

KIC 003240406

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})
003240406-01	OBS	3185.01	0.934144	132.412288	8.7	3.610	13.4	12.9	2.15	7624	0.68	27016.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003240406-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—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.

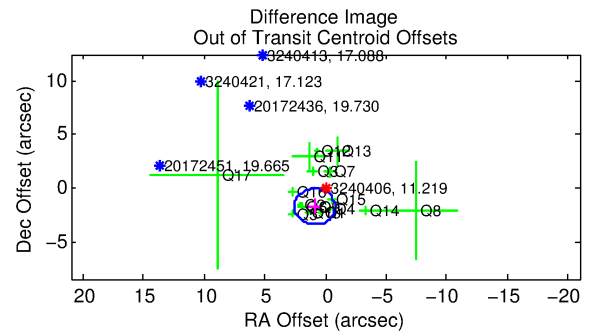
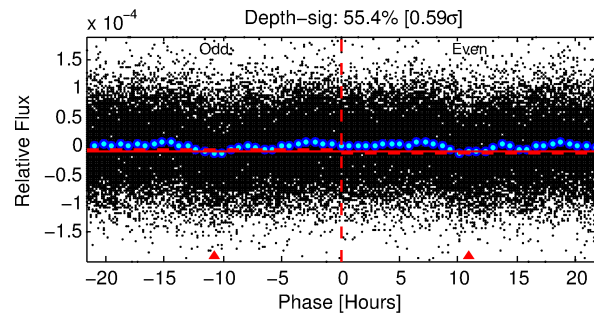
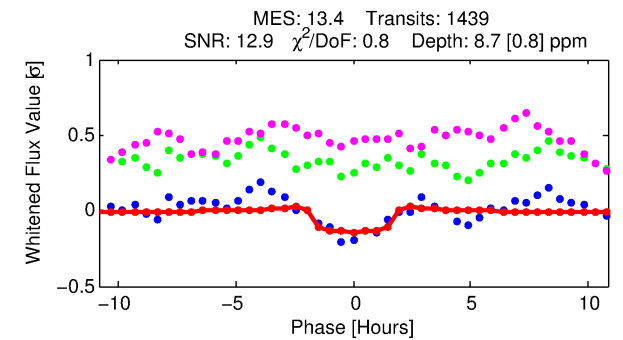
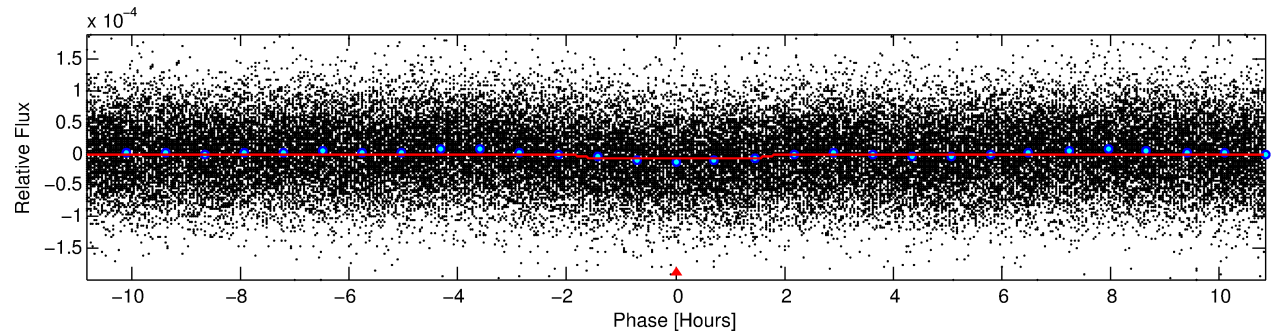
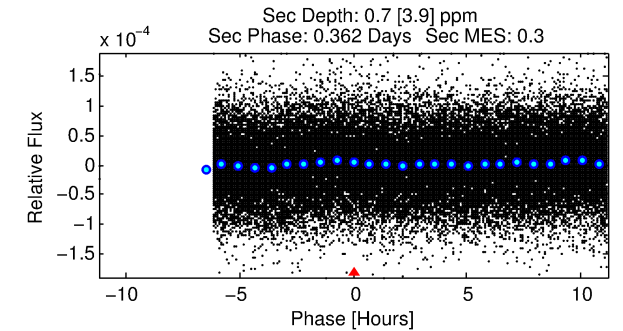
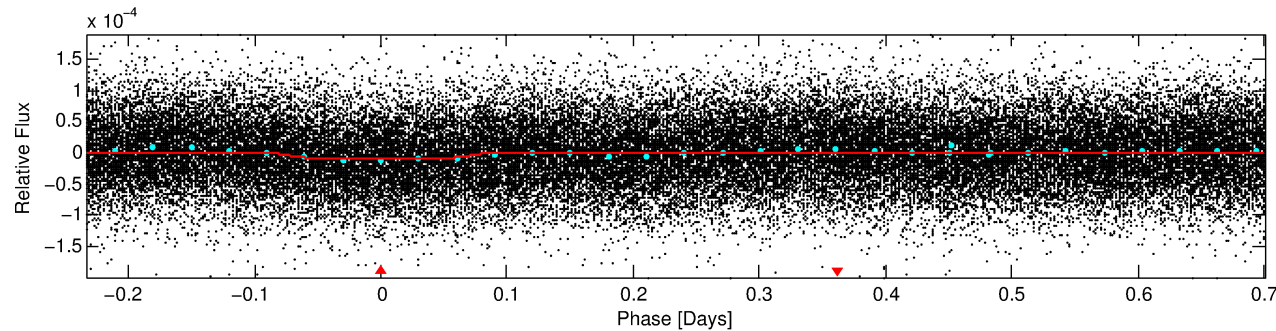
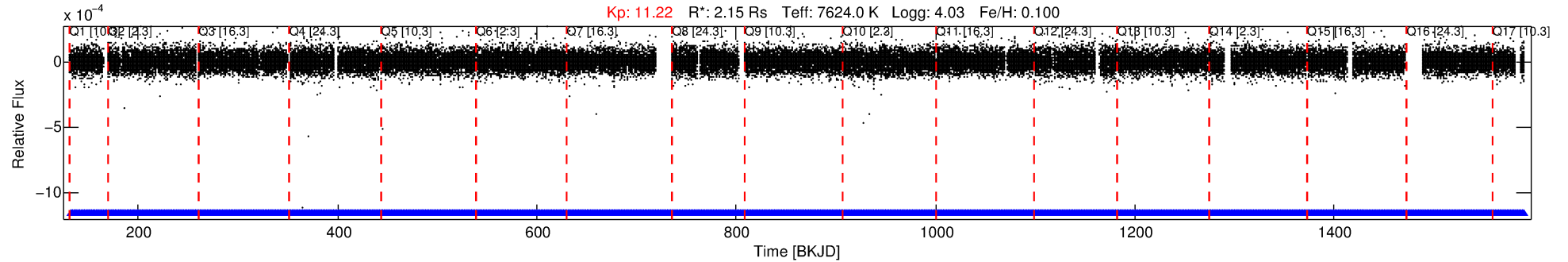
Ephemeris Match Information For 003240406-01

No Significant Match Found

DV One-Page Summary

KIC: 3240406 Candidate: 1 of 1 Period: 0.934 d

KOI: K03185.01 Corr: 0.889



DV Fit Results:

Period = 0.93414 [0.00001] d
Epoch = 132.4123 [0.0028] BKJD
 R_p/R^* = 0.0029 [0.0003]
 a/R^* = 1.63 [0.55]
 b = 0.71 [0.39]
 Seff = 27016.91 [5568.44]
 Teq = 3269 [168] K
 R_p = 0.68 [0.13] R_e
 a = 0.0228 [0.0031] AU
 Ag = 0.42 [2.39] $[-0.24\sigma]$
 Teffp = 4063 [5814] K $[0.14\sigma]$

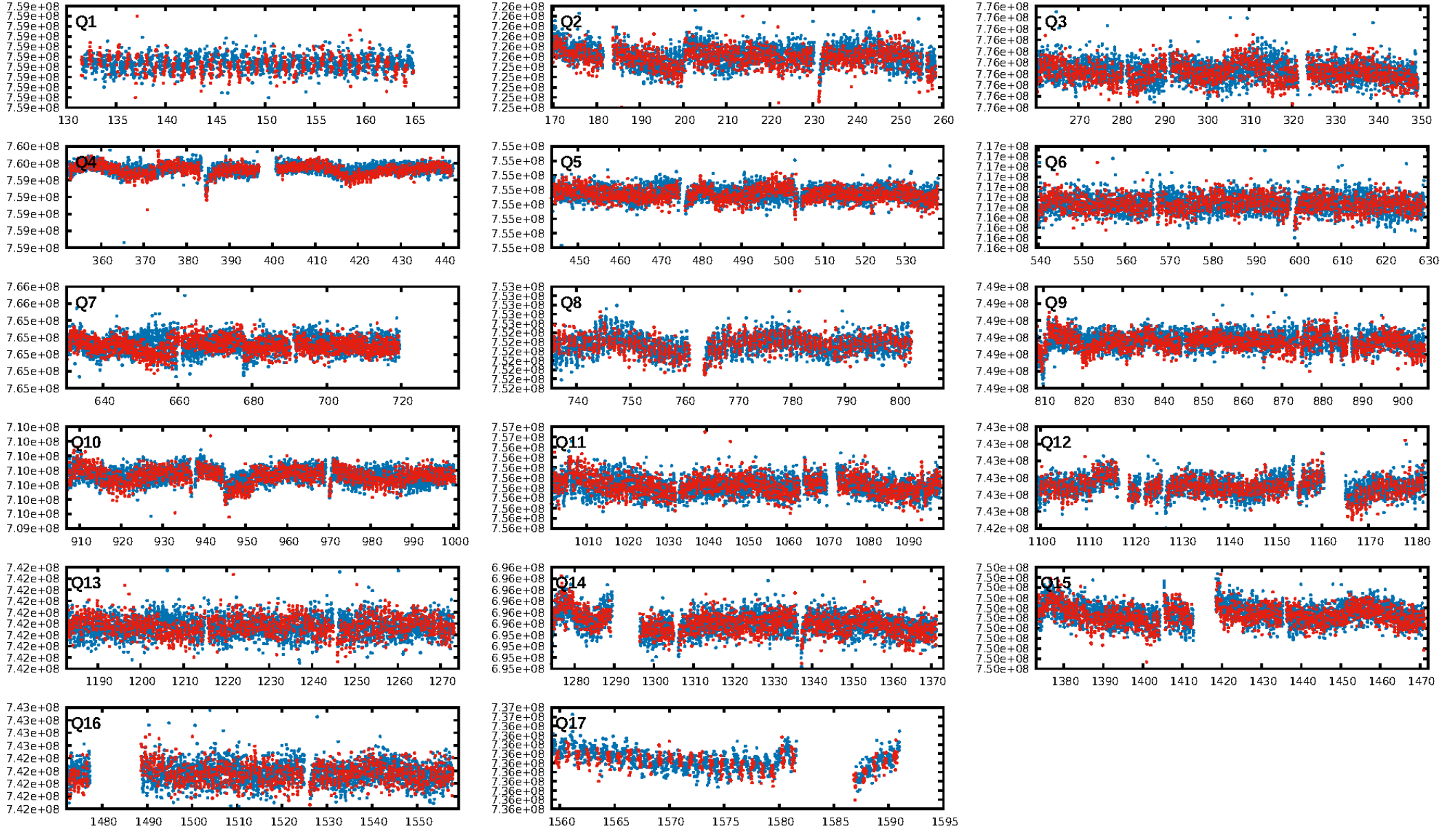
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.55e-34
RollingBand-fgt: 1.00 [1374/1374]
GhostDiagnostic-chr: 4.034
Centroid-sig: 14.1%
Centroid-so: 1.133 arcsec [1.20 σ]
OotOffset-rm: 1.953 arcsec [3.46 σ]
KicOffset-rm: 1.821 arcsec [3.20 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

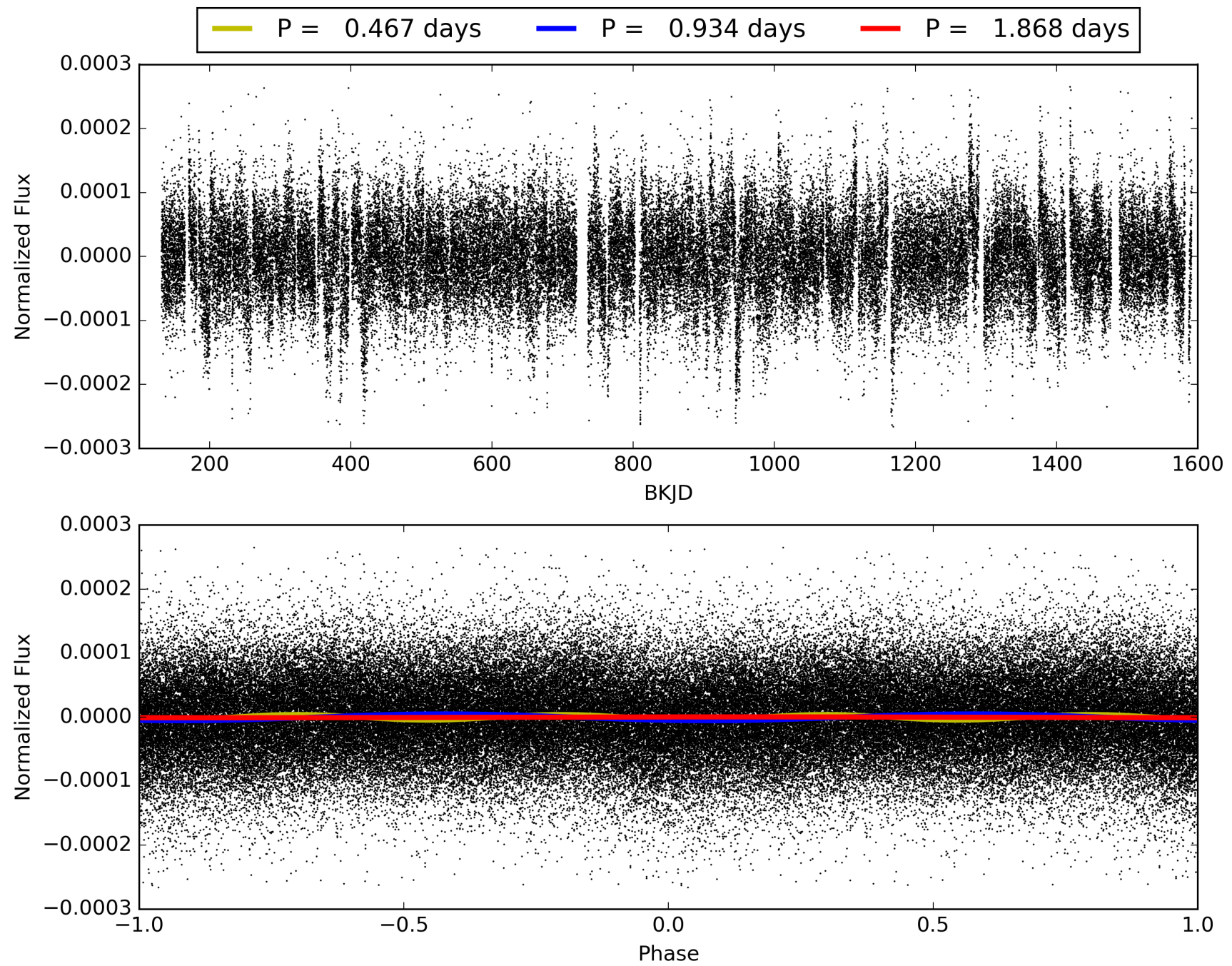
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:30:20 Z

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

TCE 003240406-01, PDC Light Curves

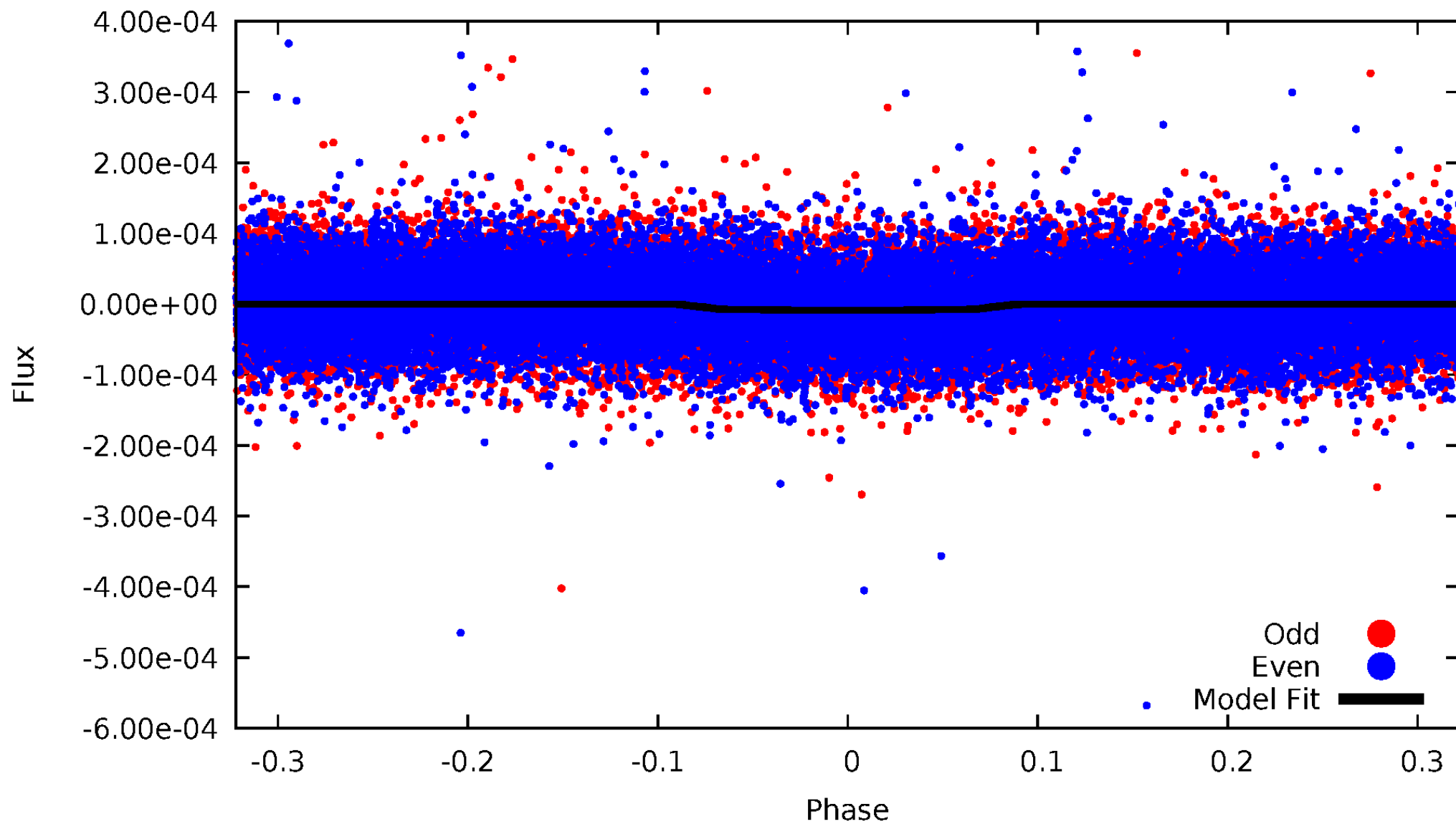


TCE 003240406-01



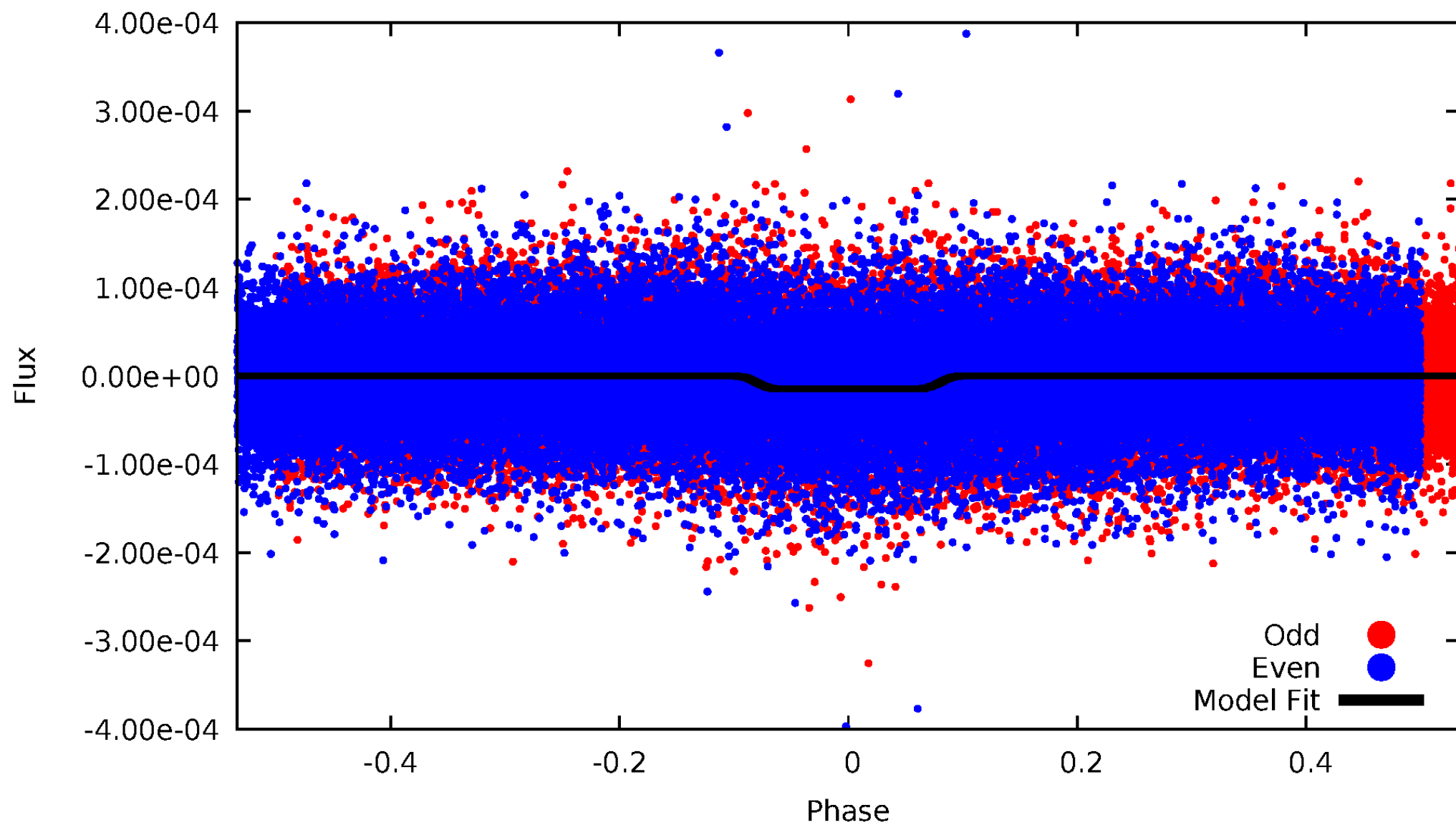
DV Odd/Even

TCE 003240406-01

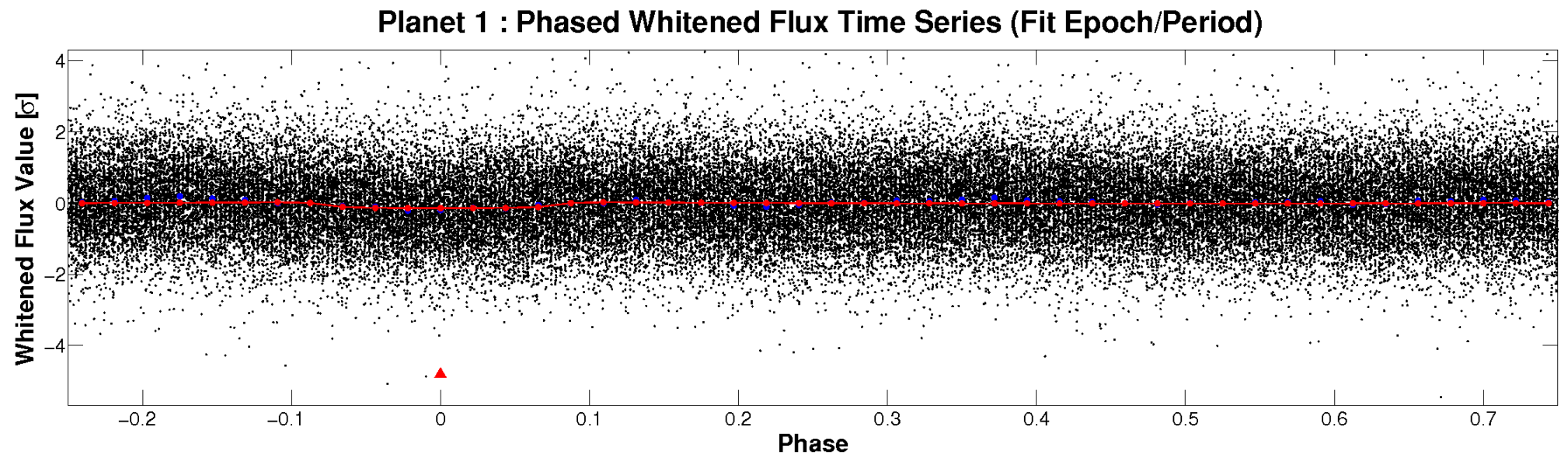
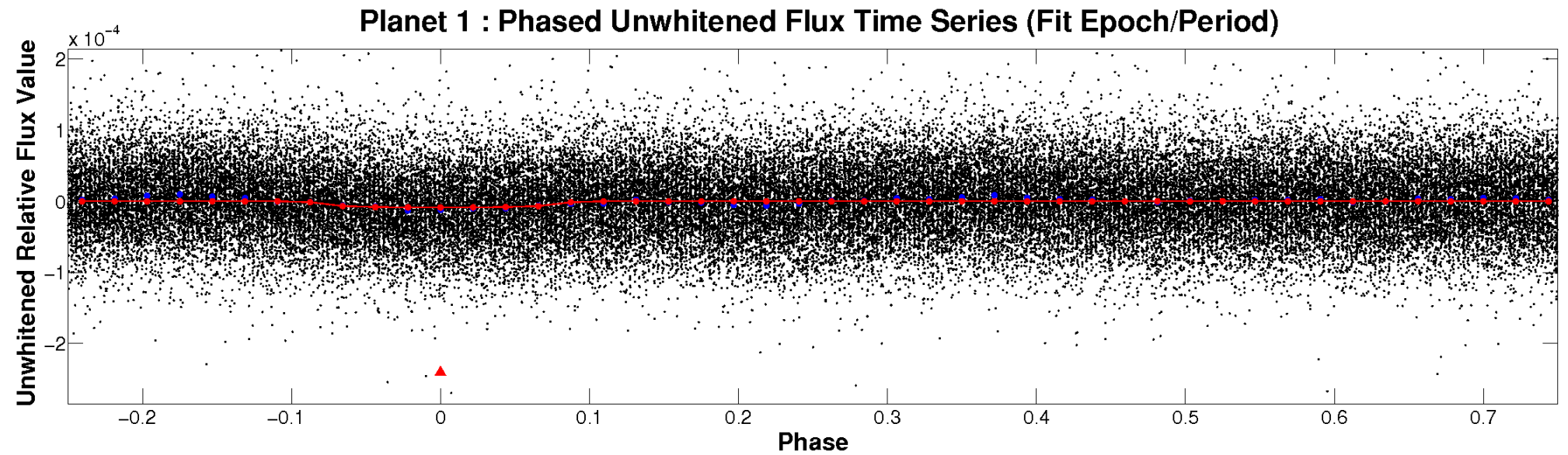


ALT Odd/Even

TCE 003240406-01

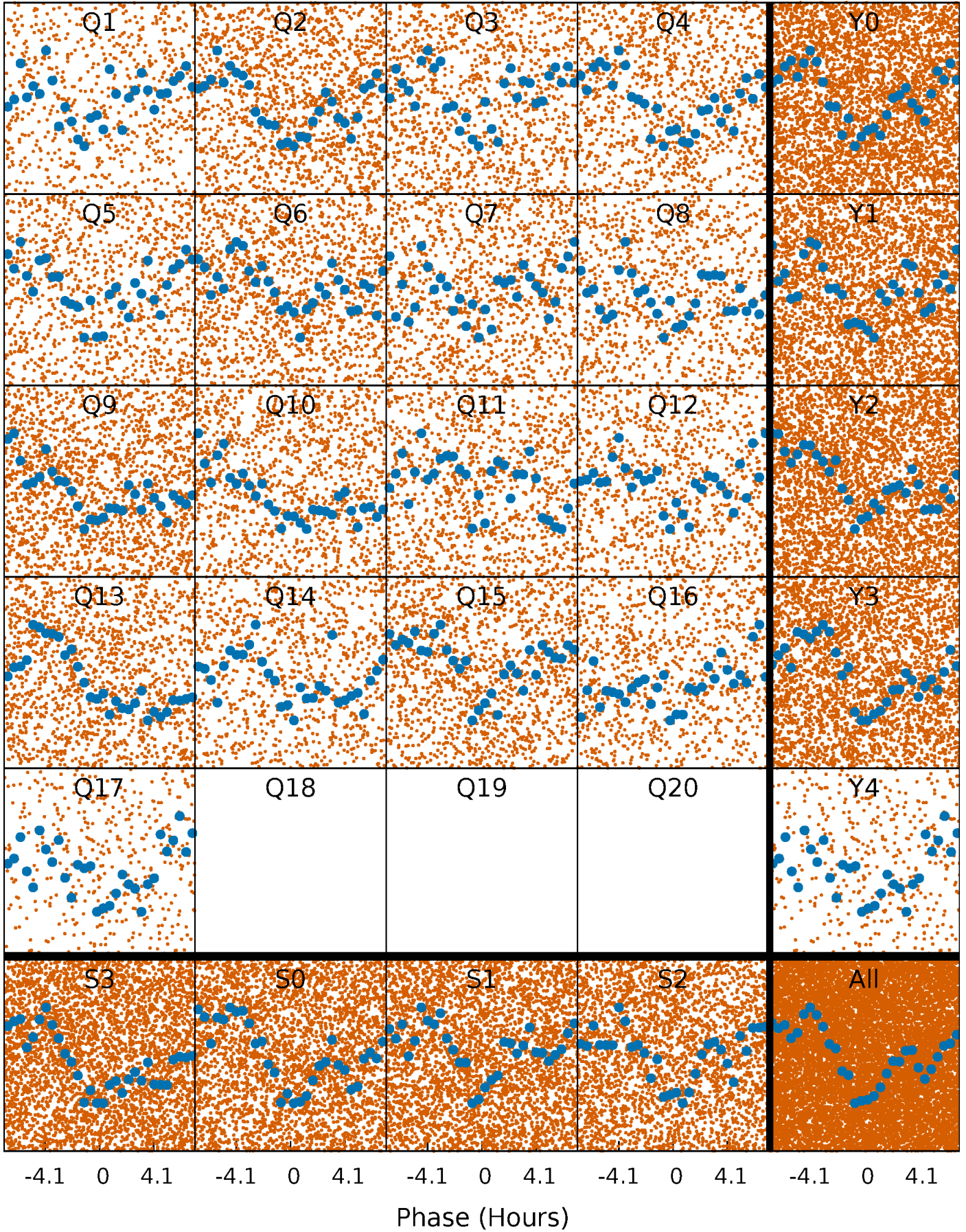


Non-Whitened Vs. Whitened Light Curve



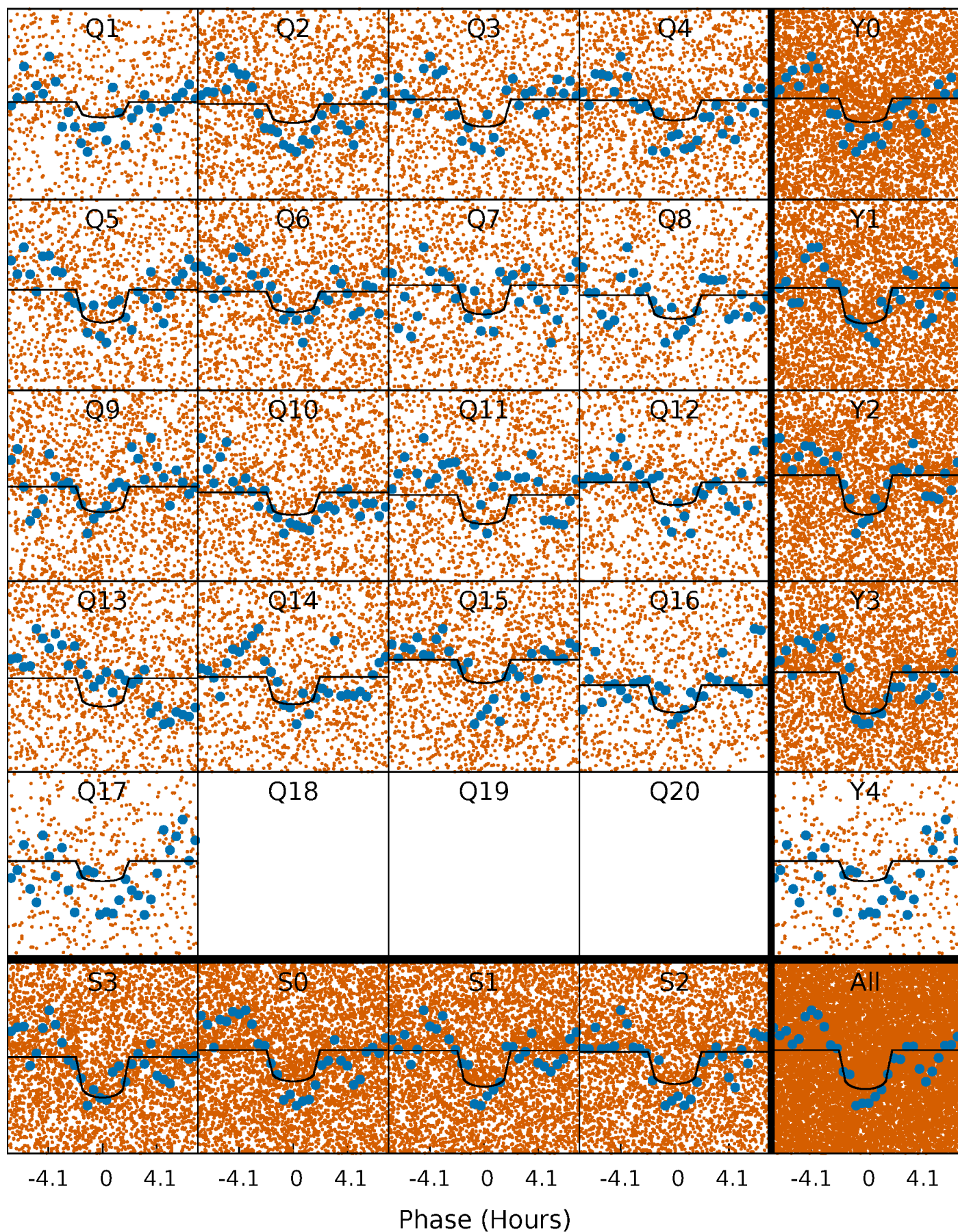
PDC Quarter-Phased Transit Curves

TCE 003240406-01 P= 0.934144 Days $T_0=132.412288$ (BKJD)



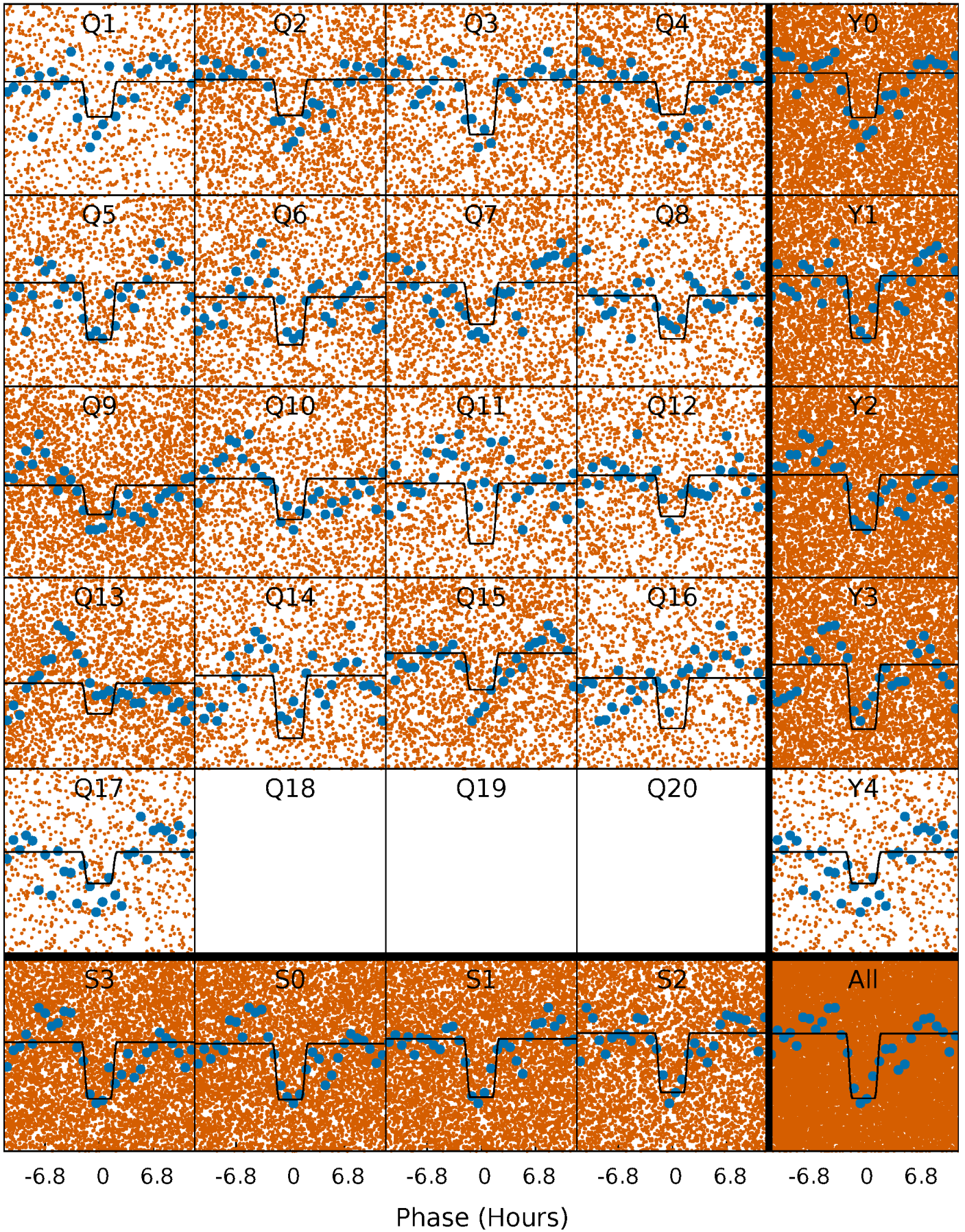
DV Quarter-Phased Transit Curves

TCE 003240406-01 P= 0.934144 Days $T_0=132.412288$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

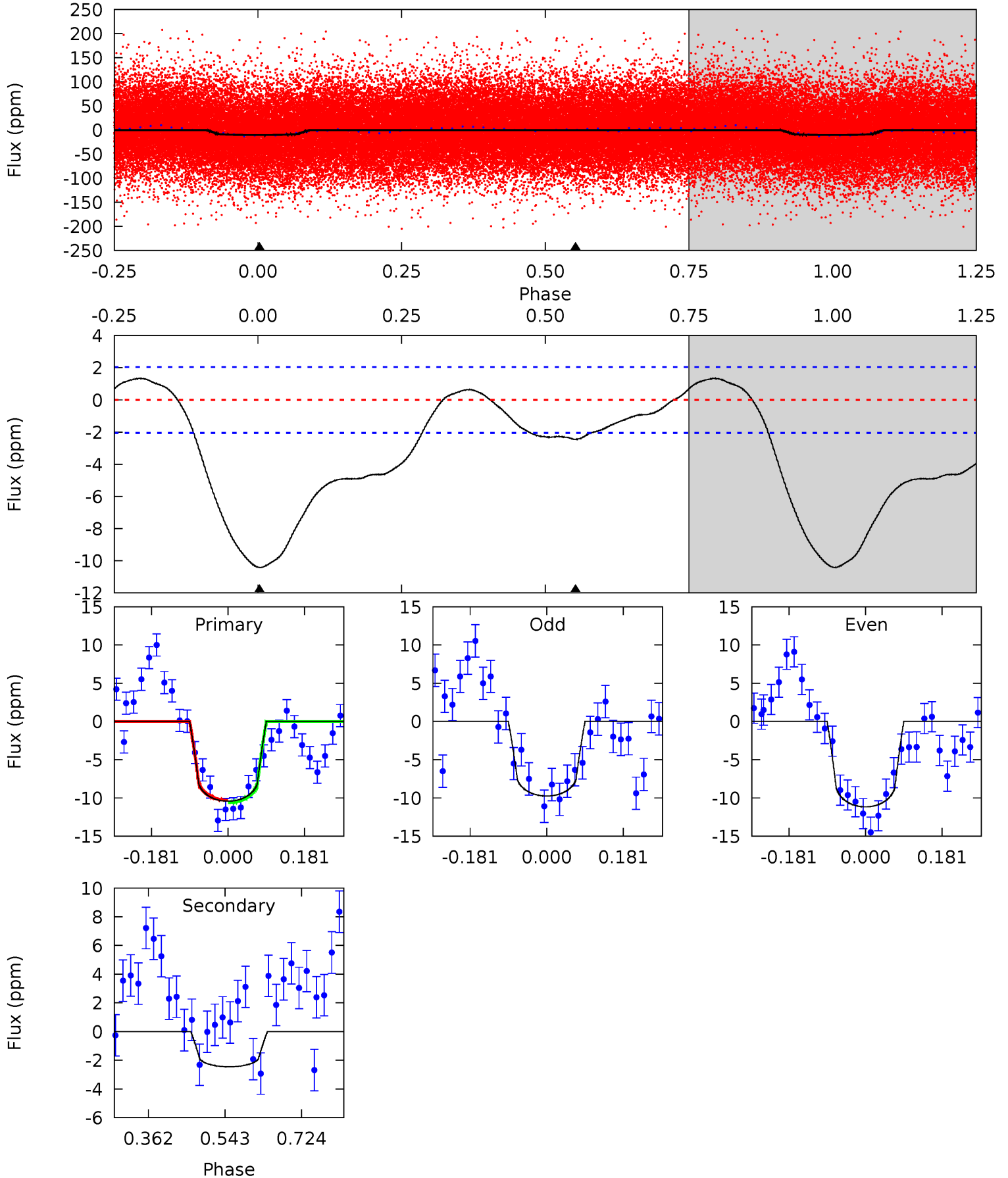
TCE 003240406-01 P= 0.934170 Days $T_0=132.400123$ (BKJD)



DV Model-Shift Uniqueness Test

003240406-01, P = 0.934144 Days, E = 131.478144 Days

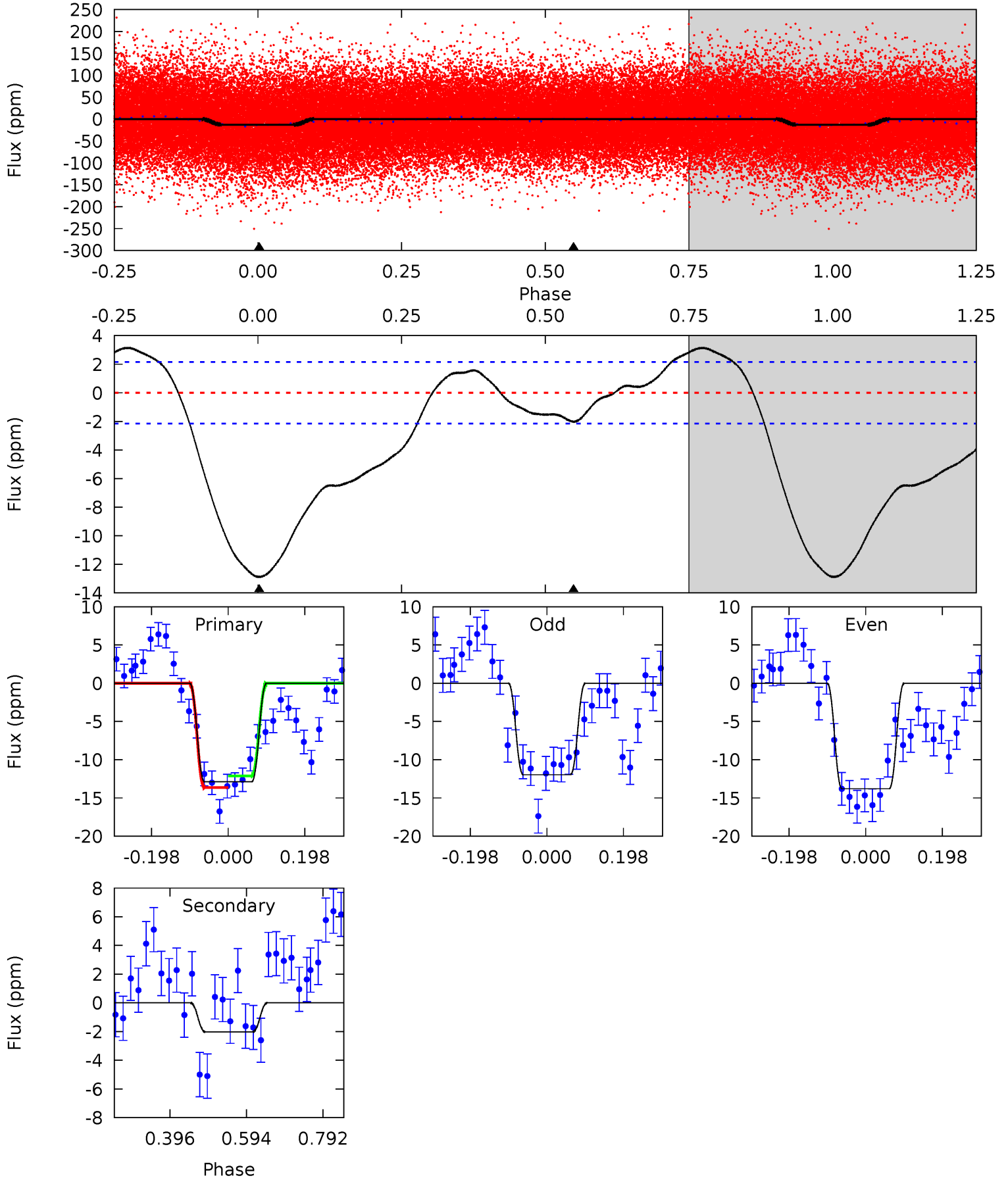
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	5.32	0	0	4.44	1.34	5.00	22.6	22.6	5.32	5.32	1.54	1.09	0.11	0.31



Alt Model-Shift Uniqueness Test

003240406-01, P = 0.934170 Days, E = 131.465953 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	4.16	0	0	4.42	1.29	6.18	26.4	26.4	4.16	4.16	1.87	1.00	0.20	1.57



Stellar Parameters For KIC 003240406

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7624^{+68}_{-91}	$4.029^{+0.110}_{-0.110}$	$0.100^{+0.100}_{-0.200}$	$2.152^{+0.349}_{-0.349}$	$1.803^{+0.116}_{-0.174}$	$0.255^{+0.140}_{-0.083}$
	+1%/-1%	+3%/-3%	+100%/-200%	+16%/-16%	+6%/-10%	+55%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003240406-01 / KOI 3185.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2 ± 0	$0.68^{+0.10}_{-0.09}$	4574^{+196}_{-196}	5234^{+411}_{-372}	$1.488^{+0.538}_{-0.392}$
Alt.	-2 ± 0	$0.90^{+0.11}_{-0.10}$	4578^{+203}_{-198}	4224^{+360}_{-445}	$0.704^{+0.259}_{-0.204}$

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

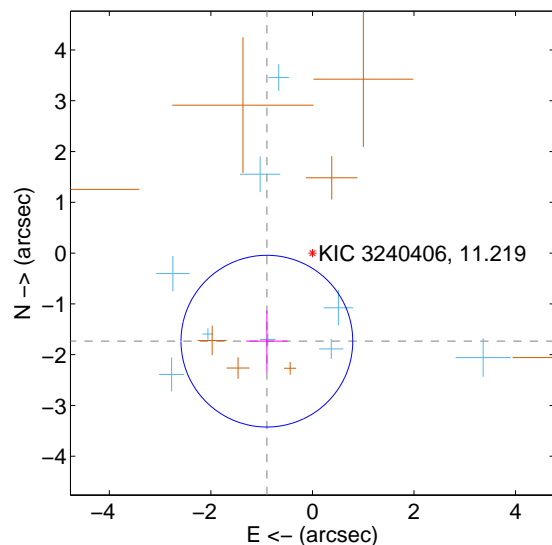
Supplemental centroid analysis for 003240406-01. **Kepler magnitude: 11.22.** Transit SNR 12.91

There are 9 quarters with good PRF difference image offsets

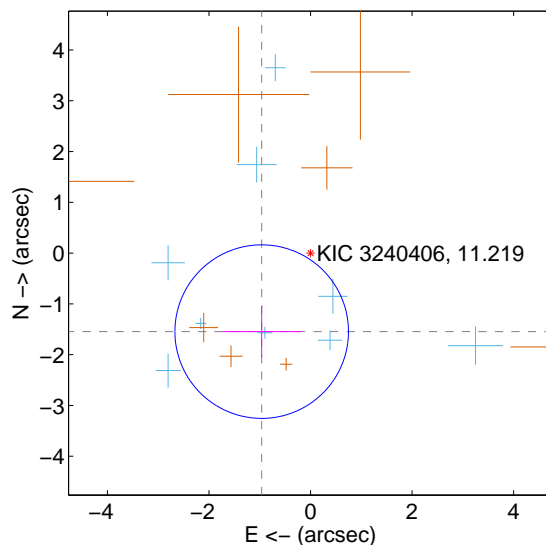
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.953 ± 0.564	3.46	0.897 ± 0.408	-1.734 ± 0.599
PRF-fit source offset from KIC position	1.821 ± 0.570	3.20	0.962 ± 0.771	-1.546 ± 0.506
photometric centroid source offset	1.13 ± 0.95	1.20	-0.89 ± 0.85	0.70 ± 1.08

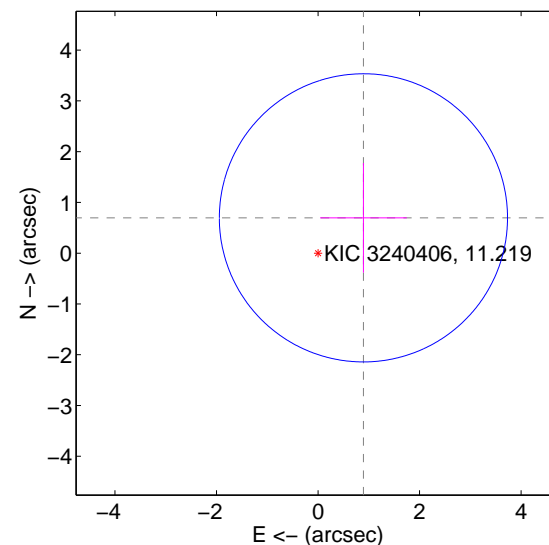
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

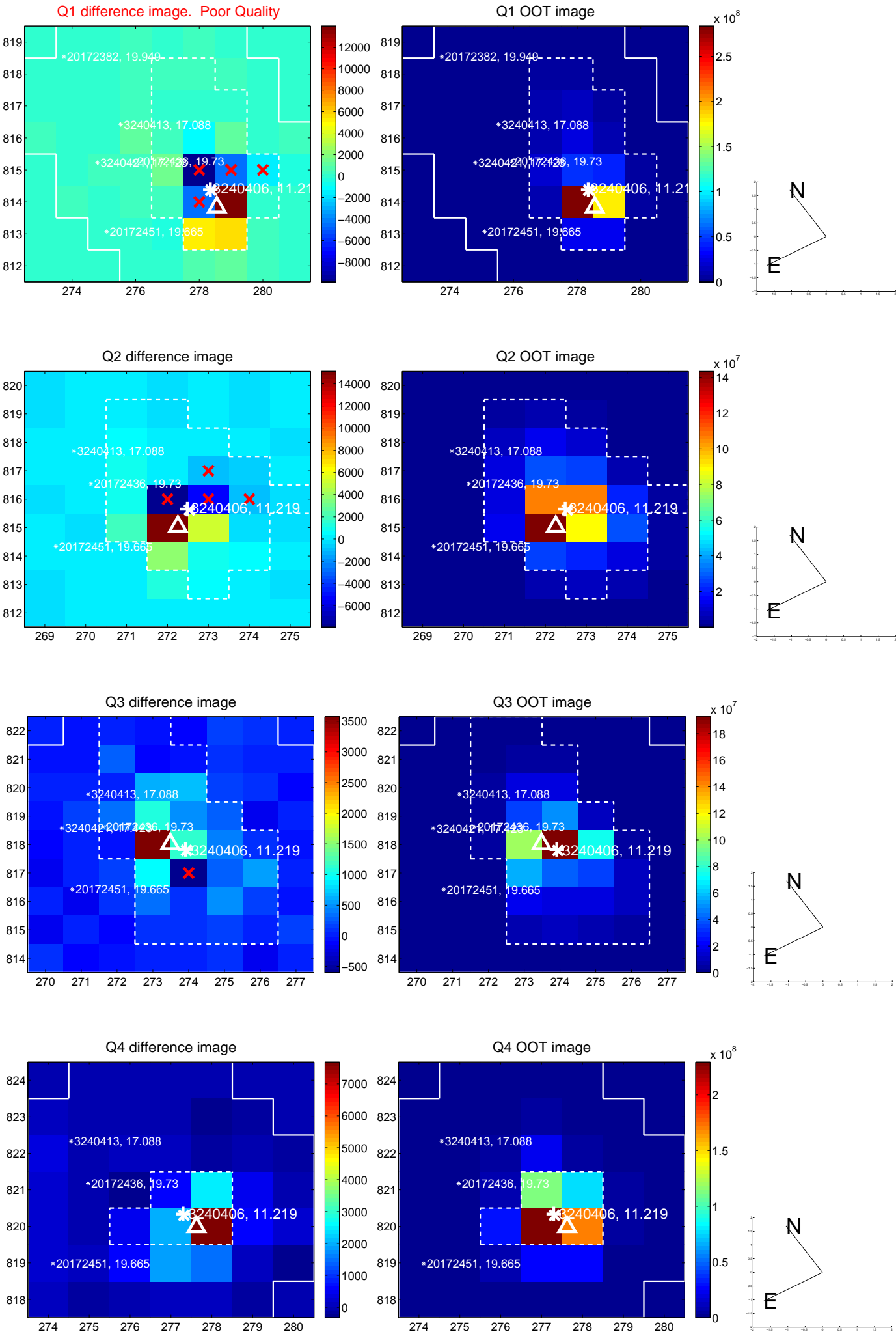


offset from photometric centroids

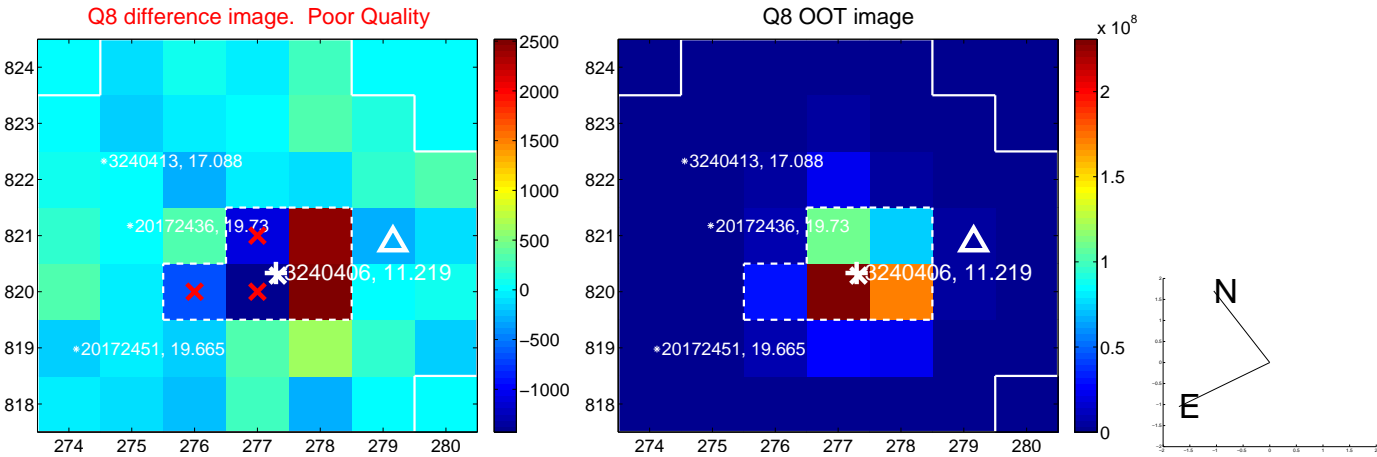
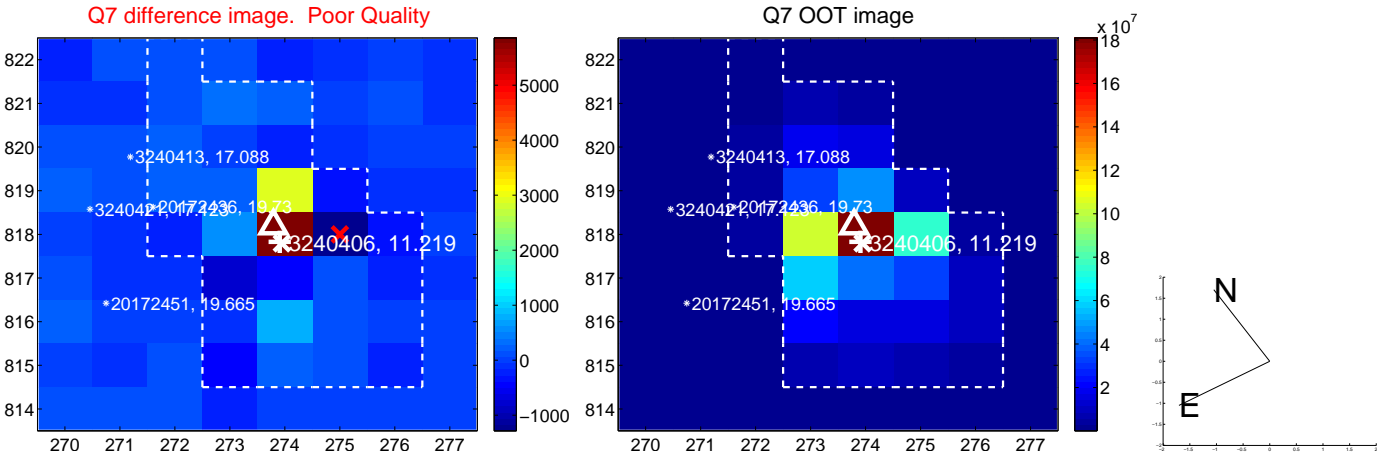
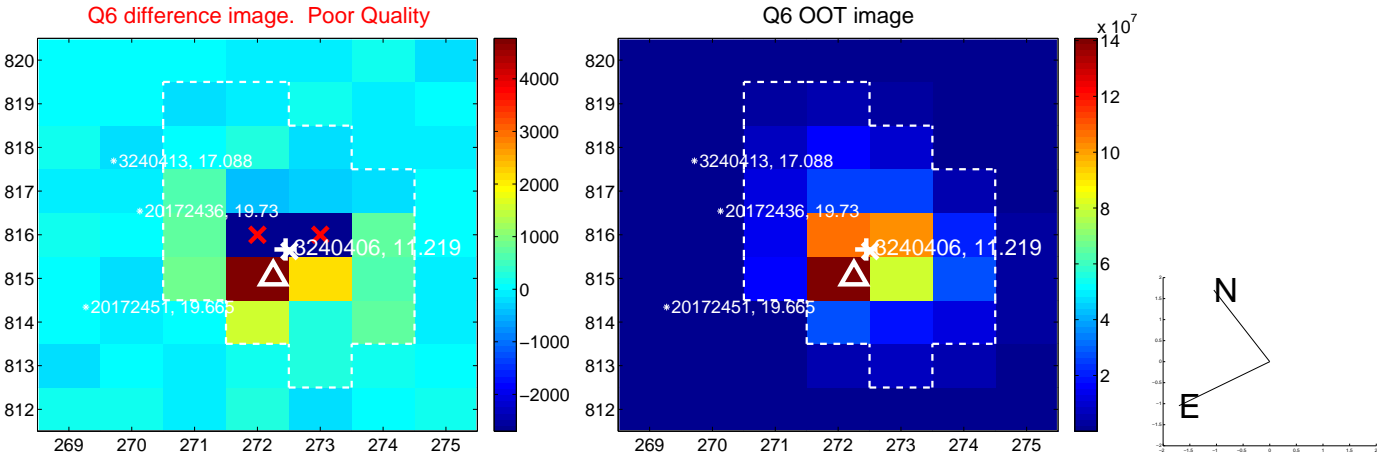
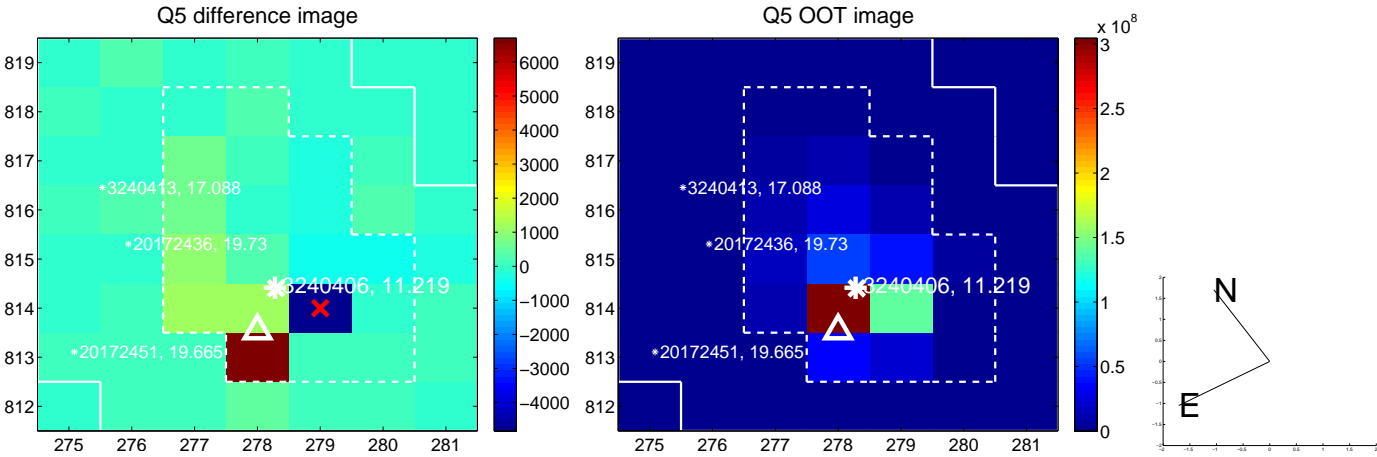


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

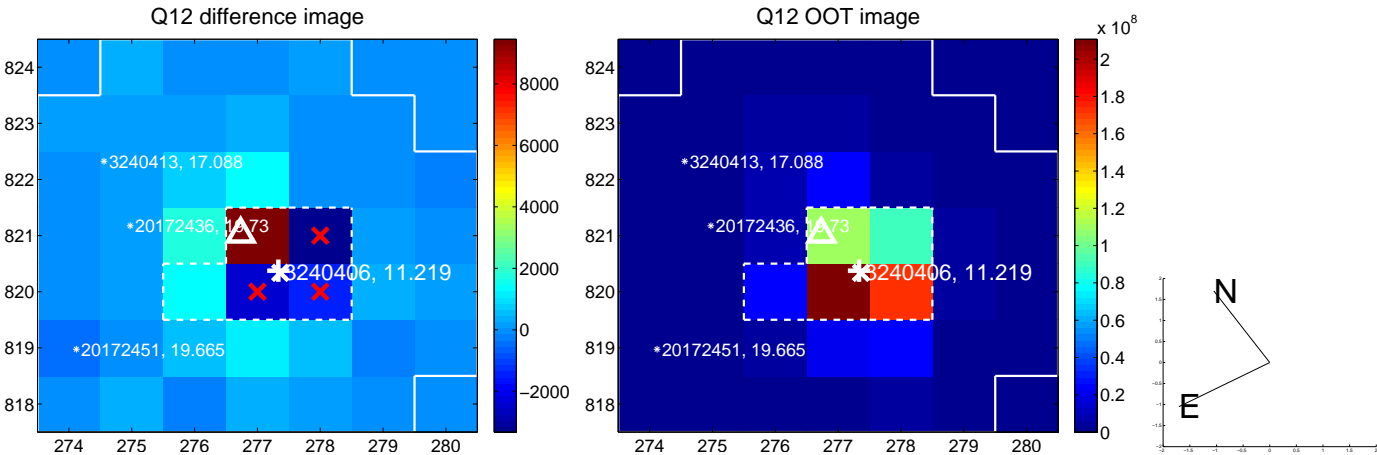
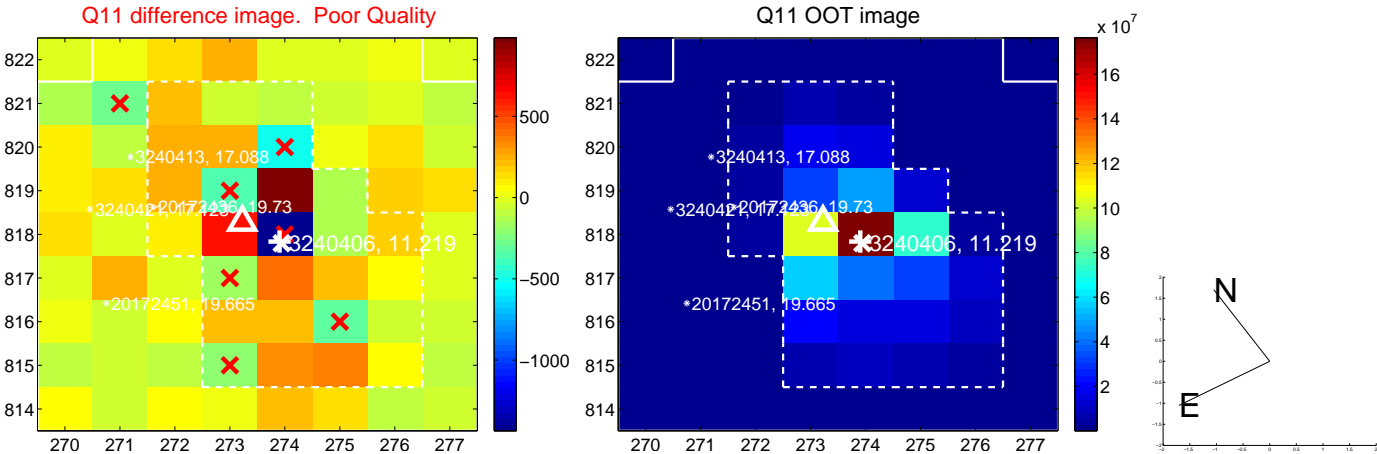
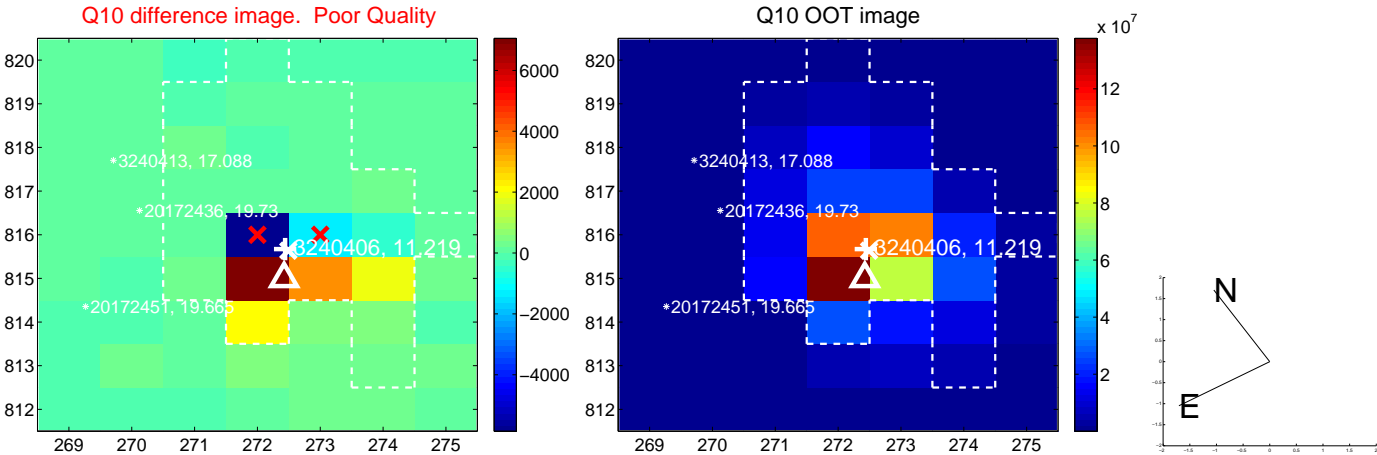
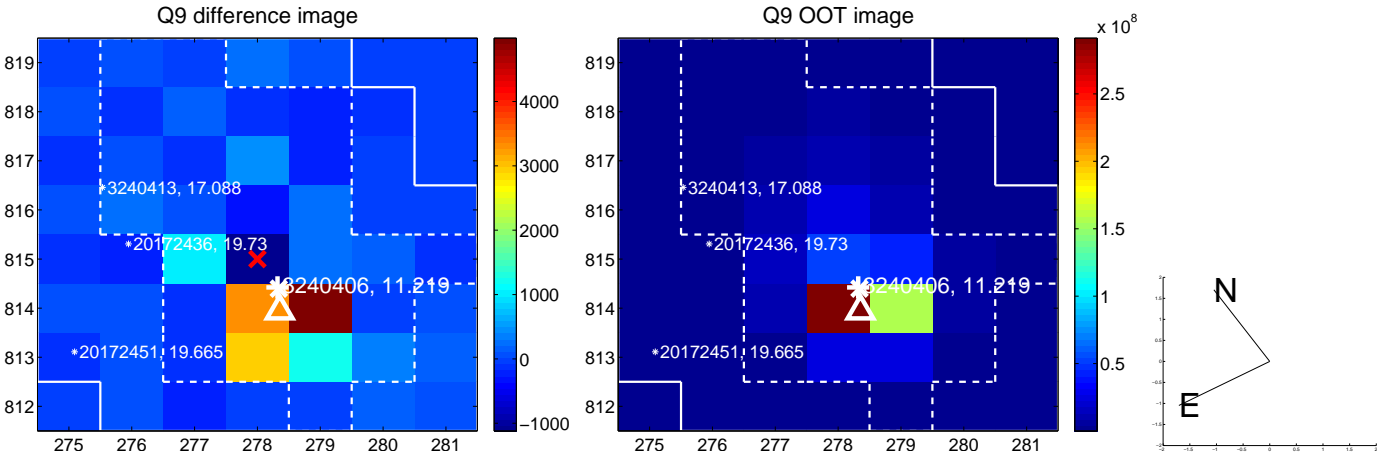
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



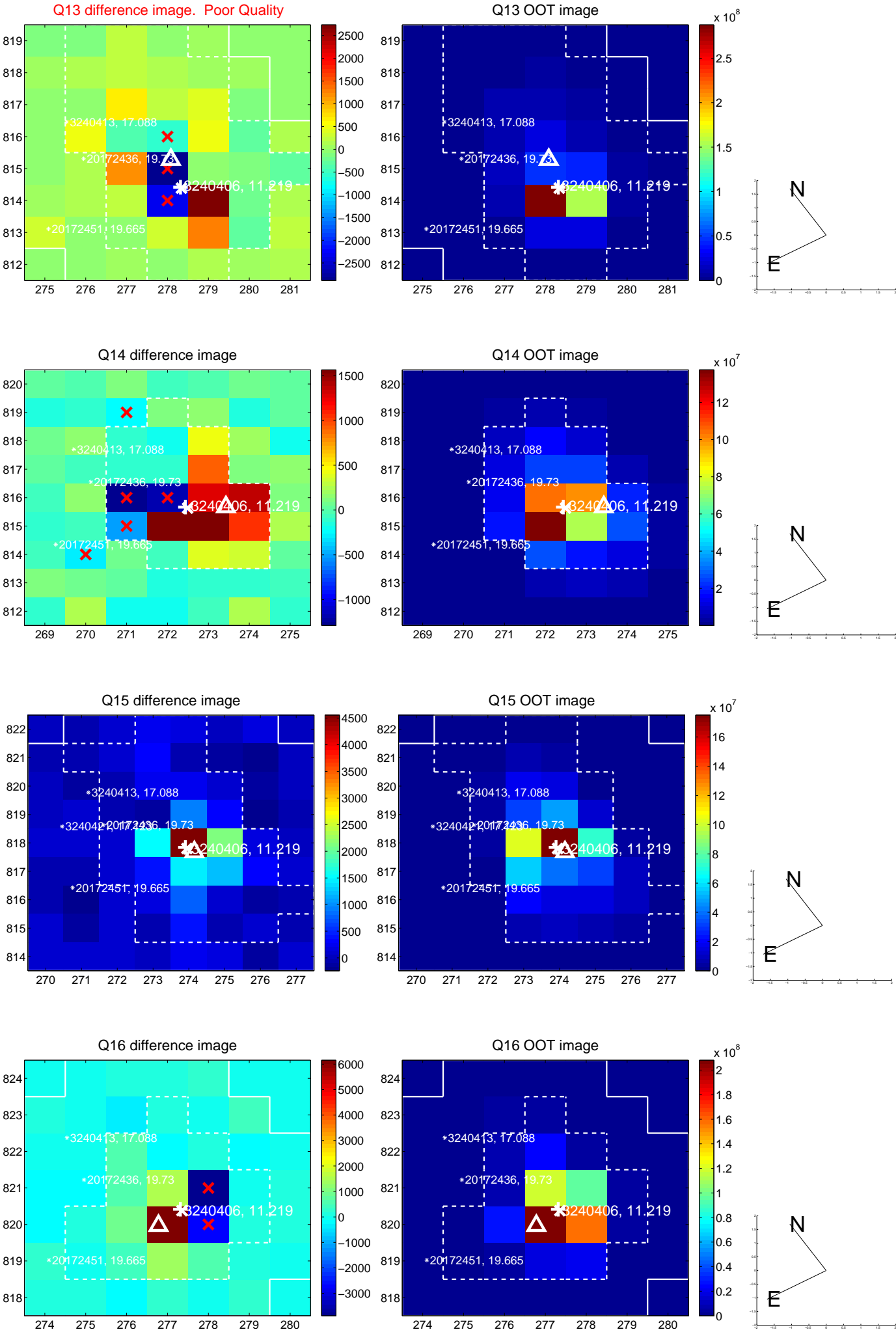
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



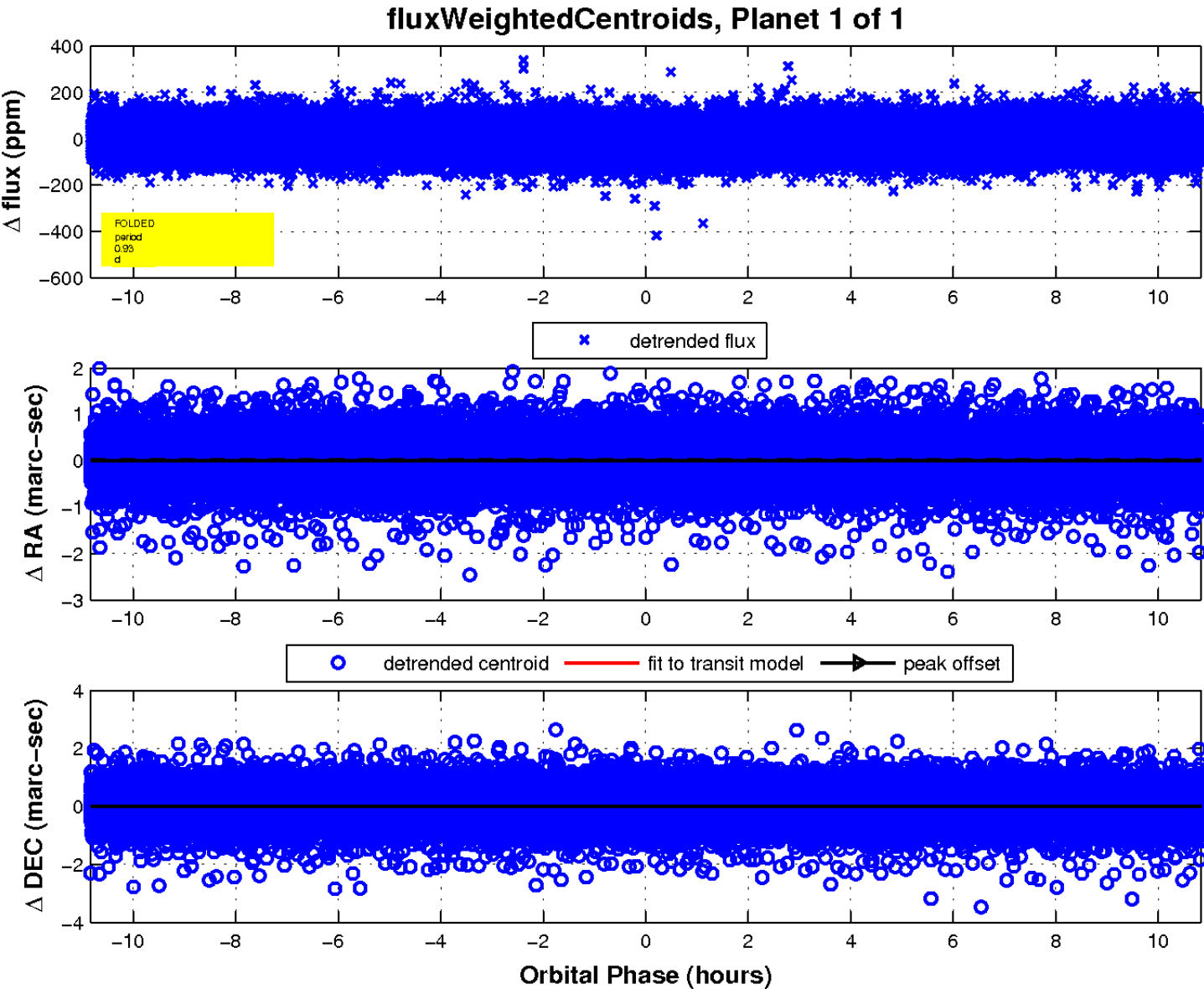
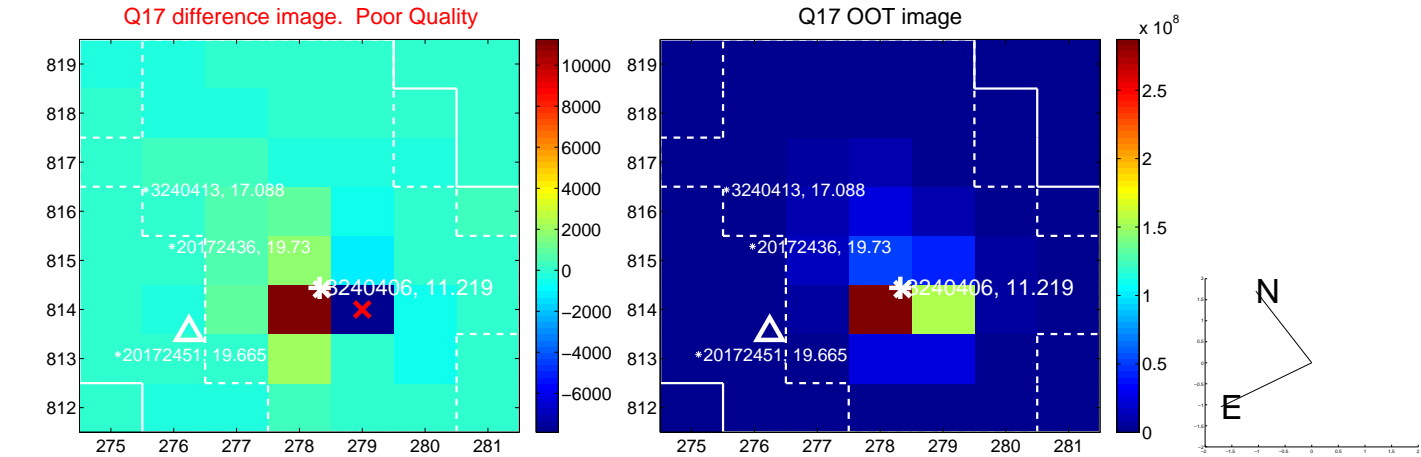
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

