

KIC 004273285

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})
004273285-01	OBS	No	380.904597	423.431339	314.2	9.217	8.5	8.8	1.30	6367	2.46	2.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004273285-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—INCONSISTENT_TRANS—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.

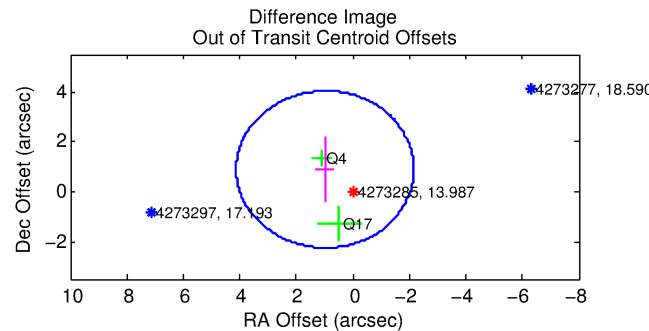
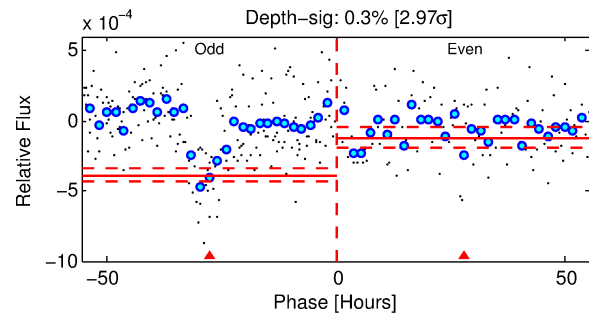
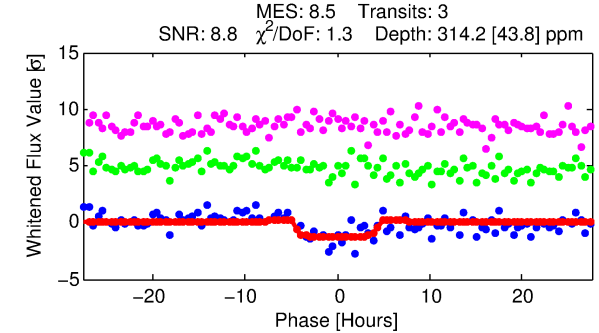
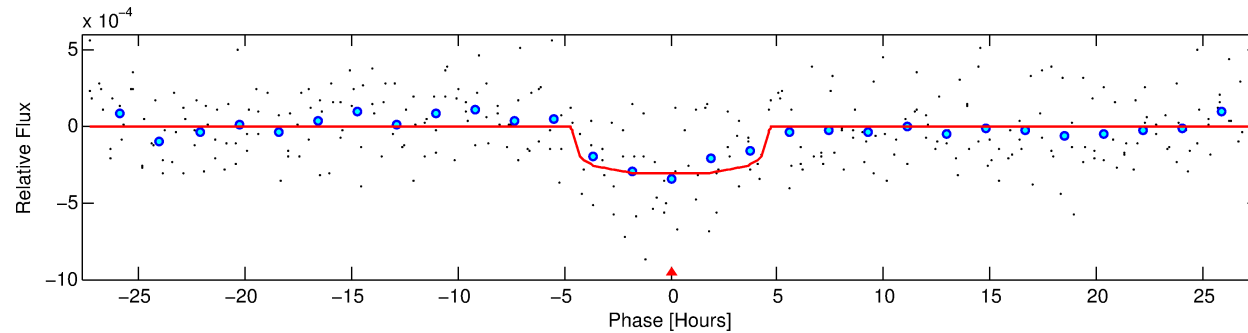
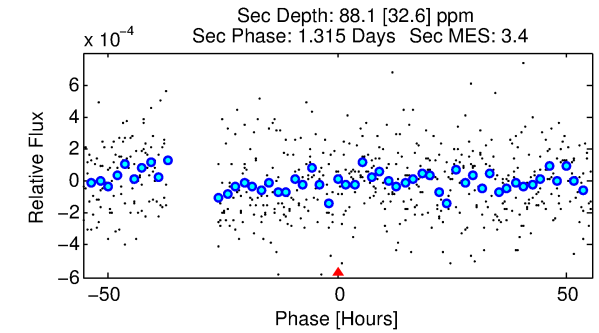
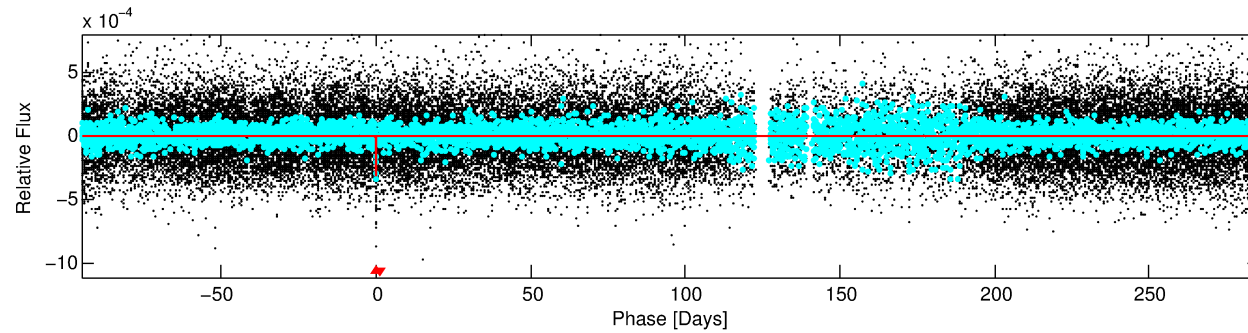
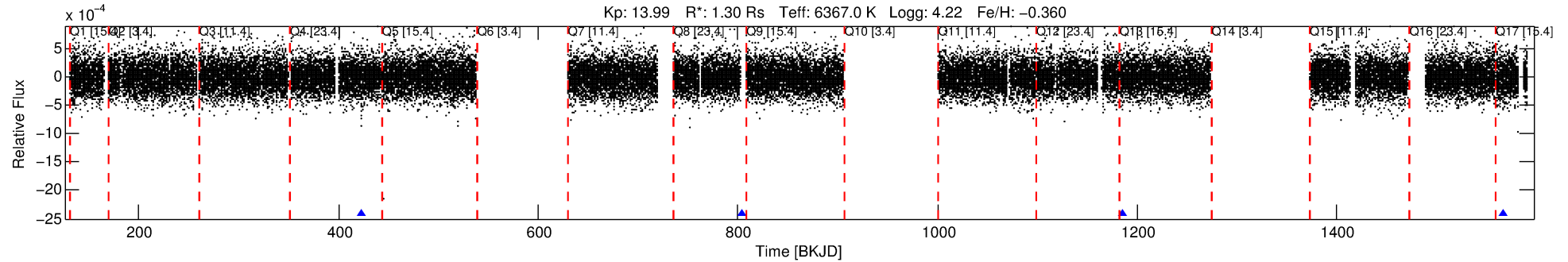
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004273285-01

No Significant Match Found

DV One-Page Summary

KIC: 4273285 Candidate: 1 of 1 Period: 380.905 d



DV Fit Results:

Period = 380.90460 [0.00949] d
Epoch = 423.4313 [0.0183] BKJD
Rp/R* = 0.0174 [0.0093]
a/R* = 234.28 [668.63]
b = 0.70 [2.12]
Seff = 2.30 [0.60]
Teq = 314 [20] K
Rp = 2.46 [1.38] Re
a = 1.0393 [0.1663] AU
Ag = 8650.36 [10071.86] [0.86σ]
Teffp = 4680 [1331] K [3.28σ]

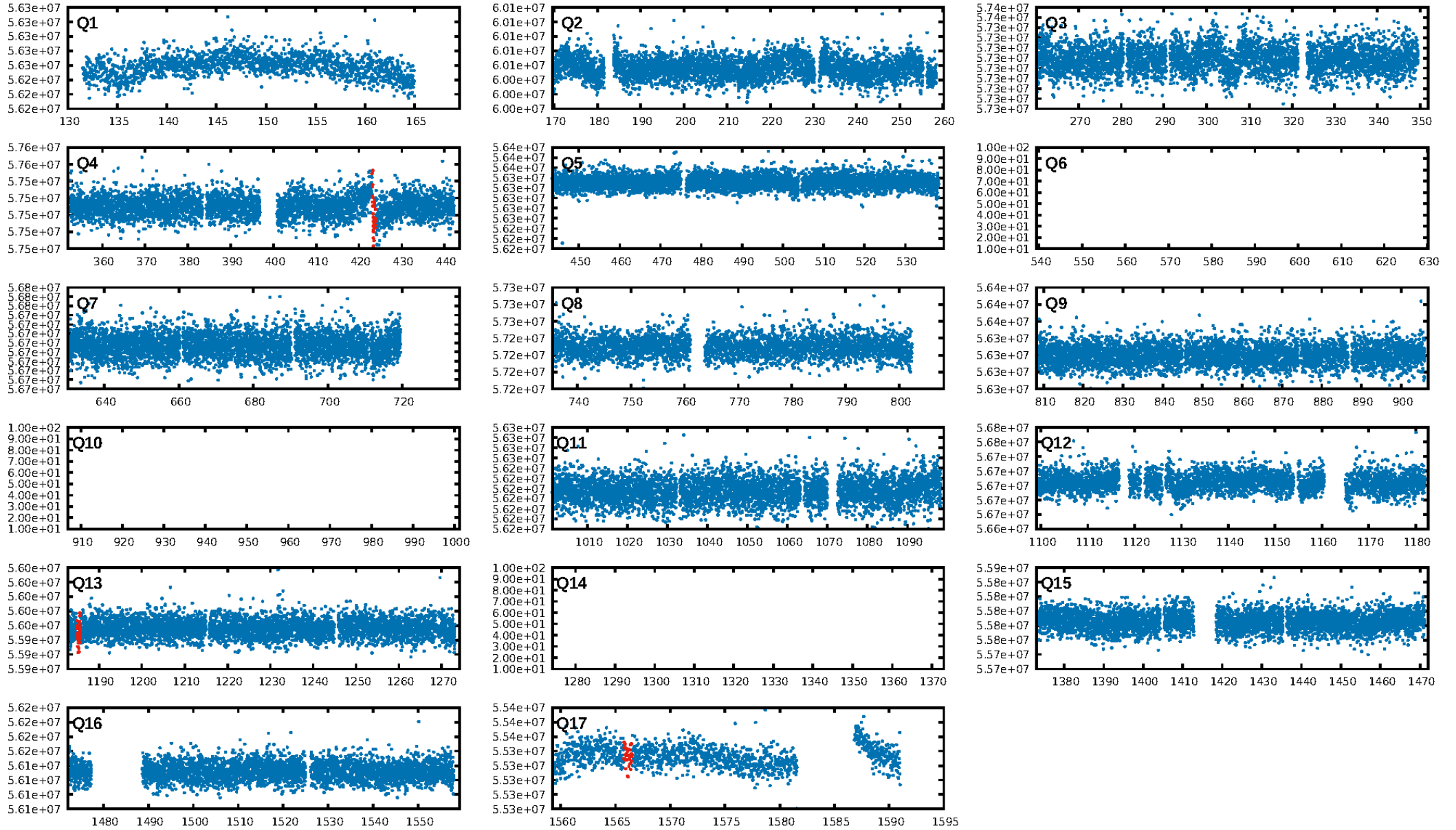
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 65.7%
Bootstrap-pfa: 4.01e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.652
Centroid-sig: 50.2%
Centroid-so: 1.032 arcsec [0.65σ]
OotOffset-rm: 1.329 arcsec [1.27σ]
KicOffset-rm: 1.309 arcsec [1.60σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

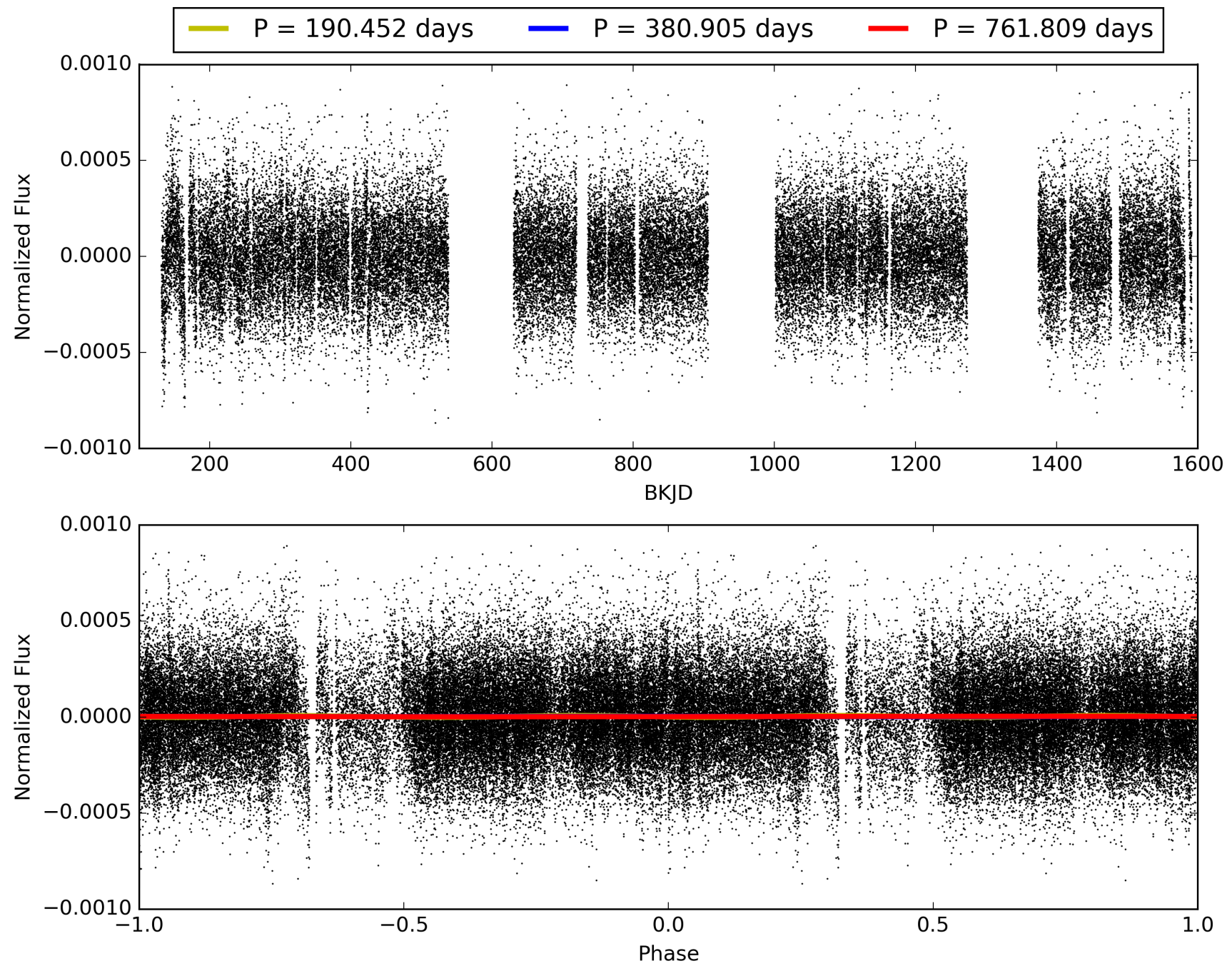
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:21:28 Z

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

TCE 004273285-01, PDC Light Curves

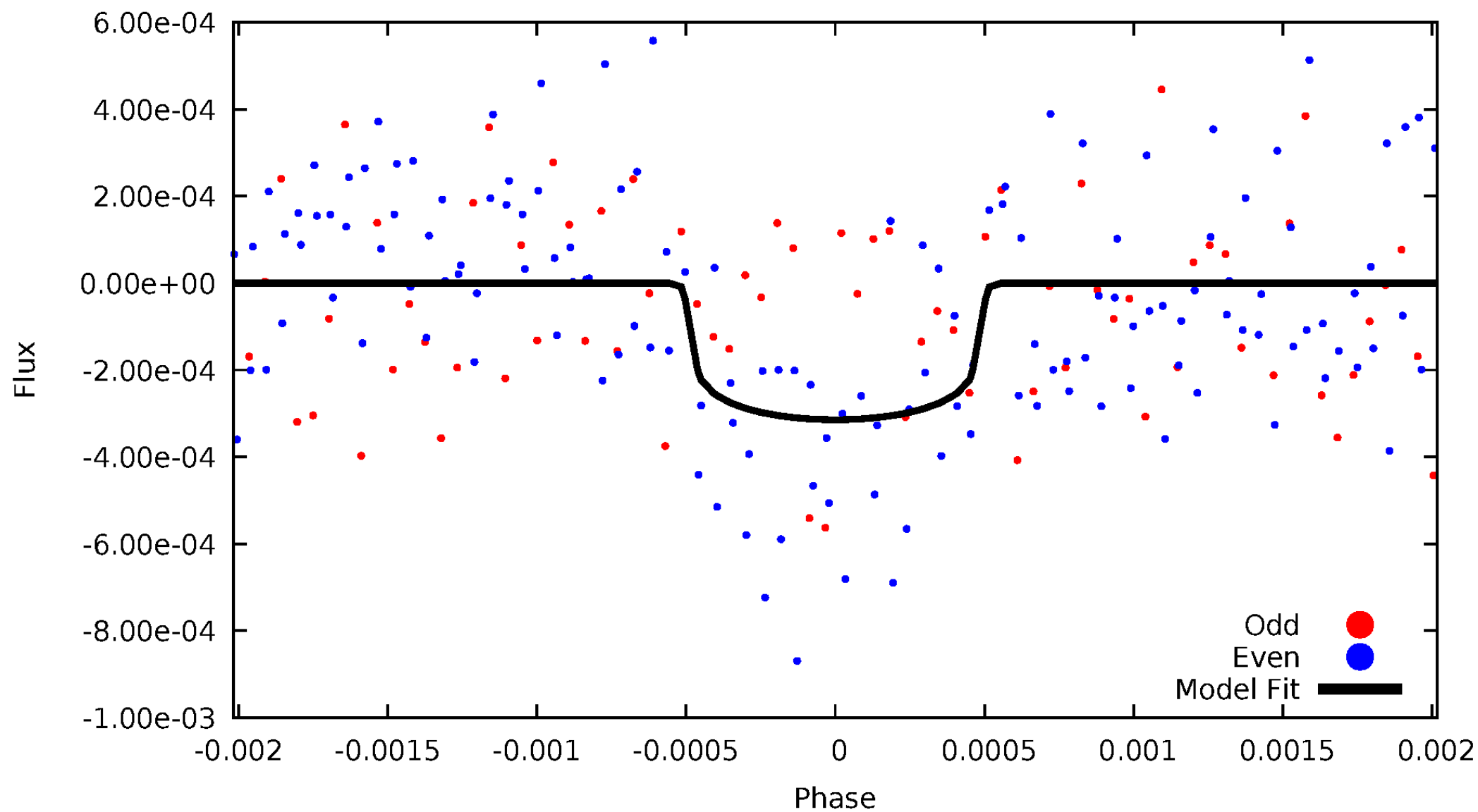


TCE 004273285-01



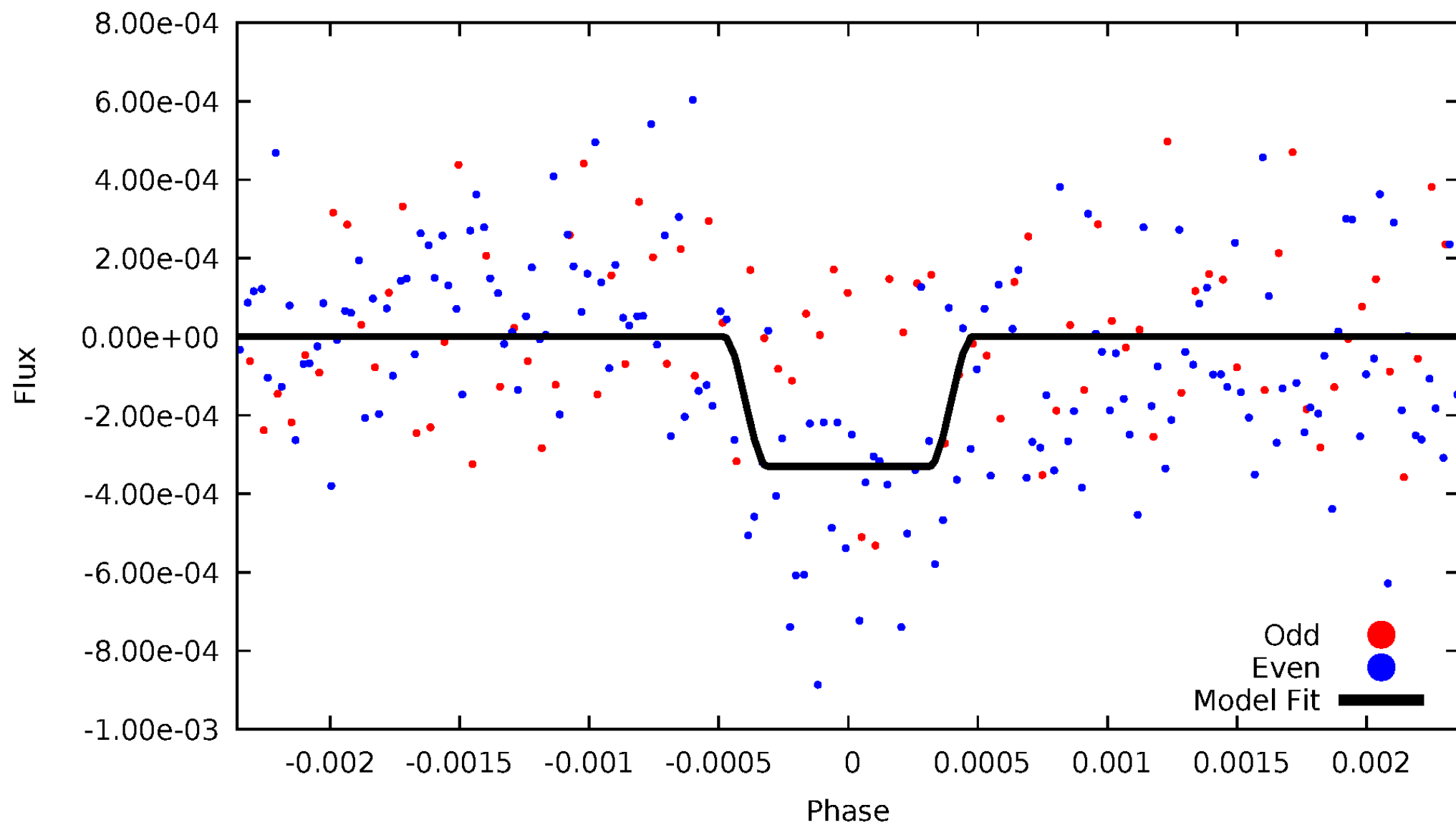
DV Odd/Even

TCE 004273285-01



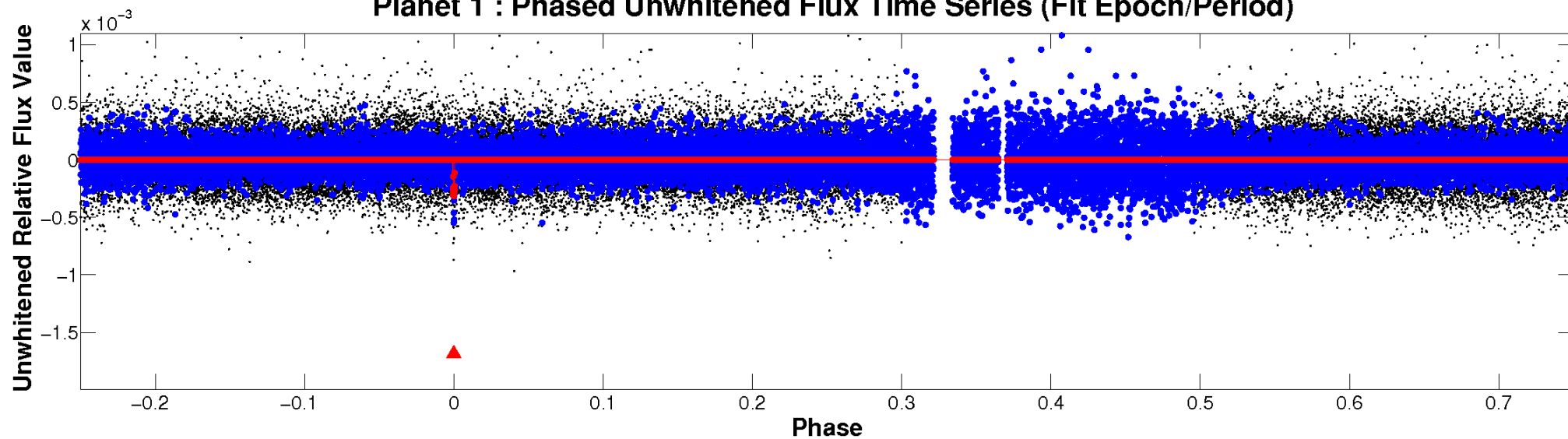
ALT Odd/Even

TCE 004273285-01

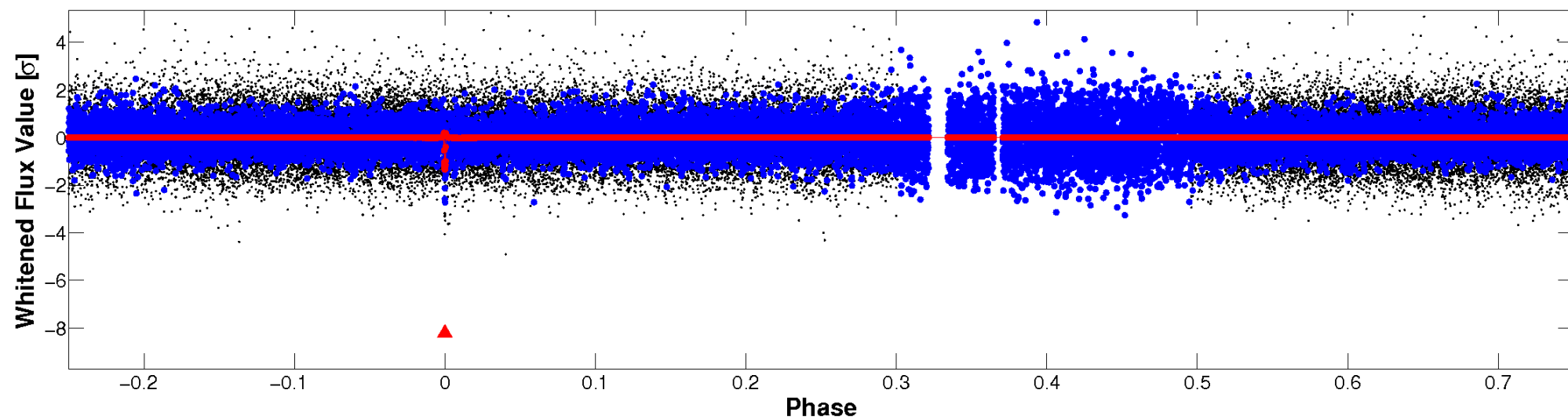


Non-Whitened Vs. Whitened Light Curve

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

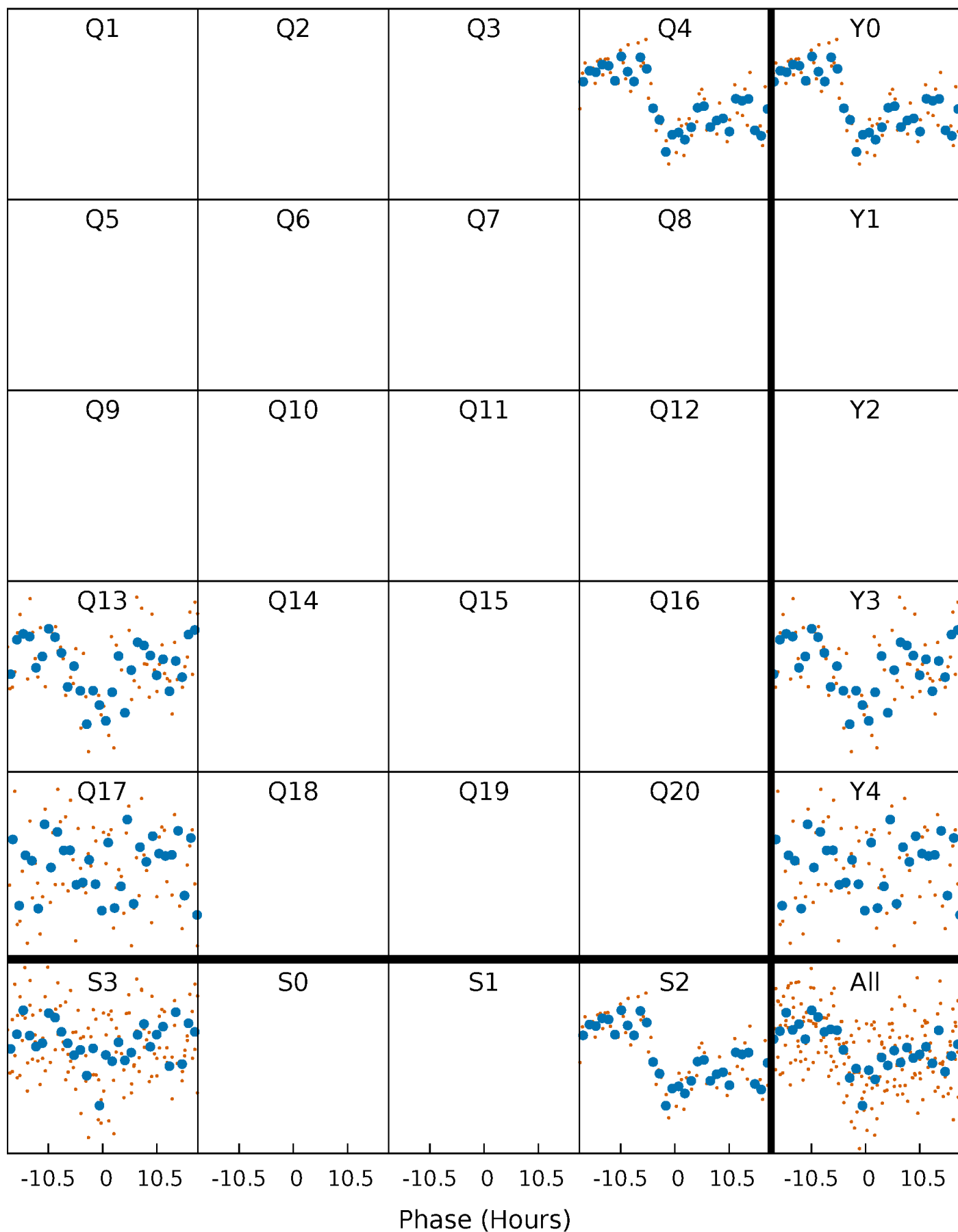


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



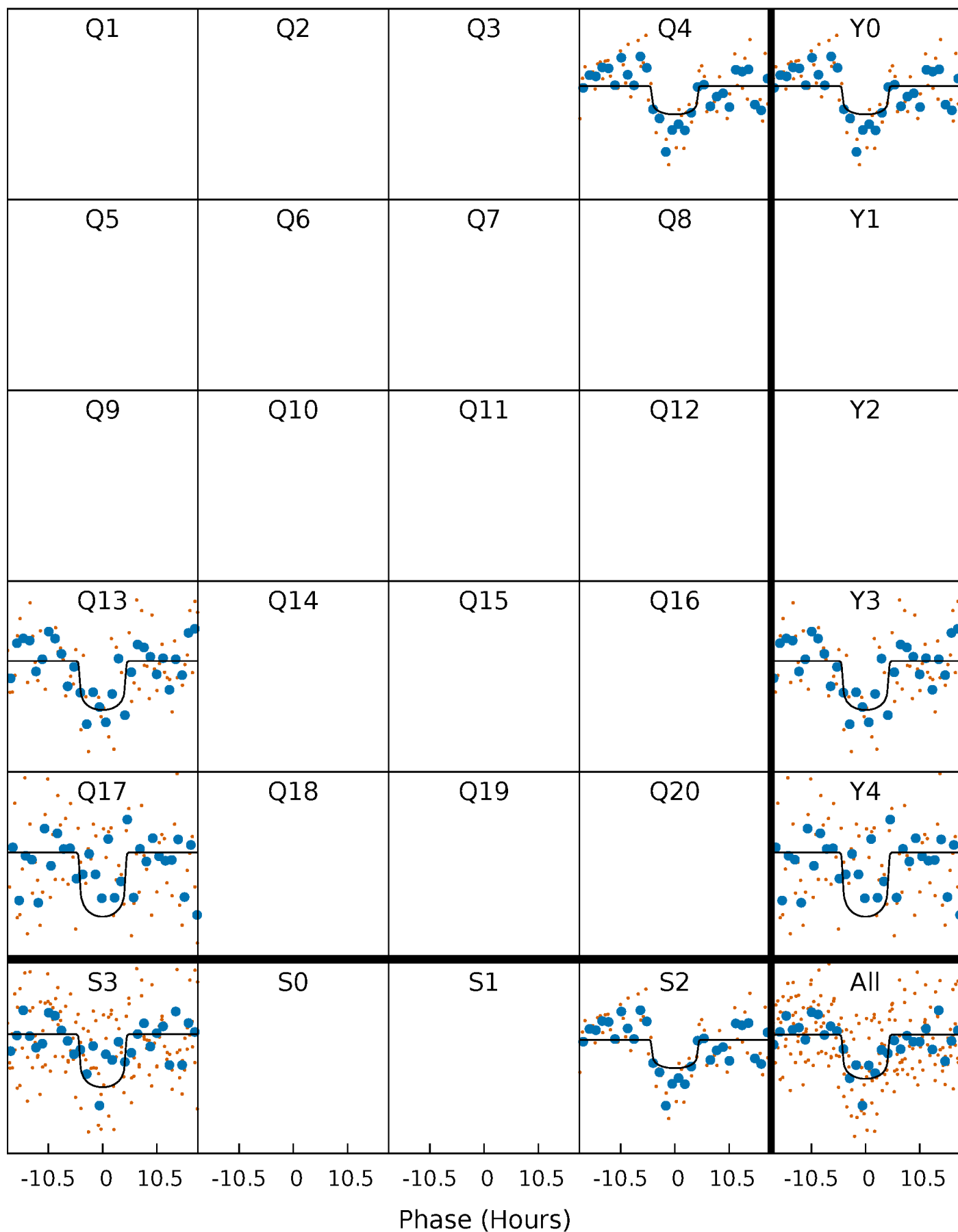
PDC Quarter-Phased Transit Curves

TCE 004273285-01 P=380.904597 Days $T_0=423.431339$ (BKJD)



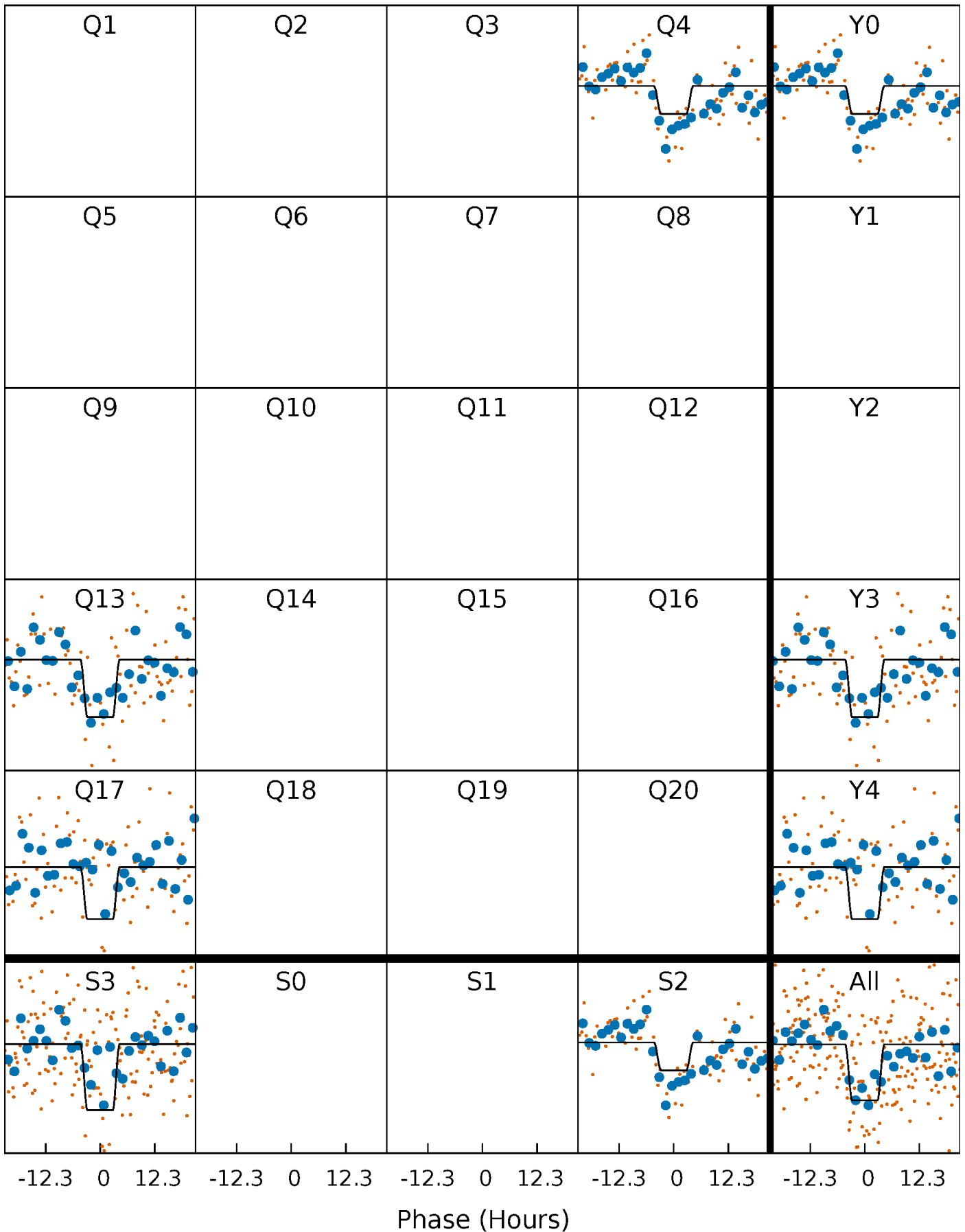
DV Quarter-Phased Transit Curves

TCE 004273285-01 P=380.904597 Days $T_0=423.431339$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

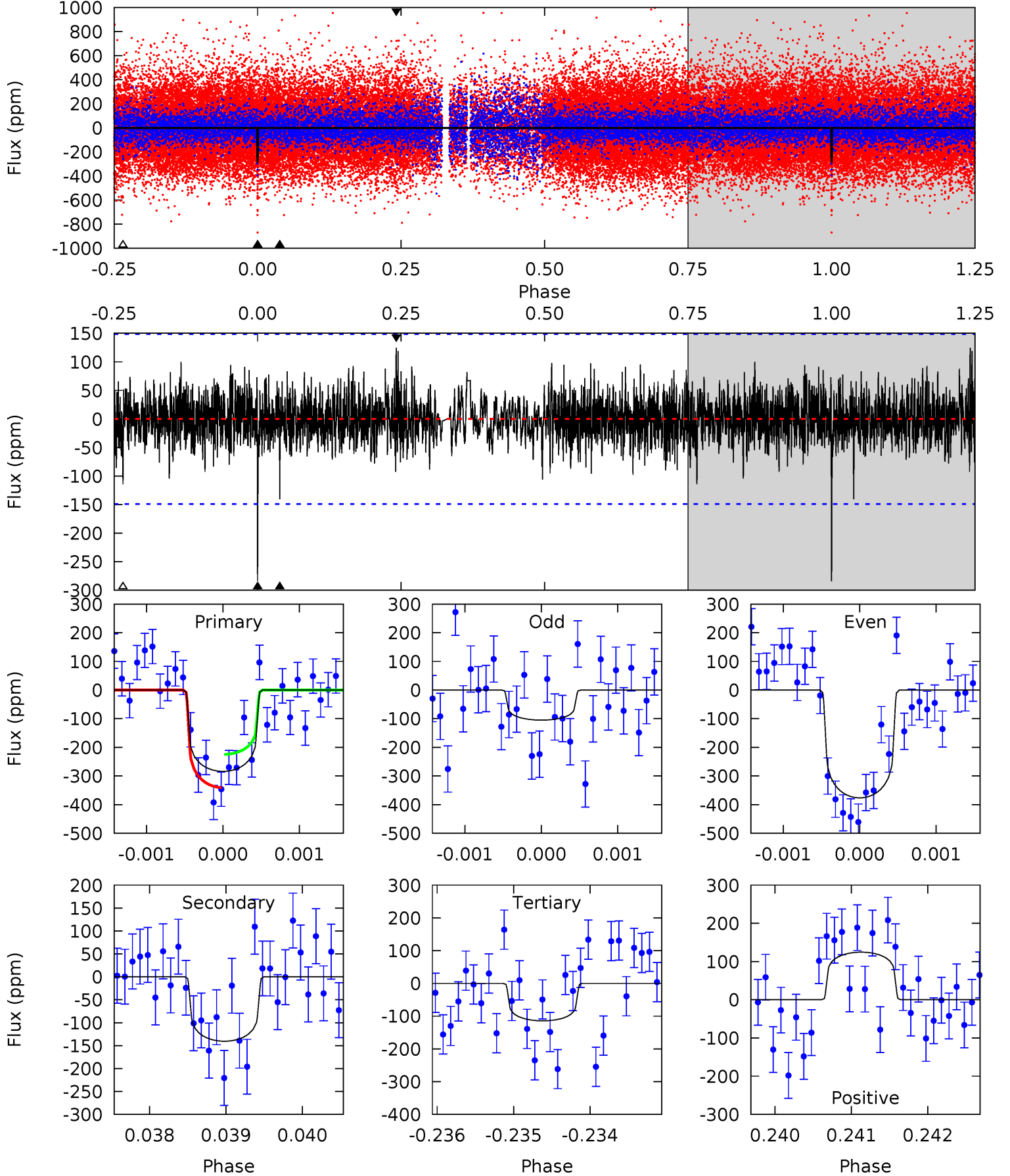
TCE 004273285-01 $P=380.888370$ Days $T_0=423.427425$ (BKJD)



DV Model-Shift Uniqueness Test

004273285-01, $P = 380.904597$ Days, $E = 42.526742$ Days

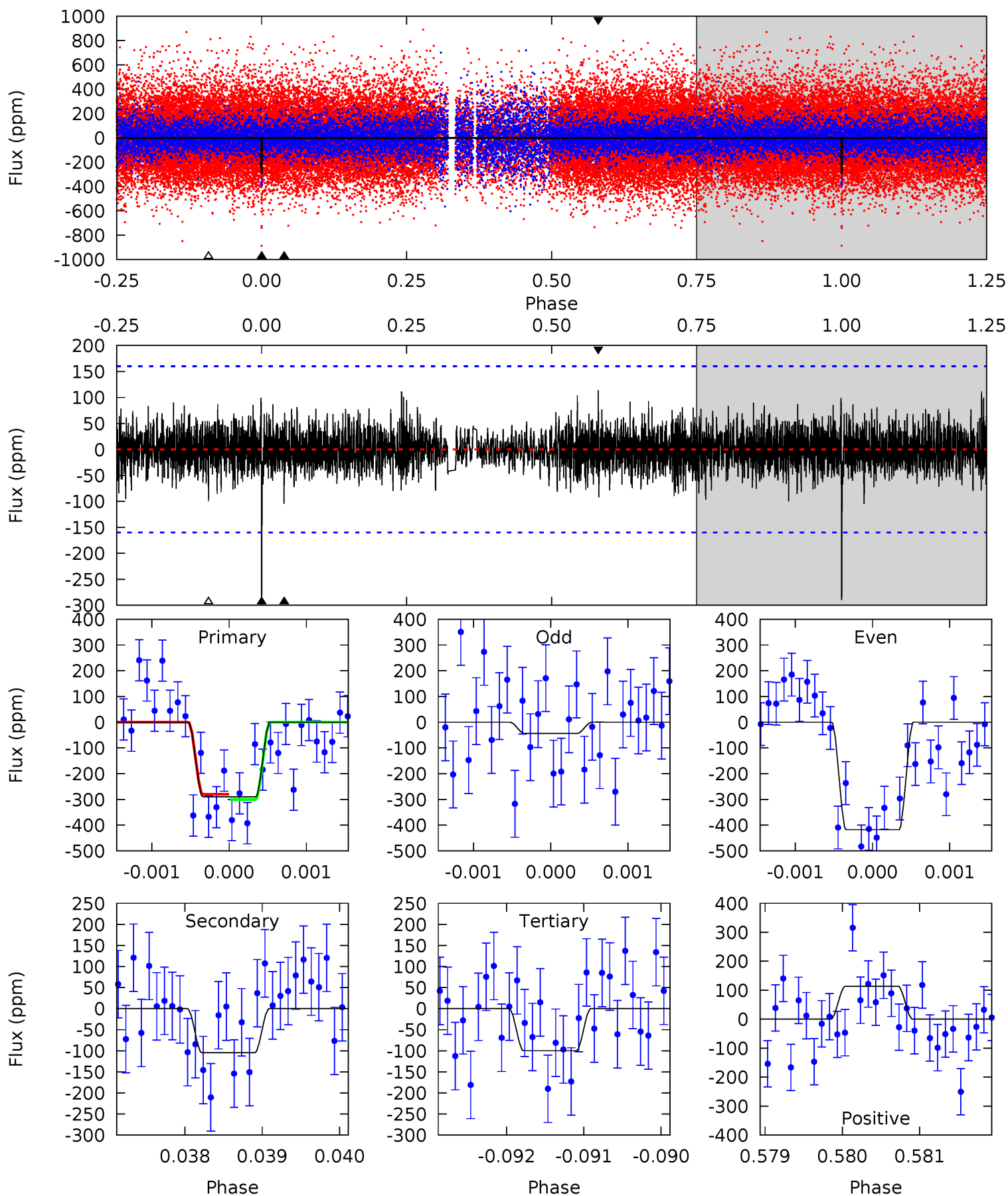
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	5.12	4.17	4.54	5.44	3.27	1.11	6.19	5.81	0.95	0.58	4.68	1.13	0.30	2.11



Alt Model-Shift Uniqueness Test

004273285-01, P = 380.888370 Days, E = 42.539055 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.90	3.58	3.41	3.88	5.47	3.32	0.96	6.48	6.01	0.17	-0.30	6.18	1.01	0.28	0.35



Stellar Parameters For KIC 004273285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6367^{+89}_{-76}	$4.225^{+0.149}_{-0.108}$	$-0.360^{+0.150}_{-0.150}$	$1.298^{+0.218}_{-0.218}$	$1.030^{+0.091}_{-0.056}$	$0.664^{+0.482}_{-0.222}$
	+1%/-1%	+4%/-3%	+42%/-42%	+17%/-17%	+9%/-5%	+73%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004273285-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-140 ± 27	$2.49^{+1.34}_{-1.27}$	437^{+20}_{-21}	5236^{+2310}_{-836}	13236^{+44633}_{-7673}
Alt.	-105 ± 29	$2.61^{+1.43}_{-1.33}$	438^{+19}_{-21}	4781^{+2039}_{-730}	8904^{+31769}_{-5373}

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 $A_{obs} \gg 1.0$

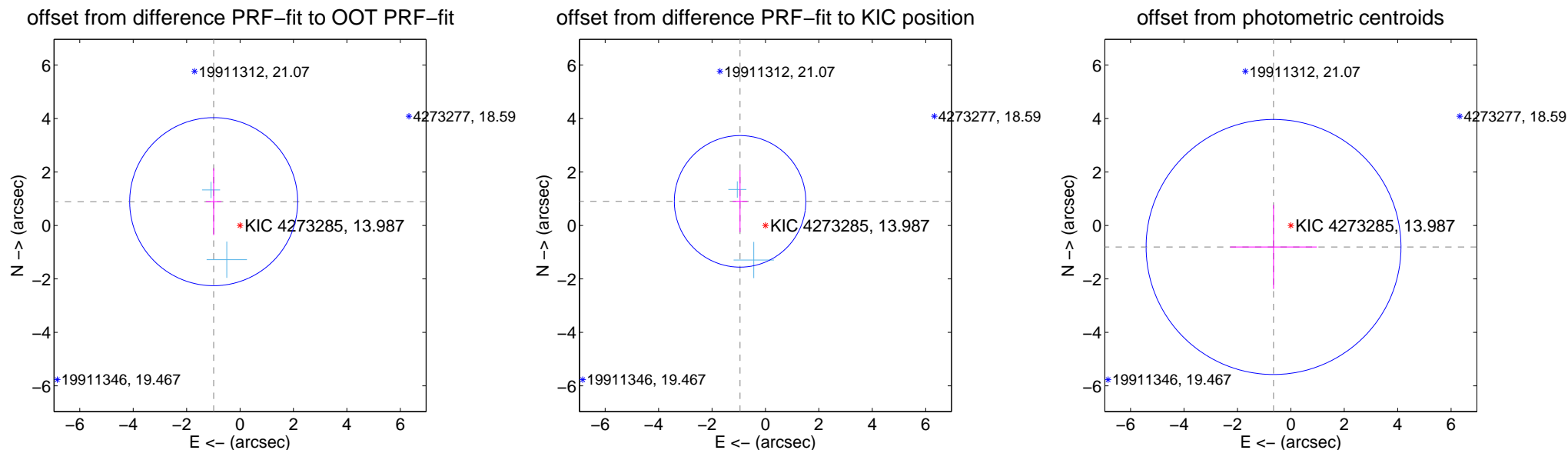
DV Centroid Data

Supplemental centroid analysis for 004273285-01. Kepler magnitude: 13.99. Transit SNR 8.76

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.329 ± 1.048	1.27	0.987 ± 0.290	0.890 ± 1.250
PRF-fit source offset from KIC position	1.309 ± 0.820	1.60	0.949 ± 0.277	0.901 ± 1.155
photometric centroid source offset	1.03 ± 1.59	0.65	0.65 ± 1.62	-0.80 ± 1.57



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



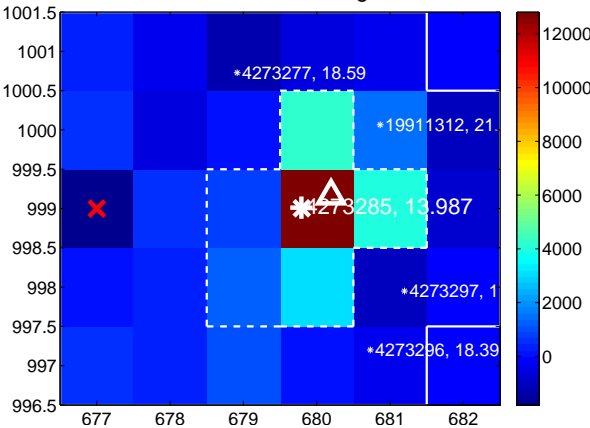
Q3 no difference image



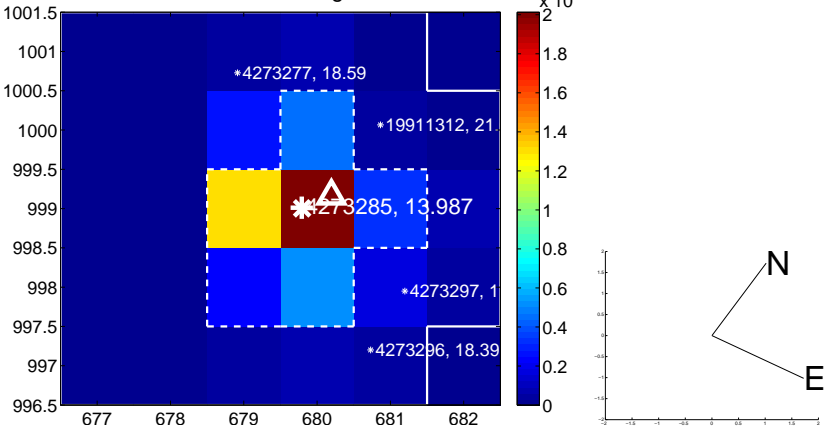
Q3 no OOT image



Q4 difference image



Q4 OOT image



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



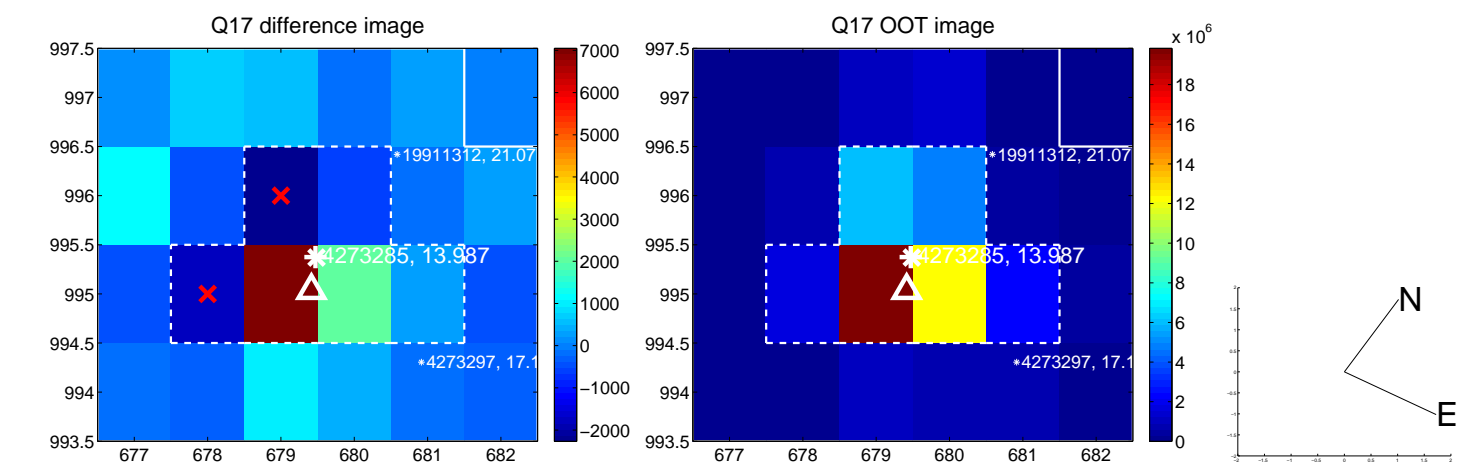
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



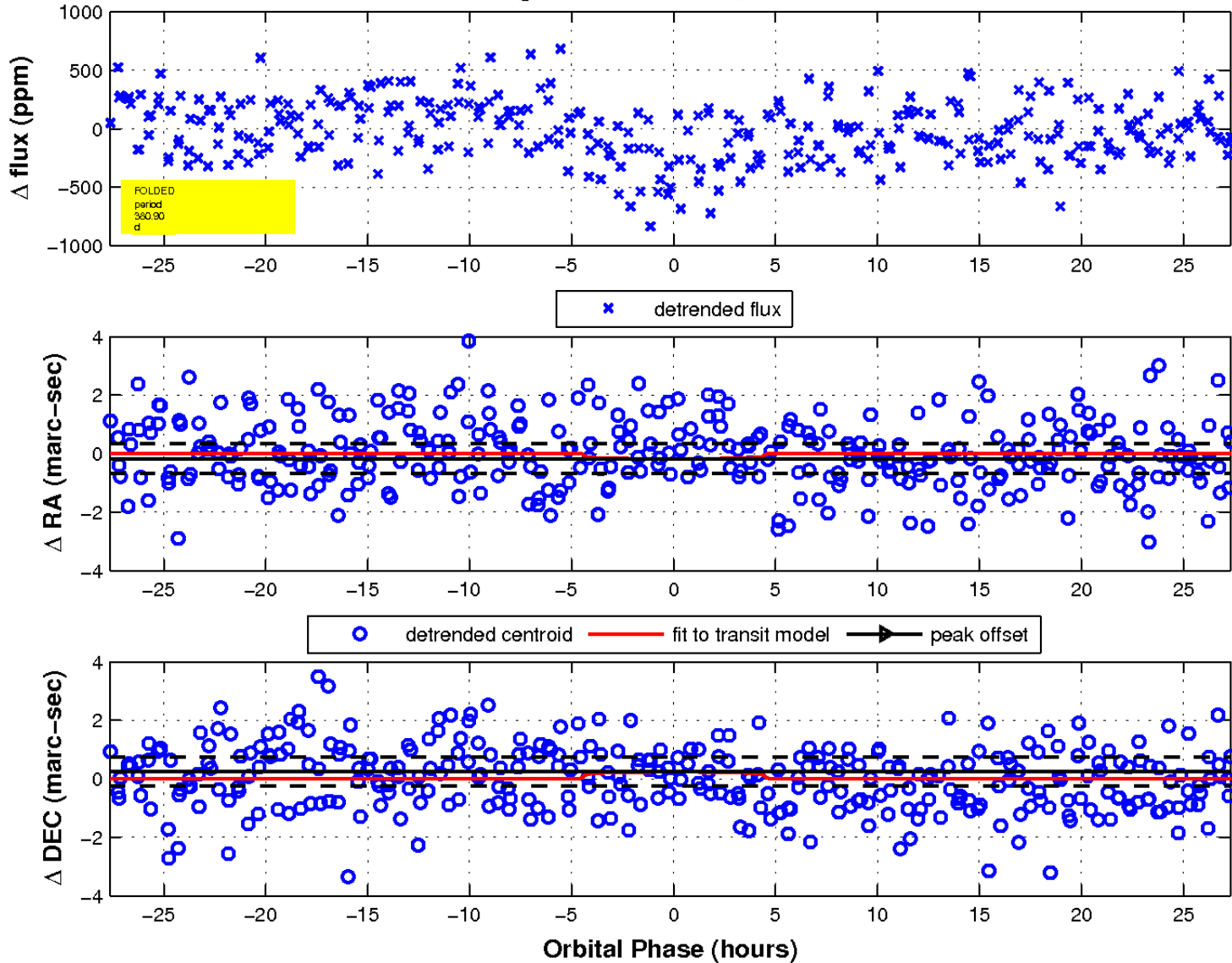
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

