

KIC 003865298

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})
003865298-01	OBS	No	9.530481	134.848899	307425.8	5.793	3471.3	2199.8	0.91	5501	59.10	99.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003865298-01	OBS	FP	0.00	1	0	0	0	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.

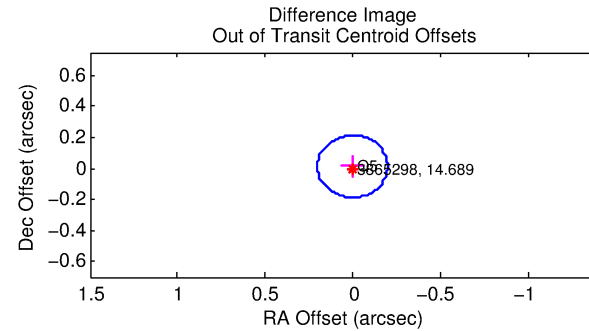
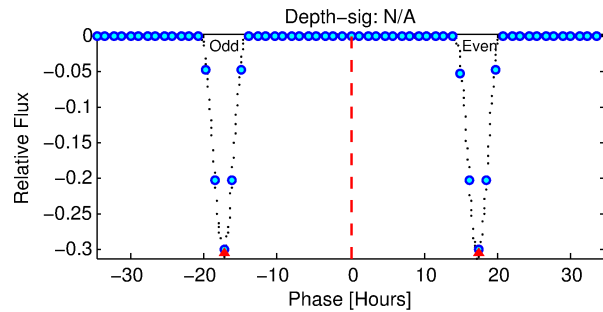
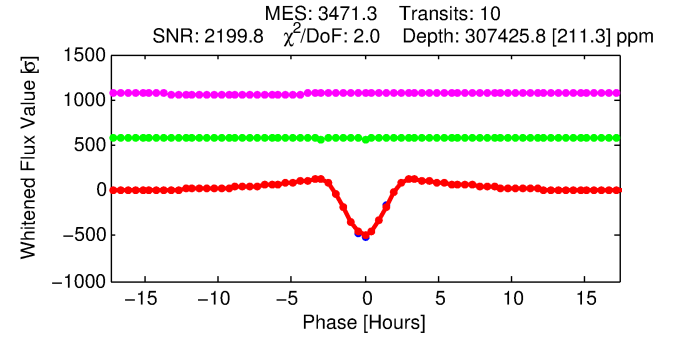
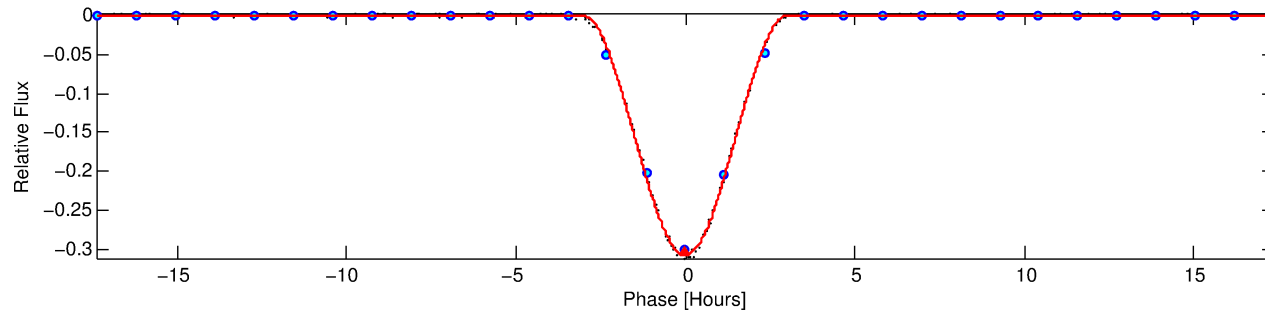
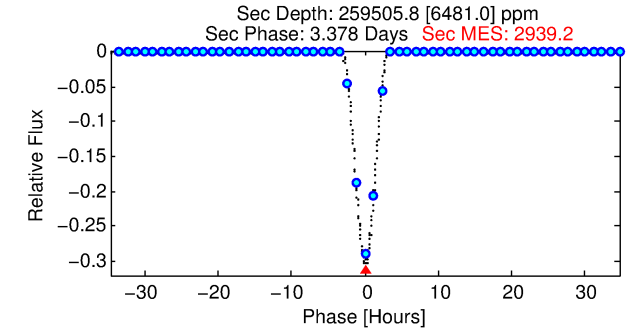
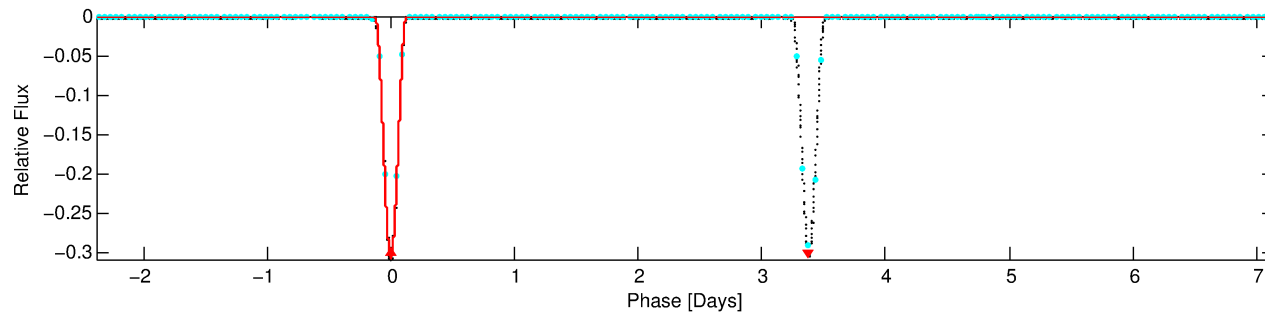
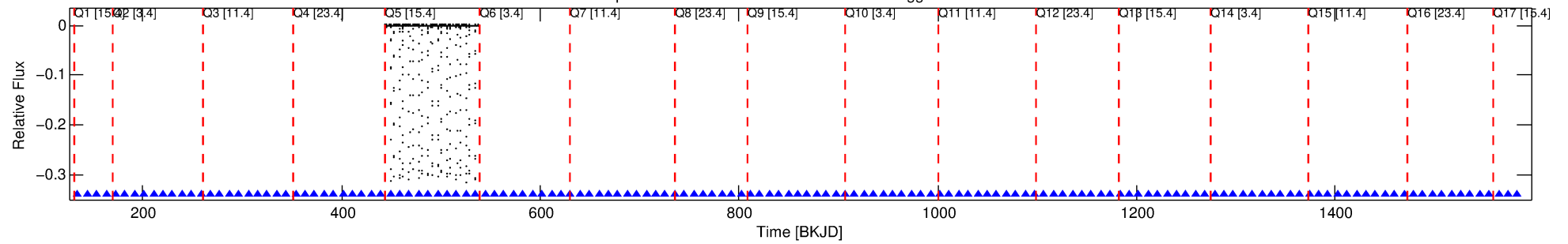
Ephemeris Match Information For 003865298-01

No Significant Match Found

DV One-Page Summary

KIC: 3865298 Candidate: 1 of 1 Period: 9.530 d
KOI: K03540 Corr: No Ephemeris Match

Kp: 14.69 R*: 0.91 Rs Teff: 5501.0 K Logg: 4.44 Fe/H: -0.140



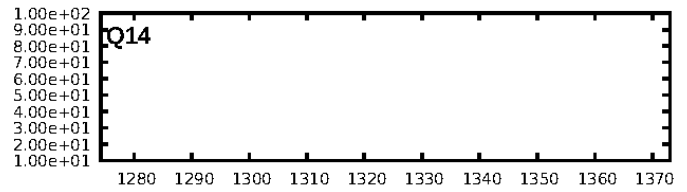
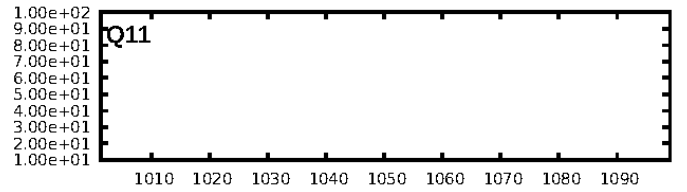
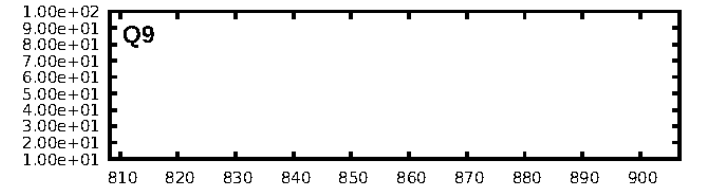
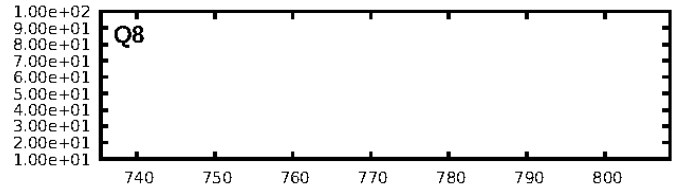
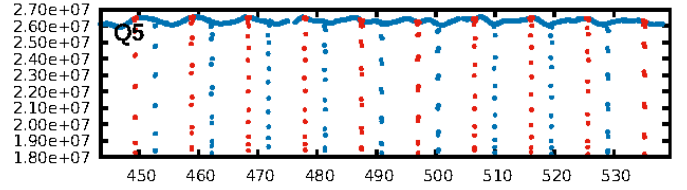
DV Fit Results:

Period = 9.53048 [0.00001] d
Epoch = 134.8489 [0.0004] BKJD
Rp/R* = 0.5938 [0.0258]
a/R* = 18.53 [0.12]
b = 0.61 [0.05]
Seff = 99.66 [34.53]
Teq = 806 [70] K
Rp = 59.10 [15.00] Re
a = 0.0828 [0.0177] AU
Ag = 279.92 [91.68] [3.04σ]
Teffp = 5095 [217] K [18.80σ]

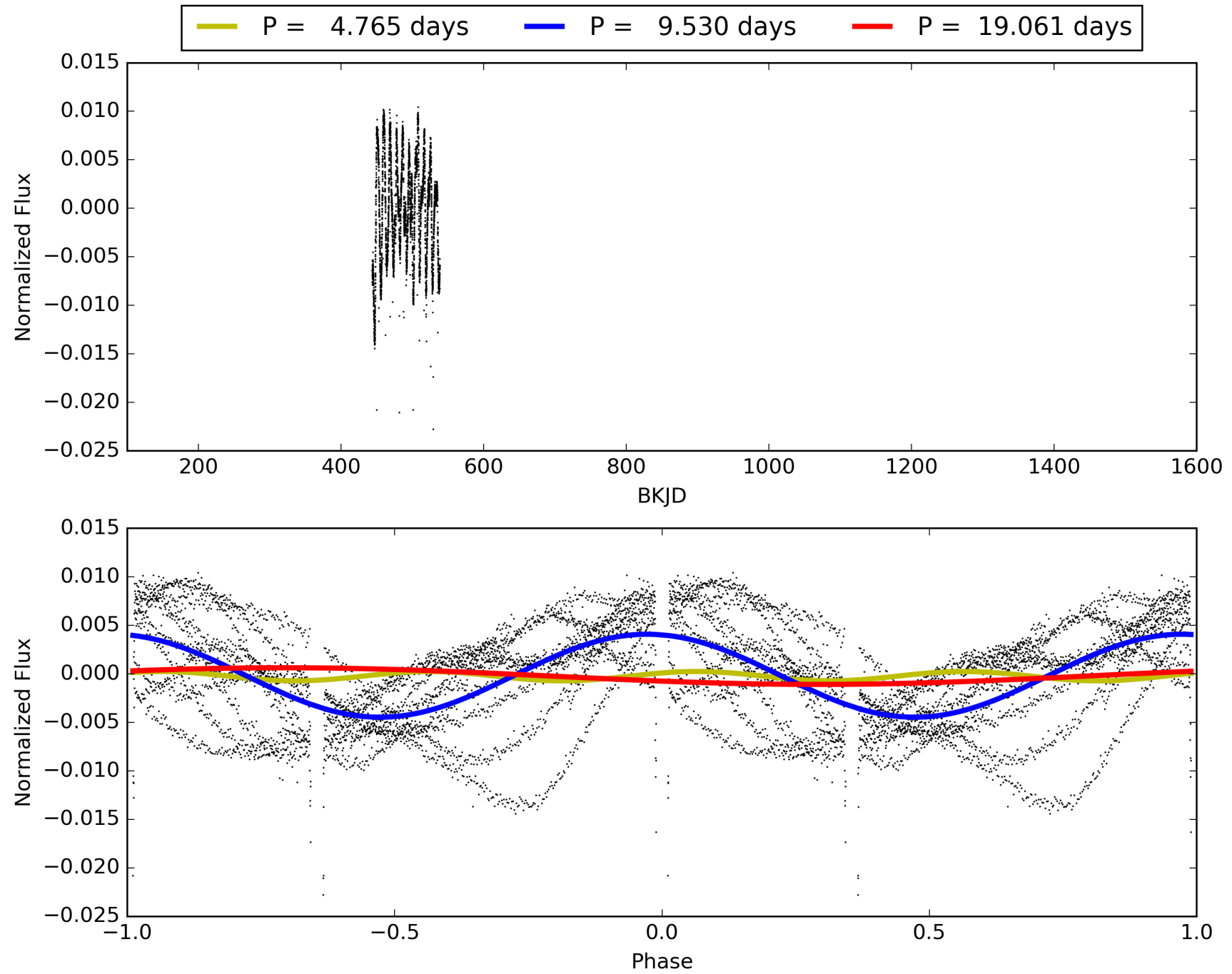
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 14.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 3.789
Centroid-sig: 0.0%
Centroid-so: 0.558 arcsec [150.42σ]
OotOffset-rm: 0.014 arcsec [0.22σ]
KicOffset-rm: 0.066 arcsec [0.99σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 003865298-01, PDC Light Curves

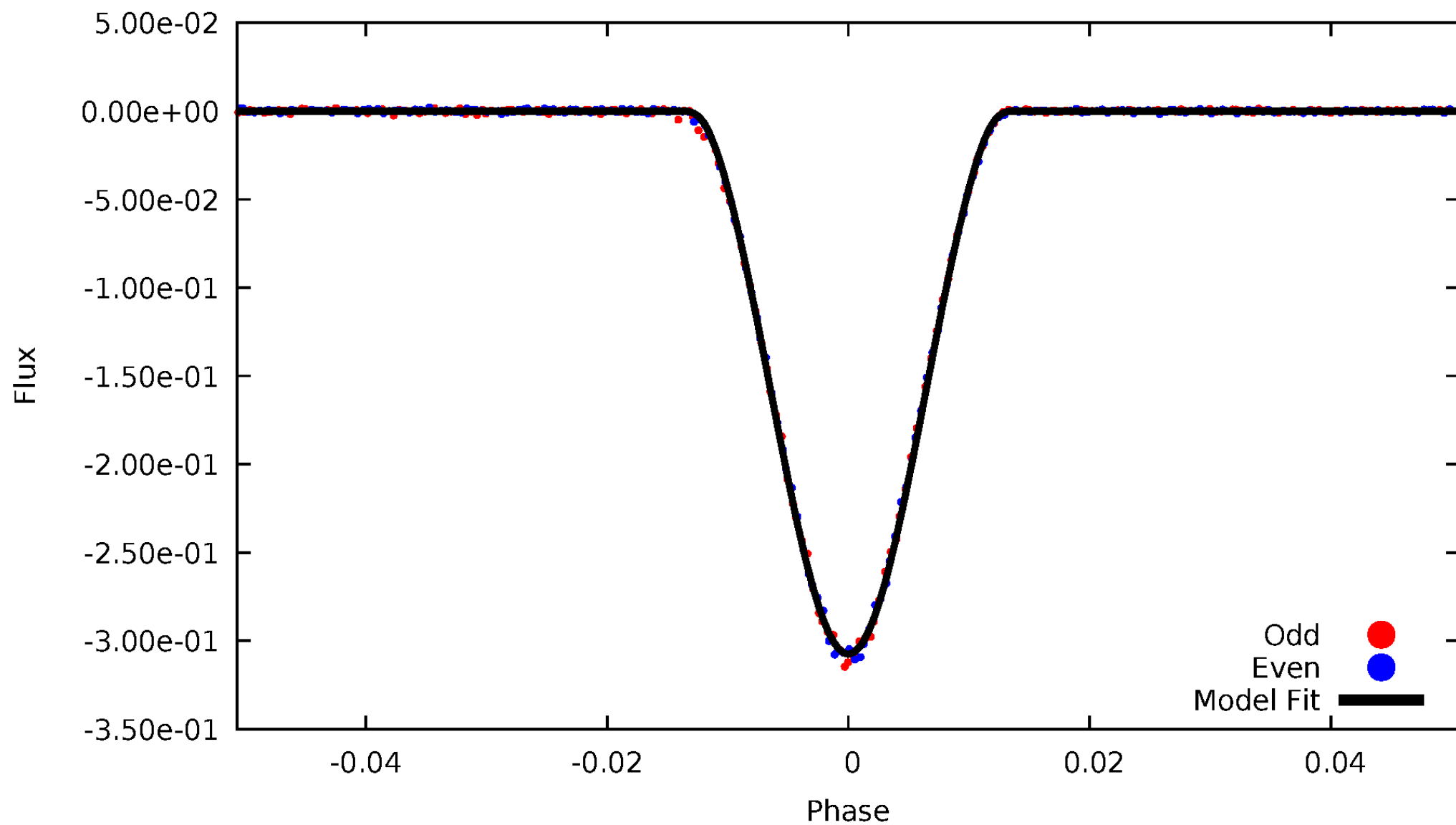


TCE 003865298-01



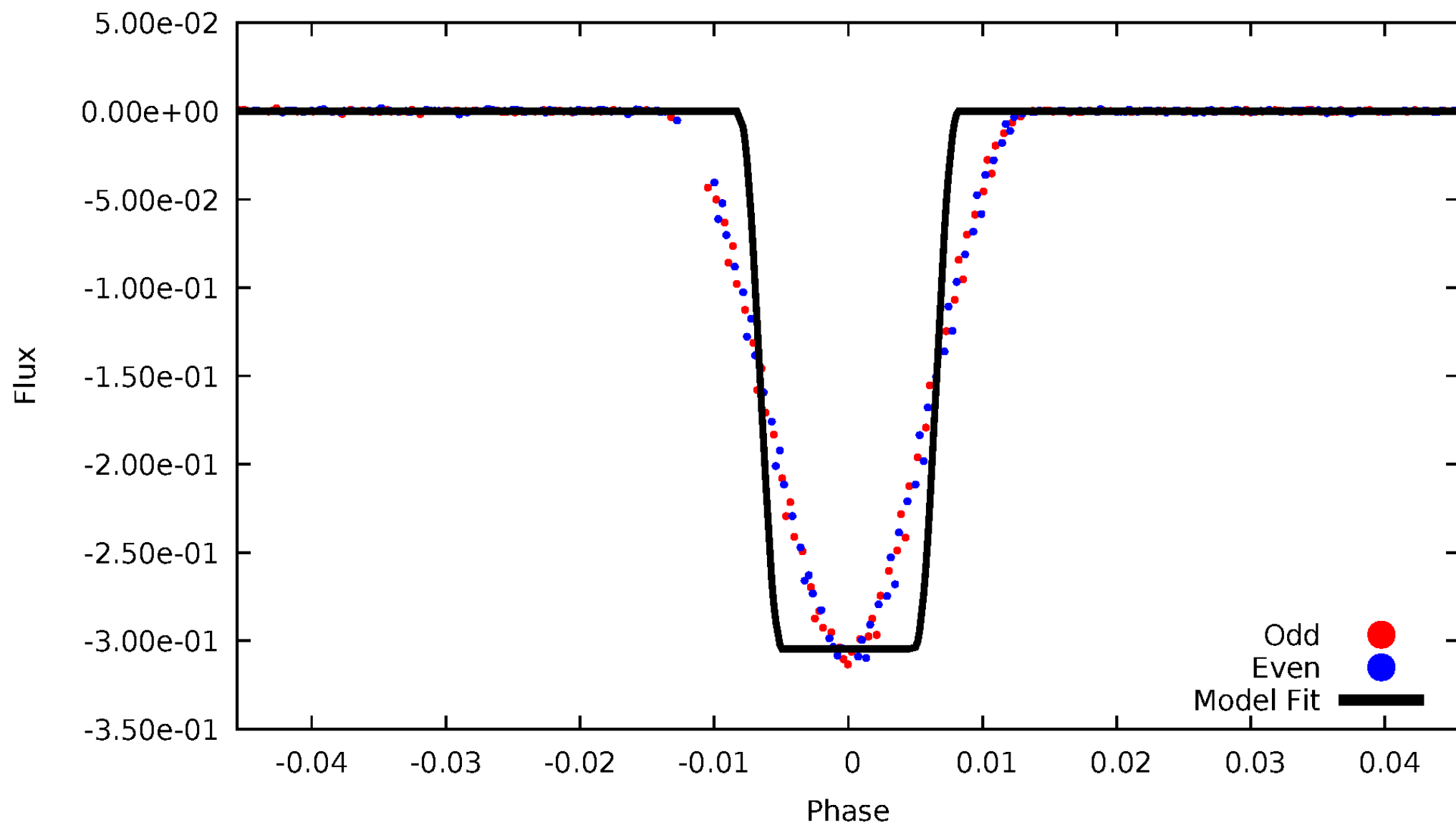
DV Odd/Even

TCE 003865298-01



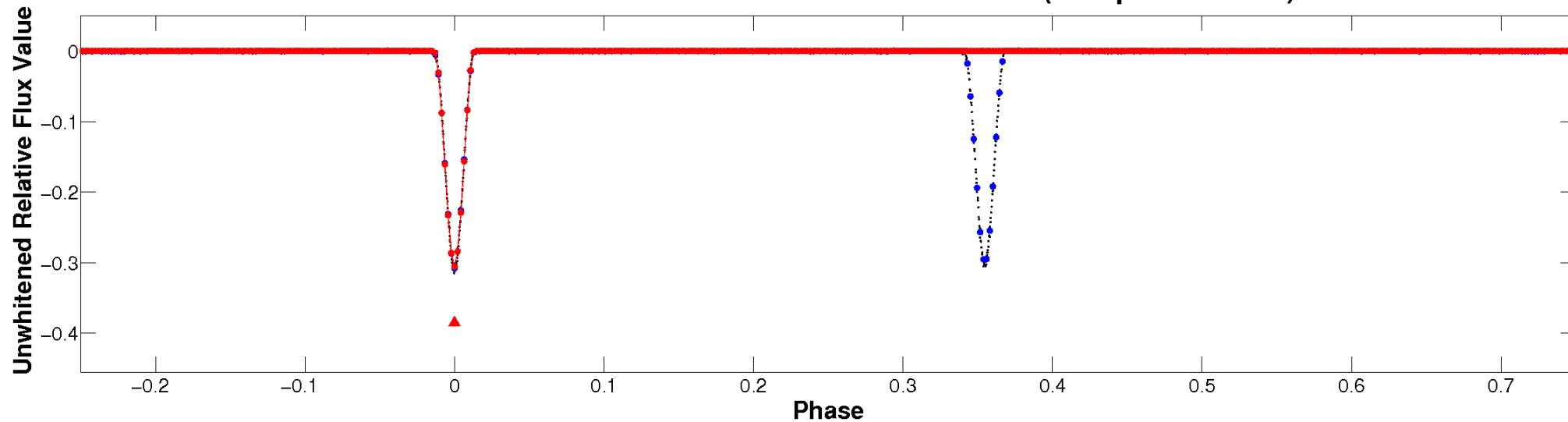
ALT Odd/Even

TCE 003865298-01

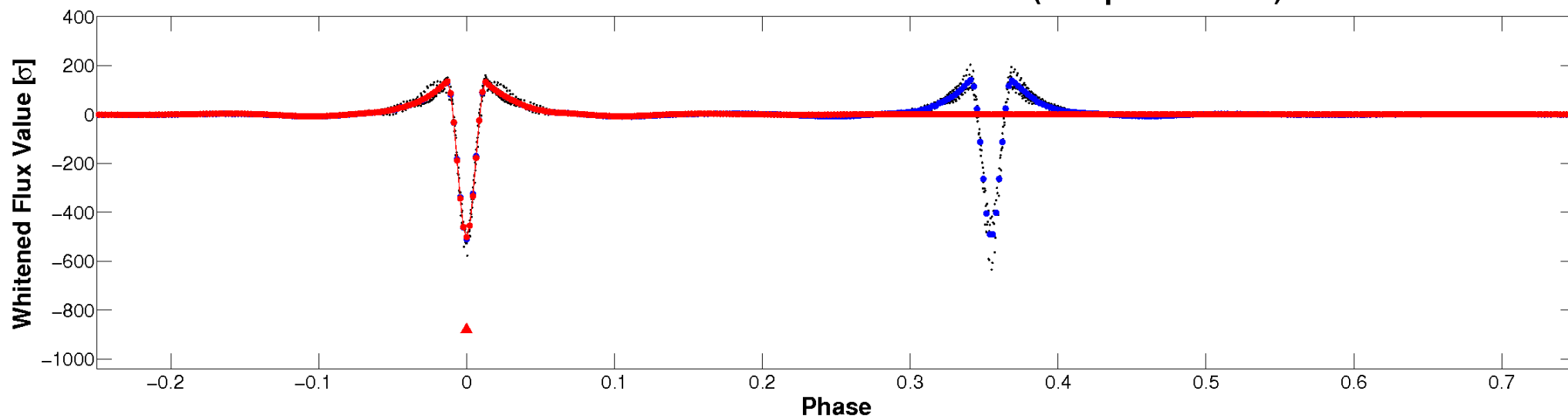


Non-Whitened Vs. Whitened Light Curve

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

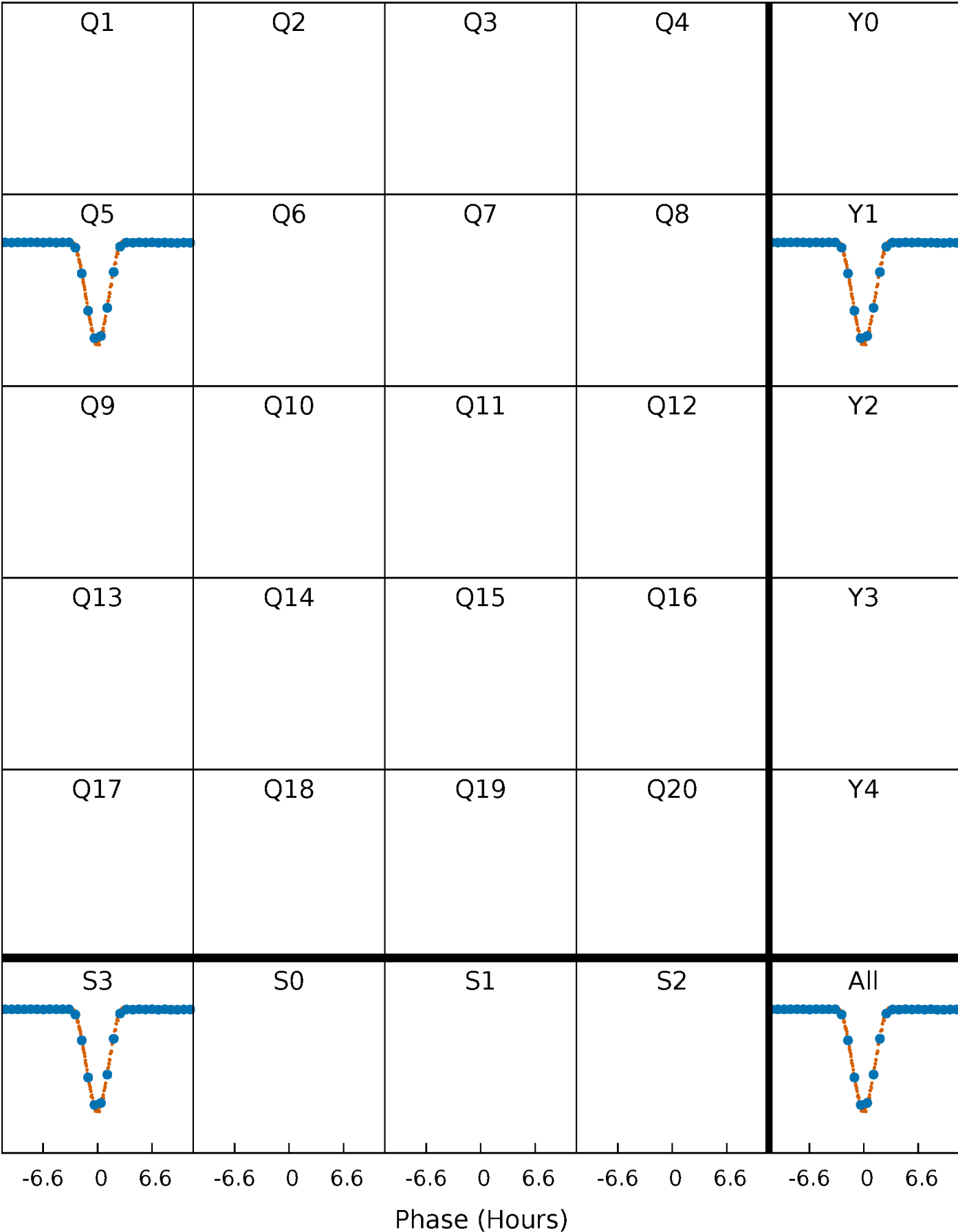


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



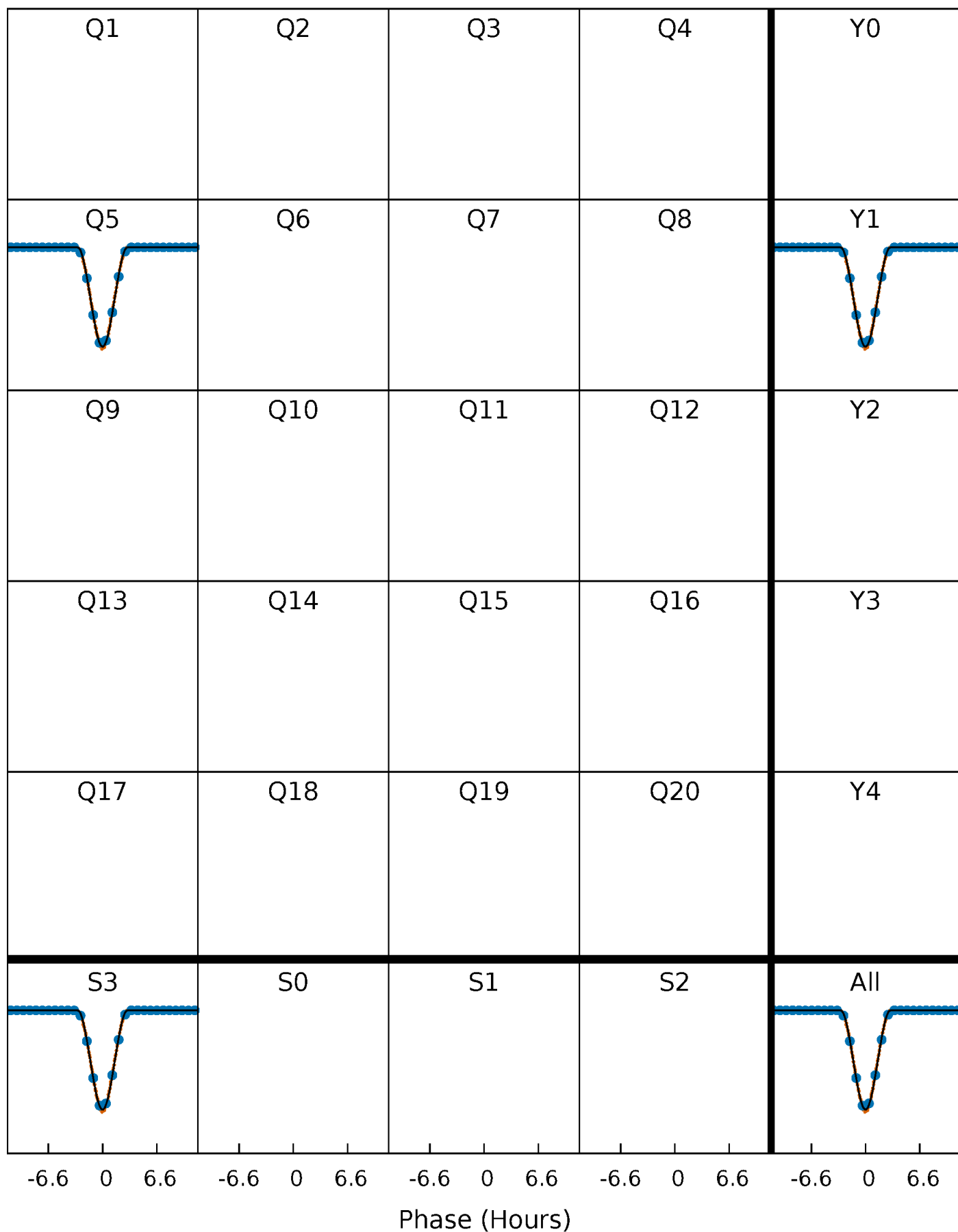
PDC Quarter-Phased Transit Curves

TCE 003865298-01 P= 9.530481 Days $T_0=134.848899$ (BKJD)



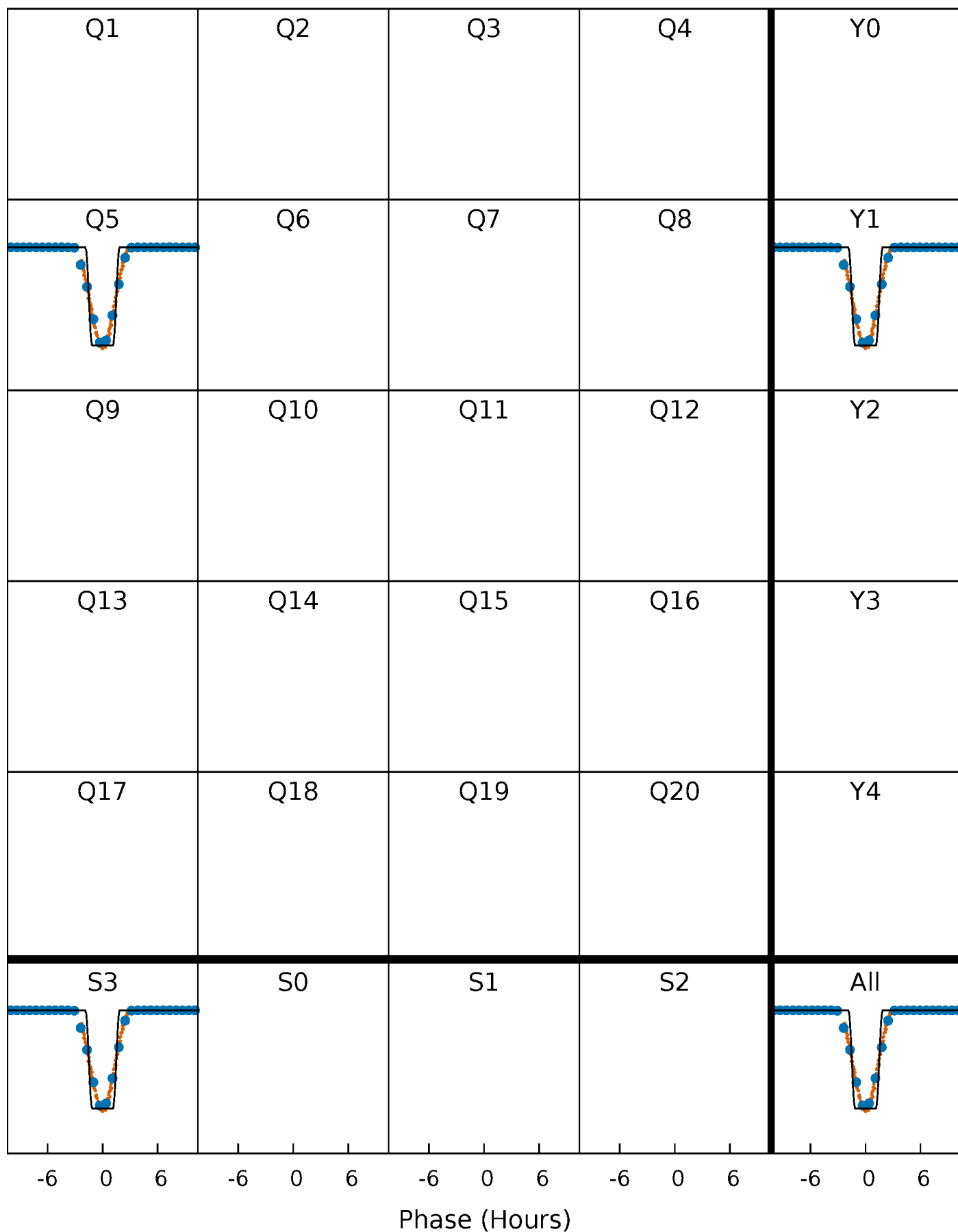
DV Quarter-Phased Transit Curves

TCE 003865298-01 P= 9.530481 Days $T_0=134.848899$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

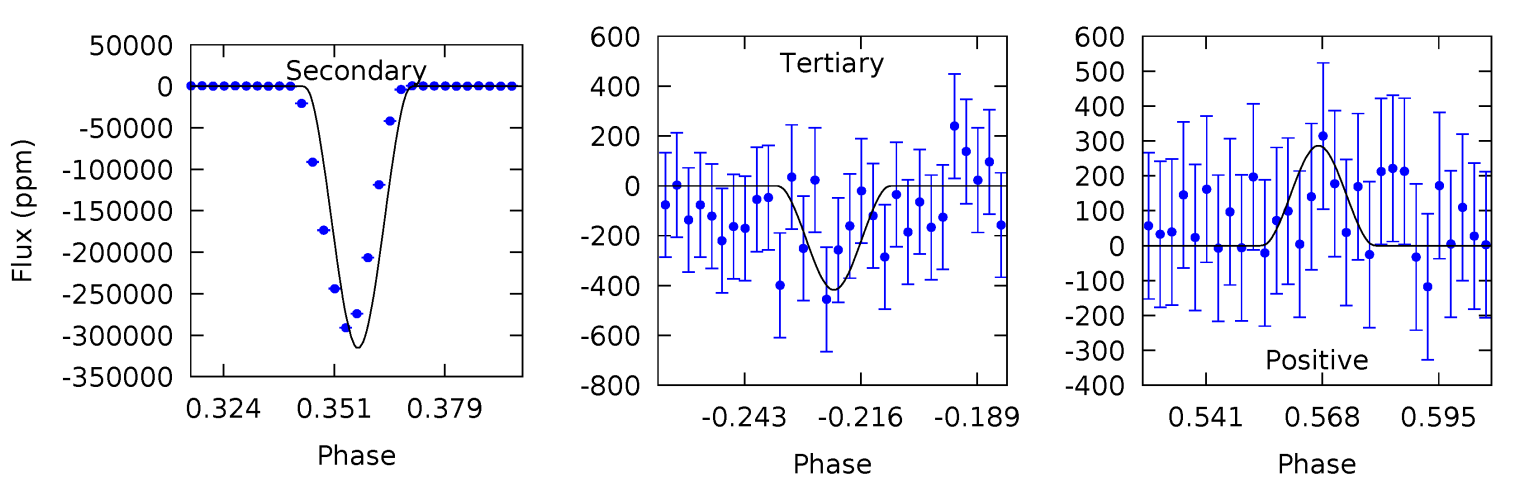
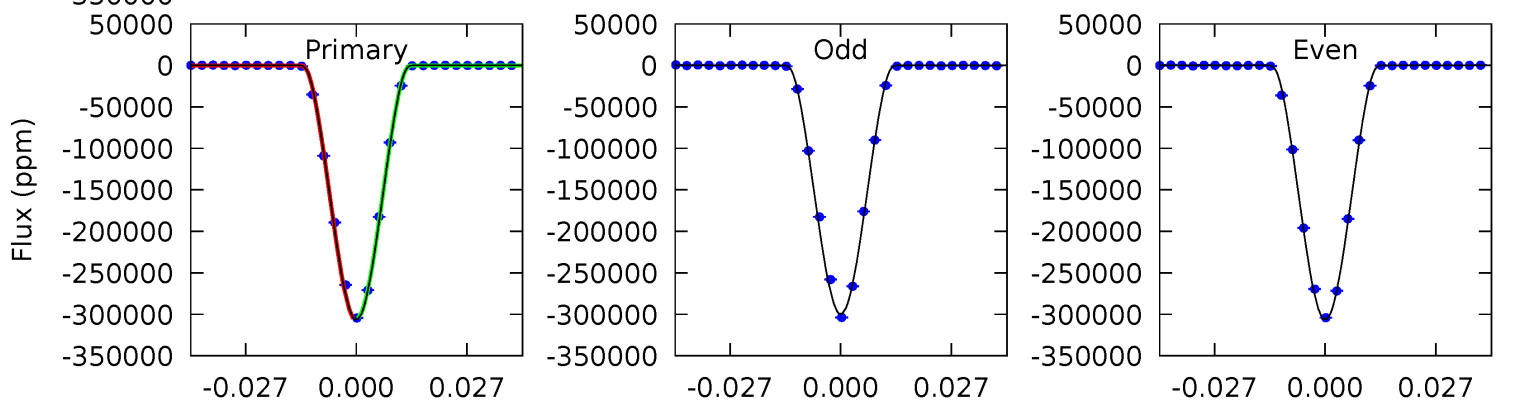
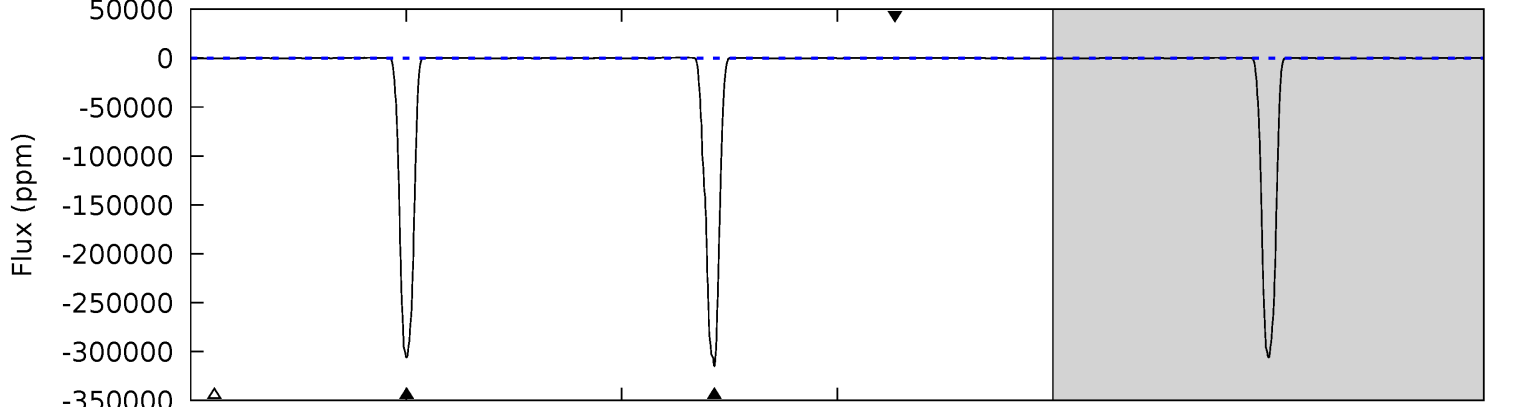
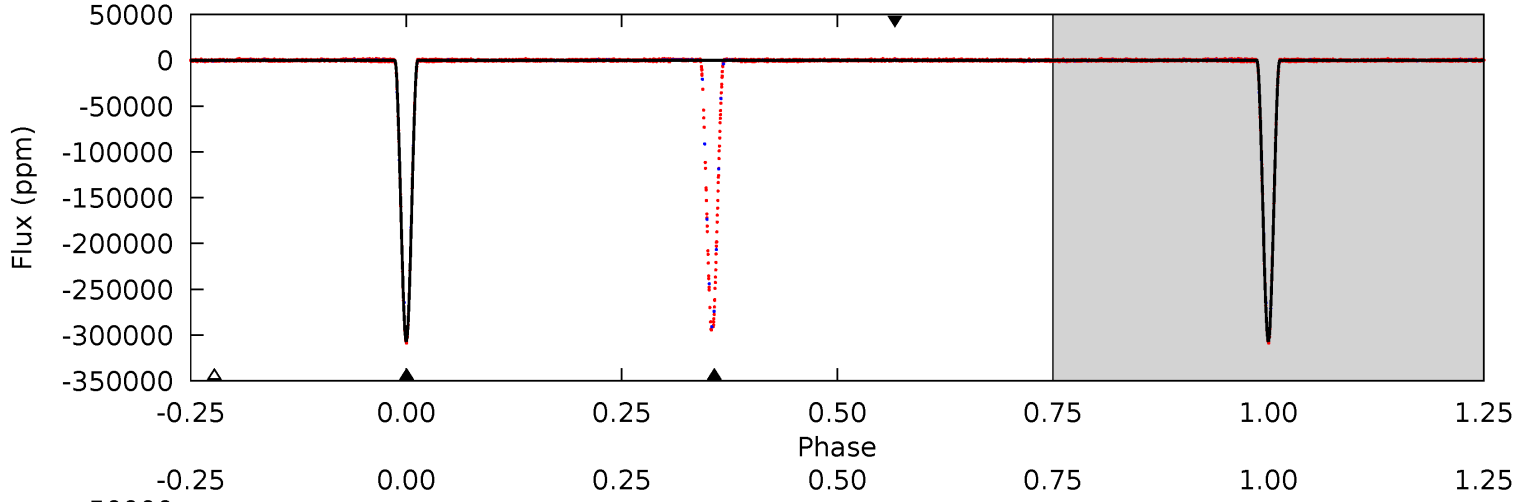
TCE 003865298-01 P= 9.529786 Days $T_0=134.874865$ (BKJD)



DV Model-Shift Uniqueness Test

003865298-01, P = 9.530481 Days, E = 134.848899 Days

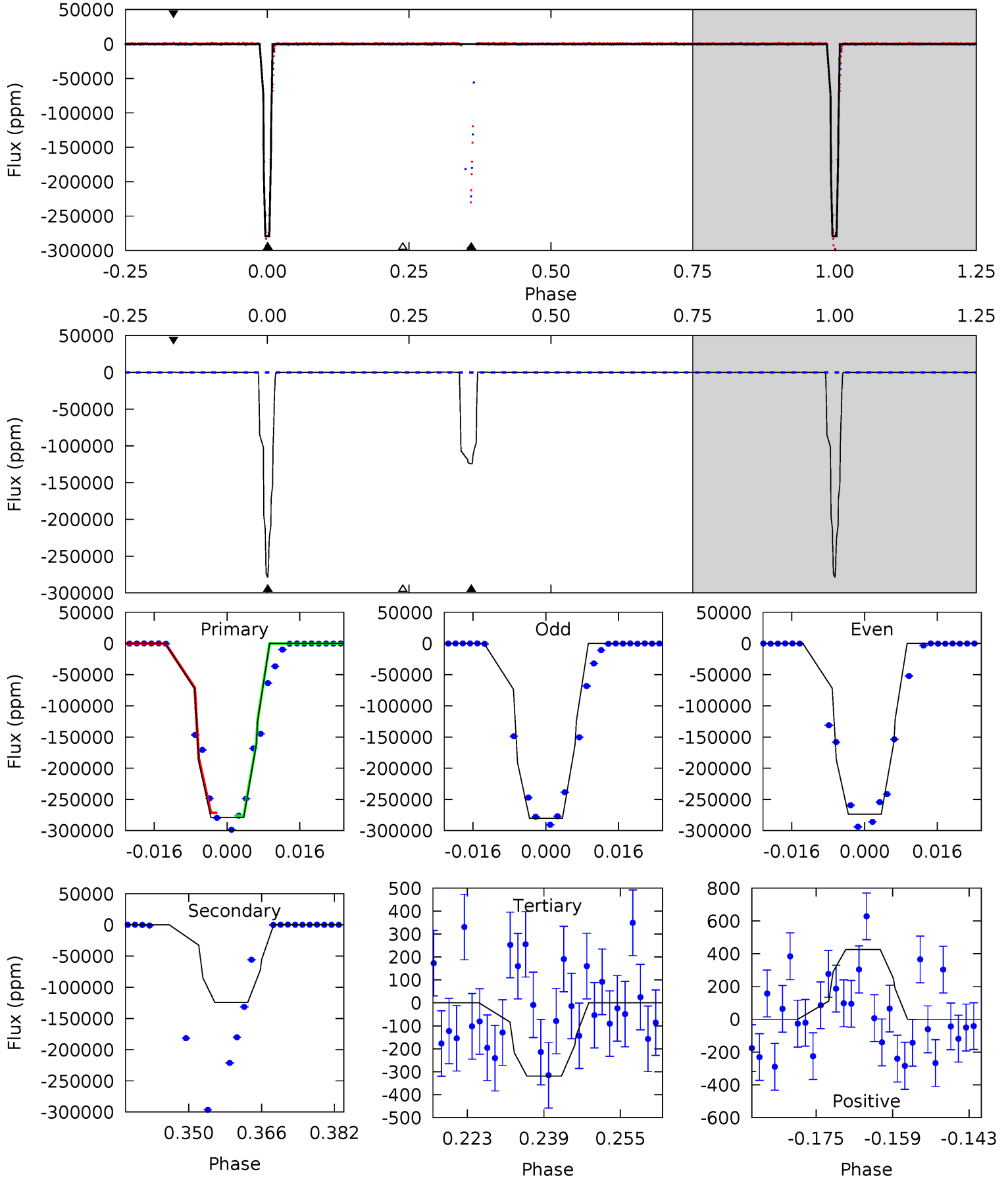
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5566	5725	7.58	5.20	4.83	2.21	3.03	5558	5561	5718	5720	60.2	1.00	0.00	0



Alt Model-Shift Uniqueness Test

003865298-01, P = 9.529786 Days, E = 134.874865 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2991	1334	3.42	4.56	4.94	2.41	33.8	2988	2987	1331	1329	39.9	1.00	0.00	0



Stellar Parameters For KIC 003865298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5501^{+199}_{-182}	$4.438^{+0.116}_{-0.174}$	$-0.140^{+0.300}_{-0.300}$	$0.912^{+0.228}_{-0.141}$	$0.833^{+0.111}_{-0.074}$	$1.545^{+0.884}_{-0.697}$
	+4%/-3%	+3%/-4%	+214%/-214%	+25%/-15%	+13%/-9%	+57%/-45%
Source	KIC0	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 003865298-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-314709 ± 55	$59.39^{+8.93}_{-5.70}$	1127^{+80}_{-64}	5847^{+249}_{-245}	492^{+109}_{-114}
Alt.	-124412 ± 93	$55.51^{+7.80}_{-5.98}$	1134^{+77}_{-66}	4682^{+181}_{-165}	176^{+41}_{-40}

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

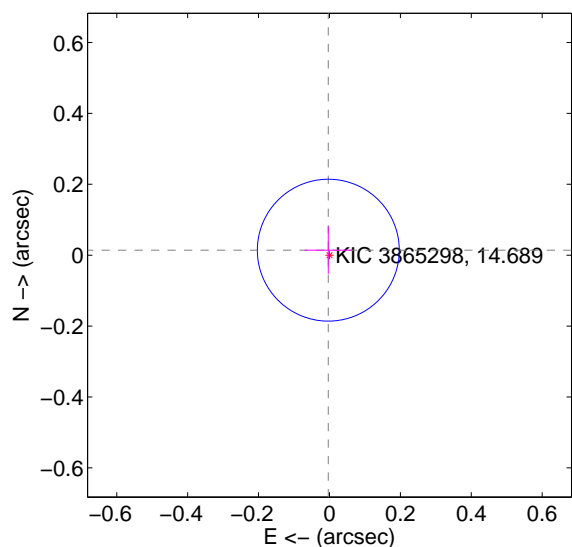
Supplemental centroid analysis for 003865298-01. Kepler magnitude: 14.69. Transit SNR 2199.78

There are 1 quarters with good PRF difference image offsets

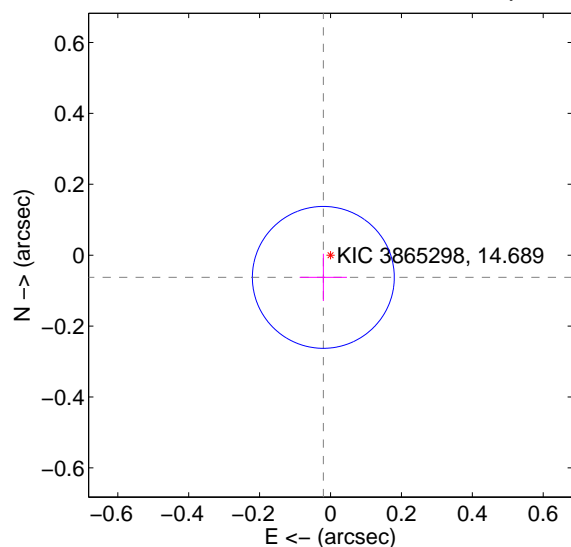
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.067	0.22	0.003 ± 0.067	0.014 ± 0.067
PRF-fit source offset from KIC position	0.066 ± 0.067	0.99	0.020 ± 0.067	-0.063 ± 0.067
photometric centroid source offset	0.56 ± 0.00	150.42	0.27 ± 0.00	-0.49 ± 0.00

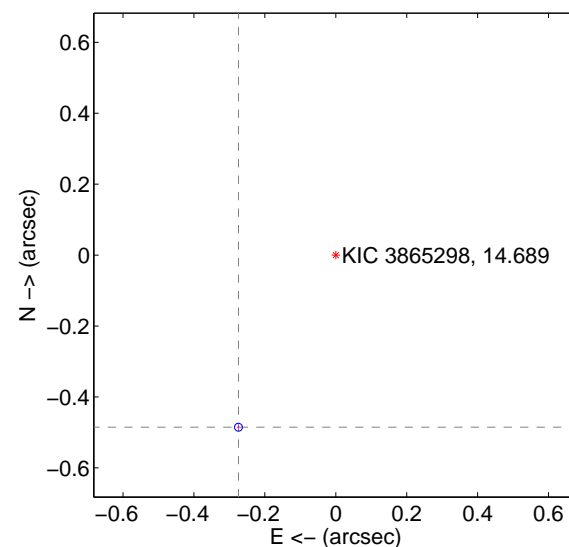
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

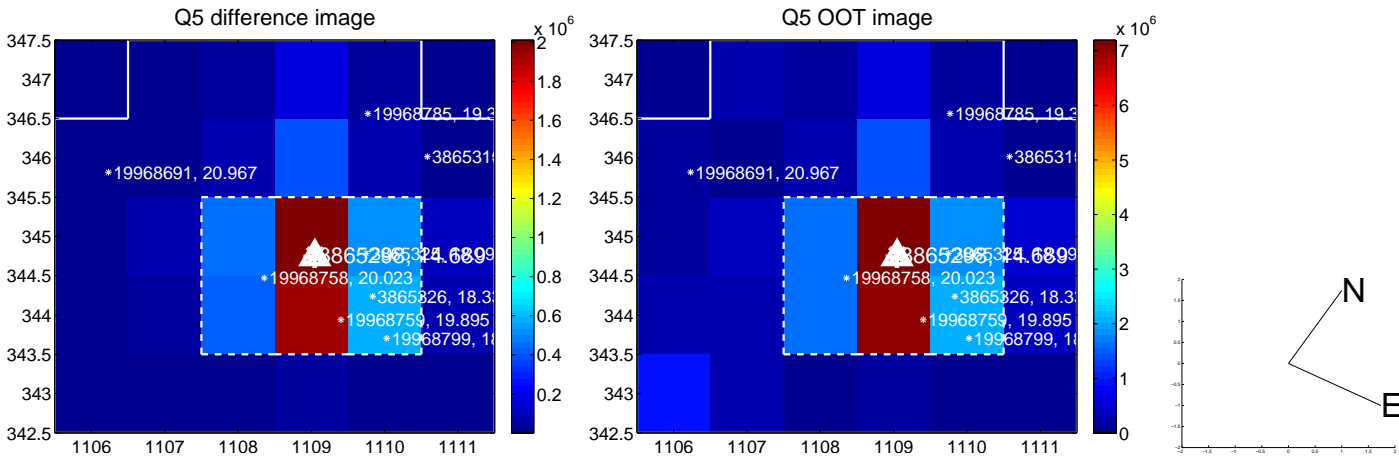


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



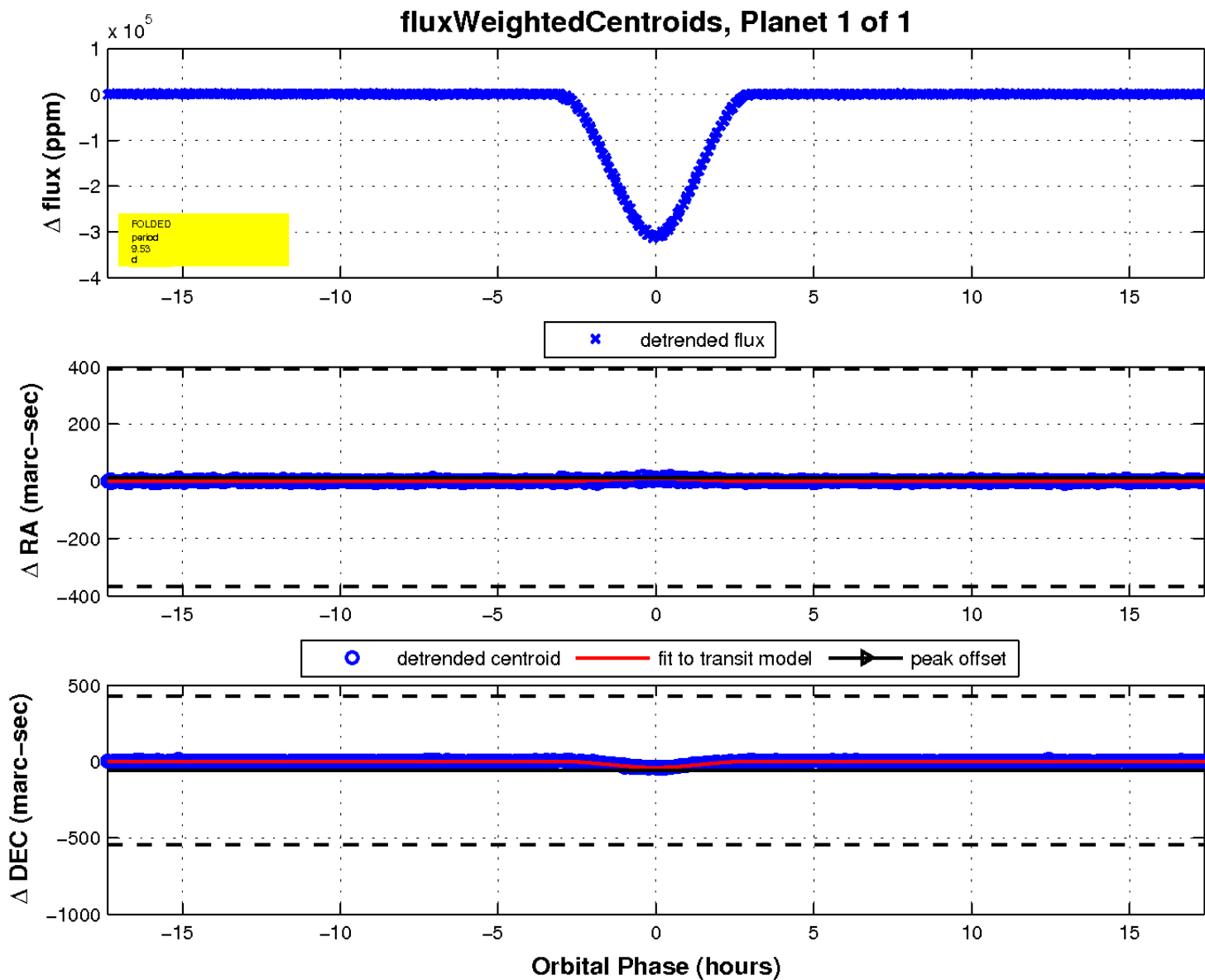
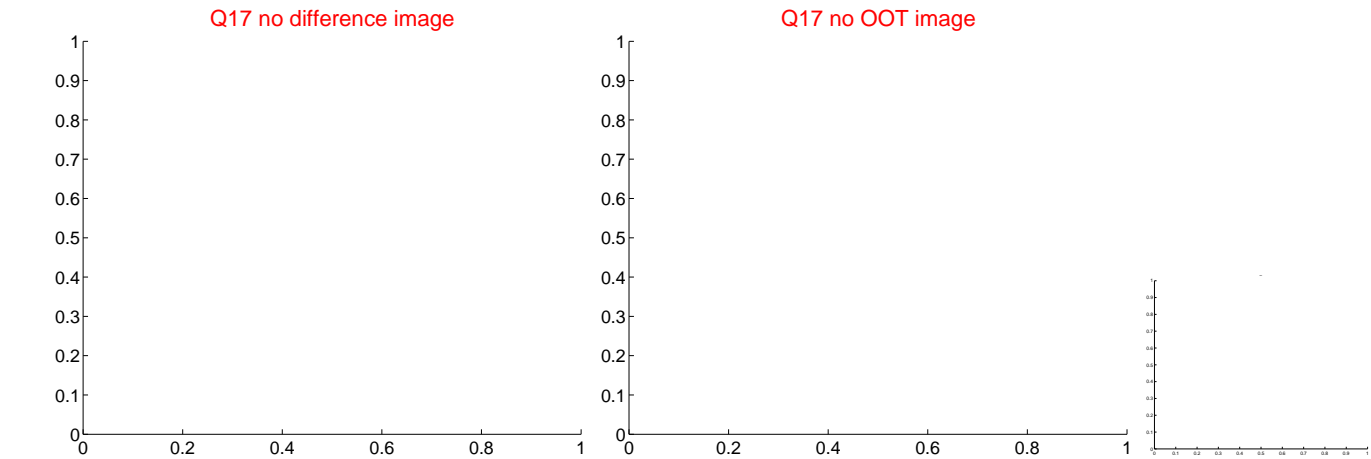
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

