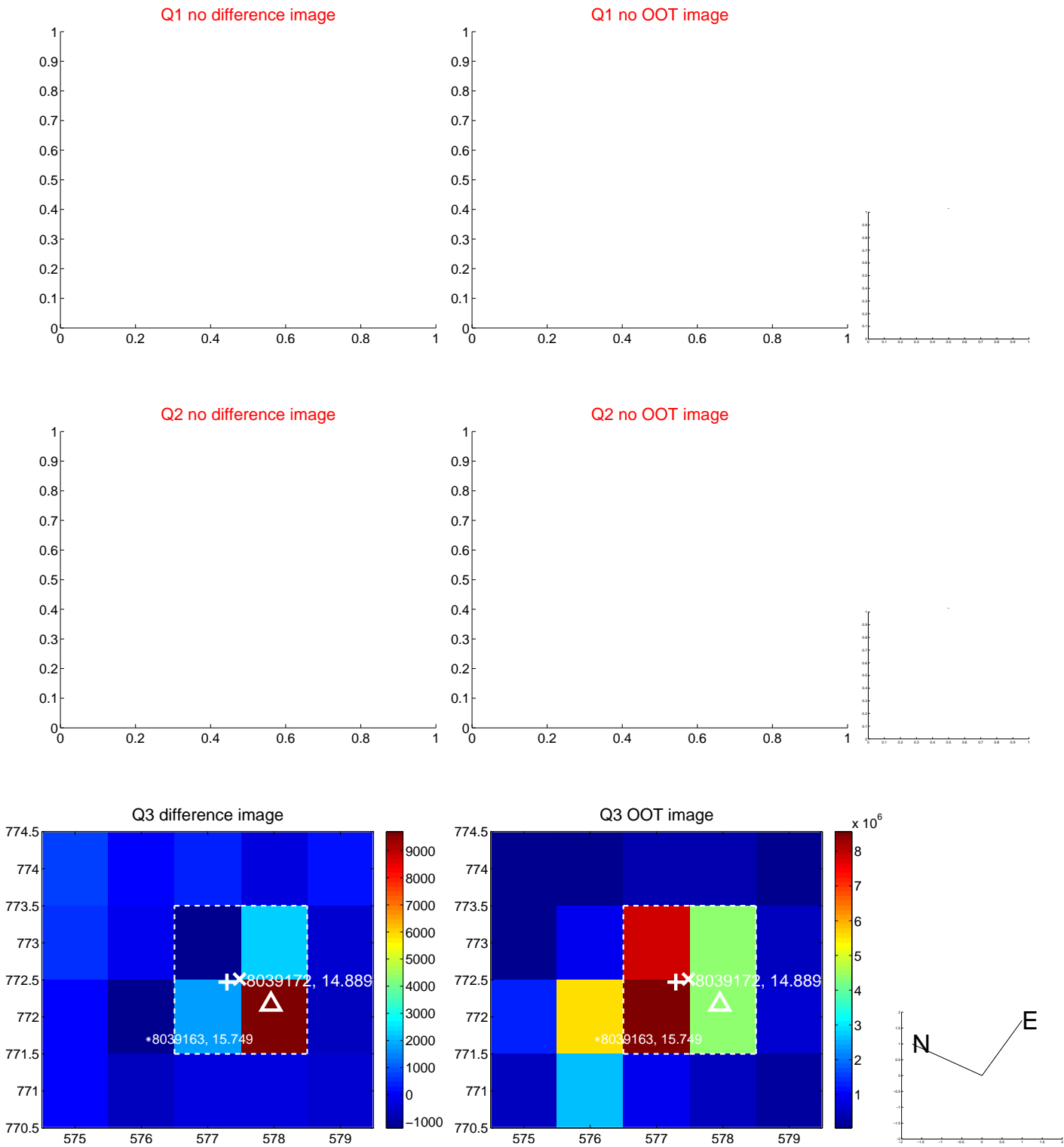
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.843 ± 2.060	0.41	-0.011 ± 1.077	0.843 ± 2.060
PRF-fit source offset from KIC position	1.371 ± 1.902	0.72	-0.473 ± 1.051	1.287 ± 1.989
photometric centroid source offset	4.54 ± 1.63	2.79	-4.43 ± 1.63	1.02 ± 1.68

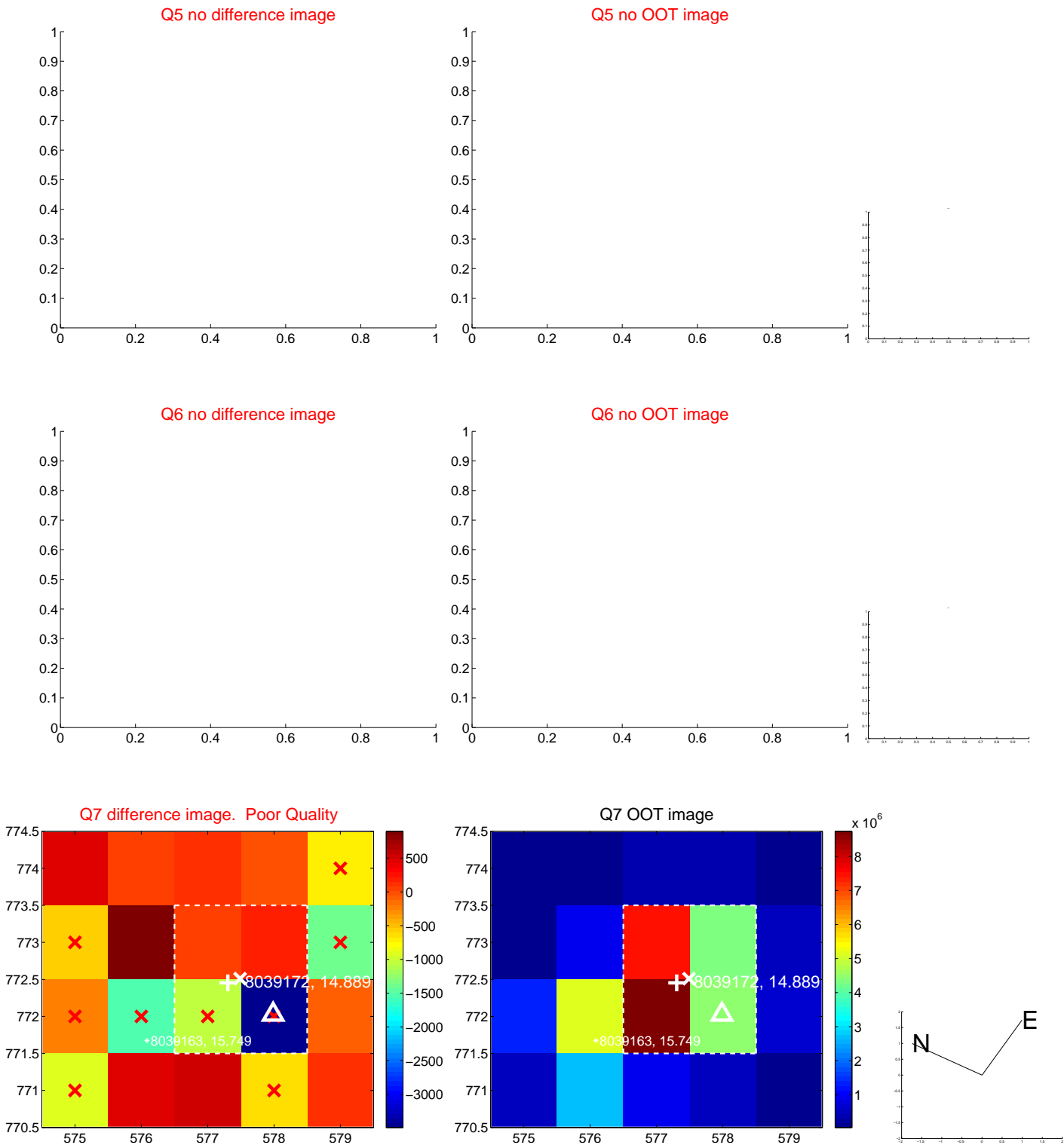


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

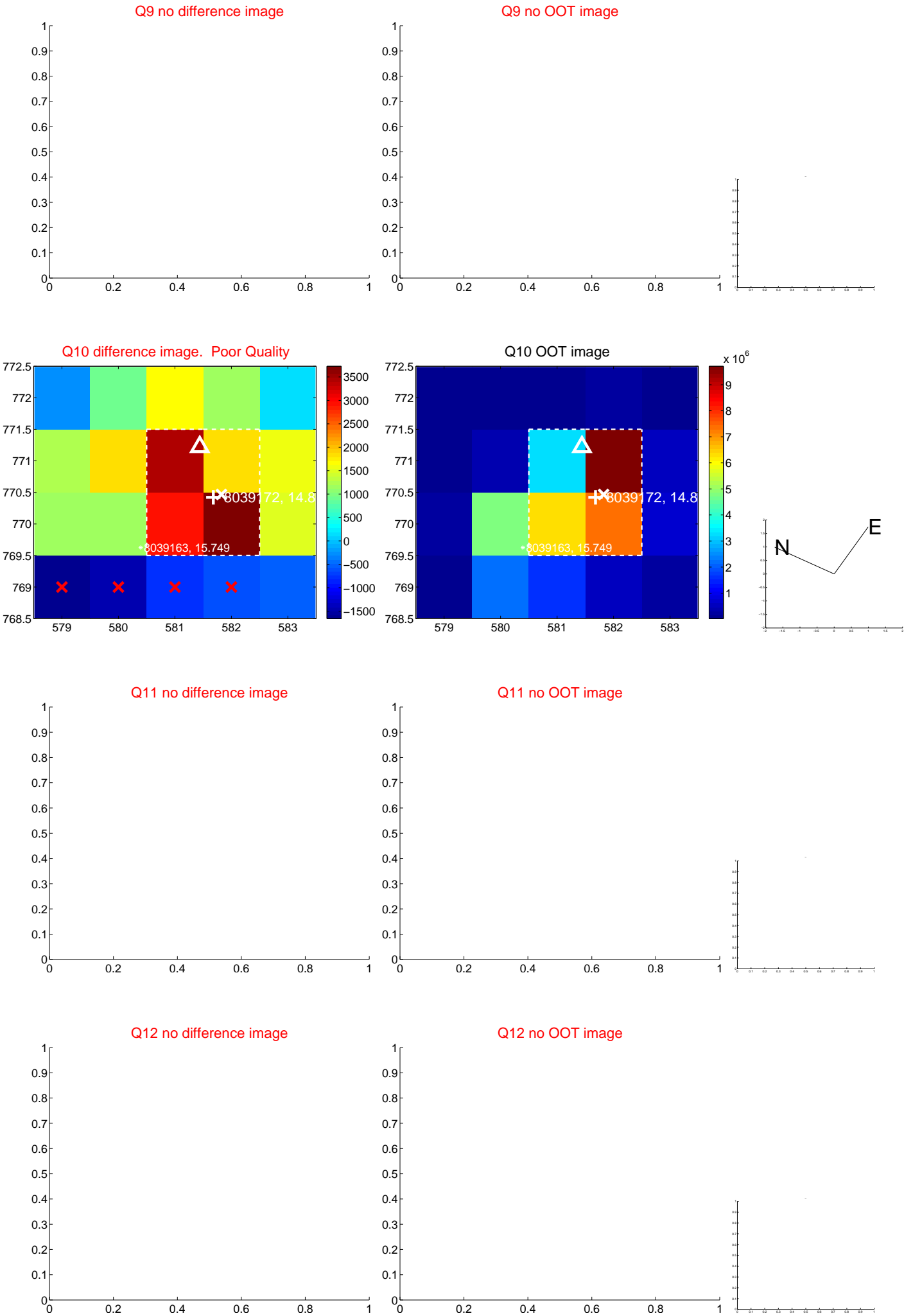
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



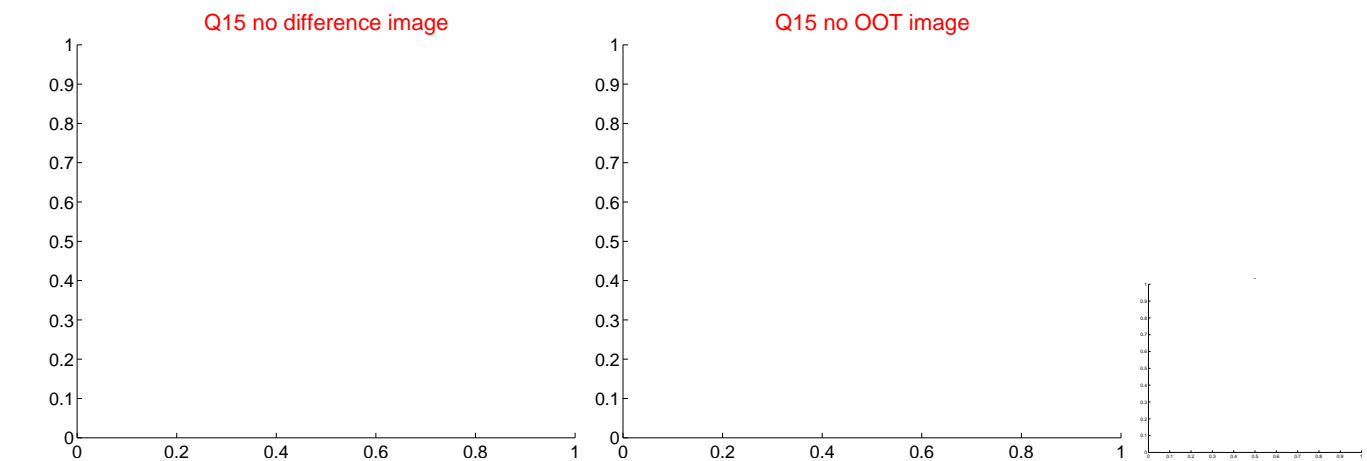
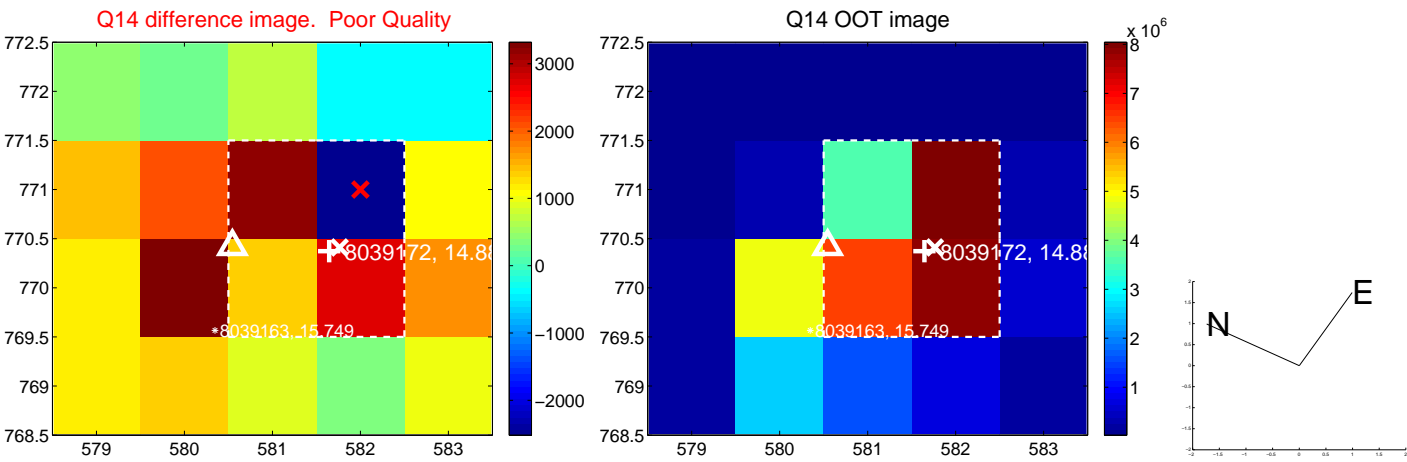
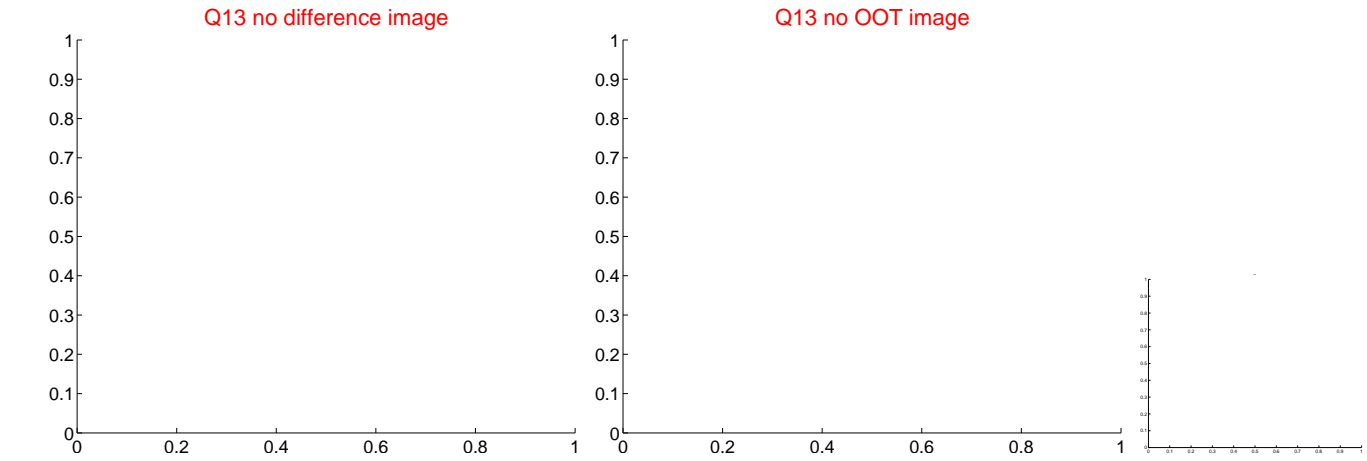
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



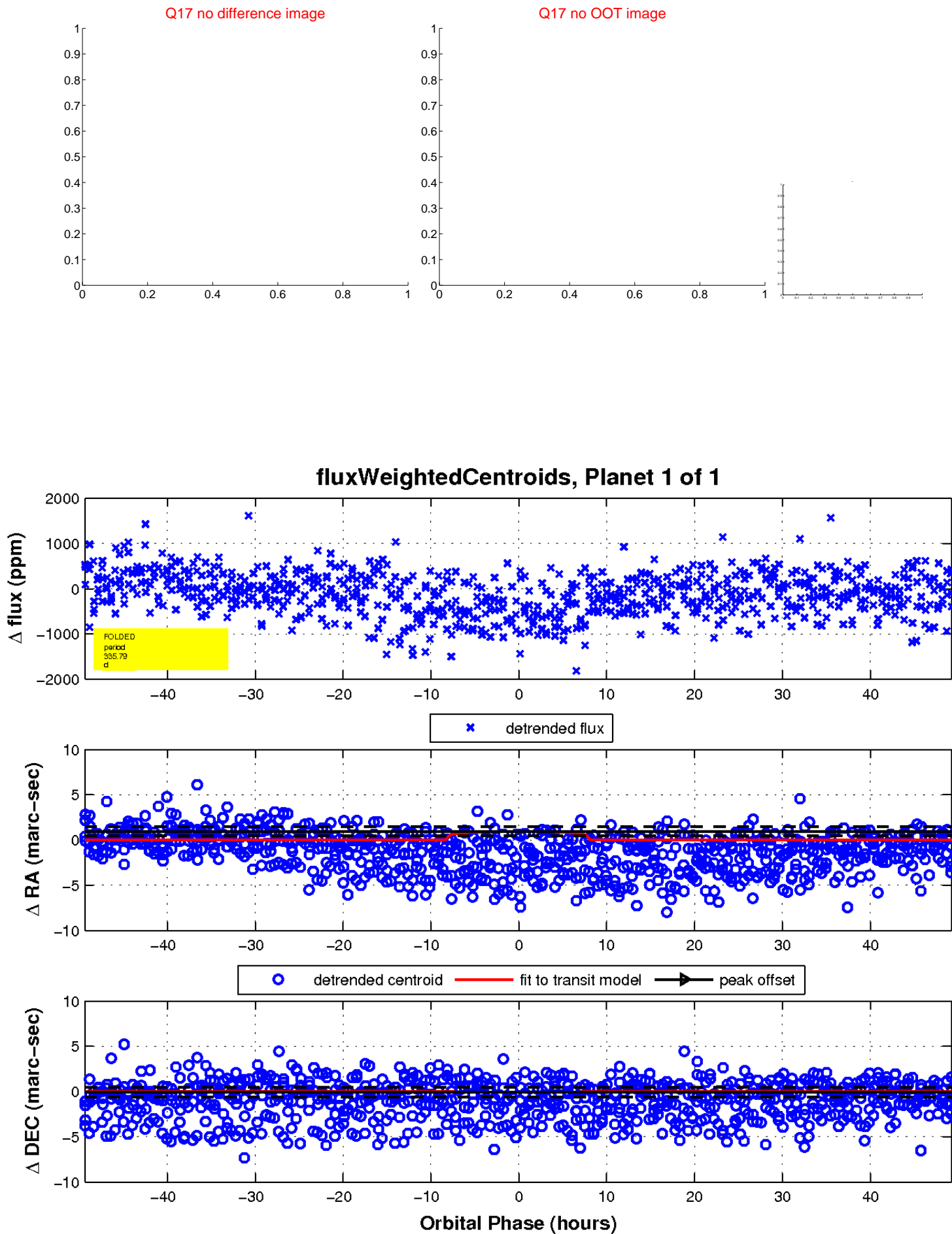
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: 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

Declination

