

KIC 004680772

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})
004680772-01	OBS	4707.01	26.190184	143.219044	52.6	2.470	8.5	10.0	1.44	6434	1.23	93.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004680772-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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 004680772-01

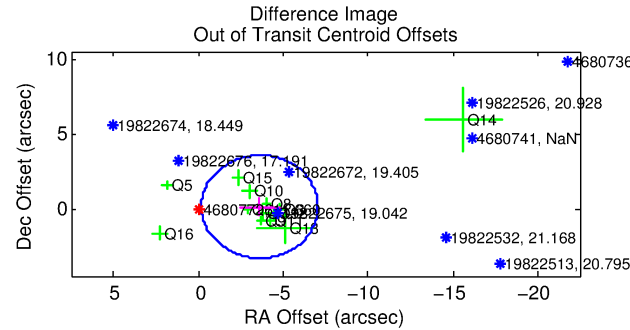
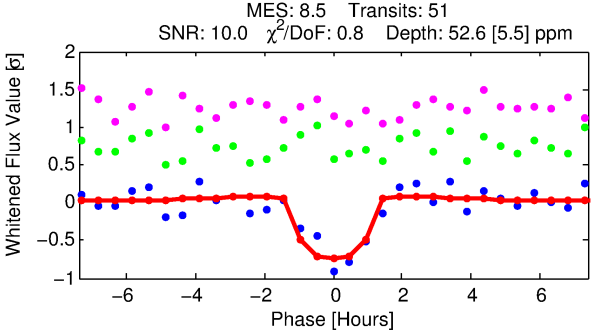
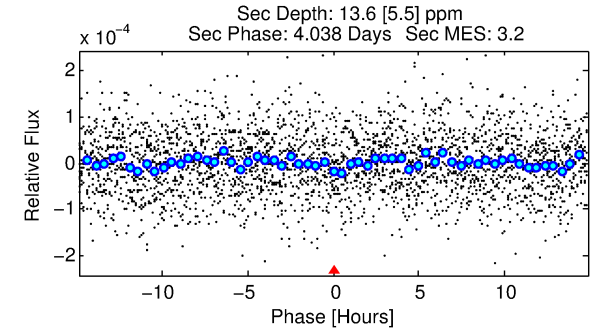
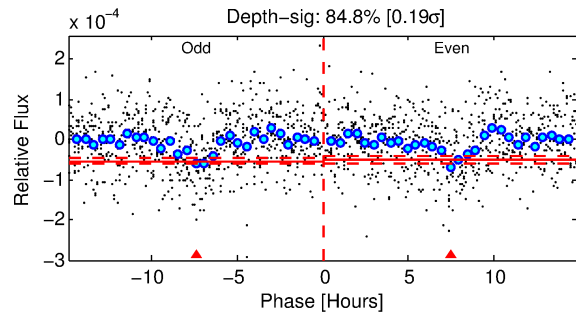
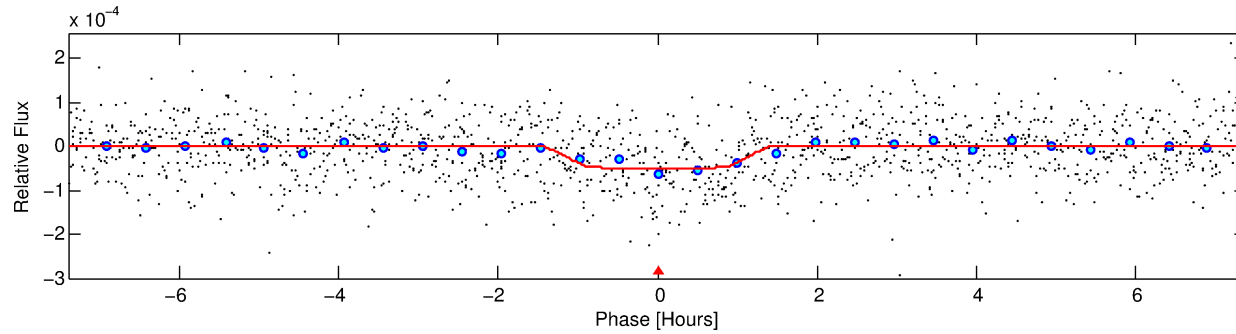
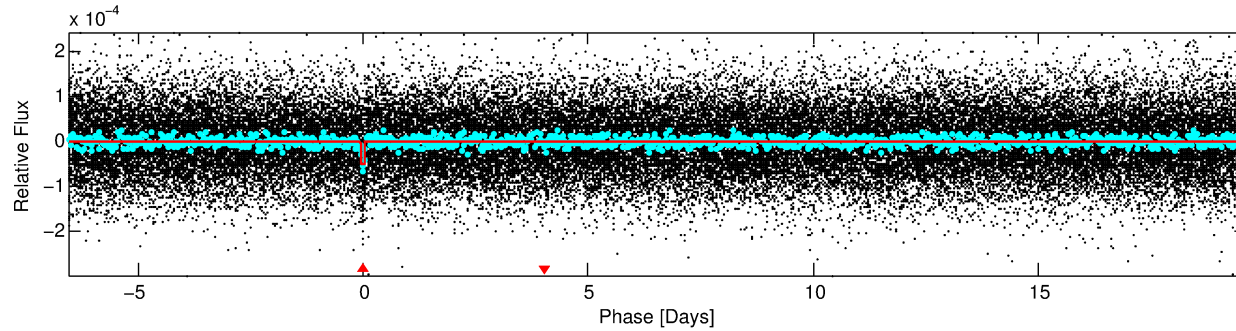
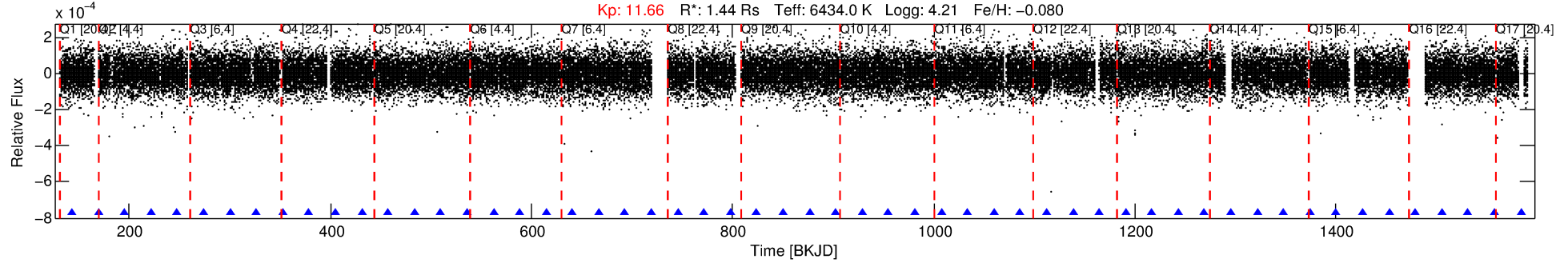
No Significant Match Found

DV One-Page Summary

KIC: 4680772 Candidate: 1 of 1 Period: 26.190 d

KOI: K04707.01 Corr: 0.969

Kp: 11.66 R*: 1.44 Rs Teff: 6434.0 K Logg: 4.21 Fe/H: -0.080



DV Fit Results:

Period = 26.19018 [0.00018] d
Epoch = 143.2190 [0.0054] BKJD
Rp/R* = 0.0078 [0.0043]
a/R* = 35.60 [111.51]
b = 0.91 [0.62]
Seff = 93.56 [36.24]
Teq = 793 [77] K
Rp = 1.23 [0.76] Re
a = 0.1846 [0.0452] AU
Ag = 168.41 [204.71] [0.82σ]
Teffp = 4417 [1295] K [2.79σ]

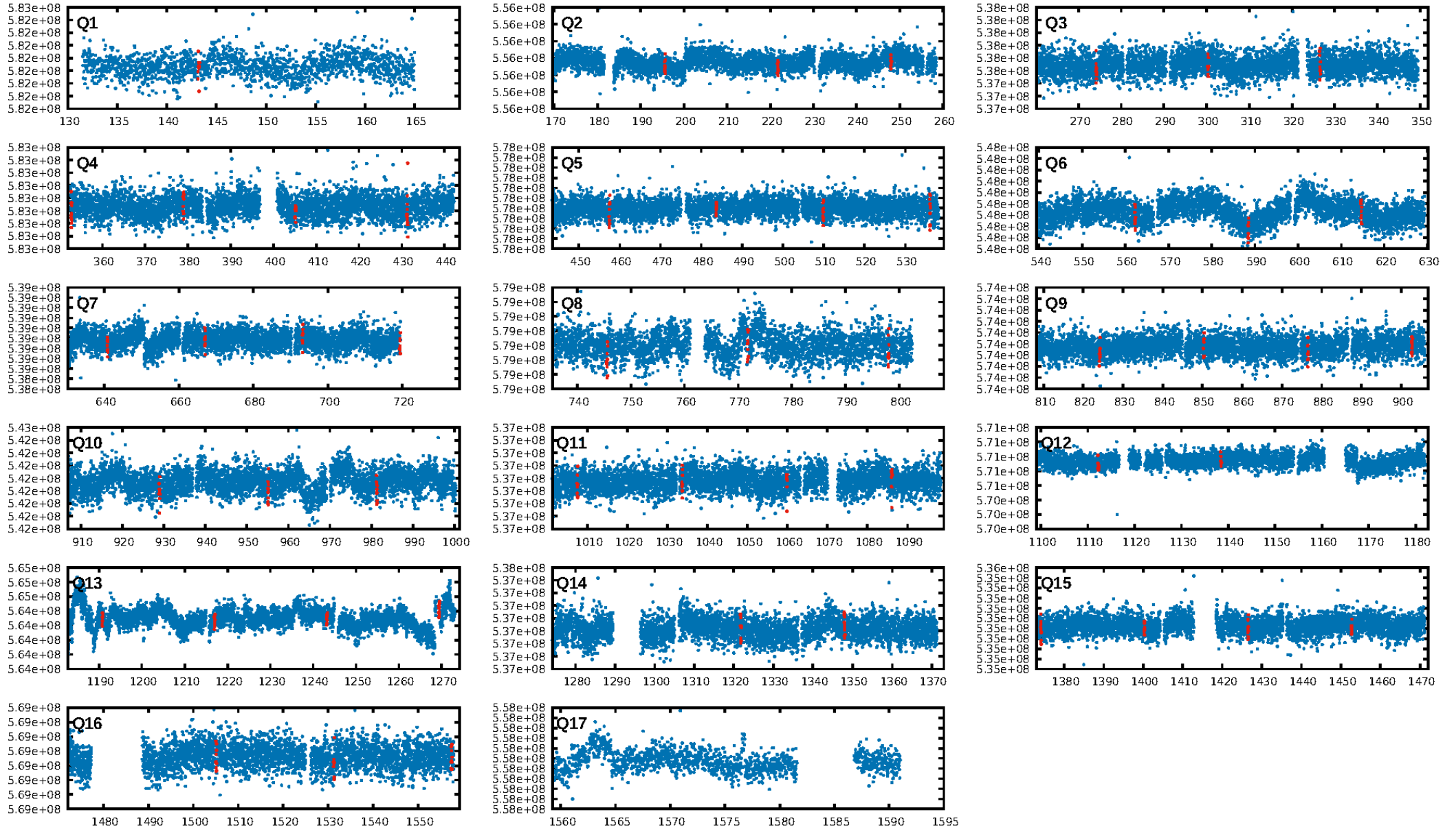
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.14e-16
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 2.103
Centroid-sig: 0.0%
Centroid-so: 4.751 arcsec [3.57σ]
OotOffset-rm: 3.614 arcsec [3.16σ]
KicOffset-rm: 3.471 arcsec [2.88σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [16/16]

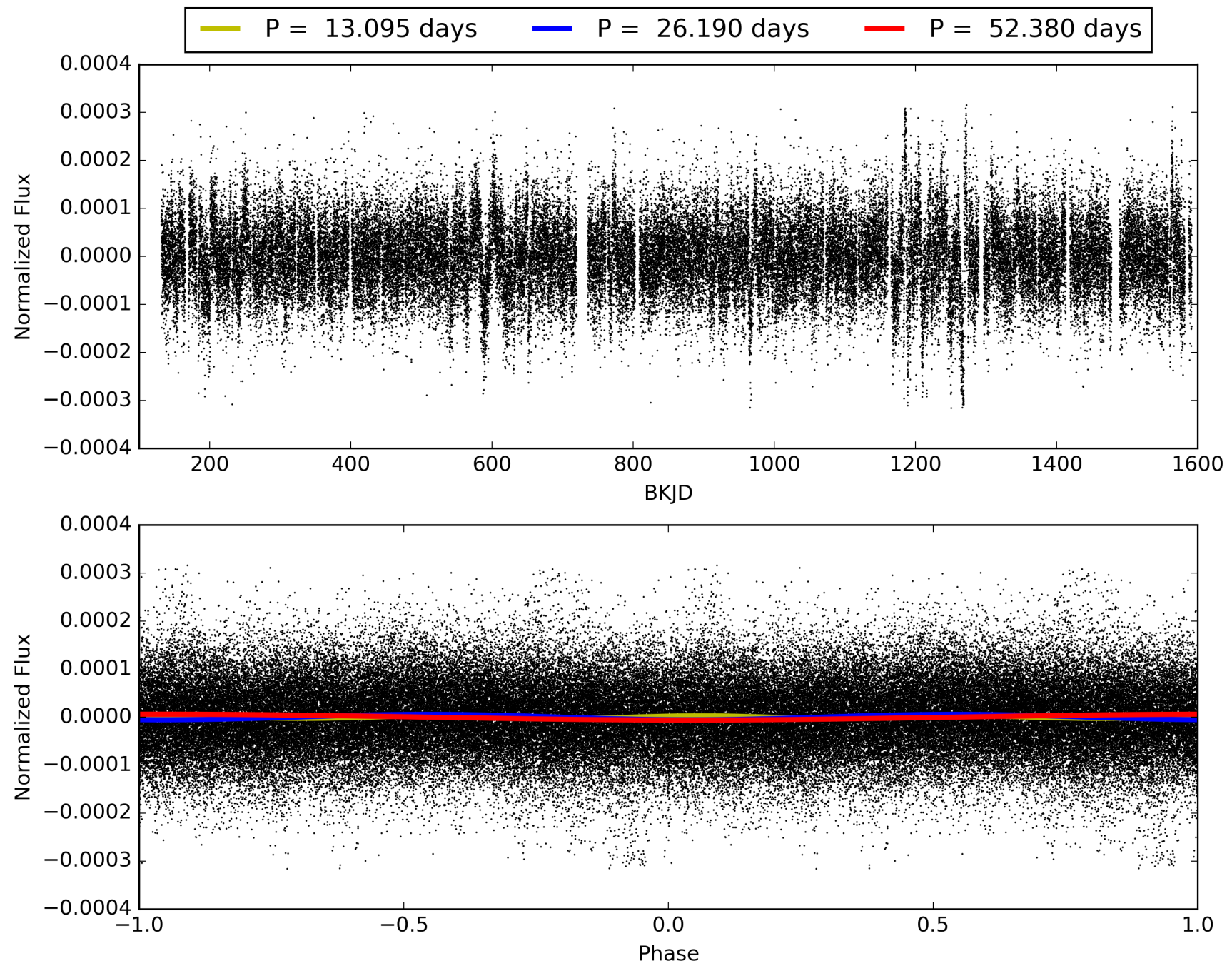
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:40:44 Z

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

TCE 004680772-01, PDC Light Curves

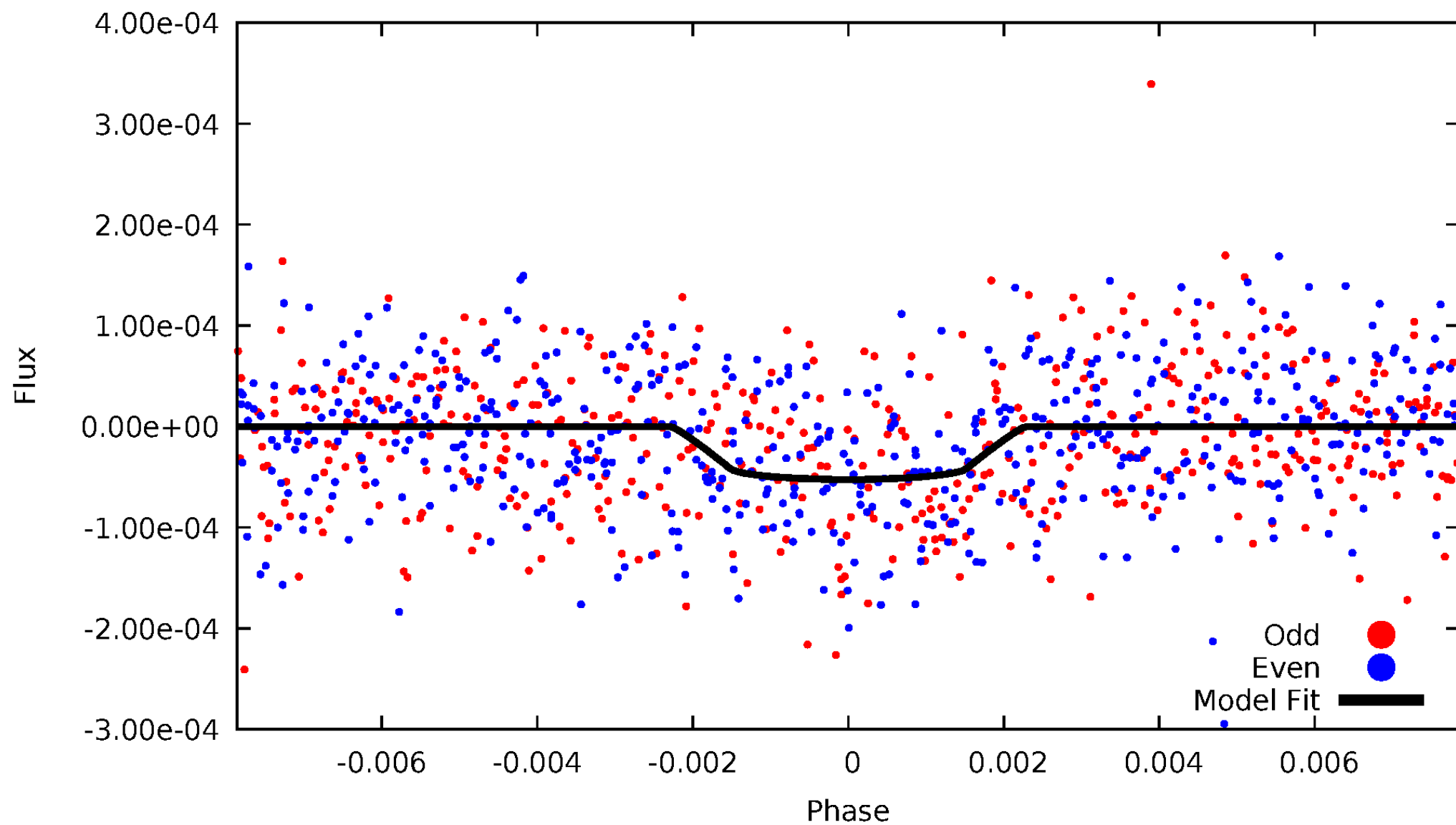


TCE 004680772-01



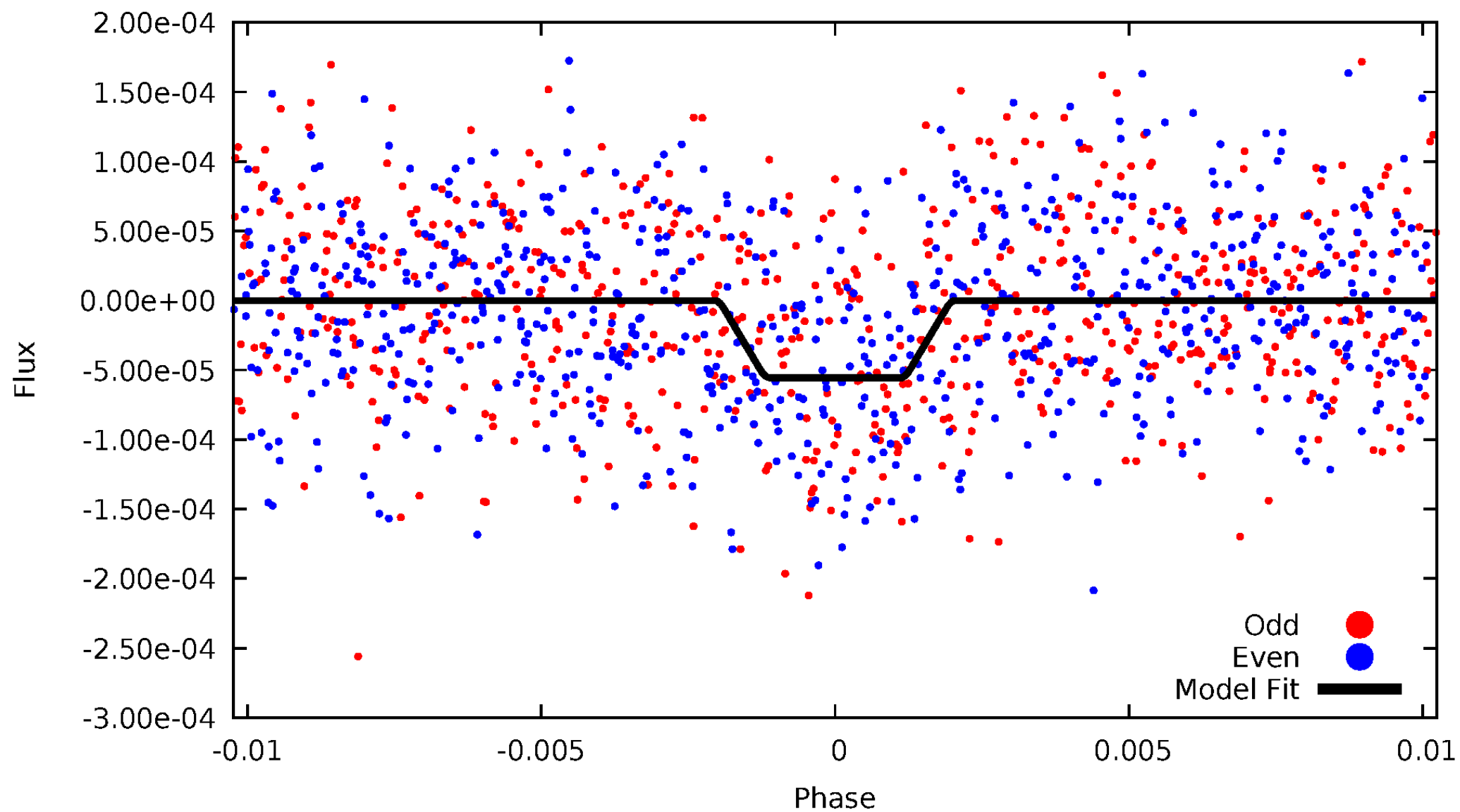
DV Odd/Even

TCE 004680772-01



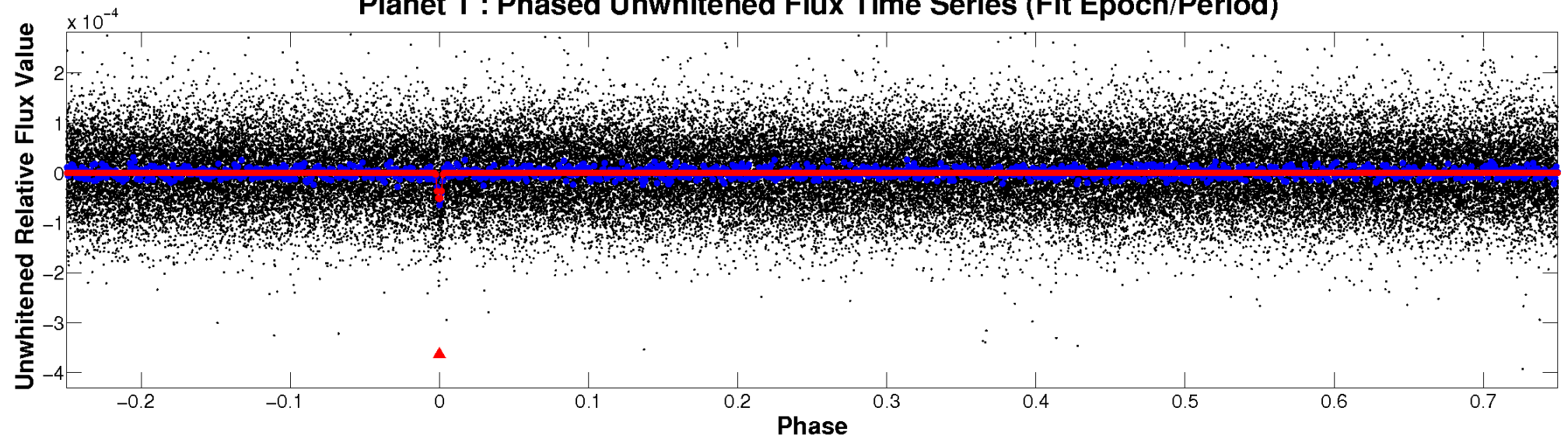
ALT Odd/Even

TCE 004680772-01

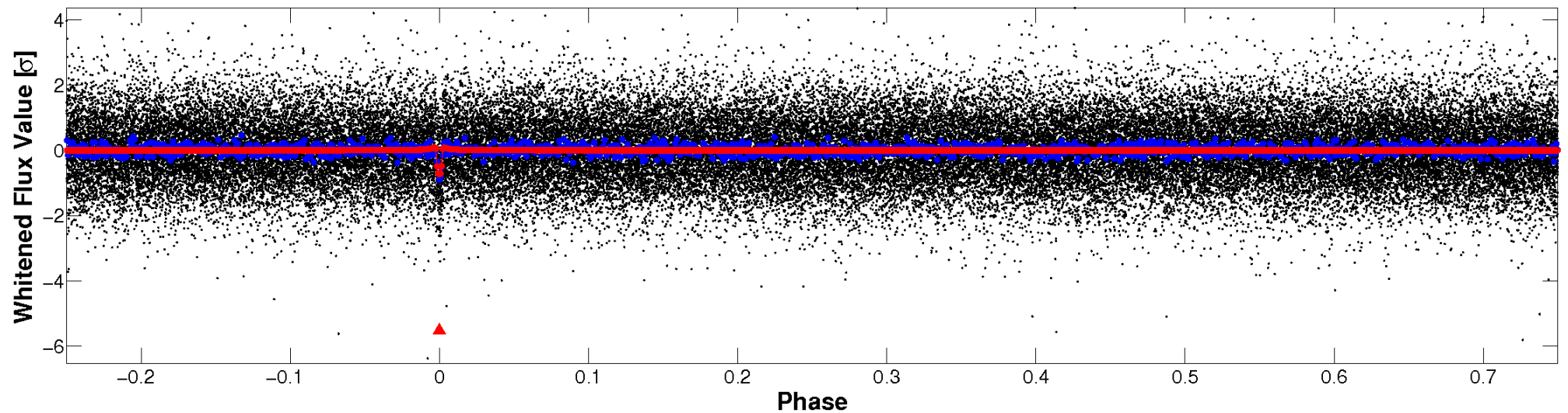


Non-Whitened Vs. Whitened Light Curve

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

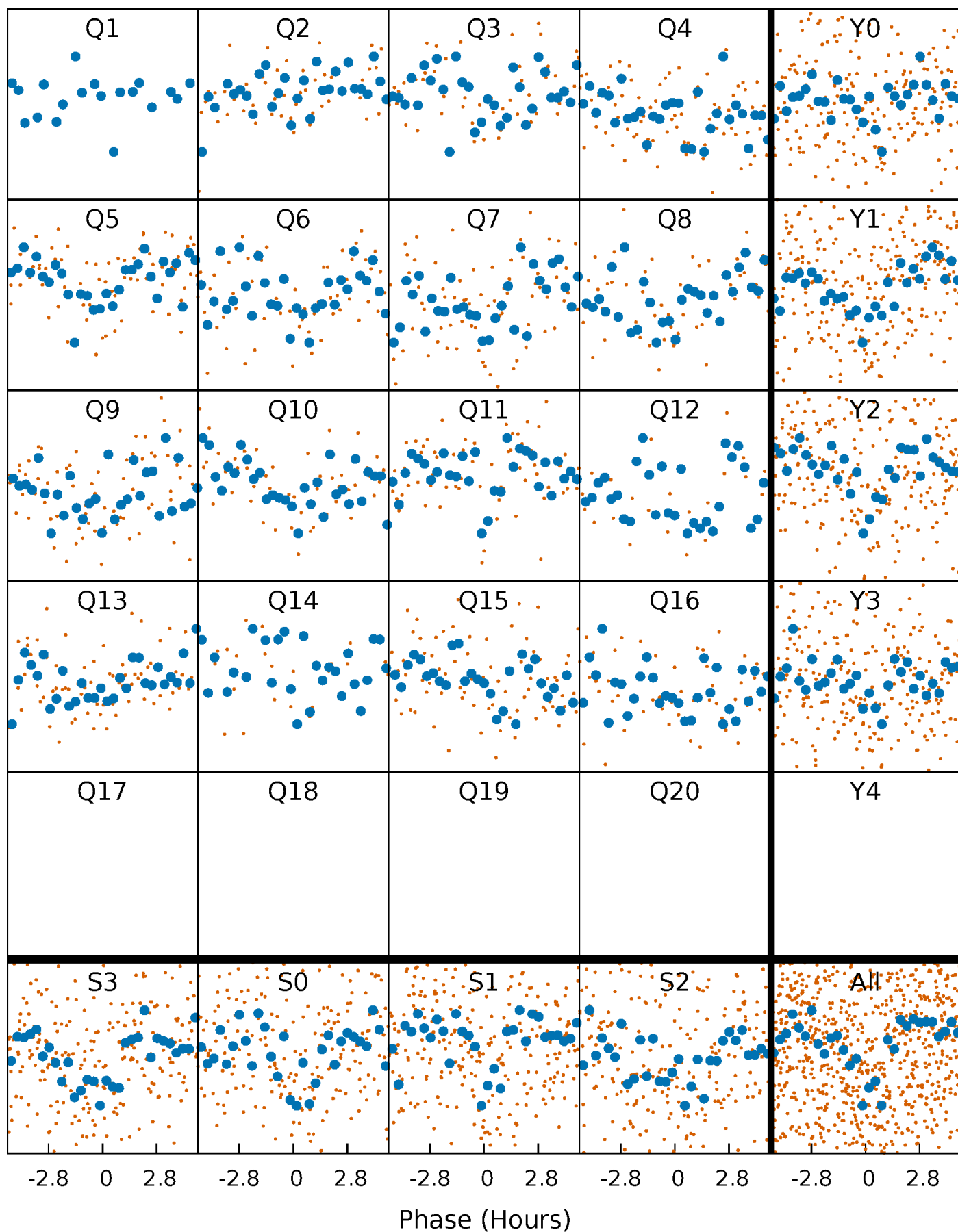


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



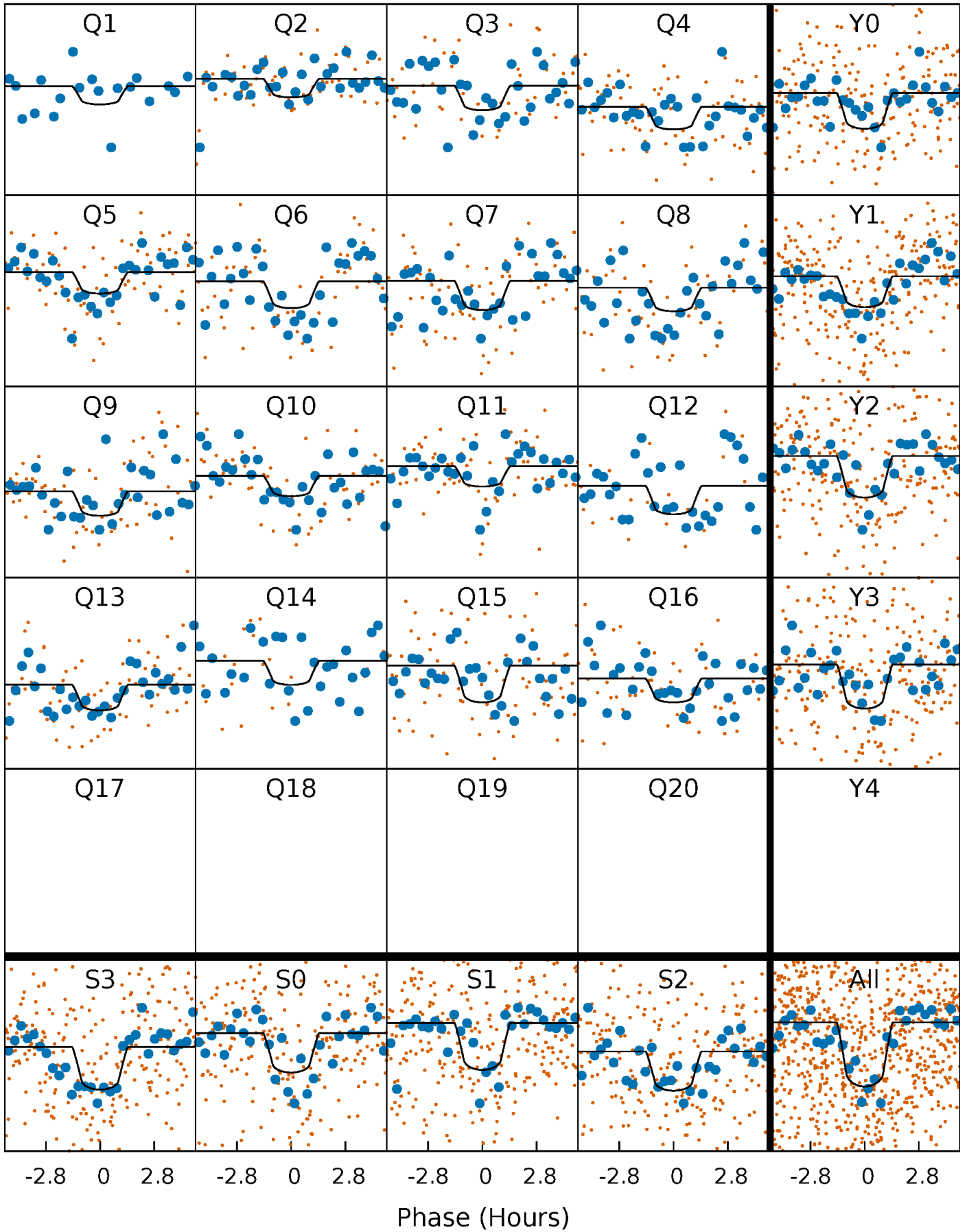
PDC Quarter-Phased Transit Curves

TCE 004680772-01 P= 26.190184 Days $T_0=143.219043$ (BKJD)



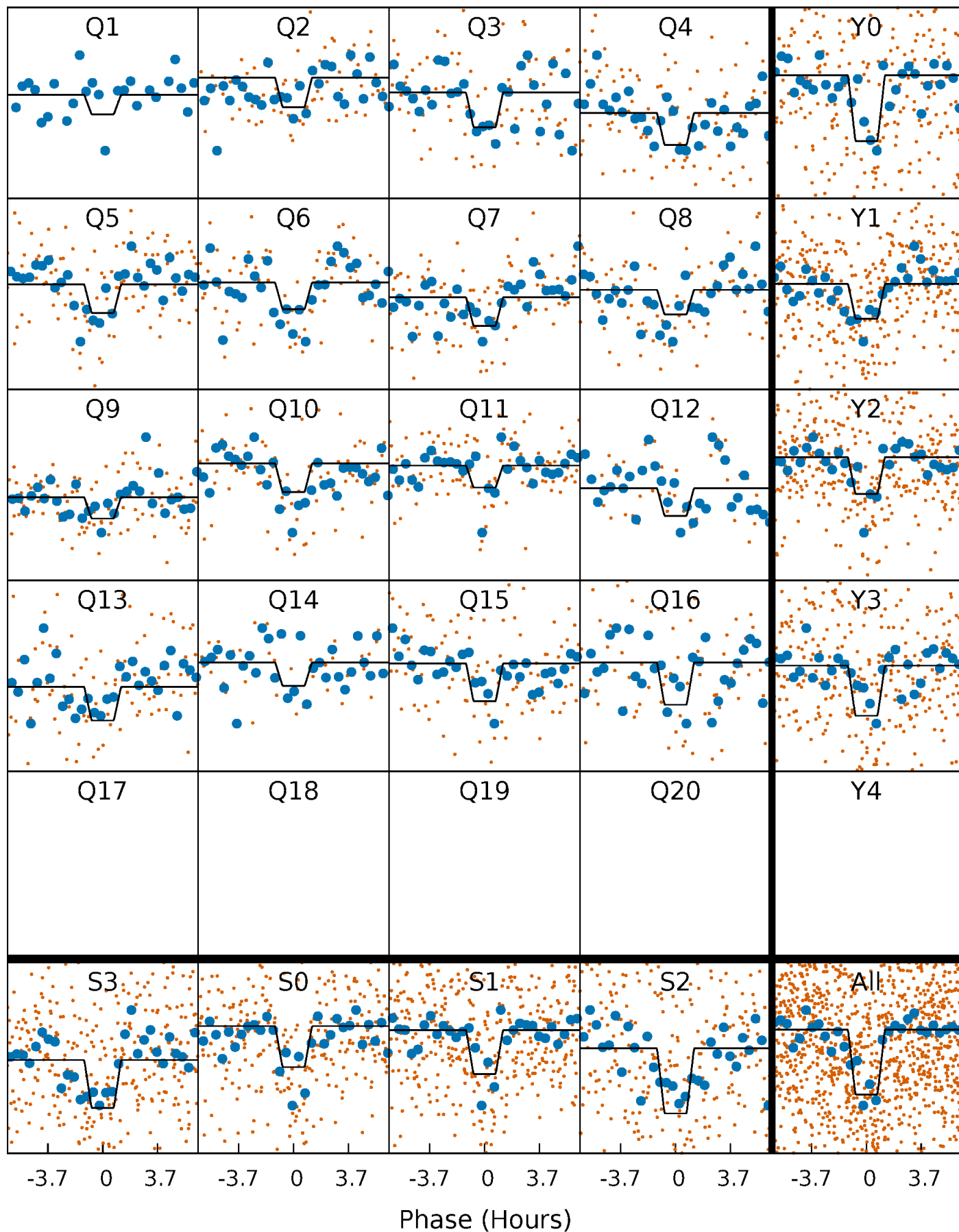
DV Quarter-Phased Transit Curves

TCE 004680772-01 P= 26.190184 Days $T_0=143.219043$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

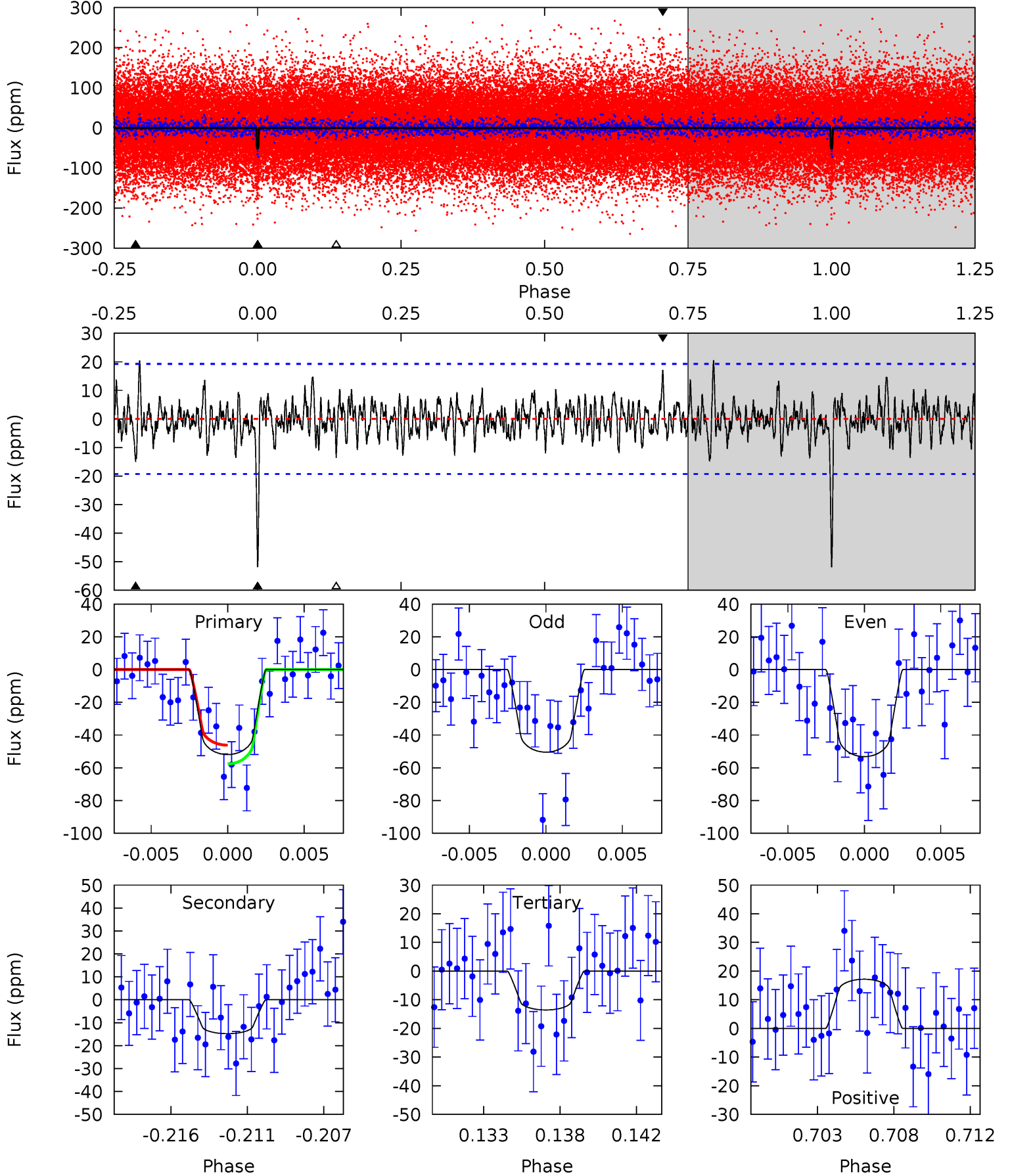
TCE 004680772-01 P= 26.190140 Days $T_0=143.228196$ (BKJD)



DV Model-Shift Uniqueness Test

004680772-01, P = 26.190184 Days, E = 117.028859 Days

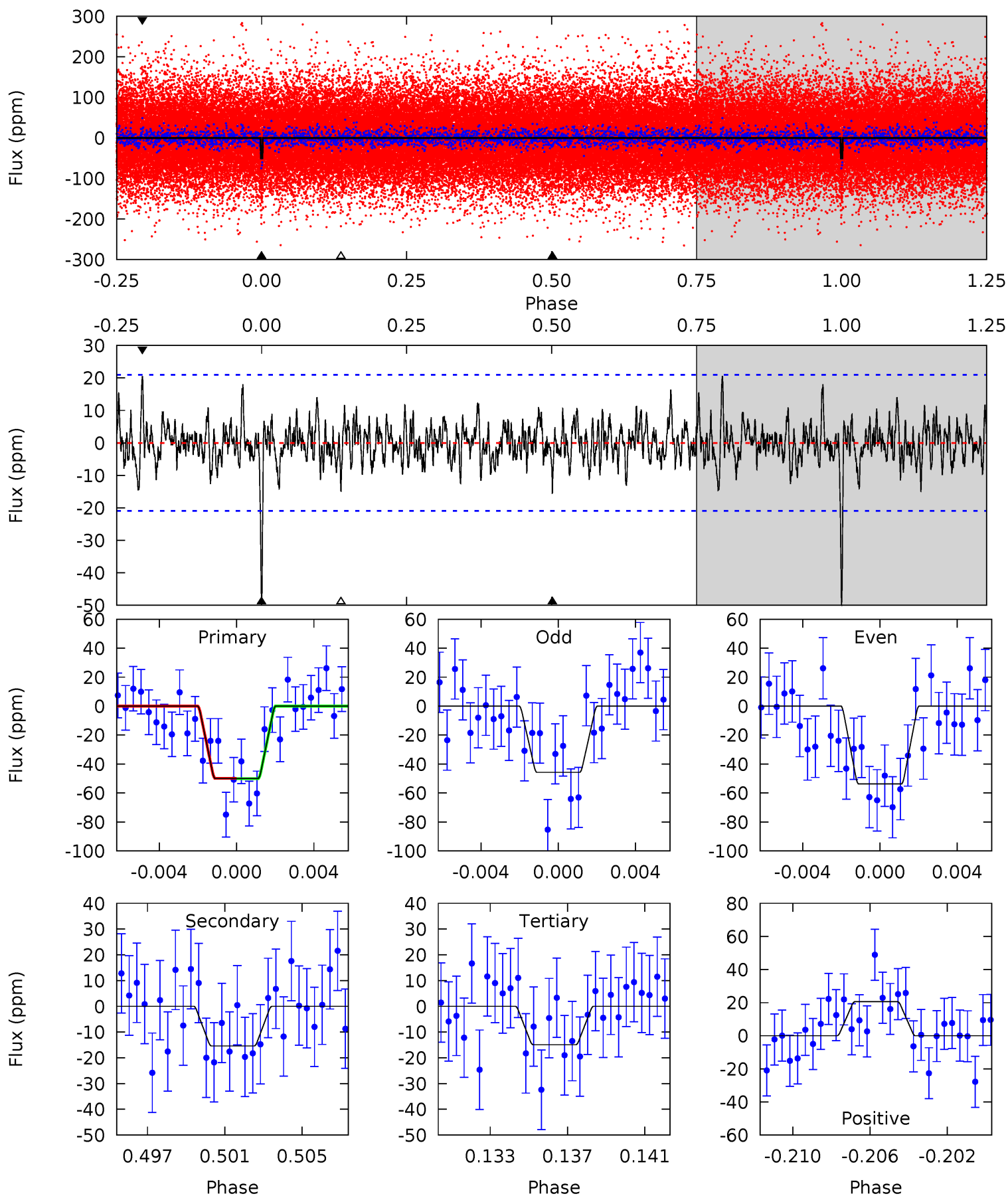
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	3.97	3.64	4.61	5.17	2.83	1.26	10.3	9.32	0.33	-0.63	0.37	0.96	0.28	1.54



Alt Model-Shift Uniqueness Test

004680772-01, P = 26.190140 Days, E = 117.038056 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	3.82	3.70	5.09	5.20	2.88	1.24	8.70	7.31	0.12	-1.27	1.00	0.98	0.29	0.02



Stellar Parameters For KIC 004680772

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6434^{+181}_{-250}	$4.208^{+0.175}_{-0.193}$	$-0.080^{+0.250}_{-0.300}$	$1.441^{+0.422}_{-0.346}$	$1.224^{+0.188}_{-0.188}$	$0.576^{+0.530}_{-0.272}$
	+3%/-4%	+4%/-5%	+312%/-375%	+29%/-24%	+15%/-15%	+92%/-47%
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 004680772-01 / KOI 4707.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 4	$1.31^{+0.68}_{-0.65}$	1105^{+83}_{-77}	4498^{+1675}_{-640}	155^{+465}_{-90}
Alt.	-15 ± 4	$1.24^{+0.70}_{-0.62}$	1117^{+83}_{-83}	4652^{+1657}_{-727}	178^{+509}_{-107}

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 $A_{obs} \gg 1.0$

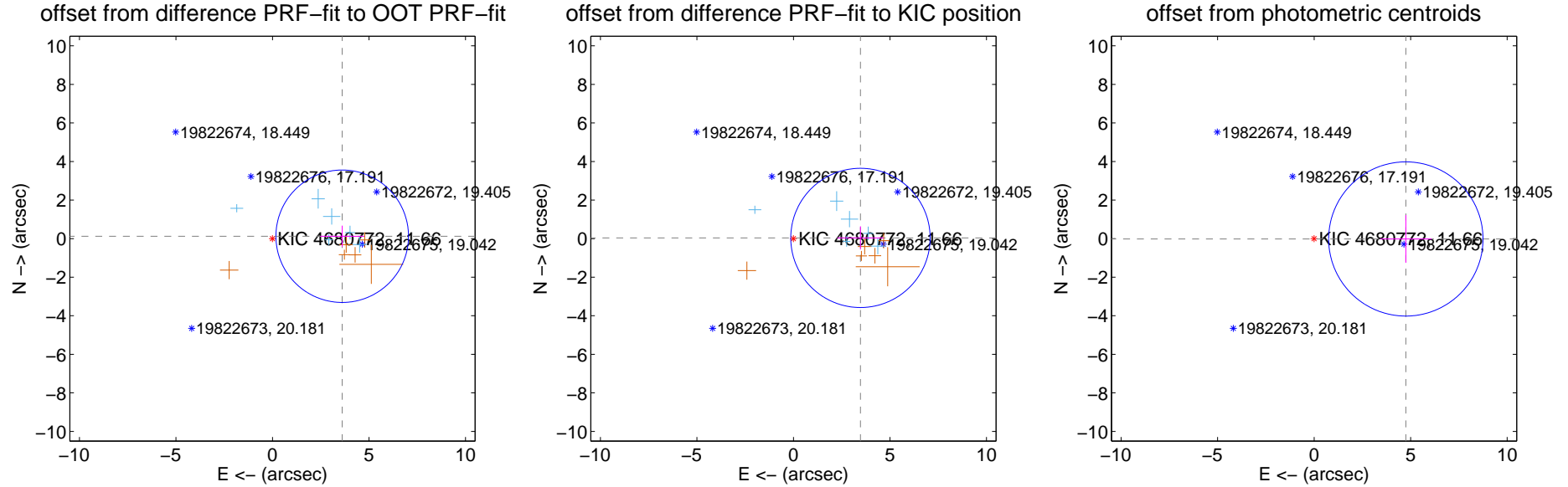
DV Centroid Data

Supplemental centroid analysis for 004680772-01. **Kepler magnitude: 11.66.** Transit SNR 10.04

There are 6 quarters with good PRF difference image offsets

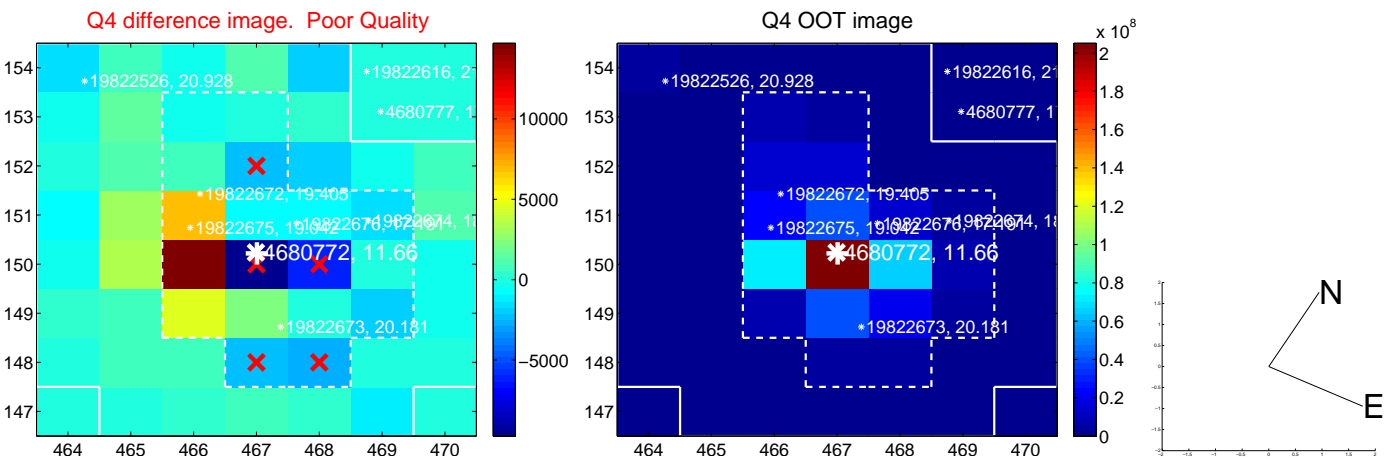
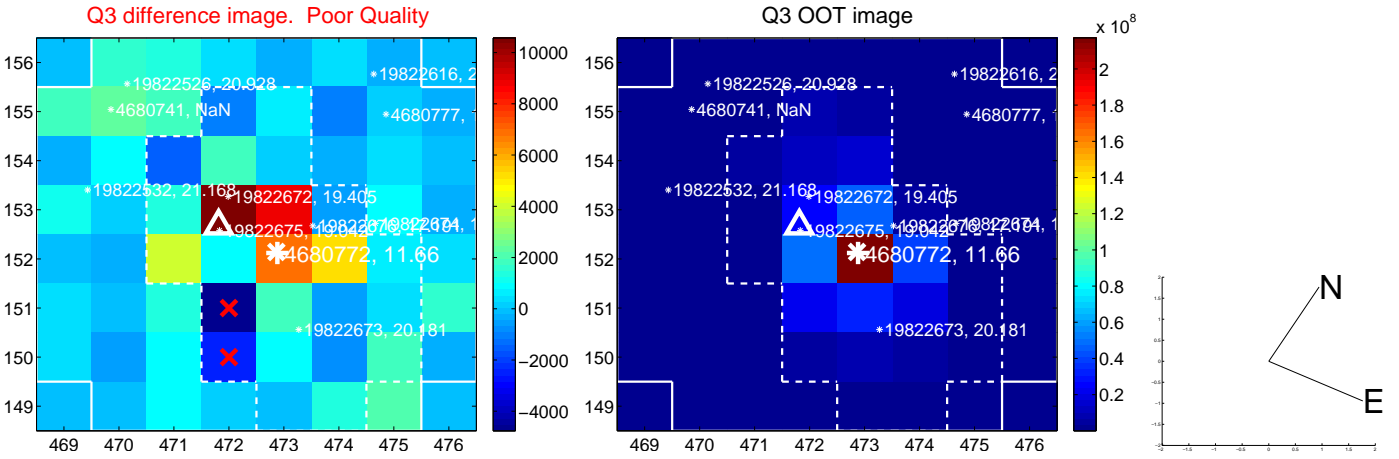
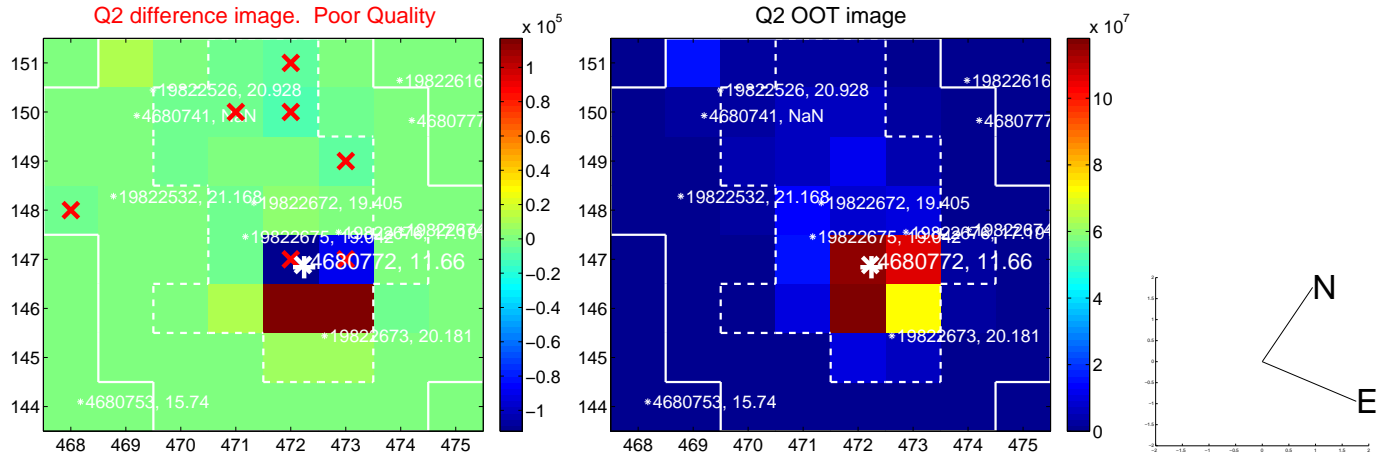
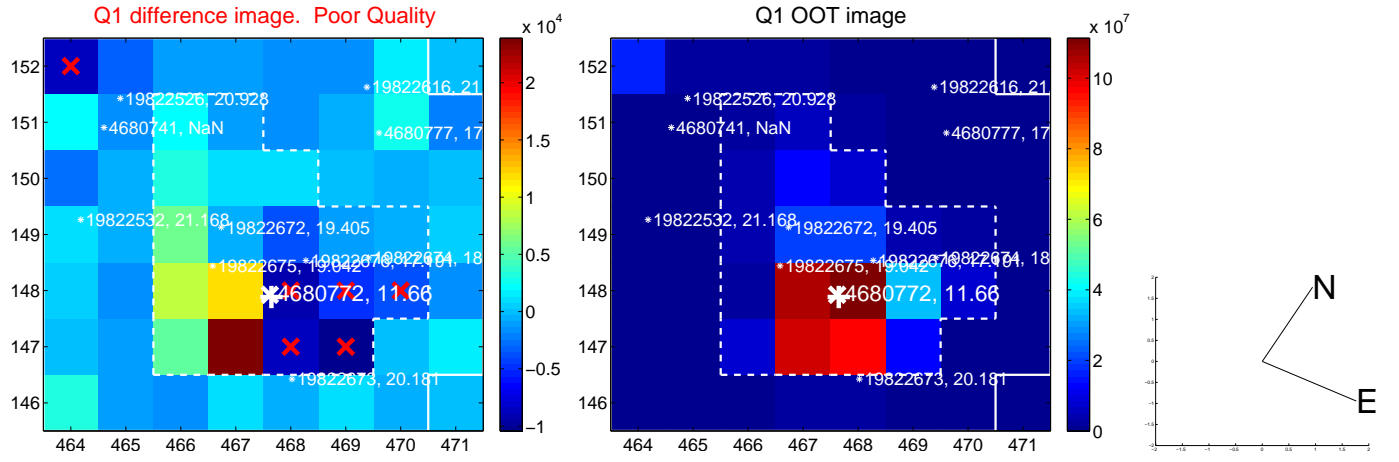
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.614 ± 1.145	3.16	-3.612 ± 1.133	0.124 ± 0.548
PRF-fit source offset from KIC position	3.471 ± 1.203	2.88	-3.471 ± 1.199	0.037 ± 0.603
photometric centroid source offset	4.75 ± 1.33	3.57	-4.75 ± 1.33	-0.02 ± 1.24

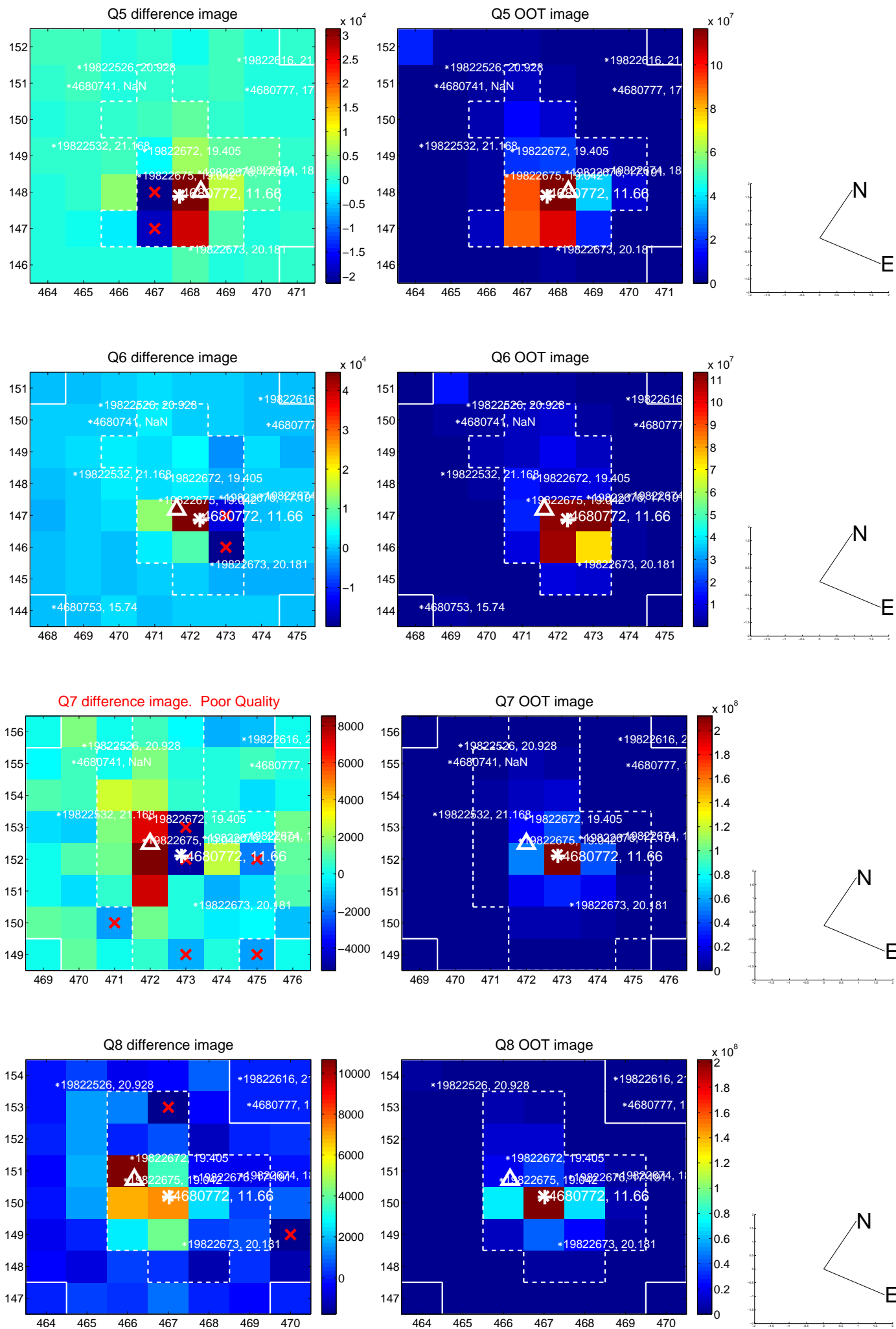


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

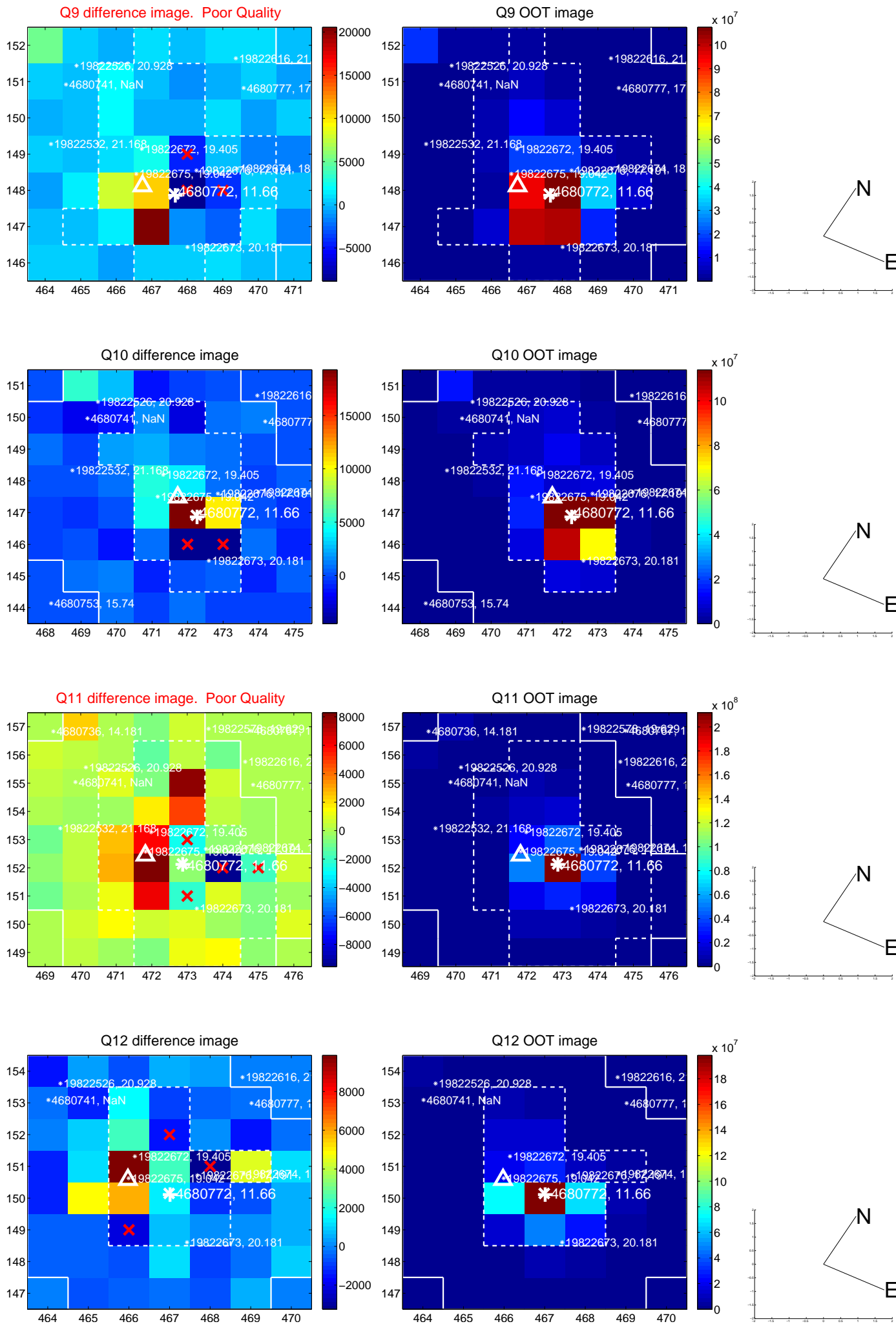
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



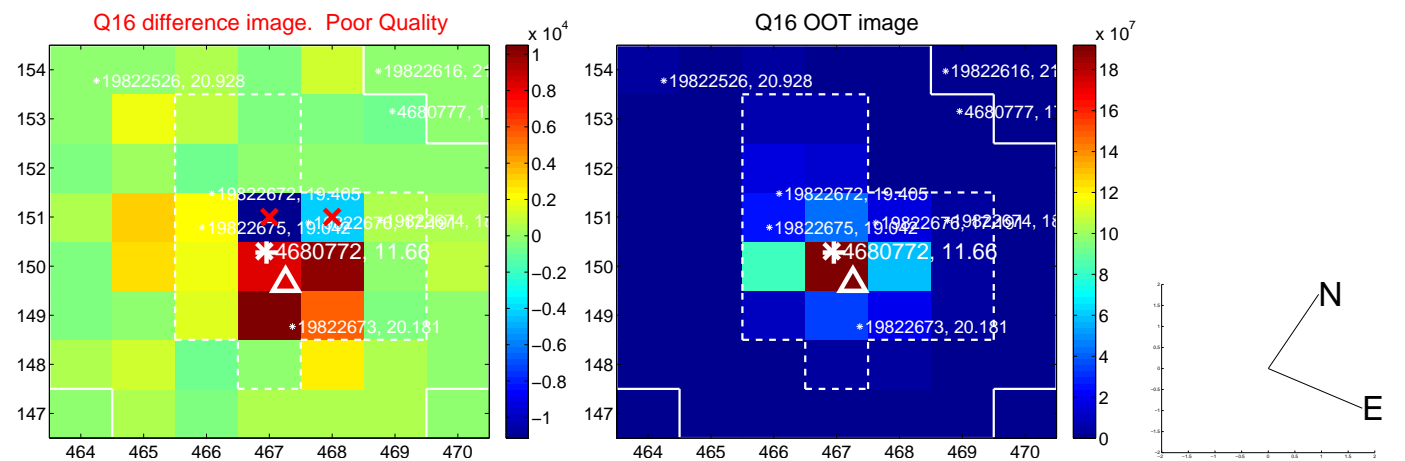
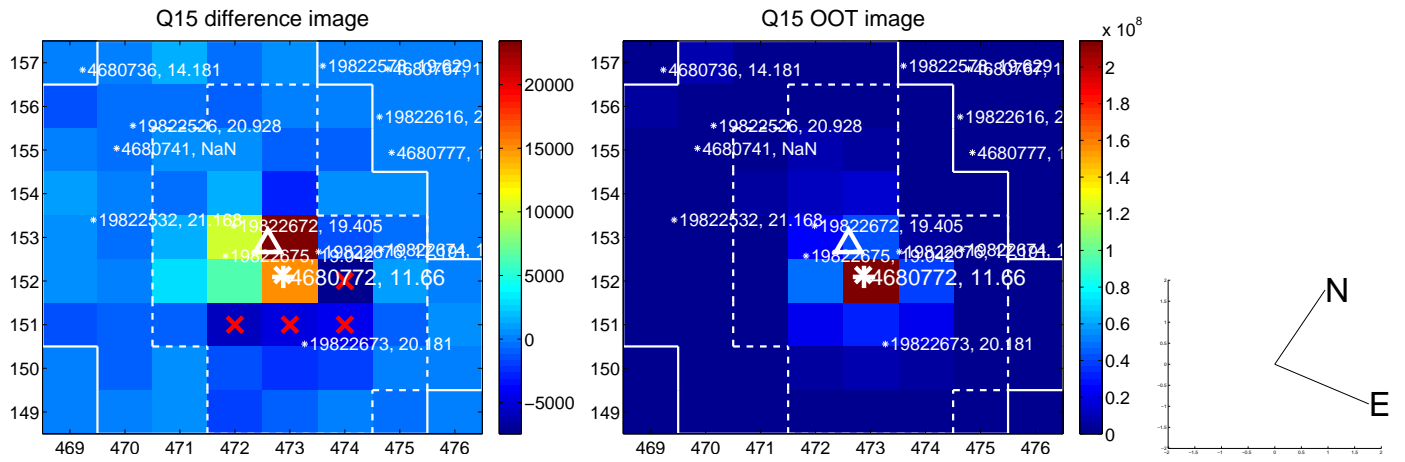
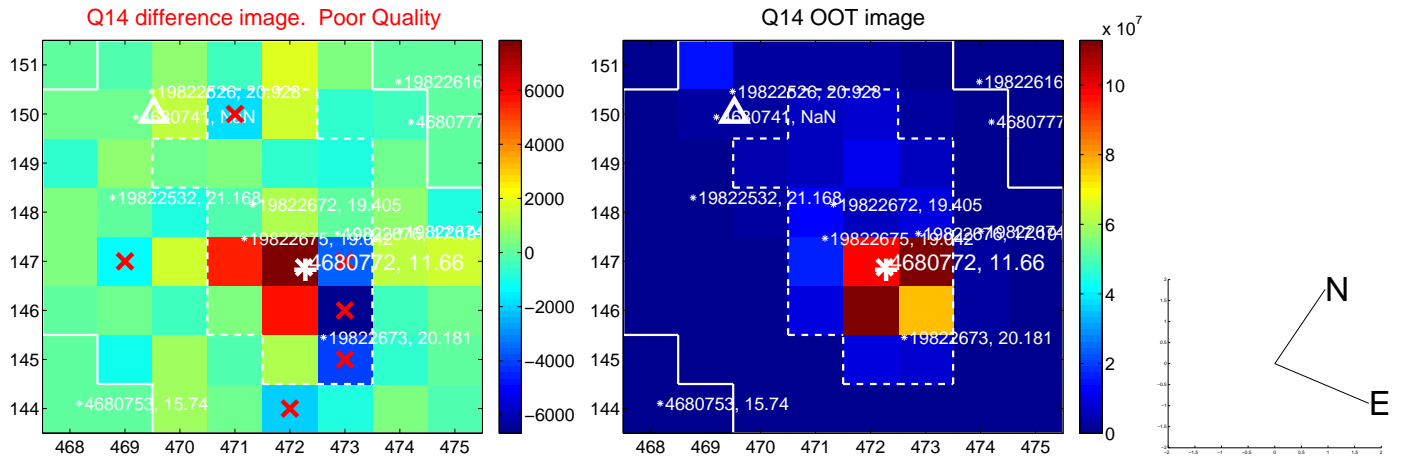
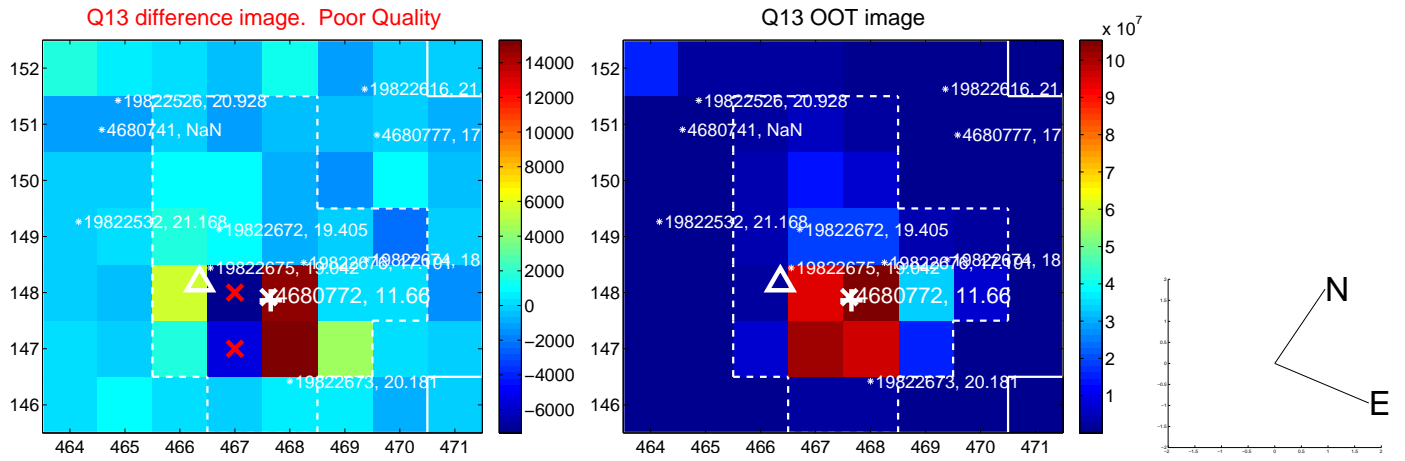
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



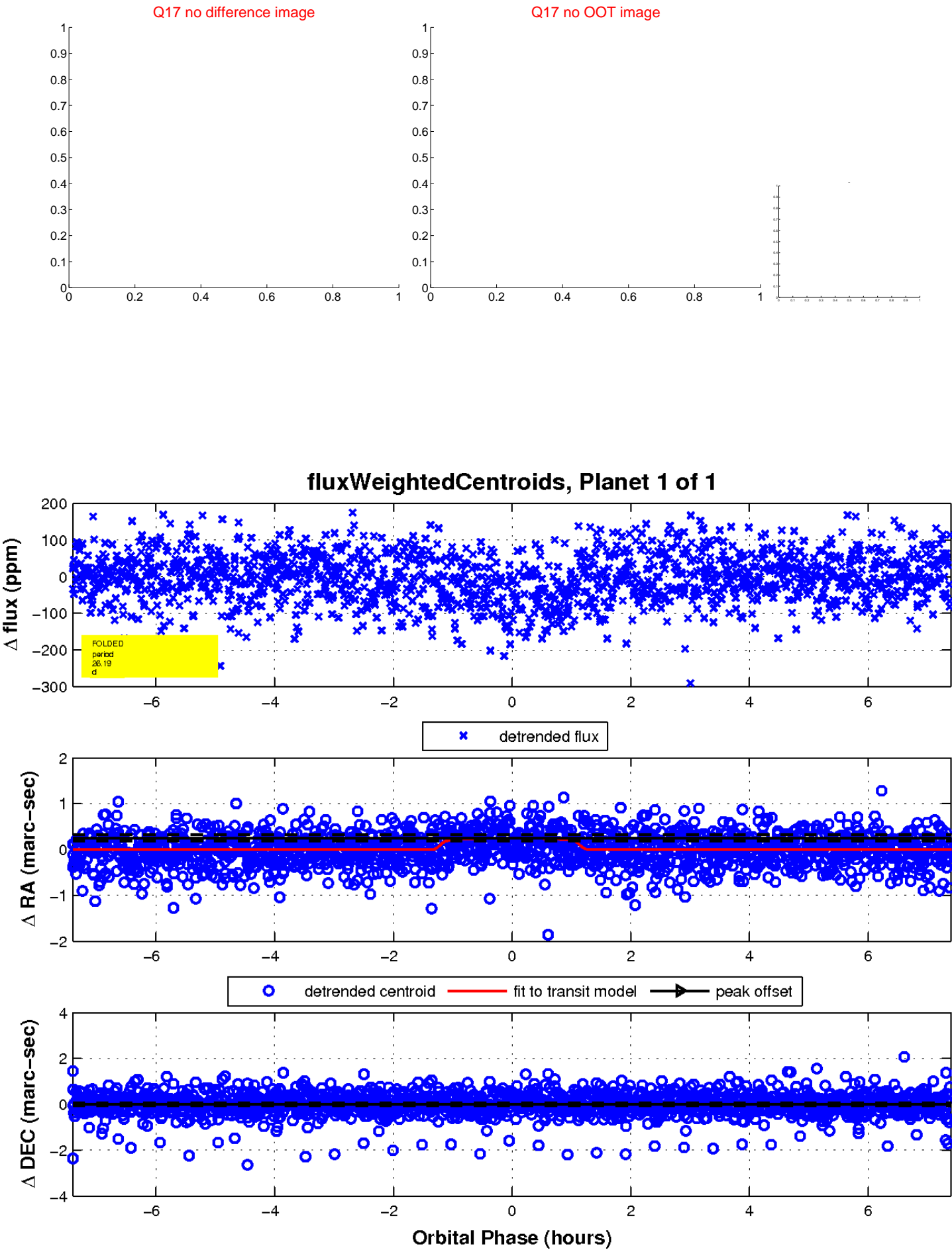
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

