

KIC 009773172

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})
009773172-01	OBS	No	1.204120	132.722442	28.6	4.529	8.4	7.9	1.31	6406	0.85	4604.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009773172-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

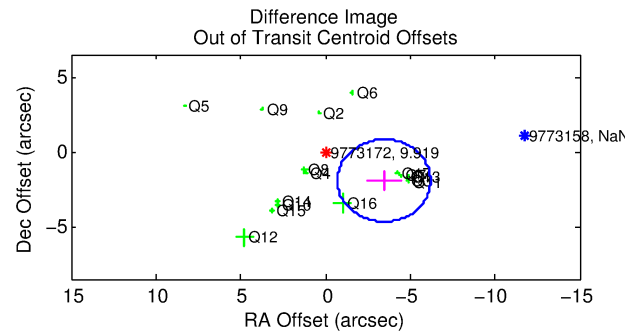
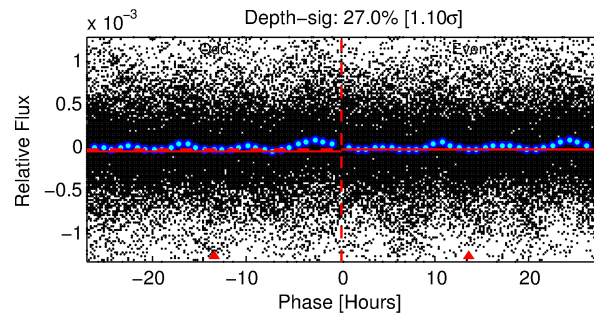
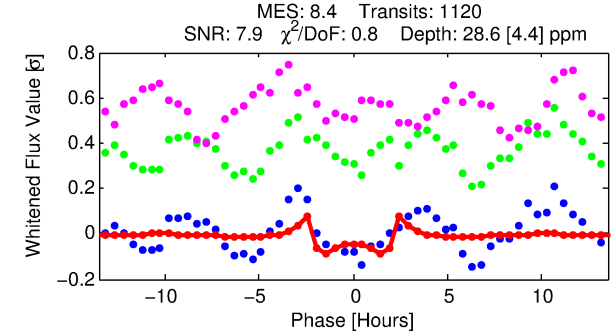
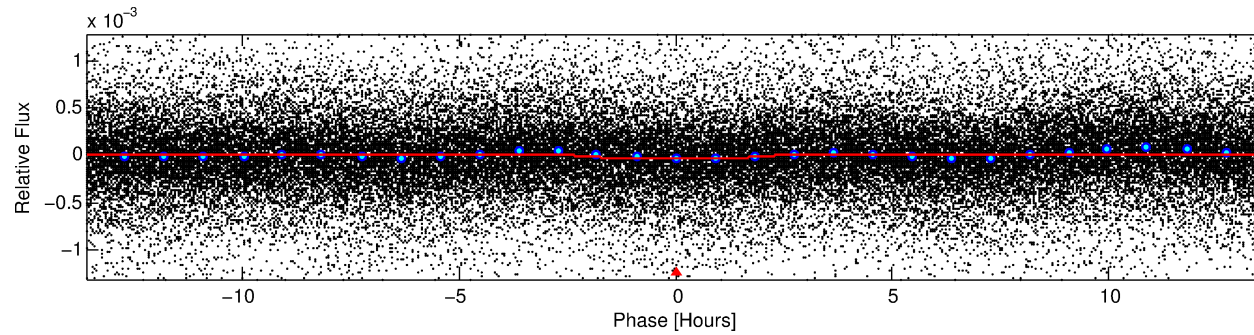
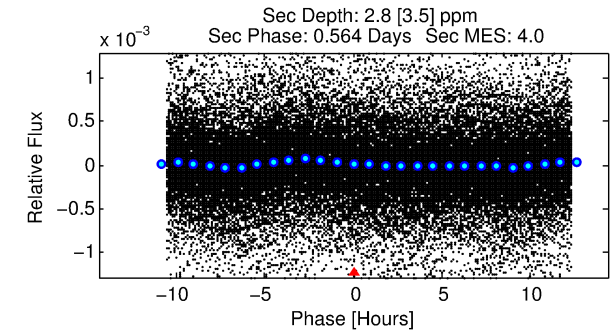
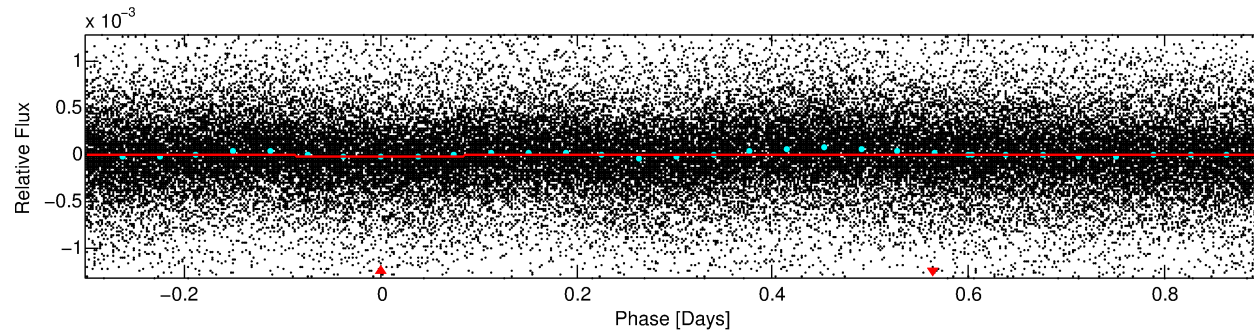
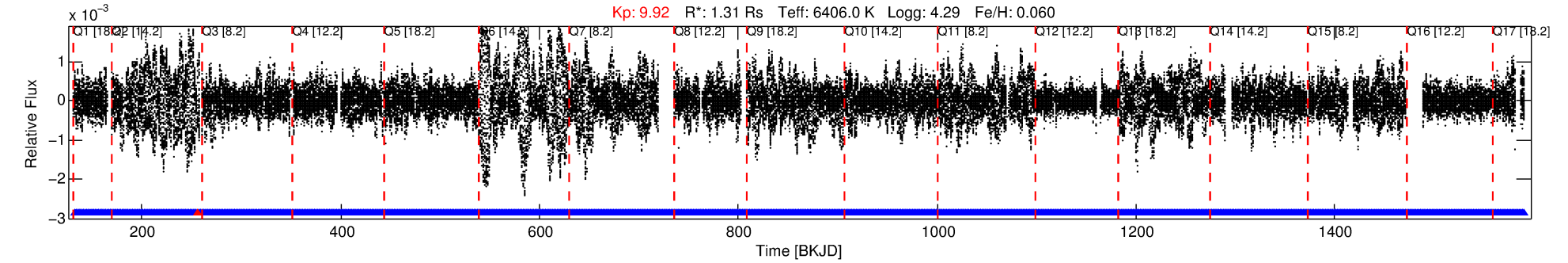
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009773172-01

No Significant Match Found

DV One-Page Summary

KIC: 9773172 Candidate: 1 of 1 Period: 1.204 d



DV Fit Results:

Period = 1.20412 [0.00001] d
Epoch = 132.7224 [0.0020] BKJD
Rp/R* = 0.0059 [0.0010]
a/R* = 1.23 [0.36]
b = 0.93 [0.12]
Seff = 4604.65 [1883.70]
Teff = 2101 [215] K
Rp = 0.85 [0.32] Re
a = 0.0237 [0.0064] AU
Ag = 1.20 [1.62] [0.12 σ]
Teffp = 3401 [1108] K [1.15 σ]

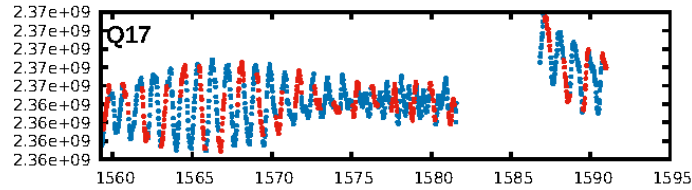
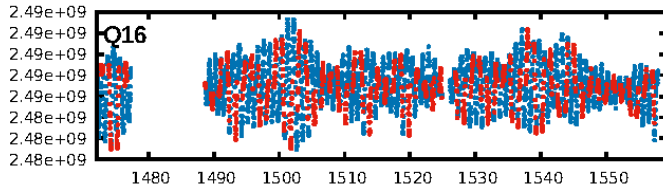
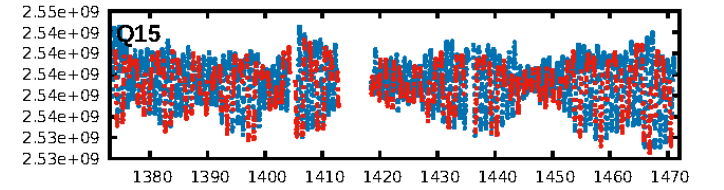
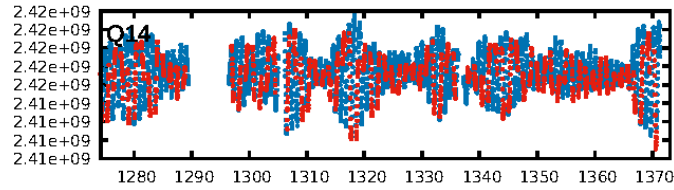
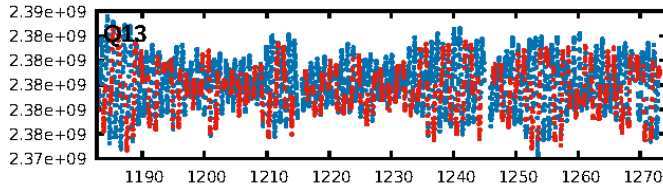
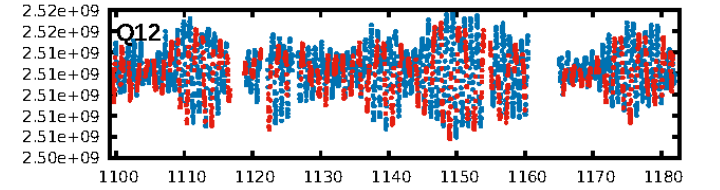
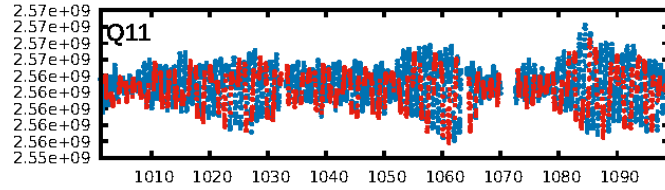
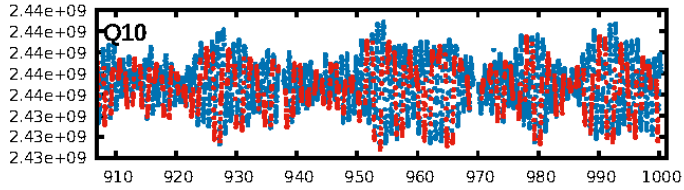
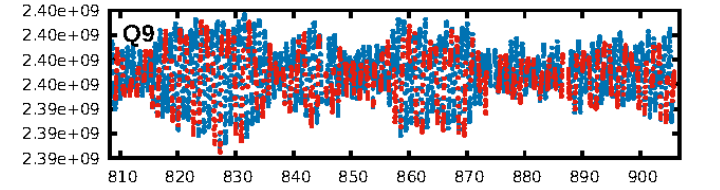
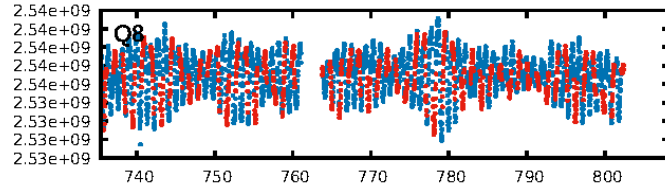
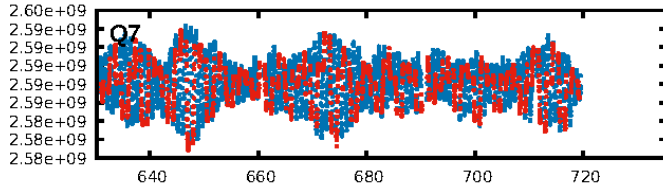
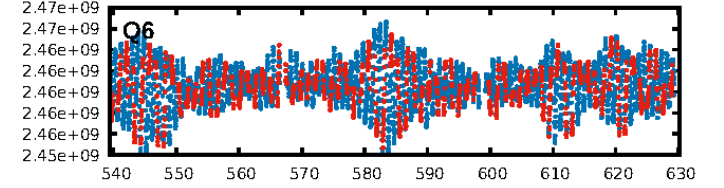
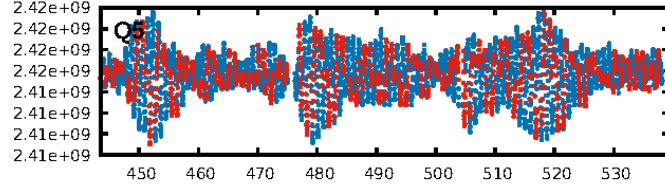
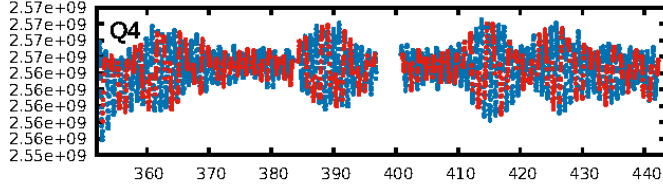
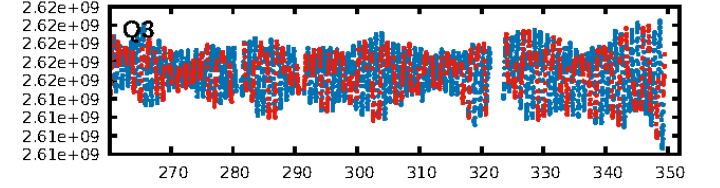
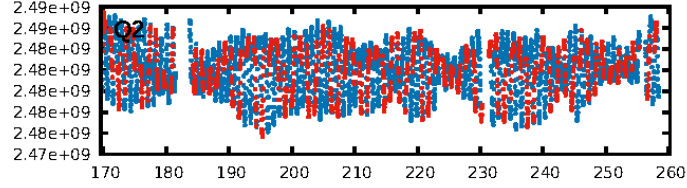
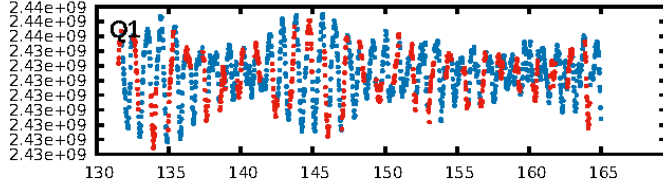
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.03e-16
RollingBand-fgt: 1.00 [1068/1069]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 2.190 arcsec [4.98 σ]
OotOffset-rm: 3.952 arcsec [4.32 σ]
KicOffset-rm: 3.868 arcsec [3.95 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

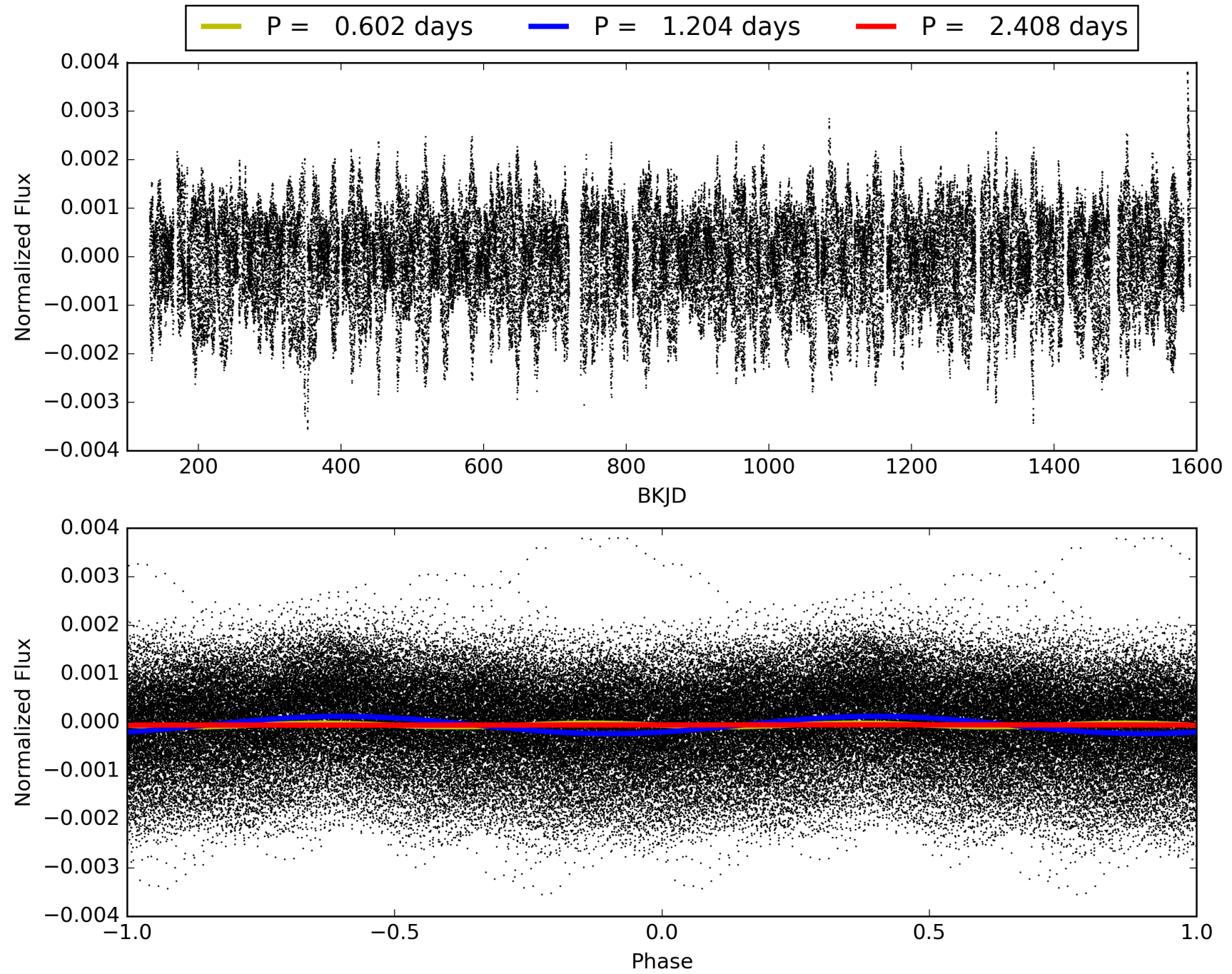
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:06:49 Z

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

TCE 009773172-01, PDC Light Curves

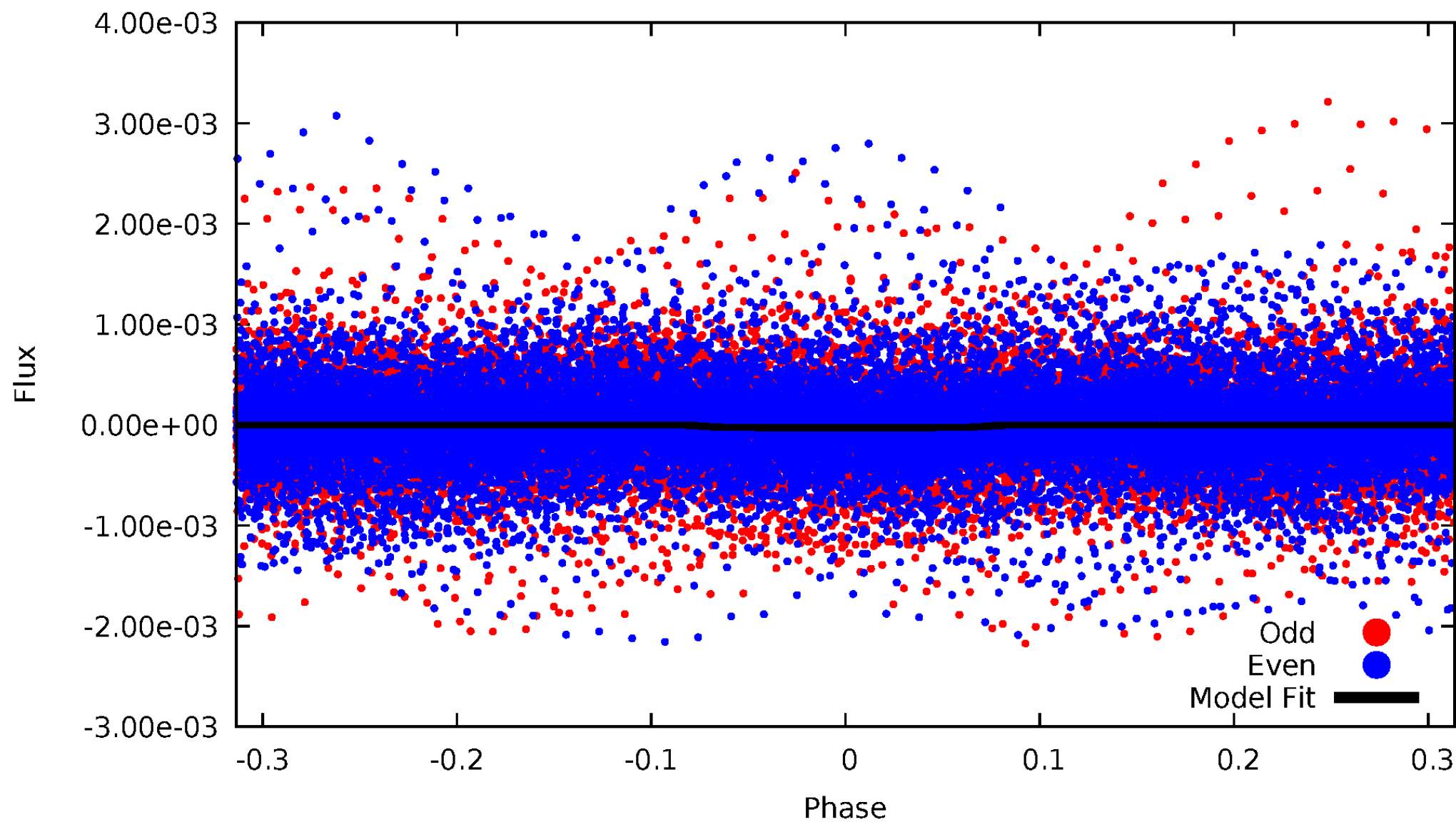


TCE 009773172-01



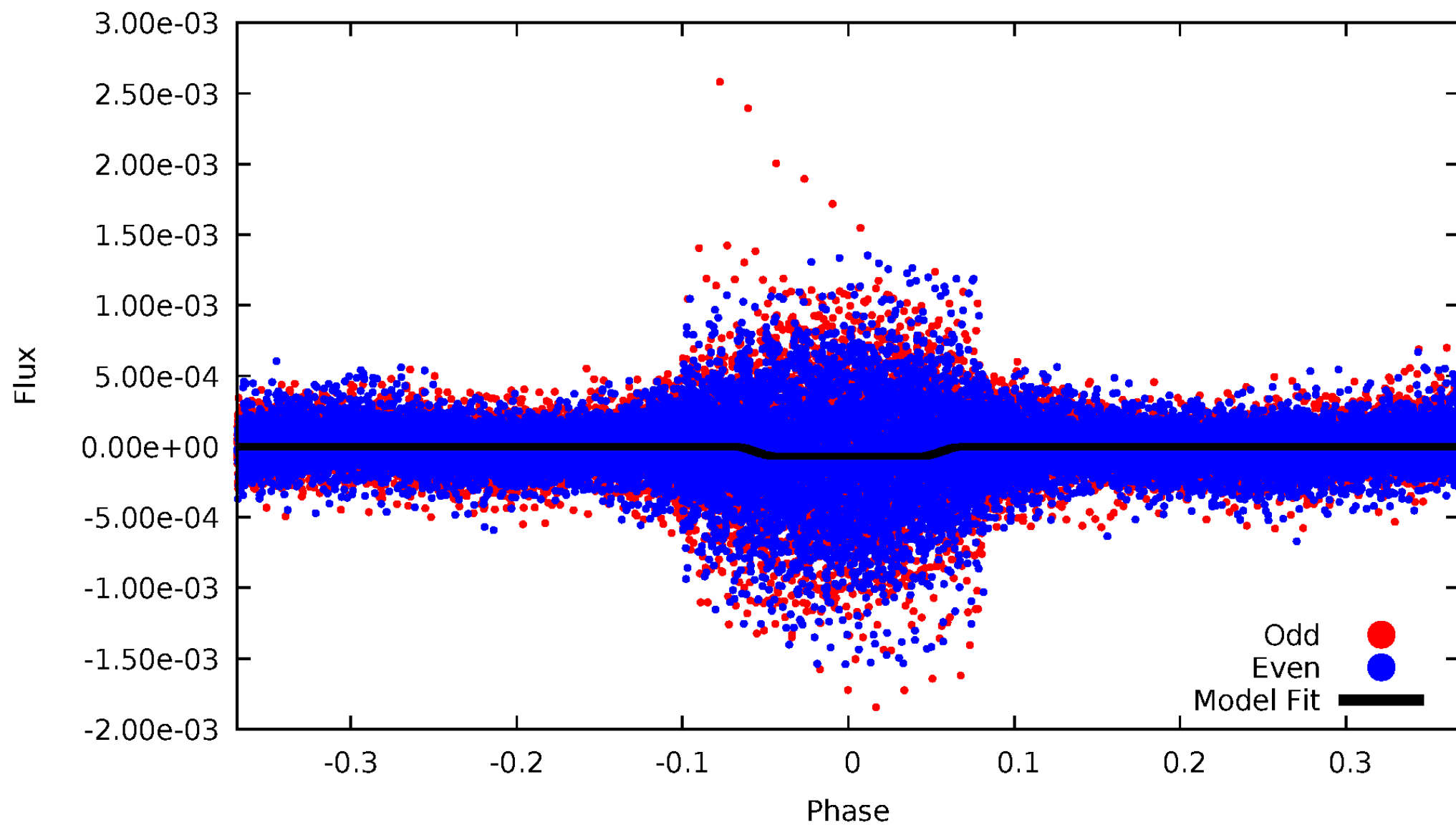
DV Odd/Even

TCE 009773172-01



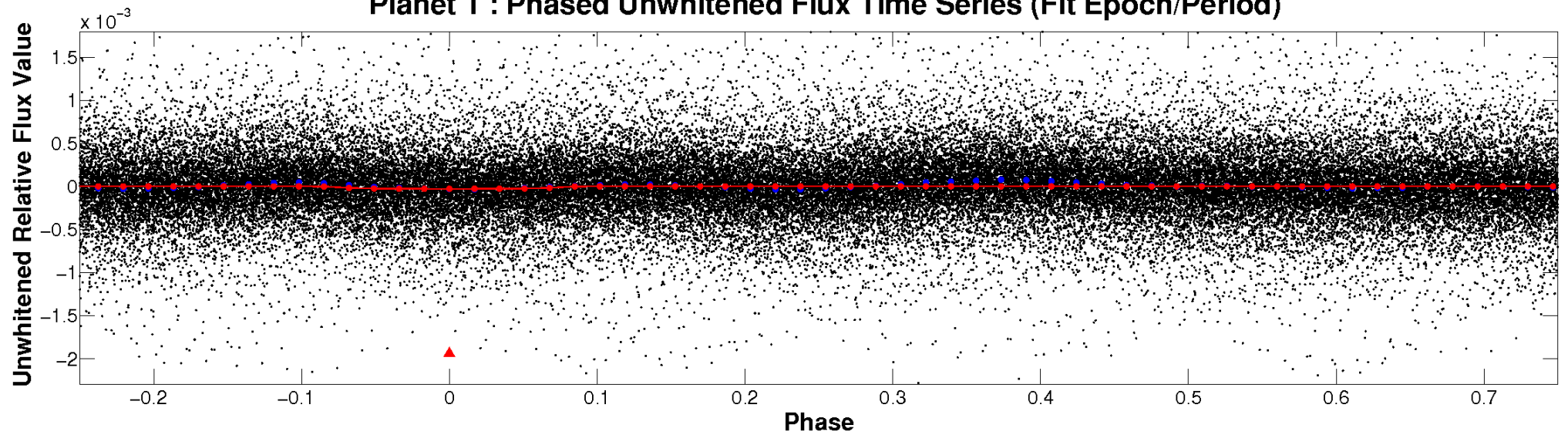
ALT Odd/Even

TCE 009773172-01

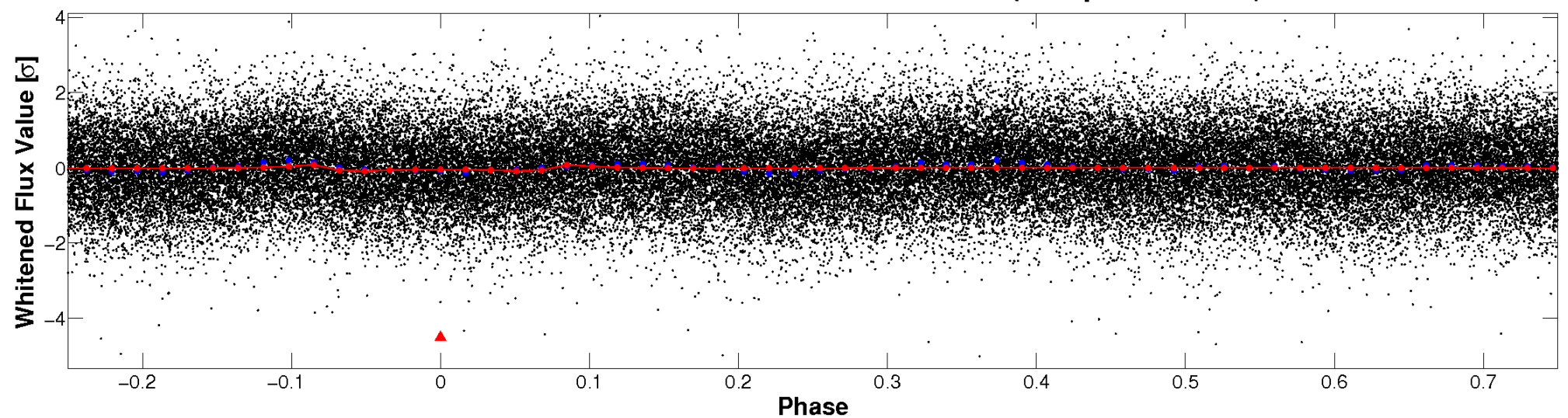


Non-Whitened Vs. Whitened Light Curve

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

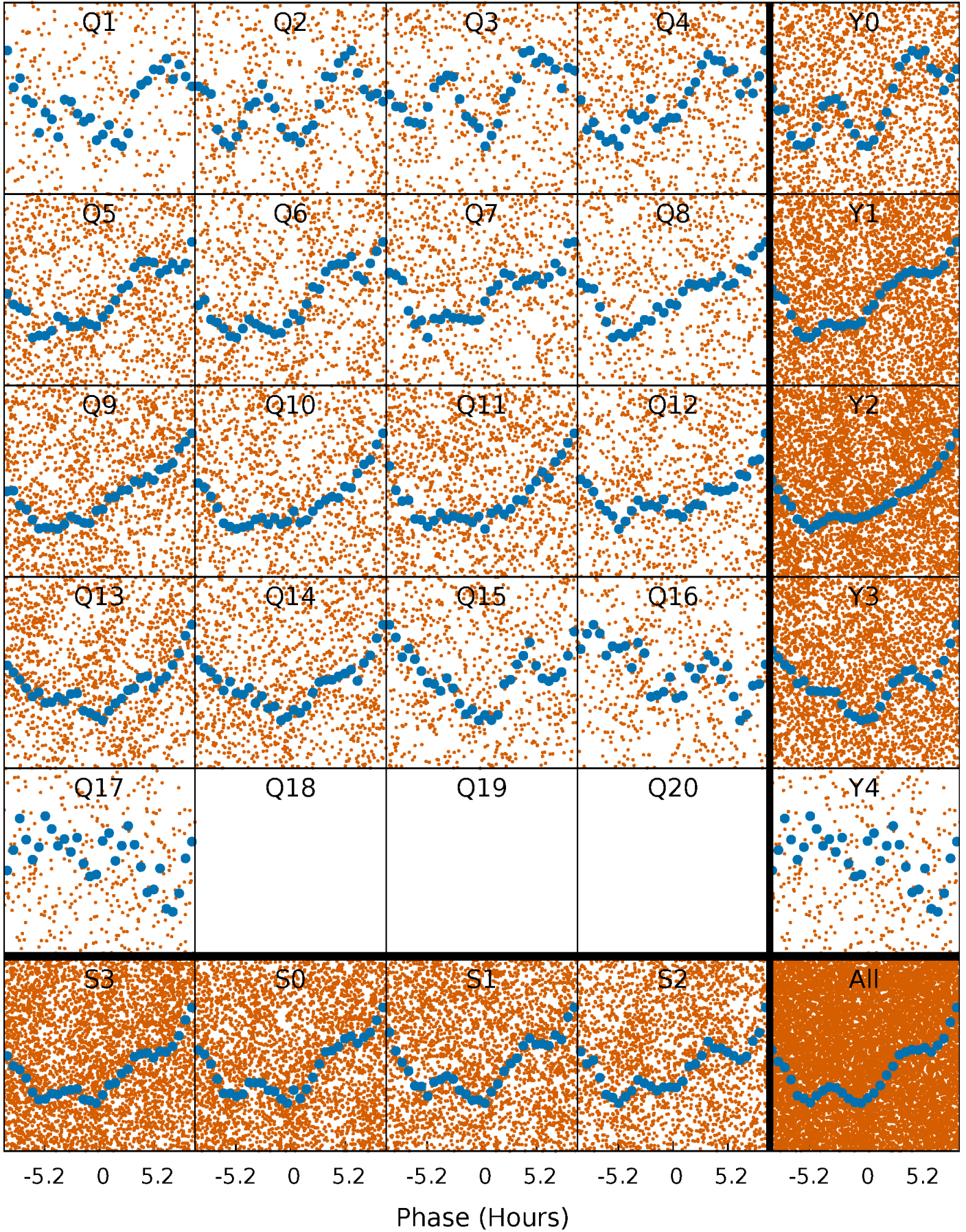


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



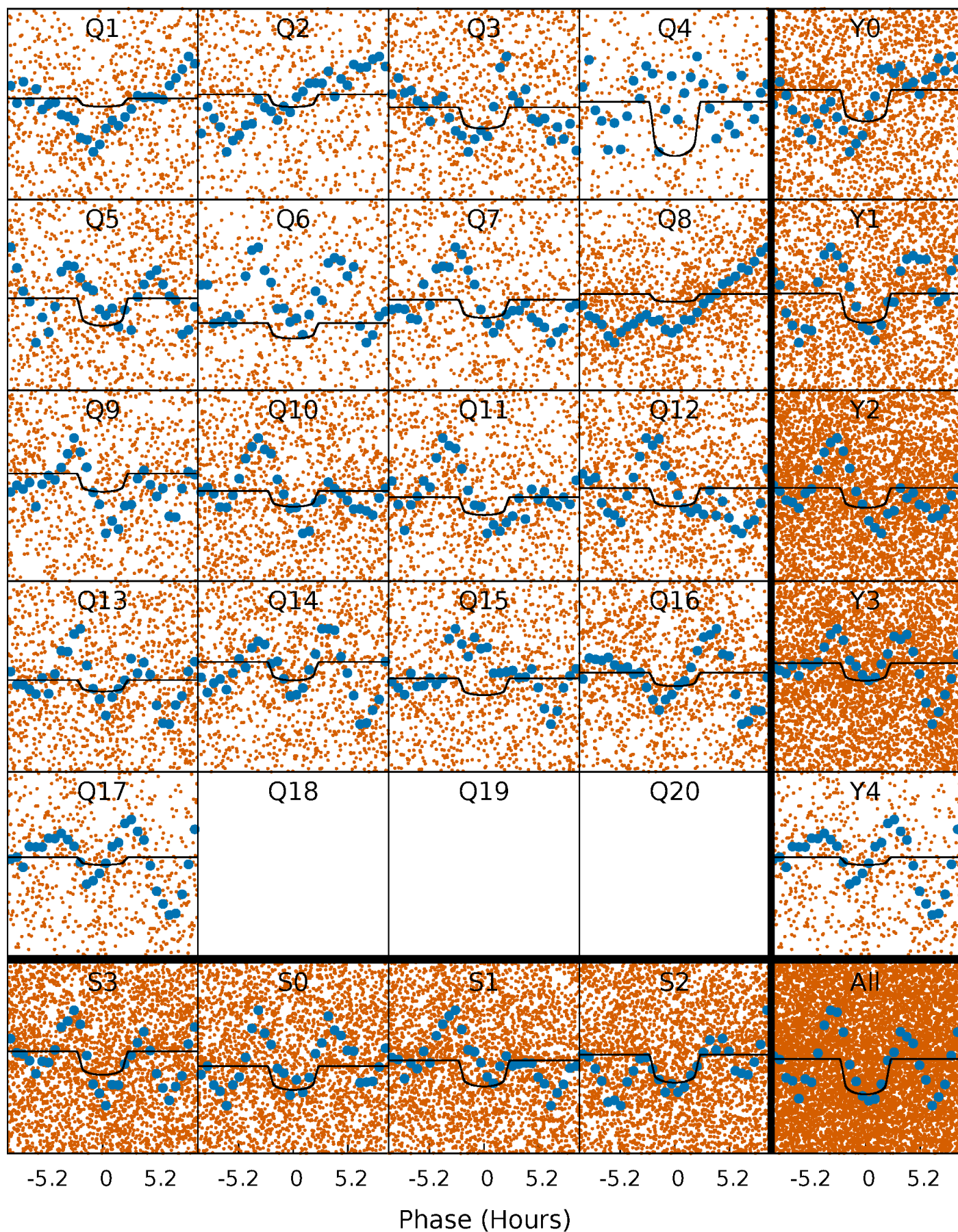
PDC Quarter-Phased Transit Curves

TCE 009773172-01 P= 1.204120 Days $T_0=132.722442$ (BKJD)



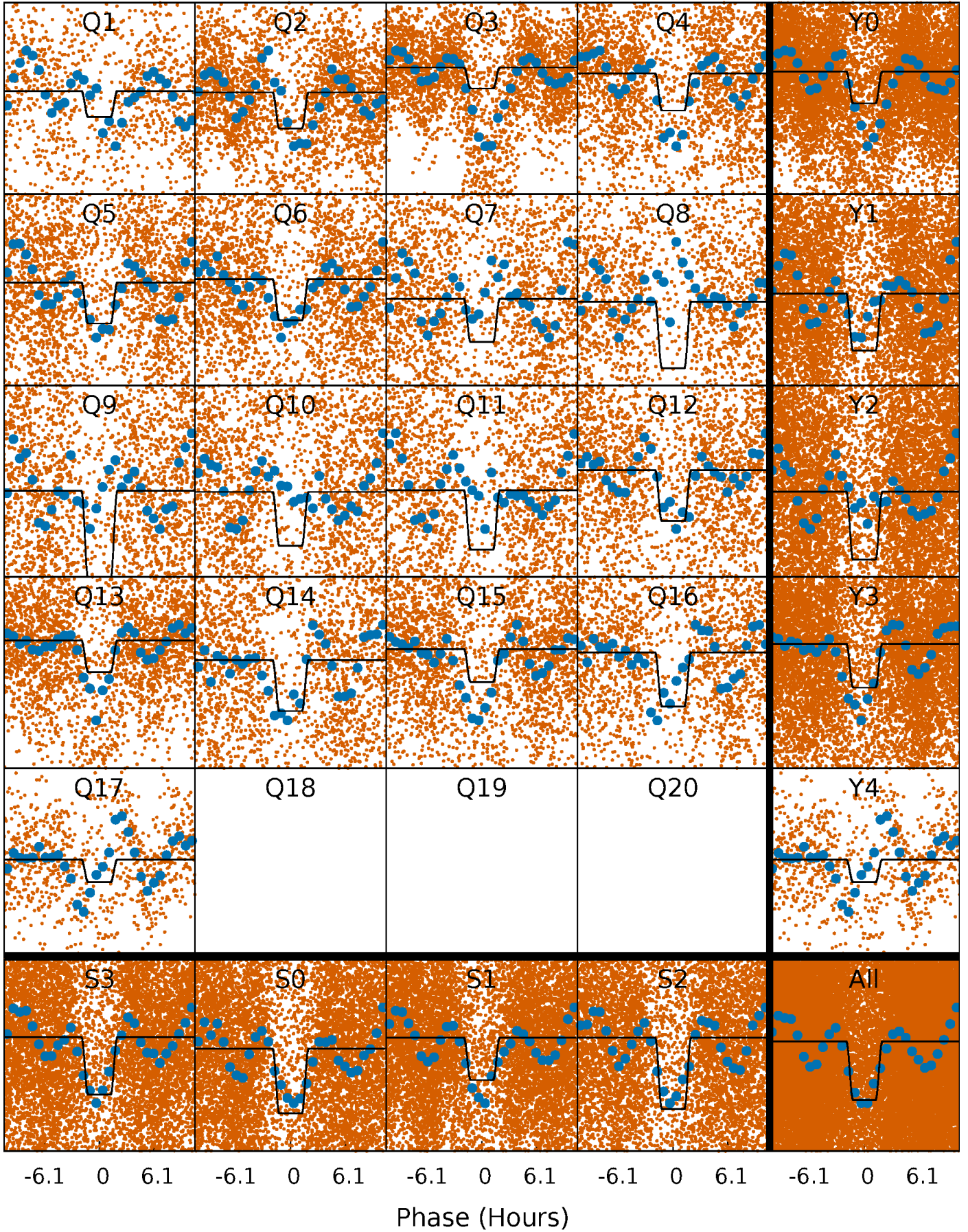
DV Quarter-Phased Transit Curves

TCE 009773172-01 P= 1.204120 Days $T_0=132.722442$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

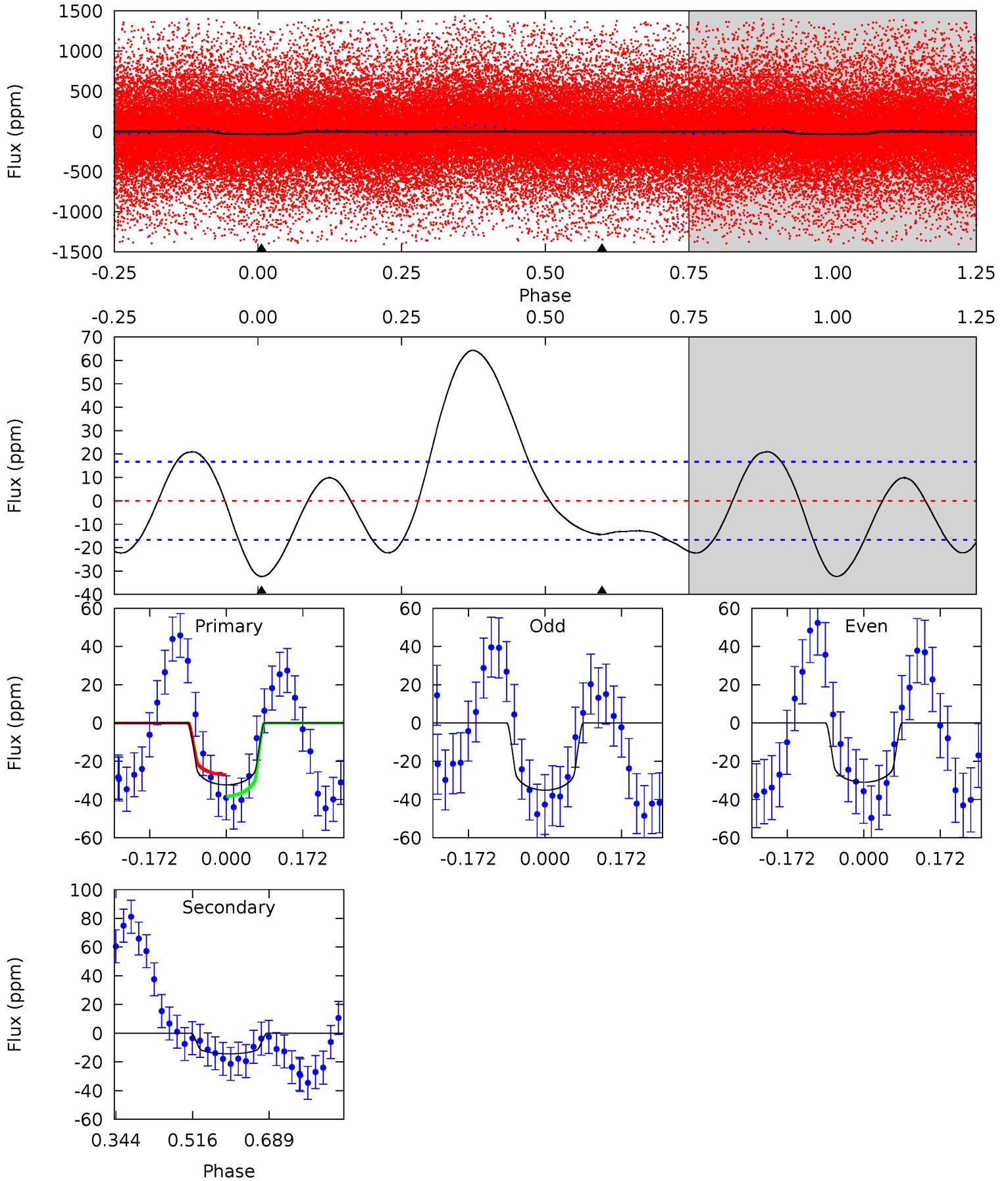
TCE 009773172-01 P= 1.204161 Days $T_0=132.708354$ (BKJD)



DV Model-Shift Uniqueness Test

009773172-01, P = 1.204120 Days, E = 130.314202 Days

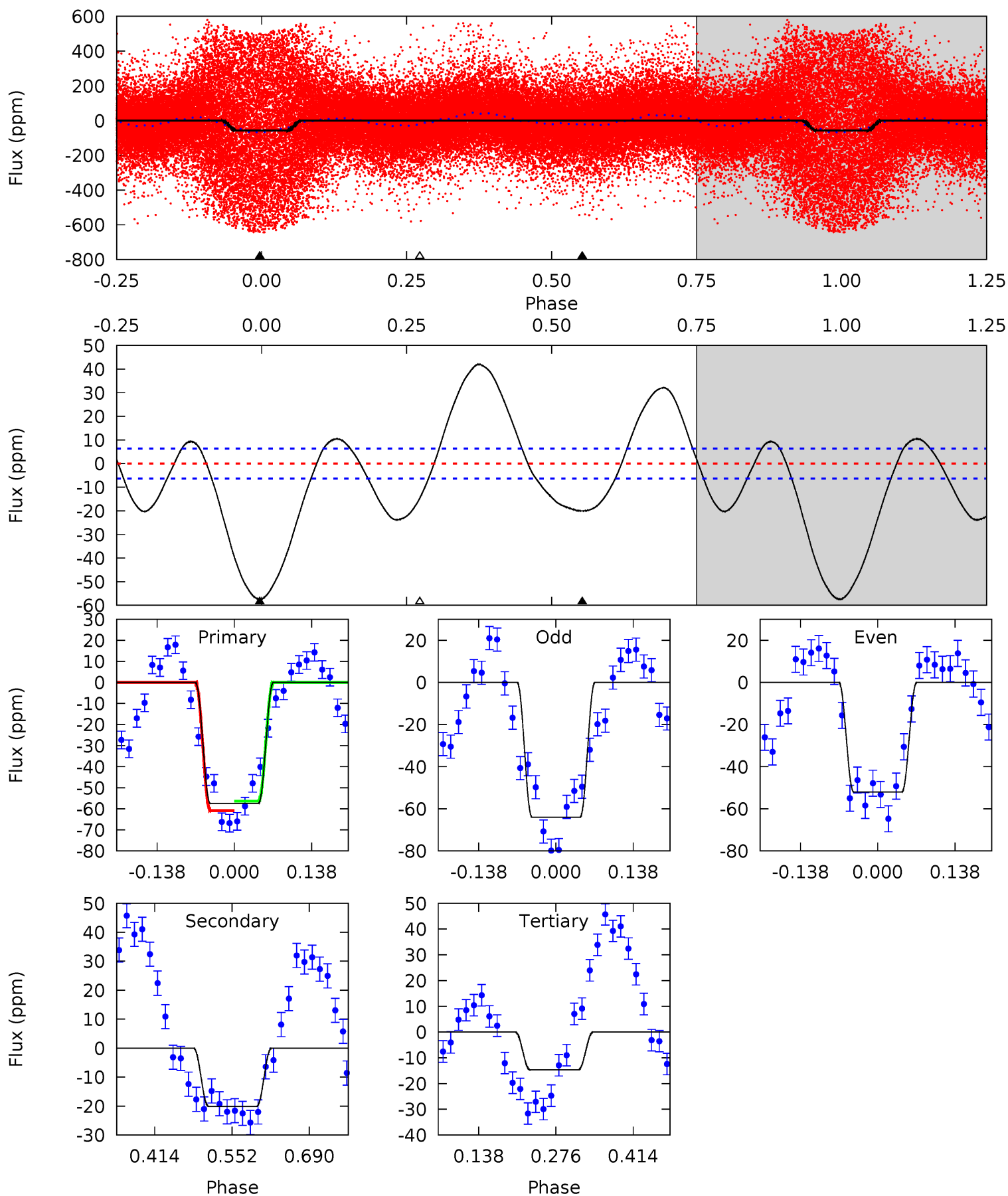
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.62	3.83	0	0	4.45	1.37	8.82	8.62	8.62	3.83	3.83	0.57	0.74	0.67	1.52



Alt Model-Shift Uniqueness Test

009773172-01, P = 1.204161 Days, E = 131.504193 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	14.2	10.4	0	4.50	1.48	14.9	30.2	40.6	3.81	14.2	4.18	1.06	0.42	1.59



Stellar Parameters For KIC 009773172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6406^{+179}_{-246}	$4.292^{+0.108}_{-0.201}$	$0.060^{+0.250}_{-0.300}$	$1.310^{+0.433}_{-0.233}$	$1.226^{+0.180}_{-0.180}$	$0.768^{+0.395}_{-0.415}$
	+3%/-4%	+3%/-5%	+417%/-500%	+33%/-18%	+15%/-15%	+51%/-54%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009773172-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 4	$0.88^{+0.22}_{-0.17}$	2977^{+231}_{-193}	5057^{+573}_{-519}	$5.526^{+3.497}_{-2.156}$
Alt.	-20 ± 1	$1.21^{+0.25}_{-0.20}$	2962^{+219}_{-161}	4743^{+324}_{-298}	$4.202^{+1.784}_{-1.283}$

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 $A_{obs} \gg 1.0$

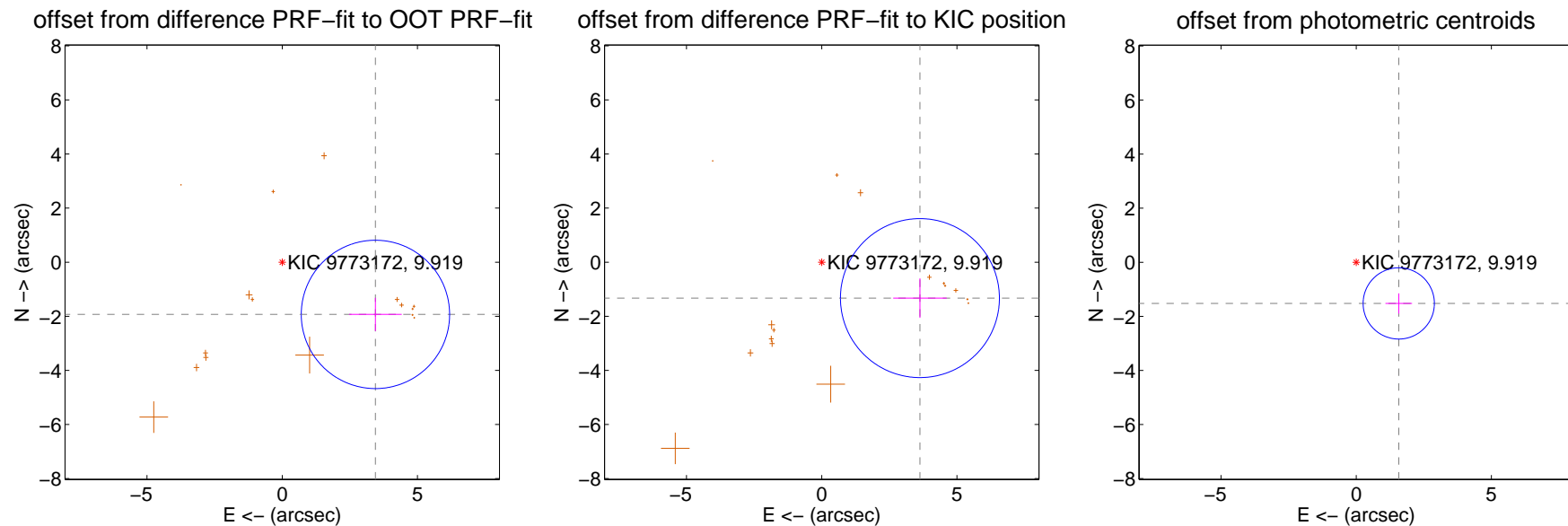
DV Centroid Data

Supplemental centroid analysis for 009773172-01. **Kepler magnitude: 9.92.** Transit SNR 7.90

There are 0 quarters with good PRF difference image offsets

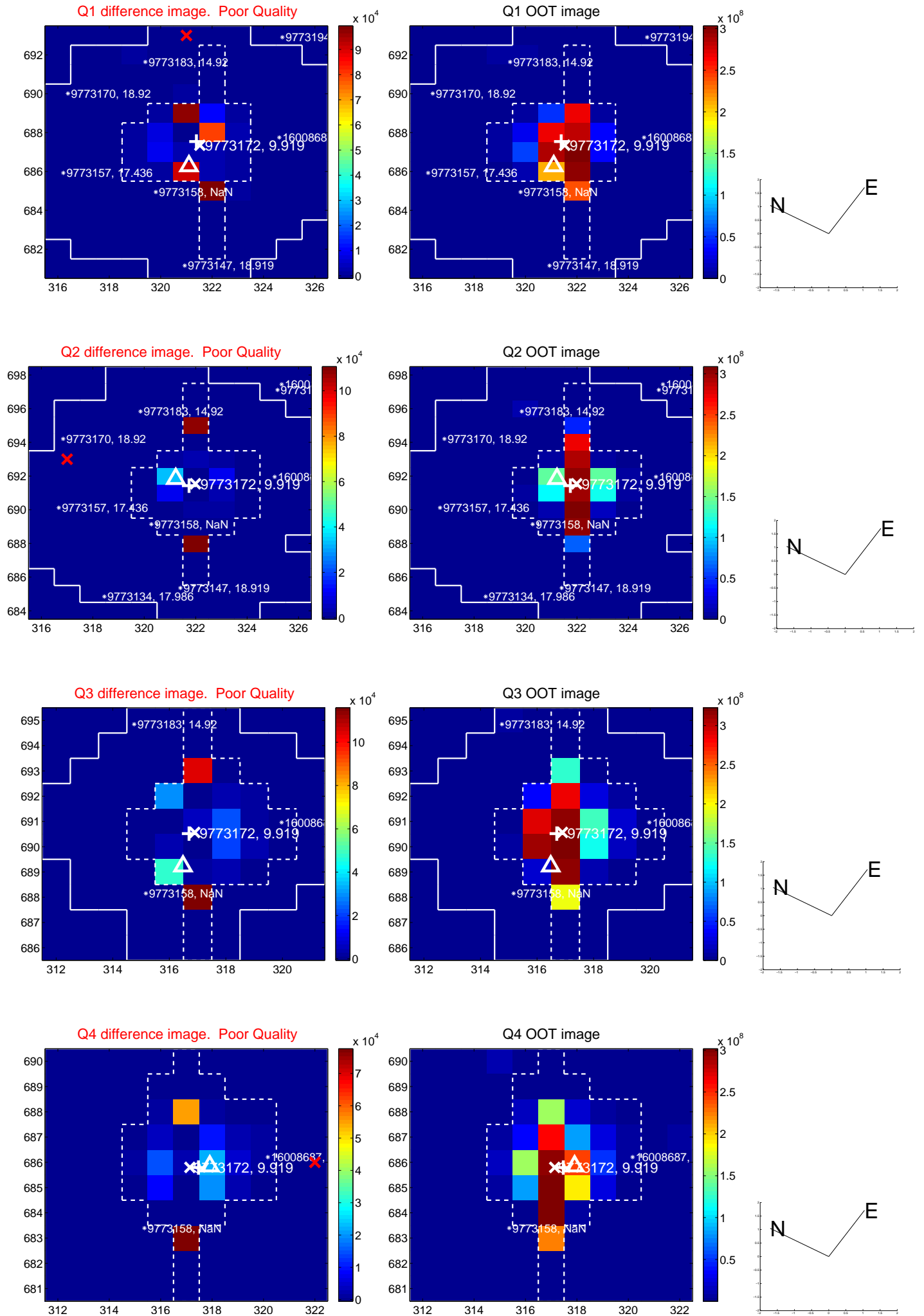
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.952 ± 0.914	4.32	-3.448 ± 0.973	-1.931 ± 0.613
PRF-fit source offset from KIC position	3.868 ± 0.980	3.95	-3.632 ± 0.989	-1.328 ± 0.729
photometric centroid source offset	2.19 ± 0.44	4.98	-1.57 ± 0.49	-1.52 ± 0.37

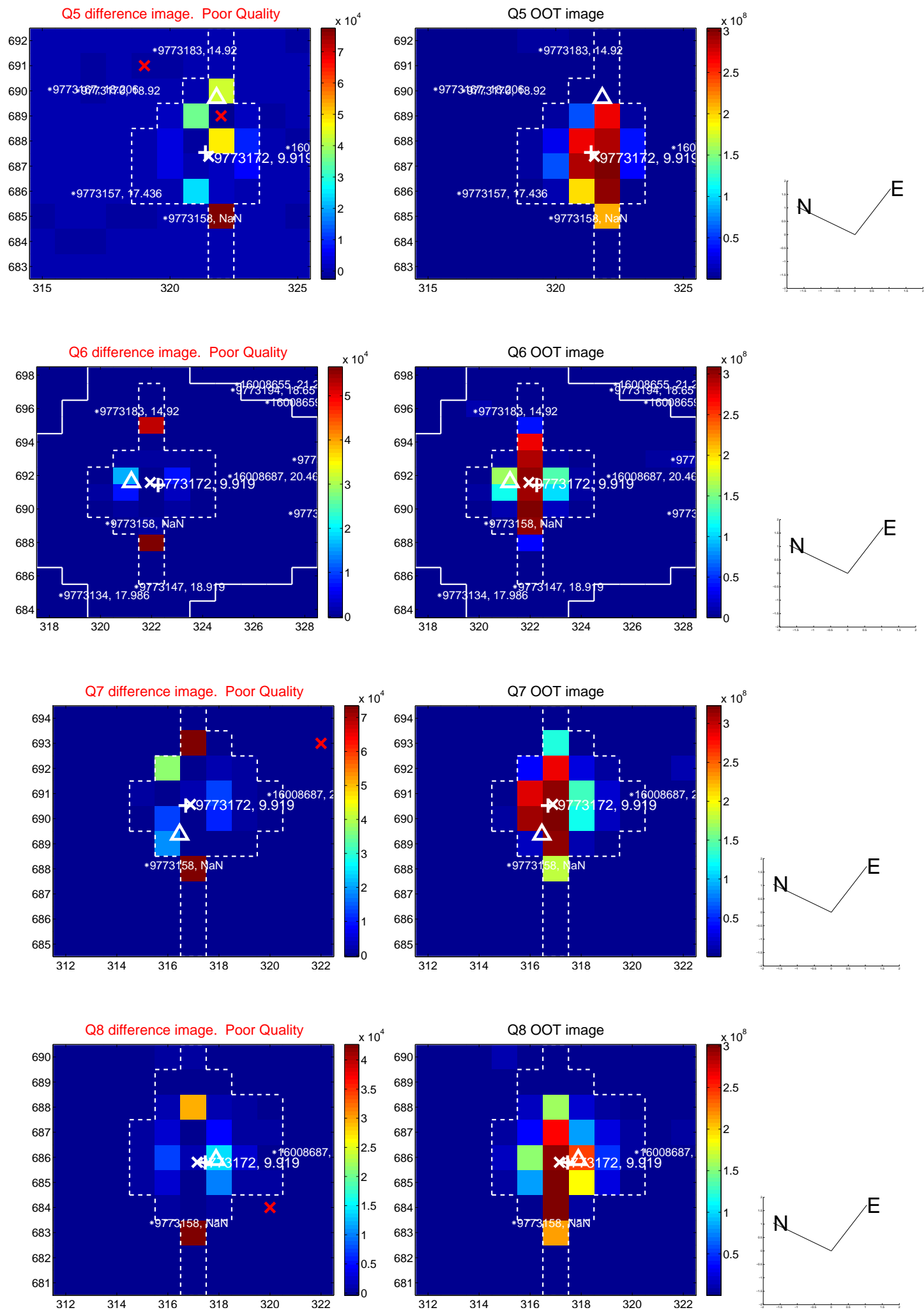


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

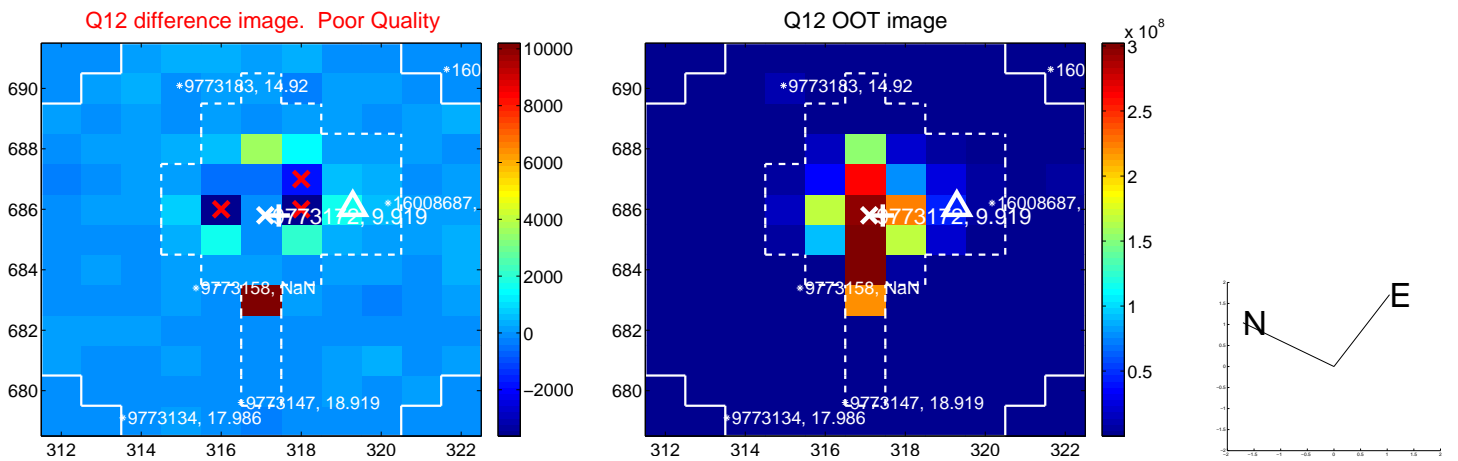
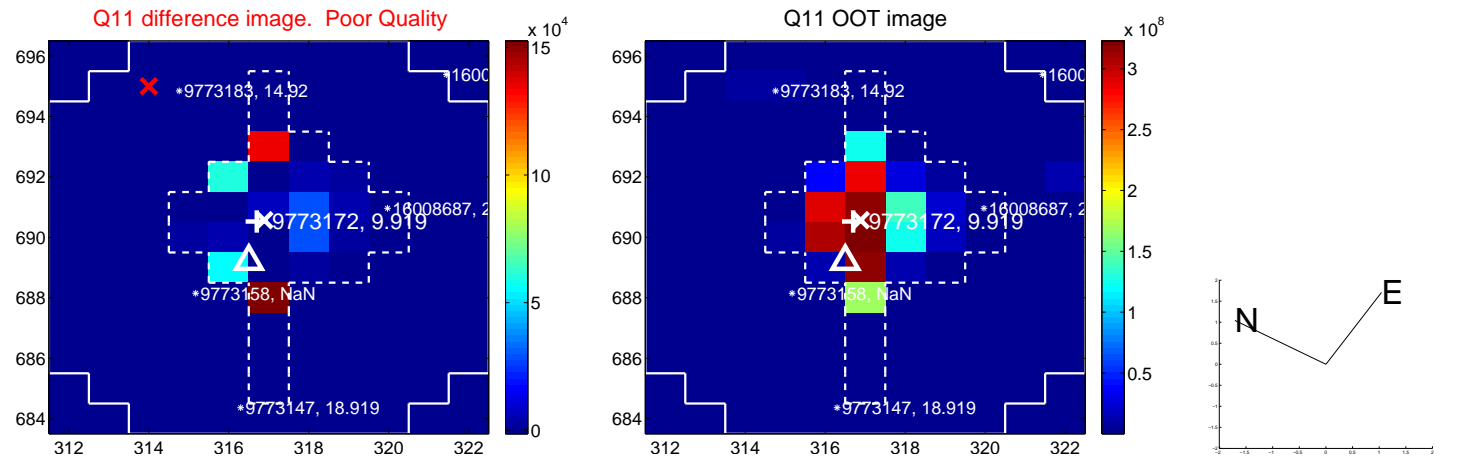
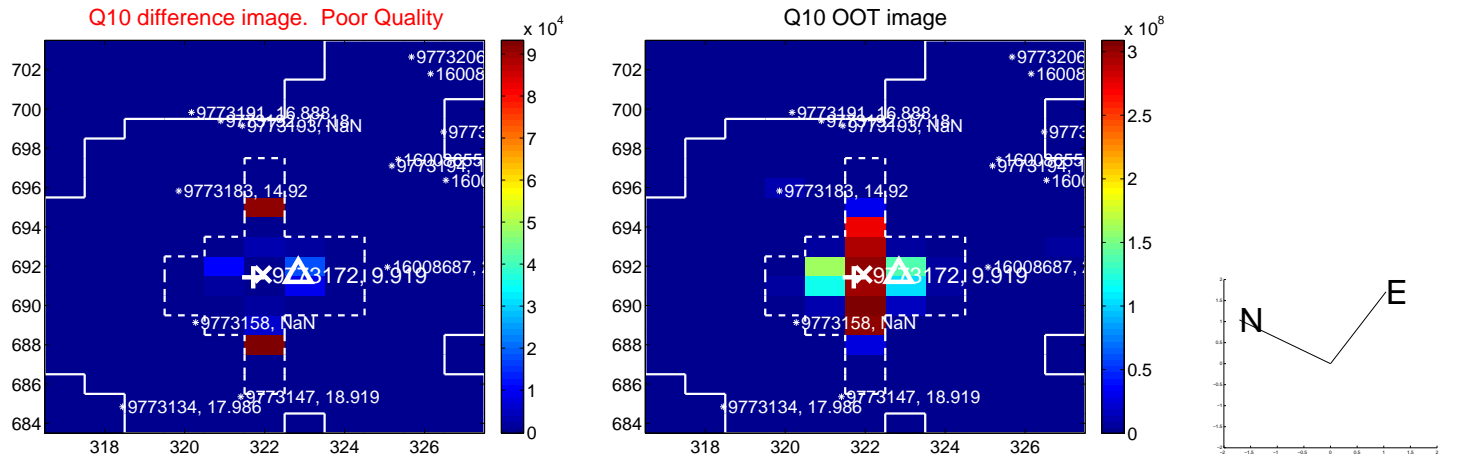
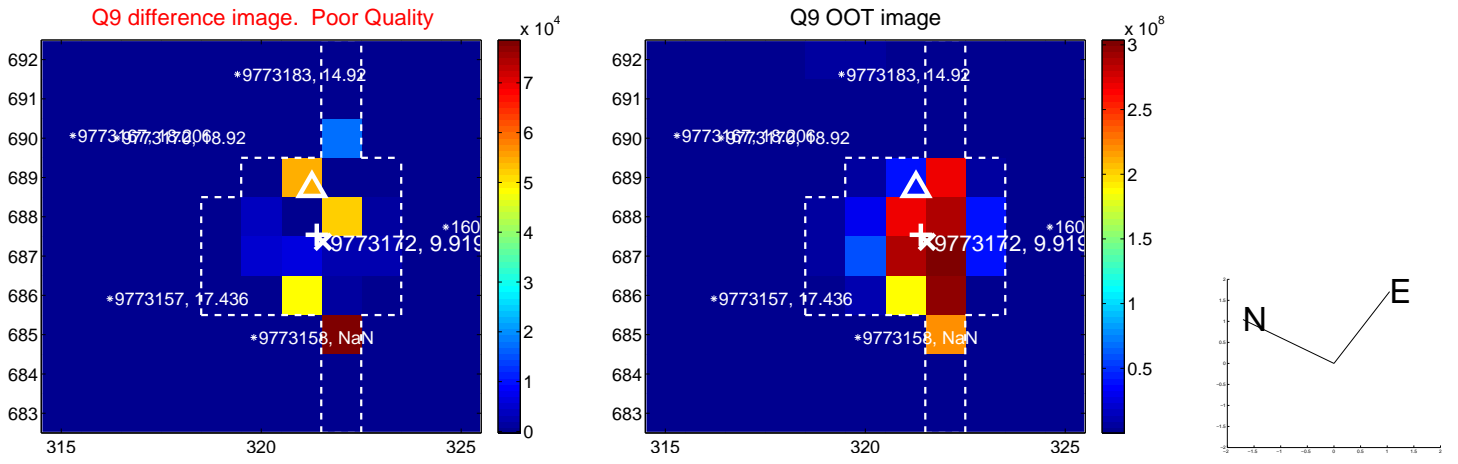
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



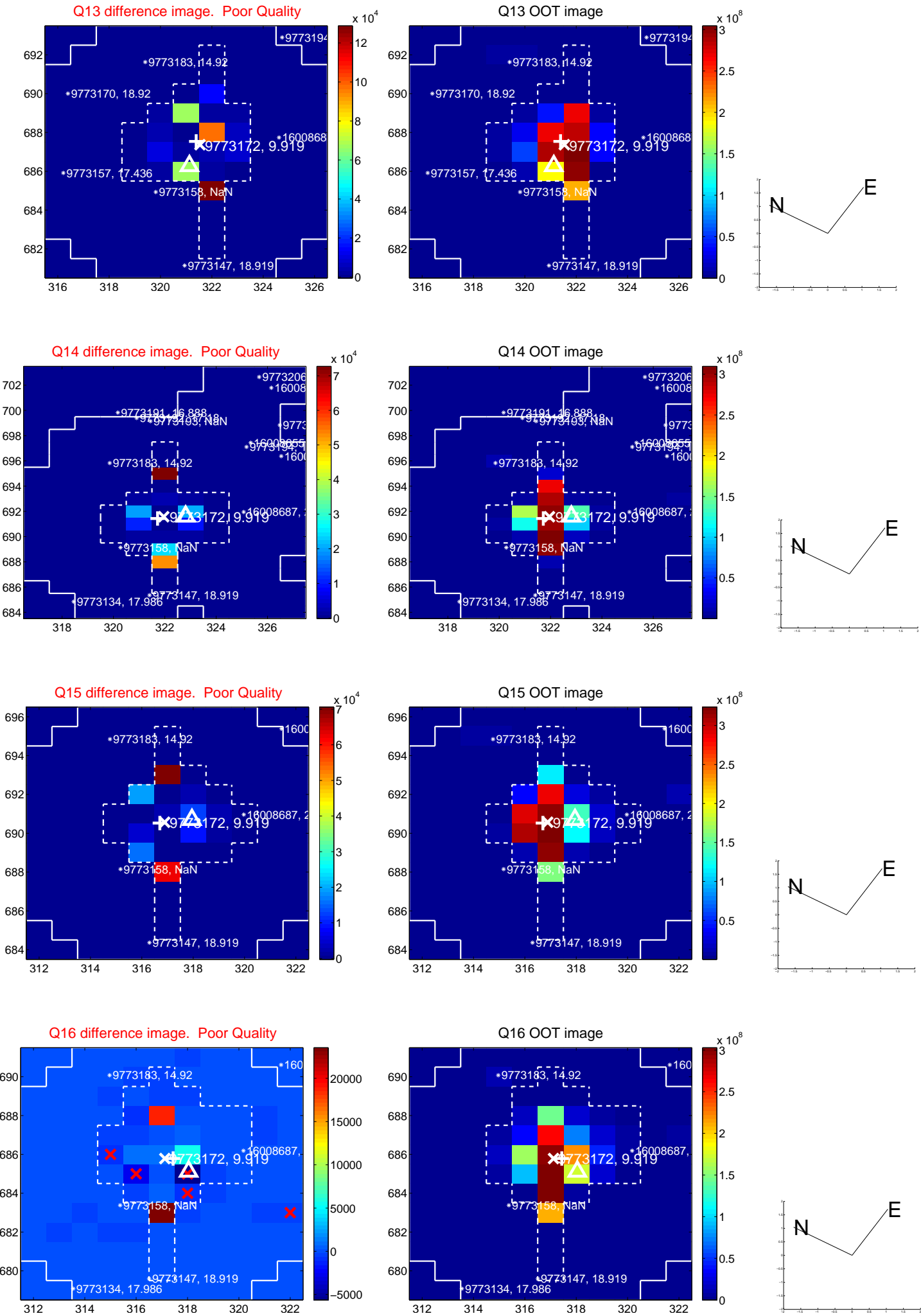
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



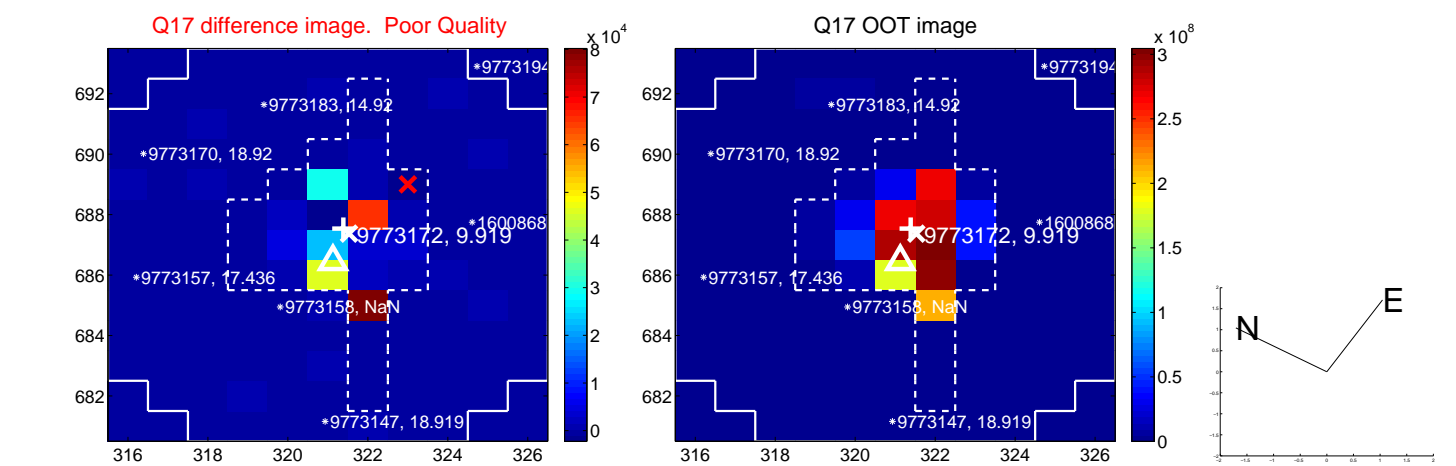
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



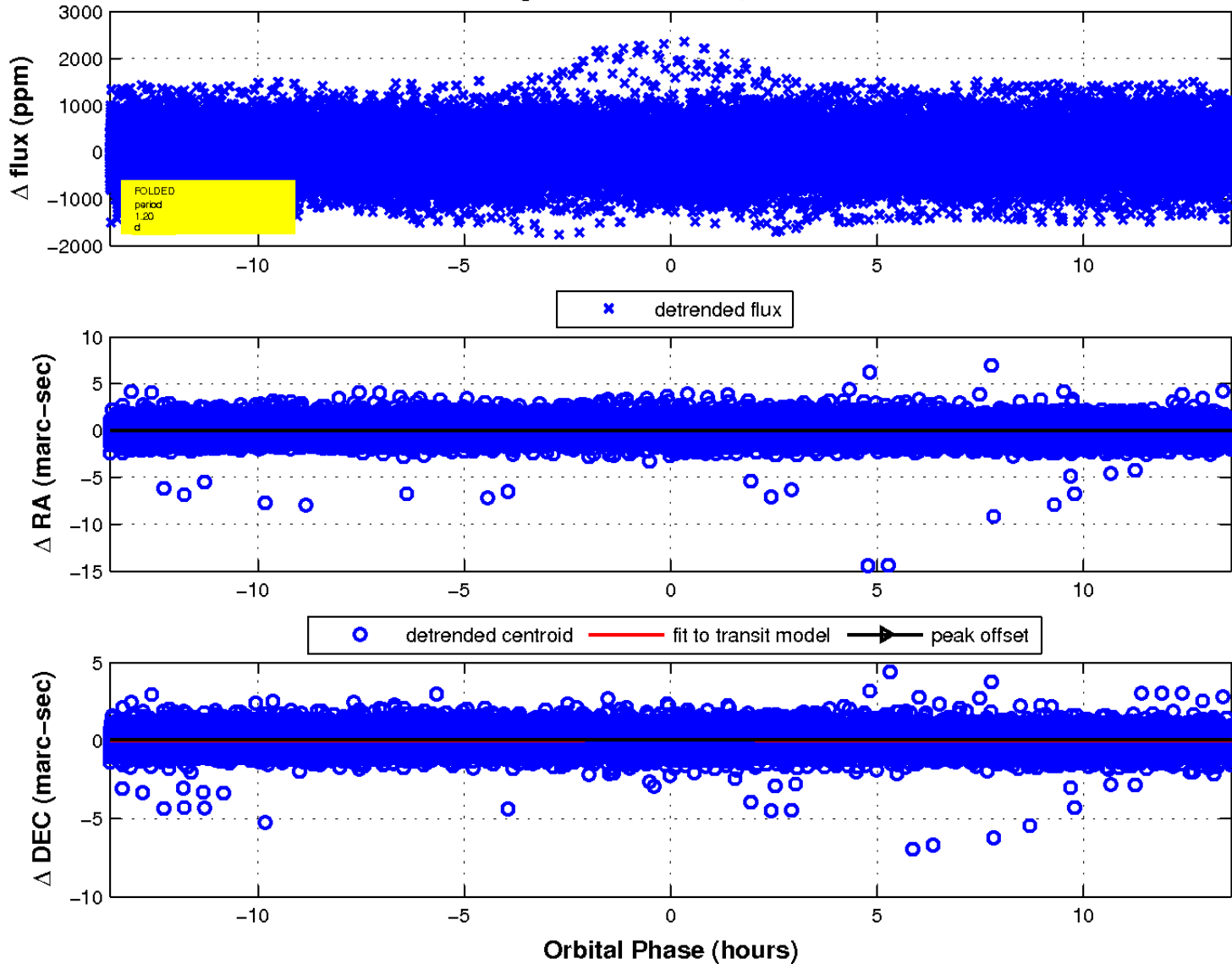
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

