

KIC 003852872

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})
003852872-01	OBS	7673.01	80.773617	188.536849	131.4	3.826	7.4	7.1	1.71	4965	2.49	12.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003852872-01	OBS	PC	0.78	0	0	0	0	NO_COMMENT

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

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

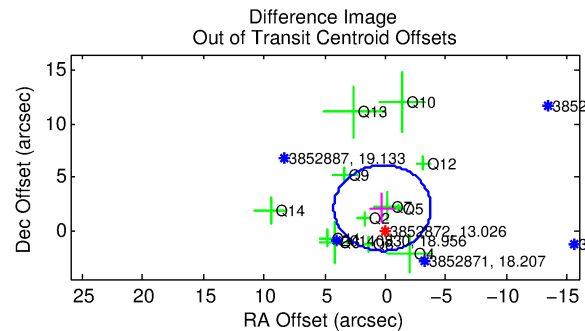
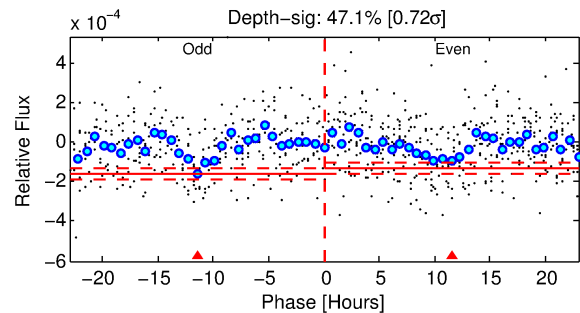
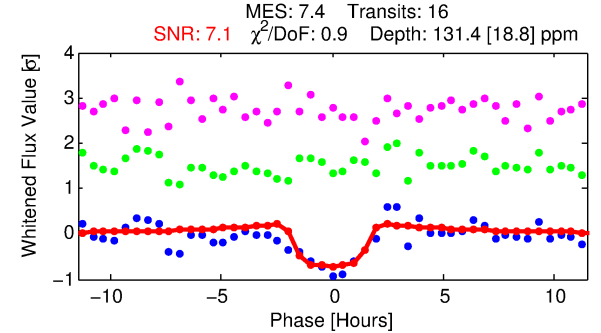
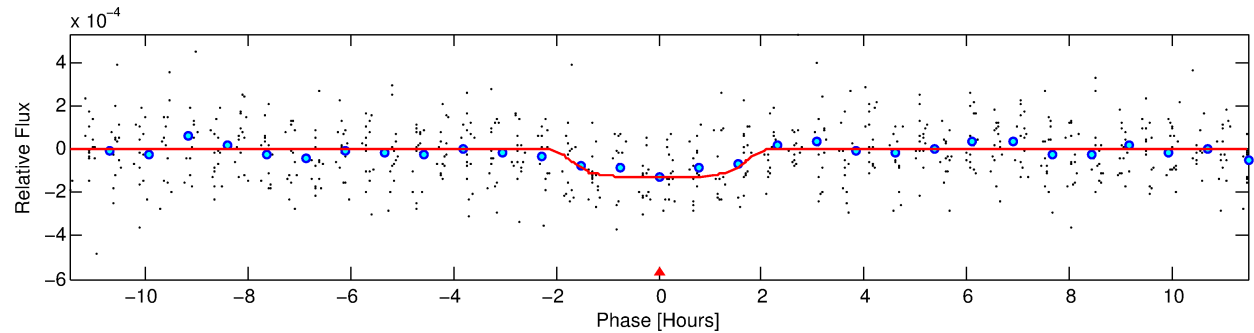
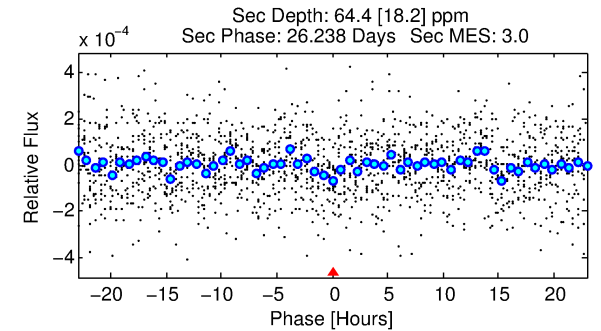
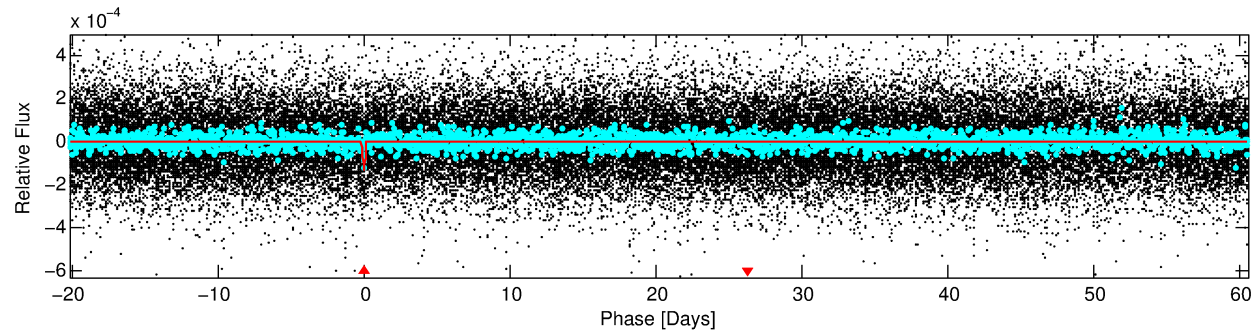
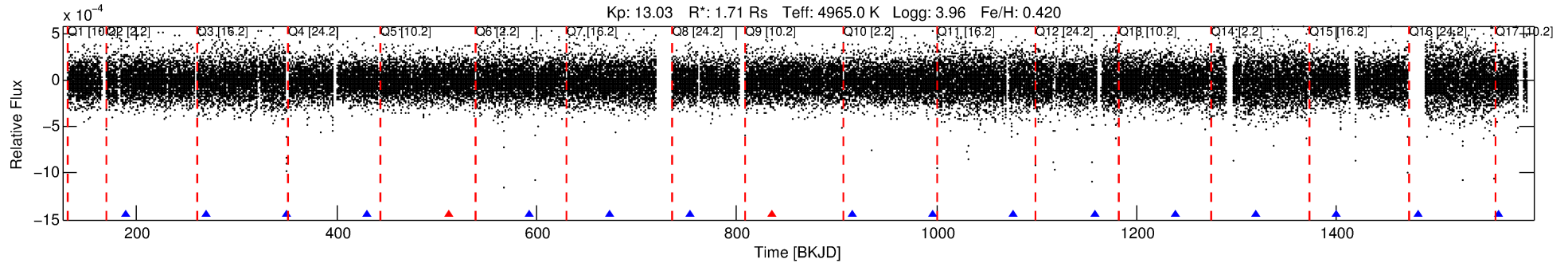
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003852872-01

No Significant Match Found

DV One-Page Summary

KIC: 3852872 Candidate: 1 of 1 Period: 80.774 d



DV Fit Results:

Period = 80.77362 [0.00097] d
Epoch = 188.5368 [0.0095] BKJD
Rp/R* = 0.0133 [0.0132]
a/R* = 66.29 [273.23]
b = 0.93 [0.65]
Seff = 12.09 [12.41]
Teq = 476 [122] K
Rp = 2.49 [2.91] Re
a = 0.3624 [0.2261] AU
Ag = 753.02 [1689.22] [0.45σ]
Teffp = 3851 [1929] K [1.75σ]

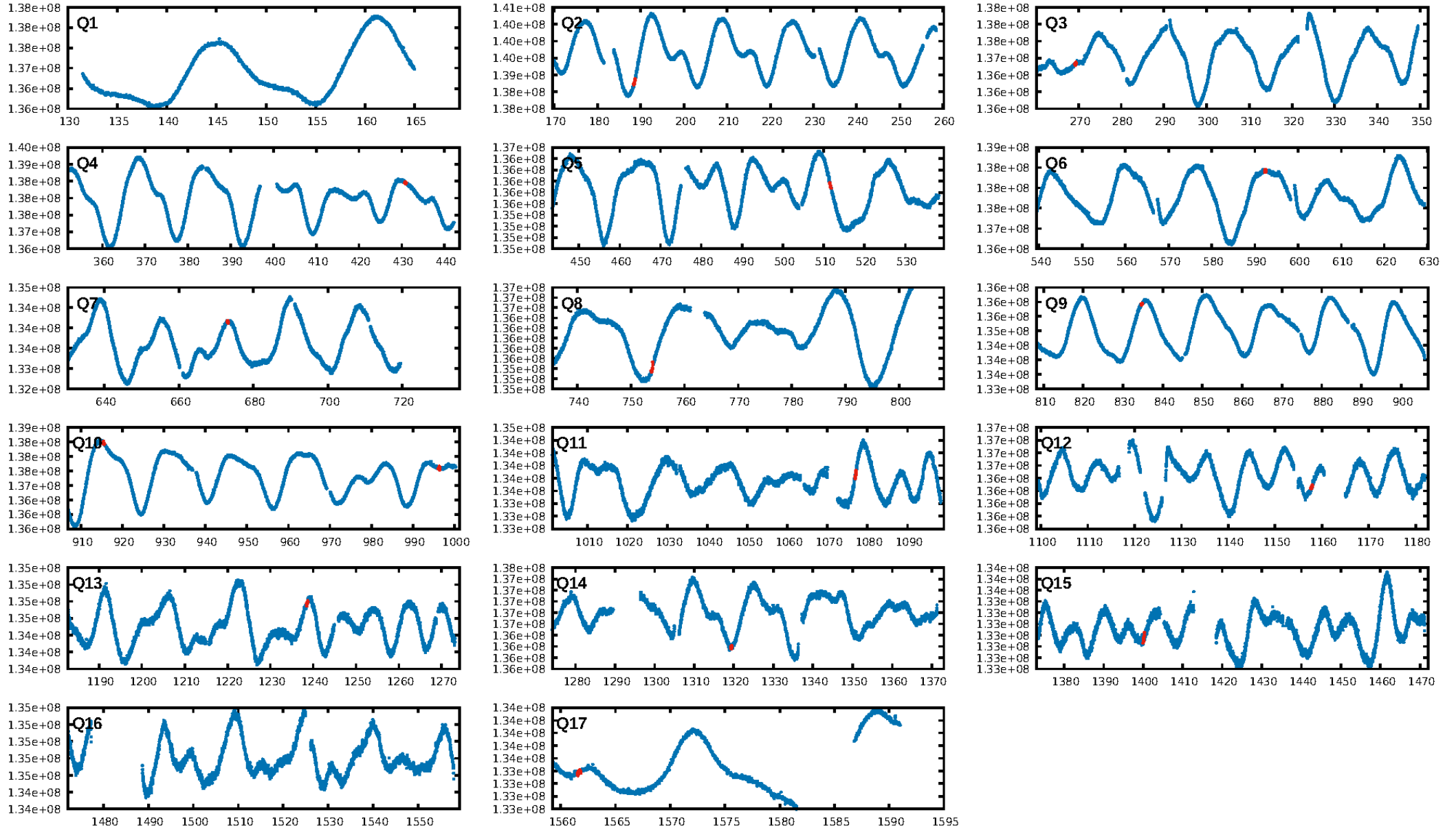
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 73.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.33e-11
RollingBand-fgt: 0.87 [13/15]
GhostDiagnostic-chr: 1.439
Centroid-sig: 4.8%
Centroid-so: 2.505 arcsec [1.57σ]
OotOffset-rm: 2.137 arcsec [1.60σ]
KicOffset-rm: 2.177 arcsec [1.74σ]
OotOffset-st: 4/2/3/3 [12]
KicOffset-st: 4/2/3/3 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 1.00 [15/15]

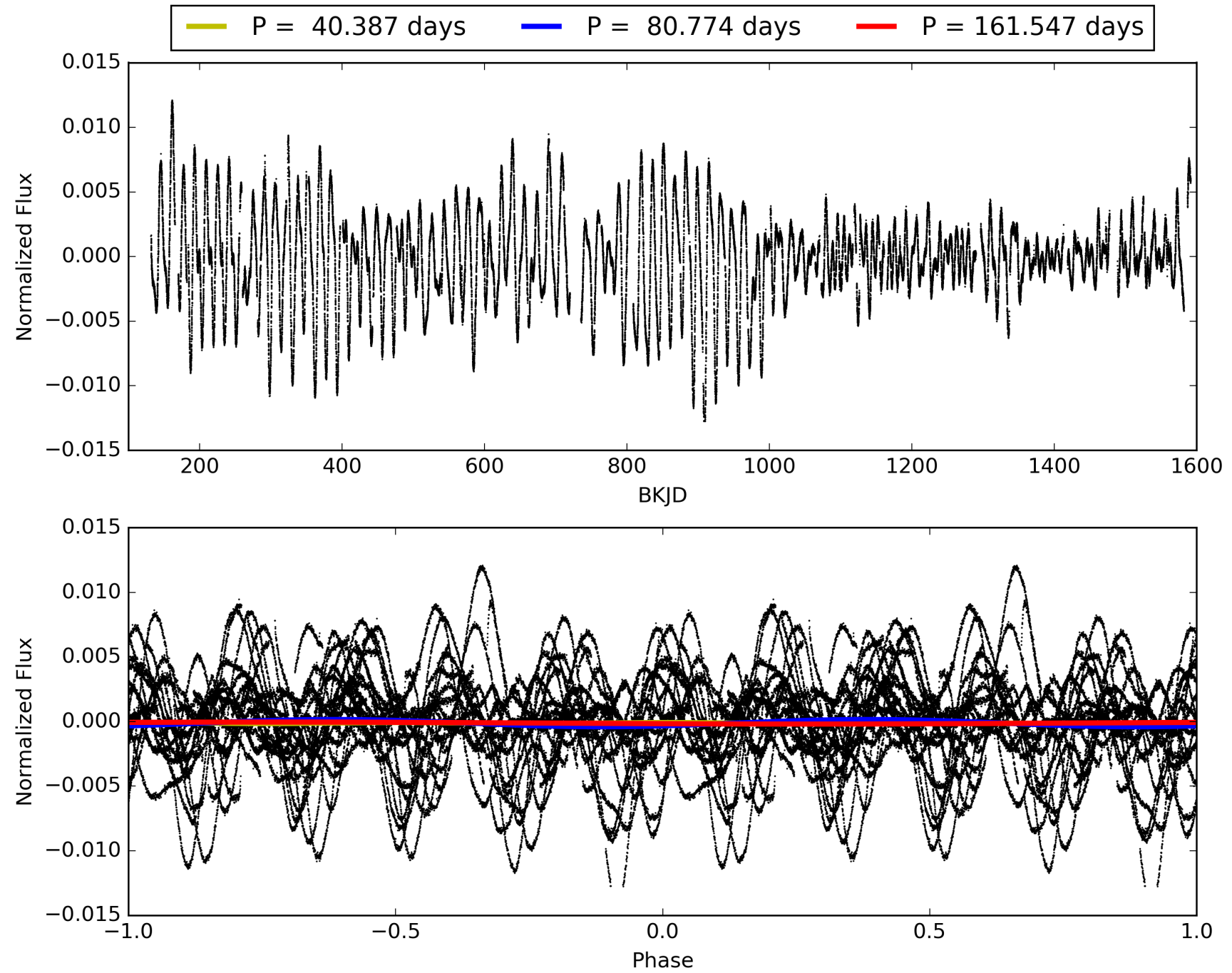
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:46:26 Z

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

TCE 003852872-01, PDC Light Curves

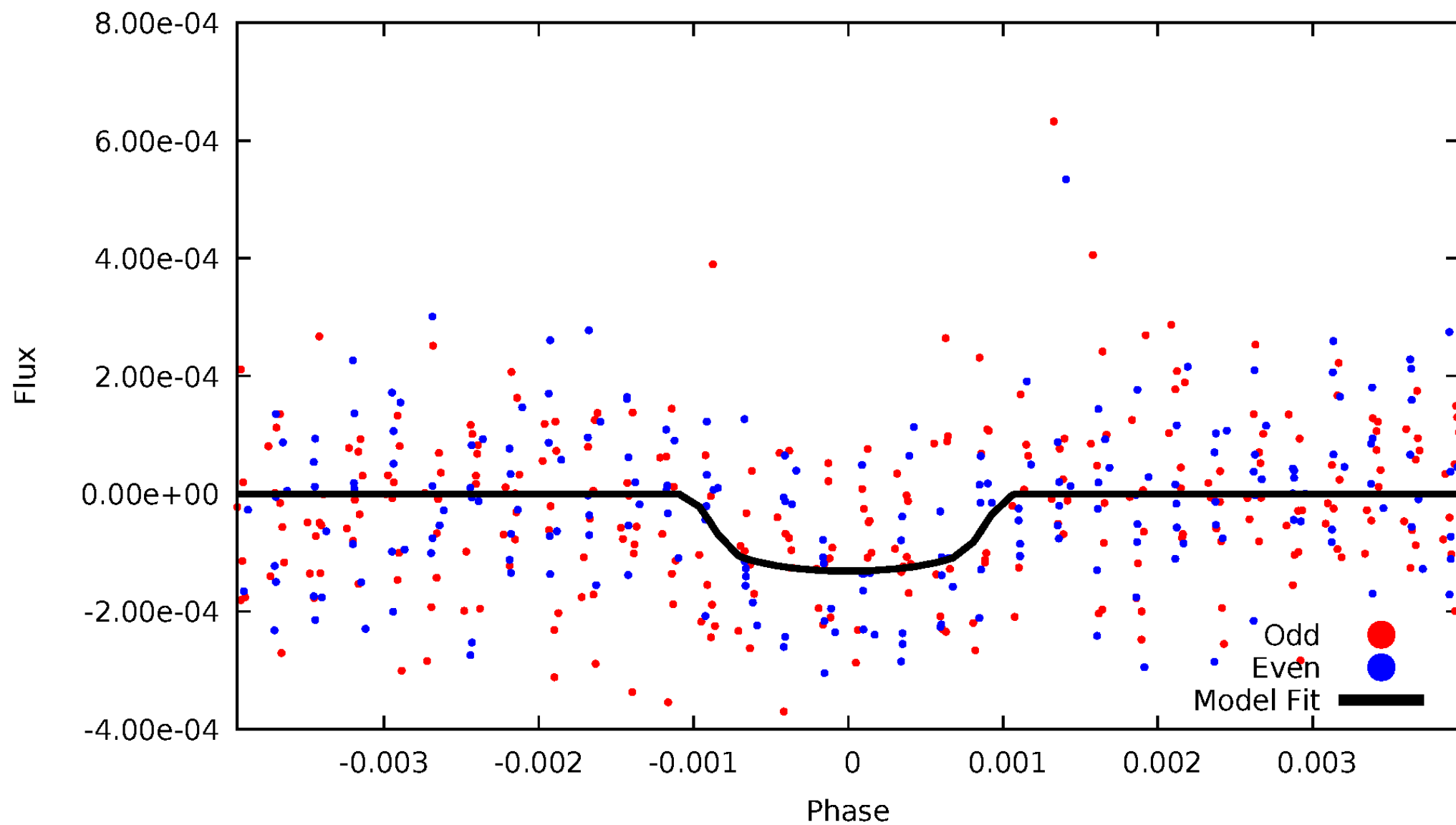


TCE 003852872-01



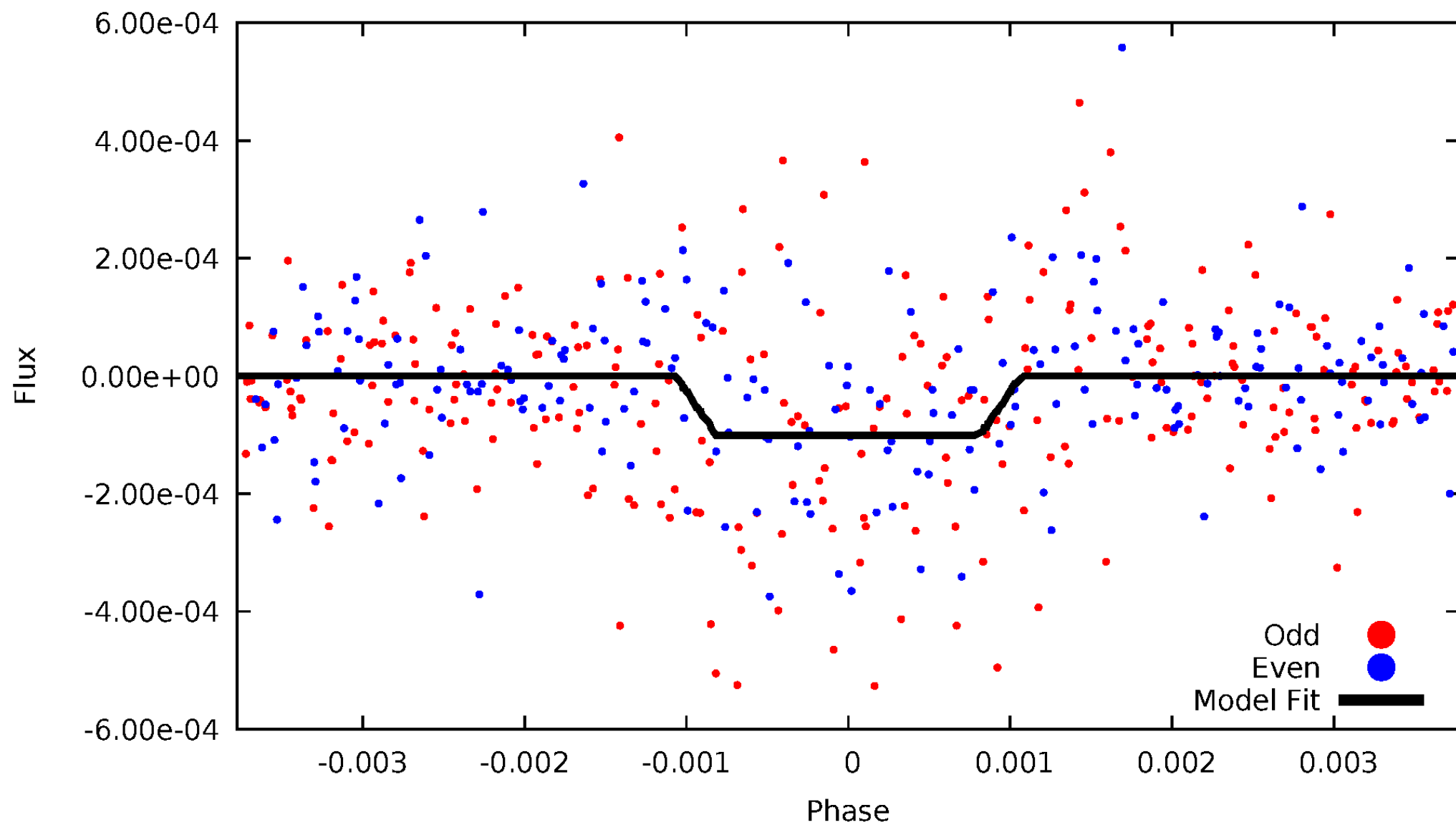
DV Odd/Even

TCE 003852872-01



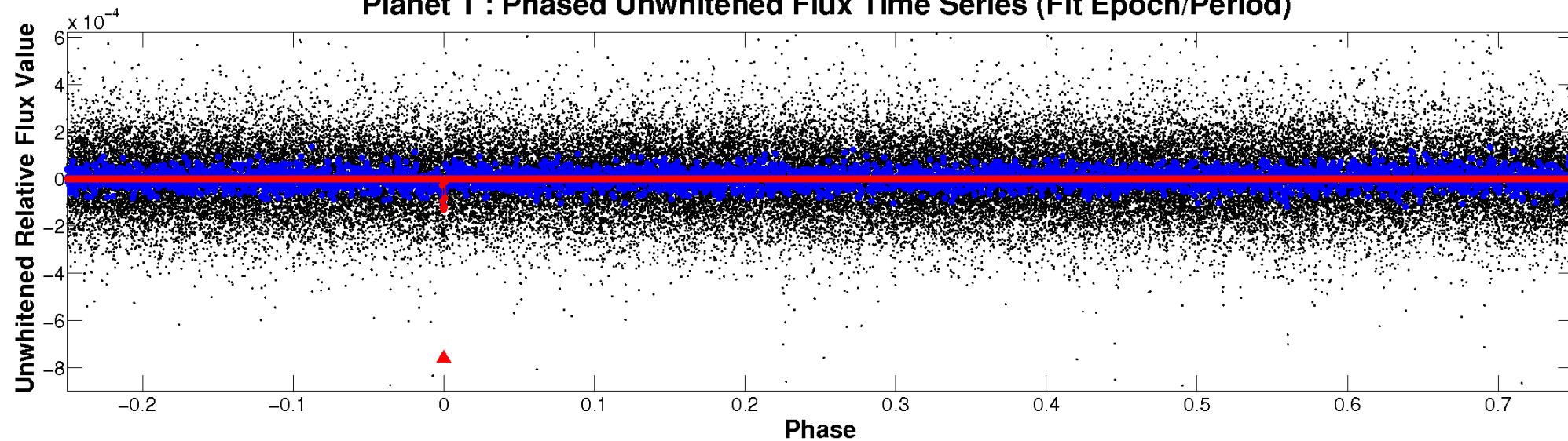
ALT Odd/Even

TCE 003852872-01

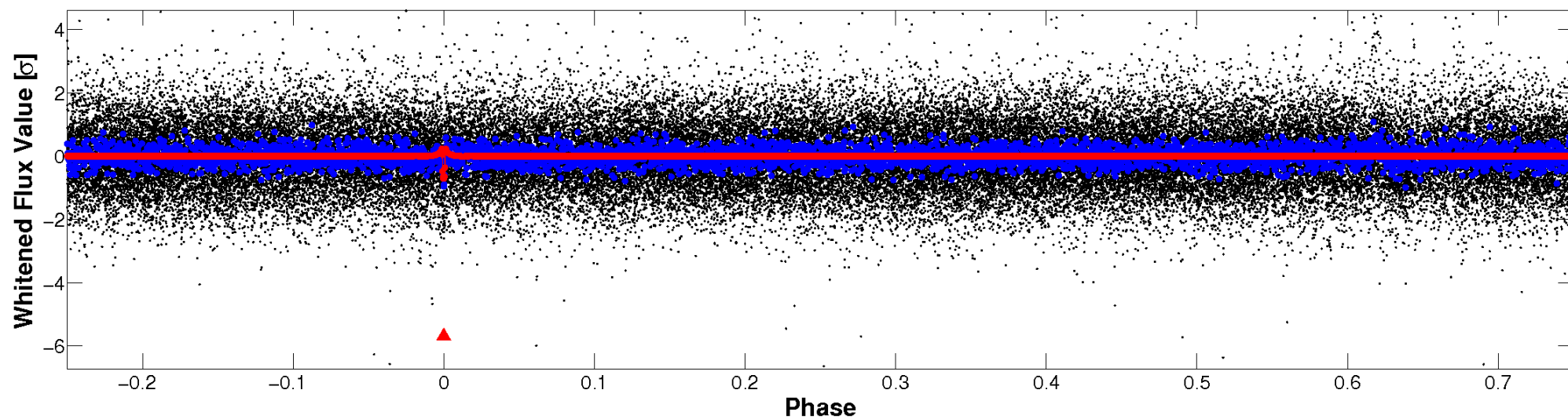


Non-Whitened Vs. Whitened Light Curve

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

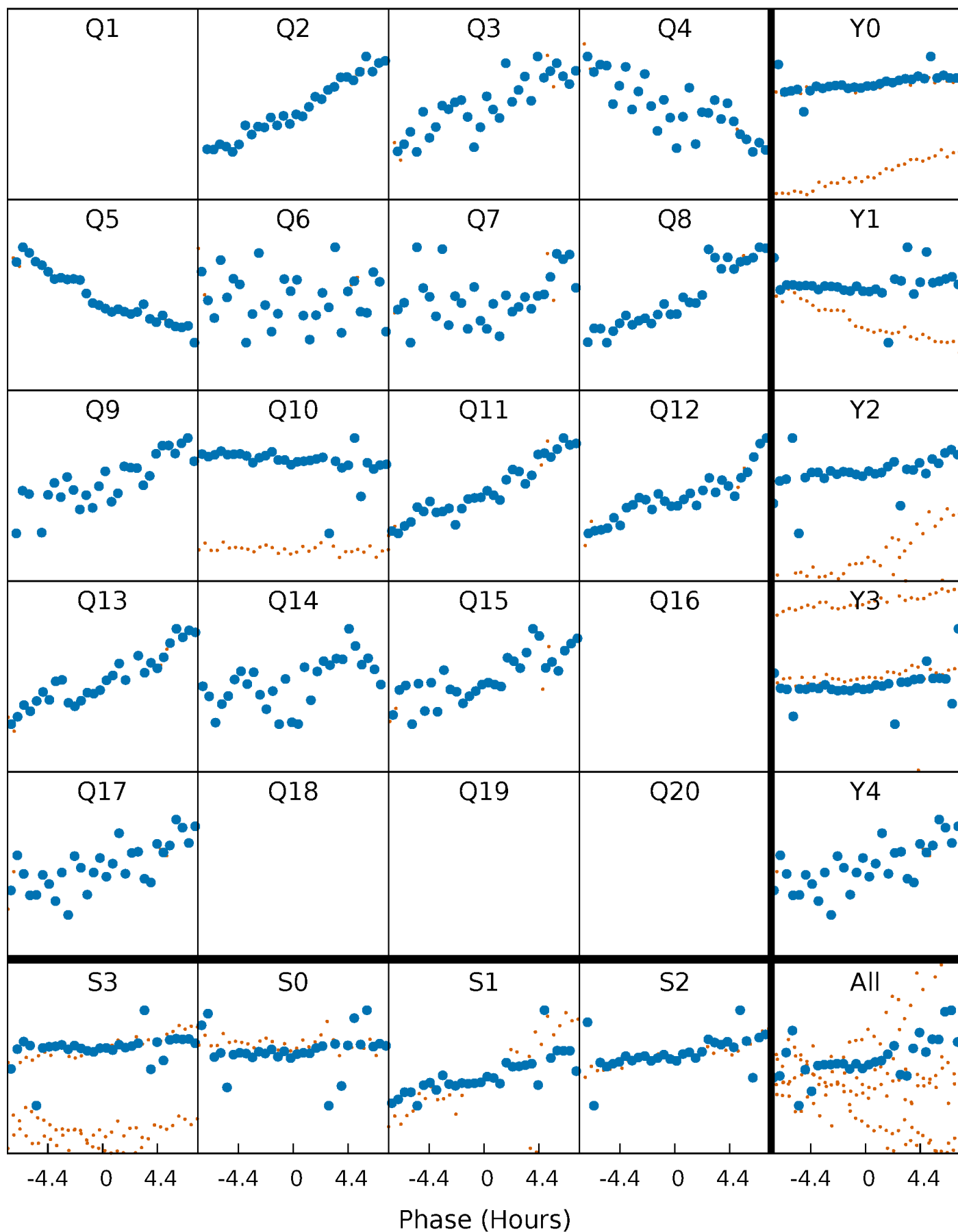


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



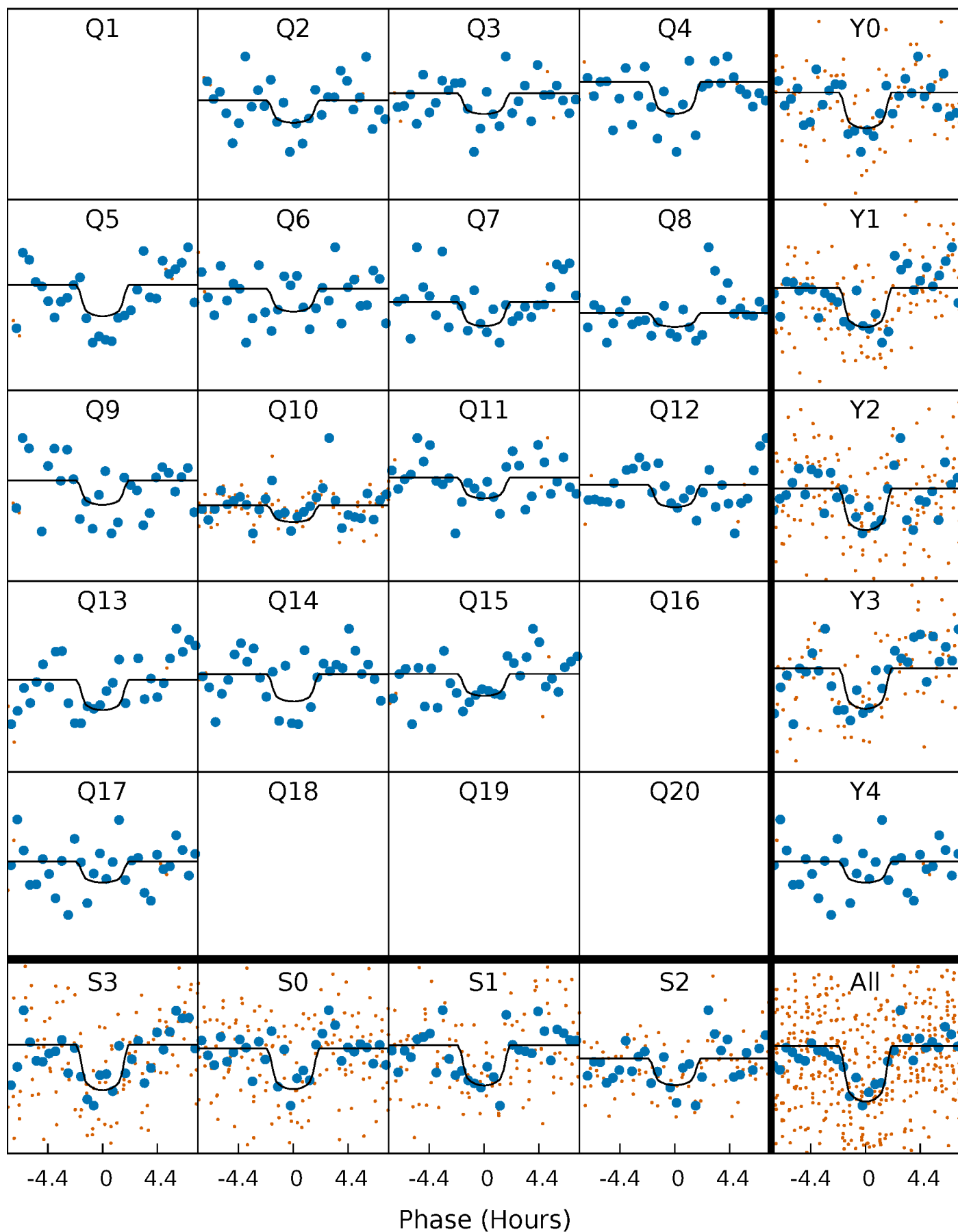
PDC Quarter-Phased Transit Curves

TCE 003852872-01 P= 80.773617 Days $T_0=188.536849$ (BKJD)



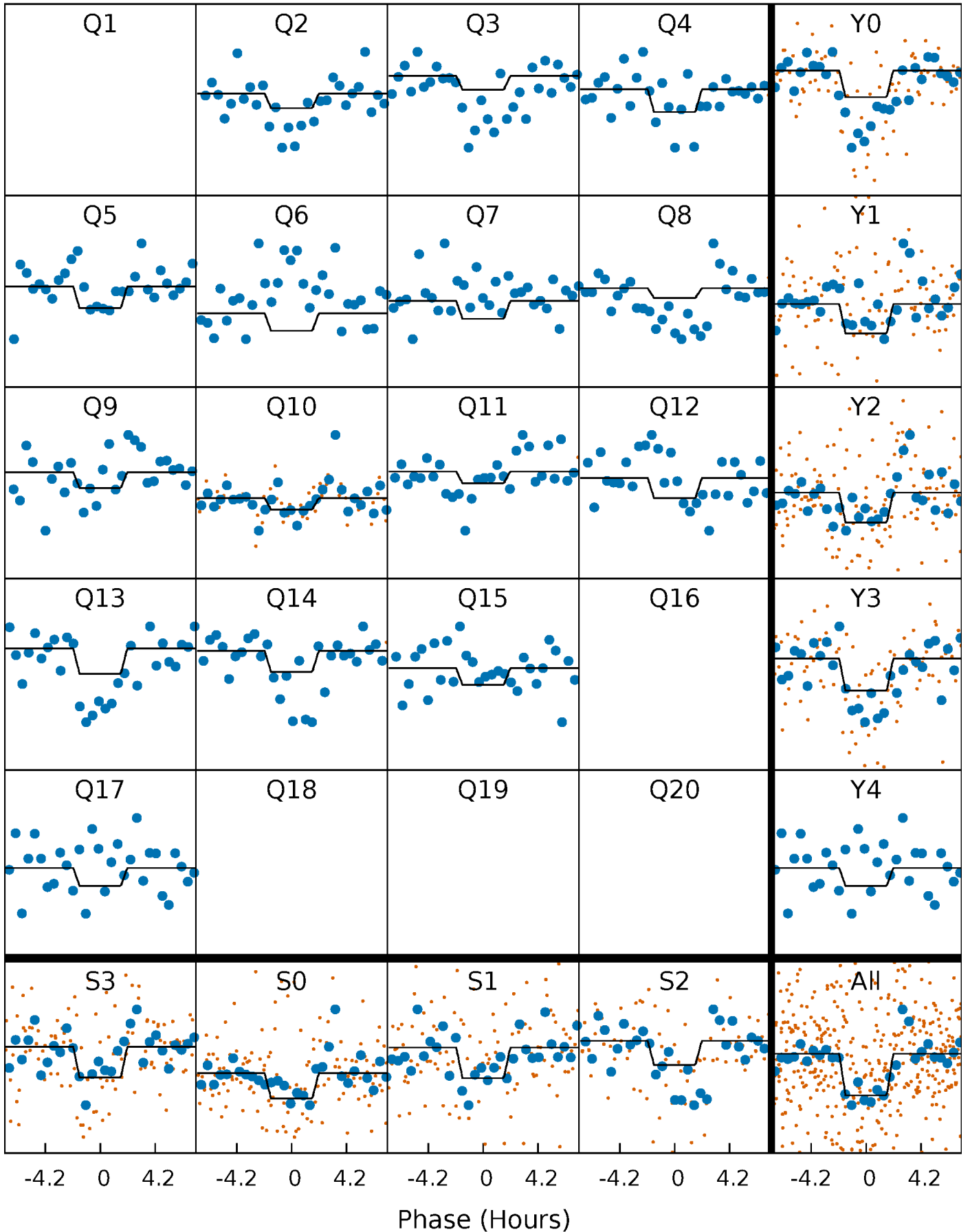
DV Quarter-Phased Transit Curves

TCE 003852872-01 P= 80.773617 Days $T_0=188.536849$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

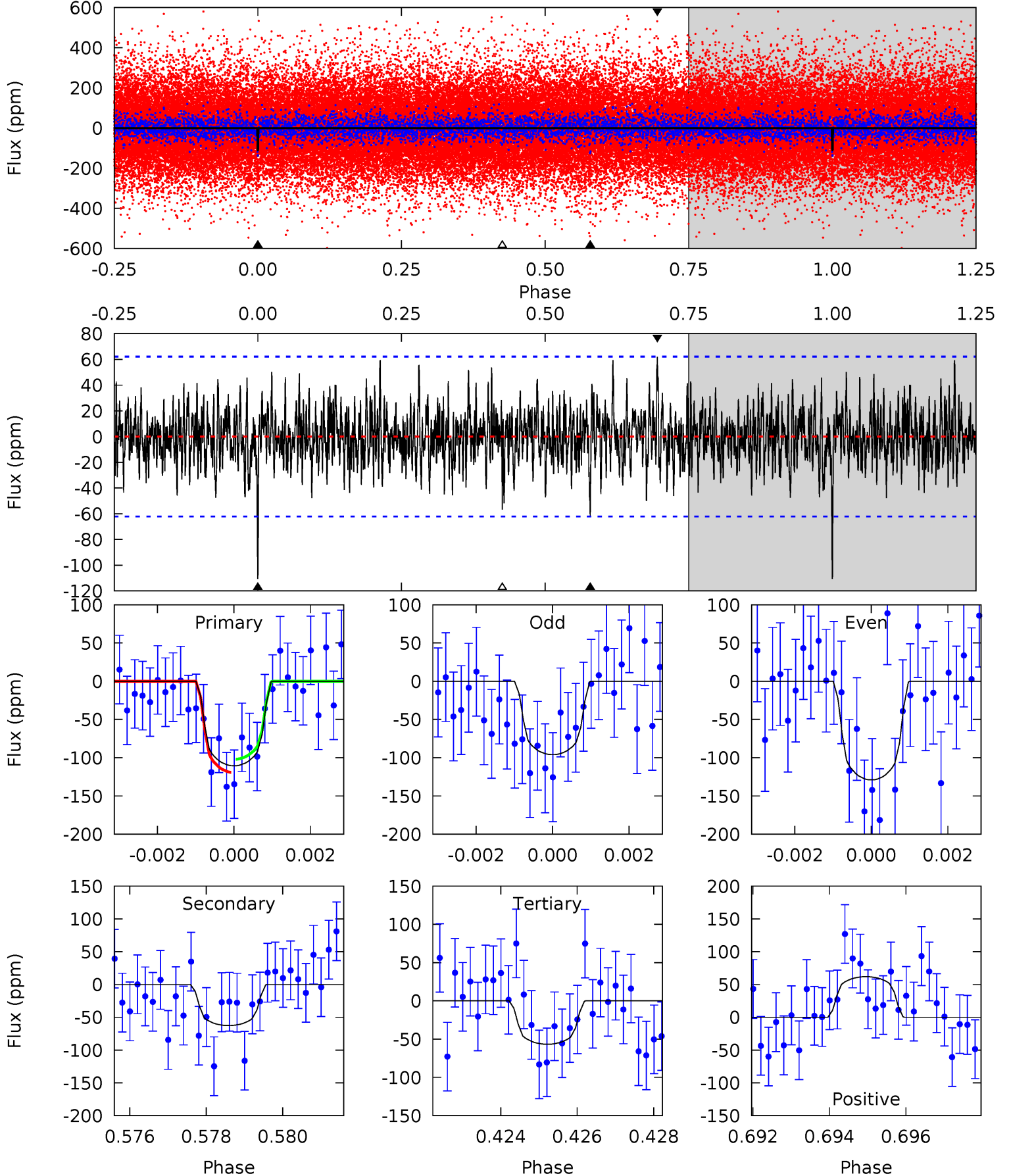
TCE 003852872-01 P= 80.768644 Days $T_0=188.563555$ (BKJD)



DV Model-Shift Uniqueness Test

003852872-01, $P = 80.773617$ Days, $E = 107.763232$ Days

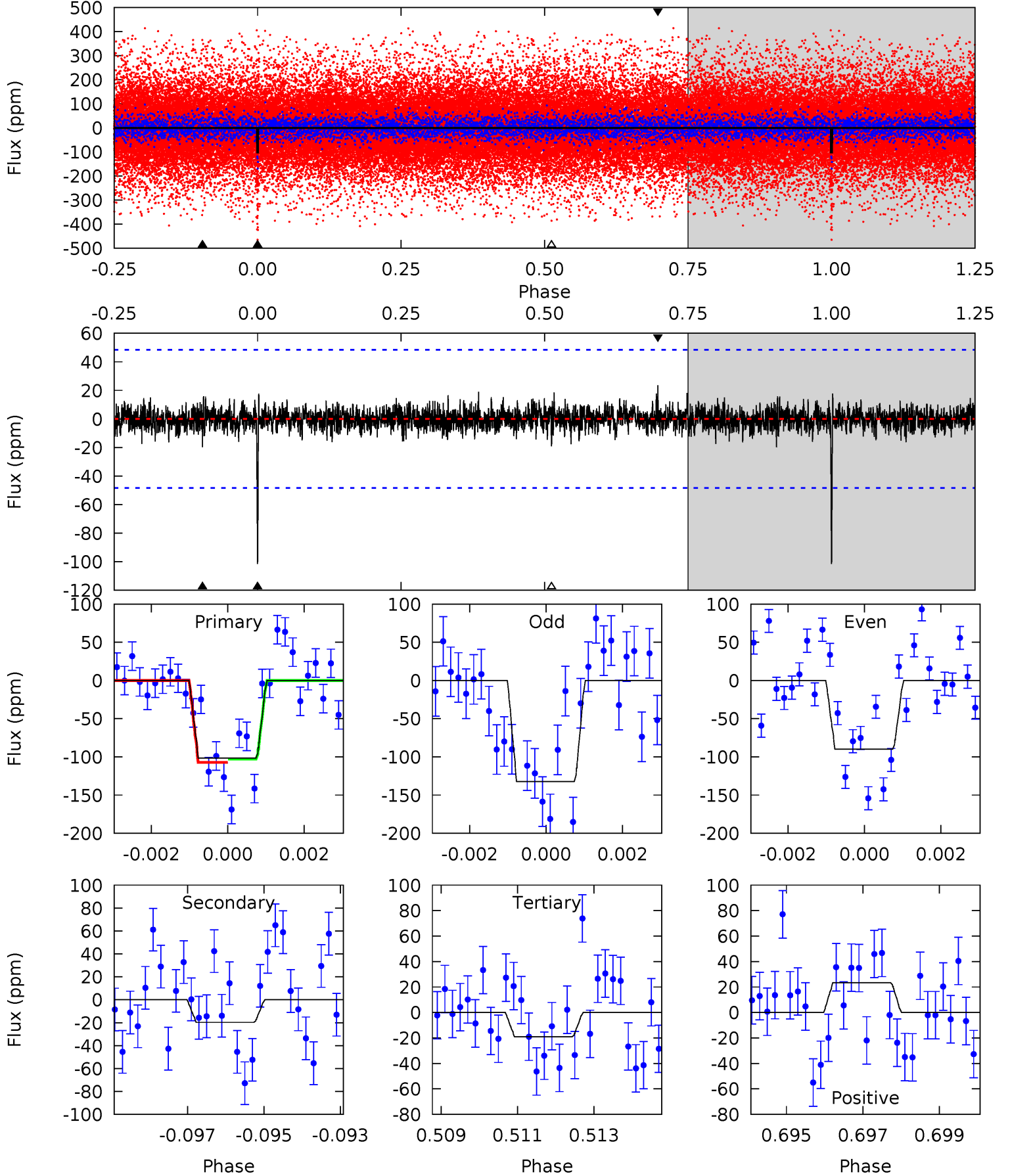
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	5.35	4.84	5.29	5.31	3.06	1.50	4.60	4.15	0.51	0.07	1.40	0.99	0.36	0.73



Alt Model-Shift Uniqueness Test

003852872-01, $P = 80.768644$ Days, $E = 107.794911$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.17	2.09	2.58	5.32	3.07	0.56	9.06	8.58	0.08	-0.41	2.34	1.33	0.19	0.23



Stellar Parameters For KIC 003852872

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4965^{+164}_{-134}	$3.961^{+0.605}_{-0.326}$	$0.420^{+0.050}_{-0.300}$	$1.708^{+1.067}_{-0.873}$	$0.973^{+0.211}_{-0.141}$	$0.275^{+2.168}_{-0.190}$
	+3%/-3%	+15%/-8%	+12%/-71%	+62%/-51%	+22%/-14%	+788%/-69%
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 003852872-01 / KOI 7673.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 12	$2.84^{+2.63}_{-1.72}$	658^{+101}_{-105}	3757^{+1678}_{-617}	572^{+3037}_{-425}
Alt.	-20 ± 9	$2.26^{+2.35}_{-1.46}$	654^{+96}_{-103}	3337^{+1472}_{-609}	264^{+1743}_{-210}

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

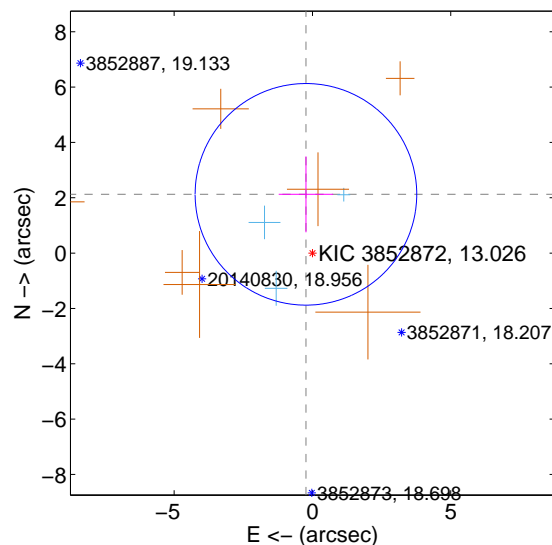
Supplemental centroid analysis for 003852872-01. Kepler magnitude: 13.03. Transit SNR 7.09

There are 3 quarters with good PRF difference image offsets

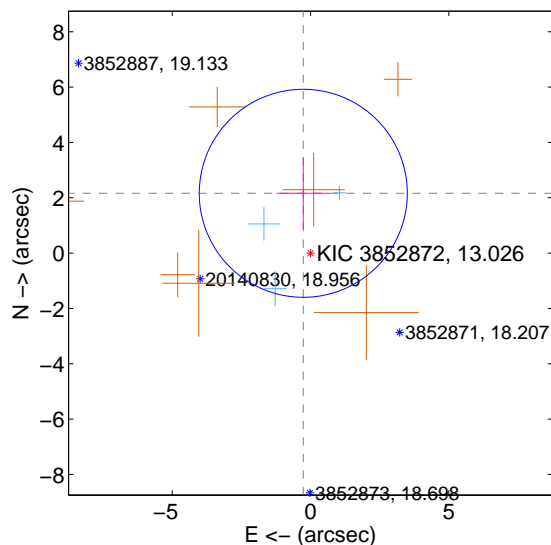
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.137 ± 1.335	1.60	0.235 ± 0.984	2.124 ± 1.373
PRF-fit source offset from KIC position	2.177 ± 1.253	1.74	0.262 ± 0.962	2.161 ± 1.284
photometric centroid source offset	2.51 ± 1.59	1.57	-1.49 ± 1.42	-2.02 ± 1.68

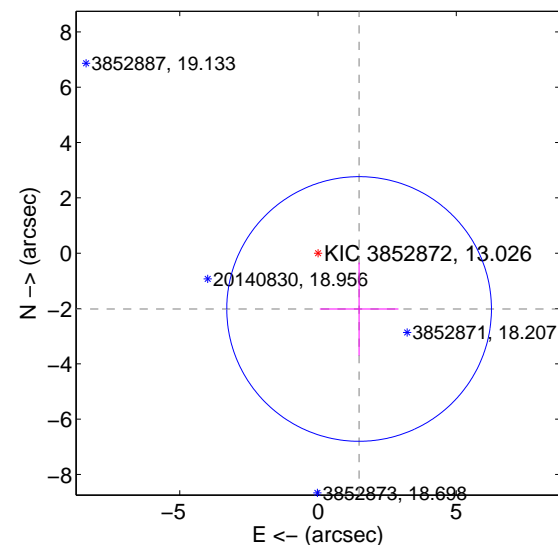
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

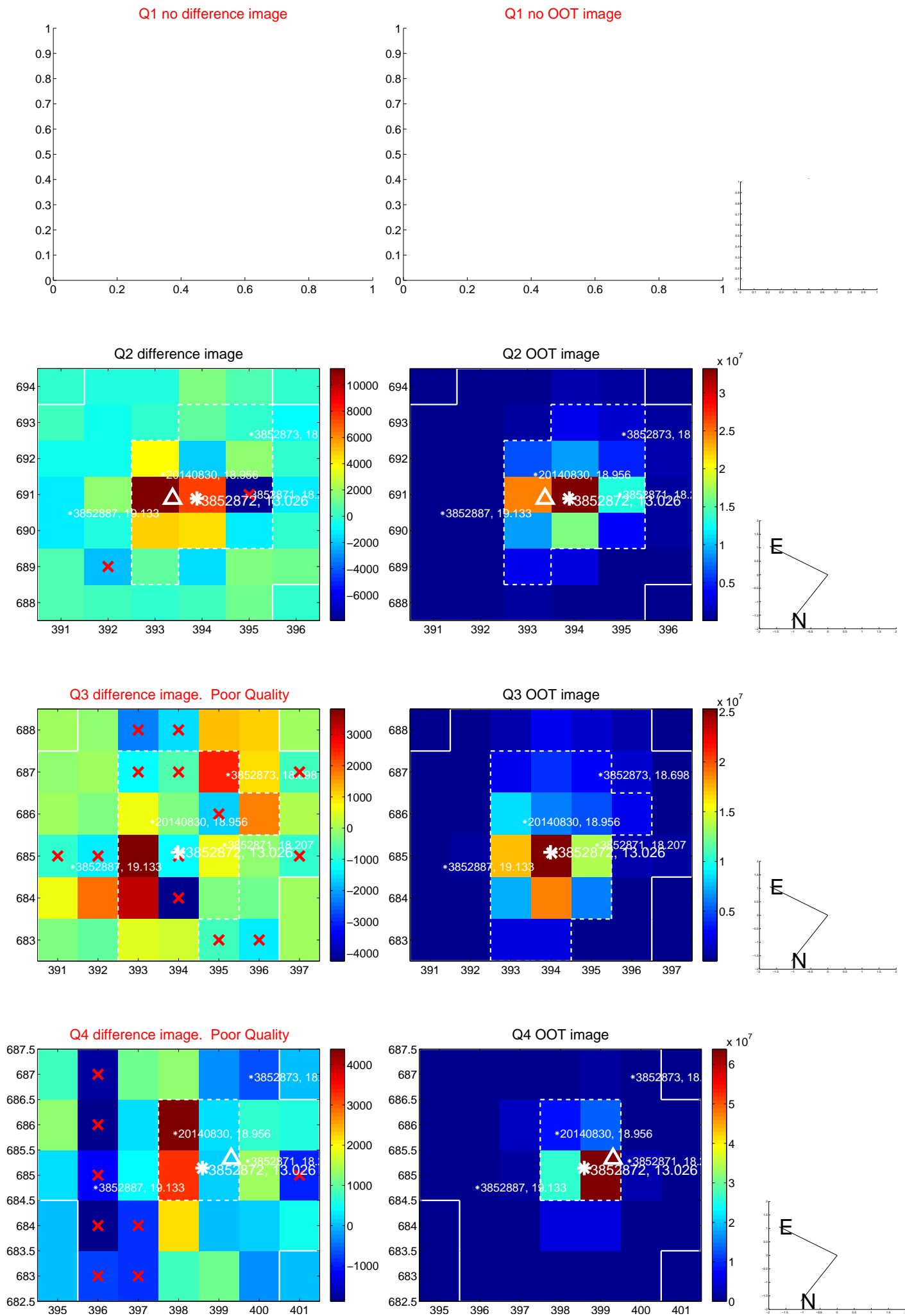


offset from photometric centroids

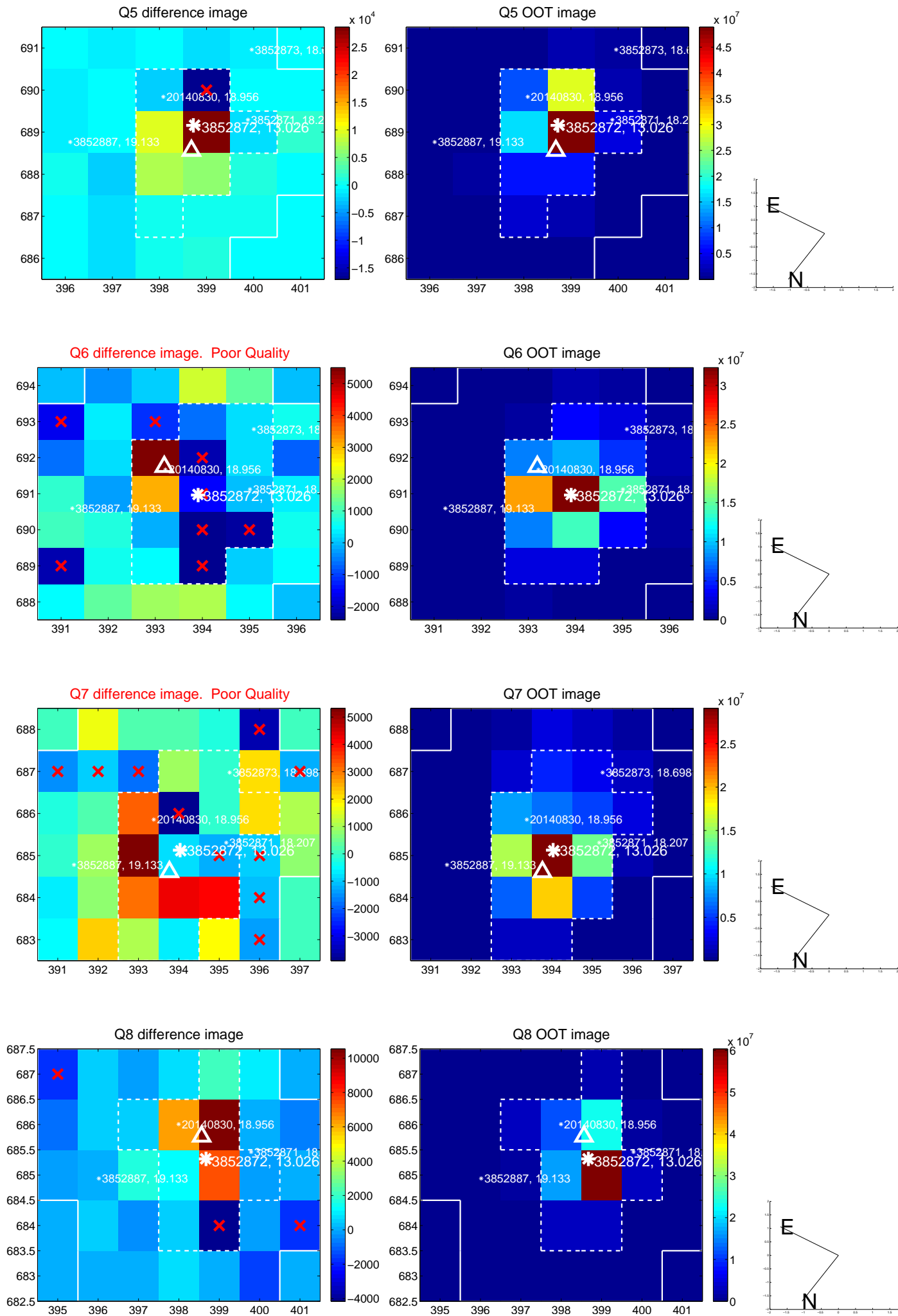


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

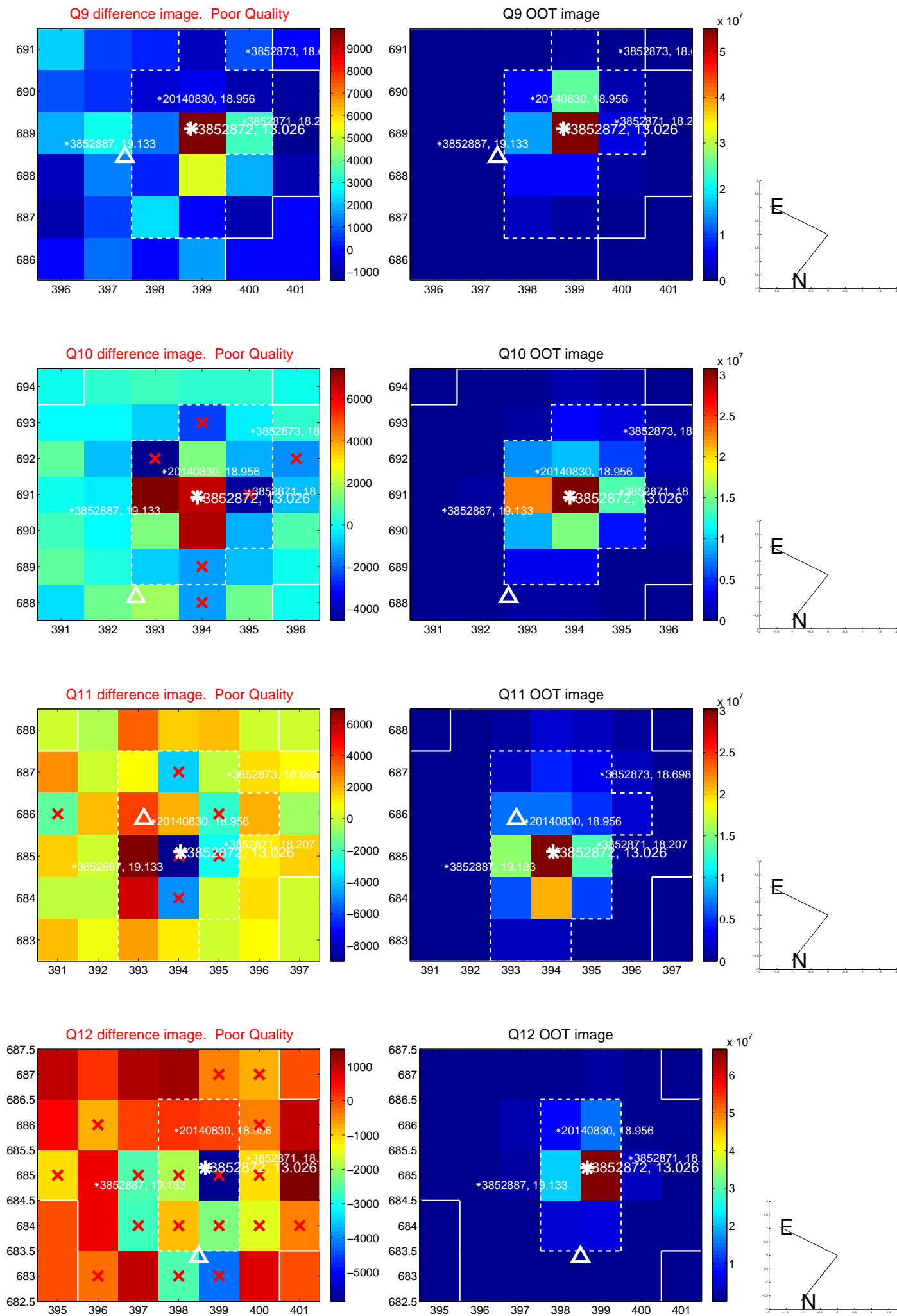
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



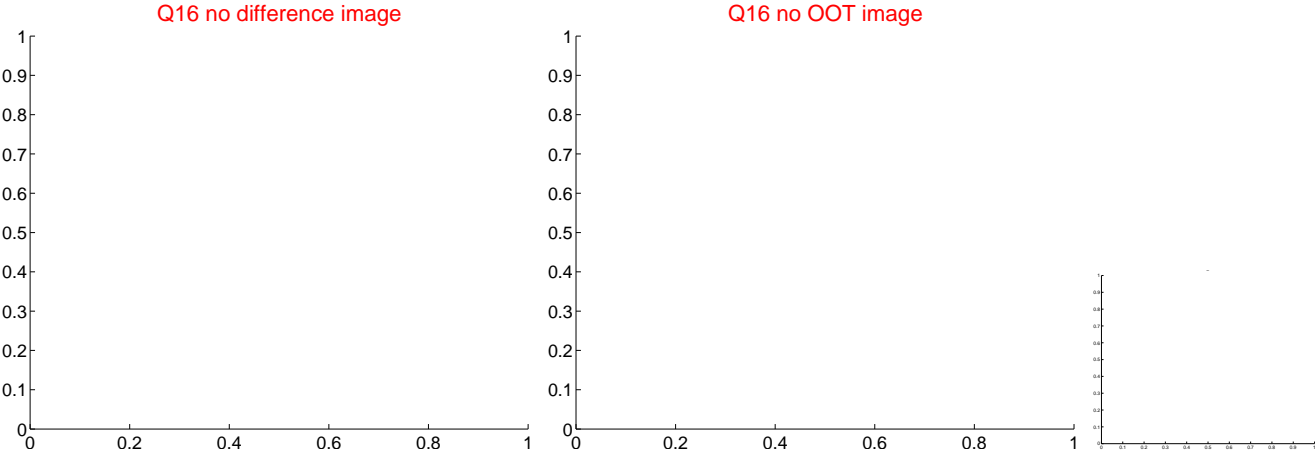
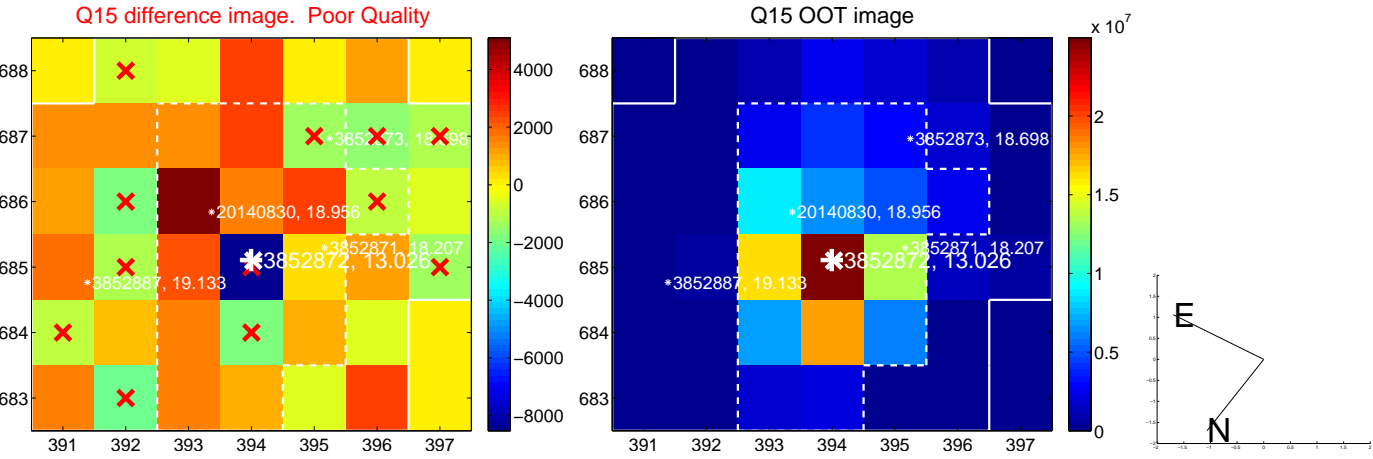
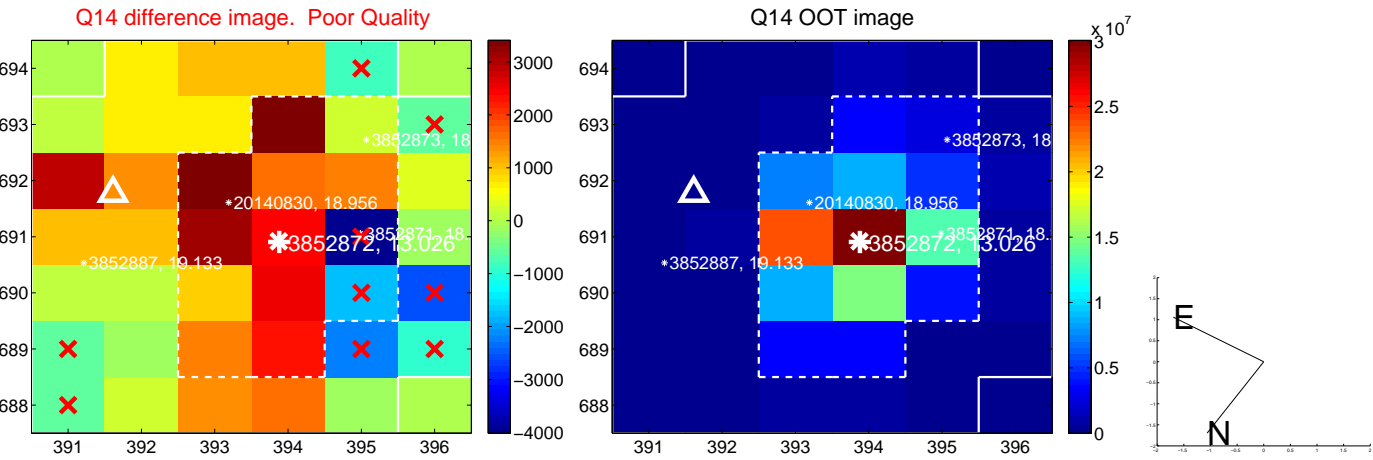
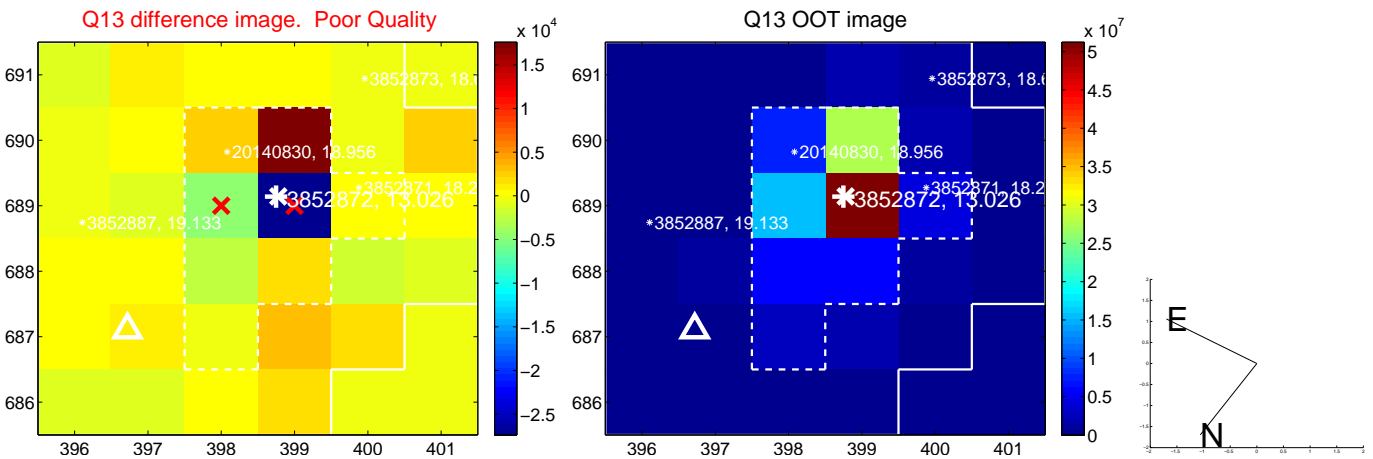
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



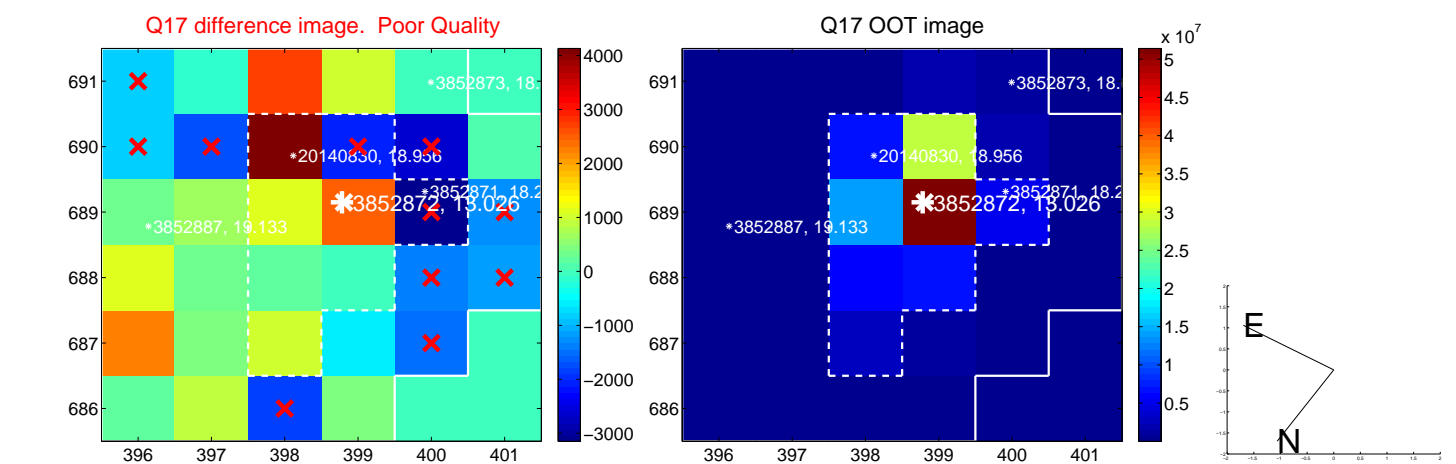
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



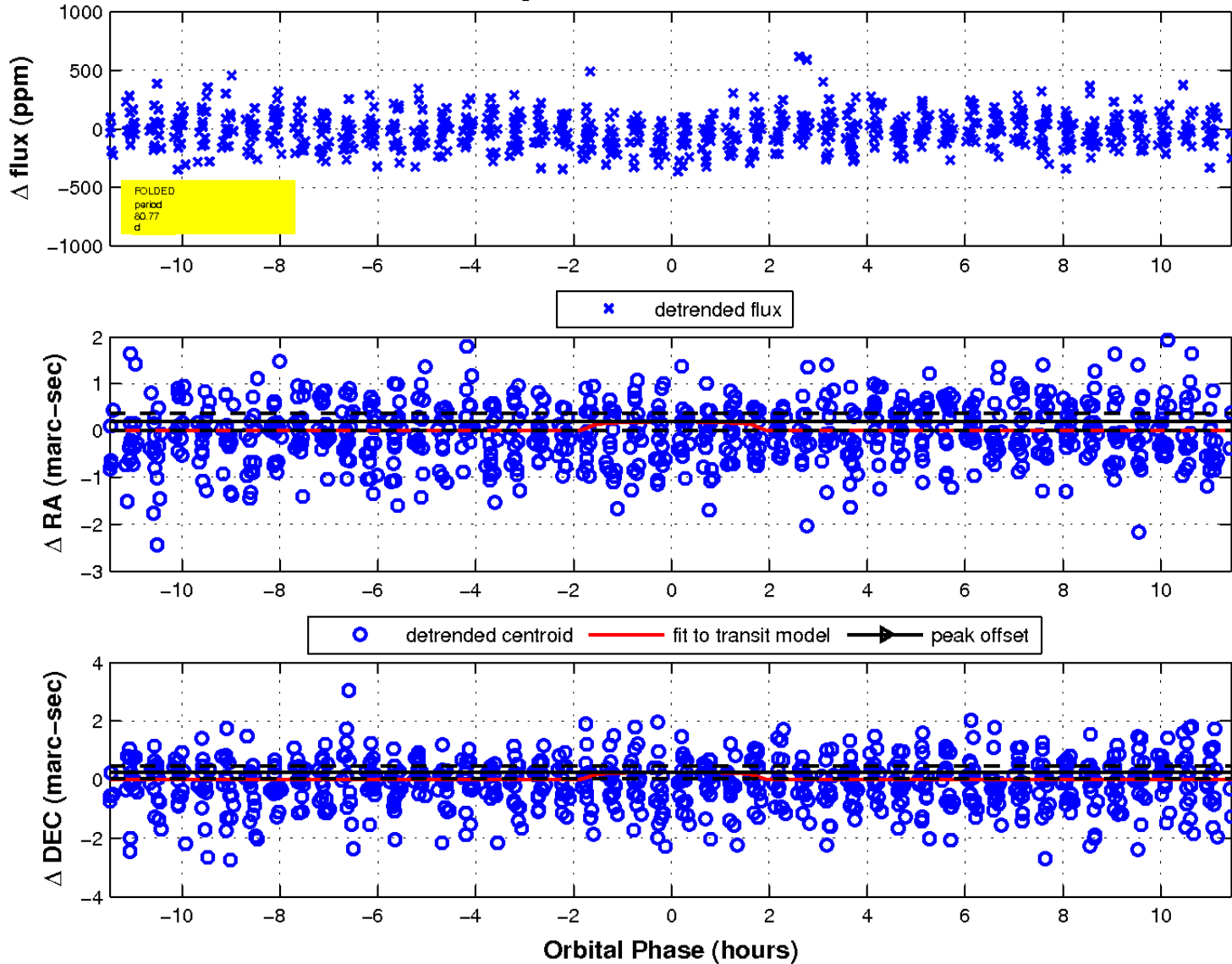
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

