

KIC 008870726

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})
008870726-01	OBS	No	368.839427	233.315234	3275.7	34.392	12.9	17.7	0.76	5261	8.35	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008870726-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

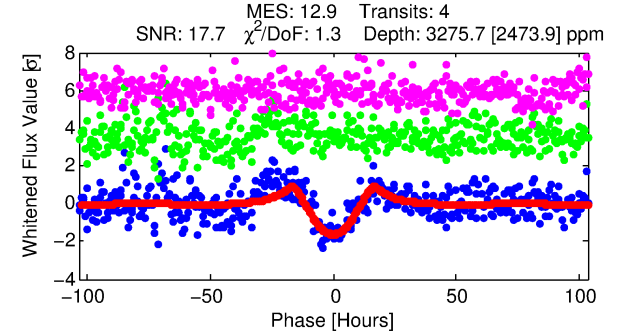
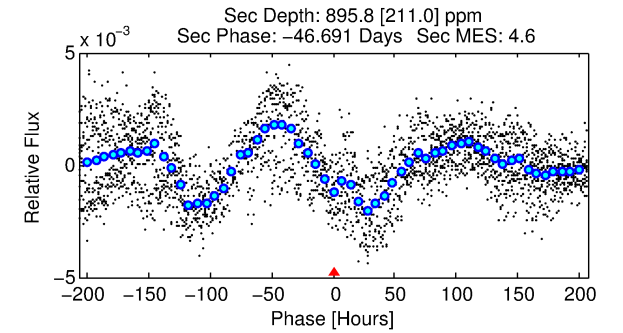
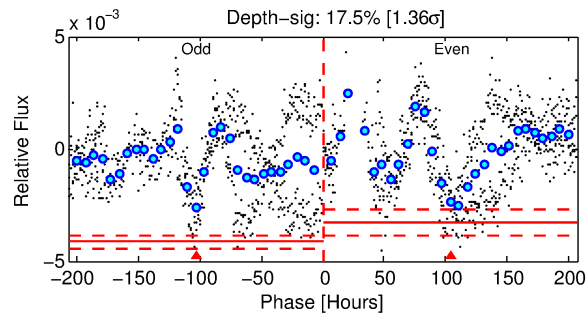
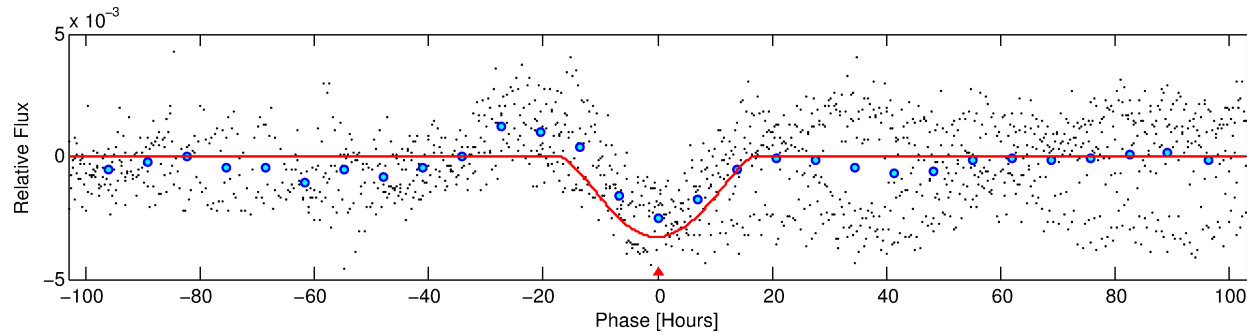
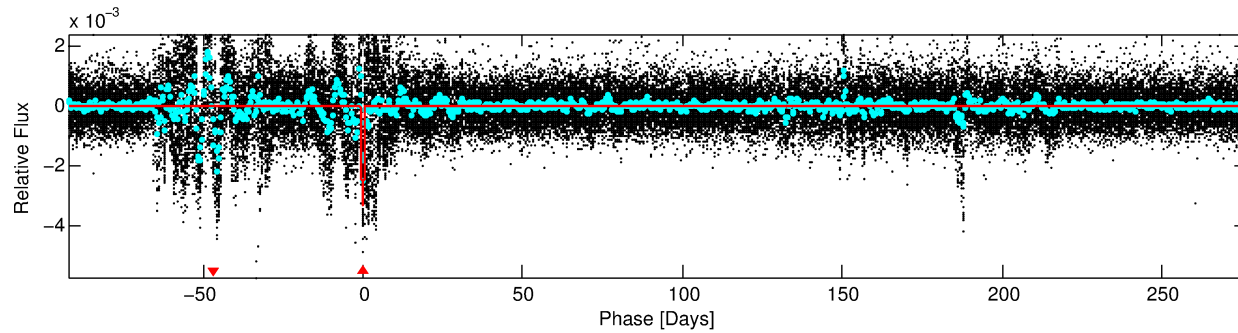
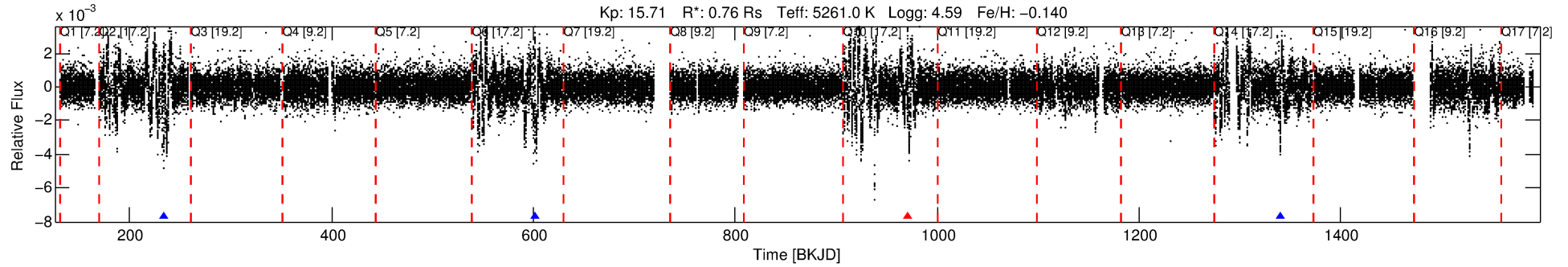
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008870726-01

No Significant Match Found

DV One-Page Summary

KIC: 8870726 Candidate: 1 of 1 Period: 368.839 d



DV Fit Results:

Period = 368.83943 [0.01675] d
Epoch = 233.3152 [0.0307] BKJD
Rp/R* = 0.1004 [0.1404]
a/R* = 37.63 [10.13]
b = 1.00 [0.15]
Seff = 0.45 [0.10]
Teq = 208 [11] K
Rp = 8.35 [11.74] Re
a = 0.9453 [0.1163] AU
Ag = 6321.66 [17779.19] [0.36 σ]
Teffp = 2873 [2018] K [1.32 σ]

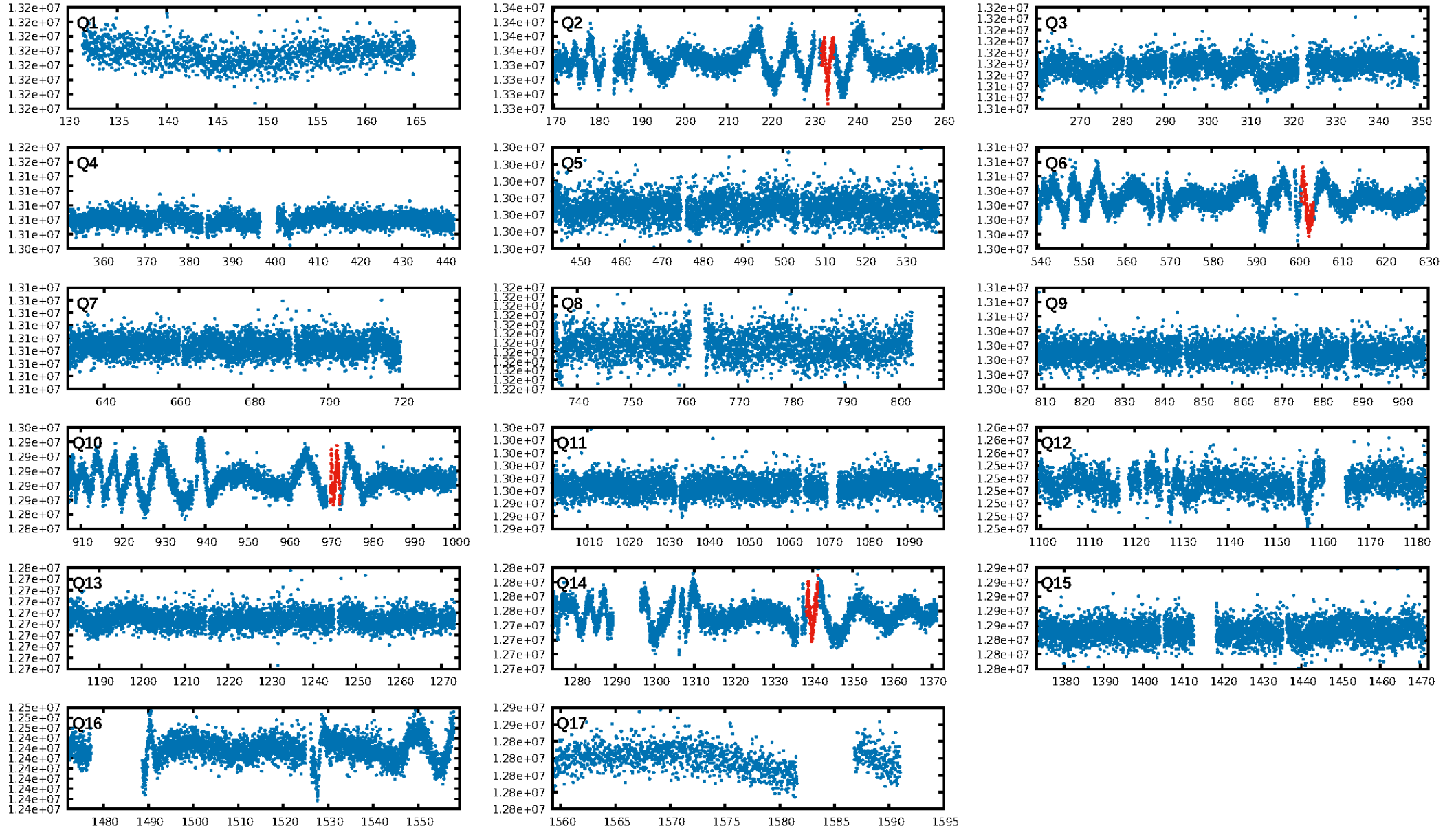
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 90.4%
Bootstrap-pfa: 1.34e-14
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 2.055
Centroid-sig: 39.1%
Centroid-so: 1.926 arcsec [1.27 σ]
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: N/A

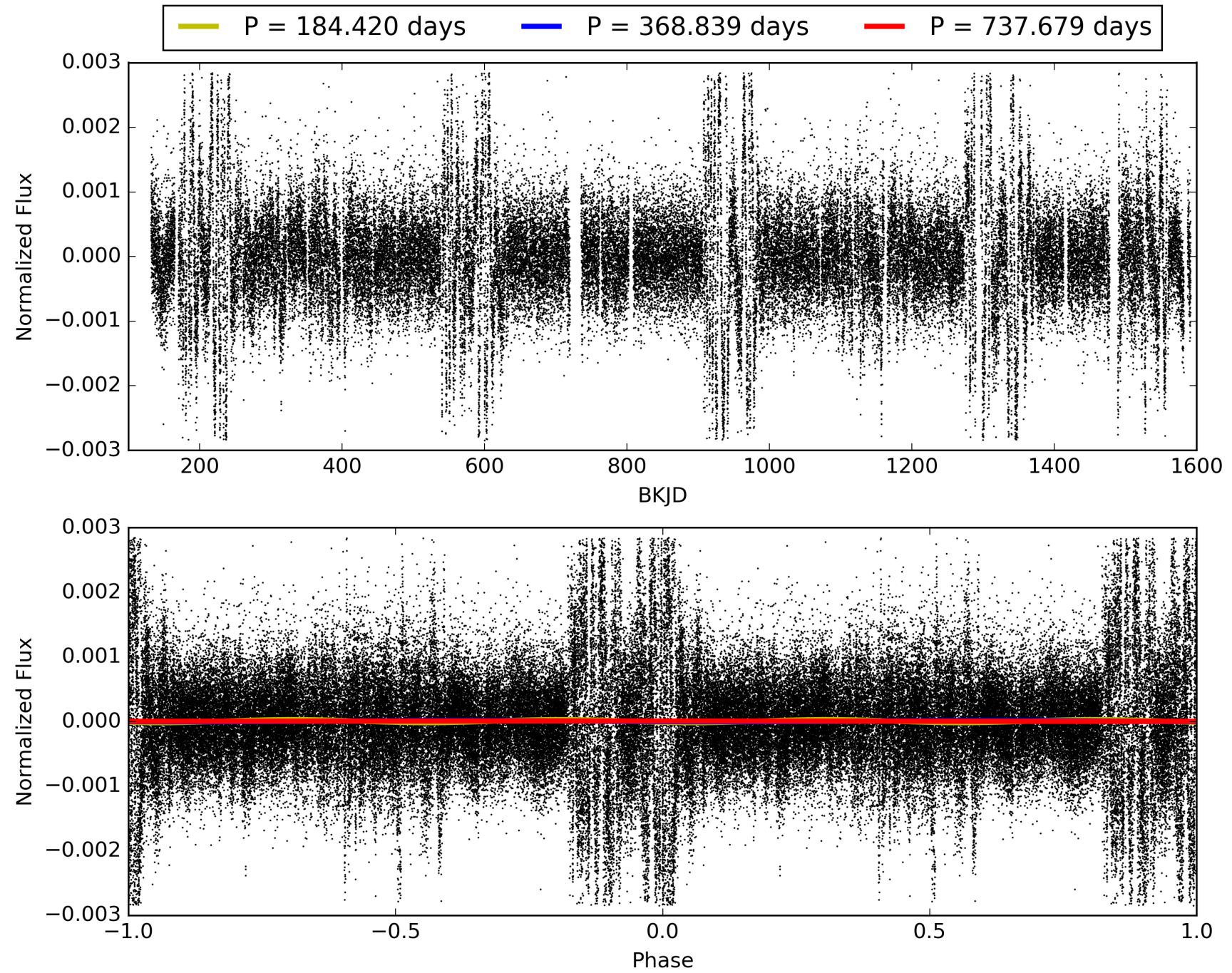
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:33:24 Z

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

TCE 008870726-01, PDC Light Curves

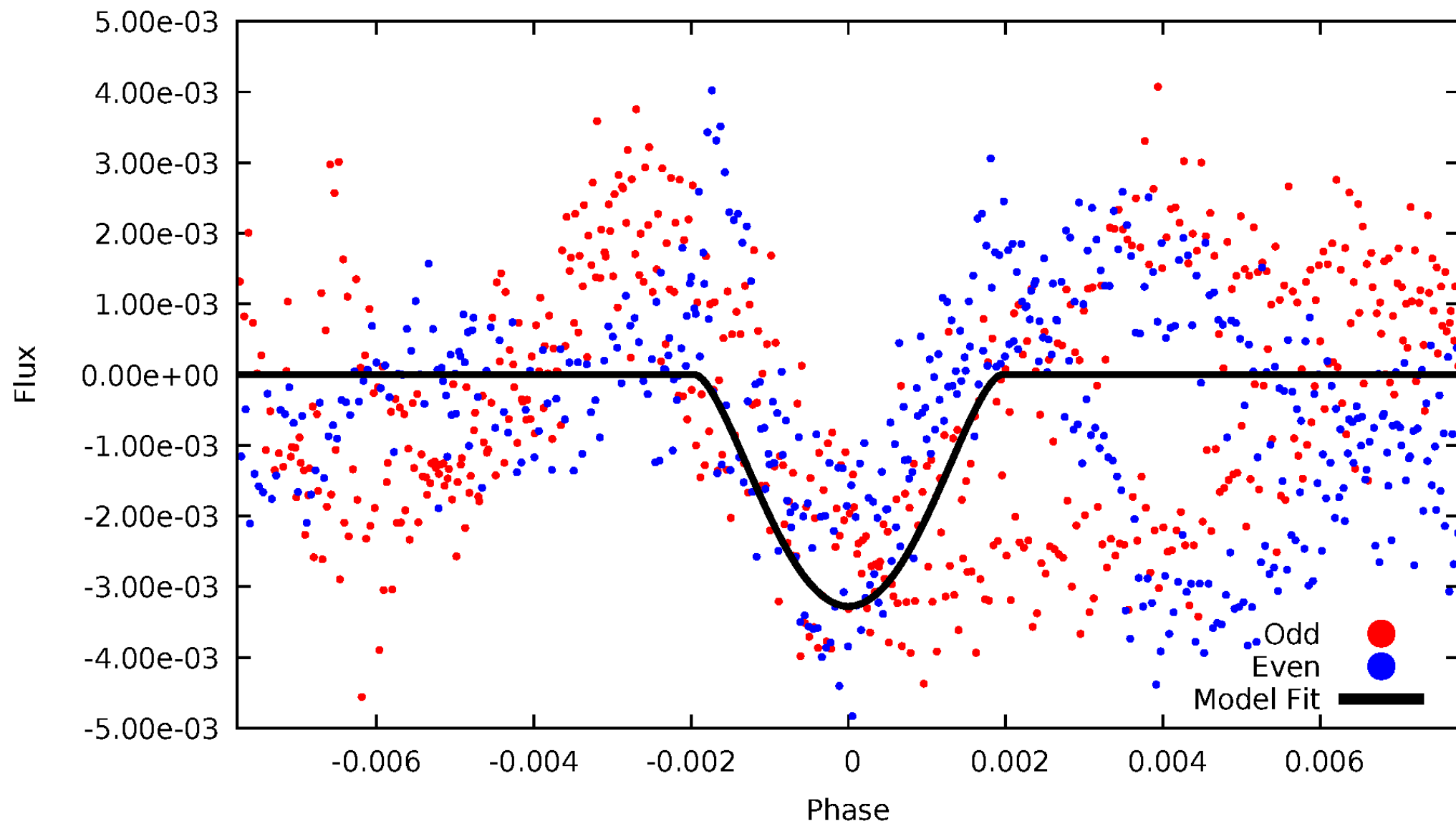


TCE 008870726-01



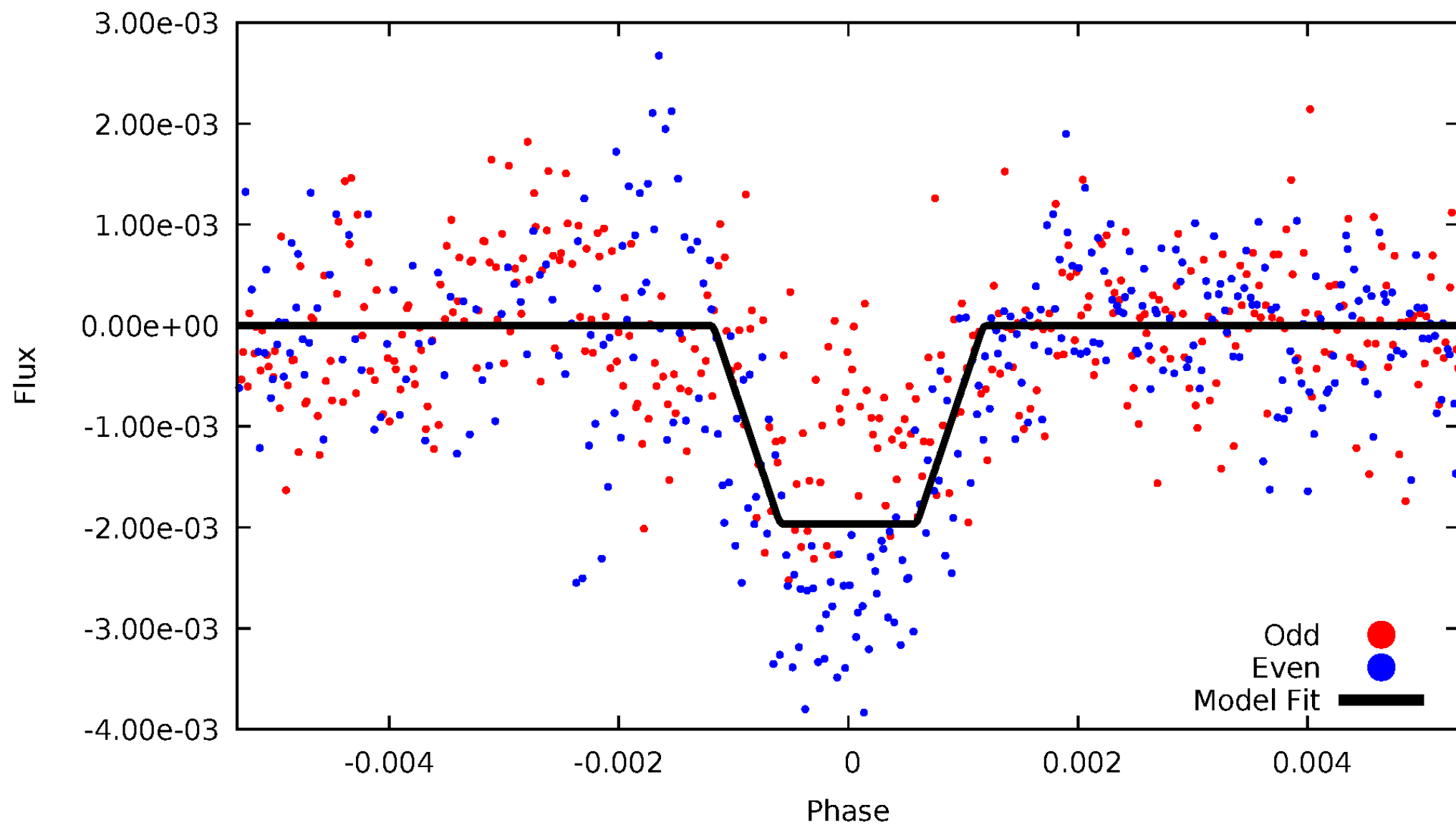
DV Odd/Even

TCE 008870726-01



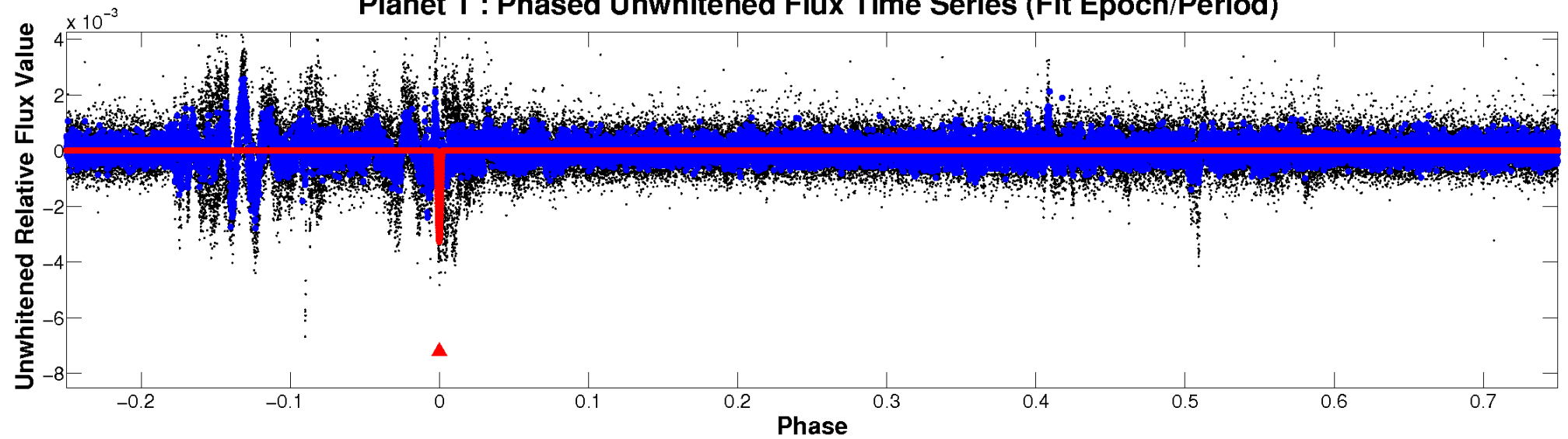
ALT Odd/Even

TCE 008870726-01

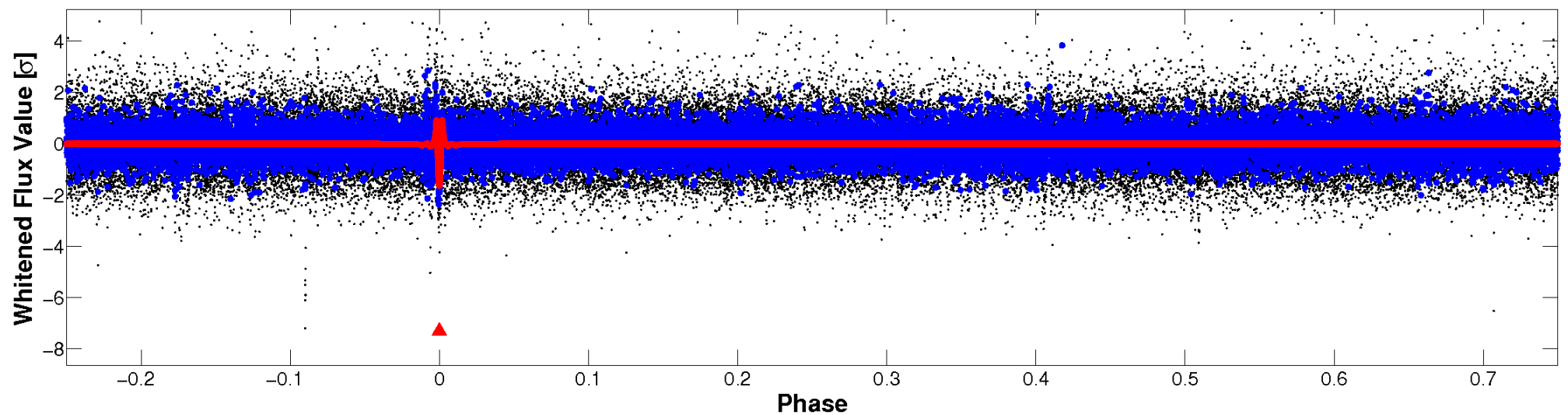


Non-Whitened Vs. Whitened Light Curve

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

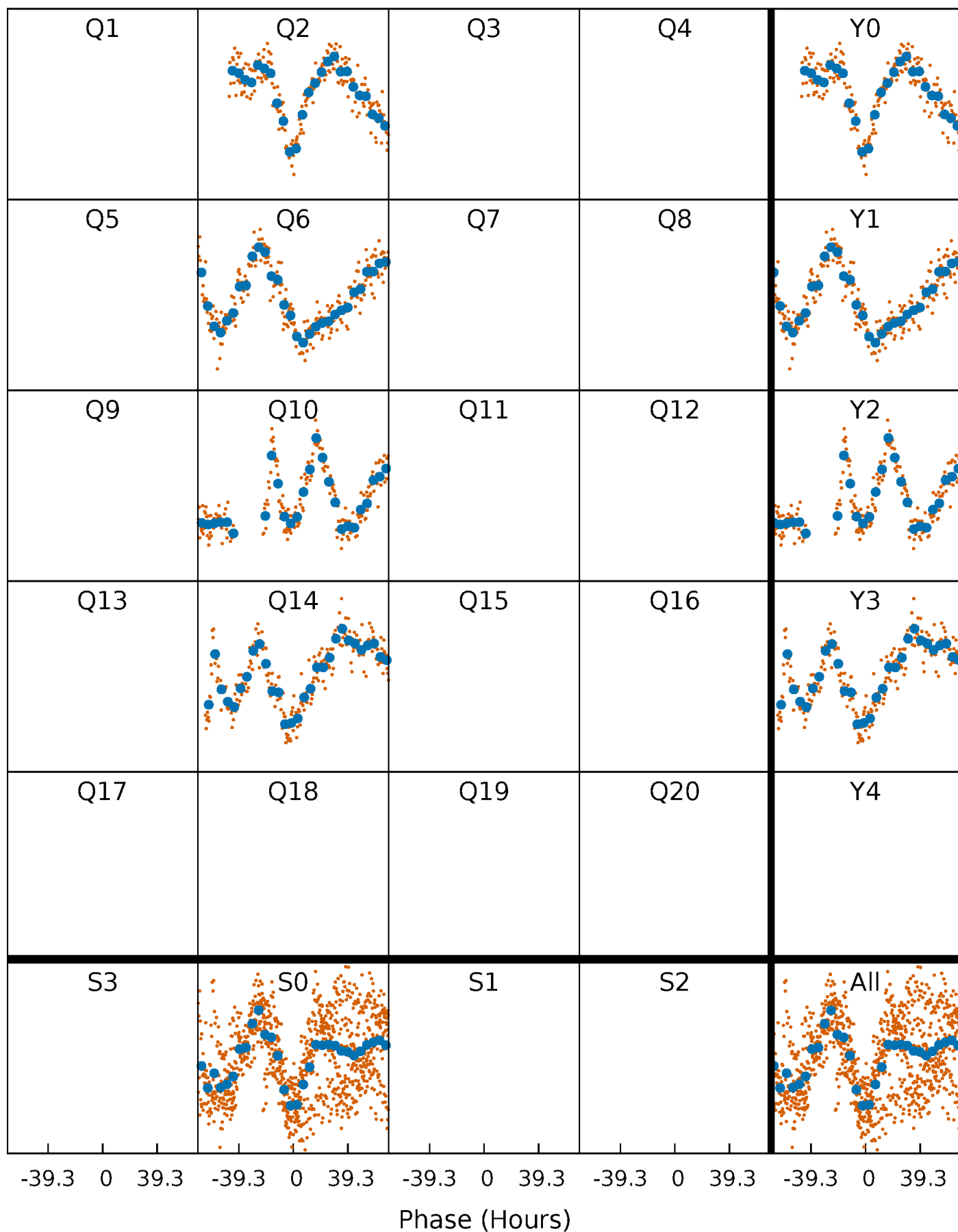


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



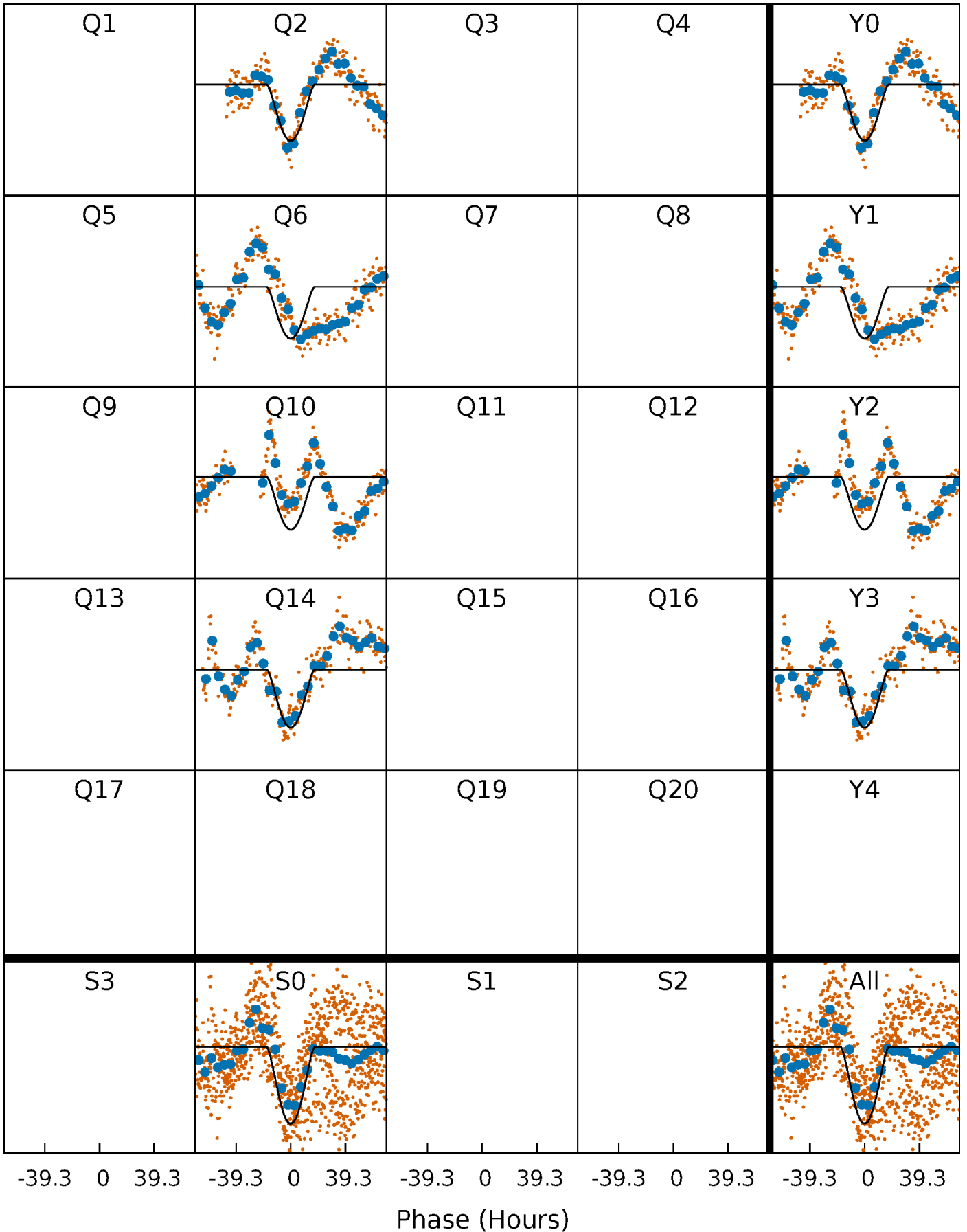
PDC Quarter-Phased Transit Curves

TCE 008870726-01 P=368.839427 Days $T_0=233.315234$ (BKJD)



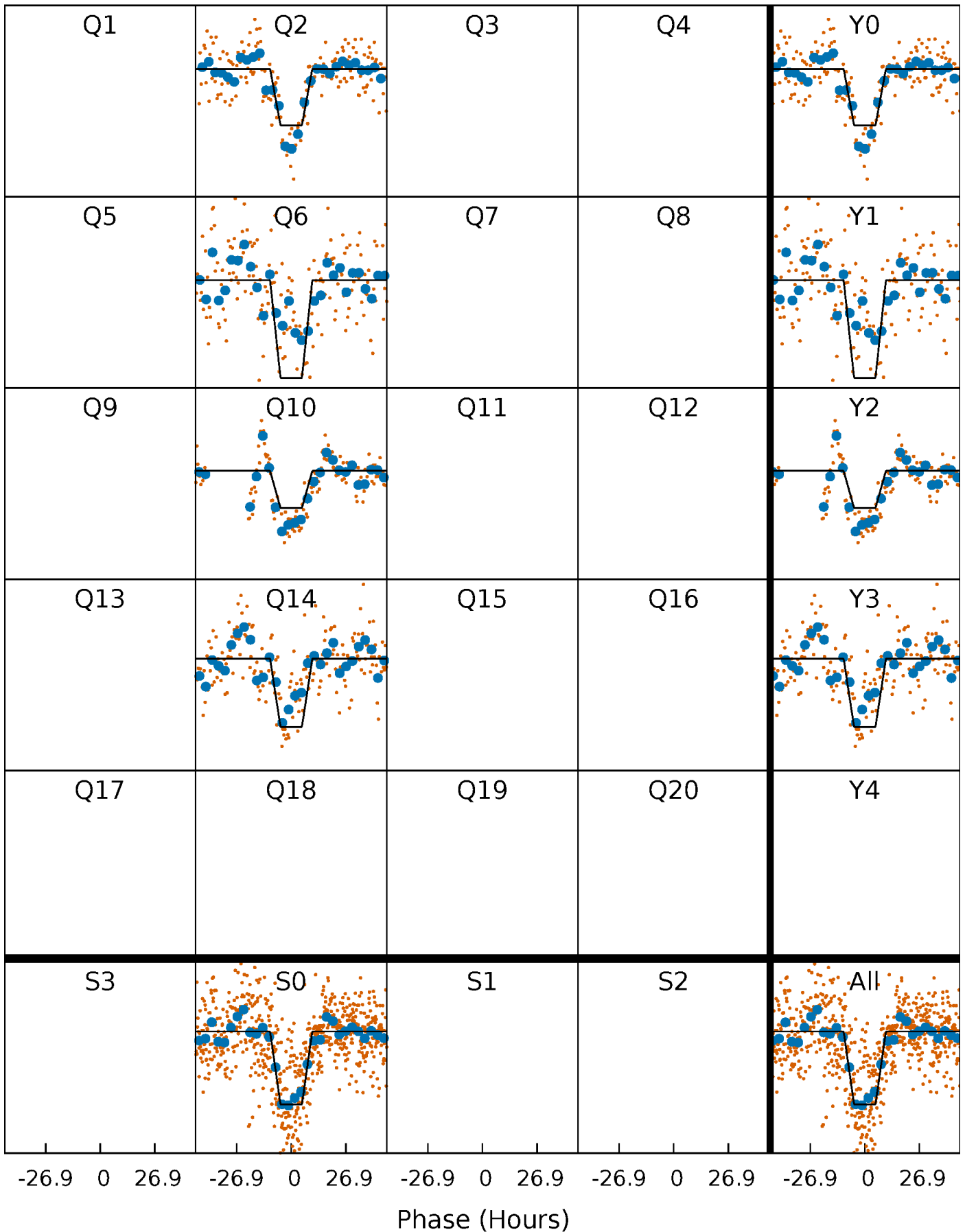
DV Quarter-Phased Transit Curves

TCE 008870726-01 P=368.839427 Days $T_0=233.315234$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

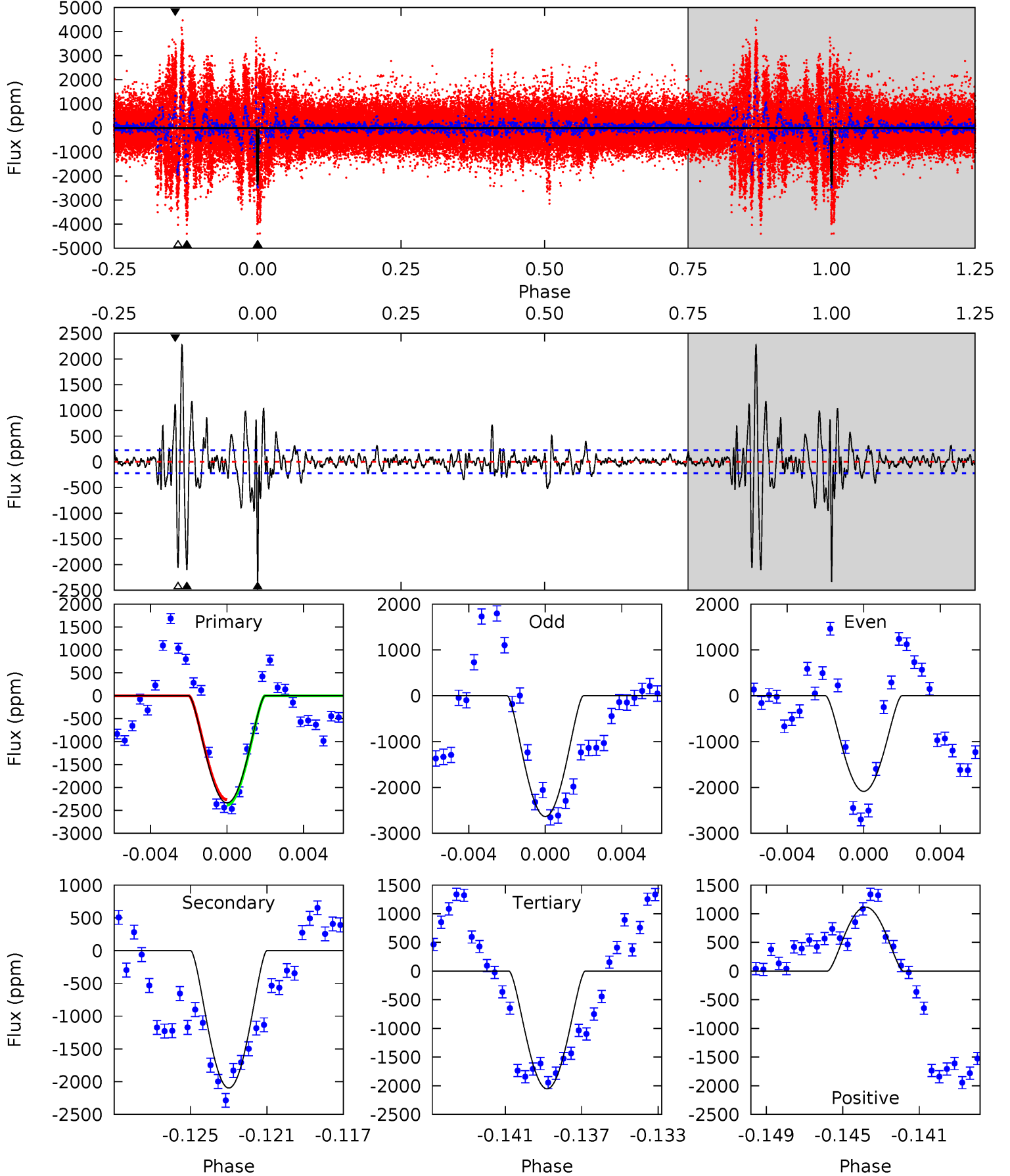
TCE 008870726-01 P=368.839380 Days $T_0=233.283500$ (BKJD)



DV Model-Shift Uniqueness Test

008870726-01, P = 368.839427 Days, E = 233.315234 Days

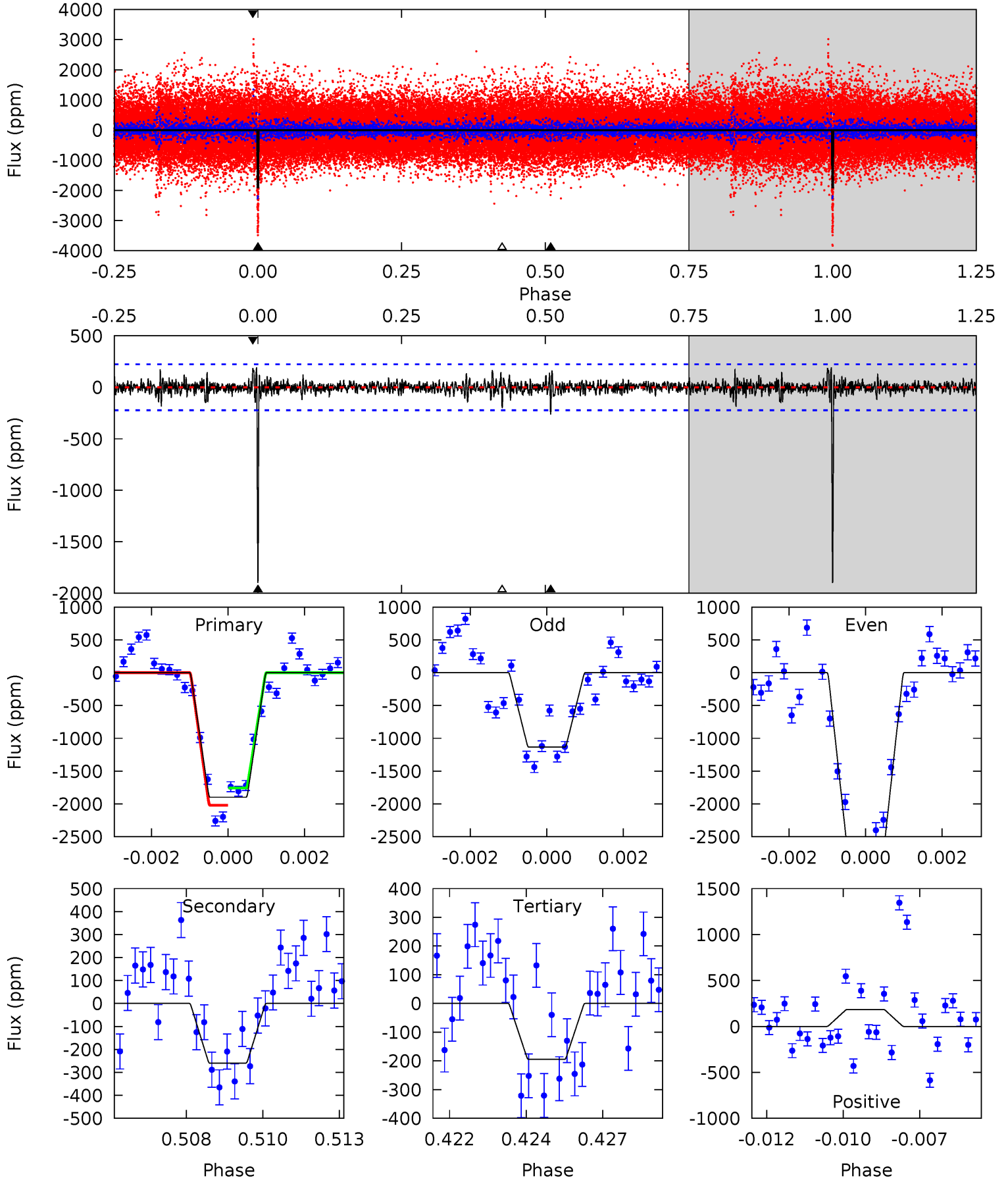
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.0	48.5	47.5	25.8	5.20	2.89	6.29	6.56	28.2	1.00	22.7	6.33	0.90	0.49	1.36



Alt Model-Shift Uniqueness Test

008870726-01, P = 368.839380 Days, E = 233.283500 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.1	6.17	4.63	4.38	5.29	3.04	0.93	40.5	40.7	1.54	1.79	17.4	1.05	0.09	3.13



Stellar Parameters For KIC 008870726

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5261^{+158}_{-158}	$4.592^{+0.032}_{-0.097}$	$-0.140^{+0.300}_{-0.300}$	$0.762^{+0.112}_{-0.060}$	$0.830^{+0.078}_{-0.086}$	$2.646^{+0.512}_{-0.787}$
	+3%/-3%	+1%/-2%	+214%/-214%	+15%/-8%	+9%/-10%	+19%/-30%
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 008870726-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2097 ± 43	$12.02^{+11.30}_{-7.48}$	295^{+12}_{-11}	3432^{+1551}_{-567}	6990^{+43990}_{-5083}
Alt.	-260 ± 42	$8.88^{+9.84}_{-6.05}$	294^{+13}_{-10}	2783^{+1119}_{-462}	1584^{+13716}_{-1227}

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

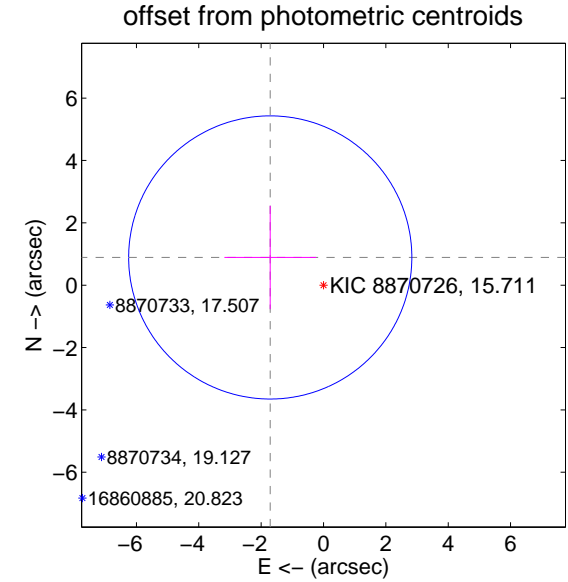
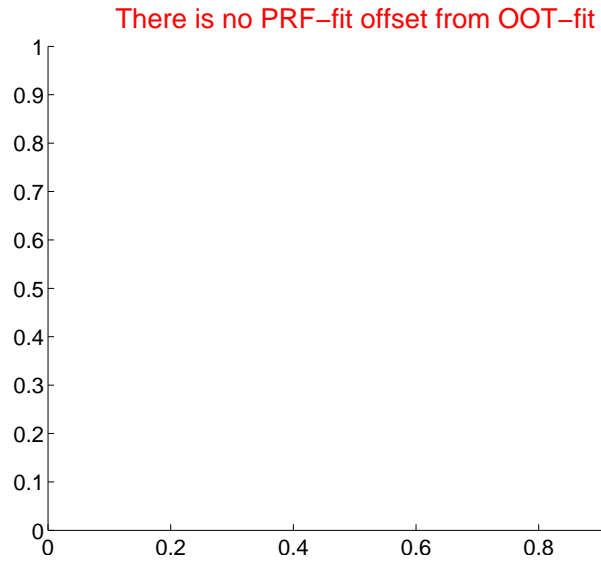
DV Centroid Data

Supplemental centroid analysis for 008870726-01. Kepler magnitude: 15.71. Transit SNR 17.73

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	1.93 ± 1.51	1.27	1.71 ± 1.47	0.89 ± 1.66



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.



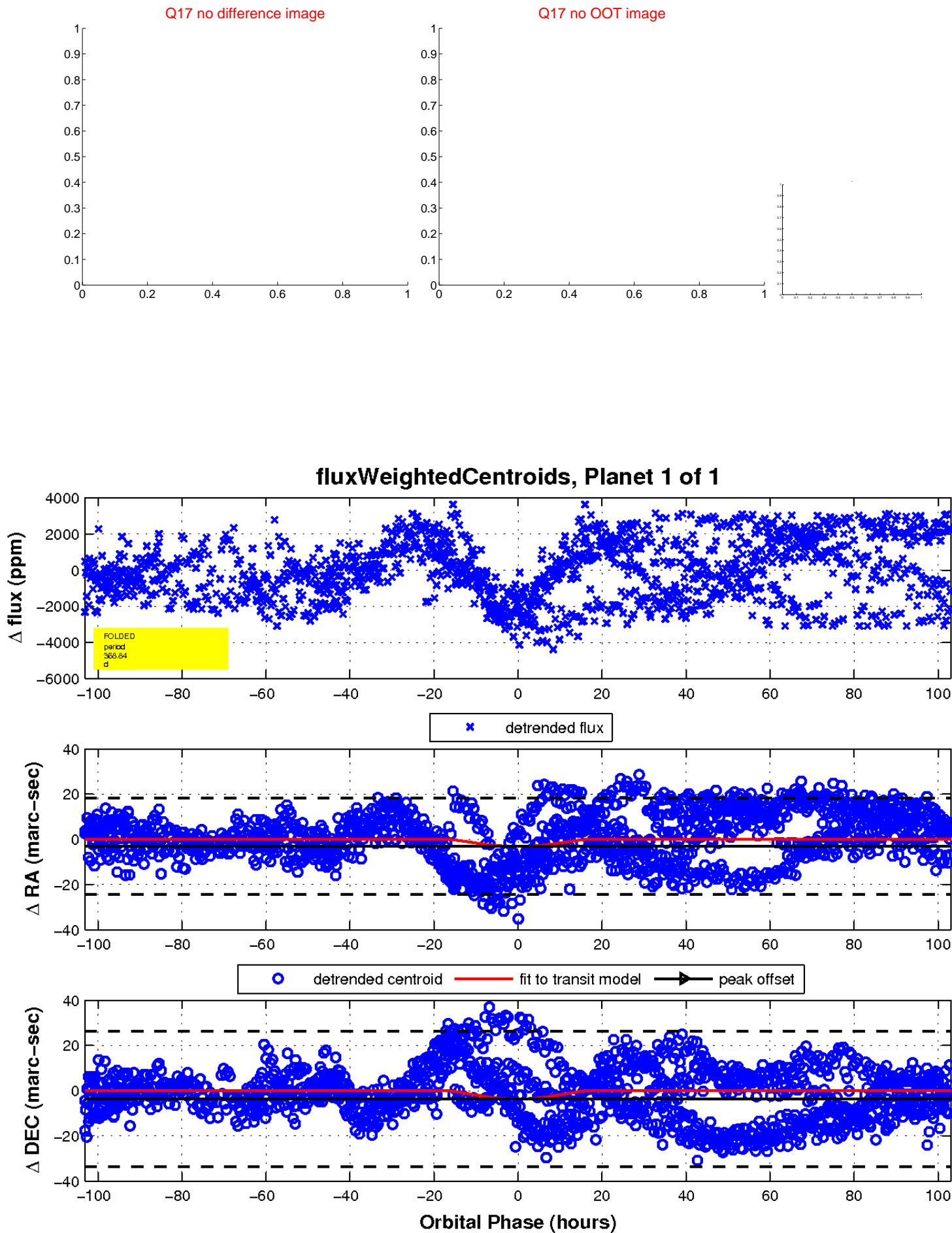
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

