

KIC 003969154

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})
003969154-01	OBS	No	380.172719	471.588599	425.9	12.118	7.6	7.3	1.22	5912	2.70	1.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003969154-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

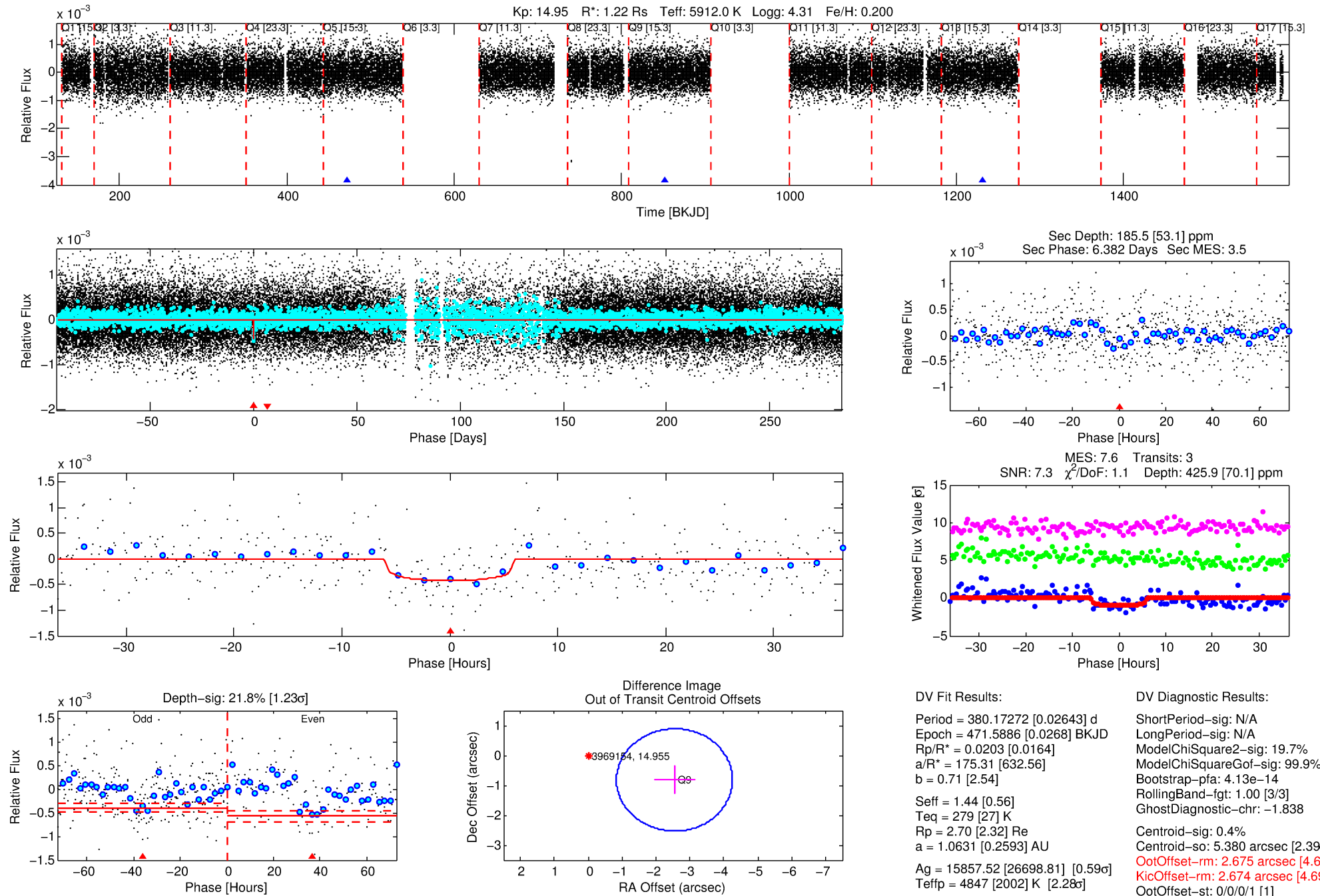
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003969154-01

No Significant Match Found

DV One-Page Summary

KIC: 3969154 Candidate: 1 of 1 Period: 380.173 d



DV Fit Results:

Period = 380.17272 [0.02643] d
Epoch = 471.5886 [0.0268] BKJD
Rp/R* = 0.0203 [0.0164]
a/R* = 175.31 [632.56]
b = 0.71 [2.54]
Seff = 1.44 [0.56]
Teff = 279 [27] K
Rp = 2.70 [2.32] Re
a = 1.0631 [0.2593] AU
Ag = 15857.52 [26698.81] [0.59 σ]
Teffp = 4847 [2002] K [2.28 σ]

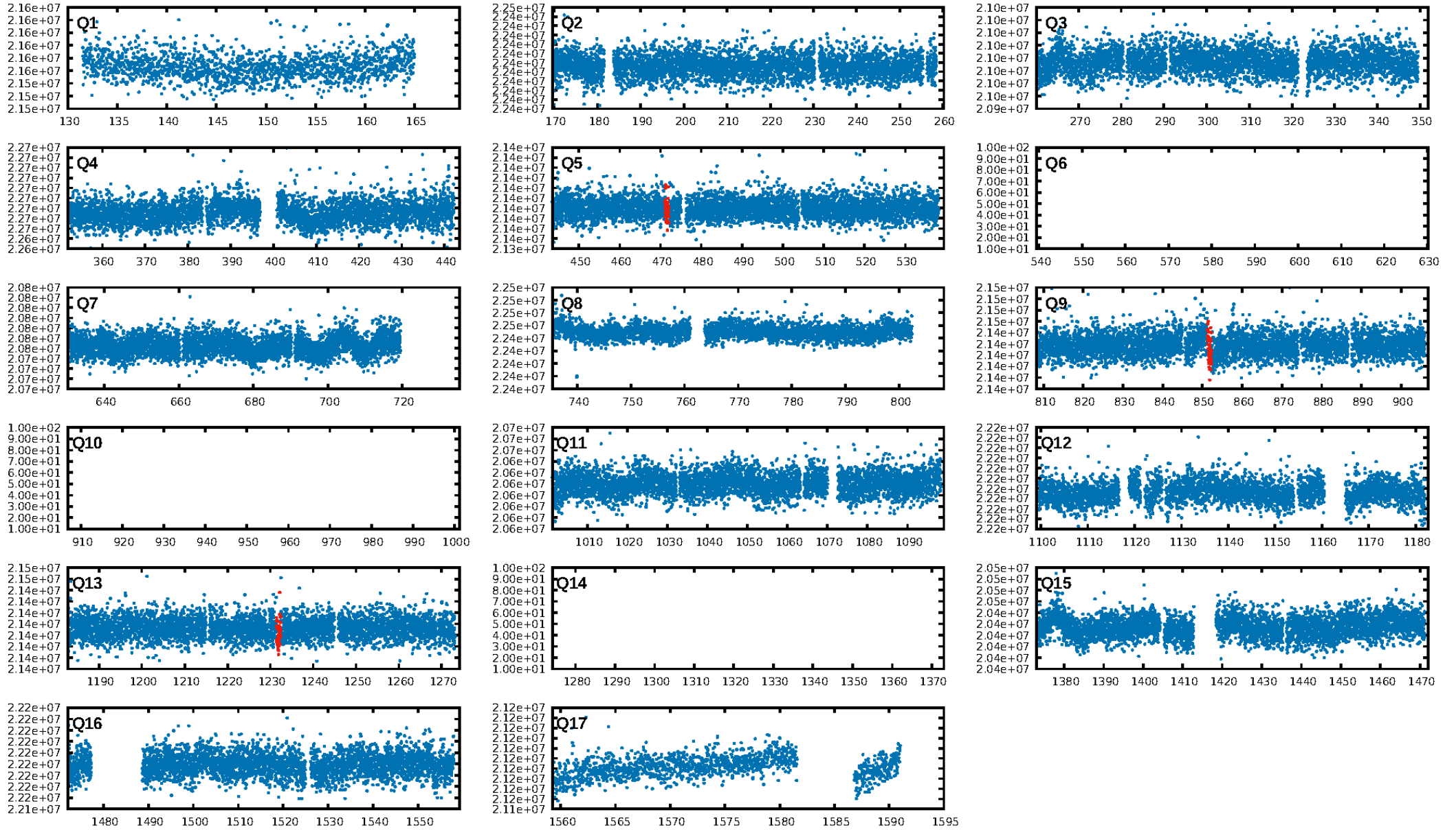
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 4.13e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.838
Centroid-sig: 0.4%
Centroid-so: 5.380 arcsec [2.39 σ]
OotOffset-rm: 2.675 arcsec [4.69 σ]
KicOffset-rm: 2.674 arcsec [4.69 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

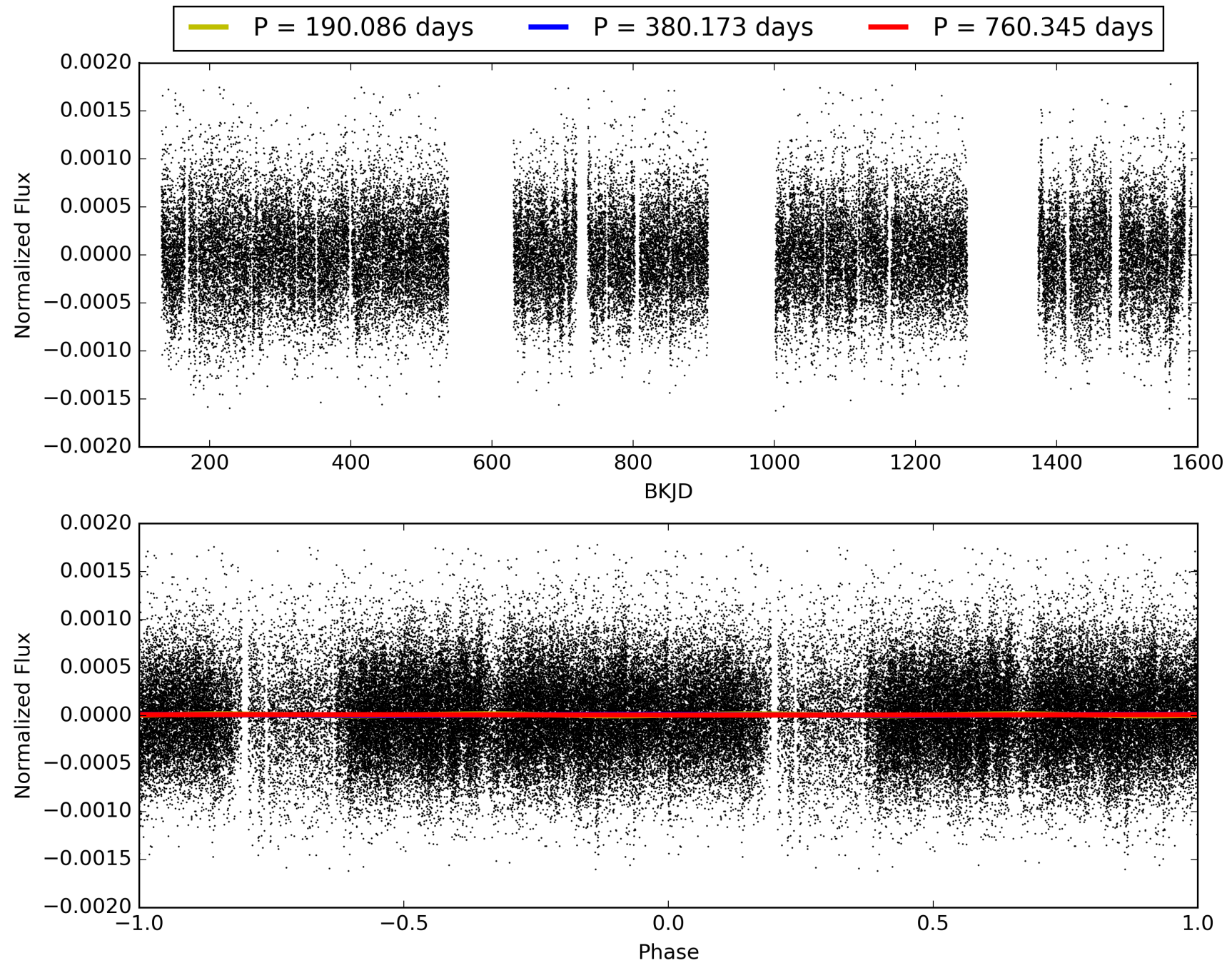
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:10:02 Z

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

TCE 003969154-01, PDC Light Curves

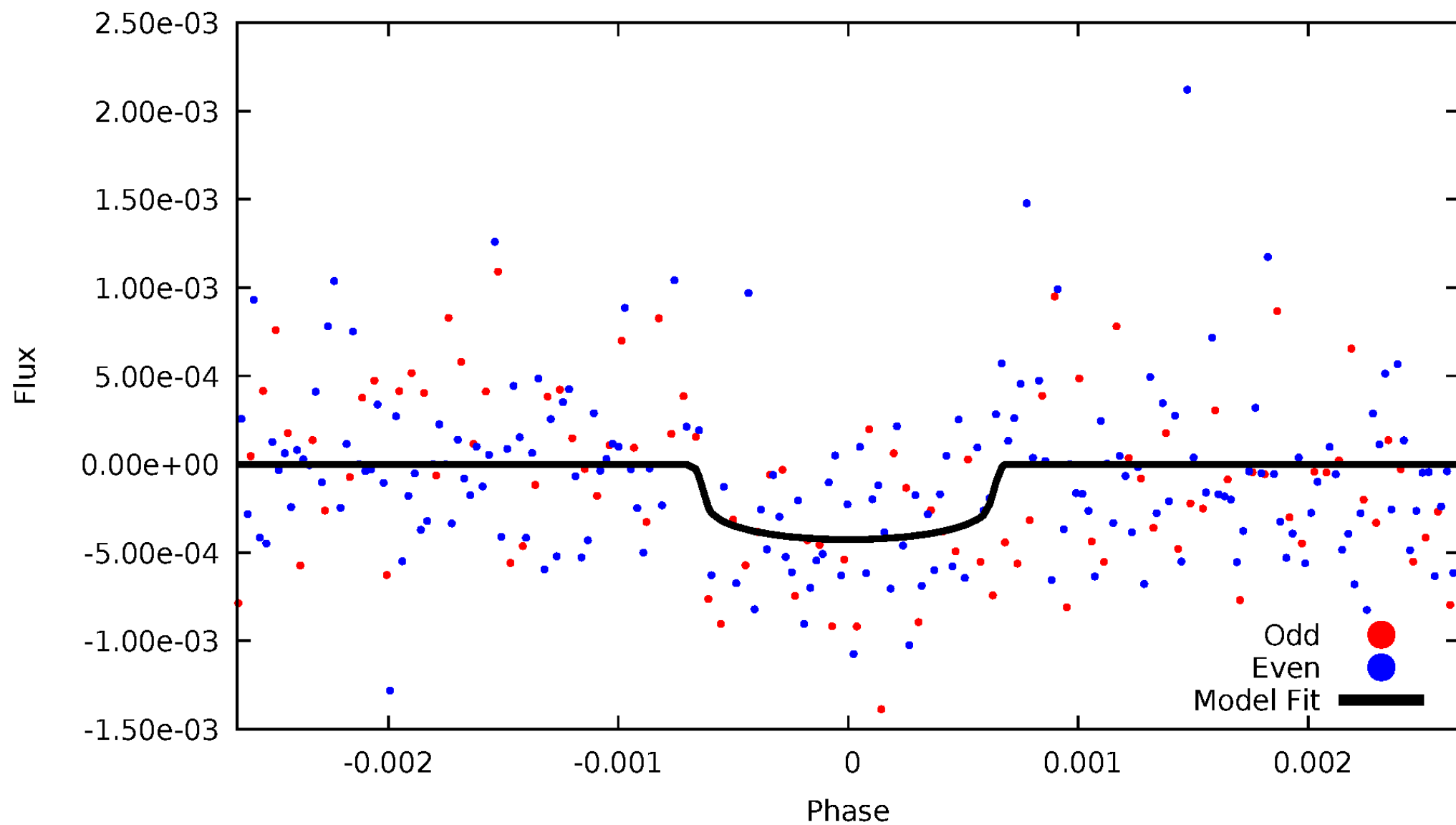


TCE 003969154-01



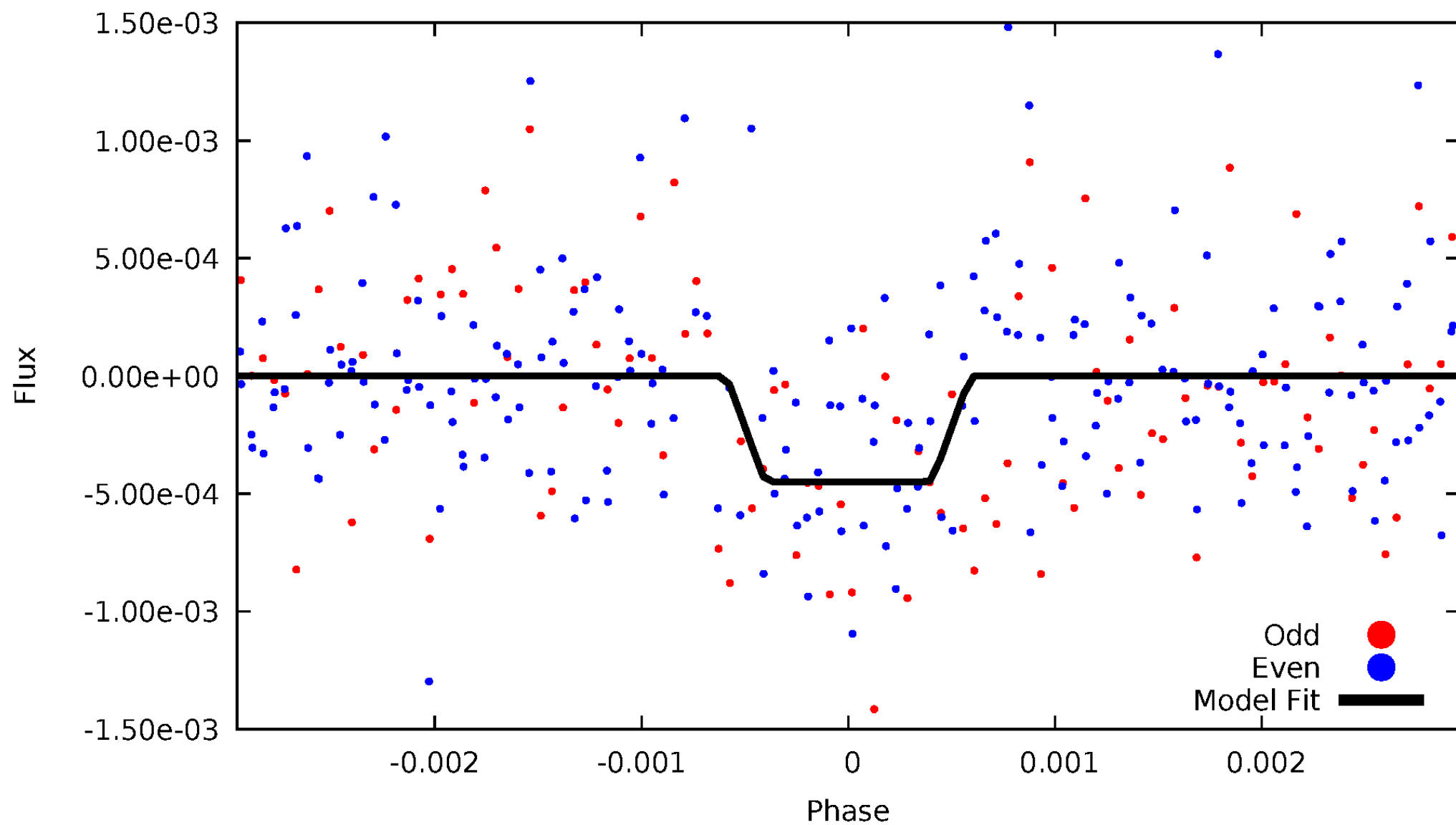
DV Odd/Even

TCE 003969154-01



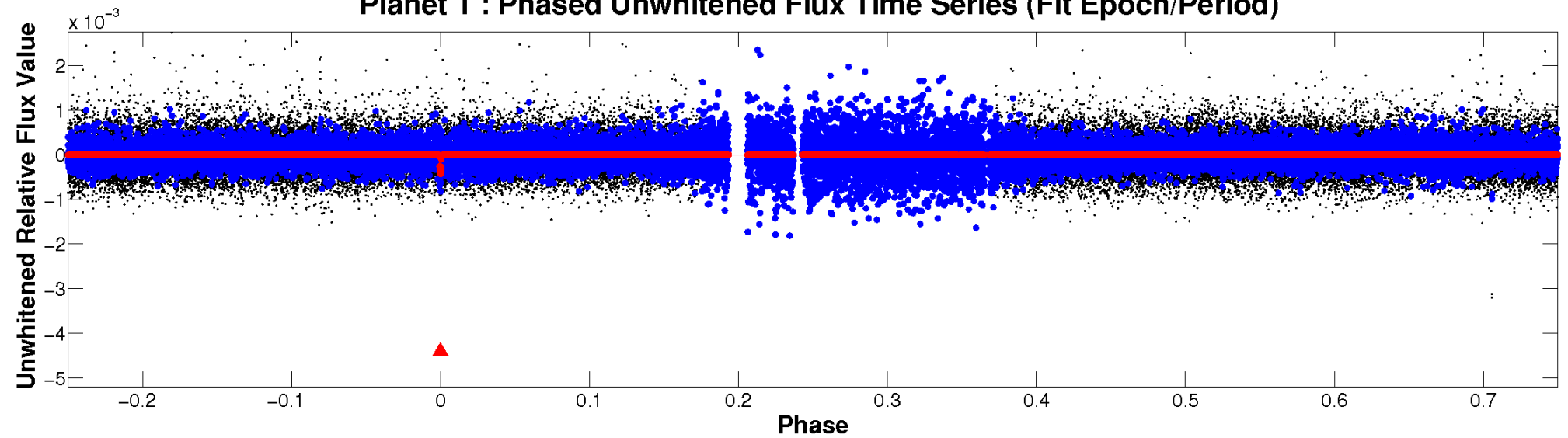
ALT Odd/Even

TCE 003969154-01

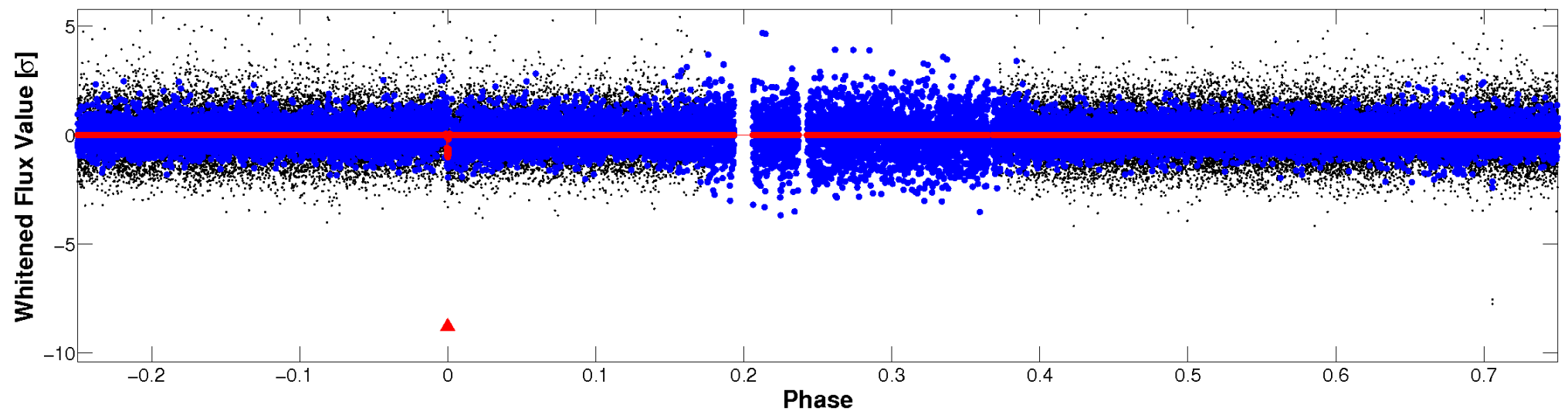


Non-Whitened Vs. Whitened Light Curve

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

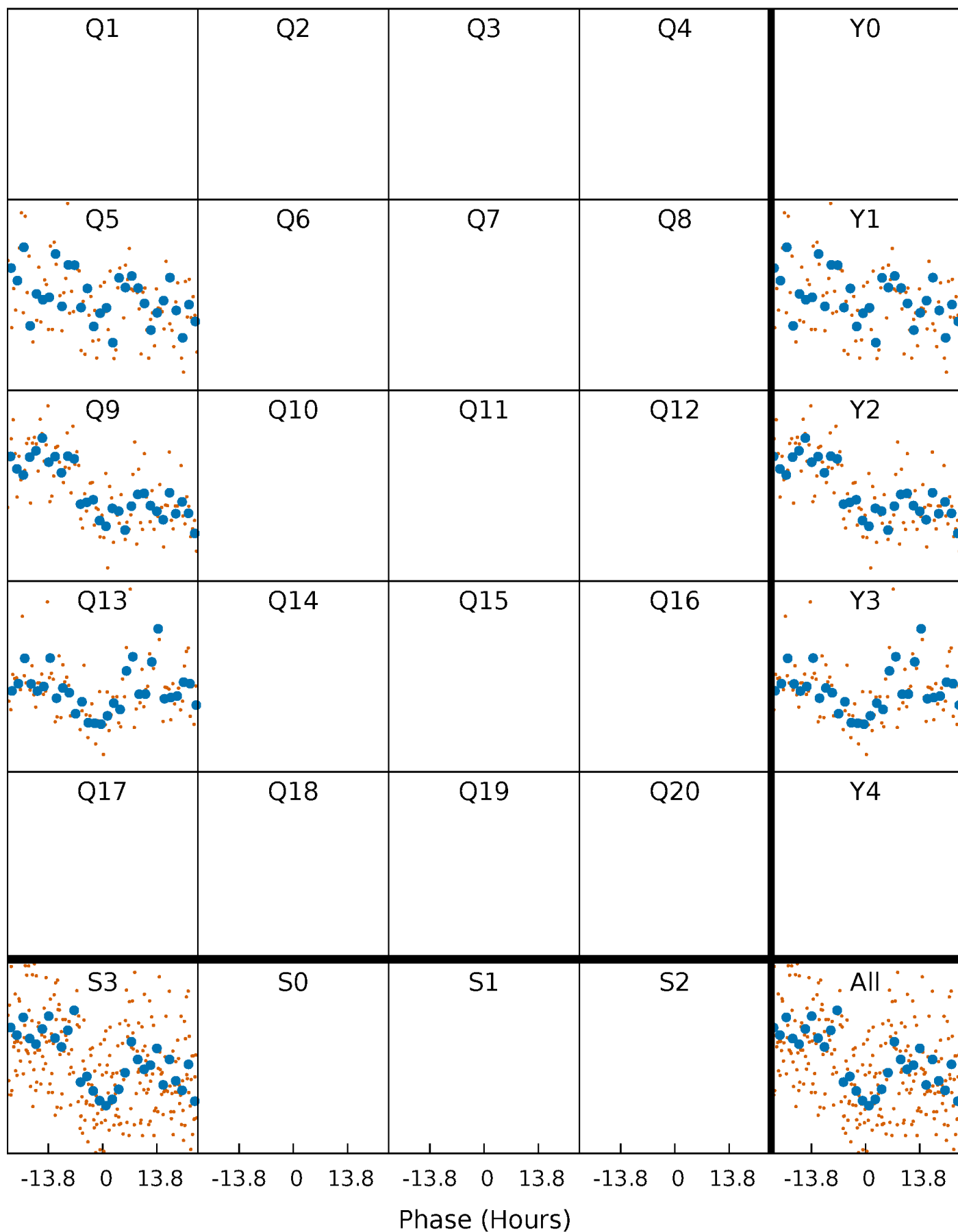


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



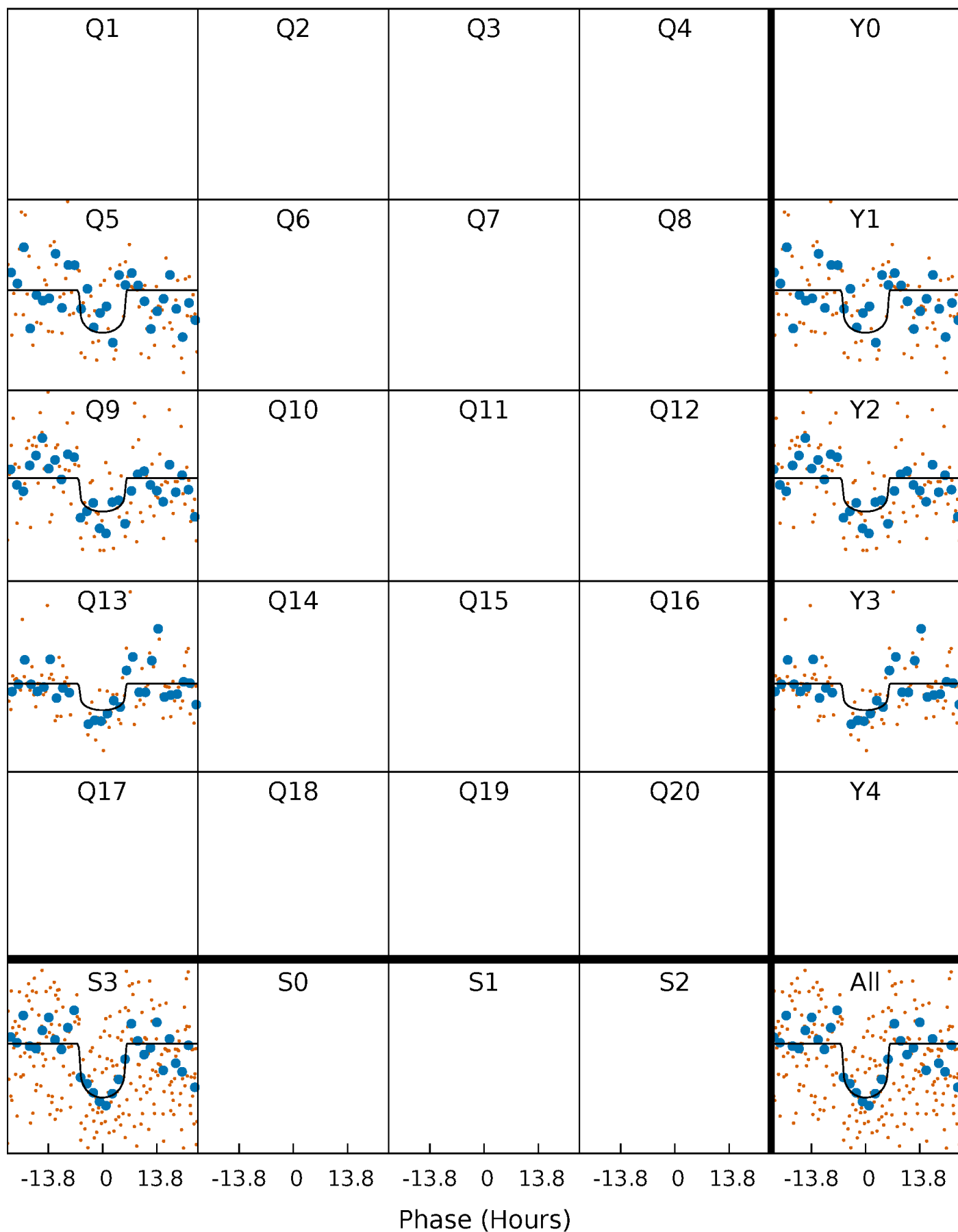
PDC Quarter-Phased Transit Curves

TCE 003969154-01 P=380.172719 Days $T_0=471.588599$ (BKJD)



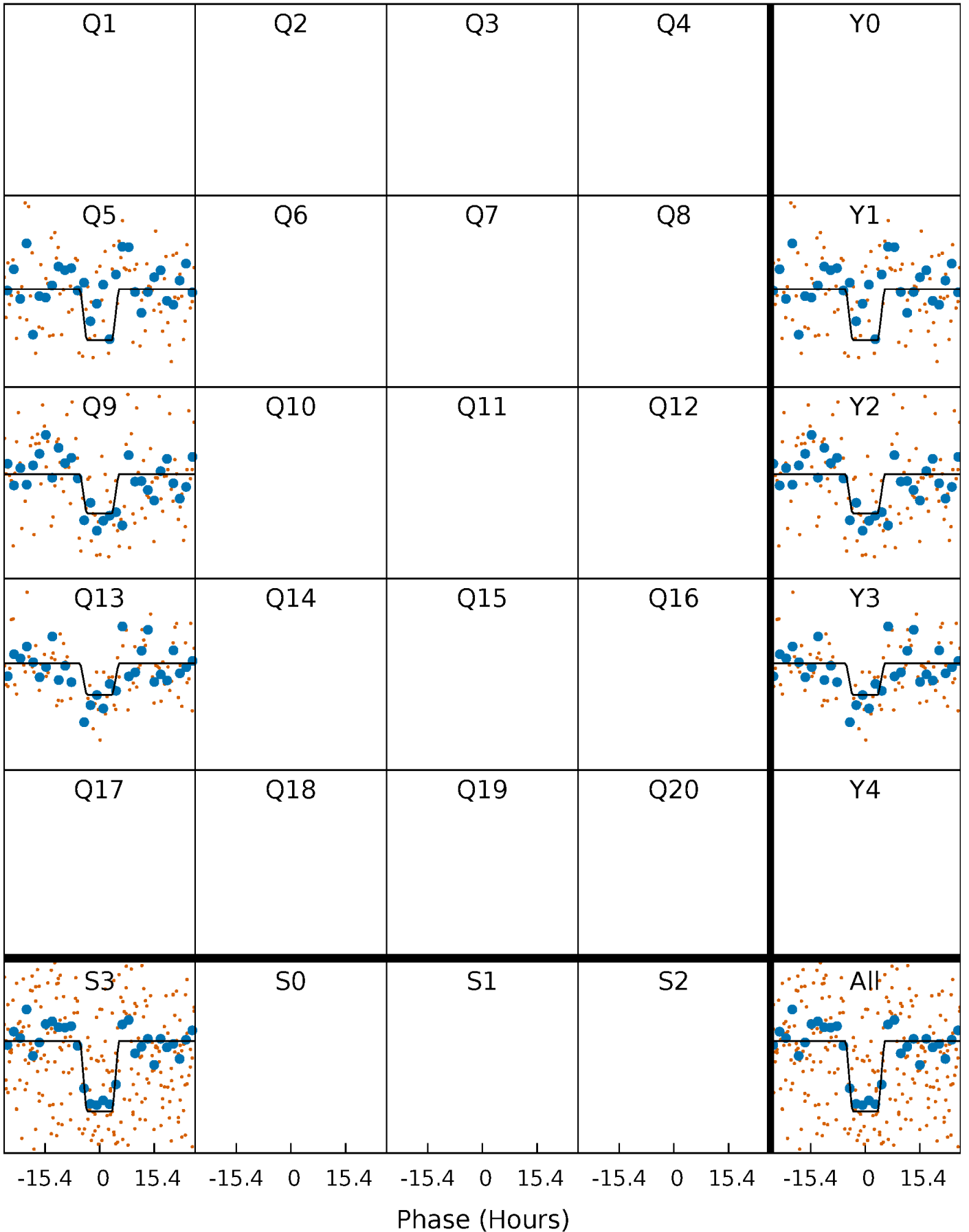
DV Quarter-Phased Transit Curves

TCE 003969154-01 P=380.172719 Days $T_0=471.588599$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

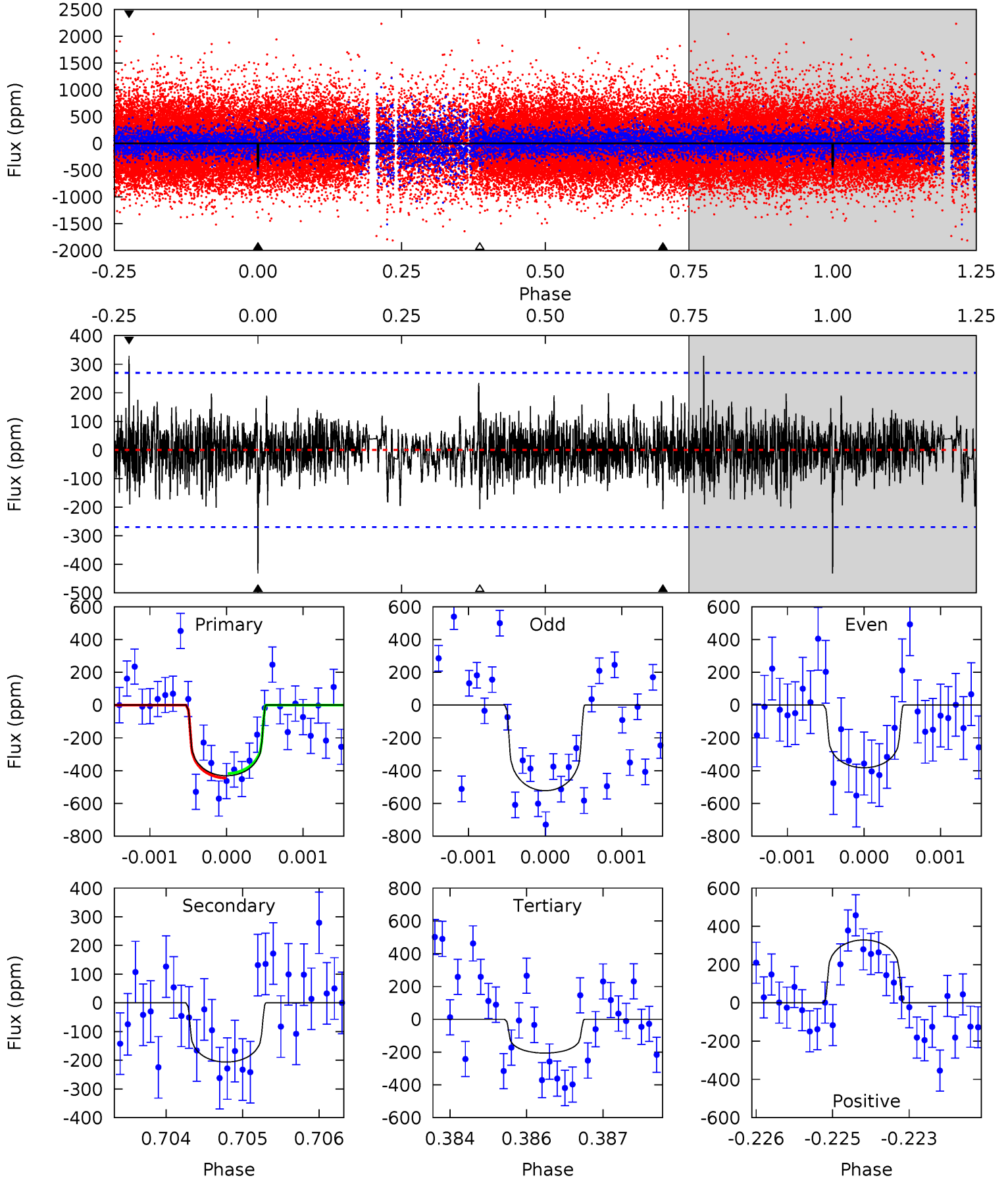
TCE 003969154-01 P=380.166384 Days $T_0=471.602080$ (BKJD)



DV Model-Shift Uniqueness Test

003969154-01, $P = 380.172719$ Days, $E = 91.415880$ Days

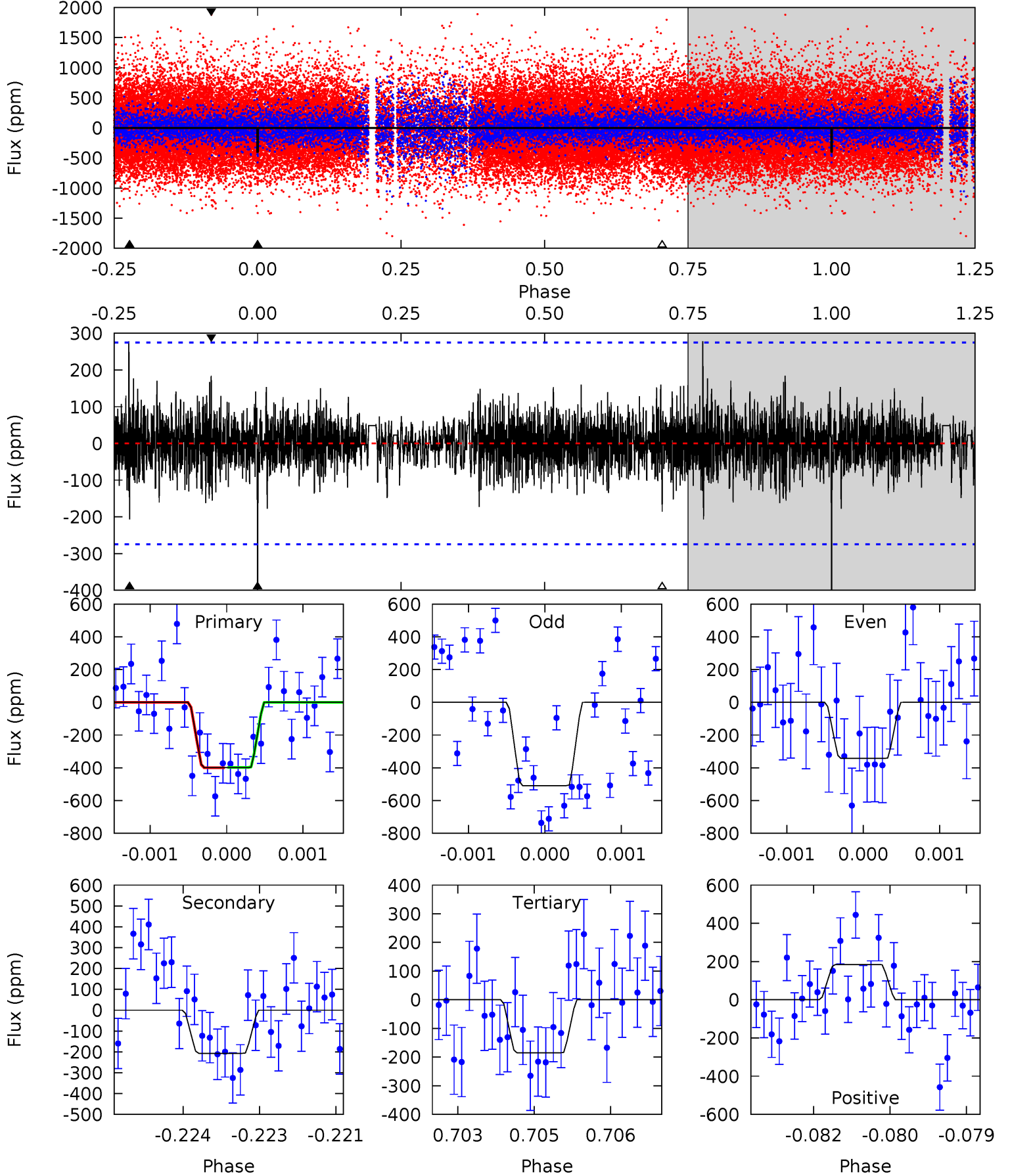
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.63	4.13	4.13	6.58	5.40	3.21	1.19	4.50	2.05	0.00	-2.45	1.33	0.84	0.43	0.27



Alt Model-Shift Uniqueness Test

003969154-01, $P = 380.166384$ Days, $E = 91.435696$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	4.08	3.65	3.64	5.41	3.23	0.99	4.22	4.23	0.43	0.45	1.57	0.79	0.41	0.02



Stellar Parameters For KIC 003969154

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5912^{+187}_{-229}	$4.310^{+0.132}_{-0.198}$	$0.200^{+0.200}_{-0.300}$	$1.220^{+0.349}_{-0.233}$	$1.109^{+0.148}_{-0.148}$	$0.860^{+0.624}_{-0.448}$
	+3%/-4%	+3%/-5%	+100%/-150%	+29%/-19%	+13%/-13%	+73%/-52%
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 003969154-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-206 ± 50	$3.02^{+2.21}_{-1.71}$	395^{+32}_{-27}	4832^{+2327}_{-929}	13560^{+60033}_{-9133}
Alt.	-207 ± 51	$2.98^{+2.16}_{-1.86}$	393^{+27}_{-25}	4829^{+3146}_{-891}	14299^{+86303}_{-9658}

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

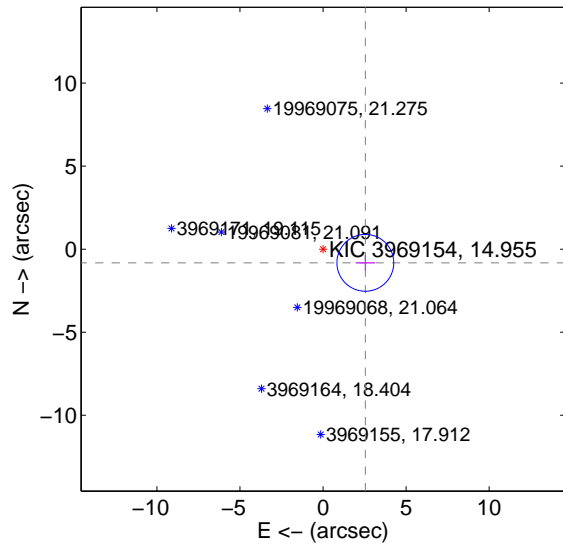
Supplemental centroid analysis for 003969154-01. Kepler magnitude: 14.96. Transit SNR 7.27

There are 1 quarters with good PRF difference image offsets

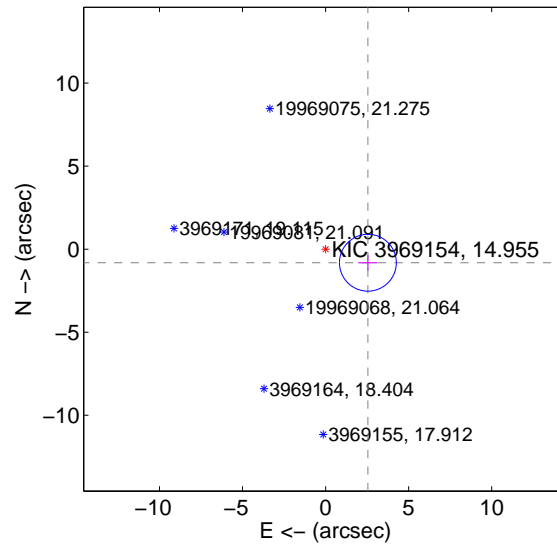
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.675 ± 0.570	4.69	-2.546 ± 0.580	-0.822 ± 0.468
PRF-fit source offset from KIC position	2.674 ± 0.570	4.69	-2.547 ± 0.580	-0.816 ± 0.468
photometric centroid source offset	5.38 ± 2.25	2.39	-5.38 ± 2.25	-0.10 ± 1.99

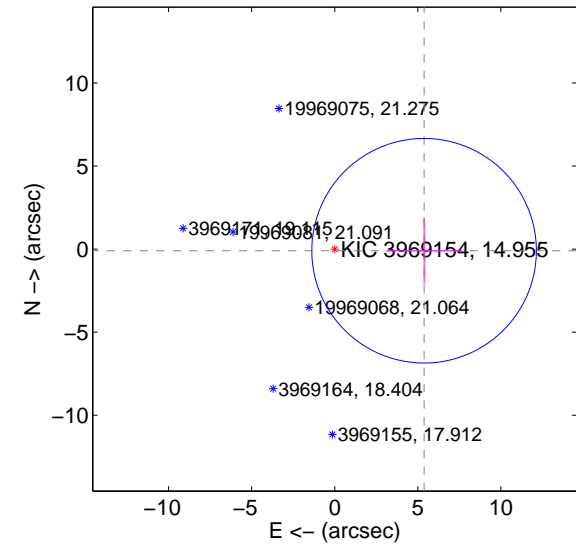
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

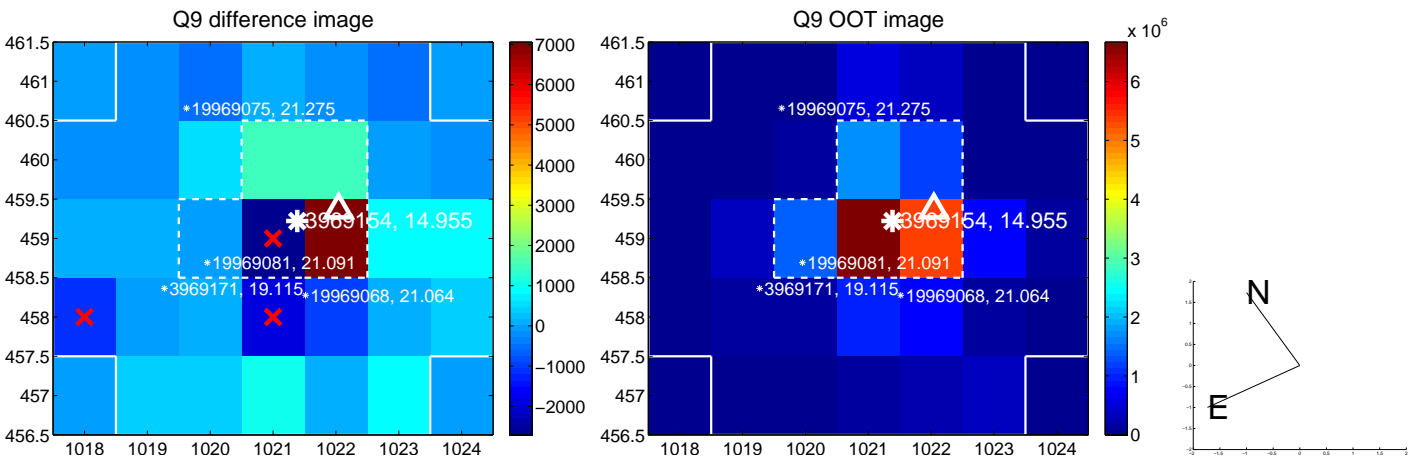


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



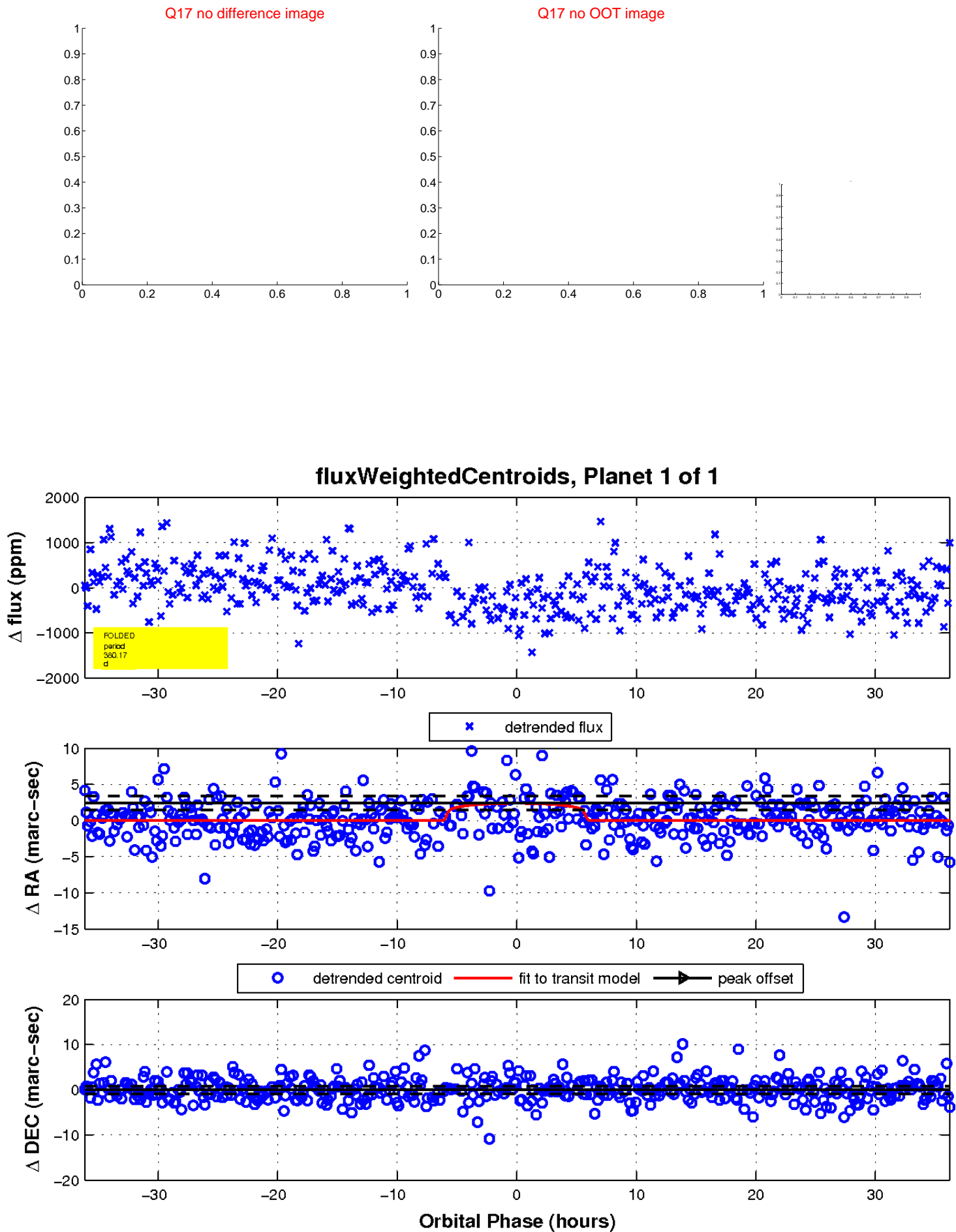
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

