

KIC 003240231

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})
003240231-01	OBS	No	0.682992	132.017272	52.6	8.196	10.1	6.3	1.75	7318	1.31	25957.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003240231-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

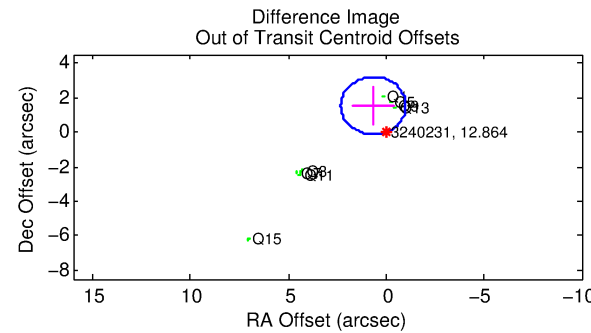
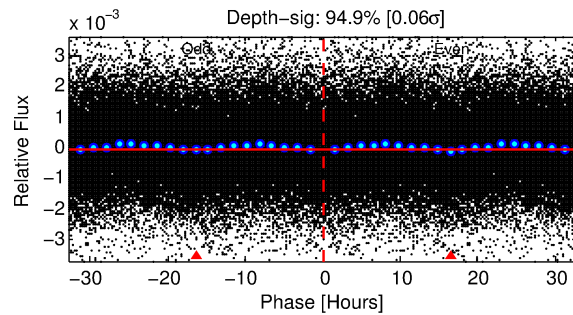
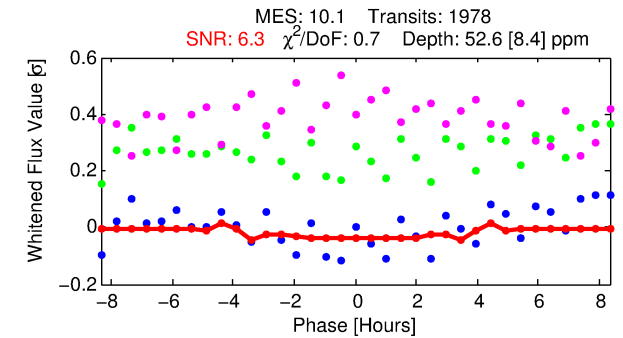
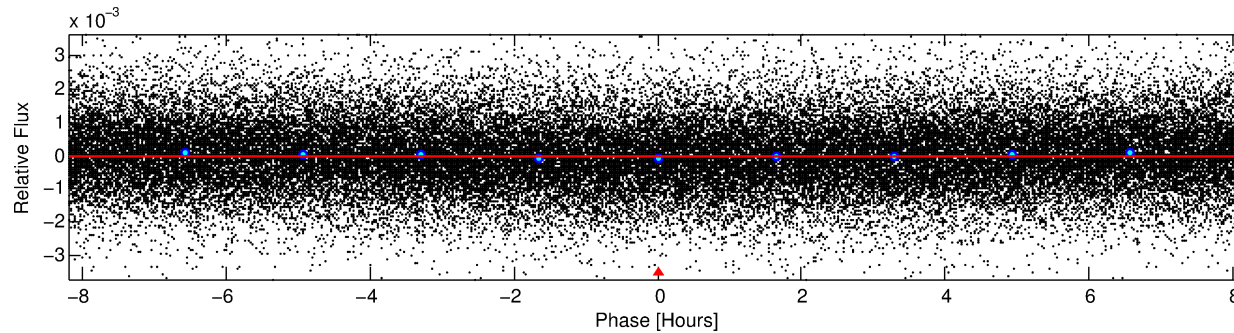
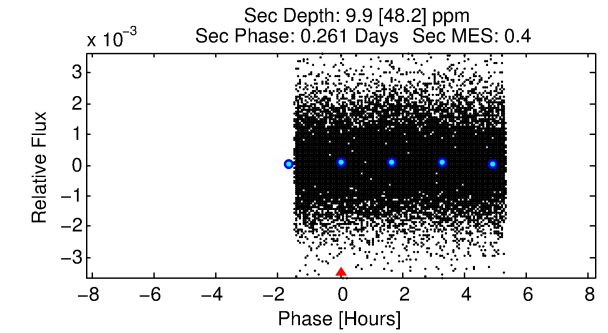
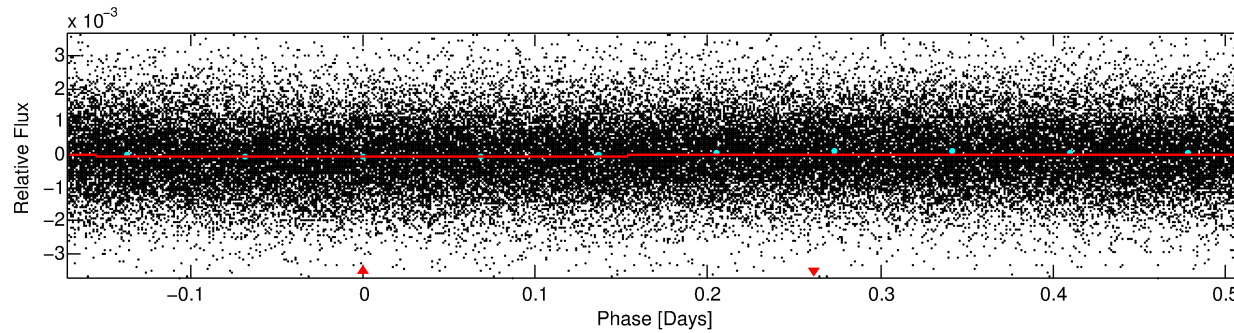
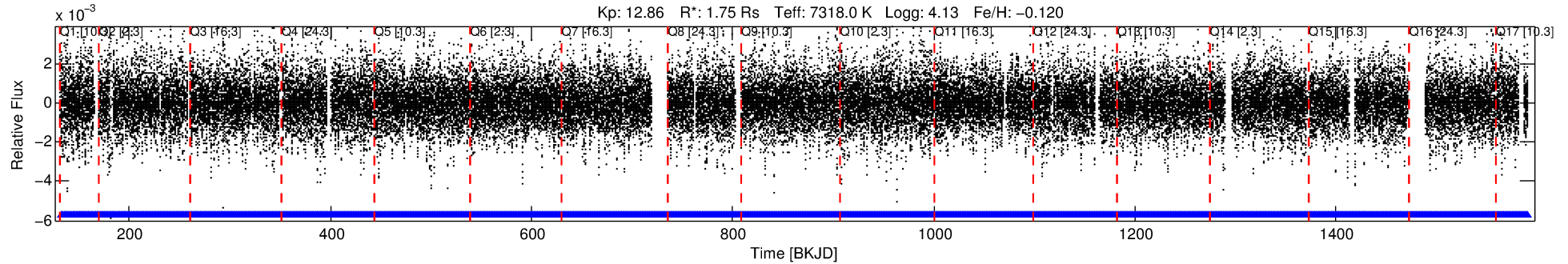
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003240231-01

No Significant Match Found

DV One-Page Summary

KIC: 3240231 Candidate: 1 of 1 Period: 0.683 d



DV Fit Results:

Period = 0.68299 [0.00002] d
Epoch = 132.0173 [0.0038] BKJD
Rp/R* = 0.0069 [0.0013]
a/R* = 1.00 [0.00]
b = 0.46 [1.74]
Seff = 25957.96 [10117.35]
Teq = 3237 [315] K
Rp = 1.31 [0.47] Re
a = 0.0174 [0.0043] AU
Ag = 0.96 [4.70] [-0.01σ]
Teffp = 4953 [6047] K [0.28σ]

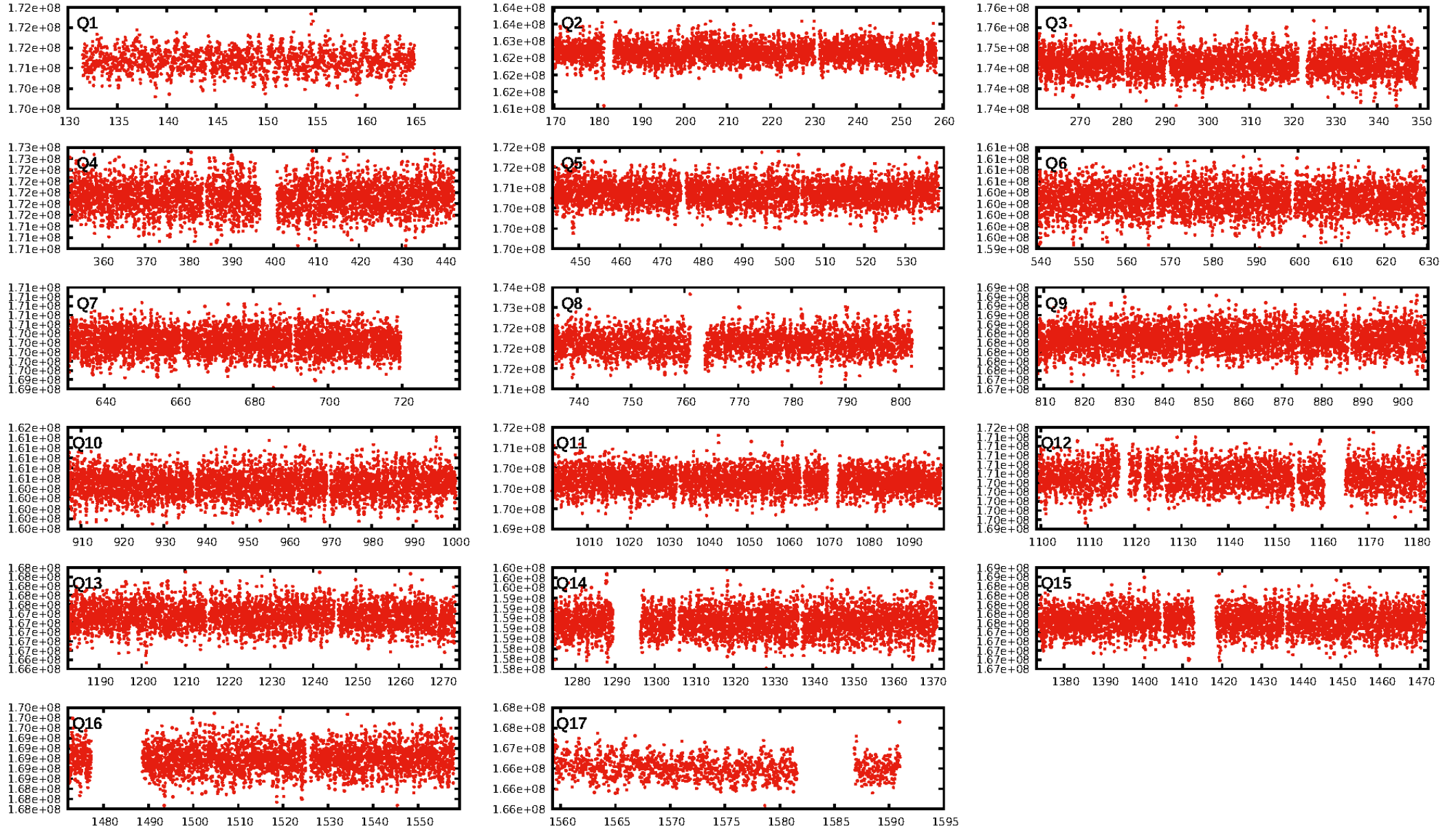
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgm: 1.00 [1888/1888]
GhostDiagnostic-chr: 0.9957
Centroid-sig: 2.1%
Centroid-so: 0.318 arcsec [1.47σ]
OotOffset-rm: 1.667 arcsec [3.00σ]
KicOffset-rm: 1.702 arcsec [3.18σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [17/17]

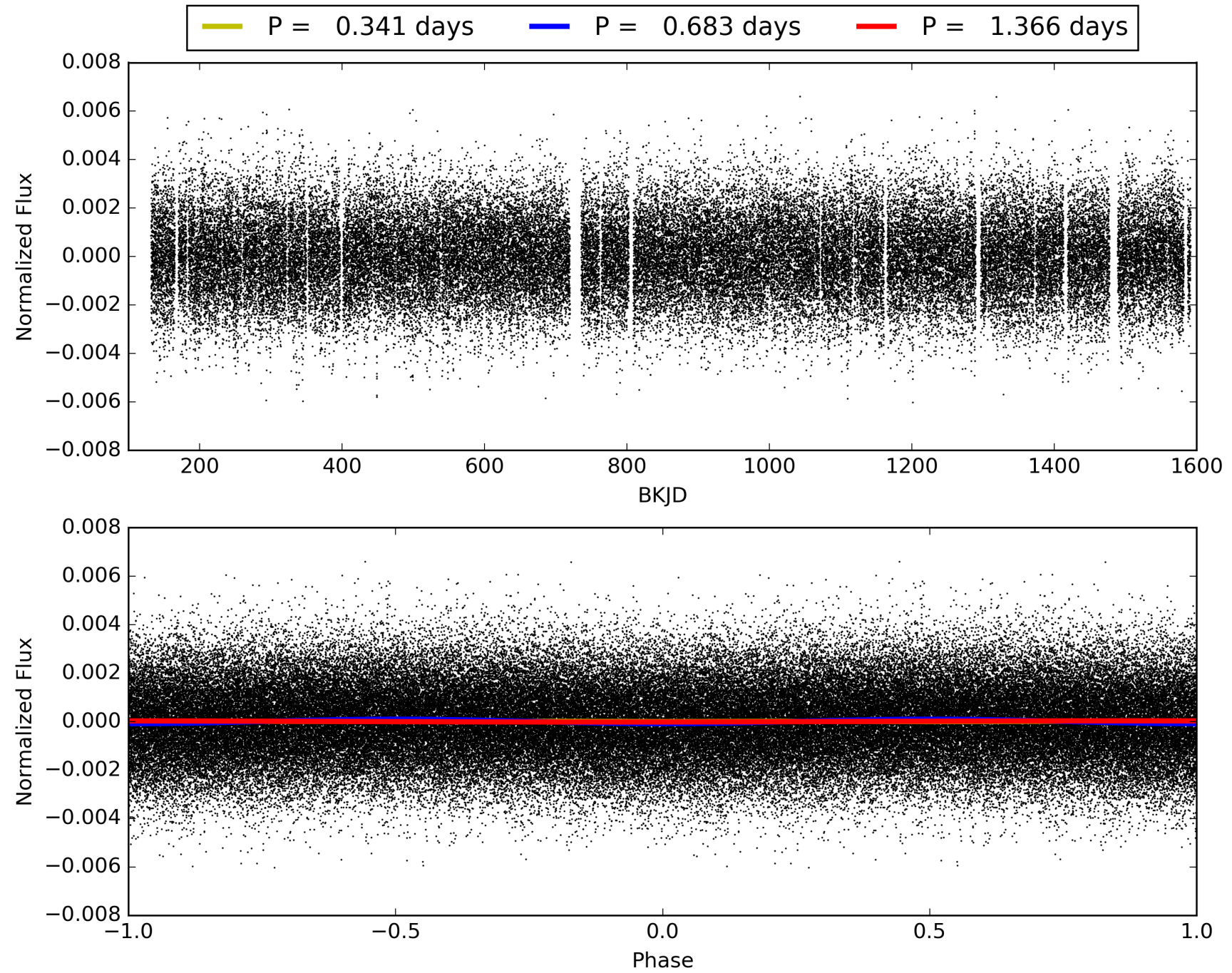
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:15:52 Z

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

TCE 003240231-01, PDC Light Curves

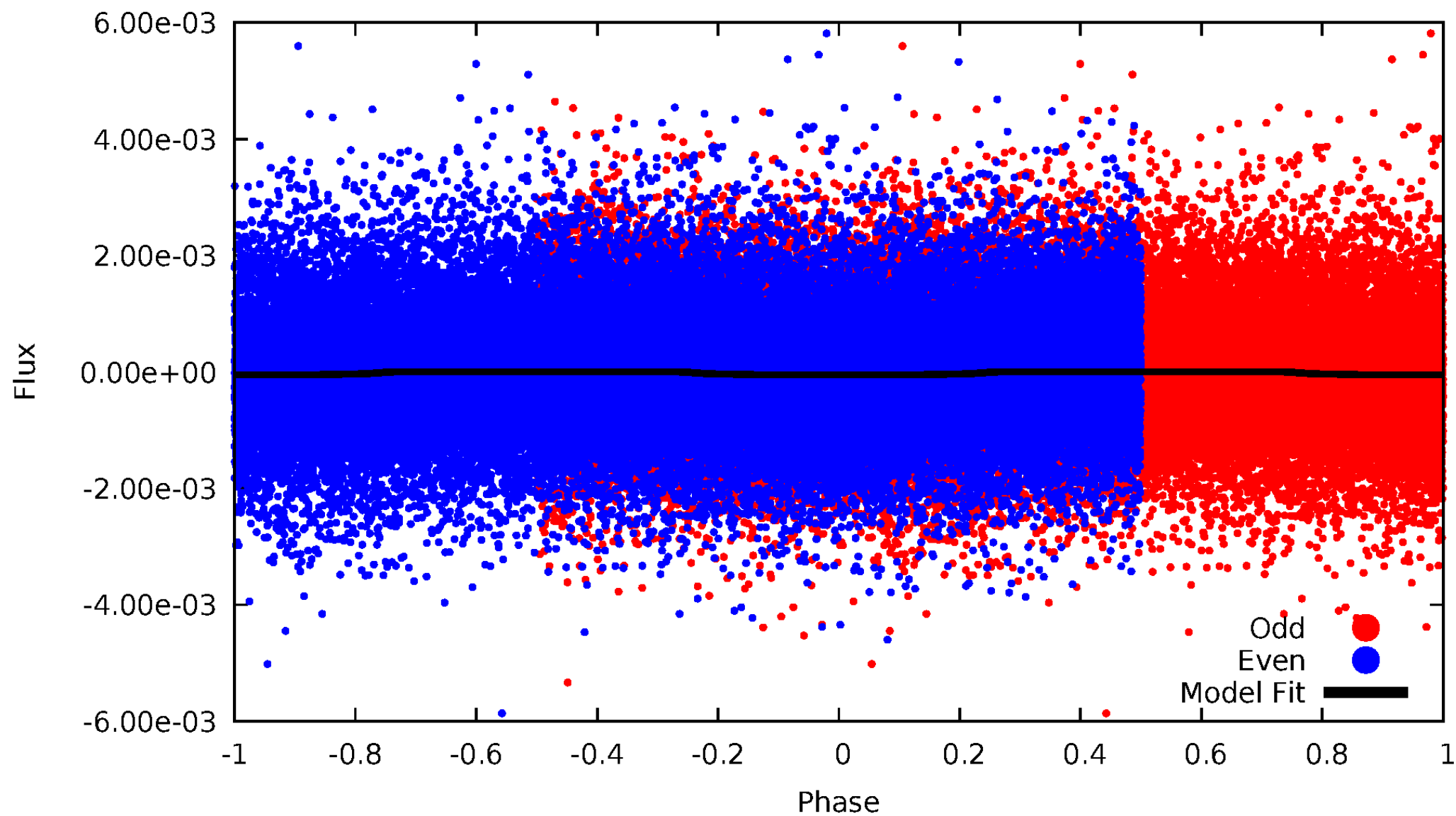


TCE 003240231-01



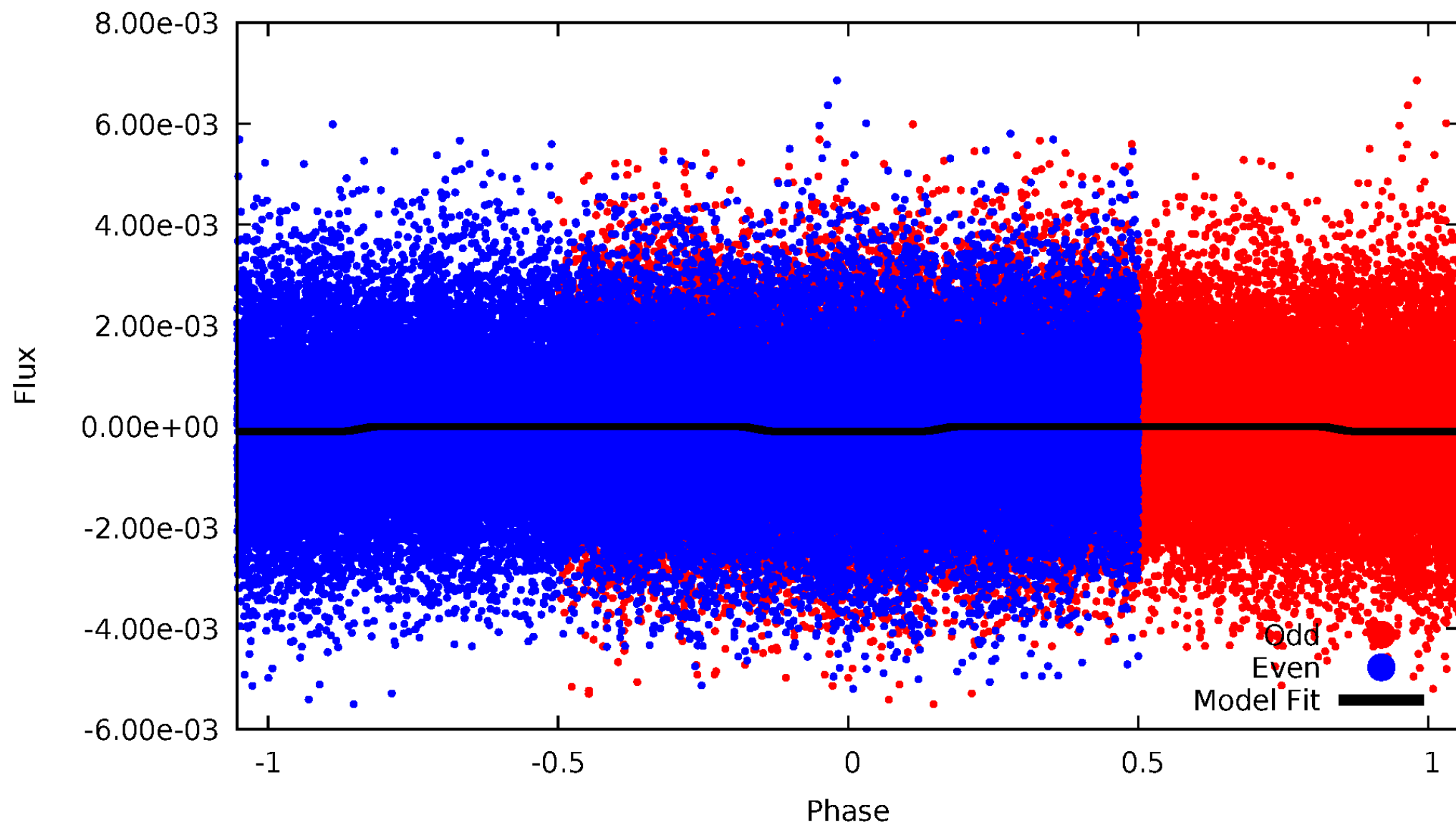
DV Odd/Even

TCE 003240231-01



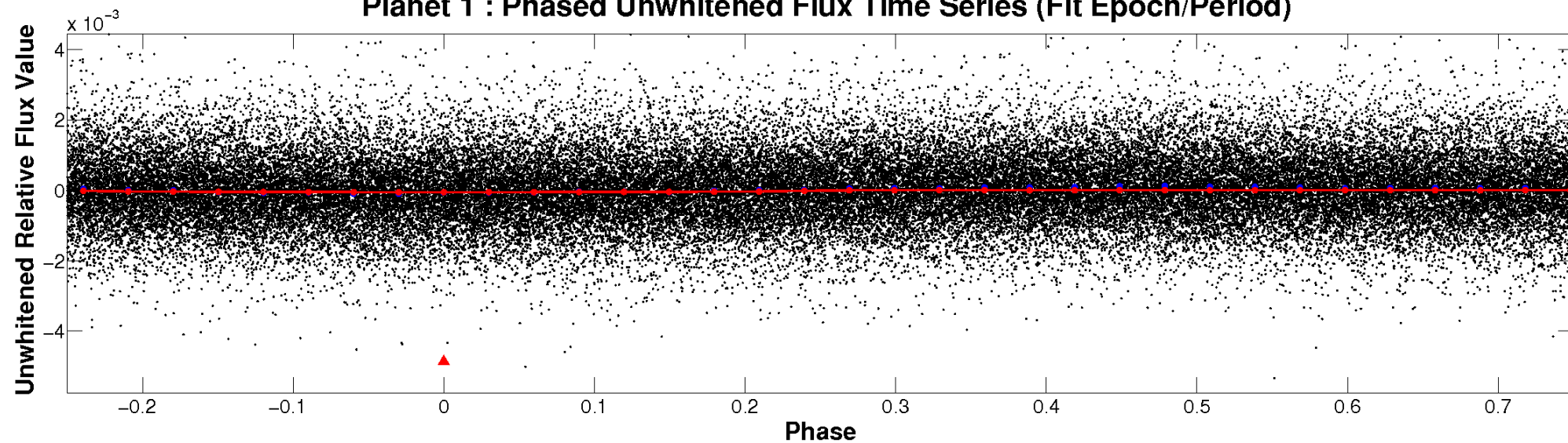
ALT Odd/Even

TCE 003240231-01

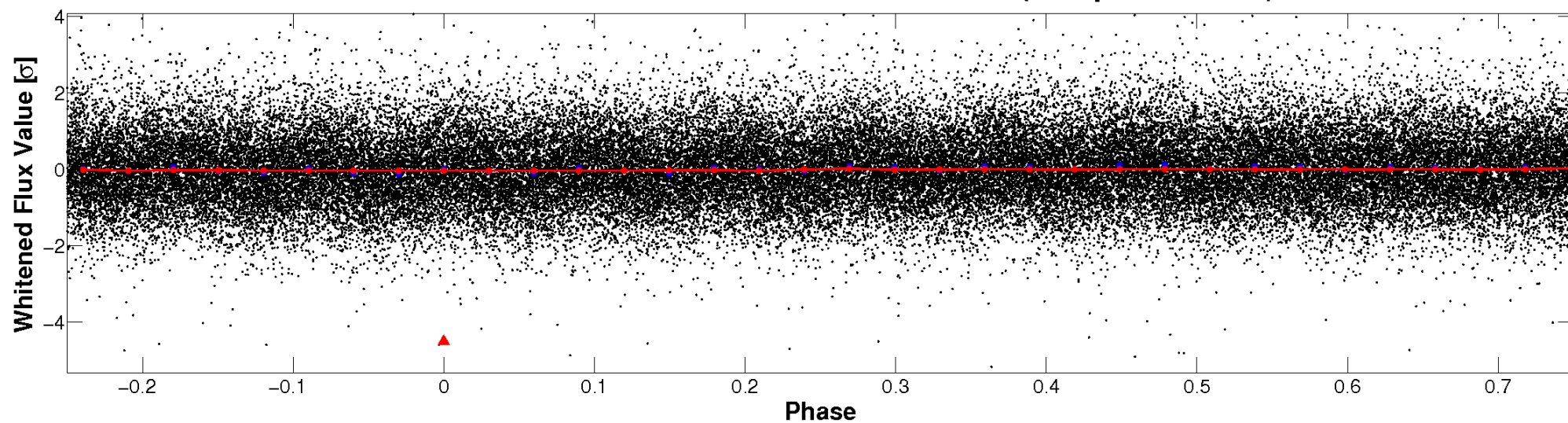


Non-Whitened Vs. Whitened Light Curve

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

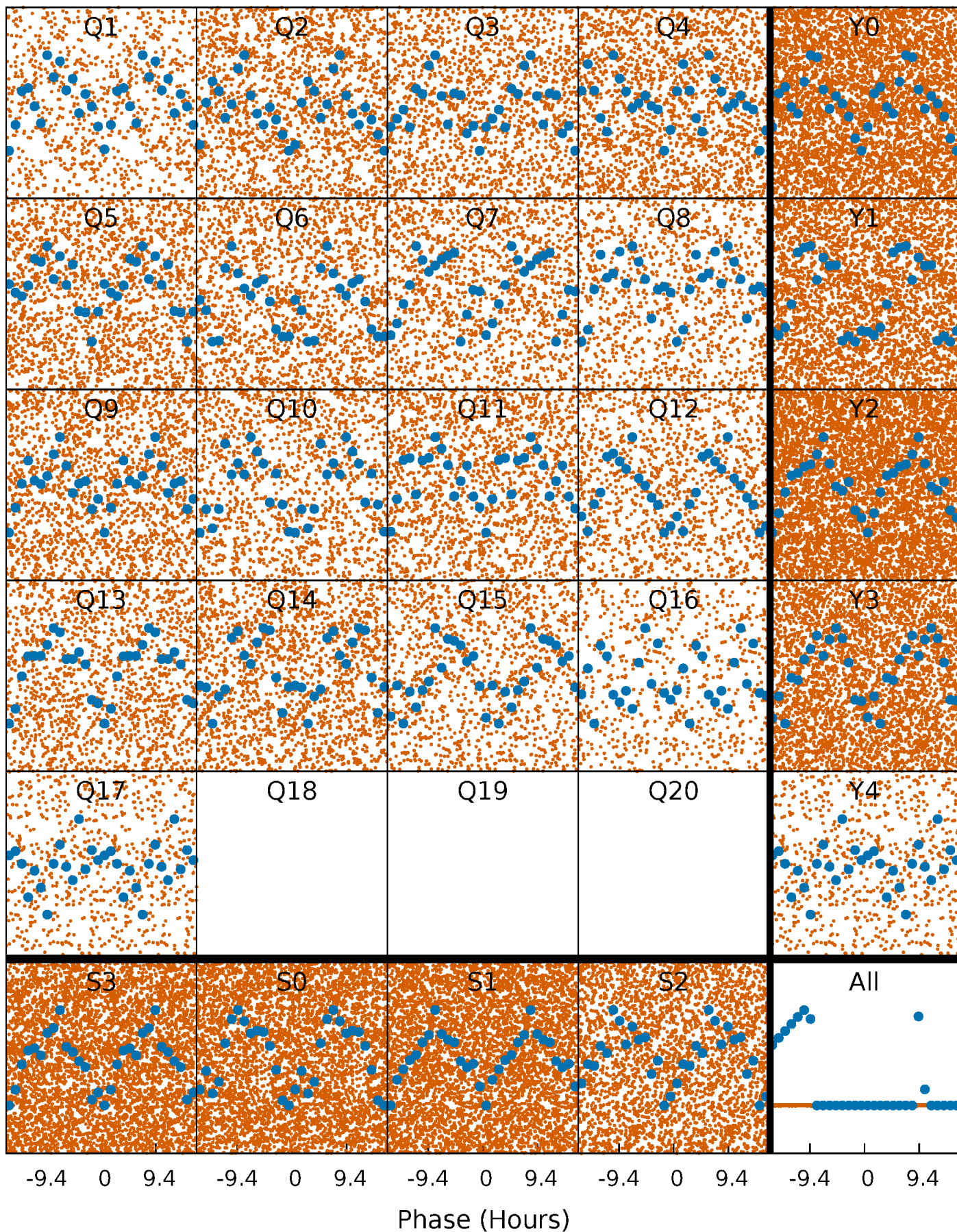


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



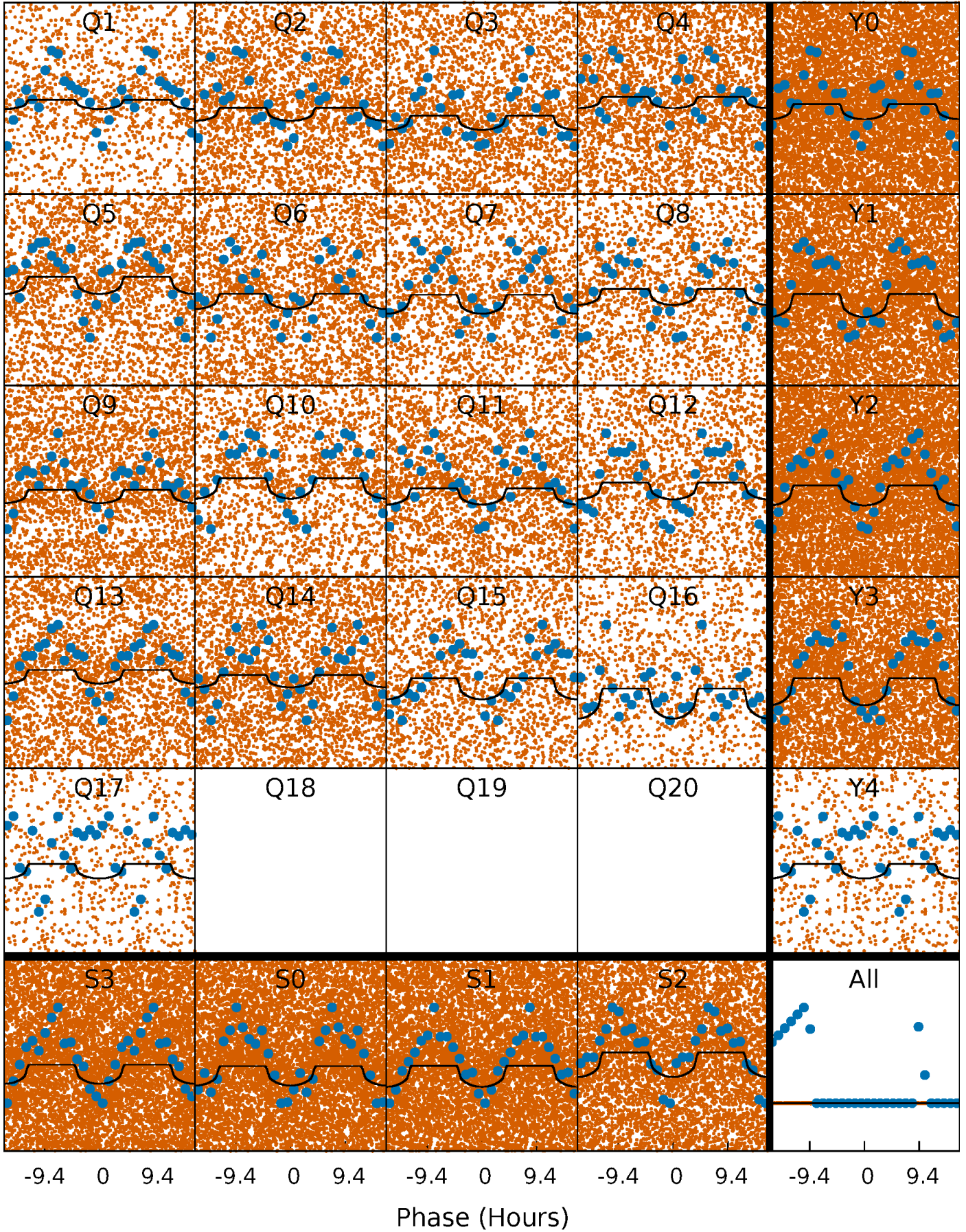
PDC Quarter-Phased Transit Curves

TCE 003240231-01 P= 0.682992 Days $T_0=132.017272$ (BKJD)



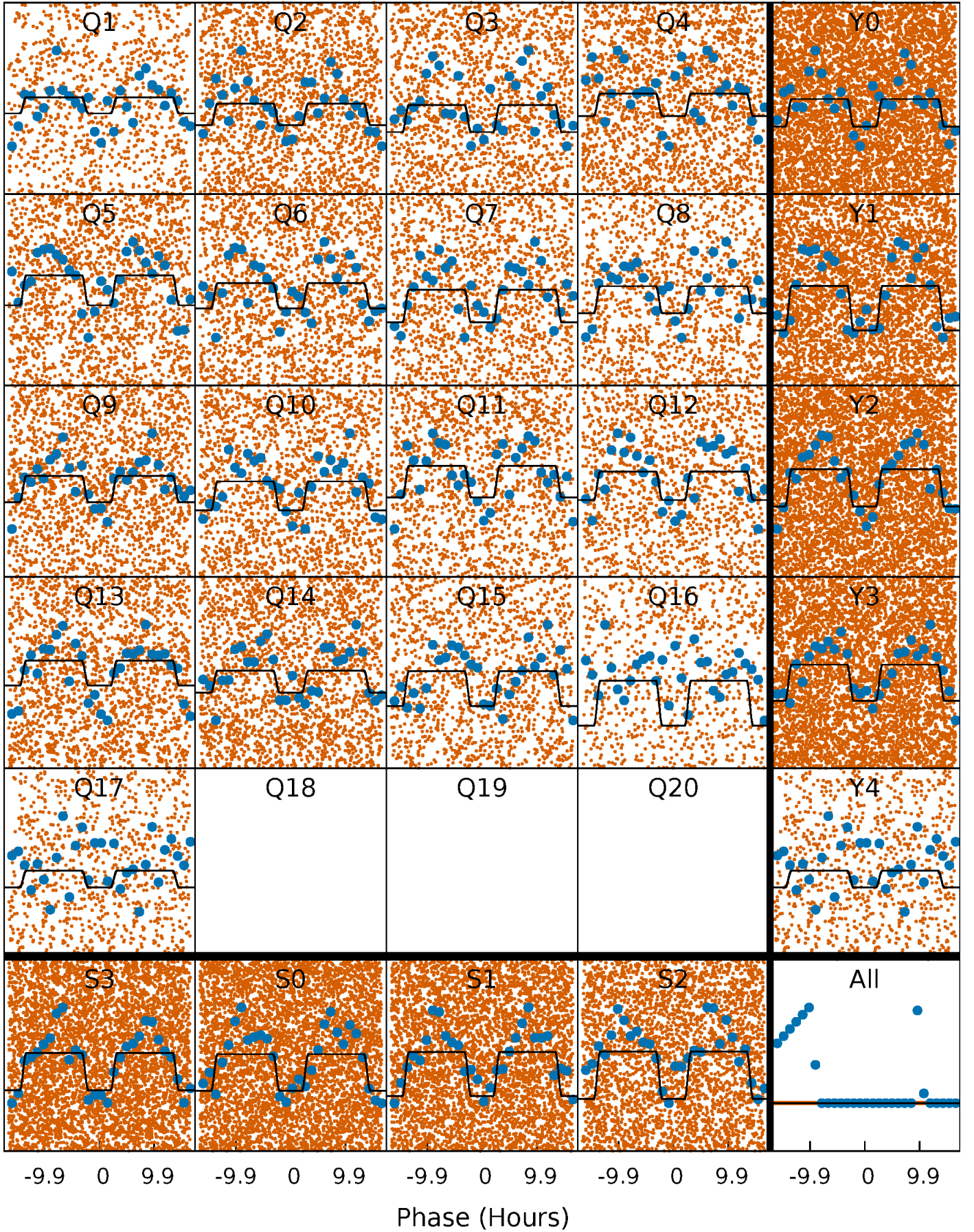
DV Quarter-Phased Transit Curves

TCE 003240231-01 P= 0.682992 Days $T_0=132.017272$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

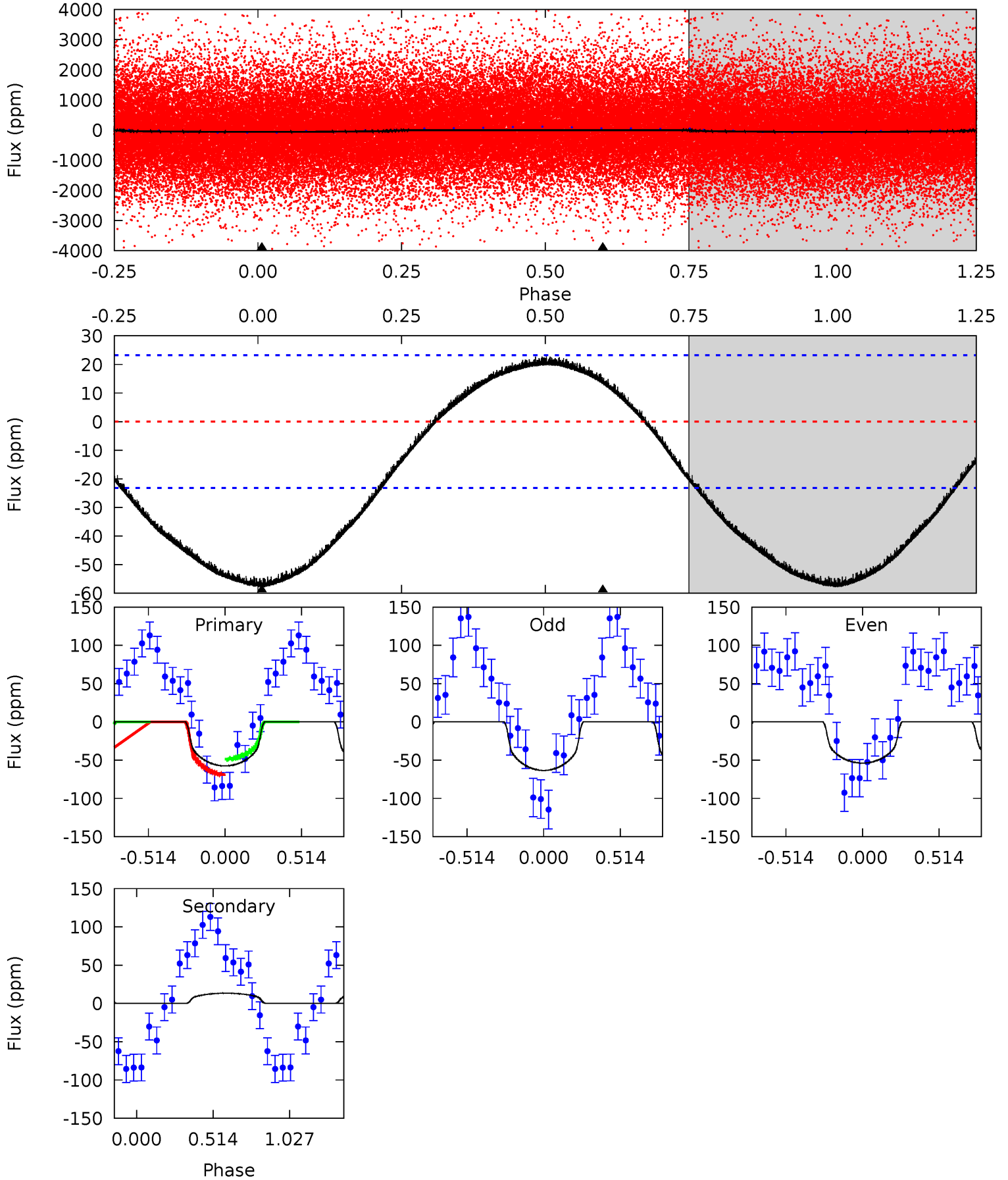
TCE 003240231-01 P= 0.682990 Days $T_0=132.016870$ (BKJD)



DV Model-Shift Uniqueness Test

003240231-01, $P = 0.682992$ Days, $E = 131.334280$ Days

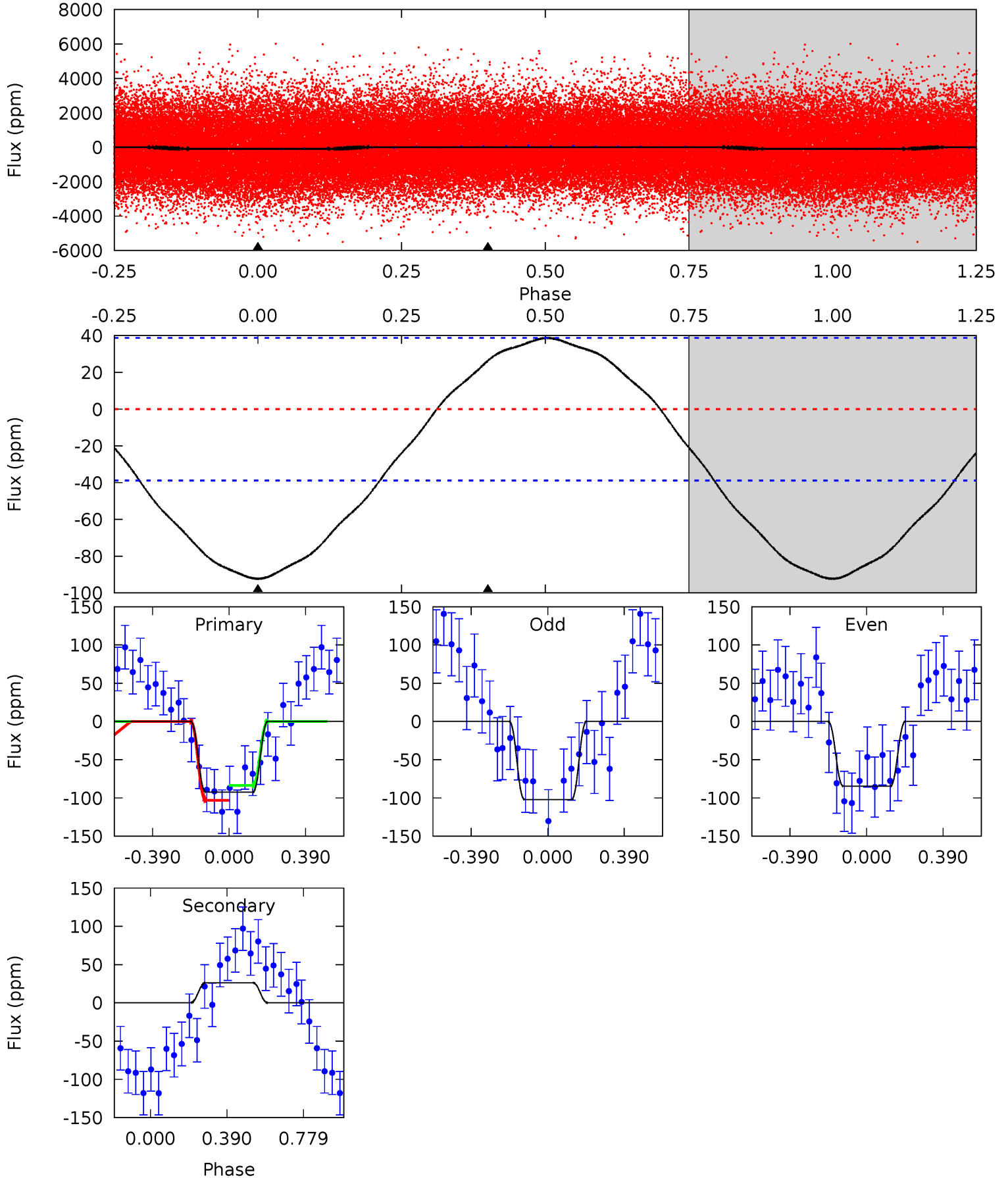
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	-2.43	0	0	4.21	0.65	1.12	10.4	10.4	-2.43	-2.43	0.87	1.24	0.28	1.82



Alt Model-Shift Uniqueness Test

003240231-01, P = 0.682990 Days, E = 131.333880 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	-2.89	0	0	4.27	0.86	1.22	10.2	10.2	-2.89	-2.89	0.96	1.14	0.30	1.04



Stellar Parameters For KIC 003240231

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7318^{+228}_{-330}	$4.130^{+0.149}_{-0.182}$	$-0.120^{+0.200}_{-0.350}$	$1.748^{+0.533}_{-0.400}$	$1.501^{+0.211}_{-0.234}$	$0.396^{+0.297}_{-0.194}$
	+3%/-5%	+4%/-4%	+167%/-292%	+30%/-23%	+14%/-16%	+75%/-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 003240231-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	13 ± 6	$1.32^{+0.32}_{-0.30}$	4521^{+356}_{-288}	-5528^{+588}_{-720}	$-1.180^{+0.580}_{-1.069}$
Alt.	26 ± 9	$1.95^{+0.37}_{-0.34}$	4524^{+359}_{-319}	-5485^{+466}_{-489}	$-1.138^{+0.444}_{-0.687}$

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

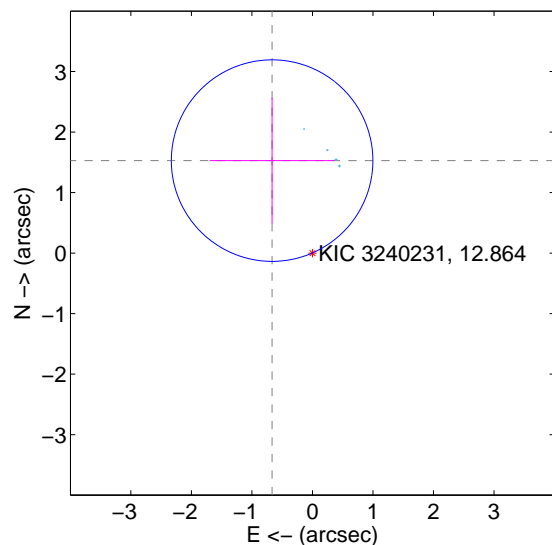
Supplemental centroid analysis for 003240231-01. Kepler magnitude: 12.86. Transit SNR 6.30

There are 4 quarters with good PRF difference image offsets

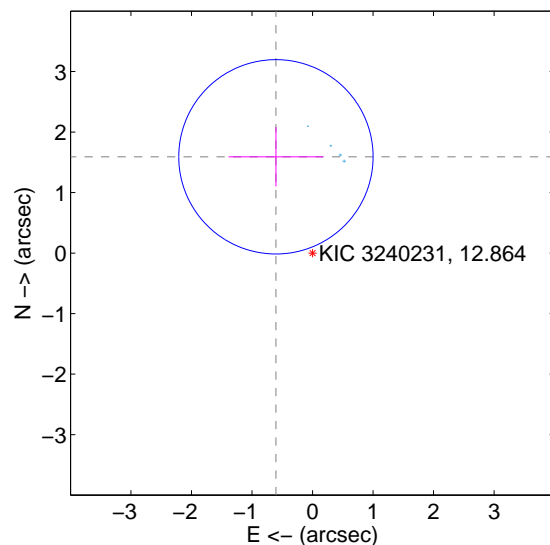
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.667 ± 0.555	3.00	0.667 ± 1.032	1.528 ± 1.038
PRF-fit source offset from KIC position	1.702 ± 0.535	3.18	0.605 ± 0.782	1.591 ± 0.489
photometric centroid source offset	0.32 ± 0.22	1.47	-0.30 ± 0.20	0.12 ± 0.28

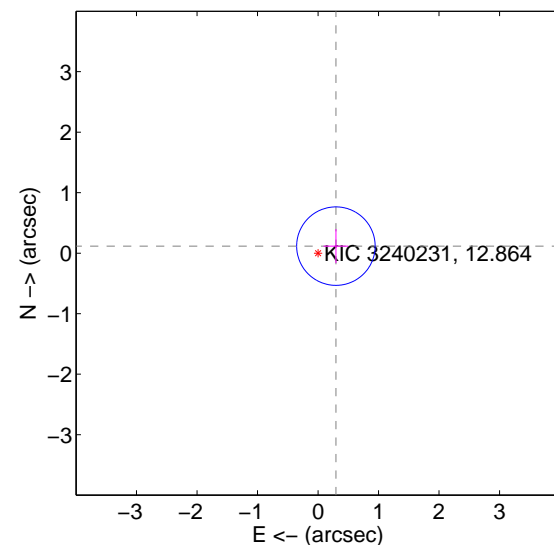
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

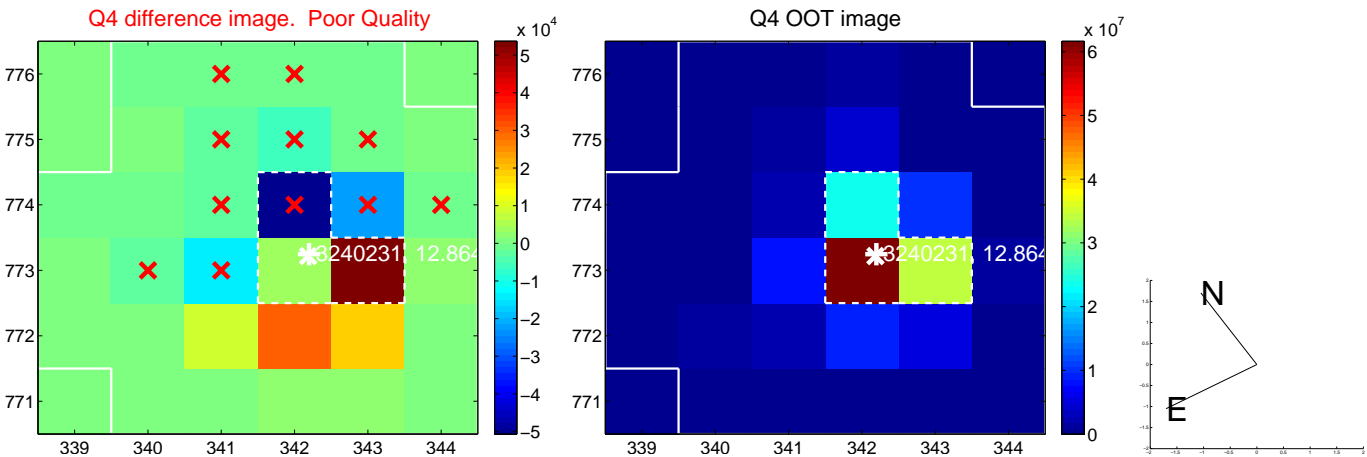
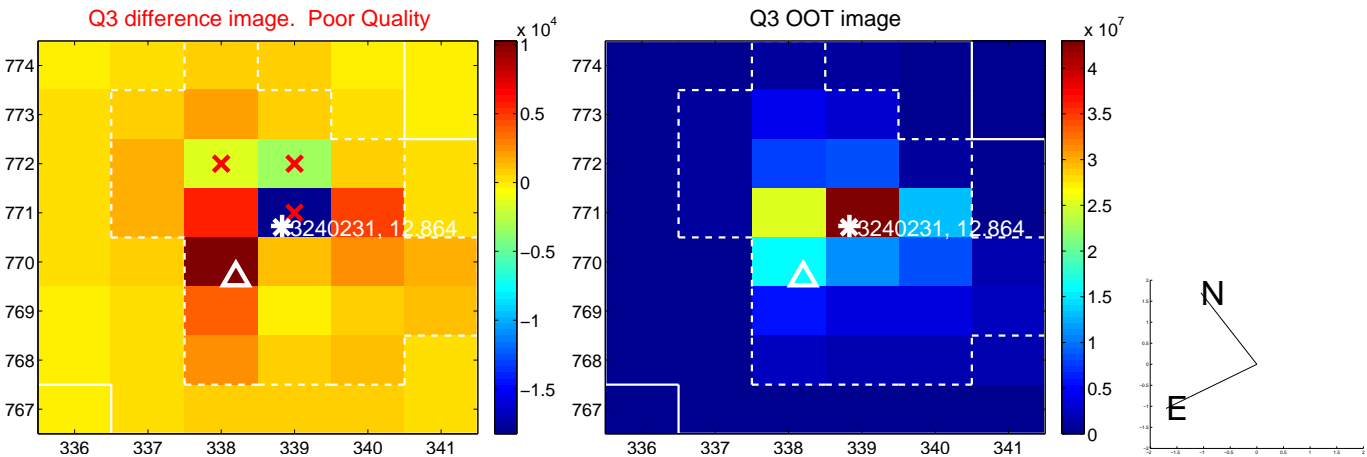
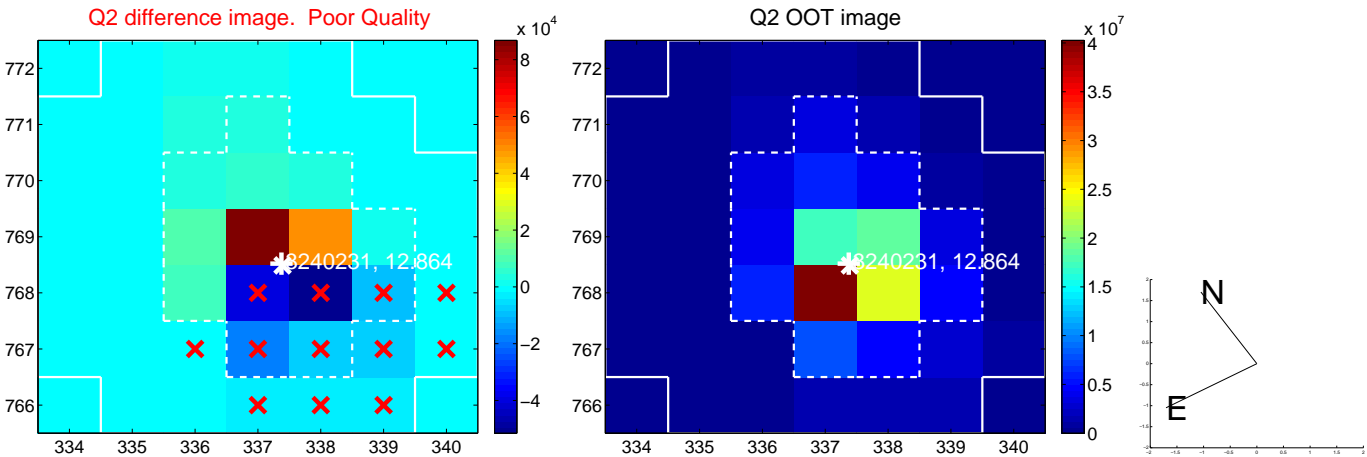
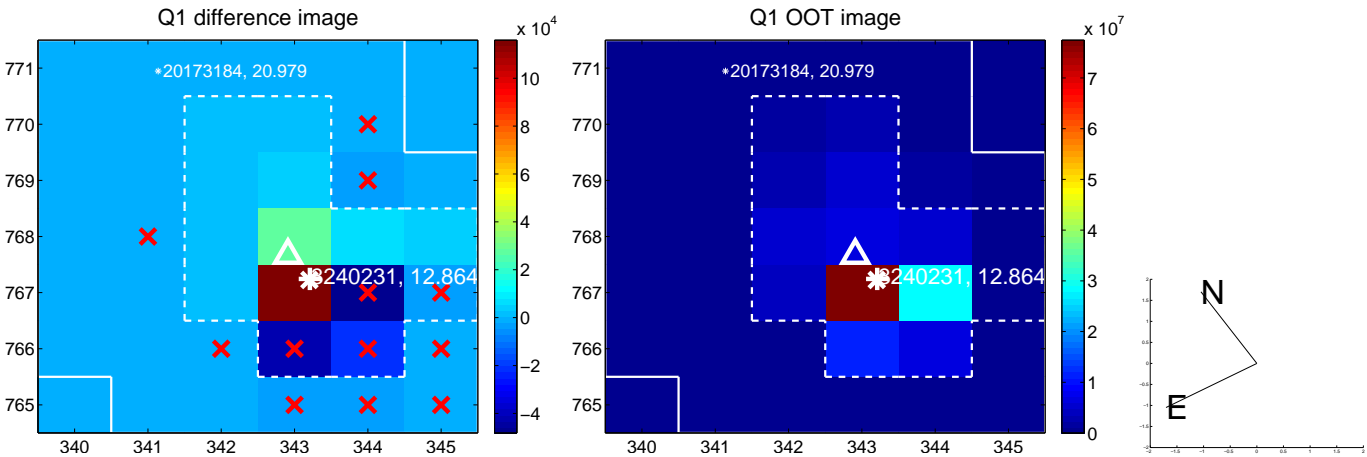


offset from photometric centroids

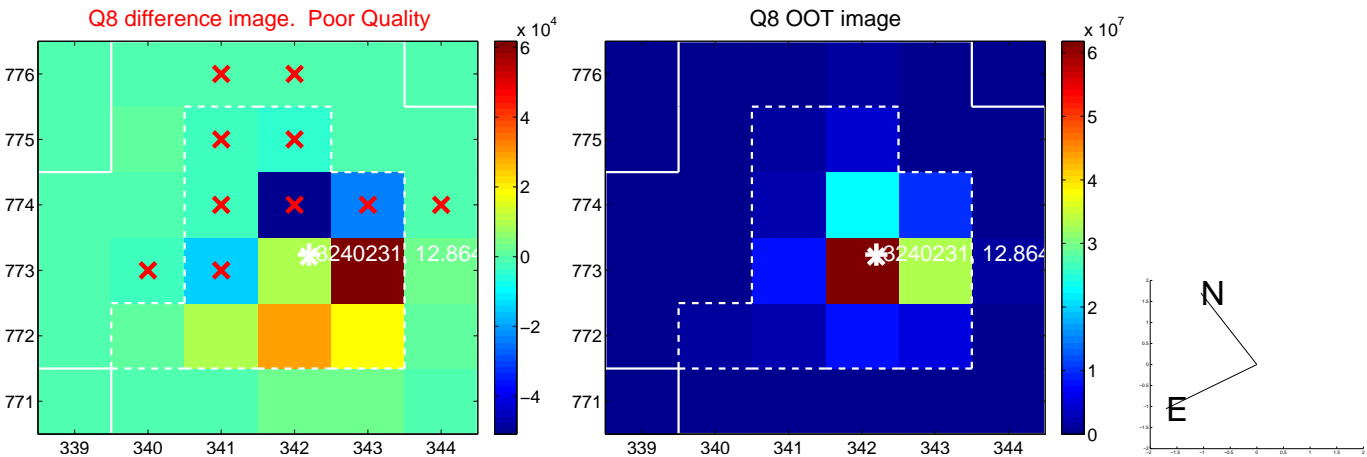
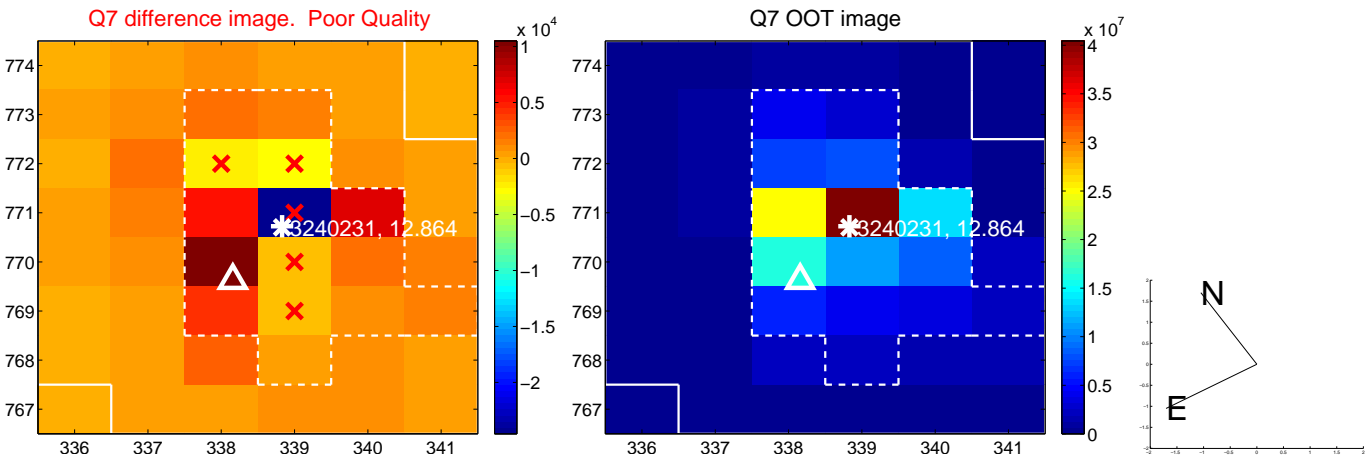
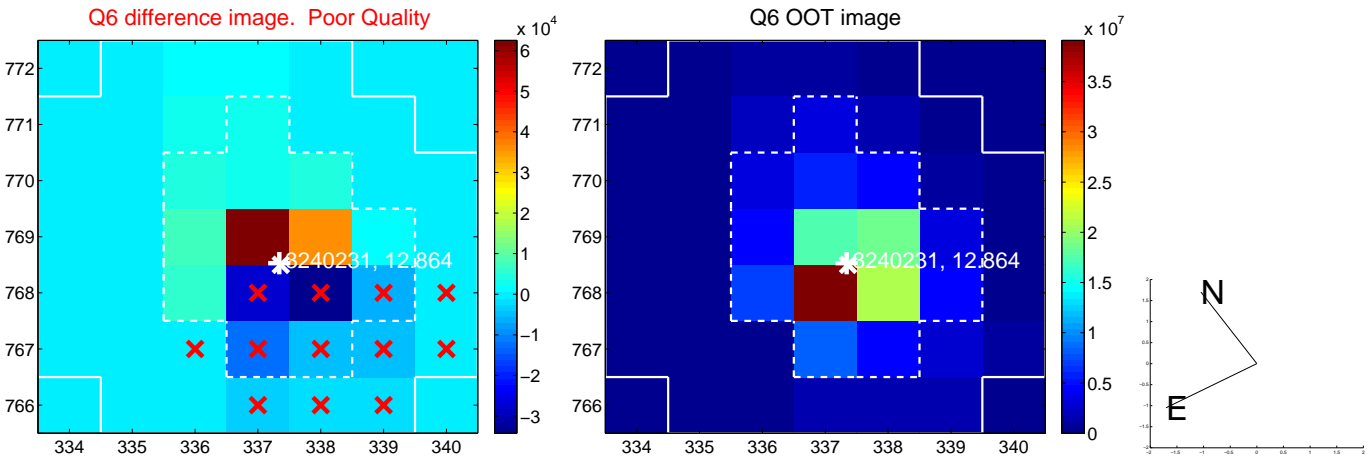
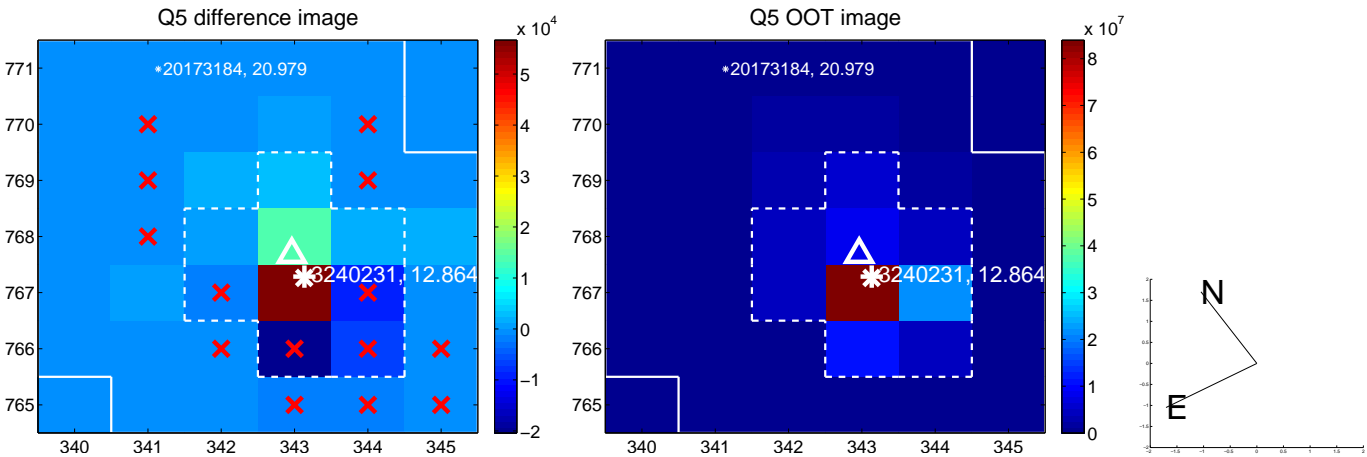


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

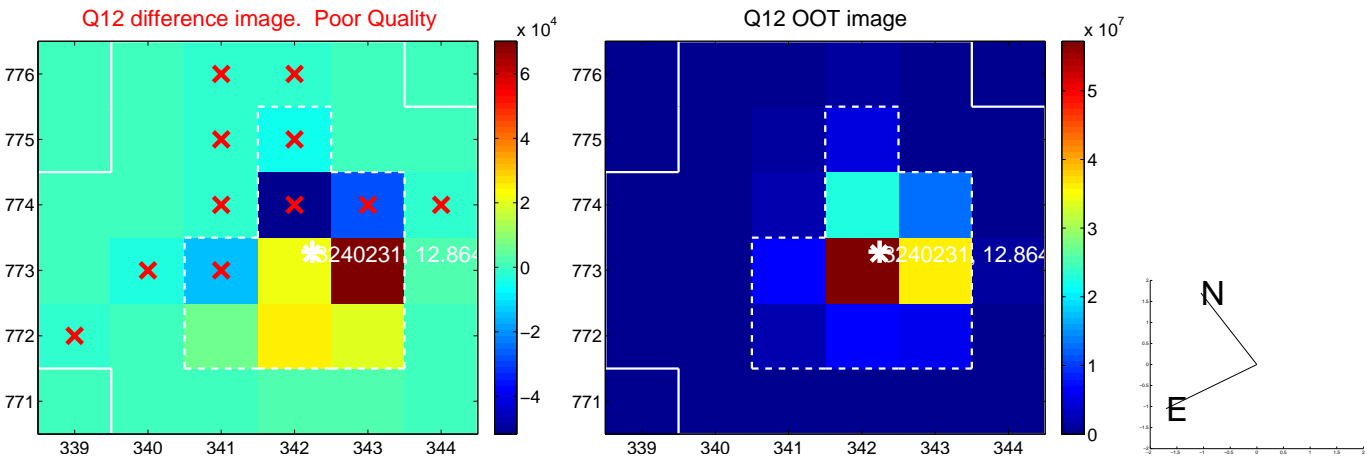
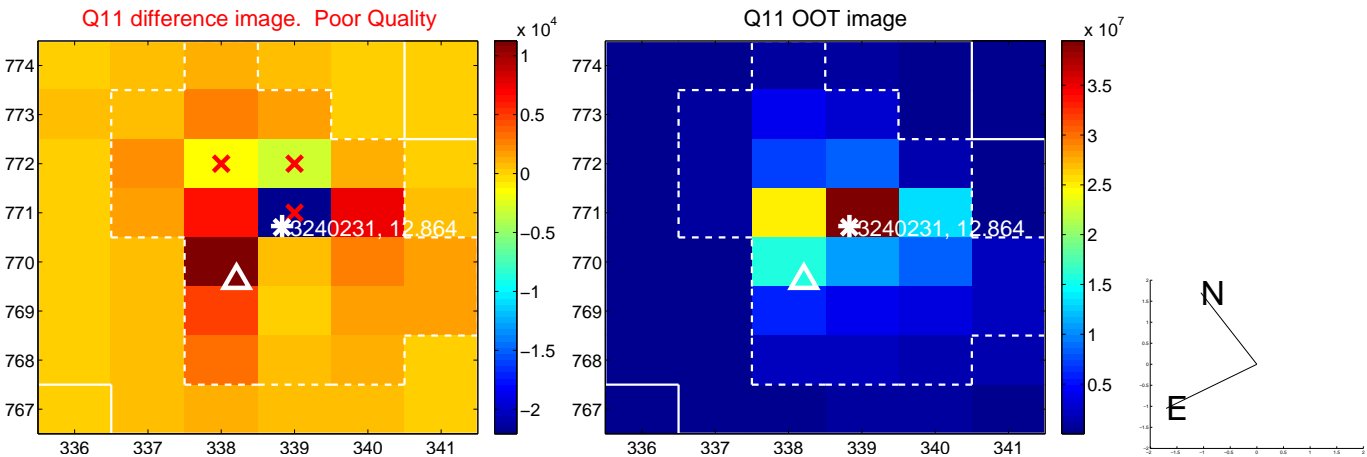
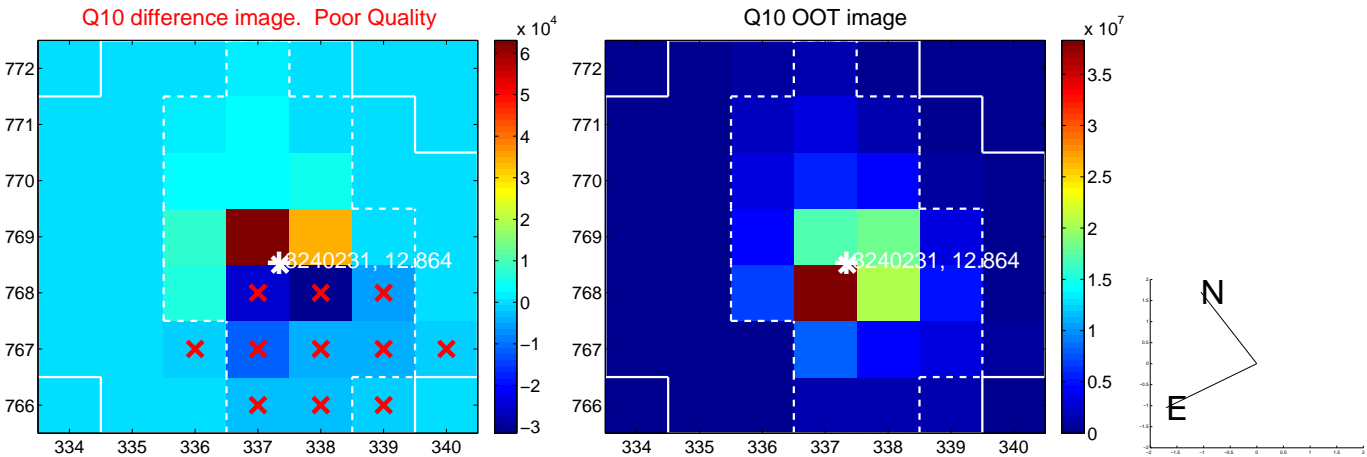
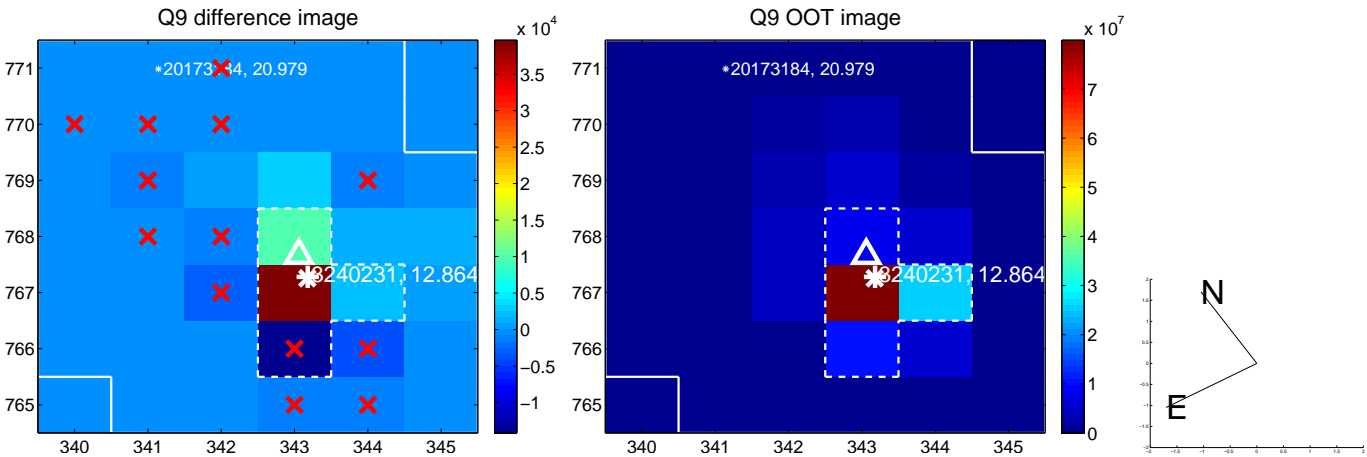
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



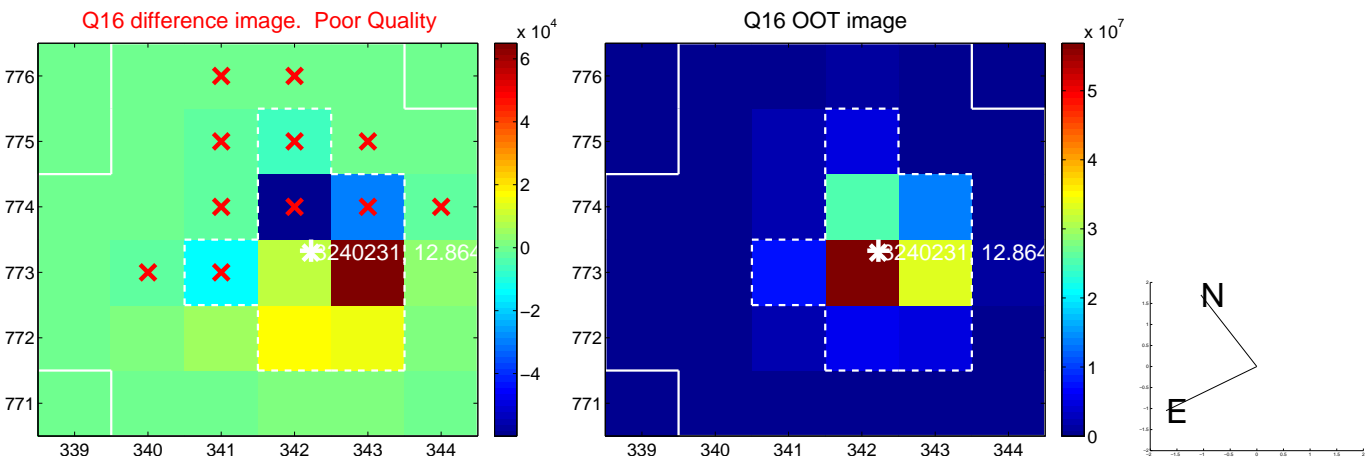
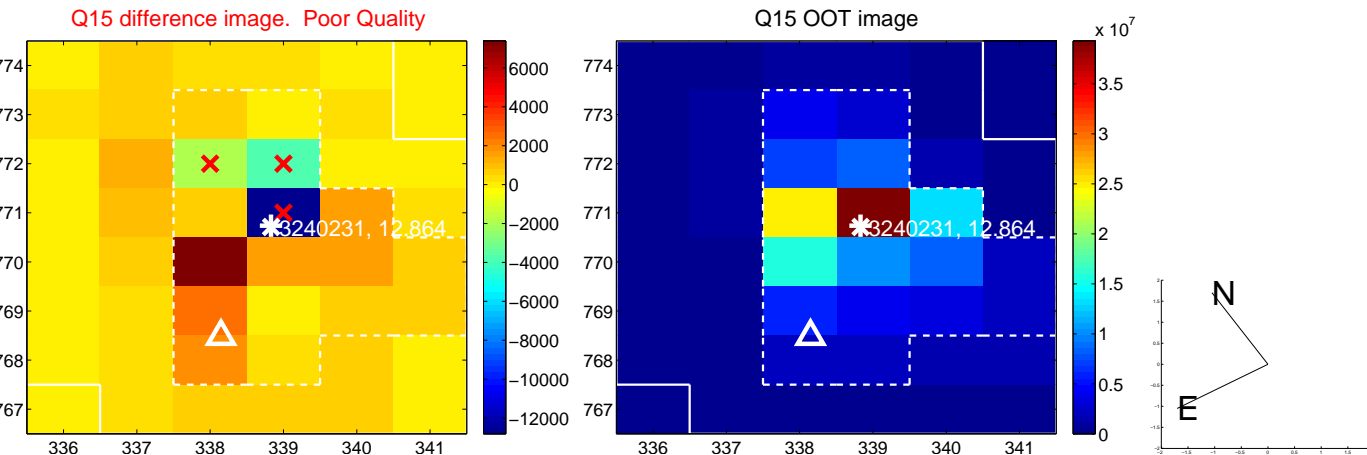
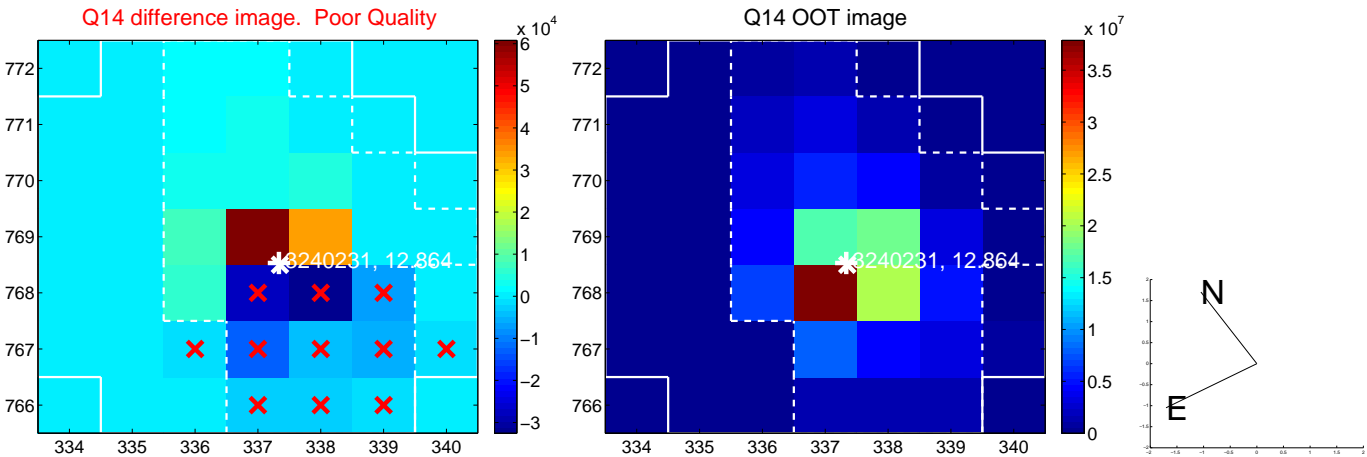
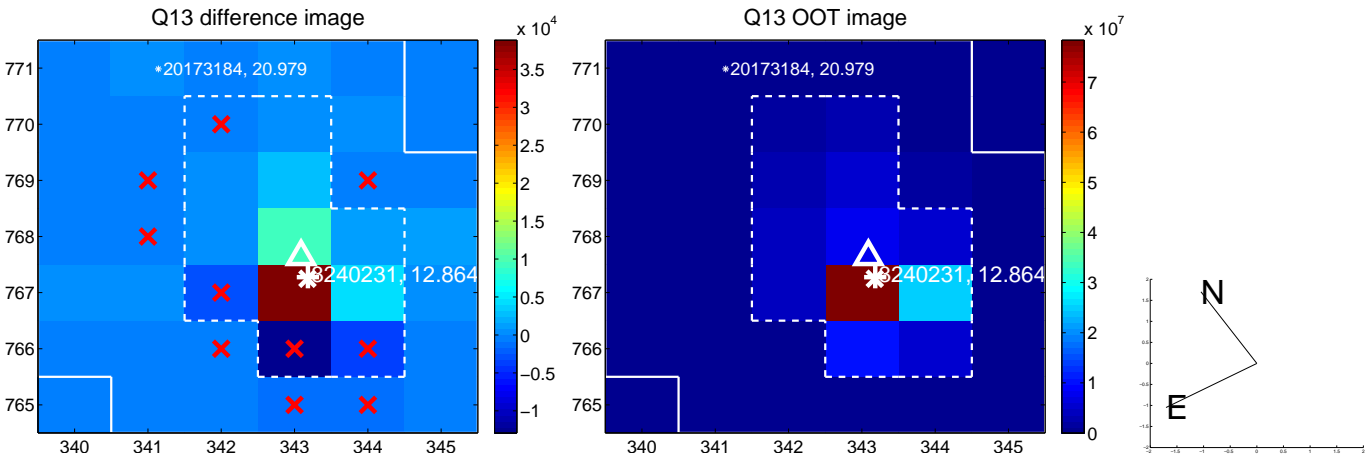
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



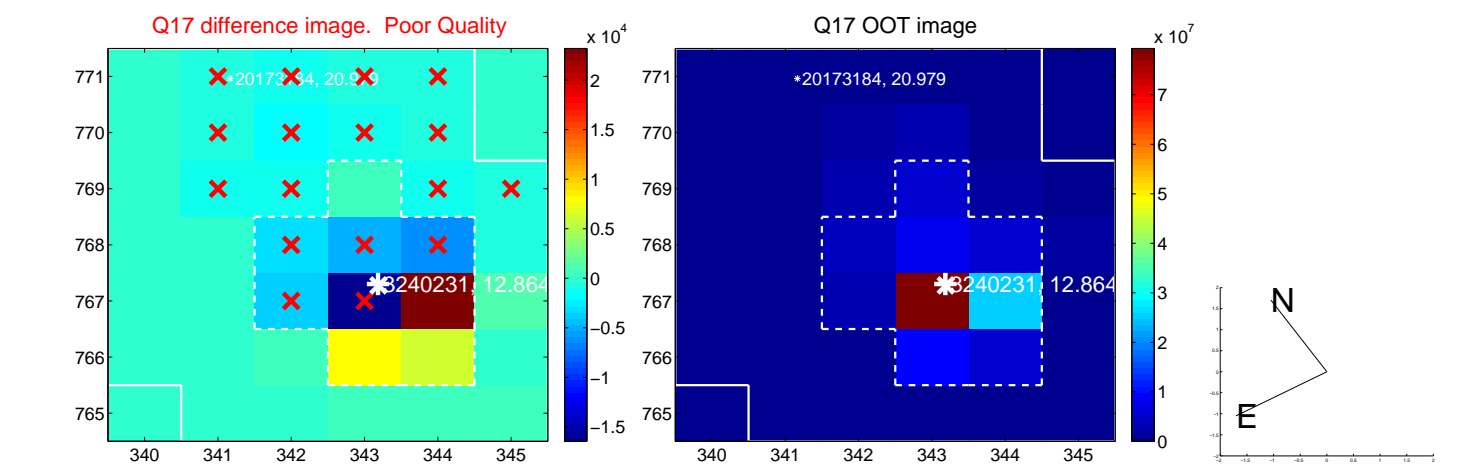
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



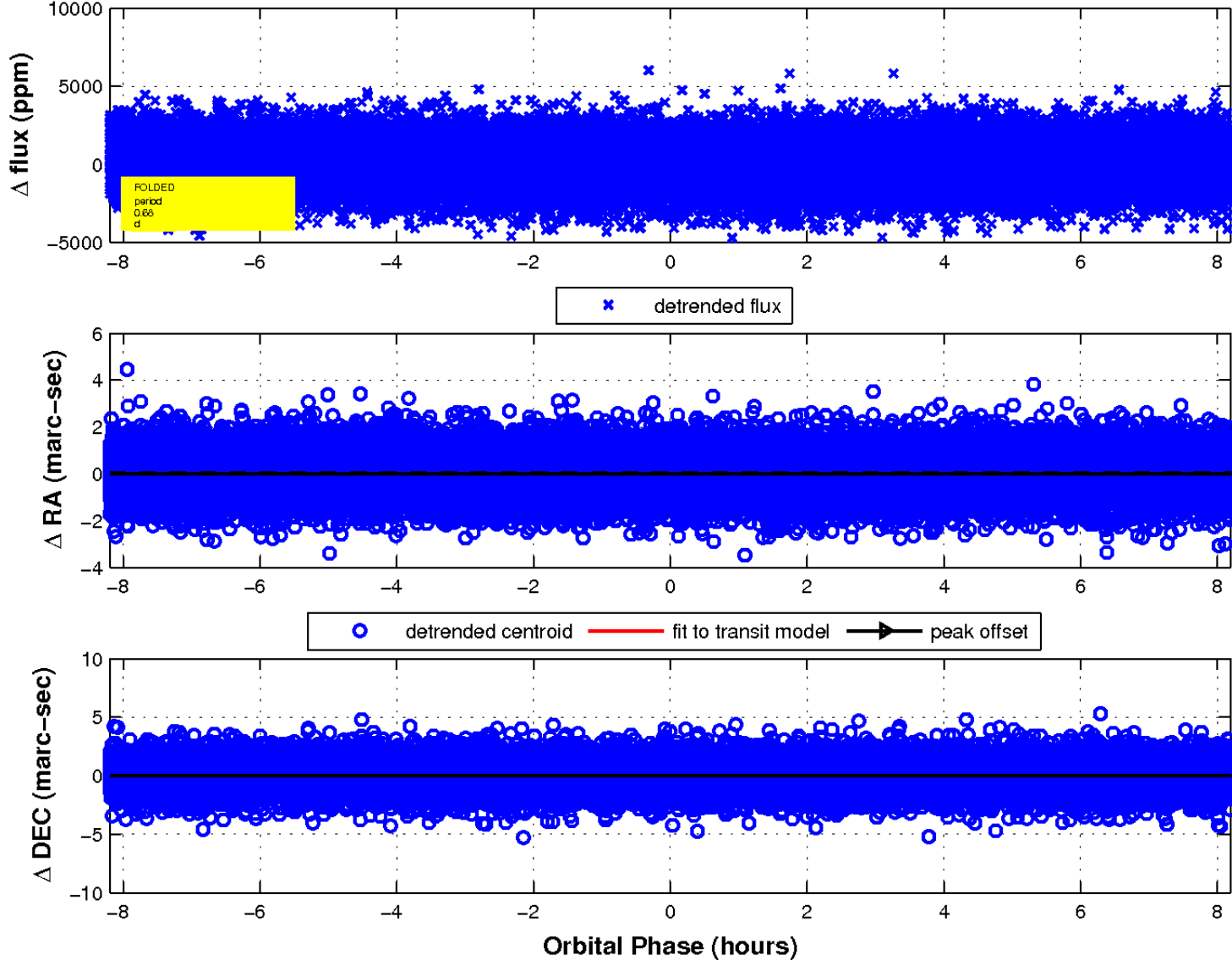
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

