

KIC 004740125

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})
004740125-01	OBS	No	2.217529	131.996217	18.7	19.612	9.1	11.1	3.70	7664	1.96	23738.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004740125-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

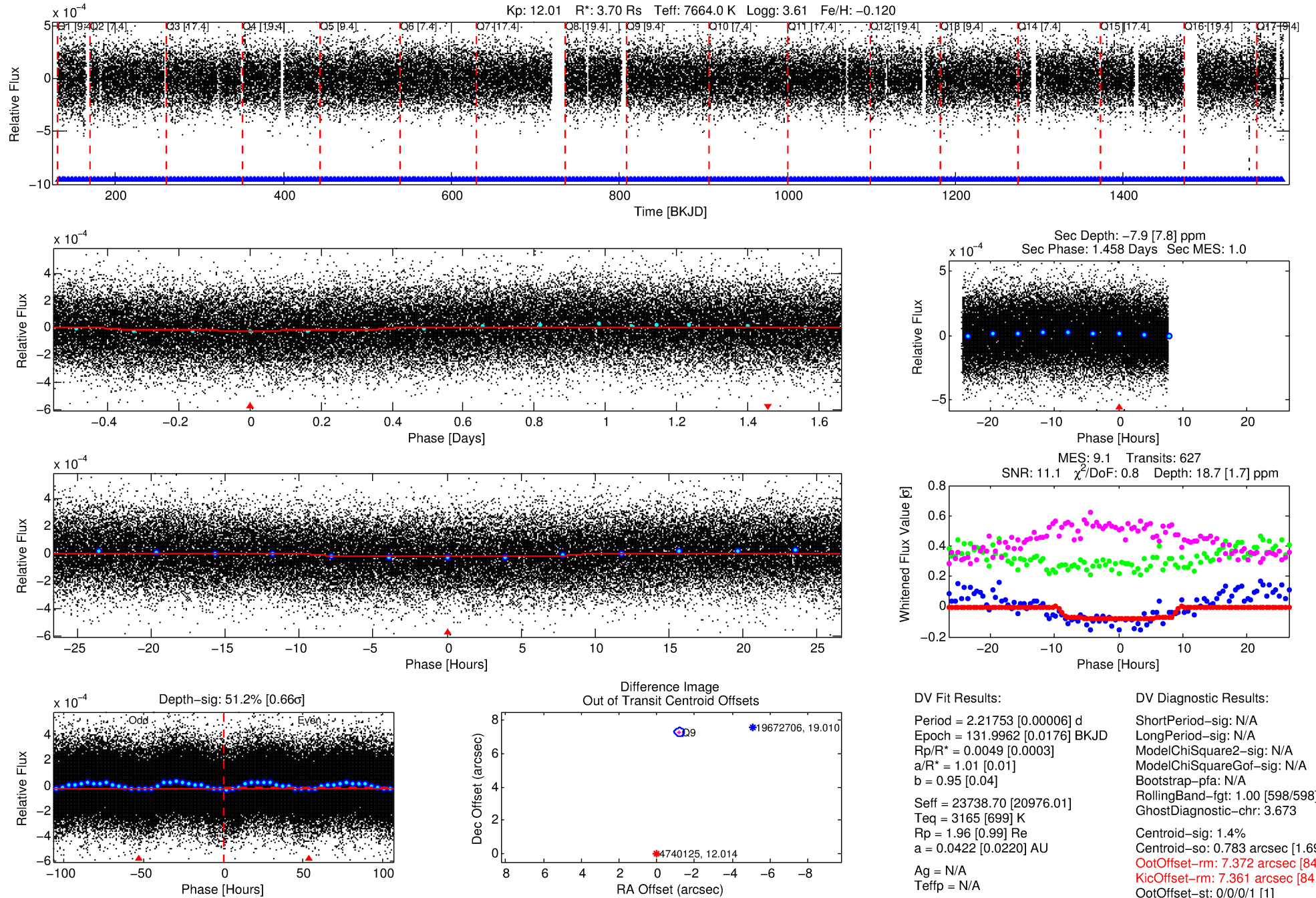
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004740125-01

No Significant Match Found

DV One-Page Summary

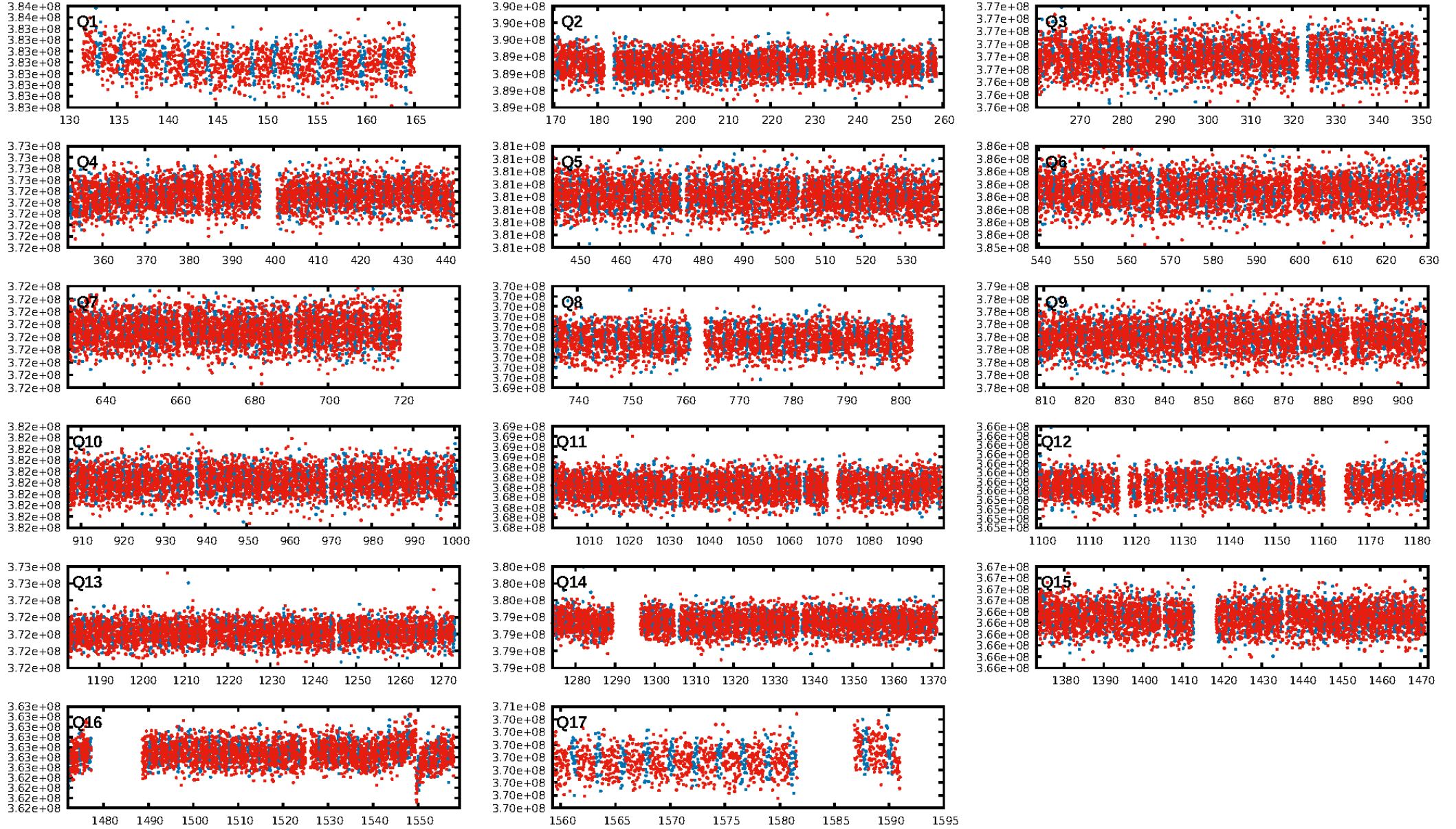
KIC: 4740125 Candidate: 1 of 1 Period: 2.218 d



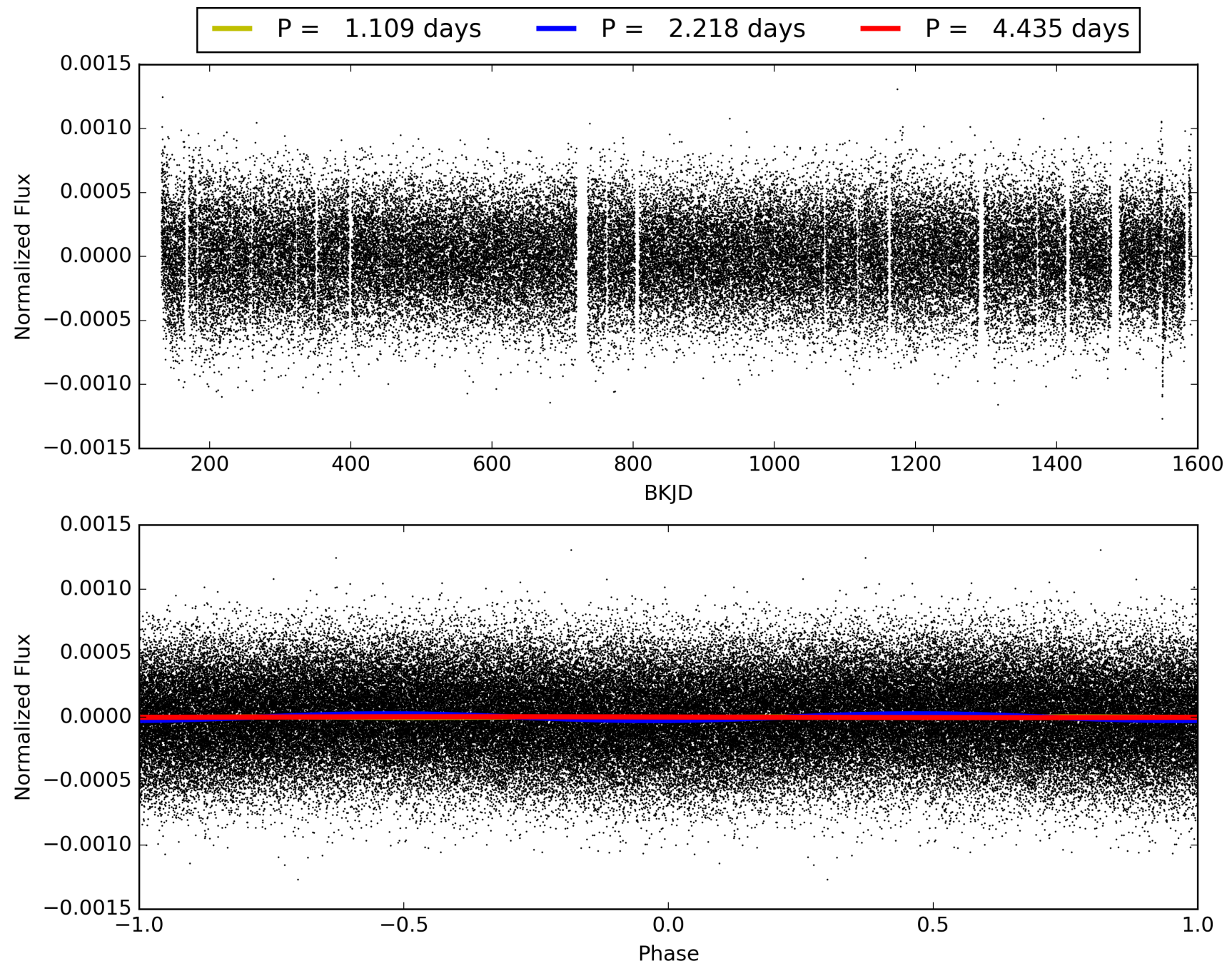
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:25:35 Z

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

TCE 004740125-01, PDC Light Curves

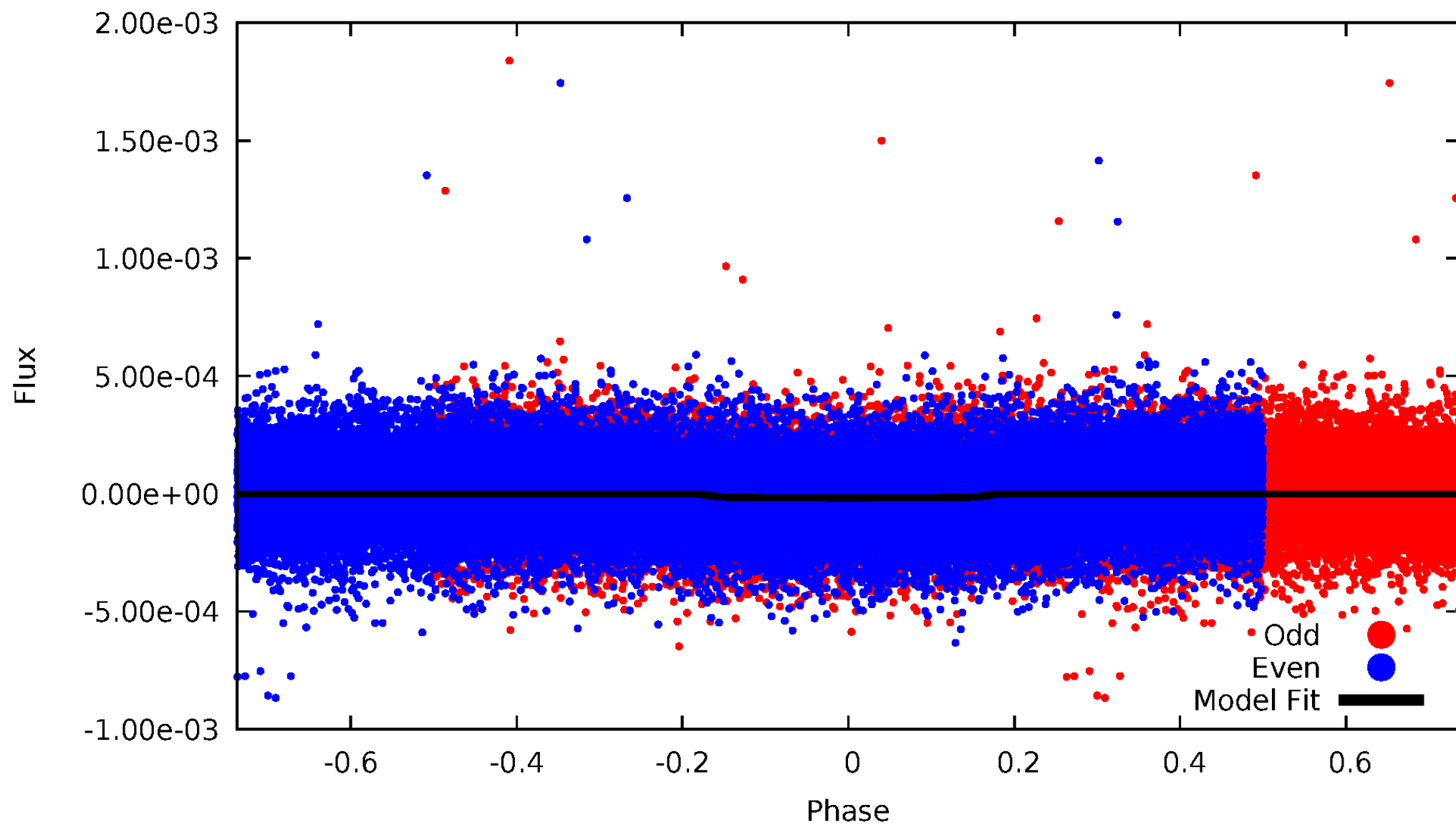


TCE 004740125-01



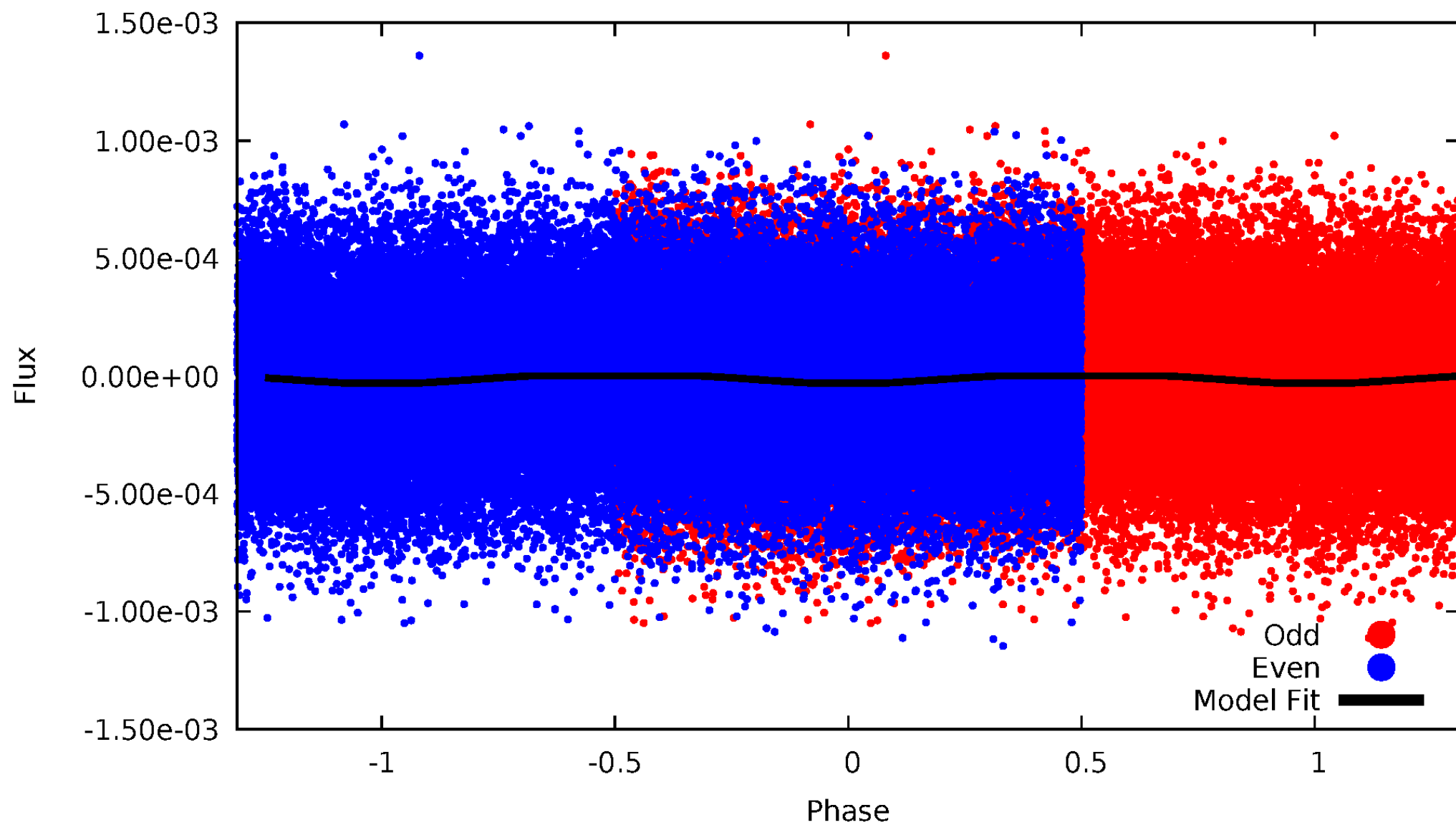
DV Odd/Even

TCE 004740125-01



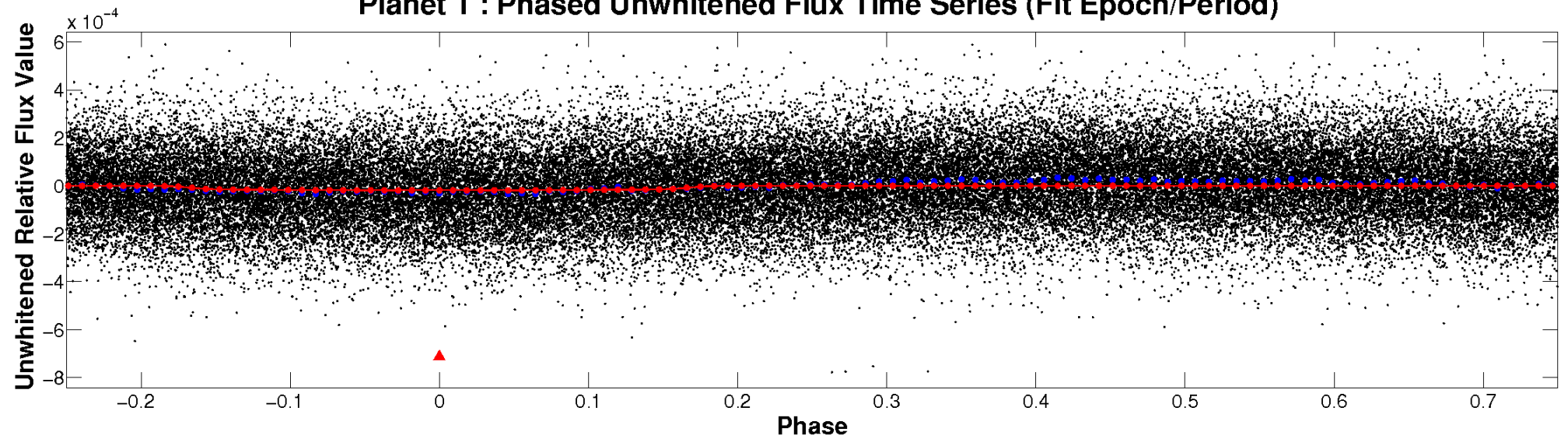
ALT Odd/Even

TCE 004740125-01

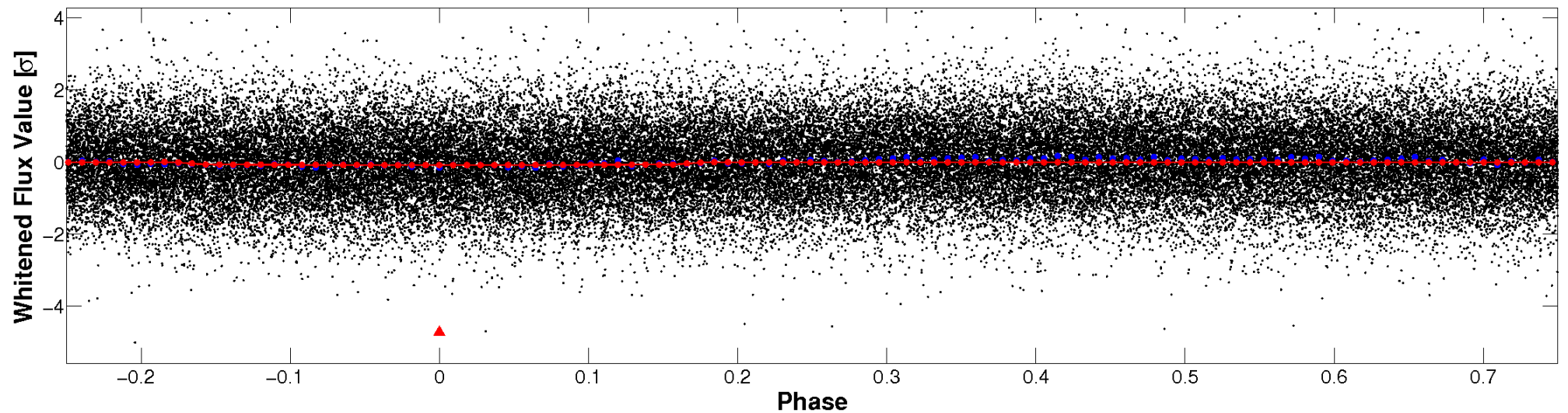


Non-Whitened Vs. Whitened Light Curve

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

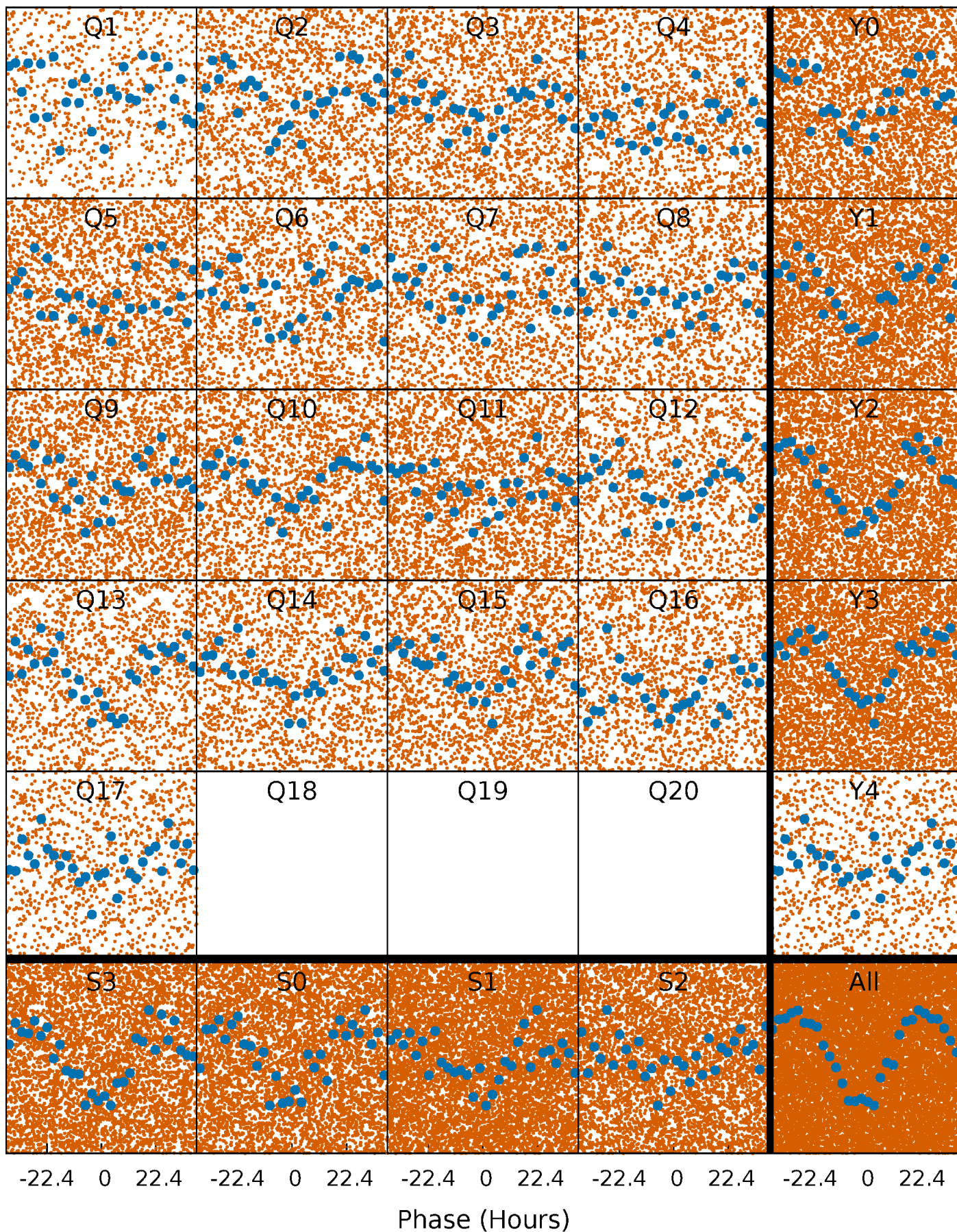


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



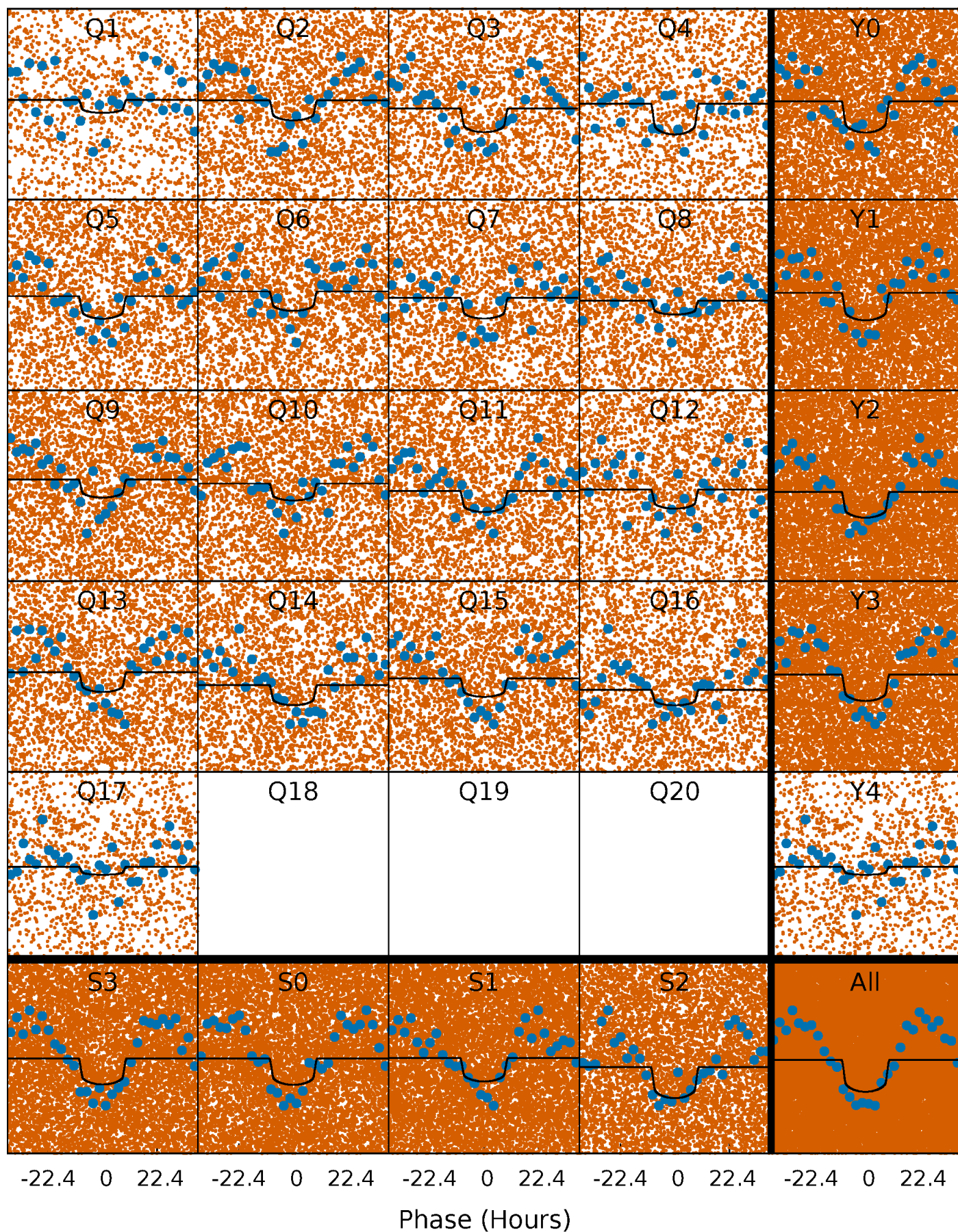
PDC Quarter-Phased Transit Curves

TCE 004740125-01 P= 2.217529 Days $T_0=131.996217$ (BKJD)



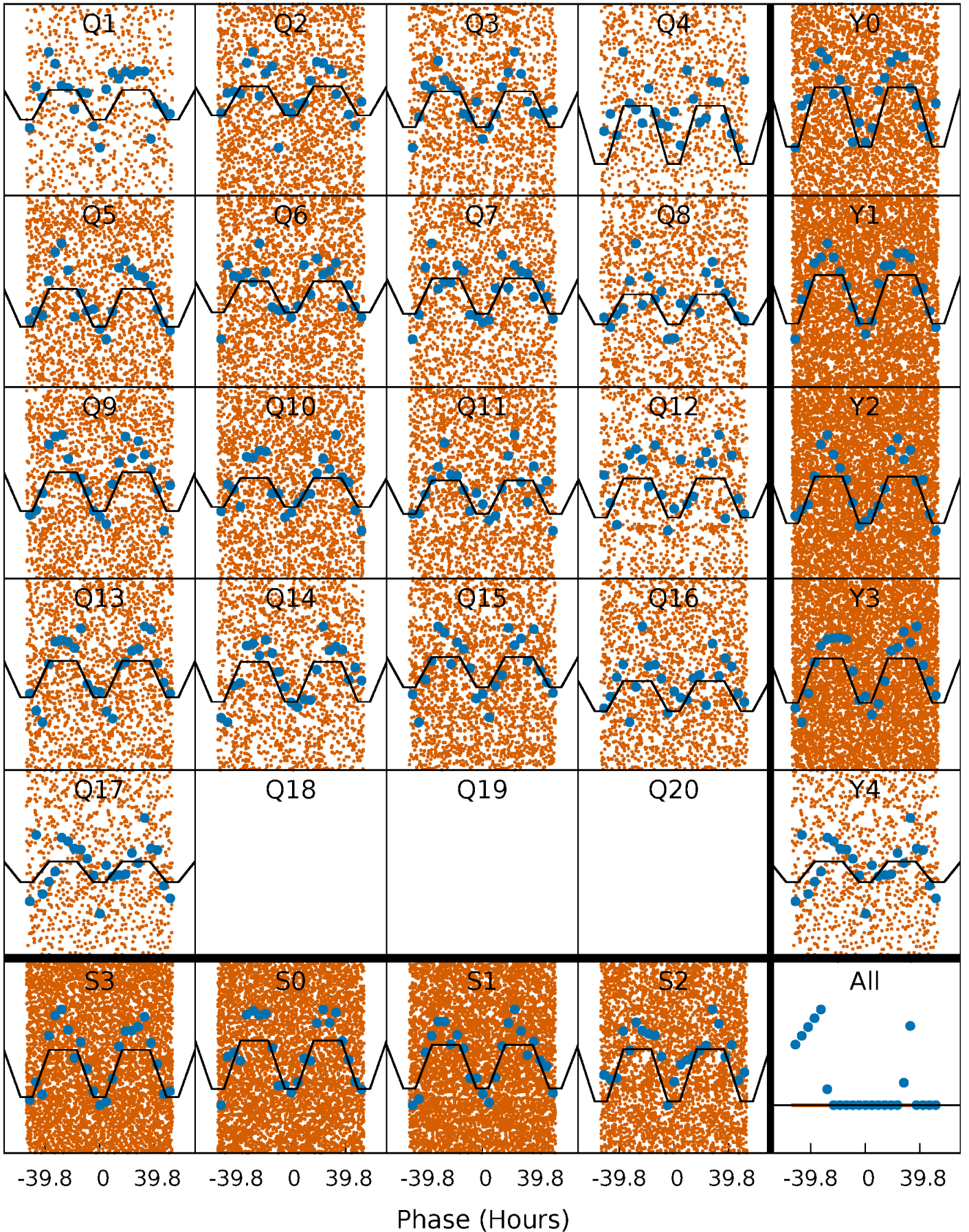
DV Quarter-Phased Transit Curves

TCE 004740125-01 P= 2.217529 Days $T_0=131.996217$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

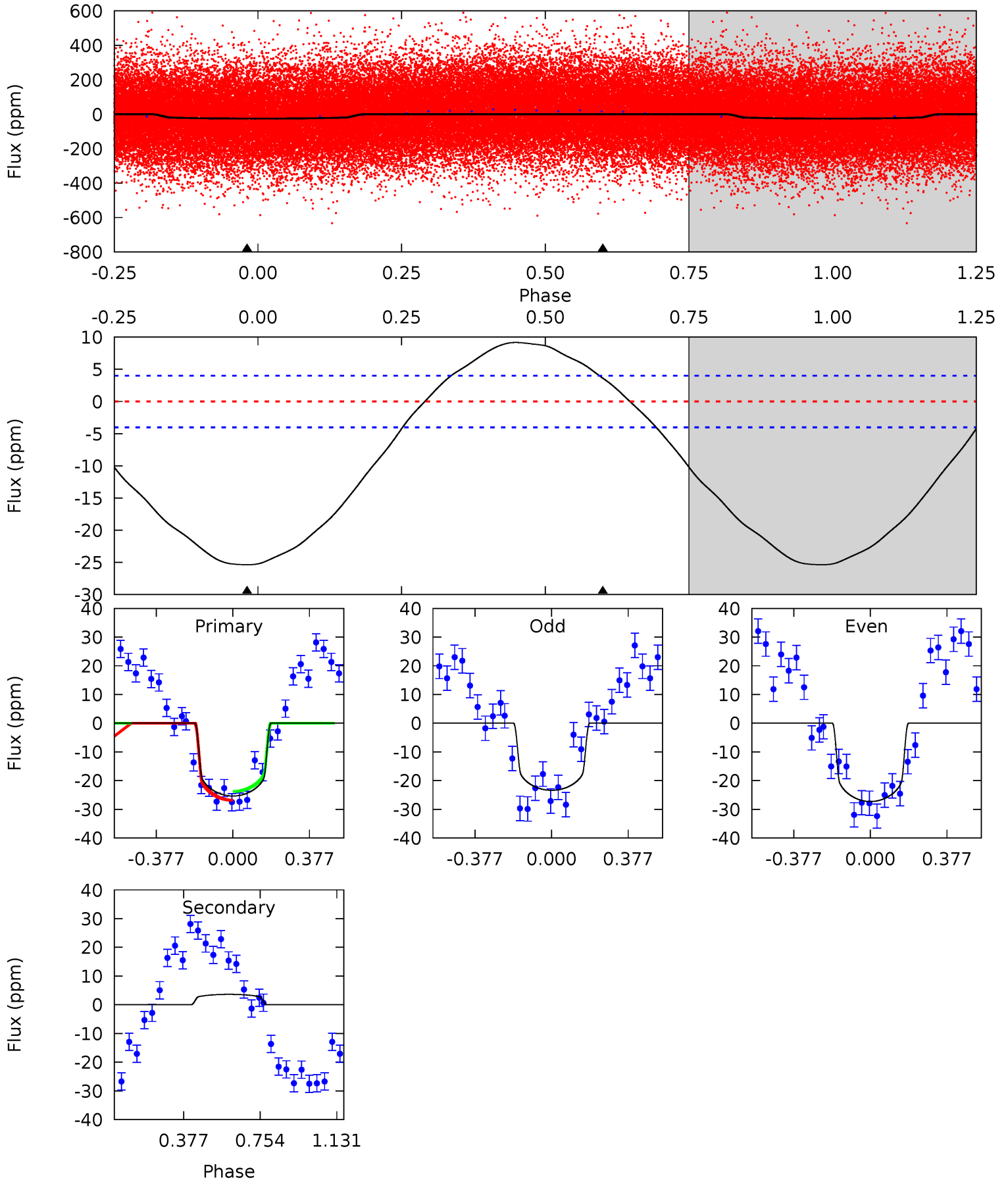
TCE 004740125-01 P= 2.217241 Days $T_0=132.022523$ (BKJD)



DV Model-Shift Uniqueness Test

004740125-01, P = 2.217529 Days, E = 129.778688 Days

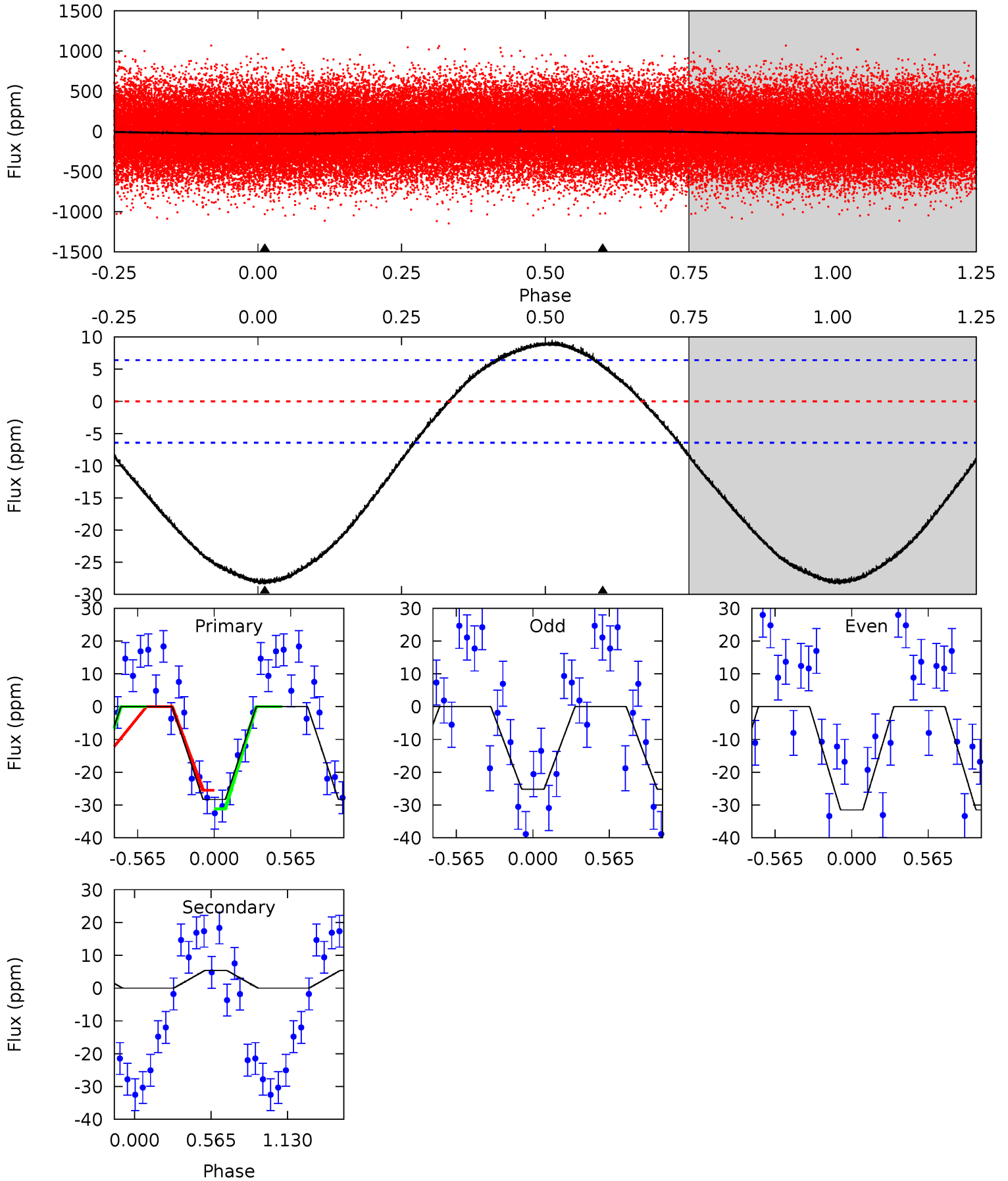
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	-3.86	0	0	4.28	0.88	3.06	27.0	27.0	-3.86	-3.86	2.05	1.01	0.27	1.62



Alt Model-Shift Uniqueness Test

004740125-01, P = 2.217241 Days, E = 129.805282 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	-3.49	0	0	4.19	0.58	1.87	18.5	18.5	-3.49	-3.49	2.02	0.99	0.25	1.77



Stellar Parameters For KIC 004740125

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7664^{+213}_{-320}	$3.611^{+0.522}_{-0.058}$	$-0.120^{+0.200}_{-0.300}$	$3.697^{+0.615}_{-1.846}$	$2.039^{+0.279}_{-0.518}$	$0.057^{+0.322}_{-0.017}$
	+3%/-4%	+14%/-2%	+167%/-250%	+17%/-50%	+14%/-25%	+567%/-29%
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 004740125-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	4 ± 1	$1.77^{+0.34}_{-0.46}$	4158^{+323}_{-517}	-5016^{+274}_{-290}	$-1.145^{+0.393}_{-0.897}$
Alt.	5 ± 2	$1.98^{+0.38}_{-0.49}$	4170^{+329}_{-518}	-5153^{+310}_{-331}	$-1.329^{+0.473}_{-0.896}$

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

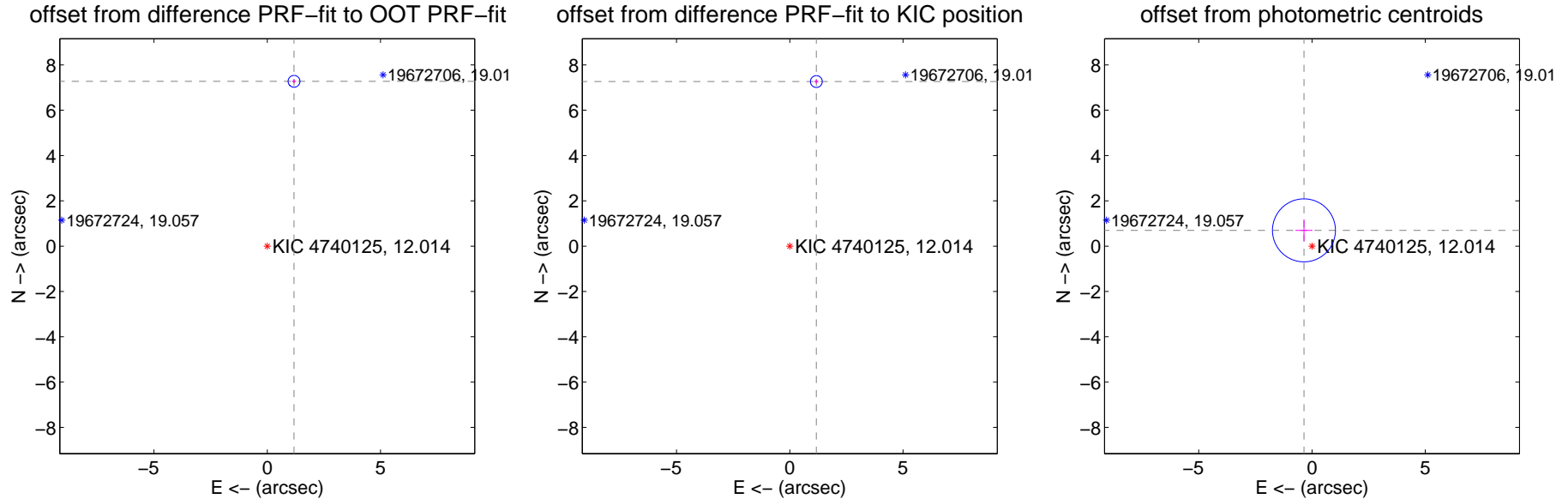
DV Centroid Data

Supplemental centroid analysis for 004740125-01. Kepler magnitude: 12.01. Transit SNR 11.08

There are 0 quarters with good PRF difference image offsets

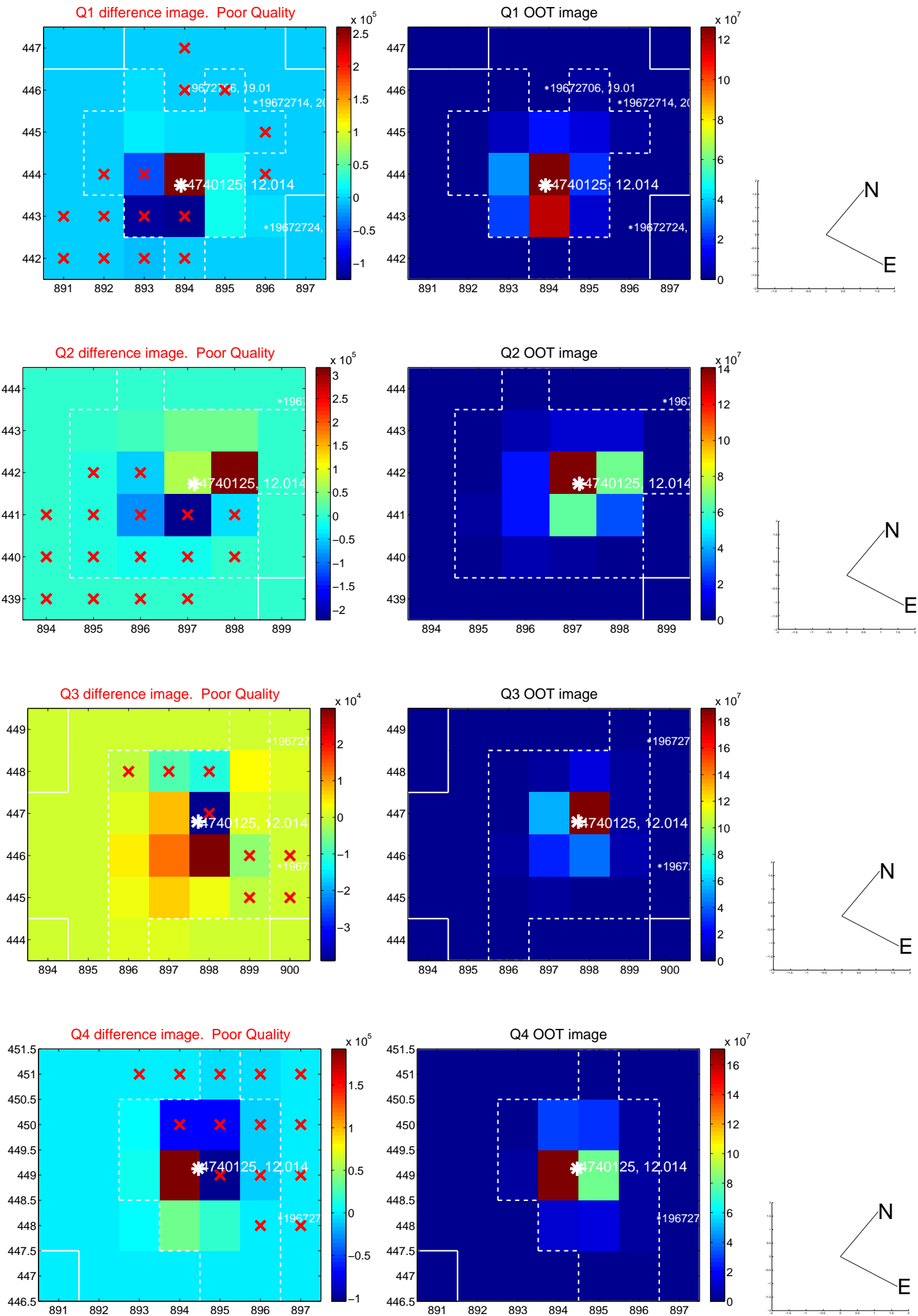
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.372 ± 0.087	84.65	-1.183 ± 0.091	7.276 ± 0.087
PRF-fit source offset from KIC position	7.361 ± 0.087	84.53	-1.173 ± 0.091	7.267 ± 0.087
photometric centroid source offset	0.78 ± 0.46	1.69	0.36 ± 0.38	0.70 ± 0.48

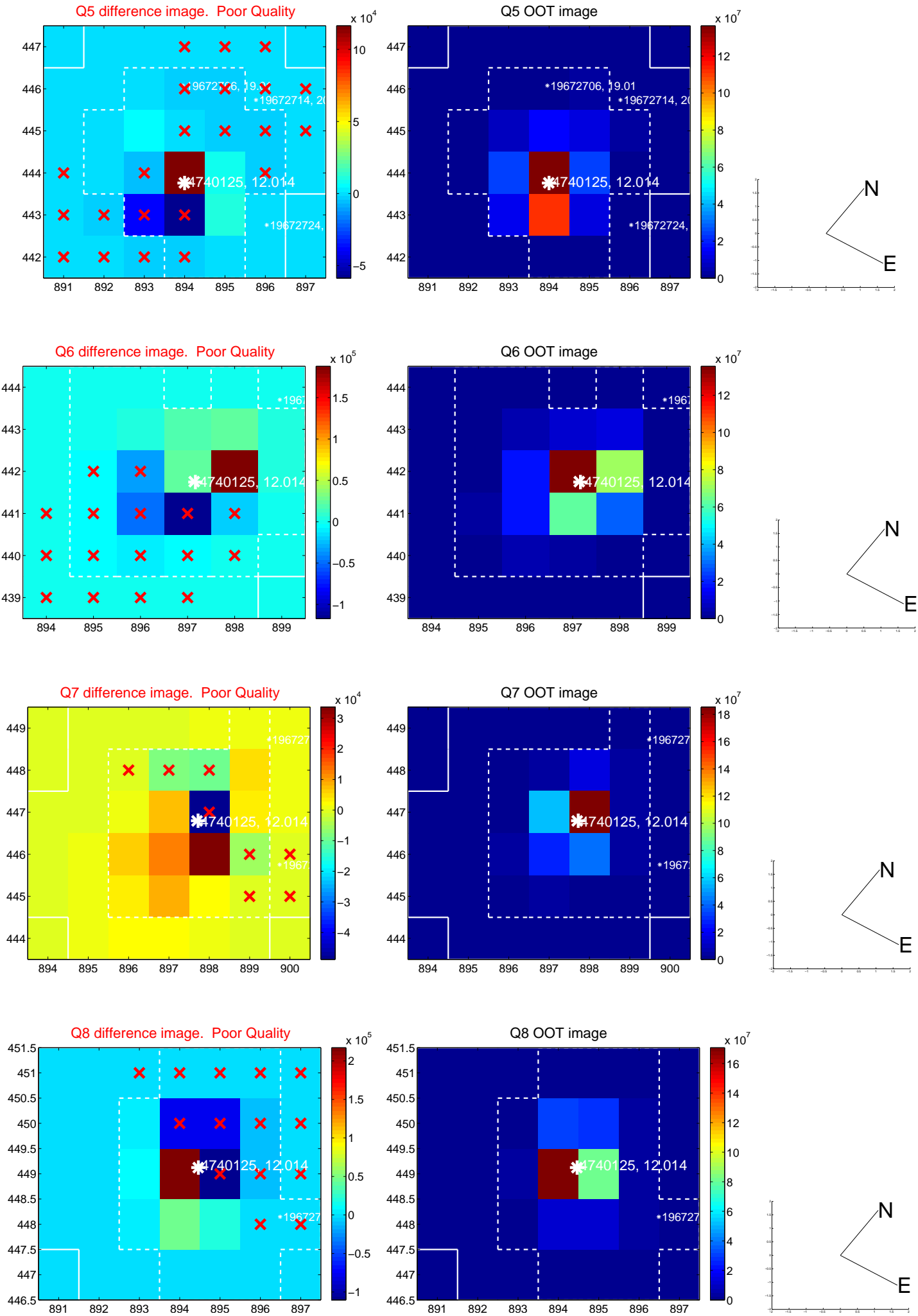


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

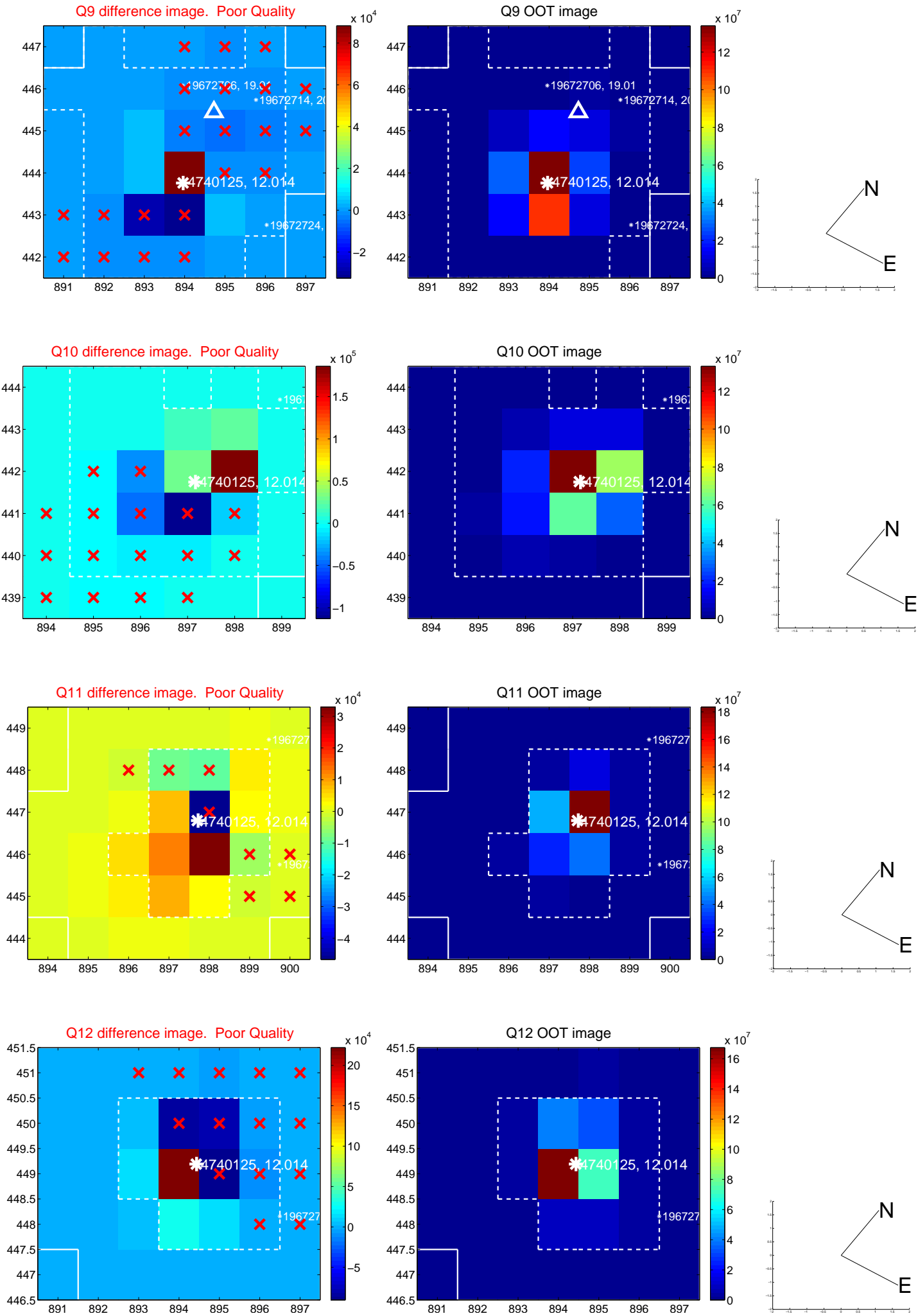
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



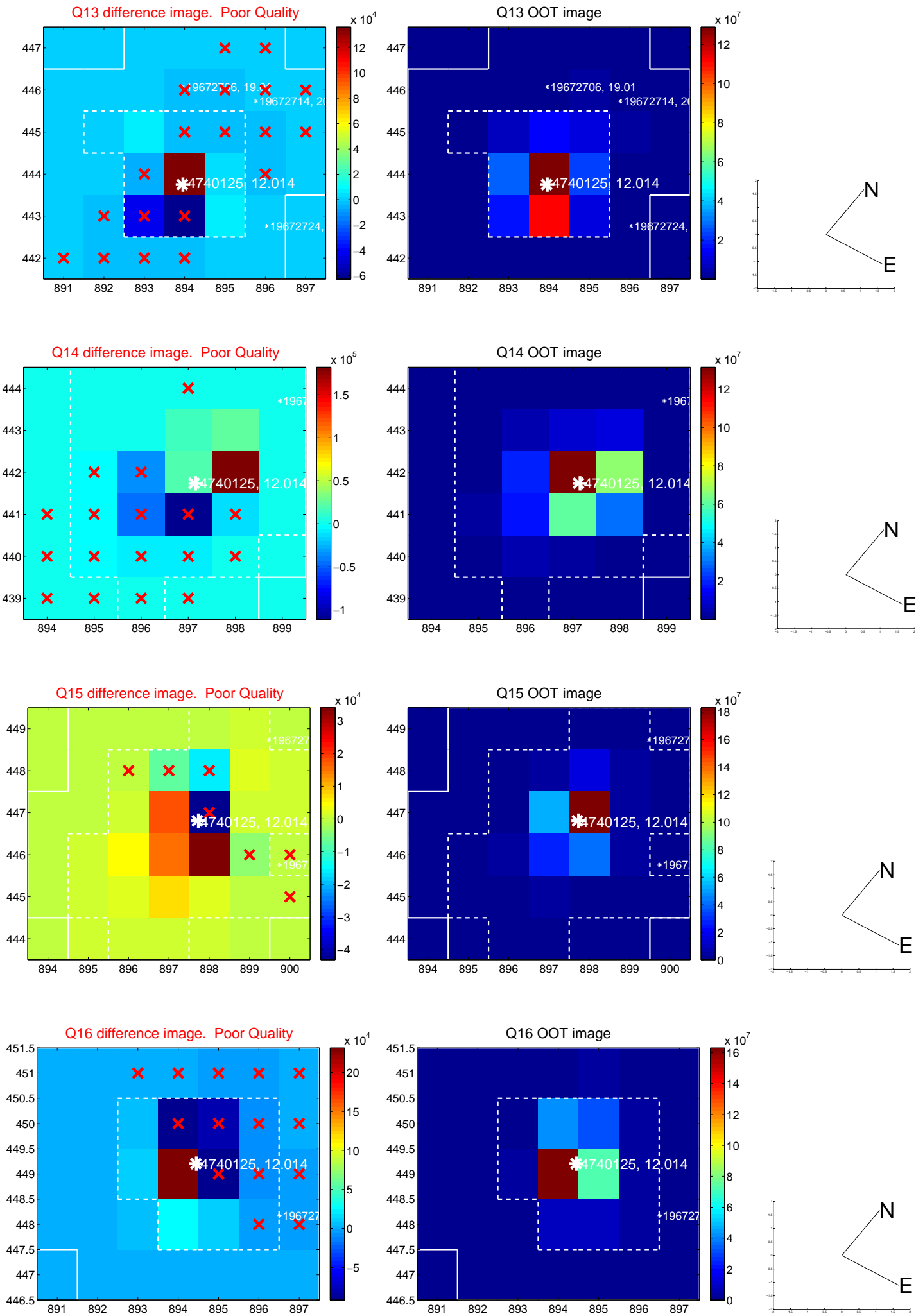
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



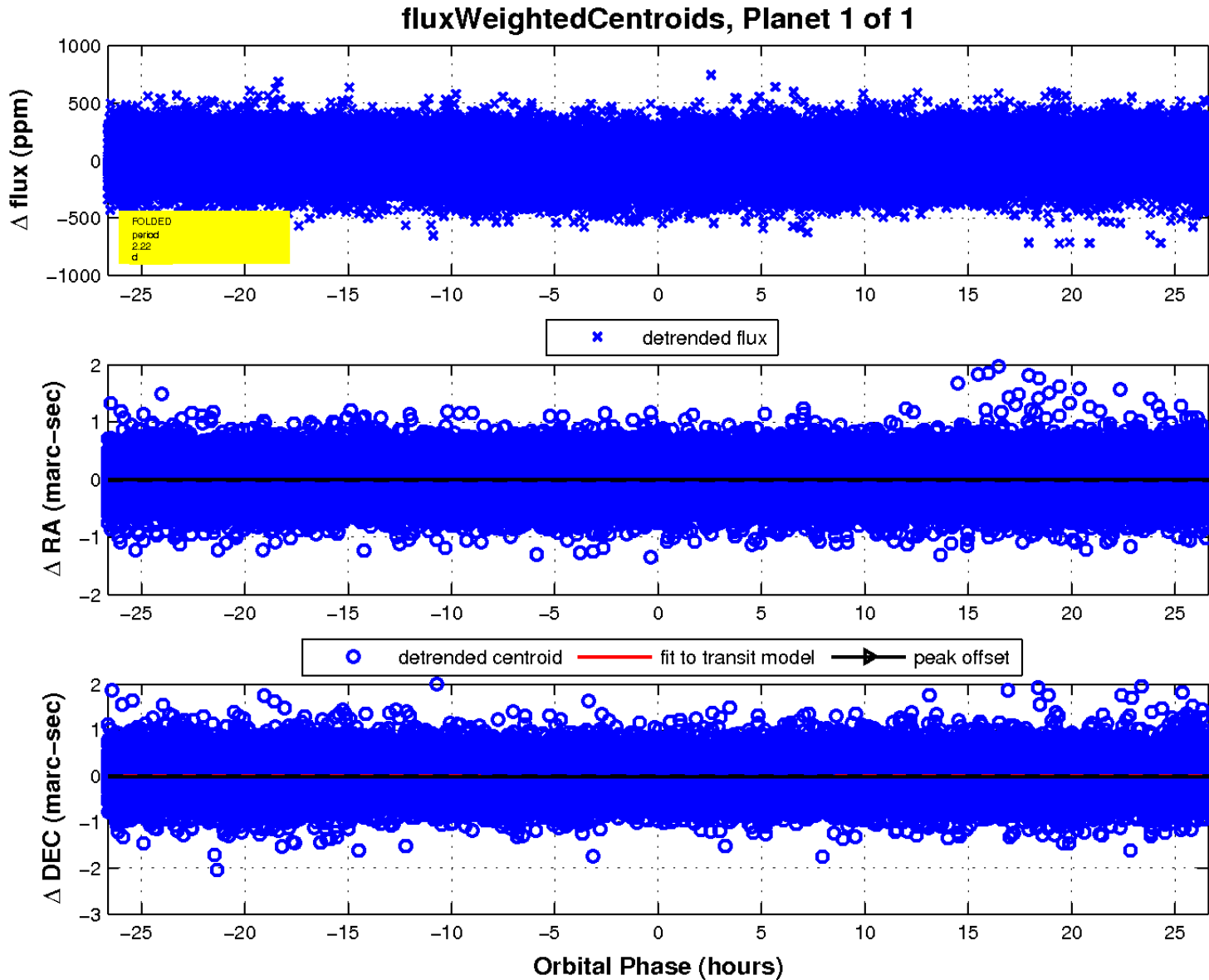
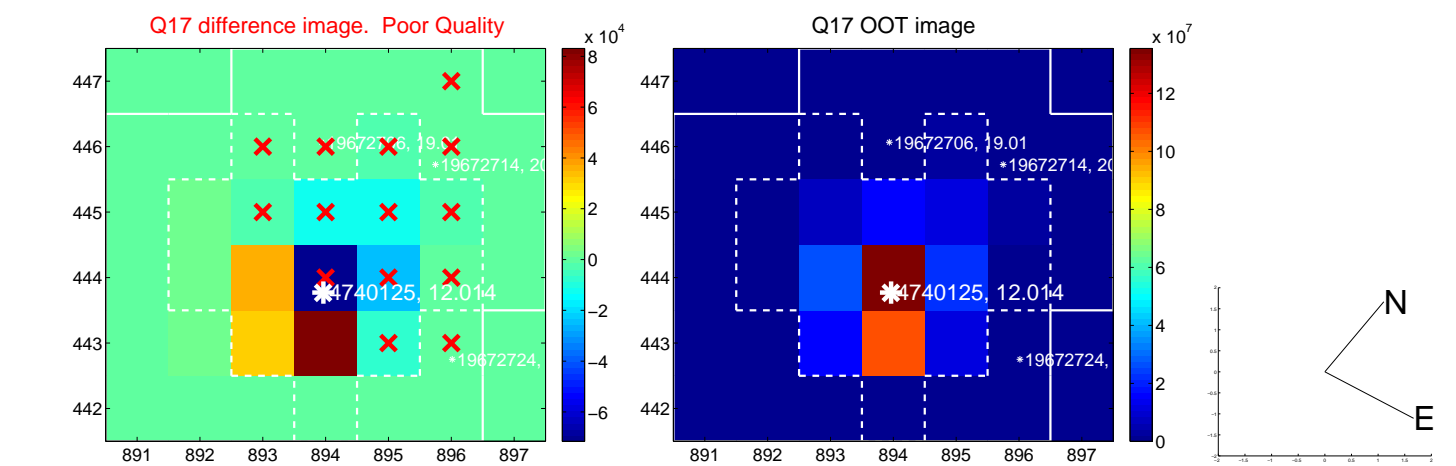
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

