

KIC 003218844

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})
003218844-01	OBS	7646.01	85.113370	171.820477	524.2	2.604	7.1	7.2	0.97	6018	2.45	7.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003218844-01	OBS	FP	0.15	1	0	0	0	MOD_NONUNIQ_ALT—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.

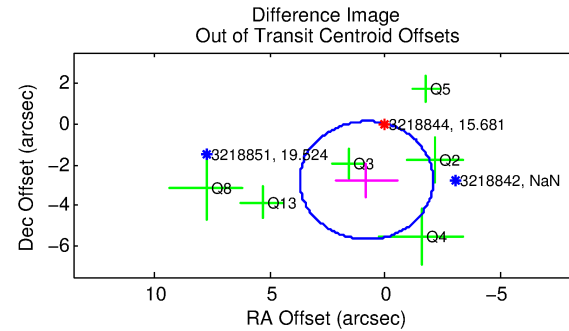
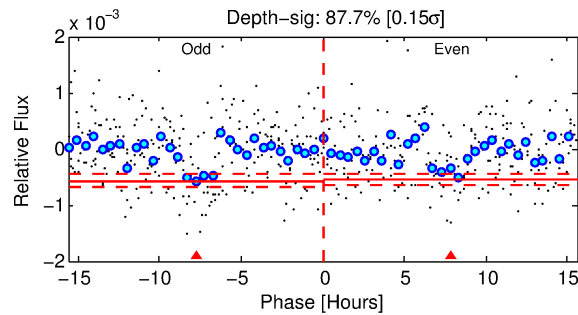
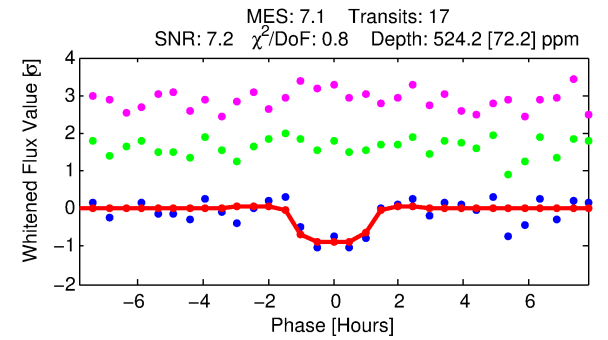
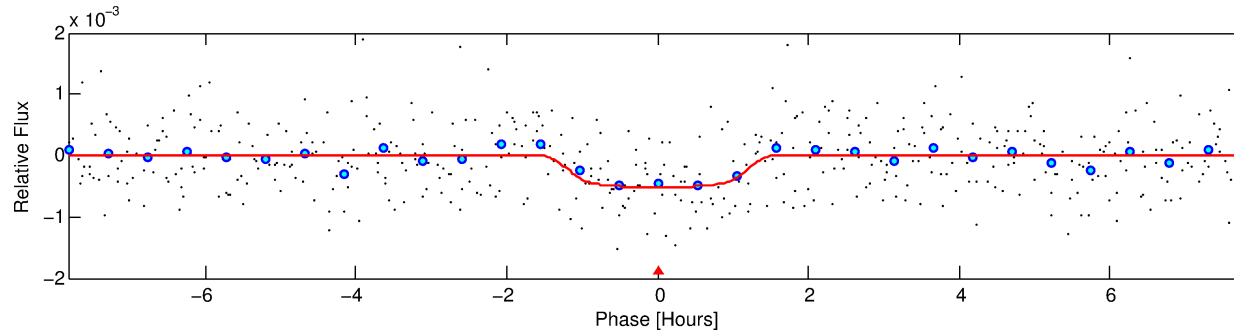
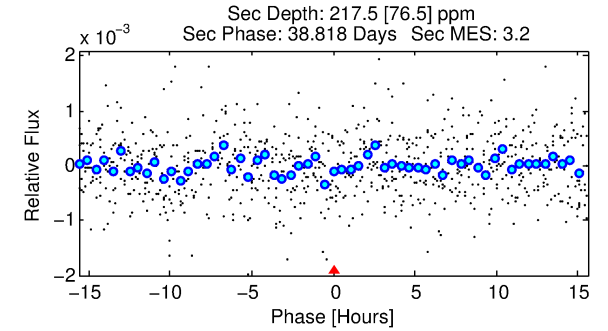
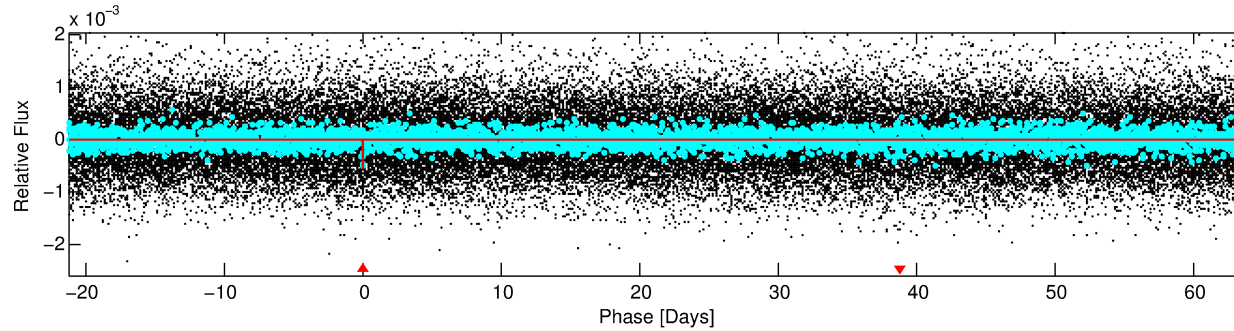
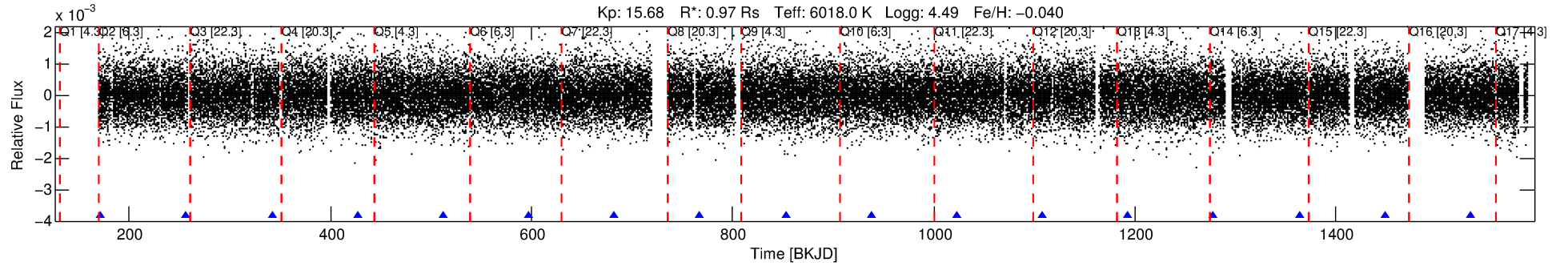
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003218844-01

No Significant Match Found

DV One-Page Summary

KIC: 3218844 Candidate: 1 of 1 Period: 85.113 d



DV Fit Results:

Period = 85.11337 [0.00084] d
Epoch = 171.8205 [0.0081] BKJD
Rp/R* = 0.0230 [0.0314]
a/R* = 167.60 [1098.22]
b = 0.77 [3.48]
Seff = 7.49 [3.15]
Teq = 422 [44] K
Rp = 2.45 [3.44] Re
a = 0.3861 [0.1056] AU
Ag = 2980.01 [8293.66] [0.36σ]
Teffp = 4819 [3323] K [1.32σ]

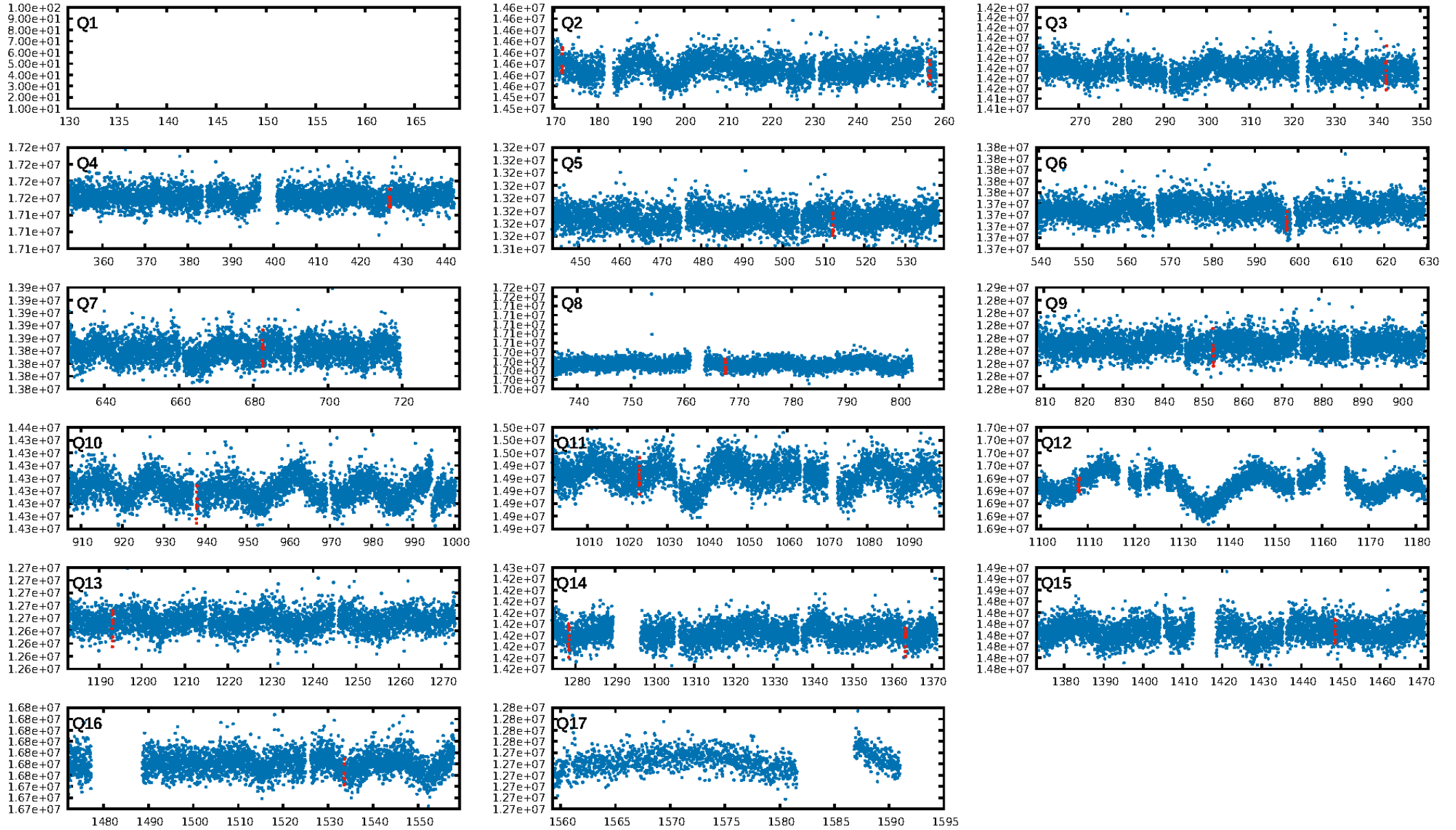
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.47e-13
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: -7.932
Centroid-sig: 92.1%
Centroid-so: 1.854 arcsec [0.96σ]
OotOffset-rm: 2.886 arcsec [3.00σ]
KicOffset-rm: 2.889 arcsec [2.40σ]
OotOffset-st: 1/1/2/2 [6]
KicOffset-st: 1/1/2/2 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 1.00 [13/13]

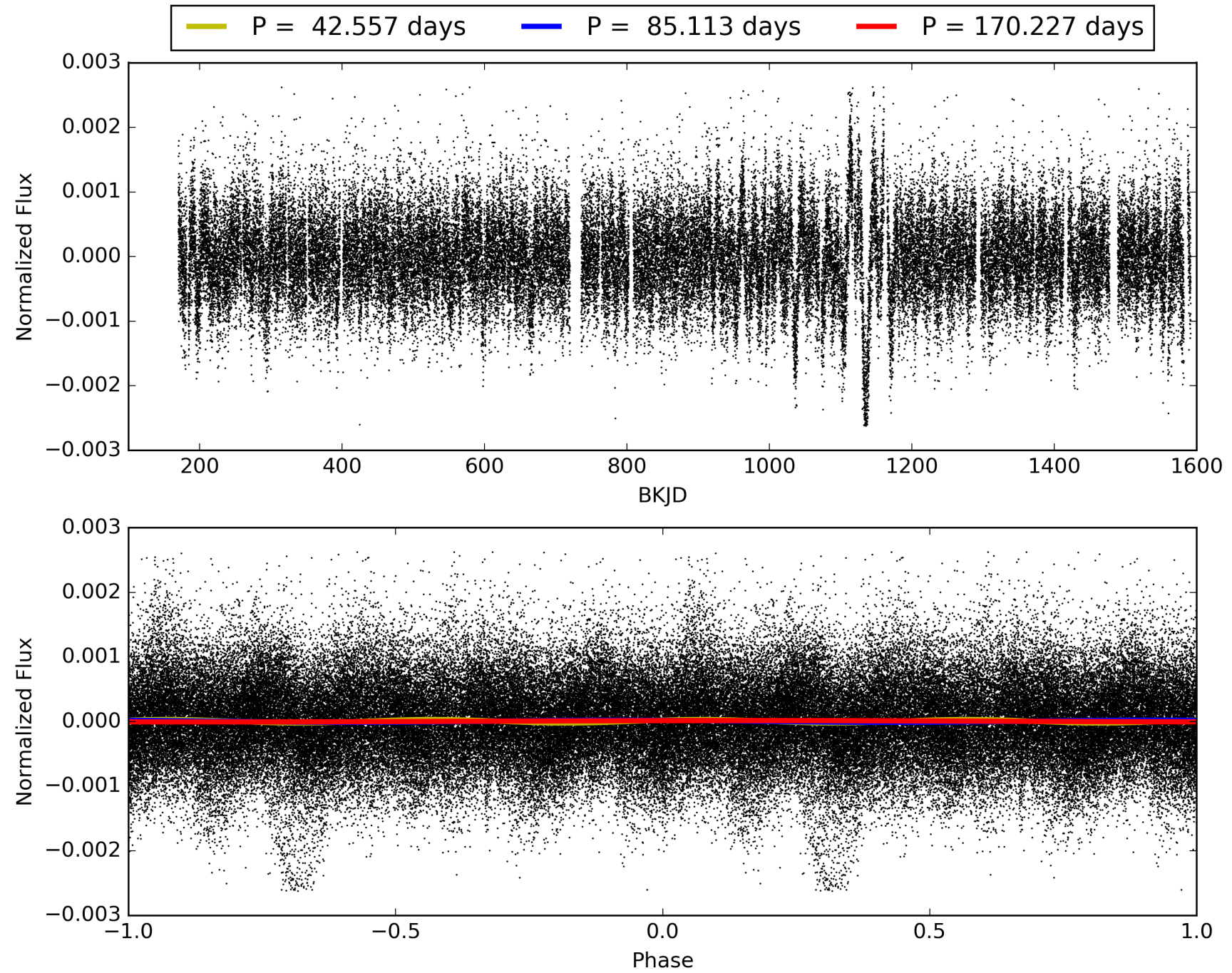
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:48:38 Z

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

TCE 003218844-01, PDC Light Curves

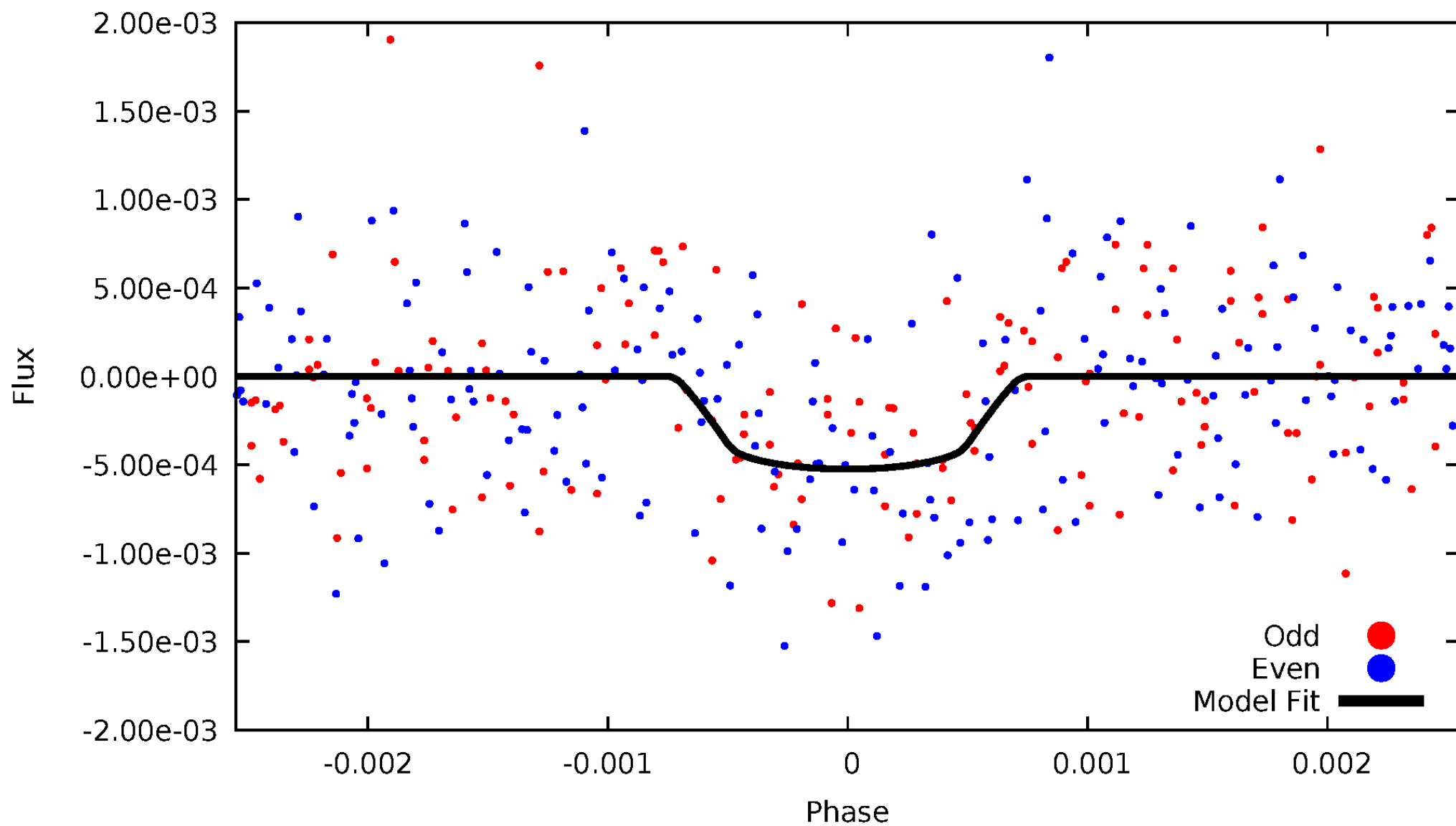


TCE 003218844-01



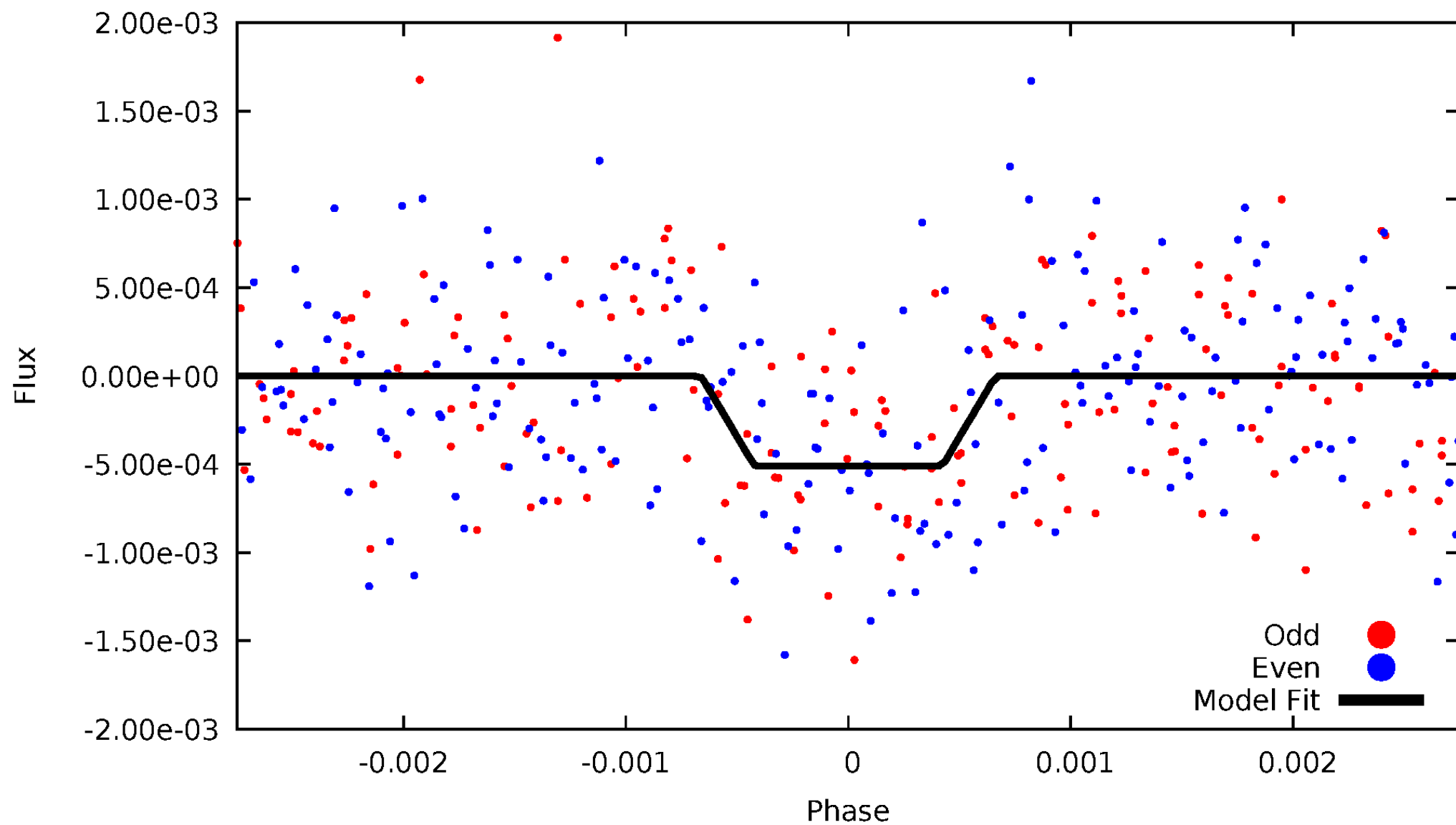
DV Odd/Even

TCE 003218844-01



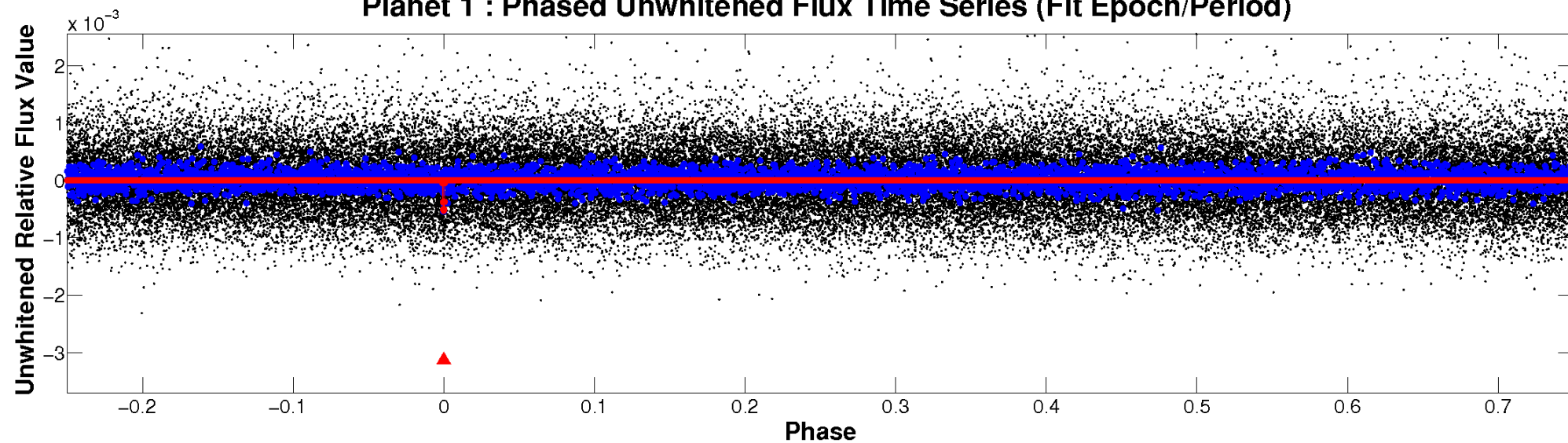
ALT Odd/Even

TCE 003218844-01

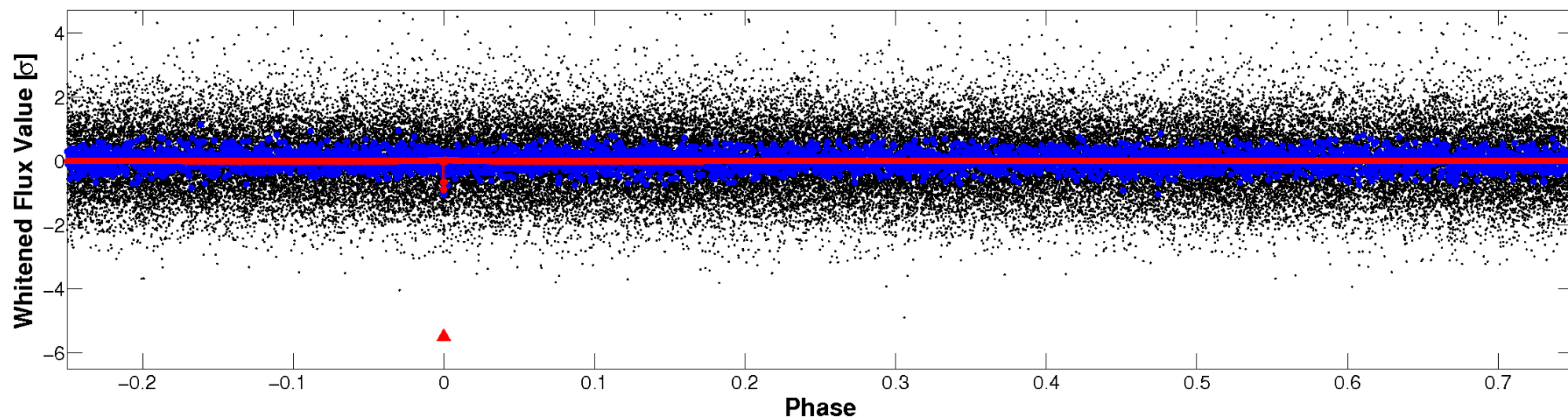


Non-Whitened Vs. Whitened Light Curve

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

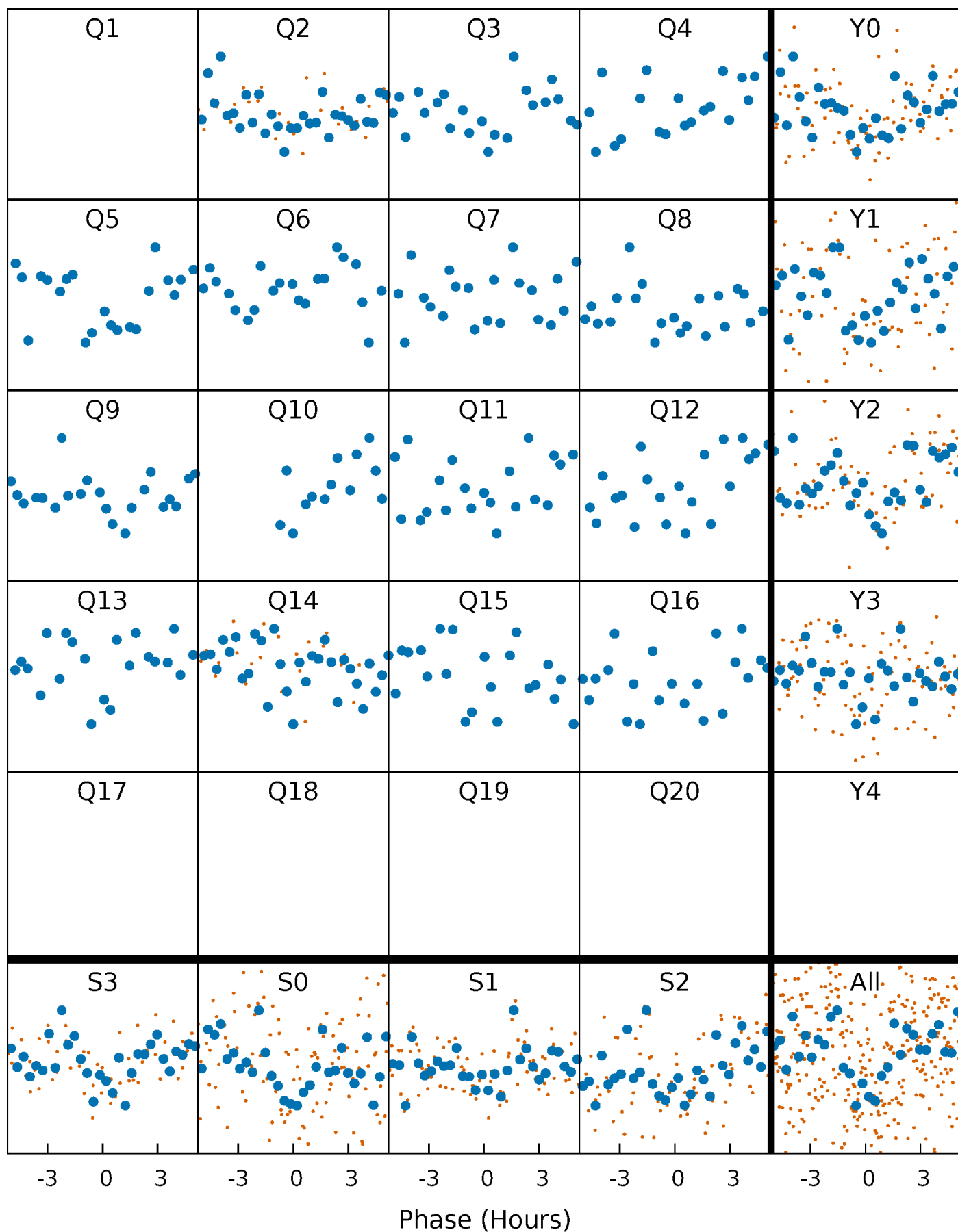


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



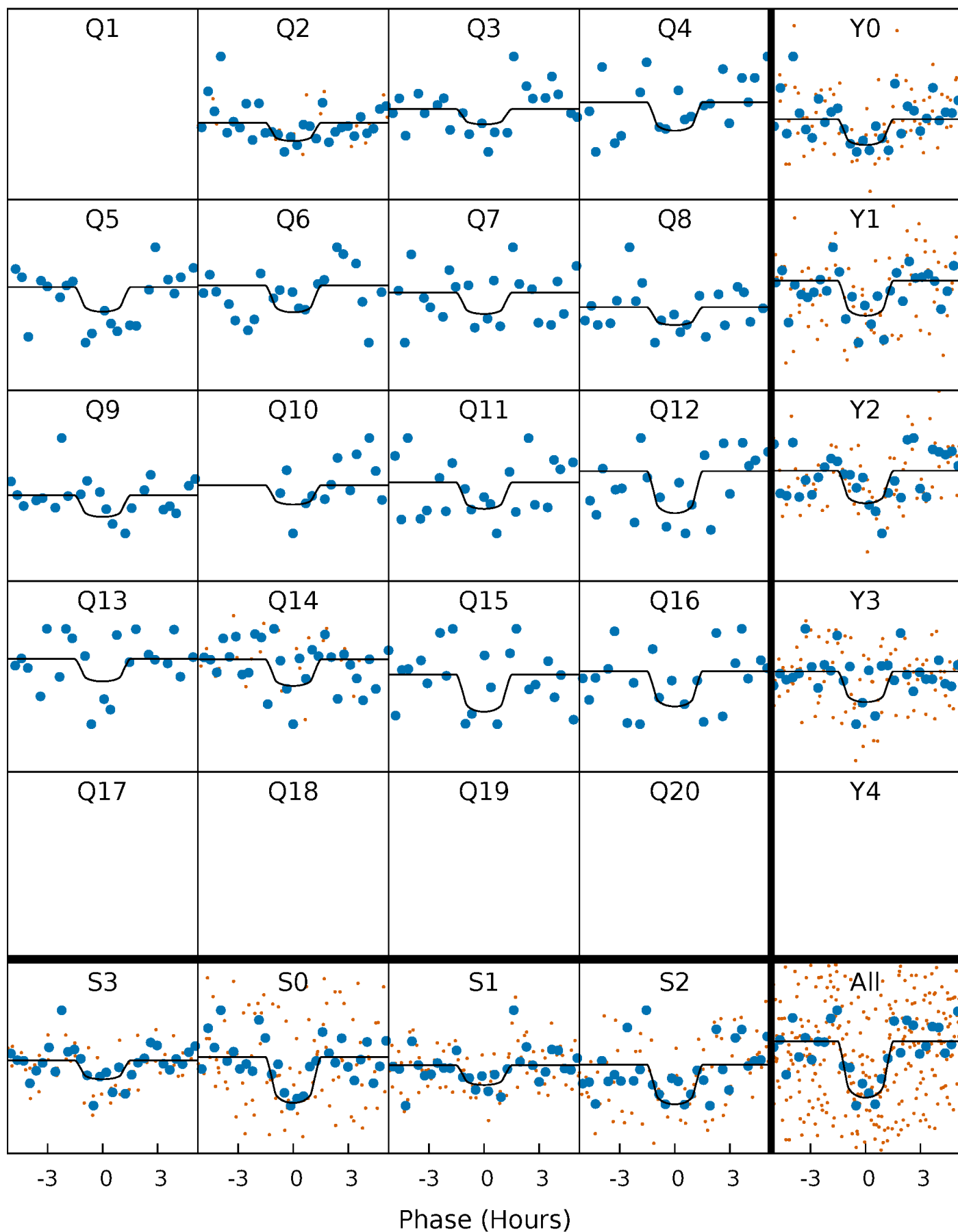
PDC Quarter-Phased Transit Curves

TCE 003218844-01 P= 85.113370 Days $T_0=171.820477$ (BKJD)



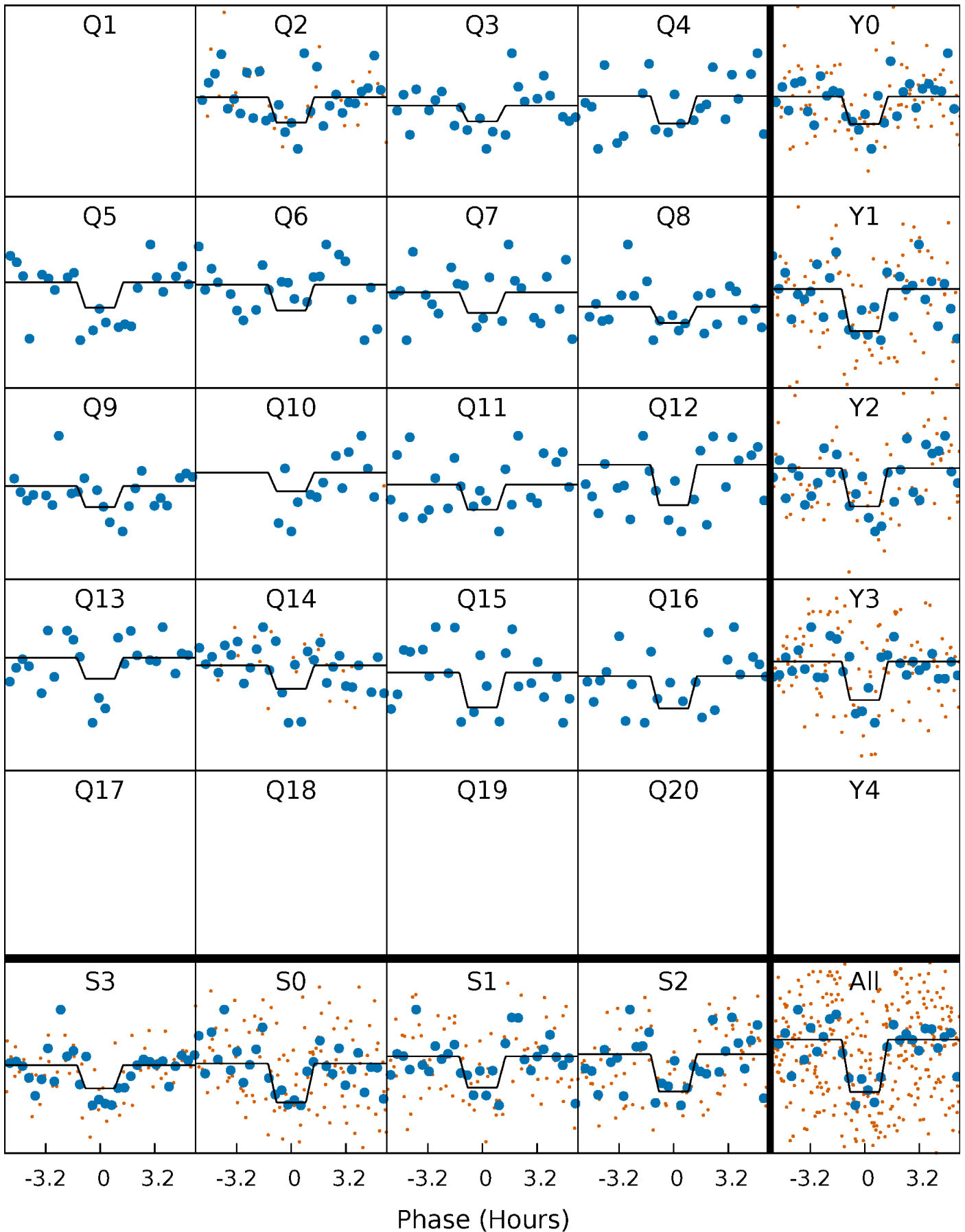
DV Quarter-Phased Transit Curves

TCE 003218844-01 P= 85.113370 Days $T_0=171.820477$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

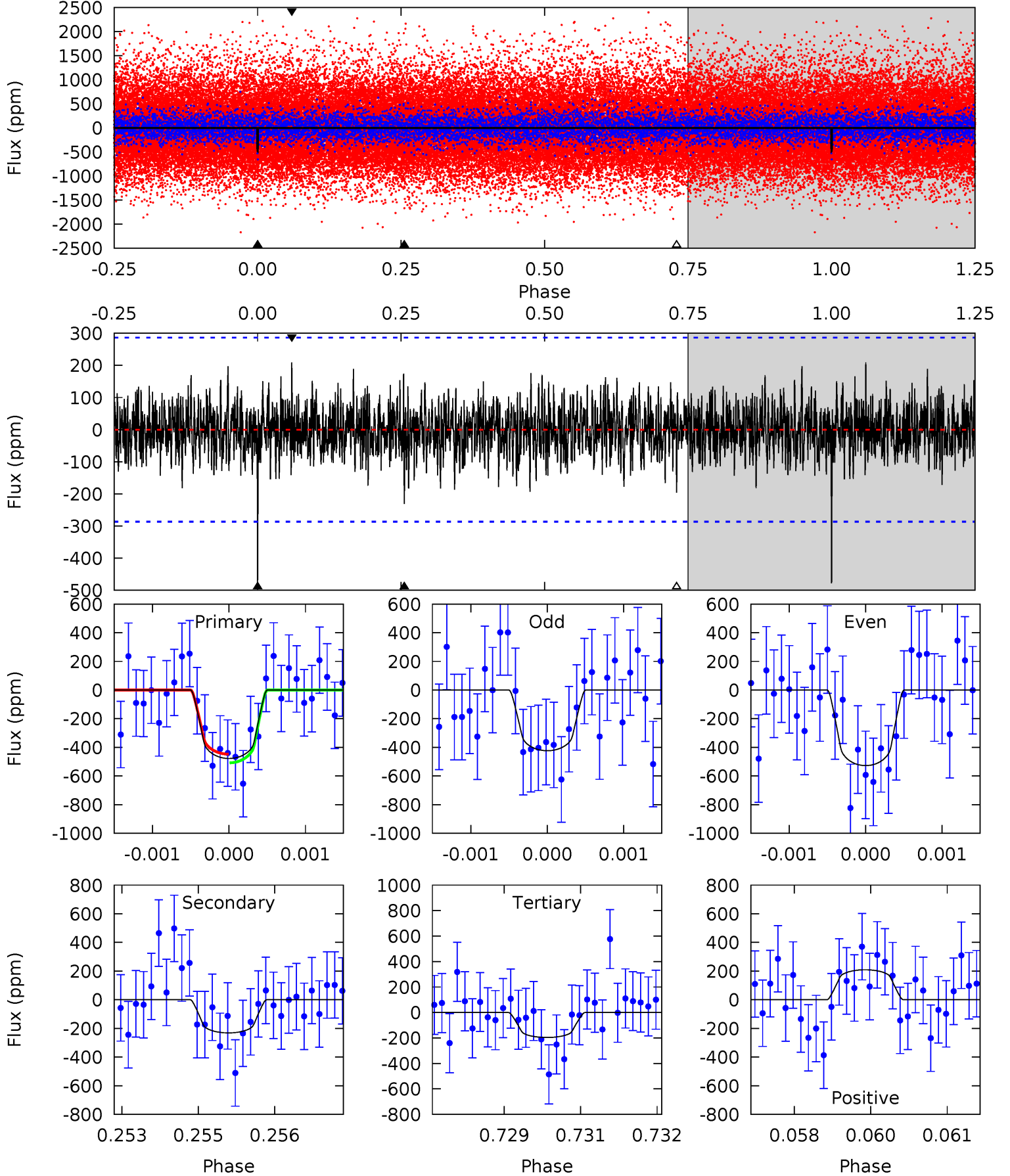
TCE 003218844-01 P= 85.113399 Days $T_0=171.822051$ (BKJD)



DV Model-Shift Uniqueness Test

003218844-01, P = 85.113370 Days, E = 86.707107 Days

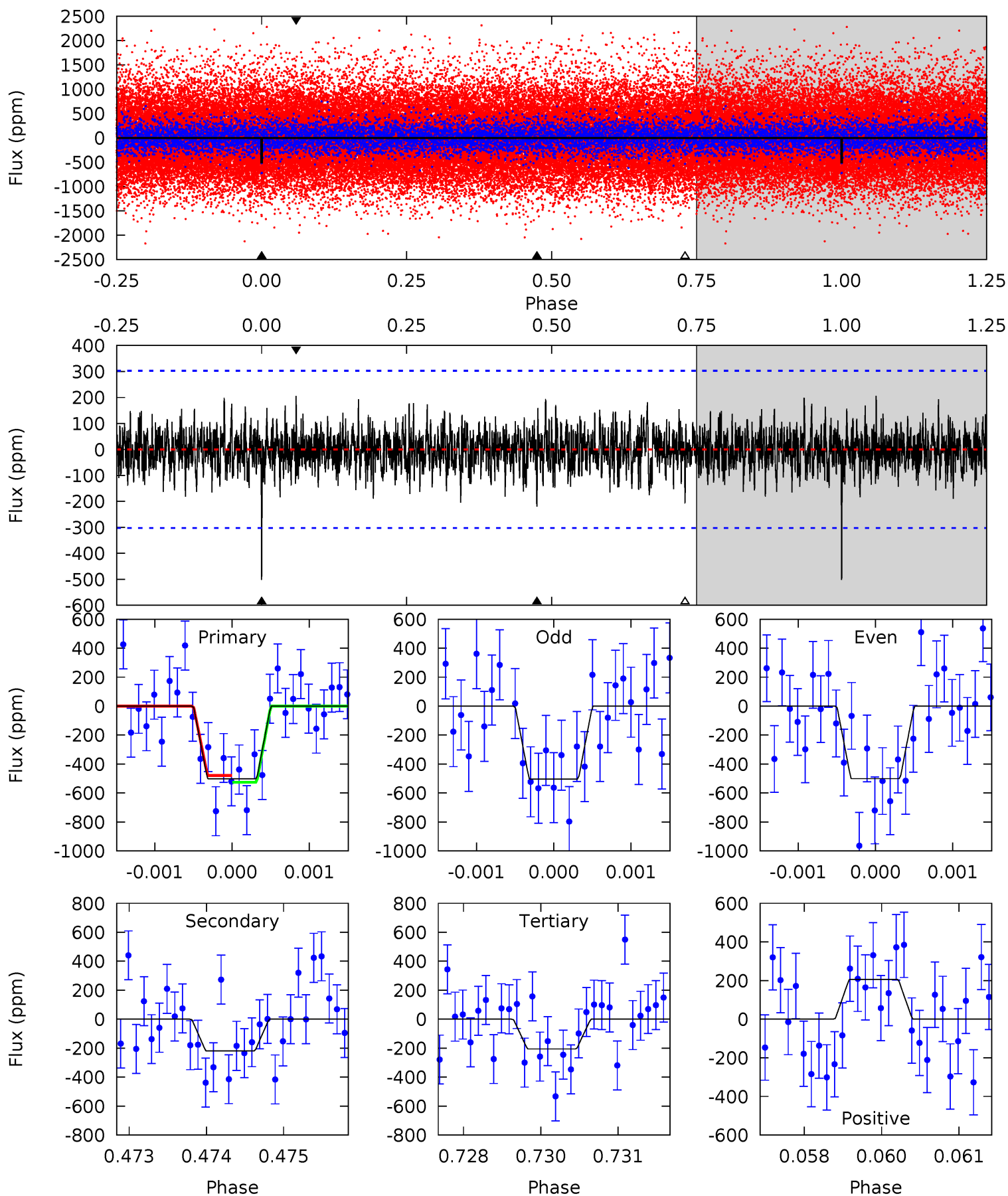
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.97	4.34	3.68	3.93	5.38	3.18	1.15	5.29	5.04	0.66	0.41	0.98	1.19	0.30	0.57



Alt Model-Shift Uniqueness Test

003218844-01, P = 85.113399 Days, E = 86.708652 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.97	3.92	3.67	3.68	5.40	3.21	1.09	5.30	5.29	0.25	0.24	0.03	1.14	0.29	0.41



Stellar Parameters For KIC 003218844

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6018^{+169}_{-211}	$4.485^{+0.054}_{-0.216}$	$-0.040^{+0.250}_{-0.300}$	$0.975^{+0.318}_{-0.106}$	$1.058^{+0.134}_{-0.134}$	$1.608^{+0.361}_{-0.901}$
	+3%/-4%	+1%/-5%	+625%/-750%	+33%/-11%	+13%/-13%	+22%/-56%
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 003218844-01 / KOI 7646.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-231 ± 53	$3.52^{+3.33}_{-2.30}$	599^{+49}_{-29}	4328^{+2978}_{-848}	1446^{+11744}_{-1061}
Alt.	-220 ± 56	$3.62^{+3.18}_{-2.38}$	601^{+43}_{-31}	4309^{+2706}_{-885}	1359^{+9936}_{-999}

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 $A_{obs} \gg 1.0$

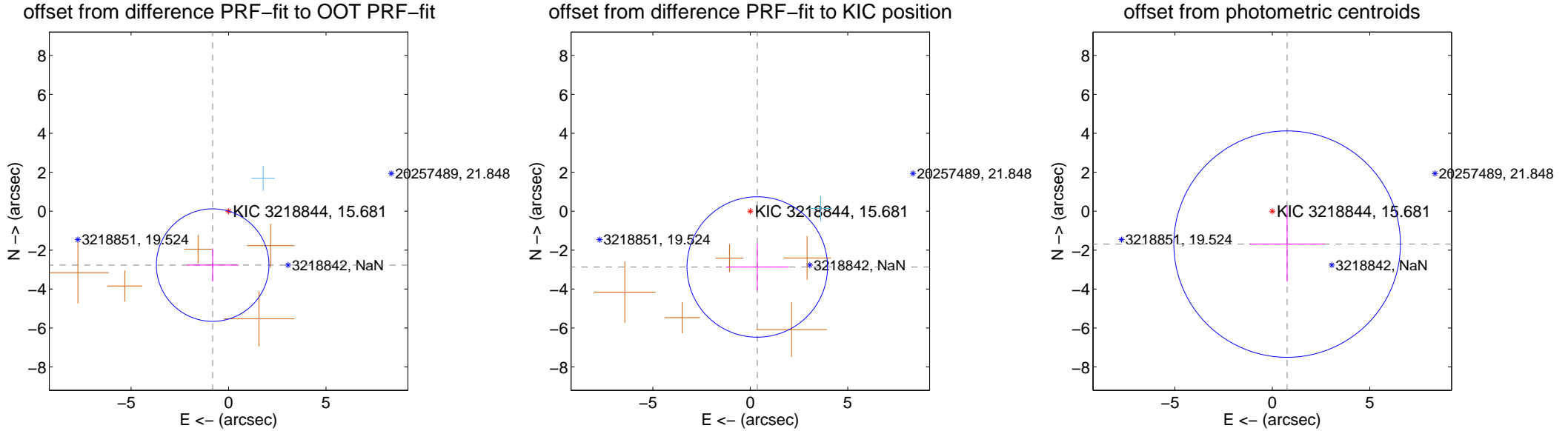
DV Centroid Data

Supplemental centroid analysis for 003218844-01. Kepler magnitude: 15.68. Transit SNR 7.24

There are 1 quarters with good PRF difference image offsets

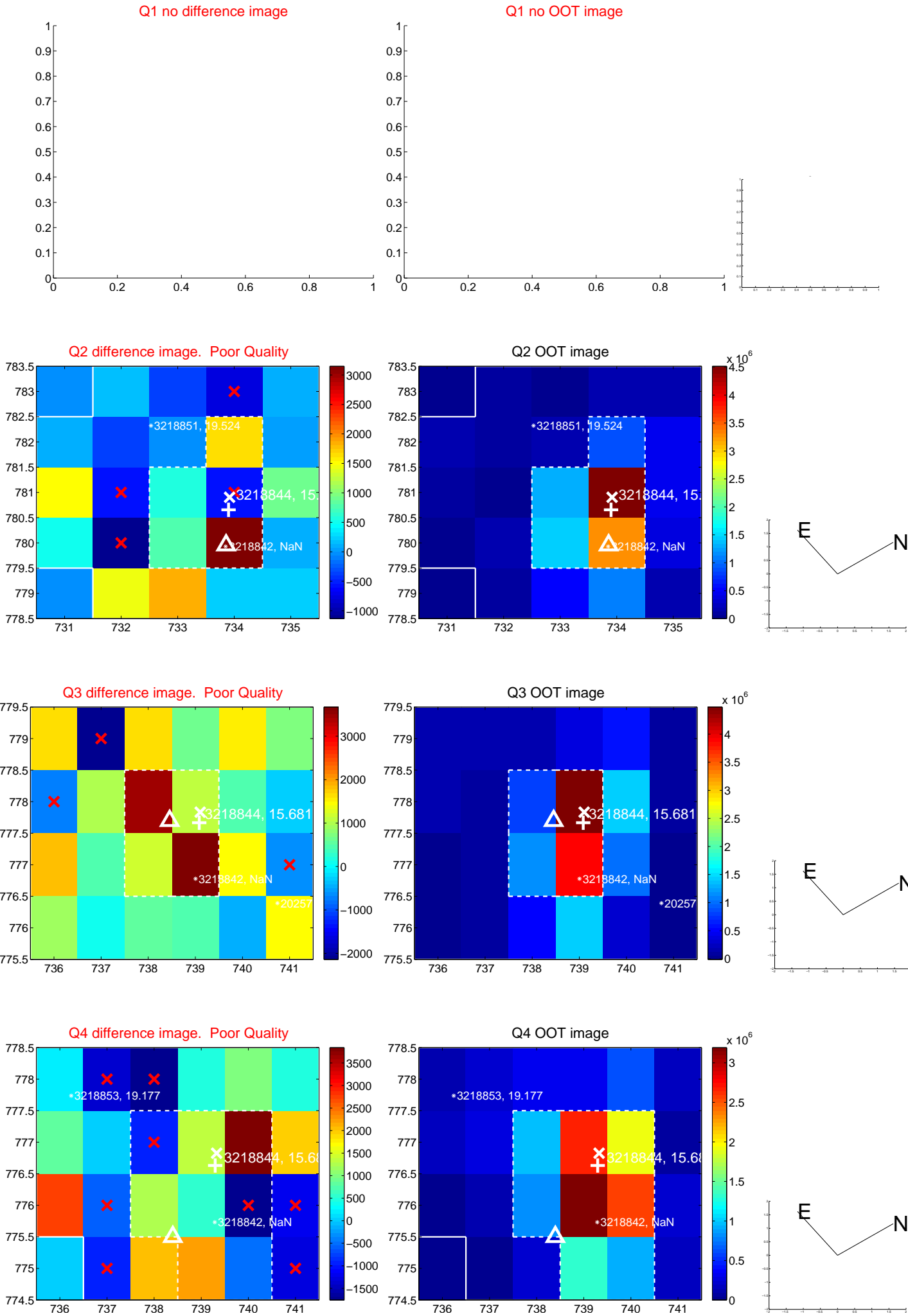
The OOT PRF centroid is offset from the target star catalog position by about 2.45 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.886 ± 0.963	3.00	0.816 ± 1.335	-2.769 ± 0.849
PRF-fit source offset from KIC position	2.889 ± 1.202	2.40	-0.358 ± 1.612	-2.866 ± 1.194
photometric centroid source offset	1.85 ± 1.94	0.96	-0.76 ± 1.95	-1.69 ± 1.94

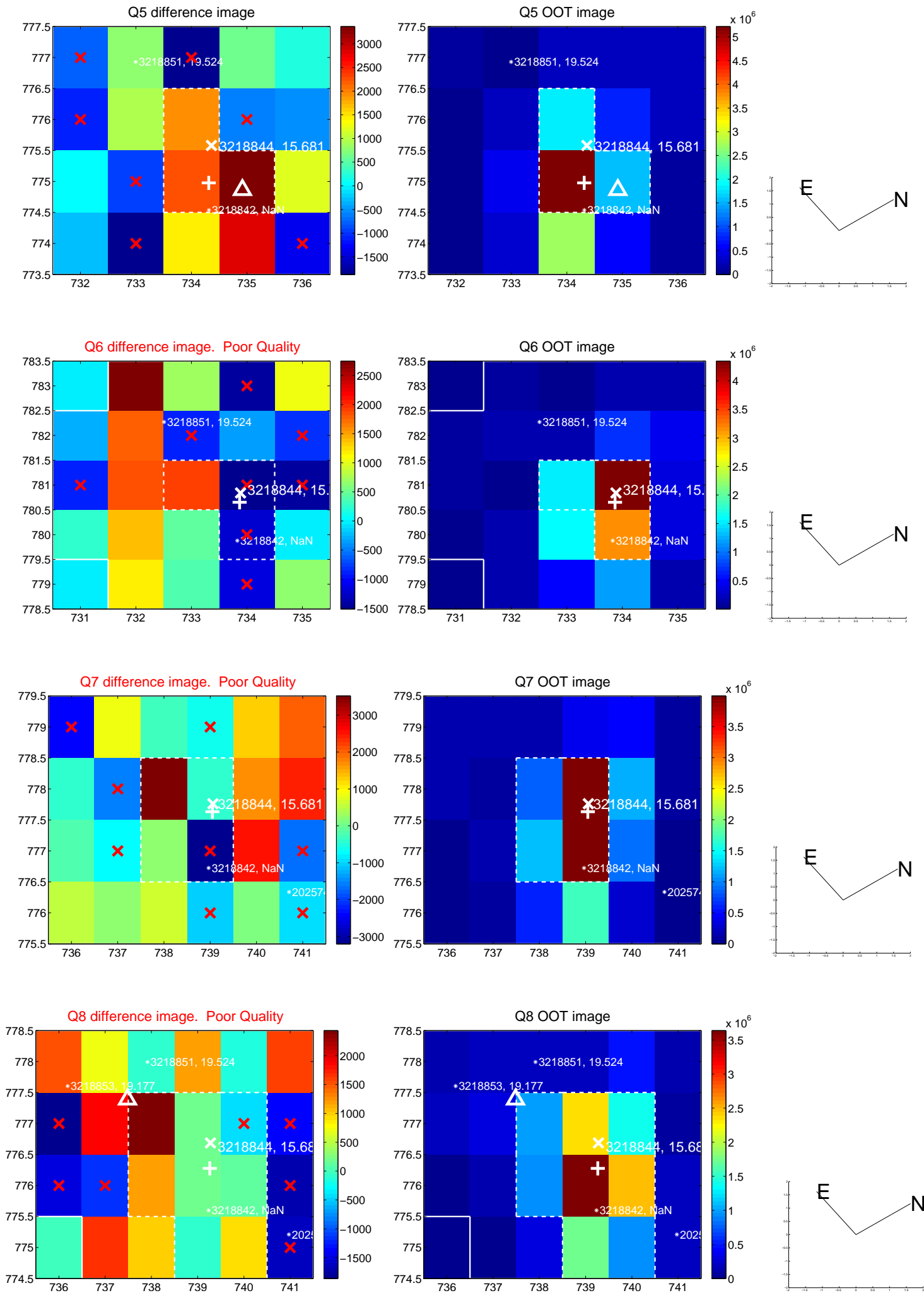


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

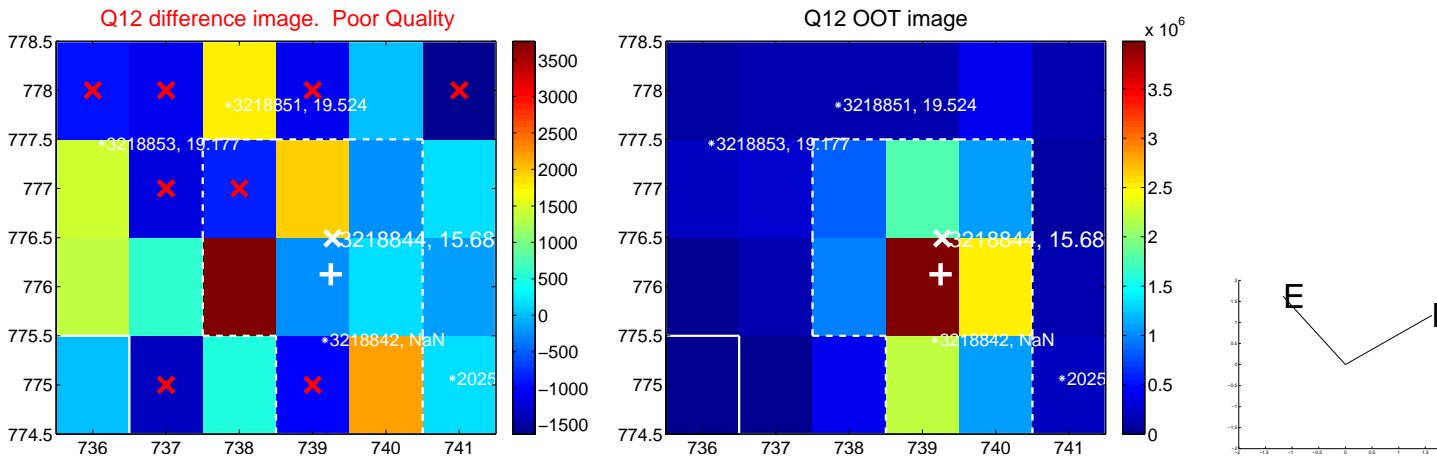
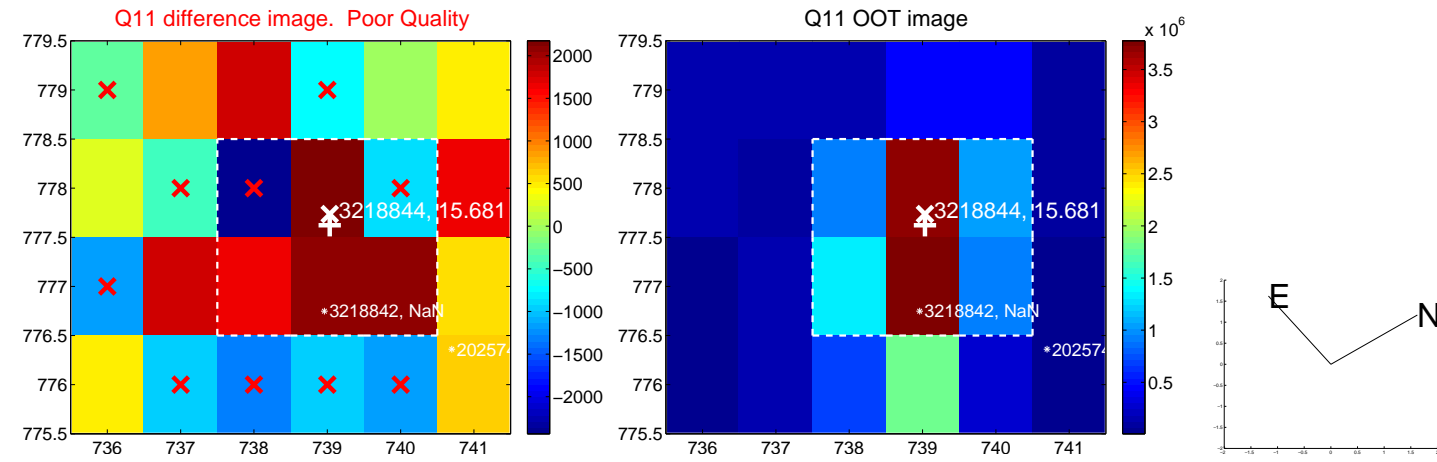
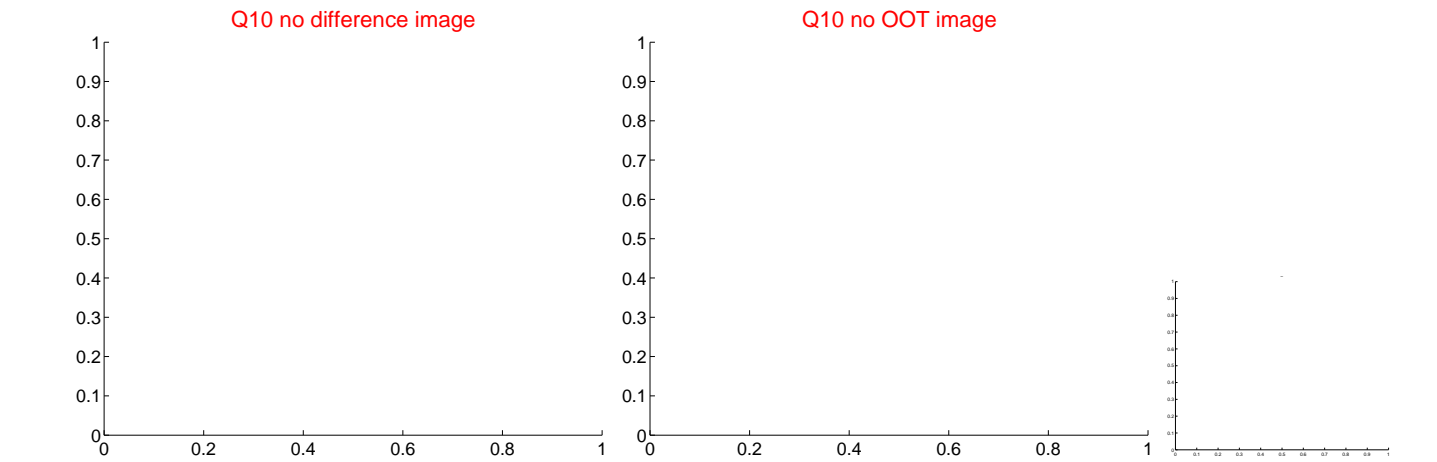
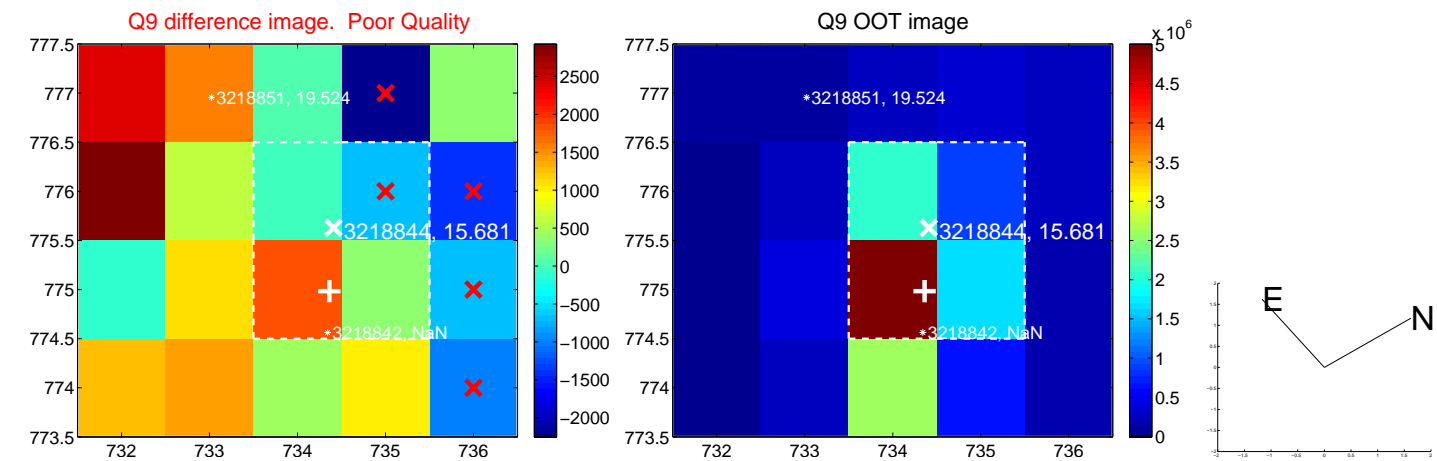
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



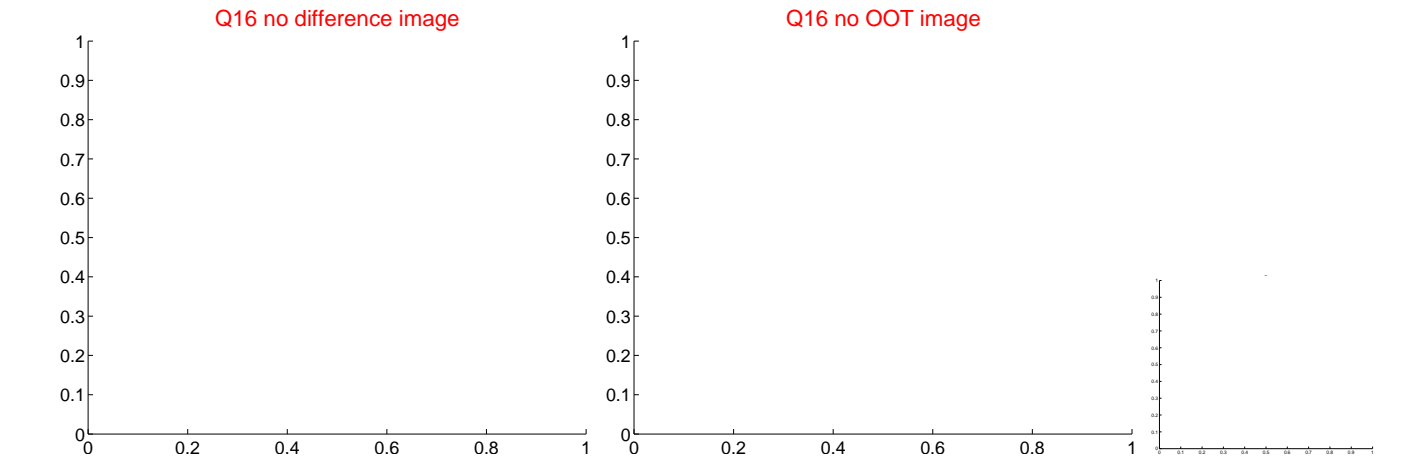
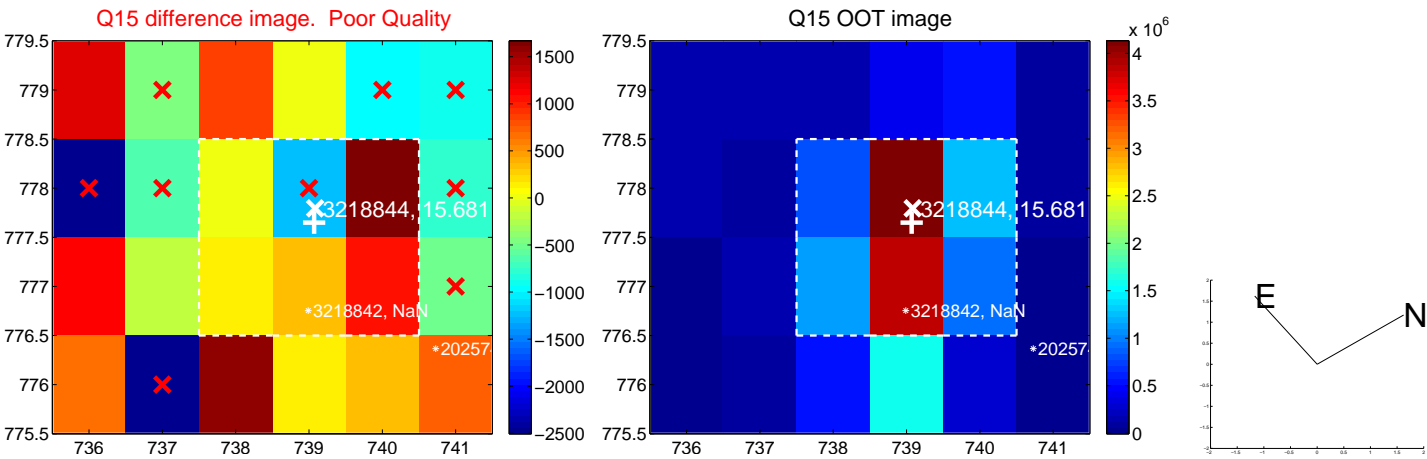
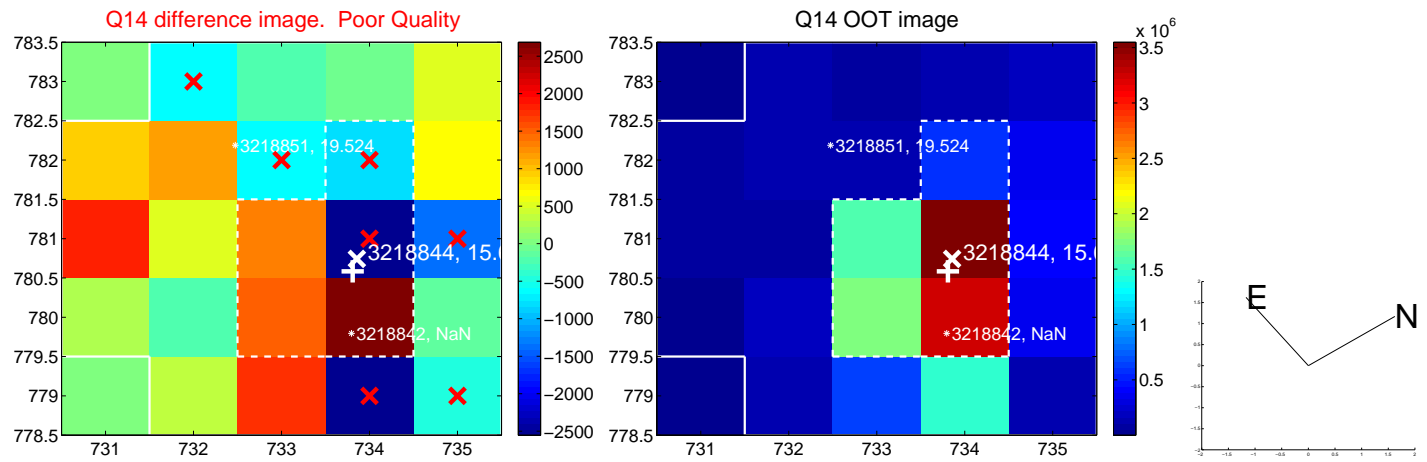
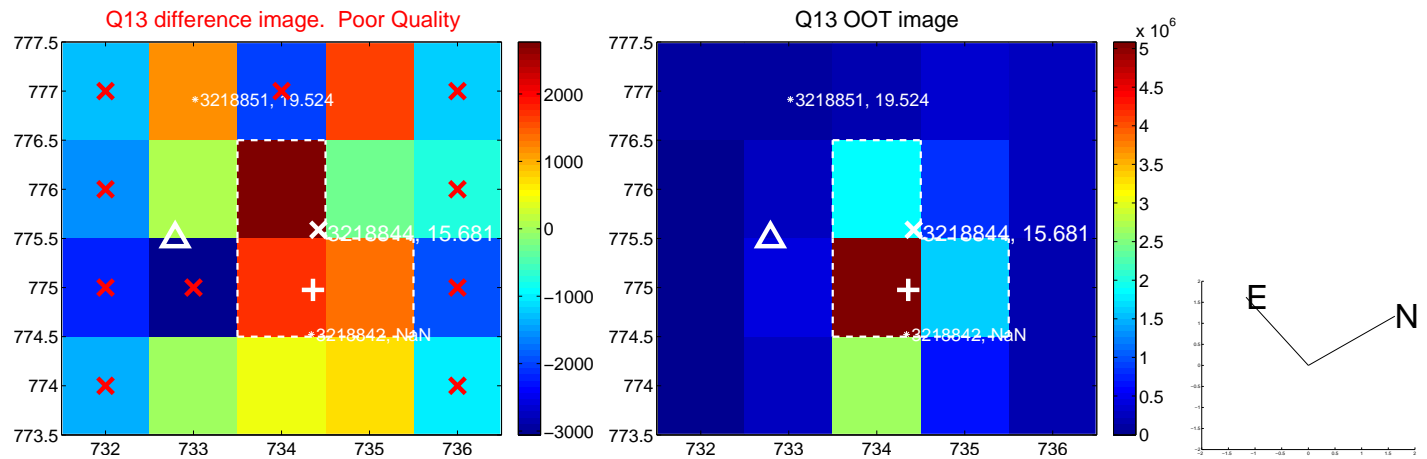
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



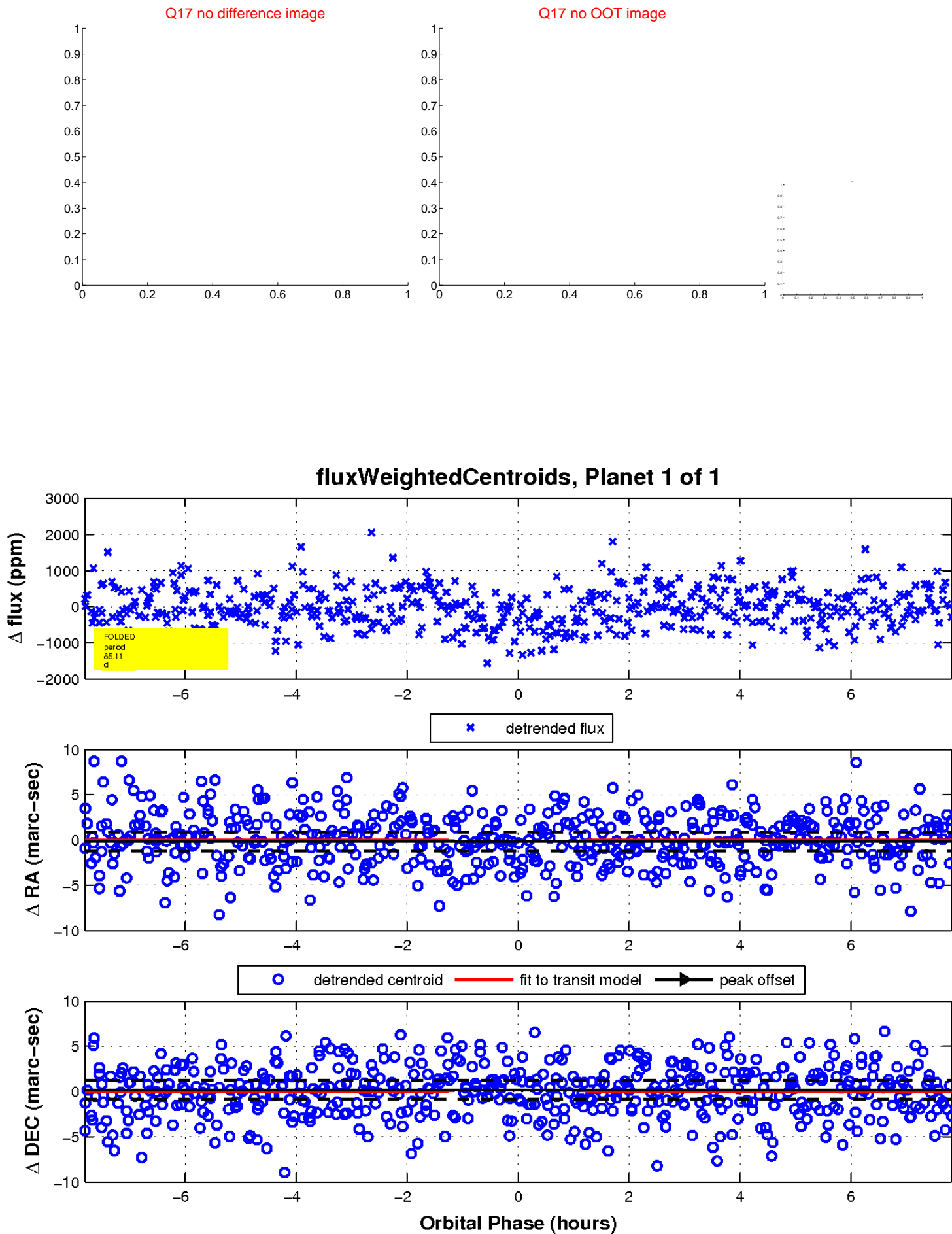
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

