

KIC 008039313

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})
008039313-01	OBS	No	369.350075	232.018570	1677.3	25.200	8.4	10.4	0.62	4447	3.35	0.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008039313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

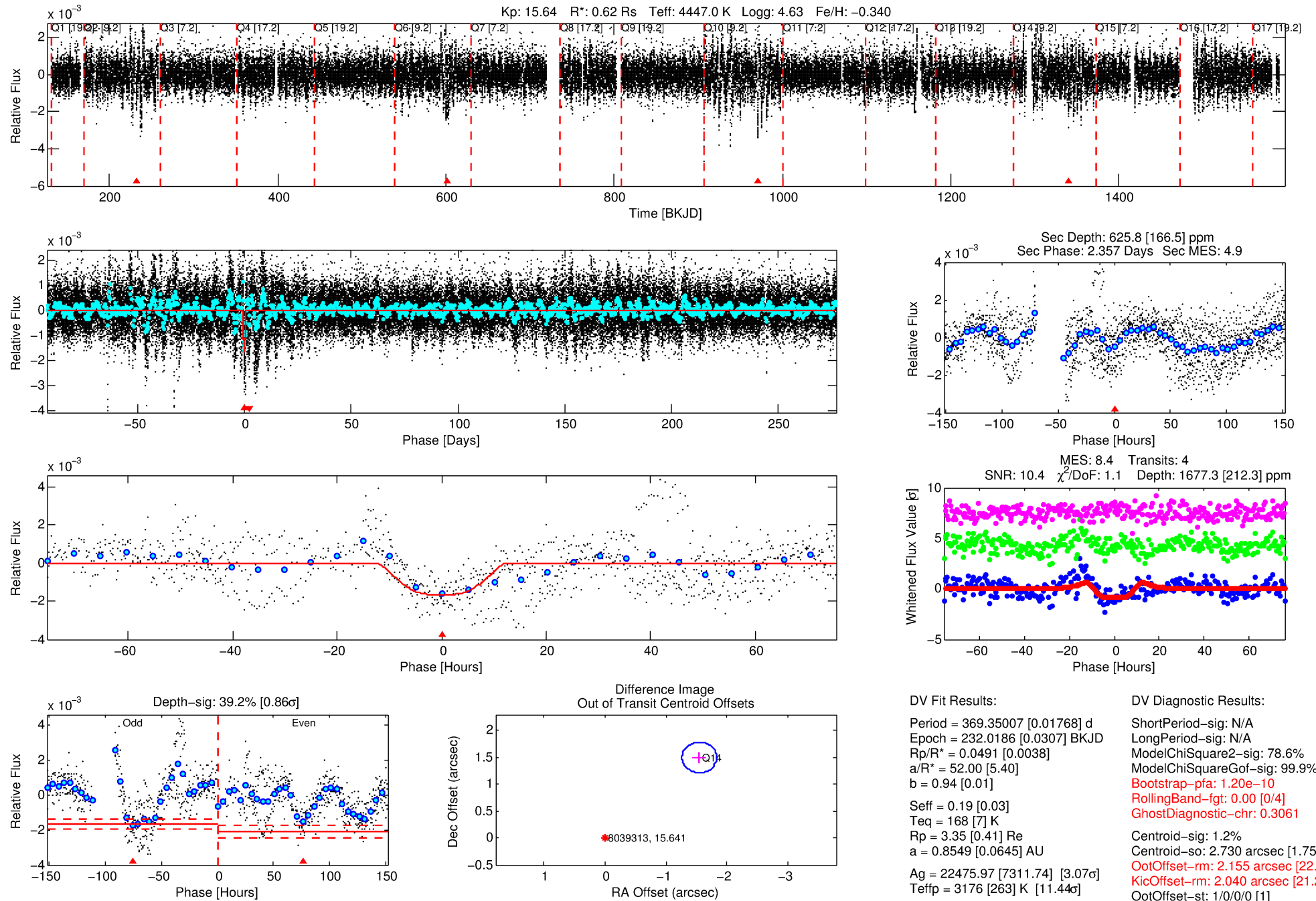
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008039313-01

No Significant Match Found

DV One-Page Summary

KIC: 8039313 Candidate: 1 of 1 Period: 369.350 d



DV Fit Results:

Period = 369.35007 [0.01768] d
Epoch = 232.0186 [0.0307] BKJD
Rp/R* = 0.0491 [0.0038]
a/R* = 52.00 [5.40]
b = 0.94 [0.01]
Seff = 0.19 [0.03]
Teq = 168 [7] K
Rp = 3.35 [0.41] Re
a = 0.8549 [0.0645] AU
Ag = 22475.97 [7311.74] [3.07 σ]
Teff = 3176 [263] K [11.44 σ]

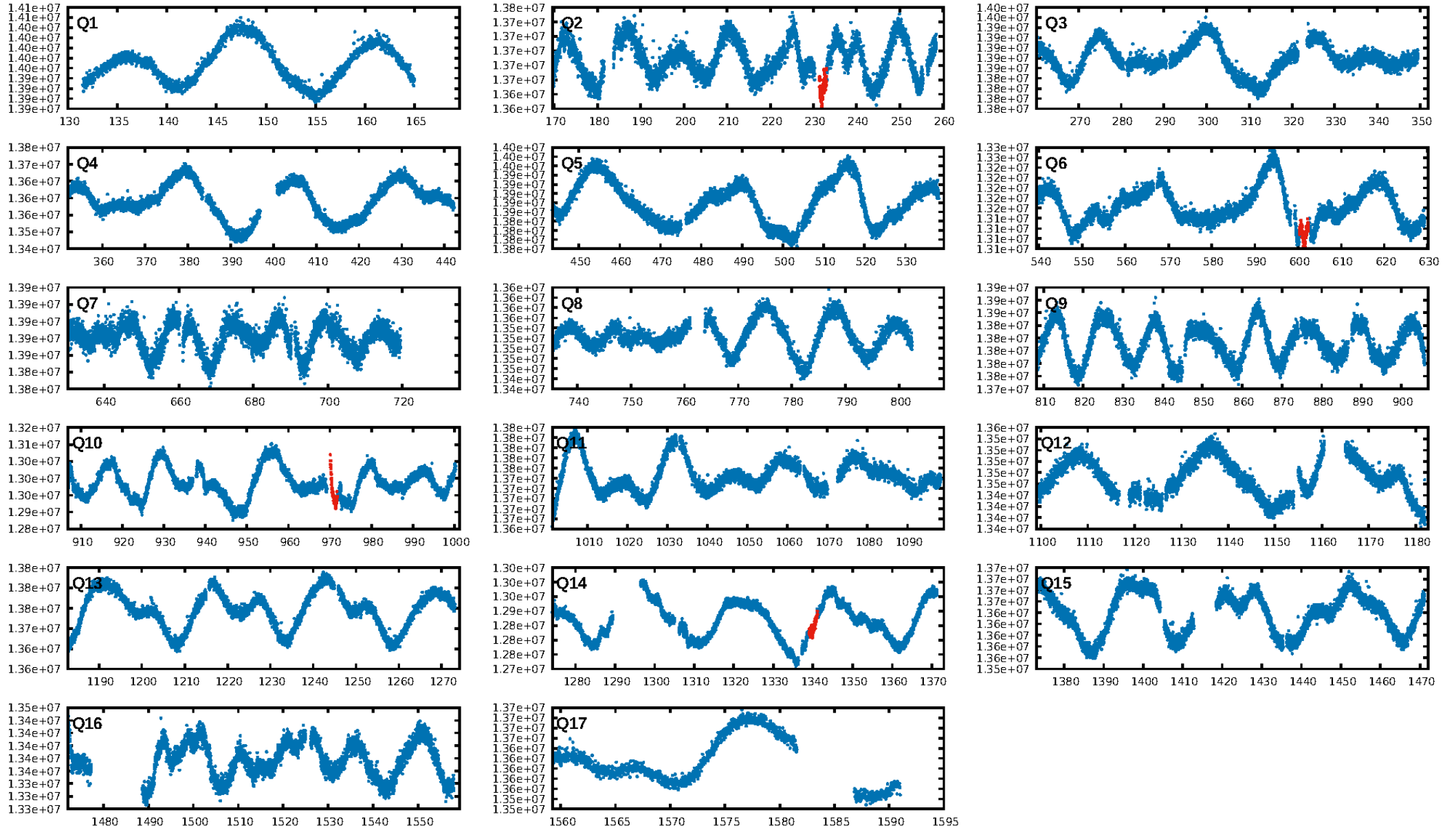
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.6%
ModelChiSquareGoF-sig: 99.9%
Bootstrap-pfa: 1.20e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.3061
Centroid-sig: 1.2%
Centroid-so: 2.730 arcsec [1.75 σ]
OotOffset-rm: 2.155 arcsec [22.66 σ]
KicOffset-rm: 2.040 arcsec [21.26 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

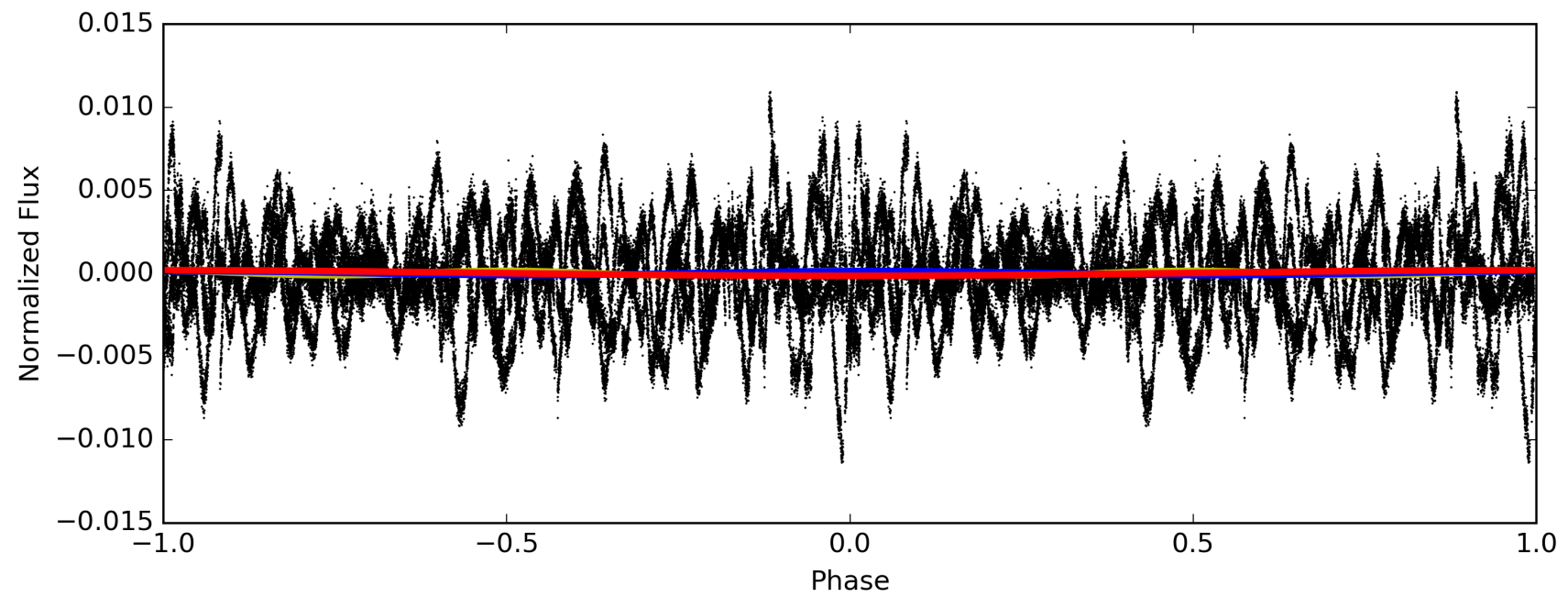
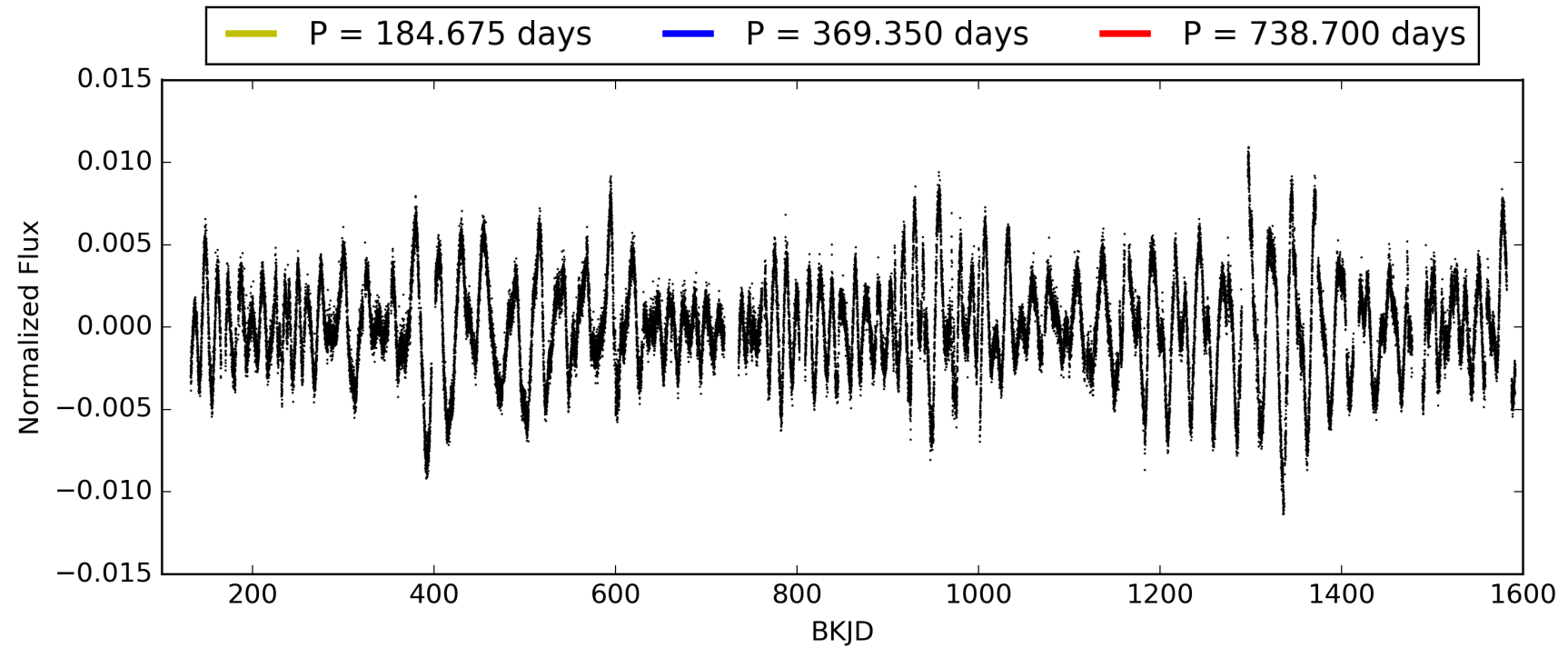
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:02:05 Z

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

TCE 008039313-01, PDC Light Curves

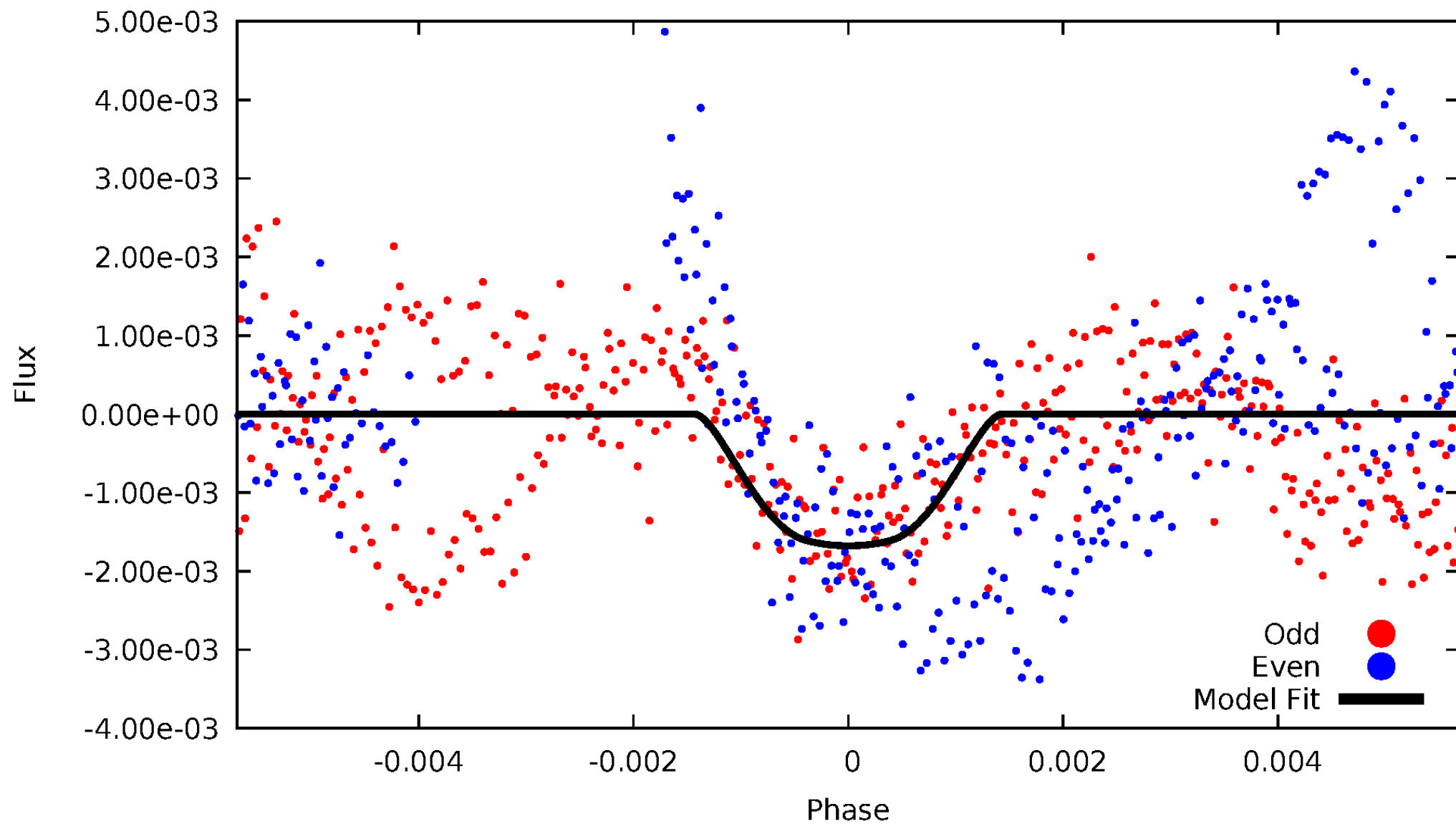


TCE 008039313-01



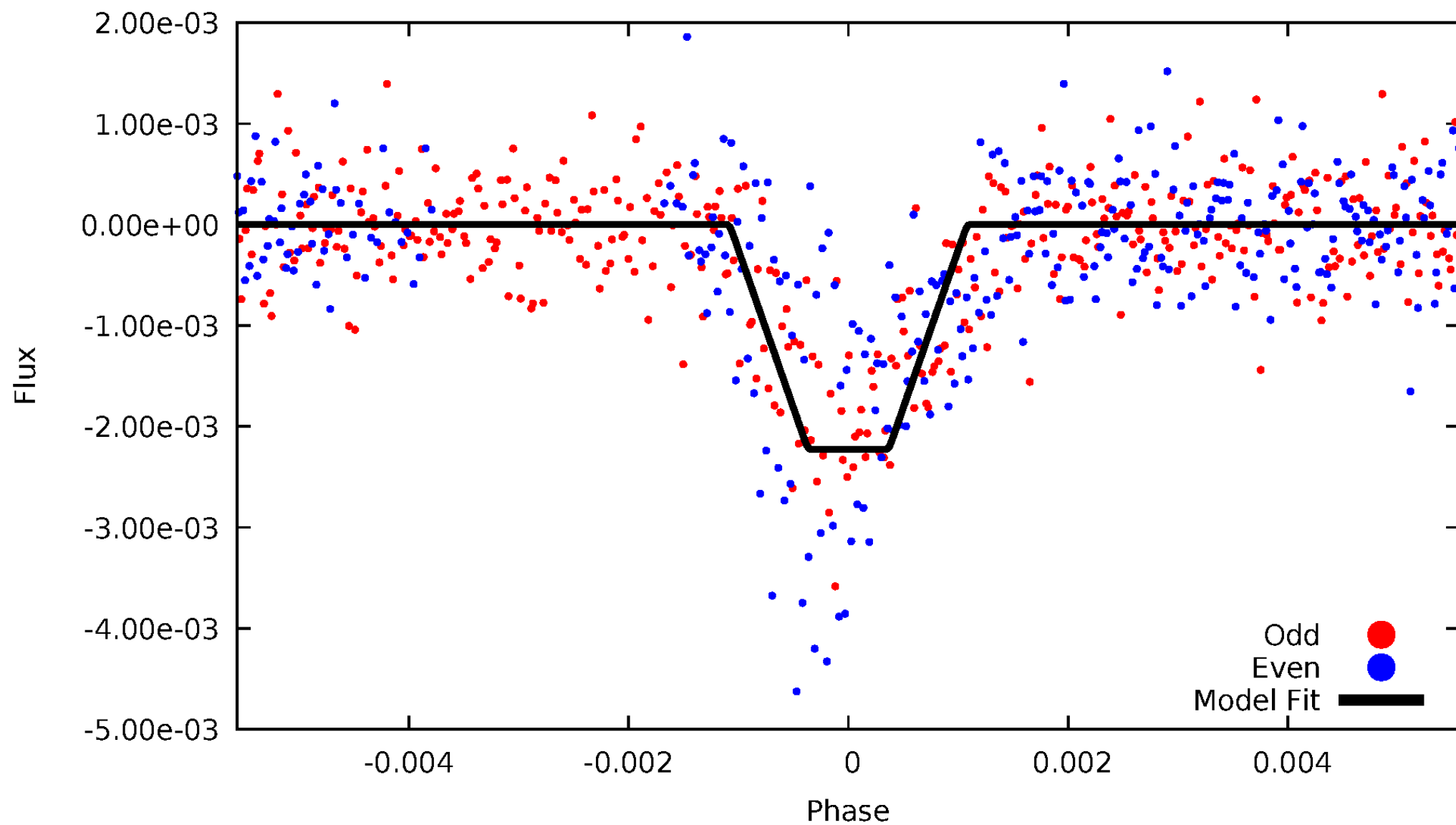
DV Odd/Even

TCE 008039313-01



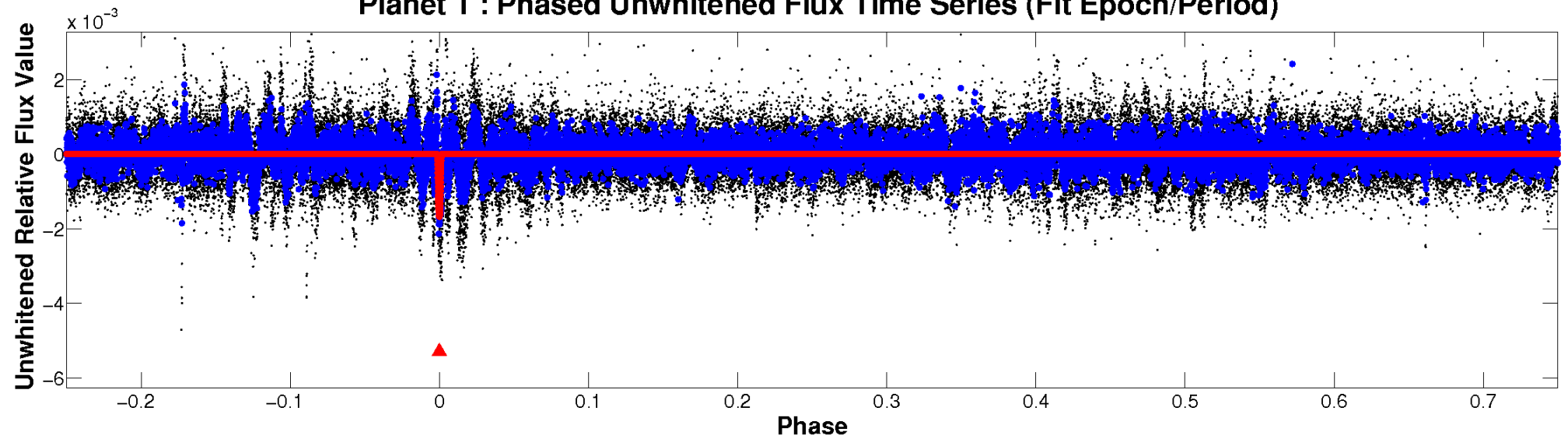
ALT Odd/Even

TCE 008039313-01

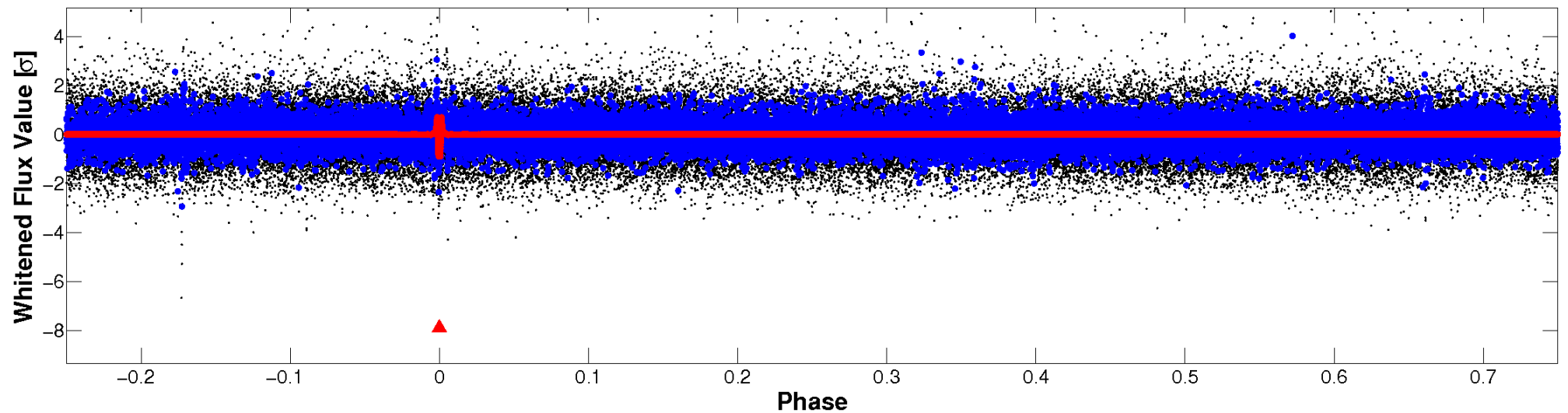


Non-Whitened Vs. Whitened Light Curve

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

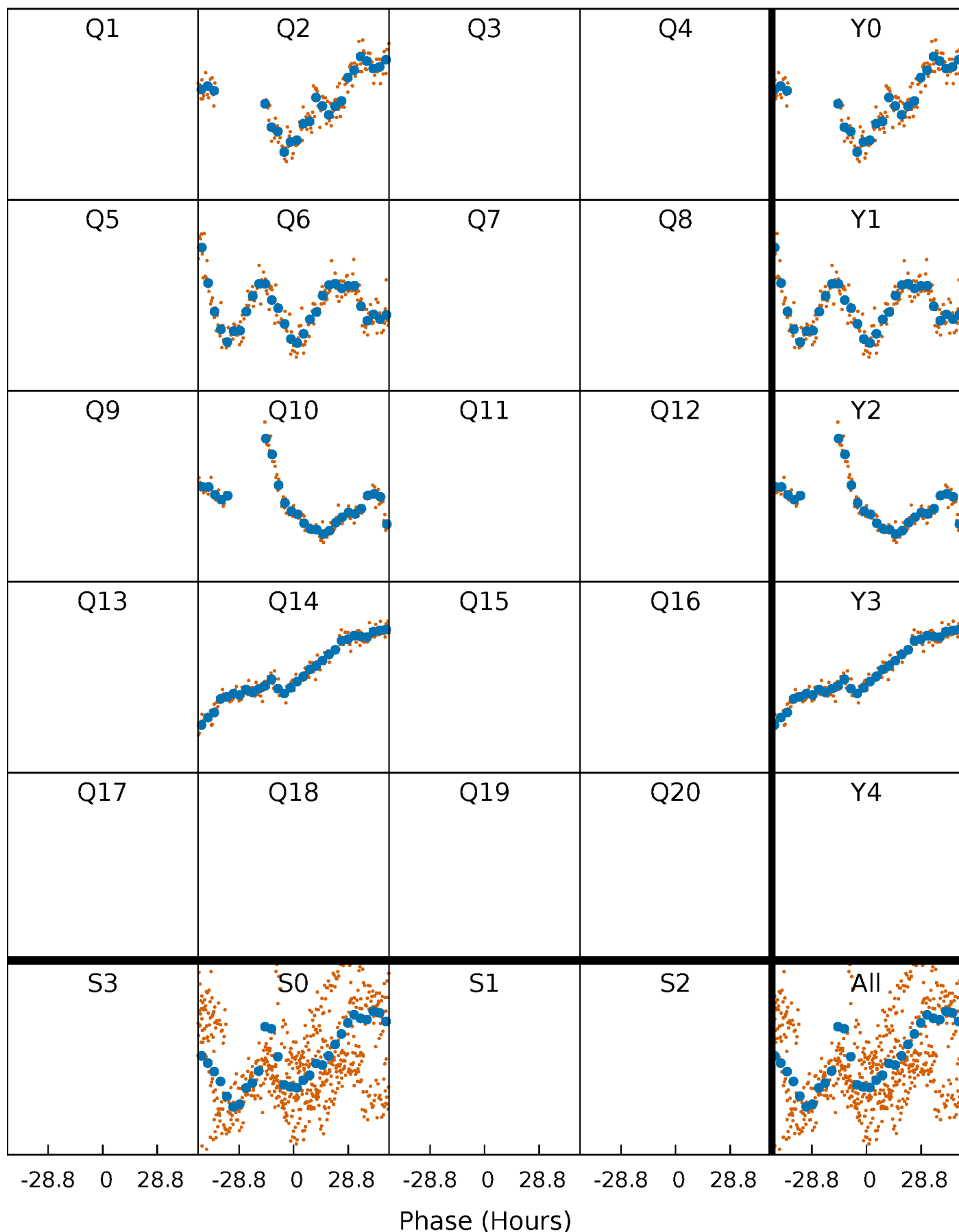


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



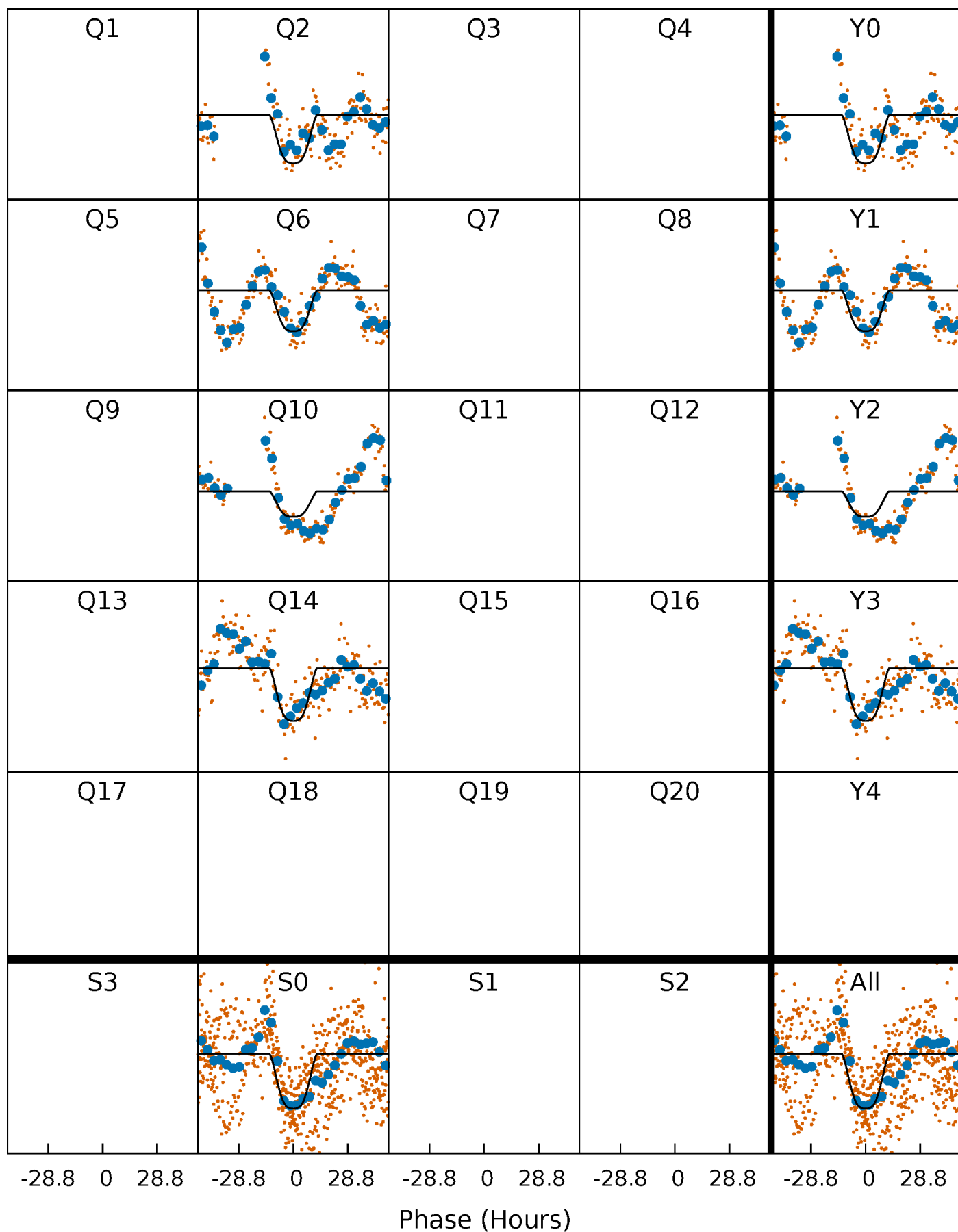
PDC Quarter-Phased Transit Curves

TCE 008039313-01 P=369.350075 Days $T_0=232.018570$ (BKJD)



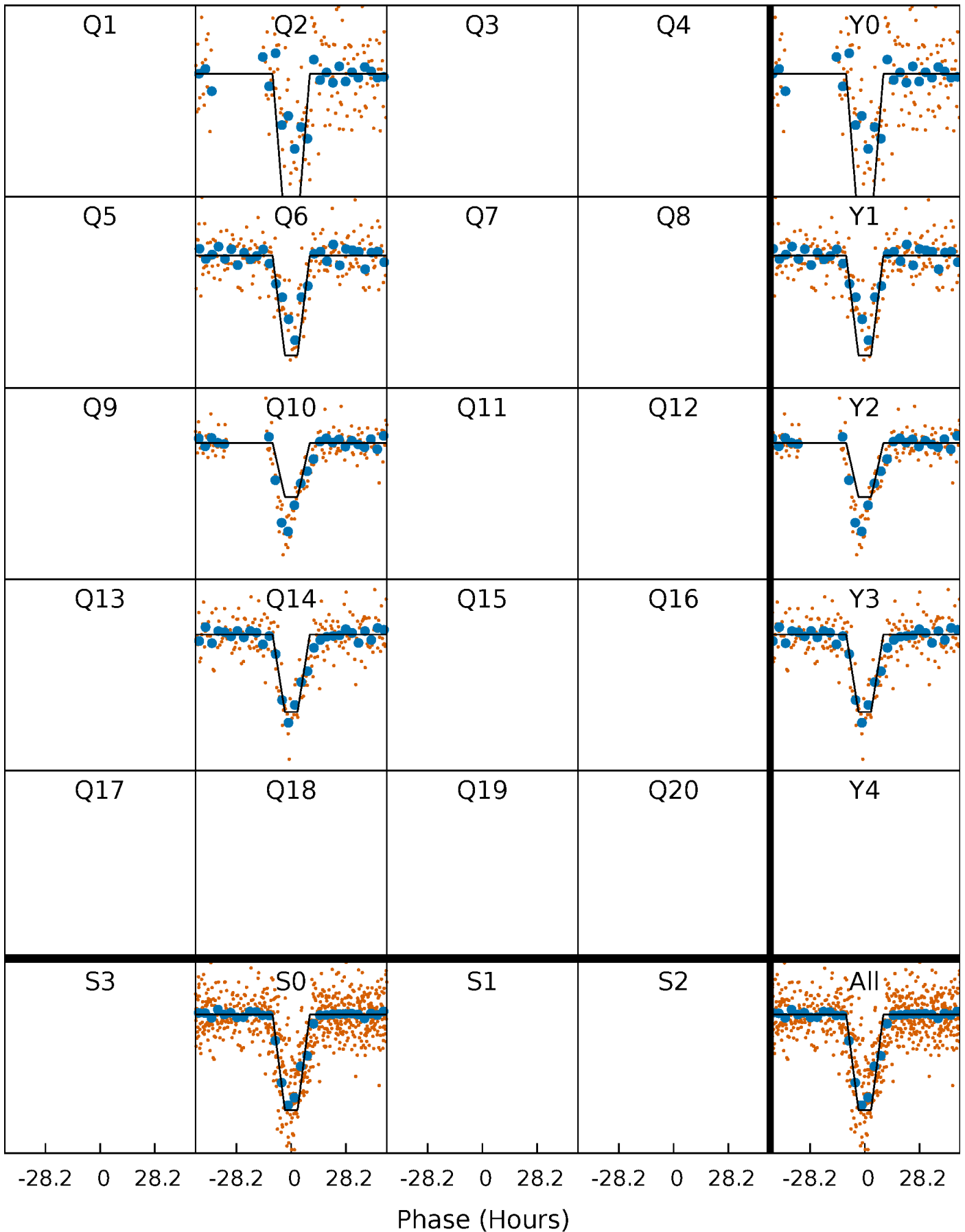
DV Quarter-Phased Transit Curves

TCE 008039313-01 P=369.350075 Days $T_0=232.018570$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

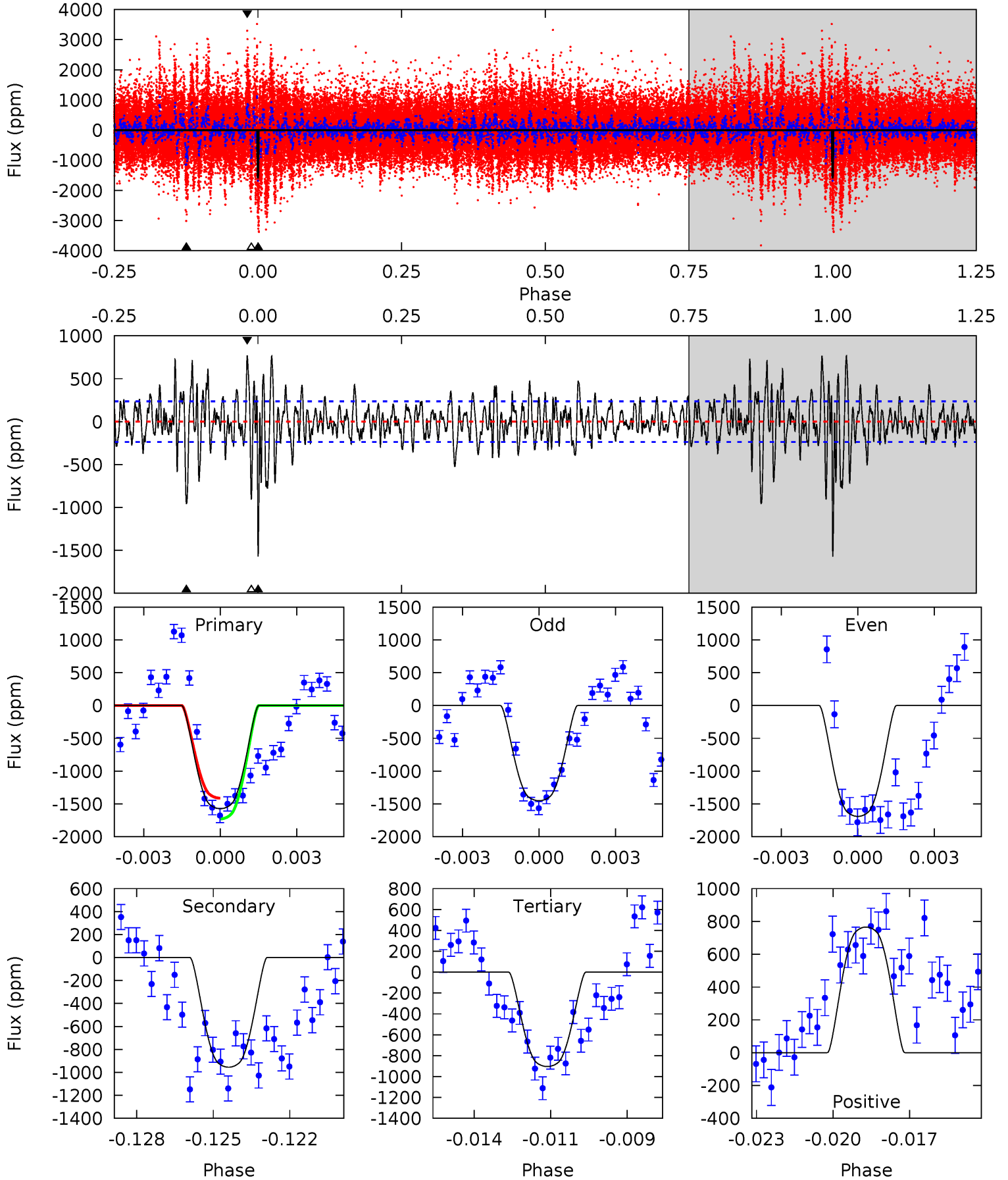
TCE 008039313-01 P=369.309352 Days $T_0=232.012172$ (BKJD)



DV Model-Shift Uniqueness Test

008039313-01, P = 369.350075 Days, E = 232.018570 Days

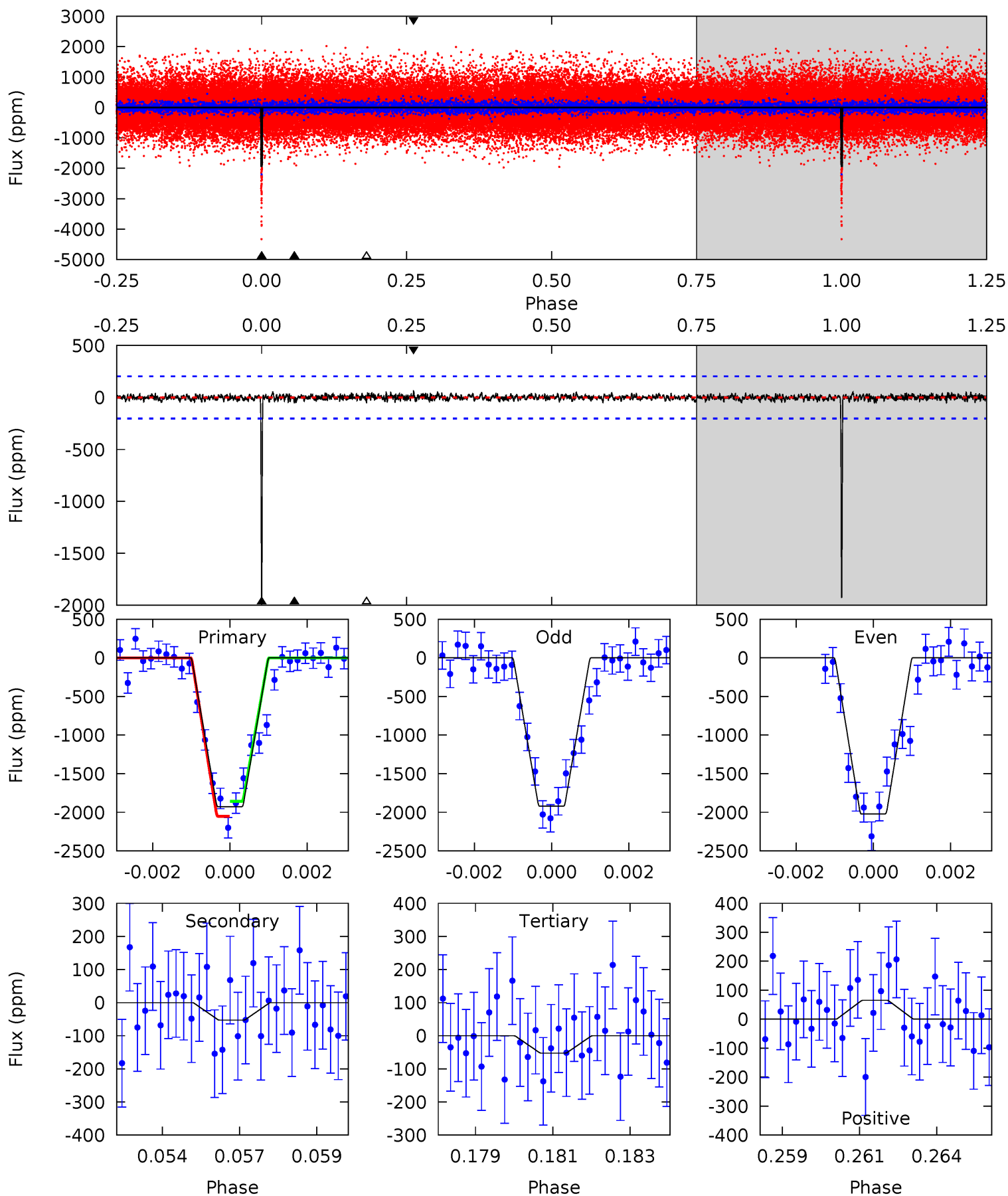
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.9	21.2	20.1	17.0	5.26	2.98	4.71	14.8	17.9	1.13	4.20	2.66	1.08	0.33	3.50



Alt Model-Shift Uniqueness Test

008039313-01, P = 369.309352 Days, E = 232.012172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.5	1.38	1.37	1.70	5.31	3.06	0.44	49.1	48.8	0.01	-0.32	1.32	1.04	0.03	2.54



Stellar Parameters For KIC 008039313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4447^{+120}_{-133}	$4.632^{+0.052}_{-0.024}$	$-0.340^{+0.300}_{-0.300}$	$0.625^{+0.045}_{-0.060}$	$0.611^{+0.067}_{-0.045}$	$3.528^{+0.812}_{-0.401}$
	+3%/-3%	+1%/-1%	+88%/-88%	+7%/-10%	+11%/-7%	+23%/-11%
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 008039313-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-955 ± 45	$3.31^{+0.32}_{-0.28}$	233^{+8}_{-7}	3773^{+135}_{-138}	35474^{+6167}_{-5790}
Alt.	-53 ± 38	$3.20^{+0.30}_{-0.31}$	233^{+7}_{-7}	2510^{+194}_{-351}	2091^{+1515}_{-1523}

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

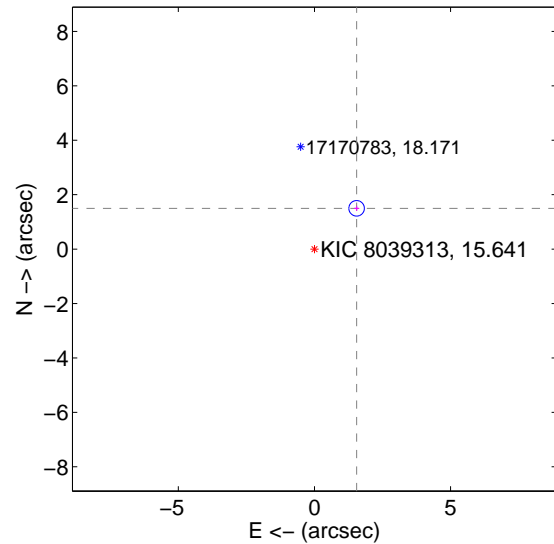
Supplemental centroid analysis for 008039313-01. Kepler magnitude: 15.64. Transit SNR 10.43

There are 1 quarters with good PRF difference image offsets

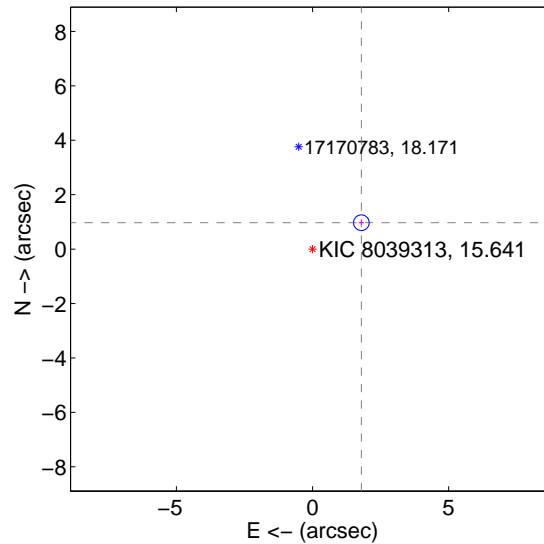
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.155 ± 0.095	22.66	-1.549 ± 0.097	1.498 ± 0.093
PRF-fit source offset from KIC position	2.040 ± 0.096	21.26	-1.795 ± 0.097	0.969 ± 0.093
photometric centroid source offset	2.73 ± 1.56	1.75	1.24 ± 1.42	-2.43 ± 1.59

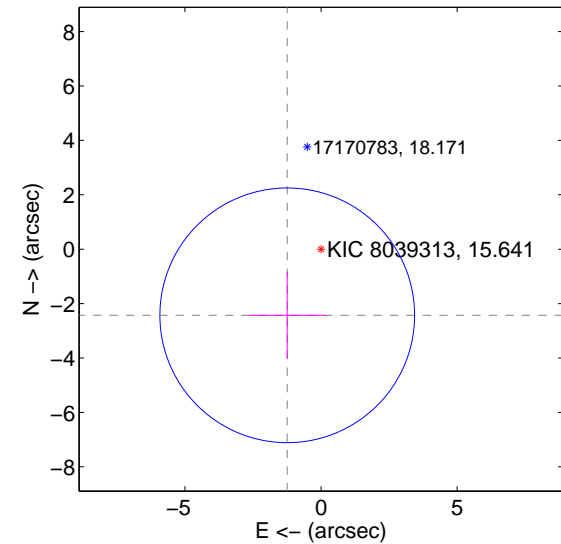
offset from difference PRF-fit to OOT PRF-fit



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.



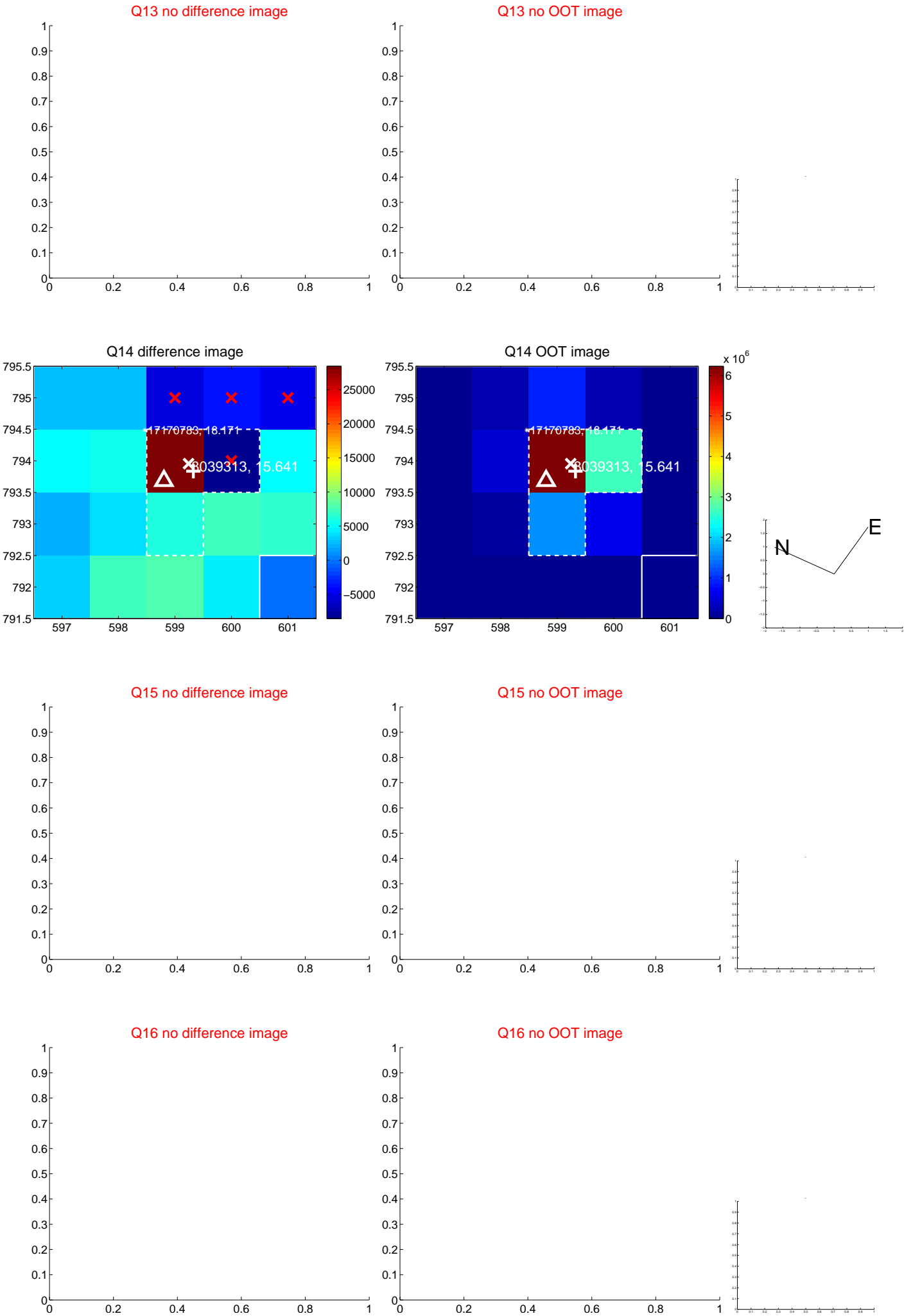
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



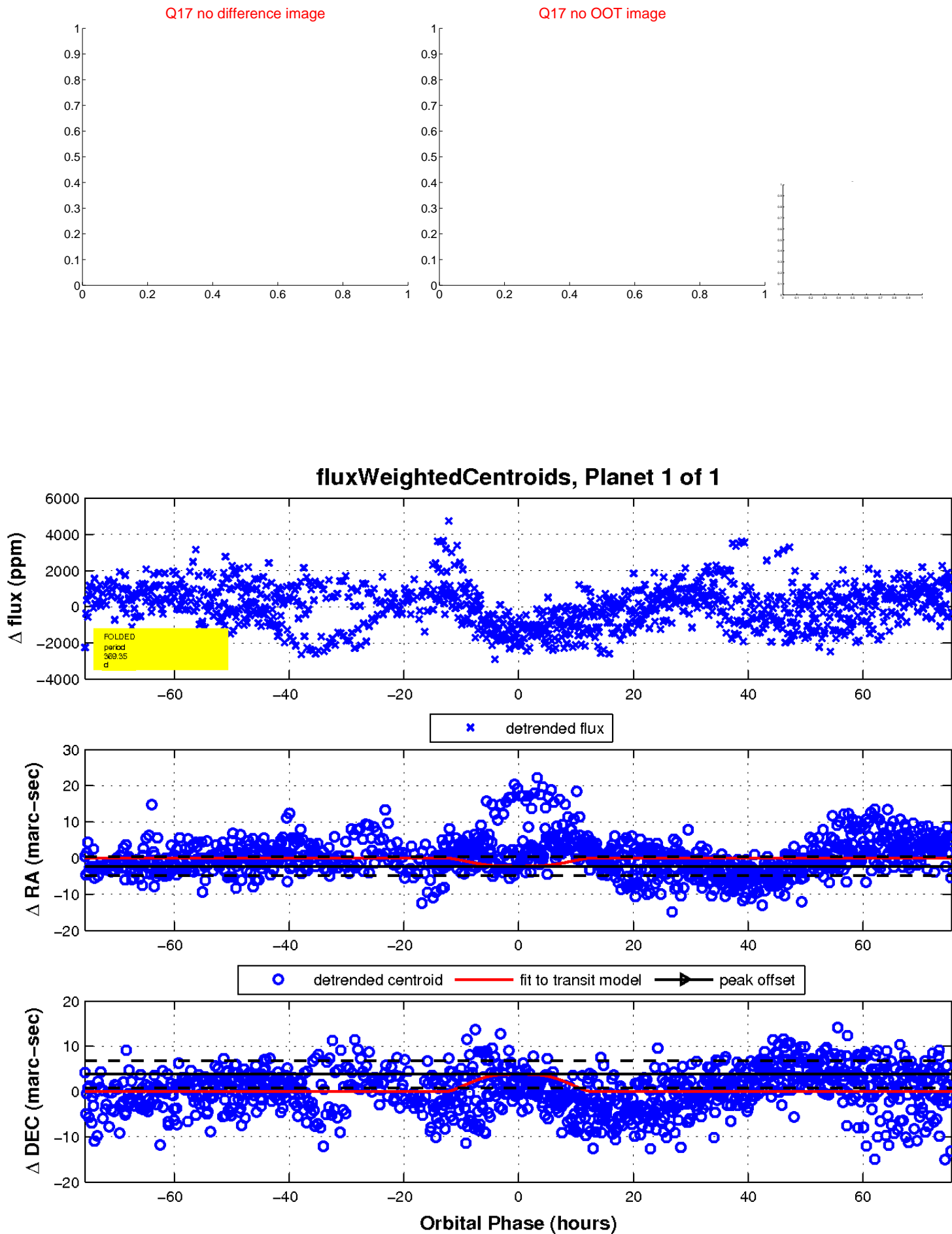
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

