

KIC 010845049

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})
010845049-01	OBS	No	53.999767	171.026129	1948.7	8.434	7.6	7.8	1.81	7461	9.24	92.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010845049-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

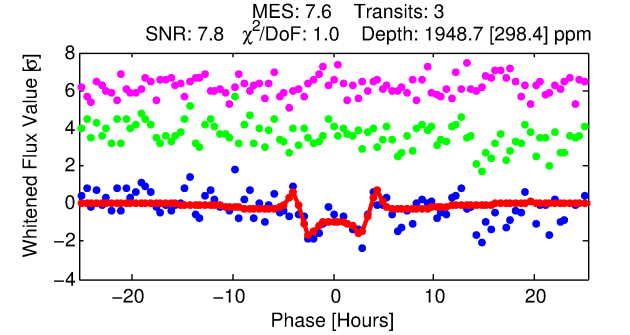
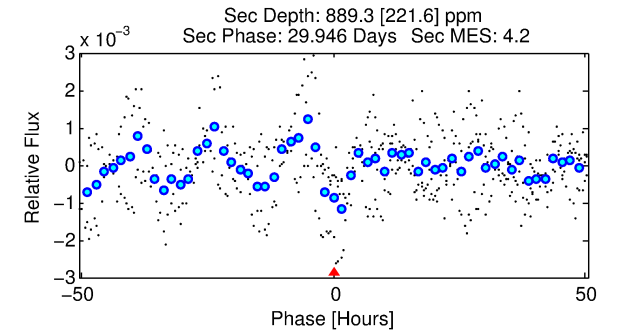
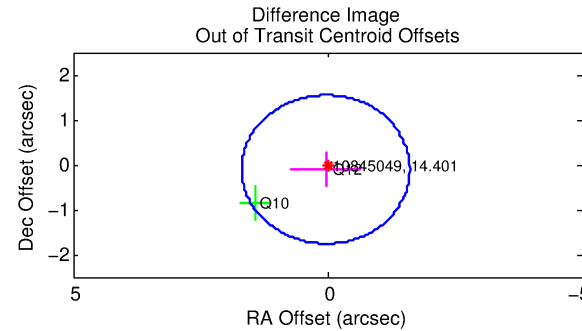
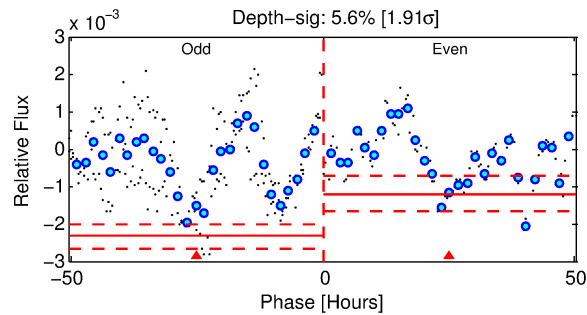
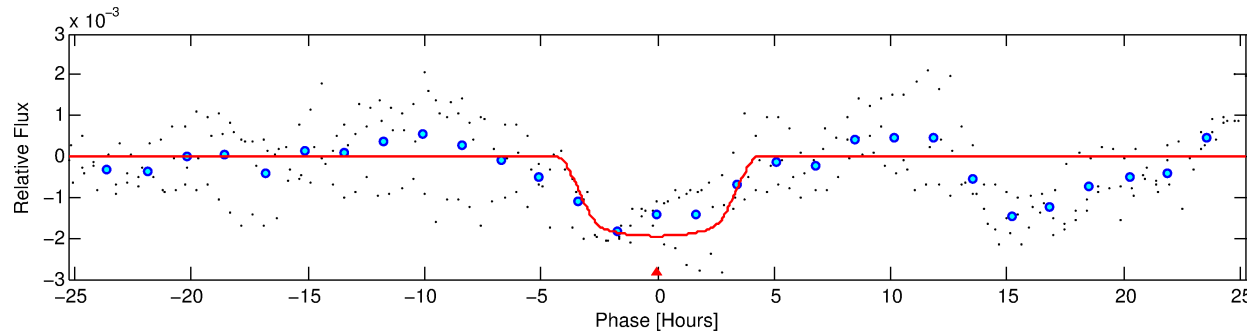
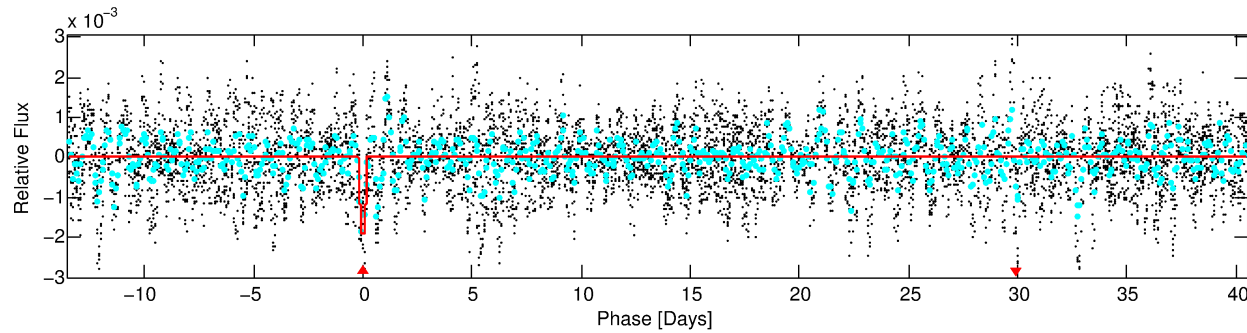
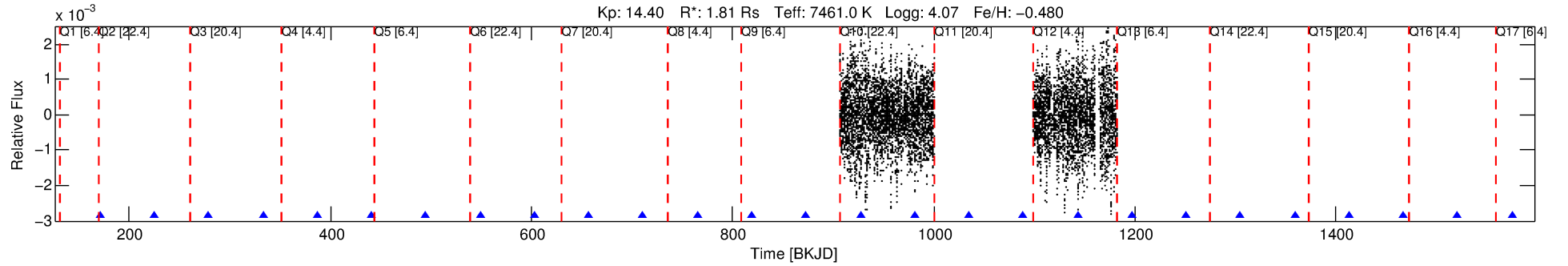
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010845049-01

No Significant Match Found

DV One-Page Summary

KIC: 10845049 Candidate: 1 of 1 Period: 54.000 d



DV Fit Results:

Period = 53.99977 [0.00333] d
Epoch = 171.0261 [0.0523] BKJD
Rp/R* = 0.0468 [0.0039]
a/R* = 26.28 [3.44]
b = 0.90 [0.03]
Seff = 92.69 [38.32]
Teq = 791 [82] K
Rp = 9.24 [2.71] Re
a = 0.3129 [0.0780] AU
Ag = 561.01 [270.42] [2.07 σ]
Teffp = 5953 [509] K [10.01 σ]

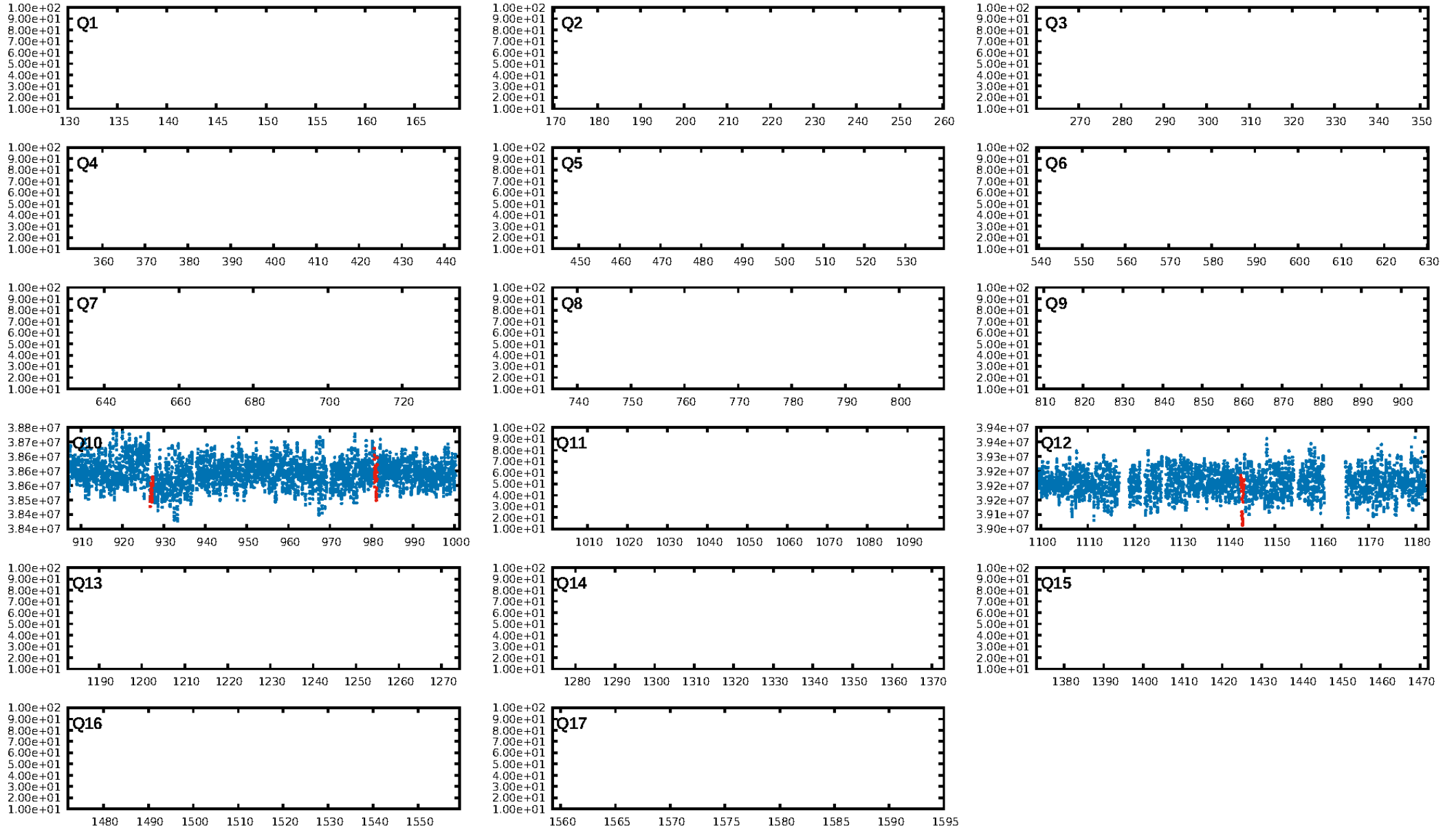
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 8.82e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.083
Centroid-sig: 0.1%
Centroid-so: 0.897 arcsec [2.12 σ]
OotOffset-rm: 0.111 arcsec [0.20 σ]
KicOffset-rm: 0.137 arcsec [0.35 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

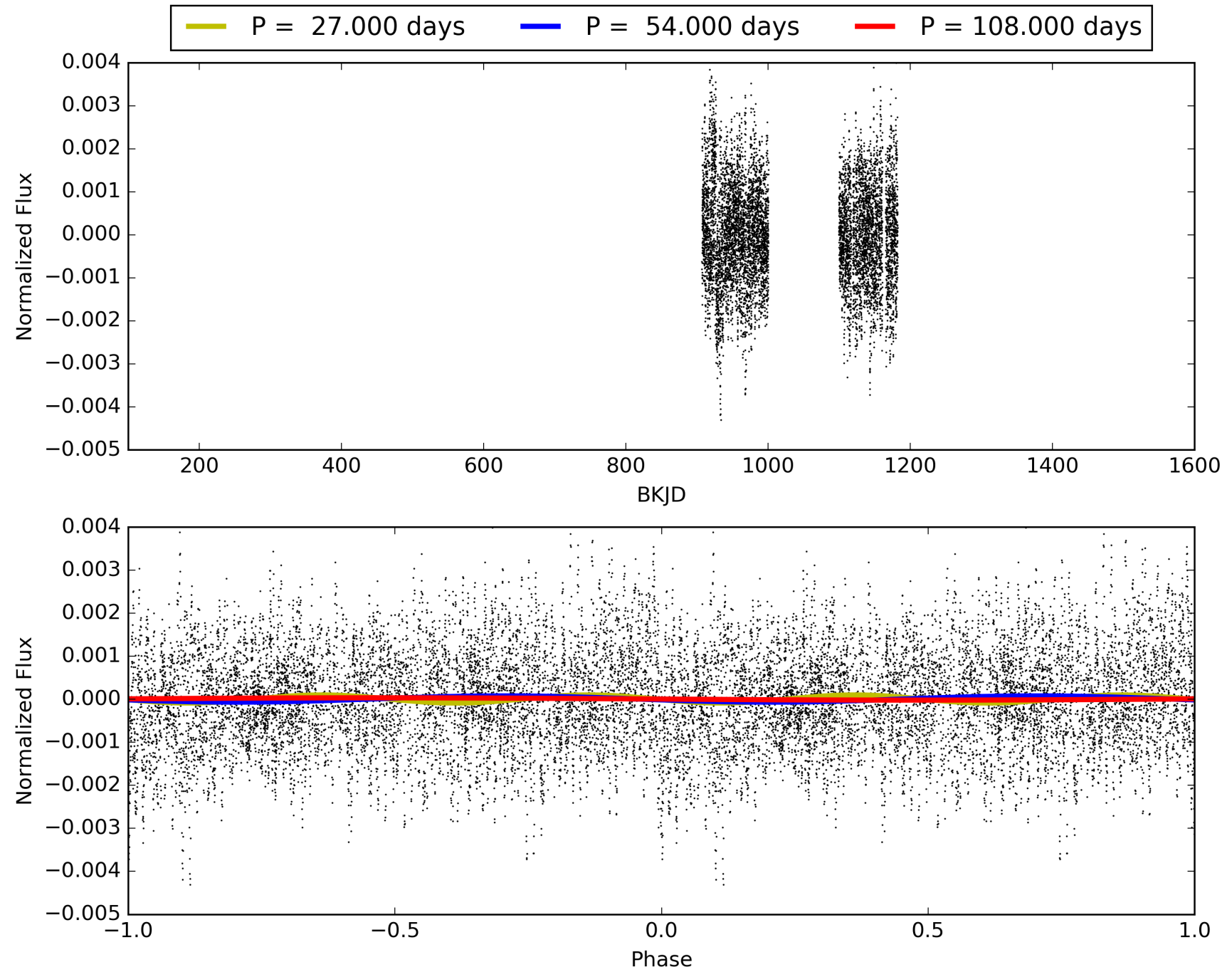
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:35:34 Z

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

TCE 010845049-01, PDC Light Curves

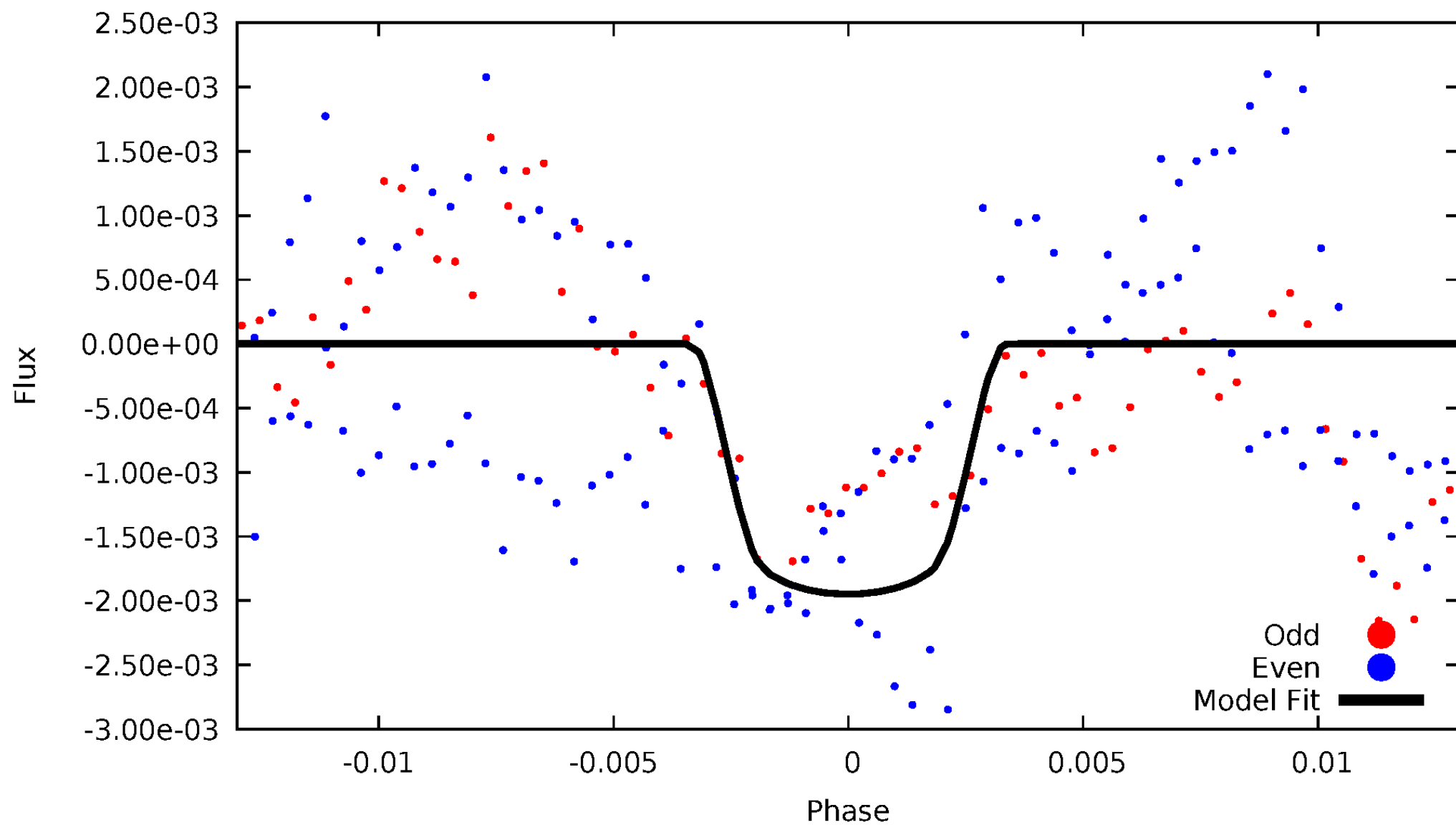


TCE 010845049-01



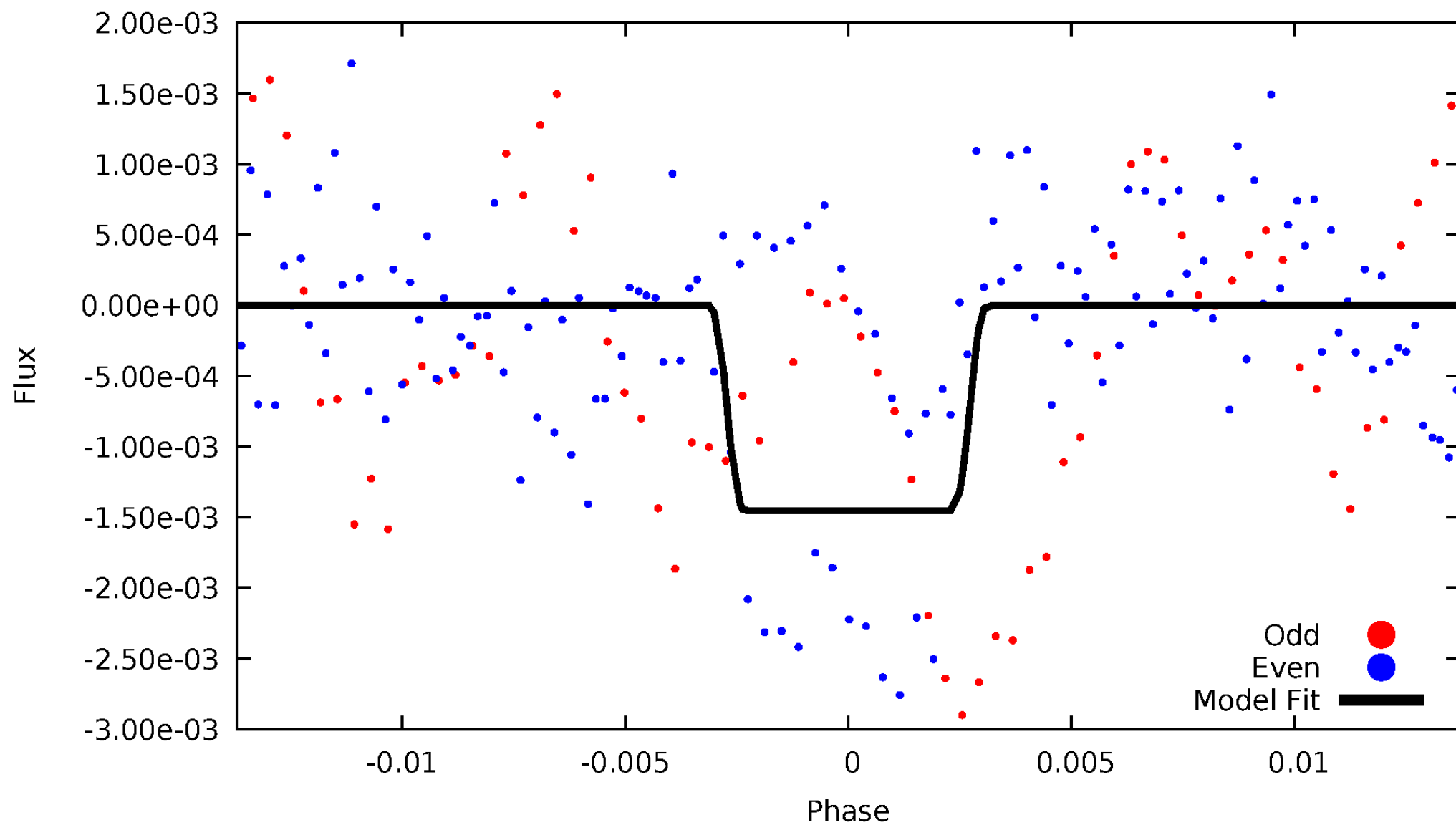
DV Odd/Even

TCE 010845049-01



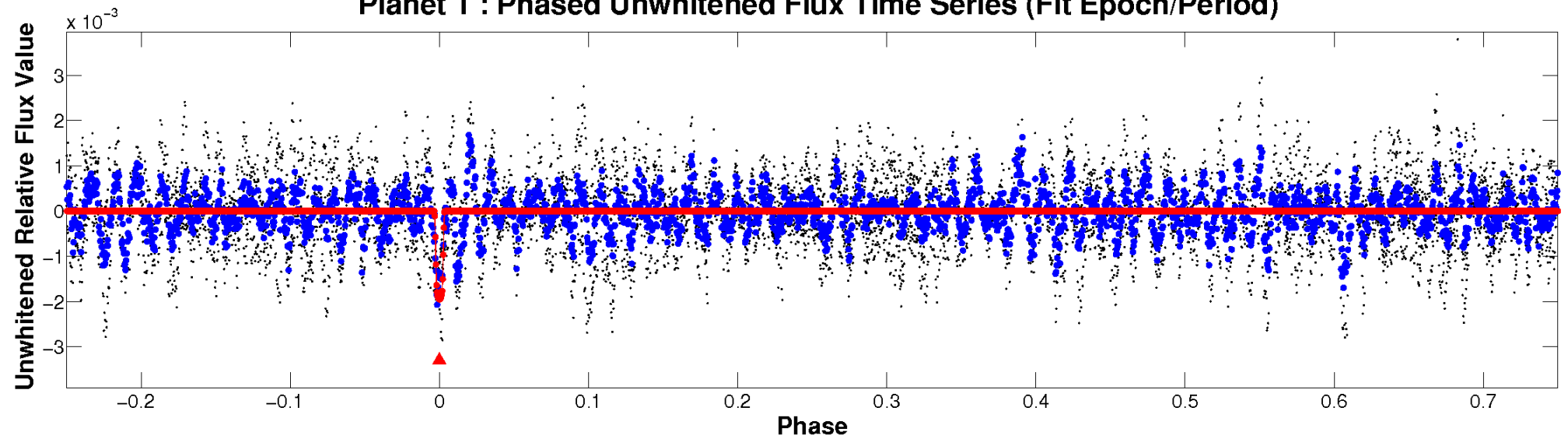
ALT Odd/Even

TCE 010845049-01

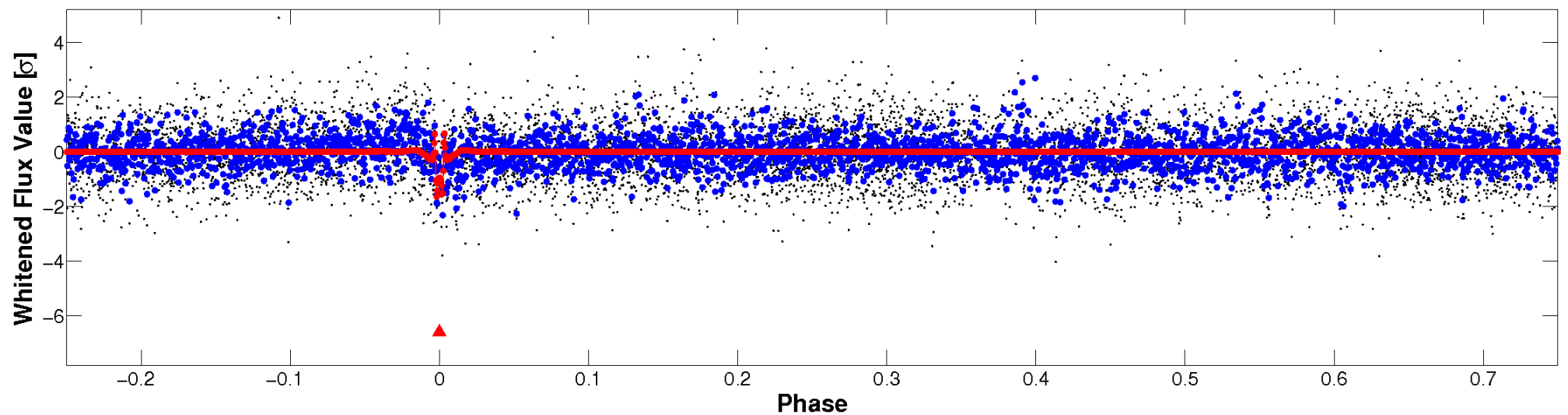


Non-Whitened Vs. Whitened Light Curve

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

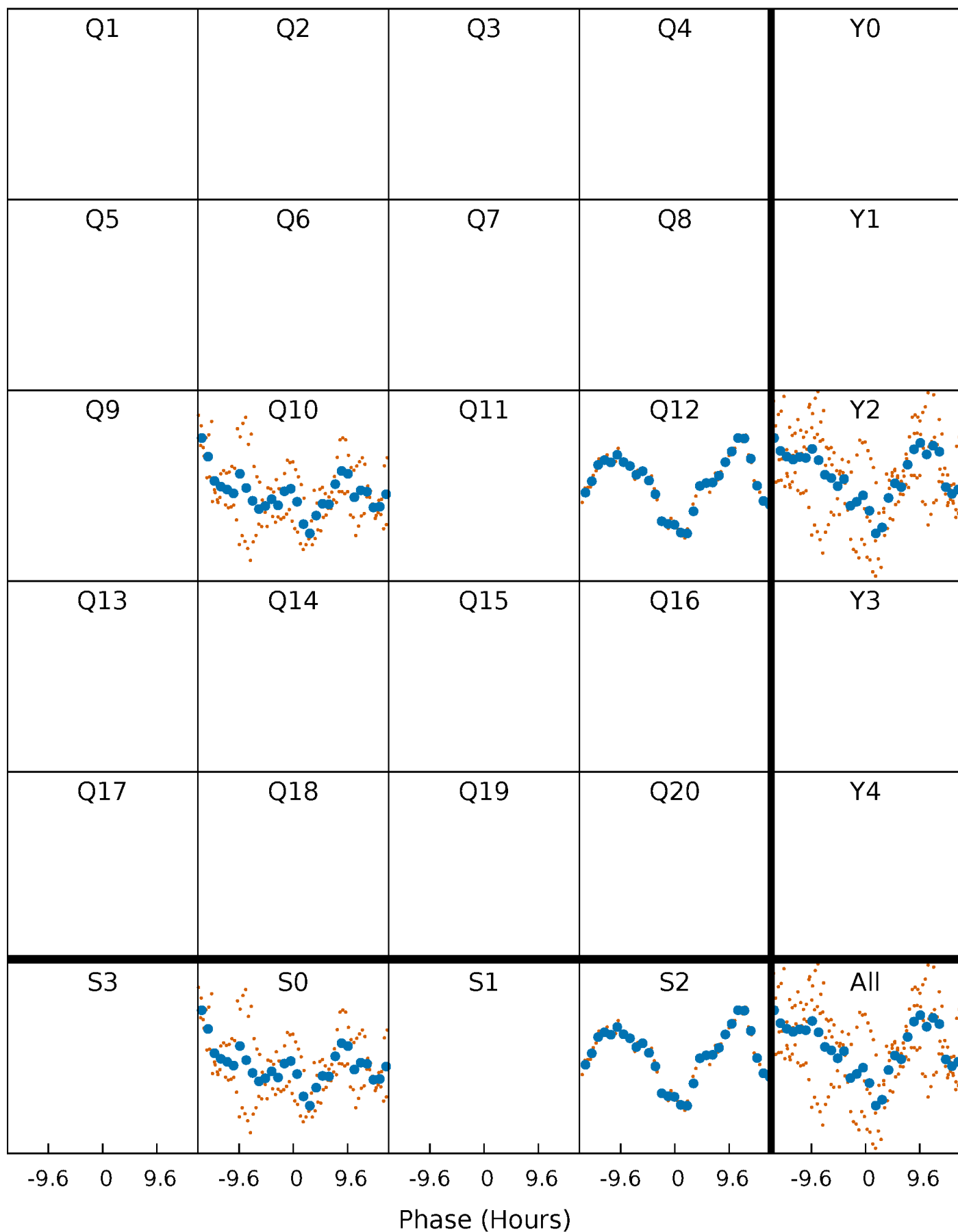


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



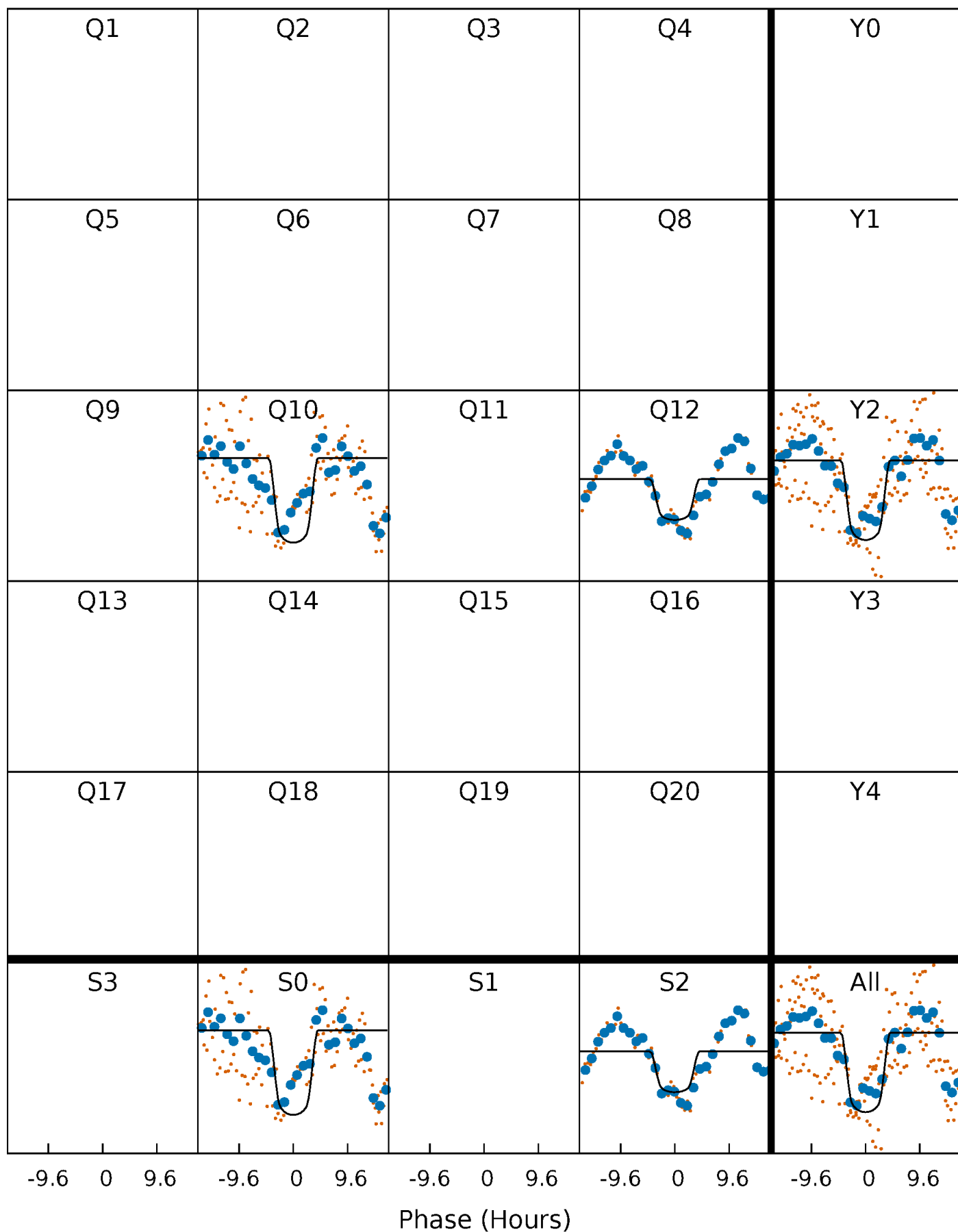
PDC Quarter-Phased Transit Curves

TCE 010845049-01 P= 53.999767 Days $T_0=171.026129$ (BKJD)



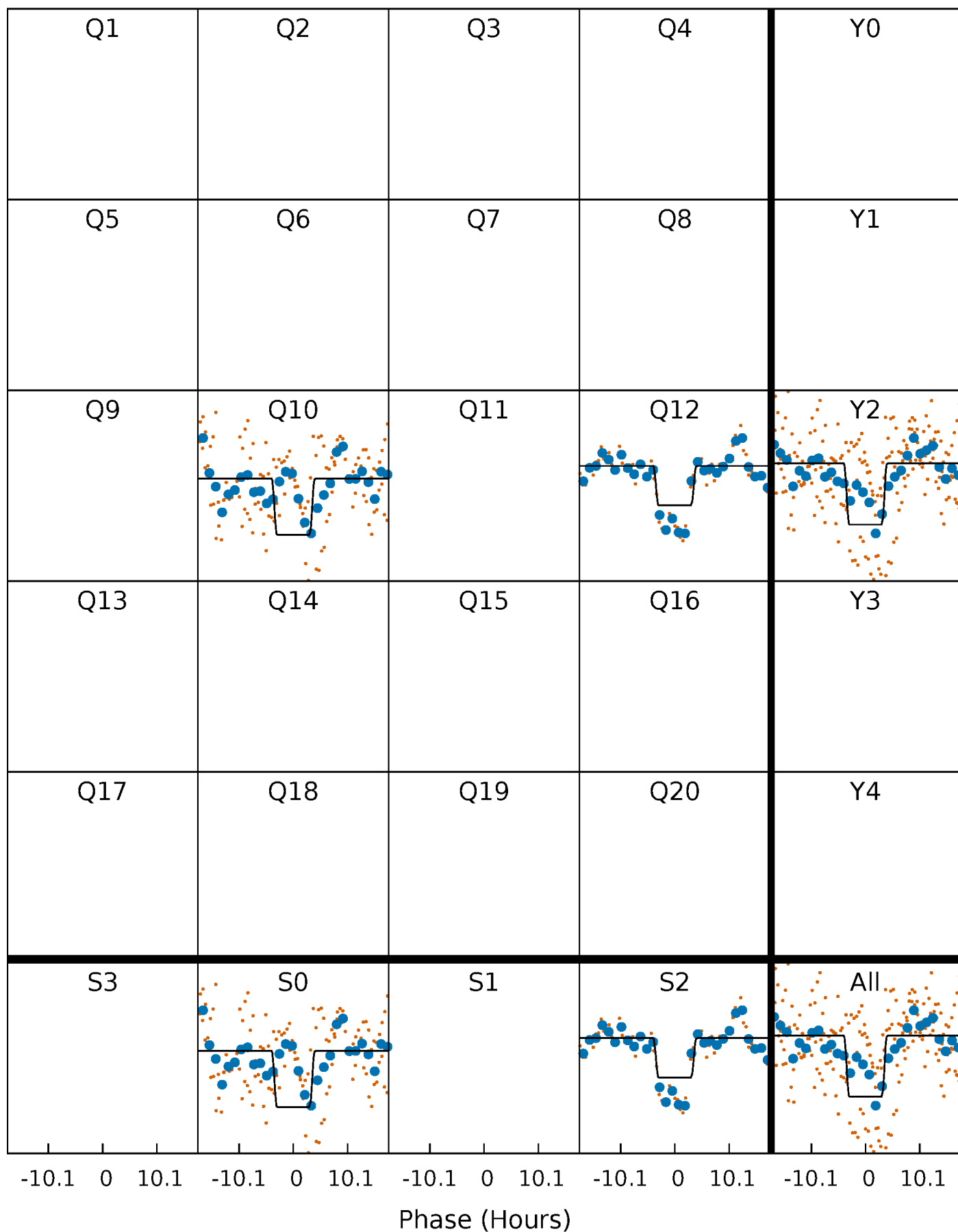
DV Quarter-Phased Transit Curves

TCE 010845049-01 P= 53.999767 Days $T_0=171.026129$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

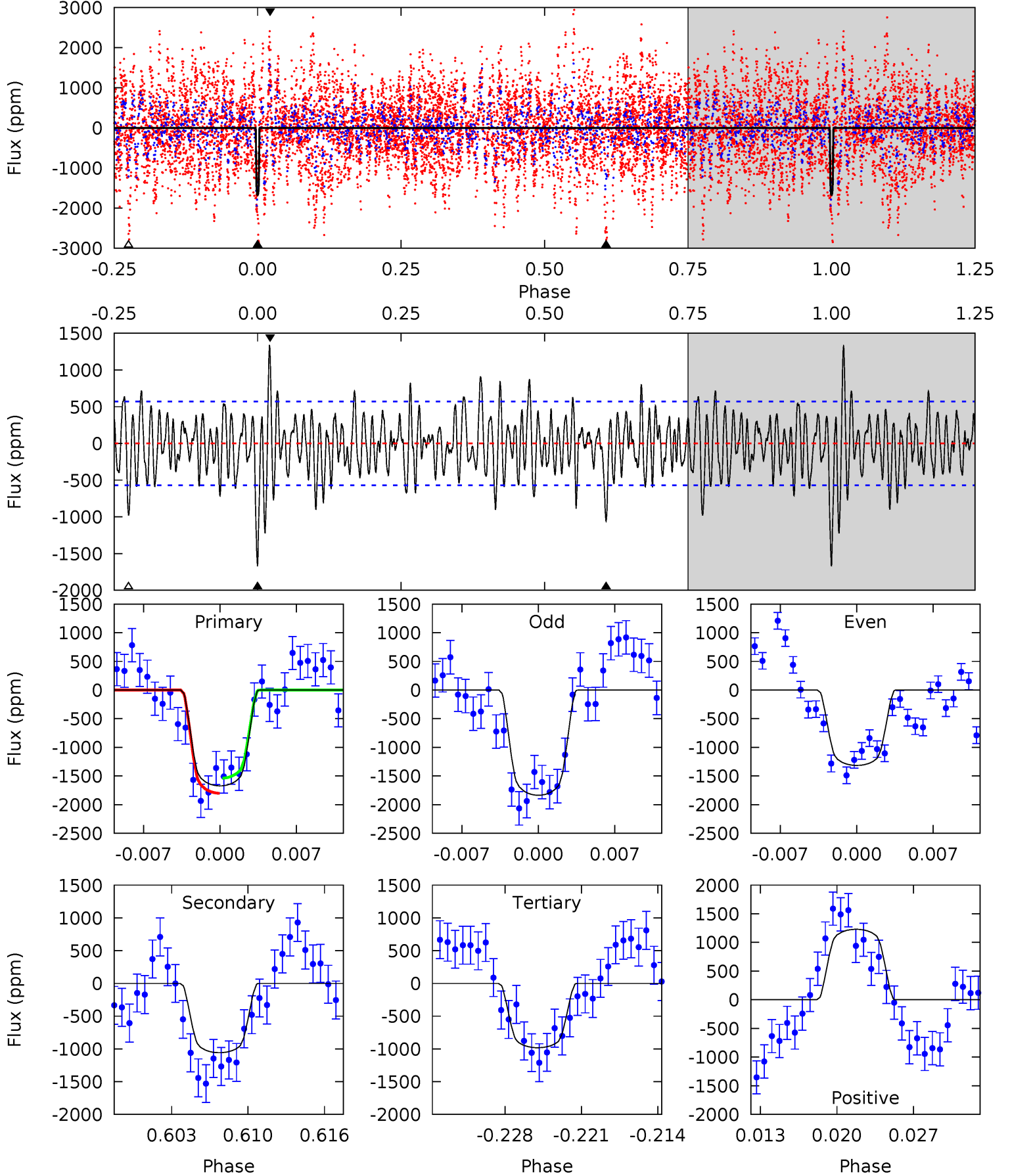
TCE 010845049-01 P= 54.002676 Days $T_0=170.985128$ (BKJD)



DV Model-Shift Uniqueness Test

010845049-01, P = 53.999767 Days, E = 171.026129 Days

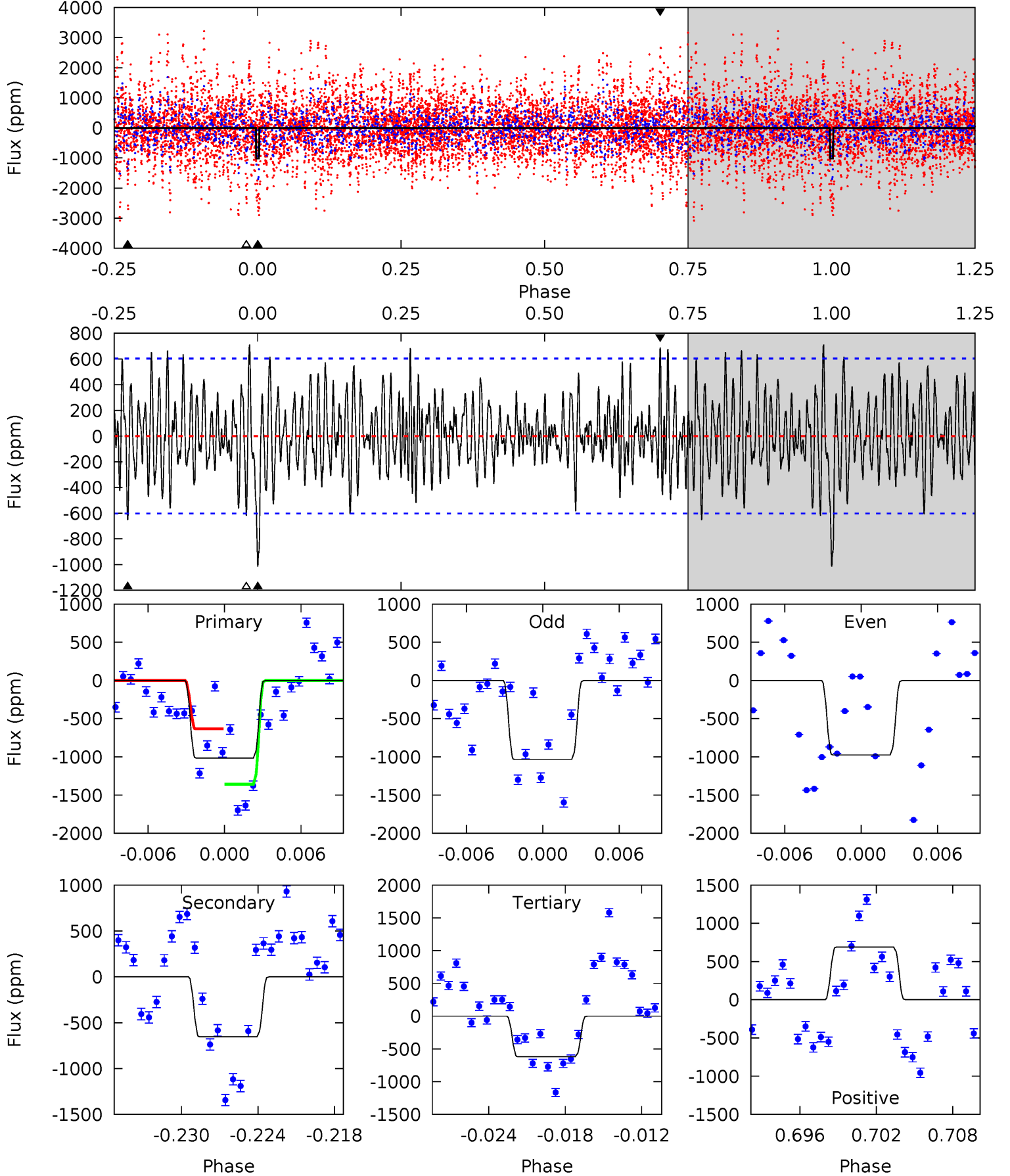
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	9.46	8.78	11.0	5.10	2.71	3.04	6.17	3.96	0.68	-1.53	2.21	1.22	0.44	1.16



Alt Model-Shift Uniqueness Test

010845049-01, $P = 54.002676$ Days, $E = 170.985128$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.62	5.55	5.26	5.85	5.12	2.74	2.00	3.36	2.77	0.29	-0.30	0.23	1.04	0.41	3.06



Stellar Parameters For KIC 010845049

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7461^{+233}_{-311}	$4.070^{+0.214}_{-0.156}$	$-0.480^{+0.300}_{-0.300}$	$1.808^{+0.509}_{-0.509}$	$1.400^{+0.220}_{-0.220}$	$0.334^{+0.439}_{-0.141}$
	+3%/-4%	+5%/-4%	+62%/-62%	+28%/-28%	+16%/-16%	+132%/-42%
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 010845049-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1058 ± 112	$9.14^{+1.65}_{-1.57}$	1094^{+86}_{-85}	6119^{+371}_{-349}	690^{+294}_{-201}
Alt.	-653 ± 118	$7.52^{+1.41}_{-1.29}$	1099^{+84}_{-93}	5969^{+478}_{-420}	626^{+305}_{-210}

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

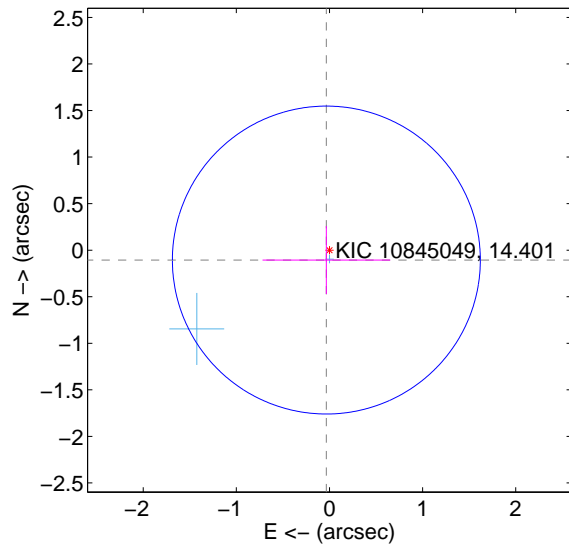
Supplemental centroid analysis for 010845049-01. Kepler magnitude: 14.40. Transit SNR 7.84

There are 2 quarters with good PRF difference image offsets

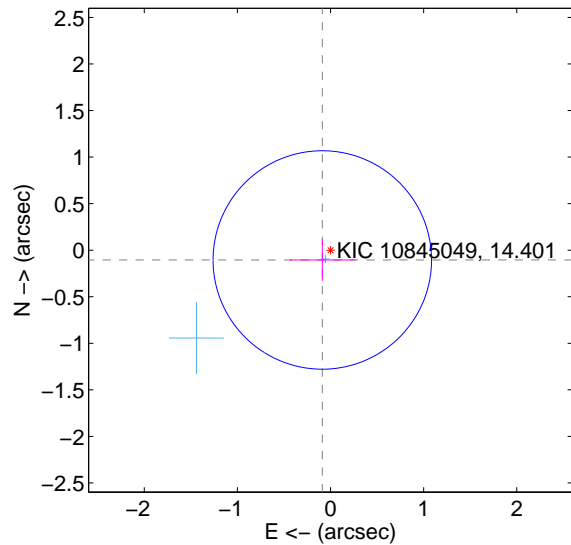
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.551	0.20	0.033 ± 0.686	-0.106 ± 0.365
PRF-fit source offset from KIC position	0.137 ± 0.391	0.35	0.088 ± 0.353	-0.105 ± 0.223
photometric centroid source offset	0.90 ± 0.42	2.12	-0.57 ± 0.44	-0.70 ± 0.41

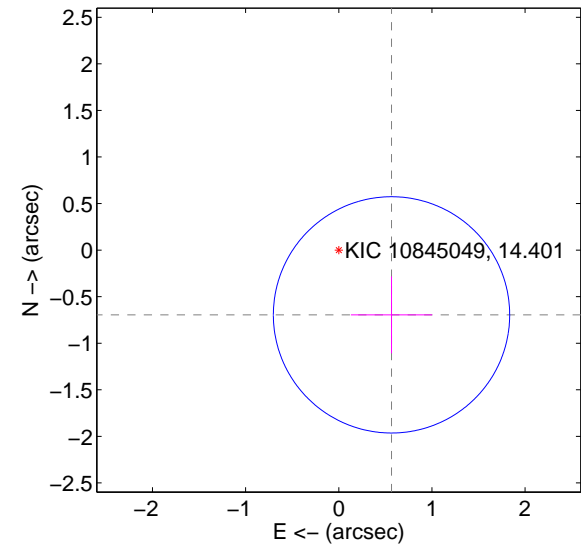
offset from difference PRF-fit to OOT PRF-fit



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.

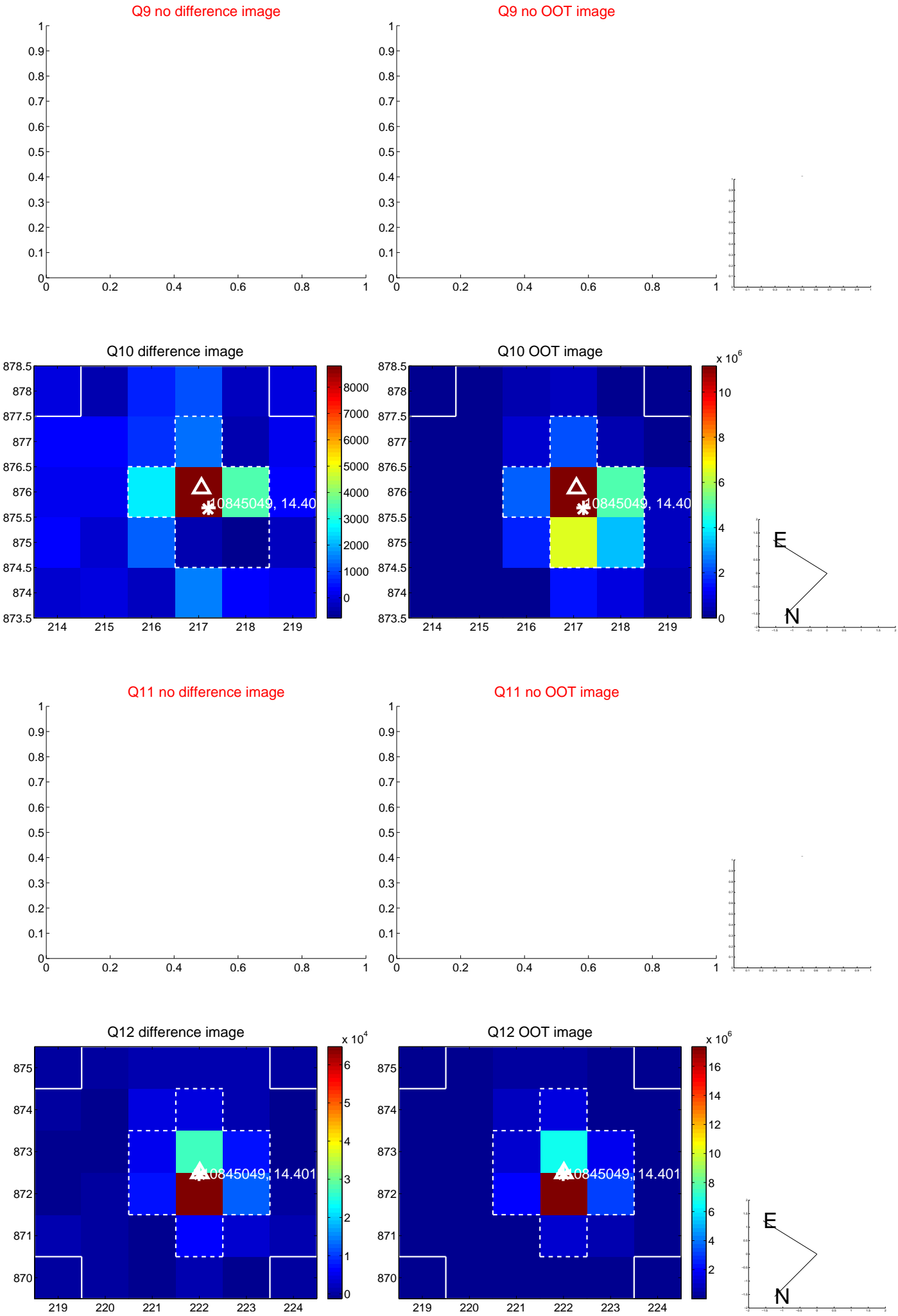
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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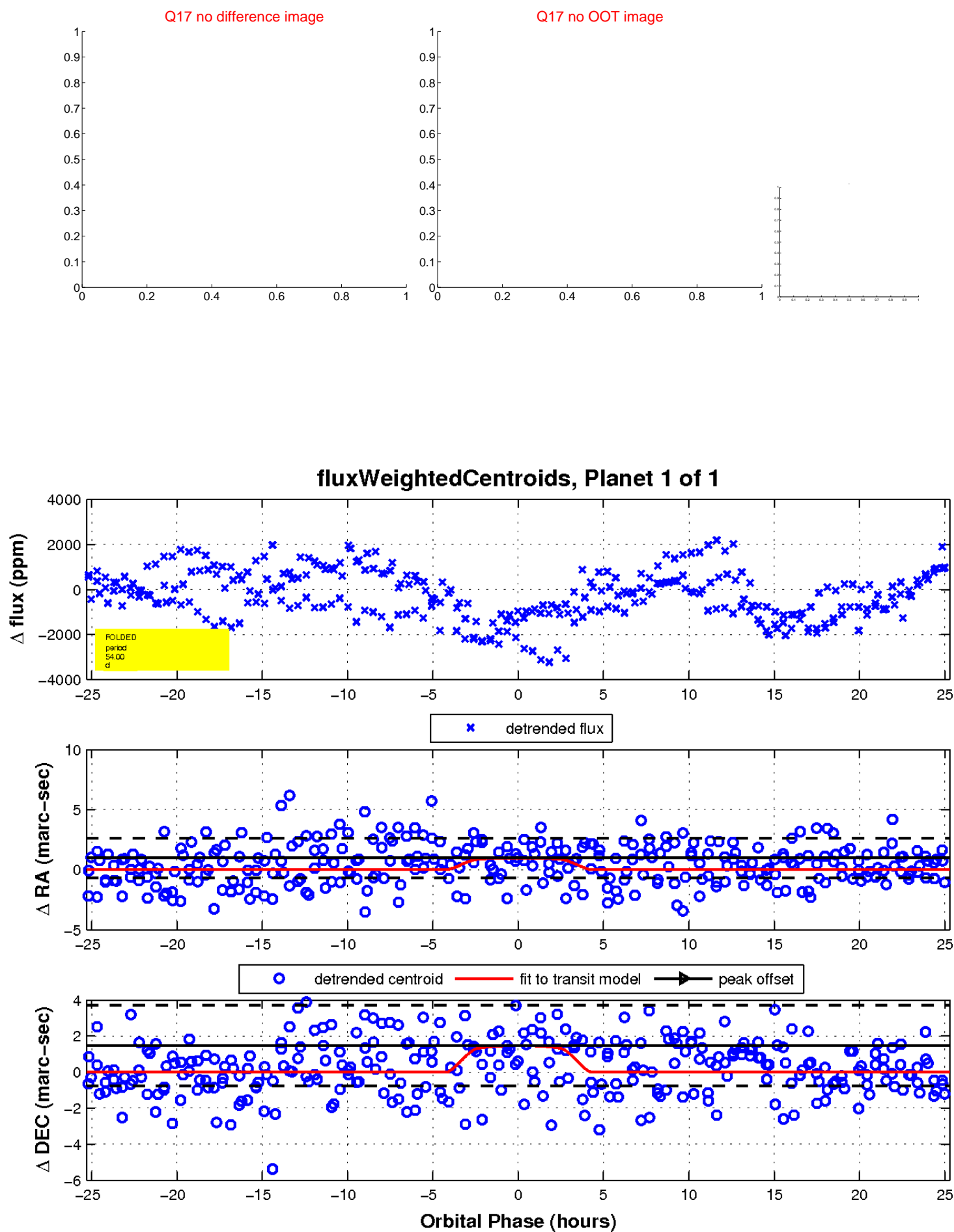
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UKIRT Image

Declination

