

KIC 009655514

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})
009655514-01	OBS	No	1.036341	131.976674	53.4	3.885	10.2	9.9	3.62	7643	3.05	61130.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009655514-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

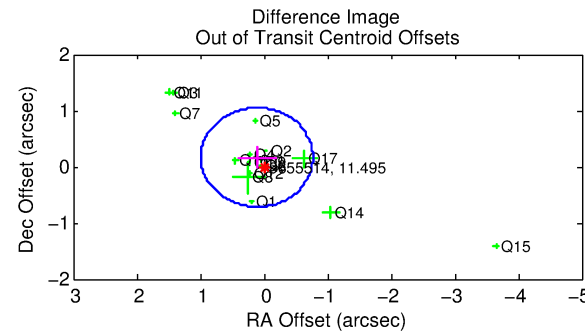
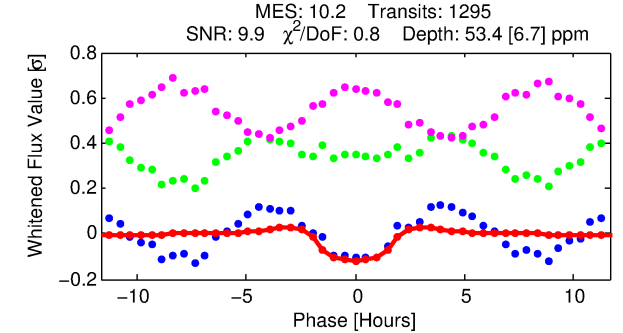
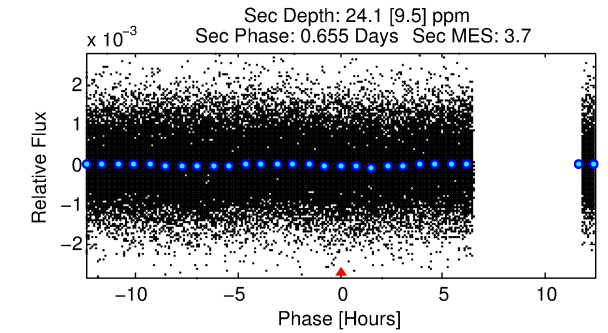
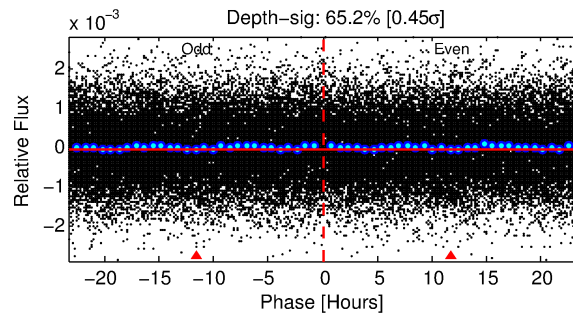
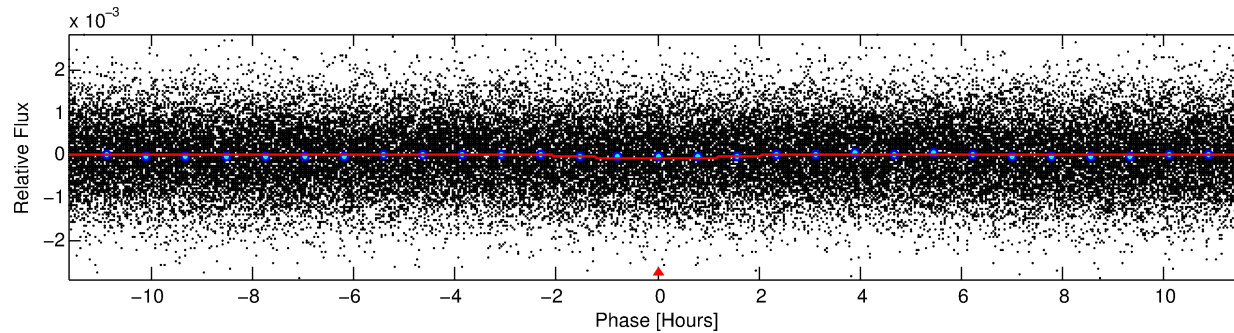
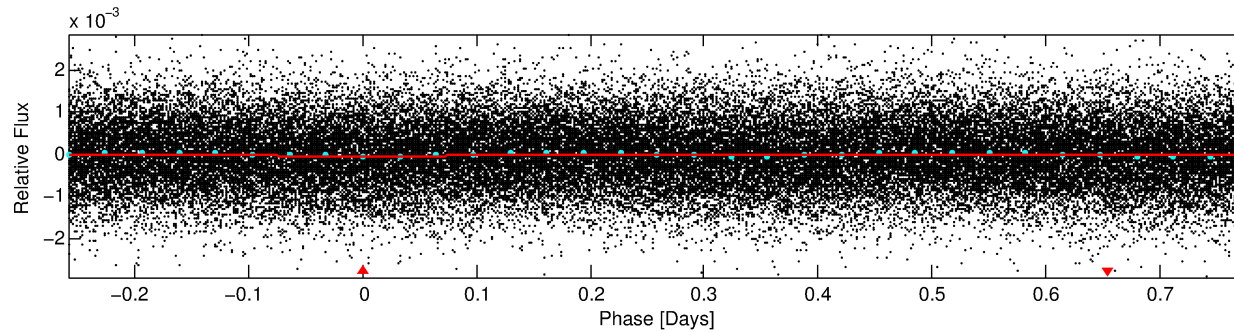
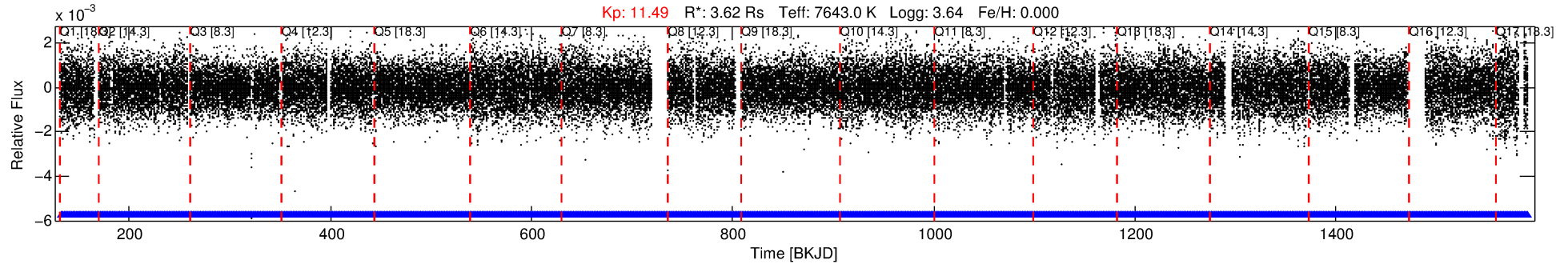
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009655514-01

No Significant Match Found

DV One-Page Summary

KIC: 9655514 Candidate: 1 of 1 Period: 1.036 d



DV Fit Results:

Period = 1.03634 [0.00001] d
 Epoch = 131.9767 [0.0052] BKJD
 Rp/R* = 0.0077 [0.0063]
 a/R* = 1.35 [3.02]
 b = 0.89 [1.22]
 Seff = 61130.58 [49467.14]
 Teq = 4010 [811] K
 Rp = 3.05 [2.91] Re
 a = 0.0256 [0.0126] AU
 Ag = 0.94 [1.73] [-0.04 σ]
 Tefp = 6098 [2558] K [0.78 σ]

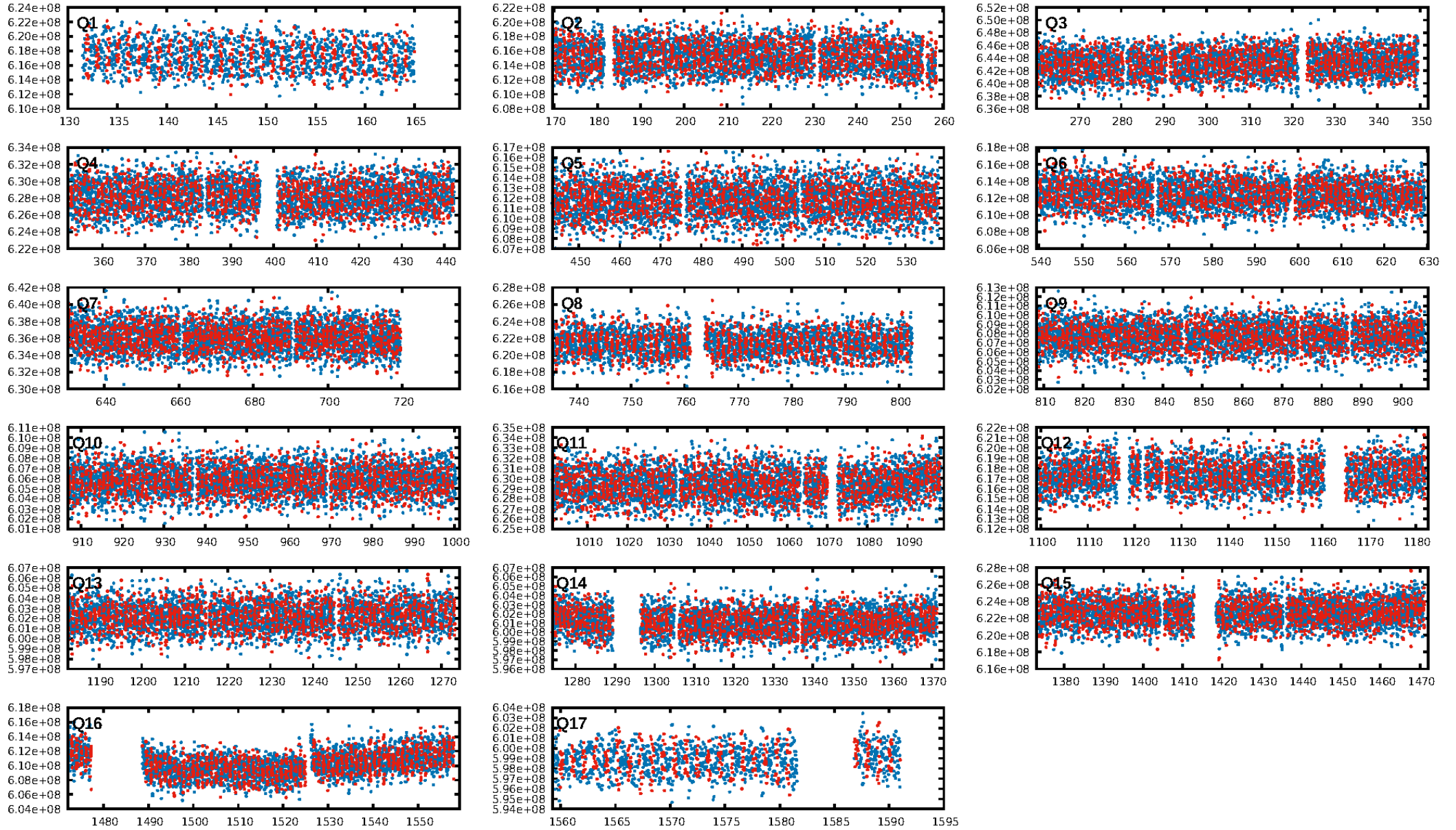
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: 1.23e-25
 RollingBand-fgt: 1.00 [1238/1238]
 GhostDiagnostic-chr: 4.275
 Centroid-sig: 68.4%
 Centroid-so: 0.053 arcsec [0.34 σ]
 OutOffset-rm: 0.199 arcsec [0.68 σ]
 KicOffset-rm: 0.128 arcsec [0.36 σ]
 OutOffset-st: 3/4/4/5 [16]
 KicOffset-st: 3/4/4/5 [16]
 DiffImageQuality-fgm: 0.62 [10/16]
 DiffImageOverlap-fno: 1.00 [17/17]

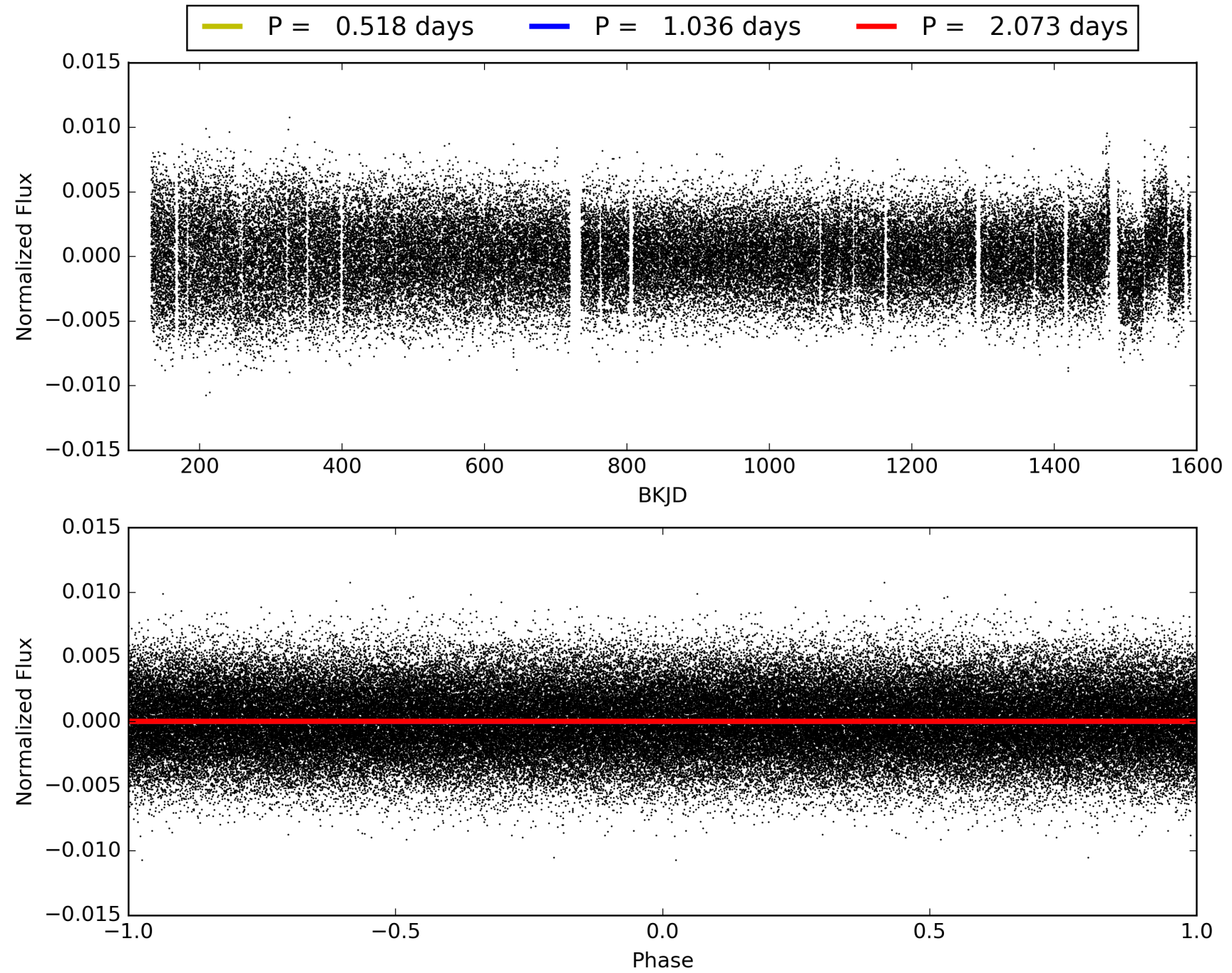
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:49:53 Z

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

TCE 009655514-01, PDC Light Curves

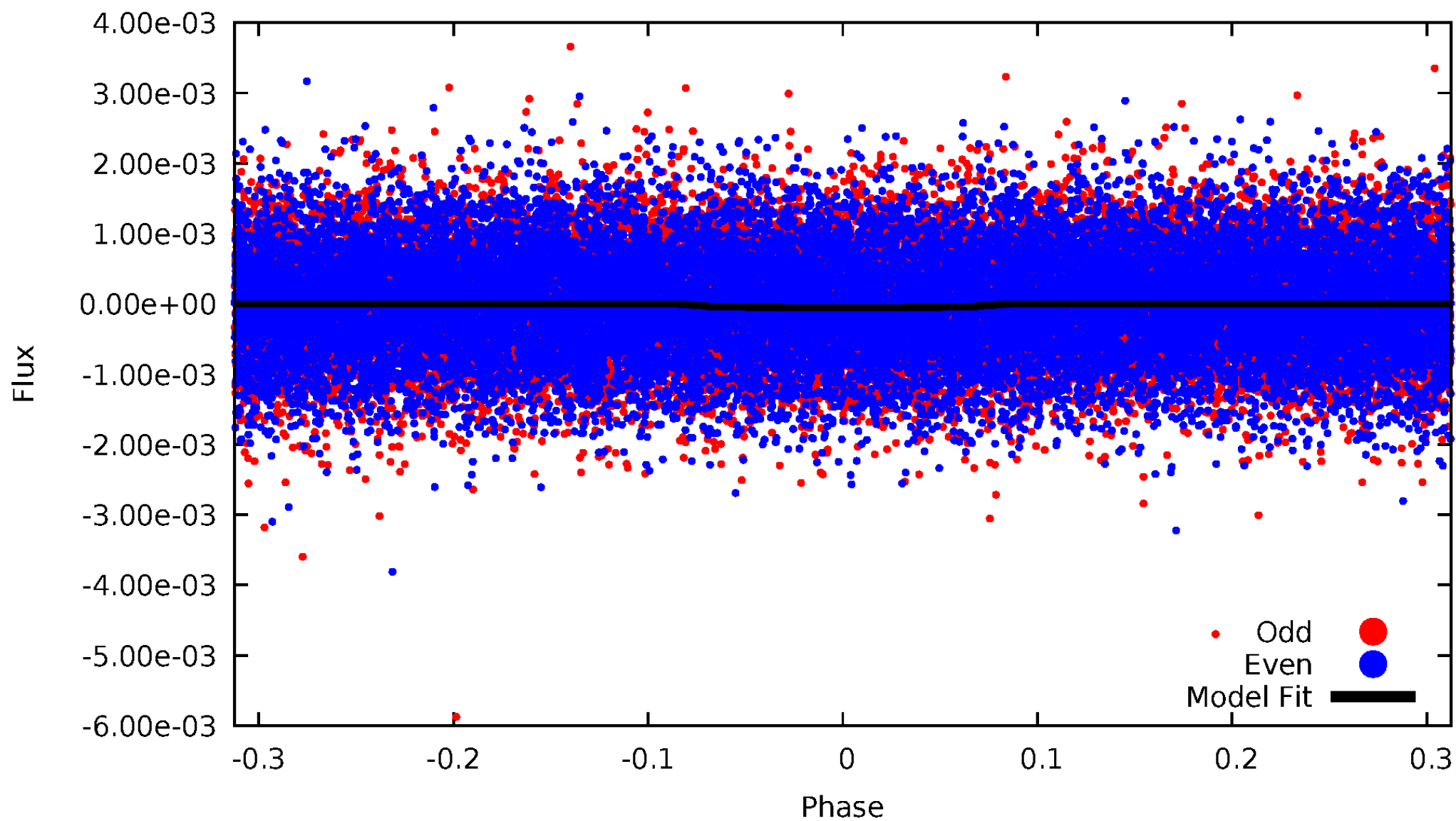


TCE 009655514-01



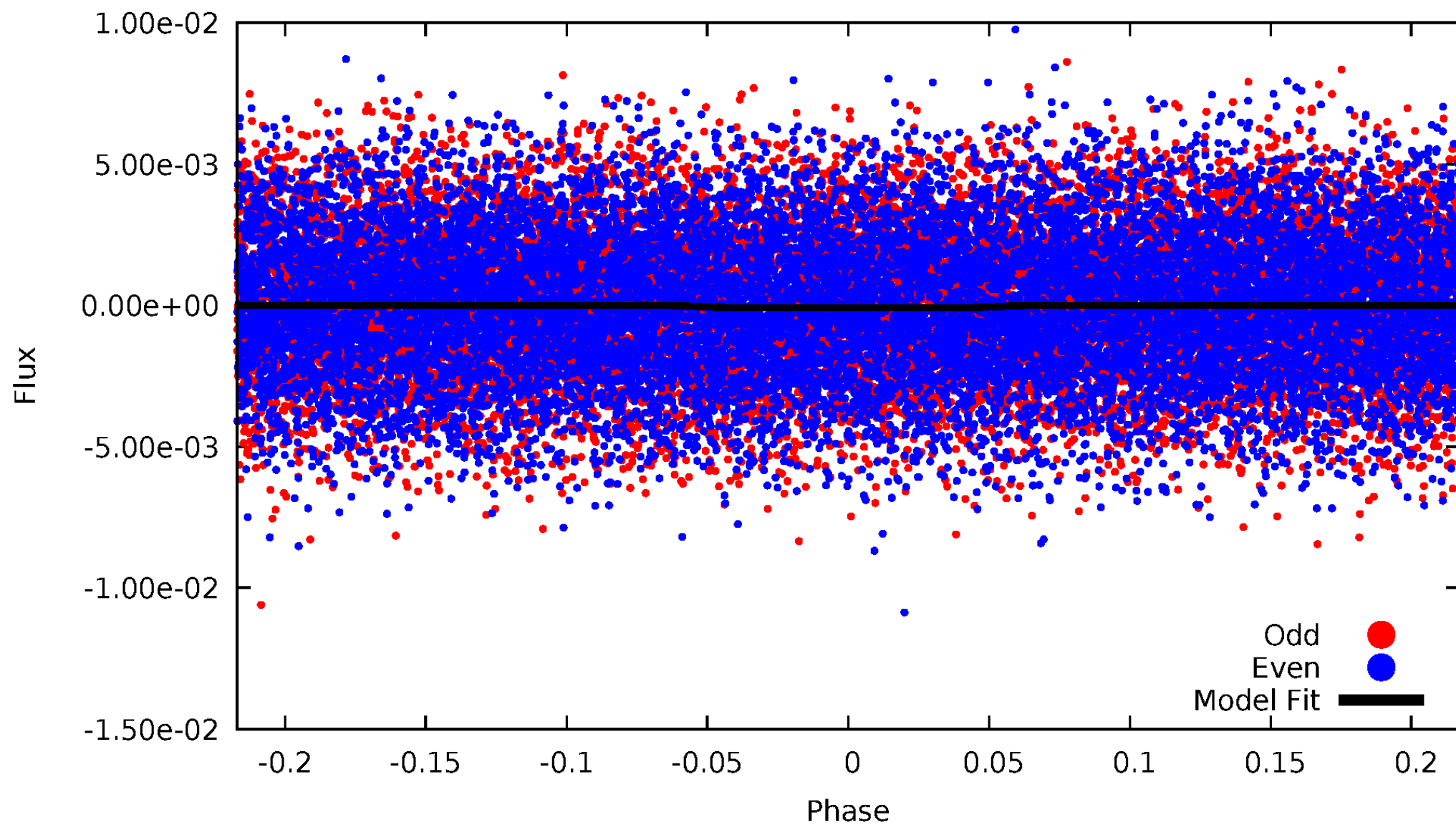
DV Odd/Even

TCE 00965514-01



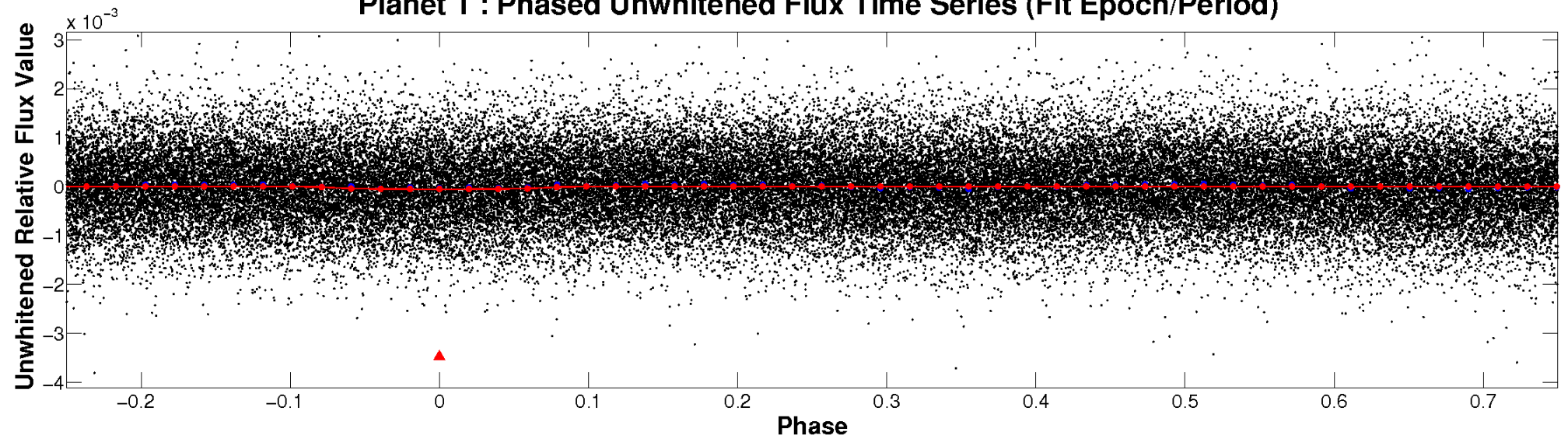
ALT Odd/Even

TCE 009655514-01

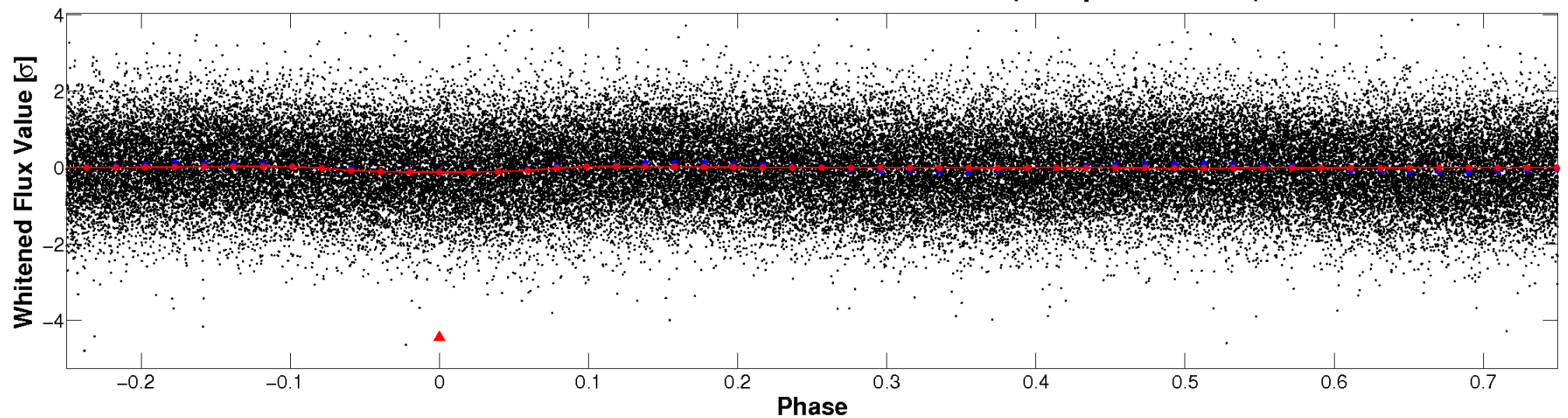


Non-Whitened Vs. Whitened Light Curve

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

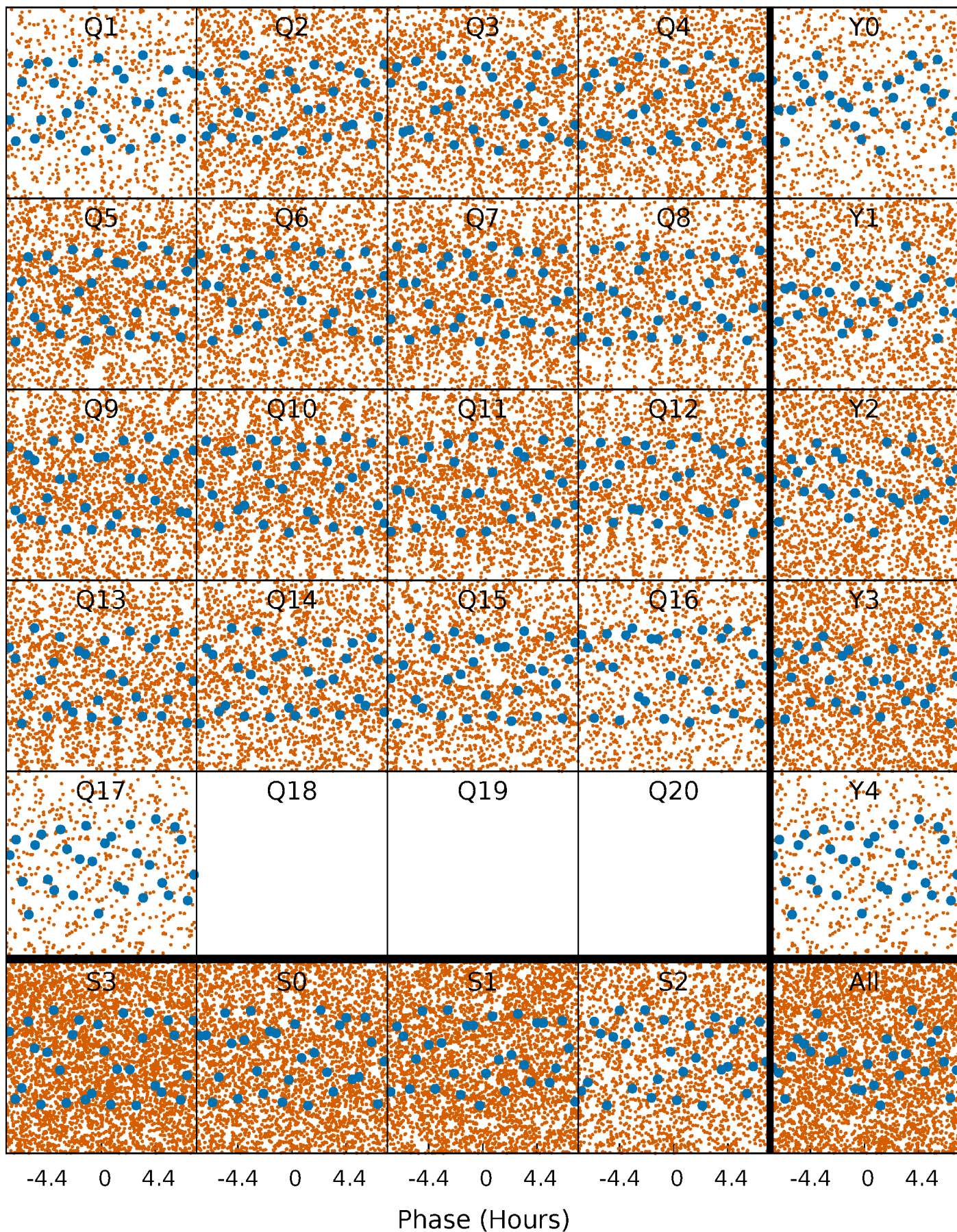


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



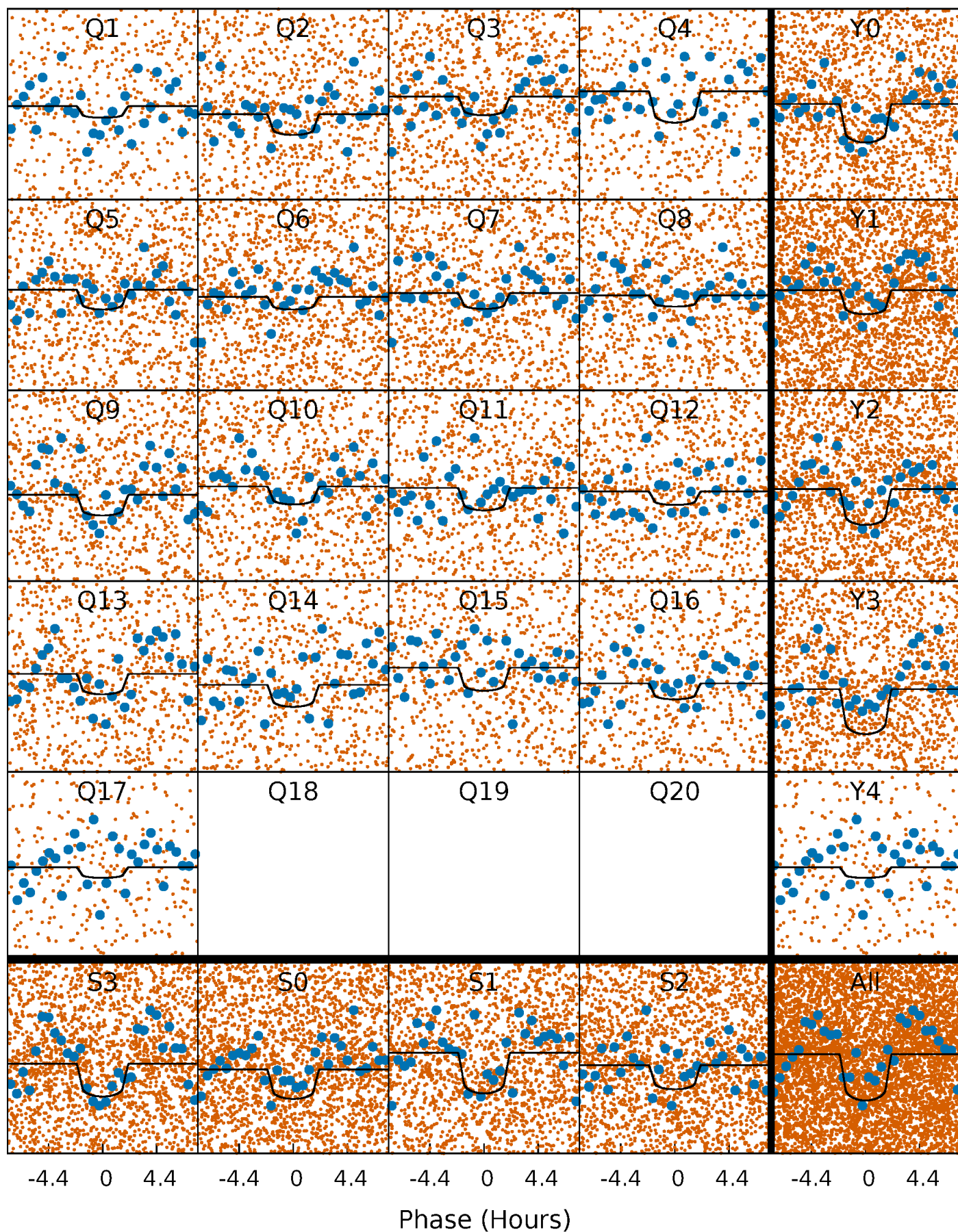
PDC Quarter-Phased Transit Curves

TCE 009655514-01 P= 1.036341 Days $T_0=131.976674$ (BKJD)



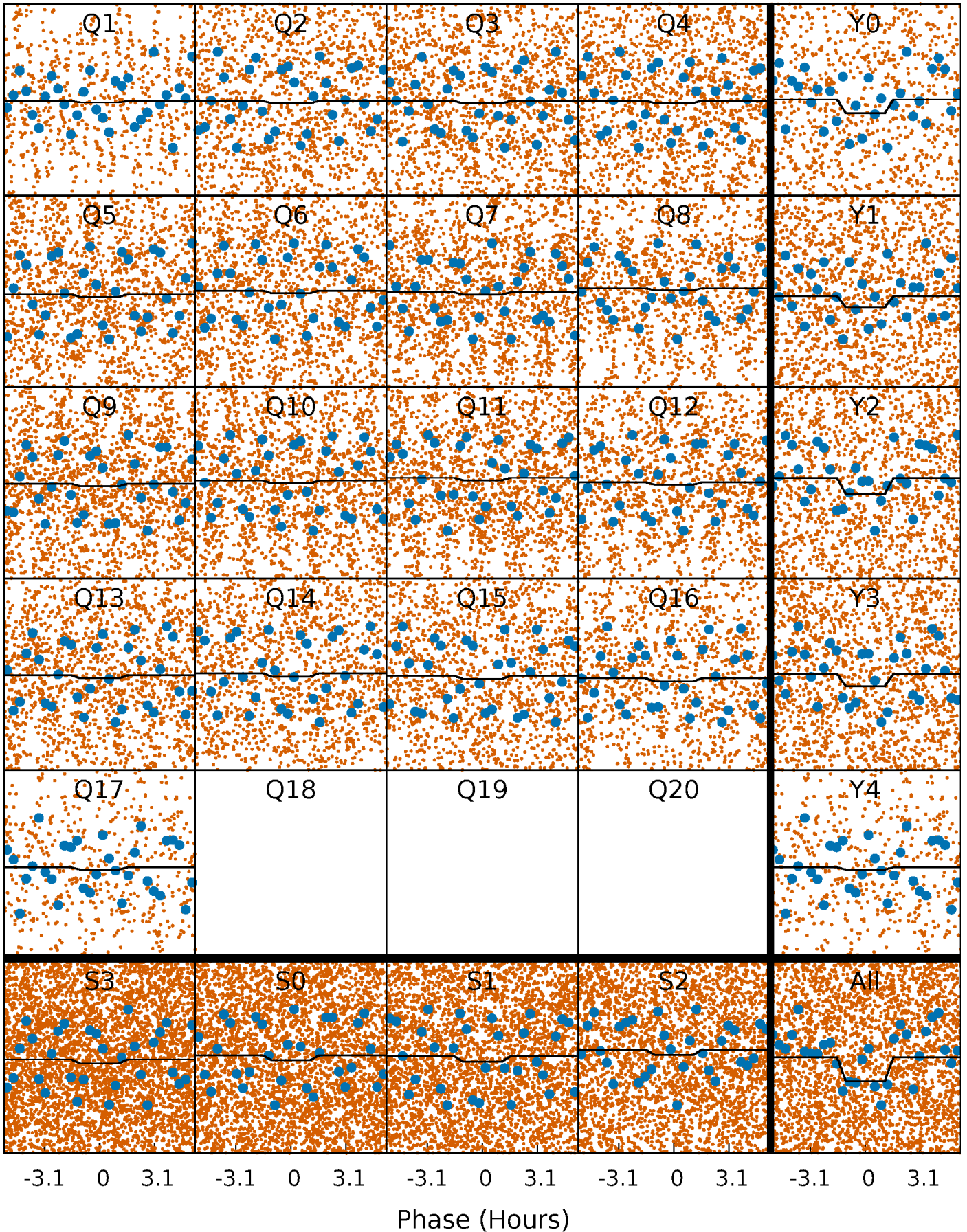
DV Quarter-Phased Transit Curves

TCE 009655514-01 P= 1.036341 Days $T_0=131.976674$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

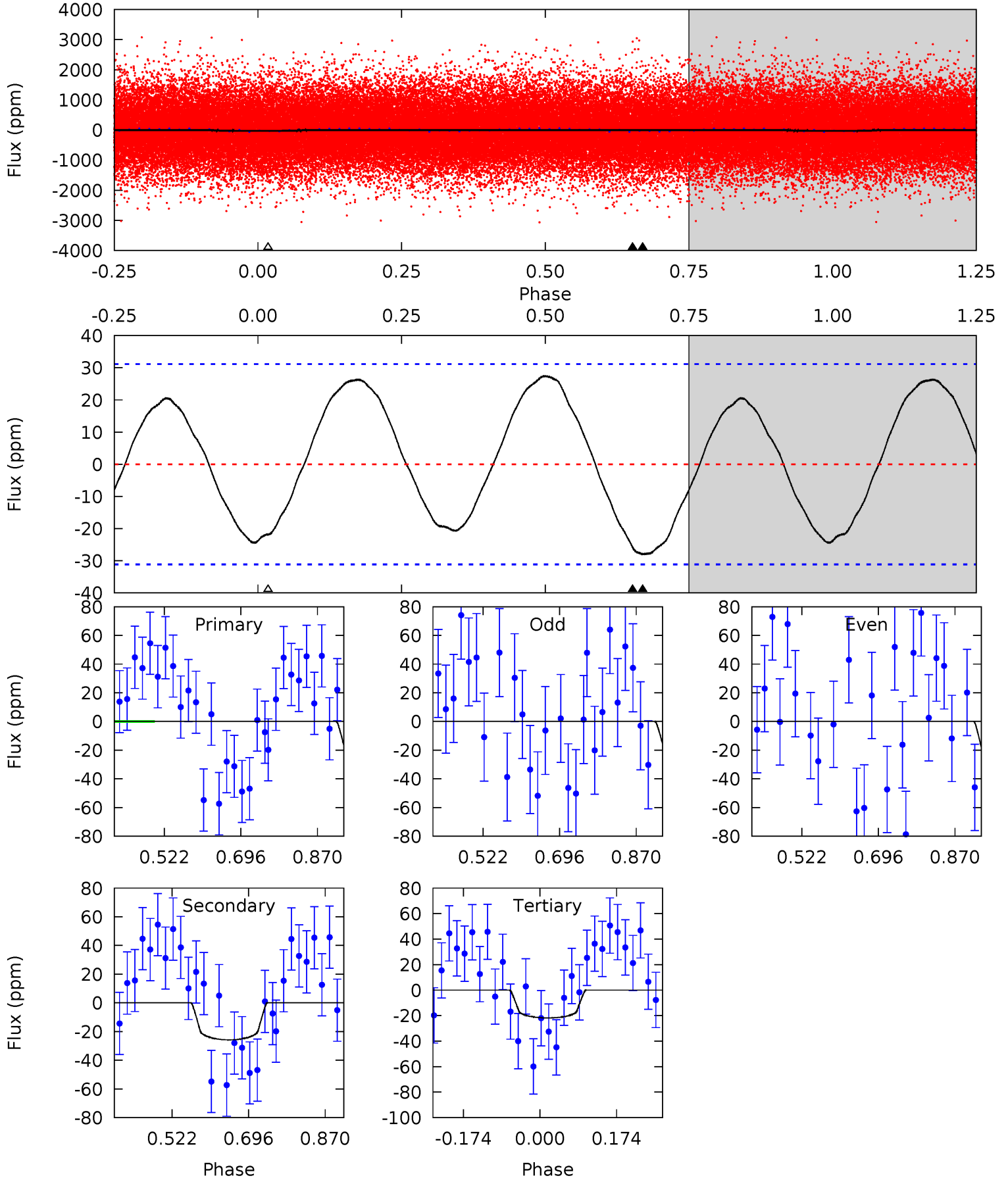
TCE 009655514-01 P= 1.036348 Days $T_0=131.981403$ (BKJD)



DV Model-Shift Uniqueness Test

009655514-01, P = 1.036341 Days, E = 130.940333 Days

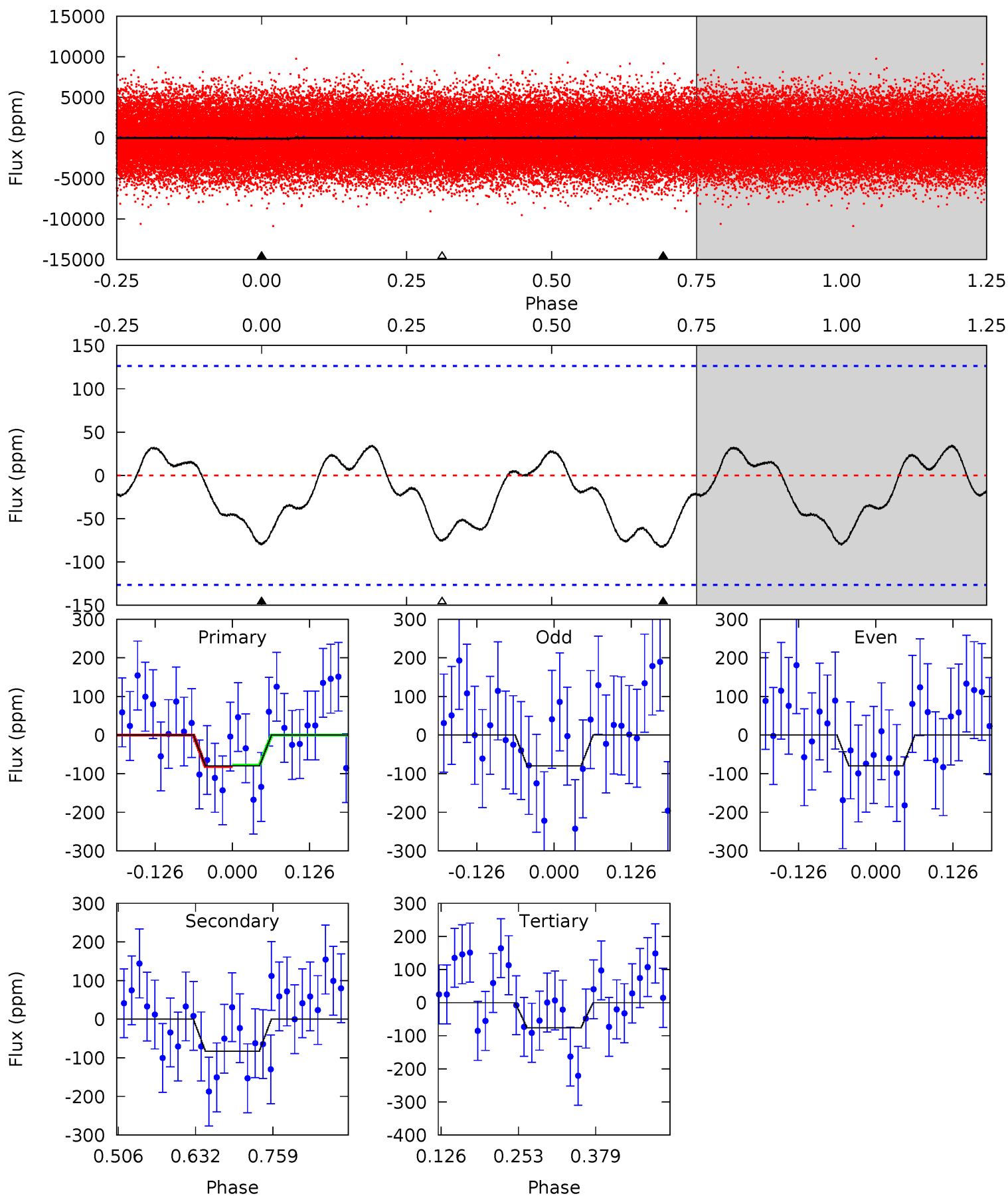
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.99	3.68	3.12	0	4.45	1.36	2.36	0.87	3.99	0.57	3.68	0.33	1.09	0.50	0.52



Alt Model-Shift Uniqueness Test

009655514-01, P = 1.036348 Days, E = 130.945055 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.86	2.97	2.70	0	4.52	1.53	1.13	0.16	2.86	0.26	2.97	0.00	1.01	0.29	0.07



Stellar Parameters For KIC 009655514

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7643^{+212}_{-318}	$3.639^{+0.467}_{-0.082}$	$0.000^{+0.200}_{-0.350}$	$3.618^{+0.609}_{-1.826}$	$2.082^{+0.292}_{-0.542}$	$0.062^{+0.312}_{-0.017}$
	+3%/-4%	+13%/-2%	+inf%/-inf%	+17%/-50%	+14%/-26%	+504%/-28%
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 009655514-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 7	$3.10^{+2.26}_{-1.83}$	5403^{+401}_{-664}	5083^{+3905}_{-7053}	$0.938^{+4.746}_{-0.639}$
Alt.	-83 ± 28	$3.36^{+2.37}_{-1.97}$	5392^{+403}_{-650}	6934^{+5574}_{-1920}	$2.538^{+12.046}_{-1.724}$

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 $A_{obs} \gg 1.0$

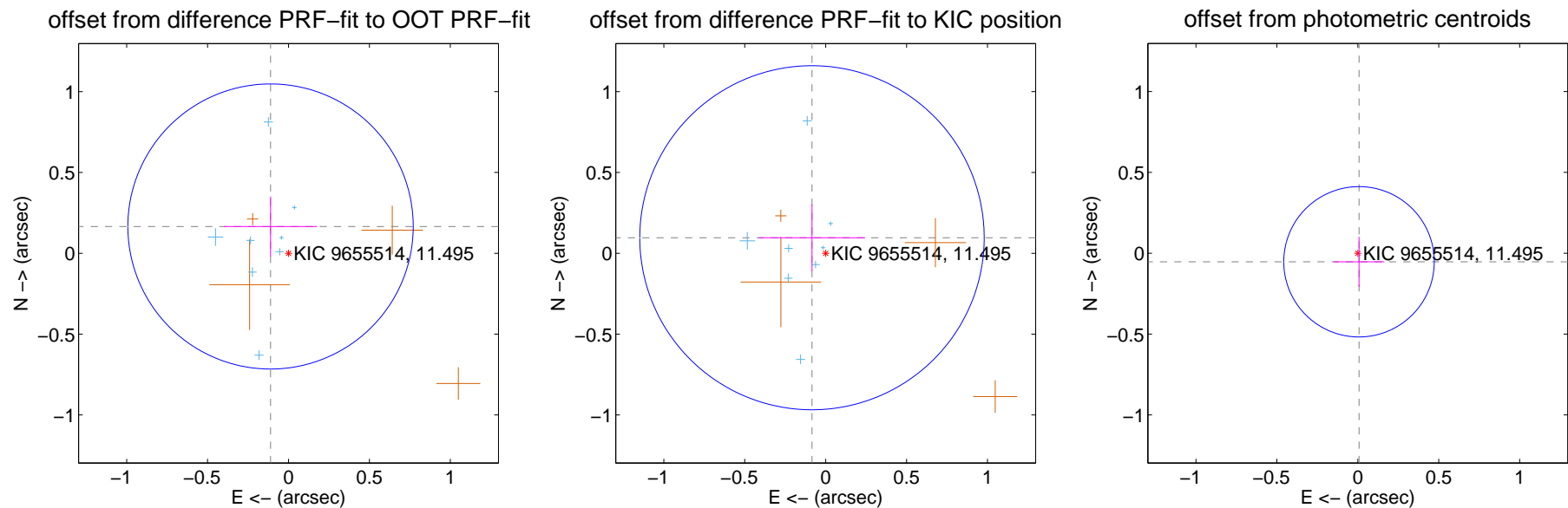
DV Centroid Data

Supplemental centroid analysis for 009655514-01. **Kepler magnitude: 11.49.** Transit SNR 9.92

There are 10 quarters with good PRF difference image offsets

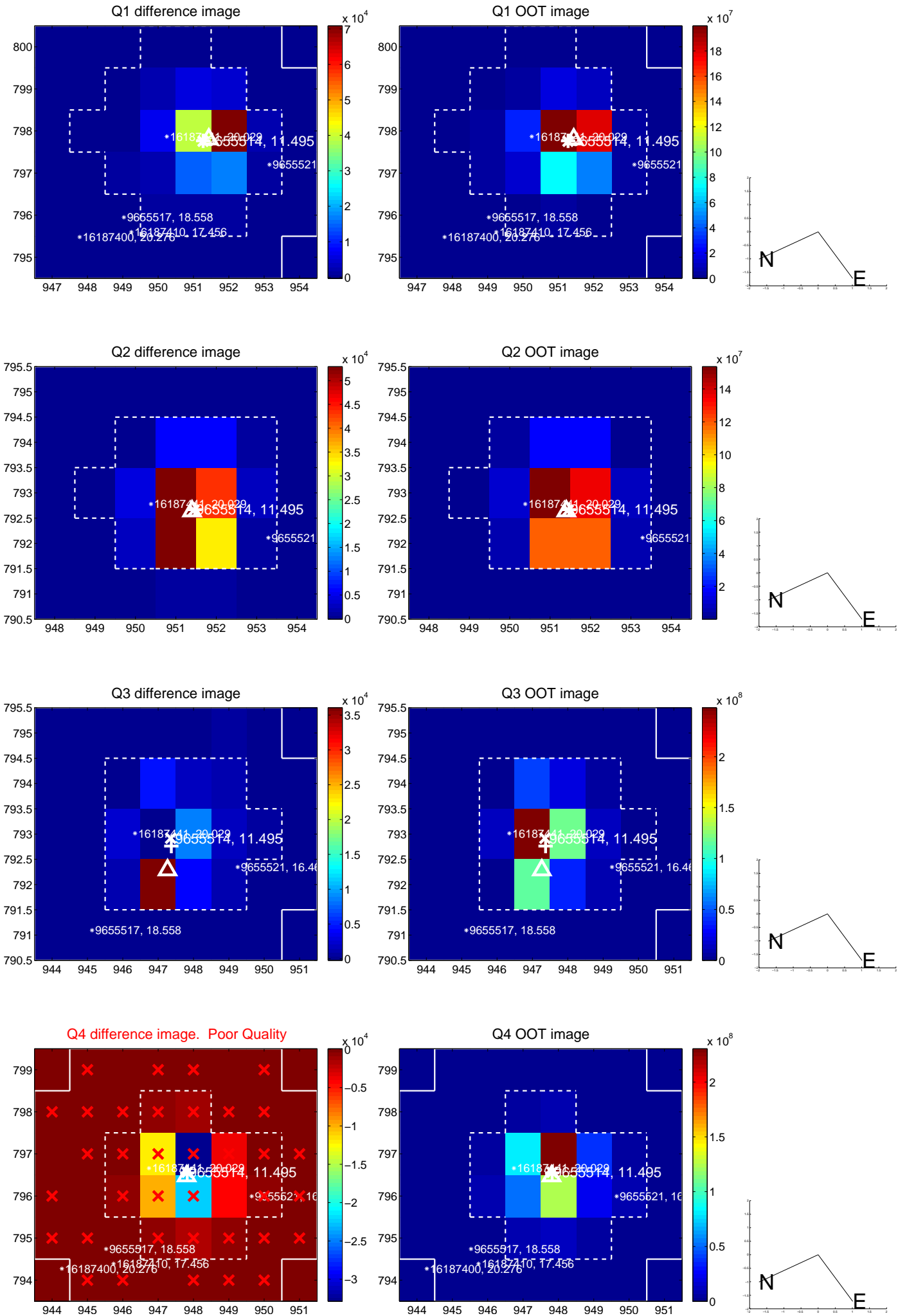
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.199 ± 0.294	0.68	0.111 ± 0.288	0.166 ± 0.185
PRF-fit source offset from KIC position	0.128 ± 0.355	0.36	0.085 ± 0.329	0.096 ± 0.206
photometric centroid source offset	0.05 ± 0.15	0.34	-0.01 ± 0.16	-0.05 ± 0.15

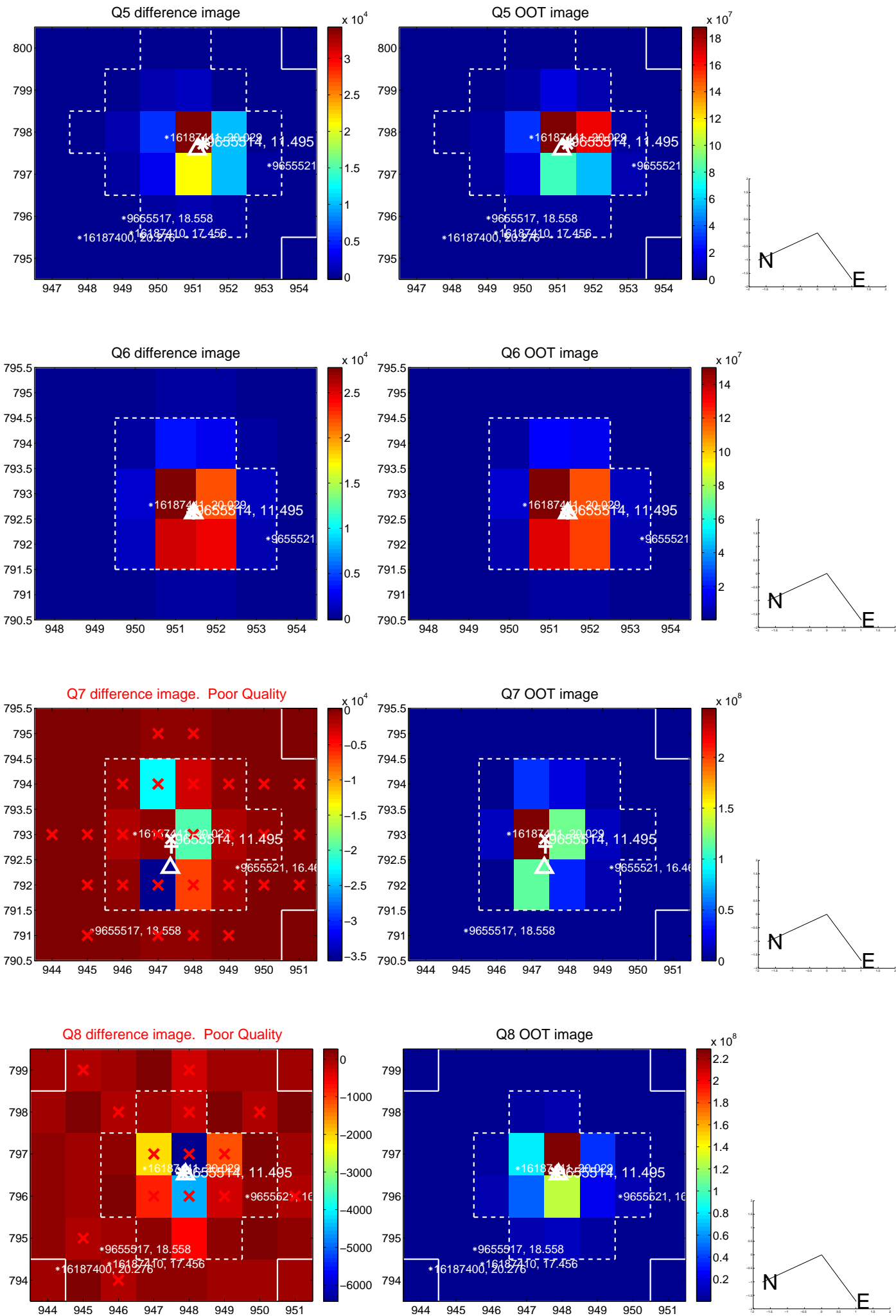


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

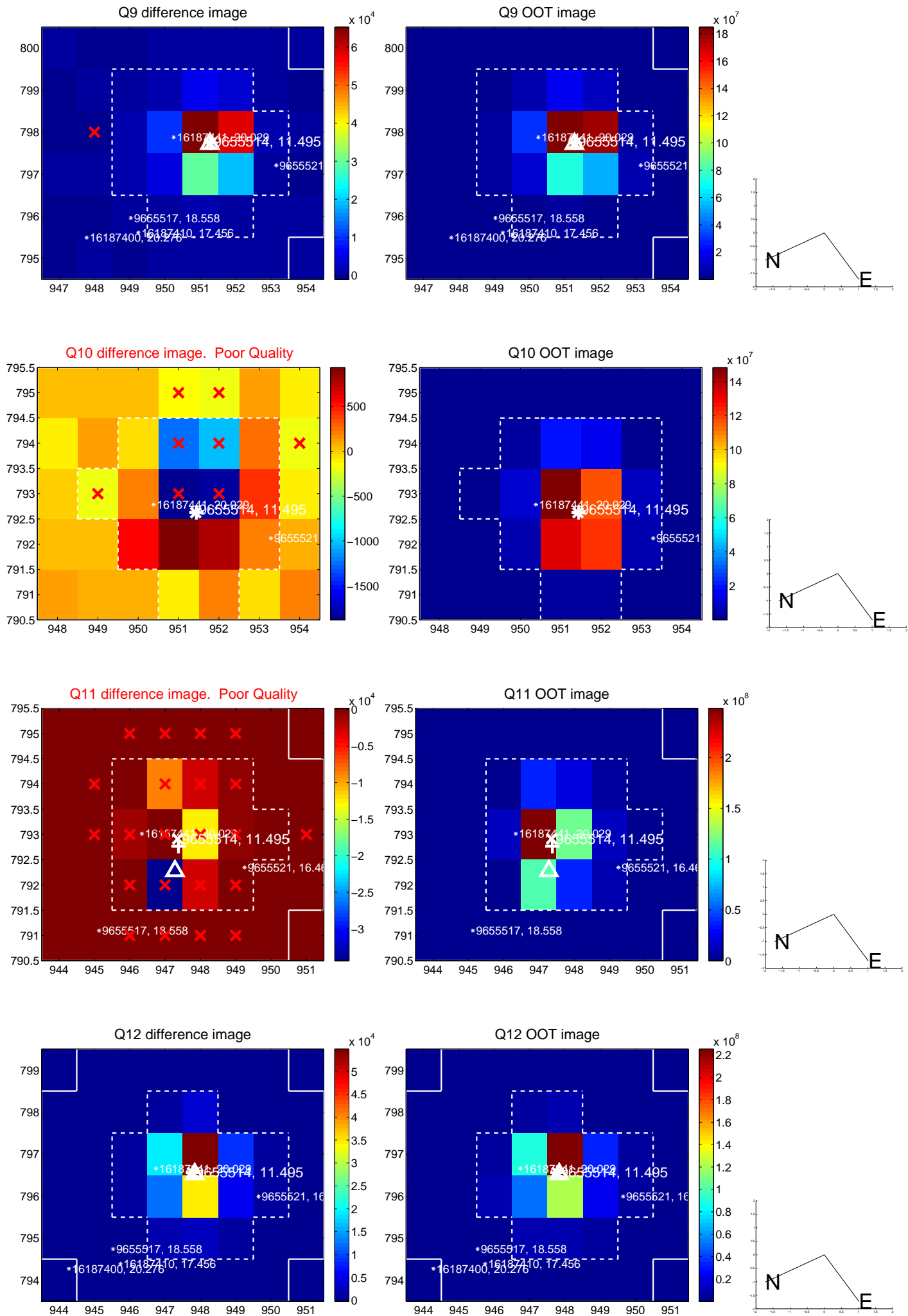
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



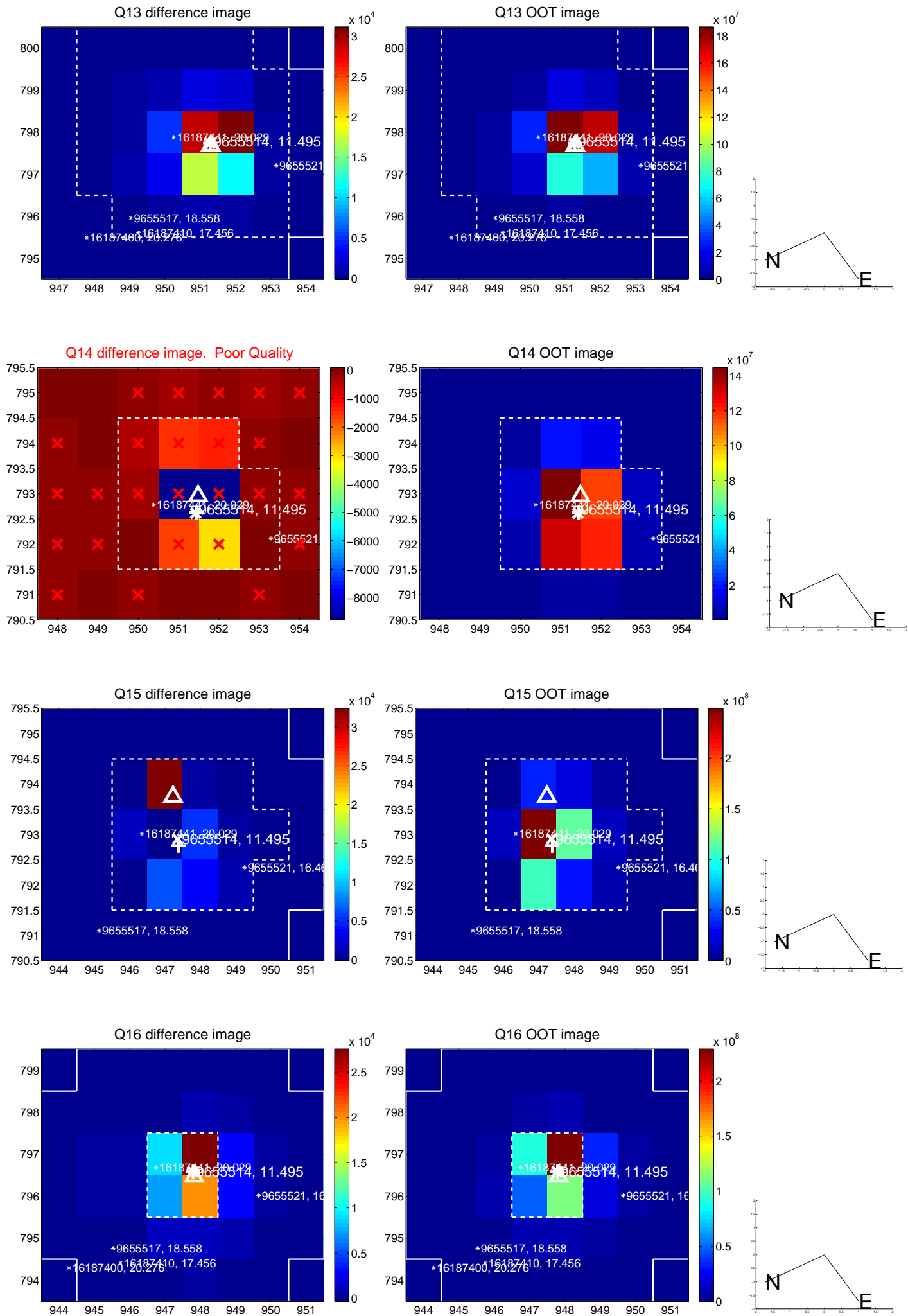
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



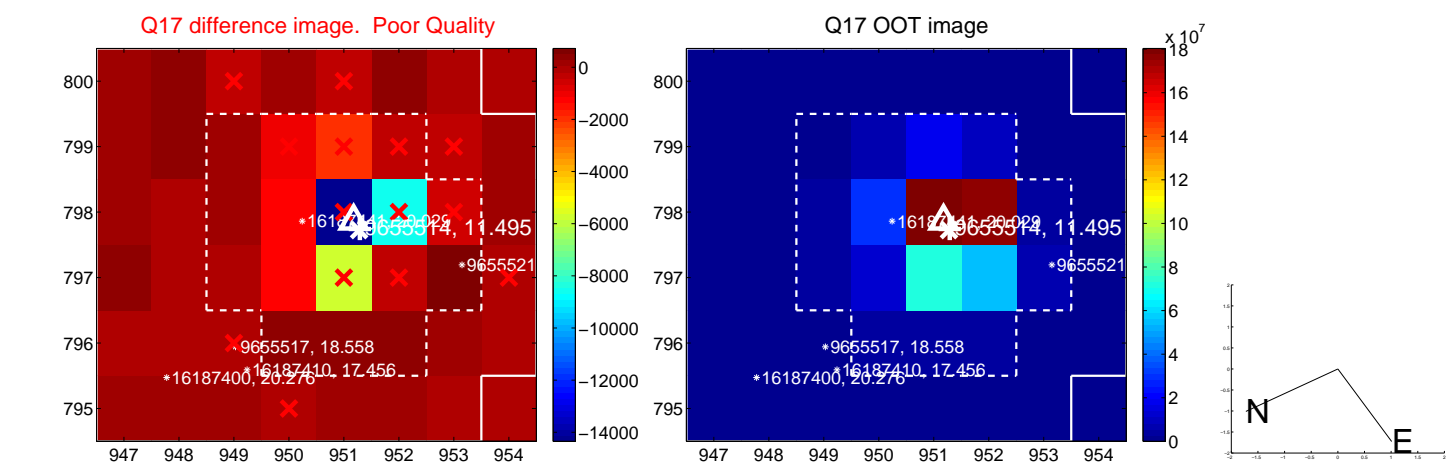
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



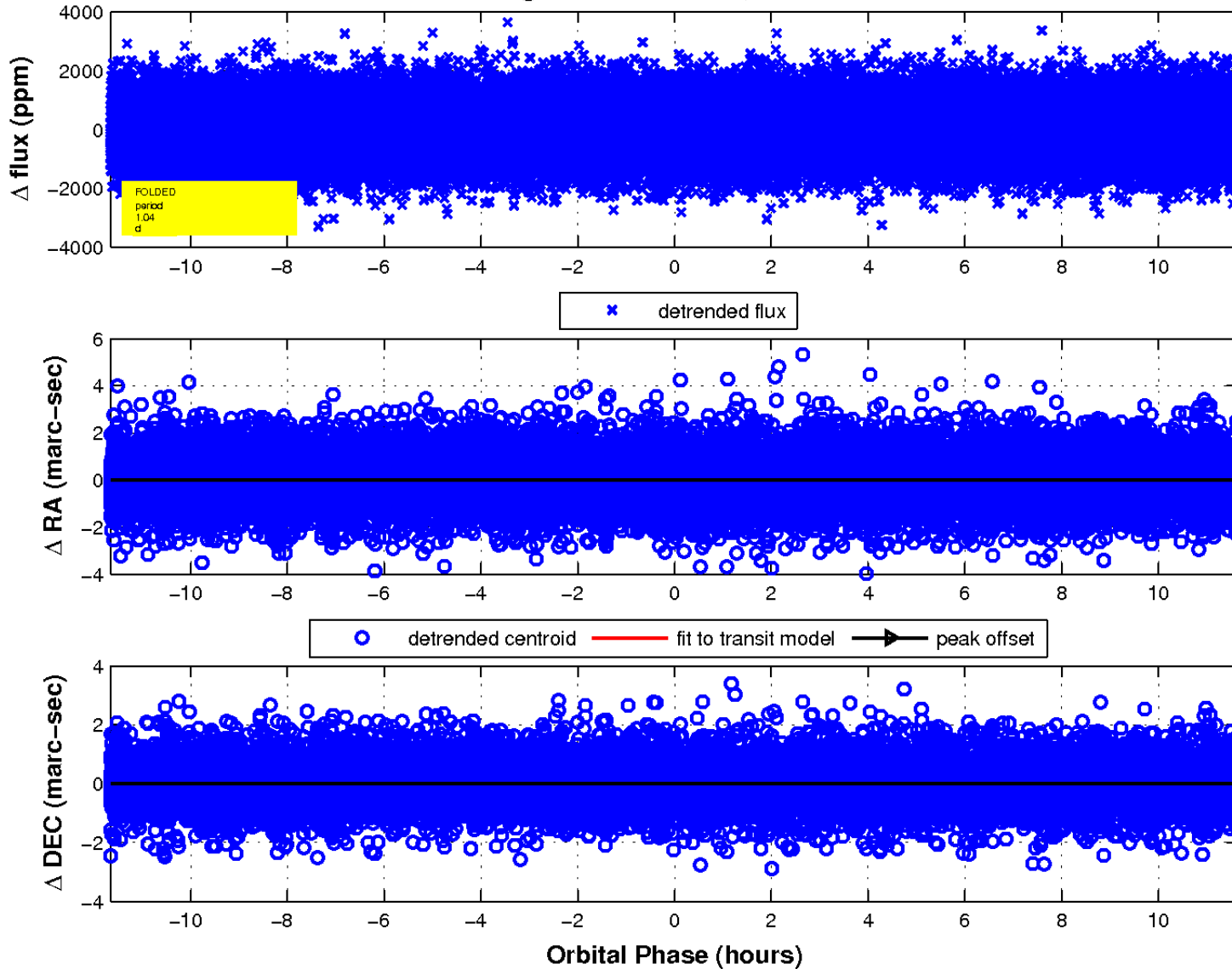
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

