

KIC 010340598

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})
010340598-01	OBS	No	371.083431	499.239653	1314.1	18.027	7.7	7.5	0.46	3677	2.03	0.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010340598-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

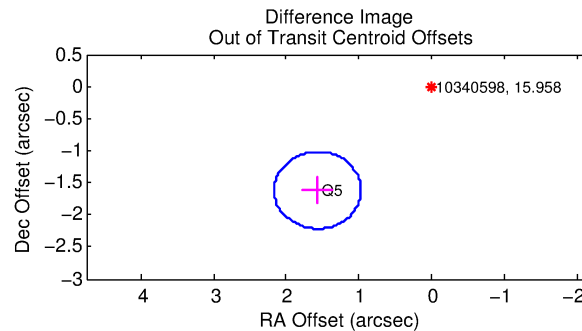
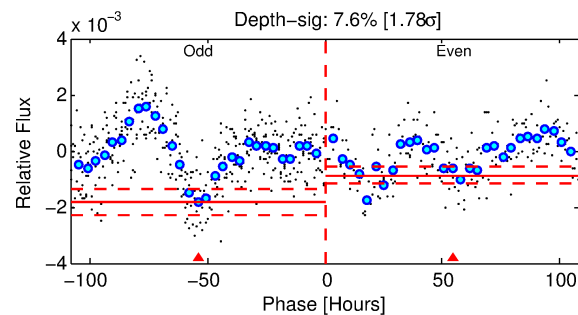
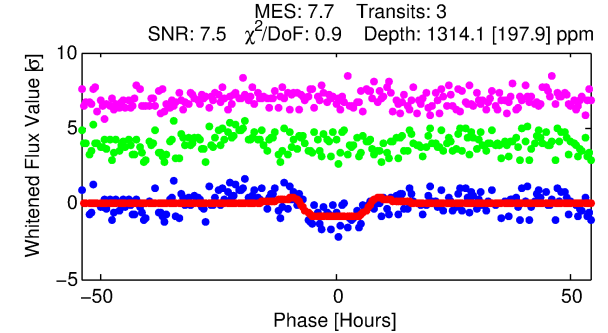
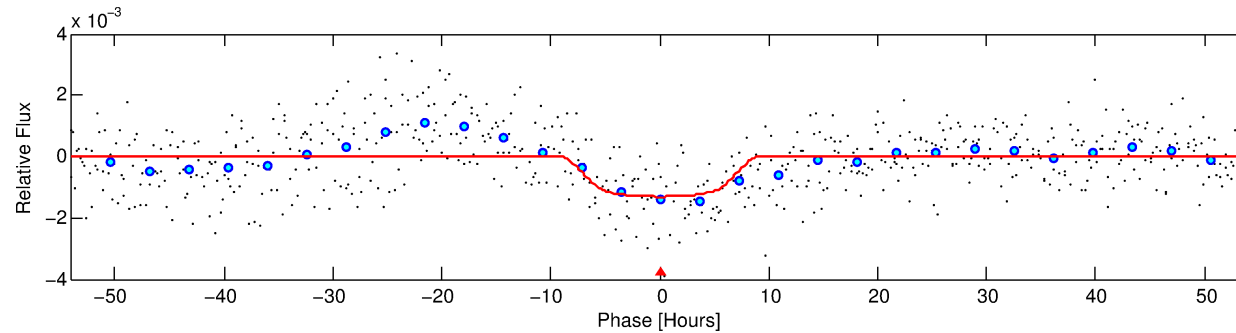
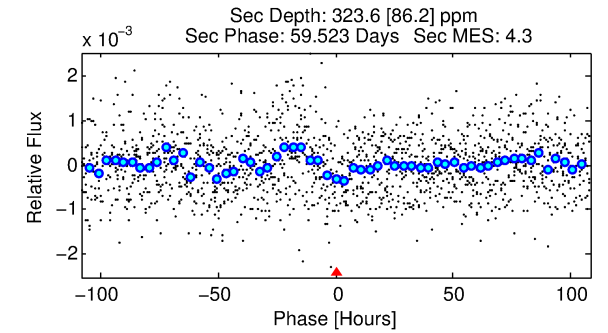
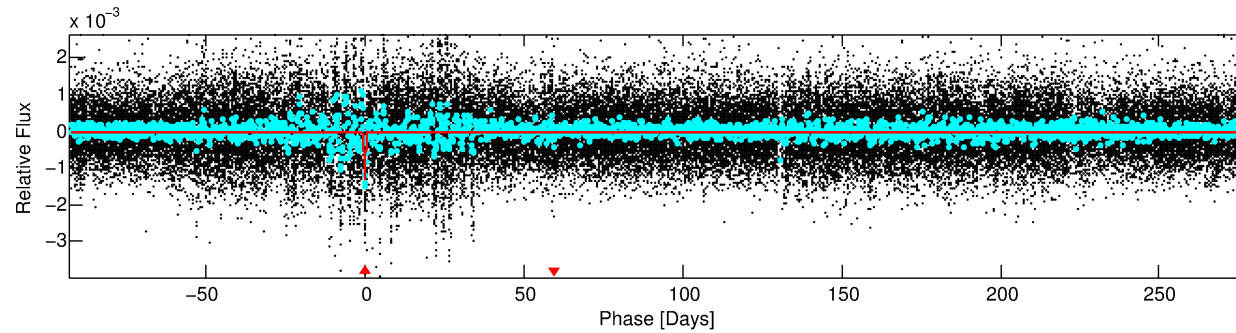
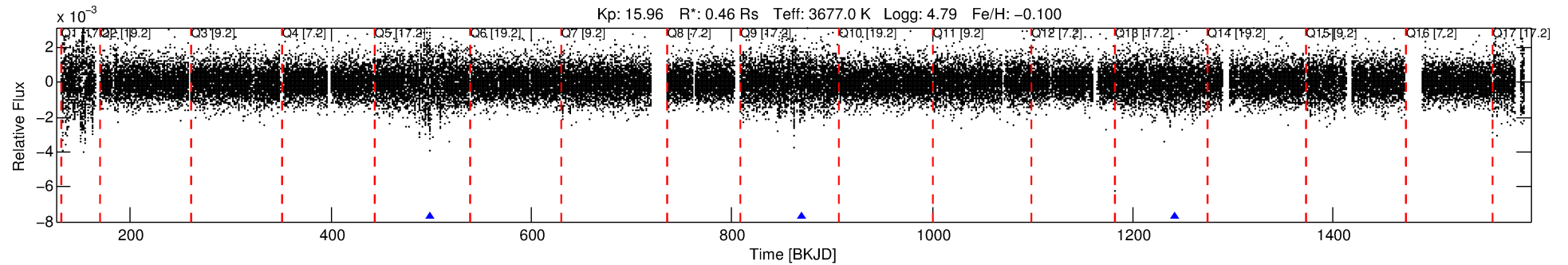
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010340598-01

No Significant Match Found

DV One-Page Summary

KIC: 10340598 Candidate: 1 of 1 Period: 371.083 d



DV Fit Results:

Period = 371.08343 [0.02492] d
Epoch = 499.2397 [0.0324] BKJD
Rp/R* = 0.0404 [0.0044]
a/R* = 76.49 [20.37]
b = 0.92 [0.05]
Seff = 0.06 [0.01]
Teq = 124 [3] K
Rp = 2.03 [0.27] Re
a = 0.7862 [0.0454] AU
Ag = 26813.18 [9462.19] [2.83σ]
Teff = 2452 [214] K [10.87σ]

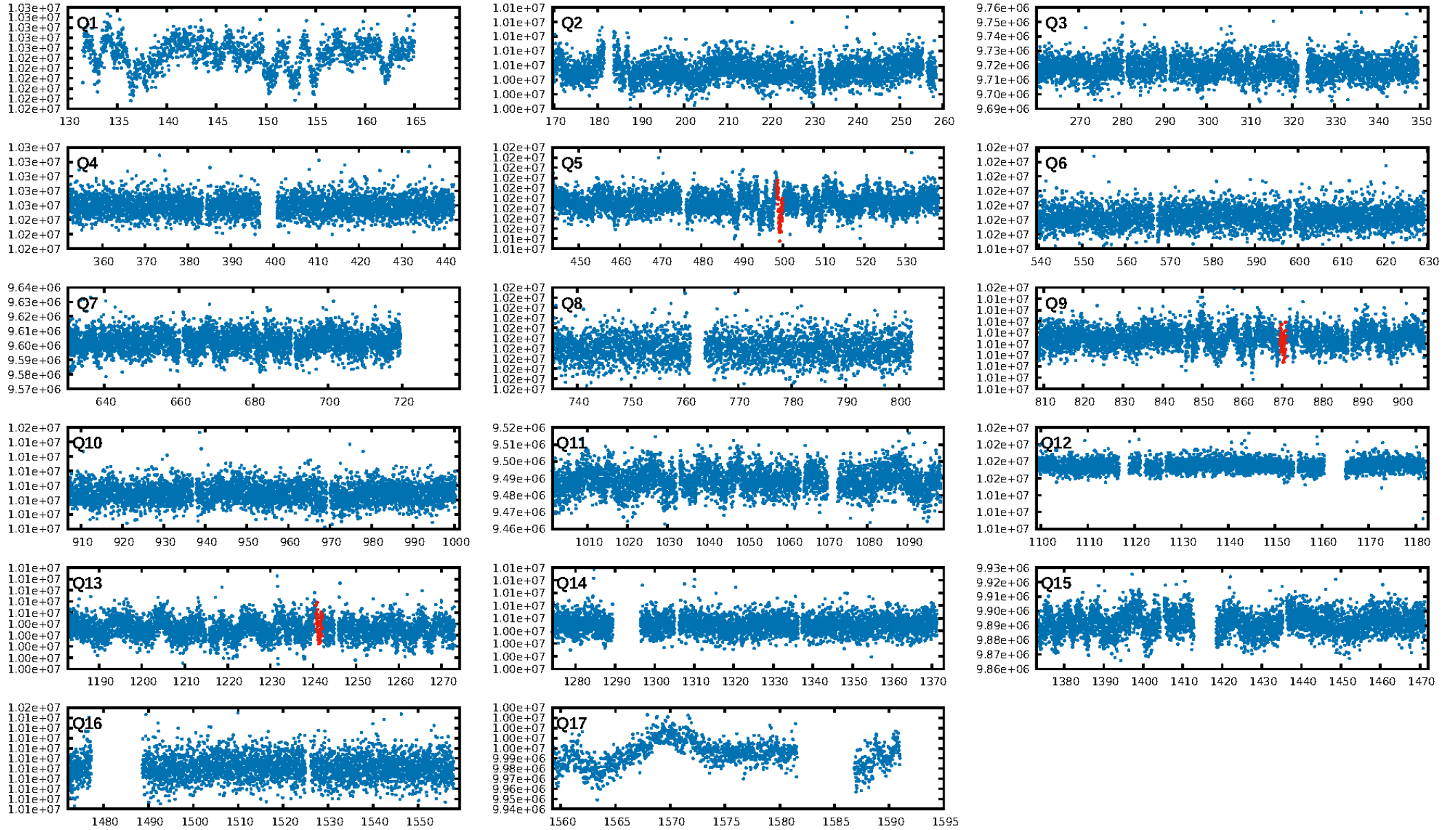
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.0%
ModelChiSquareGoF-sig: 99.9%
Bootstrap-pfa: 3.38e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.32
Centroid-sig: 78.2%
Centroid-so: 1.164 arcsec [0.42σ]
OotOffset-rm: 2.257 arcsec [11.31σ]
KicOffset-rm: 2.285 arcsec [11.45σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

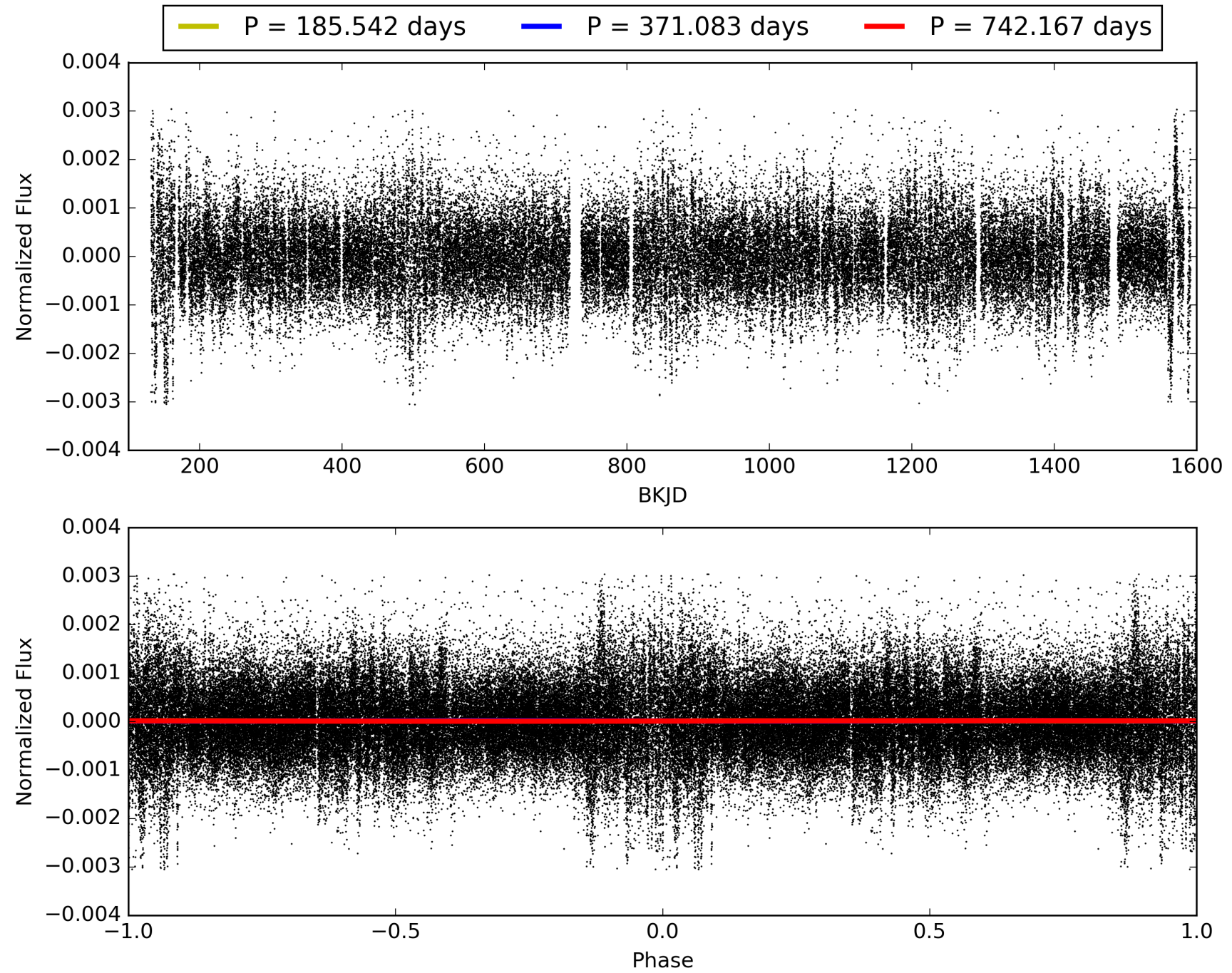
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:15:36 Z

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

TCE 010340598-01, PDC Light Curves

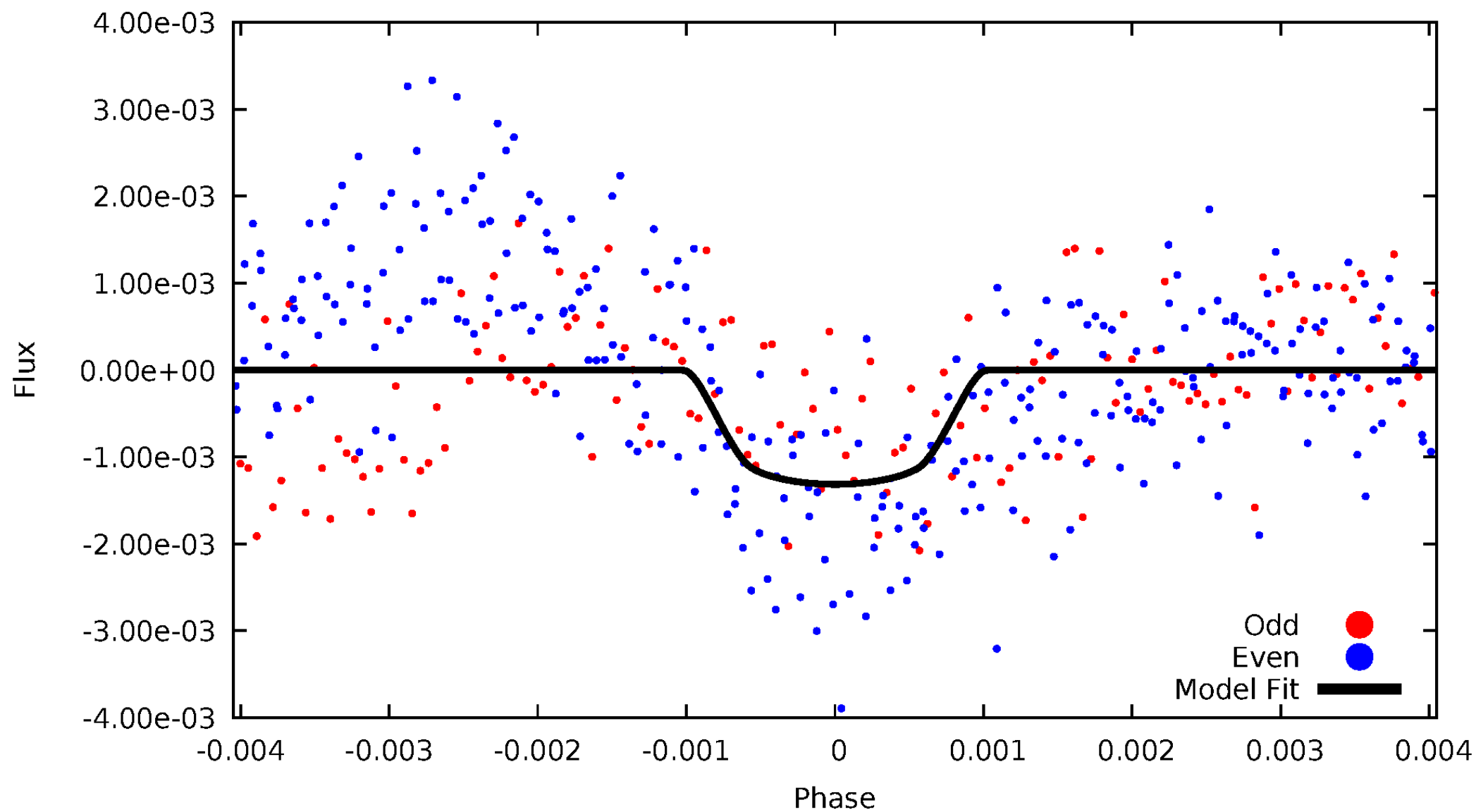


TCE 010340598-01



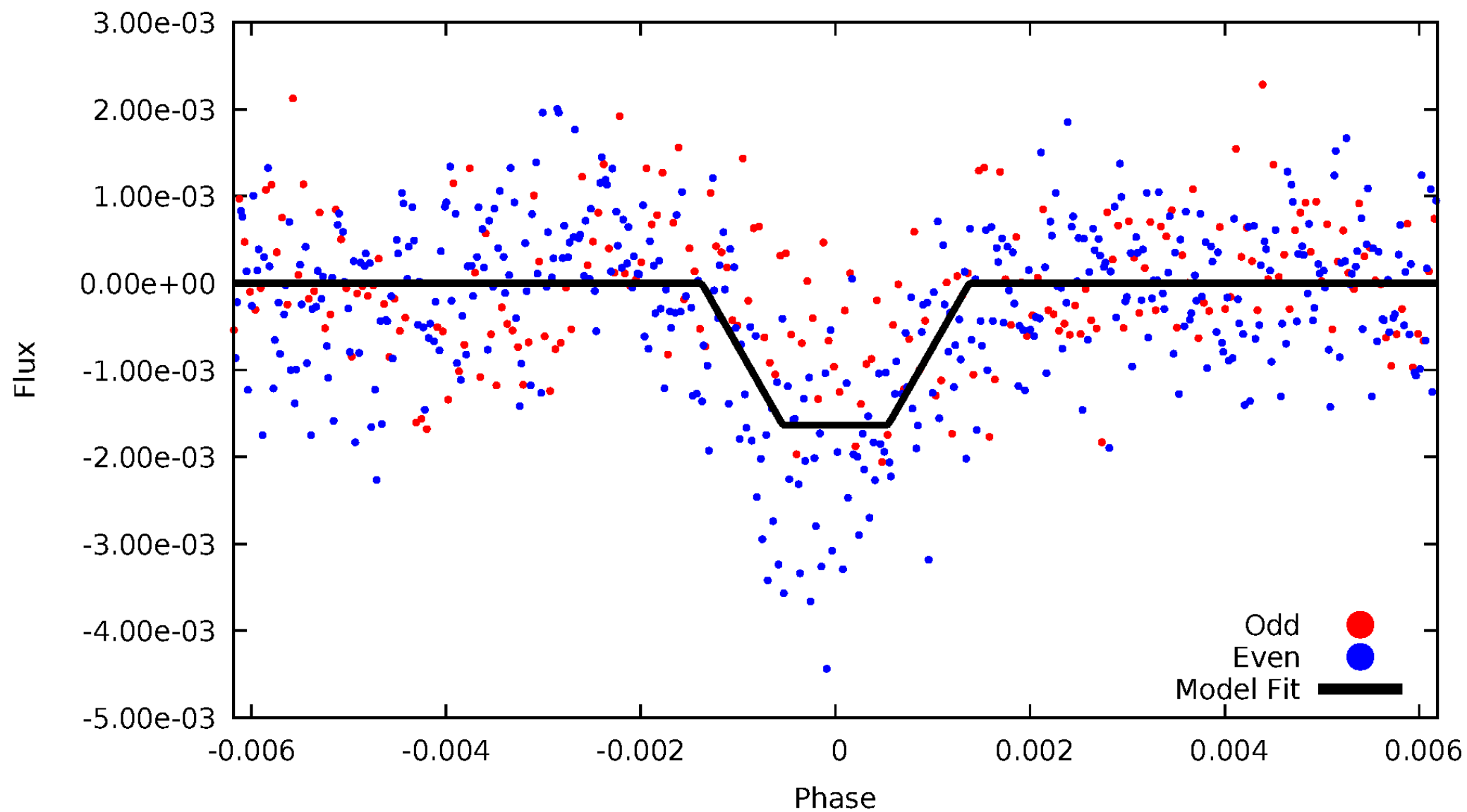
DV Odd/Even

TCE 010340598-01



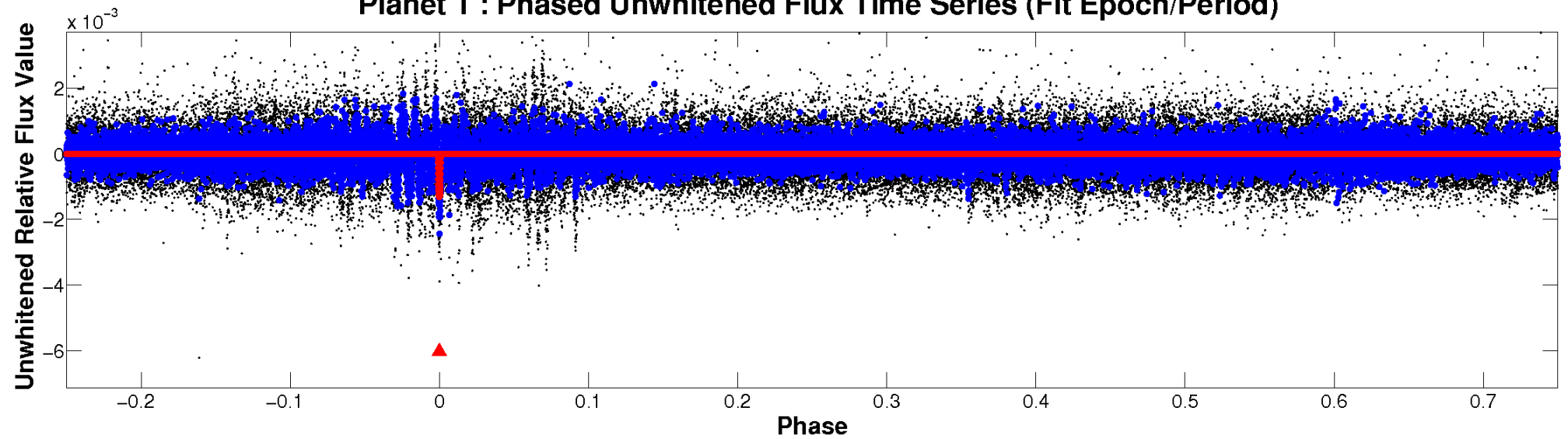
ALT Odd/Even

TCE 010340598-01

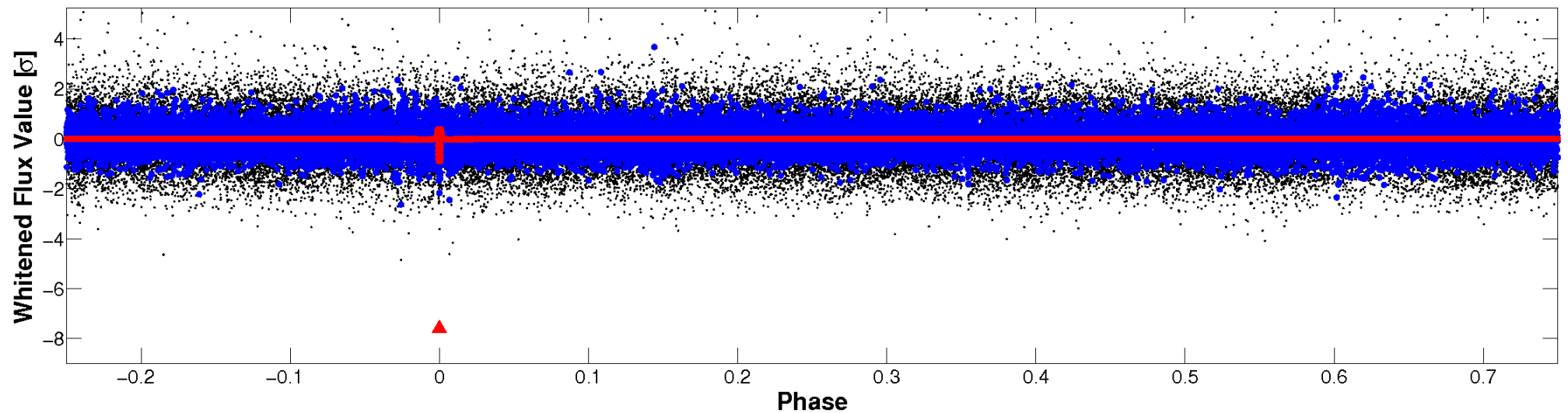


Non-Whitened Vs. Whitened Light Curve

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

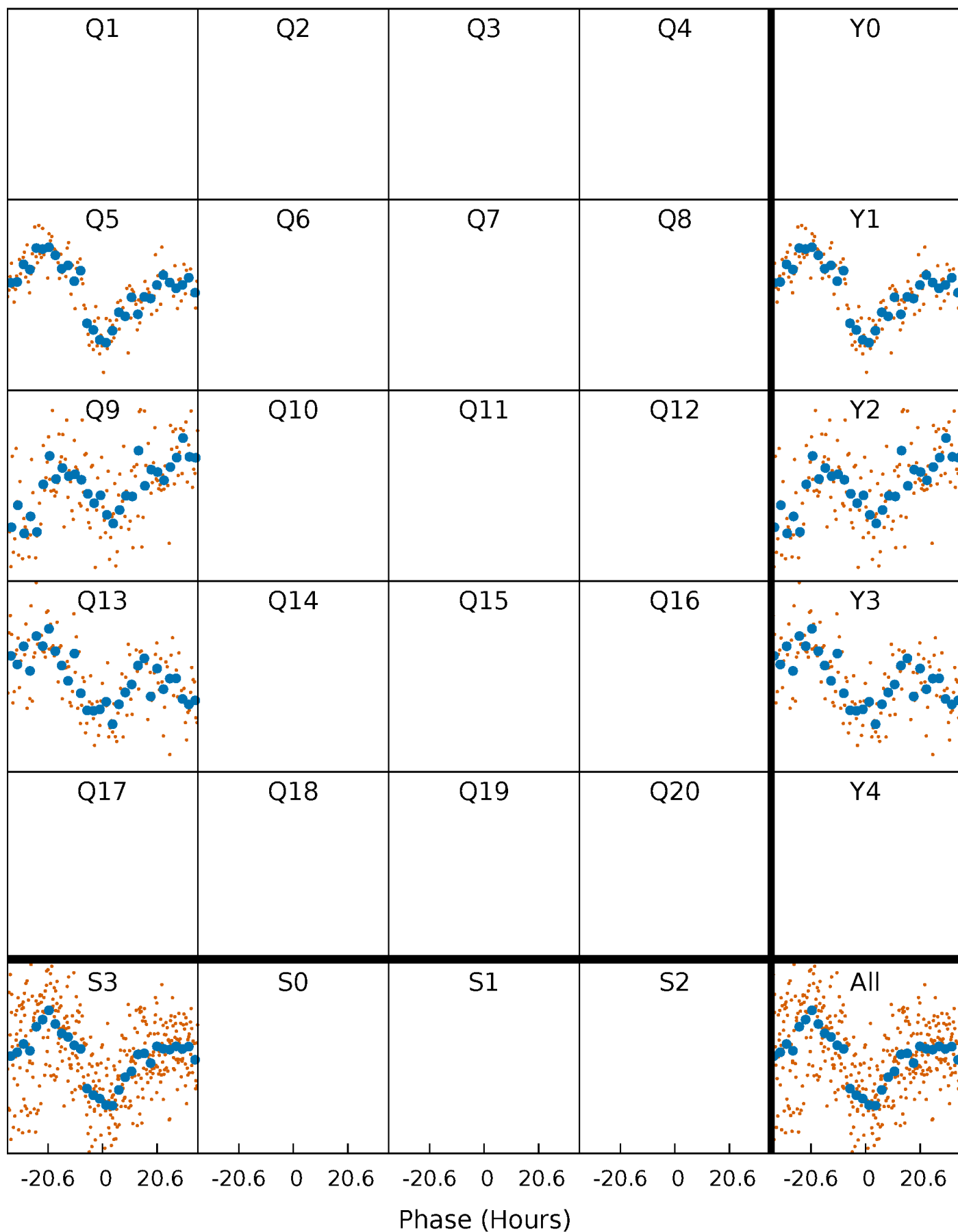


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



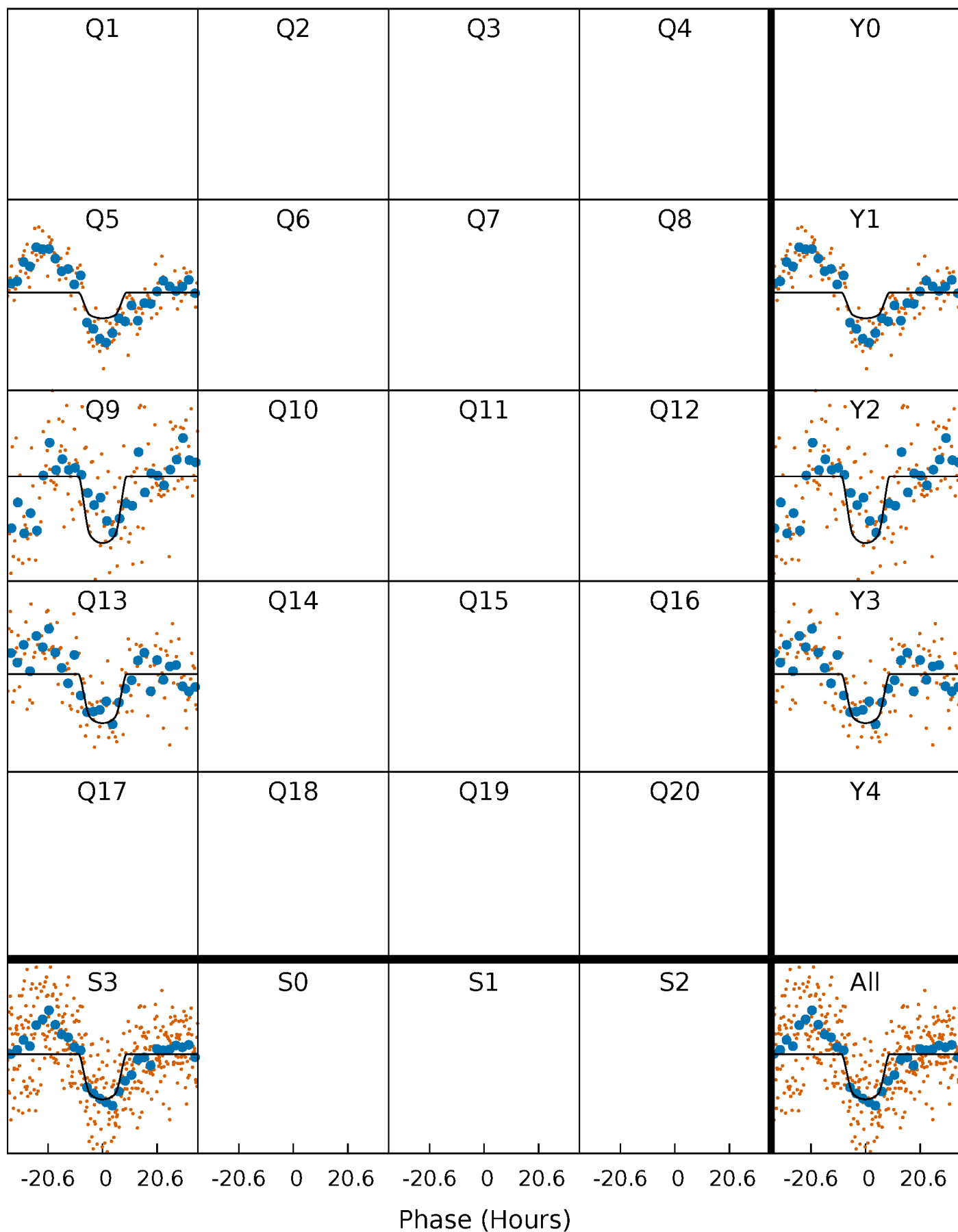
PDC Quarter-Phased Transit Curves

TCE 010340598-01 P=371.083431 Days $T_0=499.239653$ (BKJD)



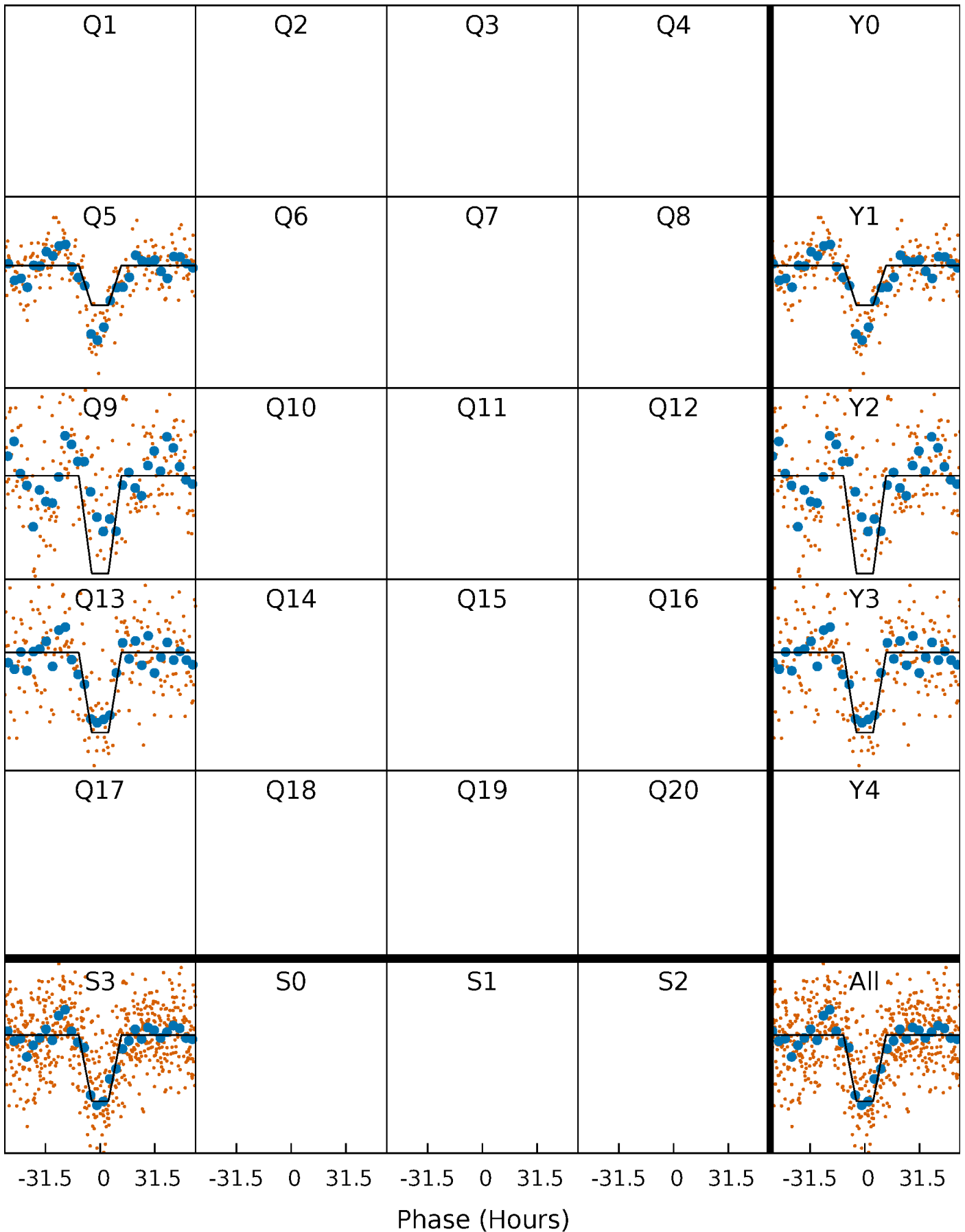
DV Quarter-Phased Transit Curves

TCE 010340598-01 $P=371.083431$ Days $T_0=499.239653$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

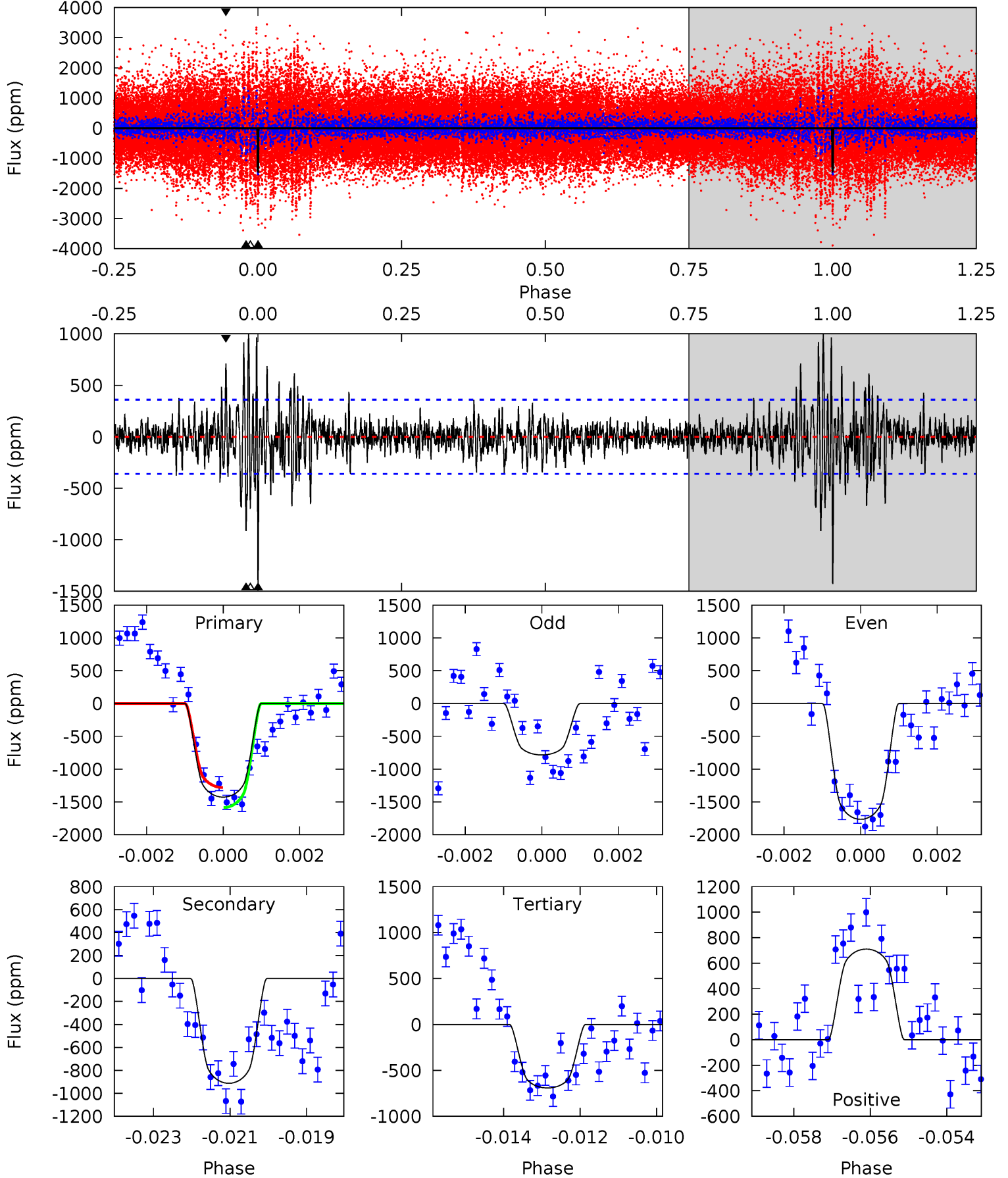
TCE 010340598-01 P=371.066638 Days $T_0=499.288697$ (BKJD)



DV Model-Shift Uniqueness Test

010340598-01, P = 371.083431 Days, E = 128.156222 Days

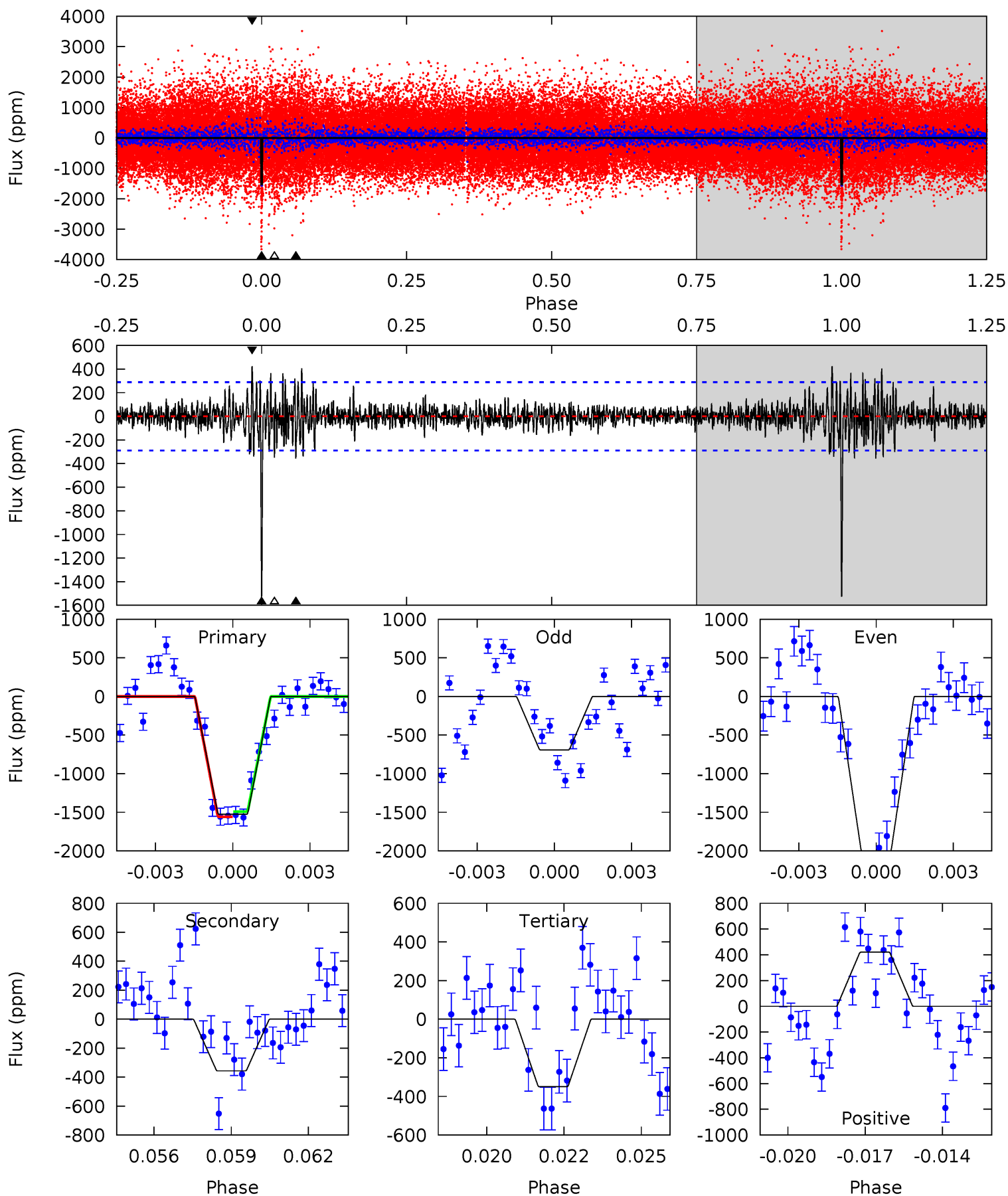
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	13.5	10.2	10.5	5.32	3.08	2.27	10.9	10.6	3.27	2.99	6.85	1.20	0.41	2.26



Alt Model-Shift Uniqueness Test

010340598-01, P = 371.066638 Days, E = 128.222059 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	6.48	6.36	7.65	5.26	2.99	1.41	21.4	20.1	0.13	-1.16	11.4	1.11	0.22	0.59



Stellar Parameters For KIC 010340598

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3677^{+49}_{-54}	$4.787^{+0.039}_{-0.024}$	$-0.100^{+0.100}_{-0.100}$	$0.459^{+0.025}_{-0.034}$	$0.471^{+0.028}_{-0.031}$	$6.846^{+1.231}_{-0.714}$
	+1%/-1%	+1%/-1%	+100%/-100%	+5%/-7%	+6%/-7%	+18%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 010340598-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-913 ± 68	$2.01^{+0.24}_{-0.23}$	173^{+3}_{-4}	3350^{+135}_{-114}	76185^{+22190}_{-14550}
Alt.	-357 ± 55	$2.01^{+0.25}_{-0.23}$	173^{+3}_{-4}	2923^{+118}_{-110}	29969^{+9837}_{-7103}

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

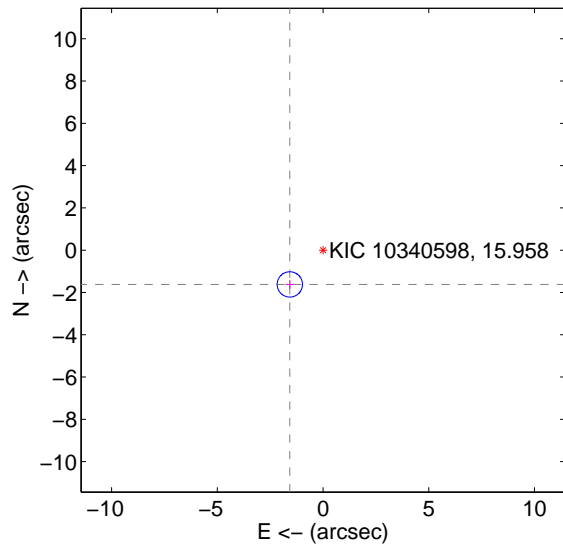
Supplemental centroid analysis for 010340598-01. Kepler magnitude: 15.96. Transit SNR 7.47

There are 0 quarters with good PRF difference image offsets

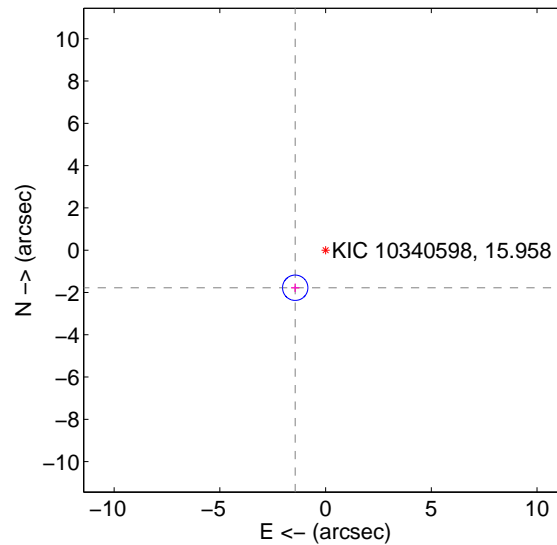
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.257 ± 0.199	11.31	1.571 ± 0.198	-1.620 ± 0.200
PRF-fit source offset from KIC position	2.285 ± 0.200	11.45	1.436 ± 0.198	-1.777 ± 0.200
photometric centroid source offset	1.16 ± 2.79	0.42	1.14 ± 2.82	0.24 ± 2.16

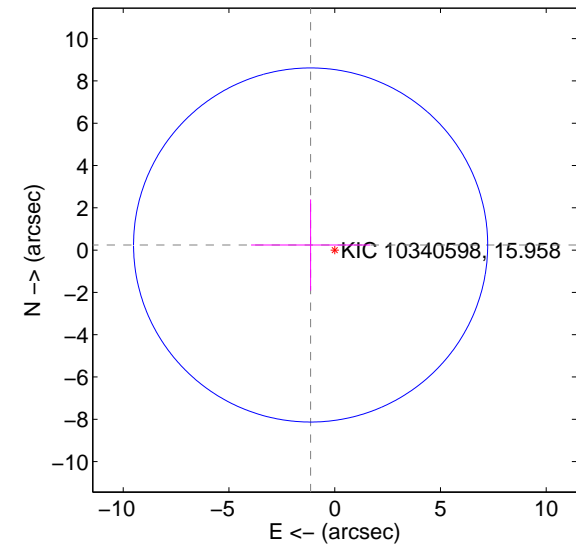
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

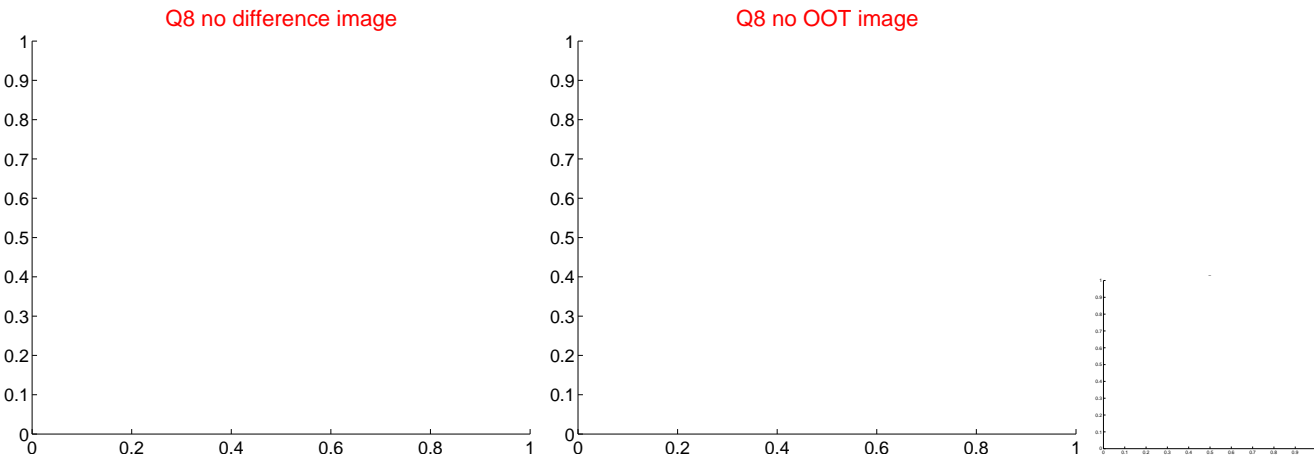
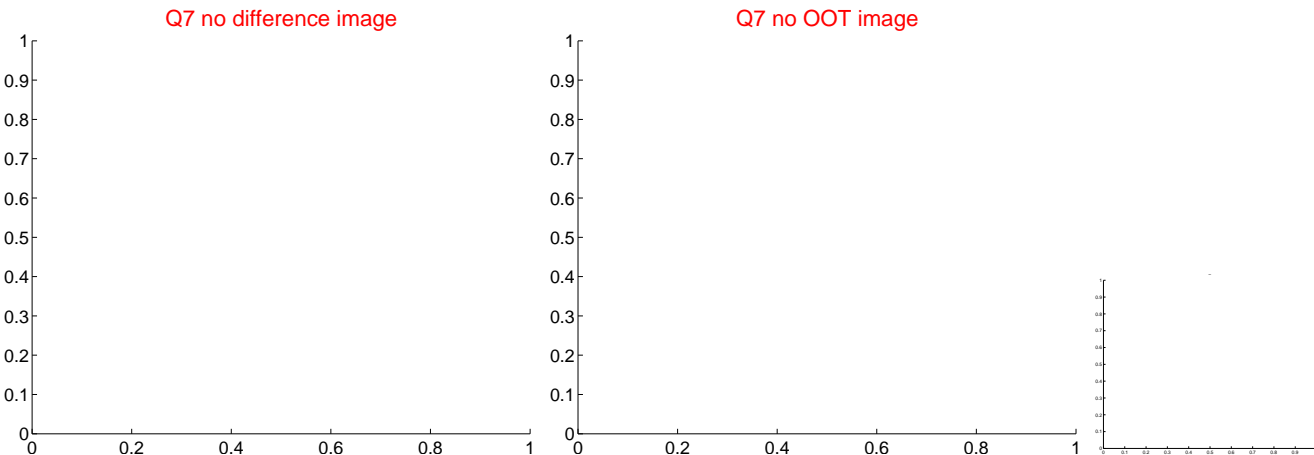
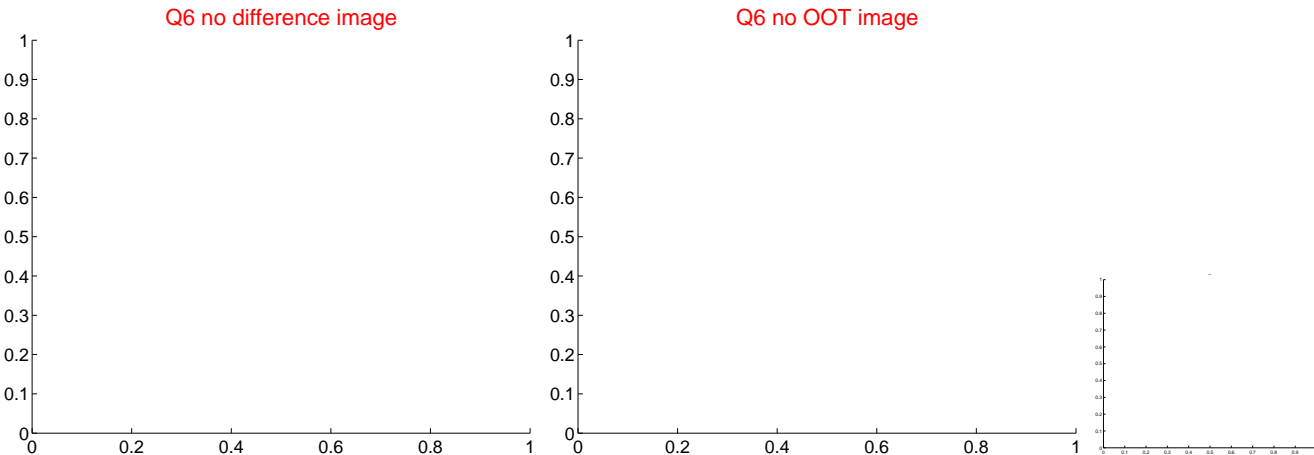
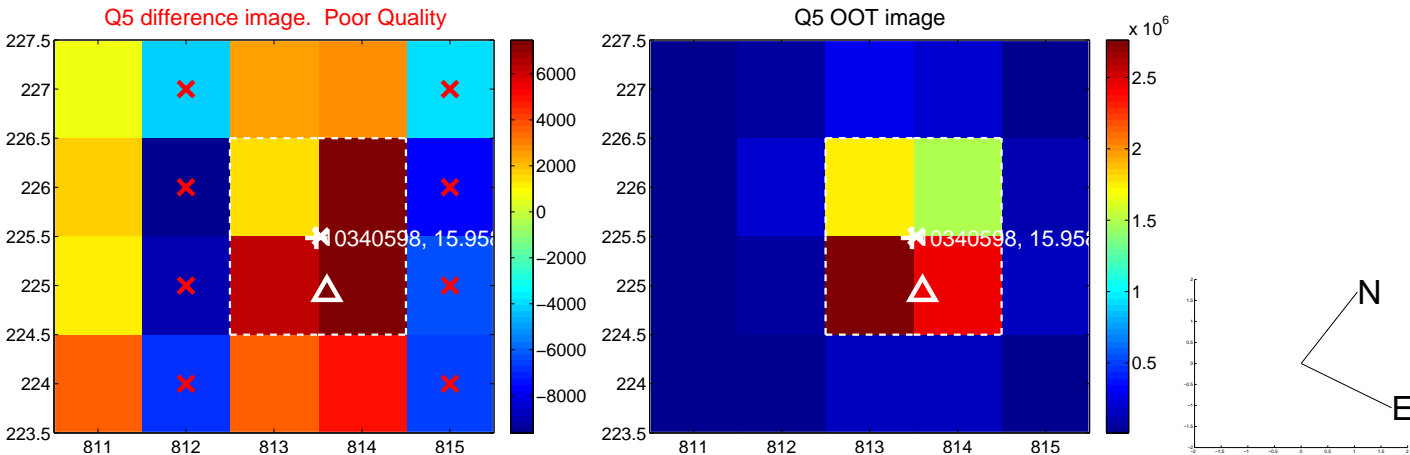


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

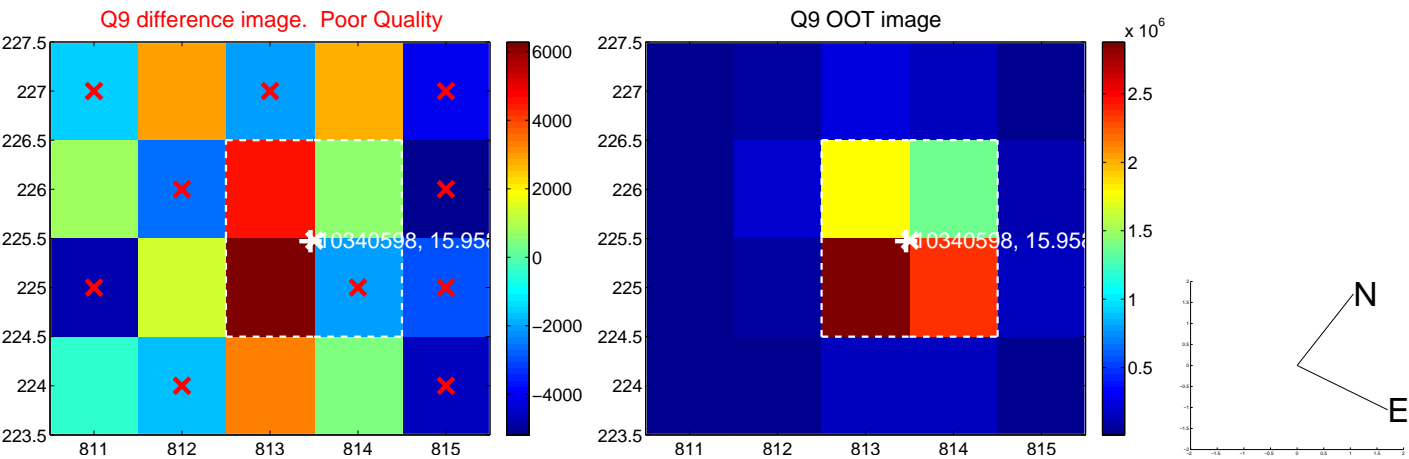
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



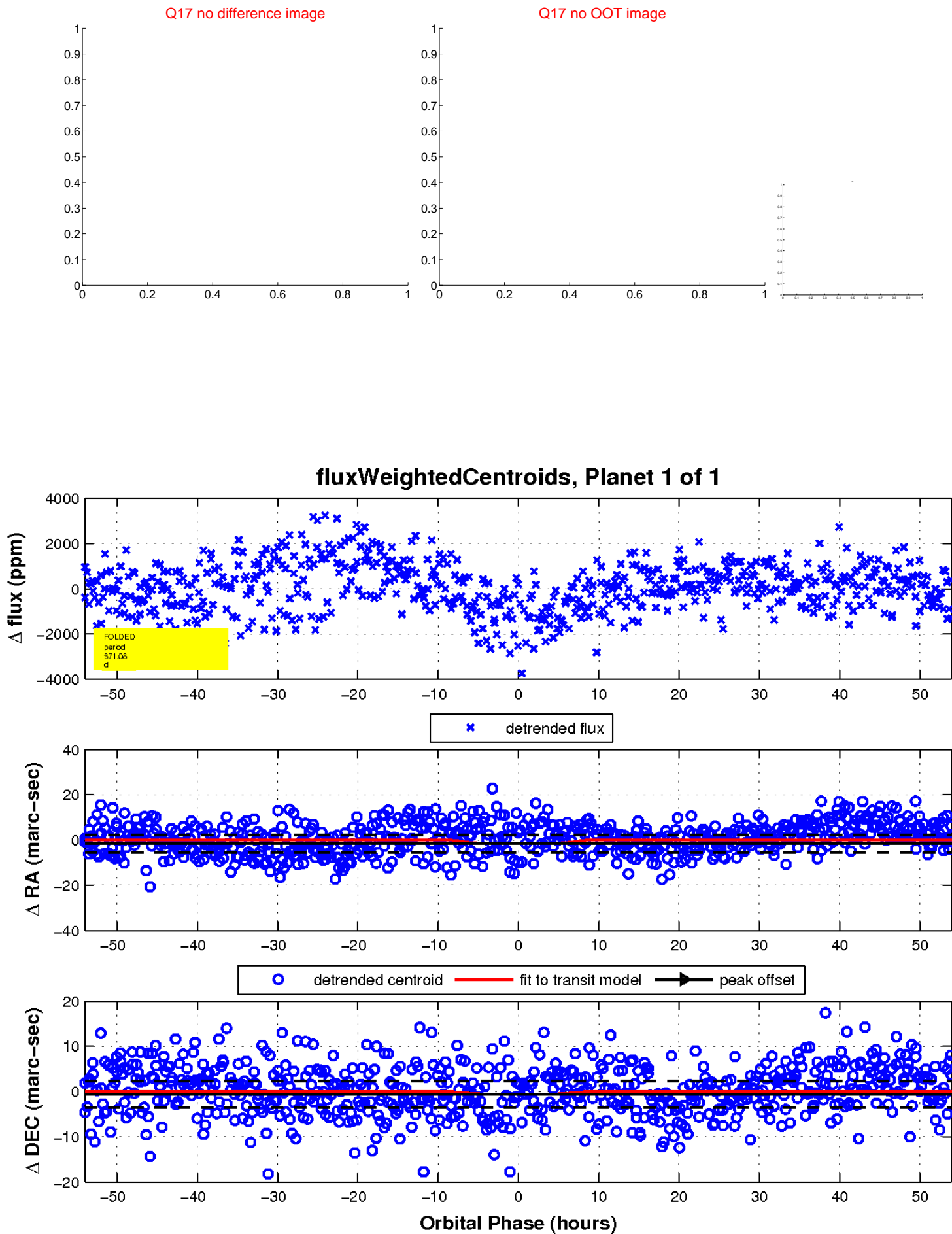
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

