

KIC 008167703

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})
008167703-01	OBS	No	0.618536	131.515108	21.7	7.422	7.4	7.3	0.93	5706	0.43	3909.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008167703-01	OBS	FP	0.00	1	0	1	0	LPP_DV—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.

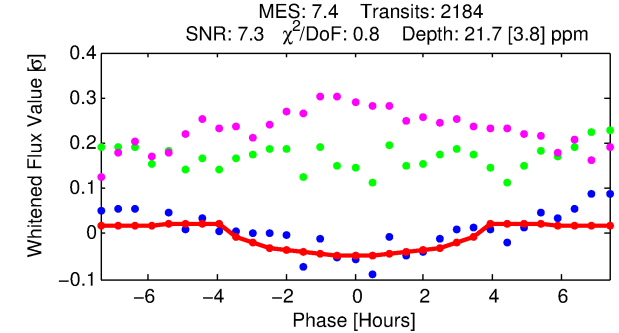
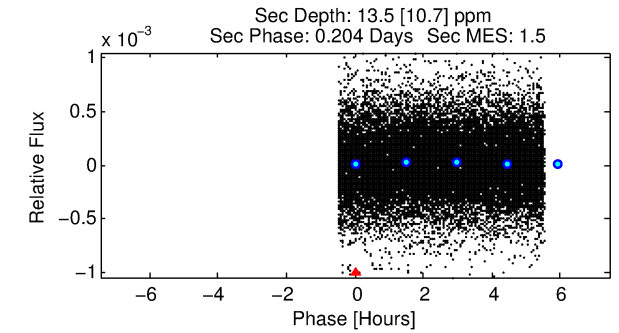
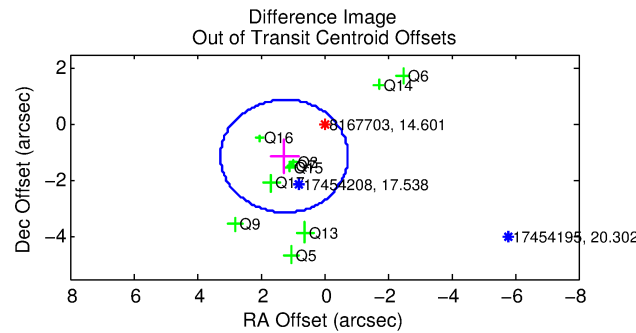
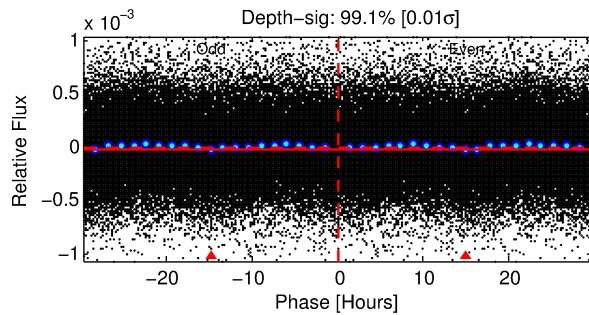
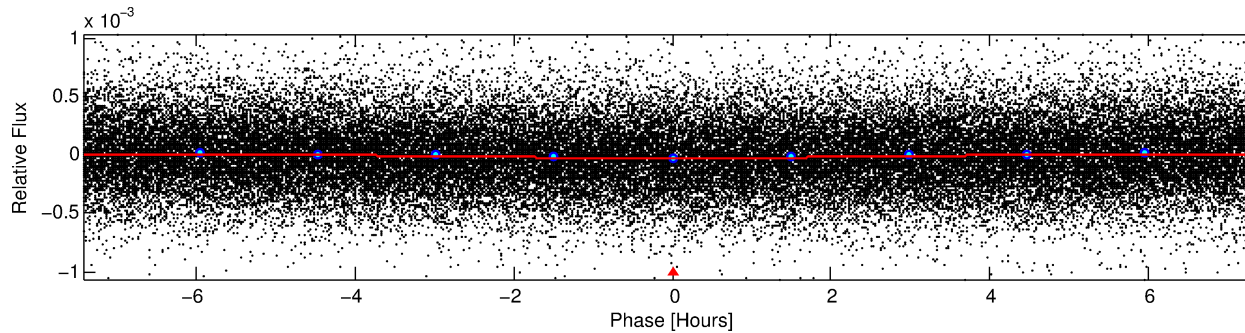
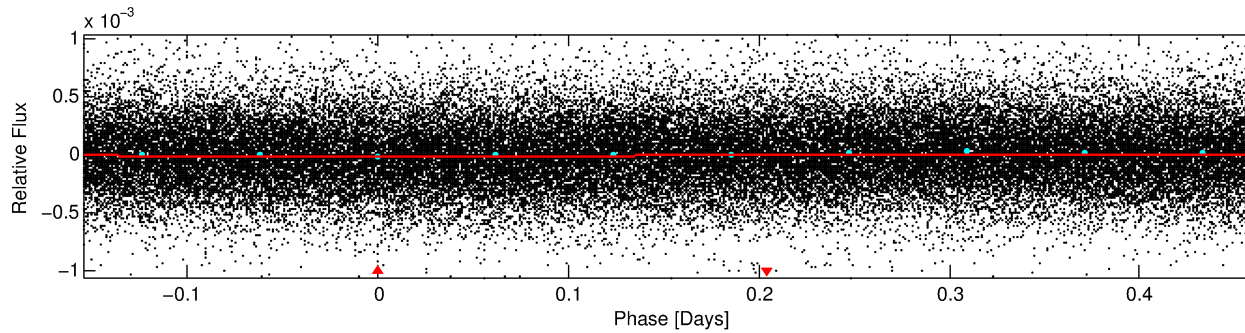
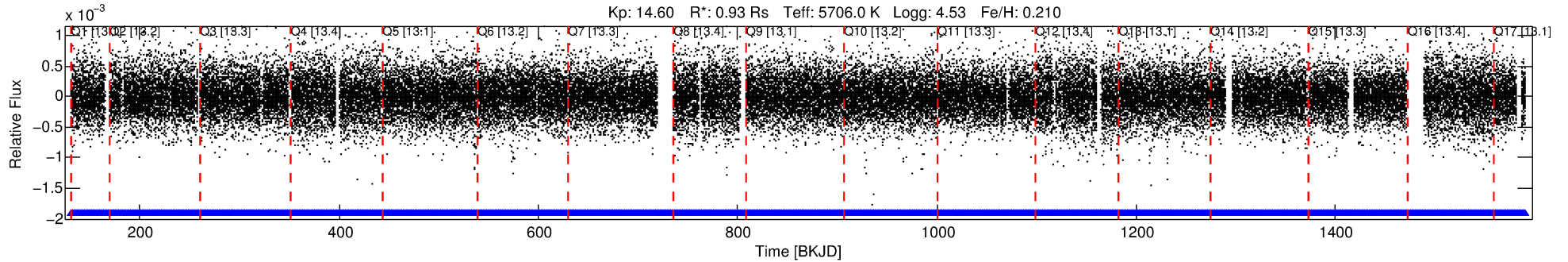
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008167703-01

No Significant Match Found

DV One-Page Summary

KIC: 8167703 Candidate: 1 of 1 Period: 0.619 d



DV Fit Results:

Period = 0.61854 [0.00002] d
Epoch = 131.5151 [0.0093] BKJD
Rp/R* = 0.0042 [0.0029]
a/R* = 1.00 [0.01]
b = 0.14 [20.96]
Seff = 3909.69 [736.94]
Teq = 2016 [95] K
Rp = 0.43 [0.30] Re
a = 0.0144 [0.0017] AU
Ag = 8.53 [13.69] [0.55 σ]
Teffp = 5328 [2125] K [1.56 σ]

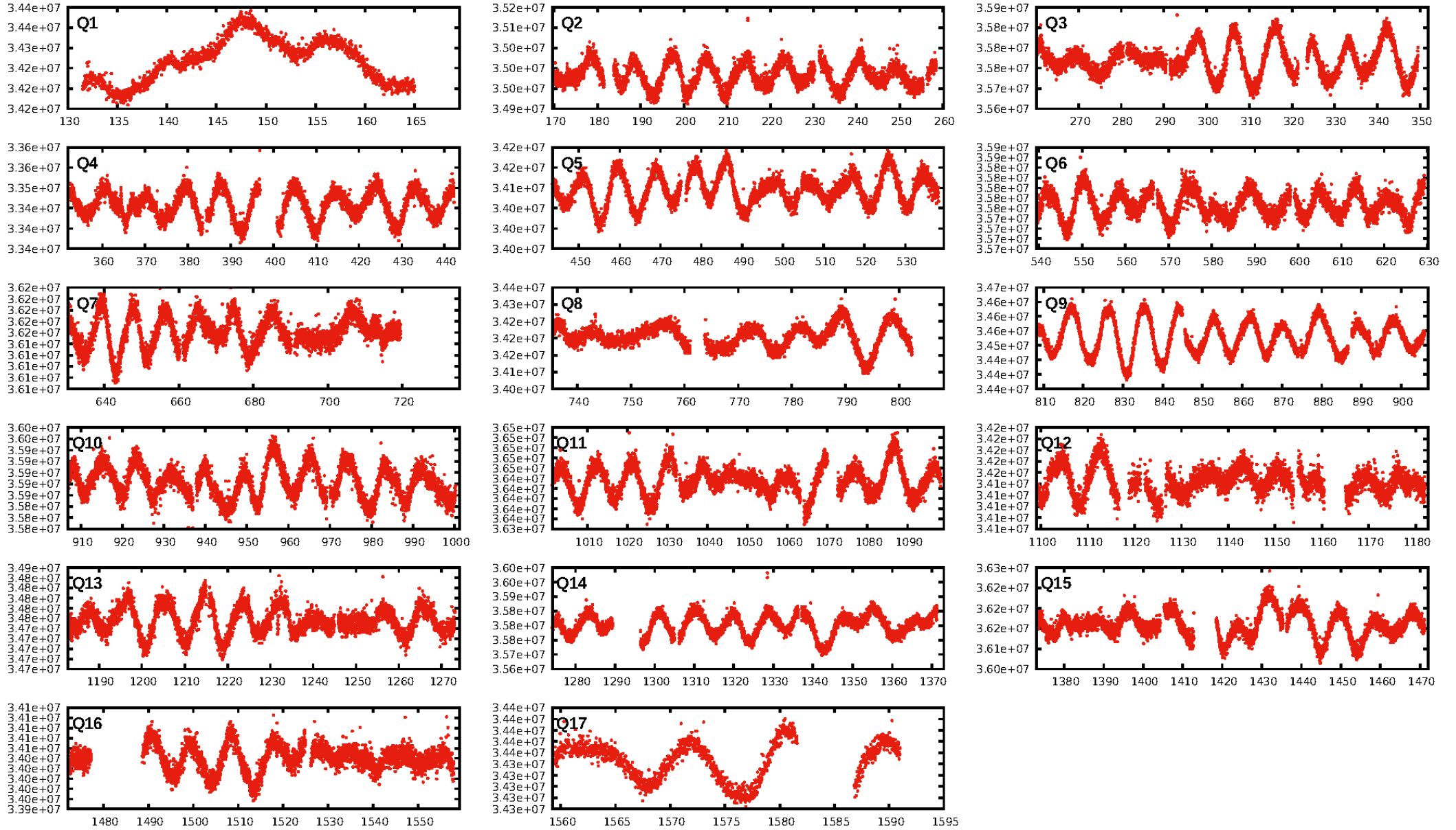
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2085/2085]
GhostDiagnostic-chr: 0.6758
Centroid-sig: 0.0%
Centroid-so: 13.899 arcsec [10.70 σ]
OotOffset-rm: 1.686 arcsec [2.52 σ]
OotOffset-st: 2/3/1/4 [10]
KicOffset-rm: 1.856 arcsec [2.47 σ]
KicOffset-st: 2/3/1/4 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [17/17]

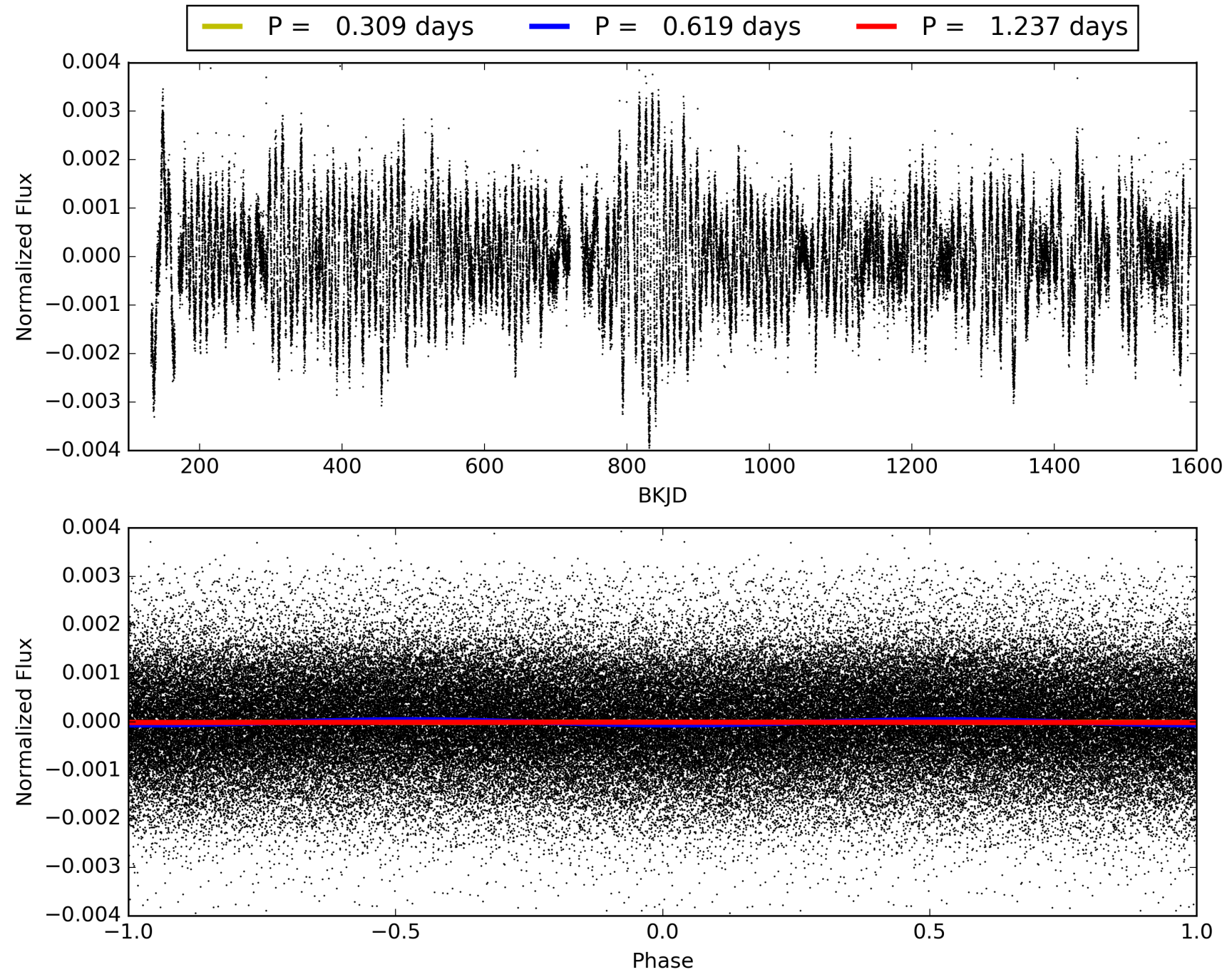
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:31:22 Z

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

TCE 008167703-01, PDC Light Curves

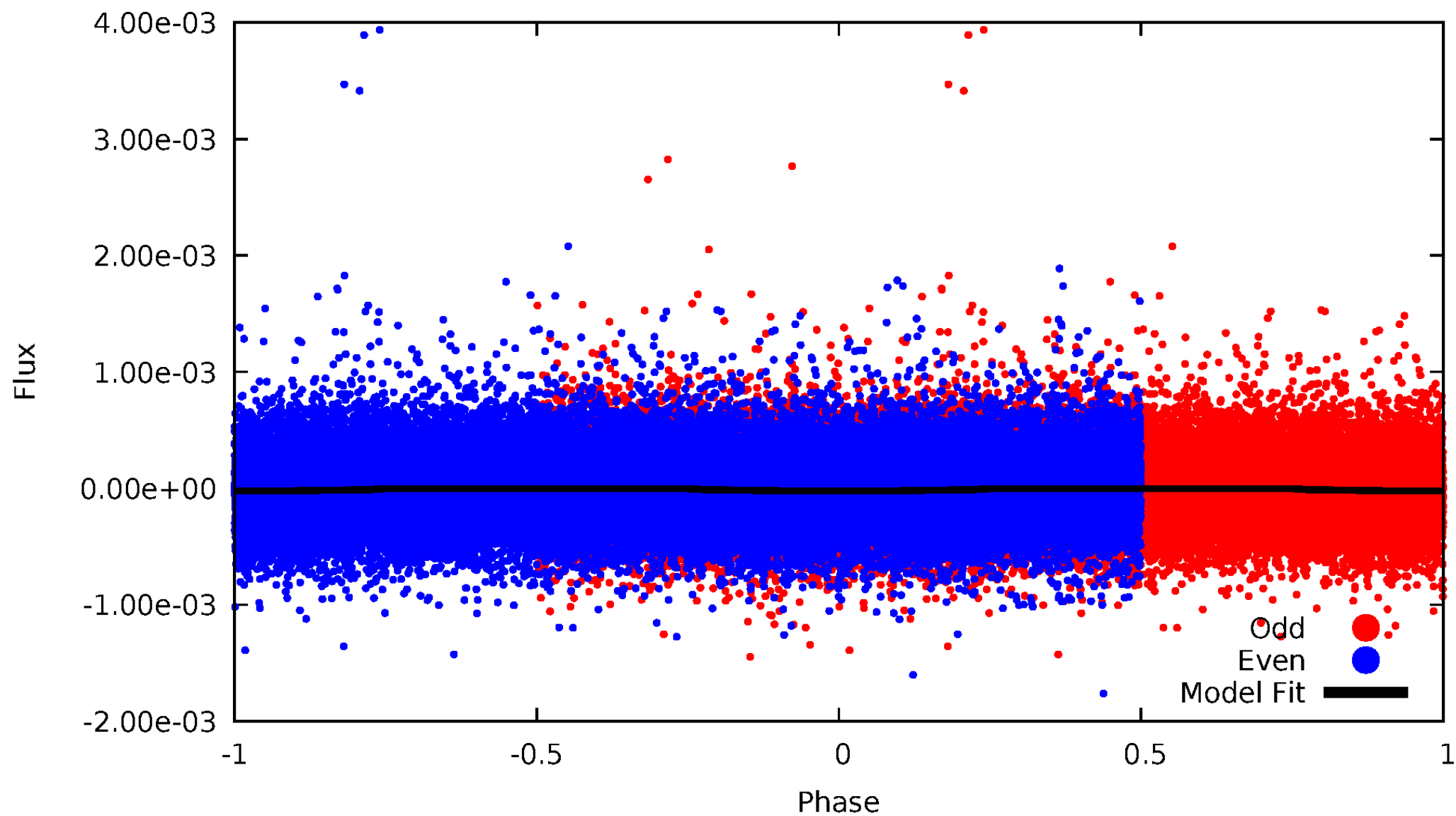


TCE 008167703-01



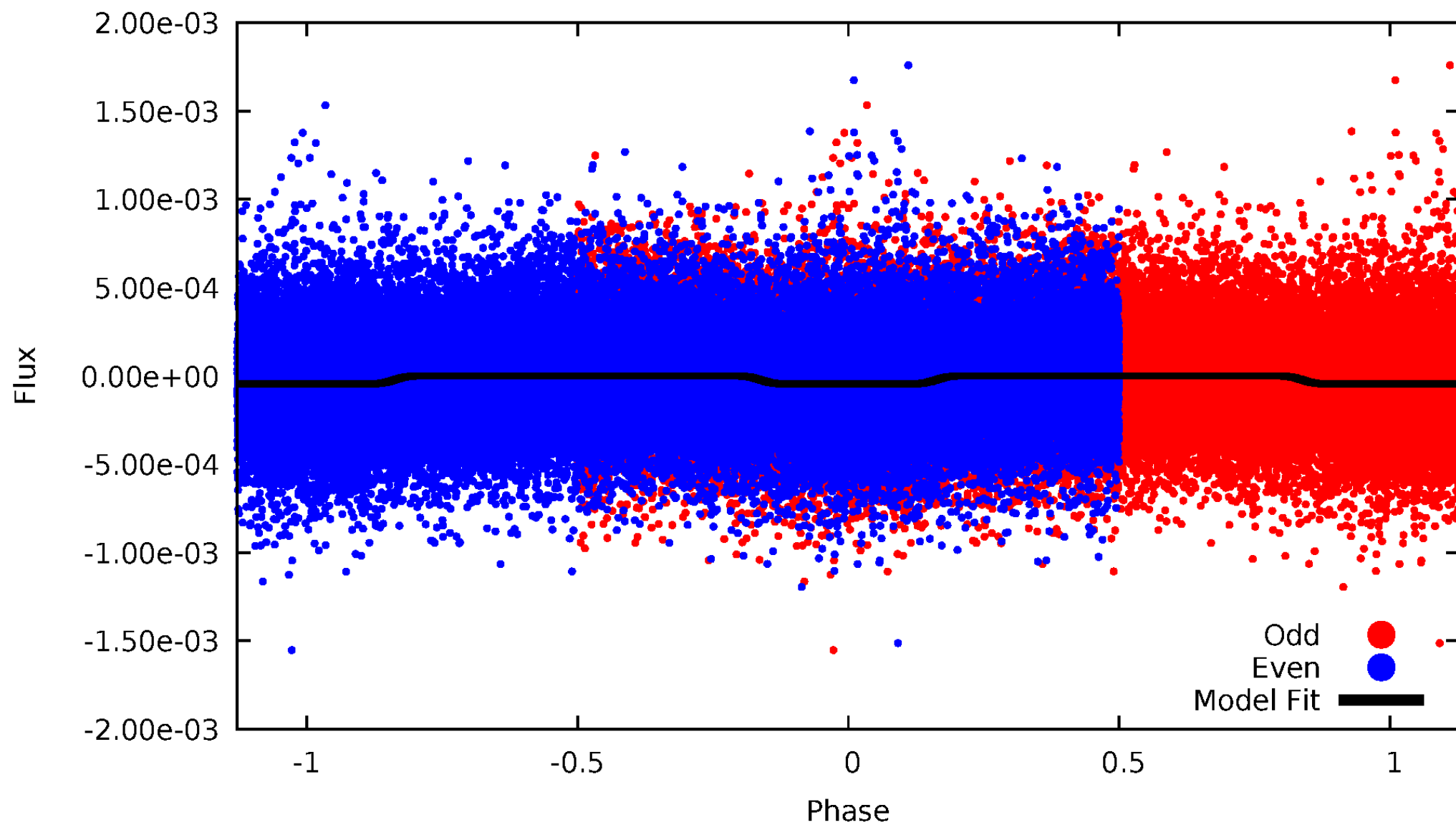
DV Odd/Even

TCE 008167703-01



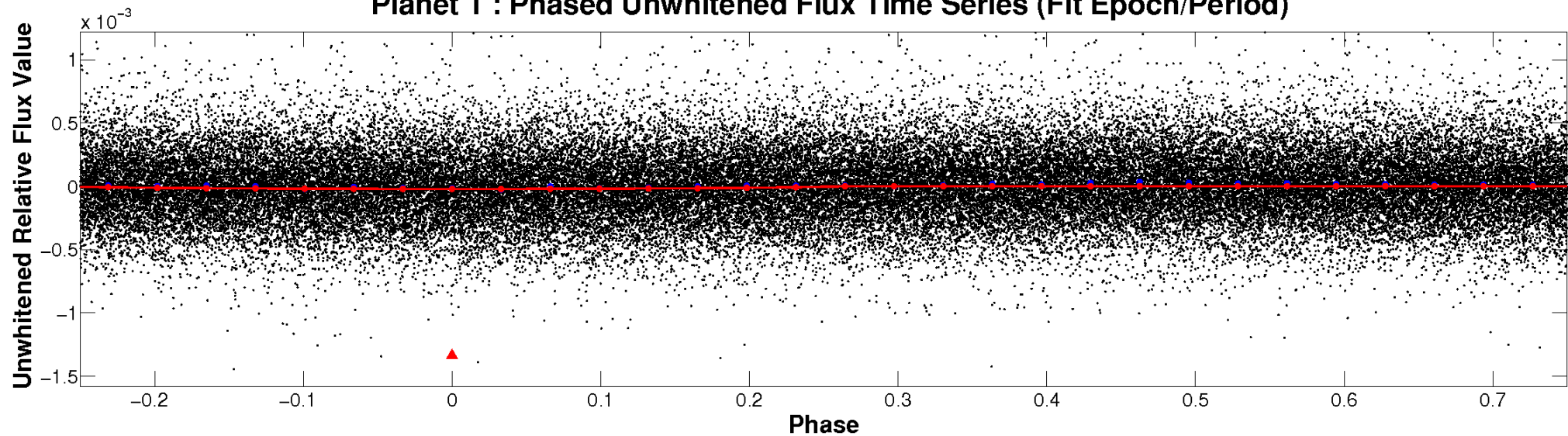
ALT Odd/Even

TCE 008167703-01

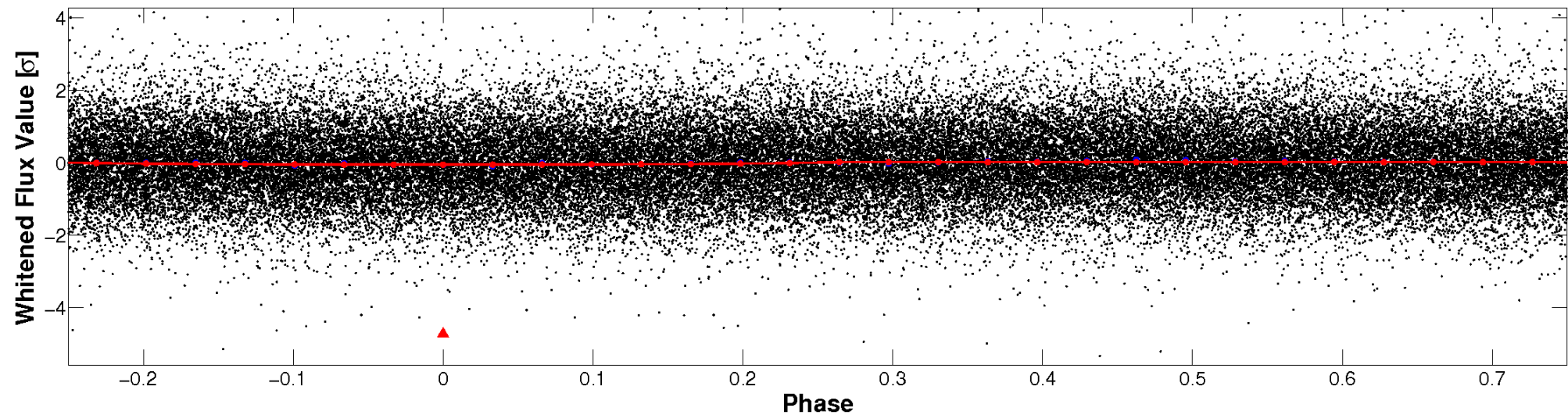


Non-Whitened Vs. Whitened Light Curve

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

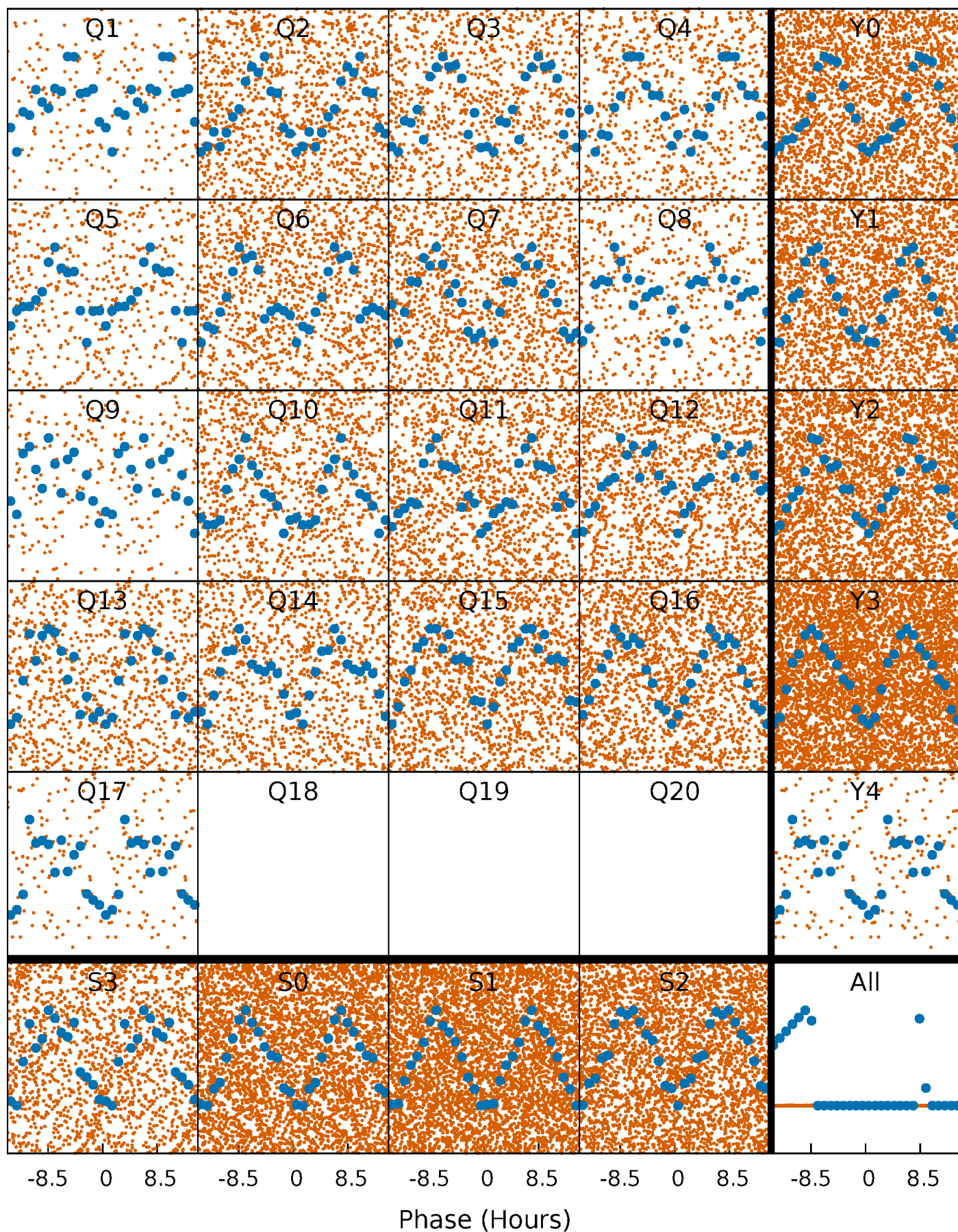


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



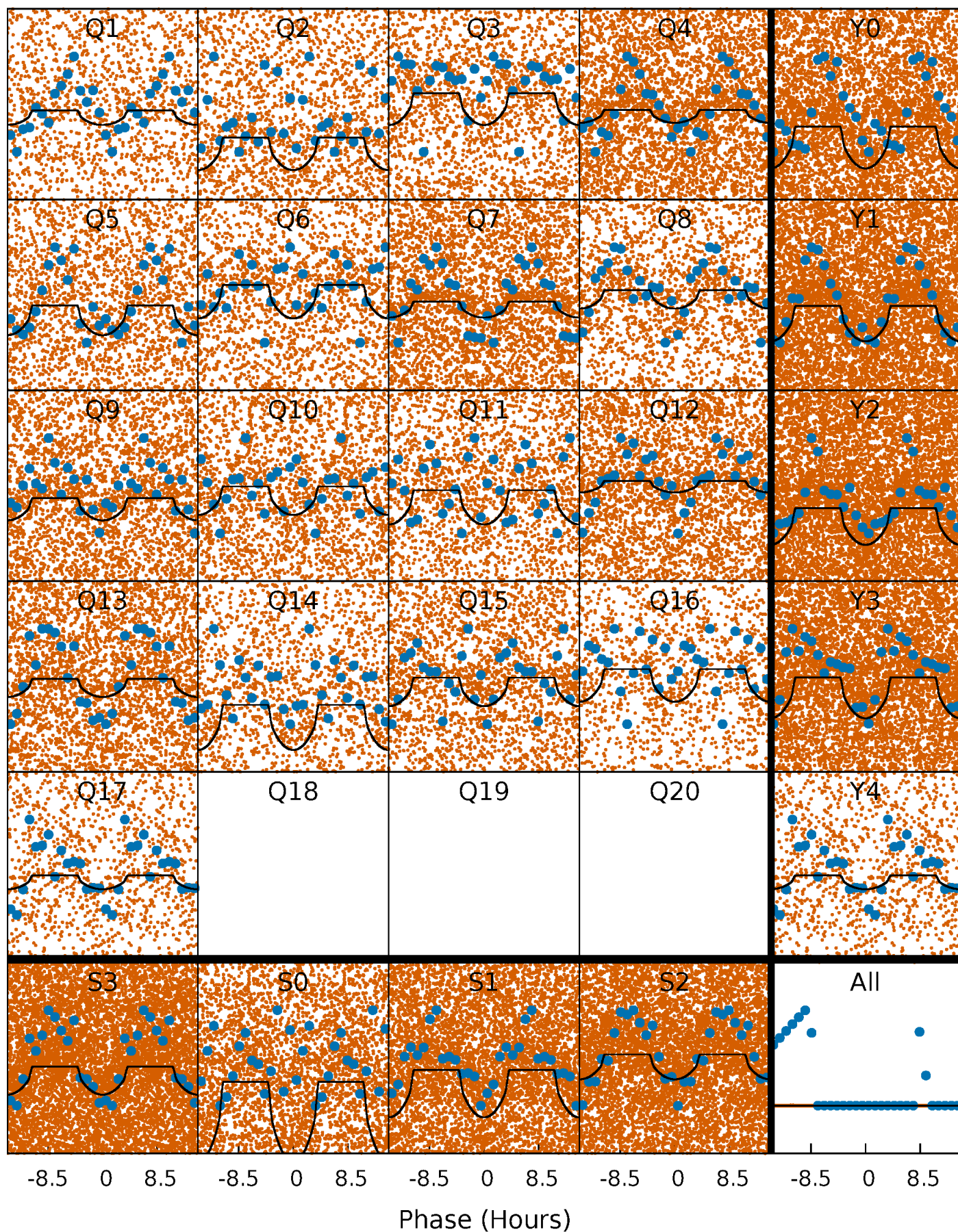
PDC Quarter-Phased Transit Curves

TCE 008167703-01 P= 0.618536 Days $T_0=131.515108$ (BKJD)



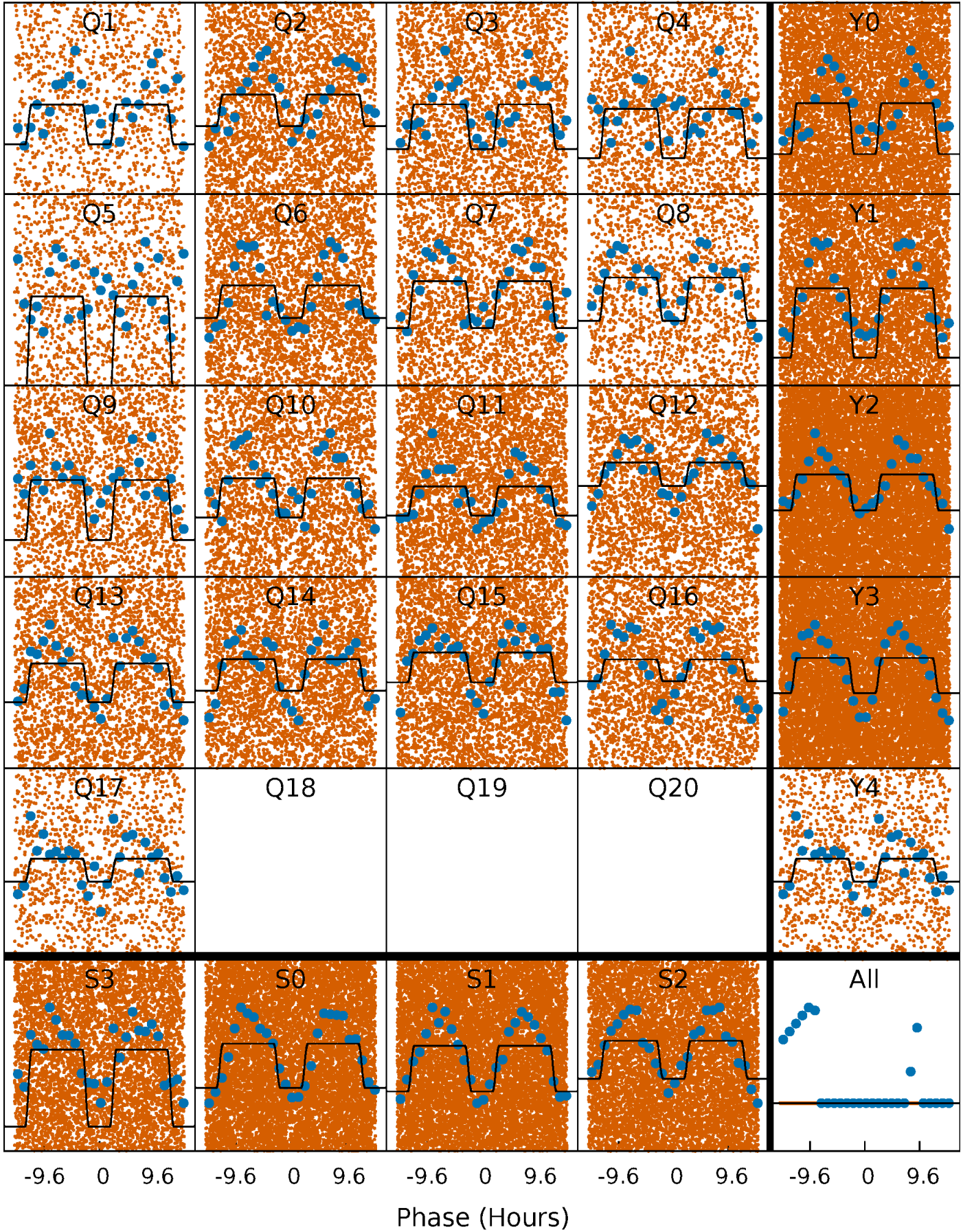
DV Quarter-Phased Transit Curves

TCE 008167703-01 P= 0.618536 Days $T_0=131.515108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

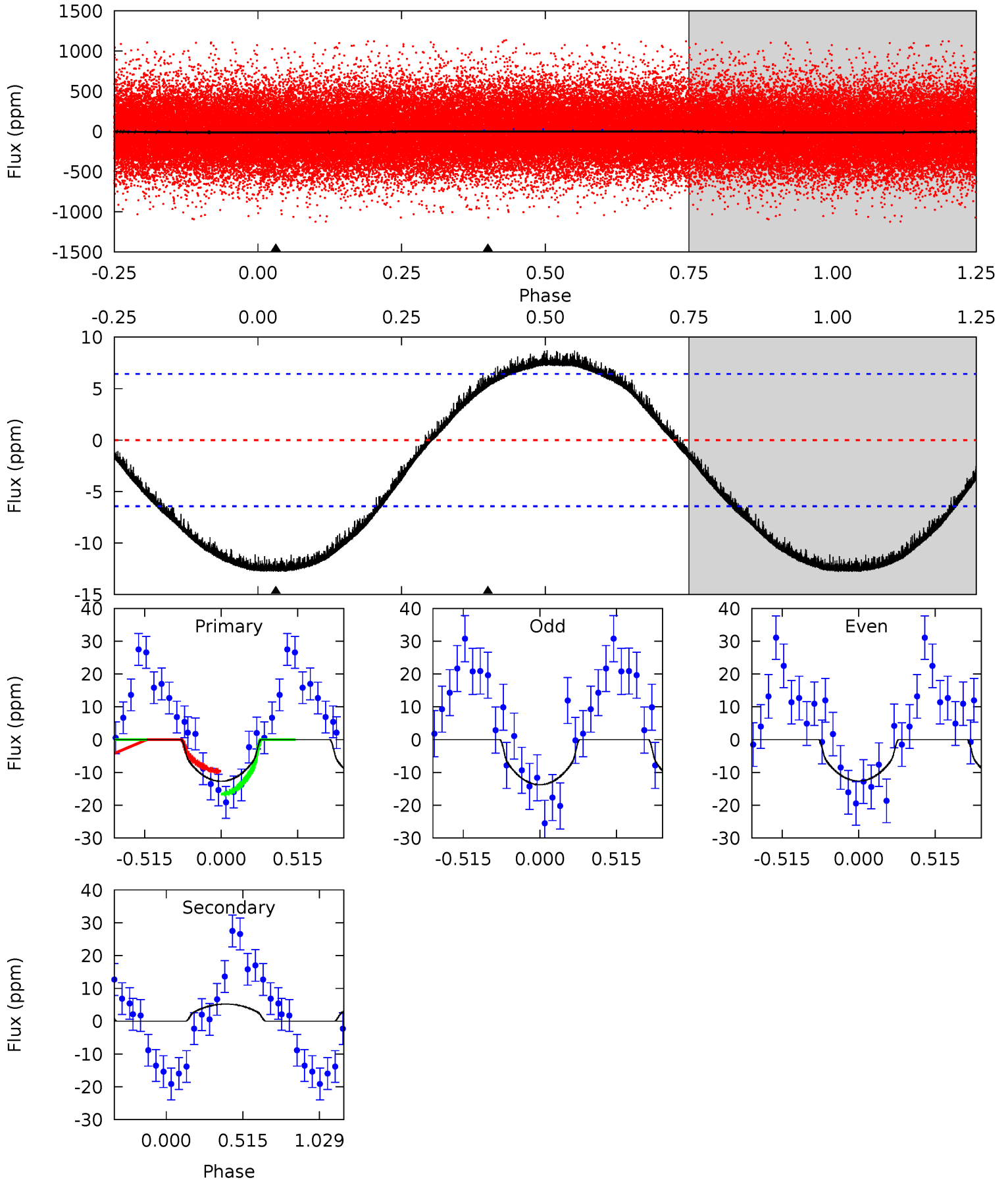
TCE 008167703-01 P= 0.618560 Days $T_0=131.502985$ (BKJD)



DV Model-Shift Uniqueness Test

008167703-01, P = 0.618536 Days, E = 130.896572 Days

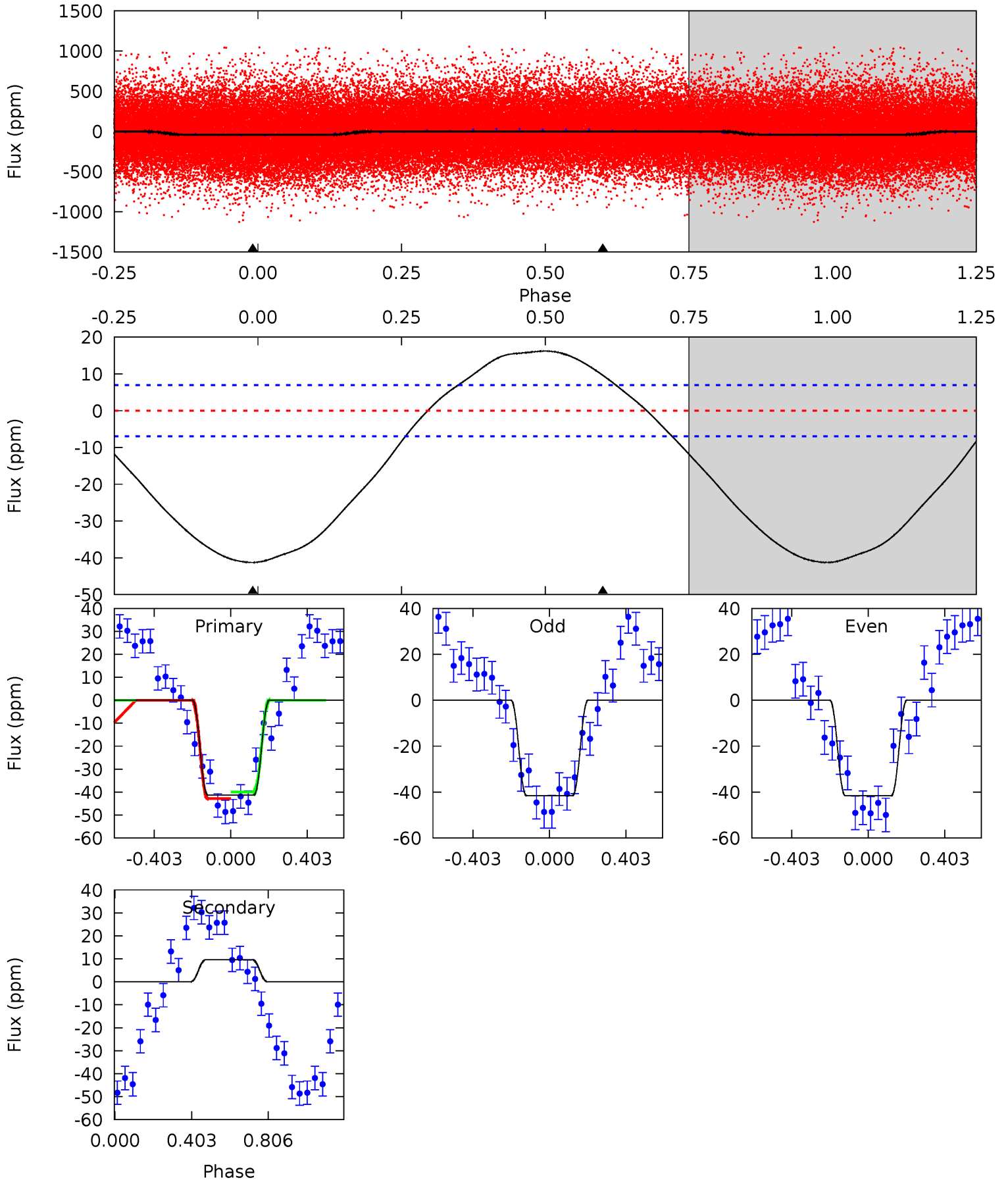
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.32	-3.41	0	0	4.21	0.65	1.21	8.32	8.32	-3.41	-3.41	0.37	0.71	0.41	2.31



Alt Model-Shift Uniqueness Test

008167703-01, P = 0.618560 Days, E = 131.502985 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	-5.91	0	0	4.26	0.84	2.87	25.3	25.3	-5.91	-5.91	0.00	0.98	0.28	0.87



Stellar Parameters For KIC 008167703

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5706^{+77}_{-77}	$4.525^{+0.012}_{-0.102}$	$0.210^{+0.150}_{-0.150}$	$0.926^{+0.125}_{-0.031}$	$1.048^{+0.042}_{-0.058}$	$1.856^{+0.119}_{-0.551}$
	+1%/-1%	+0%/-2%	+71%/-71%	+13%/-3%	+4%/-6%	+6%/-30%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008167703-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	5 ± 2	$0.49^{+0.29}_{-0.28}$	2853^{+92}_{-58}	-4270^{+565}_{-1624}	$-2.296^{+1.427}_{-10.069}$
Alt.	10 ± 2	$0.70^{+0.34}_{-0.27}$	2861^{+88}_{-62}	-4242^{+455}_{-846}	$-2.204^{+1.202}_{-3.821}$

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 $A_{\text{obs}} \gg 1.0$

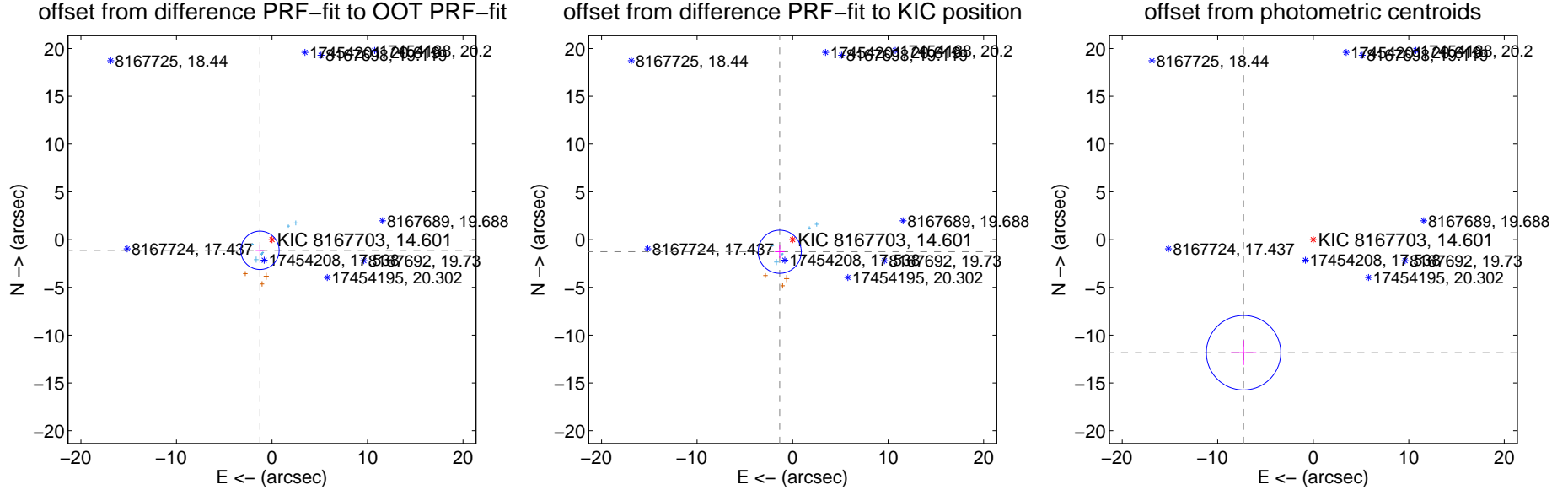
DV Centroid Data

Supplemental centroid analysis for 008167703-01. Kepler magnitude: 14.60. Transit SNR 7.33

There are 7 quarters with good PRF difference image offsets

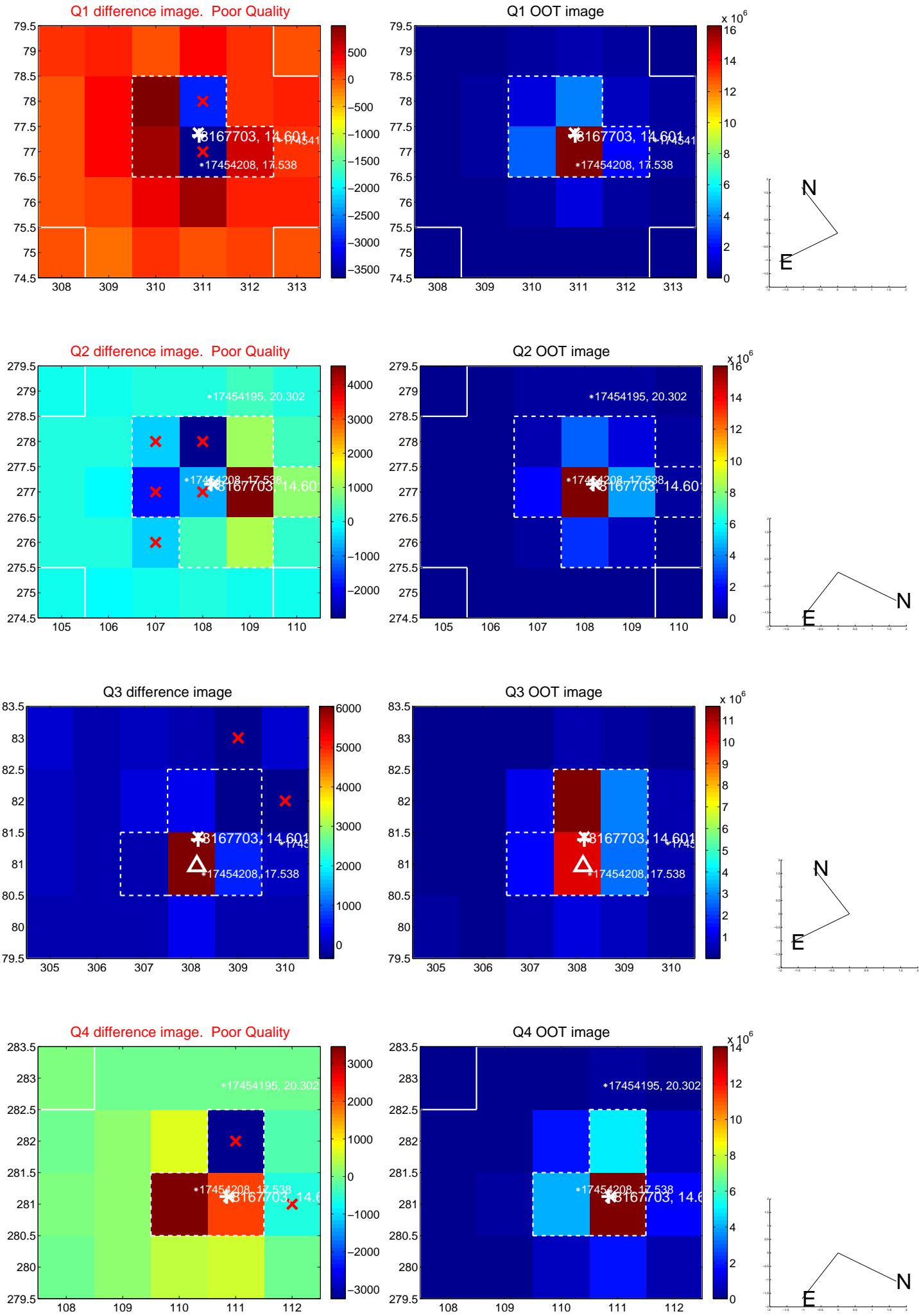
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.686 ± 0.669	2.52	1.256 ± 0.442	-1.124 ± 0.612
PRF-fit source offset from KIC position	1.856 ± 0.752	2.47	1.350 ± 0.504	-1.273 ± 0.661
photometric centroid source offset	13.90 ± 1.30	10.70	7.29 ± 1.33	-11.83 ± 1.29

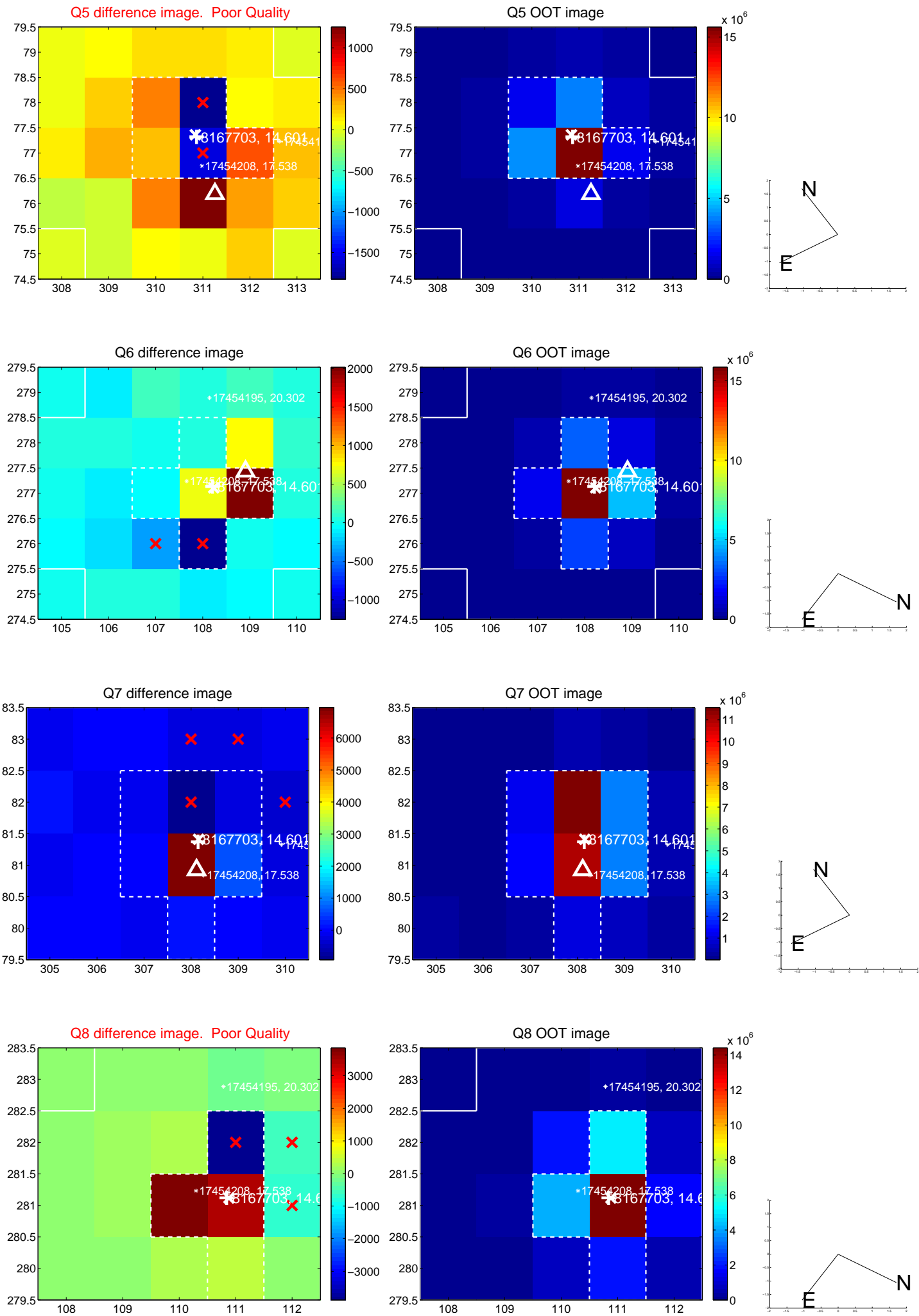


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

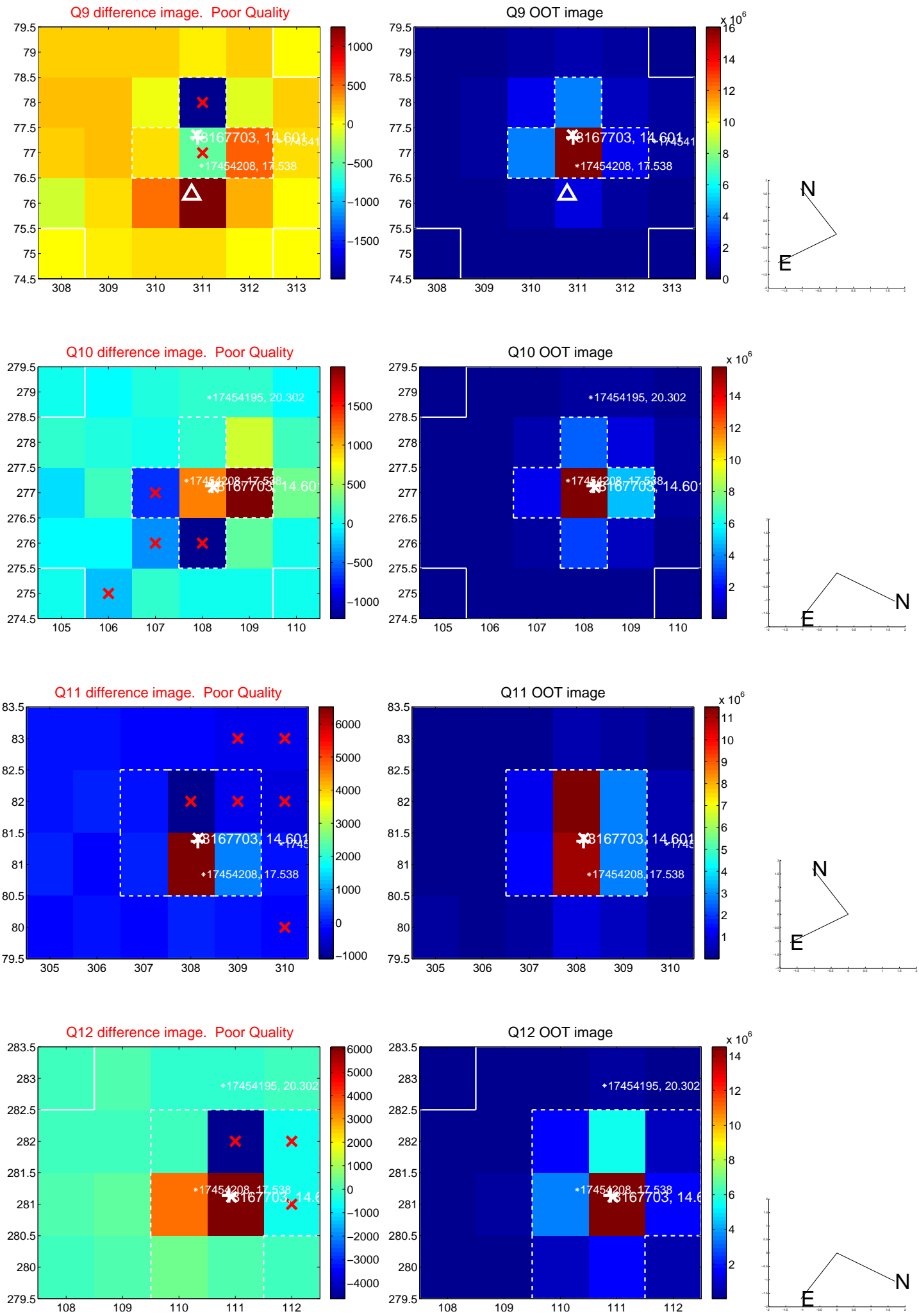
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



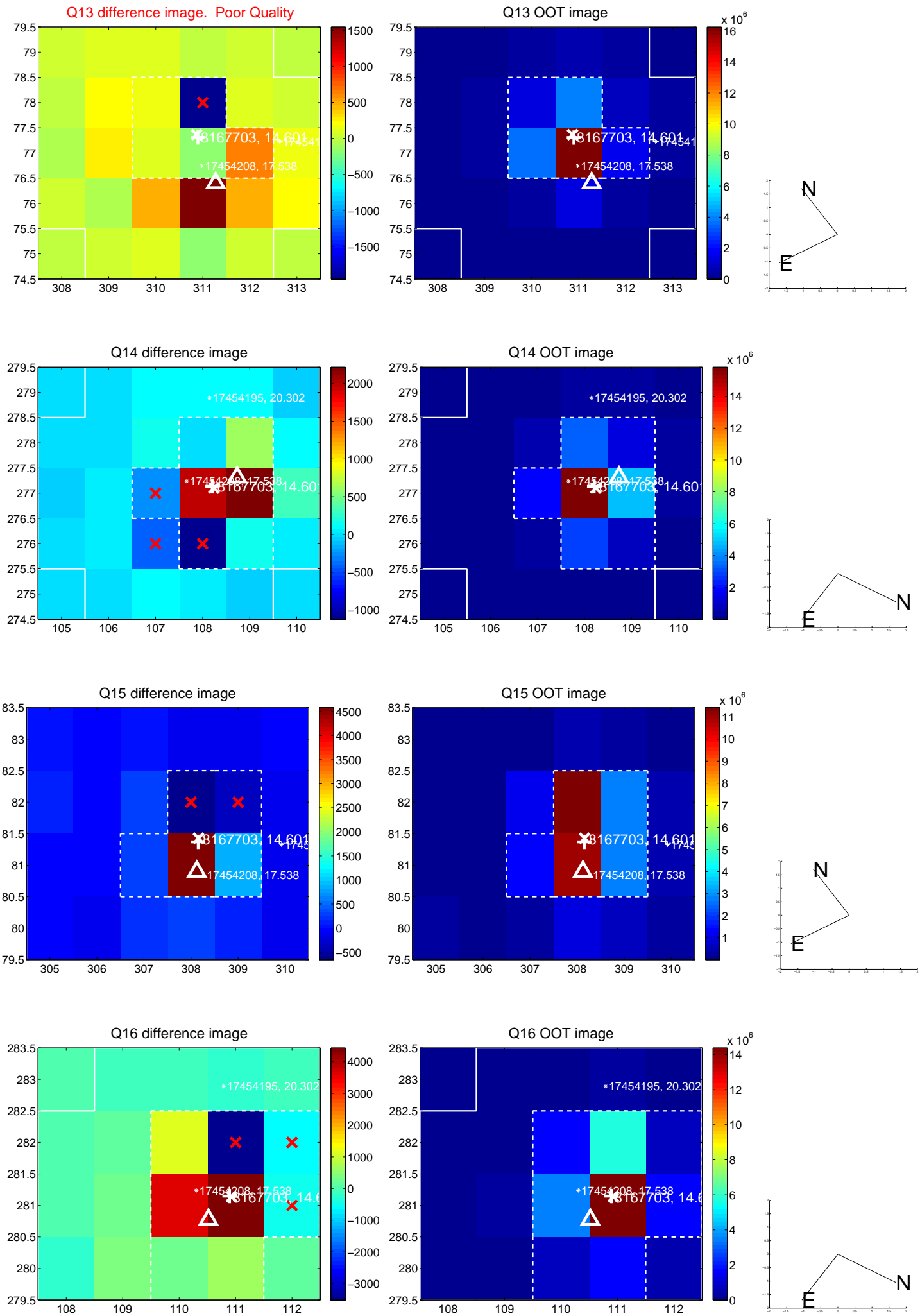
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



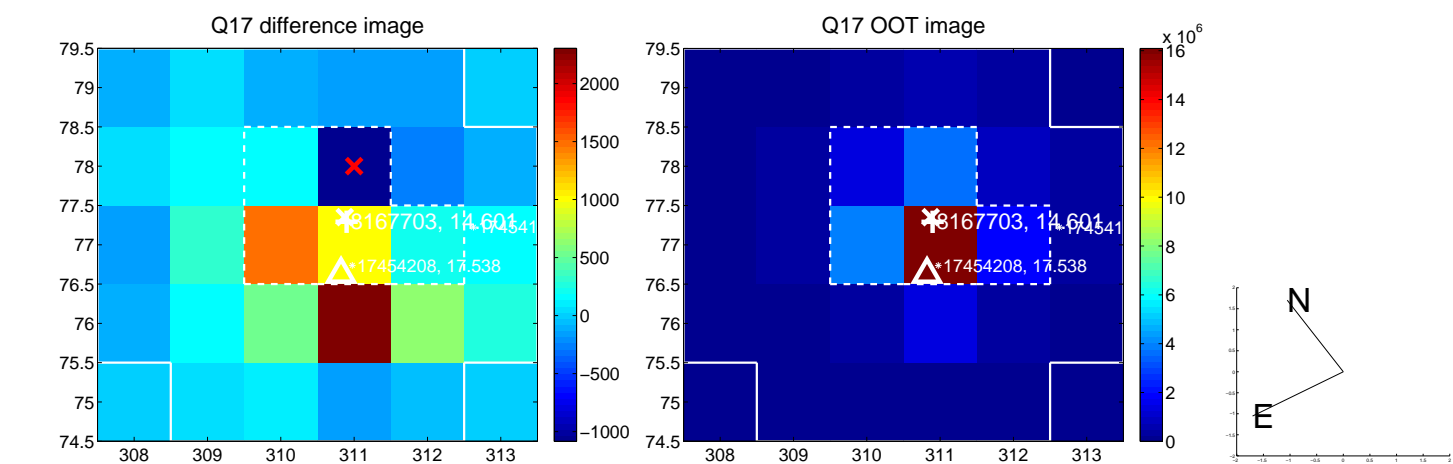
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



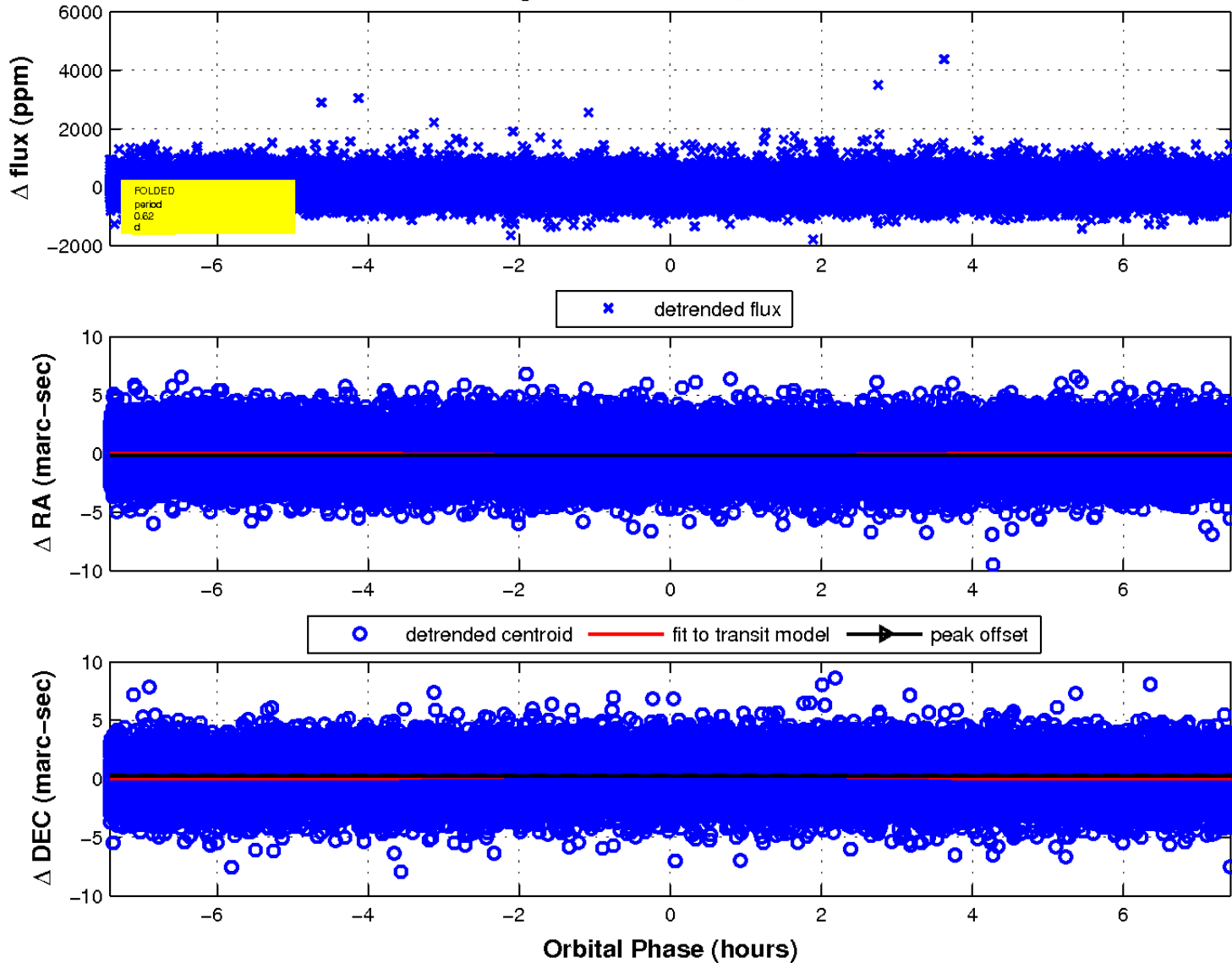
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

