

KIC 008973285

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})
008973285-01	OBS	4782.02	4.292476	134.491621	194.5	3.017	8.8	9.5	0.97	6032	1.60	405.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008973285-01	OBS	PC	0.81	0	0	0	0	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.

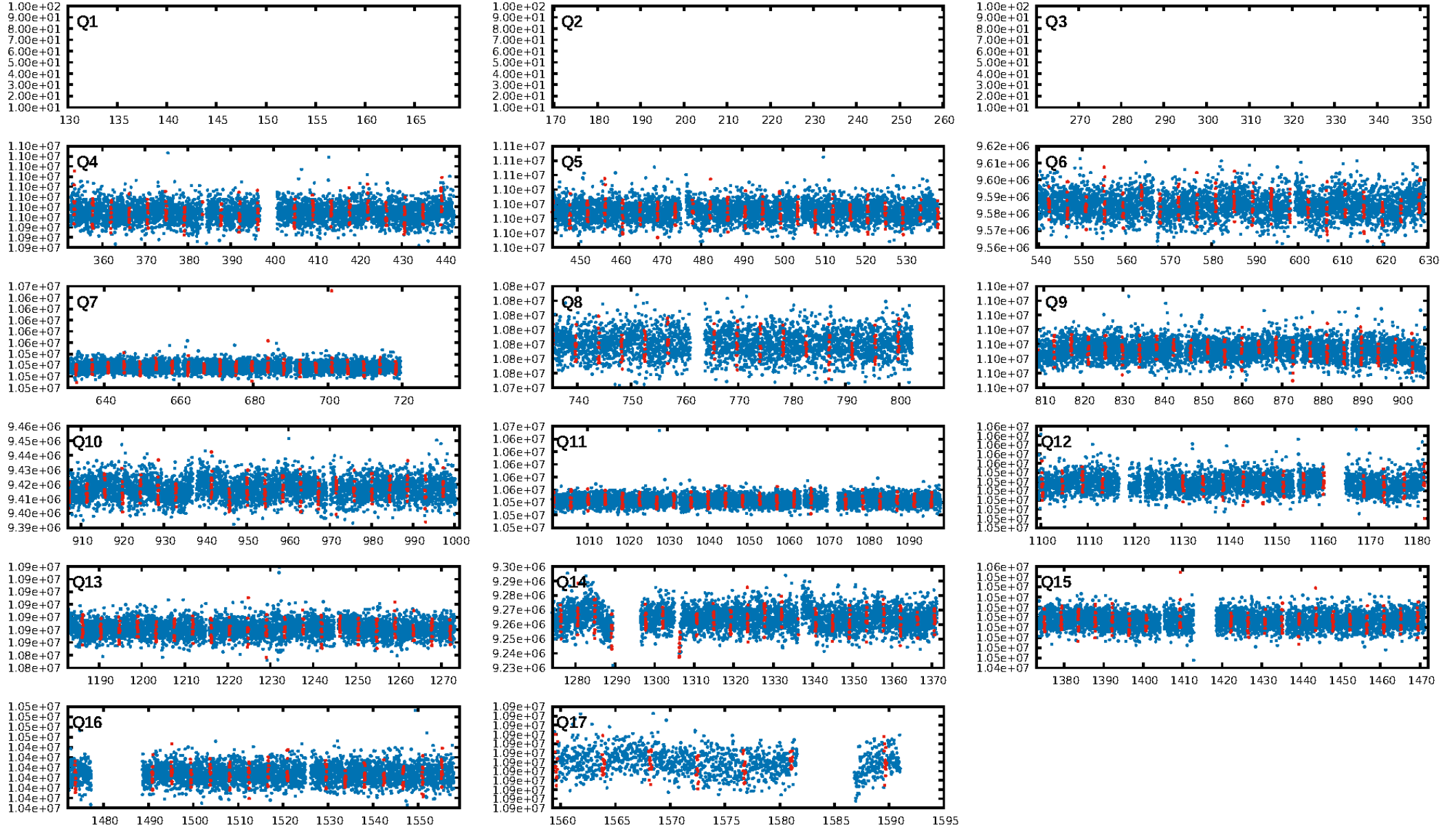
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008973285-01

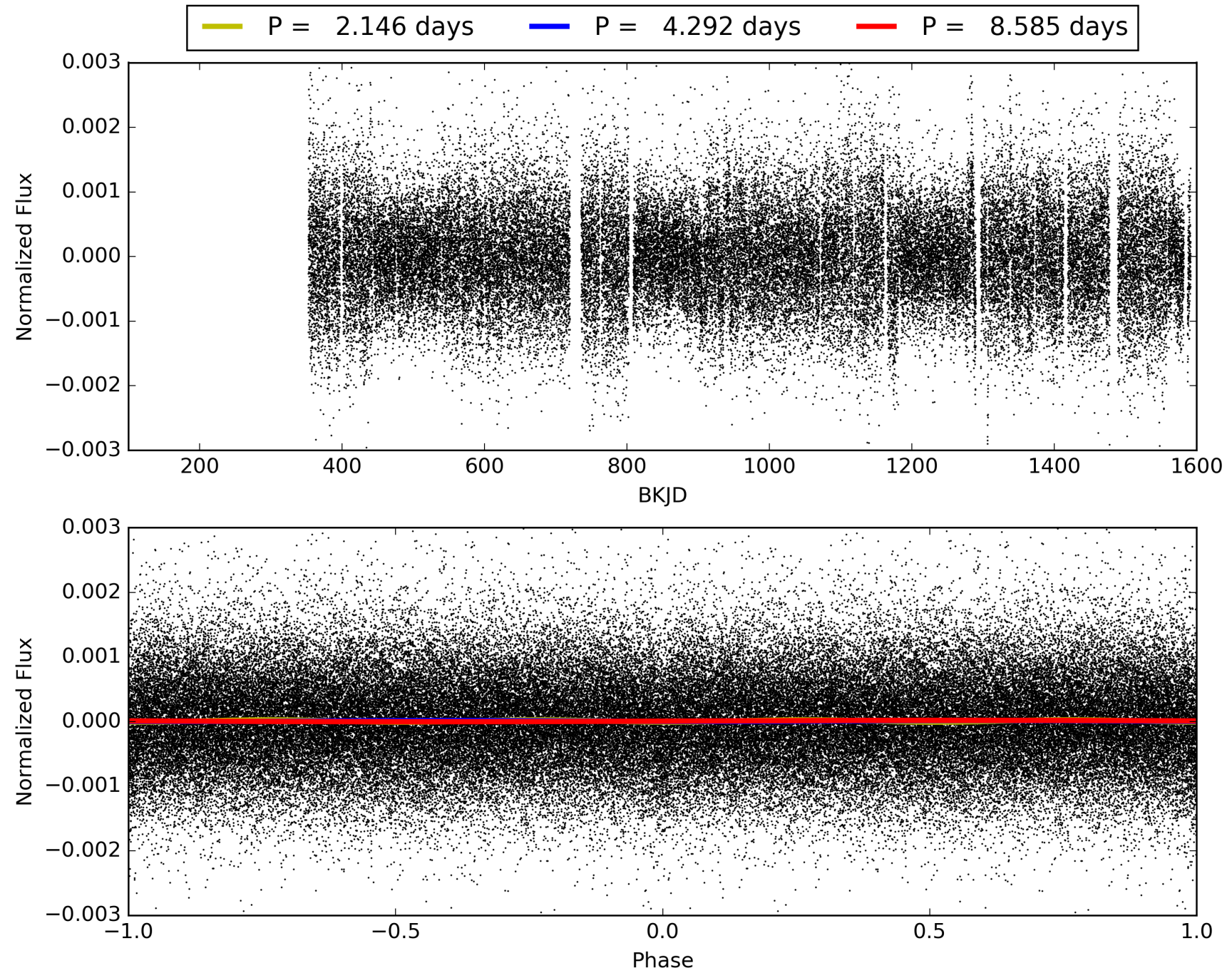
No Significant Match Found

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

TCE 008973285-01, PDC Light Curves

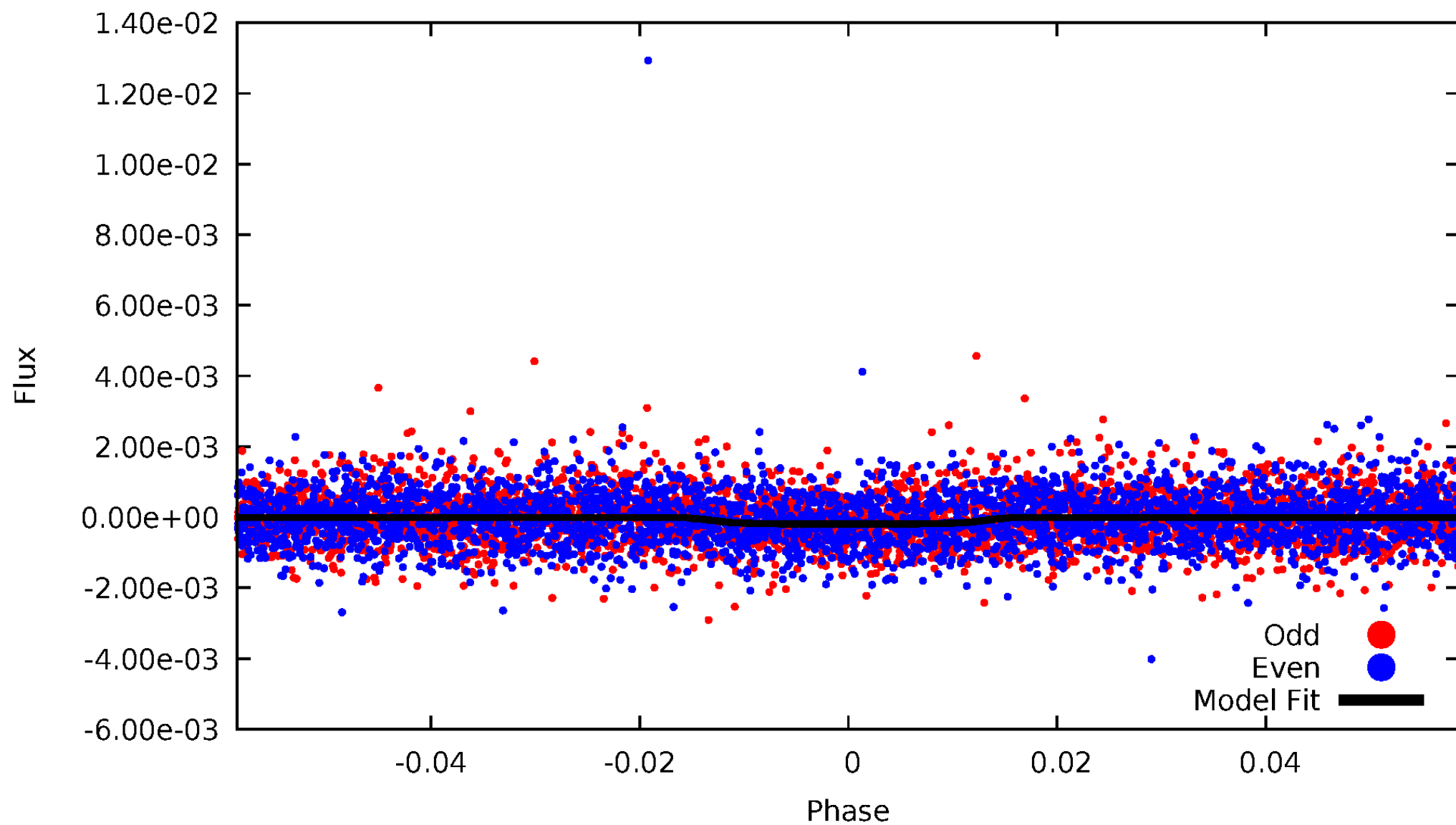


TCE 008973285-01



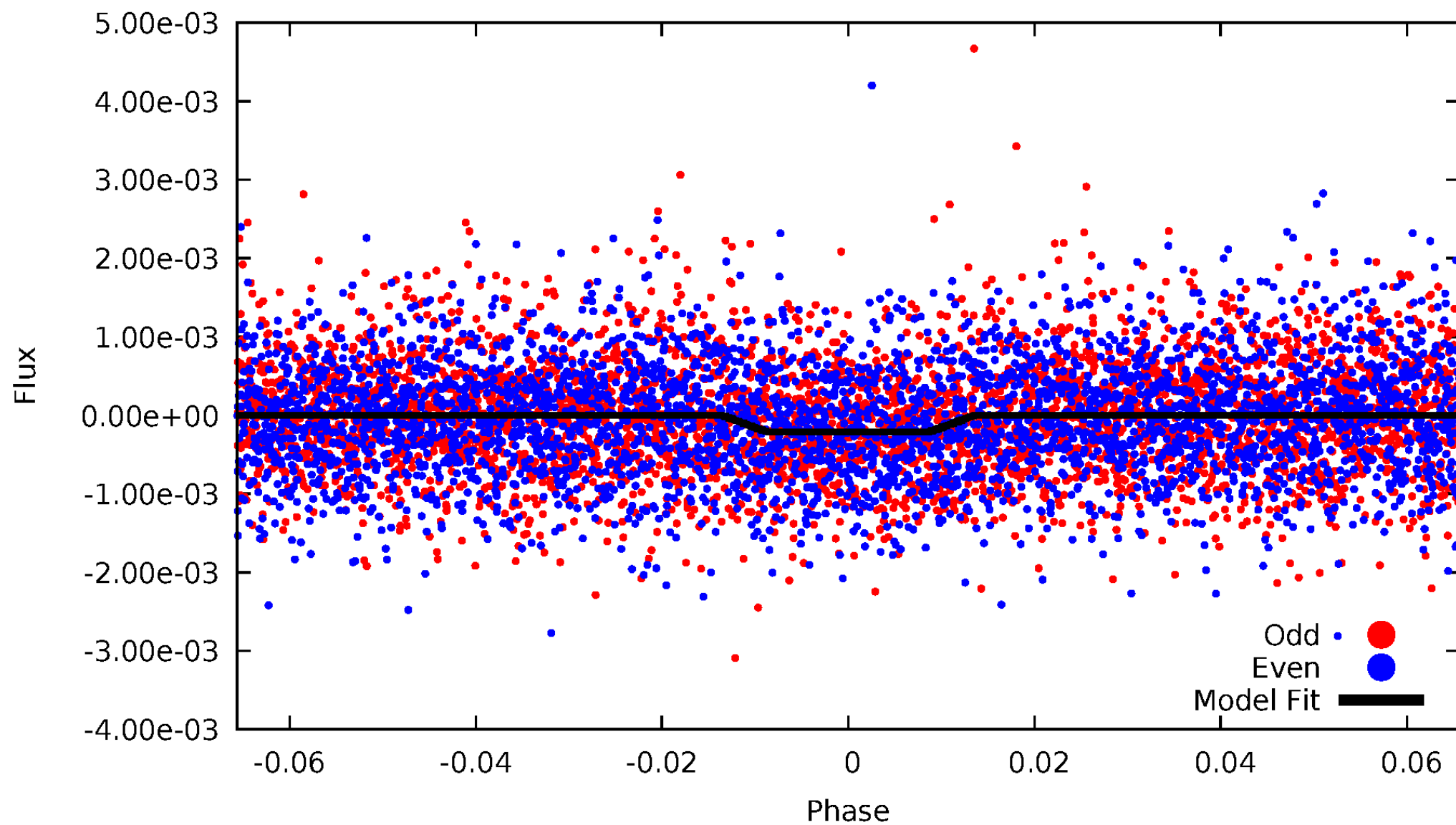
DV Odd/Even

TCE 008973285-01



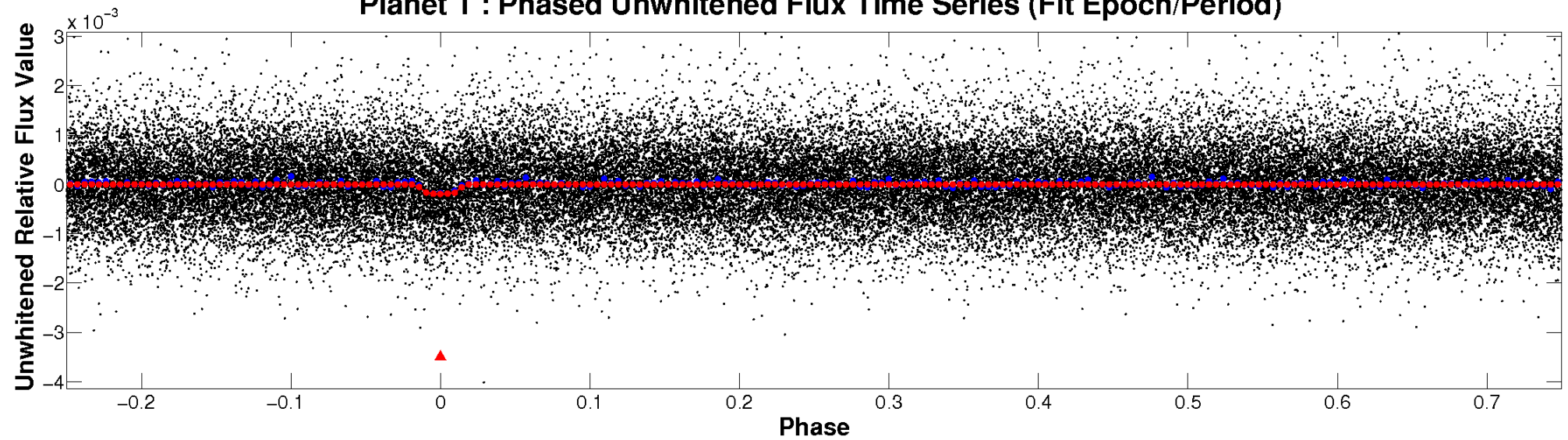
ALT Odd/Even

TCE 008973285-01

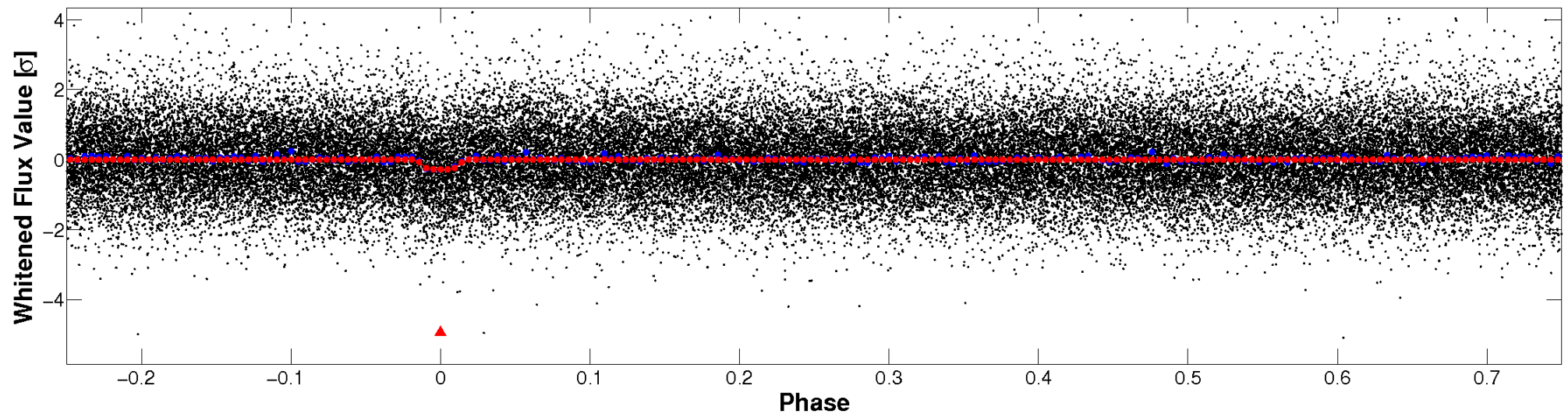


Non-Whitened Vs. Whitened Light Curve

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

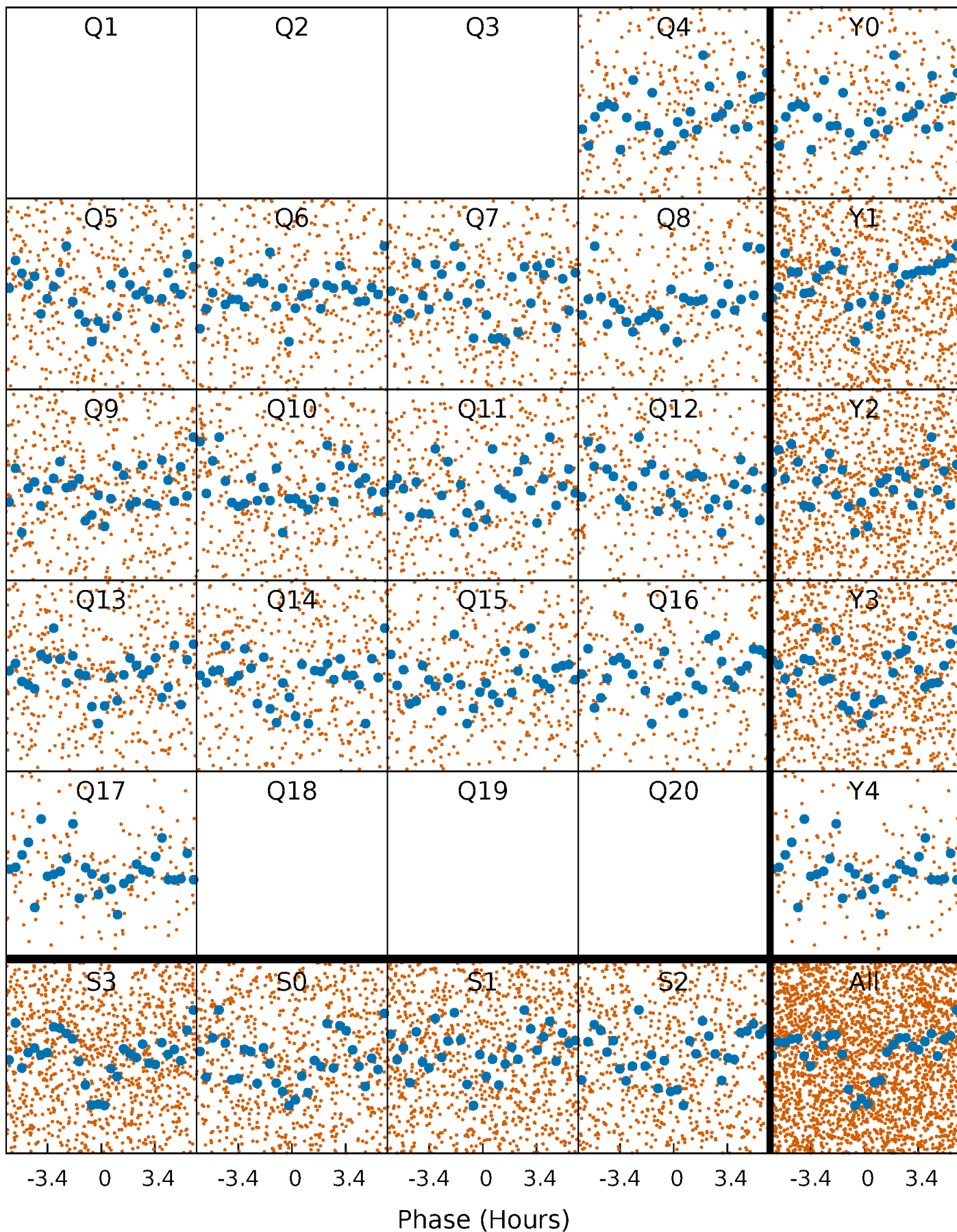


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



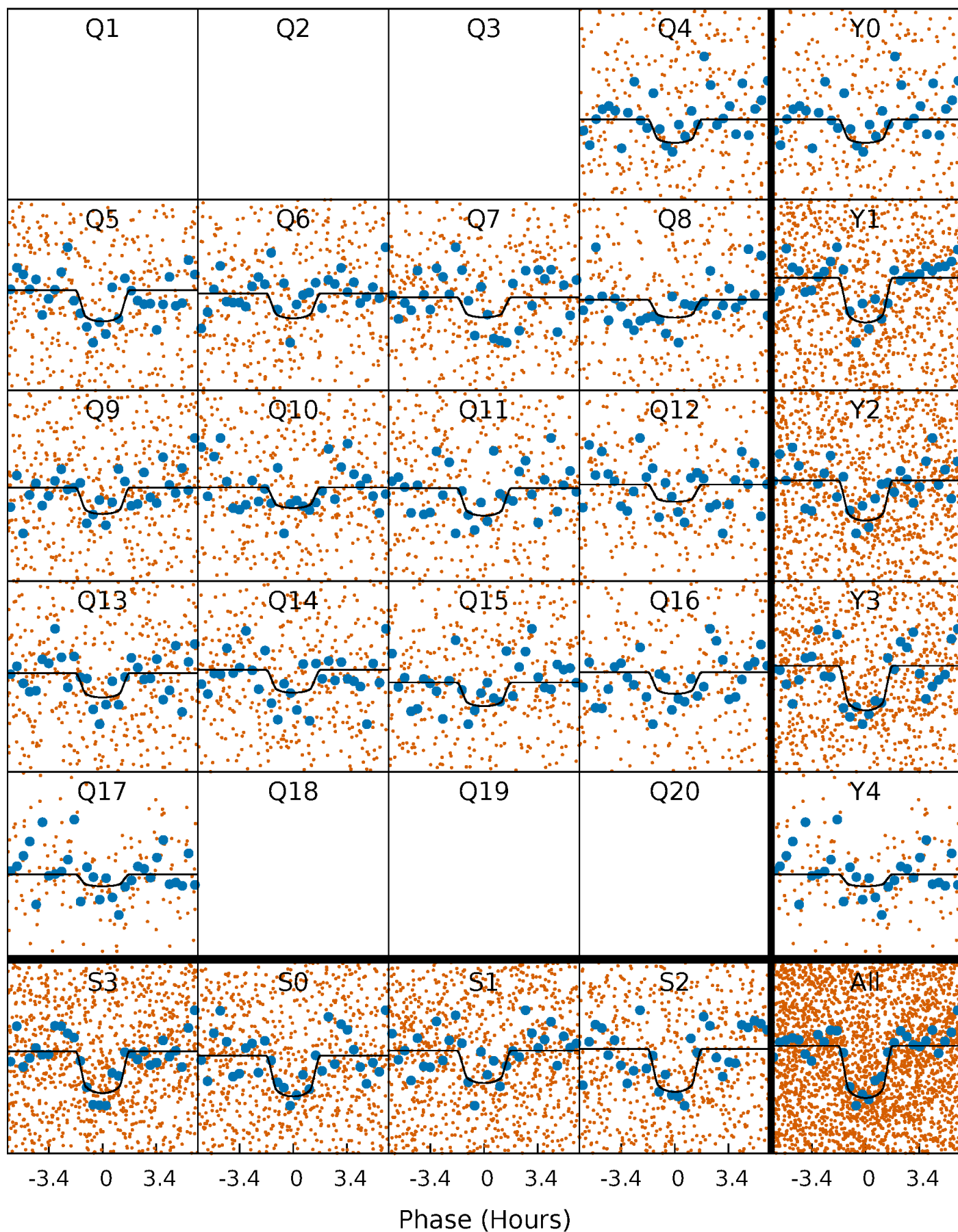
PDC Quarter-Phased Transit Curves

TCE 008973285-01 P= 4.292476 Days $T_0=134.491621$ (BKJD)



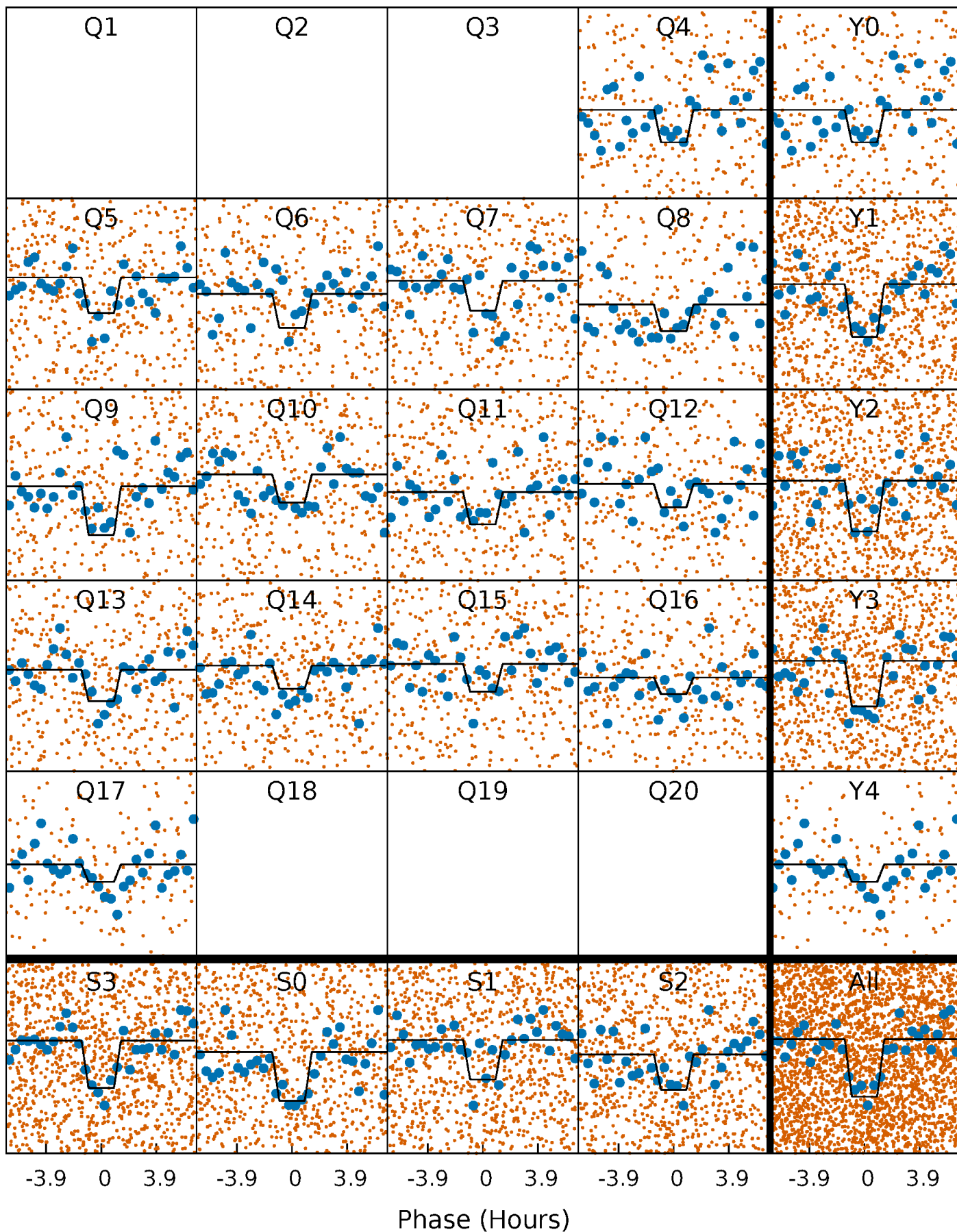
DV Quarter-Phased Transit Curves

TCE 008973285-01 P= 4.292476 Days $T_0=134.491621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

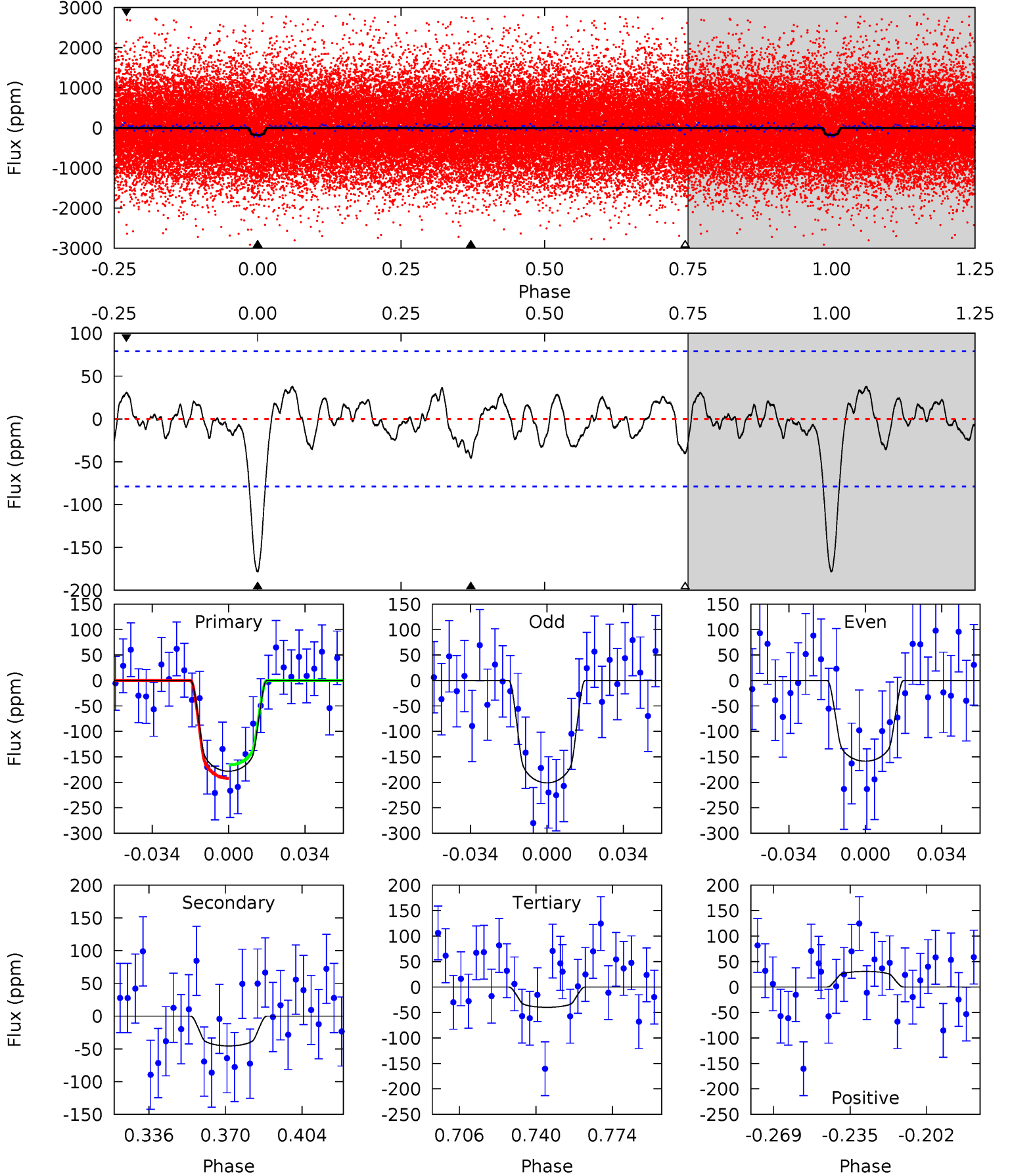
TCE 008973285-01 P= 4.292474 Days $T_0=134.486804$ (BKJD)



DV Model-Shift Uniqueness Test

008973285-01, P = 4.292476 Days, E = 134.491621 Days

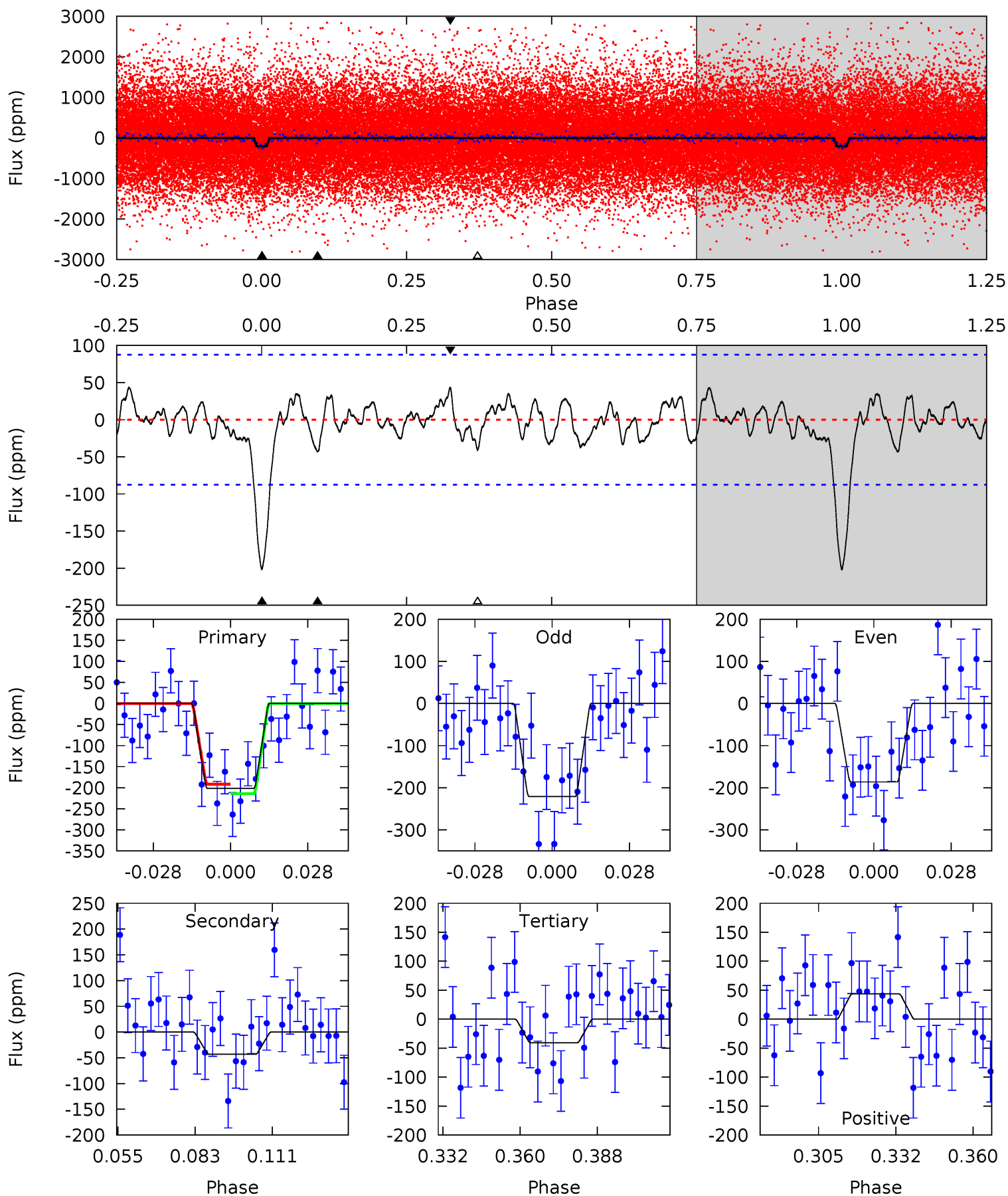
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	2.76	2.42	1.85	4.79	2.12	1.03	8.39	8.95	0.34	0.90	1.29	0.89	0.17	0.80



Alt Model-Shift Uniqueness Test

008973285-01, P = 4.292474 Days, E = 134.486804 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	2.38	2.24	2.41	4.83	2.20	1.00	8.86	8.69	0.14	-0.03	0.95	0.96	0.18	0.62



Stellar Parameters For KIC 008973285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6032^{+189}_{-232}	$4.485^{+0.052}_{-0.208}$	$-0.060^{+0.250}_{-0.300}$	$0.973^{+0.300}_{-0.100}$	$1.055^{+0.139}_{-0.153}$	$1.612^{+0.443}_{-0.872}$
	+3%/-4%	+1%/-5%	+417%/-500%	+31%/-10%	+13%/-15%	+27%/-54%
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 008973285-01 / KOI 4782.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-45 ± 16	$1.76^{+0.98}_{-0.93}$	1633^{+122}_{-83}	4152^{+1483}_{-649}	21^{+68}_{-12}
Alt.	-43 ± 18	$1.68^{+1.02}_{-0.92}$	1638^{+113}_{-88}	4162^{+1681}_{-694}	22^{+88}_{-15}

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 $A_{obs} \gg 1.0$

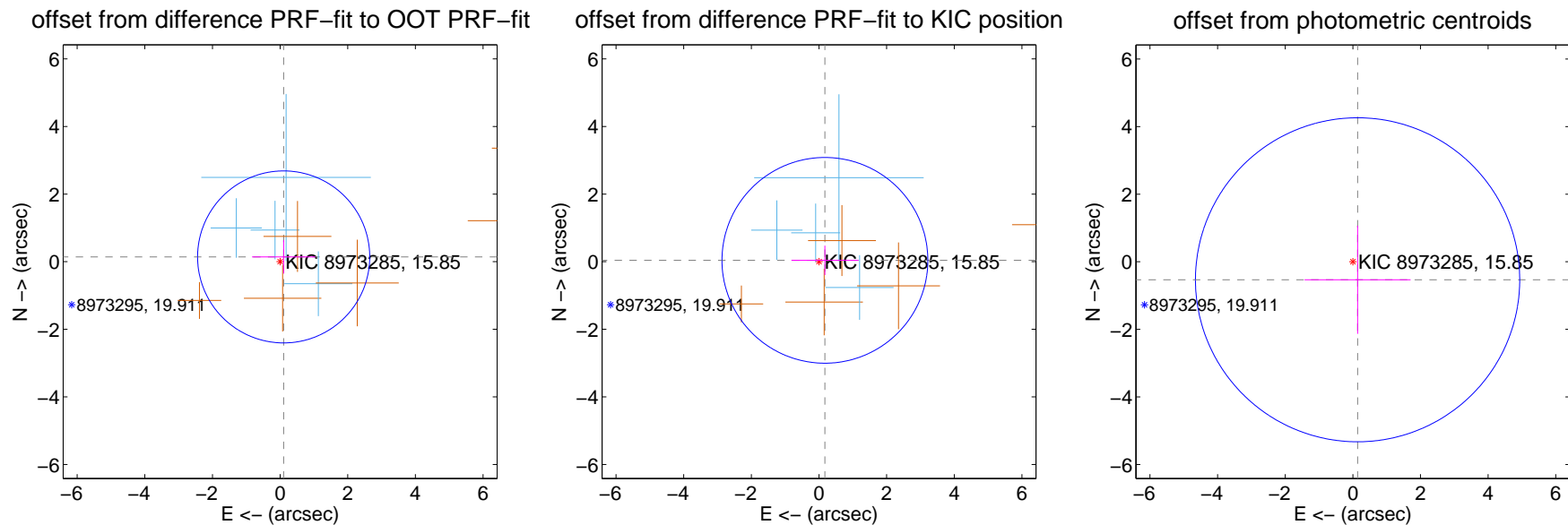
DV Centroid Data

Supplemental centroid analysis for 008973285-01. Kepler magnitude: 15.85. Transit SNR 9.46

There are 4 quarters with good PRF difference image offsets

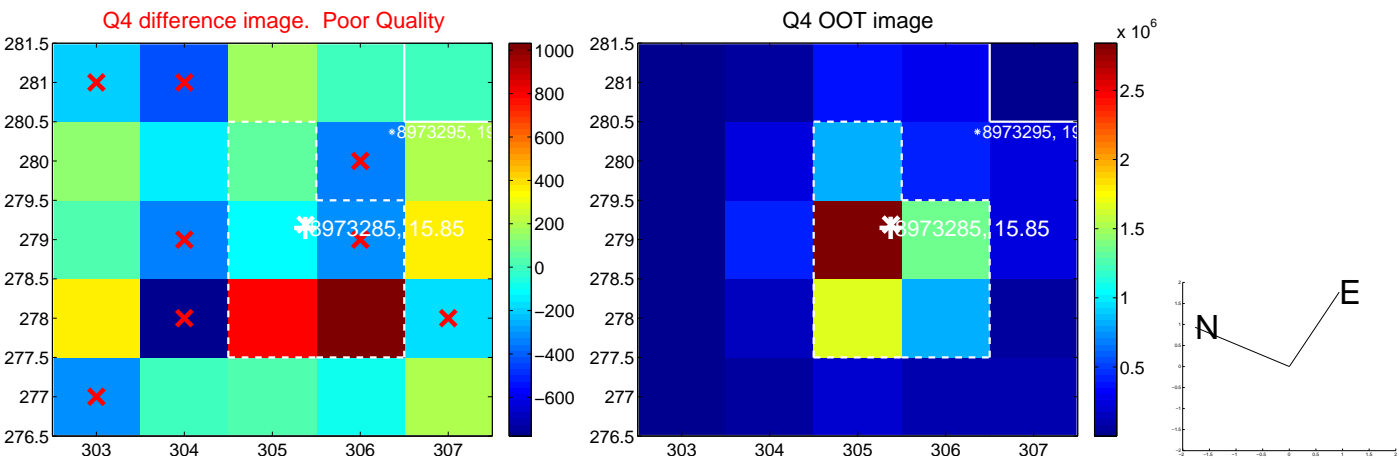
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.176 ± 0.848	0.21	-0.105 ± 0.937	0.141 ± 0.495
PRF-fit source offset from KIC position	0.180 ± 1.015	0.18	-0.175 ± 0.991	0.040 ± 0.436
photometric centroid source offset	0.55 ± 1.60	0.34	-0.14 ± 1.57	-0.53 ± 1.60

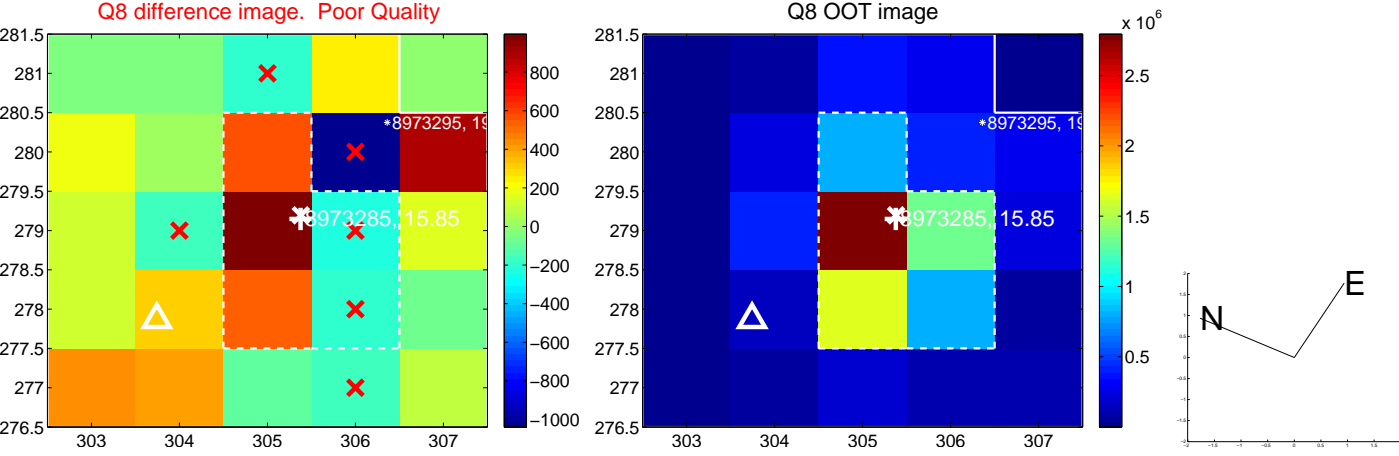
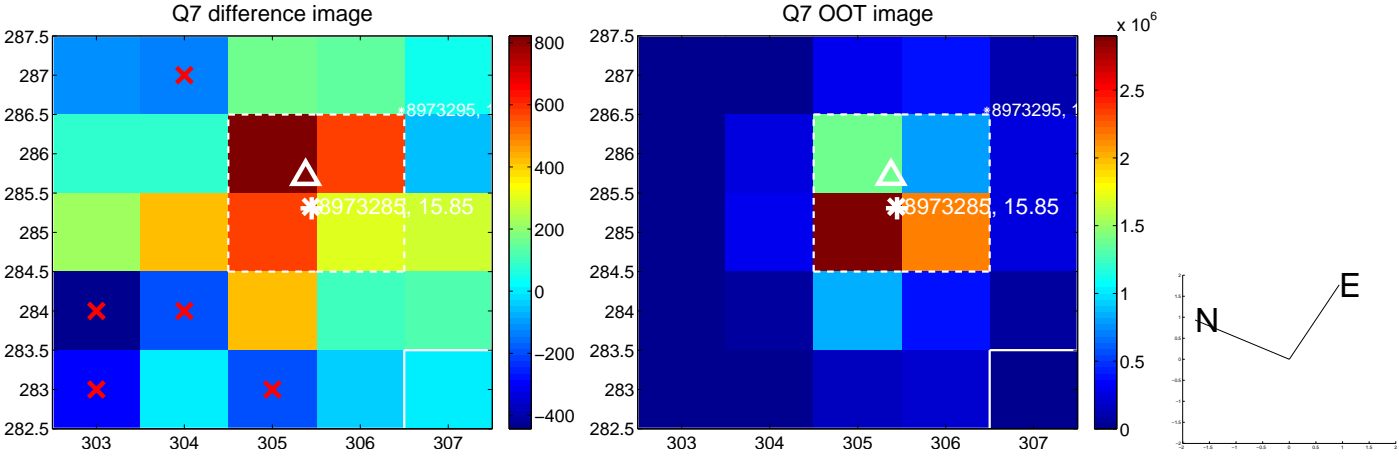
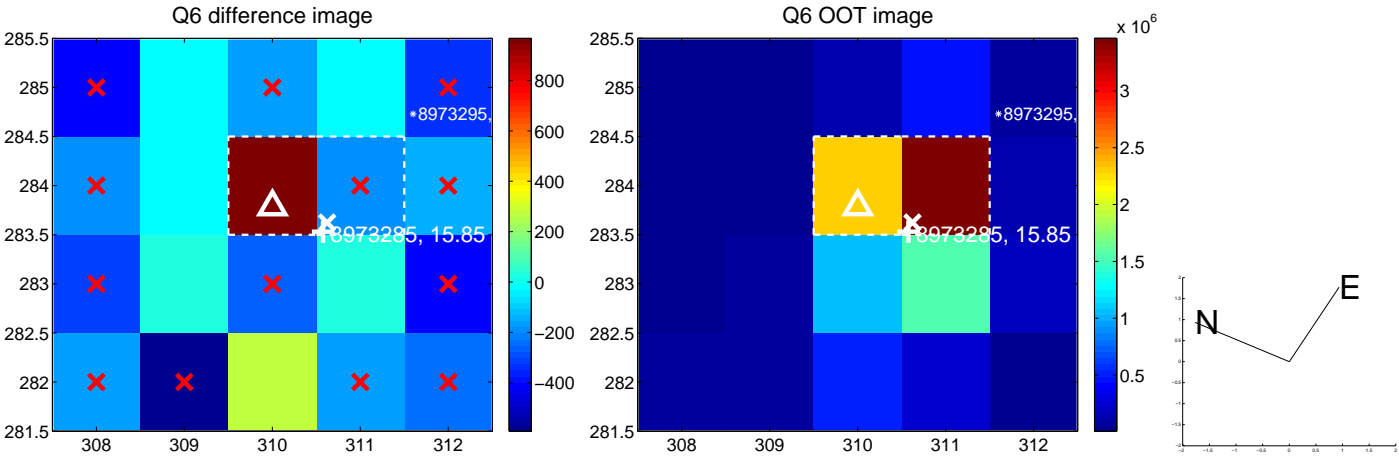
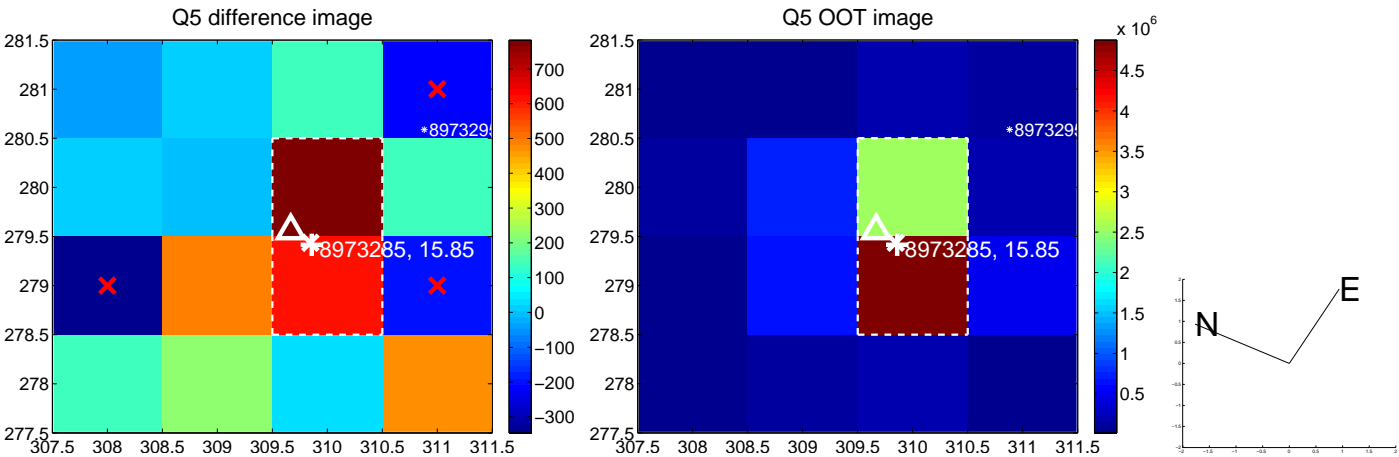


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

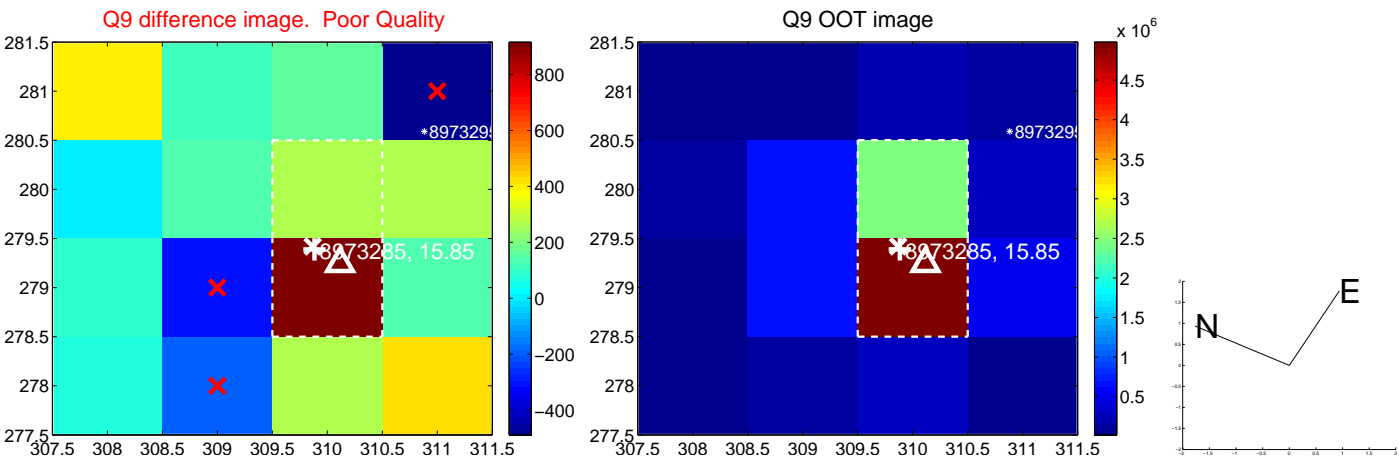
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



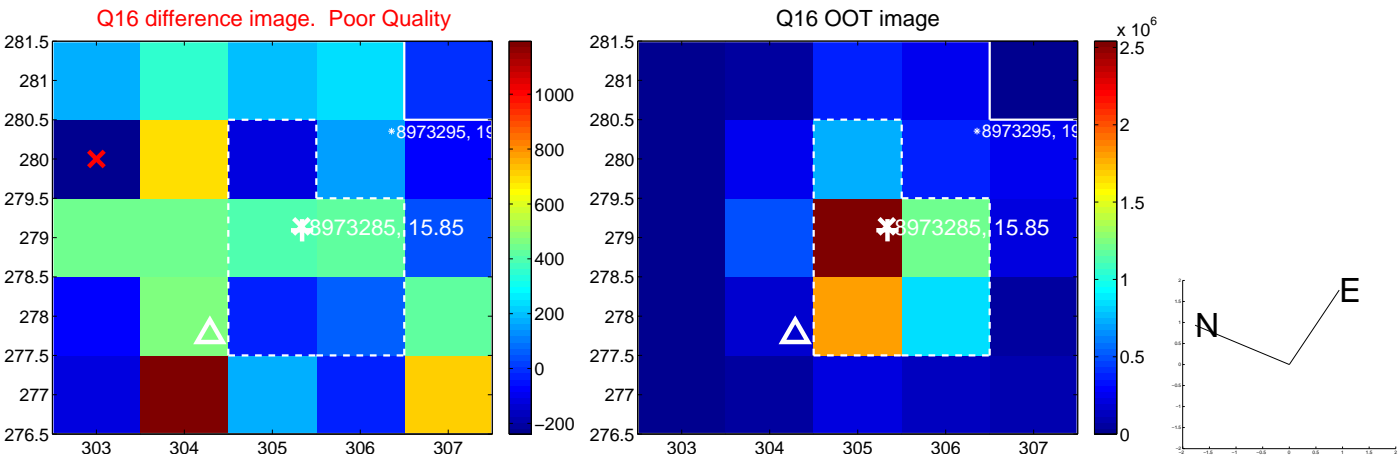
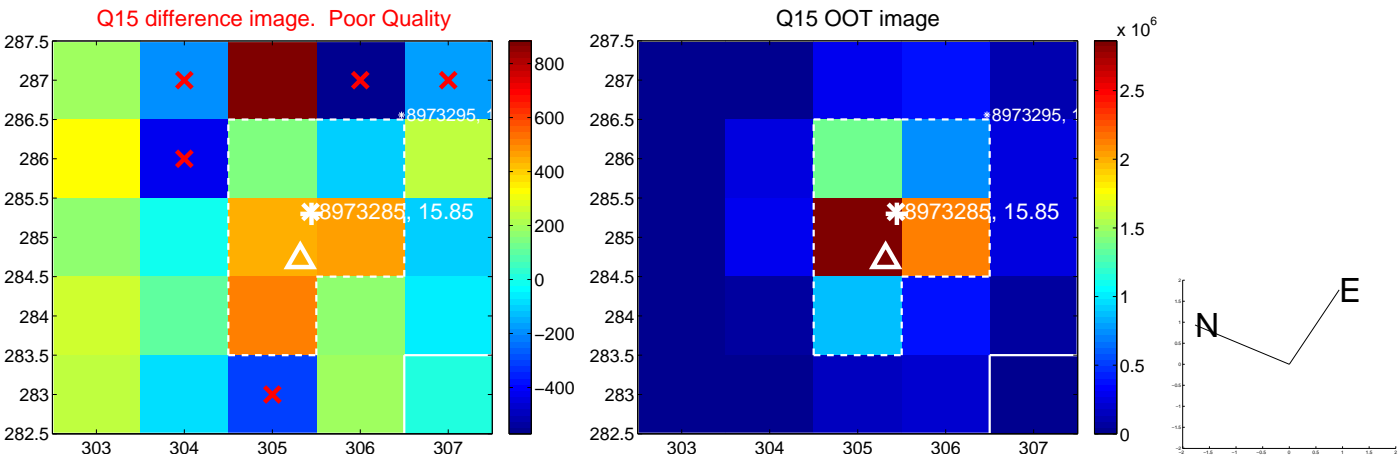
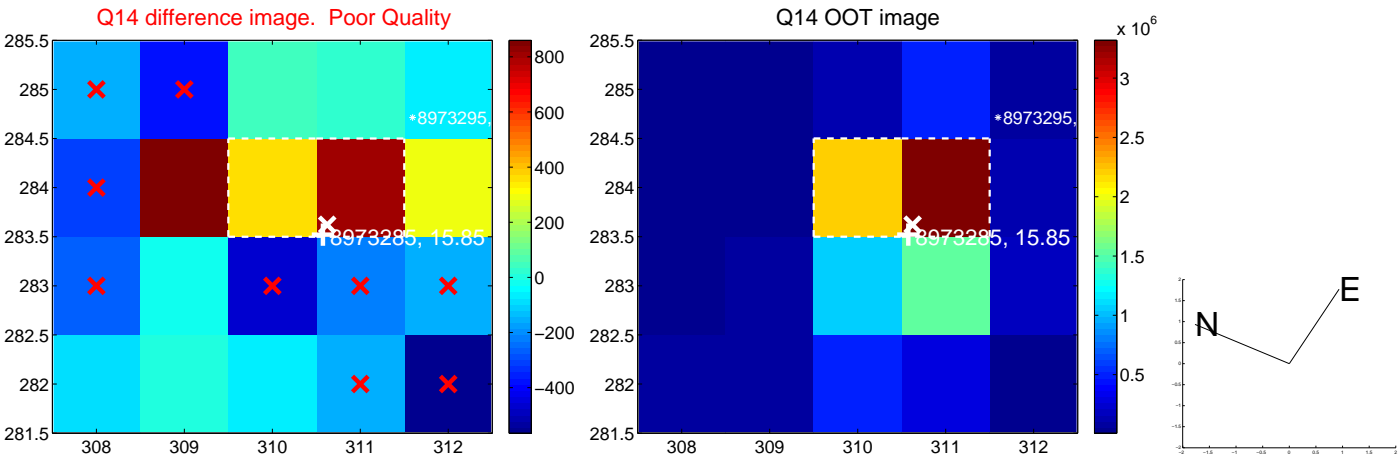
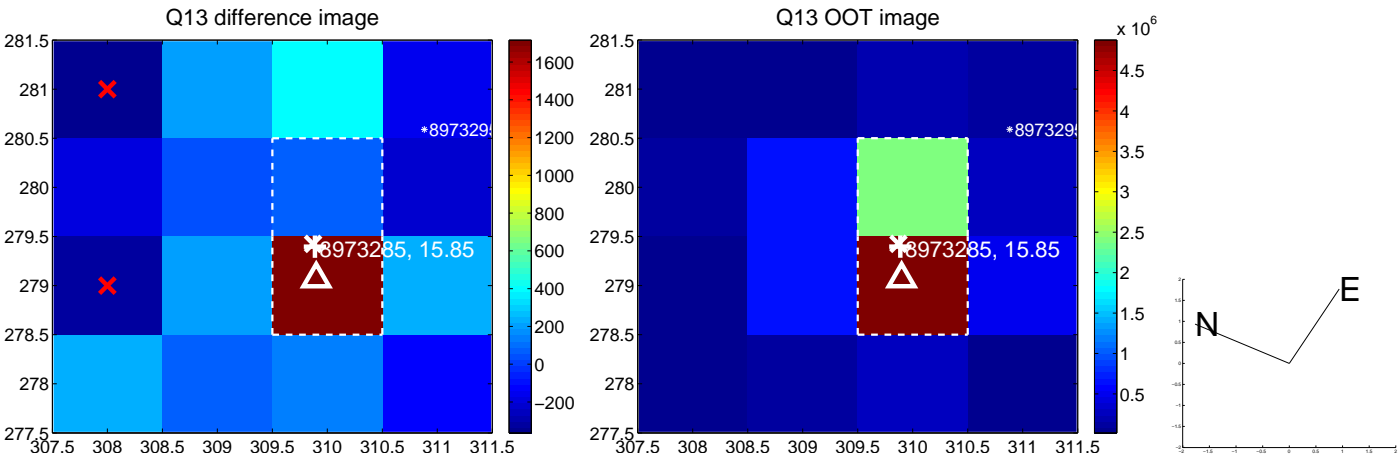
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



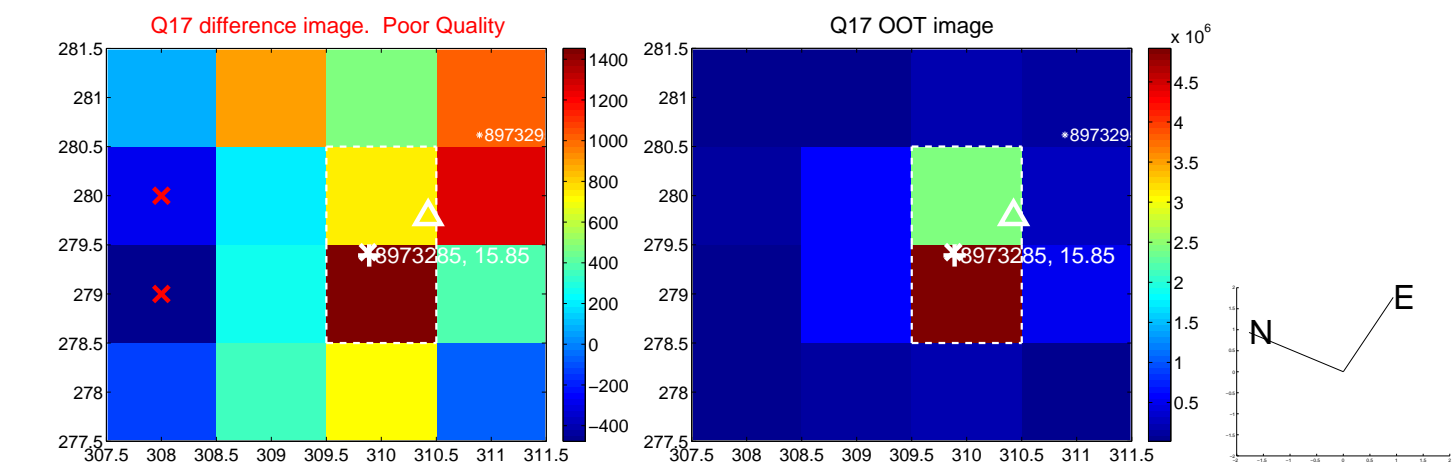
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



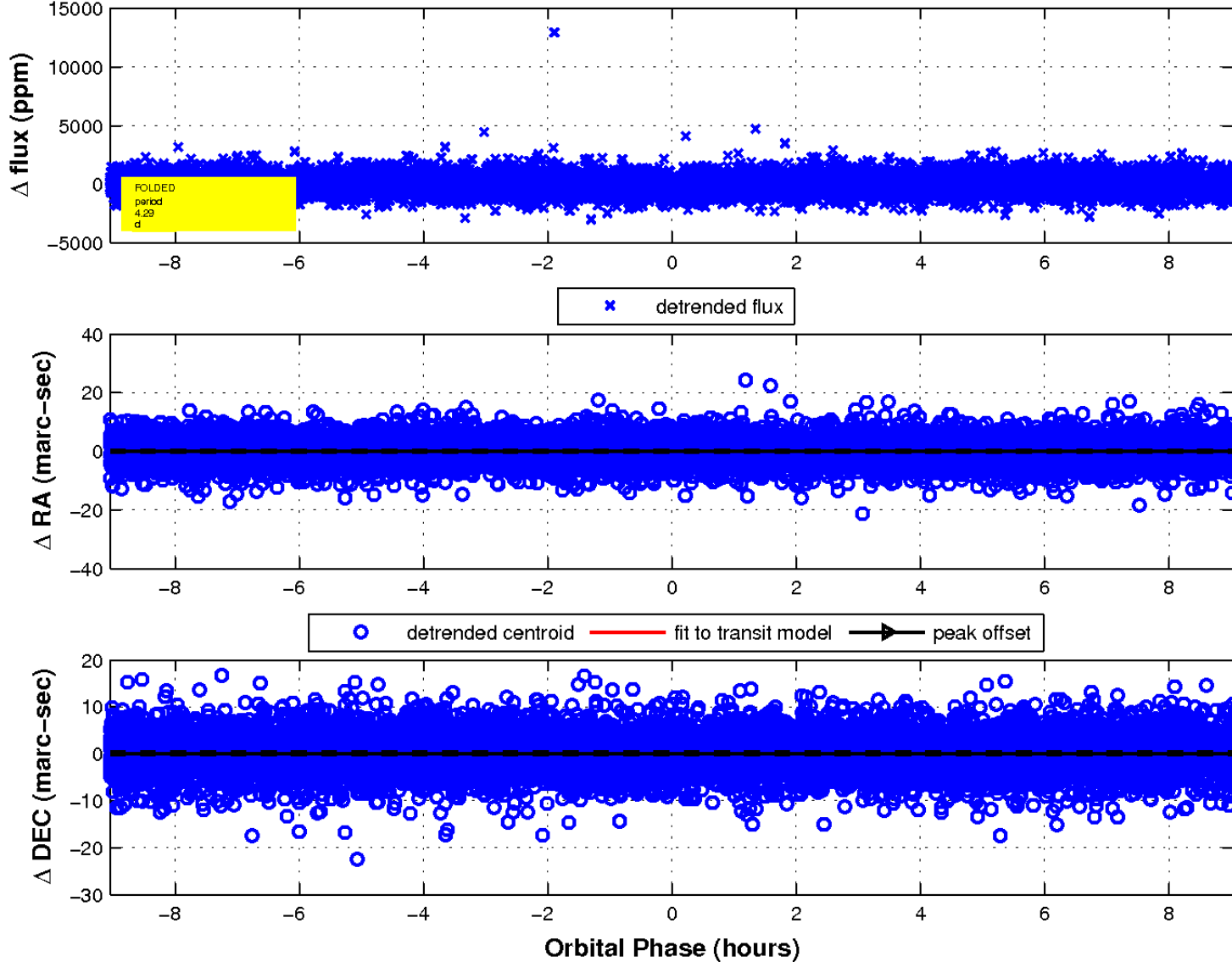
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

