

KIC 008630973

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})
008630973-01	OBS	No	1.012124	131.956843	42.0	1.507	8.1	6.1	0.70	4848	0.48	752.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008630973-01	OBS	FP	0.00	1	0	0	1	LPP_DV—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.

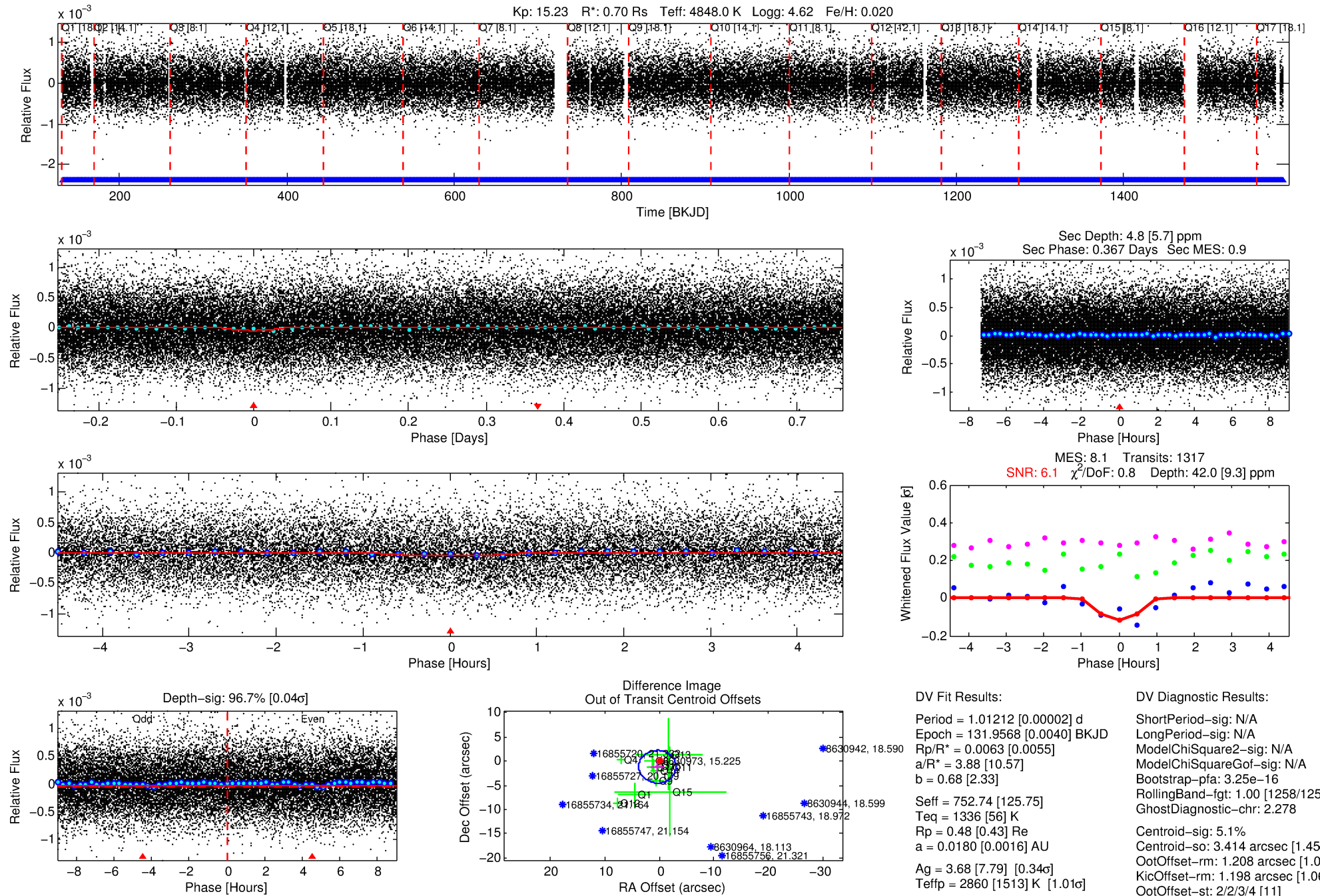
Ephemeris Match Information For 008630973-01

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
008630973-01	8630973	008565912-pri	8565912	1:1	253.5	64	0	14.71	15.22	7709.50	Col-Anomaly	0	4.53	3.40

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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

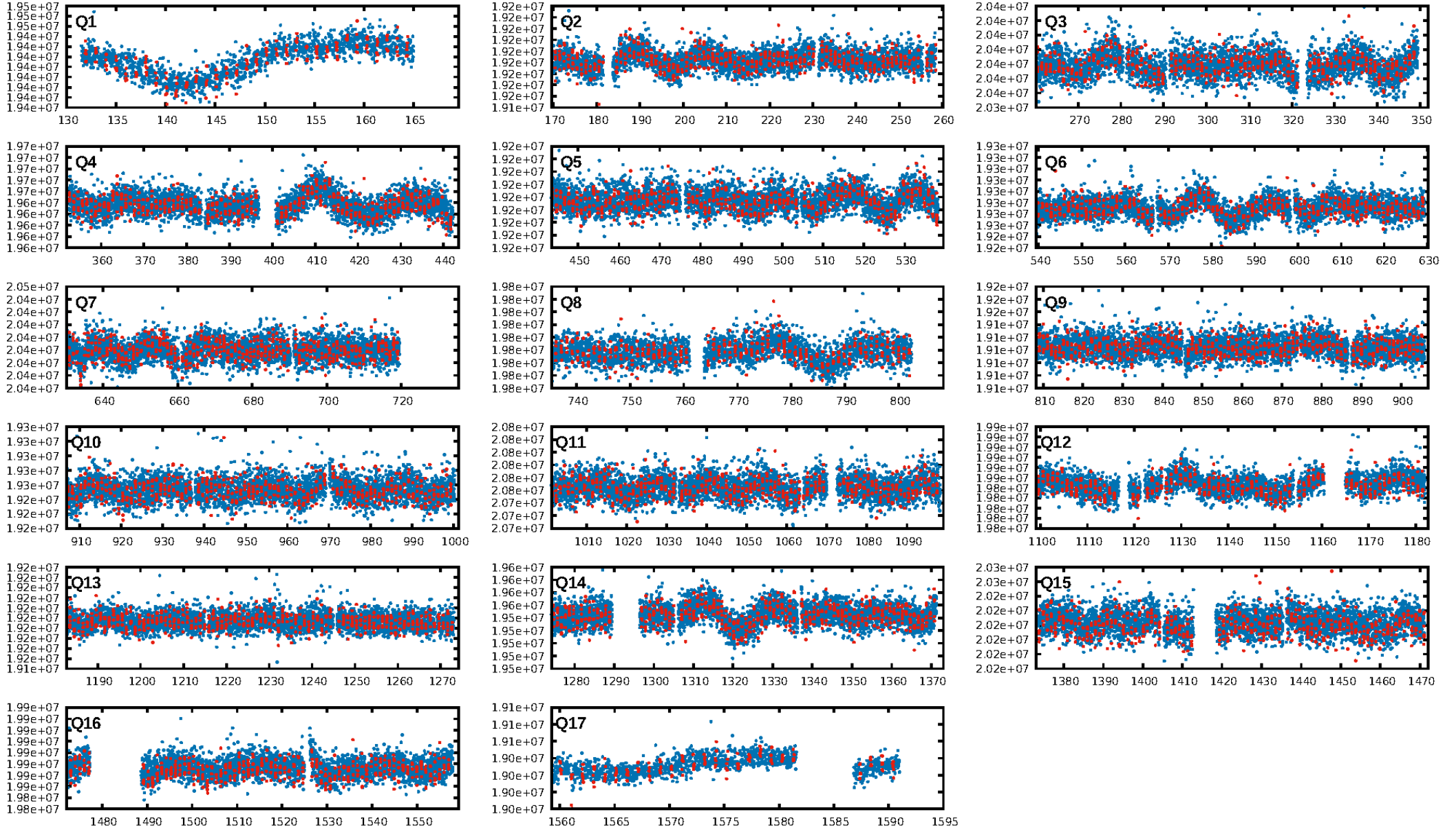
KIC: 8630973 Candidate: 1 of 1 Period: 1.012 d



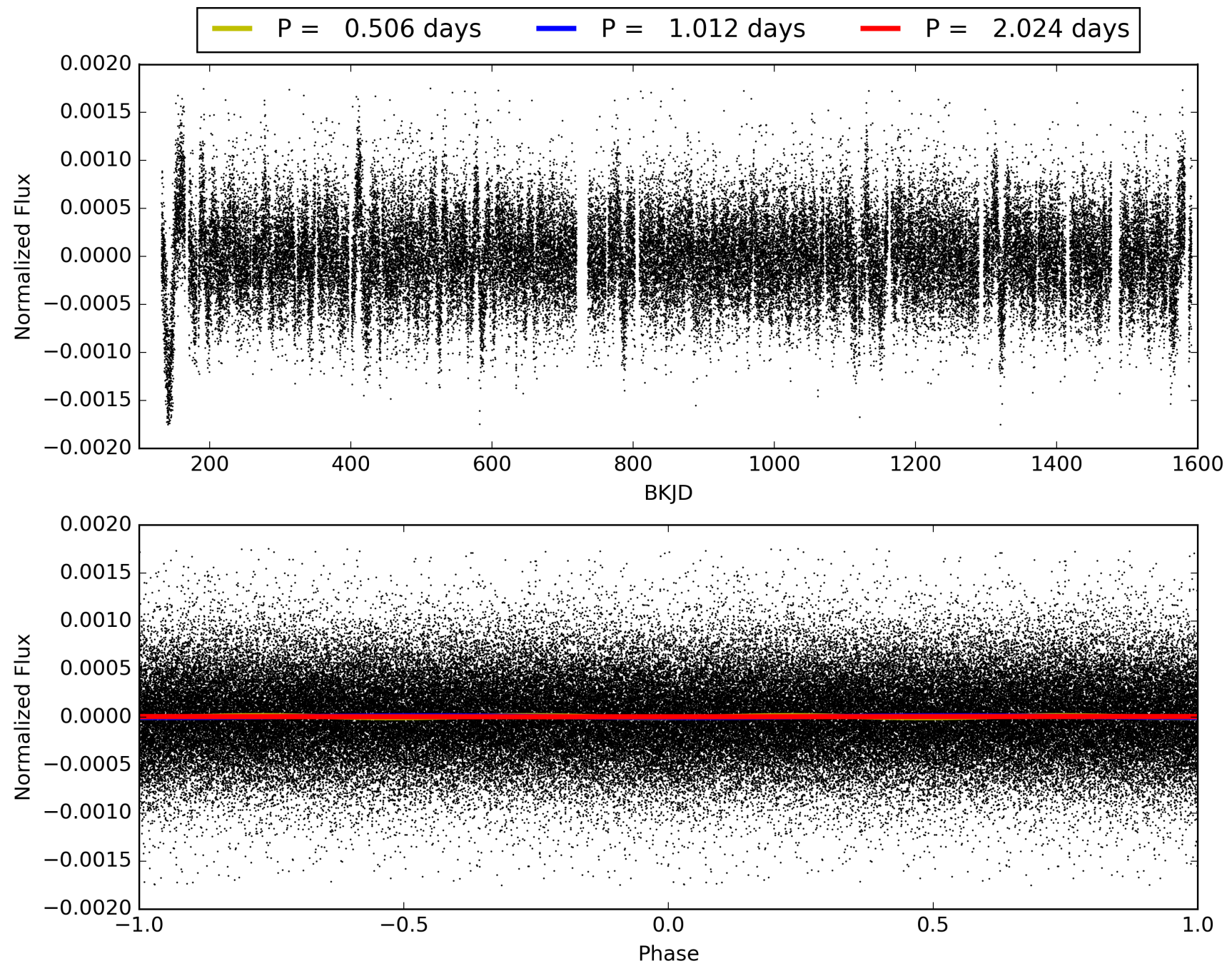
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:17:52 Z

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

TCE 008630973-01, PDC Light Curves

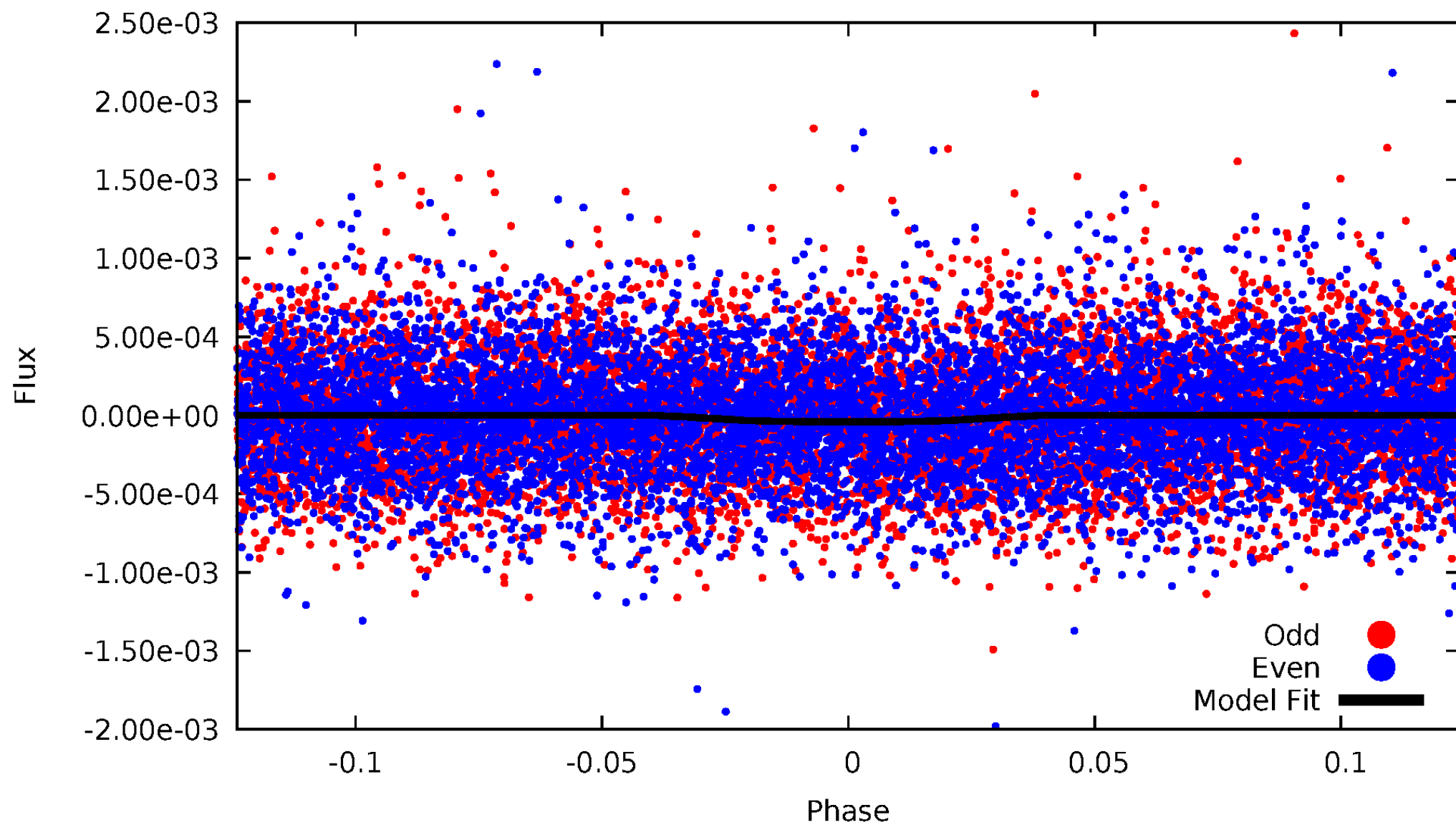


TCE 008630973-01



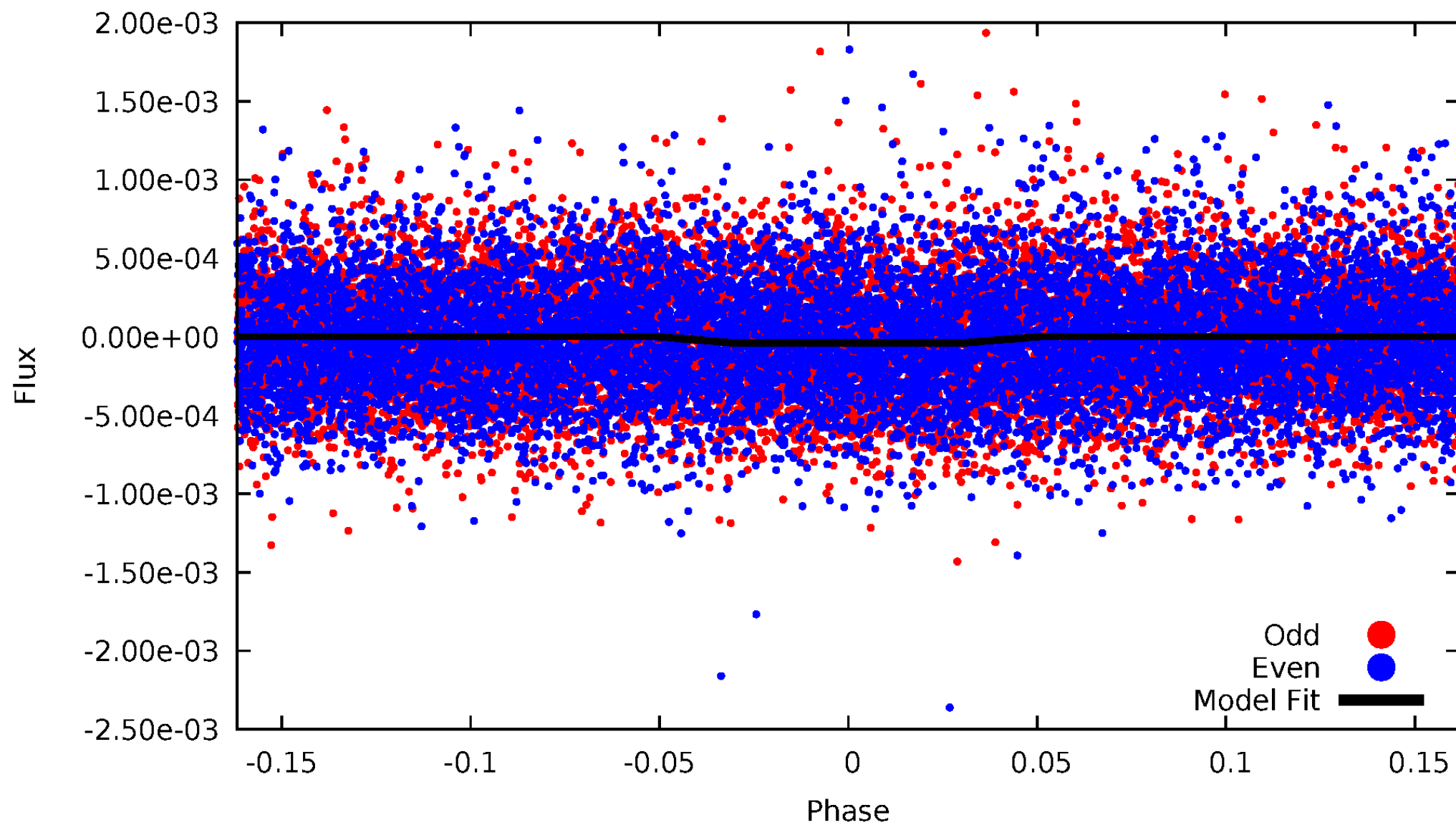
DV Odd/Even

TCE 008630973-01



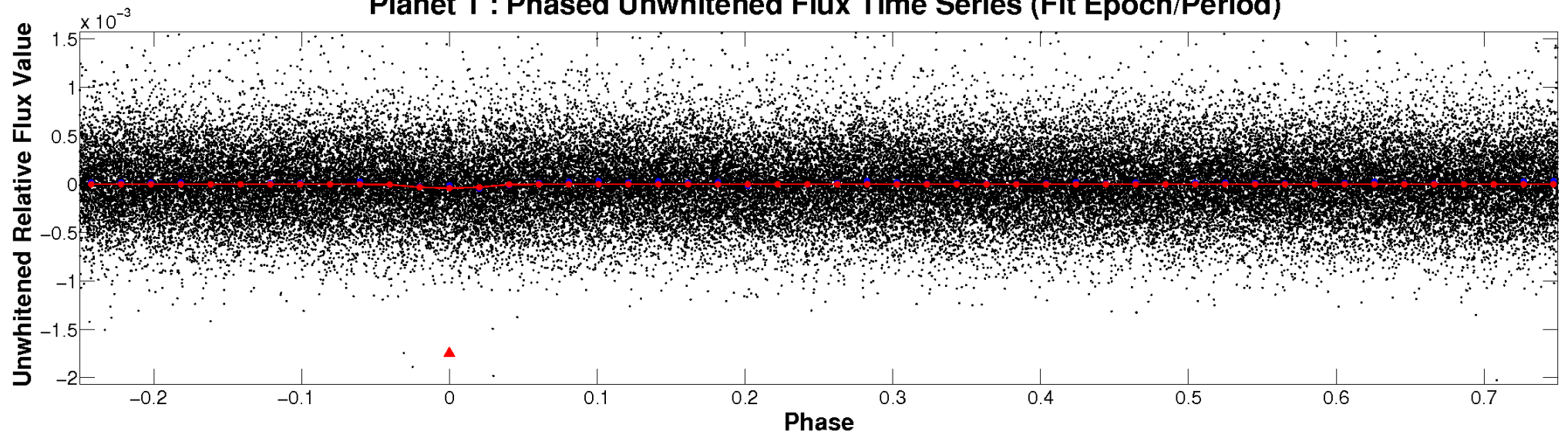
ALT Odd/Even

TCE 008630973-01

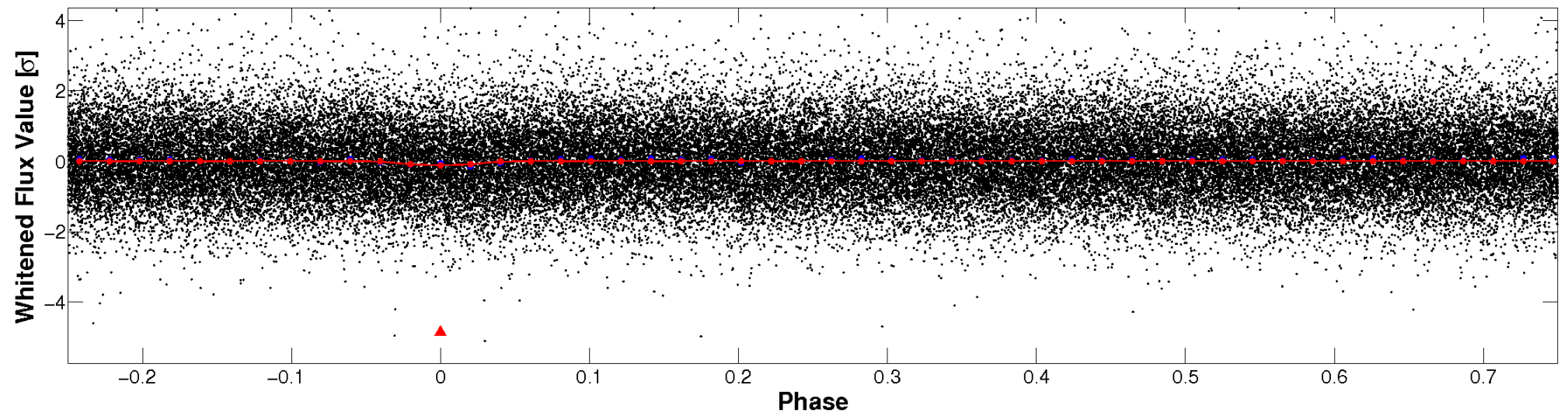


Non-Whitened Vs. Whitened Light Curve

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

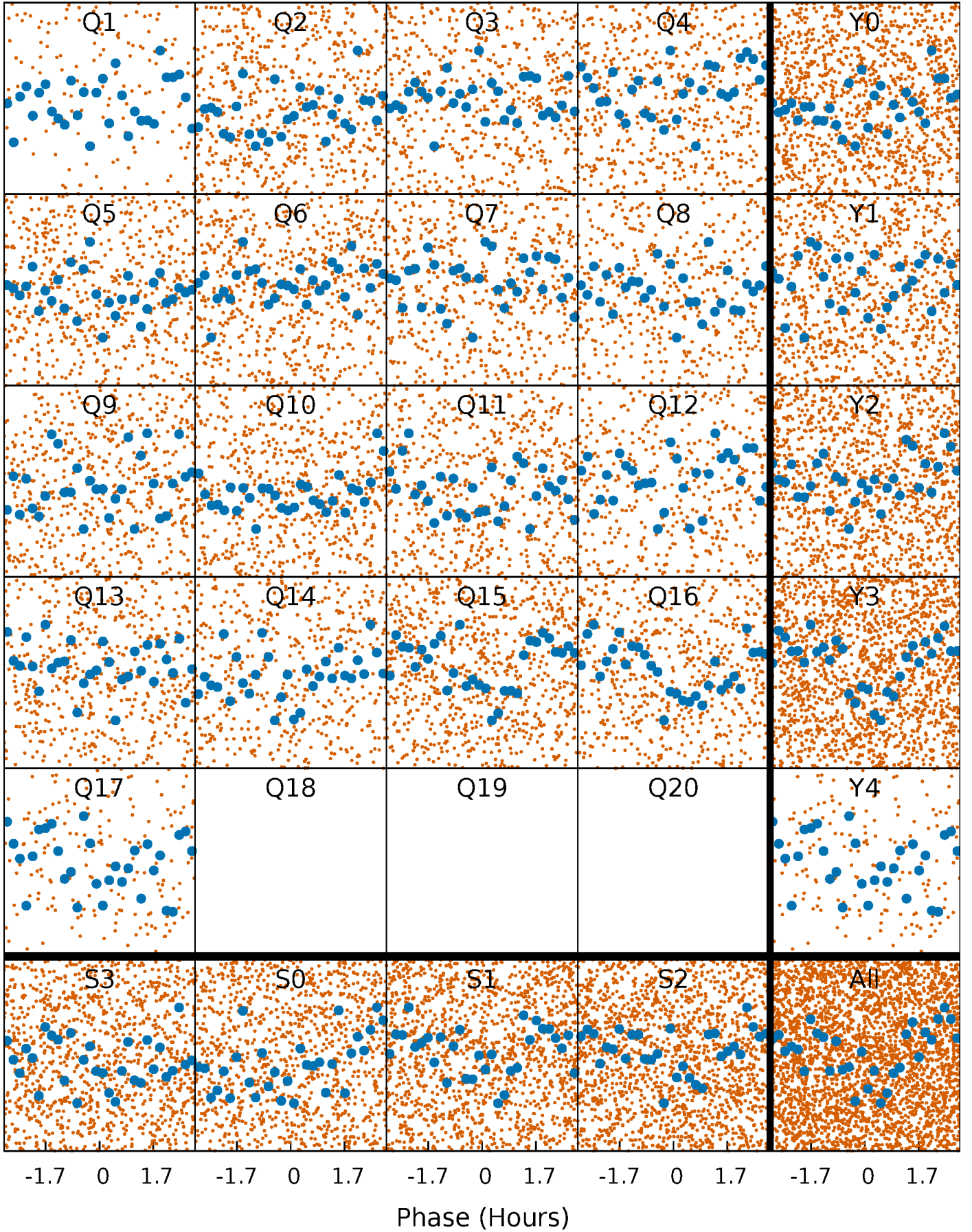


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



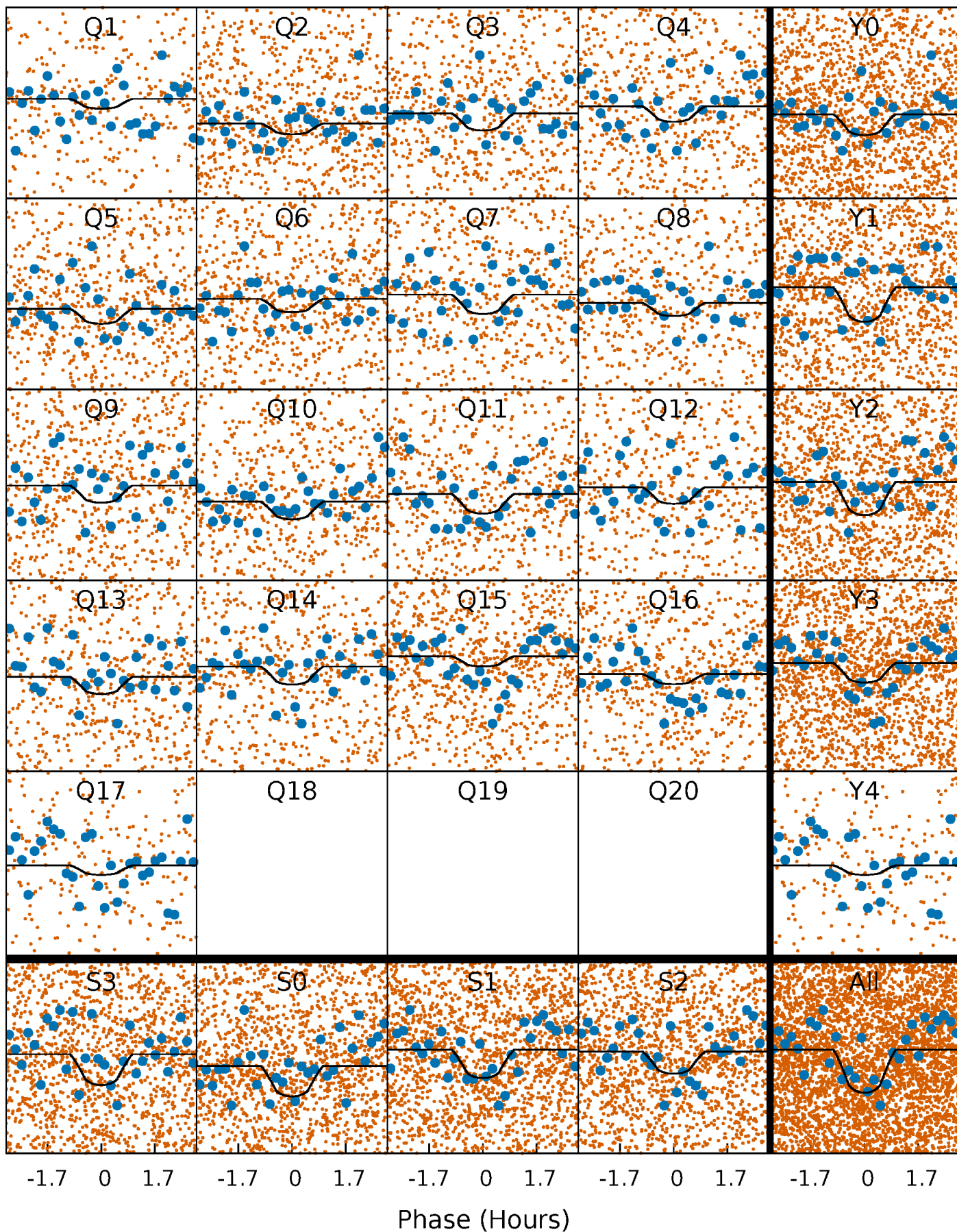
PDC Quarter-Phased Transit Curves

TCE 008630973-01 P= 1.012124 Days $T_0=131.956842$ (BKJD)



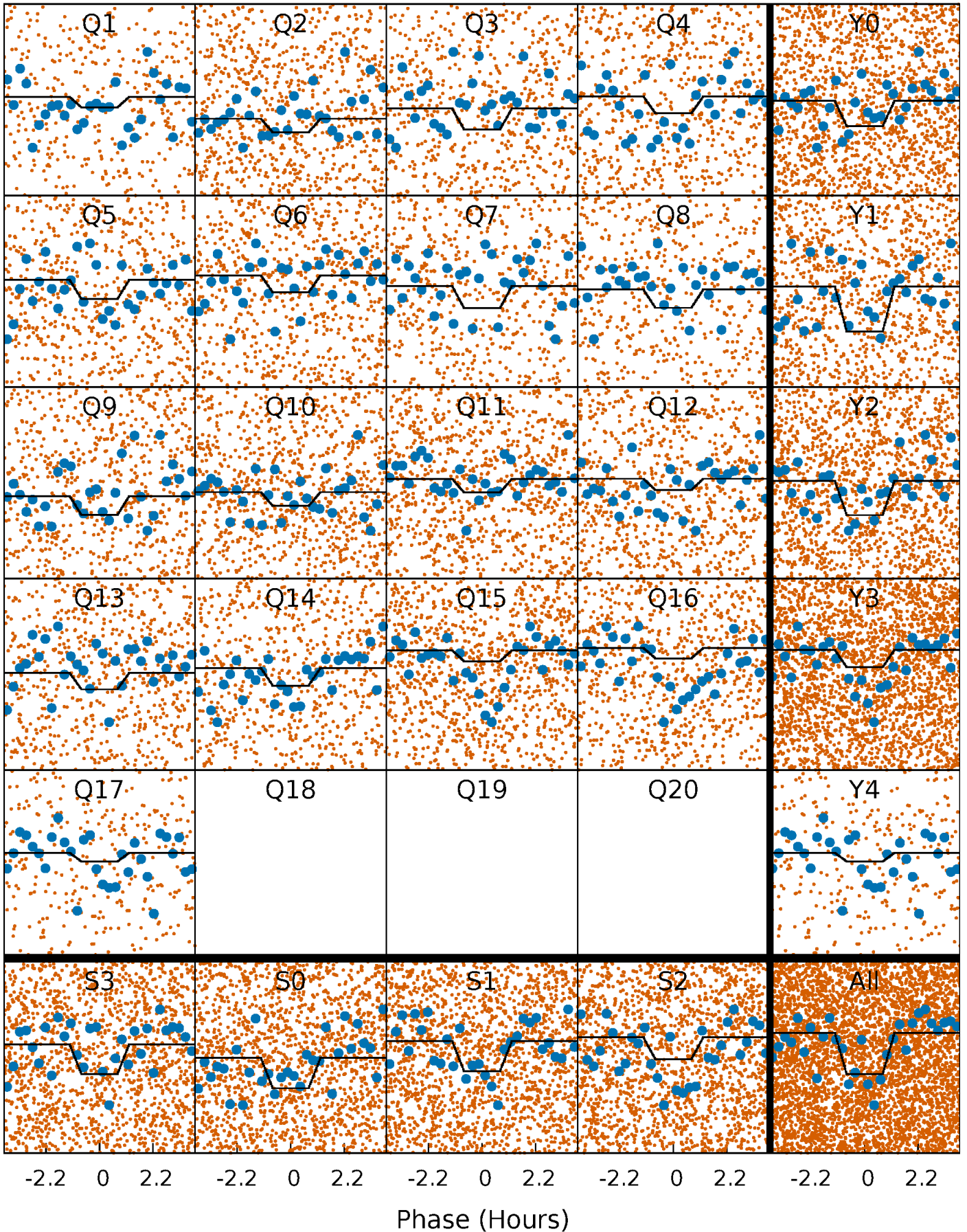
DV Quarter-Phased Transit Curves

TCE 008630973-01 P= 1.012124 Days $T_0=131.956842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

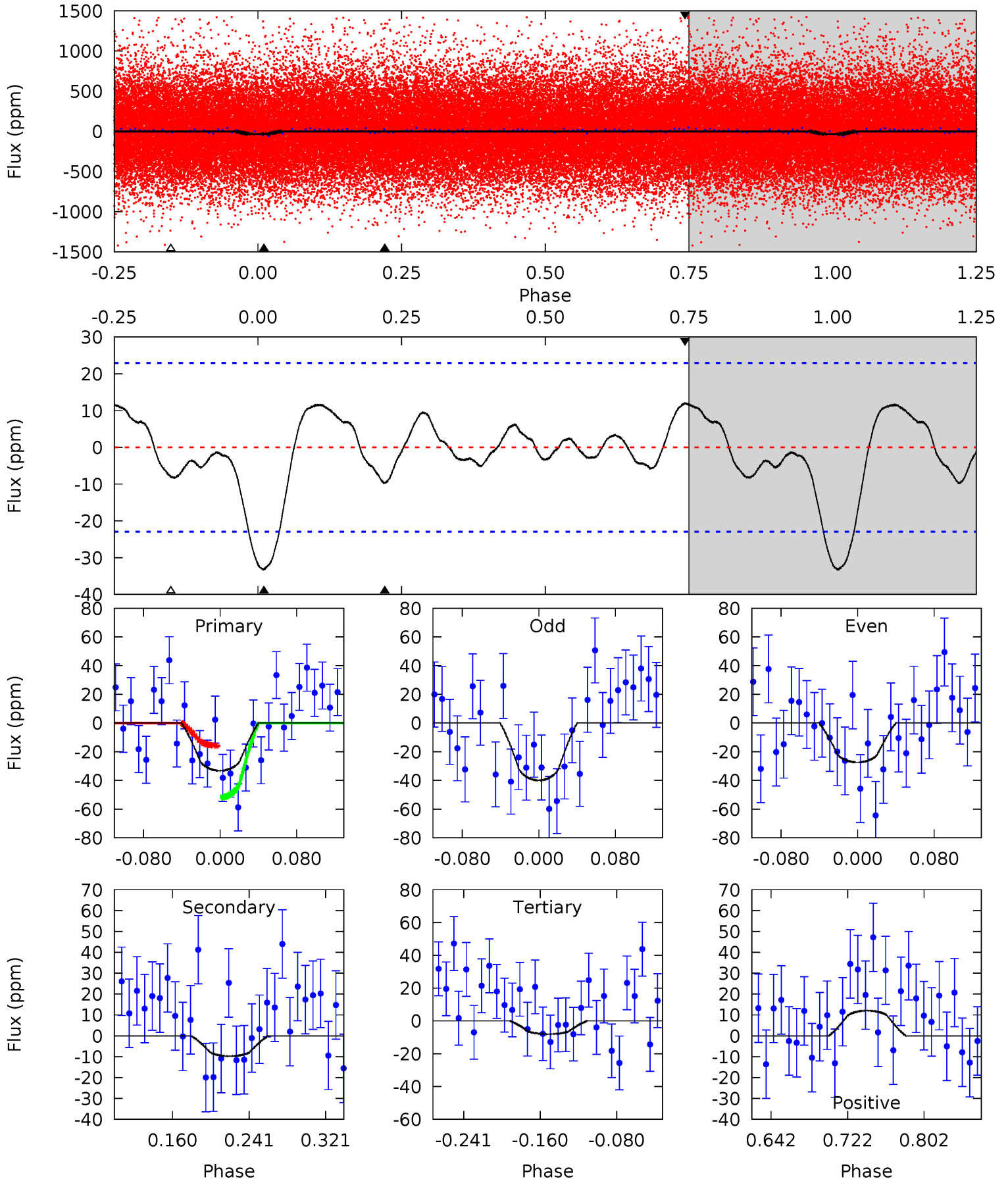
TCE 008630973-01 P= 1.012126 Days $T_0=131.956222$ (BKJD)



DV Model-Shift Uniqueness Test

008630973-01, P = 1.012124 Days, E = 130.944718 Days

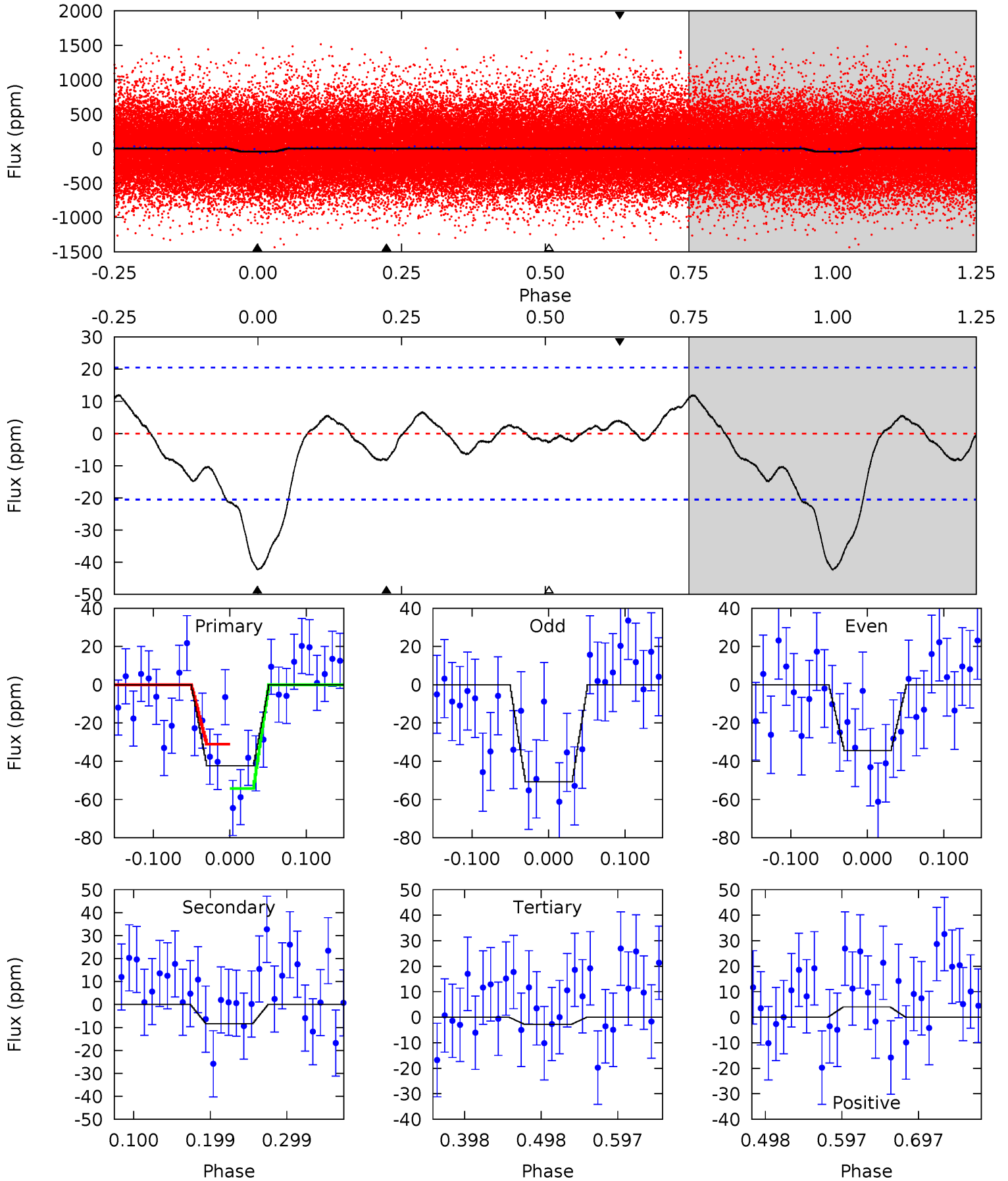
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.69	1.96	1.62	2.42	4.61	1.75	1.10	5.07	4.26	0.35	-0.46	1.26	0.86	0.27	3.62



Alt Model-Shift Uniqueness Test

008630973-01, P = 1.012126 Days, E = 130.944096 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.43	1.86	0.63	0.91	4.57	1.65	1.21	8.80	8.52	1.24	0.95	1.82	1.04	0.22	2.57



Stellar Parameters For KIC 008630973

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4848^{+129}_{-143}	$4.625^{+0.024}_{-0.060}$	$0.020^{+0.250}_{-0.300}$	$0.701^{+0.078}_{-0.048}$	$0.790^{+0.047}_{-0.080}$	$3.231^{+0.406}_{-0.781}$
	+3%/-3%	+1%/-1%	+1250%/-1500%	+11%/-7%	+6%/-10%	+13%/-24%
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 008630973-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 5	$0.58^{+0.41}_{-0.37}$	1880^{+70}_{-62}	3466^{+1518}_{-681}	$4.982^{+28.583}_{-3.668}$
Alt.	-8 ± 4	$0.56^{+0.41}_{-0.35}$	1886^{+63}_{-64}	3407^{+1535}_{-650}	$4.357^{+27.510}_{-3.137}$

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

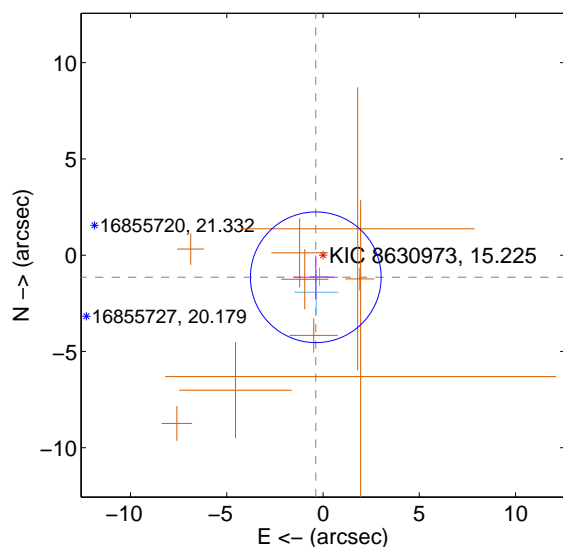
Supplemental centroid analysis for 008630973-01. Kepler magnitude: 15.22. Transit SNR 6.06

There are 2 quarters with good PRF difference image offsets

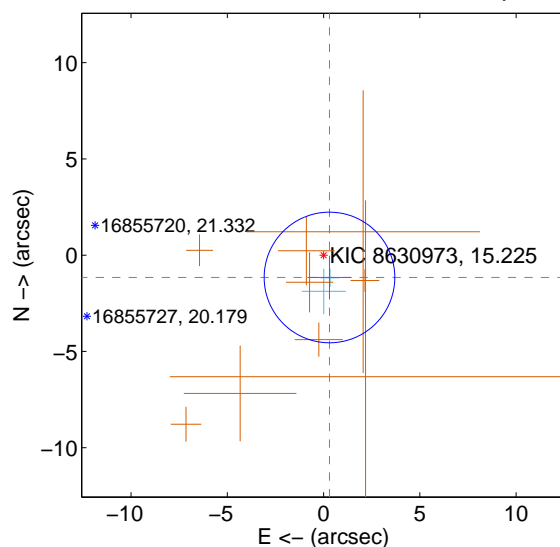
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.208 ± 1.131	1.07	0.376 ± 1.141	-1.148 ± 1.130
PRF-fit source offset from KIC position	1.198 ± 1.131	1.06	-0.306 ± 1.141	-1.158 ± 1.130
photometric centroid source offset	3.41 ± 2.35	1.45	-1.47 ± 2.15	-3.08 ± 2.40

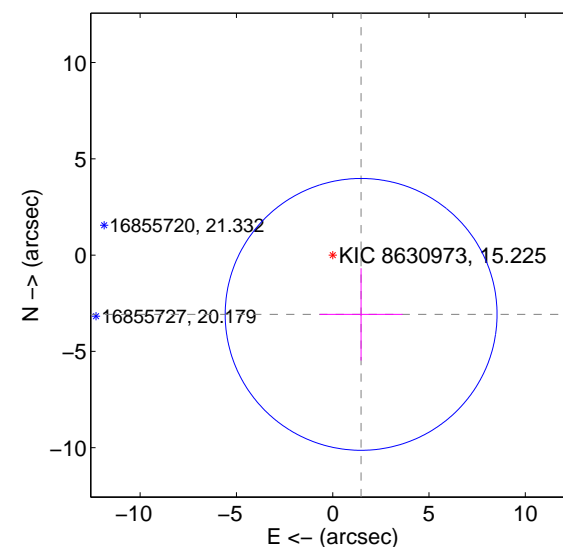
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

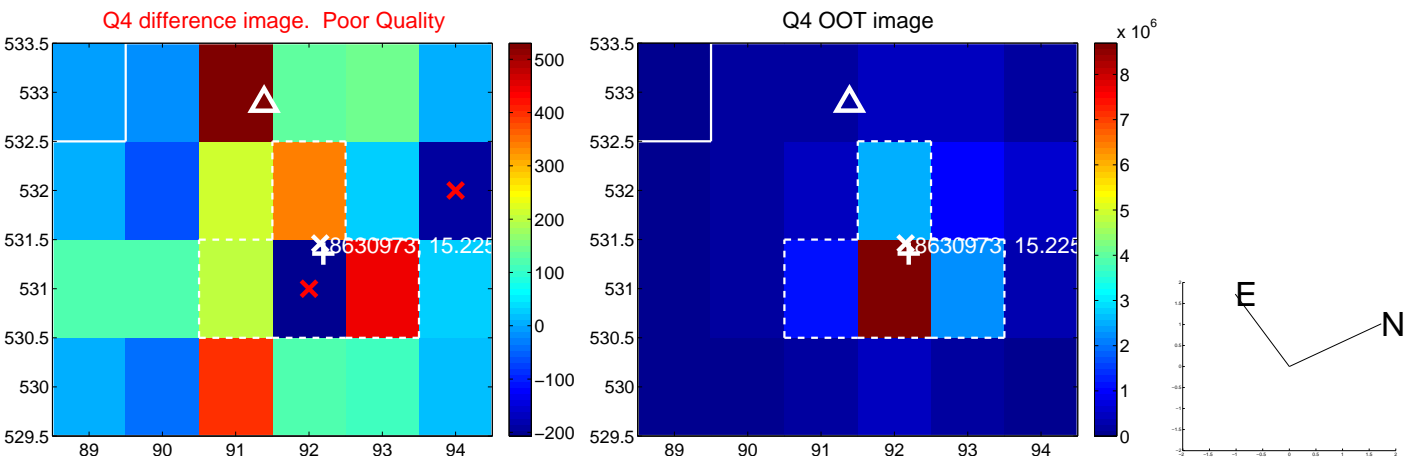
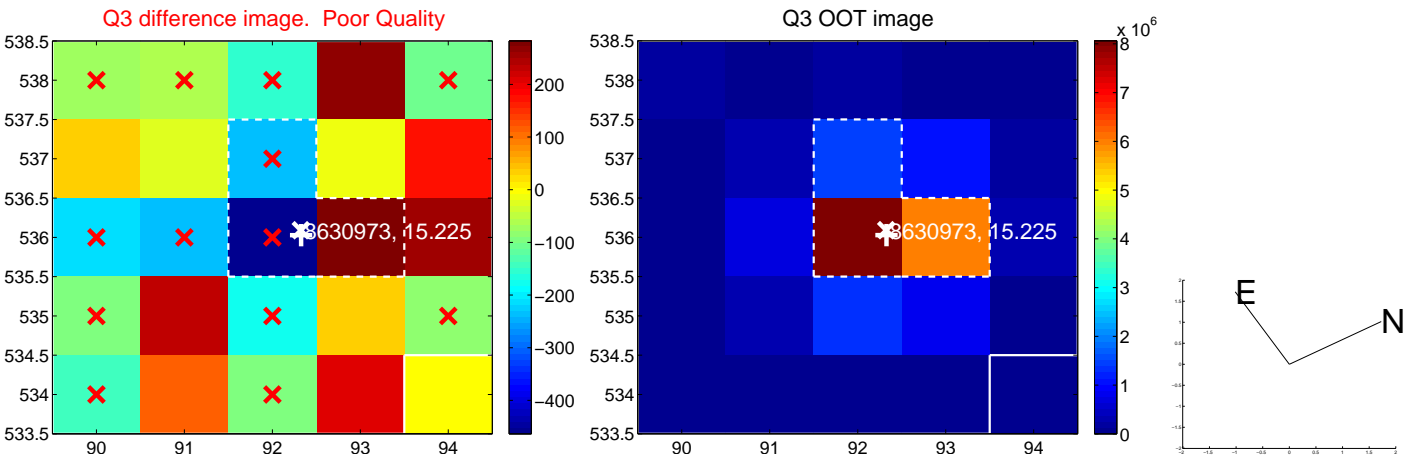
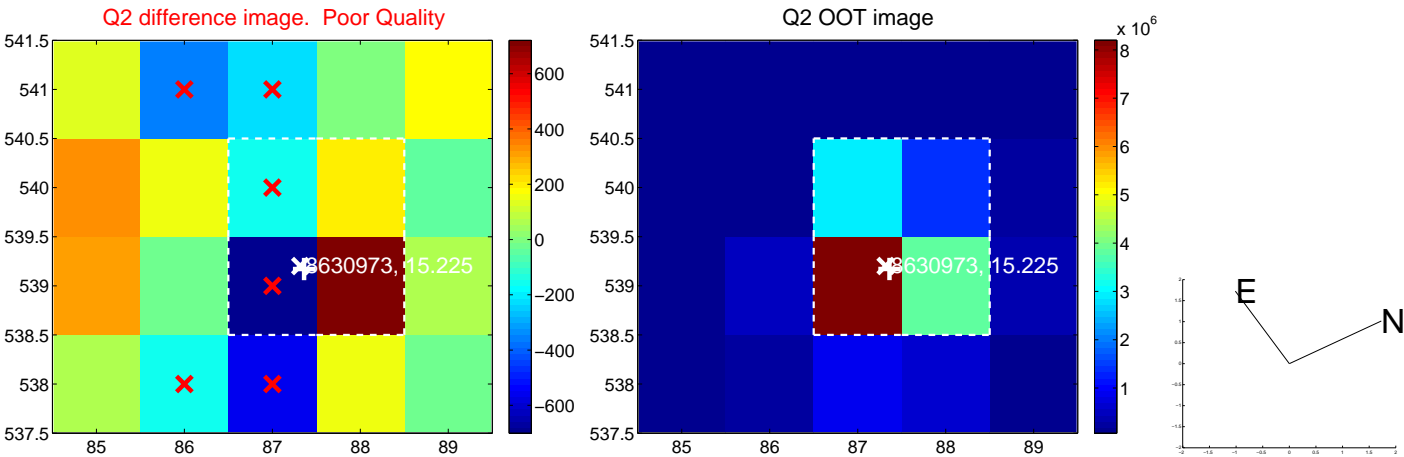
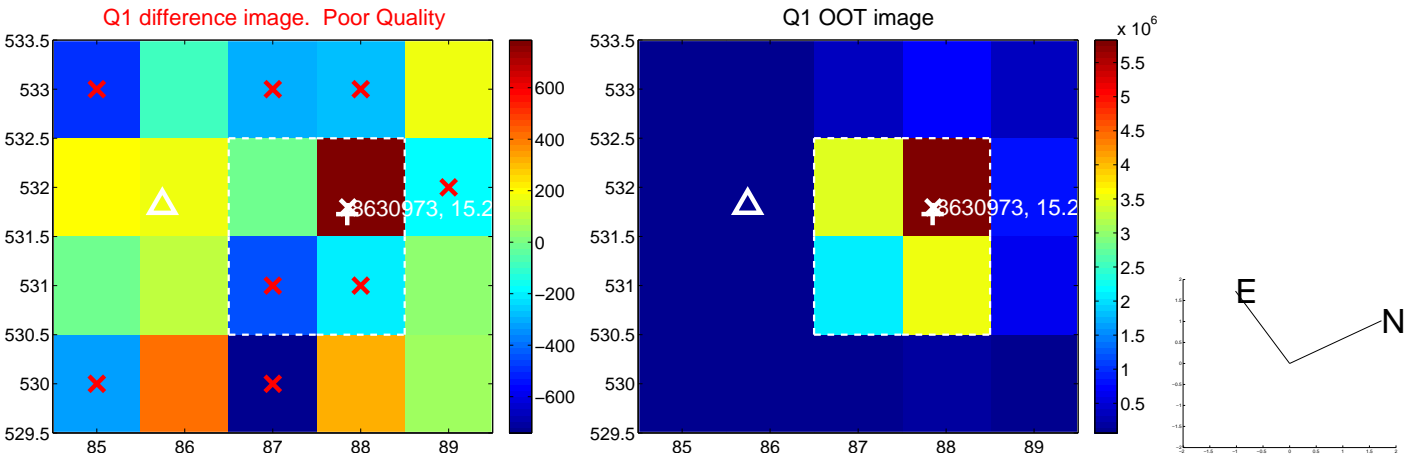


offset from photometric centroids

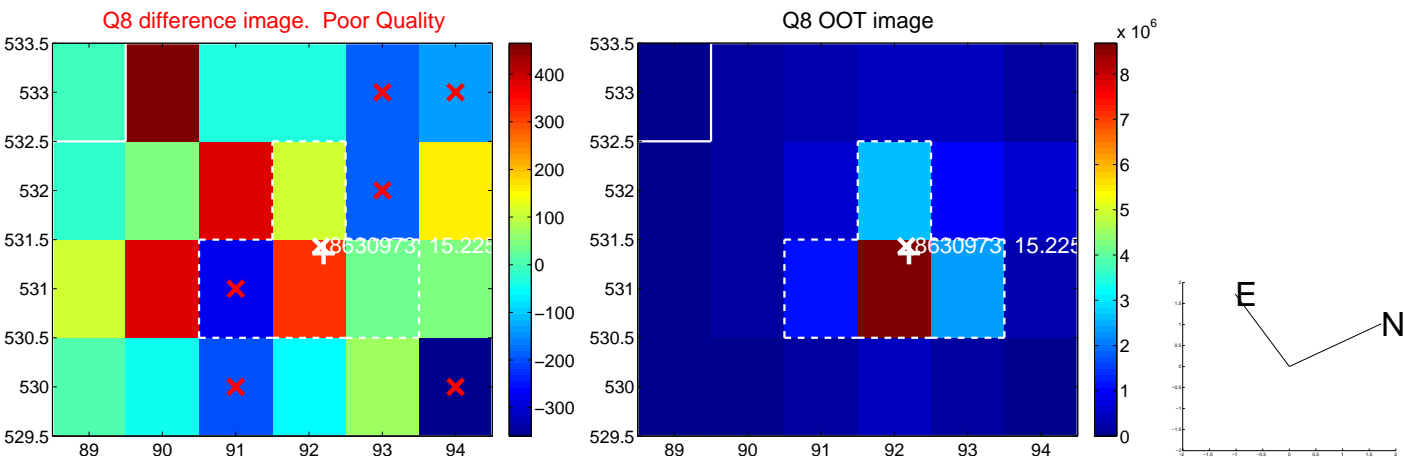
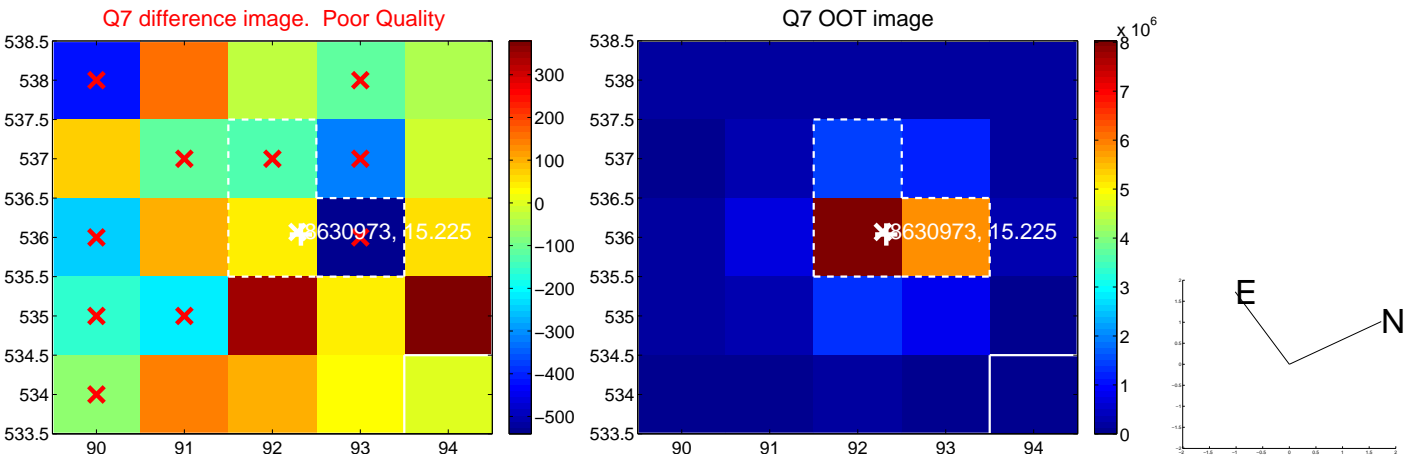
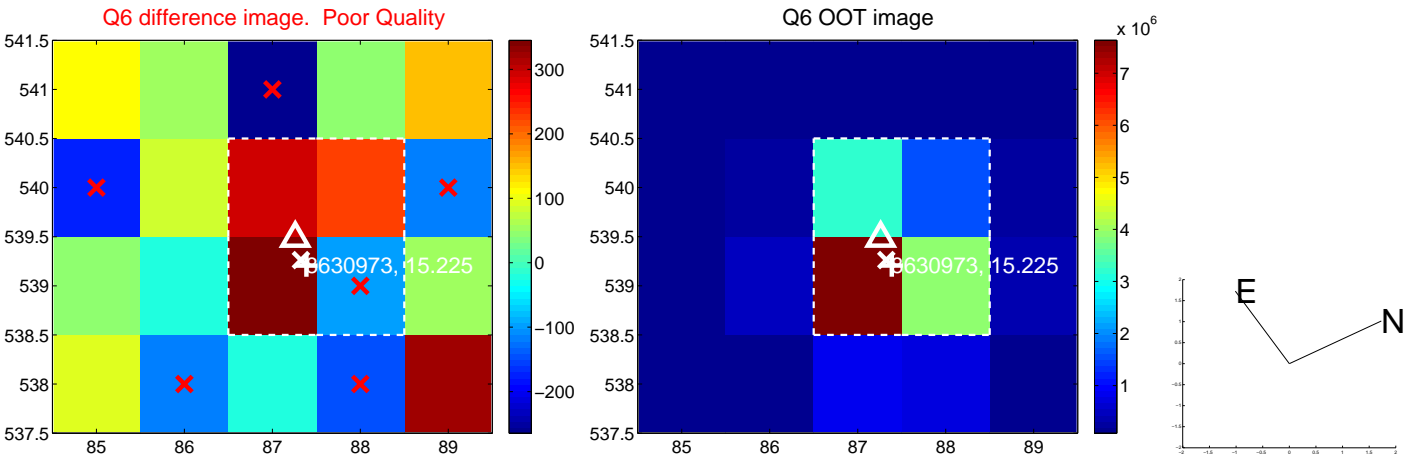
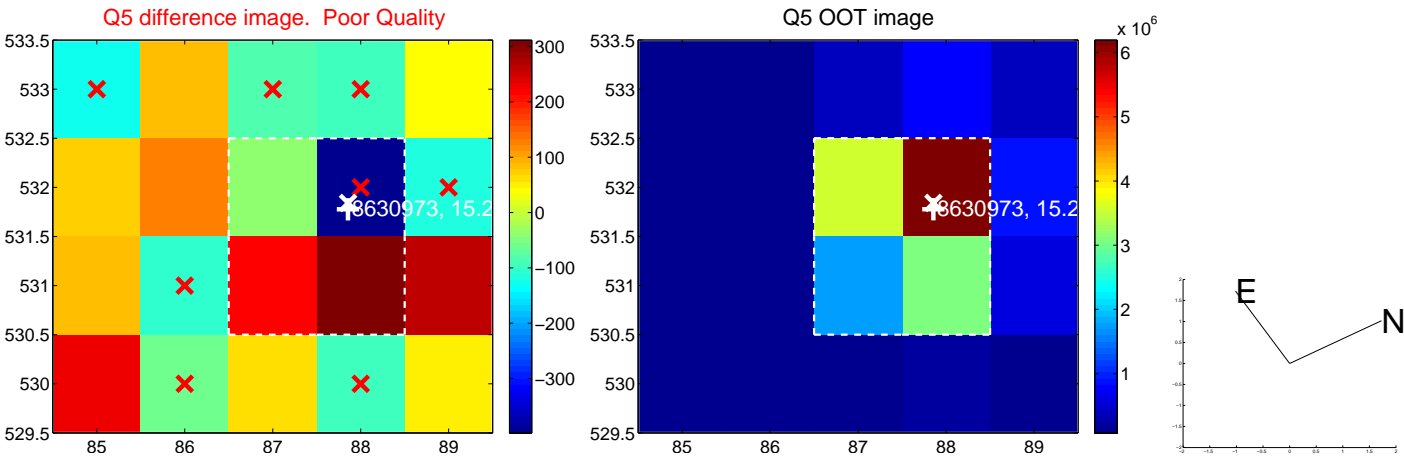


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

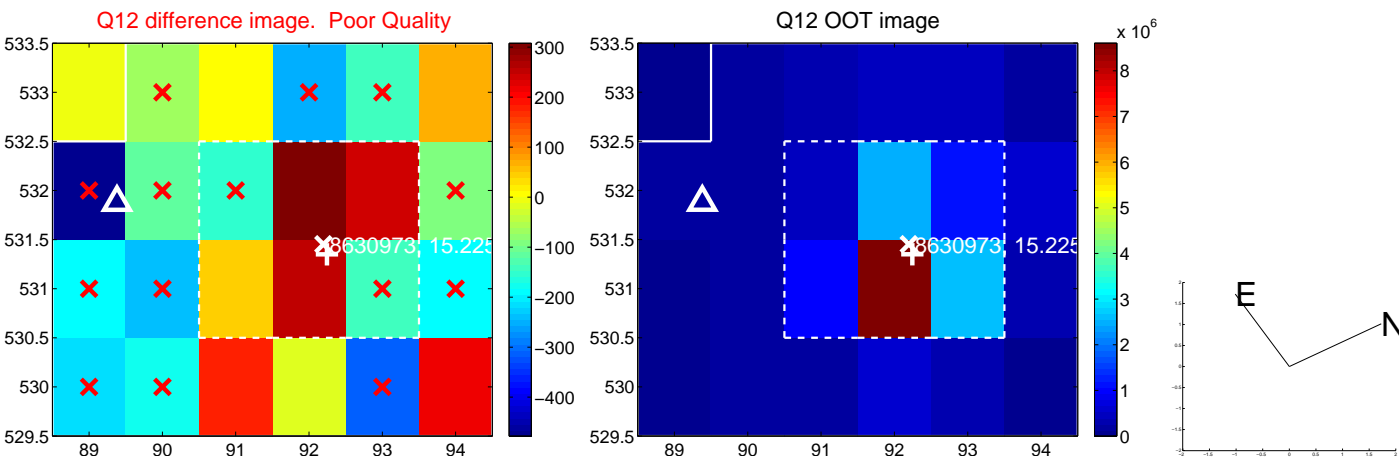
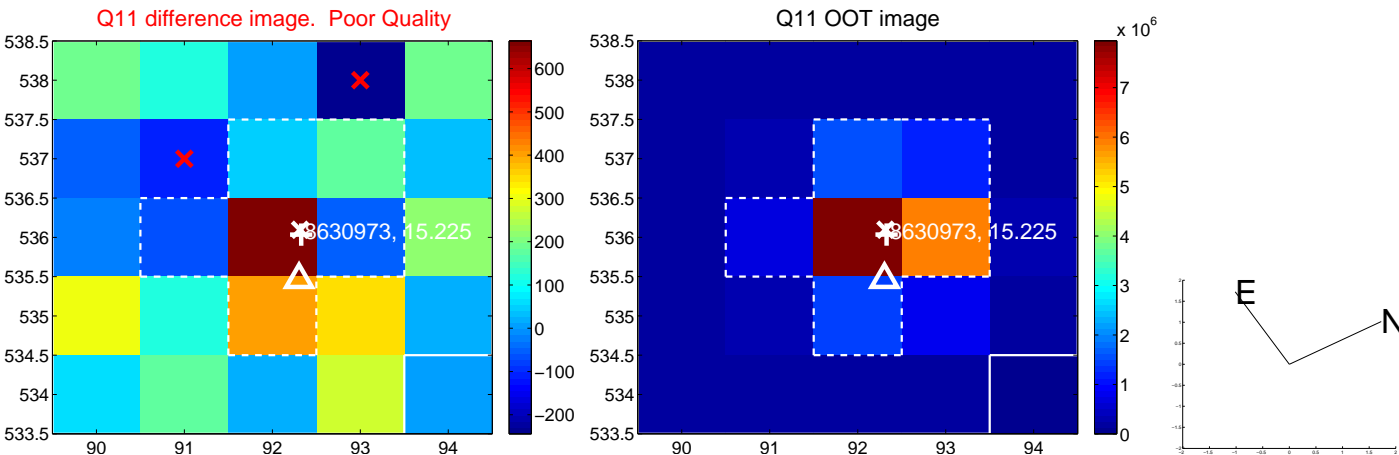
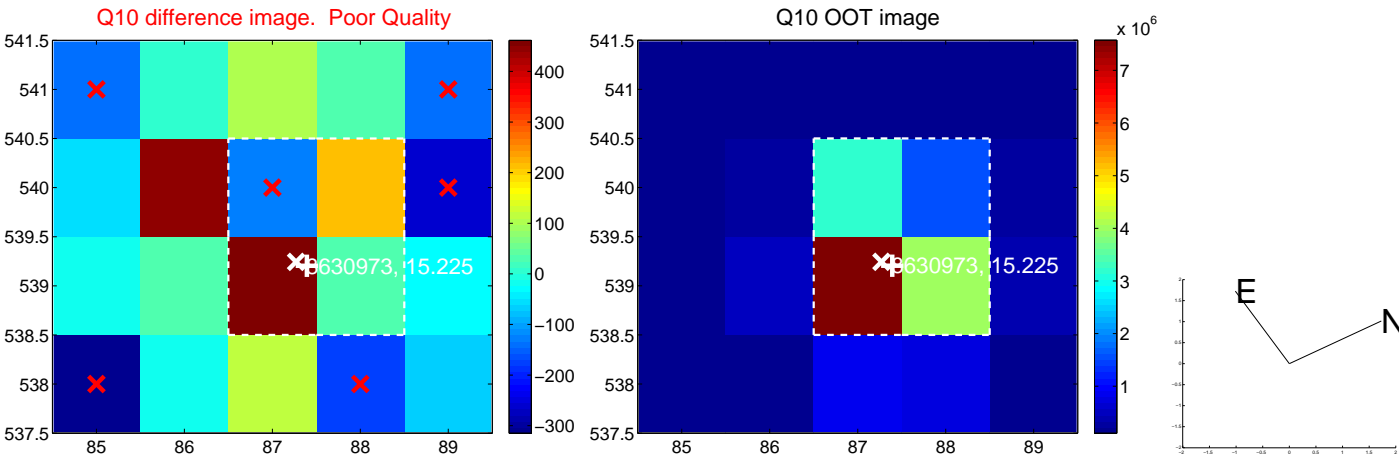
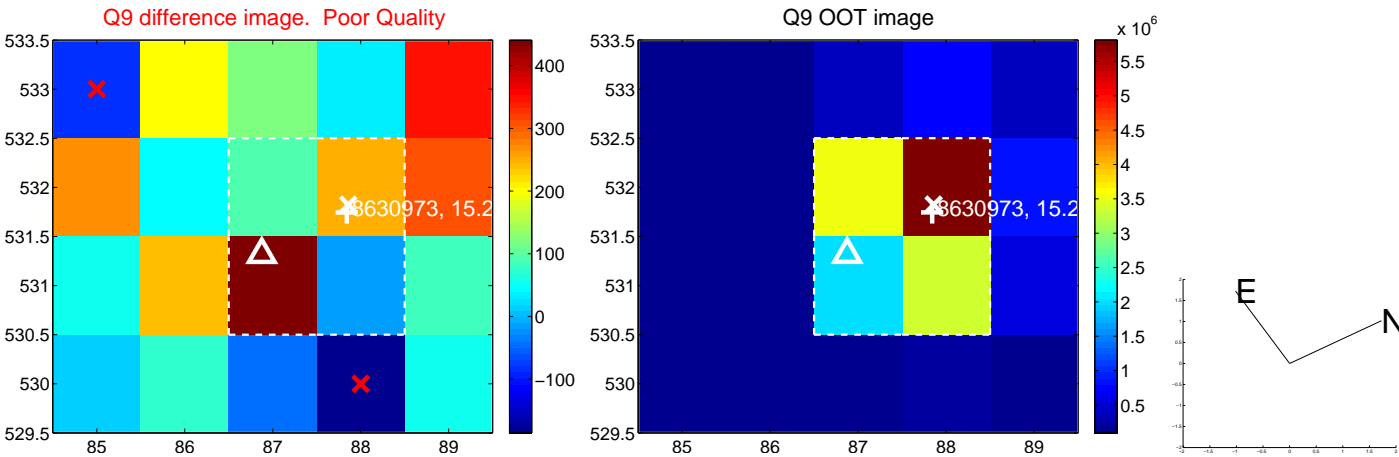
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



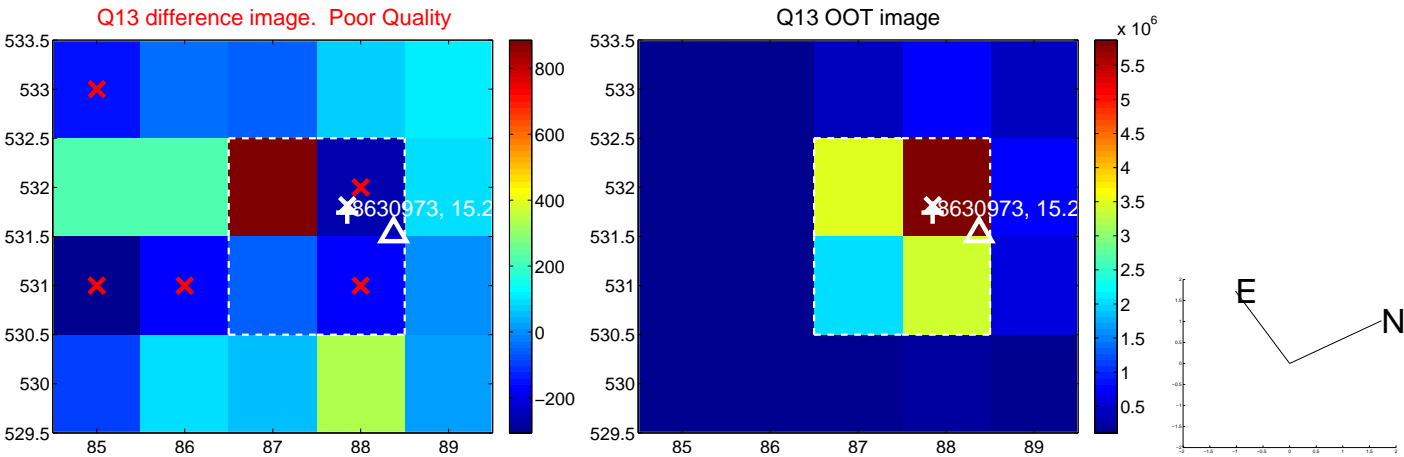
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



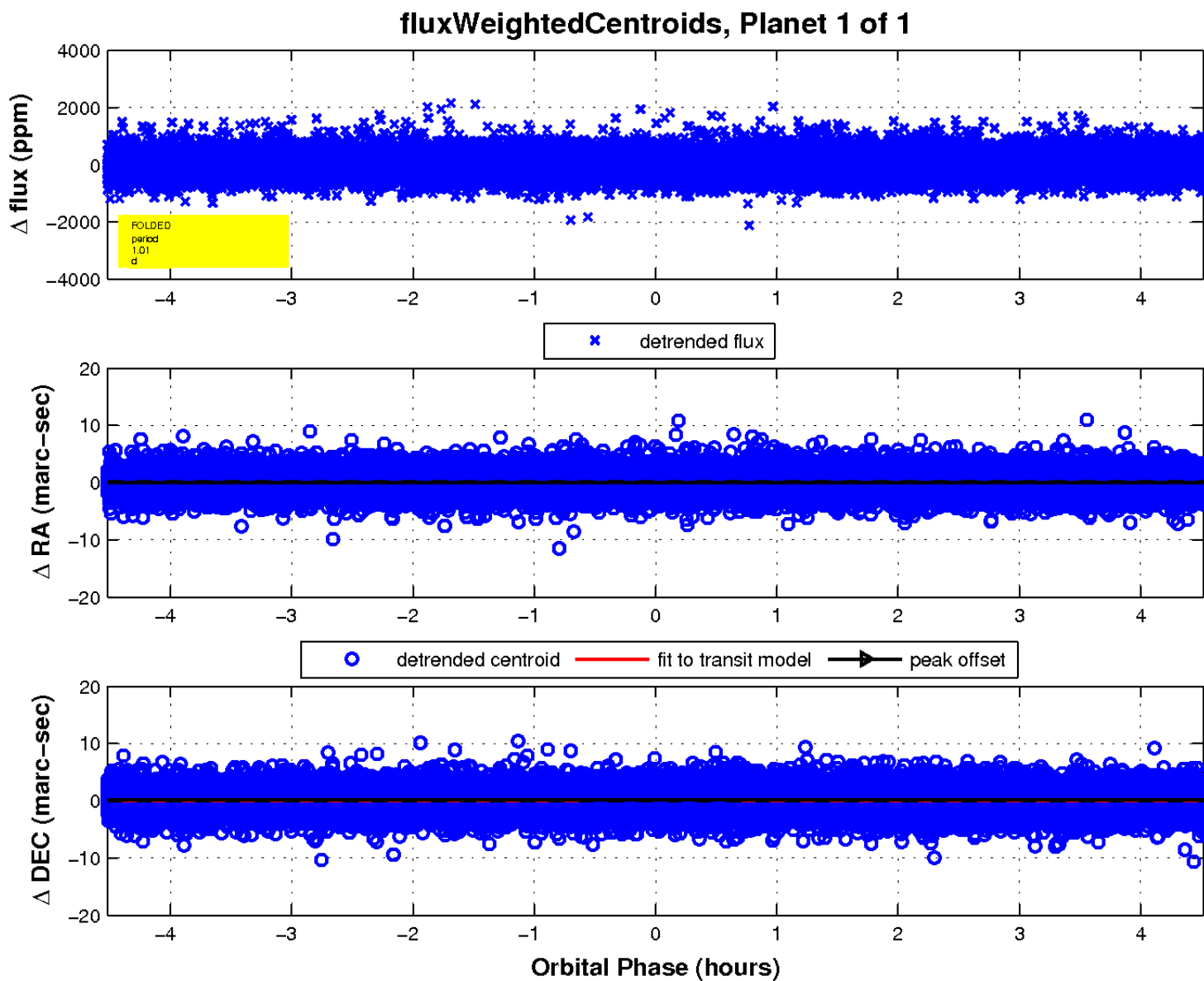
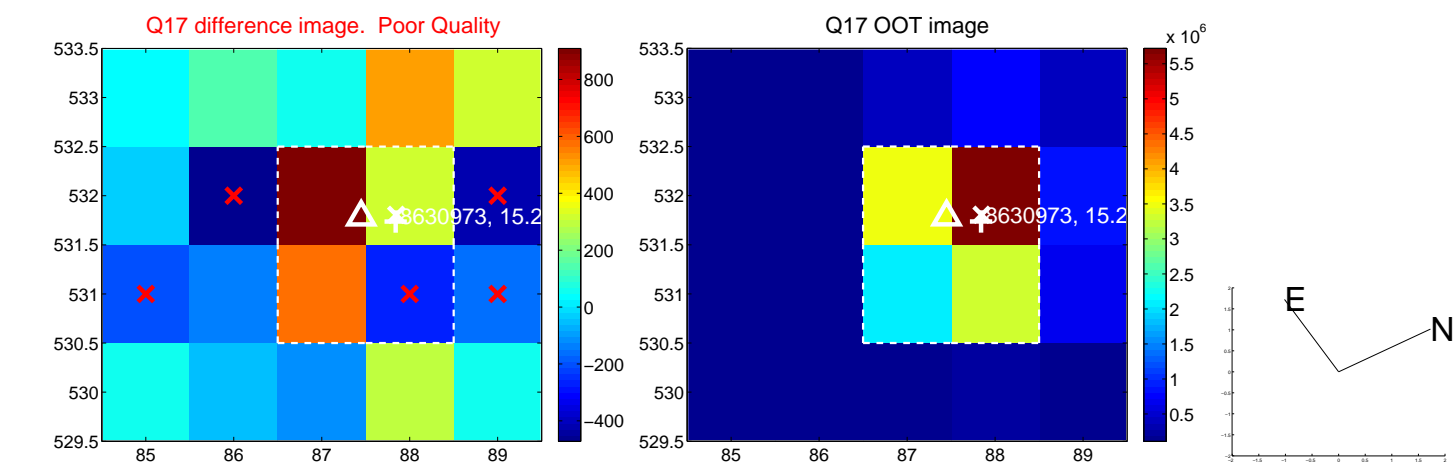
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

