

KIC 009340980

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})
009340980-01	OBS	No	0.536524	132.037578	30.7	4.610	11.5	8.9	1.00	6086	0.56	7107.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009340980-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—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.

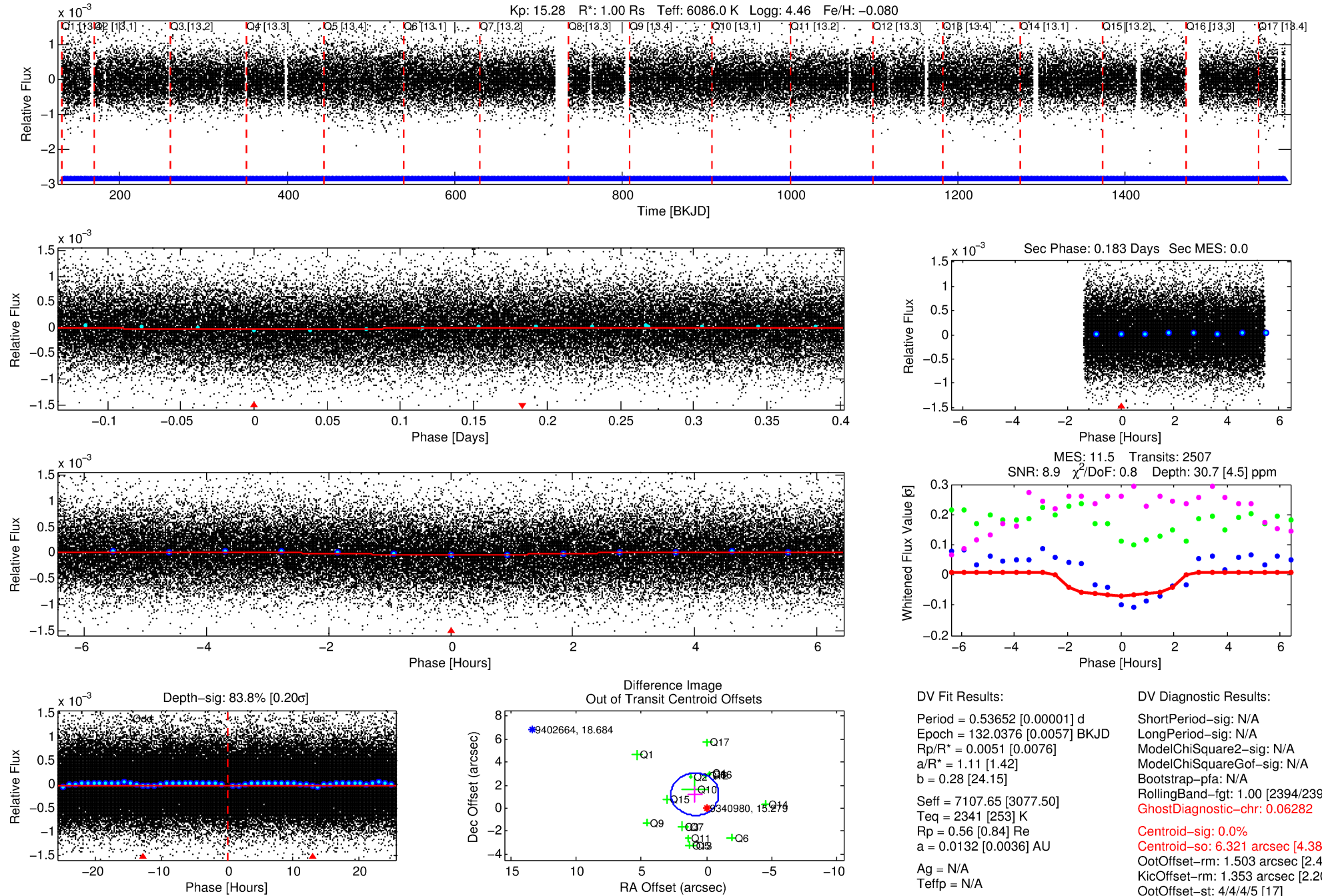
Ephemeris Match Information For 009340980-01

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
009340980-01	9340980	009402583-01	9402583	1:1	106.2	-4	26	15.89	15.28	2.19	Col-Anomaly	1	2.24	0.80

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

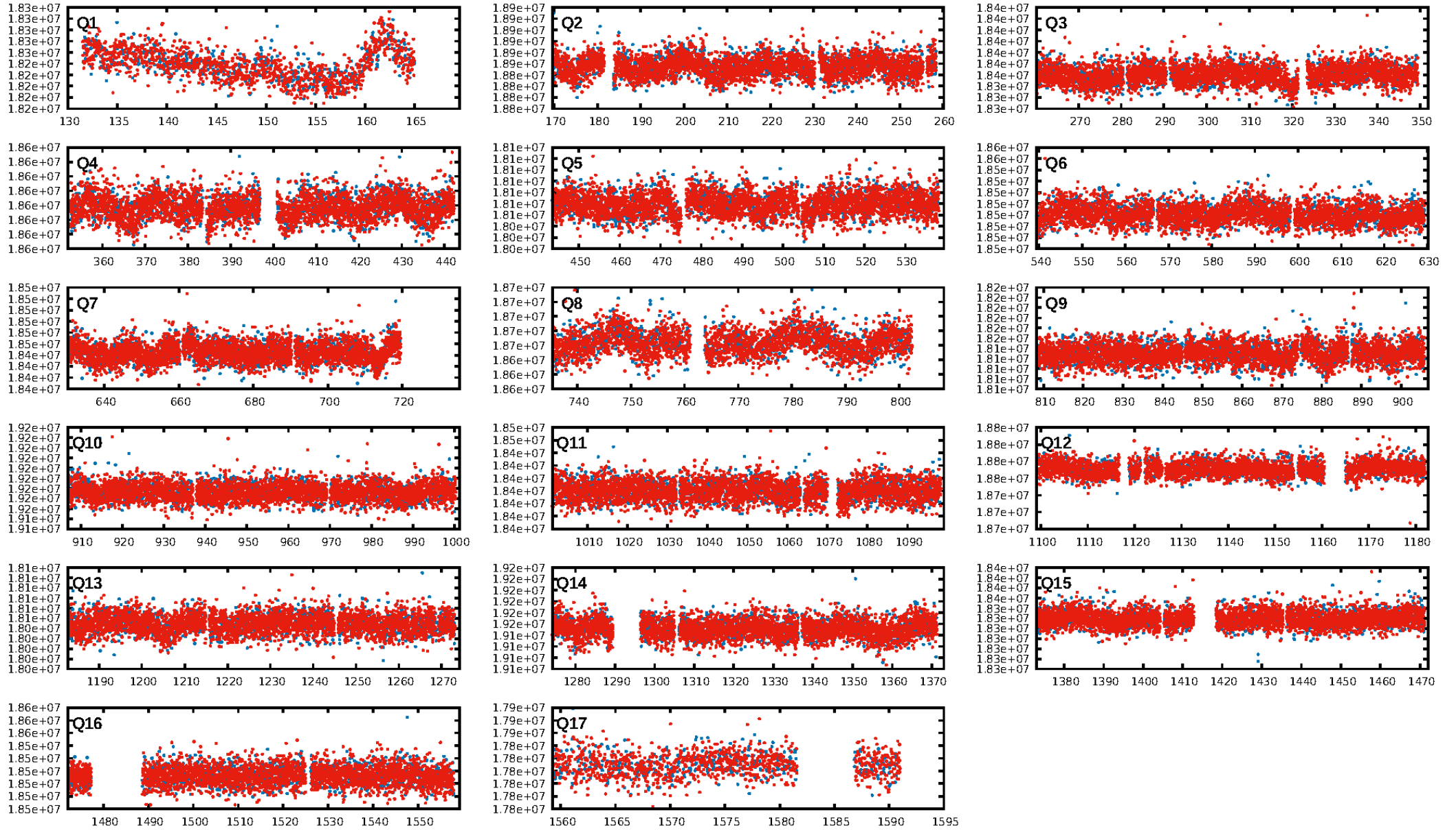
KIC: 9340980 Candidate: 1 of 1 Period: 0.537 d



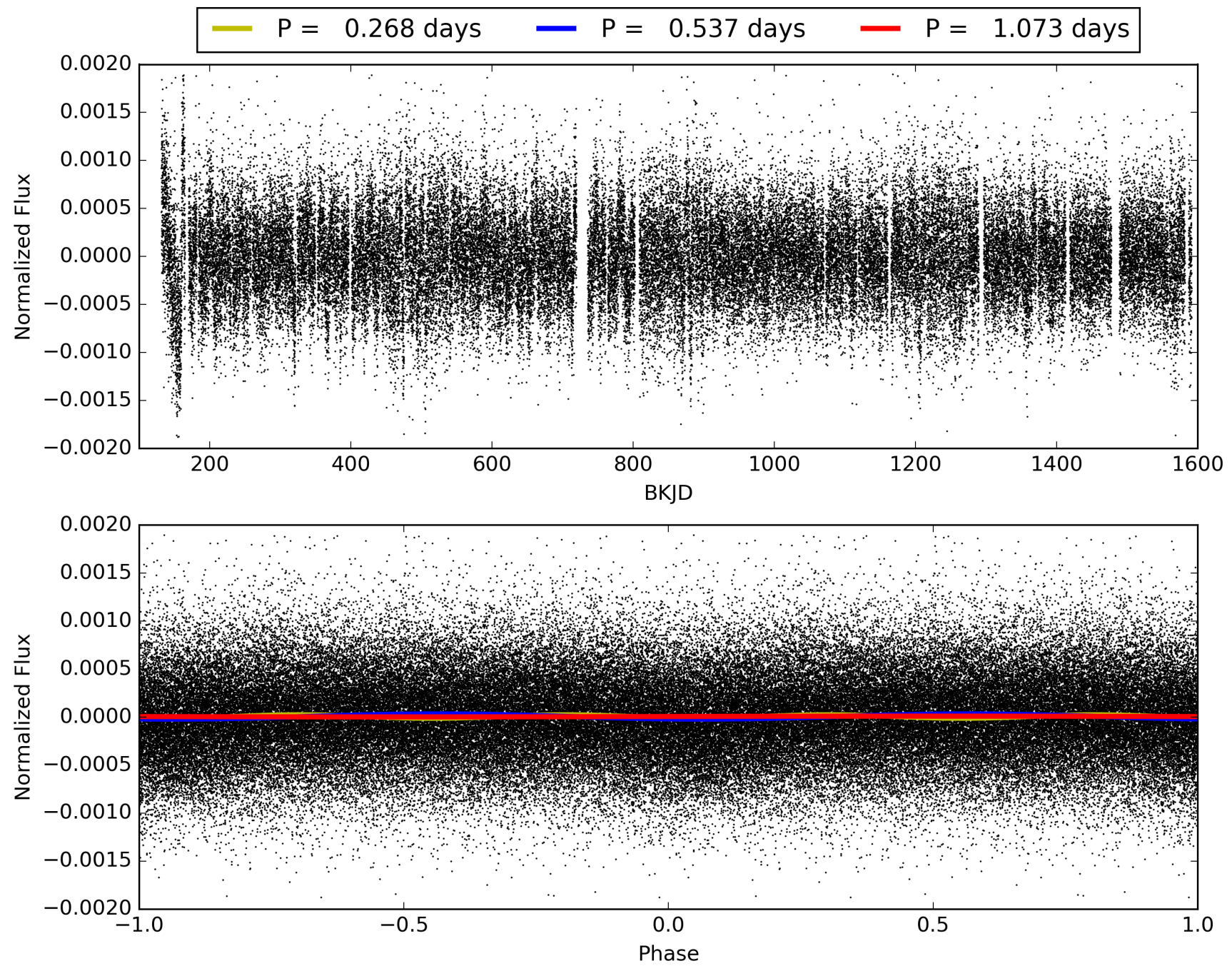
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:10:16 Z

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

TCE 009340980-01, PDC Light Curves

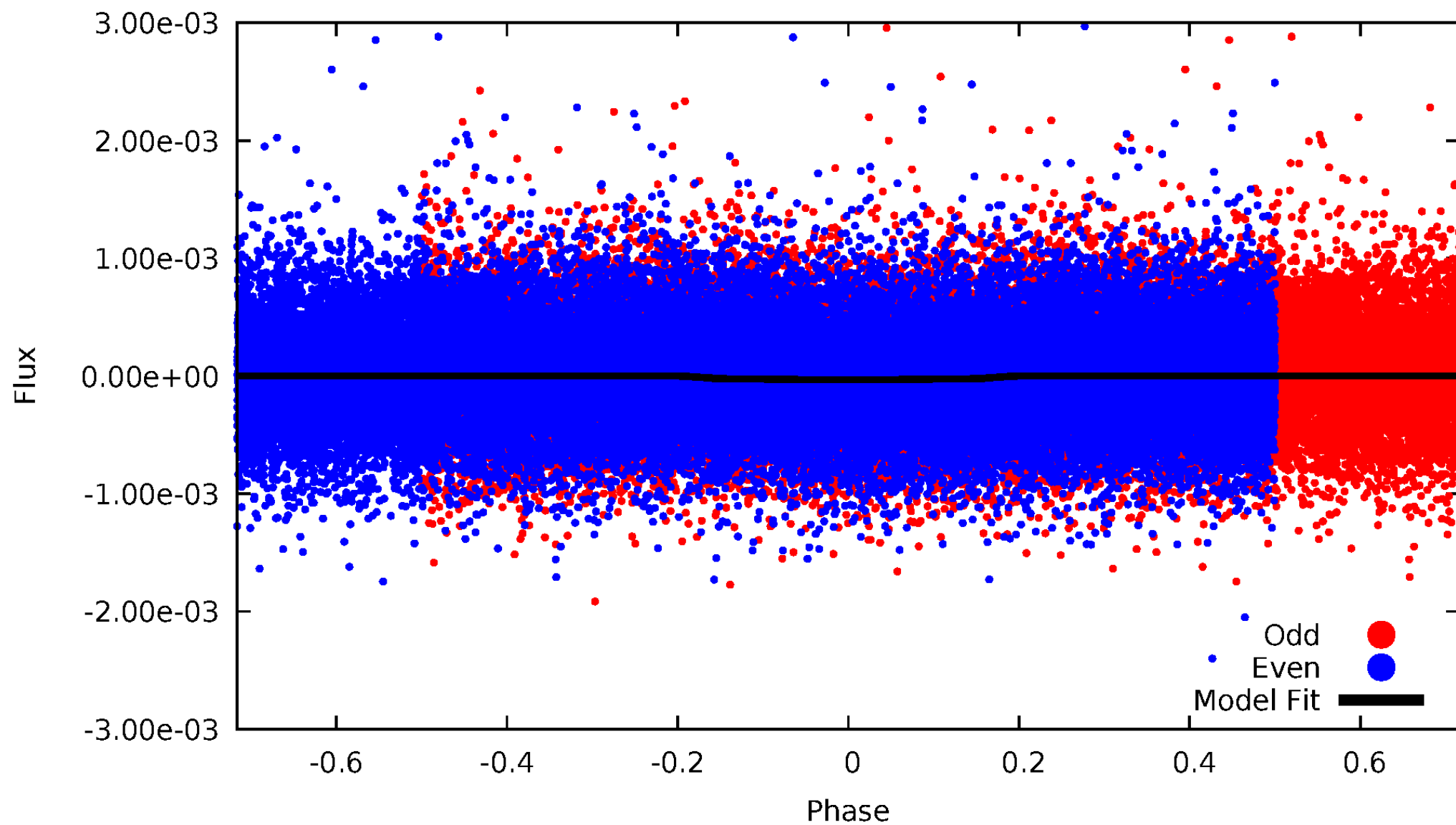


TCE 009340980-01



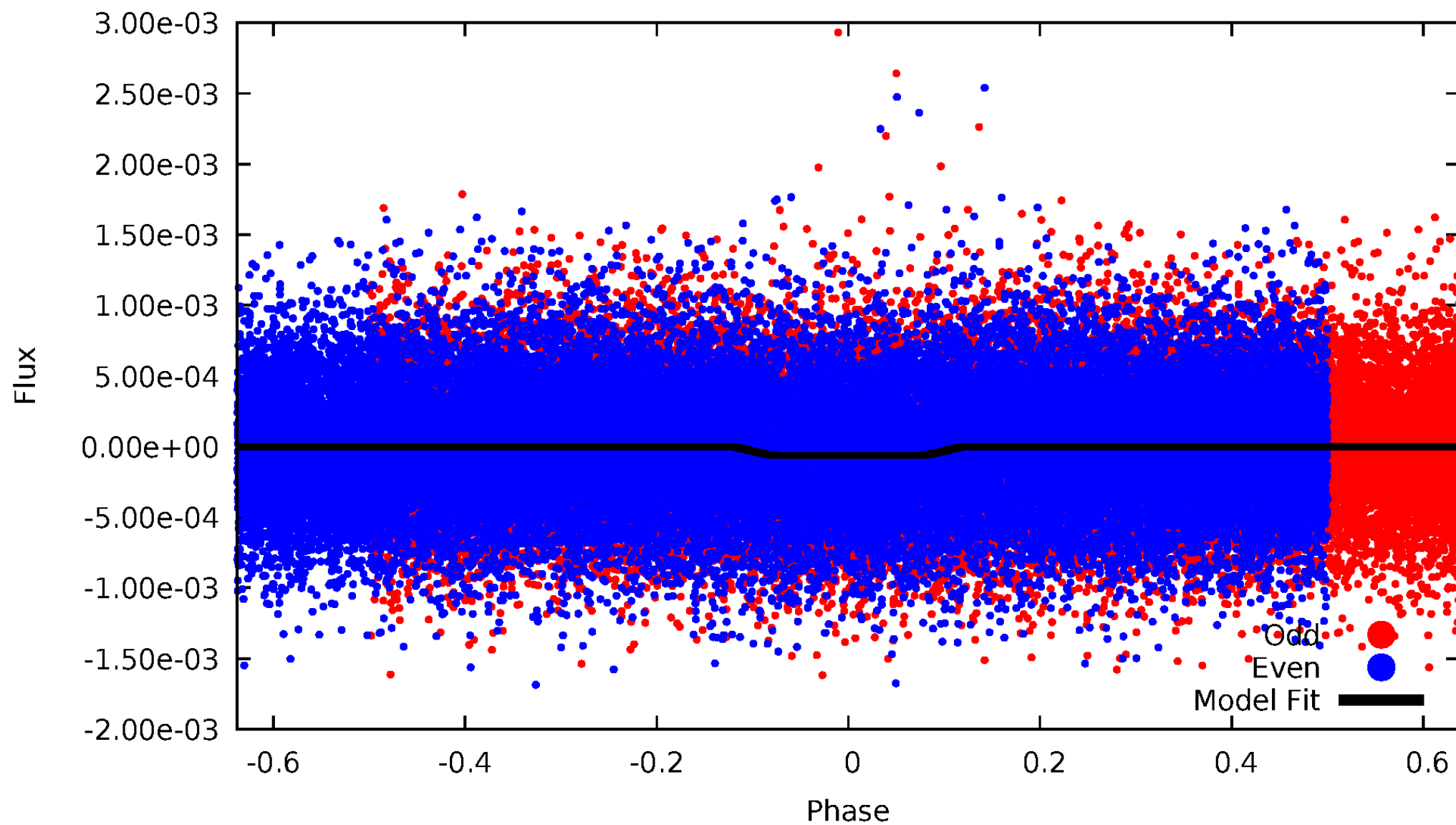
DV Odd/Even

TCE 009340980-01



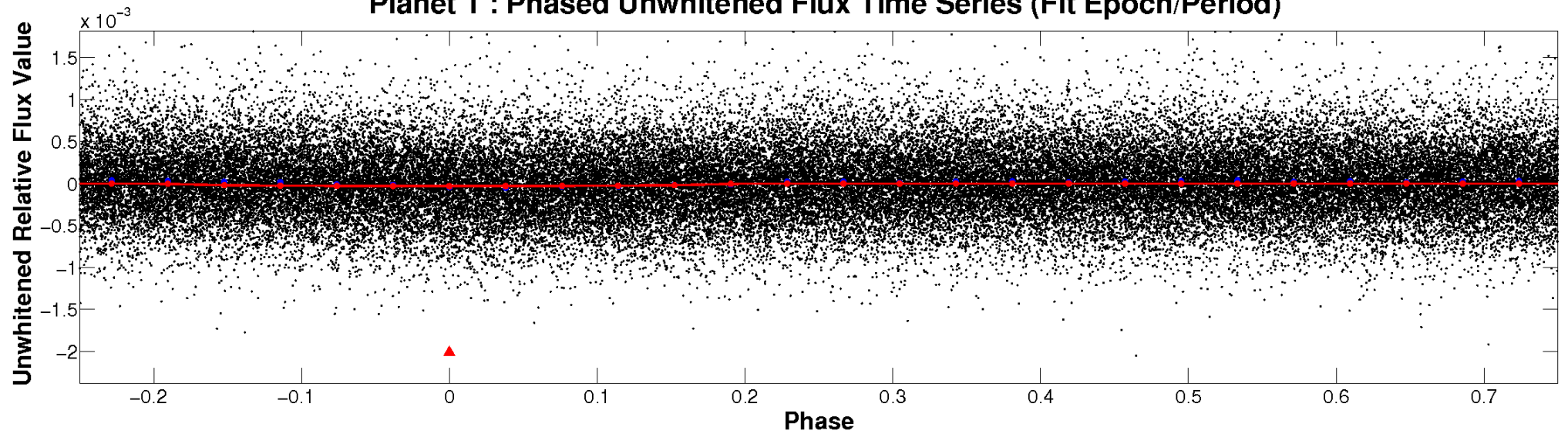
ALT Odd/Even

TCE 009340980-01

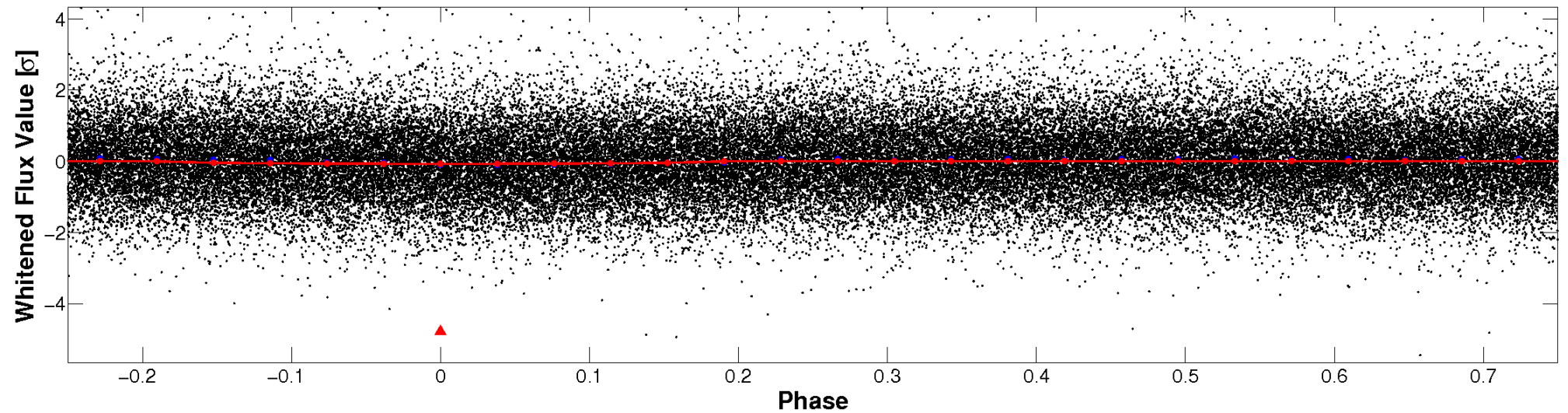


Non-Whitened Vs. Whitened Light Curve

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

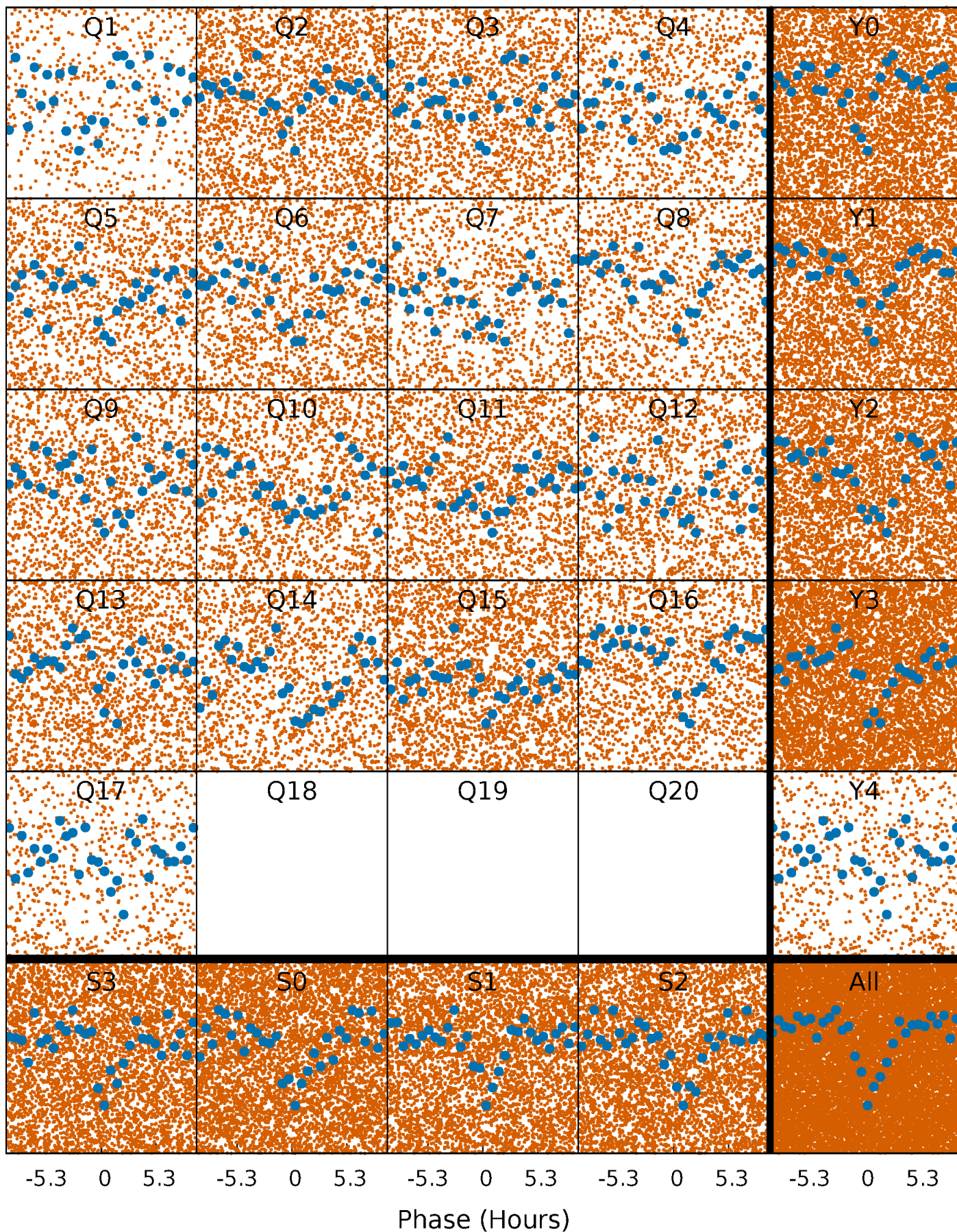


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



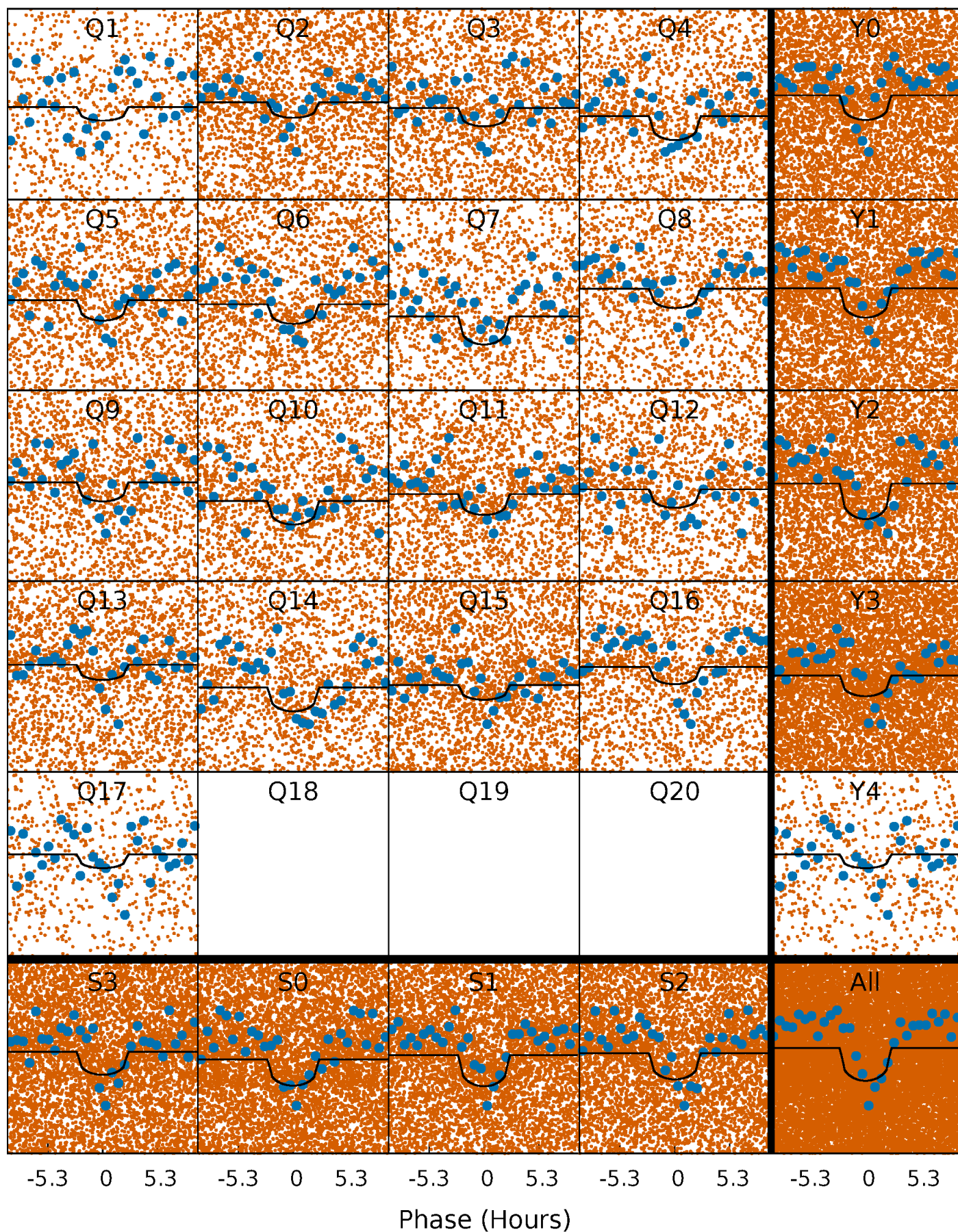
PDC Quarter-Phased Transit Curves

TCE 009340980-01 P= 0.536524 Days $T_0=132.037578$ (BKJD)



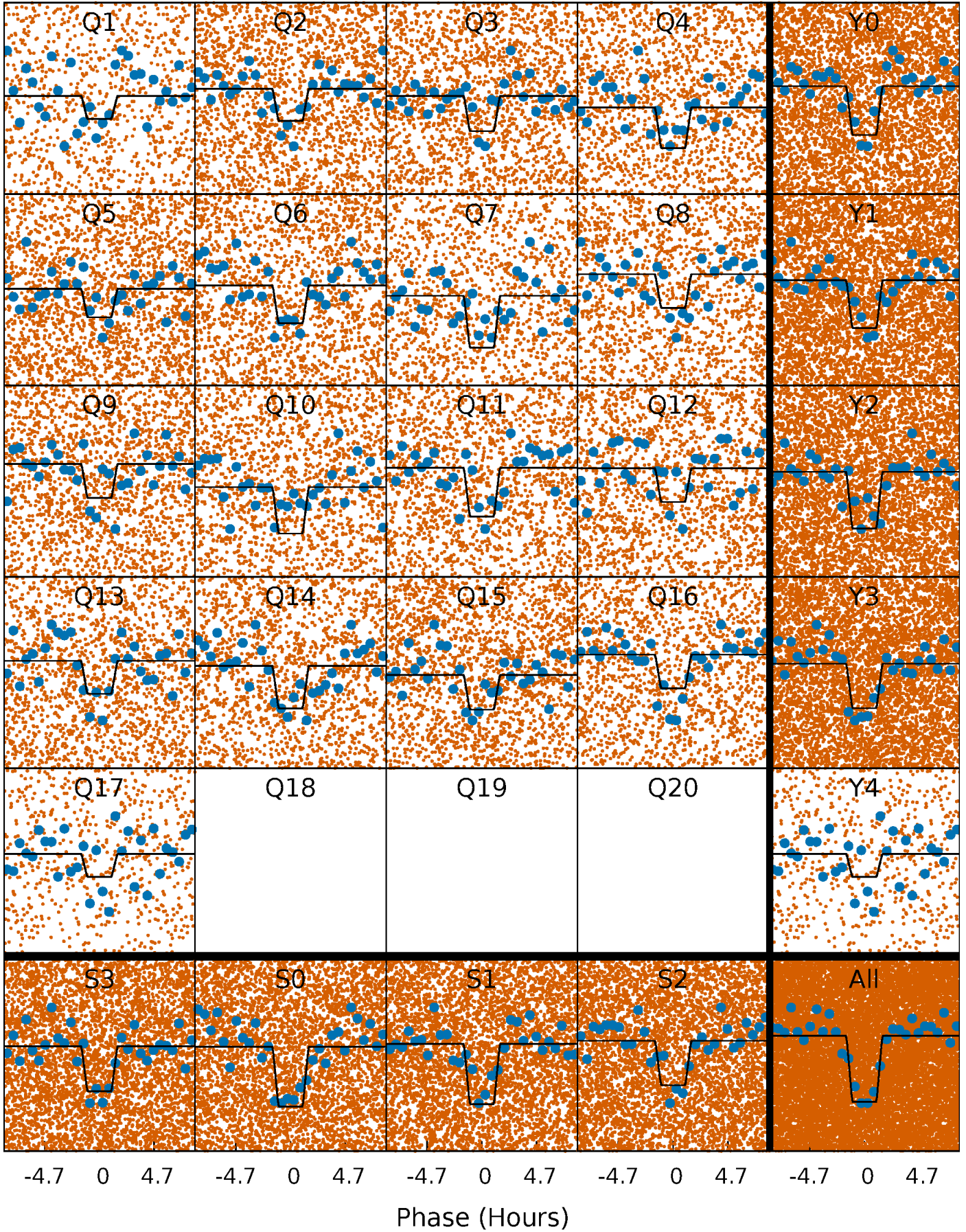
DV Quarter-Phased Transit Curves

TCE 009340980-01 P= 0.536524 Days $T_0=132.037578$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

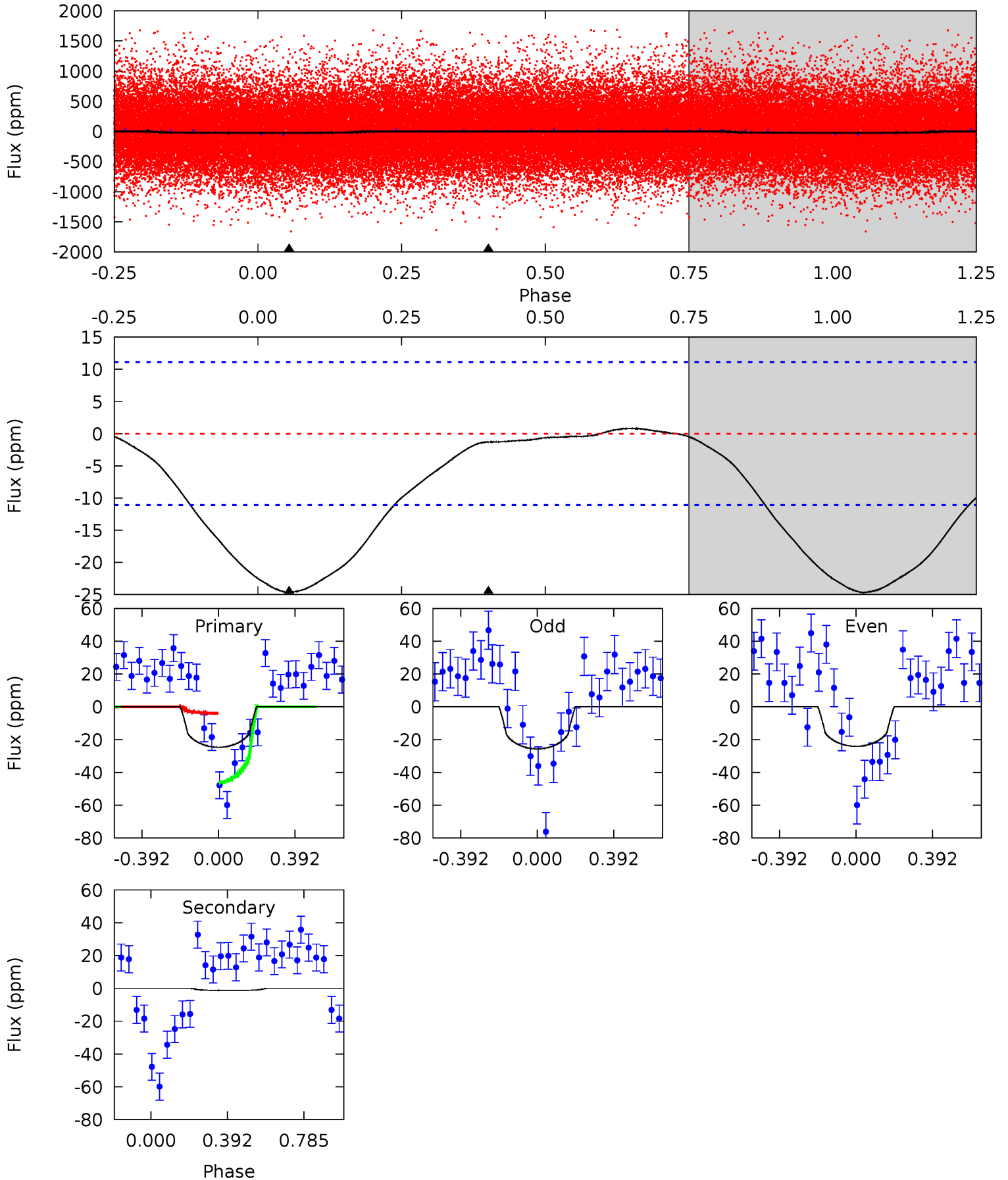
TCE 009340980-01 $P = 0.536550$ Days $T_0 = 132.028761$ (BKJD)



DV Model-Shift Uniqueness Test

009340980-01, P = 0.536524 Days, E = 131.501054 Days

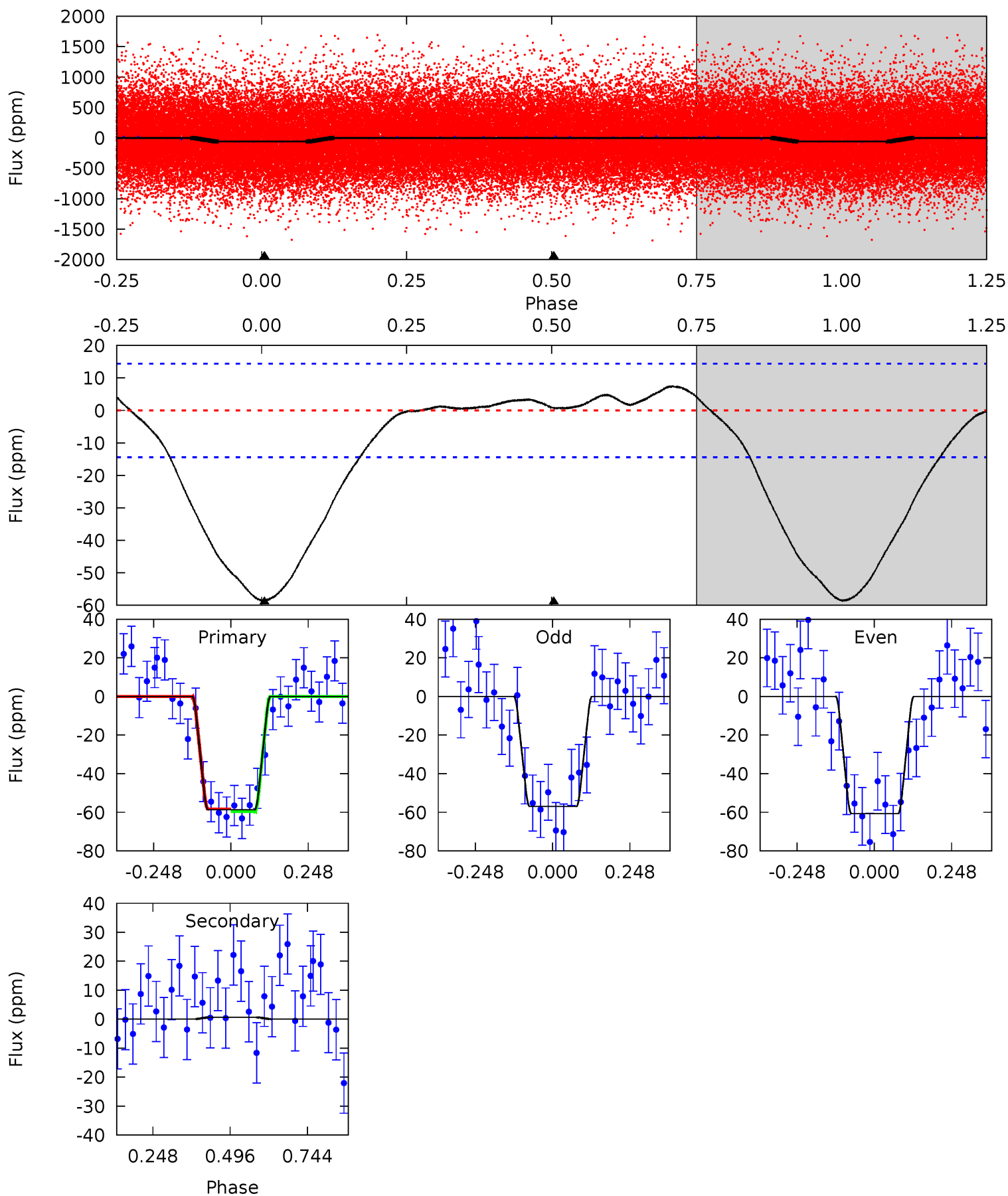
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	0.50	0	0	4.27	0.86	0.25	9.50	9.50	0.50	0.50	0.30	0.89	0.03	7.92



Alt Model-Shift Uniqueness Test

009340980-01, P = 0.536550 Days, E = 131.492211 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	-0.19	0	0	4.37	1.15	0.76	17.8	17.8	-0.19	-0.19	0.56	0.98	0.11	0.20



Stellar Parameters For KIC 009340980

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6086^{+189}_{-232}	$4.461^{+0.056}_{-0.224}$	$-0.080^{+0.250}_{-0.300}$	$1.001^{+0.322}_{-0.115}$	$1.052^{+0.150}_{-0.135}$	$1.477^{+0.430}_{-0.786}$
	+3%/-4%	+1%/-5%	+312%/-375%	+32%/-11%	+14%/-13%	+29%/-53%
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 009340980-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 3	$0.86^{+0.80}_{-0.56}$	3340^{+244}_{-171}	-3100^{+7077}_{-512}	$0.101^{+1.093}_{-0.283}$
Alt.	1 ± 3	$1.04^{+0.84}_{-0.61}$	3344^{+261}_{-177}	-3399^{+857}_{-640}	$-0.041^{+0.289}_{-0.578}$

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

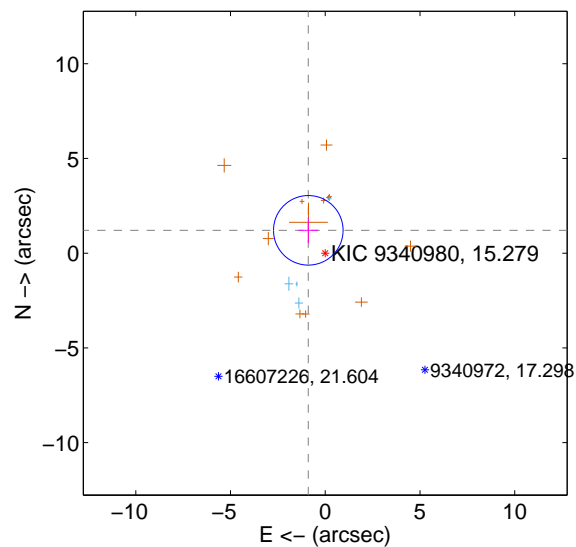
Supplemental centroid analysis for 009340980-01. Kepler magnitude: 15.28. Transit SNR 8.87

There are 4 quarters with good PRF difference image offsets

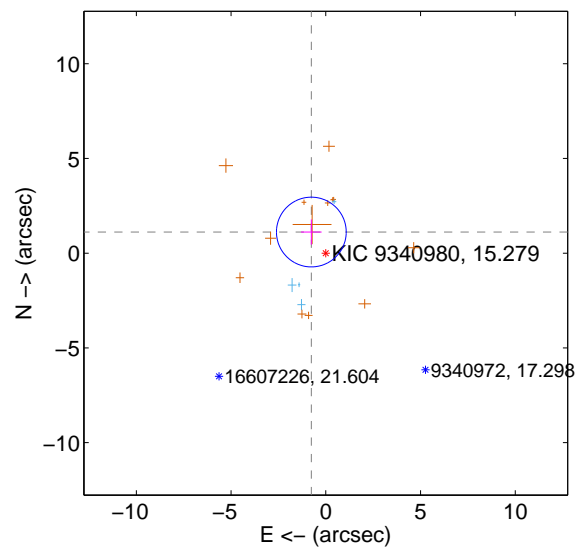
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.503 ± 0.612	2.46	0.896 ± 0.513	1.207 ± 0.680
PRF-fit source offset from KIC position	1.353 ± 0.614	2.20	0.764 ± 0.542	1.116 ± 0.667
photometric centroid source offset	6.32 ± 1.44	4.38	-0.94 ± 1.53	6.25 ± 1.44

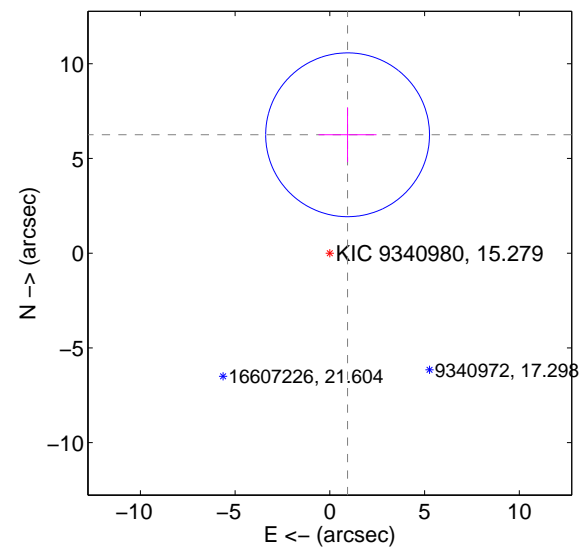
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

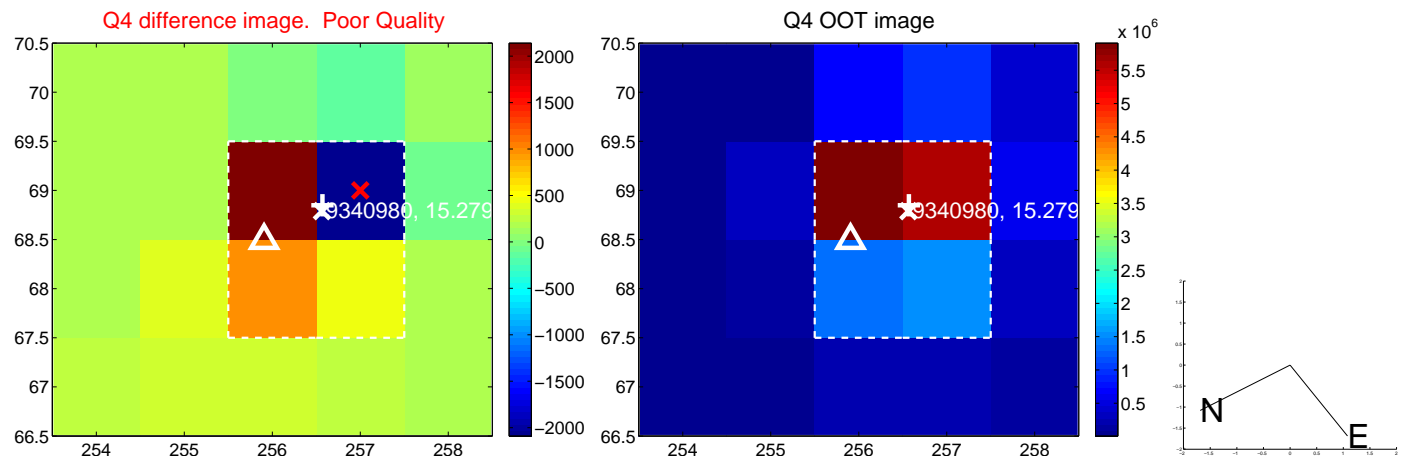
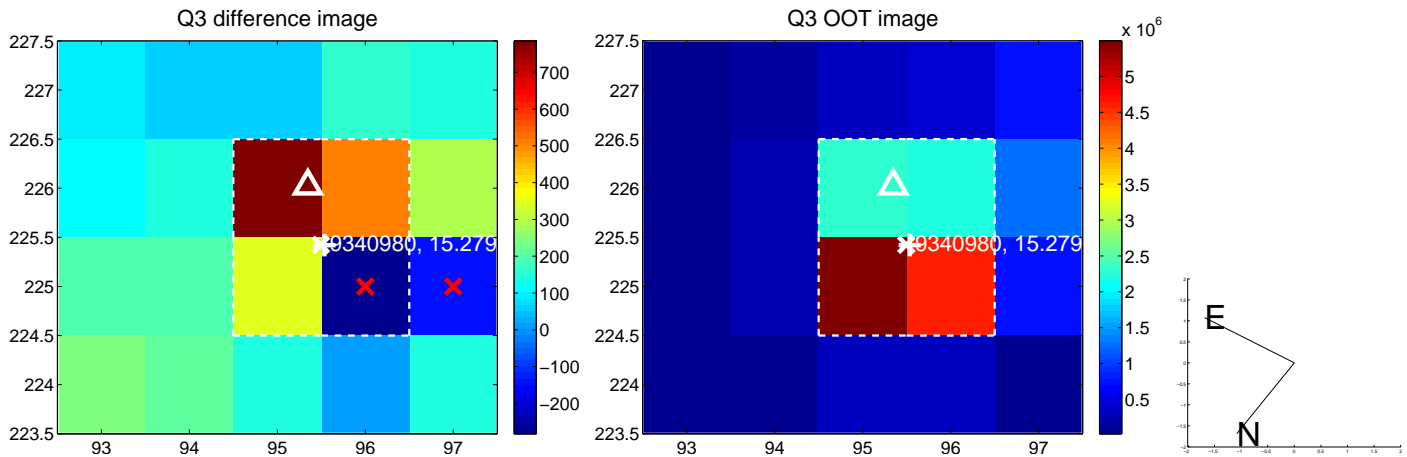
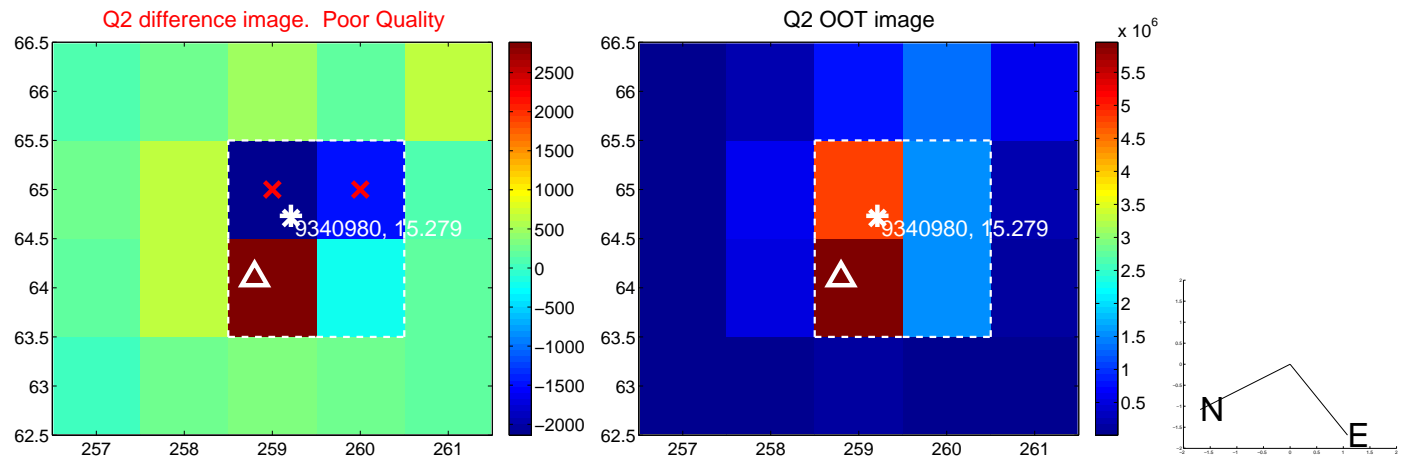
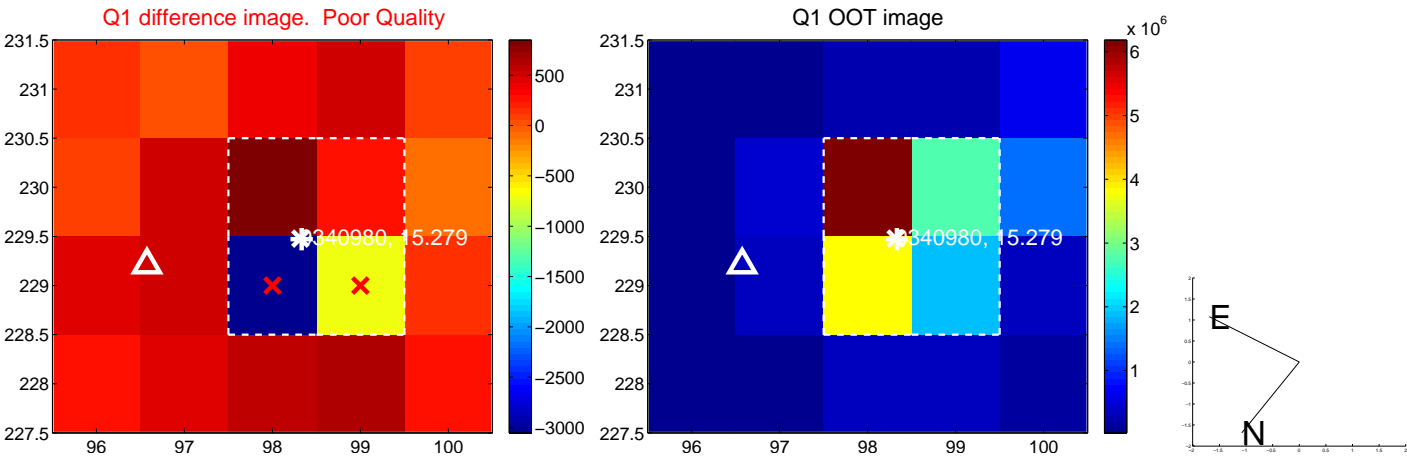


offset from photometric centroids

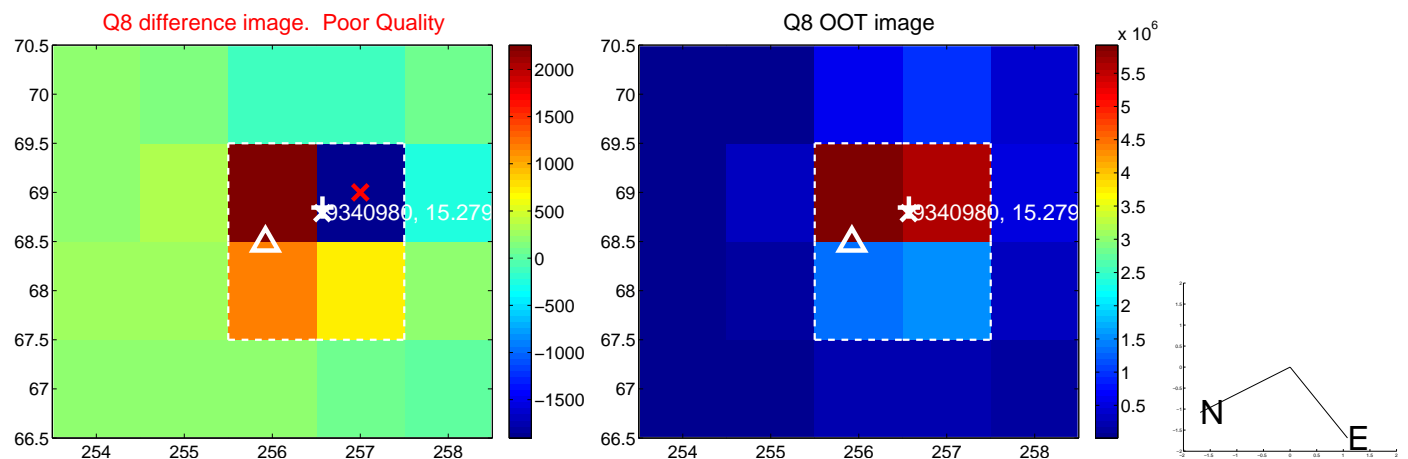
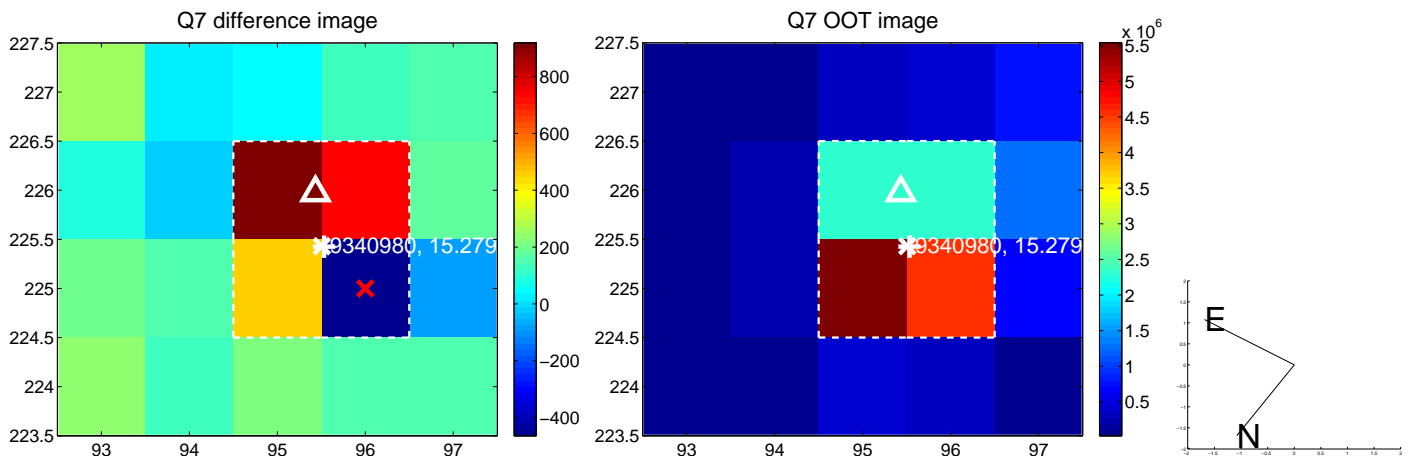
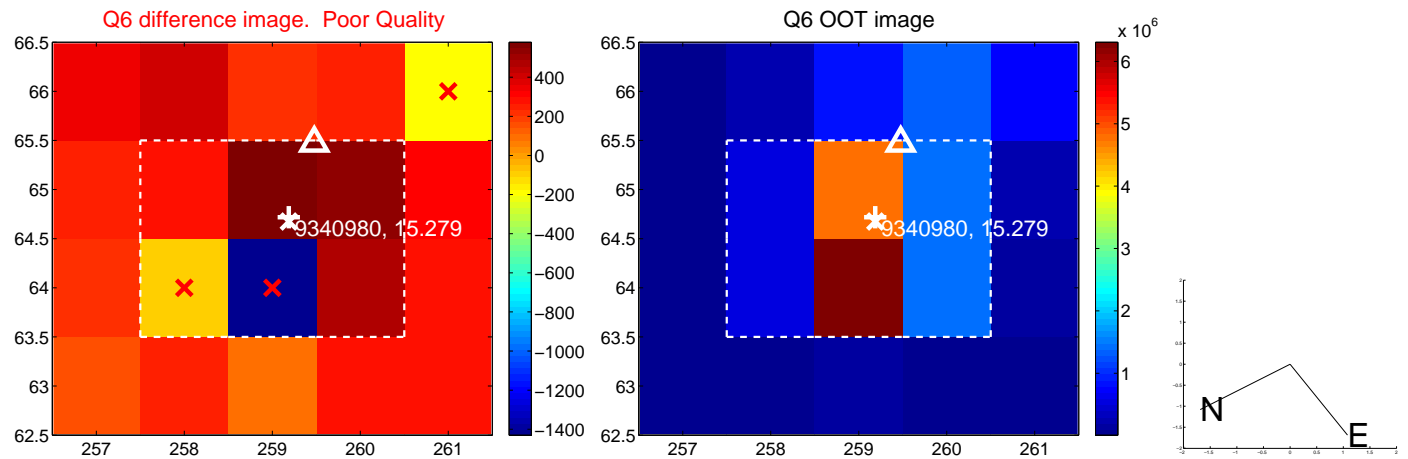
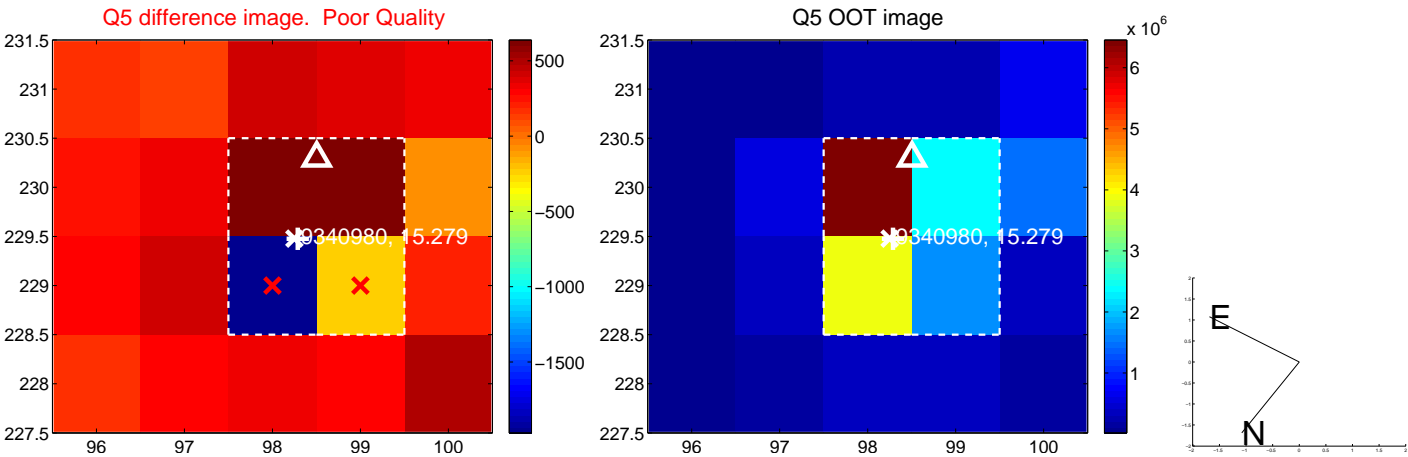


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

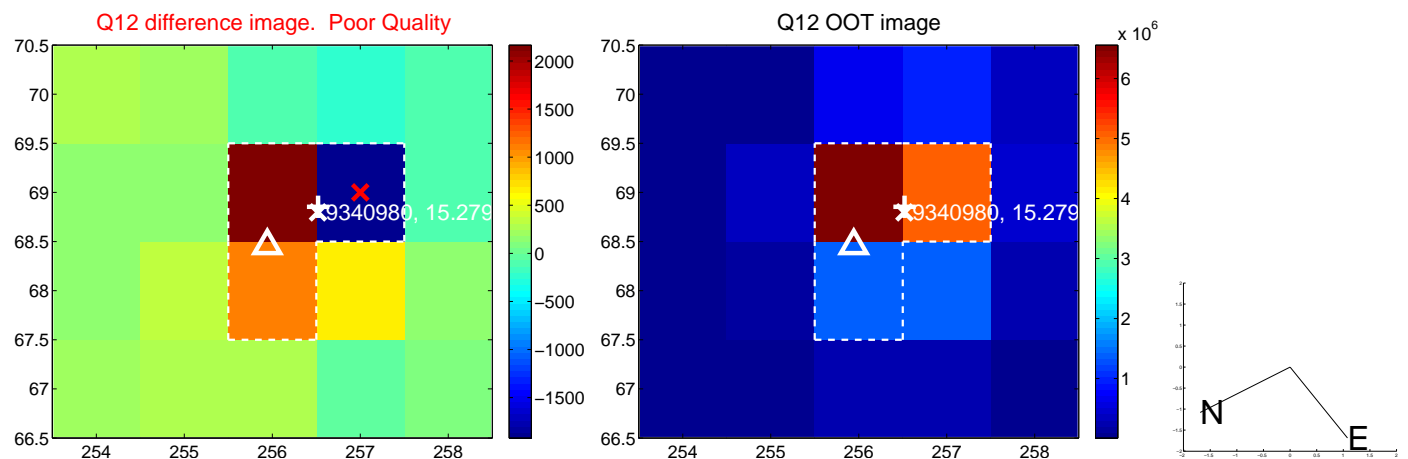
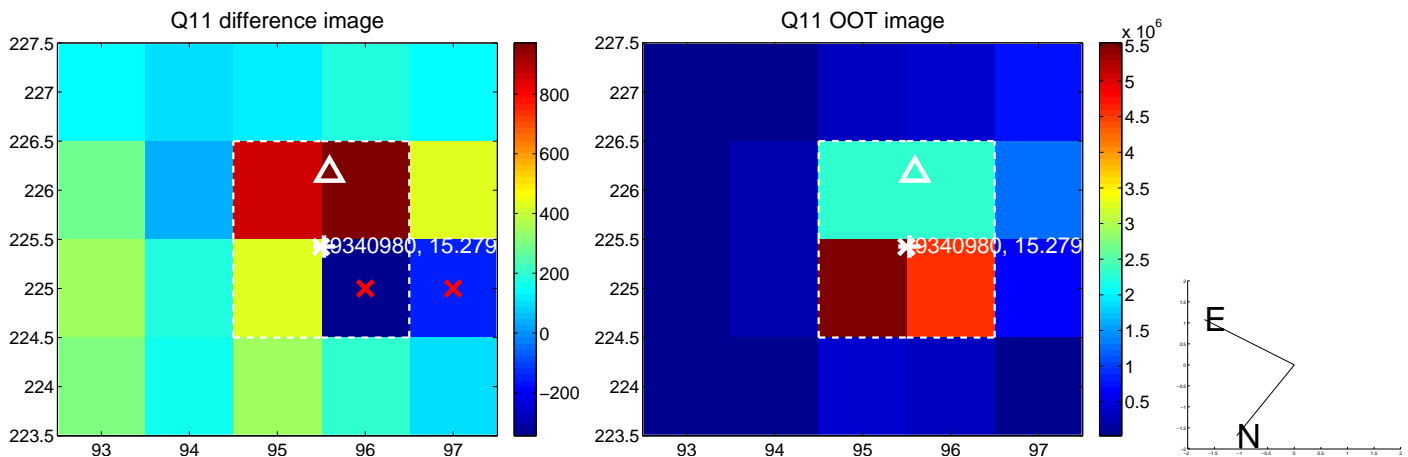
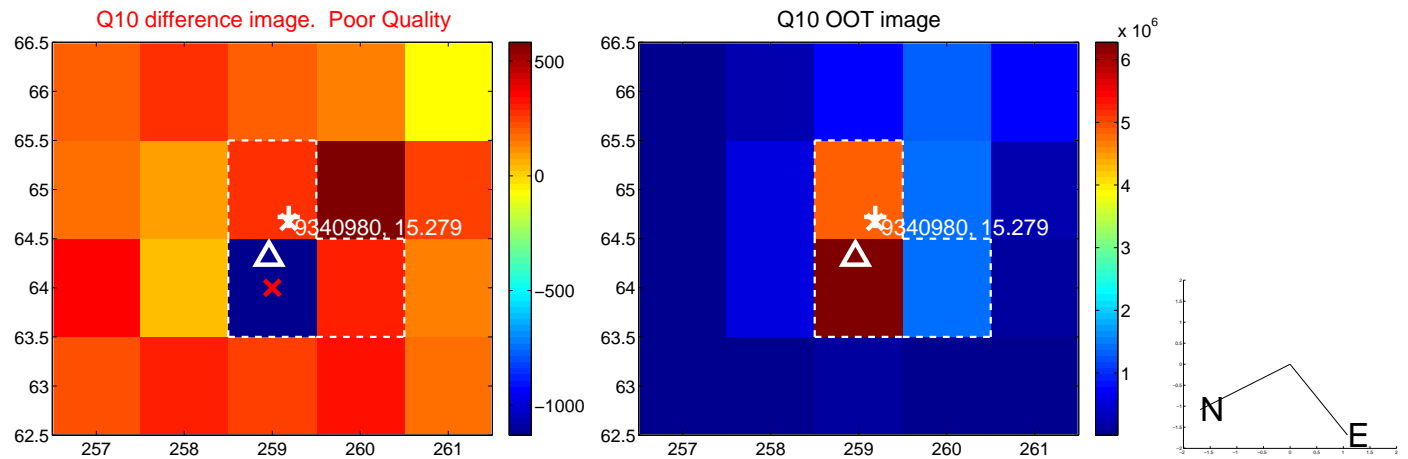
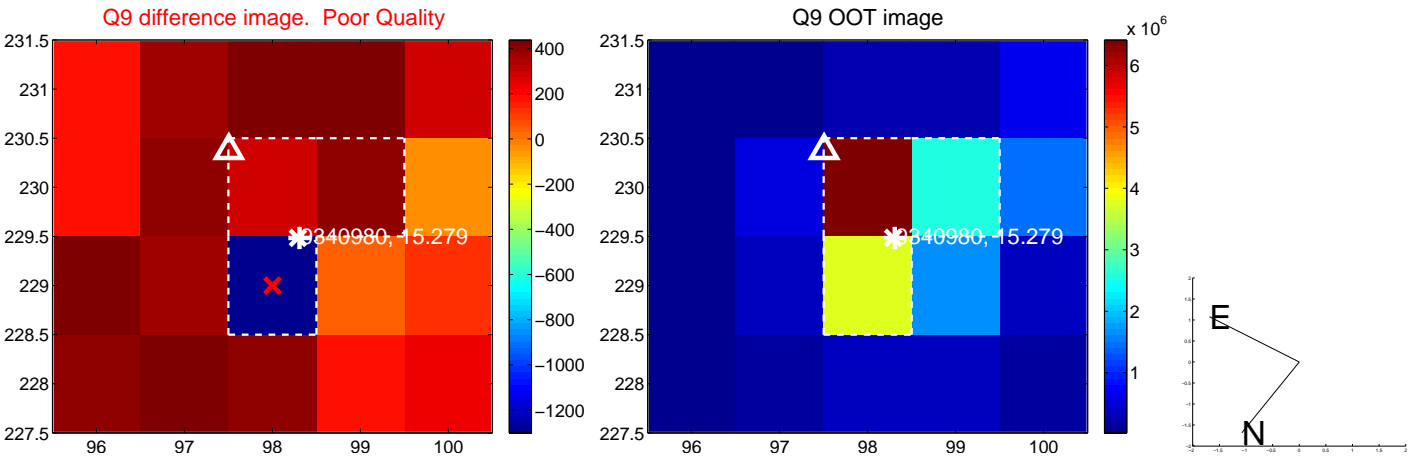
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



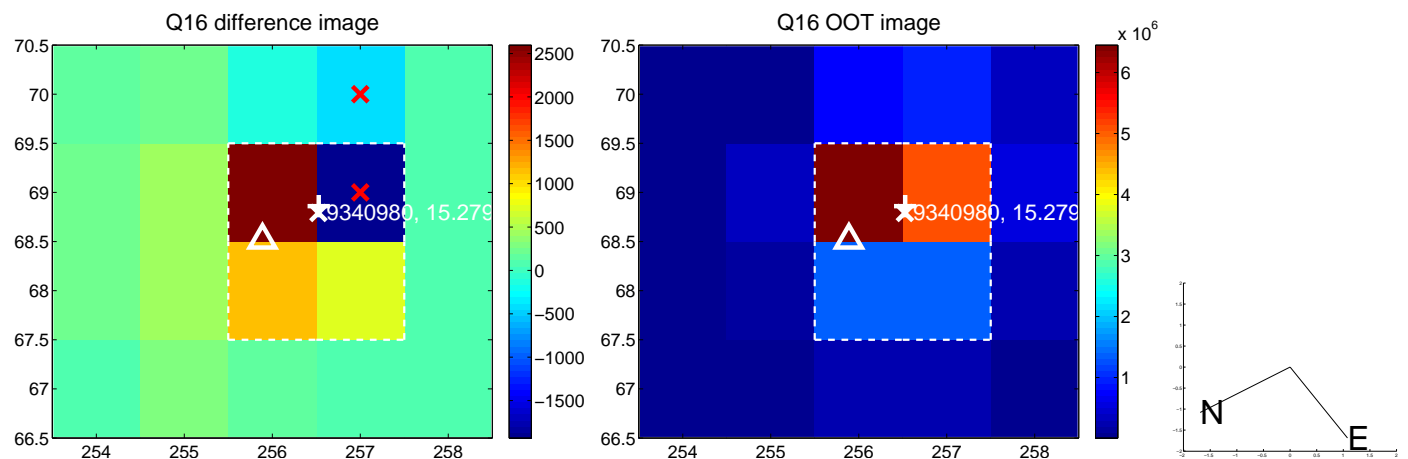
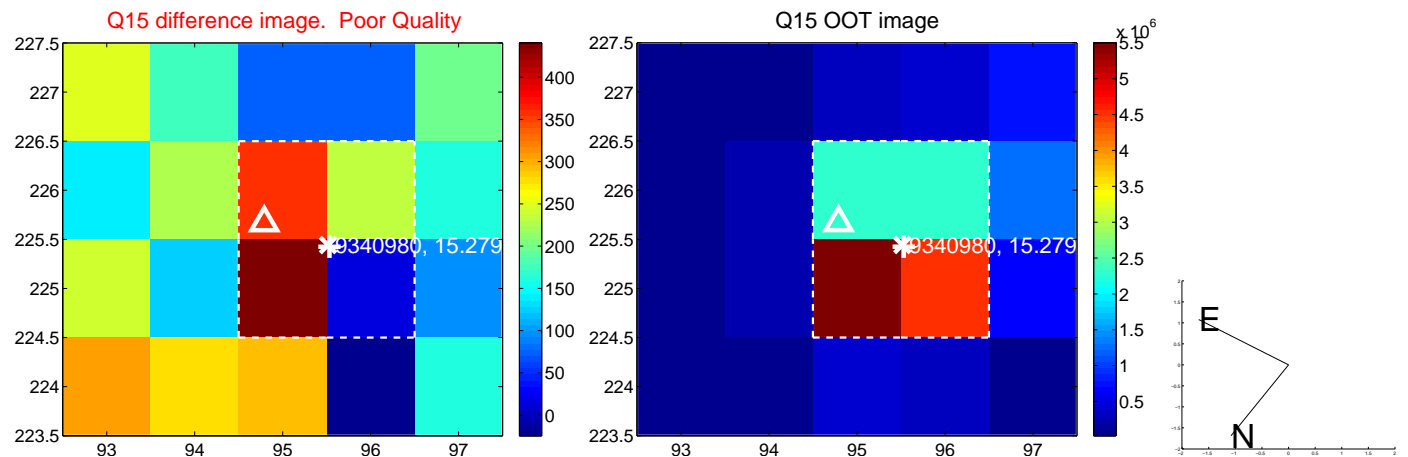
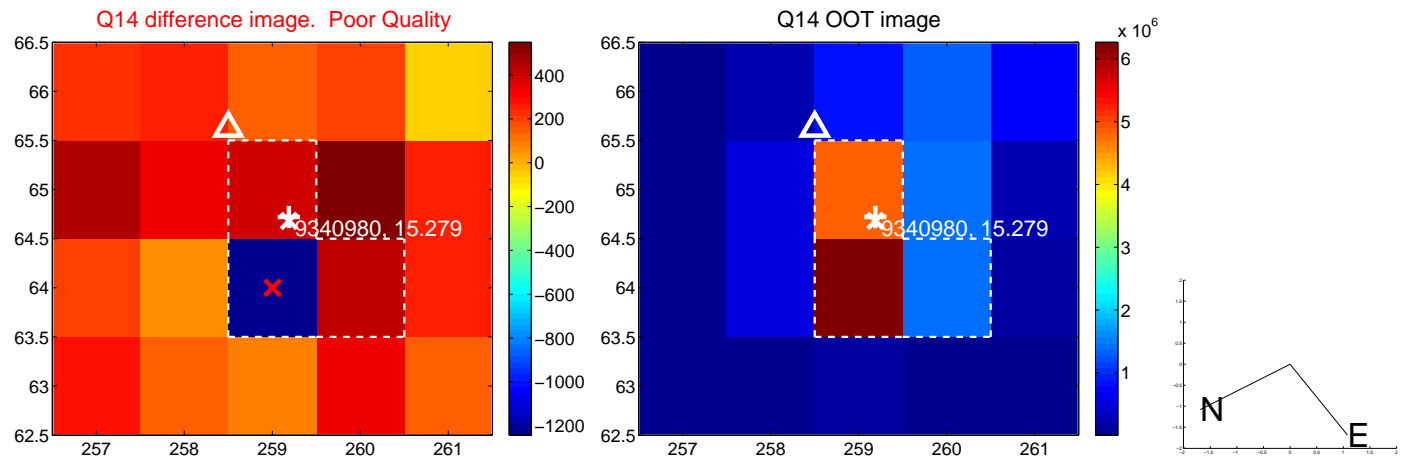
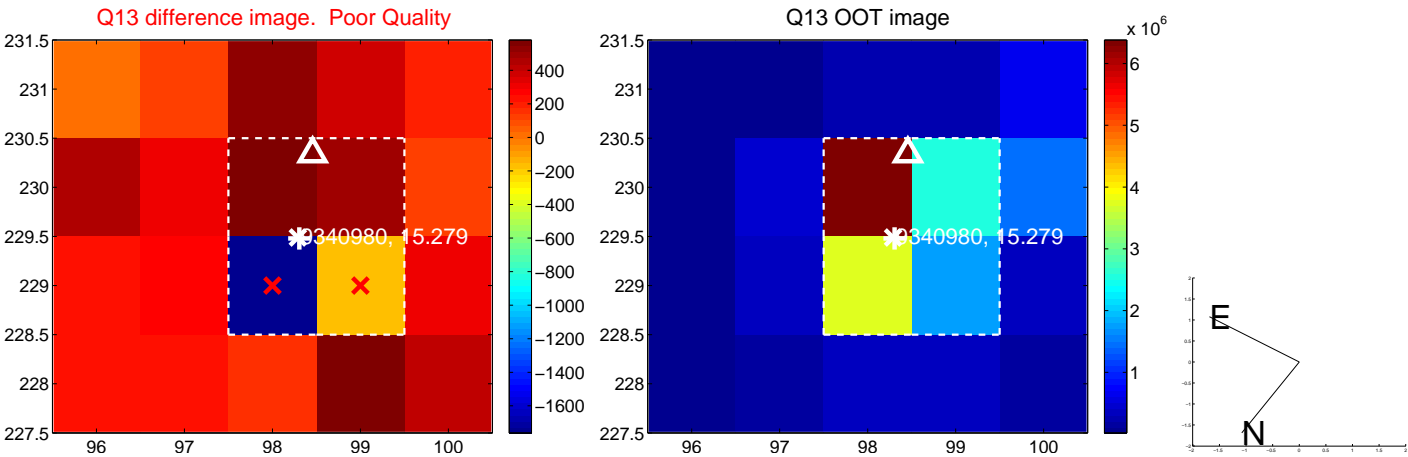
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



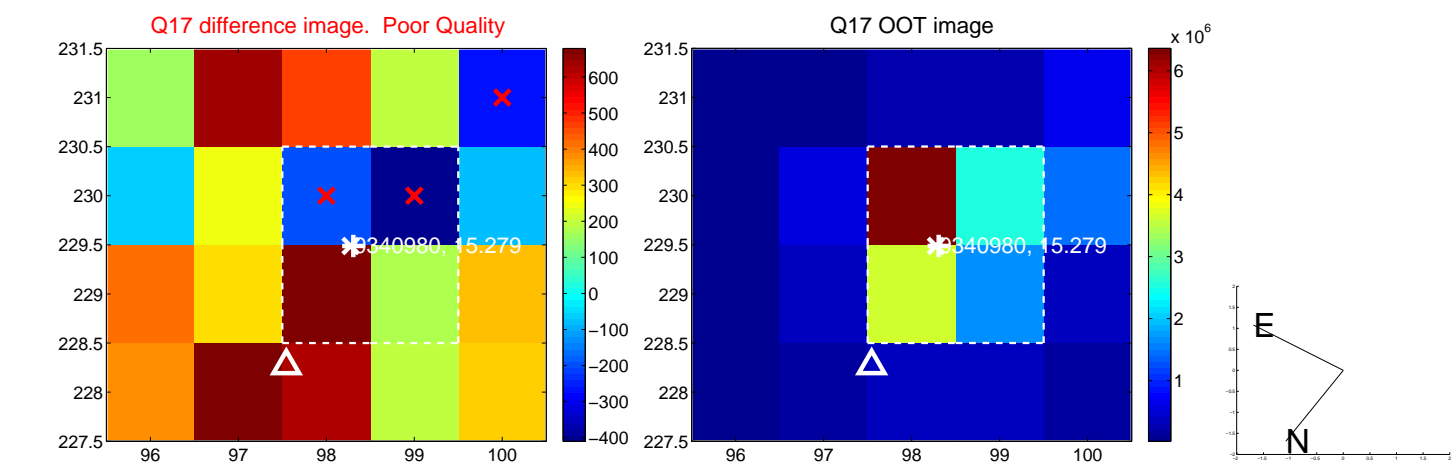
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



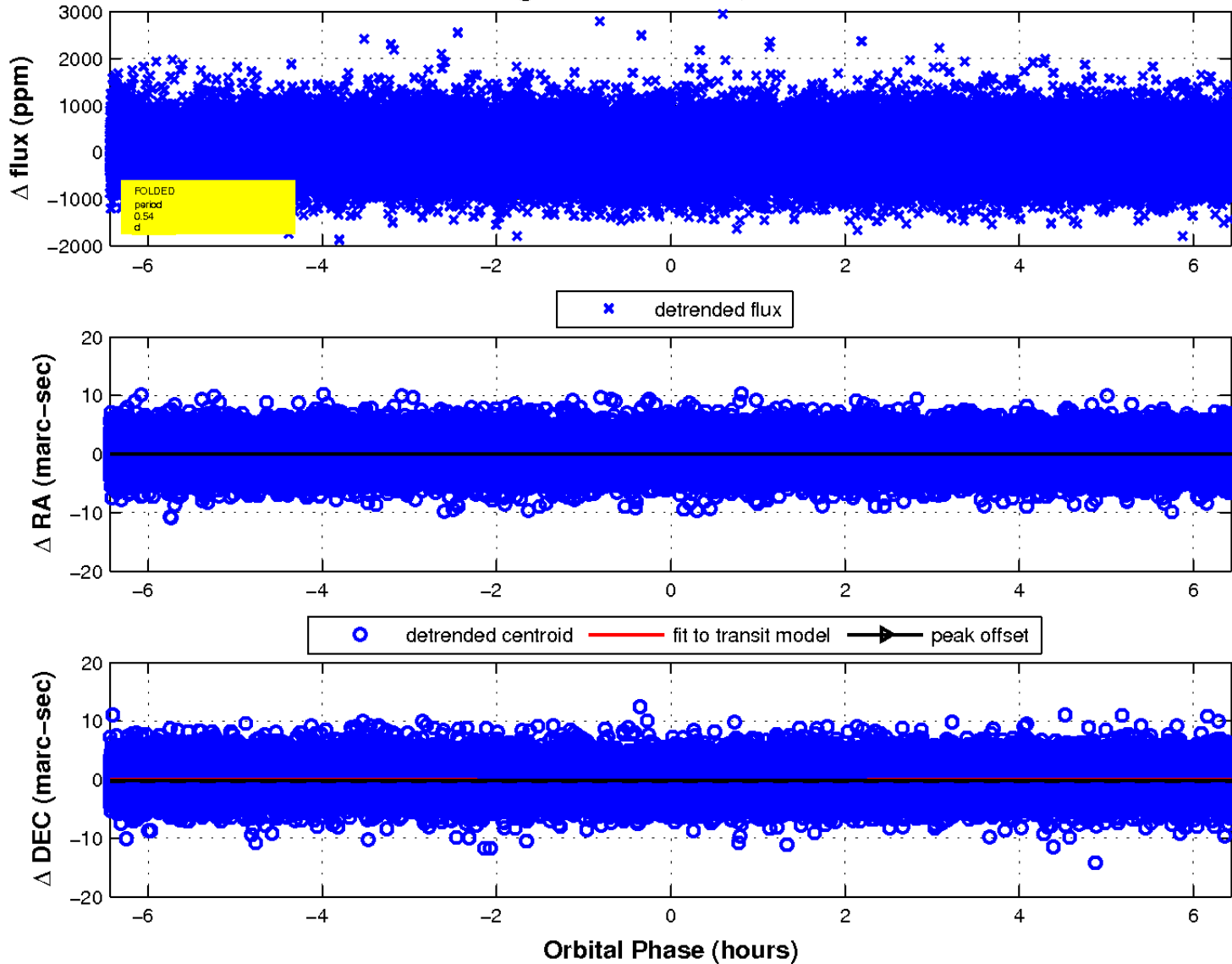
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

