

KIC 008943164

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})
008943164-01	OBS	No	365.237030	183.669997	729.9	32.821	11.4	11.5	1.06	6230	3.47	1.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008943164-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

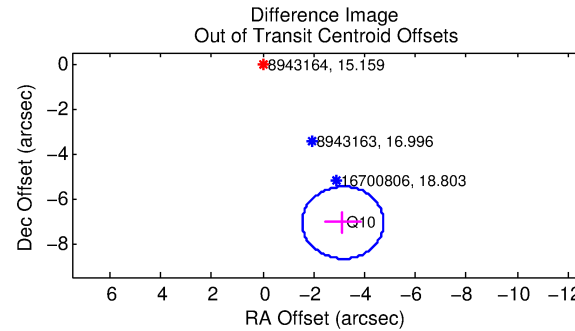
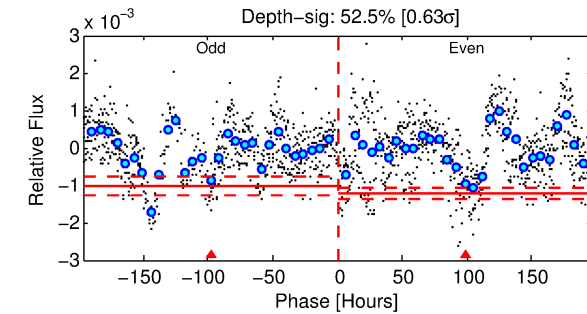
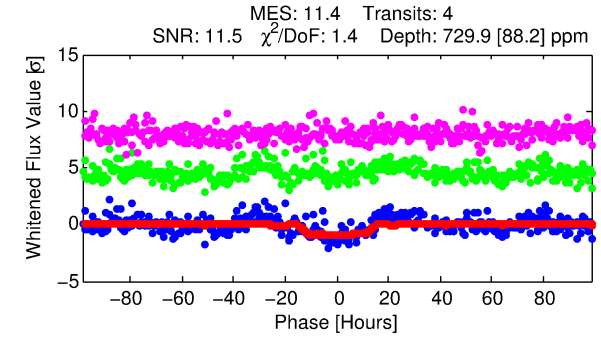
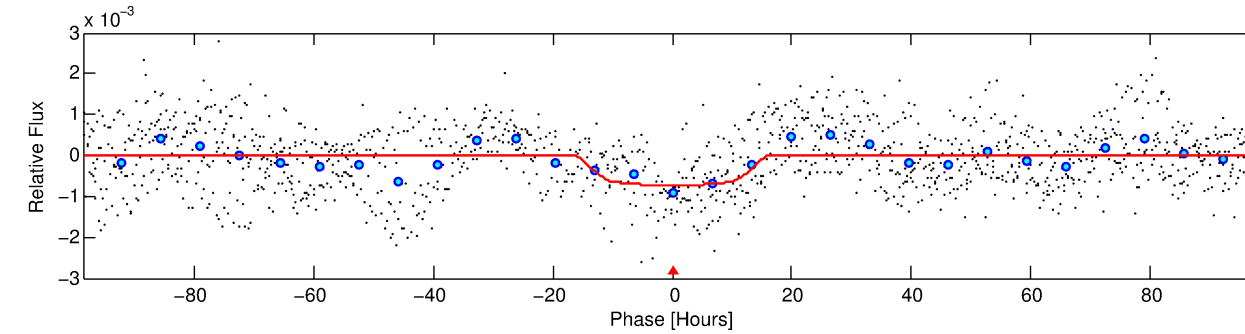
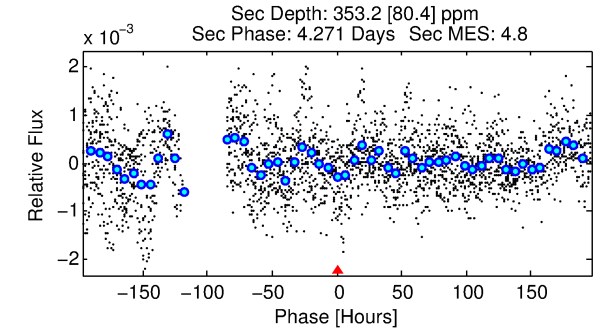
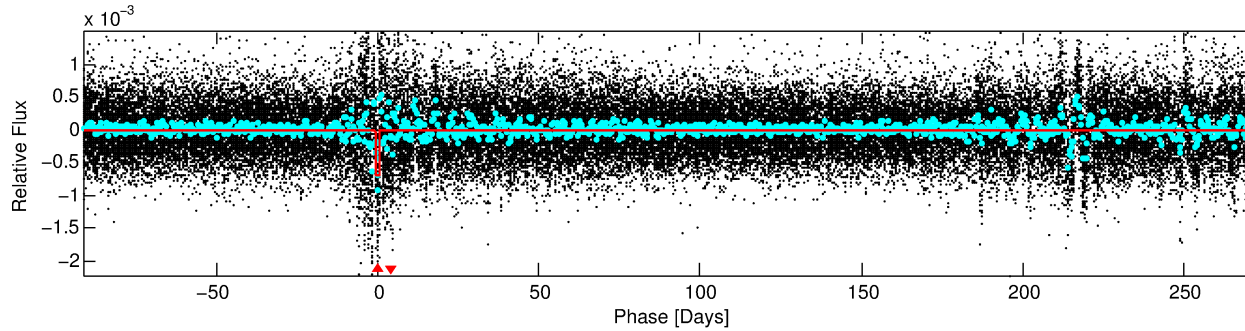
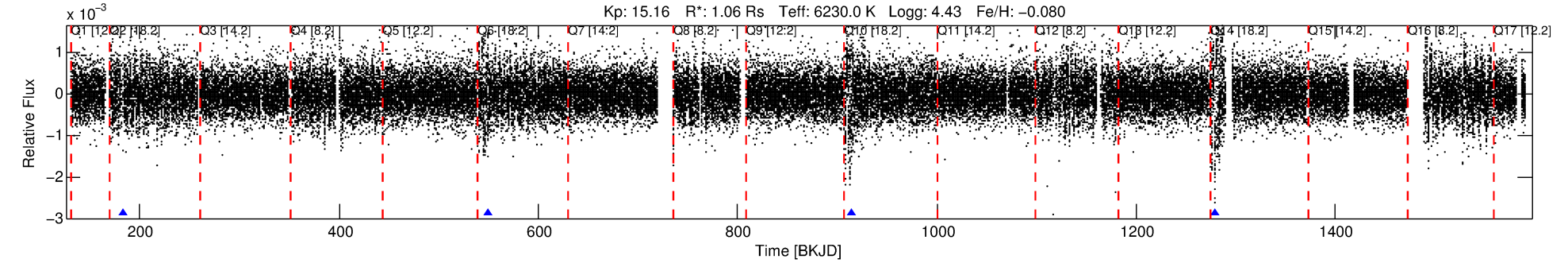
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008943164-01

No Significant Match Found

DV One-Page Summary

KIC: 8943164 Candidate: 1 of 1 Period: 365.237 d



DV Fit Results:

Period = 365.23703 [0.03867] d
Epoch = 183.6700 [0.0752] BKJD
Rp/R* = 0.0299 [0.0026]
a/R* = 38.14 [10.78]
b = 0.93 [0.04]
Seff = 1.43 [0.63]
Teq = 279 [30] K
Rp = 3.47 [1.23] Re
a = 1.0330 [0.2963] AU
Ag = 17238.46 [8668.39] [1.99σ]
Teffp = 4939 [395] K [11.77σ]

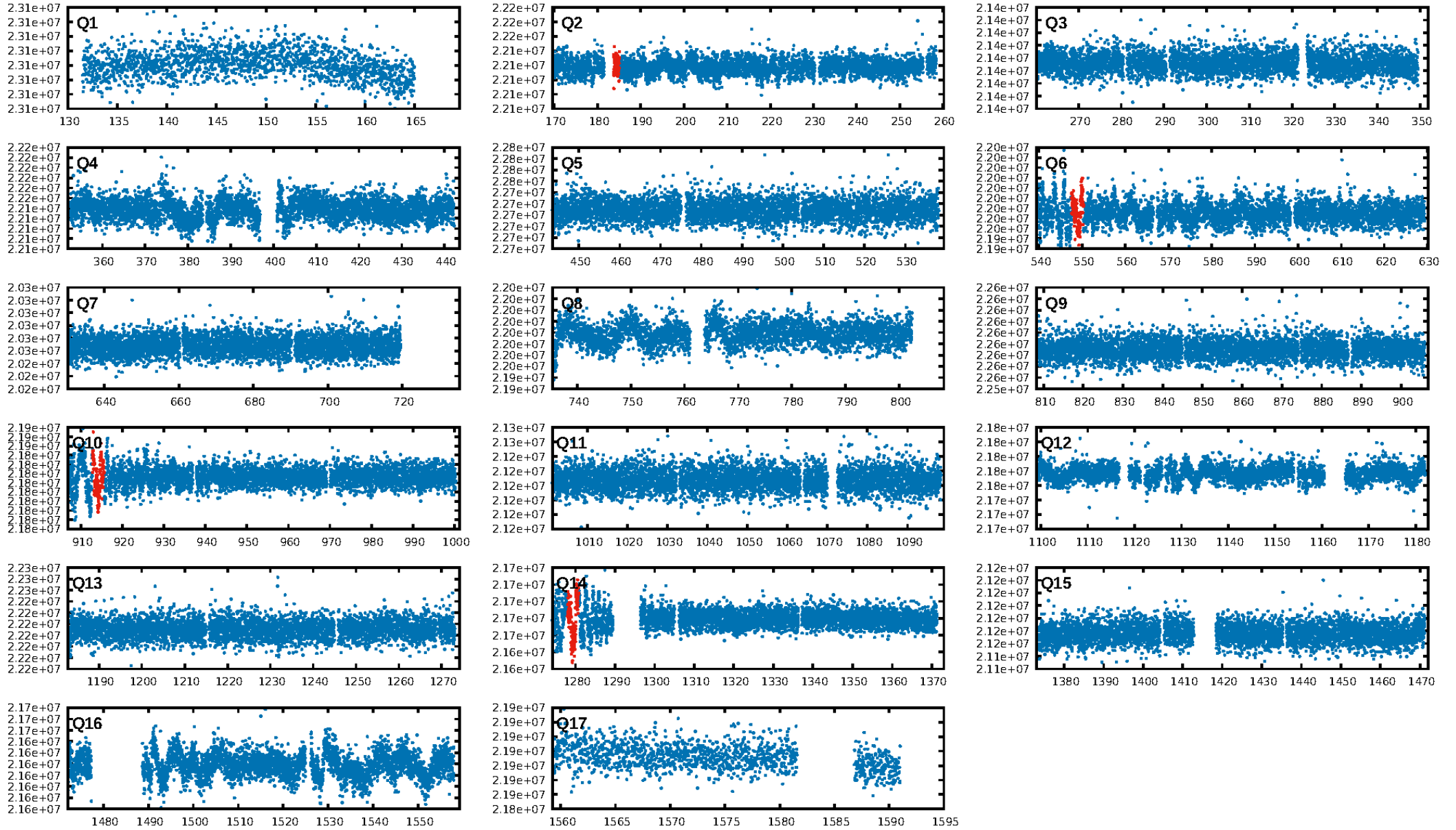
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.12e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.176
Centroid-sig: 0.5%
Centroid-so: 4.200 arcsec [3.08σ]
OotOffset-rm: 7.750 arcsec [14.49σ]
KicOffset-rm: 7.538 arcsec [13.98σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

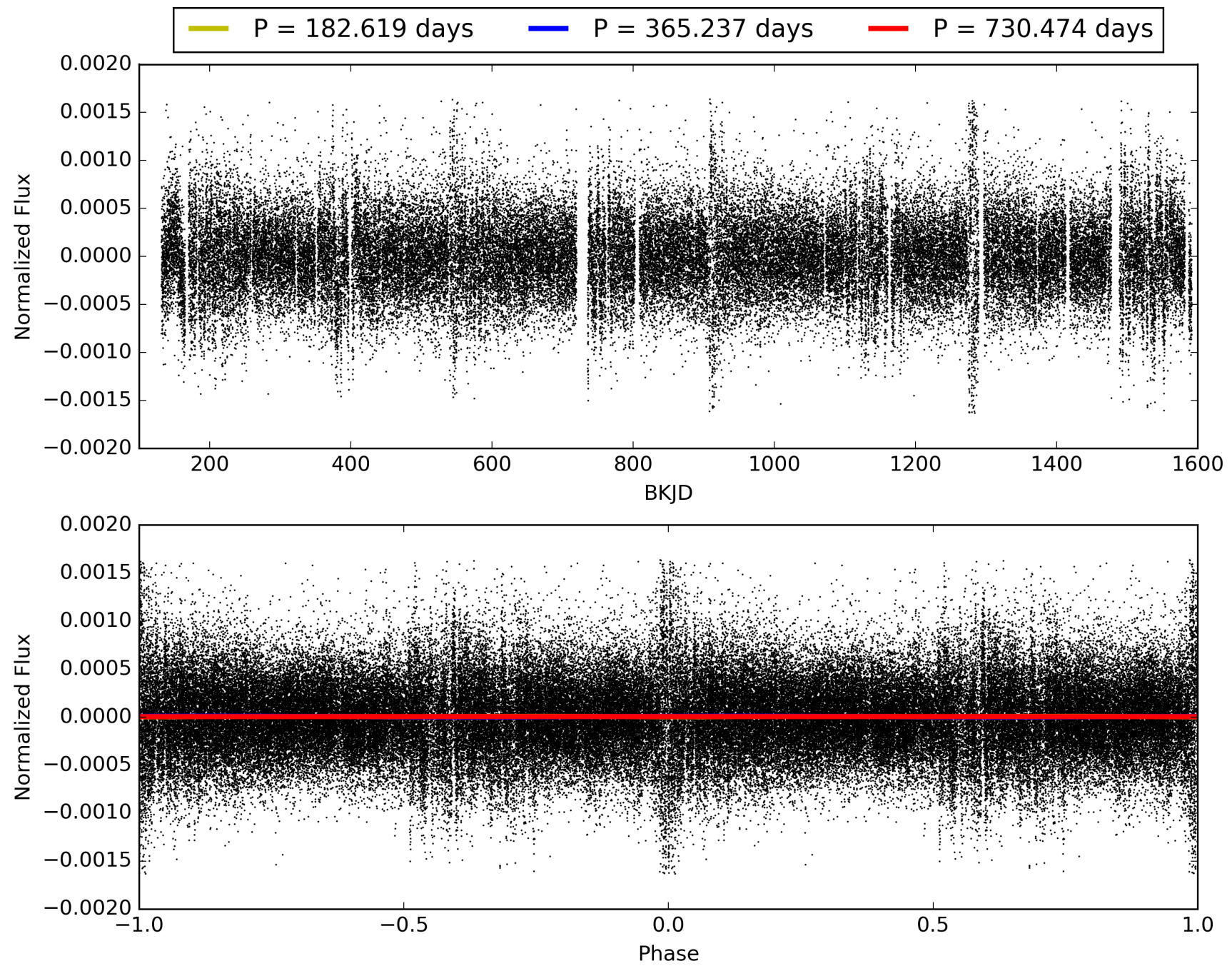
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:27:14 Z

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

TCE 008943164-01, PDC Light Curves

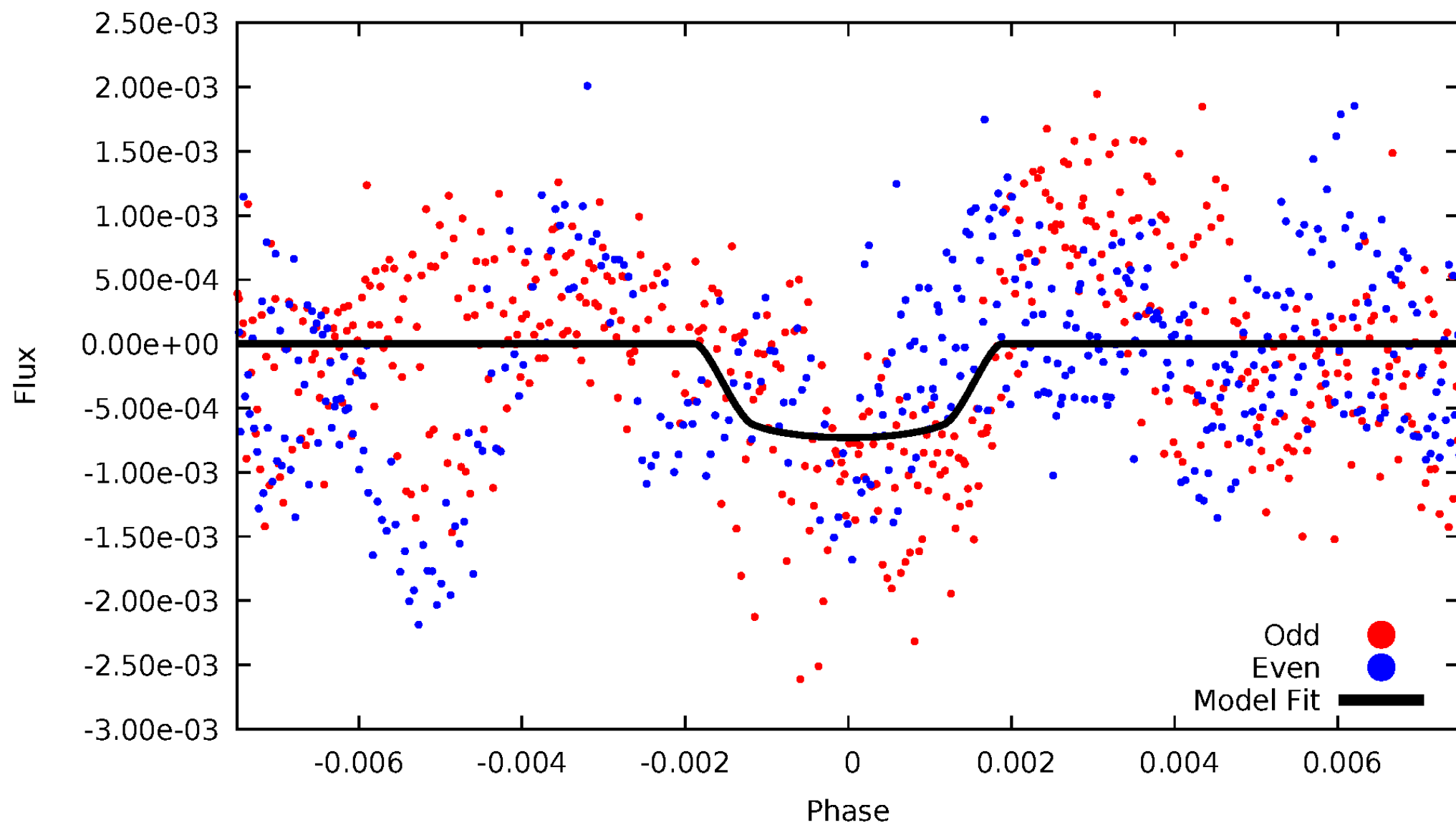


TCE 008943164-01



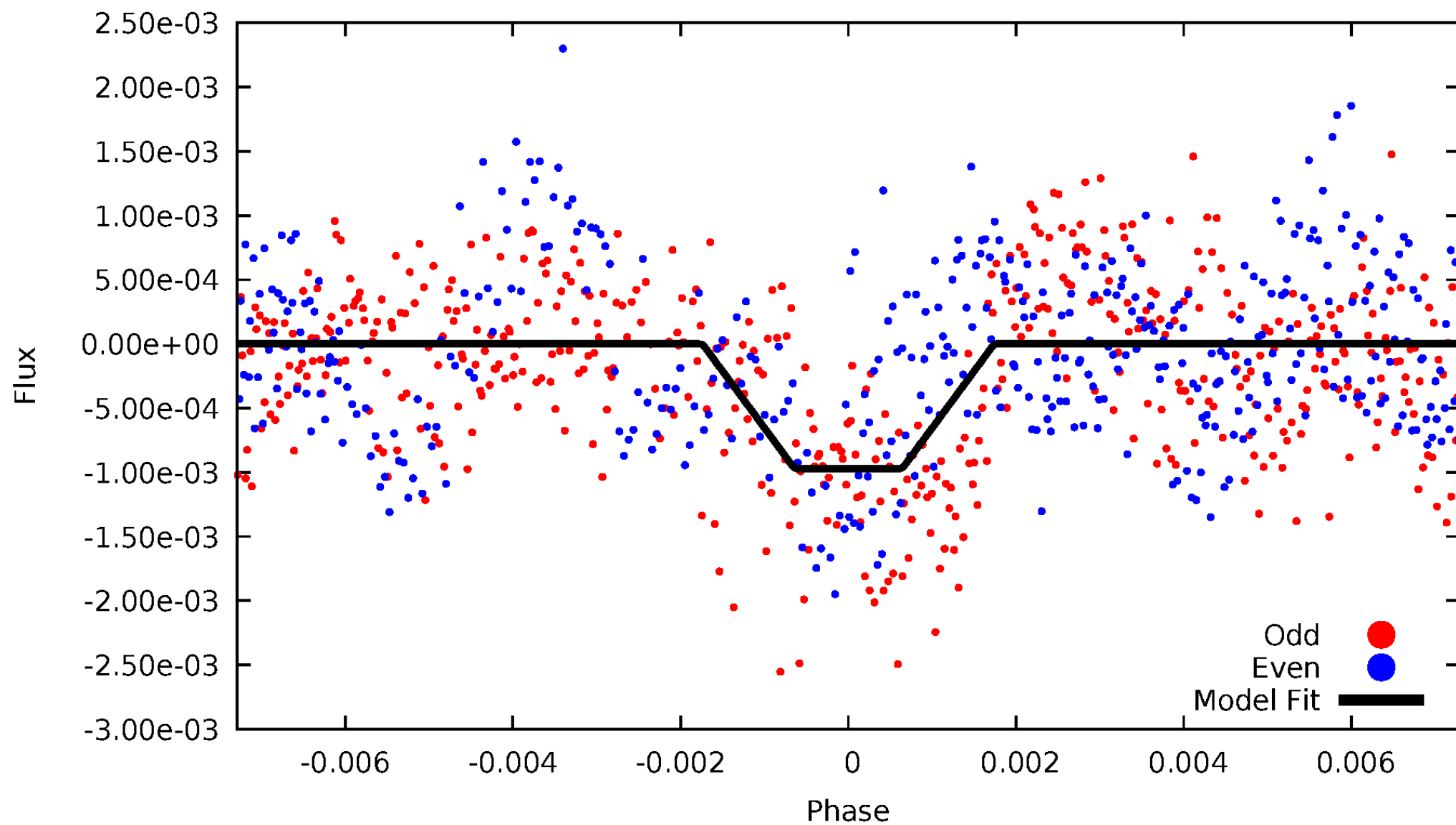
DV Odd/Even

TCE 008943164-01



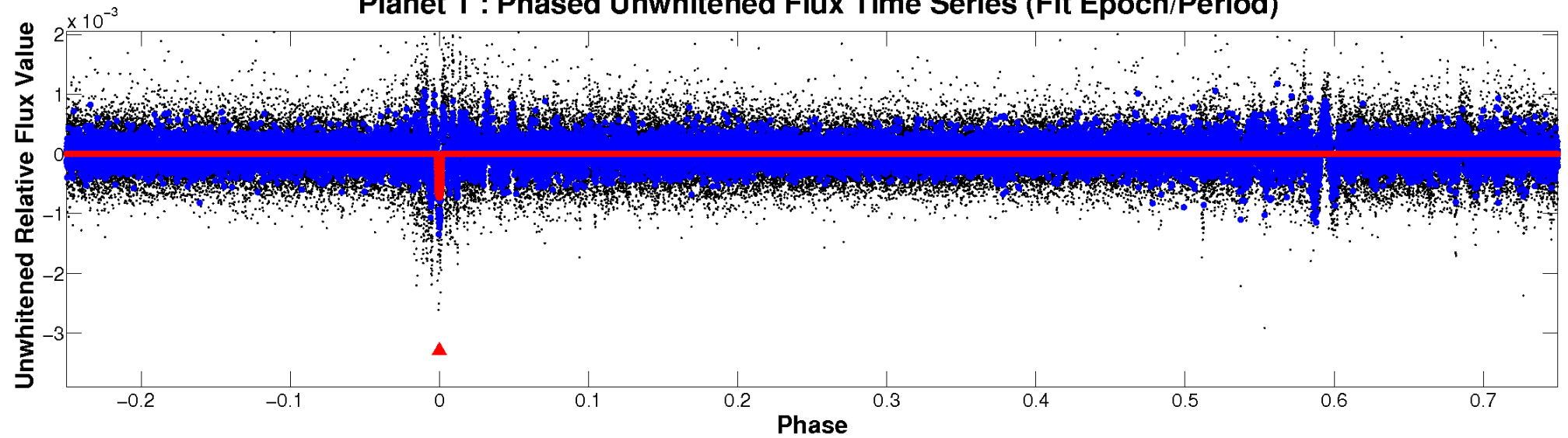
ALT Odd/Even

TCE 008943164-01

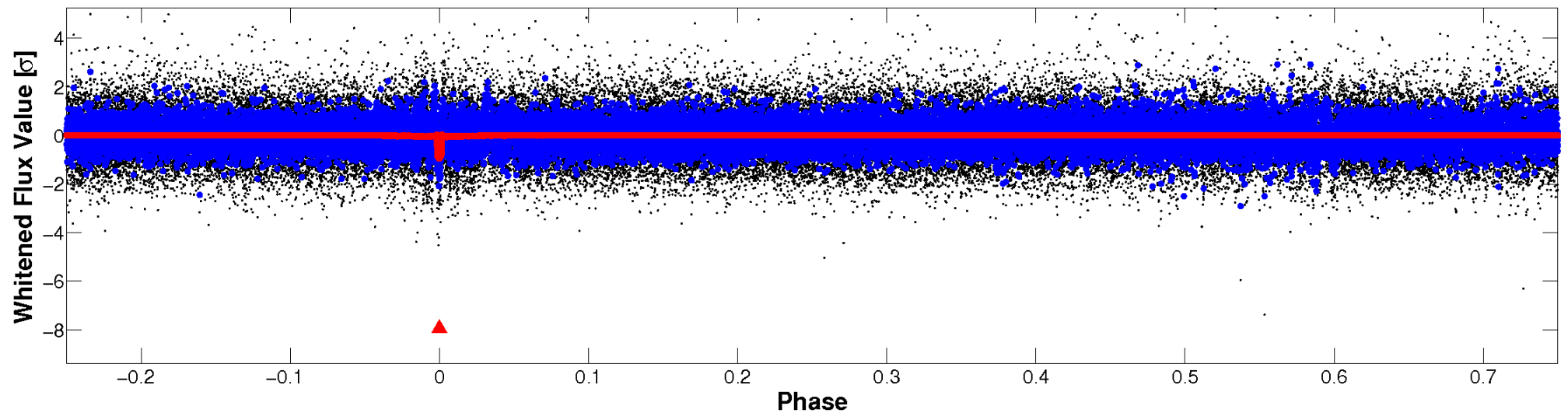


Non-Whitened Vs. Whitened Light Curve

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

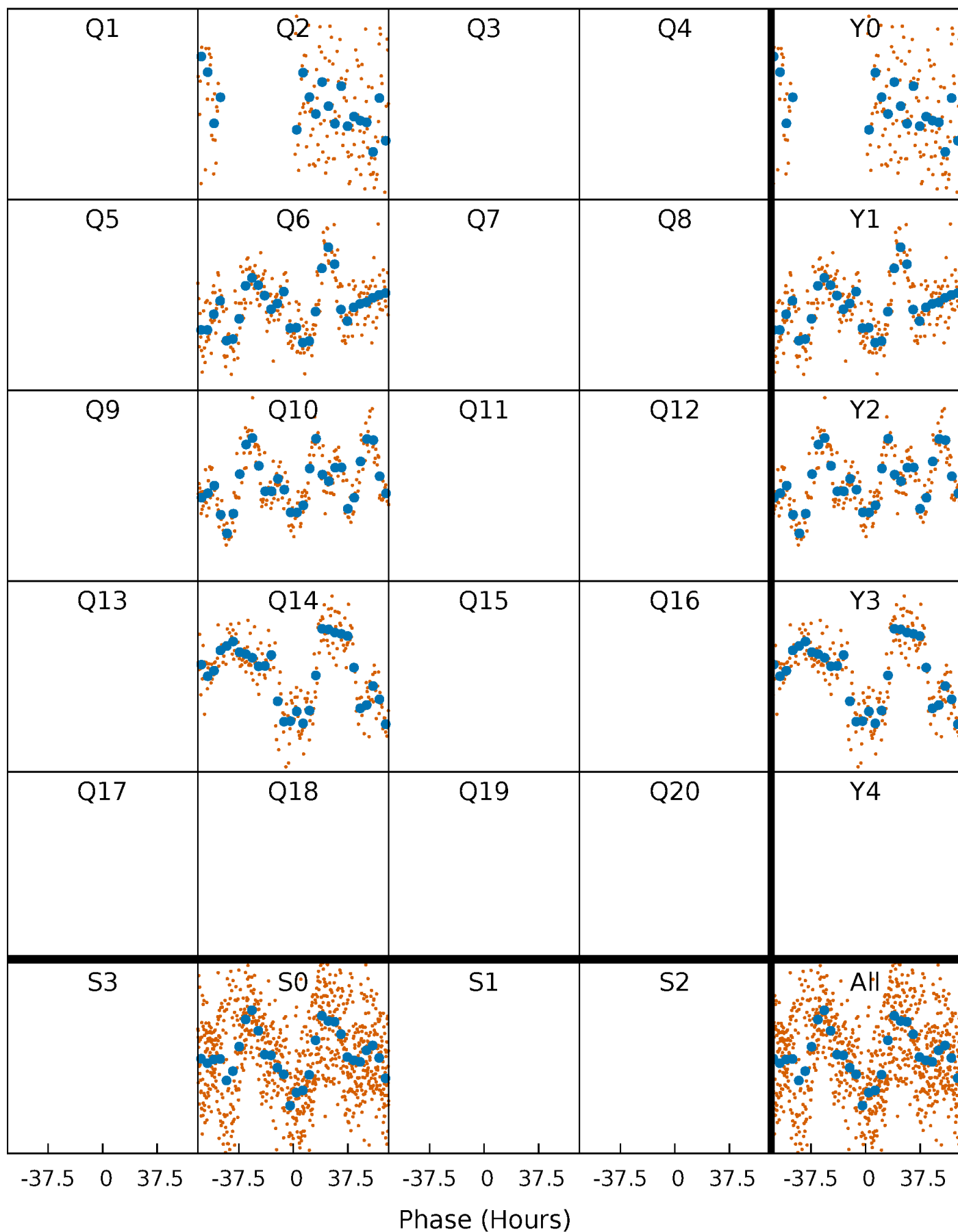


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



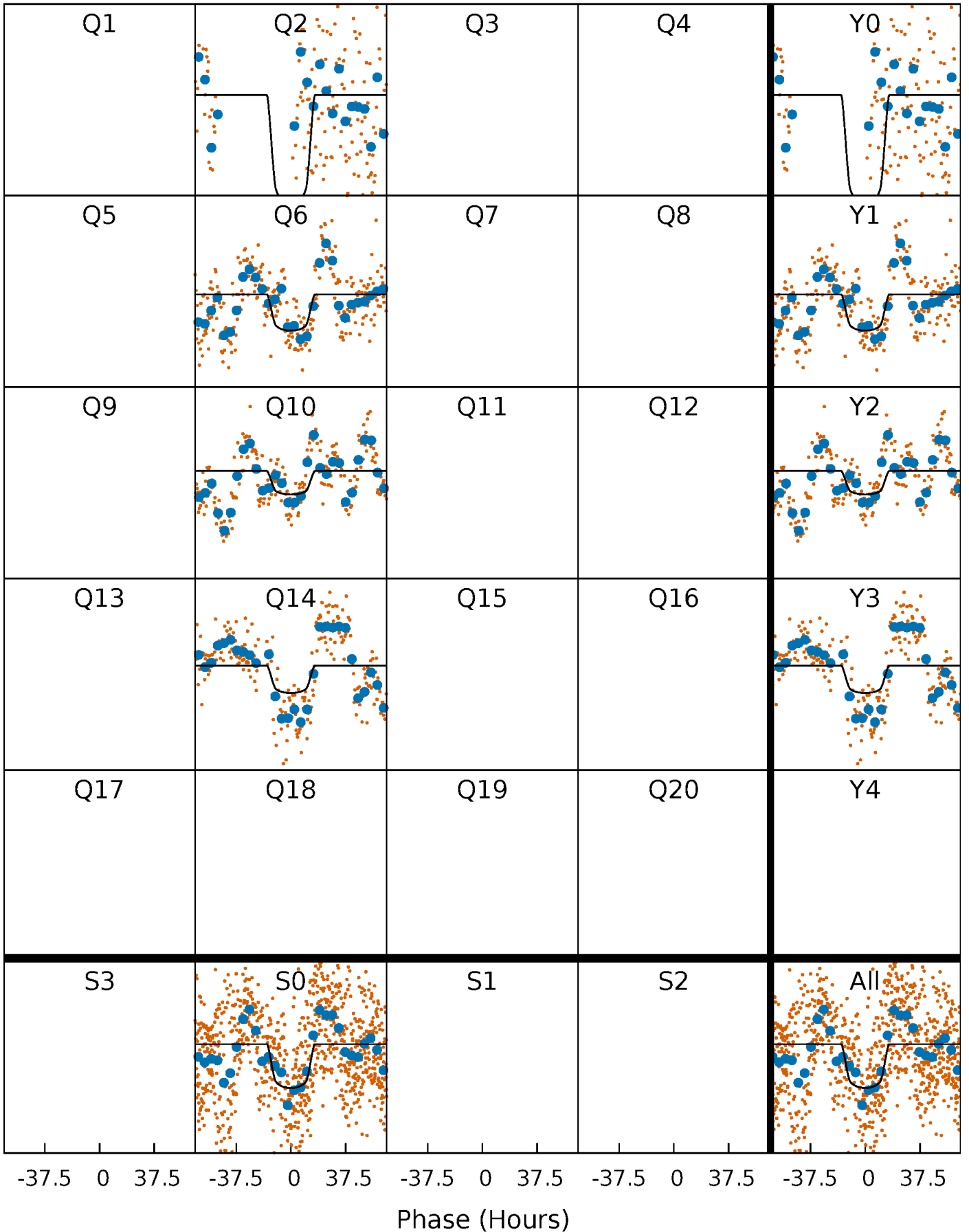
PDC Quarter-Phased Transit Curves

TCE 008943164-01 P=365.237030 Days $T_0=183.669997$ (BKJD)



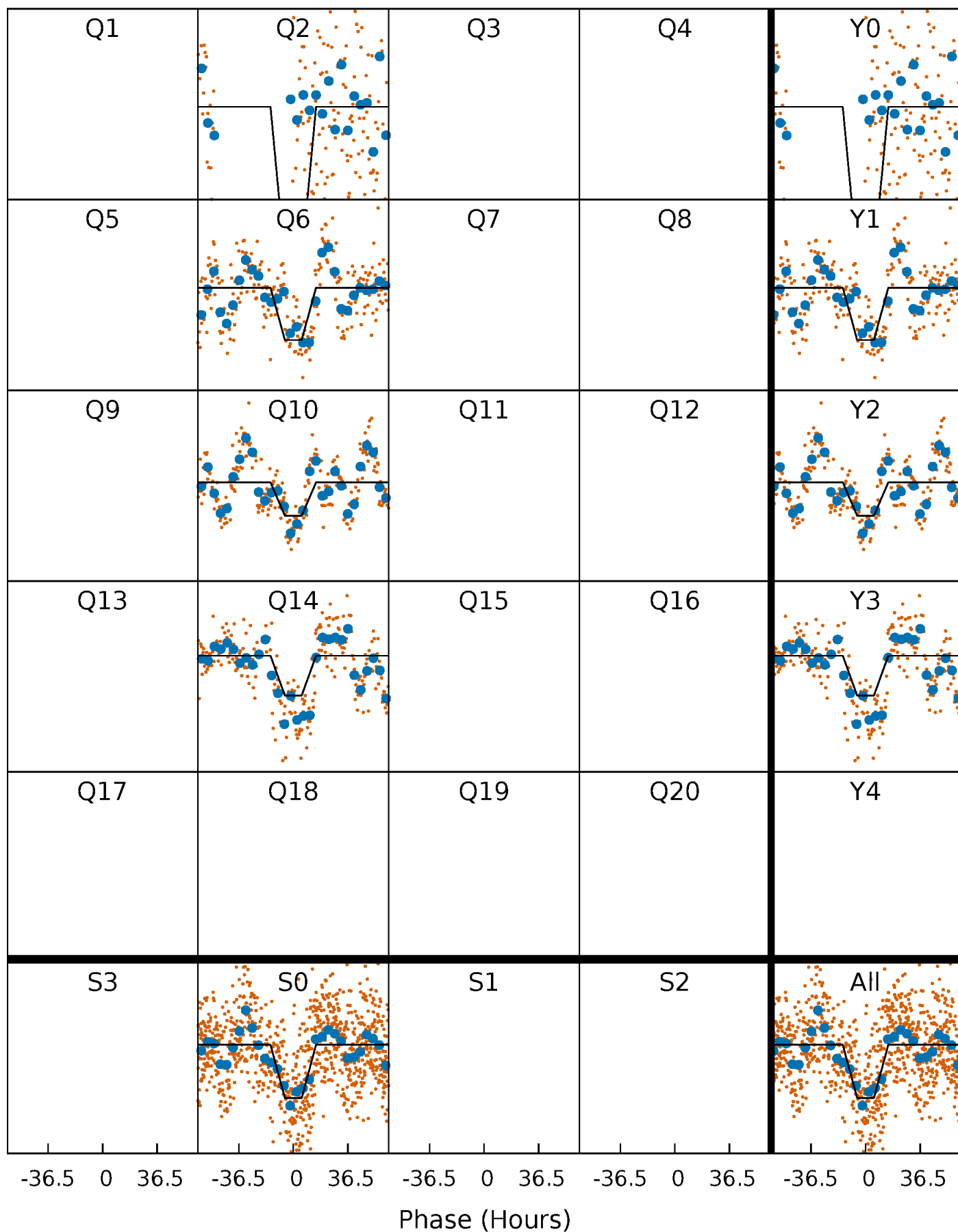
DV Quarter-Phased Transit Curves

TCE 008943164-01 P=365.237030 Days $T_0=183.669997$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

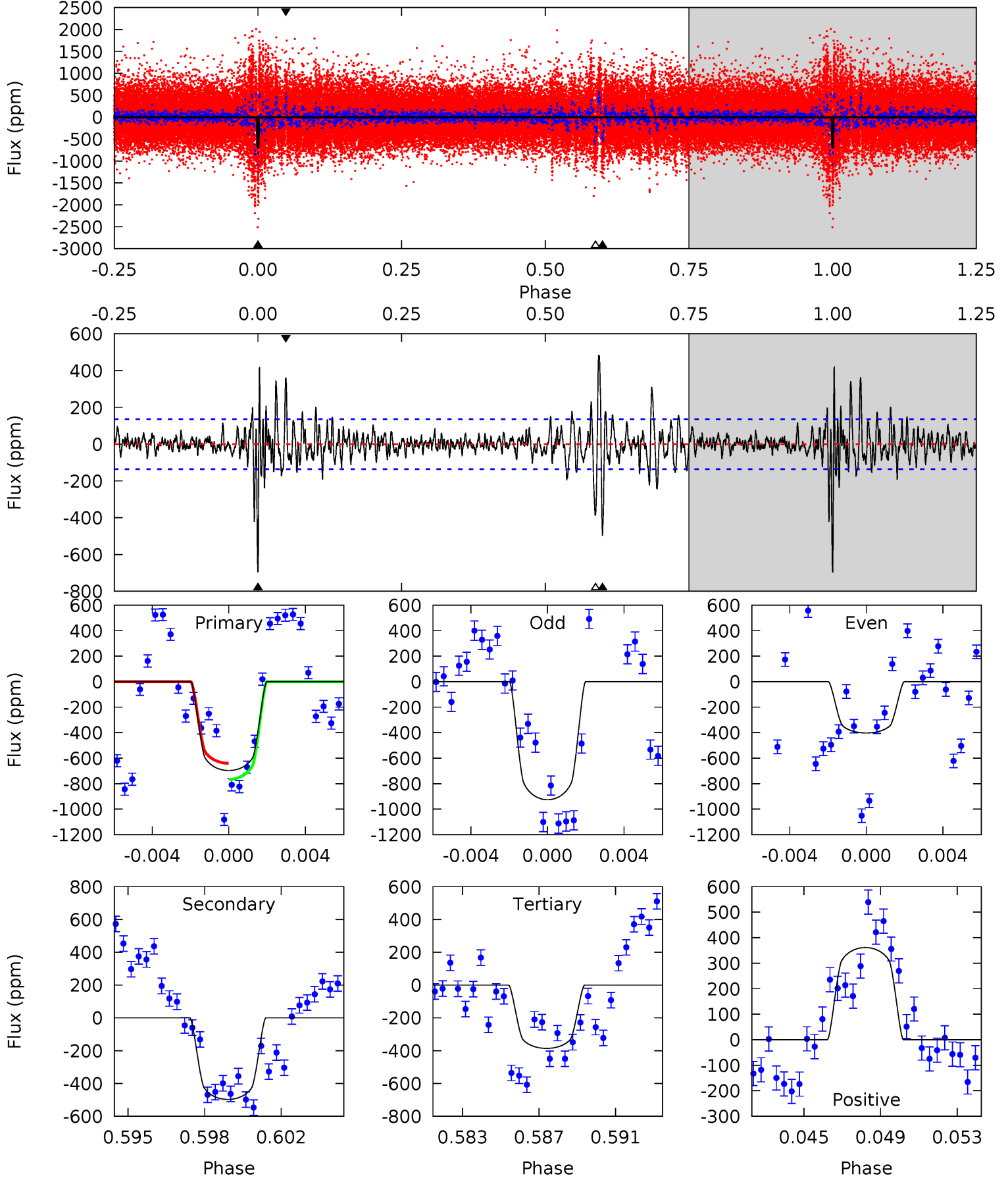
TCE 008943164-01 P=365.243074 Days $T_0=183.732873$ (BKJD)



DV Model-Shift Uniqueness Test

008943164-01, P = 365.237030 Days, E = 183.669997 Days

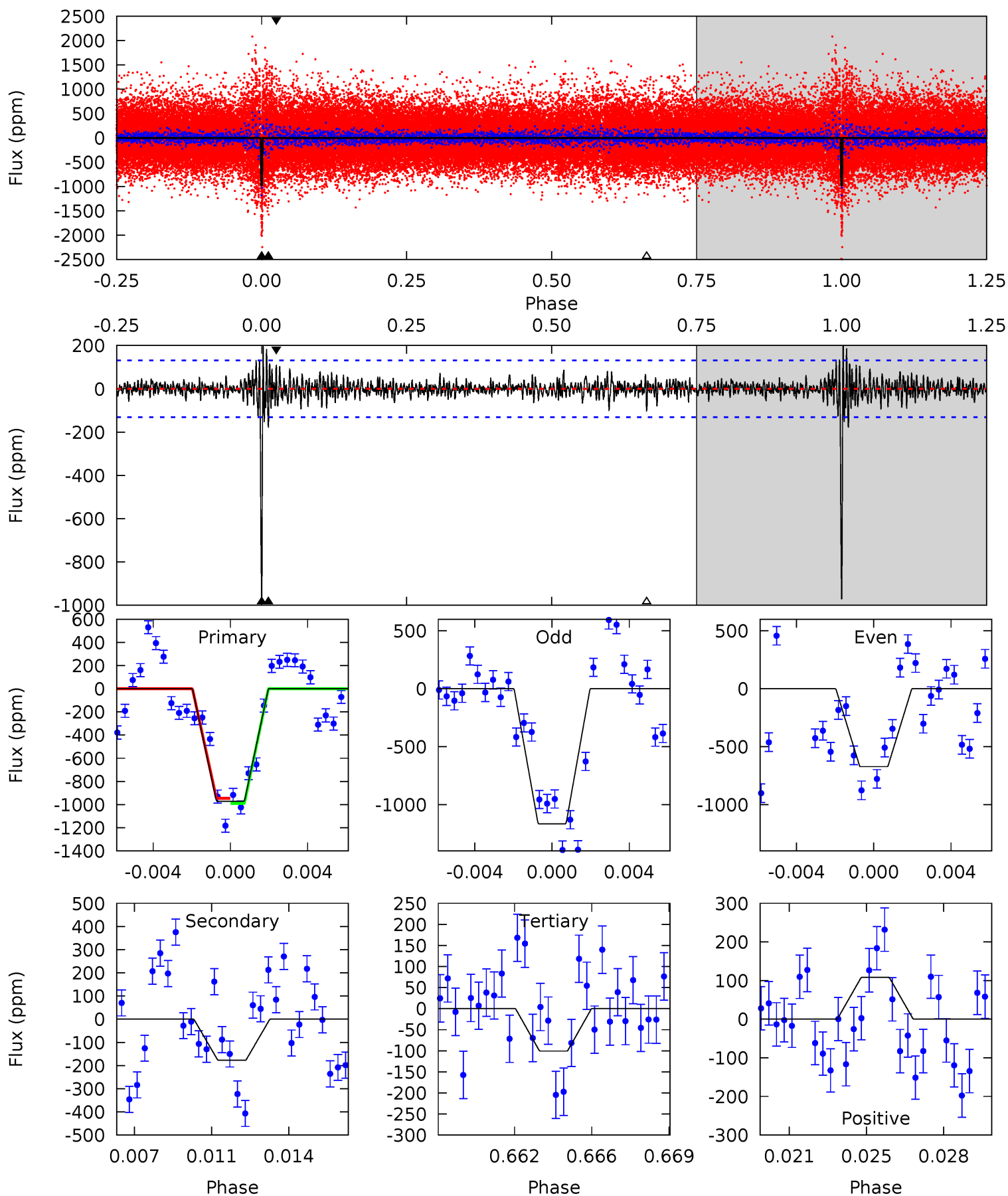
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	19.0	14.8	13.8	5.21	2.90	2.86	11.9	12.8	4.25	5.21	9.97	1.06	0.41	2.36



Alt Model-Shift Uniqueness Test

008943164-01, P = 365.243074 Days, E = 183.732873 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.6	7.06	4.00	4.31	5.22	2.92	1.09	34.6	34.3	3.06	2.75	9.83	0.96	0.17	0.85



Stellar Parameters For KIC 008943164

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+185}_{-222}	$4.427^{+0.056}_{-0.224}$	$-0.080^{+0.250}_{-0.300}$	$1.063^{+0.366}_{-0.122}$	$1.101^{+0.168}_{-0.153}$	$1.290^{+0.388}_{-0.702}$
	+3%/-4%	+1%/-5%	+312%/-375%	+34%/-11%	+15%/-14%	+30%/-54%
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 008943164-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-497 ± 26	$3.62^{+0.67}_{-0.45}$	400^{+31}_{-21}	5427^{+288}_{-286}	21731^{+6621}_{-5604}
Alt.	-178 ± 25	$3.75^{+0.72}_{-0.46}$	398^{+31}_{-19}	4309^{+204}_{-224}	7065^{+2438}_{-2041}

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

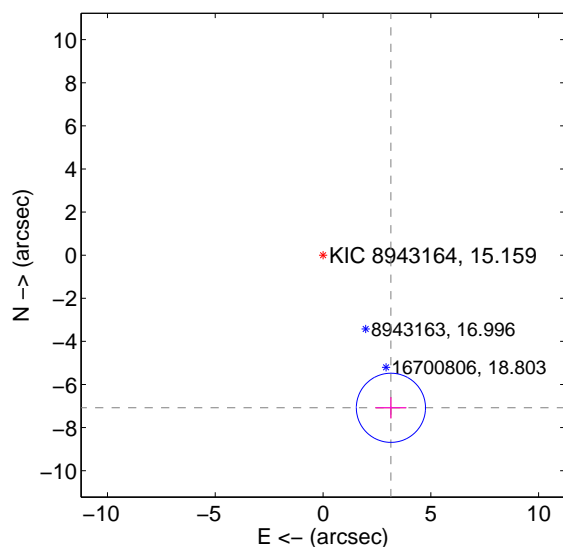
Supplemental centroid analysis for 008943164-01. Kepler magnitude: 15.16. Transit SNR 11.51

There are 0 quarters with good PRF difference image offsets

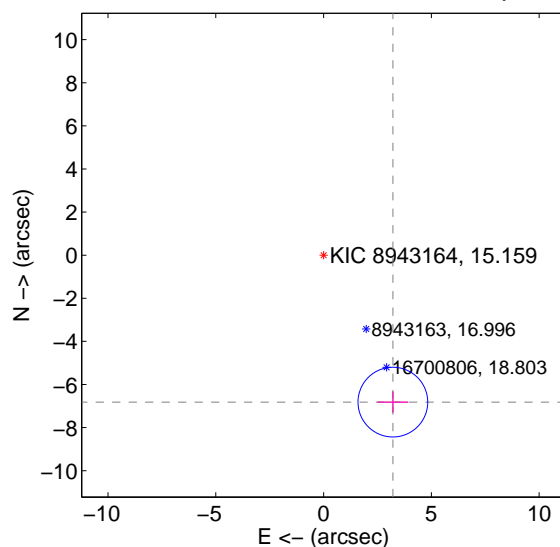
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.750 ± 0.535	14.49	-3.150 ± 0.714	-7.081 ± 0.492
PRF-fit source offset from KIC position	7.538 ± 0.539	13.98	-3.215 ± 0.714	-6.818 ± 0.492
photometric centroid source offset	4.20 ± 1.36	3.08	-4.18 ± 1.37	0.36 ± 1.09

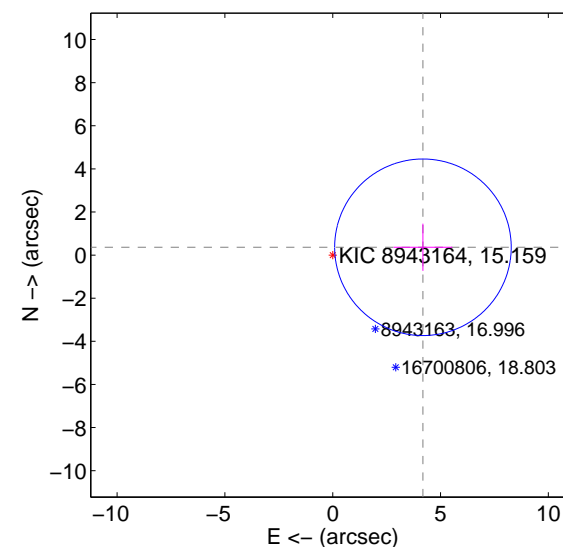
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

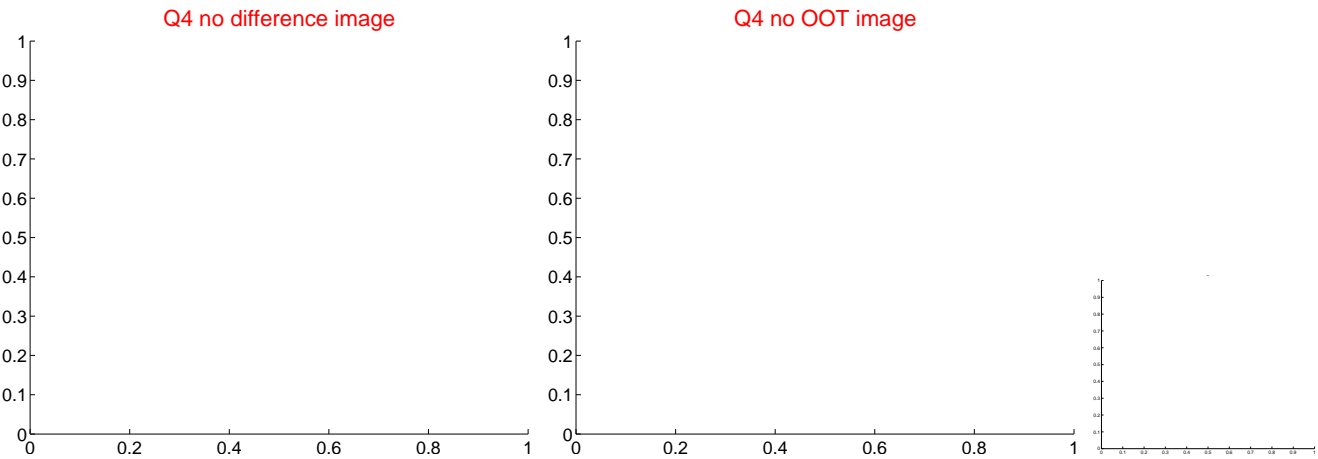
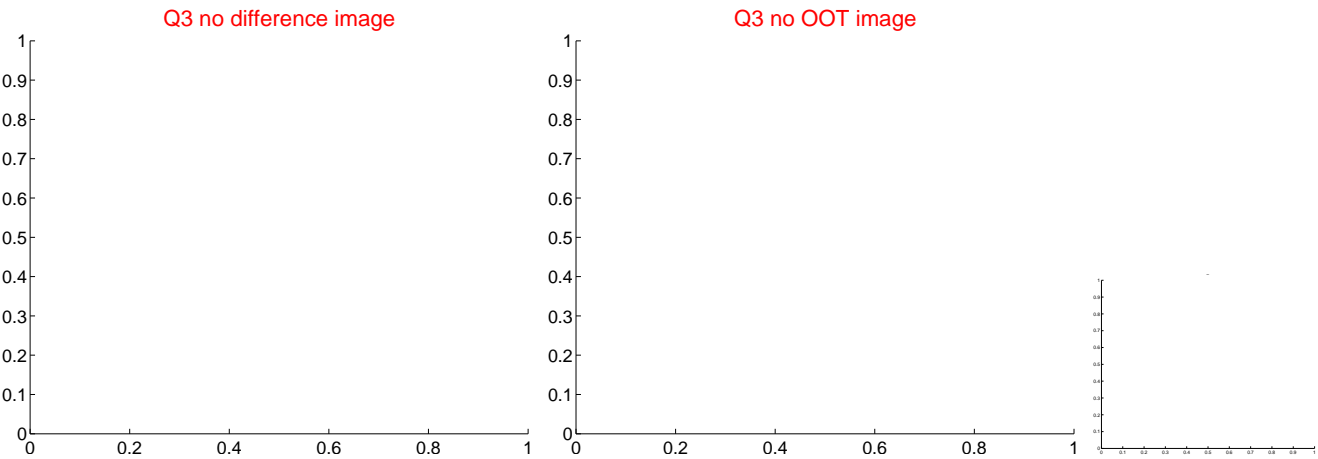
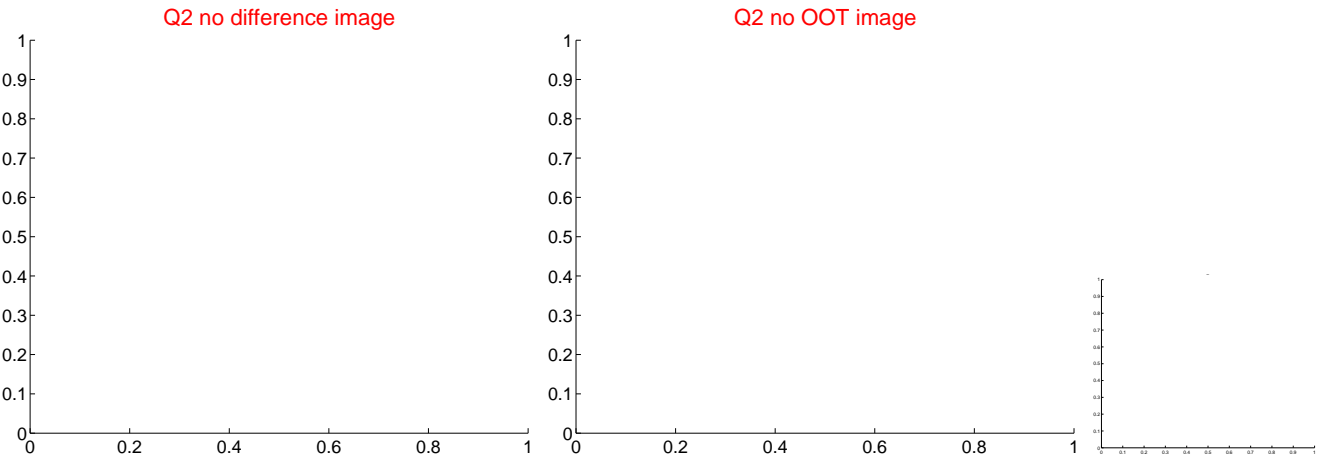
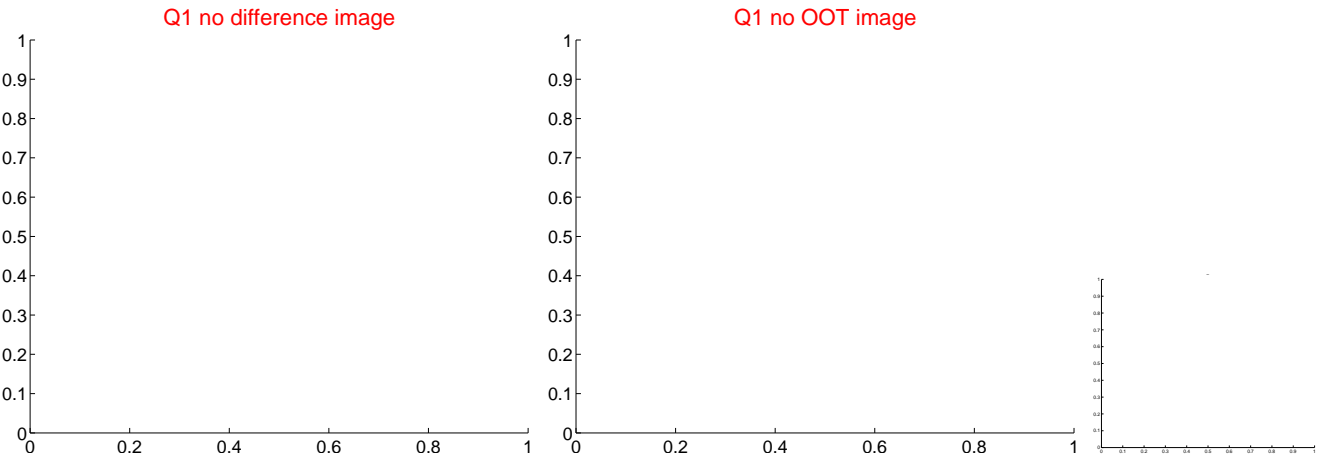


offset from photometric centroids



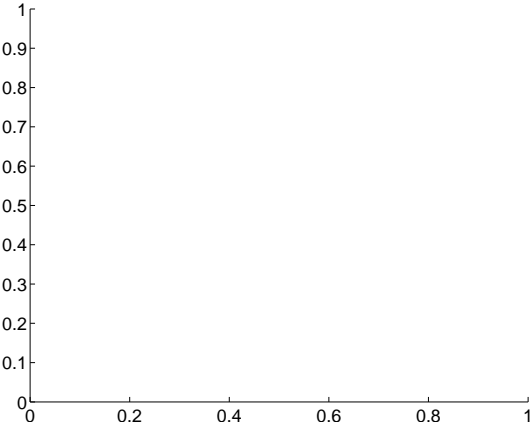
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

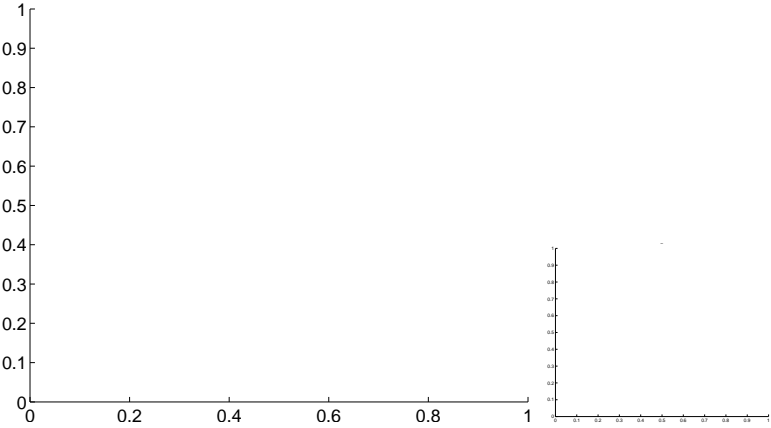


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

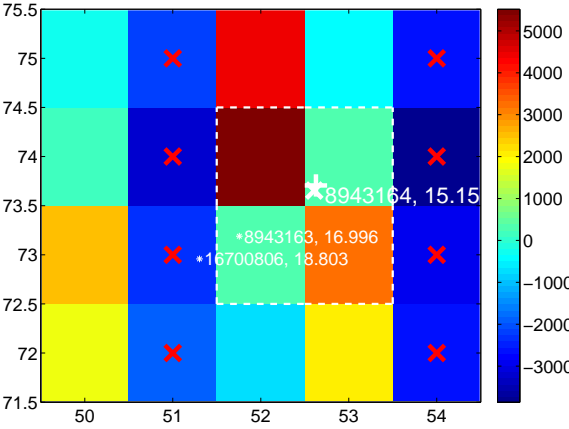
Q5 no difference image



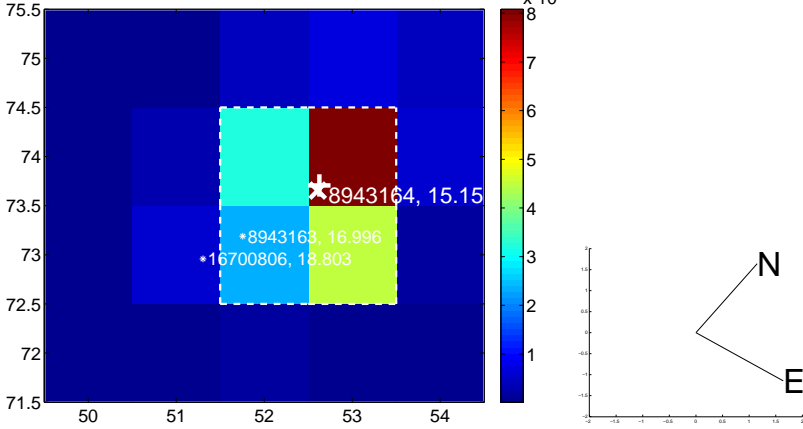
Q5 no OOT image



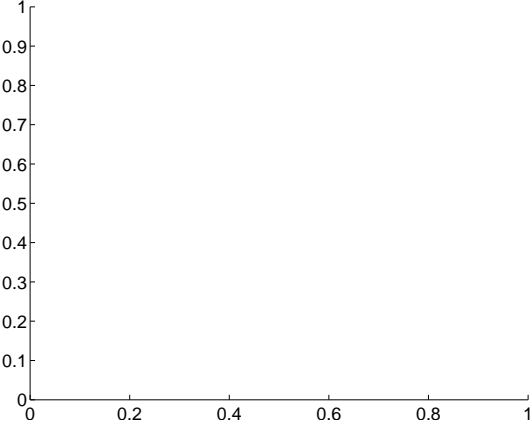
Q6 difference image. Poor Quality



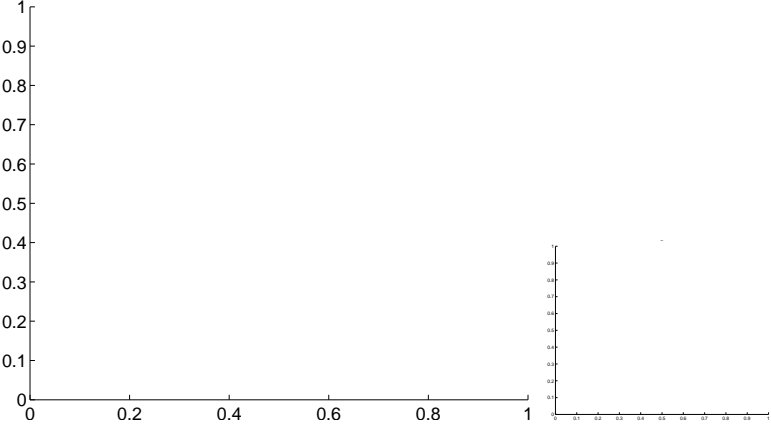
Q6 OOT image



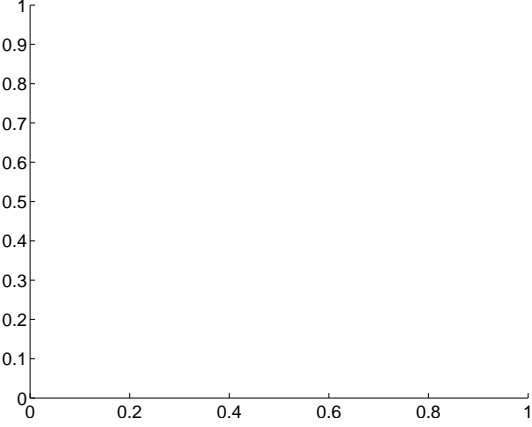
Q7 no difference image



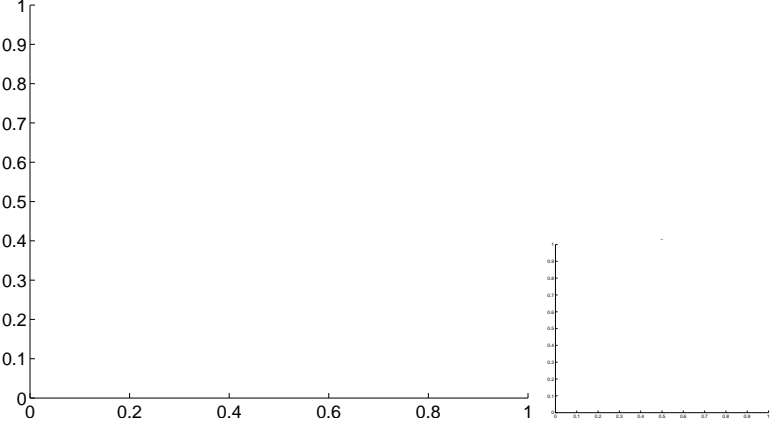
Q7 no OOT image



Q8 no difference image

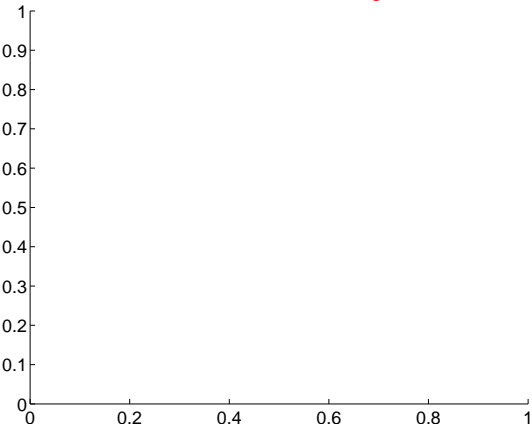


Q8 no OOT image

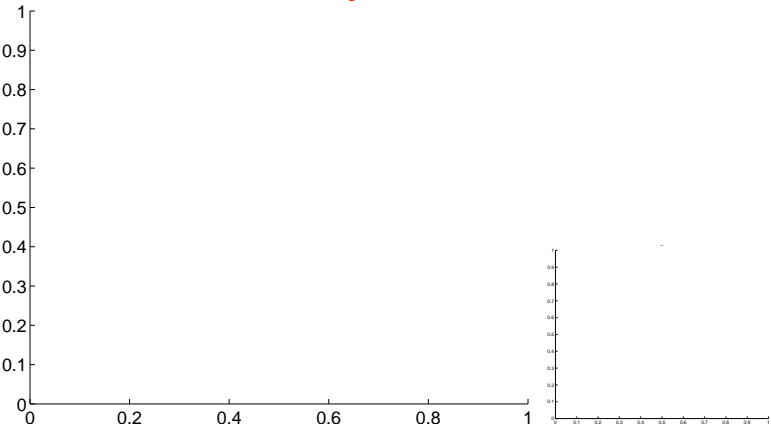


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

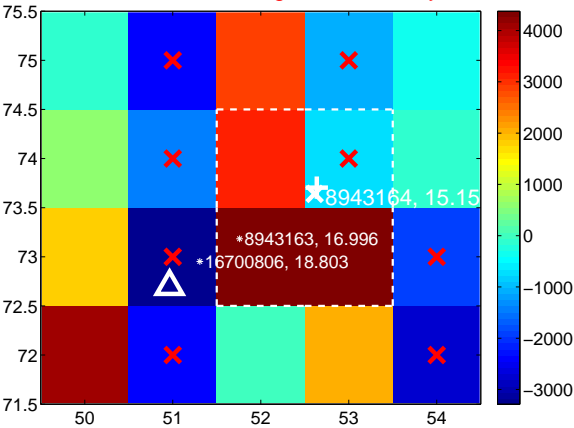
Q9 no difference image



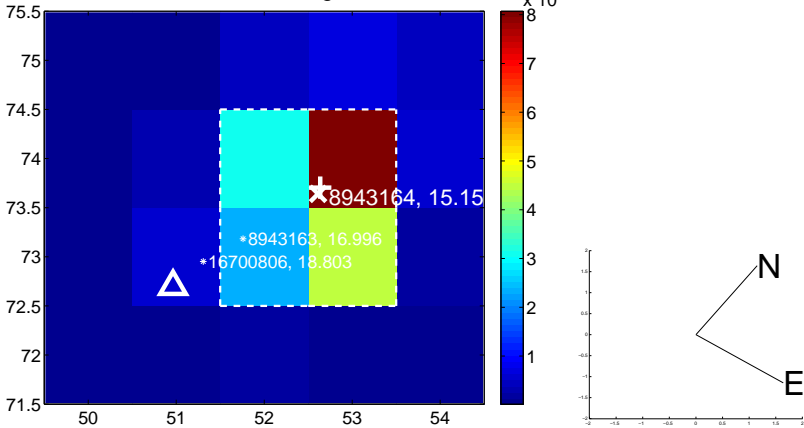
Q9 no OOT image



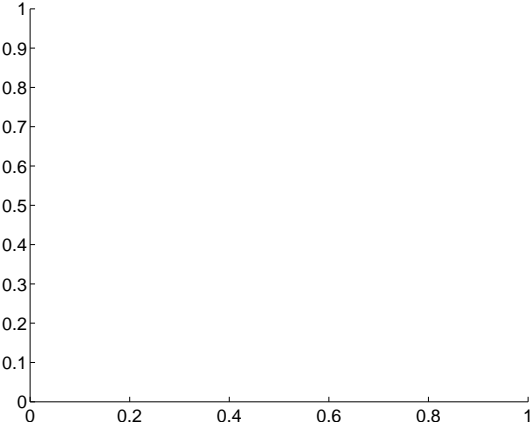
Q10 difference image. Poor Quality



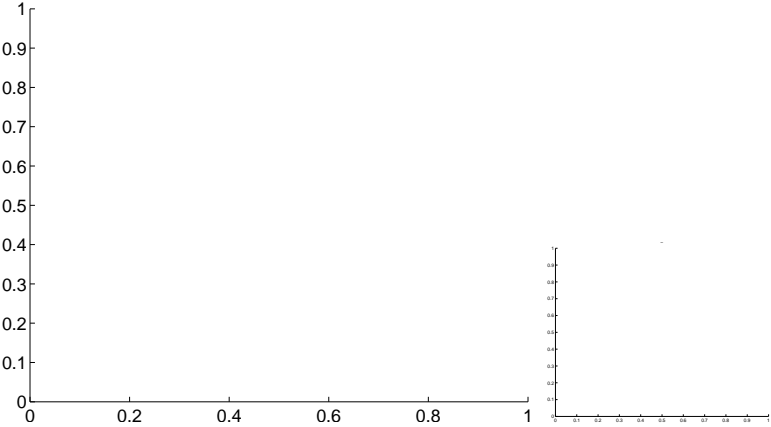
Q10 OOT image



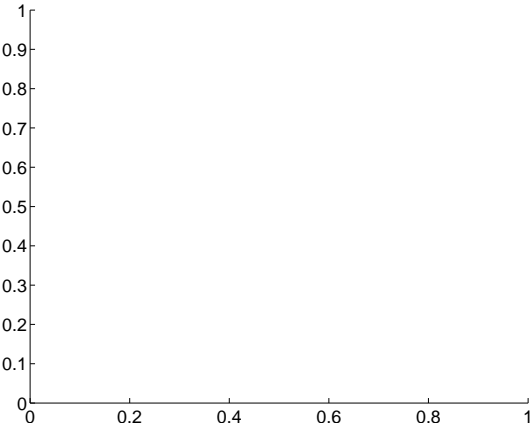
Q11 no difference image



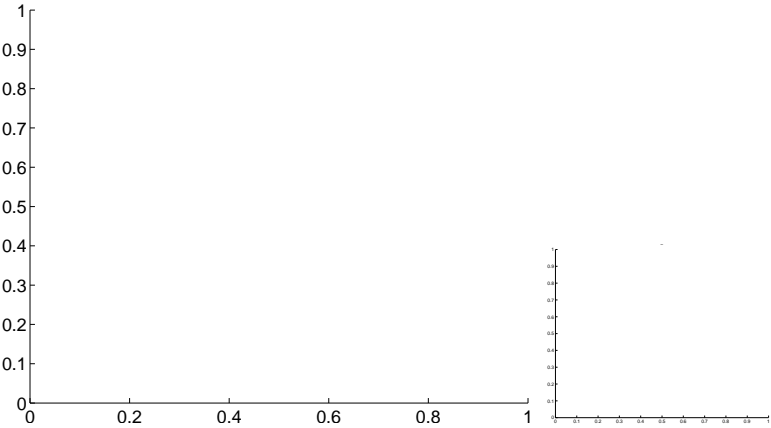
Q11 no OOT image



Q12 no difference image



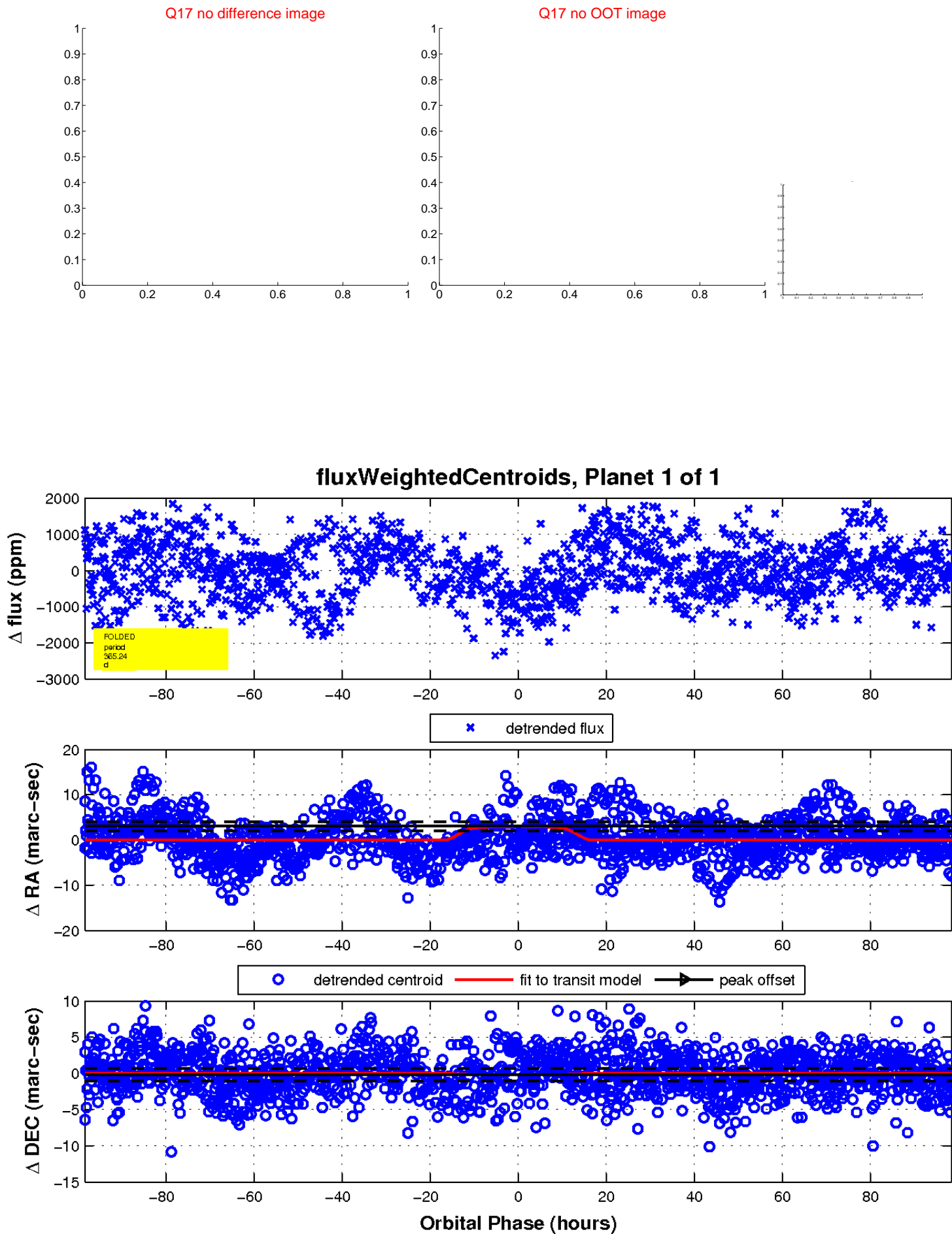
Q12 no OOT image



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.



UKIRT Image

