

KIC 009775253

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})
009775253-01	OBS	3621.01	4.394550	133.615226	129252.6	3.142	738.9	412.7	0.48	3695	24.11	22.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009775253-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—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.

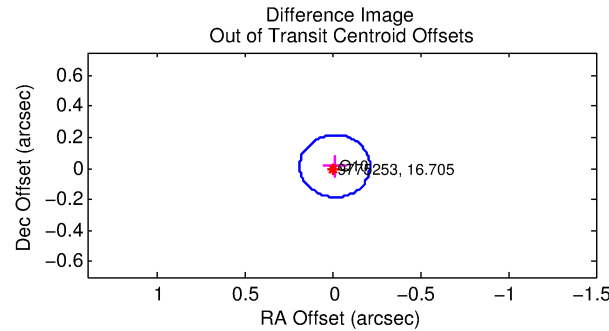
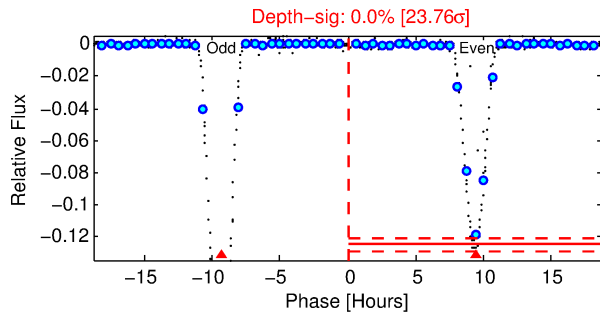
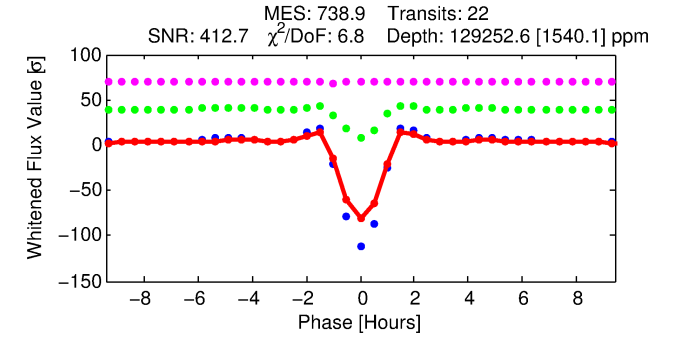
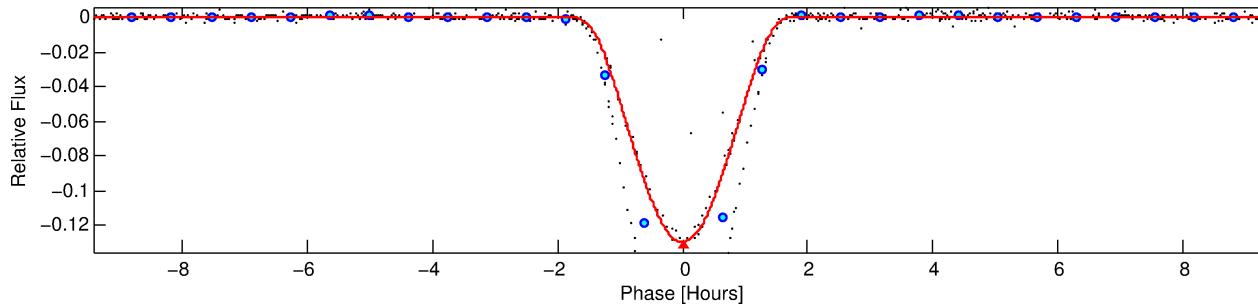
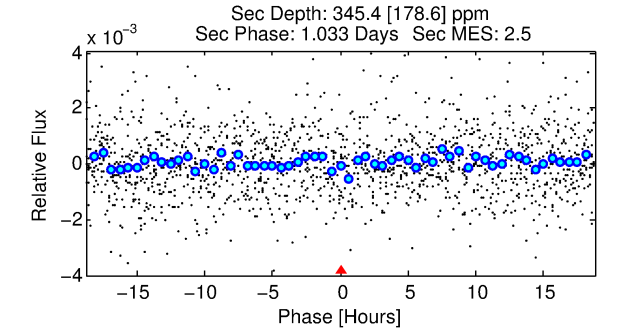
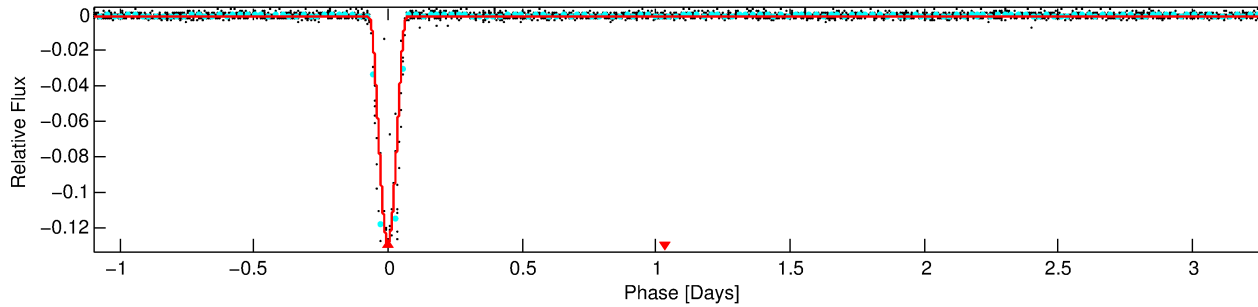
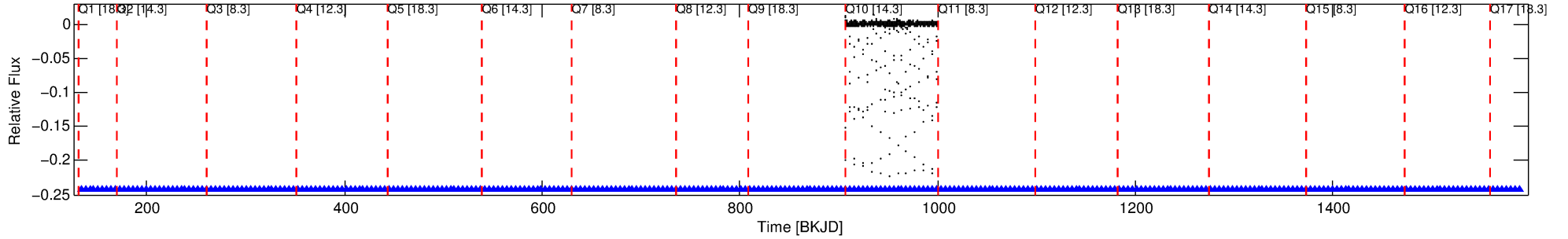
Ephemeris Match Information For 009775253-01

No Significant Match Found

DV One-Page Summary

KIC: 9775253 Candidate: 1 of 1 Period: 4.395 d
KOI: K03621.01 Corr: 0.947

Kp: 16.70 R*: 0.48 Rs Teff: 3695.0 K Logg: 4.77 Fe/H: 0.000



DV Fit Results:

Period = 4.39455 [0.00001] d
Epoch = 133.6152 [0.0011] BKJD
Rp/R* = 0.4575 [0.2277]
a/R* = 12.68 [0.28]
b = 0.85 [0.35]
Seff = 22.29 [6.05]
Teq = 554 [38] K
Rp = 24.11 [13.08] Re
a = 0.0418 [0.0069] AU
Ag = 0.57 [0.65] [-0.66σ]
Teffp = 745 [211] K [0.89σ]

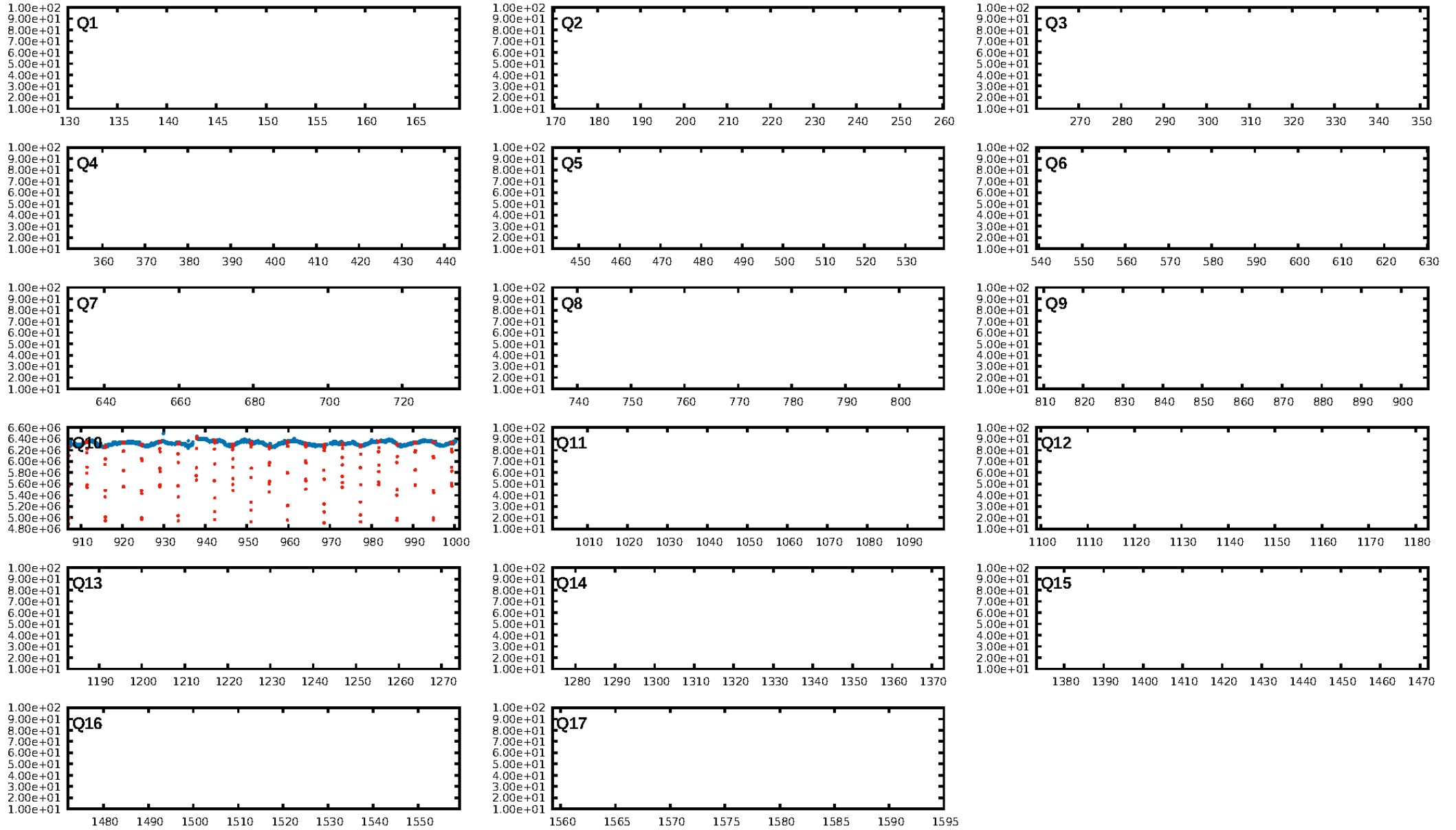
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: 3.257
Centroid-sig: 0.0%
Centroid-so: 0.394 arcsec [30.81σ]
OotOffset-rm: 0.019 arcsec [0.29σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 0.340 arcsec [5.10σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

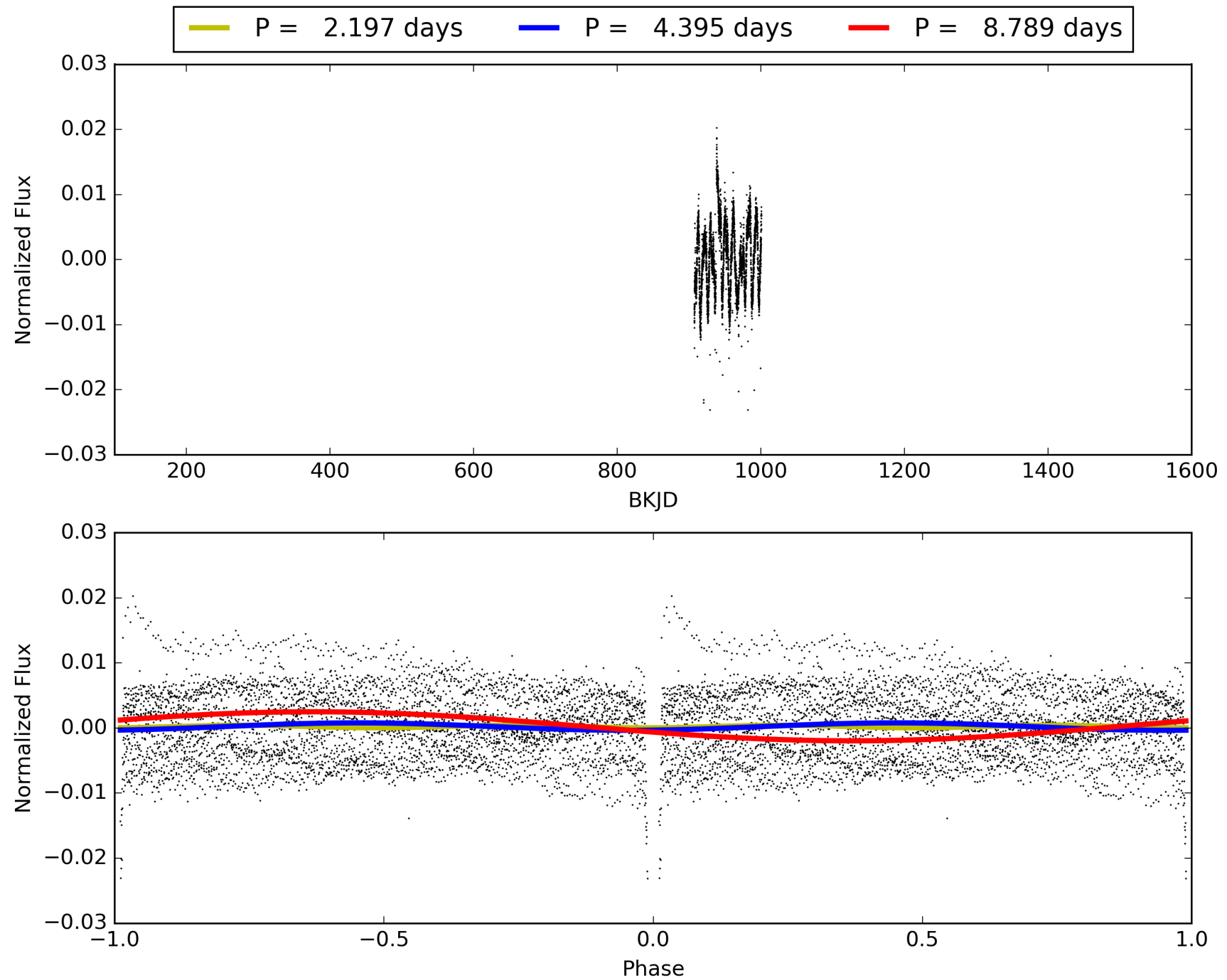
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:06:03 Z

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

TCE 009775253-01, PDC Light Curves

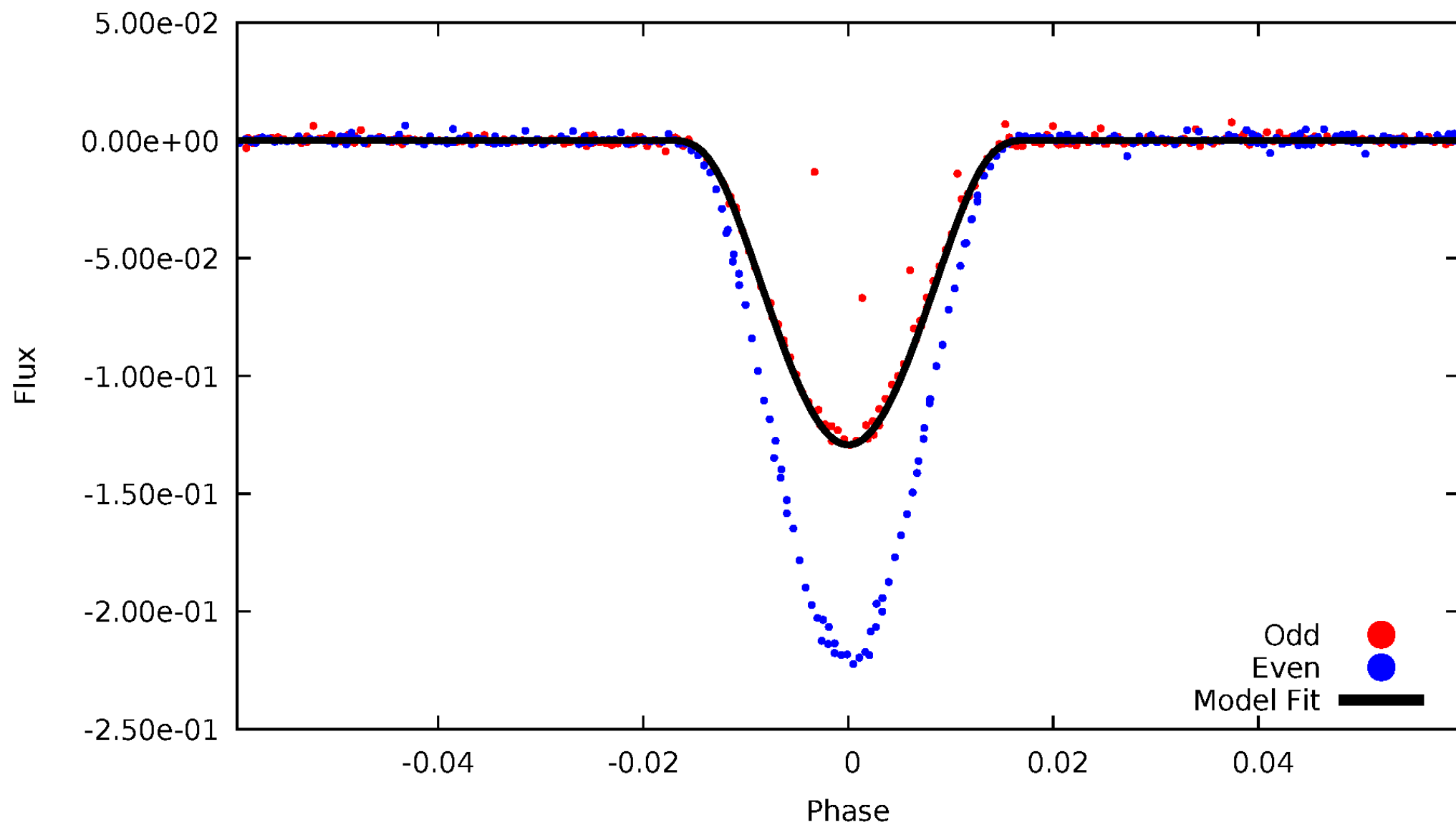


TCE 009775253-01



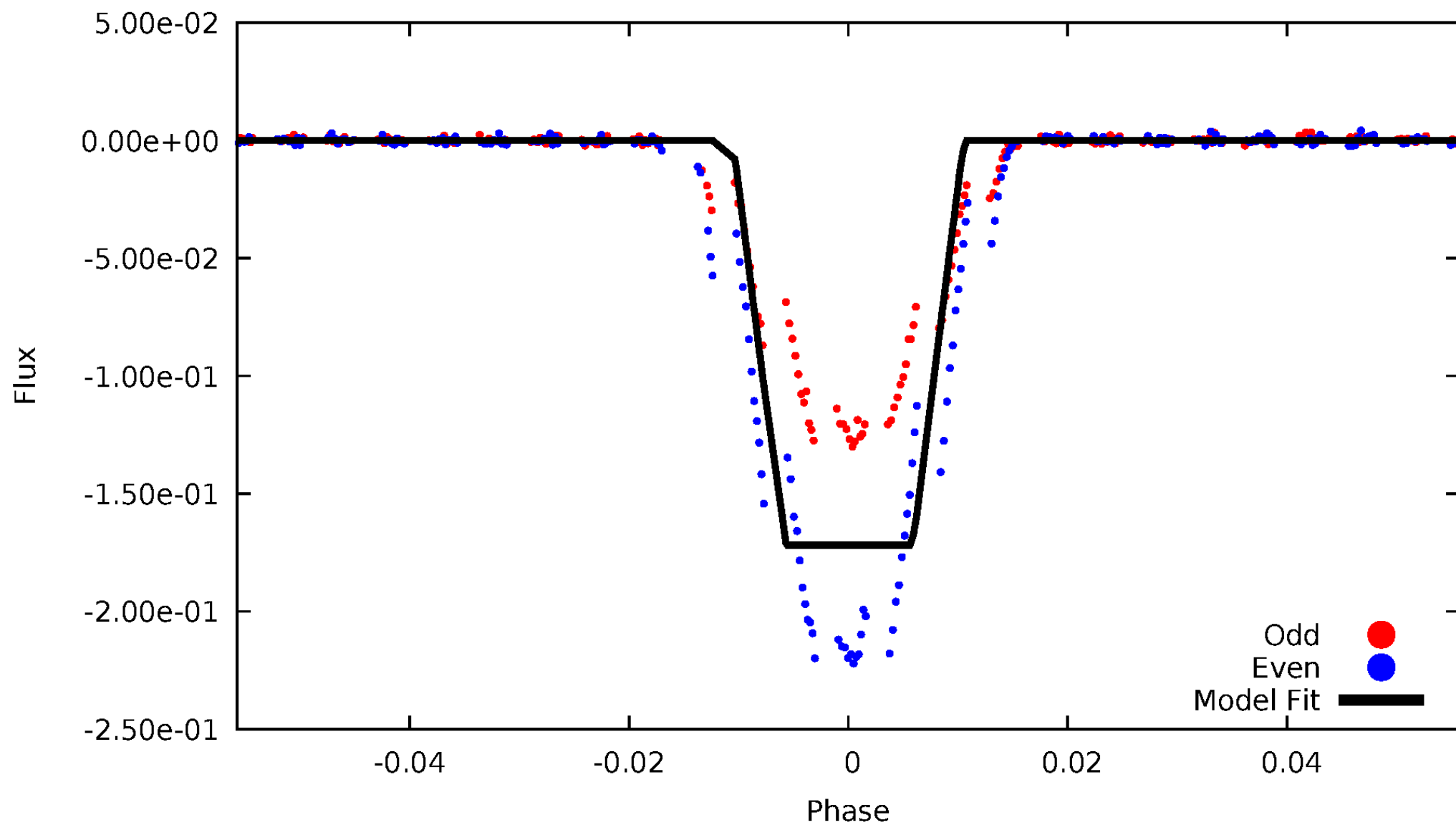
DV Odd/Even

TCE 009775253-01



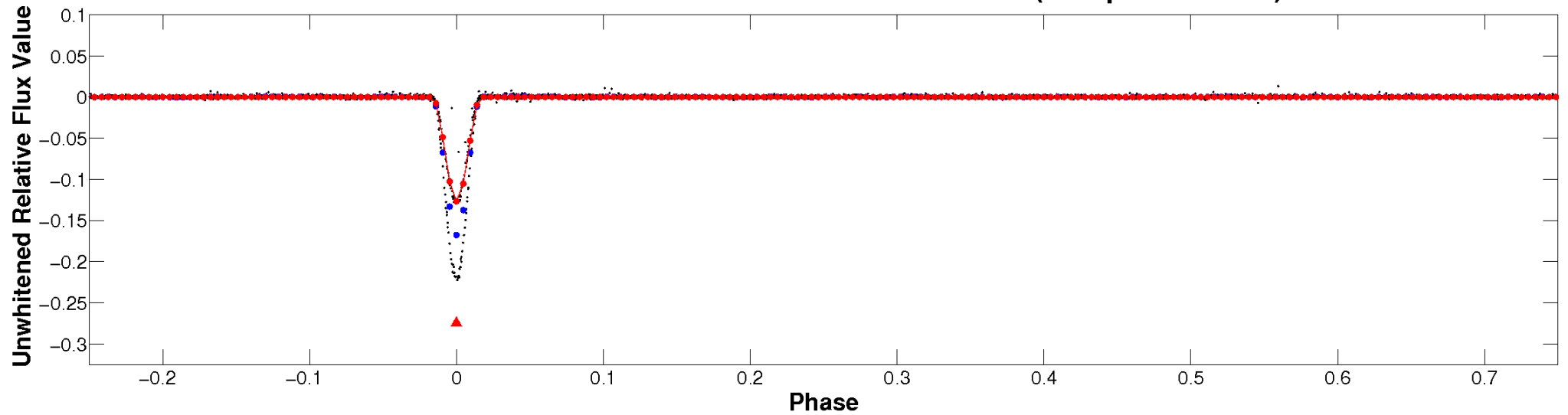
ALT Odd/Even

TCE 009775253-01

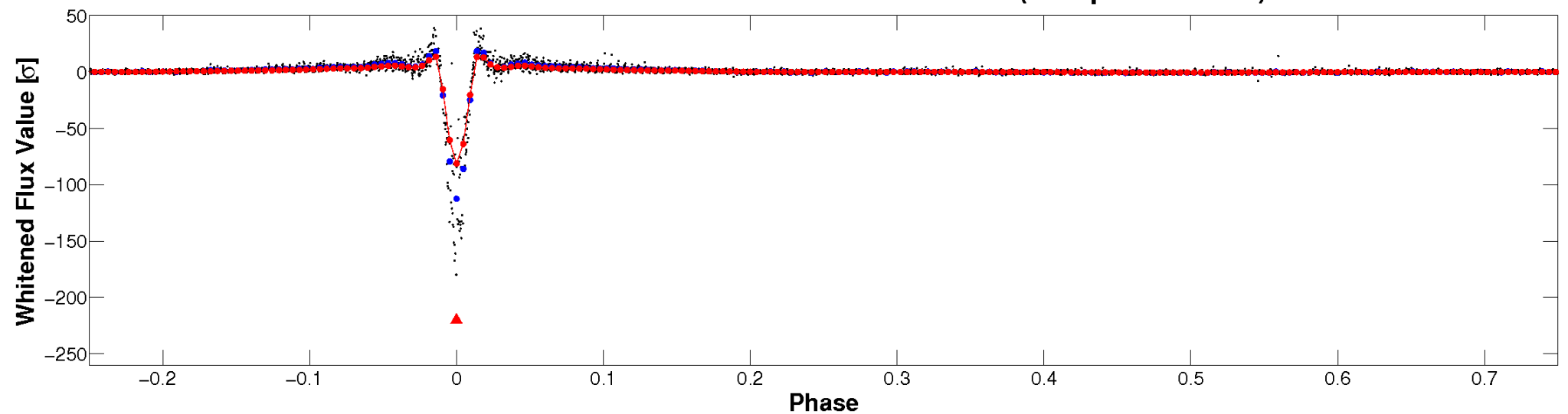


Non-Whitened Vs. Whitened Light Curve

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

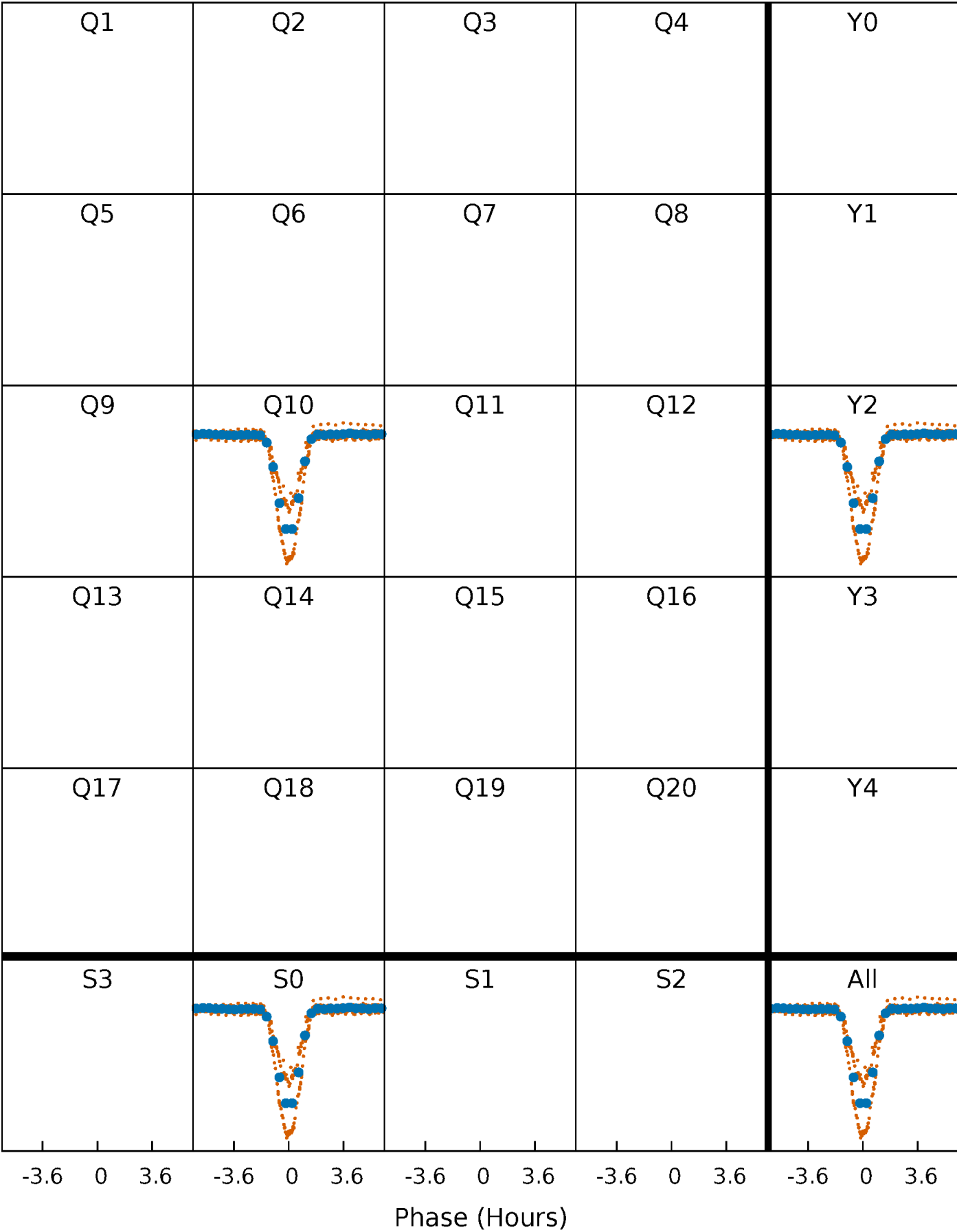


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



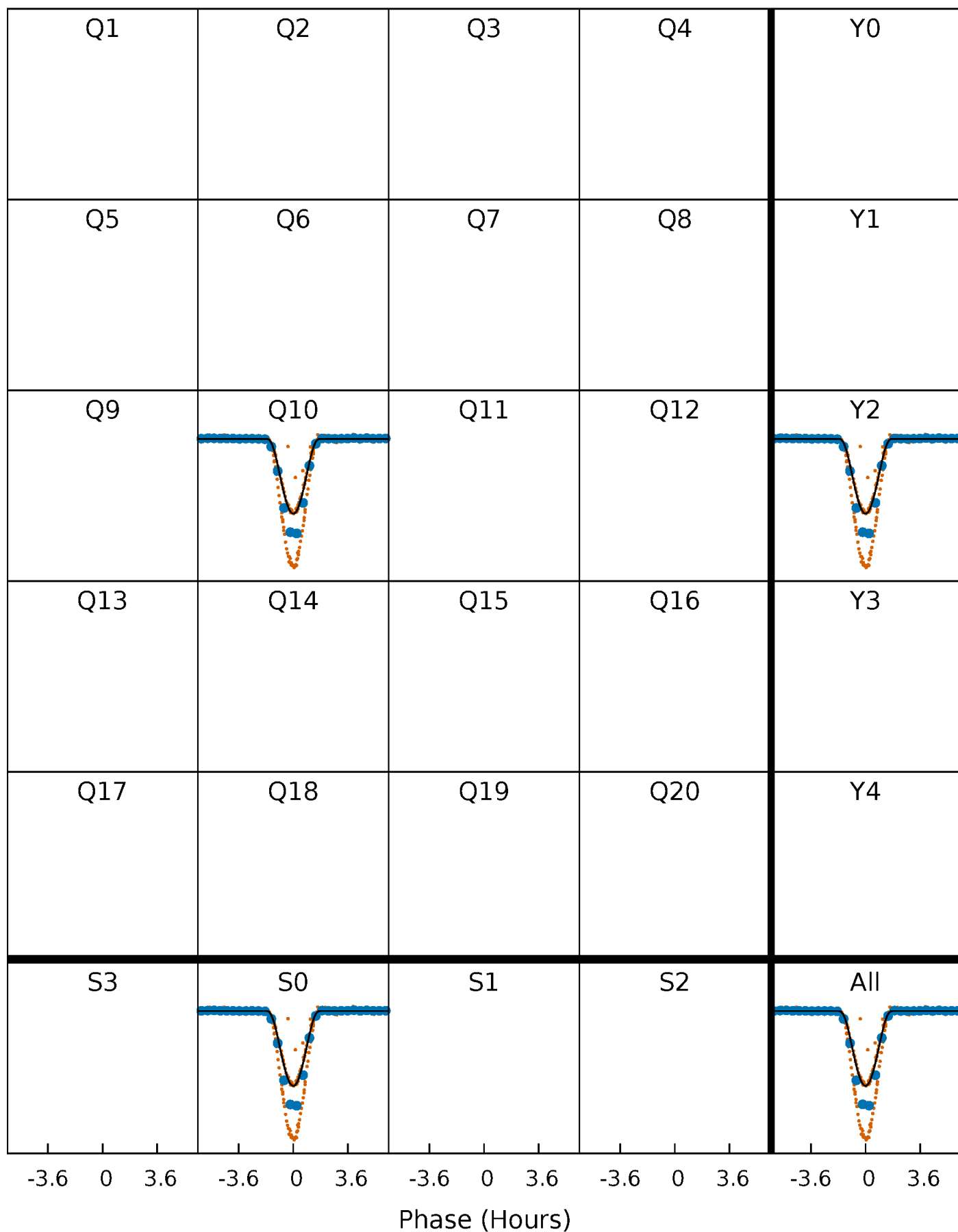
PDC Quarter-Phased Transit Curves

TCE 009775253-01 P= 4.394550 Days T₀=133.615226 (BKJD)



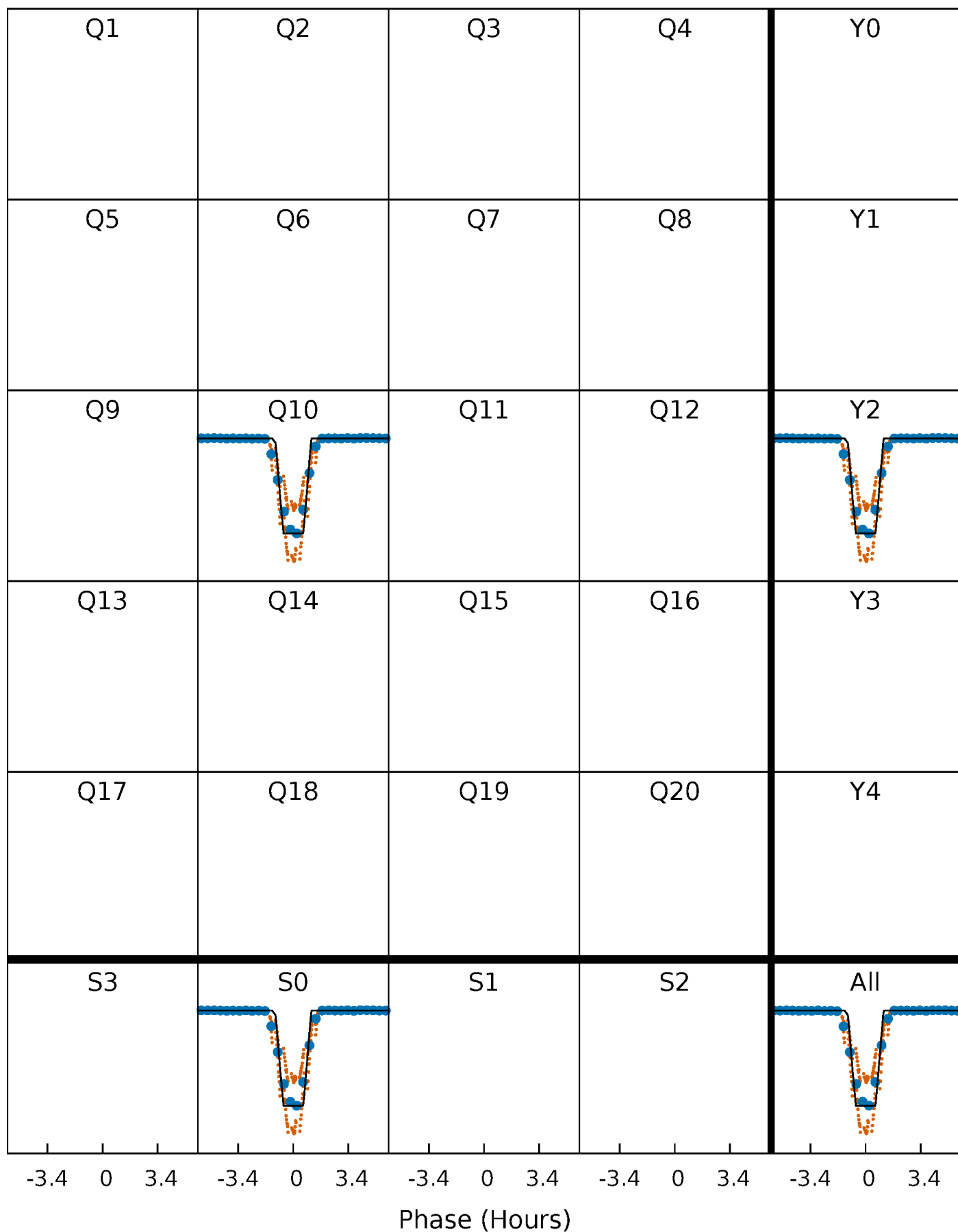
DV Quarter-Phased Transit Curves

TCE 009775253-01 P= 4.394550 Days $T_0=133.615226$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

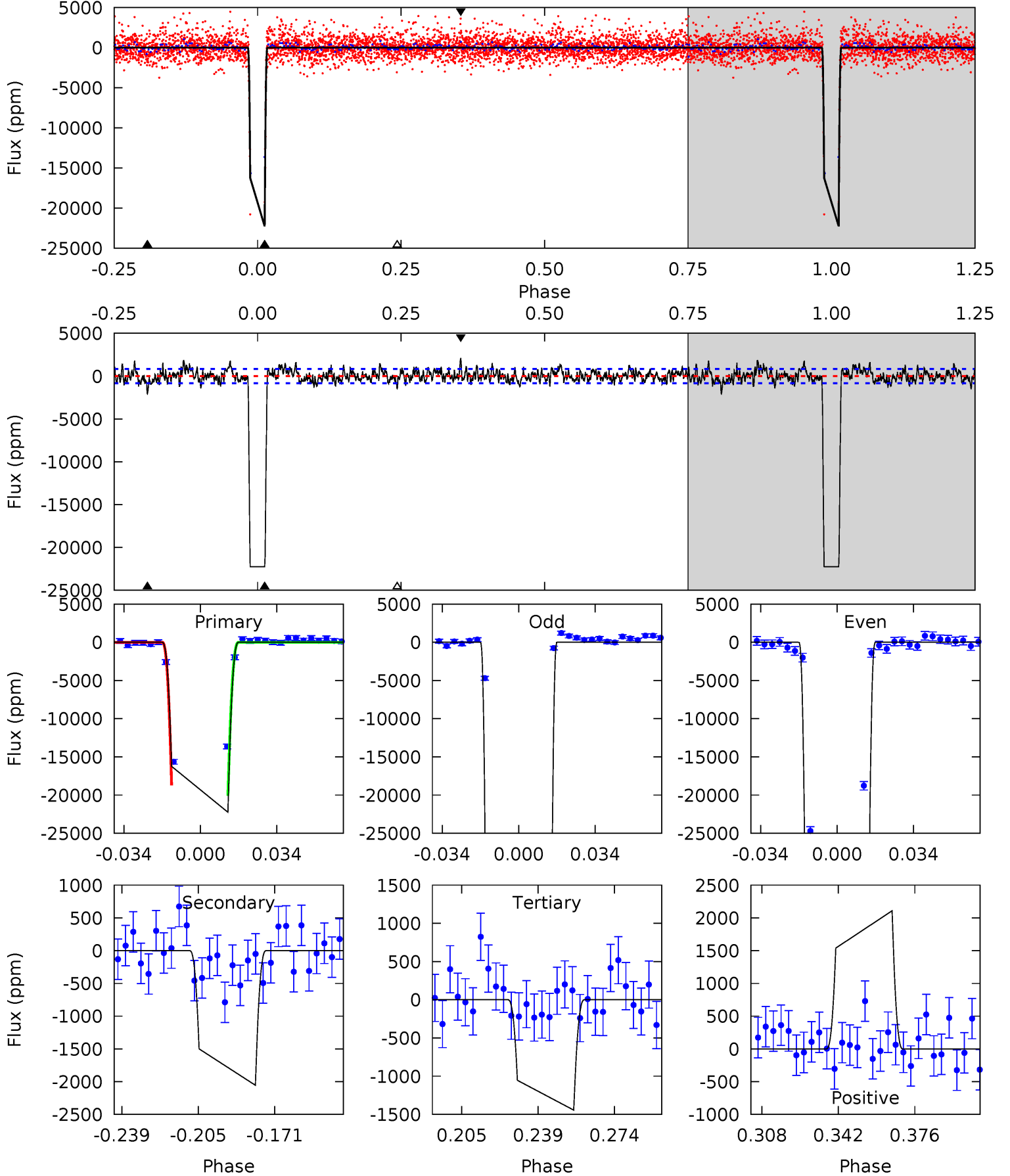
TCE 009775253-01 P= 4.393802 Days $T_0=133.754322$ (BKJD)



DV Model-Shift Uniqueness Test

009775253-01, P = 4.394550 Days, E = 133.615226 Days

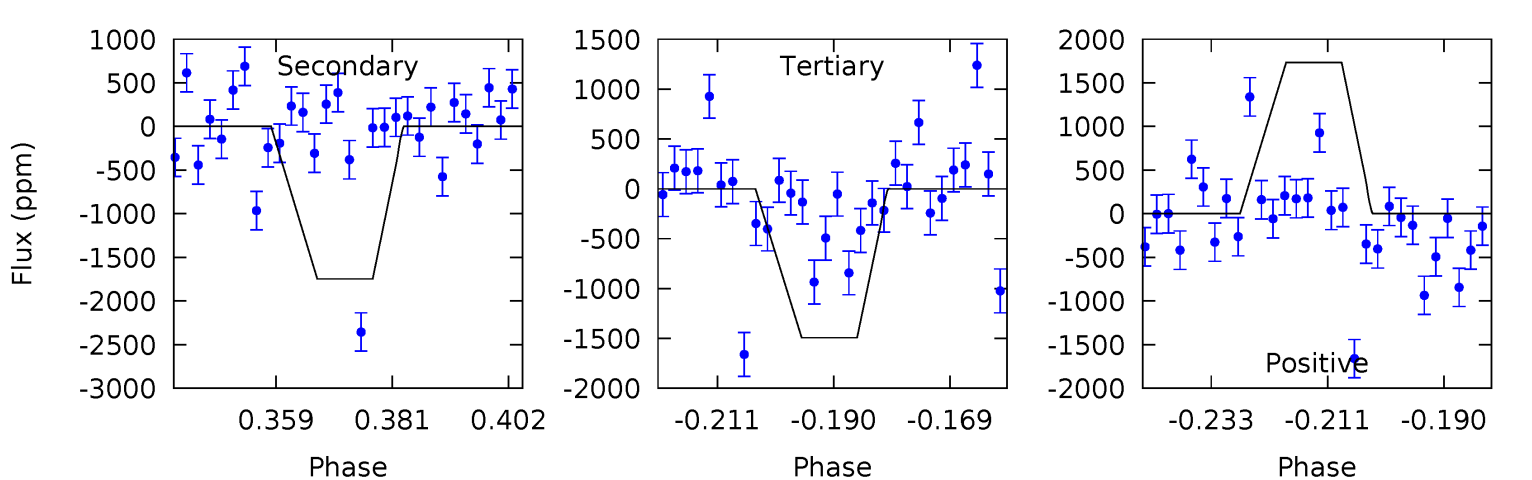
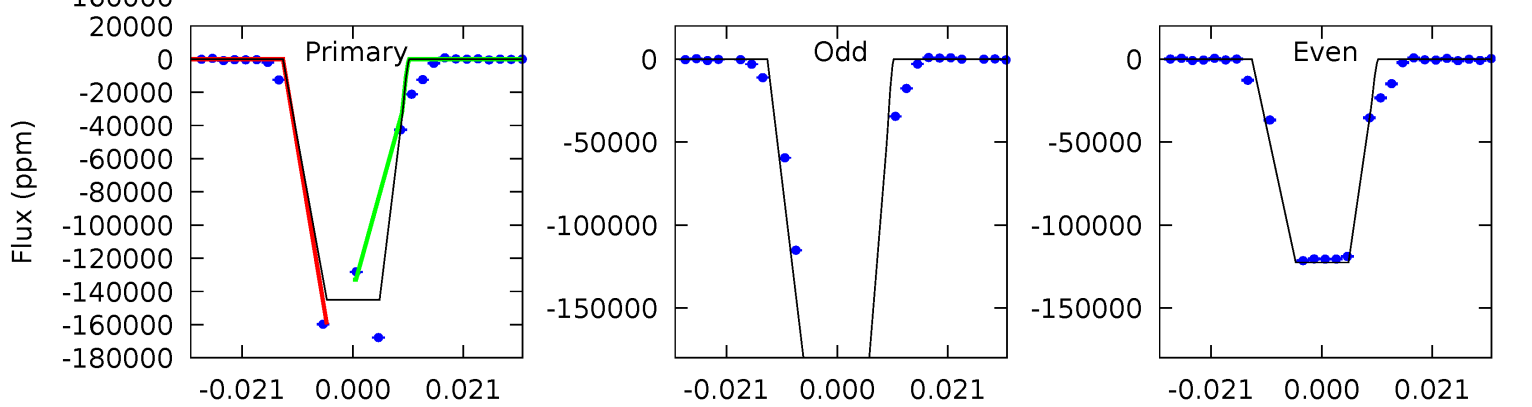
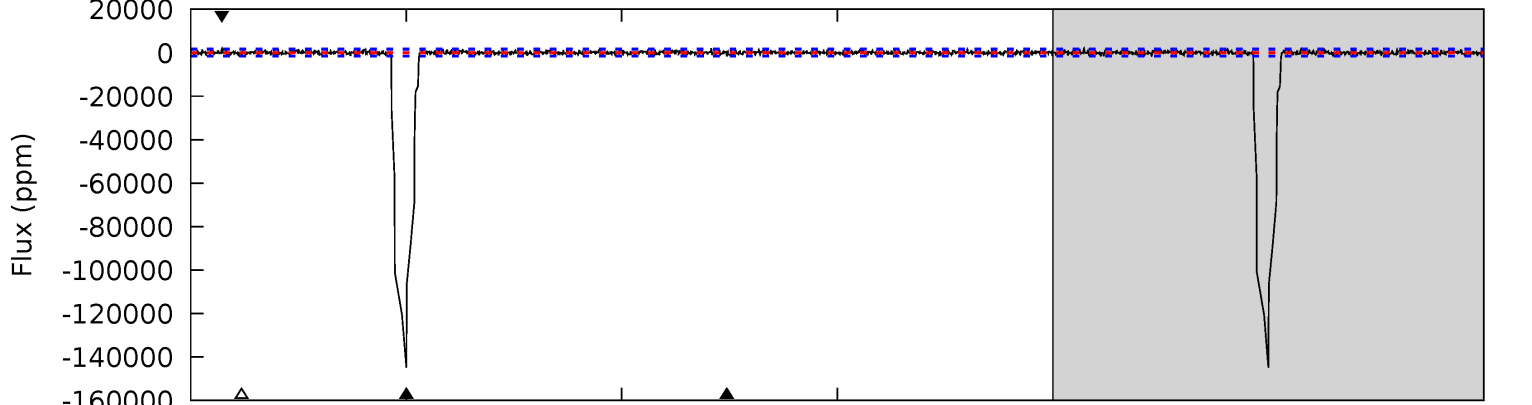
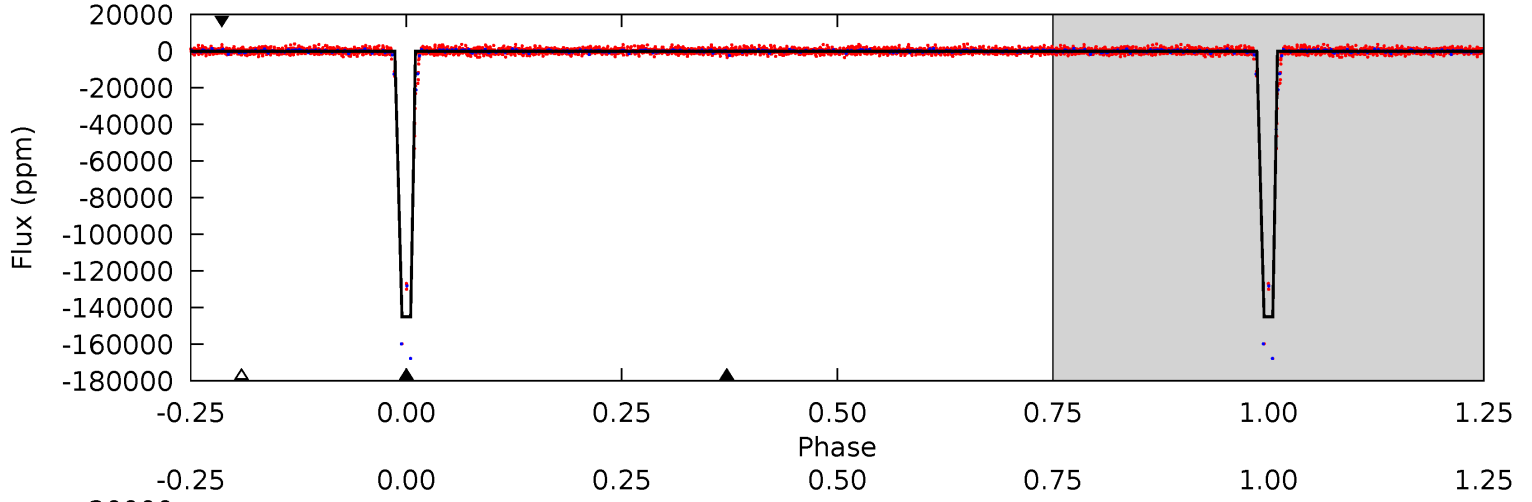
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
127.6	11.8	8.28	12.1	4.78	2.12	3.01	119.3	115.5	3.51	-0.30	499.9	0.99	0.09	0



Alt Model-Shift Uniqueness Test

009775253-01, P = 4.393802 Days, E = 133.754322 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
440.8	5.32	4.54	5.28	4.88	2.31	1.38	436.3	435.6	0.77	0.04	247.7	1.01	0.01	0



Stellar Parameters For KIC 009775253

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3695^{+114}_{-152}	$4.773^{+0.105}_{-0.053}$	$0.000^{+0.250}_{-0.350}$	$0.483^{+0.056}_{-0.104}$	$0.504^{+0.056}_{-0.105}$	$6.307^{+4.134}_{-1.410}$
	+3%/-4%	+2%/-1%	+inf%/-inf%	+12%/-22%	+11%/-21%	+66%/-22%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009775253-01 / KOI 3621.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2055 ± 174	$24.70^{+11.13}_{-11.78}$	764^{+36}_{-37}	1994^{+288}_{-171}	$3.243^{+8.293}_{-1.745}$
Alt.	-1748 ± 329	$21.76^{+12.29}_{-10.42}$	764^{+36}_{-39}	1989^{+314}_{-184}	$3.443^{+8.238}_{-2.045}$

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 $A_{obs} \gg 1.0$

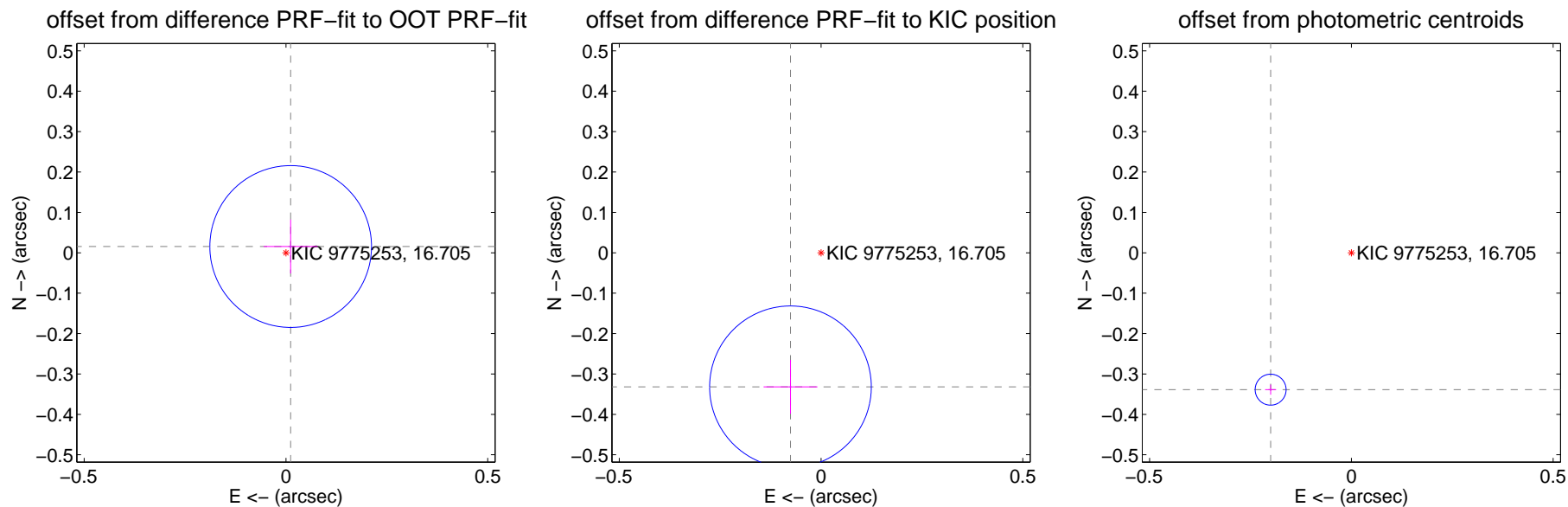
DV Centroid Data

Supplemental centroid analysis for 009775253-01. Kepler magnitude: 16.70. Transit SNR 412.65

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.019 ± 0.067	0.29	-0.012 ± 0.067	0.016 ± 0.067
PRF-fit source offset from KIC position	0.340 ± 0.067	5.10	0.076 ± 0.067	-0.332 ± 0.067
photometric centroid source offset	0.39 ± 0.01	30.81	0.20 ± 0.01	-0.34 ± 0.01



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.

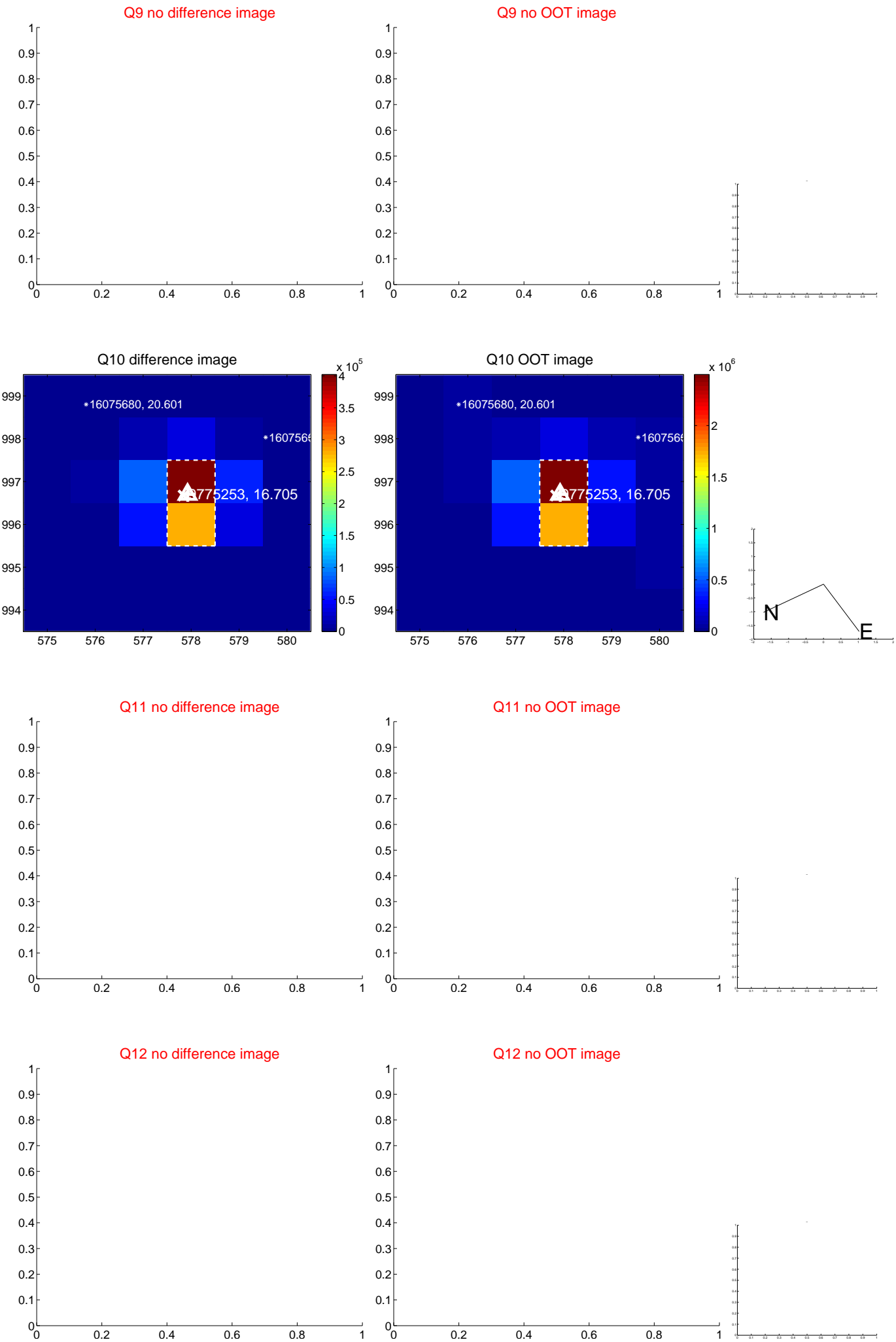
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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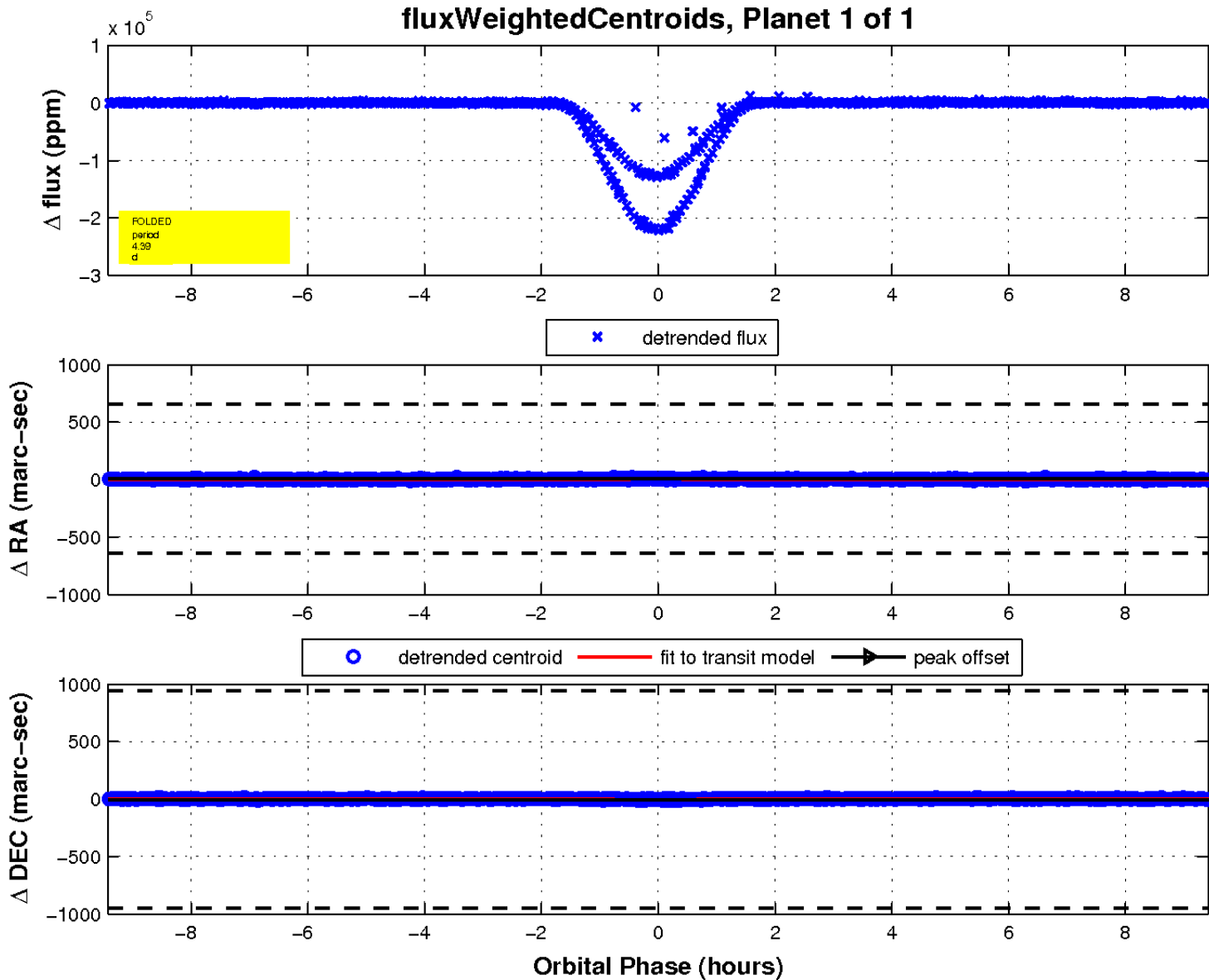
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

