

KIC 009953736

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})
009953736-01	OBS	7262.01	0.508161	131.623615	13.8	4.318	12.5	11.1	1.56	7141	0.60	27206.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009953736-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL — LPP_DV — 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.

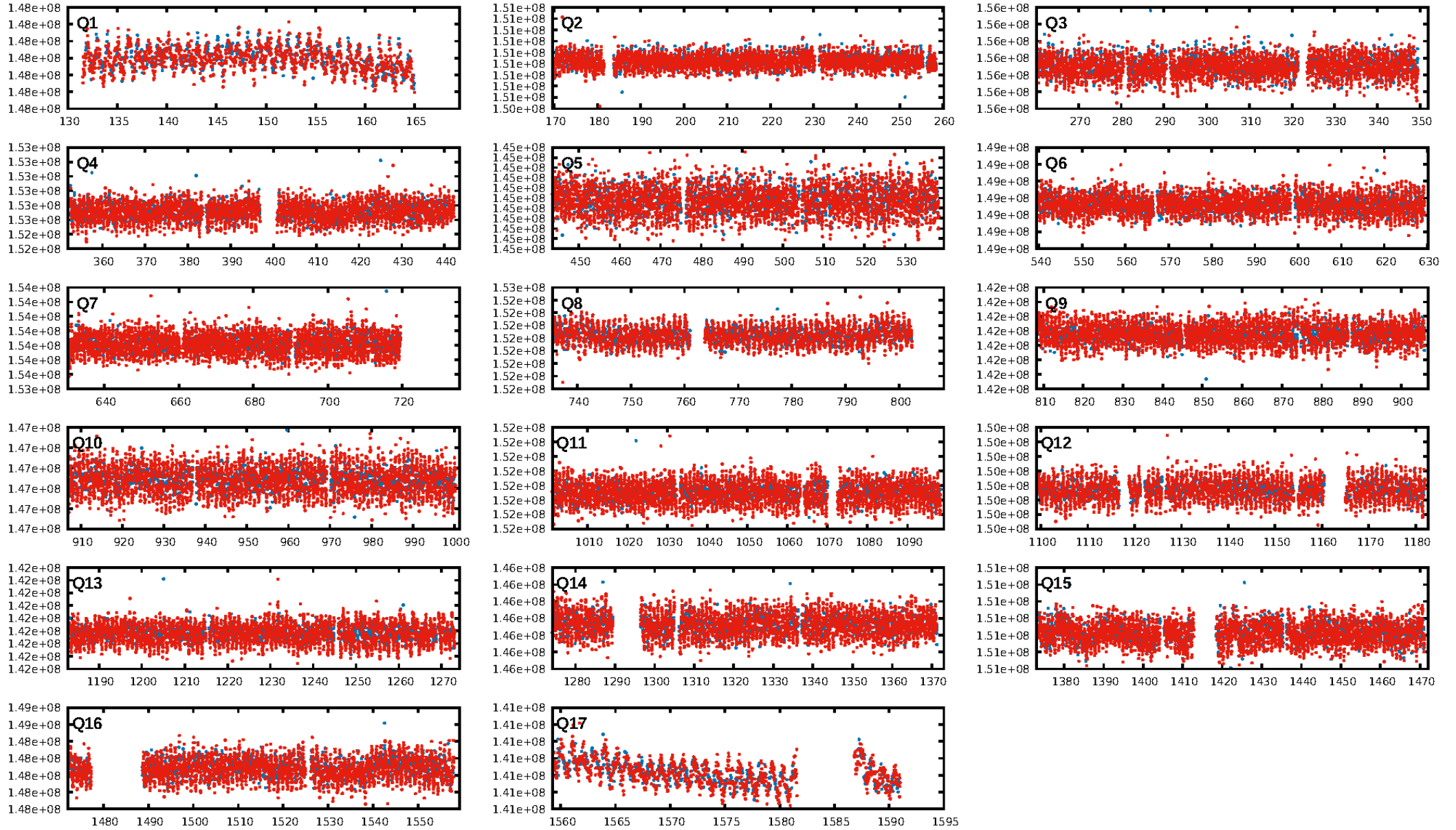
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009953736-01

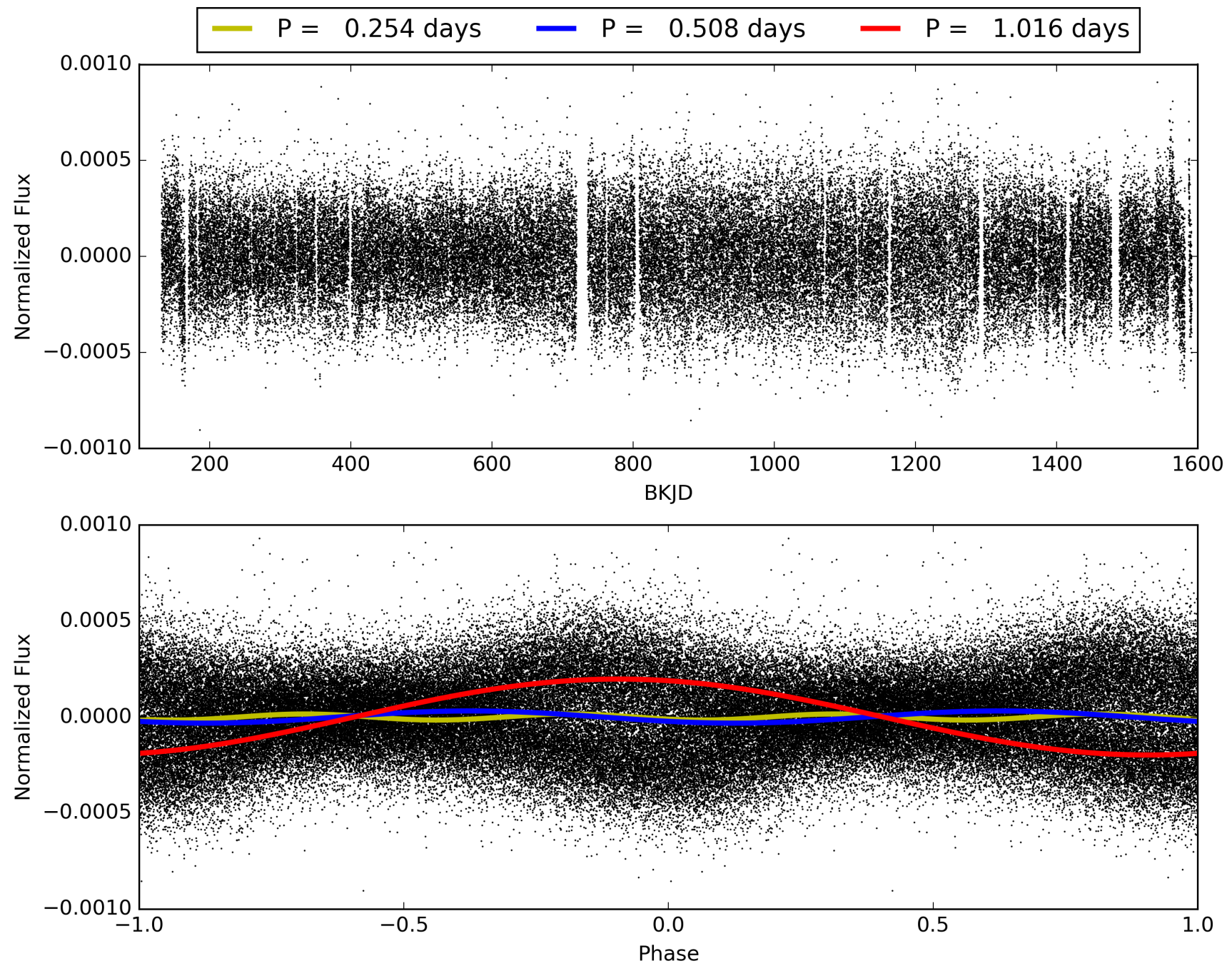
No Significant Match Found

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

TCE 009953736-01, PDC Light Curves

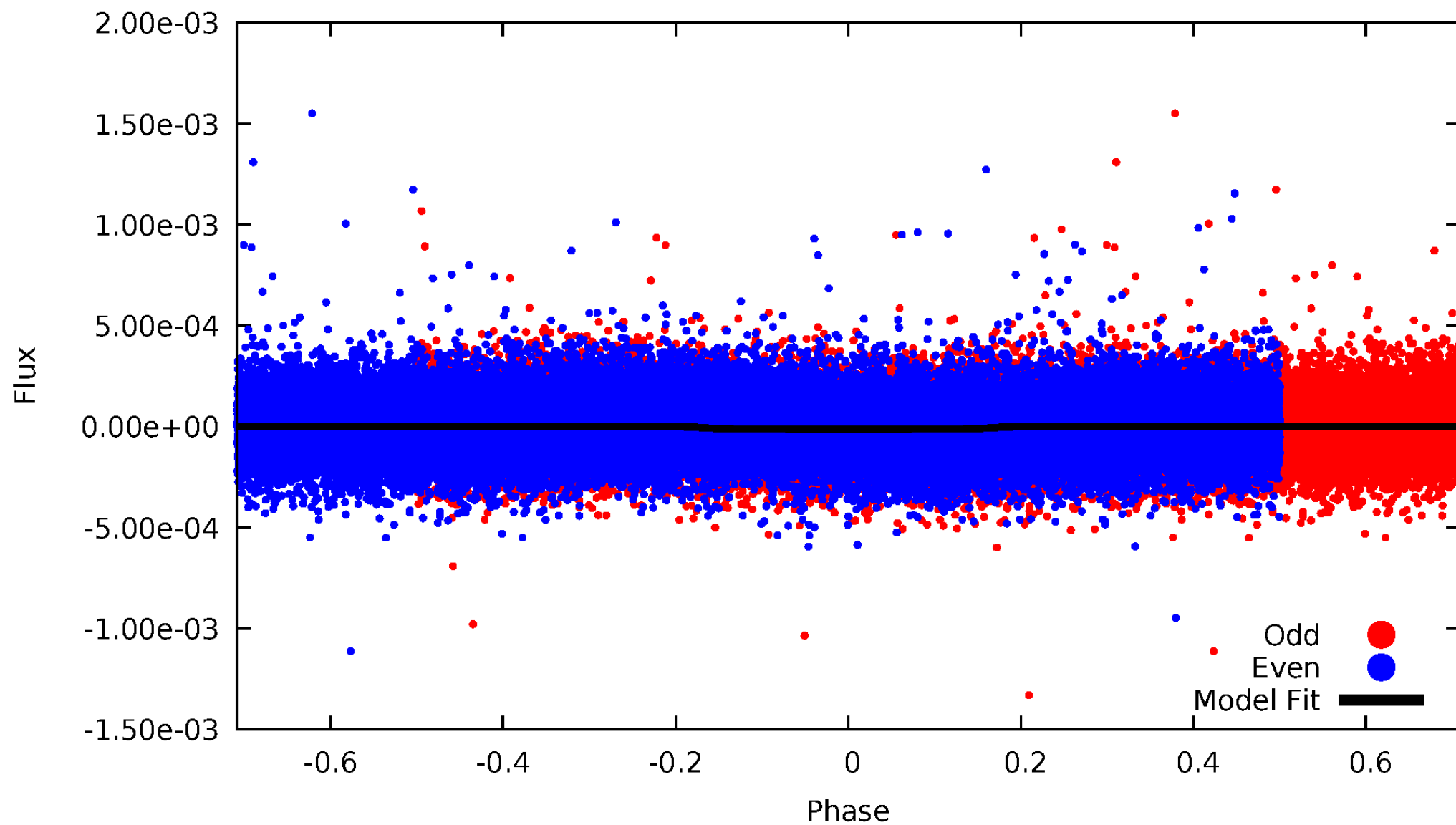


TCE 009953736-01



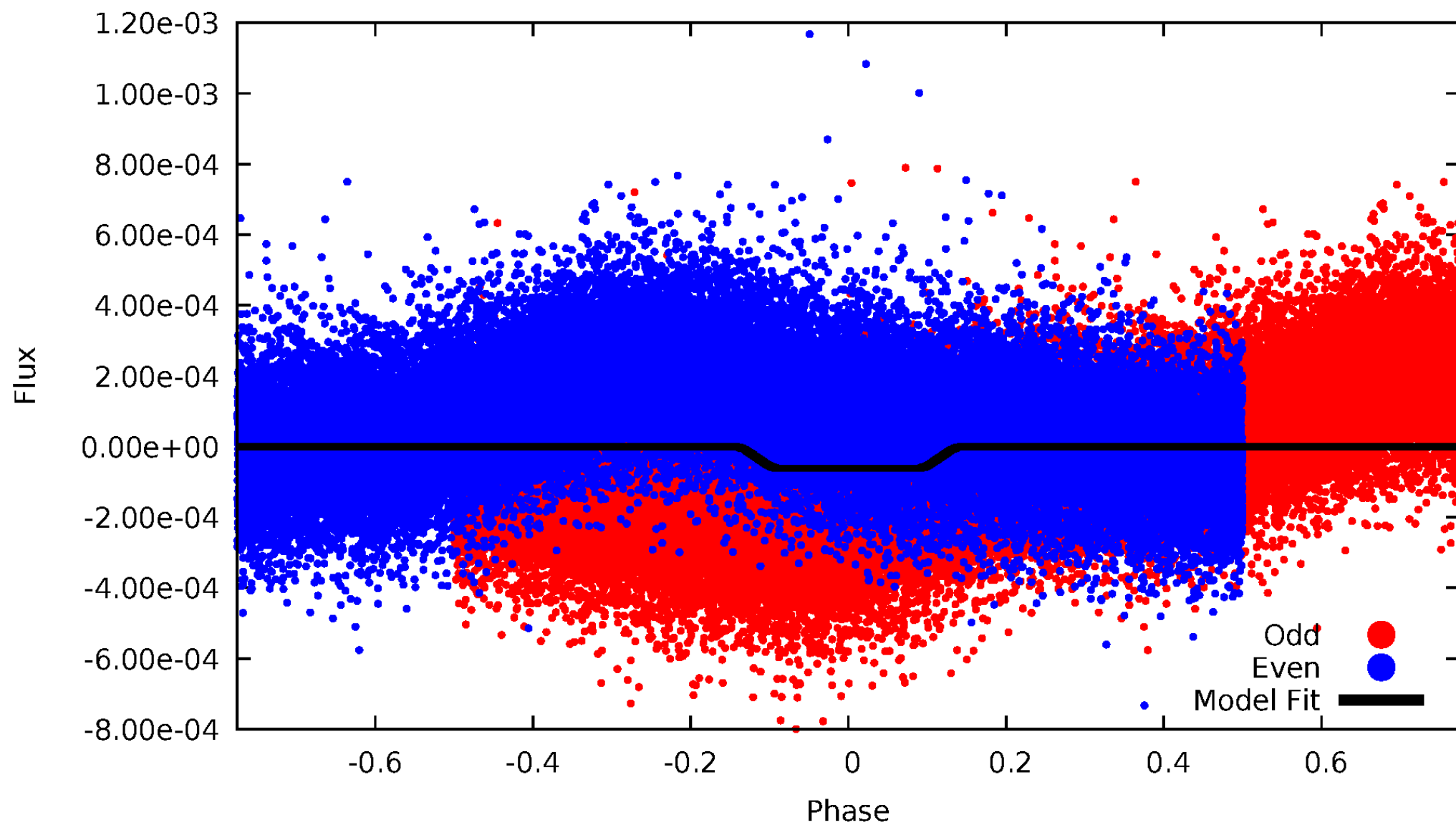
DV Odd/Even

TCE 009953736-01



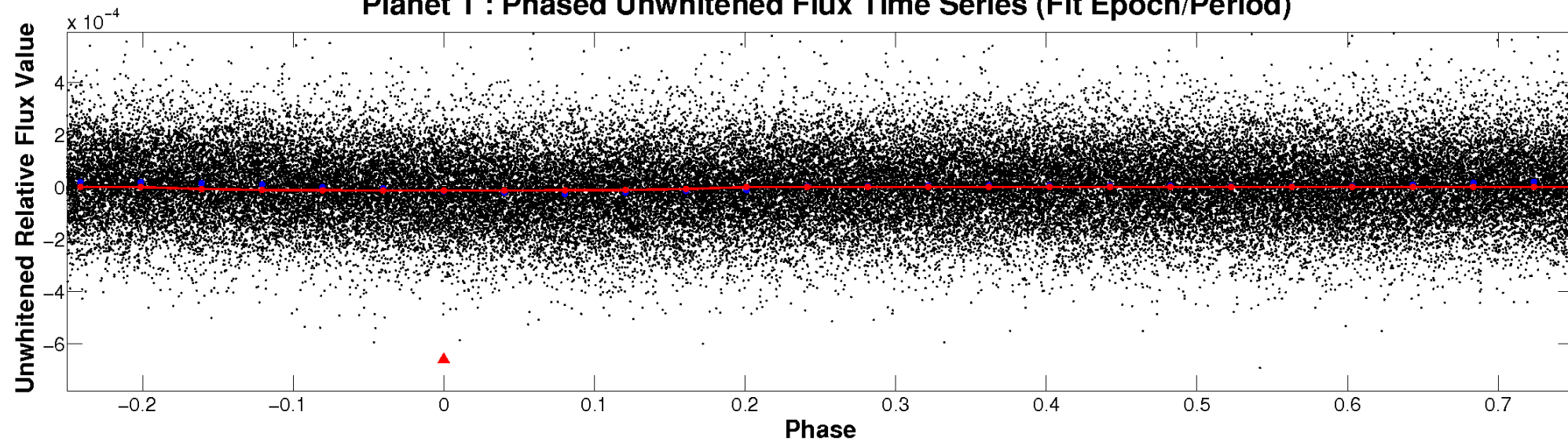
ALT Odd/Even

TCE 009953736-01

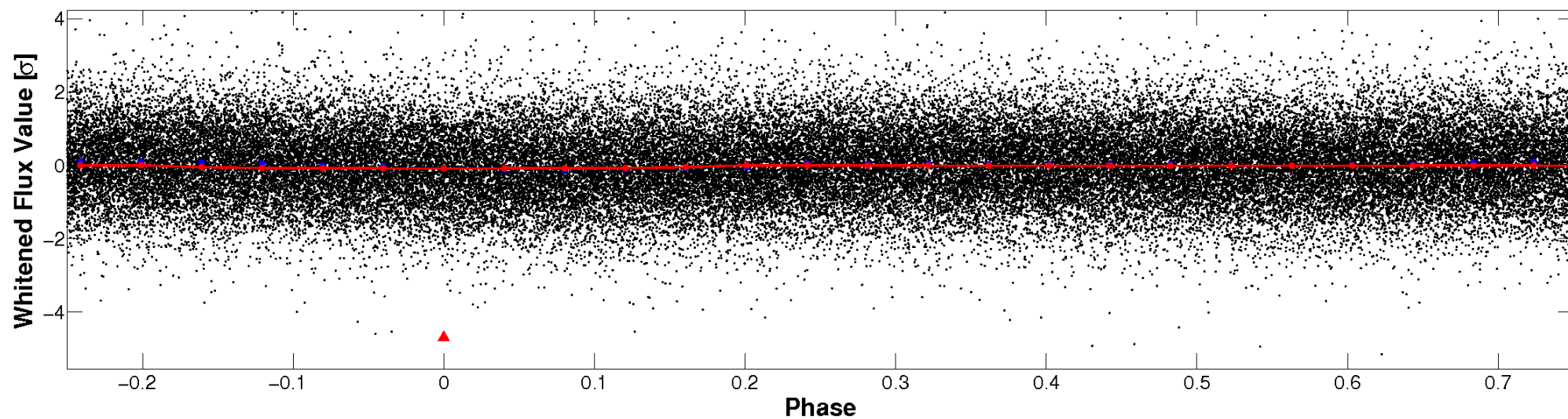


Non-Whitened Vs. Whitened Light Curve

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

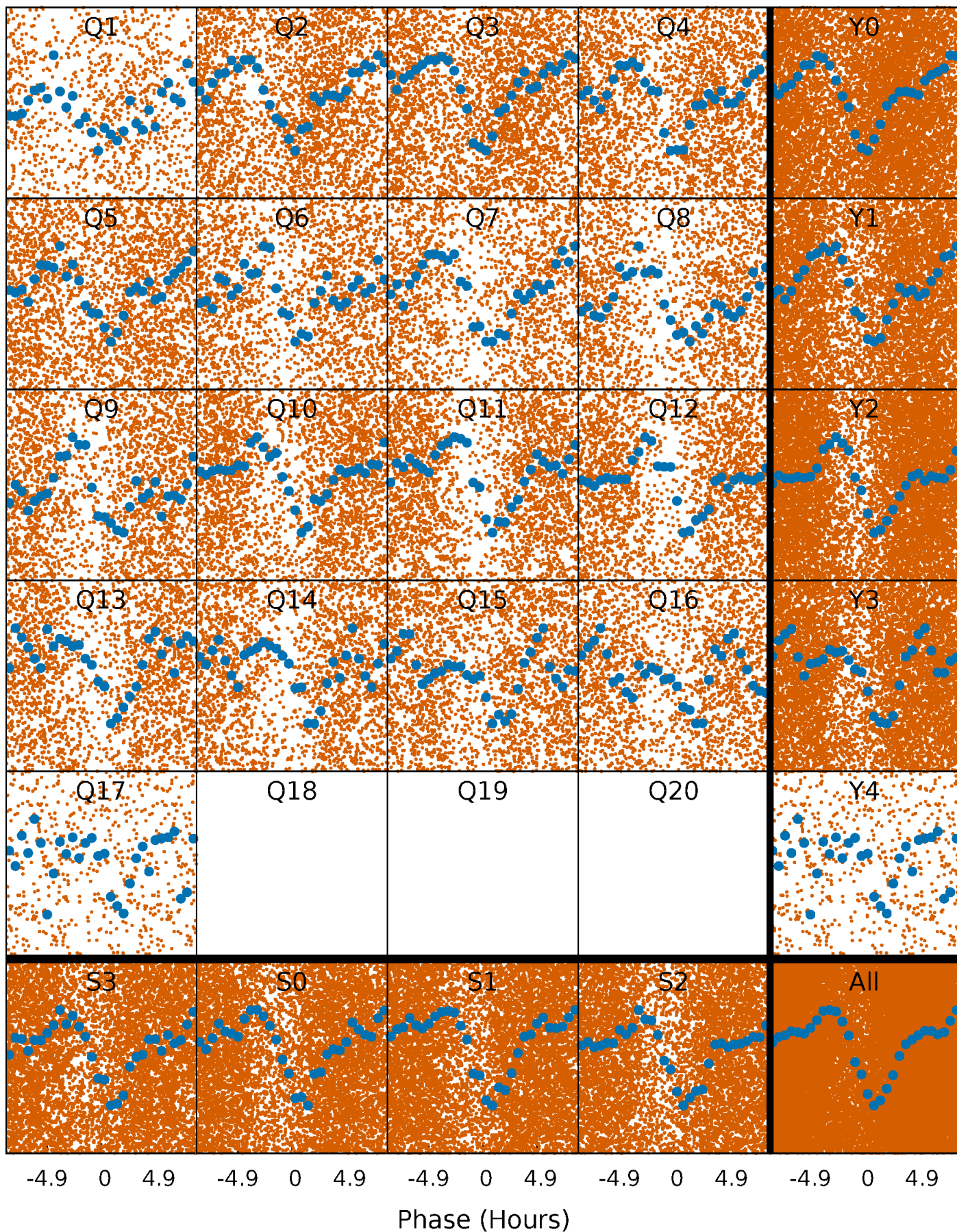


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



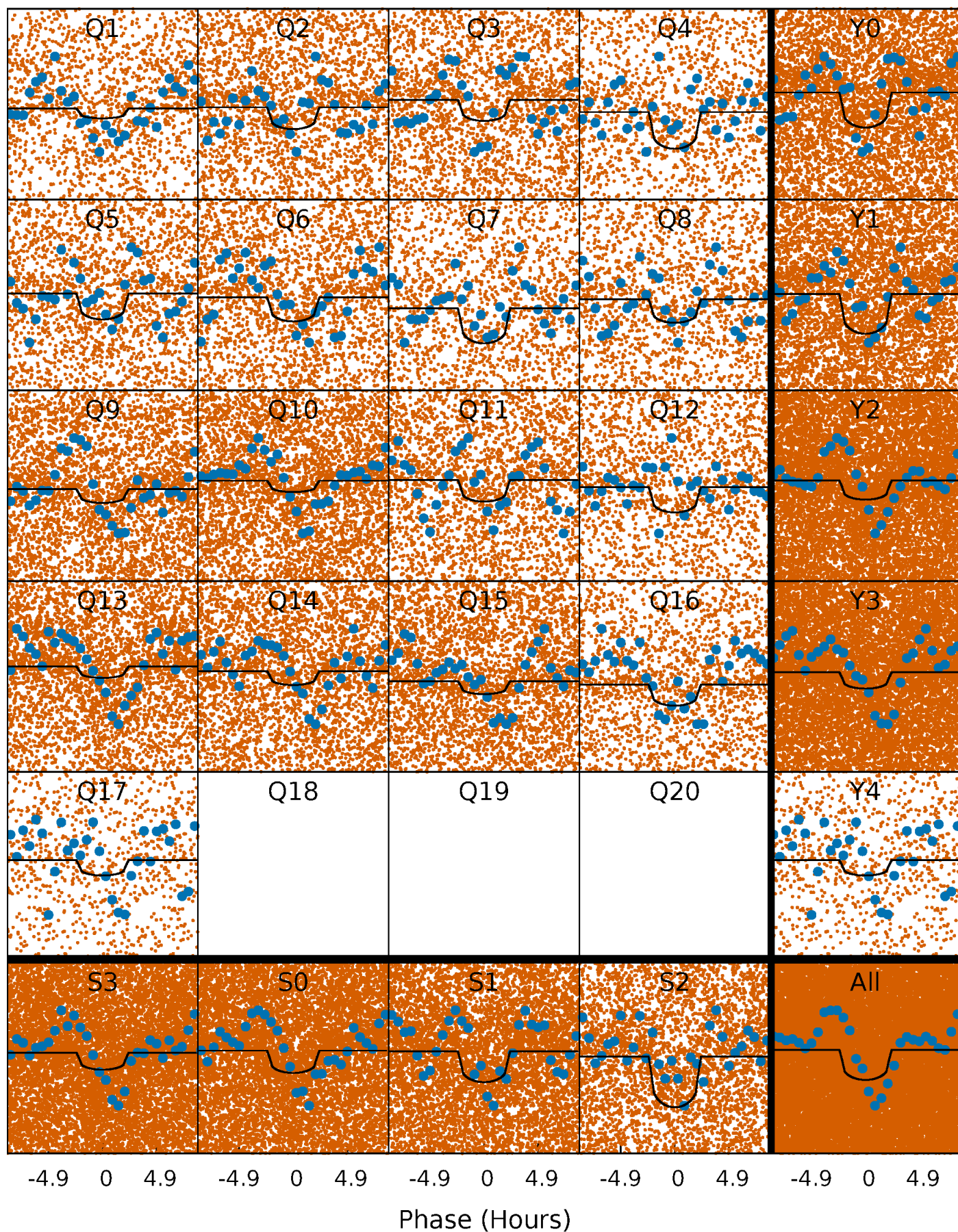
PDC Quarter-Phased Transit Curves

TCE 009953736-01 P= 0.508160 Days $T_0=131.623615$ (BKJD)



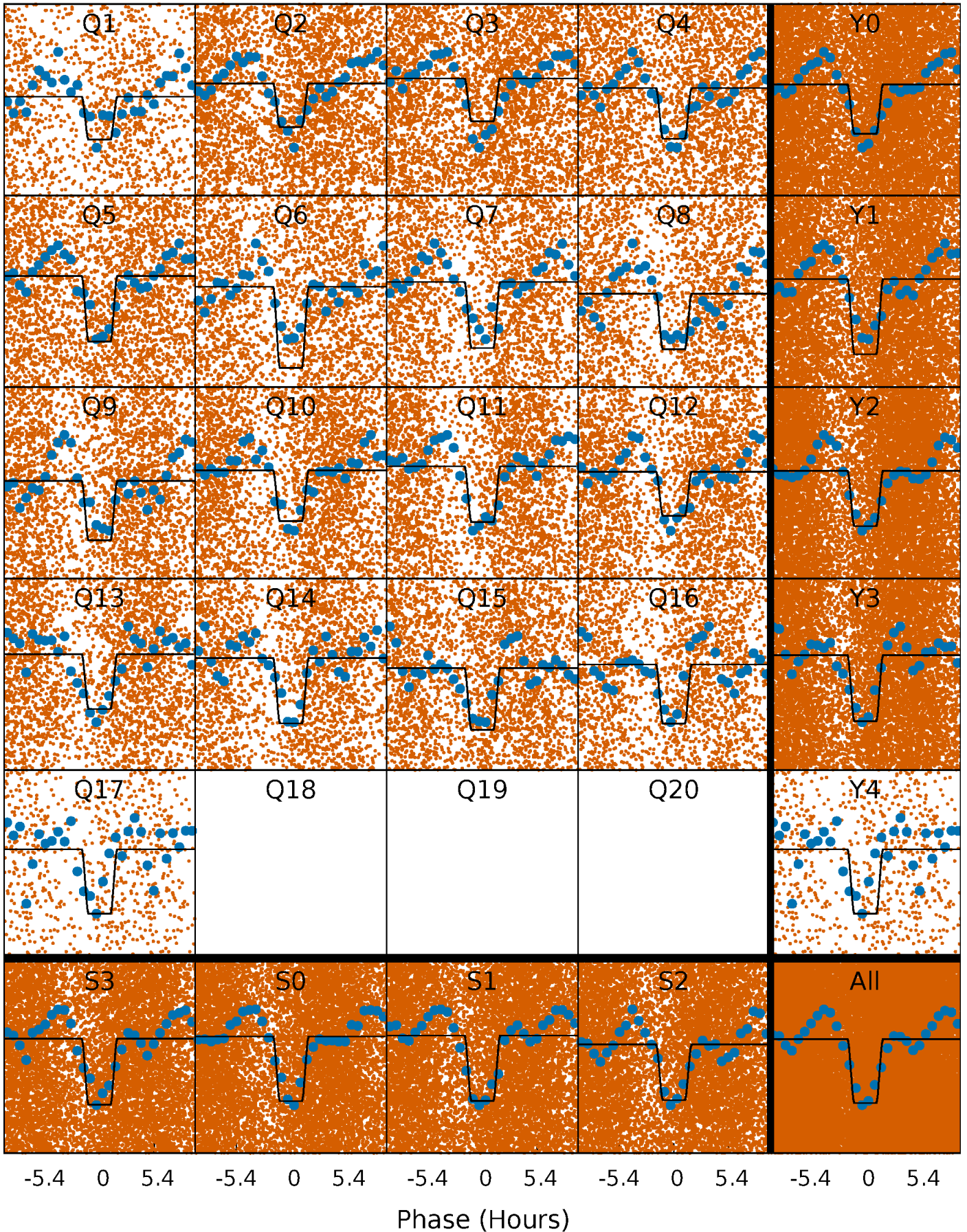
DV Quarter-Phased Transit Curves

TCE 009953736-01 P= 0.508160 Days $T_0=131.623615$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

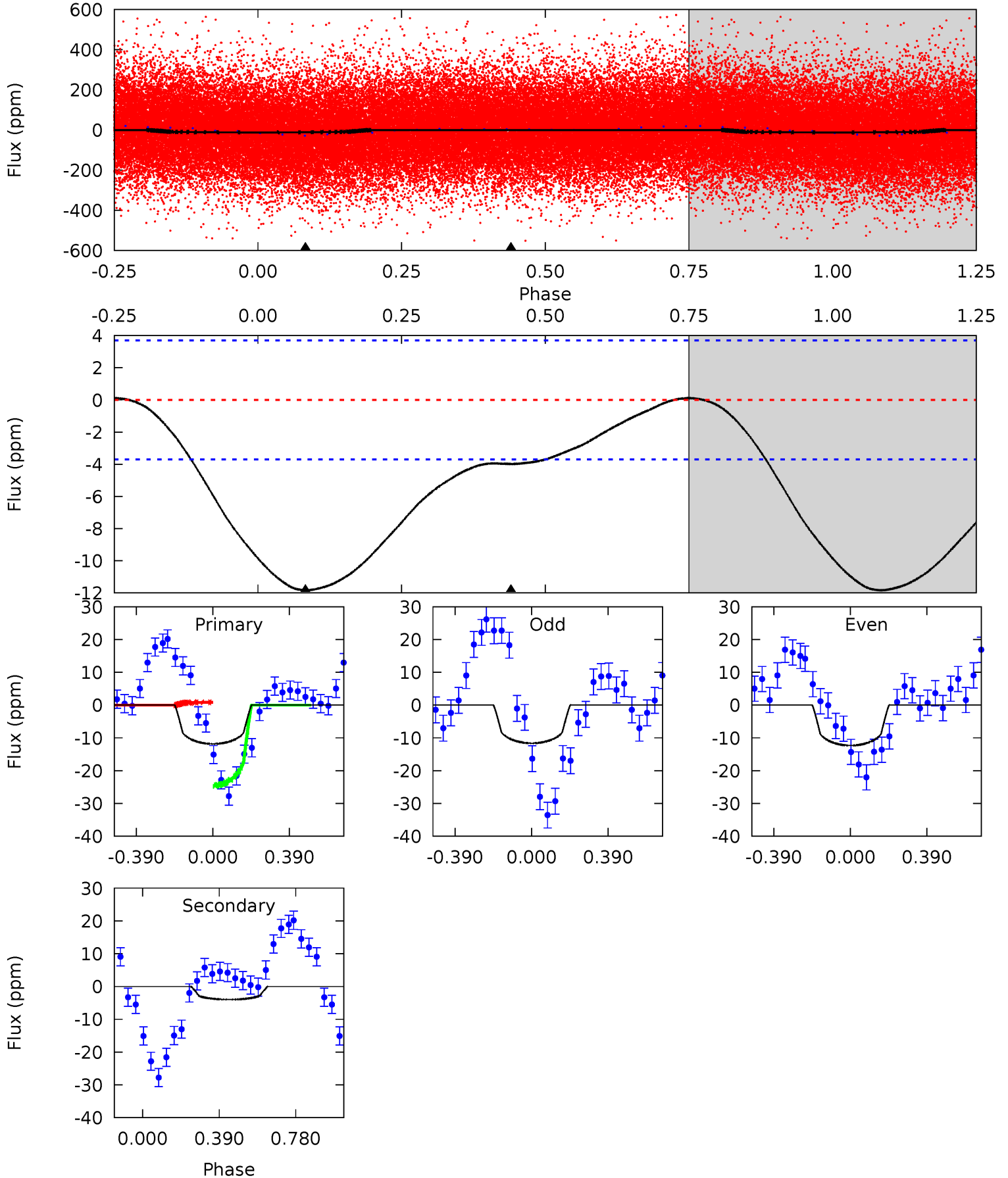
TCE 009953736-01 P= 0.508197 Days $T_0=131.615389$ (BKJD)



DV Model-Shift Uniqueness Test

009953736-01, P = 0.508160 Days, E = 131.115455 Days

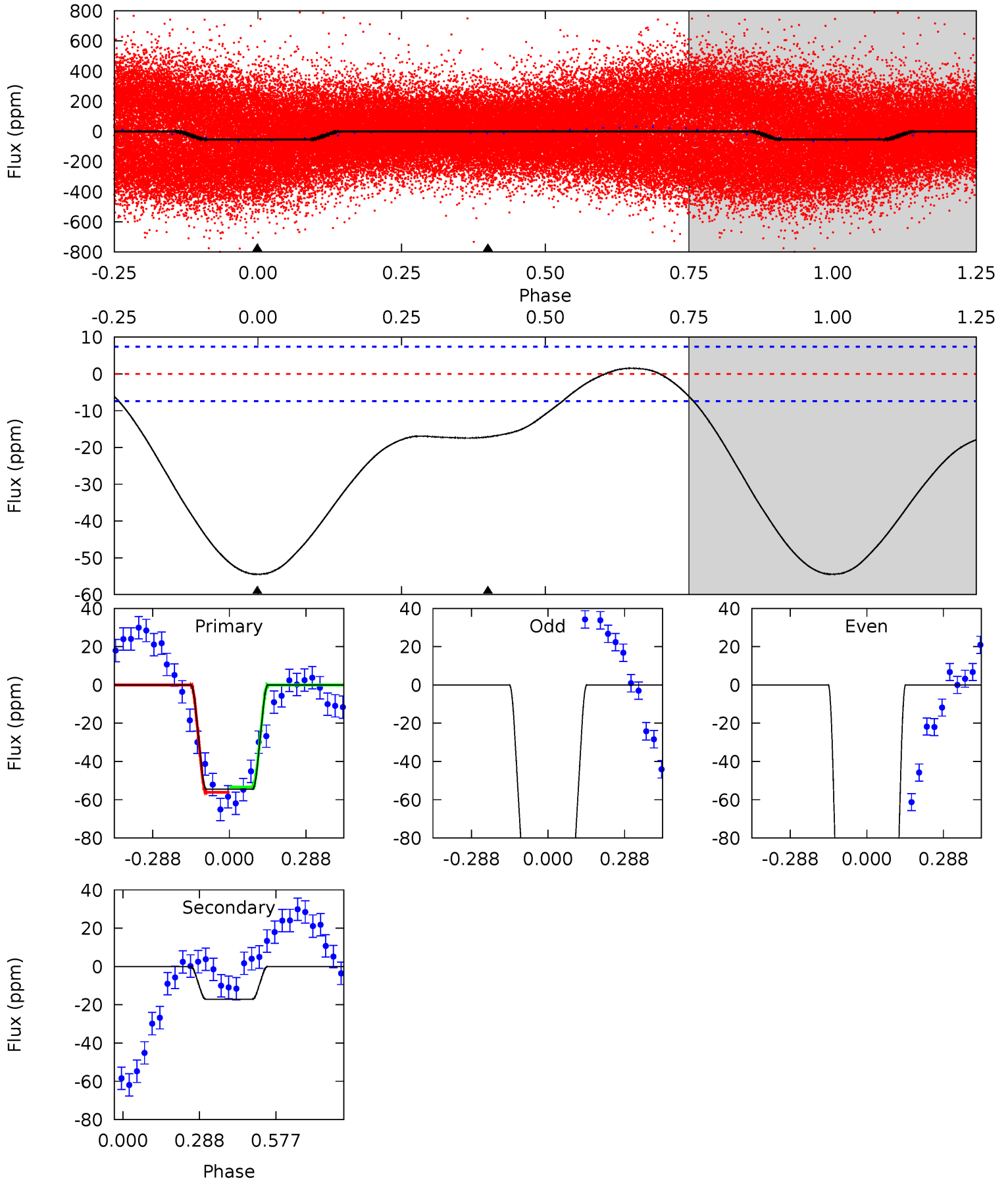
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	4.61	0	0	4.27	0.86	0.23	13.7	13.7	4.61	4.61	0.40	0.95	0.01	13.7



Alt Model-Shift Uniqueness Test

009953736-01, P = 0.508197 Days, E = 131.107192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	10.0	0	0	4.34	1.06	1.34	31.9	31.9	10.0	10.0	51.0	0.93	0.03	0.95



Stellar Parameters For KIC 009953736

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7141^{+195}_{-335}	$4.243^{+0.060}_{-0.225}$	$0.210^{+0.150}_{-0.350}$	$1.560^{+0.596}_{-0.199}$	$1.558^{+0.214}_{-0.214}$	$0.578^{+0.184}_{-0.323}$
	+3%/-5%	+1%/-5%	+71%/-167%	+38%/-13%	+14%/-14%	+32%/-56%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009953736-01 / KOI 7262.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.67^{+0.45}_{-0.41}$	4676^{+353}_{-252}	4776^{+3563}_{-1633}	$0.963^{+5.105}_{-0.608}$
Alt.	-17 ± 2	$1.42^{+0.52}_{-0.46}$	4660^{+386}_{-274}	4801^{+1101}_{-886}	$0.981^{+1.083}_{-0.462}$

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 $A_{obs} \gg 1.0$

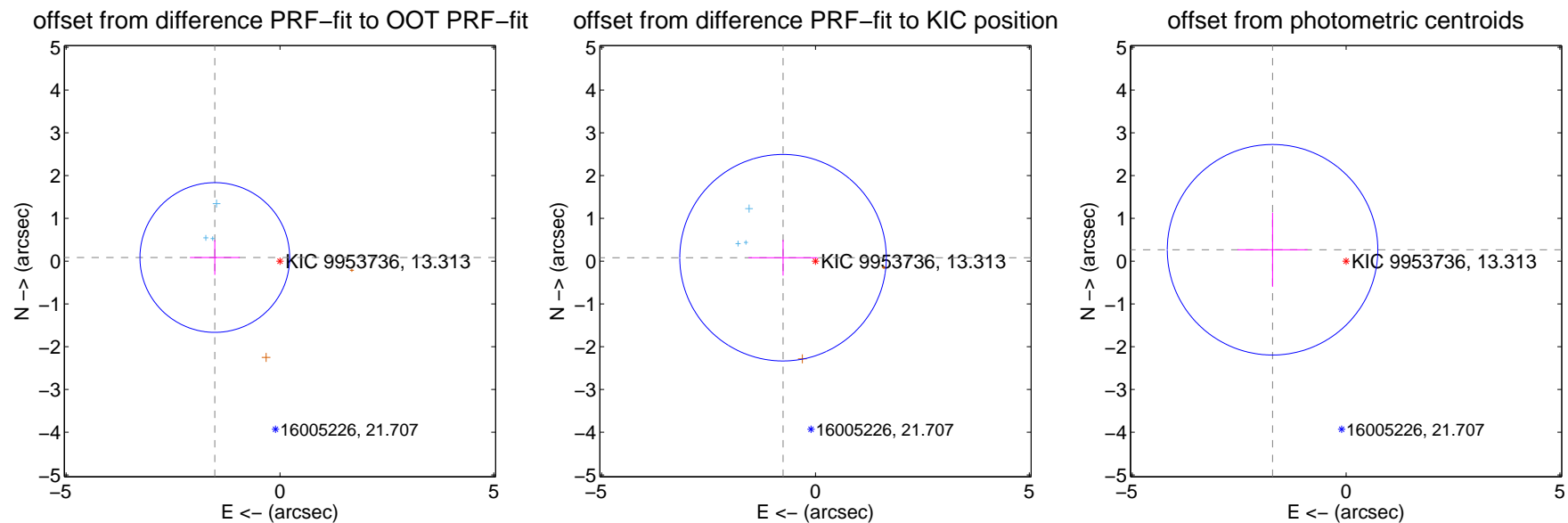
DV Centroid Data

Supplemental centroid analysis for 009953736-01. Kepler magnitude: 13.31. Transit SNR 11.15

There are 3 quarters with good PRF difference image offsets

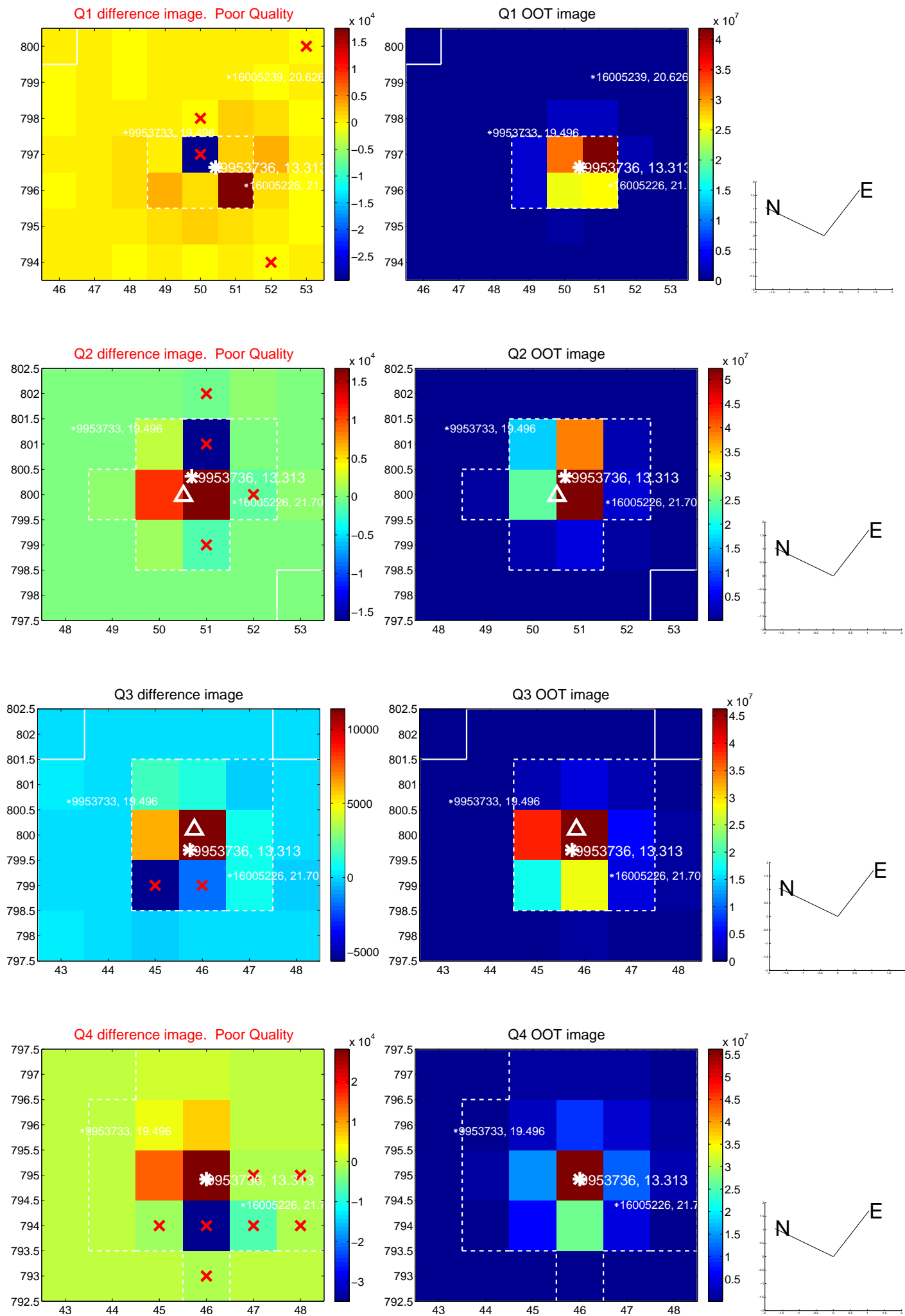
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.525 ± 0.583	2.61	1.523 ± 0.583	0.085 ± 0.407
PRF-fit source offset from KIC position	0.762 ± 0.805	0.95	0.758 ± 0.808	0.080 ± 0.418
photometric centroid source offset	1.74 ± 0.82	2.12	1.72 ± 0.82	0.27 ± 0.87

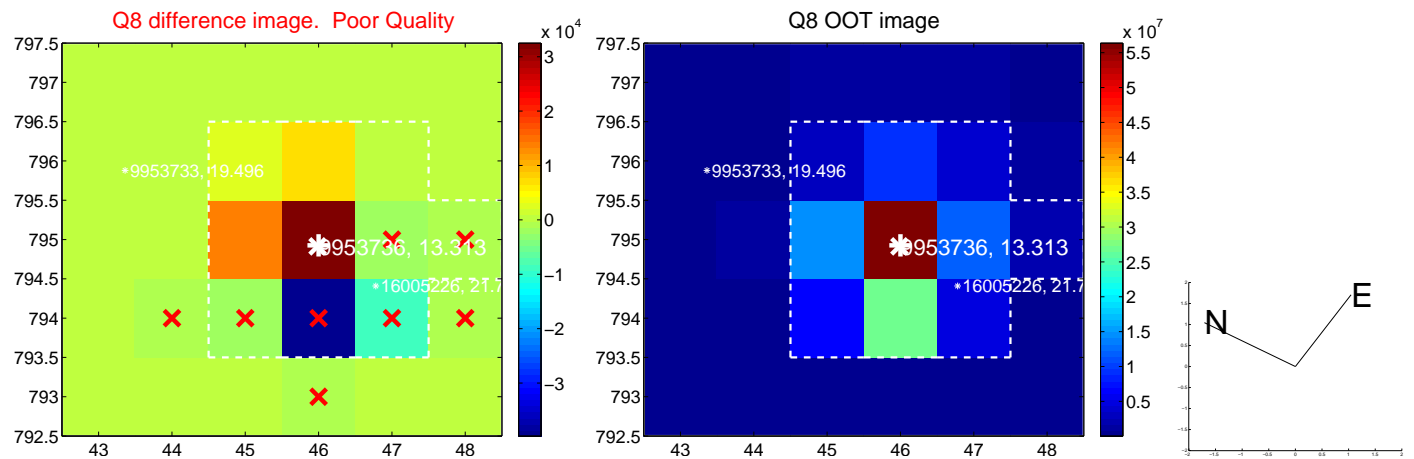
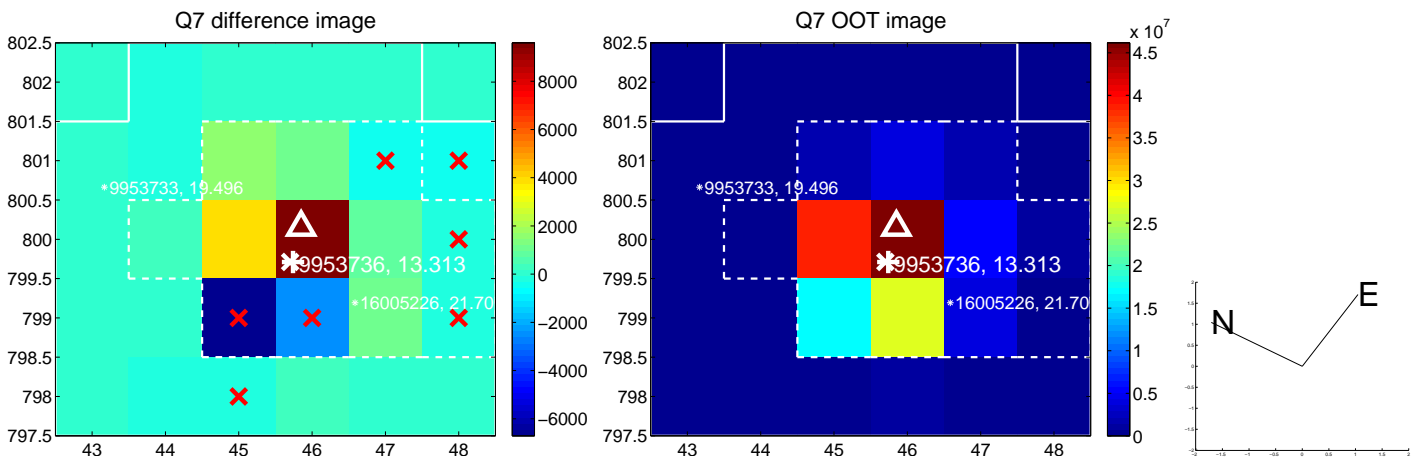
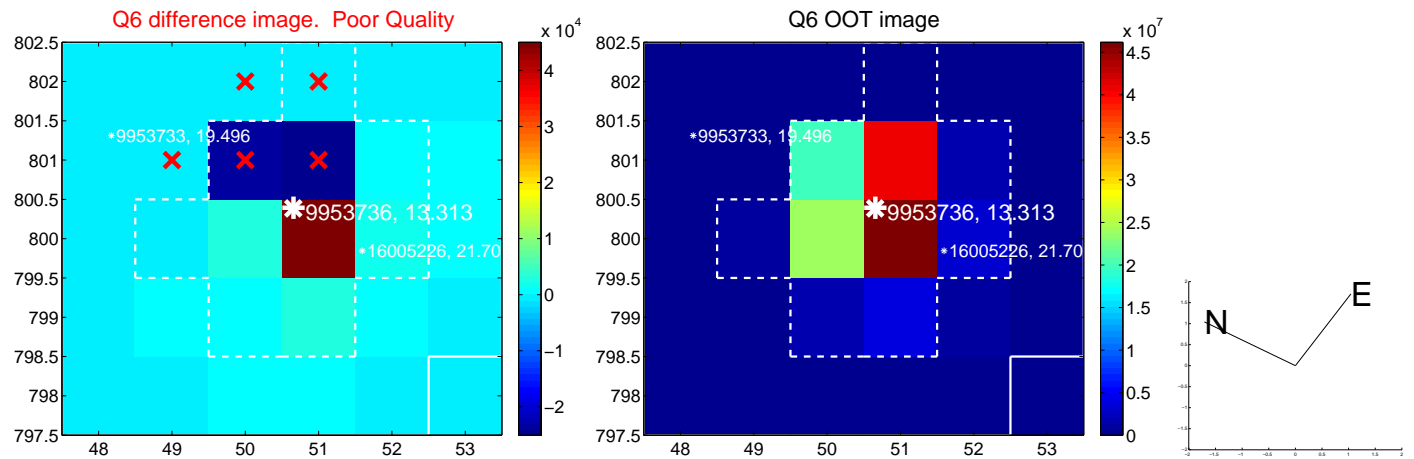
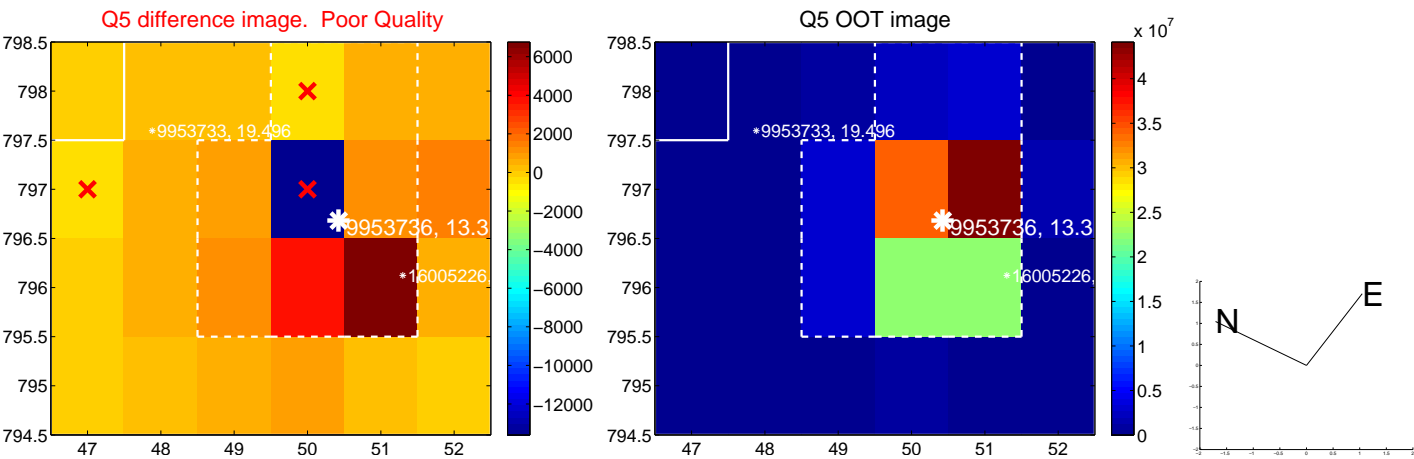


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

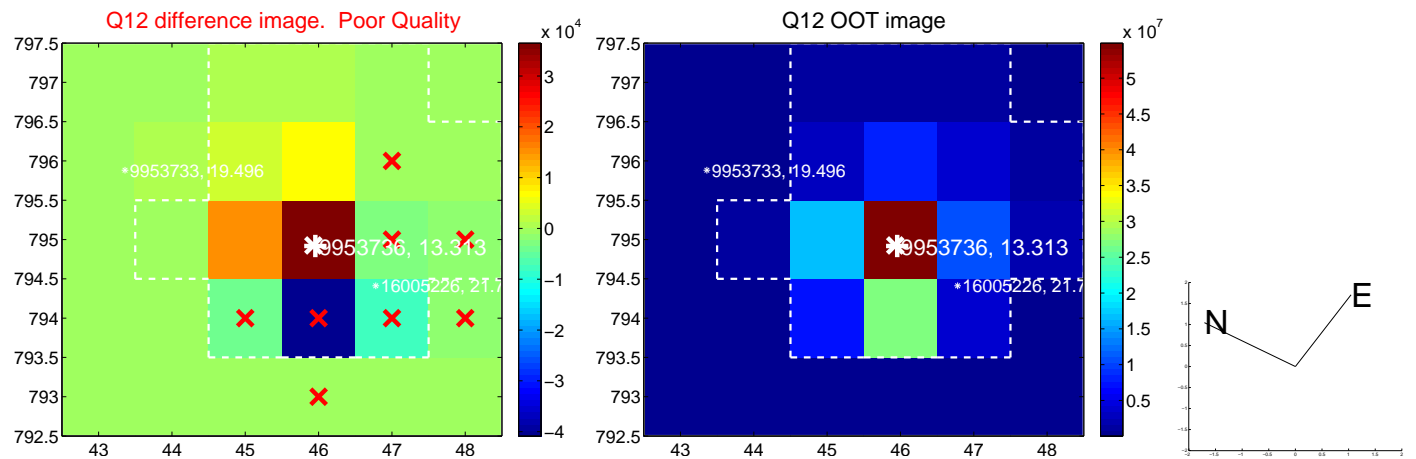
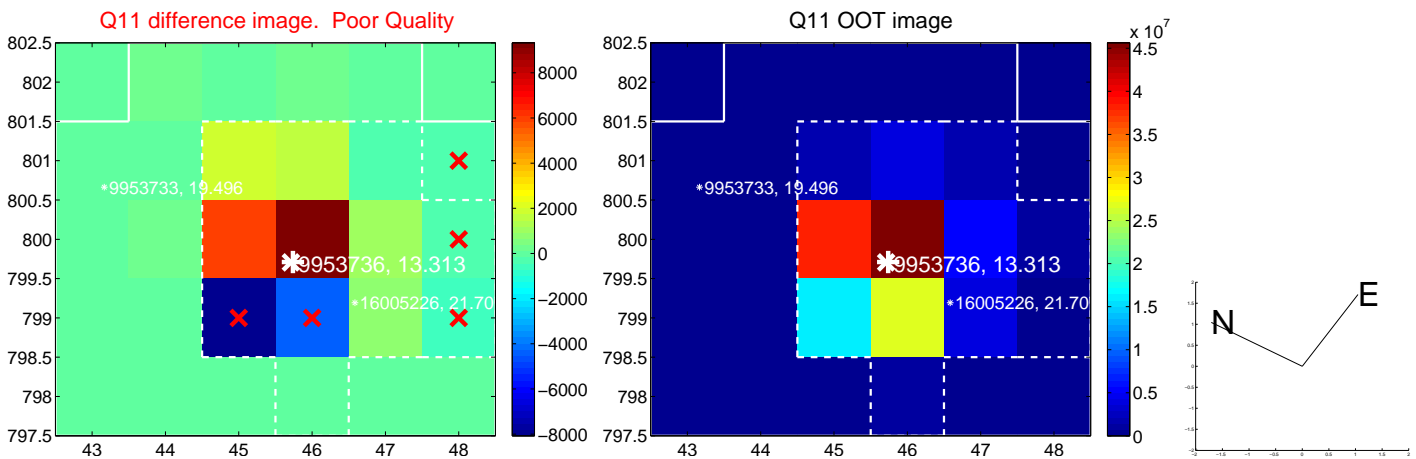
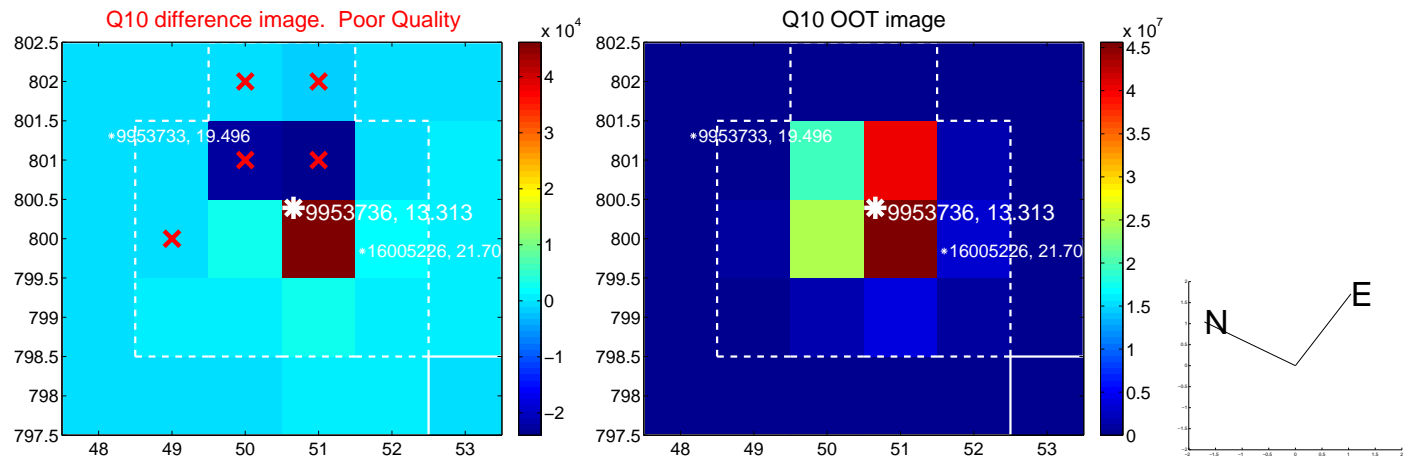
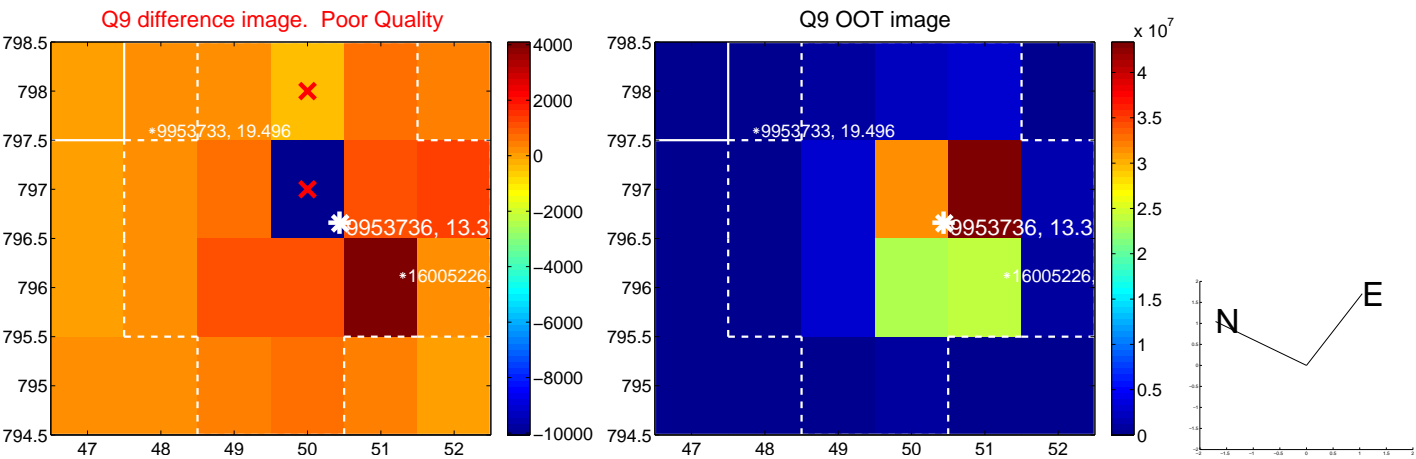
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



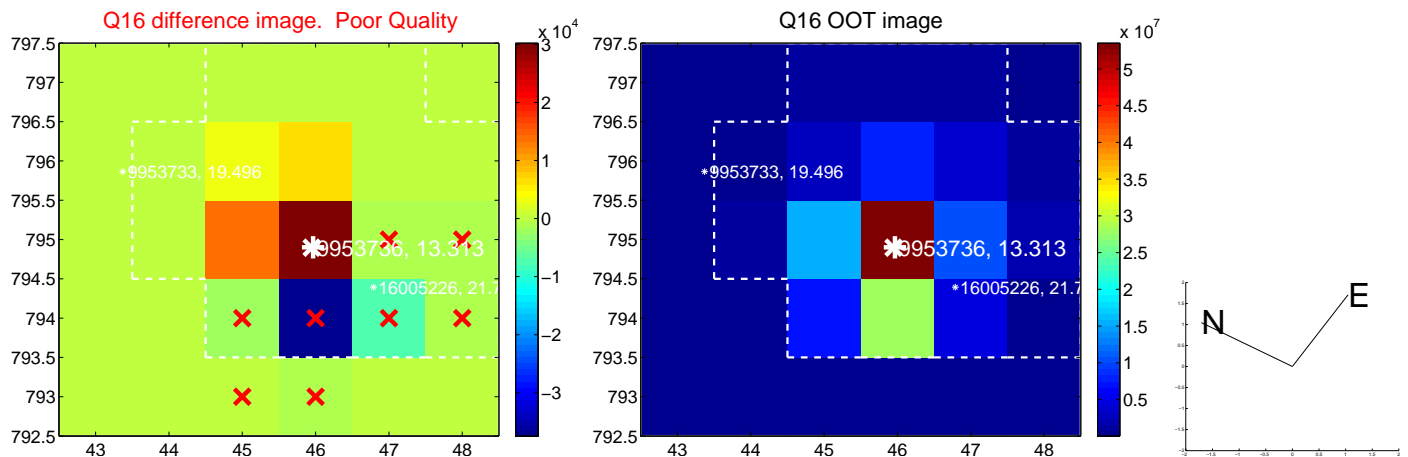
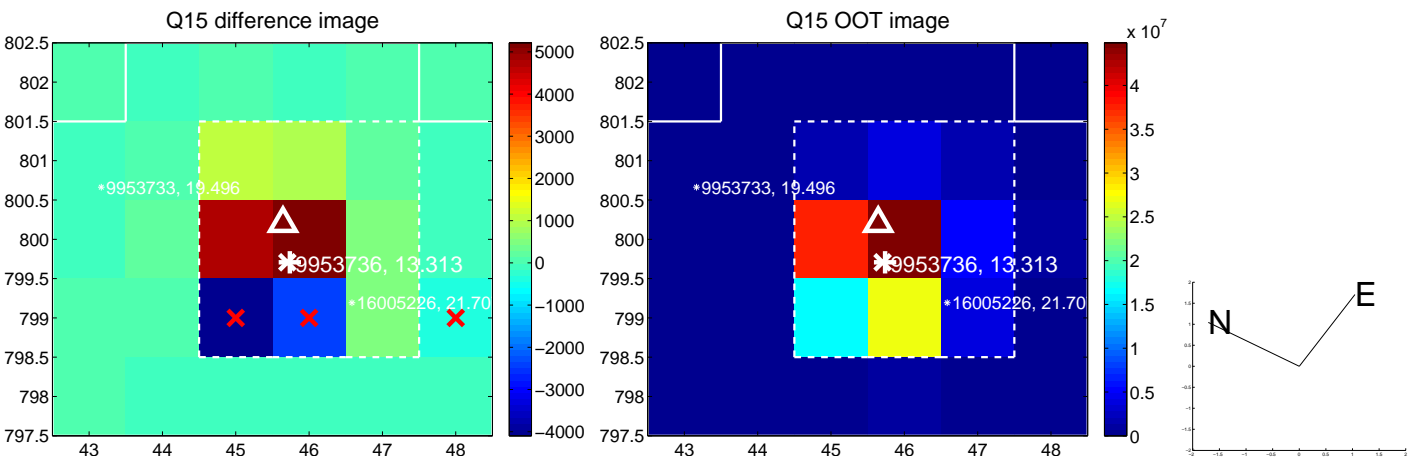
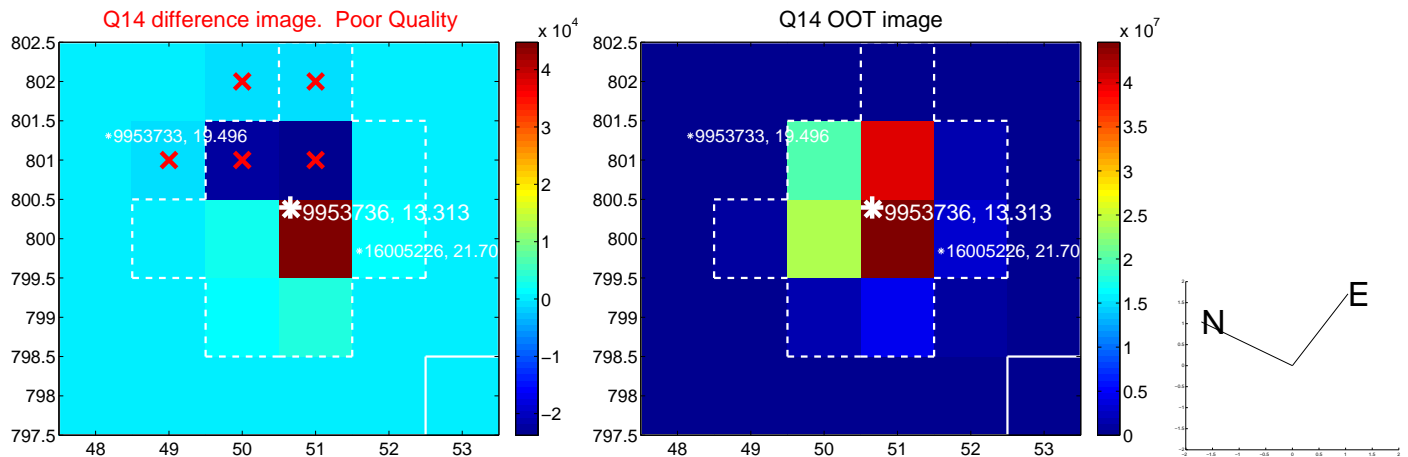
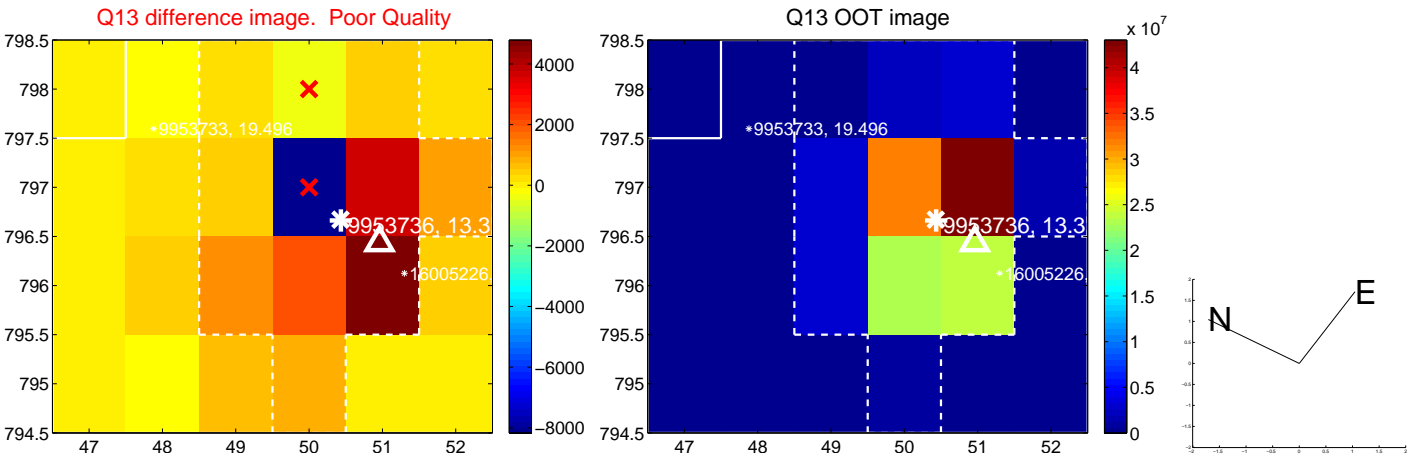
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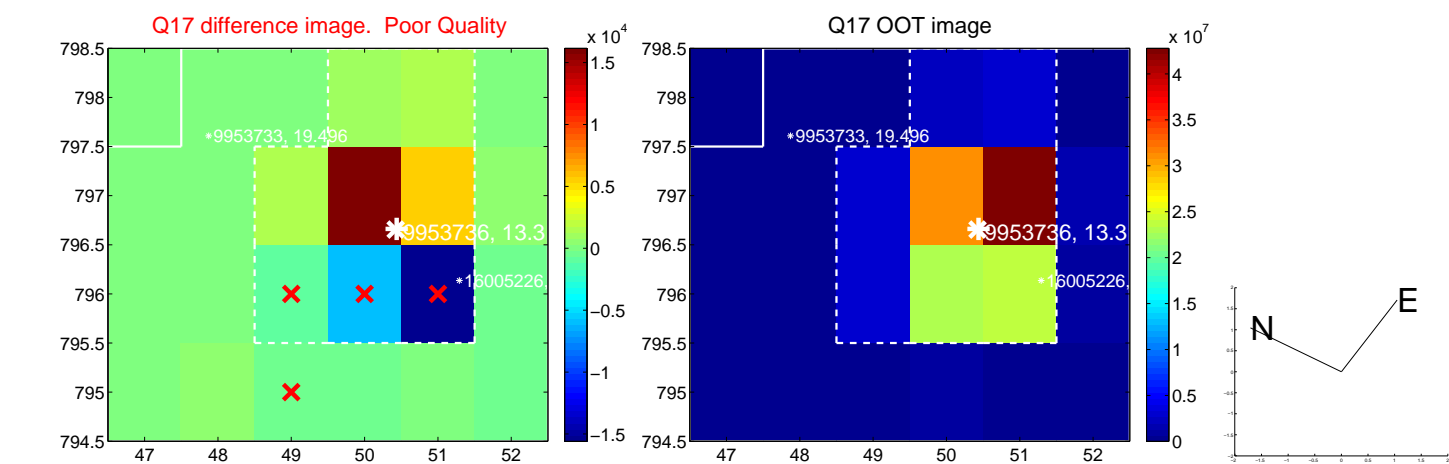
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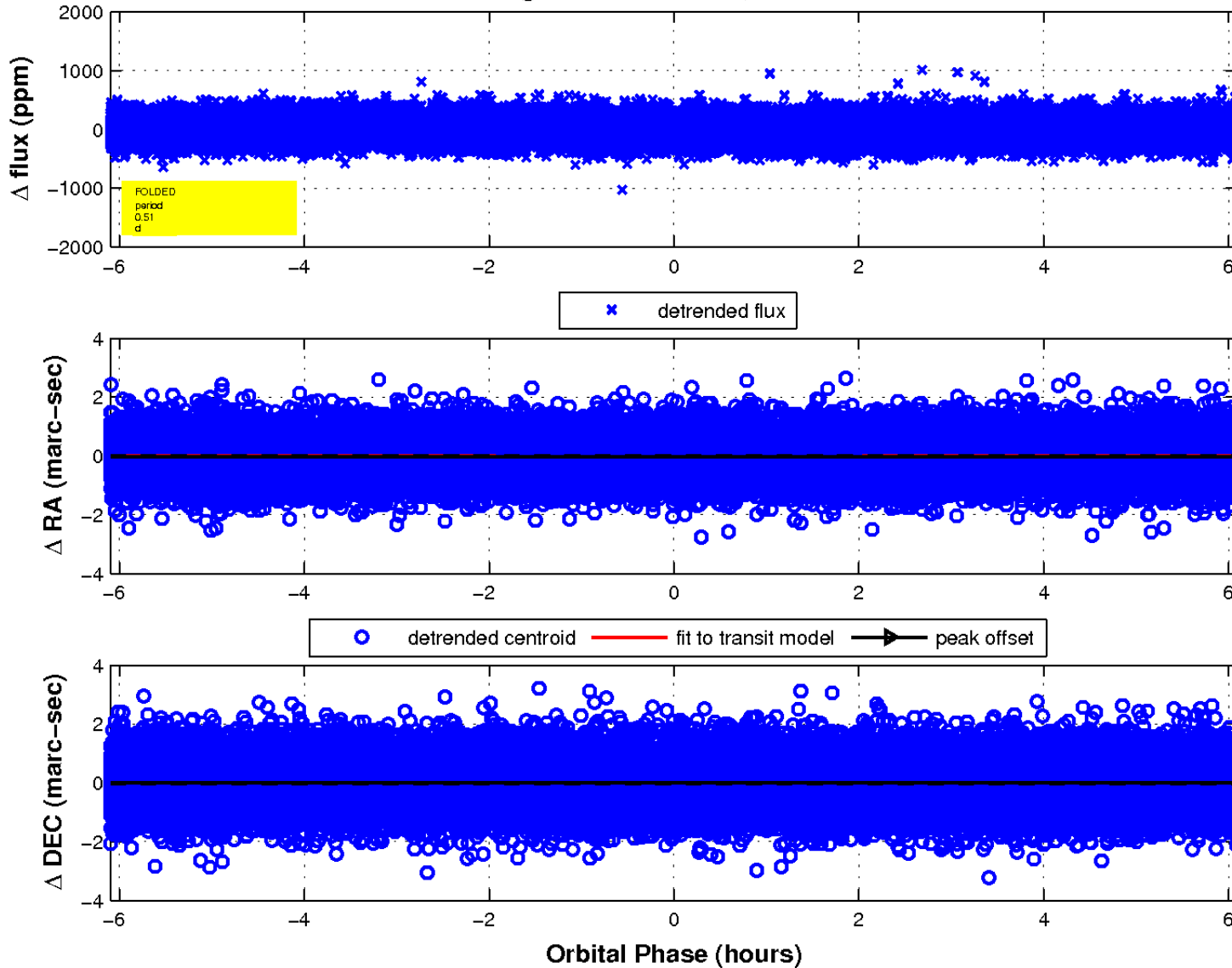
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

