

KIC 010354763

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})
010354763-01	OBS	No	45.914255	163.598805	1368.5	4.583	8.7	6.0	0.94	6131	3.72	17.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010354763-01	OBS	FP	0.01	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.

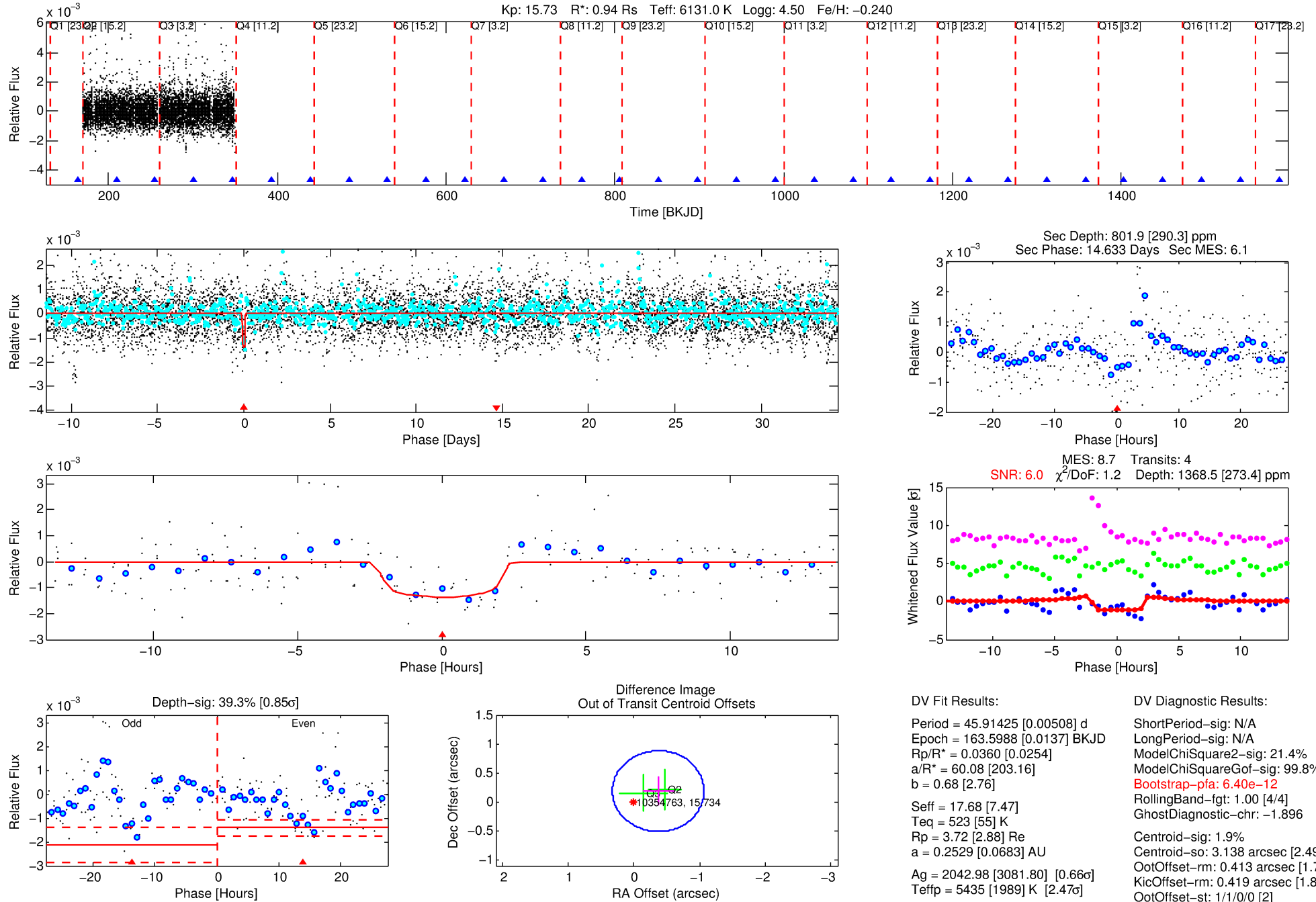
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010354763-01

No Significant Match Found

DV One-Page Summary

KIC: 10354763 Candidate: 1 of 1 Period: 45.914 d



DV Fit Results:

Period = 45.91425 [0.00508] d
Epoch = 163.5988 [0.0137] BKJD
Rp/R* = 0.0360 [0.0254]
a/R* = 60.08 [203.16]
b = 0.68 [2.76]
Seff = 17.68 [7.47]
Teq = 523 [55] K
Rp = 3.72 [2.88] Re
a = 0.2529 [0.0683] AU
Ag = 2042.98 [3081.80] [0.66 σ]
Teffp = 5435 [1989] K [2.47 σ]

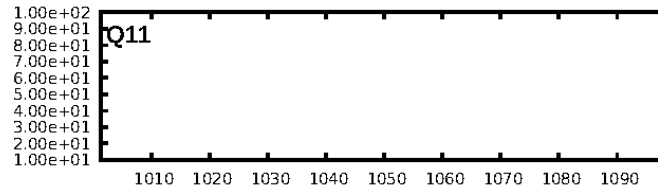
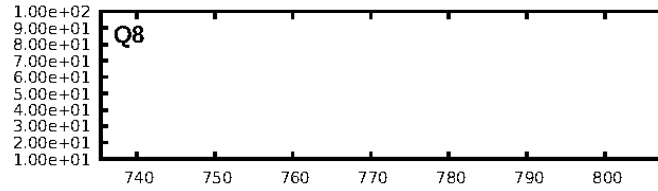
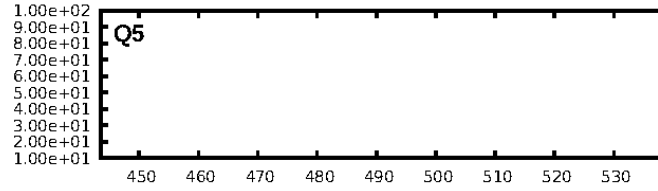
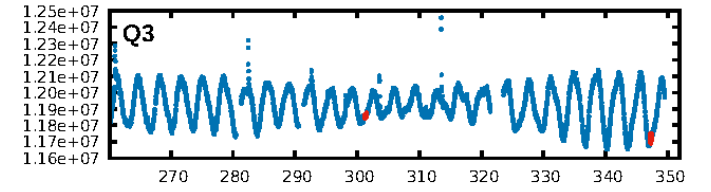
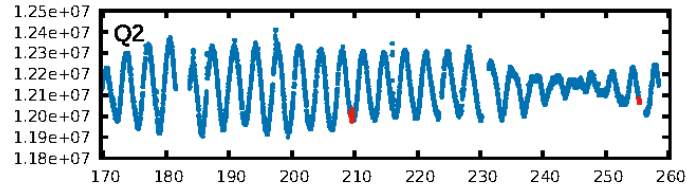
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 6.40e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.896
Centroid-sig: 1.9%
Centroid-so: 3.138 arcsec [2.49 σ]
OotOffset-rm: 0.413 arcsec [1.78 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.419 arcsec [1.80 σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

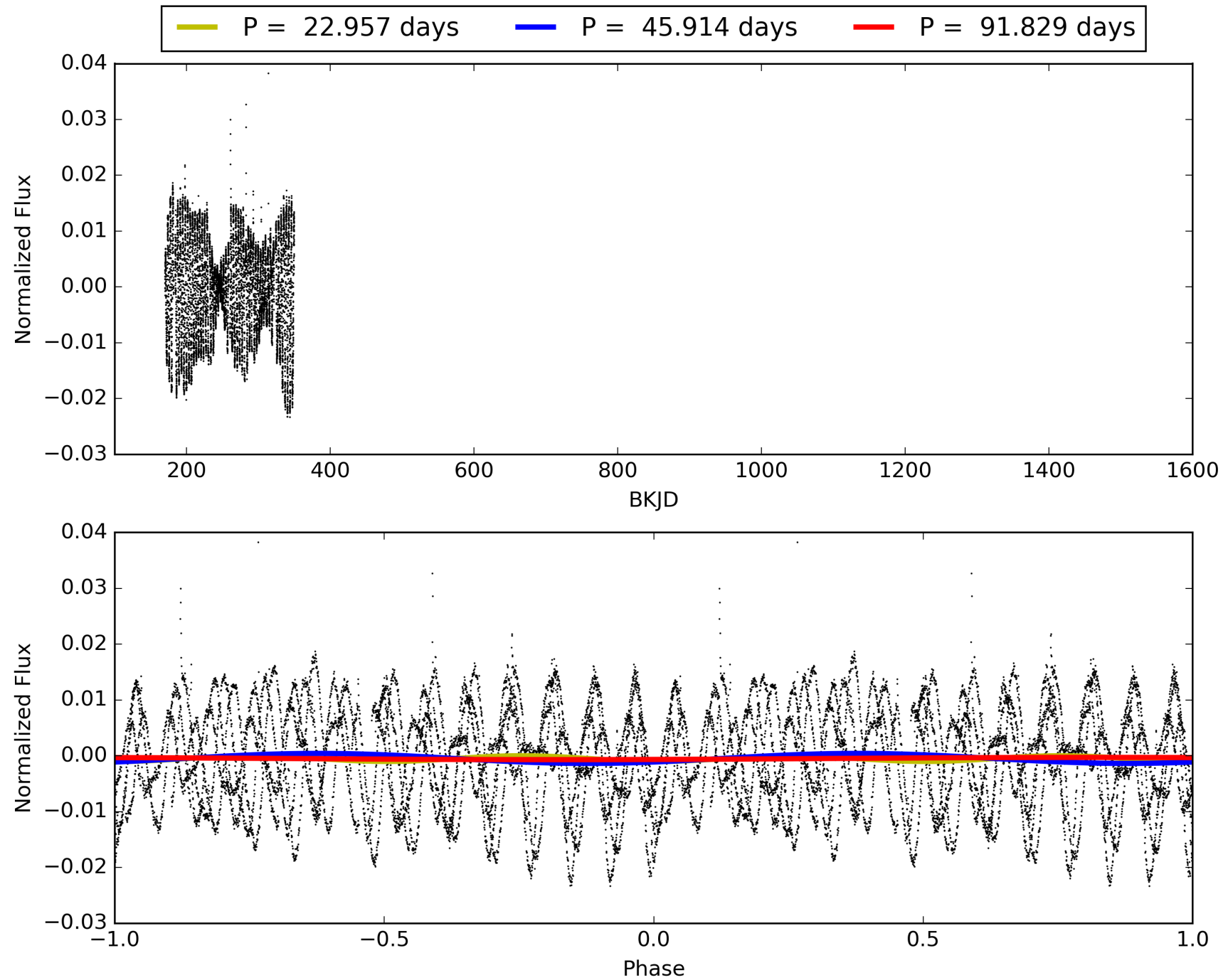
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:39:49 Z

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

TCE 010354763-01, PDC Light Curves

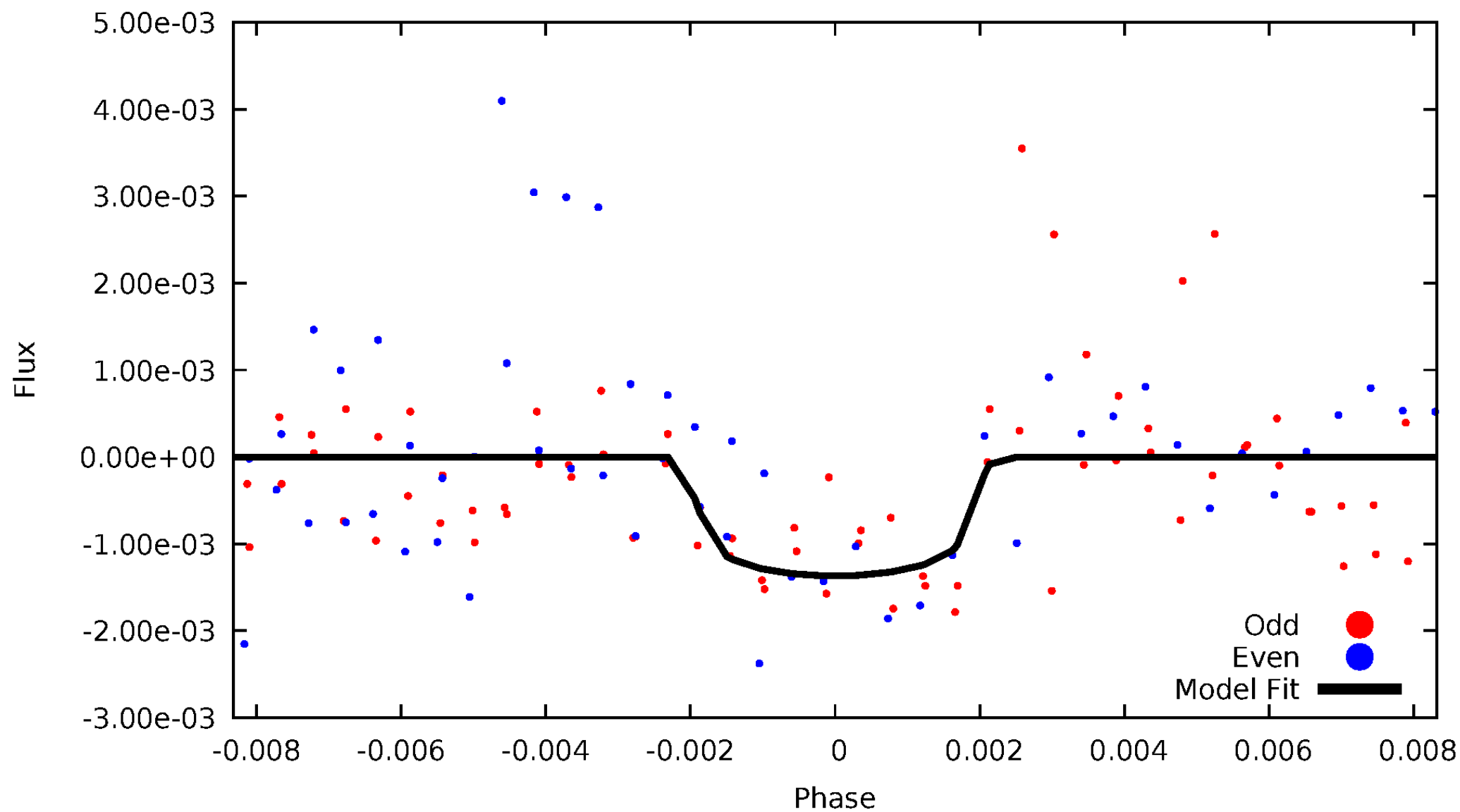


TCE 010354763-01



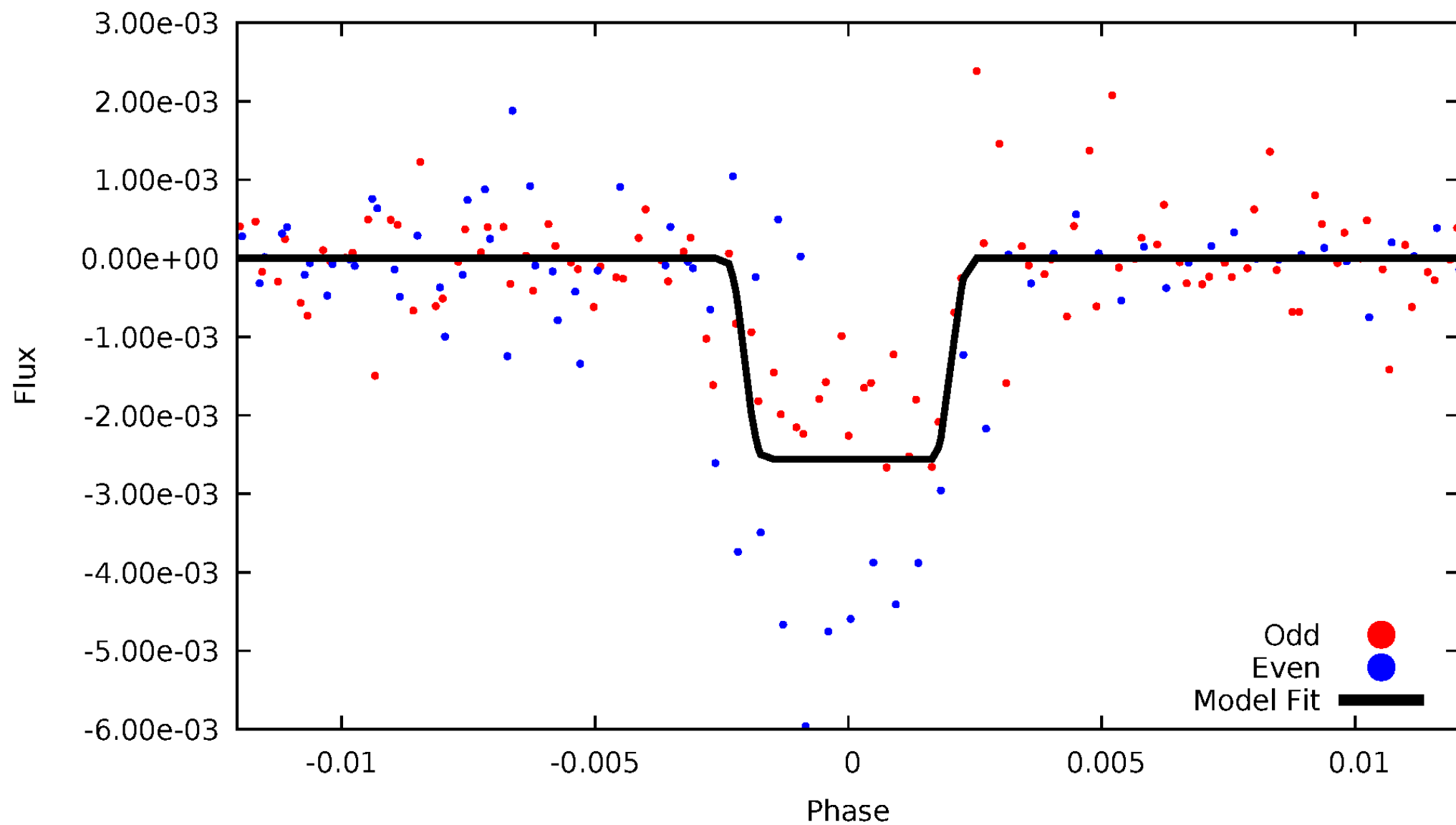
DV Odd/Even

TCE 010354763-01



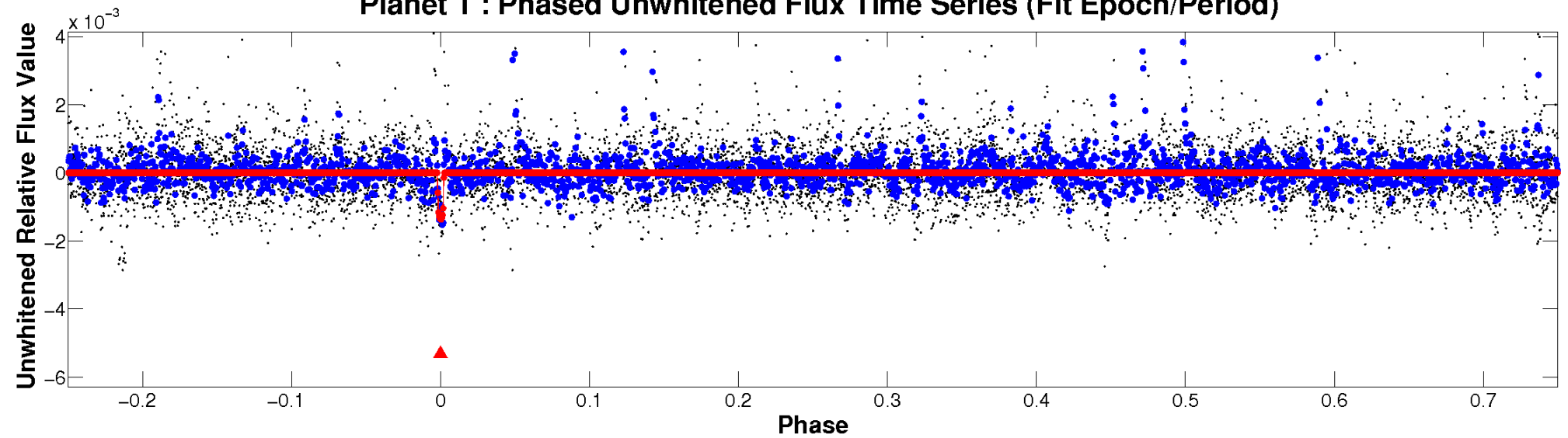
ALT Odd/Even

TCE 010354763-01

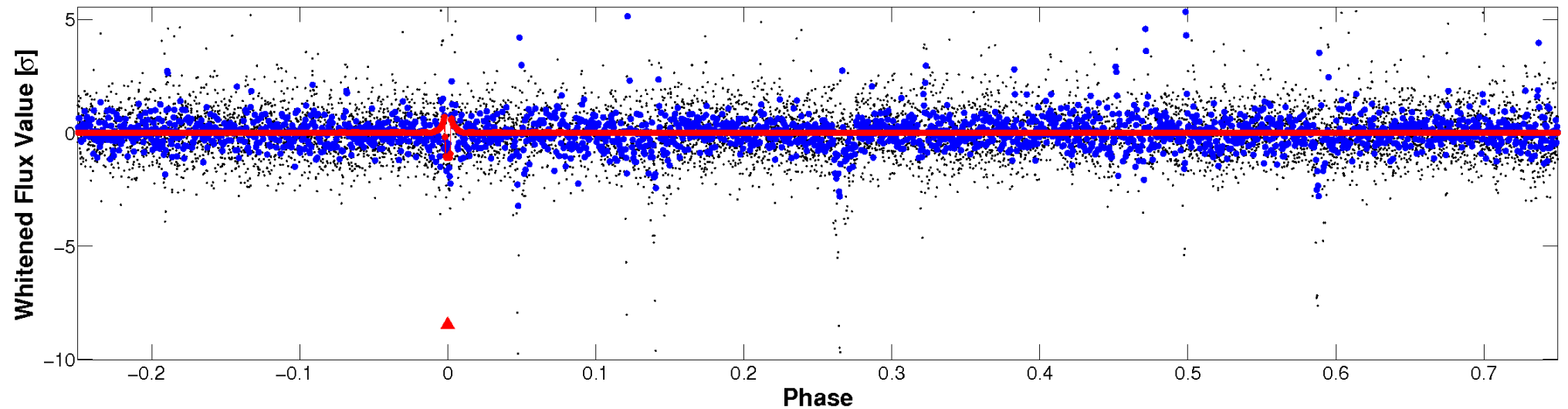


Non-Whitened Vs. Whitened Light Curve

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

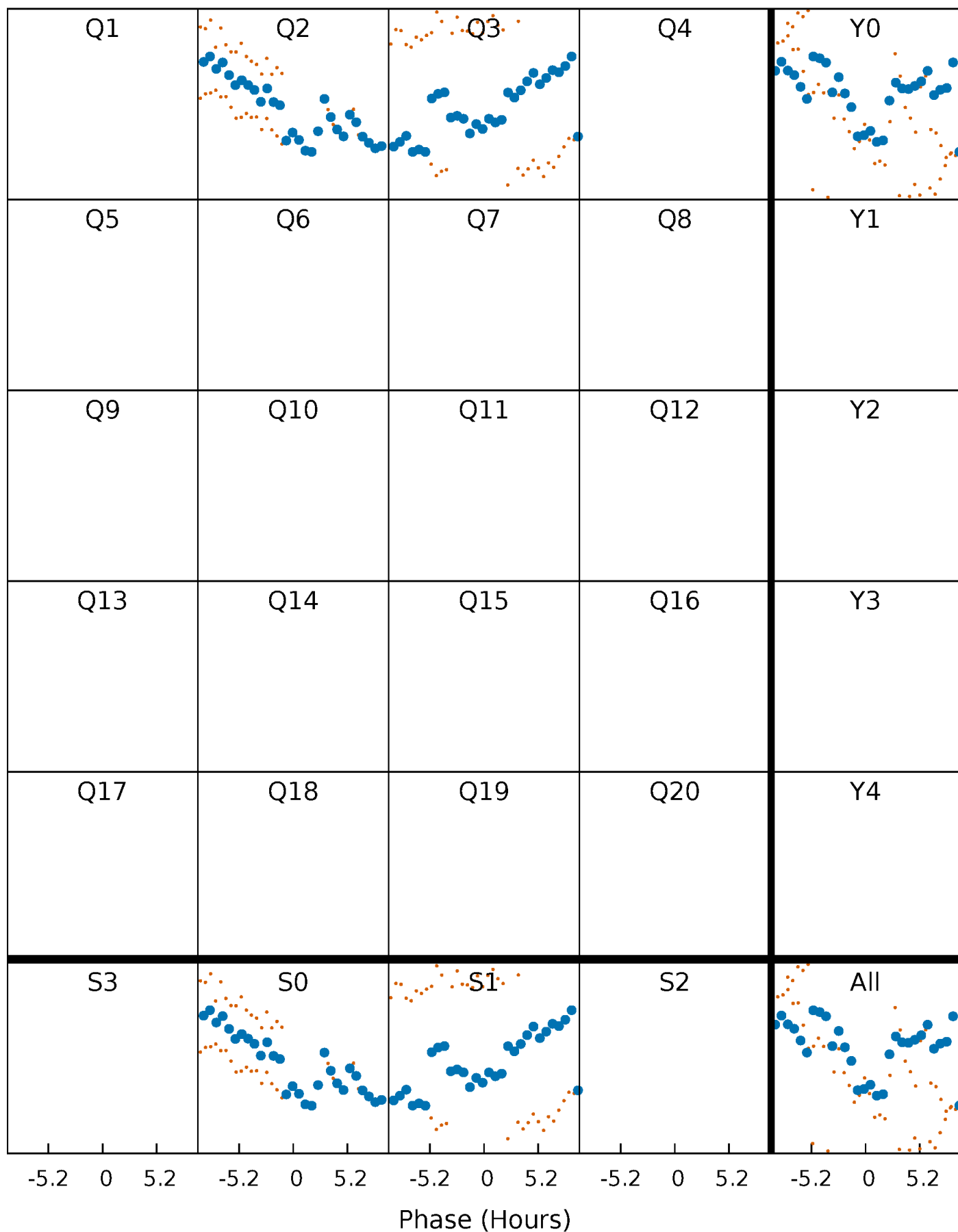


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



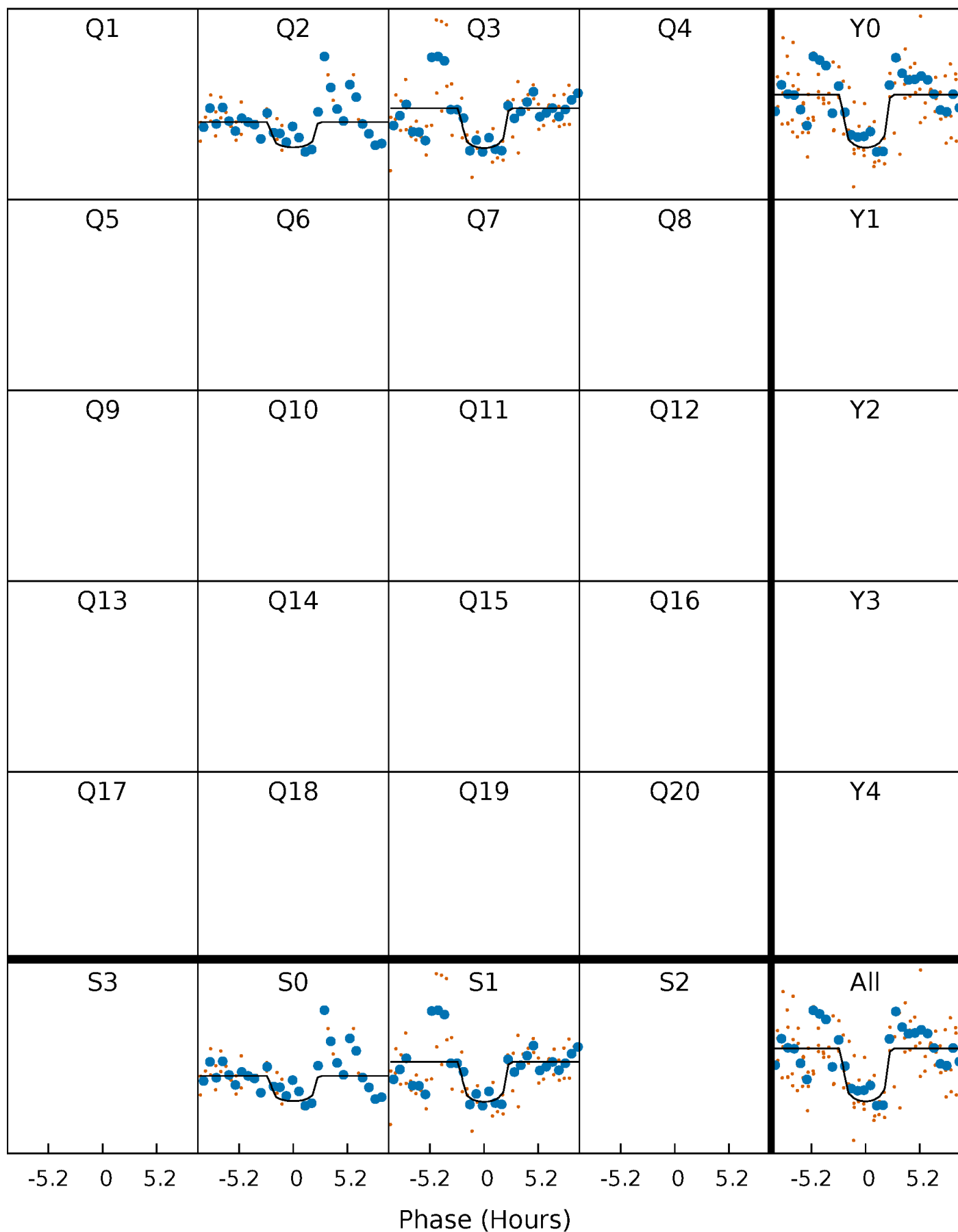
PDC Quarter-Phased Transit Curves

TCE 010354763-01 P= 45.914255 Days $T_0=163.598805$ (BKJD)



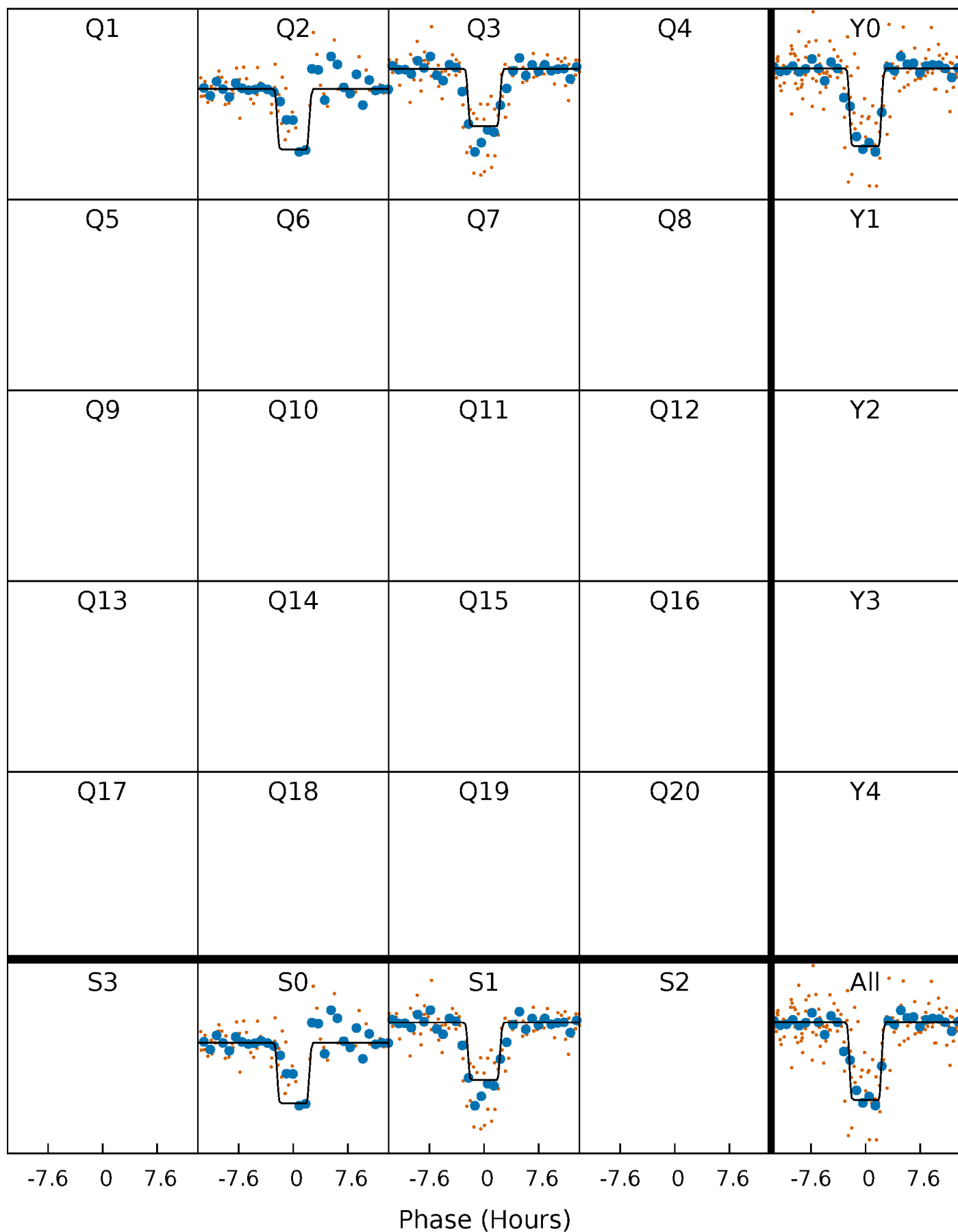
DV Quarter-Phased Transit Curves

TCE 010354763-01 $P = 45.914255$ Days $T_0 = 163.598805$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

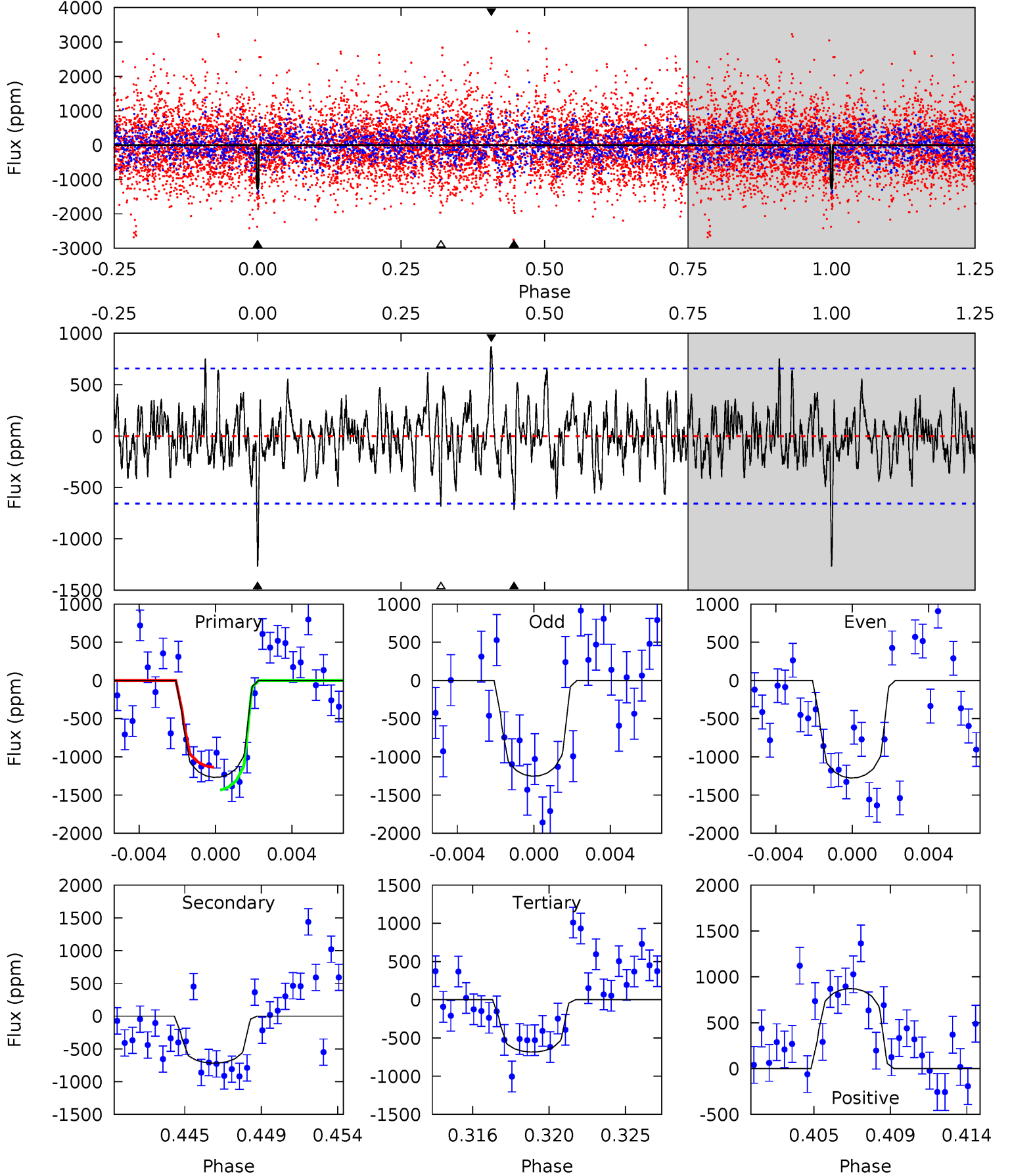
TCE 010354763-01 P= 45.910404 Days $T_0=163.604784$ (BKJD)



DV Model-Shift Uniqueness Test

010354763-01, P = 45.914255 Days, E = 163.598805 Days

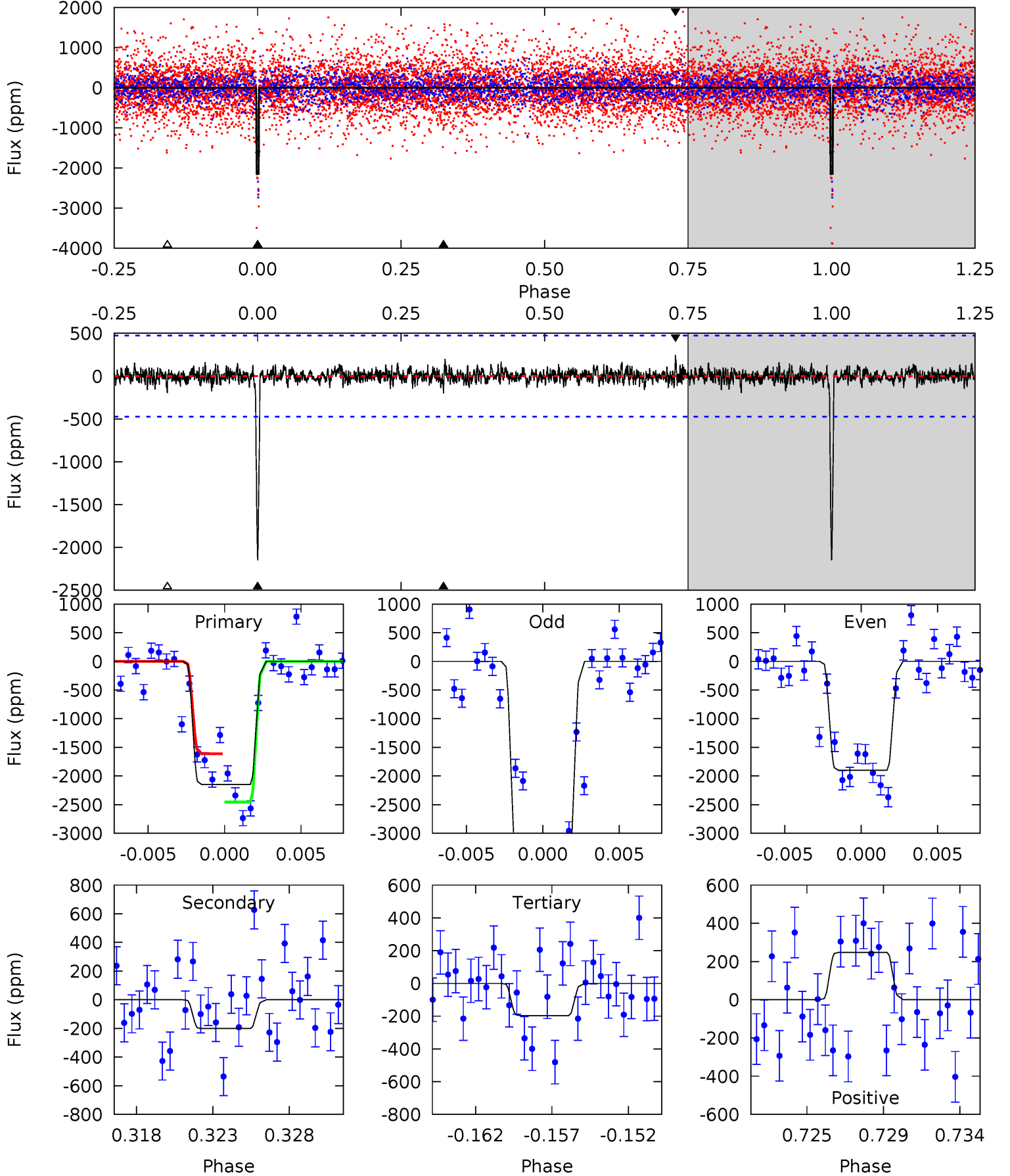
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.99	5.65	5.39	6.86	5.18	2.84	1.72	4.60	3.13	0.26	-1.21	0.08	0.83	0.41	1.19



Alt Model-Shift Uniqueness Test

010354763-01, P = 45.910404 Days, E = 163.604784 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	2.19	2.14	2.70	5.16	2.81	0.57	21.3	20.7	0.05	-0.51	9.83	1.07	0.10	4.50



Stellar Parameters For KIC 010354763

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6131^{+191}_{-233}	$4.497^{+0.054}_{-0.216}$	$-0.240^{+0.250}_{-0.300}$	$0.945^{+0.302}_{-0.101}$	$1.023^{+0.139}_{-0.139}$	$1.707^{+0.382}_{-0.943}$
	+3%/-4%	+1%/-5%	+104%/-125%	+32%/-11%	+14%/-14%	+22%/-55%
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 010354763-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-718±127	$4.16^{+2.79}_{-2.38}$	746^{+52}_{-41}	5162^{+2798}_{-930}	1420^{+6031}_{-920}
Alt.	-201±92	$5.44^{+2.83}_{-2.65}$	747^{+53}_{-38}	3645^{+1007}_{-568}	215^{+614}_{-143}

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

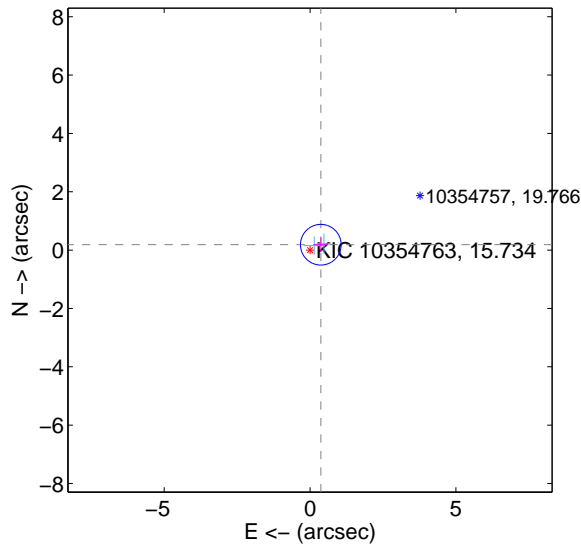
Supplemental centroid analysis for 010354763-01. Kepler magnitude: 15.73. Transit SNR 5.99

There are 2 quarters with good PRF difference image offsets

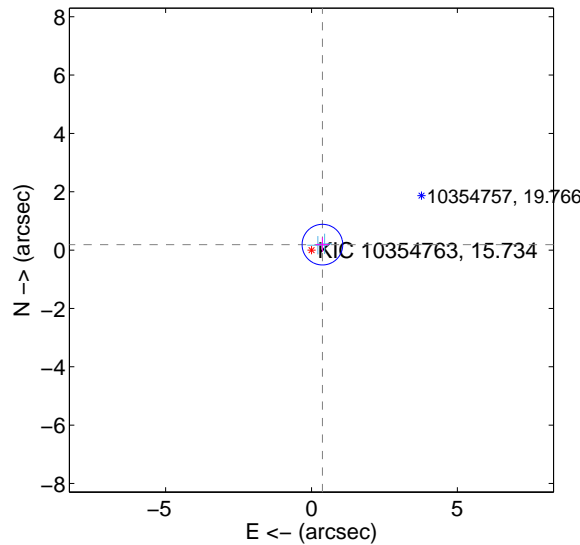
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.413 ± 0.232	1.78	-0.369 ± 0.229	0.185 ± 0.244
PRF-fit source offset from KIC position	0.419 ± 0.232	1.80	-0.375 ± 0.229	0.187 ± 0.244
photometric centroid source offset	3.14 ± 1.26	2.49	-2.75 ± 1.16	1.51 ± 1.55

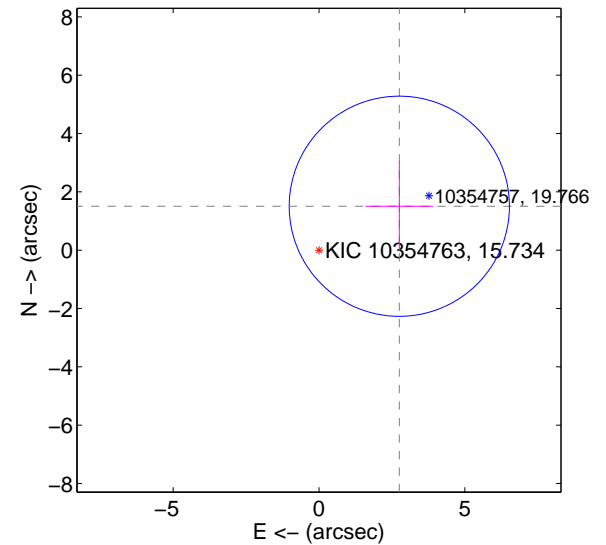
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

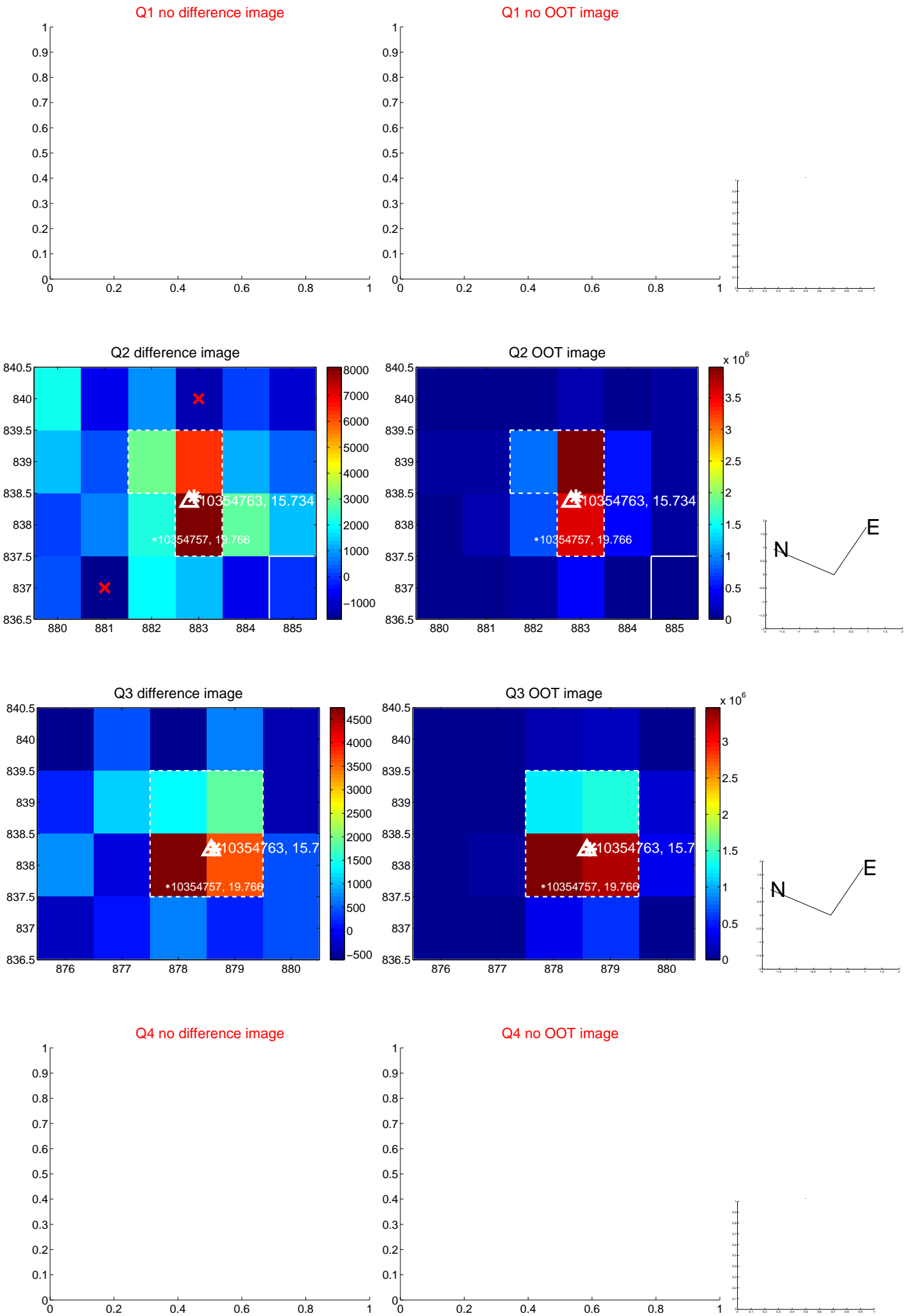


offset from photometric centroids



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.



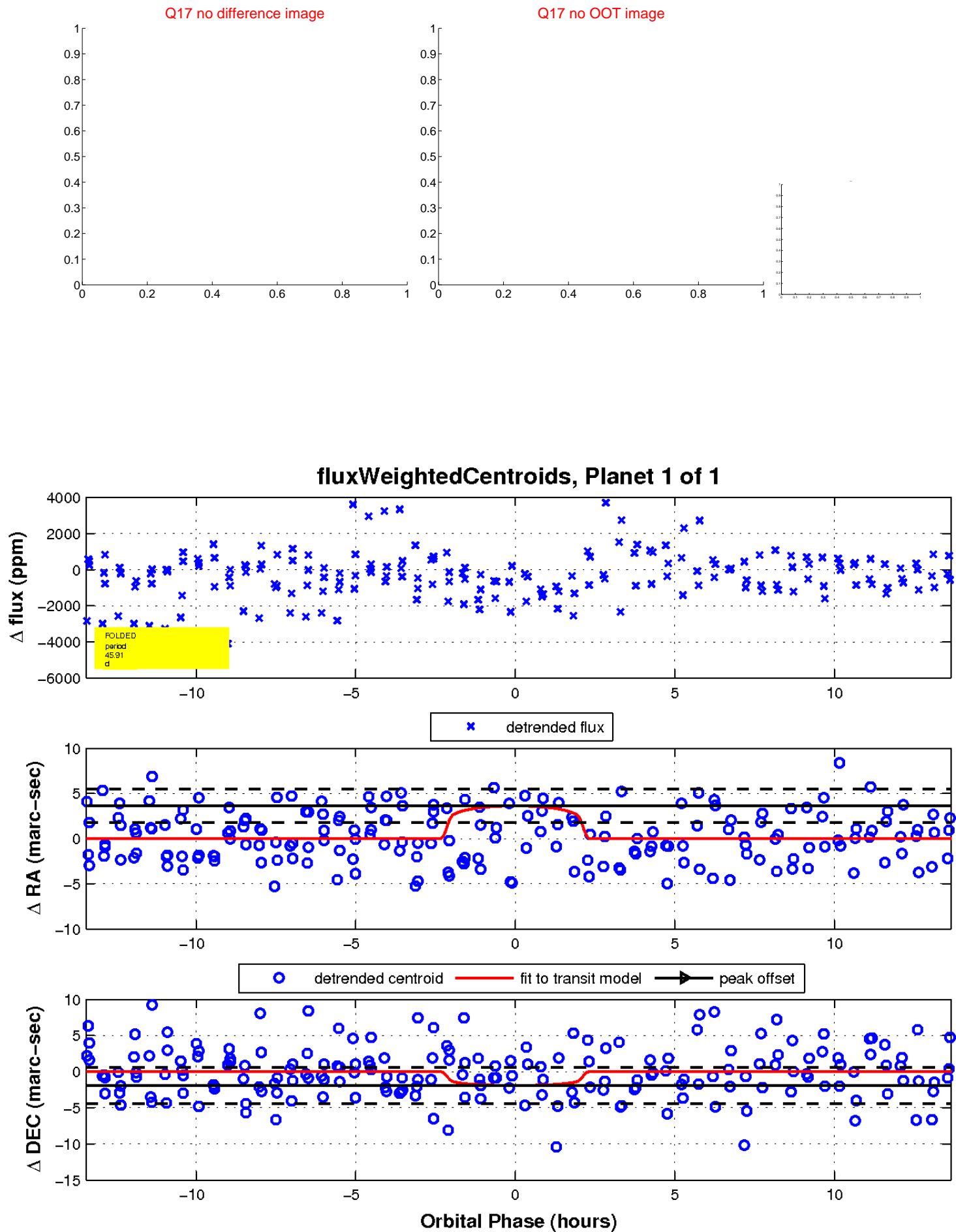
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

