

KIC 010794974

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})
010794974-01	OBS	4235.01	66.643187	170.082662	257.9	2.318	11.8	14.5	1.16	5751	2.60	12.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010794974-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

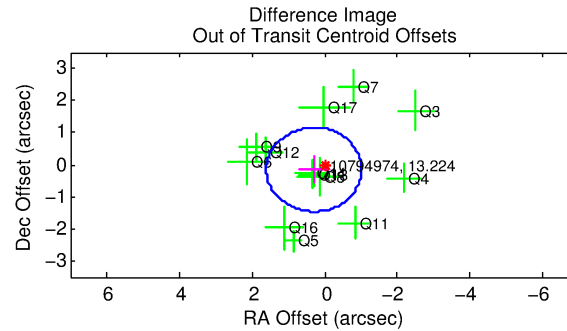
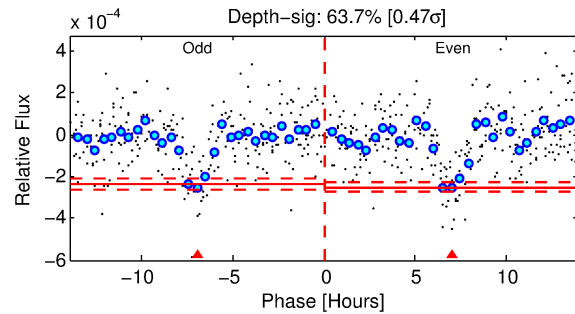
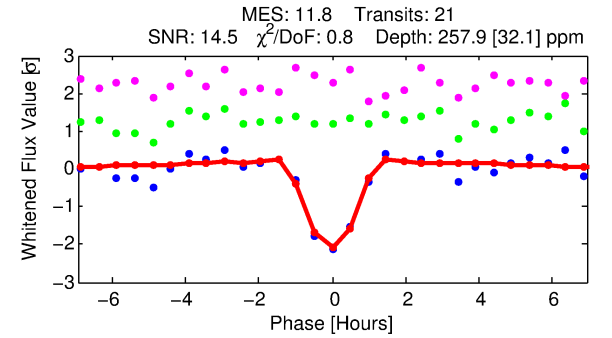
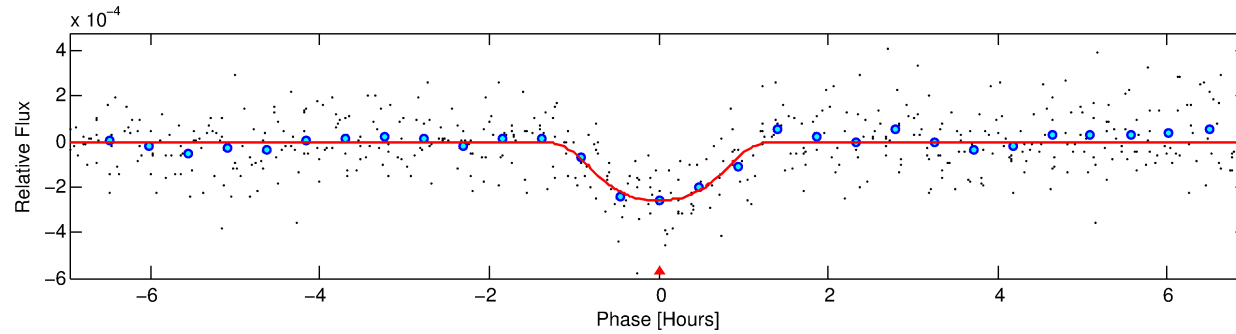
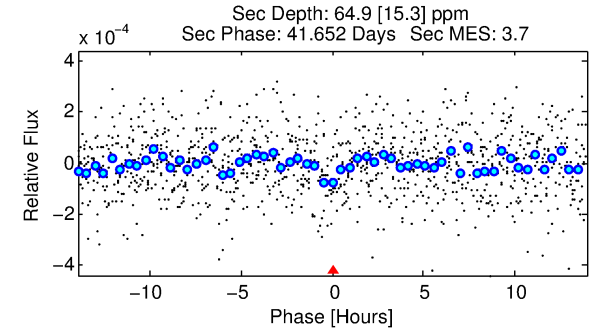
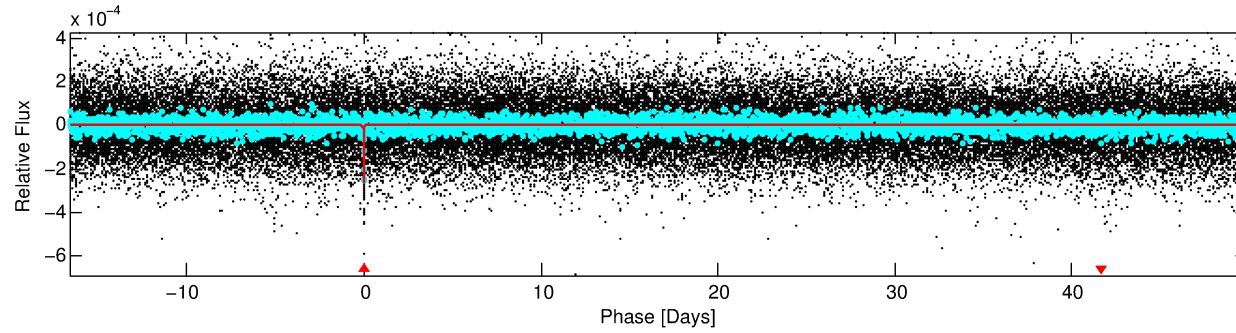
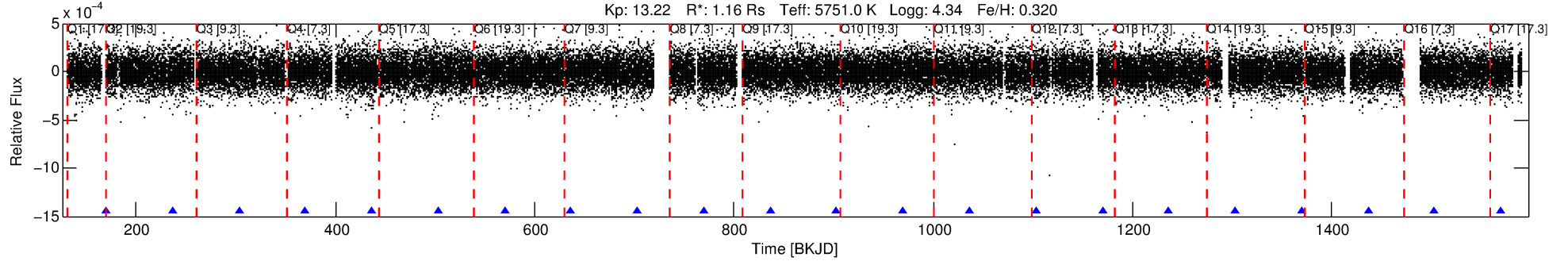
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010794974-01

No Significant Match Found

DV One-Page Summary

KIC: 10794974 Candidate: 1 of 1 Period: 66.643 d
KOI: K04235.01 Corr: 0.977



DV Fit Results:

Period = 66.64319 [0.00028] d
Epoch = 170.0827 [0.0036] BKJD
Rp/R* = 0.0205 [0.0020]
a/R* = 63.78 [11.92]
b = 0.98 [0.01]
Seff = 12.19 [3.34]
Teq = 477 [33] K
Rp = 2.60 [0.60] Re
a = 0.3300 [0.0595] AU
Ag = 576.19 [235.72] [2.44σ]
Teffp = 3610 [282] K [11.02σ]

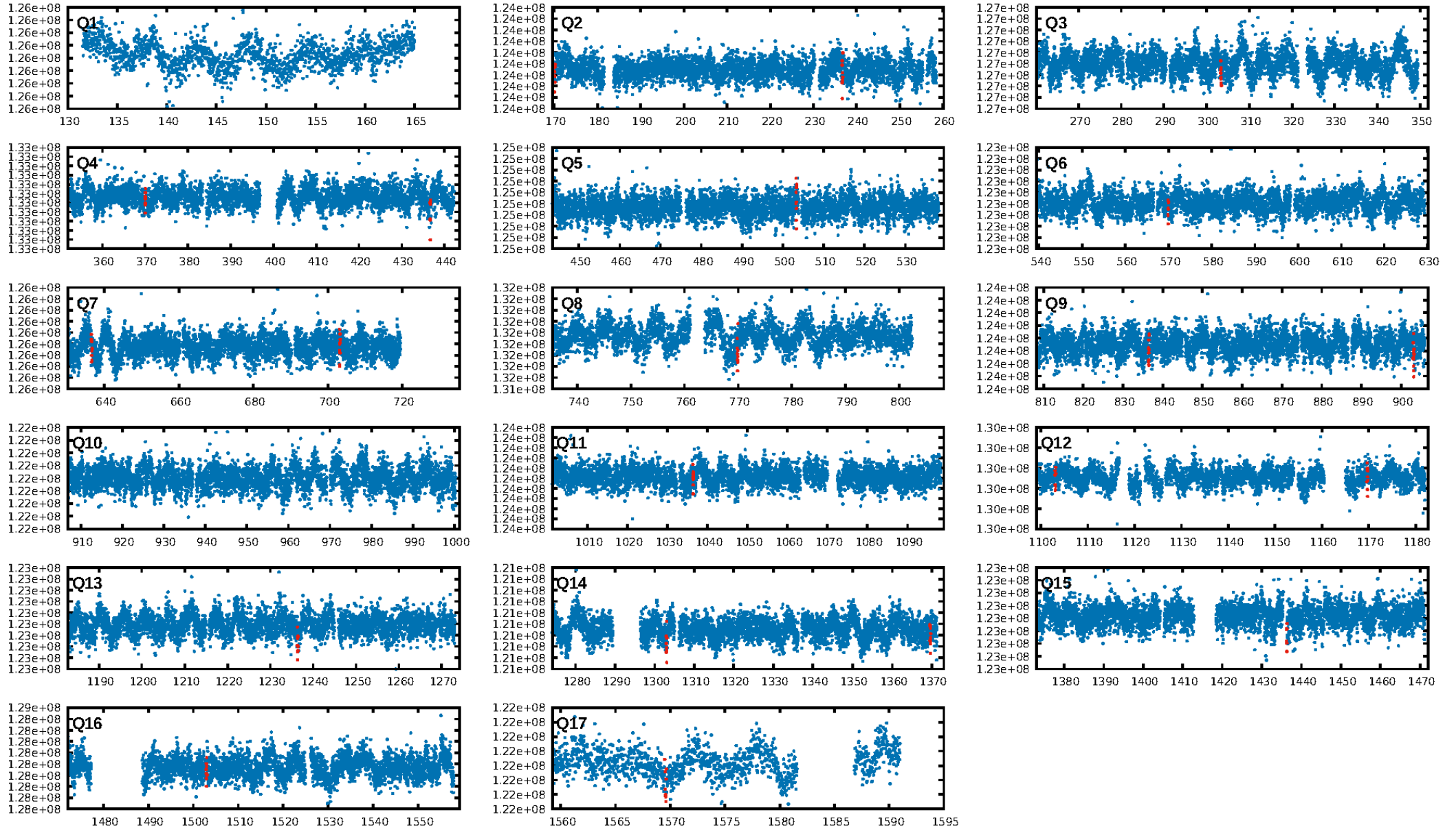
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.26e-31
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 2.178
Centroid-sig: 1.3%
Centroid-so: 1.644 arcsec [2.34σ]
OotOffset-rm: 0.335 arcsec [0.77σ]
KicOffset-rm: 0.387 arcsec [0.92σ]
OotOffset-st: 2/3/4/4 [13]
KicOffset-st: 2/3/4/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [14/14]

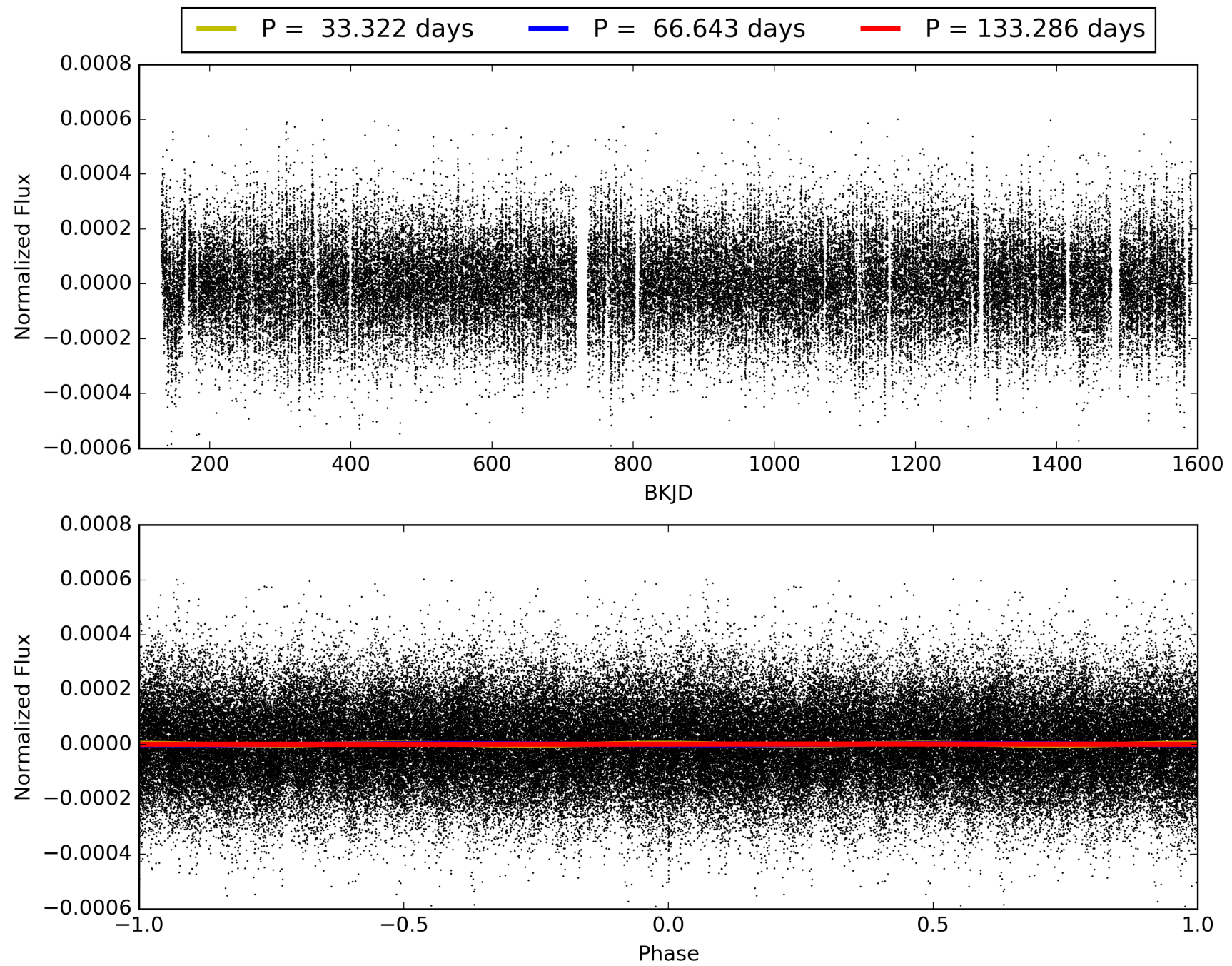
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:20:15 Z

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

TCE 010794974-01, PDC Light Curves

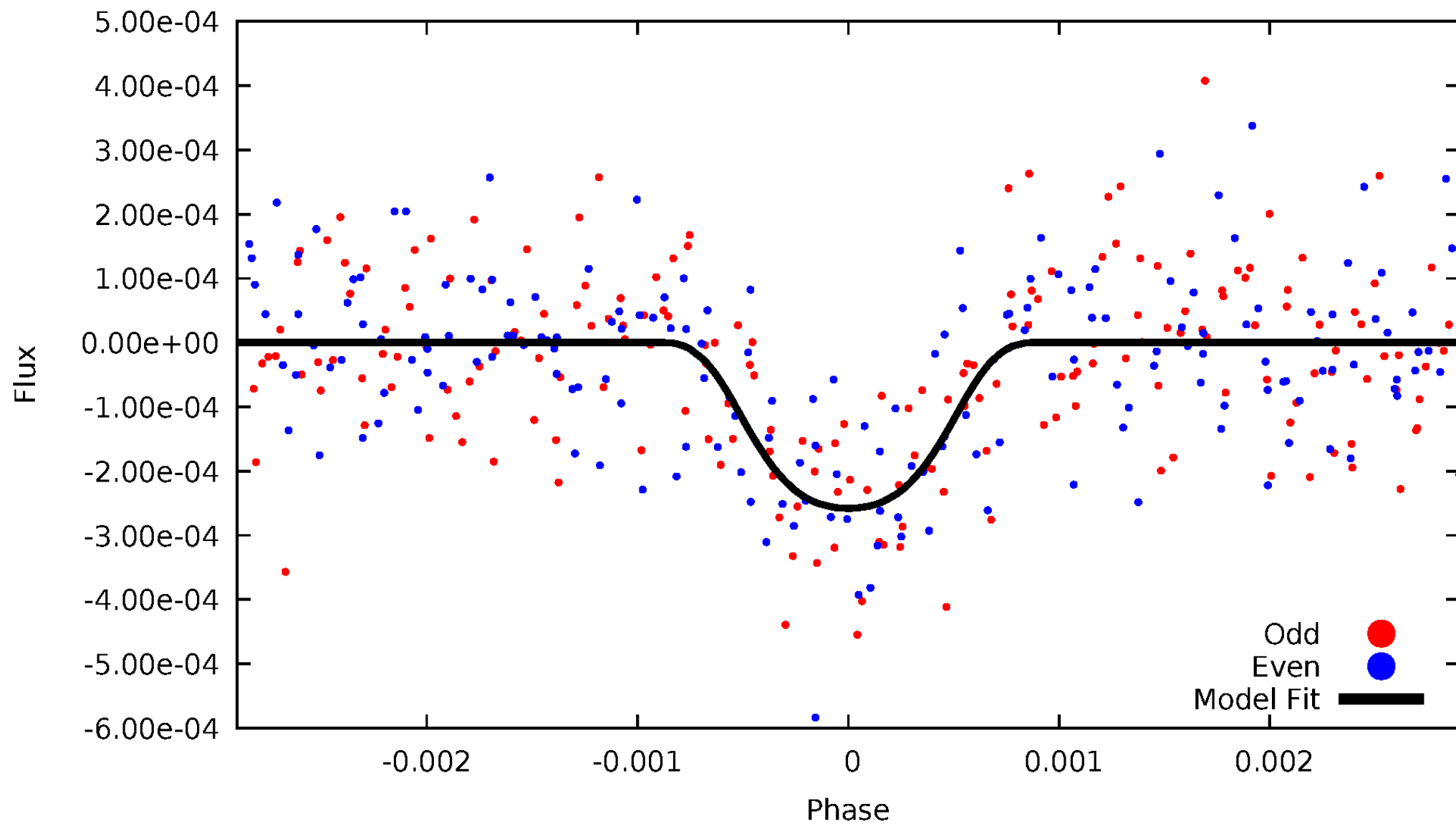


TCE 010794974-01



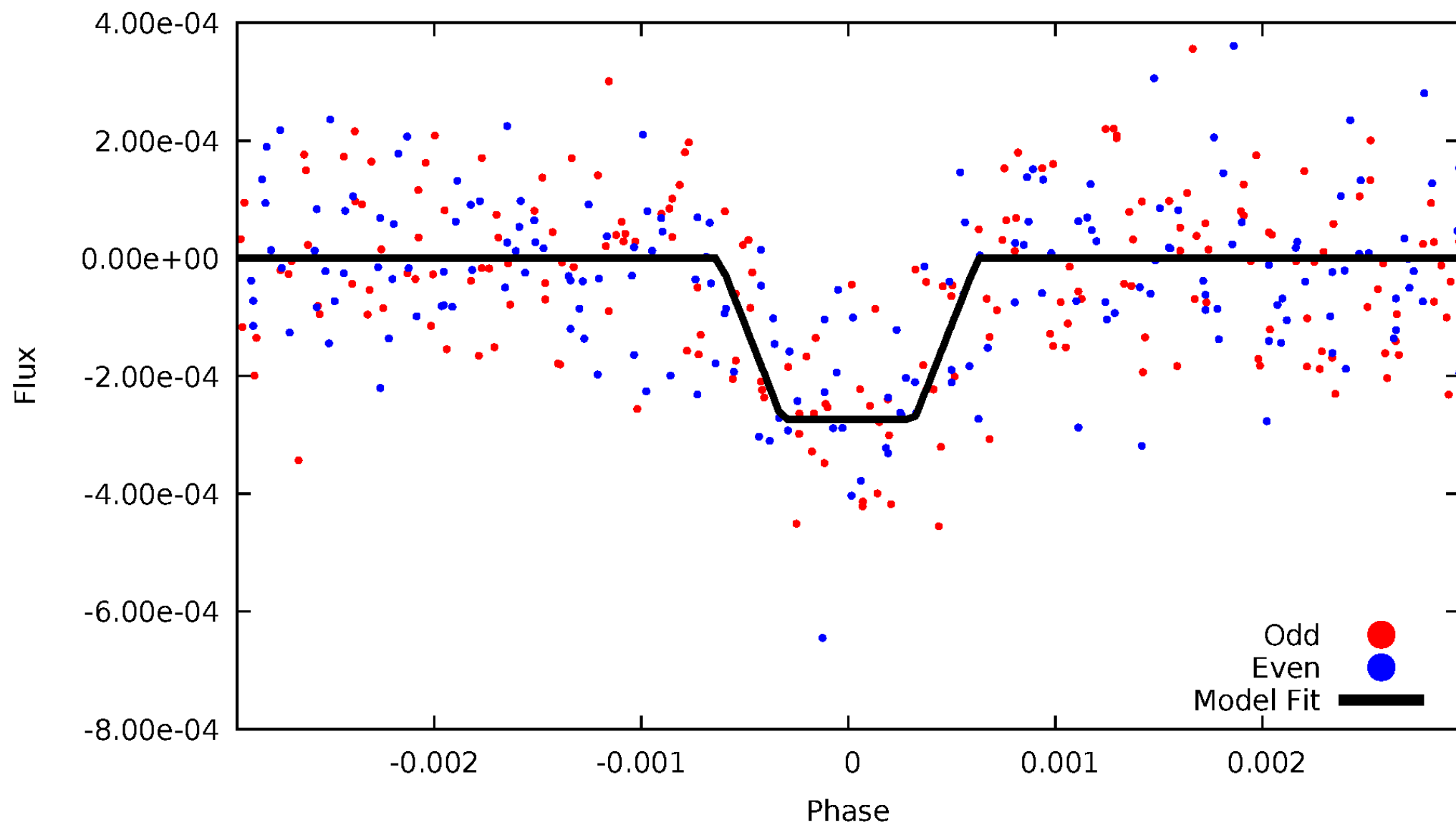
DV Odd/Even

TCE 010794974-01



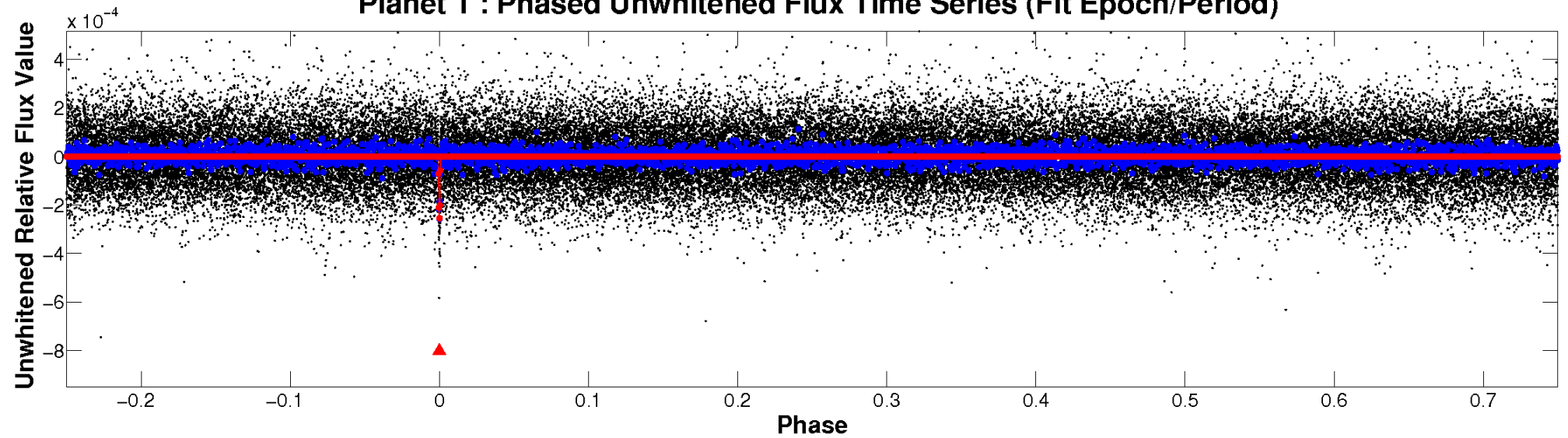
ALT Odd/Even

TCE 010794974-01

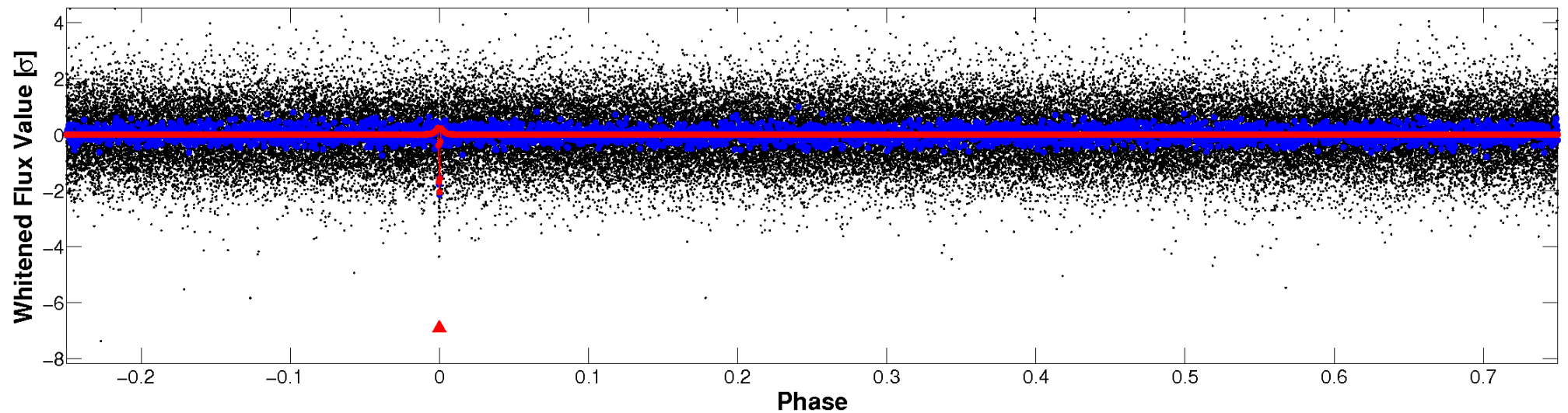


Non-Whitened Vs. Whitened Light Curve

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

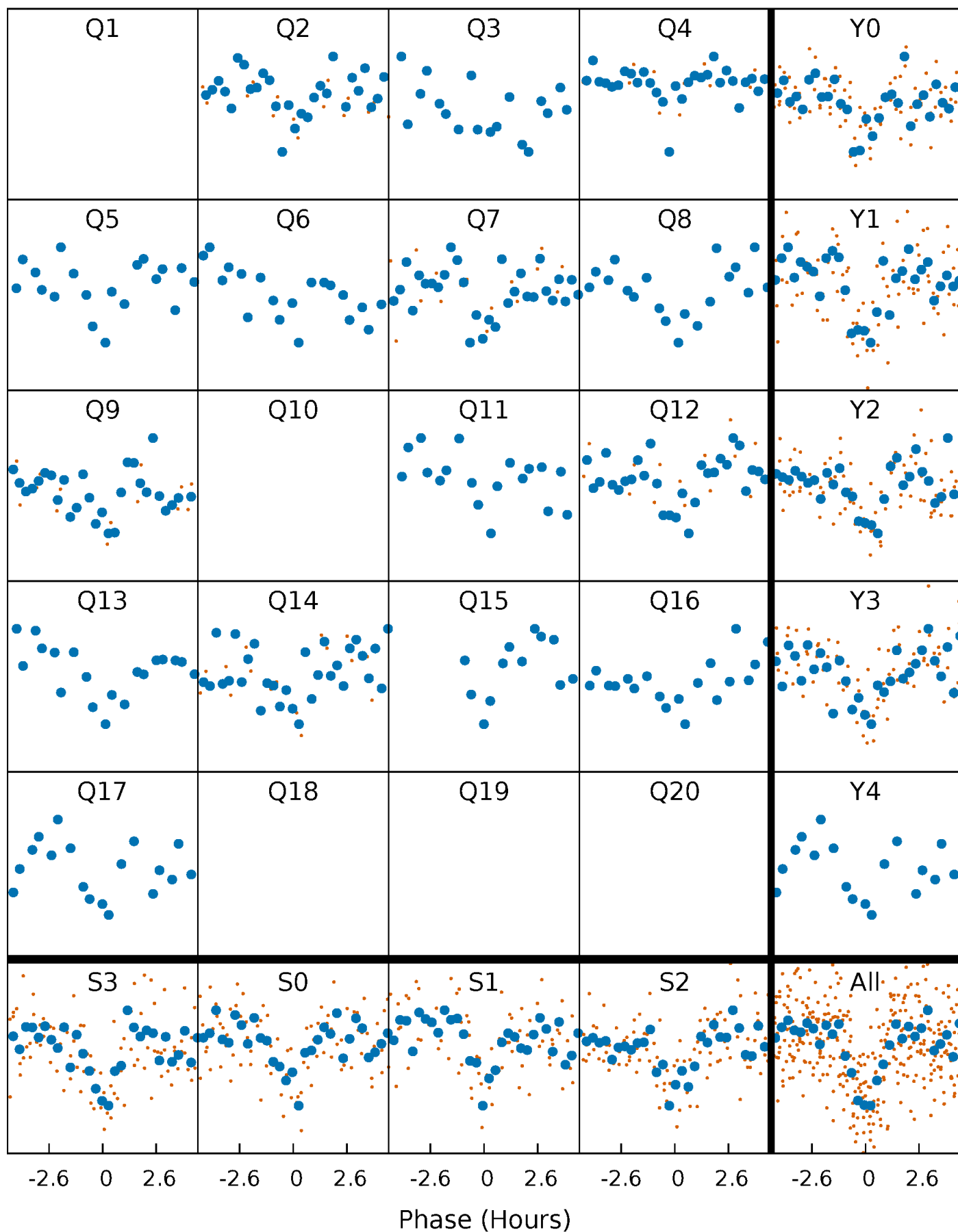


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



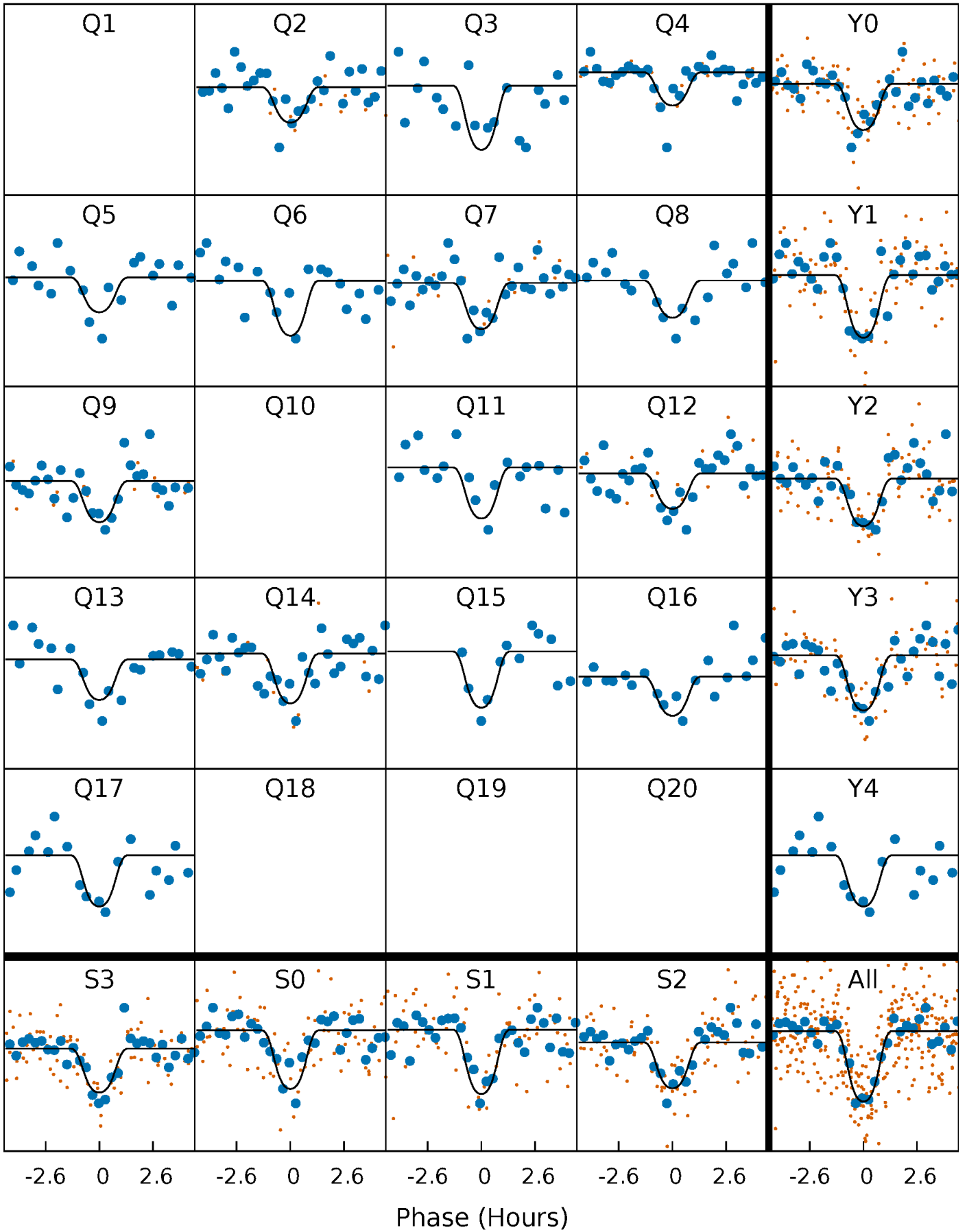
PDC Quarter-Phased Transit Curves

TCE 010794974-01 P= 66.643187 Days $T_0=170.082662$ (BKJD)



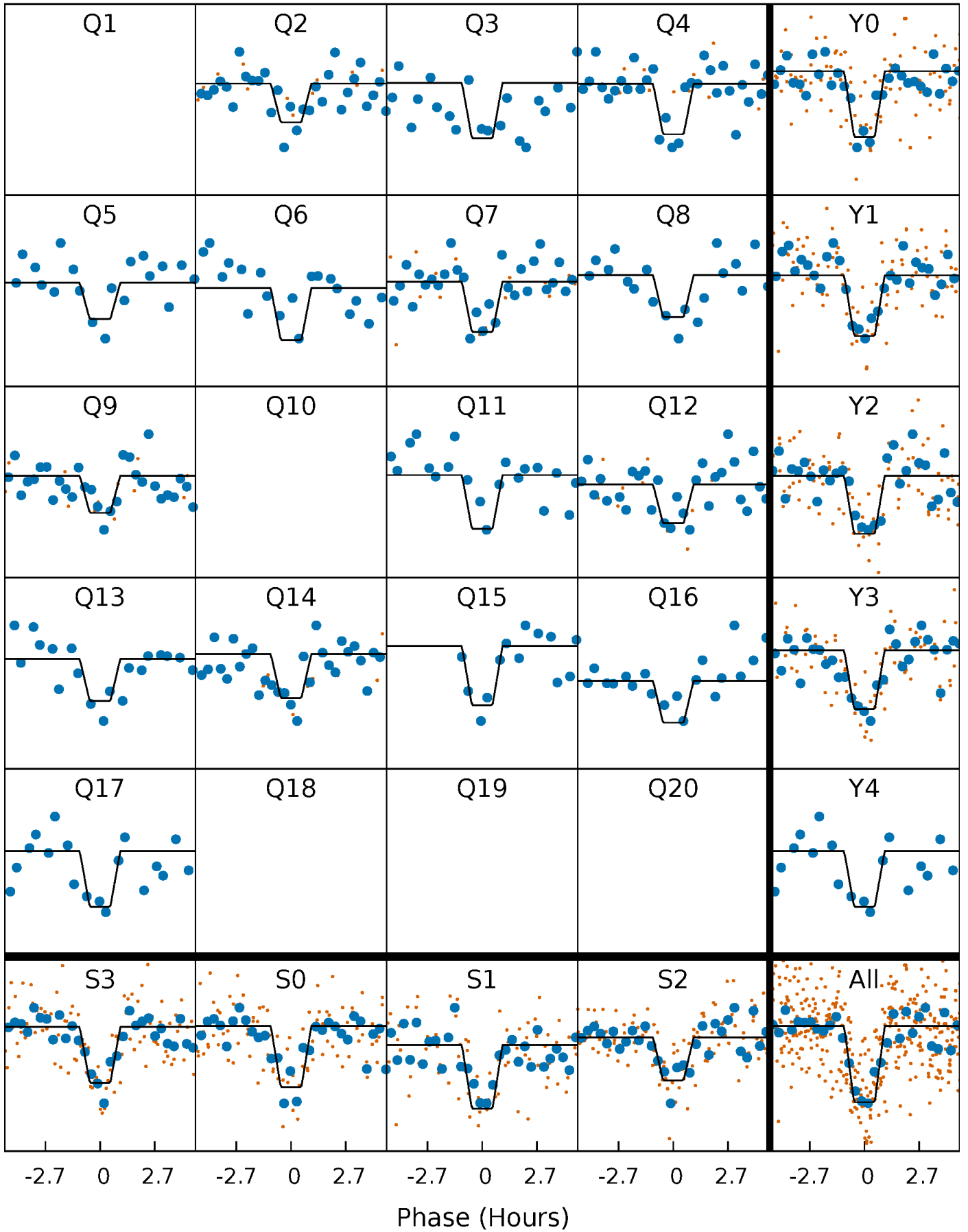
DV Quarter-Phased Transit Curves

TCE 010794974-01 P= 66.643187 Days $T_0=170.082662$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

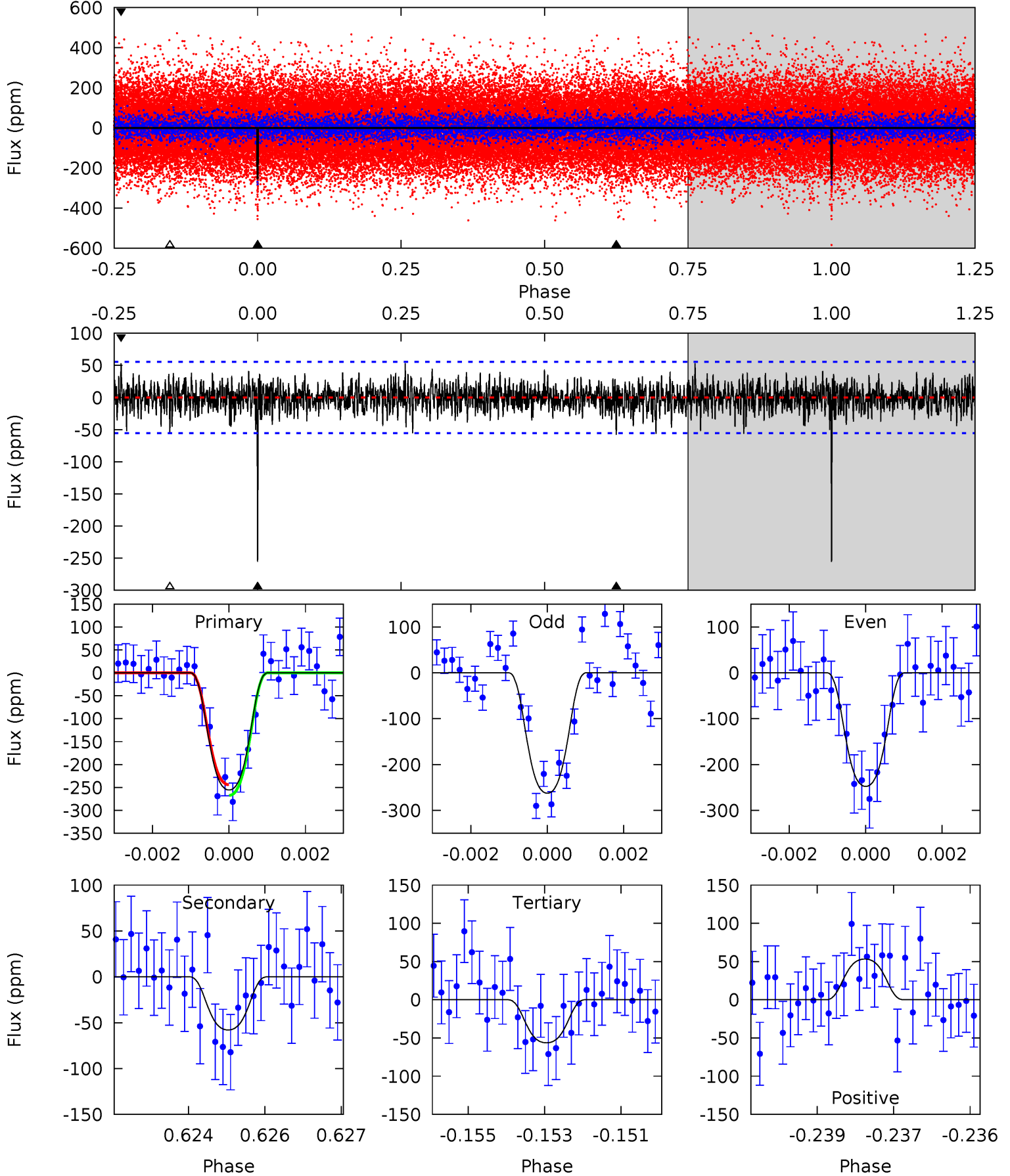
TCE 010794974-01 P= 66.643545 Days $T_0=170.079140$ (BKJD)



DV Model-Shift Uniqueness Test

010794974-01, P = 66.643187 Days, E = 103.439475 Days

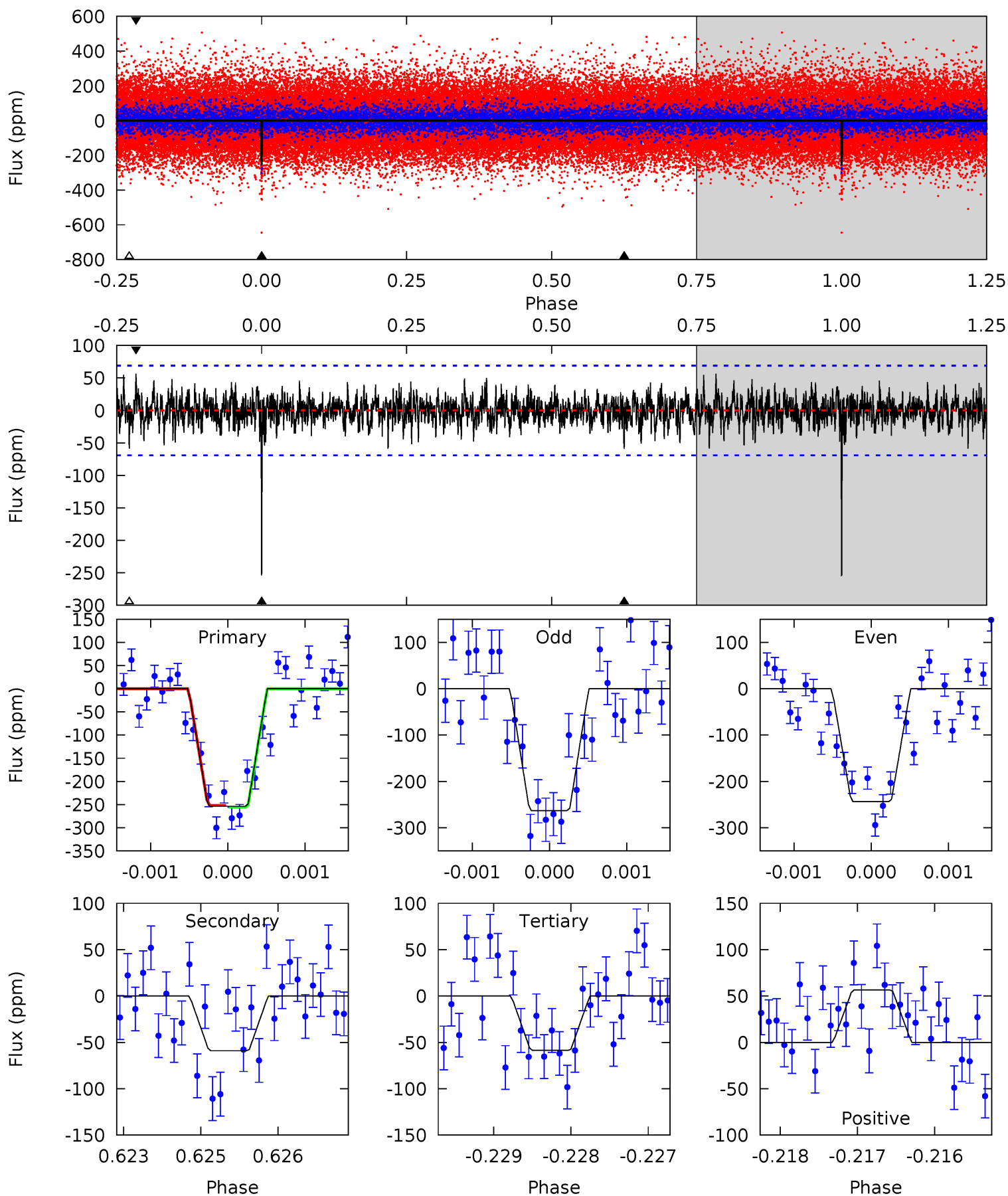
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	5.59	5.43	5.14	5.35	3.13	1.50	19.2	19.5	0.15	0.45	0.72	1.01	0.17	1.12



Alt Model-Shift Uniqueness Test

010794974-01, P = 66.643545 Days, E = 103.435595 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	4.63	4.60	4.43	5.41	3.23	1.28	15.3	15.5	0.03	0.20	0.76	0.97	0.18	0.15



Stellar Parameters For KIC 010794974

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5751^{+77}_{-77}	$4.339^{+0.100}_{-0.150}$	$0.320^{+0.100}_{-0.150}$	$1.164^{+0.242}_{-0.149}$	$1.079^{+0.073}_{-0.060}$	$0.963^{+0.397}_{-0.387}$
	+1%/-1%	+2%/-3%	+31%/-47%	+21%/-13%	+7%/-6%	+41%/-40%
Source	SPE90	FLK73	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010794974-01 / KOI 4235.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-58 ± 10	$2.62^{+0.38}_{-0.31}$	670^{+34}_{-27}	3872^{+184}_{-185}	504^{+175}_{-149}
Alt.	-59 ± 13	$2.13^{+0.35}_{-0.31}$	669^{+35}_{-27}	4174^{+280}_{-243}	769^{+362}_{-250}

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 $A_{obs} \gg 1.0$

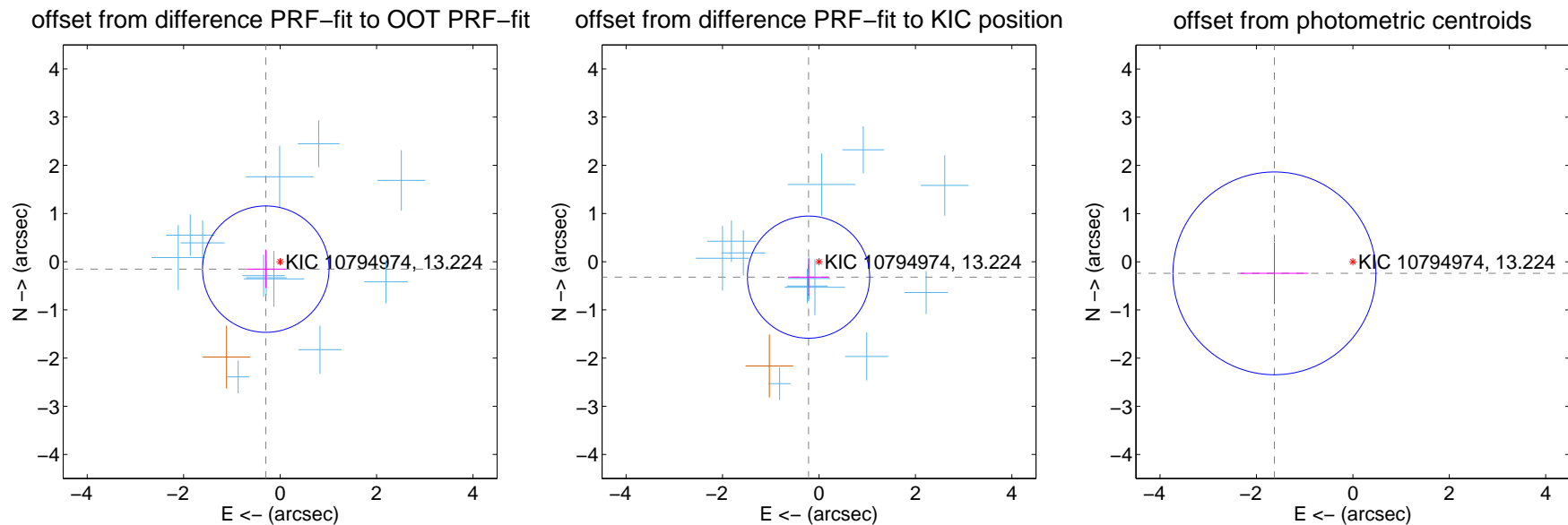
DV Centroid Data

Supplemental centroid analysis for 010794974-01. Kepler magnitude: 13.22. Transit SNR 14.53

There are 12 quarters with good PRF difference image offsets

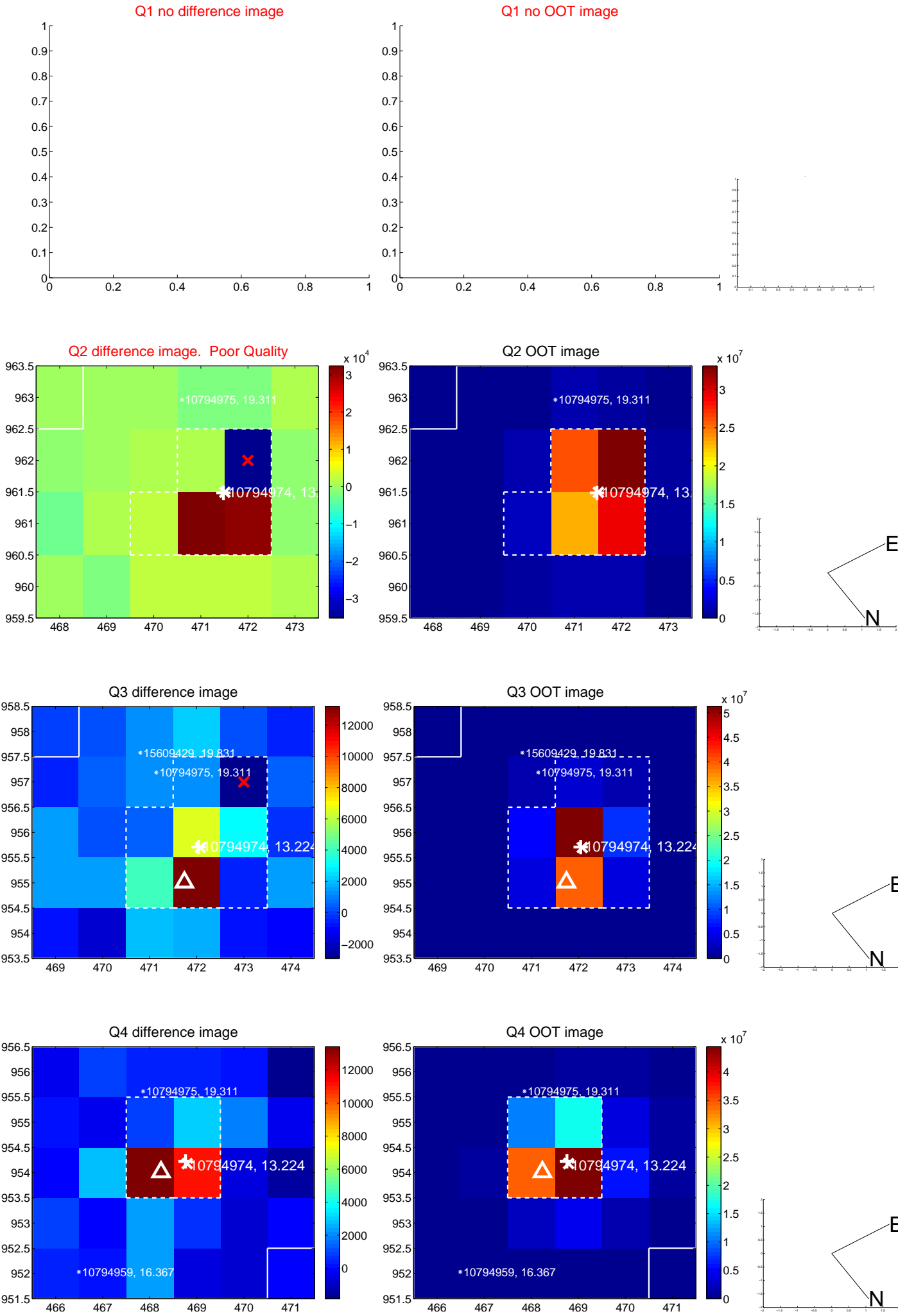
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.335 ± 0.437	0.77	0.297 ± 0.409	-0.154 ± 0.394
PRF-fit source offset from KIC position	0.387 ± 0.422	0.92	0.216 ± 0.421	-0.320 ± 0.386
photometric centroid source offset	1.64 ± 0.70	2.34	1.63 ± 0.70	-0.24 ± 0.64

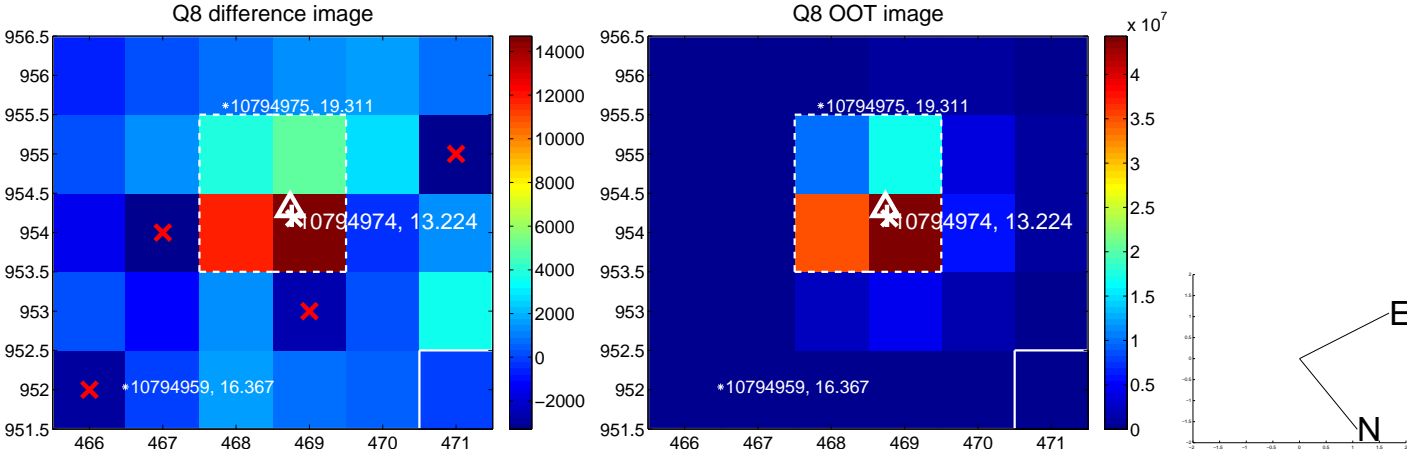
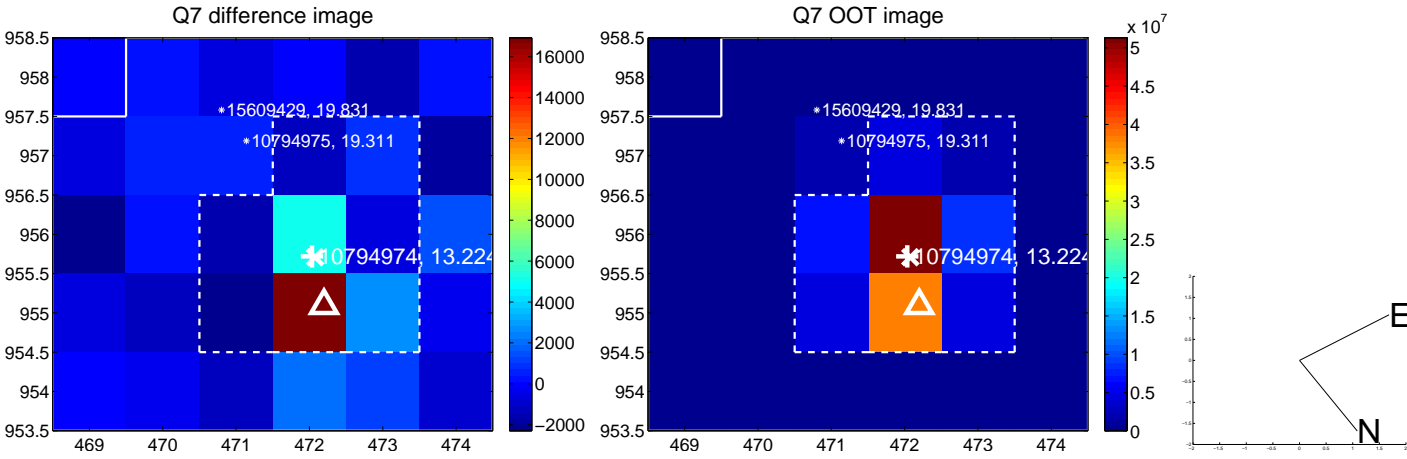
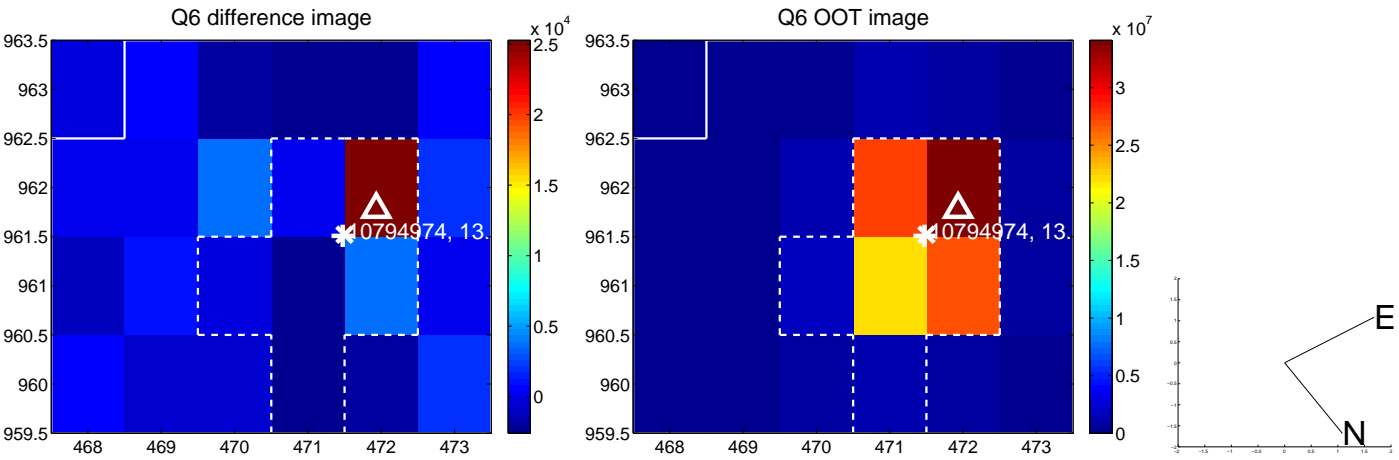
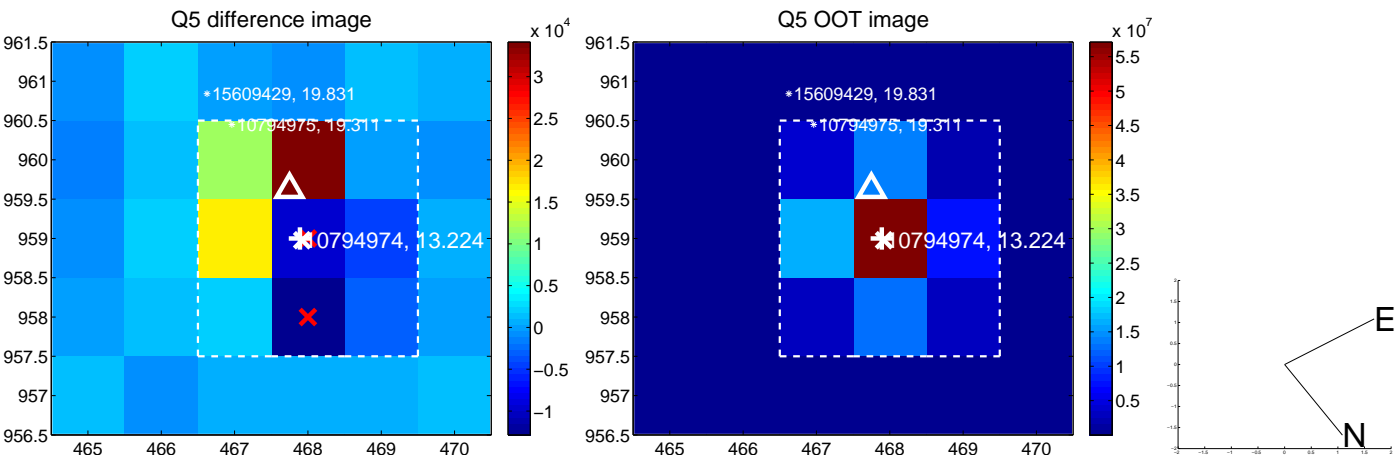


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

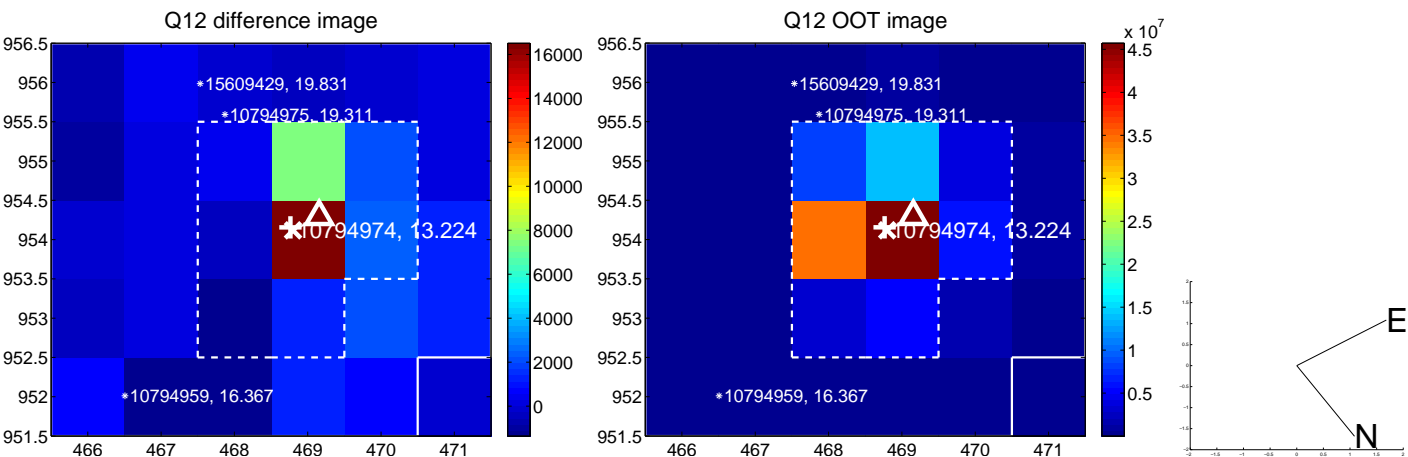
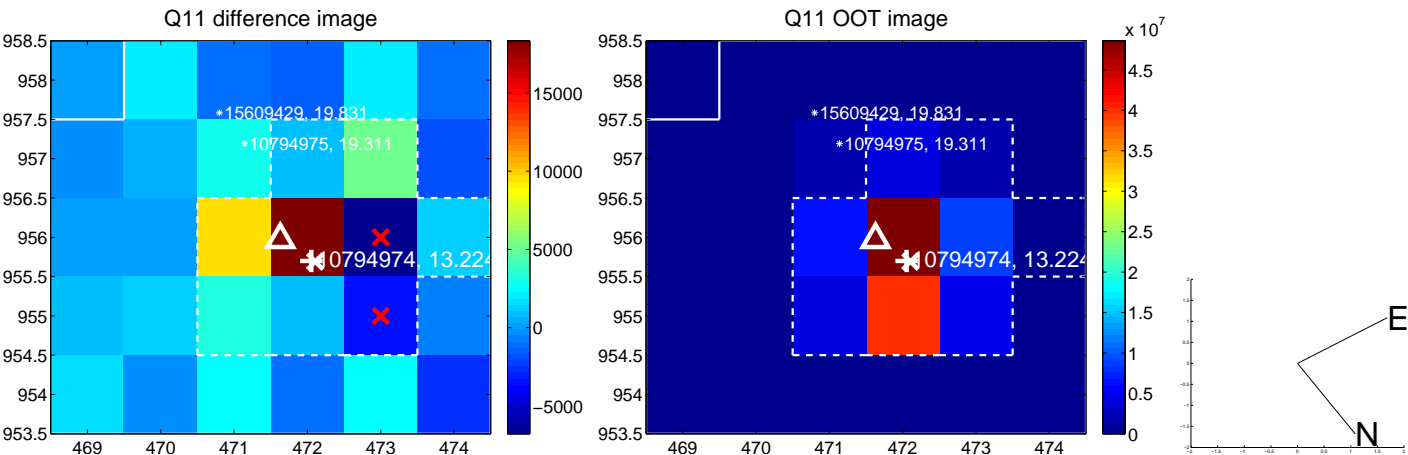
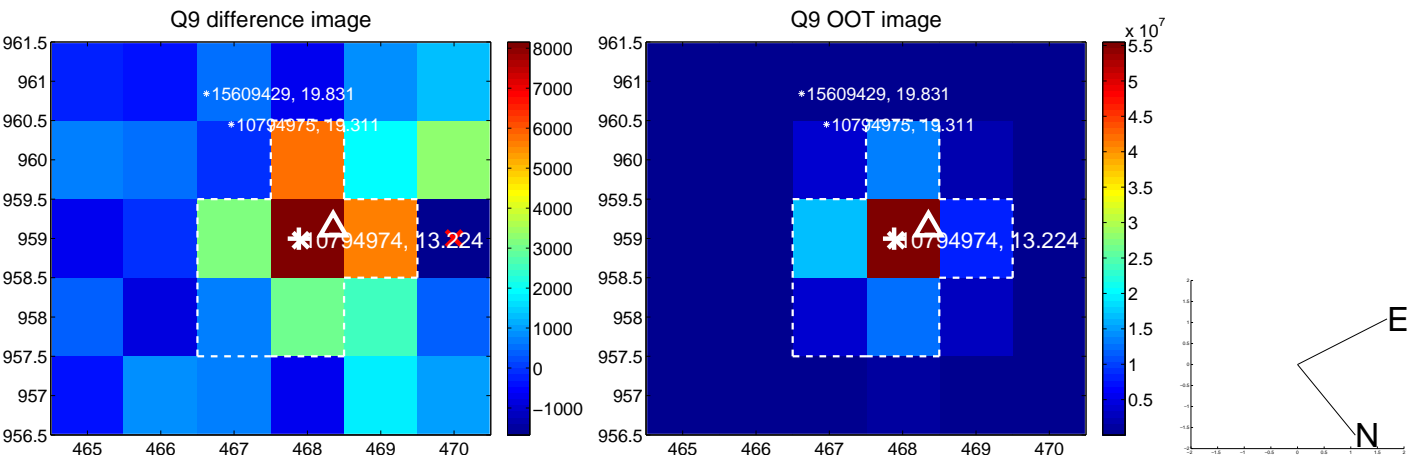
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



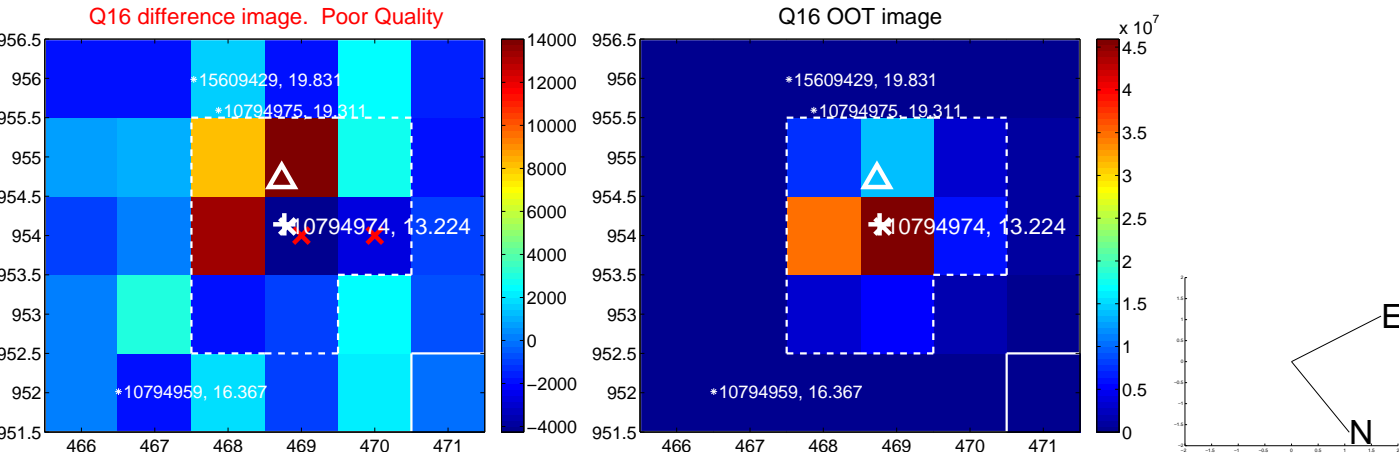
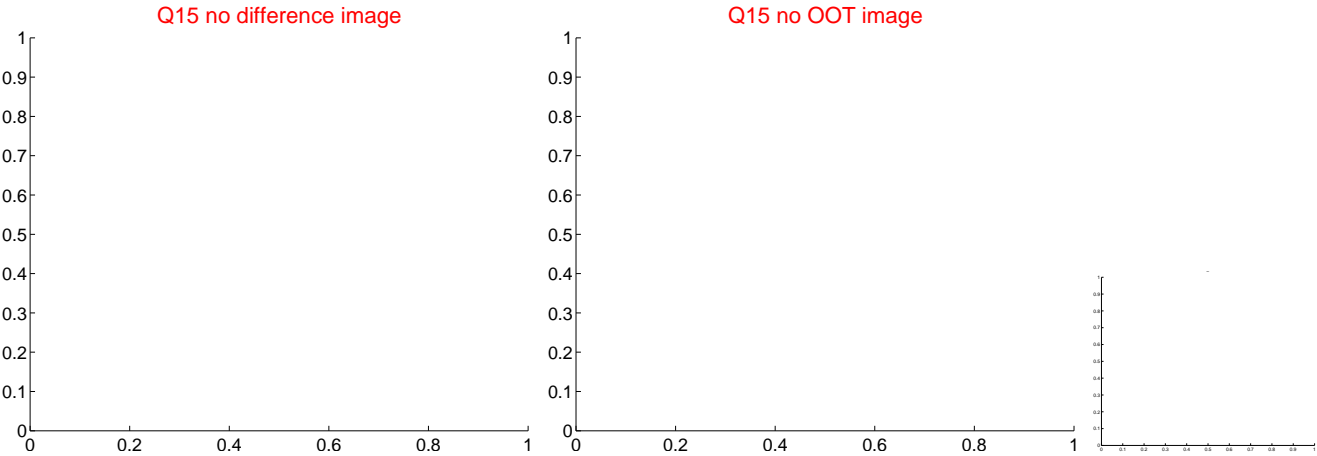
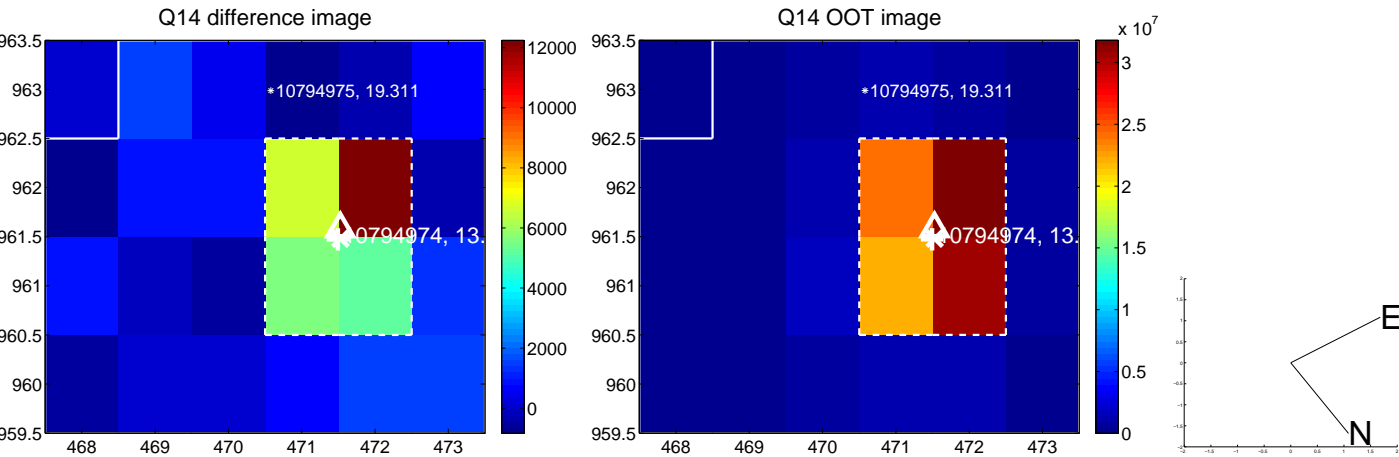
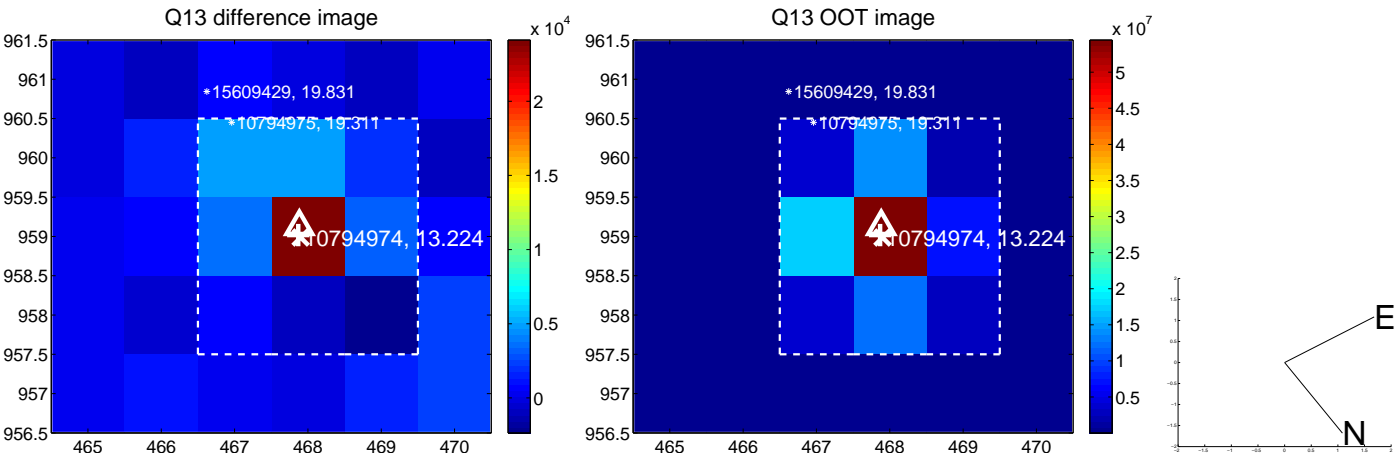
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



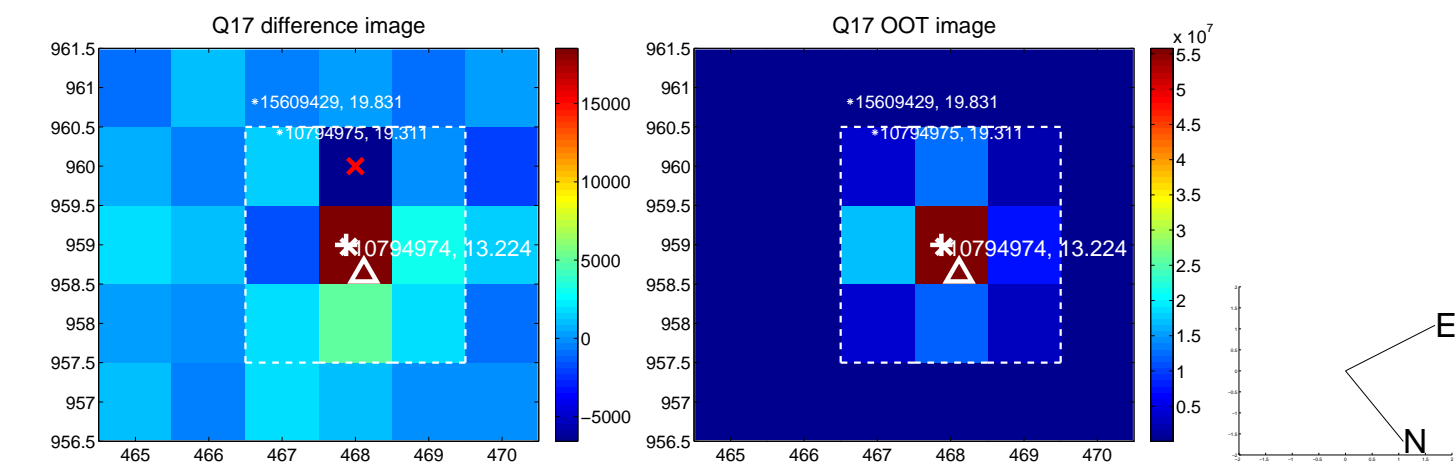
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



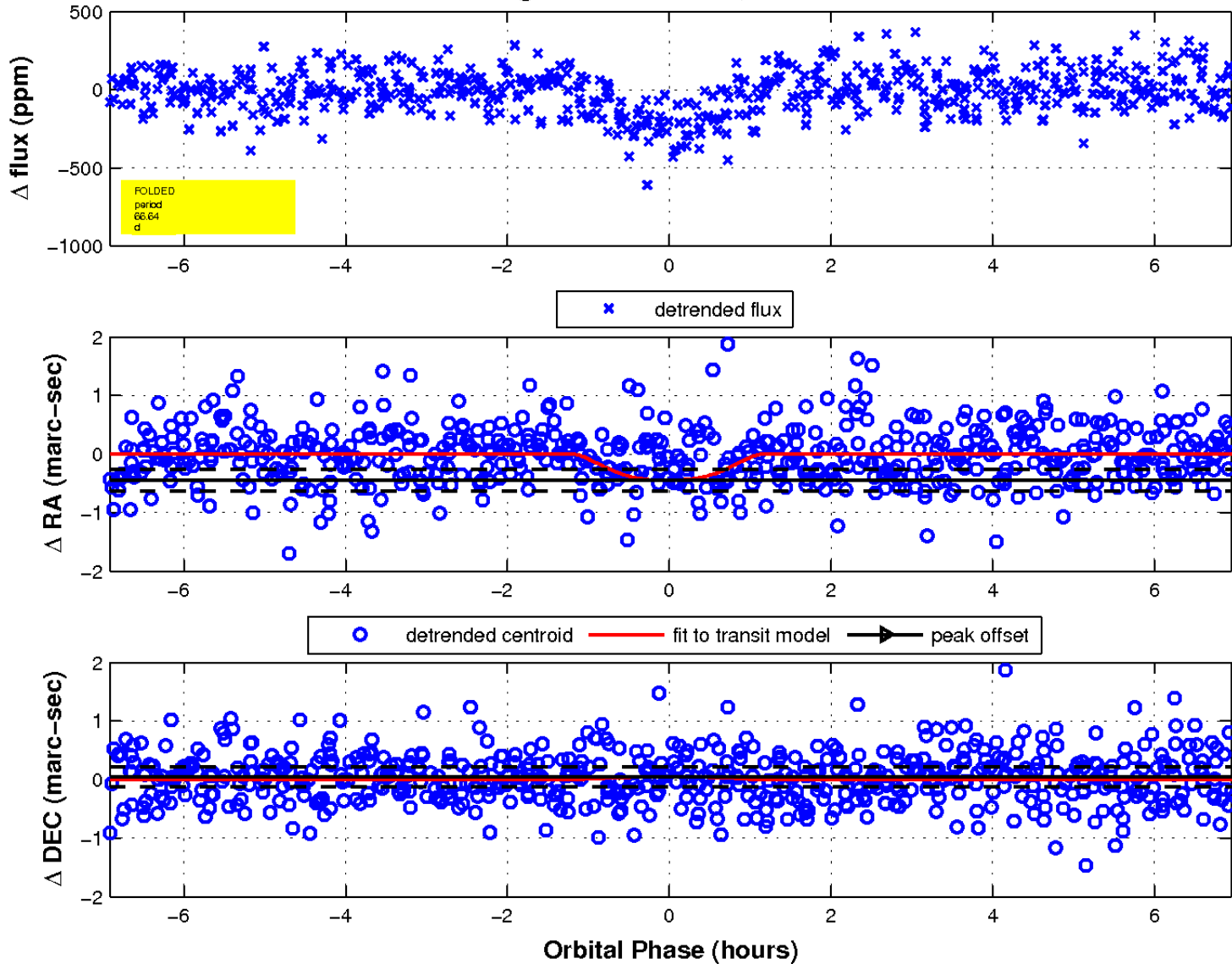
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

