

KIC 003101923

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})
003101923-01	OBS	3483.01	82.322457	133.192437	252.5	6.548	9.6	7.9	1.24	5997	2.13	11.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003101923-01	OBS	PC	0.77	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.

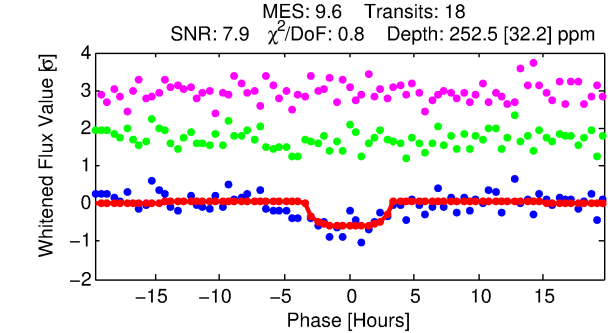
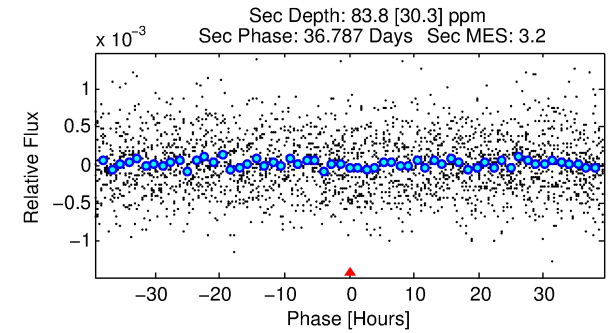
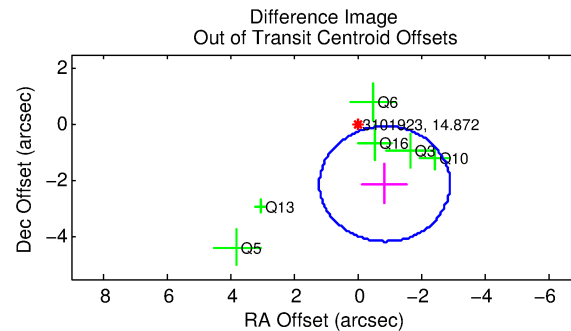
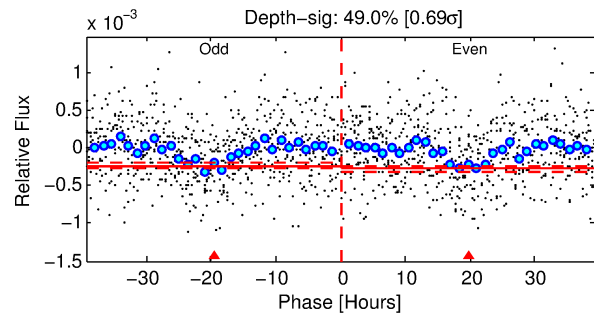
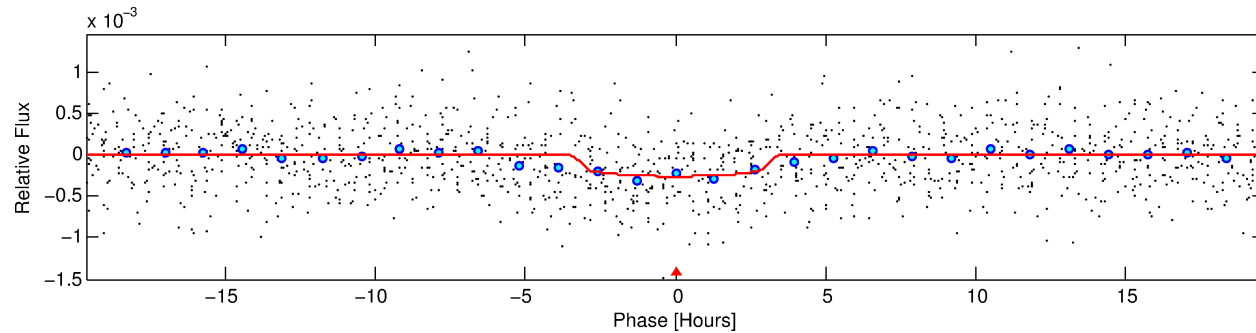
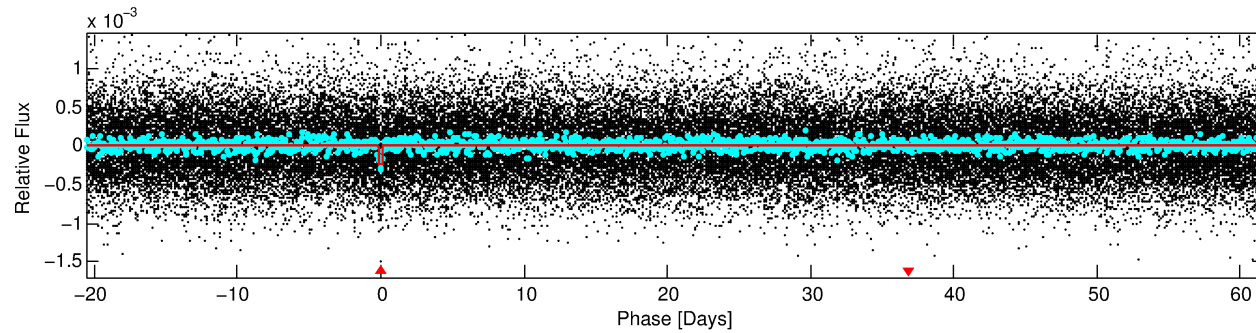
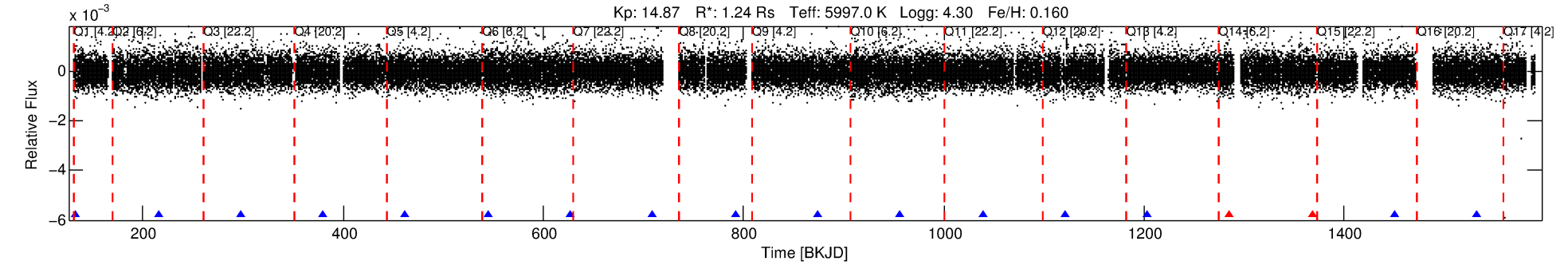
Ephemeris Match Information For 003101923-01

No Significant Match Found

DV One-Page Summary

KIC: 3101923 Candidate: 1 of 1 Period: 82.322 d

KOI: K03483.01 Corr: 0.825



DV Fit Results:

Period = 82.32246 [0.00145] d
Epoch = 133.1924 [0.0152] BKJD
Rp/R* = 0.0157 [0.0153]
a/R* = 67.75 [307.06]
b = 0.73 [2.92]
Seff = 11.99 [2.66]
Teff = 474 [26] K
Rp = 2.13 [2.11] Re
a = 0.3862 [0.0554] AU
Ag = 1517.62 [3029.65] [0.50 σ]
Teffp = 4579 [2273] K [1.81 σ]

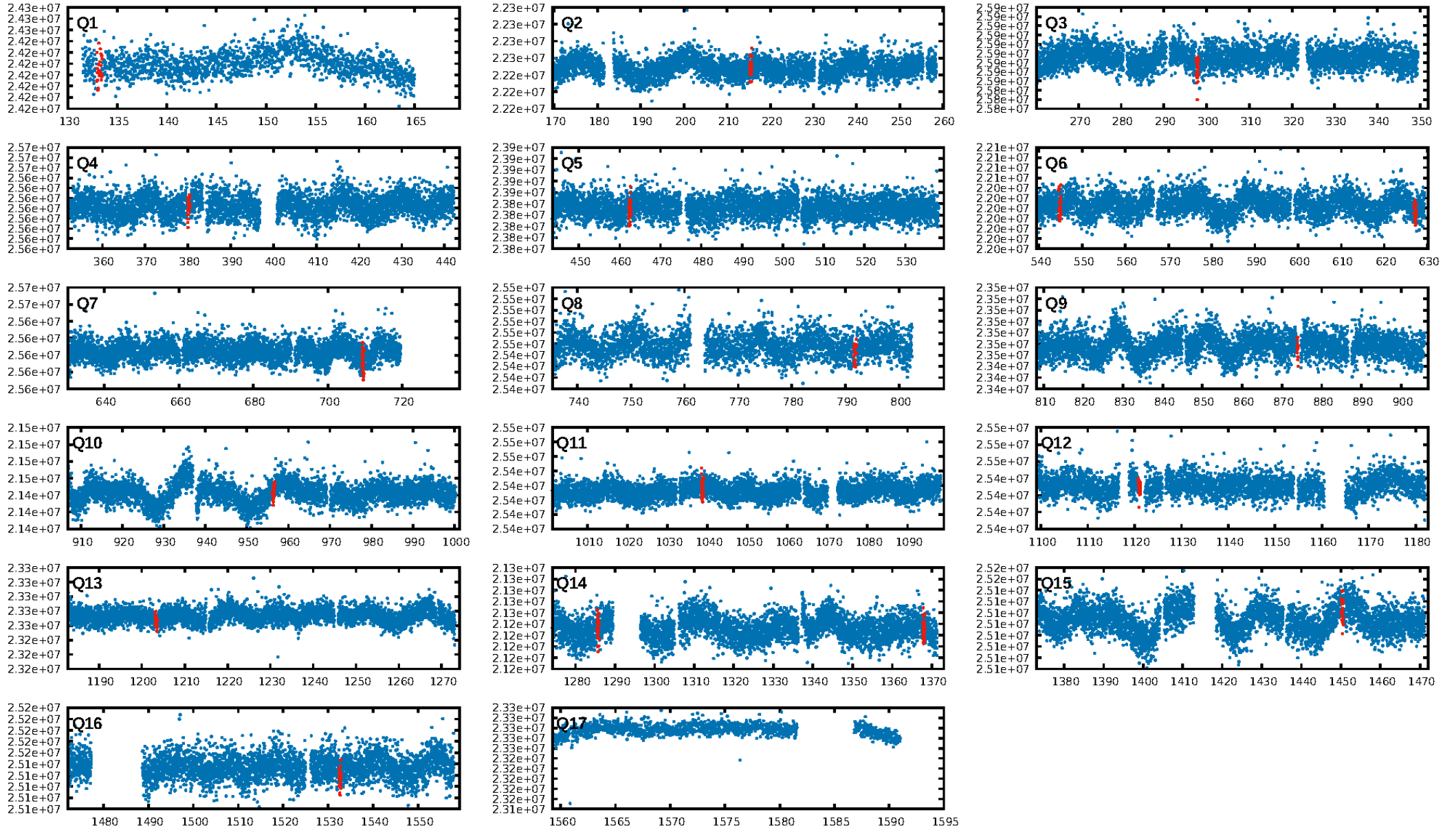
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 63.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.14e-21
RollingBand-fgt: 0.88 [15/17]
GhostDiagnostic-chr: 1.949
Centroid-sig: 53.3%
Centroid-so: 1.154 arcsec [0.67 σ]
OotOffset-rm: 2.285 arcsec [3.34 σ]
KicOffset-rm: 2.379 arcsec [3.50 σ]
OotOffset-st: 2/1/1/2 [6]
KicOffset-st: 2/1/1/2 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 1.00 [12/12]

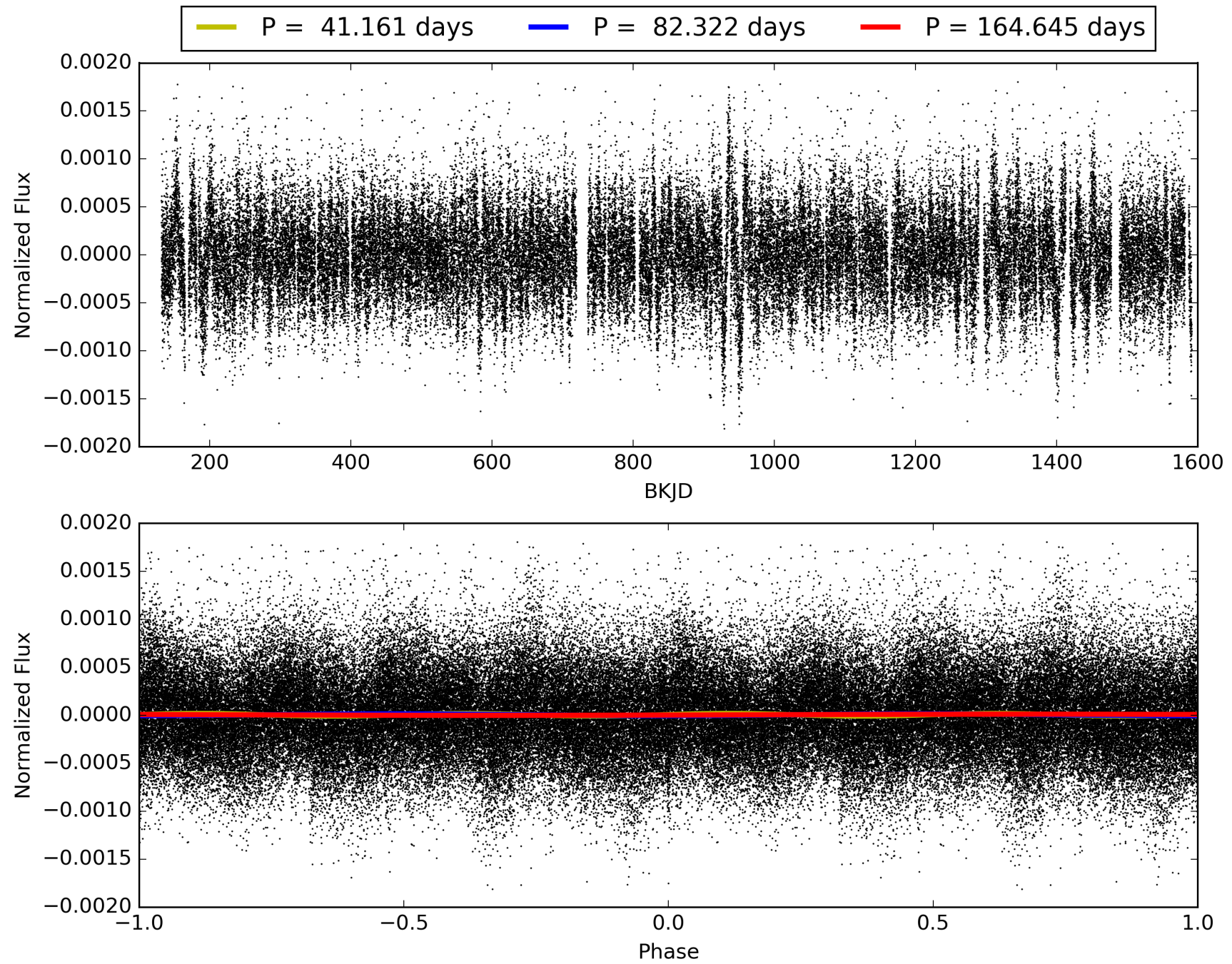
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:31:08 Z

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

TCE 003101923-01, PDC Light Curves

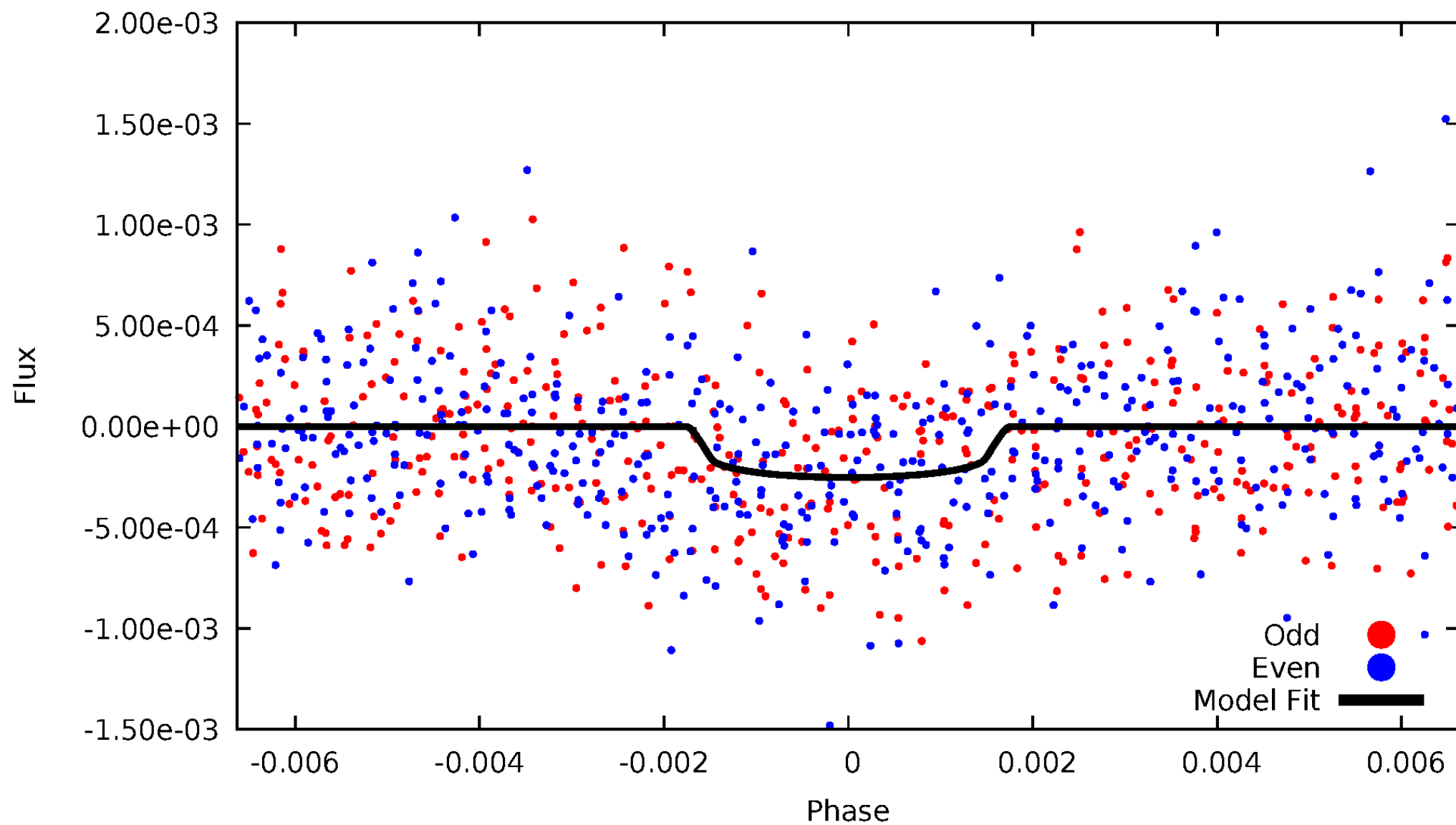


TCE 003101923-01



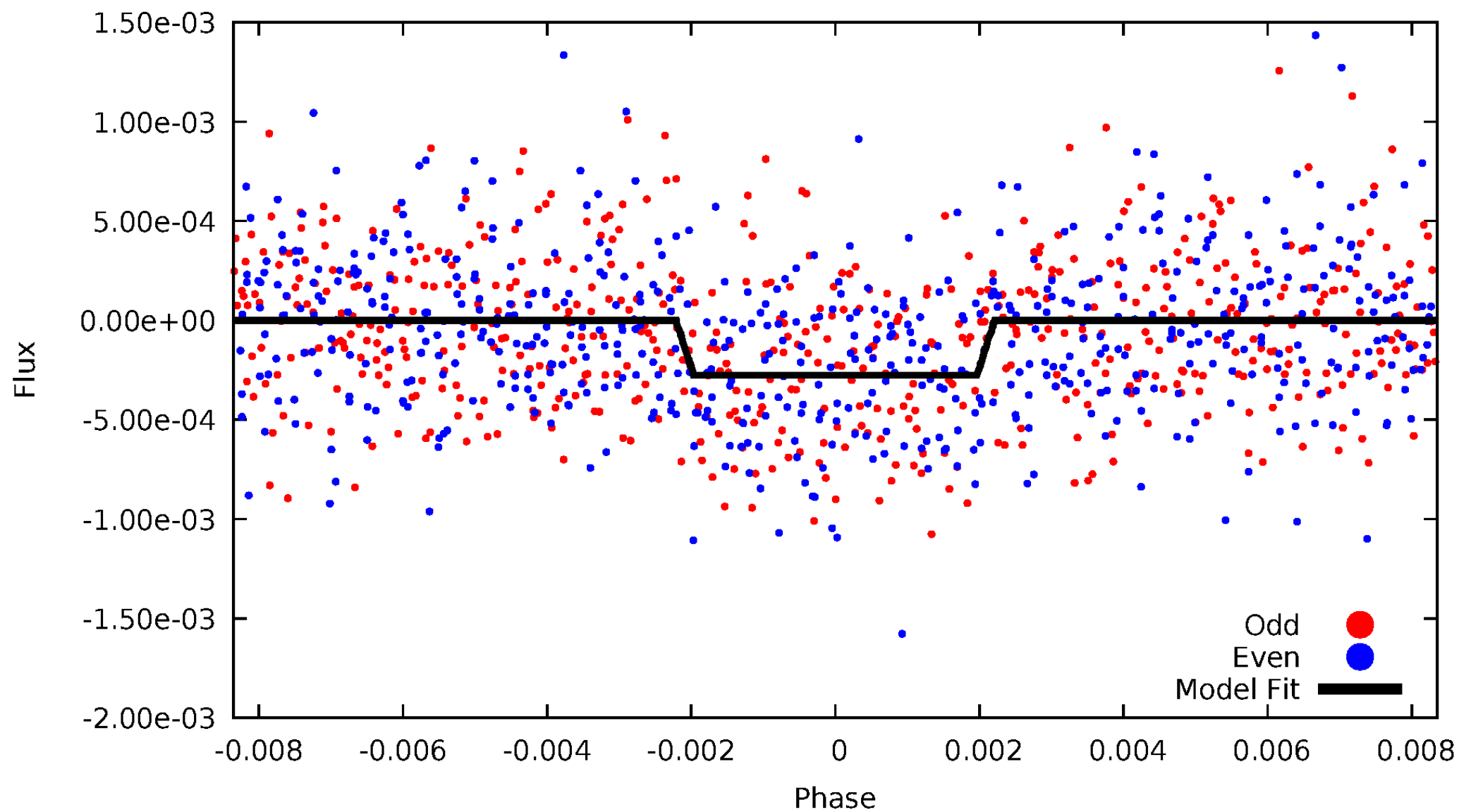
DV Odd/Even

TCE 003101923-01

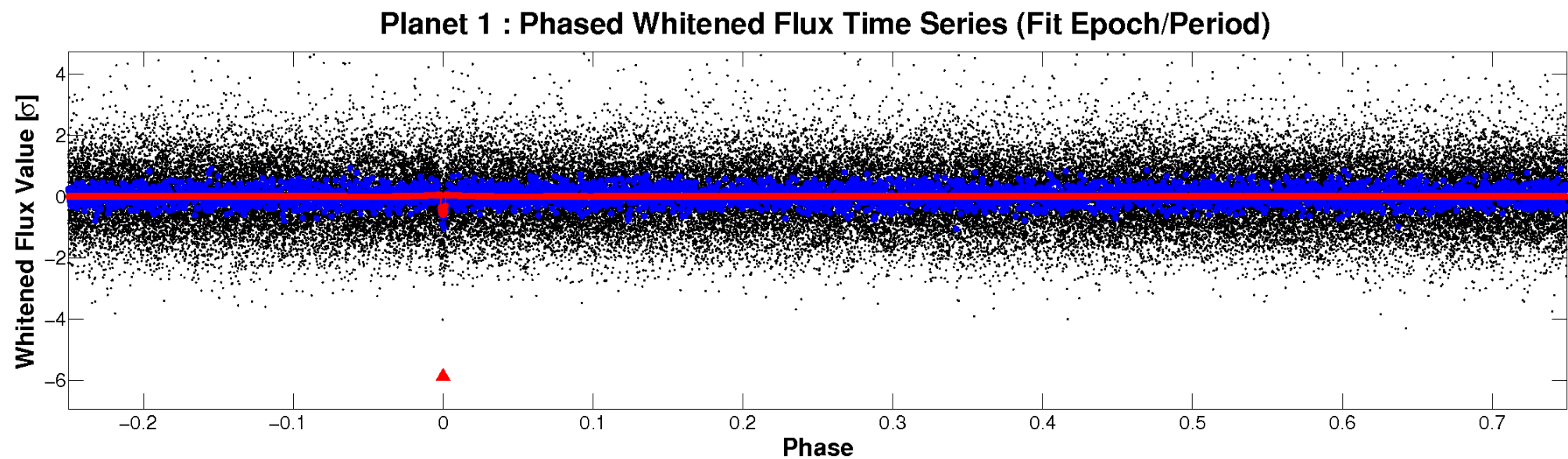
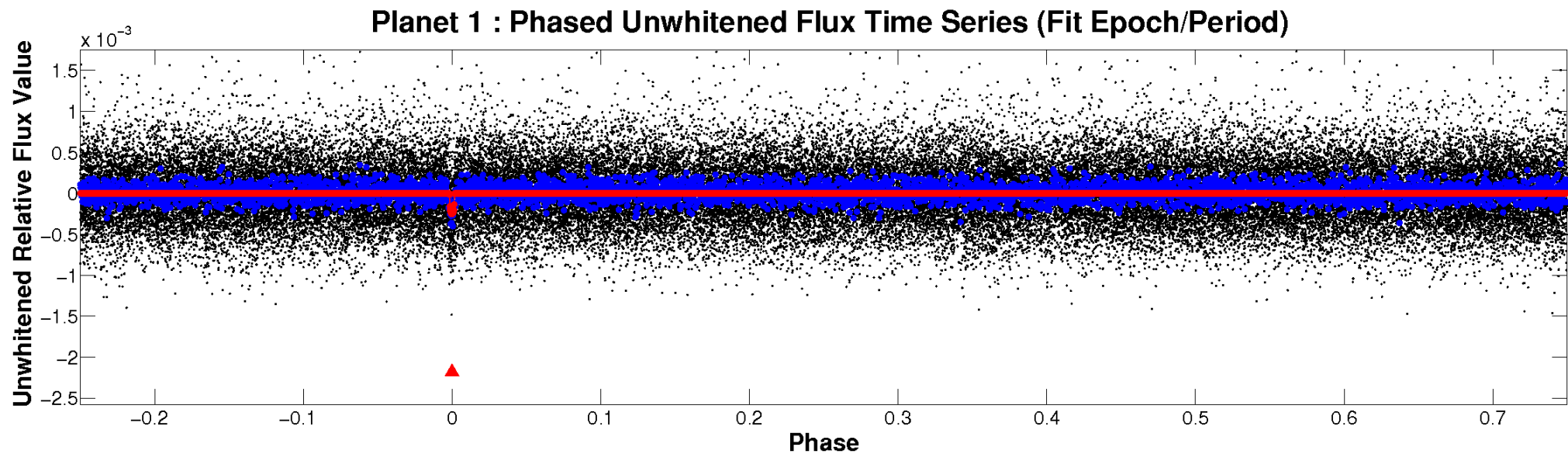


ALT Odd/Even

TCE 003101923-01

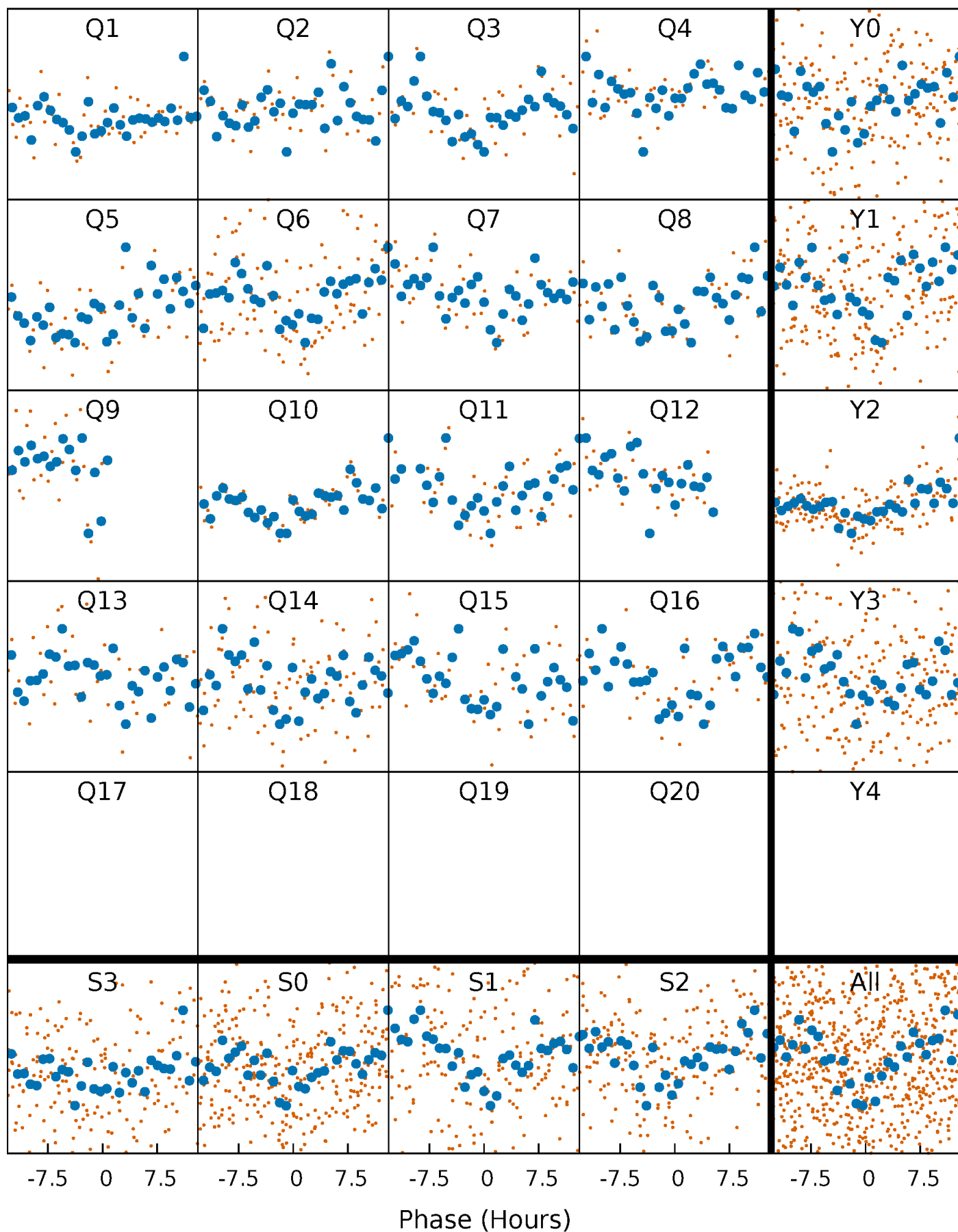


Non-Whitened Vs. Whitened Light Curve



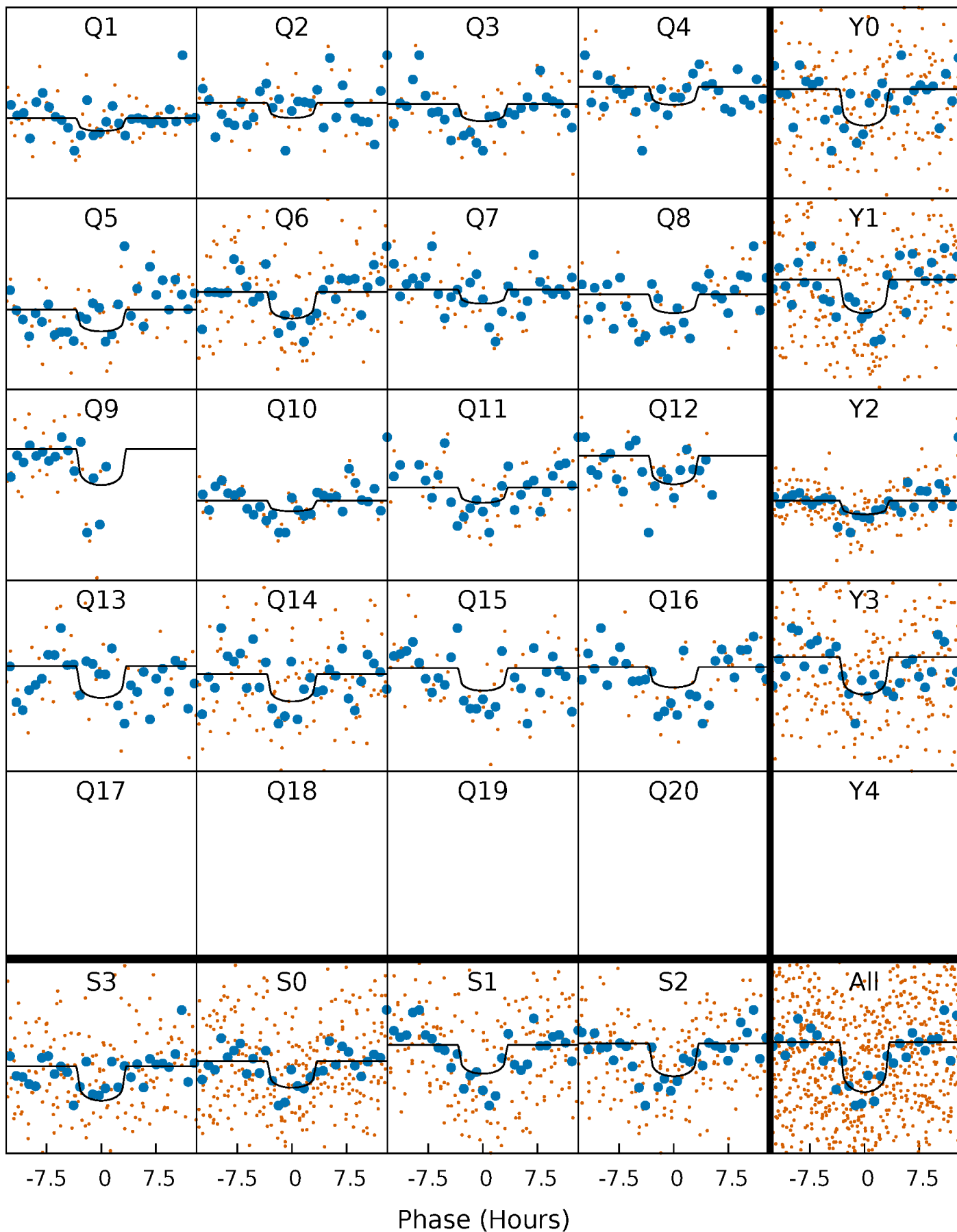
PDC Quarter-Phased Transit Curves

TCE 003101923-01 P= 82.322457 Days $T_0=133.192437$ (BKJD)



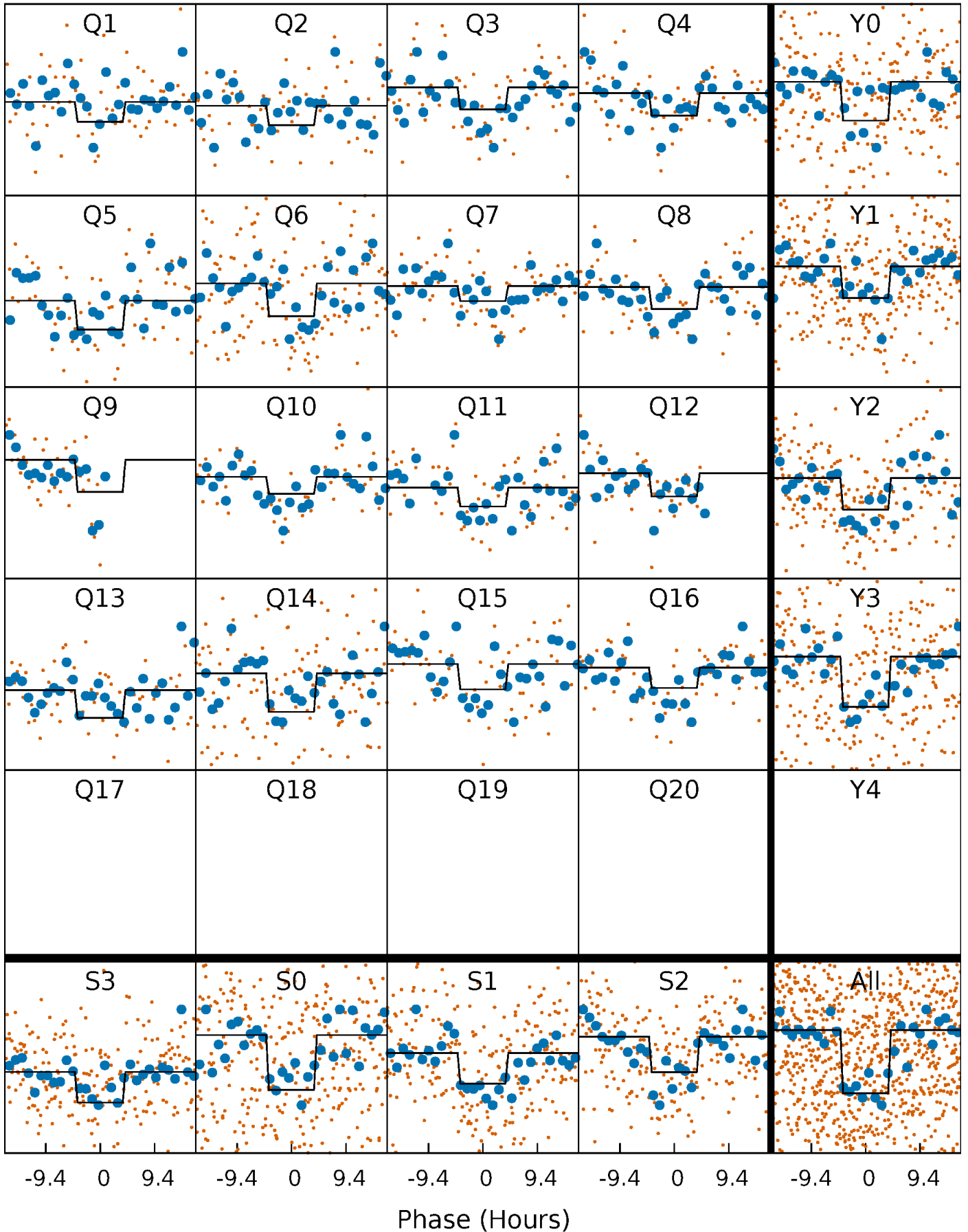
DV Quarter-Phased Transit Curves

TCE 003101923-01 P= 82.322457 Days $T_0=133.192437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

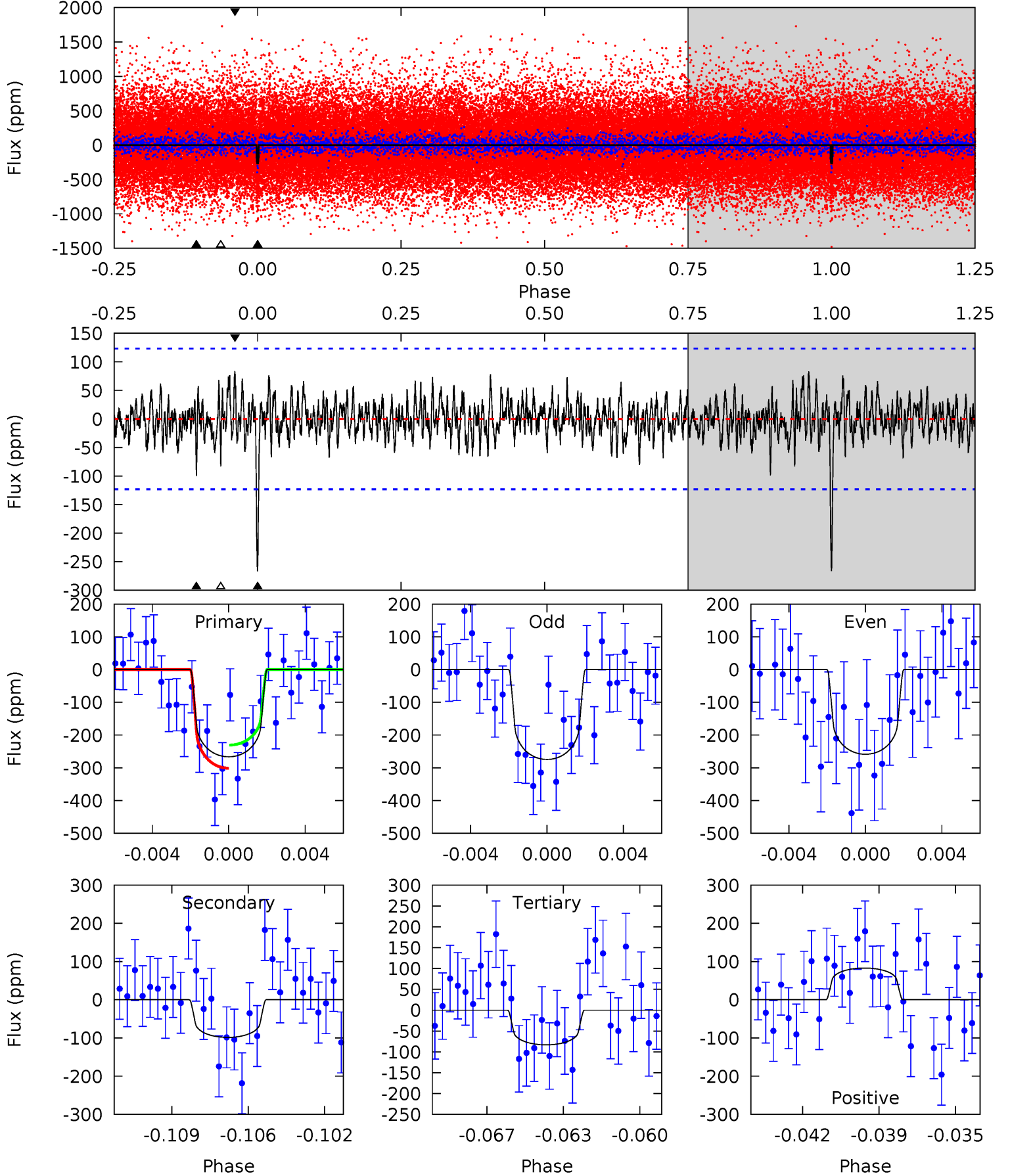
TCE 003101923-01 P= 82.332151 Days $T_0=133.080050$ (BKJD)



DV Model-Shift Uniqueness Test

003101923-01, P = 82.322457 Days, E = 50.869980 Days

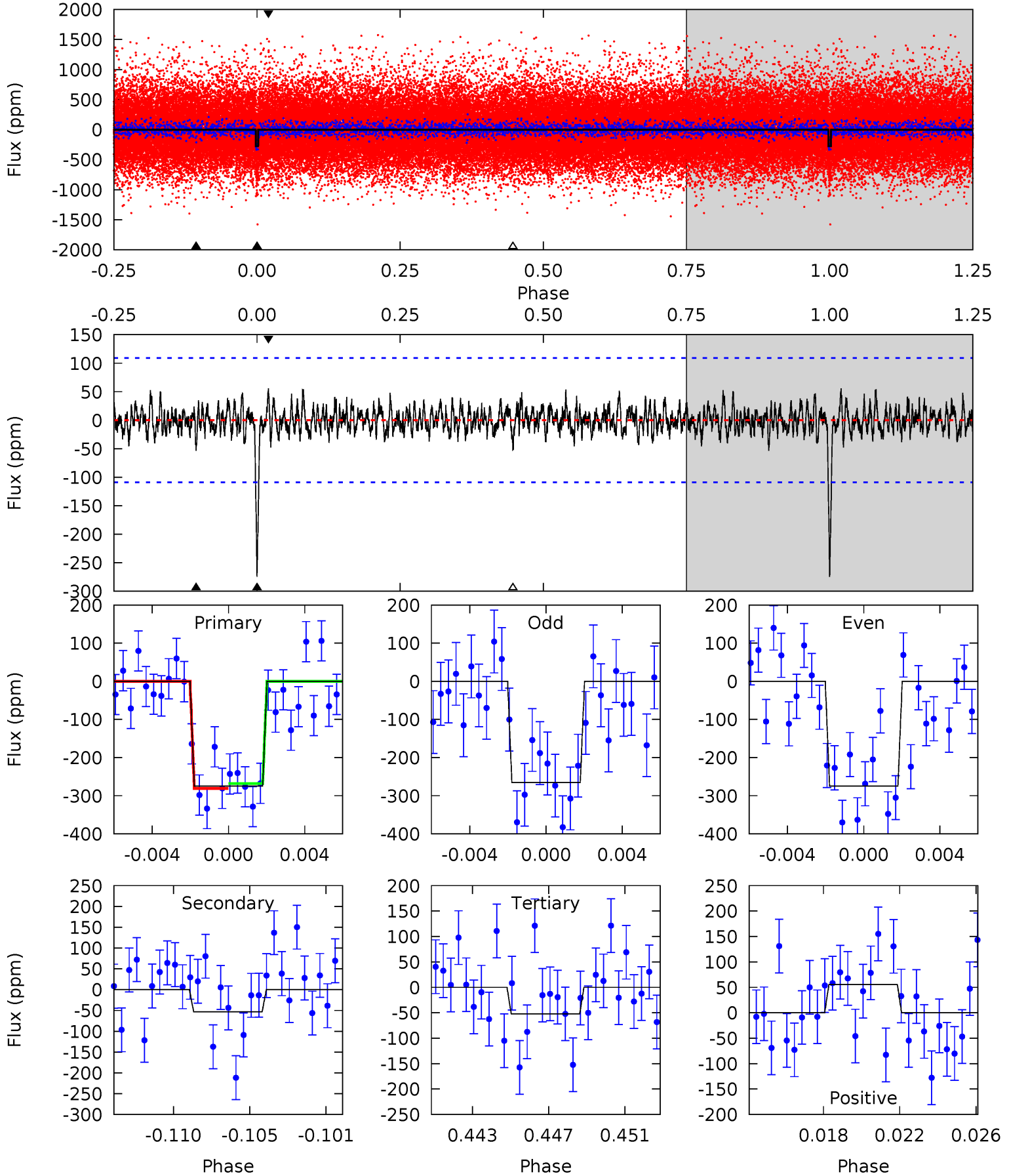
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	4.18	3.53	3.52	5.22	2.92	1.10	7.78	7.78	0.65	0.66	0.34	0.95	0.24	1.50



Alt Model-Shift Uniqueness Test

003101923-01, P = 82.332151 Days, E = 50.747899 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	2.55	2.48	2.64	5.18	2.85	0.83	10.6	10.4	0.07	-0.09	0.22	0.95	0.17	0.30



Stellar Parameters For KIC 003101923

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+81}_{-81}	$4.304^{+0.099}_{-0.121}$	$0.160^{+0.150}_{-0.150}$	$1.242^{+0.204}_{-0.167}$	$1.135^{+0.071}_{-0.087}$	$0.835^{+0.367}_{-0.300}$
	+1%/-1%	+2%/-3%	+94%/-94%	+16%/-13%	+6%/-8%	+44%/-36%
Source	SPE90	SPE90	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 003101923-01 / KOI 3483.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-99 ± 24	$2.55^{+1.92}_{-1.68}$	665^{+30}_{-27}	4563^{+2859}_{-890}	1250^{+8398}_{-873}
Alt.	-54 ± 21	$2.58^{+2.12}_{-1.58}$	668^{+30}_{-28}	4020^{+2041}_{-773}	642^{+3689}_{-471}

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 $A_{obs} \gg 1.0$

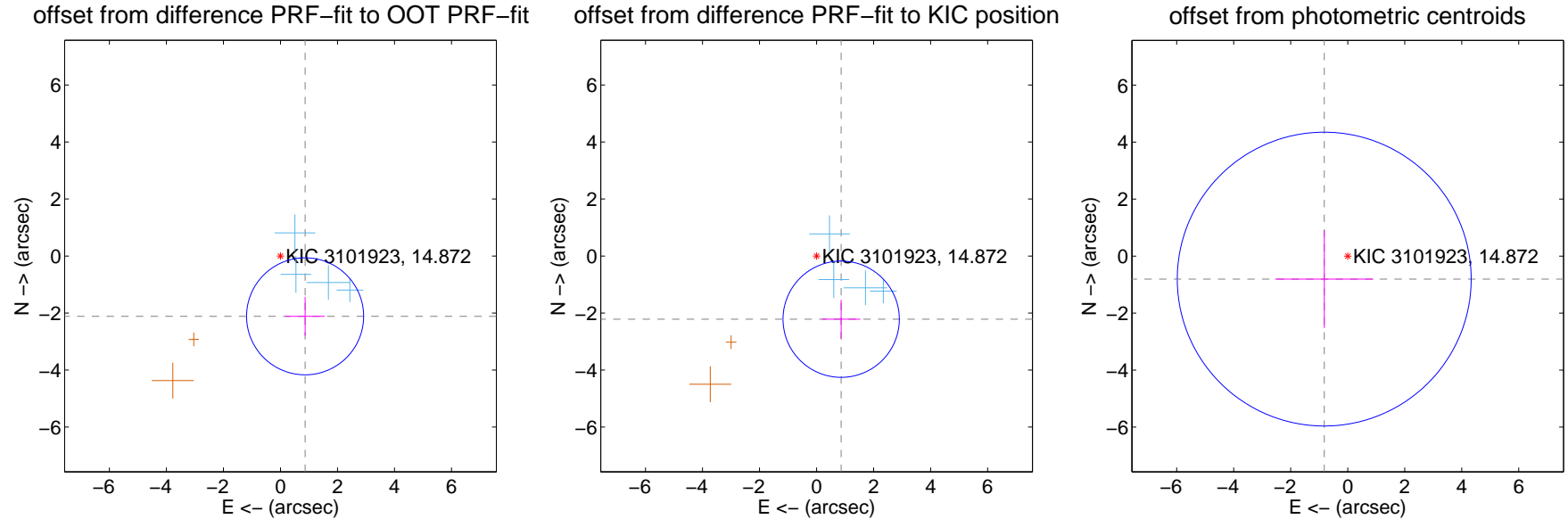
DV Centroid Data

Supplemental centroid analysis for 003101923-01. Kepler magnitude: 14.87. Transit SNR 7.86

There are 4 quarters with good PRF difference image offsets

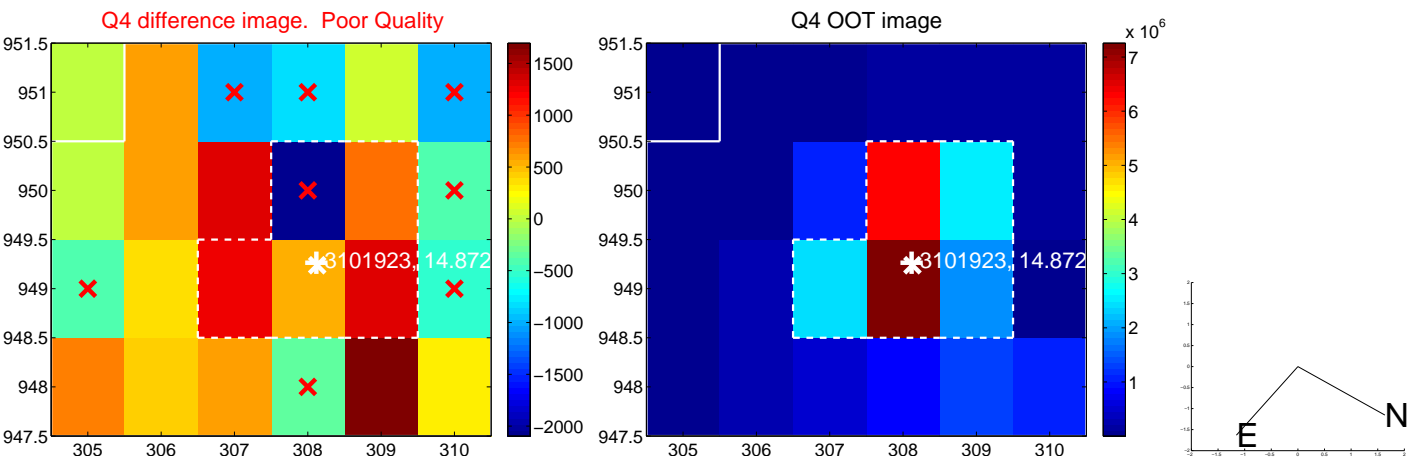
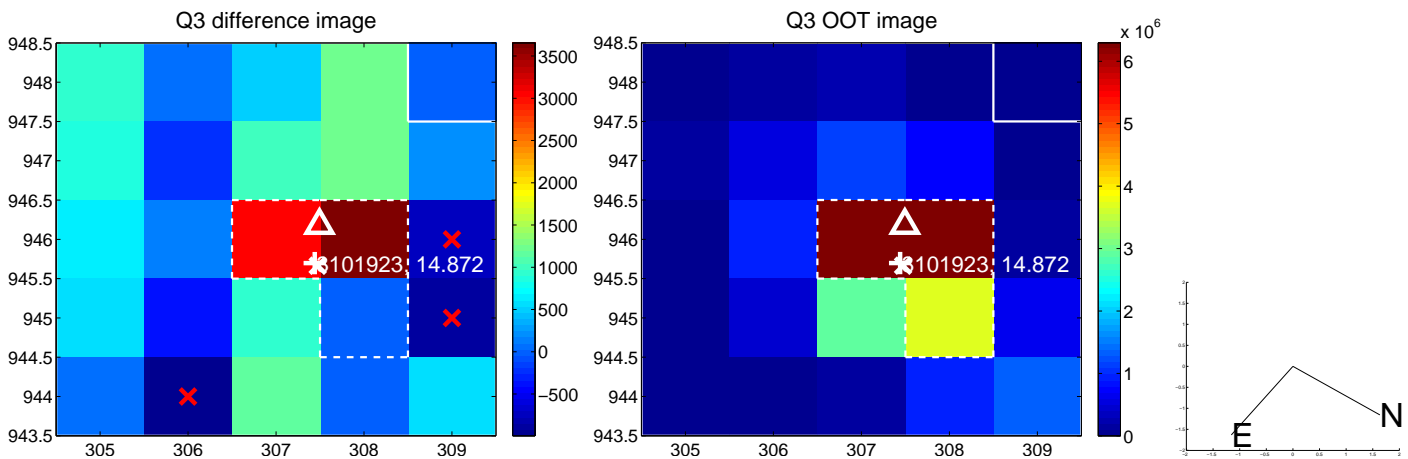
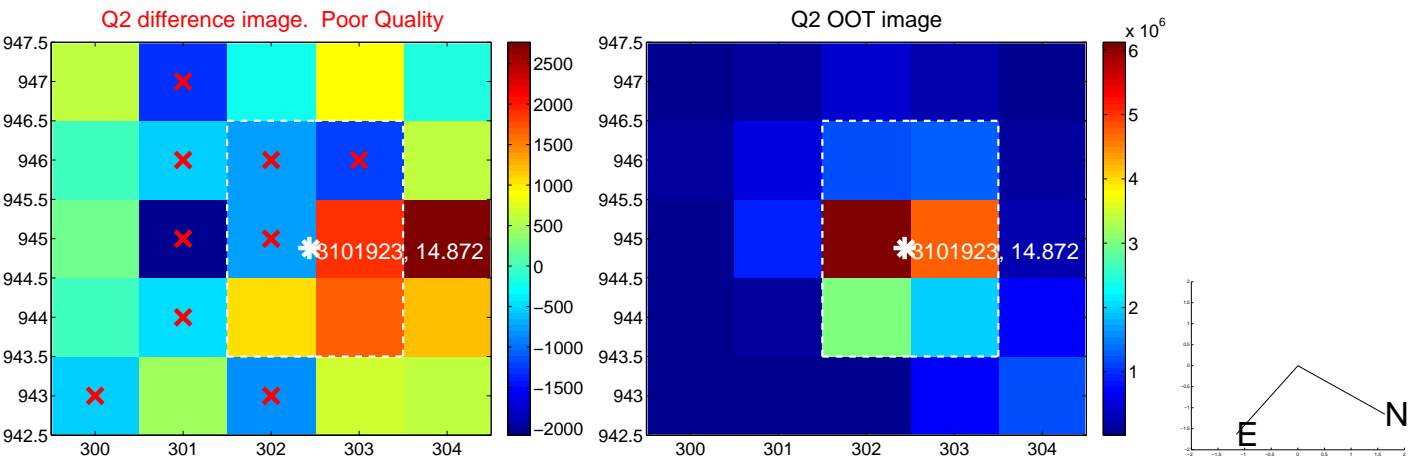
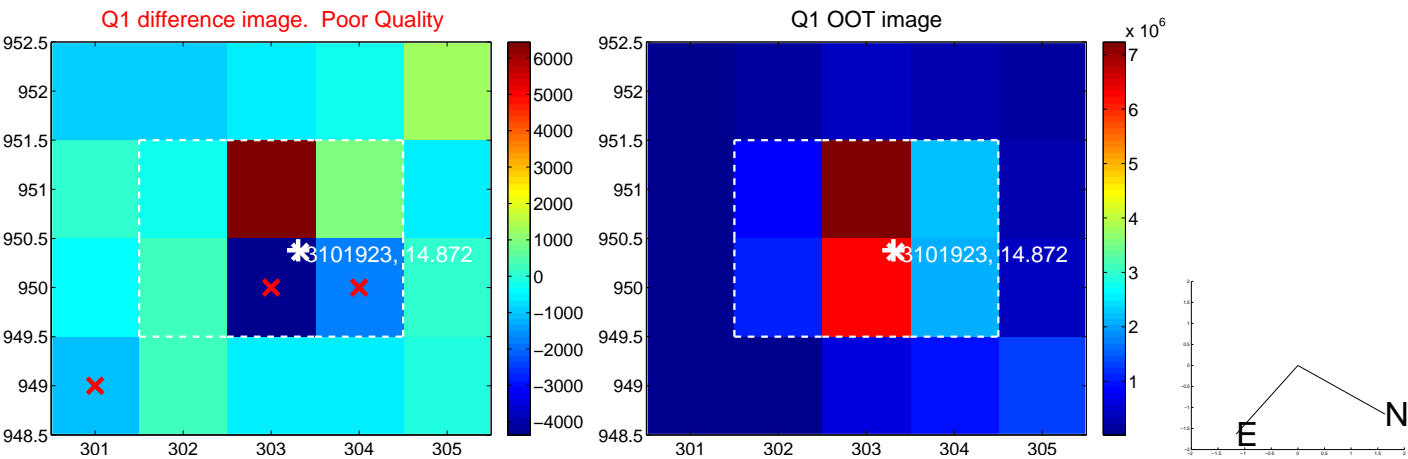
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.285 ± 0.684	3.34	-0.864 ± 0.690	-2.115 ± 0.683
PRF-fit source offset from KIC position	2.379 ± 0.680	3.50	-0.863 ± 0.673	-2.217 ± 0.681
photometric centroid source offset	1.15 ± 1.72	0.67	0.82 ± 1.72	-0.81 ± 1.71

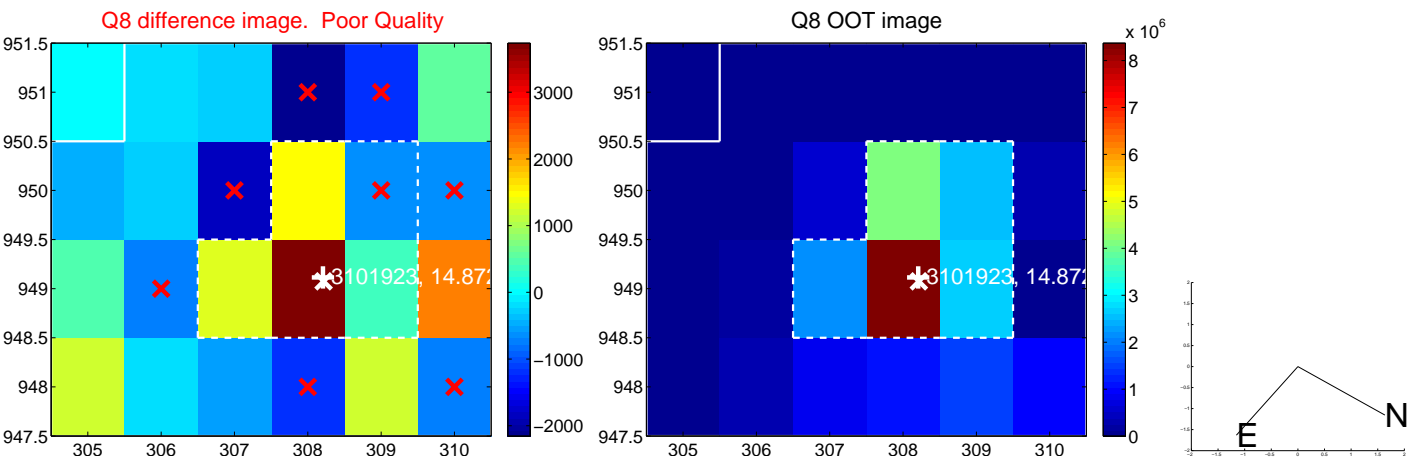
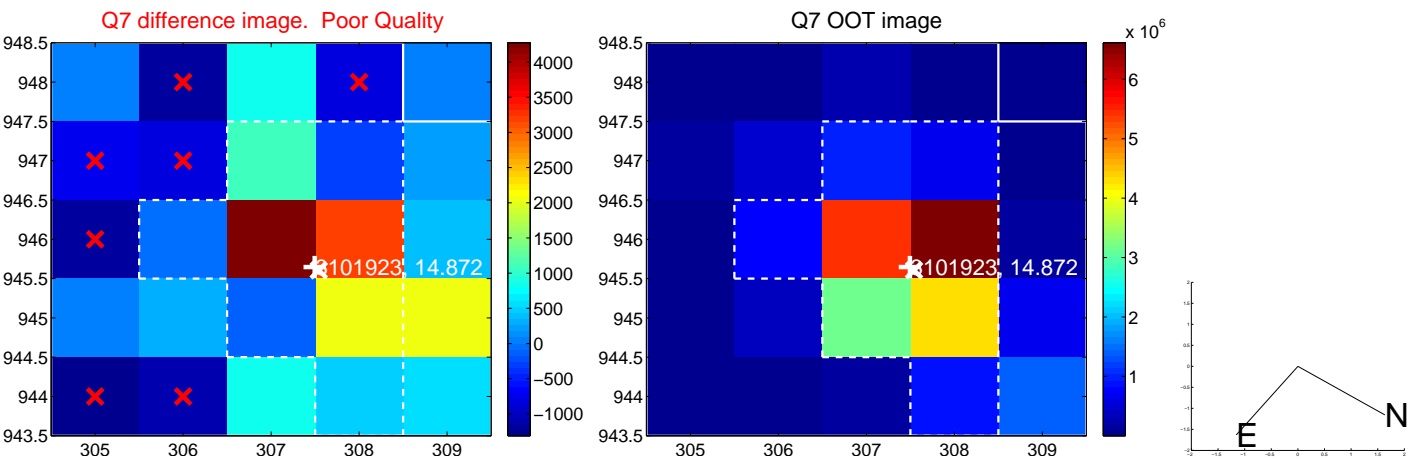
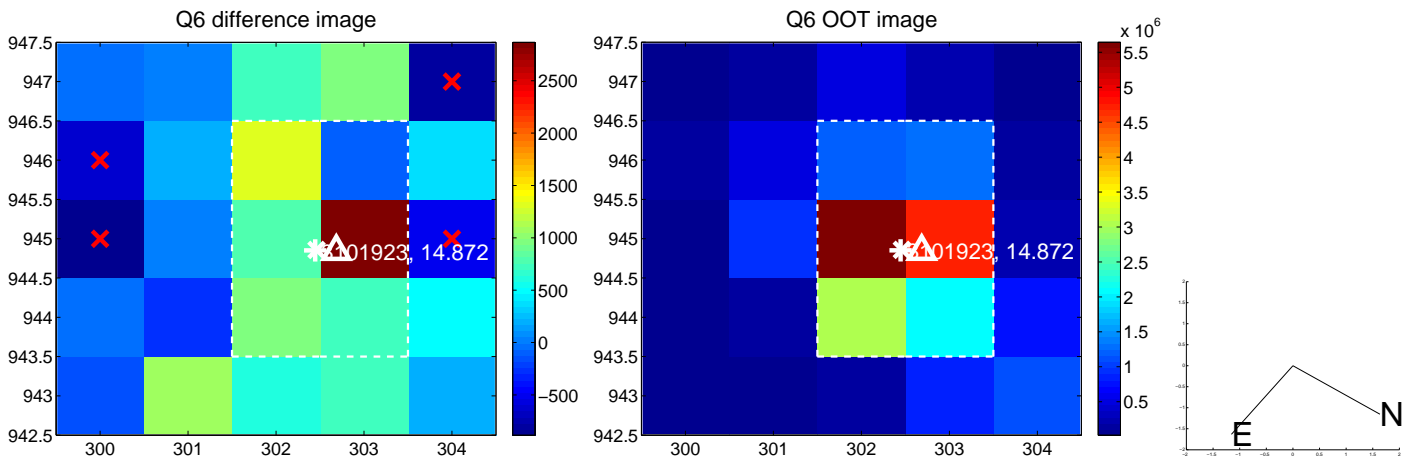
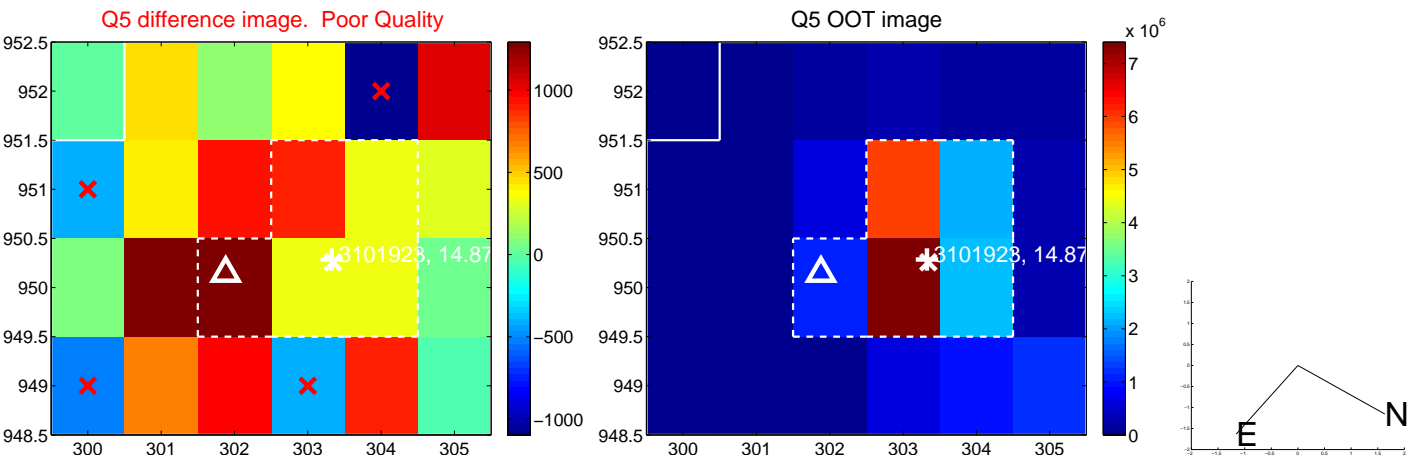


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

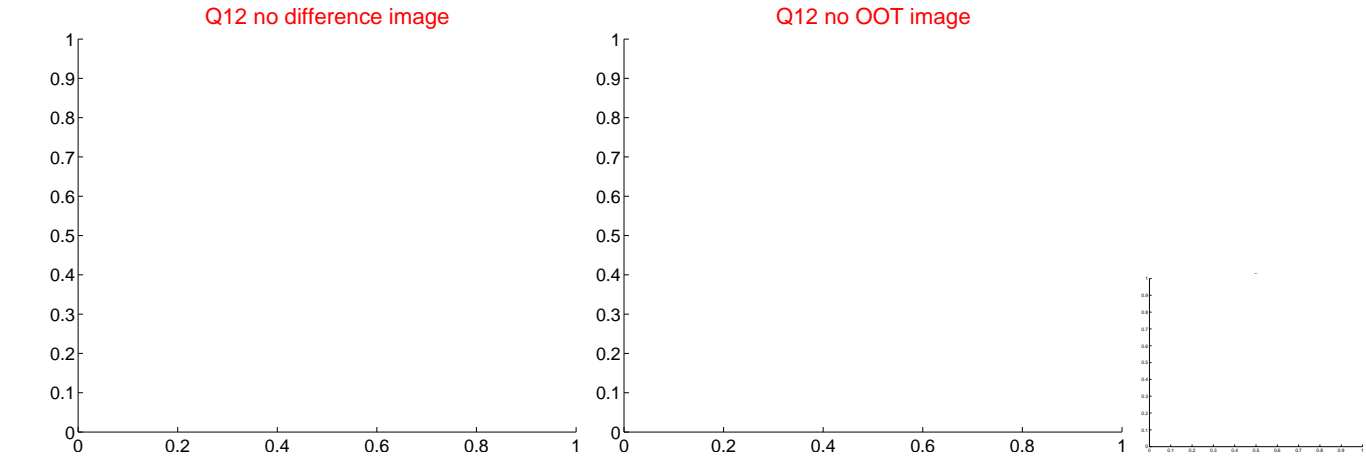
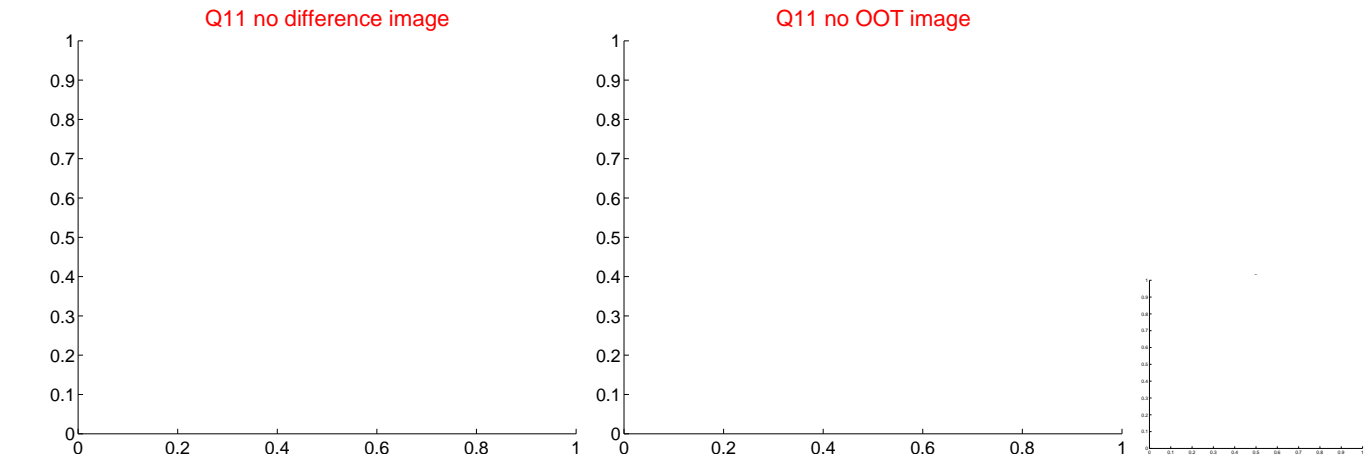
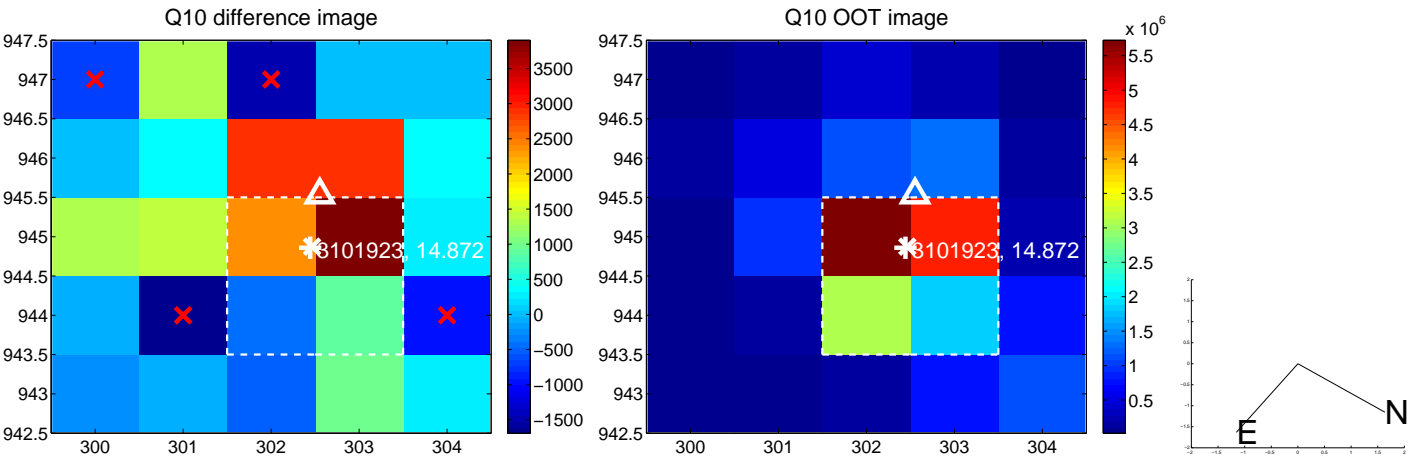
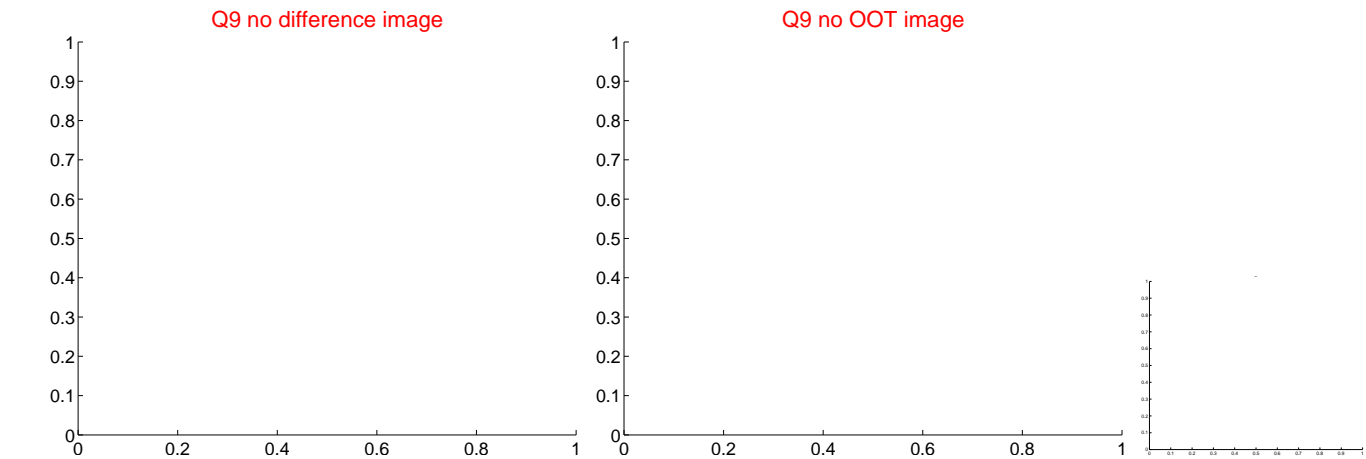
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



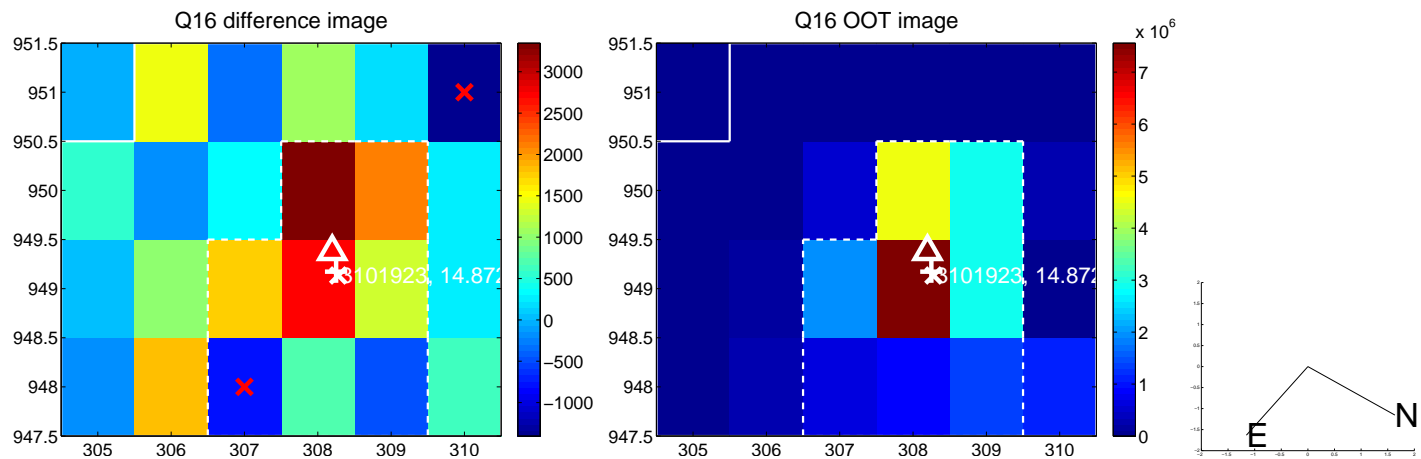
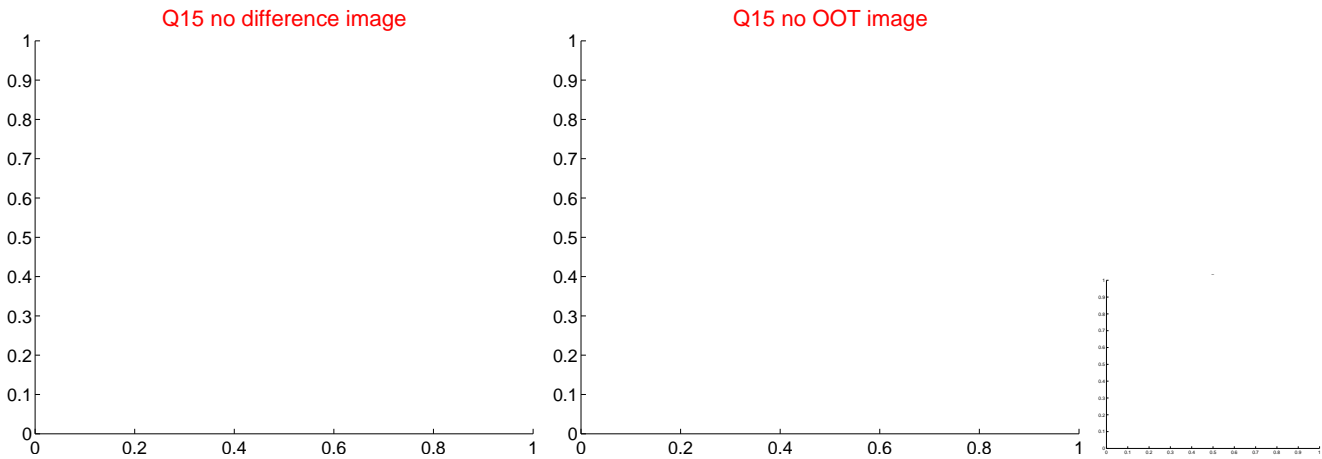
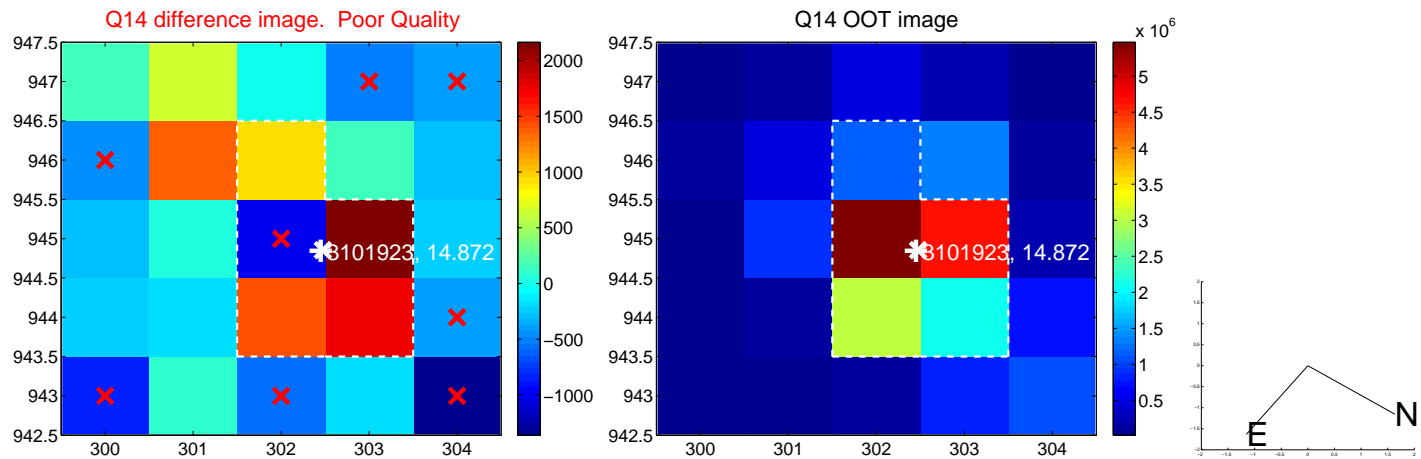
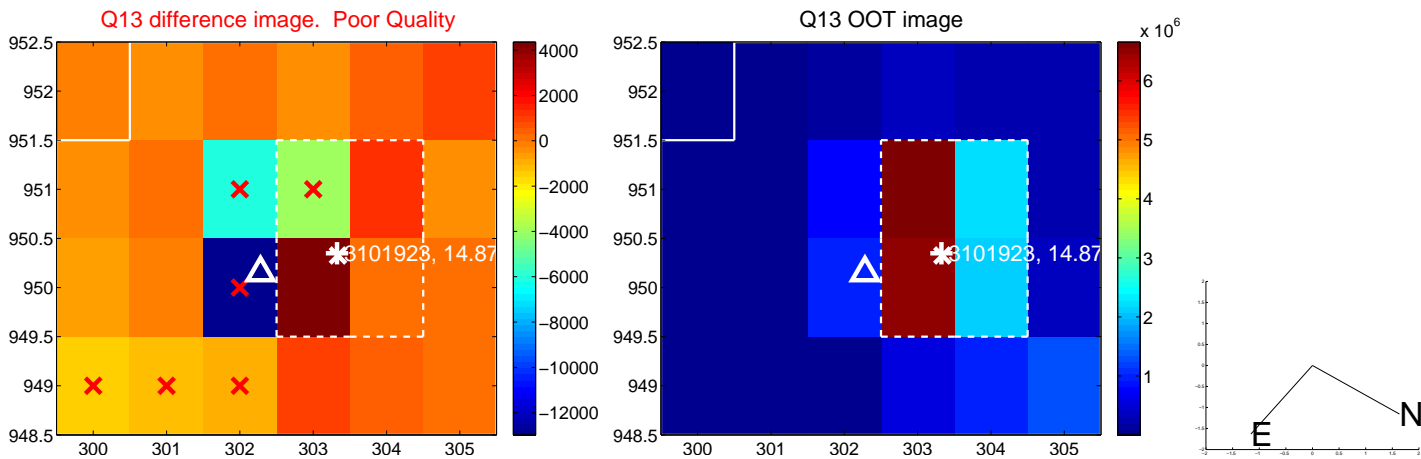
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



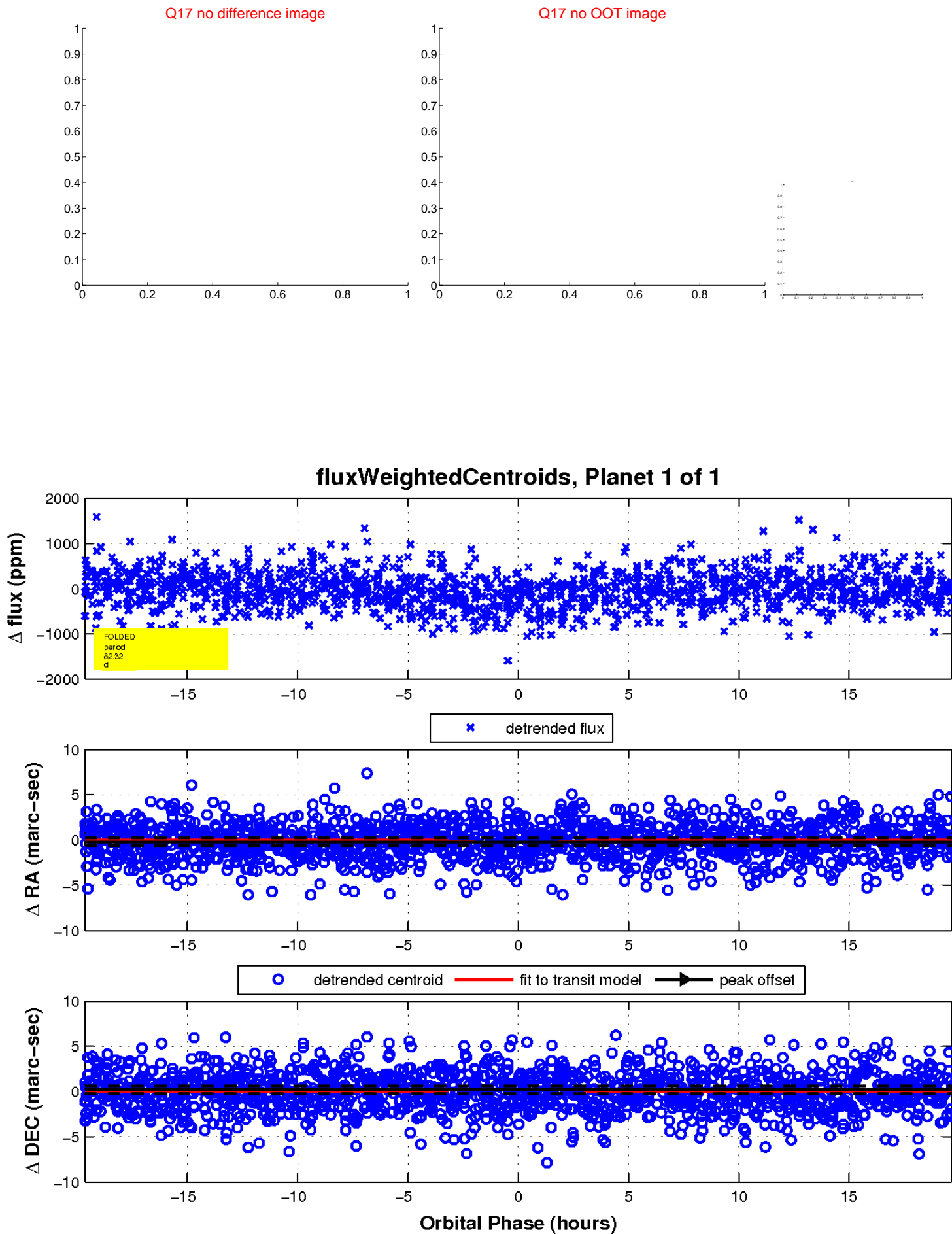
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

