

KIC 006878173

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})
006878173-01	OBS	No	0.528769	131.698163	15.6	4.102	10.2	8.2	1.11	6355	0.44	9969.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006878173-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

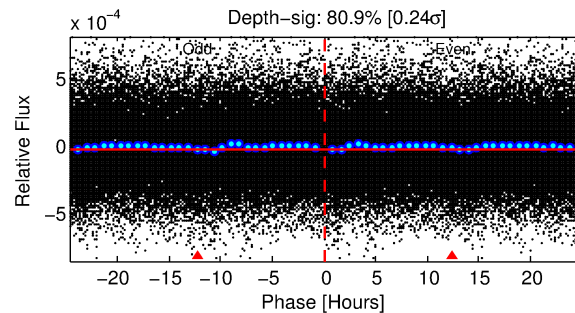
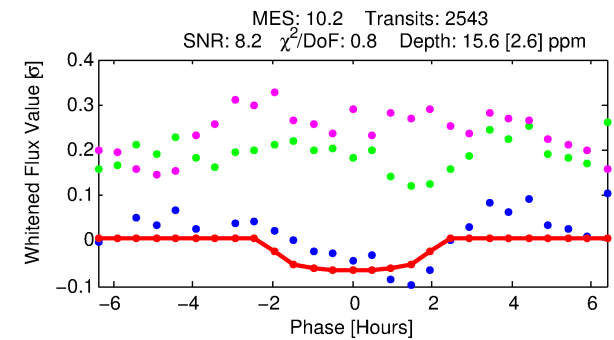
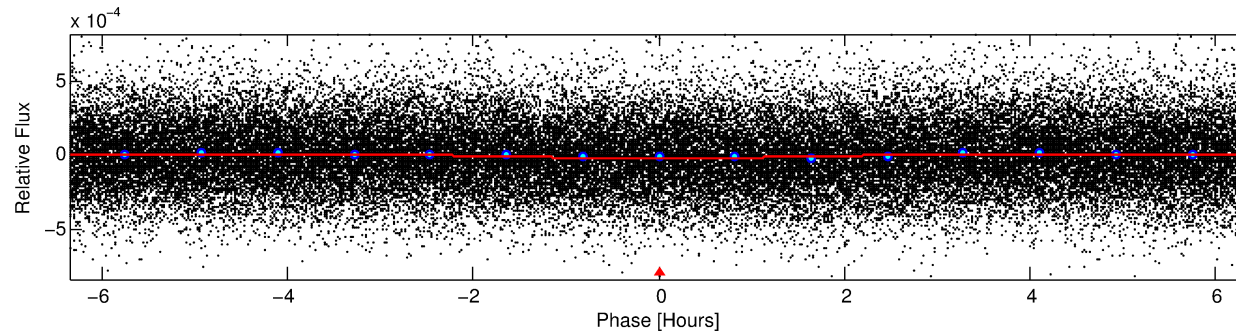
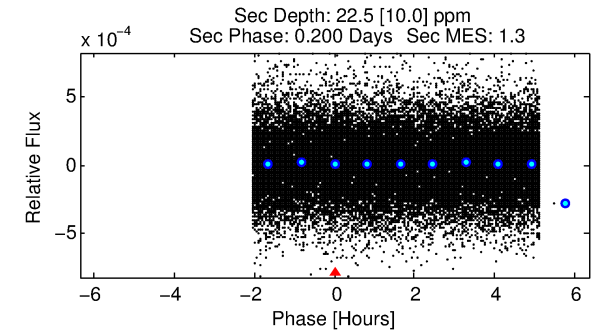
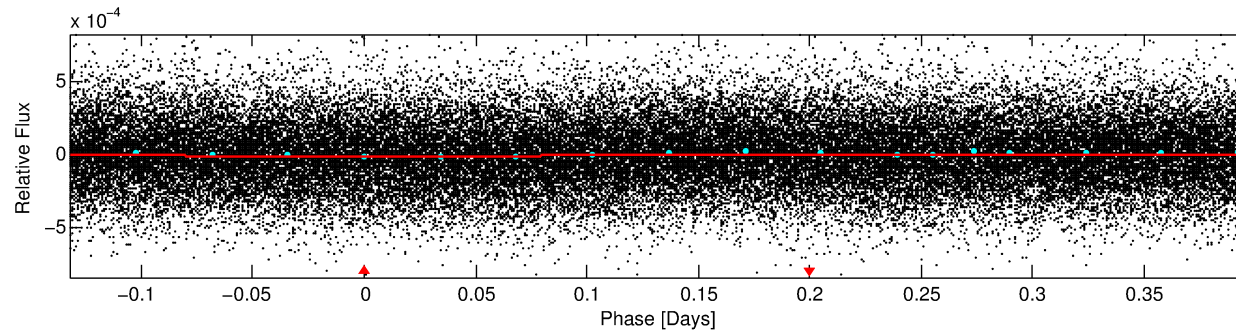
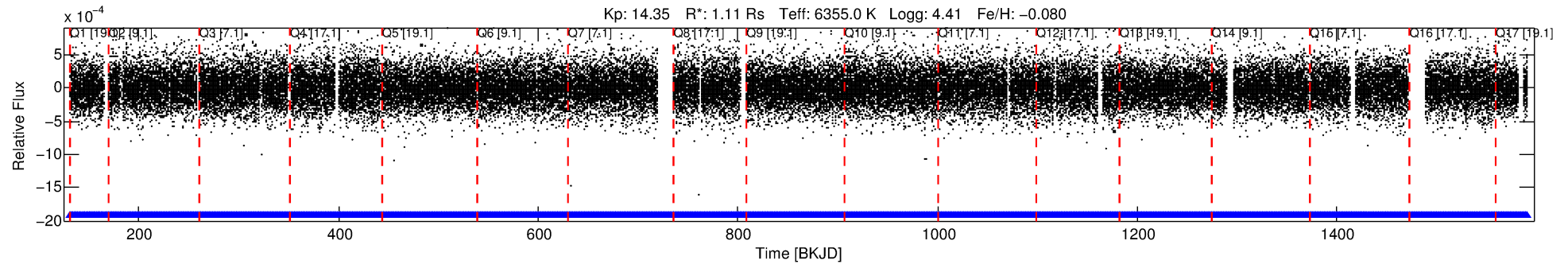
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006878173-01

No Significant Match Found

DV One-Page Summary

KIC: 6878173 Candidate: 1 of 1 Period: 0.529 d



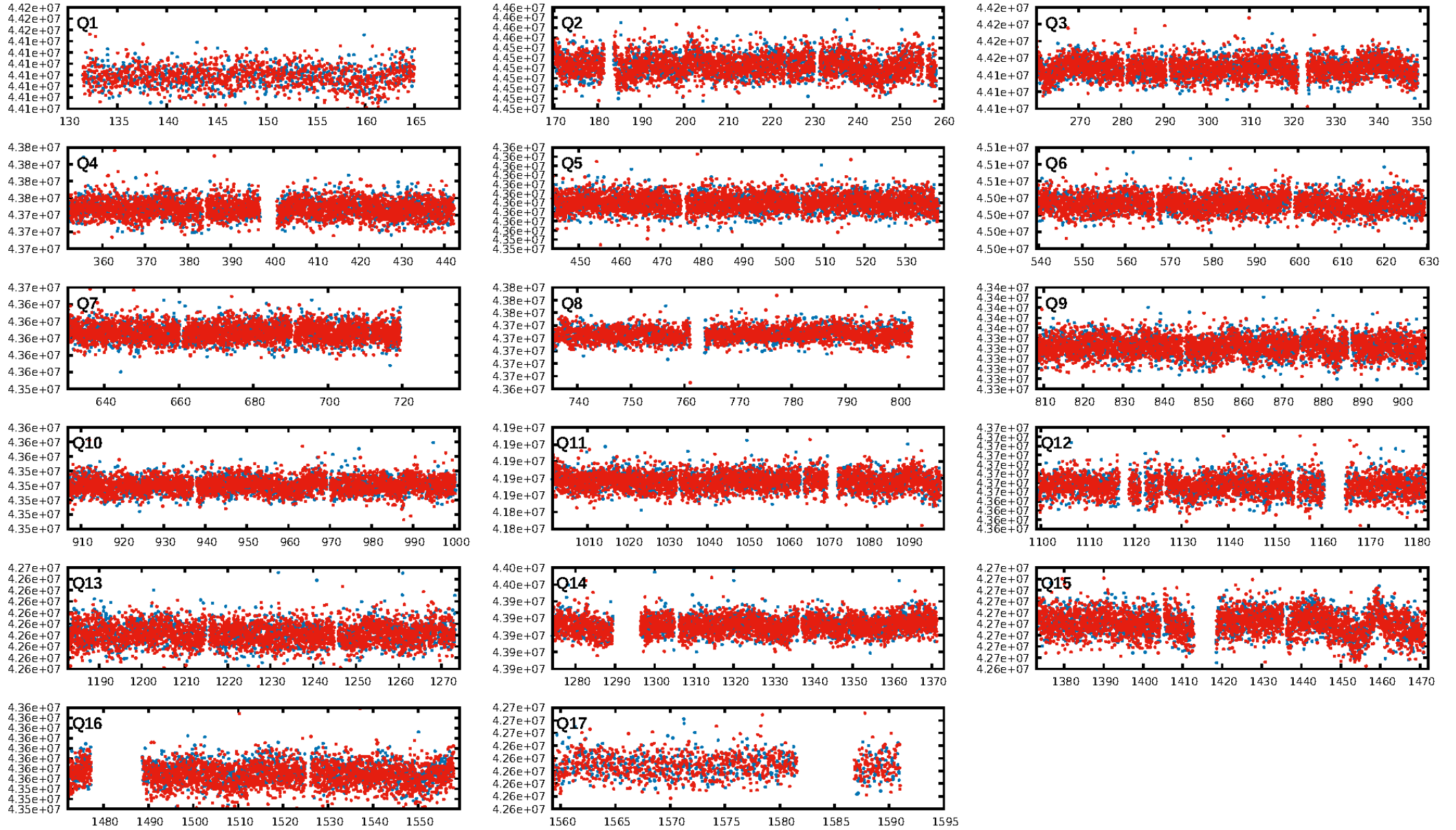
DV Fit Results:

Period = 0.52877 [0.00001] d
Epoch = 131.6982 [0.0056] BKJD
Rp/R* = 0.0037 [0.0053]
a/R* = 1.17 [2.32]
b = 0.27 [25.72]
Seff = 9969.99 [4235.30]
Teq = 2548 [271] K
Rp = 0.44 [0.65] Re
a = 0.0134 [0.0037] AU
Ag = 11.44 [33.69] [0.31σ]
Teffp = 7244 [5293] K [0.89σ]

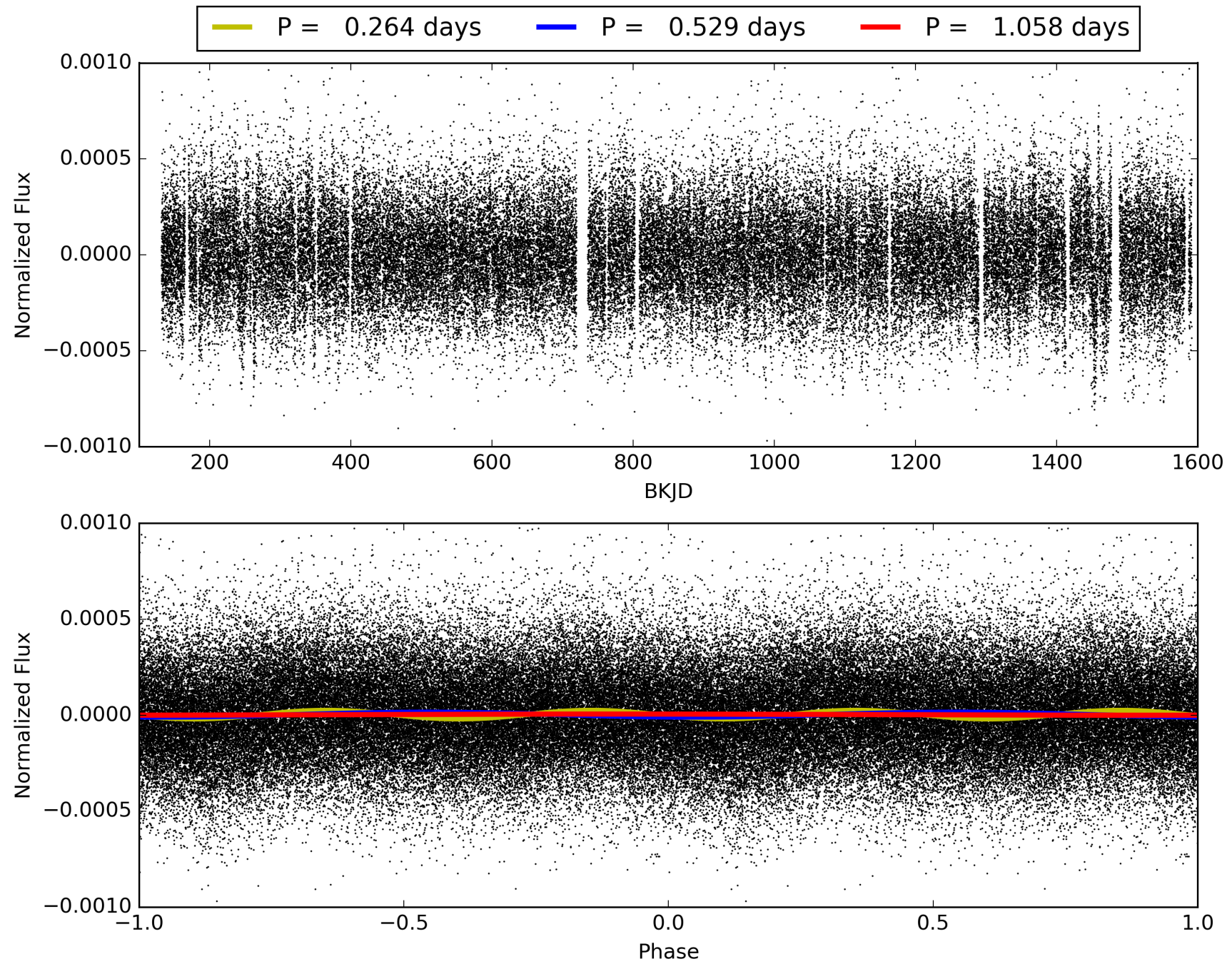
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2428/2428]
GhostDiagnostic-chr: 1.877
Centroid-sig: 0.0%
Centroid-so: 3.394 arcsec [2.97σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006878173-01, PDC Light Curves

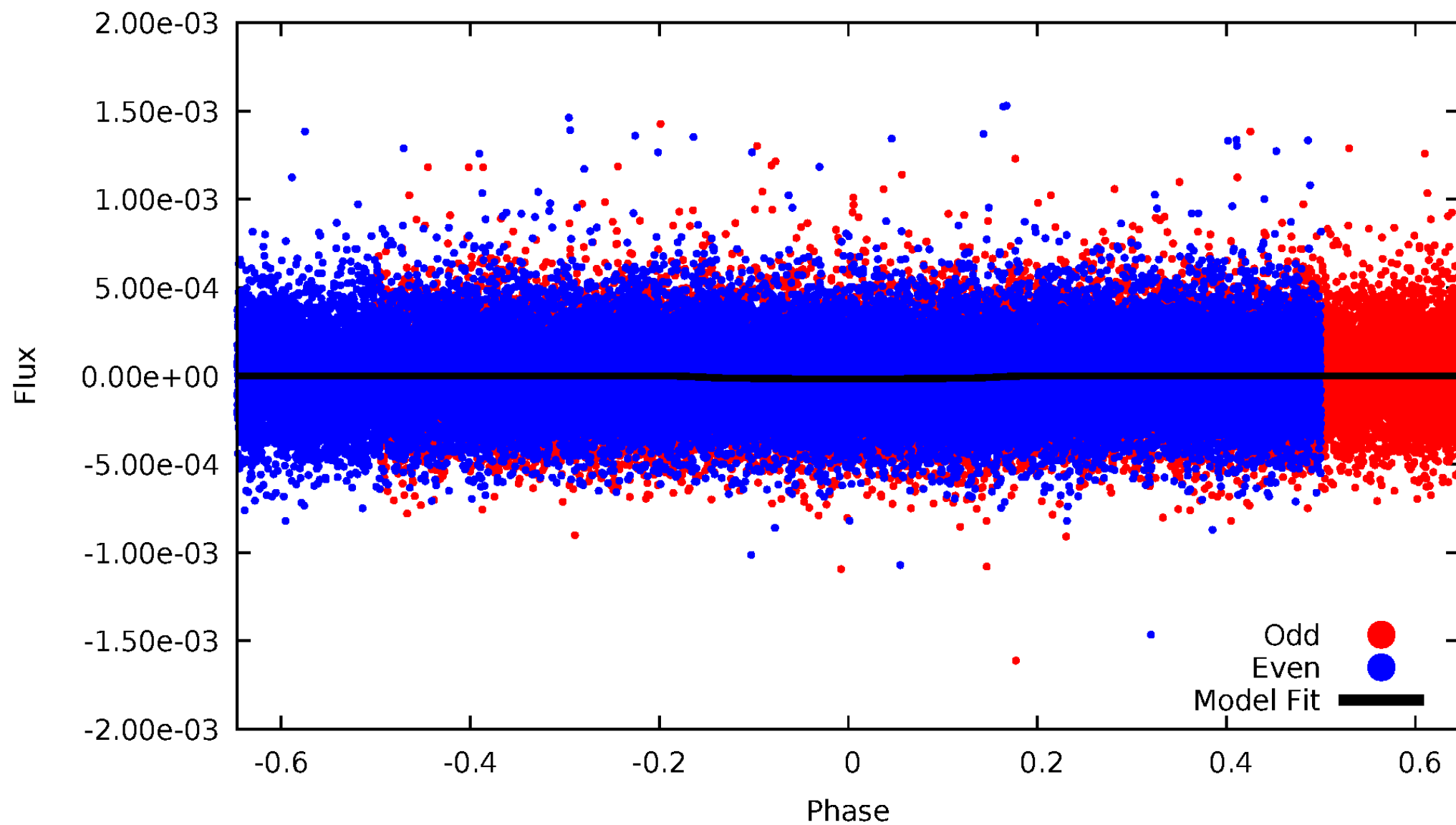


TCE 006878173-01



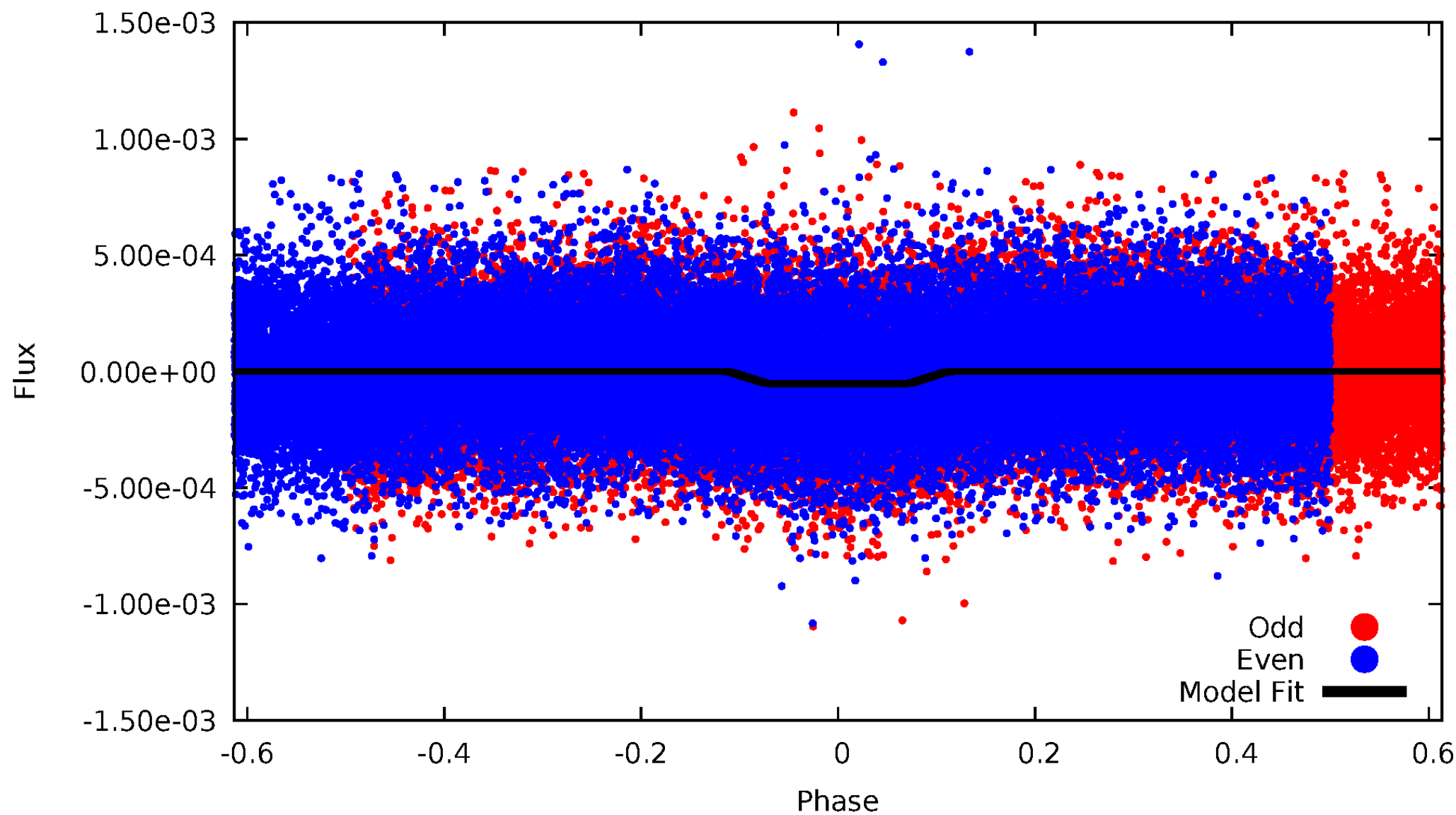
DV Odd/Even

TCE 006878173-01



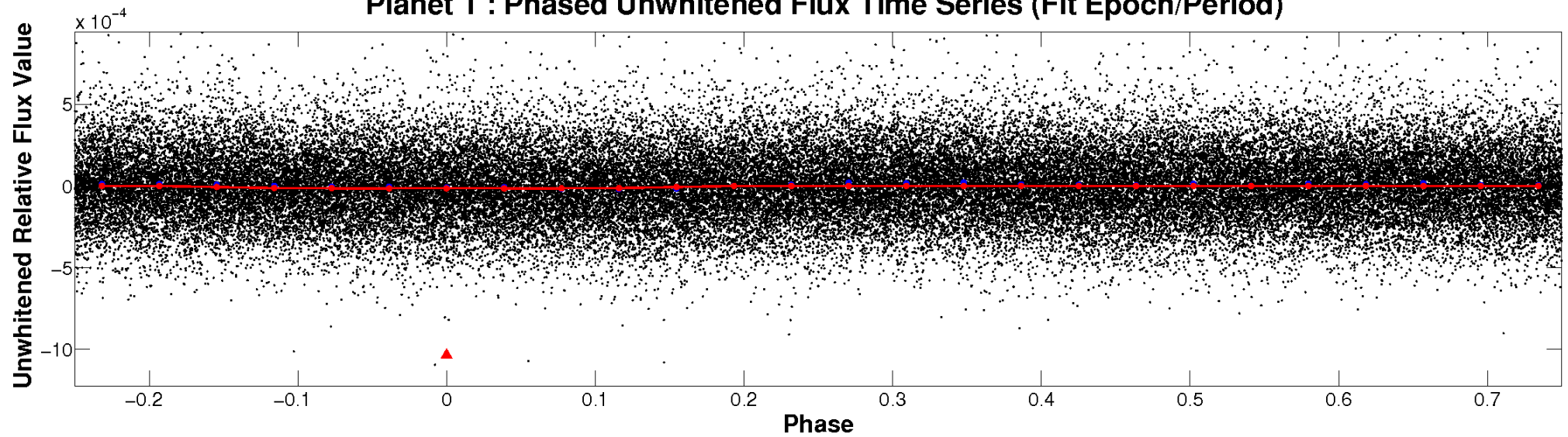
ALT Odd/Even

TCE 006878173-01

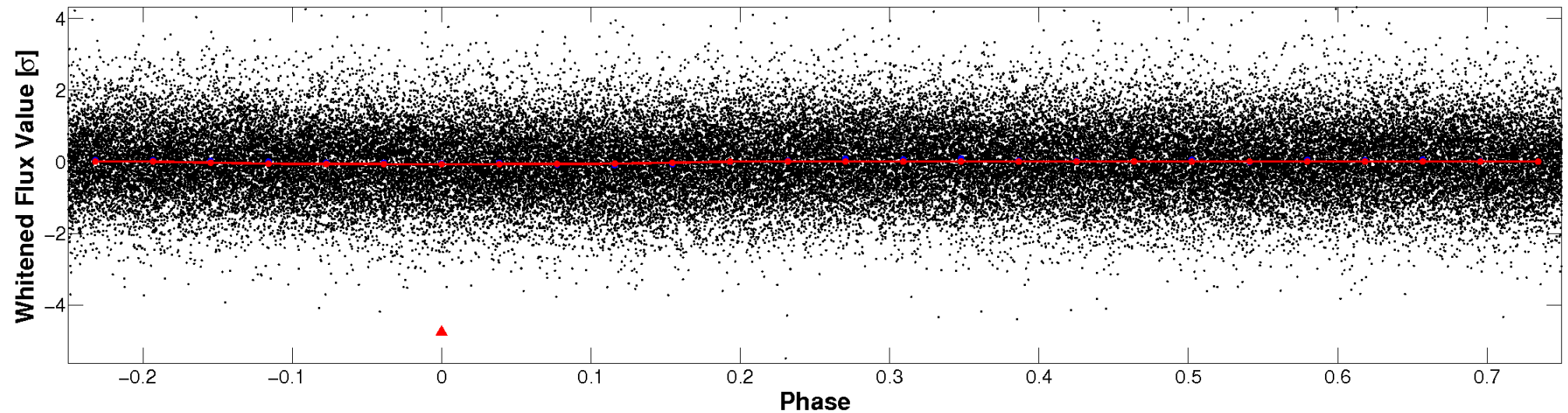


Non-Whitened Vs. Whitened Light Curve

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

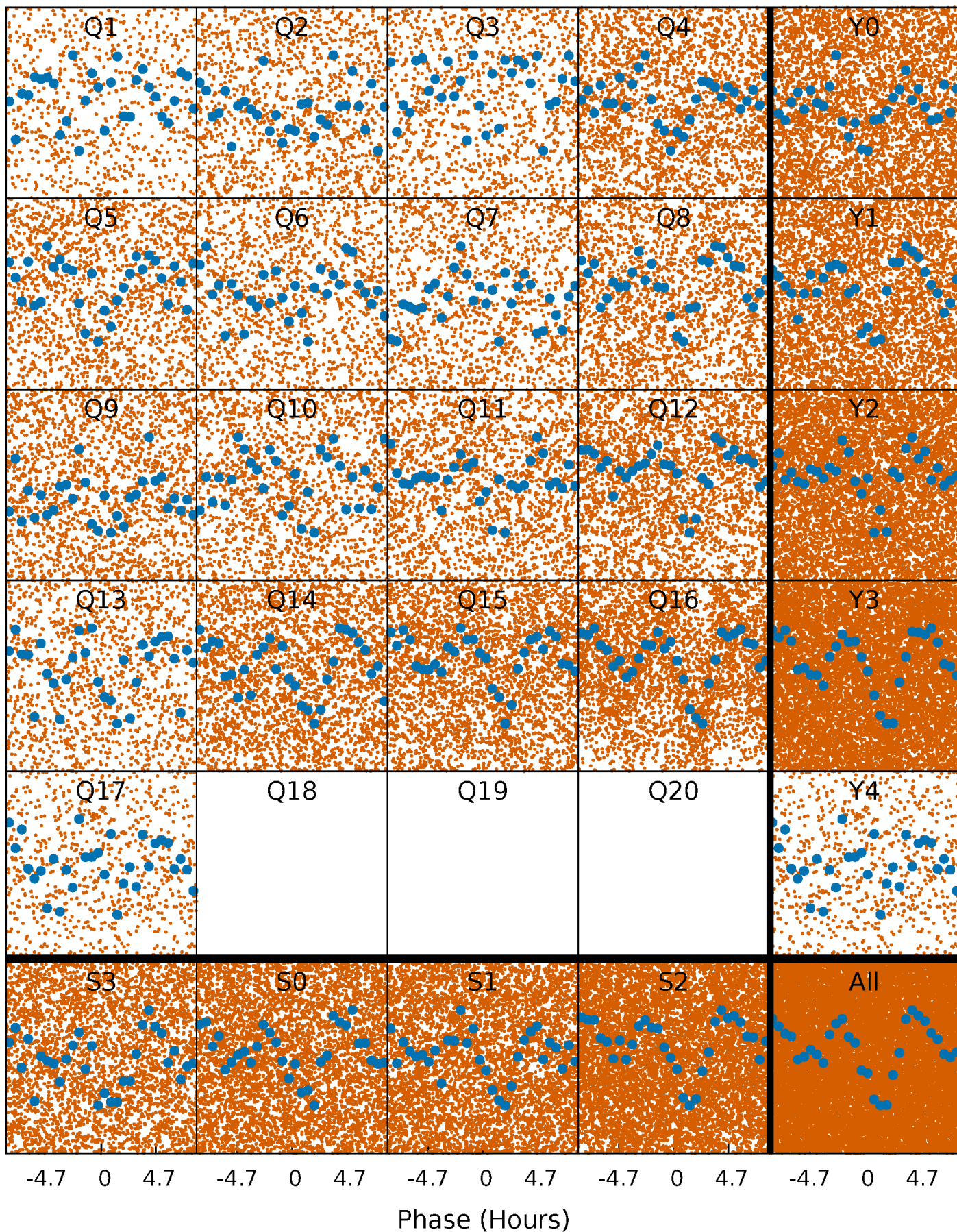


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



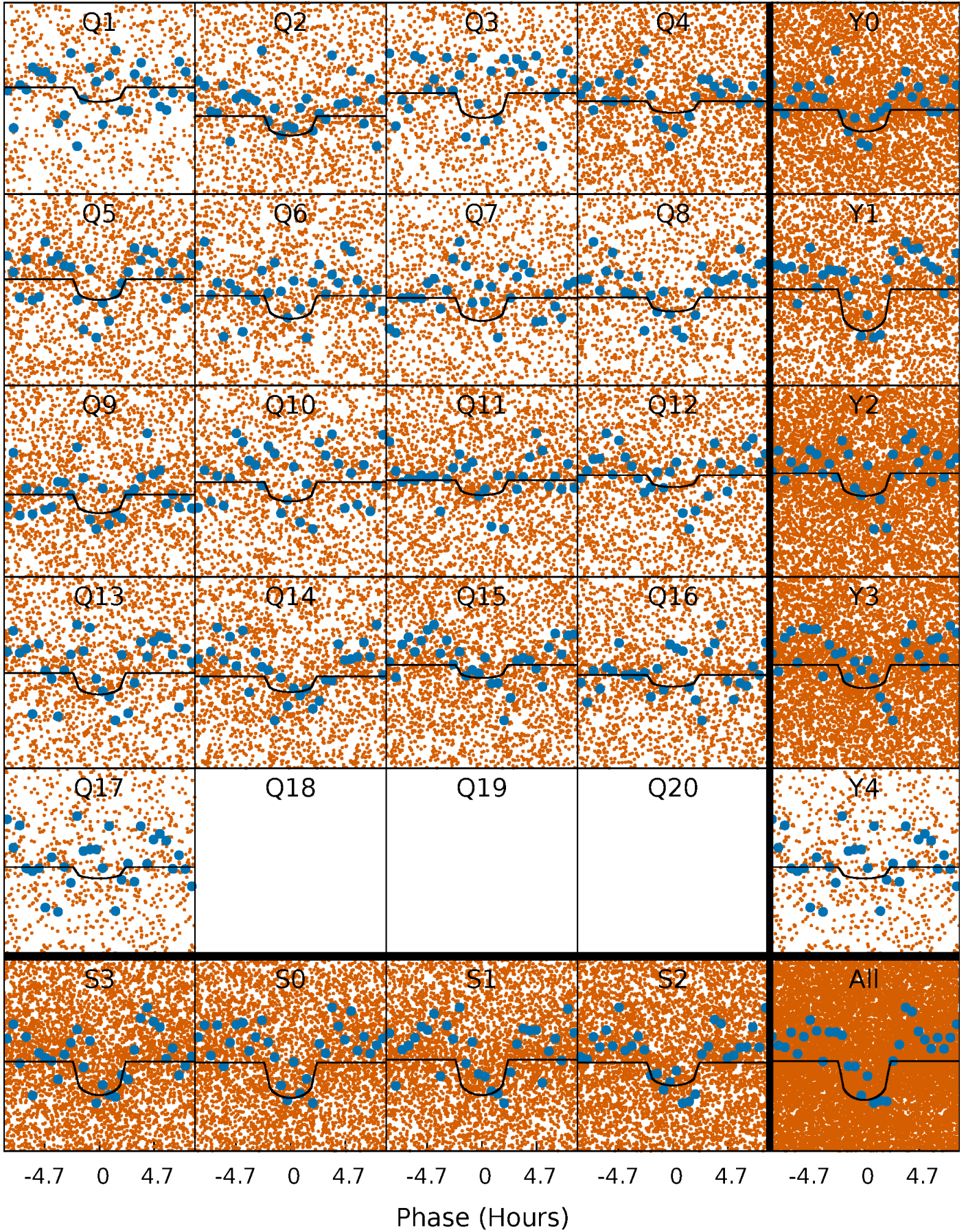
PDC Quarter-Phased Transit Curves

TCE 006878173-01 P= 0.528769 Days $T_0=131.698163$ (BKJD)



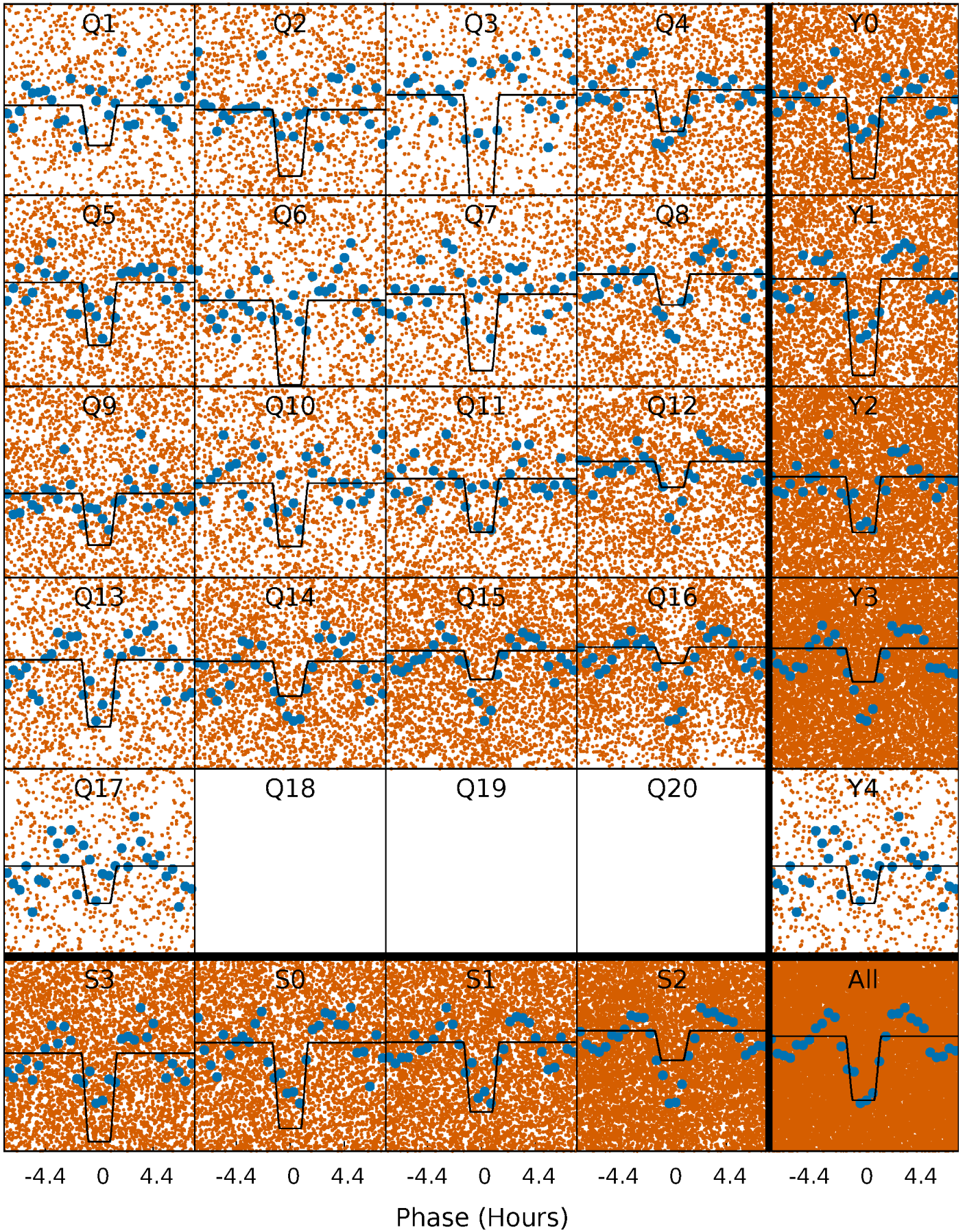
DV Quarter-Phased Transit Curves

TCE 006878173-01 P= 0.528769 Days $T_0=131.698163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

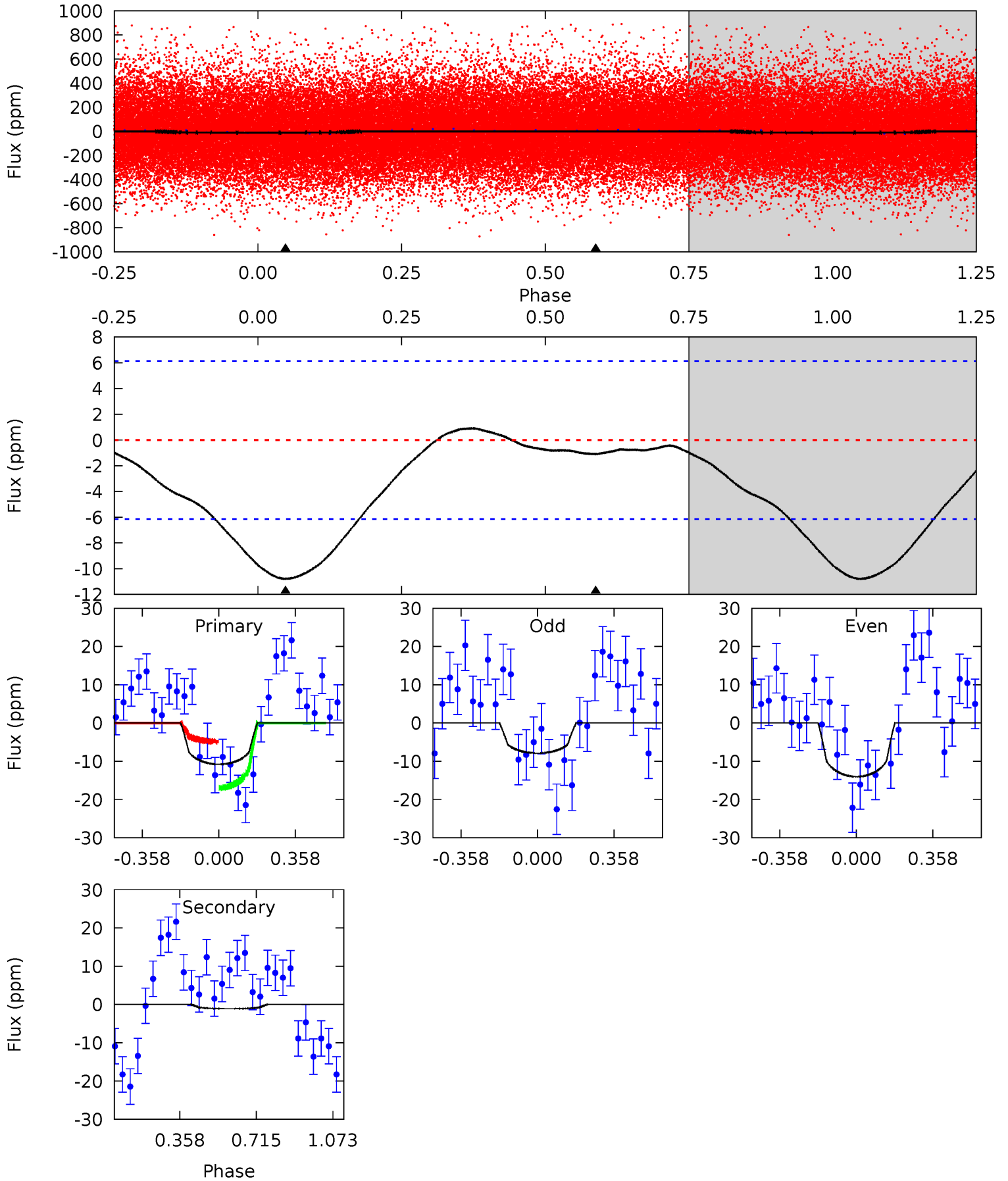
TCE 006878173-01 P= 0.528803 Days $T_0=131.687087$ (BKJD)



DV Model-Shift Uniqueness Test

006878173-01, P = 0.528769 Days, E = 131.169394 Days

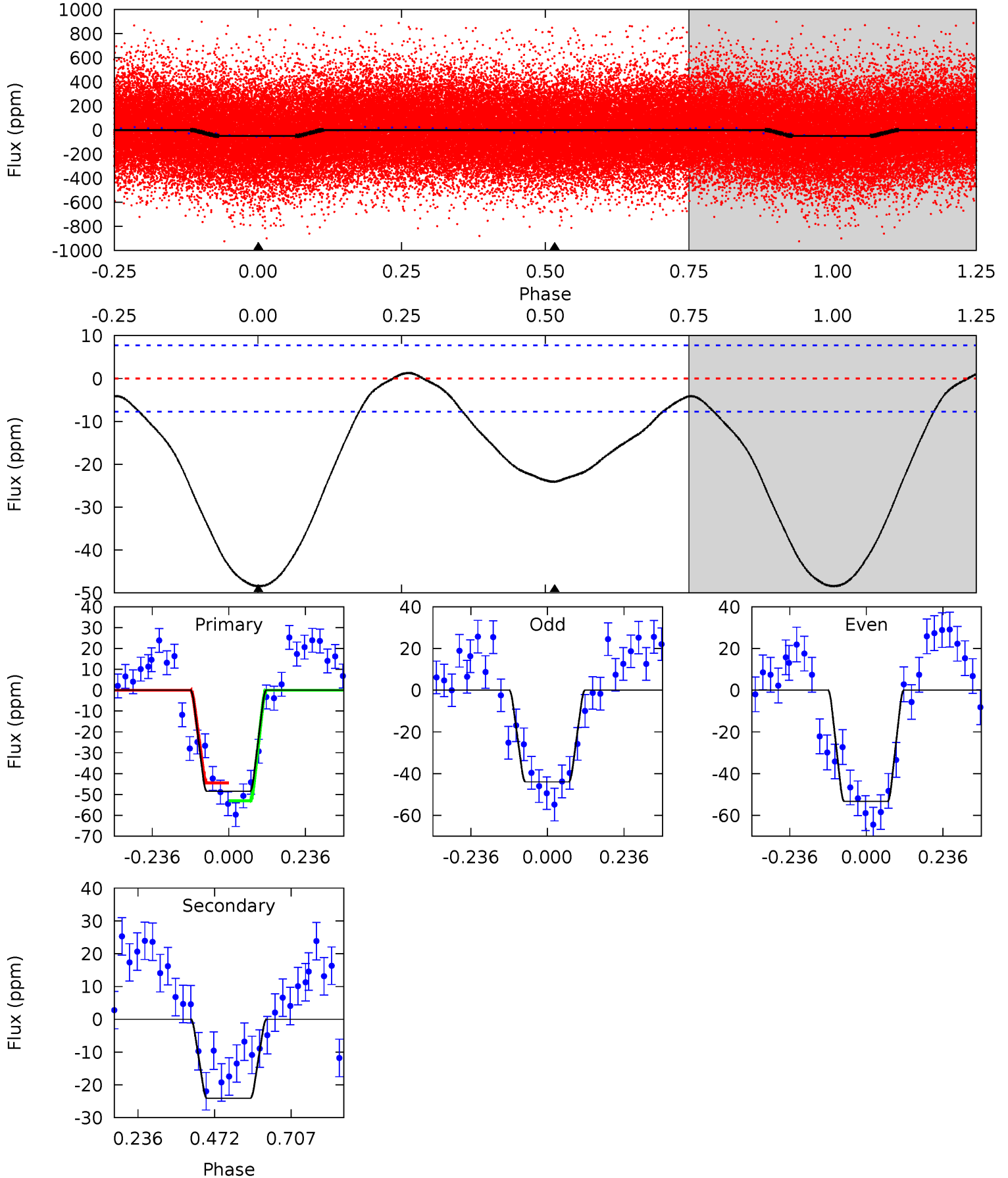
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	0.77	0	0	4.29	0.92	0.83	7.55	7.55	0.77	0.77	2.17	0.93	0.08	4.21



Alt Model-Shift Uniqueness Test

006878173-01, P = 0.528803 Days, E = 131.158284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	13.7	0	0	4.38	1.19	1.40	27.4	27.4	13.7	13.7	2.66	1.06	0.03	2.46



Stellar Parameters For KIC 006878173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6355^{+153}_{-230}	$4.410^{+0.067}_{-0.216}$	$-0.080^{+0.250}_{-0.300}$	$1.108^{+0.370}_{-0.123}$	$1.151^{+0.169}_{-0.152}$	$1.191^{+0.355}_{-0.649}$
	+2%/-4%	+2%/-5%	+312%/-375%	+33%/-11%	+15%/-13%	+30%/-55%
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 006878173-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$0.65^{+0.55}_{-0.42}$	3608^{+267}_{-182}	-2992^{+7792}_{-624}	$0.186^{+2.148}_{-0.228}$
Alt.	-24 ± 2	$1.02^{+0.66}_{-0.56}$	3618^{+259}_{-174}	4913^{+2548}_{-1083}	$2.283^{+8.229}_{-1.449}$

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

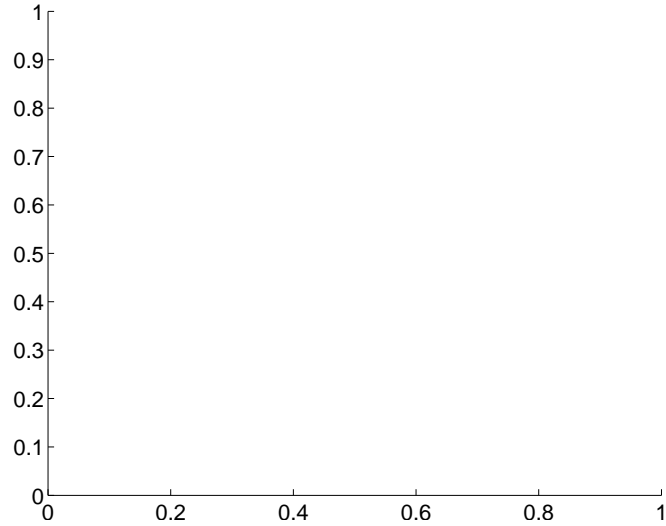
Supplemental centroid analysis for 006878173-01. Kepler magnitude: 14.35. Transit SNR 8.25

There are 0 quarters with good PRF difference image offsets

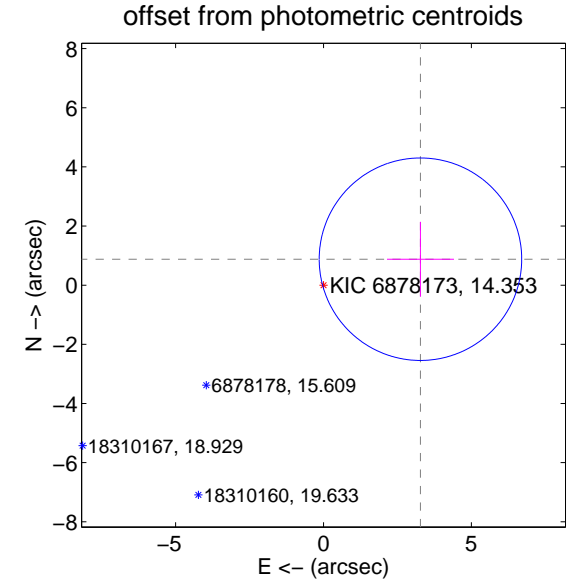
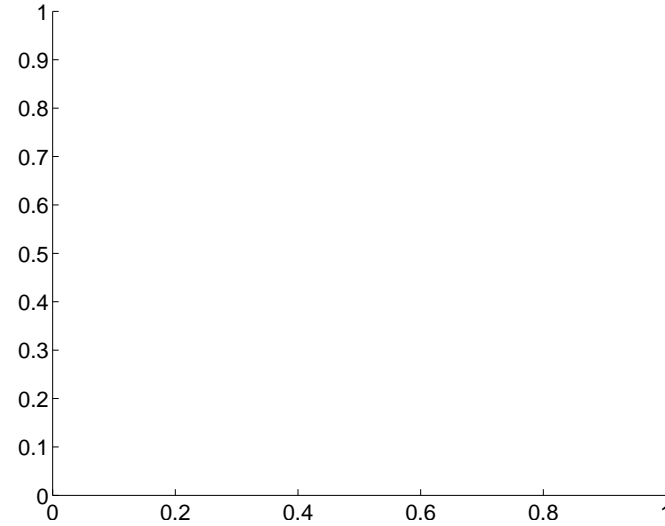
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.39 ± 1.14	2.97	-3.28 ± 1.13	0.88 ± 1.27

There is no PRF-fit offset from OOT-fit

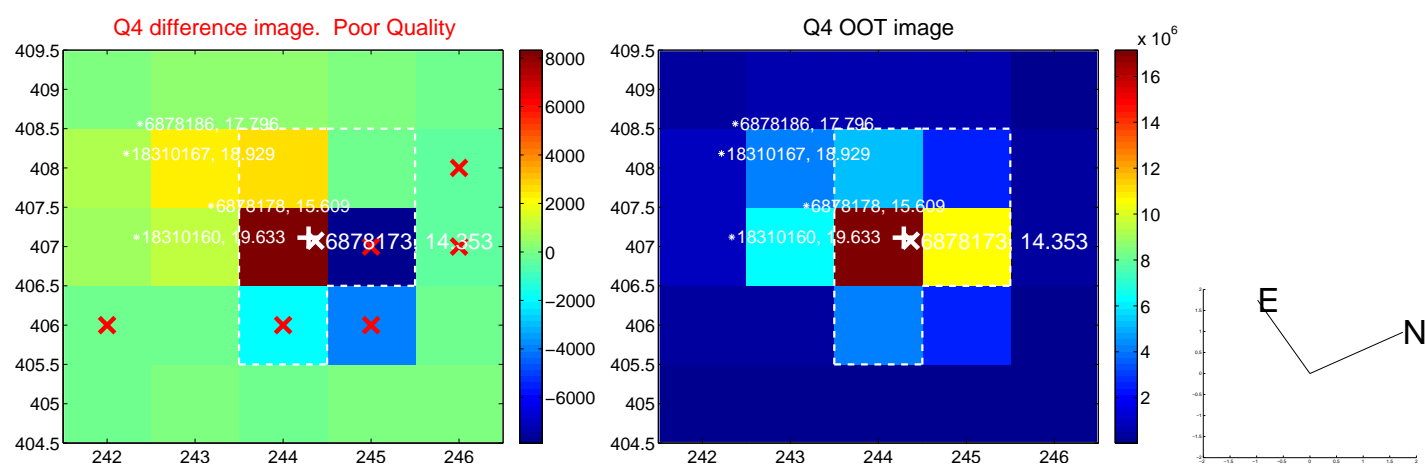
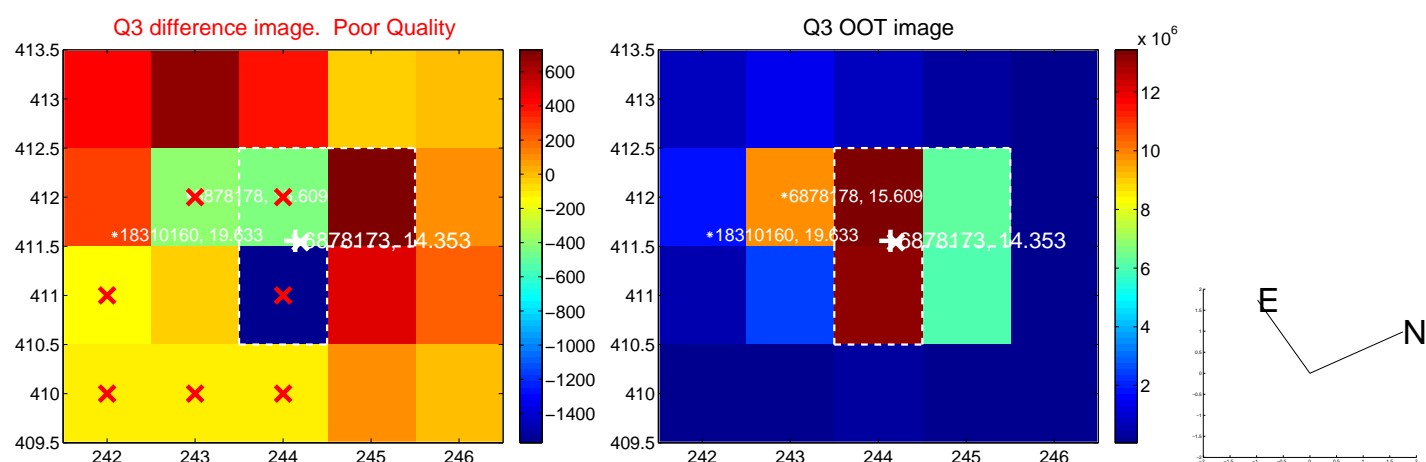
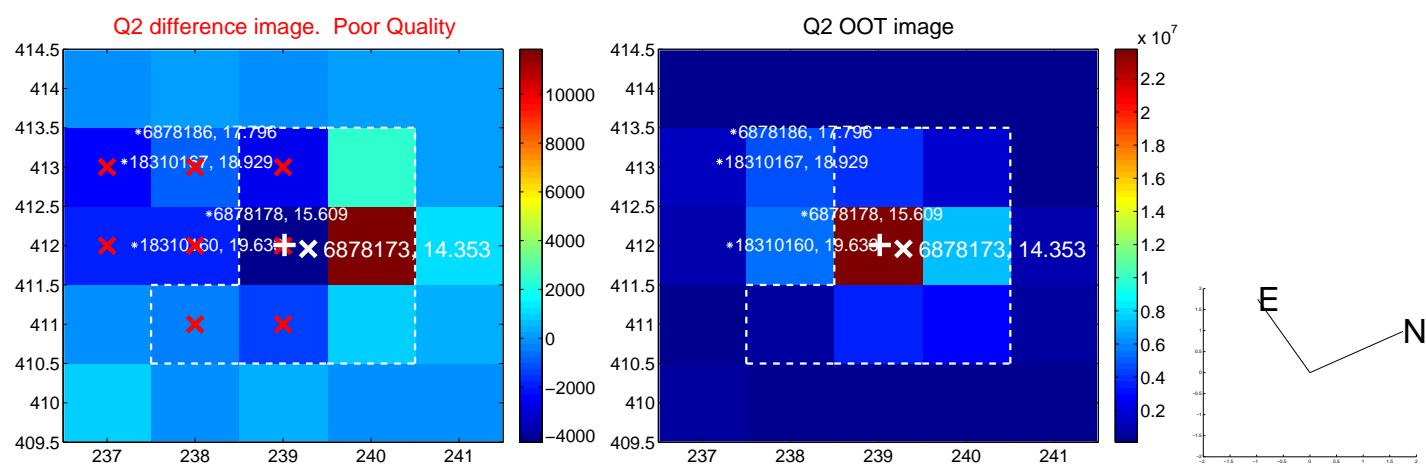
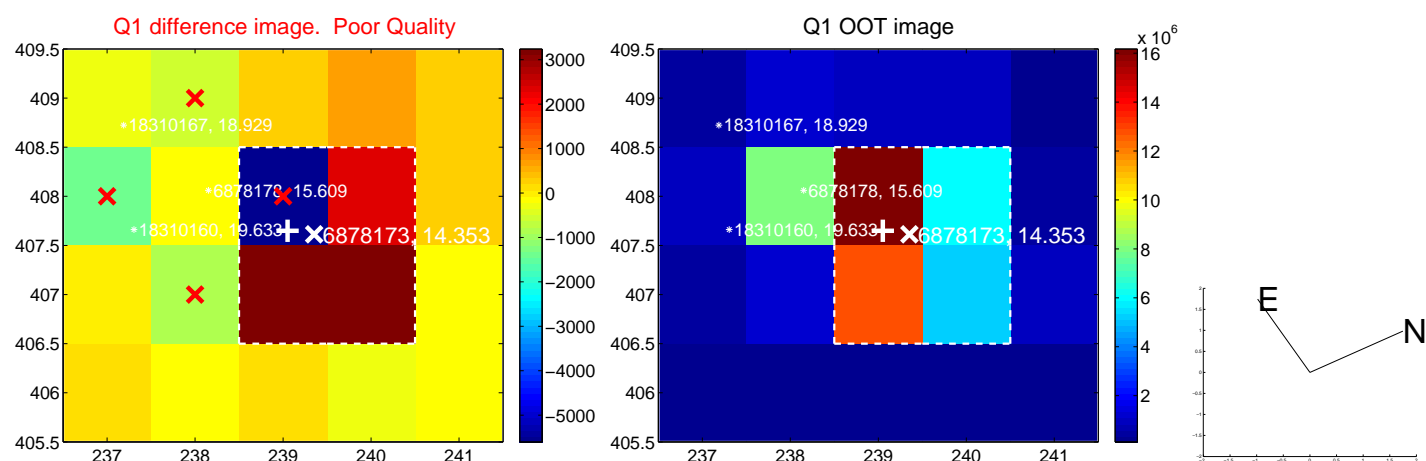


There is no PRF-fit offset from KIC

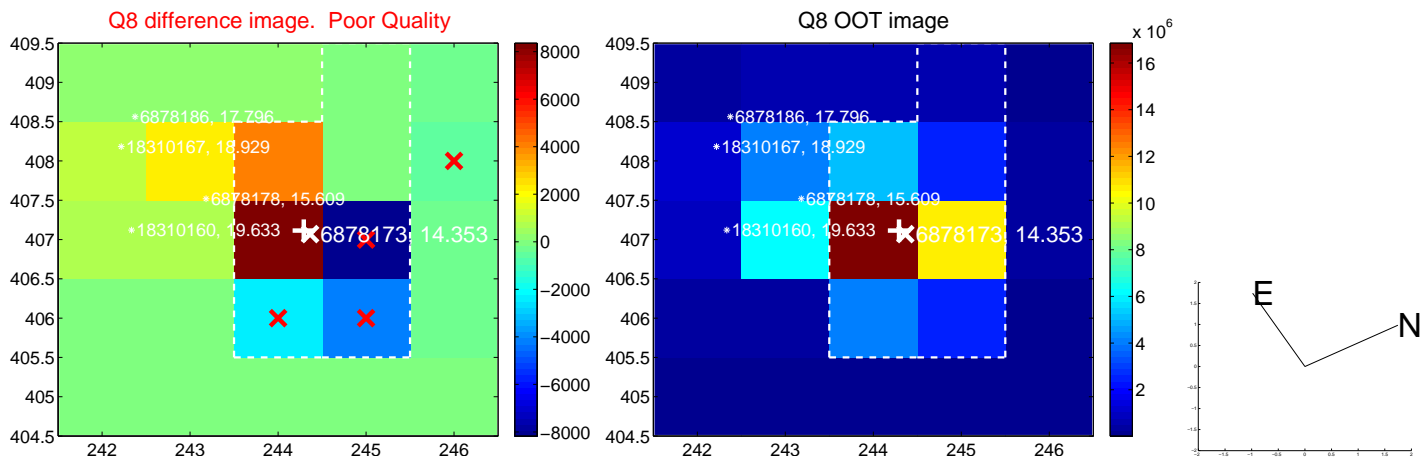
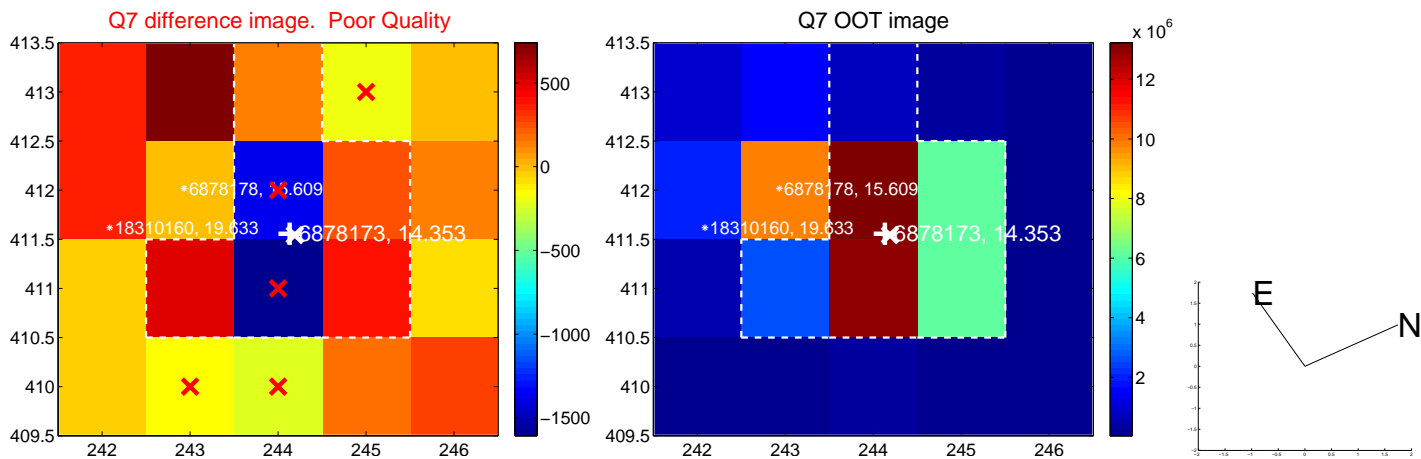
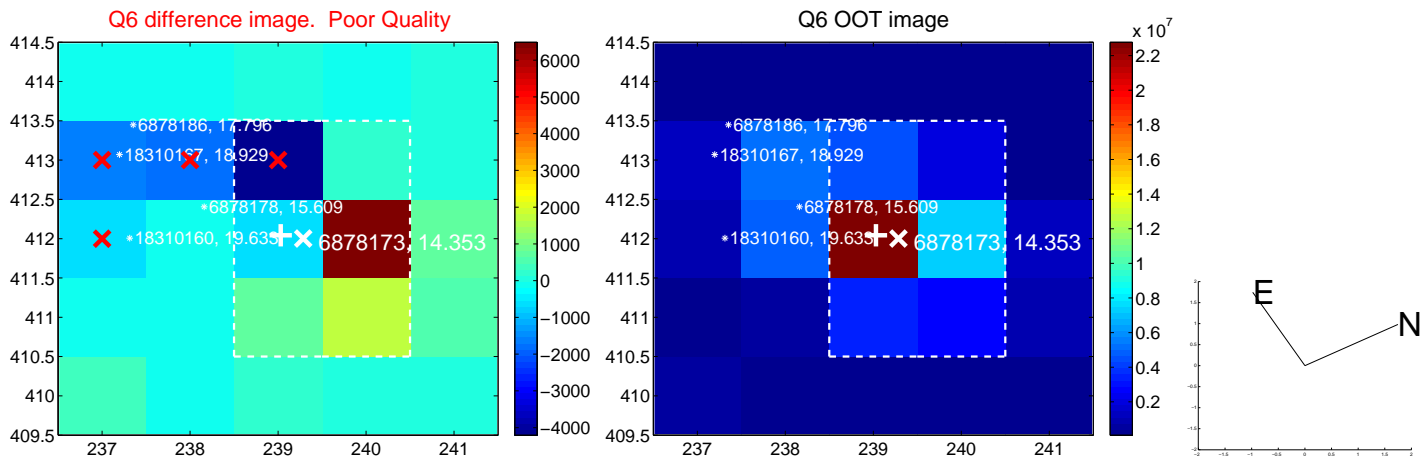
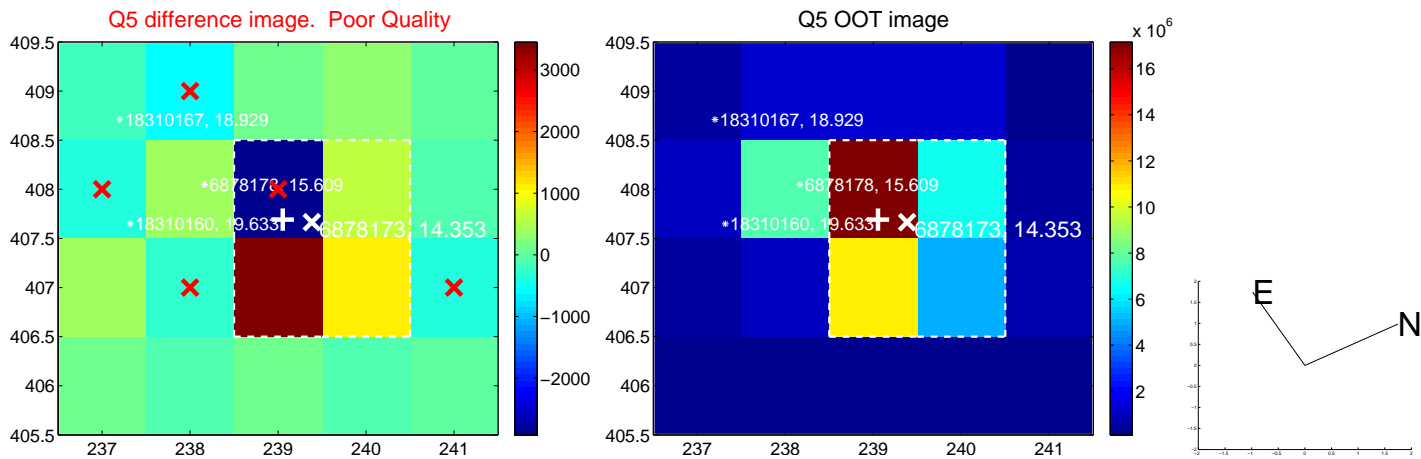


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

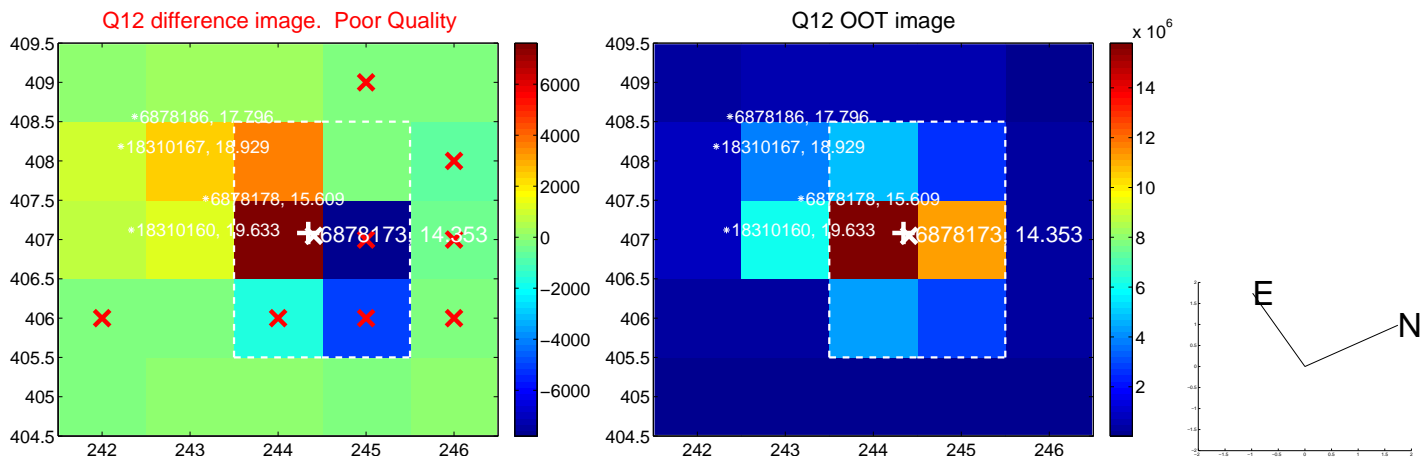
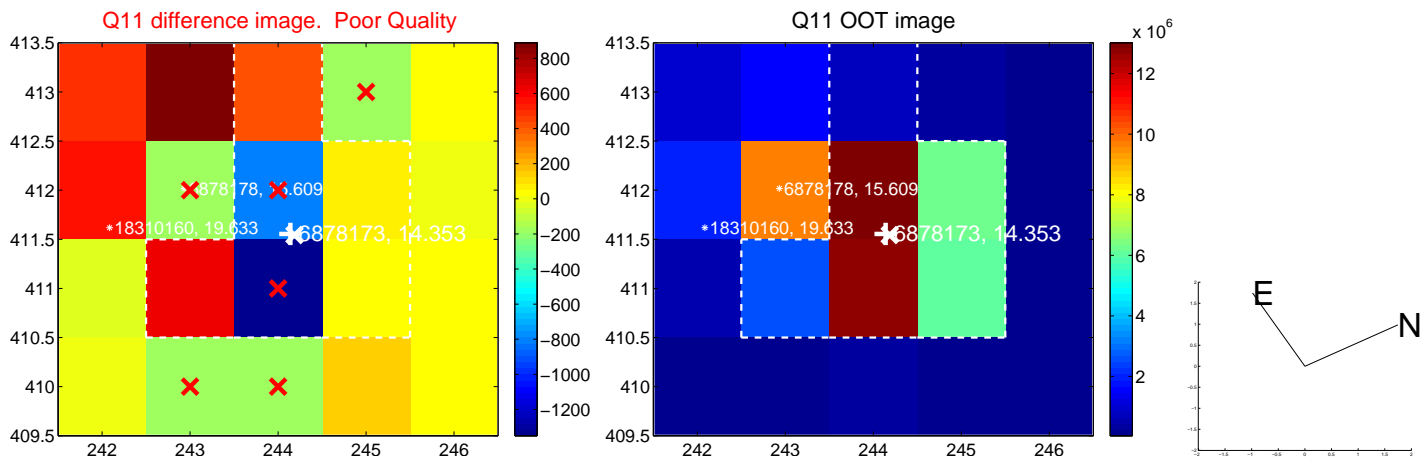
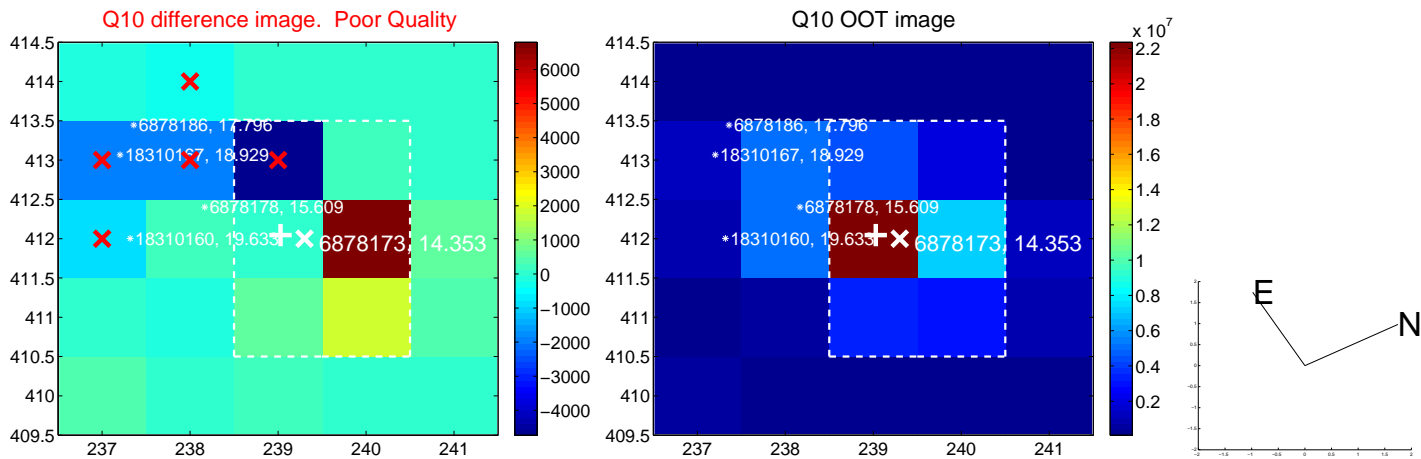
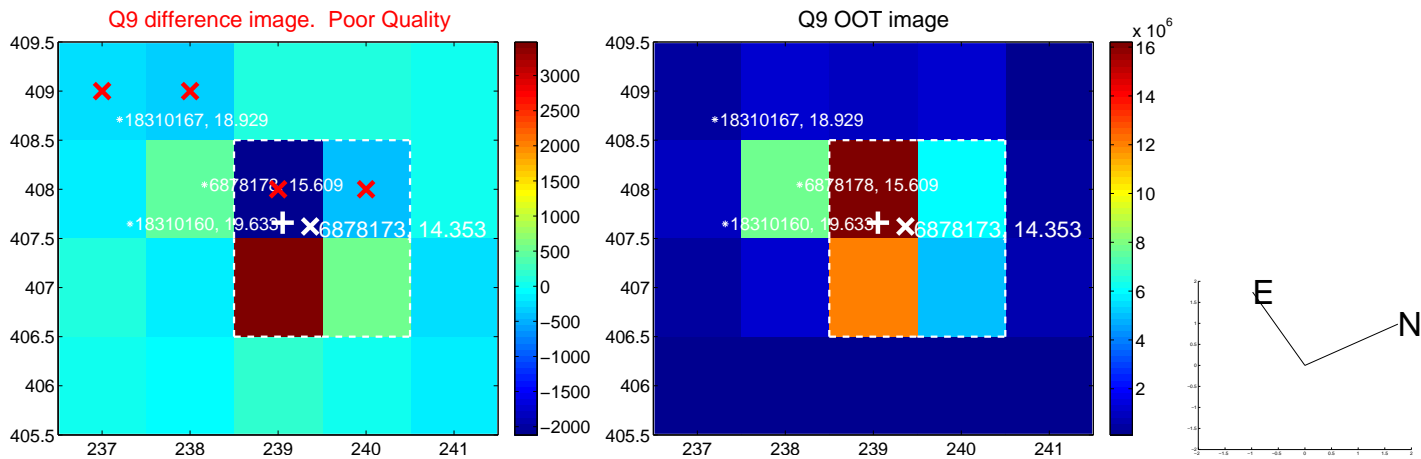
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



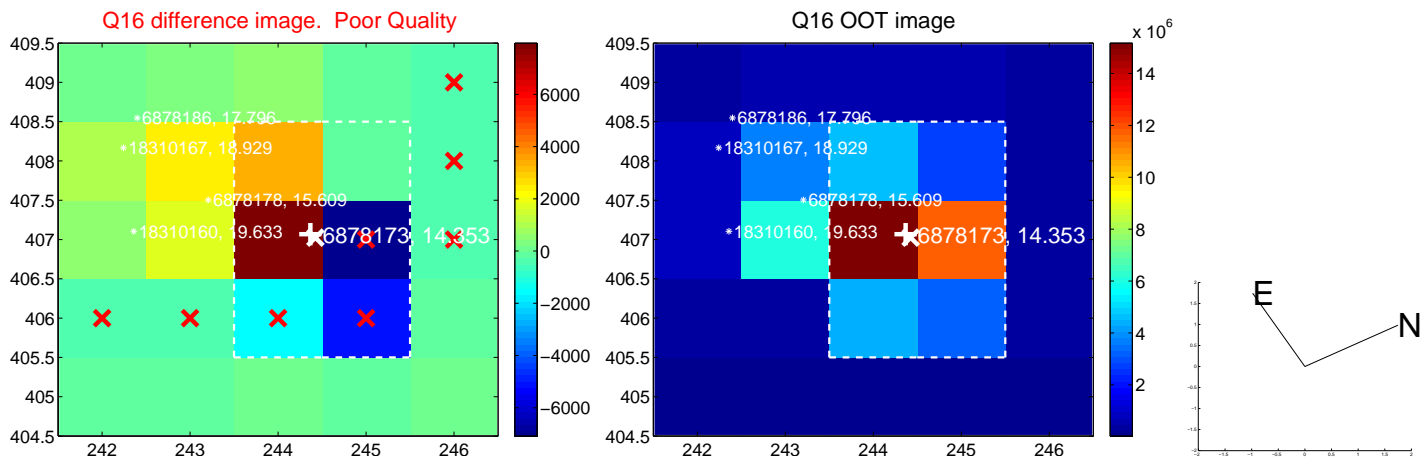
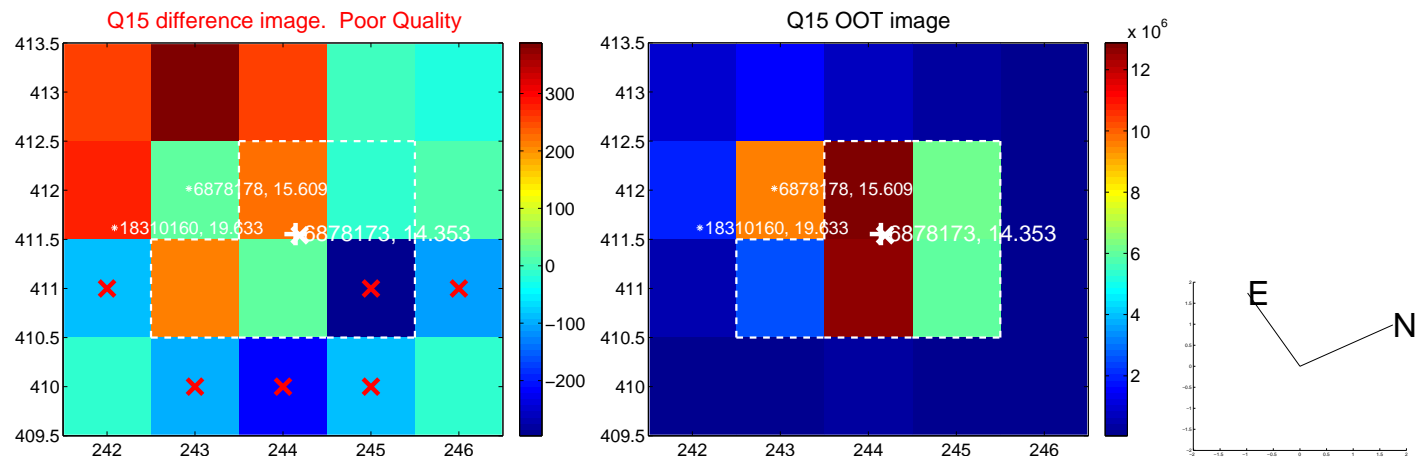
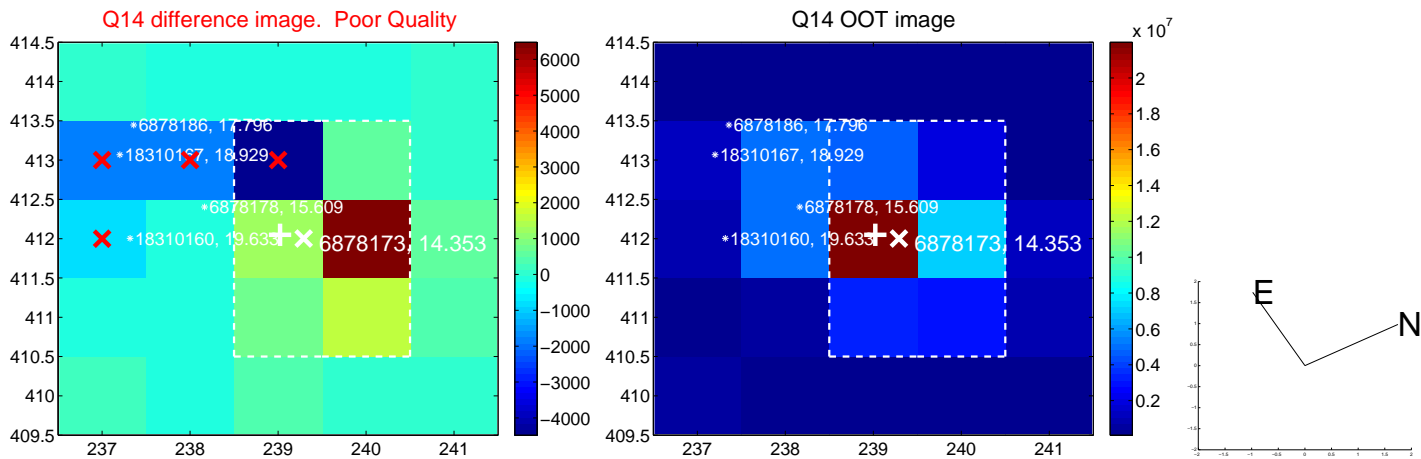
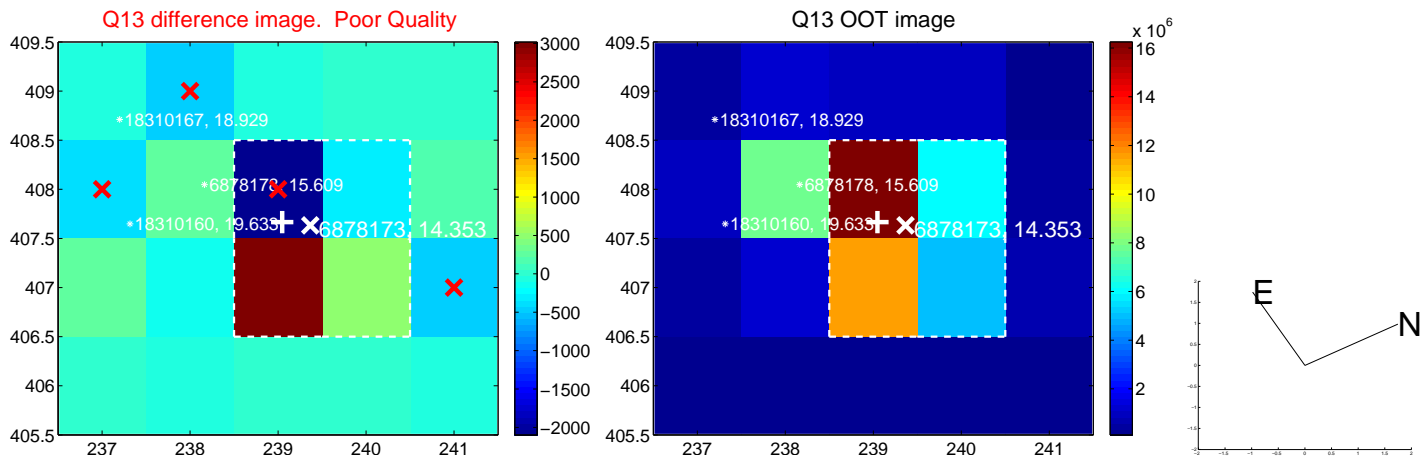
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



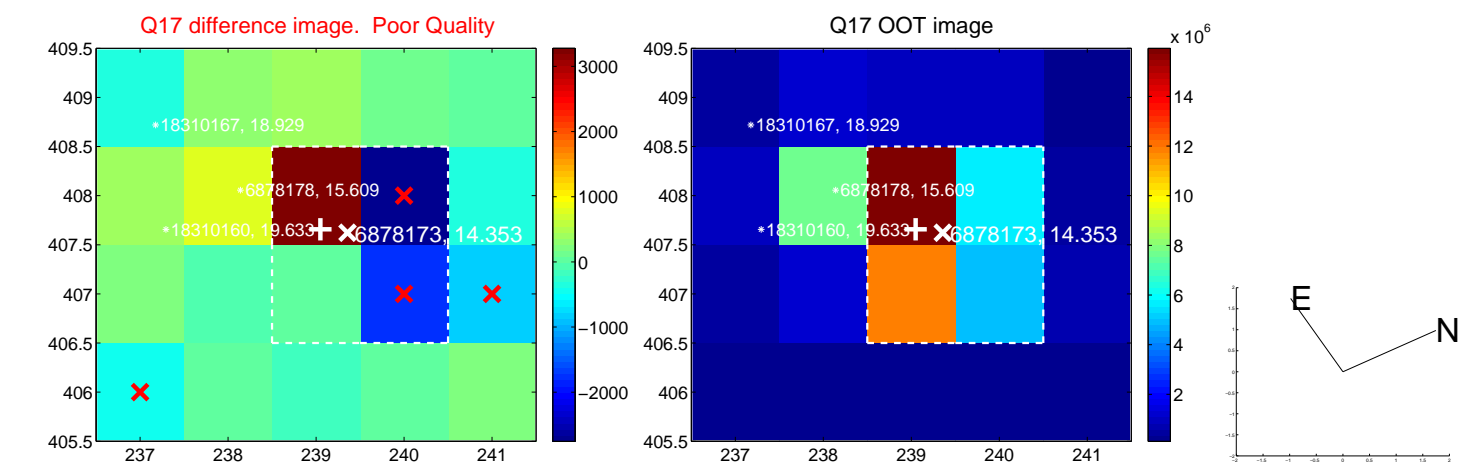
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



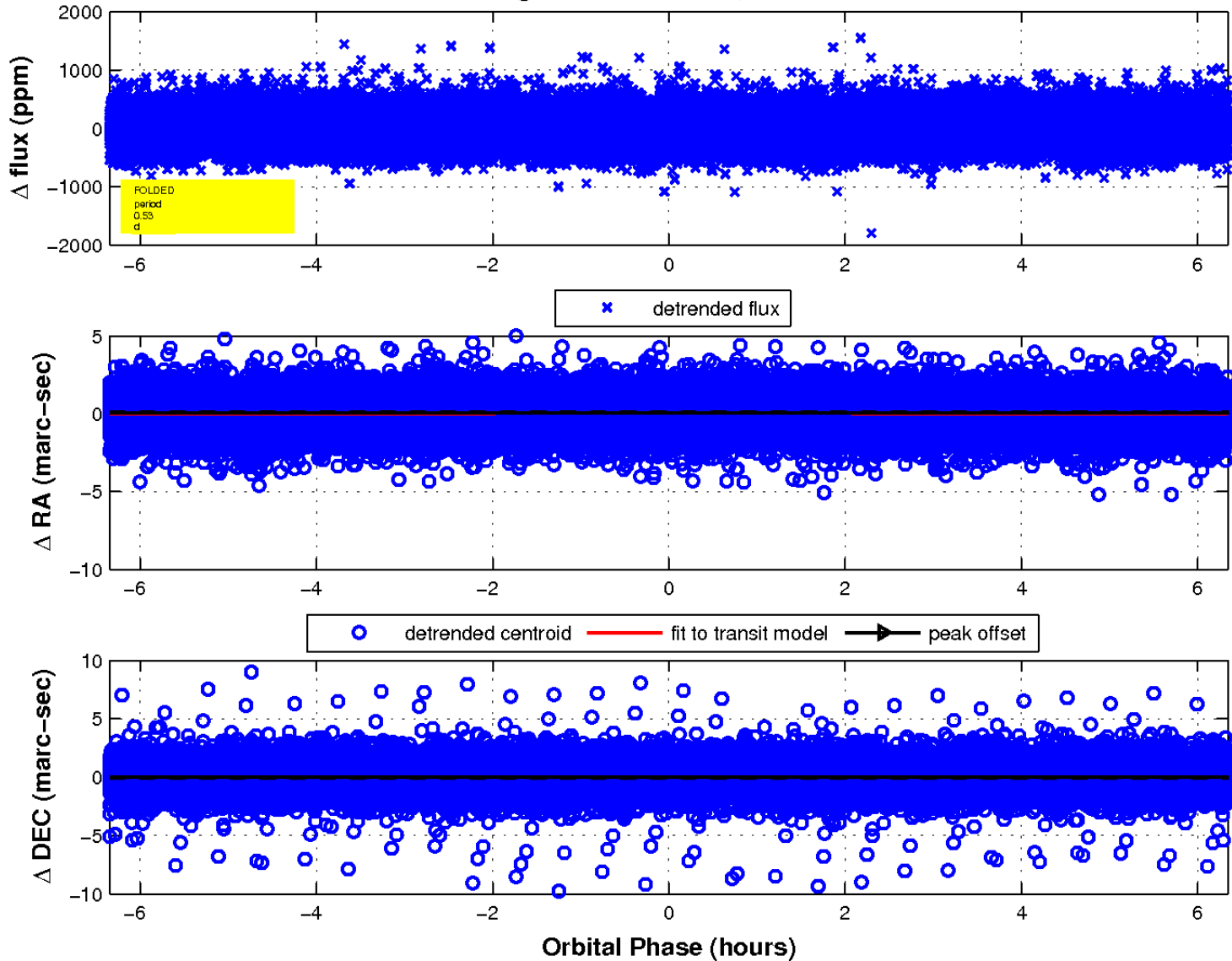
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

