

KIC 009210874

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})
009210874-01	OBS	No	368.065512	171.838902	998.6	13.604	10.2	12.4	0.82	5413	3.32	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009210874-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—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.

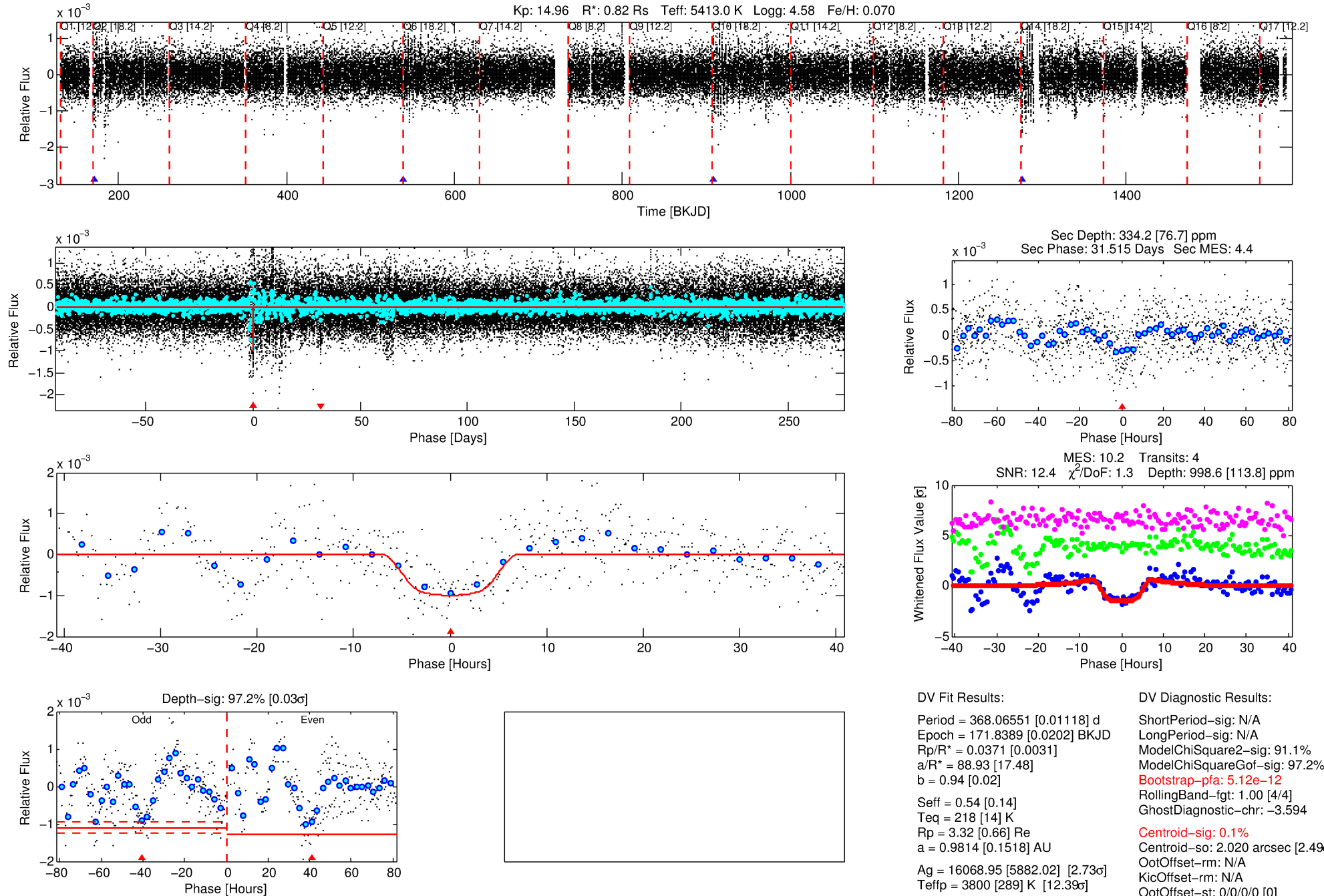
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009210874-01

No Significant Match Found

DV One-Page Summary

KIC: 9210874 Candidate: 1 of 1 Period: 368.066 d



DV Fit Results:

Period = 368.06551 [0.01118] d
Epoch = 171.8389 [0.0202] BKJD
Rp/R* = 0.0371 [0.0031]
a/R* = 88.93 [17.48]
b = 0.94 [0.02]
Seff = 0.54 [0.14]
Teq = 218 [14] K
Rp = 3.32 [0.66] Re
a = 0.9814 [0.1518] AU
Ag = 16068.95 [5882.02] [2.73σ]
Teffp = 3800 [289] K [12.39σ]

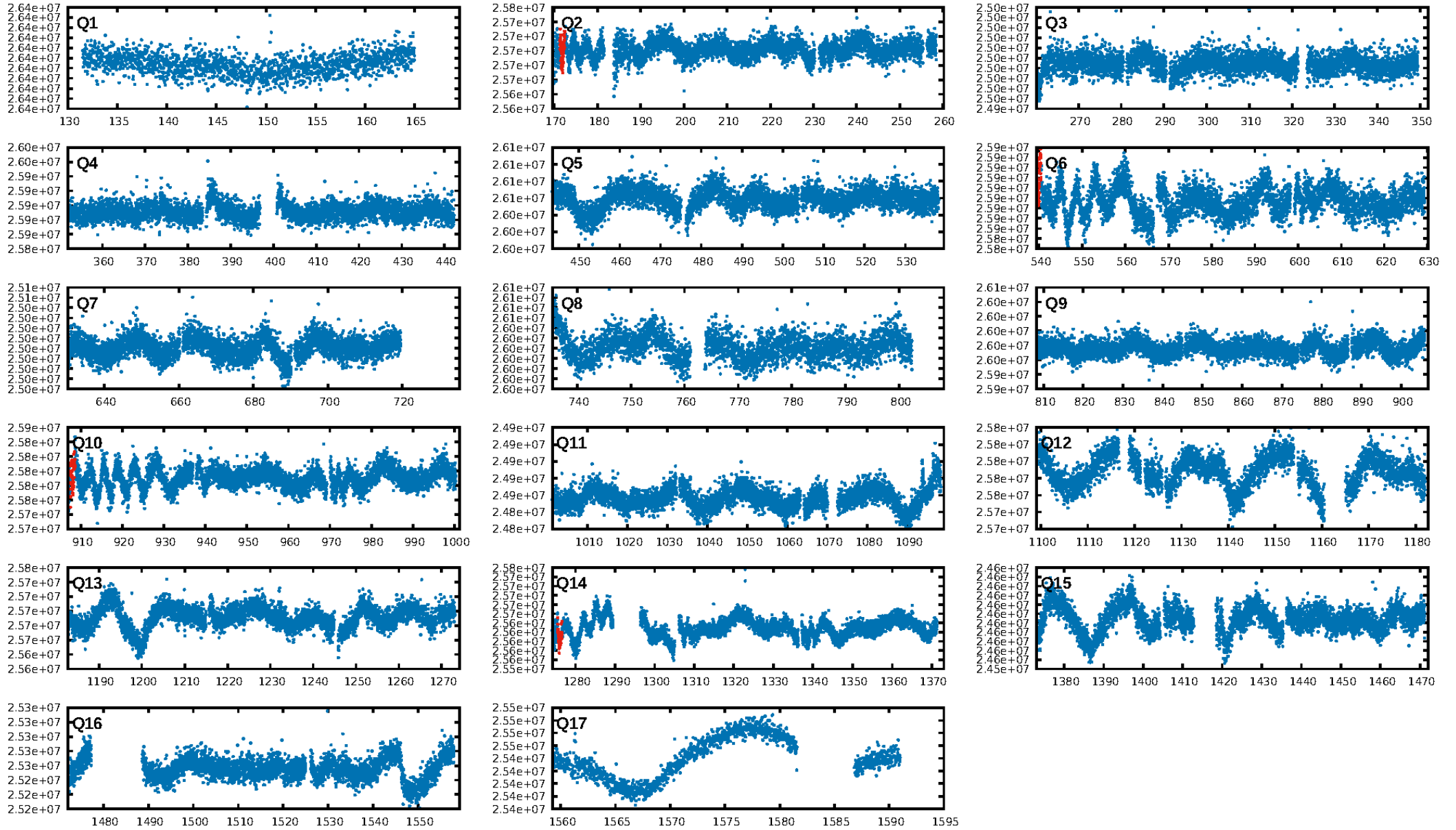
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 91.1%
ModelChiSquareGof-sig: 97.2%
Bootstrap-pfa: 5.12e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -3.594
Centroid-sig: 0.1%
Centroid-so: 2.020 arcsec [2.49σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

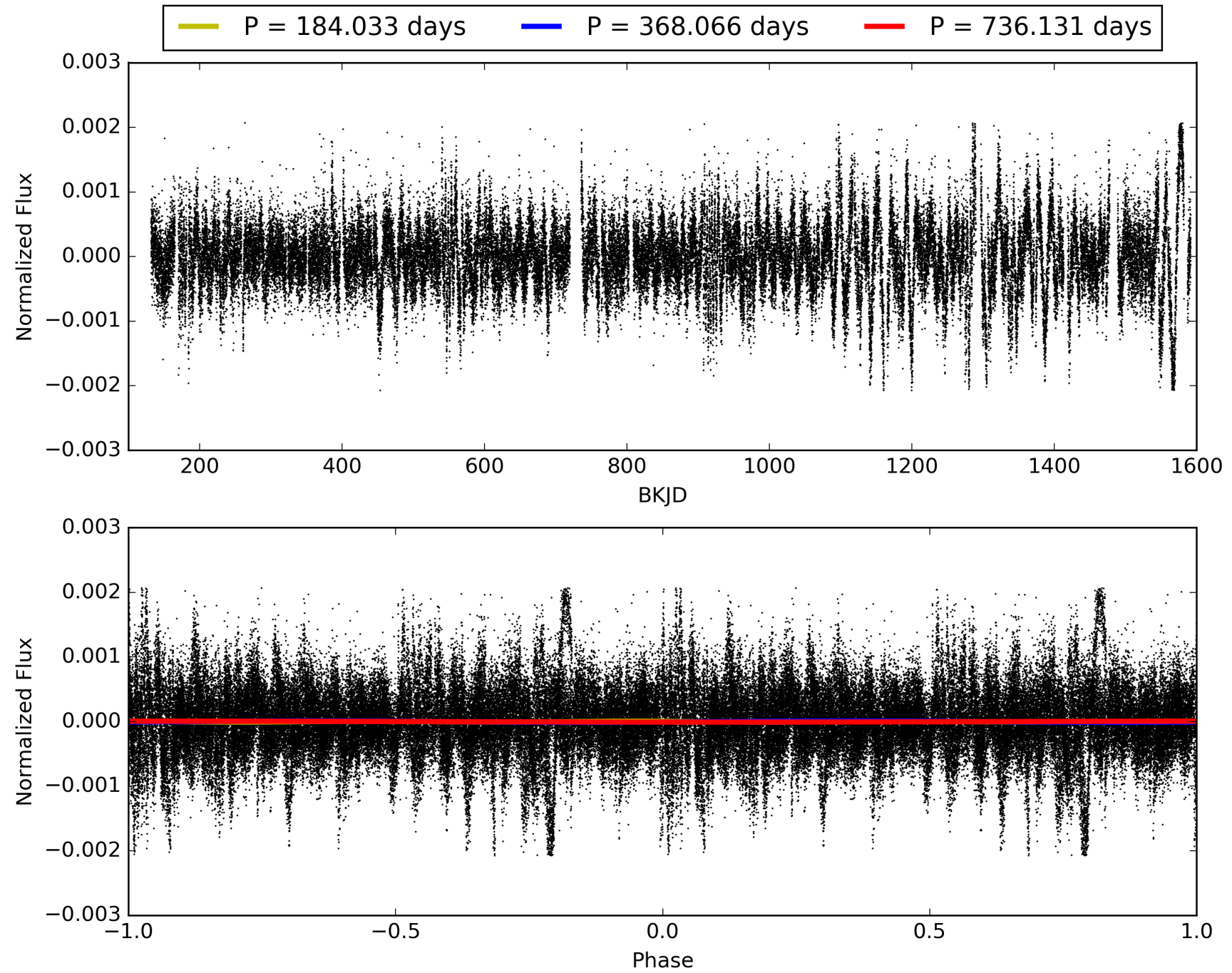
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:15:51 Z

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

TCE 009210874-01, PDC Light Curves

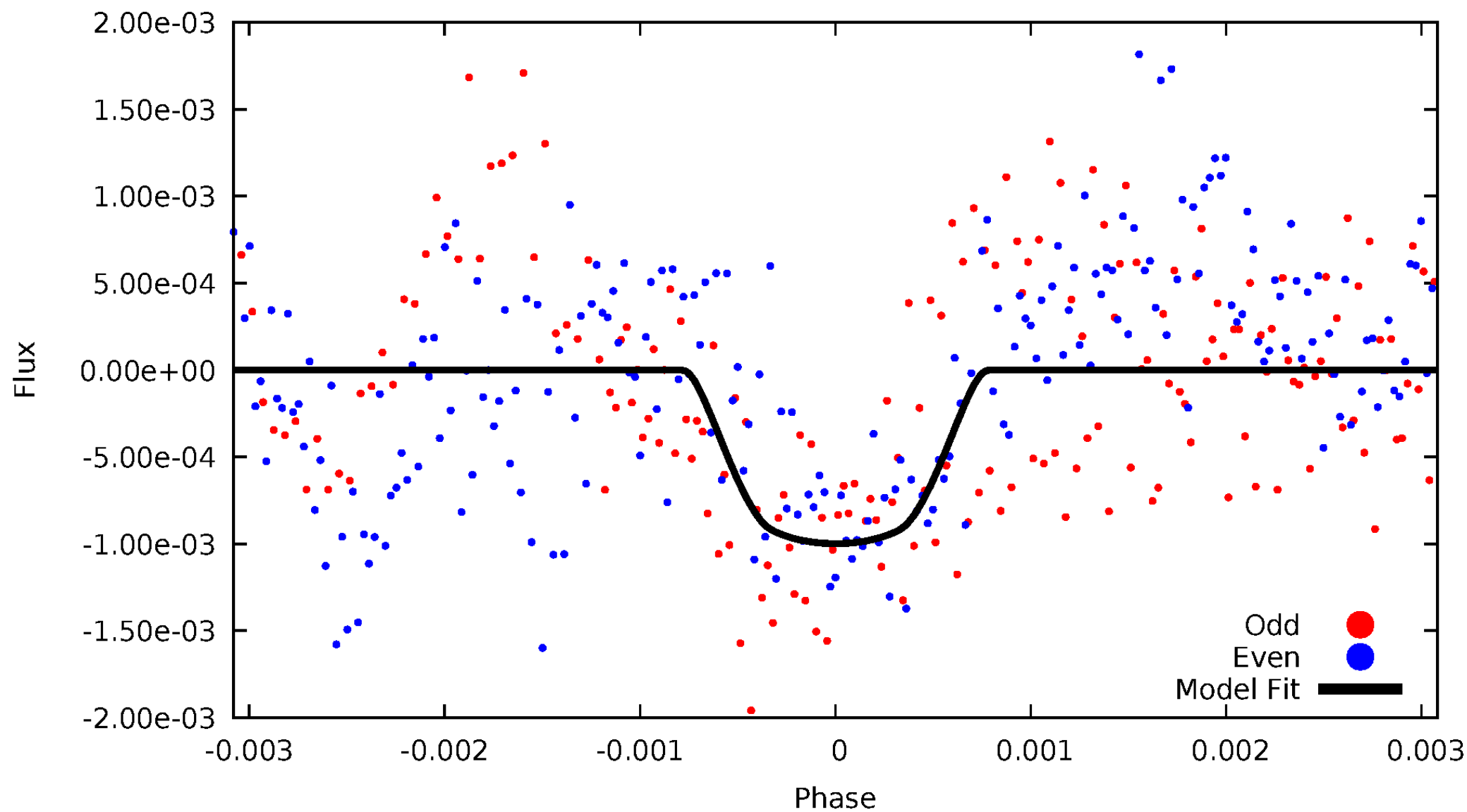


TCE 009210874-01



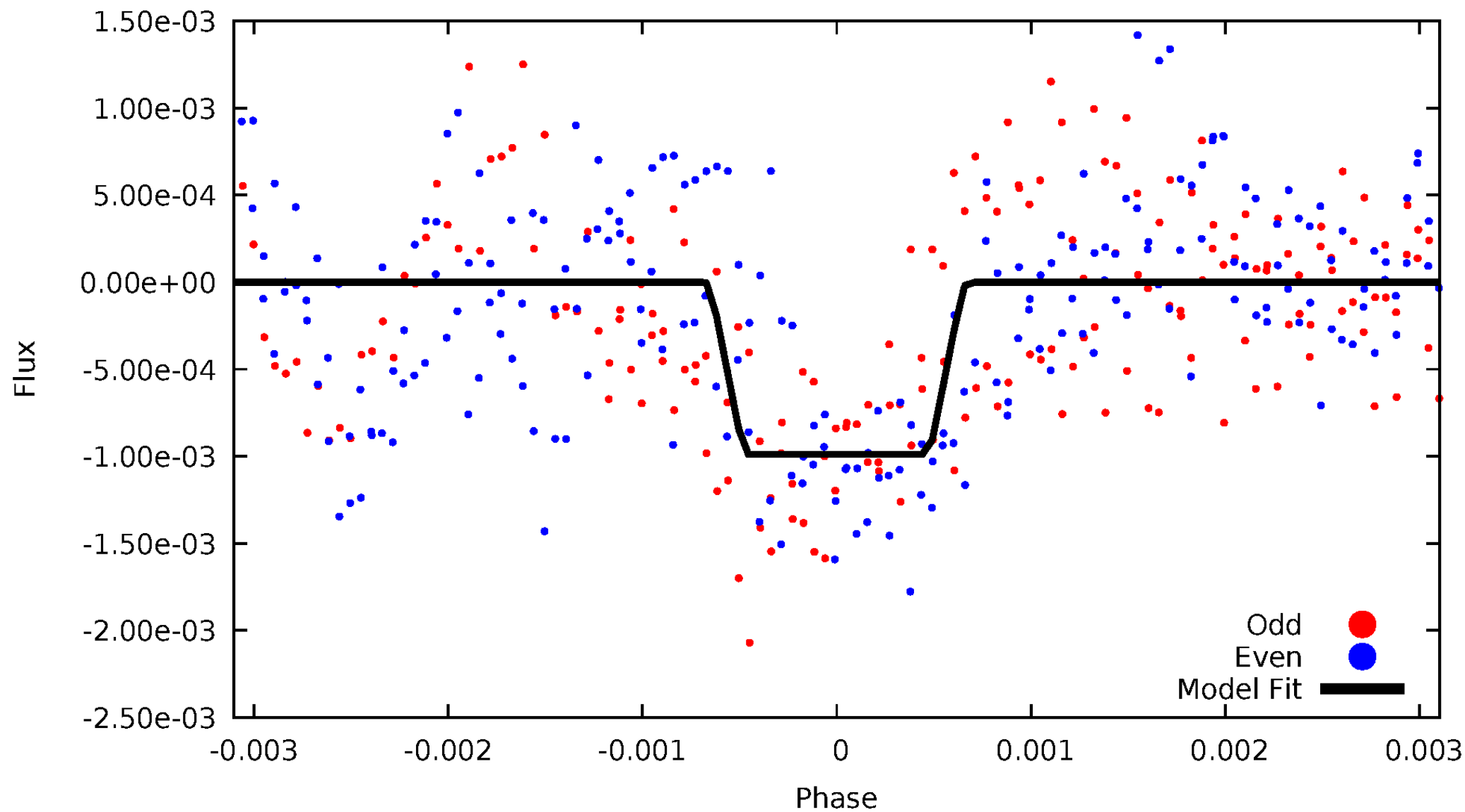
DV Odd/Even

TCE 009210874-01



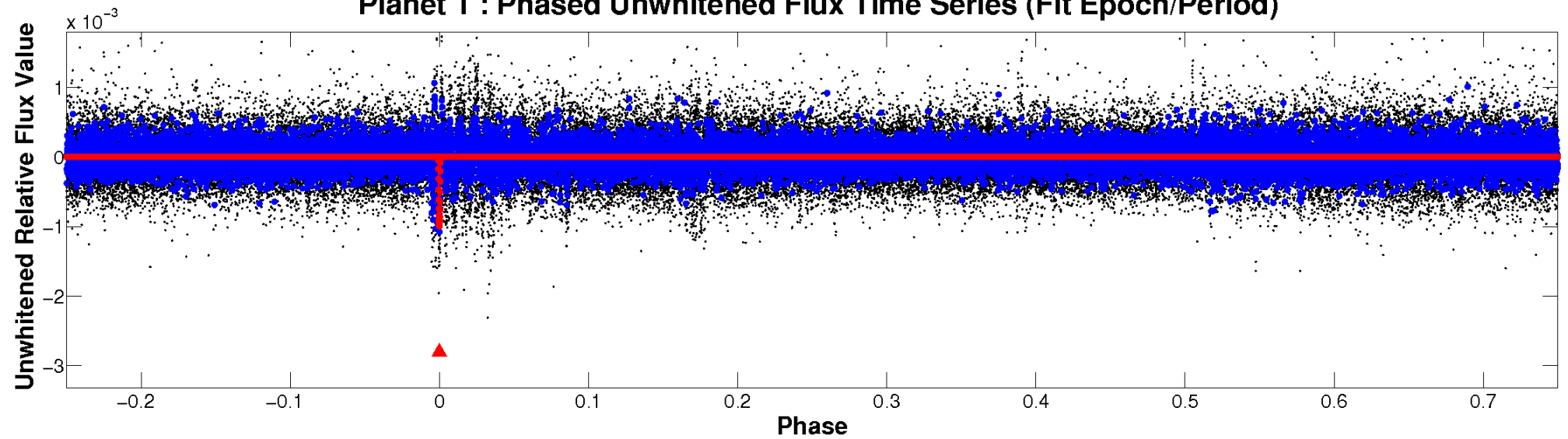
ALT Odd/Even

TCE 009210874-01

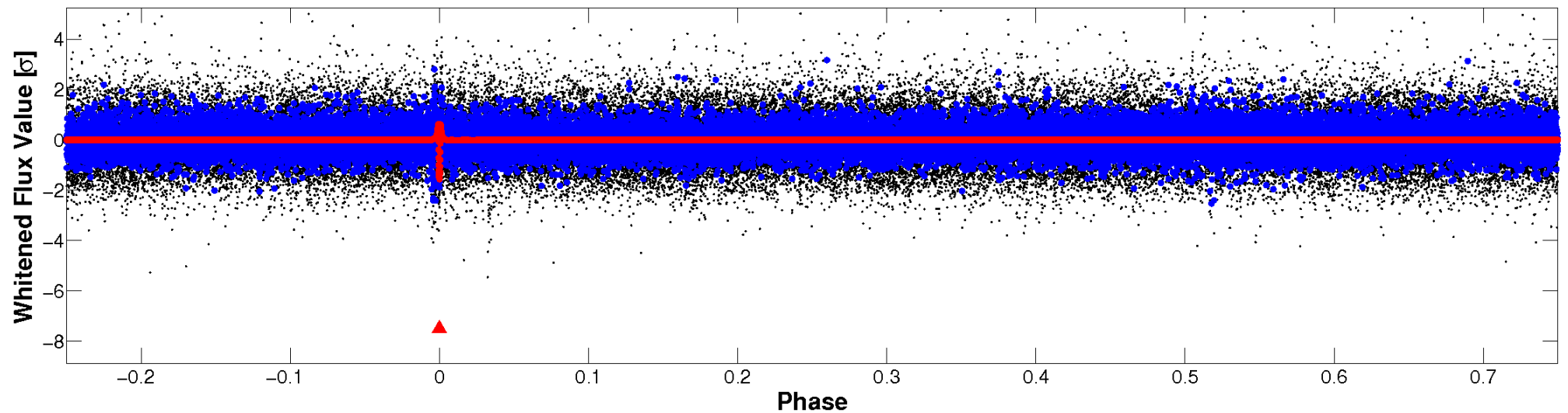


Non-Whitened Vs. Whitened Light Curve

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

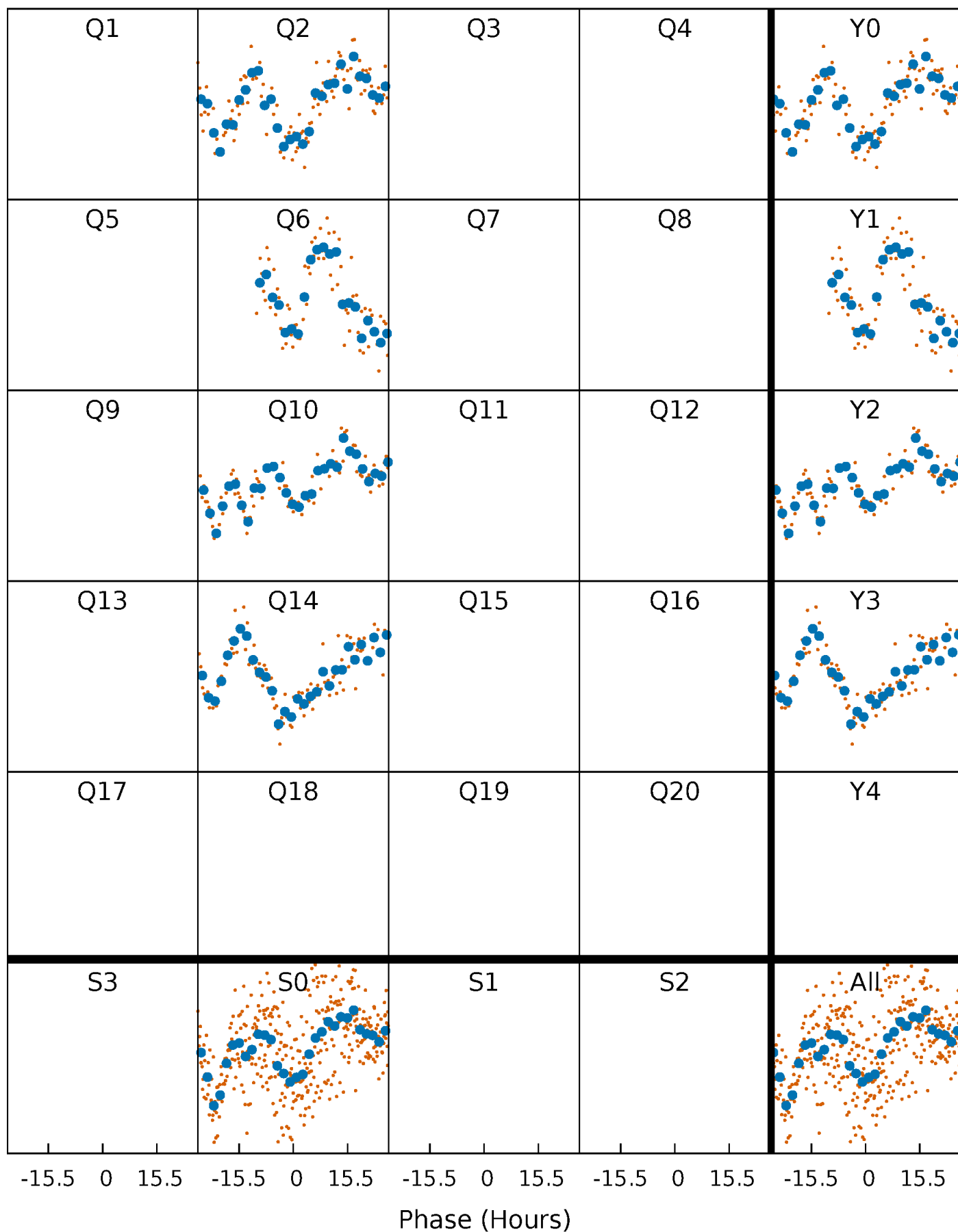


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



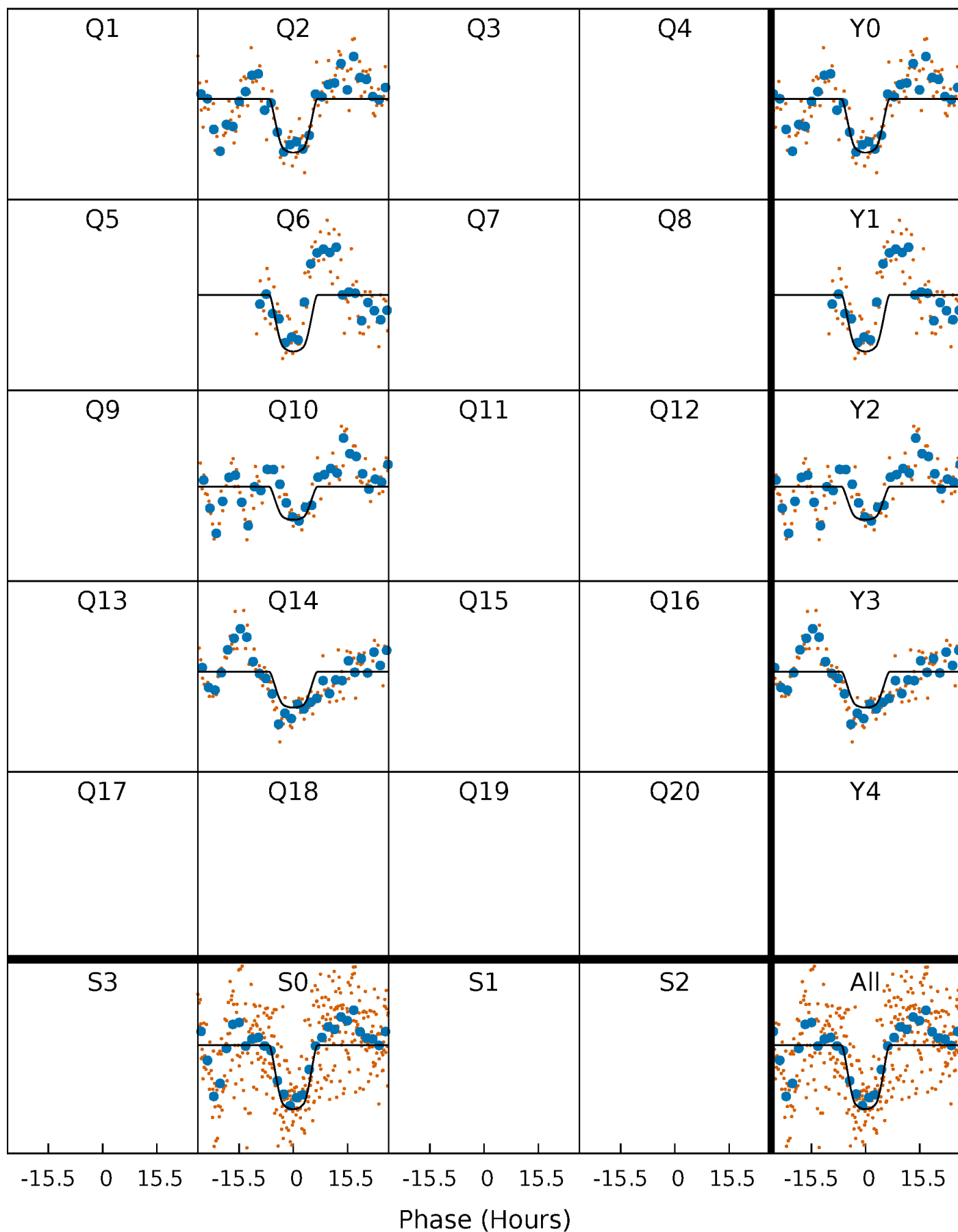
PDC Quarter-Phased Transit Curves

TCE 009210874-01 P=368.065512 Days $T_0=171.838902$ (BKJD)



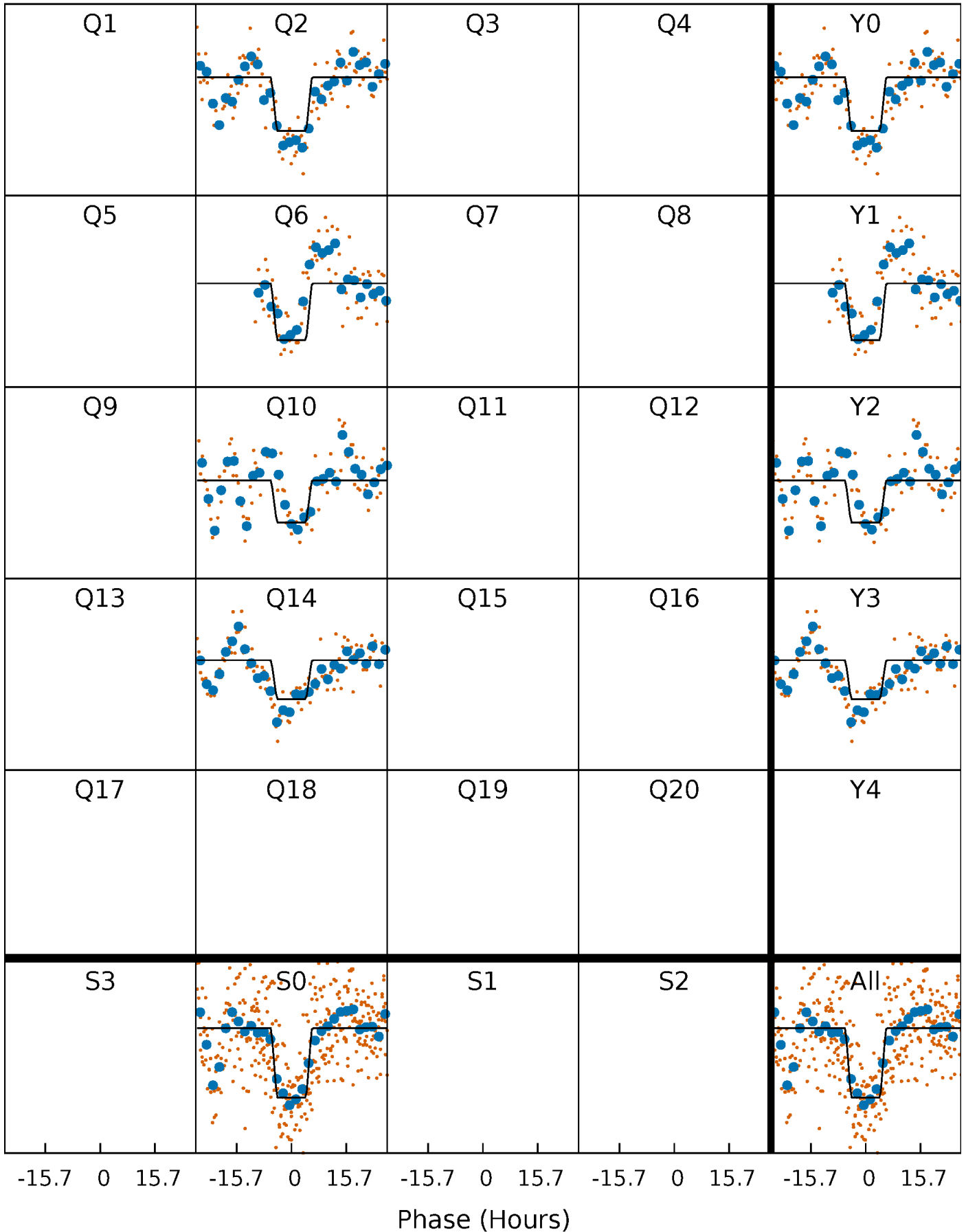
DV Quarter-Phased Transit Curves

TCE 009210874-01 P=368.065512 Days $T_0=171.838902$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

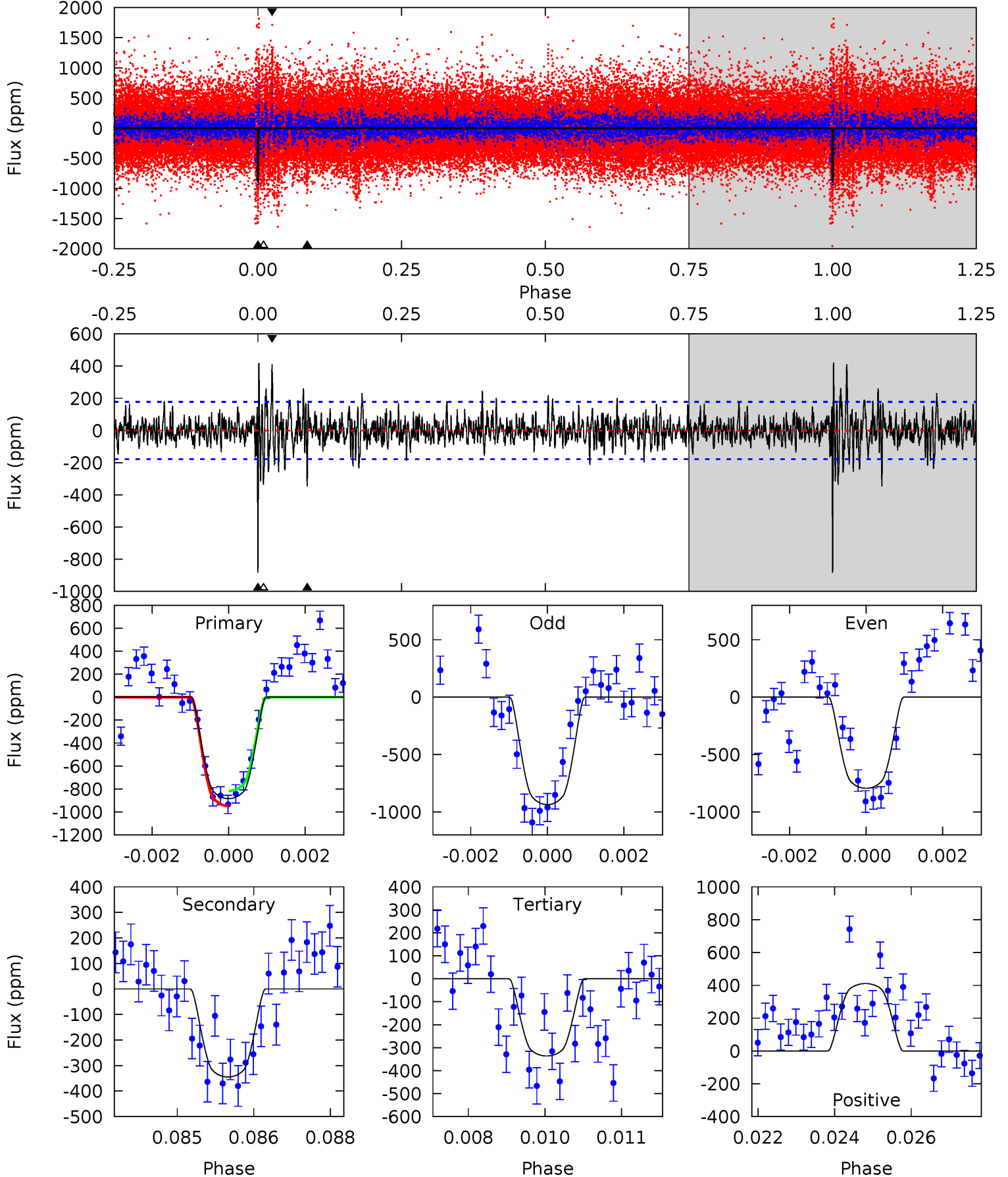
TCE 009210874-01 P=368.069716 Days $T_0=171.832511$ (BKJD)



DV Model-Shift Uniqueness Test

009210874-01, P = 368.065512 Days, E = 171.838902 Days

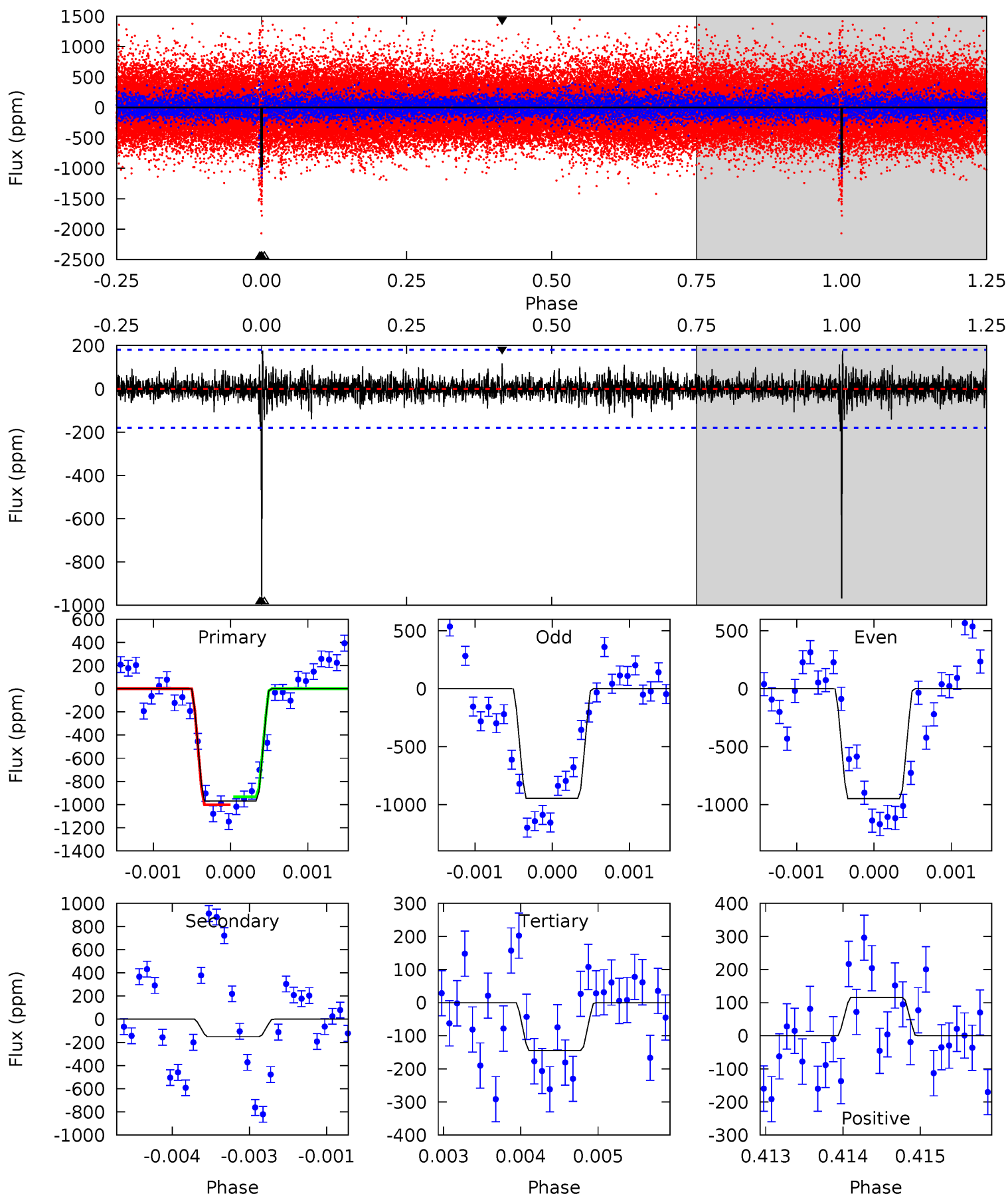
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	10.4	10.1	12.4	5.37	3.16	2.11	16.5	14.3	0.26	-1.99	2.15	1.10	0.32	1.99



Alt Model-Shift Uniqueness Test

009210874-01, P = 368.069716 Days, E = 171.832511 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	4.51	4.33	3.47	5.40	3.21	0.96	24.7	25.5	0.17	1.04	0.06	1.00	0.15	1.02



Stellar Parameters For KIC 009210874

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5413^{+144}_{-144}	$4.579^{+0.032}_{-0.128}$	$0.070^{+0.200}_{-0.350}$	$0.820^{+0.147}_{-0.063}$	$0.931^{+0.063}_{-0.108}$	$2.383^{+0.387}_{-0.868}$
	+3%/-3%	+1%/-3%	+286%/-500%	+18%/-8%	+7%/-12%	+16%/-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 009210874-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-345 ± 33	$3.40^{+0.42}_{-0.36}$	310^{+15}_{-11}	4096^{+179}_{-164}	15399^{+3960}_{-3208}
Alt.	-151 ± 33	$2.88^{+0.42}_{-0.33}$	311^{+14}_{-12}	3757^{+195}_{-193}	9257^{+3349}_{-2688}

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

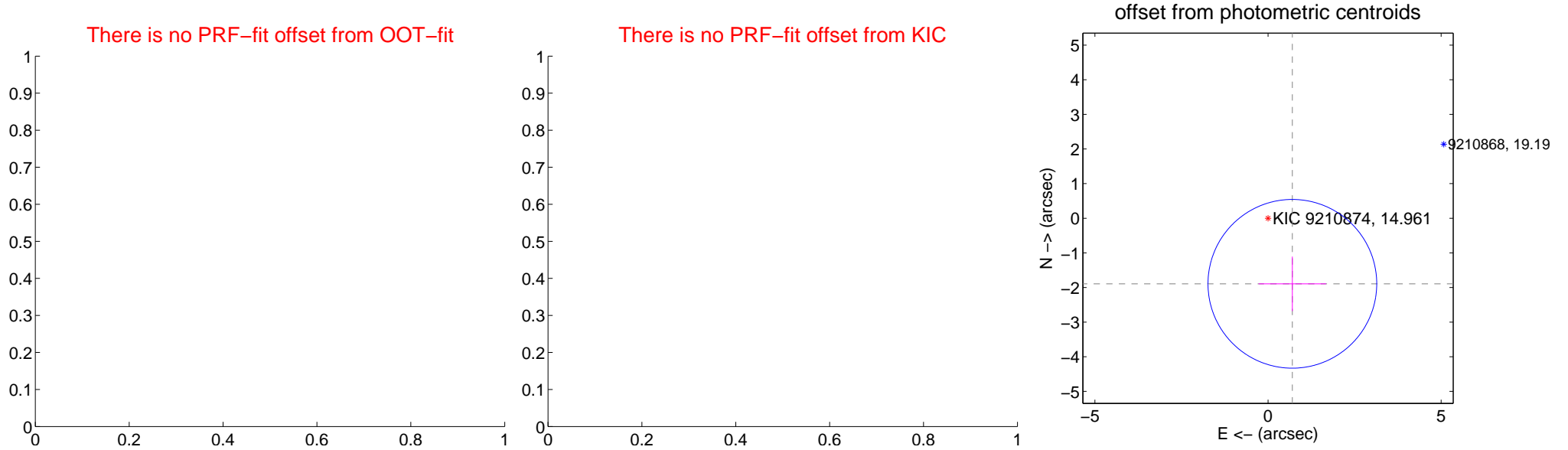
DV Centroid Data

Supplemental centroid analysis for 009210874-01. Kepler magnitude: 14.96. Transit SNR 12.41

There are 0 quarters with good PRF difference image offsets

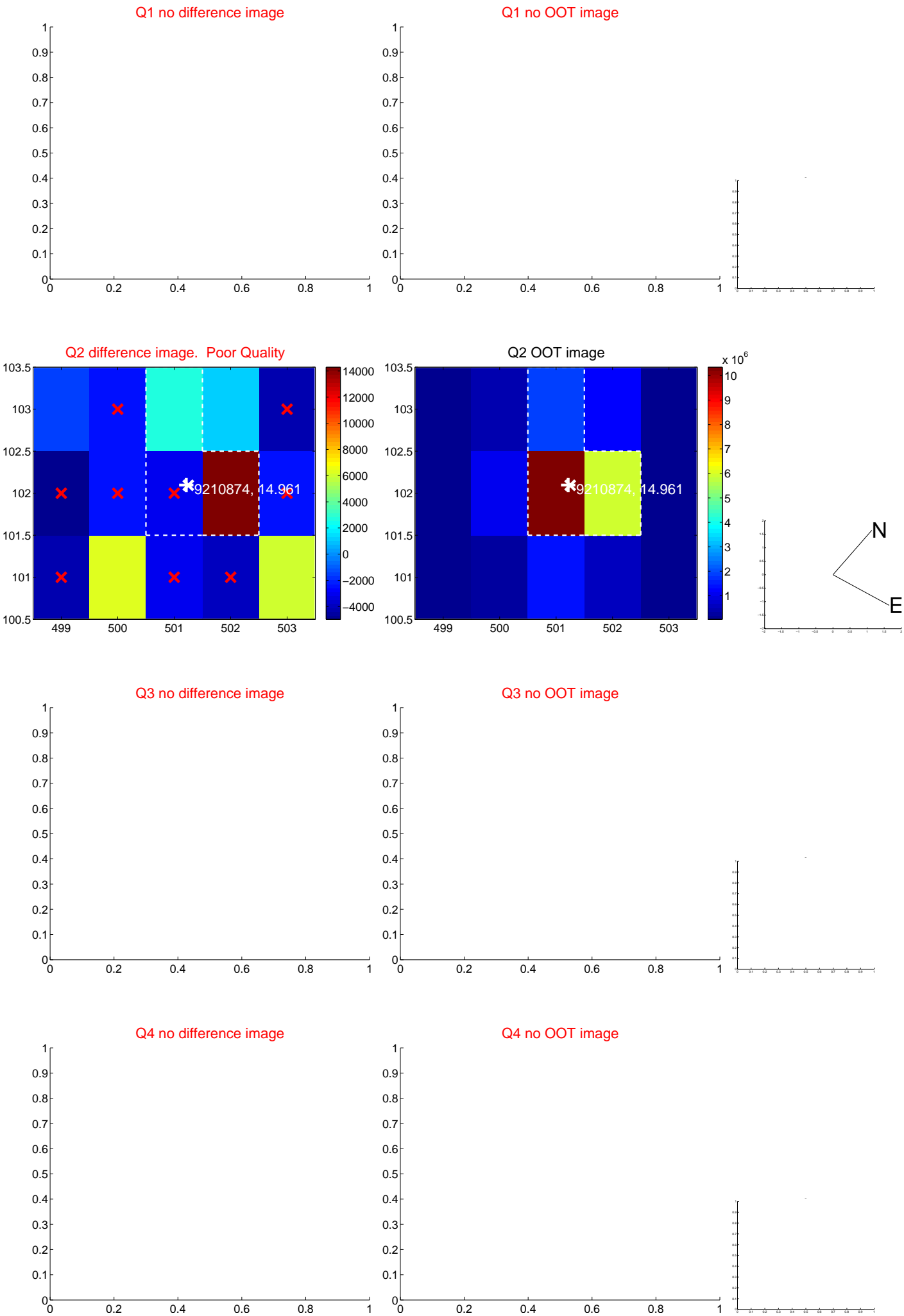
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.02 ± 0.81	2.49	-0.70 ± 0.97	-1.89 ± 0.79



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.



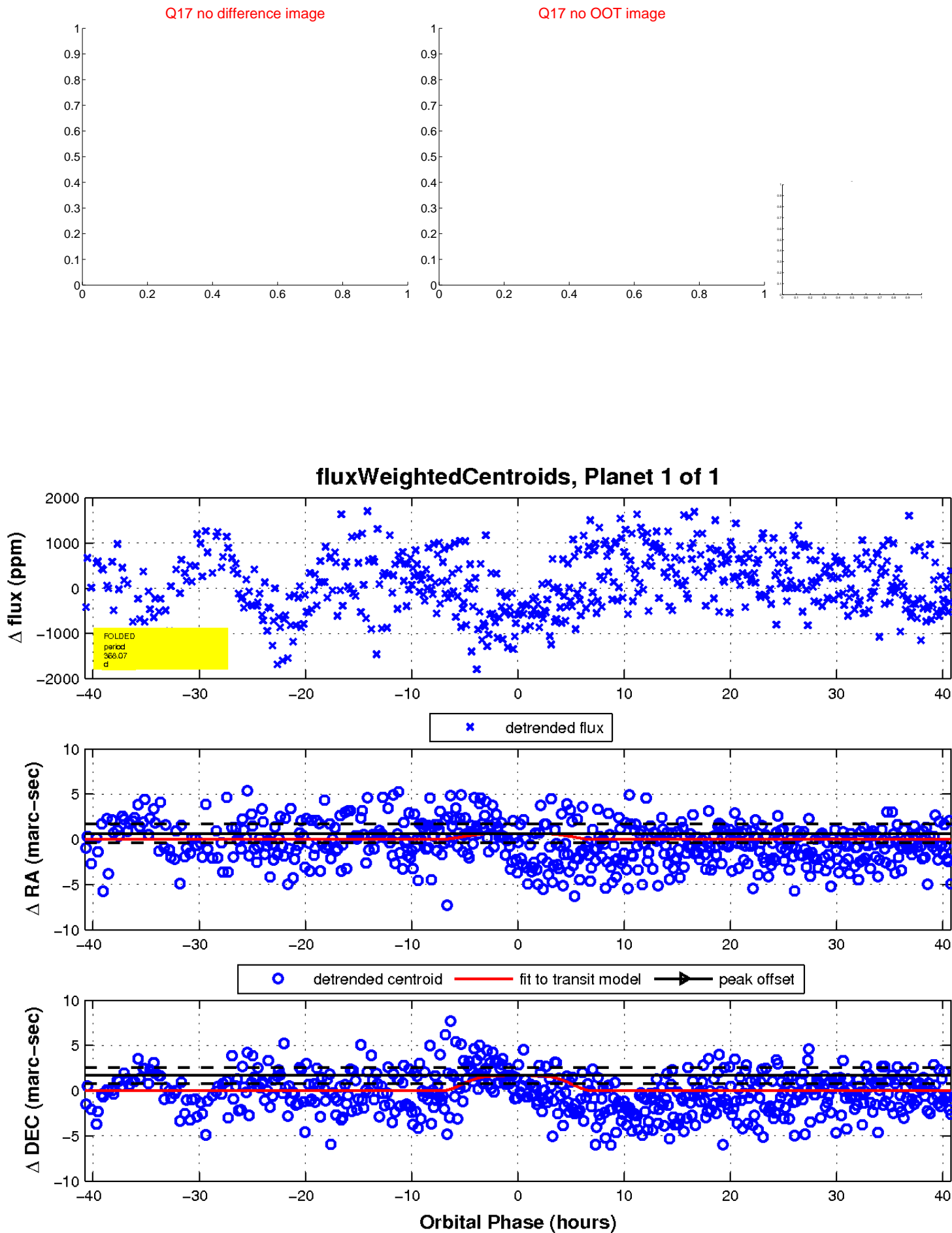
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

