

KIC 007968451

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})
007968451-01	OBS	No	369.030406	233.311108	1184.2	28.437	7.4	9.7	0.75	5052	3.29	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007968451-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

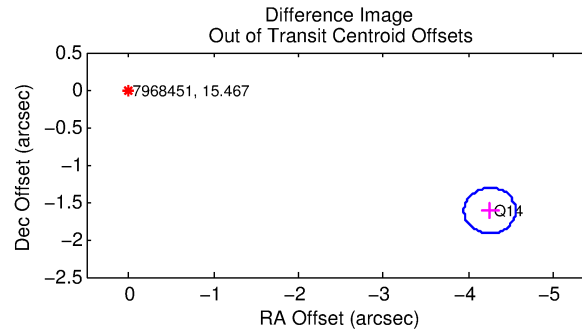
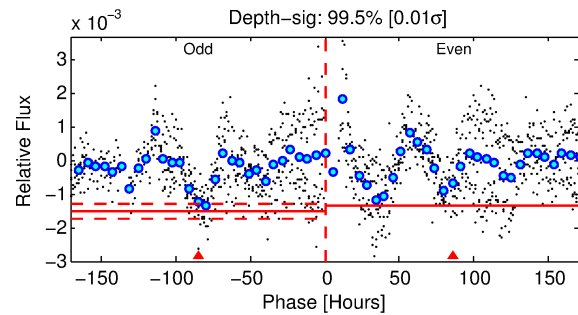
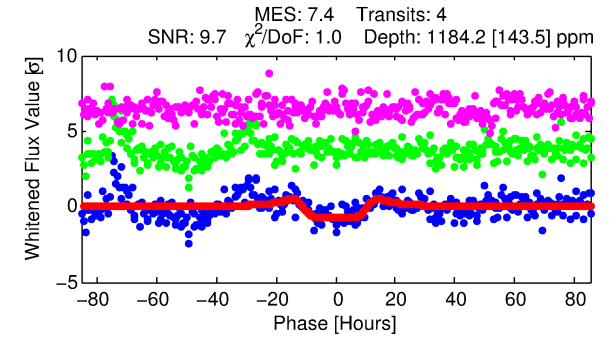
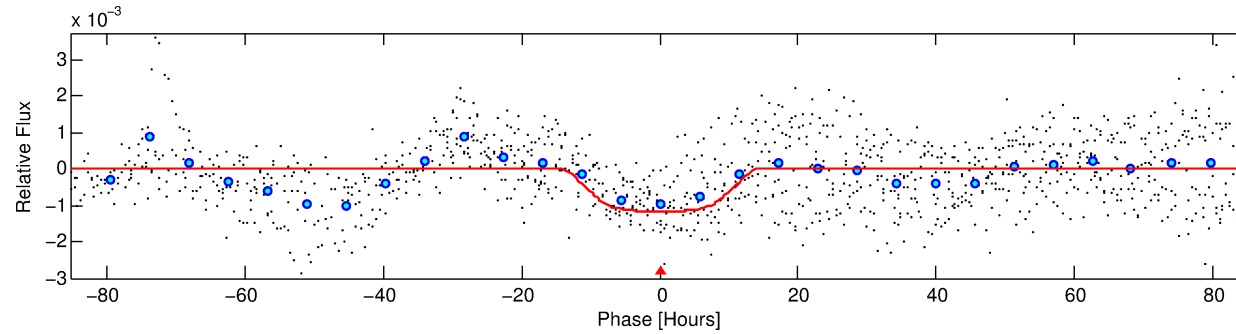
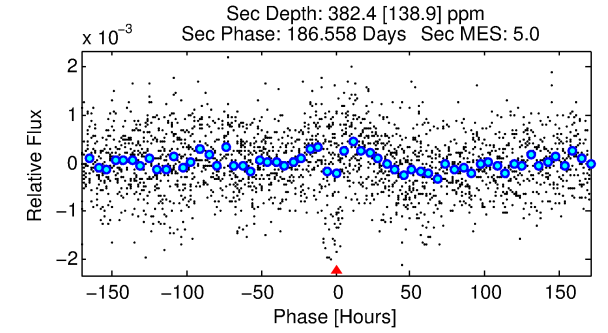
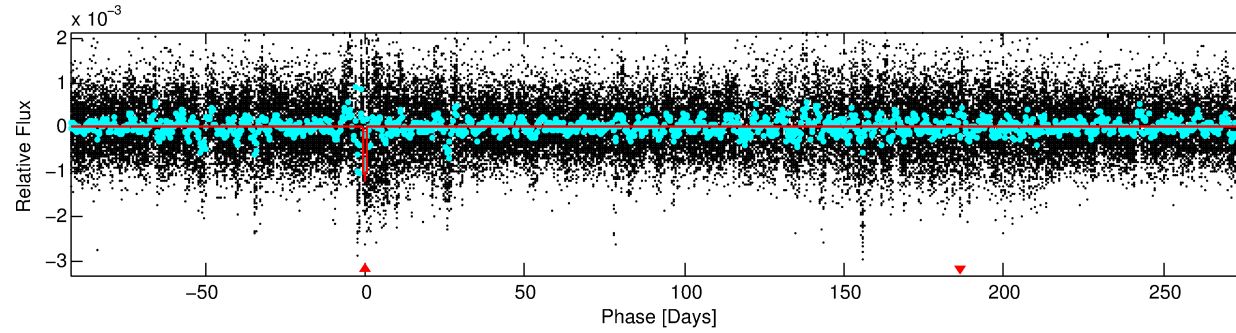
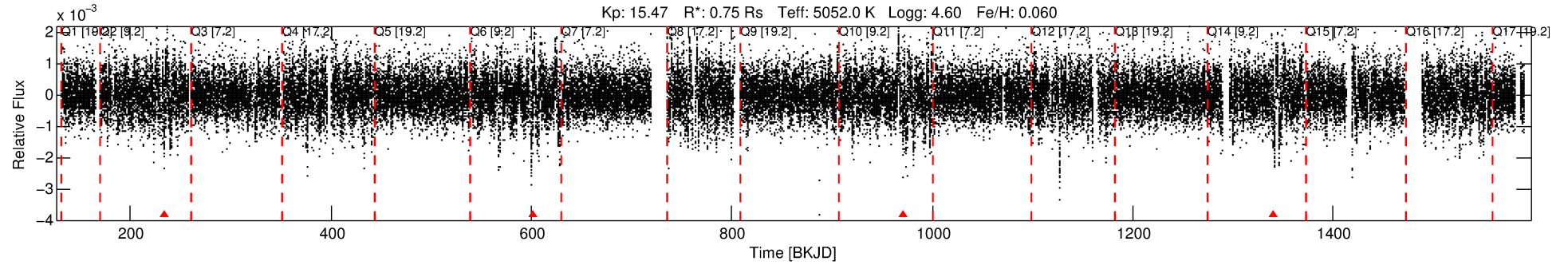
Ephemeris Match Information For 007968451-01

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
007968451-01	7968451	007968400-01	7968400	1:1	67.5	4	17	15.44	15.47	0.78	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: 7968451 Candidate: 1 of 1 Period: 369.030 d



DV Fit Results:

Period = 369.03041 [0.01959] d
Epoch = 233.3111 [0.0368] BKJD
Rp/R* = 0.0404 [0.0031]
a/R* = 45.34 [6.23]
b = 0.93 [0.02]
Seff = 0.37 [0.07]
Teq = 199 [10] K
Rp = 3.29 [0.47] Re
a = 0.9426 [0.0968] AU
Ag = 17231.98 [7267.29] [2.37σ]
Teff = 3517 [362] K [9.15σ]

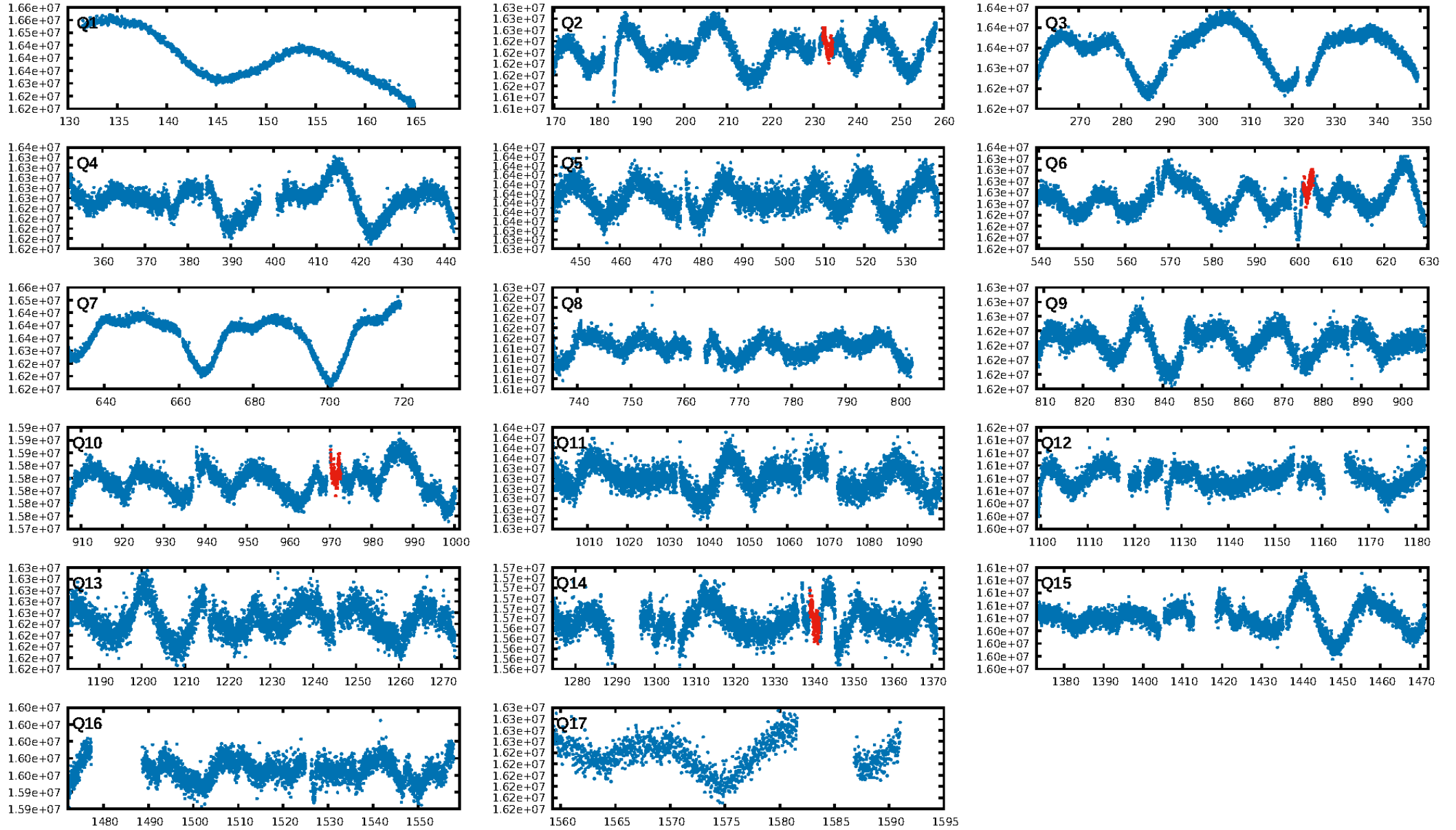
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.1%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.06e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: -2.372
Centroid-sig: 0.2%
Centroid-so: 3.858 arcsec [2.07σ]
OotOffset-rm: 4.553 arcsec [44.96σ]
KicOffset-rm: 4.526 arcsec [44.66σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

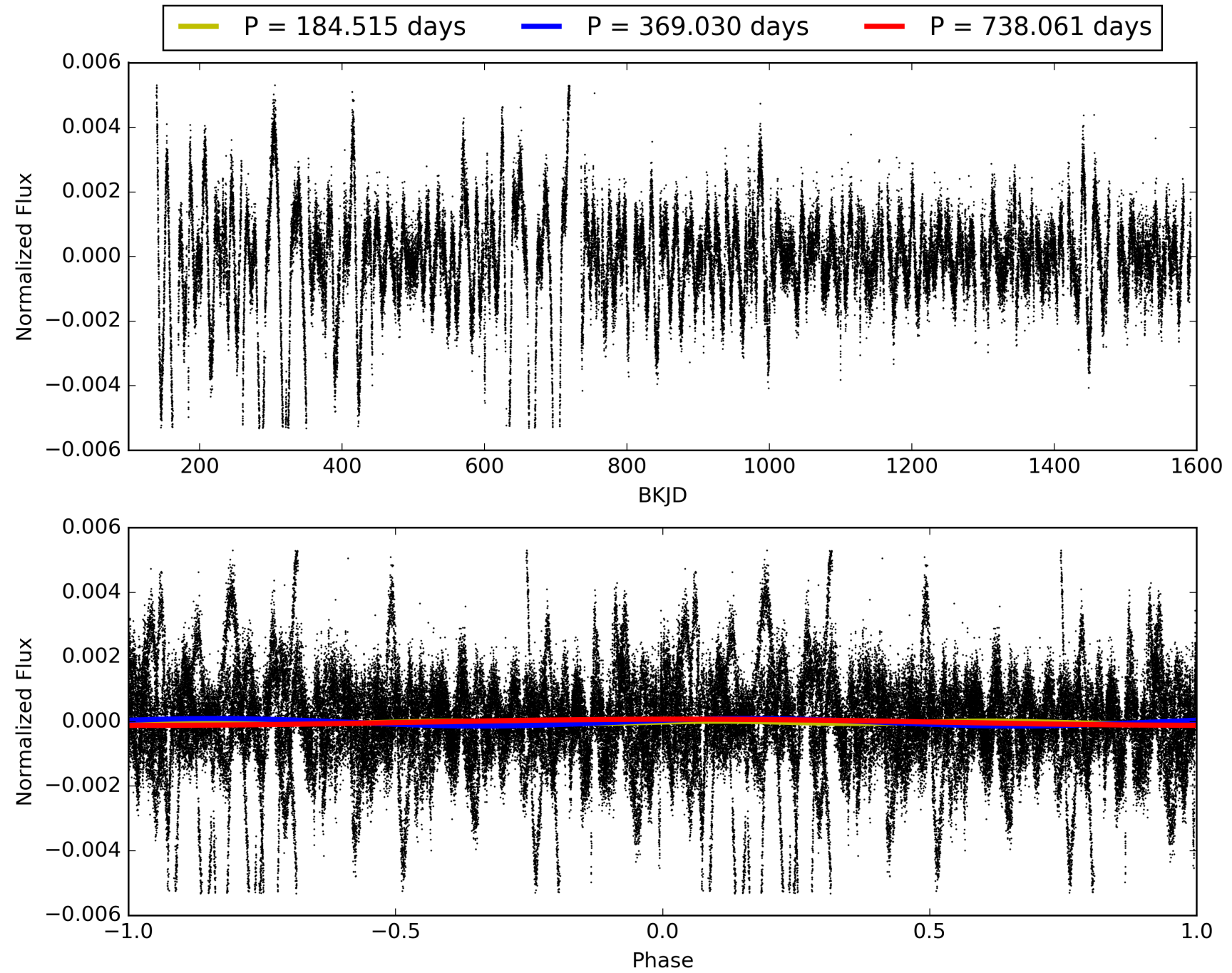
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:58:36 Z

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

TCE 007968451-01, PDC Light Curves

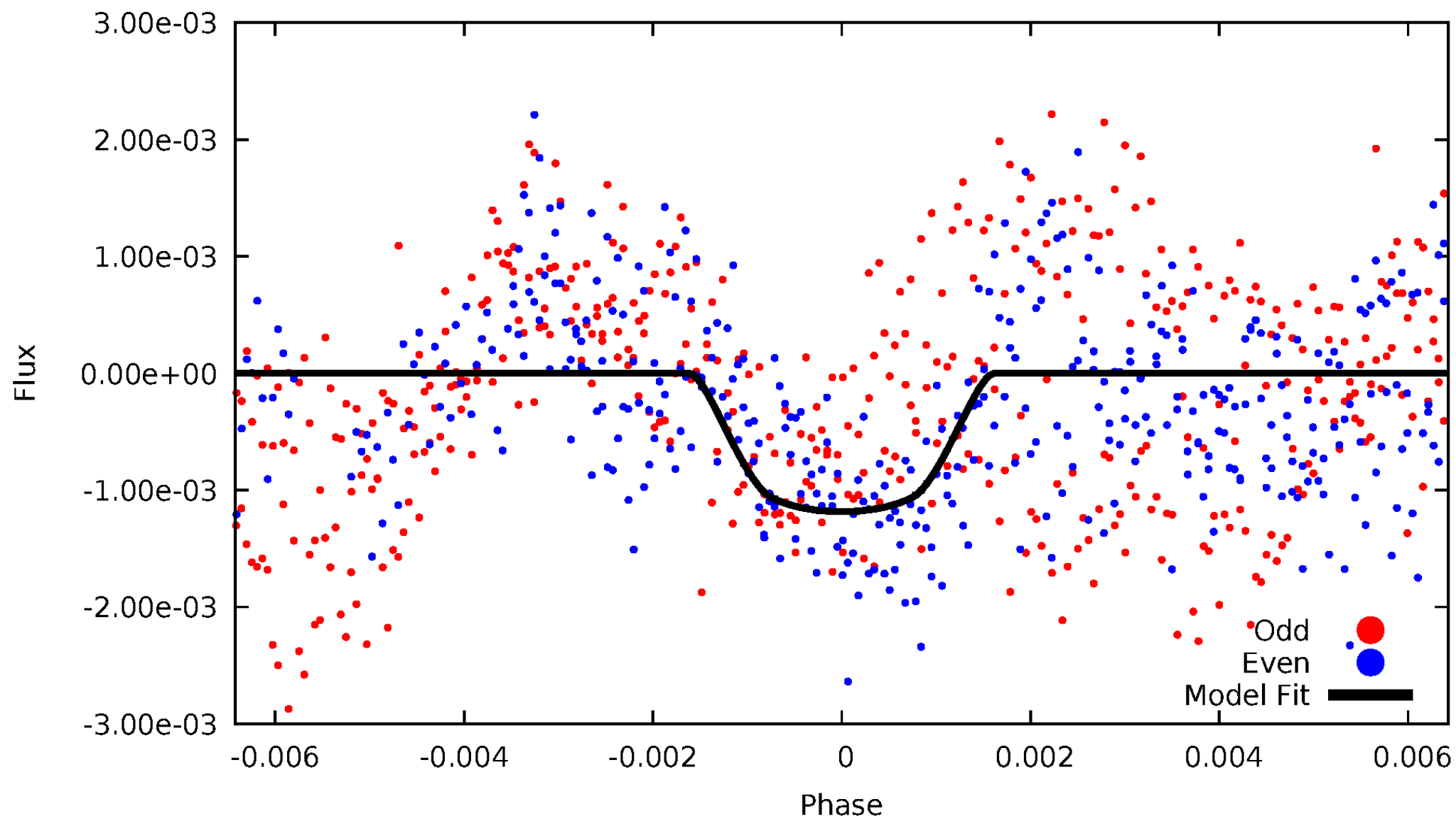


TCE 007968451-01



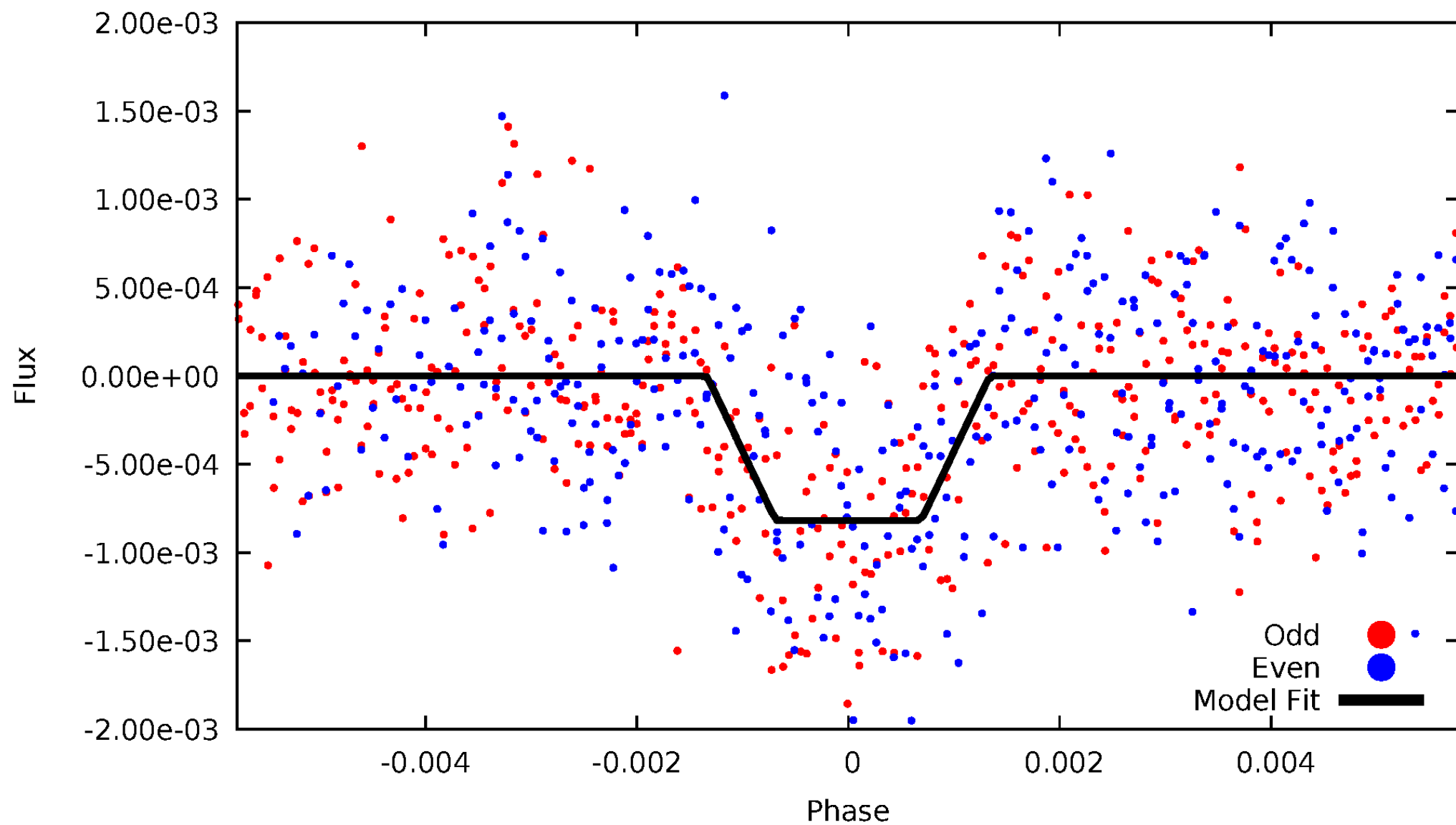
DV Odd/Even

TCE 007968451-01



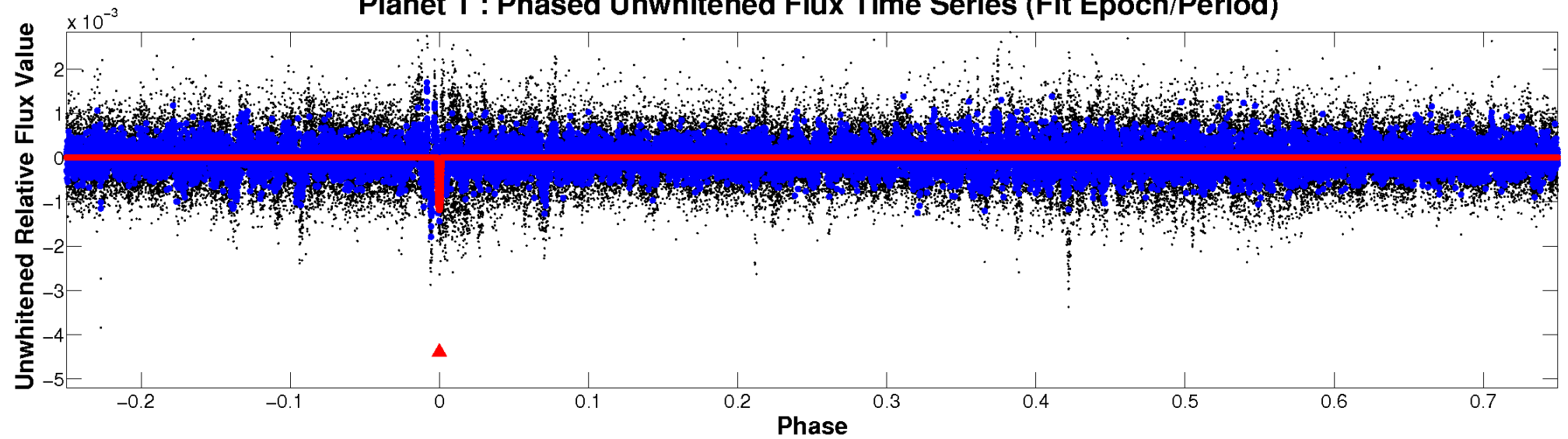
ALT Odd/Even

TCE 007968451-01

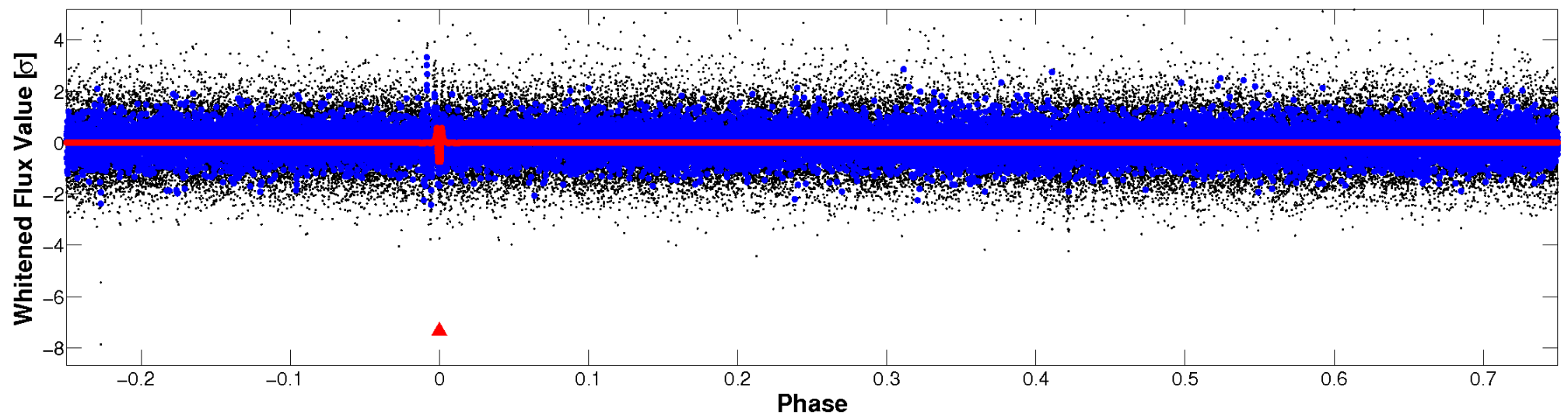


Non-Whitened Vs. Whitened Light Curve

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

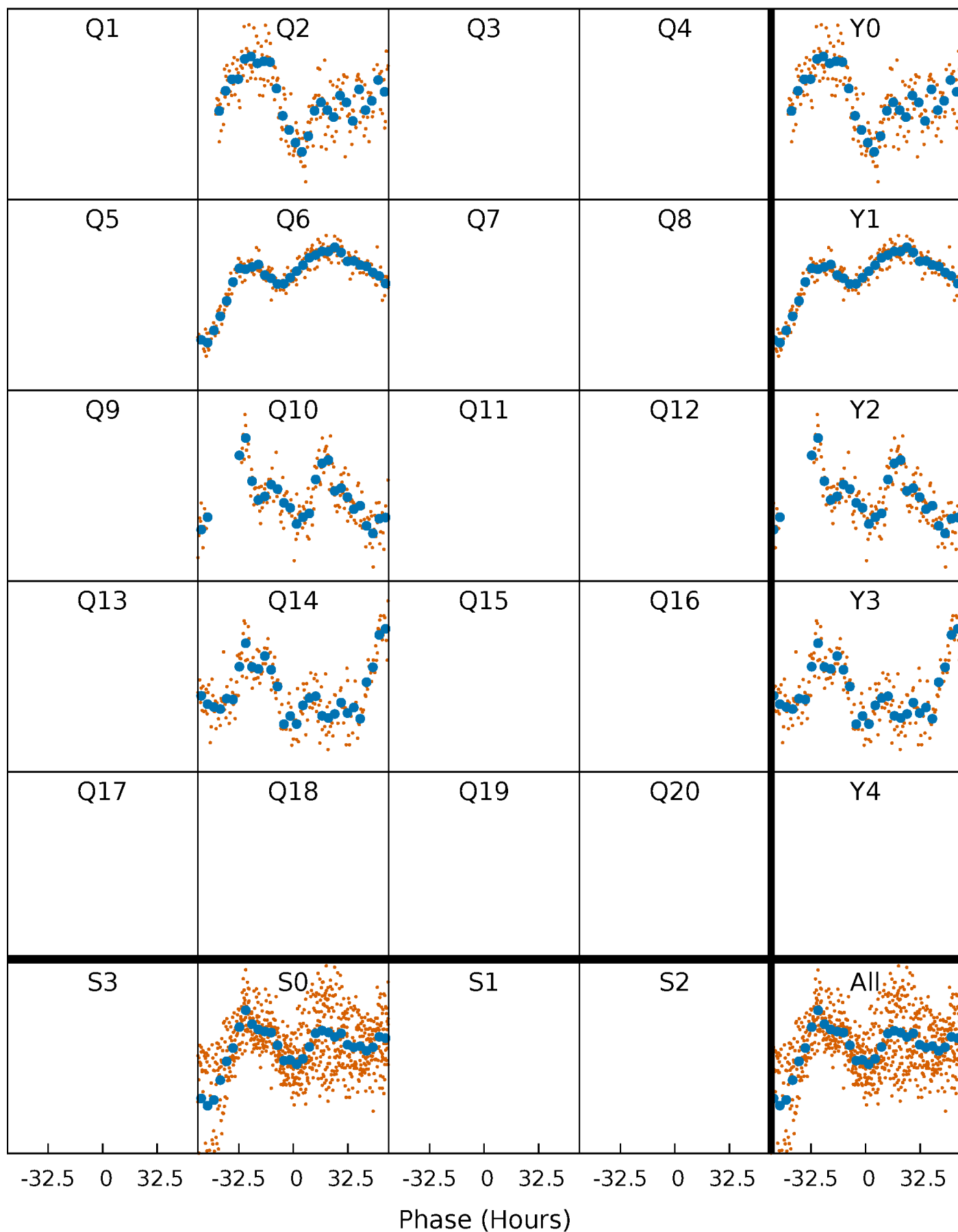


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



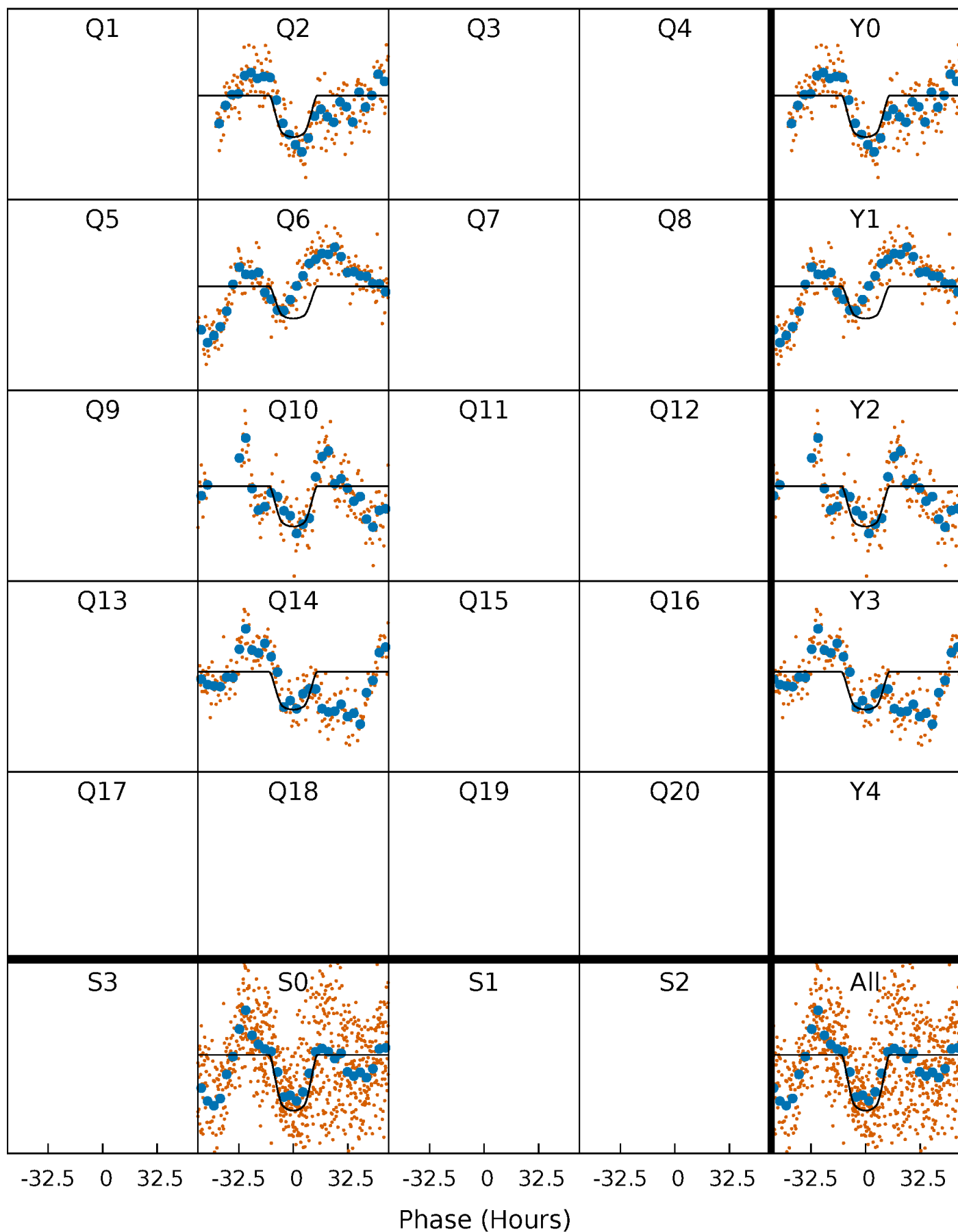
PDC Quarter-Phased Transit Curves

TCE 007968451-01 P=369.030406 Days $T_0=233.311108$ (BKJD)



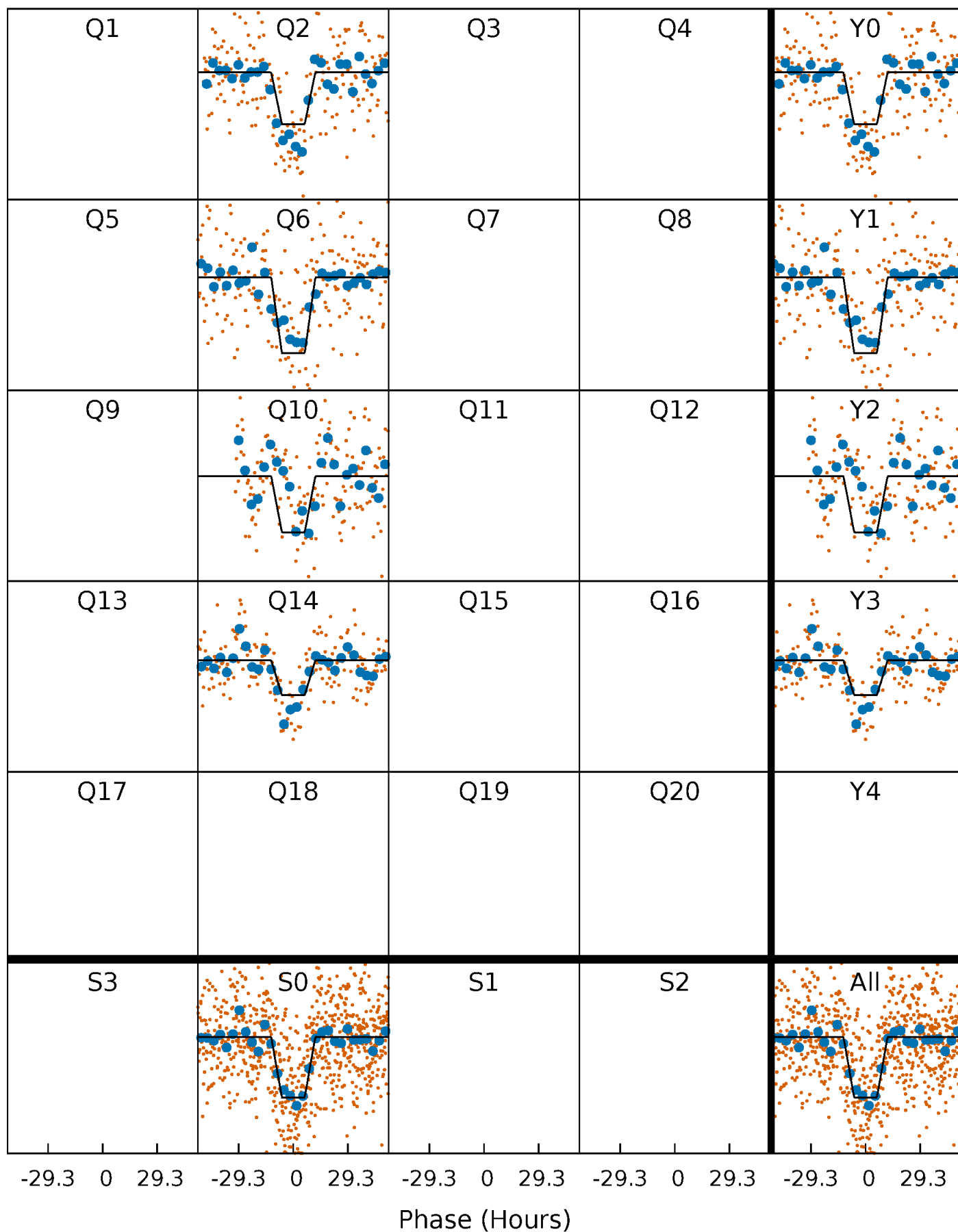
DV Quarter-Phased Transit Curves

TCE 007968451-01 P=369.030406 Days $T_0=233.311108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

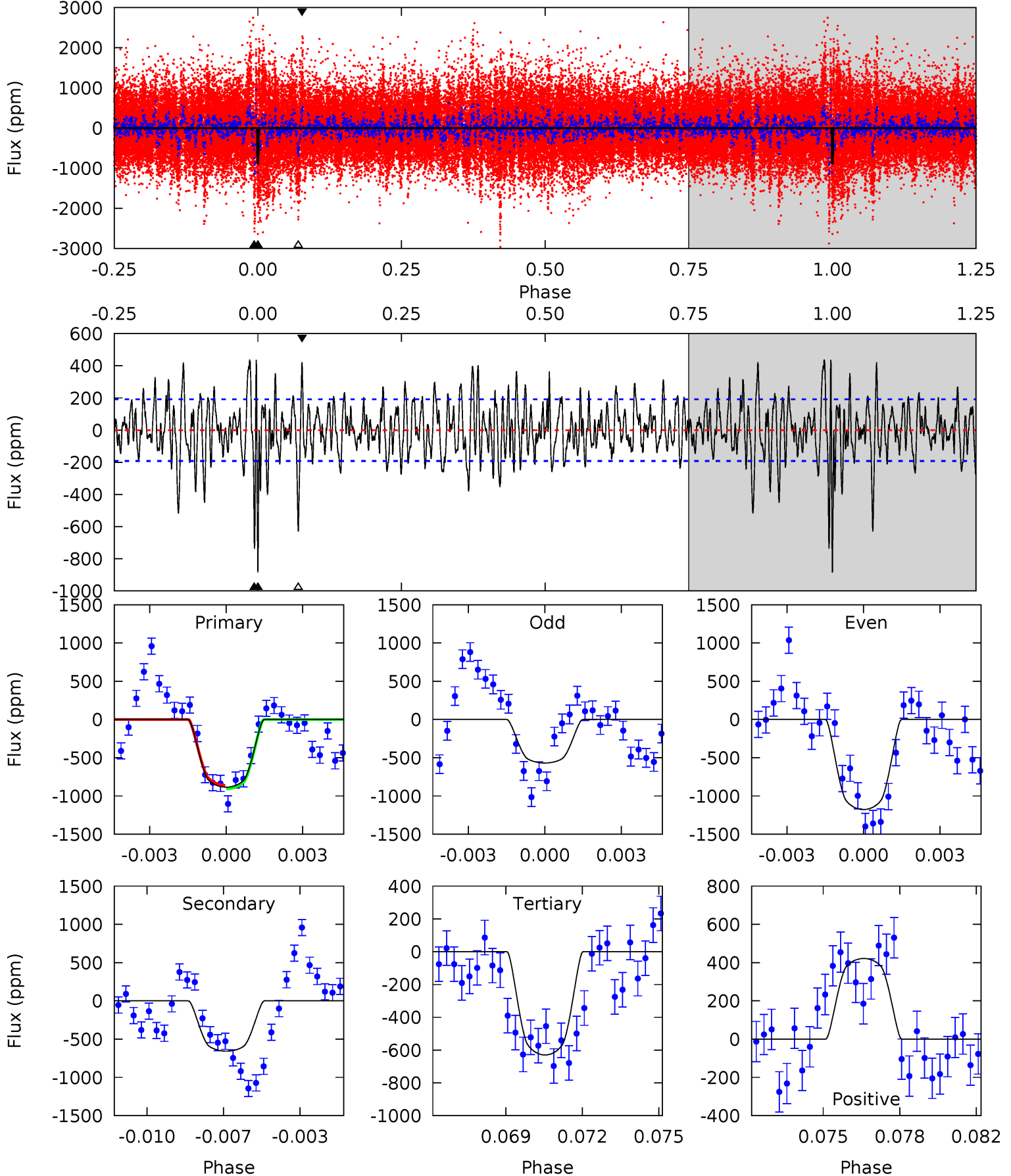
TCE 007968451-01 P=368.989226 Days $T_0=233.401061$ (BKJD)



DV Model-Shift Uniqueness Test

007968451-01, P = 369.030406 Days, E = 233.311108 Days

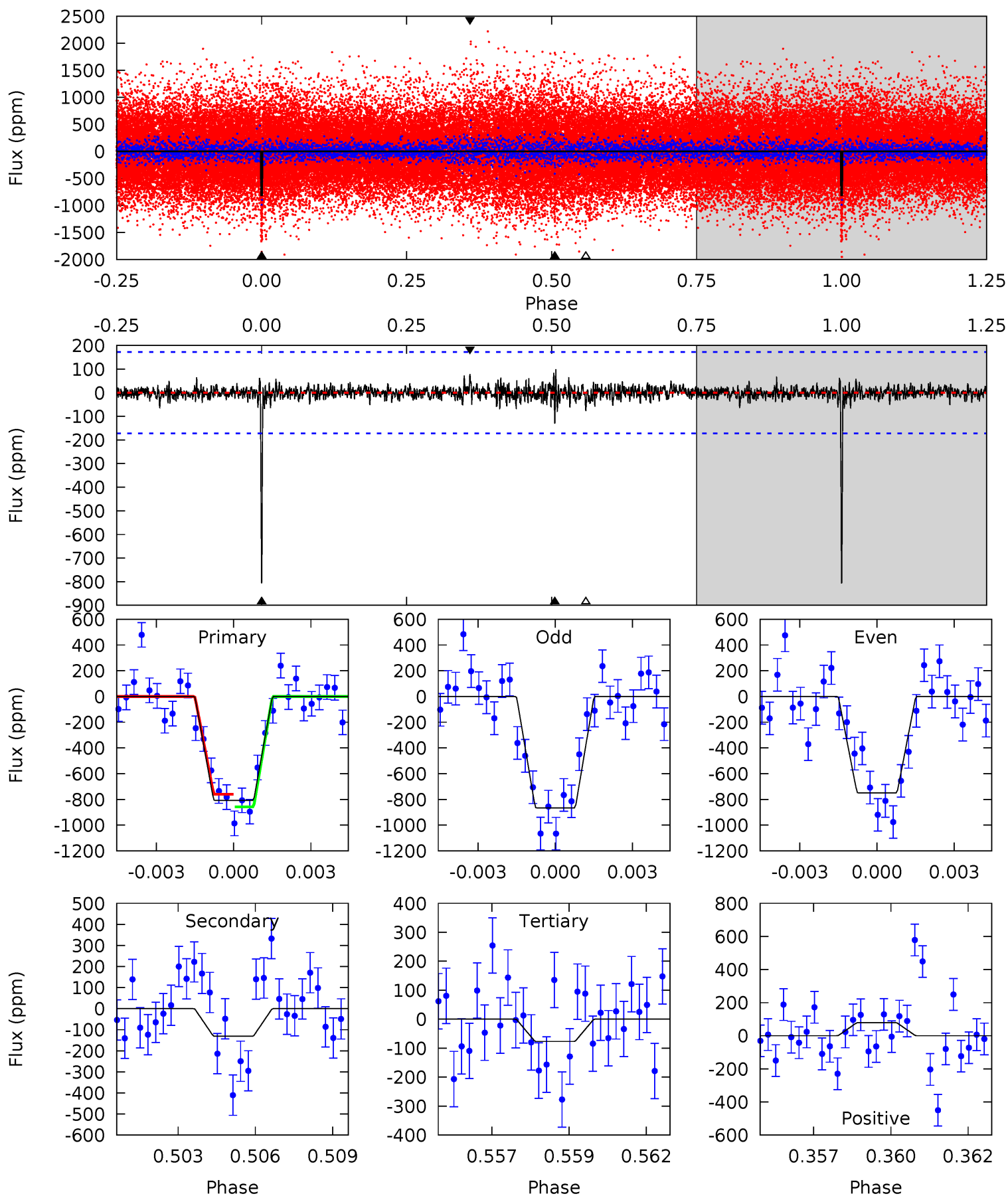
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	17.9	17.2	11.5	5.24	2.94	3.92	6.95	12.6	0.75	6.43	8.32	0.88	0.33	0.62



Alt Model-Shift Uniqueness Test

007968451-01, P = 368.989226 Days, E = 233.401061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	4.01	2.35	2.41	5.27	3.00	0.58	22.3	22.3	1.66	1.60	1.79	0.93	0.11	1.51



Stellar Parameters For KIC 007968451

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5052^{+152}_{-152}	$4.604^{+0.027}_{-0.082}$	$0.060^{+0.250}_{-0.300}$	$0.748^{+0.091}_{-0.056}$	$0.845^{+0.055}_{-0.090}$	$2.839^{+0.419}_{-0.779}$
	+3%/-3%	+1%/-2%	+417%/-500%	+12%/-7%	+7%/-11%	+15%/-27%
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 007968451-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-657 ± 37	$3.38^{+0.33}_{-0.32}$	282^{+11}_{-11}	4227^{+176}_{-162}	28146^{+5792}_{-4748}
Alt.	-131 ± 33	$2.40^{+0.31}_{-0.29}$	281^{+11}_{-10}	3596^{+220}_{-227}	11039^{+4314}_{-3455}

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

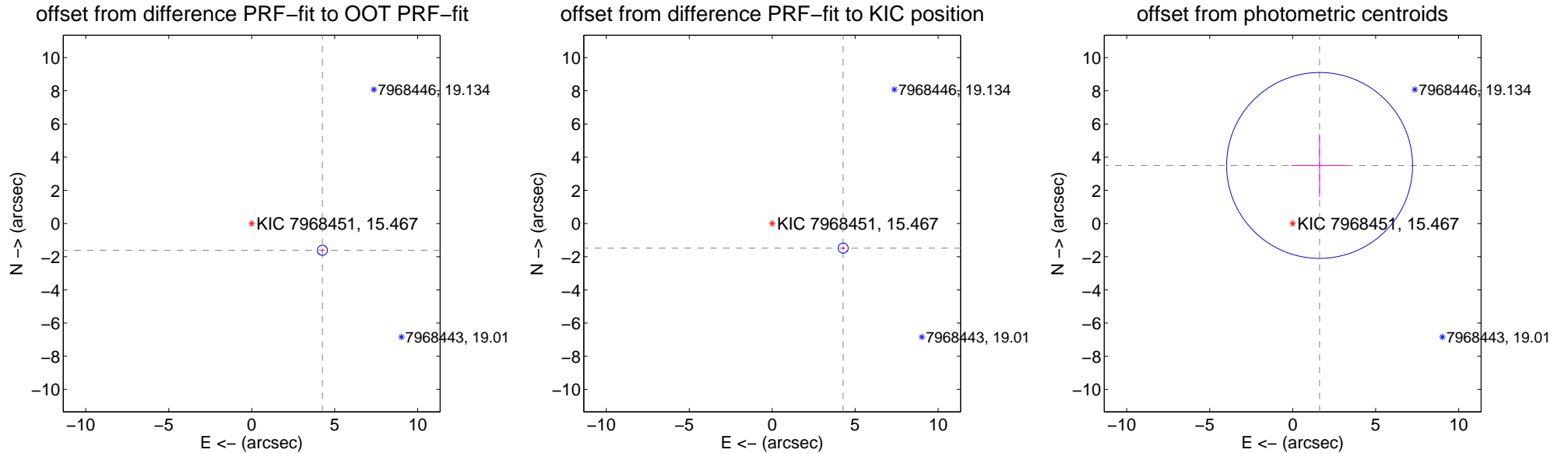
DV Centroid Data

Supplemental centroid analysis for 007968451-01. Kepler magnitude: 15.47. Transit SNR 9.74

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.553 ± 0.101	44.96	-4.257 ± 0.102	-1.615 ± 0.098
PRF-fit source offset from KIC position	4.526 ± 0.101	44.66	-4.276 ± 0.102	-1.485 ± 0.098
photometric centroid source offset	3.86 ± 1.87	2.07	-1.62 ± 1.70	3.50 ± 1.90

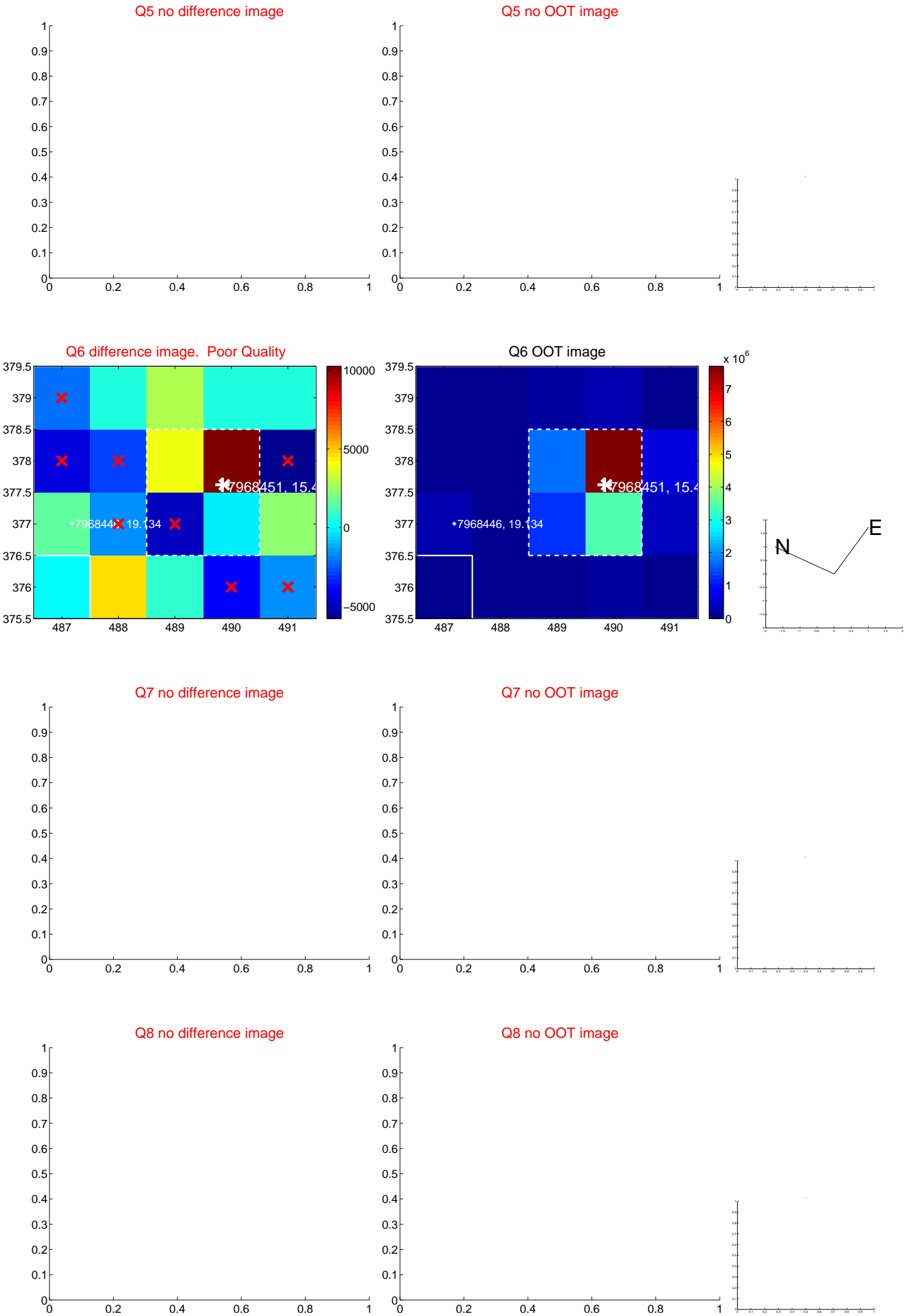


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



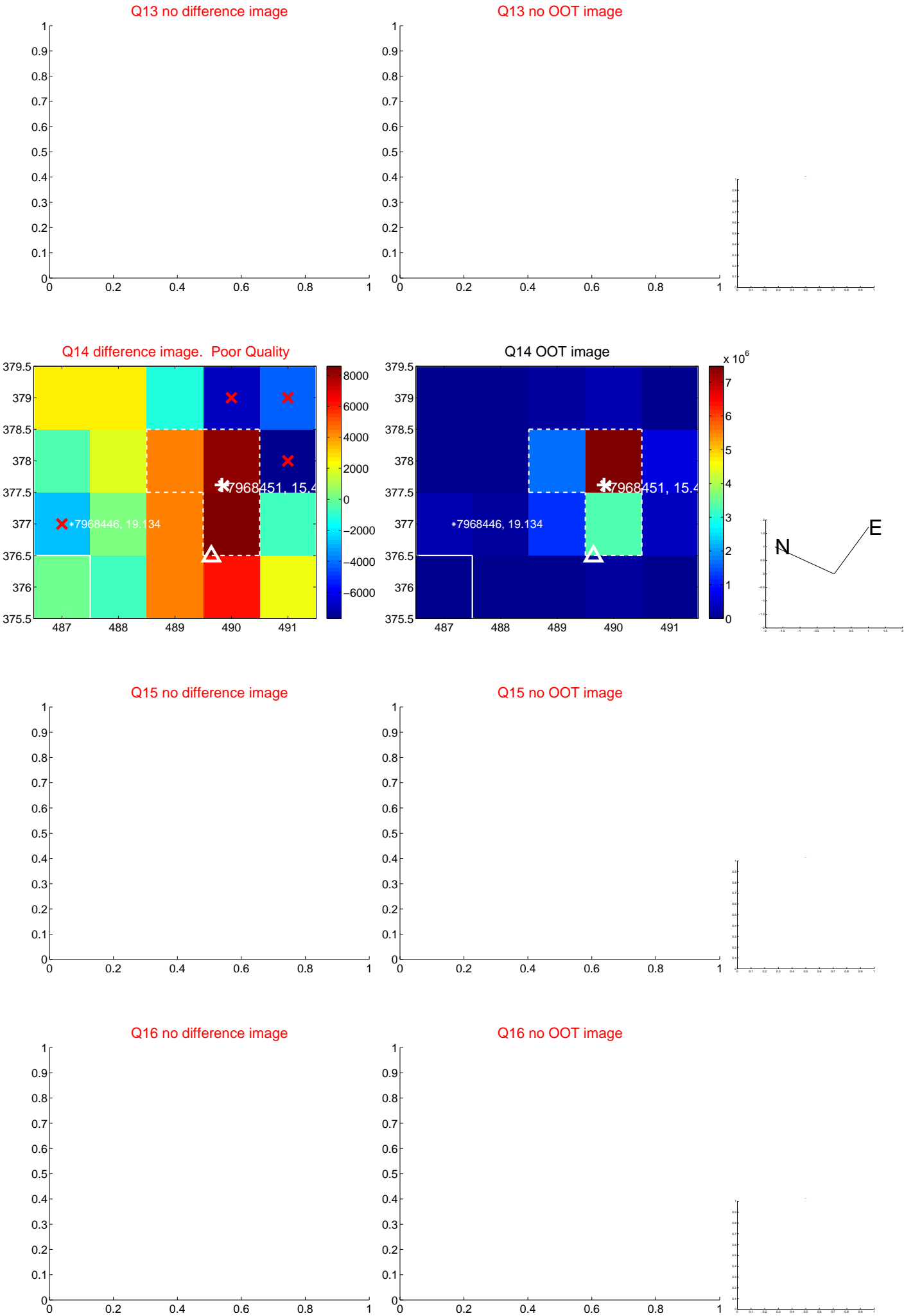
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



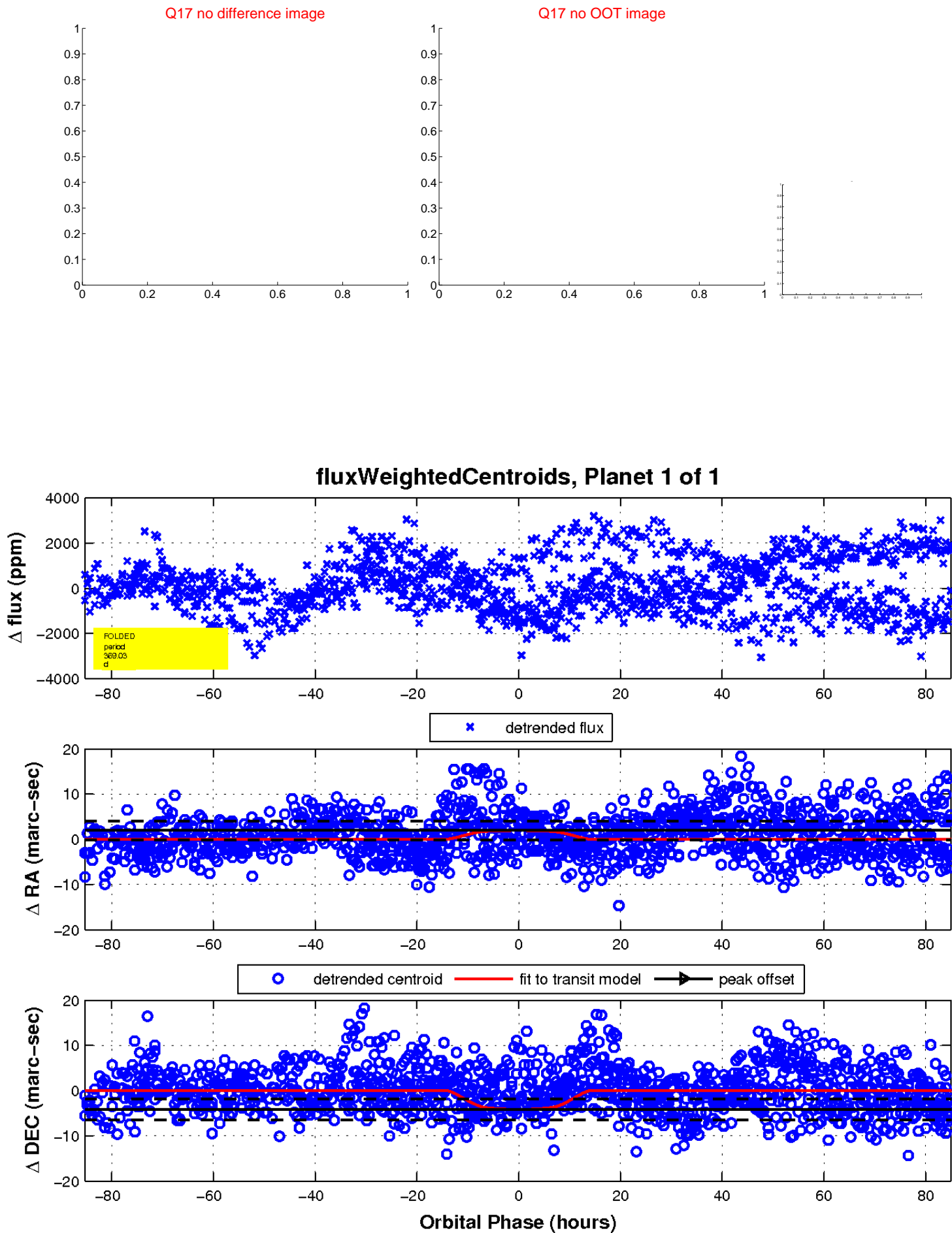
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

