

KIC 003446721

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})
003446721-01	OBS	No	200.400121	329.567361	802.7	2.486	7.1	6.9	1.15	6484	3.41	4.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003446721-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

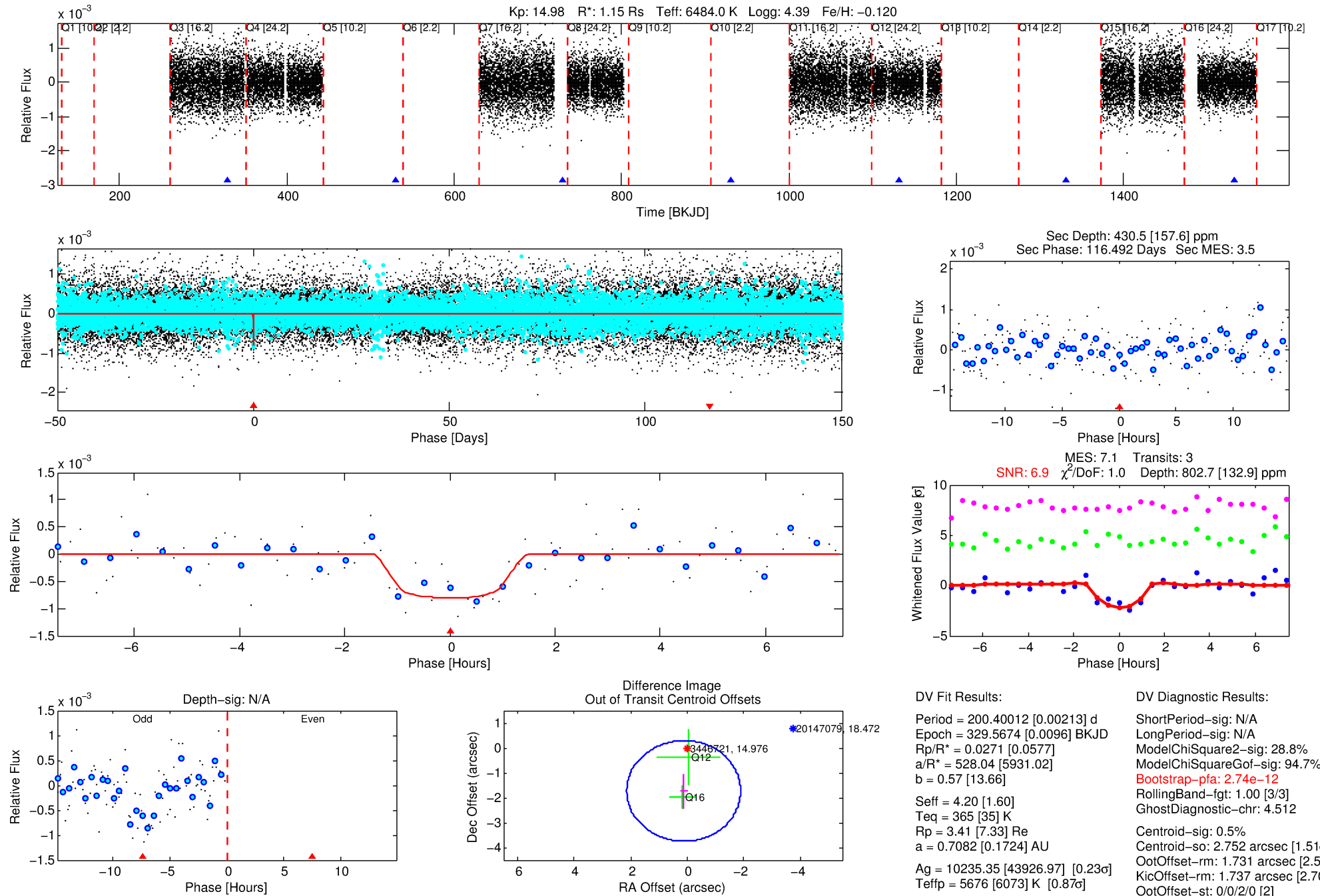
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003446721-01

No Significant Match Found

DV One-Page Summary

KIC: 3446721 Candidate: 1 of 1 Period: 200.400 d



DV Fit Results:

Period = 200.40012 [0.00213] d
 Epoch = 329.5674 [0.0096] BKJD
 Rp/R* = 0.0271 [0.0577]
 a/R* = 528.04 [5931.02]
 b = 0.57 [13.66]
 Seff = 4.20 [1.60]
 Teq = 365 [35] K
 Rp = 3.41 [7.33] Re
 a = 0.7082 [0.1724] AU
 Ag = 10235.35 [43926.97] [0.23σ]
 Tefp = 5676 [6073] K [0.87σ]

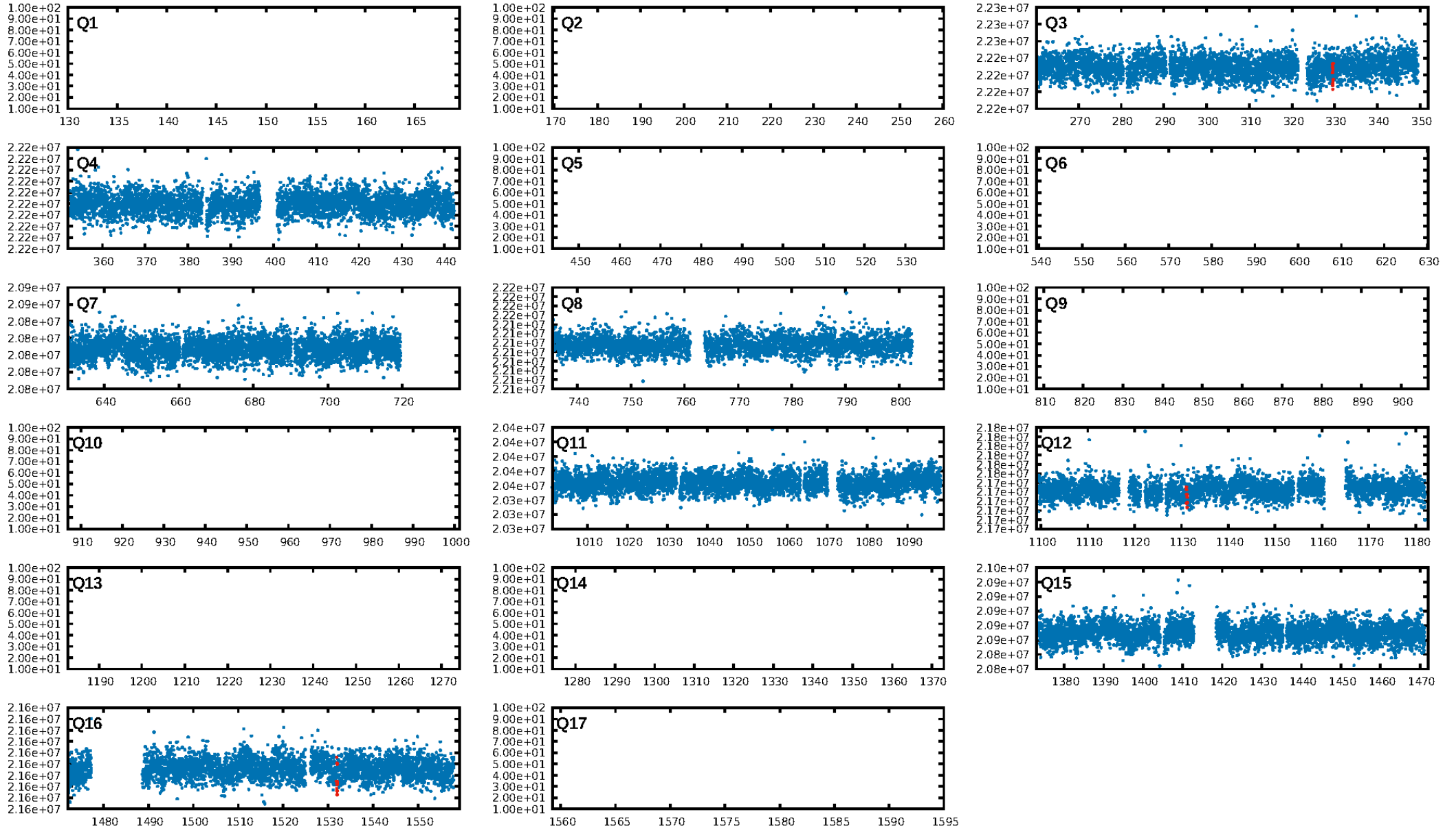
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 28.8%
 ModelChiSquareGof-sig: 94.7%
Bootstrap-pfa: 2.74e-12
 RollingBand-fgt: 1.00 [3/3]
 GhostDiagnostic-chr: 4.512
 Centroid-sig: 0.5%
 Centroid-so: 2.752 arcsec [1.51σ]
 OotOffset-rm: 1.731 arcsec [2.57σ]
 OotOffset-st: 0/0/2/0 [2]
 KicOffset-rm: 1.737 arcsec [2.70σ]
 KicOffset-st: 0/0/2/0 [2]
 DiffImageQuality-fgm: 0.50 [1/2]
 DiffImageOverlap-fno: 1.00 [3/3]

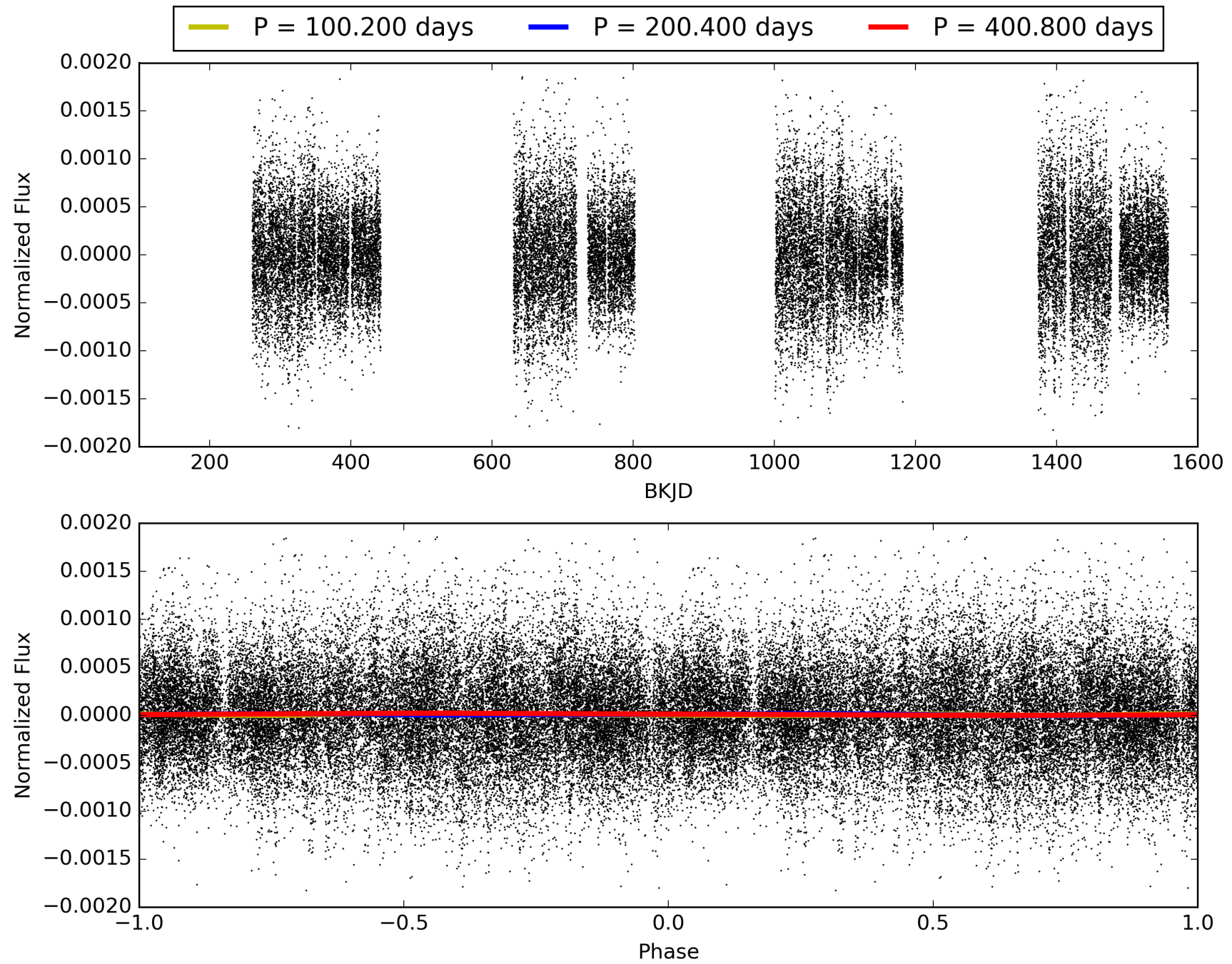
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:00:56 Z

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

TCE 003446721-01, PDC Light Curves

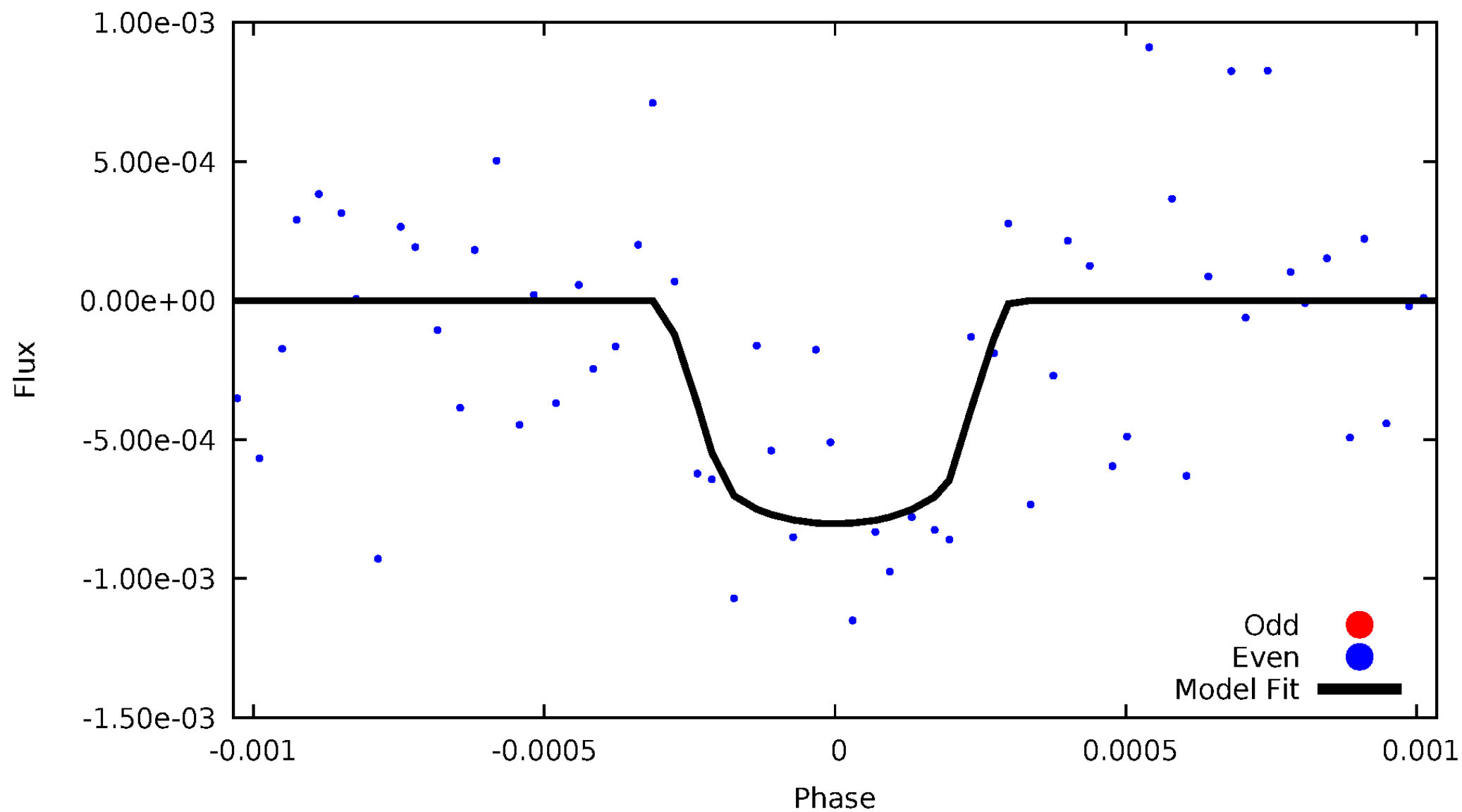


TCE 003446721-01



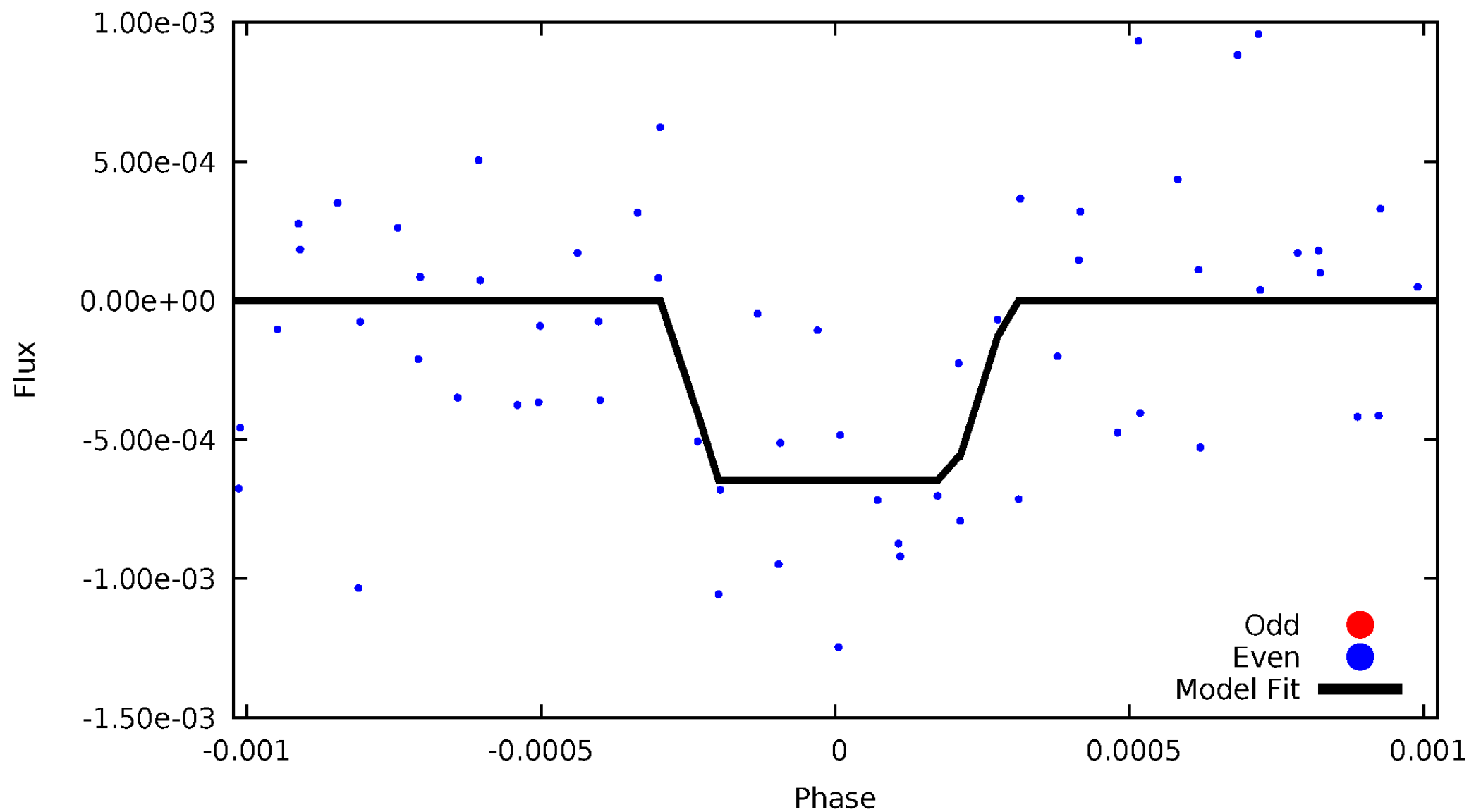
DV Odd/Even

TCE 003446721-01



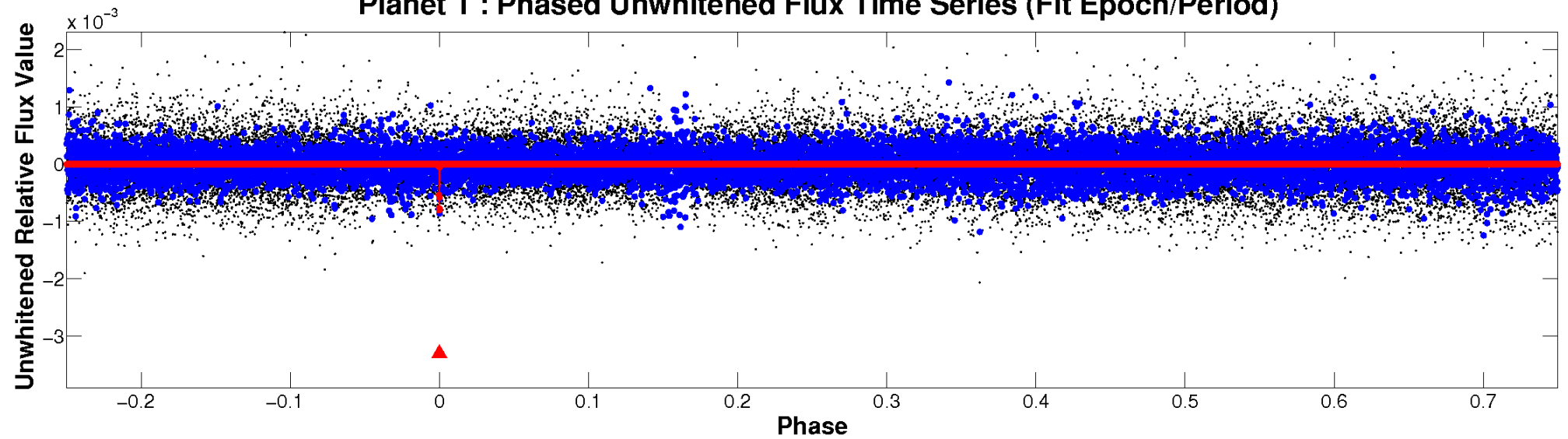
ALT Odd/Even

TCE 003446721-01

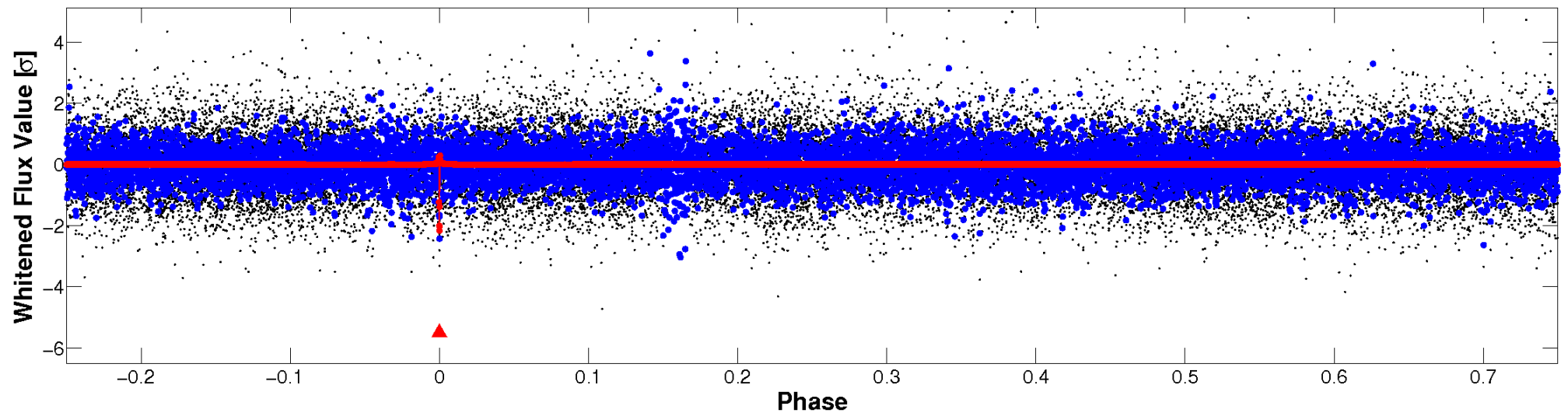


Non-Whitened Vs. Whitened Light Curve

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

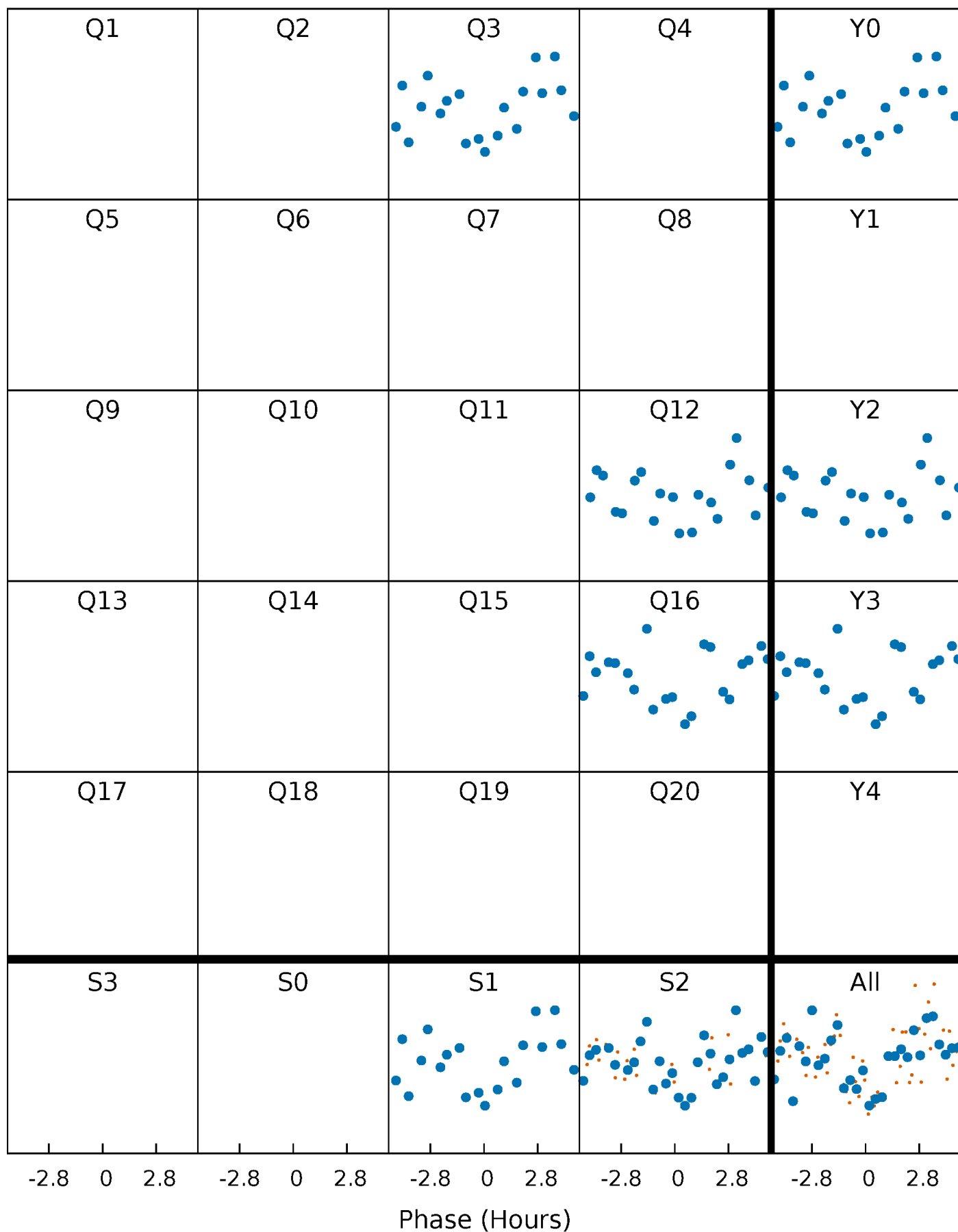


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



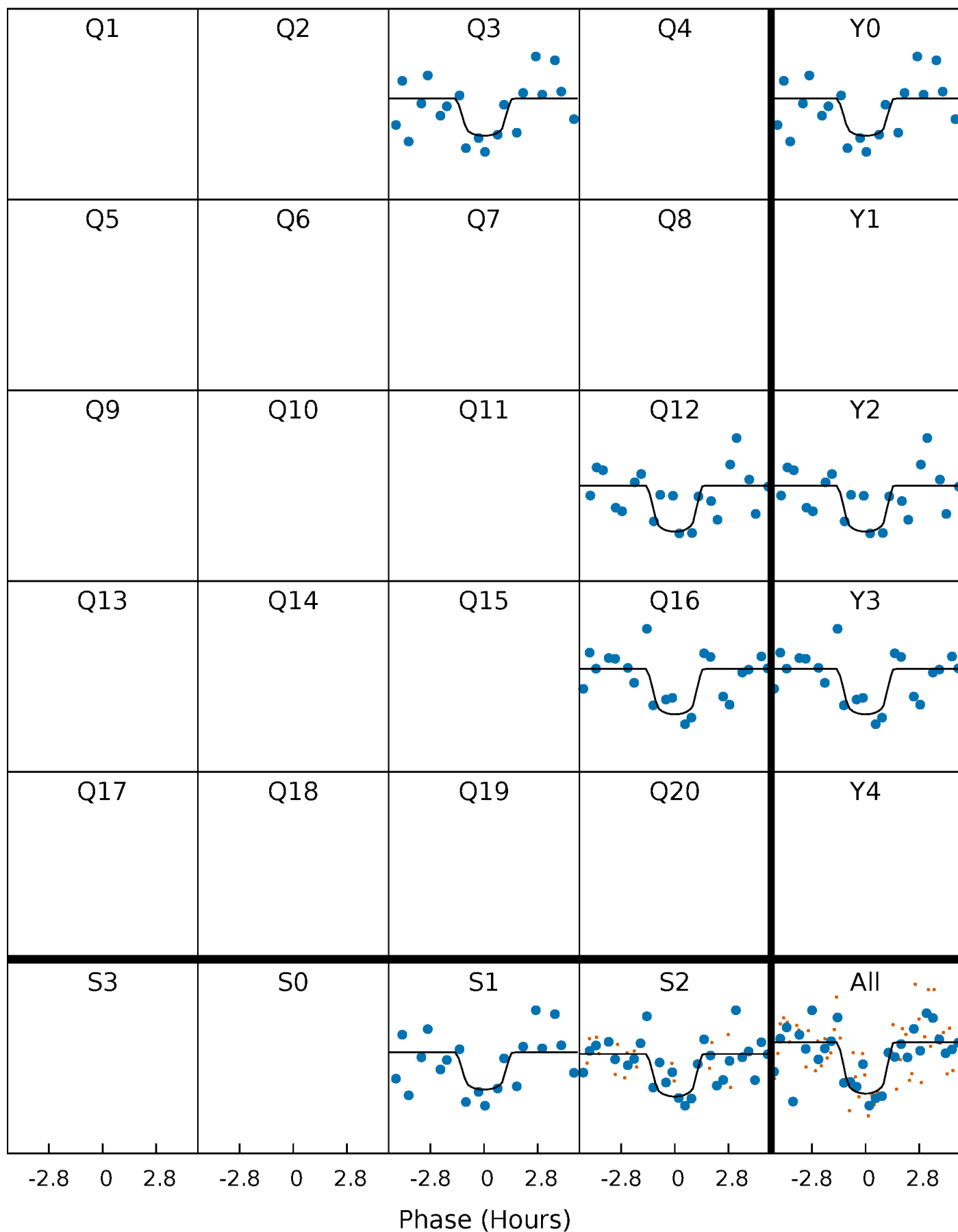
PDC Quarter-Phased Transit Curves

TCE 003446721-01 P=200.400121 Days $T_0=329.567361$ (BKJD)



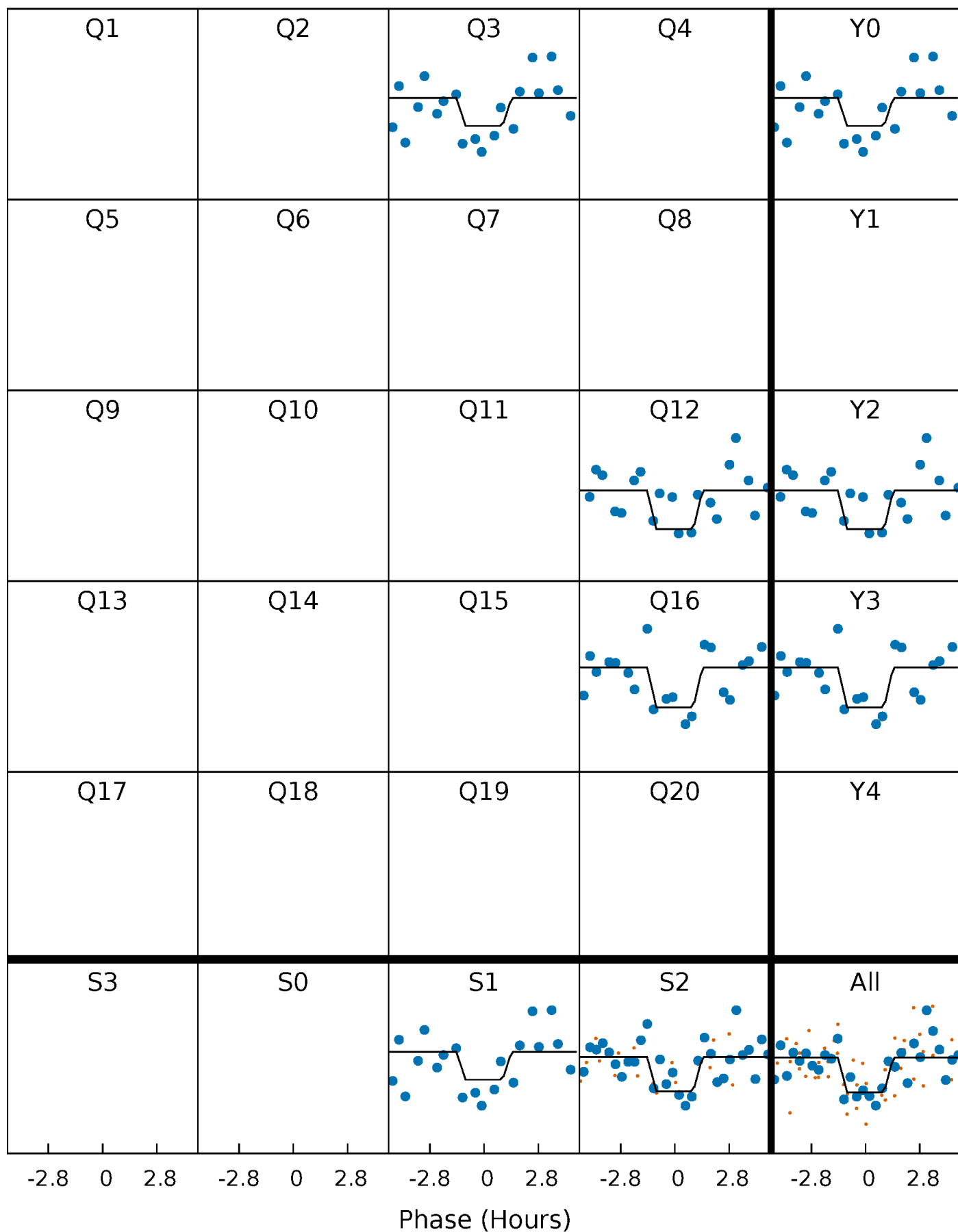
DV Quarter-Phased Transit Curves

TCE 003446721-01 P=200.400121 Days $T_0=329.567361$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

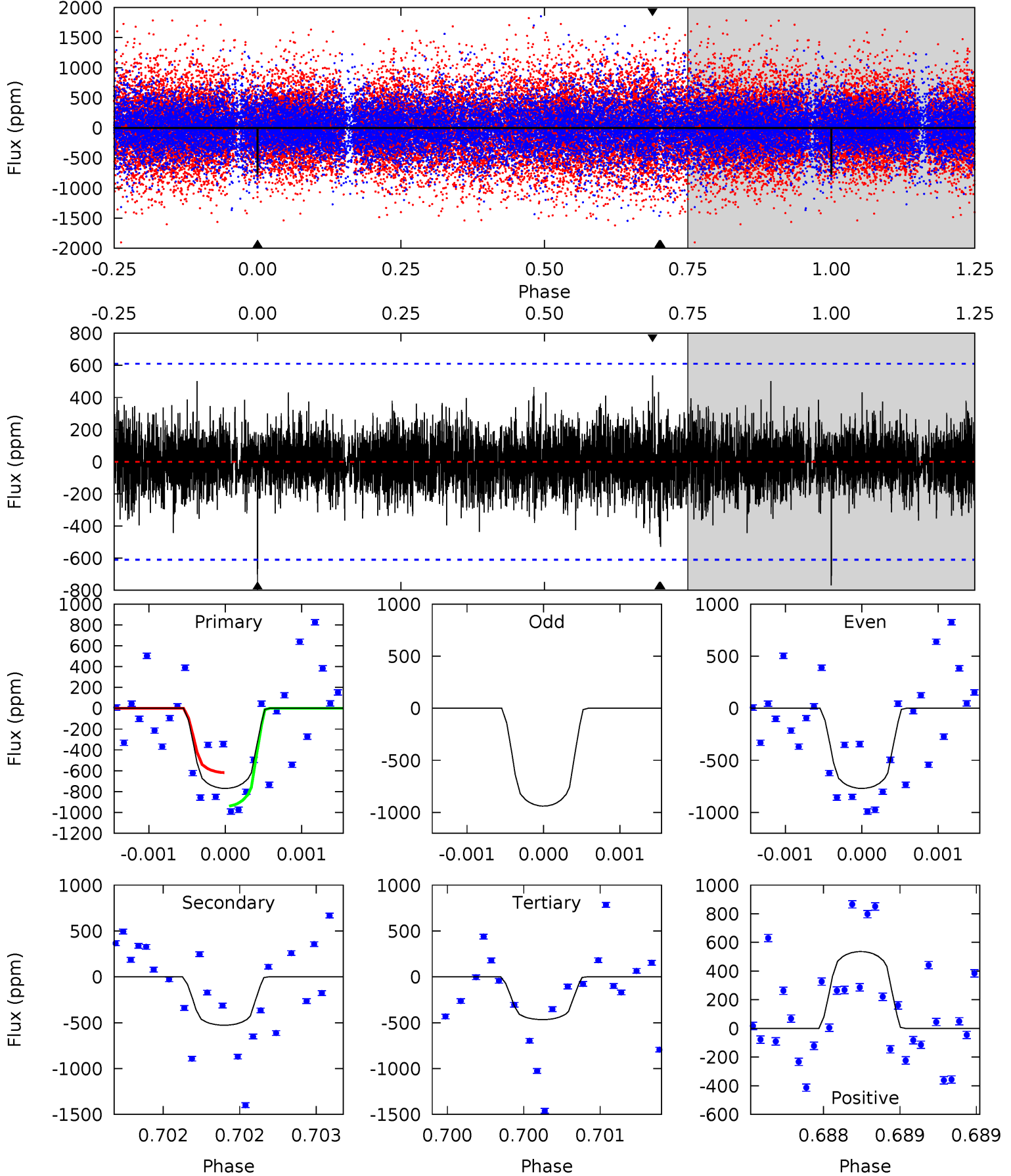
TCE 003446721-01 P=200.398762 Days $T_0=329.572316$ (BKJD)



DV Model-Shift Uniqueness Test

003446721-01, P = 200.400121 Days, E = 129.167240 Days

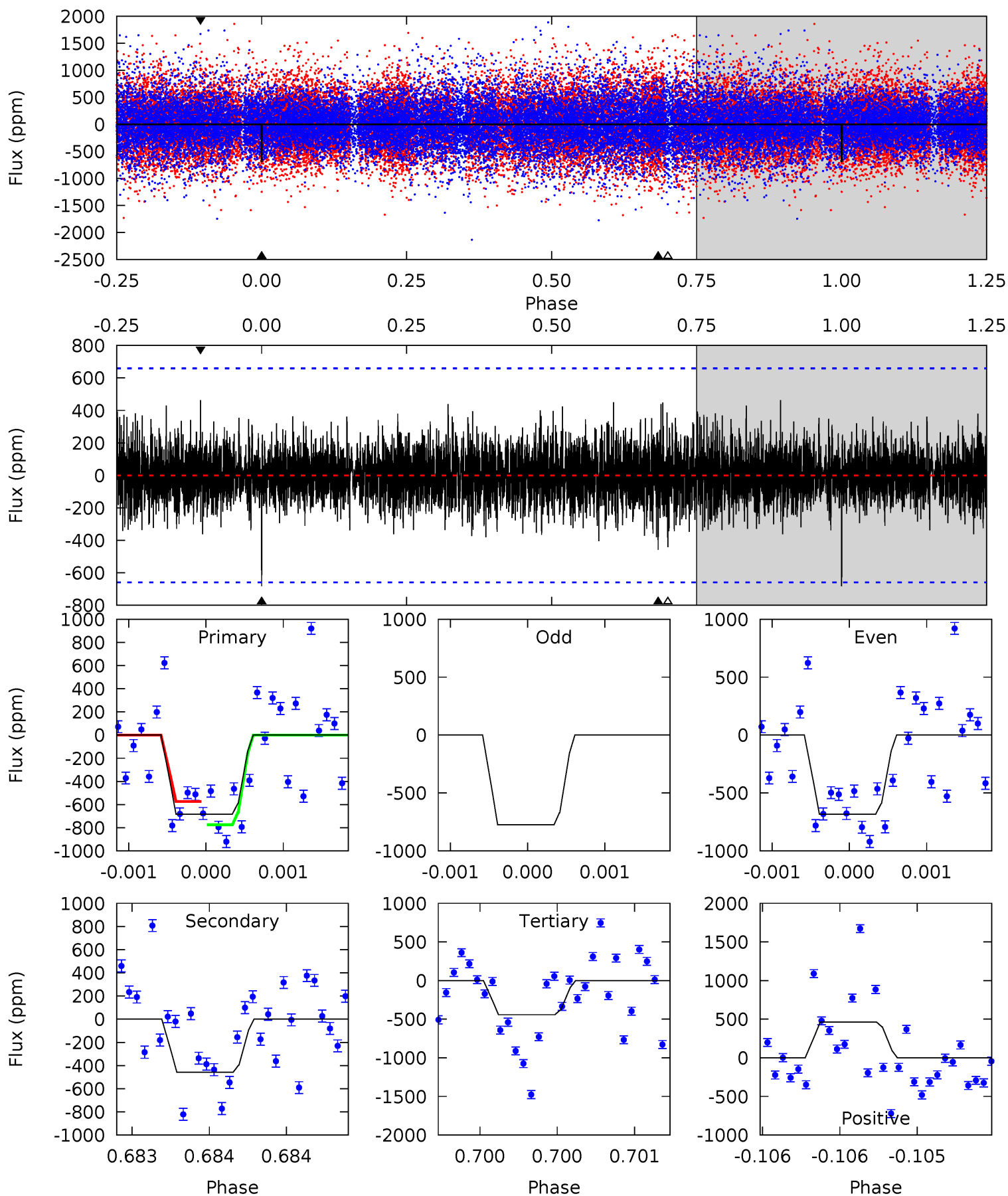
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.00	4.80	4.25	4.88	5.55	3.44	1.14	2.75	2.12	0.56	-0.08	0.94	0.99	0.41	1.47



Alt Model-Shift Uniqueness Test

003446721-01, P = 200.398762 Days, E = 129.173554 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.77	3.87	3.73	3.91	5.57	3.48	1.00	2.04	1.86	0.14	-0.04	0.52	0.98	0.40	0.80



Stellar Parameters For KIC 003446721

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6484^{+158}_{-248}	$4.386^{+0.062}_{-0.188}$	$-0.120^{+0.250}_{-0.300}$	$1.153^{+0.339}_{-0.145}$	$1.178^{+0.164}_{-0.164}$	$1.084^{+0.349}_{-0.516}$
	+2%/-4%	+1%/-4%	+208%/-250%	+29%/-13%	+14%/-14%	+32%/-48%
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 003446721-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-528 ± 110	$6.60^{+6.71}_{-4.63}$	518^{+36}_{-26}	4511^{+3486}_{-984}	3302^{+32437}_{-2521}
Alt.	-457 ± 118	$6.55^{+6.32}_{-4.60}$	517^{+39}_{-25}	4414^{+3343}_{-937}	2872^{+27669}_{-2145}

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 $A_{obs} \gg 1.0$

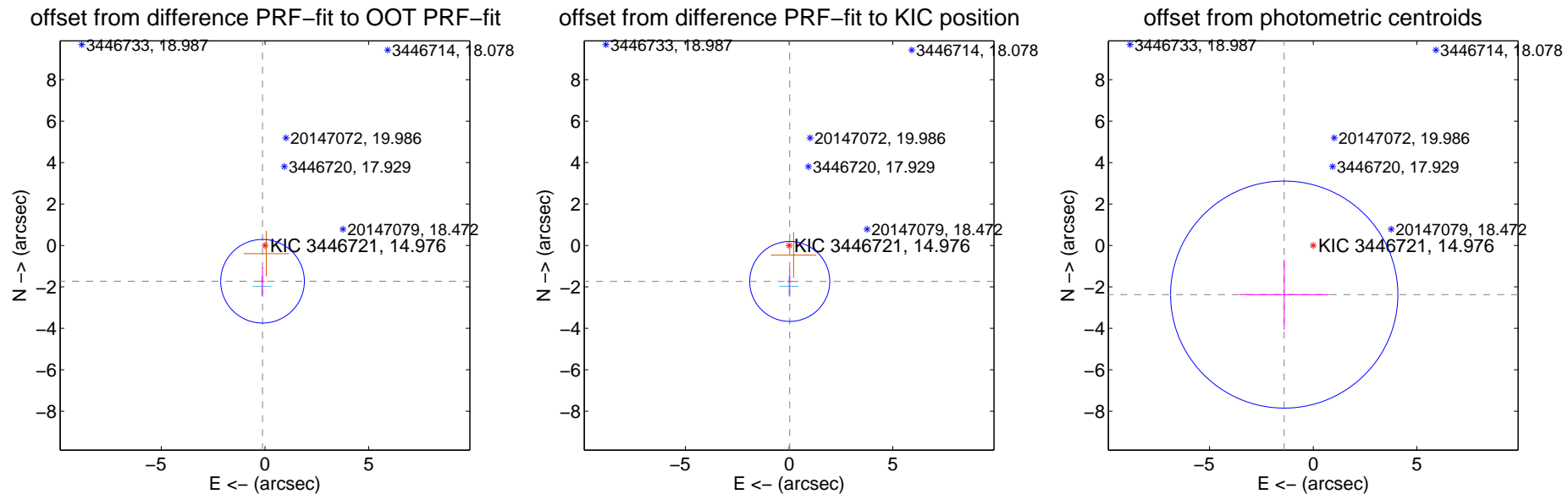
DV Centroid Data

Supplemental centroid analysis for 003446721-01. Kepler magnitude: 14.98. Transit SNR 6.94

There are 1 quarters with good PRF difference image offsets

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

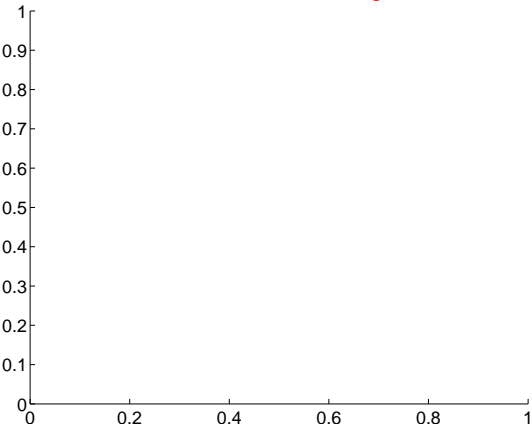
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.731 ± 0.673	2.57	0.119 ± 0.111	-1.727 ± 0.674
PRF-fit source offset from KIC position	1.737 ± 0.643	2.70	-0.031 ± 0.113	-1.736 ± 0.643
photometric centroid source offset	2.75 ± 1.83	1.51	1.40 ± 2.16	-2.37 ± 1.70



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.

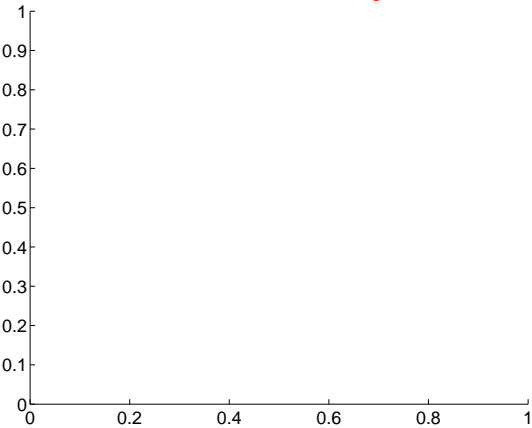
Q1 no difference image



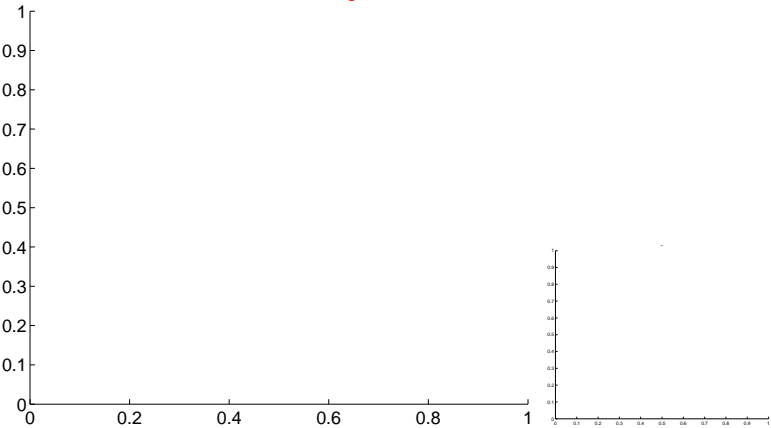
Q1 no OOT image



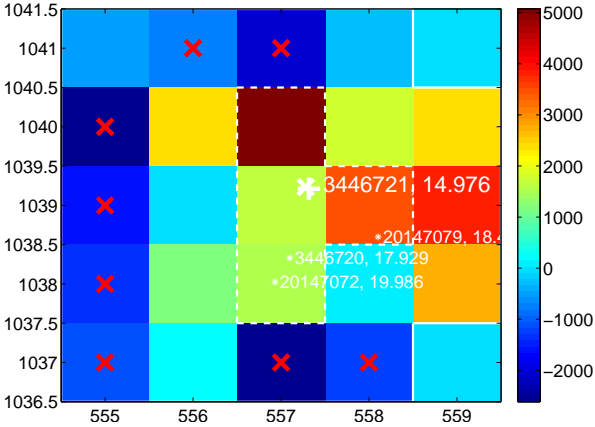
Q2 no difference image



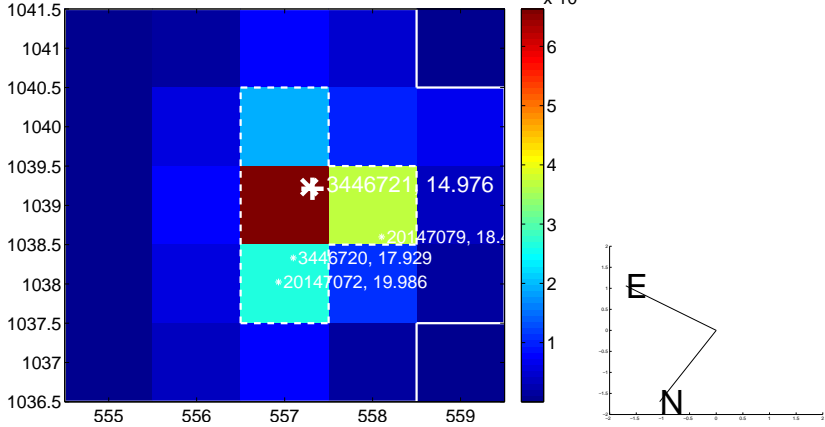
Q2 no OOT image



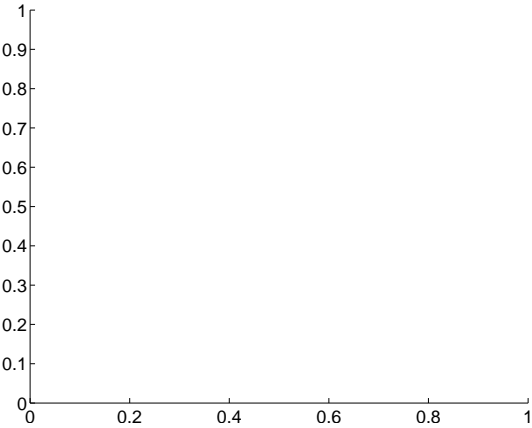
Q3 difference image. Poor Quality



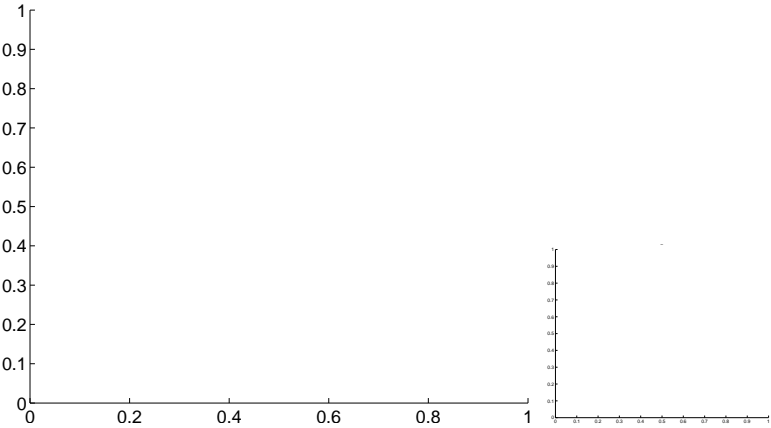
Q3 OOT image



Q4 no difference image



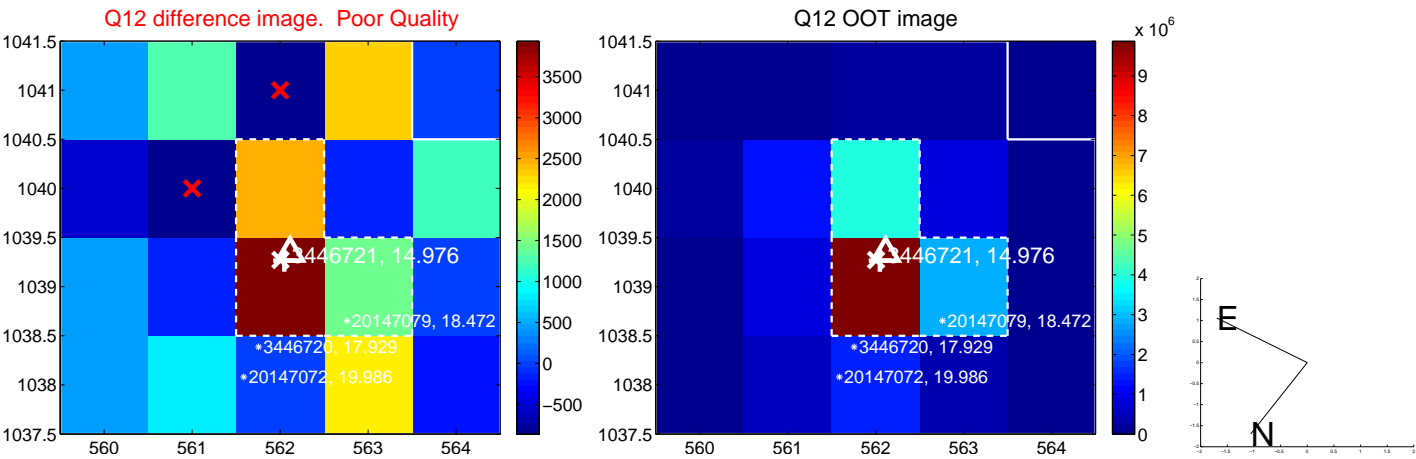
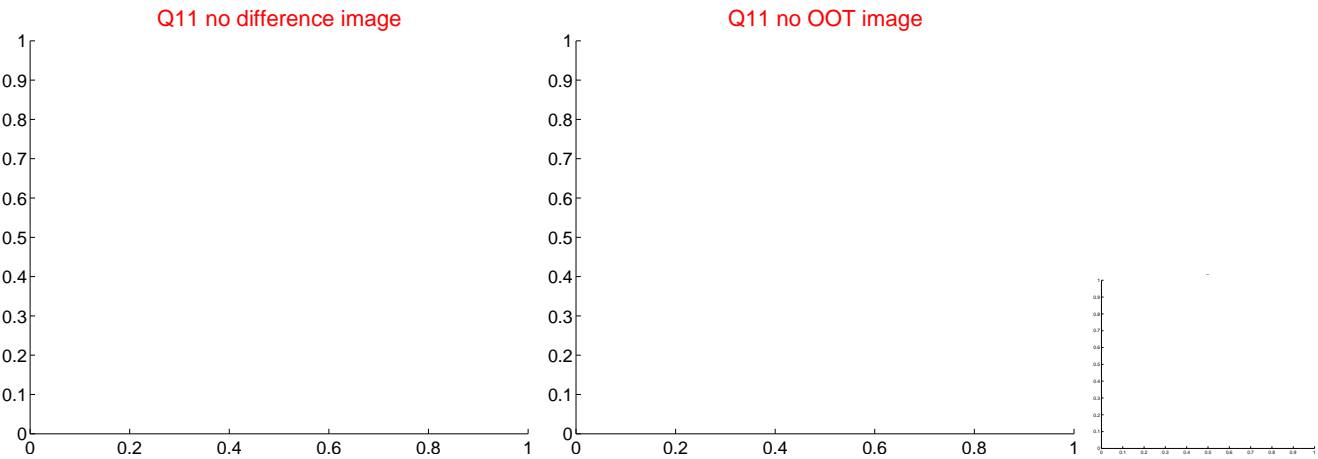
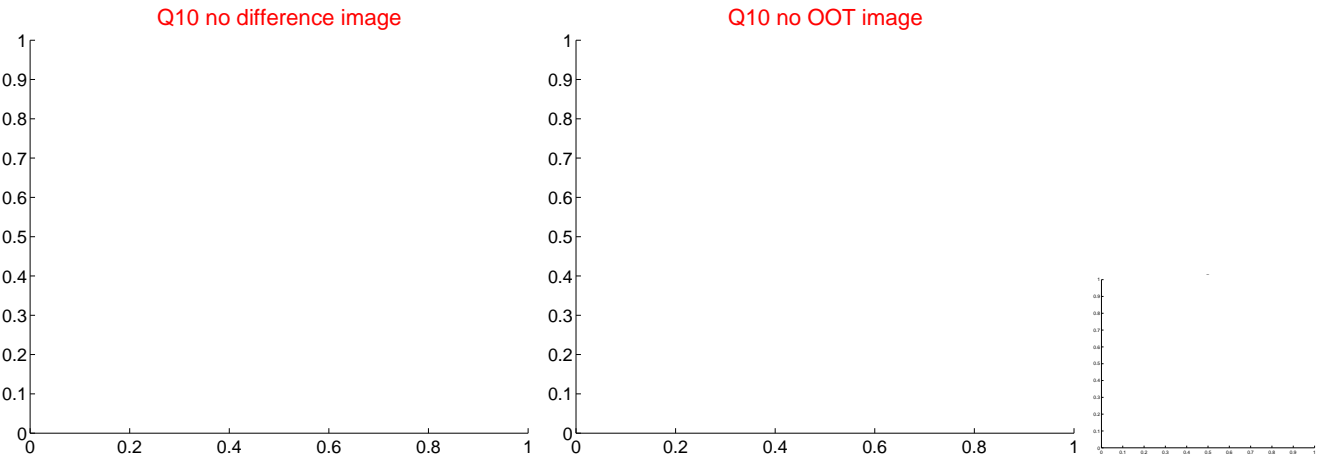
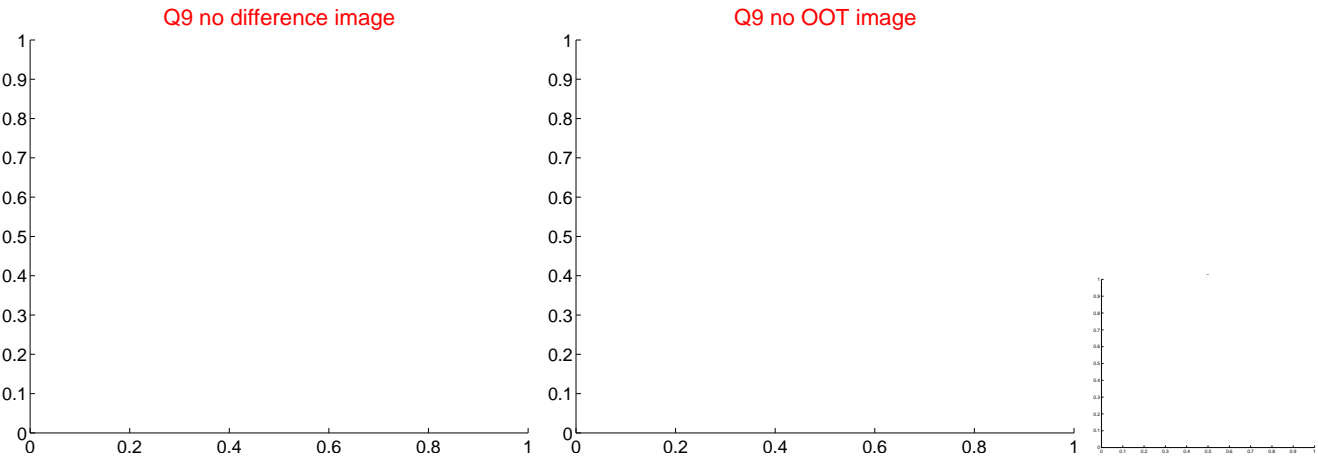
Q4 no OOT image



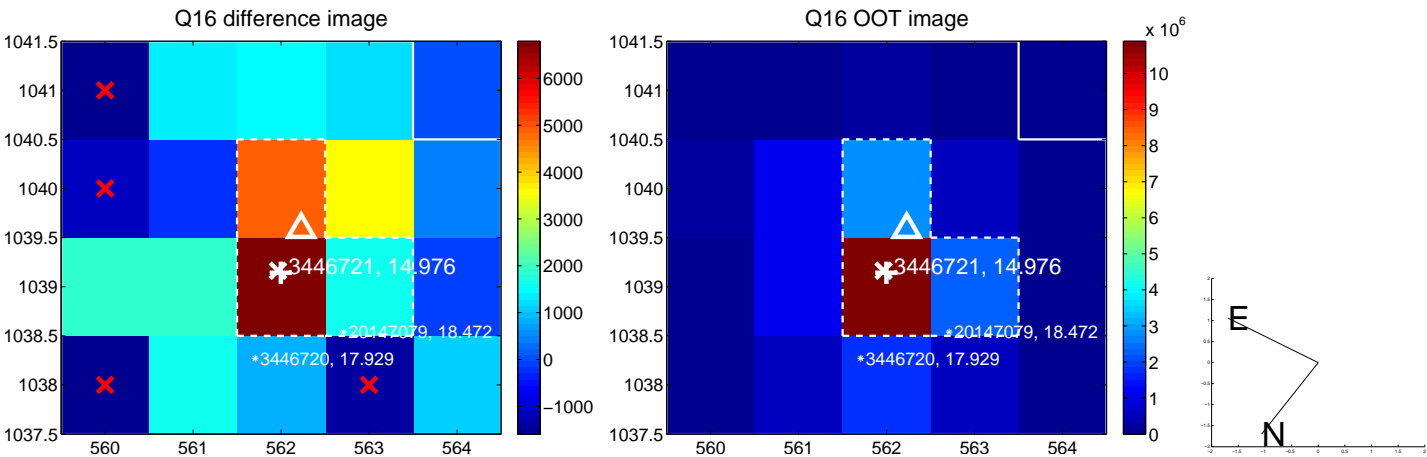
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



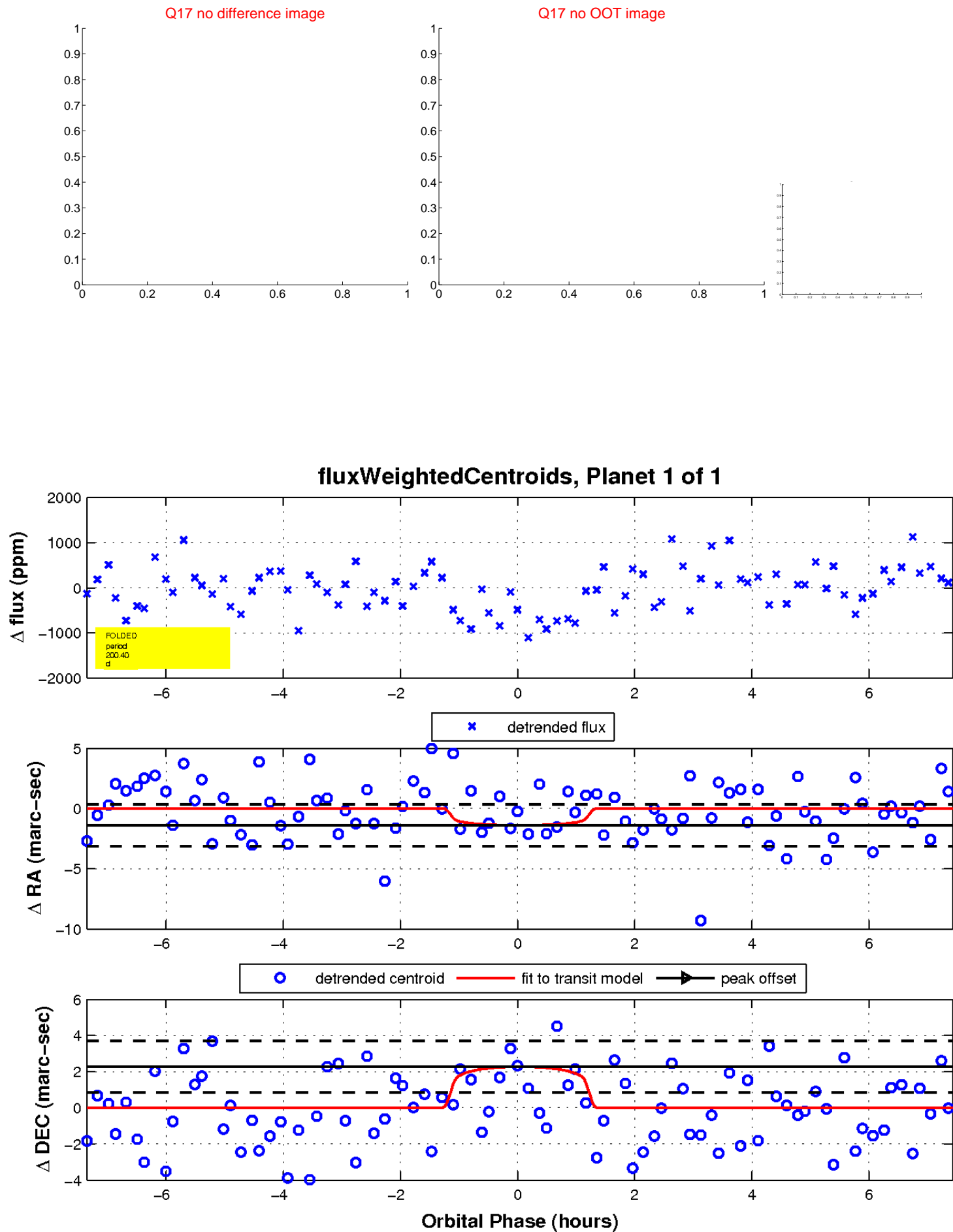
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

