

KIC 009764544

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})
009764544-01	OBS	No	0.965529	132.072402	7.2	3.752	17.4	17.5	3.26	9013	1.01	92732.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009764544-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

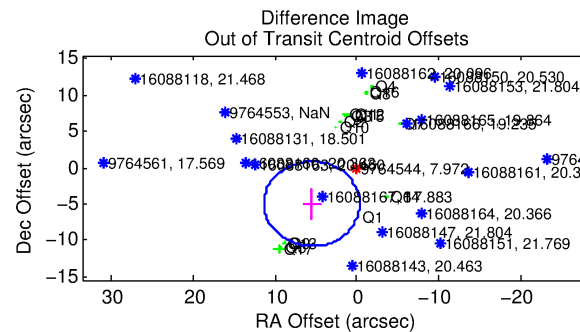
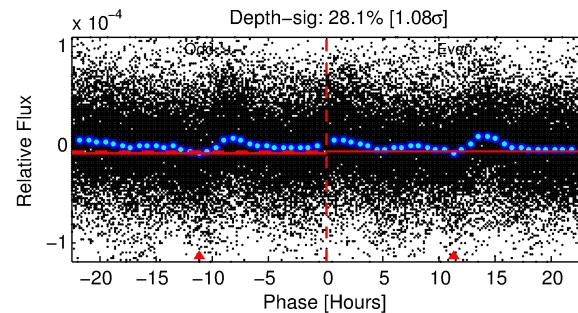
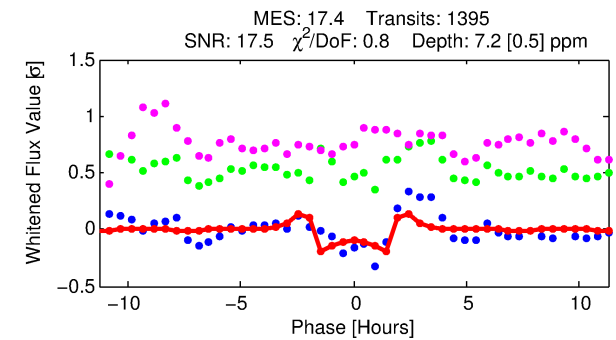
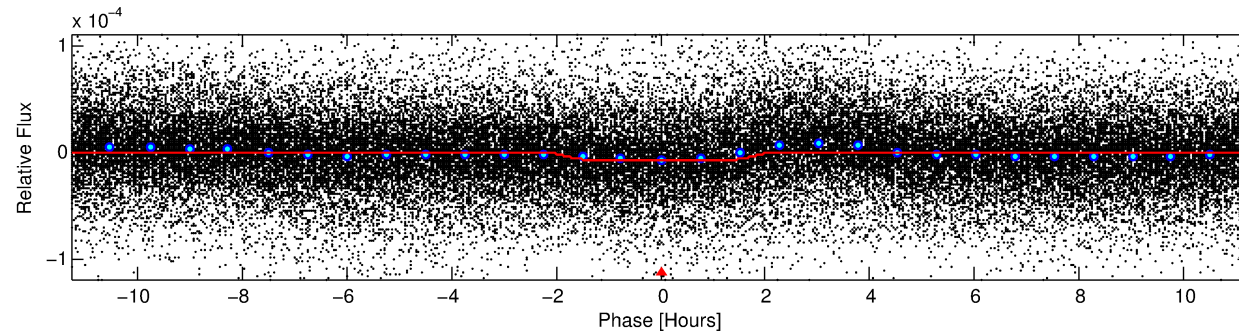
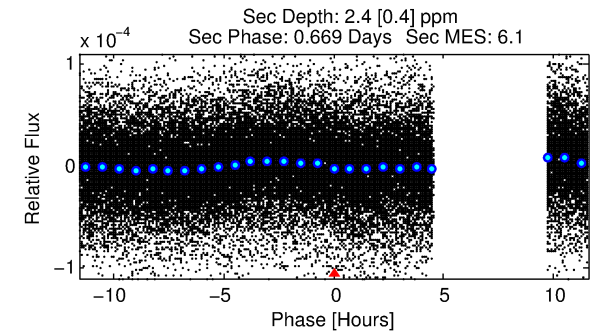
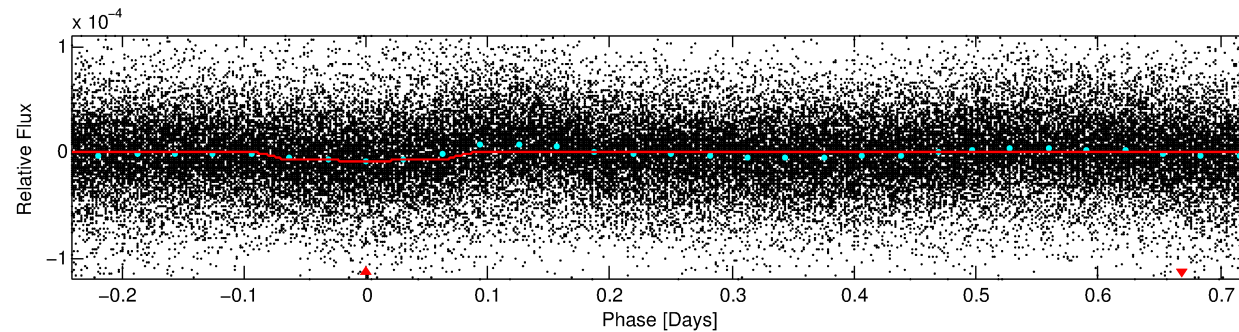
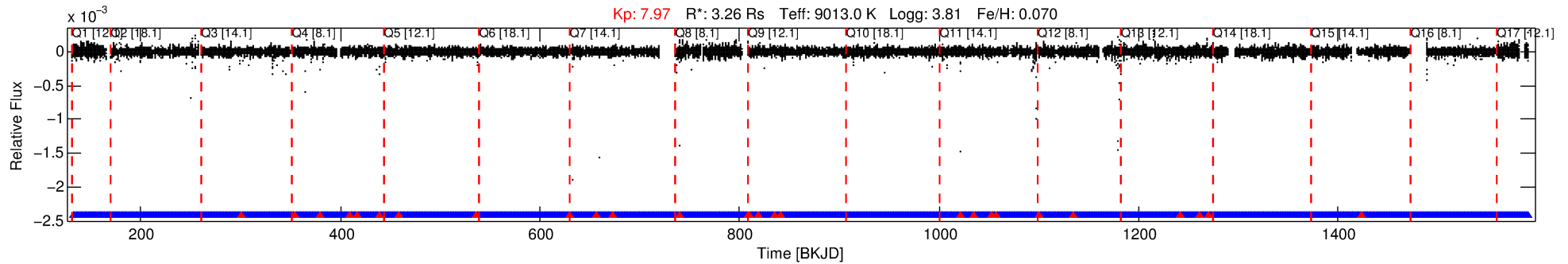
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009764544-01

No Significant Match Found

DV One-Page Summary

KIC: 9764544 Candidate: 1 of 1 Period: 0.966 d



DV Fit Results:

Period = 0.96553 [0.00001] d
Epoch = 132.0724 [0.0009] BKJD
Rp/R* = 0.0028 [0.0001]
a/R* = 1.26 [0.12]
b = 0.91 [0.05]
Seff = 92732.07 [63636.78]
Teq = 4450 [763] K
Rp = 1.01 [0.48] Re
a = 0.0260 [0.0111] AU
Ag = 0.87 [0.60] [-0.23σ]
Teffp = 6635 [473] K [2.43σ]

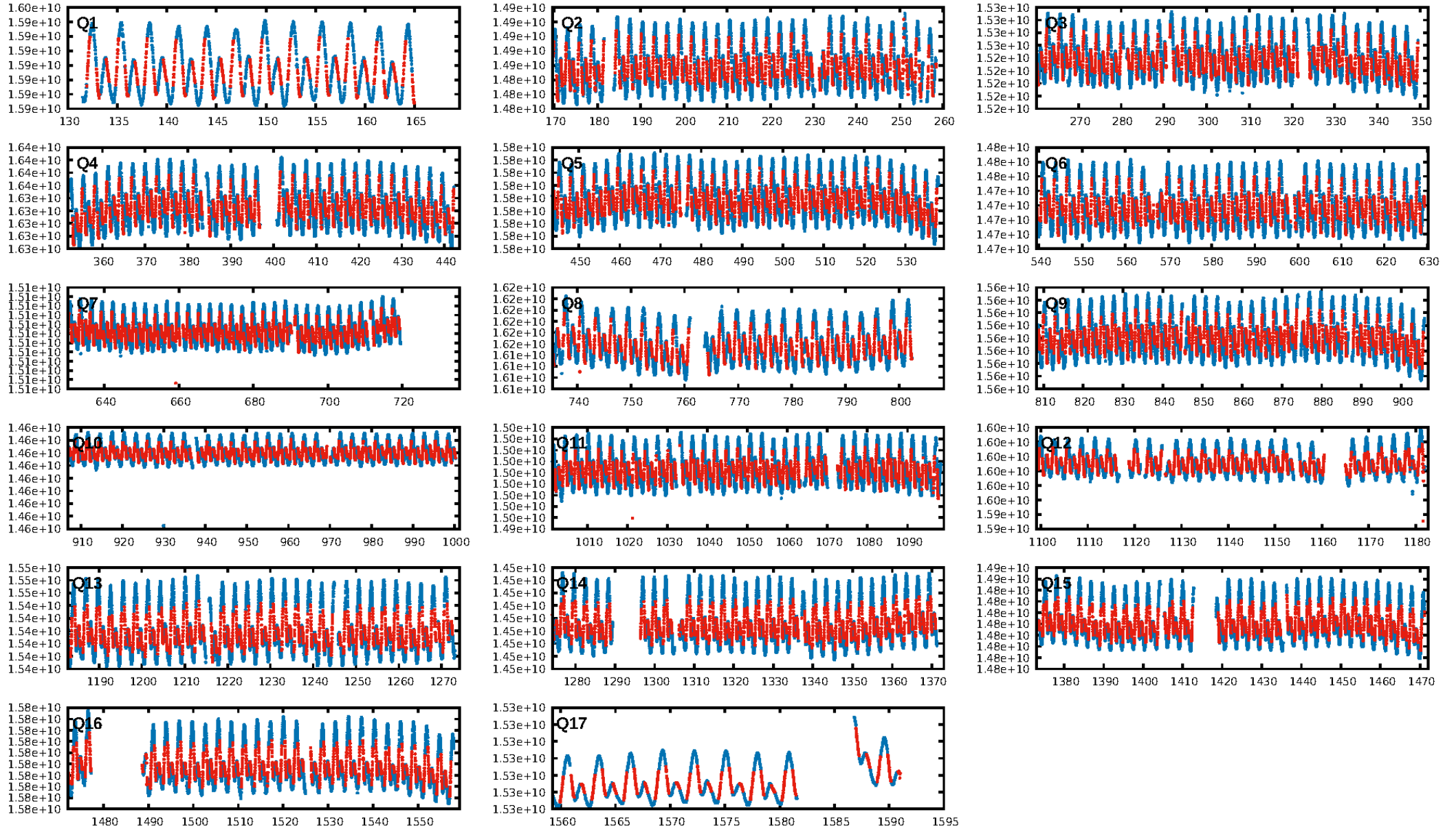
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.13e-45
RollingBand-fgt: 0.98 [1305/1332]
GhostDiagnostic-chr: N/A
Centroid-sig: 11.5%
Centroid-so: 0.373 arcsec [0.18σ]
OotOffset-rm: 7.455 arcsec [3.83σ]
KicOffset-rm: 12.740 arcsec [3.81σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

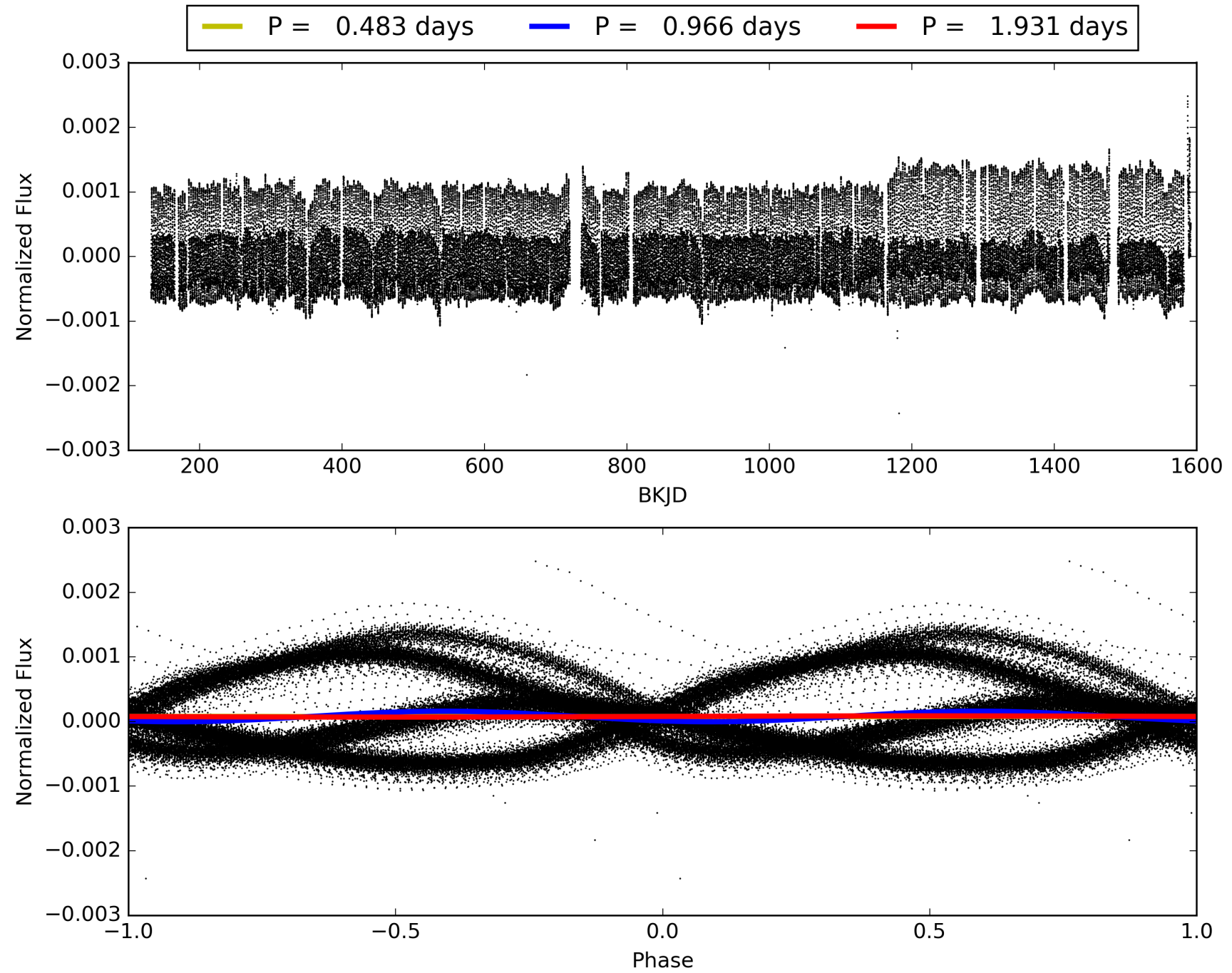
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:12:55 Z

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

TCE 009764544-01, PDC Light Curves

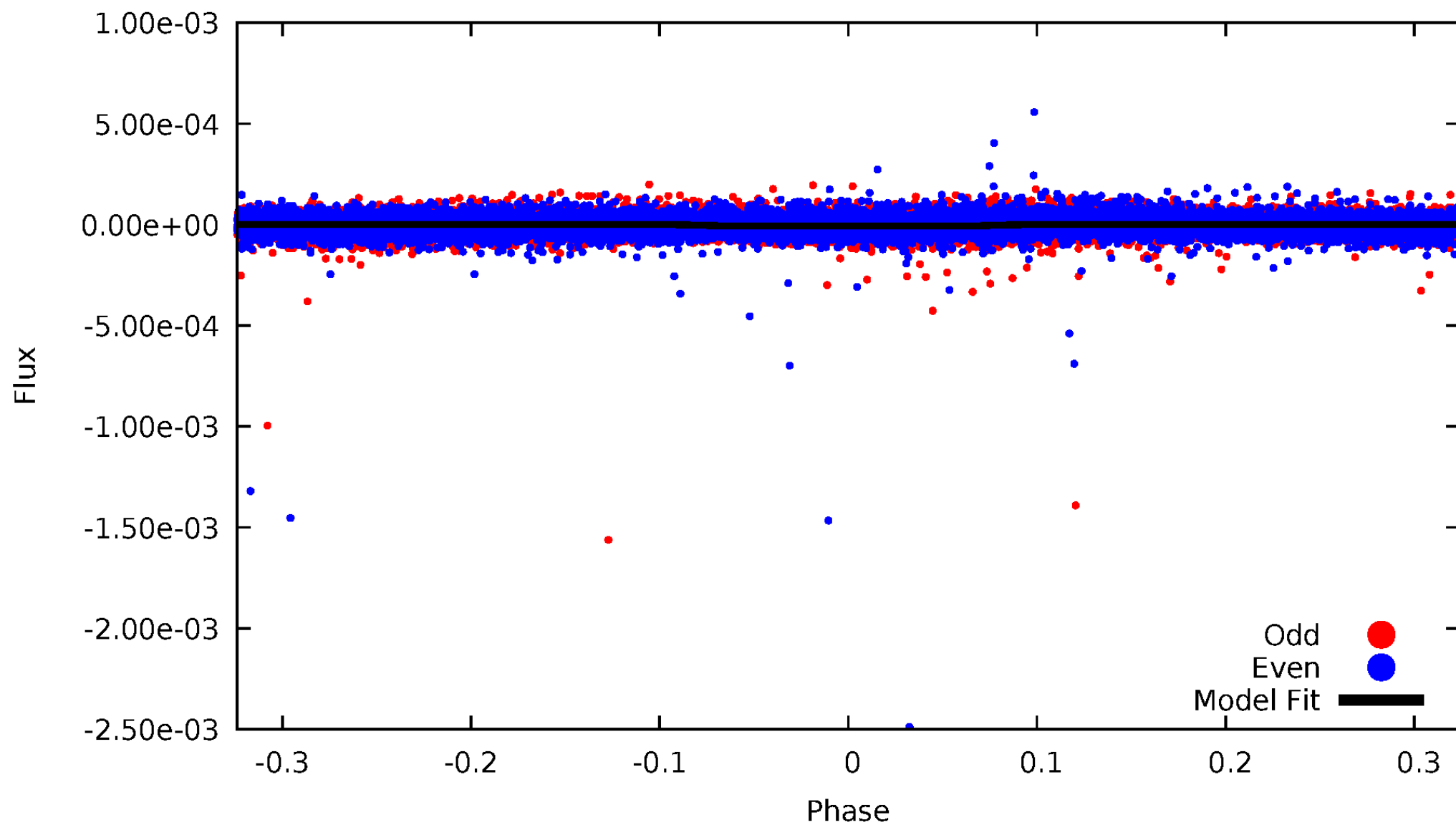


TCE 009764544-01



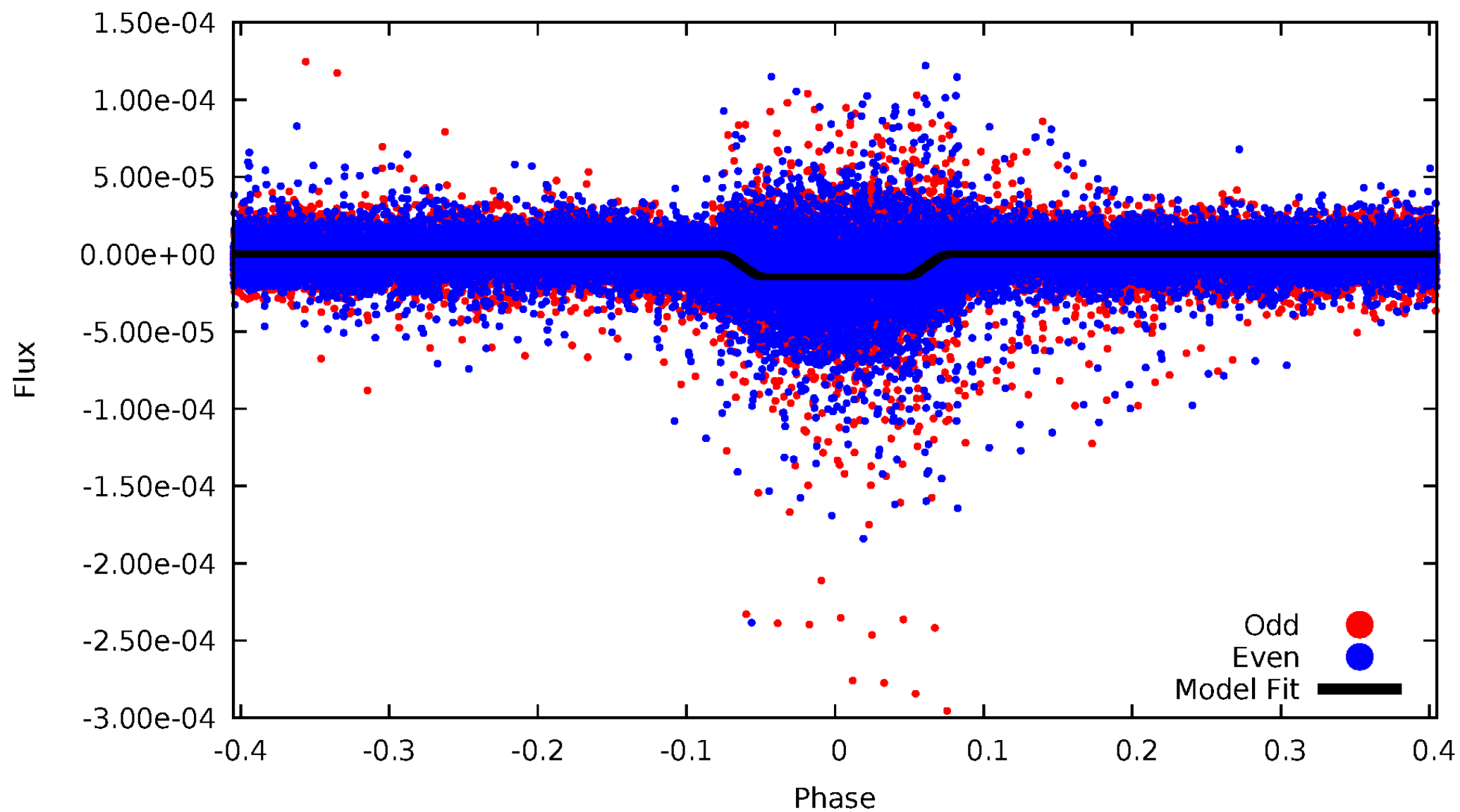
DV Odd/Even

TCE 009764544-01



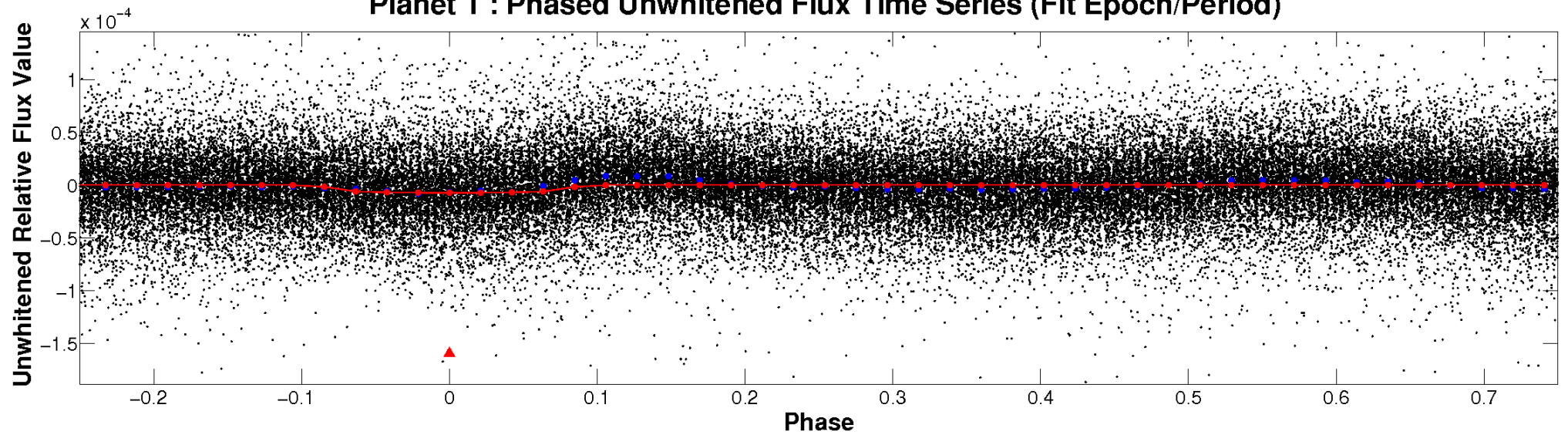
ALT Odd/Even

TCE 009764544-01

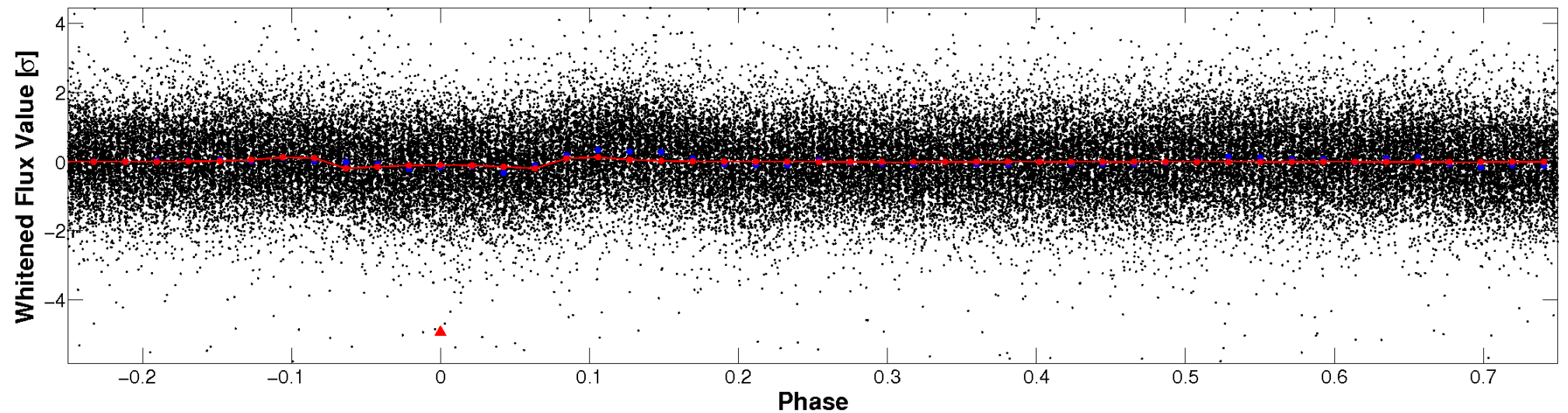


Non-Whitened Vs. Whitened Light Curve

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

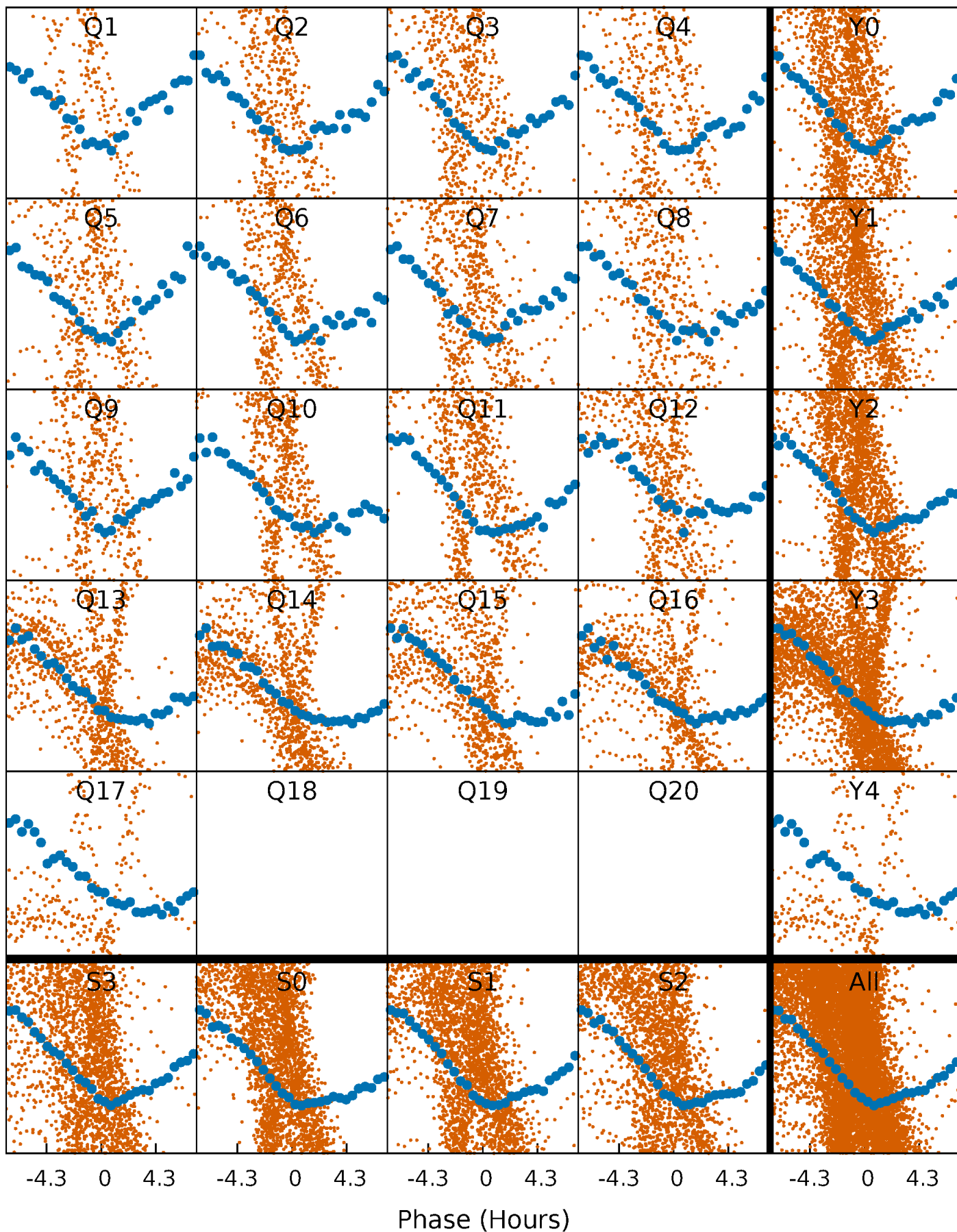


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



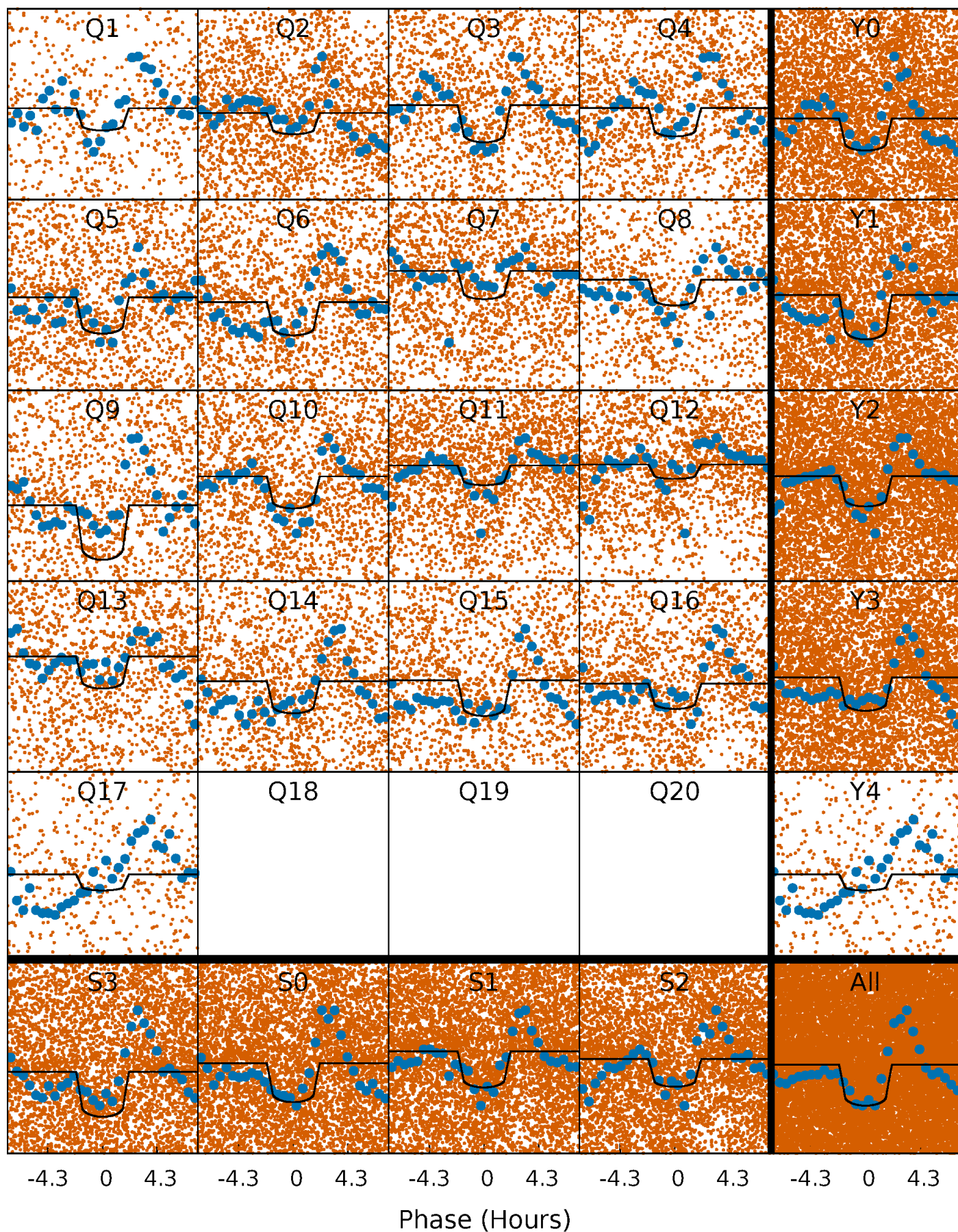
PDC Quarter-Phased Transit Curves

TCE 009764544-01 P= 0.965529 Days $T_0=132.072402$ (BKJD)



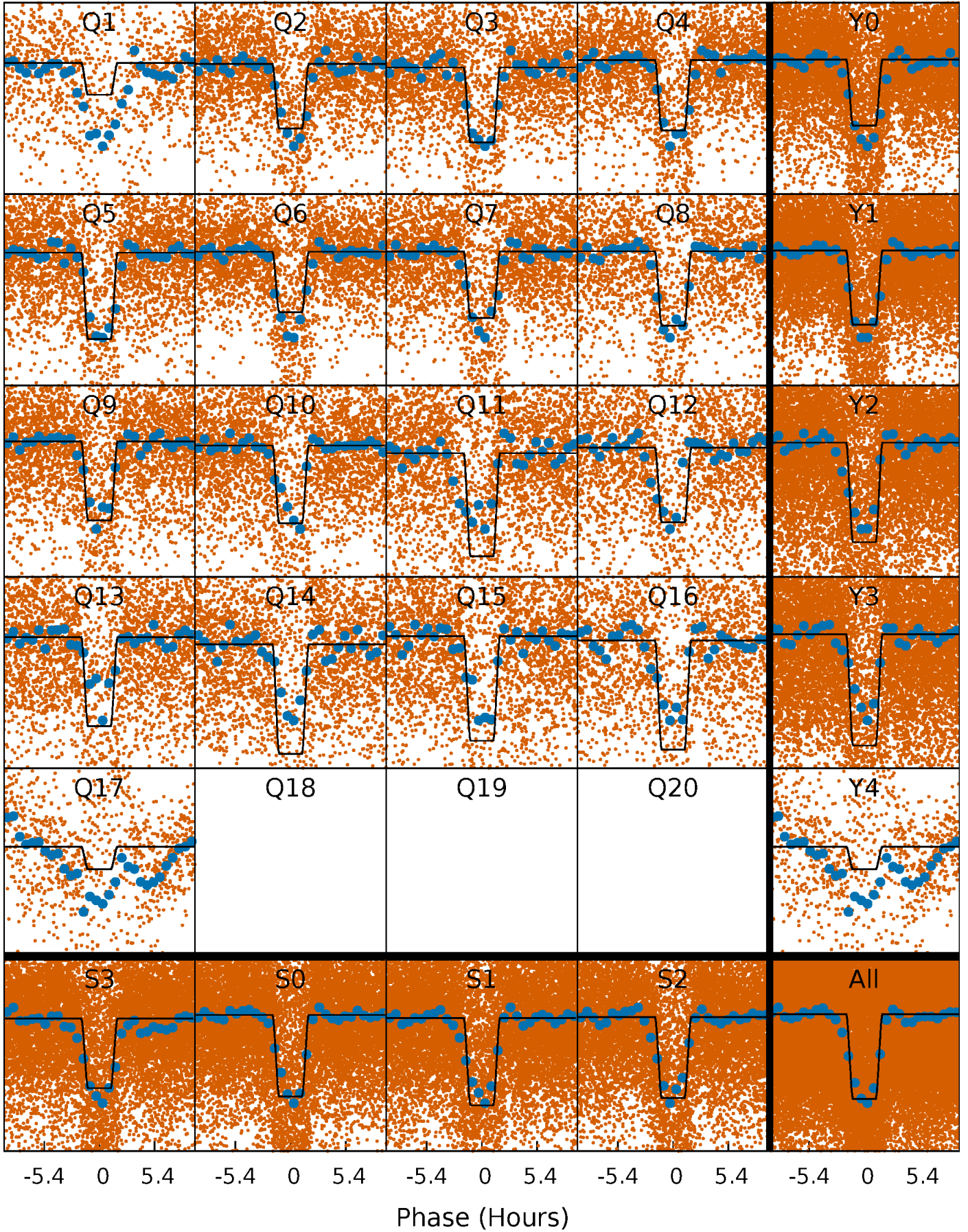
DV Quarter-Phased Transit Curves

TCE 009764544-01 P= 0.965529 Days $T_0=132.072402$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

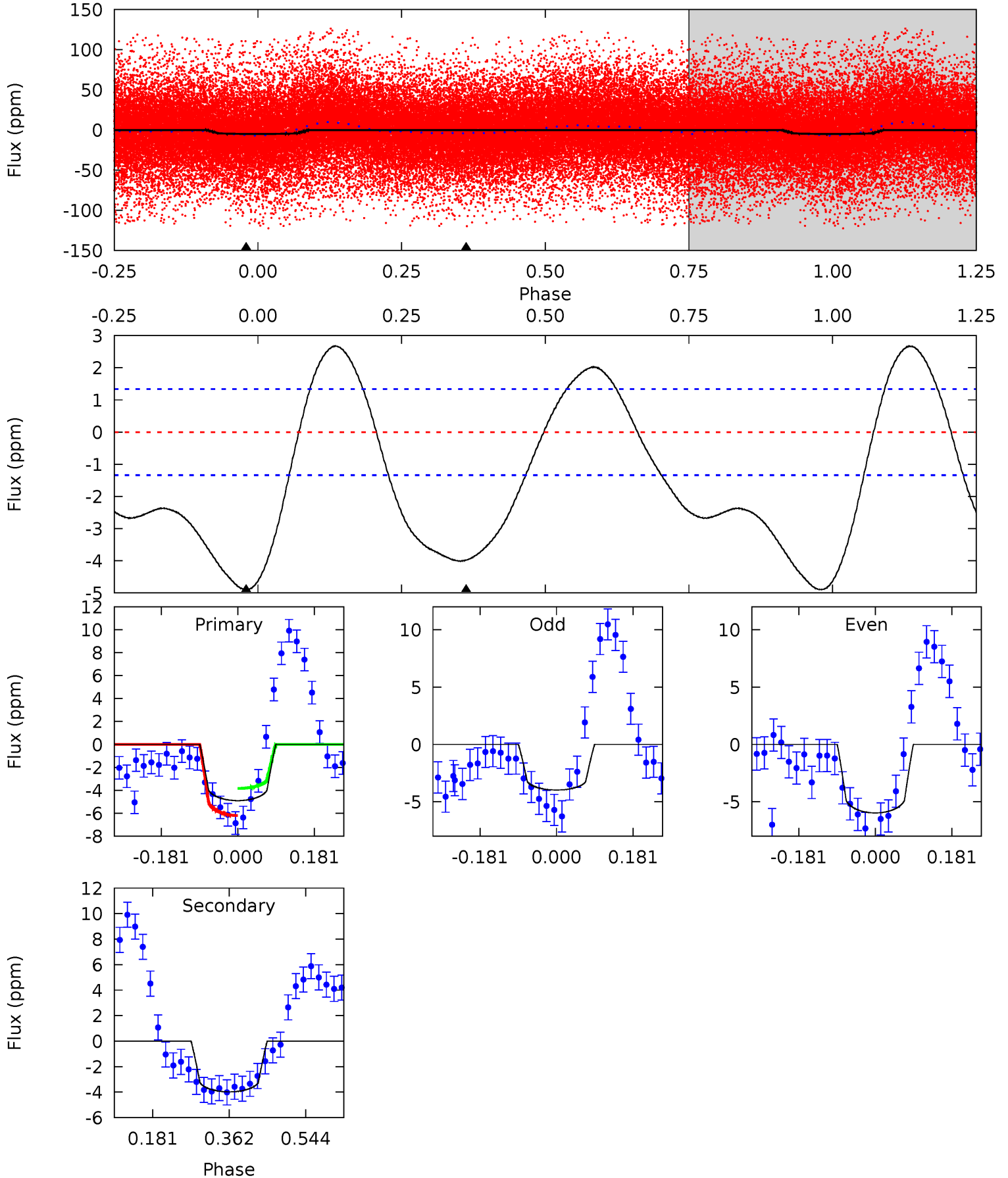
TCE 009764544-01 P= 0.965569 Days $T_0=132.061087$ (BKJD)



DV Model-Shift Uniqueness Test

009764544-01, P = 0.965529 Days, E = 131.106873 Days

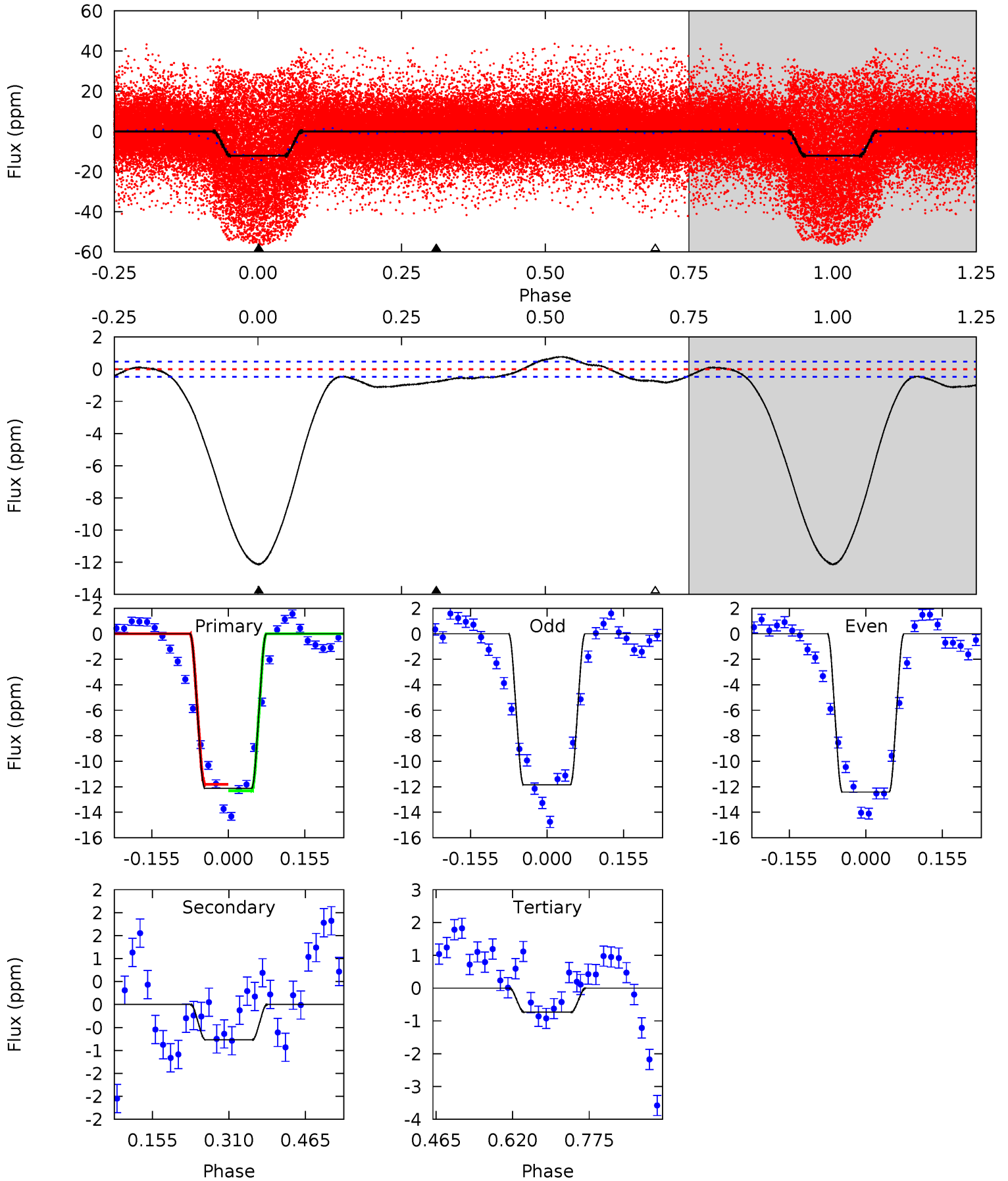
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	13.2	0	0	4.44	1.34	5.97	16.2	16.2	13.2	13.2	3.32	1.00	0.35	3.79



Alt Model-Shift Uniqueness Test

009764544-01, P = 0.965569 Days, E = 131.095518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
114.7	7.29	6.96	0	4.47	1.42	4.65	107.7	114.7	0.34	7.29	2.75	1.16	0.06	2.37



Stellar Parameters For KIC 009764544

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9013^{+251}_{-430}	$3.813^{+0.378}_{-0.162}$	$0.070^{+0.200}_{-0.650}$	$3.257^{+1.019}_{-1.528}$	$2.513^{+0.359}_{-0.838}$	$0.102^{+0.332}_{-0.046}$
	+3%/-5%	+10%/-4%	+286%/-929%	+31%/-47%	+14%/-33%	+324%/-45%
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 009764544-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 0	$0.97^{+0.20}_{-0.24}$	6036^{+606}_{-731}	6758^{+417}_{-401}	$1.556^{+0.997}_{-0.457}$
Alt.	-1 ± 0	$1.31^{+0.25}_{-0.33}$	6058^{+576}_{-713}	-4125^{+1097}_{-555}	$0.169^{+0.103}_{-0.055}$

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

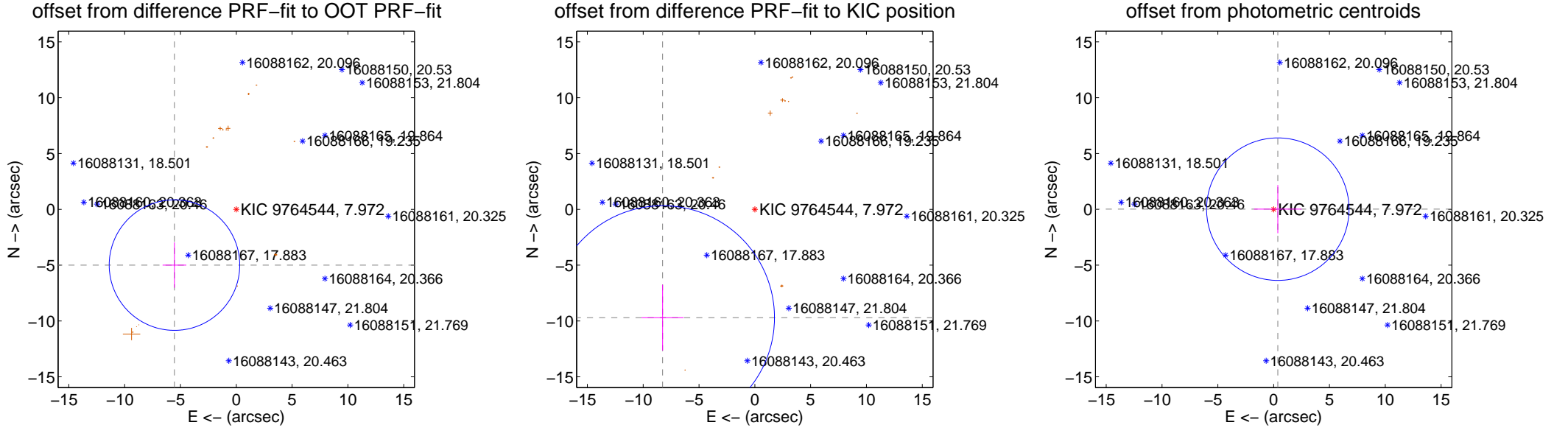
DV Centroid Data

Supplemental centroid analysis for 009764544-01. **Kepler magnitude: 7.97.** Transit SNR 17.49

There are 0 quarters with good PRF difference image offsets

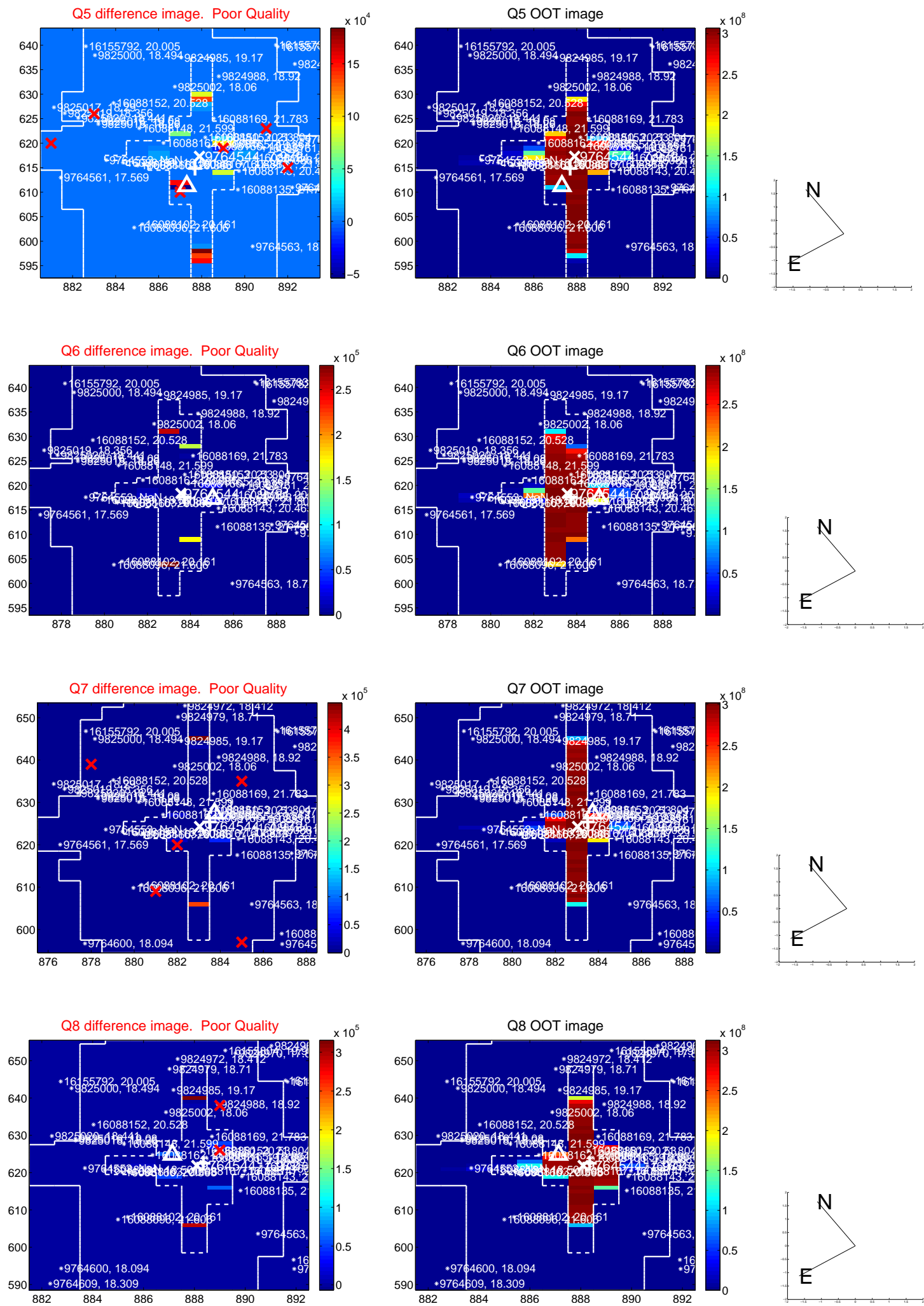
The OOT PRF centroid is offset from the target star catalog position by about 9.77 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.455 ± 1.948	3.83	5.537 ± 1.060	-4.993 ± 2.029
PRF-fit source offset from KIC position	12.740 ± 3.340	3.81	8.260 ± 1.880	-9.699 ± 2.942
photometric centroid source offset	0.37 ± 2.13	0.18	-0.37 ± 2.13	0.02 ± 2.16

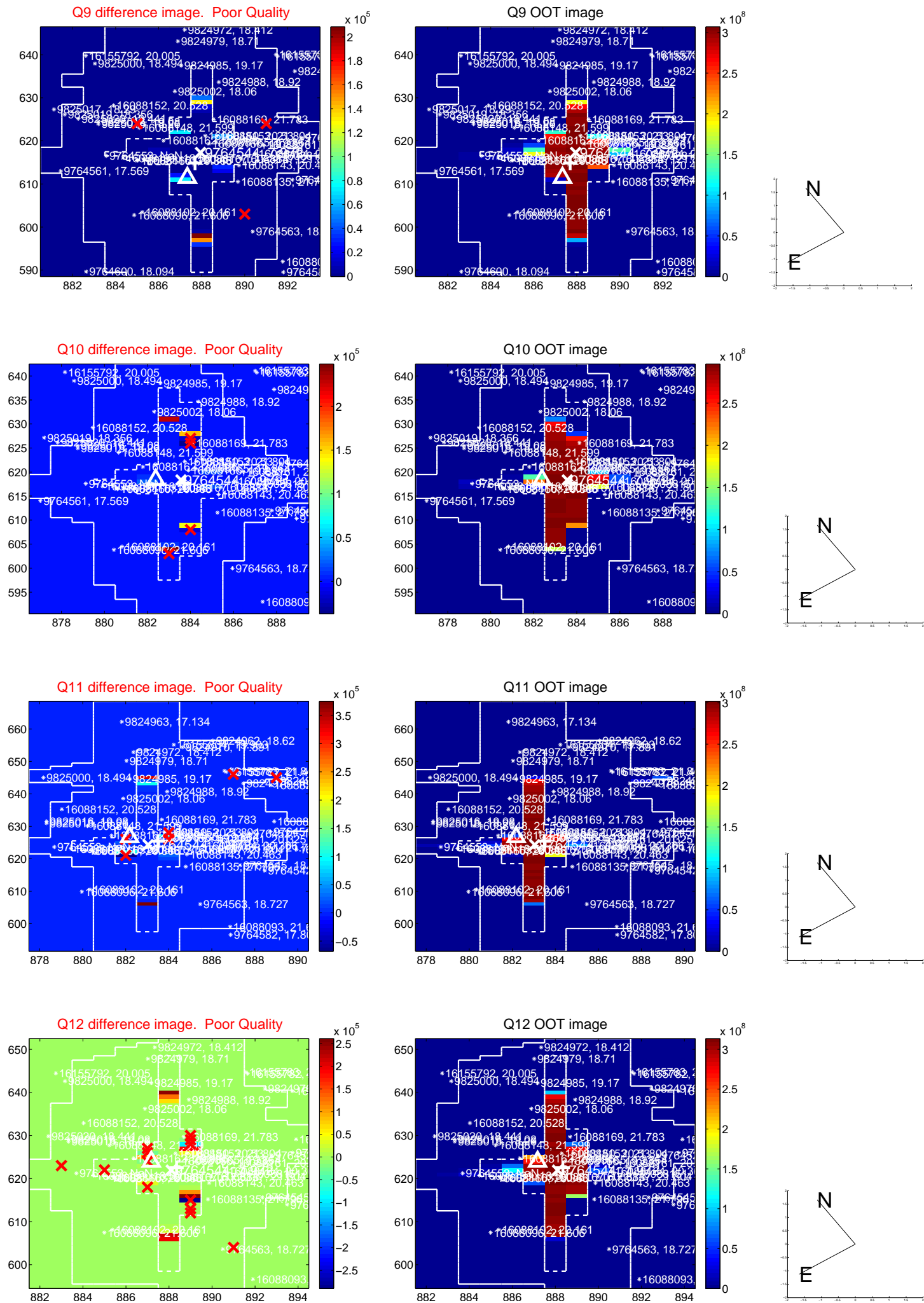


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

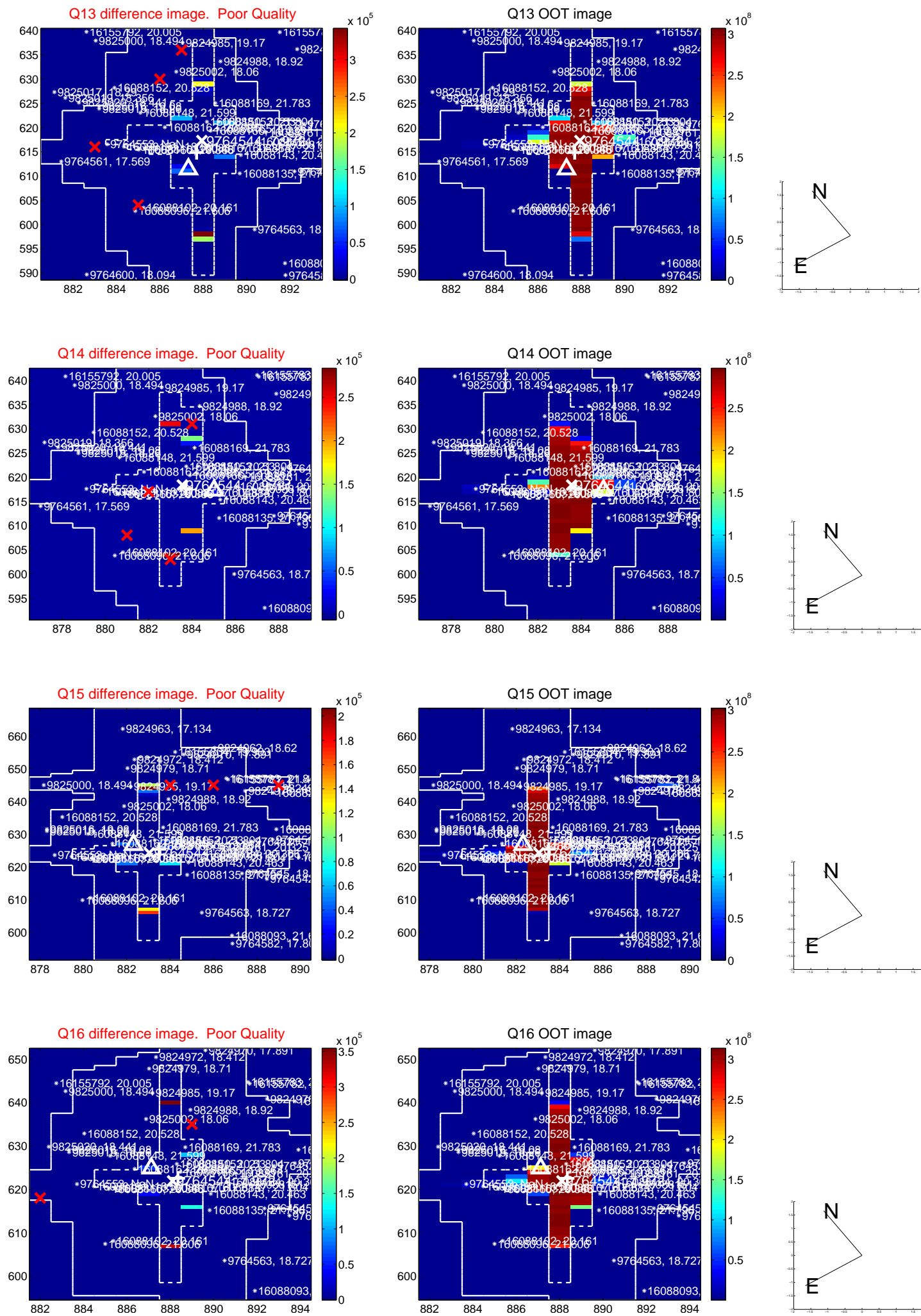
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



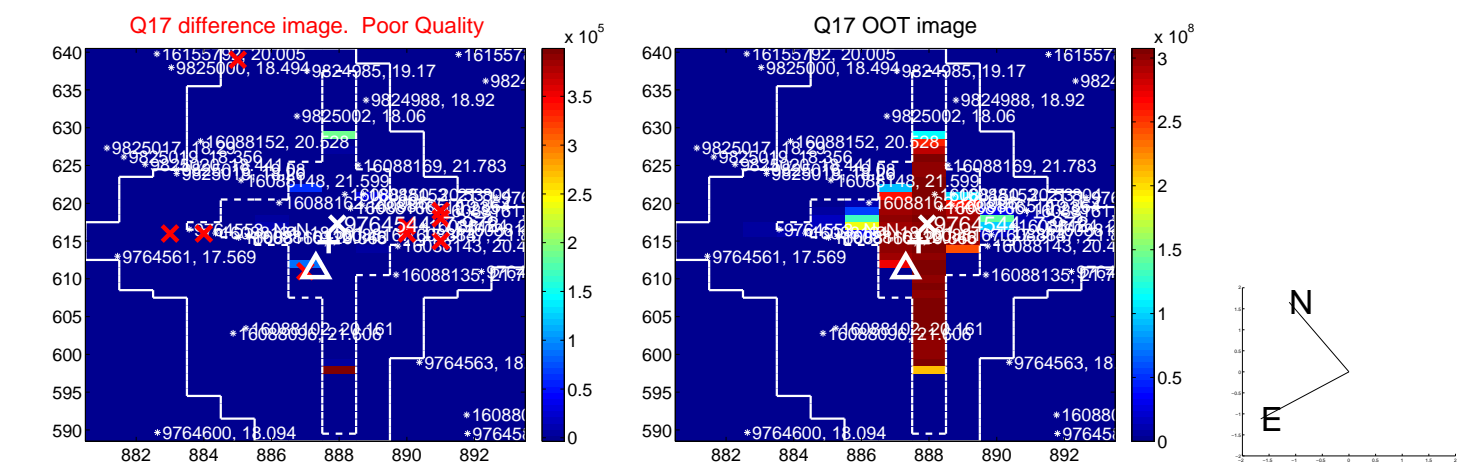
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



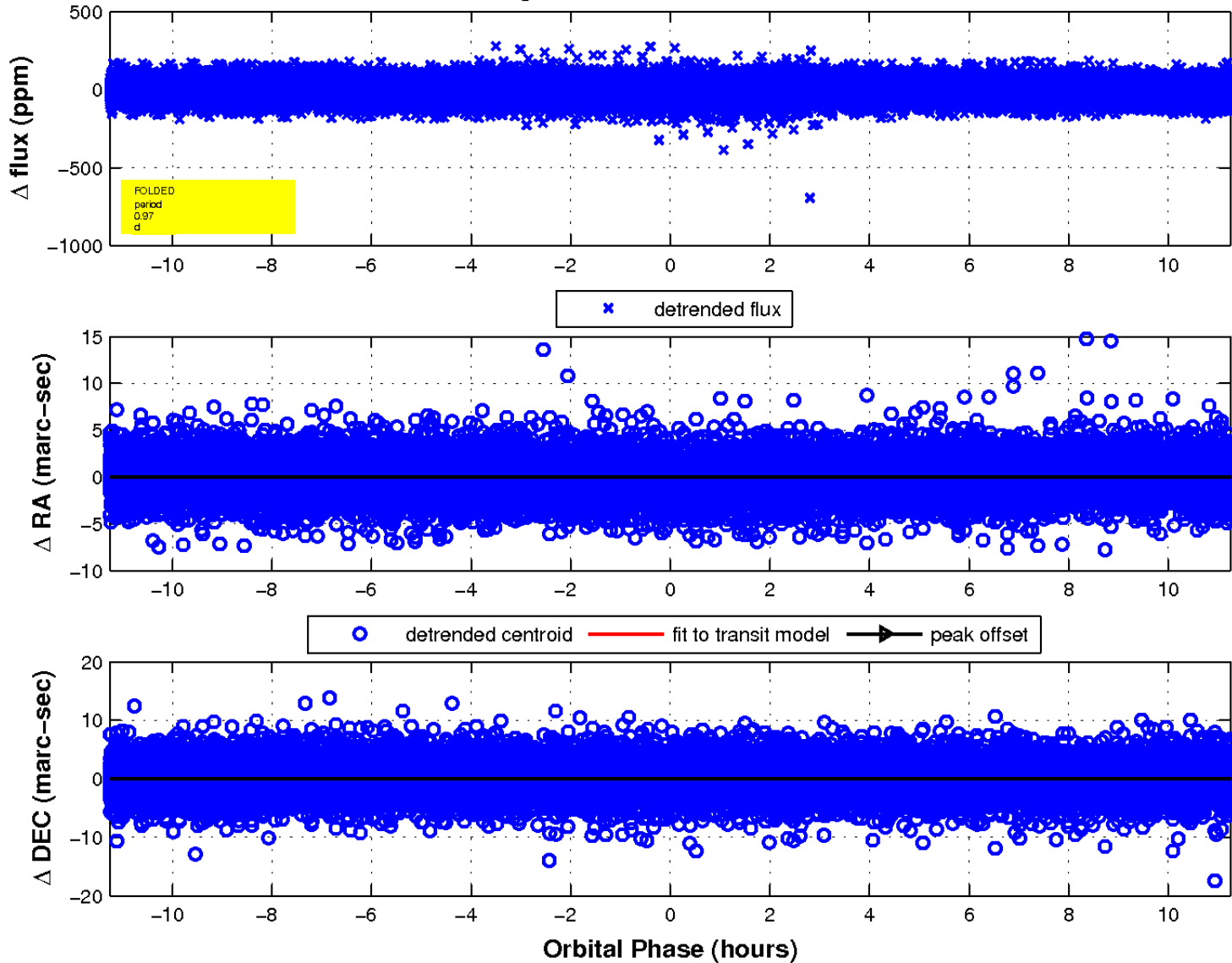
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

