

KIC 009095245

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})
009095245-01	OBS	No	5.567869	135.752500	18.4	6.341	7.9	8.0	3.93	9328	1.92	14602.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009095245-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

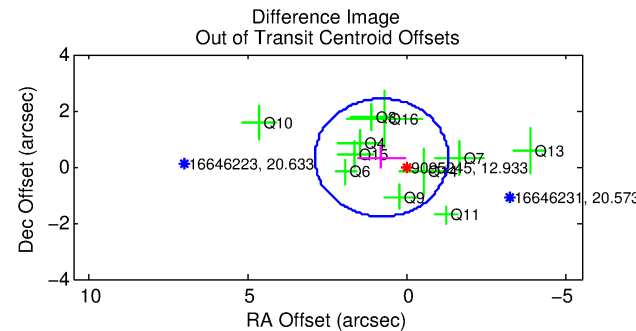
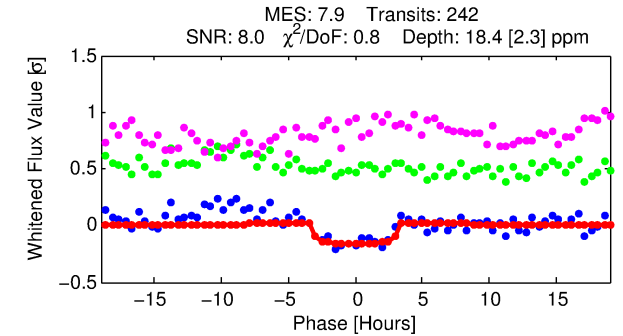
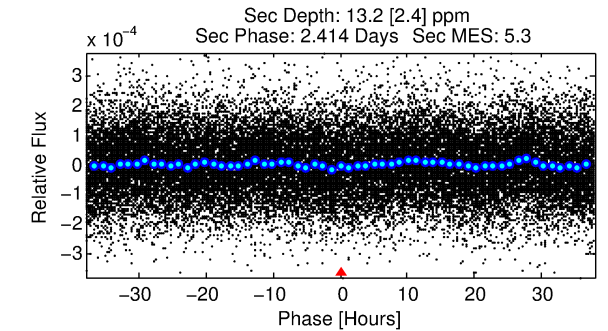
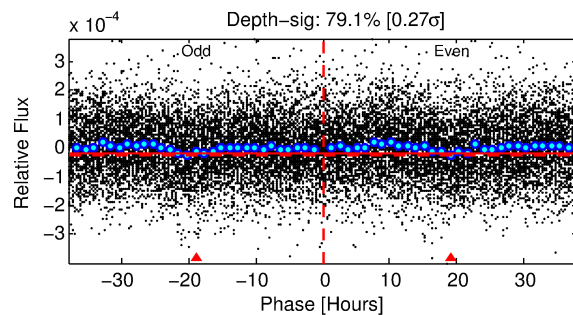
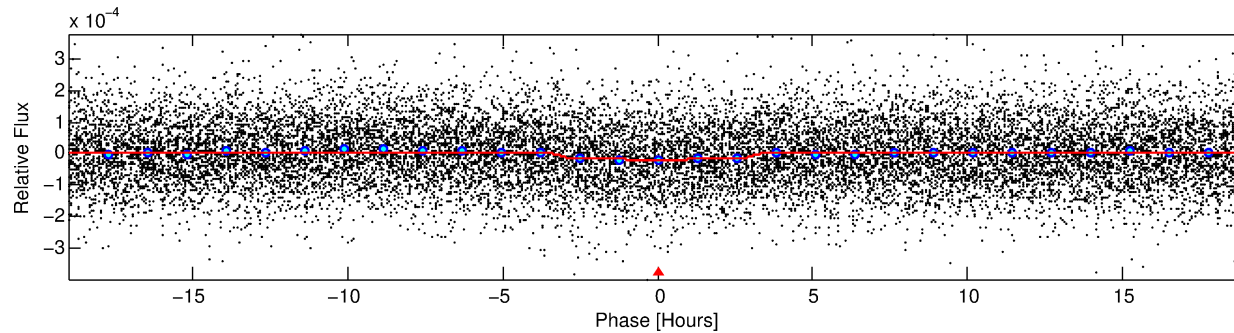
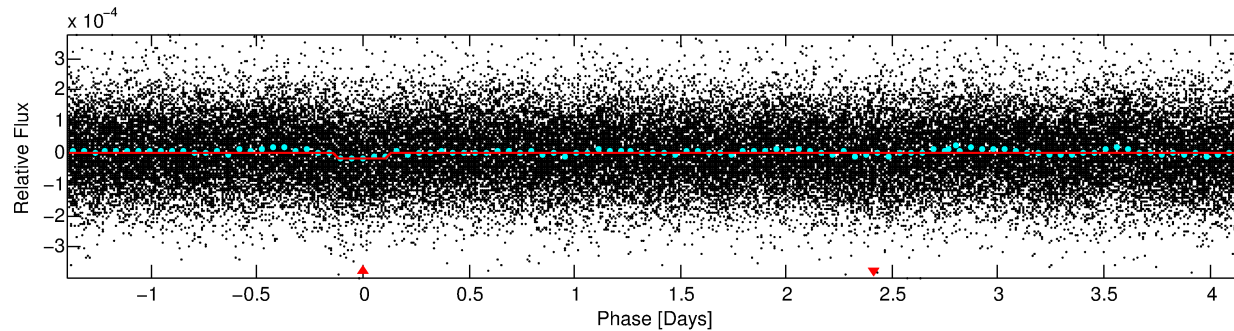
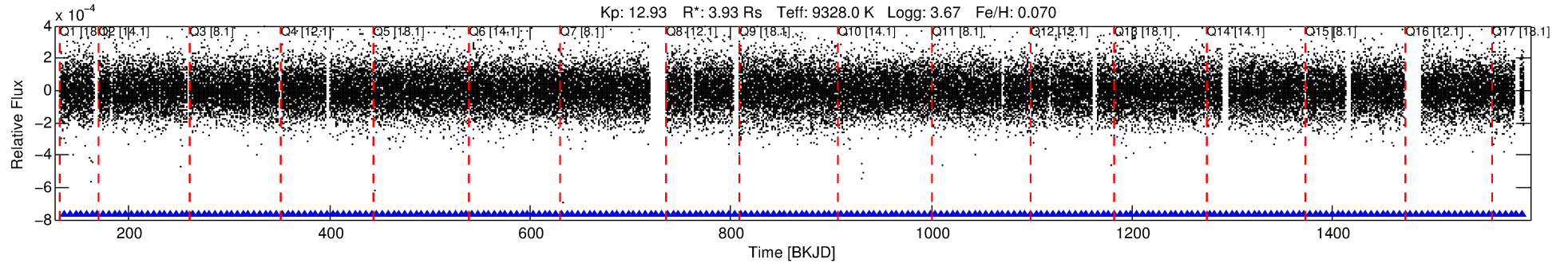
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009095245-01

No Significant Match Found

DV One-Page Summary

KIC: 9095245 Candidate: 1 of 1 Period: 5.568 d



DV Fit Results:

Period = 5.56787 [0.00008] d
Epoch = 135.7525 [0.0098] BKJD
Rp/R* = 0.0045 [0.0009]
a/R* = 3.28 [4.31]
b = 0.89 [0.35]
Seff = 14602.59 [13255.22]
Teq = 2803 [636] K
Rp = 1.92 [1.10] Re
a = 0.0846 [0.0458] AU
Ag = 14.13 [13.98] [0.94 σ]
Teffp = 8402 [1024] K [4.65 σ]

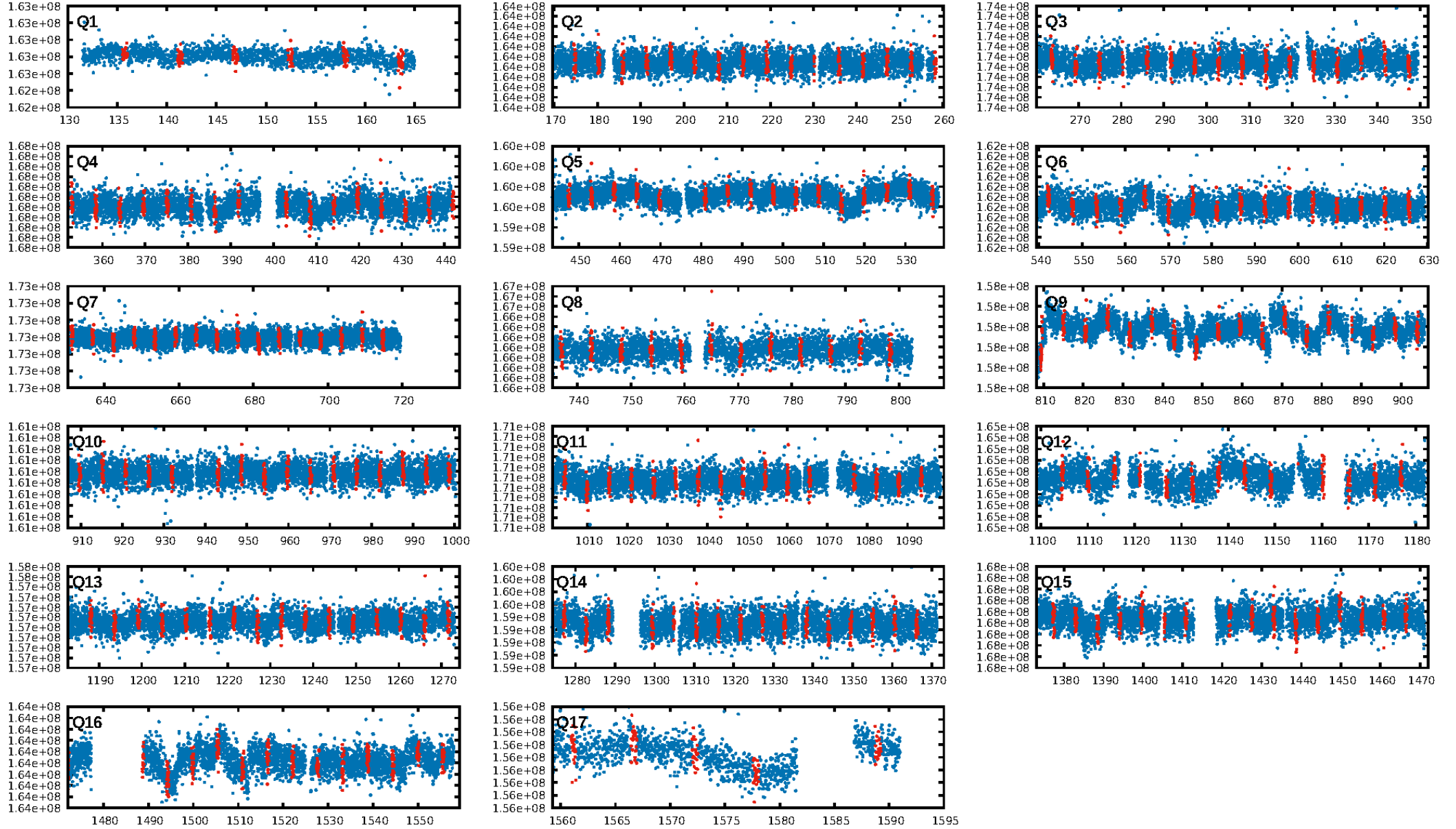
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.35e-14
RollingBand-fgt: 1.00 [231/231]
GhostDiagnostic-chr: 4.182
Centroid-sig: 74.4%
Centroid-so: 0.706 arcsec [0.42 σ]
OotOffset-rm: 0.864 arcsec [1.24 σ]
KicOffset-rm: 0.451 arcsec [0.69 σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

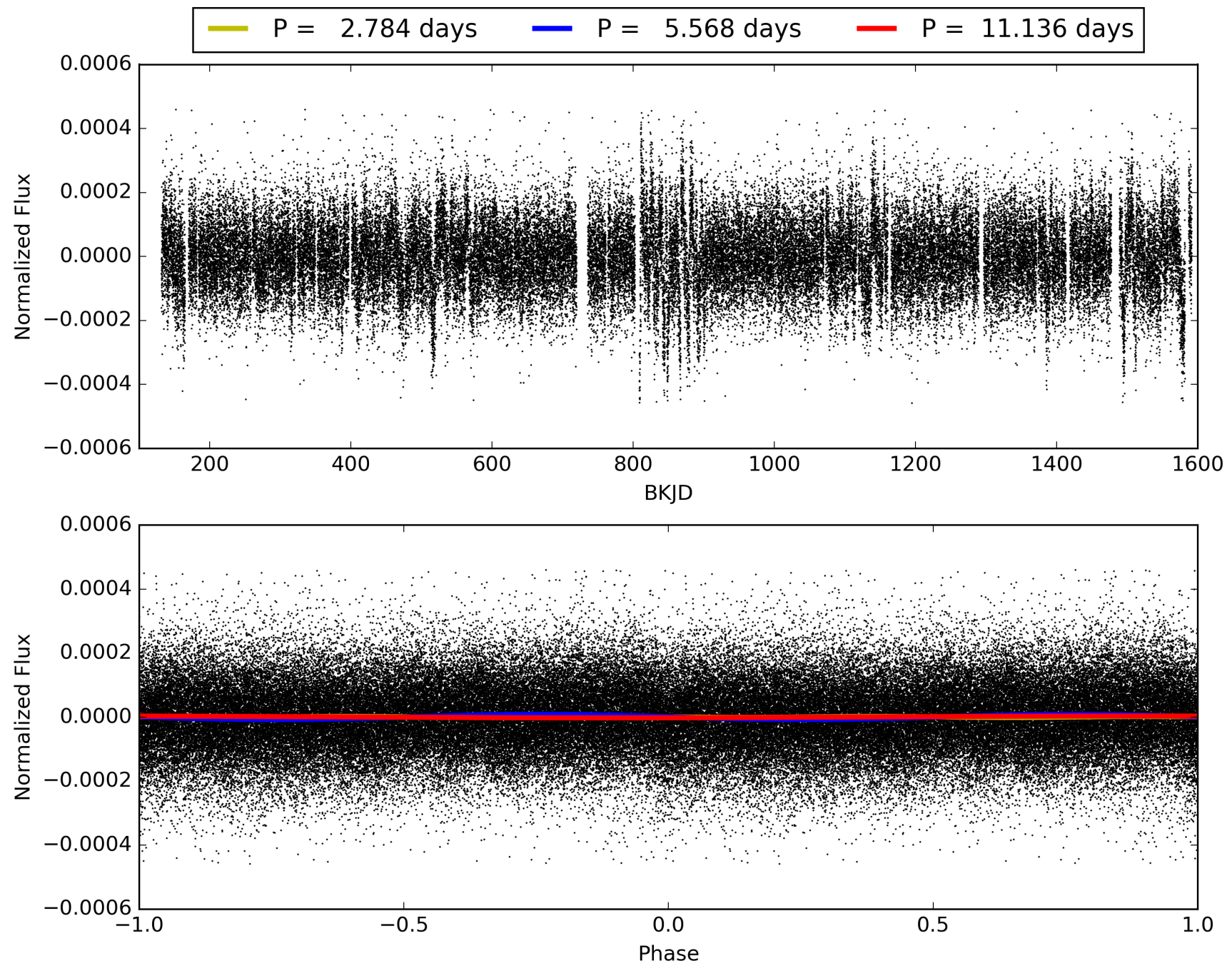
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:21:18 Z

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

TCE 009095245-01, PDC Light Curves

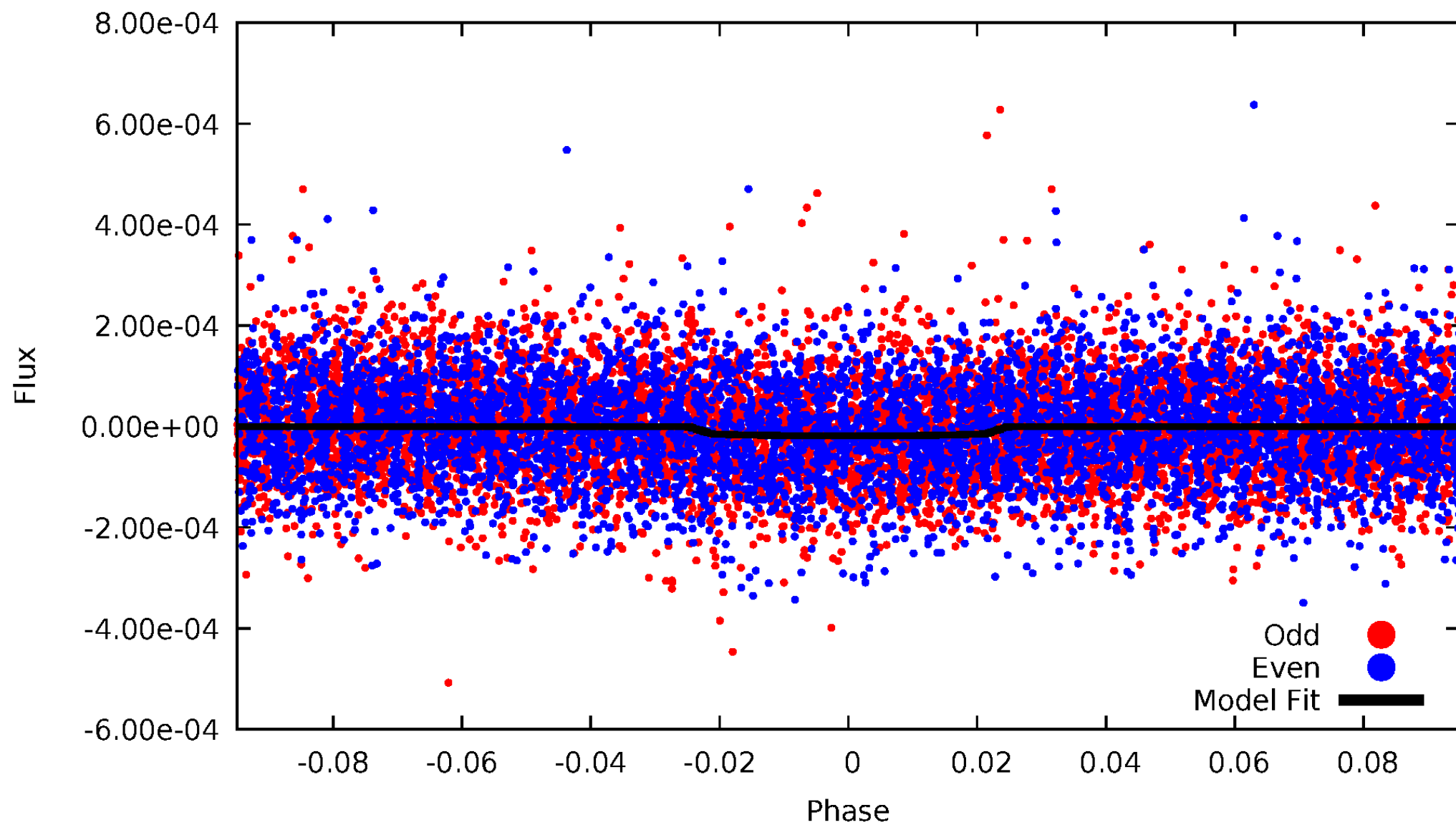


TCE 009095245-01



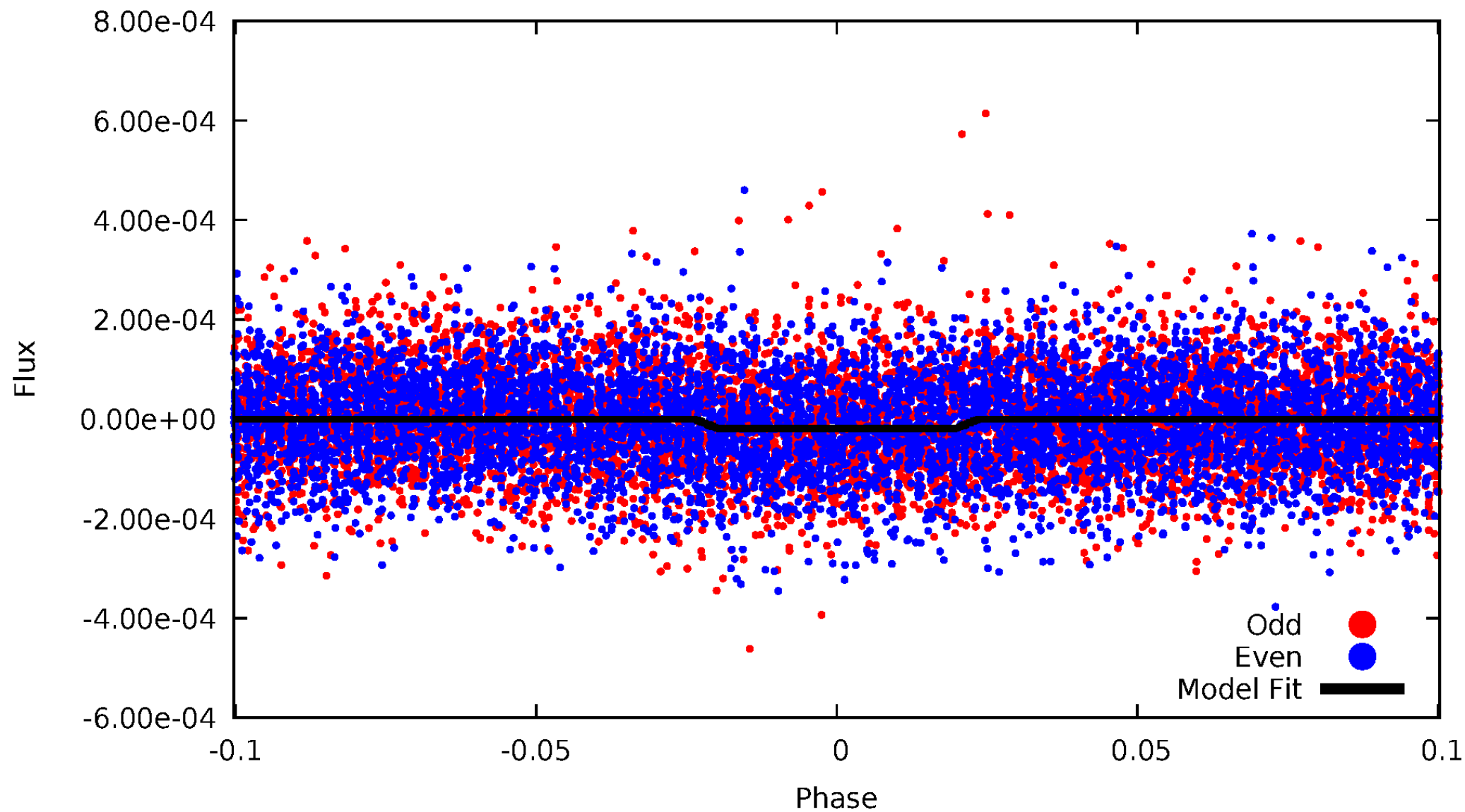
DV Odd/Even

TCE 009095245-01



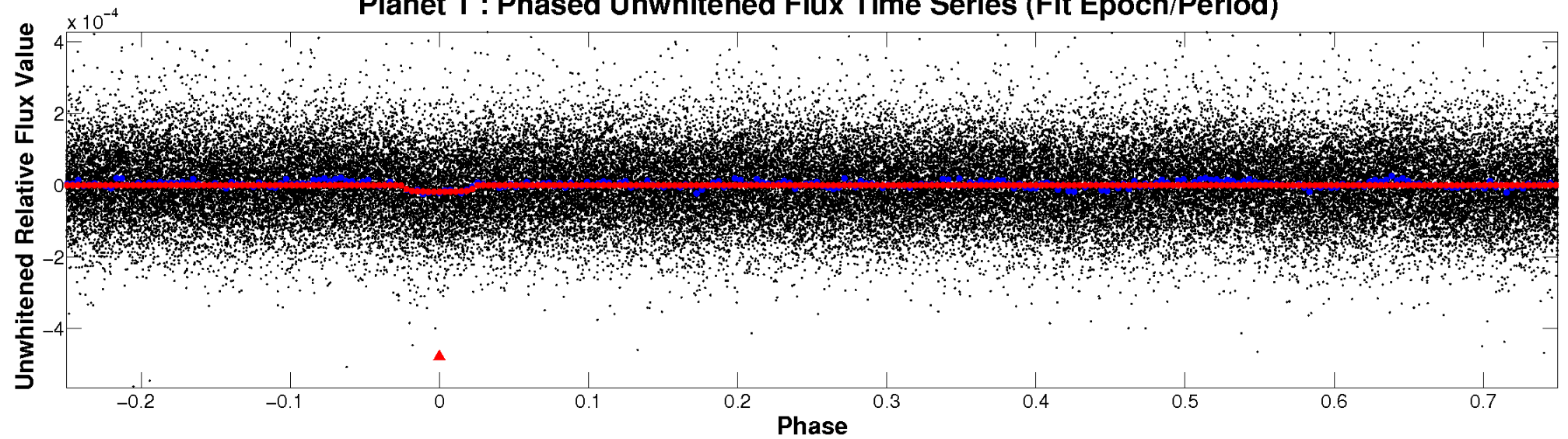
ALT Odd/Even

TCE 009095245-01

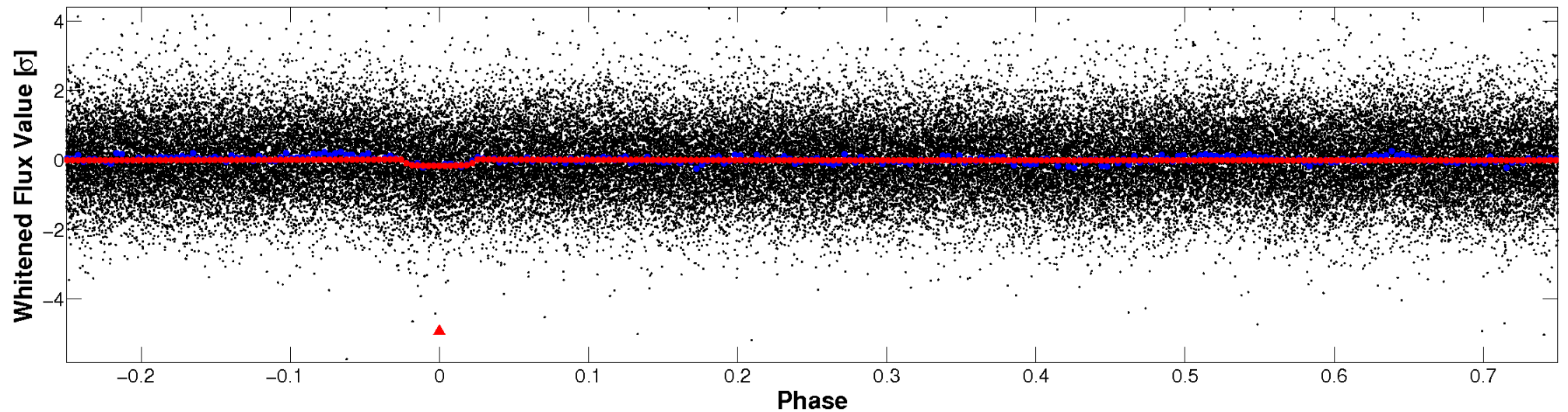


Non-Whitened Vs. Whitened Light Curve

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

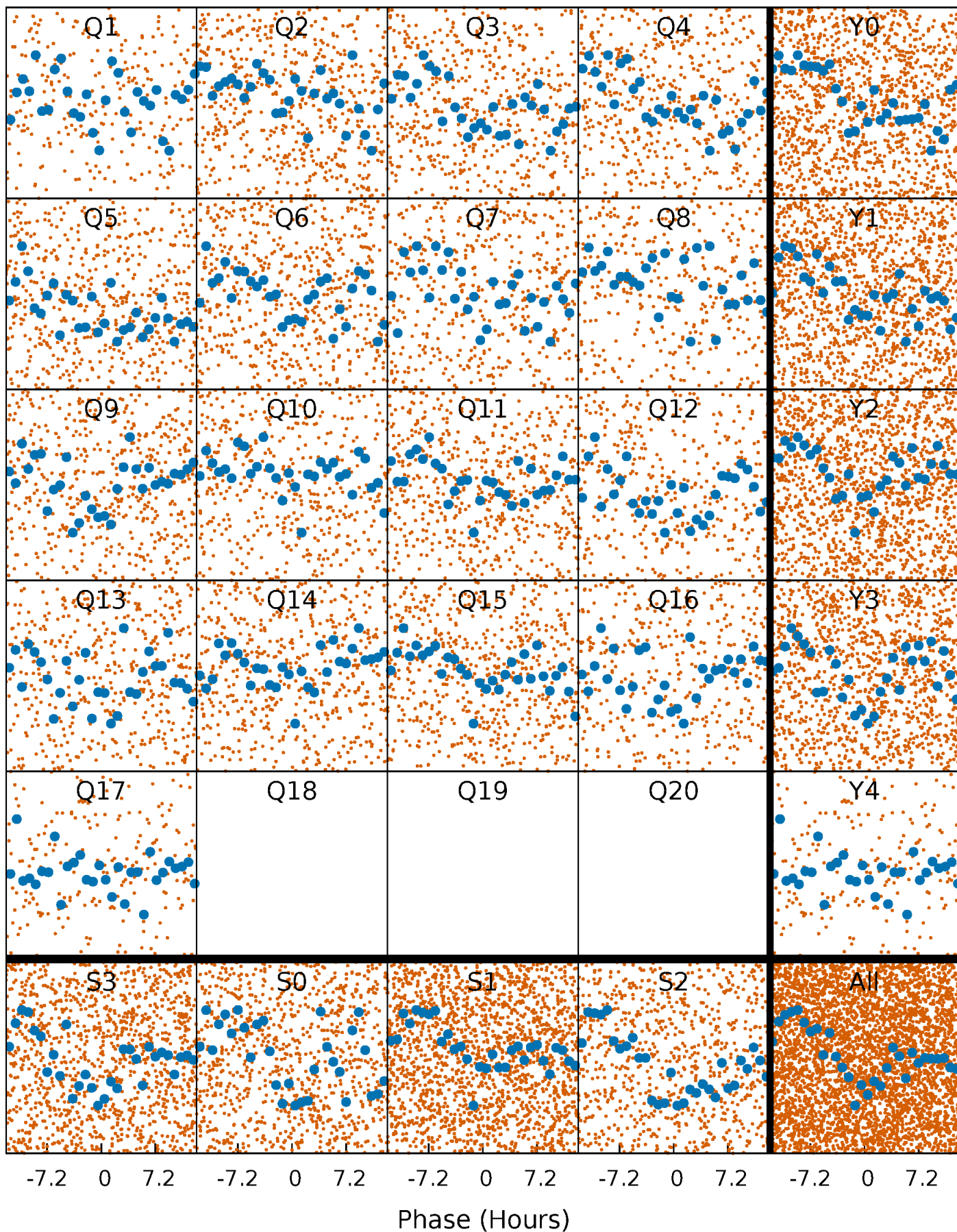


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



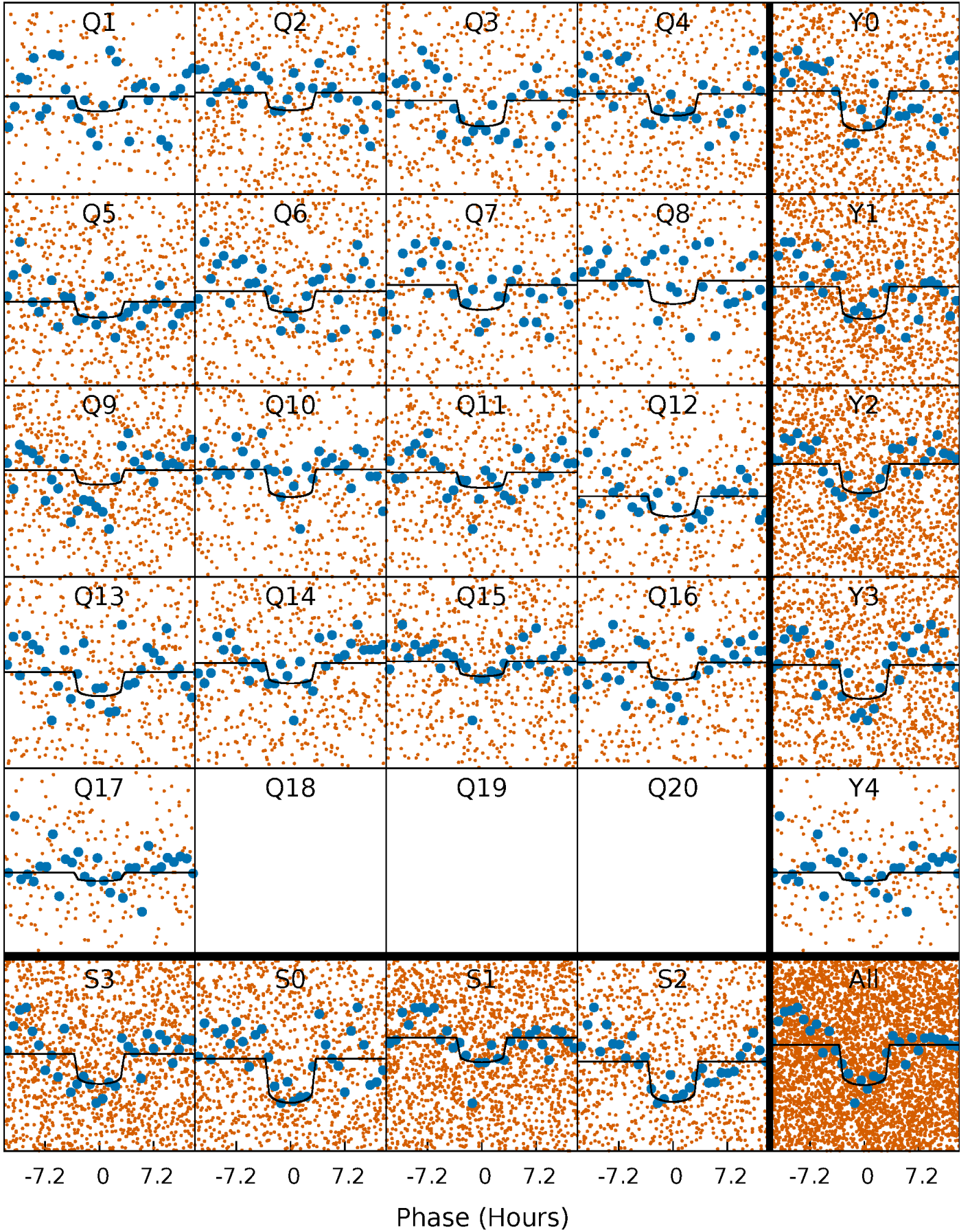
PDC Quarter-Phased Transit Curves

TCE 009095245-01 P= 5.567869 Days $T_0=135.752500$ (BKJD)



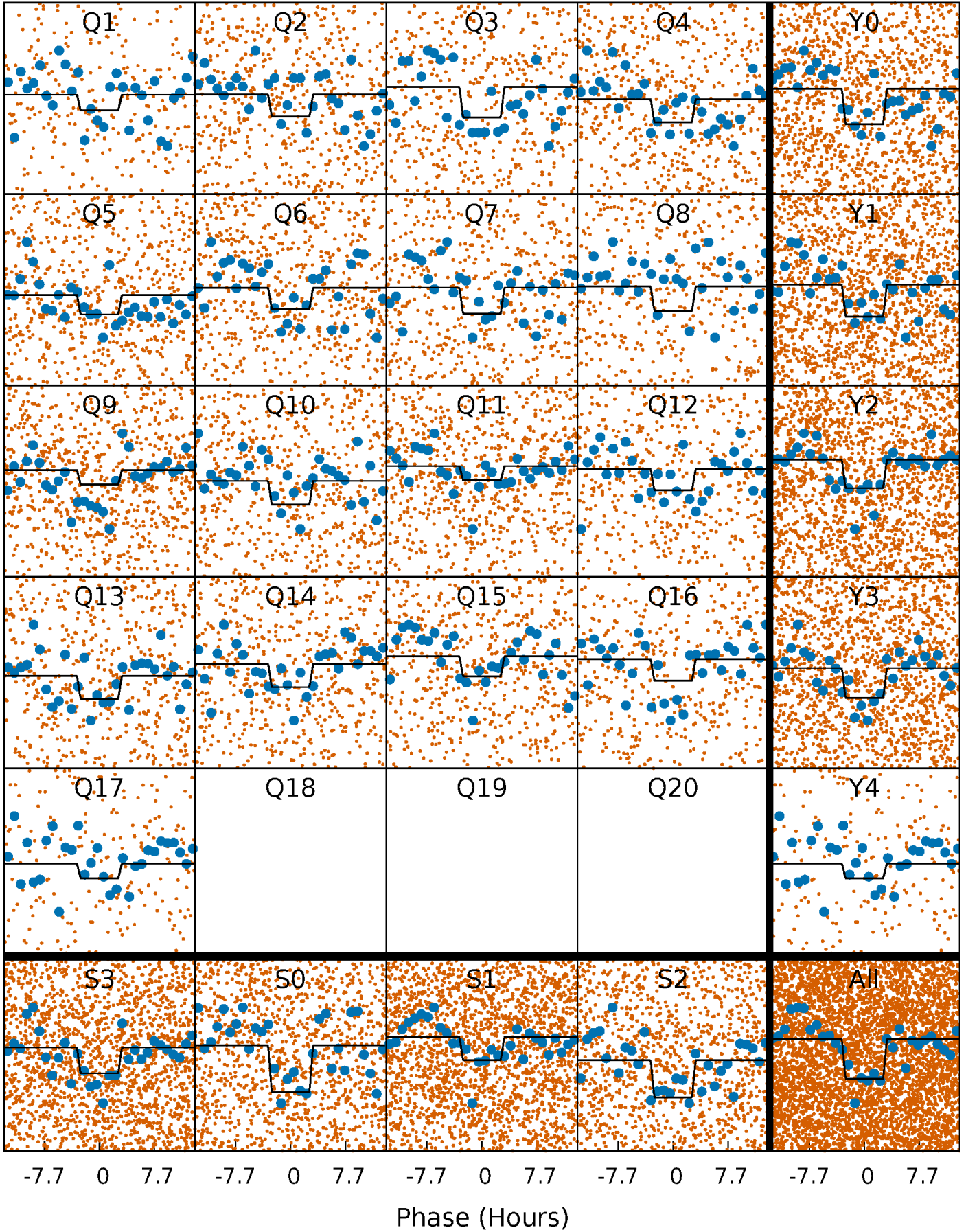
DV Quarter-Phased Transit Curves

TCE 009095245-01 P= 5.567869 Days $T_0=135.752500$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

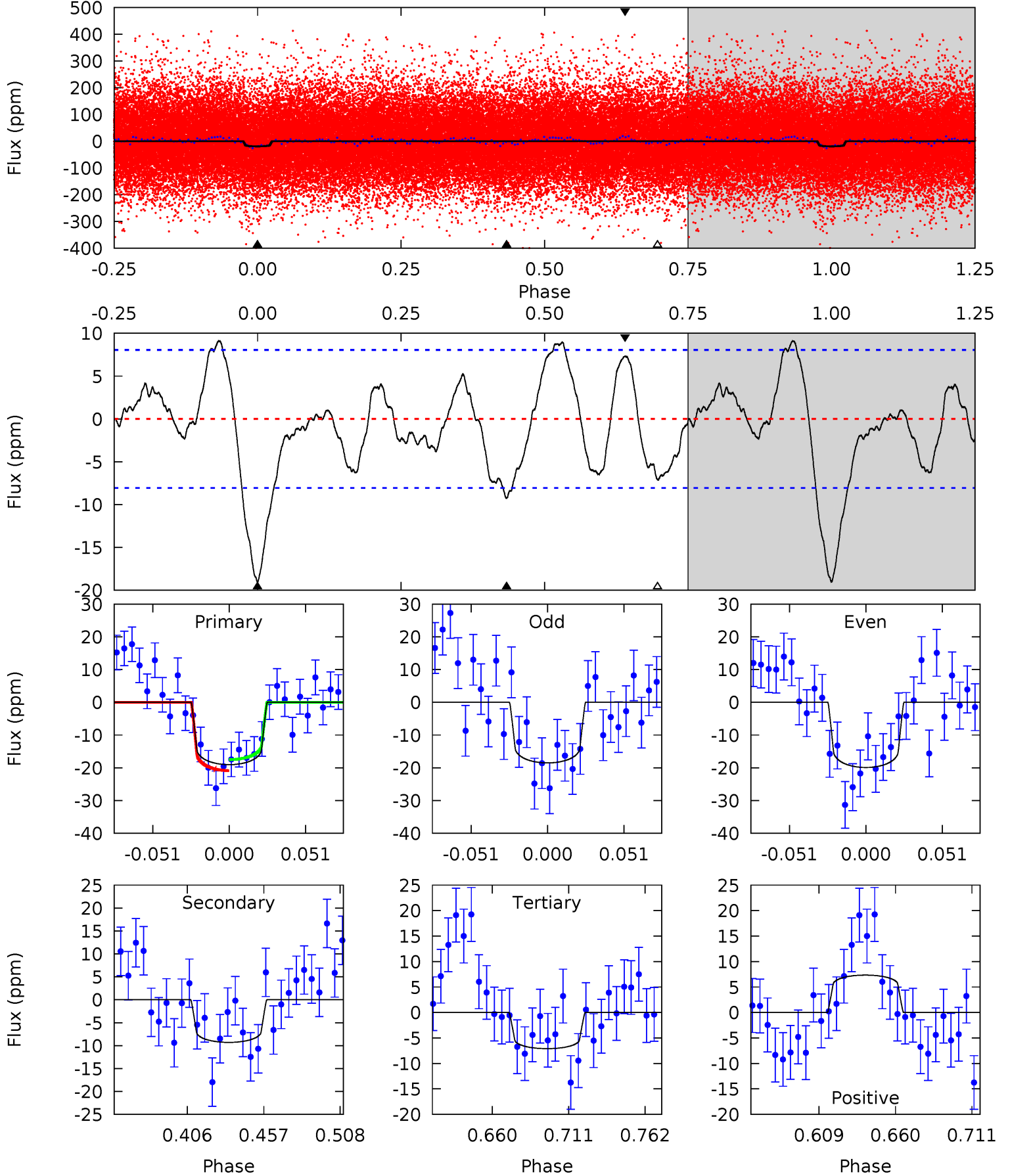
TCE 009095245-01 P= 5.567987 Days $T_0=135.732459$ (BKJD)



DV Model-Shift Uniqueness Test

009095245-01, P = 5.567869 Days, E = 130.184631 Days

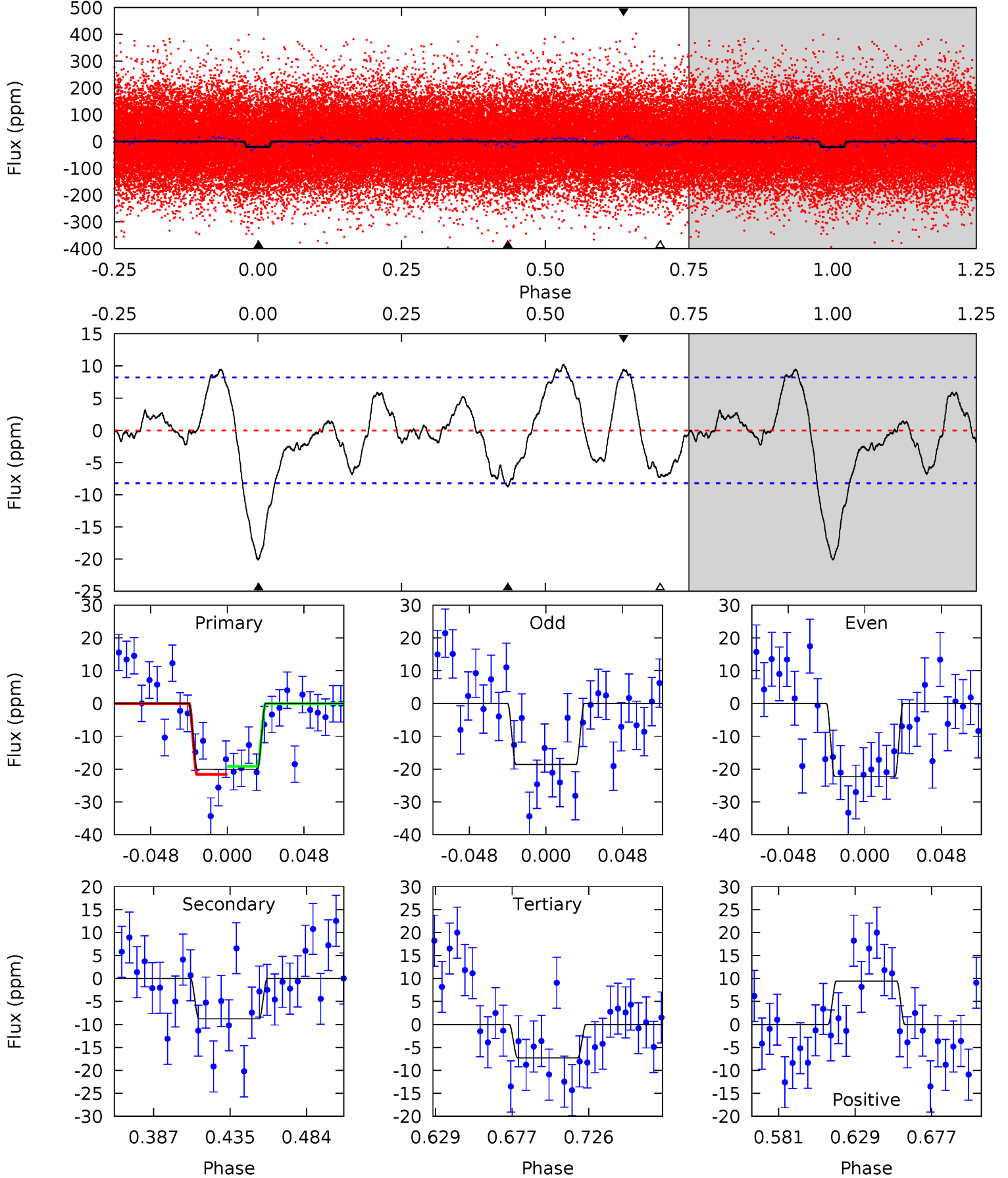
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	5.43	4.15	4.29	4.70	1.95	2.41	6.98	6.84	1.28	1.14	0.41	0.96	0.32	0.99



Alt Model-Shift Uniqueness Test

009095245-01, P = 5.567987 Days, E = 130.164472 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	5.03	4.17	5.42	4.71	1.97	2.45	7.34	6.09	0.85	-0.40	1.06	0.86	0.34	0.70



Stellar Parameters For KIC 009095245

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9328^{+290}_{-471}	$3.666^{+0.527}_{-0.093}$	$0.070^{+0.150}_{-0.750}$	$3.926^{+0.906}_{-2.113}$	$2.606^{+0.389}_{-0.909}$	$0.061^{+0.376}_{-0.024}$
	+3%/-5%	+14%/-3%	+214%/-1071%	+23%/-54%	+15%/-35%	+620%/-40%
Source	KIC0	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 009095245-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 2	$1.73^{+0.51}_{-0.54}$	3732^{+332}_{-495}	7223^{+1146}_{-853}	12^{+12}_{-5}
Alt.	-9 ± 2	$1.67^{+0.56}_{-0.55}$	3716^{+351}_{-489}	7199^{+1149}_{-880}	12^{+13}_{-5}

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

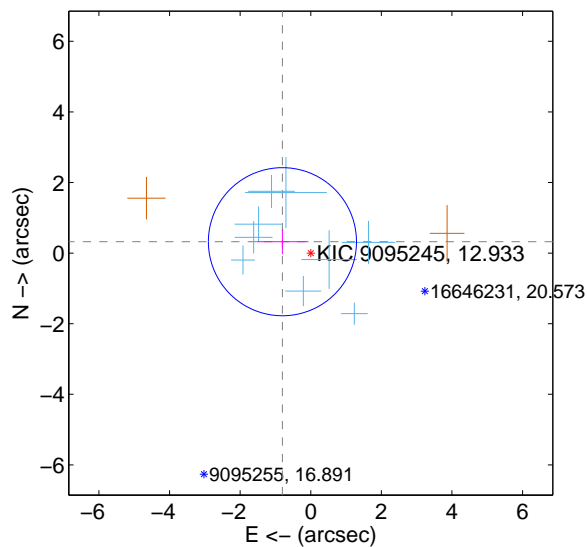
Supplemental centroid analysis for 009095245-01. Kepler magnitude: 12.93. Transit SNR 8.03

There are 9 quarters with good PRF difference image offsets

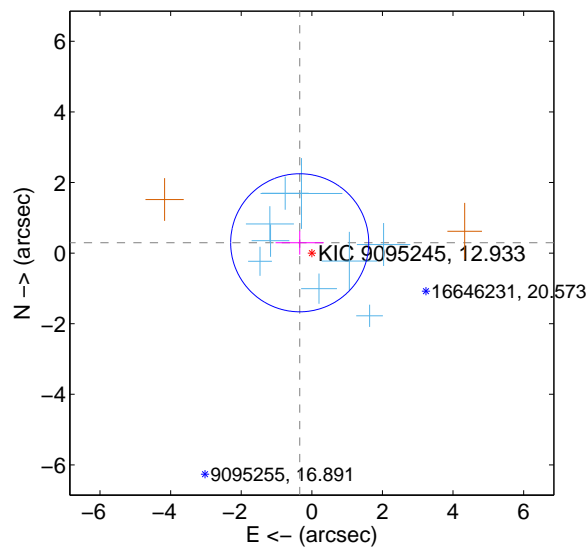
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.864 ± 0.699	1.24	0.802 ± 0.740	0.323 ± 0.355
PRF-fit source offset from KIC position	0.451 ± 0.652	0.69	0.344 ± 0.683	0.293 ± 0.336
photometric centroid source offset	0.71 ± 1.67	0.42	0.56 ± 1.58	0.43 ± 1.81

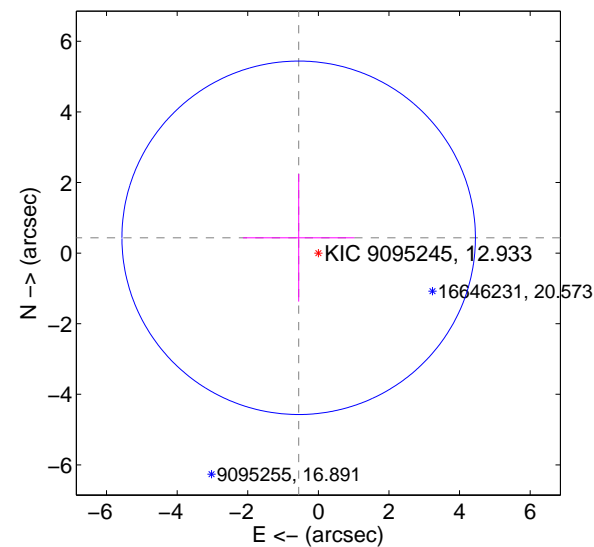
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

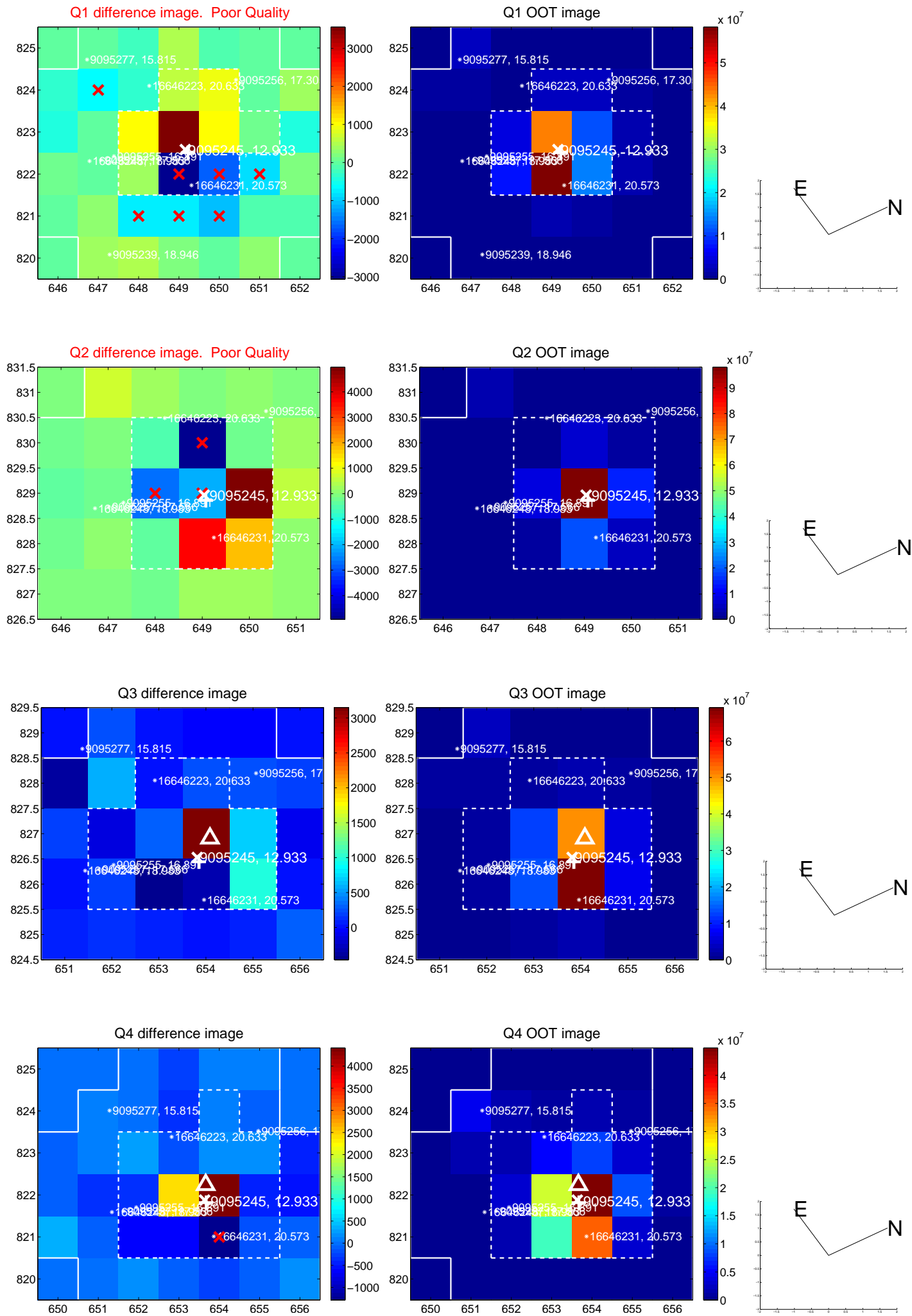


offset from photometric centroids

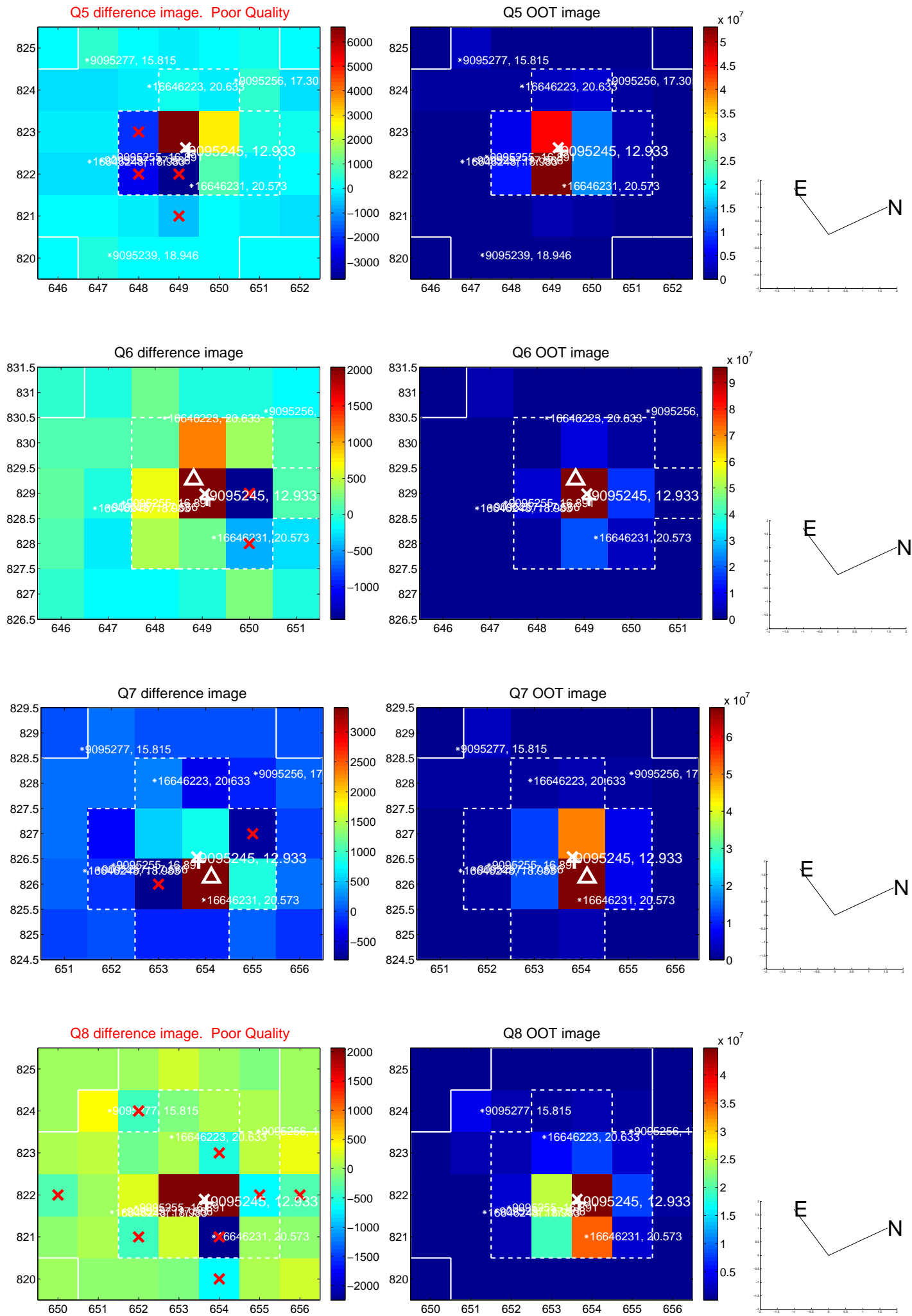


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

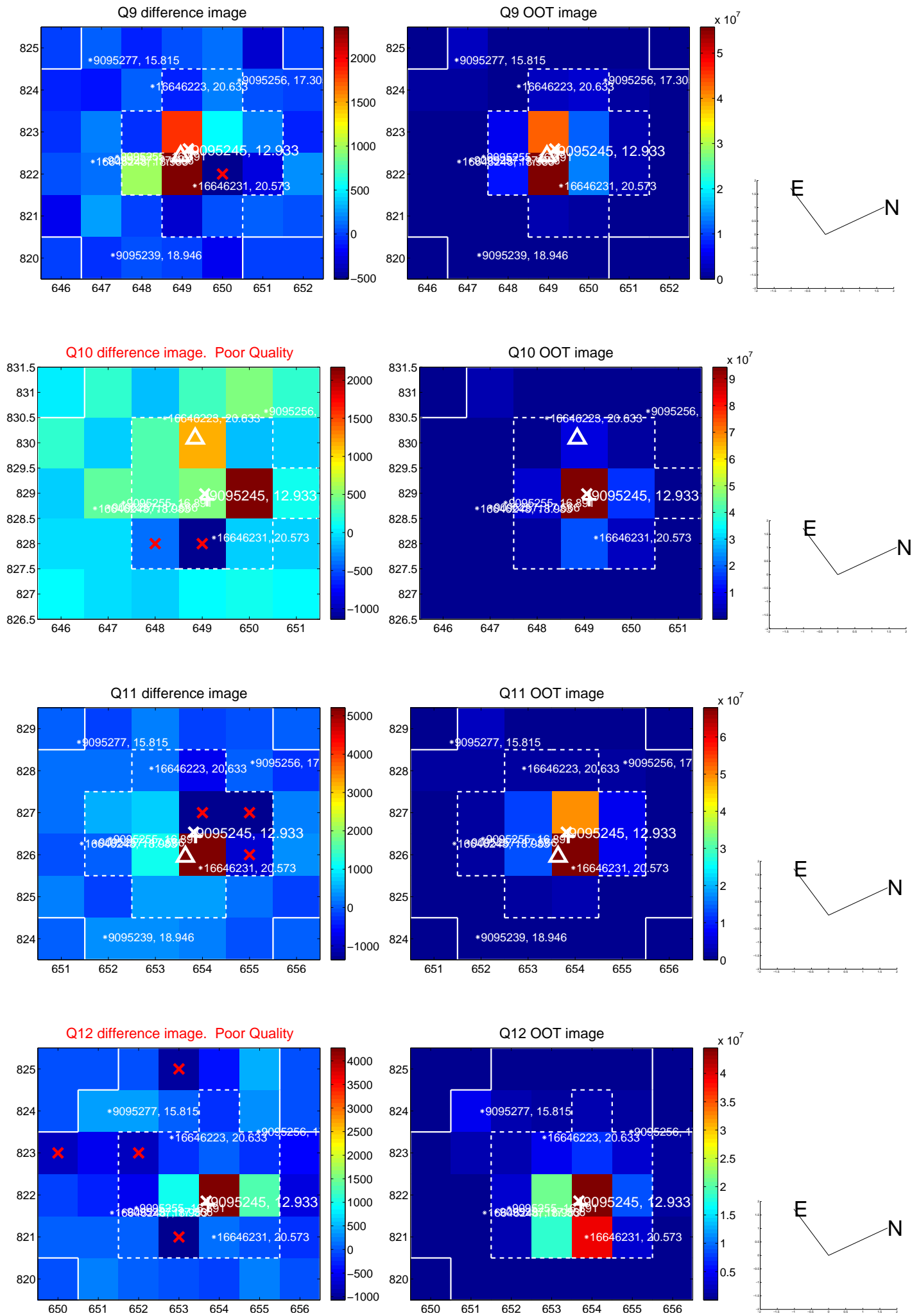
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



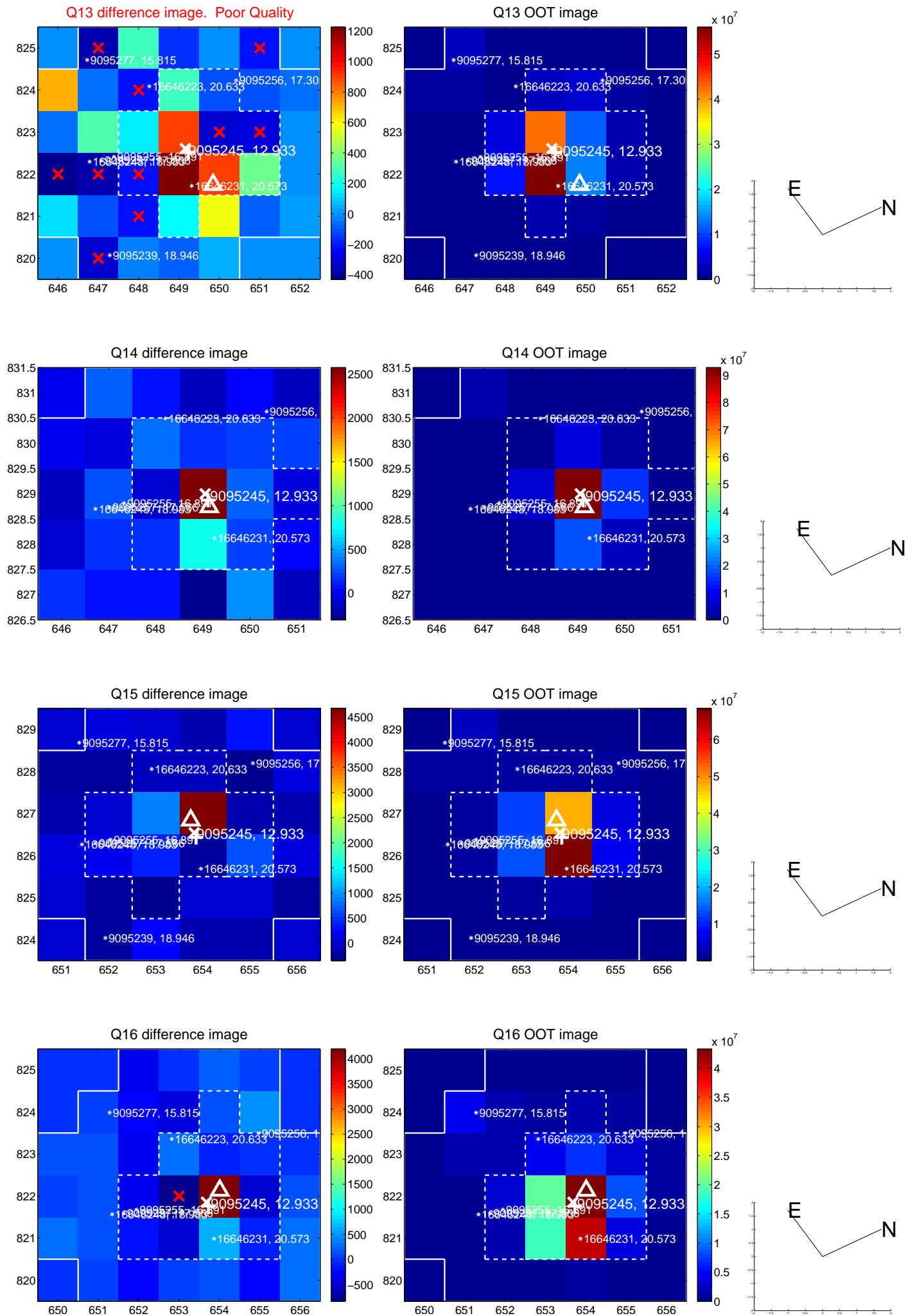
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



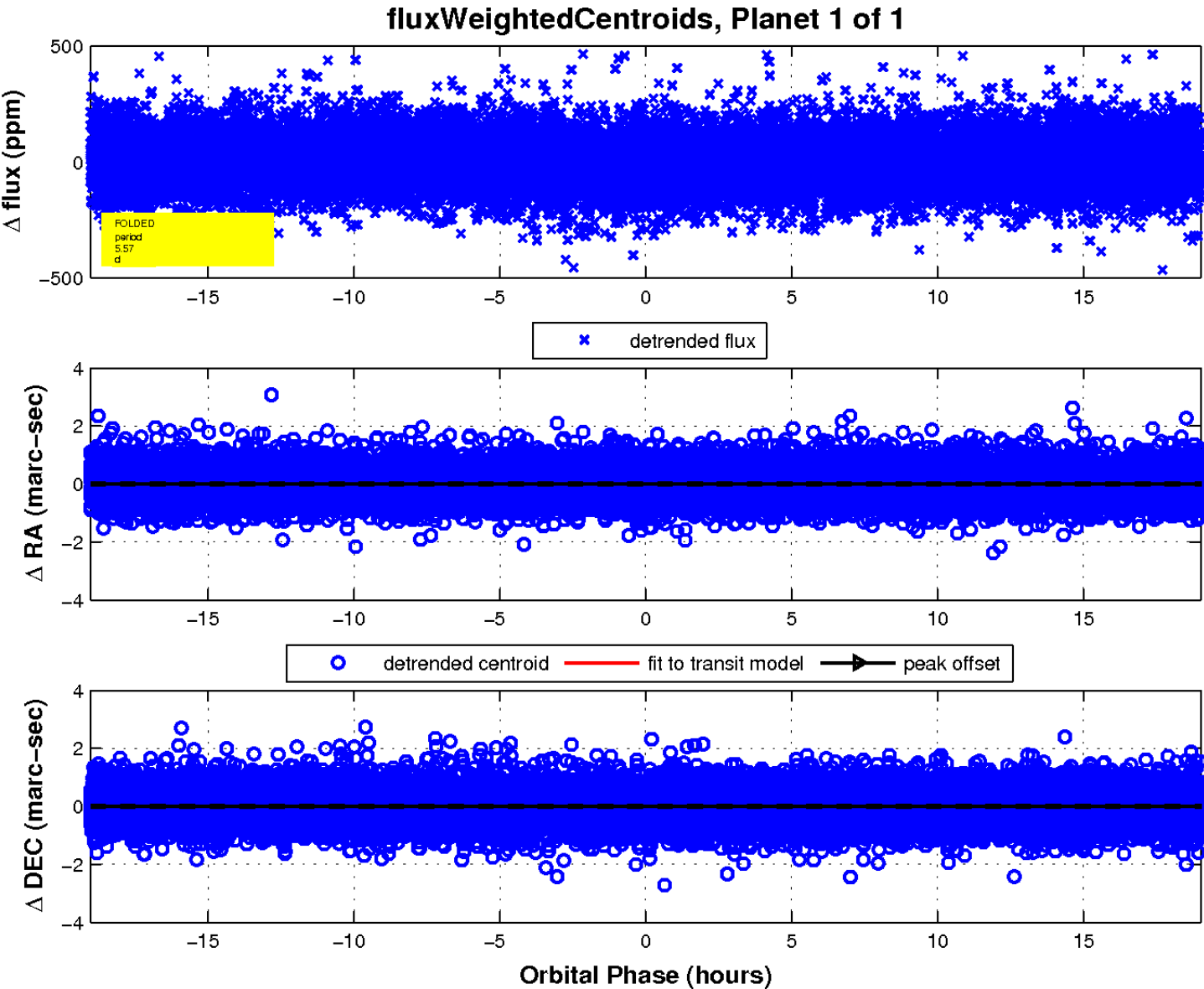
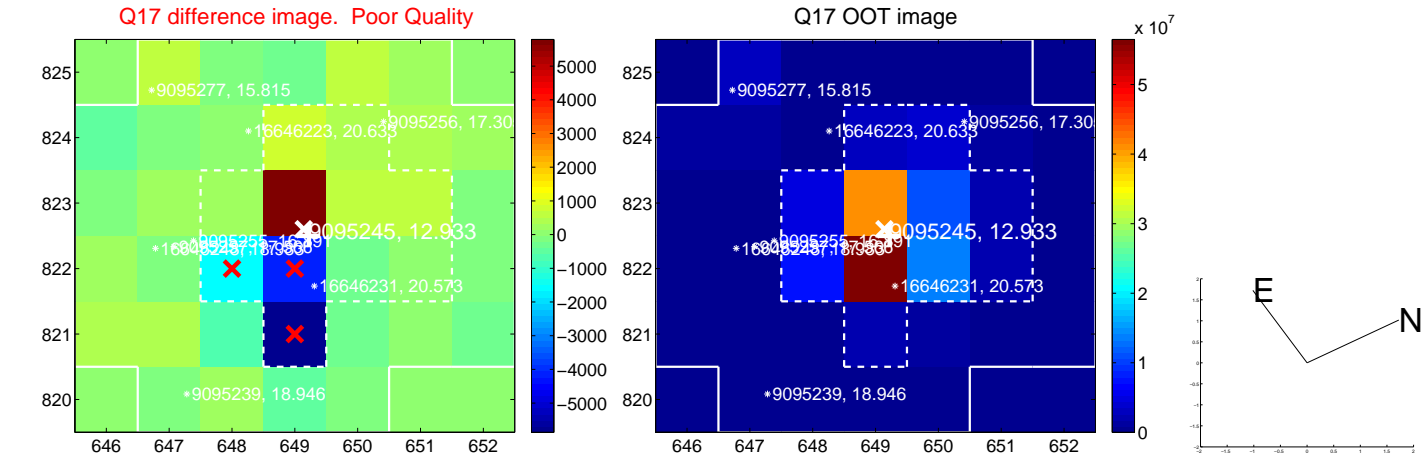
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

