

KIC 010014201

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})
010014201-01	OBS	No	359.807156	163.799410	1552.0	21.204	7.8	8.0	0.76	5506	3.56	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010014201-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

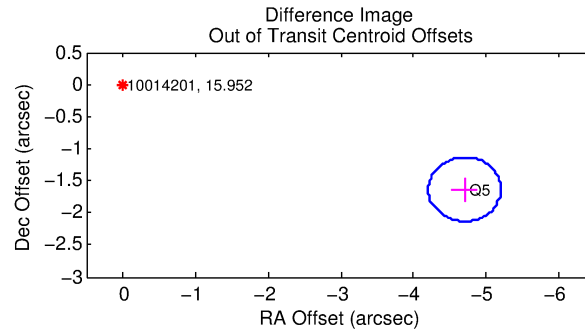
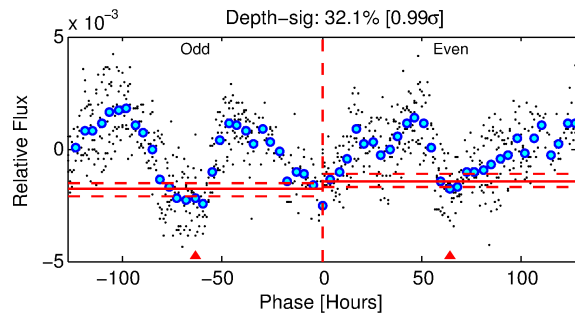
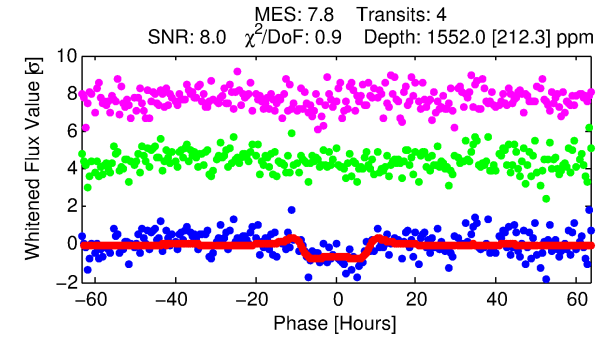
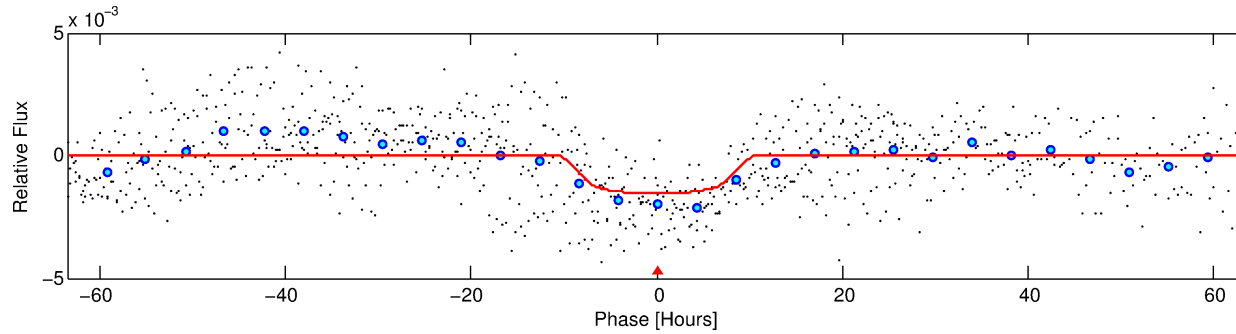
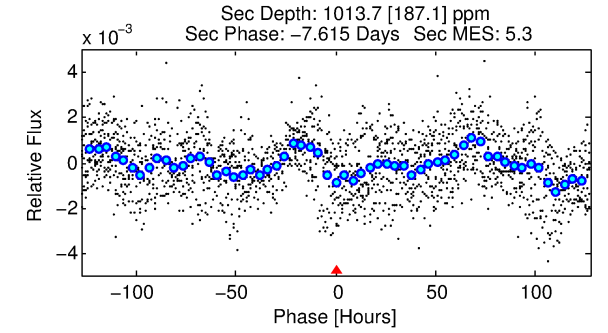
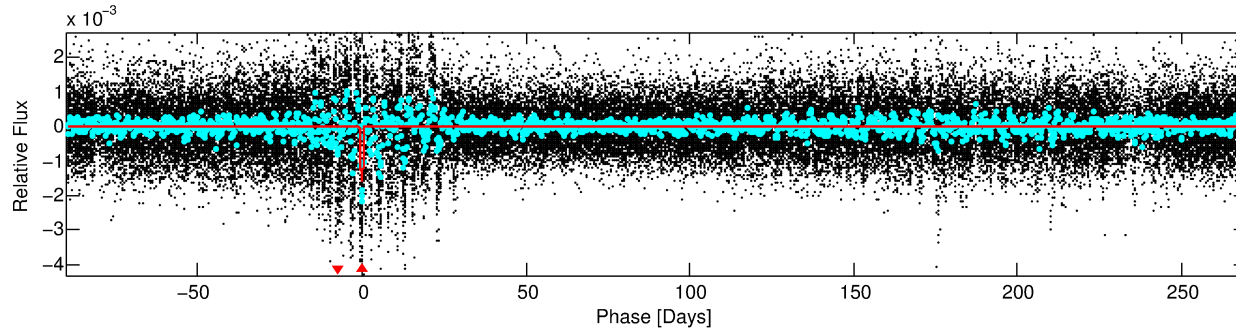
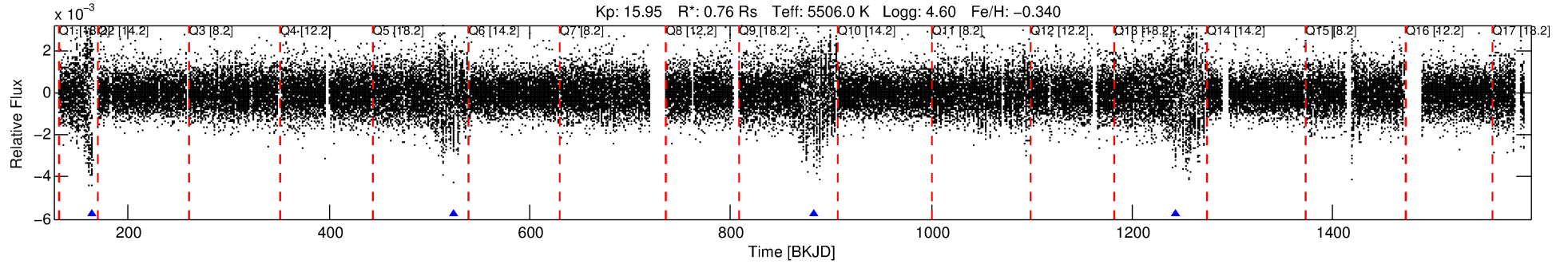
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010014201-01

No Significant Match Found

DV One-Page Summary

KIC: 10014201 Candidate: 1 of 1 Period: 359.807 d



DV Fit Results:

Period = 359.80716 [0.01645] d
Epoch = 163.7994 [0.0295] BKJD
Rp/R* = 0.0432 [0.0038]
a/R* = 67.99 [13.67]
b = 0.90 [0.04]
Seff = 0.54 [0.14]
Teq = 219 [15] K
Rp = 3.56 [0.78] Re
a = 0.9299 [0.1541] AU
Ag = 38012.91 [13252.96] [2.87σ]
Teff = 4728 [334] K [13.48σ]

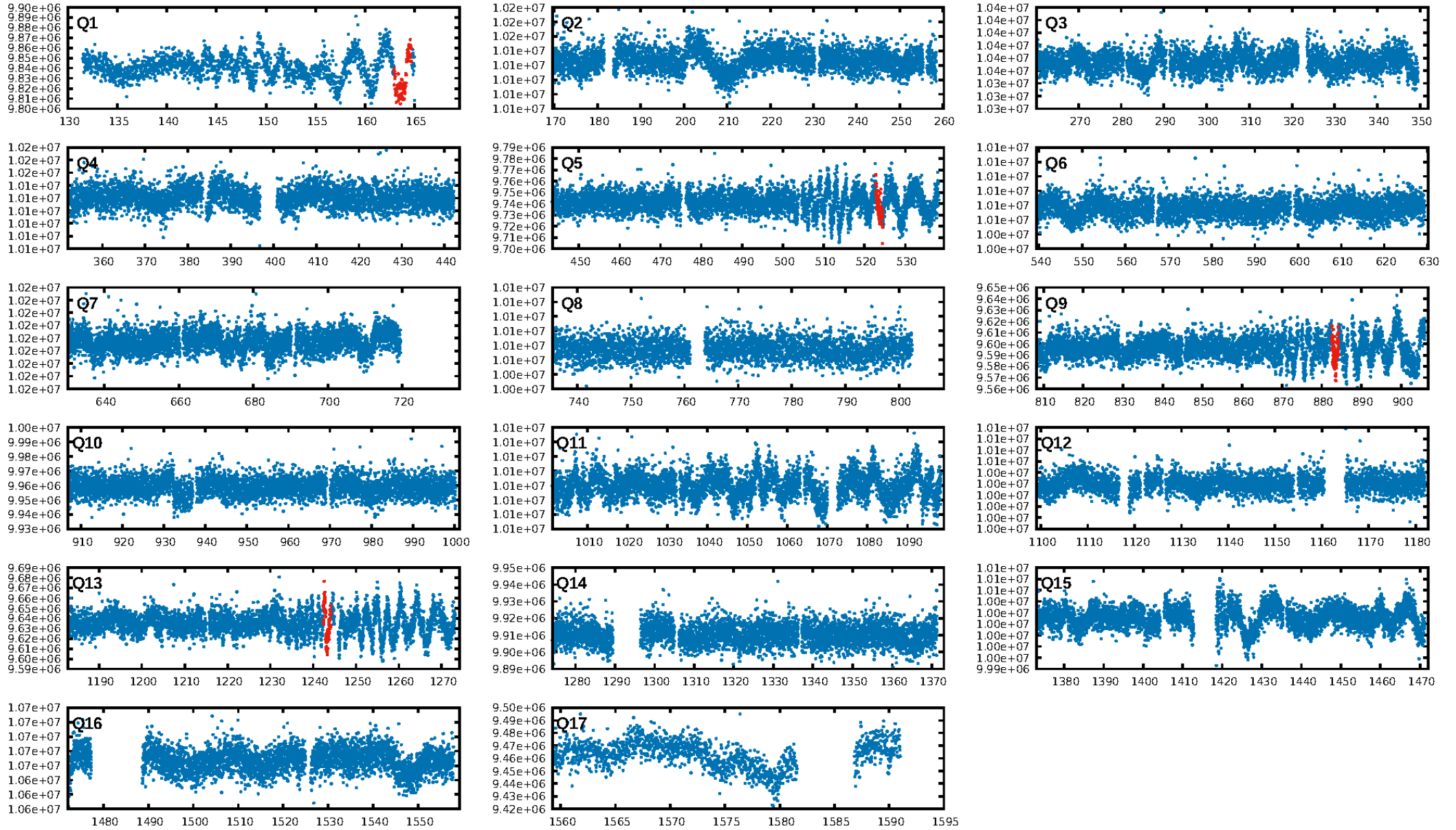
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.67e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.656
Centroid-sig: 41.2%
Centroid-so: 1.612 arcsec [1.14σ]
OotOffset-rm: 4.979 arcsec [29.92σ]
KicOffset-rm: 4.828 arcsec [29.01σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

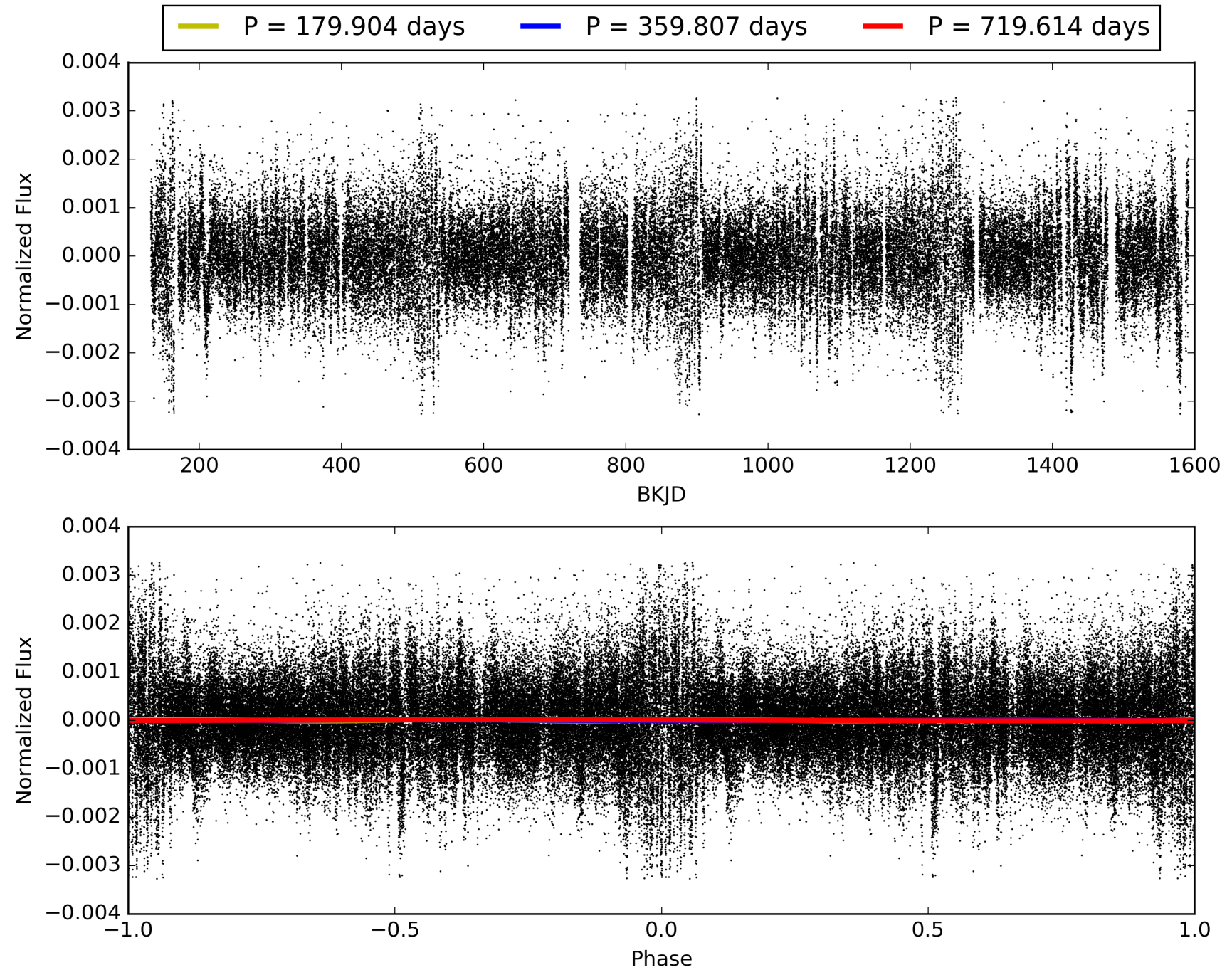
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:04:36 Z

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

TCE 010014201-01, PDC Light Curves

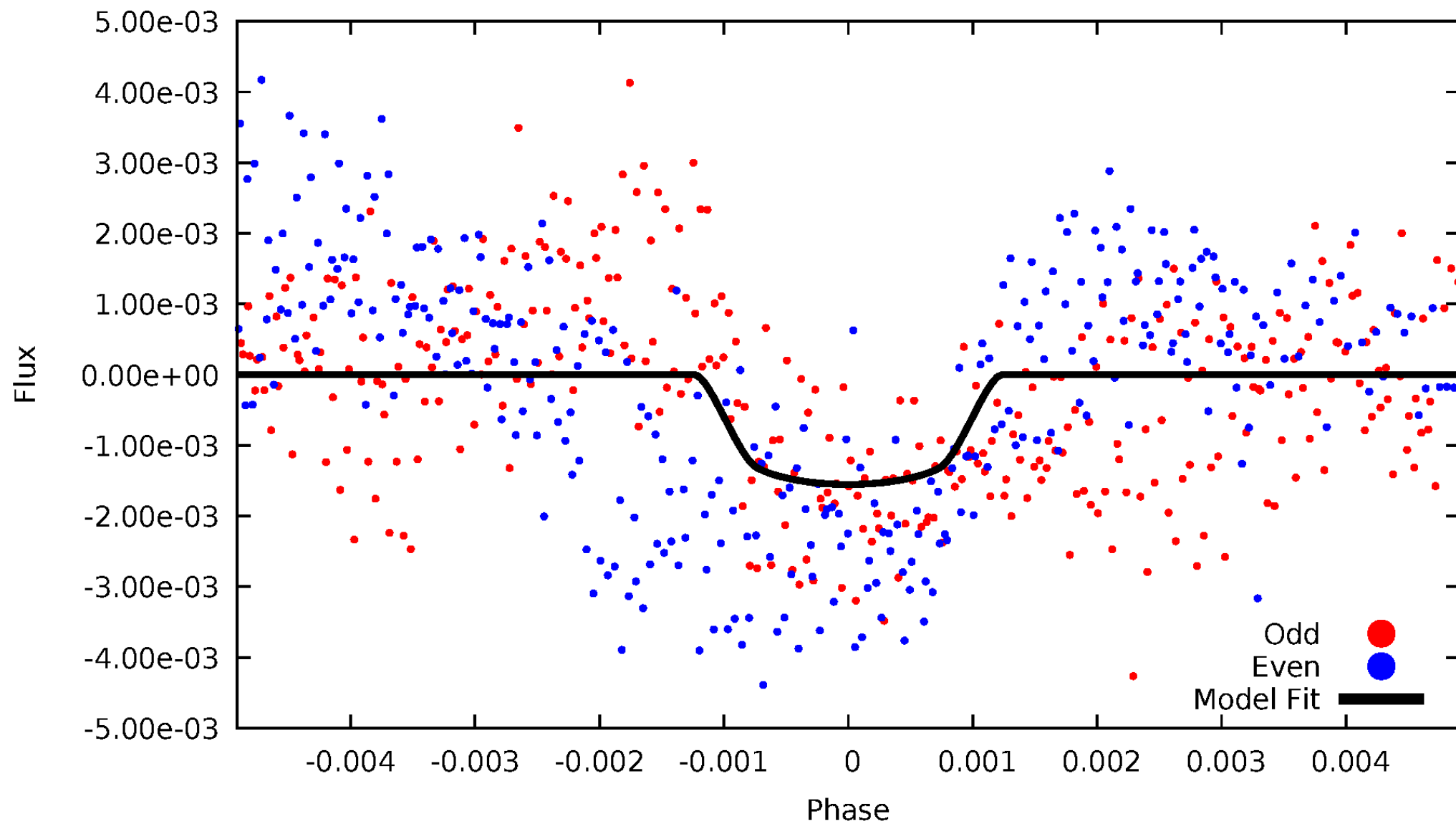


TCE 010014201-01



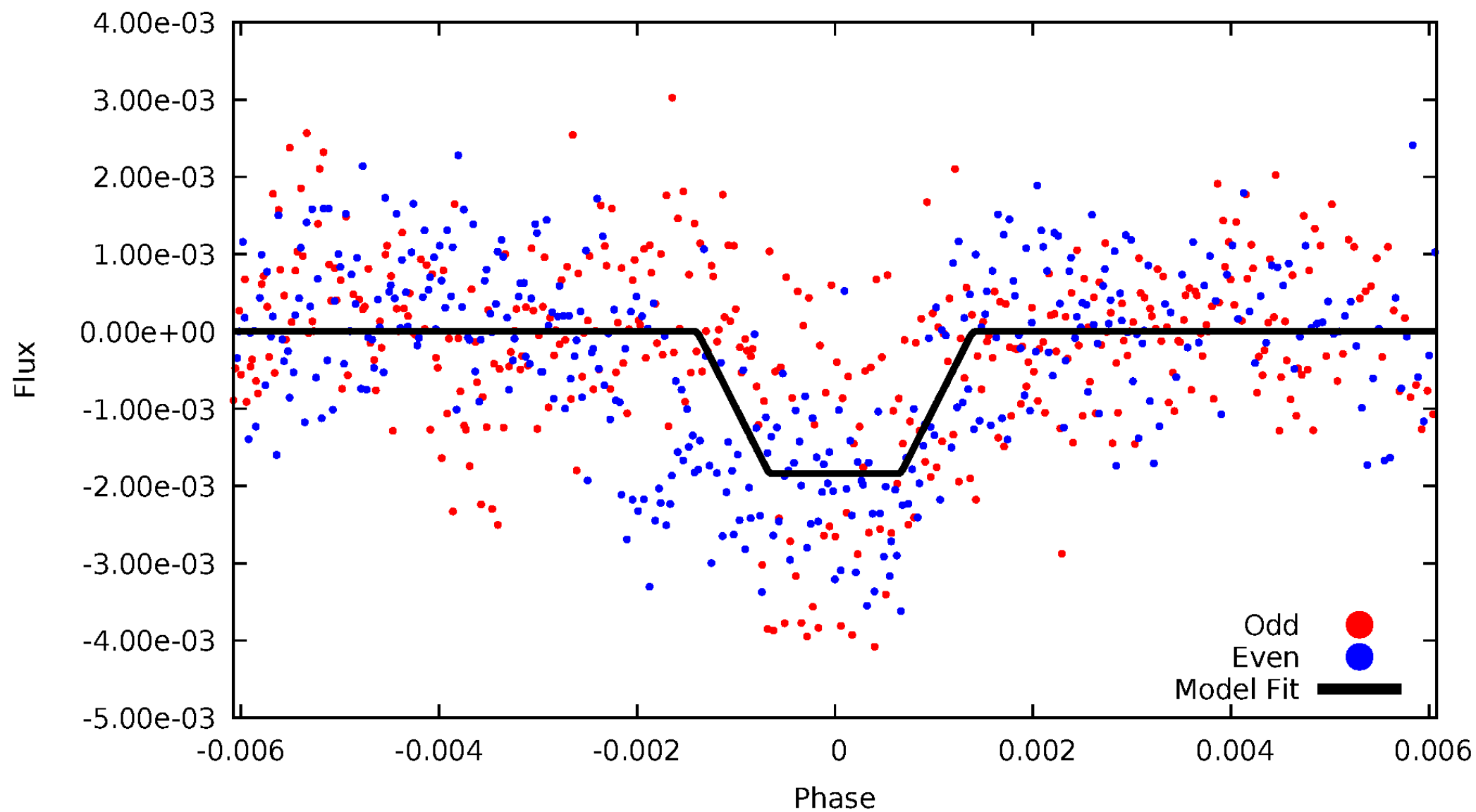
DV Odd/Even

TCE 010014201-01



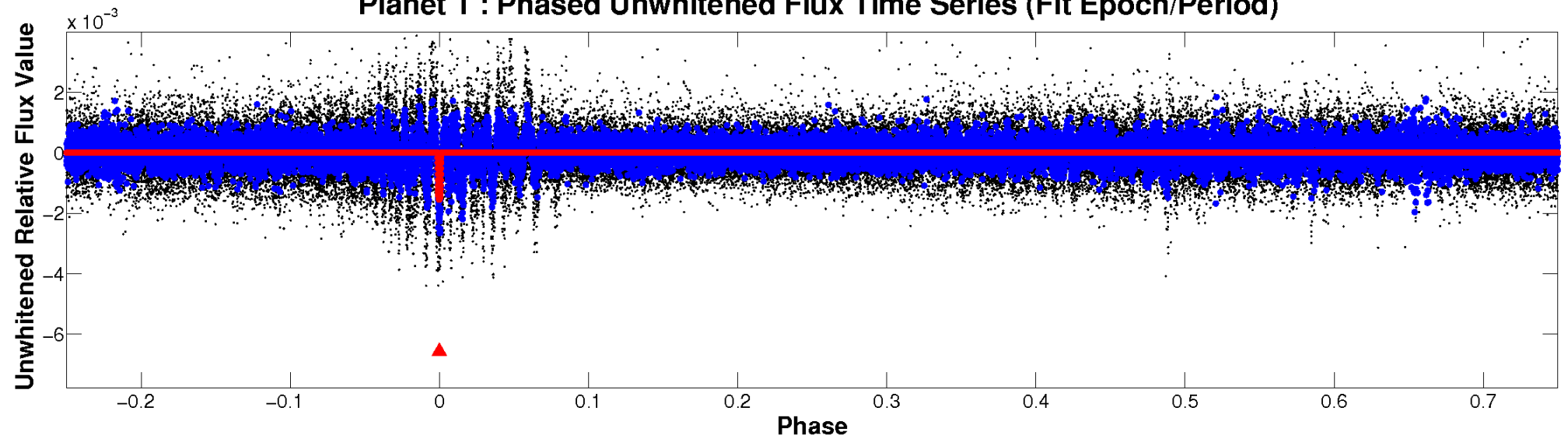
ALT Odd/Even

TCE 010014201-01

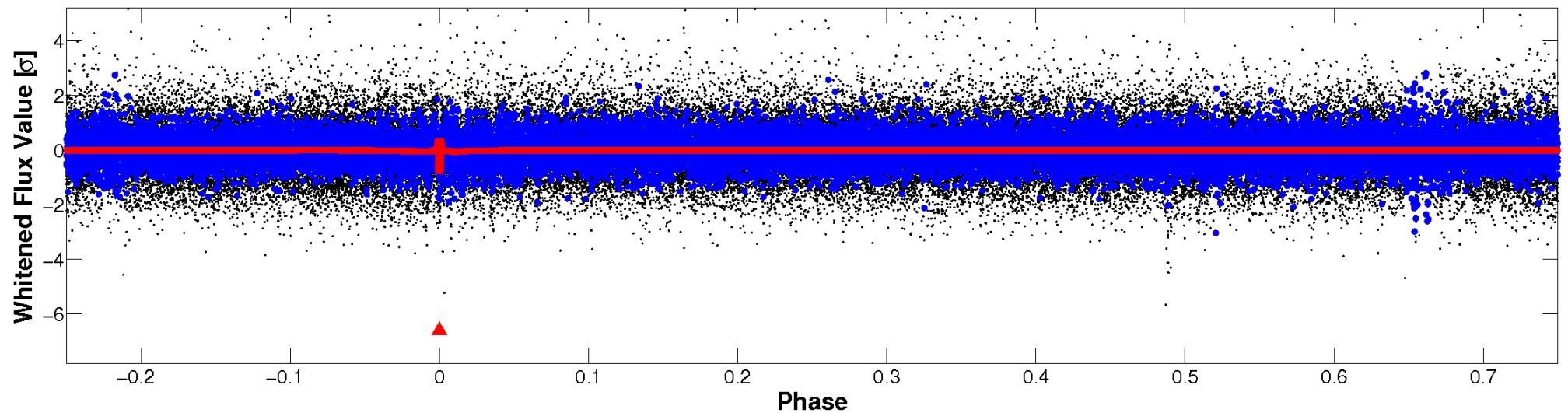


Non-Whitened Vs. Whitened Light Curve

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

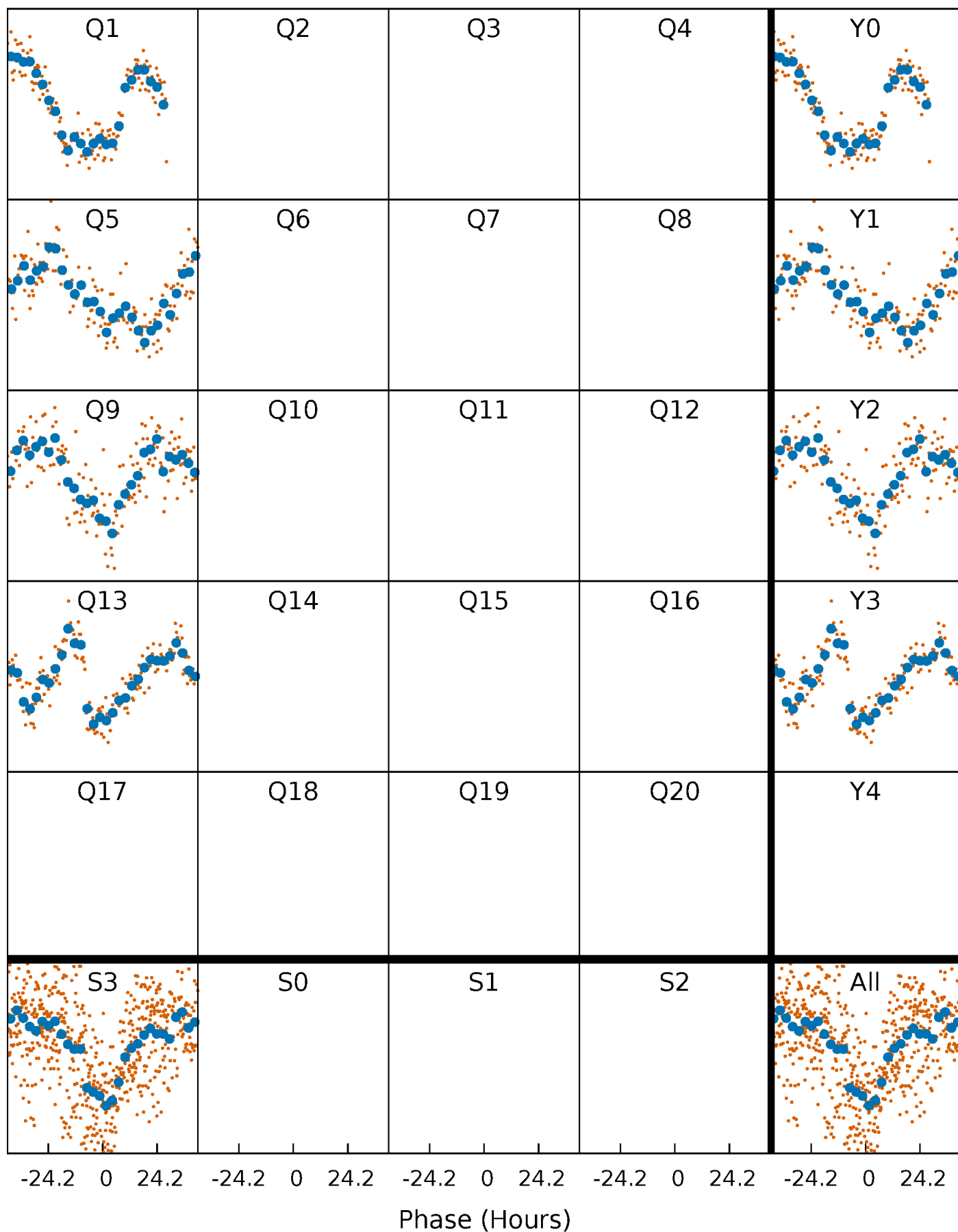


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



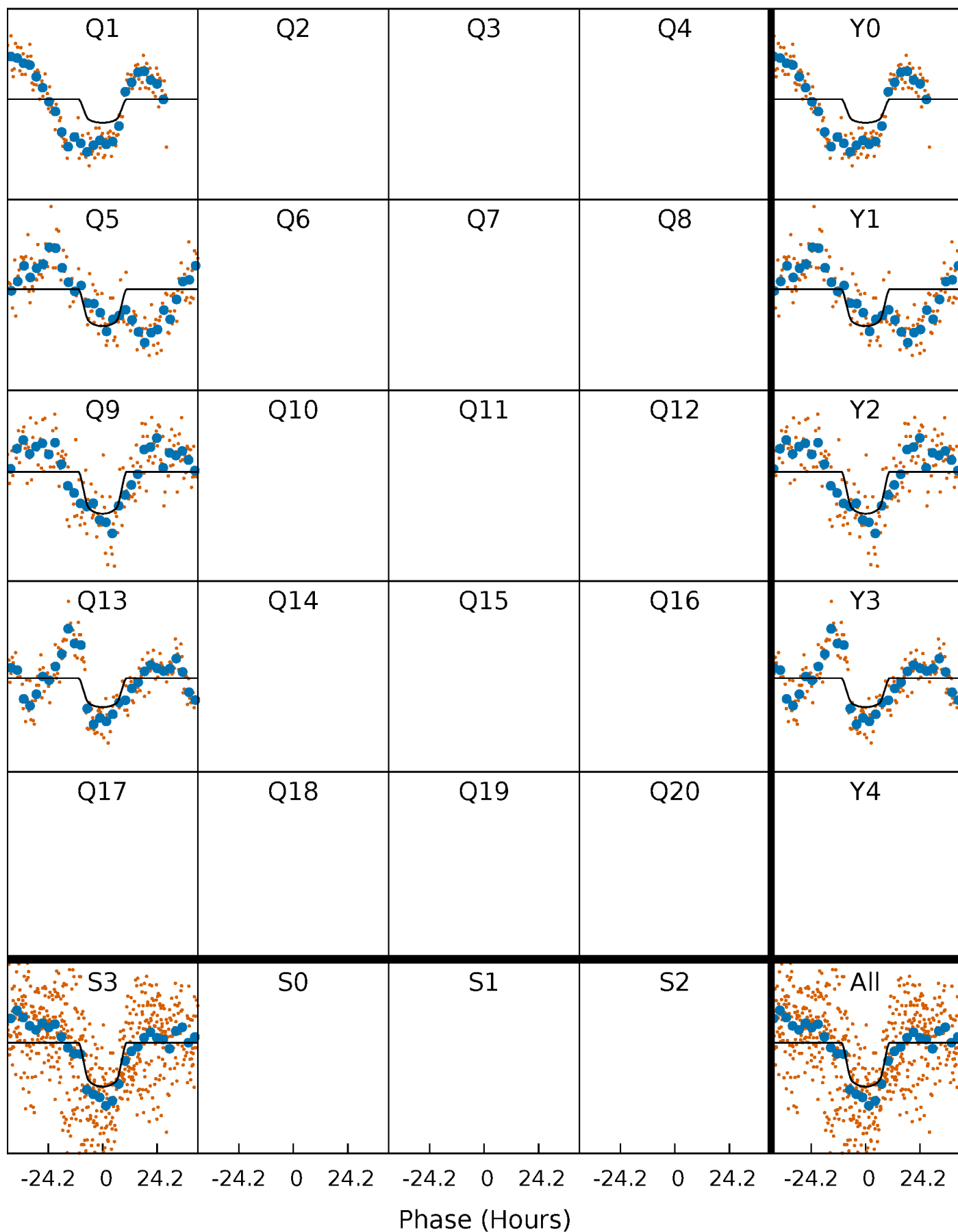
PDC Quarter-Phased Transit Curves

TCE 010014201-01 P=359.807156 Days $T_0=163.799410$ (BKJD)



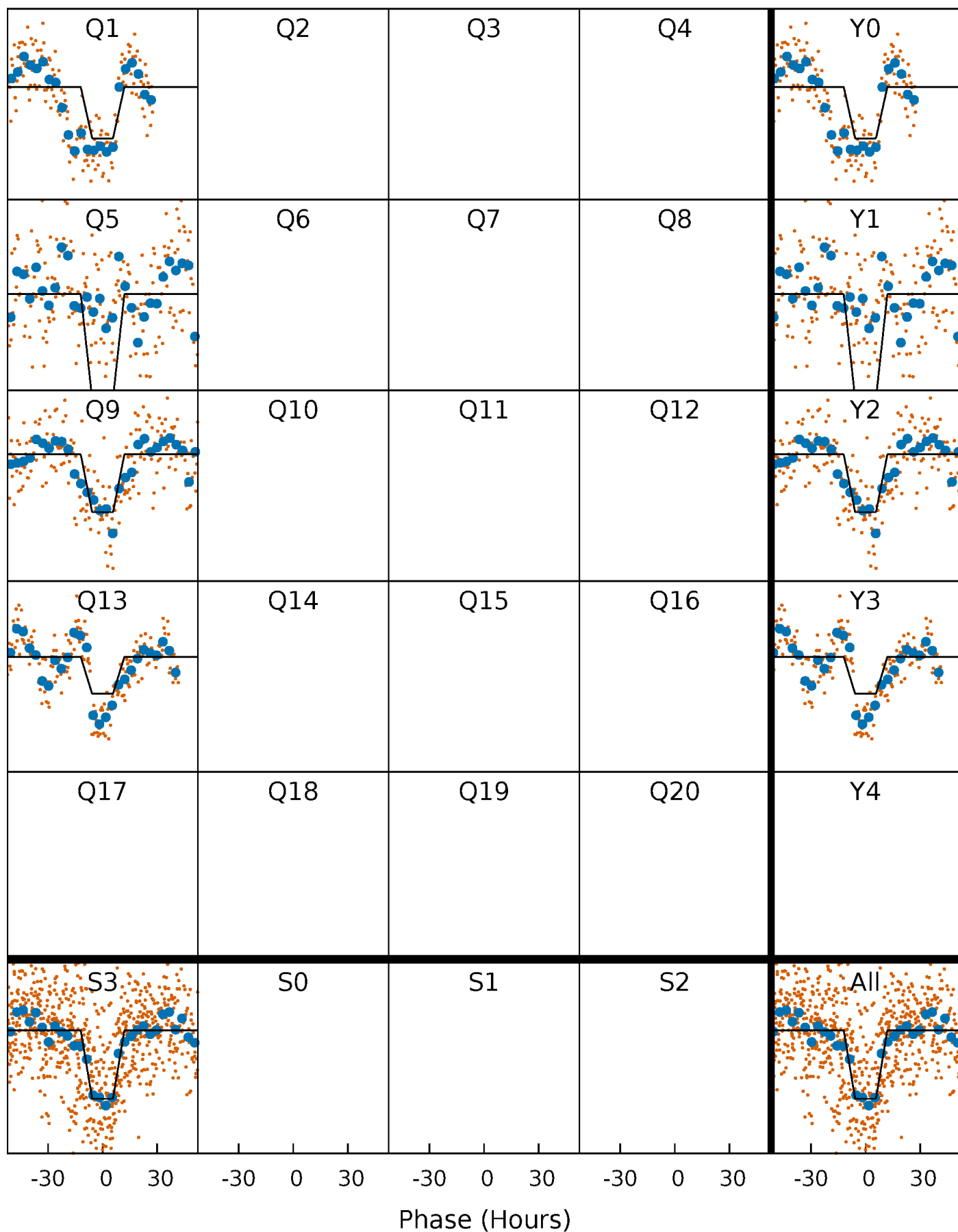
DV Quarter-Phased Transit Curves

TCE 010014201-01 P=359.807156 Days $T_0=163.799410$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

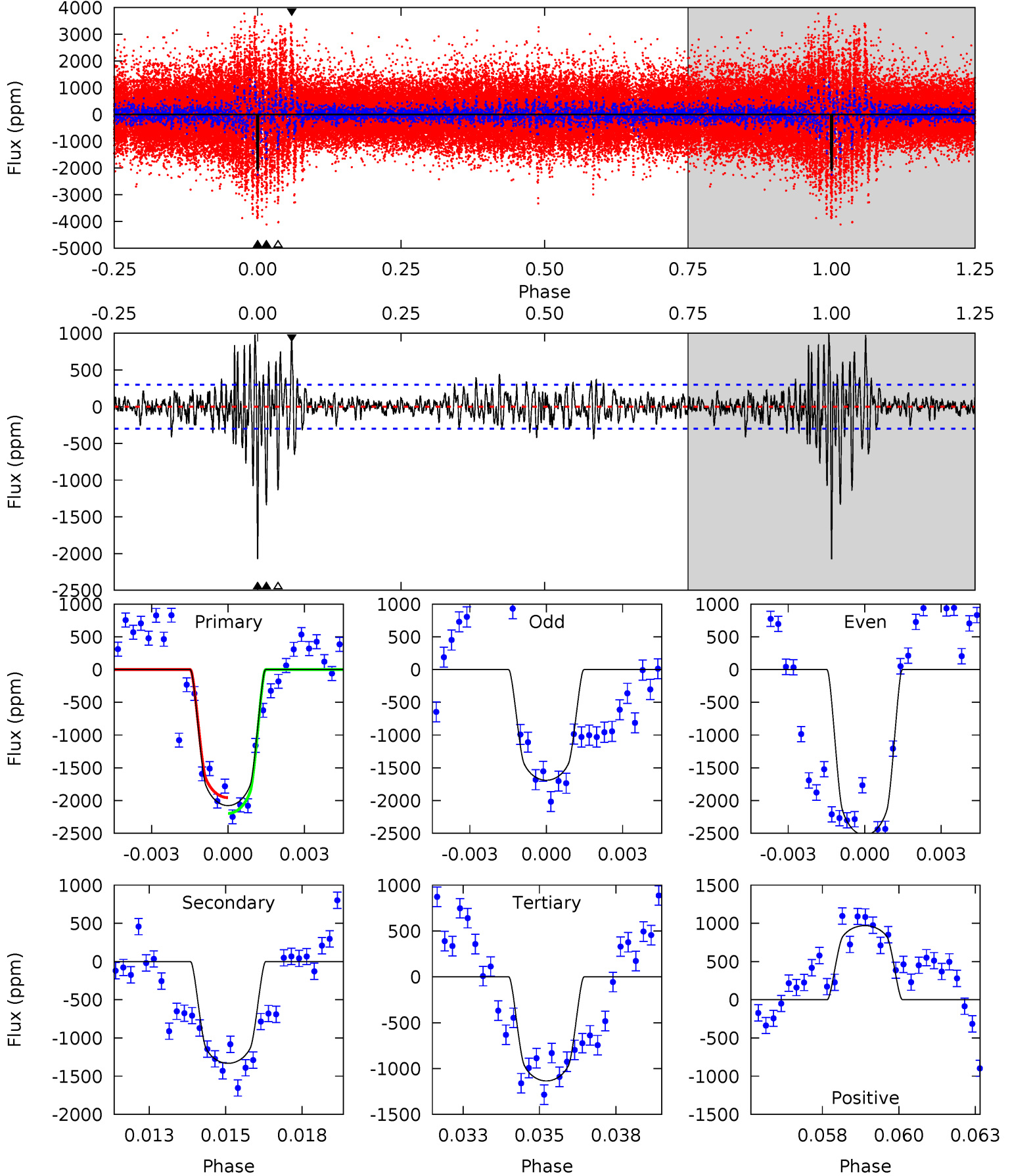
TCE 010014201-01 $P=359.787313$ Days $T_0=163.818425$ (BKJD)



DV Model-Shift Uniqueness Test

010014201-01, P = 359.807156 Days, E = 163.799410 Days

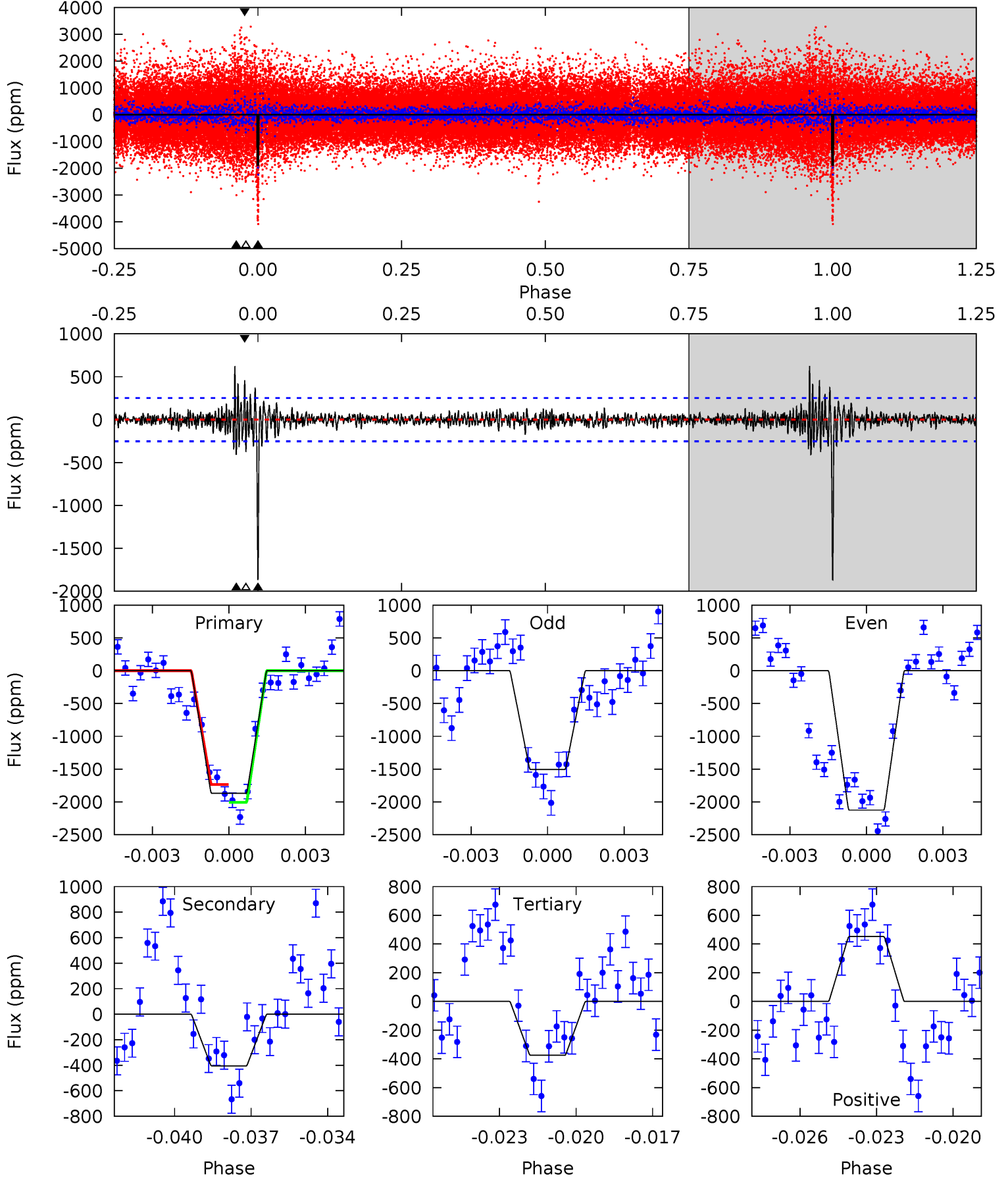
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.7	23.5	20.1	17.1	5.28	3.02	3.35	16.7	19.6	3.48	6.40	7.41	1.04	0.32	2.12



Alt Model-Shift Uniqueness Test

010014201-01, P = 359.787313 Days, E = 163.818425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	8.45	7.82	9.44	5.26	2.98	1.33	31.2	29.6	0.63	-0.99	6.54	0.85	0.25	2.82



Stellar Parameters For KIC 010014201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5506^{+165}_{-165}	$4.599^{+0.034}_{-0.127}$	$-0.340^{+0.300}_{-0.300}$	$0.756^{+0.152}_{-0.065}$	$0.836^{+0.080}_{-0.089}$	$2.722^{+0.451}_{-0.999}$
	+3%/-3%	+1%/-3%	+88%/-88%	+20%/-9%	+10%/-11%	+17%/-37%
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 010014201-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1332 ± 57	$3.71^{+0.47}_{-0.42}$	311^{+17}_{-13}	5092^{+264}_{-221}	45925^{+11318}_{-9274}
Alt.	-405 ± 48	$3.66^{+0.47}_{-0.40}$	312^{+15}_{-12}	4057^{+197}_{-178}	13961^{+4657}_{-3030}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

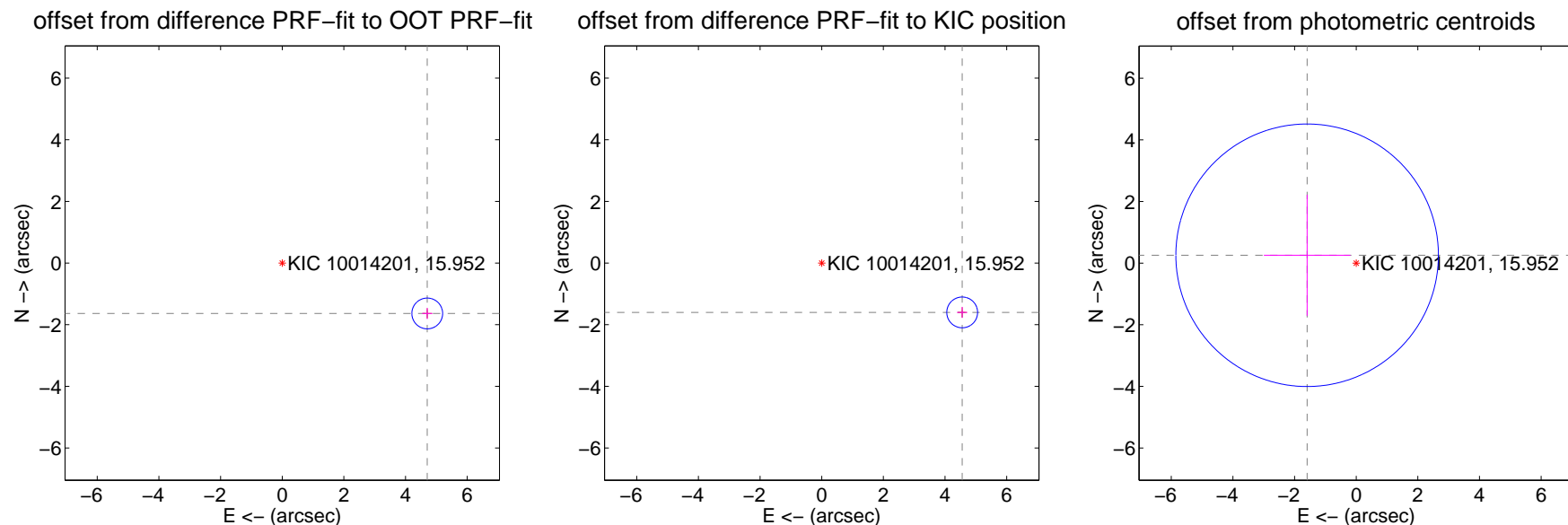
DV Centroid Data

Supplemental centroid analysis for 010014201-01. Kepler magnitude: 15.95. Transit SNR 8.04

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.979 ± 0.166	29.92	-4.703 ± 0.165	-1.635 ± 0.178
PRF-fit source offset from KIC position	4.828 ± 0.166	29.01	-4.555 ± 0.165	-1.601 ± 0.178
photometric centroid source offset	1.61 ± 1.42	1.14	1.59 ± 1.40	0.25 ± 1.96

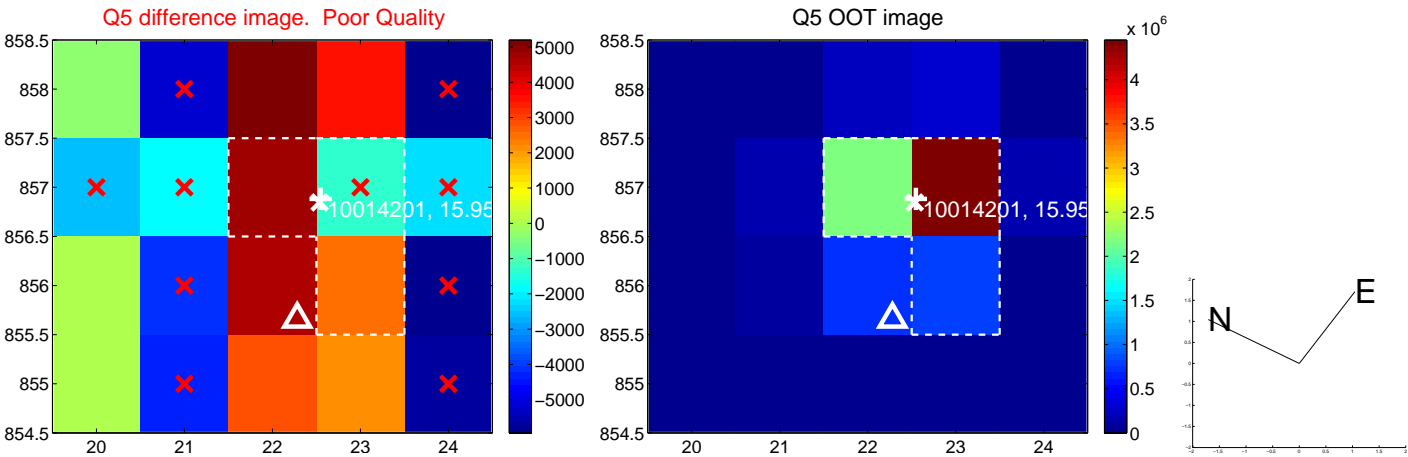


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

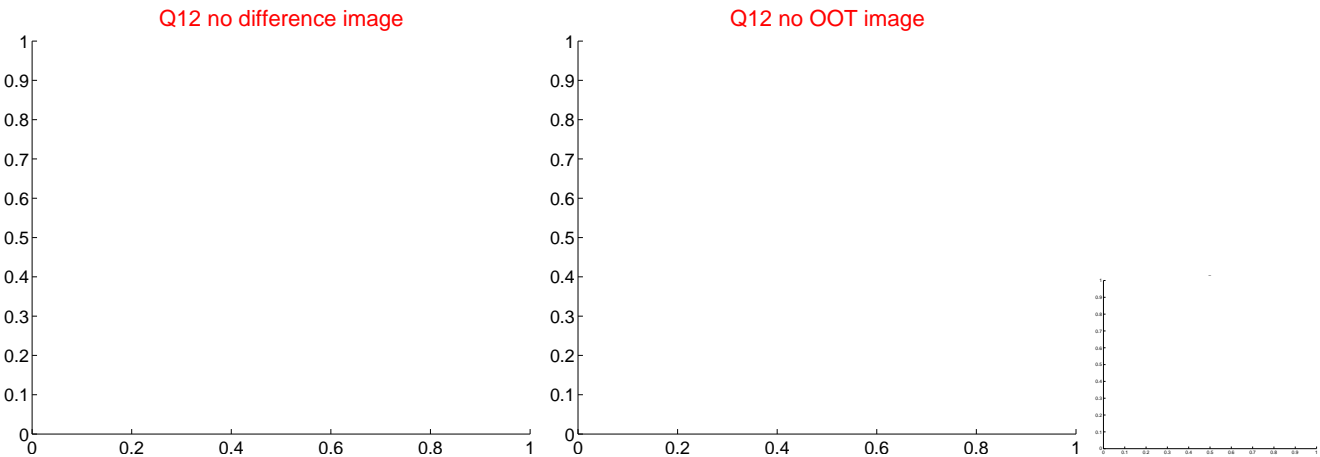
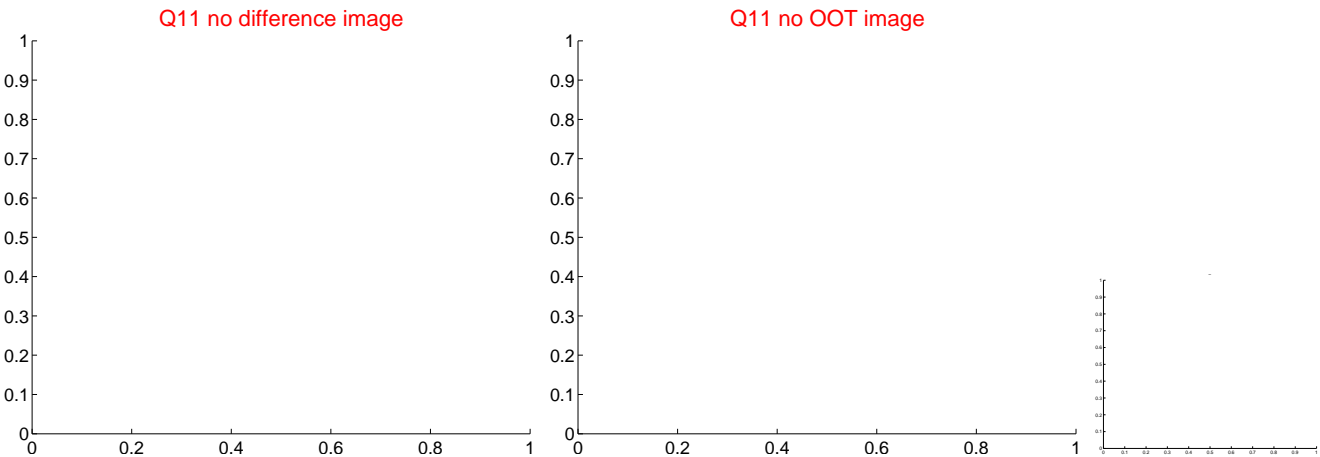
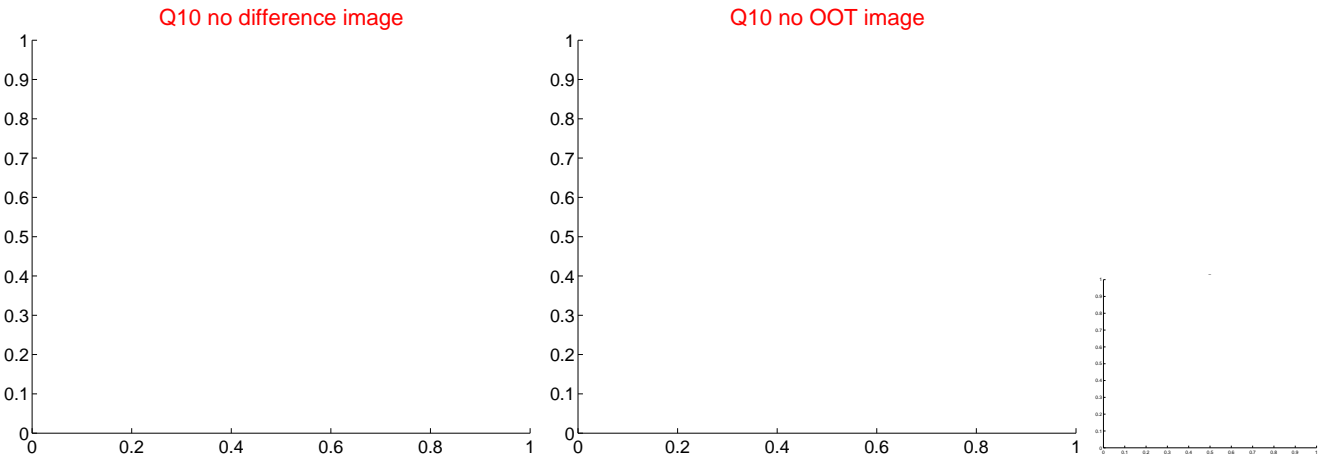
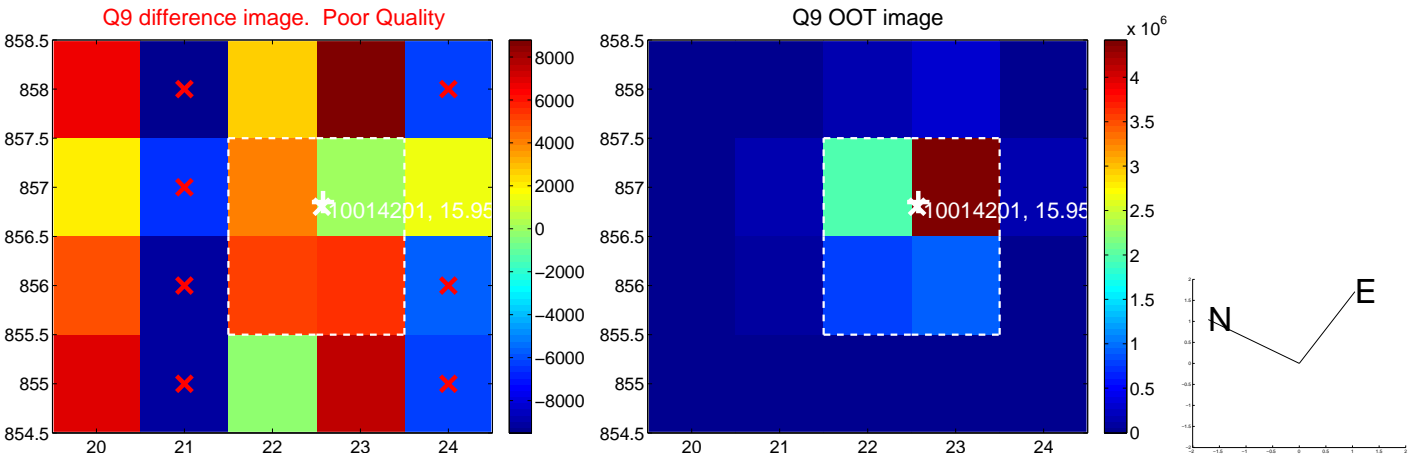
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



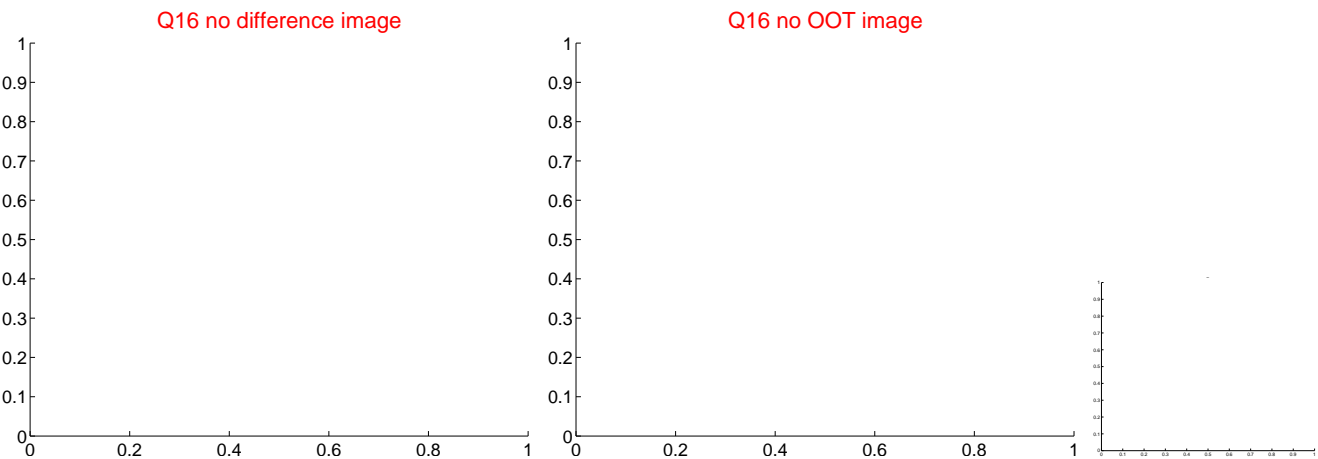
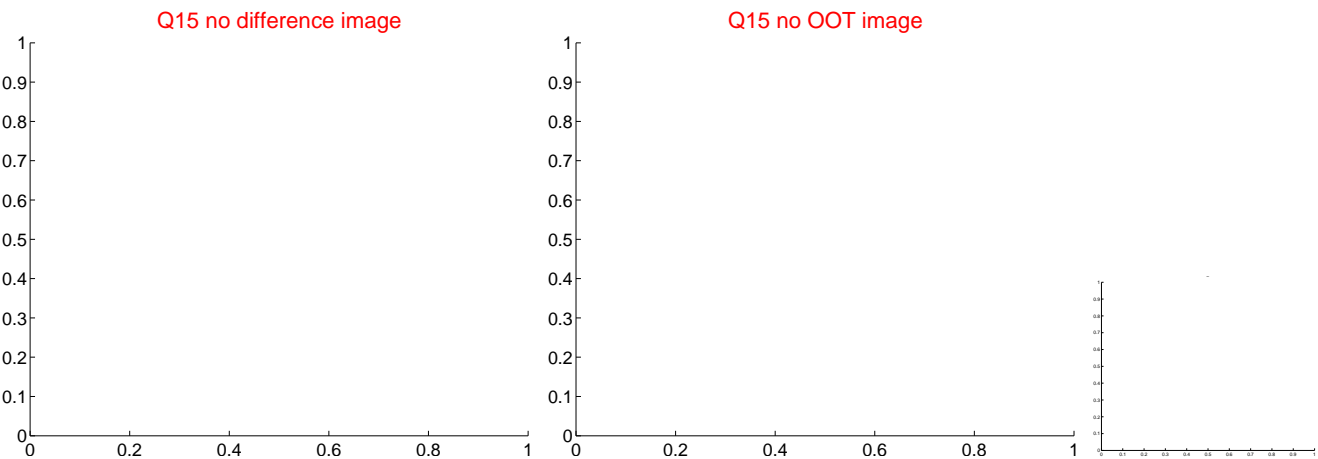
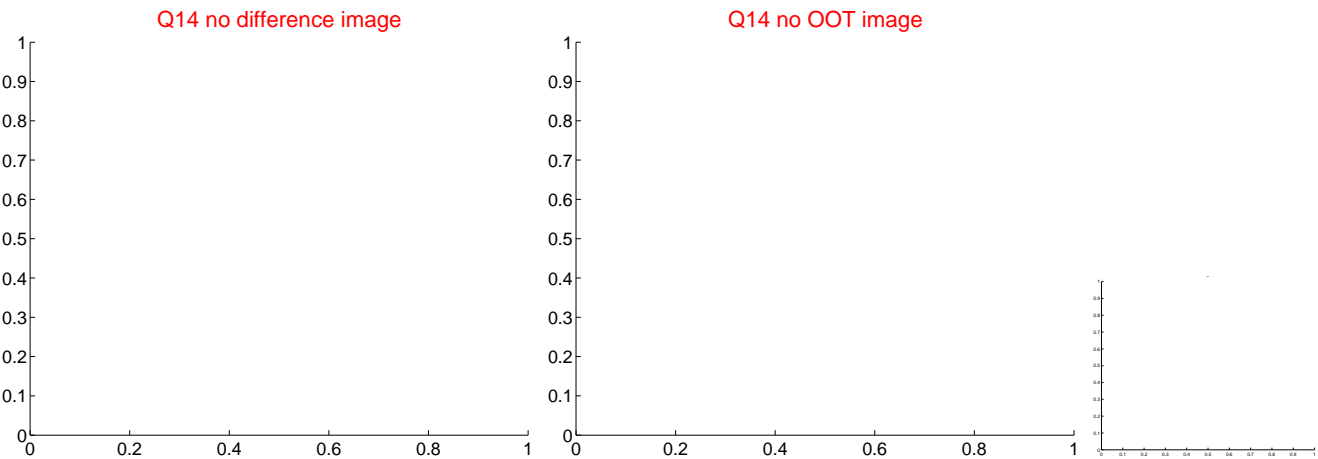
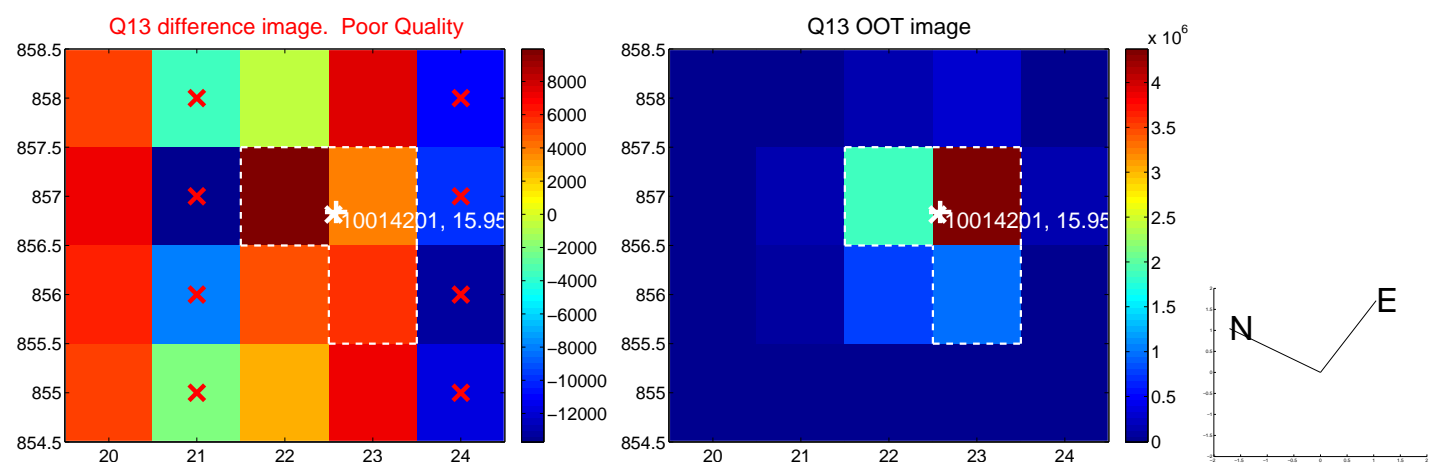
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



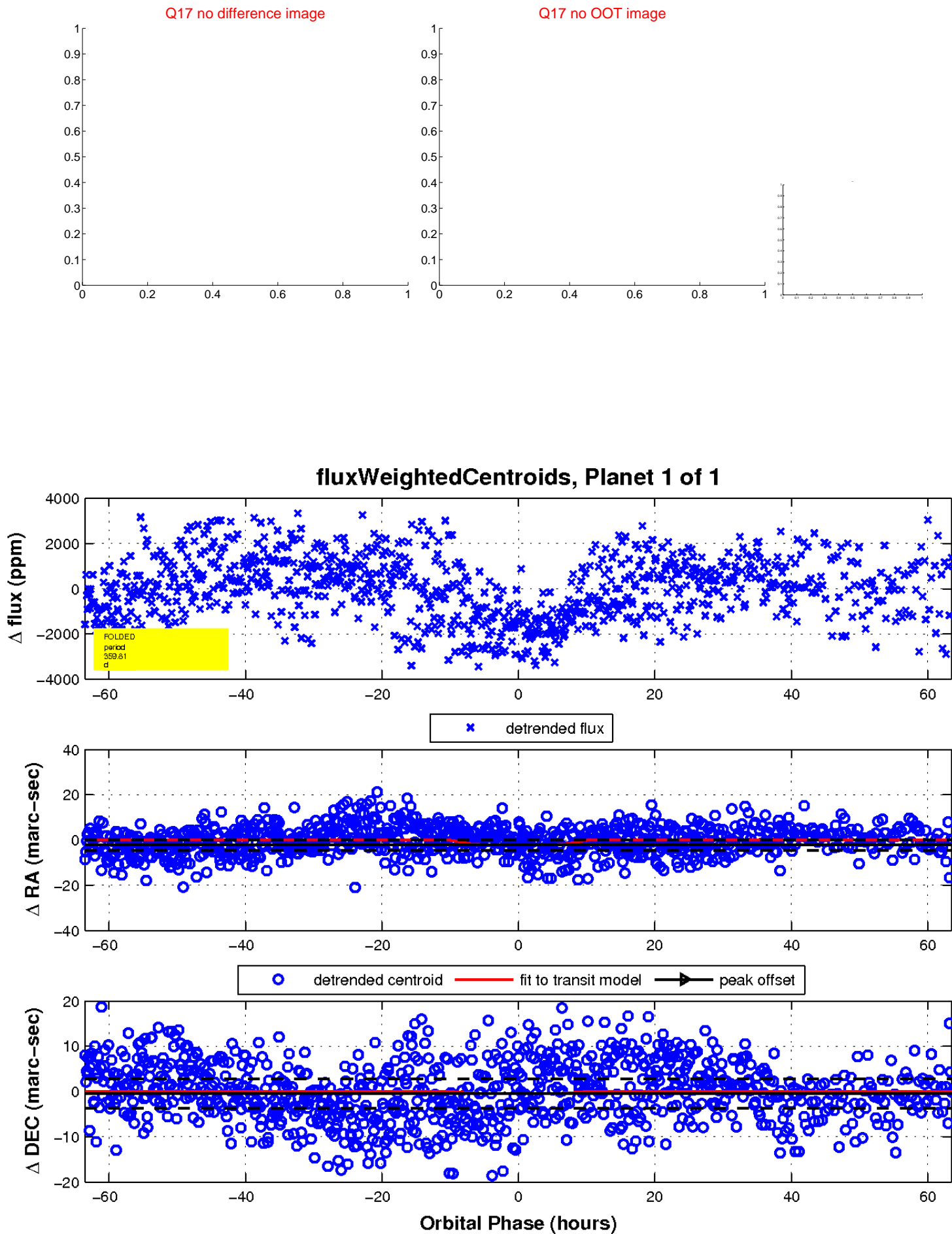
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

