

KIC 009710876

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})
009710876-01	OBS	No	329.149663	169.760104	646.8	21.952	9.9	5.9	1.02	6089	2.98	1.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009710876-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_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.

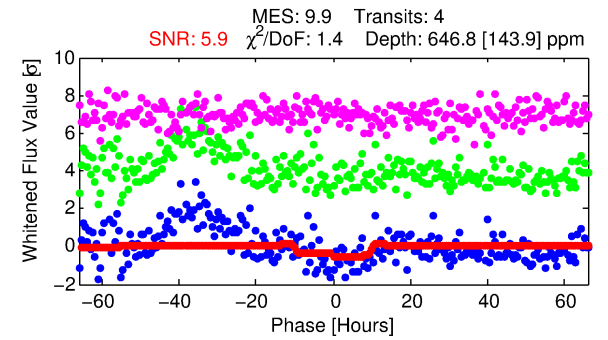
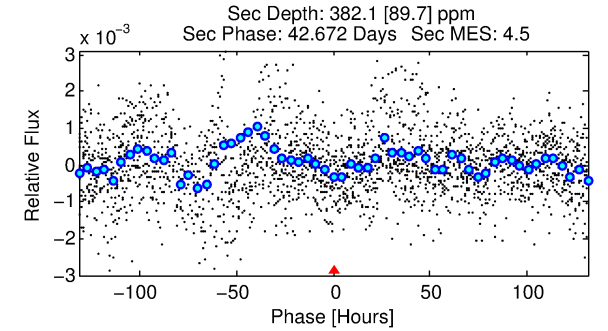
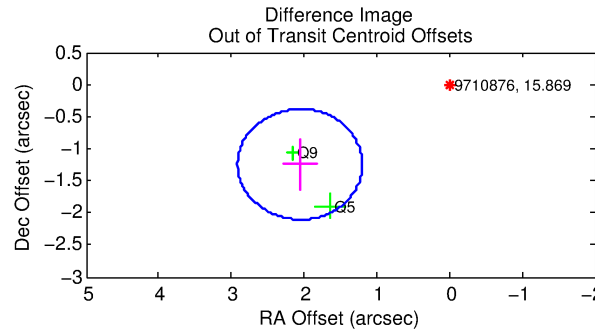
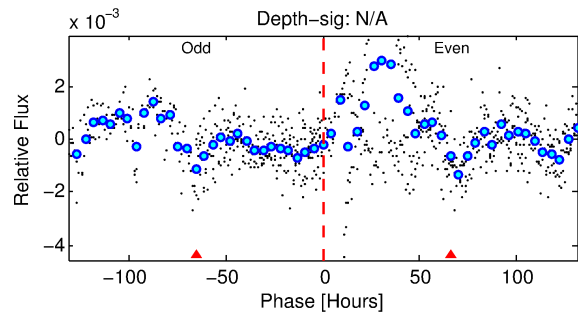
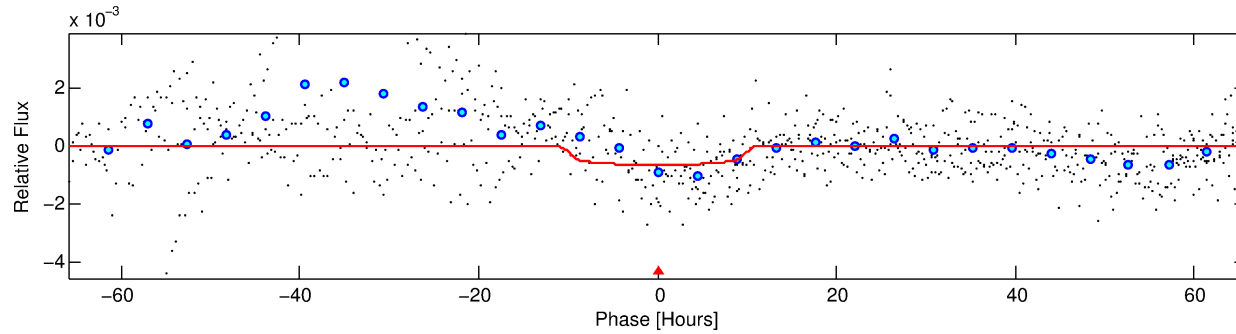
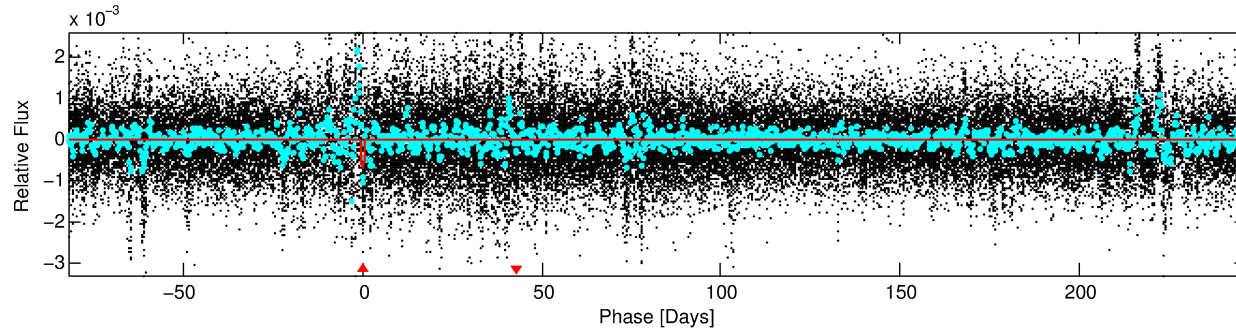
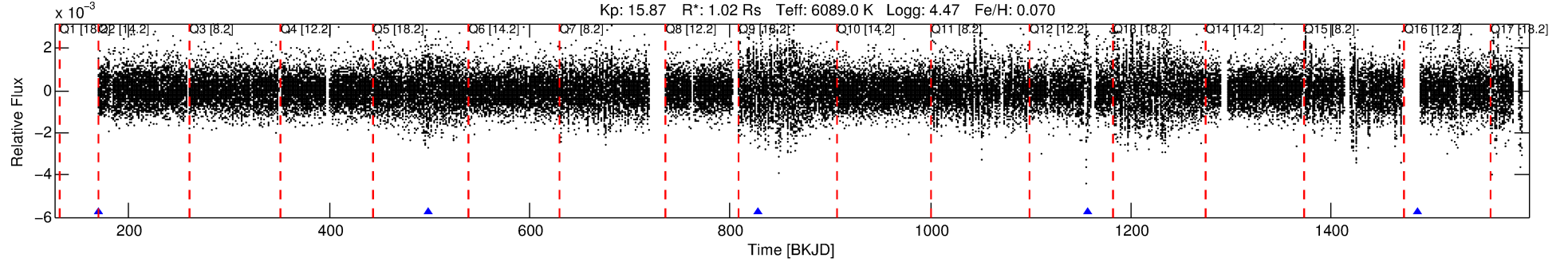
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009710876-01

No Significant Match Found

DV One-Page Summary

KIC: 9710876 Candidate: 1 of 1 Period: 329.150 d



DV Fit Results:

Period = 329.14966 [0.03332] d
Epoch = 169.7601 [0.0681] BKJD
Rp/R* = 0.0267 [0.0055]
a/R* = 64.31 [51.99]
b = 0.86 [0.25]
Seff = 1.37 [0.57]
Teq = 276 [29] K
Rp = 2.98 [1.13] Re
a = 0.9701 [0.2603] AU
Ag = 22288.44 [13731.03] [1.62σ]
Teffp = 5214 [645] K [7.65σ]

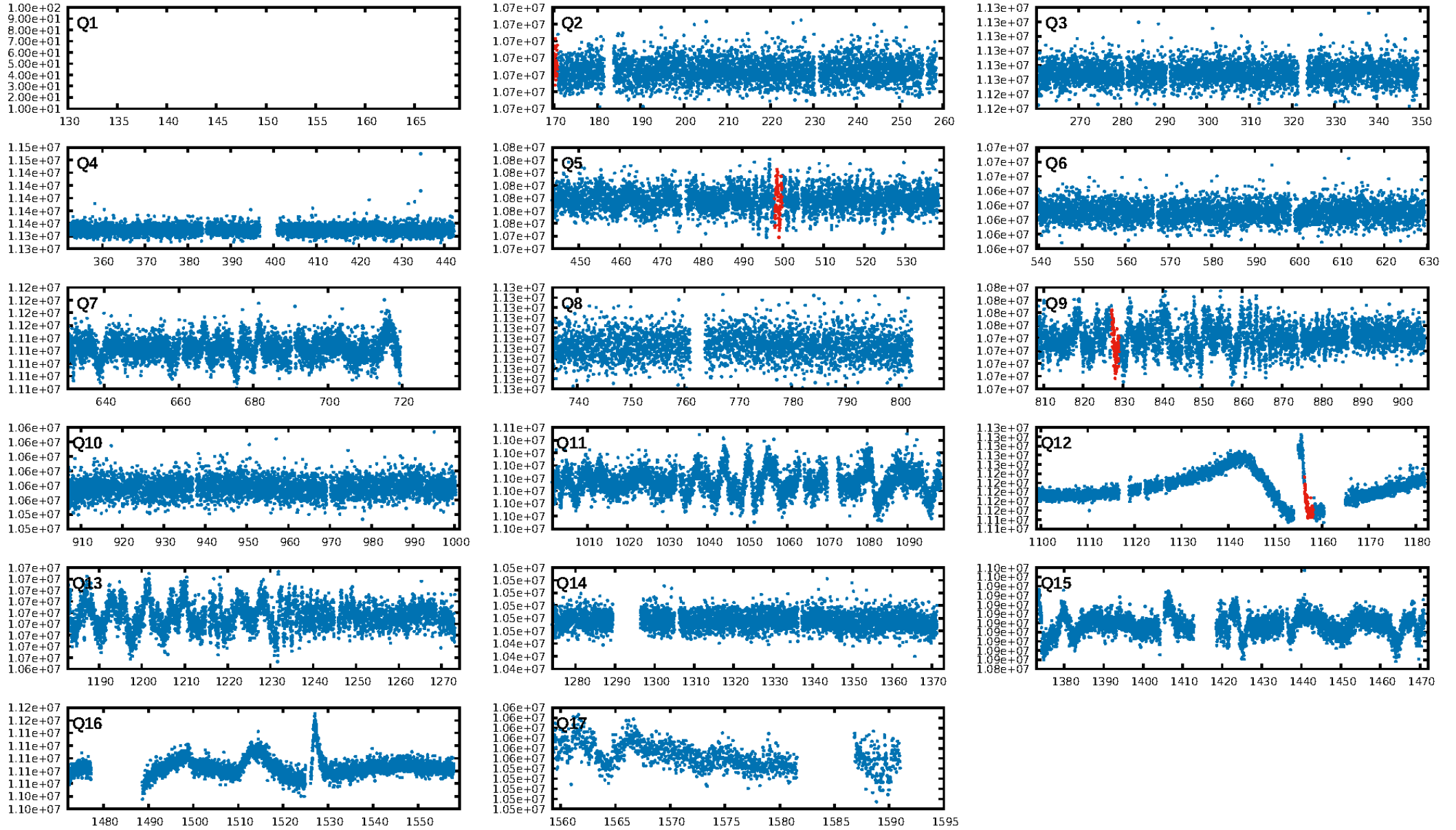
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 79.0%
Bootstrap-pfa: 2.06e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.5898
Centroid-sig: 97.9%
Centroid-so: 1.156 arcsec [0.47σ]
OotOffset-rm: 2.406 arcsec [8.40σ]
KicOffset-rm: 2.268 arcsec [8.34σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

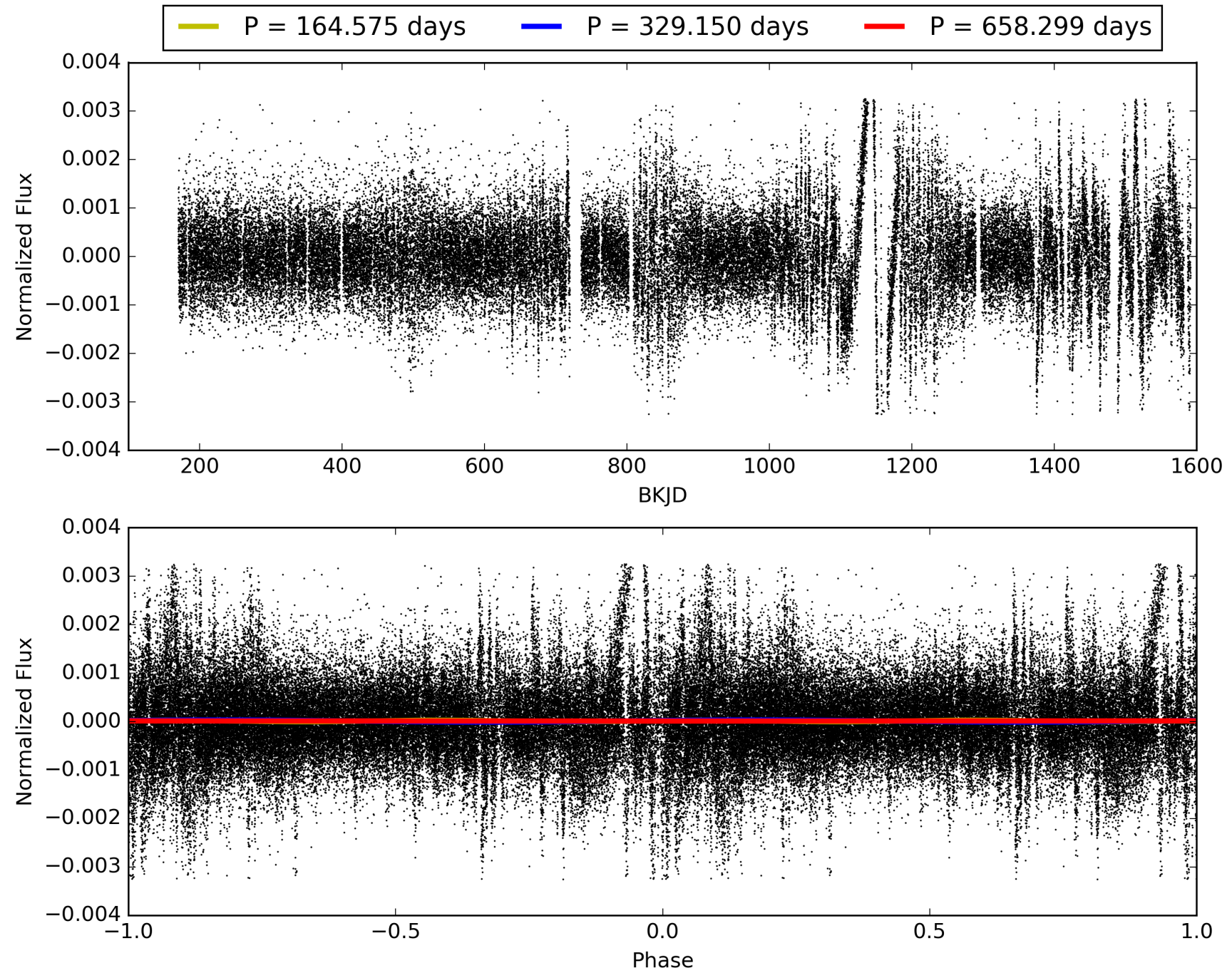
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:57:09 Z

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

TCE 009710876-01, PDC Light Curves

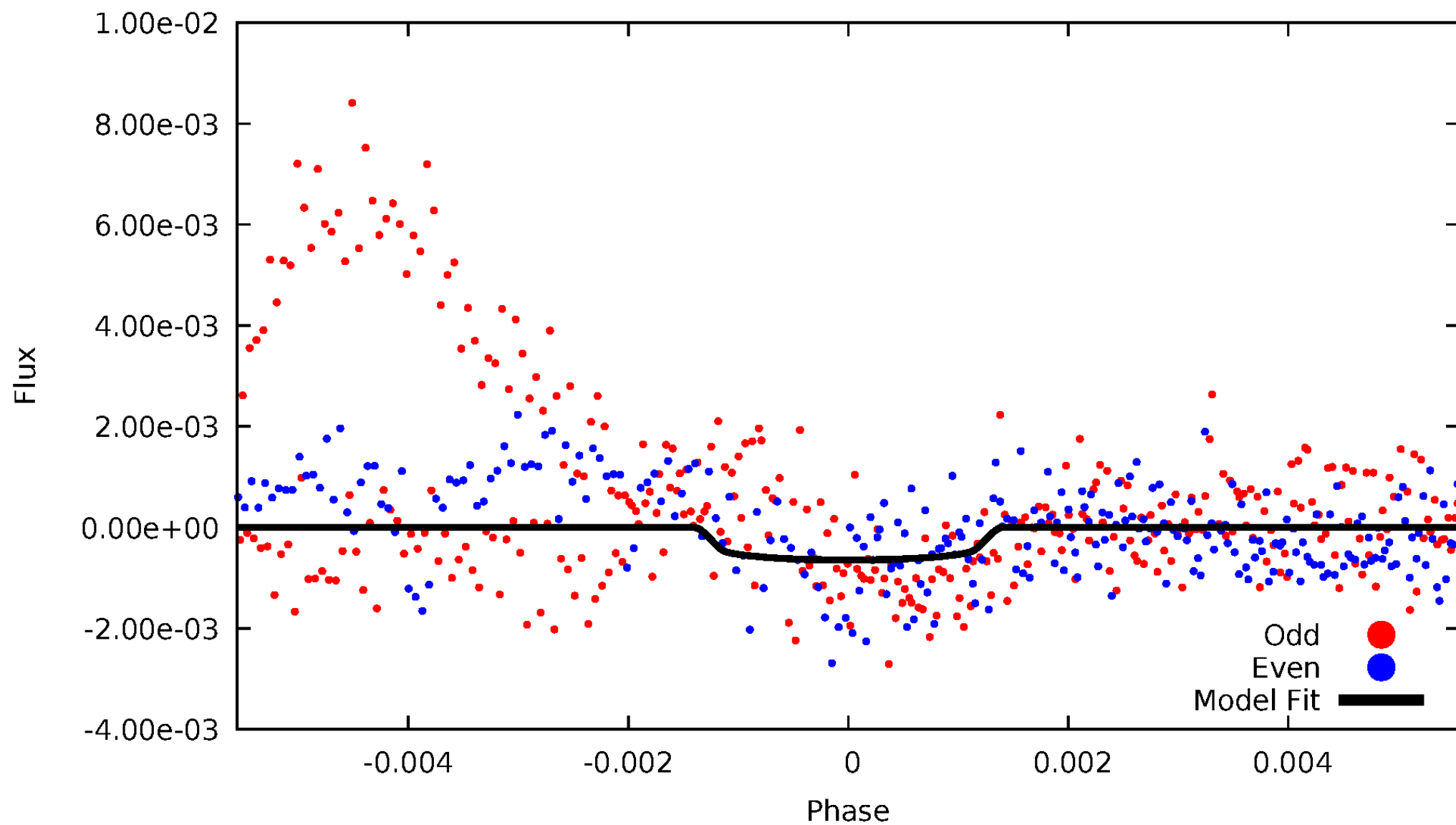


TCE 009710876-01



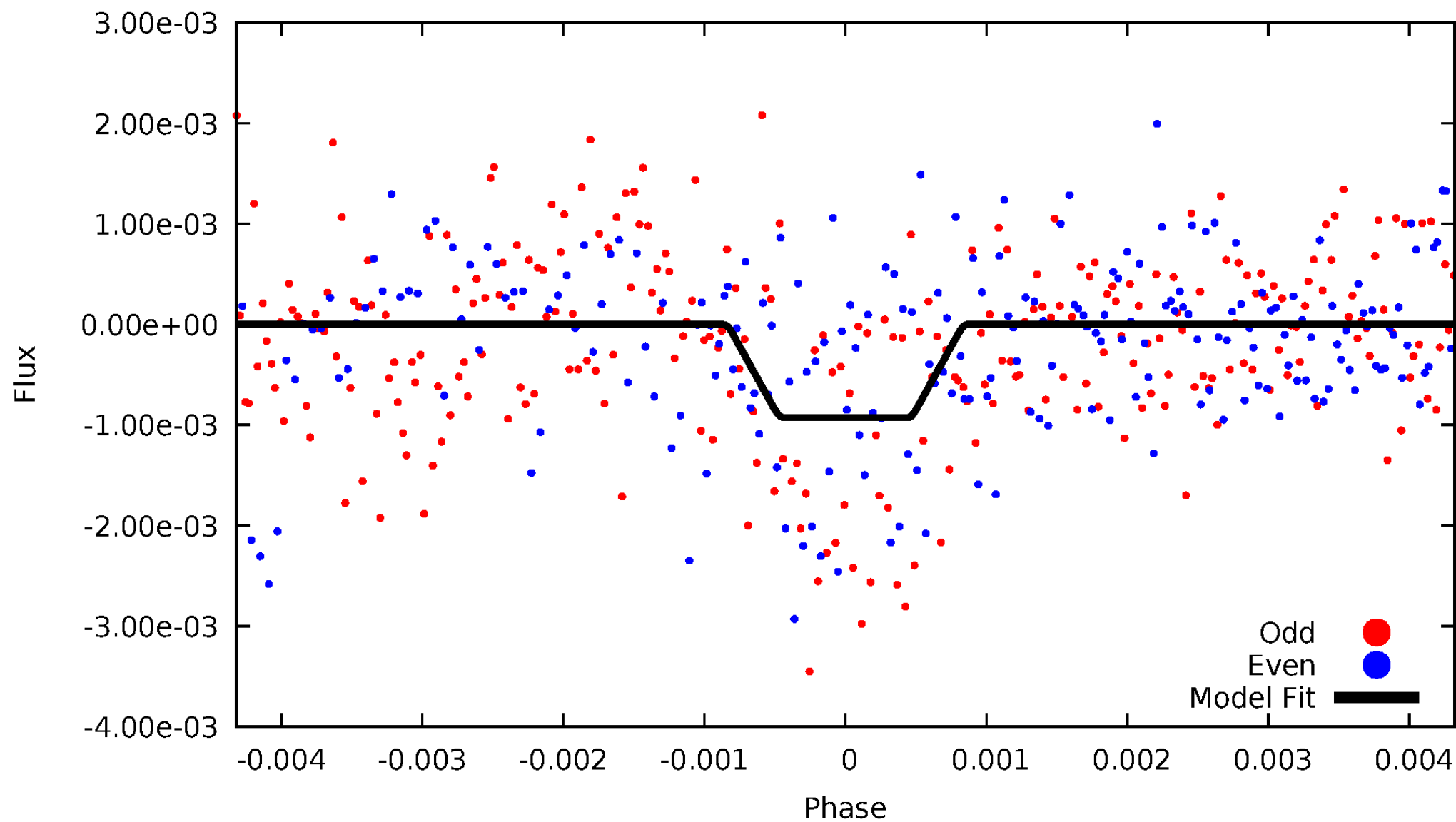
DV Odd/Even

TCE 009710876-01



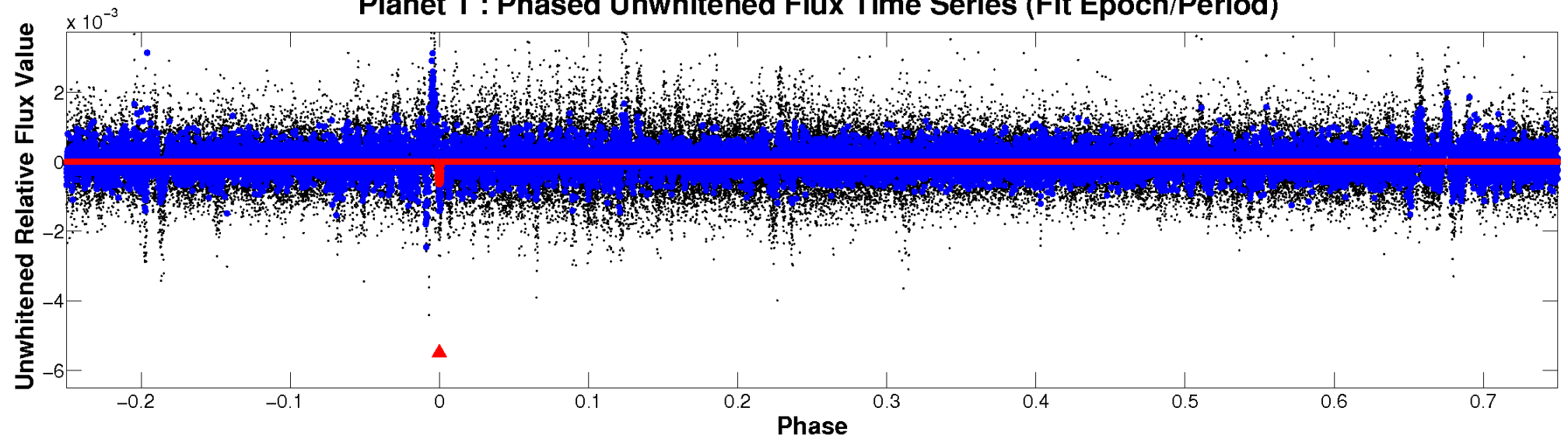
ALT Odd/Even

TCE 009710876-01

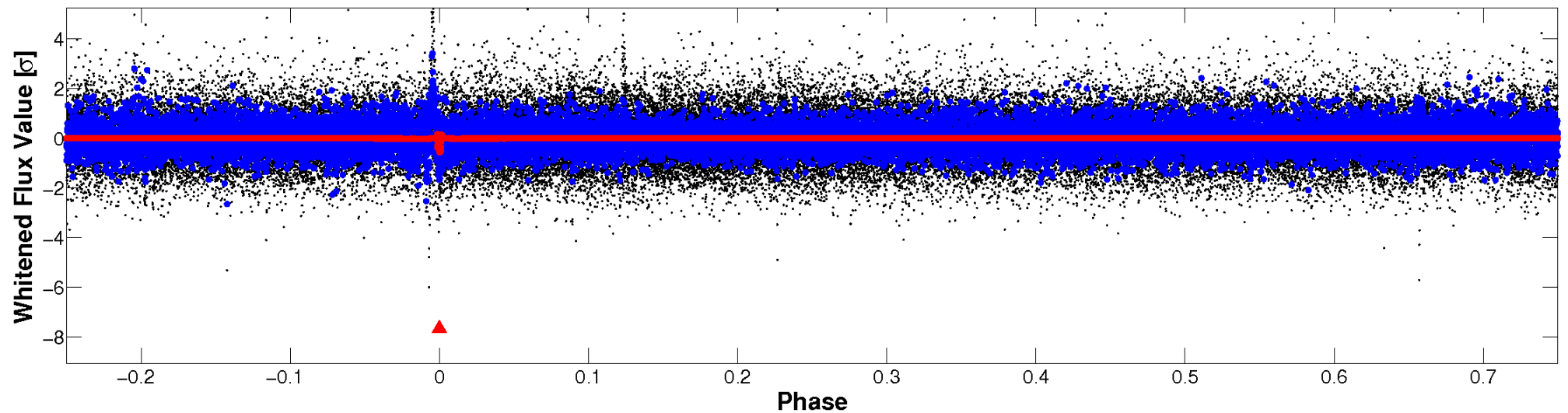


Non-Whitened Vs. Whitened Light Curve

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

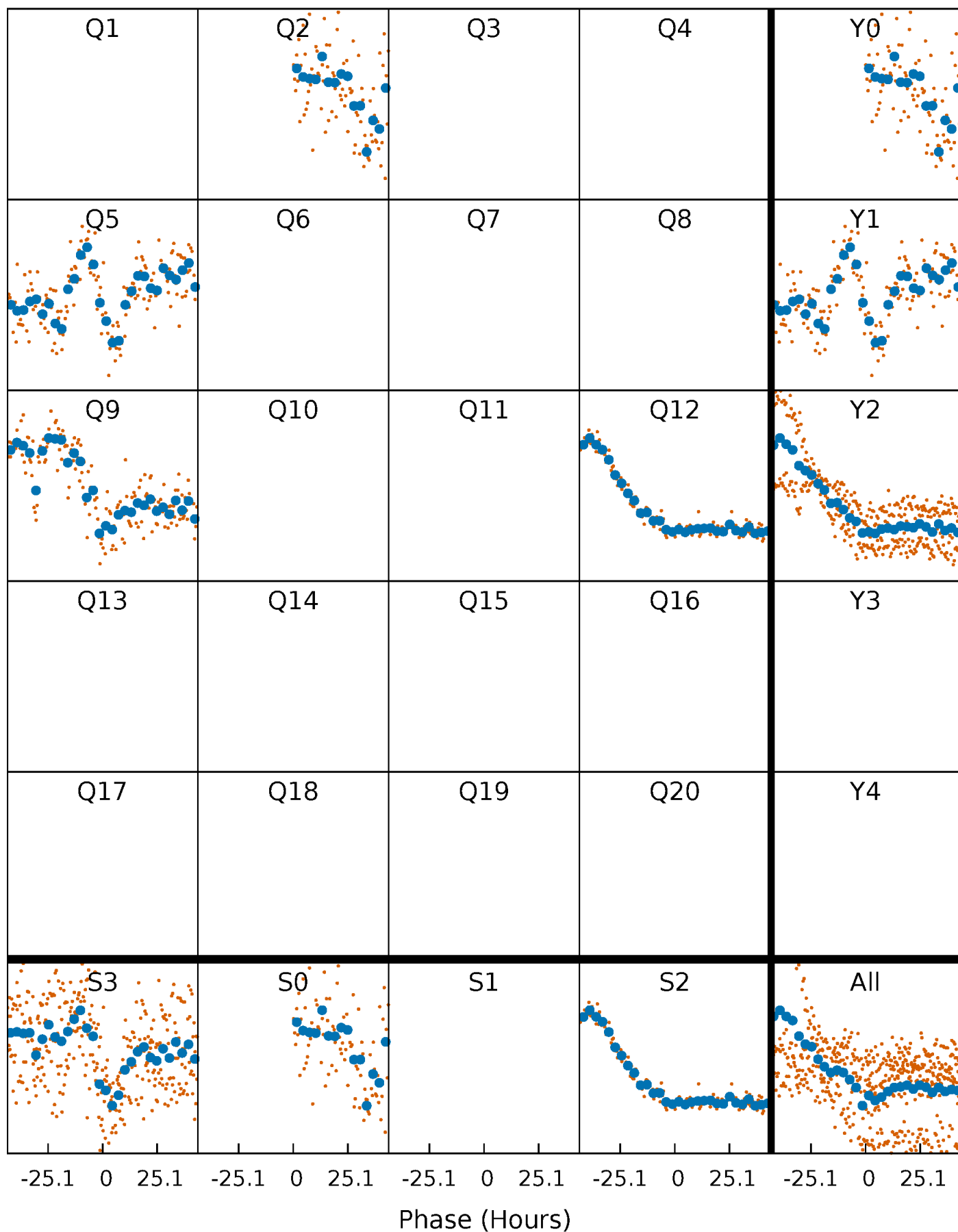


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 009710876-01 P=329.149663 Days $T_0=169.760104$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009710876-01 P=329.149663 Days $T_0=169.760104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

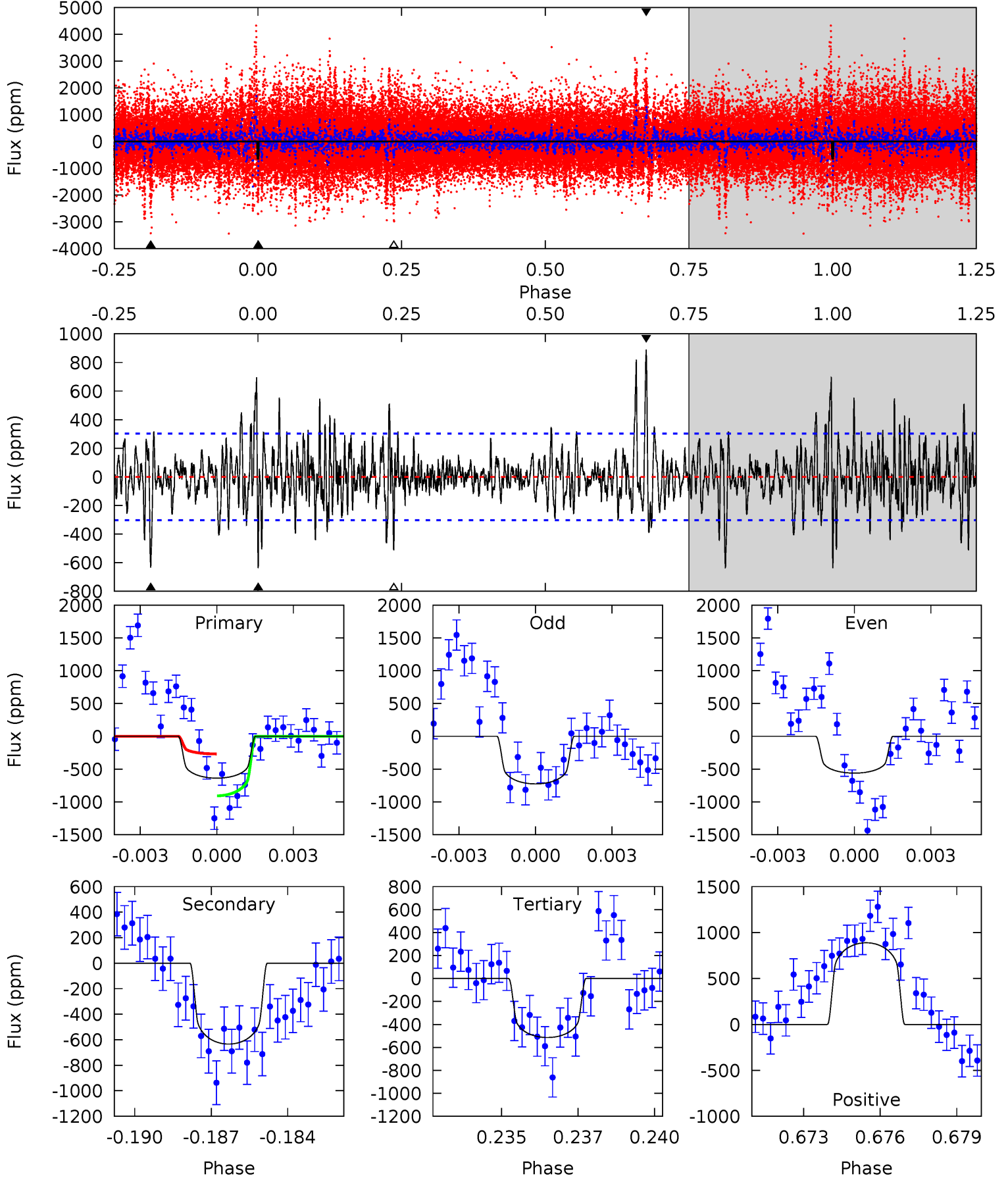
TCE 009710876-01 P=329.014372 Days $T_0=170.100593$ (BKJD)



DV Model-Shift Uniqueness Test

009710876-01, P = 329.149663 Days, E = 169.760104 Days

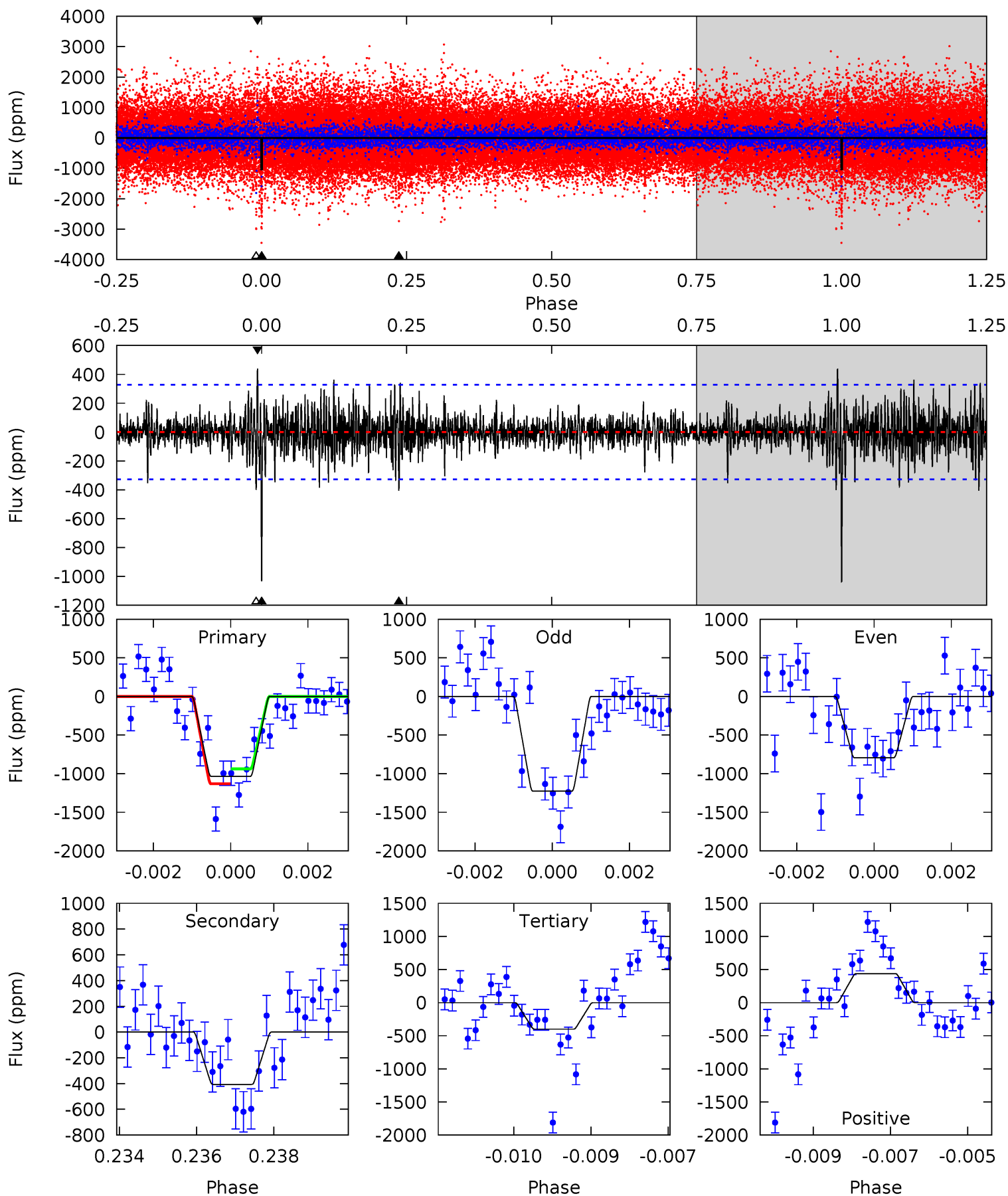
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	11.0	8.94	15.5	5.27	2.99	2.59	2.16	-4.36	2.09	-4.43	1.39	1.00	0.58	5.52



Alt Model-Shift Uniqueness Test

009710876-01, P = 329.014372 Days, E = 170.100593 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	6.64	6.53	7.15	5.35	3.13	1.45	10.4	9.75	0.11	-0.51	3.56	1.05	0.30	1.58



Stellar Parameters For KIC 009710876

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6089^{+193}_{-214}	$4.468^{+0.054}_{-0.216}$	$0.070^{+0.250}_{-0.350}$	$1.024^{+0.324}_{-0.108}$	$1.125^{+0.135}_{-0.166}$	$1.475^{+0.421}_{-0.778}$
	+3%/-4%	+1%/-5%	+357%/-500%	+32%/-11%	+12%/-15%	+29%/-53%
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 009710876-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-634 ± 57	$3.11^{+0.85}_{-0.67}$	395^{+29}_{-22}	5931^{+729}_{-568}	33145^{+20117}_{-12715}
Alt.	-406 ± 61	$3.56^{+0.83}_{-0.73}$	393^{+28}_{-19}	5014^{+515}_{-381}	16172^{+9547}_{-5775}

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 $A_{obs} \gg 1.0$

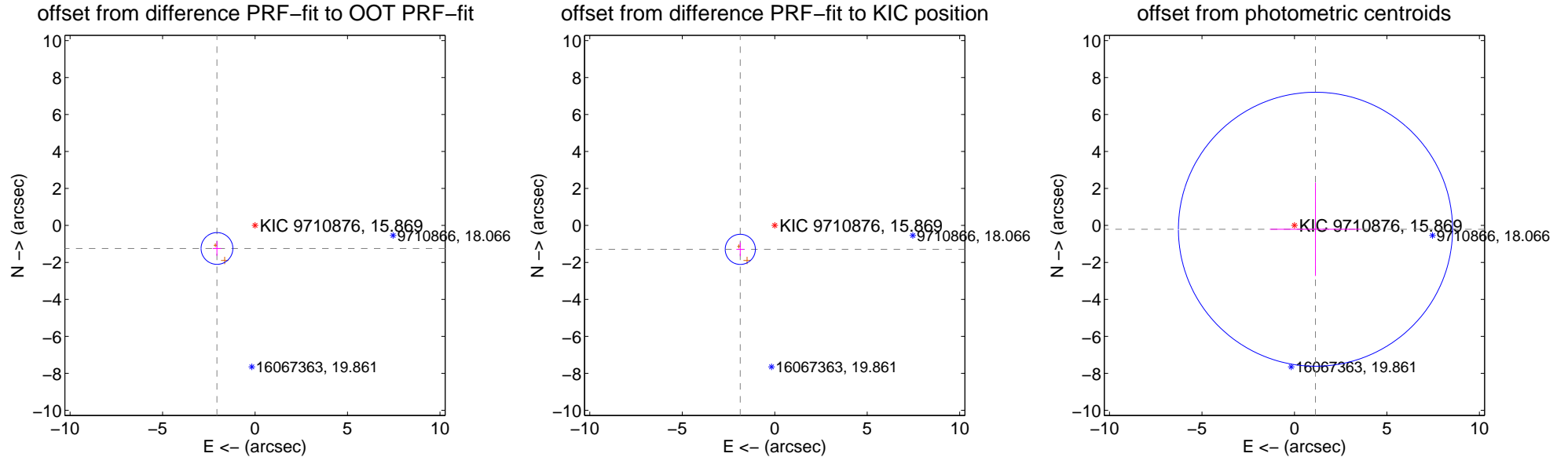
DV Centroid Data

Supplemental centroid analysis for 009710876-01. Kepler magnitude: 15.87. Transit SNR 5.87

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.406 ± 0.286	8.40	2.058 ± 0.233	-1.245 ± 0.397
PRF-fit source offset from KIC position	2.268 ± 0.272	8.34	1.863 ± 0.210	-1.294 ± 0.369
photometric centroid source offset	1.16 ± 2.47	0.47	-1.14 ± 2.47	-0.21 ± 2.52

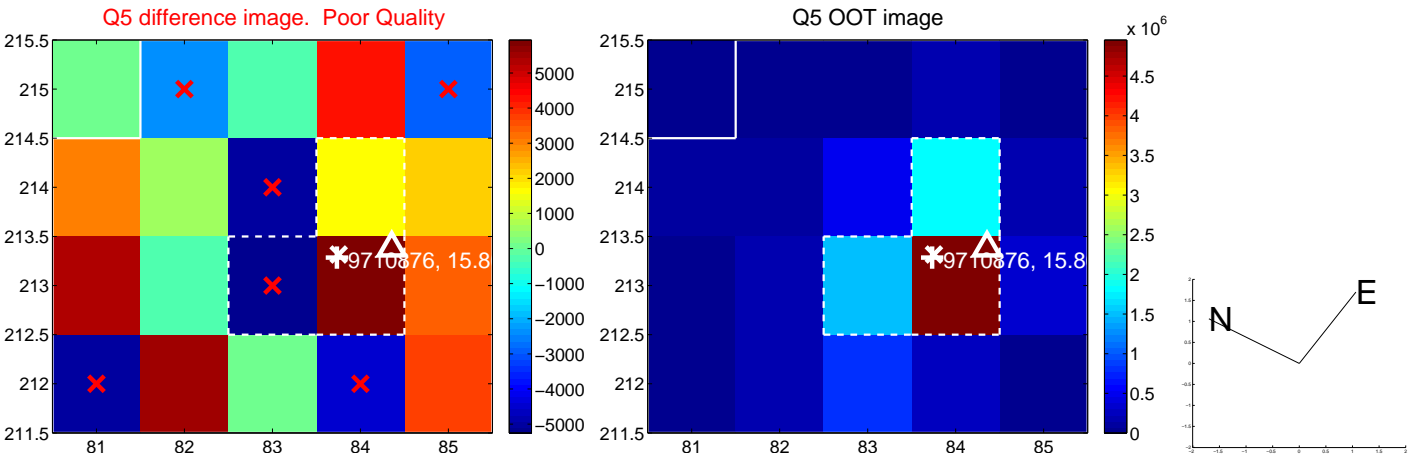


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

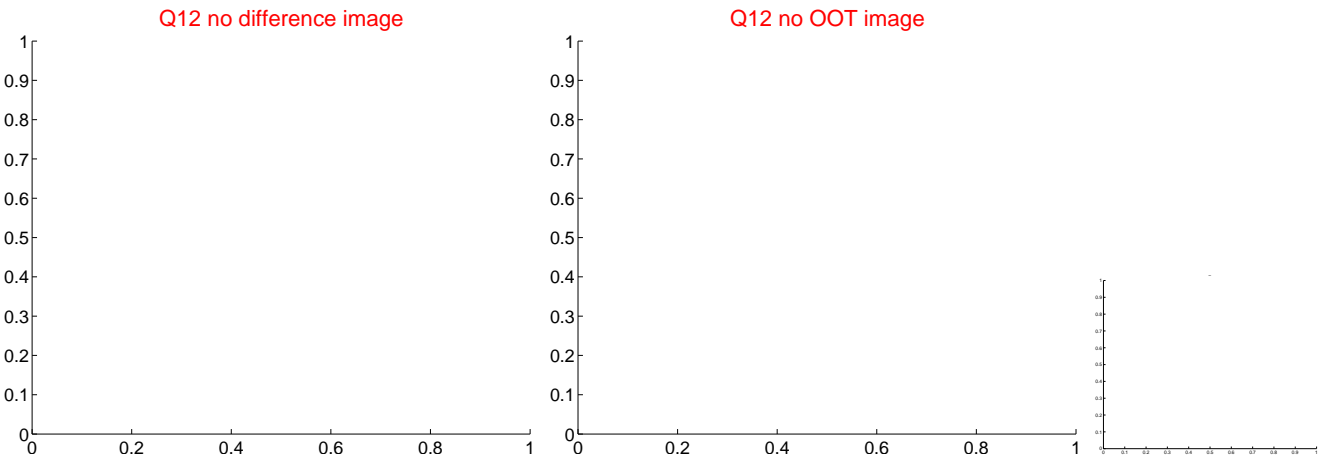
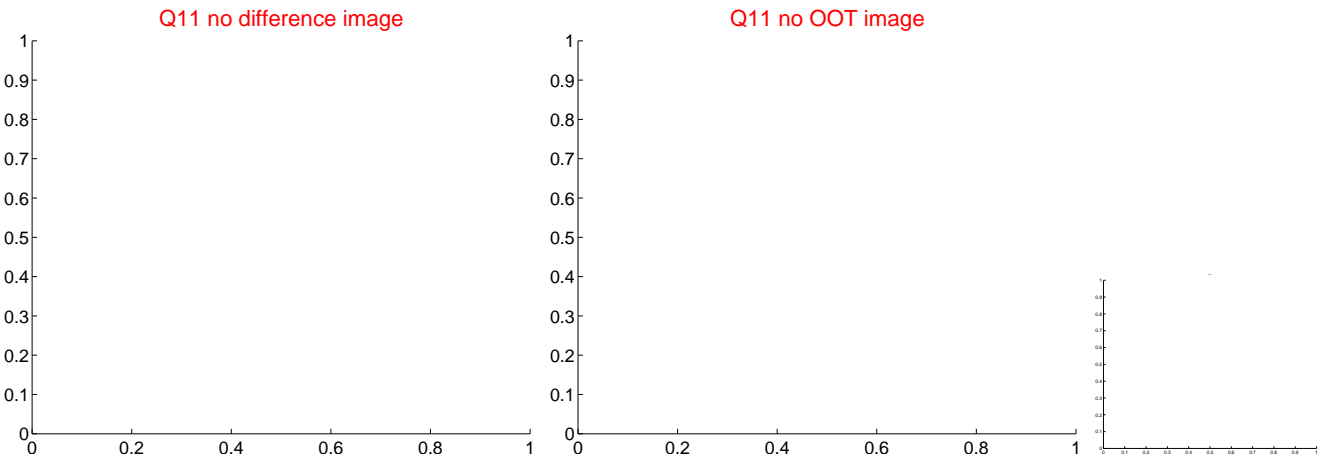
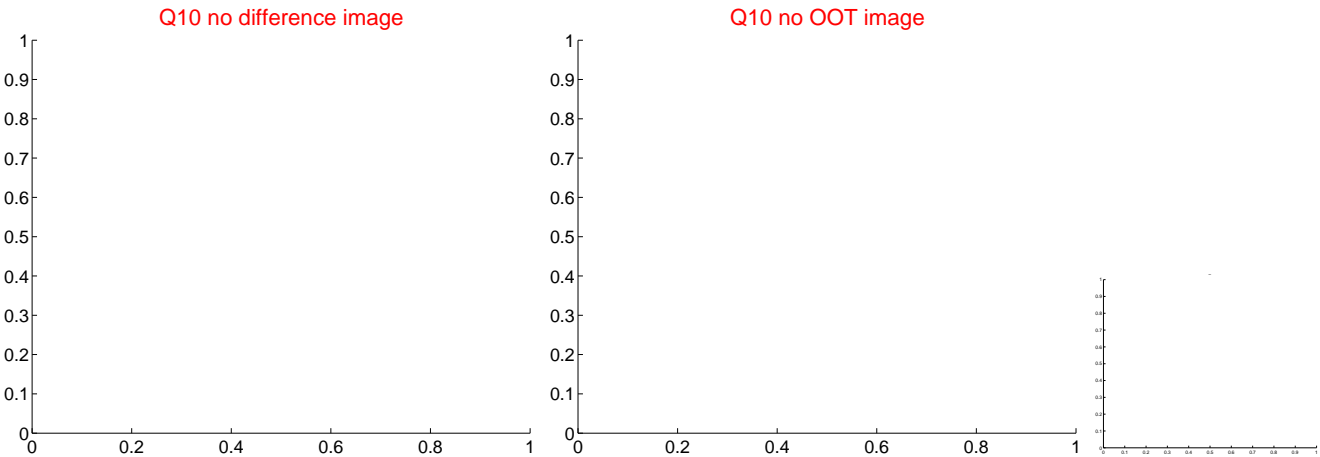
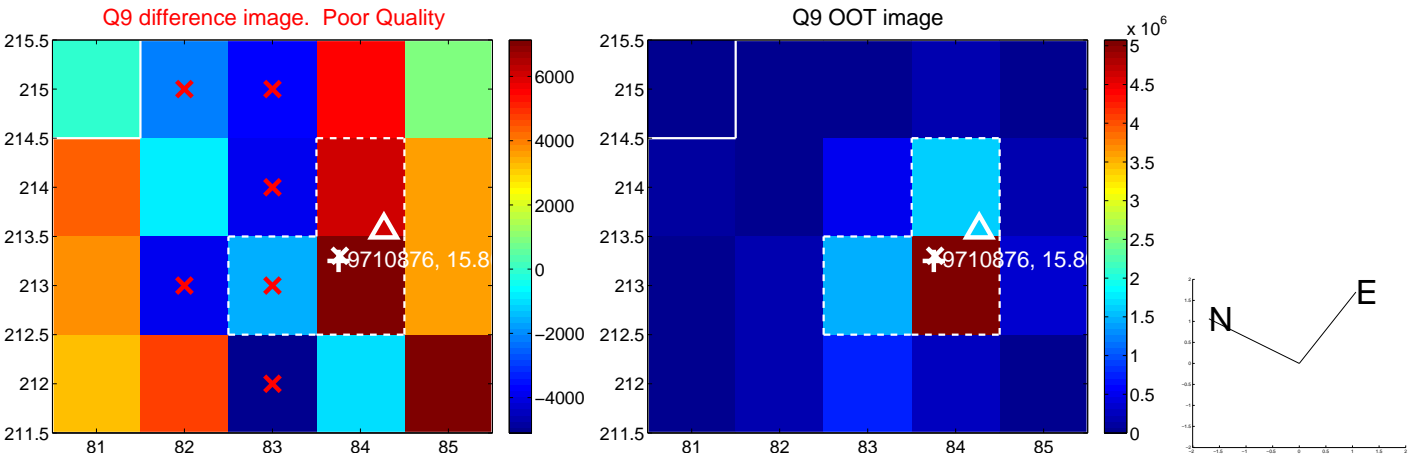
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



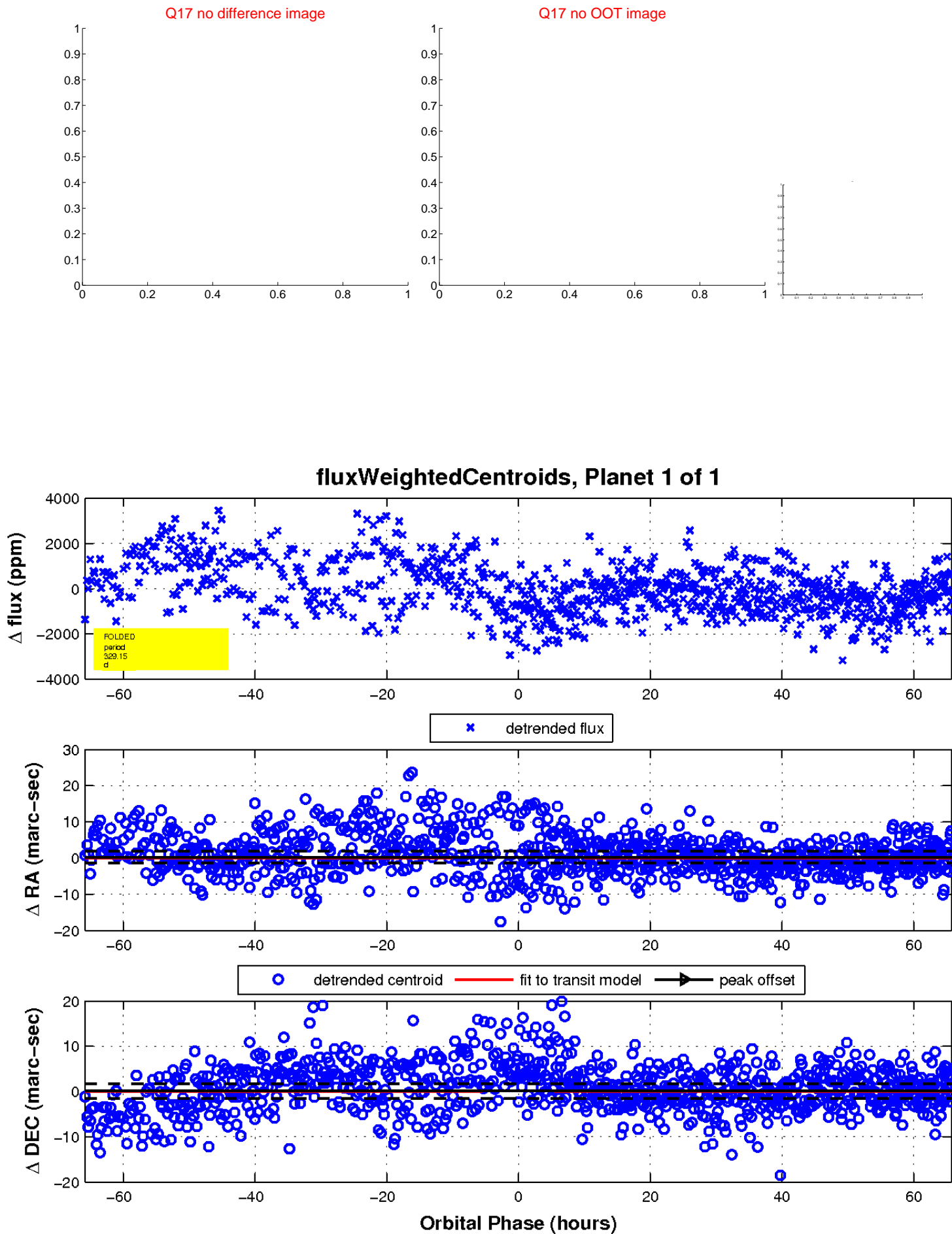
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

