

KIC 010924437

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})
010924437-01	OBS	No	0.750742	131.813043	31.8	1.383	8.4	8.4	0.79	5950	0.53	2936.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010924437-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—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.

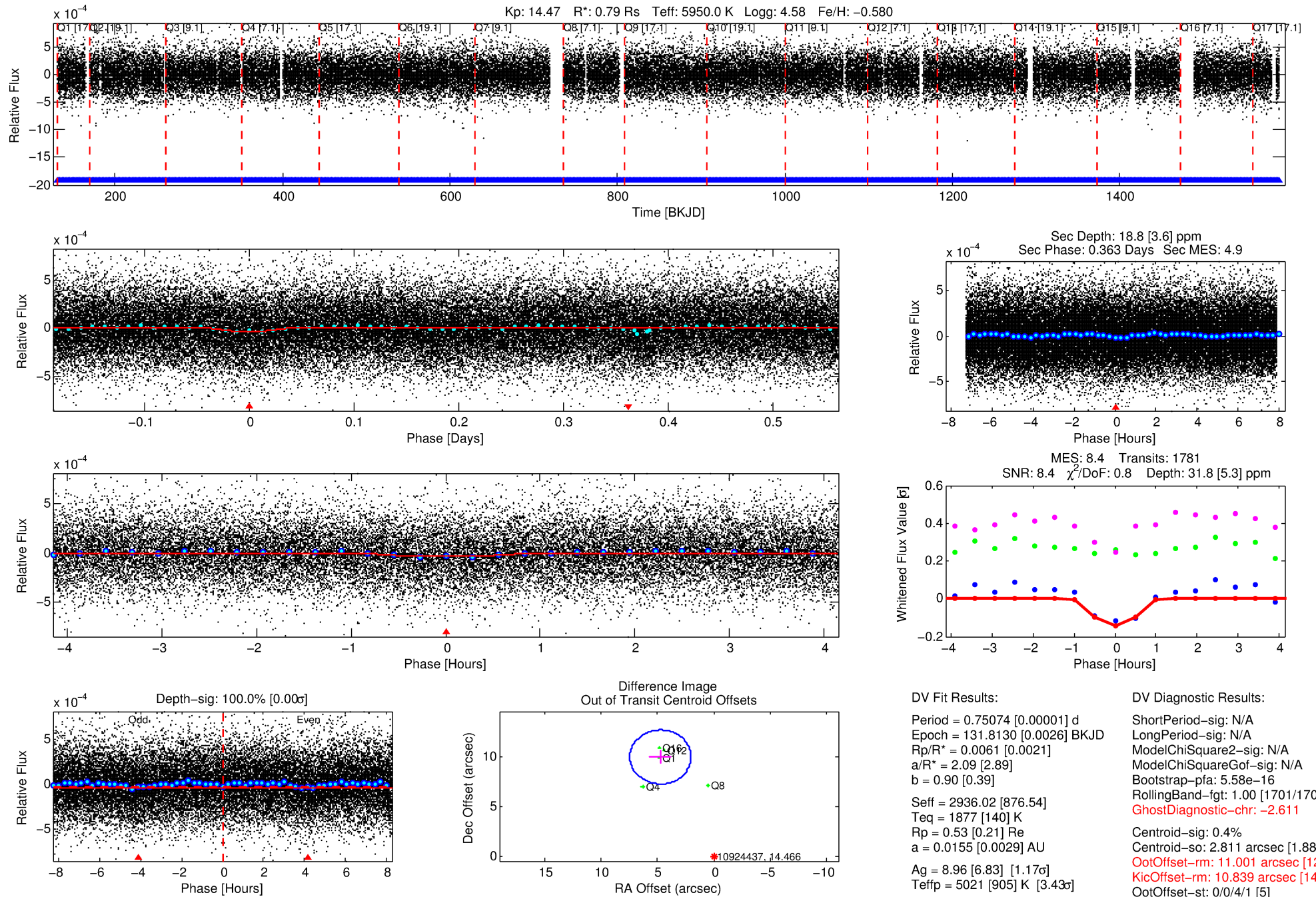
Ephemeris Match Information For 010924437-01

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
010924437-01	10924437	010924462-pri	10924462	2:1	24.5	-2	5	13.40	14.47	10750.00	Direct-PRF	0	0.44	0.47

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: 10924437 Candidate: 1 of 1 Period: 0.751 d



DV Fit Results:

Period = 0.75074 [0.00001] d
Epoch = 131.8130 [0.0026] BKJD
Rp/R* = 0.0061 [0.0021]
a/R* = 2.09 [2.89]
b = 0.90 [0.39]
Seff = 2936.02 [876.54]
Teq = 1877 [140] K
Rp = 0.53 [0.21] Re
a = 0.0155 [0.0029] AU
Ag = 8.96 [6.83] [1.17σ]
Teff = 5021 [905] K [3.43σ]

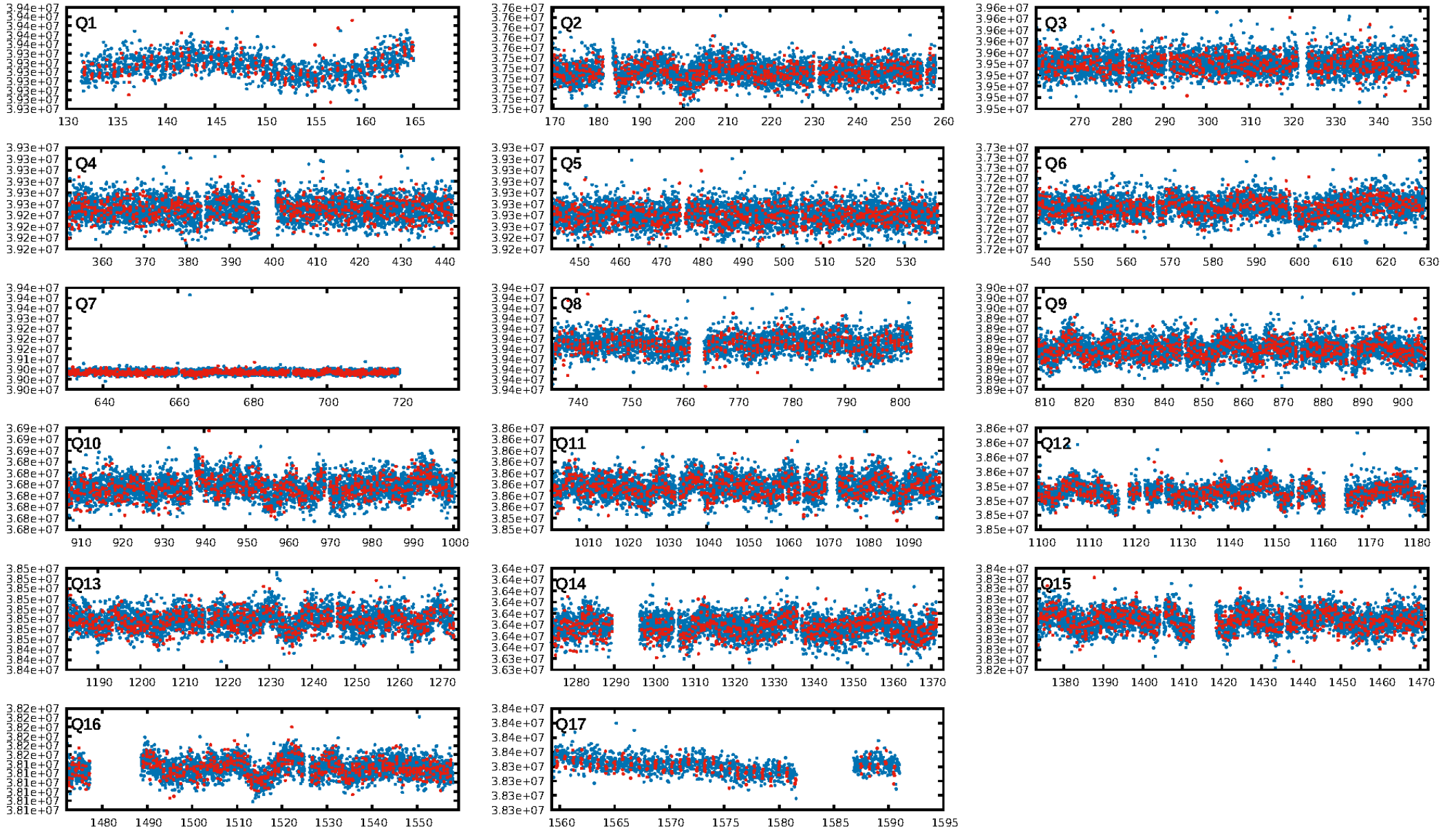
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.58e-16
RollingBand-fgt: 1.00 [1701/1701]
GhostDiagnostic-chr: -2.611
Centroid-sig: 0.4%
Centroid-so: 2.811 arcsec [1.88σ]
OotOffset-rm: 11.001 arcsec [12.18σ]
KicOffset-rm: 10.839 arcsec [14.10σ]
OotOffset-st: 0/0/4/1 [5]
KicOffset-st: 0/0/4/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 1.00 [17/17]

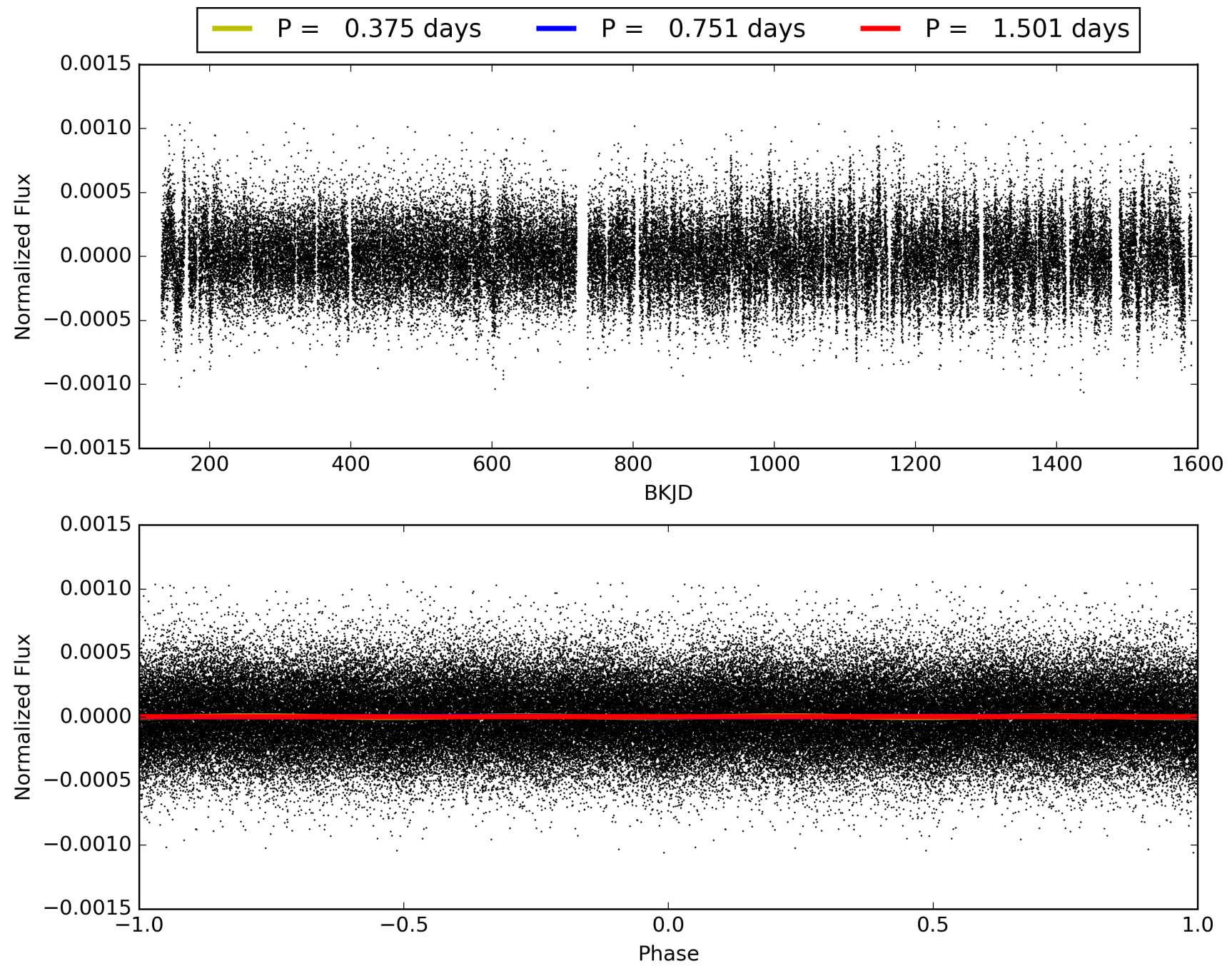
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:09:29 Z

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

TCE 010924437-01, PDC Light Curves

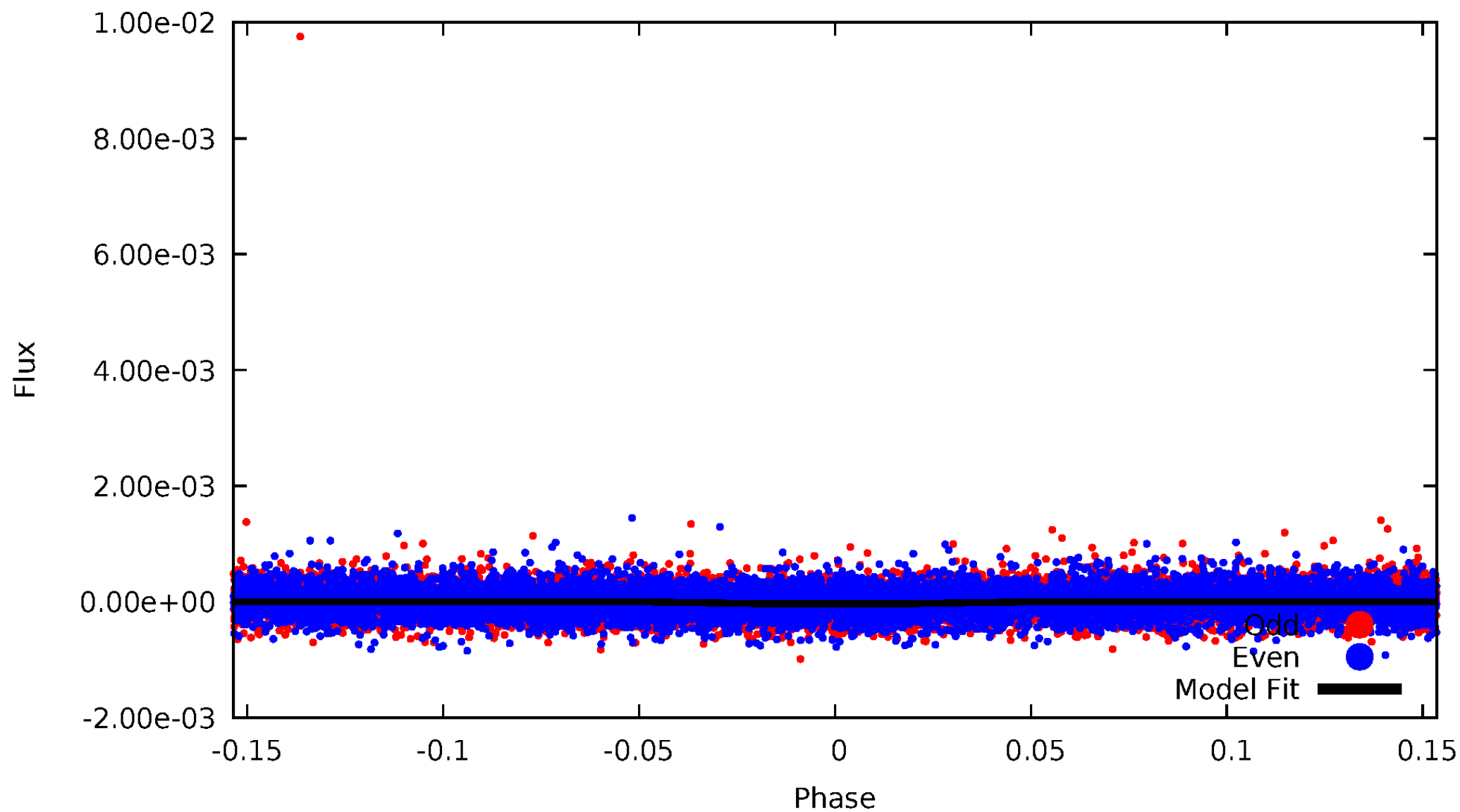


TCE 010924437-01



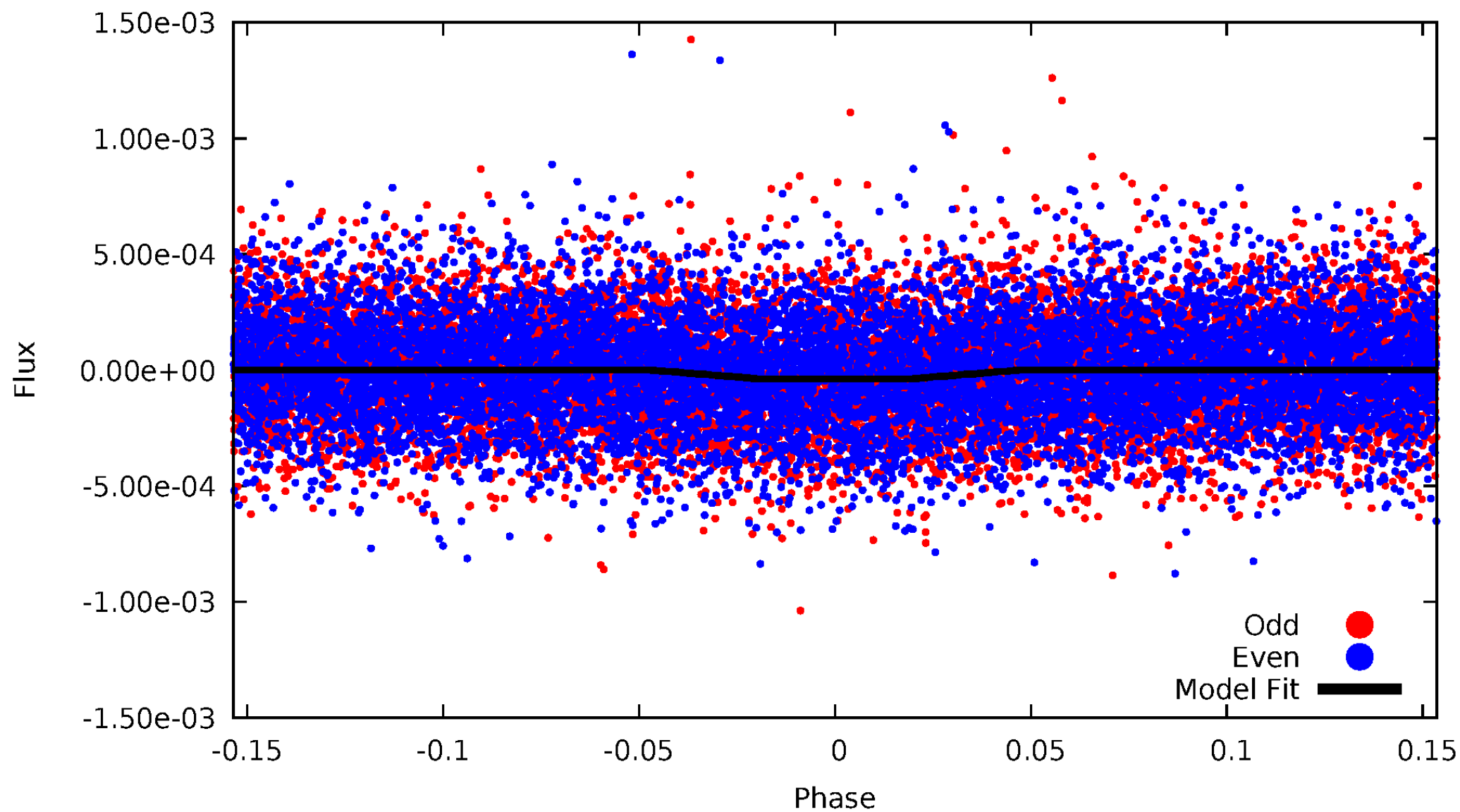
DV Odd/Even

TCE 010924437-01

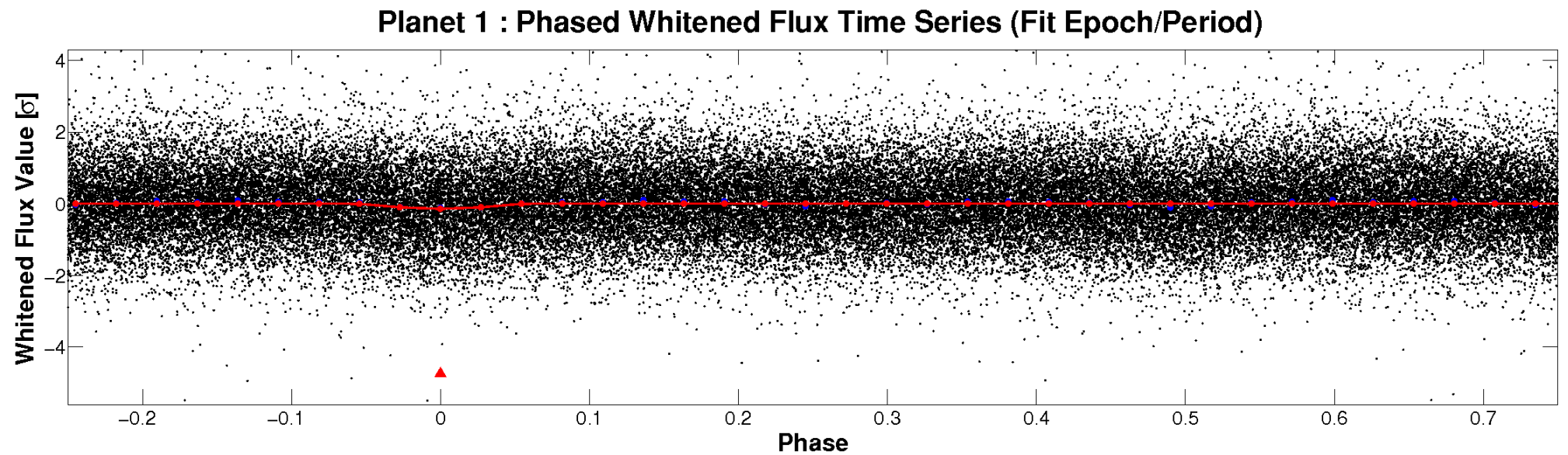
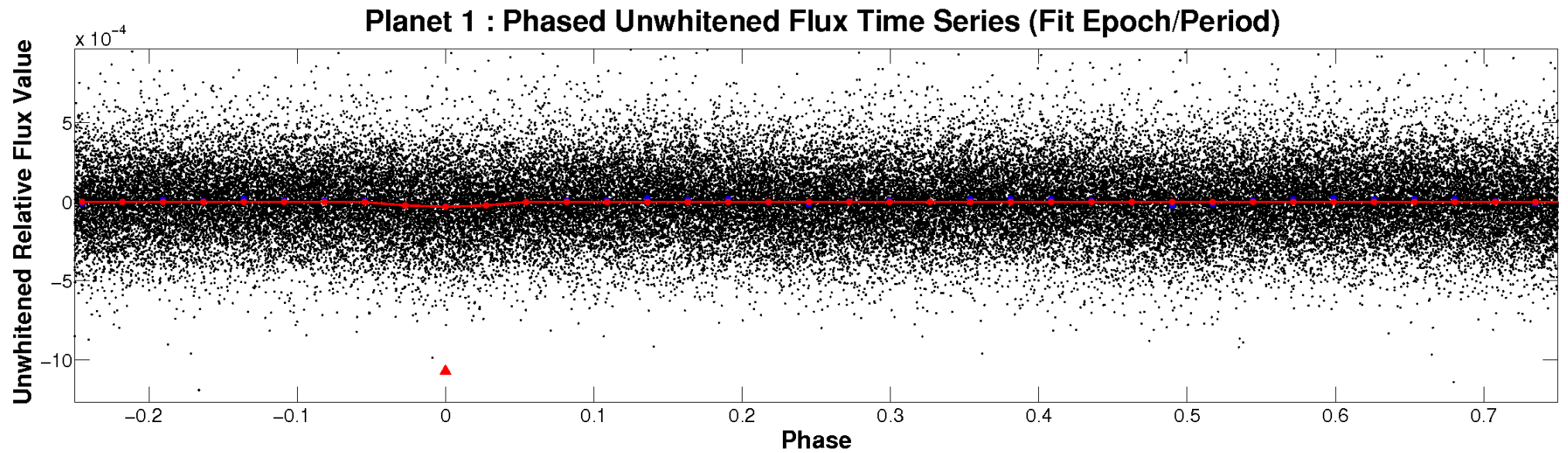


ALT Odd/Even

TCE 010924437-01

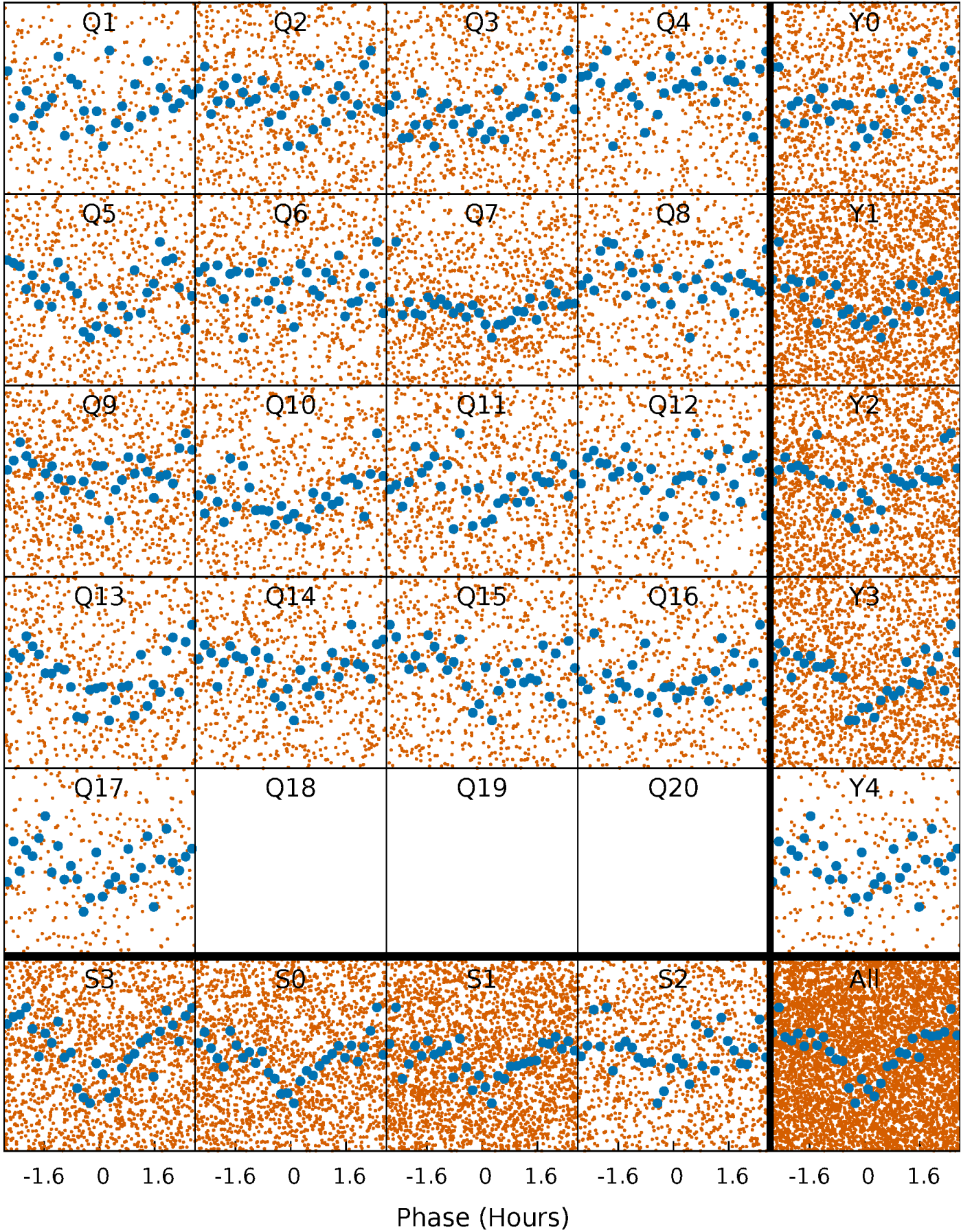


Non-Whitened Vs. Whitened Light Curve



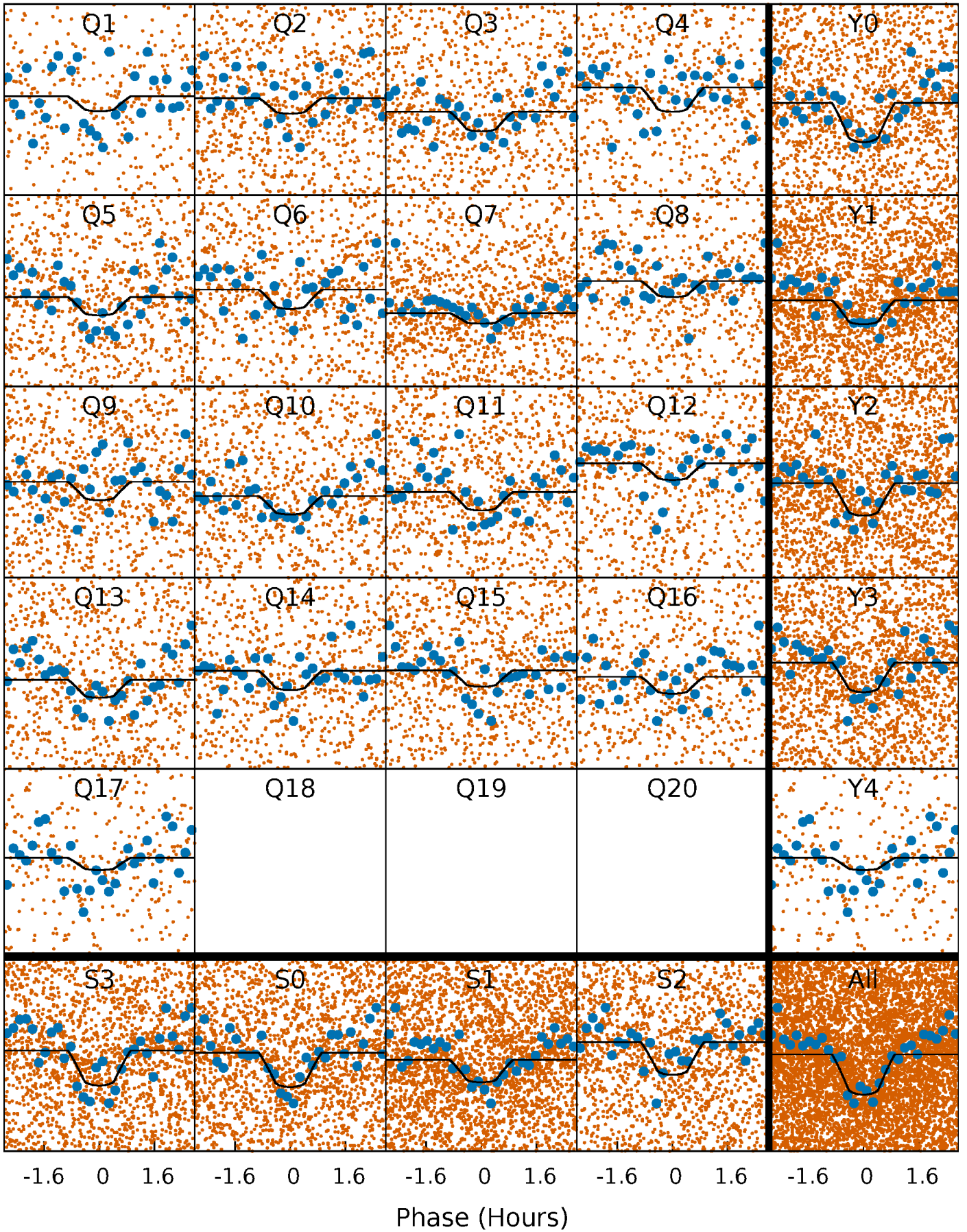
PDC Quarter-Phased Transit Curves

TCE 010924437-01 P= 0.750742 Days $T_0=131.813043$ (BKJD)



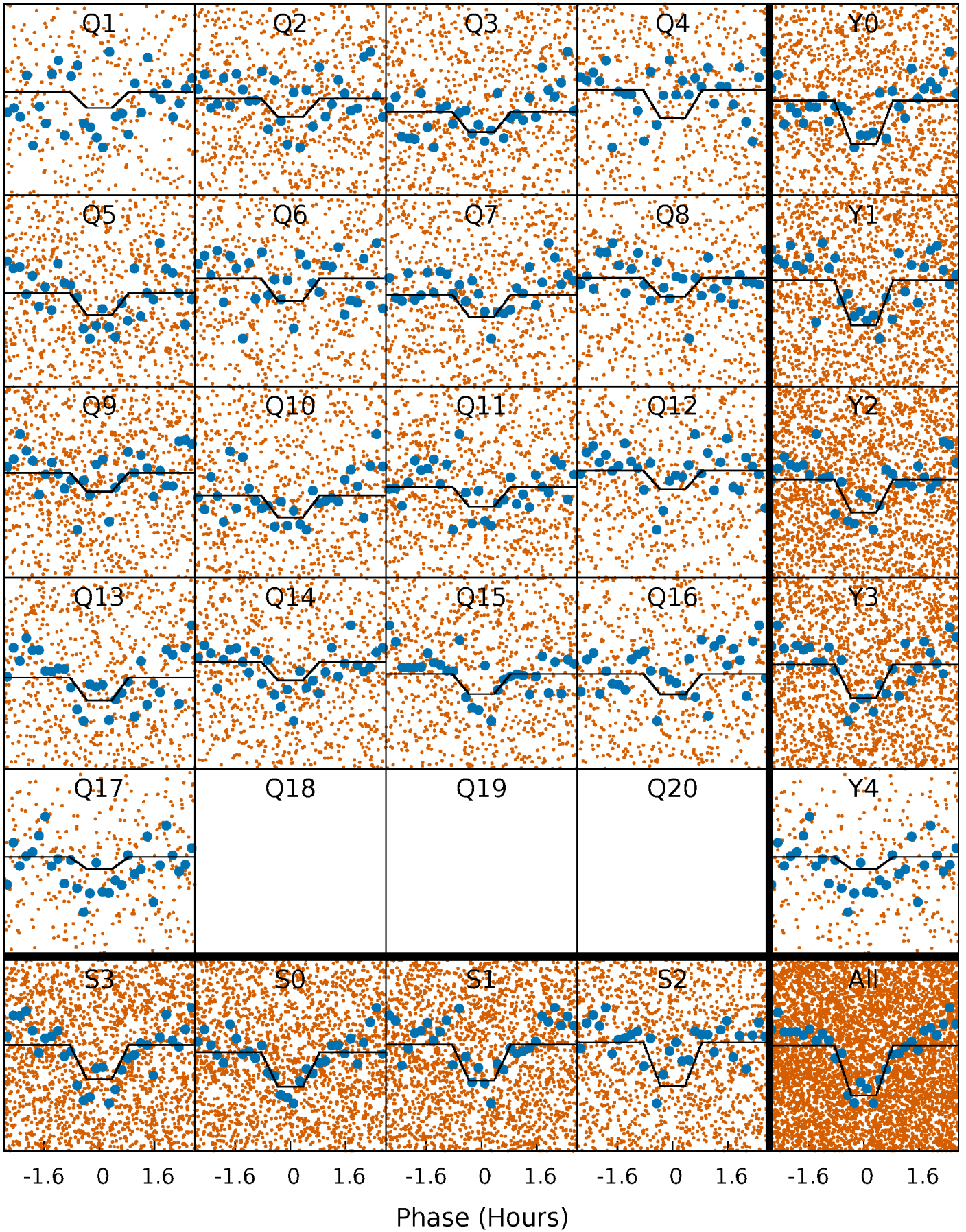
DV Quarter-Phased Transit Curves

TCE 010924437-01 P= 0.750742 Days $T_0=131.813043$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

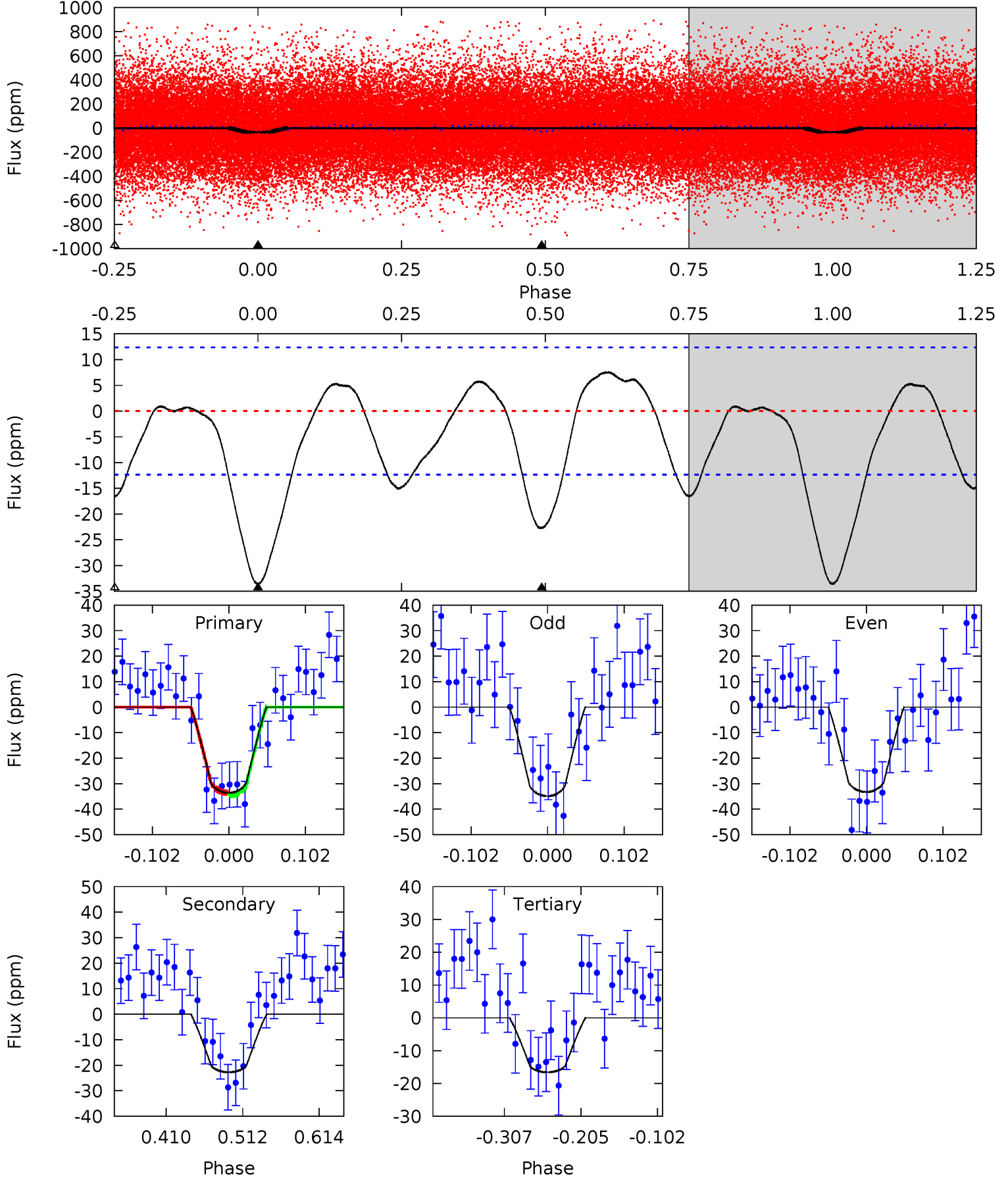
TCE 010924437-01 P= 0.750742 Days $T_0=131.813043$ (BKJD)



DV Model-Shift Uniqueness Test

010924437-01, P = 0.750742 Days, E = 131.062301 Days

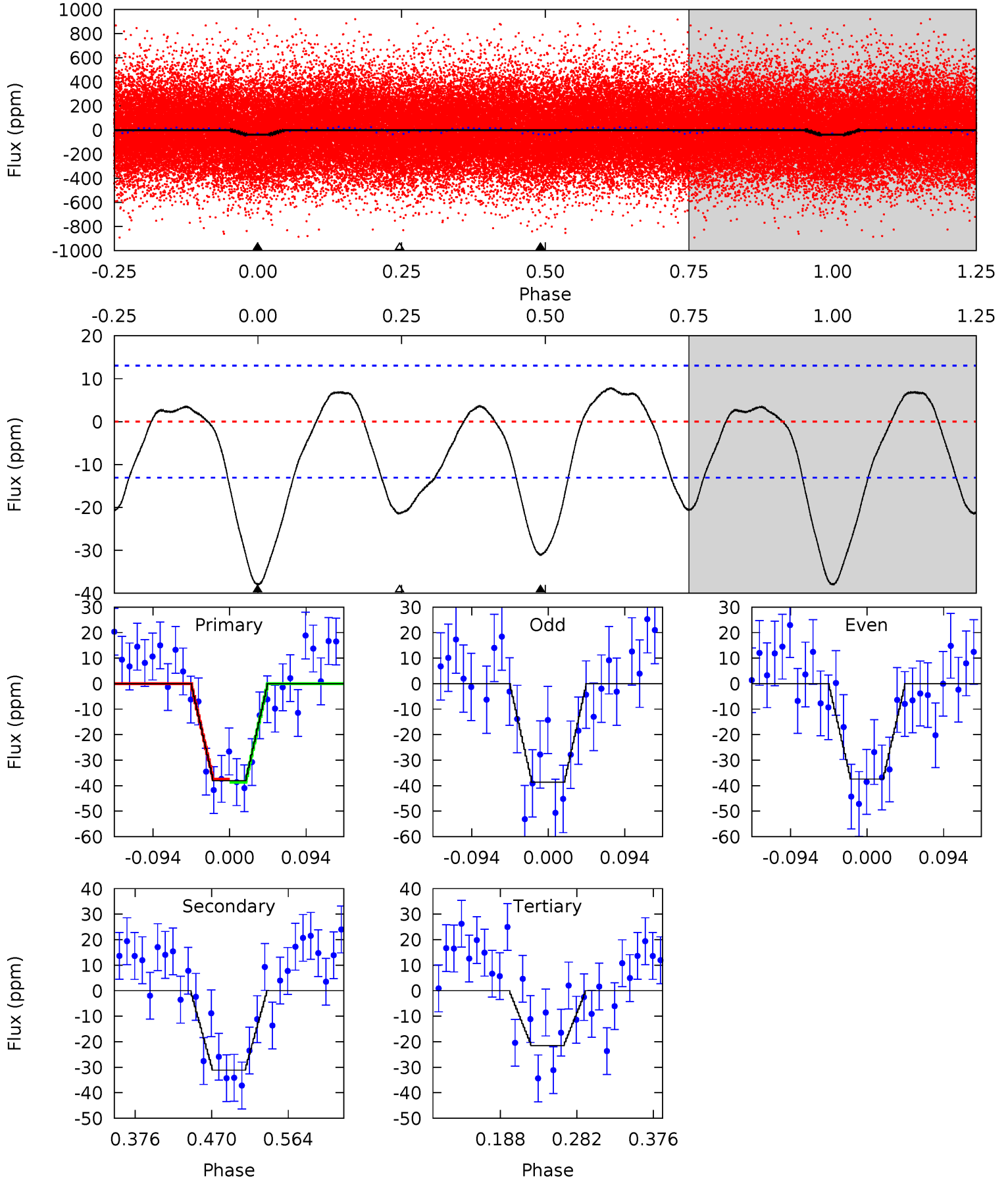
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	8.39	6.12	0	4.56	1.63	2.66	6.28	12.4	2.27	8.39	0.30	0.93	0.18	0.18



Alt Model-Shift Uniqueness Test

010924437-01, P = 0.750742 Days, E = 131.062301 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	10.9	7.53	0	4.58	1.67	3.29	5.79	13.3	3.38	10.9	0.22	0.91	0.17	0.24



Stellar Parameters For KIC 010924437

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5950^{+141}_{-177}	$4.584^{+0.038}_{-0.152}$	$-0.580^{+0.300}_{-0.300}$	$0.791^{+0.170}_{-0.061}$	$0.878^{+0.079}_{-0.096}$	$2.501^{+0.486}_{-1.083}$
	+2%/-3%	+1%/-3%	+52%/-52%	+21%/-8%	+9%/-11%	+19%/-43%
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 010924437-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 3	$0.53^{+0.19}_{-0.18}$	2659^{+140}_{-100}	5278^{+1241}_{-646}	10^{+14}_{-4}
Alt.	-31 ± 3	$0.53^{+0.19}_{-0.17}$	2663^{+137}_{-96}	5687^{+1282}_{-776}	14^{+17}_{-6}

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 $A_{obs} \gg 1.0$

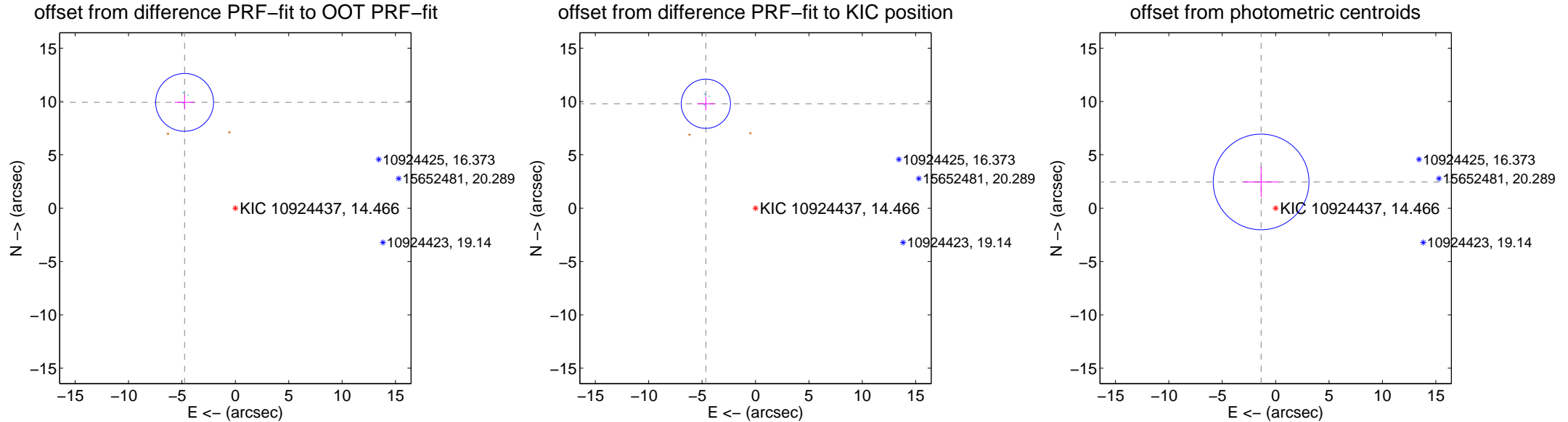
DV Centroid Data

Supplemental centroid analysis for 010924437-01. Kepler magnitude: 14.47. Transit SNR 8.42

There are 3 quarters with good PRF difference image offsets

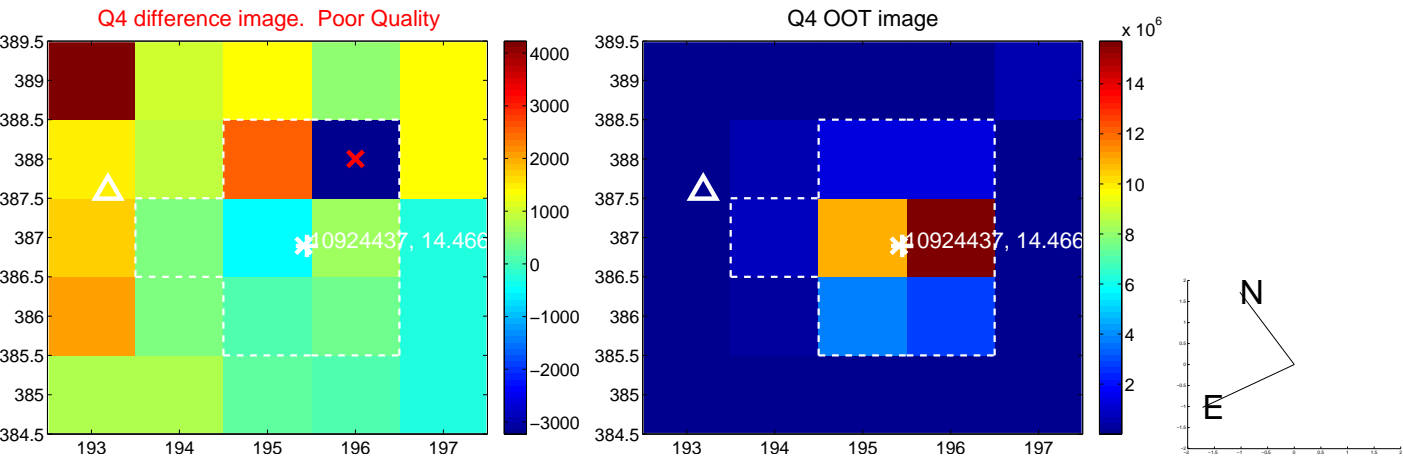
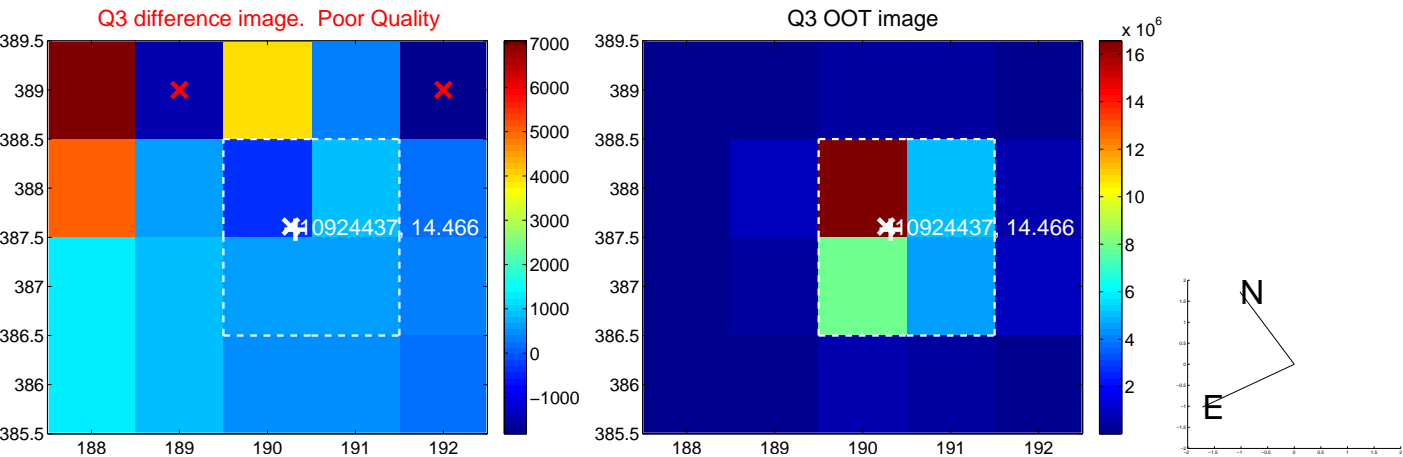
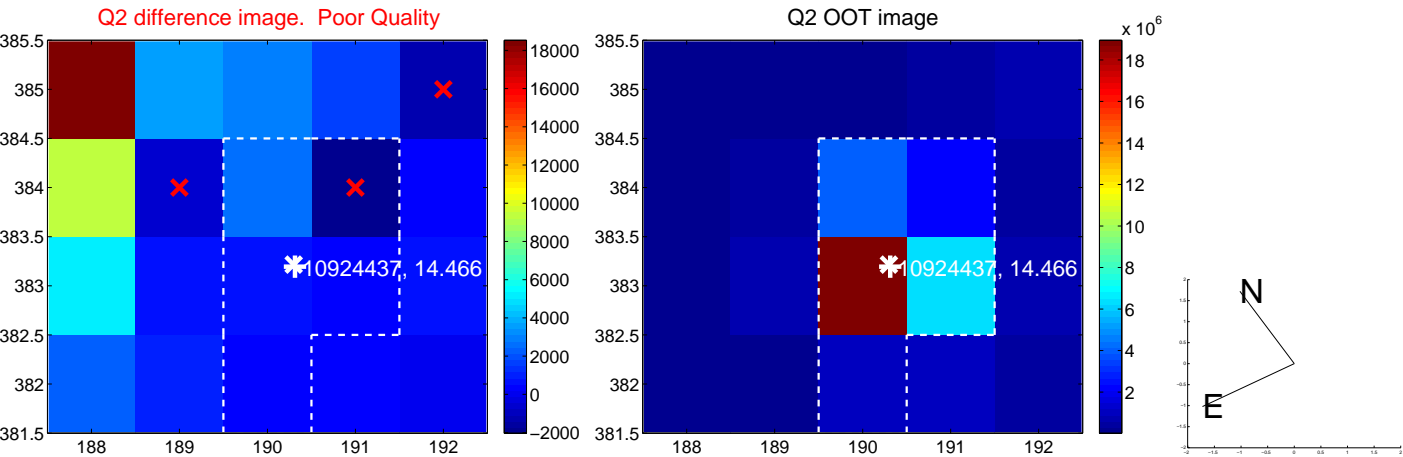
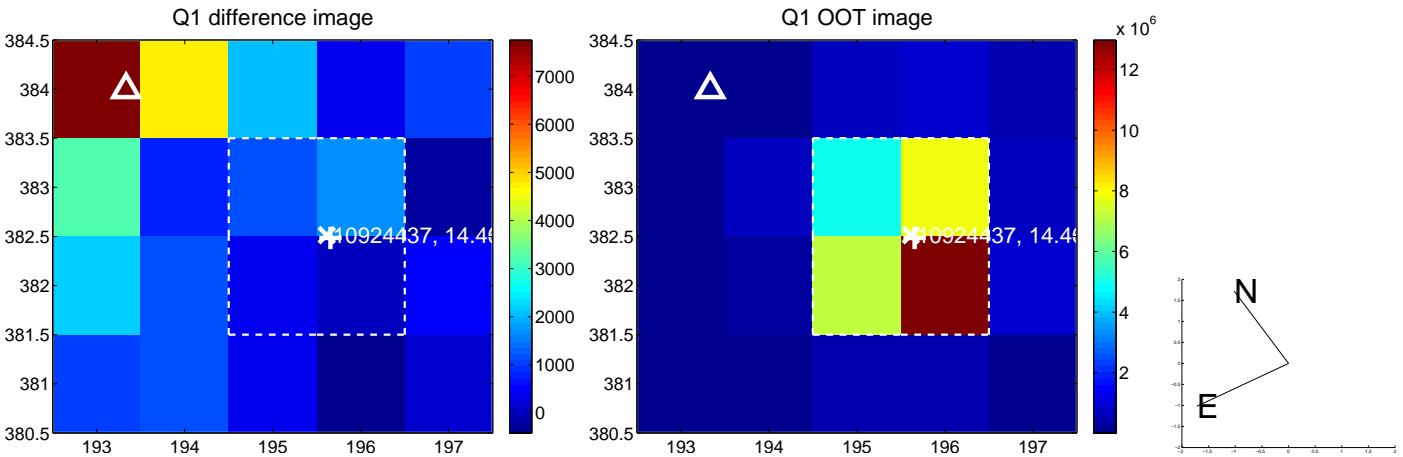
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.001 ± 0.903	12.18	4.752 ± 0.918	9.922 ± 0.672
PRF-fit source offset from KIC position	10.839 ± 0.769	14.10	4.650 ± 0.814	9.791 ± 0.620
photometric centroid source offset	2.81 ± 1.49	1.88	1.36 ± 1.66	2.46 ± 1.44

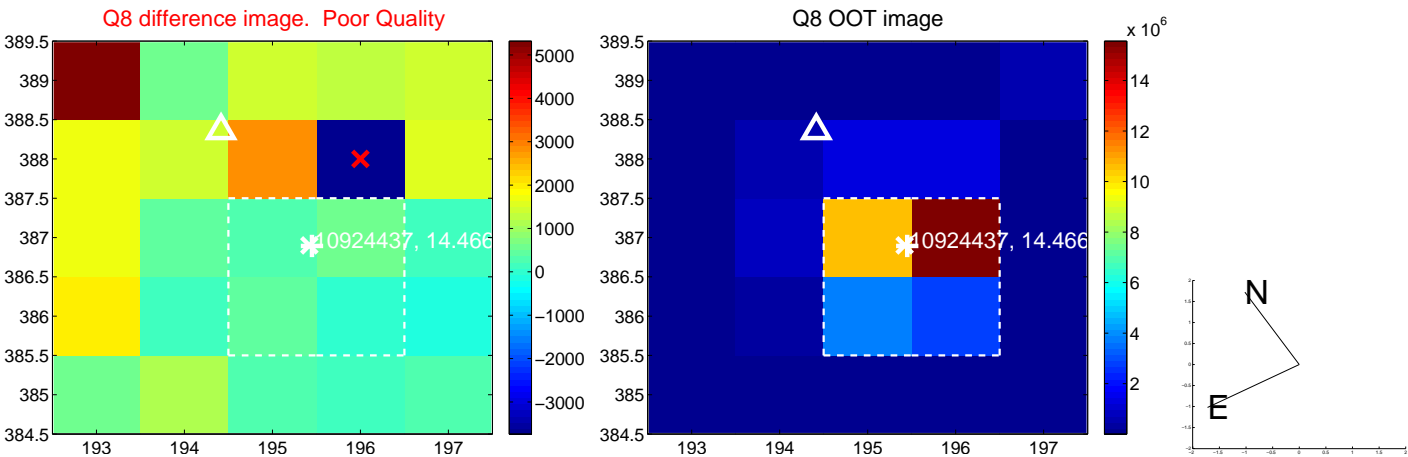
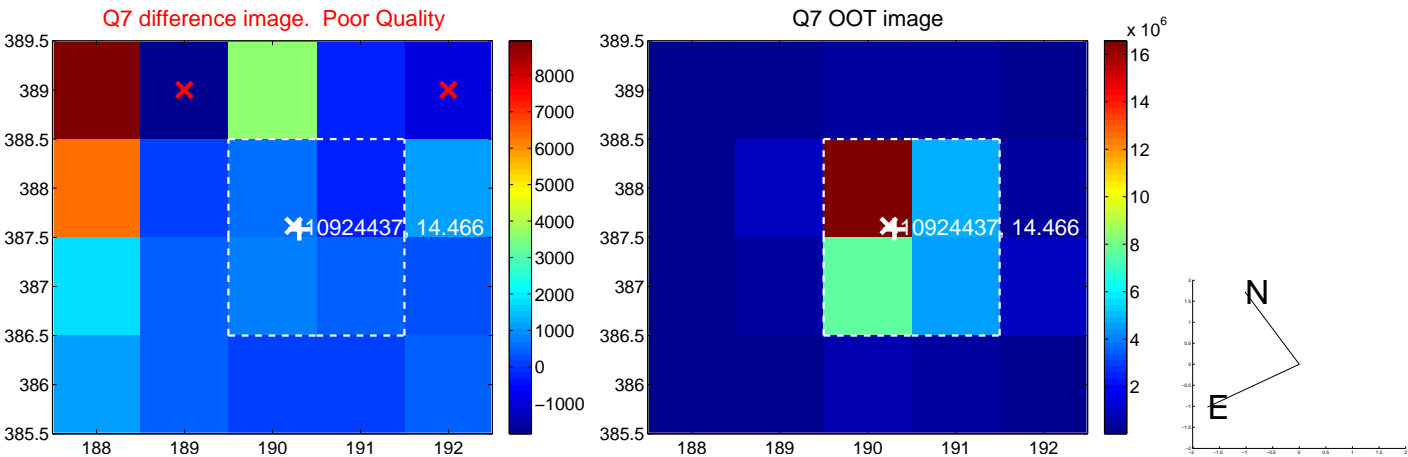
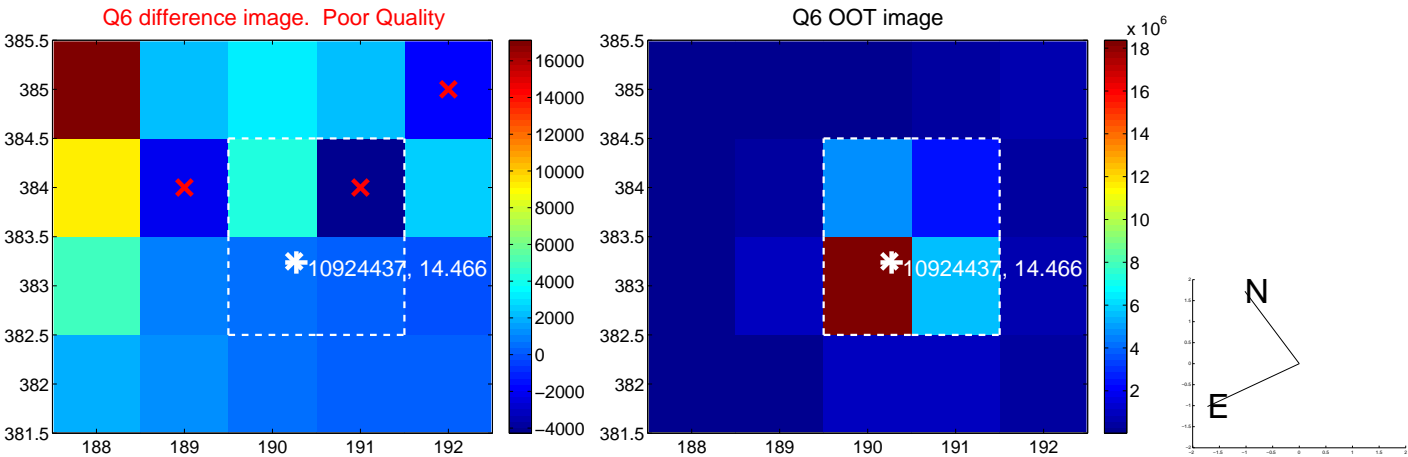
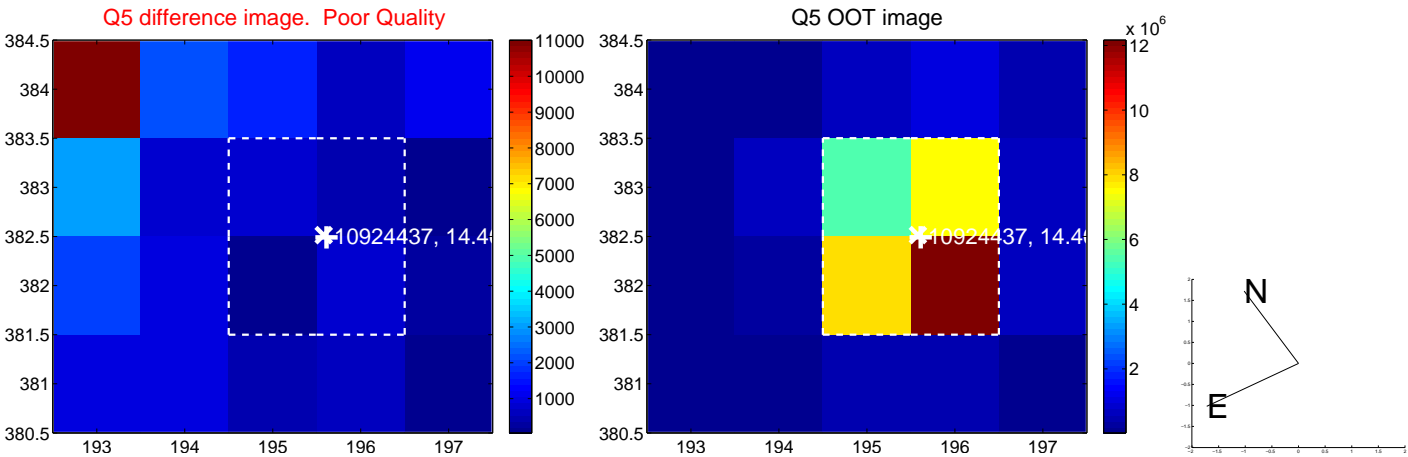


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

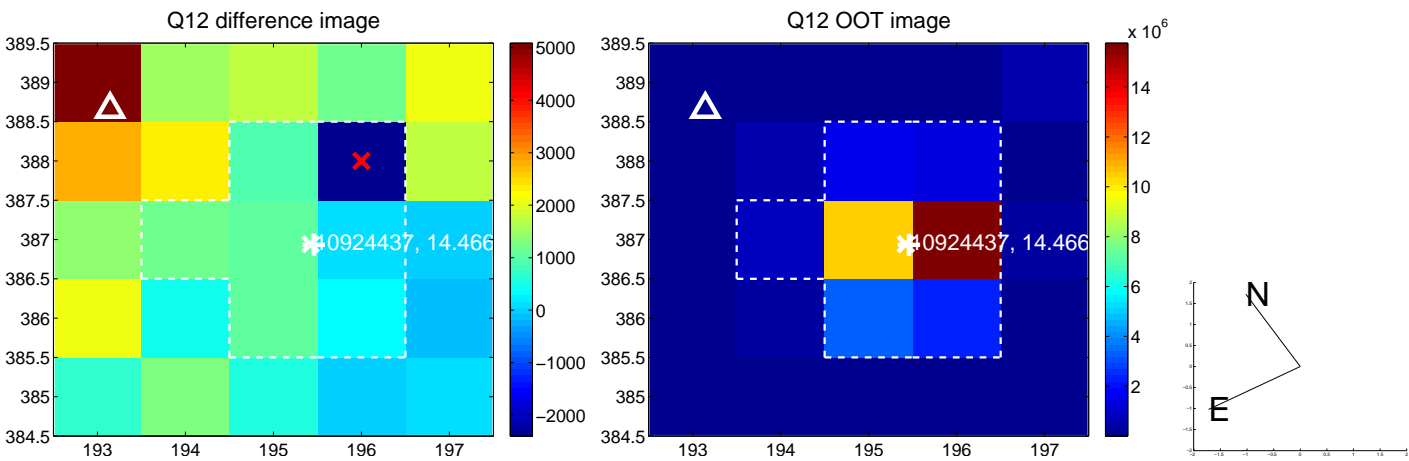
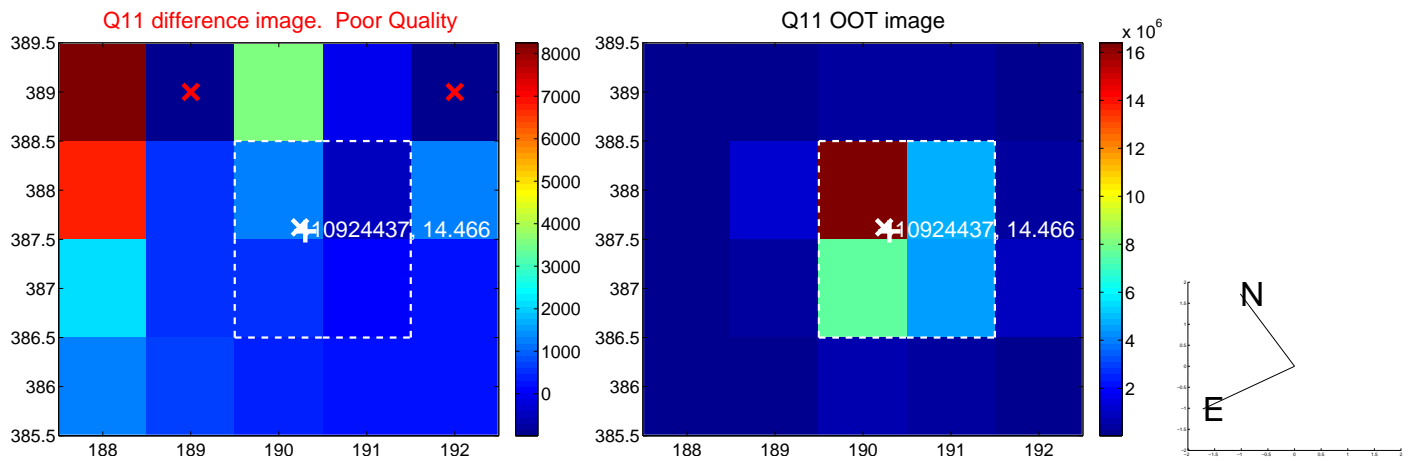
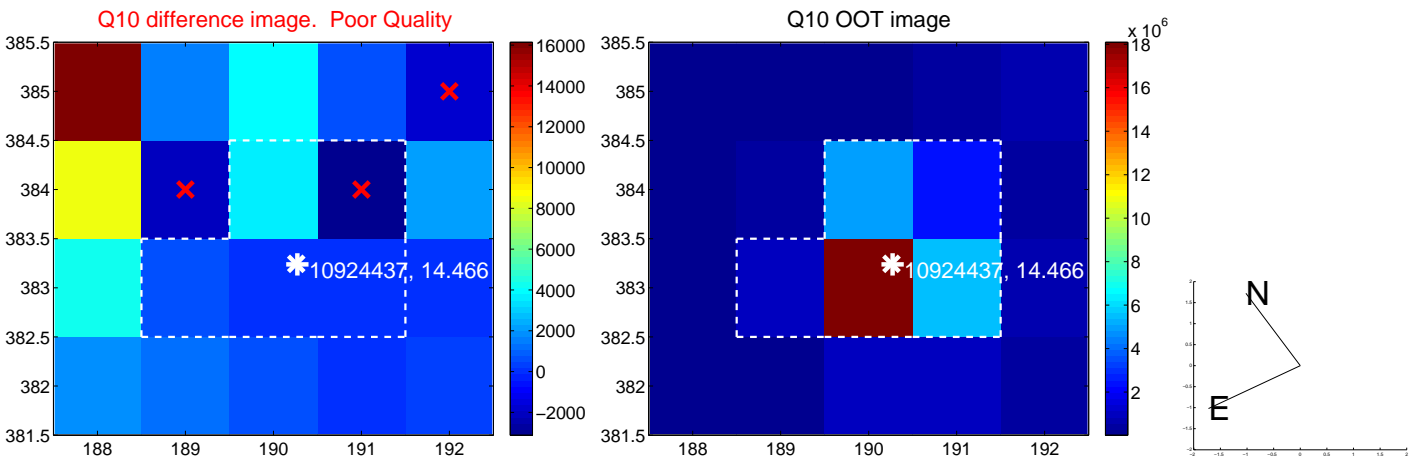
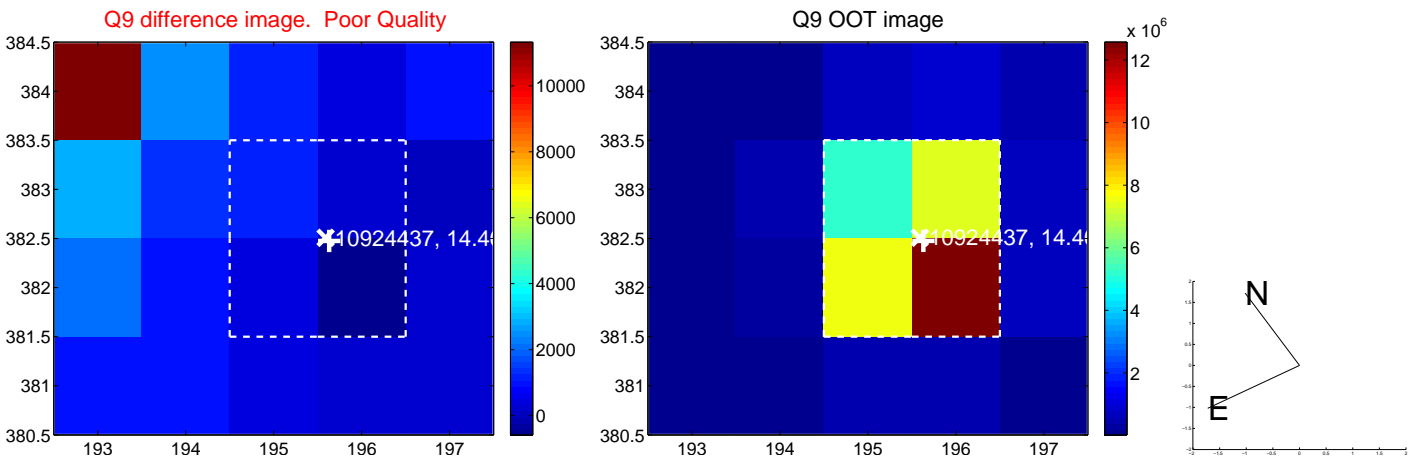
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



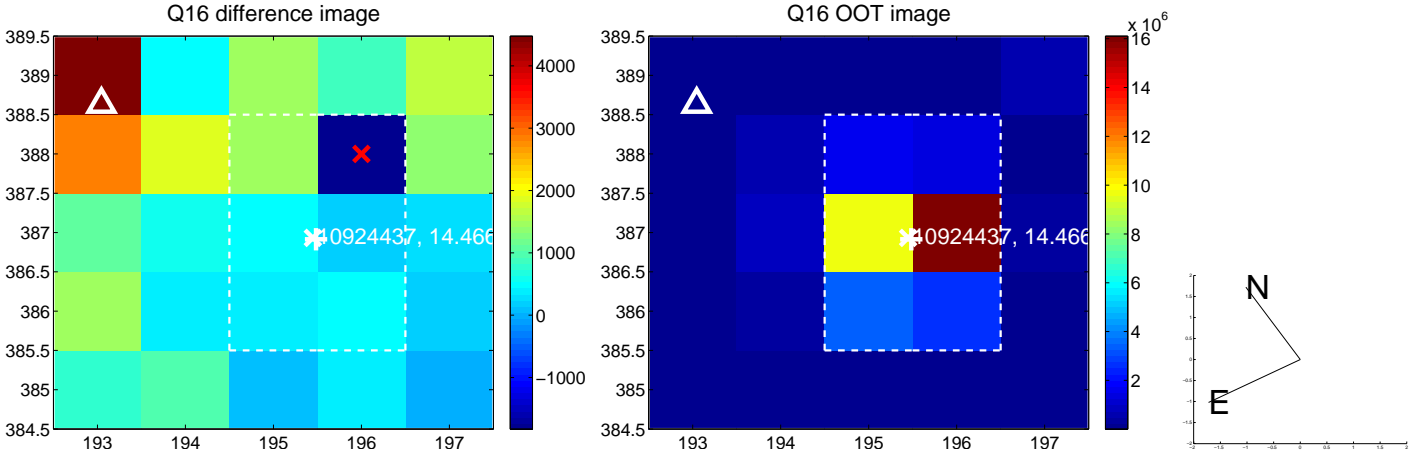
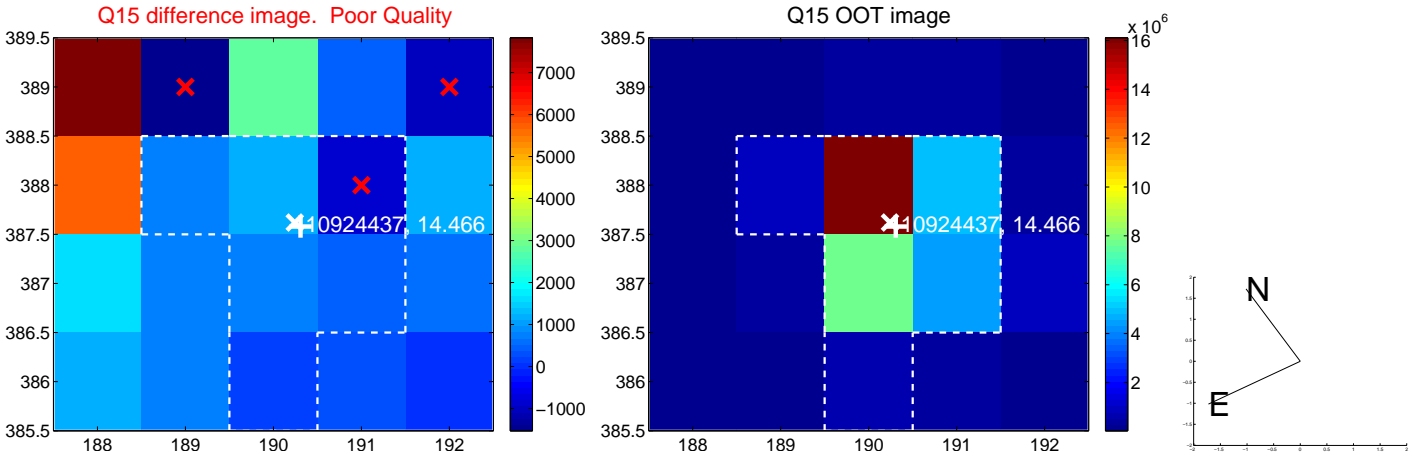
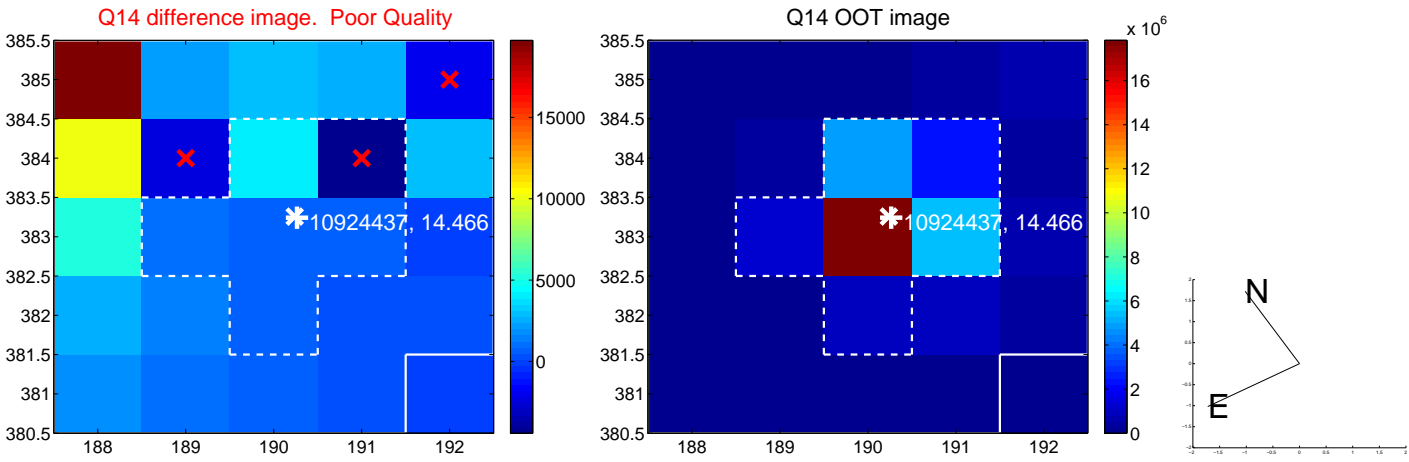
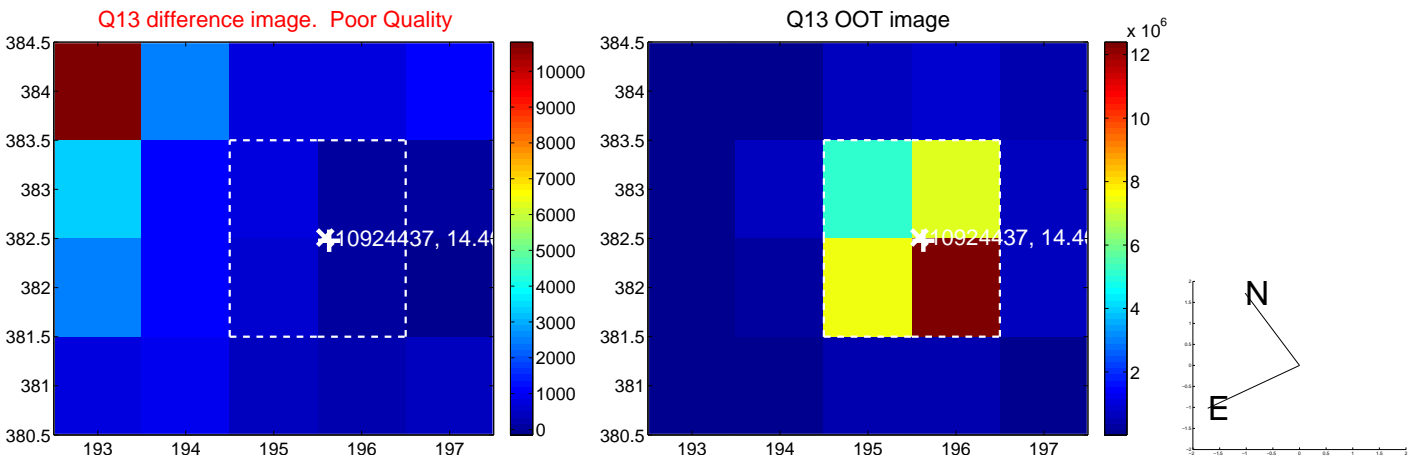
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



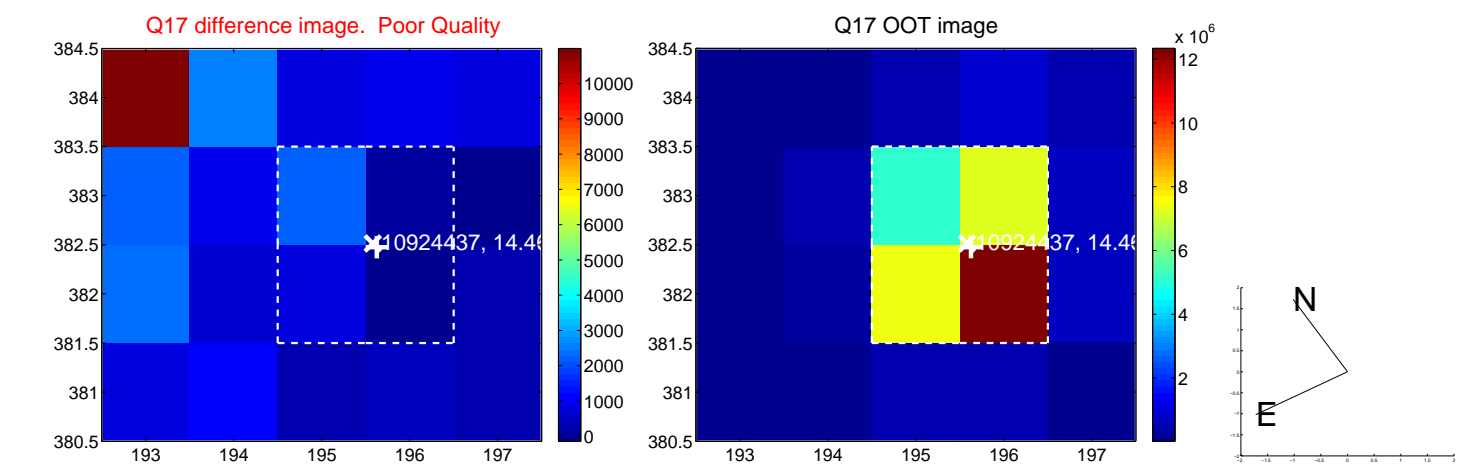
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



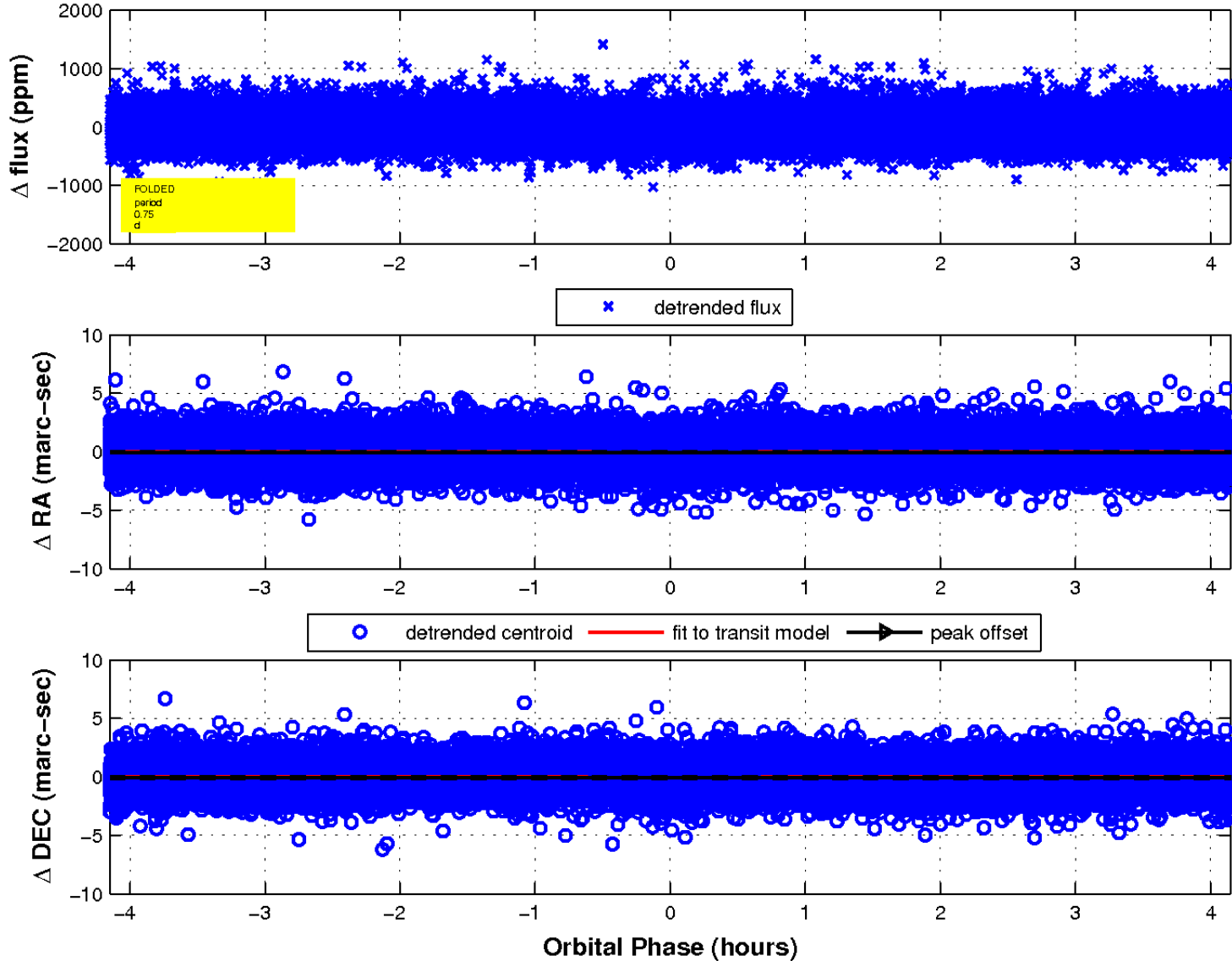
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

