

KIC 010974032

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})
010974032-01	OBS	No	373.336543	390.338549	53.4	10.551	17.7	10.2	3.58	9264	2.90	48.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010974032-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

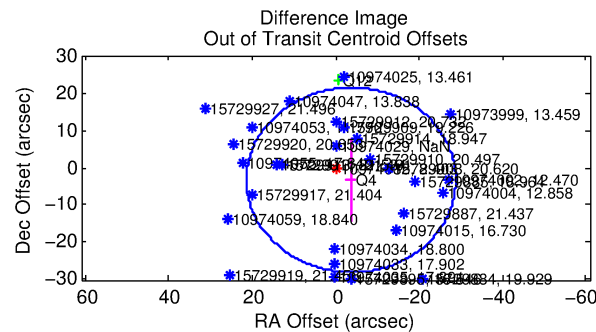
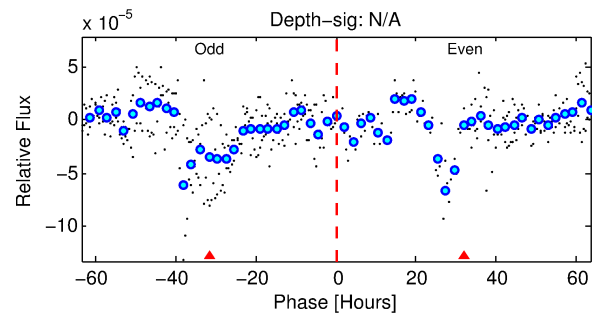
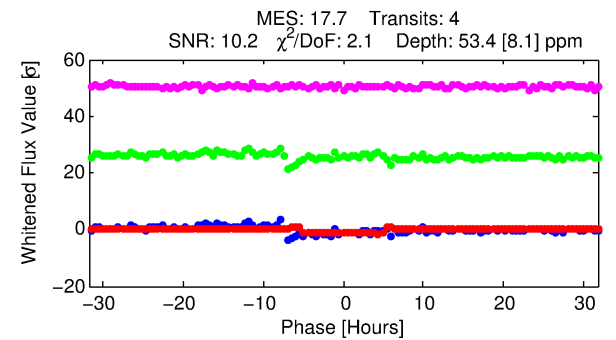
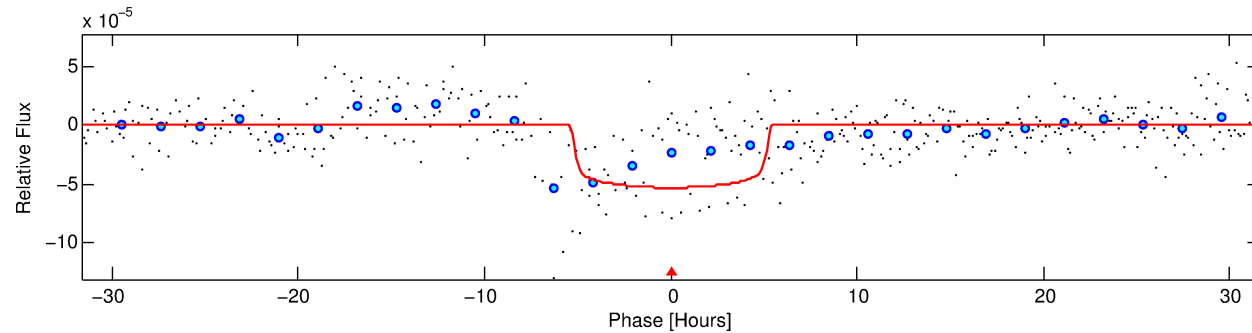
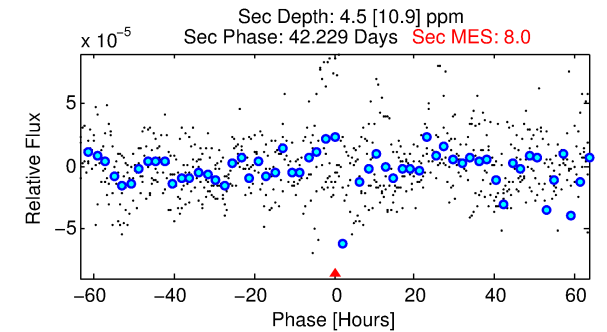
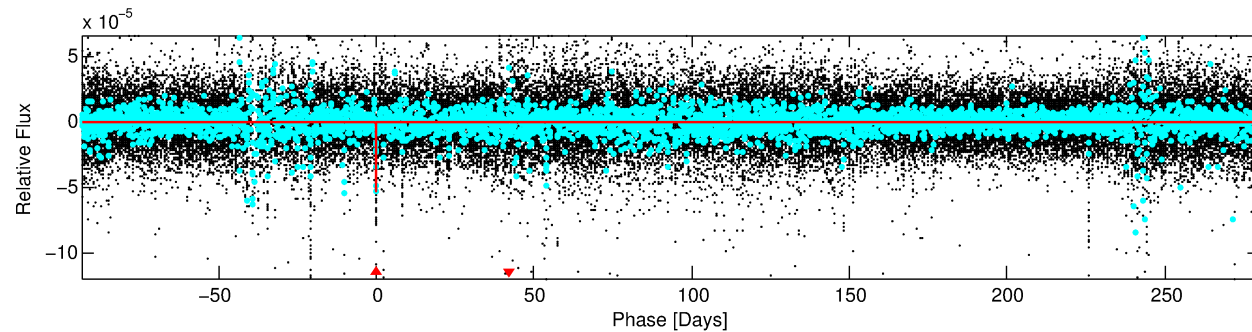
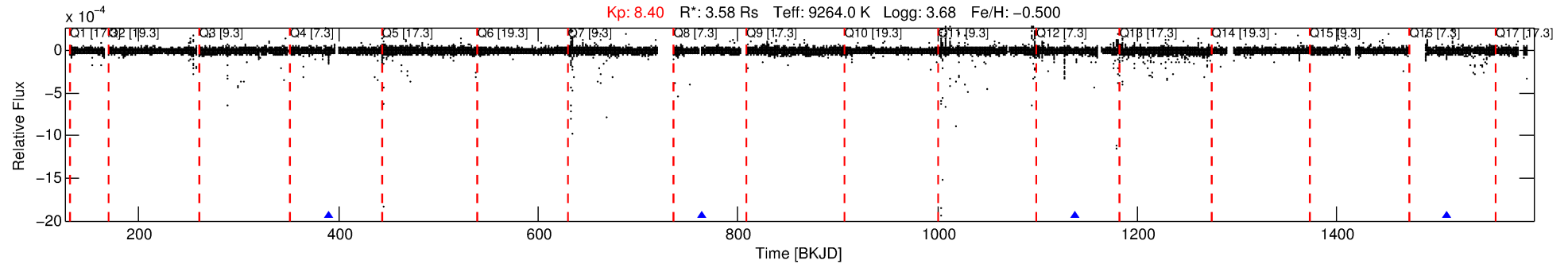
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010974032-01

No Significant Match Found

DV One-Page Summary

KIC: 10974032 Candidate: 1 of 1 Period: 373.337 d



DV Fit Results:

Period = 373.33654 [0.00507] d
Epoch = 390.3385 [0.0091] BKJD
Rp/R* = 0.0074 [0.0012]
a/R* = 159.12 [144.48]
b = 0.82 [0.37]
Seff = 48.05 [43.96]
Teq = 671 [154] K
Rp = 2.90 [1.72] Re
a = 1.3259 [0.7369] AU
Ag = 518.46 [1354.70] [0.38σ]
Teff = 4953 [3049] K [1.40σ]

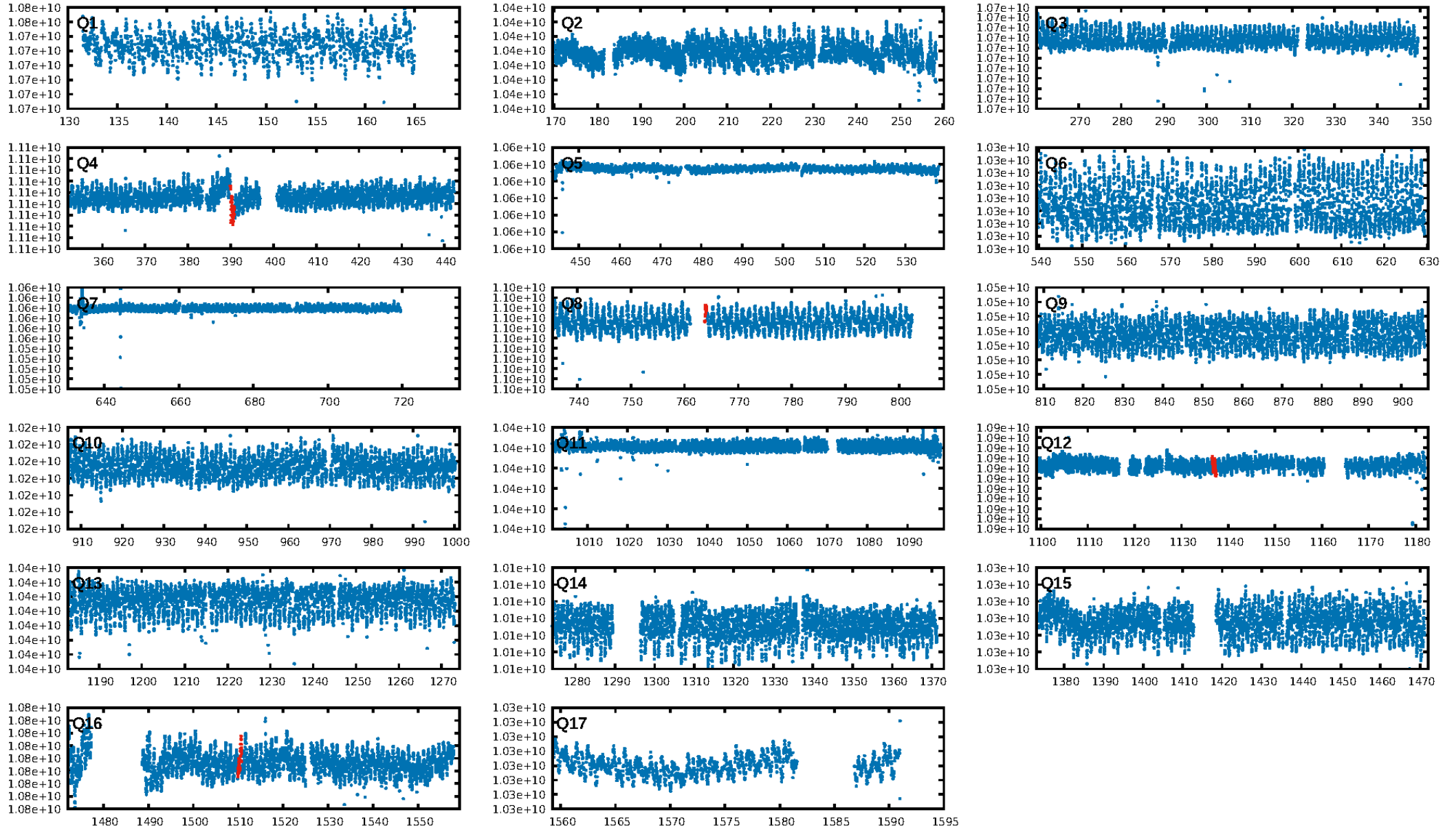
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.3%
Bootstrap-pfa: 6.46e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 90.8%
Centroid-so: 4.828 arcsec [0.88σ]
OotOffset-rm: 5.010 arcsec [0.60σ]
KicOffset-rm: 6.650 arcsec [0.66σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

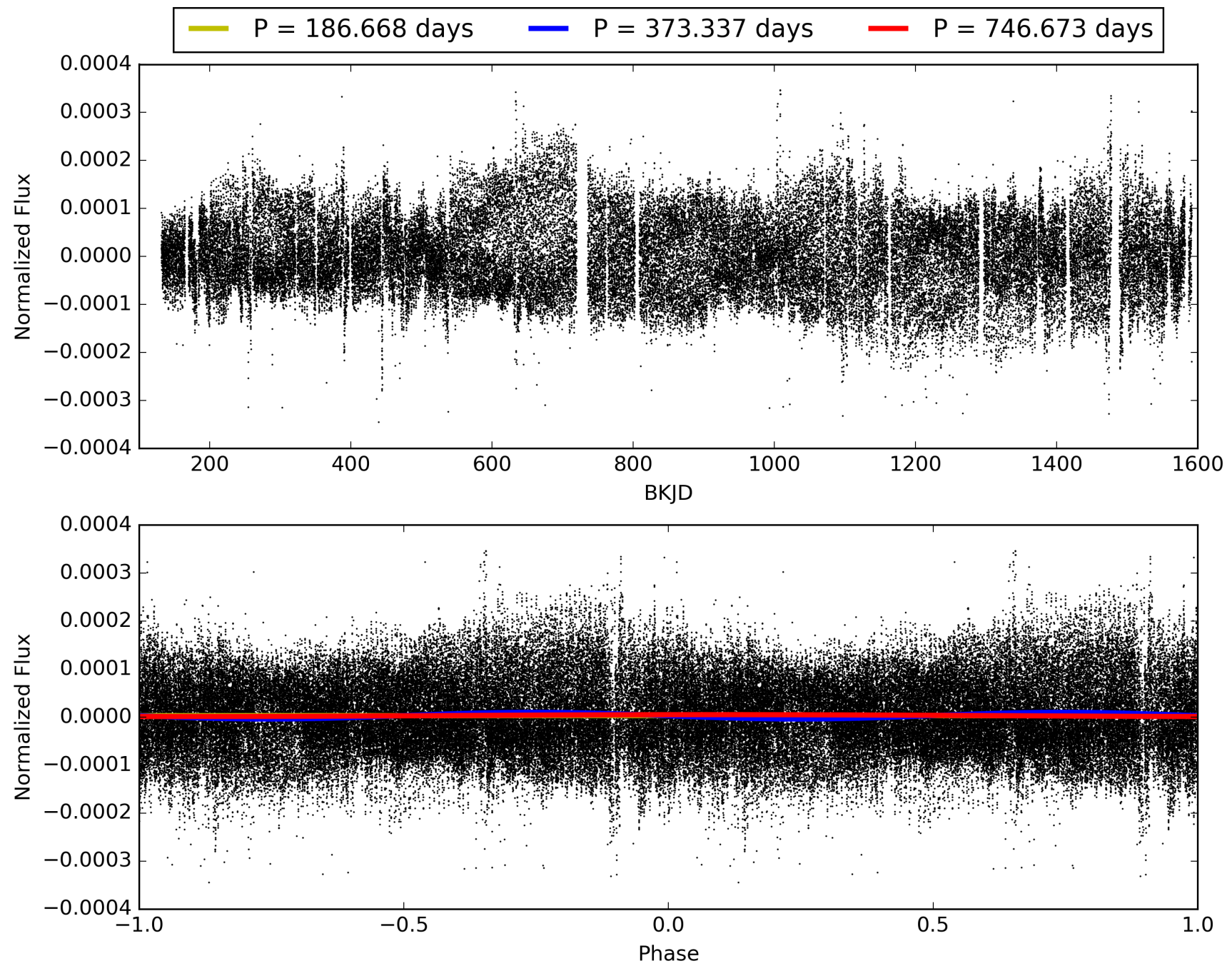
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:35:36 Z

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

TCE 010974032-01, PDC Light Curves

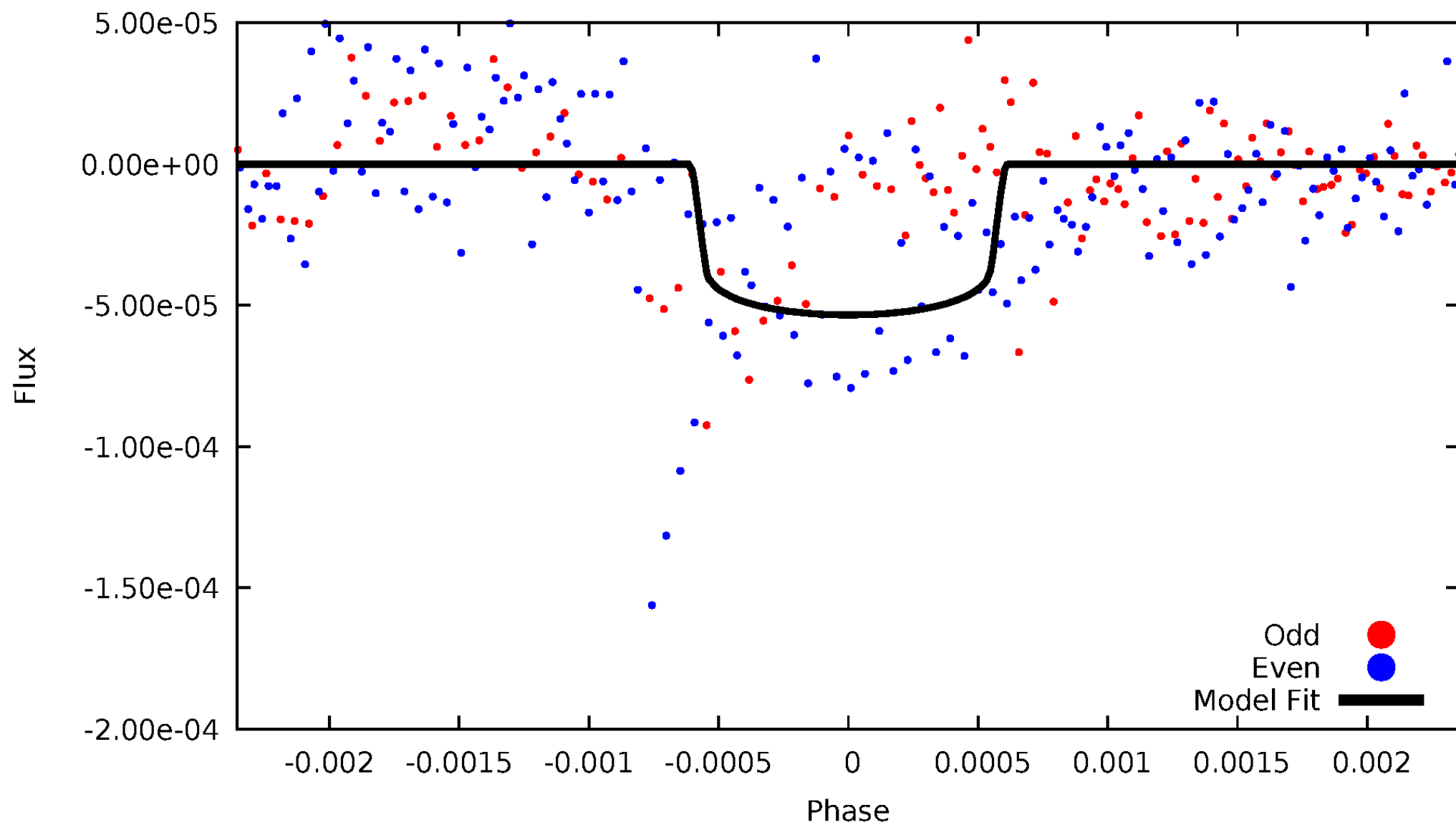


TCE 010974032-01



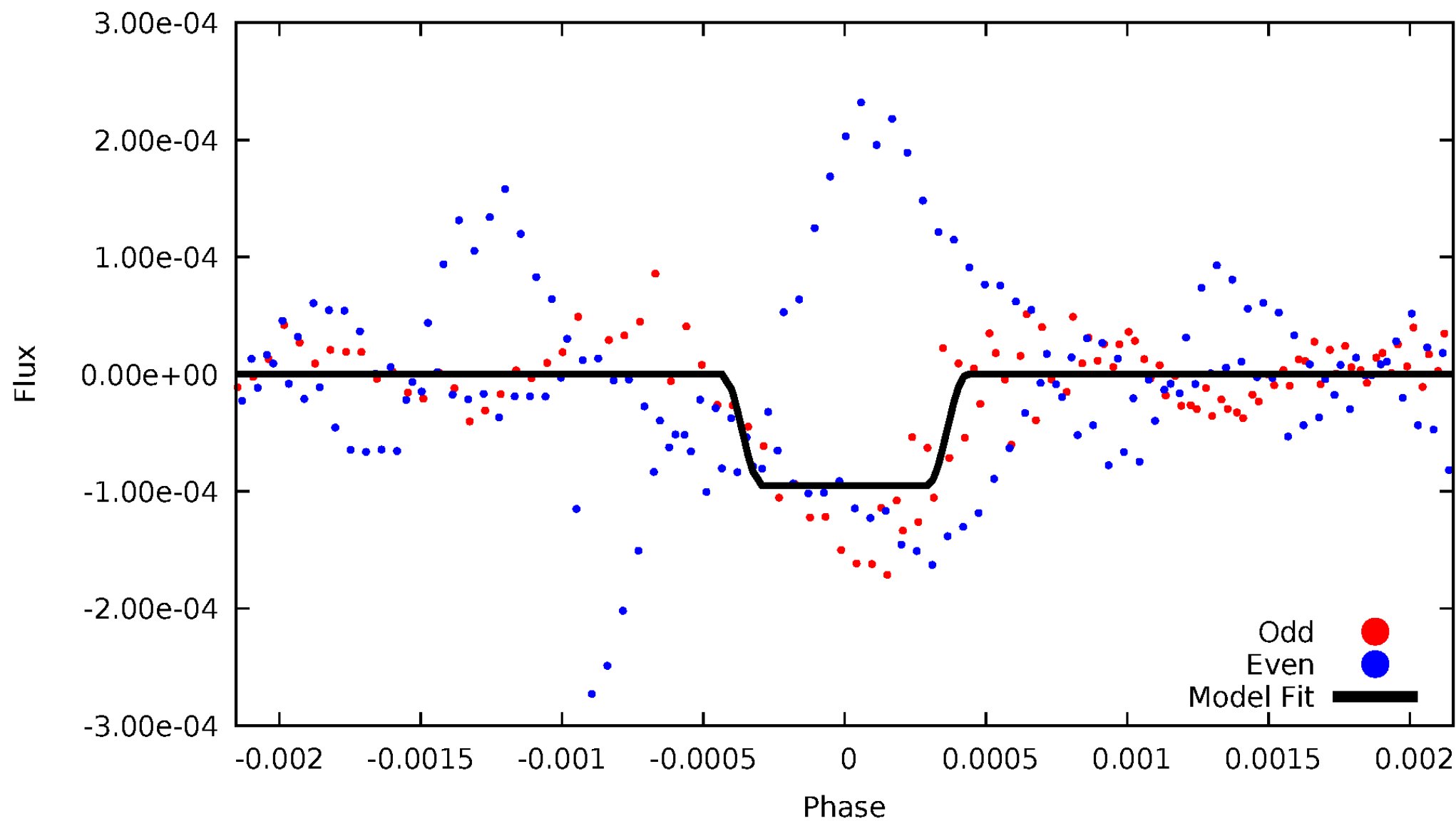
DV Odd/Even

TCE 010974032-01



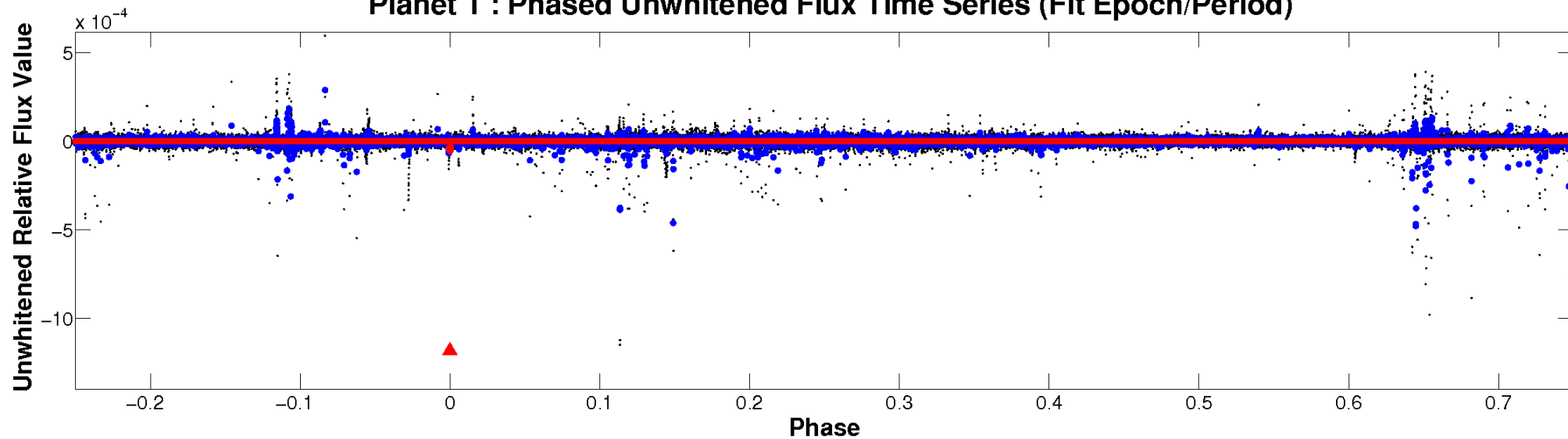
ALT Odd/Even

TCE 010974032-01

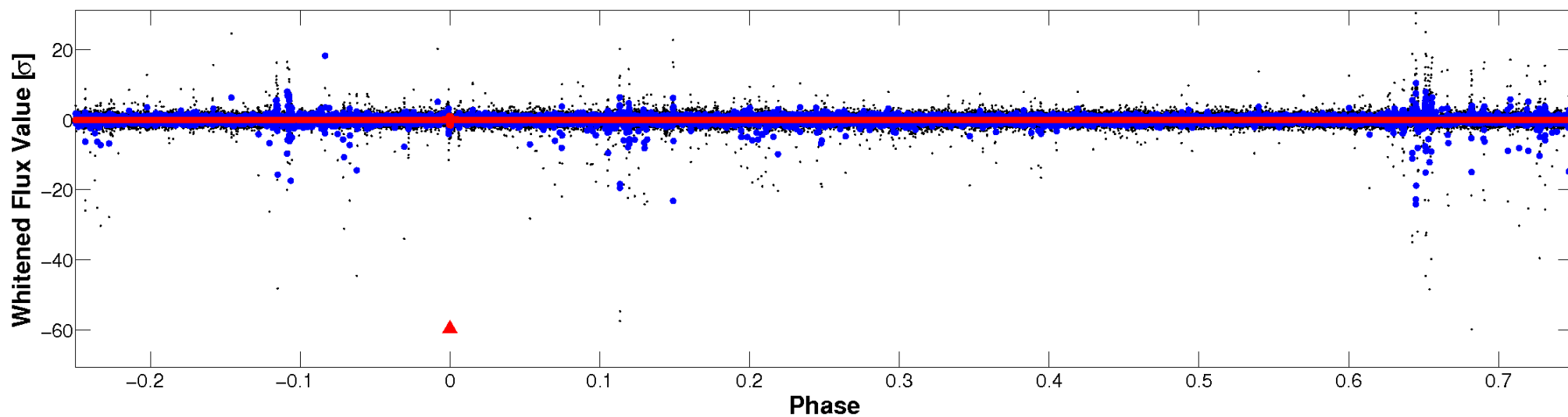


Non-Whitened Vs. Whitened Light Curve

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

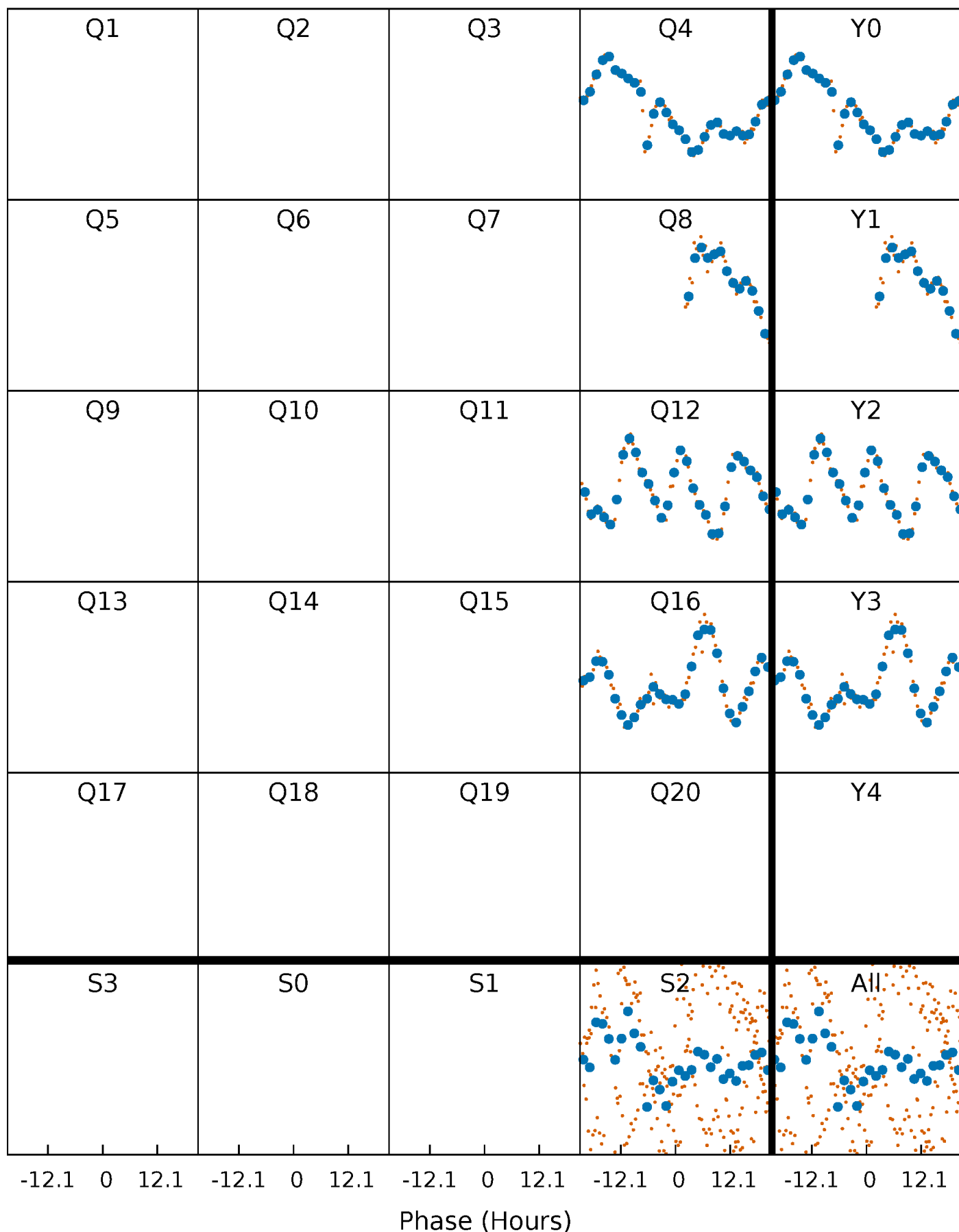


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



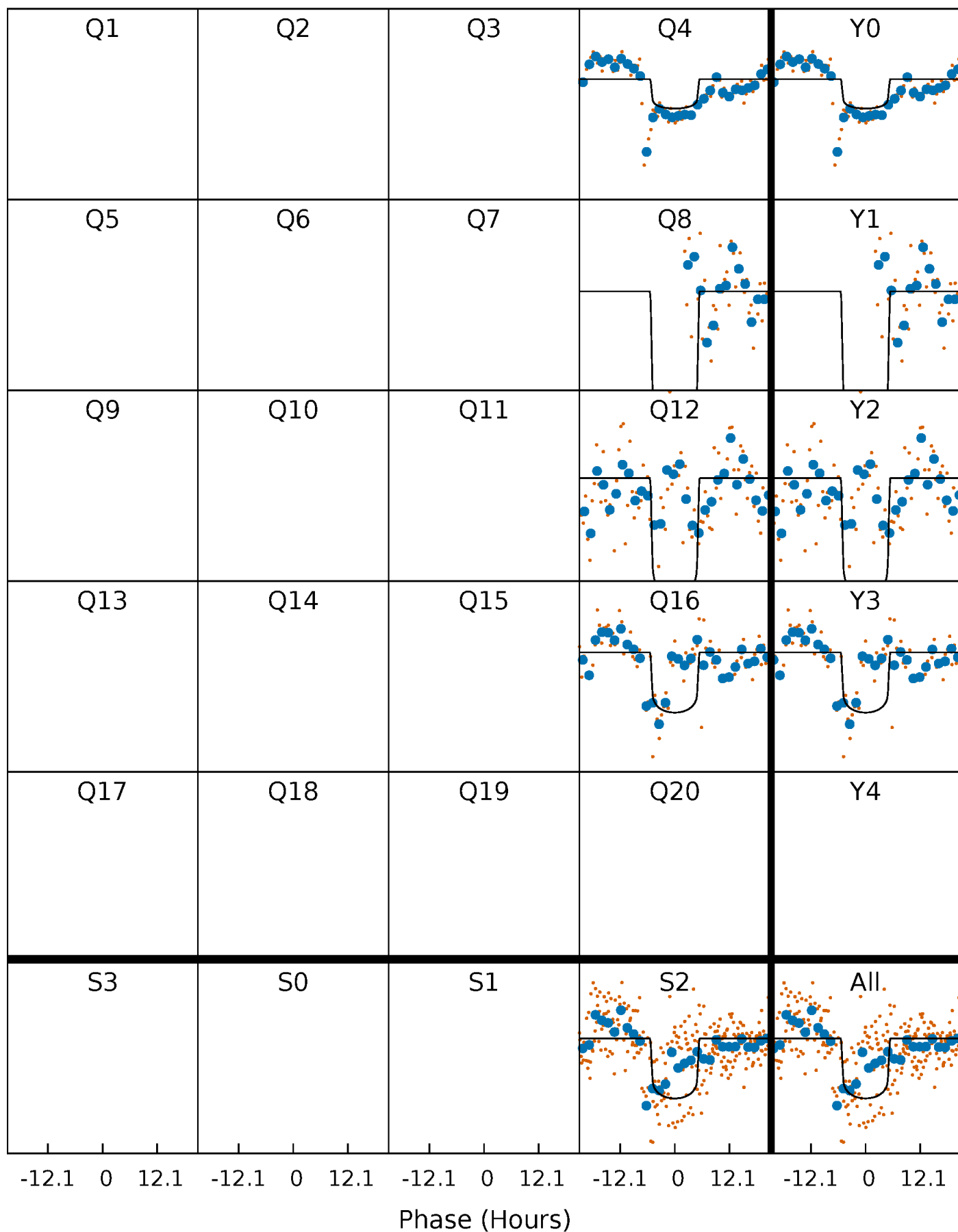
PDC Quarter-Phased Transit Curves

TCE 010974032-01 P=373.336543 Days $T_0=390.338549$ (BKJD)



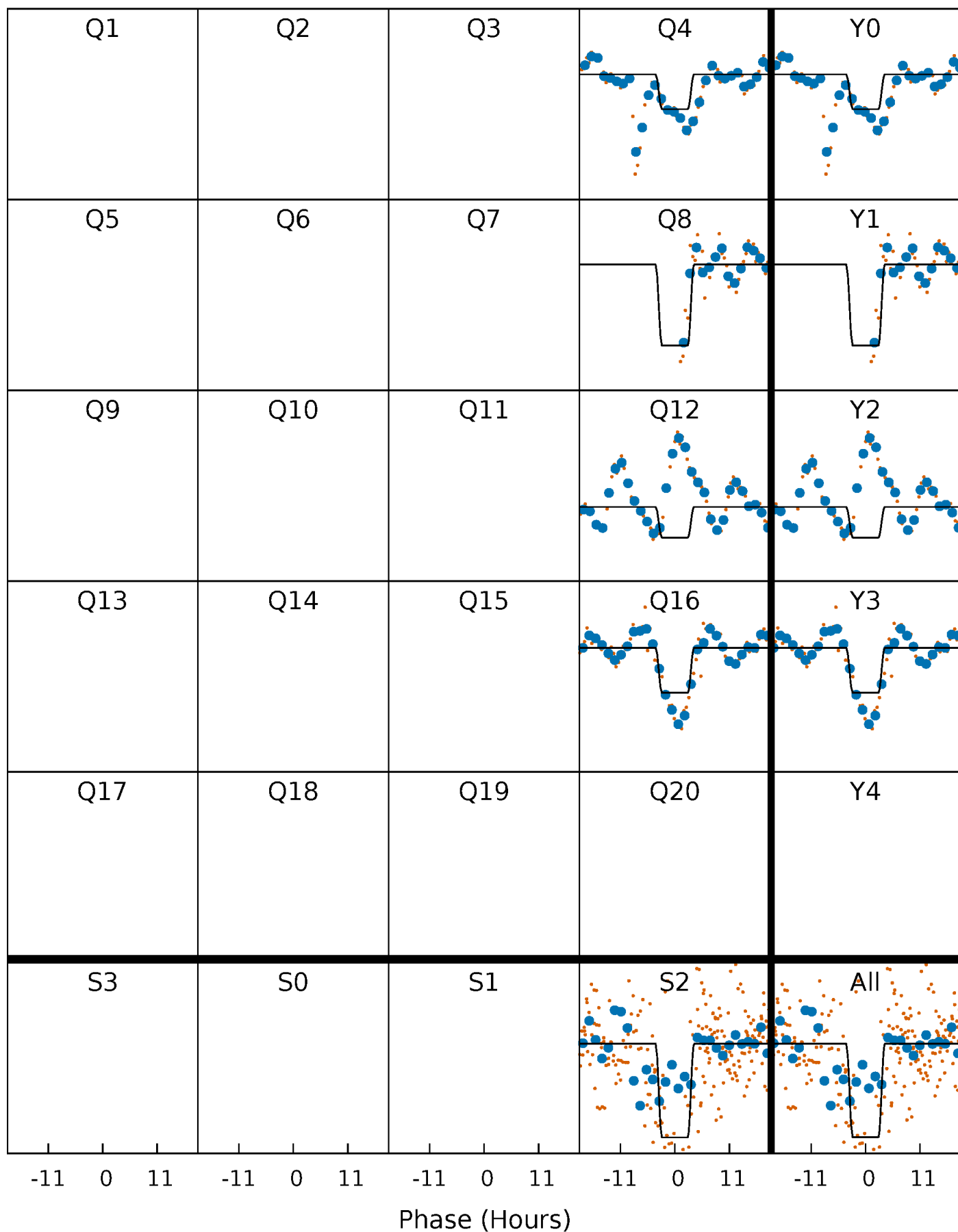
DV Quarter-Phased Transit Curves

TCE 010974032-01 P=373.336543 Days $T_0=390.338549$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

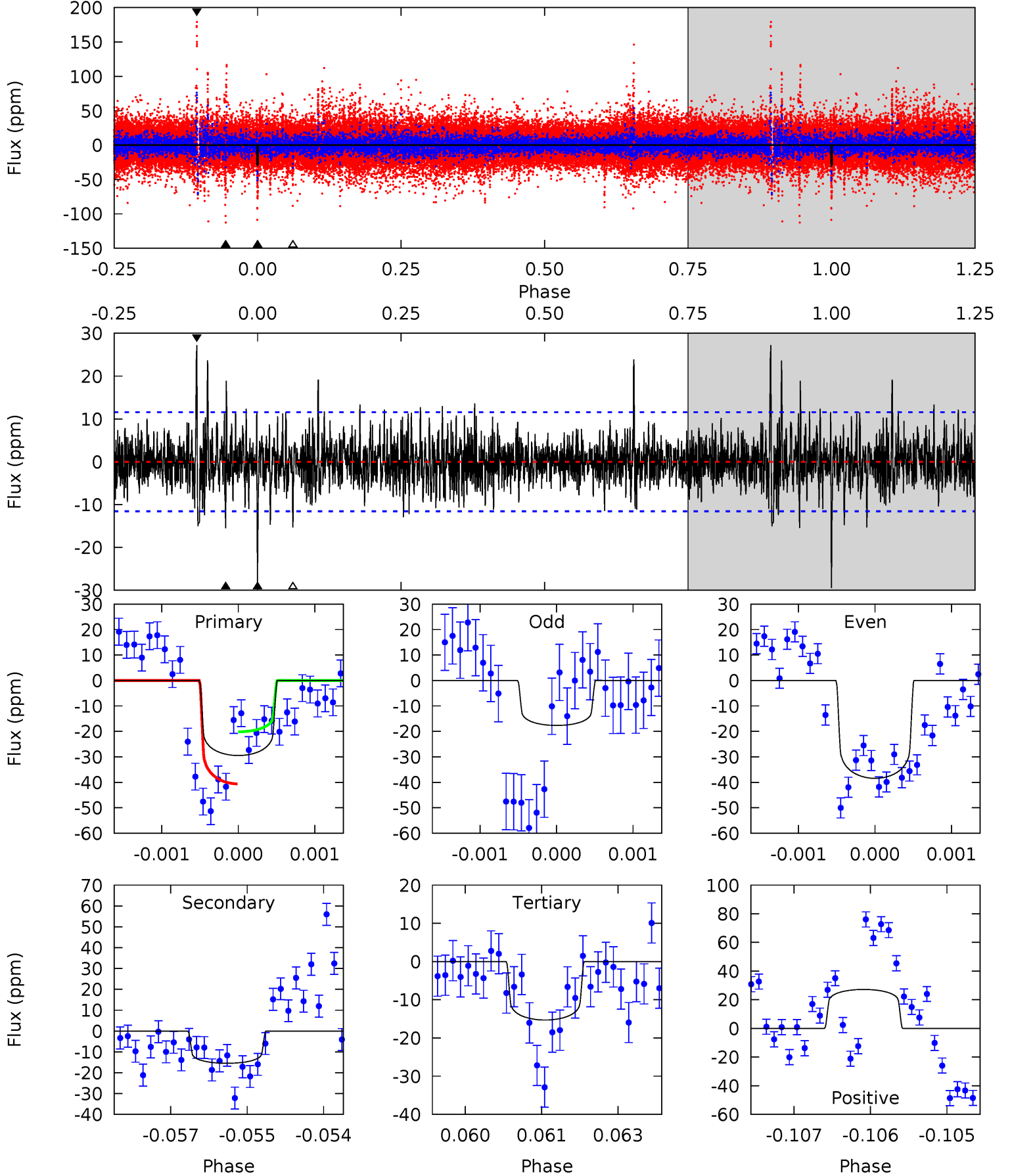
TCE 010974032-01 P=373.327952 Days $T_0=390.389798$ (BKJD)



DV Model-Shift Uniqueness Test

010974032-01, P = 373.336543 Days, E = 17.002006 Days

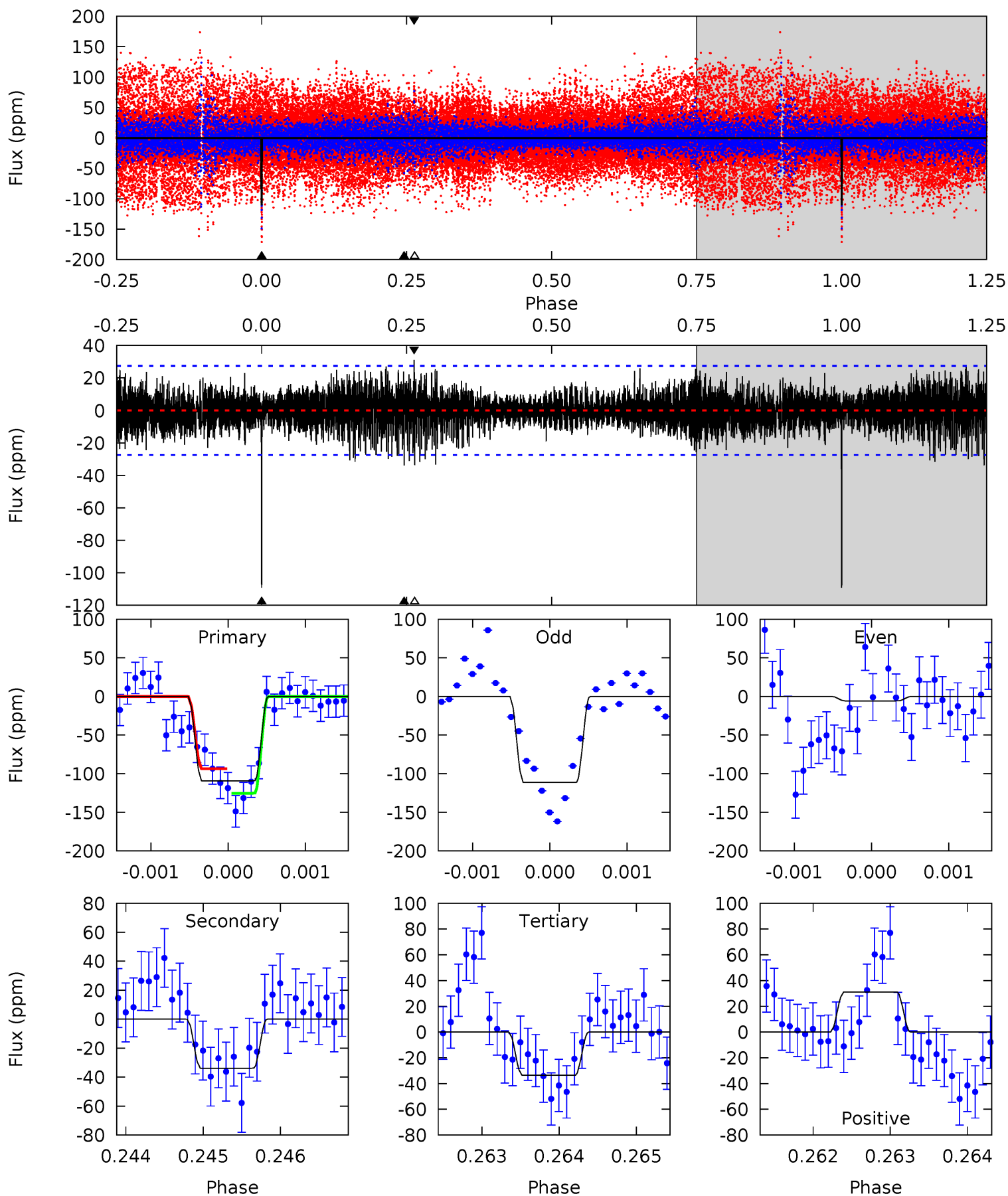
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	7.25	7.17	12.7	5.42	3.24	1.94	6.64	1.06	0.08	-5.49	4.55	1.27	0.48	4.77



Alt Model-Shift Uniqueness Test

010974032-01, $P = 373.327952$ Days, $E = 17.061846$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	6.77	6.70	6.22	5.48	3.34	1.68	15.1	15.6	0.06	0.54	11.8	0.50	0.22	3.12



Stellar Parameters For KIC 010974032

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9264^{+254}_{-435}	$3.679^{+0.528}_{-0.132}$	$-0.500^{+0.100}_{-0.350}$	$3.578^{+1.021}_{-2.041}$	$2.228^{+0.426}_{-0.639}$	$0.069^{+0.467}_{-0.033}$
	+3%/-5%	+14%/-4%	+20%/-70%	+29%/-57%	+19%/-29%	+682%/-49%
Source	KIC0	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 010974032-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 2	$2.67^{+0.80}_{-0.77}$	901^{+74}_{-118}	6290^{+637}_{-515}	2104^{+1852}_{-827}
Alt.	-34 ± 5	$3.58^{+0.87}_{-1.05}$	901^{+81}_{-126}	6709^{+621}_{-498}	2609^{+2496}_{-932}

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 $A_{obs} \gg 1.0$

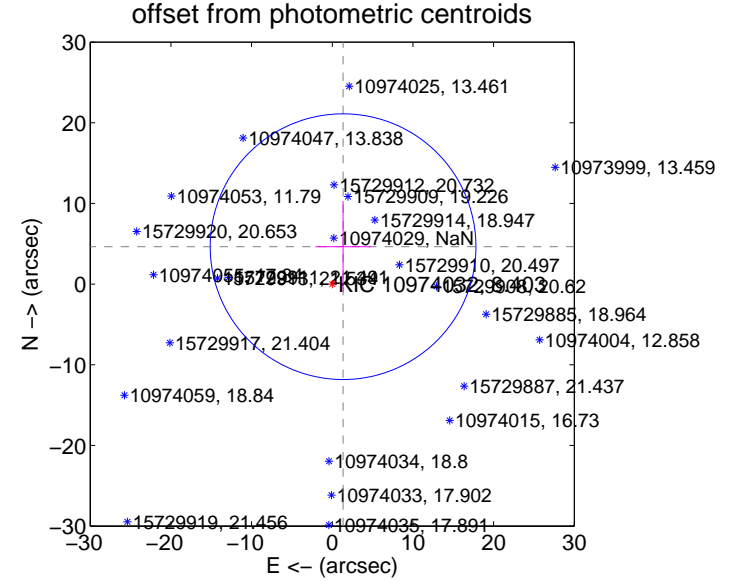
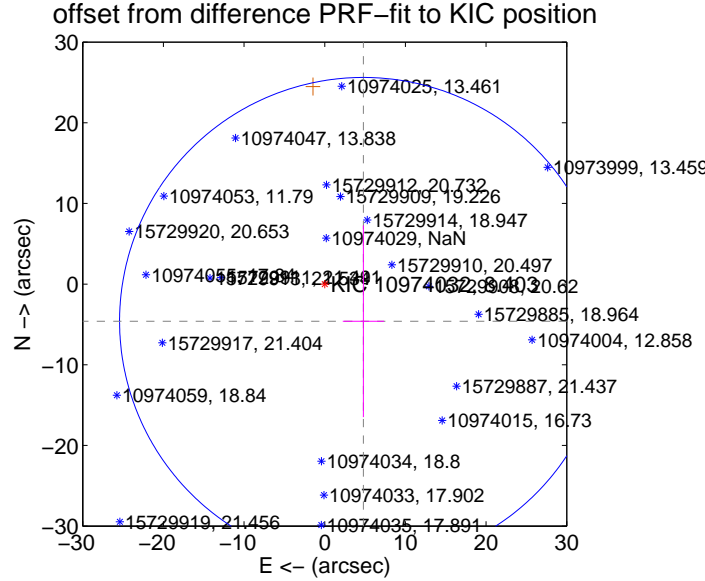
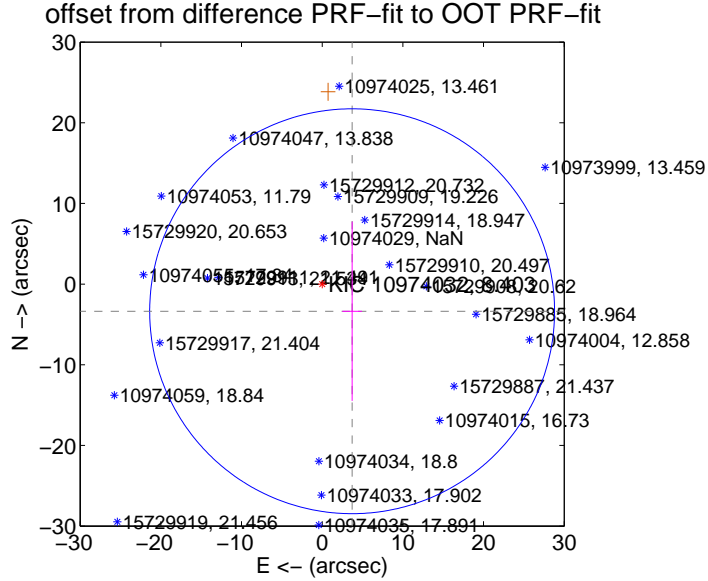
DV Centroid Data

Supplemental centroid analysis for 010974032-01. **Kepler magnitude: 8.40.** Transit SNR 10.21

There are 0 quarters with good PRF difference image offsets

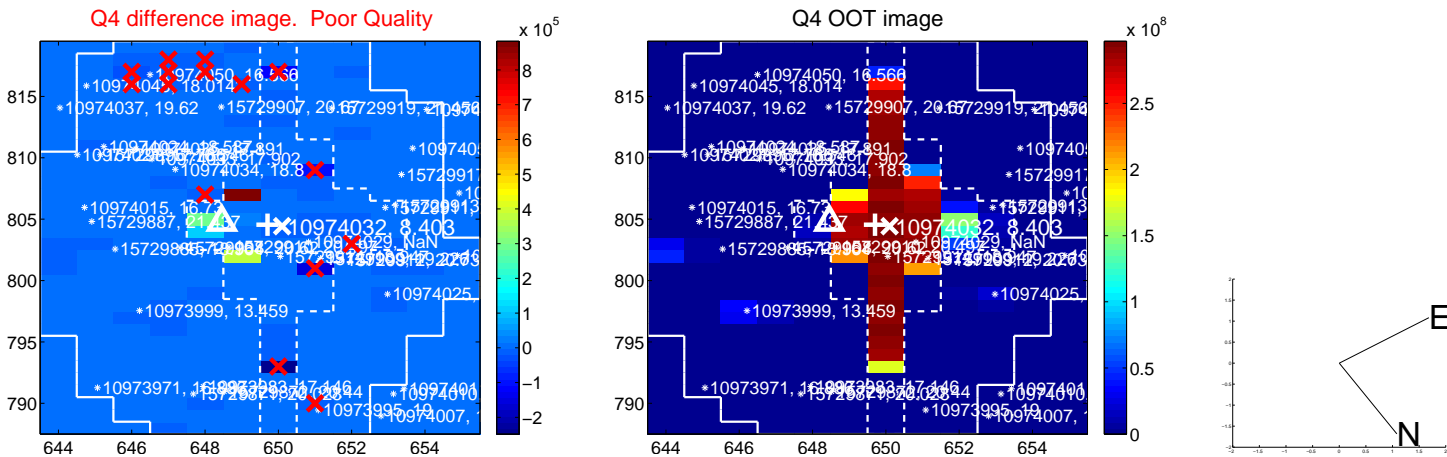
The OOT PRF centroid is offset from the target star catalog position by about 2.29 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.010 ± 8.365	0.60	-3.711 ± 1.218	-3.366 ± 11.110
PRF-fit source offset from KIC position	6.650 ± 10.075	0.66	-4.795 ± 2.556	-4.608 ± 11.882
photometric centroid source offset	4.83 ± 5.49	0.88	-1.34 ± 3.44	4.64 ± 5.63



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.

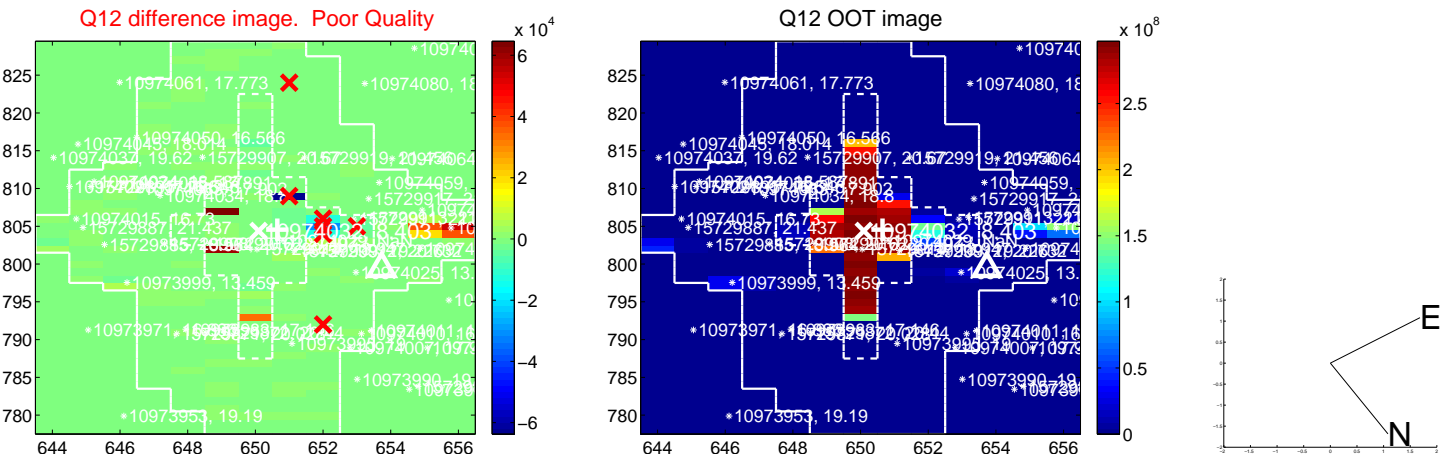
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



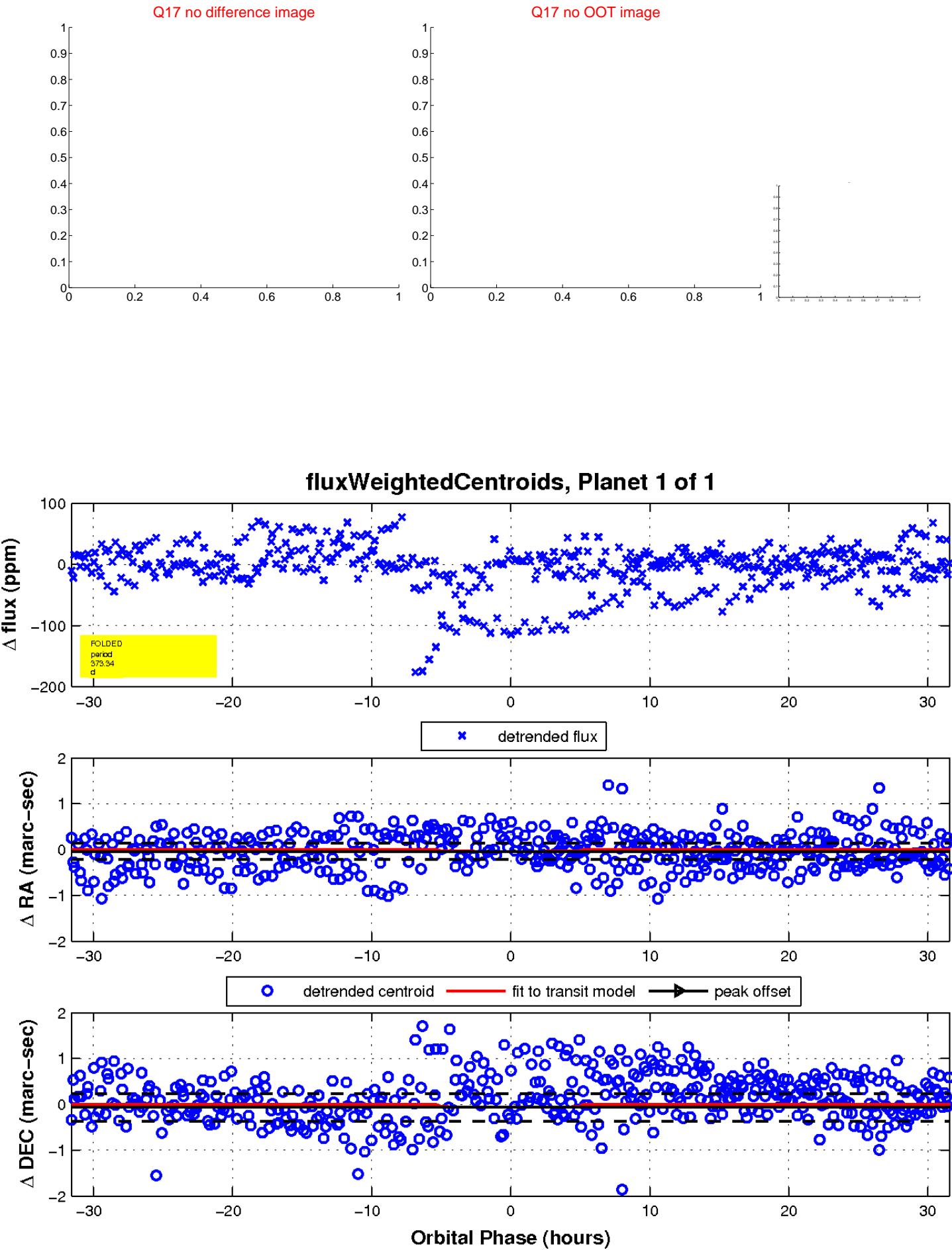
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

