

KIC 009893419

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})
009893419-01	OBS	No	0.691259	131.946158	22.5	5.406	8.7	8.0	0.91	5984	0.43	4043.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009893419-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

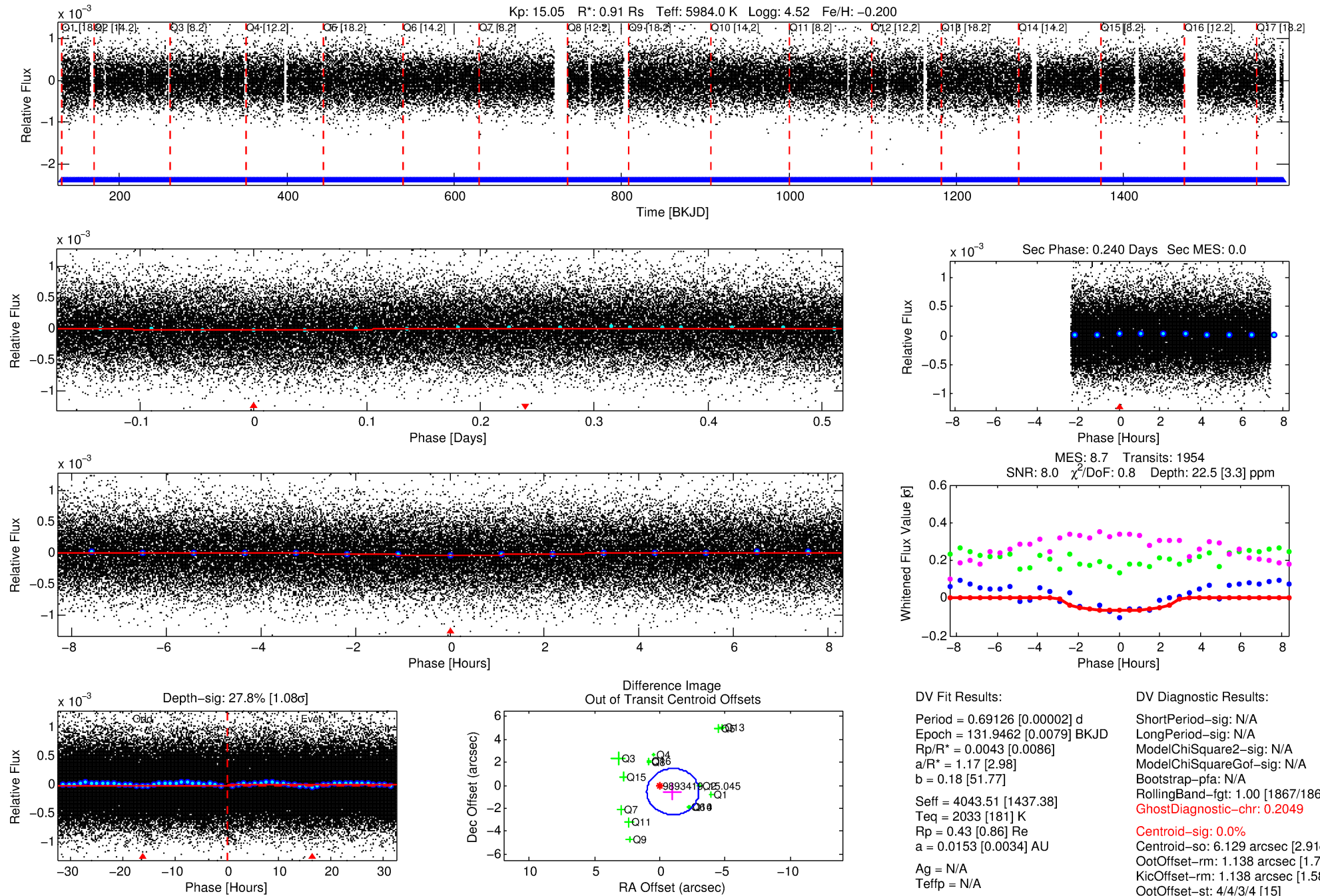
Ephemeris Match Information For 009893419-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
009893419-01	9893419	009893365-01	9893365	1:1	71.2	3	17	14.34	15.05	0.83	Direct-PRF	1	2.78	0.95

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

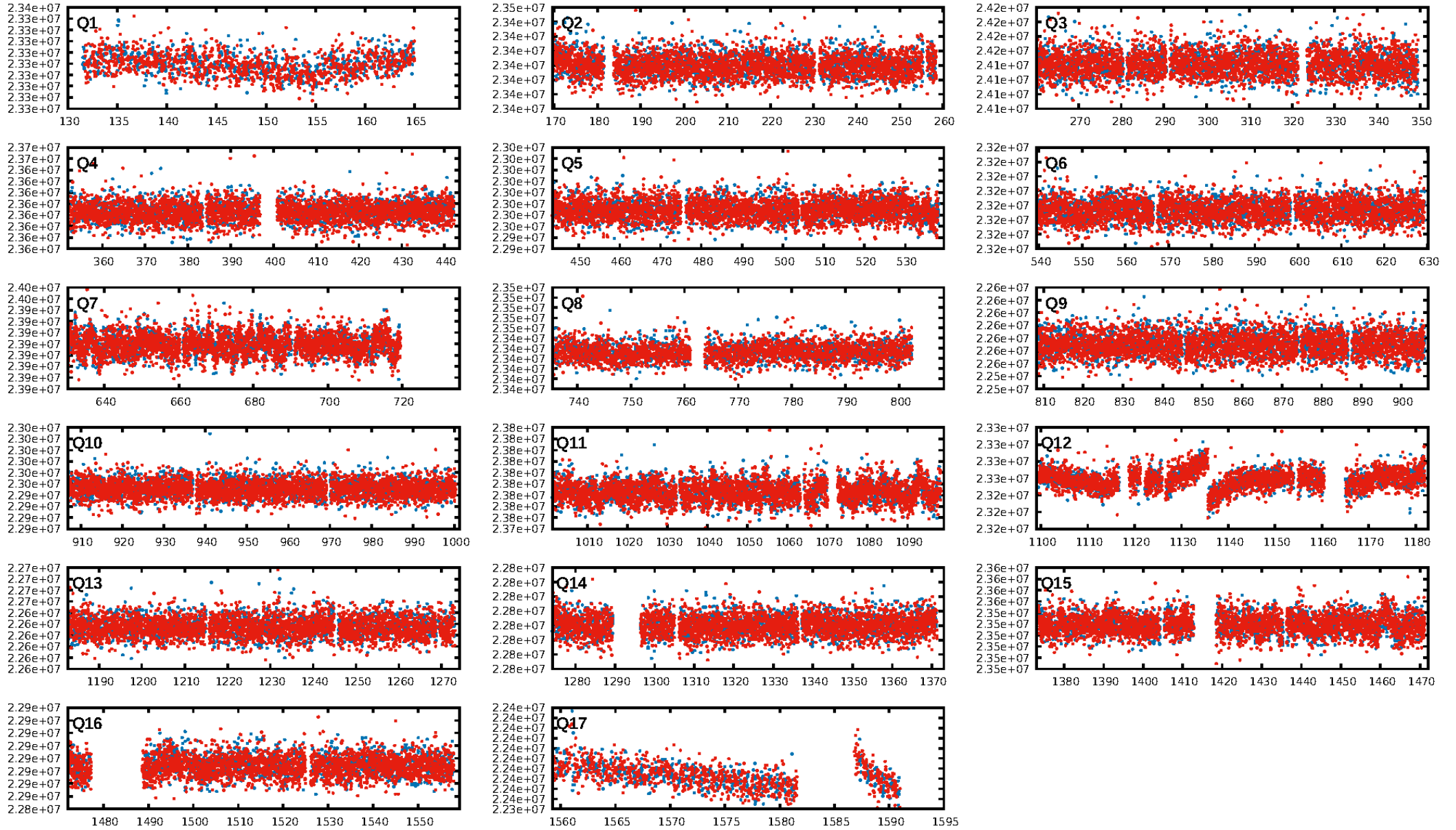
KIC: 9893419 Candidate: 1 of 1 Period: 0.691 d



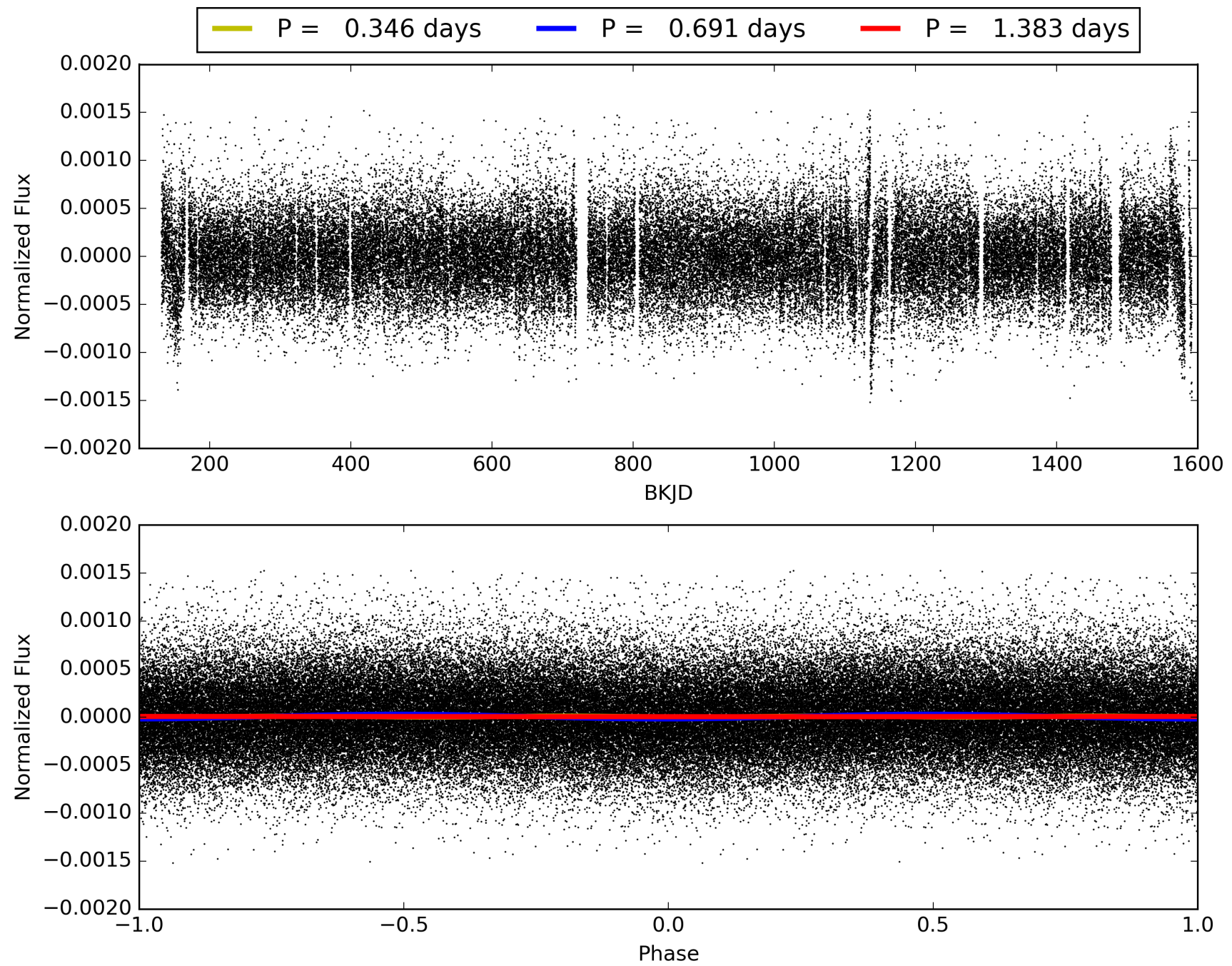
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:11:28 Z

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

TCE 009893419-01, PDC Light Curves

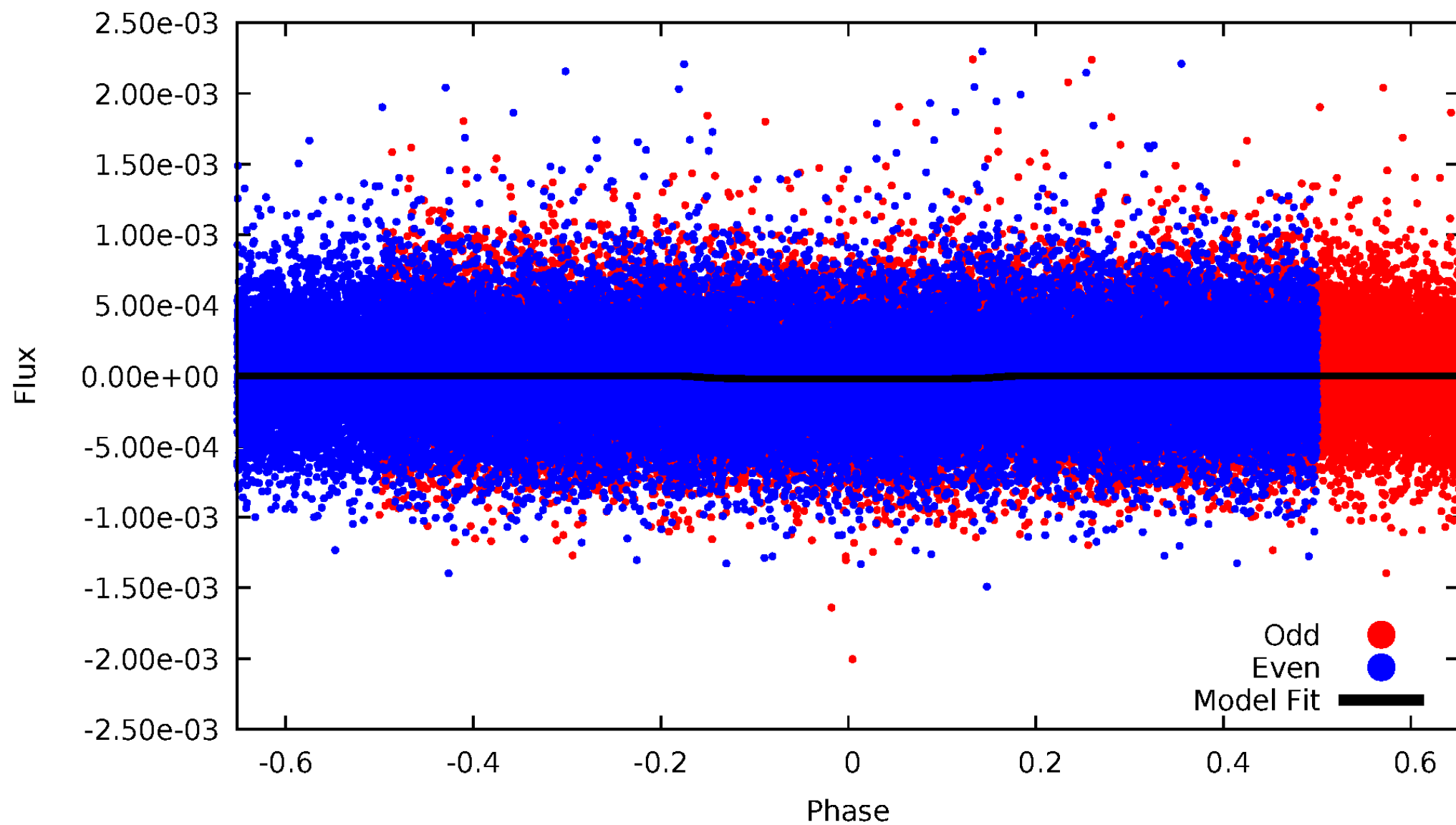


TCE 009893419-01



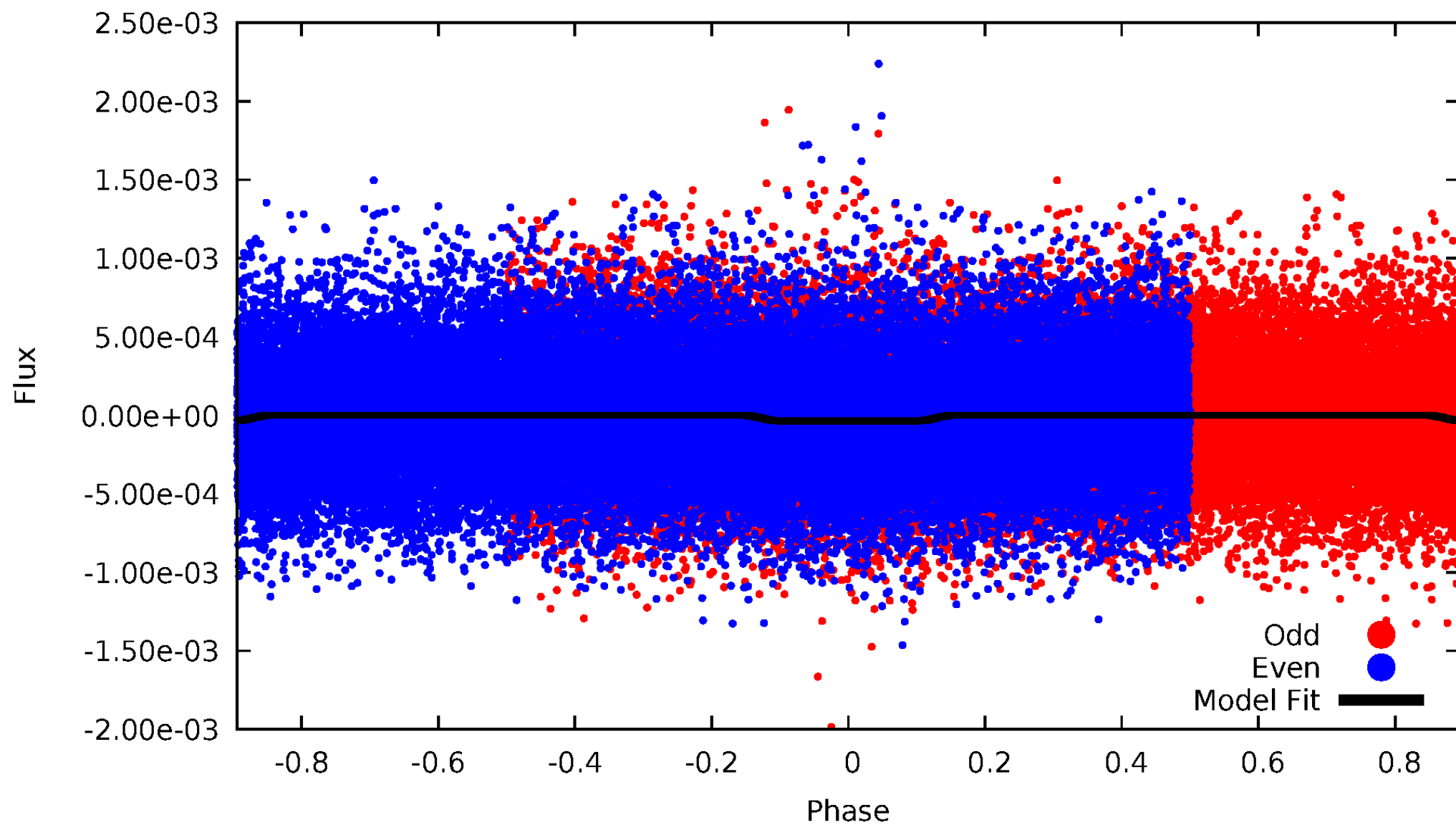
DV Odd/Even

TCE 009893419-01

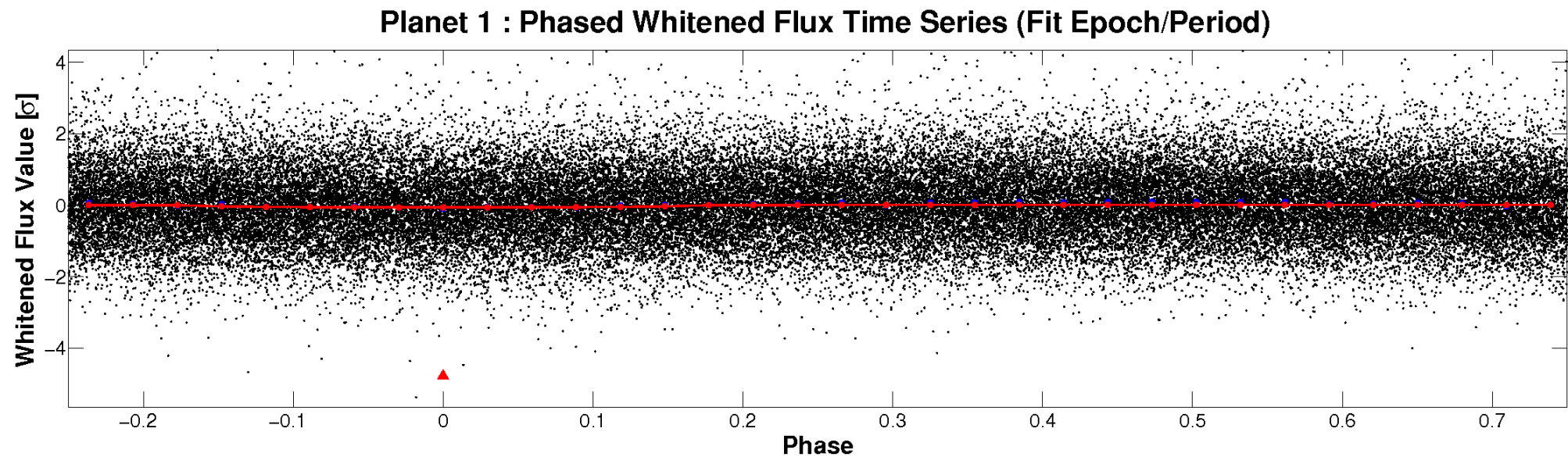
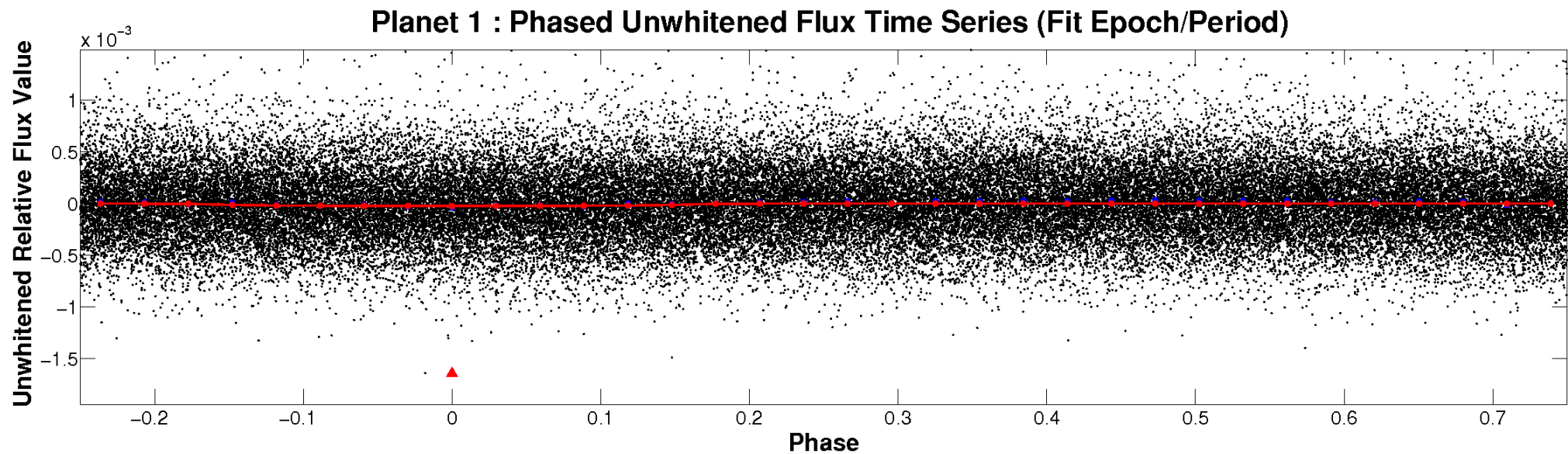


ALT Odd/Even

TCE 009893419-01

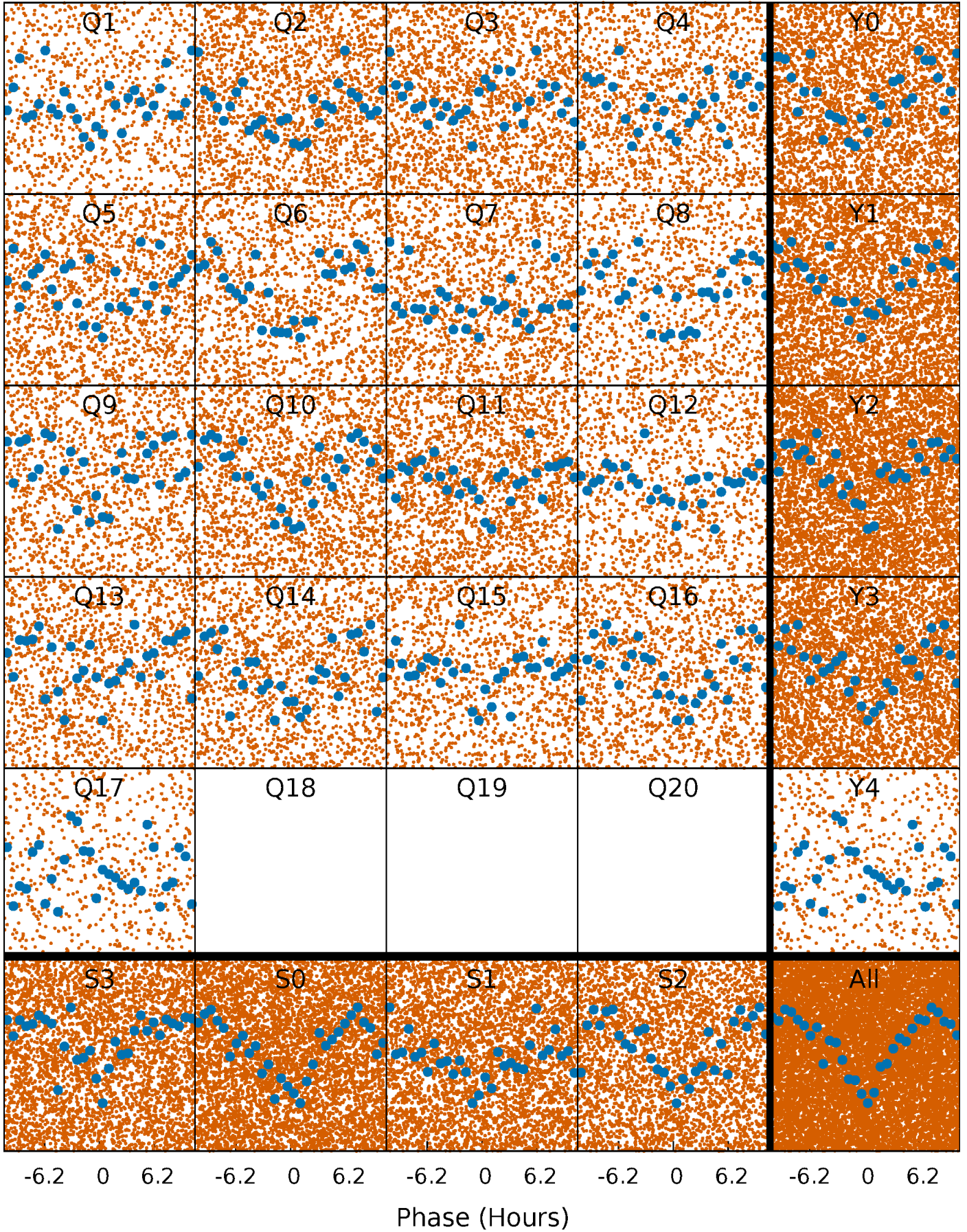


Non-Whitened Vs. Whitened Light Curve



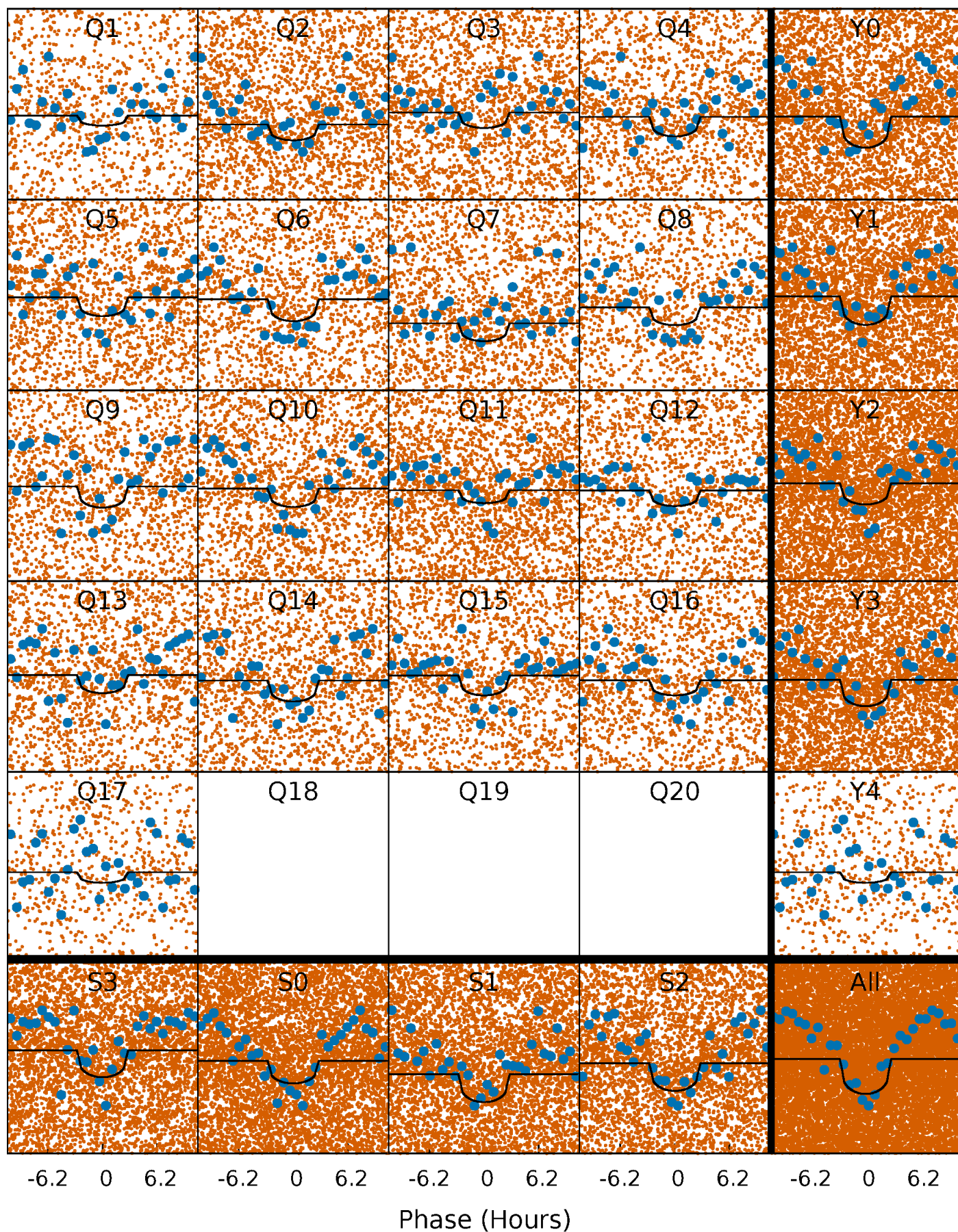
PDC Quarter-Phased Transit Curves

TCE 009893419-01 P= 0.691259 Days $T_0=131.946158$ (BKJD)



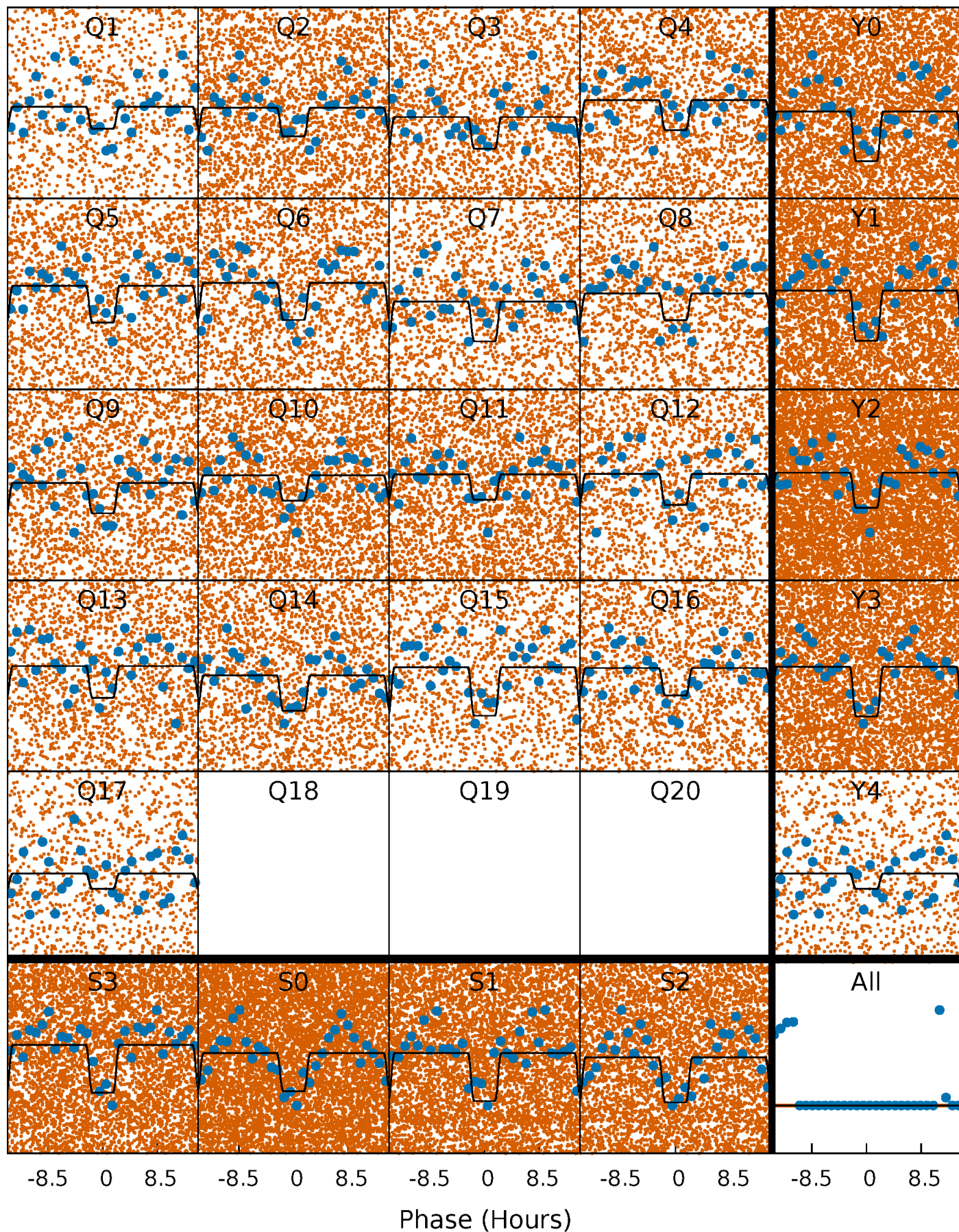
DV Quarter-Phased Transit Curves

TCE 009893419-01 P= 0.691259 Days $T_0=131.946158$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

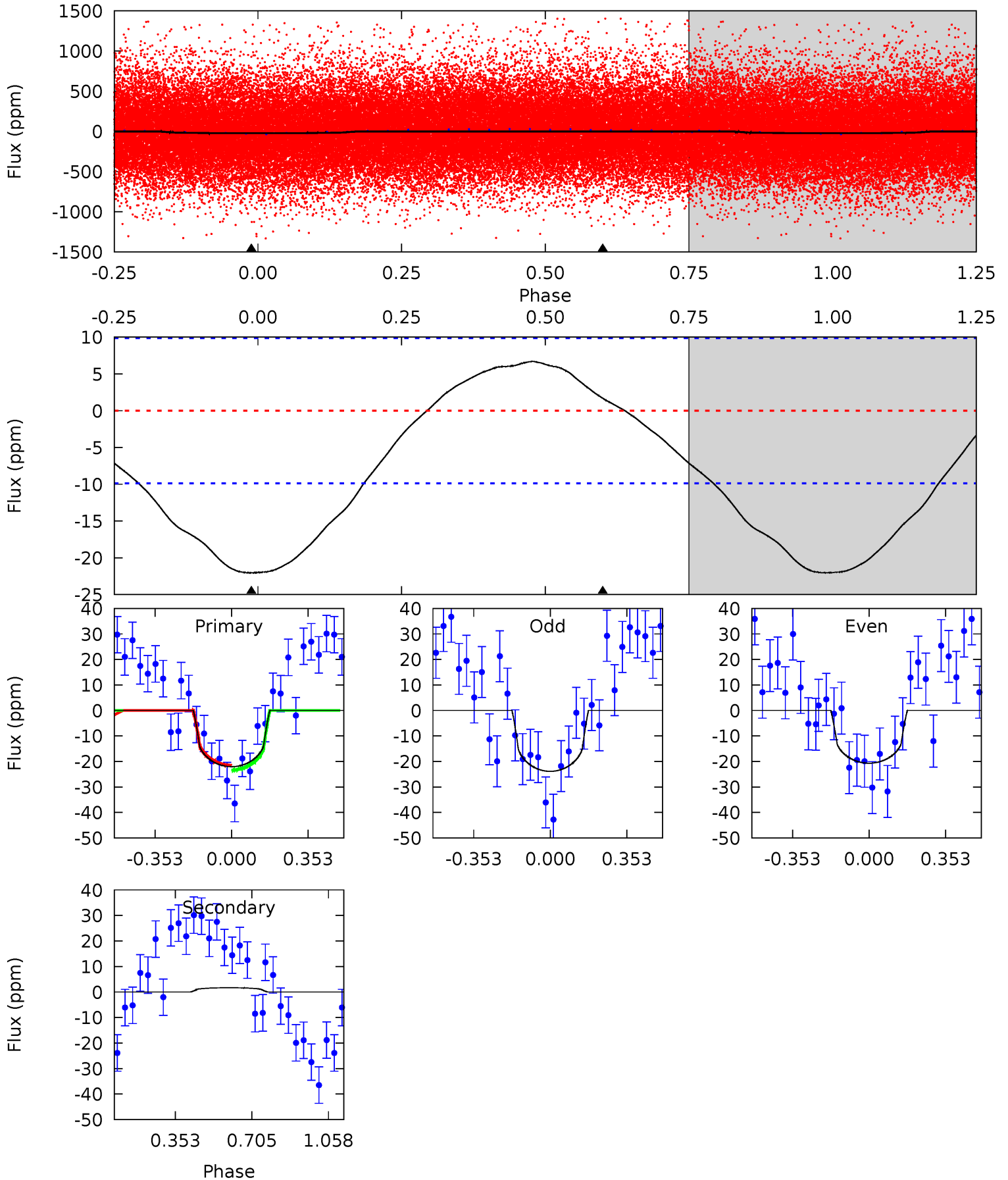
TCE 009893419-01 P= 0.691326 Days $T_0=131.869682$ (BKJD)



DV Model-Shift Uniqueness Test

009893419-01, P = 0.691259 Days, E = 131.254899 Days

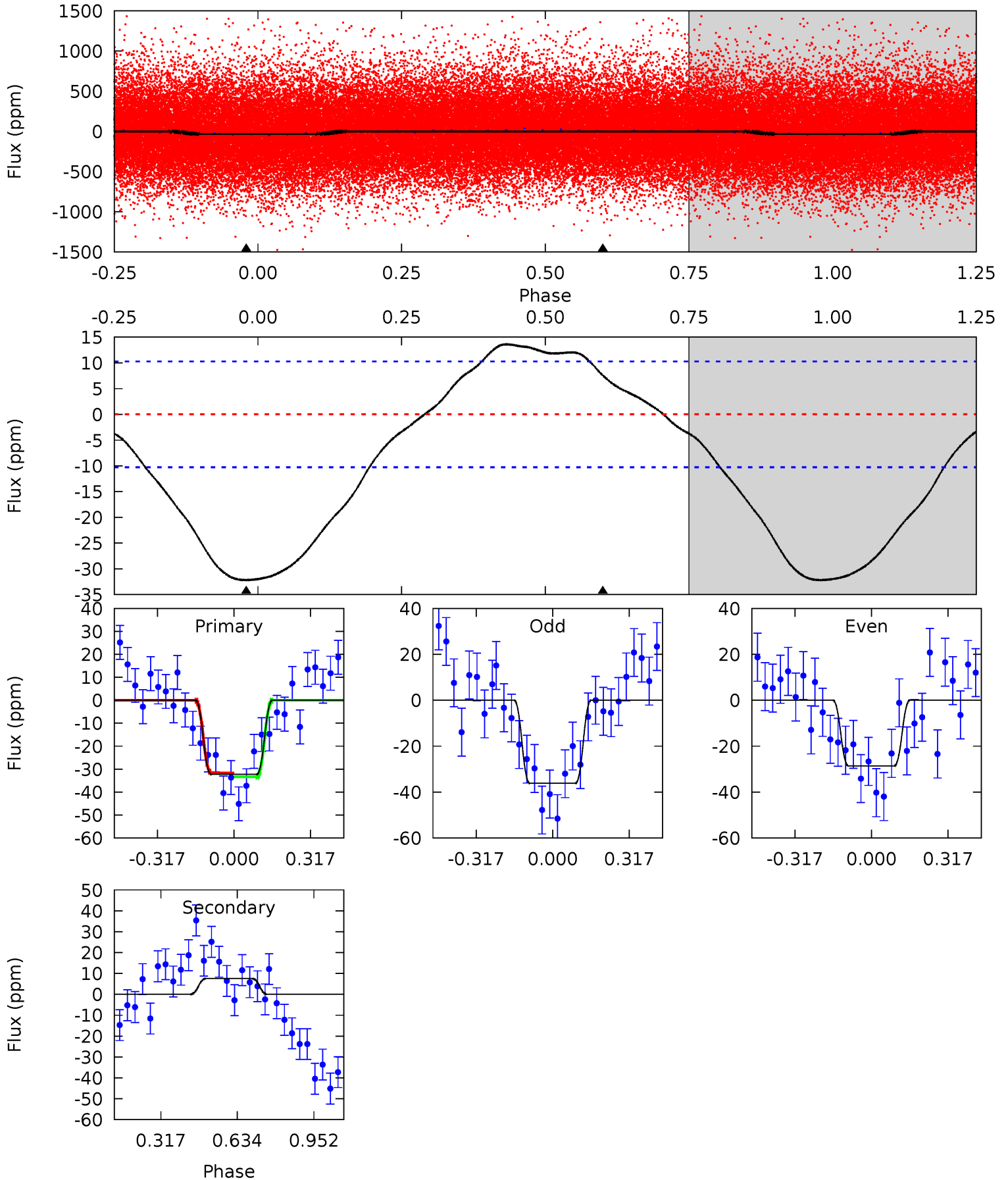
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	-0.73	0	0	4.29	0.93	0.93	9.58	9.58	-0.73	-0.73	0.70	1.01	0.23	0.41



Alt Model-Shift Uniqueness Test

009893419-01, $P = 0.691326$ Days, $E = 131.178356$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	-3.18	0	0	4.32	1.00	1.13	13.5	13.5	-3.18	-3.18	1.59	0.94	0.30	0.35



Stellar Parameters For KIC 009893419

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5984^{+161}_{-179}	$4.521^{+0.044}_{-0.187}$	$-0.200^{+0.250}_{-0.350}$	$0.906^{+0.234}_{-0.084}$	$0.993^{+0.109}_{-0.133}$	$1.883^{+0.441}_{-0.877}$
	+3%/-3%	+1%/-4%	+125%/-175%	+26%/-9%	+11%/-13%	+23%/-47%
Source	PHO1	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 009893419-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 2	$0.84^{+0.75}_{-0.54}$	2901^{+185}_{-133}	-3288^{+387}_{-1007}	$-0.199^{+0.276}_{-1.796}$
Alt.	8 ± 2	$0.92^{+0.78}_{-0.60}$	2899^{+178}_{-130}	-3865^{+480}_{-1838}	$-1.054^{+0.768}_{-8.116}$

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 $A_{obs} \gg 1.0$

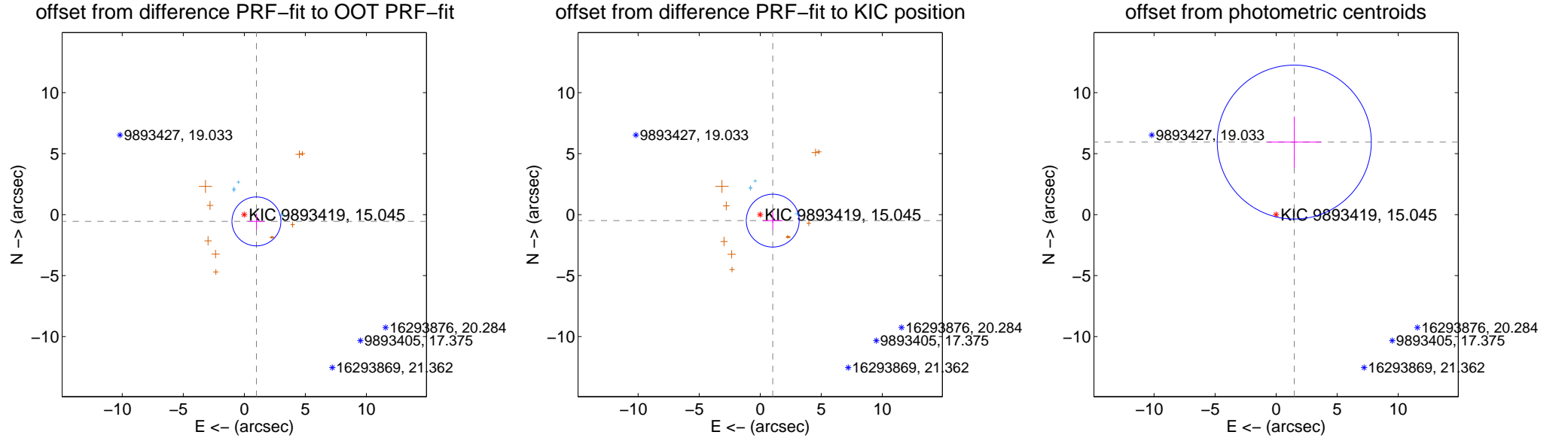
DV Centroid Data

Supplemental centroid analysis for 009893419-01. Kepler magnitude: 15.04. Transit SNR 8.04

There are 4 quarters with good PRF difference image offsets

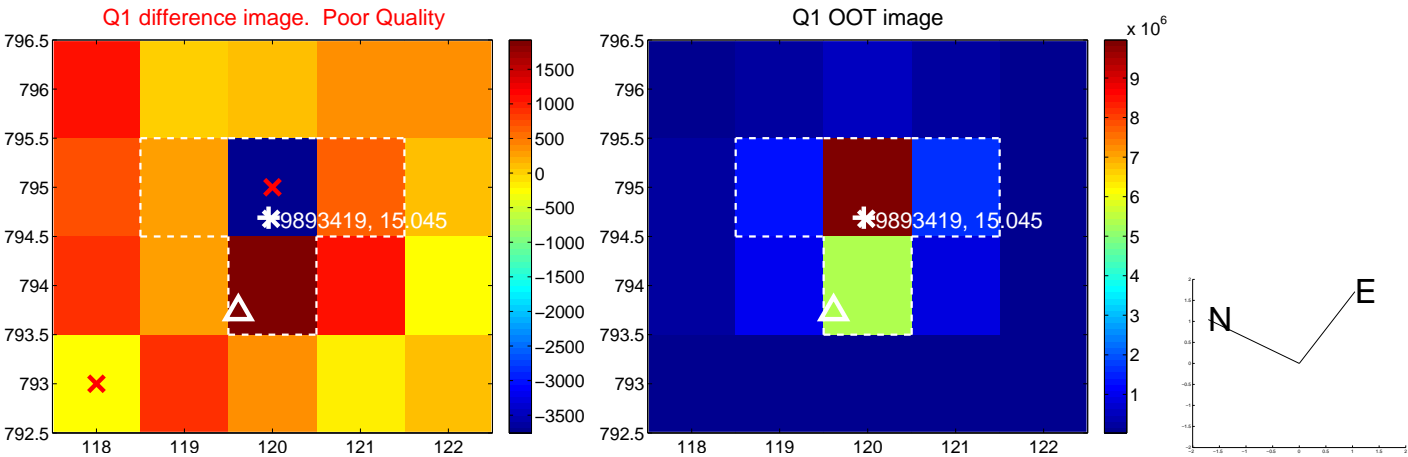
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.138 ± 0.668	1.70	-0.992 ± 0.669	-0.557 ± 0.667
PRF-fit source offset from KIC position	1.138 ± 0.722	1.58	-1.026 ± 0.810	-0.494 ± 0.732
photometric centroid source offset	6.13 ± 2.10	2.91	-1.49 ± 2.19	5.95 ± 2.10

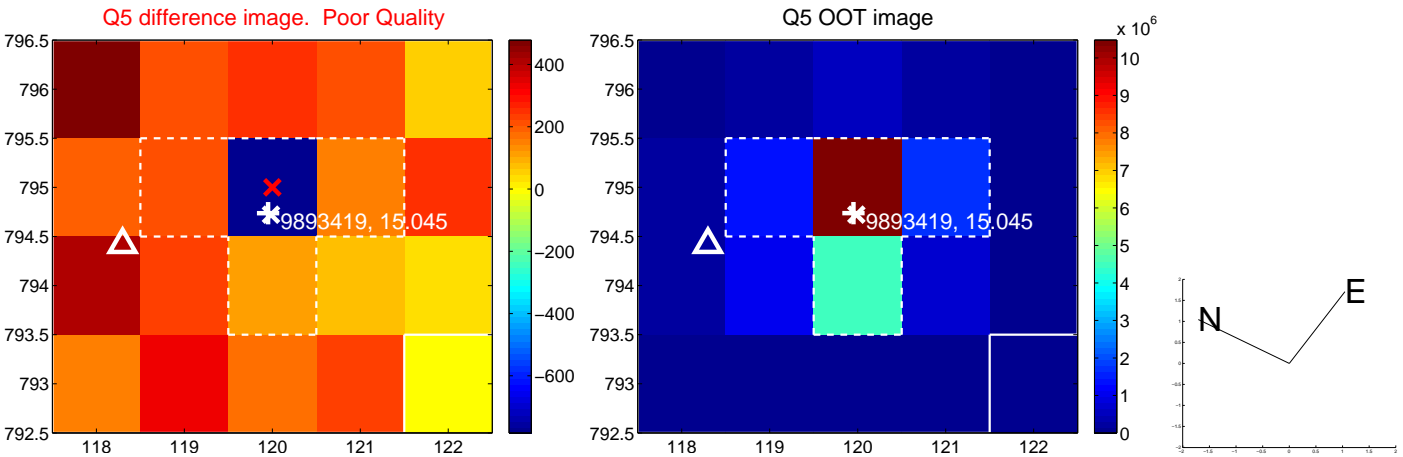


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

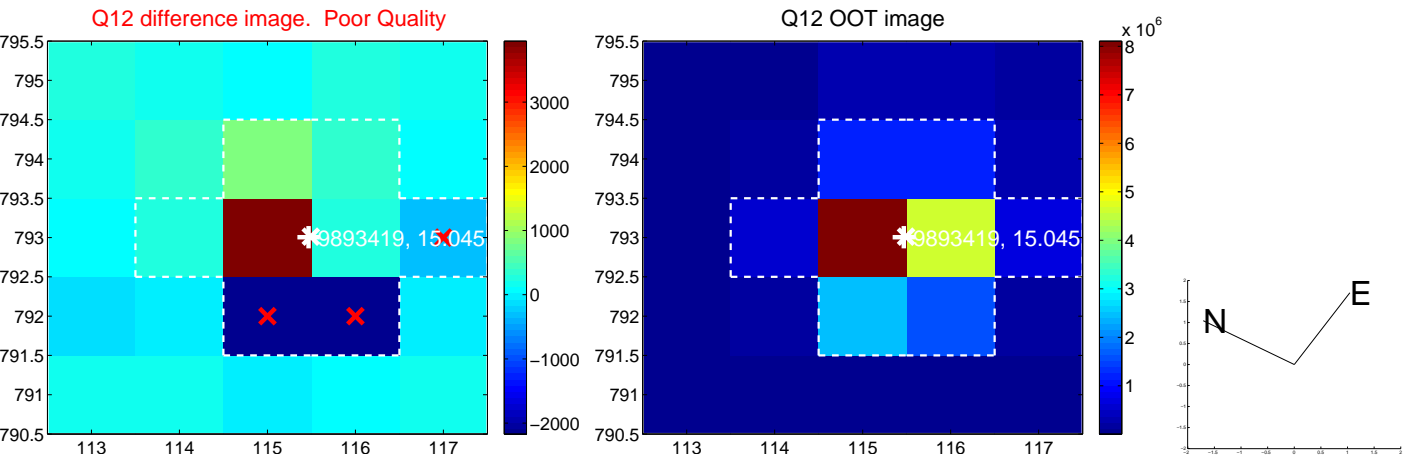
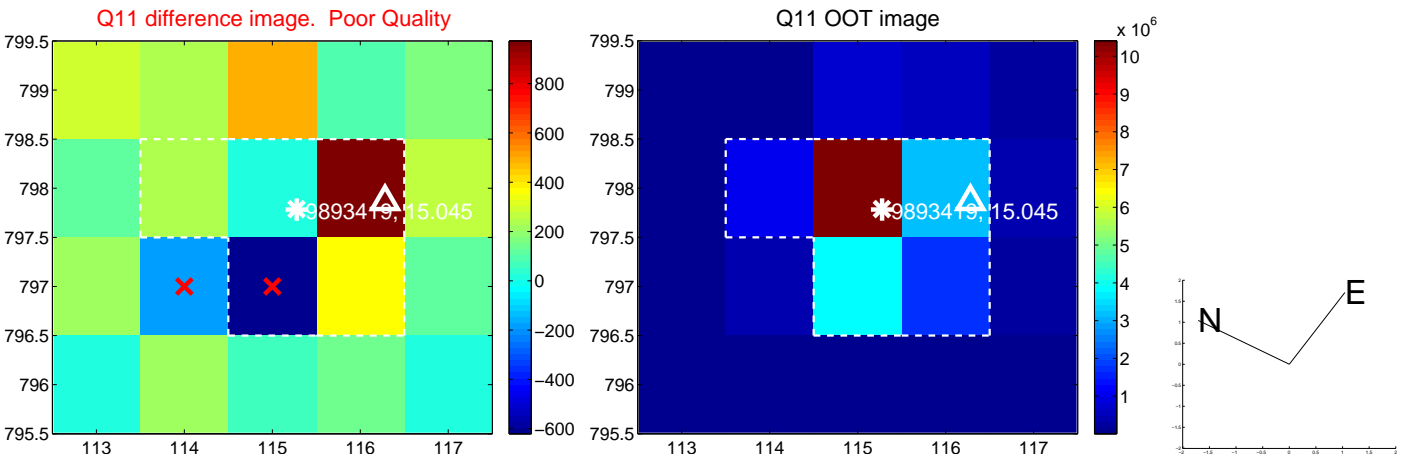
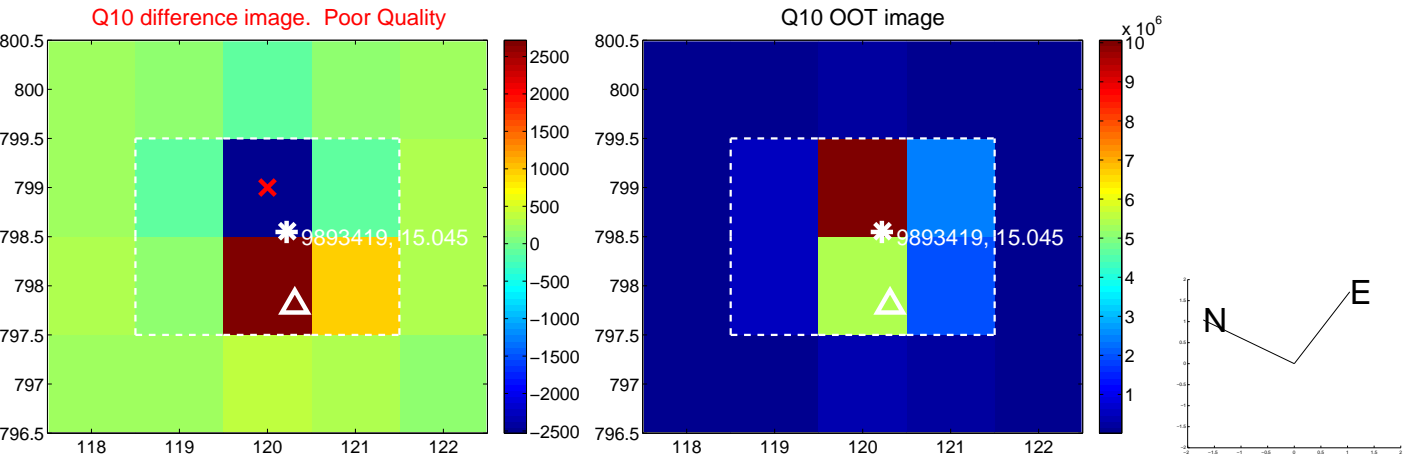
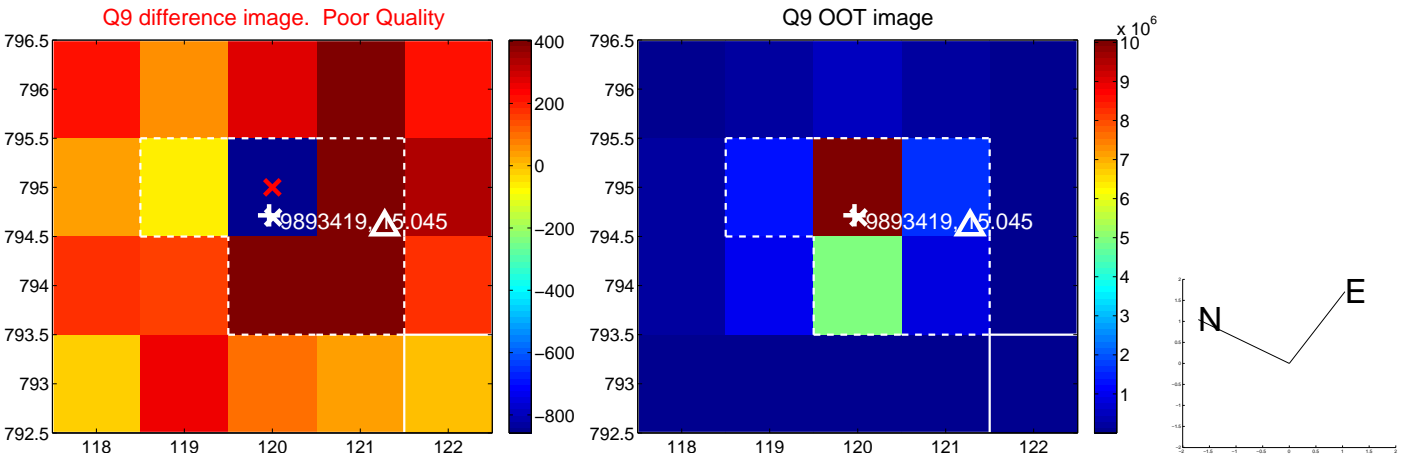
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



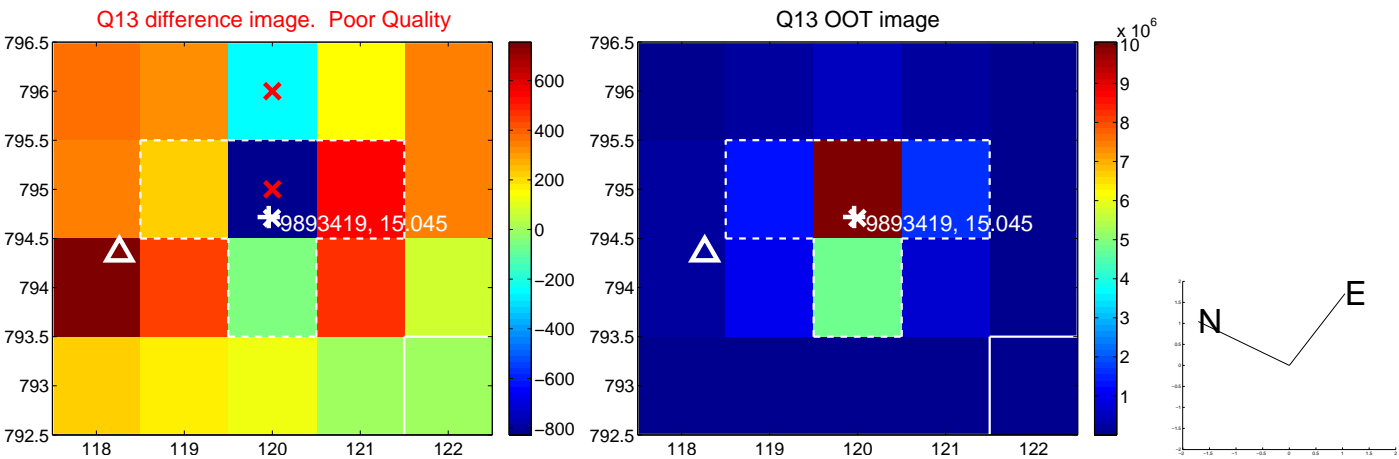
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



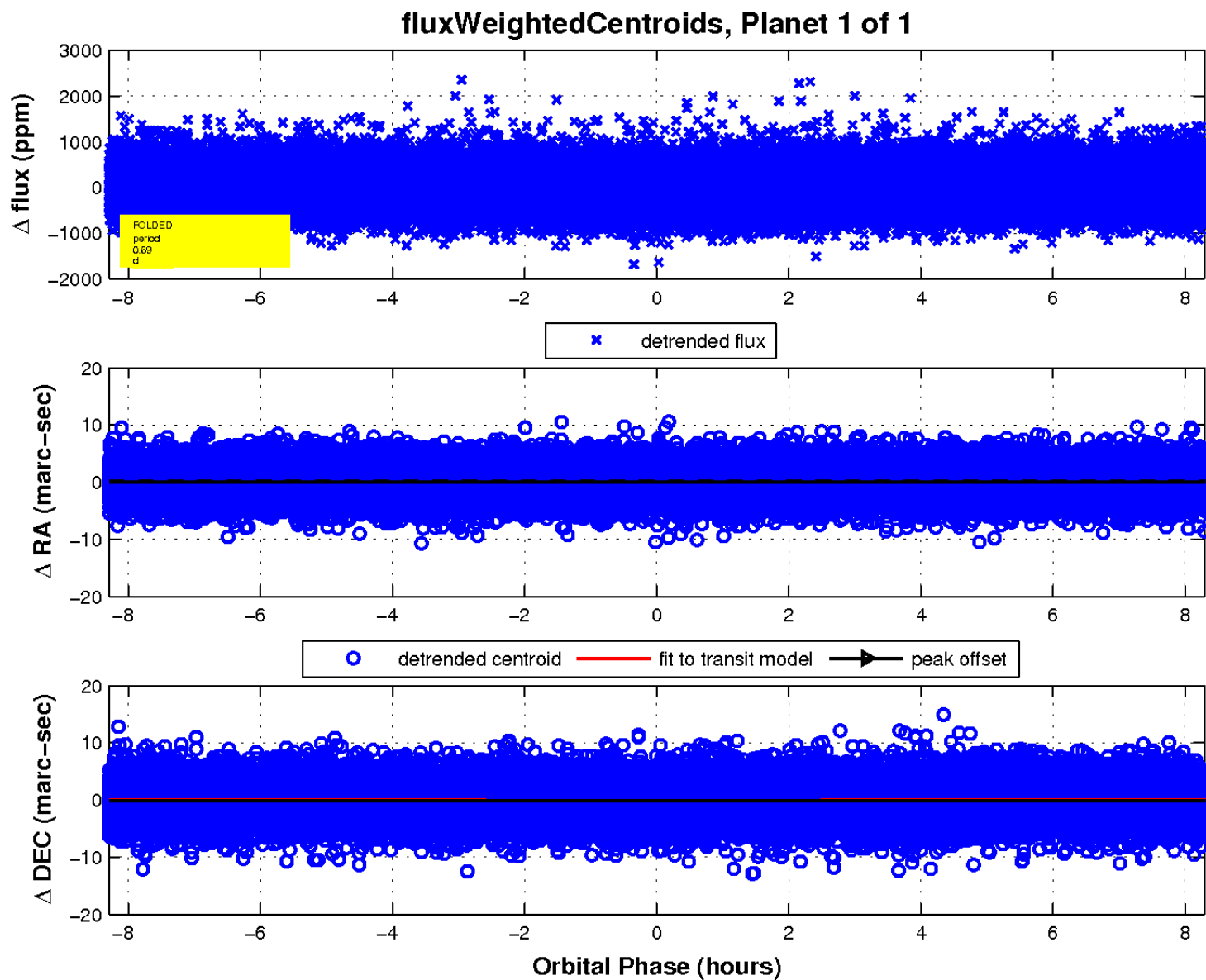
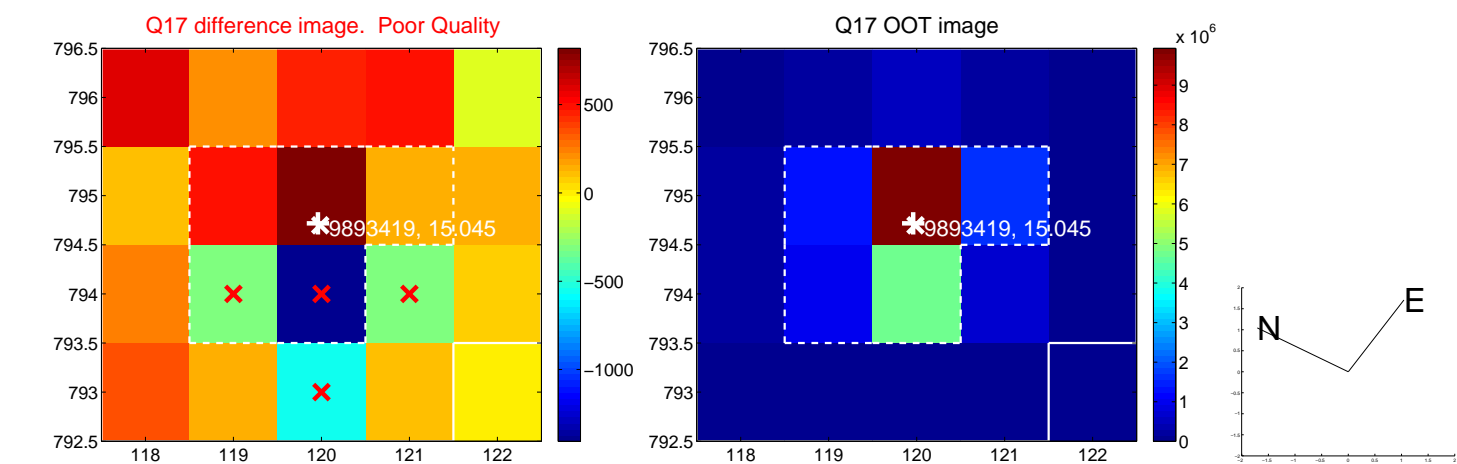
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UKIRT Image

Declination

