

KIC 007013923

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})
007013923-01	OBS	7801.01	2.213953	132.570488	120.9	3.392	8.6	9.2	0.82	4922	1.04	376.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007013923-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

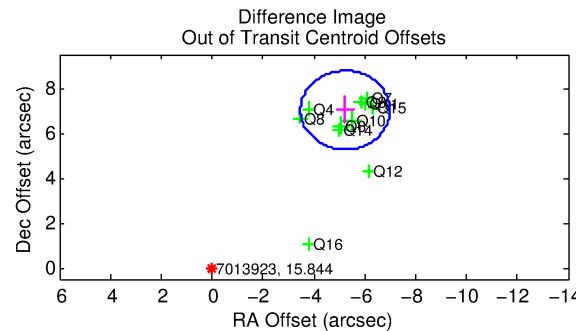
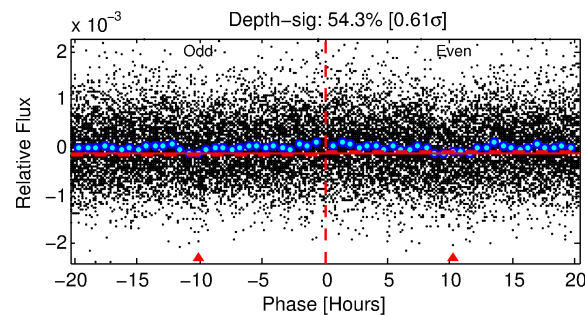
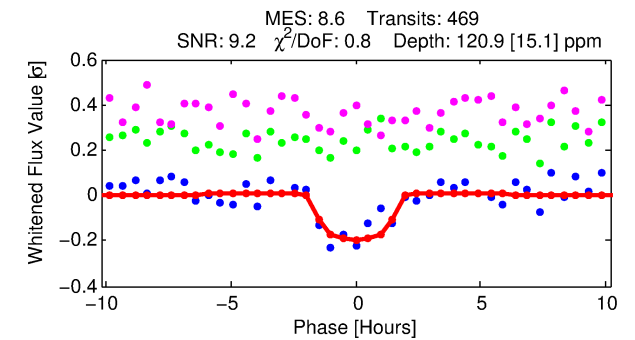
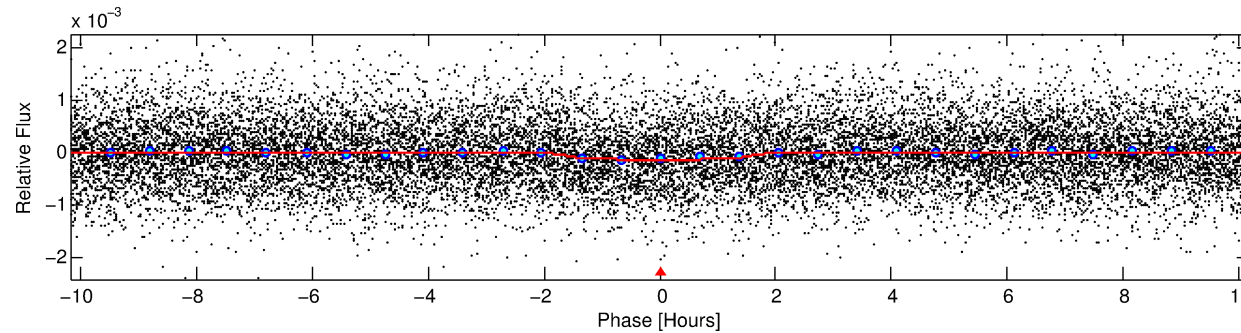
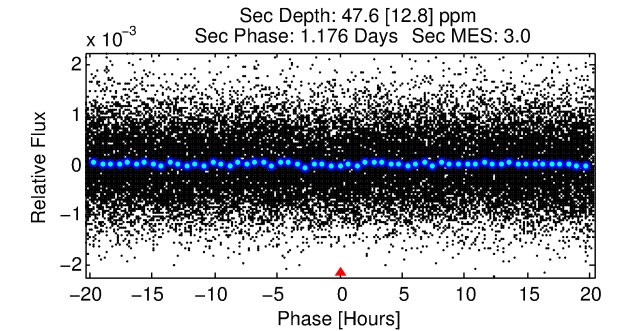
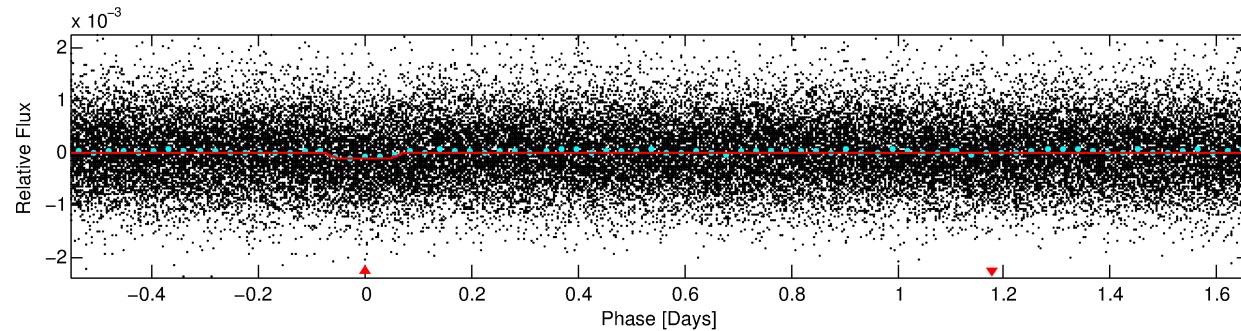
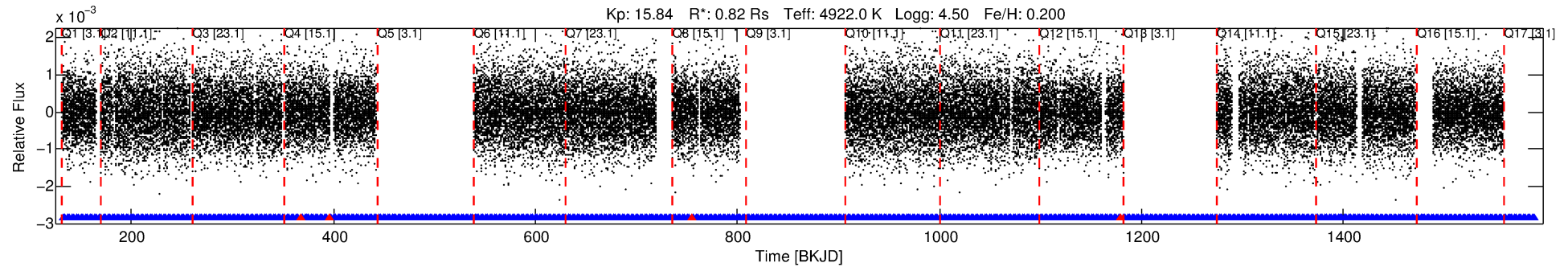
Ephemeris Match Information For 007013923-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007013923-01	7013923	007097571-pri	7097571	1:1	41.8	6	8	11.27	15.85	1090.90	Direct-PRF	0	0.33	0.27

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7013923 Candidate: 1 of 1 Period: 2.214 d



DV Fit Results:

Period = 2.21395 [0.00002] d
Epoch = 132.5705 [0.0054] BKJD
Rp/R* = 0.0116 [0.0104]
a/R* = 2.96 [8.56]
b = 0.84 [1.19]
Seff = 376.85 [71.68]
Teq = 1123 [53] K
Rp = 1.04 [0.94] Re
a = 0.0307 [0.0030] AU
Ag = 22.70 [41.22] [0.53 σ]
Teff = 3791 [1720] K [1.55 σ]

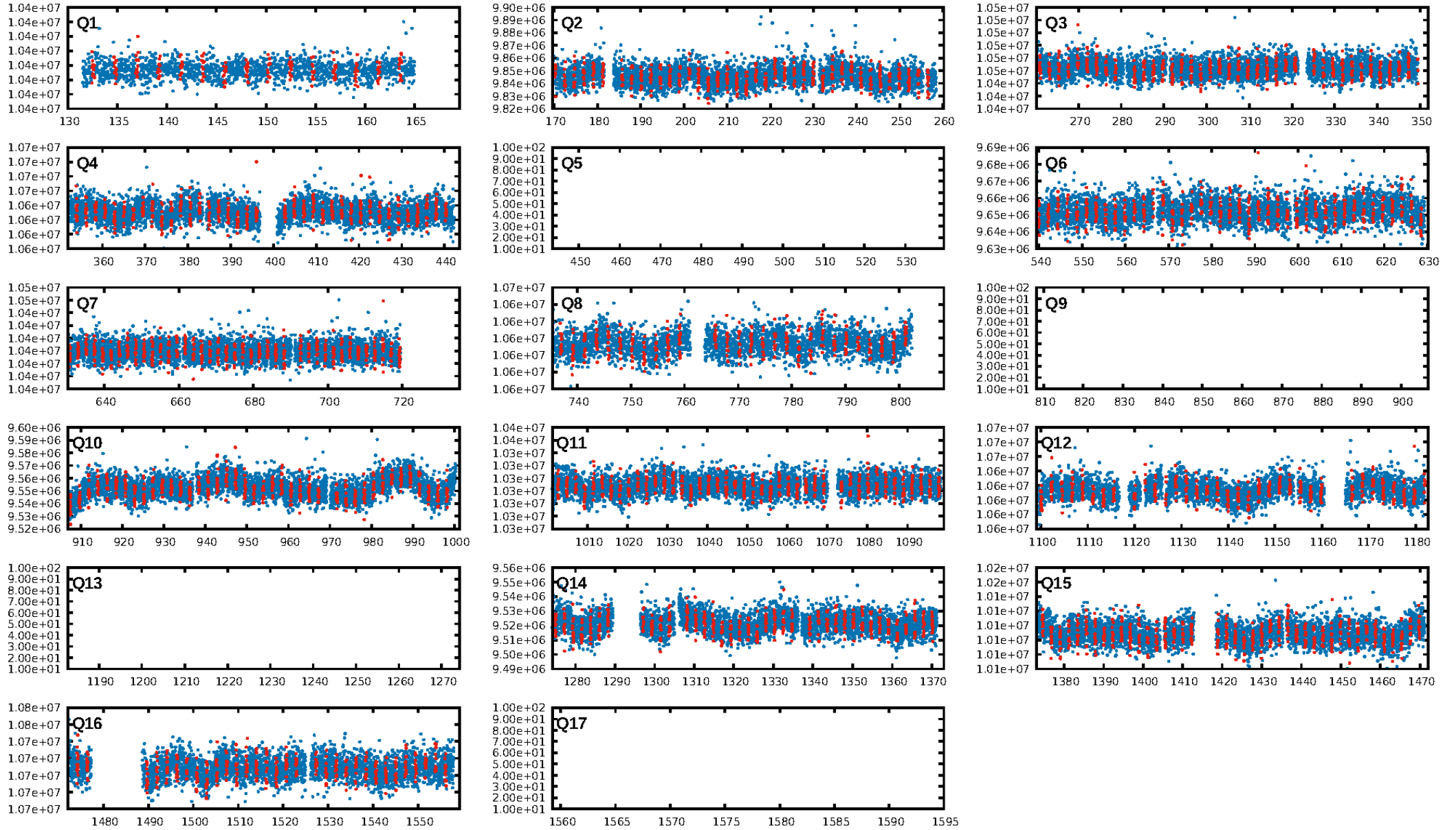
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.02e-18
RollingBand-fgt: 0.99 [450/454]
GhostDiagnostic-chr: -0.3358
Centroid-sig: 0.0%
Centroid-so: 9.029 arcsec [5.60 σ]
OotOffset-rm: 8.749 arcsec [14.96 σ]
KicOffset-rm: 8.715 arcsec [15.73 σ]
OotOffset-st: 3/4/4/0 [11]
KicOffset-st: 3/4/4/0 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [13/13]

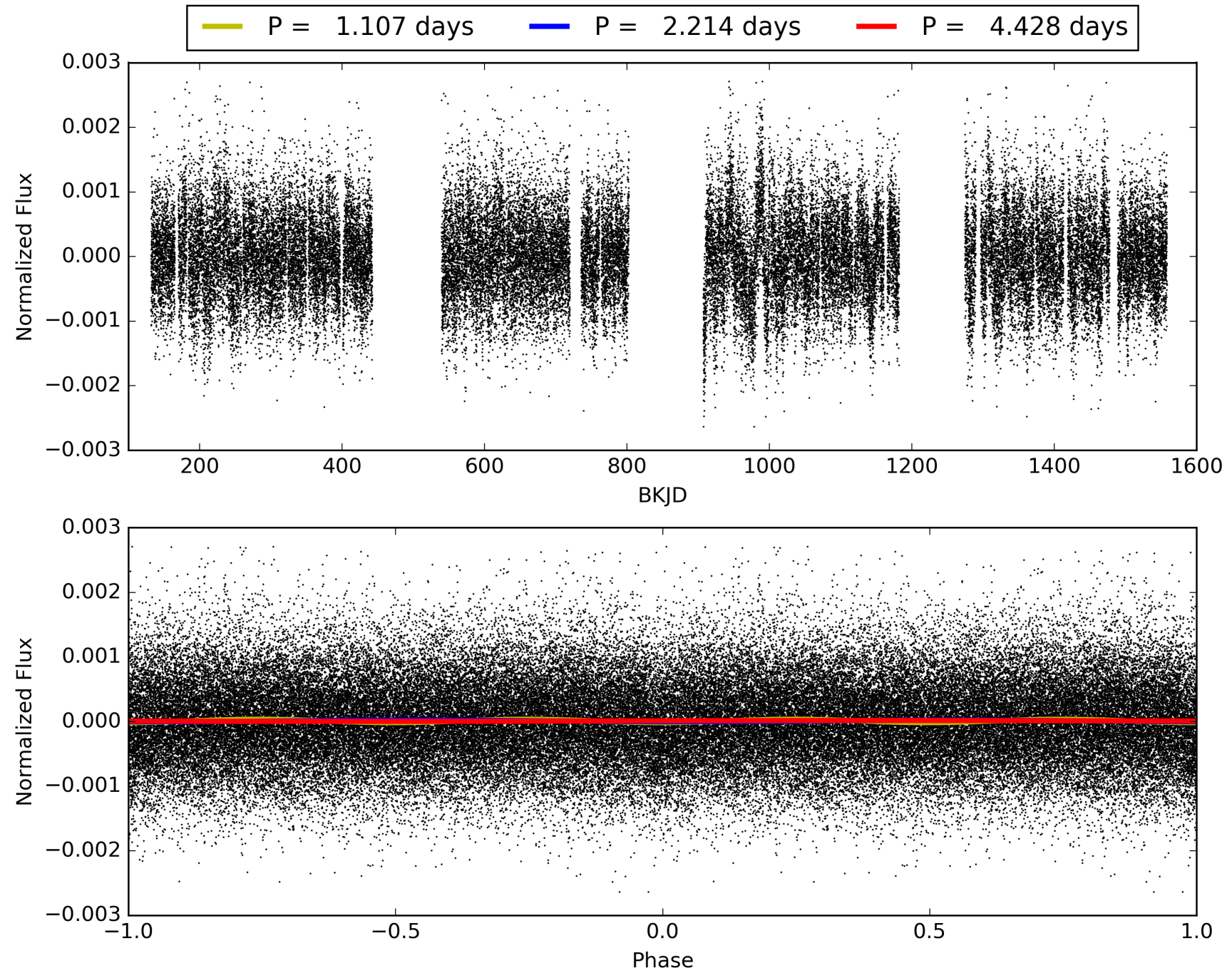
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:36:55 Z

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

TCE 007013923-01, PDC Light Curves

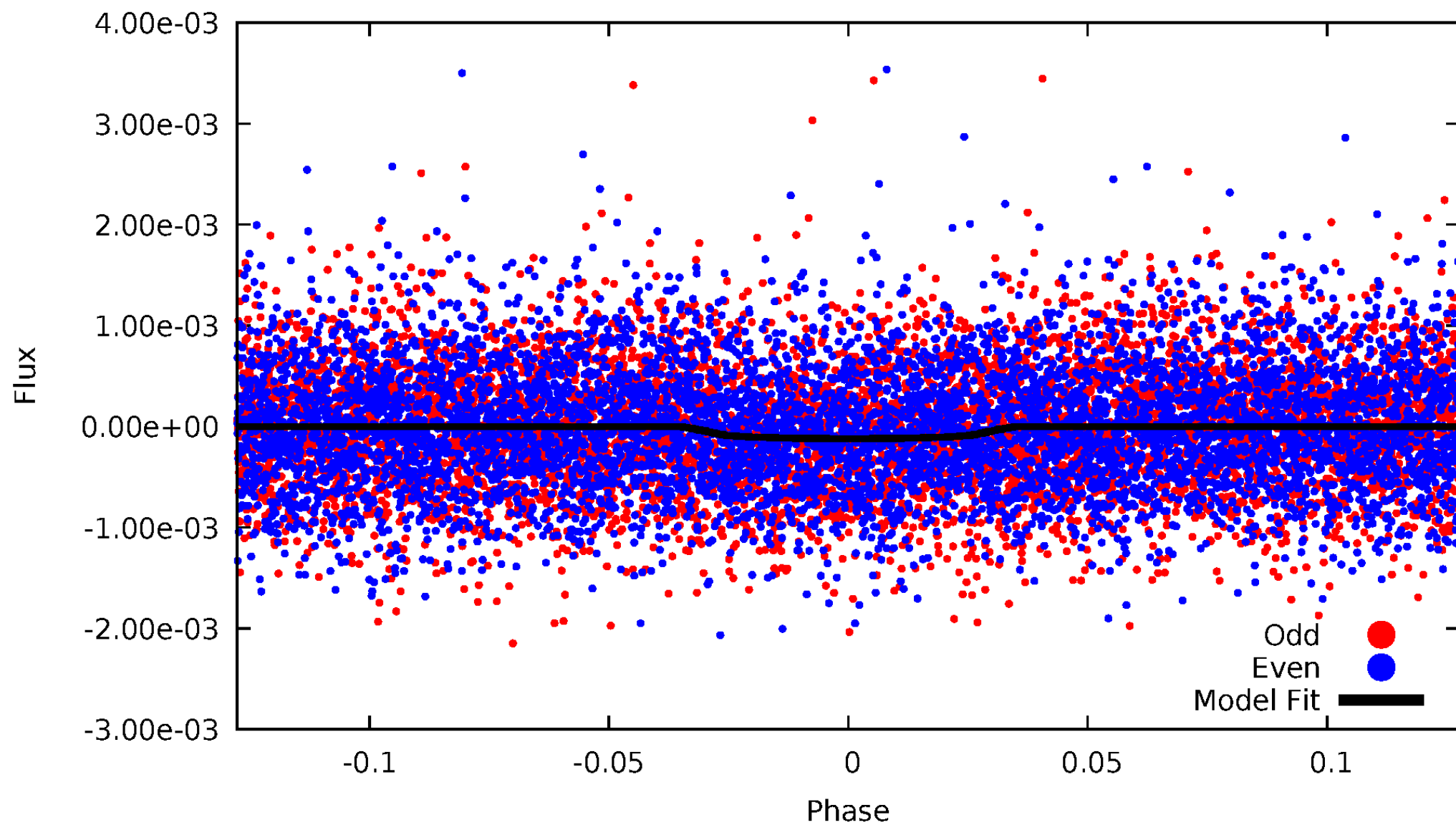


TCE 007013923-01



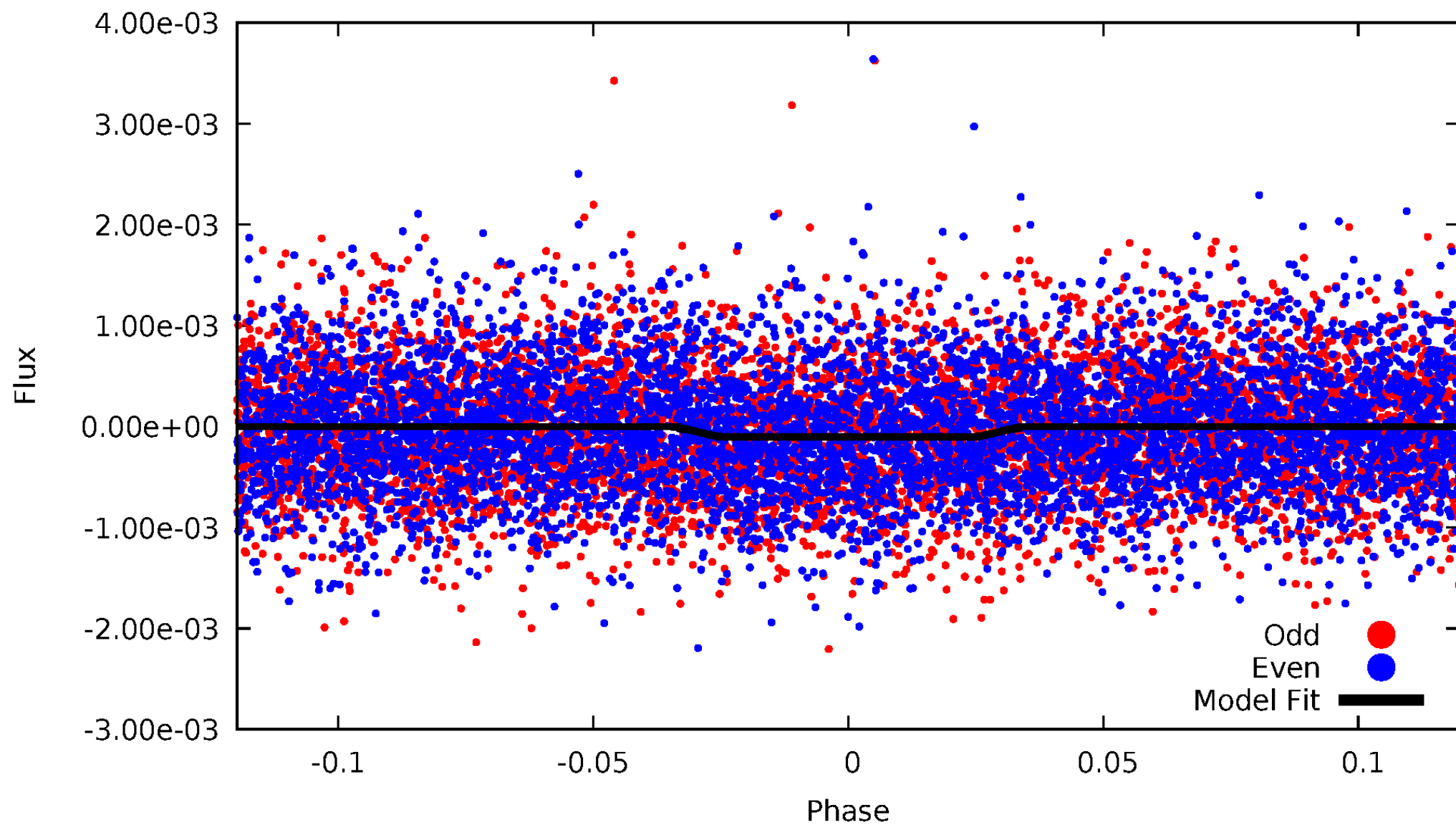
DV Odd/Even

TCE 007013923-01

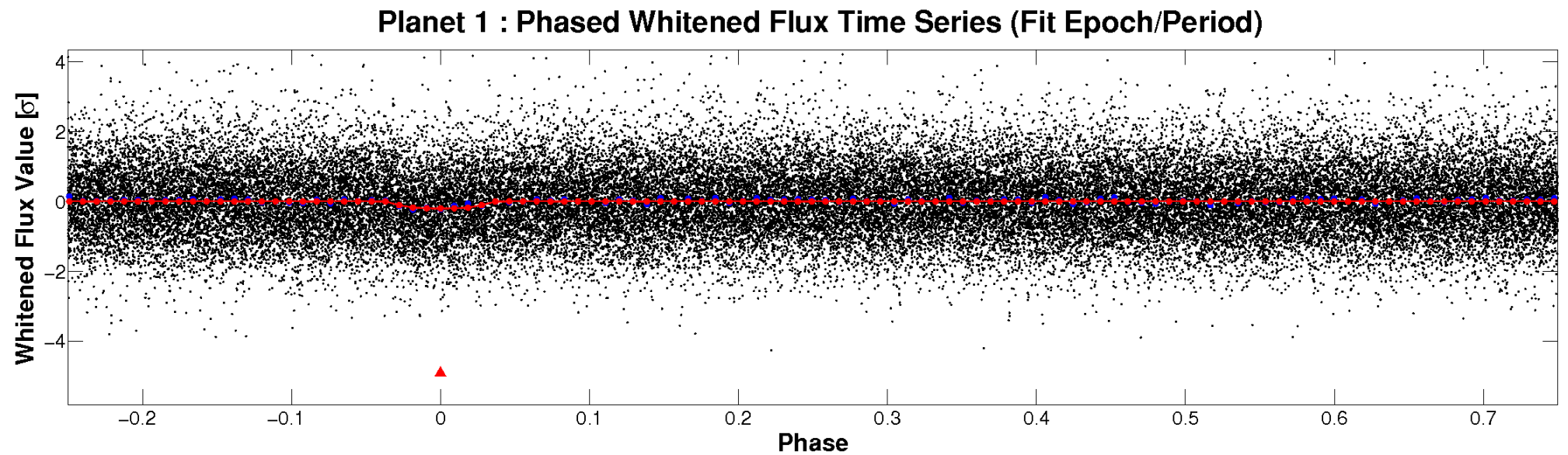
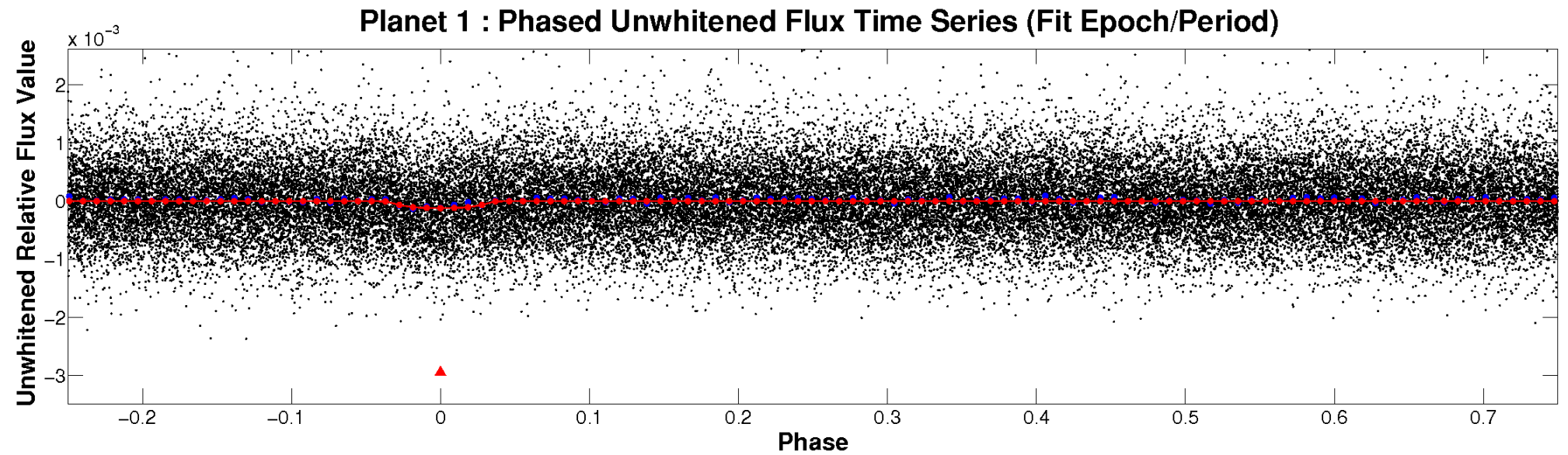


ALT Odd/Even

TCE 007013923-01

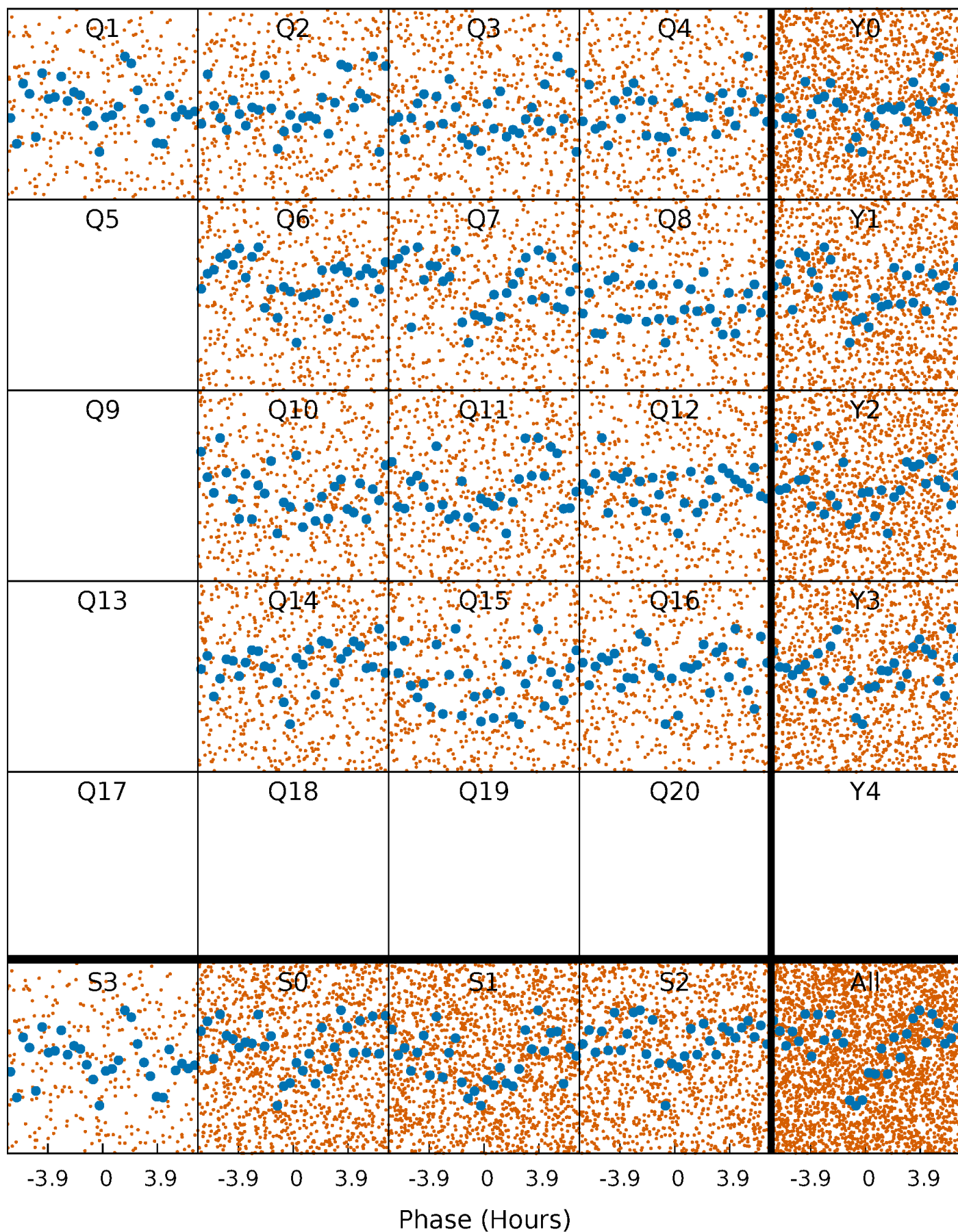


Non-Whitened Vs. Whitened Light Curve



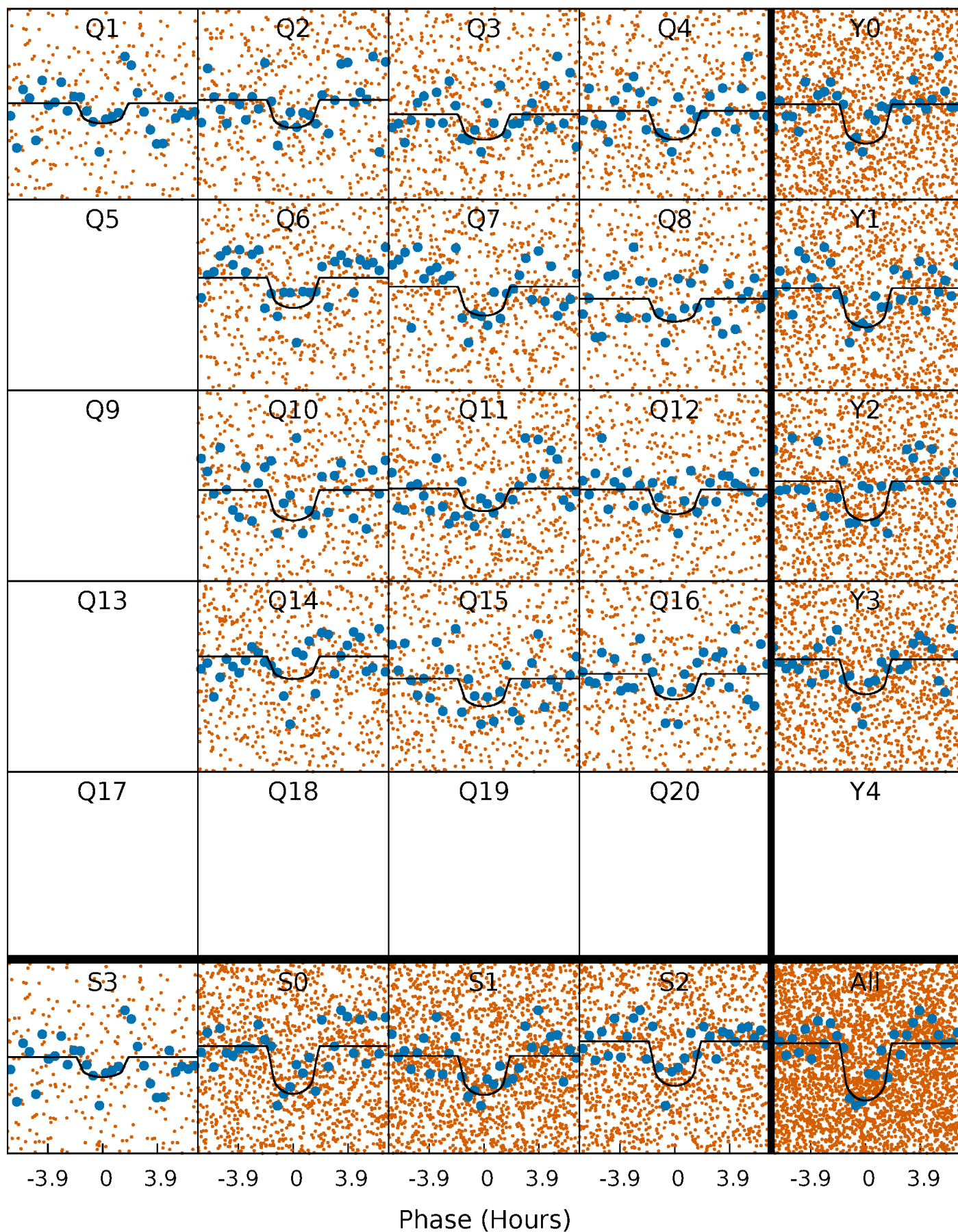
PDC Quarter-Phased Transit Curves

TCE 007013923-01 P= 2.213953 Days $T_0=132.570488$ (BKJD)



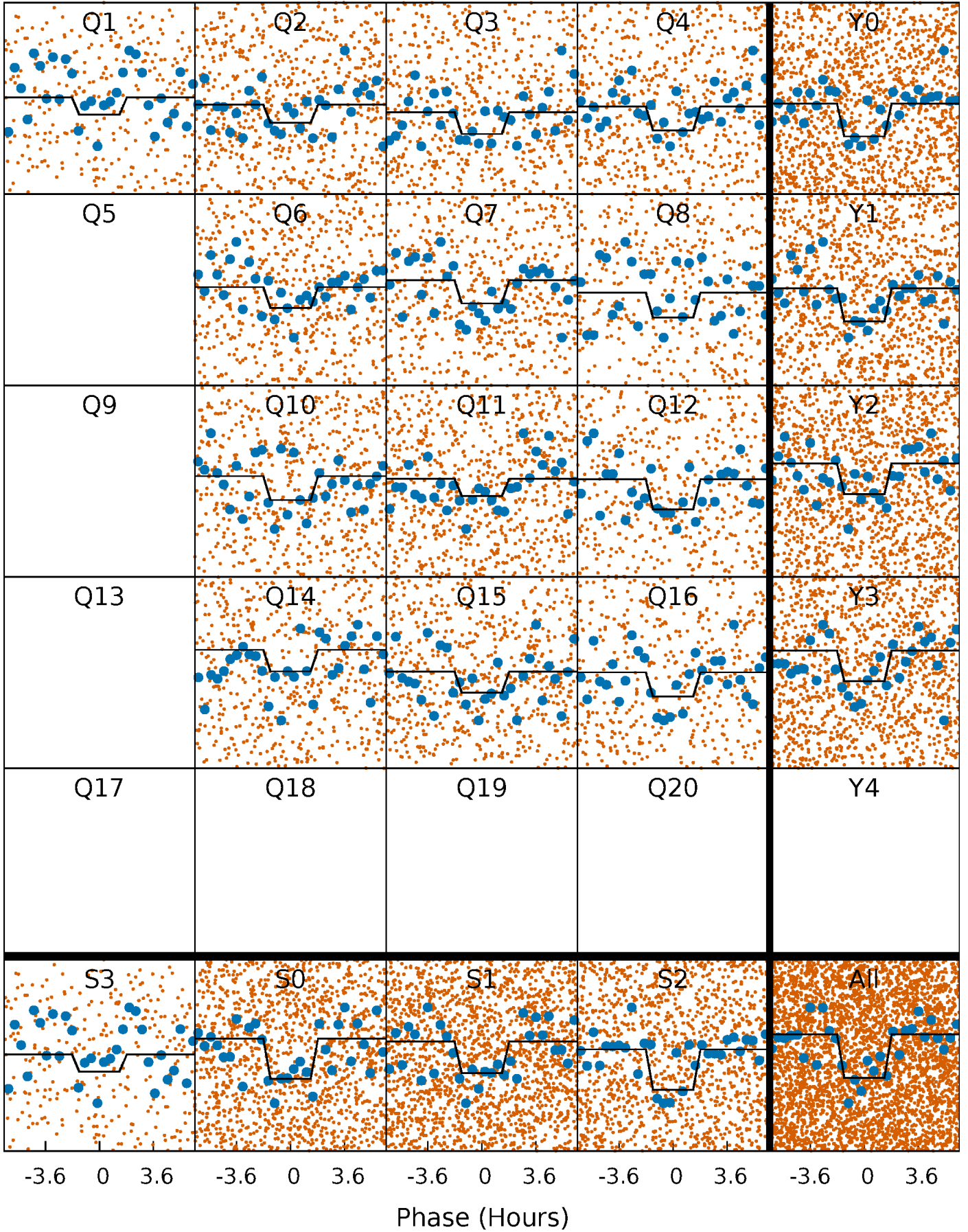
DV Quarter-Phased Transit Curves

TCE 007013923-01 P= 2.213953 Days $T_0=132.570488$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

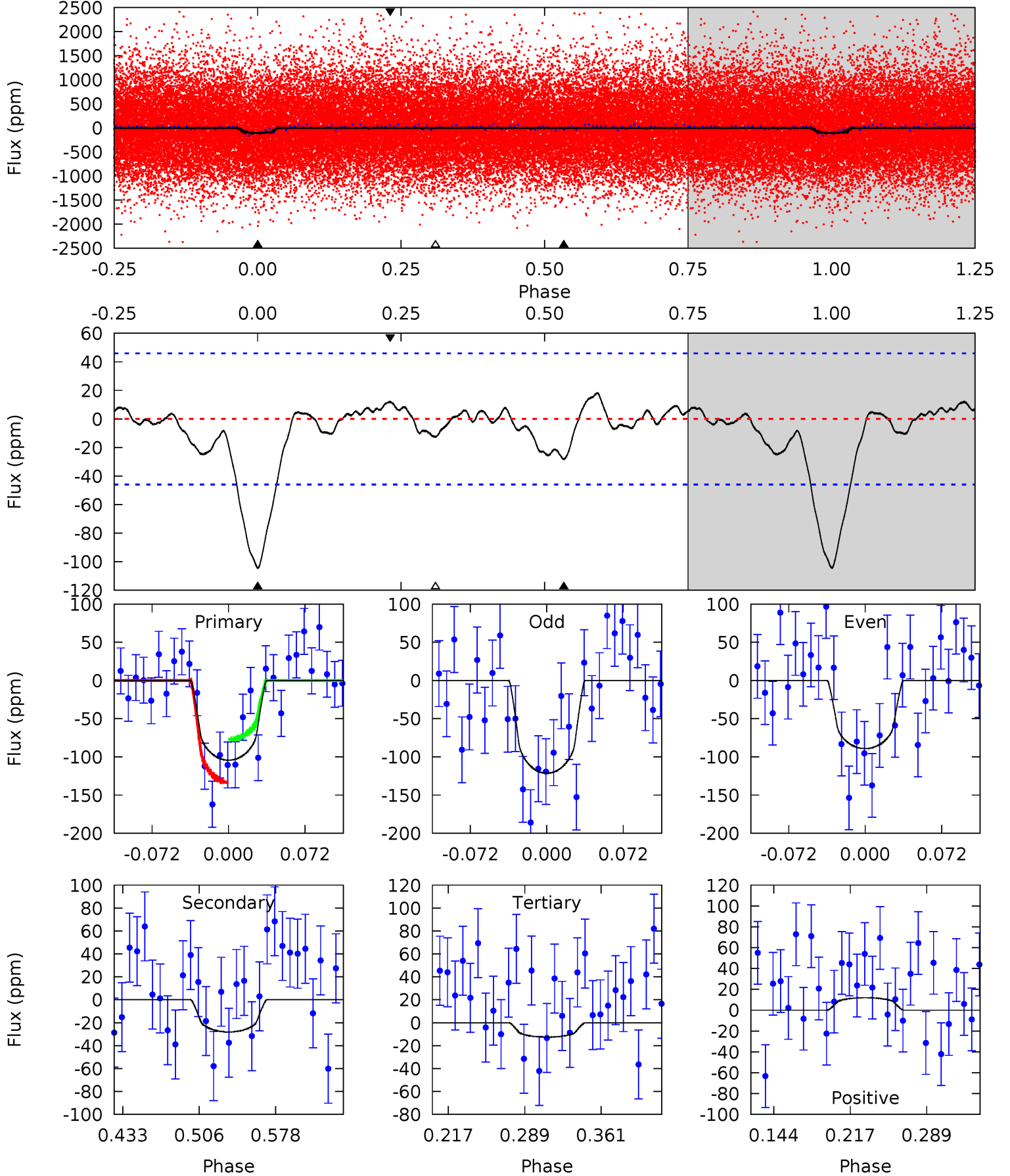
TCE 007013923-01 P= 2.213975 Days $T_0=132.568155$ (BKJD)



DV Model-Shift Uniqueness Test

007013923-01, P = 2.213953 Days, E = 130.356535 Days

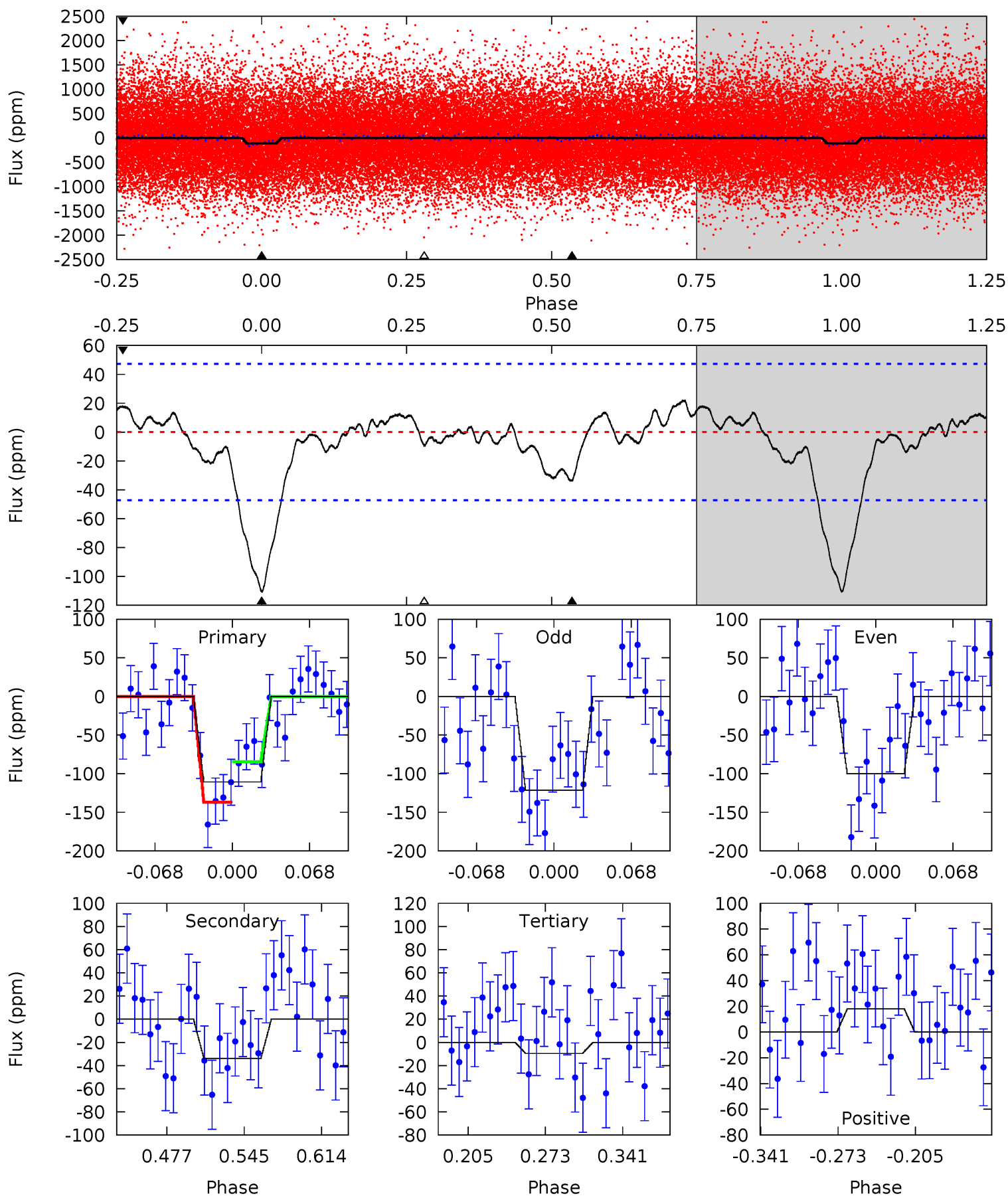
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	2.83	1.27	1.21	4.63	1.80	0.78	9.24	9.31	1.57	1.63	1.63	0.98	0.15	2.85



Alt Model-Shift Uniqueness Test

007013923-01, P = 2.213975 Days, E = 130.354180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	3.34	0.94	1.77	4.64	1.82	0.93	9.95	9.12	2.40	1.57	1.06	1.09	0.17	2.58



Stellar Parameters For KIC 007013923

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4922^{+148}_{-148}	$4.505^{+0.084}_{-0.058}$	$0.200^{+0.200}_{-0.300}$	$0.823^{+0.059}_{-0.088}$	$0.790^{+0.067}_{-0.055}$	$1.996^{+0.728}_{-0.347}$
	+3%/-3%	+2%/-1%	+100%/-150%	+7%/-11%	+8%/-7%	+36%/-17%
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 007013923-01 / KOI 7801.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 10	$1.14^{+0.87}_{-0.69}$	1562^{+61}_{-63}	3522^{+1483}_{-594}	11^{+60}_{-7}
Alt.	-34 ± 10	$1.06^{+0.88}_{-0.68}$	1562^{+61}_{-62}	3746^{+1805}_{-664}	15^{+98}_{-11}

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 $A_{obs} \gg 1.0$

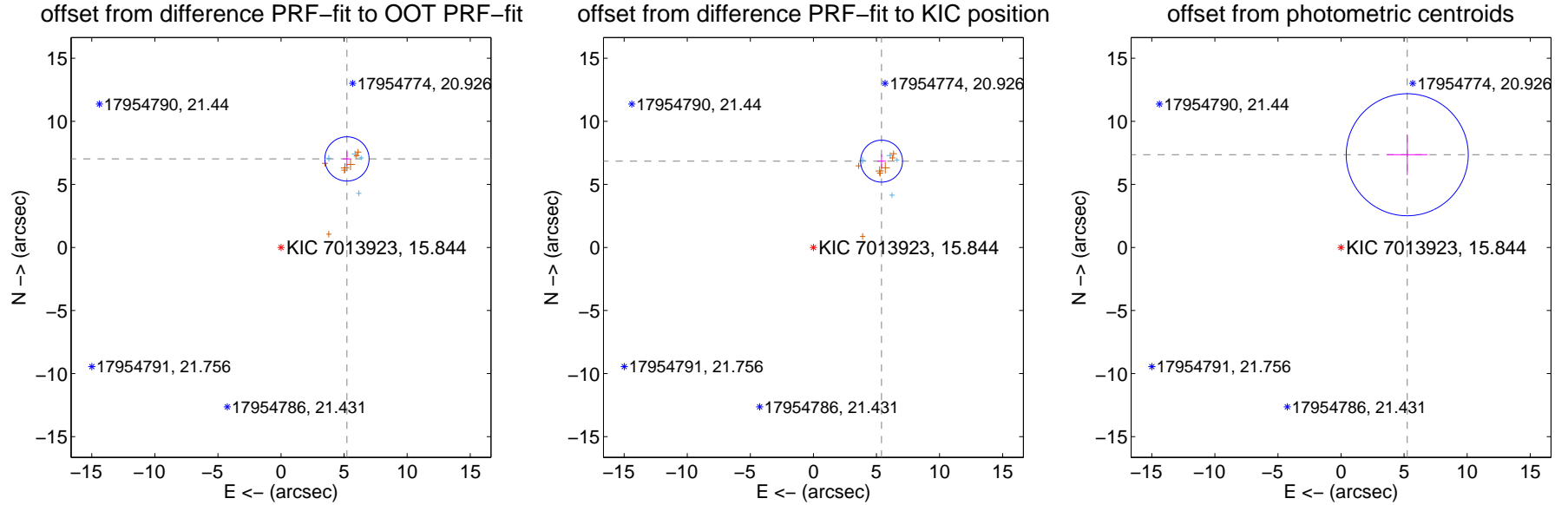
DV Centroid Data

Supplemental centroid analysis for 007013923-01. Kepler magnitude: 15.84. Transit SNR 9.22

There are 4 quarters with good PRF difference image offsets

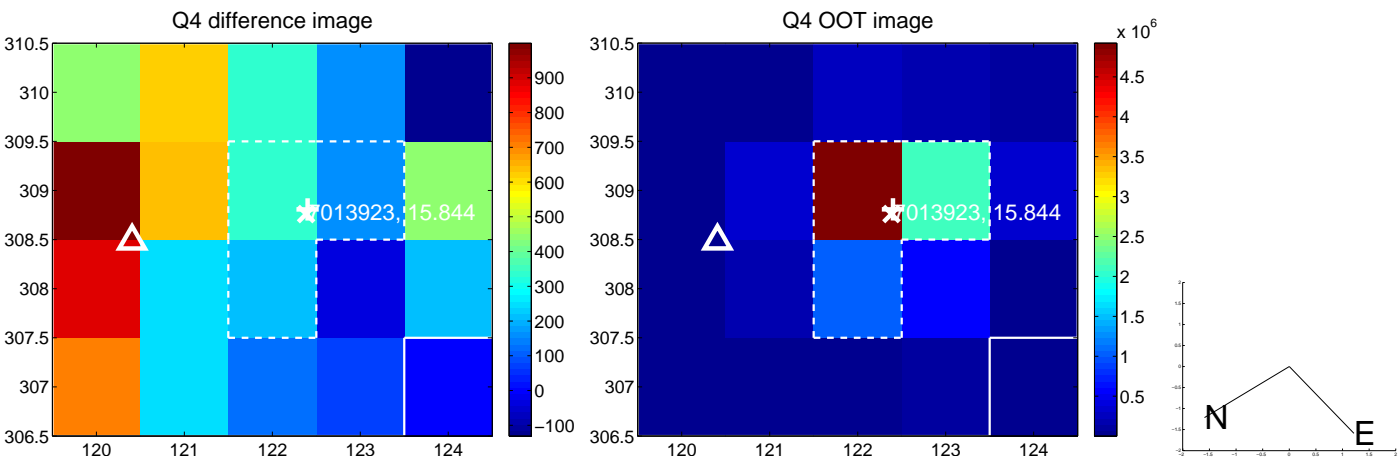
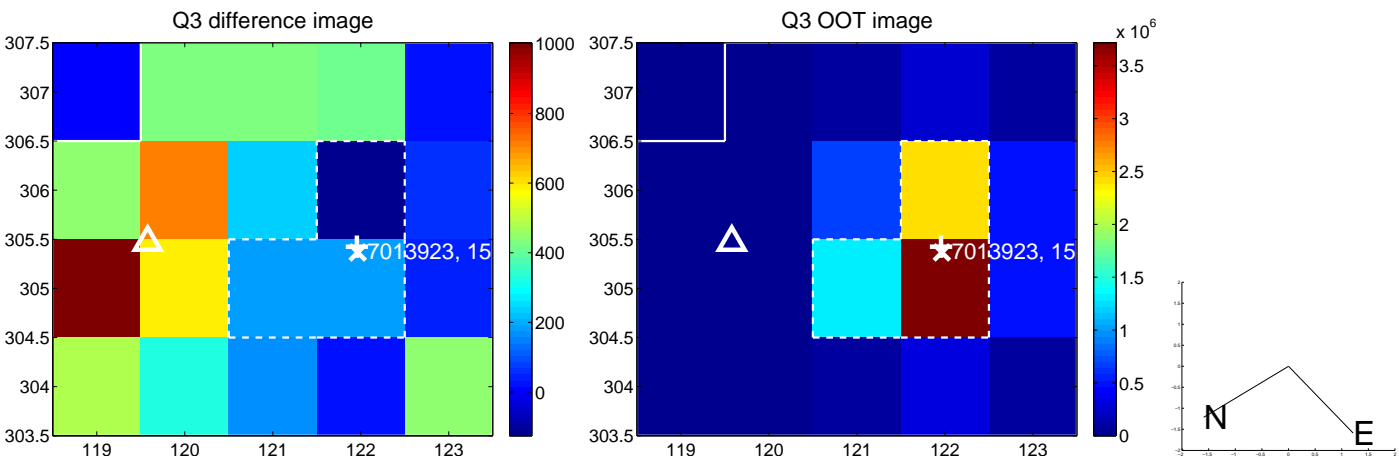
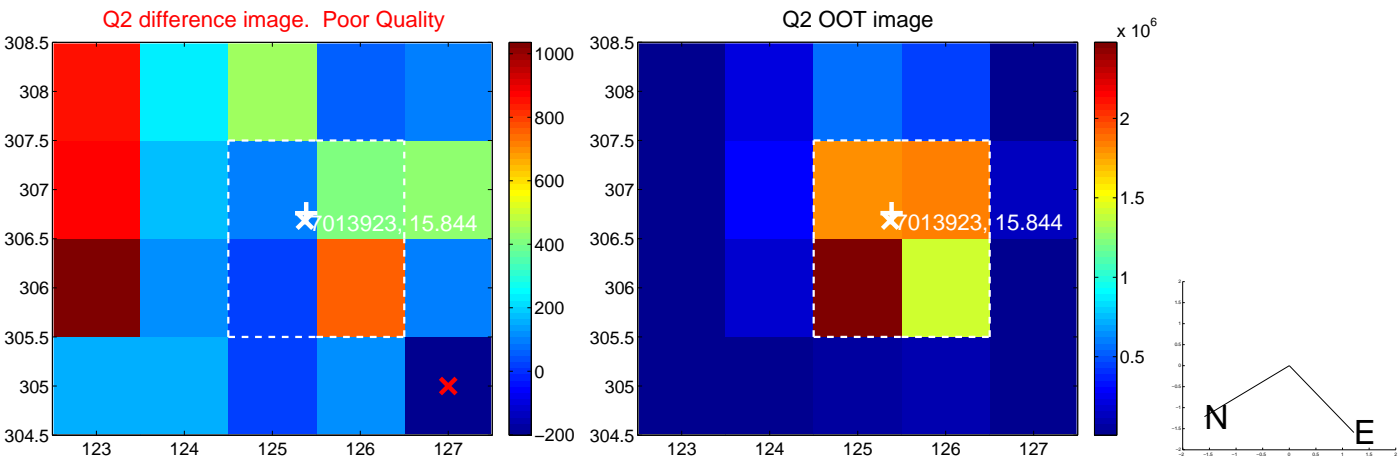
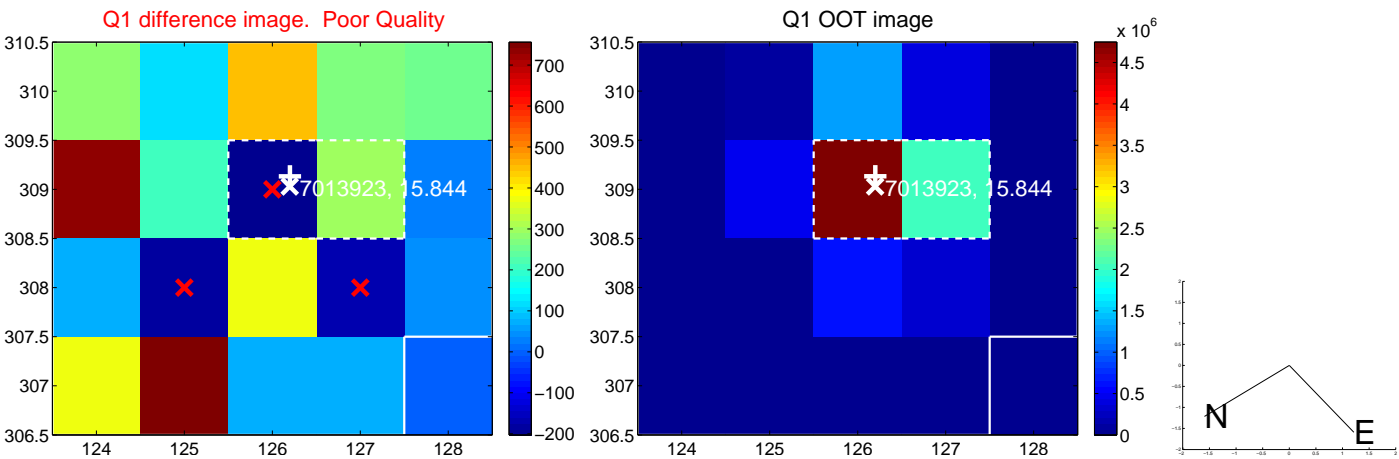
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.749 ± 0.585	14.96	-5.227 ± 0.339	7.016 ± 0.586
PRF-fit source offset from KIC position	8.715 ± 0.554	15.73	-5.400 ± 0.349	6.840 ± 0.527
photometric centroid source offset	9.03 ± 1.61	5.60	-5.25 ± 1.61	7.35 ± 1.61

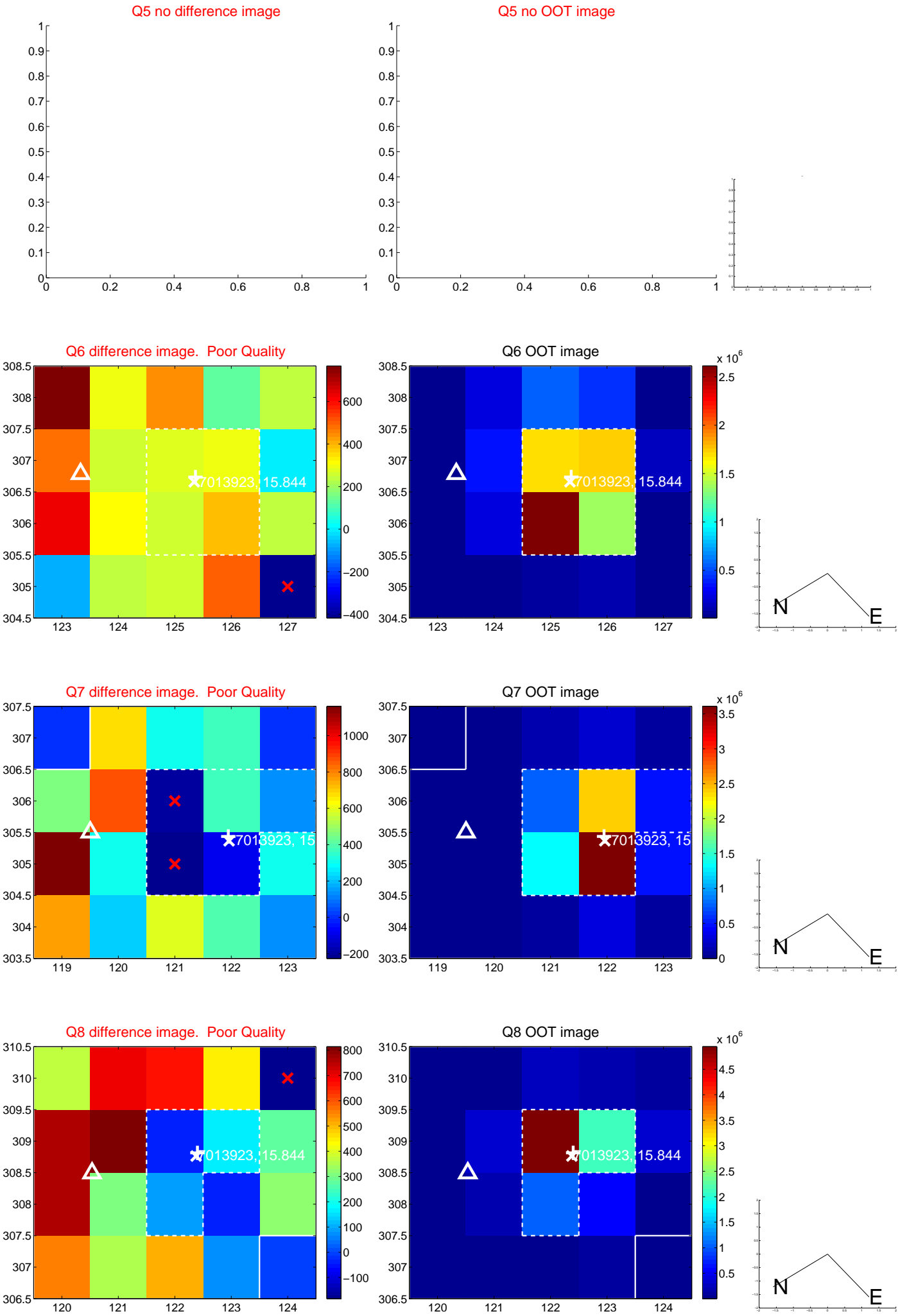


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

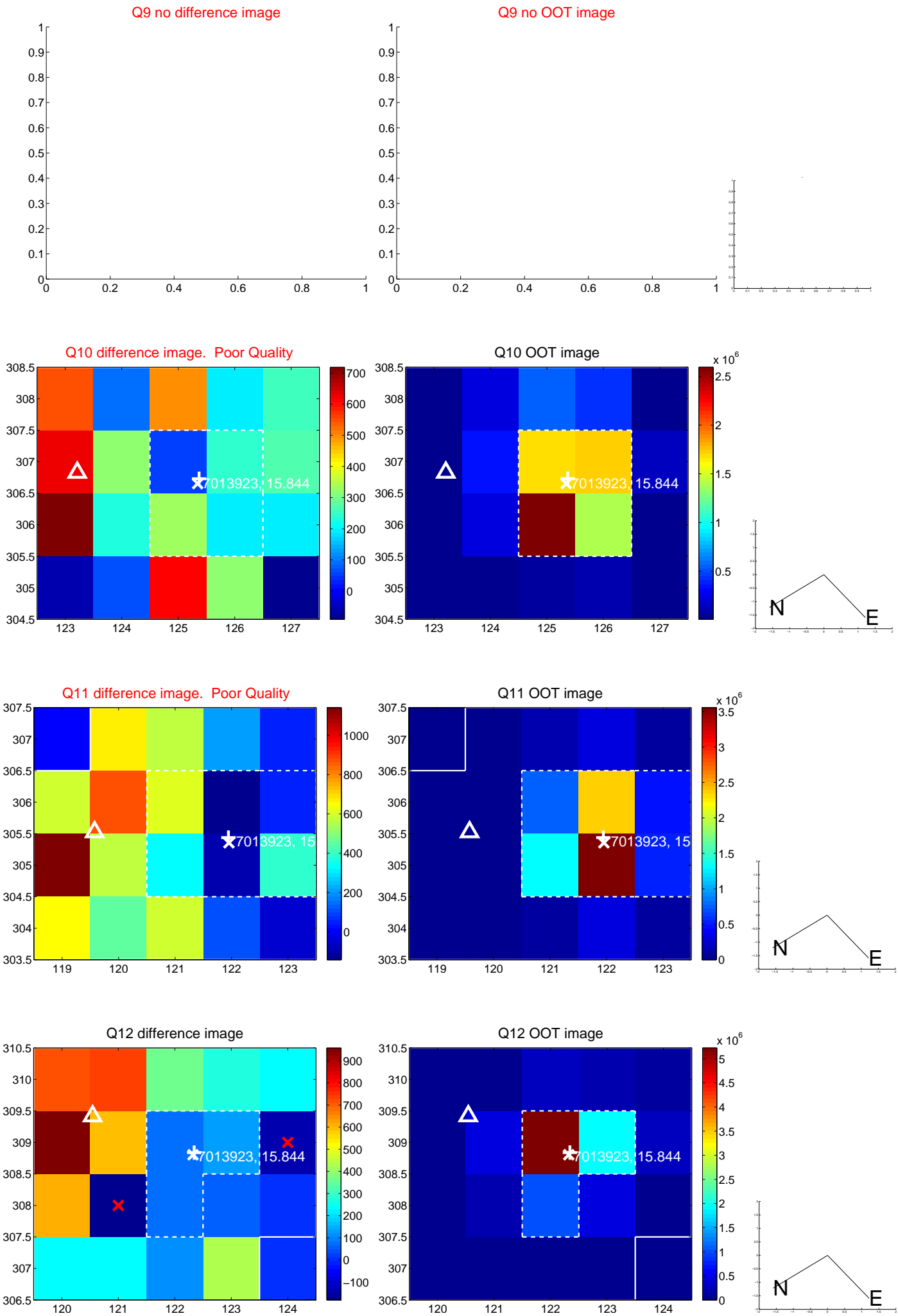
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



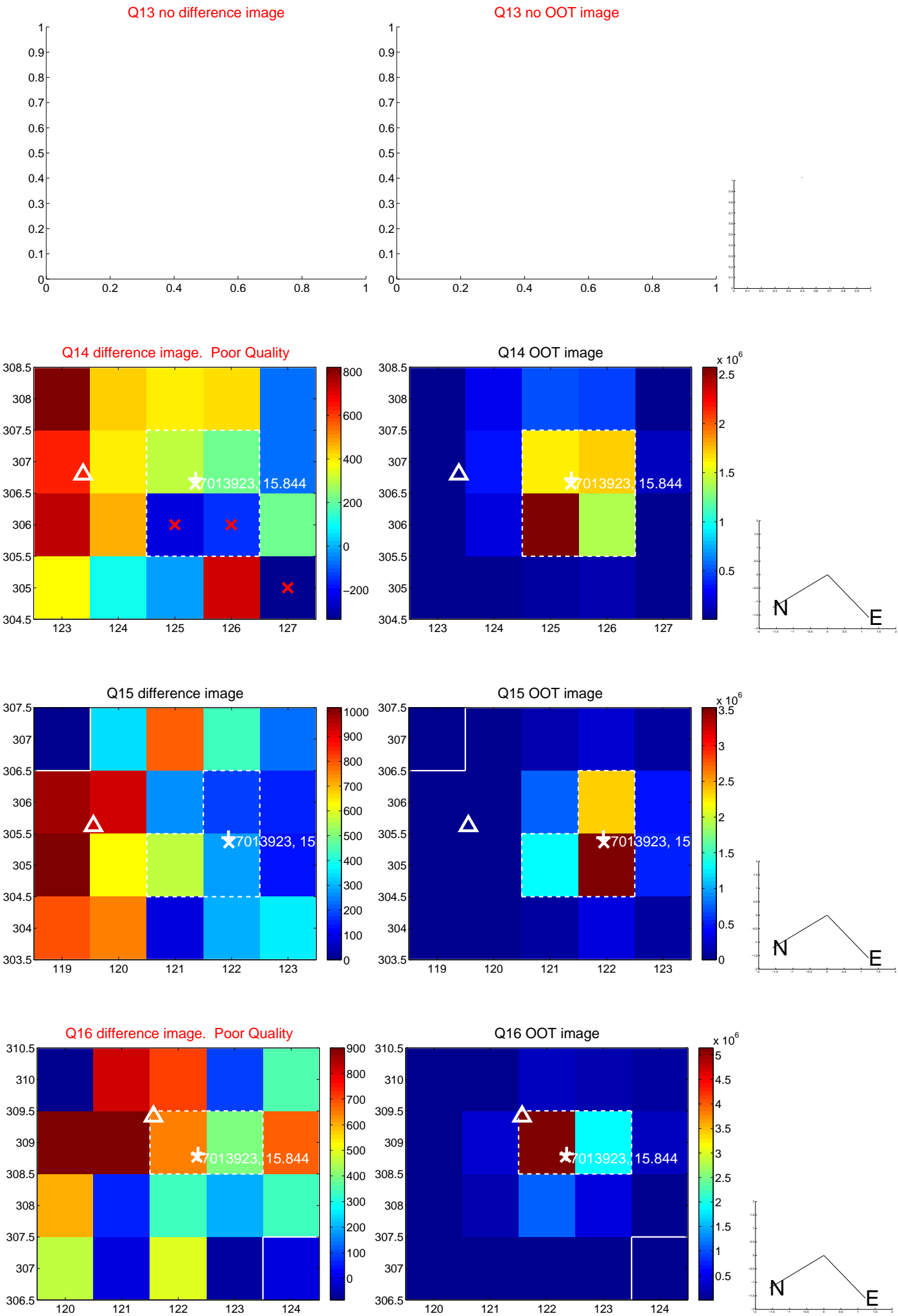
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



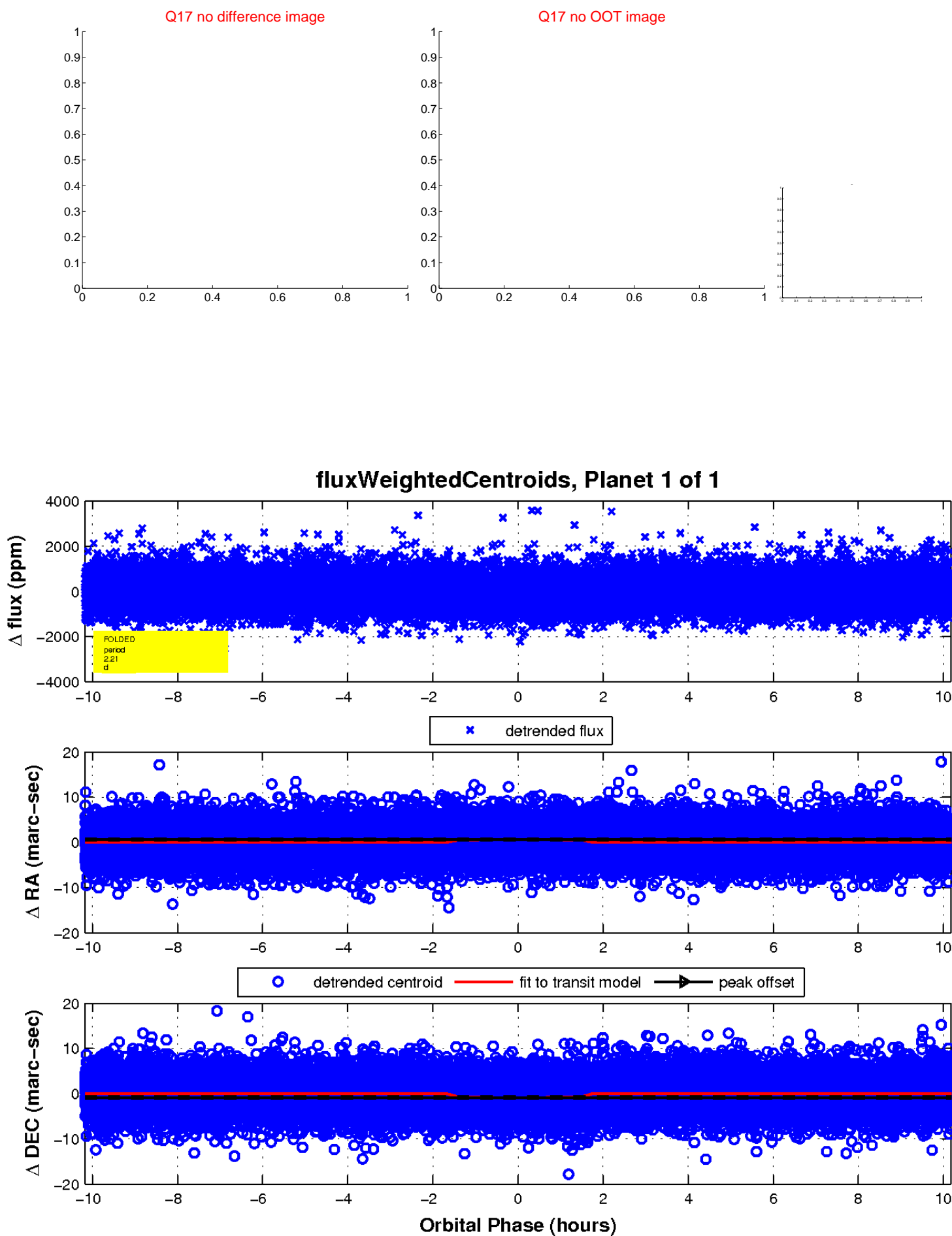
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

