

KIC 010471844

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})
010471844-01	OBS	No	350.029453	186.493318	732.6	15.711	7.3	7.0	0.54	4475	1.46	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010471844-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

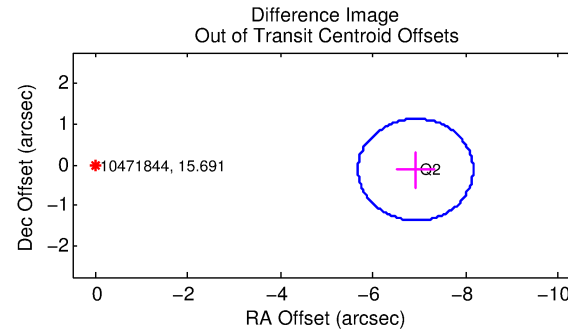
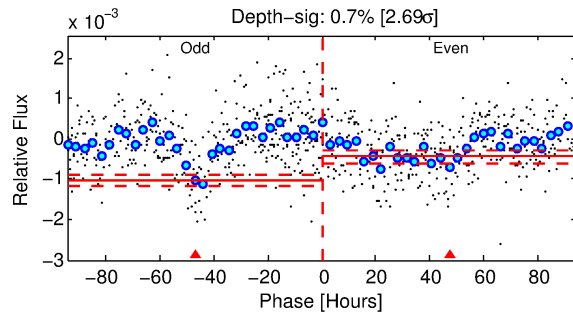
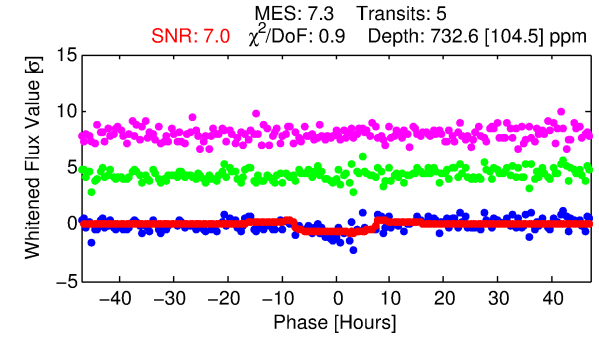
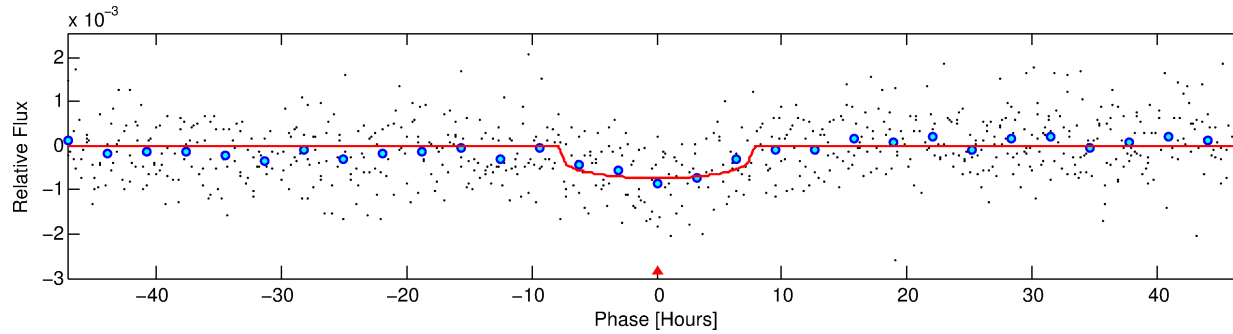
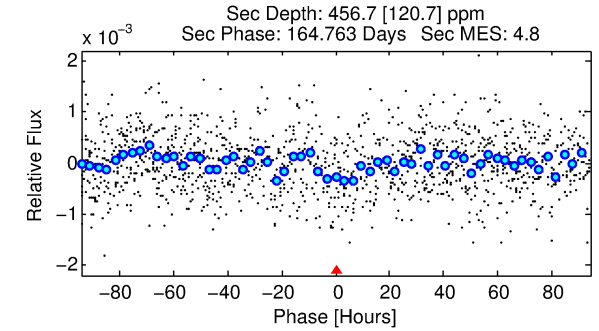
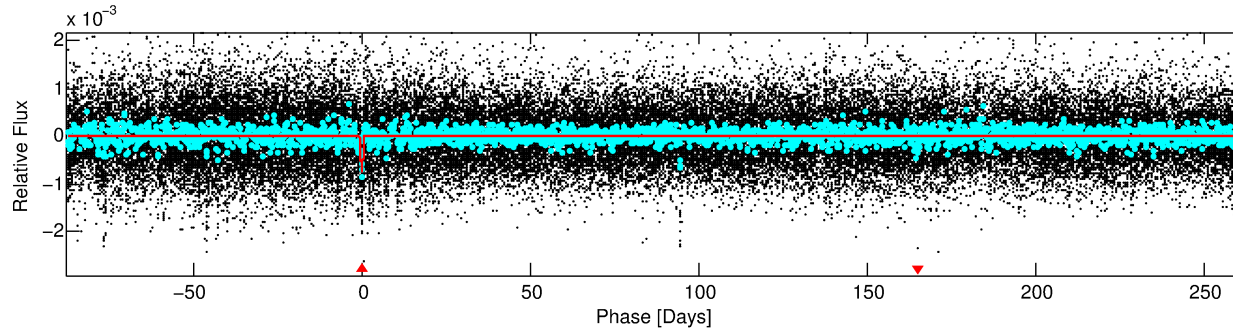
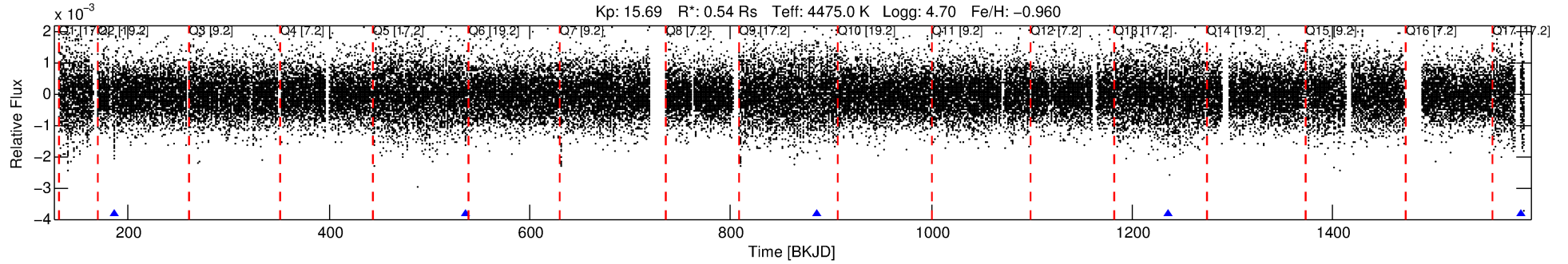
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010471844-01

No Significant Match Found

DV One-Page Summary

KIC: 10471844 Candidate: 1 of 1 Period: 350.029 d



DV Fit Results:

Period = 350.02945 [0.00964] d
Epoch = 186.4933 [0.0191] BKJD
Rp/R* = 0.0250 [0.0178]
a/R* = 154.78 [396.87]
b = 0.47 [4.26]
Seff = 0.17 [0.03]
Teq = 163 [7] K
Rp = 1.46 [1.05] Re
a = 0.7878 [0.0574] AU
Ag = 72857.36 [106154.25] [0.69σ]
Teffp = 4140 [1510] K [2.63σ]

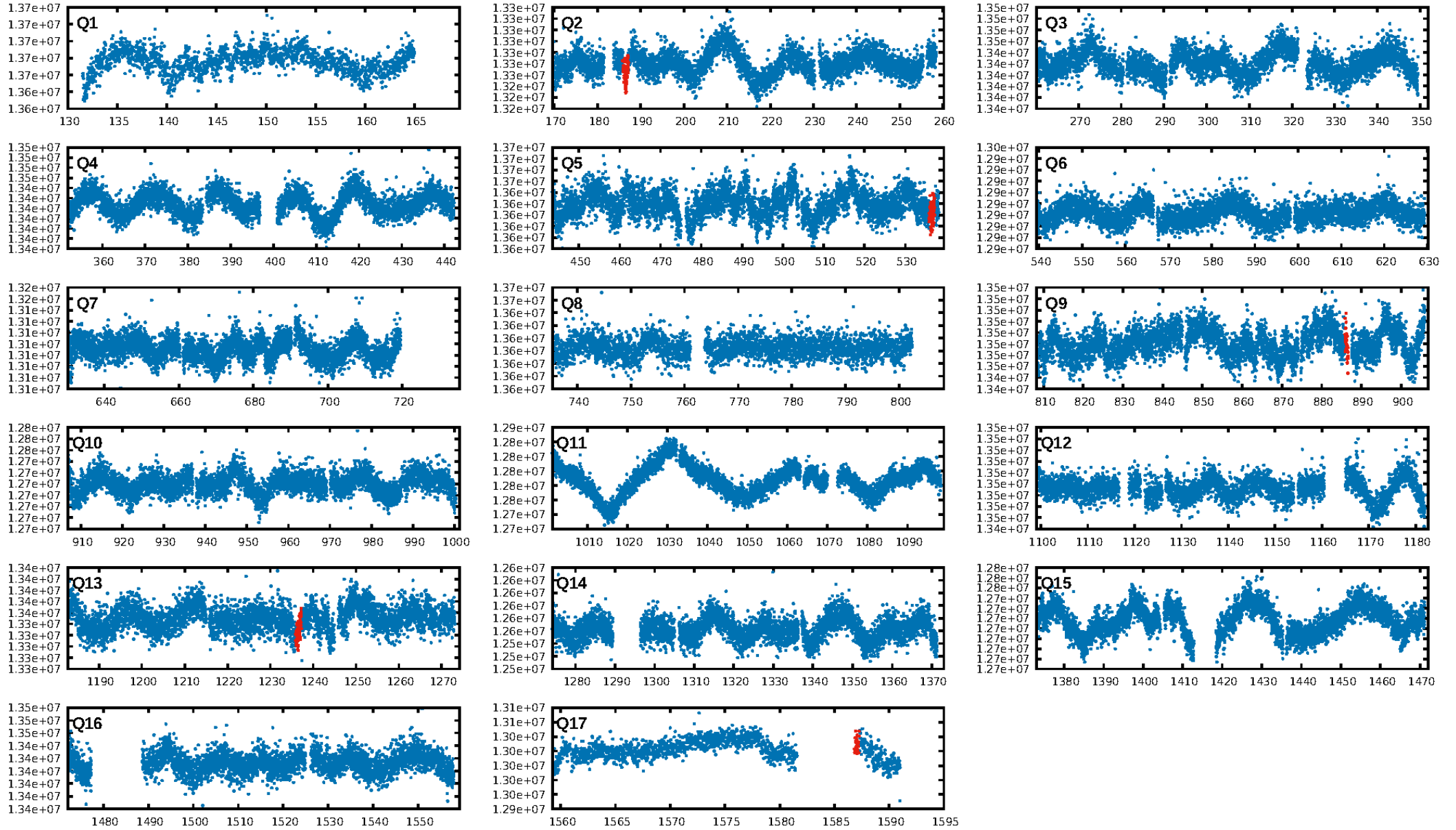
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.7%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 5.95e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.9
Centroid-sig: 7.3%
Centroid-so: 3.242 arcsec [1.31σ]
OotOffset-rm: 6.921 arcsec [16.69σ]
KicOffset-rm: 6.842 arcsec [16.50σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

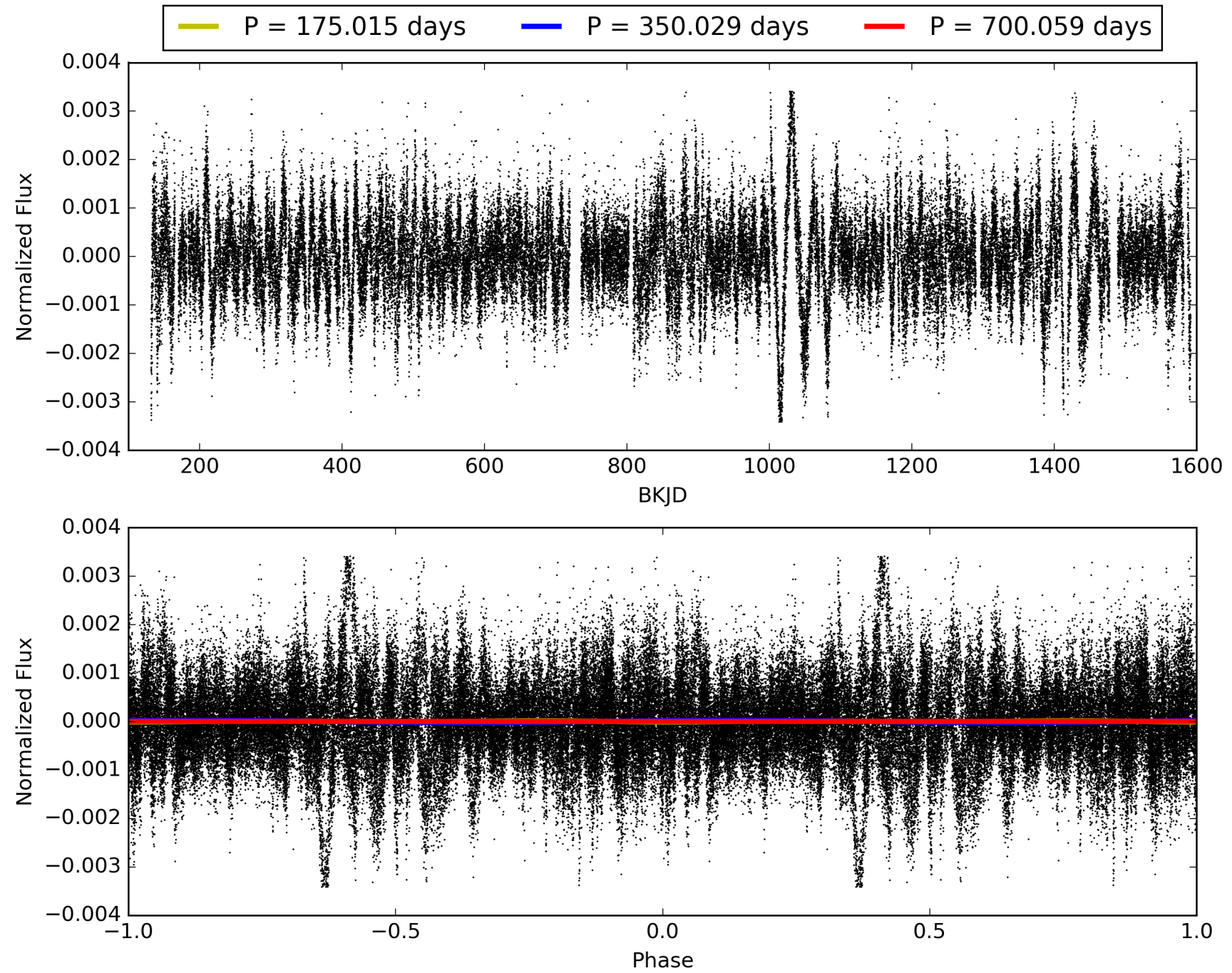
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:03:26 Z

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

TCE 010471844-01, PDC Light Curves

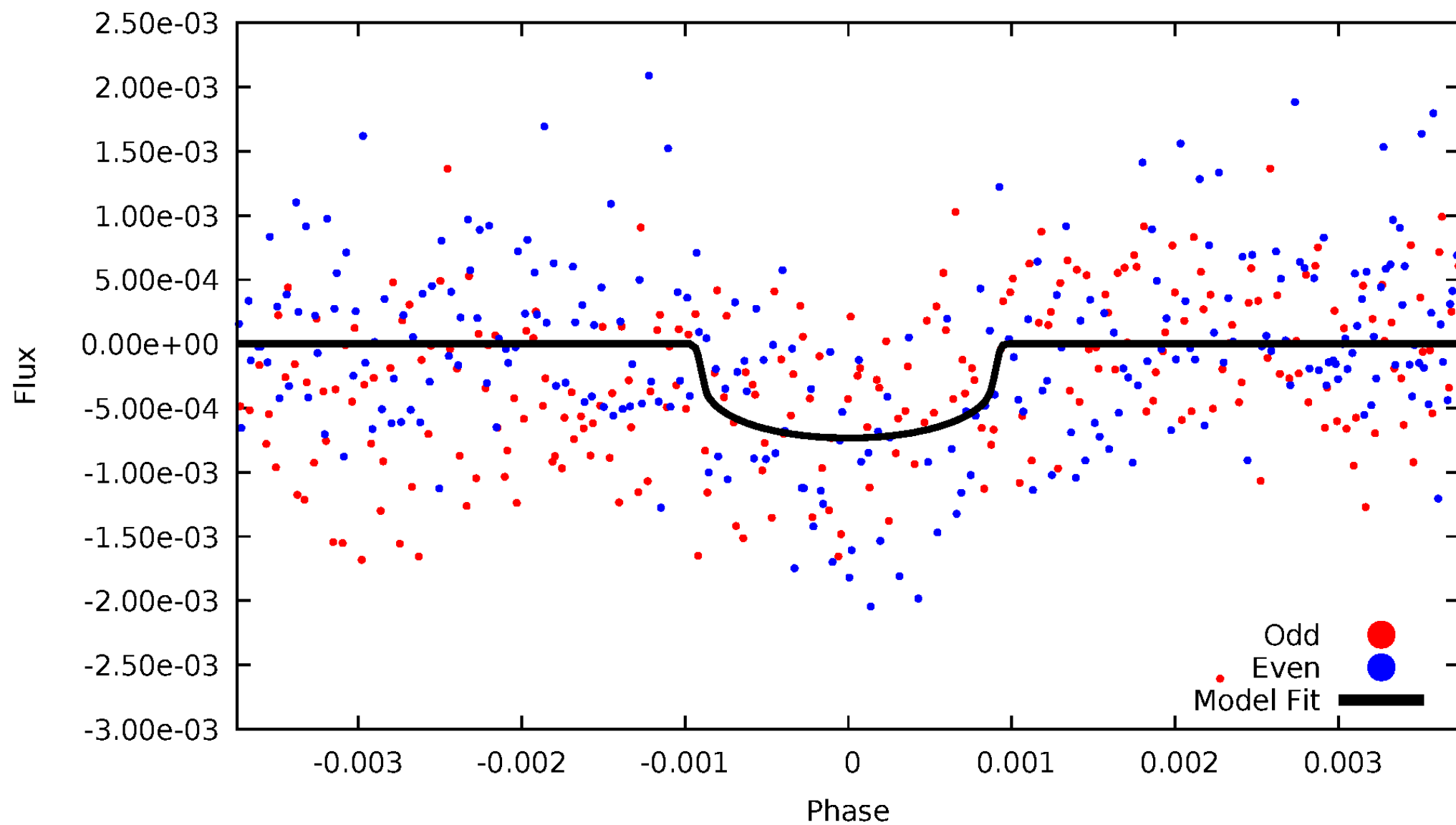


TCE 010471844-01



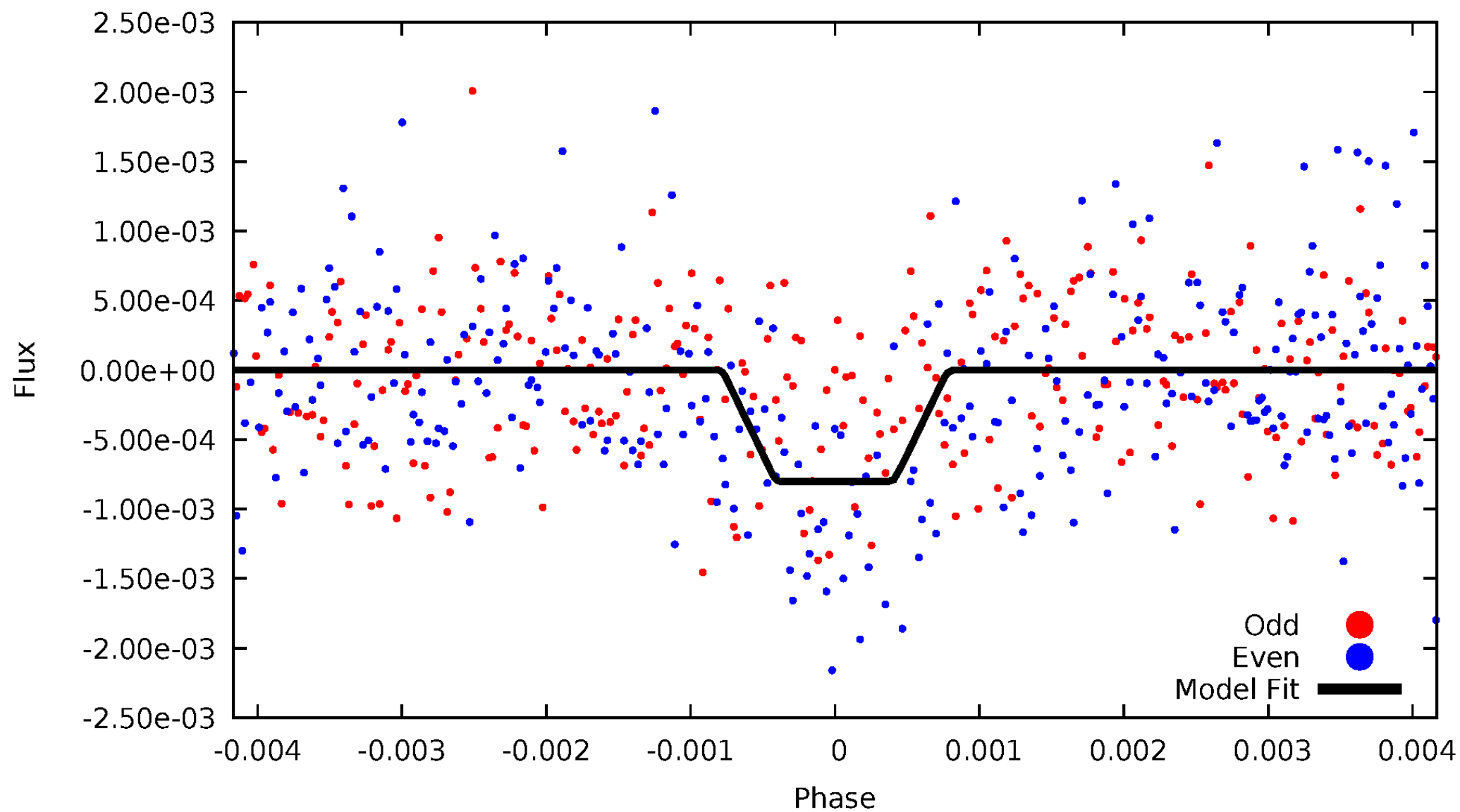
DV Odd/Even

TCE 010471844-01

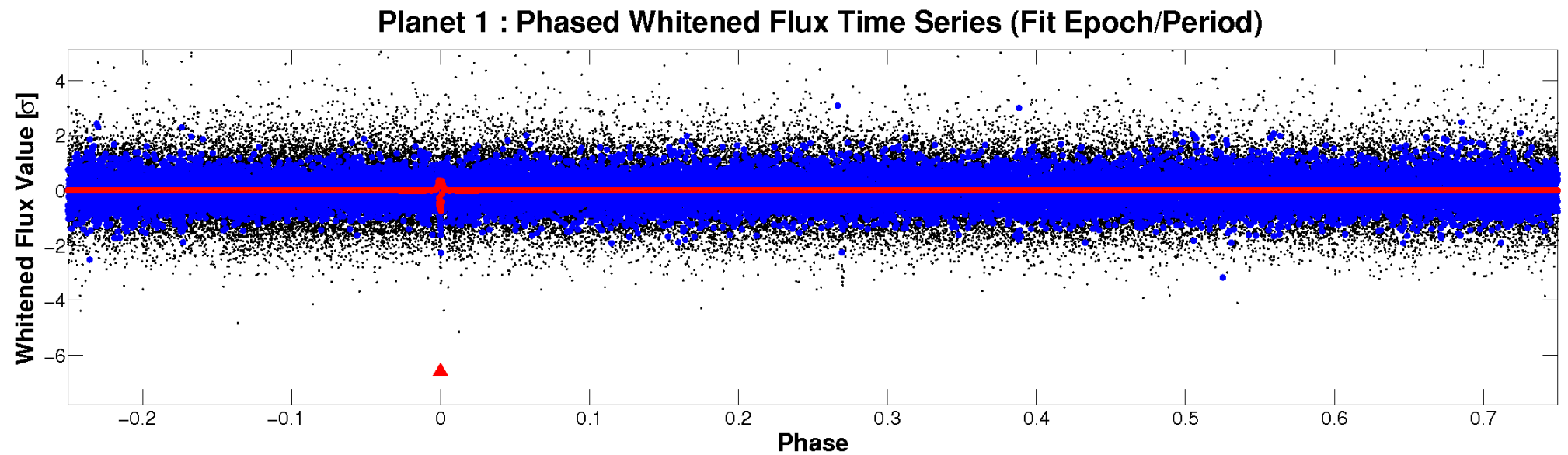
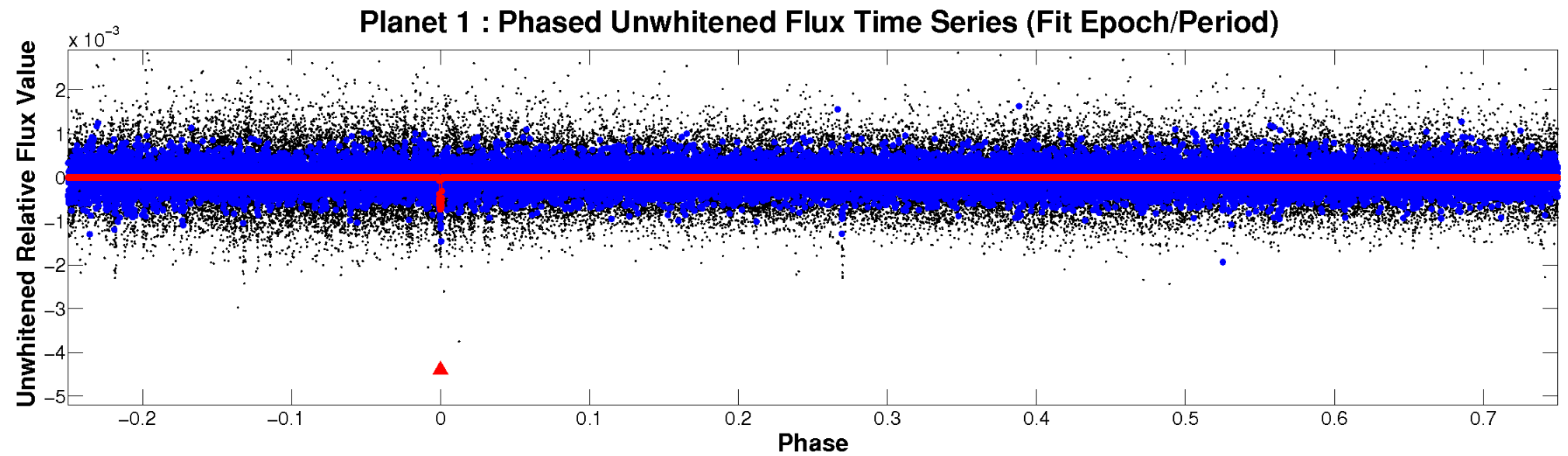


ALT Odd/Even

TCE 010471844-01

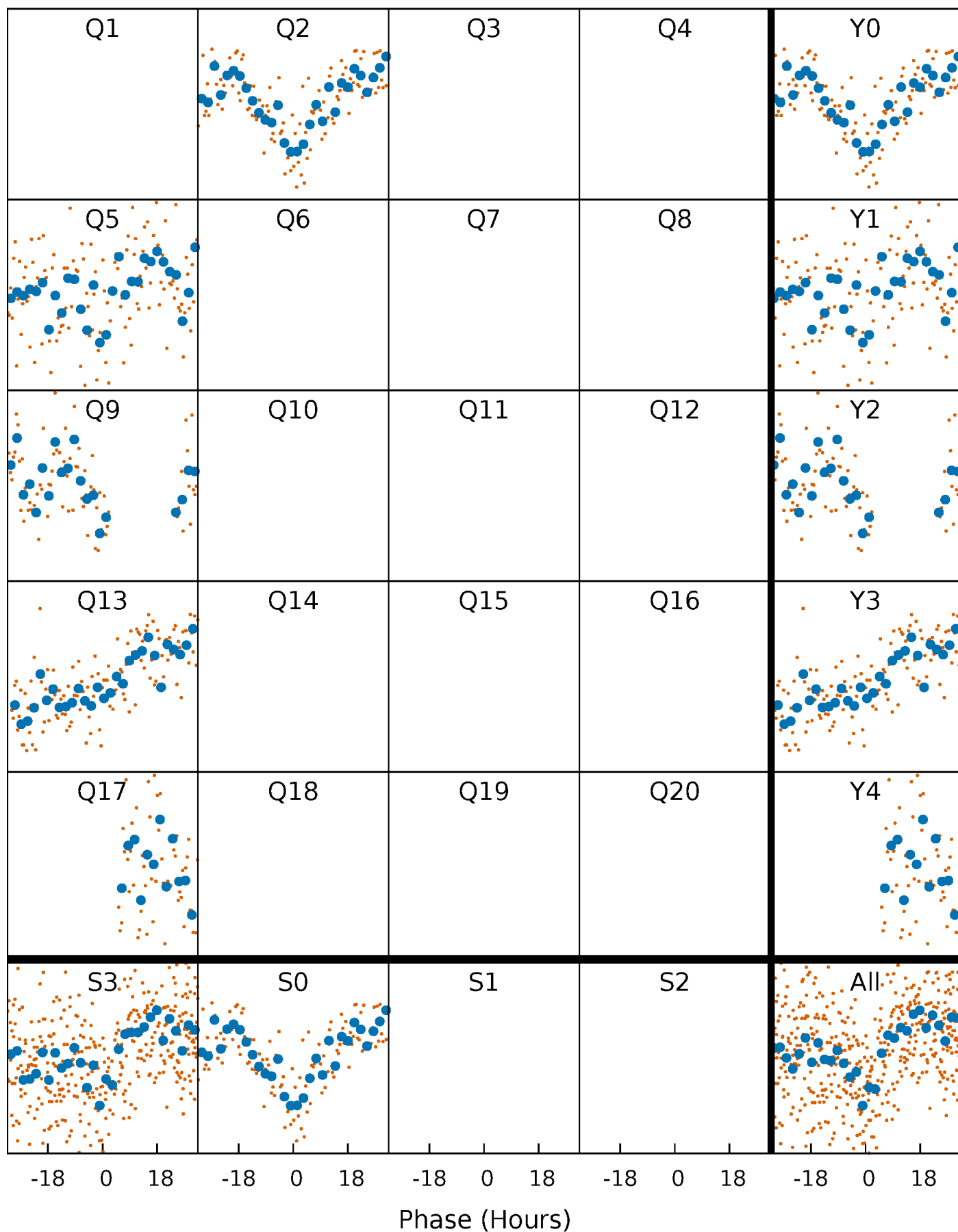


Non-Whitened Vs. Whitened Light Curve



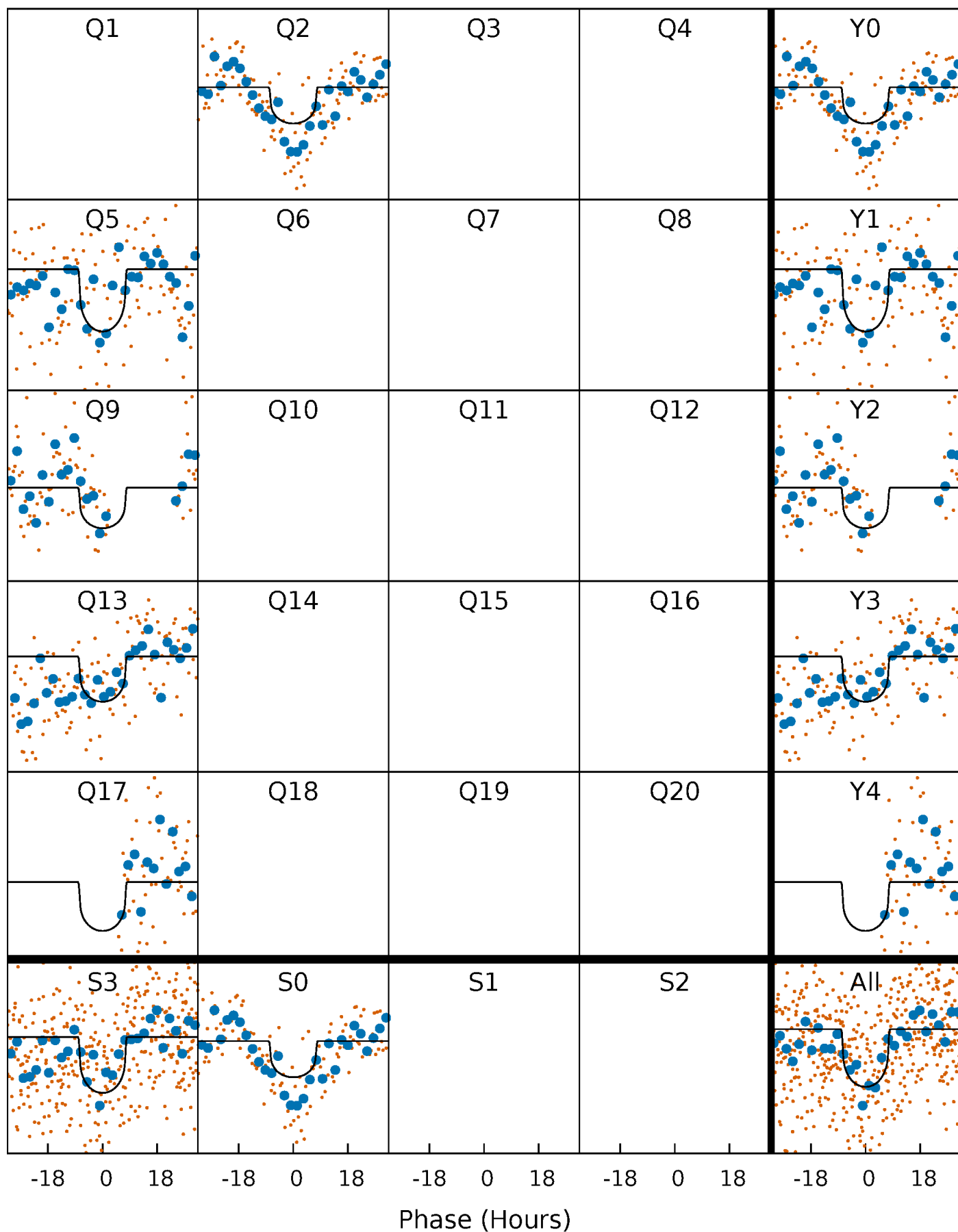
PDC Quarter-Phased Transit Curves

TCE 010471844-01 P=350.029453 Days $T_0=186.493318$ (BKJD)



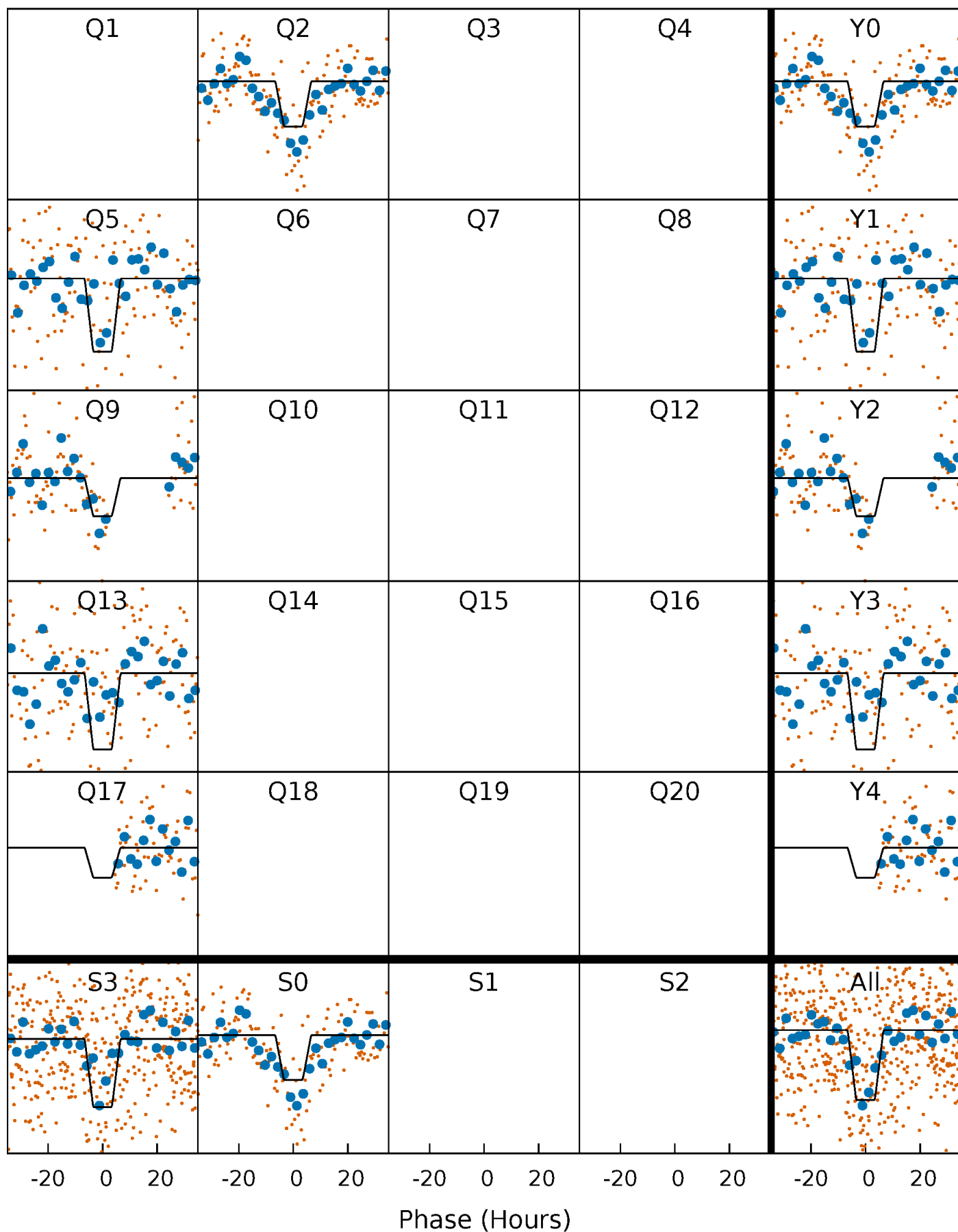
DV Quarter-Phased Transit Curves

TCE 010471844-01 P=350.029453 Days $T_0=186.493318$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

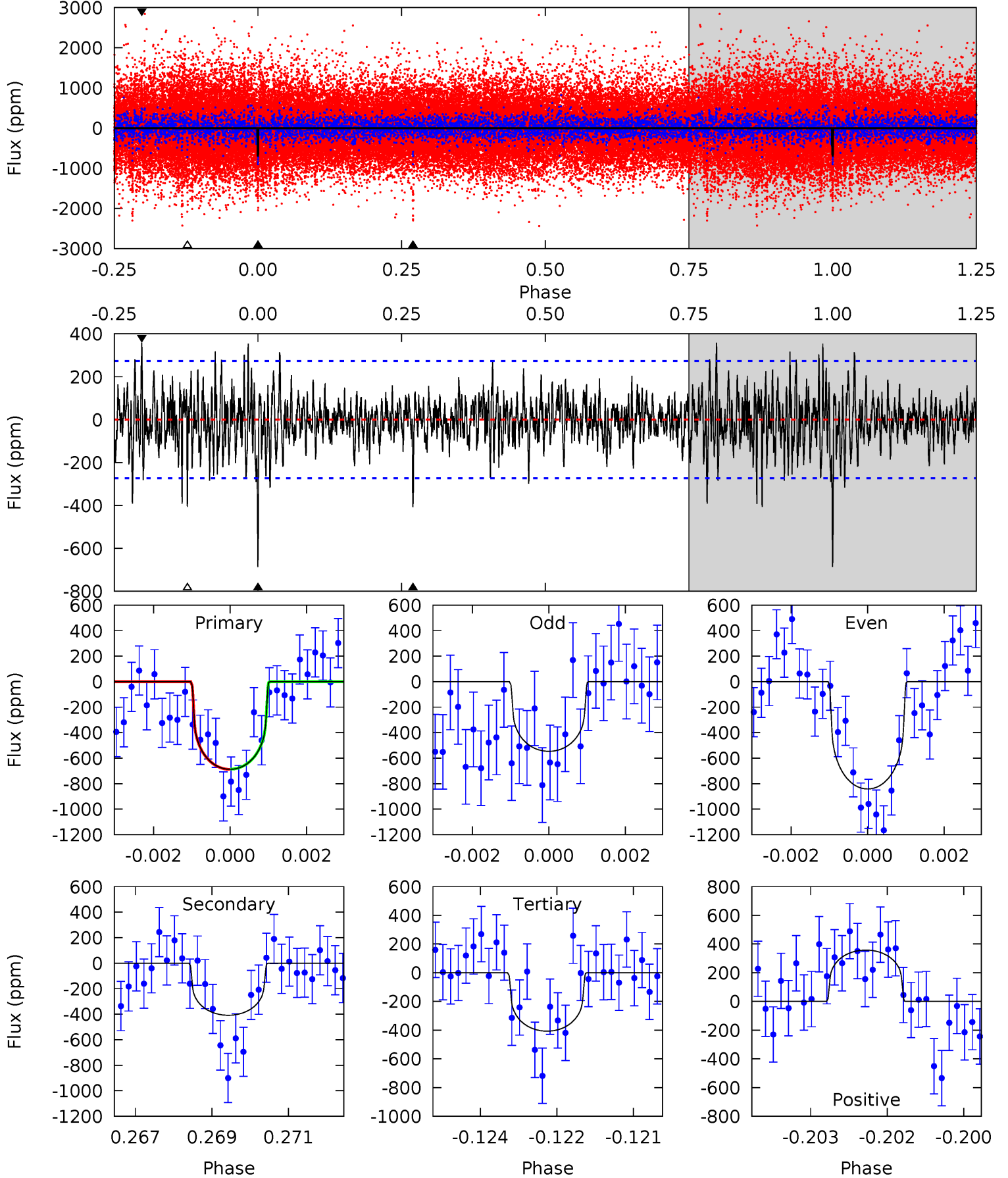
TCE 010471844-01 P=350.040505 Days $T_0=186.480435$ (BKJD)



DV Model-Shift Uniqueness Test

010471844-01, P = 350.029453 Days, E = 186.493318 Days

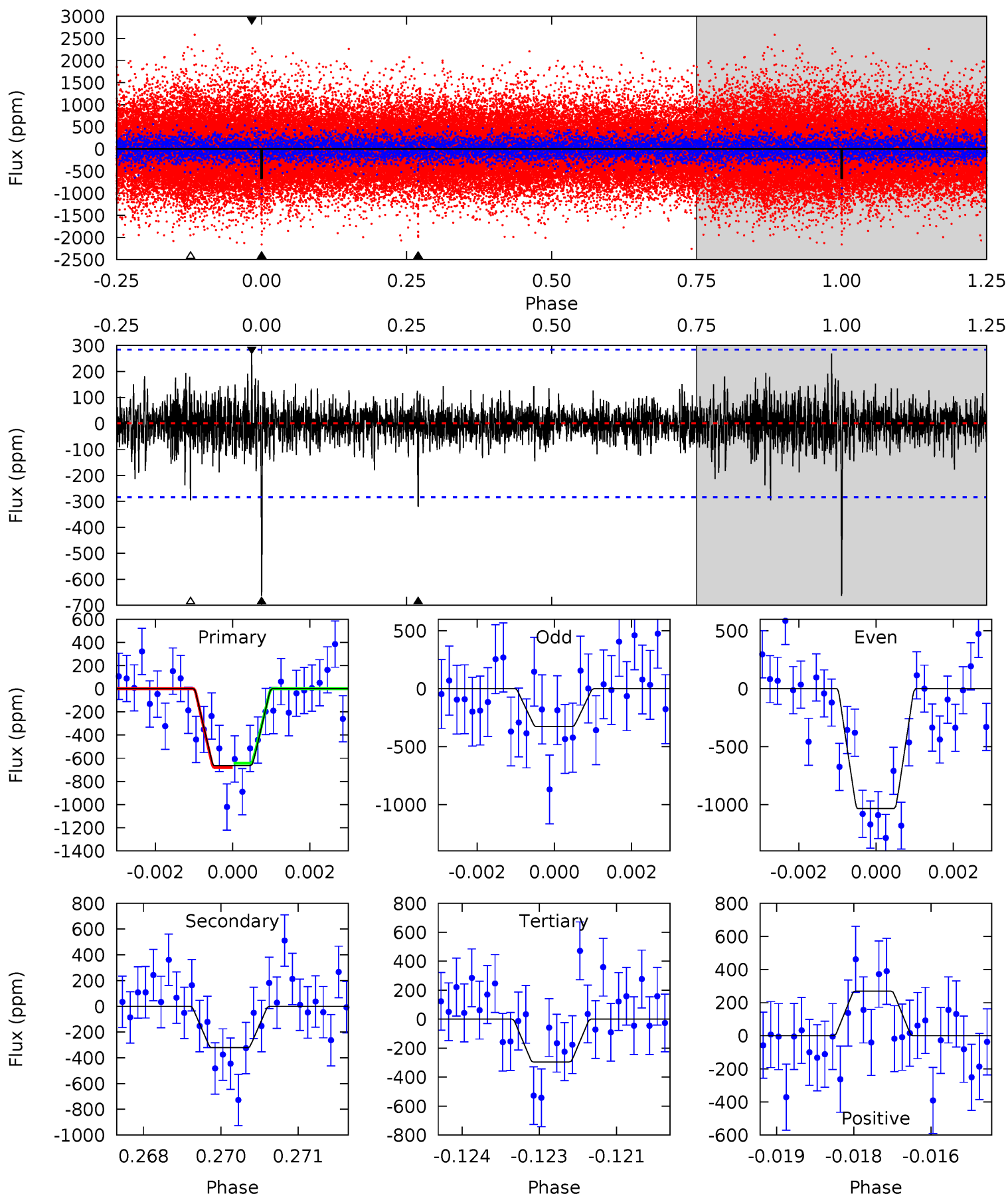
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	7.97	7.95	6.98	5.34	3.11	1.83	5.47	6.44	0.02	0.99	2.89	1.13	0.34	0.02



Alt Model-Shift Uniqueness Test

010471844-01, P = 350.040505 Days, E = 186.480435 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	6.07	5.58	5.09	5.37	3.16	1.00	6.96	7.45	0.49	0.99	6.70	0.94	0.29	0.35



Stellar Parameters For KIC 010471844

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4475^{+120}_{-146}	$4.704^{+0.059}_{-0.027}$	$-0.960^{+0.300}_{-0.300}$	$0.537^{+0.038}_{-0.046}$	$0.533^{+0.040}_{-0.033}$	$4.835^{+1.199}_{-0.586}$
	+3%/-3%	+1%/-1%	+31%/-31%	+7%/-9%	+8%/-6%	+25%/-12%
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 010471844-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-408 ± 51	$1.57^{+0.93}_{-0.86}$	226^{+7}_{-8}	4012^{+1542}_{-592}	$57386^{+232845}_{-35986}$
Alt.	-321 ± 53	$1.70^{+1.04}_{-0.96}$	226^{+8}_{-8}	3708^{+1466}_{-514}	$36437^{+161103}_{-22315}$

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

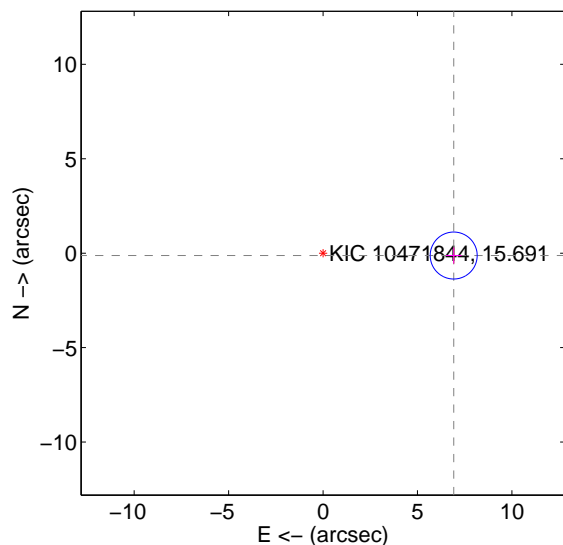
Supplemental centroid analysis for 010471844-01. Kepler magnitude: 15.69. Transit SNR 6.96

There are 0 quarters with good PRF difference image offsets

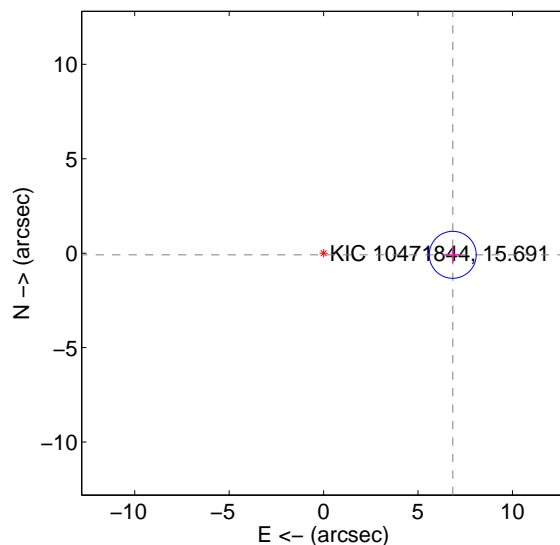
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.921 ± 0.415	16.69	-6.920 ± 0.415	-0.125 ± 0.427
PRF-fit source offset from KIC position	6.842 ± 0.415	16.50	-6.841 ± 0.415	-0.086 ± 0.427
photometric centroid source offset	3.24 ± 2.48	1.31	-2.46 ± 2.53	-2.12 ± 2.41

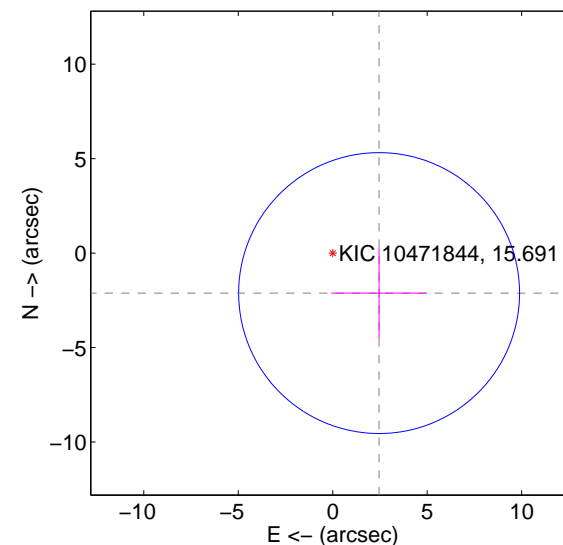
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

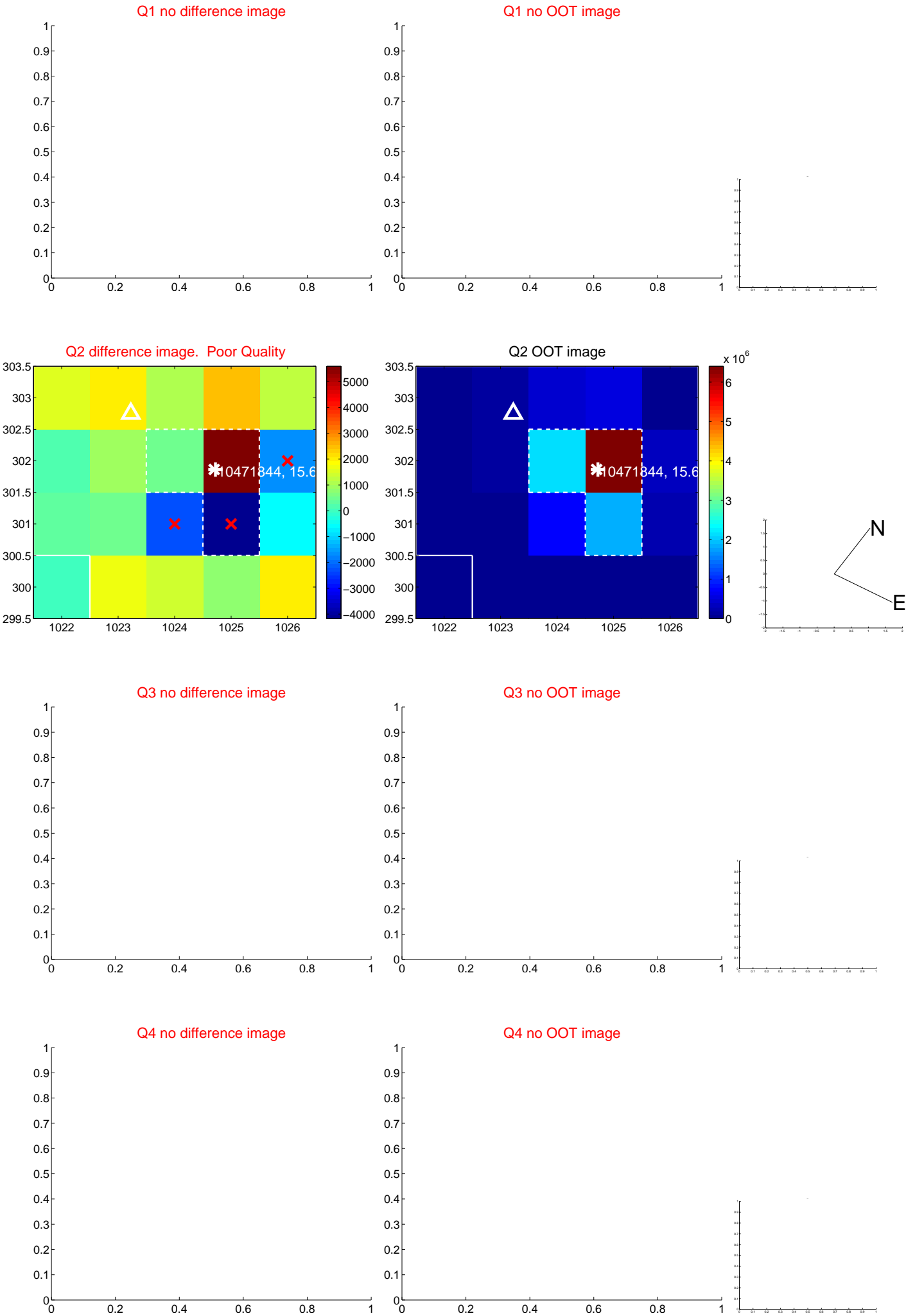


offset from photometric centroids

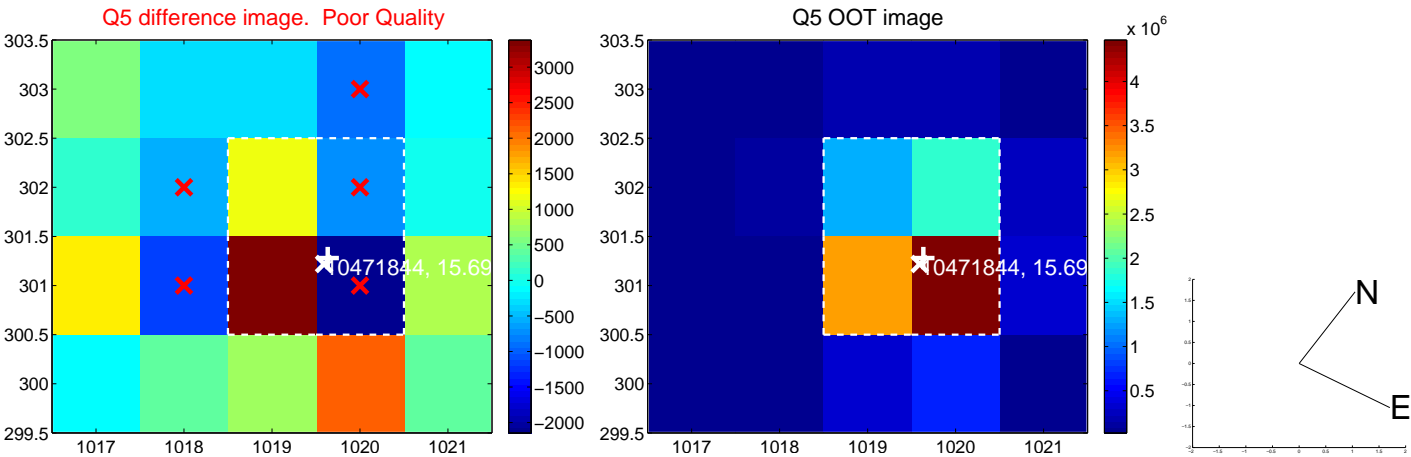


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



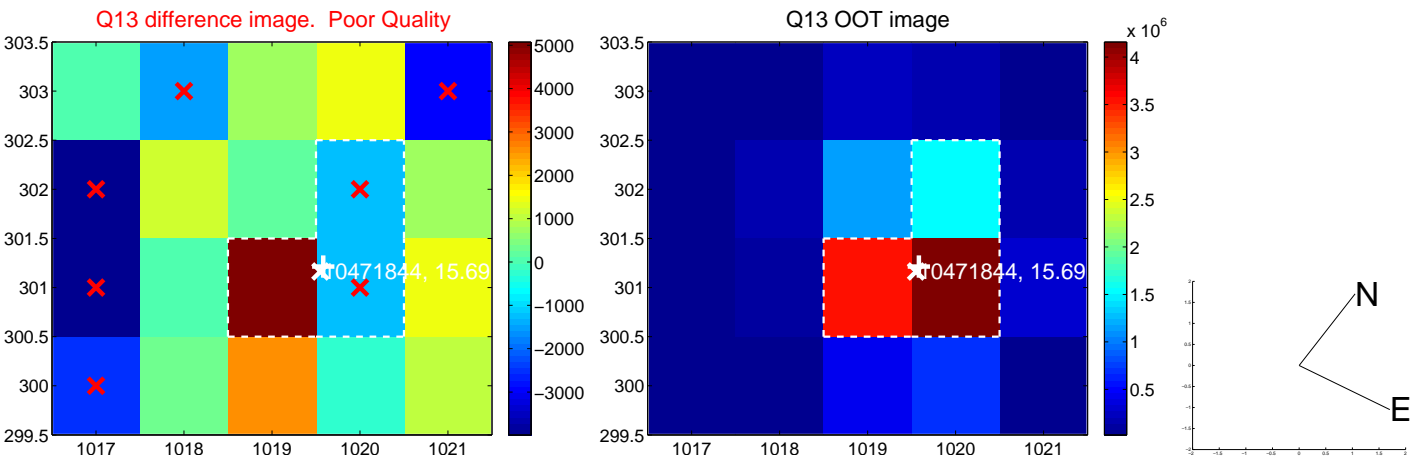
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



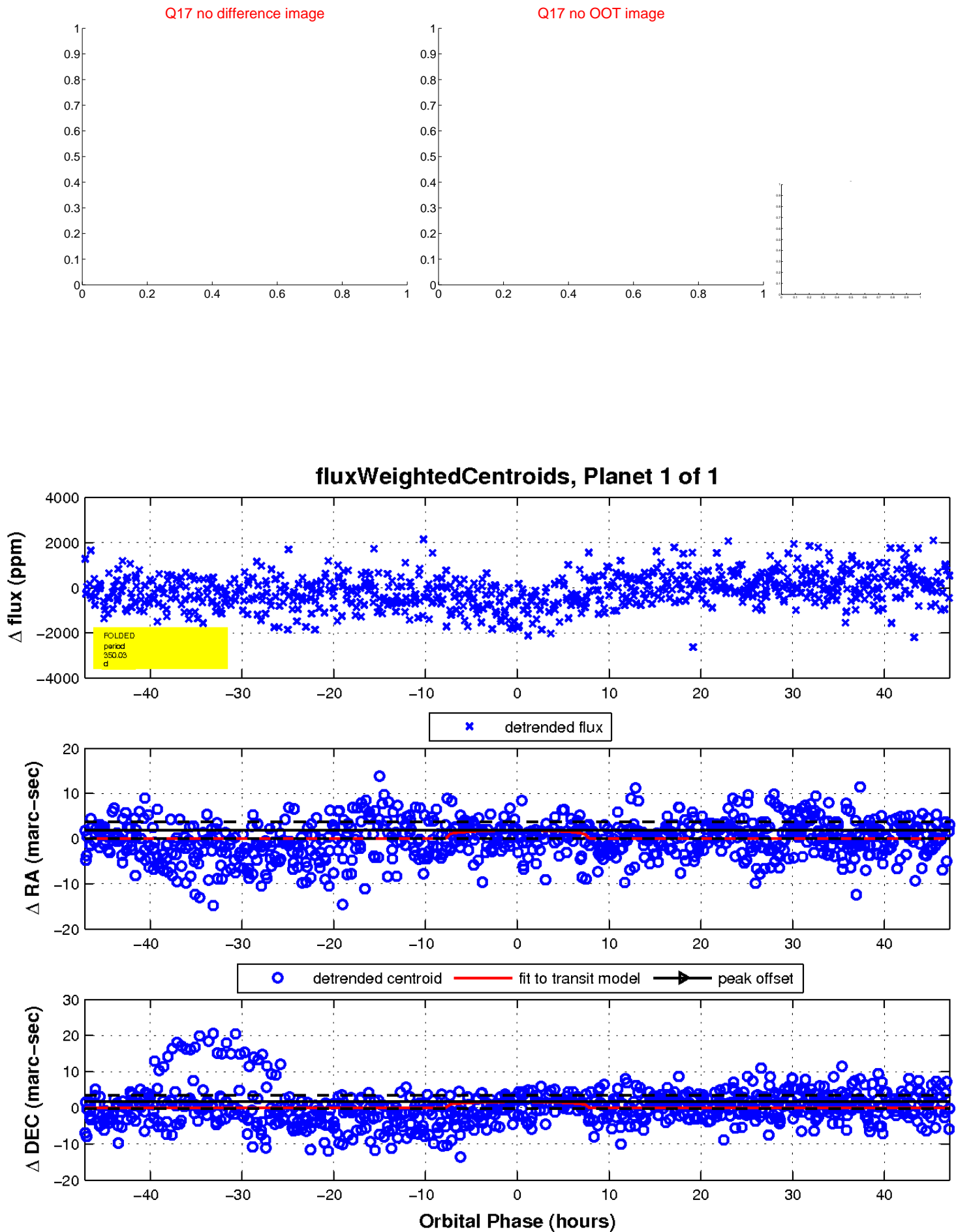
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

