

KIC 010861770

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})
010861770-01	OBS	No	358.625753	170.732364	1158.5	36.672	8.0	11.5	0.94	5926	6.05	0.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010861770-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

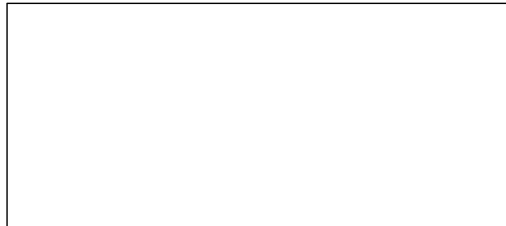
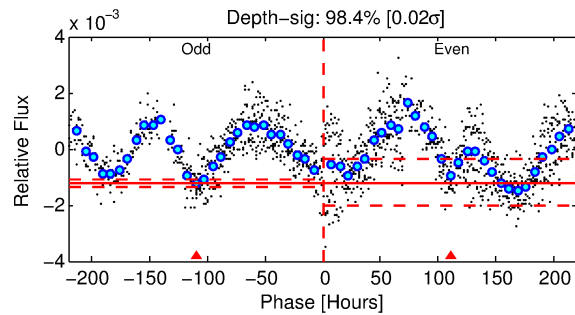
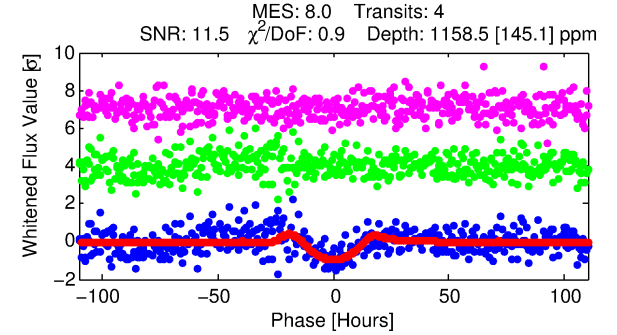
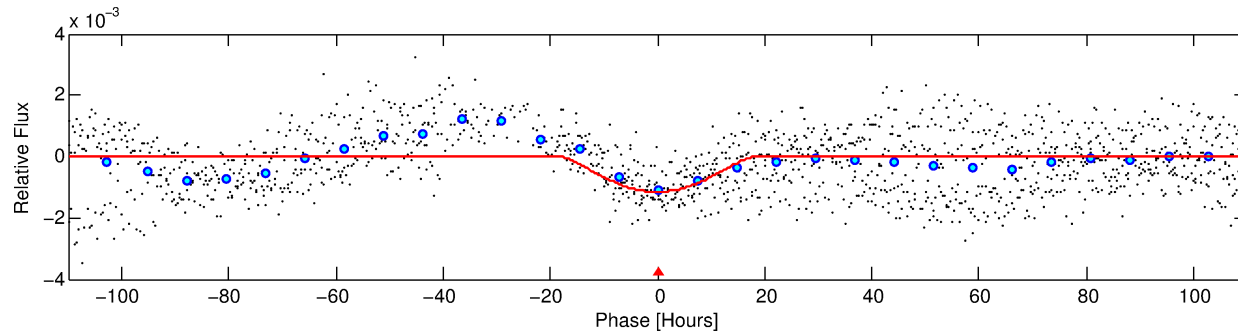
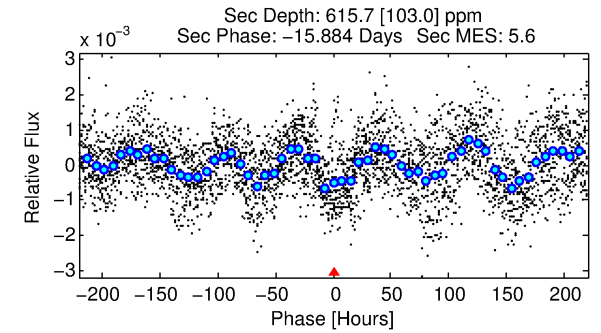
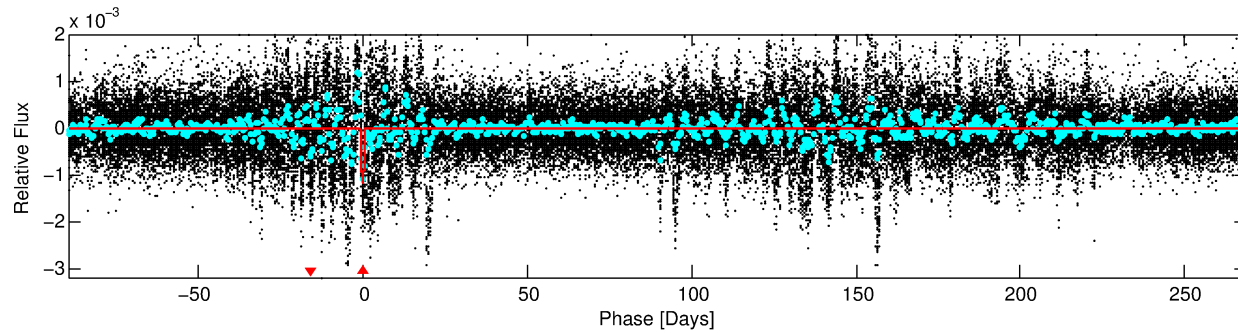
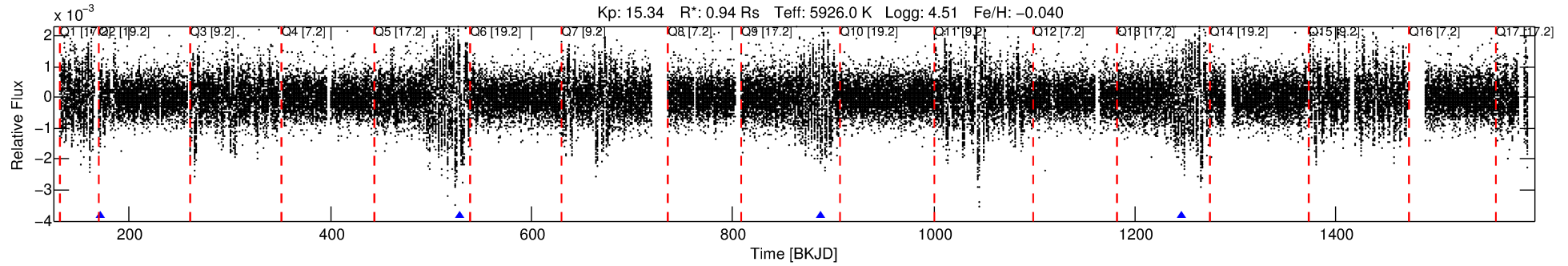
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010861770-01

No Significant Match Found

DV One-Page Summary

KIC: 10861770 Candidate: 1 of 1 Period: 358.626 d



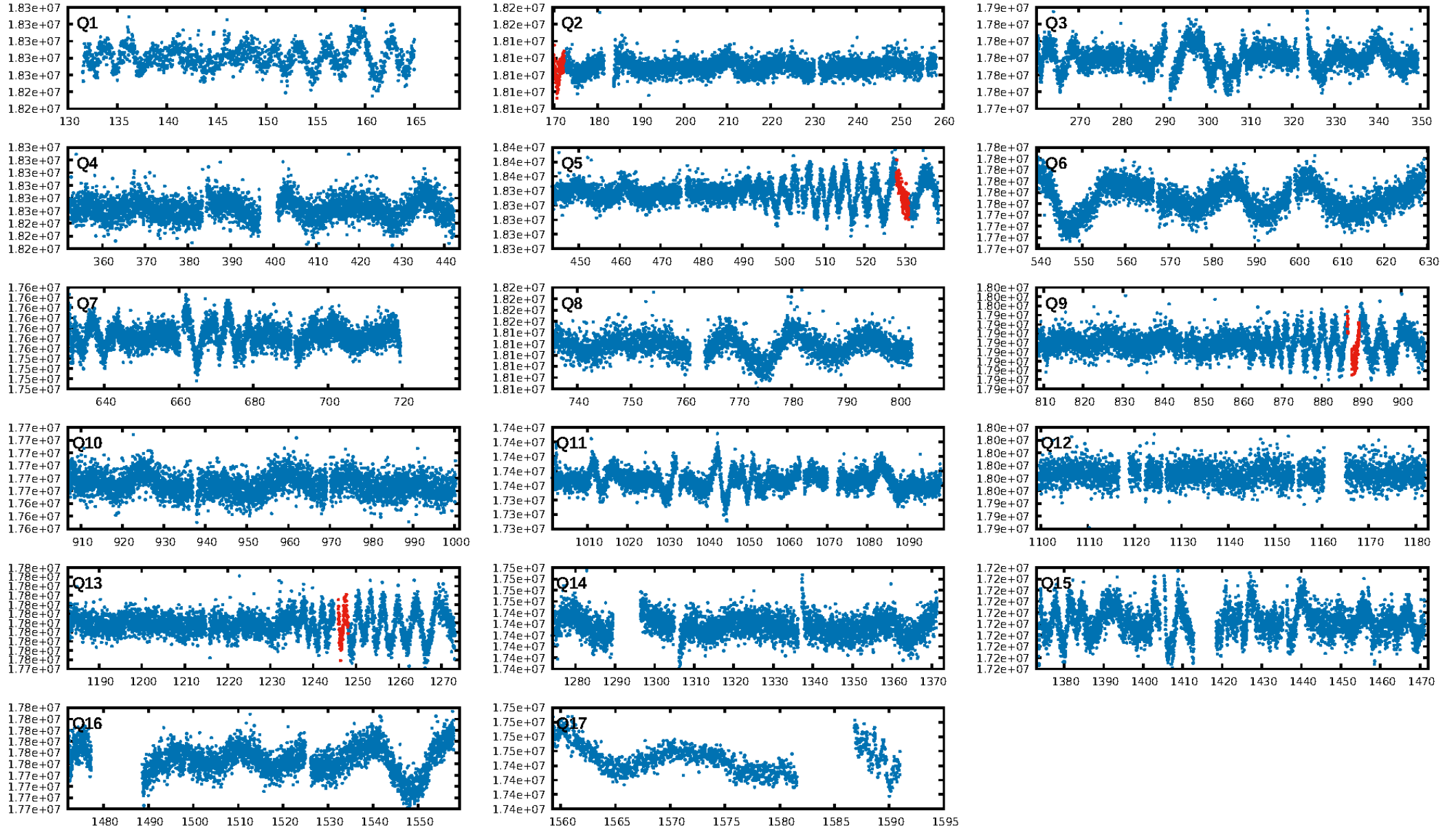
DV Fit Results:

Period = 358.62575 [0.02752] d
Epoch = 170.7324 [0.0361] BKJD
Rp/R* = 0.0591 [0.1029]
a/R* = 26.39 [10.95]
b = 1.00 [0.15]
Seff = 0.98 [0.40]
Teq = 254 [26] K
Rp = 6.05 [10.72] Re
a = 0.9982 [0.2640] AU
Ag = 9211.17 [32319.64] [0.28 σ]
Teffp = 3841 [3351] K [1.07 σ]

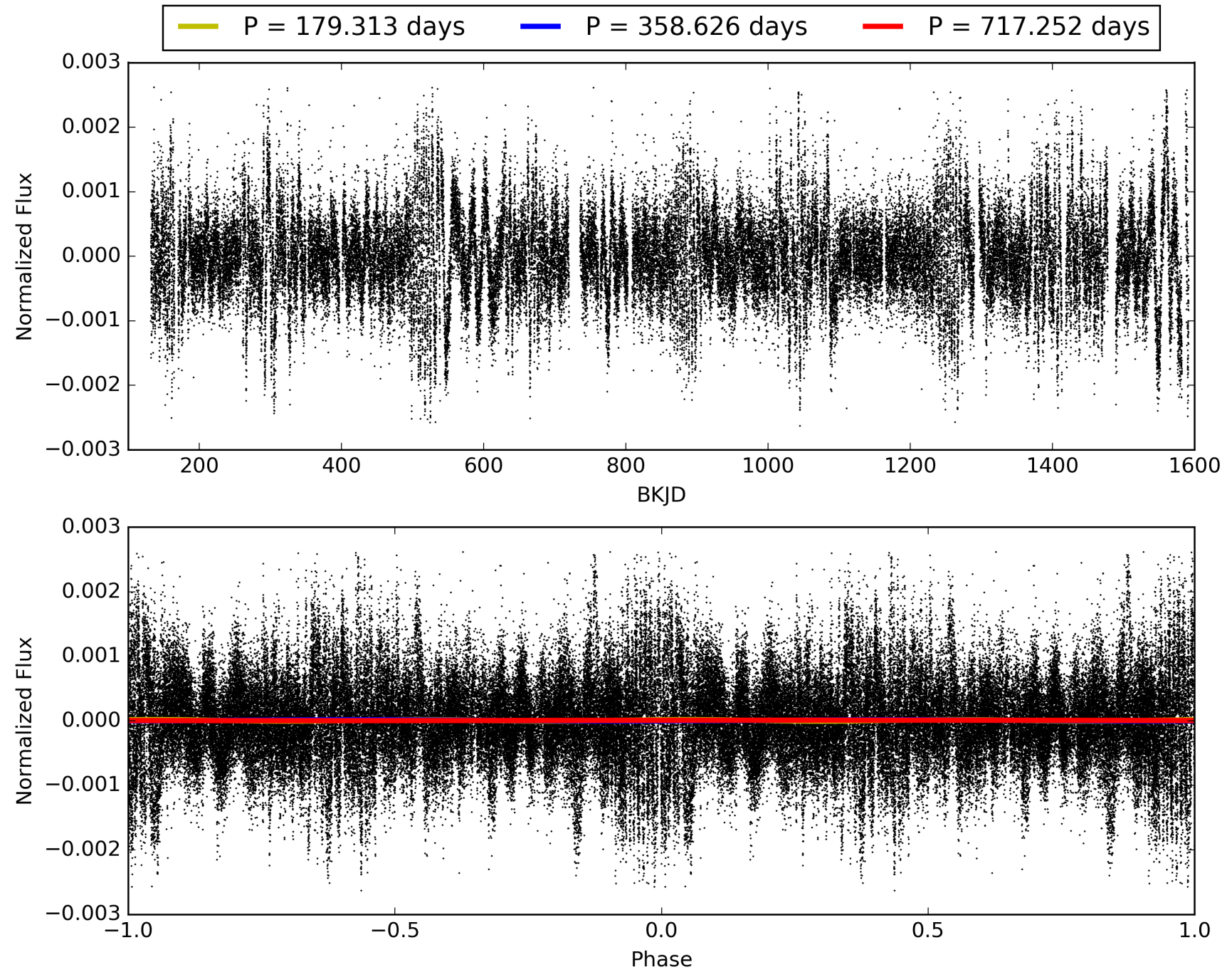
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.27e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.331
Centroid-sig: 0.0%
Centroid-so: 3.376 arcsec [2.20 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: 1.00 [1/1]

TCE 010861770-01, PDC Light Curves

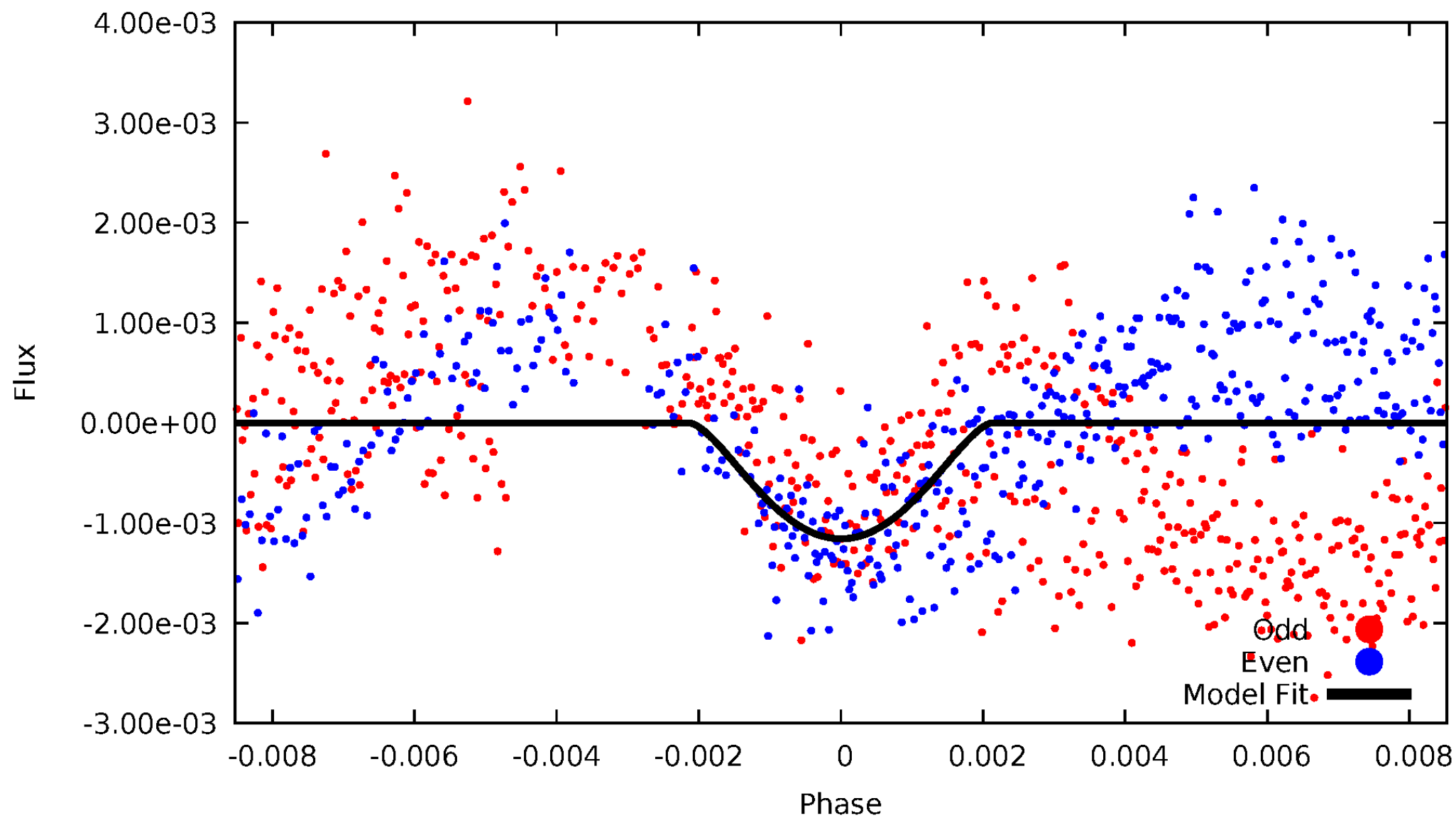


TCE 010861770-01



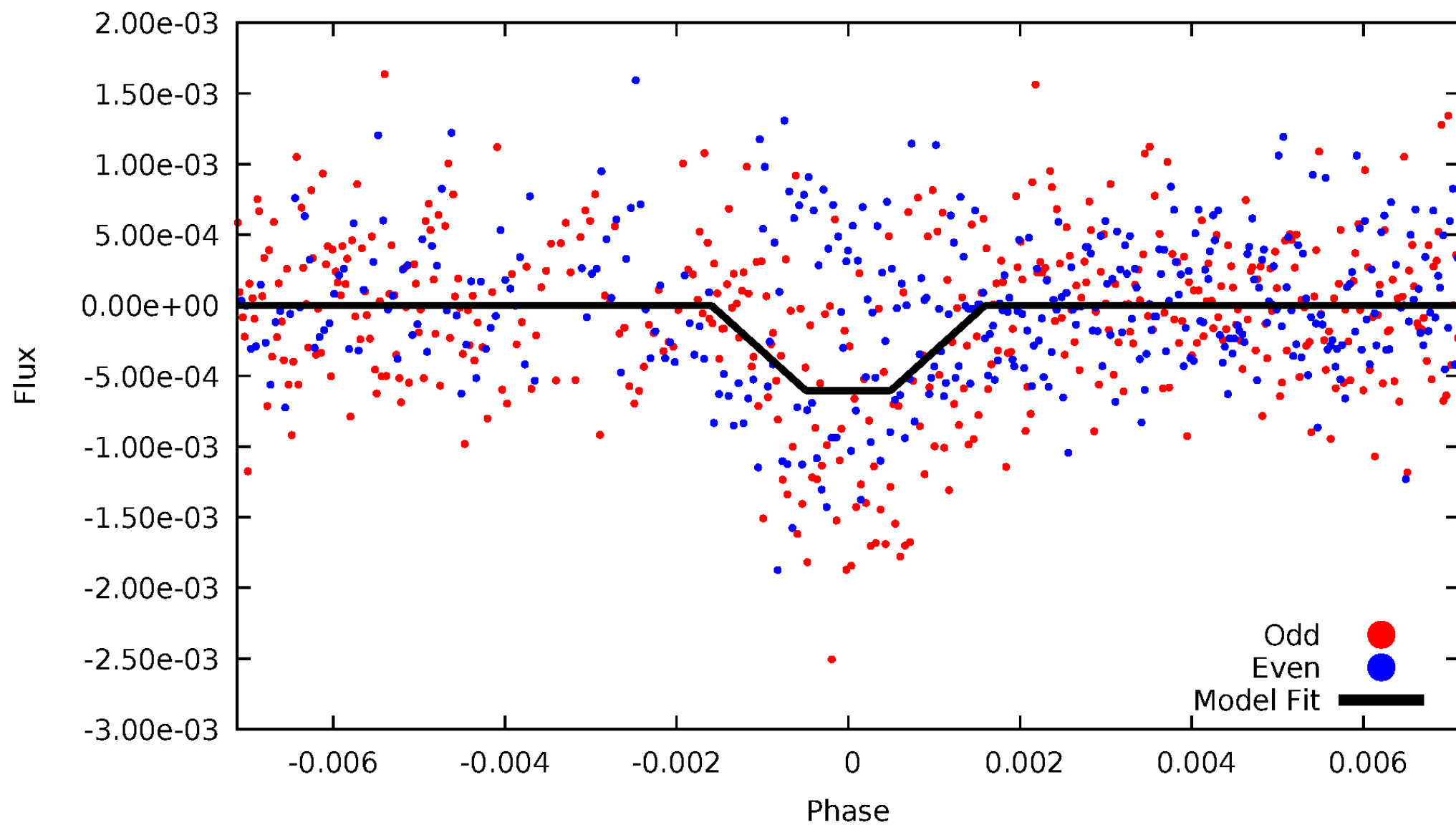
DV Odd/Even

TCE 010861770-01



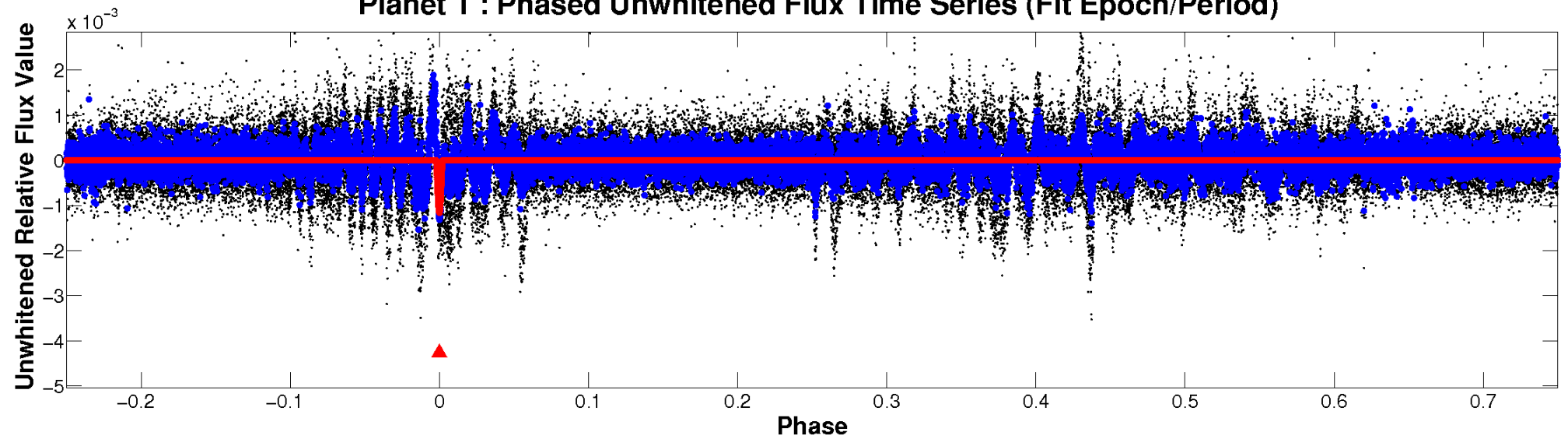
ALT Odd/Even

TCE 010861770-01

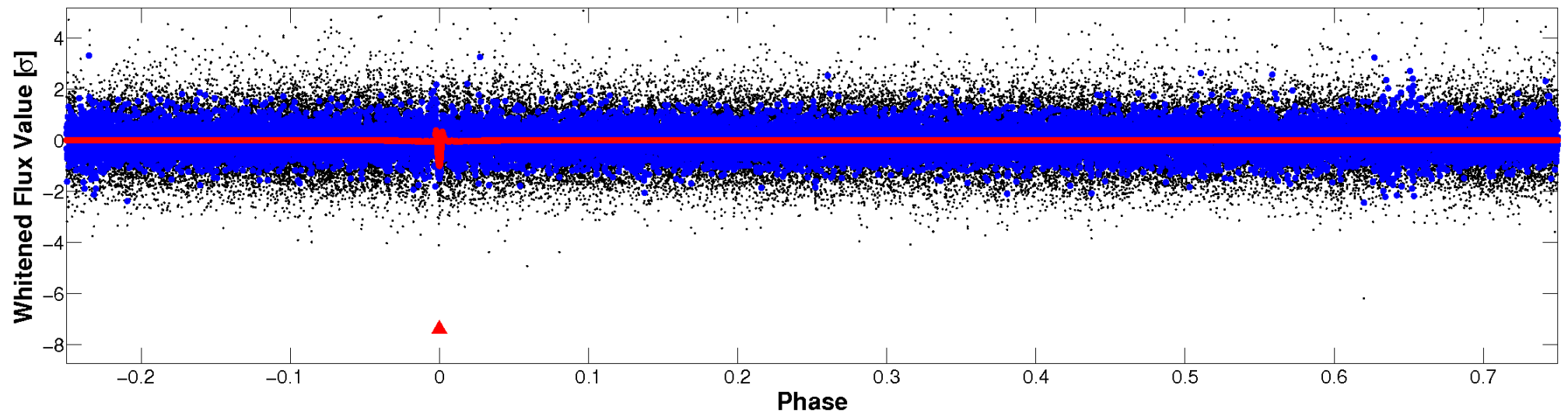


Non-Whitened Vs. Whitened Light Curve

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

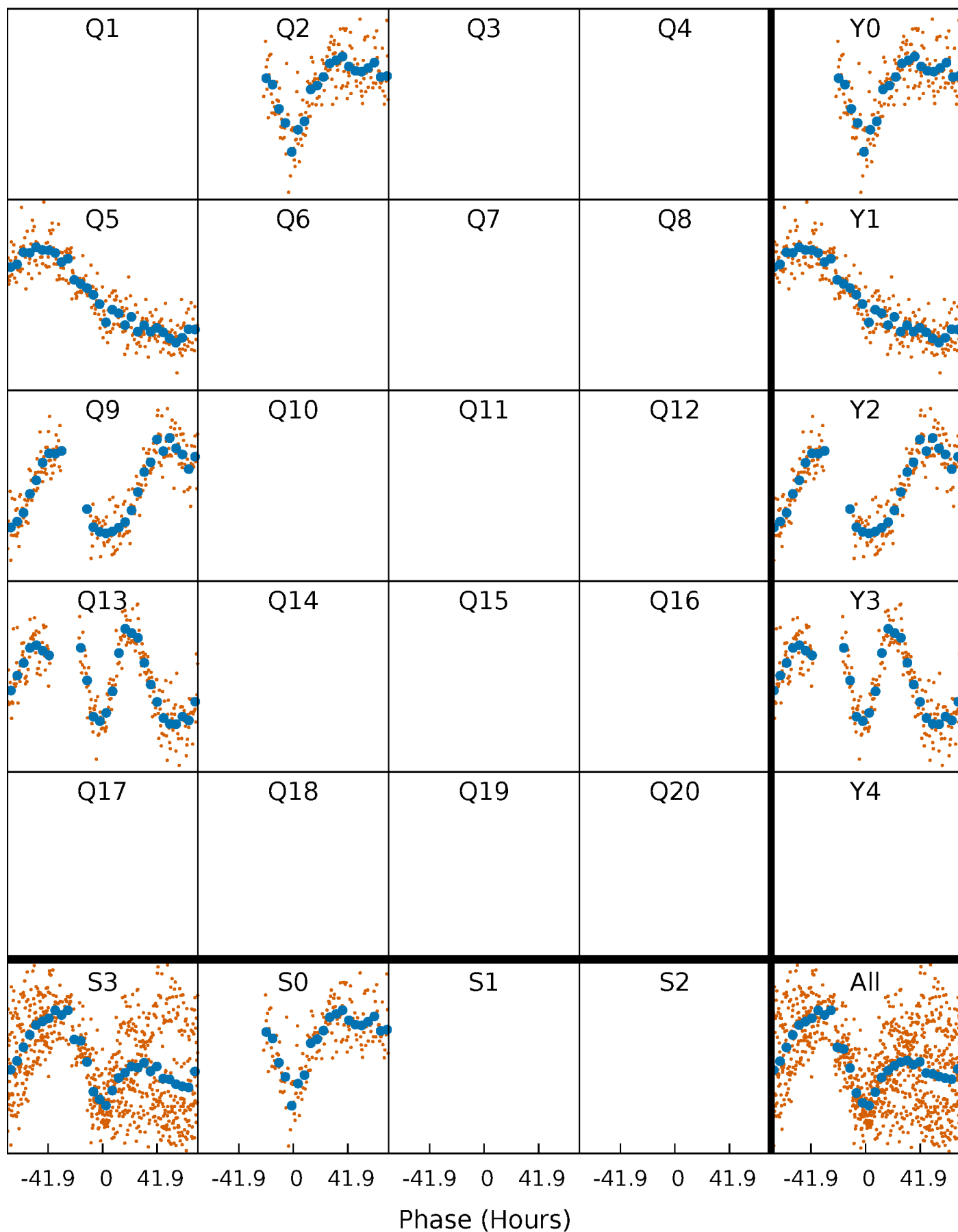


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



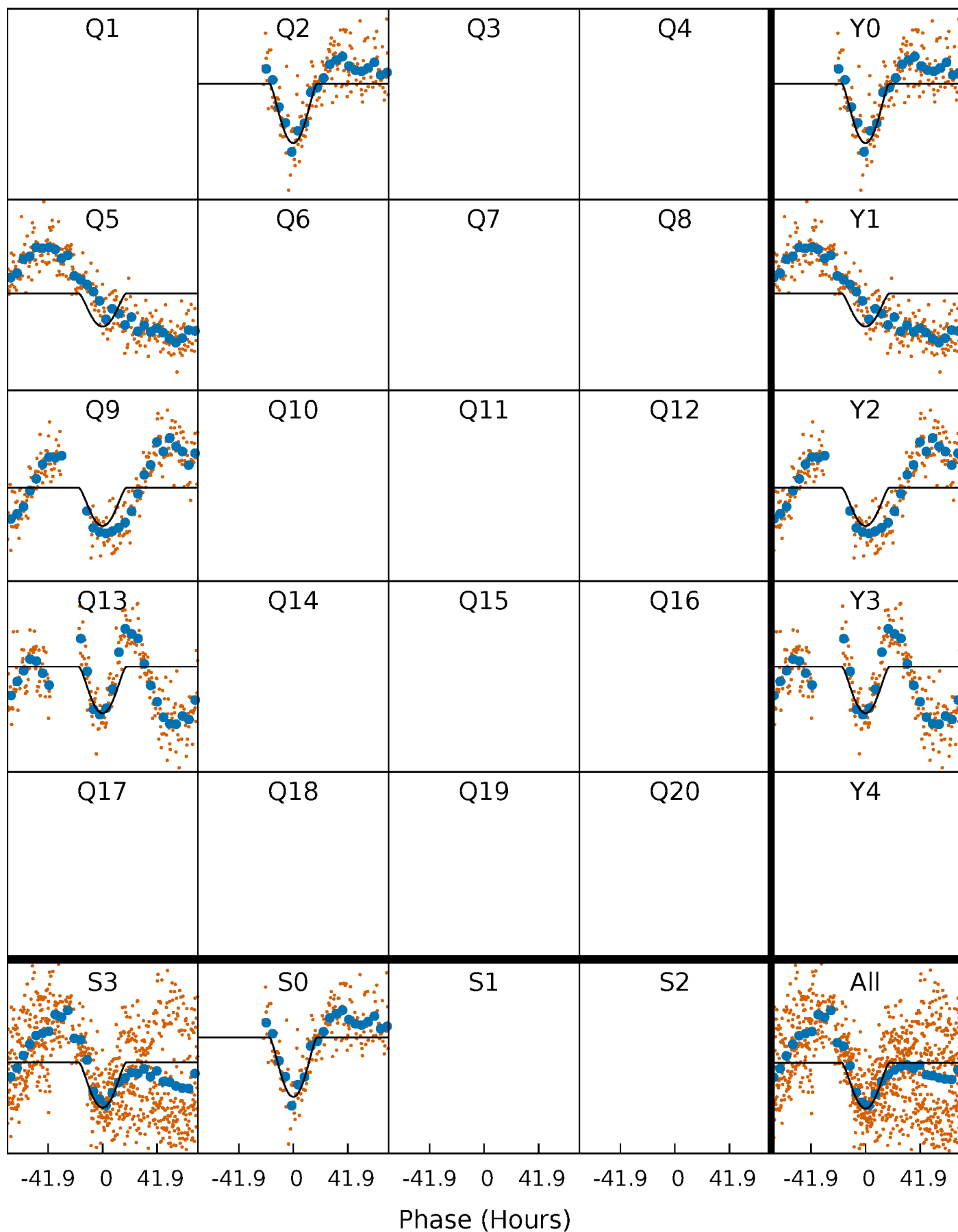
PDC Quarter-Phased Transit Curves

TCE 010861770-01 P=358.625753 Days $T_0=170.732364$ (BKJD)



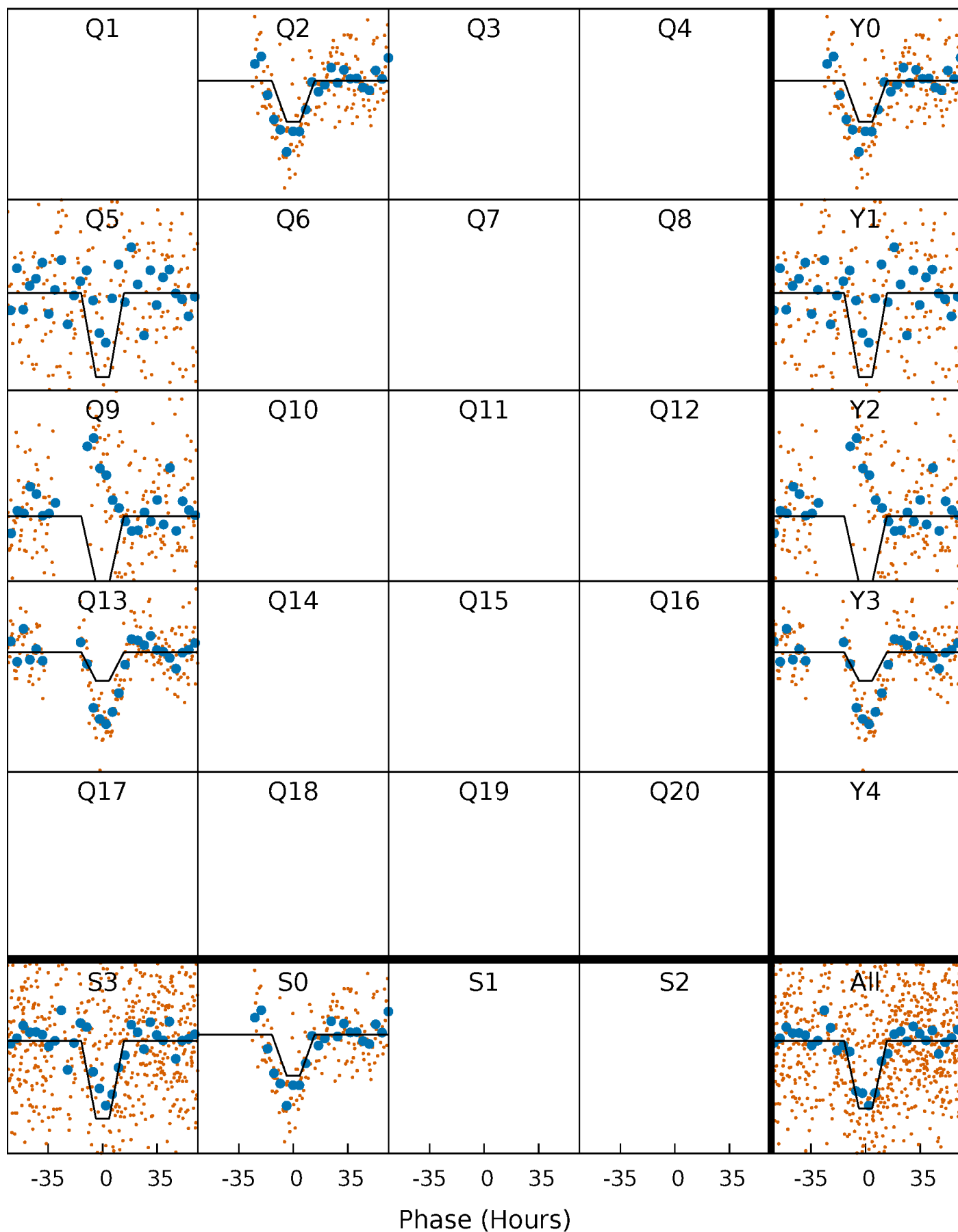
DV Quarter-Phased Transit Curves

TCE 010861770-01 P=358.625753 Days $T_0=170.732364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

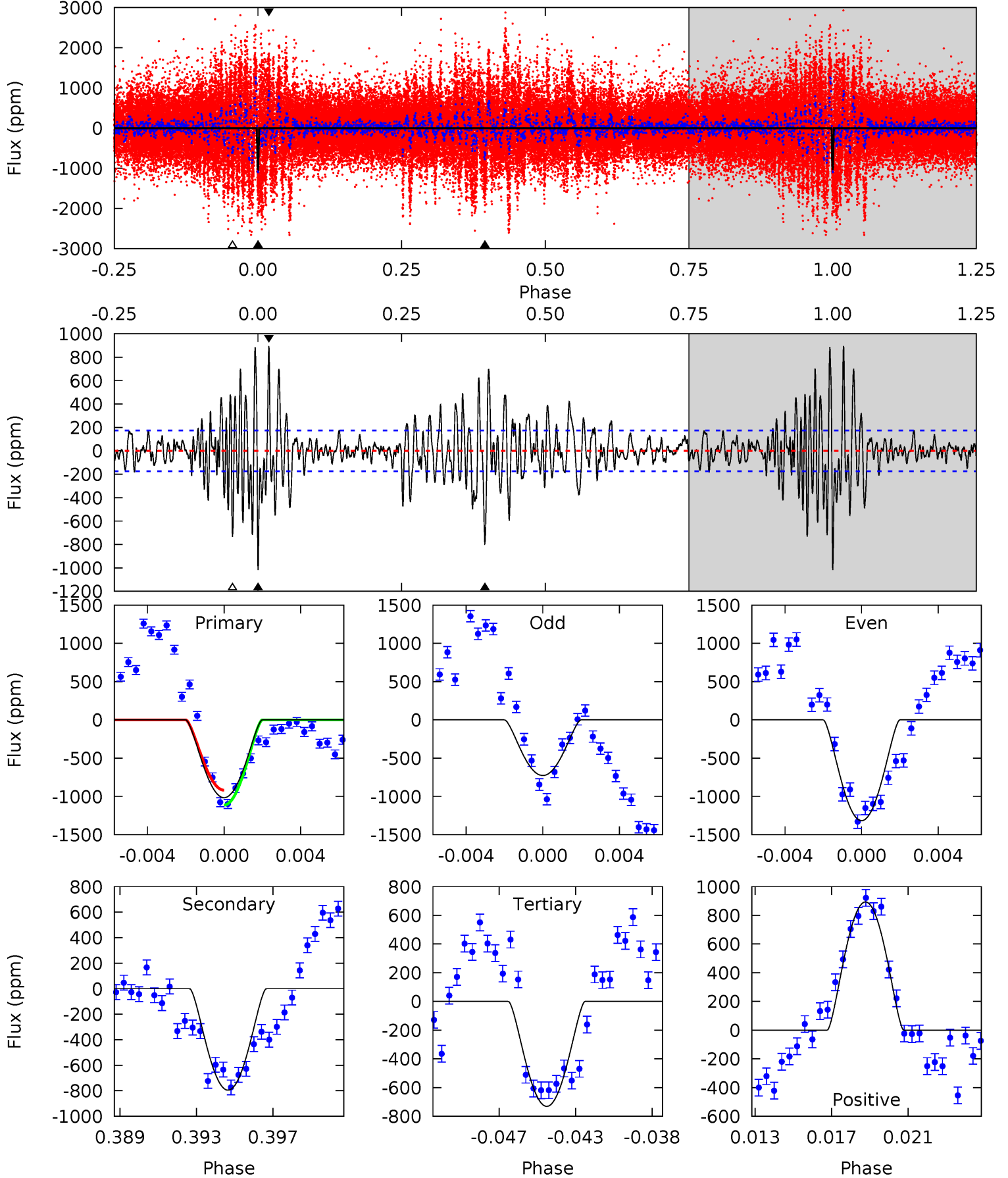
TCE 010861770-01 P=358.534055 Days $T_0=170.877408$ (BKJD)



DV Model-Shift Uniqueness Test

010861770-01, P = 358.625753 Days, E = 170.732364 Days

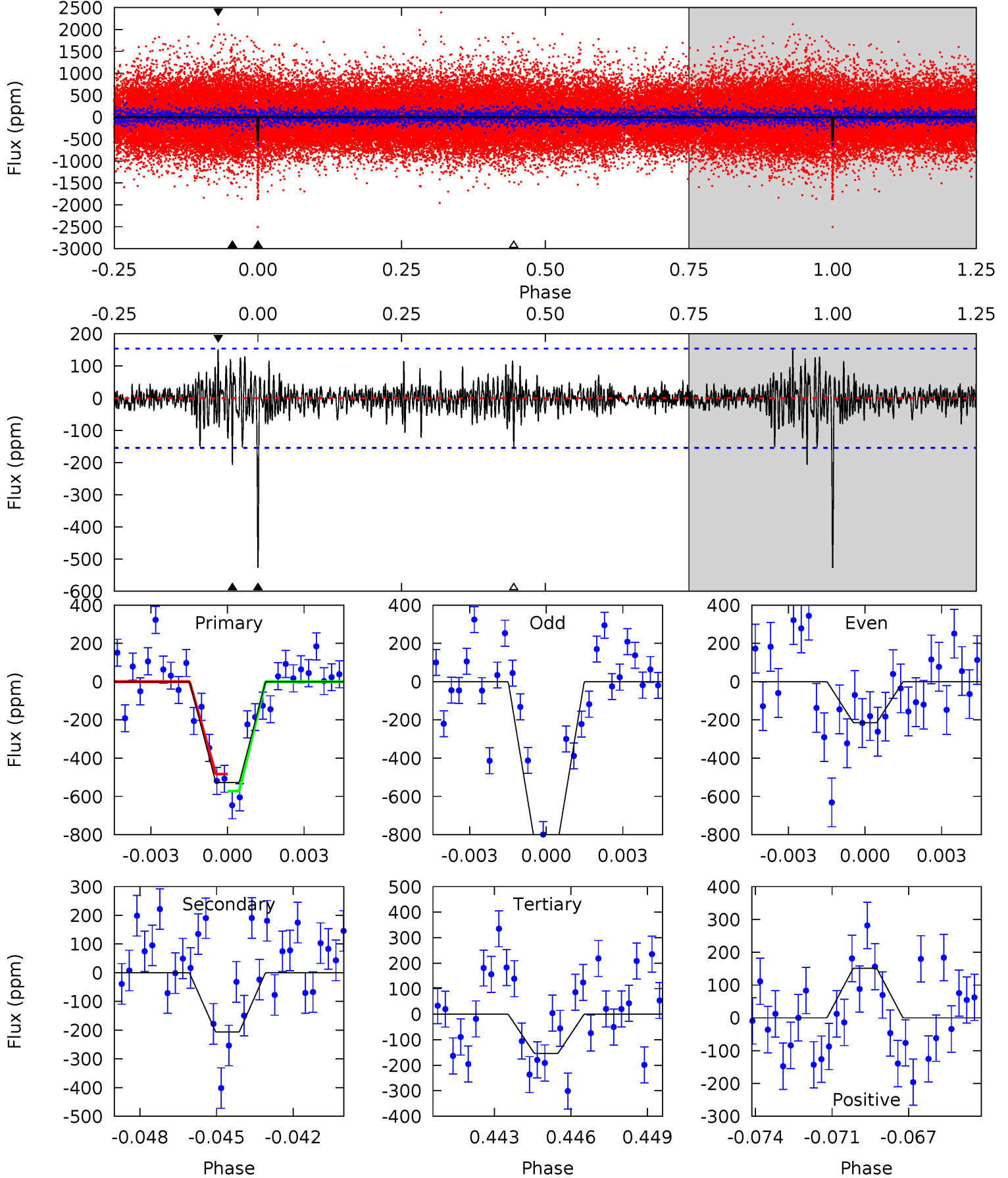
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.2	23.6	21.7	26.6	5.19	2.86	5.85	8.49	3.66	1.92	-2.91	8.80	1.00	0.47	2.89



Alt Model-Shift Uniqueness Test

010861770-01, P = 358.534055 Days, E = 170.877408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	7.02	5.23	5.13	5.24	2.95	1.13	12.7	12.8	1.79	1.89	10.5	0.99	0.22	1.51



Stellar Parameters For KIC 010861770

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5926^{+164}_{-205}	$4.506^{+0.052}_{-0.208}$	$-0.040^{+0.250}_{-0.300}$	$0.939^{+0.297}_{-0.099}$	$1.030^{+0.127}_{-0.140}$	$1.752^{+0.377}_{-0.953}$
	+3%/-3%	+1%/-5%	+625%/-750%	+32%/-11%	+12%/-14%	+22%/-54%
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 010861770-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-795 ± 34	$10.21^{+9.73}_{-6.71}$	362^{+28}_{-17}	3651^{+1951}_{-663}	4151^{+29902}_{-3037}
Alt.	-207 ± 29	$8.60^{+9.38}_{-6.01}$	361^{+24}_{-17}	3131^{+1554}_{-576}	1467^{+14354}_{-1136}

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

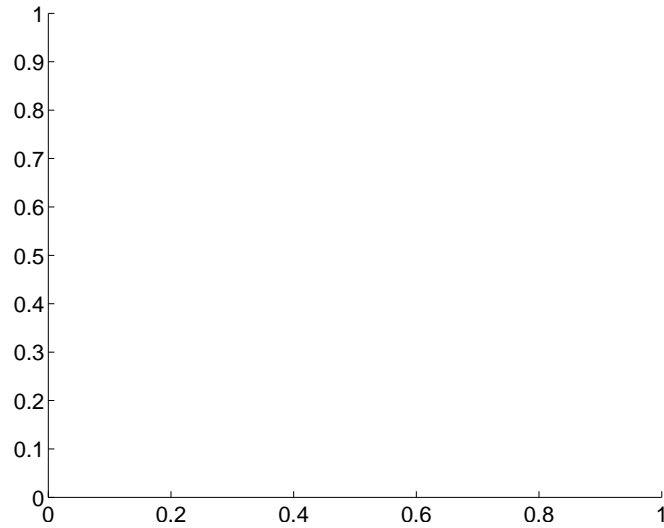
Supplemental centroid analysis for 010861770-01. Kepler magnitude: 15.34. Transit SNR 11.46

There are 0 quarters with good PRF difference image offsets

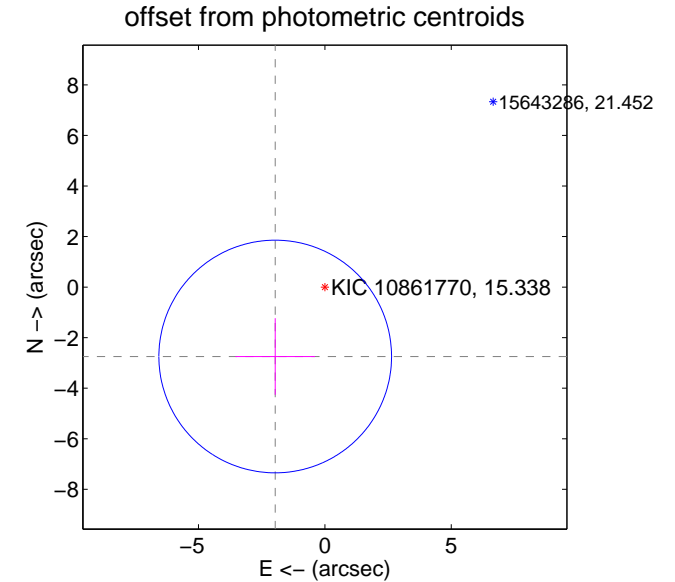
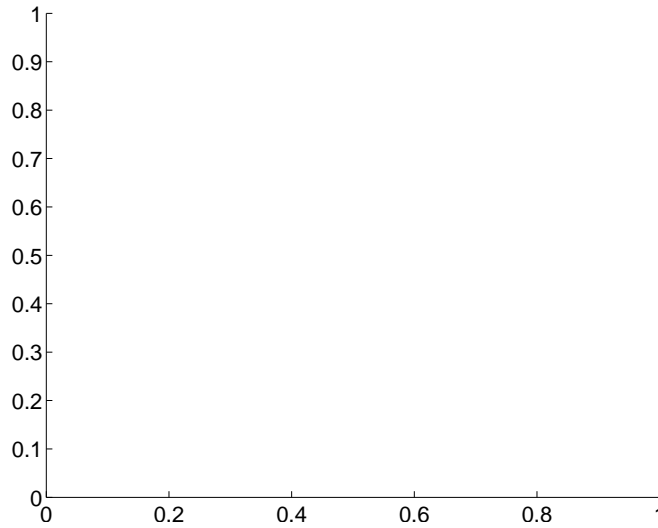
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	3.38 ± 1.53	2.20	1.96 ± 1.57	-2.75 ± 1.51

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

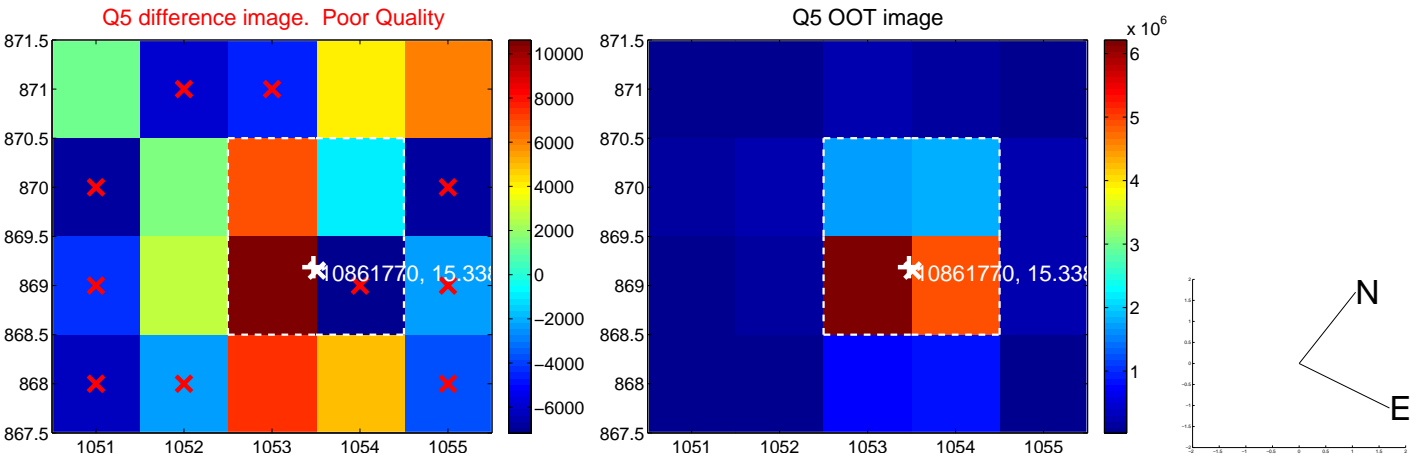


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



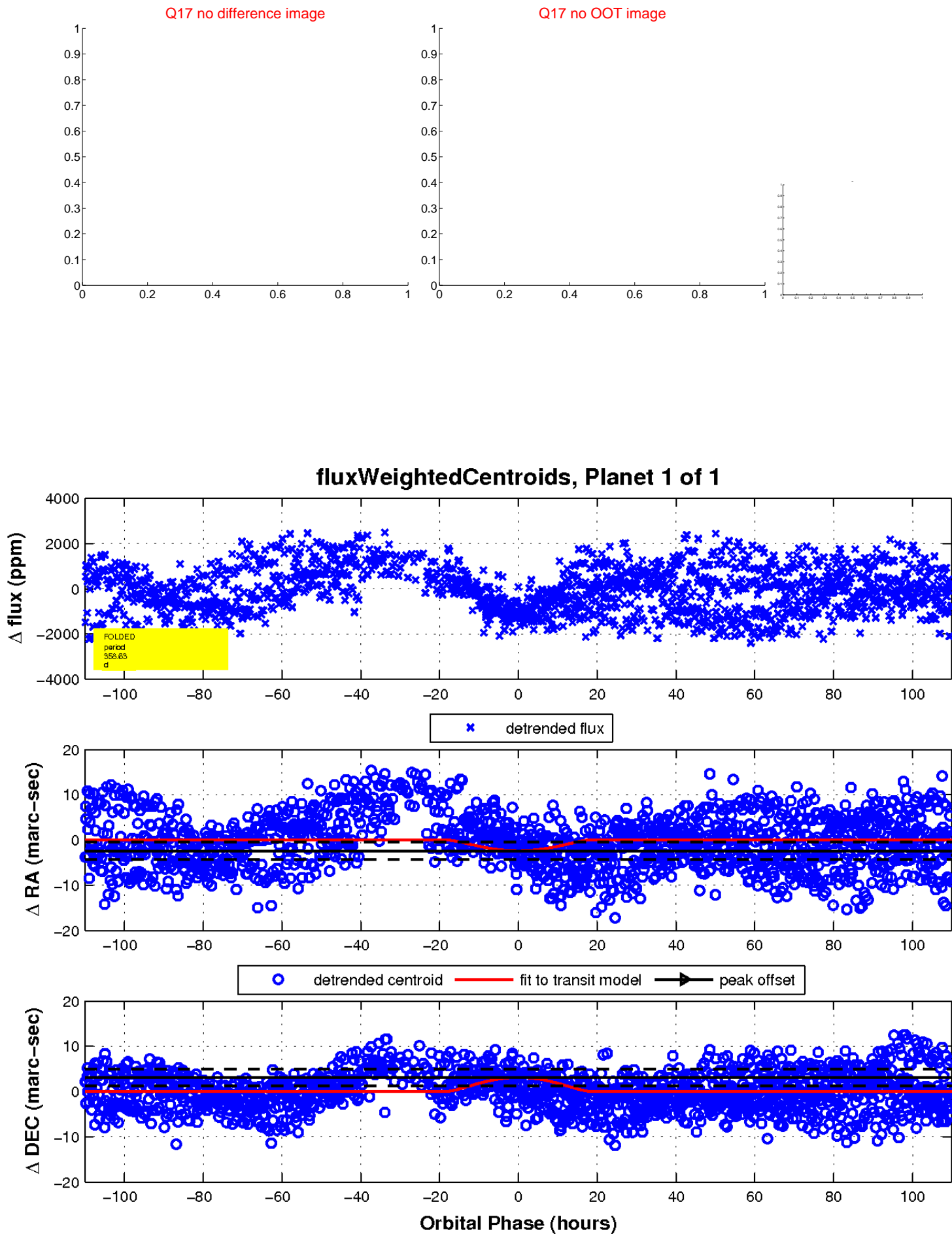
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

