

KIC 003848083

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})
003848083-01	OBS	7670.01	8.479351	138.145286	164.5	5.785	7.4	7.7	0.93	5841	1.31	132.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003848083-01	OBS	PC	1.00	0	0	0	0	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.

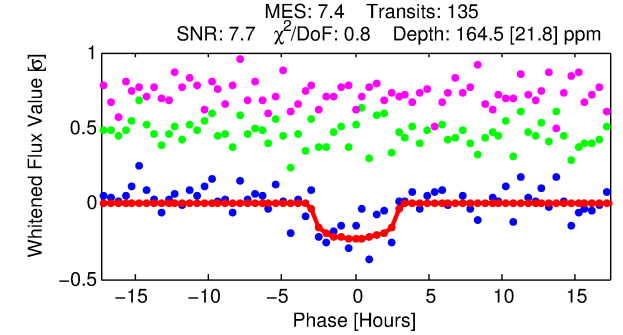
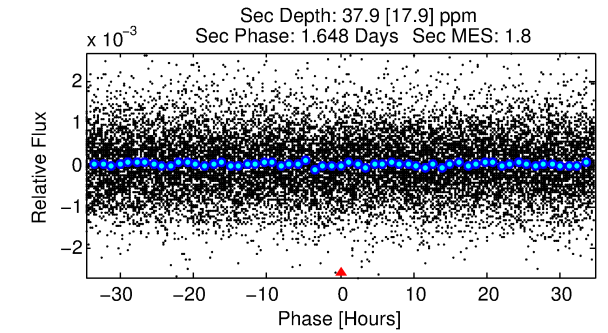
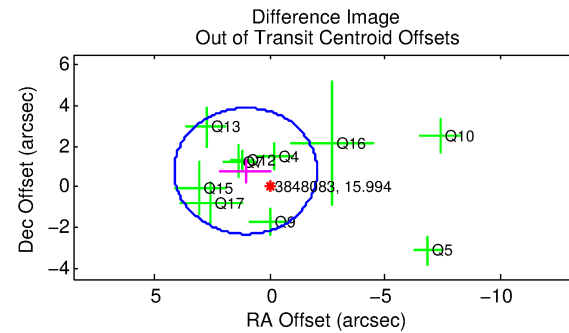
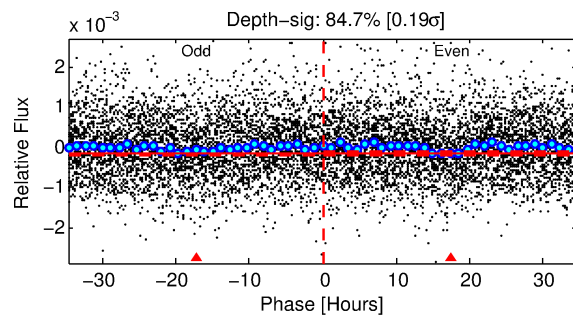
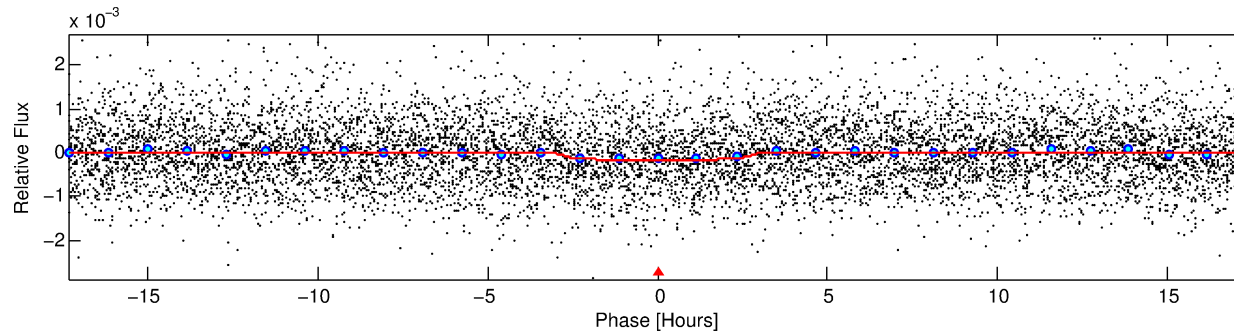
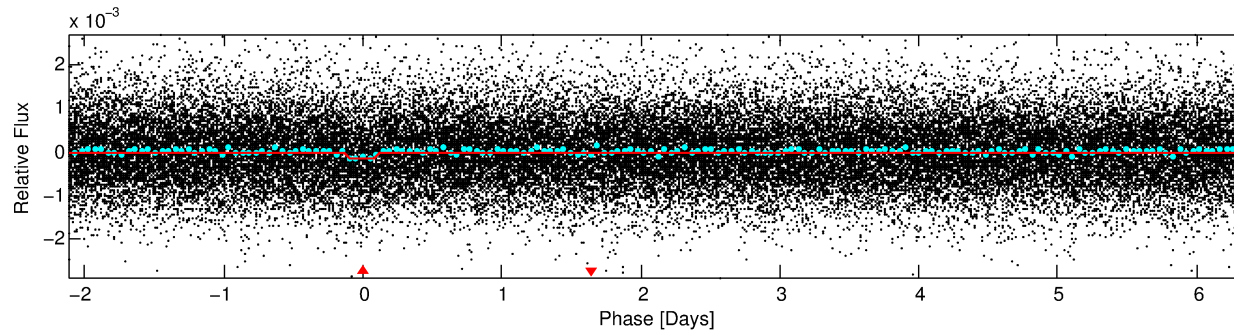
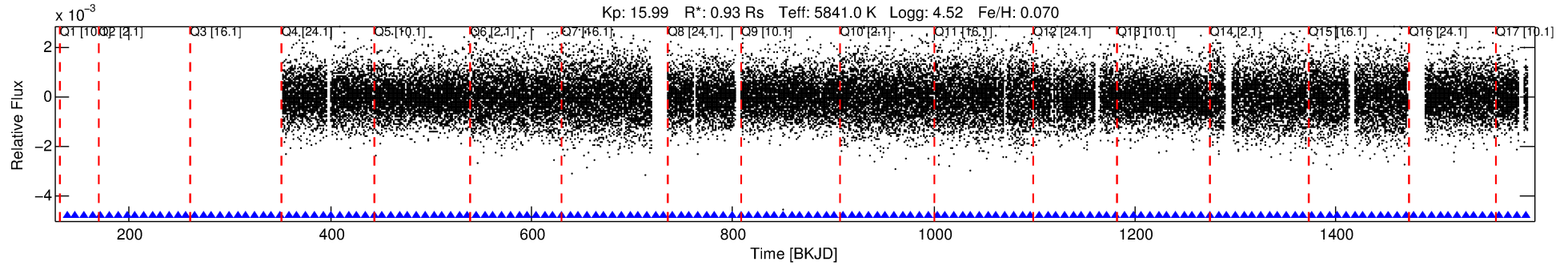
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003848083-01

No Significant Match Found

DV One-Page Summary

KIC: 3848083 Candidate: 1 of 1 Period: 8.479 d



DV Fit Results:

Period = 8.47935 [0.00016] d
Epoch = 138.1453 [0.0163] BKJD
Rp/R* = 0.0129 [0.0136]
a/R* = 7.24 [34.10]
b = 0.78 [2.39]
Seff = 132.33 [51.07]
Teq = 865 [83] K
Rp = 1.31 [1.43] Re
a = 0.0826 [0.0198] AU
Ag = 82.45 [180.52] [0.45 σ]
Teff = 4029 [2182] K [1.45 σ]

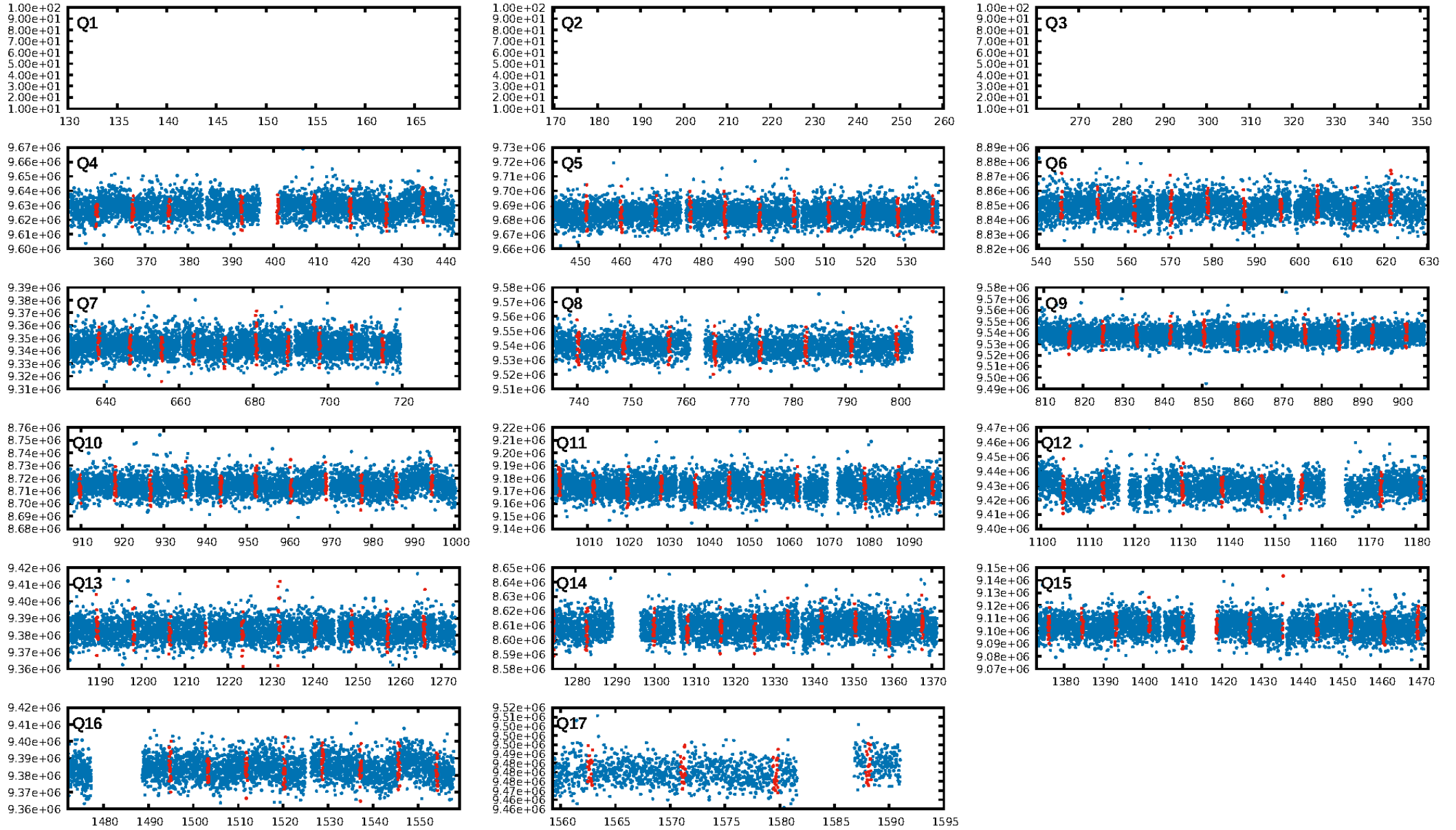
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.55e-14
RollingBand-fgt: 1.00 [131/131]
GhostDiagnostic-chr: 4.706
Centroid-sig: 95.1%
Centroid-so: 0.858 arcsec [0.53 σ]
OotOffset-rm: 1.303 arcsec [1.26 σ]
KicOffset-rm: 1.321 arcsec [1.22 σ]
OotOffset-st: 1/2/3/4 [10]
KicOffset-st: 1/2/3/4 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [14/14]

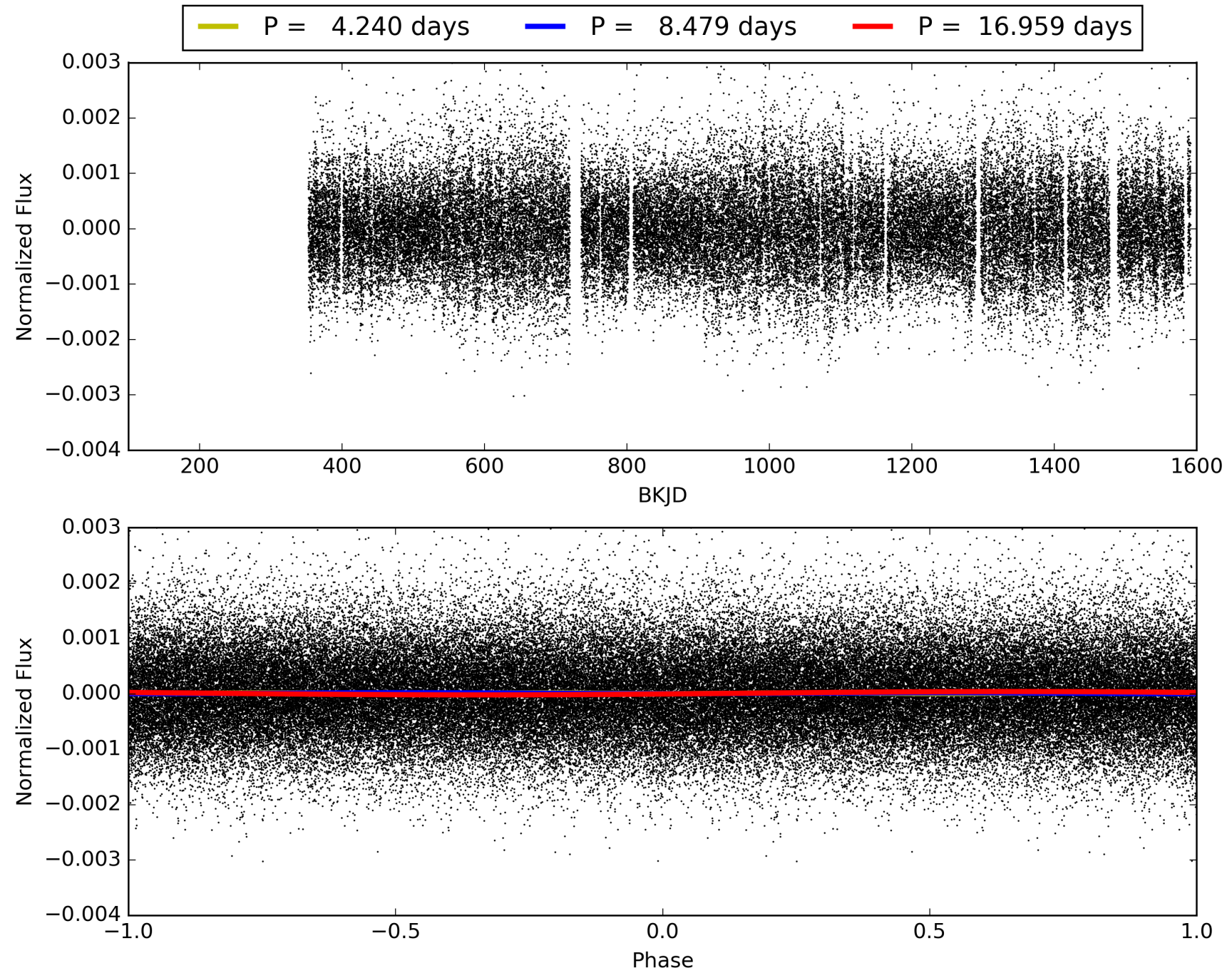
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:02:02 Z

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

TCE 003848083-01, PDC Light Curves

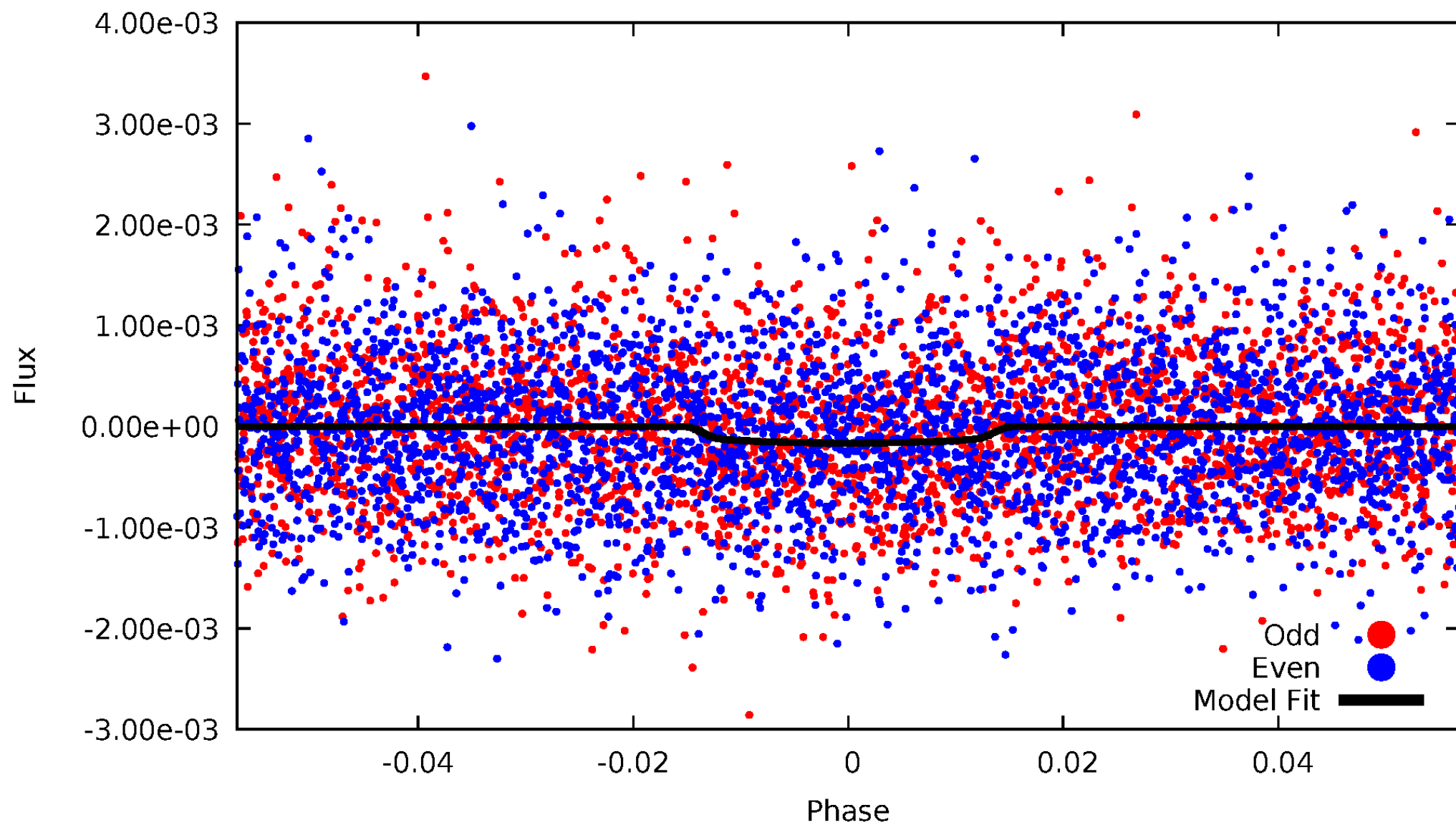


TCE 003848083-01



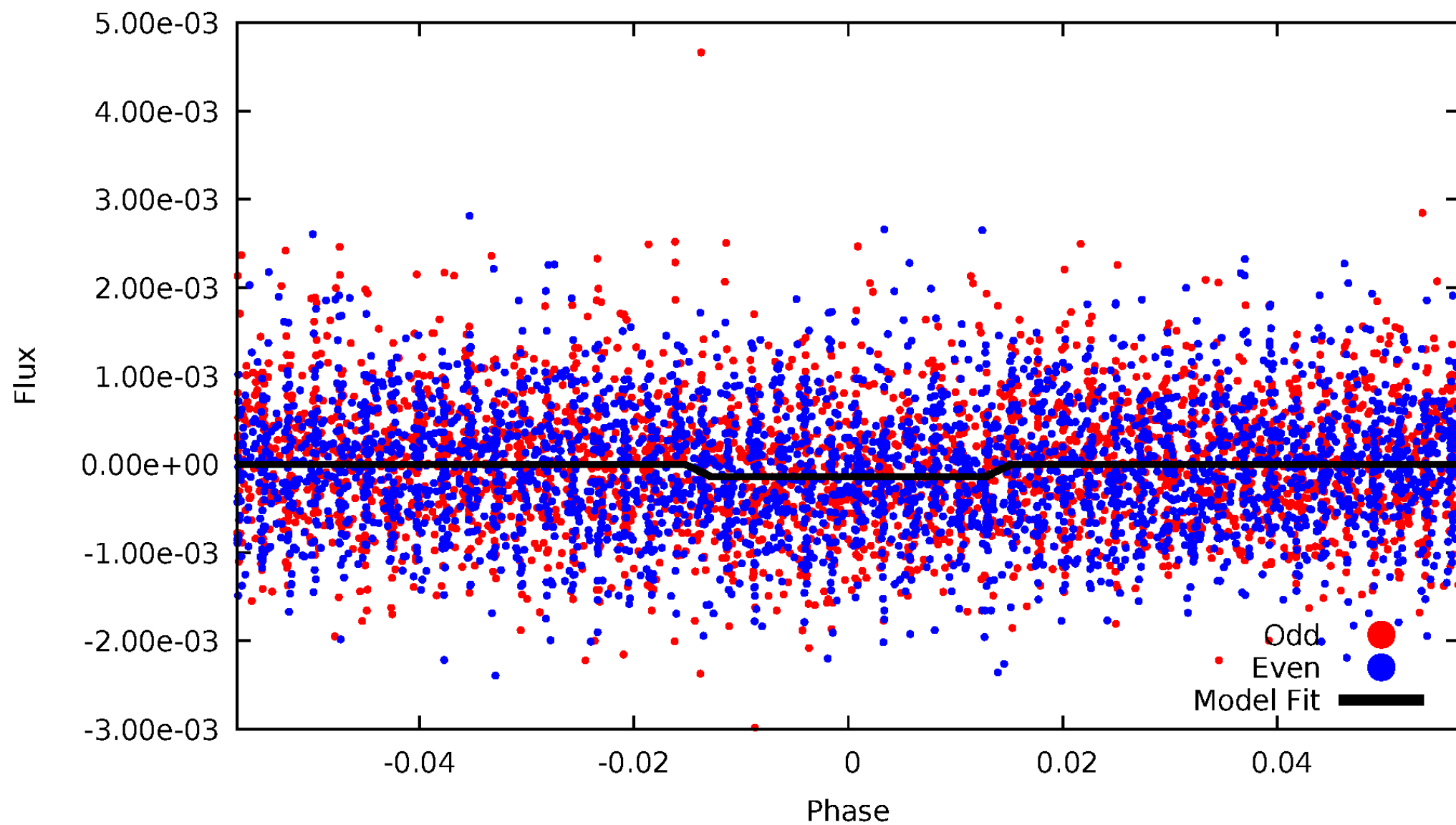
DV Odd/Even

TCE 003848083-01



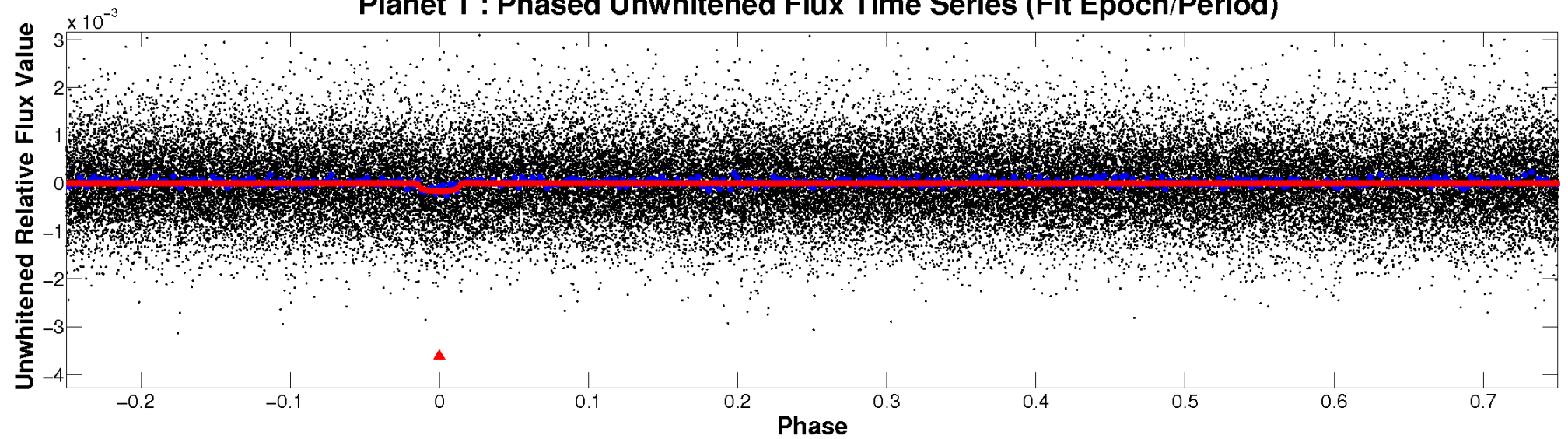
ALT Odd/Even

TCE 003848083-01

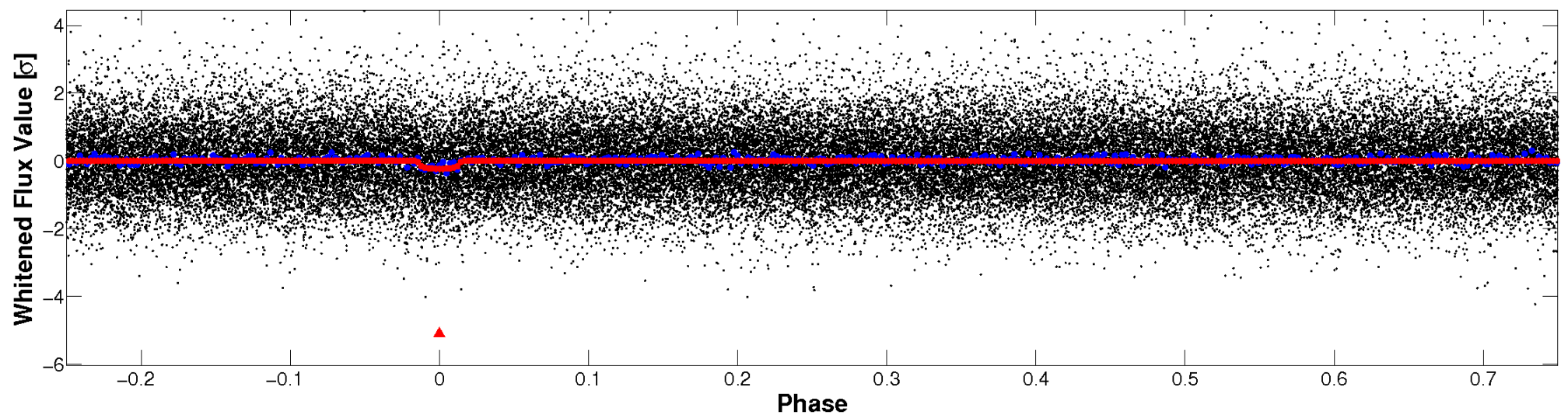


Non-Whitened Vs. Whitened Light Curve

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

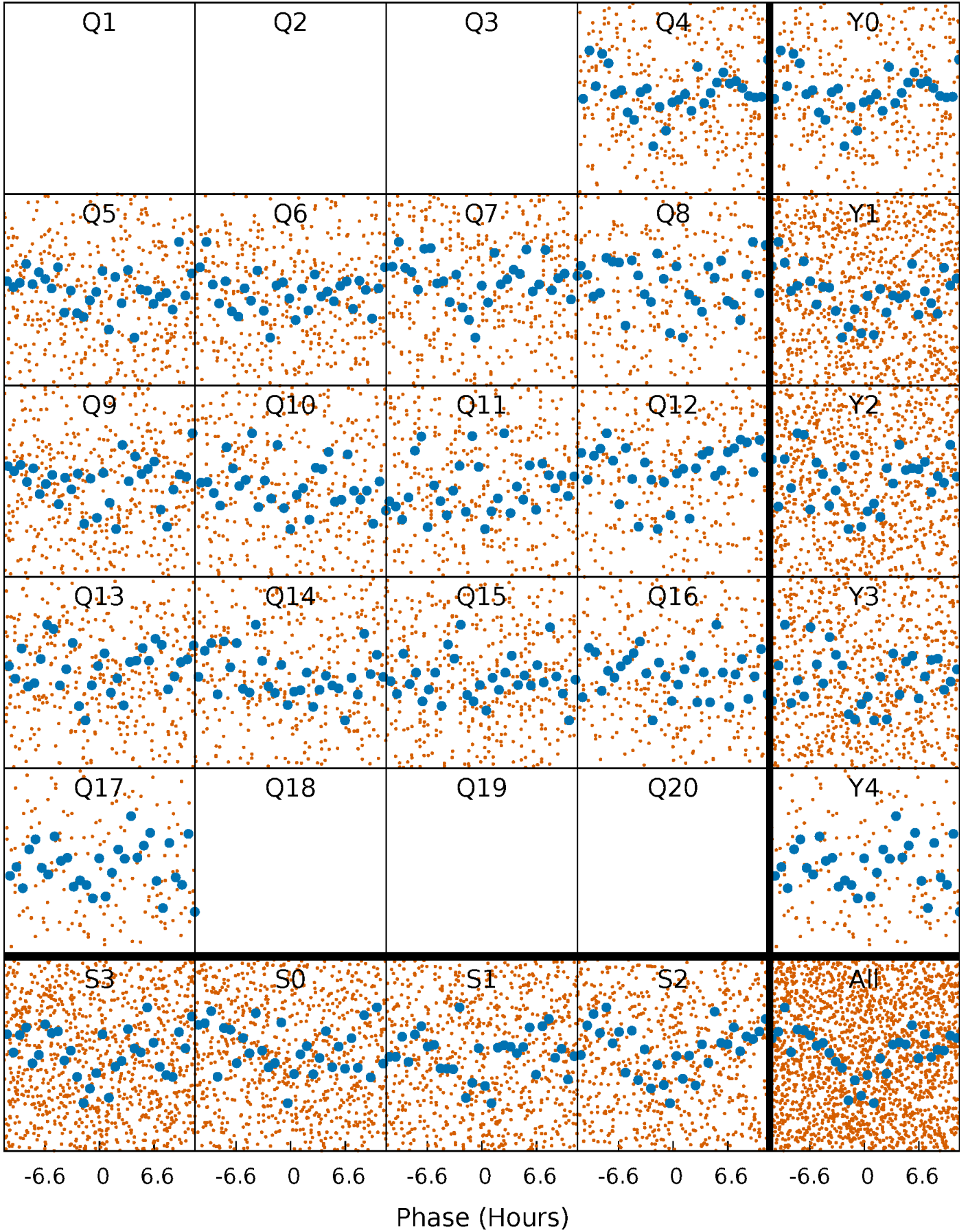


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



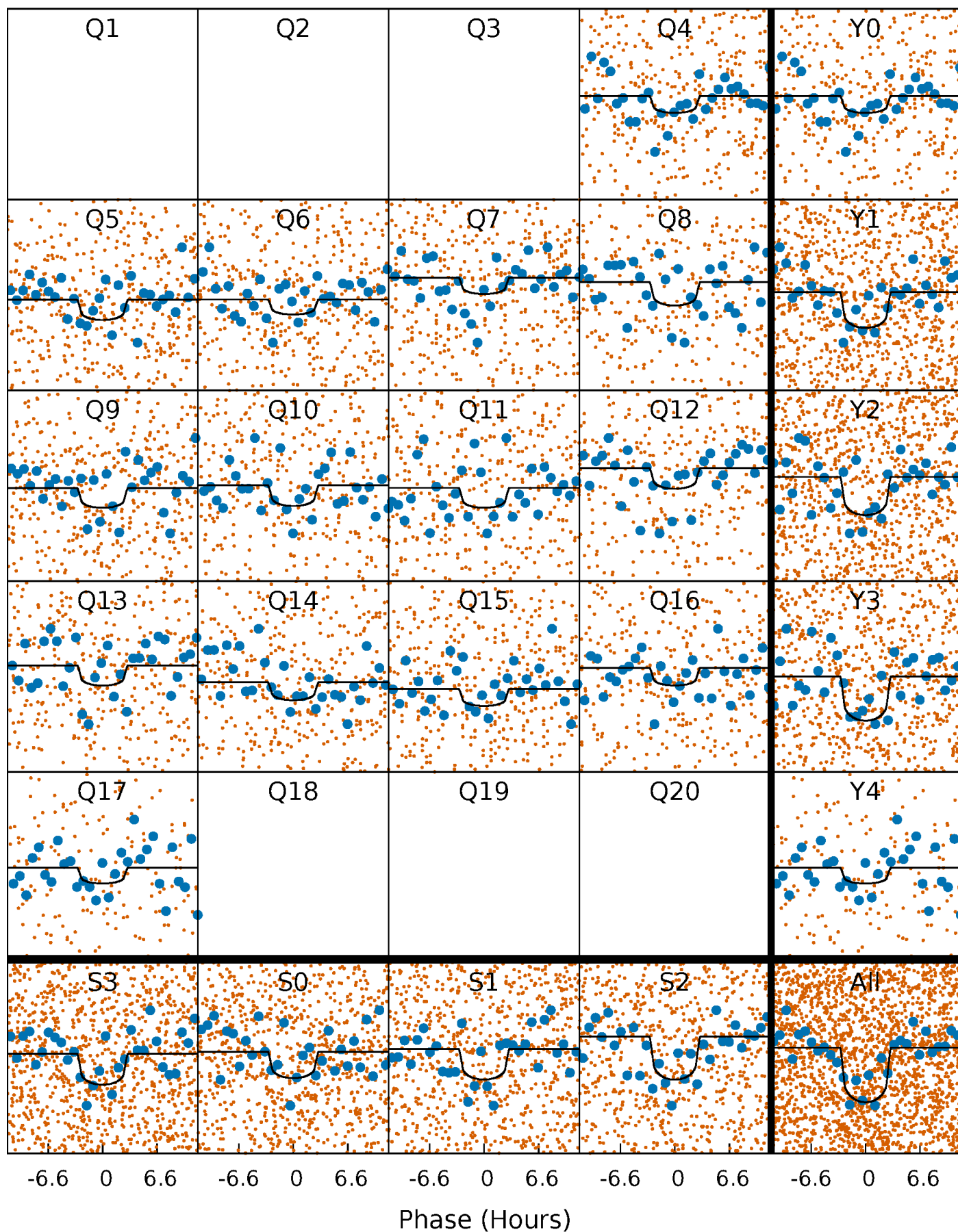
PDC Quarter-Phased Transit Curves

TCE 003848083-01 P= 8.479351 Days $T_0=138.145285$ (BKJD)



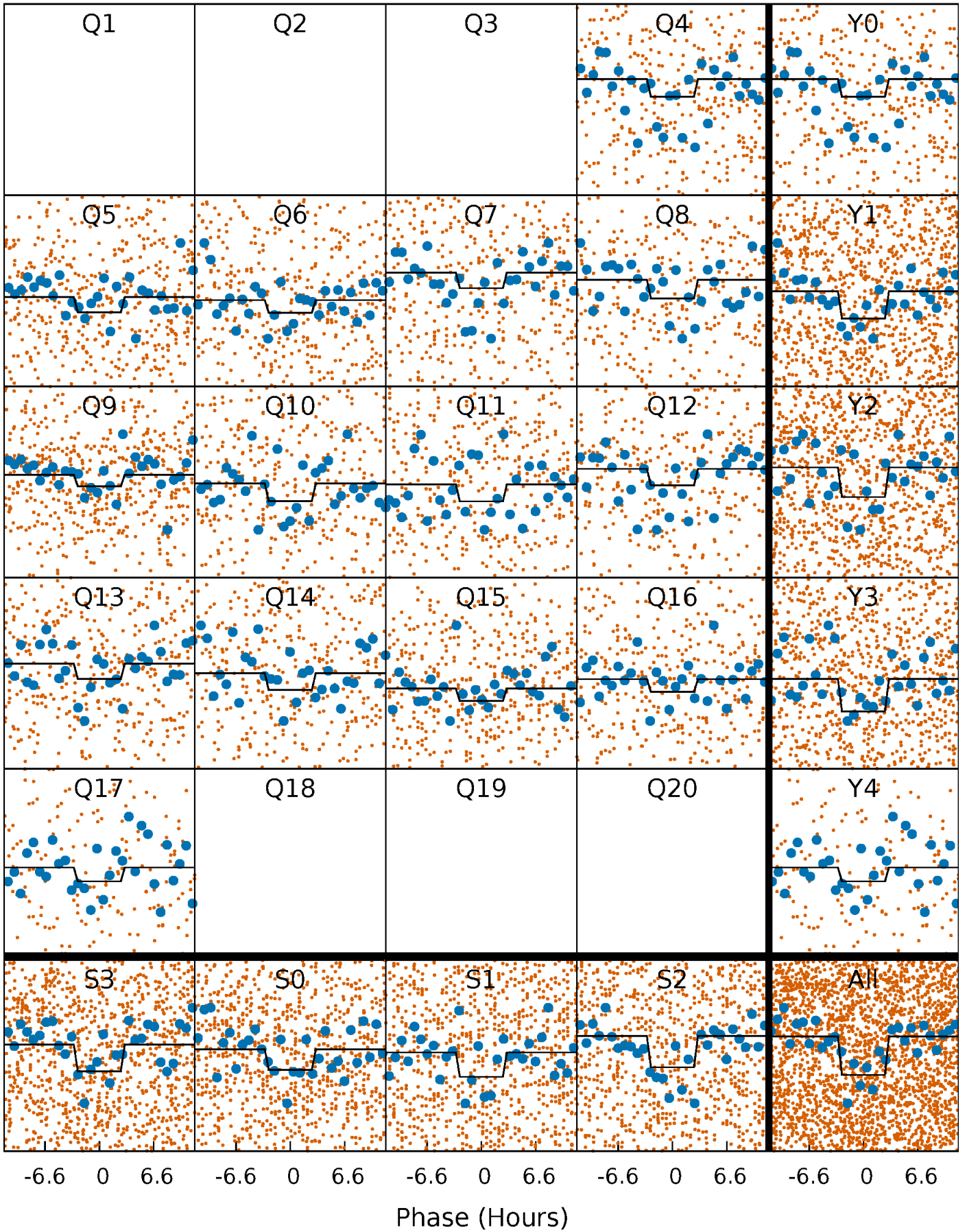
DV Quarter-Phased Transit Curves

TCE 003848083-01 P= 8.479351 Days $T_0=138.145285$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

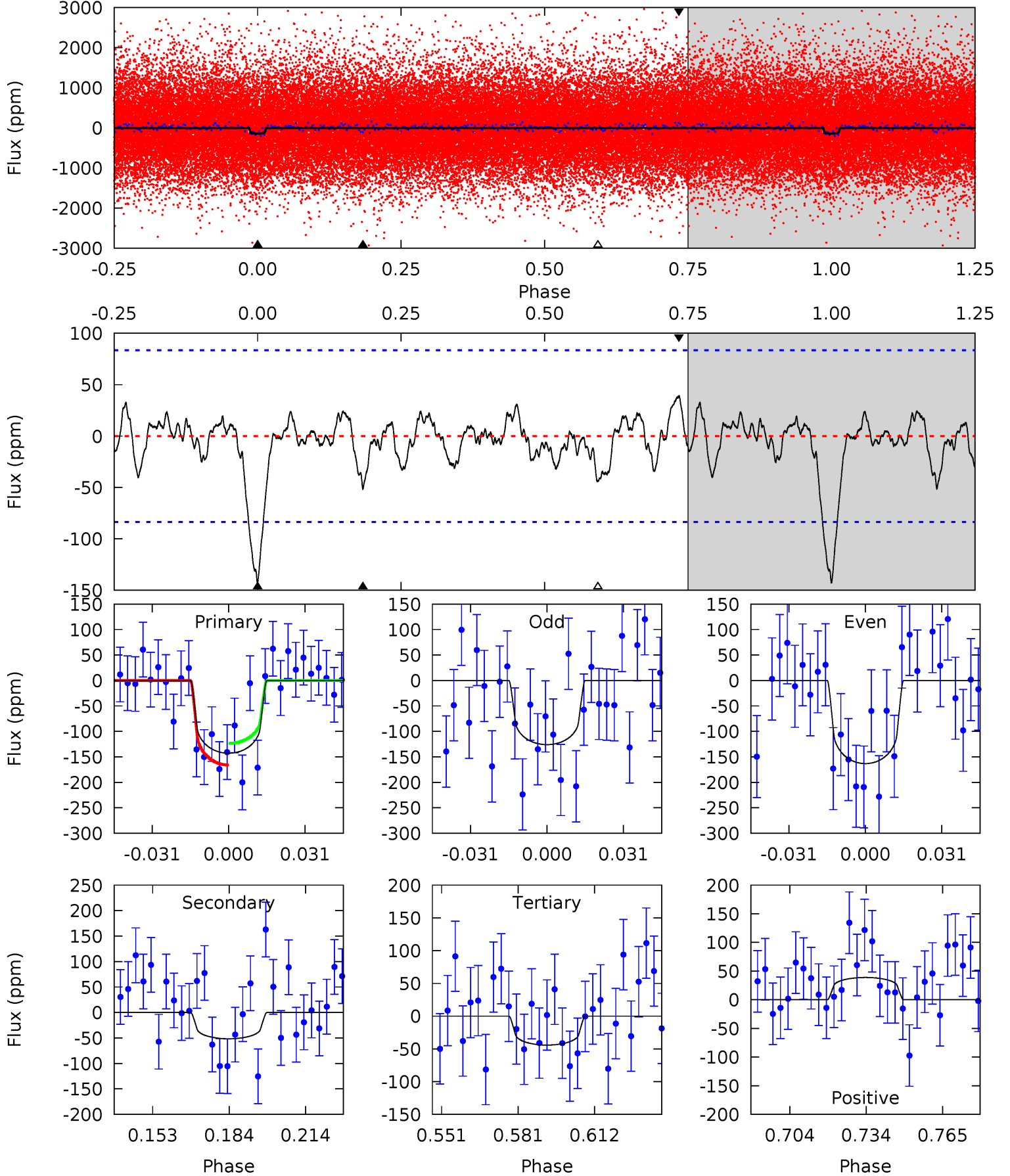
TCE 003848083-01 P= 8.479499 Days $T_0=138.131946$ (BKJD)



DV Model-Shift Uniqueness Test

003848083-01, P = 8.479351 Days, E = 138.145285 Days

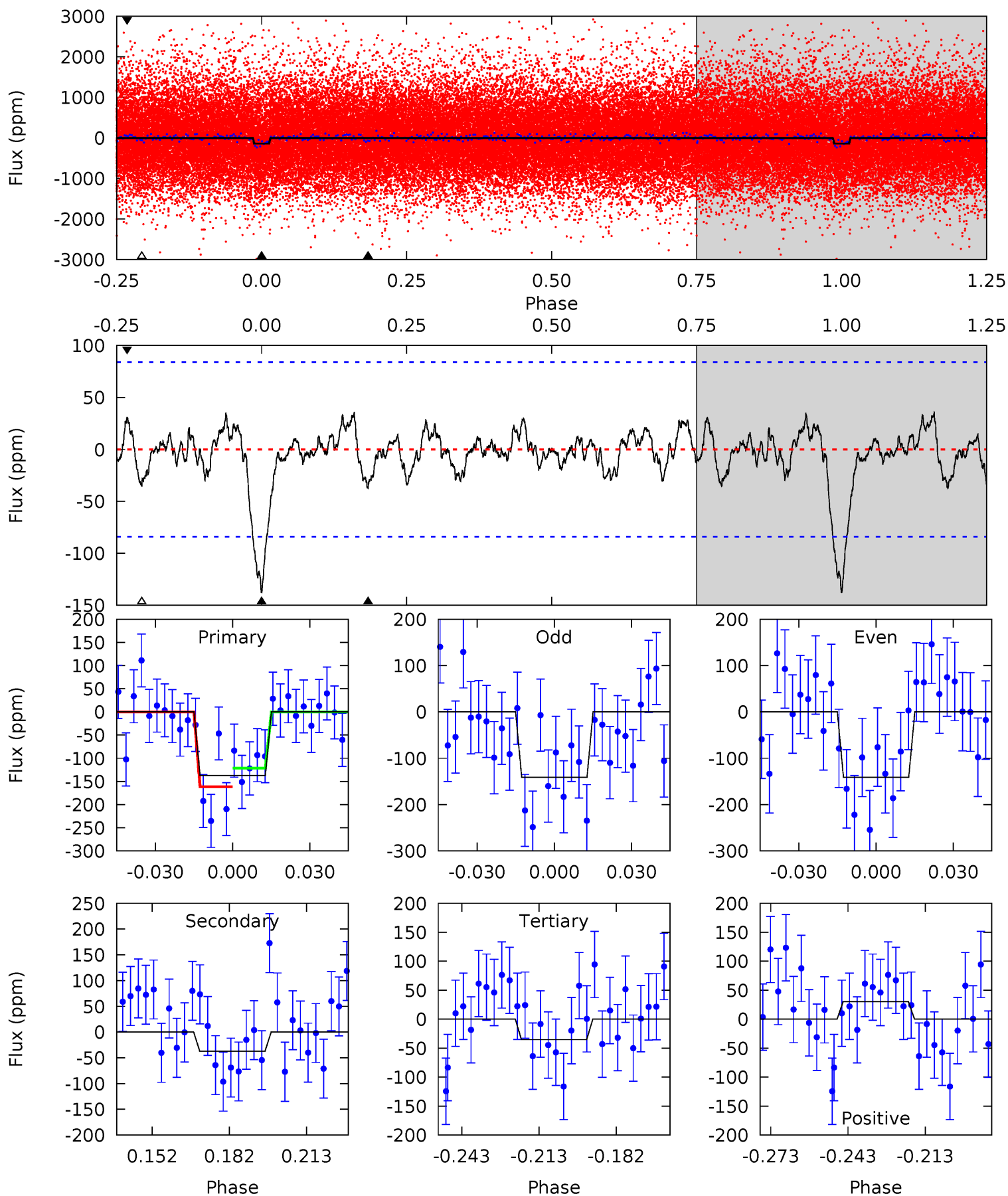
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.22	2.96	2.54	2.23	4.81	2.16	0.93	5.68	5.99	0.42	0.73	1.07	0.90	0.21	1.23



Alt Model-Shift Uniqueness Test

003848083-01, P = 8.479499 Days, E = 138.131946 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	2.14	2.02	1.74	4.81	2.17	0.80	5.85	6.13	0.12	0.40	0.00	1.03	0.21	1.15



Stellar Parameters For KIC 003848083

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5841^{+163}_{-225}	$4.520^{+0.046}_{-0.196}$	$0.070^{+0.250}_{-0.350}$	$0.931^{+0.260}_{-0.087}$	$1.047^{+0.101}_{-0.139}$	$1.828^{+0.350}_{-0.882}$
	+3%/-4%	+1%/-4%	+357%/-500%	+28%/-9%	+10%/-13%	+19%/-48%
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 003848083-01 / KOI 7670.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52 ± 17	$1.74^{+1.23}_{-1.12}$	1227^{+89}_{-60}	4123^{+2137}_{-761}	61^{+396}_{-42}
Alt.	-37 ± 17	$1.61^{+1.37}_{-1.08}$	1228^{+93}_{-60}	3977^{+2240}_{-812}	52^{+407}_{-40}

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 $A_{\text{obs}} \gg 1.0$

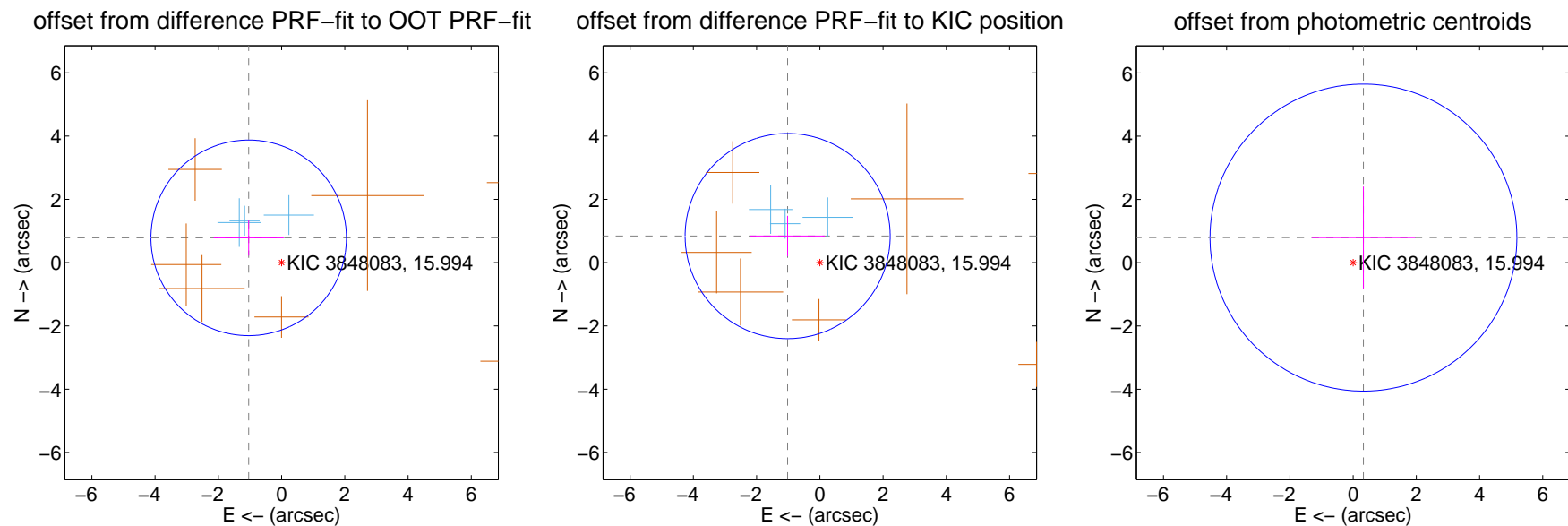
DV Centroid Data

Supplemental centroid analysis for 003848083-01. Kepler magnitude: 15.99. Transit SNR 7.72

There are 3 quarters with good PRF difference image offsets

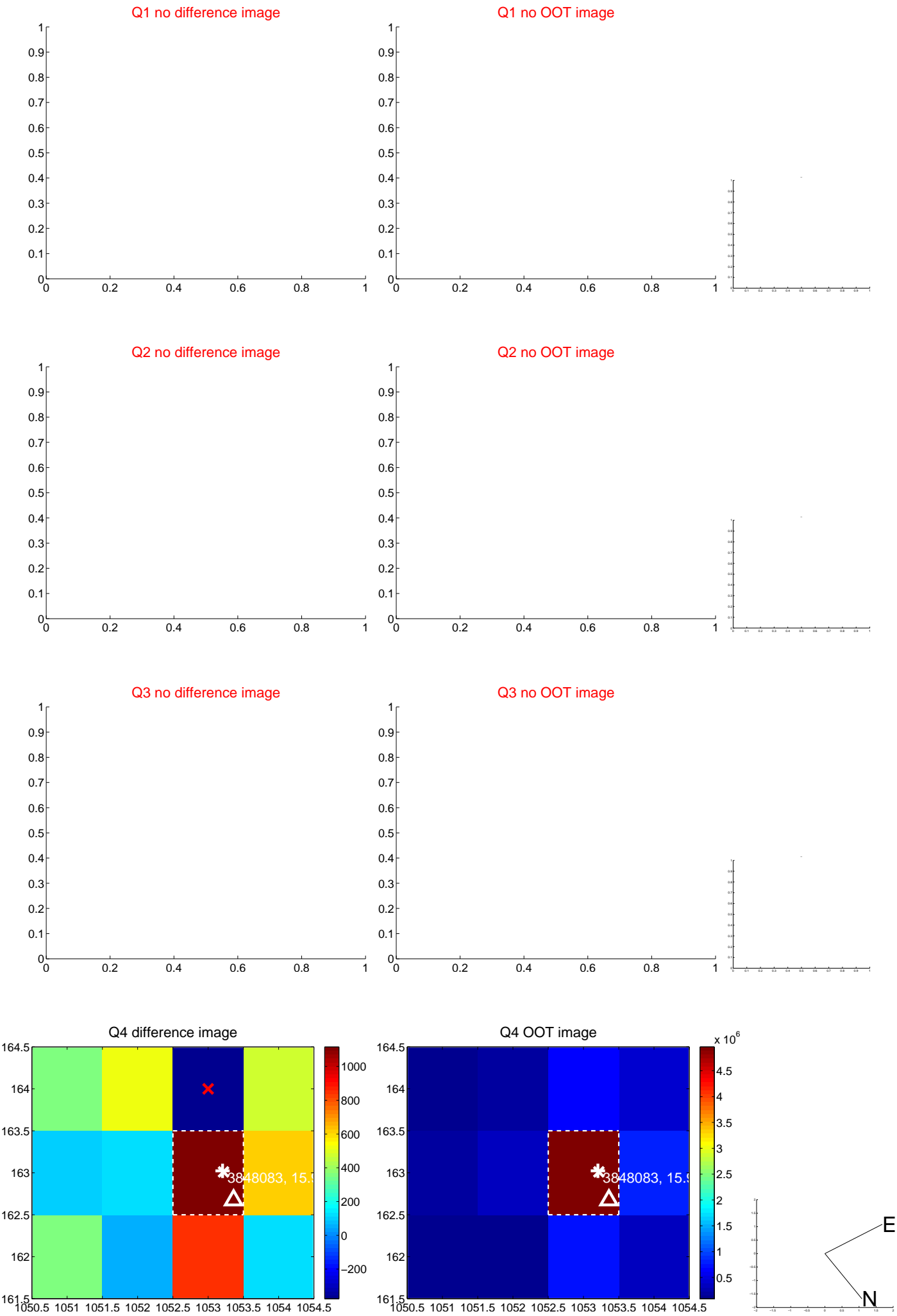
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.303 ± 1.030	1.26	1.040 ± 1.109	0.784 ± 0.561
PRF-fit source offset from KIC position	1.321 ± 1.080	1.22	1.018 ± 1.177	0.841 ± 0.639
photometric centroid source offset	0.86 ± 1.62	0.53	-0.33 ± 1.64	0.79 ± 1.61

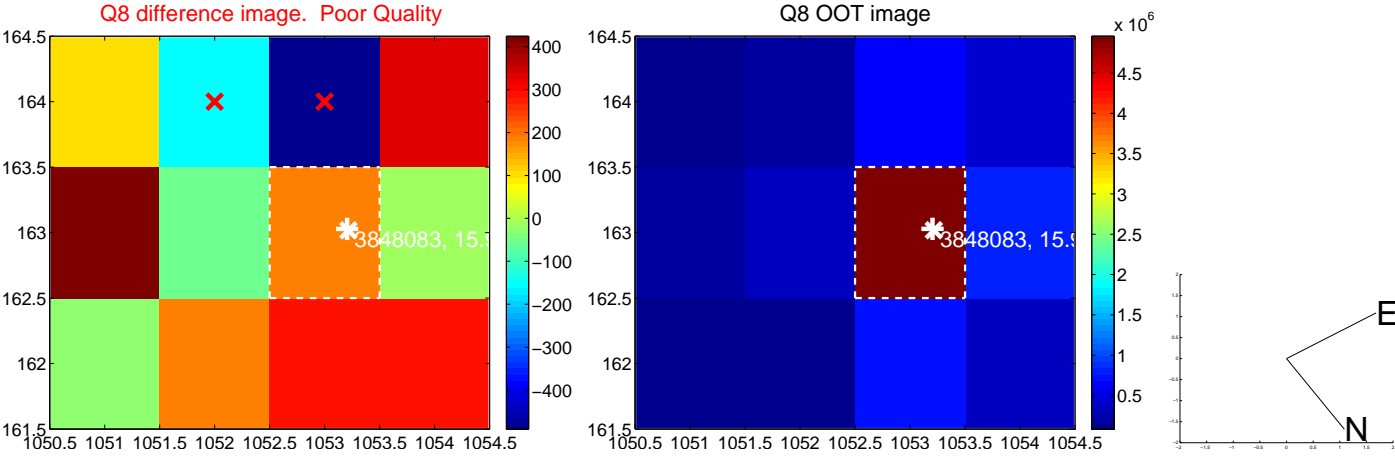
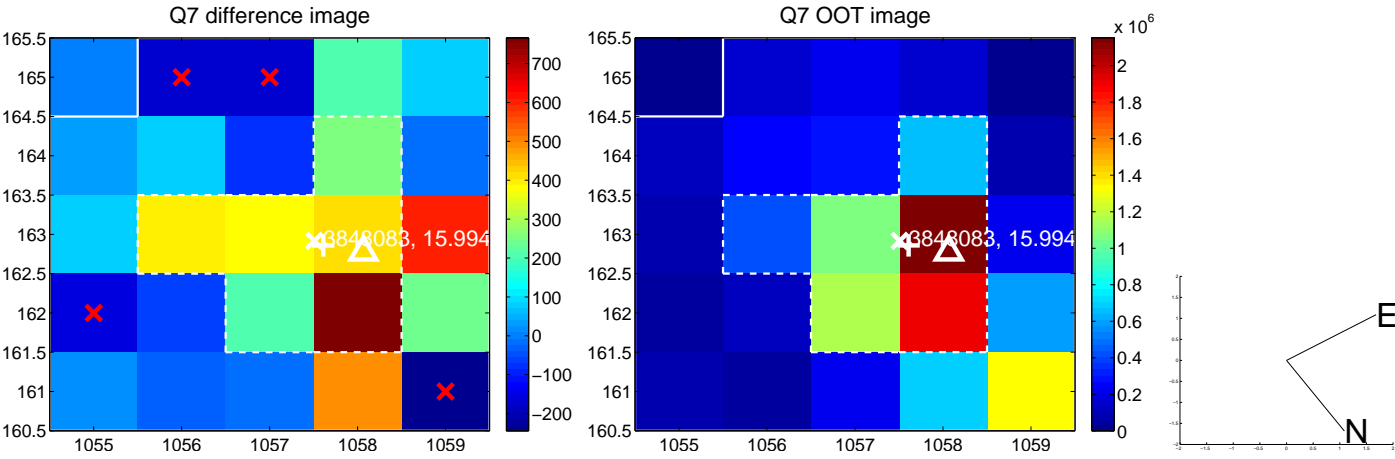
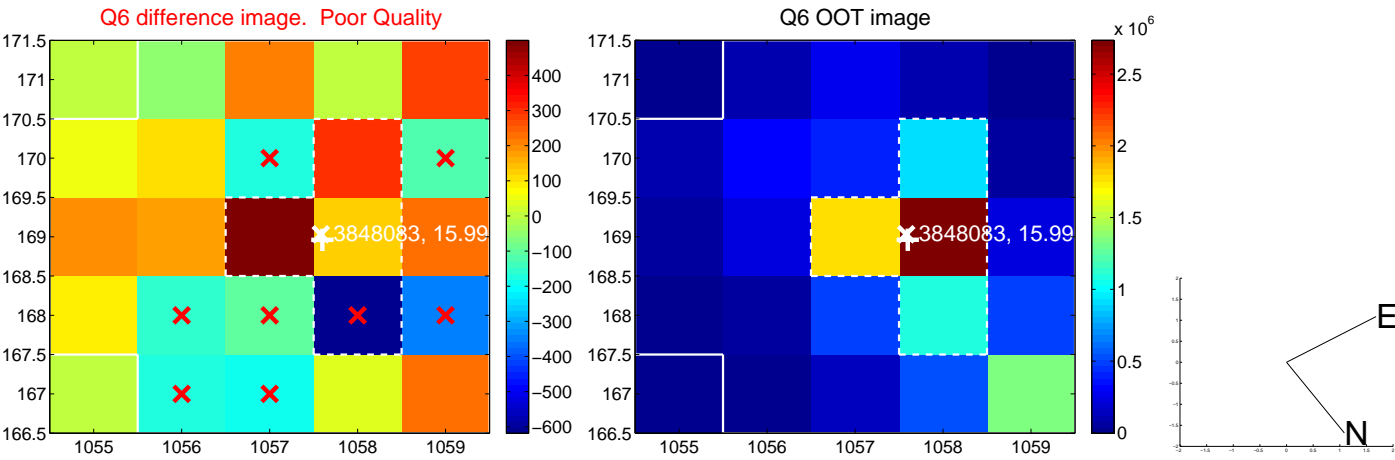
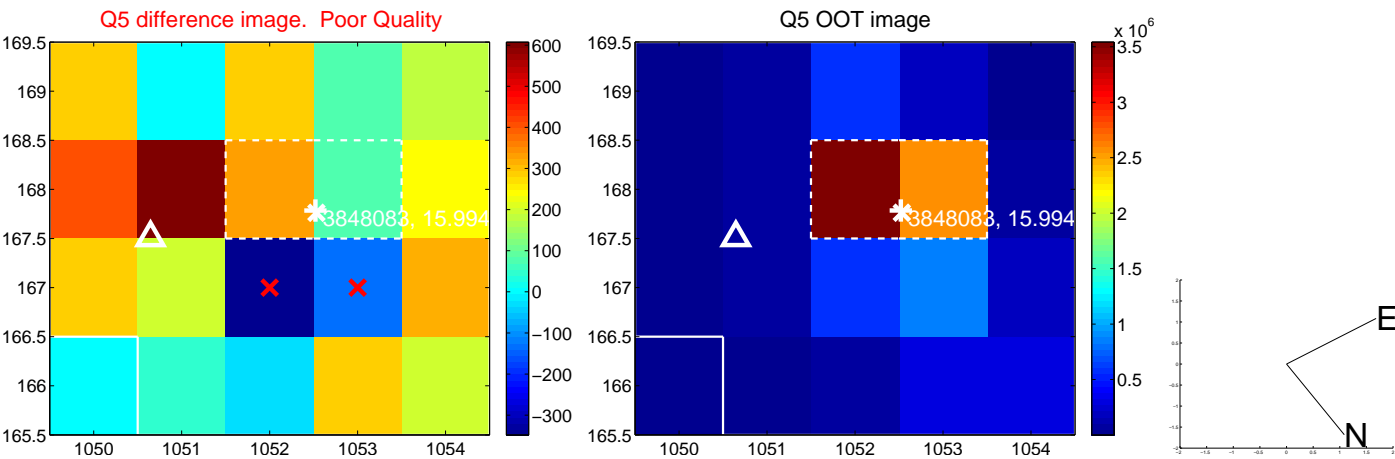


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

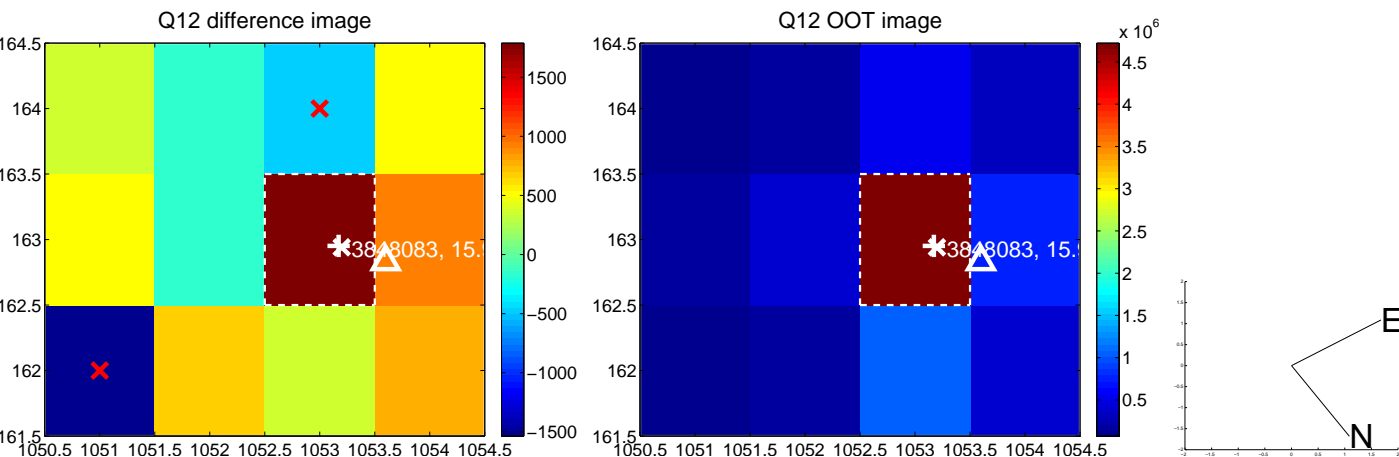
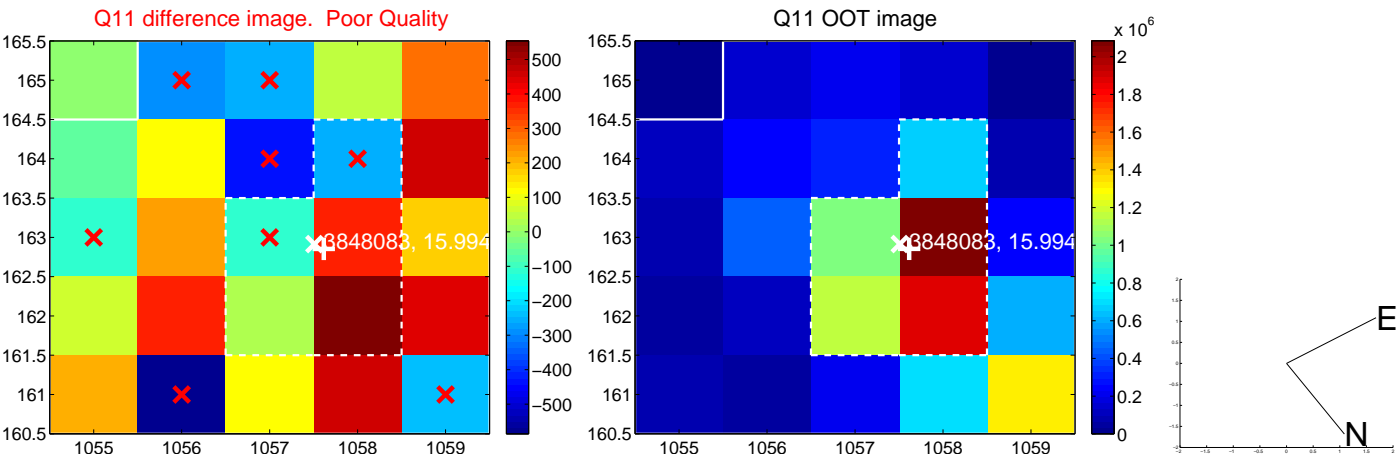
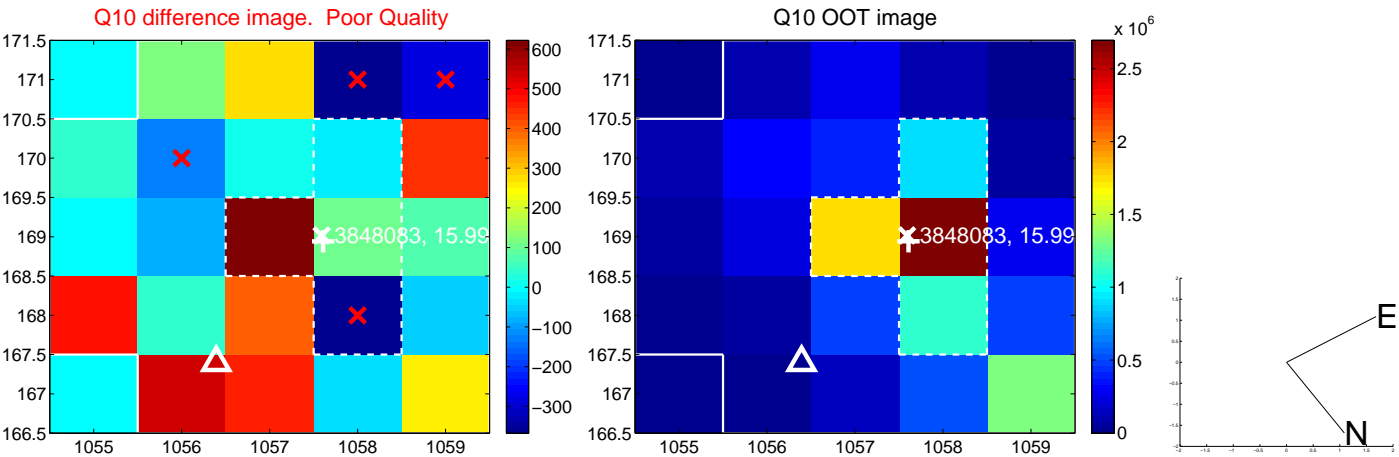
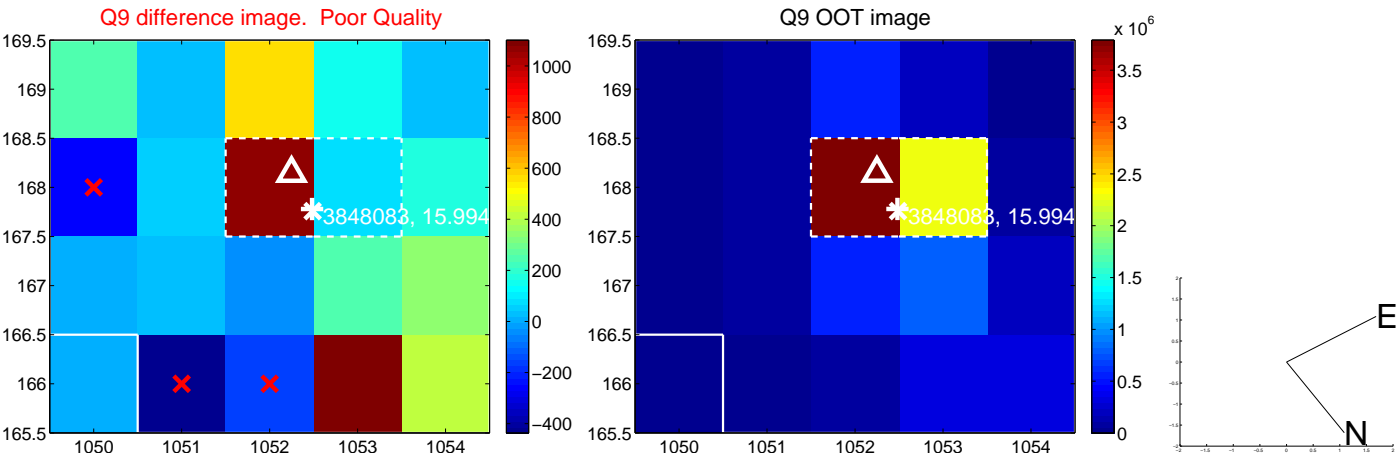
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



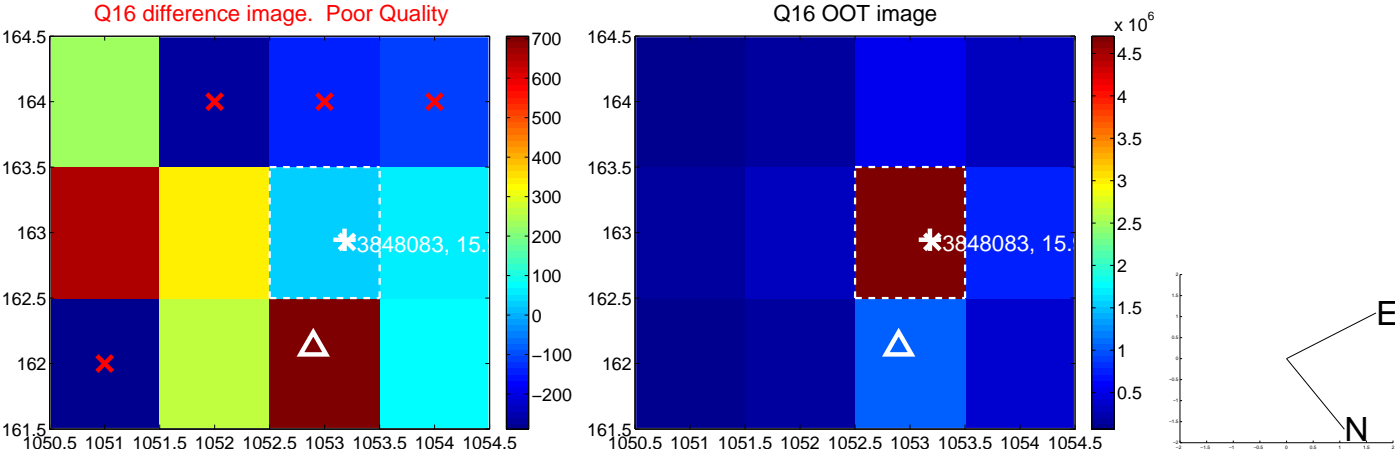
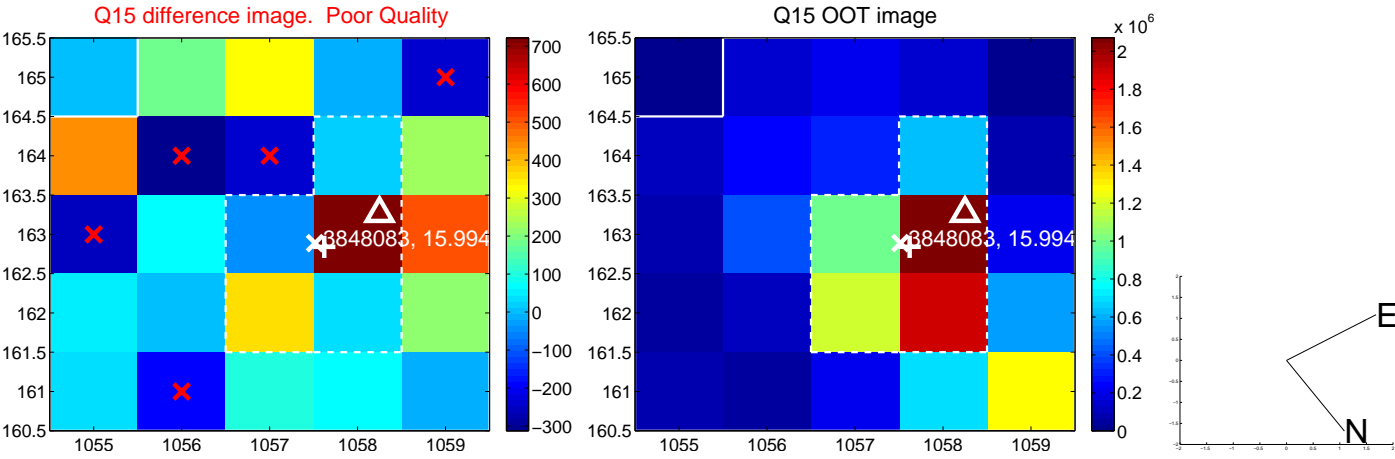
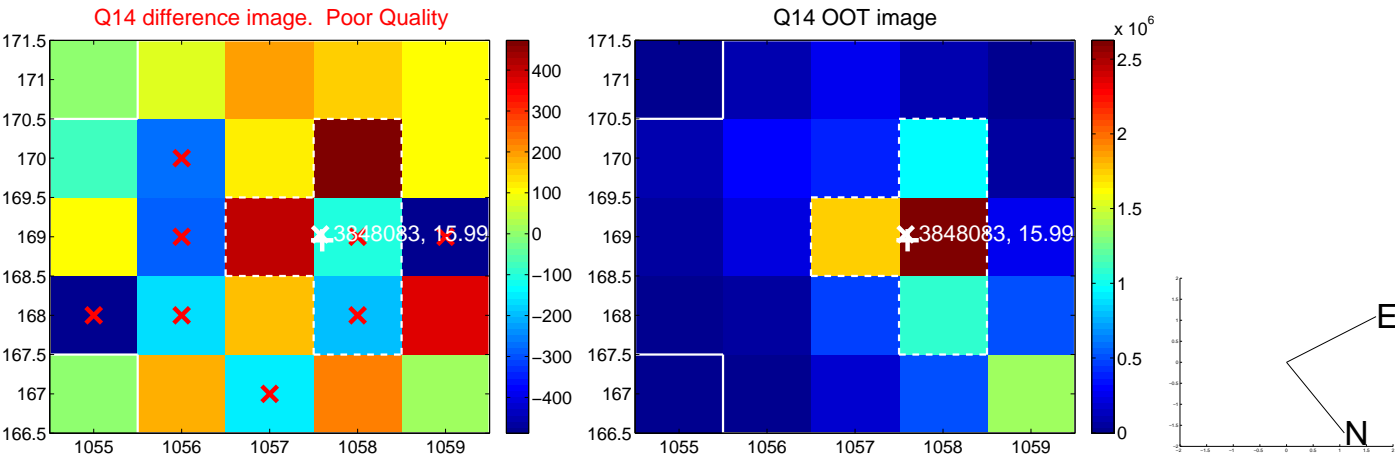
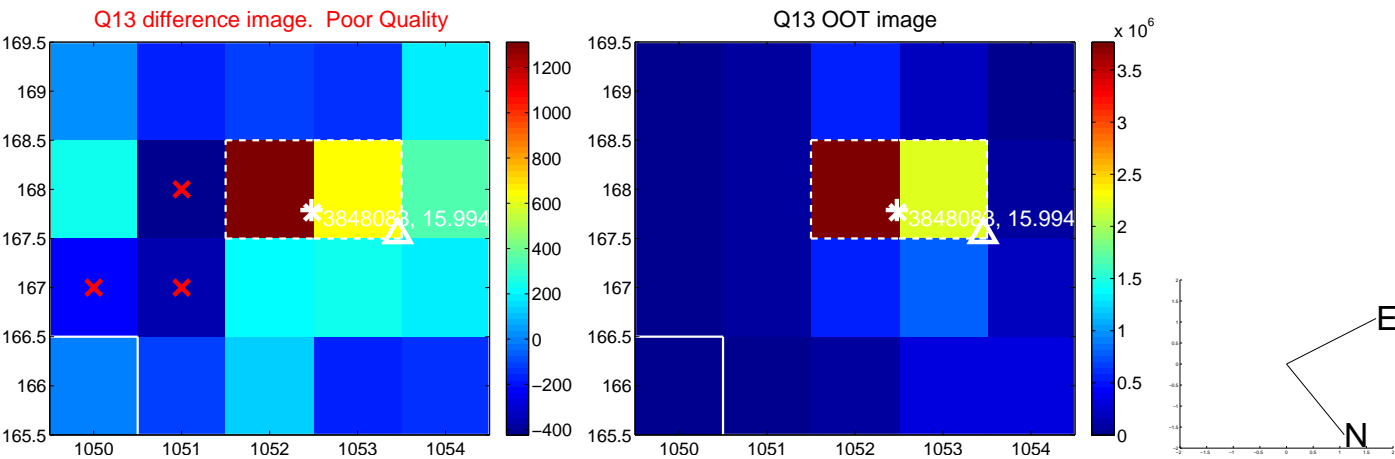
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

