

KIC 003103473

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})
003103473-01	OBS	4395.01	1.920044	131.730684	197.7	1.586	9.5	11.9	0.74	5266	1.28	473.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003103473-01	OBS	PC	0.53	0	0	0	0	CENT_KIC_POS

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 003103473-01

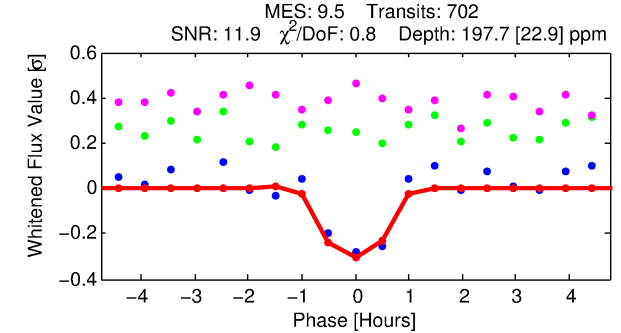
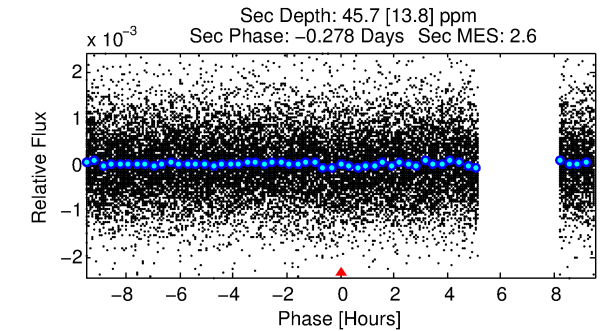
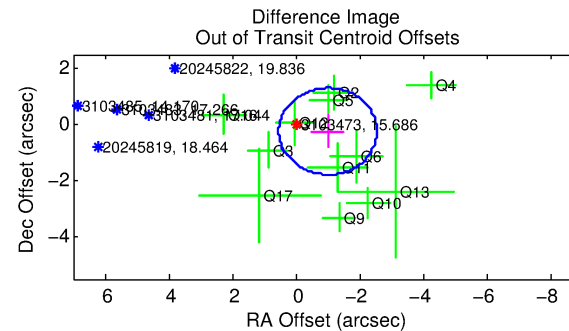
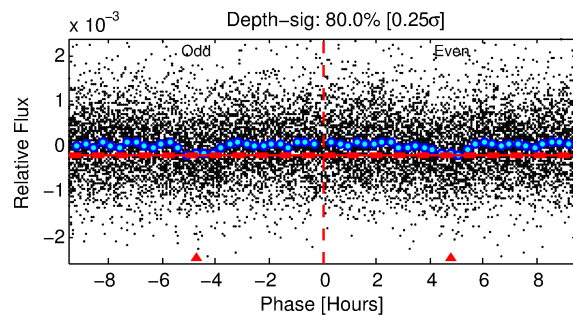
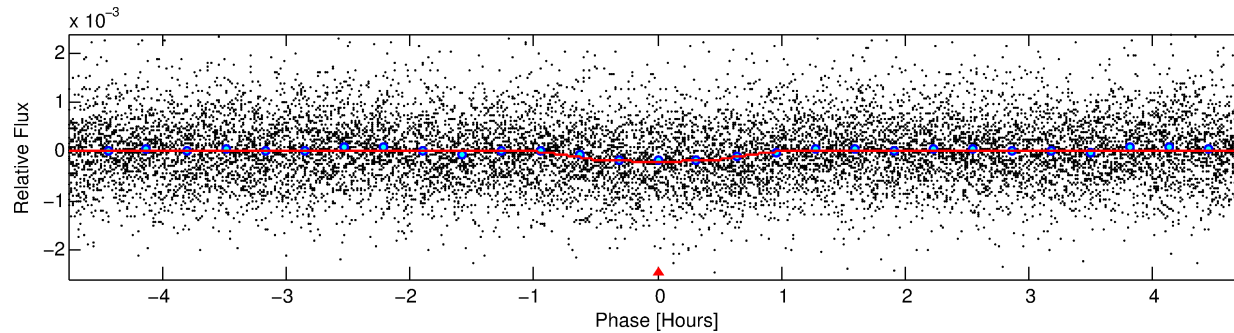
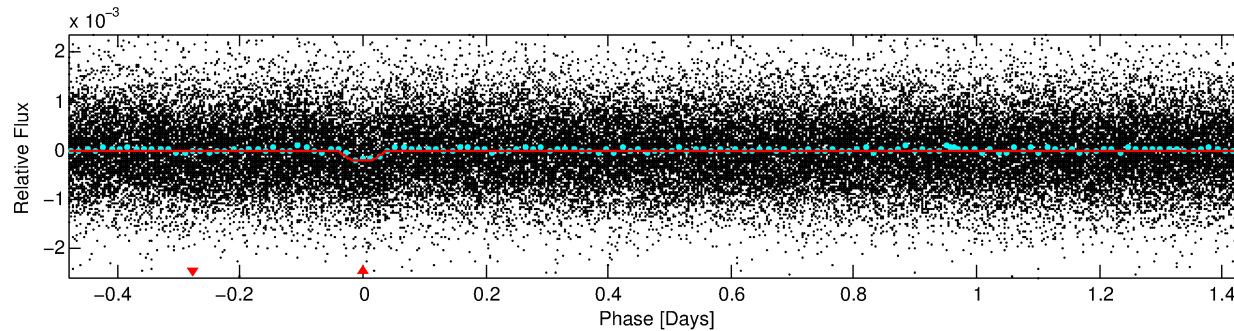
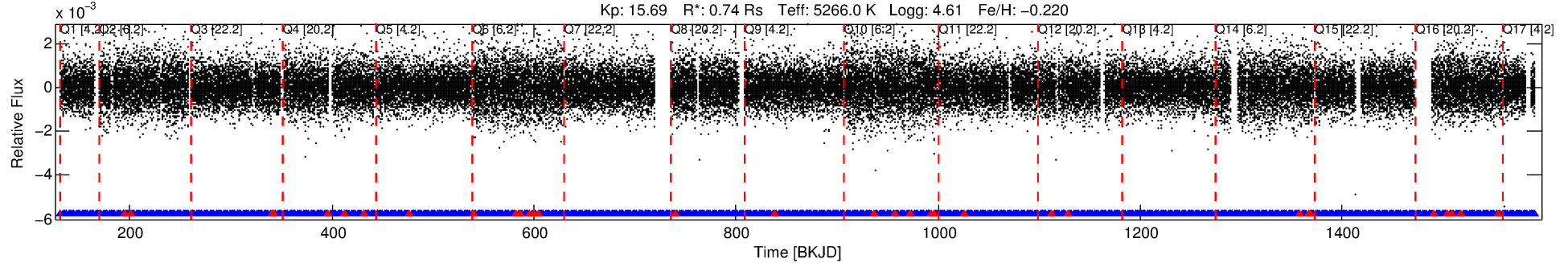
No Significant Match Found

DV One-Page Summary

KIC: 3103473 Candidate: 1 of 1 Period: 1.920 d

KOI: K04395.01 Corr: 0.934

Kp: 15.69 R*: 0.74 Rs Teff: 5266.0 K Logg: 4.61 Fe/H: -0.220



DV Fit Results:

Period = 1.92004 [0.00001] d
Epoch = 131.7307 [0.0022] BKJD
Rp/R* = 0.0158 [0.0115]
a/R* = 4.26 [12.68]
b = 0.91 [0.60]
Seff = 473.09 [97.05]
Teq = 1189 [61] K
Rp = 1.28 [0.94] Re
a = 0.0283 [0.0033] AU
Ag = 12.34 [18.44] [0.62σ]
Teffp = 3446 [1283] K [1.76σ]

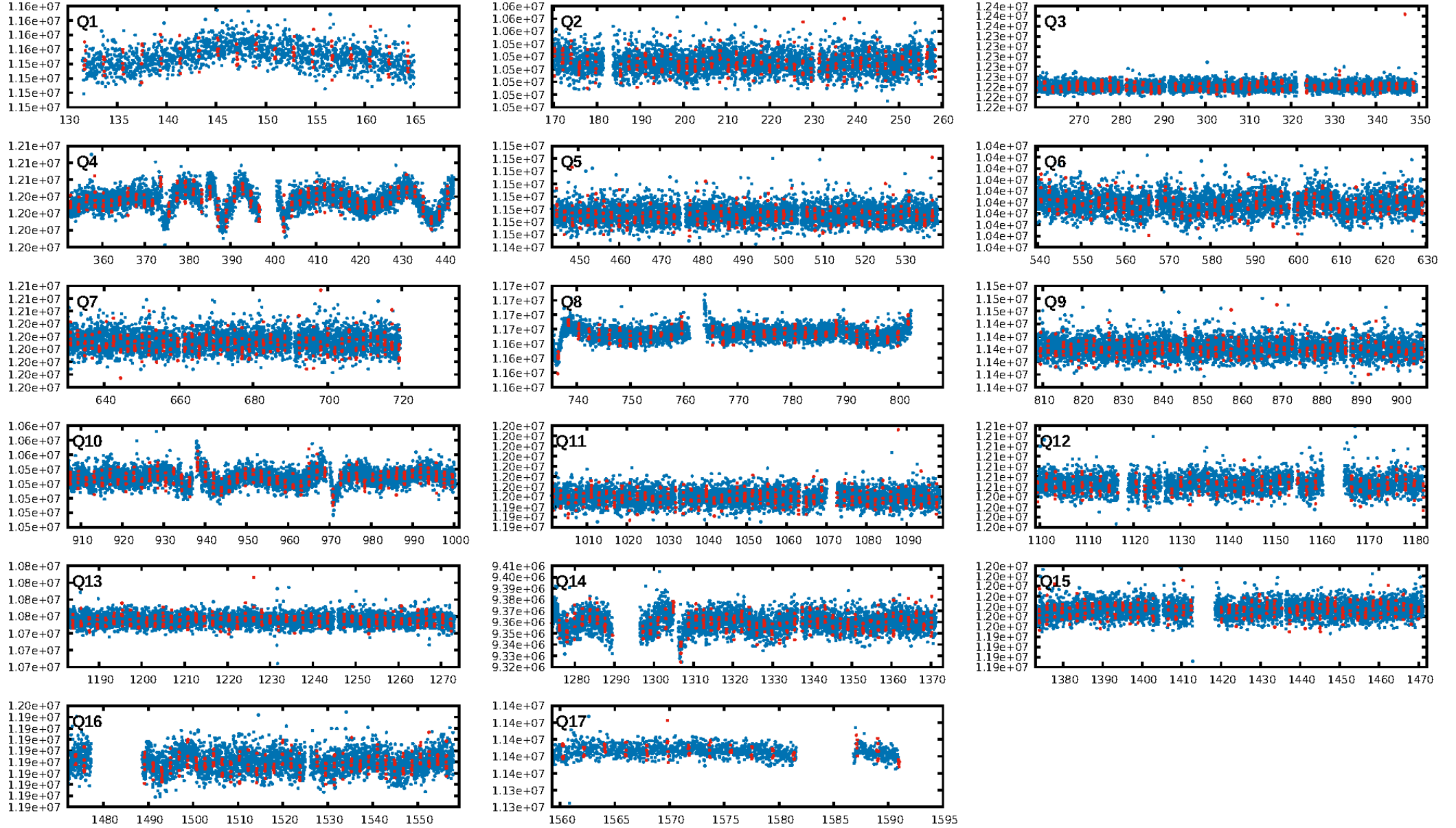
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.95e-21
RollingBand-fgt: 0.95 [637/669]
GhostDiagnostic-chr: 3.163
Centroid-sig: 41.6%
Centroid-so: 0.512 arcsec [0.44σ]
OotOffset-rm: 1.038 arcsec [2.02σ]
OotOffset-st: 3/2/3/4 [12]
KicOffset-rm: 1.089 arcsec [2.05σ]
KicOffset-st: 3/2/3/4 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

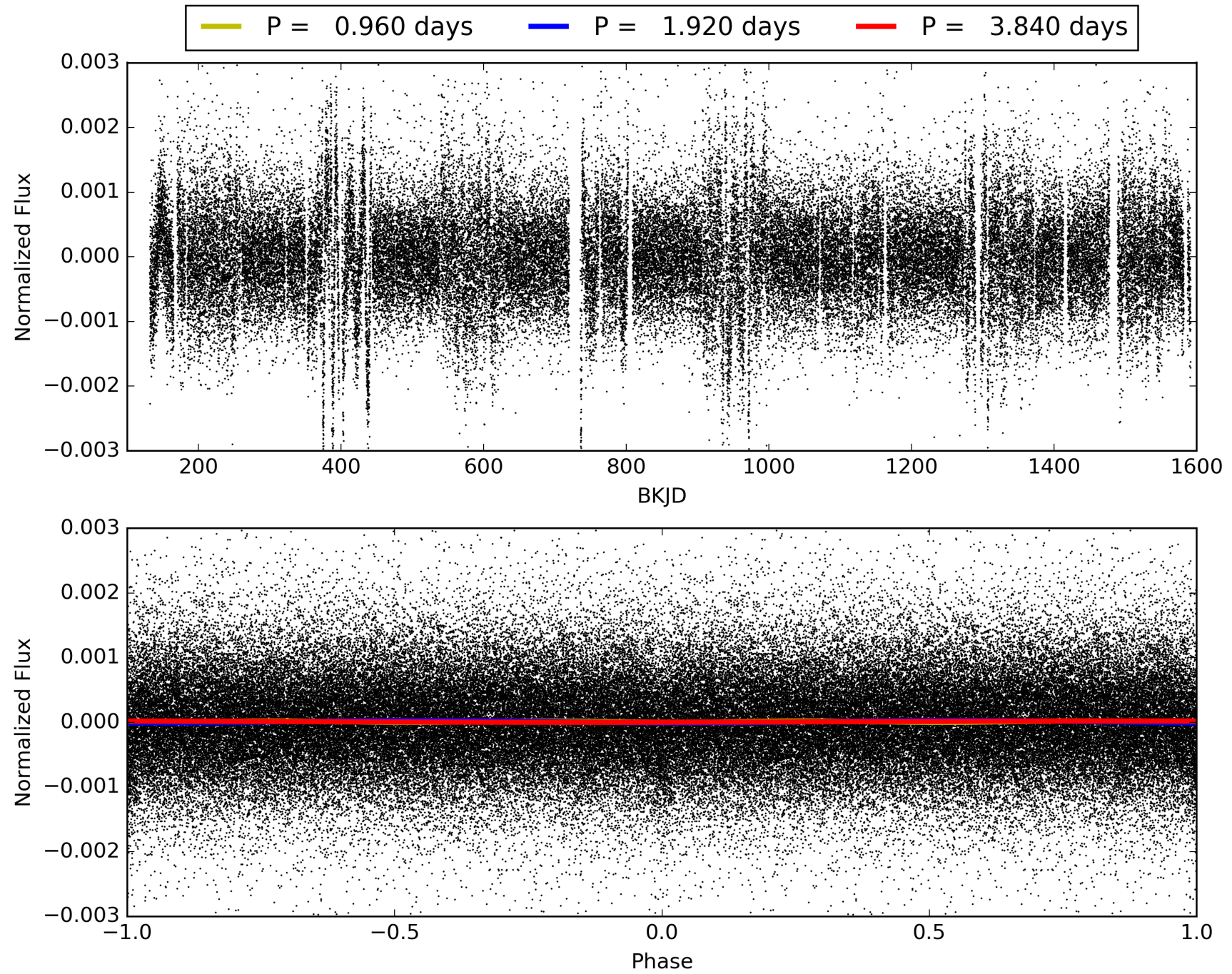
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:20:49 Z

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

TCE 003103473-01, PDC Light Curves

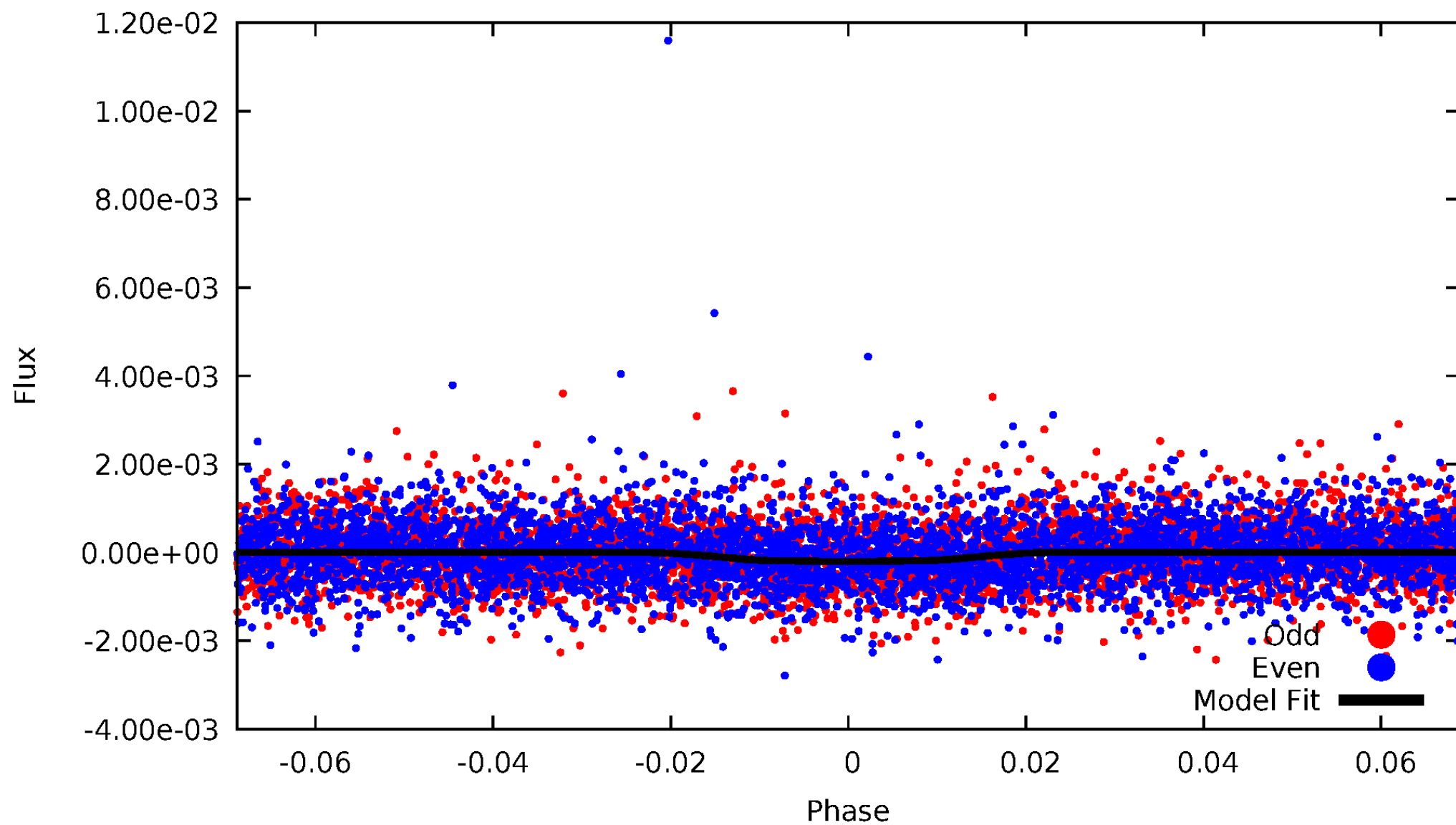


TCE 003103473-01



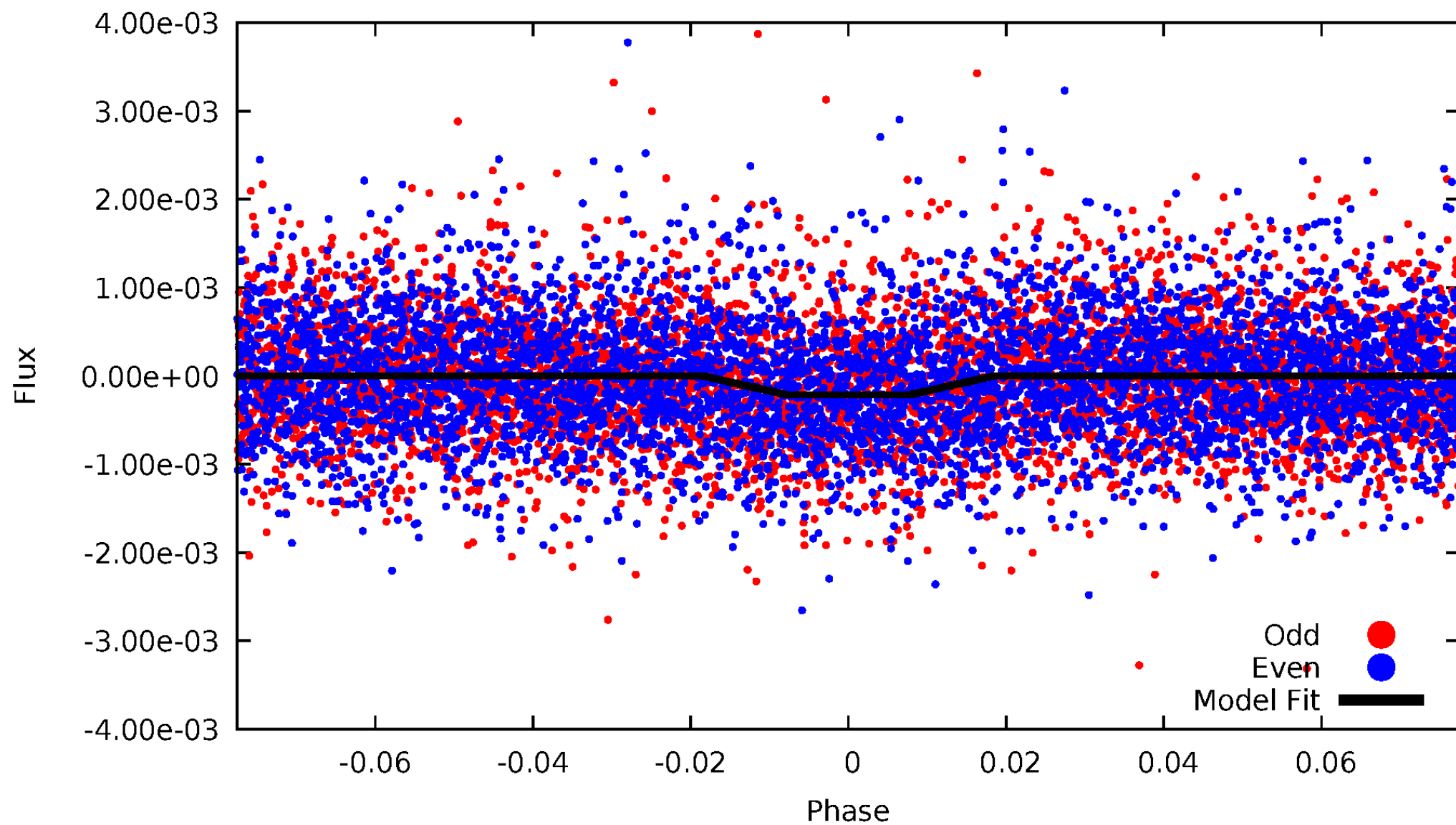
DV Odd/Even

TCE 003103473-01



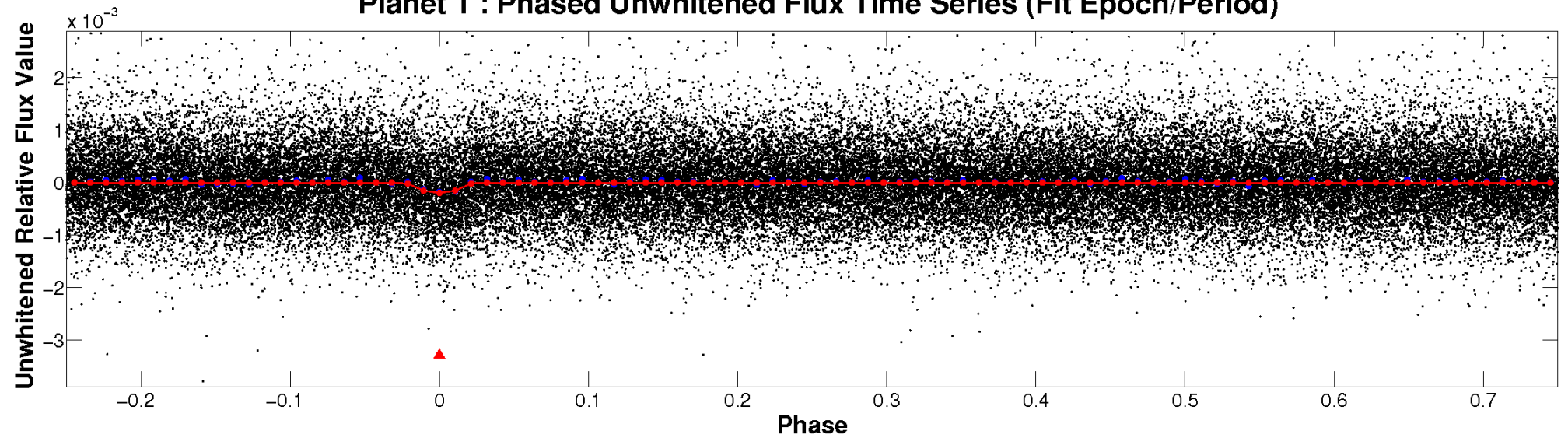
ALT Odd/Even

TCE 003103473-01

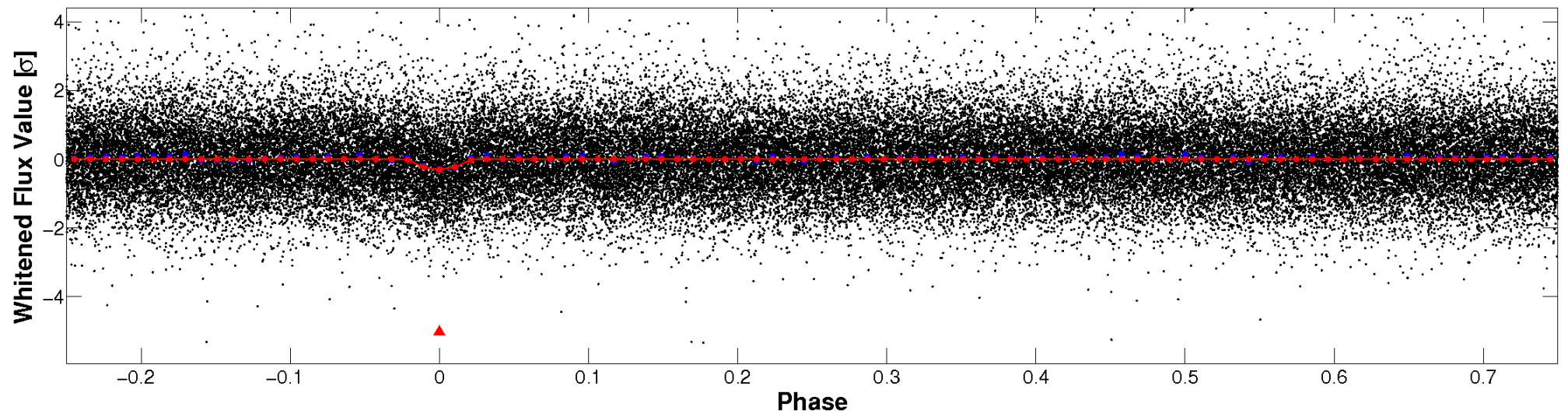


Non-Whitened Vs. Whitened Light Curve

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

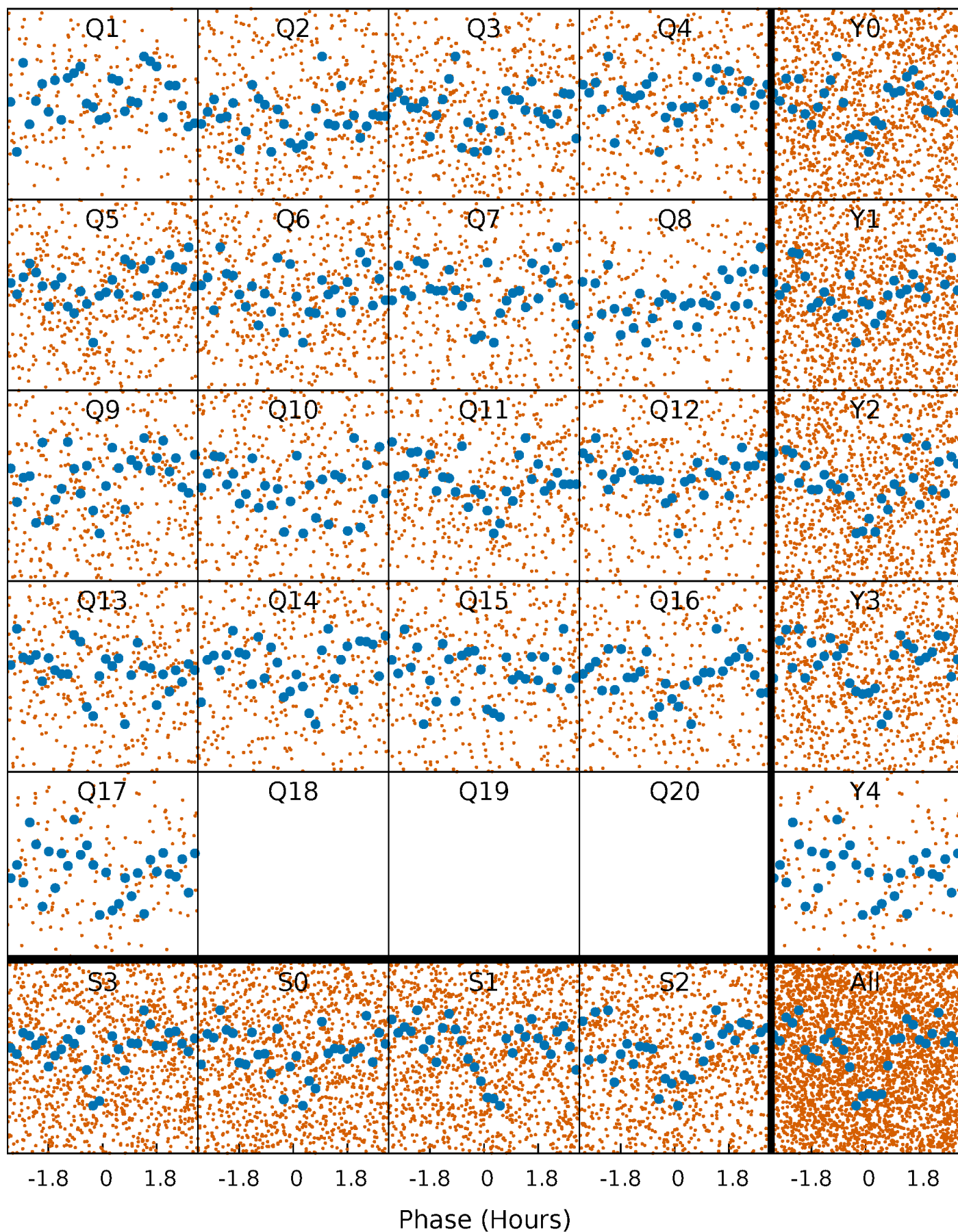


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



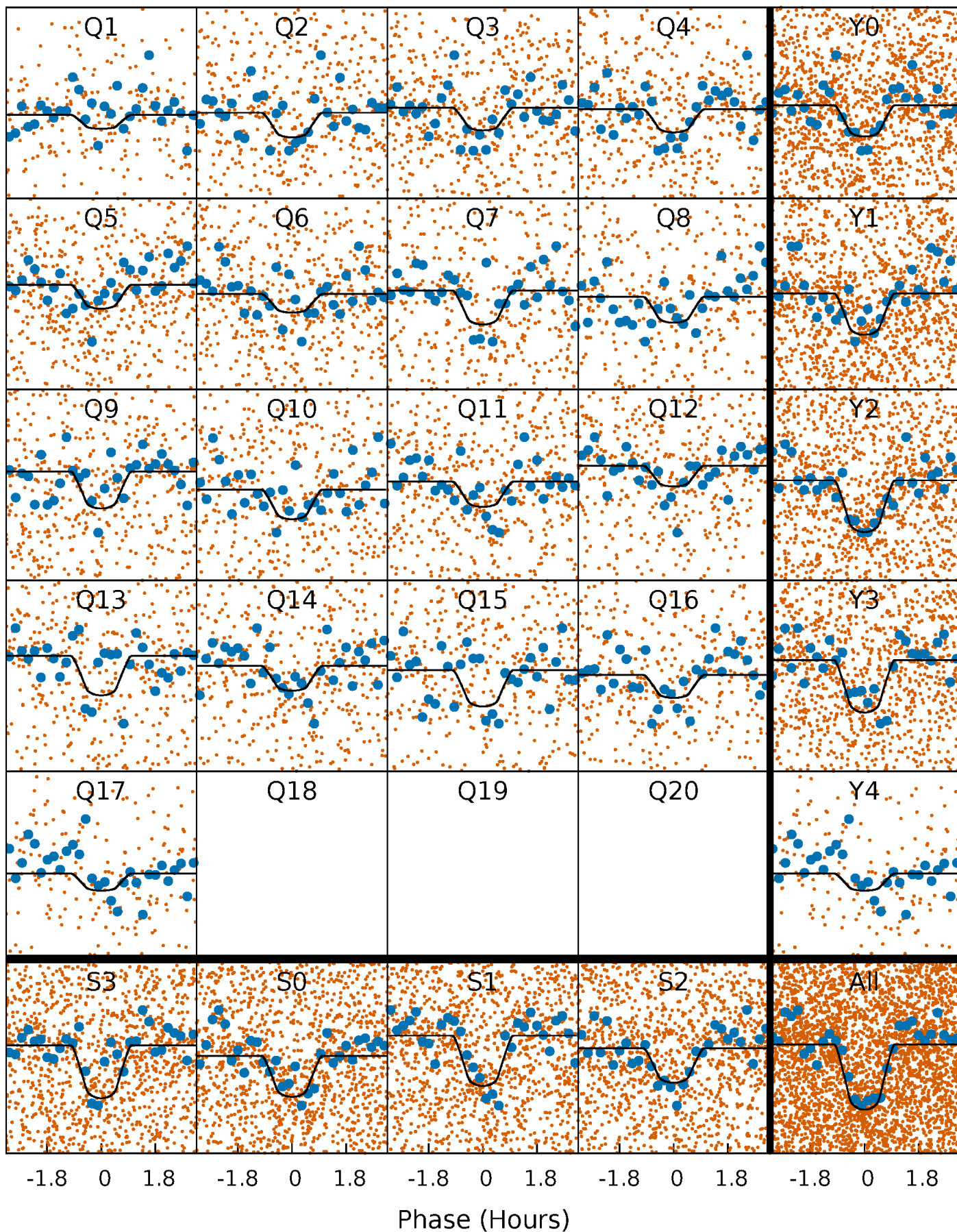
PDC Quarter-Phased Transit Curves

TCE 003103473-01 P= 1.920044 Days $T_0=131.730684$ (BKJD)



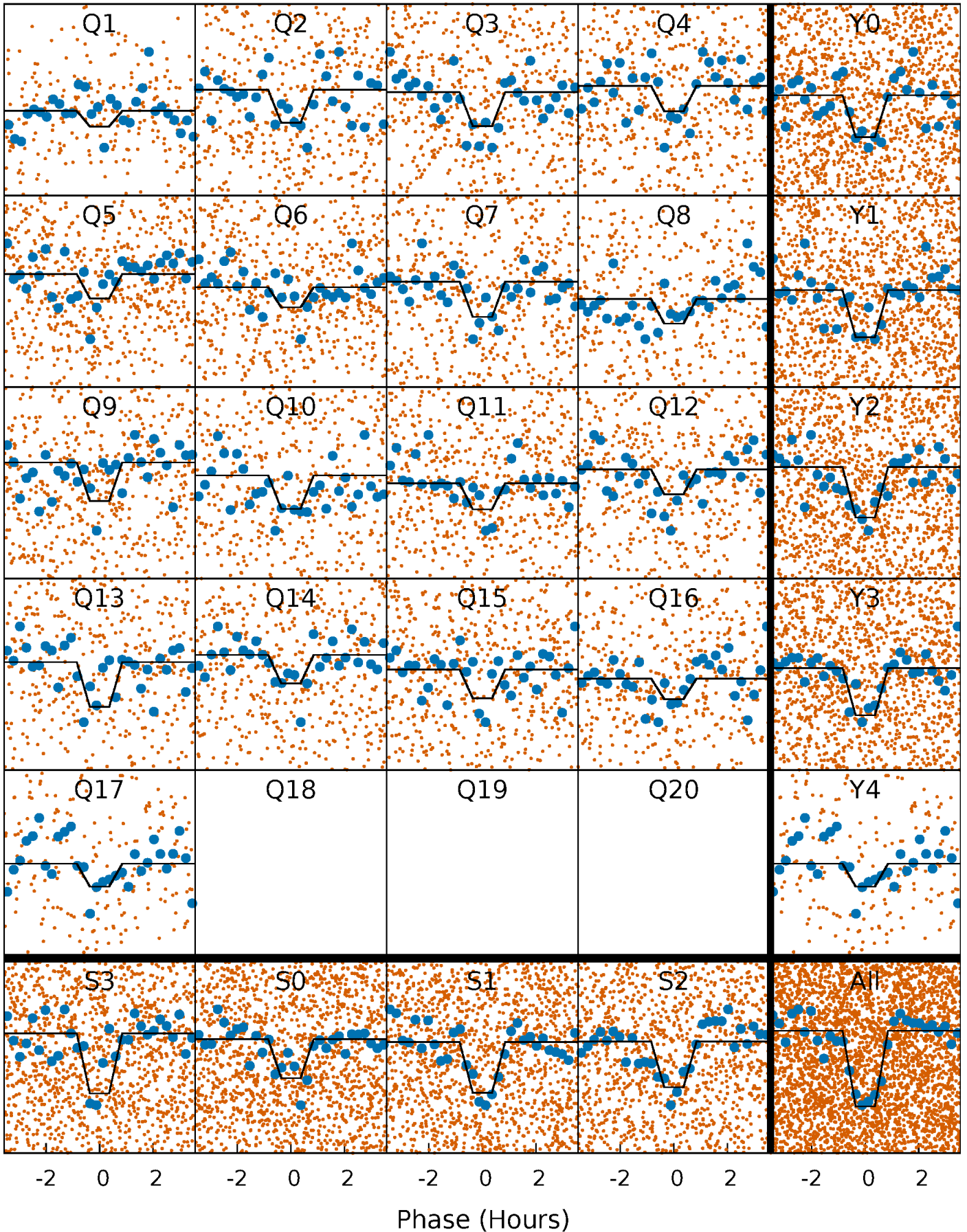
DV Quarter-Phased Transit Curves

TCE 003103473-01 P= 1.920044 Days $T_0=131.730684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

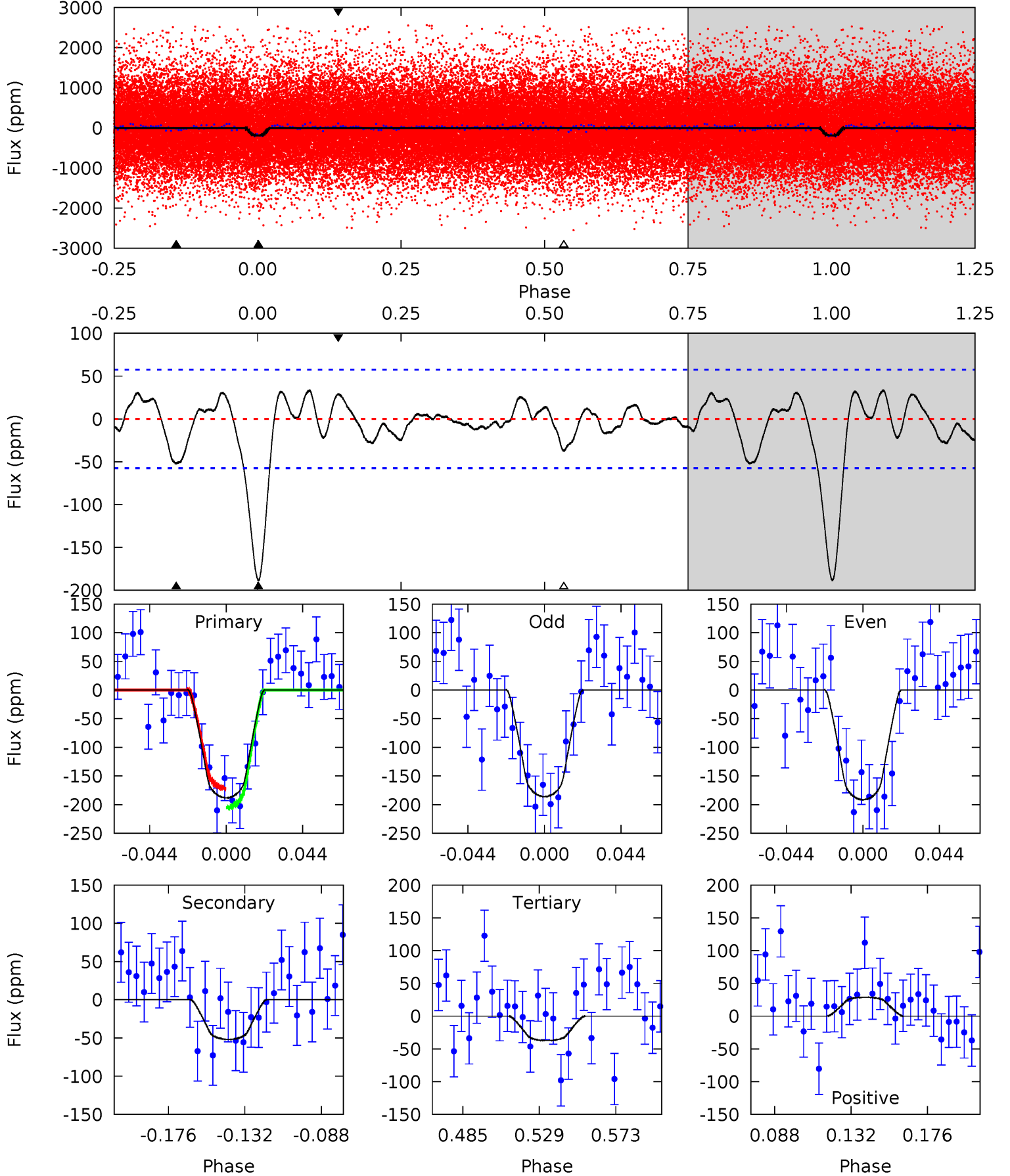
TCE 003103473-01 P= 1.920078 Days $T_0=131.720635$ (BKJD)



DV Model-Shift Uniqueness Test

003103473-01, P = 1.920044 Days, E = 129.810640 Days

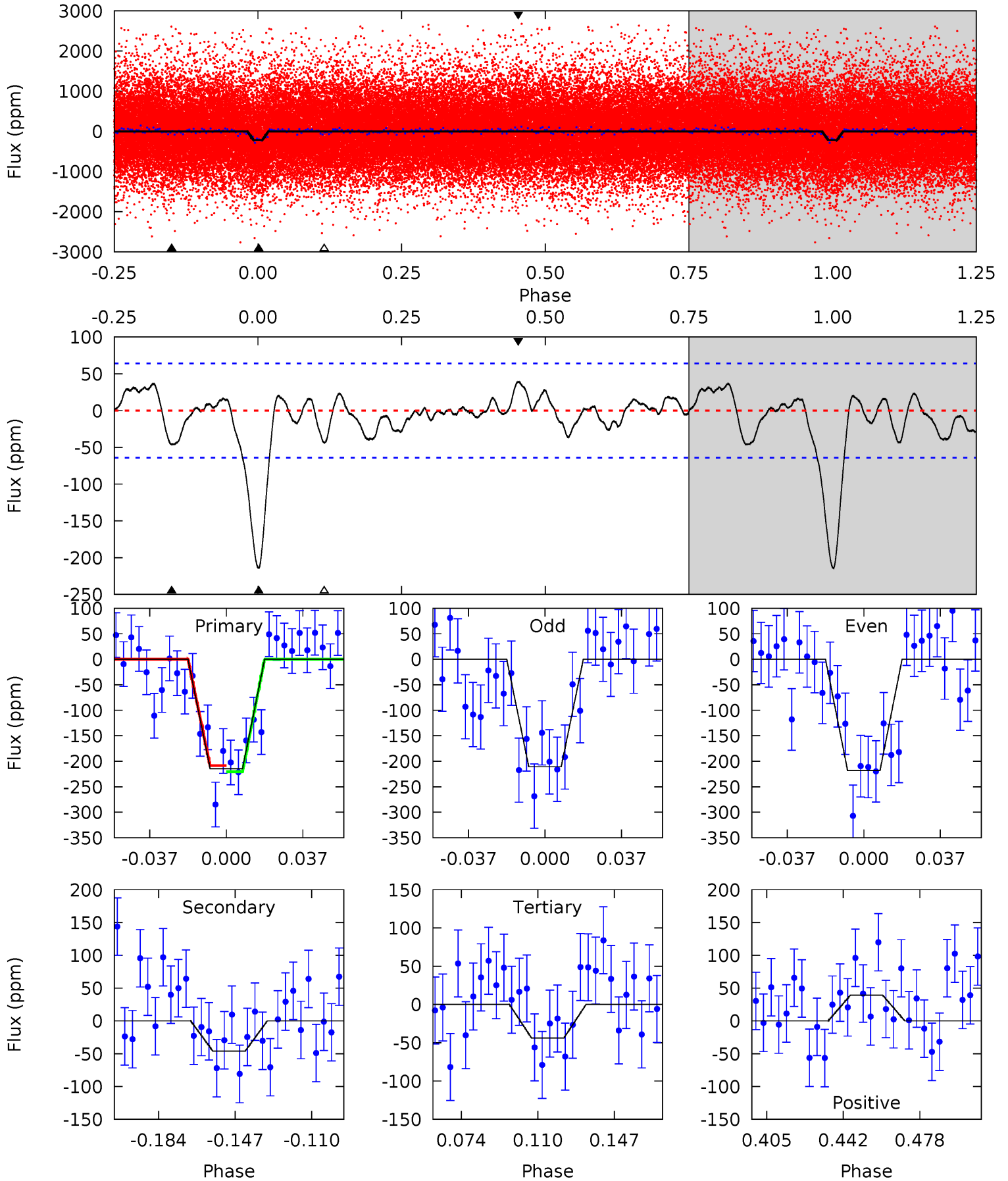
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	4.27	3.07	2.37	4.73	2.01	1.21	12.4	13.1	1.20	1.90	0.23	0.92	0.15	1.39



Alt Model-Shift Uniqueness Test

003103473-01, P = 1.920078 Days, E = 129.800557 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	3.43	3.26	2.91	4.77	2.09	1.27	12.7	13.1	0.17	0.52	0.28	0.83	0.15	0.45



Stellar Parameters For KIC 003103473

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5266^{+158}_{-142}	$4.611^{+0.036}_{-0.090}$	$-0.220^{+0.300}_{-0.300}$	$0.741^{+0.103}_{-0.060}$	$0.830^{+0.070}_{-0.101}$	$2.868^{+0.467}_{-0.849}$
	+3%/-3%	+1%/-2%	+136%/-136%	+14%/-8%	+8%/-12%	+16%/-30%
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 003103473-01 / KOI 4395.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 12	$1.41^{+0.94}_{-0.80}$	1684^{+64}_{-60}	3782^{+1503}_{-628}	11^{+53}_{-7}
Alt.	-46 ± 13	$1.32^{+0.93}_{-0.77}$	1680^{+69}_{-63}	3769^{+1508}_{-632}	11^{+55}_{-7}

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

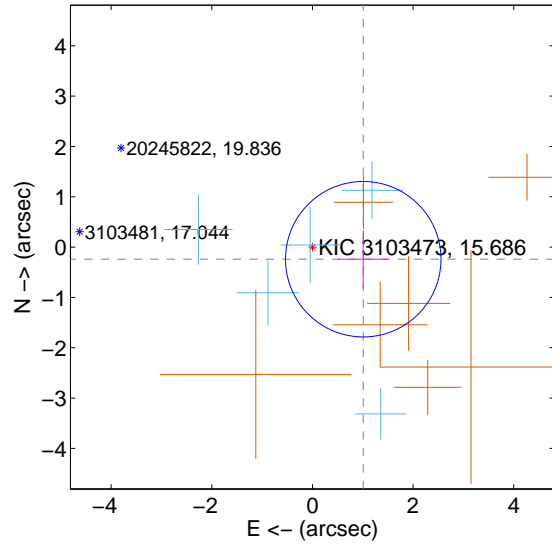
Supplemental centroid analysis for 003103473-01. Kepler magnitude: 15.69. Transit SNR 11.86

There are 5 quarters with good PRF difference image offsets

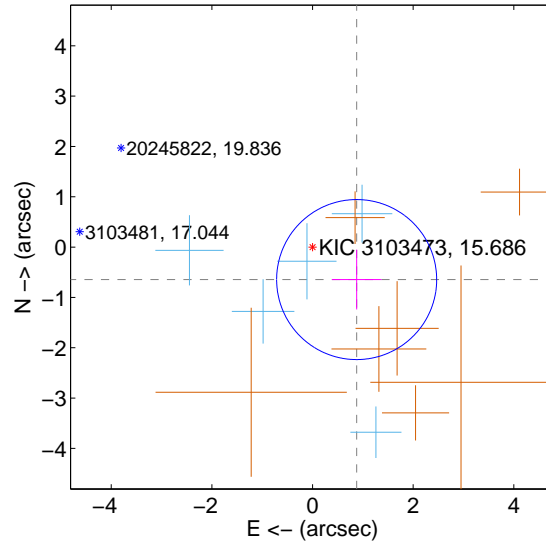
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.038 ± 0.515	2.02	-1.009 ± 0.511	-0.241 ± 0.575
PRF-fit source offset from KIC position	1.089 ± 0.530	2.05	-0.877 ± 0.492	-0.645 ± 0.594
photometric centroid source offset	0.51 ± 1.16	0.44	-0.51 ± 1.17	-0.05 ± 1.15

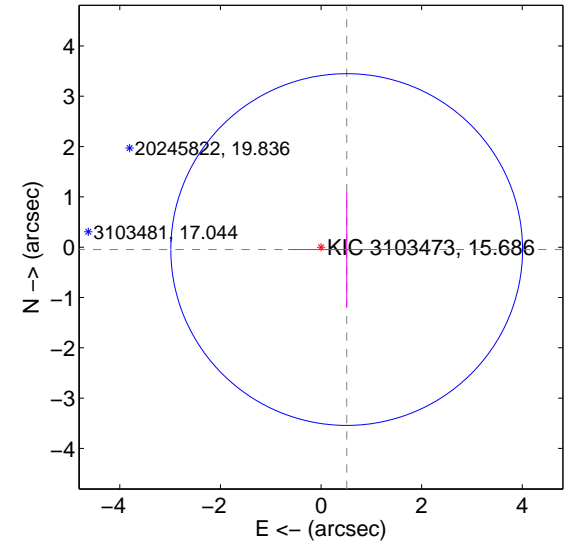
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

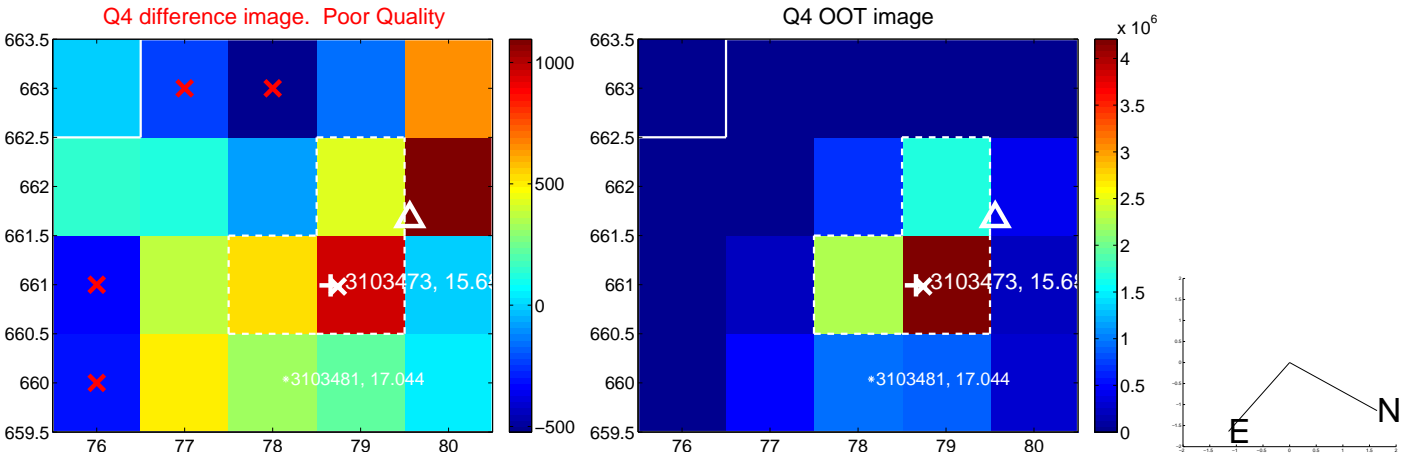
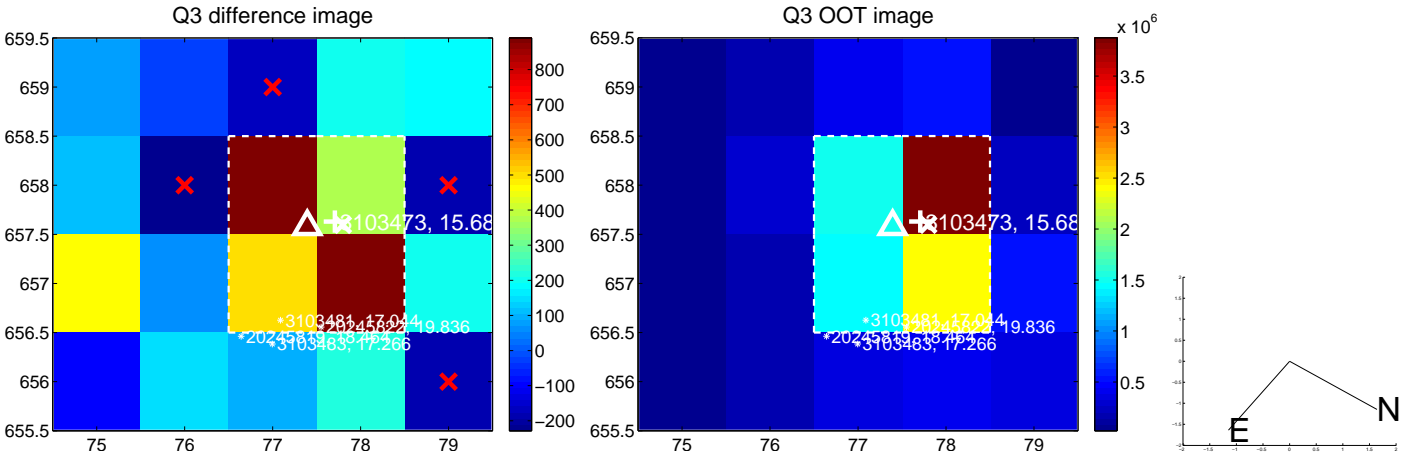
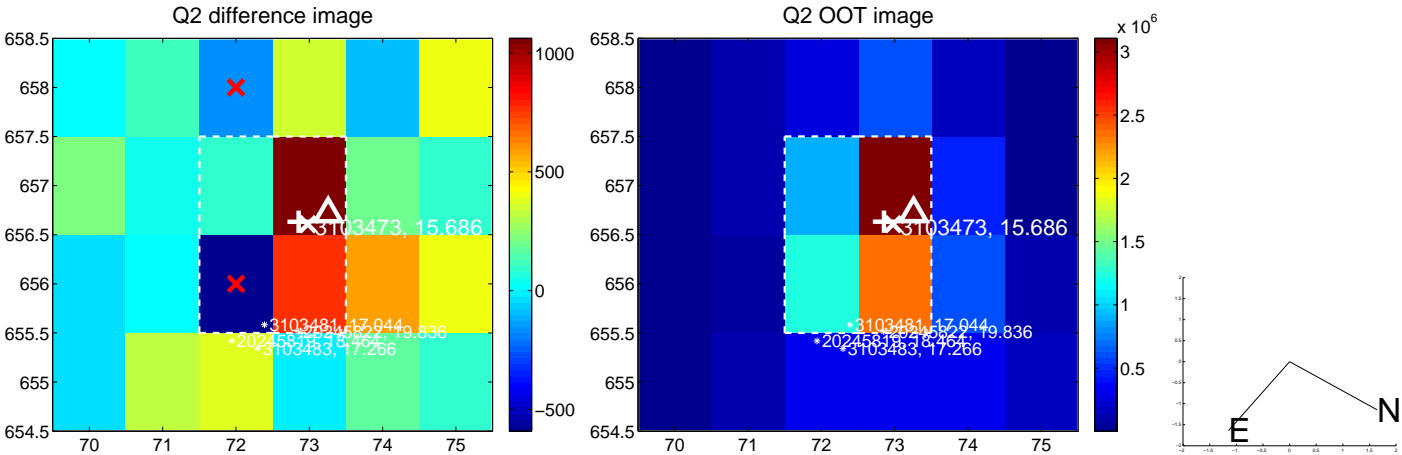
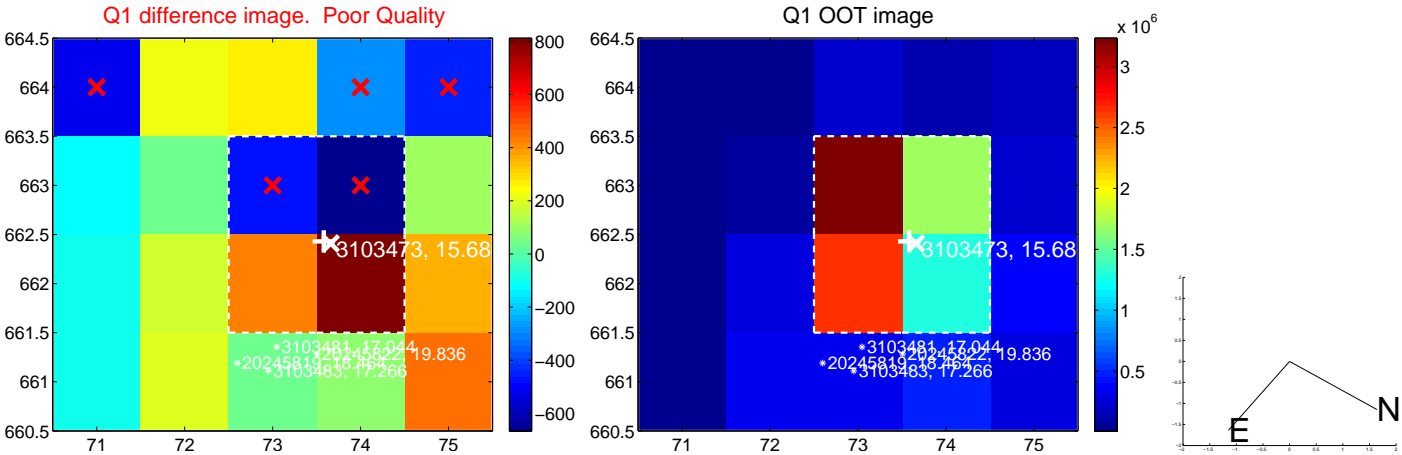


offset from photometric centroids

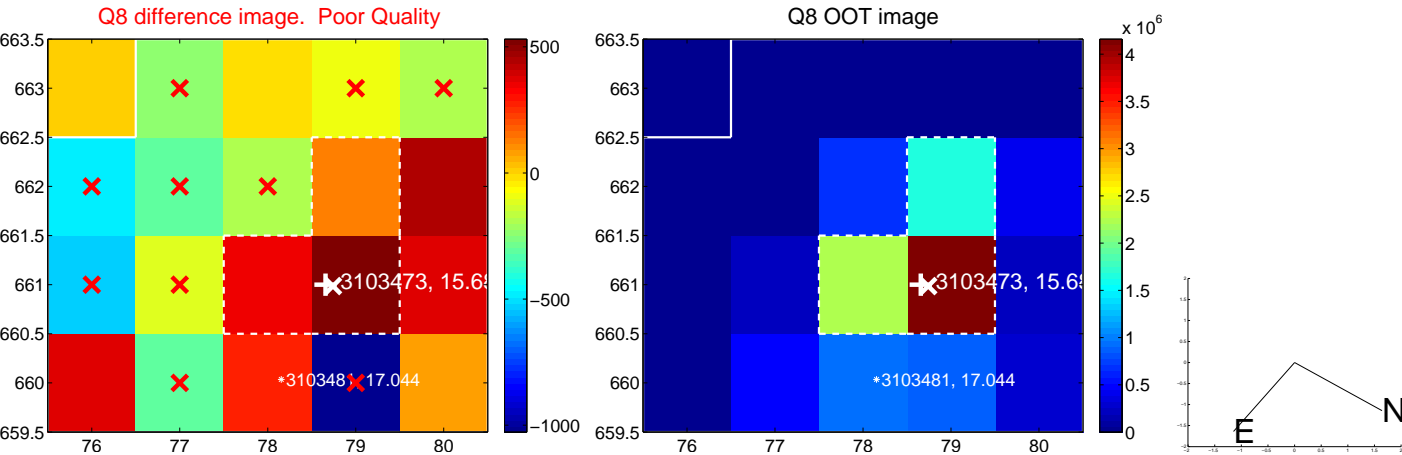
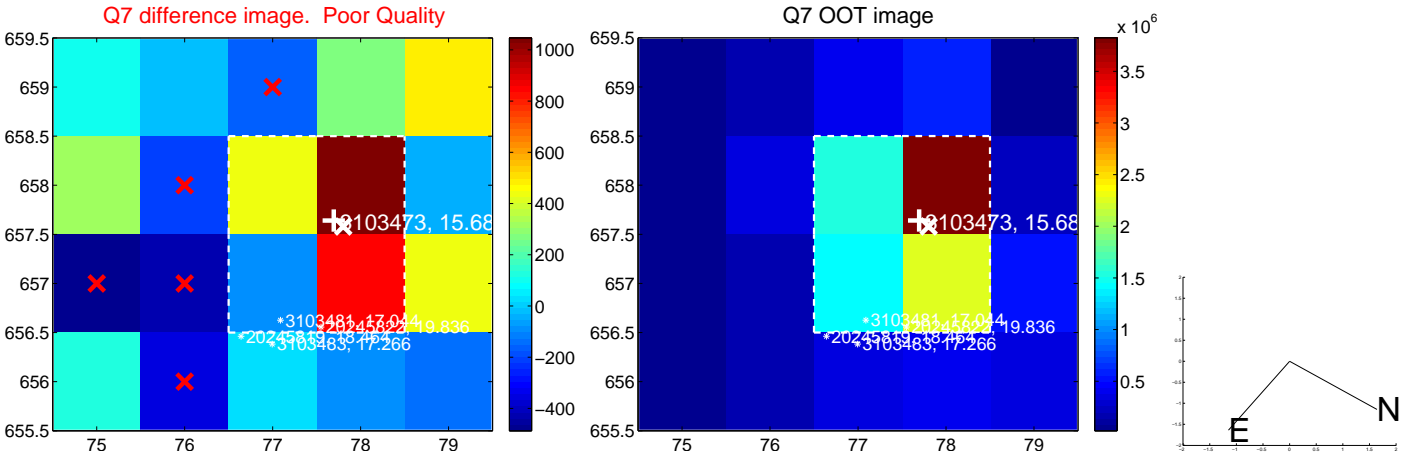
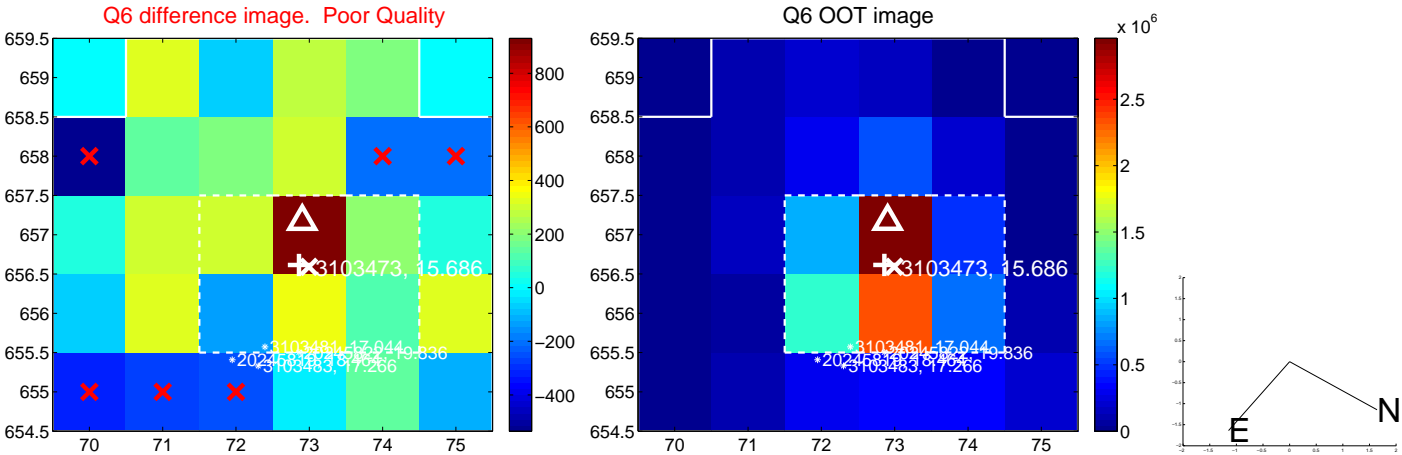
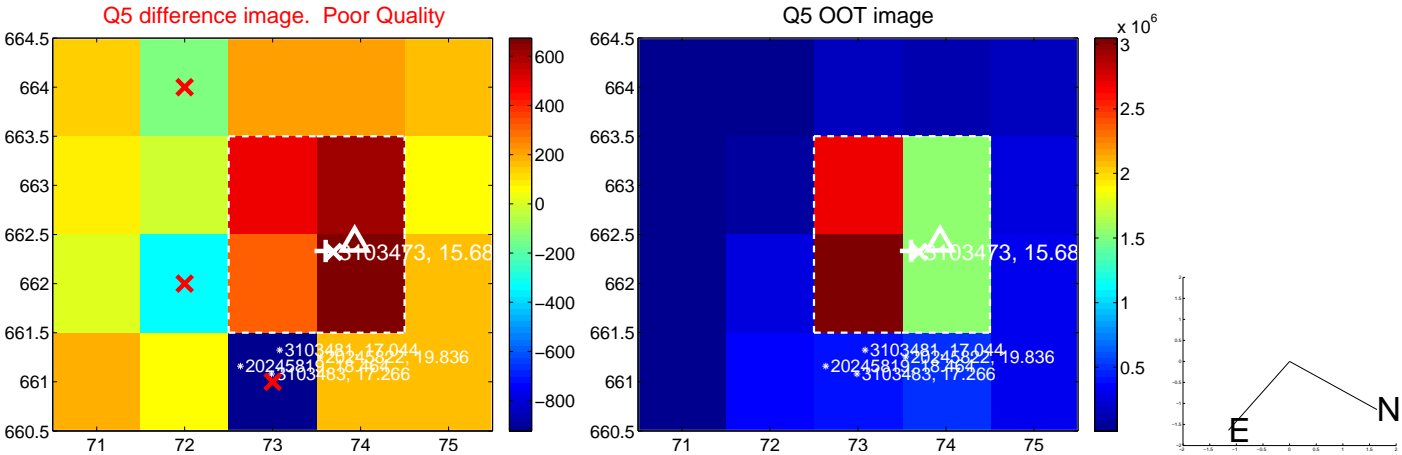


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

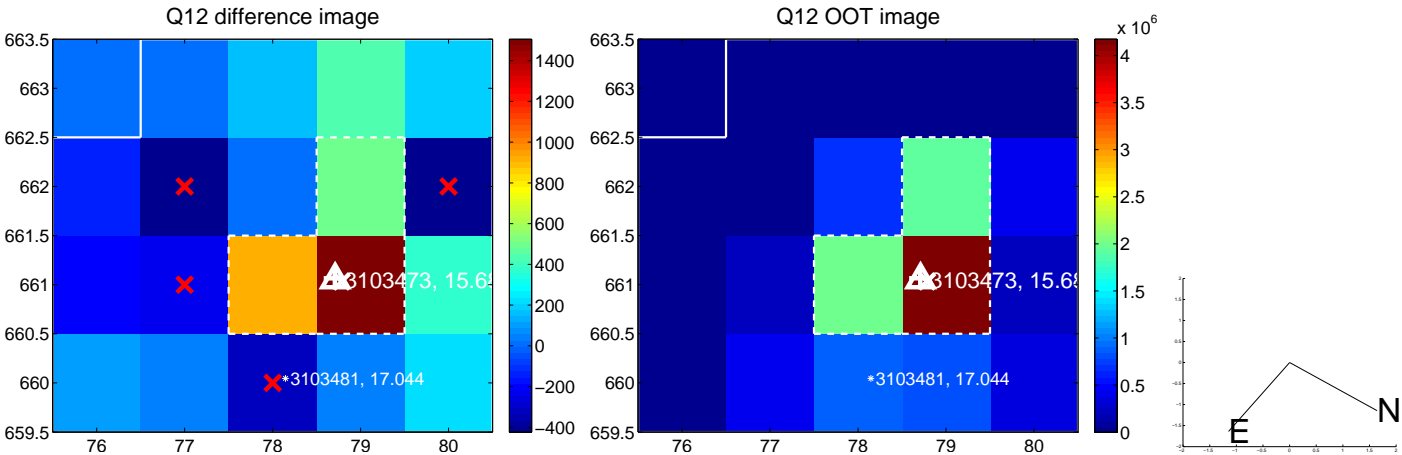
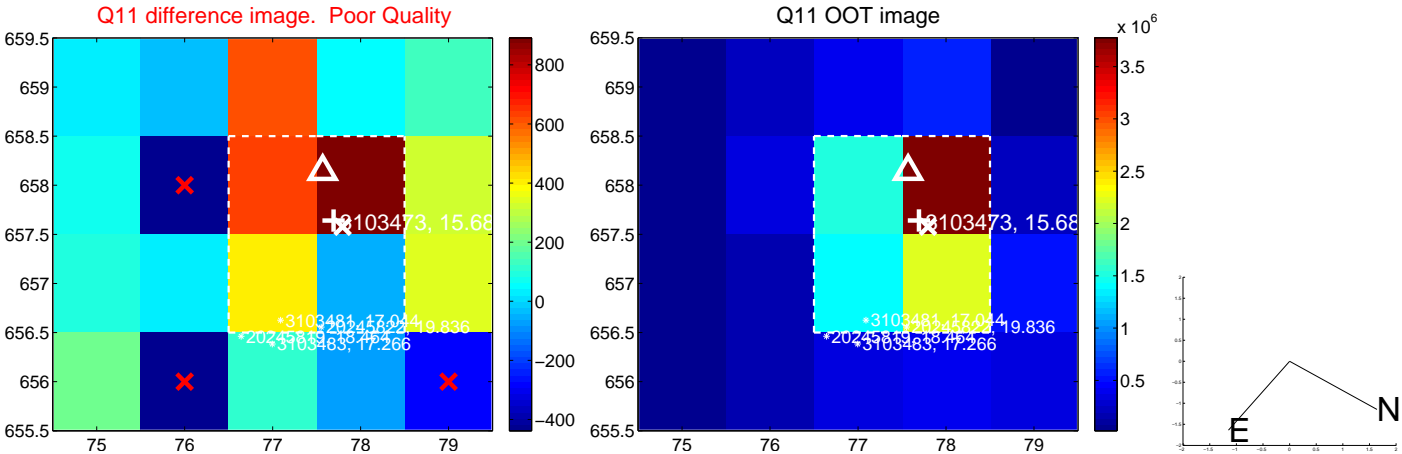
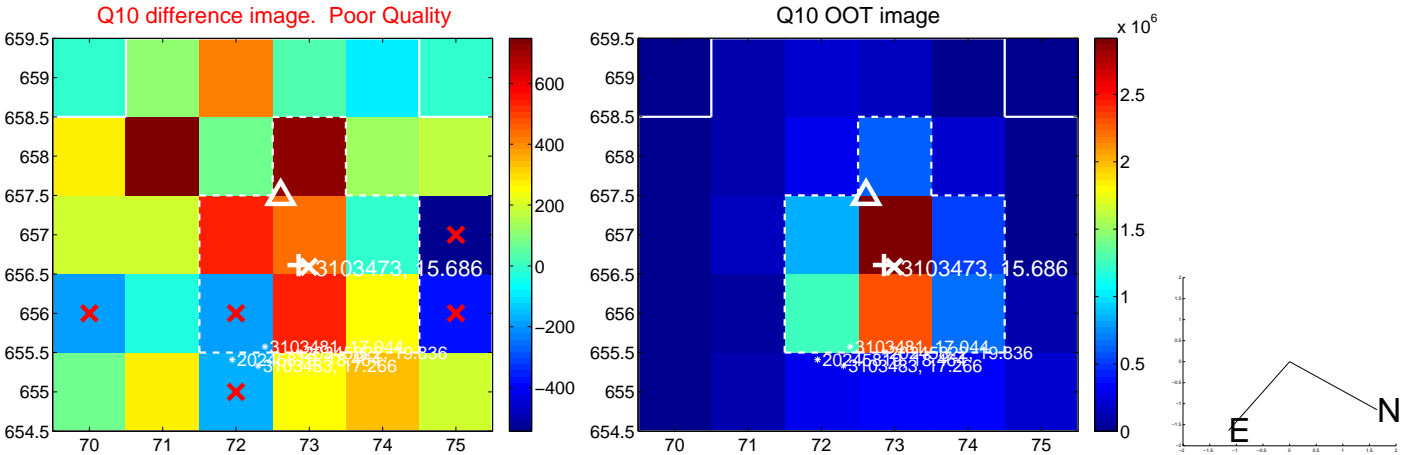
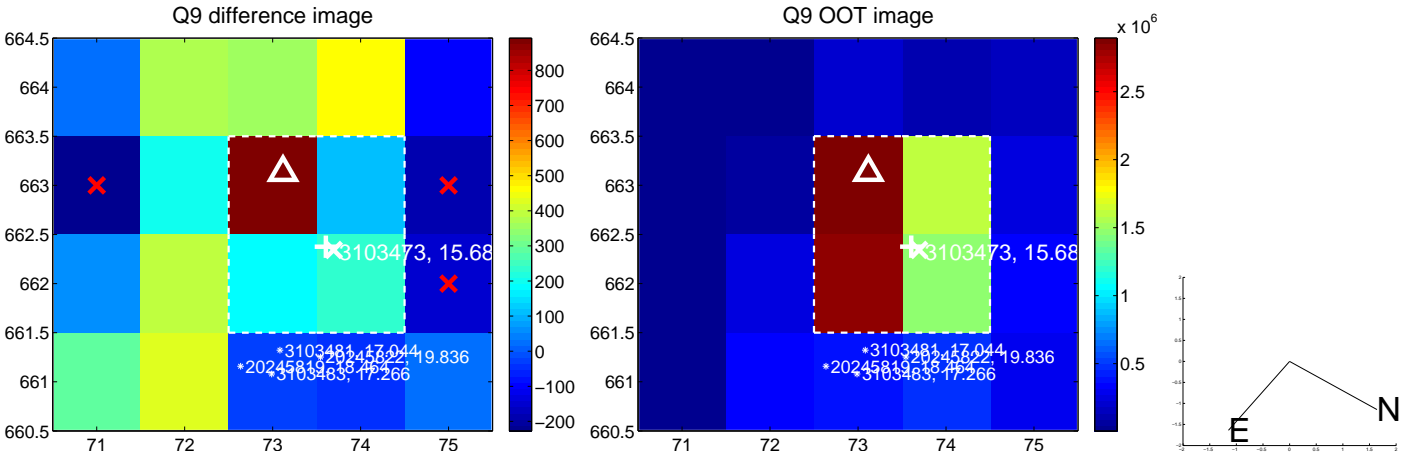
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



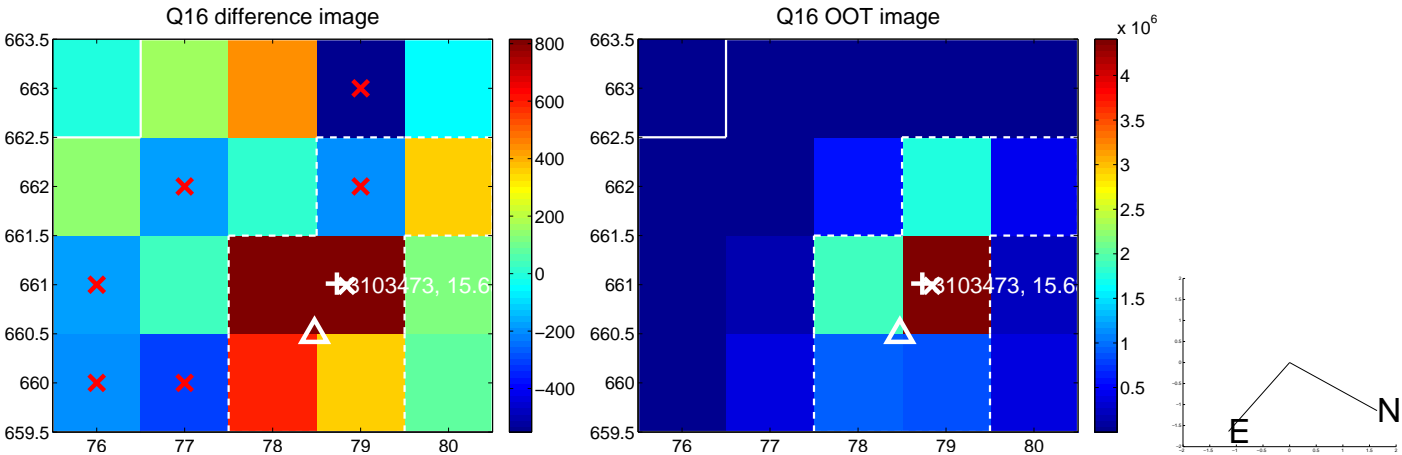
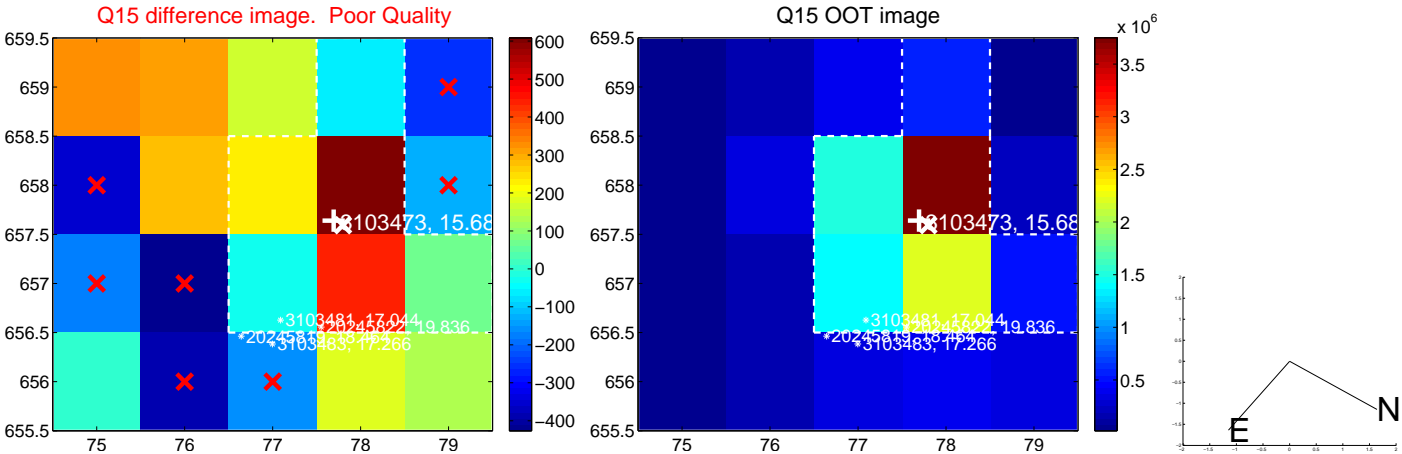
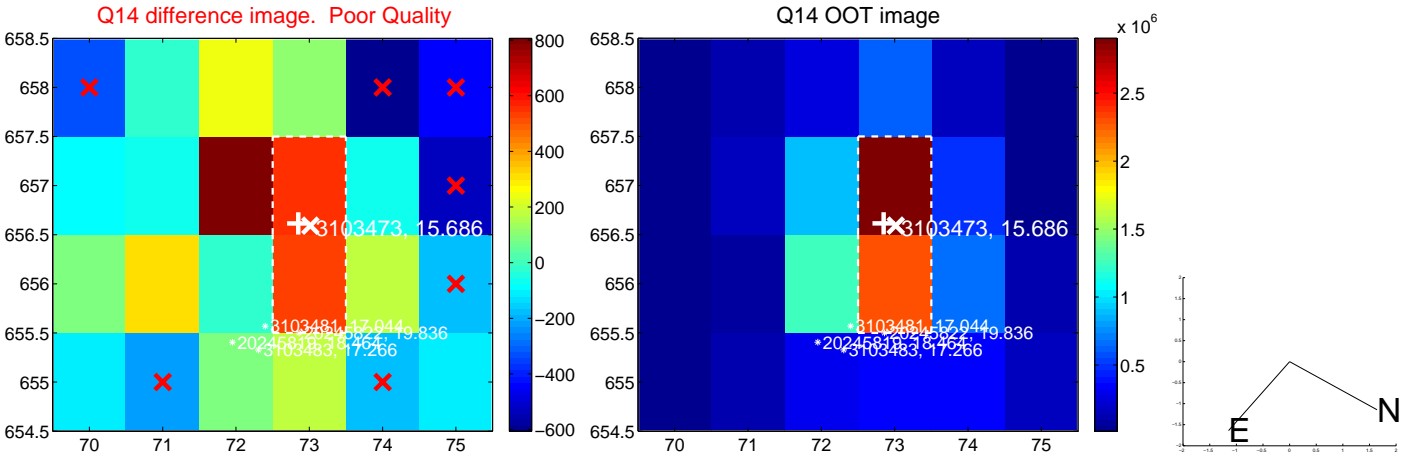
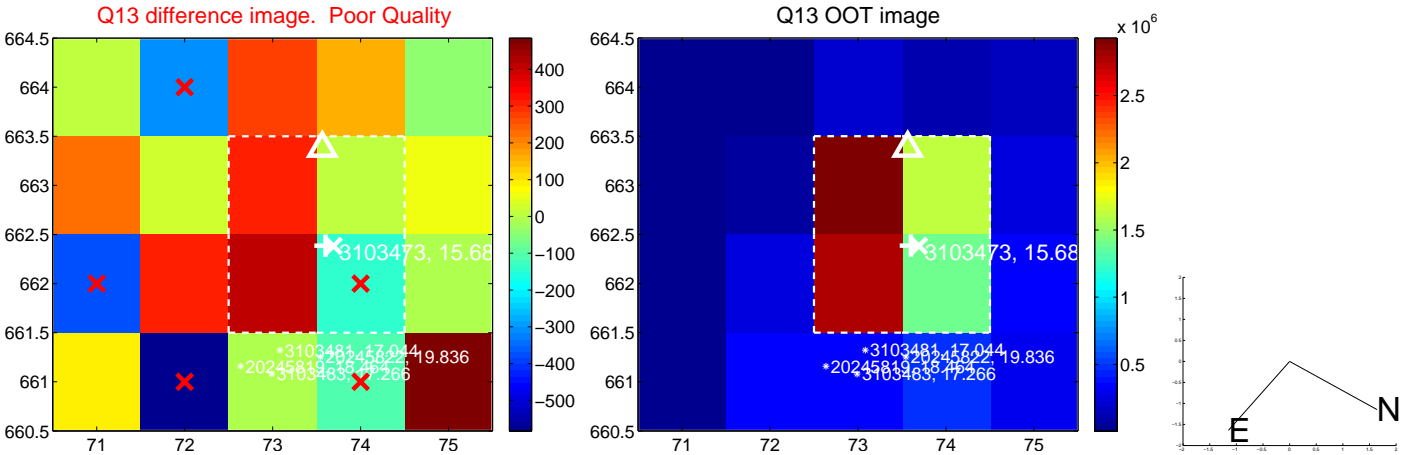
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

