

KIC 007968400

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})
007968400-01	OBS	No	368.900077	233.217629	928.8	34.548	9.3	9.8	0.90	5794	3.41	0.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007968400-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—EPHEM_MATCH

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.

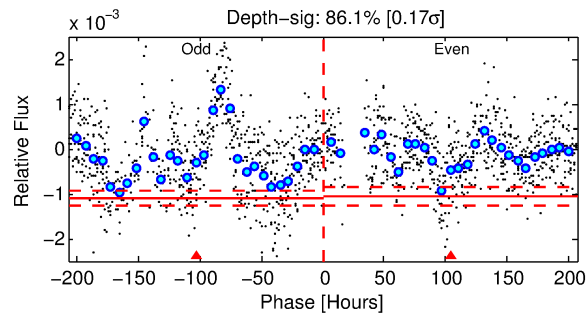
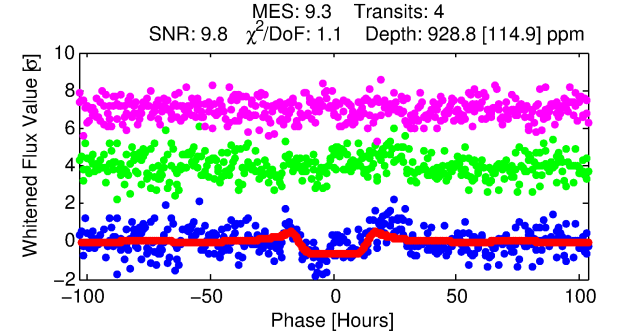
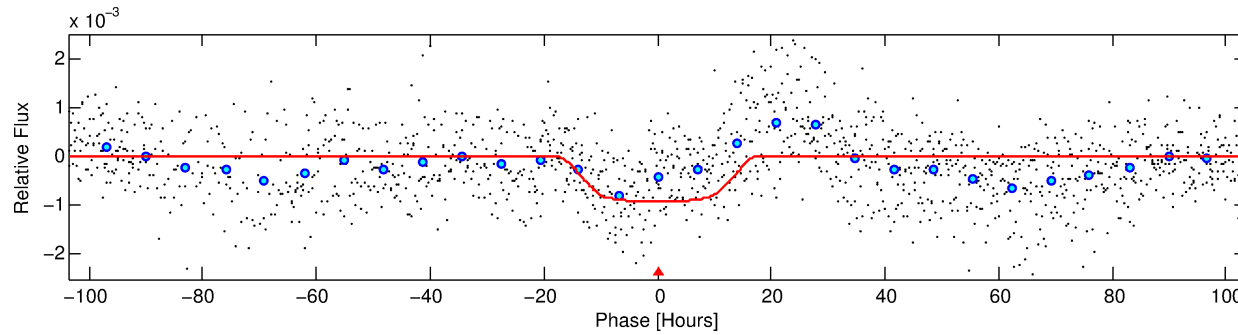
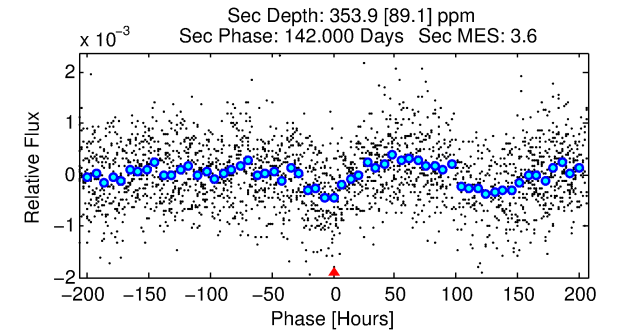
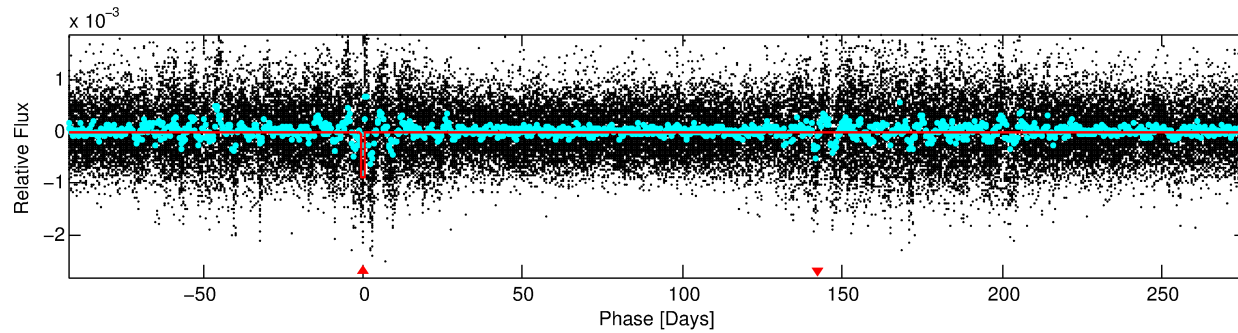
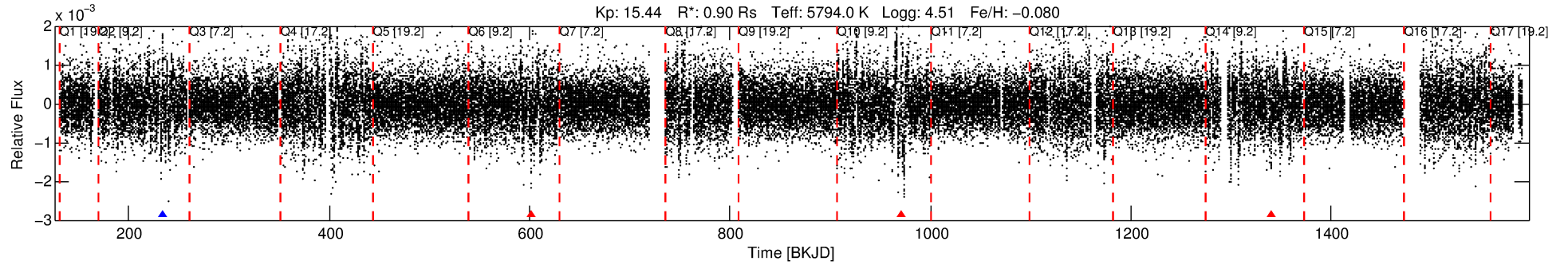
Ephemeris Match Information For 007968400-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007968400-01	7968400	007968451-01	7968451	1:1	67.5	-4	-17	15.47	15.44	1.27	Direct-PRF	1	3.49	0.80

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7968400 Candidate: 1 of 1 Period: 368.900 d



DV Fit Results:

Period = 368.90008 [0.02359] d
Epoch = 233.2176 [0.0414] BKJD
Rp/R* = 0.0346 [0.0026]
a/R* = 36.20 [5.73]
b = 0.93 [0.02]
Seff = 0.83 [0.32]
Teq = 243 [24] K
Rp = 3.41 [1.07] Re
a = 0.9972 [0.2538] AU
Ag = 16683.28 [7864.35] [2.12σ]
Teffp = 4274 [340] K [11.82σ]

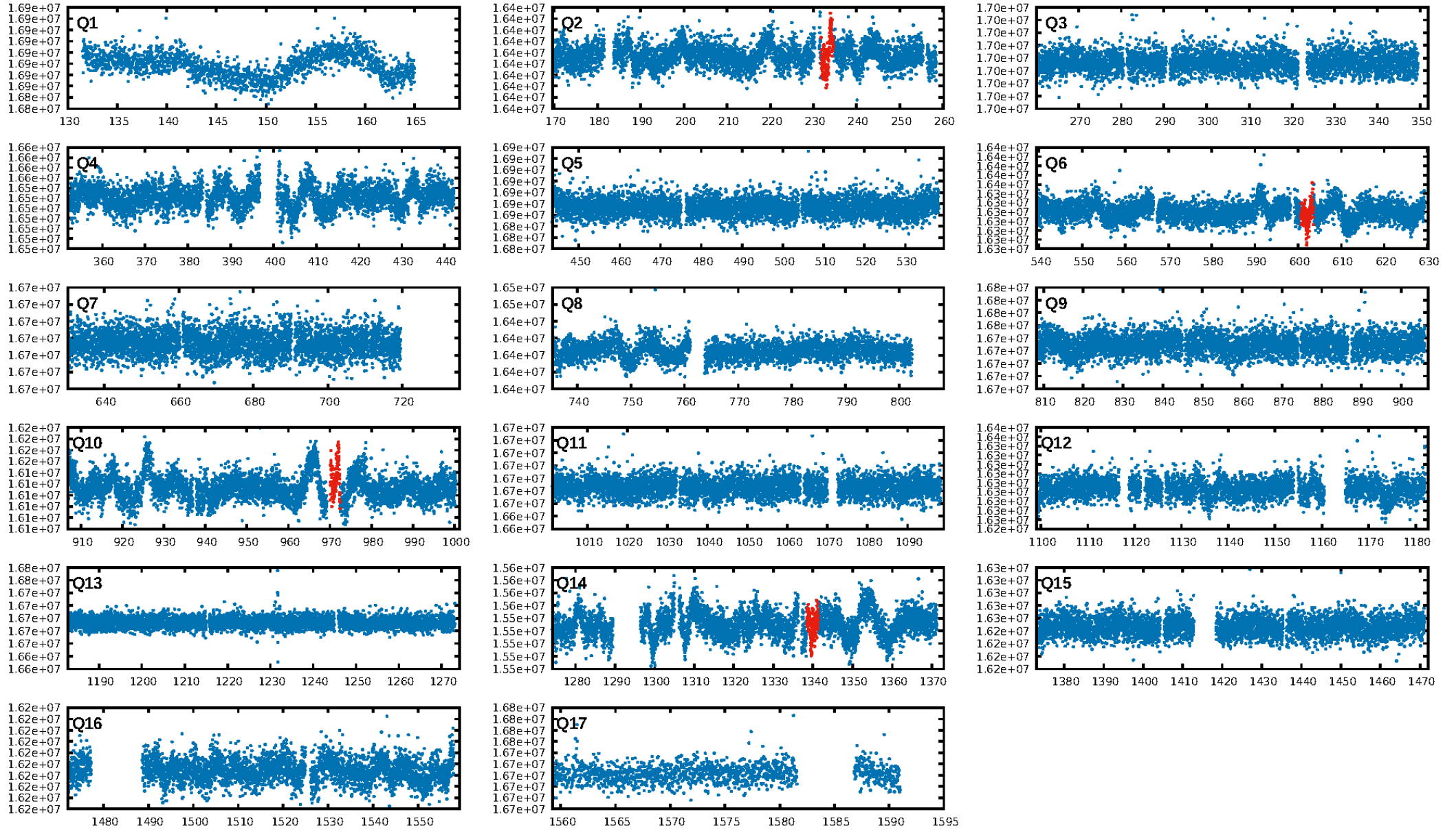
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.92e-12
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.7789
Centroid-sig: 9.1%
Centroid-so: 3.051 arcsec [1.72σ]
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: N/A

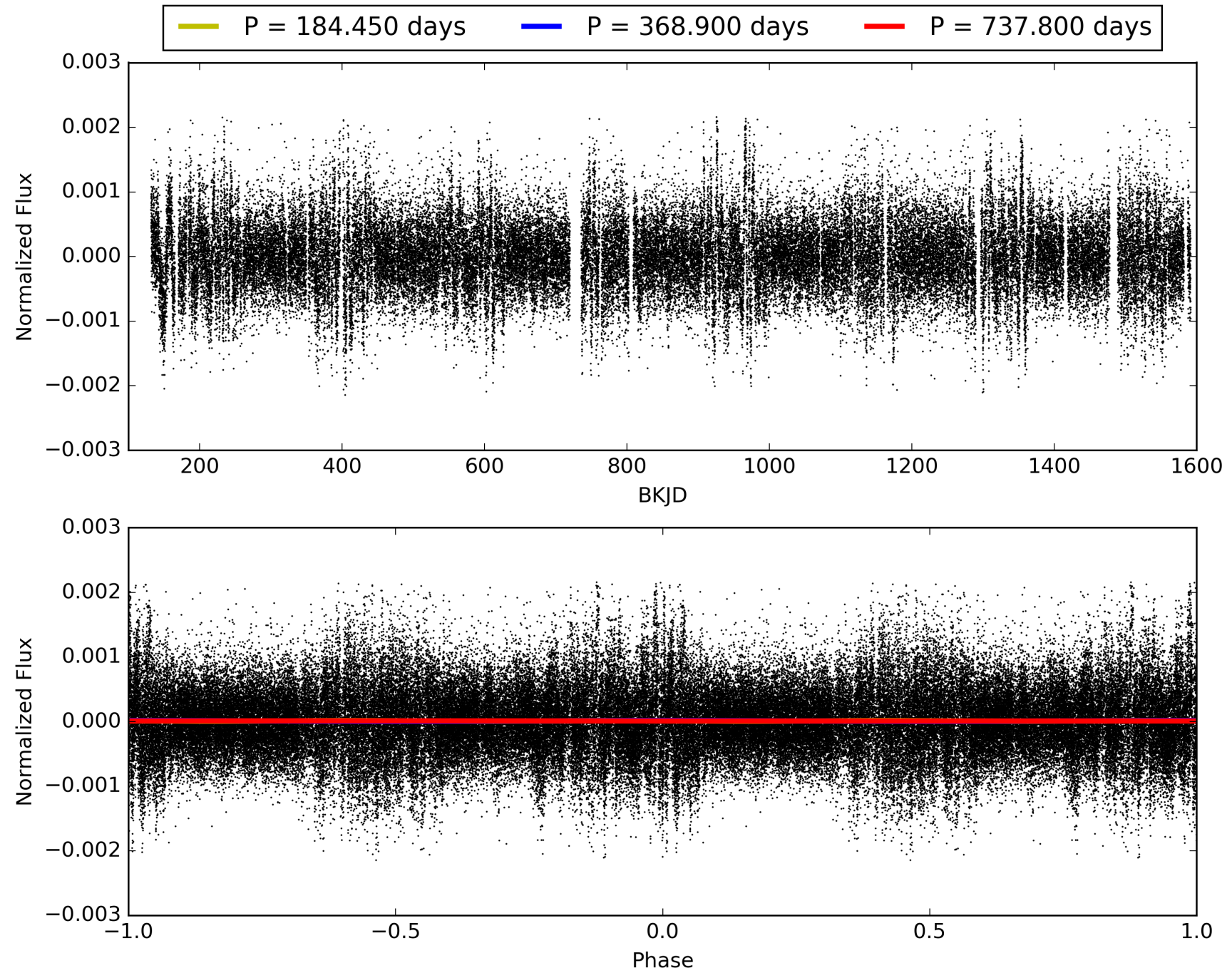
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:14:27 Z

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

TCE 007968400-01, PDC Light Curves

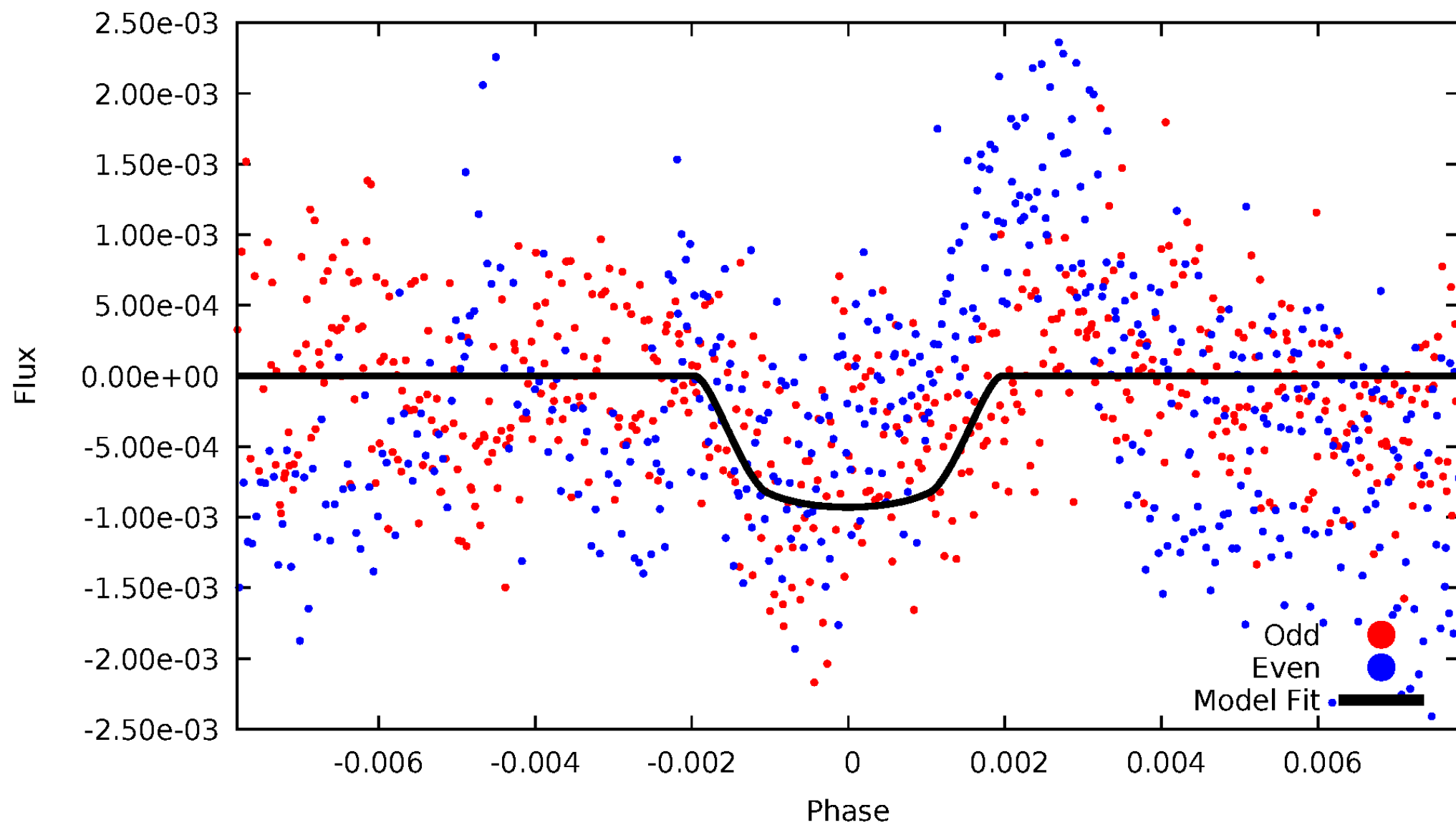


TCE 007968400-01



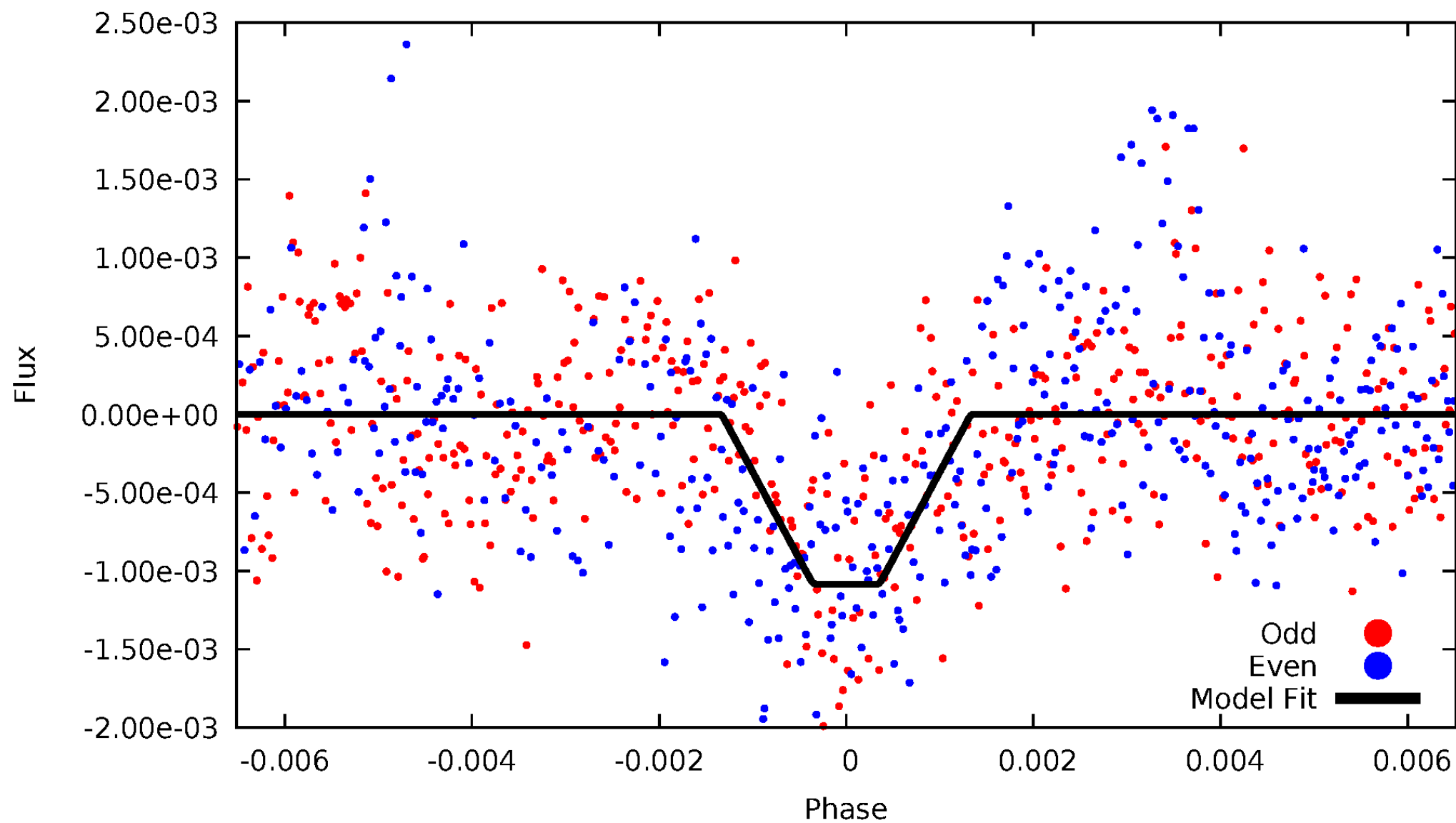
DV Odd/Even

TCE 007968400-01

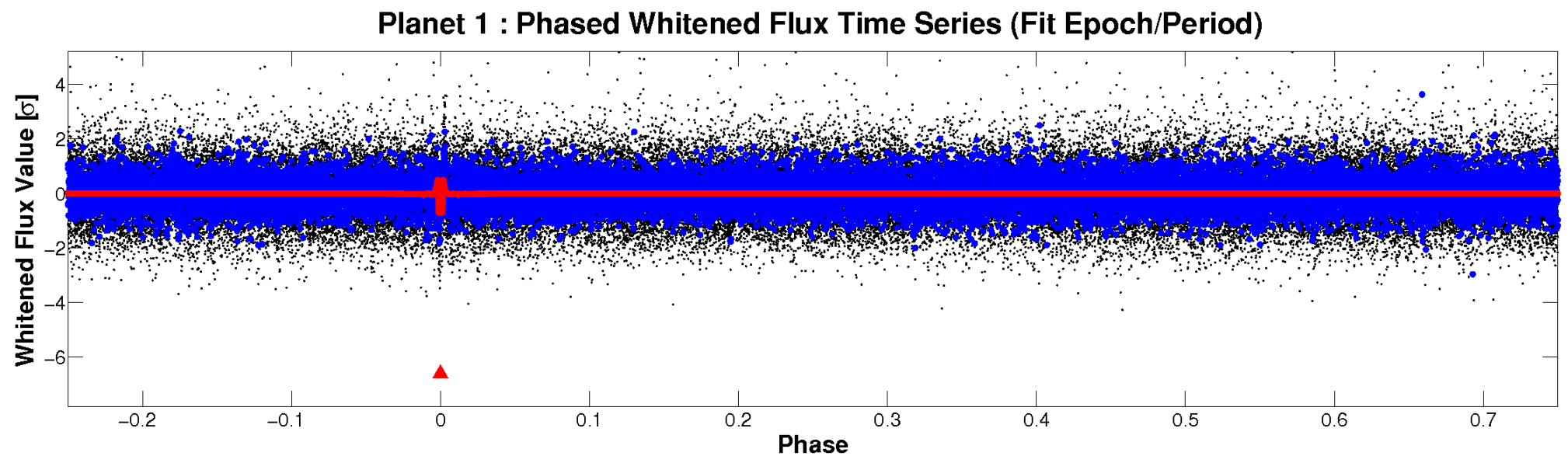
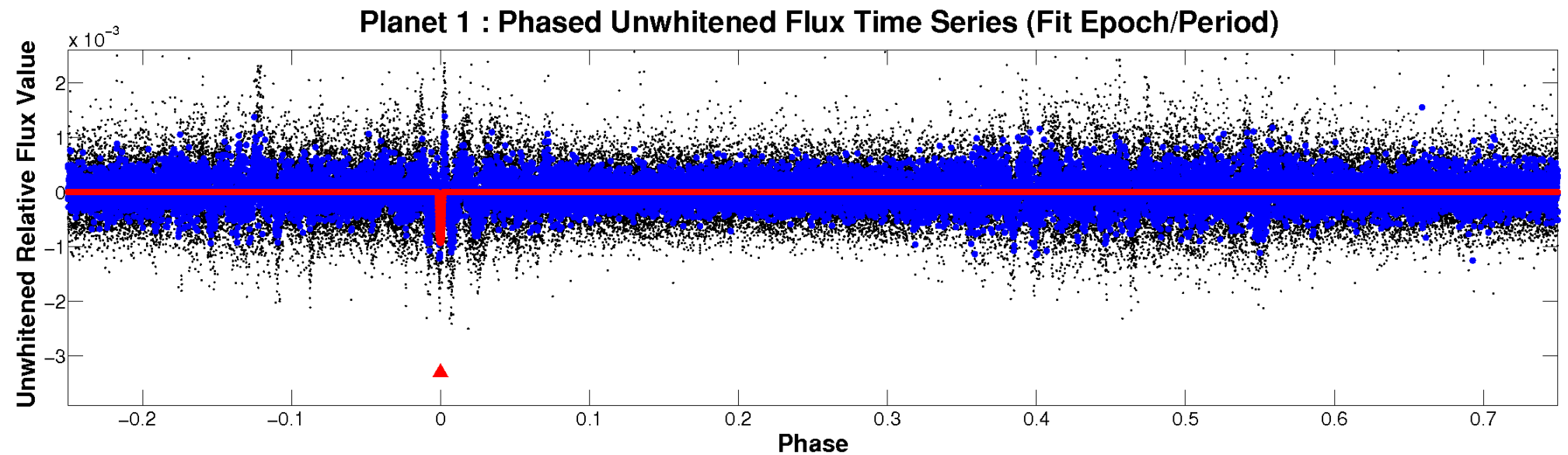


ALT Odd/Even

TCE 007968400-01

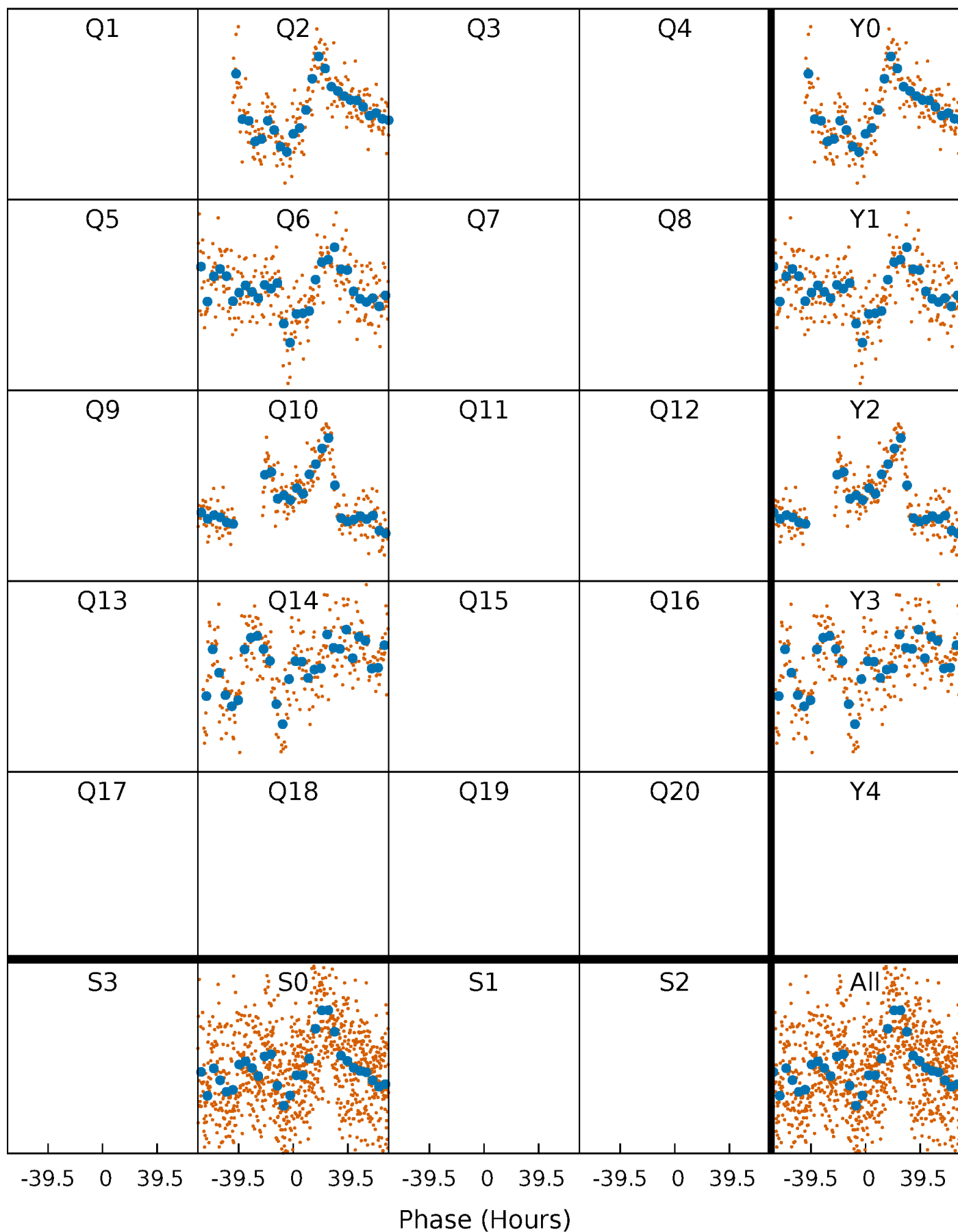


Non-Whitened Vs. Whitened Light Curve



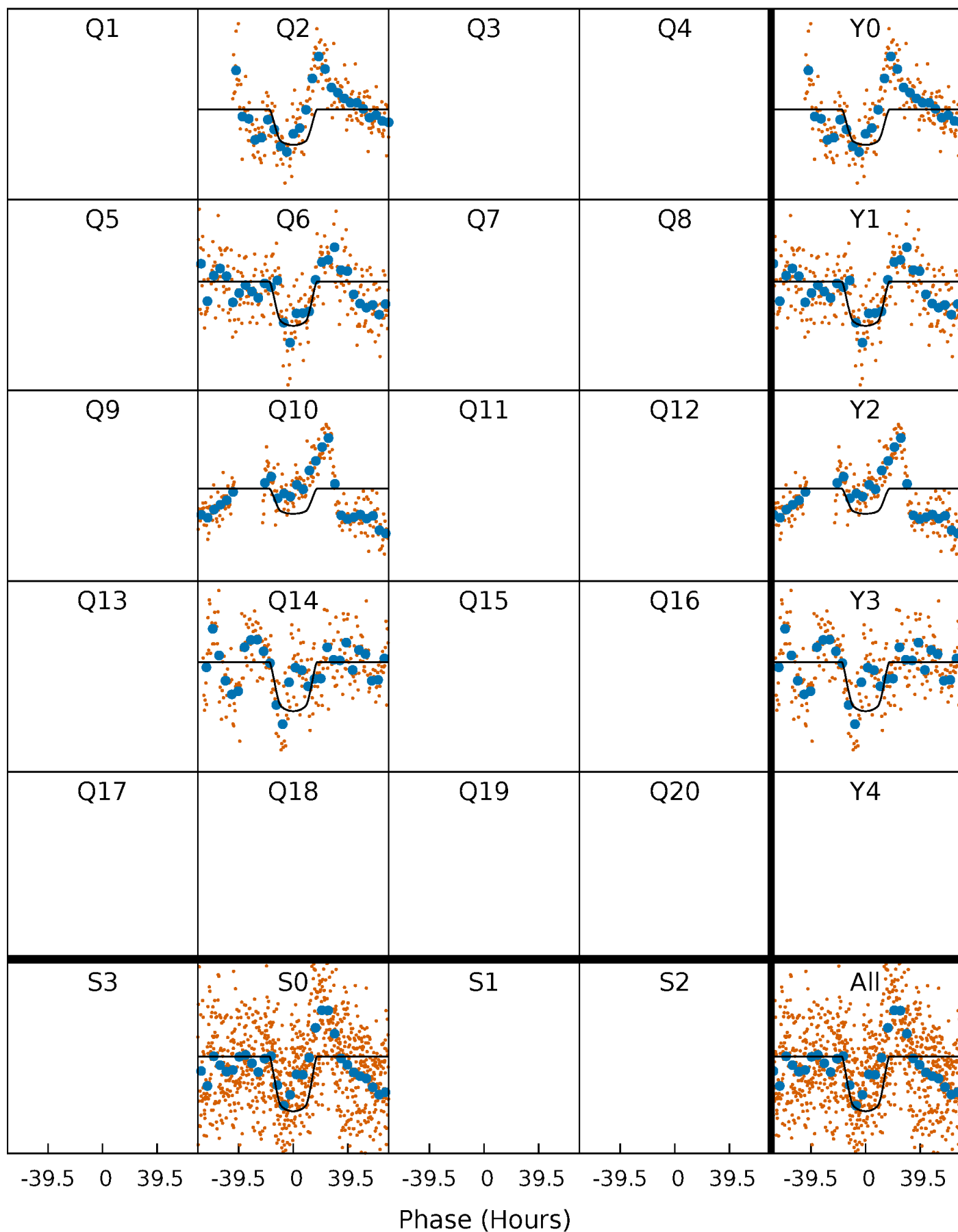
PDC Quarter-Phased Transit Curves

TCE 007968400-01 P=368.900077 Days $T_0=233.217629$ (BKJD)



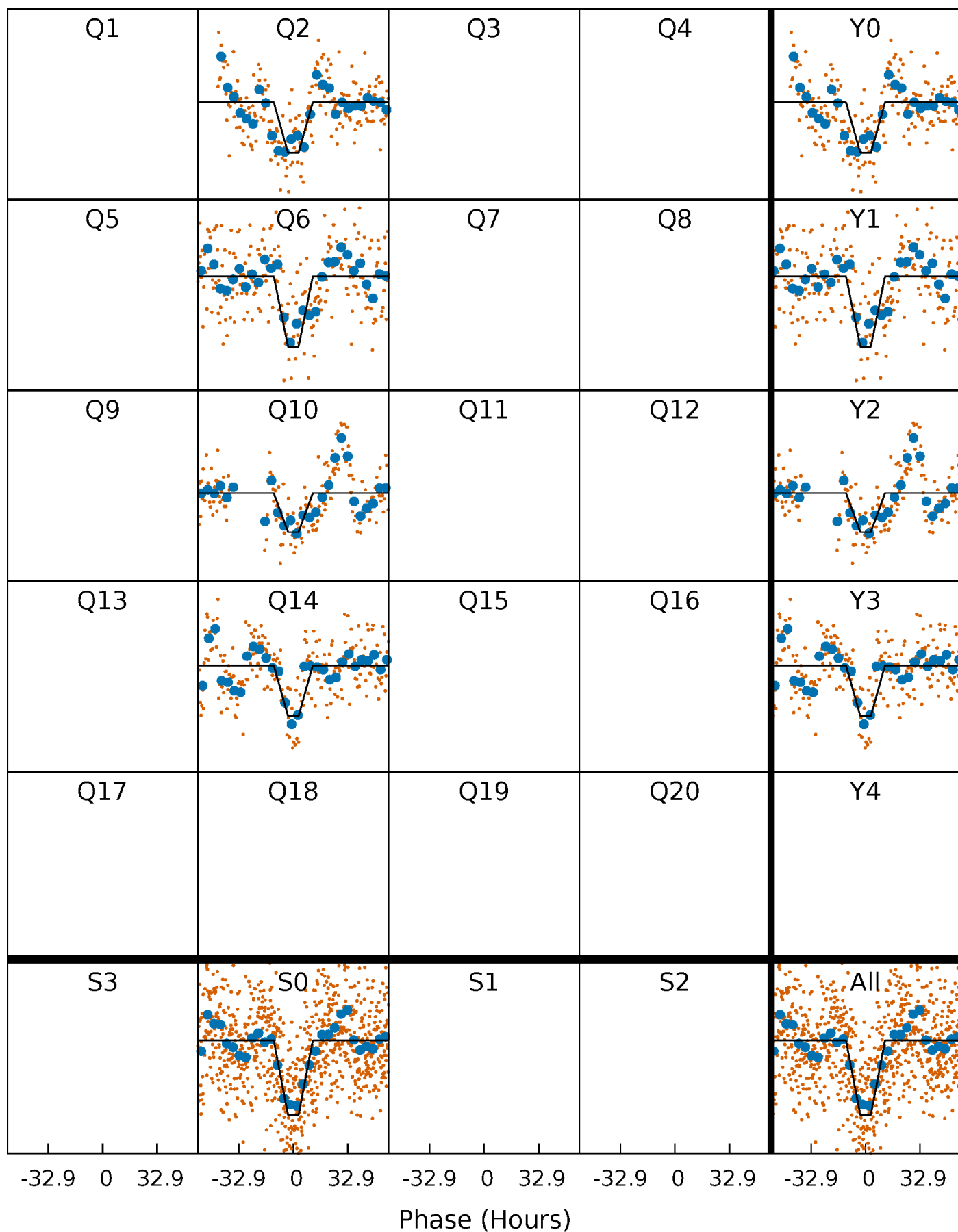
DV Quarter-Phased Transit Curves

TCE 007968400-01 P=368.900077 Days $T_0=233.217629$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

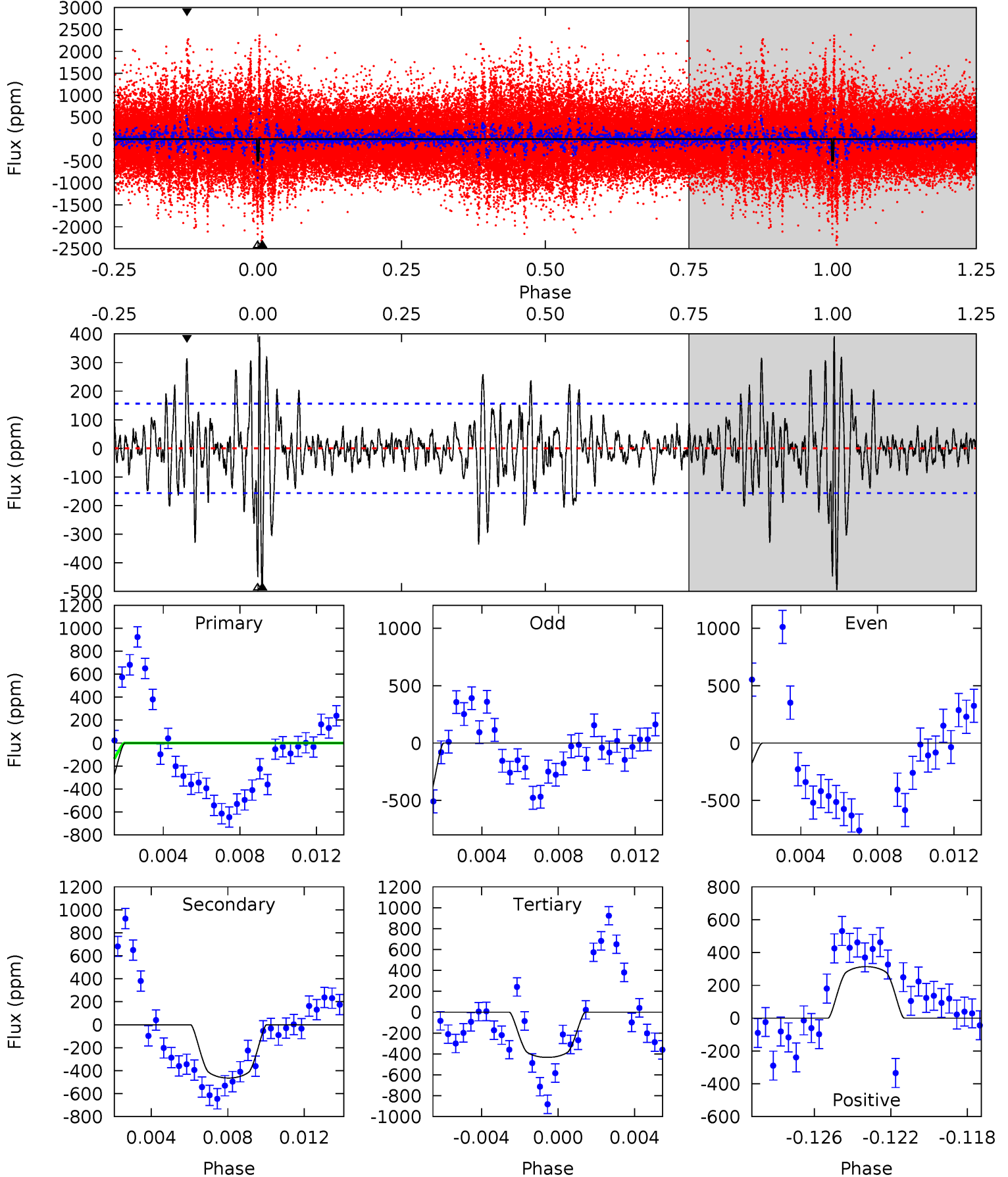
TCE 007968400-01 P=368.757646 Days $T_0=233.289422$ (BKJD)



DV Model-Shift Uniqueness Test

007968400-01, P = 368.900077 Days, E = 233.217629 Days

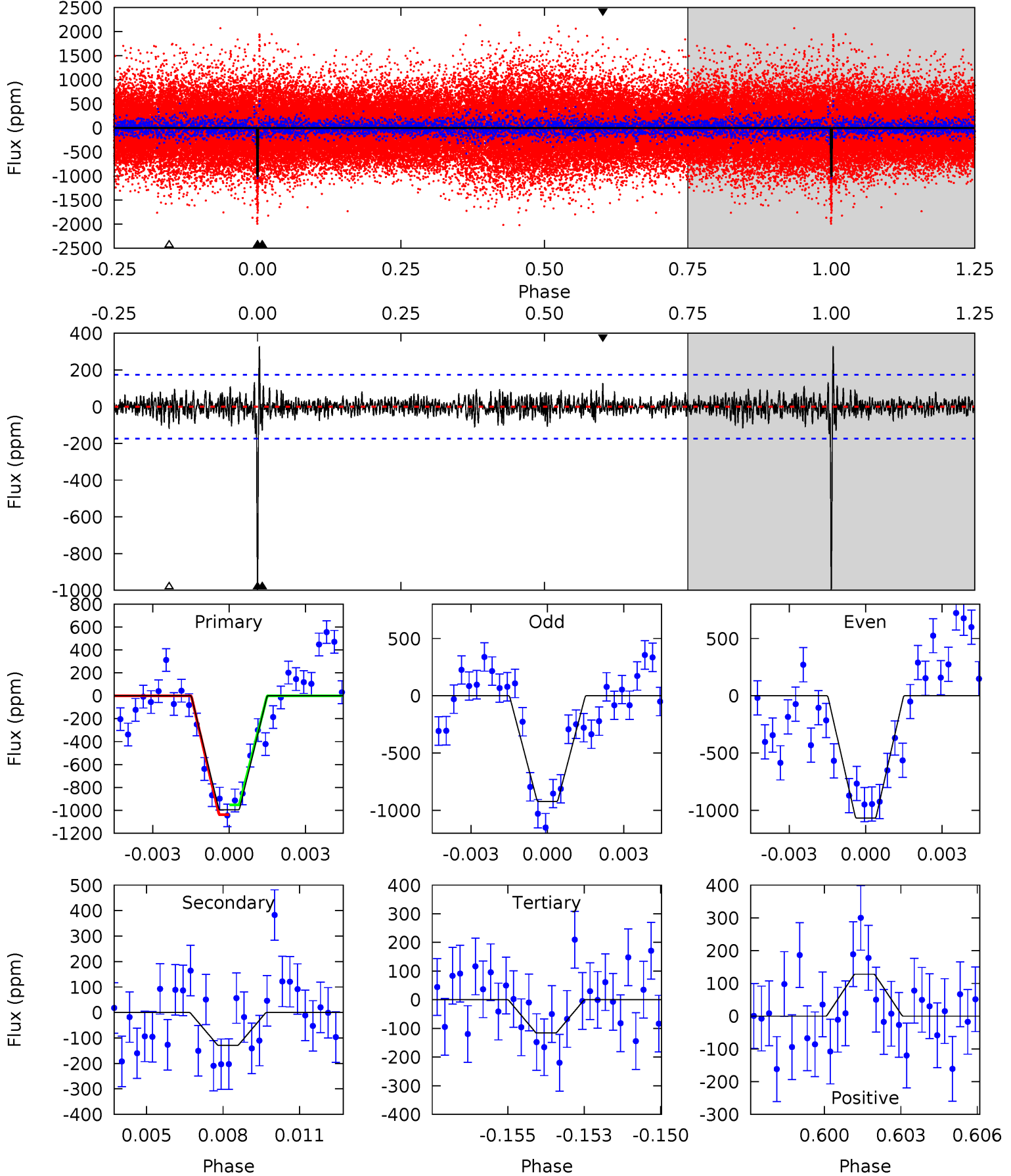
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	15.5	14.4	10.4	5.20	2.88	2.95	2.05	6.03	1.04	5.01	5.94	0.84	0.44	8.46



Alt Model-Shift Uniqueness Test

007968400-01, P = 368.757646 Days, E = 233.289422 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.1	3.92	3.52	3.87	5.27	3.00	1.08	26.6	26.3	0.40	0.04	2.19	0.97	0.25	1.31



Stellar Parameters For KIC 007968400

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5794^{+157}_{-175}	$4.514^{+0.050}_{-0.200}$	$-0.080^{+0.300}_{-0.300}$	$0.903^{+0.275}_{-0.092}$	$0.971^{+0.116}_{-0.116}$	$1.860^{+0.492}_{-0.991}$
	+3%/-3%	+1%/-4%	+375%/-375%	+30%/-10%	+12%/-12%	+26%/-53%
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 007968400-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-464 ± 30	$3.54^{+0.56}_{-0.40}$	347^{+26}_{-17}	4709^{+208}_{-179}	20099^{+5071}_{-5253}
Alt.	-129 ± 33	$3.37^{+0.54}_{-0.39}$	347^{+25}_{-16}	3773^{+211}_{-208}	5958^{+2364}_{-2006}

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 $A_{\text{obs}} \gg 1.0$

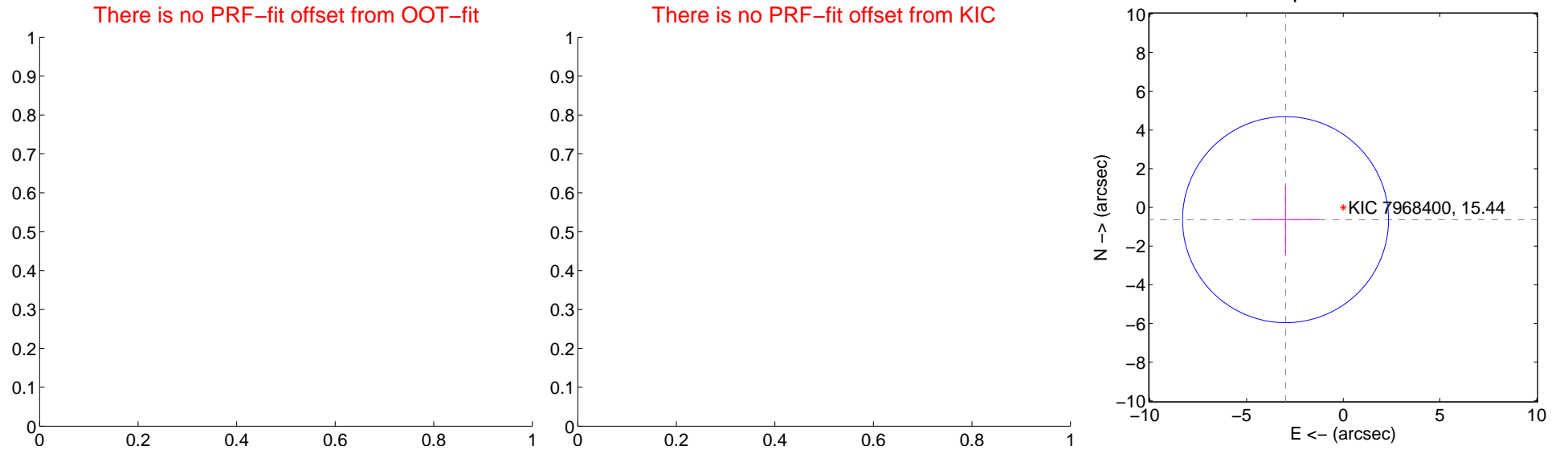
DV Centroid Data

Supplemental centroid analysis for 007968400-01. Kepler magnitude: 15.44. Transit SNR 9.83

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	3.05 ± 1.78	1.72	2.98 ± 1.78	-0.63 ± 1.74



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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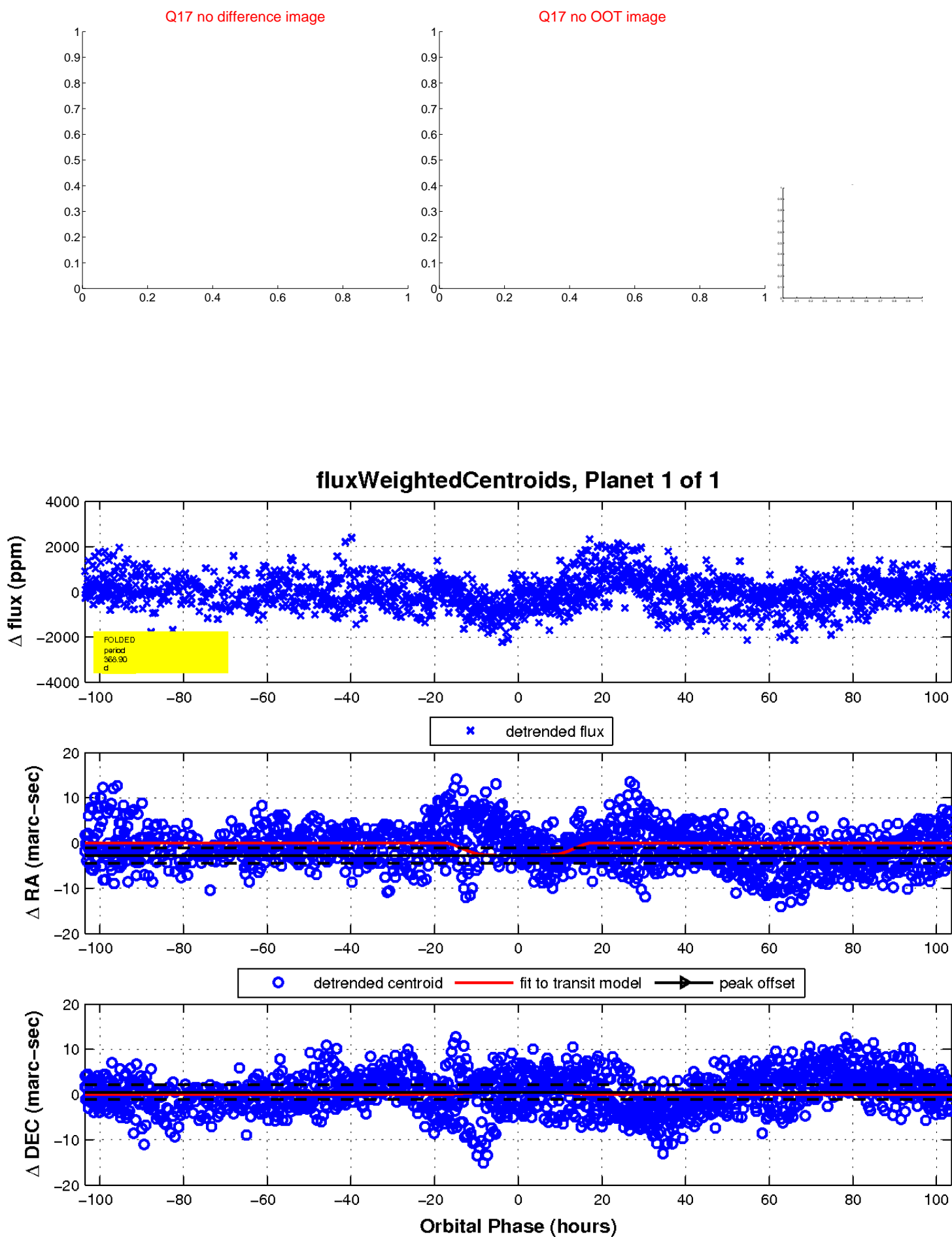
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UKIRT Image

Declination

