

KIC 008718678

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})
008718678-01	OBS	No	0.793086	131.770218	15.8	6.141	8.7	6.6	2.90	7181	1.20	49881.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008718678-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

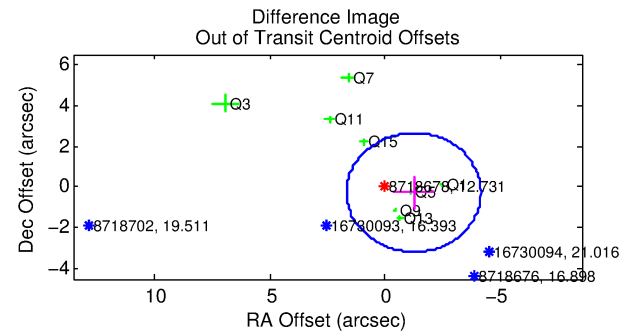
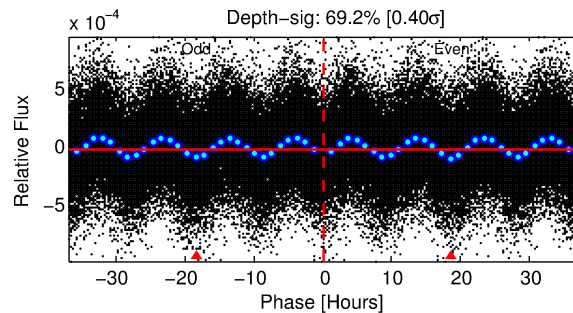
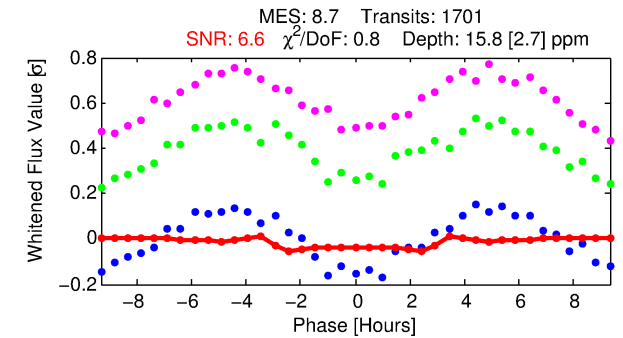
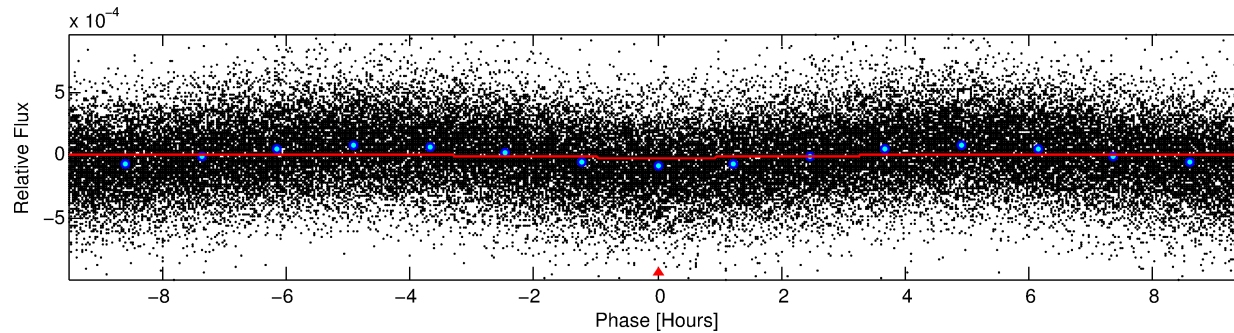
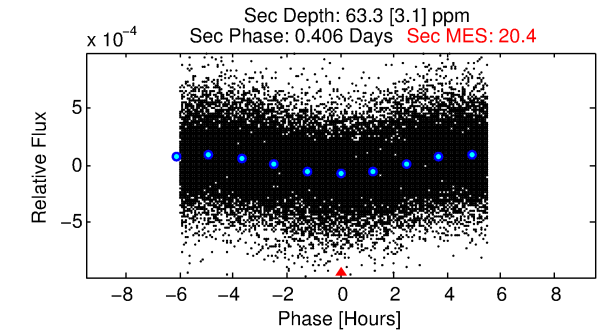
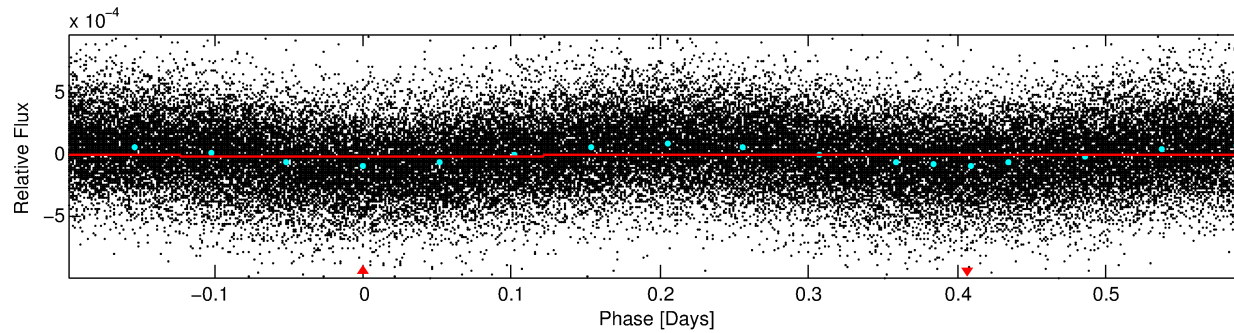
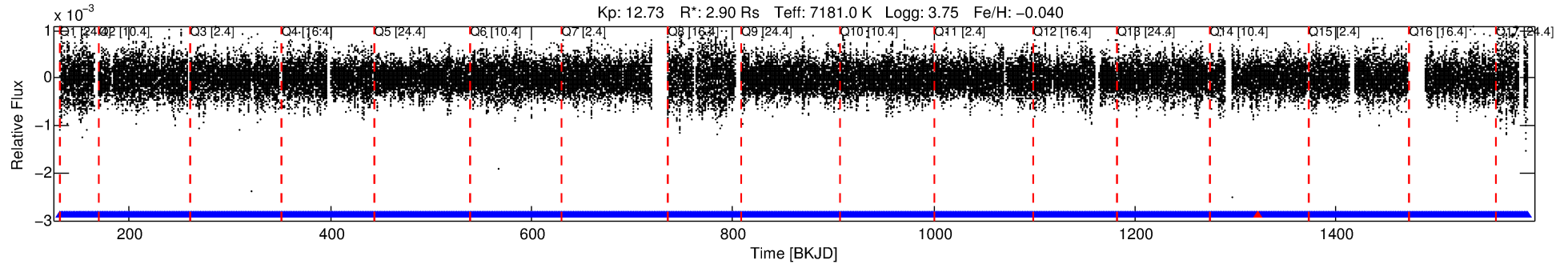
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008718678-01

No Significant Match Found

DV One-Page Summary

KIC: 8718678 Candidate: 1 of 1 Period: 0.793 d



DV Fit Results:

Period = 0.79309 [0.00002] d
Epoch = 131.7702 [0.0046] BKJD
Rp/R* = 0.0038 [0.0027]
a/R* = 1.14 [1.08]
b = 0.53 [5.78]
Seff = 49881.46 [37055.26]
Teq = 3811 [708] K
Rp = 1.20 [1.00] Re
a = 0.0200 [0.0089] AU
Ag = 9.74 [15.34] [0.57σ]
Teffp = 10407 [3675] K [1.76σ]

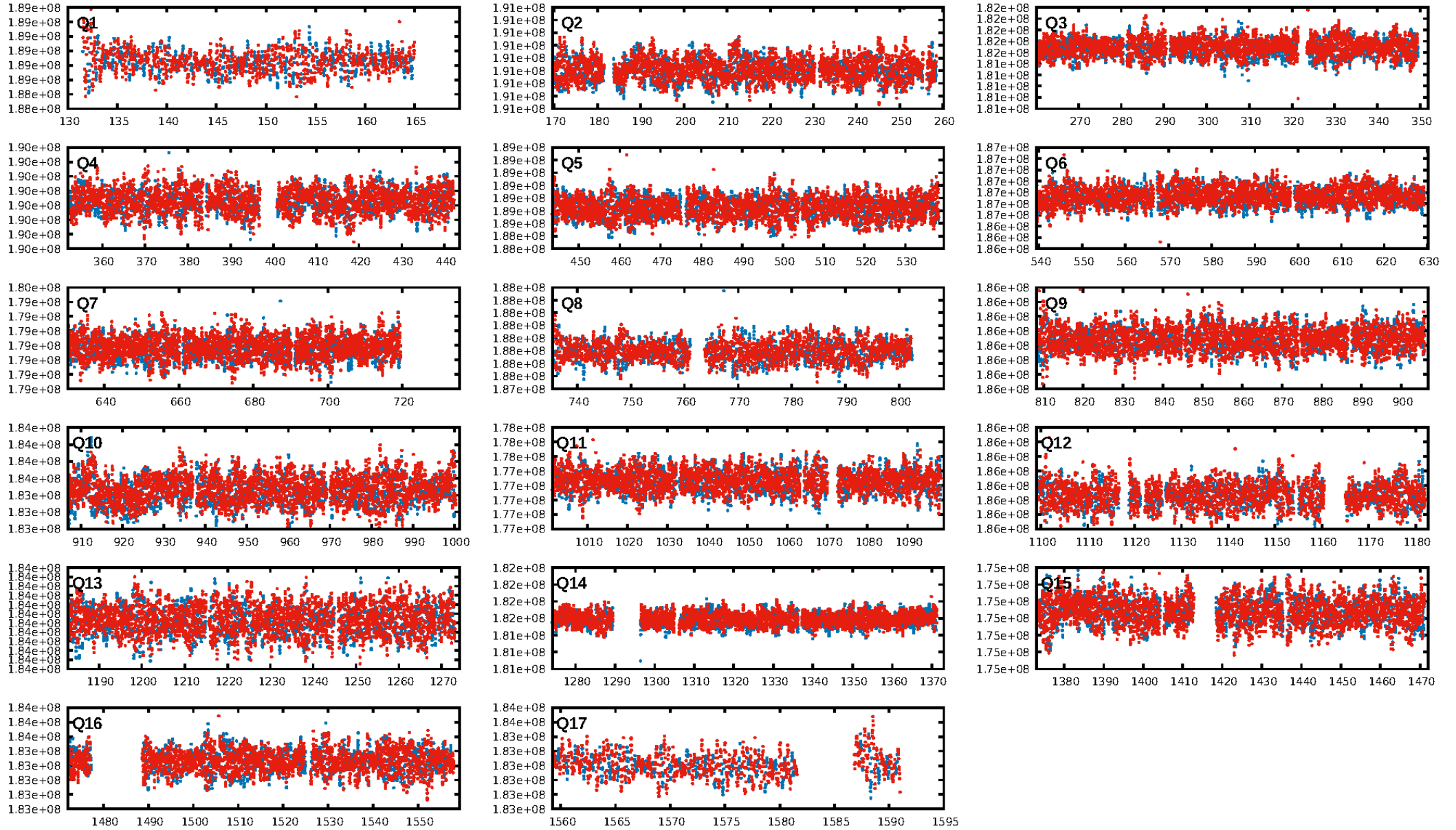
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1622/1623]
GhostDiagnostic-chr: 3.364
Centroid-sig: 7.6%
Centroid-so: 1.128 arcsec [1.15σ]
OotOffset-rm: 1.254 arcsec [1.29σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-rm: 1.351 arcsec [1.17σ]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [17/17]

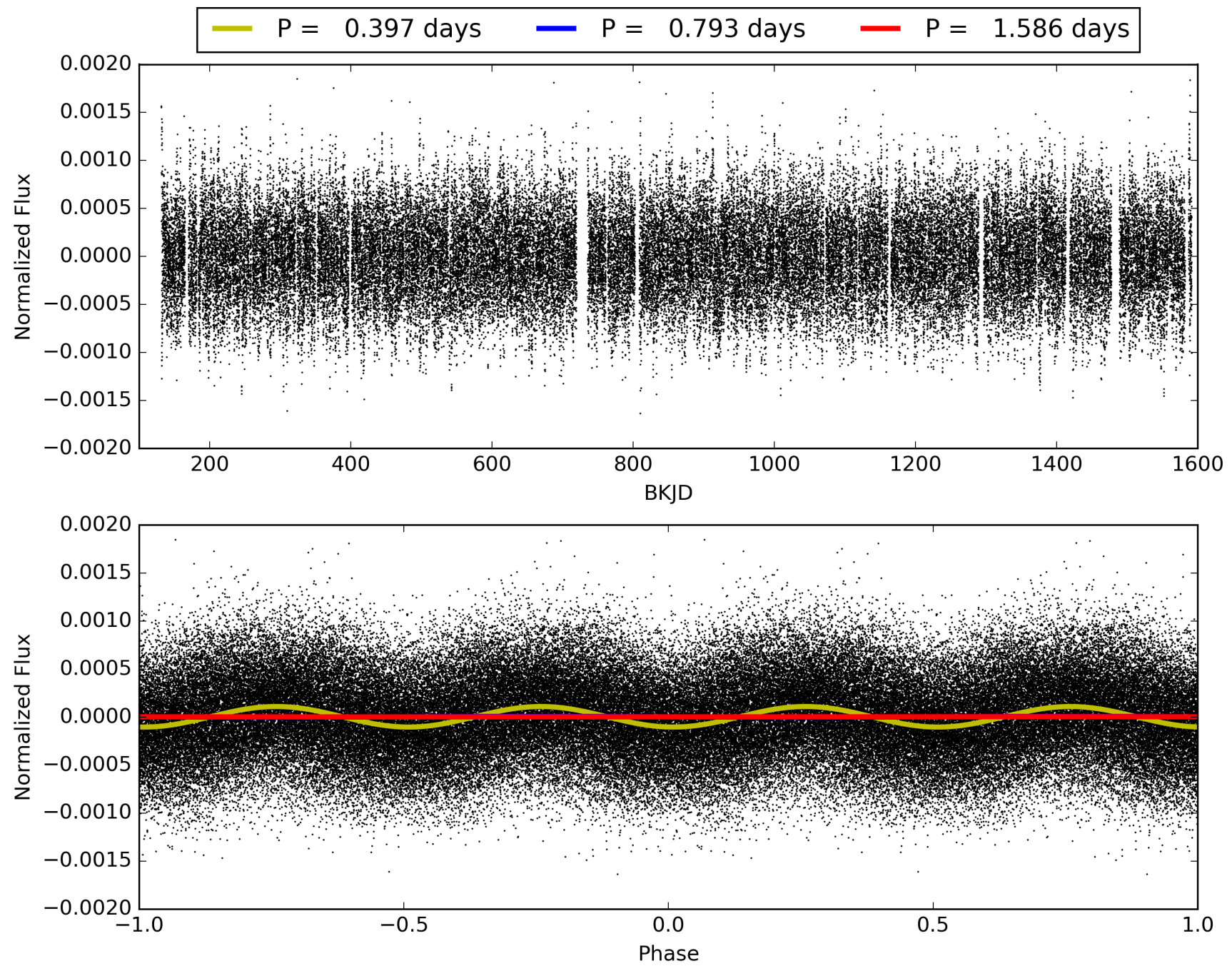
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:08:37 Z

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

TCE 008718678-01, PDC Light Curves

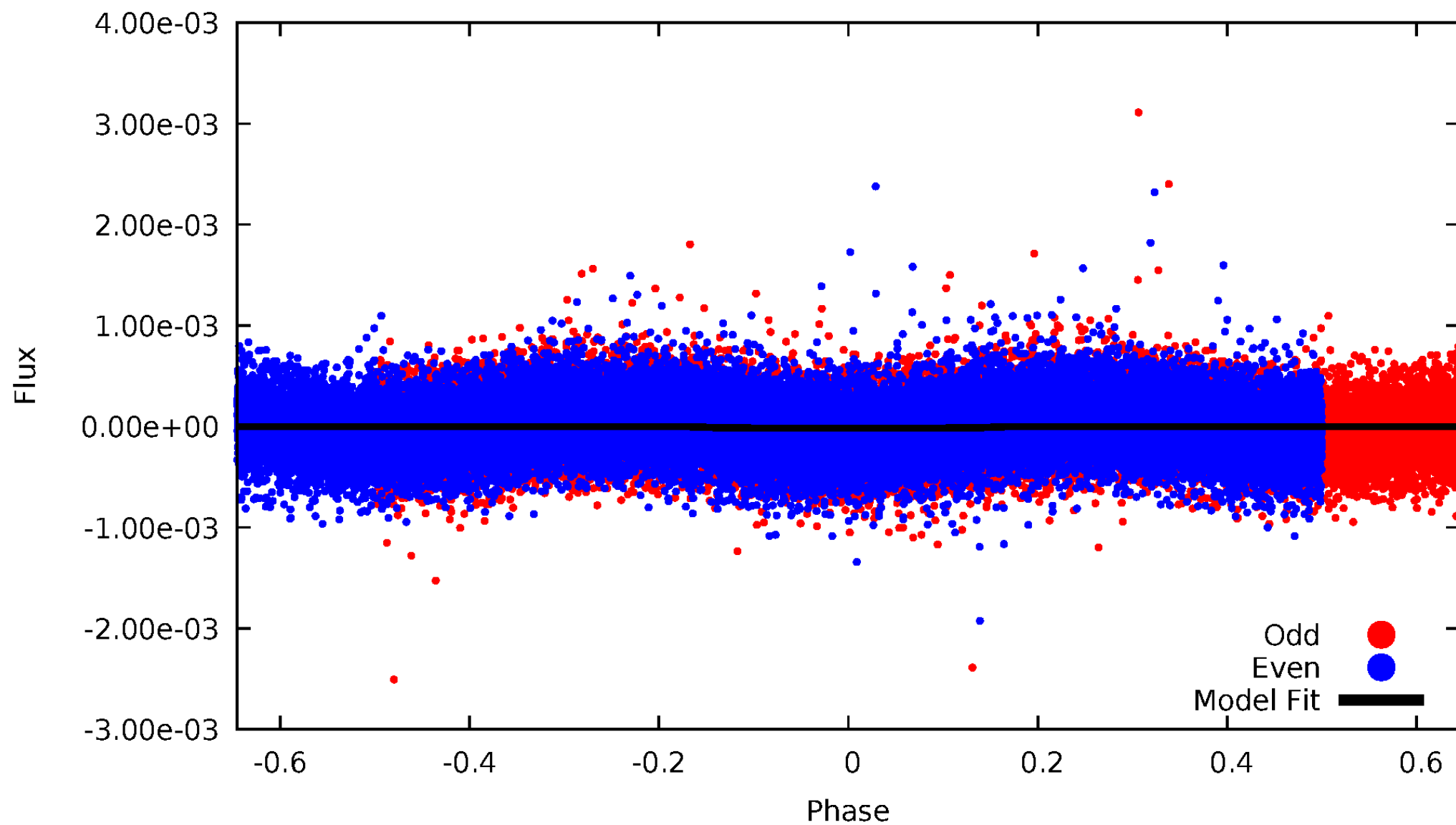


TCE 008718678-01



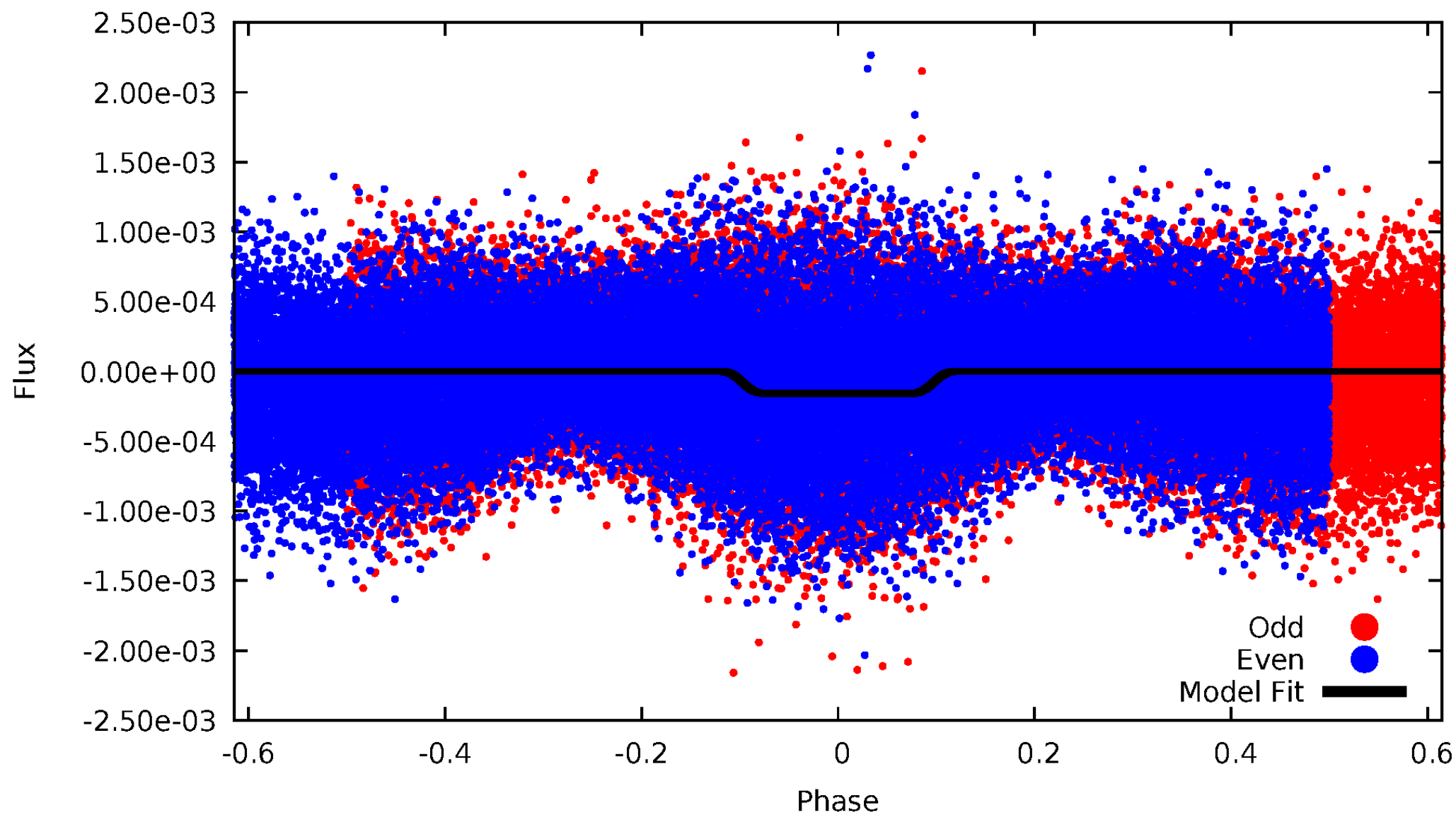
DV Odd/Even

TCE 008718678-01



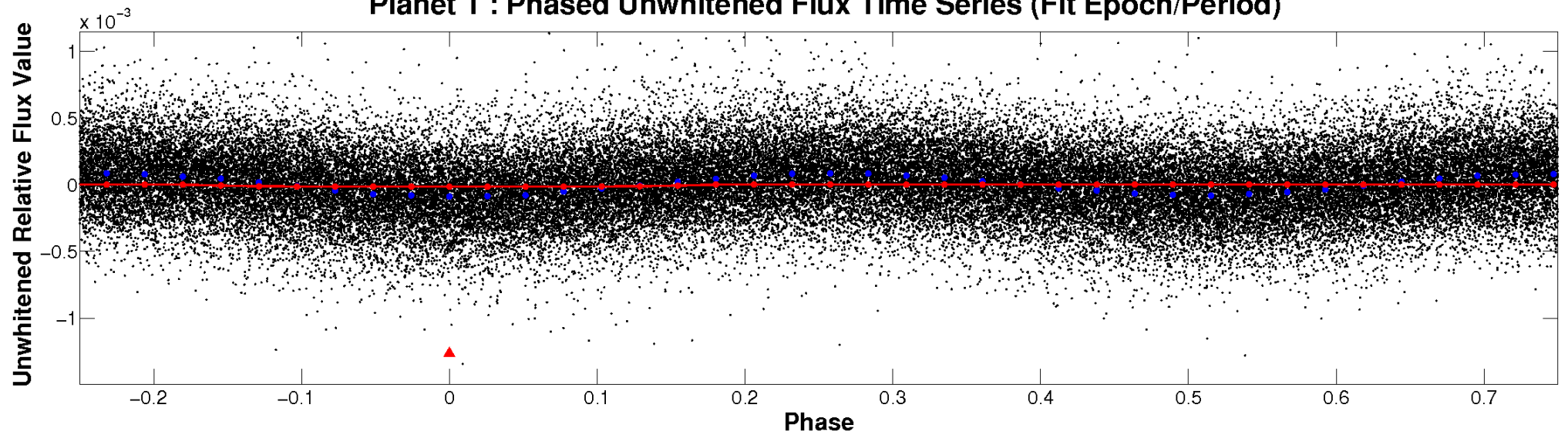
ALT Odd/Even

TCE 008718678-01

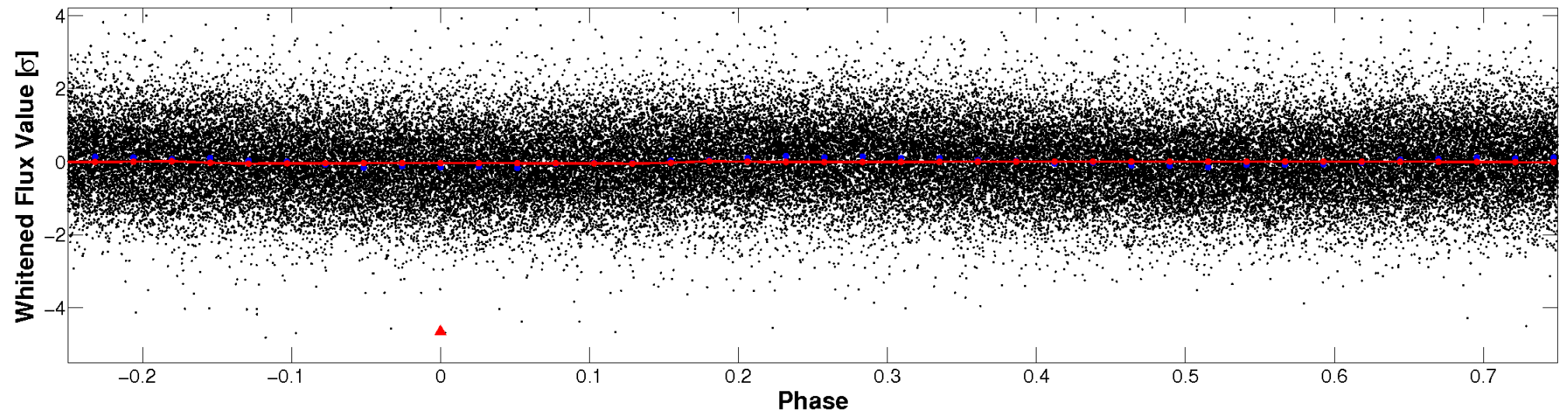


Non-Whitened Vs. Whitened Light Curve

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

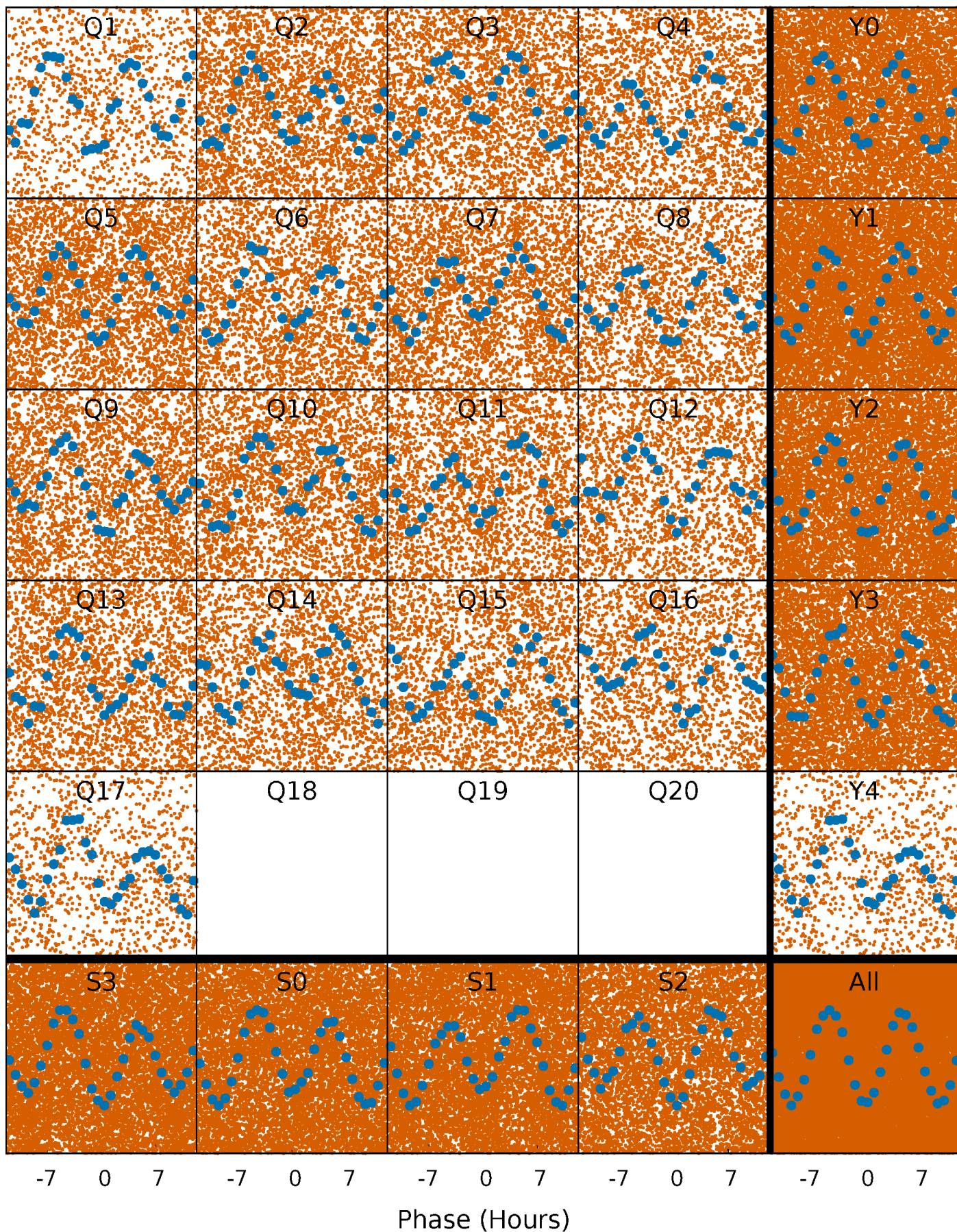


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



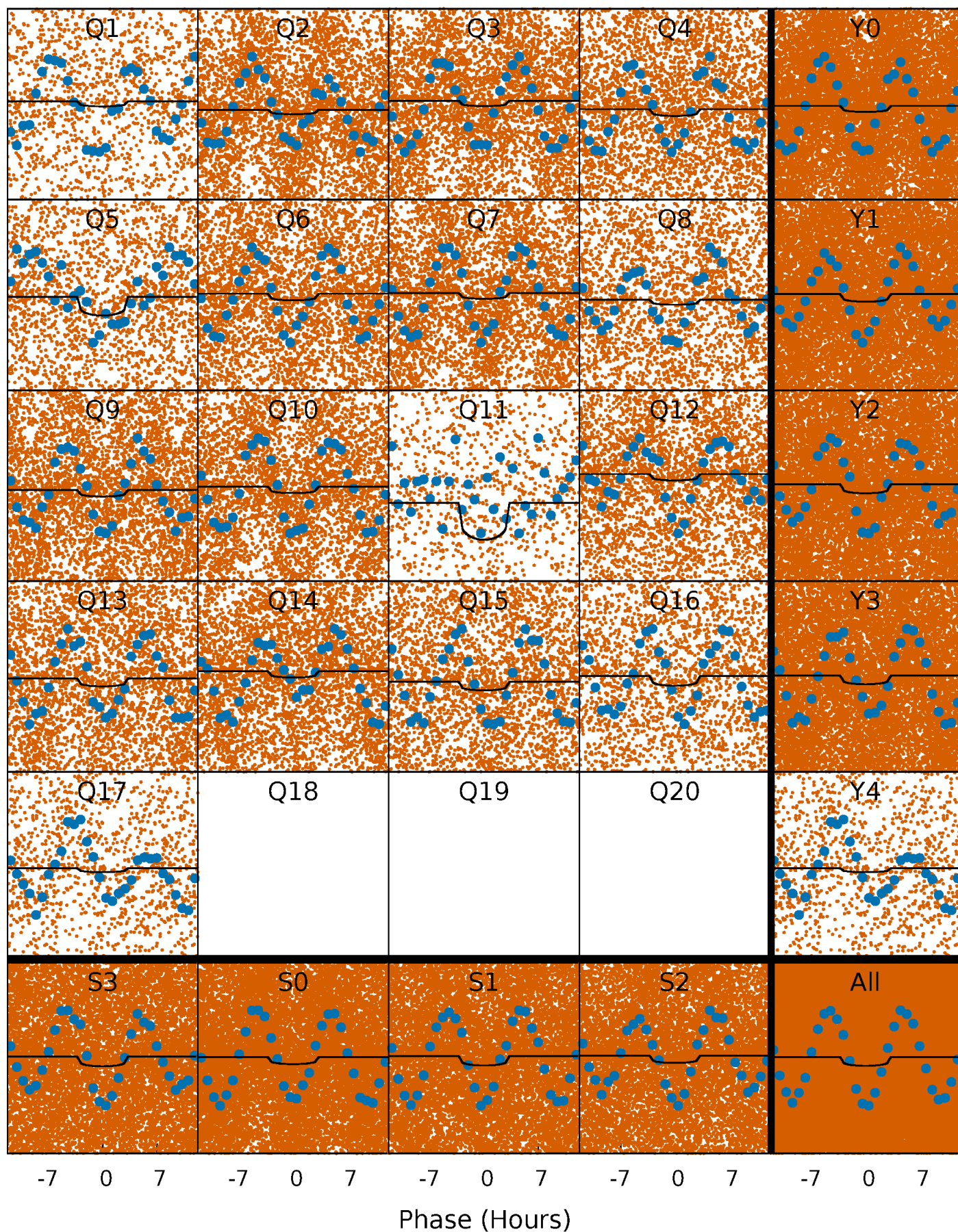
PDC Quarter-Phased Transit Curves

TCE 008718678-01 P= 0.793086 Days $T_0=131.770218$ (BKJD)



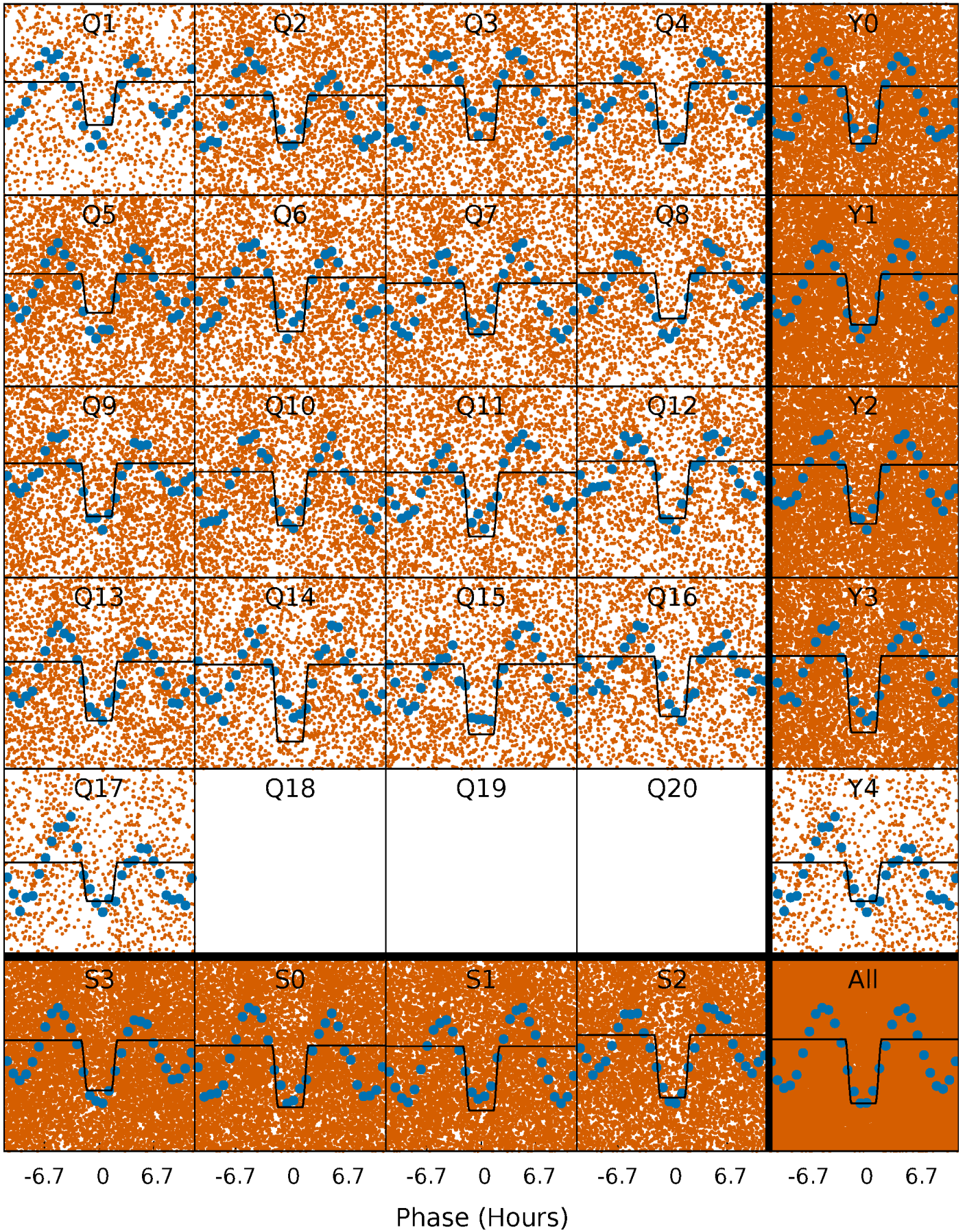
DV Quarter-Phased Transit Curves

TCE 008718678-01 P= 0.793086 Days $T_0=131.770218$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

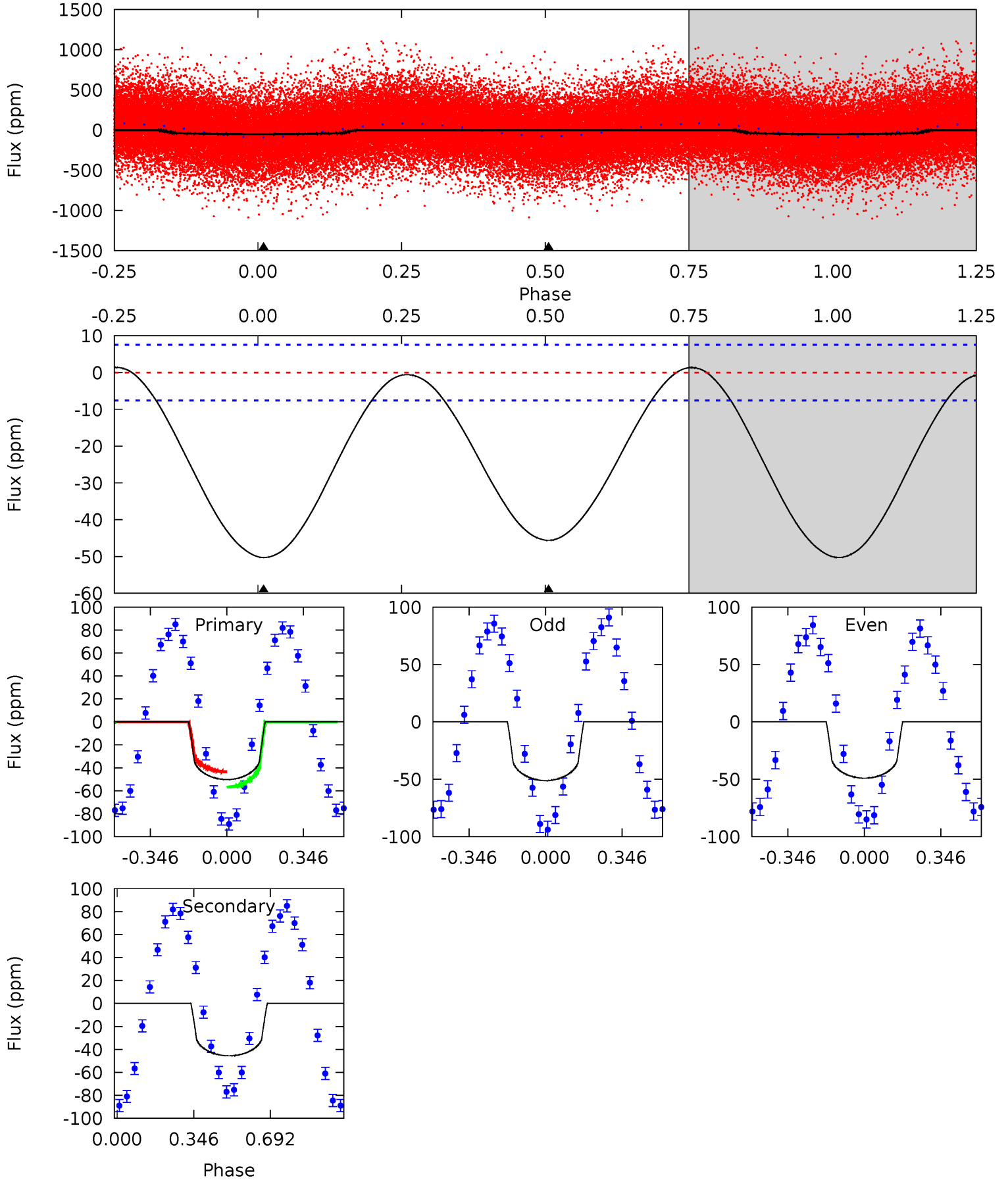
TCE 008718678-01 P= 0.793112 Days $T_0=131.755740$ (BKJD)



DV Model-Shift Uniqueness Test

008718678-01, P = 0.793086 Days, E = 130.977132 Days

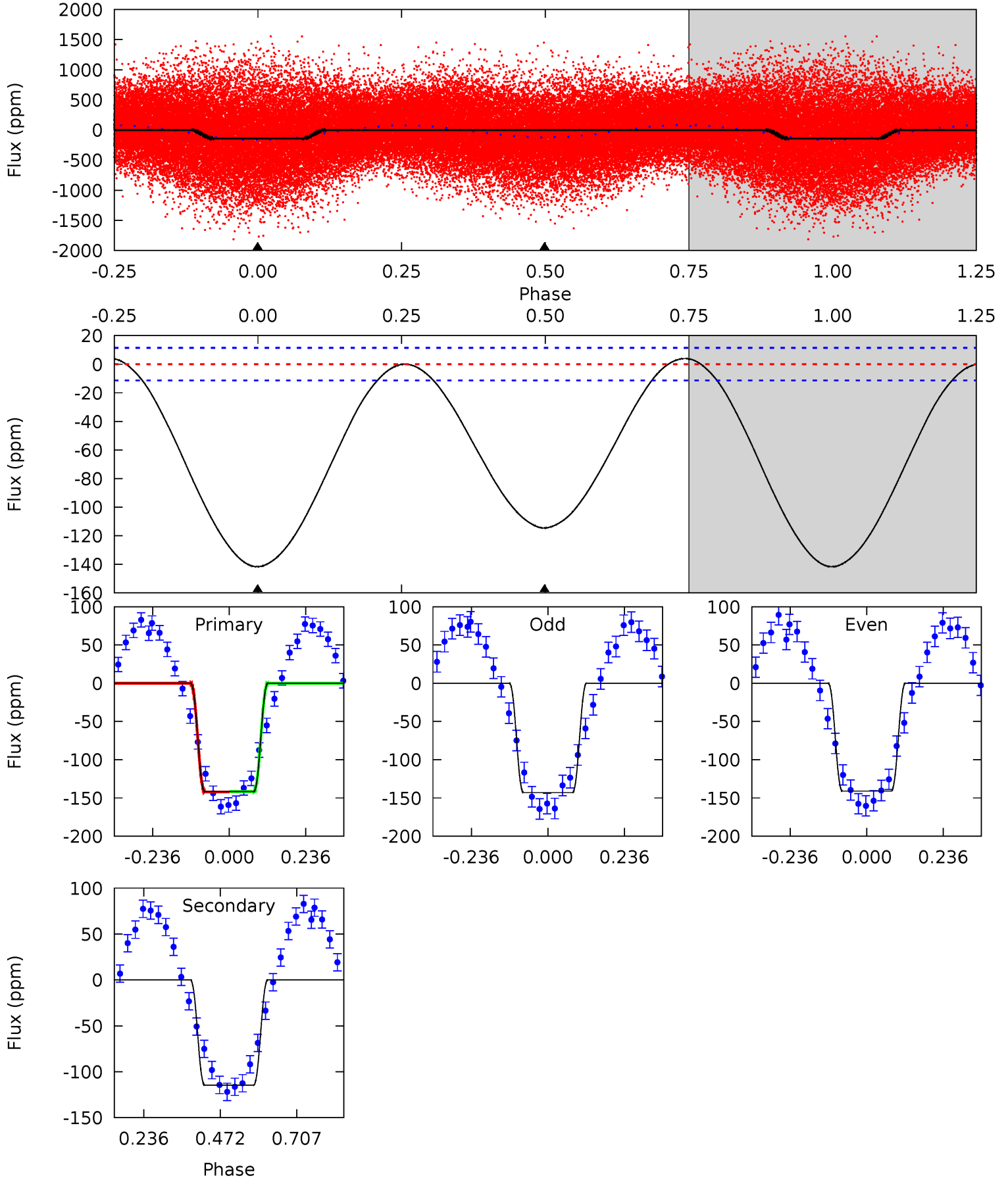
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	25.9	0	0	4.30	0.94	0.55	28.5	28.5	25.9	25.9	0.61	1.00	0.03	3.92



Alt Model-Shift Uniqueness Test

008718678-01, P = 0.793112 Days, E = 130.962628 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.4	44.0	0	0	4.38	1.19	0.93	54.4	54.4	44.0	44.0	0.36	0.97	0.03	0.08



Stellar Parameters For KIC 008718678

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7181^{+201}_{-327}	$3.745^{+0.425}_{-0.075}$	$-0.040^{+0.250}_{-0.350}$	$2.898^{+0.442}_{-1.326}$	$1.705^{+0.196}_{-0.364}$	$0.099^{+0.362}_{-0.032}$
	+3%/-5%	+11%/-2%	+625%/-875%	+15%/-46%	+11%/-21%	+367%/-33%
Source	KIC0	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 008718678-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-46 ± 2	$1.13^{+0.78}_{-0.65}$	5110^{+389}_{-535}	9819^{+10642}_{-2803}	$8.159^{+32.755}_{-5.343}$
Alt.	-115 ± 3	$3.58^{+1.06}_{-0.97}$	5116^{+351}_{-554}	6258^{+969}_{-683}	$2.005^{+1.641}_{-0.815}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

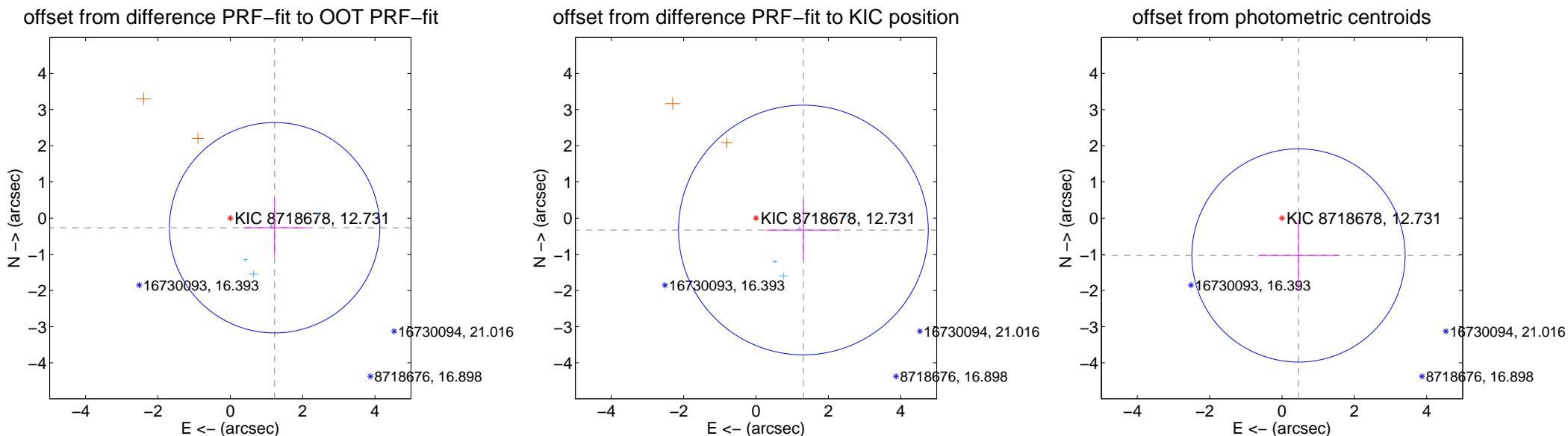
DV Centroid Data

Supplemental centroid analysis for 008718678-01. Kepler magnitude: 12.73. Transit SNR 6.55

There are 4 quarters with good PRF difference image offsets

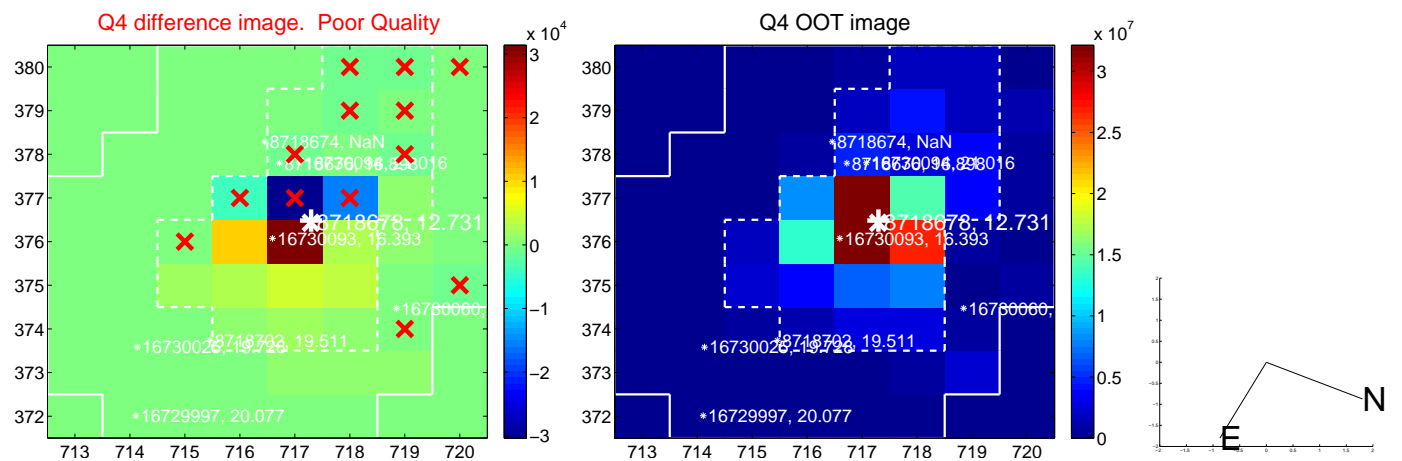
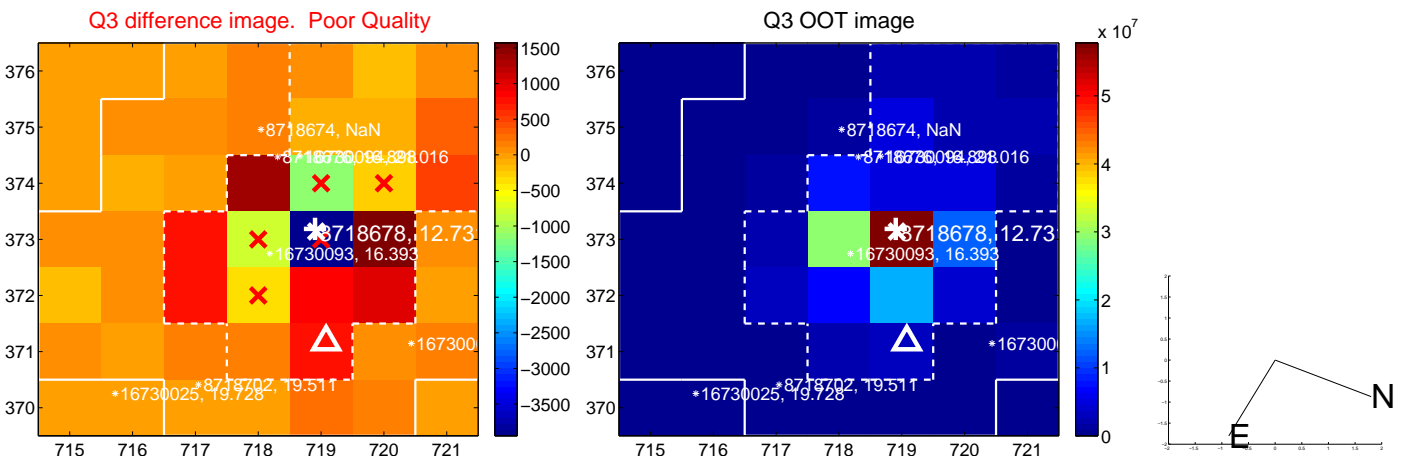
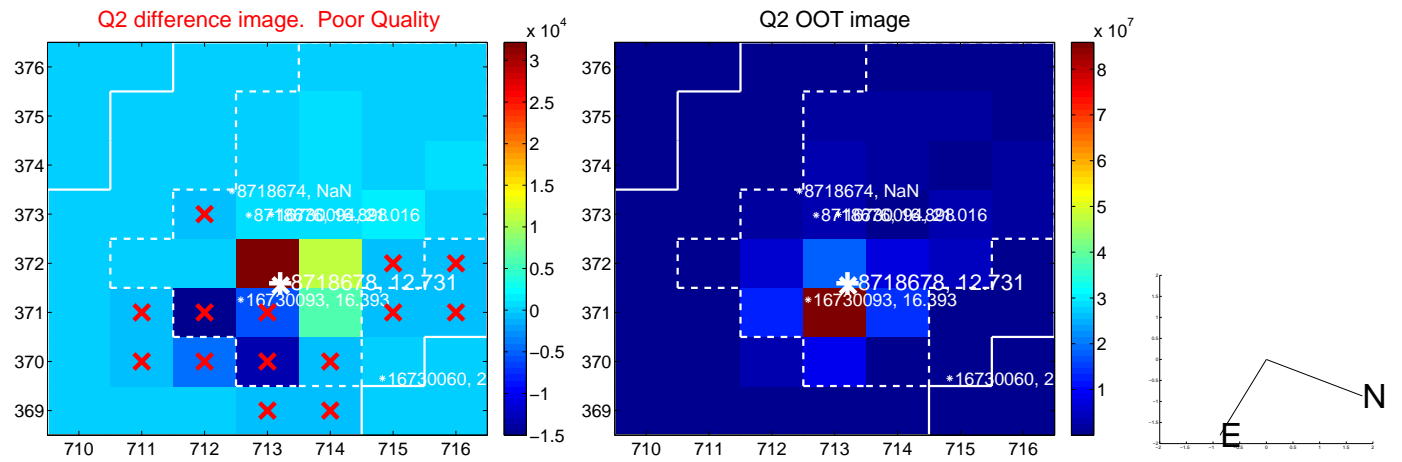
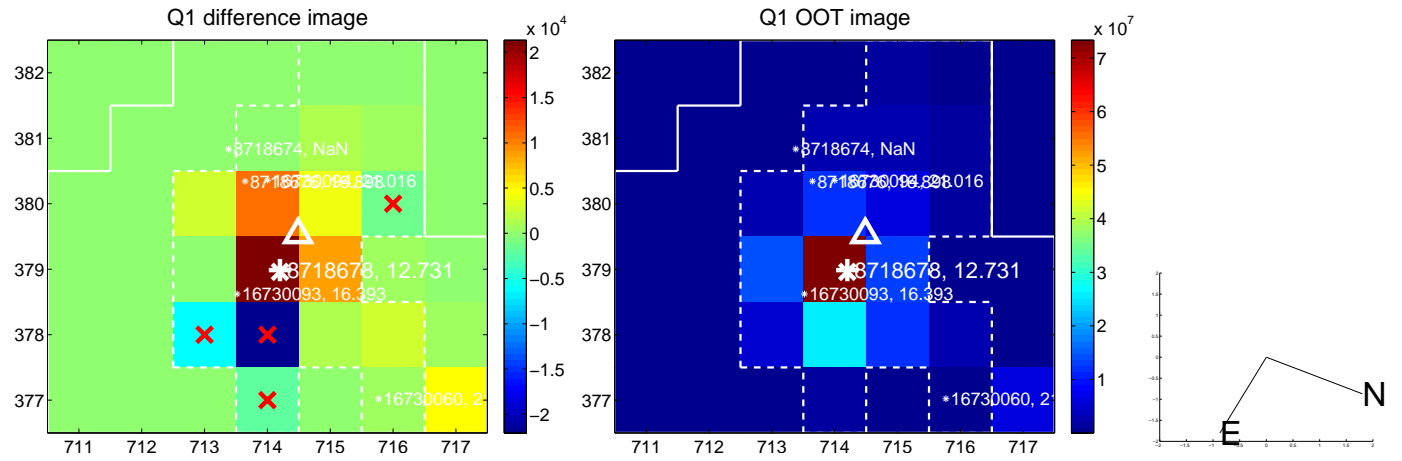
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.254 ± 0.969	1.29	-1.225 ± 0.868	-0.266 ± 0.799
PRF-fit source offset from KIC position	1.351 ± 1.151	1.17	-1.310 ± 1.021	-0.329 ± 0.824
photometric centroid source offset	1.13 ± 0.98	1.15	-0.46 ± 1.12	-1.03 ± 0.95

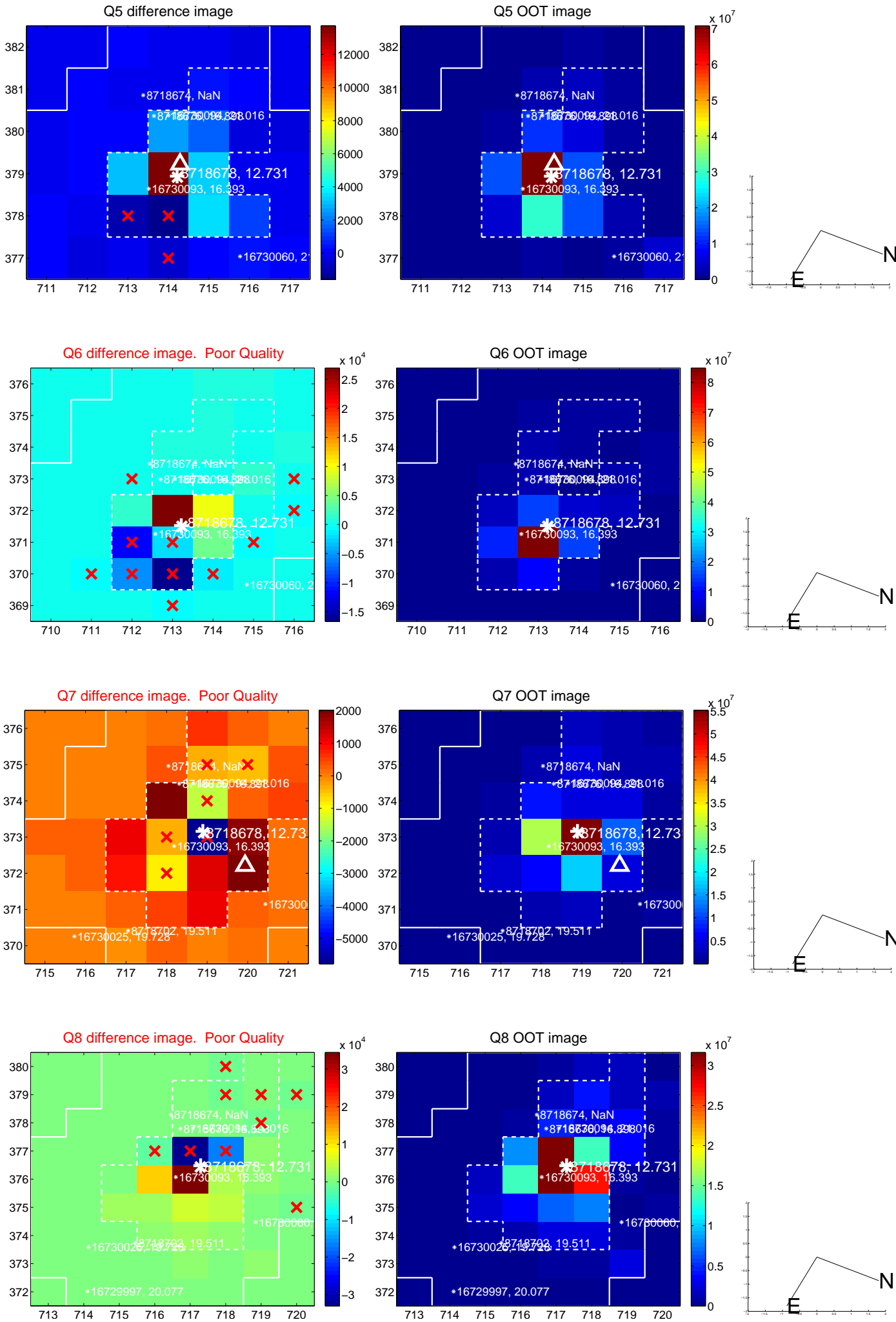


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

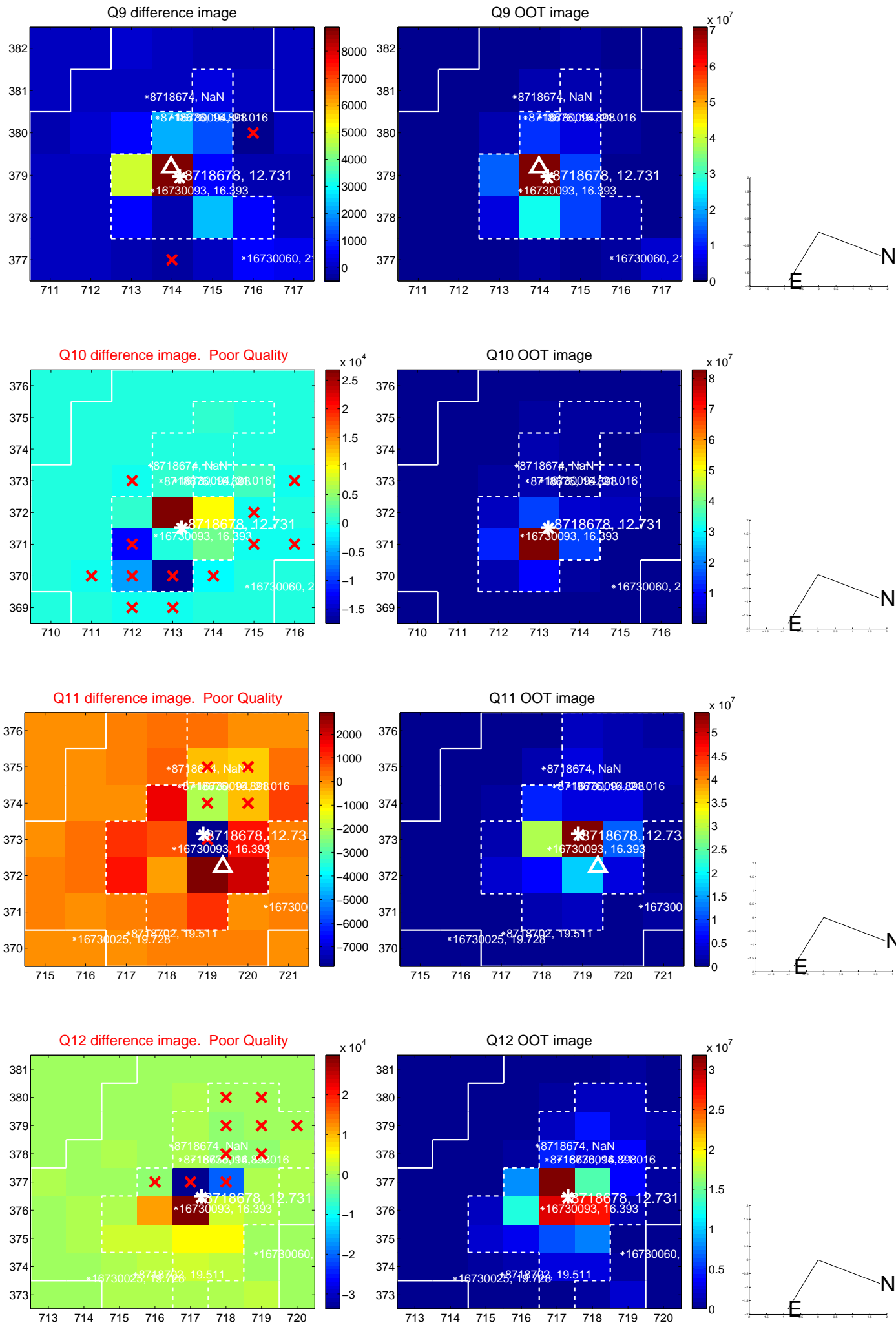
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



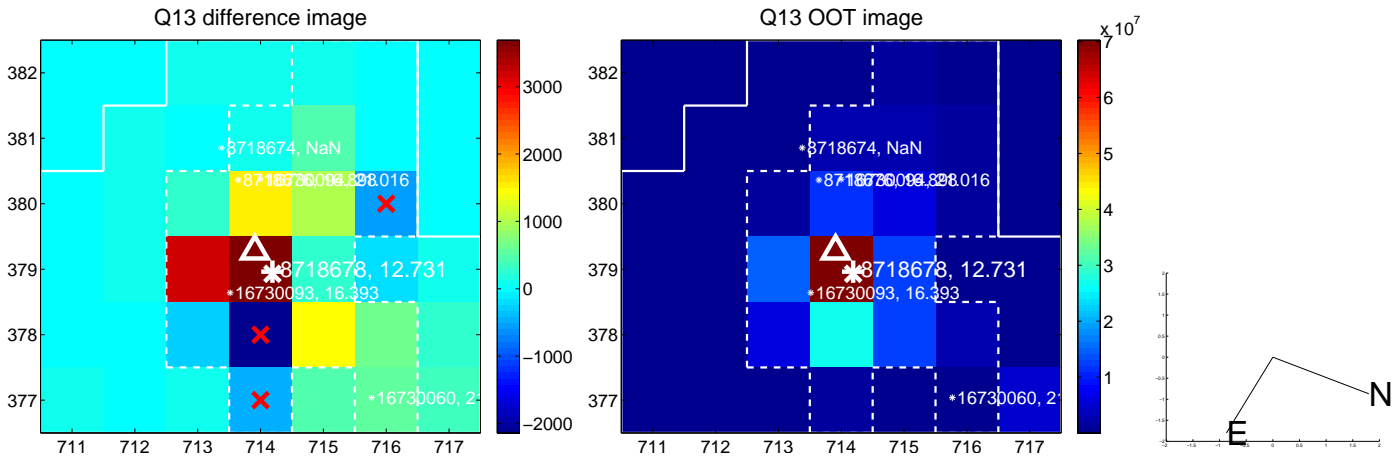
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



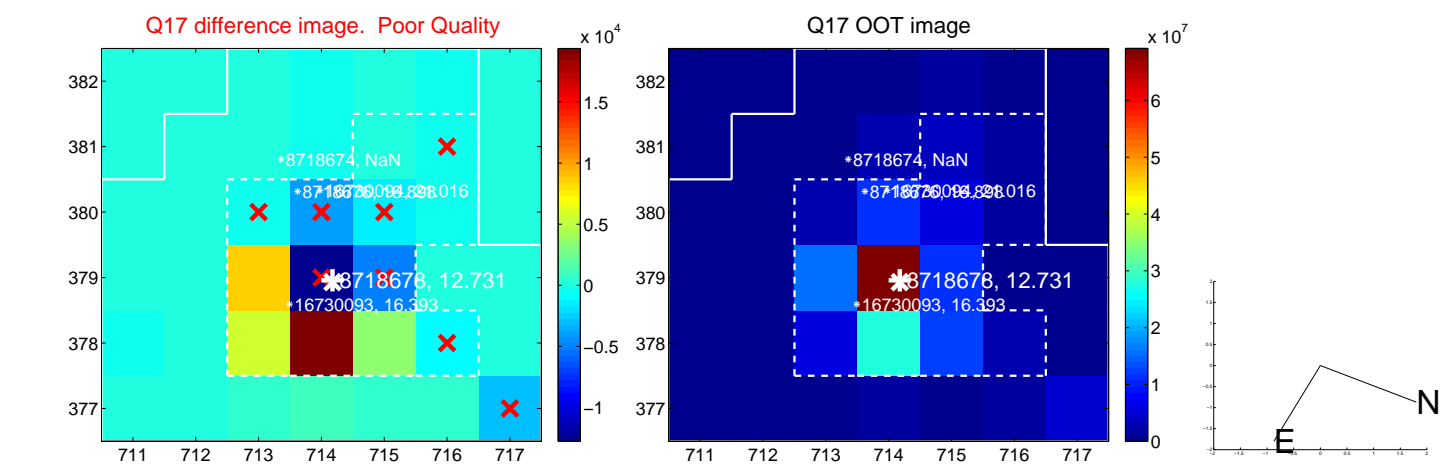
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



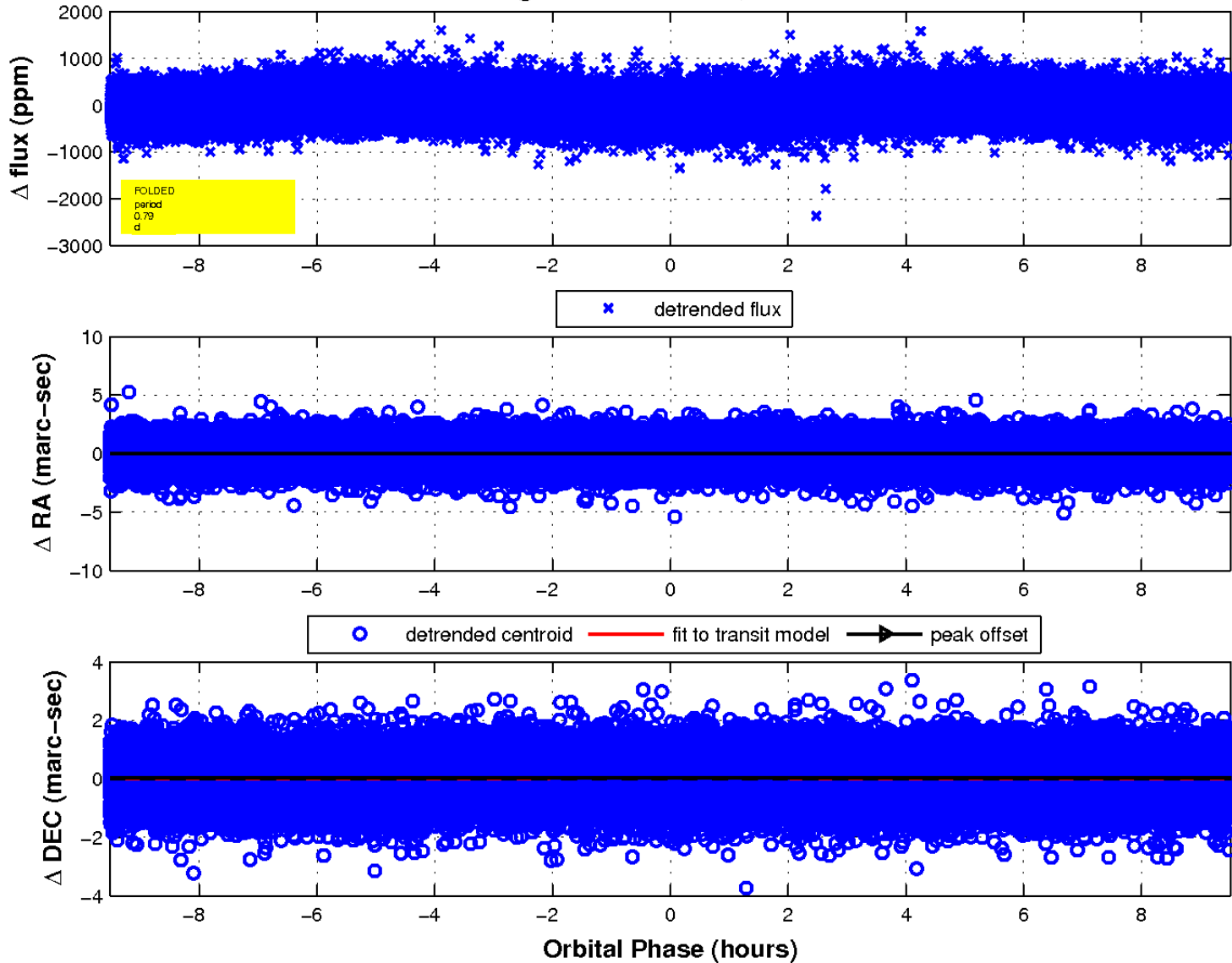
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

