

KIC 008493354

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})
008493354-01	OBS	4505.01	18.006432	138.340670	71.6	6.738	9.6	10.6	1.17	6173	1.11	96.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008493354-01	OBS	PC	0.99	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.

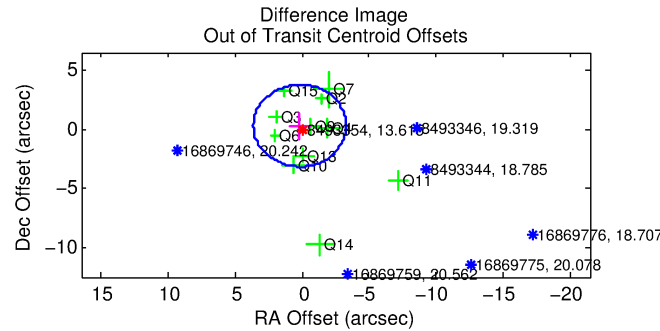
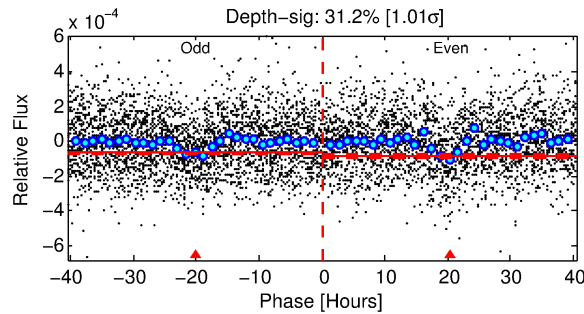
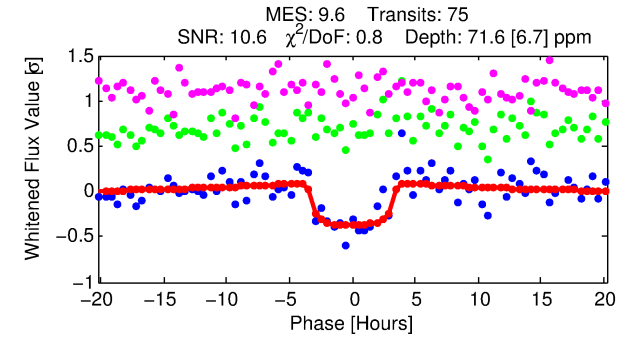
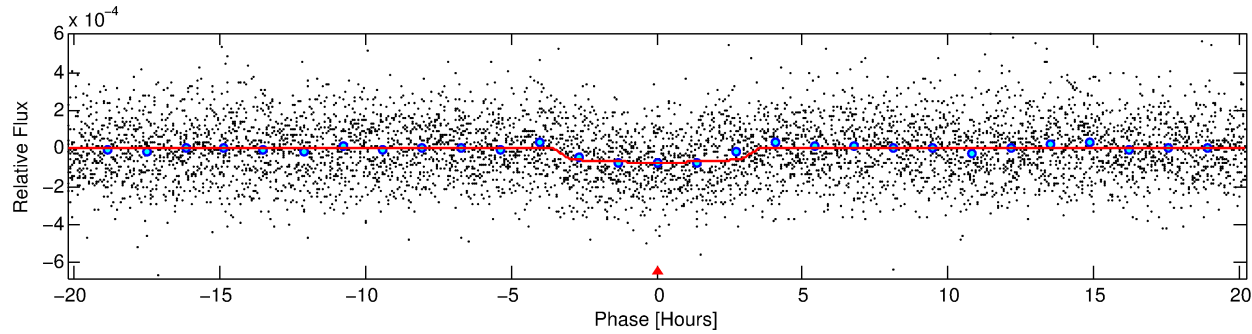
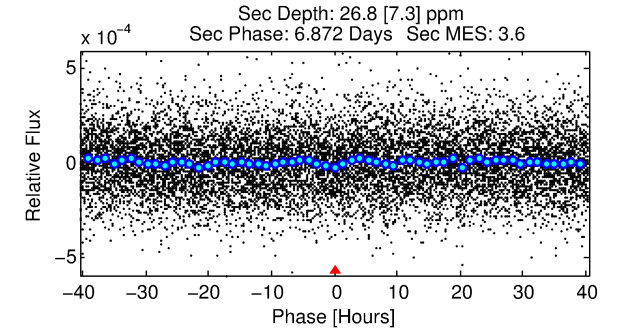
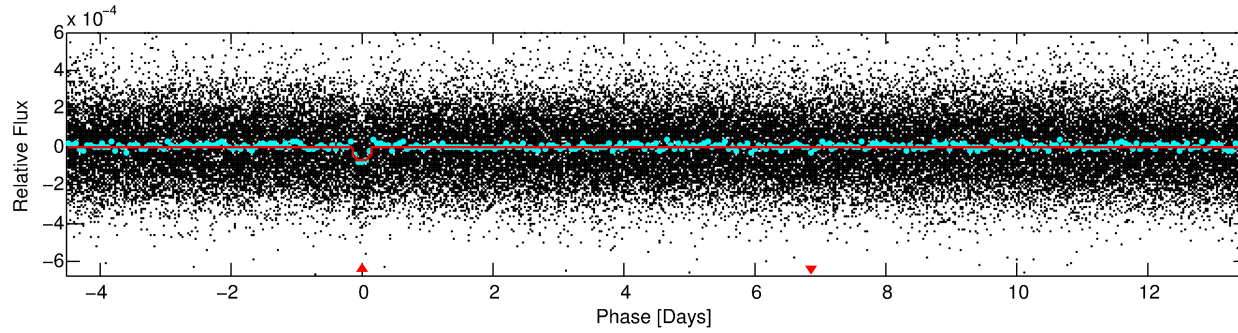
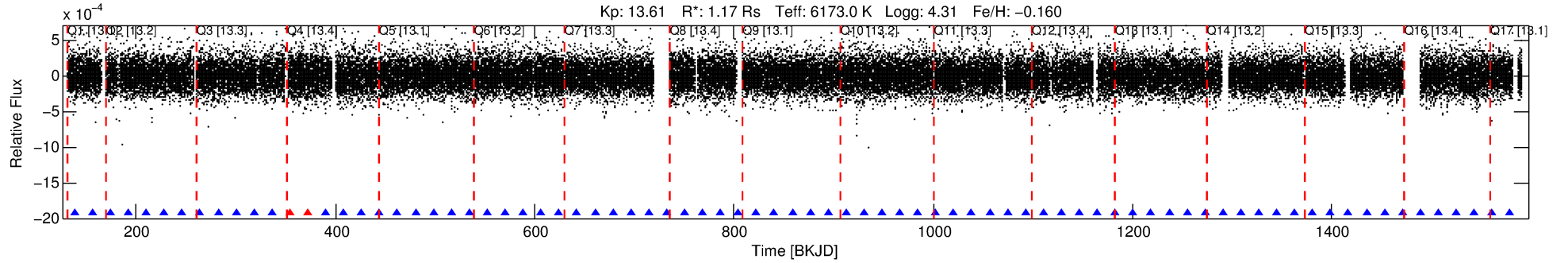
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008493354-01

No Significant Match Found

DV One-Page Summary

KIC: 8493354 Candidate: 1 of 1 Period: 18.006 d
KOI: K04505.01 Corr: 0.891



DV Fit Results:

Period = 18.00643 [0.00022] d
Epoch = 138.3407 [0.0098] BKJD
Rp/R* = 0.0087 [0.0034]
a/R* = 11.64 [23.79]
b = 0.83 [0.76]
Seff = 96.46 [22.36]
Teq = 799 [46] K
Rp = 1.11 [0.48] Re
a = 0.1355 [0.0205] AU
Ag = 220.55 [190.64] [1.15σ]
Teffp = 4761 [995] K [3.98σ]

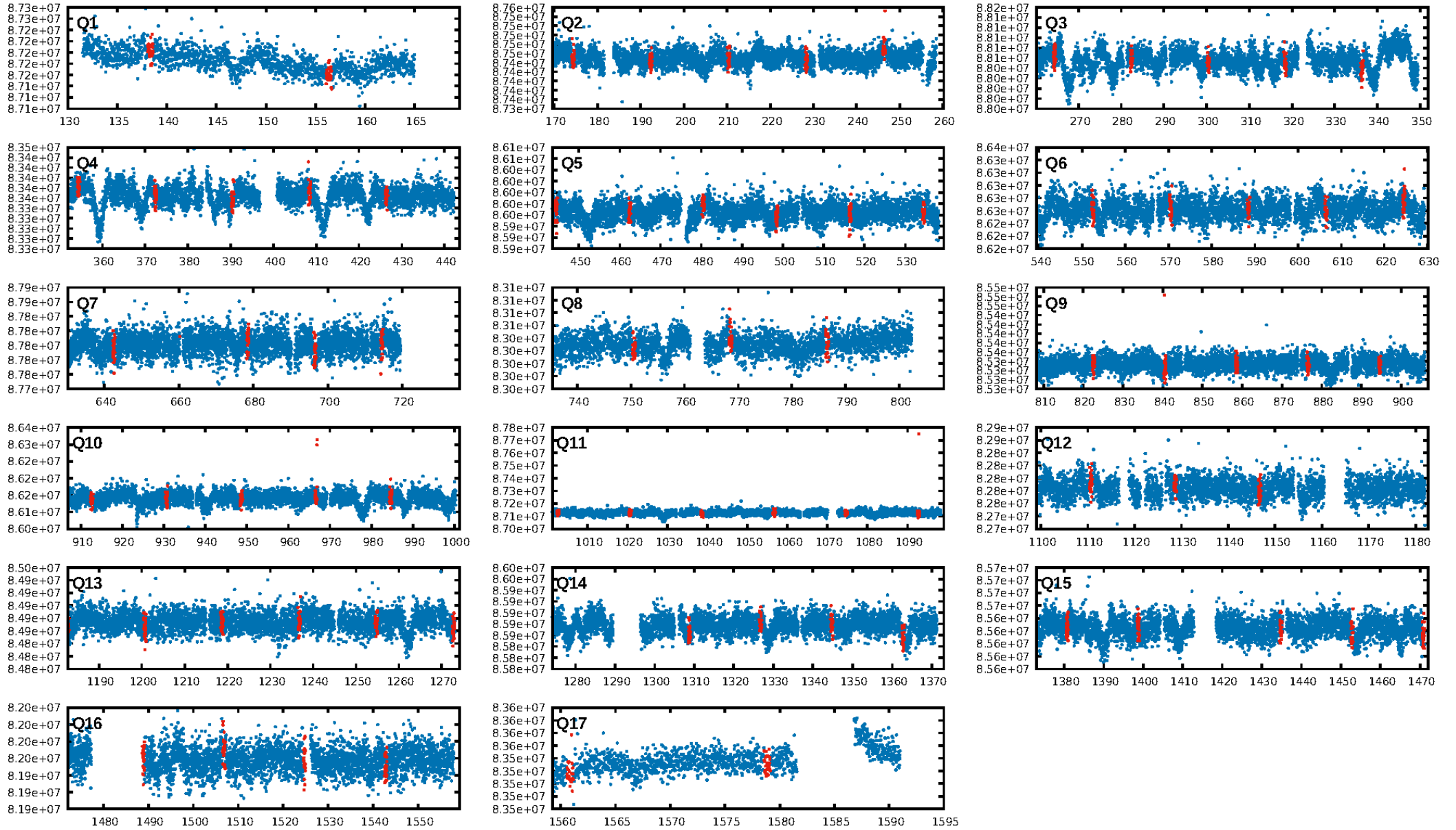
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.81e-22
RollingBand-fgt: 0.97 [69/71]
GhostDiagnostic-chr: 1.922
Centroid-sig: 7.6%
Centroid-so: 1.495 arcsec [1.15σ]
OotOffset-rm: 0.346 arcsec [0.30σ]
KicOffset-rm: 0.371 arcsec [0.32σ]
OotOffset-st: 4/4/1/2 [11]
KicOffset-st: 4/4/1/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

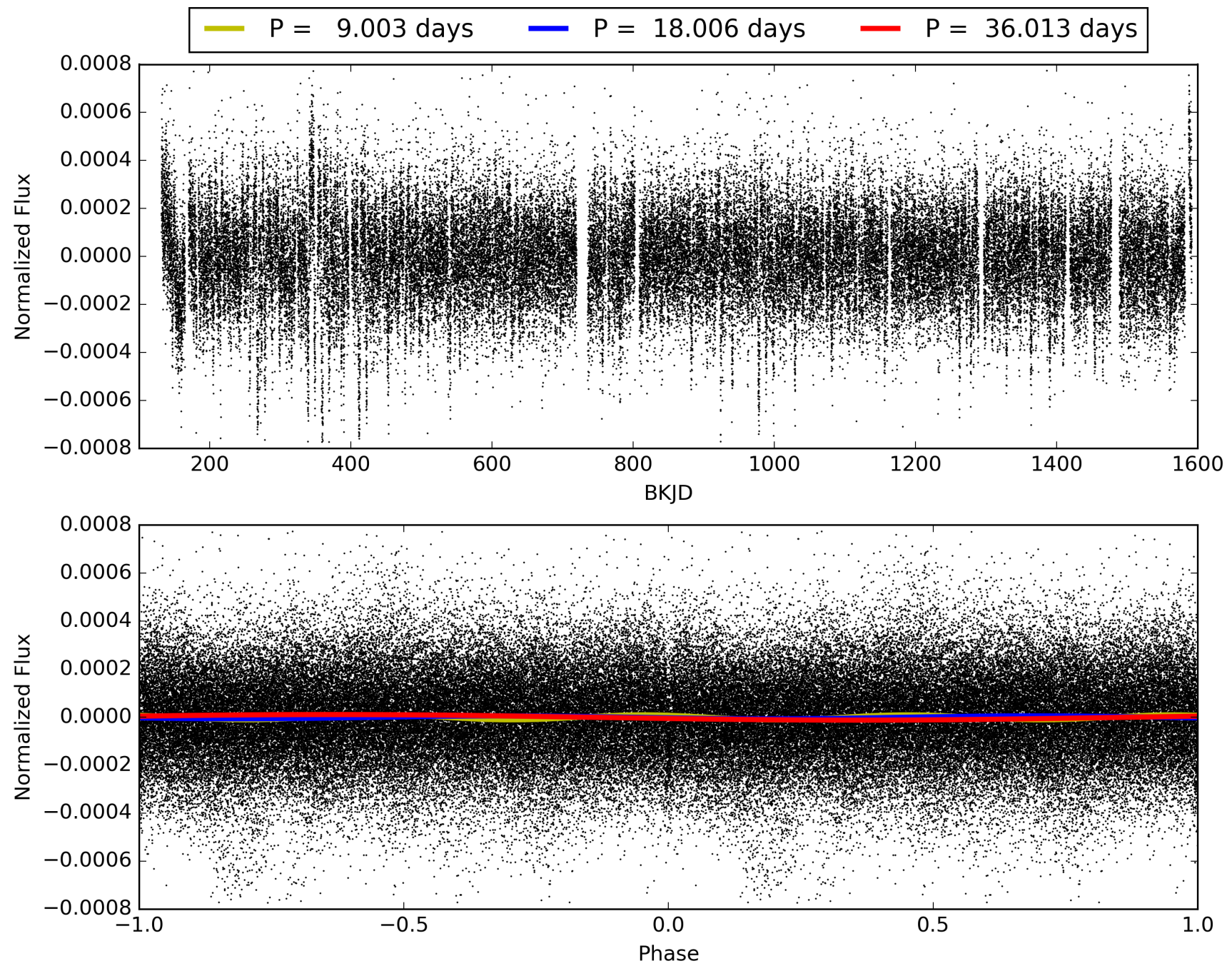
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:15:33 Z

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

TCE 008493354-01, PDC Light Curves

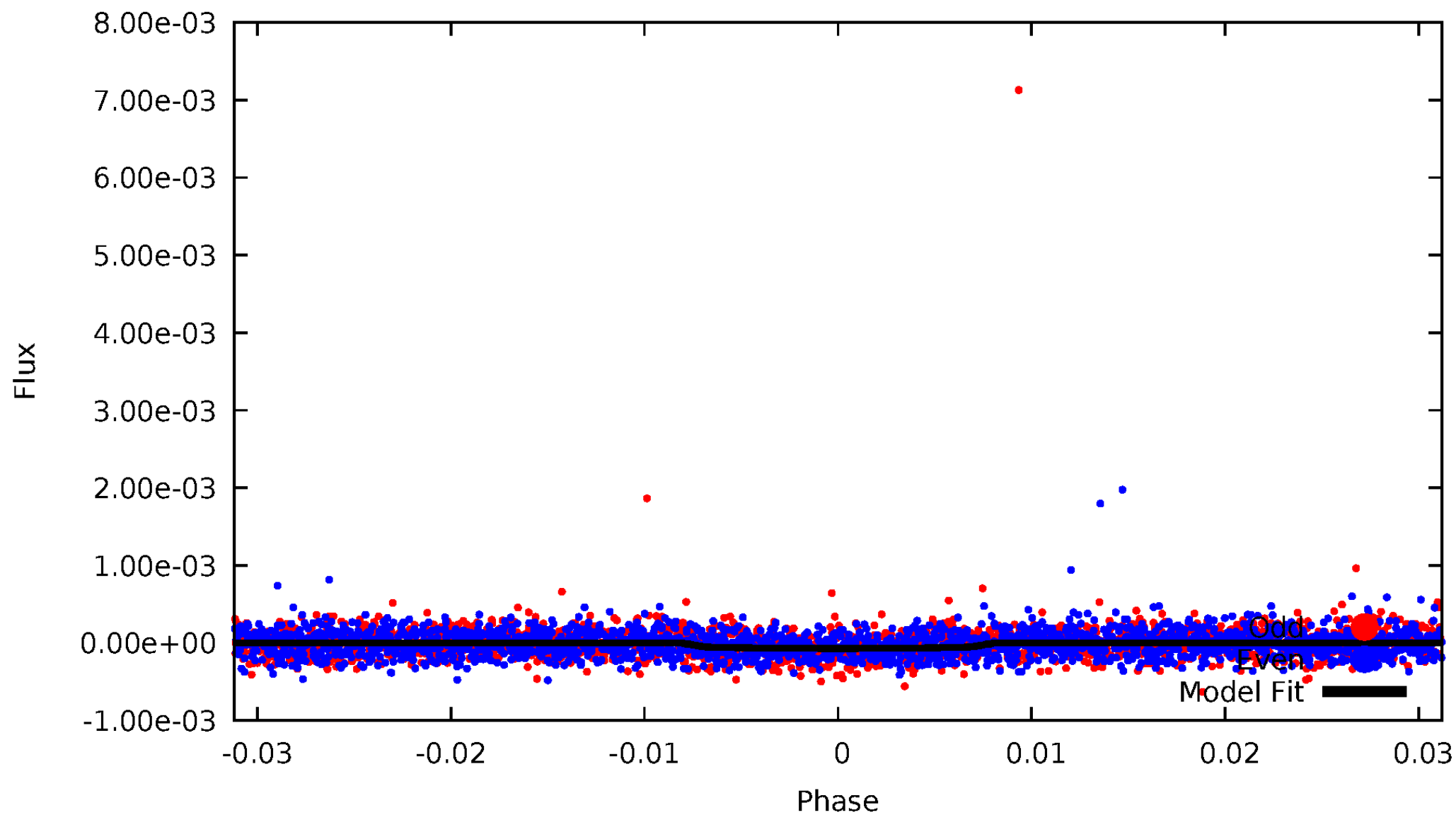


TCE 008493354-01



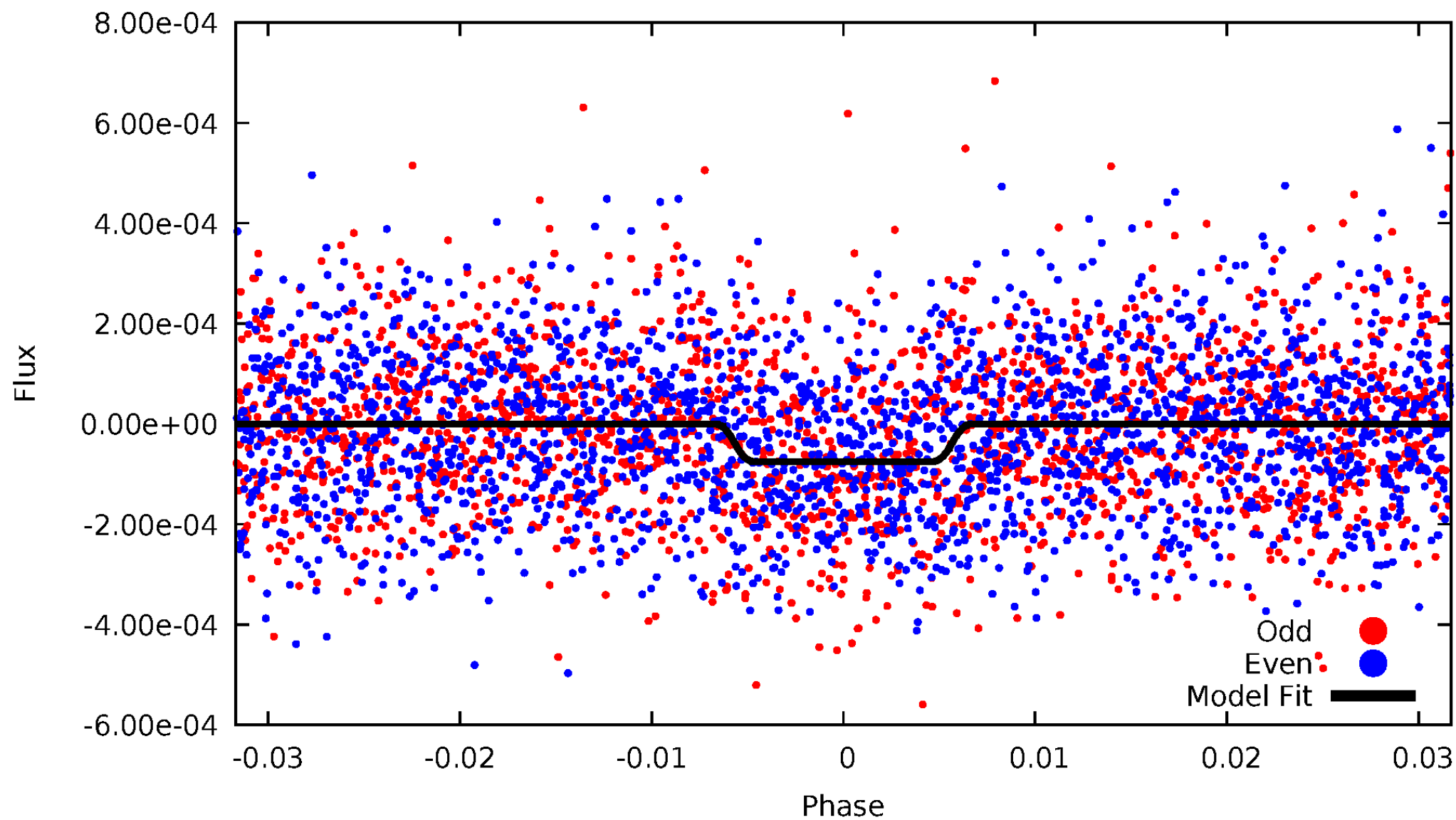
DV Odd/Even

TCE 008493354-01



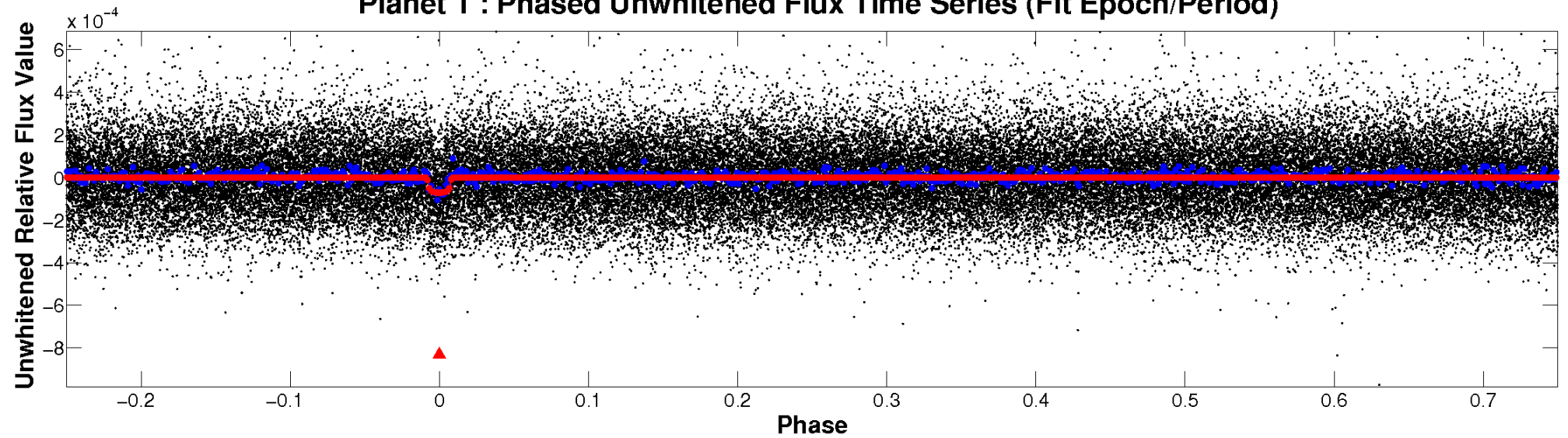
ALT Odd/Even

TCE 008493354-01

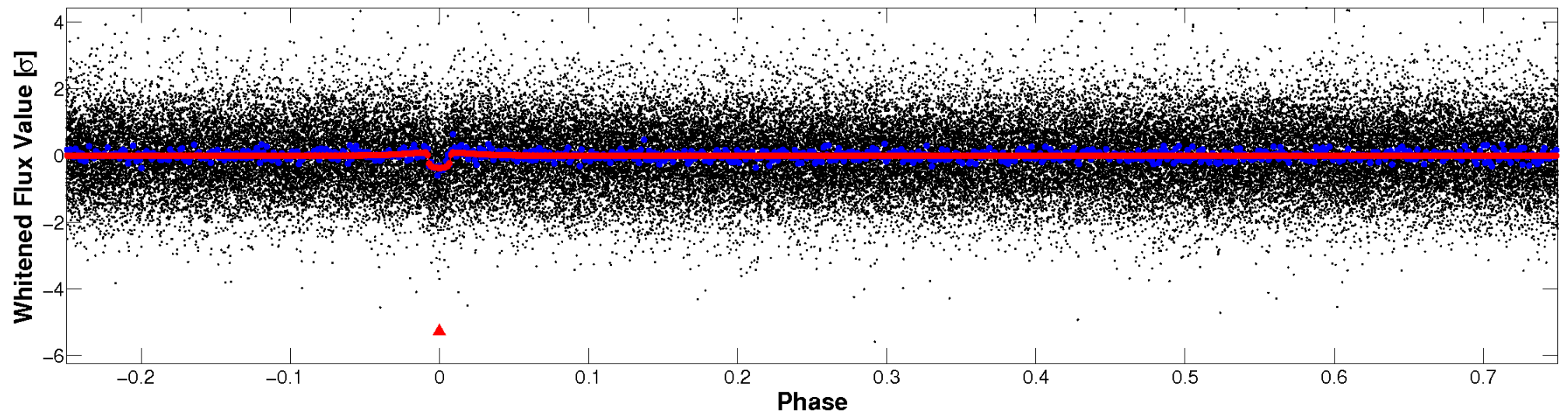


Non-Whitened Vs. Whitened Light Curve

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

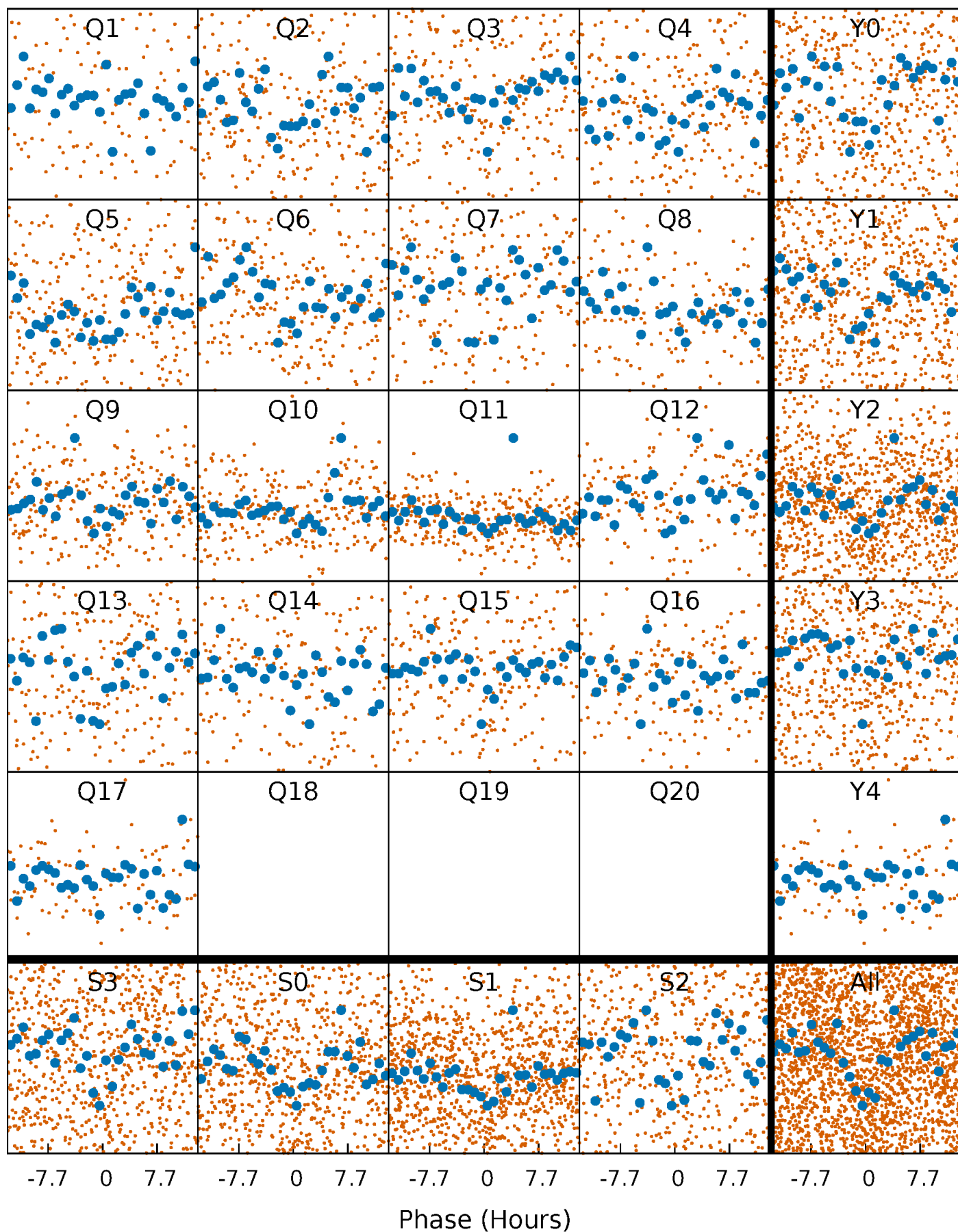


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



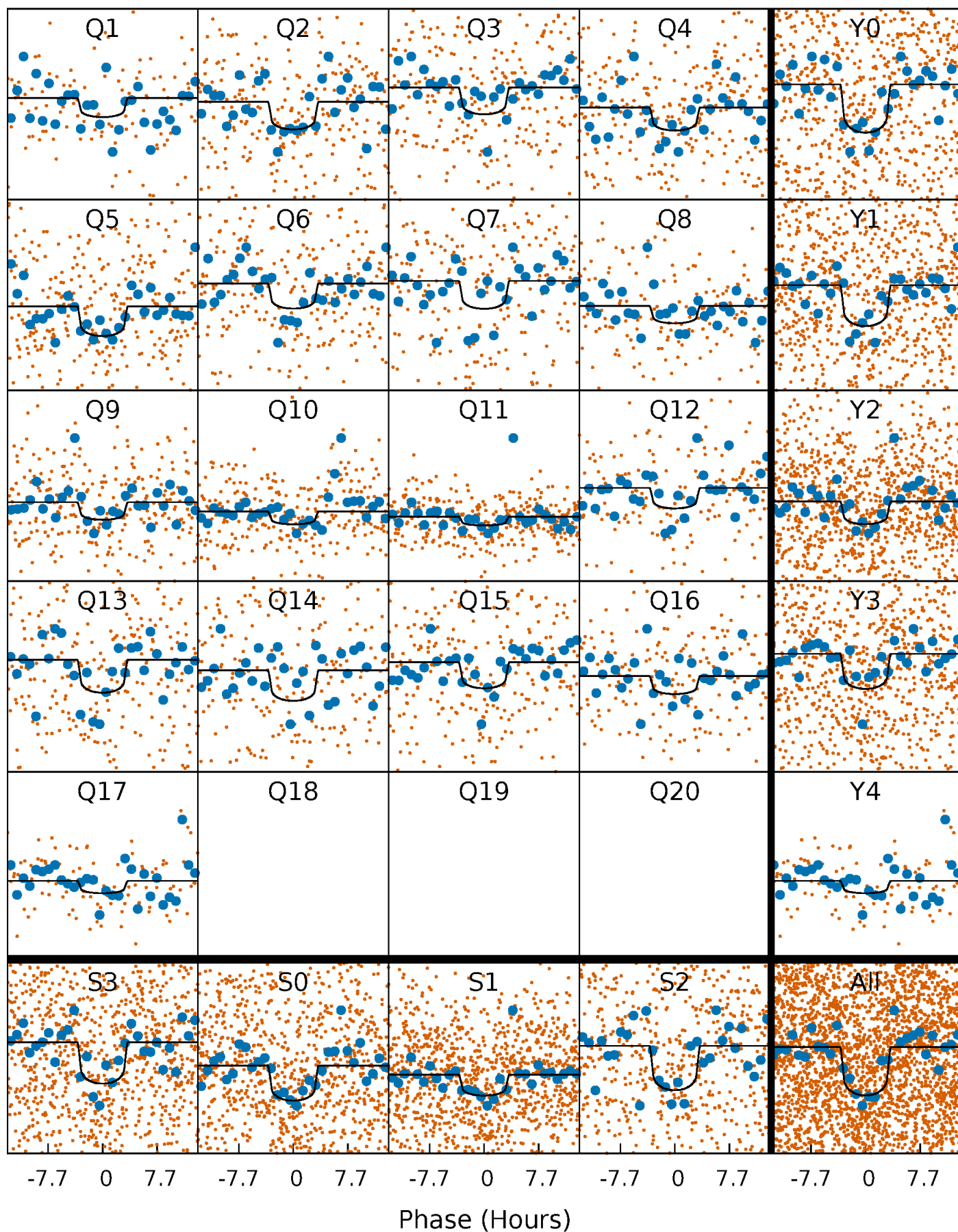
PDC Quarter-Phased Transit Curves

TCE 008493354-01 P= 18.006432 Days $T_0=138.340670$ (BKJD)



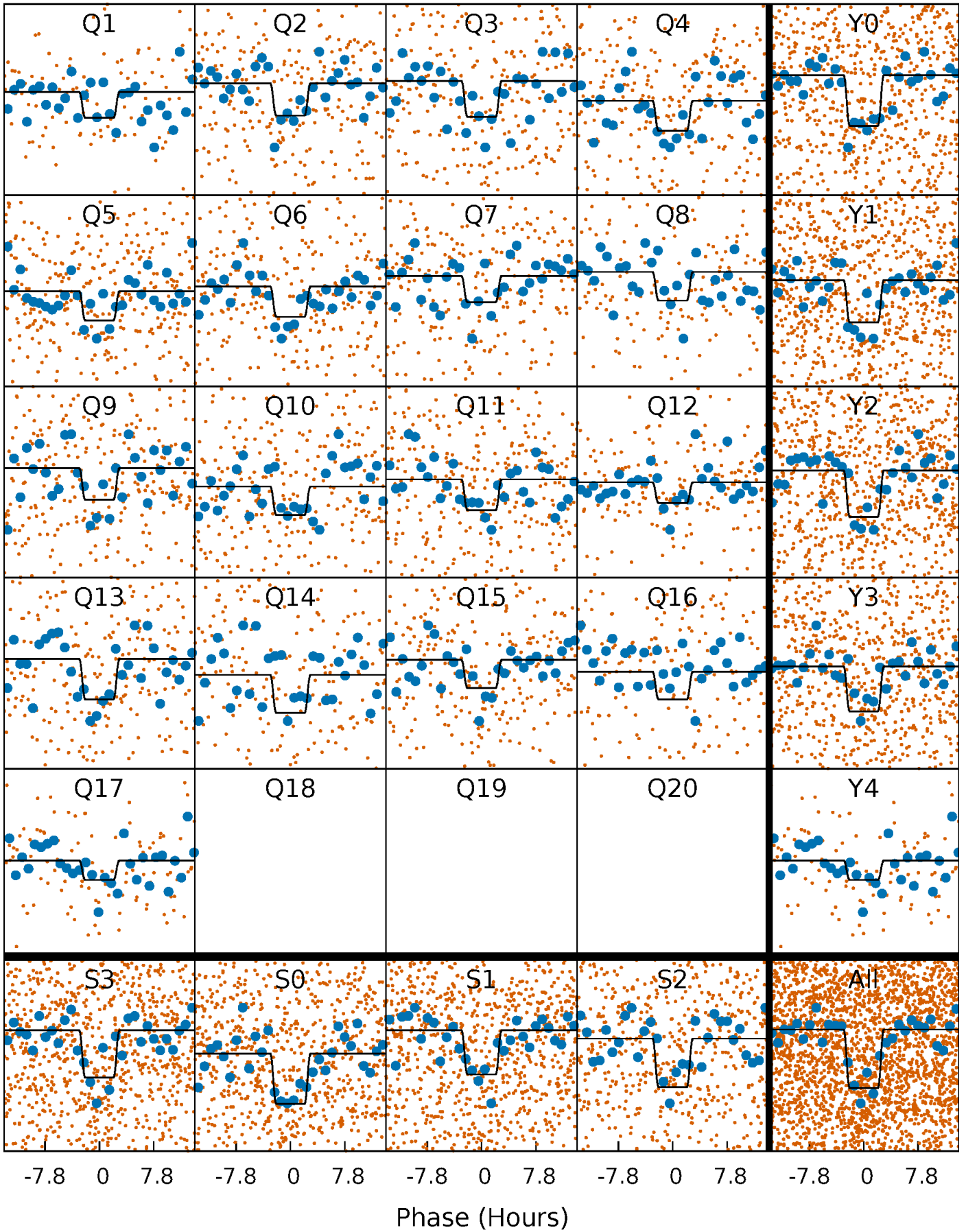
DV Quarter-Phased Transit Curves

TCE 008493354-01 P= 18.006432 Days $T_0=138.340670$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

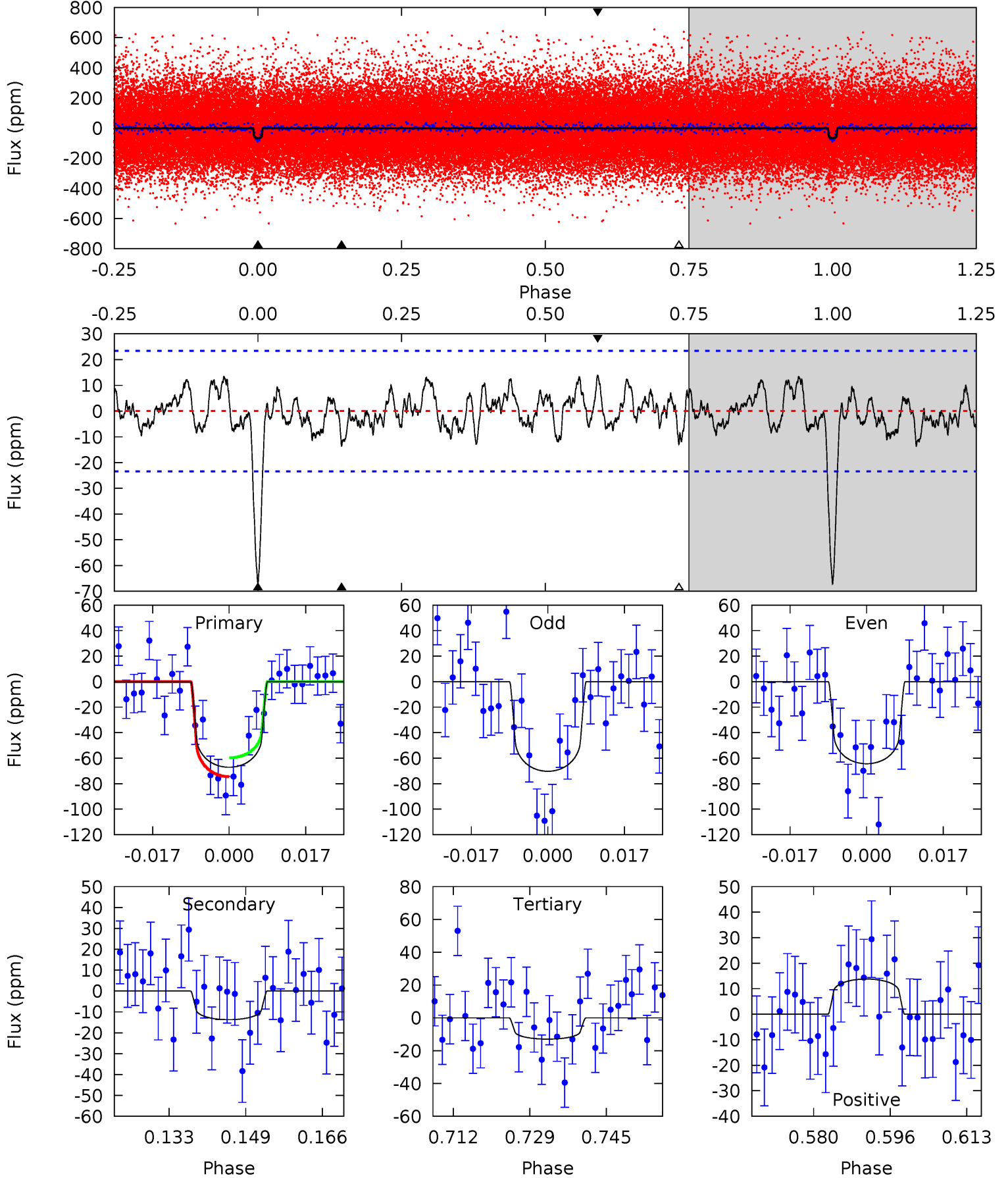
TCE 008493354-01 P= 18.006510 Days $T_0=138.326836$ (BKJD)



DV Model-Shift Uniqueness Test

008493354-01, P = 18.006432 Days, E = 120.334238 Days

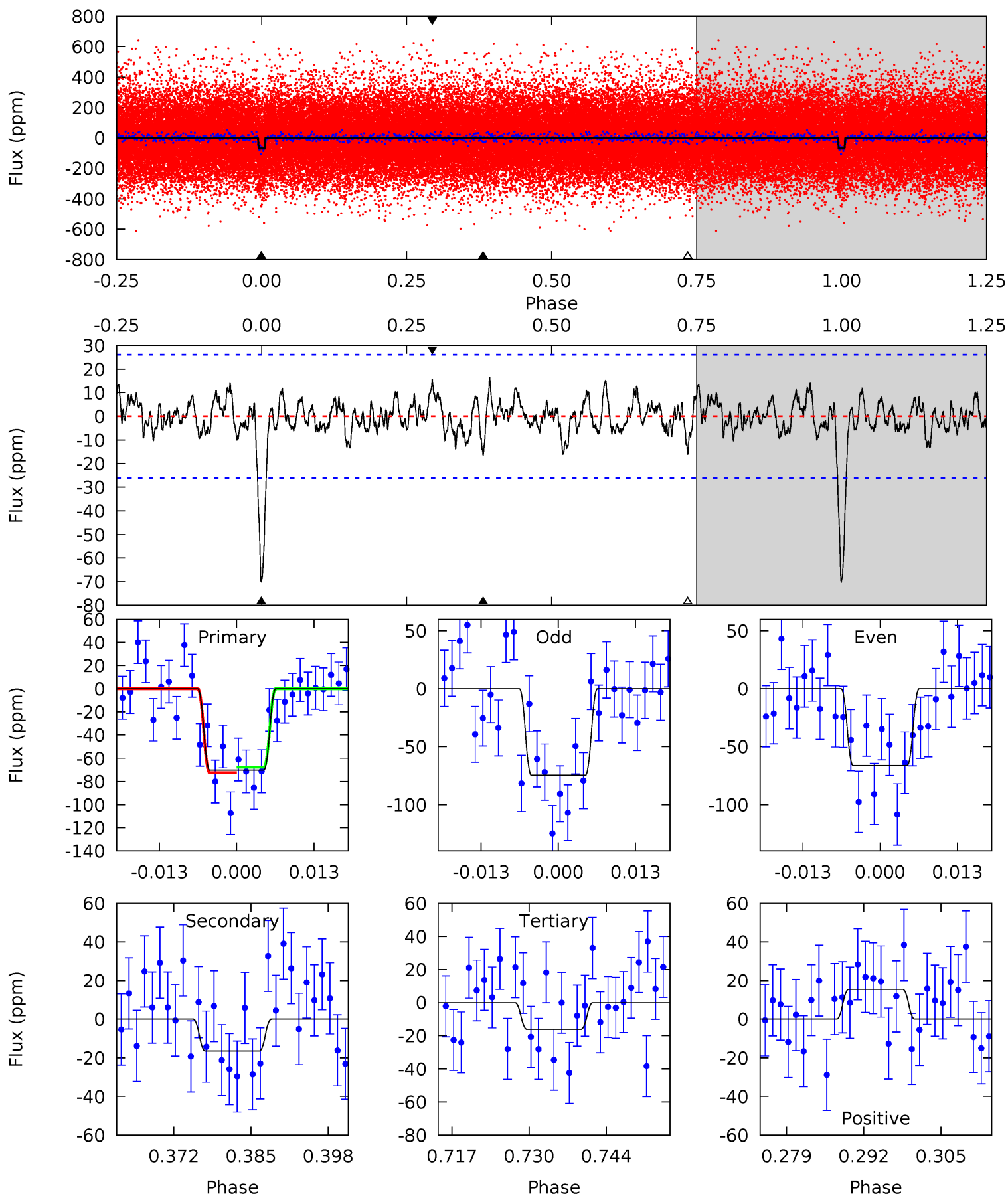
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	2.89	2.73	2.90	4.93	2.40	1.22	11.4	11.2	0.16	-0.01	0.62	0.94	0.17	1.56



Alt Model-Shift Uniqueness Test

008493354-01, P = 18.006510 Days, E = 120.320326 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	3.13	3.06	2.93	4.97	2.48	1.07	10.3	10.4	0.07	0.20	0.80	0.94	0.19	0.45



Stellar Parameters For KIC 008493354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6173^{+83}_{-83}	$4.314^{+0.115}_{-0.126}$	$-0.160^{+0.150}_{-0.150}$	$1.167^{+0.203}_{-0.136}$	$1.023^{+0.092}_{-0.053}$	$0.907^{+0.443}_{-0.319}$
	+1%/-1%	+3%/-3%	+94%/-94%	+17%/-12%	+9%/-5%	+49%/-35%
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 008493354-01 / KOI 4505.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 5	$1.14^{+0.47}_{-0.44}$	1118^{+48}_{-41}	4251^{+931}_{-611}	108^{+208}_{-65}
Alt.	-16 ± 5	$1.08^{+0.48}_{-0.42}$	1118^{+51}_{-48}	4416^{+1150}_{-616}	134^{+267}_{-77}

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

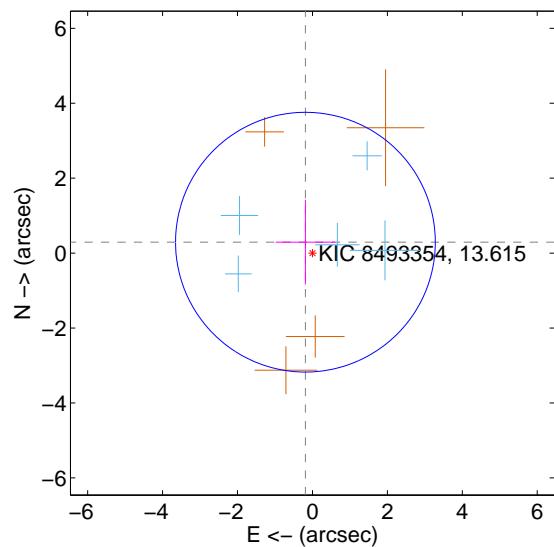
Supplemental centroid analysis for 008493354-01. Kepler magnitude: 13.62. Transit SNR 10.56

There are 5 quarters with good PRF difference image offsets

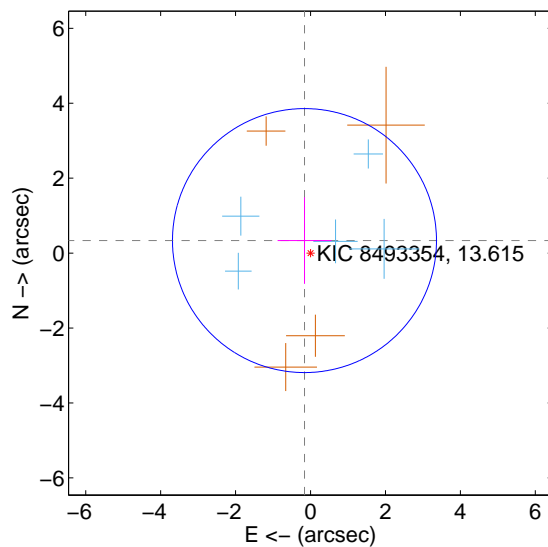
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.346 ± 1.156	0.30	0.187 ± 0.796	0.291 ± 1.132
PRF-fit source offset from KIC position	0.371 ± 1.175	0.32	0.161 ± 0.718	0.334 ± 1.156
photometric centroid source offset	1.49 ± 1.30	1.15	-0.01 ± 1.28	-1.49 ± 1.30

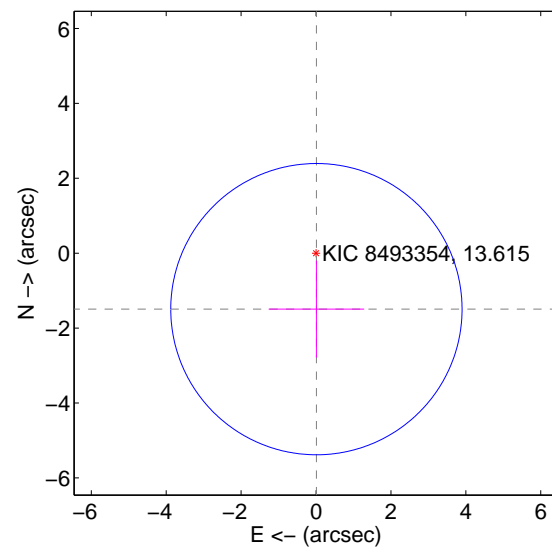
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

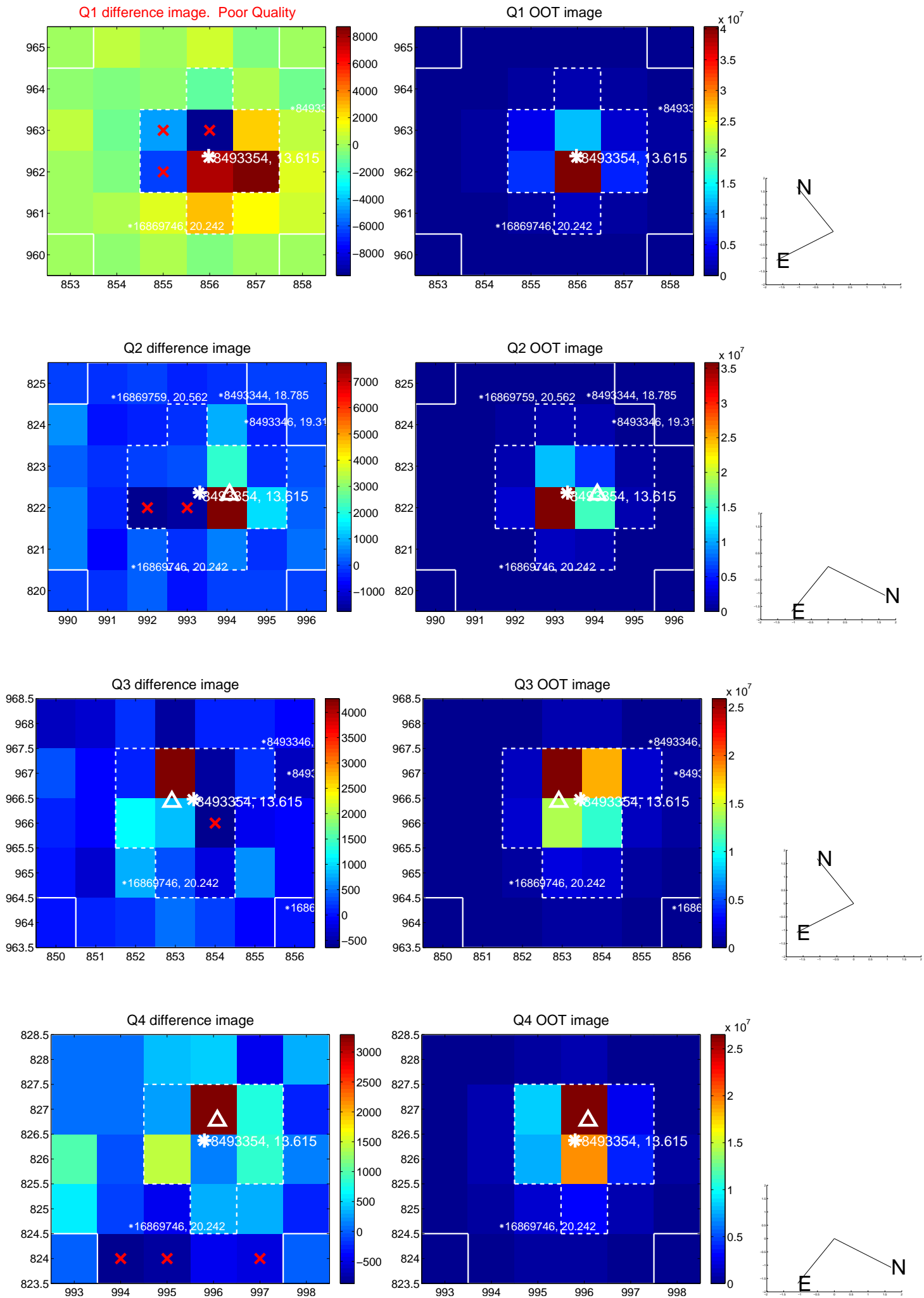


offset from photometric centroids

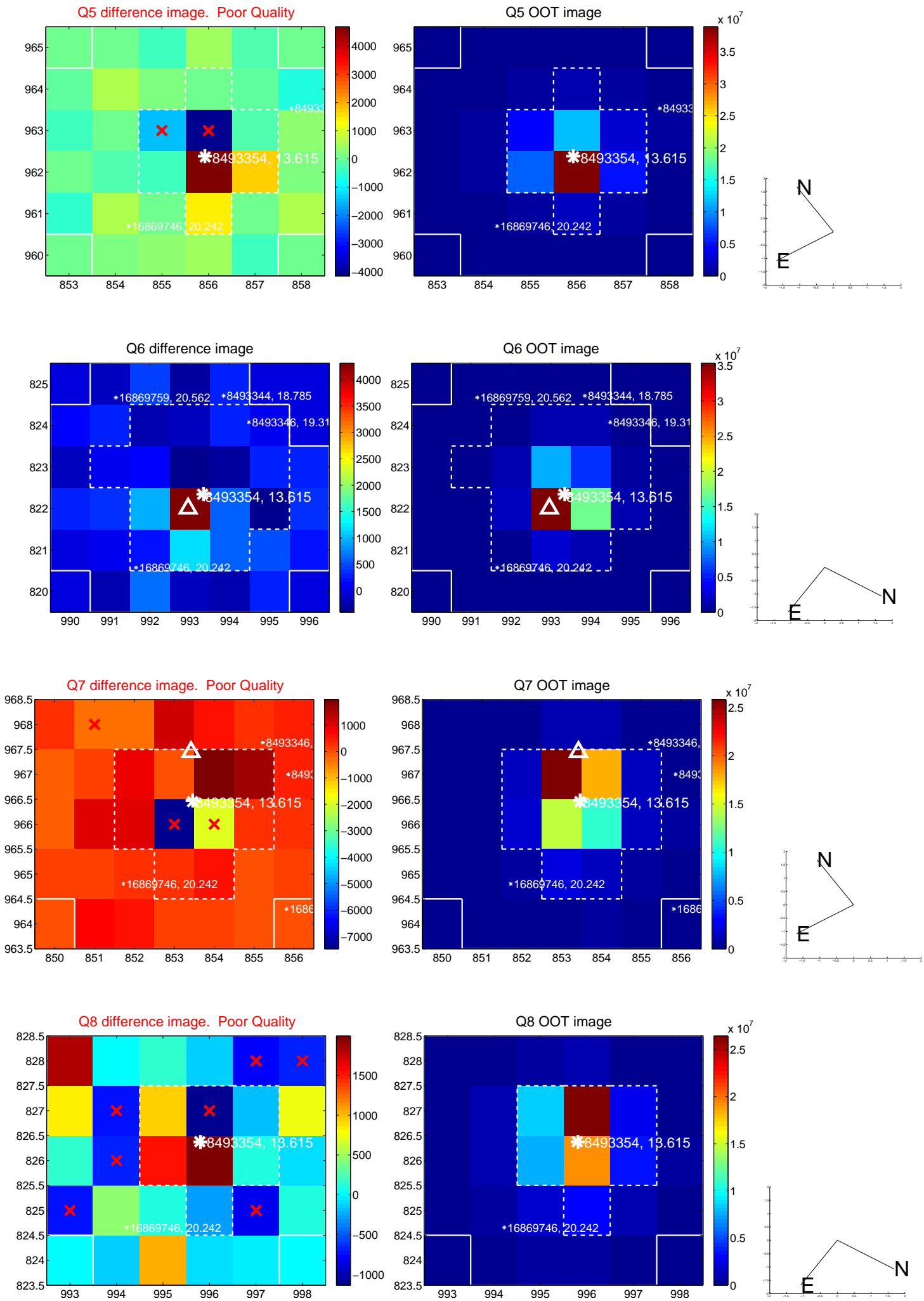


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

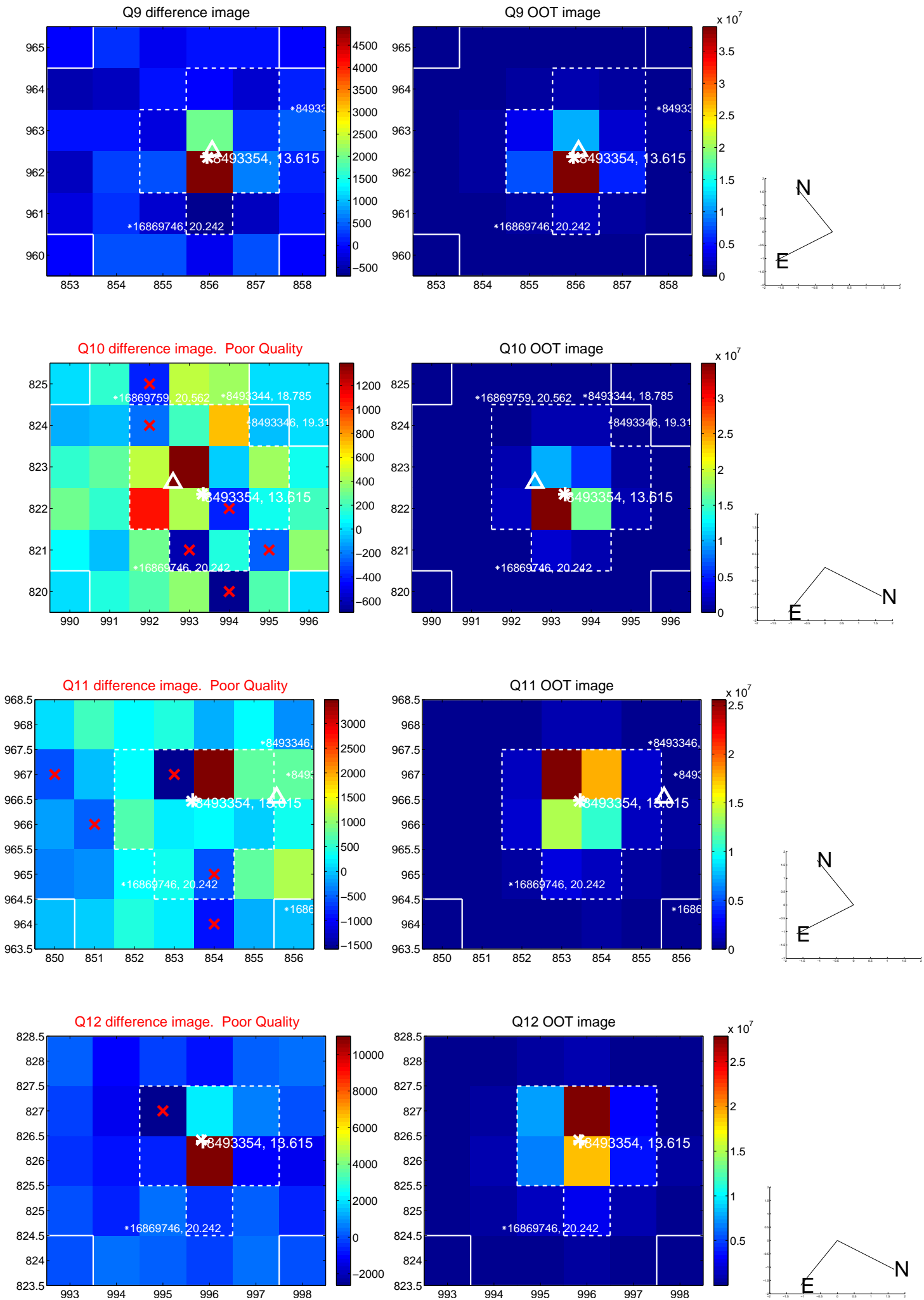
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



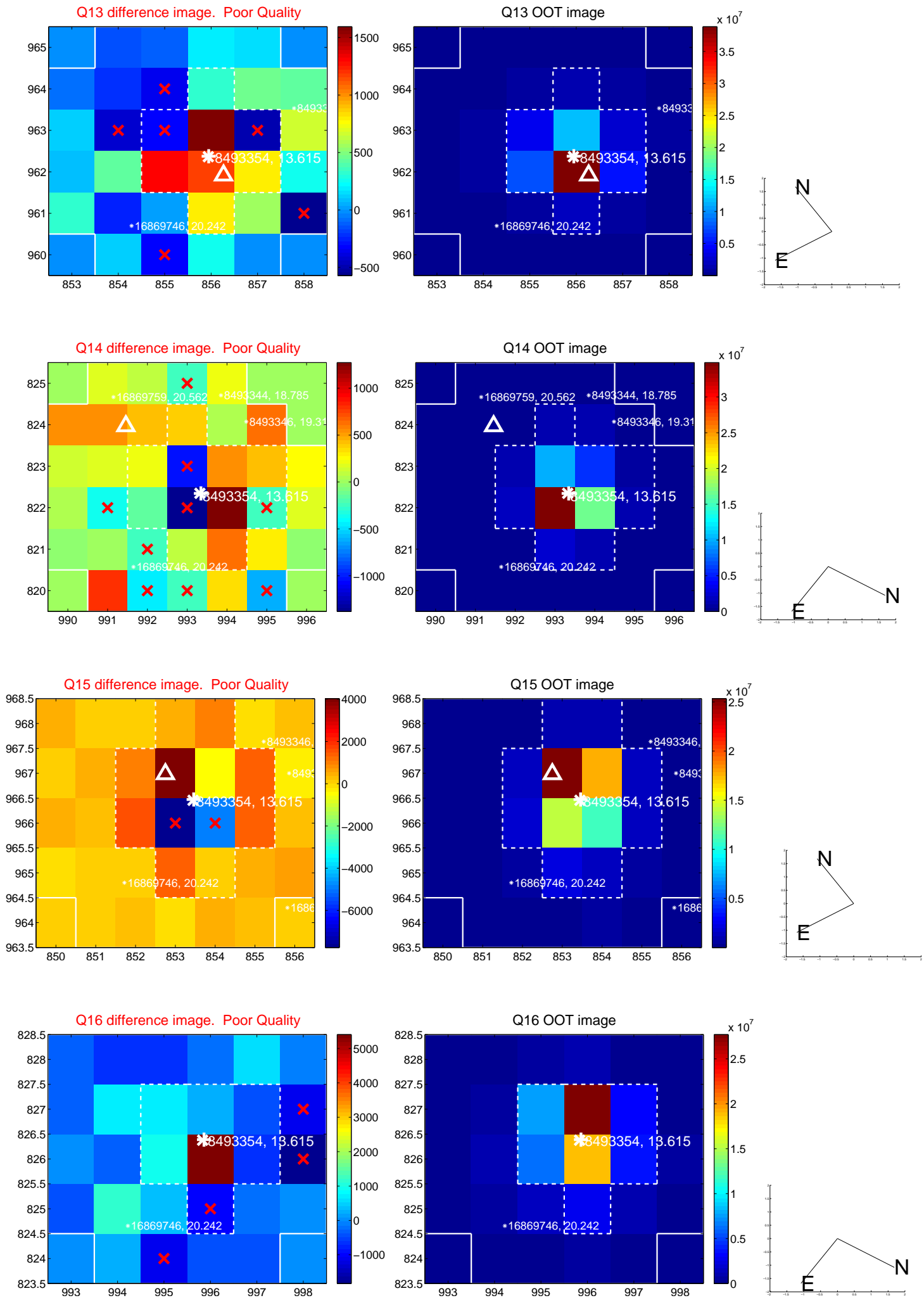
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



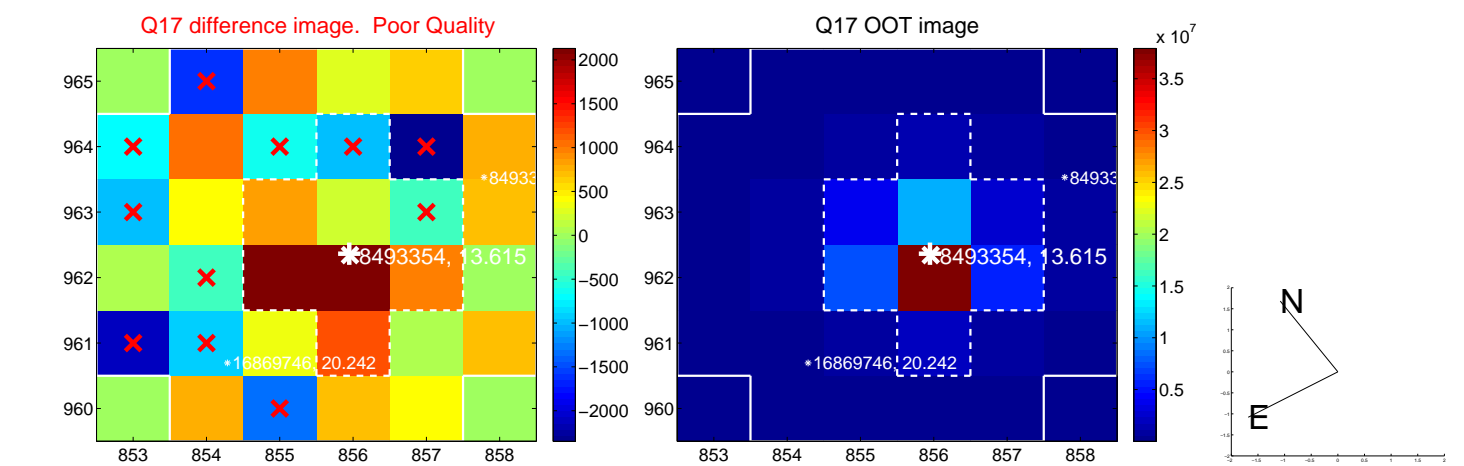
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



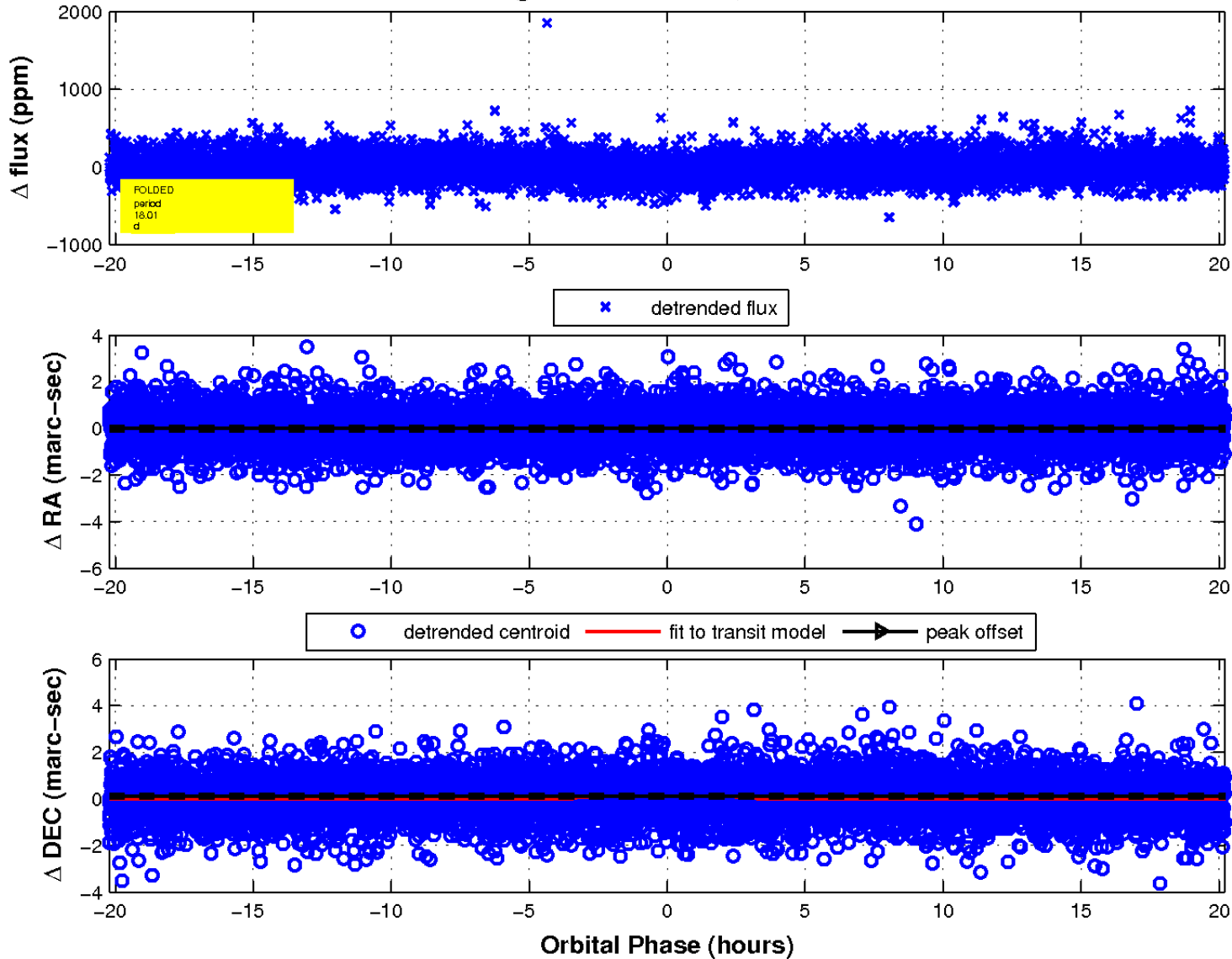
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

